



XXIV SPEDIZIONE 2008-2009

PROGRAMMA NAZIONALE DI RICERCHE IN ANTARTIDE

**Rapporto periodico di attività
10 gennaio – 7 febbraio 2009**

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Week 3rd Activity Report

(Jan. 10th - Jan. 16th 2009)

1. Concordia Crew

- **WO4 Crew**

Roberto RAINIS Medical Doctor

- **WO5 Crew**

Eric LOTZ Medical Doctor
 Massimiliano FAIELLA Technical manager
 Domenico FASANO Cook/Chief Intendant
 Guillame FRINOT Plumber
 Laura GENONI Glaciologist Air Glacs
 Caroline JULLIEN Glaciologist
 Alexandre LE LUC Vehicle Mechanic
 Denis PETERMANN Astronomer Astroconcordia
 Cyprien POUZENC Astronomer Astroconcordia
 Alex SALAM ESA Medical Researcher
 Eric TRAGIN Electrician
 Jonathan ZACCARIA Information Tech. / Observation / Operations / WO5 Science Support

- **Summer Direction Office**

Chiara MONTANARI Expedition Leader
 Claire LE CALVEZ Technical & Logistical Manager
 Eric LOTZ Medical Doctor
 Roberto RAINIS Medical Doctor
 Nicola LA NOTTE Technical & Logistical Manager Assistant

- **Radio Room**

Rita CARBONETTI Secretary / Meteo Observation / Operations
 Fabio PIERSIGILLI Telecom / Radio & Electronic Support
 Jonathan ZACCARIA Information Tech. / Observation / Operations / WO5 Science Support

- **Logistic**

Gilles BALADA Mechanical assembler
 Luigi BONETTI Multi skill specialist
 Jean Gabriel COLL Electrotechnicien
 Daniel CRON Diesel Mechanics
 Giovanni BANCHER Vehicle Mechanic
 Christian DIDIER Plumber
 Jean Louis DURAFFOURG Cook/Chief Intendant
 Massimiliano FAIELLA Technical manager
 Domenico FASANO Cook/Chief Intendant
 Guillame FRINOT Plumber
 David LAJOLIE Multi skill specialist
 Alexandre LE LUC Vehicle Mechanic
 Nicolas LE PARC Electrotechnician
 Mario QUINTAVALLA Vehicle Mechanic / PB Specialist
 Hubert SINARDET Mechanical assembler
 Eric TRAGIN Electrician
 Antony VENDE Responsabile Meccanico

- **Science**

Gary BURN Geoelectric Field
 Simons LLOYDS Geoelectric Field
 Julien COURTEAUD Glaciology Barnola
 Gilles DURAND Astronomer Camistic
 Denis PETERMAN Astronomer Astroconcordia
 Cyprien POUZENC Astronomer Astroconcordia
 Alberto MANCINI Astronomer IRAIT
 Antonfranco PILUSO Technician for Astronomy IRAIT

Joel	SAVARINO	Glaciologist Nite DC
JeanCharles	GALLET	Glaciologist Nite DC
Caroline	JULLIEN	Glaciologist CESOA
Laura	GENONI	Glaciologist Air Glacs
Christian	GENTHON	Glacioclim
Delphine	SIX	Glaciologist Concordiasi
Christian	HUSSEL	Technitian StarPhotomter
Martin	REITZ	Technitian StarPhotomter
Manuel	SELLMAN	Astronomer StarPhotomter
Philippe	RICAUD	Hamstrad
Alex	SALAM	ESA Medical Researcher

Total people on Jan 9th: 44

2 Basler/Casa Flights

N. volo	Data	Tratta	Cargo in arrivo	Viveri in arrivo	Passeggeri
15	14/01/2009	CASEY-DC	0	0	Arrivi: Hussel, Reitz, Sellmann, Ricaud
16	14/01/2009	PROGRESS-DC			Solo crew (5 persone)
17	15/01/2009	DC-McM	0	0	Partiti: Camporeale, Gamberini, Possenti, Choukèr, Lefebvre, Di Felice, Del Guasta, Maggi
18	16/01/2009	McM- DC	100 kg	0	Arrivati: Principe Alberto II di Monaco con 3 Pax
19	16/01/2009	DC-DdU- DC	0	0	Partiti: Agabi, Bes De Berc, Chambodut , Fantei, Folte, Jourdain, Munoz, Renert, Tremblin, Le Roy, Martinet Arrivati: Coll, Ricaud, Vende

3 Evidences

- The 13th Dr. Alberto Mancini made a presentation of the IRAIT telescope.
- The 13th we took the group picture in front of the Base with the inflatable Palm.
- The 14th Jonathan Zaccaria projected a 52' documentary about an winterover at Dumont d'Urville Station.
- The 14th the CASA212 arrived from CASEY to transport to DC 4 researchers and to bring back the two Australian researchers: due to weather condition and to mechanical trouble on the batteries, the aircraft couldn't take off until the 17th of January. Casey Expedition Leader was really helpful as he didn't send the mechanic with the crew in order to let us transport 3 more passengers on the CASA flight allowing us to change the flights schedule and save a flight to Casey.
- The 14th the ALCI flight arrived from progress with 5 people of the crews. They stay overnight at DC.
- The 15th the ALCI flight left DC to McM with the first crew and 8 passengers OUT DC onboard. They overnight at McM.
- The 16th the ALCI flight turned back DC with 5 VIP passengers.
- The 16th the ALCI flight left DC to DdU with the second crew and 11 passengers OUT DC onboard. They came back to DC with 3 passengers onboard.
- The 16th Prince Albert II of Monaco, his aid and the two journalists were led by the Expedition Leader and the Technical and Logistical Manager to visit the Base and the scientific activities of Dome C. The day come out to be a really interesting visit in a wonderful weather. The Prince was introduced to the activities by the researchers. At the aperitif there was an exchange of presents and the dinner was excellent. The evening was closed by the presentation of the other bases visited by the Prince. All the Concordia personnel was really pleasant by this kind visit, and during the days before they all were really collaborative in cleaning the labs and common spaces of the Base and helpful in the sharing of the tasks.

4 Information Technology Evidences and Activities

Fabio Di Felice – I. & T. Support Manager

- Attività di sala radio.
- Send & Fetch posta elettronica.
- Scarico e stampa quotidiani.
- Assistenza agli utenti.
- Assistenza atterraggio e decollo aereo con metar.
- Documentazione di rete: schema collegamenti esterni alla torre fibra e radio.

- Ripristino link Wi-Fi.
- Eliminazione posta elettronica _s.
- Test nuovi link in fibra ottica tra torre, shelter Salvietti, shelter Sismo e shelter Caro.
- Relazione Wi-Fi in concordia con cambio frequenze apparati wireless.
- Ri-sistemazione fibra ottica e armadio shelter cochise.
- Collegamento telematico con Italia.
- Check switch shelter American tower.
- Check wireless shelter geomagneto2, spento perchè NIC acquirettore rotta.
- Riconfigurazione access point summer camp 2.
- Training invernante su malfunzionamenti LAN, collegamenti telematici con Italia in caso di emergenze, apparati wireless e configurazione, posta elettronica e autenticazione su IP.

Training of the WO 5 Jonathan Zaccaria:

- Wi-Fi access point from summer camp are out of order . We will reconfigure it next week.
- I created new email account for new users.
- Forward email of those who asked for it and will delete old account.
- With Fabio, we plan to go to radio HF shelter to see how it is working.

5 Communications Evidences and Activities

Fabio Piersigilli – Telecom, Radio & Electronic Support

- Test link fibra ottica con shelter sismo, eseguiti test di link della prima, quarta e quinta fibra in loop dallo shelter sismo.
- Ripristinato il funzionamento della sala video.
- Test su nuovo satellitare, cambiata routing su arrivo chiamate su linea tel 3, in quanto le linee 1 e 2 sono fuori uso. Implementata la funzione HSD.
- Servizio di sala radio.
- Realizzazione switch di collegamento SODA-Inmarsat con la linea 56, 51 e 52.
- Training su satellitari e sistemi di gestione tariffazione telefonica all'invernante della sala radio.
- Scarico ed invio email
- Test hard disk.
- Carico e scarico aereo.
- Servizio di sala radio ed assistenza ai voli aerei.
- Sistemazione magazzino.
- Ricollocazione del mailer2 e sistemazione dei cablaggi e delle permutazioni rame e ottiche dei 2 rack della sala radio.

6 Logistics Evidences and Activities

Claire Le Calvez – Tecnical & Logistic Manager

Les travaux prioritaires au cours de cette semaine ont été :

- Préparation de la visite du Prince de Monaco
- Assistance pour les scientifiques
- Passation de consignes pour les nouveaux hivernants
- Accueil des avions (le 14 : CASA + ALCI restent sur place, le 15, le 16 et le 17 .. beaucoup d'avions !)

Le 17/01/09 : 40 personnes sur la Station

Le 14 : 67 personnes. En raison de la présence des 2 avions, nous sommes 64 ce soir sur la Station ... tout est plein, nous sommes à la limite de la saturation (certains points sature) sur à peu près tous les points ... (toilettes, eau, couchage, déchets ...)

6.1 CENTRALES ELECTRIQUES

6.1.1 CENTRALE DU CAMP ETE et CAMP ETE

- Cummins : carte de régulation à changer – la vis de réglage de tension de la génératrice vibre avec le groupe et ne garde pas la bonne position. - Révision et contrôle, problème sur la régulation de la tension (vis HS) – en cours

Consommation de fuel : 1 700 l

Consommation d'eau camp été : 8,5 m³

6.1.2 CENTRALE DE CONCORDIA

- Le 17/01/09 : permutation GE3 → GE1 pour révision 250h GE3

Consommation moyenne : 84 kW

Consommation de fuel : 3 000 l

Consommation d'eau Concordia : 26 m³

6.2 PRODUCTION ET DISTRIBUTION D'EAU - CONCORDIA

- **GWTU :**

- 15 m3 traités
- Rendement à 70 %

Consommation d'eau total : 34,5 m³

Consommation moyenne : 89 l/personne.jour (55 personnes en moyenne cette semaine)

6.2 TRAVAUX EFFECTUES ET EN COURS

Domaines :

- AMEN : aménagement, CENT : centrale, ELEC : électricité, LOG : logistique, MECA : mécanique, PLOM : plomberie, RADIO : radio, SECU : sécurité

TRAVAUX SITE CONCORDIA		
1BB	AMEN	- Pose d'un groom de porte sur la porte des incinolets
1BB	LOG	- Mise en service du digesteur CAMSTAR 50
1BB Urinoirs	PLOM	- Vidange vers la cuve à boues : tous travaux finis
1BC	ELEC	- Mise en place de l'onduleur dans la salle mail
3BB cuisine	PLOM	- Frigos de la cuisine en panne : le contact du régulateur qui commande le ventilateur de l'évaporateur était HS (charbonné) sur les 2 frigos
BC	PLOM	- Contrôle et maintenance de la ventilation – en cours
Camp été	AMEN	- Tente n°4 : préparation en vue de l'arrivée du Prince (ménage, aménagement, literie)
Centrale	ELEC	- Compresseur Atlas CoPCo : coffret électrique pour le démarrage progressif fini. Test encours, pour l'instant ils ne sont pas concluants .. le pic d'intensité au démarrage existe toujours
Fondoir	PLOM	- Le 13/01/2009 : vidange et nettoyage
Garage	MECA	- Challenger : ○ Démarreur HS ou en bien mauvais état. Nous ne l'utilisons plus - PB270 : ○ Château de la lame cassé - MERLO : Réparation sur l'avance du véhicule - Skidoos : ○ Réparations diverses - Fraise à neige
Passerelle d'eau	AMEN	- Isolation et rénovation des caissons de la passerelle d'eau – début des travaux
Site	LOG	- Dénivelage du site (camp été / plateforme Concordia / cargoline) - Nivelage de la plateforme de Concordia - Retrait de l'escalier de la Station coté menuiserie pour rabotage de la neige – remise en place de l'escalier
Site	LOG	- Préparation de fûts pour les déchets - Les 12 et 15/01/09 : vidange de la cuve à boues de Concordia - Le 12/01/09 : vidange de la cuve à boues du camp été - Le 17/01/2009 : plein des réservoirs des tentes - Conditionnement des résidus (fuel + eau) des fonds des cuves de fuel vidangées et nettoyées (F07 et F09) - fini - Préparation des plateformes pour le stockage des véhicules en hiver - Mise en chauffe de la tente n°4 en prévision de l'arrivée de la délégation de Monaco - Préparation de matériel pour le raid, rangement divers et variés sur le site en prévision de l'arrivée des VIP - Tente EPICA : remise à l'intérieur du matériel de glaciologie qui avait été mis dehors pour IRAIT - Préparation de caisses de matériel RDC et préparation de matériel pour le raid 3 - Fermeture de la bâche du conteneur OPEN TOP contenant le radôme d'ASTROCONCORDIA. Il servira de conteneur pour les déchets cet hiver car nous manquons de conteneurs
Site	LOG / Avion	- Préparation de la piste d'avion avec le PB270 (fait avant chaque vol prévu et après chaque vol)

TRAVAUX SCIENCES CONCORDIA		
Programme/ Lieu	Domaine	Travaux
IRAIT	LOG	- Mise en place du rotateur - Réalisation de la panoplie hydraulique pour le refroidissement du télescope – en cours - Mise en place de la fourche du télescope - Préparation de l'armoire électrique pour le refroidissement du système - Travail électrique pour le branchement des armoires électriques du télescope
Shelter PHYSIQUE	LOG MECA	- Réalisation des embases et pose de la structure à côté du shelter SALVIETTI - Pose des conteneurs
Shelter GLACIO	MECA	- Montage de la structure de support du shelter - Réalisation des embases - Montage des escaliers et échelle à crinoline... pas facile sans plan
GLACIO	LOG	- Assistance pour la pose d'une Station météo à Little Italy (Flex + 2 personnes techniques) - Récupération de la grappe de température du forage à Little Italy (3 personnes+flex) - Travaux électriques pour le montage des batteries d'une Station autonome
SISMO	LOG	- Manip à une des STATIONS éloignées. 2 personnels techniques + flex
STARPHOT OMETER	LOG AMEN	- Construction de la plateforme en bois - Dépotage du conteneur et préparation du matériel sur la plateforme starphotometer - Fabrication d'un escalier d'accès à la plateforme en bois
TOUR US	AMEN	- Fabrication d'un système pour laisser la porte ouverte. Depuis l'installation des pompes CESOA, la température dans le shelter est très élevée (plus de 35°C en journée)
TOUS	LOG	- Transfert de matériel scientifique à stocker hors gel vers l'hôpital du camp été qui sera la zone de stockage cet hiver. La pièce sera chauffée à -20°C durant l'hiver

DIVERS :

- Le 15/01/09 : Réunions avec les scientifiques arrivés (STARPHOTMETER et HAMSTRAD)
- Le 16/01/09 : Visite avec les VIP (Prince Albert de Monaco) toute la journée
- Le 17/01/09: Réunion générale à 13h30

7 Medical Service**Eric Lotz, MD – Medical Doctor***Curative care*

- 8 consultations : 2 gastroenteritis, 1 tracheitis, 1 headache, 1 toe infection, 1 shoulder pain, 1 leg pain, 1 wound

Hospitalization

- No need.

Transfers

- No need.

Telemedicine

- No activity.

General mood

- Good

Preventive care

- Medical : information given about condoms
- Block alimentation : good food

Research

- Departure of Dr Choukèr from CHOICE program

Equipments

- Condoms received from DdU

- Emails exchanged with Dr Catalano and with Bob O'Brien (NZ) for the supplies asked. Orders in progress, medications should arrive before the winter-over.

Other

- Departure of Dr Rainis
- Visit of the hospital by the Prince Albert II of Monaco, with explanations of its functioning. A video interview was made with the journalists accompanying him.

8 Scientific Activities

Chiara Montanari - Scientific Programme Supervisor

- A document to define a strategy for the American Tower is under development together with the researchers involved in activities at the tower.
- Followed the activity of the Glacio team at the Tower.

ASTRONOMY

1040 - CAMISTIC

Gilles Durand- Yann Reinert- Pascal Tremblin

CANON à CORBEAUX:

The compressor is heated in its insulated box

At 2 hours intervals, an air gun removes snow from COCHISE mirror and from Summit window.

This system will flush the snow with air guns at 2 hours intervals. The compressor and its heated box for the winter have been tested and used. It will be installed on COCHISE/SUMMIT next week to keep them clean from snow during the winter.

