

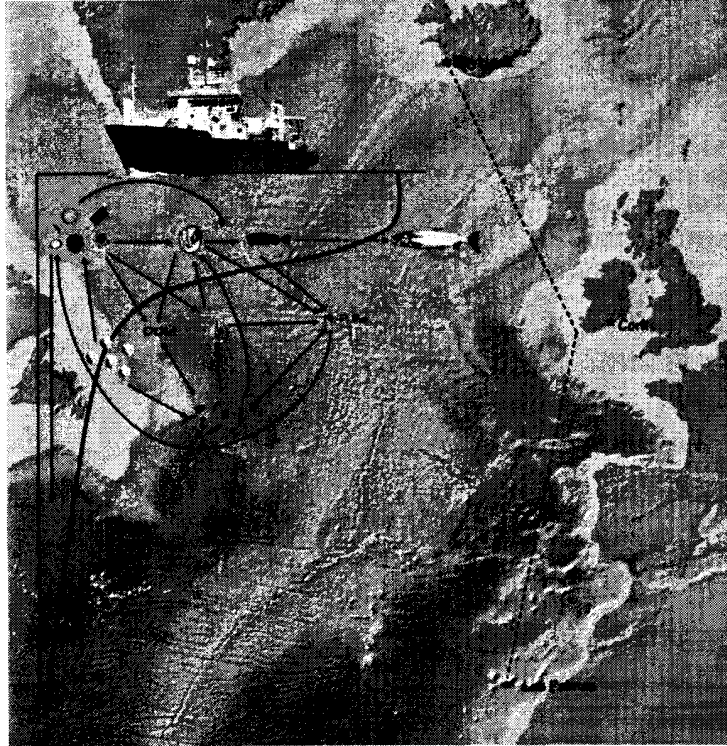
# CRUISE REPORT 64PE309

## ***STRATIPHYT***

*15 July – 11 August 2009*



**Las Palmas - Reykjavik  
2009 • 2010**



**Ship** : RV Pelagia

**Cruise Name** : STRATIPHYT - Changes in vertical stratification and its impacts on phytoplankton communities

**Cruise Number** : 64PE309

**Cruise Period** : 15 July – 11 August 2009

**Port of departure** : Las Palmas, Gran Canaria  
**Port of return** : Reykjavik, Island

**Responsible Institute** : Royal Netherlands Institute for Sea Research (NIOZ)  
Landsdiep 4, 1797 SZ 't Horntje, Texel, The Netherlands

**Chief Scientist** : Dr. C. P.D. Brussaard  
Dept. Biological Oceanography, NIOZ

## Acknowledgements

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LEG 1

LEG 2



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## Project Abstract

Global warming will change physical, chemical and biological processes in the oceans. Ocean-climate model predict that heating of the surface layer may yield a stronger vertical stratification, which starts earlier in spring and lasts longer in autumn. This results in suppressed upward mixing of nutrients from the deep ocean. Changes in stratification will have major effects on the production and species composition of phytoplankton (=unicellular algae). This will subsequently impact grazing, virally induced mortality and sedimentation rates, with cascading effects on ecosystem functioning and biogeochemical fluxes. Little is known, however, of the exact implications of global warming for these fundamental processes.

As part of the Dutch ZKO (Sea, Coast and Ocean) competitive funding program we will investigate how changes in vertical stratification affect phytoplankton communities along a north-south gradient in the Atlantic Ocean. Six institutes and 7 PIs are involved in the STRATIPHYT project. The project runs for 4 years (2009-2013).

Our study is based on oceanographic cruises from the Canaries to Iceland, advanced models of hydrodynamics and plankton growth, and detailed laboratory experiments with representative phytoplankton species. We have chosen for the Northeast Atlantic Ocean, because it is a key area in global ocean circulation, a large sink for atmospheric CO<sub>2</sub>, and a major determinant of the climate in Western Europe. Furthermore, the Atlantic Ocean offers a gradient from weak seasonal stratification in the North to strong permanent stratification in the (sub)tropics. This gradient offers ideal opportunities for the comparative study of different stratification regimes. Our integrated approach of physical, chemical, and biological processes, by a new research team, will enable a better understanding of the implications of global warming for plankton growth in the North Atlantic Ocean.

*Table 1. Project participants (project coordinator underlined).*

<u>Name</u>	<u>Speciality</u>	<u>Institute</u>
Postdoc 1	Physical Oceanography	UU and VU
Postdoc 2	Phytoplankton Ecology	RUG and NIOZ
PhD-student 3	Biological Oceanography	NIOZ
PhD-student 4	Theoretical Ecology	UvA and CWI
<u>Dr. C. Brussaard</u>	Biological Oceanography	NIOZ
Dr. K.R. Timmermans	Phytoplankton Ecology	NIOZ
Prof. A.G.J. Buma	Phytoplankton Ecology	RUG
Prof. J. Huisman	Aquatic Microbiology	UvA
Dr. B. Sommeijer	Computational Science	CWI
Prof. H. Dijkstra	Physical Oceanography	UU/ IMAU
Dr. H. van der Woerd	Remote Sensing	VU / IVM

## Project Introduction and Objectives

Observations as well as results from climate models indicate that stratification patterns in the ocean may change due to global warming (Sarmiento et al. 1998, Levitus et al. 2000, Toggweiler & Russell 2008). For example, warming of the surface layer may yield a stronger stratification, which enhances average light exposure for phytoplankton and can suppress the upward mixing of nutrients from the deeper nutrient-rich waters below. Global climate change is likely to have a particularly strong effect in the North Atlantic, which has been estimated to store 23% of the total oceanic uptake of anthropogenic CO<sub>2</sub> (Sabine et al. 2004). The North Atlantic Ocean is a key area in the global ocean circulation, and a major determinant of the climate in Western Europe. It has a clear north-south gradient, with permanent stratification in the subtropics and seasonal stratification in the temperate zone. The North Atlantic has already undergone a major warming, potentially affecting the strength of its meridional overturning circulation (MOC).

Changes in stratification patterns have major effects on phytoplankton growth (Behrenfeld et al. 2006, Huisman et al. 2006). Typically, prolonged stratification yields nutrient-poor surface waters with deep chlorophyll maxima (DCMs), whereas seasonal stratification induces a strong spring bloom. Fifty years of monitoring (the Continuous Plankton Recorder survey) suggests changes in phytoplankton and zooplankton abundance and composition in the Northeast Atlantic Ocean that agree with expectations based on global warming (Richardson & Schoeman 2004, Beaugrand et al. 2002). However, comprehensive and integrated studies are however, lacking and little is known on the exact nature of the consequences of global warming for the phytoplankton community in the Northeast Atlantic.

We will investigate how changes in vertical stratification affect phytoplankton communities along a north-south gradient by a combination of oceanographic cruises, high resolution ocean-biochemistry and mathematical modelling, and detailed laboratory experiments with representative phytoplankton species.

**The North Atlantic Ocean offers the opportunity to investigate our overarching hypothesis that global warming will lead to enhanced stratification and reduced vertical transport in key areas, which in turn affects marine primary production and losses, plankton species composition and carbon storage in the ocean.**

Phytoplankton fix large amounts of CO<sub>2</sub> and account for almost half of the total primary production on Earth. These photosynthetic microorganisms make up the base of the marine food web and provide more than 99% of the organic matter used by marine food webs. Phytoplankton production sets upper limits to both the overall activity of the pelagic food web and the quantity of organic carbon exported downwards. The nature and activity of the phytoplankton community are strongly influenced by physical and chemical factors that determine their light and nutrient availability. Phytoplankton losses by viral infection-induced death, grazing and sinking, however, restrain primary production and are thus equally important for ocean ecosystem productivity (Suttle 2007, Ruardij et al. 2005, Baudoux et al. 2006). These controlling processes influence the cycling of energy and biogeochemically relevant elements each very differently, directly affecting the production/respiration ratio of the ocean and the efficiency of the biological pump. As nicely formulated by Kirchman (1999), "how phytoplankton die largely determines how other marine organisms live". Phytoplankton biomass that sinks from the euphotic zone has a strong impact on carbon sequestration in the oceans, whereas grazed algae are channelled to higher trophic levels. Viral lysis directly affects the standing stock of dissolved organic carbon which forces the food web towards a more regenerative pathway (Brussaard et al. 2005, Suttle 2007).

A stronger stratification is expected to suppress productivity in the (sub)tropics, where nutrients are typically limiting algal growth. At mid-latitudes, with seasonal stratification, the spring bloom may start earlier but phytoplankton may experience severe nutrient limitation already at the onset of summer. At high latitudes, decreased mixed layer depth and higher temperatures may stimulate phytoplankton growth. Modifications in vertical mixing and stratification will not only alter phytoplankton productivity, but also their species composition and most likely their nutritious value for higher trophic levels (Arrigo et al. 1999, Huisman et al. 2004, Diehl 2007). Model studies indicate, furthermore, that reduced vertical mixing may induce oscillations and chaos in the phytoplankton at the DCM, generated by differences in time scale between the sinking flux of phytoplankton and the upward flux of nutrients (Huisman et al. 2006). Anthropogenic global warming may thus destabilize the phytoplankton dynamics both in the upper mixed layer as well as DCM, with implications for oceanic productivity, species composition and carbon export.

Shifts in algal abundance and species composition will directly affect the degree of viral lysis and grazing. For instance, viral infection is dependent on encounter rate between host and virus and have a stringent host-specificity. Grazers can be selective in their choice of prey, depending on the nutritious quality and abundance of their prey species. Furthermore, changes in vertical stratification may directly and indirectly (e.g. shift towards smaller-sized phytoplankton in response to more severe nutrient limitation upon reduced vertical mixing) impinge on the sedimentation rate of algae from the euphotic zone.

Clearly, the interaction of physical, chemical and biological processes is extremely important in structuring plankton communities. Yet integrated, multidisciplinary programmes covering these aspects are scarce. At present such an approach is vital to enhance our understanding of potential shifts in phytoplankton distribution, ecosystem structure and function due to current global climate change.

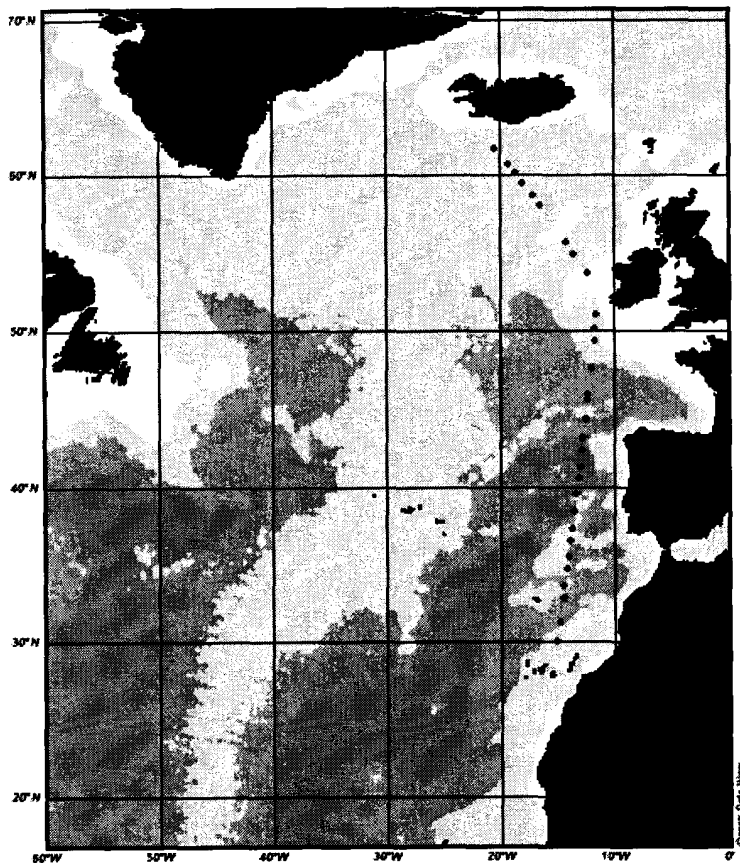
**The overall objectives of our research program are:**

- 1) To establish the physical and chemical characteristics of the upper ocean (200 m) of the Northeast Atlantic Ocean, along the transect Iceland–Ireland–Canary Islands, with particular emphasis on the stratification patterns along this transect.
- 2) To model the effect of a changing atmospheric forcing on the upper ocean stratification and vertical transport along this transect.
- 3) To obtain remote sensing measurements and phytoplankton biomass data for the Northeast Atlantic Ocean to validate and improve net primary productivity estimates along this transect.
- 4) To determine the variability of the phytoplankton, grazer and algal virus community abundance and composition in the mixed layer and the DCM, as well as in the translocation experiments mimicking changes in nutrient supply and mixed layer depth.
- 5) To determine primary production, phytoplankton physiology and cellular composition in the surface ocean, DCM, and during the translocation experiments.
- 6) To investigate loss factors structuring the phytoplankton community in the surface ocean, DCM and translocation experiments, i.e. viral lysis and grazing of relevant groups and size classes of phytoplankton.
- 7) To study the ecophysiology, sinking rates, sensitivity for viral infection and grazing of representative phytoplankton species in laboratory culture under different light, nutrient and temperature conditions.
- 8) To model phytoplankton dynamics and species interactions in response to changes in seasonal stratification and vertical transport caused by climate change.

## The STRATIPHYT cruise 2009

We studied for a month (July-August 2009) the vertical stratification and the biology of plankton (with a major focus on phytoplankton) in the Northeastern Atlantic Ocean, along a transect from Las Palmas (Gran Canaria), via Cork (Ireland) to Reykjavik (Iceland). This cruise was undertaken as part of larger integrated study with the main merit of assessing the physics, chemistry and biology of the upper water column (typically top 200 m) in order to understand the impact of vertical stratification of the water column for the unicellular algal community; its production, mortality and diversity. This is the first of two cruises, one in summer (2009) and one in spring (2010). The cruise track is shown in Figure 1, the station details in Table 2 and the participant and crew list in Table 3.

Different geographical locations and subsequently biological communities were studied in order to allow unique and optimal insight into the contribution of the different algal groups and to the functioning of the pelagic food web.



*Fig. 1. Cruise track STRATIPHYT 2009.*



Table 2. Station details STRATIPHYT – 64PE309 cruise with R/V Pelagia.

**Stratiphyt - 64PE309**

Station/ Track	Date/ Time (UTC)	Lat	Lon	Depth (m)
1	Jul 17 2009 05:05:07	30.01492	-15.06905	3317
2	Jul 18 2009 05:02:58	31.22085	-14.86552	3317
3	Jul 19 2009 04:58:43	32.82408	-14.58918	3317
4	Jul 19 2009 19:12:43	33.58052	-14.45793	3317
5	Jul 20 2009 05:07:43	34.71928	-14.25802	2536
6	Jul 20 2009 21:04:58	35.52918	-14.11427	4640
7	Jul 21 2009 05:06:38	36.52605	-13.93472	4054
8	Jul 21 2009 20:32:43	37.27735	-13.79655	3707
9	Jul 22 2009 04:59:20	38.424	-13.58622	3737
10	Jul 22 2009 20:02:24	39.48843	-13.3876	4091
11	Jul 23 2009 05:20:17	40.52753	-13.1907	3932
12	Jul 23 2009 20:37:41	41.24687	-13.05223	3646
13	Jul 24 2009 05:06:28	42.3373	-12.88325	3810
14	Jul 24 2009 20:29:03	43.08168	-12.7787	5006
15	Jul 25 2009 05:01:20	44.28242	-12.60548	4945
16	Jul 26 2009 07:40:33	45.91702	-12.36342	4780
17	Jul 26 2009 11:03:58	45.52638	-12.42627	3865
18	Jul 28 2009 05:05:42	47.56735	-12.11408	4603
19	Jul 29 2009 05:05:04	49.38245	-11.82932	1040
20	Jul 29 2009 20:00:16	50.1759	-11.70073	1890
21	Jul 30 2009 04:59:38	51.00037	-11.56683	1190
22	Aug 02 2009 07:31:05	53.63667	-12.35428	310
23	Aug 02 2009 20:00:36	54.94998	-13.55343	2855
24	Aug 03 2009 04:58:48	55.71382	-14.28072	2258
25	Aug 04 2009 04:59:58	58.0019	-16.52033	1147
26	Aug 04 2009 19:59:10	58.65352	-17.18172	1074
27	Aug 05 2009 04:58:56	59.49987	-18.06988	2303
28	Aug 05 2009 20:00:24	60.11648	-18.72702	2614
29	Aug 06 2009 05:03:40	60.68382	-19.33963	2462
30	Aug 07 2009 09:07:19	61.713	-20.4867	1968
31	Aug 08 2009 19:23:11	62.30007	-21.1555	1468
32	Aug 09 2009 05:00:49	62.79987	-21.736	1181

Table 3. R/V Pelagia Cruise STRATIPHYT Participants and Crew listing.

PARTICIPANTS LIST		In alphabetic order
Name	Institute/University	
<b>Brussaard, C *</b>	NIOZ	
Dijkstra, H <sup>2</sup>	UU / IMAU	
Finke, J	NIOZ	
Groenewegen, R	NIOZ	
Hegeman, J.	NIOZ	
Heuvel, v.d. F <sup>1</sup>	RUG	
Jurado, E	UU	
Kulk, G <sup>1</sup>	RUG	
Loriaux, J <sup>2</sup>	UU	
Maat, D	NIOZ	
Mojica, K	NIOZ	
Noort, v. G	NIOZ	
Noordeloos, A <sup>1</sup>	NIOZ	
Oosterhuis, S <sup>2</sup>	NIOZ	
Poll, v.d. W	RUG	
Tigchelaar, M <sup>1</sup>	UU	
Timmermans, K	NIOZ	
Weerlee, E	NIOZ	
Witte, Y	NIOZ	
Woerd, v.d. H	IVM / VU	
Wagt, v.d. B <sup>2</sup>	VU	
<b>(*) = Chief Scientist</b>	<b>(1) = leg 1: Las Palmas - Cork</b> <b>(2) = leg 2: Cork - Reykjavik</b>	

CREW LIST	
Ellen, J <sup>o</sup>	Master
Haaren, v. J	Ch. Officer
Seepma, J	Ch. Engineer
Verheyen, D <sup>1</sup>	2 <sup>nd</sup> Officer
Weyn, J <sup>2</sup>	2 <sup>nd</sup> Officer
Frankfort, M	2 <sup>nd</sup> Engineer
Linde, v.d. H	Cook
Heide, vd R	Ship's Techn.
Maas, J	Ship's Techn.
Vermeulen, G	Ship's Techn.
Aleksejevs, V	A/B
Hiemstra, F	Steward-O/S
<b>(<sup>o</sup>) = Captain</b>	<b>(1) = leg 1: Las Palmas - Cork</b> <b>(2) = leg 2: Cork - Reykjavik</b>

The physical vertical stratification was studied using a Scamp instrument (see for more detail furtheron in cruise report). Water samples were taken using the 24 plastic samplers (General Oceanics type Go-Flo, 10 liters each), which were mounted on a ultra-clean (trace metal-free) system that consists of a full titanium sampler frame equipped with CTD (Seabird 9+) and auxiliary sensors. When on board ship, the sampler frame was stored and sampled in its own 20 foot Clean Container. Deployment of the frame was from a non metallic hoisting cable, again to ensure contamination free sampling. Auxiliary sensors were: Oxygen (Seabird model 43), Fluorescence (Chelsea Aquatracka Mk III), Light transmission (Wet-Labs C-star), PAR (Satlantic) and OBS (Sea-Point turbidimeter). To compensate for variance in the sunlight, a deck reference PAR sensor (Satlantic) was installed, enabling ratiometric measurements. Furthermore, on leg 2 (Cork-Reykjavik) a vertical net was used to collect the larger sized mesozooplankton (>300  $\mu\text{m}$  mesh size).

Besides direct sampling of the upper water column and short termed (max 24 h) on-board incubation, on-deck incubations using 20 L bottles were conducted for up to one week. These so called translocation experiments will provide insight in the response of the algal community to more or less nutrient input in combination with enhanced or reduced light conditions. Additionally, optical measurements were obtained and the ship's continuous Aquaflow system from a depth of 3 m (detecting temperature, salinity, optical back scatter, and fluorescence) was and will be used for validation, adaptation and testing new satellite products for Chlorophyll and primary production retrieval.

The results of this timely project will largely advance our comprehension of the importance of different stratification scenarios for phytoplankton population dynamics. The results are expected to provide new insights in our understanding of the functioning and structure of marine pelagic food webs and the impact of global change. The obtained data will, furthermore, be essential for the different models (to be) developed within the project.

The Atlantic Ocean showed indeed, according to expectation, permanent stratification with a deep mixed layer in the (sub)tropics and a summer stratification with reduced mixed layer in the northeastern section of the transect (Fig. 2). The, furthermore, low concentrations of nutrients (Fig. 3), as found in the south, promoted only the very small-sized algae (majority typically  $<2 \mu\text{m}$ ). Larger sized phytoplankton were observed during leg 2 (Cork-Reykjavik), resulting in enhanced total algal pigment (Chlorophyll a) fluorescence (Fig. 3).

In total 32 locations were sampled (stations), during which 103 CTD casts, 160 SCAMP profiles and 48 vertical net hauls have been performed. Only some of measurements could be analysed on board (e.g. macronutrients, direct counts of phytoplankton, physical and optical variables). Numerous samples were stored for later analysis at the home laboratories.

Detailed description of the different scientific activities can be found in the following section.

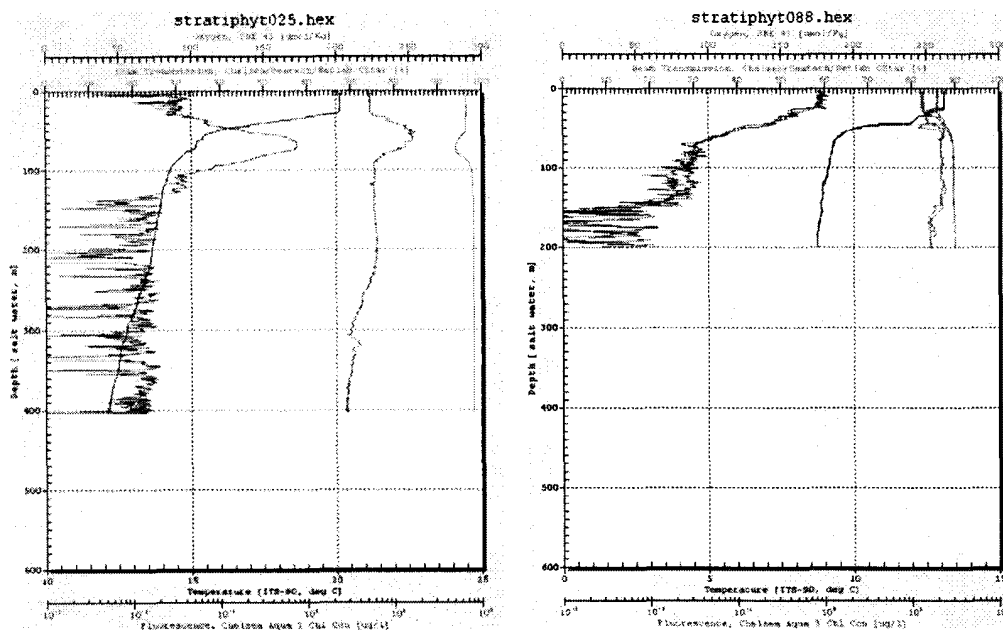


Figure 2. CTD profiles of temperature (red line), Chlorophyll a fluorescence (green line), oxygen (blue line) and beam transmission (orange line) for station 10 (leg 1) and station 30 (leg 2).

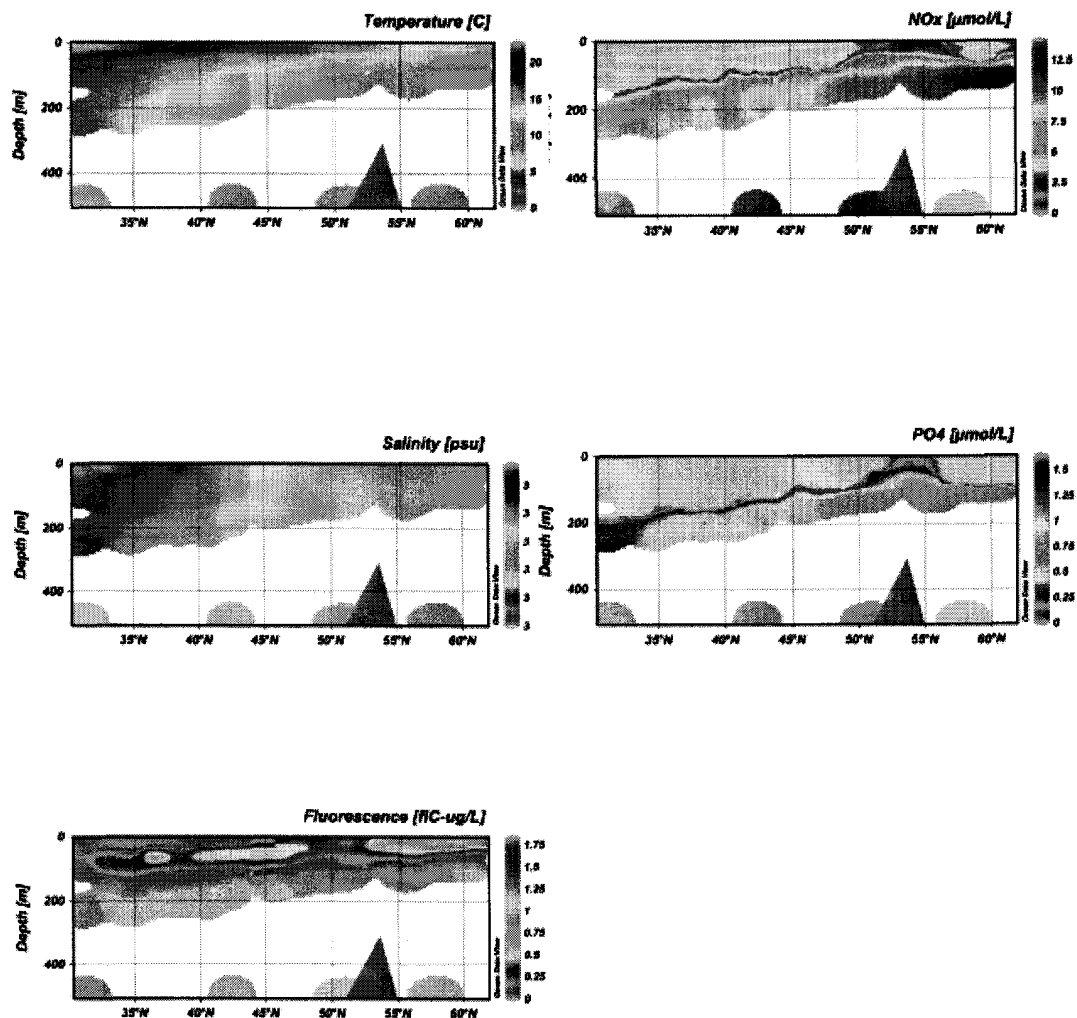


Figure 3. Transect plots from Las Palmas to Cork and from Cork to Reykjavik, showing from top to bottom and from left to right: temperature, salinity, fluorescence, NO<sub>x</sub> (nitrate and nitrite) and inorganic phosphate concentrations.

## Scientific activities (per variable):

### Nutrient measurements

- Evaline van Weerlee -

Samples for inorganic phosphate, NO<sub>x</sub> (=nitrate+nitrite), nitrite, and ammonium were taken from each sampled Rosette bottle for shipboard analysis. The samples were collected in polyethylene sample bottles after three times rinsing and stored dark and cool at 4°C until analysis (within 24h). Prior to analysis, samples were filtered through a 0.2 µm Acrodisk (32 mm diameter; Pall Inc.) in open polyethylene vials (6 mL) covered with laboratoryfilm and put in the auto sampler-trays. The different nutrients were measured colorimetrically using a BRAN&LUEBBE QUAATRO autoanalyzer.

- Ammonia reacts with phenol and sodiumhypochlorite at pH 10.5 to an indo-phenolblue complex. Citrate is used as a buffer and a complexant for calcium and magnesium at this pH. The intensity was measured at 630 nm. Method according to Koroleff, 1969 and optimized by W.Helder and R. de Vries, 1979. An automatic phenol-hypochlorite method for the determination of ammonia in sea – and brackish waters. *Neth. J. Sea Research* 13(1): 154-160.
- Phosphate reacts with ammoniummolybdate at pH 1.0, and potassiumantimonyltartrate was used as an inhibitor. The yellow phosphate-molybdenum complex was reduced by ascorbic acid to a blue complex and measured at 880 nm. Method according to Murphy, J.& Riley, J.P.,1962. A modified single solution method for the determination of phosphate in natural waters. *Analitica chim. Acta* 27, 31-36.
- NO<sub>3</sub>+NO<sub>2</sub>: Nitrate was mixed with the buffer imidazole at pH 7.5 and reduced to nitrite by a copper-coated cadmium coil (efficiency > 98%), and measured as nitrite. Nitrite was diazotated with sulphanilamide and naftylethylenediamine to a pink coloured complex and measured at 550 nm. The reduction efficiency of the cadmium column was measured in each run.As described by Grashoff (1983).

Calibration standards were prepared by diluting stock solutions of each nutrient in the same nutrient depleted surface ocean water as used for the baseline water. The standards were kept dark and cool in the same refrigerator as the samples. Standards were prepared fresh every day. The samples were measured from the surface to the bottom to obtain the smallest possible carry-over-effects. In every run a mixed control nutrient standard containing ammonia, phosphate and nitrate in a constant and well known ratio, the so-called nutrient-cocktail, was measured. These standards were used to check the performance of analysis and the gain factor of the autoanalyzer channels.

In total about 1500 CTD-samples were analysed and 450 samples from experiments. Another 41 samples were taken for silicate measurements, to be analysed at the NIOZ laboratory (stored at 4 degrees in the dark).

The results of analysis of the nutrient-cocktail during the cruise is:

	PO4	NH4	NOx
av	0.872	0.62	13.98
stdev	0.010	0.02	0.06
stdev%	1.130	3.31	0.43
det lim av blanc+3* stdev bl			
det lim	0.028	0.09	0.10

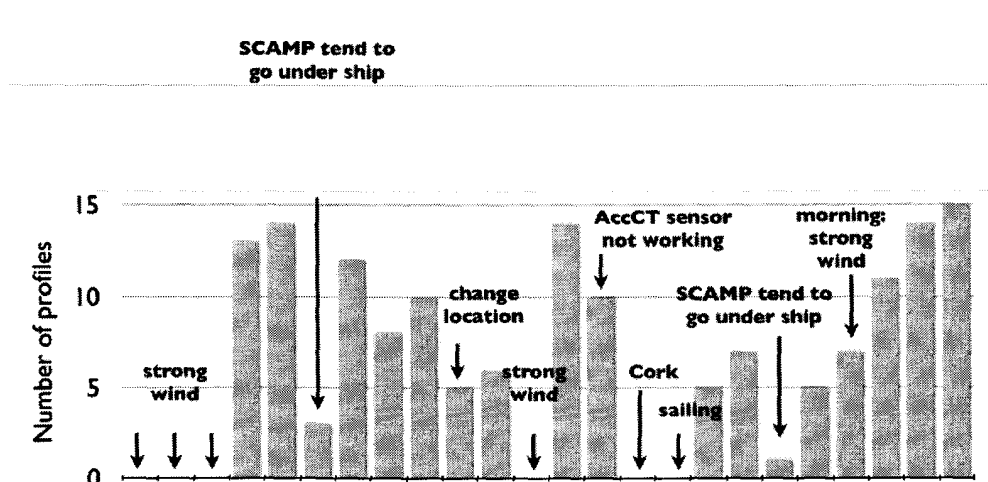
## Vertical turbulence, POC, PON and DOC

- *Henk Dijkstra, Elena Jurado, Michelle Tigchelaar, Jessica Loriaux* -

### **Microstructure measurements C-T-D (conductivity-temperature-depth) with SCAMP.**

During the cruise, high-resolution vertical profiles of temperature, pressure (depth), conductivity of the first 90 m of the water column have been measured with SCAMP, a free-fall microstructure profiler.