1 day work remaining 2 people

IRIDIUM OPEN PORT:

After 2 weeks of attempts we could not restart the Iridium. The provider V-Sat asked us to return it under guarantee for repair.

- IRAIT:

- The telescope is ready to mount the optics.
- The test of the electronic is in progress under the responsibility of Alberto Mancini.
- The PID command of the cooling loop for the coolers is completed, as well as the power circuit. The pumping system is in a final stage of construction. It will be tested next week, as well as several times during the winter under the responsibility of the winterover astronomer Denis.
- The heavy M1 mirror will be shipped from Italy by Maurizio Buso in order to make it ready at start of 09-10 summer period.

Winter program:

Gilles will soon make a description of the program to be proposed for the maintenance of the Camistic components during the winter.

Based on former discussions between Gilles and Eric Fossat about the continuation of GIVRE collaboration, the proposed request will be 1/day per week, 1 person.

Highest priority will be verification of the performances of IRAIT cooling system and of SUMMIT transparency measurements for a full year.

Other measurement as GIVRE, COCHISE defrost and Mast temperature measurement are of lower priority.

The program must be discussed with Eric Fossat, Karim Agabi and Yves Frenot.

Communication:

Today 16th January we had the visit of SAS Albert II de Monaco along his 3 weeks visit of scientific research running around the various bases of Antarctica.

Alberto made to him the presentation of the IRAIT. Gilles Durand presented the whole Camistic program, with the aim of a large telescope at Concordia. All photos and videos made by the collaborators of SAS Albert will be available on the IPEV site. A interview of G. Durand by the journalists on the far infrared program will be also made available

- We take this opportunity to address our warm thanks to the technical and general chiefs of the Base Claire Lecalvez and Chiara Montanari for their constant support on this program. Without their action we would not have reached this status.

I also would like to address my warm full thanks to my collaborators Pascal and Yann who made a wonderful job during their first 45 days campaign. Pascal Tremblin and Yann Reinert went on 16th in the

morning to Dumont d'Urville Gilles Durand was in the Casa plane on 16th at 7 h . The motors did not start because of battery failure. I could meet the Prince for a full day instead... destiny... Due to departures of the CEA team, this is the last weekly report on Camisitit The Perugia team will report to start of February on IRAIT.

1194 - IRAIT

Alberto Mancini- Antonfranco Piluso

- Brought completed derotator to the dome.
- Inserted the derotator inside the telescope.
- Made cabled grounding for all instrumentation.
- Re-built connections between electronic boxes.
- Put wood on the rotating floor.
- Built a trapdoor to access the upper floor.
- Calibrated the azimuth motors and gears.
- Started derotator's thermal tests.

610 - HAMSTRAD

Ricaud Philippe

Report

- Arrival on Tuesday 13 January
 - 1st meeting with Chiara and Claire on Thursday 15 January afternoon
 - Philippe presented the scientific and technical aspects of the HAMSTRAD project to measure H₂O in the troposphere over several years and study the link with climate change,
 - Claire explained that, due to the Astrolabe problem, the shelter that should have received the HAMSTRAD receiver was far from finished. Local manpower is busy working on other projects and in two weeks time, the winter season will start. As a consequence, the delivery is expected not before beginning of December 2009,
 - Some boxes from France were arrived and were stored outside. Later, Philippe checked that the boxes containing the radiometer (x2), the liquid nitrogen LN₂ plant (x1), the dielectric LD24 sheets (x1), and the protection shield (niche) delivered by IPEV together with the associated rails (x2) were actually at DC stuck on the snow.
 - Claire also mentioned that the radiometer and LN₂ boxes will have to be stored somewhere. She proposed either to store them at DC (-20°C with no temperature checking in case of power failure over winter time) or DdU (minimum T is about -30°C). Philippe will have to decide by the end of January.
 - It was concluded that, at this stage, Philippe could help the local technicians to isolate the shelter and could make some test on the protection shield (niche) by using LD24 sheet, heater and blower inside in order to check whether the ice crystals in suspension in the air actually stick on the dielectric. The protection will need to be placed on the roof of a heated shelter.
 - Next meeting was planned on Tuesday 20 January afternoon.

Radiometer status

- After the first meeting, Philippe checked with the German manufacturer whether the HAMSTRAD radiometer could be placed outdoor in temperatures ranging -30°C to -40°C for preliminary tests during the two following weeks. On Saturday morning, Philippe had the confirmation that, under strict conditions and following a rigorous protocol, the radiometer can be used at temperatures of about -40°C. As a consequence, a new meeting is expected with Claire and Chiara (probably Sunday evening) where will be discussed the different options to deploy the radiometer and to produce liquid nitrogen for calibration being given constraints such as manpower, temperature, available spaces, electrical power, etc.

STARPHOTOMETER

Martin Reitz – Christian Hüssel – Manuel Sellman

- In the summer season 2008/2009 it is planned to install the Dome for the Starphotometer on Concordia Base. The installation works are carried out from Christian Hüssel and Martin Rietze from "Baader Planetarium GmbH" and Manuel Sellmann from the "Alfred-Wegener-Institut for polar and marine research".
- After one day delay due to bad weather conditions at Wilkins Runway we arrived at Concordia Base on Wednesday the 14th during the early afternoon.
- On Thursday we checked the parts inside the container and found everything very well. The three concrete pillars, the frame to hold them and a 4m to 6m wooden platform were already finished by the

Station team so that we could started right away with unloading the container, again with the help from the Station crew who also brought the container to the platform for us.

- On Friday the 16th we started the construction work and it was possible to install the parts of the lower ring on the wooden plate.
- For the next week it is planned to install the outer dome completely and to install the drives for the shells.
- Without all the help from the crew and the well done platform everything would have been much harder for us and we would not be at the point we are now.

908 - ASTROCONCORDIA - SONICS

Karim Agabi - Denis Petermann - Cyprien Pouzenc - Yan Fantei

Expériences en cours d'acquisition : DIMM, GSM, SBM, SONIC

- DIMM
 - remise en place de l'ancien PC (échec du remplacement par un PC neuf)
- GSM 1 & 2
 - le remplacement d'une des motorisations de GSM 2 n'a pas apporté d'amélioration au problème récurrent de suivi
 - maintien de l'ancien PC (échec du remplacement par un PC neuf)
- SBM
 - complément d'affinement de la mise en station
 - échange de mails avec les responsables
 - écriture d'un script d'archivage qui se substitue à la fonction intégrée au logiciel
- PAIX
 - suite au défaut de régulation de la température de l'abris
 - remplacement des commandes par triac et relais par de nouvelles en logique 24V
 - utilisation de relais statiques pour le chauffage et la ventilation
 - la sonde de température extérieure a été abritée du rayonnement solaire, un décalage de -7 degrés configuré sur le régulateur permet d'avoir un résultat proche des températures données par la météo, au degré près
- MOSP
 - capot Sub-D (chauffage) remplacé
 - poursuite de la mise en station
- ASTEP Sud
 - nouvelles améliorations de run_astep et save_astep
 - formation aux logiciels d'acquisition et de sauvegarde
- SONIC
 - mise en place de la nouvelle alimentation réparée par le service radio
 - équilibrage du circuit électrique
 - échange de mails avec les responsables
 - le calcul des moyennes horaires est opérationnel sur l'ensemble des SONICS grâce à l'envoi de nouvelles sources par Eric Aristidi
 - mise en place sur la machine Pollux de scripts de sauvegarde automatique des données et d'envoi de mails (DIMM, GSM, SBM, régulateurs thermiques contrôlables à distance, météo, SONIC) (échange de mails avec les responsables)
 - examen des raquettes défectueuses et remise en état de la plupart
 - transformation d'une raquette en raquette plein jour (filtre rouge remplacé par un incolore)
 - examen des CP défectueux et remise en état de la plupart (composants remplacés)
 - remise en état de motorisations
 - préparation du laboratoire et du shelter pour la visite du prince de Monaco

Remarques concernant les rapports avec Karim Agabi :

Après un accueil chaleureux et une journée de récupération, il en a été tout autrement dans les jours qui ont suivi. Cyprien et Denis ont rapidement compris qu'il était inutile de faire valoir leur point de vue, une discussion pouvant être close par « qui est le chef de projet ». Citons également des messages d'encouragement tels que « ils sont mous les hivernants cette année ». Aux tâches parfois ingrates qui nous faisaient réagir, nous avons eu comme réponse « il faut bien occuper les hivernants ». Aux demandes de matériel ou d'outillage nous avons eu comme réponse « débrouillez-vous, c'est l'Antarctique ».

Nous devons au contraire remercier Yan pour son travail efficace qui a réorganisé le parc informatique et participé à l'aménagement du shelter.

GEOMAGNETISM AND SEISMOLOGY

1144 – DOME X 2, 905- 906 – 1178- 1183 - Geodesia ed Osservatori a Dome C, 904 – SAOZ

Jonathan Zaccaria

- Aude and Marcellin has gone a few days ago. I am taking in charge the new acquisition. Backup system seems working, but the automatic sending mail does not send all the email it should be. We will see that next week.
- DOME X: Nothing special.
- SAOZ: Nothing special.

Project N° 906 SEISMOLOGY AT CONCORDIA

Jonathan Zaccaria

- Alessia and Maxime has gone. The next week I will install 2 gps on 2 out of 3 remote stations.

ExDC33- ELECTRICFIELDS

Gary Burn - Lloyds Simons - Jonathan Zaccaria

- Not sent

GLACIOLOGY

1181 AIR GLACS

Laura Genoni

1181 – AIR GLACS

- Prosegue il monitoraggio giornaliero del funzionamento dei campionatori di aerosol atmosferico a diverso cut off e a diversa risoluzione temporale; attraverso il cambio dei filtri a cadenza da giornaliera, a settimanale ed a mensile, la manutenzione periodica delle pompe, sia mensile che ogni 2 mesi e fase di re-ingrassatura delle teste di misura necessaria solo saltuariamente.
- Giornalmente (al mattino e al pomeriggio) ho raccolto campioni di neve superficiale per l'Università di Firenze e, quando presenti, campioni delle precipitazioni per l'Università di Trieste.

1144 – MAPME/DOME X

- Inoltre, ho proseguito nelle osservazioni nivologiche giornaliere e nel riconoscimento della tipologia/morfologia dei cristalli di ghiaccio; sia raccogliendo su i "banchini" campioni delle precipitazioni, caratteristicamente sporadiche di questo periodo, che misurando lo spessore delle deposizioni sulle due tavolette posta da Andrea Crepaz a poca distanza dai suddetti banchini.
- Scarico dei dati di temperatura registrati dalle sonde posizionate da Macelloni e Crepax in prossimità dello schelter Salvietti.

1011 NITEDC (NITrate Evolution in Dome C surface snow)

Joel Savarino - Jean-Charles Gallet

- Not sent

902 GLACIOLOGIE PHYSIQUE

Julien Courteaud

- Not sent

914 GLACIOCLIM et CONCORDIASI

Delphine Six

- Réparation des ventilateurs au niveau 6 et au niveau 1 qui ne fonctionnaient pas. Re-installation des deux capteurs dans les abris ventilés réparés. Câblage de la centrale pour ces deux instruments. Test OK.
- Changement du chargeur de batteries pour la ventilation.
- Mise en place du chemin de câble complet au niveau de la tour. Piquets, colson. Démontage de la corde de mise en place des instruments.
- Test de la connexion de la centrale CR1000 du shelter Helene au réseau. Encore deux après midi pour changer de logiciel, les câbles, etc... rien à faire, impossible. Changement de la version du logiciel PC400. Test sur la CR1000 de Laurent ARNAUD : OK, mais toujours pas sur les nôtres.
- Mise en place du ruban téflon autour du capteur PT100 à la CR1000 du shelter Hélène. Mise en place des câbles de la CR1000 dans la boîte isolante.

- Installation du cordon isolant autour de la CR1000 et du DTP dans la même boîte. Changement du Hub en panne. Changement du module NL115 permettant la connexion au réseau et l'acquisition sur la compact flash.
- Préparation des connectiques entre batteries dans la cantine pour l'installation de notre station météo. Installation des diodes, des protections et des panneaux solaires sur prises. Tests extérieurs de la charge :OK
- Récupération des données de balises (relevés de Novembre : Laura). Récupération des données de densité des balises à 25 km (JC).
- Installation sur PC météo Laura du logiciel avec les bonnes connexions aux centrales.
- Préparation du ballon ozone avec Laura et Caroline.
- Nettoyage des instruments sur la tour remplis de givre (lundi 12, mercredi 14, vendredi 16, samedi 17). Le givre est présent même à l'intérieur des abris. Surtout dans les ventilés.

902 - Glaciologie

Delphine Six

- Préparation du matériel pour la station météorologique STAMEMO de Laurent ARNAUD. Listing complet du matériel réalisé au workshop.
- Connectique de tous les instruments à la centrale d'acquisition au workshop . Tests et essais erreurs. Beaucoup de petites choses à revoir. En fin de semaine, il reste le problème de la température interne du capteur de rayonnement qui chauffe en permanence. Echanges avec Laurent pour résoudre les différents pbs. A voir.
- Installation des batteries, panneaux solaires et structure métallique pour l'installation des capteurs à Little Italy. Descente des batteries dans le trou de 2m. Piquets en place. Site réaménagé proprement au Kass.

903 – CESOA

Caroline Jullian

- 4 shelter's visit to change :
 - filters Low Volume
 - filters High Volume
 - impactor
 - tubes denudeurs
 - filters for pollen
- 3 visit to the American tower to change filters (10, 25 and 45 meters of altitude)
- Snow sampling with Joël Savarino
- Sampling and analysis of DMS and DMSO each day
- Visit of the prince to the shelter

ATMOSPHERIC SCIENCE

1149 - RMO , 1176 – BSRN, 914 – CONCORDASI

Laura Genoni-

1149 – Meteo RMO -AWS

- Manutenzione ordinaria della stazione meteo Milos520. Riparazione del cavo di collegamento tra il sensore di temperatura ed umidità, che presentava in alcuni punti delle spaccature. Queste, che interessavano solamente la guaina esterna sono state riparate con nastro autoagglomerante.
- Verifica giornaliera del corretto invio dei dati di fisica dell'atmosfera dallo shelter Caro al PC meteo ed ai responsabili di progetto.

Ballons

- Esecuzione giornaliera (19,30 LT) dei radiosondaggi. Scarico ed invio dei dati.
- Affiancamento di Caroline Julian ed Eric Lozt per le fase di preparazione della sonda e lancio per pallone.

912 – Ozone Polaire

- Nella giornata del 15 gennaio 2009 è stata preparata la ozonosonda, il lancio verrà effettuato il 19 gennaio 2009.

1176 – BSRN

- BSRN - Tracker
- Giornalmente viene effettuato il controllo del corretto funzionamento della strumentazione, posta all'interno dello shelter Caro, e lo stato di pulizia delle apparecchiature poste all'esterno (puntamento del tracker). Le operazioni di pulizia del tracker vengono registrate nel diario elettronico, appositamente

creato, che viene inviato automaticamente ai responsabili di progetto in Italia, perché siano al corrente delle diverse manutenzioni che vengono condotte sulla suddetta strumentazione.

Gas in traccia e particelle aerosol

- Dal laboratorio è stato eseguito lo scarico settimanale, dei dati della Torre Americana. Inoltre sono state eseguite le manutenzioni ordinarie sulle linee di misura GRIMM, DPMS e UVRAD. La sostituzione dei filtri e la verifica dei flussi.

HUMAN BIOLOGY AND MEDICIN

Project ESA Medical

Alex Salam

- Activities: inclusion and assessment of pre-isolation measurements in 3 (of 6) expeditioners who have had previously agreed to participate in the CHOICE study
- All biological sample collections were completely collected and functional immune parameters were successfully measured with an on-site cytometer in the BioMed Lab.

Week 4th Activity Report

Jan. 17th 2009 - Jan. 23rd 2009

1. Concordia Crew

- **WO5 Crew**

Eric	LOTZ	Medical Doctor
Massimiliano	FAIELLA	Technical manager
Domenico	FASANO	Cook/Chief Intendant
Guillaume	FRINOT	Plumber
Laura	GENONI	Glaciologist Air Glacs
Caroline	JULLIEN	Glaciologist
Alexandre	LE LUC	Vehicle Mechanic
Denis	PETERMANN	Astronomer Astroconcordia
Cyprien	POUZENC	Astronomer Astroconcordia
Alex	SALAM	ESA Medical Researcher
Eric	TRAGIN	Electrician
Jonathan	ZACCARIA	Information Tech. / Observation / Operations / WO5 Science Support

- **Summer Direction Office**

Chiara	MONTANARI	Expedition Leader
Claire	LE CALVEZ	Technical & Logistical Manager
Eric	LOTZ	Medical Doctor
Nicola	LA NOTTE	Technical & Logistical Manager Assistant

- **Radio Room**

Rita	CARBONETTI	Secretary / Meteo Observation / Operations
Fabio	PIERSIGILLI	Telecom / Radio & Electronic Support
Jonathan	ZACCARIA	Information Tech. / Observation / Operations / WO5 Science Support

- **Logistic**

Gilles	BALADA	Mechanical assembler
Luigi	BONETTI	Multi skill specialist
Jean Gabriel	COLL	Electrotechnician
Daniel	CRON	Diesel Mechanics
Christian	DIDIER	Plumber
Jean Louis	DURAFFOURG	Cook/Chief Intendant
Massimiliano	FAIELLA	Technical manager
Domenico	FASANO	Cook/Chief Intendant
Guillaume	FRINOT	Plumber
David	LAJOLIE	Multi skill specialist
Alexandre	LE LUC	Vehicle Mechanic
Nicolas	LE PARC	Electrotechnician
Mario	QUINTAVALLA	Vehicle Mechanic / PB Specialist
Hubert	SINARDET	Mechanical assembler
Eric	TRAGIN	Electrician
Antony	VENDE	Responsible Mechanics

- **Science**

Julien	COURTEAUD	Glaciology Barnola
Denis	PETERMAN	Astronomer Astroconcordia
Cyprien	POUZENC	Astronomer Astroconcordia
Alberto	MANCINI	Astronomer IRAIT
Antonfranco	PILUSO	Technician for Astronomy IRAIT
Joel	SAVARINO	Glaciologist Nite DC
JeanCharles	GALLET	Glaciologist Nite DC
Caroline	JULLIEN	Glaciologist CESOA
Laura	GENONI	Glaciologist Air Glacs
Christian	GENTHON	Glacioclim
Delphine	SIX	Glaciologist Concordiasi - Glacioclim
Christian	HUSSEL	Technitian StarPhotomter
Martin	RIETZE	Technitian StarPhotomter

Manuel	SELLMANN	Astronomer StarPhotometer
Philippe	RICAUD	Hamstrad
Alex	SALAM	ESA Medical Researcher
Jonathan	ZACCARIA	Geomagnetism and Seismology technician

Total people on Jan 23rd : 39

2. Basler/Casa Flights

N. volo	Data	Tratta	Cargo in arrivo	Viveri in arrivo	Passeggeri
20	17/01/2009	DC- CASEY	0	0	Partiti: Simons, Burn, Bancher, Durand, Rainis
21	17/01/2009	DC-VOSTOK-DAVIS			Partiti: Principe Alberto II di Monaco con 3 Pax + 5 crew

3. Evidences

- The 17th of January Prince Albert II of Monaco, his aid and the two journalists left DC to Vostok (coordination between the bases of McM, Vostok and Davis for the Prince visit)
- The 17th 5 persons left DC to Casey with the CASA212 aircraft.
- The 19th interview with Radio Montecarlo.
- The 20th interview with La Repubblica.
- The 23rd there was a fire exercitation at the Base, the reaction of the crew was good.

Training of the WO 5 Eric Lotz:

- The 21th training on phone communication and procedures.
- The 23th training on phone communication and instrumentation at the Radio Room of the summer Camp for Emergency.

4. Communications Evidences and Activities

Fabio Piersigilli – Telecom, Radio & Electronic Support

- Continuato ed ultimato il test degli hard disk acquistati quest'anno.
 - Disattivati account email delle persone non più presenti in Base.
 - Scarico ed invio email.
 - Disservizio del servizio Wi-Fi al campo estivo, a causa della perdita programmazione degli access point. Riprogrammati e riattivato il servizio.
 - Revisione all'interno del radom standard B linea 51.
 - Applicato silicone sulla giuntura del radom dello standard B linea 56.
 - Permutazione ethernet su shelter sismo tramite fibra ottica, disabilitato Wi-Fi.
 - Scarico e stampa del giornale "La Repubblica".
 - Reinstallazione software su PC del campo estivo e reinstallato in loco.
 - Riattivazione sistema telegestione radiosonde Vaisala con responsabile invernale meteo.
 - Realizzata protezione invernale del radom standard B. linea 56 con 6 sacchi a pelo.
 - Realizzata scatola in Styrodur per contenere i due trasduttori fibra/rame dello shelter Salvietti per l'inverno.
 - Installata scatola in Styrodur nello shelter Hélène per contenere il trasduttore fibra/rame in caldo per l'inverno.
- Training al capo spedizione invernale ed invernante sala radio:
- Spiegazione sistema telefonico Base Concordia e campo estivo.
 - Centrale telefonica e sua gestione tramite software.
 - Gestione addebiti telefonate private e lavorative.
 - Utilizzo e manutenzione dei satellitari, Inmarsat ed Iridium, sia fissi che mobili.
 - Satellitari e centrale telefonica
 - Ispezione e visione sala radio del campo estivo.
 - Telecomunicazioni di backup installate nella sala radio del campo estivo.
 - Sistema di rete ethernet zona del campo estivo, epica, tenda tempo libero.
 - Sistemi HF, VHF, standard C ed iridium con relative antenne esterne.
 - Sistema telefonico del campo estivo.
 - Stazione meteo Davis e relativo PC.
- Training all'invernante sala radio:
- Sistemi HF e svolto sopralluogo allo shelter HF, ed antenne.

5. Logistics Evidences and Activities

Claire Le Calvez – Technical & Logistic Manager

Les travaux prioritaires au cours de cette semaine ont été :

- Assistance pour les scientifiques
- Passation de consignes pour les nouveaux hivernants
- Montage des nouveaux laboratoires GLACIO et PHYSIQUE
- Exercice incendie

Le 24/01/09: 39 personnes sur la Station

5.1 CENTRALES ELECTRIQUES

5.1.1 CENTRALE DU CAMP ETE et CAMP ETE

- Cummins : carte de régulation changée. Révision et contrôle. Le groupe semble pompé en charge, affaire à suivre ...
- Alsthom : winterisation en cours (batteries et panneaux silicones chauffants, réchauffage des cylindres ...). Test de démarrage et de fonctionnement par température basse (conteneur ouvert toute la nuit)
- Le 21/01/09 : Permutation de groupe pour la révision du GE2

Consommation de fuel : 1 700 l

Consommation d'eau camp été : 6 m³

5.1.2 CENTRALE DE CONCORDIA

- Le 19/01/09 : révision 250h GE3
- Inventaire / tri des pompes
- GE3 : démontage du turbo en raison d'une consommation d'huile trop importante
- Le 23/01/2009 : essai du GES le matin avec une partie de la charge sur le groupe (tout sauf sciences et bâtiment calme)

Consommation moyenne : 53 kW

Consommation de fuel : 3 000 l

Consommation d'eau Concordia : 31 m³

5.2 PRODUCTION ET DISTRIBUTION D'EAU - CONCORDIA

- **GWTU :**
 - 14,5 m³ traités
 - Rendement à 65 %

Consommation d'eau total : 37 m³

Consommation moyenne : 136 l/personne.jour (39 personnes en moyenne cette semaine)

5.3 TRAVAUX EFFECTUES ET EN COURS

Domaines :

- AMEN : aménagement, CENT : centrale, ELEC : électricité, LOG : logistique, MECA : mécanique, PLOM : plomberie, RADIO : radio, SECU : sécurité

TRAVAUX SITE CONCORDIA		
1BB Workshop	ELEC	- Réparation sur le variateur de vitesse du ventilateur de l'espace fumeur du workshop. C'est en fait un variateur d'intensité pour les luminaires. - Suite à l'exercice incendie, pose de flash lumineux « technique » et « incendie » dans le workshop - Essai de mise en service du nettoyeur à vapeur Vaporetto acheté cette année → ne fonctionne pas pour le moment
1BB Urinoirs	PLOM	- Vidange vers la cuve à boues : tous travaux finis
BC	PLOM	- Contrôle et maintenance de la ventilation – en cours
Camp été Centrale		- Etude Alsthom pour un meilleur réchauffage en hiver (batteries, moteur) – travaux faits, essais en cours
Camp été Centrale	AMEN	- Diagnostic sur les panneaux rayonnants au plafond de la centrale : ce n'est pas du tout cela, c'est une ancienne centrale anti-incendie avec des aérosols ... On va tout démonter
Camp été	AMEN	- Préparation et fermeture des tente 3 et 4 pour l'hivernage et la campagne d'été prochaine (ménage et lits faits). Les tentes seront prêtes pour la réouverture du camp

TRAVAUX SITE CONCORDIA		
Camp été Centrale	ELEC	- Contrôle de la répartition des phases des prises au niveau de la centrale en raison du branchement des radiateurs l'hiver – tout va bien
Centrale	ELEC	- Compresseur Atlas Copco : mise en service avec le système de démarrage progressif même si celui-ci n'apporte pas satisfaction (le pic d'intensité au démarrage existe toujours) - Préparation d'une résistance de cuve avec les protections en plastique + remplacement de la PT100
Centrale	MECA	- Remplacement d'une des pompes de la panoplie eau recyclée - Changement des joints d'une motopompe HONDA pour la rendre compatible fuel et gréage de la motopompe avec les camelocks
Concordia	AMEN	- Armoires de zone Clean area et astro : fabrication des supports des armoires – fini. Support mis en place. Reste les Armoires à mettre en place - Préparation de la chambre de tirage des passerelles d'eau en vue du tirage de câble SUPERDARN vers l'armoire sciences et de la fibre optique - Fabrication de panneaux en bois pour boucher l'extrémité du tubosider – début des travaux
Concordia	SECURITE	- Le 23/01 : Exercice incendie à 13H35, suivi d'un debriefing et d'une réunion générale avant dîner pour rappeler la consigne en cas d'incendie et le rôle de chacun
Garage	MECA	- Challenger : o Démarreur HS ou en bien mauvais état. Nous ne l'utilisons plus - PB270 : o Château de la lame ressoudé. Kass en service - MERLO : La réparation sur l'avance du véhicule n'a pas fonctionné. Le véhicule s'arrête de manière aléatoire - Skidoos : o Réparations diverses
GWTU	MECA	- Tri et inventaire des pompes
GWTU	PLOM	- Souci sur la pompe P10. Démontage pour nettoyage. Nettoyage de l'UF soude + chlore
Passerelle d'eau	AMEN	- Isolation et rénovation des caissons de la passerelle d'eau
Plateforme extérieure	LOG	- Pose des derniers poteaux électriques entre le tubosider et la ligne vers HF/SUPERDARN ; pose des cablofils. Recherche des armoires SUPERDARN, tout est près pour le tirage de câbles
Site	ELEC	- Visite électrique de la Station (Concordia, shelters, camp été) de Jean Gabriel COLL avec les électriciens
Site	LOG	- Déneigement du site (camp été / plateforme Concordia / cargoline) - Mise en conteneur de déchets de bois
Site	LOG	- Préparation de fûts pour les déchets - Le 20/01/09 : vidange de la cuve à boues de Concordia - Le 19/01/09 : vidange de la cuve à boues du camp été - Le 24/01/2009 : plein des réservoirs des tentes
Site	LOG / Avion	- Préparation de la piste d'avion avec le PB270 (fait avant chaque vol prévu et après chaque vol)

TRAVAUX SCIENCES CONCORDIA		
Programme/ Lieu	Domaine	Travaux
GLACIO	ELEC	- Udisti : Intervention électrique sur un des appareils de prélèvements
GLACIO	LOG	- Assistance pour la pose d'une station météo à Little Italy (Flex + 2 personnes techniques) - Transport de cartons de carottes de glace de la grotte vers le workshop EPICA (devant)
HAMSTRAD	LOG ELEC	- Suite à la réunion d'hier soir, installation de toute la manip pour l'été dans la tente temps libre (logistique et électricité) - Installation du radiomètre à l'extérieur de la tente bureau. Raccordement électrique - Réparation sur le compresseur d'hélium – apport d'hélium – en cours - Préparation de la niche (pose du LD24, isolation)/ La niche va être montée sur le shelter et des tests de givre seront effectués cet hiver.

TRAVAUX SCIENCES CONCORDIA		
IRAIT	PLOM ELEC AMEN	<ul style="list-style-type: none"> - Panoplie hydraulique pour le refroidissement du télescope <ol style="list-style-type: none"> 1. Travaux hydrauliques fini 2. Branchements électriques effectués 3. Fabrication d'une boîte isolée tout autour 4. Pose du système dans le « casing » sous le télescope IRAIT et raccordement des tuyaux au rotateur. Branchements électriques – en cours - Logistique en prévision de l'hiver (rangement des caisses et matériel divers à l'intérieur du conteneur qui est sur traîneau - Pose d'une prise électrique pour les skidoos
Shelter GLACIO	MECA	<ul style="list-style-type: none"> - Fin du chantier pour cette année. Les structures de support de 6 conteneurs sont montées. L'escalier d'accès, l'échelle à crinoline et les caillebotis sont sur place et posés sur les radiers des structures pour éviter l'enneigement hivernale.
Shelter PHYSIQUE	AMEN	<ul style="list-style-type: none"> - Escaliers d'accès posé sur le bord du conteneur (provisoire) et échelle a crinoline montée - Caillebotis mis tout autour des 2 conteneurs - Tri des panneaux DAGARD pour le revêtement de sol et pose - Etanchéité des conteneurs faites - Fin étanchéité des conteneurs - Perçage de la fenêtre et de la niche - Etude de calepinage pour le tri des panneaux DAGARD pour les murs et les plafonds. - Transport et pose <p>→ Tout ce qui pouvait être posé l'a été. En attente de finition pour les portes intérieures et la fenêtre. Nettoyage et rangement du chantier. Pour cette année, il reste la niche à fixer et la préparation de la manip pour cet hiver (test de givre sur la niche uniquement)</p>
Shelter Tour US		<ul style="list-style-type: none"> - Gros souci de température dans le shelter. Portes fermées, la température monte à 48°C depuis que les pompes du programme CESO sont branchées. Laisser la porte ouverte permet de diminuer la température mais c'est à risque (vent, chute des températures)
SISMO	LOG	<ul style="list-style-type: none"> - Manip à une des stations éloignées. 1 personnels techniques + flex
STARPHOTO METER	LOG AMEN	<ul style="list-style-type: none"> - Assistance pour le montage des pétales du radôme et raccordement électrique de l'armoire électrique du radôme - Pose d'un éclairage dans le radôme en prévision de l'hiver
SUPERDARN		<ul style="list-style-type: none"> - Tri des câbles (pesage pour savoir les longueur) et armoires de la ligne depuis Concordia - Tirage des câbles 4G35 jusqu'à la zone 1 - Pose des supports des armoires intermédiaires. Les armoires seront posées la semaine prochaine que le support sera bien ancré dans la neige

DIVERS :

- Le 24/01/2009: Réunion générale à 13h30

6. Medical Service**Eric Lotz, MD – Medical Doctor***Curative care*

- consultations : 1 gastro-enteritis, 2 finger cuts, 1 neck pain, 1 insomnia

Hospitalisations

- 1 hospitalisation of 36h for gastro-enteritis, good evolution.

Transfers

- No need.

Telemedicine

- 1 case sent to Swinfen Charitable Trust (tongue problem). Awaiting response.

Preventive care

- Block alimentation : good food
- Base safety : 1 fire exercise with the winter-over crew and the summer-crew : the fire team (winteroverers) did better than the 1st time, the summer-crew had problem with quick evacuation of the Station and with the counting outside. After the exercise, it is decided with Claire LeCalvez to put a fire alarm in the workshop of the noisy building, which didn't exist

Research

- Participation to CHOICE program by analyzing some blood samples.
- Participation to the meteorological radio soundings with Laura Genoni.

Other

- Since the departure of Sergio Gamberini, I'm in charge of explaining every morning the cleaning service to the crewmembers.
- Training by the radio team to use the different means of communication of the Station
- Preparation of the medical waste boxes to be sent with the RAID, destruction of some old medical stock (17 years-old sterile bandages and compresses, 10 years-old disinfectant, 5 years-old creams...).