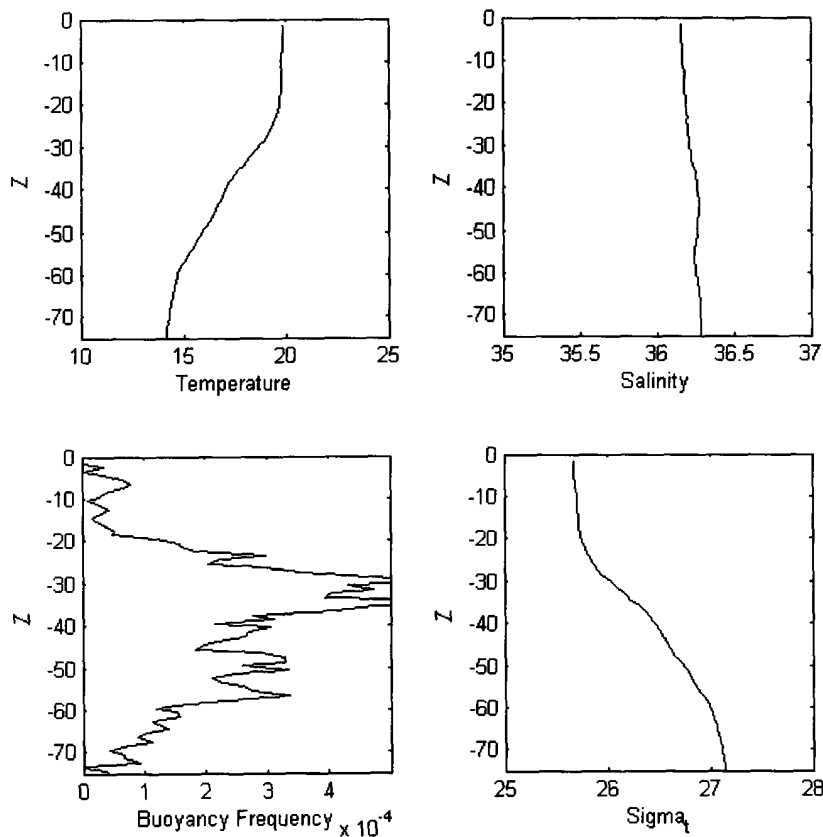
Because the intermittent nature of turbulent events a large number of these profiles needs to be collected in order to obtain statistically robust and unbiased estimates of mean quantities of turbulent parameters. Figure 4 shows the number of profiles taken per day, summing up a total of 160 profiles and average depth of 70 m.



**Figure 4.** Number of SCAMP profiles per day during the cruise PELAGIA Jul -Aug 09

Problems were encountered when strong wind conditions didn't allow the recovery of the instrument or forced the instrument to go under the ship. Due to its low falling velocity, SCAMP tended to drift away from the ship, imposing practical limitations as long time periods to obtain the profiles and a limitation in depth. In this context, the winch used with the instrument, property of NIOZ, with longer rope than the one provided with the SCAMP, constituted a success, since it allowed to measure deeper depths and allowed an easy recovery from the deck.

In the following picture (Figure 5) are shown the typical variables measured with the SCAMP and averaged over the 12 profiles recorded the 23th July. In addition, are depicted derived quantities such as density ( $\sigma\text{-T}$ ) and the buoyancy frequency ( $N^2$ ). Results of temperature and salinity, also recorded by the CTD but in a lower vertical and temporal resolution, fit well.

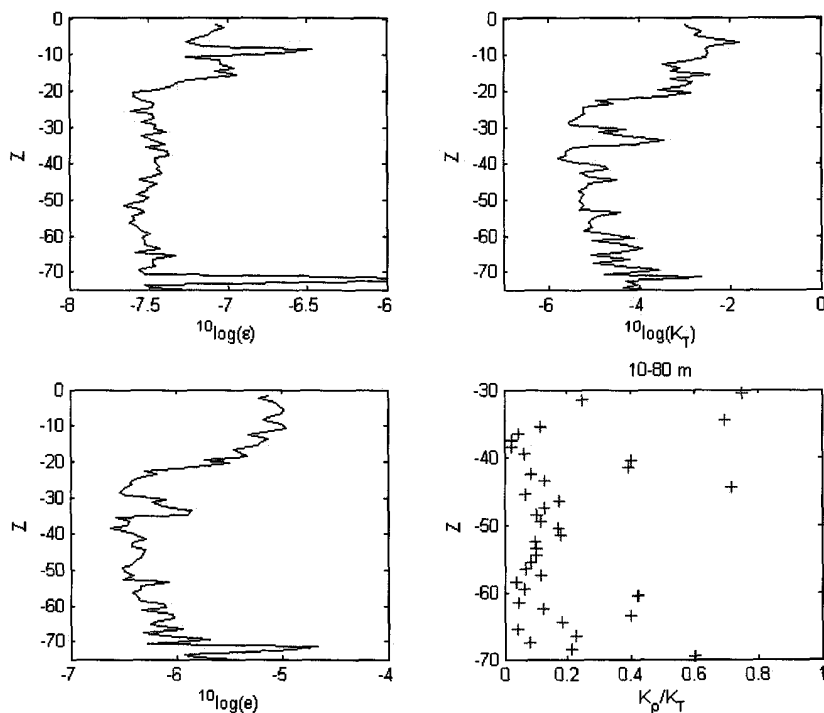


**Figure 5.** Averaged temperature, salinity, buoyancy frequency ( $N^2$ ) and Sigma-T profiles recorded by SCAMP the 23 July.

Furthermore, the turbulent dissipation rate  $\varepsilon$ , the vertical diffusivity of heat  $K_T$ , the turbulent kinetic energy  $e$  and the ratio between the vertical diffusivity of mass  $K_\rho$  and  $K_T$  have been calculated from the SCAMP microstructure profiles (Figure 6). This figure suggests an enhanced mixing in the mixed layer and possible phenomena of convection or breaking internal waves below the mixing layer.

On a longer time period, the aim of SCAMP measurements is to explain the effects of vertical mixing to the distribution of phytoplankton on the water column.





**Figure 6.** Averaged turbulent dissipation rate  $\epsilon$ , vertical diffusivity of heat  $K_T$ , turbulent kinetic energy ( $e$ ) and ratio between the vertical diffusivity of mass  $K_\rho$  and  $K_T$  profiles recorded by SCAMP the 23 July.

#### POC, PON and DOC.

Three water samples at different depths, corresponding roughly to the Deep Chlorophyll Maximum (DCM), mid mixed layer, and below DCM were taken from the 8 AM CTD. These have been used to determine both Particulate Organic Carbon and Nitrogen (POC/PON) and Dissolved Organic Carbon (DOC) by vacuum filtration through GF/F filters of  $0.7 \mu\text{m}$ .

These measures will be used to analyse water colour and verify the accuracy of the biological models to be coupled to the already existing physical model from subproject 1 (SPFLAME).

## Optical measurements

- Hans vd Woerd -

The objective for the collection of optical measurements is to establish a validation set to adapt and test the robustness of new satellite products for Chlorophyll and Primary Production retrieval. The validation set consists of optical field data and laboratory analysis of the bio-optical properties. During the STRATIPHYT cruise the following measurements were made to characterize the optical properties of the North-East Atlantic waters: Remote Sensing Reflectance (Rrs), Aerosol Optical Thickness (AOT), Particulate Organic Carbon (POC) concentration, specific absorption of phytoplankton ( $a^*_{ph}$ ) and pigment concentrations (HPLC). In addition, four CTD measurements (PAR irradiation, attenuation, Fluorescence and backscatter) were interpreted to characterize the underwater light field.

### **Remote Sensing Reflectance (Rrs)**

At each station that was visited during the day, the Remote Sensing reflectance was determined by the use of two photospectrometers: The PR650 (PhotoResearch inc.) and the WISP-3 (Water Insight). The PR650 is a handheld instrument that is subsequently pointed at the water, sky and a calibrated diffuse reflection panel. These measurements were carried out in multiple triples to derive for each station an average remote sensing reflection spectrum between 380 and 780 nm with a wavelength resolution of 4nm. The WISP instrument is a prototype that integrates the three observations of water, sky and irradiance in one instrument. The wavelength resolution is 4 nm over an interval of 350-950 nm. At each daylight station up to 15 spectra were collected. All spectra were collected with an azimuth angle from the sun of approximately 135 degrees, to minimize the effect of scattering at the surface and high backscatter from particles in the water.

### **Satellite Near Real Time data**

At clear sky conditions the spectral measurements from the deck of the PELAGIA were collected within one hour from the time of overpass of the satellite instruments MERIS (ESA) or MODIS AQUA (NASA). These Ocean Colour instruments have different orbits and pass over typically between 11 and 13 hours UTC. The weather conditions were rather unfavorable for the collection of so-called match-up measurements. In addition, fully processed CHL-a maps were transferred to the Pelagia from the GlobColour site of ESA/ACRI within two days from overpass.

### **Aerosol Optical Thickness (AOT)**

Weather permitted, the optical thickness from the aerosol in the atmosphere was measured with the MICROTOPS II, a sun photometer from Solar Light Co. This instrument measures the solar spectrum in 5 wavelength bands at 440, 500, 675, 870 and 936 nm. The spectrum is corrected for the influence Rayleigh scattering as function of Solar Zenith Angle and barometric pressure. These measurements are compared to the AOT as provided by the atmospheric correction routines from NASA and ESA.

### Down-welling irradiation

Three instruments were operated to measure the down-welling irradiance. A continuous recording of the full solar radiation spectrum between 305 and 2800 nm was made with a CM11 Secondary Standard Pyranometer (SCI-Tec/ Kipp & Zonen). With each CTD cast two PAR measurements were recorded 24 times per second. A linear irradiance sensor from SATLANTIC measured the above water PAR (400-700). This information was compared to the measurements made with the PAR LOG 7000 SATLANTIC sensor under water. Thus the variations in illumination conditions by clouds could be corrected for. The ratio of the two measurements resulted in an accurate reconstruction of the PAR attenuation curve at each CTD cast.

### Attenuation, fluorescence and backscatter

On the CTD frame the following three optical instruments were operated. An AQUATRACKA MKIII fluorimeter from Chelsea Technologies group Ltd that has a linear response to the concentration of Chlorophyll-a and therefore provides information on the main absorber in the water column. Combined with the specific spectral absorption of the algae ( $a^*_{ph}$ ) that will be measured in the laboratory, the absorption of PAR at each depth can be reconstructed. The attenuation (C) was measured at 660 nm with a C-star from WETlabs with a path length of 25 cm. In addition a measure of scattering at each depth was provided by a SeaPoint Turbidity OBS measurement. This instrument measures the backscatter by algae, POC and Zooplankton at 880 nm. An example of the co-variation between PAR, C-star, Fluorimeter and OBS is provided in Figure 7.

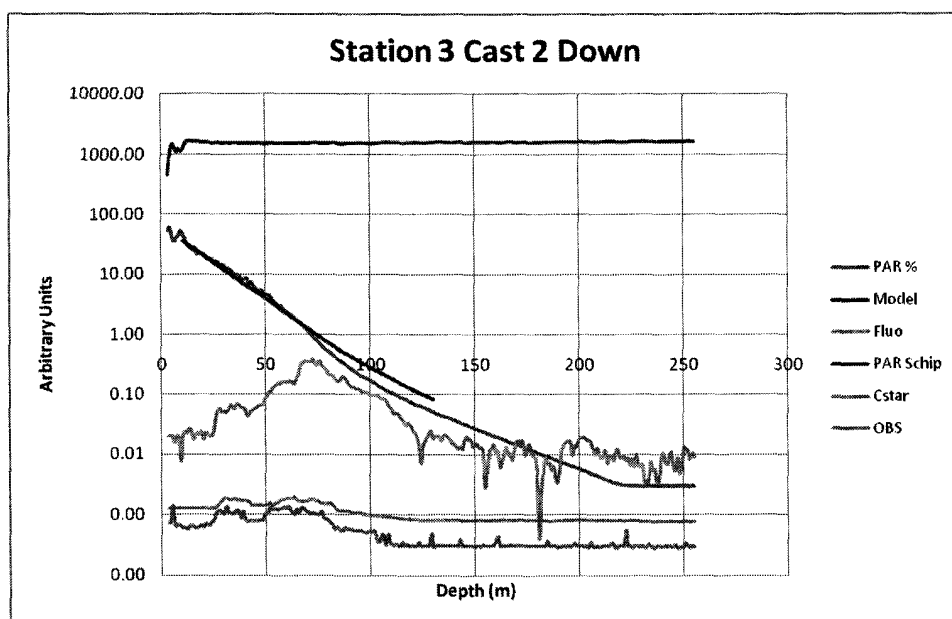


Figure 7. Reconstruction of the attenuation of PAR as function of depth. The light-blue curve shows the PAR attenuation (in percent) from the surface PAR (upper purple curve) that was constant during the down cast. Notice the marked drop in attenuation below the DCM at 70 meters depth where PAR is at the 1% level.

## Flow cytometric abundances of phytoplankton, bacteria and viruses

**- Anna Noordeloos, Jan Finke and Corina Brussaard -**

For all stations, each CTD and each depth, samples were taken for phytoplankton, bacteria and viruses.

Phytoplankton samples were measured fresh using flow cytometry. Fresh phytoplankton populations were discriminated using red chlorophyll autofluorescence and scatter. Species/group composition was characterised based on the cellular bio-optical properties, including forward- and side scatter and chlorophyll fluorescence, of the algal cells. Figure XXX shows two examples of different populations dominating the pico- and nanophytoplankton community; the more nutrient-limited oligotrophic waters sampled during leg 1 show the dominance of very small-sized phytoplankton. Serial fractionation of 10 mL of the natural community using 8, 5, 3, 2, 1, 0.8 and 0.4  $\mu\text{m}$  pore-size PC filters showed that most cells detectable using flow cytometry were  $< 2 \mu\text{m}$  in diameter. In contrast, the phytoplankton during leg 2 – with enhanced nutrient concentrations and reduced mixed layer depth – showed an increase in larger-sized algae and the loss of the smallest picophytoplankton (Prochlorococcus). It has to be noted that the weather conditions during leg 2 strongly reduced the % light penetrating the water as there was generally a heavy cloud cover during the full day. Therefore, the abundance of algae in surface waters during leg 2 reduced strongly with depth. In contrast, the day length (the time period there is light) was of course much higher than in the southern part of the cruise (leg 1, subtropical waters). This will have helped the algae to sustain sufficient light for optimal growth.

Furthermore, additional samples from various assays and experimental incubations were analysed and/or sampled and fixed. Phytoplankton abundance was determined on direct counts of fresh samples in order to prevent potential loss of cells due to fixation. Still, at each main station all depths sampled at the 8.30 AM CTD-cast were also fixed using formaline (18% v/v) buffered with hexamine (10% w/v) for 30 min at 4°C after which the samples were flash frozen and stored at -80°C.

Samples for bacterial and viral abundances were fixed with glutaraldehyde (25% EM-grade) to a final concentration of 0.5% for 15-30 min at 4°C, after which the samples were flash frozen and stored at -80°C. Fixed samples will be analyzed in the home laboratory upon completion of the cruise.

The basic instrument applied for single-cell analysis of the phytoplankton community was a bench top flow cytometer, Becton Dickinson FacsCalibur. The instrument is equipped with a 15mW Argon laser (488 nm excitation), which has an emission in the green, orange, and red. In addition, forward and side (90°) light scatter are collected. Counts were performed with MilliQ as the sheath fluid at a flow rate of approximately 60-90  $\mu\text{l}/\text{min}$  (determined daily) for 10 minutes.

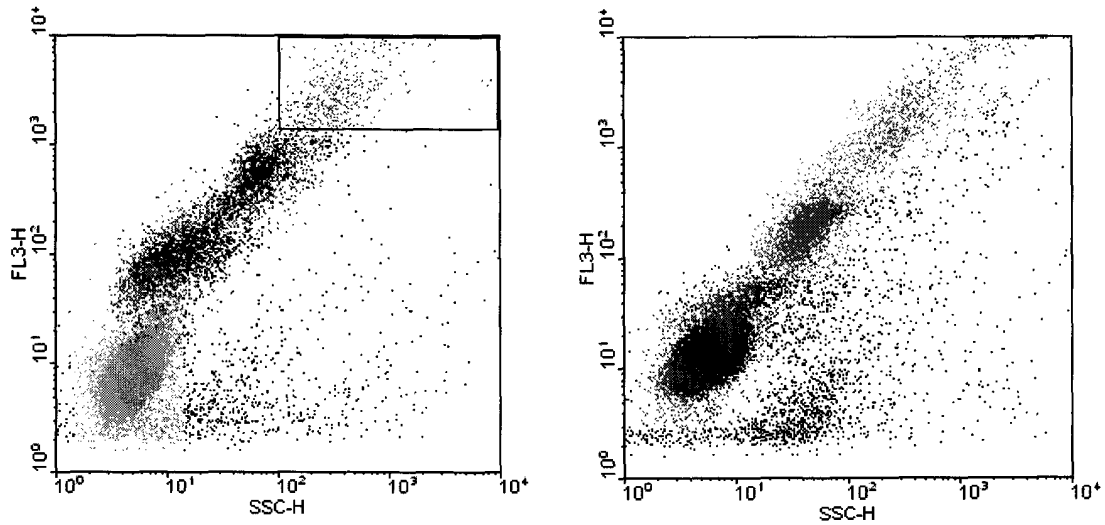


Figure 8. Flow cytometric dot plots showing the various different algal populations for a representative station with Deep Chlorophyll Maximum (station 10, leg 1) and a northeastern station with high Chlorophyll signal at the surface (station 30, 10 m; leg 2). Note that the second plot has a reduced settings as the sample contained no tiny picophytoplankter (green colored population in plot 1) but did contain a relatively large number of larger-sized algal populations (colored orange and green). The sample displayed in plot 1 did not have such larger algal populations when checked with lower settings. The red colored population represents the cyanobacteria.

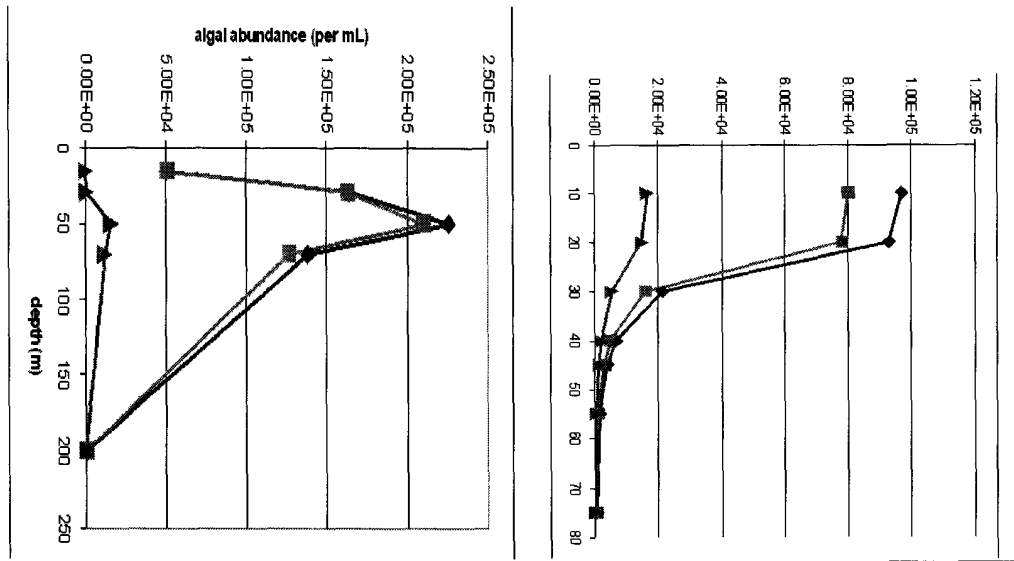


Figure 9. Depth profiles of algal abundance from station 10 (leg 1) and station 30 (leg 2), representing stations with the maximum Chlorophyll signal in the deep and at the surface. Dark blue represents total algal abundance as counted using flow cytometry ( $<20 \mu\text{m}$ ); light blue represents the cyanobacteria and the pink line represents the rest of the algal populations. Station 10 (first plot) is dominated by prokaryotic *Prochlorococcus*, whereas station 30 (second plot) is dominated by pico- and nano-eukaryotes. Note the difference in scale for the Y-axis as well as the X-axis.

## Algal fluorescence measurements and enzyme activities

- Klaas Timmermans and Bas vd Wagt -

### **Algal fluorescence measurements.**

Measurements were made of autofluorescence ( $F_0$ ), maximum fluorescence ( $F_m$ ) and photosynthetic efficiency ( $F_v/F_m$ , with  $F_v$  the variable fluorescence) using a Walz (Walz, Germany) WATER-PAM. All stations and all casts were sampled for all depths. Measurements were made in triplicate in dark adapted (15 minutes minimum) samples.

Autofluorescence is an overall measure of phytoplankton biomass, including the whole population from large to small cells. The photosynthetic efficiency is an indicator of the physiological performance of the phytoplankton, with values of 0.6 to 0.7 typical for "healthy" phytoplankton. In addition, measurements for onboard assays and tests were performed.

A preliminary analysis of the measurements of the depth profiles show a clear distinction between stations with a Deep Chlorophyll Maximum (DCM) in the southern part of the cruise (leg 1) and stations without a DCM during leg 2 where the highest Chlorophyll autofluorescence signals were found in the surface layer. Typical examples of both situations are depicted in Figure 10.

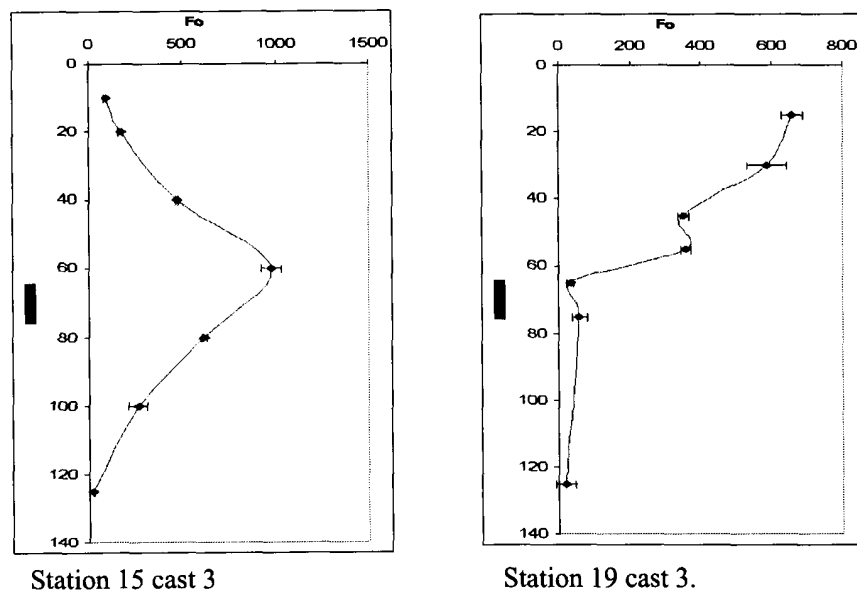


Figure 10.  $F_0$  (X-axis, autofluorescence in relative units) versus depth (Y-axis, m) for A) Station 15 cast 3 and B) Station 19 cast 3.

The photosynthetic efficiency showed considerable variability, sometimes the maximum coincided with maxima of  $F_0$  and  $F_m$ , more often the maxima appeared to be somewhat below the chlorophyll maximum.

The results of the fluorescence measurements will be topic of further interpretation in the months to come. All results are in the cruise database, and are available for the cruise participants.

### **Measurements of activity of alkaline phosphatase (APA) and nitrate reductase (NRA).**

During leg 1 no enzyme activity measurements were possible due to the breakdown in the spectrofluorimeter. A new spectrofluorimeter was shipped to Cork, and during the second leg, from Cork to Reykjavik, APA and NRA measurements were performed. Unfortunately, both phosphate and nitrate concentrations during leg 2 were relatively high, resulting in extreme low enzyme activities.

The APA measurements, using MUF-P method (\*) worked well. In the field, low APA was measured. When water was incubated during several days, and as a result P depletion was induced in the phytoplankton, increased APA was measured (no data shown). The NRA measurements, using the NADH method (\*\*), on the contrary, had methodological problems.

*\* MUF-P method: alkaline phosphatase removes the P from MUF-P (non-fluorescent) resulting in MUF (fluorescent) formation. This method only works well in P-depleted waters, using fluorescent measurements (excitation 365 nm, emission 455 nm). APA was measured in untreated samples or samples concentrated for phytoplankton using filtration.*

*\*\* NADH method: reduction of NADH is assumed to be proportional to reduction of nitrate to nitrite. Reduction of NADH is measured spectrophotometrically (340 nm) in sonicated phytoplankton cells, suspended in phosphate buffer (pH 7.9). As the measurement is spectrophotometrically, especially remaining debris of cells caused a noisy signal. This method needs further improvement.*

### Primary production phytoplankton

**- Jan Hegeman and Willem vd Poll -**

Phytoplankton productivity was determined at every main station by spiking samples with  $^{14}\text{C}$ . At first two methods were tested and compared using the algal community from the oligotrophic waters of the first stations with very low algal biomass. The incubator with an artificial lightsource was finally chosen instead of the deck-incubator (better temperature control possible for the samples from the Deep Chlorophyll Maximum). For two depths, samples were incubated under a range of light intensities (10; from 2 to  $\sim 700$   $\mu\text{mol photons}$ ) for 3 h. The resulting photosynthesis – irradiance relationship, combined with chlorophyll, spectral absorption cross section (here called  $a^*_{\text{ph}}$ ), and POC data can be used to calculate the maximal carbon incorporation per chlorophyll per hour.  $A^*_{\text{ph}}$  stands for the absorption between 400 and 700 nm, determined with spectrophotometer with integrating sphere, before and after bleaching the filter. This parameter can also be used to refine Chlorophyll a estimations from satellites.

Transparent scintillation vials were filled with 5 mL seawater of the first CTD-cast (6 AM) on almost every day and to each vial 10 microcurie sodiumbicarbonate was added. The same procedure was done with 13 samples each of two sample bottles. In two of the 13 vials 250  $\mu\text{L}$  6N HCl was added and these were left in the fumehood to let the  $^{14}\text{C}$  evaporate. The other 11 vials were placed in the incubator on fixed places with a known light value. After 3 h incubation photosynthesis in the light-bottles was also stopped with HCl and left in the fumehood until the next morning. Then for all vials the acid was neutralized with 250  $\mu\text{L}$  6N NaOH, closed and stored frozen to be measured in the lab on Texel.

## Phytoplankton community structure, photo-acclimation and lipid composition

- Willem vd Poll, Gemma Kulk and Freek vd Heuvel -

Phytoplankton species composition was determined by obtaining samples for pigment composition from different depths at every station. After analysis by HPLC, Chlorophyll a will be used as an indicator for algal biomass (to be correlated to the fluorescence data from the CTD). Furthermore, specific marker pigments can reveal the presence of certain species. Using the CHEMTAX program, the contribution of these species to the total population can be estimated. In addition, pigment composition gives information on the photoacclimation status of algae (i.e if they are acclimated to high or low light). To further investigate this experiments were performed to determine the capacity of the algae to deal with short high light exposure. The recovery kinetics of algal Chlorophyll autofluorescence in low light (determined by a PAM) after a short exposure to high light reveals the capacity of algae to photosynthesize and survive under high light conditions. Information on the photoacclimation state of individual algal species is needed to make a reliable estimates with the CHEMTAX program.

On main station samples (100 ml) were collected along the depth gradient and fixed with Lugol for microscopic determination of the species composition.

In addition, samples for DNA analysis (DGGE) were obtained at every main station. A DGGE gel can reveal species richness in samples. After sequencing, species can be identified. HPLC and DGGE results will be compared to microscopic analysis of Lugol-fixed samples, and flow cytometry data.

Finally, samples were obtained for lipid analysis. Poly unsaturated fatty acids (PUFAs) will be determined in these samples by GC/MS. These lipids are crucial components in the diet of grazers (copepods, salps, etc). Therefore, PUFA content, normalized to Chlorophyll a can be used as an indicator for the nutritional value of the sample for grazers.



## Phytoplankton viral lysis and microzooplankton grazing rates

- Kristina Mojica, Douwe Maat, Jan Finke and Corina Brussaard -

Using the adapted dilution method by Baudoux et al. (2005), microzooplankton grazing and virally induced mortality can be estimated simultaneously. The principle is that the removal of predators (grazers and viruses) by dilution allows the algal cells to increase in standing stock over the measured 24 h period. The difference in algal concentration over the period; therefore, provides an estimate of algal growth rate. Plotting the growth rate against the dilution, the slope of the linear regression represents the loss rate. Depending on the type of diluent (either grazer-free or grazer and virus-free) the microzooplankton grazing rate and the viral lysis rate can be obtained (see Fig. 11). Statistical analysis is used to test the significance of the slope.

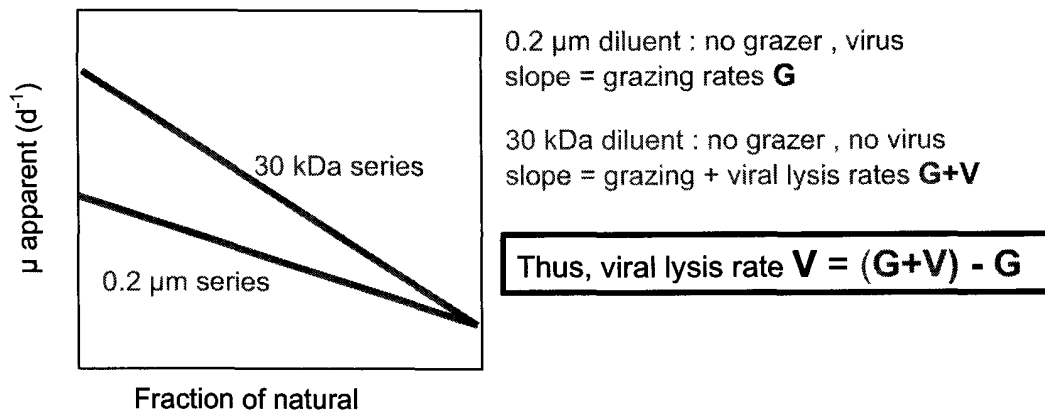


Fig. 11. Dilution method principle.

The method was applied to water collected from one depth at every main station (typically the DCM at 70-100 m depth during leg 1 and the mid Mixed Layer at 10-20 m depth during leg 2). A series of dilutions were prepared to measure 24 h loss rates in the pico- and nanophytoplankton. For each experiment, 40 L of natural seawater obtained from the 6 AM CTD-cast. Ten liters of the collected water was filtered through an AcroPak 200 SUPOR membrane filters with a pore-size of 0.45  $\mu\text{m}$  to produce grazers-free water. Ten liters of collected water was also filtered using Vivaflow 200 cartridges (Sartorius) with a 30 KDa cutoff to produce grazers and virus-free water, which provides the loss rate of grazing and viral lysis. From the difference between the two dilutions series the actual virally mediated algal mortality rate can be calculated. Using 1 L polycarbonate incubation bottles, natural water (very gently reverse sieved through 200  $\mu\text{m}$  mesh-size) was diluted with the 0.45  $\mu\text{m}$  and 30 KDa filtrate to 100, 70, 40 and 20% of the total volume (all dilutions in triplicate). Care was taken to do this as gently as possible. Subsamples for algal abundance were taken at T=0 and T=24, the phytoplankton was measured fresh using the bench top flow cytometer. Typically, also samples for bacterial and viral abundances were taken, fixed (0.5% glutaraldehyde final concentration), flash frozen and stored at -80°C. Bottles were placed in an on-deck incubator at in situ temperature and irradiance (using variable numbers of screens, each reducing the intensity with 50%, depending on the natural % PAR at the specified depths). Sample and data processing and will be done back at the homelab subsequent to the cruise.

## Determination of lytic / lysogenic viral infection and grazing of prokaryotes

**- Kristina Mojica, Tea de Vries and Corina Brussaard -**

The algal community in oligotrophic waters typically consists of very small-sized organisms, including cyanobacteria. These cells are eaten by small-sized heterotrophic nanoflagellates, as are the heterotrophic bacteria. The prokaryotes (heterotrophic bacteria and cyanobacteria) are known to be subject to lytic as well as lysogenic viral infection modes. The latter seems dominant in the oligotrophic waters. Therefore, we set up a series of experiments that would provide us with both the lytic and the lysogenic virally induced mortality rates. At every main station, 2-3 depths (below DCM, DCM and Mixed Layer) were sampled from the 8.30 AM CTD cast. Occasionally, during two 24 h stations, samples were also taken in the afternoon (4 PM) and the evening (8.30 PM).

Rates of lytic viral infection were determined according to the method of Winget et al. (2005). Briefly the bacterial fraction was concentrated and resuspended in virus-free water generated by tangential flow filtration (an adaptation of the Wilhelm et al. methodology). Samples (50 mL in triplicate) were incubated at in situ temperature and light regime. In this way further infection of the bacteria was prevented and the level of lytic infection in the existing population could be determined by monitoring the production of new viruses and loss of bacteria. Samples were fixed (0.5% glutaraldehyde final, for 15-30 min at 4°C) and flash frozen for bacterial and viral enumeration every 3 h for 12 h, as well as after 24 h incubation. Rates of lysogenic infection were determined by preparing addition replicates and adding the antibiotic Mitomycin C at a final concentration of 1 µg per mL to trigger the lytic production of any lysogenic phage incorporated into the bacterial population. A 0.2 µm filtered treatment was prepared to monitor for viral loss due to the experimental set-up. Results from these experiments will become available after the flow cytometric analysis of bacterial and viral abundances back at the laboratory.

Additionally, grazing of bacteria was investigated by filtration experiments; filtrate < 0.8 µm was incubated in triplicate and will be compared to whole water incubations (also in triplicate). By comparing the abundance of bacteria in whole water and filtrate incubations the grazing on bacteria can be estimated. Also here, the samples were incubated under the temperature and approximate light conditions of the water depth at the collection station. Subsamples were taken at regular intervals for bacteria and viruses counts, these samples were flash frozen after glutaraldehyde (0.5%) fixation for 15-30 min at 4°C. Samples will be analysis by flow cytometry at the laboratory.

## Grazing experiments using fluorescently labelled prey

- Govert van Noort -

A different approach of determining the grazing rates of bacteria, cyanobacteria and algae (10 µm cell diameter) by heterotrophic nanoflagellates (HNF) and microzooplankton was investigated using green fluorescently labeled prey. Fluorescently labeled prey was gently combined with whole water in 1 L incubations at approximately 10 % of the natural concentration. Grazing was determined by monitoring the concentration of labeled prey at the start of the experiment and after a 24 h incubation at *in situ* temperature and light. The analysis was completed by preparation of filters at the start of the experiment and after 24 h, to be counted using epifluorescence microscopy (organisms will be distinguished based on their green fluorescence). The experiments were conducted at 2-3 depths (below DCM, DCM and Mixed Layer) for the fluorescently labelled bacteria (FLB) and cyanobacteria (FLC) and only for the upper two depths for the algae (FLA). Each main station was sampled for and for the two 24 h stations also an evening series was prepared. Sampling was then at the start and after 12 h incubation. Filters are stored at -20°C until further analysis at the home laboratory.

Additionally, samples for the abundance of HNF and microzooplankton community structure and abundance were taken and fixed. Glutaraldehyde fixed HNF (1% final using 10% working fixative stock) were filtered through 0.2 µm filter and stored for at -20°C. Samples for microzooplankton (using brown glass bottles) were fixed with Lugol and stored in the dark at 4°C until further analysis.

## Abundance and diversity of viruses

- Kristina Mojica and Corina Brussaard -

As part of the cruise viral DNA/RNA samples were collected from 2-3 depths at every main station to investigate the genotypic composition of the viral community. We used 3 different manners to collect samples of the viral community: (1) by concentrating typically 10 L of whole seawater by tangential flow filtration using Vivaflow 200 cartridges (Sartorius) with a 30 KDa cutoff, (2) by concentrating 3-10 L of seawater were filtered onto 0.22 µm pore size Sterivex-GP filters (Millipore), and (3) by filtering through 0.2 µm pore-size PC filters. Subsamples of the viral concentrates received an addition of Tween80 (37 µL of 10% to 50 mL sample), after which the sample underwent slow speed centrifugation for 30 min (7500 rpm) and the supernatant was flash frozen and stored at -80°C. Other subsamples of the viral concentrates received 10% glycerol after which flash frozen and stored at -80°C. Another part received both the Tween80 and the glycerol. Several samples were treated with PEG6000 instead in order to allow the viruses to precipitate (up to 3 days at 4°C), after which the samples were placed in a centrifuge and the precipitate was resuspended in 50 mM Tris-buffer and stored at 4°C. The filters were snap frozen in liquid nitrogen and stored at -80°C. All analysis will be done in the home laboratory; using Pulsed Field Gel Electrophoresis (PFGE) and/or standard and quantitative PCR, denaturing gradient gel electrophoresis (DGGE) and sequencing techniques. Specific primer/probes for algal viruses will be used.

Furthermore, samples were taken for screening of infectious algal viruses back at the home insitutue (NIOZ) using the algal culture collection of the NIOZ. These whole water samples

were obtained from 2-3 depths and are stored at 4 °C until further processing. To increase the chance of virus isolation, we also cultured whole water samples from onboard incubations (see section on Translocation experiments) at the *in situ* temperature, light intensity and light:dark regime. To half of the sample nutrients (most importantly, nitrate and inorganic phosphate) were added in order to accommodate sustained growth during the length of the cruise.

### Bacterial secondary production

- Jan Hegeman -

Heterotrophic bacterial secondary production was measured using tritium-labeled leucine. Maximum three depths were sampled (below DCM, DCM and Mixed Layer) at each main station from the 08.30 AM CTD cast. Seawater was added in to sterile 10 mL tubes (Greiner Inc) in triplicate. To one of these three tube 0.5 mL formaldehyde (37%) was added in order to kill the bacteria ("blank"). Then 30  $\mu$ L  $^3$ H-Leucine was added in each vial. This is 50 microCurie per vial. Starting with station 19, 20 microliter was added, because the leucine was used to fast. After an incubation of two hours the growing was stopped with formaldehyde and the samples were filtrated on 25 mm polycarbonate filters with a pore-size of 0.2  $\mu$ m. After rinsing with 5% trichloroacetic acid and seawater, the filters were stored frozen in scintillation-vials to be measured in the lab on Texel.

### Mesozooplankton secondary production and biomass

- Swier Oosterhuis -

During leg 2 of the Stratiphyte cruise (July 31<sup>st</sup> –August 11<sup>th</sup> 2009), mesozooplankton were collected using a vertical net with a net opening of 0.354 m<sup>2</sup> and equipped with a 300  $\mu$ m mesh sized net. The sampled depth layer was typically from 0 to 100 meter. Usually 4 net catches were done at each station, two for grazing experiments, a third one for total biomass and taxonomy collection, and a fourth one for a third party (foraminifera analysis). To cope with the day/night variation in grazing, experiments were done in the morning and in the evening.

Mesozooplankton grazing rate assays were performed by means of two approaches. Firstly, zooplankton was added to a 10 L container filled with water from the mixed layer and then incubated for a period of approximately 10 h in the dark. At the start and at the end of the incubation, algal pigment samples (to be analysed using HPLC) were taken to estimate the difference in Chlorophyll a content by the action of the zooplankton. Also the zooplankton was recollected for taxonomy and biomass. A second 10 L container was incubated at the same way without the zooplankton and acted as control vessel.

Secondly, a zooplankton starvation experiment was done where a zooplankton catch was split in several more or less equal parts and added to bottles filled with GF/F (0.7  $\mu$ m nominal pore size) filtered seawater (filtrate from HPLC filtrations). The zooplankton from the bottles was collected at discrete time intervals and frozen at -80°C for later Chlorophyll a (Phaeophytine) gut contents analysis at the lab. From the rate of gut contents loss with time and the initial gut content, the grazing (ingestion) rate can be calculated.

## Translocation experiments

**- Klaas Timmermans, Willem vd Poll, Kristina Mojica, Hans van der Woerd and Corina Brussaard –**

In order to manipulate the phytoplankton growing conditions and to simulate enhanced or reduced mixing in the surface layers, so-called translocation experiments were performed during the cruise. In total 5 experiments (A, B, C, D, E) were executed. For each experiment a dedicated CTD cast was taken to collect water from 500 m depth (nutrient-rich water, hereafter “deep water”) and water from 5 m below the maximum Chlorophyll autofluorescence signal (“surface water”) was collected. Upon recovery of the CTD on board, water from the Go-Flo bottles was used to fill the 20 L polycarbonate incubation bottles. Each bottle received 10 L of unfiltered surface water. This water contained the phytoplankton inoculum for the experiment. Next, 4 bottles were amended with filtered deep water, simulating a nutrient pulse. Finally, 4 incubation bottles received 10 L of filtered surface water. In the incubators on the aft deck of Pelagia, 4 bottles were placed in the high light incubator (15% of surface PAR), 4 bottle in the low light incubator (8% of surface PAR). The reduction of light was achieved by applying mosquito maze and/or a floor mat.

Overview and coding of the different conditions in the translocation experiments:

LL:	Low Light, surface phytoplankton filtered surface water (duplo),
HL:	High Light, surface phytoplankton, filtered surface water (duplo),
LL mix:	Low light, surface phytoplankton filtered deep water (duplo),
HL mix:	High Light, surface phytoplankton, filtered deep water (duplo).

The incubators were connected to the ship’s seawater inlet system, thereby maintaining surface seawater temperature during the time of the incubations. Typically, an experiment lasted 5 days. The following measurements were done daily: flow cytometry (phytoplankton, bacteria and virus enumeration), dissolved nutrients (NO<sub>x</sub>, NO<sub>2</sub>, PO<sub>4</sub>, NH<sub>4</sub>), Chlorophyll fluorescence measurements (autofluorescence F<sub>0</sub>, maximum fluorescence F<sub>m</sub> and photosynthetic efficiency F<sub>v</sub>/F<sub>m</sub>, with F<sub>v</sub> the variable fluorescence). At the end of the incubations the following additional samples were collected for pigment analysis using HPLC, species composition by DGGE and light microscopy after Lugol fixation, and viral DNA/RNA (primer/probe analysis).

A clear distinction was seen in the autofluorescence (F<sub>0</sub>) signals in the translocation experiments performed in the south (leg 1) and further north of the cruise track (see Figure 12). In translocation experiment A (southern part of the cruise: nutrient depleted surface water), mixing with deep water resulted in the highest F<sub>0</sub> values (HL mix) after 5 days of incubation. In contrast, in translocation experiment C (started with non-nutrient depleted water northern part of the cruise) the light climate determined the final results: in the HL incubations the highest F<sub>0</sub> values were measured, irrespective of addition of nutrients or not.

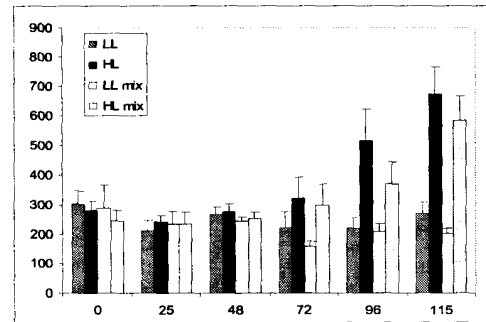
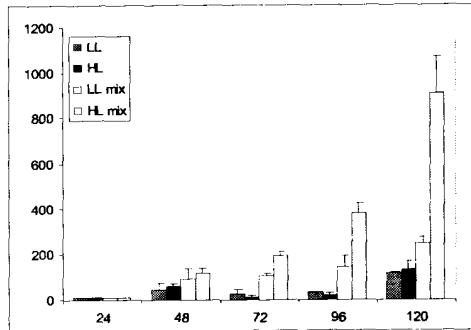


Figure 12. Autofluorescence  $F_0$  (average and standard deviation,  $n=3$ , in relative units) versus time (hours) for translocation experiment A (left plot) and translocation experiment C (right plot). For coding of the different treatment see text above.

## **APPENDIXES**

Appendix I. Logbook ship's scientific activities STRATIPHYT cruise 2009

Appendix II. Instruments configuration file STRATIPHYT cruise 2009

Appendix III. Masterfile STRATIPHYT cruise 2009

Appendix IV. Onboard database STRATIPHYT cruise 2009

1	2	3	4	5	6	7	8	9	
1	Stratiphyt - 64PE309								
2									
3	Station/ Track	Cast/ Action	Type	Event	Date/ Time	Lat	Lon	Diepte	Remark
4									
5	1	1	Clean CTD	Begin	Jul 17 2009 05:05:07	30,01492	-15,06905	3317	test station
6	1	1	Clean CTD	Bottom	Jul 17 2009 06:00:54	30,01512	-15,07131	3317	
7	1	1	Clean CTD	End	Jul 17 2009 06:05:38	30,01432	-15,06988	3317	
8	1	2	Clean CTD	Begin	Jul 17 2009 07:56:15	30,01435	-15,06862	3317	
9	1	2	Clean CTD	Bottom	Jul 17 2009 08:02:35	30,01468	-15,06938	3317	250mtr
10	1	2	Clean CTD	End	Jul 17 2009 08:22:57	30,01448	-15,06967	3317	
11	1	3	Clean CTD	Begin	Jul 17 2009 12:55:48	30,01532	-15,06912	3310	
12	1	3	Clean CTD	Bottom	Jul 17 2009 13:07:49	30,01462	-15,07165	3317	250mtr
13	1	3	Clean CTD	End	Jul 17 2009 13:26:05	30,01745	-15,07335	3317	
14	2	1	Clean CTD	Begin	Jul 18 2009 05:02:58	31,22085	-14,86552	3317	
15	2	1	Clean CTD	Bottom	Jul 18 2009 05:20:34	31,22087	-14,86588	3317	500 mtr
16	2	1	Clean CTD	End	Jul 18 2009 05:49:01	31,2208	-14,86502	3317	
17	2	2	Clean CTD	Begin	Jul 18 2009 07:09:11	31,22085	-14,86583	3317	
18	2	2	Clean CTD	Bottom	Jul 18 2009 07:16:40	31,22145	-14,86602	3317	255mtr
19	2	2	Clean CTD	End	Jul 18 2009 07:38:40	31,22078	-14,86692	3317	
20	2	3	Clean CTD	Begin	Jul 18 2009 10:07:21	31,22083	-14,86627	3317	
21	2	3	Clean CTD	Bottom	Jul 18 2009 10:15:04	31,22138	-14,86545	3317	252mtr
22	2	3	Clean CTD	End	Jul 18 2009 10:30:31	31,2217	-14,8661	3317	
23	2	4	Clean CTD	Begin	Jul 18 2009 12:59:05	31,22182	-14,8666	3317	
24	2	4	Clean CTD	Bottom	Jul 18 2009 13:18:55	31,22108	-14,87052	3317	501mtr
25	2	4	Clean CTD	End	Jul 18 2009 13:40:20	31,22238	-14,87118	3317	
26	3	1	Clean CTD	Begin	Jul 19 2009 04:58:43	32,82408	-14,58918	3317	
27	3	1	Clean CTD	Bottom	Jul 19 2009 05:20:14	32,82432	-14,5886	3317	500 mtr
28	3	1	Clean CTD	End	Jul 19 2009 05:36:17	32,82427	-14,58897	3317	
29	3	2	Clean CTD	Begin	Jul 19 2009 07:38:37	32,82468	-14,58897	3317	
30	3	2	Clean CTD	Bottom	Jul 19 2009 07:43:55	32,8241	-14,5893	3317	250 Mtr
31	3	2	Clean CTD	End	Jul 19 2009 08:00:00	32,82417	-14,58922	3317	
32	3	3	Clean CTD	Begin	Jul 19 2009 10:03:30	32,82412	-14,5888	3317	
33	3	3	Clean CTD	Bottom	Jul 19 2009 10:09:17	32,8243	-14,58922	3317	250 mtr
34	3	3	Clean CTD	End	Jul 19 2009 10:24:38	32,82483	-14,5885	3317	
35	4	1	Clean CTD	Begin	Jul 19 2009 19:12:43	33,58052	-14,45793	3317	
36	4	1	Clean CTD	Bottom	Jul 19 2009 19:21:57	33,5805	-14,45733	3317	500mtr
37	4	1	Clean CTD	End	Jul 19 2009 19:39:40	33,5808	-14,45718	3317	
38	5	1	Clean CTD	Begin	Jul 20 2009 05:07:43	34,71928	-14,25802	2536	
39	5	1	Clean CTD	Bottom	Jul 20 2009 05:17:16	34,71947	-14,25845	2536	500 mtr
40	5	1	Clean CTD	End	Jul 20 2009 05:34:47	34,7199	-14,25878	2536	
41	5	2	Clean CTD	Begin	Jul 20 2009 07:34:33	34,71962	-14,25825	2536	
42	5	2	Clean CTD	Bottom	Jul 20 2009 07:39:47	34,7196	-14,25852	2536	250mtr
43	5	2	Clean CTD	End	Jul 20 2009 07:52:08	34,7198	-14,25817	3512	
44	5	3	Clean CTD	Begin	Jul 20 2009 09:34:29	34,71938	-14,25853	3414	
45	5	3	Clean CTD	Bottom	Jul 20 2009 09:39:46	34,71937	-14,2583	3420	250mtr
46	5	3	Clean CTD	End	Jul 20 2009 09:52:04	34,71983	-14,2586	3378	
47	5	4	SCAMP Turbulentiemeter	Begin	Jul 20 2009 10:15:48	34,71992	-14,26052	2225	
48	5	4	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 10:20:53	34,72087	-14,26118	1500	
49	5	4	SCAMP Turbulentiemeter	End	Jul 20 2009 10:23:05	34,72135	-14,26093	1500	
50	5	5	SCAMP Turbulentiemeter	Begin	Jul 20 2009 10:35:45	34,724	-14,26085	1500	
51	5	5	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 10:38:35	34,72447	-14,26095	1500	100mtr
52	5	5	SCAMP Turbulentiemeter	End	Jul 20 2009 10:41:31	34,72483	-14,261	1500	
53	5	6	SCAMP Turbulentiemeter	Begin	Jul 20 2009 10:50:55	34,72465	-14,26227	1500	
54	5	6	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 10:53:57	34,72508	-14,2621	1500	100mtr
55	5	6	SCAMP Turbulentiemeter	End	Jul 20 2009 10:57:59	34,72582	-14,2618	1500	
56	5	7	SCAMP Turbulentiemeter	Begin	Jul 20 2009 12:21:37	34,72037	-14,26157	1713	
57	5	7	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 12:25:21	34,7208	-14,26252	1823	135mtr
58	5	7	SCAMP Turbulentiemeter	End	Jul 20 2009 12:29:34	34,72152	-14,26248	1500	
59	5	8	SCAMP Turbulentiemeter	Begin	Jul 20 2009 12:35:28	34,72305	-14,26287	1500	
60	5	8	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 12:39:33	34,72405	-14,26255	1500	200mtr
61	5	8	SCAMP Turbulentiemeter	End	Jul 20 2009 12:44:16	34,72503	-14,26192	1560	
62	5	9	SCAMP Turbulentiemeter	Begin	Jul 20 2009 12:48:23	34,72607	-14,26103	1500	
63	5	9	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 12:54:12	34,72727	-14,26085	1500	220mtr
64	5	9	SCAMP Turbulentiemeter	End	Jul 20 2009 12:59:02	34,72858	-14,26108	1500	
65	5	10	SCAMP Turbulentiemeter	Begin	Jul 20 2009 13:05:31	34,7302	-14,2614	1500	
66	5	10	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 13:09:59	34,73103	-14,26155	1500	220mtr
67	5	10	SCAMP Turbulentiemeter	End	Jul 20 2009 13:14:57	34,7324	-14,26172	1902	
68	5	11	SCAMP Turbulentiemeter	Begin	Jul 20 2009 13:19:14	34,73335	-14,26205	1500	
69	5	11	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 13:23:50	34,73467	-14,26183	1536	220mtr
70	5	11	SCAMP Turbulentiemeter	End	Jul 20 2009 13:28:53	34,73558	-14,26128	1500	
71	5	12	SCAMP Turbulentiemeter	Begin	Jul 20 2009 13:33:01	34,7368	-14,26213	1500	
72	5	12	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 13:39:26	34,73838	-14,2632	1695	200mtr
73	5	12	SCAMP Turbulentiemeter	End	Jul 20 2009 13:42:45	34,73893	-14,26412	1500	
74	5	13	SCAMP Turbulentiemeter	Begin	Jul 20 2009 13:48:53	34,74035	-14,26548	1560	
75	5	13	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 13:54:12	34,74157	-14,26625	1500	200mtr
76	5	13	SCAMP Turbulentiemeter	End	Jul 20 2009 13:59:50	34,74328	-14,26727	1506	
77	5	14	SCAMP Turbulentiemeter	Begin	Jul 20 2009 14:24:09	34,7452	-14,27143	1500	
78	5	14	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 14:28:25	34,74627	-14,27077	1500	200mtr
79	5	14	SCAMP Turbulentiemeter	End	Jul 20 2009 14:33:34	34,74778	-14,27042	2006	
80	5	15	SCAMP Turbulentiemeter	Begin	Jul 20 2009 14:37:59	34,74892	-14,2705	1500	
81	5	15	SCAMP Turbulentiemeter	Bottom	Jul 20 2009 14:42:37	34,75018	-14,2698	1500	200mtr
82	5	15	SCAMP Turbulentiemeter	End	Jul 20 2009 14:48:44	34,75177	-14,27143	1506	
83	5	16	SCAMP Turbulentiemeter	Begin	Jul 20 2009 14:53:19	34,75272	-14,27153	1500	



	1	2	3	4	5	6	7	8	9
84	5	16	SCAMP Turbulentiometer	Bottom	Jul 20 2009 14:59:18	34,75422	-14,271	1536	200mtr
85	5	16	SCAMP Turbulentiometer	End	Jul 20 2009 15:02:19	34,765	-14,27148	1500	
86	6	1	Clean CTD	Begin	Jul 20 2009 21:04:58	35,52918	-14,11427	4640	
87	6	1	Clean CTD	Bottom	Jul 20 2009 21:14:02	35,5289	-14,11388	4640	500mtr
88	6	1	Clean CTD	End	Jul 20 2009 21:31:23	35,53013	-14,11452	4640	
89	7	1	Clean CTD	Begin	Jul 21 2009 05:06:38	36,52605	-13,93472	4054	
90	7	1	Clean CTD	Bottom	Jul 21 2009 05:14:27	36,52598	-13,93498	4054	400 mtr
91	7	1	Clean CTD	End	Jul 21 2009 05:31:58	36,52615	-13,93458	4054	
92	7	2	Clean CTD	Begin	Jul 21 2009 07:34:16	36,5261	-13,93437	4048	
93	7	2	Clean CTD	Bottom	Jul 21 2009 07:39:15	36,5259	-13,93448	4054	250mtr
94	7	2	Clean CTD	End	Jul 21 2009 07:51:48	36,52605	-13,93435	4048	
95	7	3	Clean CTD	Begin	Jul 21 2009 09:51:52	36,526	-13,93428	4054	
96	7	3	Clean CTD	Bottom	Jul 21 2009 09:56:40	36,5262	-13,93475	4054	250mtr
97	7	3	Clean CTD	End	Jul 21 2009 10:12:08	36,52578	-13,93415	4054	
98	7	4	SCAMP Turbulentiometer	Begin	Jul 21 2009 10:56:44	36,52565	-13,93327	3548	
99	7	4	SCAMP Turbulentiometer	Bottom	Jul 21 2009 10:59:47	36,5252	-13,93447	3548	200mtr
100	7	4	SCAMP Turbulentiometer	End	Jul 21 2009 11:04:15	36,52445	-13,93558	4067	
101	7	5	SCAMP Turbulentiometer	Begin	Jul 21 2009 11:10:33	36,5237	-13,93725	4067	
102	7	5	SCAMP Turbulentiometer	Bottom	Jul 21 2009 11:13:49	36,52375	-13,93822	4067	200mtr
103	7	5	SCAMP Turbulentiometer	End	Jul 21 2009 11:20:50	36,52357	-13,94057	4067	
104	7	6	SCAMP Turbulentiometer	Begin	Jul 21 2009 11:25:07	36,52288	-13,94168	4067	
105	7	6	SCAMP Turbulentiometer	Bottom	Jul 21 2009 11:29:39	36,52352	-13,94277	4067	250mtr
106	7	6	SCAMP Turbulentiometer	End	Jul 21 2009 11:35:39	36,52278	-13,94485	4060	
107	7	7	SCAMP Turbulentiometer	Begin	Jul 21 2009 11:41:12	36,52208	-13,94555	4060	
108	7	7	SCAMP Turbulentiometer	Bottom	Jul 21 2009 11:43:26	36,52245	-13,94572	4060	250mtr
109	7	7	SCAMP Turbulentiometer	End	Jul 21 2009 11:50:19	36,52287	-13,947	4054	
110	7	8	SCAMP Turbulentiometer	Begin	Jul 21 2009 11:54:05	36,52268	-13,9482	4060	
111	7	8	SCAMP Turbulentiometer	Bottom	Jul 21 2009 11:58:26	36,52313	-13,94918	4054	250mtr
112	7	8	SCAMP Turbulentiometer	End	Jul 21 2009 12:05:36	36,52292	-13,95075	4054	
113	7	9	SCAMP Turbulentiometer	Begin	Jul 21 2009 12:10:31	36,5228	-13,95213	4048	
114	7	9	SCAMP Turbulentiometer	Bottom	Jul 21 2009 12:14:35	36,52283	-13,95308	4048	250mtr
115	7	9	SCAMP Turbulentiometer	End	Jul 21 2009 12:20:41	36,52248	-13,95487	4048	
116	7	10	SCAMP Turbulentiometer	Begin	Jul 21 2009 12:24:37	36,5225	-13,95565	4048	
117	7	10	SCAMP Turbulentiometer	Bottom	Jul 21 2009 12:28:46	36,52275	-13,95682	4048	250mtr
118	7	10	SCAMP Turbulentiometer	End	Jul 21 2009 12:39:28	36,52163	-13,95843	4054	
119	7	11	SCAMP Turbulentiometer	Begin	Jul 21 2009 12:43:08	36,5221	-13,95867	4048	
120	7	11	SCAMP Turbulentiometer	Bottom	Jul 21 2009 12:47:52	36,5222	-13,95965	4048	250mtr
121	7	11	SCAMP Turbulentiometer	End	Jul 21 2009 12:59:19	36,522	-13,9626	4067	
122	7	12	SCAMP Turbulentiometer	Begin	Jul 21 2009 13:03:24	36,52222	-13,96328	4060	
123	7	12	SCAMP Turbulentiometer	Bottom	Jul 21 2009 13:13:25	36,52173	-13,96565	4067	250mtr
124	7	12	SCAMP Turbulentiometer	End	Jul 21 2009 13:18:20	36,52232	-13,96652	4060	
125	7	13	SCAMP Turbulentiometer	Begin	Jul 21 2009 13:21:38	36,52187	-13,9676	4060	
126	7	13	SCAMP Turbulentiometer	Bottom	Jul 21 2009 13:29:44	36,52218	-13,96903	4054	250mtr
127	7	13	SCAMP Turbulentiometer	End	Jul 21 2009 13:34:26	36,52105	-13,97023	4067	
128	7	14	SCAMP Turbulentiometer	Begin	Jul 21 2009 13:38:59	36,52148	-13,9707	4060	
129	7	14	SCAMP Turbulentiometer	Bottom	Jul 21 2009 13:42:16	36,52145	-13,97173	4060	250mtr
130	7	14	SCAMP Turbulentiometer	End	Jul 21 2009 13:54:19	36,52178	-13,97372	4060	
131	7	15	SCAMP Turbulentiometer	Begin	Jul 21 2009 13:57:40	36,52125	-13,97462	4054	
132	7	15	SCAMP Turbulentiometer	Bottom	Jul 21 2009 14:00:43	36,52153	-13,97512	4054	250mtr
133	7	15	SCAMP Turbulentiometer	End	Jul 21 2009 14:10:20	36,52208	-13,97723	4054	
134	7	16	SCAMP Turbulentiometer	Begin	Jul 21 2009 14:14:01	36,52232	-13,97787	4048	
135	7	16	SCAMP Turbulentiometer	Bottom	Jul 21 2009 14:17:39	36,5227	-13,9788	4048	250mtr
136	7	16	SCAMP Turbulentiometer	End	Jul 21 2009 14:26:39	36,52223	-13,98055	4048	
137	7	17	SCAMP Turbulentiometer	Begin	Jul 21 2009 14:30:36	36,52205	-13,98183	4048	
138	7	17	SCAMP Turbulentiometer	Bottom	Jul 21 2009 14:34:20	36,52207	-13,98288	4048	250mtr
139	7	17	SCAMP Turbulentiometer	End	Jul 21 2009 14:41:28	36,52152	-13,98502	4042	
140	7	18	Clean CTD	Begin	Jul 21 2009 15:10:34	36,52575	-13,93455	4054	
141	7	18	Clean CTD	Bottom	Jul 21 2009 15:12:56	36,52593	-13,93453	4054	90 mtr
142	7	18	Clean CTD	End	Jul 21 2009 15:19:56	36,52603	-13,9346	4054	
143	8	1	Clean CTD	Begin	Jul 21 2009 20:32:43	37,27735	-13,79655	3707	
144	8	1	Clean CTD	Bottom	Jul 21 2009 20:40:05	37,27662	-13,79553	3707	400 mtr
145	8	1	Clean CTD	End	Jul 21 2009 20:56:23	37,27632	-13,79567	3707	
146	9	1	Clean CTD	Begin	Jul 22 2009 04:59:20	38,424	-13,58622	3737	
147	9	1	Clean CTD	Bottom	Jul 22 2009 05:06:40	38,42368	-13,5859	3737	400 mtr
148	9	1	Clean CTD	End	Jul 22 2009 05:20:11	38,42398	-13,58628	3737	
149	9	2	Clean CTD	Begin	Jul 22 2009 07:27:31	38,42423	-13,58588	3731	
150	9	2	Clean CTD	Bottom	Jul 22 2009 07:35:38	38,42342	-13,58597	3737	400mtr
151	9	2	Clean CTD	End	Jul 22 2009 07:50:47	38,42313	-13,58572	3737	
152	9	3	Clean CTD	Begin	Jul 22 2009 09:36:05	38,42363	-13,5863	3731	
153	9	3	Clean CTD	Bottom	Jul 22 2009 09:40:47	38,42402	-13,58602	3731	250mtr
154	9	3	Clean CTD	End	Jul 22 2009 09:56:00	38,42357	-13,58597	3737	
155	9	4	SCAMP Turbulentiometer	Begin	Jul 22 2009 10:37:29	38,42803	-13,57628	3798	
156	9	4	SCAMP Turbulentiometer	Bottom	Jul 22 2009 10:42:03	38,42942	-13,57438	3817	220mtr
157	9	4	SCAMP Turbulentiometer	End	Jul 22 2009 10:47:41	38,43017	-13,57288	3829	
158	9	5	SCAMP Turbulentiometer	CANCELE	Jul 22 2009 11:00:56	38,43063	-13,56727	3317	
159	9	6	Clean CTD	Begin	Jul 22 2009 12:27:15	38,42477	-13,58607	3731	
160	9	6	Clean CTD	Bottom	Jul 22 2009 12:36:07	38,42443	-13,58375	3731	250mtr
161	9	6	Clean CTD	End	Jul 22 2009 12:55:10	38,42188	-13,57783	3384	
162	10	1	Clean CTD	Begin	Jul 22 2009 20:02:24	39,48843	-13,3876	4091	
163	10	1	Clean CTD	Bottom	Jul 22 2009 20:09:32	39,48857	-13,38777	4091	400mtr
164	10	1	Clean CTD	End	Jul 22 2009 20:26:06	39,48833	-13,38763	4091	
165	11	1	Clean CTD	Begin	Jul 23 2009 05:20:17	40,52753	-13,1907	3932	
166	11	1	Clean CTD	Bottom	Jul 23 2009 05:25:38	40,52748	-13,1907	3932	100 mtr