7. Scientific Activities

Chiara Montanari - Scientific Programme Supervisor

- Followed the end of the activity of Starphotometer.
- Followed the activity of Hamstrad.
- Followed the activity of the new Physic shelters: the logistic team made as usual a really good job, paying a lot of attention to minimize the impact of their work on the environment. Despite that the suggestion for the future is to take into account the possibility to build the container in Europe in order to minimize the impact of the construction in some critical areas like the air clean area.
- Agreement among Chiara Montanari and Eric Lotz on the unacceptability of the work condition inside the GLACIO shelter: 3 pumps (from CESOA project) make too much noise, neither the DPI can sufficiently reduce the noise. A technical solution is under discussion.

ASTRONOMY

1194 - IRAIT

Alberto Mancini- Antonfranco Piluso

- Locked cables and wires to avoid tangling.
- Built wooden supports for joysticks.
- Performed motion tests on 360 degrees for telescope and tent.
- Made software alterations to allow the use for winter tests.
- Completed tent's locking.
- Built sealing for electronics' boxes.
- Complete substitution of heating system of tent's motors' boxes for malfunction.
- Altered circuits of box nicknamed flight-case to allow use under low temperatures.
- Performed thermal tests on the flight-case.

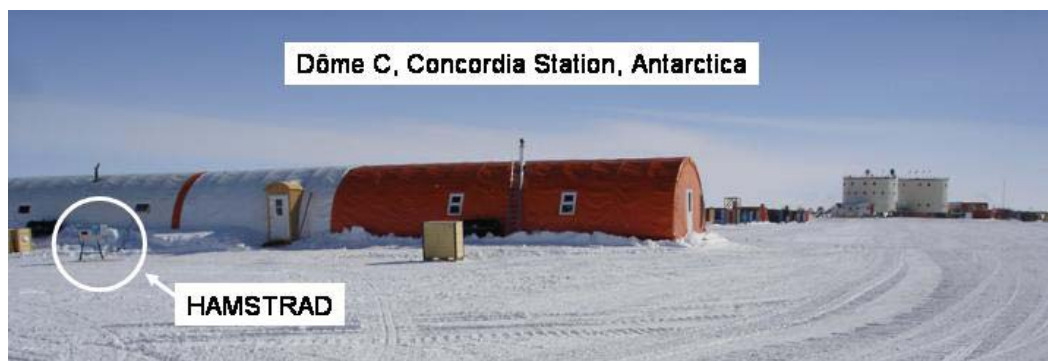
610 - HAMSTRAD

Ricaud Philippe

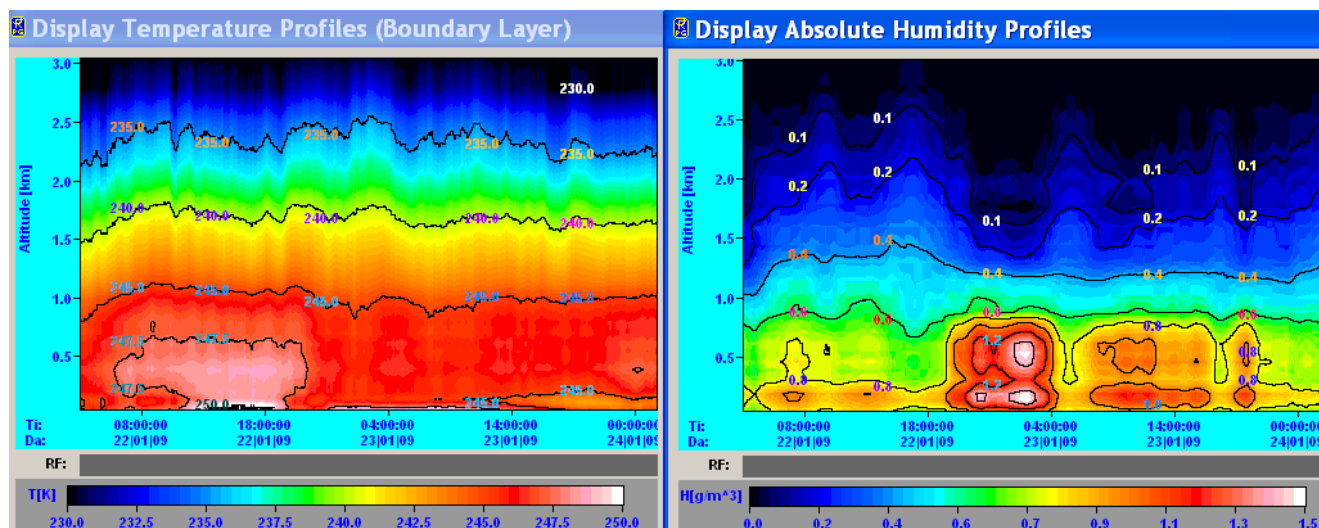
Experiment HAMSTRAD

- Radiometer
 - After the German manufacturer agreed for a deployment of the radiometer outdoor, it was accepted that HAMSTRAD will be installed in the summer camp tent. It staid over there 2 days at room temperature to be sure that it was properly working. On Thursday 22 January, the instrument was installed outside and the first ever measurements were recorded. Since that date, it is working properly. It is already an unexpected very good result. (see attached pictures)
- Liquid Nitrogen
 - In parallel, the production of Liquid Nitrogen with the Liquid Nitrogen Plant did not succeed. Liquid Nitrogen is needed for absolute calibration. Consequently, the HAMSTRAD measurements although rather realistic will absolutely have to be calibrated against liquid nitrogen for real scientific purposes. A first problem relative to the air compressor was solved by local technicians. A more serious problem was found when trying to use the Helium compressor for getting N2 into liquid form. The pressure into the He tank was too low and a security switch automatically switched the compressor off. After interacting with the American manufacturer, a probable He leakage appeared on the He compressor. Thus the tank needs to be refilled. Some interactions with scientists and technicians are under way in order to find a solution to locally refill the He compressor.
- Shield (la niche)
 - The interior of the HAMSTRAD shield (niche) is going to be protected against heat loss and the LD24 sheet will be installed. The shield will be installed on the dedicated HAMSTRAD shelter by next Monday. A heater together with a vent will be set into the shield and run all over the winter in order to check whether the ice crystals in suspension in the air actually stick on the dielectric.

- Shelter
 - The shelter that should contain the HAMSTRAD project is nowadays under work. The hole that should receive the shield has already been done. An electrical power line will be drawn to it in order for the heater and the vent to work properly into the shield all over the winter. It is expected that the shelter is entirely finished by next November.
- Automatic transfer
 - Some tests are under way in order to automatically send the measurements from the local PC at the summer camp to another PC located at the main station, save the data, and automatically send a subset of the measurements to Toulouse, France, once per day.



The HAMSTRAD radiometer at Dome C



Temporal evolution of temperature (left) and absolute humidity (right) as measured by HAMSTRAD in the lowermost troposphere (0-3 km) from 22 to 24 January 2009.

STARPHOTOMETER

Martin Rietze – Christian Hüssel – Manuel Sellmann

Installation of the starphotometer for the project Tavern Report

- Installation:

In the beginning of the week it was possible to install all segments for the roof and to put them on their place on base of the dome. After installation and adjustment of the motors the dome was ready to move for the first time. The power was kindly supplied by the Station personal so that the installed limit switches and motors could have been tested during the week. In the end of the week the dome is installed completely with all its components and the metal pillar for the starphotometer was set up to one of the concrete pillars. The whole dome and the pillar for the instrument is strictly orientated in North – South direction, so that the installation of the photometer is well prepared.
- Tests:

All electronic parts stayed the winter inside the container in very low temperature without being damaged. Due to this fact we can be sure now, that they will be ok, even without heating the electronic compartment of the dome at the loss of power during winter. This information ensures the results of tests in Germany in -80°C .

All limit switches were tested for correct work during movement of the dome segments and as an additions on the software a safety timeout was built in, so that we are now sure that the dome is moving correctly with protecting the motors.

For the upcoming project ICE-T, which uses the dome also, it was necessary to take some measurements concerning the flatness and height variation of the three concrete pillars. These results will help to install the ICE – T components in the future.

908 - ASTROCONCORDIA - SONICS

Denis Petermann - Cyprien Pouzenc

DIMM, GSM, SBM ont été arrêtés les 21, 22, 23 à cause du ciel couvert.

Depuis notre arrivée, GSM s'arrête toutes les heures. Il faut au moins 5 minutes pour le relancer. Le programme de calcul de seeing signale une erreur d'indexation de tableau. Le programme d'autoguidage exécuté simultanément ne semble pas opérationnel.

- Samedi 17
 - labo : rangement KVM (MOSP, DIMM GSM) en vue de l'installation du KVM de MOSP.
 - installation du bureau de Cyprien
 - points de mises en stations : MOSP, SBM
- Dimanche 18
 - Sonic : visite des installations de la tour avec Christophe Genthon.
 - points de mises en stations : SBM, DIMM, GSM1 & GSM2.
- Lundi 19
 - SBM: formatage disque externe USB en EXT3 (Linux) pour cause de problème de conservation de droits lors des sauvegardes automatiques dû au FAT32. Modifications des scripts. Le chercheur électronique bouge en journée. Après vérification du serrage, cela pourrait être dû à des flexions mécaniques.
 - points de mises en stations : SBM, DIMM, GSM1 & GSM2.
 - LUCAS : installation de l'ordinateur dans le shelter, à coté de GSM.
 - DIMM : orientation de la caméra et du masque.
 - MOSP : mise en place du KVM.
 - CP de maintenance
 - 2 modifications câbles longs
 - contrôle de 4 autres, l'un d'eux induit des vibrations sur les moteurs alors qu'ils devraient être à l'arrêt, il est considéré hors d'usage
 - motorisations de maintenance (4 moteurs)
 - remplacement d'un codeur optique, remplacement d'un axe en bronze, thermalisation, graissage, assemblage
- Mardi 20
 - LUCAS : fin de l'installation informatique : écran, tour sur BlackBox, partage du clavier-souris avec GSM via Synaptic.
 - shelter de la tour : suite à l'installation de pompes à vide par les chimistes de l'atmosphère la température monte fortement dans le shelter (~50°C). Dans ces conditions le switch est inutilisable et l'ordinateur Sonic est en surchauffe. Les câbles réseaux ont été branchés sur le switch de la radio présent dans le shelter, avec leur autorisation.
 - points de mises en stations: SBM, DIMM, GSM1 & GSM2.
 - installation de VNC sur les ordinateurs qui en étaient dépourvus. Ils sont désormais tous accessible par ce moyen.
 - fin des opérations sur les CP de maintenance et sur les motorisations
 - démontage de la régulation de température de l'abris ASTEP
- Mercredi 21
 - points de mises en stations: SBM, DIMM, GSM1 & GSM2.
 - réalisation d'un support plus rigide pour le chercheur électronique de SBM, orientation et centrage
 - modification de la régulation de l'abris ASTEP, régulateur Eurotherm avec 2 commandes logiques (chaud, froid) pour relais statiques et recâblage de la partie puissance (chauffage et ventilation), mise en place dans l'abris ; mise en place d'un bloc chauffant autorégulé indépendant
 - début de mise en place des scripts de sauvegarde et d'envoi d'e-mail des expériences de Christophe Genthon
- Jeudi 22
 - points de mises en stations: GSM1 & GSM2, DIMM, MOSP, SBM.
 - réalisation et pose d'une prise fixe pour une raquette pour la monture de PAIX
 - réalisation et pose d'un obturateur sur la ventilation de l'abris ASTEP
 - poursuite de la mise au point des scripts pour Christophe Genthon

- poursuite de la documentation sur les missions
- o Vendredi 23
 - rangement informatique dans le laboratoire coté castor & pollux + étagère livres
 - LUCAS : spectres de ciel blanc. mail responsable
 - réalisation et pose de 4 autres prises fixes pour raquette sur MOSP, GSM1, GSM2, DIMM
 - fixation de la prise secteur de MOSP
 - déplacement de la prise secteur de GSM gênant le passage des câbles
- o Samedi 24
 - premier examen du langage de commande des CP par liaison série RS232
 - contrôle des installations extérieures : verrouillage de Sub-D défectueux ou absent, câbles extérieurs défectueux
 - vérification de l'orientation des masques et des caméras de GSM1 et GSM2 sur demande d'Eric Aristidi
 - configuration du BIOS de l'ordinateur ASTEP2 pour qu'il redémarre automatiquement après une coupure de courant
 - points de mises en stations: GSM1 & GSM2, DIMM, SBM

GEOMAGNETISM AND SEISMOLOGY

1144 - DOMEX-2 – 905 - 906 – 1178 - 1183 - Geodesia ed Osservatori a DomeC - 904 – SAOZ – DC33 Geoelectricfield

Jonathan Zaccaria

Geomagnetism at DC

- o There is a network problem with the acquisition PC 10.10.5.51 located in the shelter.
- o Daily emails are not all sended. 5 out of 6 daily email are sended, but everything is saved on the local PC in the lab at Concordia.

Geoelectricfield: Nothing special.

DOMEX: I noted that every 3 or 4 days the acquisition program stopped. A reboot solves the problem

SAOZ: The account saoz@concordiabase.eu can now receive email.

LIDAR: Massimo Del Guasta reported an acquisition problem in the shelter. I checked. Everything seems to work well.

Project N° 906 - Seismology at Concordia

- o Visit to remote station Case03 and case 01 to plug new GPS. The operation has been done successfully. GPS are working properly and are located inside the acquisition box.
- o Reboot of Q4128 at the shelter.
- o Installation of a fiber optics. The Wi-Fi has been desactivated. The new installation is working properly at the moment

GLACIOLOGY

1181 AIR GLACS

Laura Genoni

1181 – AIR GLACS

- o Prosegue il monitoraggio giornaliero del funzionamento dei campionatori di aerosol atmosferico a diverso cut off e a diversa risoluzione temporale; attraverso il cambio dei filtri a cadenza da giornaliera, a settimanale ed a mensile, la manutenzione periodica delle pompe, sia mensile che ogni 2 mesi e fase di re-ingrassatura delle teste di misura necessaria solo saltuariamente.
- o Giornalmente (al mattino e al pomeriggio) ho raccolto campioni di neve superficiale per l'Università di Firenze e, quando presenti, campioni delle precipitazioni per l'Università di Trieste.
- o Si è verificato un mal funzionamento per il campionatore a carbonio che interessa il flusso di campionamento. Dopo aver sostituito la pompa e alcuni tubi in silicone la situazione non è ancora tornata alla normalità.

MAPME/DOMEX

- o Proseguono le osservazioni nivologiche giornaliere ed il riconoscimento della tipologia/morfologia dei cristalli di ghiaccio; sia raccogliendo su i "banchini" campioni delle precipitazioni, caratteristicamente

sporadiche di questo periodo, che misurando lo spessore delle deposizioni sulle due tavolette posta da Andrea Crepez a poca distanza dai suddetti banchini.

- Scarico dei dati di temperatura registrati dalle sonde posizionate da Macelloni e Crepez in prossimità dello schelter Salvietti.
- Il giorno 23 gennaio è stata eseguita una trincea di 1 metro di profondità per misurare una serie di parametri, quali: temperatura, densità e conducibilità ogni 10 cm di profondità. Tali determinazioni si ottengono attraverso carotaggi e l'utilizzo della Snow Fork.

1011 NITEDC (NITrate Evolution in Dome C surface snow)

Joel Savarino - Jean-Charles Gallet

The tasks accomplished during the Ninth week of the program are as follow:

- The 5 fields under study were again sampled by the means of 5 mini pits of 20 cm each (for the nine time), totalizing approximately 50 samples. There is still two collections to go before closing the sampling site
- The concentration of nitrate of 300 samples has been measured by the means of our CFA.
- Extraction of nitrate of the summer samples continues on regular basis as well as the nitrate concentration measurements. So far we have processed more than 1000 samples, reducing the weight of 1000 kg of snow down to 10 kg.
- Tour of the glaciology installations (EPICA drill, Scientific trench, Epica storage tunnel, Snow pit and stratigraphy, atmospheric shelter) during the visit of the Prince Albert II of Monaco.
- Study of the physical properties of the surface continuously for 36 h
- Data processing
- Study of the hoar formed in the auxiliary Epica storage room
- Sampling of surface snow at 5 Km North (S75° 03' 07.4" E123° 28' 25.1") and 5 Km South (S75° 09' 07.1" E123° 19' 25.2") of Concordia Station to test the potential contamination of the "clean area" by the power station. Two snow pits sampled and a collect of surface snow to be studied back in France. Cutting and sampling a new whaleback at Little Italy to be shipped back to France
- Packing of ice cores boxes and snow samples to be retrograded to France
- Study of geographical distribution of a whaleback at Little Italy.