	1	2	3	4	5	6	7	8	9
167	11	1	Clean CTD	End	Jul 23 2009 05:35:46	40,52748	-13,19093	3932	
168	11	2	Clean CTD	Begin	Jul 23 2009 07:42:31	40,52755	-13,19135	2847	
169	11	2	Clean CTD	Bottom	Jul 23 2009 07:51:51	40,52775	-13,1907	2182	400mtr
170	11	2	Clean CTD	End	Jul 23 2009 08:08:57	40,52772	-13,1908	2292	
171	11	3	Clean CTD	Begin	Jul 23 2009 09:37:29	40,52792	-13,19082	2731	
172	11	3	Clean CTD	Bottom	Jul 23 2009 09:42:07	40,52782	-13,19037	3414	250mtr
173	11	3	Clean CTD	End	Jul 23 2009 09:55:20	40,5279	-13,19053	5024	
174	11	4	SCAMP Turbulentiometer	Begin	Jul 23 2009 10:06:35	40,52827	-13,18753	2695	
175	11	4	SCAMP Turbulentiometer	Bottom	Jul 23 2009 10:12:30	40,52945	-13,18693	2000	200mtr
176	11	4	SCAMP Turbulentiometer	End	Jul 23 2009 10:18:59	40,53107	-13,18563	2256	
177	11	5	SCAMP Turbulentiometer	Begin	Jul 23 2009 10:23:20	40,53148	-13,18477	2006	
178	11	5	SCAMP Turbulentiometer	Bottom	Jul 23 2009 10:29:05	40,53132	-13,18412	4713	250mtr
179	11	5	SCAMP Turbulentiometer	End	Jul 23 2009 10:40:43	40,53075	-13,18165	2189	
180	11	6	SCAMP Turbulentiometer	Begin	Jul 23 2009 10:46:03	40,5309	-13,17983	3000	
181	11	6	SCAMP Turbulentiometer	Bottom	Jul 23 2009 10:49:58	40,53063	-13,17878	2317	220mtr
182	11	6	SCAMP Turbulentiometer	End	Jul 23 2009 10:59:12	40,53087	-13,17583	2762	
183	11	7	SCAMP Turbulentiometer	Begin	Jul 23 2009 11:12:15	40,53215	-13,17213	2000	
184	11	7	SCAMP Turbulentiometer	Bottom	Jul 23 2009 11:17:38	40,53317	-13,17217	2000	200mtr
185	11	7	SCAMP Turbulentiometer	End	Jul 23 2009 11:26:33	40,53332	-13,1733	2000	
186	11	8	SCAMP Turbulentiometer	Begin	Jul 23 2009 11:29:44	40,53298	-13,1732	2000	
187	11	8	SCAMP Turbulentiometer	Bottom	Jul 23 2009 11:35:54	40,53298	-13,17437	2000	200mtr
188	11	8	SCAMP Turbulentiometer	End	Jul 23 2009 11:42:54	40,53298	-13,17617	2000	
189	11	9	SCAMP Turbulentiometer	Begin	Jul 23 2009 11:43:55	40,53225	-13,17703	2000	
190	11	9	SCAMP Turbulentiometer	Bottom	Jul 23 2009 11:49:39	40,53228	-13,17725	2000	200mtr
191	11	9	SCAMP Turbulentiometer	End	Jul 23 2009 11:58:12	40,53362	-13,17932	2000	
192	11	10	SCAMP Turbulentiometer	Begin	Jul 23 2009 12:04:20	40,53408	-13,18125	2000	
193	11	10	SCAMP Turbulentiometer	Bottom	Jul 23 2009 12:06:23	40,53452	-13,18167	2000	200mtr
194	11	10	SCAMP Turbulentiometer	End	Jul 23 2009 12:15:17	40,53648	-13,18347	2000	
195	11	11	SCAMP Turbulentiometer	Begin	Jul 23 2009 12:19:18	40,53672	-13,18427	2000	
196	11	11	SCAMP Turbulentiometer	Bottom	Jul 23 2009 12:21:52	40,5369	-13,18477	2000	200mtr
197	11	11	SCAMP Turbulentiometer	End	Jul 23 2009 12:32:16	40,53878	-13,1861	2000	
198	11	12	SCAMP Turbulentiometer	Begin	Jul 23 2009 12:38:09	40,53897	-13,18702	2000	
199	11	12	SCAMP Turbulentiometer	Bottom	Jul 23 2009 12:42:06	40,5399	-13,18798	2000	200mtr
200	11	12	SCAMP Turbulentiometer	End	Jul 23 2009 12:55:05	40,541	-13,19063	2000	
201	11	13	SCAMP Turbulentiometer	Begin	Jul 23 2009 12:58:00	40,54118	-13,19157	2000	
202	11	13	SCAMP Turbulentiometer	Bottom	Jul 23 2009 13:01:40	40,53995	-13,19203	2000	200mtr
203	11	13	SCAMP Turbulentiometer	End	Jul 23 2009 13:10:48	40,54025	-13,19422	2000	
204	11	14	SCAMP Turbulentiometer	Begin	Jul 23 2009 13:12:00	40,54068	-13,19448	2000	
205	11	14	SCAMP Turbulentiometer	Bottom	Jul 23 2009 13:18:12	40,54118	-13,19507	2000	200mtr
206	11	14	SCAMP Turbulentiometer	End	Jul 23 2009 13:27:22	40,5413	-13,19665	2000	
207	11	15	SCAMP Turbulentiometer	Begin	Jul 23 2009 13:31:55	40,54128	-13,19803	2000	
208	11	15	SCAMP Turbulentiometer	Bottom	Jul 23 2009 13:36:24	40,5405	-13,19903	2000	200mtr
209	11	15	SCAMP Turbulentiometer	End	Jul 23 2009 13:43:42	40,54055	-13,20037	2000	
210	11	16	SCAMP Turbulentiometer	Begin	Jul 23 2009 13:46:15	40,54083	-13,20095	2000	
211	11	16	SCAMP Turbulentiometer	Bottom	Jul 23 2009 13:50:33	40,54168	-13,20133	2000	200mtr
212	11	16	SCAMP Turbulentiometer	End	Jul 23 2009 14:01:42	40,542	-13,20273	2000	
213	11	17	SCAMP Turbulentiometer	Begin	Jul 23 2009 14:03:32	40,54205	-13,20338	2000	
214	11	17	SCAMP Turbulentiometer	Bottom	Jul 23 2009 14:06:56	40,5414	-13,2045	2000	200mtr
215	11	17	SCAMP Turbulentiometer	End	Jul 23 2009 14:18:39	40,53928	-13,20648	2000	
216	11	18	SCAMP Turbulentiometer	Begin	Jul 23 2009 14:27:38	40,53865	-13,20802	2000	
217	11	18	SCAMP Turbulentiometer	Bottom	Jul 23 2009 14:32:47	40,53835	-13,20913	2000	200mtr
218	11	18	SCAMP Turbulentiometer	End	Jul 23 2009 14:41:17	40,53783	-13,21017	2000	
219	11	19	Clean CTD	Begin	Jul 23 2009 15:03:47	40,5283	-13,19068	2006	
220	11	19	Clean CTD	Bottom	Jul 23 2009 15:28:36	40,52753	-13,19053	3213	400 mtr
221	11	19	Clean CTD	End	Jul 23 2009 15:28:38	40,52755	-13,19055	3213	
222	12	1	Clean CTD	Begin	Jul 23 2009 20:37:41	41,24687	-13,05223	3646	
223	12	1	Clean CTD	Bottom	Jul 23 2009 20:44:58	41,24697	-13,05248	4914	300mtr
224	12	1	Clean CTD	End	Jul 23 2009 21:01:55	41,24837	-13,05182	2835	
225	13	1	Clean CTD	Begin	Jul 24 2009 05:06:28	42,3373	-12,88325	3810	
226	13	1	Clean CTD	Bottom	Jul 24 2009 05:14:25	42,33702	-12,88355	3810	300 mtr
227	13	1	Clean CTD	End	Jul 24 2009 05:23:22	42,3372	-12,88373	4975	
228	13	2	Clean CTD	Begin	Jul 24 2009 07:41:15	42,33748	-12,88355	2237	
229	13	2	Clean CTD	Bottom	Jul 24 2009 07:46:11	42,33762	-12,88332	4067	250mtr
230	13	2	Clean CTD	End	Jul 24 2009 08:01:48	42,33707	-12,88367	4268	
231	13	3	Clean CTD	Begin	Jul 24 2009 09:36:55	42,33683	-12,88352	4536	
232	13	3	Clean CTD	Bottom	Jul 24 2009 10:00:07	42,33692	-12,8837	3957	200mtr
233	13	3	Clean CTD	End	Jul 24 2009 10:16:11	42,33682	-12,88465	4719	
234	13	4	SCAMP Turbulentiometer	Begin	Jul 24 2009 10:26:06	42,33692	-12,88498	2000	
235	13	4	SCAMP Turbulentiometer	Bottom	Jul 24 2009 10:31:54	42,3374	-12,88512	2000	200mtr
236	13	4	SCAMP Turbulentiometer	End	Jul 24 2009 10:45:07	42,33825	-12,88595	2000	
237	13	5	SCAMP Turbulentiometer	Begin	Jul 24 2009 12:15:15	42,33772	-12,87943	2000	
238	13	5	SCAMP Turbulentiometer	Bottom	Jul 24 2009 12:18:15	42,3384	-12,87997	2000	200mtr
239	13	5	SCAMP Turbulentiometer	End	Jul 24 2009 12:29:00	42,33877	-12,88265	2000	
240	13	6	SCAMP Turbulentiometer	Begin	Jul 24 2009 12:32:36	42,33945	-12,88335	2000	
241	13	6	SCAMP Turbulentiometer	Bottom	Jul 24 2009 12:36:00	42,34023	-12,88363	2000	250mtr
242	13	6	SCAMP Turbulentiometer	End	Jul 24 2009 12:47:30	42,34125	-12,8859	2000	
243	13	7	SCAMP Turbulentiometer	Begin	Jul 24 2009 12:53:43	42,34127	-12,8873	2000	
244	13	7	SCAMP Turbulentiometer	Bottom	Jul 24 2009 12:57:20	42,34218	-12,88783	2000	250mtr
245	13	7	SCAMP Turbulentiometer	End	Jul 24 2009 13:06:53	42,3427	-12,88967	2000	
246	13	8	SCAMP Turbulentiometer	End	Jul 24 2009 13:16:03	42,34332	-12,89117	2000	
247	13	8	SCAMP Turbulentiometer	Bottom	Jul 24 2009 13:21:01	42,34325	-12,89168	2000	220mtr
248	13	8	SCAMP Turbulentiometer	End	Jul 24 2009 13:30:54	42,3443	-12,89325	2000	
249	13	9	SCAMP Turbulentiometer	Begin	Jul 24 2009 13:35:37	42,34418	-12,89405	2000	

	1	2	3	4	5	6	7	8	9
250	13	9	SCAMP Turbulentiometer	Bottom	Jul 24 2009 13:40:10	42,34425	-12,89557	2000	200mtr
251	13	9	SCAMP Turbulentiometer	End	Jul 24 2009 13:44:10	42,34462	-12,89598	2000	
252	13	10	SCAMP Turbulentiometer	Begin	Jul 24 2009 13:48:38	42,34562	-12,8967	2000	
253	13	10	SCAMP Turbulentiometer	Bottom	Jul 24 2009 13:51:49	42,3465	-12,89697	2000	200mtr
254	13	10	SCAMP Turbulentiometer	End	Jul 24 2009 13:55:59	42,34687	-12,89803	2000	
255	13	11	SCAMP Turbulentiometer	Begin	Jul 24 2009 14:00:30	42,34708	-12,89893	2000	
256	13	11	SCAMP Turbulentiometer	Bottom	Jul 24 2009 14:03:00	42,34692	-12,89928	2000	230mtr
257	13	11	SCAMP Turbulentiometer	End	Jul 24 2009 14:14:04	42,347	-12,90135	2000	
258	13	12	SCAMP Turbulentiometer	Begin	Jul 24 2009 14:17:20	42,34738	-12,90185	2000	
259	13	12	SCAMP Turbulentiometer	Bottom	Jul 24 2009 14:21:10	42,3478	-12,90235	2000	200mtr
260	13	12	SCAMP Turbulentiometer	End	Jul 24 2009 14:29:22	42,34873	-12,90422	2000	
261	13	13	Clean CTD	Begin	Jul 24 2009 14:49:26	42,33733	-12,8818	2000	
262	13	13	Clean CTD	Bottom	Jul 24 2009 15:02:26	42,3372	-12,88255	2006	500 mtr
263	13	13	Clean CTD	End	Jul 24 2009 15:15:57	42,3371	-12,8833	2189	
264	14	1	Clean CTD	Begin	Jul 24 2009 20:29:03	43,08168	-12,7787	5006	
265	14	1	Clean CTD	Bottom	Jul 24 2009 20:34:19	43,0821	-12,7792	5006	300mtr
266	14	1	Clean CTD	End	Jul 24 2009 20:49:09	43,08123	-12,77933	5006	
267	15	1	Clean CTD	Begin	Jul 25 2009 05:01:20	44,28242	-12,60548	4945	
268	15	1	Clean CTD	Bottom	Jul 25 2009 05:08:39	44,28245	-12,60583	4939	300 mtr
269	15	1	Clean CTD	End	Jul 25 2009 05:18:02	44,28235	-12,6057	4945	
270	15	2	Clean CTD	Begin	Jul 25 2009 07:34:23	44,28273	-12,60522	4926	
271	15	2	Clean CTD	Bottom	Jul 25 2009 07:38:59	44,2826	-12,60567	4932	250mtr
272	15	2	Clean CTD	End	Jul 25 2009 07:52:59	44,2822	-12,60595	4926	
273	15	3	Clean CTD	Begin	Jul 25 2009 08:51:53	44,28245	-12,60505	4939	
274	15	3	Clean CTD	Bottom	Jul 25 2009 08:56:23	44,28257	-12,6055	4939	76mtr
275	15	3	Clean CTD	End	Jul 25 2009 09:56:13	44,28227	-12,60562	4634	
276	15	4	SCAMP Turbulentiometer	Begin	Jul 25 2009 10:05:59	44,28172	-12,60525	2000	
277	15	4	SCAMP Turbulentiometer	Bottom	Jul 25 2009 10:10:29	44,28055	-12,60628	2000	200mtr
278	15	4	SCAMP Turbulentiometer	End	Jul 25 2009 10:19:56	44,27902	-12,60568	2164	
279	15	5	SCAMP Turbulentiometer	Begin	Jul 25 2009 10:25:27	44,27908	-12,60568	2000	
280	15	5	SCAMP Turbulentiometer	Bottom	Jul 25 2009 10:29:31	44,27953	-12,60677	2000	200mtr
281	15	5	SCAMP Turbulentiometer	End	Jul 25 2009 10:39:34	44,28023	-12,6059	4347	
282	15	6	SCAMP Turbulentiometer	Begin	Jul 25 2009 10:46:16	44,28082	-12,60445	2018	
283	15	6	SCAMP Turbulentiometer	Bottom	Jul 25 2009 10:50:09	44,28107	-12,6055	2000	200mtr
284	15	6	SCAMP Turbulentiometer	End	Jul 25 2009 10:59:52	44,28093	-12,6068	2000	
285	15	7	SCAMP Turbulentiometer	Begin	Jul 25 2009 11:05:34	44,28073	-12,60968	2000	
286	15	7	SCAMP Turbulentiometer	Bottom	Jul 25 2009 11:08:37	44,28007	-12,6104	2000	250mtr
287	15	7	SCAMP Turbulentiometer	End	Jul 25 2009 11:20:22	44,27835	-12,61307	2000	
288	15	8	SCAMP Turbulentiometer	Begin	Jul 25 2009 11:27:08	44,27652	-12,61325	2213	
289	15	8	SCAMP Turbulentiometer	Bottom	Jul 25 2009 11:30:35	44,27622	-12,61397	2000	250mtr
290	15	8	SCAMP Turbulentiometer	End	Jul 25 2009 11:43:57	44,27305	-12,61423	2000	
291	15	9	SCAMP Turbulentiometer	Begin	Jul 25 2009 11:50:27	44,27192	-12,615	2000	
292	15	9	SCAMP Turbulentiometer	Bottom	Jul 25 2009 11:54:04	44,2709	-12,61473	2000	250mtr
293	15	9	SCAMP Turbulentiometer	End	Jul 25 2009 12:04:38	44,26858	-12,61198	2201	
294	15	10	SCAMP Turbulentiometer	Begin	Jul 25 2009 12:11:50	44,26798	-12,61147	2000	
295	15	10	SCAMP Turbulentiometer	Bottom	Jul 25 2009 12:14:40	44,26772	-12,61248	2000	250mtr
296	15	10	SCAMP Turbulentiometer	End	Jul 25 2009 12:25:44	44,26623	-12,61473	2000	
297	15	11	SCAMP Turbulentiometer	Begin	Jul 25 2009 12:31:21	44,26568	-12,61582	2000	
298	15	11	SCAMP Turbulentiometer	Bottom	Jul 25 2009 12:34:53	44,26458	-12,61558	2060	200mtr
299	15	11	SCAMP Turbulentiometer	End	Jul 25 2009 12:44:47	44,2632	-12,61252	2128	
300	15	12	SCAMP Turbulentiometer	Begin	Jul 25 2009 12:51:07	44,26318	-12,61152	2000	
301	15	12	SCAMP Turbulentiometer	Bottom	Jul 25 2009 12:53:45	44,26287	-12,612	2000	200mtr
302	15	12	SCAMP Turbulentiometer	End	Jul 25 2009 13:05:15	44,26122	-12,61485	2000	
303	15	13	SCAMP Turbulentiometer	Begin	Jul 25 2009 13:10:07	44,25992	-12,61495	2000	
304	15	13	SCAMP Turbulentiometer	Bottom	Jul 25 2009 13:13:25	44,2595	-12,61472	2115	175mtr
305	15	13	SCAMP Turbulentiometer	End	Jul 25 2009 13:19:23	44,25972	-12,6152	2000	
306	15	14	SCAMP Turbulentiometer	Begin	Jul 25 2009 13:24:24	44,25858	-12,61585	2000	
307	15	14	SCAMP Turbulentiometer	Bottom	Jul 25 2009 13:27:10	44,25792	-12,6161	2000	175mtr
308	15	14	SCAMP Turbulentiometer	End	Jul 25 2009 13:33:02	44,25788	-12,61775	2000	
309	15	15	SCAMP Turbulentiometer	Begin	Jul 25 2009 13:40:07	44,2569	-12,61912	2000	
310	15	15	SCAMP Turbulentiometer	Bottom	Jul 25 2009 13:42:27	44,25702	-12,61977	2000	150mtr
311	15	15	SCAMP Turbulentiometer	End	Jul 25 2009 13:49:34	44,25718	-12,62168	2000	
312	16	1	Clean CTD	Begin	Jul 26 2009 07:40:33	45,91702	-12,36342	4780	
313	16	1	Clean CTD	Bottom	Jul 26 2009 07:56:20	45,9166	-12,36408	4780	500mtr
314	16	1	Clean CTD	End	Jul 26 2009 08:17:07	45,91617	-12,3629	4780	
315	17	1	Clean CTD	Begin	Jul 26 2009 11:03:58	45,52638	-12,42627	3865	
316	17	1	Clean CTD	Bottom	Jul 26 2009 11:08:42	45,5263	-12,42687	3701	120mtr
317	17	1	Clean CTD	End	Jul 26 2009 11:17:21	45,5262	-12,42588	2018	
318	17	2	Clean CTD	Begin	Jul 26 2009 12:29:01	45,52652	-12,42708	4768	
319	17	2	Clean CTD	Bottom	Jul 26 2009 12:37:29	45,52647	-12,42677	4780	250mtr
320	17	2	Clean CTD	End	Jul 26 2009 12:53:19	45,5261	-12,42633	4737	
321	17	3	SCAMP Turbulentiometer	Begin	Jul 26 2009 13:12:30	45,52667	-12,42687	2000	
322	17	3	SCAMP Turbulentiometer	Bottom	Jul 26 2009 13:15:38	45,52742	-12,4267	2000	200mtr
323	17	3	SCAMP Turbulentiometer	End	Jul 26 2009 13:23:10	45,52895	-12,42732	2000	
324	17	4	SCAMP Turbulentiometer	Begin	Jul 26 2009 13:29:23	45,52925	-12,42843	2000	
325	17	4	SCAMP Turbulentiometer	Bottom	Jul 26 2009 13:31:58	45,52923	-12,42908	2000	200mtr
326	17	4	SCAMP Turbulentiometer	End	Jul 26 2009 13:40:47	45,53033	-12,43133	2000	
327	17	5	SCAMP Turbulentiometer	Begin	Jul 26 2009 13:46:35	45,53033	-12,43287	2000	
328	17	5	SCAMP Turbulentiometer	Bottom	Jul 26 2009 13:51:49	45,5307	-12,43445	2000	200mtr
329	17	5	SCAMP Turbulentiometer	End	Jul 26 2009 13:57:58	45,53128	-12,43633	2000	
330	17	6	SCAMP Turbulentiometer	Begin	Jul 26 2009 14:05:46	45,5325	-12,43755	2000	
331	17	6	SCAMP Turbulentiometer	Bottom	Jul 26 2009 14:09:07	45,53307	-12,43833	2000	200mtr
332	17	6	SCAMP Turbulentiometer	End	Jul 26 2009 14:19:17	45,53337	-12,44057	2000	





	1	2	3	4	5	6	7	8	9
499	22	3	Vertical Net	End	Aug 02 2009 08:25:27	53,63853	-12,35443	310	
500	22	4	Vertical Net	Begin	Aug 02 2009 08:28:54	53,6381	-12,35485	311	
501	22	4	Vertical Net	End	Aug 02 2009 08:36:02	53,6385	-12,35505	311	
502	22	5	Vertical Net	Begin	Aug 02 2009 08:37:56	53,63857	-12,35497	311	
503	22	5	Vertical Net	End	Aug 02 2009 08:47:48	53,63947	-12,35405	310	
504	22	6	SCAMP Turbulentiometer	Begin	Aug 02 2009 09:00:09	53,63742	-12,35178	311	
505	22	6	SCAMP Turbulentiometer	Bottom	Aug 02 2009 09:05:10	53,63653	-12,35195	311	200mtr
506	22	6	SCAMP Turbulentiometer	End	Aug 02 2009 09:14:04	53,63393	-12,35292	311	
507	22	7	SCAMP Turbulentiometer	Begin	Aug 02 2009 09:19:32	53,63287	-12,3518	310	
508	22	7	SCAMP Turbulentiometer	Bottom	Aug 02 2009 09:23:47	53,63167	-12,35193	314	200mtr
509	22	7	SCAMP Turbulentiometer	End	Aug 02 2009 09:32:17	53,63072	-12,35097	314	
510	22	8	SCAMP Turbulentiometer	Begin	Aug 02 2009 09:38:52	53,62975	-12,34932	317	
511	22	8	SCAMP Turbulentiometer	Bottom	Aug 02 2009 09:42:50	53,62915	-12,34927	317	200mtr
512	22	8	SCAMP Turbulentiometer	End	Aug 02 2009 09:52:23	53,6284	-12,34863	301	
513	22	9	SCAMP Turbulentiometer	Begin	Aug 02 2009 09:57:35	53,62697	-12,34888	305	
514	22	9	SCAMP Turbulentiometer	Bottom	Aug 02 2009 10:01:57	53,62562	-12,3482	320	250mtr
515	22	9	SCAMP Turbulentiometer	End	Aug 02 2009 10:10:42	53,62333	-12,34748	322	
516	22	10	SCAMP Turbulentiometer	Begin	Aug 02 2009 10:16:16	53,62227	-12,34772	321	
517	22	10	SCAMP Turbulentiometer	Bottom	Aug 02 2009 10:20:21	53,621	-12,34752	322	200mtr
518	22	10	SCAMP Turbulentiometer	End	Aug 02 2009 10:30:40	53,6178	-12,34685	322	
519	22	11	SCAMP Turbulentiometer	Begin	Aug 02 2009 10:35:43	53,61733	-12,34628	322	
520	22	11	SCAMP Turbulentiometer	Bottom	Aug 02 2009 10:39:49	53,61625	-12,34588	324	200mtr
521	22	11	SCAMP Turbulentiometer	End	Aug 02 2009 10:49:29	53,6143	-12,34668	322	
522	23	1	Clean CTD	Begin	Aug 02 2009 20:00:36	54,94998	-13,55343	2855	
523	23	1	Clean CTD	Bottom	Aug 02 2009 20:04:23	54,95102	-13,55432	2855	200mtr
524	23	1	Clean CTD	End	Aug 02 2009 20:16:14	54,95247	-13,55257	2855	
525	23	2	Vertical Net	Begin	Aug 02 2009 20:24:11	54,95337	-13,54968	2855	
526	23	2	Vertical Net	End	Aug 02 2009 20:32:10	54,95322	-13,55108	2855	
527	23	3	Vertical Net	Begin	Aug 02 2009 20:34:02	54,95298	-13,55123	2855	
528	23	3	Vertical Net	End	Aug 02 2009 20:41:58	54,95255	-13,5529	2855	
529	23	4	Vertical Net	Begin	Aug 02 2009 20:44:41	54,95223	-13,55337	2855	
530	23	4	Vertical Net	End	Aug 02 2009 20:52:11	54,95208	-13,55405	2855	
531	23	5	Vertical Net	Begin	Aug 02 2009 20:55:28	54,95282	-13,55662	2855	
532	23	5	Vertical Net	End	Aug 02 2009 21:02:10	54,95308	-13,55775	2855	
533	24	1	Clean CTD	Begin	Aug 03 2009 04:58:48	55,71382	-14,28072	2258	
534	24	1	Clean CTD	Bottom	Aug 03 2009 05:02:34	55,71385	-14,28093	2253	200 mtr
535	24	1	Clean CTD	End	Aug 03 2009 05:13:32	55,71352	-14,28073	2258	
536	24	2	Clean CTD	Begin	Aug 03 2009 07:26:58	55,71348	-14,27817	2258	
537	24	2	Clean CTD	Bottom	Aug 03 2009 07:32:51	55,71392	-14,27742	2258	300mtr
538	24	2	Clean CTD	End	Aug 03 2009 07:46:26	55,7133	-14,27892	2258	
539	24	3	Vertical Net	Begin	Aug 03 2009 07:57:53	55,71412	-14,27878	2258	
540	24	3	Vertical Net	End	Aug 03 2009 08:05:09	55,71383	-14,27953	2258	
541	24	4	Vertical Net	Begin	Aug 03 2009 08:08:11	55,7139	-14,28062	2253	
542	24	4	Vertical Net	End	Aug 03 2009 08:17:19	55,71333	-14,27967	2258	
543	24	5	Vertical Net	Begin	Aug 03 2009 08:19:58	55,71332	-14,2798	2258	
544	24	5	Vertical Net	End	Aug 03 2009 08:29:33	55,71282	-14,27895	2258	
545	24	6	Vertical Net	Begin	Aug 03 2009 08:33:27	55,71275	-14,27888	2258	
546	24	6	Vertical Net	End	Aug 03 2009 08:41:20	55,71375	-14,27962	2258	
547	24	7	SCAMP Turbulentiometer	Begin	Aug 03 2009 08:57:28	55,7142	-14,2777	2258	
548	24	7	SCAMP Turbulentiometer	Bottom	Aug 03 2009 08:59:42	55,71417	-14,27767	2258	200mtr
549	24	7	SCAMP Turbulentiometer	End	Aug 03 2009 09:06:20	55,71333	-14,27652	2263	
550	24	8	SCAMP Turbulentiometer	Begin	Aug 03 2009 09:09:59	55,71302	-14,27573	2263	
551	24	8	SCAMP Turbulentiometer	Bottom	Aug 03 2009 09:13:38	55,71252	-14,27505	2263	200mtr
552	24	8	SCAMP Turbulentiometer	End	Aug 03 2009 09:20:21	55,71187	-14,2735	2263	
553	24	9	SCAMP Turbulentiometer	Begin	Aug 03 2009 09:24:29	55,71153	-14,2725	2263	
554	24	9	SCAMP Turbulentiometer	Bottom	Aug 03 2009 09:28:50	55,71103	-14,27145	2263	200mtr
555	24	9	SCAMP Turbulentiometer	End	Aug 03 2009 09:36:59	55,70992	-14,26975	2263	
556	24	10	SCAMP Turbulentiometer	Begin	Aug 03 2009 09:46:04	55,7089	-14,2678	2268	
557	24	10	SCAMP Turbulentiometer	Bottom	Aug 03 2009 09:51:58	55,70788	-14,26613	2273	200mtr
558	24	10	SCAMP Turbulentiometer	End	Aug 03 2009 09:58:16	55,70805	-14,26433	2278	
559	24	11	SCAMP Turbulentiometer	Begin	Aug 03 2009 10:02:16	55,7051	-14,2629	2278	
560	24	11	SCAMP Turbulentiometer	Bottom	Aug 03 2009 10:07:32	55,70412	-14,26123	2283	200mtr
561	24	11	SCAMP Turbulentiometer	End	Aug 03 2009 10:13:57	55,70255	-14,2592	2283	
562	24	12	SCAMP Turbulentiometer	Begin	Aug 03 2009 10:17:41	55,70188	-14,25807	2288	
563	24	12	SCAMP Turbulentiometer	Bottom	Aug 03 2009 10:21:55	55,70078	-14,25755	2288	200mtr
564	24	12	SCAMP Turbulentiometer	End	Aug 03 2009 10:29:45	55,69927	-14,25532	2293	
565	24	13	SCAMP Turbulentiometer	Begin	Aug 03 2009 10:33:47	55,69835	-14,25428	2298	
566	24	13	SCAMP Turbulentiometer	Bottom	Aug 03 2009 10:38:34	55,6974	-14,25247	2298	200mtr
567	24	13	SCAMP Turbulentiometer	End	Aug 03 2009 10:45:49	55,69577	-14,24937	2304	
568	25	1	Clean CTD	Begin	Aug 04 2009 04:59:58	58,0019	-16,52033	1147	
569	25	1	Clean CTD	Bottom	Aug 04 2009 05:03:20	58,00178	-16,5204	1147	200 mtr
570	25	1	Clean CTD	End	Aug 04 2009 05:16:03	58,002	-16,5195	1147	
571	25	2	Clean CTD	Begin	Aug 04 2009 07:31:07	58,00237	-16,51807	1141	
572	25	2	Clean CTD	Bottom	Aug 04 2009 07:34:48	58,00233	-16,51548	1147	200mtr
573	25	2	Clean CTD	End	Aug 04 2009 07:46:06	58,00208	-16,51765	1147	
574	25	3	Vertical Net	Begin	Aug 04 2009 08:00:32	58,00102	-16,5177	1147	
575	25	3	Vertical Net	End	Aug 04 2009 08:07:25	58,00168	-16,51808	1147	
576	25	4	Vertical Net	Begin	Aug 04 2009 08:10:31	58,00147	-16,51735	1147	
577	25	4	Vertical Net	End	Aug 04 2009 08:20:06	58,0013	-16,51425	1147	
578	25	5	Vertical Net	Begin	Aug 04 2009 08:23:39	58,0022	-16,51332	1141	
579	25	5	Vertical Net	End	Aug 04 2009 08:30:46	58,00257	-16,51157	1147	
580	25	6	Vertical Net	Begin	Aug 04 2009 08:32:23	58,00295	-16,51107	1147	
581	25	6	Vertical Net	End	Aug 04 2009 08:41:40	58,00365	-16,50928	1147	

	1	2	3	4	5	6	7	8	9
582	25	7	Clean CTD	Begin	Aug 04 2009 09:34:43	58,00167	-16,52117	1141	
583	25	7	Clean CTD	Bottom	Aug 04 2009 09:43:26	58,00233	-16,52203	1141	500mtr
584	25	7	Clean CTD	End	Aug 04 2009 09:57:27	58,00168	-16,51993	1141	
585	25	8	SCAMP Turbulentiometer	Begin	Aug 04 2009 10:14:18	58,00197	-16,52065	1141	
586	25	8	SCAMP Turbulentiometer	Bottom	Aug 04 2009 10:16:19	58,00197	-16,52065	1141	
587	25	8	SCAMP Turbulentiometer	End	Aug 04 2009 10:18:21	58,00197	-16,52067	1141	
588	25	9	Clean CTD	Begin	Aug 04 2009 13:57:31	58,00197	-16,52072	1141	
589	25	9	Clean CTD	Bottom	Aug 04 2009 14:06:40	58,00153	-16,52012	1141	500mtr
590	25	9	Clean CTD	End	Aug 04 2009 14:21:17	58,001	-16,52028	1147	
591	26	1	Clean CTD	Begin	Aug 04 2009 19:59:10	58,65352	-17,18172	1074	
592	26	1	Clean CTD	Bottom	Aug 04 2009 20:02:57	58,65358	-17,18315	1074	200mtr
593	26	1	Clean CTD	End	Aug 04 2009 20:15:27	58,65315	-17,18505	1074	
594	26	2	Vertical Net	Begin	Aug 04 2009 20:23:04	58,65285	-17,18285	1074	
595	26	2	Vertical Net	End	Aug 04 2009 20:32:59	58,65275	-17,1833	1074	
596	26	3	Vertical Net	Begin	Aug 04 2009 20:34:58	58,65302	-17,1839	1074	
597	26	3	Vertical Net	End	Aug 04 2009 20:44:14	58,65273	-17,18342	1074	
598	26	4	Vertical Net	Begin	Aug 04 2009 20:46:30	58,65255	-17,18338	1074	
599	26	4	Vertical Net	End	Aug 04 2009 20:54:32	58,65302	-17,18343	1074	
600	26	5	Vertical Net	Begin	Aug 04 2009 20:58:30	58,6527	-17,18425	1074	
601	26	5	Vertical Net	End	Aug 04 2009 21:05:47	58,65253	-17,18443	1074	
602	27	1	Clean CTD	Begin	Aug 05 2009 04:58:56	59,49987	-18,06988	2303	
603	27	1	Clean CTD	Bottom	Aug 05 2009 05:03:50	59,49962	-18,06937	2297	200 mtr
604	27	1	Clean CTD	End	Aug 05 2009 05:17:28	59,49938	-18,06922	2297	
605	27	2	Clean CTD	Begin	Aug 05 2009 07:30:08	59,49877	-18,06722	2291	
606	27	2	Clean CTD	Bottom	Aug 05 2009 07:33:49	59,4986	-18,06842	2291	200mtr
607	27	2	Clean CTD	End	Aug 05 2009 07:46:09	59,4999	-18,06728	2297	
608	27	3	Vertical Net	Begin	Aug 05 2009 07:56:47	59,49872	-18,06758	2291	
609	27	3	Vertical Net	End	Aug 05 2009 08:04:45	59,49795	-18,06812	2285	
610	27	4	Vertical Net	Begin	Aug 05 2009 08:06:36	59,4983	-18,0676	2291	
611	27	4	Vertical Net	End	Aug 05 2009 08:16:35	59,49888	-18,06615	2291	
612	27	5	Vertical Net	Begin	Aug 05 2009 08:17:47	59,49892	-18,06605	2291	
613	27	5	Vertical Net	End	Aug 05 2009 08:26:44	59,49877	-18,06833	2291	
614	27	6	Vertical Net	Begin	Aug 05 2009 08:28:43	59,4987	-18,06855	2291	
615	27	6	Vertical Net	End	Aug 05 2009 08:37:41	59,49865	-18,06633	2291	
616	27	7	Clean CTD	Begin	Aug 05 2009 09:38:03	59,50042	-18,06898	2303	
617	27	7	Clean CTD	Bottom	Aug 05 2009 09:40:08	59,50025	-18,06865	2297	100mtr
618	27	7	Clean CTD	End	Aug 05 2009 09:50:52	59,49923	-18,06955	2297	
619	27	8	SCAMP Turbulentiometer	Begin	Aug 05 2009 10:02:13	59,50005	-18,06583	2297	
620	27	8	SCAMP Turbulentiometer	Bottom	Aug 05 2009 10:10:40	59,49892	-18,0685	2291	150mtr
621	27	8	SCAMP Turbulentiometer	End	Aug 05 2009 10:14:07	59,4988	-18,07063	2285	
622	27	9	Vertical Net	Begin	Aug 05 2009 12:11:00	59,50032	-18,0658	2297	
623	27	9	Vertical Net	End	Aug 05 2009 12:53:20	59,50007	-18,06457	2297	
624	27	10	SCAMP Turbulentiometer	Begin	Aug 05 2009 12:59:21	59,49977	-18,06338	2291	
625	27	10	SCAMP Turbulentiometer	Bottom	Aug 05 2009 13:03:53	59,49985	-18,06152	2291	200mtr
626	27	10	SCAMP Turbulentiometer	End	Aug 05 2009 13:12:27	59,49947	-18,05795	2285	
627	27	11	SCAMP Turbulentiometer	Begin	Aug 05 2009 13:23:39	59,49833	-18,0542	2267	
628	27	11	SCAMP Turbulentiometer	Bottom	Aug 05 2009 13:28:17	59,4985	-18,05172	2260	200mtr
629	27	11	SCAMP Turbulentiometer	End	Aug 05 2009 13:33:46	59,49823	-18,05002	2260	
630	27	12	SCAMP Turbulentiometer	Begin	Aug 05 2009 13:36:27	59,49813	-18,04943	2260	
631	27	12	SCAMP Turbulentiometer	Bottom	Aug 05 2009 13:40:56	59,49777	-18,04732	2254	200mtr
632	27	12	SCAMP Turbulentiometer	End	Aug 05 2009 13:47:45	59,49725	-18,04463	2248	
633	27	13	SCAMP Turbulentiometer	Begin	Aug 05 2009 13:52:12	59,4969	-18,04262	2248	
634	27	13	SCAMP Turbulentiometer	Bottom	Aug 05 2009 13:56:18	59,49673	-18,04022	2242	200mtr
635	27	13	SCAMP Turbulentiometer	End	Aug 05 2009 14:02:07	59,49628	-18,03775	2242	
636	27	14	SCAMP Turbulentiometer	Begin	Aug 05 2009 14:16:29	59,49815	-18,07027	2285	
637	27	14	SCAMP Turbulentiometer	Bottom	Aug 05 2009 14:20:51	59,49873	-18,06828	2291	200mtr
638	27	14	SCAMP Turbulentiometer	End	Aug 05 2009 14:25:59	59,49927	-18,06628	2297	
639	27	15	Clean CTD	Begin	Aug 05 2009 14:34:29	59,49938	-18,06677	2297	
640	27	15	Clean CTD	Bottom	Aug 05 2009 14:37:24	59,4994	-18,06712	2297	150mtr
641	27	15	Clean CTD	End	Aug 05 2009 14:49:29	59,49973	-18,0672	2297	
642	28	1	Clean CTD	Begin	Aug 05 2009 20:00:24	60,11648	-18,72702	2614	
643	28	1	Clean CTD	Bottom	Aug 05 2009 20:03:57	60,11657	-18,72743	2608	200mtr
644	28	1	Clean CTD	End	Aug 05 2009 20:15:42	60,11617	-18,72713	2614	
645	28	2	Vertical Net	Begin	Aug 05 2009 20:23:06	60,1164	-18,7276	2608	
646	28	2	Vertical Net	End	Aug 05 2009 20:32:22	60,11608	-18,7273	2608	
647	28	3	Vertical Net	Begin	Aug 05 2009 20:34:19	60,11578	-18,72752	2608	
648	28	3	Vertical Net	End	Aug 05 2009 20:42:43	60,11635	-18,72633	2608	
649	28	4	Vertical Net	Begin	Aug 05 2009 20:44:55	60,11625	-18,72648	2614	
650	28	4	Vertical Net	End	Aug 05 2009 20:54:15	60,1163	-18,72887	2614	
651	28	5	Vertical Net	Begin	Aug 05 2009 20:56:03	60,11625	-18,72695	2614	
652	28	5	Vertical Net	End	Aug 05 2009 21:04:51	60,11615	-18,72638	2608	
653	29	1	Clean CTD	Begin	Aug 06 2009 05:03:40	60,68382	-19,33963	2462	
654	29	1	Clean CTD	Bottom	Aug 06 2009 05:07:24	60,68368	-19,34015	2462	200 mtr
655	29	1	Clean CTD	End	Aug 06 2009 05:19:11	60,68352	-19,34053	2462	
656	29	2	Clean CTD	Begin	Aug 06 2009 07:36:56	60,6838	-19,3389	2462	
657	29	2	Clean CTD	Bottom	Aug 06 2009 07:40:48	60,68348	-19,33772	2462	200mtr
658	29	2	Clean CTD	End	Aug 06 2009 07:52:06	60,68395	-19,33833	2462	
659	29	3	Vertical Net	Begin	Aug 06 2009 08:01:10	60,68395	-19,33833	2462	
660	29	3	Vertical Net	End	Aug 06 2009 08:10:51	60,68297	-19,33473	2462	
661	29	4	Vertical Net	Begin	Aug 06 2009 08:11:06	60,68302	-19,3348	2462	
662	29	4	Vertical Net	End	Aug 06 2009 08:19:54	60,68393	-19,33543	2462	
663	29	5	Vertical Net	Begin	Aug 06 2009 08:21:32	60,68378	-19,33467	2462	
664	29	5	Vertical Net	End	Aug 06 2009 08:31:29	60,68357	-19,33278	2462	





	1	2	3	4	5	6	7	8	9
748	30	21	Clean CTD	Bottom	Aug 07 2009 19:38:57	61,71163	-20,48463	1974	200mtr
749	30	21	Clean CTD	End	Aug 07 2009 19:50:38	61,71295	-20,48378	1974	
750	30	22	Vertical Net	Begin	Aug 07 2009 19:57:59	61,7121	-20,48567	1974	
751	30	22	Vertical Net	End	Aug 07 2009 20:05:41	61,71237	-20,48572	1974	
752	30	23	Vertical Net	Begin	Aug 07 2009 20:07:48	61,71195	-20,4849	1974	
753	30	23	Vertical Net	End	Aug 07 2009 20:15:16	61,71157	-20,48448	1974	
754	30	24	Vertical Net	Begin	Aug 07 2009 20:18:30	61,71177	-20,48378	1980	
755	30	24	Vertical Net	End	Aug 07 2009 20:26:31	61,71177	-20,48378	1980	
756	30	25	Clean CTD	Begin	Aug 07 2009 23:02:21	61,71202	-20,48567	1974	
757	30	25	Clean CTD	Bottom	Aug 07 2009 23:06:20	61,71168	-20,48585	1968	200mtr
758	30	25	Clean CTD	End	Aug 07 2009 23:20:44	61,71005	-20,48665	1974	
759	30	26	Clean CTD	Begin	Aug 08 2009 05:00:42	61,71183	-20,4844	1968	
760	30	26	Clean CTD	Bottom	Aug 08 2009 05:04:22	61,71183	-20,4842	1974	200 mtr
761	30	26	Clean CTD	End	Aug 08 2009 05:17:09	61,712	-20,4844	1974	
762	30	27	Clean CTD	Begin	Aug 08 2009 07:32:09	61,71242	-20,48487	1974	
763	30	27	Clean CTD	Bottom	Aug 08 2009 07:35:48	61,71258	-20,48435	1968	200mtr
764	30	27	Clean CTD	End	Aug 08 2009 07:48:40	61,71232	-20,48523	1974	
765	30	28	SCAMP Turbulentiometer	Begin	Aug 08 2009 08:02:27	61,7124	-20,48383	1974	
766	30	28	SCAMP Turbulentiometer	Bottom	Aug 08 2009 08:07:08	61,71135	-20,4828	1974	300mtr
767	30	28	SCAMP Turbulentiometer	End	Aug 08 2009 08:16:24	61,70972	-20,48117	1974	
768	30	29	SCAMP Turbulentiometer	Begin	Aug 08 2009 08:19:26	61,70933	-20,48097	1974	
769	30	29	SCAMP Turbulentiometer	Bottom	Aug 08 2009 08:26:00	61,70843	-20,48042	1980	300mtr
770	30	29	SCAMP Turbulentiometer	End	Aug 08 2009 08:34:22	61,70742	-20,48047	1974	
771	30	30	SCAMP Turbulentiometer	Begin	Aug 08 2009 08:37:27	61,70725	-20,4796	1974	
772	30	30	SCAMP Turbulentiometer	Bottom	Aug 08 2009 08:42:21	61,70712	-20,47793	1974	300mtr
773	30	30	SCAMP Turbulentiometer	End	Aug 08 2009 08:50:44	61,70667	-20,47458	1974	
774	30	31	SCAMP Turbulentiometer	Begin	Aug 08 2009 08:54:08	61,7065	-20,47345	1974	
775	30	31	SCAMP Turbulentiometer	Bottom	Aug 08 2009 08:59:05	61,70623	-20,4726	1974	300mtr
776	30	31	SCAMP Turbulentiometer	End	Aug 08 2009 09:06:45	61,70607	-20,47223	1974	
777	30	32	SCAMP Turbulentiometer	Begin	Aug 08 2009 09:10:44	61,70585	-20,47147	1974	
778	30	32	SCAMP Turbulentiometer	Bottom	Aug 08 2009 09:17:29	61,7053	-20,47102	1974	300mtr
779	30	32	SCAMP Turbulentiometer	End	Aug 08 2009 09:25:21	61,70508	-20,4712	1974	
780	30	33	SCAMP Turbulentiometer	Begin	Aug 08 2009 09:30:26	61,7048	-20,4711	1974	
781	30	33	SCAMP Turbulentiometer	Bottom	Aug 08 2009 09:37:34	61,70445	-20,47133	1974	300mtr
782	30	33	SCAMP Turbulentiometer	End	Aug 08 2009 09:41:53	61,70438	-20,47103	1974	
783	30	34	SCAMP Turbulentiometer	Begin	Aug 08 2009 09:45:03	61,70425	-20,47045	1974	
784	30	34	SCAMP Turbulentiometer	Bottom	Aug 08 2009 09:53:45	61,70418	-20,47145	1974	300mtr
785	30	34	SCAMP Turbulentiometer	End	Aug 08 2009 09:56:24	61,7044	-20,47268	1974	
786	30	35	SCAMP Turbulentiometer	Begin	Aug 08 2009 10:00:57	61,70452	-20,47505	1974	
787	30	35	SCAMP Turbulentiometer	Bottom	Aug 08 2009 10:07:40	61,7036	-20,47498	1980	300mtr
788	30	35	SCAMP Turbulentiometer	End	Aug 08 2009 10:13:28	61,70293	-20,47525	1980	
789	30	36	SCAMP Turbulentiometer	Begin	Aug 08 2009 10:17:21	61,7029	-20,47545	1980	
790	30	36	SCAMP Turbulentiometer	Bottom	Aug 08 2009 10:23:17	61,70312	-20,47462	1980	300mtr
791	30	36	SCAMP Turbulentiometer	End	Aug 08 2009 10:29:24	61,70298	-20,47355	1980	
792	30	37	SCAMP Turbulentiometer	Begin	Aug 08 2009 10:33:30	61,70305	-20,47315	1980	
793	30	37	SCAMP Turbulentiometer	Bottom	Aug 08 2009 10:40:17	61,70365	-20,47433	1974	300mtr
794	30	37	SCAMP Turbulentiometer	End	Aug 08 2009 10:48:51	61,70407	-20,4785	1980	
795	30	38	SCAMP Turbulentiometer	Begin	Aug 08 2009 10:54:56	61,70422	-20,48055	1980	
796	30	38	SCAMP Turbulentiometer	Bottom	Aug 08 2009 11:02:35	61,7043	-20,48138	1980	300mtr
797	30	38	SCAMP Turbulentiometer	End	Aug 08 2009 11:09:16	61,70373	-20,48182	1980	
798	30	39	SCAMP Turbulentiometer	Begin	Aug 08 2009 11:14:15	61,70323	-20,48237	1980	
799	30	39	SCAMP Turbulentiometer	Bottom	Aug 08 2009 11:22:00	61,70247	-20,48262	1980	300mtr
800	30	39	SCAMP Turbulentiometer	End	Aug 08 2009 11:25:07	61,70223	-20,48248	1980	
801	30	40	SCAMP Turbulentiometer	Begin	Aug 08 2009 11:33:42	61,70153	-20,48367	1980	
802	30	40	SCAMP Turbulentiometer	Bottom	Aug 08 2009 11:39:53	61,70095	-20,48523	1980	300mtr
803	30	40	SCAMP Turbulentiometer	End	Aug 08 2009 11:43:36	61,70075	-20,48607	1986	
804	30	41	SCAMP Turbulentiometer	Begin	Aug 08 2009 11:48:08	61,70045	-20,48618	1986	
805	30	41	SCAMP Turbulentiometer	Bottom	Aug 08 2009 11:53:54	61,70008	-20,4855	1986	300mtr
806	30	41	SCAMP Turbulentiometer	End	Aug 08 2009 11:58:49	61,69987	-20,48503	1986	
807	30	42	SCAMP Turbulentiometer	Begin	Aug 08 2009 12:03:19	61,69963	-20,4849	1986	
808	30	42	SCAMP Turbulentiometer	Bottom	Aug 08 2009 12:09:30	61,69932	-20,48478	1986	300mtr
809	30	42	SCAMP Turbulentiometer	End	Aug 08 2009 12:12:53	61,69932	-20,48593	1986	
810	30	43	Clean CTD	Begin	Aug 08 2009 12:30:00	61,71207	-20,48492	1968	
811	30	43	Clean CTD	Bottom	Aug 08 2009 12:41:33	61,7122	-20,48475	1968	500mtr
812	30	43	Clean CTD	End	Aug 08 2009 13:06:41	61,71223	-20,48428	1968	
813	31	1	Clean CTD	Begin	Aug 08 2009 19:23:11	62,30007	-21,1555	1468	
814	31	1	Clean CTD	Bottom	Aug 08 2009 19:32:18	62,30022	-21,15578	1468	500mtr
815	31	1	Clean CTD	End	Aug 08 2009 20:19:47	62,30003	-21,15552	1468	
816	31	2	Vertical Net	Begin	Aug 08 2009 20:27:51	62,30033	-21,15527	1468	
817	31	2	Vertical Net	End	Aug 08 2009 20:35:20	62,29992	-21,15577	1468	
818	31	3	Vertical Net	Begin	Aug 08 2009 20:36:55	62,30002	-21,1558	1468	
819	31	3	Vertical Net	End	Aug 08 2009 20:45:36	62,3002	-21,15563	1468	
820	31	4	Vertical Net	Begin	Aug 08 2009 20:47:14	62,3001	-21,15577	1468	
821	31	4	Vertical Net	End	Aug 08 2009 20:54:38	62,29988	-21,15588	1468	
822	31	5	Vertical Net	Begin	Aug 08 2009 20:56:25	62,30002	-21,15553	1468	
823	31	5	Vertical Net	End	Aug 08 2009 21:04:13	62,3003	-21,15563	1468	
824	32	1	Clean CTD	Begin	Aug 09 2009 05:00:49	62,79987	-21,736	1181	
825	32	1	Clean CTD	Bottom	Aug 09 2009 05:04:35	62,7998	-21,73642	1181	200 mtr
826	32	1	Clean CTD	End	Aug 09 2009 05:17:11	62,79998	-21,73615	1181	
827	32	2	Clean CTD	Begin	Aug 09 2009 07:30:30	62,79977	-21,73578	1181	
828	32	2	Clean CTD	Bottom	Aug 09 2009 07:34:08	62,7998	-21,73583	1181	200mtr
829	32	2	Clean CTD	End	Aug 09 2009 07:47:56	62,8001	-21,73608	1181	
830	32	3	Vertical Net	Begin	Aug 09 2009 07:56:25	62,80005	-21,73552	1181	

	1	2	3	4	5	6	7	8	9
831	32	3	Vertical Net	End	Aug 09 2009 08:04:47	62,79987	-21,7364	1181	
832	32	4	Vertical Net	Begin	Aug 09 2009 08:06:54	62,7999	-21,73625	1181	
833	32	4	Vertical Net	End	Aug 09 2009 08:15:31	62,79985	-21,73593	1181	
834	32	5	Vertical Net	Begin	Aug 09 2009 08:17:34	62,7999	-21,73677	1181	
835	32	5	Vertical Net	End	Aug 09 2009 08:25:55	62,7999	-21,73675	1181	
836	32	6	Vertical Net	Begin	Aug 09 2009 08:27:41	62,79992	-21,73658	1181	
837	32	6	Vertical Net	End	Aug 09 2009 08:36:33	62,80003	-21,73652	1181	
838	32	7	SCAMP Turbulentiometer	Begin	Aug 09 2009 09:02:20	62,80027	-21,73562	1181	
839	32	7	SCAMP Turbulentiometer	Bottom	Aug 09 2009 09:05:39	62,80055	-21,73683	1177	200mtr
840	32	7	SCAMP Turbulentiometer	End	Aug 09 2009 09:13:19	62,80008	-21,74078	1181	
841	32	8	SCAMP Turbulentiometer	Begin	Aug 09 2009 09:19:33	62,79897	-21,74198	1181	
842	32	8	SCAMP Turbulentiometer	Bottom	Aug 09 2009 09:24:25	62,79792	-21,74177	1181	200mtr
843	32	8	SCAMP Turbulentiometer	End	Aug 09 2009 09:32:17	62,79635	-21,74228	1181	
844	32	9	SCAMP Turbulentiometer	Begin	Aug 09 2009 09:37:47	62,79563	-21,7425	1185	
845	32	9	SCAMP Turbulentiometer	Bottom	Aug 09 2009 09:43:54	62,79442	-21,74348	1185	275mtr
846	32	9	SCAMP Turbulentiometer	End	Aug 09 2009 09:51:12	62,79278	-21,74562	1189	
847	32	10	SCAMP Turbulentiometer	Begin	Aug 09 2009 09:57:45	62,79163	-21,74595	1189	
848	32	10	SCAMP Turbulentiometer	Bottom	Aug 09 2009 10:03:53	62,79077	-21,74612	1189	250mtr
849	32	10	SCAMP Turbulentiometer	End	Aug 09 2009 10:11:38	62,78978	-21,74675	1189	
850	32	11	SCAMP Turbulentiometer	Begin	Aug 09 2009 10:19:30	62,78962	-21,74623	1189	
851	32	11	SCAMP Turbulentiometer	Bottom	Aug 09 2009 10:26:05	62,78867	-21,7459	1189	250mtr
852	32	11	SCAMP Turbulentiometer	End	Aug 09 2009 10:31:27	62,78752	-21,74595	1193	
853	32	12	SCAMP Turbulentiometer	Begin	Aug 09 2009 10:36:05	62,7865	-21,74622	1193	
854	32	12	SCAMP Turbulentiometer	Bottom	Aug 09 2009 10:42:18	62,7854	-21,7472	1193	250mtr
855	32	12	SCAMP Turbulentiometer	End	Aug 09 2009 10:49:51	62,78432	-21,74863	1193	
856	32	13	SCAMP Turbulentiometer	Begin	Aug 09 2009 10:55:52	62,78415	-21,74678	1193	
857	32	13	SCAMP Turbulentiometer	Bottom	Aug 09 2009 11:01:34	62,78582	-21,74588	1193	250mtr
858	32	13	SCAMP Turbulentiometer	Bottom	Aug 09 2009 11:07:33	62,78758	-21,74515	1193	
859	32	14	SCAMP Turbulentiometer	Begin	Aug 09 2009 11:11:15	62,78858	-21,74608	1189	
860	32	14	SCAMP Turbulentiometer	Bottom	Aug 09 2009 11:15:47	62,78953	-21,74782	1189	250mtr
861	32	14	SCAMP Turbulentiometer	End	Aug 09 2009 11:23:48	62,79123	-21,75042	1189	
862	32	15	SCAMP Turbulentiometer	Begin	Aug 09 2009 11:27:53	62,79212	-21,75068	1189	
863	32	15	SCAMP Turbulentiometer	Bottom	Aug 09 2009 11:33:00	62,79378	-21,75083	1185	250mtr
864	32	15	SCAMP Turbulentiometer	End	Aug 09 2009 11:41:00	62,79578	-21,7503	1185	
865	32	16	SCAMP Turbulentiometer	Begin	Aug 09 2009 11:44:55	62,79673	-21,74953	1181	
866	32	16	SCAMP Turbulentiometer	Bottom	Aug 09 2009 11:50:18	62,79767	-21,74713	1181	250mtr
867	32	16	SCAMP Turbulentiometer	End	Aug 09 2009 11:56:51	62,79898	-21,74832	1181	
868	32	17	SCAMP Turbulentiometer	Begin	Aug 09 2009 12:01:00	62,79992	-21,74768	1181	
869	32	17	SCAMP Turbulentiometer	Bottom	Aug 09 2009 12:05:33	62,80113	-21,74747	1177	250mtr
870	32	17	SCAMP Turbulentiometer	End	Aug 09 2009 12:14:30	62,80362	-21,74738	1177	
871	32	18	SCAMP Turbulentiometer	Begin	Aug 09 2009 12:17:58	62,80437	-21,74728	1177	
872	32	18	SCAMP Turbulentiometer	Bottom	Aug 09 2009 12:23:39	62,80595	-21,74605	1172	250mtr
873	32	18	SCAMP Turbulentiometer	End	Aug 09 2009 12:30:40	62,80763	-21,7445	1168	
874	32	19	SCAMP Turbulentiometer	Begin	Aug 09 2009 12:35:02	62,80713	-21,74272	1172	
875	32	19	SCAMP Turbulentiometer	Bottom	Aug 09 2009 12:41:08	62,80628	-21,7414	1172	250mtr
876	32	19	SCAMP Turbulentiometer	End	Aug 09 2009 12:48:19	62,80502	-21,7415	1172	
877	32	20	SCAMP Turbulentiometer	Begin	Aug 09 2009 12:51:59	62,80388	-21,74085	1177	
878	32	20	SCAMP Turbulentiometer	Bottom	Aug 09 2009 12:58:04	62,80245	-21,74032	1177	250mtr
879	32	20	SCAMP Turbulentiometer	End	Aug 09 2009 13:04:17	62,80097	-21,7397	1177	
880	32	21	SCAMP Turbulentiometer	Begin	Aug 09 2009 13:11:22	62,79933	-21,7371	1177	
881	32	21	SCAMP Turbulentiometer	Bottom	Aug 09 2009 13:17:30	62,7978	-21,7356	1181	250mtr
882	32	21	SCAMP Turbulentiometer	End	Aug 09 2009 13:21:50	62,7968	-21,73325	1181	
883	32	22	SCAMP Turbulentiometer	Begin	Aug 09 2009 13:25:18	62,79602	-21,73208	1181	
884	32	22	SCAMP Turbulentiometer	Bottom	Aug 09 2009 13:32:02	62,79443	-21,7304	1181	150mtr
885	32	22	SCAMP Turbulentiometer	End	Aug 09 2009 13:32:23	62,794	-21,728	1177	
886	32	23	Clean CTD	Begin	Aug 09 2009 14:03:09	62,80003	-21,736	1177	
887	32	23	Clean CTD	Bottom	Aug 09 2009 14:38:33	62,79995	-21,73598	1177	500mtr
888	32	23	Clean CTD	End	Aug 09 2009 14:53:48	62,8	-21,73552	1177	
889	*								

instruments configuration stratiphyt 2009

Description of the instruments used				
<b>CTD</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
SBE	9+	230/43517		8 Aug. 2008
<b>Conductivity sensor</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
SBE	4	43262		12-jun-07
<b>Temperature sensor</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
SBE	3	31197		26-feb-09
<b>Oxygen sensor</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
SBE	43	431141		25-feb-09
<b>Fluorimeter</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
CHELSEA	MK-III	088-042		23-jan-09
<b>Transmissiometer</b>				
Manufacturer	Type	Serial number	Date entry / change	Latest calibration date
WET-LAB	C-Star	CST-112DR		24-apr-08
<b>Rosette</b>				
Type of bottles	Number			
Go-Flo	24 X 10 Liter			
<b>PAR</b>				
		Serial number		Latest calibration date
SATLANTIC		92		4-jun-09
<b>PAR</b>				
		Serial number		Latest calibration date
SATLANTIC		45		25-jun-09
<b>OBS</b>				
		Serial number		Latest calibration date
SEA-Point		10512		1-feb-08

1	2	3	4	5	6	7	8	9
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	Relay time (UTC +1)	Depths	Bottle #
1		Stratiphyt cruise 2009; 64PE09						
2								
3								
4	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	90	7
5	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	90	7
6	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 30, 45, 60, 87, 225	20, 14, 13, 5, 3, 2
7	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 30, 45, 60, 87, 225	20, 14, 13, 5, 3, 2
8	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	1:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
9	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	2:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
10	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	2:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
11	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 50, 100, 225	23, 14, 13, 2, 1
12	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 20, 50, 100, 225	23, 14, 13, 2, 1
13	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 45, 75, 100, 225	23, 15, 13, 12, 6, 1
14	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 45, 75, 100, 225	23, 15, 13, 12, 6, 1
15	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	20, 100	11, 10, 3, 1
16	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	20, 100	11, 10, 3, 1
17	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 55, 80, 200	16, 15, 4, 3
18	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 55, 80, 200	16, 15, 4, 3
19	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
20	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
21	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
22	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 50, 70, 100, 150, 200	16, 14, 13, 7, 5, 3, 2
23	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 50, 70, 100, 150, 200	16, 14, 13, 7, 5, 3, 2
24	4	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:40 PM	10, 45, 90, 150, 225	14, 10, 7, 4, 1
25	4	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:40 PM	10, 45, 90, 150, 225	14, 10, 7, 4, 1
26	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 50, 85, 225	15, 14, 3, 1
27	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 50, 85, 225	15, 14, 3, 1
28	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
29	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
30	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
31	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	20, 40, 60, 80, 100, 150, 225	21, 18, 15, 11, 8, 5, 1
32	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	20, 40, 60, 80, 100, 150, 225	21, 18, 15, 11, 8, 5, 1
33	6	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 PM	15, 35, 60, 90, 225	21, 18, 15, 12, 1
34	6	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 PM	15, 35, 60, 90, 225	21, 18, 15, 12, 1
35	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 55, 120, 200	15, 5, 3, 2
36	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 55, 120, 200	15, 5, 3, 2
37	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
38	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
39	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
40	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	10, 20, 35, 65, 90, 115, 200	21, 18, 14, 10, 7, 4, 2
41	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 35, 65, 90, 115, 200	21, 18, 14, 10, 7, 4, 2
42	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	4:00 PM	15	3
43	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	4:00 PM	15	3
44	8	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:00 PM	15, 30, 50, 65, 90, 120, 200	20, 17, 14, 10, 7, 4, 2
45	8	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:00 PM	15, 30, 50, 65, 90, 120, 200	20, 17, 14, 10, 7, 4, 2
46	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 70, 200	15, 5, 2
47	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 70, 200	15, 5, 2
48	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
49	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
50	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
51	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 35, 55, 70, 200	21, 18, 15, 10, 2
52	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 35, 55, 70, 200	21, 18, 15, 10, 2

1	2	3	4	5	6	7	8	9
53	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	1:30 PM	15, 70	22, 10
54	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 70	22, 10
55	10	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	9:30 PM	15, 30, 50, 70, 200	20, 18, 14, 10, 1
56	10	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	9:30 PM	15, 30, 50, 70, 200	20, 18, 14, 10, 1
57	11	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 45, 70, 100	15, 14, 4, 1
58	11	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 45, 70, 100	15, 14, 4, 1
59	11	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 35, 55, 70, 90	18, 17, 11, 9, 8, 7, 1
60	11	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 35, 55, 70, 90, 120, 200	18, 17, 11, 9, 8, 7, 1
61	11	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 35, 55, 70, 90, 120, 200	18, 17, 11, 9, 8, 7, 1
62	11	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 50, 70, 90, 110, 200	20, 17, 13, 10, 7, 4, 2
63	11	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 50, 70, 90, 110, 200	20, 17, 13, 10, 7, 4, 2
64	11	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	3:30 PM	15, 35, 55, 70, 90, 110, 200	21, 19, 12, 9, 6, 3, 1
65	11	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	3:30 PM	15, 35, 55, 70, 90, 110, 200	21, 19, 12, 9, 6, 3, 1
66	12	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:00 PM	15, 30, 55, 70, 100, 120, 200	22, 19, 15, 11, 10, 4, 2
67	12	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	10:00 PM	15, 30, 55, 70, 100, 120, 200	22, 19, 15, 11, 10, 4, 2
68	13	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 50, 175	15, 4, 2
69	13	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 50, 175	15, 4, 2
70	13	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
71	13	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
72	13	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
73	13	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	10, 35, 55, 65, 80	22, 19, 15, 9, 7, 5
74	13	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 30, 35, 40, 45, 50, 55, 60, 65, 70, 80, 90, 100, 110, 120	24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
75	14	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	9:30 PM	10, 30, 45, 60, 80	20, 16, 12, 10, 7
76	14	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	9:30 PM	10, 30, 45, 60, 80, 100, 150	20, 18, 16, 12, 10, 7, 4, 2
77	15	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 60, 150	15, 4, 1
78	15	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 60, 150	15, 4, 1
79	15	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 70, 90	18, 17, 15, 9, 7
80	15	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 70, 90, 125	18, 17, 15, 9, 7, 1
81	15	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 70, 90, 125	18, 17, 15, 9, 7, 1
82	15	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 40, 60, 80	23, 18, 17, 8, 7
83	15	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	10:30 AM	10, 20, 40, 60, 80, 100, 125	23, 18, 17, 8, 7, 4, 2
84	16	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	9:20 AM	10, 25, 40, 60, 100, 125	16, 7, 6, 5, 3, 1
85	16	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	9:20 AM	10, 25, 40, 60, 100, 125	16, 7, 6, 5, 3, 1
86	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 30, 55, 75, 100	20, 18, 9, 7, 5
87	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	1:30 PM	15, 30, 55, 75, 100, 150	20, 18, 9, 7, 5, 1
88	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 30, 55, 75, 100, 150	20, 18, 9, 7, 5, 1
89	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	4:20 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
90	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	4:00 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
91	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	4:00 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
92	17	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	4:00 PM	15, 51	20, 17
93	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
94	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
95	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
96	17	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	7:00 PM	15, 55	20, 16, 8
97	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
98	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
99	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
100	17	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	9:00 PM	15, 55	21, 9
101	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	1:00 AM	15, 30, 56, 75, 100	21, 17, 14, 9, 5
102	17	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	1:00 AM	15, 30, 56, 75, 100, 150	21, 17, 14, 9, 5, 3
103	17	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:00 AM	15, 30, 56, 75, 100, 150	21, 17, 14, 9, 5, 3
104	17	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	1:00 AM	30, 56	17, 14