914 GLACIOCLIM - CONCORDIASI

Christian Genthon - Delphine Six

- préparation du matériel :préparation d'attaches adaptées, câblage de la station, installation de connecteur pour les rallonges de câbles des instruments, nettoyage des roulements et installation de la graisse des astros dans nos roulements....
- installation de la structure métallique sur place : trou à 1.70m pour les batteries. Descente des batteries dans le trou. Installation des panneaux solaires et de la boîte de la centrale d'acquisition sur les piquets.
- préparation du système batterie-panneaux solaires : problème de limitation de la tension des batteries. Installation de deux systèmes différents de diode zener, d'un système de voyant, sans succès. 3 visites en 4 jours pour changer sur place le système : sans succès. Encore un problème à ce jour
- installation de la station sur place. Capteurs en place, connexion à la centrale. Mesure des hauteurs, instruments orientés. Vérification des données. Deux jours après (dimanche) : OK.
- Configuration et connexion du détecteur de temps présent (shelter Hélène) pour accès par réseau local aux données en période hivernale. Connexion opérationnelle.
- Problème de configuration de la station hauteur de neige shelter Hélène pour accès au réseau local probablement identifié. Résolution en attente de la réception d'une mise à jour du système d'exploitation de la station d'acquisition.
- Résolution du problème d'accès ftp (téléchargement automatisé) à la seconde station d'acquisition météorologie profilage tour (thermomètres ventilés).
- Vérification des ventilation de la tour : les abris ventilés sont complètement remplis de givre. Laisser en test pour voir.
- Rangement de l'ensemble du matériel de Glacioclim et Concordiasi : pour retour Grenoble ou stockage DC. Début des listes de colisage.

902 - GLACIOLOGIE

Delphine Six

- Installation de la station météorologique STAMEMO :
- Démontage de l'anémomètre et changement des roulements.

- Problème de mesures de la température interne du capteur de rayonnement. Test au chaud lundi : pbs. Mesures des résistances : ok ! Puis problème résolu : lié aux branchements sur la centrale. Changements des branchements. Remis en fonction dehors le soir pour tester la température : OK
- Vérification en extérieur des mesures de rayonnement : OK
- Préparation du matériel pour la future station : coupe de plaque isolante, câble de batterie-centrale, préparation attaches CNR1, mise à l'heure GMT de la station.
- Installation sur place de la station : instruments sur piquets, centrale dans la caisse alu dans le trou. Aménagement nécessaire : percer une ouverture dans la caisse alu pour le passage des câbles. Creuser la centrale d'acquisition pour le passage des câbles de connexion. Isolation dans la caisse alu et dans la caisse plastique pour le passage des câbles. Installation d'un nouveau piquet pour l'argos, car sinon, l'antenne est trop basse. Déconnexion et reconnexion du baromètre. Direction du vent : caler le sud : OK.
- Problème sur l'acquisition des données : le baromètre ne fonctionne pas. La température de la sonde à neige est très sensible à la position des câbles (se déconnecte facilement). La température du capteur de rayonnement ne marche pas. La direction du vent ne marche pas comme il faut. Tout cela est à revoir.

902 Glaciologie Physique

Julien Courteaud

Study of the chemistry of mercury in the Concordia area :

- Measurements of gaseous elemental mercury in the interstitial air of the snow and in the atmosphere : this experiment is running automatically now, and continuous measurements are performed from the surface to 3 meters depth.
- Measurements of reactive gaseous mercury and particulate mercury :these measurements are going to be performed in a couple of days. The preparation of this experiment in the lab is now finished.
- Measurements of oxidised form of mercury in the snow : a 2.5 meters hole has been drilled, and snow has been taken at different depth. This samples will be brought back to France for analysis.
- Daily measurements of oxidised mercury at the snow surface : snow at the surface is taken each day. The analysis will be performed in France.
- Measurement of the vertical gradient of concentration in gaseous elemental mercury : blanks have been made in the lab. This experiment will be performed in the next days.

903 – CESOA

Caroline Jullian

DMS

One day of analysis of DMS in the week. One had to be cancelled for loss of time due to some problem with the CPG and the fire exercise. It was too late then to realize the calibration and the analysis.

DMSO

- Resolution of some problems linked with the sampling. 5 samples in the week and two days of analysis.
- Filters on the shelter, denudors and impactor.
Due to some station work near the shelter, sampling had to be stopped for 4 days (from Monday to Friday) and then put on again.
- Filters on the tour.
- Filters were changed Monday and Friday in relation with the shelter one's. Apparently the pumps may cause a temperature problem in the shelter of the tour. To check-in.
- Pollen filters.
These filters were changed as usual on Monday.
Preparation of the ozone balloon with Laura. The launch is for Monday the 26th.

ATMOSPHERIC SCIENCE

1149 - RMO , 1176 – BSRN

Laura Genoni

1149 – Meteo RMO

AWS

- Ispezione alla stazione meteo Milos520 per accertarsi dello stato delle parti del cavo che erano state riparate con nastro autoagglomerante.
- Verifica giornaliera del corretto invio dei dati di fisica dell'atmosfera dallo shelter Caro al PC meteo top ed ai responsabili di progetto.

Ballons

- Esecuzione dei giornaliera (19,30 LT) dei radiosondaggi. Scarico ed invio dei dati.
- Affiancamento di Caroline Julian ed Eric Lozt per le fase di preparazione della sonda e lancio per pallone.

912 – Ozone Polaire

- Il giorno 22/1/2009 è stata preparata la ozonosonda, il lancio verrà effettuato il 26 gennaio 2009.

1176 – BSRN- Traker

- Giornalmente viene effettuato il controllo del corretto funzionamento della strumentazione, posta all'interno dello shelter Caro, e lo stato di pulizia delle apparecchiature poste all'esterno (puntamento del Tracker). Le operazioni di pulizia del Tracker vengono registrate nel diario elettronico, appositamente creato, che viene inviato automaticamente ai responsabili di progetto in Italia, perché siano al corrente delle diverse manutenzioni che vengono condotte sulla suddetta strumentazione.

Gas in traccia e particelle aerosol

- Dal laboratorio è stato eseguito lo scarico settimanale, dei dati della Torre Americana. Inoltre sono state eseguite le manutenzioni ordinarie sulle linee di misura GRIMM, DPMS e UVRAD. La sostituzione dei filtri e la verifica dei flussi.
- Il giorno 22 gennaio il CPC del DMPS è stato trovato spento, comunicato il guasto ai responsabili in Italia si attendono istruzioni per il riavvio dell'apparecchio.
- Il giorno 23 gennaio sono stati sostituiti due fusibili che hanno permesso il riavvio del CPC del DMPS.

HUMAN BIOLOGY AND MEDICINE

Project ESA Medical**Alex Salam**Experiment CHOICE

Activities: inclusion and assessment of pre-isolation measurements in 1 (of 6) expeditioners who have had previously agreed to participate in the CHOICE study

- All biologica

Samples were completely collected and functional immune parameters were successfully

Week 5th Activity Report

(January 24th - 30th, 2009)

1. Concordia Crew

- **WO5 Crew**

Eric	LOTZ	Medical Doctor
Massimiliano	FAIELLA	Technical manager
Domenico	FASANO	Cook/Chief Intendant
Guillame	FRINOT	Plumber
Laura	GENONI	Glaciologist Air Glacs
Caroline	JULLIEN	Glaciologist
Alexandre	LE LUC	Vehicle Mechanic
Denis	PETERMANN	Astronomer Astroconcordia
Cyprien	POUZENC	Astronomer Astroconcordia
Alex	SALAM	ESA Medical Researcher
Eric	TRAGIN	Electrician
Jonathan	ZACCARIA	Information Tech. / Observation / Operations / WO5 Science Support

- **Summer Direction Office**

Chiara	MONTANARI	Expedition Leader
Claire	LE CALVEZ	Technical & Logistical Manager
Eric	LOTZ	Medical Doctor
Nicola	LA NOTTE	Technical & Logistical Manager Assistant

- **Radio Room**

Rita	CARBONETTI	Secretary / Meteo Observation / Operations
Fabio	PIERSIGILLI	Telecom / Radio & Electronic Support
Jonathan	ZACCARIA	Information Tech. / Observation / Operations / WO5 Science Support

- **Logistic**

Gilles	BALADA	Mechanical assembler
Luigi	BONETTI	Multi skill specialist
Jean Gabriel	COLL	Electrotechnician
Daniel	CRON	Diesel Mechanics
Christian	DIDIER	Plumber
Jean Louis	DURAFFOURG	Cook/Chief Intendant
Massimiliano	FAIELLA	Technical manager
Domenico	FASANO	Cook/Chief Intendant
Guillame	FRINOT	Plumber
David	LAJOLIE	Multi skill specialist
Alexandre	LE LUC	Vehicle Mechanic
Nicolas	LE PARC	Electrotechnician
Mario	QUINTAVALLA	Vehicle Mechanic / PB Specialist
Hubert	SINARDET	Mechanical assembler
Eric	TRAGIN	Electrician
Antony	VENDE	Responsible Mechanics

- **Science**

Julien	COURTEAUD	Glaciology Barnola
Denis	PETERMAN	Astronomer Astroconcordia
Cyprien	POUZENC	Astronomer Astroconcordia
Alberto	MANCINI	Astronomer IRAIT
Antonfranco	PILUSO	Technician for Astronomy IRAIT
Joel	SAVARINO	Glaciologist Nite DC
JeanCharles	GALLET	Glaciologist Nite DC
Caroline	JULLIEN	Glaciologist CESOA
Laura	GENONI	Glaciologist Air Glacs
Christian	GENTHON	Glacioclim
Delphine	SIX	Glaciologist Concordiasi - Glacioclim
Christian	HUSSEL	Technitian StarPhotomter
Martin	RIETZE	Technitian StarPhotomter
Manuel	SELLMANN	Astronomer StarPhotomter

Philippe RICAUD Hamstrad
 Alex SALAM ESA Medical Researcher
 Jonathan ZACCARIA Geomagnetism and Seismology technician

Total people on Jan 29th: 38

2. Flights

N. volo	Data	Tratta	Cargo in arrivo	Viveri in arrivo	Passeggeri
22	29/01/2009	McM-DC-McM	0	0	Partiti: Tragin

3. Evidences

- The 27th of January we received the medical response for Eric Tragin: he had to make a visit in CHCH.
- The 28th coordination with Casey, McM and ALCI to find an aircraft for the medical evacuation.
- The 28th after the inspection to the shelter GLACIO, sent email to Bruno Jourdain for unacceptable pump noise inside the container, after several days of discussion, the matter was solved by installing a filter at the end of the outlet of the vacuum pump.
- The 29th a Kenn Borek Calgary Twin Otter landed in DC at 23:30 UTC to carry Eric Tragin to McM. It left DC at 00:15 UTC. He was able to catch the flight McM- CHCH on the 30th of January.
- The 29th arrival of raid 3 in DC.
- The 29th there was a general meeting with the personnel: the importance of the use of the radio was remarked as some unconformities occurred during the week. Some people went in Flex mobile without the communication to the radio room, and some researchers made a night activity at the American Tower without the radio communication.

Training of the WO 5 Eric Lotz:

- The 28th of January, training on coordination flights and emergency evacuation.

4. Communications Evidences and Activities

Fabio Piersigilli – Telecom, Radio & Electronic Support

- Scarico ed invio email.
 - Ripristinata funzionalità sala video.
 - Sostituito telefono nella tenda falegnameria
 - Installazione sistema operativo più software su PC con sistema raid per utilizzo di backup per la sala radio.
 - Supporto allo shelter Glacio per l'installazione di un nuovo PC.
 - Eseguita lista materiali contenuti in una cassa wav, la quale andrà poi riposta al campo estivo con materiali obsoleti o danneggiati.
 - Problemi con lo scarico delle email, eseguiti vari collegamenti straordinari per la visione di email importanti del capo spedizione.
 - Eseguito collegamento con CNR per risoluzione problema download email.
 - Scarico e stampa del giornale "La Repubblica".
 - Impacchettato il materiale da rispedire in Italia in 2 casse ed eseguite packing list.
 - Eseguito passaggio cavo da power-station a tubosider della fibra ottica che andrà verso shelter HF e poi Superdarn.
 - Eseguito inventario del materiale elettronico e telecomunicazioni.
 - Sostituito switch ethernet su shelter Geomagnetismo.
 - Risolto problema con radio HF 1, è stato trovato il telecomando spento, la radio fuori frequenza standard, il telecomando non remotizzava più l'apparato ma ne visualizzava solamente la frequenza. Si è verificata la rottura della maniglia dello shelter HF.
 - Effettuato backup dei dati telecom.
- Training del Capo Spedizione invernale:
- Ripasso sulle procedure di telecomunicazioni e sulle procedure che regolano la sala radio.
- Training dell'invernante Jonathan Zaccaria:
- This week I dedicated a lot of time to the Hamstrad experiment. A new experimentation. I helped Philippe Ricaud to debug his acquisition system and his network problem. All is working fine now.

- At the beginning of the week. I modified a file system on the email server to change the properties of an account. Two days later we had problems to receive emails. It seems that the problem is due to the modifications I made. Nevertheless, even after replacing the file modified by the original one, the system was not going better. Simona Longo solved the problem by making a remote connexion from Italy and modifying 2 files (included the one I had modified before).
- The reason why the system went wrong is not clear yet and I will consult Simona Longo to know the modification she did.

Chiara MONTANARI remarks: Jonathan Zaccaria modified the file system in order to change a scientific mail account without any authorization by the Station Leader (according to the procedures he should ask the authorization to modify/extend a scientific mail account, and unfortunately it wasn't the first time that he did something like that). Moreover he made the modification during the organization of the medical evacuation of Eric Tragin and this caused a trouble in the server so that we weren't able to receive the email for the whole day of 28th of January. This caused a great trouble on the organization of the medical evacuation as I had to follow by email the schedule of flights and I had to send written confirmation to the other bases representatives.

Fortunately we woke up (at 2:00 a.m. Italian time) Simona Longo who found a temporary solution and, finally, solved the trouble at the end of the day. According to Simona (who is in charge for technical telecommunication matter and made the training to Jonathan) Jonathan modified the script without making a back up, than he reinsert the script but it was quite similar and not exactly the same of the previous. That caused an incompatibility with the scripts of the server.

Independently to the technical matter, what I remarked during a meeting with Claire le Calvez, Eric Lotz and Jonathan Zaccaria was the lack of respect of the procedures and the unconsciousness of the consequences of such an action during an emergency situation. This especially because this kind of things occurred during the whole summer campaign with Jonathan Zaccaria, fortunately only once during a state of emergency.