	1	2	3	4	5	6	7	8	9
105	17	12	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 41, 150	7, 4, 1
106	17	12	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton fixed	CTD	6:00 AM	15, 41, 150	7, 4, 1
107	17	12	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 41, 150	7, 4, 1
108	17	12	Noordeloos / Finke	Brussard, Mojica	phytoplankton DNA	CTD	6:00 AM	15, 41	17, 4
109	17	13	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
110	17	13	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
111	17	13	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
112	17	13	Noordeloos / Finke	Brussard, Mojica	phytoplankton DNA	CTD	8:30 AM	15, 47	18, 11
113	17	25	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	1:30 PM	15, 30, 51, 75, 90	21, 18, 14, 11, 8
114	17	25	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton fixed	CTD	1:30 PM	15, 30, 51, 75, 90, 110, 150	21, 18, 14, 11, 8, 6, 2
115	17	25	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 30, 51, 75, 90, 110, 150	21, 18, 14, 11, 8, 6, 2
116	17	25	Noordeloos / Finke	Brussard, Mojica	phytoplankton DNA	CTD	1:30 PM	15, 51	21, 14
117	18	1	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 35, 150	15, 5, 3
118	18	1	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 35, 150	15, 5, 3
119	19	1	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 45, 75, 125	16, 5, 4, 1
120	19	1	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 45, 75, 125	16, 5, 4, 1
121	19	2	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 60, 80, 125	18, 12, 10, 8, 6, 1
122	19	2	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 60, 80, 125	18, 12, 10, 8, 6, 1
123	19	3	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 45, 65, 75, 125	15, 11, 9, 7, 5, 4, 1
124	20	1	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	9:00 PM	15, 30, 40, 50, 60, 70, 90, 121	24, 17, 14, 11, 9, 7, 5, 1
125	21	1	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 55, 125	15, 5, 1
126	21	1	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 55, 125	15, 5, 1
127	21	2	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 60, 75, 125	18, 16, 14, 13, 6, 1
128	21	2	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 60, 75, 125	18, 16, 14, 13, 6, 1
129	21	2	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live / fixed	CTD		60	13
130	21	3	Noordeloos / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 40, 60, 80, 125	20, 18, 16, 6, 4, 2
131	21	3	Noordeloos / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 40, 60, 80, 125	20, 18, 16, 6, 4, 2
132	22	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	25	7
133	22	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 25, 50, 75, 100	21, 7, 5, 3, 1
134	23	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 25, 40, 60	21, 17, 15, 12
135	23	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 25, 40, 60, 80, 100	21, 17, 15, 13, 12, 5, 1
136	24	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 40, 70, 125	15, 5, 4, 1
137	24	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 40, 70, 125	15, 5, 4, 1
138	24	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 40, 70, 125	15, 5, 4, 1
139	24	2	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40, 70, 125	23, 17, 15, 9, 7, 1
140	24	2	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20	23, 17
141	24	2	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40, 70, 125	23, 17, 15, 9, 7, 1
142	25	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 21, 50, 75, 100	13, 9, 7, 5, 1
143	25	1	Brussard / Finke	Brussard, Mojica	fractionation	CTD	6:00 AM	15	13
144	25	2	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40	18, 13, 11, 9
145	25	2	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 30, 40, 60, 100	18, 13, 11, 9, 7, 1
146	25	7	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	30, 500	11, 2
147	26	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:30 AM	15, 30, 45, 75	20, 17, 10, 5
148	26	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:30 AM	15, 30, 45, 75, 100	20, 17, 10, 5, 1
149	27	1	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 25, 37, 75, 100	13, 11, 8, 6, 1
150	27	1	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 25, 37, 75, 100	13, 11, 8, 6, 1
151	27	2	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 45	24, 13, 10, 7
152	27	2	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 30, 45, 100	24, 13, 10, 7, 1
153	27	3	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	10:30 AM	10, 20, 30, 40, 50	23, 10, 8, 5, 3
154	27	3	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 30, 40, 50, 60	23, 10, 8, 5, 3, 1
155	27	15	Brussard / Finke	Brussard, Mojica	abundance phytoplankton live	CTD	3:30 PM	20	14
156	27	15	Brussard / Finke	Brussard, Mojica	abundance bacteria / viruses fixed	CTD	3:30 PM	10, 20, 30, 40, 50, 60, 100	23, 14, 12, 10, 8, 6, 1

1	2	3	4	5	6	7	8	9
157	28	1	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 30, 40, 50, 23, 19, 16, 13, 10
158	28	1	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 20, 30, 40, 50, 60, 75, 100, 23, 19, 16, 13, 10, 7, 4, 1
159	29	1	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 40, 50, 60, 100, 13, 11, 9, 6, 4, 1
160	29	2	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30
161	29	2	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 30, 40, 50, 60, 100, 15, 14, 11, 8, 7, 6, 1
162	29	14	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	4:00 PM	10, 20, 16, 13
163	29	14	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	4:00 PM	5, 10, 15, 20, 25, 30, 40, 50, 75, 23, 16, 19, 13, 10, 7, 5, 3, 1
164	30	1	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	19, 17, 12, 10, 8
165	30	1	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 25, 35, 45, 55, 75, 100, 19, 17, 12, 10, 8, 6, 4, 1
166	30	11	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	1:00 PM	22, 12, 9, 6, 3, 1
167	30	11	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	1:00 PM	10, 20, 30, 40, 50, 60, 22, 12, 9, 6, 3, 1
168	30	19	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	4:00 PM	15, 30, 40, 50
169	30	19	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	4:00 PM	15, 30, 40, 50, 75, 100, 125, 19, 14, 11, 9, 7, 3, 1
170	30	20	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 PM	10, 20, 30, 40, 60, 100, 17, 15, 11, 9, 7, 1
171	30	20	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 PM	10, 20, 30, 40, 60, 100, 17, 15, 11, 9, 7, 1
172	30	21	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	8:00 PM	10, 20, 25, 30, 40, 50, 75, 17, 15, 13, 9, 7, 6, 4
173	30	21	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:00 PM	10, 20, 25, 30, 40, 50, 75, 100, 17, 15, 13, 9, 7, 6, 4, 1
174	30	25	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	12:00 AM	10, 20, 30, 40, 60, 100, 21, 17, 13, 9, 5, 1
175	30	26	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	1, 2, 3, 4, 5, 6, 7, 8
176	30	26	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	1, 2, 3, 4, 5, 6, 7, 8, 1, 2, 3, 4, 5, 6, 7, 8
177	30	27	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	8:00 AM	10, 20, 25, 35, 45, 60, 80, 18, 16, 14, 11, 9, 8, 7
178	30	27	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:00 AM	10, 20, 25, 35, 45, 60, 80, 100, 18, 16, 14, 11, 9, 8, 7, 1
179	30	43	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	1:00 PM	5, 10, 20, 25, 30, 40, 50, 75, 24, 20, 18, 16, 14, 12, 10, 9
180	30	43	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:00 PM	5, 10, 20, 25, 30, 40, 50, 75, 100, 24, 20, 18, 16, 14, 12, 10, 9, 5, 4, 3, 2, 1
181	31	1	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 30, 40, 45, 55, 75, 23, 19, 15, 11, 7, 5, 3
182	31	1	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 20, 30, 40, 45, 55, 75, 100, 23, 19, 15, 11, 7, 5, 3, 1
183	32	1	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 30, 40, 75, 100, 13, 11, 9, 5, 4
184	32	1	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 30, 40, 75, 100, 13, 11, 9, 5, 4
185	32	2	Brussaard, Fijne	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 25, 30, 35, 40, 50, 60, 90, 125, 17, 13, 11, 10, 9, 7, 6, 5, 2
186	32	2	Brussaard, Fijne	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 25, 30, 35, 40, 50, 60, 90, 125, 17, 13, 11, 10, 9, 8, 7, 6, 5, 2

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	Other comments
2	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	everything	CTD	8:00 AM	225, 100, 20	2, 8, 7, 6, 17, 18	test station - no data
3	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17, 18, 19, 20	
3	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	80	11, 12, 13, 14	
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	15	20, 21, 23	
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	57	11, 12	
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	200	2, 3	
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21, 22, 23, 24	
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	85	9, 10, 11, 13	
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	225	2	
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	15	22, 23	
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	85	13, 14	
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	225	3	
7	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	21, 22, 23, 24	
7	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	55	11, 12, 13, 14	
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	15	18, 22	
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	70	10, 13	
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Virus isolation	CTD	8:30 AM	200	2	
7	18	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	4:00 PM	15	3	
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16, 17, 18, 19	
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	70	5, 6, 7, 8	
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	200	2	
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	15	19, 20	
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	75	10, 11	
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	200	2	



11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	14, 17, 18, 19, 20
11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	60	5,6,7,8
11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	DNA	CTD	6:00 AM	100	3
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	21,22
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	55	12,13
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Virus isolation Ultrafiltrate made and Viral Production	CTD	8:30 AM	200	4,5
11	19	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Centrimate Test	CTD	4:00 PM	15	21,22
11	19	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	4:00 PM	55	12,13,14,15,16,17
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	16,17,18,19
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	57	5,6,7,14
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	175	2
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	18,19
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	47	9,10
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	175	3
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16,17,18,19
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	60	5,6,7,13
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	150	1,2
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	21, 24
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	60	11, 21
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Ultrafiltrate made and Viral Production	CTD	8:30 AM	125	3
16	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	8:30 AM	10	20,21,22,23
16	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	8:30 AM	25	13,14,15
17	8	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Ultrafiltrate made and Viral Production	CTD	4:00 PM	15	24
17	9	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 PM	15	21,22,24
17	9	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 PM	55	12,13,14
17	10	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 PM	15	21,22,23,24
17	10	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 PM	55	10,11,12,13,14,15

17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17,18,19
17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	41	5,6,7,8
17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	150	2
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	15	19,20
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	48	12,13
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	150	2
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16,17,18,19
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	35	5,6,7,8
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	DNA	CTD	6:00 AM	150	2
18	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production (used 6am filtrate)	CTD	4:00 PM	25	10,11,15,16
18	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	4:00 PM	33	22,23,24
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17,18,19
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	45	6,7,8,9
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	2
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	15	23,24
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	30	14,15
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	3
19	3	Mojica/Maat/de Vries	Mojica/Brussaard	Centramate Test	CTD	10:30 AM	15	19,20,21,22,23,24
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21,22,23,24
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	55	11,12,13,14
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	3
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	15	21,22
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	60	11,12
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	3,4
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21,22,23,24
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	40	11,12,13,14
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	3

24	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	20	21,22
24	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	4,5
25	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	19,20,21,22
25	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
25	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	21,22,23
25	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3,4
27	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	19,20,21,22
27	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
27	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	20	19,20,21
27	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	2,3
27	15	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	3:30 PM	20	15
29	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	15,16,17,24
29	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	2,3
29	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	19,20
29	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3
30	19	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Ultrafiltrate made and Viral Production	CTD	4:00 PM	15	20,21
30	20	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:30 PM	10	18,19,20,21
30	21	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 PM	10	19,20
30	26	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	20,21,22,23
30	26	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
30	27	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	23,24
30	27	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3
32	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	16,17,18,19
32	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	2,3
32	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	18,19
32	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	2

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	UTC+1 time of day	Depths	Other comments	
2	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,30,50,100,225 m	23,14,12,3,1	
2	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,4,75,100,225 m	23,15,13,12,6,1	
2	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	10,100 m	10,1	
2	4	Timmermans	Timmermans	translocation A	CTD	15:00 AM	45,500	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1	
3	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,55,80,200 m	16,15,4,3	
3	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,35,60,125 m	17,15,8,6,1	
3	3	Timmermans	Timmermans	WATER-PAM	CTD	11:00 AM	15,30,50,72,100,150,200 m	16,14,13,7,5,3,2	
4	1	Timmermans	Timmermans	WATER-PAM	CTD	20:00 PM	10,45,90,150,225 m	14,10,7,4,1	
5	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,50,85,225 m	15,14,3,1	
5	2	Timmermans	Timmermans	WATER-PAM	CTD	8:00 AM	15,50,85,150,225 m	18,16,8,6,2	
5	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	20,40,60,80,100,150,225 m	21,18,15,11,8,5,2	
6	1	Timmermans	Timmermans	WATER-PAM	CTD	22:00 PM	15,35,60,90,120,150,225 m	21,18,12,9,5,1	
7	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,55,120,200 m	15,5,3,1	
7	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,40,70,110,200 m	17,15,8,6,1	
7	3	Timmermans	Timmermans	WATER-PAM	CTD	10:45 AM	10,20,35,65,90,115,200 m	21,18,14,10,7,4,2	
8	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	15,30,50,65,90,120,200 m	20,17,14,10,7,4,2	
9	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,70,200 m	16,4,2	
9	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,40,75,120,200 m	18,16,9,6,2	
9	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,35,55,70,100,120,200 m	21,18,15,10,7,4,1	
9	6	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,50,63,100,120,200 m	22,19,16,10,7,4,1	
10	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,50,70,120,200 m	20,17,14,10,7,4,1	
11	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,40,70,100 m	15,14,4,1	
11	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,35,50,70,90,120,200 m	18,17,15,9,8,7,1	
11	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,35,55,70,90,110,200 m	20,17,13,10,7,4,1	
11	19	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,35,55,70,90,110,200 m	21,18,12,9,6,3,1	
12	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	15,30,55,70,100,200 m	22,19,15,11,7,4,1	
13	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,50,175 m	15,4,1	
13	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,47,90,175 m	17,16,7,6,2	
13	3	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	10,20,30,35,40,45,50,55,60,65,70,80,90,100,110,120 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1	
13	13	Timmermans	Timmermans	Translocatie B	CTD	16:00 PM	45,100 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1	
14	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	10,20,30,45,60,80,100,150 m	20,18,16,12,10,4,1	
15	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,60,150 m	15,4,1	

15	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,50,70,125 m	18,17,15,9,1
15	3	Timmermans	Timmermans	WATER-PAM	CTD	10:45 AM	10,20,40,60,80,100,125 m	20,18,16,8,6,4,1
16	1	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,25,40,60,80,100,125 m	16,7,6,5,4,3,1
17	2	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,55,75,100,150 m	20,18,9,7,5,1
17	8	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,30,51,75,100,150 m	20,17,12,9,6,1
17	9	Timmermans	Timmermans	WATER-PAM	CTD	18:30 PM	15,30,55,75,100,150 m	20,18,8,7,4,1
17	10	Timmermans	Timmermans	WATER-PAM	CTD	20:30 PM	15,30,55,75,100,150 m	21,19,9,6,4,1
17	11	Timmermans	Timmermans	WATER-PAM	CTD	12:30 AM	15,30,55,75,100,150 m	21,17,14,9,5,1
17	12	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,52,150 m	17,4,1
17	13	Timmermans	Timmermans	WATER-PAM	CTD	8:00 AM	15,50,60,80,100,150 m	18,11,9,7,5,1
17	25	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,51,75,90,110,150 m	21,18,14,11,8,5,1
18	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,35,150 m	15,4,1
18	2	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	25,29,33,35,42,50,55,60,70,100 m	18,12,11,10,9,8,7,6,5,1
19	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,45,75,125 m	16,5,4,1
19	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,45,60,80,125 m	18,12,10,8,6,1
19	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,30,45,55,65,75,125 m	15,11,9,7,5,4,1
20	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,40,50,60,70,90,125 m	21,17,14,11,9,7,5,1
21	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,55,125 m	15,5,1
21	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,45,60,75,125 m	18,16,14,8,3,1
21	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,30,40,60,80,125 m	20,18,16,6,4,2
21	14	Timmermans	Timmermans	translocation C	CTD	14:30 PM	45, 500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1
22	1	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,25,50,75,100 m	21,7,5,3,1
22	1	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	25 m	8
23	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,25,40,60,80,100 m	21,17,13,12,5,1
24	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,40,70,125 m	15,5,4,1
24	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,70,125 m	23,17,15,9,7,1
24	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	30 m	16
25	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,22,50,75,100 m	13,9,7,5,1
25	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,60,100 m	18,13,11,9,7,1
25	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20	16
25	7	Timmermans	Timmermans	translocation D	CTD	10:30 AM	30, 500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1
26	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,45,75,100 m	20,15,10,5,1
27	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,25,38,75,100 m	13,11,8,6,1
27	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,100 m	24,13,10,7,1
27	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	30 m	10
28	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,20,30,40,50,60,75,100 m	23,19,16,13,10,7,4,1

29	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,40,50,60,100 m	13,11,8,6,4,1
29	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,50,60,100 m	15,14,11,8,7,6,1
29	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20 m	14
29	14	Timmermans	Timmermans	WATER-PAM	CTD	15:45 PM	5,10,15,20,25,30,40,50,75 m	22,19,16,13,10,7,5,3,1
30	1	Timmermans	Timmermans	WATER-PAM	CTD	10:00 AM	15,25,35,45,55,65,75,100 m	19,17,12,10,8,6,4,1
30	1	Timmermans	Timmermans	enzyme activity	CTD	10:00 AM	25 m	17
30	11	Timmermans	Timmermans	WATER-PAM	CTD	13:00 PM	10,20,30,40,50,60 m	22,12,9,6,3,1
30	19	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,30,40,50,75,100,125 m	19,14,11,9,6,3,1
30	20	Timmermans	Timmermans	WATER-PAM	CTD	18:30 PM	10,20,30,40,60,100 m	17,15,11,9,7,9
30	21	Timmermans	Timmermans	WATER-PAM	CTD	20:30 PM	10,20,25,30,40,50,75,100	17,15,13,9,7,6,5,1
30	25	Timmermans	Timmermans	WATER-PAM	CTD	24:00 PM	10,20,30,40,60,100 m	21,17,13,9,5,1
30	26	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,30,40,50,75,100,150 m	15,13,11,9,8,5,2,1
30	27	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,25,35,4,60,80,100 m	18,16,14,11,9,8,7,1
30	27	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20	17
30	43	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	5,10,20,25,30,40,50,75,100,200,300,375,500 m	24,20,18,16,14,12,10,9,5,4,3,2,1
31	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,20,30,40,45,55,75,100 m	23,20,19,15,11,7,5,3,1
32	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,30,40,50,75,100,125 m	15,13,11,9,7,5,4,2
32	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,25,30,35,40,50,60,90,125 m	17,13,11,10,9,8,7,6,5,2
32	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20 m	14
32	34	Timmermans	Timmermans	translocation exp E	CTD	15:45 PM	25,500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1

Stratiphyt cruise 2009; 64PE309										
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	Other comments	UTC+1
1	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	10, 40	23, 17		
2	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	20, 100, 225	19, 10, 3		
3	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 60, 200	19, 10, 4		
5	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 85, 250	20, 15, 4		
7	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 70, 200	20, 11, 3		
9	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 75, 200	21, 12, 3		
11	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 55, 200	19, 14, 3		
13	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 47, 175	22, 11, 4		
15	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 60, 125	19, 10, 2		
16	1	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	10, 25, 125	17, 8, 2		
17	13	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	33, 48, 150	21, 15, 3		
18	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	23, 25, 100	20, 14, 1		
19	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 30, 125	19, 13, 2		
21	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	15, 60, 125	19, 9, 2		
24	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	20, 120	18, 2		
25	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	10, 100	19, 2		
27	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	20, 100	14, 2		
29	2	G. van Noord	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM	10, 100	16, 2		

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	
2	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:00 AM	225, 100, 20	1, 6, 18	
3	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 60, 15	2, 9, 18	
5	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	225, 85, 15	2, 9, 19	
7	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 70, 15	2, 9, 17	
9	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 75, 15	2, 9, 18	
11	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 55, 15	1, 11, 18	
13	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	175, 47, 15	2, 7, 17	
15	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 60, 15	1, 9, 18	
16	1	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 25, 10	1, 7, 16	
17	12	Hegeman	Brussaard/Mojica	bacterial production	CTD	6:00 AM	49, 30, 15	4, 14, 17	
18	1	Hegeman	Brussaard/Mojica	bacterial production	CTD	6:00 AM	150, 35, 15	3, 5, 15	
19	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 30, 15	1, 12, 18	
21	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 60, 15	1, 13, 18	
24	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 20	1, 17	
25	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 30, 10	1, 11, 18	
27	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 40, 20	1, 7, 13	
29	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 30, 10	1, 11, 15	
30	27	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 35, 10	1, 11, 18	



Stratiphyt cruise 2009; 64PE309								
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #
22	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	25	mixed bottles
22		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
22		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
22		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
23	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	60	10+11
23		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:00 PM	100	
23		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:00 PM	100	
23		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:00 PM	100	
24	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	40	12+13
24		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
24		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
24		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
25	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	20	16+17
25		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
25		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
25		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
26	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	15	22+23
26		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
26		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
26		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
27	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	15	16+22
27		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
27		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
27		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
28	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	20	21+22

28	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
28	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
28	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
29	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	10	22+24
29	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
29	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
29	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	10:00 AM	15	19+22
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 PM	15	23+24
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
30	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
30	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:15 PM	20	21+22
31	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
32	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	10	22+23
32	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
32	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
32	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	

Stratiphyt cruise 2009: 64PE309							UTC		
Station	Cast	who sampled?	What are you sampling for?	Sampling device	time of day	Depths	Other comments		
1	2	Van der Woerd	Water Rrs	PR650	7:59	From Deck			
1	3	Van der Woerd	Water Rrs	PR650	13:26	From Deck			
1		Van der Woerd	Water Rrs	WISP	14:18	From Deck			
2		Van der Woerd	Water Rrs	WISP	13:10	From Deck			
3		Van der Woerd	Water Rrs	PR650	11:19	From Deck			
4				0	0		evening		
5		Van der Woerd	Water Rrs	PR650	13:36	From Deck			
5	2	Van der Woerd	Water Rrs	WISP	8:10	From Deck			
5		Van der Woerd	Water Rrs	WISP	13:10	From Deck			
6				0	0		evening		
7		Van der Woerd	Water Rrs	PR650	12:28	From Deck			
7	4	Van der Woerd	Water Rrs	PR650	14:25	From Deck	Overpass MODIS		
7	4	Van der Woerd	Water Rrs	WISP	14:40	From Deck	Overpass MODIS		
8				0	0		evening		
9		Van der Woerd	Water Rrs	PR650	11:39	From Deck			
10				0	0		evening		
11		Van der Woerd	Water Rrs	PR650	10:56	From Deck	Overpass MERIS		
11		Van der Woerd	Water Rrs	WISP	11:20	From Deck	Overpass MERIS		
11	4	Van der Woerd	Water Rrs	PR650	15:26	From Deck			
12				0	0		evening		
13		Van der Woerd	Water Rrs	PR650	13:25	From Deck			
13		Van der Woerd	Water Rrs	PR650	14:18	From Deck			
13		Van der Woerd	Water Rrs	WISP	14:45	From Deck			
14				0	0		evening		
15		Van der Woerd	Water Rrs	PR650	11:18	From Deck	Overpass MERIS		
15		Van der Woerd	Water Rrs	PR650	11:21	From Deck	Overpass MERIS		
15		Van der Woerd	Water Rrs	PR650	13:42	From Deck	Overpass MODIS		
15		Van der Woerd	Water Rrs	WISP	13:50	From Deck	Overpass MODIS		
16				0	0		rain		
17				0	0		rain		
17		Van der Woerd	Water Rrs	PR650	11:10	From Deck	27 July 2009		
18				0	0		rain		
19		Van der Woerd							

Stratiphyt cruise 2009; 64PE309							
Station	Cast	who sampled?	What are you sampling for?	Sampling device	time of day	Depths	Other comments
1		Van der Woerd	Aerosol OT	MicroTops	8:09 en 14:18	From Deck	
2		Van der Woerd	Aerosol OT	MicroTops	14:34	From Deck	
3		Van der Woerd	Aerosol OT	MicroTops	11:14	From Deck	
4							evening
5		Van der Woerd	Aerosol OT	MicroTops	13:34	From Deck	
6							evening
7		Van der Woerd	Aerosol OT	MicroTops	12:25 en 14:24	From Deck	
8							evening
9		Van der Woerd	Aerosol OT	MicroTops	11:37	From Deck	
10							evening
11		Van der Woerd	Aerosol OT	MicroTops	10:54 en 15:24	From Deck	
12							evening
13		Van der Woerd	Aerosol OT	MicroTops	13:24 en 14:17	From Deck	
14							evening
15		Van der Woerd	Aerosol OT	MicroTops	11:14 en 13:27	From Deck	
16							rain and clouds
17							rain and clouds
17							rain and clouds
18							rain and clouds
19		Van der Woerd	Aerosol OT		11:06 en 12:34	From Deck	

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	UTC+1	time of day	Depths	Bottle #
1	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:56 AM	10, 45, 225	22, 11, 1
2	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:09 AM	10, 20, 225	23, 16, 1
3	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:38 AM	15, 200	17, 1
5	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	15, 225	18, 1
7	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	15, 200	17, 1
9	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:27 AM	75, 15, 200	9, 18, 1
11	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:42 AM	55, 15, 200	11, 18, 1
13	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:41 AM	47, 15, 175	7, 17, 2
15	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	60, 15, 125	9, 18, 1
16	1	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:40 AM	25, 10, 125	7, 16, 1
17	13	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:32 AM	50, 15, 150	11, 18, 1
18	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		3:42 PM	33, 25, 100	19, 13, 2
19	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:32 AM	30, 15, 125	12, 18, 1
21	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:33 AM	60, 15, 125	13, 18, 1
22	1	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:31 AM	25	11
24	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:26 AM	40, 20, 125	9, 17, 1
24	x	E. Jurado, J. Loriaux	Jurado	DOC	CTD		x	x	x
25	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:31 AM	10, 30, 100	18, 11, 1
27	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:30 AM	40, 20, 100	7, 13, 1
29	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:36 AM	30, 10, 100	11, 15, 1
30	27	E. Jurado, J. Loriaux	Jurado	DOC	CTD		7:32 AM	35, 10, 100	11, 18, 1
32	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:30 AM	9, 17, 2	35, 10, 125

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	
1	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:56 AM	10, 45, 225	2, 11, 22	
2	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:09 AM	10, 20, 225	23, 16, 1	
3	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:38 AM	15, 200	17, 1	
5	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	15, 225	18, 1	
5	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	x	x	
7	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	15, 200	17, 1	
9	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:27 AM	75, 15, 200	9, 18, 1	
11	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:42 AM	55, 15, 200	11, 18, 1	
13	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:41 AM	47, 15, 175	7, 17, 2	
15	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:43 AM	60, 15, 125	9, 18, 1	
16	1	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:40 AM	25, 10, 125	7, 16, 1	
17	13	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	50, 15, 150	11, 18, 1	
18	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	3:42 PM	33, 25, 100	19, 13, 2	
19	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	30, 15, 125	12, 18, 1	
19	-	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	x	x	
21	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:33 AM	60, 15, 125	13, 18, 1	
22	1	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:31 AM	25	11	
24	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:26 AM	40, 20, 125	9, 17, 1	
25	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:31 AM	10, 30, 100	18, 11, 1	
27	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:30 AM	40, 20, 100	7, 13, 1	
29	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:36 AM	30, 10, 100	11, 15, 1	
30	27	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	35, 10, 100	11, 18, 1	
C	x	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	x	x	x	
32	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:30 AM	35, 10, 125	9, 17, 1	

Stratiphyt cruise 2009; 64PE309							
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths
5	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1015	80
5	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1035	65
5	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1050	87
5	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1221	88
5	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	88
5	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1248	88
5	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1305	88
5	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1319	88
5	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	93
5	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1348	82
5	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1424	74
5	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1437	74
5	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1453	76
7	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1056	37
7	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1110	55
7	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1125	45
7	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1141	65
7	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1154	55
7	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1210	55
7	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1224	76
7	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1243	85
7	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1303	60
7	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1321	78
7	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1338	68
7	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1357	65

7	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1414	48
7	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1430	60
9	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1037	52
9	4a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1057	23
9	4b	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1115	55
11	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1006	82
11	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1023	82
11	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1046	75
11	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1112	92
11	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1129	90
11	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1143	93
11	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1204	89
11	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1219	93
11	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1238	67
11	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1258	70
11	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	77
11	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1331	52
11	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1346	82
11	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1403	-999
11	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	73
13	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1026	92
13	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1215	65
13	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1232	93
13	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1253	90
13	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1335	90
13	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1348	73
13	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1400	76
13	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1417	82
13	12a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	-999



15	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1005	75
15	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1025	77
15	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1046	62
15	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1105	-999
15	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1127	-999
15	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1150	-999
15	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1211	92
15	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1231	80
15	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1251	85
15	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1310	87
15	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1324	73
15	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1340	65
17	3	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	86
17	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1329	86
17	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1346	92
17	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1405	92
17	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1424	-999
17	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	805	92
17	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	823	-999
17	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	846	-999
17	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	929	-999
17	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1003	92
17	19	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1029	-999
17	20	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1053	-999
17	21	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1115	68
17	22	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1131	67
17	23	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1148	68
17	24	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1206	56
19	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	954	70

19	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1008	76
19	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1023	87
19	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1043	-999
19	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1106	76
19	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1124	87
19	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1142	80
19	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1159	89
19	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1216	58
19	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1236	68
19	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1254	53
19	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	65
19	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	65
19	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1352	74
19	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1409	82
21	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	87
21	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1019	87
21	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1041	86
21	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1059	87
21	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1118	80
21	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1137	90
21	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1157	78
21	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1217	58
21	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	35
21	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1252	92
22	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	900	66
22	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	919	92
22	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	938	95
22	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	957	67
22	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1016	60

22	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1035	-999
24	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	857	95
24	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	909	93
24	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	924	93
24	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	946	92
24	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	93
24	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1017	93
24	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1033	93
25	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1014	34
25	8a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1020	-999
27	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	-999
27	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1259	73
27	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1323	65
27	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1336	86
27	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1352	58
27	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1416	76
29	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1222	
29	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1241	67
29	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1256	71
29	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1314	85
29	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	92
29	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1351	78
29	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1406	85
30	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1024	53
30	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1038	84
30	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1056	71
30	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1113	93
30	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1130	-999
30	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1239	92

30	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1256	90
30	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1316	89
30	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	93
30	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1351	93
30	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1409	93
30	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	93
30	28	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	802	69
30	29	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	819	93
30	30	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	837	93
30	31	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	854	93
30	32	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	910	93
30	33	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	930	86
30	34	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	945	93
30	35	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1000	82
30	36	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1017	93
30	37	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1033	-999
30	38	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1054	93
30	39	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1114	86
30	40	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1133	70
30	41	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1148	82
30	42	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1203	75
32	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	902	87
32	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	919	89
32	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	937	93
32	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	957	93
32	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1019	93
32	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1036	93
32	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1055	63
32	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1111	81

32	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1127	64
32	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1144	85
32	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1201	81
32	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1217	70
32	19	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	93
32	20	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1251	86
32	21	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1311	72
32	22	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1325	37

**Stratiphyt cruise 2009; 64PE309**

Station	Cast	Who did it?	Responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #
1	3	vd Poll	vd Poll	phytoplankton pigments	CTD	afternoon	224; 98; 77; 53; 26	3; 6; 13; 15; 21
2	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	225; 100; 50; 20; 9	2; 10; 13; 22; 23
2	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:00 AM	226; 94; 24; 11	5; 11; 20; 24
2	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:30 AM	99; 18	1+3; 10; 11
3	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	84; 55; 15	7; 15; 22
3	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:00 AM	200; 125; 58; 15; 36	5; 7; 11; 20; 16
3	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	71; 15	8; 17+18
4	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	226; 149; 91; 45; 10	2; 5; 8; 11; 15
5	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	86; 20	5; 17
5	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	226; 150; 86; 52; 16	5; 7; 11; 17; 21
5	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	81; 22	11+14; 22+23
6	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	91; 61; 36; 17	13; 16; 18; 22
7	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 8	8; 17
7	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	201; 110; 74; 40; 17	4; 7; 14; 16; 21
7	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	66; 9	11+13; 22+23
8	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	91; 65; 50; 30; 15	8; 11; 15; 19; 21+22
9	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	70; 15	12; 21
9	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	201; 120; 74; 40; 15	4; 7; 13; 17; 22
9	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	71; 15	13; 23
10	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	101; 62; 44; 30; 14	8; 11; 15; 18; 22
11	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 17	13; 14
11	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	91; 70; 55; 36; 16	8; 10; 16; 17; 20
11	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	51; 15	15; 22
12	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	101; 71; 56; 32; 16	10; 13; 17; 21; 22
13	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	50; 11	10; 22
13	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	176; 91; 47; 32; 14	5; 6; 12; 16; 21
13	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	54; 10	11; 24
14	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	81; 60; 46; 28; 7	8; 11; 13; 17; 21
15	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	58; 14	10; 23
15	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	125; 90; 60; 45; 15	4; 8; 13; 16; 22
15	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	60; 9	9+10; 21+22
16	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 AM	60; 40; 25	5; 6; 9
17	2	vd Poll	vd Poll	phytoplankton pigments	CTD	2:00 PM	50; 16	10+11; 21
17	3	vd Poll	vd Poll	phytoplankton pigments	CTD	7:00 PM	55; 16	10+ 15; 20
17	12	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	49; 14	11; 22
17	13	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	100; 80; 61; 51; 15	6; 8; 10; 16; 22
18	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	38; 14	12+14; 22
18	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	103; 26; 23	4; 15; 12
19	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	44; 14	13; 20