5. Logistics Evidences and Activities

Claire Le Calvez – Technical & Logistic Manager

Les travaux prioritaires au cours de cette semaine ont été :

- Assistance pour les scientifiques
- Passation de consignes pour les nouveaux hivernants
- Préparation du matériel pour le raid et début préparation du site pour l'hiver
- Avion à 7h30 ce matin EVASAN. Eric TRAJIN est parti pour Mc Murdo
- Arrivée du raid 3 le 30/01/09 à 22h heure Concordia.
- Déchargement et rechargement dans la foulée

Le 31/01/09 : 38 personnes sur la Station + 11 personnes du raid

5.1 CENTRALES ELECTRIQUES

5.1.1 CENTRALE DU CAMP ETE et CAMP ETE

- Cummins : carte de régulation changée. Révision et contrôle
- Alsthom : winterisation fini pour cette année
- Travaux électriques en vue du couplage des GE du camp été
- Le 30/01/2009 :
 - Essai de couplage des 2 GE. Ça fonctionne dans un sens et pas dans l'autre
 - Démarrage de l'ALSTHOM et mise en débit sur le camp été
 - Démarrage du CUMMINS et mise en débit sur l'application centrale du camp été

Consommation de fuel : 1 860 l

Consommation d'eau camp été : 6,5 m³

5.1.2 CENTRALE DE CONCORDIA

- Nettoyage de l'échangeur sur gaz d'échappement du GE3 au Forcimax – solution liquide. Efficacité bonne, la solution est retenue
- Formation au démarrage / couplage des groupes pour les hivernants techniques autre que chef centrale
- Remplacement du moteur électrique 'action +vide –vide qui commande la pompe à injection GE1
- Pot catalytique : début des travaux pour le désencrasse, essai de lavage du pot avec une solution de soude. Il reste à rincer et sécher le pot avant de le stocker.
- Rangement et étiquetage de pièces
- Rangement du matériel restant dans l'ex tente centrale qui est affecté au camp été

- Le 31/01/09 : Passage dur GE1 pour la révision du GE3. Le GE3 consomme beaucoup d'huile

Consommation moyenne : 55 kW

Consommation de fuel : 2 700 l

Consommation d'eau Concordia : 27 m³

5.2 PRODUCTION ET DISTRIBUTION D'EAU - CONCORDIA

• GWTU :

- 13 m3 traités
- Rendement à 62 %

Consommation d'eau total : 33,5 m³

Consommation moyenne : 122 l/personne.jour (39 personnes en moyenne cette semaine)

5.3 TRAVAUX EFFECTUES ET EN COURS

- AMEN : aménagement, CENT : centrale, ELEC : électricité, LOG : logistique, MECA : mécanique, PLOM : plomberie, RADIO : radio, SECU : sécurité

TRAVAUX SITE CONCORDIA		
1BB Workshop	ELEC	- Réparation sur le nettoyeur à vapeur Vaporetto acheté cette année
1BB Workshop	MECA	- Formation pour les hivernants sur le tour et la fraiseuse
1BB Lingerie	ELEC	- Réparation sur sèche-linge, changement de la carte électronique
2BB Frigo -20°C	AMEN	- Porte du frigo -20°C du 2BB : reajustage pour la fermeture
2BC Lingerie	AMEN	- Modification de la fermeture de la porte OTIS du 2BC
2BC Chambres	AMEN	- Changement des joints extérieures des fenêtres intérieures de l'étage des chambres
3BB Réserve	ELEC	- Réparation sur congélateur -20°C de la réserve – le ventilateur de l'évaporateur ne fonctionne pas bien
Camp été Centrale	AMEN MECA	- Démontage de l'ancienne centrale à incendie du camp été - Révision d'une des pompes eau douce (moteur arrivé de DdU)
Camp été	LOG	- Vidange et nettoyage de la tente « centrale ». Cette tente n'est pas démontée pour le moment, les étagères à l'intérieur sont conservées telles quel. Il reste à l'intérieur une pompe électrique pour le transfert du fuel
Centrale	AMEN	- Réfection du joint de la porte de la centrale (joint arraché et décollé) - Fabrication et pose d'un coffrage en bois pour protéger le cablofil posé sur le toit de la centrale électrique
Centrale	ELEC	- Compresseur Atlas Copco : mise en service avec le système de démarrage progressif même si celui-ci n'apporte pas satisfaction (le pic d'intensité au démarrage existe toujours) - Le compresseur va être remis dans sa configuration électrique de démarrage initial en étoile - triangle
Centrale	PLOM	- Travaux sur l'aspiration de la caisse journalière chaudière (en fait c'était un remplissage sans tuyau plongeur) - Travaux de plomberie sur la pompe de caisse journalière GE (changement de pompe) - Changement d'une vanne dans le caisson d'eau sur la passerelle suite à un gel - Remise à niveau de joint au niveau de certains raccords en raison de fuite
Chaufferie	PLOM	- Préparation de la manip pour le changement de glycol dans la boucle de chauffage - Changement de glycol le 30/01/09

TRAVAUX SITE CONCORDIA		
Concordia	AMEN	<ul style="list-style-type: none"> - Fabrication de panneaux en bois pour boucher l'extrémité du tubosider - Fin ouverture chambre de tirage de la passerelle d'eau - Pose des supports en bois pour les 2 armoires de zone (zone astro et zone clean area) et mise en place des armoires de zone - Fabrication et pose des étagères dans un des conteneurs vivres - Révision des escaliers de la menuiserie et de la centrale
Concordia	ELEC	<ul style="list-style-type: none"> - Rangement des conteneurs de stockage de pièces électriques – en cours - Tirage de la fibre optique entre la chambre de tirage derrière la centrale et le shelter HF, pose de poteaux et de cablofils
Garage	MECA	<ul style="list-style-type: none"> - Challenger : <ul style="list-style-type: none"> o Démontage du démarreur – il ne peut pas être réparé - MERLO : Echec de la tentative de réparation, nous n'avons pas les pièces nécessaires - Skidoos : <ul style="list-style-type: none"> o Réparations diverses et variées sur tous les skidoos
Site	AMEN	<ul style="list-style-type: none"> - Changement du portique (ancien cassé) pour les câbles vers ASTROCONCORDIA - Pose de grenouillères sur la boîte du banc de charge - Pose des cablofils à l'extérieur de la centrale vers la chambre de tirage vers la zone HF et Superdarn
Site	LOG	<ul style="list-style-type: none"> - Retrait de câbles non utilisés sur la ligne vers sismo et l'ancien géomagnétisme – mise aux déchets des câbles - Tri et rangement des bouteilles de gaz - Mise à disposition des conteneurs vides en prévision du stockage des déchets de l'hiver - Pose de grenouillères sur la boîte du banc de charge – fini. Le banc de charge est stocké dans la tente EPICA Drilling pour l'hiver - Mise à disposition de 28 fûts de kérosène sur le traîneau pour les avions - Déchargement et rechargement du raid – fini. Il reste à dépoter 1 conteneur de vivres secs et un de vivres +4°C . Ce sera fait demain
Site	LOG	<ul style="list-style-type: none"> - Dénéigement du site (camp été / plateforme Concordia / cargoline) - Mise en conteneur de déchets de bois - Rangement de matériel de tout ordre sur le site en préparation de l'arrivée du raid et de la fin de campagne - Passage du kass au niveau des shelters physique et glacio suite aux travaux et passages de la chargeuse
Site	LOG	<ul style="list-style-type: none"> - Le 27 et 30/01/09 : vidange de la cuve à boues de Concordia - Le 29/01/09 : vidange de la cuve à boues du camp été - Le 30/01/2009 : plein des réservoirs des tentes
Site	LOG / Avion	<ul style="list-style-type: none"> - Préparation de la piste d'avion avec le PB270 (fait avant chaque vol prévu et après chaque vol)
Site	SECURITE	<ul style="list-style-type: none"> - Stockage des sacs de sécurité de chaque hivernants dans la tente vêtements

TRAVAUX SCIENCES CONCORDIA

Programme/ Lieu	Domaine	Travaux
GLACIO	ELEC	<ul style="list-style-type: none"> - Travaux électriques sur des installations « pirates » dans le shelter GLACIO
GLACIO	ELEC	<ul style="list-style-type: none"> - Assistance pour la station de mesures de Little Italy

TRAVAUX SCIENCES CONCORDIA

HAMSTRAD	LOG AMEN ELEC	<ul style="list-style-type: none"> - Préparation de la niche (pose du LD24, isolation). - Montage de la niche dans le shelter physique et raccordement électrique - Essai de complément d'hélium pour le compresseur qui ne fonctionne pas bien – échec - Assistance pour la mise en caisse RDC04 du compresseur d'hélium et des pièces attachées <p>→ Pour l'année prochaine, le scientifique doit prévoir son hélium et les raccords qui vont bien entre la bouteille et le compresseur</p>
IRAIT	PLOM ELEC	<ul style="list-style-type: none"> - Panoplie hydraulique pour le refroidissement du télescope <ol style="list-style-type: none"> 1. Raccordements hydrauliques et isolation. Le circuit est en eau. 2. Raccordements électriques à faire <p>→ C'est une usine à gaz</p>
SHELTER PHYSIQUE	AMEN	- Finition sur l'isolation intérieure – fin de rangement du matériel
STARPHOT OMETER		- Formation de 2 hivernants pour le test d'ouverture / fermeture du dôme en hiver
SUPERDAR N		- Pose des armoires intermédiaires et raccordements électriques de la centrale jusqu'à la première zone

DIVERS :

- Le 30/01/2009: Réunion générale à 13h30

FLUIDES LIVRES PAR LE RAID3 :

- **Kérosène** : 74 fûts
- **Fuel SAB** : 74 000 m³
- **Huile CAT 15W40** : 3 fûts
- **Gaz** :
 3. Acétylène : 4 bouteilles
 4. 9 racks d'hélium
 5. 5 Oxygène
 6. 2 azote + 2 petites azote
 7. 2 argon

6. Medical Service**Eric Lotz, MD – Medical Doctor**

- *Curative care*
5 consultations : two finger cuts, one dental filling, one frost bite, one throat pain.
- *Hospitalisations*
No need.
- *Telemedicine*
Answer from the Swinfen Charitable Trust telemedicine network about the case sent (tongue problem for one WO crew) : complementary exams needed, not possible in Concordia.
- *Transfers*
Medical evacuation of the WO electrician on the 29th of January by plane to Christchurch (New Zealand) via McMurdo. Organisation of the medical care in Christchurch by Dr Paul Peterson, with the help of the Italian and French National Program Senior Medical Officers.
- *Preventive care*
Mood: all the crew has been affected by the medical evacuation of the electrician, everyone hopes he will come back for the winter-over.

Medical: visit of the glacio shelter, the pumps make an unbearable noise. Since a scientist works several hours a day in the shelter, a solution to lower the level of the sound is sought with the Station Leader, the technical manager and the scientists. No solution was found for the moment.

Block alimentation: good food, organization of the +4°C storage room to be able to store the food arriving with the traverse, destruction with the cook of perished food.

Base safety: safety bags of WO crew done and brought to the clothing tent (one missing).

- *Research*
LTMS equipments prepared by Dr Salam to be sent back in Europe with the traverse.
- *Equipments*
Test of the Reflotron with the "Percinorm Hb and U" to assess the reliability of the results. The values were in the normal range except for three values (Glucose, Amylase, Pancreatic Amylase): the change of the tests sticks permitted to have values within the lab references (in fact the first sticks in use were 2 years expired).
Destruction of expired Microvette (750 pieces) and Multivette (1000 pieces) for the Reflotron.
Destruction of 90 ink cartridges for the Reflotron printer, since it doesn't work anymore (I kept 10 cartridges if we manage to fix it during the winter).
Destruction of old dental fillings (some expired since 1993) since we have a stock of new Cavit®, enough to last a few years with our activity (about 2-3 dental filling a year).
First try of the dental chair with a patient : no problem.
Sterilisation of surgical and dental instruments with the two autoclaves : no problem.
- *Training*
Nil
- *Procedures*
Still waiting the answer about the document sent by the summer Station Leader and wrote in cooperation with Dr Rainis before his departure.
- *Others*
Reorganisation of the stock to be more efficient
A video of presentation of the hospital has been realised. It can be found on Concordia intranet and on my weblog (authorized by the directions of IPEV and PNRA) at the following address:
<http://zeclarr.hautefort.com/archive/2009/01/29/l-hopital-de-concordia.html>



Destruction of old dental fillings.

7. Scientific Activities

Chiara Montanari Scientific Programme Supervisor

- Completed the documentation on the American tower, waiting for a PNRA/ IPEV agreement on the management of it.
- Found the solution for the shelter Glacio.
- Agreement on the winter tests for:
 - IRAIT and STARPHOTOMETER: Massimiliano Faiella
 - HAMSTRAD: Jonathan Zaccaria

ASTRONOMY

1194 - IRAIT

Alberto Mancini- Antonfranco Piluso

- Installed ladder to connect both storeys of the telescope.
- Performed final thermal tests.
- Performed motion tests.
- Secured tent against wind.
- Installed protections against snow-blow.
- Prepared instructions for winter tests.
- Altered electric pattern of main box to grant PLC's possible maintenance during winter.
- Completed software alterations for winter use.

610 - HAMSTRAD

Ricaud Philippe

Experiment HAMSTRAD

- Radiometer
 - Over this week, the instrument worked fine despite bad weather (strong wind and ice crystal deposition on the instrument but not on the sight window due to the use of the dew blower) and power failures (due to the efficient use of an UPS). We have recorded so far 10 days of measurements. Over this 10-day period, 90% of the temperature measurements below 2-3 km are scientifically exploitable whilst 40-50% of the absolute humidity profiles from 0 to 10 km are scientifically usable after 26 January at 03:00 UTC when we inserted a LD24 sheet in the HAMSTRAD instrument in place of the initial blue sheet too lossy at the frequency of 183 GHz. Since it has not been possible to produce liquid nitrogen for calibration (see below), we have used calibration parameters performed 6 months ago when the instrument was installed at the Pic du Midi (France) in February-June 2008. The results (both in temperature and humidity) appear qualitatively reasonable (see again below). We plan to stop the acquisition and store the instrument at Dome C in a room at temperature above -20°C on Tuesday 3 February.



HAMSTRAD at midnight



He bottle connected to the He compressor via the pressure reducer when attempting to refill the He tank

- Liquid Nitrogen
 - The production of Liquid Nitrogen with the Liquid Nitrogen Plant has definitively not been possible. Liquid Nitrogen is needed for absolute calibration. Indeed, the pressure into the He tank of the He compressor was too low and a security switch automatically switched the compressor off. After interacting with the American manufacturer, a probable He leakage appeared on the He compressor. Thus the tank needed to be refilled. With the help of scientists and technicians, both a He bottle and a pressure reducer initially devoted to glaciology purposes were adapted to the pressure input of the He compressor. All of our attempts failed. The main reason could have been that the input pressure should have been about 20 bars whilst only 9-10 bars were attainable with our device. In addition, on Friday 30 January, the compressor pressure was down to zero. We definitely packed the He compressor together with the Dewar-cold head to be sent back to Europe and then to the US manufacturer for a complete revision. In the future, we will definitively need some extra devices (pure He bottle, adapted reducer, leakage device) to

be sure Liquid Nitrogen will be locally produced. In parallel, at least for the beginning of the next summer campaign, we should think of an exceptional delivery of liquid nitrogen at the Dome C Base, in case again our LN2 plant fails. It was definitely the major weakness of our scientific and technical proposal.

- Shield (la niche)
 - The interior of the HAMSTRAD shield (niche) has been isolated (protected against heat loss) and the LD24 sheet has been installed. The shield has been installed on the dedicated HAMSTRAD shelter on Tuesday. A heater together with a vent has been set into the shield and will be run all over the winter in order to check whether the ice crystals in suspension in the air actually stick on the external part of the dielectric. A temperature sensor will also be installed within the shield, and a winterover staff (namely Jonathan Zaccaria) will check on the 2-3 times per week basis whether freeze forms on the exterior of the LD24 sheet together with the value of the indoor temperature in the shield. This information will be sent to Philippe Ricaud at Laboratoire d'Aérodologie, France on a weekly basis.



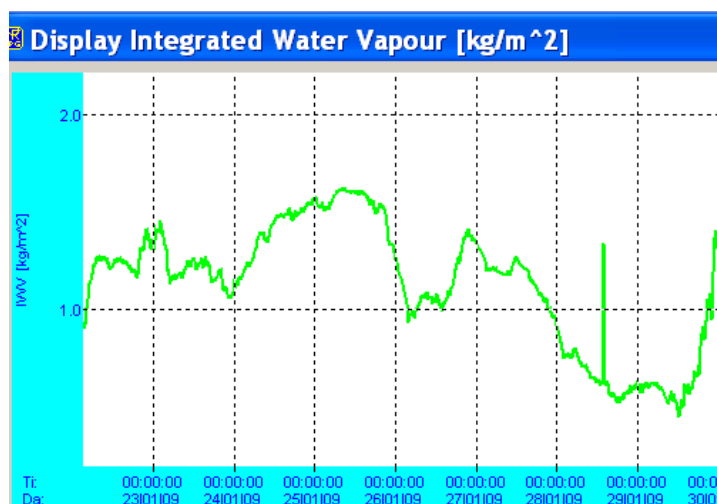
Interior of the shield with the heater HAMSTRAD shelter with the shield attached to it (on the left)

- Shelter
 - The shelter that contains the HAMSTRAD project is not completely finished but the shield is stuck to it. It is expected that the shelter is entirely finished by next November.
- Automatic transfer of measurements.
 - The measurements from the local PC (named HAMSTRAD) at the summer camp are automatically stored once per day to an external hard disk attached to it. Daily measurements are also automatically sent to another PC located at the main station (named HAMSTRAD-LABO) and the data are backed up. Today, a subset of backup data on HAMSTRAD-LABO cannot be automatically and daily sent to France because of a slight problem of username and password in some scripts. This should be solved within the few incoming days.