19	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	51; 32; 14	9; 16; 20
19	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	31; 15	13; 17
20	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	51; 40; 31	15; 18; 22
21	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	125; 58; 20	4; 8; 16
21	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	74; 62; 45; 32; 15	7; 10; 15; 17; 20
21	3?	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	60; 15	8; 22
22	1	vd Poll	vd Poll	phytoplankton pigments	CTD	test	26	9+10
23	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	80; 60; 40; 26; 11	6; 9; 16; 18; 22
24	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	42; 21	8; 19
24	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	71; 41; 31; 20; 11	8; 11; 16; 20; 24
25	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	101; 76; 50; 21; 15	2; 6; 8; 11; 17
25	2	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	19; 11	15; 20
26	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	76; 47; 30; 16	6; 11; 16; 21
27	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	101; 76; 37; 26; 14	2; 7; 9; 12; 16
27	2	vd Poll	vd Poll	phytoplankton pigments	CTD	9:30 AM	20; 10	12+18; 24
28	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	60; 50; 40; 30; 20	8; 11; 13; 17; 20
29	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 50; 39; 20; 10	5; 7; 9; 12; 23
29	2	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 AM	30; 9	12; 18
30	1	vd Poll	vd Poll	phytoplankton pigments	CTD	10:00 AM	36; 15	16; 21
30	11	vd Poll	vd Poll	phytoplankton pigments	CTD	1:00 PM	41; 30; 20; 11	7; 10; 15; 23
30	20	vd Poll	vd Poll	phytoplankton pigments	CTD	7:00 PM	11	22
30	26	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	50; 40; 19; 10; 30	8; 10; 14; 17; 12
30	27	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	35; 10	13; 22
31	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	55; 41; 31; 20; 10	6; 12; 16; 20; 24
32	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	51; 40; 30; 20; 10	7; 10; 12; 14; 22
32	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	40; 36; 25; 20; 10	8; 9; 12; 15; 21

Stratiphyt cruise 2009; 64PE309										
Station	Cast	Who did it?	responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #	comments	
2	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	100; 21	?	18-jul	
3	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	15; 83	?	19-jul	
5	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	85; 21	?	20-jul	
7	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	60; 8	?	21-jul	
9	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	69; 15	?	22-jul	
11	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	59; 16	?	23-jul	
13	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	51; 11	12	24-jul	
15	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	14; 58	20	25-jul	
17	2	Michelle	vd Poll	POC for prim prod	CTD	2:00 PM	49	14	26-jul	
17	12	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	15; 48	20; 9	27-jul	
18	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	35; 15	?	28-jul	
19	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	44; 13	?	29-jul	
21	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	58; 19	?	30-jul	
24	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	41; 21	9; 20	3-aug	
25	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	15	15	4-aug	
27	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	38; 14	10; 17	5-aug	
29	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	20; 10	11; 20	6-aug	
30	1	Jessica	vd Poll	POC for prim prod	CTD	10:00 AM	36; 16	15; 20	7-aug	
30	11	Jessica	vd Poll	POC for prim prod	CTD	1:00 PM	20	15	7-aug	
30	20	Jessica	vd Poll	POC for prim prod	CTD	7:00 PM	11	22	7-aug	
30	26	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	10	18	8-aug	
32	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	10	21	9-aug	



Stratiphyt cruise 2009; 64PE309									
Station	Cast	Who did it?	Responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #	
2	3	Kulk	vd Poll	photoacclimation	CTD	11:30 AM	99; 18	1+3; 10+11	
3	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	71	8	
5	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	81; 22	11+14; 22+23	
7	1	Kulk	vd Poll	photoacclimation	CTD	6:00 AM	59; 8	11+13; 22+23	
9	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	71; 15	11+14; 22	
11	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	51; 12	14; 21	
13	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	55; 19	10; 21	
15	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	60; 9	9; 21	
17	13	Kulk	vd Poll	photoacclimation	CTD	8:30 AM	51; 14	11; 18	
18	2	Kulk	vd Poll	photoacclimation	CTD	8:30 AM	33; 23	18; 12	
19	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	30; 15	12; 16	
21	3?	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	60; 15	7; 21	
24	2	vd Poll	vd Poll	photoacclimation	CTD	8:30 AM	41; 20	10; 19	
25	2	vd Poll	vd Poll	photoacclimation	CTD	11:00 AM	10; 20	24; 14	
27	2	vd Poll	vd Poll	photoacclimation	CTD	9:30 AM	20; 10	18; 24	
29	2	vd Poll	vd Poll	photoacclimation	CTD	9:00 AM	30; 9	12; 18	
30	11	vd Poll	vd Poll	photoacclimation	CTD	1:00 PM	20; 11	16; 23	
30	27	vd Poll	vd Poll	photoacclimation	CTD	11:00 AM	35; 10	13; 22	
32	2	vd Poll	vd Poll	photoacclimation	CTD	8:30 AM	10	21	

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who did it?	responsible scientist	what are you sampling?	sampling device	time of day	Corrected depth (m)	Bottle #	
2	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	100; 21	9; 18	
3	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	84; 15	8; 21	
5	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	85; 20	7; 19	
7	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	60; 8	7; 18	
9	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	69; 15	11; 13	
11	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	59; 16	12; 23	
13	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	50; 11	11; 23	
15	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	58; 15	9; 21	
16	1	vd Poll	vd Poll	algal fatty acids	CTD	9:00 AM	24; 11	10; 19	
17	12	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	48; 14	10; 21	
18	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	24	
19	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	14	15	
21	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	58; 20	7; 18	
24	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	41; 21	10; 18	
25	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	18	
27	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	14	
29	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	10	21	
32	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	10	23+21	

1	2	3	4	5	6	7	8	9	
1	<b>Stratiphyt cruise 2009; 64PE309</b>								
2									
3	<b>Station</b>	<b>Cast</b>	<b>who did it?</b>	<b>responsible scientist</b>	<b>what are you sampling for?</b>	<b>sampling device</b>	<b>time of day</b>	<b>Corrected depth (m)</b>	<b>Bottle #</b>
4	5	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	85; 21	3; 15
5	7	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	60; 8	5; 15
6	9	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	69; 15	4; 15
7	11	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	59; 16	4; 15
8	13	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	49; 11	4; 15
9	15	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	58; 15	4; 15
10	16	1	Hegeman	vd Poll	primary production	CTD	9:00 AM	25	7
11	17	2	Hegeman	vd Poll	primary production	CTD	2:00 PM	45	9
12	17	12	Hegeman	vd Poll	primary production	CTD	6:00 AM	31	14
13	18	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	35; 15	5; 15
14	19	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	44; 13	5; 16
15	21	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	58; 19	5; 15
16	24	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	42; 20	5; 15
17	27	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	37; 14	8; 13
18	29	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	20; 11	11; 13
19	30	1	Hegeman	vd Poll	primary production	CTD	10:00 AM	36; 26	12; 19
20	30	11	Hegeman	vd Poll	primary production	CTD	1:00 PM	19	12
21	30	20	Hegeman	vd Poll	primary production	CTD	7:00 PM	11	17
22	30	27	Hegeman	vd Poll	primary production	CTD	11:00 AM	45; 20	9; 15

1	2	3	4	5	6	7	8	9	
1	<b>Stratiphyt cruise 2009; 64PE309</b>								
2									
3	<b>Station</b>	<b>Cast</b>	<b>who did it?</b>	<b>responsible scientist</b>	<b>what are you measuring?</b>	<b>sampling device</b>	<b>time of day</b>	<b>Corrected depth (m)</b>	<b>Bottle #</b>
4	1	3	Freek	vd Poll	algal DGGE	CTD	afternoon	98	7
5	2	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	226; 102; 51; 20; 9	1; 8; 12; 21; 24
6	3	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	200; 82; 15	3; 5; 17
7	5	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	225; 85; 49; 20	2; 6; 14; 16
8	7	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	60; 8	5; 16
9	9	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	200; 69; 15	3; 10; 19
10	11	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	59; 46; 17	10; 14; 20
11	13	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	176; 51; 11	3; 12; 15
12	15	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	150; 58; 14	1; 12; 20
13	16	1	Freek	vd Poll	algal DGGE	CTD	9:00 AM	25	11
14	17	2	Freek	vd Poll	algal DGGE	CTD	2:00 PM	49	14
15	17	12	Freek	vd Poll	algal DGGE	CTD	6:00 AM	150; 48; 15	3; 9; 20
16	18	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	149; 35; 16	3; 10; 20
17	19	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	45	12
18	21	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	56; 20	9; 19
19	24	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	71; 41; 21	4; 9; 20
20	25	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	15	15
21	27	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	14	17+18
22	29	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	20
23	30	26	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	18
24	32	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	21

	1	2	3	4	5	6	7	8	9
1	<b>Stratiphyt cruise 2009; 64PE309</b>								
2									
3	<b>Station</b>	<b>Cast</b>	<b>who did it?</b>	<b>responsible scientist</b>	<b>what are you measuring?</b>	<b>sampling device</b>	<b>time of day</b>	<b>Corrected depth (m)</b>	<b>Bottle #</b>
4	2	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	102	8
5	2	2	vd Poll	vd Poll	a*ph	CTD	8:00 AM	93; 23	7; 19
6	3	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	83; 15	6; 23
7	4	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	11	16
8	6	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	16	23
9	7	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	59; 8	10; 19
10	8	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	15	22
11	9	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	70; 15	13; 24
12	10	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	15	21
13	11	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	59; 17	11; 22
14	13	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	50; 10	13; 24
15	14	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	6	23
16	15	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	58; 14	11; 24
17	16	1	vd Poll	vd Poll	a*ph	CTD	9:00 AM	26	12
18	17	12	vd Poll	vd Poll	a*ph	CTD	6:00 AM	49; 14	12; 24
19	18	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	15	23
20	19	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	44; 14	14; 24
21	21	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	58; 20	10; 20
22	24	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	40; 21	7; 17
23	25	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	21; 15	12; 16
24	27	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	38; 14	10; 23
25	29	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	10; 20	22; 11
26	30	1	vd Poll	vd Poll	a*ph	CTD	10:00 AM	36; 16	15; 20
27	30	11	vd Poll	vd Poll	a*ph	CTD	1:00 PM	20	16
28	30	20	vd Poll	vd Poll	a*ph	CTD	7:00 PM	11	23
29	30	27	vd Poll	vd Poll	a*ph	CTD	11:00 AM	20	16
30	32	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	10	24
31									

1	2	3	4	5	6	7	8	9
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	Time of day (UTC +1)	Depths	Bottle #
Stratifyht cruise 2009; 64PE309								
4	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	90	7
5	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	90	7
6	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 30, 45, 60, 87, 225	20, 14, 13, 5, 3, 2
7	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 30, 45, 60, 87, 225	20, 14, 13, 5, 3, 2
8	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	1:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
9	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton fixed	CTD	2:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
10	1	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	2:30 PM	10, 25, 50, 75, 100, 225	20, 14, 13, 5, 3, 2
11	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 50, 100, 225	23, 14, 13, 3, 2, 1
12	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 20, 50, 100, 225	23, 14, 13, 3, 2, 1
13	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 45, 75, 100, 225	23, 15, 13, 12, 6, 1
14	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20, 45, 75, 100, 225	23, 15, 13, 12, 6, 1
15	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	20, 100	11, 10, 3, 1
16	2	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	20, 100	11, 10, 3, 1
17	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 55, 80, 200	16, 15, 4, 3
18	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 55, 80, 200	16, 15, 4, 3
19	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
20	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
21	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 35, 65, 125, 200	17, 15, 8, 6, 1
22	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 50, 72, 100, 150, 200	16, 14, 13, 7, 5, 3, 2
23	3	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 50, 72, 100, 150, 200	16, 14, 13, 7, 5, 3, 2
24	4	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:40 PM	10, 45, 90, 150, 225	14, 10, 7, 4, 1
25	4	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:40 PM	10, 45, 90, 150, 225	14, 10, 7, 4, 1
26	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 50, 85, 225	15, 14, 3, 1
27	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 50, 85, 225	15, 14, 3, 1
28	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
29	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
30	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 50, 85, 150, 225	18, 16, 8, 6, 2
31	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	20, 40, 60, 80, 100, 150, 225	21, 18, 15, 11, 8, 5, 1
32	5	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	20, 40, 60, 80, 100, 150, 225	21, 18, 15, 11, 8, 5, 1
33	6	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 PM	15, 35, 60, 90, 225	21, 18, 15, 12, 1
34	6	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 PM	15, 35, 60, 90, 225	21, 18, 15, 12, 1
35	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 55, 120, 200	15, 5, 3, 2
36	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 55, 120, 200	15, 5, 3, 2
37	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
38	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
39	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 40, 70, 110, 200	17, 15, 9, 7, 2
40	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	10, 20, 35, 65, 90, 115, 200	21, 18, 14, 10, 7, 4, 2
41	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 35, 65, 90, 115, 200	21, 18, 14, 10, 7, 4, 2
42	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	4:00 PM	15	3
43	7	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	4:00 PM	15	3
44	8	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:00 PM	15, 30, 50, 65, 90	20, 17, 14, 10, 7
45	8	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:00 PM	15, 30, 50, 65, 90, 120, 200	20, 17, 14, 10, 7, 4, 2
46	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 70, 200	15, 5, 2
47	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 70, 200	15, 5, 2
48	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
49	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
50	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 40, 75, 120, 200	18, 16, 9, 6
51	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 35, 55, 70, 200	21, 18, 15, 10, 2
52	9	Noordeloos / Brussaard	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 35, 55, 70, 200	21, 18, 15, 10, 2

1	2	3	4	5	6	7	8	9
53	9	Noordeloos / Brussard	Brussard, Molja	abundance phytoplankton live	CTD	1:30 PM	15, 70	22, 10
54	6	Noordeloos / Brussard	Brussard, Molja	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 70	22, 10
55	10	Noordeloos / Brussard	Brussard, Molja	abundance phytoplankton live	CTD	9:30 PM	15, 30, 50, 70, 200	20, 18, 14, 10, 1
56	10	Noordeloos / Brussard	Brussard, Molja	abundance bacteria / viruses fixed	CTD	9:30 PM	15, 30, 50, 70, 200	20, 18, 14, 10, 1
57	11	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	6:00 AM	15, 45, 70, 100	15, 14, 4, 1
58	11	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 45, 70, 100	15, 14, 4, 1
59	11	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	8:30 AM	15, 35, 55, 70, 90	18, 17, 11, 9, 8
60	11	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton fixed	CTD	8:30 AM	15, 35, 55, 70, 90, 120, 200	18, 17, 11, 9, 8, 7, 1
61	11	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 35, 55, 70, 90, 120, 200	18, 17, 11, 9, 8, 7, 1
62	11	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	10:30 AM	15, 30, 50, 70, 90, 110, 200	20, 17, 13, 10, 7, 4, 2
63	11	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 50, 70, 90, 110, 200	20, 17, 13, 10, 7, 4, 2
64	11	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	3:30 PM	15, 35, 55, 70, 90, 110, 200	21, 19, 12, 9, 6, 3, 1
65	11	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	3:30 PM	15, 35, 55, 70, 90, 110, 200	21, 19, 12, 9, 6, 3, 1
66	12	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	10:00 PM	15, 30, 55, 70, 100, 120, 200	22, 19, 15, 11, 10, 4, 2
67	12	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	10:00 PM	15, 30, 55, 70, 100, 120, 200	22, 19, 15, 11, 10, 4, 2
68	13	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	6:00 AM	10, 50, 175	15, 4, 2
69	13	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 50, 175	15, 4, 2
70	13	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
71	13	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
72	13	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton fixed	CTD	8:30 AM	15, 30, 47, 90, 125	17, 16, 7, 6, 2
73	13	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 35, 55, 65, 80	22, 19, 15, 9, 7, 5
74	13	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	10:30 AM	10, 20, 30, 35, 40, 45, 50, 55, 60, 65, 70, 80, 90, 100, 110, 120	24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
75	14	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	9:30 PM	10, 30, 45, 60, 80	20, 16, 12, 10, 7
76	14	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	9:30 PM	10, 20, 30, 45, 60, 80, 100, 150	20, 18, 16, 12, 10, 7, 4, 2
77	15	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 60, 150	15, 4, 1
78	15	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	6:00 AM	15, 60, 150	15, 4, 1
79	15	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 70, 90	18, 17, 15, 9, 7
80	15	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 70, 90, 125	18, 17, 15, 9, 7, 1
81	15	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 70, 90, 125	18, 17, 15, 9, 7, 1
82	15	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton fixed	CTD	10:30 AM	10, 20, 40, 60, 80	23, 18, 17, 8, 7
83	15	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 40, 60, 80, 100, 125	23, 18, 17, 8, 7, 4, 2
84	16	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	9:20 AM	10, 25, 40, 60, 100, 125	16, 7, 6, 5, 3, 1
85	16	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	9:20 AM	10, 25, 40, 60, 100, 125	16, 7, 6, 5, 3, 1
86	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	1:30 PM	15, 30, 55, 75, 100	20, 18, 9, 7, 5
87	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 30, 55, 75, 100, 150	20, 18, 9, 7, 5, 1
88	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton fixed	CTD	1:30 PM	15, 30, 55, 75, 100, 150	20, 18, 9, 7, 5, 1
89	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	4:20 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
90	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	4:00 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
91	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	4:00 PM	15, 30, 51, 75, 100, 150	20, 17, 12, 9, 6, 1
92	17	Noordeloos / Finke	Brussard, Molja	phytoplankton DNA	CTD	4:00 PM	15, 51	20, 17
93	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
94	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
95	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	7:00 PM	15, 30, 55, 75, 100, 150	20, 18, 16, 8, 7, 4, 1
96	17	Noordeloos / Finke	Brussard, Molja	phytoplankton DNA	CTD	7:00 PM	15, 55	20, 16, 8
97	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
98	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
99	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton fixed	CTD	9:00 PM	15, 30, 55, 75, 100, 150	21, 19, 9, 6, 4, 1
100	17	Noordeloos / Finke	Brussard, Molja	phytoplankton DNA	CTD	9:00 PM	15, 55	21, 9
101	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	1:00 AM	15, 30, 56, 75, 100	21, 17, 14, 9, 5
102	17	Noordeloos / Finke	Brussard, Molja	abundance bacteria / viruses fixed	CTD	1:00 AM	15, 30, 56, 75, 100, 150	21, 17, 14, 9, 5, 3
103	17	Noordeloos / Finke	Brussard, Molja	abundance phytoplankton live	CTD	1:00 AM	15, 30, 56, 75, 100, 150	21, 17, 14, 9, 5, 3
104	17	Noordeloos / Finke	Brussard, Molja	phytoplankton DNA	CTD	1:00 AM	30, 56	17, 14

	1	2	3	4	5	6	7	8	9
105	17	12	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 41, 150	7, 4, 1
106	17	12	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	6:00 AM	15, 41, 150	7, 4, 1
107	17	12	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 41, 150	7, 4, 1
108	17	12	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	6:00 AM	15, 41	17, 4
109	17	13	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
110	17	13	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
111	17	13	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 47, 60, 80, 100, 150	18, 11, 9, 7, 5, 1
112	17	13	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	8:30 AM	15, 47	18, 11
113	17	25	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	1:30 PM	15, 30, 51, 75, 90	21, 18, 14, 11, 8
114	17	25	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	1:30 PM	15, 30, 51, 75, 90, 110, 150	21, 18, 14, 11, 8, 6, 2
115	17	25	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	1:30 PM	15, 30, 51, 75, 90, 110, 150	21, 18, 14, 11, 8, 6, 2
116	17	25	Noordeloos / Finke	Brussaard, Mojica	phytoplankton DNA	CTD	1:30 PM	15, 51	21, 14
117	18	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 35, 150	15, 5, 3
118	18	1	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 35, 150	15, 5, 3
119	19	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 45, 75, 125	16, 5, 4, 1
120	19	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton fixed	CTD	6:00 AM	15, 45, 75, 125	16, 5, 4, 1
121	19	2	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 30, 45, 60, 80, 125	18, 12, 10, 8, 6, 1
122	19	2	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 60, 80, 125	18, 12, 10, 8, 6, 1
123	19	3	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 65, 75, 125	18, 12, 10, 8, 6, 1
124	20	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 40, 40, 50, 60, 70, 90, 121	15, 11, 9, 7, 5, 4, 1
125	21	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	9:00 PM	15, 30, 40, 40, 50, 60, 70, 90, 121	24, 17, 14, 11, 9, 7, 5, 1
126	21	1	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 35, 125	15, 5, 1
127	21	2	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 55, 125	15, 5, 1
128	21	2	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	15, 30, 45, 60, 75, 125	18, 16, 14, 13, 6, 1
129	21	2	Noordeloos / Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	15, 30, 45, 60, 75, 125	18, 16, 14, 13, 6, 1
130	21	3	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live / fixed	CTD	8:30 AM	60	13
131	21	3	Noordeloos / Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	15, 30, 40, 60, 80, 125	20, 18, 16, 6, 4, 2
132	22	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	15, 30, 40, 60, 80, 125	20, 18, 16, 6, 4, 2
133	22	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	25	7
134	23	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 25, 50, 75, 100	21, 7, 5, 3, 1
135	23	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 25, 40, 60	21, 17, 15, 12
136	24	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	10, 25, 40, 40, 60, 80, 100	21, 17, 15, 13, 12, 5, 1
137	24	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	20, 40, 70, 125	15, 5, 4, 1
138	24	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	20, 40, 70, 125	15, 5, 4, 1
139	24	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	20, 40, 70, 125	15, 5, 4, 1
140	24	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40, 70, 125	23, 17, 15, 9, 7, 1
141	24	2	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	8:30 AM	10, 20	23, 17
142	25	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	10, 20, 30, 40, 70, 125	23, 17, 15, 9, 7, 1
143	25	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 22, 50, 75, 100	13, 9, 7, 5, 1
144	25	1	Brussaard/Finke	Brussaard, Mojica	fractionation	CTD	6:00 AM	15	13
145	25	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40	18, 13, 11, 9
146	25	7	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 40, 60, 100	18, 13, 11, 9, 7, 1
147	26	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:30 AM	30, 500	11, 2
148	26	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:30 AM	15, 30, 45, 75	20, 17, 10, 5
149	27	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 30, 45, 75, 100	20, 17, 10, 5, 1
150	27	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	6:00 AM	15, 25, 37, 75, 100	13, 11, 8, 6, 1
151	27	2	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	6:00 AM	15, 25, 37, 75, 100	13, 11, 8, 6, 1
152	27	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	8:30 AM	10, 20, 30, 45	24, 13, 10, 7
153	27	3	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10:30 AM	10, 20, 30, 45, 100	24, 13, 10, 7, 1
154	27	3	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10:30 AM	10, 20, 30, 40, 50	23, 10, 8, 5, 3
155	27	15	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	3:30 PM	10, 20, 30, 40, 50, 60	23, 10, 8, 5, 3, 1
156	27	15	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	3:30 PM	20	14
								10, 20, 30, 40, 50, 60, 100	23, 14, 12, 10, 8, 6, 1



1	2	3	4	5	6	7	8	9
157	28	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30, 40, 50	23, 19, 16, 13, 10
158	28	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 30, 40, 50, 60, 75, 100	23, 19, 16, 13, 10, 7, 4, 1
159	29	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 40, 50, 60, 100	13, 11, 9, 6, 4, 1
160	29	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30	15, 14, 11
161	29	2	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 30, 40, 50, 60, 100	15, 14, 11, 8, 7, 6, 1
162	29	14	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20	16, 13
163	29	14	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	5, 10, 15, 20, 25, 30, 40, 50, 75	22, 16, 19, 13, 10, 7, 5, 3, 1
164	30	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	15, 25, 35, 45, 55	19, 17, 12, 10, 8
165	30	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	15, 25, 35, 45, 55, 65, 75, 100	19, 17, 12, 10, 8, 6, 4, 1
166	30	11	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30, 40, 50, 60	22, 12, 9, 6, 3, 1
167	30	11	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 30, 40, 50, 60	22, 12, 9, 6, 3, 1
168	30	19	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	15, 30, 40, 50	19, 14, 11, 9
169	30	19	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	15, 30, 40, 50, 75, 100, 125	19, 14, 11, 9, 7, 3, 1
170	30	20	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30, 40, 60, 100	17, 15, 11, 9, 7, 1
171	30	20	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 30, 40, 60, 100	17, 15, 11, 9, 7, 1
172	30	21	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 25, 30, 40, 50, 75	17, 15, 13, 9, 7, 6, 4
173	30	21	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 25, 30, 40, 50, 75, 100	17, 15, 13, 9, 7, 6, 4, 1
174	30	25	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30, 40, 60, 100	21, 17, 13, 9, 5, 1
175	30	26	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	15, 13, 11, 9, 8, 5, 2, 1	1, 2, 3, 4, 5, 6, 7, 8
176	30	26	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	15, 13, 11, 9, 8, 5, 2, 1	1, 2, 3, 4, 5, 6, 7, 8
177	30	27	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 25, 35, 45, 60, 80	1, 2, 3, 4, 5, 6, 7, 8
178	30	27	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 25, 35, 45, 60, 80	18, 16, 14, 11, 9, 8, 7
179	30	43	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 25, 35, 45, 60, 80, 100	18, 16, 14, 11, 9, 8, 7, 1
180	30	43	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	5, 10, 20, 25, 30, 40, 50, 75	24, 20, 18, 16, 14, 12, 10, 9
181	31	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	5, 10, 20, 25, 30, 40, 50, 75, 100, 200, 300, 375, 500	24, 20, 18, 16, 14, 12, 10, 9, 5, 4, 3, 2, 1
182	31	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 30, 40, 45, 55, 75	23, 19, 15, 11, 7, 5, 3
183	32	1	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 30, 40, 45, 55, 75, 100	23, 19, 15, 11, 7, 5, 3, 1
184	32	1	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	20, 30, 40, 75, 100	13, 11, 9, 5, 4
185	32	2	Brussaard/Finke	Brussaard, Mojica	abundance bacteria / viruses fixed	CTD	10, 20, 25, 30, 35, 40, 50, 60, 90, 125	17, 13, 11, 10, 9, 8, 7, 6, 5, 2
186	32	2	Brussaard/Finke	Brussaard, Mojica	abundance phytoplankton live	CTD	10, 20, 25, 30, 35, 40, 50, 60, 90, 125	17, 13, 11, 10, 9, 8, 7, 6, 5, 2

Stratiphyt cruise 2009; 6APE309										
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	Other comments	
2	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	everything	CTD	8:00 AM	225, 100, 20	2, 8, 7, 6, 17, 18	test station - no data	
3	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17, 18, 19, 20		
3	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	80	11, 12, 13, 14		
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	20, 21, 23		
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	57	11, 12		
3	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	200	2, 3		
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21, 22, 23, 24		
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	85	9, 10, 11, 13		
5	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	225	2		
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	22, 23		
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	85	13, 14		
5	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	225	3		
7	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	21, 22, 23, 24		
7	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	55	11, 12, 13, 14		
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	18, 22		
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	70	10, 13		
7	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Virus Isolation Ultrafiltrate made and Viral Production	CTD	8:30 AM	200	2		
7	18	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	4:00 PM	15	3		
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16, 17, 18, 19		
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	70	5, 6, 7, 8		
9	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	200	2		
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	19, 20		
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	75	10, 11		
9	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	200	2		

11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	14, 17, 18, 19, 20
11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	60	5,6,7,8
11	1	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	DNA	CTD	6:00 AM	100	3
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and	CTD	8:30 AM	15	21,22
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	55	12,13
11	2	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Virus isolation Ultrafiltrate made and	CTD	8:30 AM	200	4,5
11	19	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	4:00 PM	15	21,22
11	19	Mojica/Finke/Maat/de Vries	Mojica/Brussaard	Centrimate Test	CTD	4:00 PM	55	12,13,14,15,16,17
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	16,17,18,19
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	57	5,6,7,14
13	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	175	2
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and	CTD	8:30 AM	15	18,19
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	47	9,10
13	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	175	3
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16,17,18,19
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	60	5,6,7,13
15	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	150	1,2
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and	CTD	8:30 AM	15	21, 24
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	60	11, 21
15	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	3
16	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	8:30 AM	10	20,21,22,23
16	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	8:30 AM	25	13,14,15
17	8	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	4:00 PM	15	24
17	9	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 PM	15	21,22,24
17	9	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 PM	55	12,13,14
17	10	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and	CTD	8:30 PM	15	21,22,23,24
17	10	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 PM	55	10,11,12,13,14,15

17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17,18,19
17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	41	5,6,7,8
17	12	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	150	2
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production Dilution Method and Viral Production	CTD	8:30 AM	15	19,20
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	48	12,13
17	13	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	150	2
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	16,17,18,19
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	35	5,6,7,8
18	1	Mojica/Maat/de Vries	Mojica/Brussaard	DNA	CTD	6:00 AM	150	2
18	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production (used 6am filtrate)	CTD	4:00 PM	25	10,11,15,16
18	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	4:00 PM	33	22,23,24
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	17,18,19
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	45	6,7,8,9
19	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	2
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	15	23,24
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	30	14,15
19	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	3
19	3	Mojica/Maat/de Vries	Mojica/Brussaard	Centramate Test	CTD	10:30 AM	15	19,20,21,22,23,24
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21,22,23,24
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	55	11,12,13,14
21	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	3
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	15	21,22
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	60	11,12
21	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	3,4
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	20	21,22,23,24
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	40	11,12,13,14
24	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	3

24	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	20	21,22
24	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	4,5
25	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	19,20,21,22
25	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
25	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	21,22,23
25	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3,4
27	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	15	19,20,21,22
27	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
27	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	20	19,20,21
27	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	2,3
27	15	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	3:30 PM	20	15
29	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	15,16,17,24
29	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	2,3
29	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	19,20
29	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3
30	19	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made and Viral Production	CTD	4:00 PM	15	20,21
30	20	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:30 PM	10	18,19,20,21
30	21	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 PM	10	19,20
30	26	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	20,21,22,23
30	26	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	100	3,4
30	27	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	23,24
30	27	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	100	3
32	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	10	16,17,18,19
32	1	Mojica/Maat/de Vries	Mojica/Brussaard	Ultrafiltrate made	CTD	6:00 AM	125	2,3
32	2	Mojica/Maat/de Vries	Mojica/Brussaard	Dilution Method and Viral Production	CTD	8:30 AM	10	18,19
32	2	Mojica/Maat/de Vries	Mojica/Brussaard	Viral Production	CTD	8:30 AM	125	2

Station		Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	UTC+1	time of day	Depths	Other comments
Stratiphyt cruise 2009: 64PE309										
2	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,30,50,100,225 m	23,14,12,3,1		
2	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,4,75,100,225 m	23,15,13,12,6,1		
2	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	10,100 m	10,1		
2	4	Timmermans	Timmermans	translocation A	CTD	15:00 AM	45,500	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1		
3	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,55,80,200 m	16,15,4,3		
3	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,35,60,125 m	17,15,8,6,1		
3	3	Timmermans	Timmermans	WATER-PAM	CTD	11:00 AM	15,30,50,72,100,150,200 m	16,14,13,7,5,3,2		
4	1	Timmermans	Timmermans	WATER-PAM	CTD	20:00 PM	10,45,90,150,225 m	14,10,7,4,1		
5	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,50,85,225 m	15,14,3,1		
5	2	Timmermans	Timmermans	WATER-PAM	CTD	8:00 AM	15,50,85,150,225 m	18,16,8,6,2		
5	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	20,40,60,80,100,150,225 m	21,18,15,11,8,5,2		
6	1	Timmermans	Timmermans	WATER-PAM	CTD	22:00 PM	15,35,60,90,120,150,225 m	21,18,12,9,5,1		
7	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,55,120,200 m	15,5,3,1		
7	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,40,70,110,200 m	17,15,8,6,1		
7	3	Timmermans	Timmermans	WATER-PAM	CTD	10:45 AM	10,20,35,65,90,115,200 m	21,18,14,10,7,4,2		
8	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	15,30,50,65,90,120,200 m	20,17,14,10,7,4,2		
9	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,70,200 m	16,4,2		
9	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,40,75,120,200 m	18,16,9,6,2		
9	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,35,55,70,100,120,200 m	21,18,15,10,7,4,1		
9	6	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,50,63,100,120,200 m	22,19,16,10,7,4,1		
10	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,50,70,120,200 m	20,17,14,10,7,4,1		
11	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,40,70,100 m	15,14,4,1		
11	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,35,50,70,90,120,200 m	18,17,15,9,8,7,1		
11	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,35,55,70,90,110,200 m	20,17,13,10,7,4,1		
11	19	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,35,55,70,90,110,200 m	21,18,12,9,6,3,1		
12	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	15,30,55,70,100,200 m	22,19,15,11,7,4,1		
13	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,50,175 m	15,4,1		
13	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,47,90,175 m	17,16,7,6,2		
13	3	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	10,20,30,35,40,45,50,55,60,65,72,80,90,100,110,120 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1		
13	13	Timmermans	Timmermans	Translocatie B	CTD	16:00 PM	45,100 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1		
14	1	Timmermans	Timmermans	WATER-PAM	CTD	21:30 PM	10,20,30,46,60,80,100,150 m	20,18,16,12,10,4,1		
15	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,60,150 m	15,4,1		

15	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,50,70,125 m	18,17,15,9,1
15	3	Timmermans	Timmermans	WATER-PAM	CTD	10:45 AM	10,20,40,60,80,100,125 m	20,18,16,8,6,4,1
16	1	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,25,40,60,80,100,125 m	16,7,6,5,4,3,1
17	2	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,55,75,100,150 m	20,18,9,7,5,1
17	8	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,30,51,75,100,150 m	20,17,12,9,6,1
17	9	Timmermans	Timmermans	WATER-PAM	CTD	18:30 PM	15,30,55,75,100,150 m	20,18,8,7,4,1
17	10	Timmermans	Timmermans	WATER-PAM	CTD	20:30 PM	15,30,55,75,100,150 m	21,19,9,6,4,1
17	11	Timmermans	Timmermans	WATER-PAM	CTD	12:30 AM	15,30,55,75,100,150 m	21,17,14,9,5,1
17	12	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,52,150 m	17,4,1
17	13	Timmermans	Timmermans	WATER-PAM	CTD	8:00 AM	15,50,60,80,100,150 m	18,11,9,7,5,1
17	25	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	15,30,51,75,90,110,150 m	21,18,14,11,8,5,1
18	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,35,150 m	15,4,1
18	2	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	25,29,33,35,42,50,55,60,70,100 m	18,12,11,10,9,8,7,6,5,1
19	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,45,75,125 m	16,5,4,1
19	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,45,60,80,125 m	18,12,10,8,6,1
19	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,30,45,55,65,75,125 m	15,11,9,7,5,4,1
20	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,40,50,60,70,90,125 m	21,17,14,11,9,7,5,1
21	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,55,125 m	15,5,1
21	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	15,30,45,60,75,125 m	18,16,14,8,3,1
21	3	Timmermans	Timmermans	WATER-PAM	CTD	10:30 AM	15,30,40,60,80,125 m	20,18,16,6,4,2
21	14	Timmermans	Timmermans	translocation C	CTD	14:30 PM	45, 500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1
22	1	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,25,50,75,100 m	21,7,5,3,1
22	1	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	25 m	8
23	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,25,40,60,80,100 m	21,17,13,12,5,1
24	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	20,40,70,125 m	15,5,4,1
24	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,70,125 m	23,17,15,9,7,1
24	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	30 m	16
25	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,22,50,75,100 m	13,9,7,5,1
25	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,60,100 m	18,13,11,9,7,1
25	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20	16
25	7	Timmermans	Timmermans	translocation D	CTD	10:30 AM	30, 500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1
26	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	15,30,45,75,100 m	20,15,10,5,1
27	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	15,25,38,75,100 m	13,11,8,6,1
27	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,100 m	24,13,10,7,1
27	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	30 m	10
28	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,20,30,40,50,60,75,100 m	23,19,16,13,10,7,4,1

29	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,40,50,60,100 m	13,11,8,6,4,1
29	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,30,40,50,60,100 m	15,14,11,8,7,6,1
29	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20 m	14
29	14	Timmermans	Timmermans	WATER-PAM	CTD	15:45 PM	5,10,15,20,25,30,40,50,75 m	22,19,16,13,10,7,5,3,1
30	1	Timmermans	Timmermans	WATER-PAM	CTD	10:00 AM	15,25,35,45,55,65,75,100 m	19,17,12,10,8,6,4,1
30	1	Timmermans	Timmermans	enzyme activity	CTD	10:00 AM	25 m	17
30	11	Timmermans	Timmermans	WATER-PAM	CTD	13:00 PM	10,20,30,40,50,60 m	22,12,9,6,3,1
30	19	Timmermans	Timmermans	WATER-PAM	CTD	16:00 PM	15,30,40,50,75,100,125 m	19,14,11,9,6,3,1
30	20	Timmermans	Timmermans	WATER-PAM	CTD	18:30 PM	10,20,30,40,60,100 m	17,15,11,9,7,9
30	21	Timmermans	Timmermans	WATER-PAM	CTD	20:30 PM	10,20,25,30,40,50,75,100	17,15,13,9,7,6,5,1
30	25	Timmermans	Timmermans	WATER-PAM	CTD	24:00 PM	10,20,30,40,60,100 m	21,17,13,9,5,1
30	26	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,30,40,50,75,100,150 m	15,13,11,9,8,5,2,1
30	27	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,25,35,4,60,80,100 m	18,16,14,11,9,8,7,1
30	27	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20	17
30	43	Timmermans	Timmermans	WATER-PAM	CTD	13:30 PM	5,10,20,25,30,40,50,75,100,200,300,375,500 m	24,20,18,16,14,12,10,9,5,4,3,2,1
31	1	Timmermans	Timmermans	WATER-PAM	CTD	21:00 PM	10,20,30,40,45,55,75,100 m	23,20,19,15,11,7,5,3,1
32	1	Timmermans	Timmermans	WATER-PAM	CTD	6:00 AM	10,20,30,40,50,75,100,125 m	15,13,11,9,7,5,4,2
32	2	Timmermans	Timmermans	WATER-PAM	CTD	8:30 AM	10,20,25,30,35,40,50,60,90,125 m	17,13,11,10,9,8,7,6,5,2
32	2	Timmermans	Timmermans	enzyme activity	CTD	8:30 AM	20 m	14
32	34	Timmermans	Timmermans	translocation exp E	CTD	15:45 PM	25,500 m	24,23,22,21,20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1



Stratiphyt cruise 2009; 64PE309										
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	UTG-1	Depths	Bottle #	Other comments
1	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		10, 40	23, 17	
2	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		20, 100, 225	19, 10, 3	
3	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 60, 200	19, 10, 4	
5	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 85, 250	20, 15, 4	
7	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 70, 200	20, 11, 3	
9	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 75, 200	21, 12, 3	
11	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 55, 200	19, 14, 3	
13	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 47, 175	22, 11, 4	
15	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 60, 125	19, 10, 2	
16	1	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		10, 25, 125	17, 8, 2	
17	13	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		33, 48, 150	21, 15, 3	
18	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		23, 25, 100	20, 14, 1	
19	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 30, 125	19, 13, 2	
21	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		15, 60, 125	19, 9, 2	
24	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		20, 120	18, 2	
25	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		10, 100	19, 2	
27	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		20, 100	14, 2	
29	2	G. van Noort	Brussaard/Mojica	Grazing and abundance microzooplankton, HNF	CTD	8:00 AM		10, 100	16, 2	

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	
2	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:00 AM	225, 100, 20	1, 6, 18	
3	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 60, 15	2, 9, 18	
5	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	225, 85, 15	2, 9, 19	
7	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 70, 15	2, 9, 17	
9	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 75, 15	2, 9, 18	
11	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	200, 55, 15	1, 11, 18	
13	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	175, 47, 15	2, 7, 17	
15	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 60, 15	1, 9, 18	
16	1	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 25, 10	1, 7, 16	
17	12	Hegeman	Brussaard/Mojica	bacterial production	CTD	6:00 AM	49, 30, 15	4, 14, 17	
18	1	Hegeman	Brussaard/Mojica	bacterial production	CTD	6:00 AM	150, 35, 15	3, 5, 15	
19	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 30, 15	1, 12, 18	
21	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 60, 15	1, 13, 18	
24	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	125, 20	1, 17	
25	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 30, 10	1, 11, 18	
27	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 40, 20	1, 7, 13	
29	2	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 30, 10	1, 11, 15	
30	27	Hegeman	Brussaard/Mojica	bacterial production	CTD	8:30 AM	100, 35, 10	1, 11, 18	

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	
22	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	25	mixed bottles	
22		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100		
22		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100		
22		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100		
23	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	60	10+11	
23		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:00 PM	100		
23		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:00 PM	100		
23		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:00 PM	100		
24	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	40	12+13	
24		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100		
24		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100		
24		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100		
25	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	20	16+17	
25		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100		
25		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100		
25		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100		
26	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	15	22+23	
26		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100		
26		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100		
26		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100		
27	2	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	15	16+22	
27		Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100		
27		Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100		
27		Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100		
28	1	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	9:00 PM	20	21+22	

28	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
28	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
28	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
29	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	10	22+24
29	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
29	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
29	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	10:00 AM	15	19+22
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	10:30 AM	100	
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 PM	15	23+24
30	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
30	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
30	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:15 PM	20	21+22
31	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 PM	100	
31	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 PM	100	
32	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	CTD	8:30 AM	10	22+23
32	Oosterhuis	Brussaard/Mojica	mesozooplankton grazing	Vert. Net 300 µm (2x)	9:30 AM	100	
32	Oosterhuis	Brussaard/Mojica	Biomass/taxonomy	Vert. Net 300 µm	9:30 AM	100	
32	Oosterhuis	Brussaard/Mojica	Forams Voelker	Vert. Net 300 µm	9:30 AM	100	

Stratiphyt cruise 2009, 64PE309							UTC	Other comments
Station	Cast	who sampled?	What are you sampling for?	Sampling device	time of day	Depths		
1	2	Van der Woerd	Water Rrs	PR650	7:59	From Deck		
1	3	Van der Woerd	Water Rrs	PR650	13:26	From Deck		
1		Van der Woerd	Water Rrs	WISP	14:18	From Deck		
2		Van der Woerd	Water Rrs	WISP	13:10	From Deck		
3		Van der Woerd	Water Rrs	PR650	11:19	From Deck		
4				0	0		evening	
5		Van der Woerd	Water Rrs	PR650	13:36	From Deck		
5	2	Van der Woerd	Water Rrs	WISP	8:10	From Deck		
5		Van der Woerd	Water Rrs	WISP	13:10	From Deck		
6				0	0		evening	
7		Van der Woerd	Water Rrs	PR650	12:28	From Deck		
7	4	Van der Woerd	Water Rrs	PR650	14:25	From Deck	Overpass MODIS	
7	4	Van der Woerd	Water Rrs	WISP	14:40	From Deck	Overpass MODIS	
8				0	0		evening	
9		Van der Woerd	Water Rrs	PR650	11:39	From Deck		
10				0	0		evening	
11		Van der Woerd	Water Rrs	PR650	10:56	From Deck	Overpass MERIS	
11		Van der Woerd	Water Rrs	WISP	11:20	From Deck	Overpass MERIS	
11	4	Van der Woerd	Water Rrs	PR650	15:26	From Deck		
12				0	0		evening	
13		Van der Woerd	Water Rrs	PR650	13:25	From Deck		
13		Van der Woerd	Water Rrs	PR650	14:18	From Deck		
13		Van der Woerd	Water Rrs	WISP	14:45	From Deck		
14				0	0		evening	
15		Van der Woerd	Water Rrs	PR650	11:18	From Deck	Overpass MERIS	
15		Van der Woerd	Water Rrs	PR650	11:21	From Deck	Overpass MERIS	
15		Van der Woerd	Water Rrs	PR650	13:42	From Deck	Overpass MODIS	
15		Van der Woerd	Water Rrs	WISP	13:50	From Deck	Overpass MODIS	
16				0	0		rain	
17				0	0		rain	
17		Van der Woerd	Water Rrs	PR650	11:10	From Deck	27 July 2009	
18				0	0		rain	
19		Van der Woerd						

Stratiphyt cruise 2009; 64PE309							
Station	Cast	who sampled?	What are you sampling for?	Sampling device	time of day	Depths	Other comments
1		Van der Woerd	Aerosol OT	MicroTops	8:09 en 14:18	From Deck	
2		Van der Woerd	Aerosol OT	MicroTops	14:34	From Deck	
3		Van der Woerd	Aerosol OT	MicroTops	11:14	From Deck	
4							evening
5		Van der Woerd	Aerosol OT	MicroTops	13:34	From Deck	
6							evening
7		Van der Woerd	Aerosol OT	MicroTops	12:25 en 14:24	From Deck	
8							evening
9		Van der Woerd	Aerosol OT	MicroTops	11:37	From Deck	
10							evening
11		Van der Woerd	Aerosol OT	MicroTops	10:54 en 15:24	From Deck	
12							evening
13		Van der Woerd	Aerosol OT	MicroTops	13:24 en 14:17	From Deck	
14							evening
15		Van der Woerd	Aerosol OT	MicroTops	11:14 en 13:27	From Deck	
16							rain and clouds
17							rain and clouds
17							rain and clouds
18							rain and clouds
19		Van der Woerd	Aerosol OT		11:06 en 12:34	From Deck	

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	UTC+1	time of day	Depths	Bottle #
1	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:56 AM	10, 45, 225	22, 11, 1
2	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:09 AM	10, 20, 225	23, 16, 1
3	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:38 AM	15, 200	17, 1
5	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	15, 225	18, 1
7	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	15, 200	17, 1
9	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:27 AM	75, 15, 200	9, 18, 1
11	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:42 AM	55, 15, 200	11, 18, 1
13	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:41 AM	47, 15, 175	7, 17, 2
15	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:34 AM	60, 15, 125	9, 18, 1
16	1	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:40 AM	25, 10, 125	7, 16, 1
17	13	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:32 AM	50, 15, 150	11, 18, 1
18	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		3:42 PM	33, 25, 100	19, 13, 2
19	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:32 AM	30, 15, 125	12, 18, 1
21	2	E. Jurado, M. Tigchelaar	Jurado	DOC	CTD		8:33 AM	60, 15, 125	13, 18, 1
22	1	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:31 AM	25	11
24	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:26 AM	40, 20, 125	9, 17, 1
24	x	E. Jurado, J. Loriaux	Jurado	DOC	CTD		x	x	x
25	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:31 AM	10, 30, 100	18, 11, 1
27	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:30 AM	40, 20, 100	7, 13, 1
29	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:36 AM	30, 10, 100	11, 15, 1
30	27	E. Jurado, J. Loriaux	Jurado	DOC	CTD		7:32 AM	35, 10, 100	11, 18, 1
32	2	E. Jurado, J. Loriaux	Jurado	DOC	CTD		8:30 AM	9, 17, 2	35, 10, 125

Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths	Bottle #	
1	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:56 AM	10, 45, 225	2, 11, 22	
2	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:09 AM	10, 20, 225	23, 16, 1	
3	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:38 AM	15, 200	17, 1	
5	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	15, 225	18, 1	
5	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	x	x	
7	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:34 AM	15, 200	17, 1	
9	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:27 AM	75, 15, 200	9, 18, 1	
11	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:42 AM	55, 15, 200	11, 18, 1	
13	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:41 AM	47, 15, 175	7, 17, 2	
15	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:43 AM	60, 15, 125	9, 18, 1	
16	1	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:40 AM	25, 10, 125	7, 16, 1	
17	13	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	50, 15, 150	11, 18, 1	
18	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	3:42 PM	33, 25, 100	19, 13, 2	
19	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	30, 15, 125	12, 18, 1	
19	-	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	x	x	
21	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:33 AM	60, 15, 125	13, 18, 1	
22	1	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:31 AM	25	11	
24	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:26 AM	40, 20, 125	9, 17, 1	
25	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:31 AM	10, 30, 100	18, 11, 1	
27	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:30 AM	40, 20, 100	7, 13, 1	
29	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:36 AM	30, 10, 100	11, 15, 1	
30	27	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:32 AM	35, 10, 100	11, 18, 1	
C	x	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	x	x	x	
32	2	H vd Woerd, M. Tigchelaar, E. Jurado	vd Woerd/Jurado	POC/PON	CTD	8:30 AM	35, 10, 125	9, 17, 1	



Stratiphyt cruise 2009; 64PE309									
Station	Cast	who sampled?	Responsible scientist	What are you sampling for?	Sampling device	time of day	Depths		
5	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1015	80		
5	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1035	65		
5	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1050	87		
5	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1221	88		
5	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	88		
5	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1248	88		
5	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1305	88		
5	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1319	88		
5	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	93		
5	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1348	82		
5	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1424	74		
5	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1437	74		
5	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1453	76		
7	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1056	37		
7	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1110	55		
7	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1125	45		
7	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1141	65		
7	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1154	55		
7	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1210	55		
7	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1224	76		
7	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1243	85		
7	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1303	60		
7	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1321	78		
7	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1338	68		
7	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1357	65		

7	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1414	48
7	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1430	60
9	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1037	52
9	4a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1057	23
9	4b	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1115	55
11	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1006	82
11	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1023	82
11	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1046	75
11	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1112	92
11	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1129	90
11	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1143	93
11	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1204	89
11	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1219	93
11	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1238	67
11	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1258	70
11	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	77
11	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1331	52
11	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1346	82
11	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1403	-999
11	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	73
13	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1026	92
13	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1215	65
13	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1232	93
13	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1253	90
13	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1335	90
13	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1348	73
13	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1400	76
13	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1417	82
13	12a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	-999

15	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1005	75
15	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1025	77
15	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1046	62
15	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1105	-999
15	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1127	-999
15	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1150	-999
15	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1211	92
15	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1231	80
15	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1251	85
15	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1310	87
15	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1324	73
15	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1340	65
17	3	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	86
17	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1329	86
17	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1346	92
17	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1405	92
17	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1424	-999
17	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	805	92
17	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	823	-999
17	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	846	-999
17	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	929	-999
17	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1003	92
17	19	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1029	-999
17	20	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1053	-999
17	21	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1115	68
17	22	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1131	67
17	23	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1148	68
17	24	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1206	56
19	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	954	70

19	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1008	76
19	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1023	87
19	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1043	-999
19	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1106	76
19	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1124	87
19	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1142	80
19	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1159	89
19	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1216	58
19	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1236	68
19	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1254	53
19	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1312	65
19	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	65
19	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1352	74
19	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1409	82
21	4	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	87
21	5	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1019	87
21	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1041	86
21	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1059	87
21	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1118	80
21	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1137	90
21	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1157	78
21	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1217	58
21	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	35
21	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1252	92
22	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	900	66
22	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	919	92
22	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	938	95
22	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	957	67
22	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1016	60

22	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1035	-999
24	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	857	95
24	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	909	93
24	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	924	93
24	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	946	92
24	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	93
24	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1017	93
24	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1033	93
25	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1014	34
25	8a	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1020	-999
27	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1002	-999
27	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1259	73
27	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1323	65
27	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1336	86
27	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1352	58
27	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1416	76
29	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1222	67
29	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1241	71
29	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1256	85
29	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1314	92
29	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	78
29	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1351	85
29	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1406	53
30	6	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1024	84
30	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1038	71
30	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1056	93
30	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1113	-999
30	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1130	92
30	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1239	92

30	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1256	90
30	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1316	89
30	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1333	93
30	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1351	93
30	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1409	93
30	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1427	93
30	28	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	802	69
30	29	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	819	93
30	30	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	837	93
30	31	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	854	93
30	32	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	910	93
30	33	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	930	86
30	34	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	945	93
30	35	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1000	82
30	36	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1017	93
30	37	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1033	-999
30	38	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1054	93
30	39	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1114	86
30	40	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1133	70
30	41	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1148	82
30	42	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1203	75
32	7	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	902	87
32	8	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	919	89
32	9	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	937	93
32	10	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	957	93
32	11	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1019	93
32	12	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1036	93
32	13	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1055	63
32	14	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1111	81

32	15	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1127	64
32	16	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1144	85
32	17	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1201	81
32	18	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1217	70
32	19	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1235	93
32	20	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1251	86
32	21	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1311	72
32	22	Elena Jurado	Jurado/Dijkstra	Microstructure C,T,D	SCAMP	1325	37

Stratiphyt cruise 2009; 64PE309									
Station	Cast	Who did it?	Responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #	
1	3	vd Poll	vd Poll	phytoplankton pigments	CTD	afternoon	224; 98; 77; 53; 26	3; 6; 13; 15; 21	
2	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	225; 100; 50; 20; 9	2; 10; 13; 22; 23	
2	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:00 AM	226; 94; 24; 11	5; 11; 20; 24	
2	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:30 AM	99; 18	1+3; 10; 11	
3	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	84; 55; 15	7; 15; 22	
3	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:00 AM	200; 125; 58; 15; 36	5; 7; 11; 20; 16	
3	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	71; 15	8; 17+18	
4	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	226; 149; 91; 45; 10	2; 5; 8; 11; 15	
5	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	86; 20	5; 17	
5	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	226; 150; 86; 52; 16	5; 7; 11; 17; 21	
5	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	81; 22	11+14; 22+23	
6	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	91; 61; 36; 17	13; 16; 18; 22	
7	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 8	8; 17	
7	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	201; 110; 74; 40; 17	4; 7; 14; 16; 21	
7	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	66; 9	11+13; 22+23	
8	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	91; 65; 50; 30; 15	8; 11; 15; 19; 21+22	
9	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	70; 15	12; 21	
9	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	201; 120; 74; 40; 15	4; 7; 13; 17; 22	
9	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	71; 15	13; 23	
10	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	101; 62; 44; 30; 14	8; 11; 15; 18; 22	
11	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 17	13; 14	
11	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	91; 70; 55; 36; 16	8; 10; 16; 17; 20	
11	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	51; 15	15; 22	
12	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	101; 71; 56; 32; 16	10; 13; 17; 21; 22	
13	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	50; 11	10; 22	
13	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	176; 91; 47; 32; 14	5; 6; 12; 16; 21	
13	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	54; 10	11; 24	
14	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	81; 60; 46; 28; 7	8; 11; 13; 17; 21	
15	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	58; 14	10; 23	
15	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	125; 90; 60; 45; 15	4; 8; 13; 16; 22	
15	3	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	60; 9	9+10; 21+22	
16	1	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 AM	60; 40; 25	5; 6; 9	
17	2	vd Poll	vd Poll	phytoplankton pigments	CTD	2:00 PM	50; 16	10+11; 21	
17	3	vd Poll	vd Poll	phytoplankton pigments	CTD	7:00 PM	55; 16	10+ 15; 20	
17	12	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	49; 14	11; 22	
17	13	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	100; 80; 61; 51; 15	6; 8; 10; 16; 22	
18	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	38; 14	12+14; 22	
18	2	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	103; 26; 23	4; 15; 12	
19	1	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	44; 14	13; 20	



19	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	61; 32; 14	9; 16; 20
19	3	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	31; 15	13; 17
20	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	51; 40; 31	15; 18; 22
21	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	125; 58; 20	4; 8; 16
21	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	74; 62; 45; 32; 15	7; 10; 15; 17; 20
21	3?	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	60; 15	8; 22
22	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	test	26	9+10
23	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	80; 60; 40; 26; 11	6; 9; 16; 18; 22
24	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	42; 21	8; 19
24	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	71; 41; 31; 20; 11	8; 11; 16; 20; 24
25	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	101; 76; 50; 21; 15	2; 6; 8; 11; 17
25	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	19; 11	15; 20
26	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	76; 47; 30; 16	6; 11; 16; 21
27	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	101; 76; 37; 26; 14	2; 7; 9; 12; 16
27	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:30 AM	20; 10	12+18; 24
28	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	60; 50; 40; 30; 20	8; 11; 13; 17; 20
29	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	59; 50; 39; 20; 10	5; 7; 9; 12; 23
29	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 AM	30; 9	12; 18
30	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	10:00 AM	36; 15	16; 21
30	11	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	1:00 PM	41; 30; 20; 11	7; 10; 15; 23
30	20	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	7:00 PM	11	22
30	26	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	50; 40; 19; 10; 30	8; 10; 14; 17; 12
30	27	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	11:00 AM	35; 10	13; 22
31	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	9:00 PM	55; 41; 31; 20; 10	6; 12; 16; 20; 24
32	1	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	6:00 AM	51; 40; 30; 20; 10	7; 10; 12; 14; 22
32	2	vd Poll	vd Poll	vd Poll	phytoplankton pigments	CTD	8:30 AM	40; 36; 25; 20; 10	8; 9; 12; 15; 21

Stratiphyt cruise 2009; 64PE309									
Station	Cast	Who did it?	responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #	comments
2	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	100; 21	?	18-jul
3	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	15; 83	?	19-jul
5	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	85; 21	?	20-jul
7	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	60, 8	?	21-jul
9	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	69; 15	?	22-jul
11	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	59; 16	?	23-jul
13	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	51; 11	12	24-jul
15	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	14; 58	20	25-jul
17	2	Michelle	vd Poll	POC for prim prod	CTD	2:00 PM	49	14	26-jul
17	12	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	15; 48	20; 9	27-jul
18	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	35; 15	?	28-jul
19	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	44; 13	?	29-jul
21	1	Michelle	vd Poll	POC for prim prod	CTD	6:00 AM	58; 19	?	30-jul
24	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	41; 21	9; 20	3-aug
25	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	15	15	4-aug
27	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	38; 14	10; 17	5-aug
29	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	20; 10	11; 20	6-aug
30	1	Jessica	vd Poll	POC for prim prod	CTD	10:00 AM	36; 16	15; 20	7-aug
30	11	Jessica	vd Poll	POC for prim prod	CTD	1:00 PM	20	15	7-aug
30	20	Jessica	vd Poll	POC for prim prod	CTD	7:00 PM	11	22	7-aug
30	26	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	10	18	8-aug
32	1	Jessica	vd Poll	POC for prim prod	CTD	6:00 AM	10	21	9-aug

**Stratiphyt cruise 2009; 64PE309**

Station	Cast	Who did it?	Responsible scientist	what are you sampling for?	sampling device	time of day	Corrected depth (m)	Bottle #
2	3	Kulk	vd Poll	photoacclimation	CTD	11:30 AM	99; 18	1+3; 10+11
3	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	71	8
5	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	81; 22	11+14; 22+23
7	1	Kulk	vd Poll	photoacclimation	CTD	6:00 AM	59; 8	11+13; 22+23
9	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	71; 15	11+14; 22
11	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	51; 12	14; 21
13	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	55; 19	10; 21
15	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	60; 9	9; 21
17	13	Kulk	vd Poll	photoacclimation	CTD	8:30 AM	51; 14	11; 18
18	2	Kulk	vd Poll	photoacclimation	CTD	8:30 AM	33; 23	18; 12
19	3	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	30; 15	12; 16
21	3?	Kulk	vd Poll	photoacclimation	CTD	11:00 AM	60; 15	7; 21
24	2	vd Poll	vd Poll	photoacclimation	CTD	8:30 AM	41; 20	10; 19
25	2	vd Poll	vd Poll	photoacclimation	CTD	11:00 AM	10; 20	24; 14
27	2	vd Poll	vd Poll	photoacclimation	CTD	9:30 AM	20; 10	18; 24
29	2	vd Poll	vd Poll	photoacclimation	CTD	9:00 AM	30; 9	12; 18
30	11	vd Poll	vd Poll	photoacclimation	CTD	1:00 PM	20; 11	16; 23
30	27	vd Poll	vd Poll	photoacclimation	CTD	11:00 AM	35; 10	13; 22
32	2	vd Poll	vd Poll	photoacclimation	CTD	8:30 AM	10	21

**Stratiphyt cruise 2009; 64PE309**

Station	Cast	who did it?	responsible scientist	what are you sampling?	sampling device	time of day	Corrected depth (m)	Bottle #
2	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	100; 21	9; 18
3	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	84; 15	8; 21
5	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	85; 20	7; 19
7	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	60; 8	7; 18
9	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	69; 15	11; 13
11	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	59; 16	12; 23
13	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	50; 11	11; 23
15	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	58; 15	9; 21
16	1	vd Poll	vd Poll	algal fatty acids	CTD	9:00 AM	24; 11	10; 19
17	12	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	48; 14	10; 21
18	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	24
19	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	14	15
21	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	58; 20	7; 18
24	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	41; 21	10; 18
25	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	18
27	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	15	14
29	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	10	21
32	1	vd Poll	vd Poll	algal fatty acids	CTD	6:00 AM	10	23+21

1	2	3	4	5	6	7	8	9	
1	<b>Stratiphyt cruise 2009; 64PE309</b>								
2									
3	<b>Station</b>	<b>Cast</b>	<b>who did it?</b>	<b>responsible scientist</b>	<b>what are you sampling for?</b>	<b>sampling device</b>	<b>time of day</b>	<b>Corrected depth (m)</b>	<b>Bottle #</b>
4	5	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	85; 21	3; 15
5	7	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	60; 8	5; 15
6	9	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	69; 15	4; 15
7	11	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	59; 16	4; 15
8	13	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	49; 11	4; 15
9	15	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	58; 15	4; 15
10	16	1	Hegeman	vd Poll	primary production	CTD	9:00 AM	25	7
11	17	2	Hegeman	vd Poll	primary production	CTD	2:00 PM	45	9
12	17	12	Hegeman	vd Poll	primary production	CTD	6:00 AM	31	14
13	18	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	35; 15	5; 15
14	19	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	44; 13	5; 16
15	21	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	58; 19	5; 15
16	24	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	42; 20	5; 15
17	27	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	37; 14	8; 13
18	29	1	Hegeman	vd Poll	primary production	CTD	6:00 AM	20; 11	11; 13
19	30	1	Hegeman	vd Poll	primary production	CTD	10:00 AM	36; 26	12; 19
20	30	11	Hegeman	vd Poll	primary production	CTD	1:00 PM	19	12
21	30	20	Hegeman	vd Poll	primary production	CTD	7:00 PM	11	17
22	30	27	Hegeman	vd Poll	primary production	CTD	11:00 AM	45; 20	9; 15

1	2	3	4	5	6	7	8	9	
1	<b>Stratiphyt cruise 2009; 64PE309</b>								
2									
3	<b>Station</b>	<b>Cast</b>	<b>who did it?</b>	<b>responsible scientist</b>	<b>what are you measuring?</b>	<b>sampling device</b>	<b>time of day</b>	<b>Corrected depth (m)</b>	<b>Bottle #</b>
4	1	3	Freek	vd Poll	algal DGGE	CTD	afternoon	98	7
5	2	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	226; 102; 51; 20; 9	1; 8; 12; 21; 24
6	3	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	200; 82; 15	3; 5; 17
7	5	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	225; 85; 49; 20	2; 6; 14; 16
8	7	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	60; 8	5; 16
9	9	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	200; 69; 15	3; 10; 19
10	11	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	59; 46; 17	10; 14; 20
11	13	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	176; 51; 11	3; 12; 15
12	15	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	150; 58; 14	1; 12; 20
13	16	1	Freek	vd Poll	algal DGGE	CTD	9:00 AM	25	11
14	17	2	Freek	vd Poll	algal DGGE	CTD	2:00 PM	49	14
15	17	12	Freek	vd Poll	algal DGGE	CTD	6:00 AM	150; 48; 15	3; 9; 20
16	18	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	149; 35; 16	3; 10; 20
17	19	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	45	12
18	21	1	Freek	vd Poll	algal DGGE	CTD	6:00 AM	56; 20	9; 19
19	24	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	71; 41; 21	4; 9; 20
20	25	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	15	15
21	27	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	14	17+18
22	29	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	20
23	30	26	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	18
24	32	1	vd Poll	vd Poll	algal DGGE	CTD	6:00 AM	10	21

1	2	3	4	5	6	7	8	9	
1	Stratiphyt cruise 2009; 64PE309								
2									
3	Station	Cast	who did it?	responsible scientist	what are you measuring?	sampling device	time of day	Corrected depth (m)	Bottle #
4	2	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	102	8
5	2	2	vd Poll	vd Poll	a*ph	CTD	8:00 AM	93; 23	7; 19
6	3	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	83; 15	6; 23
7	4	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	11	16
8	6	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	16	23
9	7	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	59; 8	10; 19
10	8	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	15	22
11	9	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	70; 15	13; 24
12	10	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	15	21
13	11	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	59; 17	11; 22
14	13	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	50; 10	13; 24
15	14	1	vd Poll	vd Poll	a*ph	CTD	9:00 PM	6	23
16	15	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	58; 14	11; 24
17	16	1	vd Poll	vd Poll	a*ph	CTD	9:00 AM	26	12
18	17	12	vd Poll	vd Poll	a*ph	CTD	6:00 AM	49; 14	12; 24
19	18	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	15	23
20	19	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	44; 14	14; 24
21	21	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	58; 20	10; 20
22	24	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	40; 21	7; 17
23	25	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	21; 15	12; 16
24	27	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	38; 14	10; 23
25	29	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	10; 20	22; 11
26	30	1	vd Poll	vd Poll	a*ph	CTD	10:00 AM	36; 16	15; 20
27	30	11	vd Poll	vd Poll	a*ph	CTD	1:00 PM	20	16
28	30	20	vd Poll	vd Poll	a*ph	CTD	7:00 PM	11	23
29	30	27	vd Poll	vd Poll	a*ph	CTD	11:00 AM	20	16
30	32	1	vd Poll	vd Poll	a*ph	CTD	6:00 AM	10	24
31									