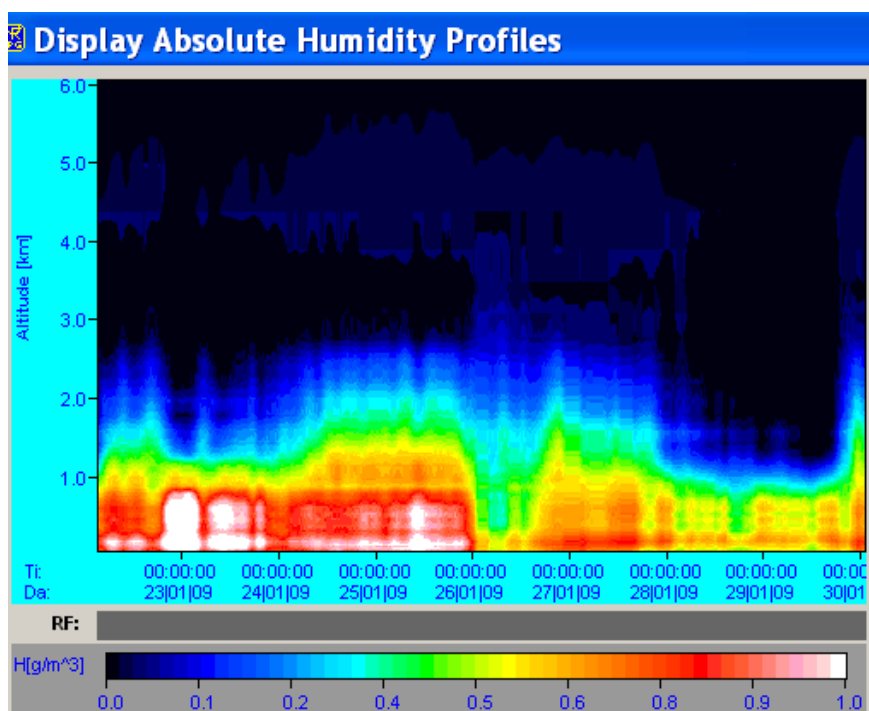
Scientific results

HAMSTRAD is a dual radiometer that can detect 1) the emission line of oxygen at 60 GHz and retrieve temperature profiles and 2) the emission line of H₂O at 183 GHz and retrieve absolute humidity profiles from 0 to about 10 km altitude. It is a brand new and state-of-the-art instrument dedicated to measure H₂O and temperature in very cold and dry sites, namely in conditions encountered at Dome C all over the year. It has two observation modes dedicated to temperature profile retrievals: 1) Boundary Layer Mode, where the instrument is scanning the atmosphere at low elevations (5-45°) to get accurate temperature profiles from the surface to 2-3 km altitude, and 2) Full Troposphere Mode, where the instrument is scanning the atmosphere at higher elevations (45-90°) to get accurate temperature profiles from the 2-3 km to ~10 km altitude. Composite temperature profiles can then be calculated when combining the two modes of observations. H₂O is retrieved considering only one mode of observation from low elevations to zenith.

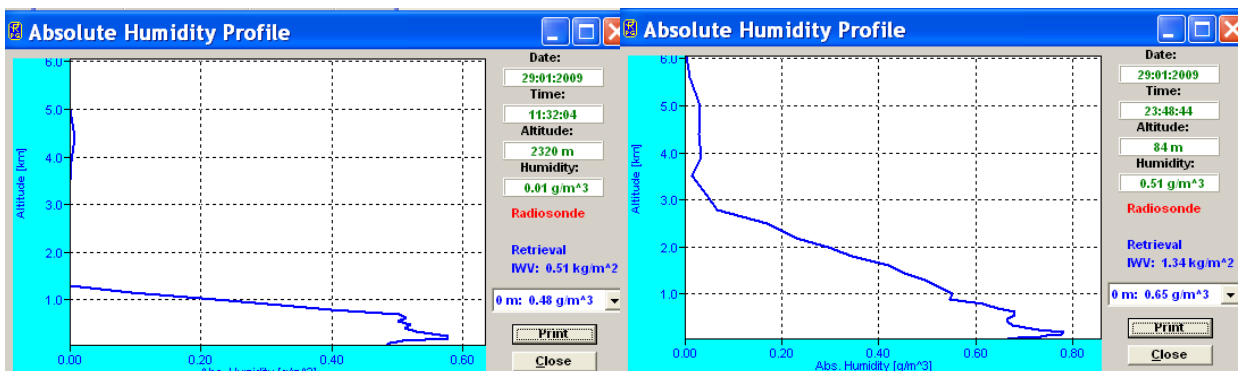
- Absolute Humidity



Temporal evolution of integrated water vapour (IWV) as observed by HAMSTRAD from 22 to 30 January 2009 at Dome C. Note that despite some changes in the instrument characteristics not explicitly taken into account in the calibration procedure, a net negative trend in IWV was detected by HAMSTRAD over this 10-day period.

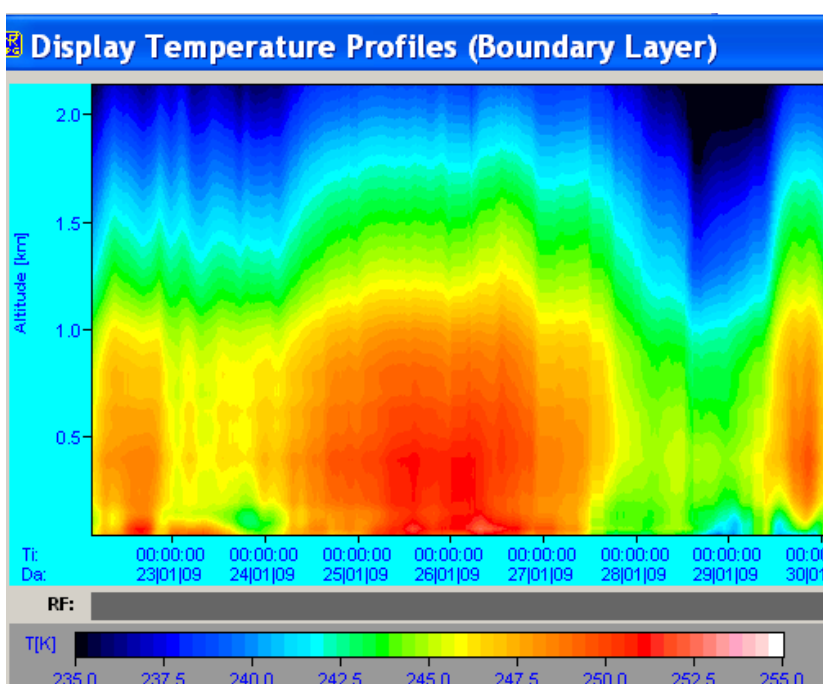


Temporal evolution of the vertical profiles of absolute humidity profiles as observed by HAMSTRAD from 22 to 30 January 2009 at Dome C. Note the negative trends of H₂O in the lowermost layers after 26 January when the instrumental configurations did not change. Also note that some information is detected in the vicinity of the Upper Troposphere-Lower Stratosphere around 5 km that is very encouraging for the scientific purpose of the HAMSTRAD project.

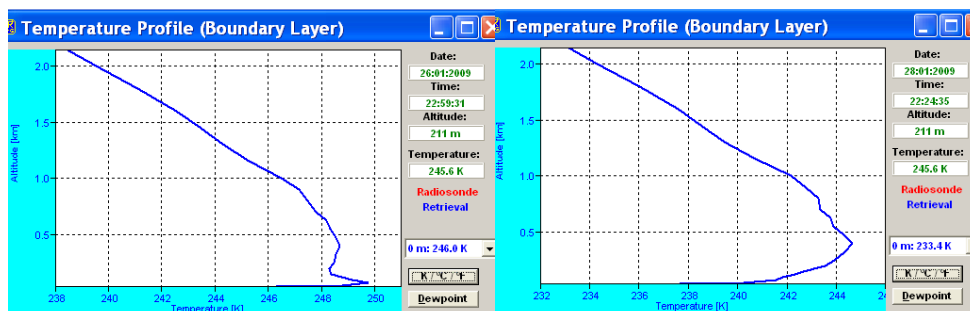


Vertical profiles of H₂O over Dome C for two periods corresponding to dry (left) with Integrated Water Vapour (IWV) IWV = 0.51 g/m⁻³ and wet conditions (right) with IWV = 1.34 g/m⁻³ above Dome C.

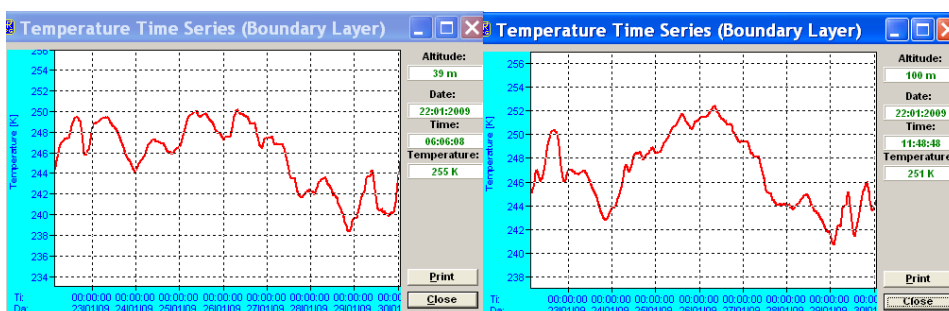
- Temperature



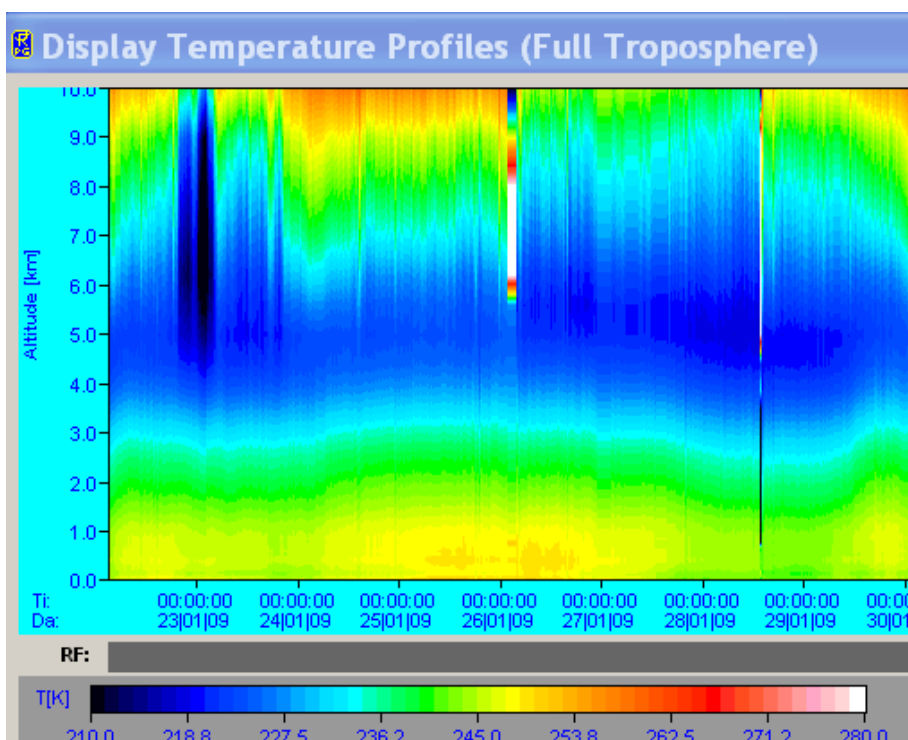
Temporal evolution of the vertical profiles of temperature as observed by HAMSTRAD using the Boundary Layer Mode of observation from 22 to 30 January 2009 at Dome C from 0 to 2 km.



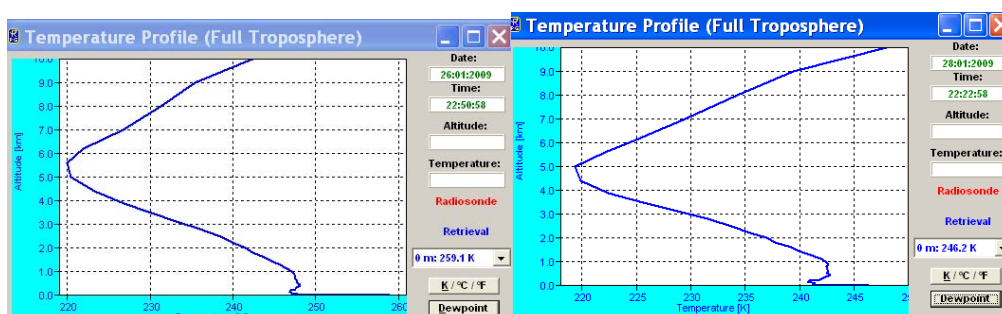
Vertical profiles of temperature as observed by HAMSTRAD using the Boundary Layer Mode of observation over Dome C for two periods corresponding to inversions of temperatures in the vicinity of the surface on 26 January at 23:00 UTC (left) and at the altitude of 400 m on 28 January at 22:25 UTC (right).



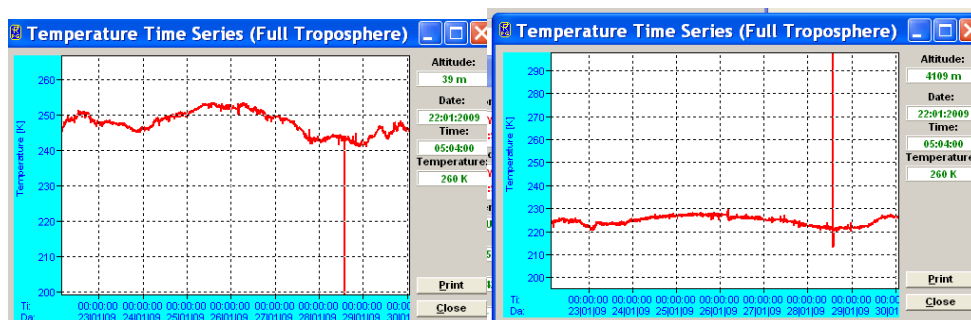
Temporal evolution of temperature as observed by HAMSTRAD using the Boundary Layer Mode of observation from 22 to 30 January 2009 at Dome C at 39 m (left) and at 100 m (right) altitude. Note the strong diurnal cycle at 39 m altitude (left) that is almost absent at 100 m (right). Also note the negative trends in temperature over this 10-day period in the lowermost layers.



Temporal evolution of the vertical profiles of temperature as observed by HAMSTRAD using the Full Troposphere Mode of observation from 22 to 30 January 2009 at Dome C from 0 to 10 km. Spikes were induced by some power failures that seriously perturbed the instrument sensitivity and that affected retrievals mainly above 5 km.



Vertical profiles of temperature as observed by HAMSTRAD using the Full Troposphere Mode of observation over Dome C for two periods corresponding to tropopause heights at 5.5 km altitude on 26 January at 23:00 UTC (left) and at the altitude of 5 km on 28 January at 22:25 UTC (right).



Temporal evolution of temperature as observed by HAMSTRAD using the Full Troposphere Mode of observation from 22 to 30 January 2009 at Dome C at 39 m (left) and at 4000 m (right) altitude. Note that the strong diurnal cycle at 39 m altitude (left) detected using the Boundary Layer mode of observation is not present in the Full Troposphere mode of observation. Spikes were induced by some power failures that seriously perturbed the instrument sensitivity.

Starphotometer

Martin Rietze – Christian Hussel – Manuel Sellmann

Installation of the starphotometer for the project Tavern Report

- Installation:
 - During this week all the rest of the mechanical work was done so that the dome is now fully installed. All mechanic components were checked and tested for the winter in low temperatures and with chilly winds, no issues were found.
- Tests:
 - Several movements and driving tests were carried out this week. The dome reacts well in different temperatures and within different levels of humidity. We are looking forward to the winter tests in lowest temperature, which the Station personnel provided us to do. Therefore a short manual- and troubleshooting pages were created and were given to the Station personal.
 - During a small training of driving the dome, Mr. Eric Targin and Mr. Massimiliano Faiella could be prepared for the tests during the polar night, which should be in lower temperatures than -50°C . An opening and closing every two or three weeks is sufficient.

908 - ASTROCONCORDIA - SONICS

Denis Petermann - Cyprien Pouzenc

- Dimanche 25 :
 - SBM : point de mise en station.
- Lundi 26 :
 - GIVRE : Changement du câble réseau par un plus long afin de pouvoir le passer « proprement » dans les chemins de câbles et non-plus en plein milieu du shelter.
 - SONIC :
 - SONIC1 n'envoie plus de données depuis le 23/01 pour cause de mauvais contact sur la prise RS232. Problème réglé.
 - vérification de l'ordre des SONIC en interposant une main entre les capteurs de chaque sonde, sur demande d'Éric Aristidi :

	Colonne de données	#	Hauteur
○	1	1	08,04 m
○	SONIC1	2	16,64 m
○	3	3	23,77 m
●	-----		
○	1	4	31,27 m
○	SONIC2	5	38,58 m
○	3	6	45,90 m

- les sondes ne sont pas bien orientées ($\sim 30^{\circ}$ d'écart). Les valeurs des vitesses du vent sont donc mauvaises. Elles pourraient être correctement orientées après consultation des différents responsables.

- points de mises en stations : GSM1 & GSM2, DIMM, SBM.
- SBM : ajout d'une entrée secteur sur le rack de contrôle afin de pouvoir couper l'alimentation du CP et de la caméra à l'aide de la BlackBox sans couper les chauffages, et mise en place de vis de verrouillages pour les connecteurs Sub-D.
- Mardi 27 :
 - points de mises en stations : GSM1 & GSM2, DIMM, SBM, MOSP.
 - ASTEP Sud : sauvegarde du dossier de test 2008-06-09. Vidage des disques de données. Relance du programme run_astep en mode debug sur la demande de Yan Fantei.
 - SONIC : test du SONIC défaillant sur une sortie fonctionnelle du datapacker : le résultat est le même, ce qui confirme que le problème ne provient pas du datapacker mais bel et bien du SONIC lui-même.
 - DIMM : ajout d'une entrée secteur sur le rack de contrôle afin de pouvoir couper l'alimentation du CP à l'aide de la BlackBox sans couper les chauffages.
- Mercredi 28 :
 - ASTEP Sud : run_astep a encore planté. Mail aux responsables.
 - point de mise en station : GSM1.
 - missions de Christophe Genthon : continuation de mise en place des scripts.
 - SBM : installation de Ubuntu Linux sur *Moon* (sans toucher à l'installation de Windows) pour pouvoir prendre le contrôle de SBM par serveur X déporté, extrêmement plus réactif et fluide que VNC.
 - vérifications des régulateurs de température installés dans le shelter, l'un d'eux avait son bouton de réglage décalé
- Jeudi 29 :
 - missions de Christophe Genthon : continuation de mise en place des scripts.
 - installation d'une colonne de ventilation et d'une étagère dans le shelter par le service technique
 - alignement de DIMM, GSM1 et GSM2 sur Canopus (passage par un alignement sur le soleil)
- Vendredi 30 :
 - missions de Christophe Genthon : fin de mise en place des scripts de sauvegardes automatiques des données et d'envoi d'e-mail.
- SONIC :
 - modification des scripts pour que les données soient enregistrées dans un dossier nommé à la date du jour et non pas toutes en vrac dans un unique dossier. Modification des *Moyhor* pour permettre cette amélioration. Modification du Crontab.
 - SONIC1 ne semble pas enregistrer les données en continu durant son cycle d'acquisition. Des pauses de 1 minute semblent se produire.
 - après consultation des responsables, les SONIC resteront ainsi orientés. Les données seront par la suite soumises à une correction pour pouvoir les exploiter pleinement.
- Pollux : Différentes améliorations apportées à l'ensemble des scripts.
- ASTEP Sud : run_astep a de nouveau planté. Relance du programme. Mail aux responsables.
- tentative d'alignement de GSM1 mais le vent forçait et le ciel se couvre
- installation d'une prise fixe pour raquette sur SBM

GEOMAGNETISM AND SEISMOLOGY

1144 - DOMEX-2 - 905- 906 – 1178- 1183 - Geodesia ed Osservatori a Dome C - 904 – SAOZ – DC33 Geoelectricfield

Jonathan Zaccaria

Geomagnetism at DC

- The switch located in the variometer shelter broke. I replaced it. I note that there are some data transfer problem since the 28th of January. On 1st of February, I changed a script by remote connection on the acquisition machine and reboot it. I will see in the next days if this will work better. I sent a report to the responsible and I am waiting for an answer.

Geoelectricfield: Nothing Special

DOMEX:

- Since the 28 of February, the acquisition PC located in the shelter of the American tower does not respond anymore. Test show that this is not a network problem. I proposed to Giovanni Macelloni to go the American tower and check the instrument. Waiting for answer.

SAOZ: Nothing special

LIDAR:

- Since the beginning of the week, the laser does not flash anymore.
- I made a couple of troubleshooting tests and sent it to Massimo Del Guasta. I am waiting for an answer.

Project N° 906 SEISMOLOGY AT CONCORDIA**Jonathan Zaccaria**

- I changed configuration of 2 remote stations.
- Visit to the shelter to check the inside temperature and to close an inside door to make the place warmer.
- The fiber optics seems to work well until now.
- I will send some data asked by M. Leveque at the beginning of next week.

GLACIOLOGY**1181 AIR GLACS****Laura Genoni**1181 AIR GLACS

- Prosegue il monitoraggio giornaliero del funzionamento dei campionatori di aerosol atmosferico a diverso cut off e a diversa risoluzione temporale; attraverso il cambio dei filtri a cadenza da giornaliera, a settimanale ed a mensile, la manutenzione periodica delle pompe, sia mensile che ogni 2 mesi e fase di re-ingrassatura delle teste di misura necessaria solo saltuariamente.
- Giornalmente (al mattino e al pomeriggio) ho raccolto campioni di neve superficiale per l'Università di Firenze e, quando presenti, campioni delle precipitazioni per l'Università di Trieste.
- Il mal funzionamento del campionatore a filtri di carbonio si è risolto, dopo aver contattato più volte via posta elettronica i responsabili ed il servizio assistenza Tecora, con la sostituzione del campionatore stesso.
- Ogni lunedì eseguo la misura dell'altezza delle paline, situate in prossimità dello shelter Salvietti, per la stima della variazione dell'accumulo nevoso.

1144 – MAPME/DOMEX

- Proseguono le osservazioni nivologiche giornaliere ed il riconoscimento della tipologia/morfologia dei cristalli di ghiaccio; sia raccogliendo su i "banchini" campioni delle precipitazioni, caratteristicamente sporadiche di questo periodo, che misurando lo spessore delle deposizioni sulle due tavolette posta da Andrea Crepez a poca distanza dai suddetti banchini.

1011 NITEDC (NITrate Evolution in Dome C surface snow)**Joel Savarino - Jean-Charles Gallet**

The tasks accomplished during the tenth week of the program are as follow:

- The 5 fields under study were again sampled by the means of 5 mini pits of 20 cm each (for the nine time), totalizing approximately 50 samples. A last collect will be performed on Monday February 2nd but the samples will be sealed and keep at DC until next year
- The concentration of the last 200 samples has been measured by our CFA
- Nitrate of the last 200 snow samples has been extracted.
- Finish physical property measurements of the whaleback sample
- Data processing
- Packing of ice cores boxes and snow samples to be retrograded to France
- Cleaning of the different labs, and storing equipments for next year

Note: The construction of the new atmospheric lab at the border of the clean area poses serious issues about the quality of the data to be measured in the future. The structure seats in front of the old shelters where the snow has been turned over by vehicles in the past and is mainly the result of snowdrift due to the present of these older shelters. Flux measurements of snow emitting compounds can be seriously compromised by this "artificial" snow. Furthermore, fitting out (doors, windows, insulation, electricity etc) of the new laboratory is planned to be done on site, generating unnecessary dust and dirt and vehicle motions, potentially compromising the purity of the snow. I want to emphasize strongly here that DC is an exceptional site for snow and atmospheric chemistry, that spoiling snow is permanent and will take at least ten years to rebuild a natural layer of 1 meter, the depth of the photic zone where interaction between matter and light occur. It is the uppermost responsibilities and attributions of both institutes to keep DC area as clean as possible and avoid unnecessary contaminations. Before the harm is done, a think tank should be organized among the different parties.

914 GLACIOCLIM - CONCORDIASI**Christian Genthon - Delphine Six**

- **Fin de l'installation de la station météorologique test** (celle qui servira en 2009-2010 à 25 km) :
- Réparation du pbs de dissipation d'énergie. Installation plaque métallique sur la diode.
- Vérification des données et récupération des data plusieurs fois dans la semaine. Trou non rebouché mais beaucoup de vent le vendredi. Probablement rebouché. A vérifier.
- Vérification des ventilations de la tour. Test de dégivrage des ventilos sur la mesure de la batterie. Sans effet, mais peu remplis de givre ce jour. Cela joue sur la température en revanche.
- Echange / reprogrammation de la centrale CR1000 du shelter Helene. Accès réseau maintenant disponible.
- Rangement des deux centrales CR3000 et des câbles dans le shelter Helene dans des boites spécifiques.
- Préparation du colisage (rangement, étiquettes...)

902 - GLACIOLOGIE**Delphine Six**

- **Continuation de l'installation de la station météorologique STAMEMO :**
- Antenne Argos levée et panneaux solaires baissés.
- Problème de mesures de la température interne du capteur de rayonnement. Encore beaucoup de problèmes liés cette température : pbs de connectique sur le capteur même (semble résolu). Problème d'acquisition sur la centrale. Appareil remplacé sur Stamémo mercredi mais sans succès. Re-démontage et divers tests au workshop. Appareil à remonter à Stamémo dès que possible.
- Réparation après démontage du capteur de vent. La direction est maintenant correcte et la valeur de vent aussi.
- Toujours un pbs de mesure de pression atmosphérique. Nettoyage du capteur, test avec un programme simplifié, vérification des connectiques. Rien à faire, toujours en panne.

902 GLACIOLOGIE PHYSIQUE**Julien Courteaud**Study of the chemistry of mercury in the Concordia area :

- Measurements of gaseous elemental mercury in the interstitial air of the snow and in the atmosphere :
 - This experiment is running automatically now, and continuous measurements are performed from the surface to 3 meters depth.
- Measurements of reactive gaseous mercury and particulate mercury :
 - These measurements have been performed. A few measurements have been made at different times.
- Measurements of oxidised form of mercury in the snow :
 - A 2 meters hole has been drilled, and snow has been taken at different depth. These samples will be brought back to France for analysis. Isotopes measurements will also be made.
- Daily measurements of oxidised mercury at the snow surface :
 - Snow at the surface is taken each day. The analysis will be performed in France
- Measurement of the vertical gradient of concentration in gaseous elemental mercury :
 - Continuous measurements have been performed during two days at different heights on the American tower.

903 – CESOA**Caroline Jullian**

- Programme POLA : I put in place the last filters and stopped them on time to send all the samples in France by the raid.
- Programme OZONE : launch with Laura of the january balloon.
- Programme CESOA : sampling of DMSO each day, 2 analisis of DMS, usuals samplings (aerosols by filters on the shelter and on the tour and by impactor, sampling of acids gaz), beginning of ozone measurements. I prepared the sending of all the samples.

ATMOSPHERIC SCIENCE**1149 - RMO , 1176 – BSRN****Laura Genoni**1149 – Meteo RMO AWS

- Riparazione alla stazione meteo Milos520 con nastro autoagglomerante di parte dei cavi dei sensori

- per la misura della velocità del vento.
- Verifica giornaliera del corretto invio dei dati di fisica dell'atmosfera dallo shelter Caro al pc meteorop ed ai responsabili di progetto.
- Ballons
- Esecuzione giornaliera (19,30 LT – 11,30 UTC) dei radiosondaggi. Scarico ed invio dei dati.

914 – CONCORDIASI

- Il 26 gennaio 2009 è stato effettuato l'ozonosondaggio. Scarico ed invio dei dati.
- Stesura del Bollettino Ozono e invio al responsabile del progetto.

1176 – BSRN*BSRN - Tracker*

- Giornalmente viene effettuato il controllo del corretto funzionamento della strumentazione, posta all'interno dello shelter Caro, e lo stato di pulizia delle apparecchiature poste all'esterno (puntamento del Tracker). Le operazioni di pulizia del Tracker vengono registrate nel diario elettronico, appositamente creato, che viene inviato automaticamente ai responsabili di progetto in Italia, perché siano al corrente delle diverse manutenzioni che vengono condotte sulla suddetta strumentazione.
- Gas in traccia e particelle aerosol
 - Sono state eseguite le manutenzioni ordinarie sulle linee di misura GRIMM, DPMS e UVRAD. La sostituzione dei filtri e la verifica dei flussi.
 - Il giorno 27 gennaio è stata effettuata una sostituzione aggiuntiva dei filtri del GRIMM e del DPMS a causa del maggior inquinamento dell'aria riconducibile ai
 - lavori svolti con mezzi meccanici in prossimità dello shelter Caro.

411 – GLACIOCLIM/SAMBA

- Dal laboratorio è stato eseguito lo scarico settimanale dei dati della Torre Americana.
- Effettuato il passaggio di consegne da parte di Christophe Genthon per quanto riguarda la manutenzione (prevalentemente pulizia dai depositi di neve/ghiaccio) e lo scarico dei dati della strumentazione della Torre Americana e dello shelter Helene.

HUMAN BIOLOGY AND MEDICINE

Project ESA Medical**Alex Salam**

Project CHOICE

- Nil.

Project COMICS

- Equipment received.

Project BLUELIGHT

- Equipment received.

Project NIGHTSOCKS

- Preparations made for summer experiment.

Week 6th Activity Report

(January 31st - February 7th, 2009)

1. Concordia Crew

Many changes during the week due to the traverse and the flights ending the summer season. On February the 2nd, after the departure of the traverse, 37 people were present on the Station :

WO5 crew

Eric Lotz, Massimiliano Faiella, Domenico Fasano, Guillaume Frinot, Laura Genoni, Caroline Jullian, Alexandre Leluc, Denis Petermann, Cyprien Pouzenc, Alex Salam and Jonathan Zaccaria.

Logistic, communication and technics

Chiara Montanari, Claire Le Calvez, Rita Carbonetti, Jean-Gabriel Coll, Fabio Persigilli, Luigi Bonetti, Nicola La Notte, Gilles Balada, Hubert Sinardet, Mario Quintavalla, Alexandro Marziali, Henry Hetroy, Daniel Cron, Jean-Louis Duraffourg, Christian Didier, Nicolas Le Parc.

Scientists

Philippe Ricaud, Delphine Six, Joel Savarino, Antonfranco Piluso, Alberto Mancini, Christian Hussel, Martin Rietze, Manuel Selmann, Christophe Genthon, Julien Courteaud.

On February the 6th, the Italian summer crew left with C-GEAI, and Eric Tragin came back. There was then 26 people on the station.

On February the 7th, the French summer crew left with C-GEAI.

On February the 8th, the 6 pilots from ALCI company left with C-GEAI.

At the end of the week, only the 12 winter-over crew members were present at Dome C : Eric Lotz, Massimiliano Faiella, Domenico Fasano, Guillaume Frinot, Laura Genoni, Caroline Jullian, Alexandre Leluc, Denis Petermann, Cyprien Pouzenc, Alex Salam, Eric Tragin and Jonathan Zaccaria.

2. Basler/Casa Flights

February the 2nd : arrival of ALCI plane C-GEAI with 6 pilots.

February the 5th : departure of the Italian Summer Crew to McMurdo : Chiara Montanari, Rita Carbonetti, Antonfranco Piluso, Fabio Persigilli, Alberto Mancini, Luigi Bonetti, Nicolas La Notte, Joel Savarino, Martin Rietze, Manuel Selmann, Christian Hussel. The plane came back with Eric Tragin.

February the 7th : departure of the French Summer Crew to Dumont d'Urville : Claire Le Calvez, Philippe Ricaud, Delphine Six, Jean Gabriel Coll, Gilles Balada, Hubert Sinardet, Christophe Genthon, Julien Courteaud, Alexandro Marziali, Henry Hetroy, Daniel Cron, Jean-Louis Duraffourg, Chrisitan Didier, Nicolas Le Parc. The plane came back with 850 kg of fresh food.

February the 8th : departure of C-GEAI with the 6 pilots.

On the demand of Giuseppe De Rossi, I filled with the pilot the flight forms of those flights, and also for seven previous flights that had not already been done. They have all been sent by email to Giuseppe De Rossi.

3. Evidences

Februray the 3rd : a meeting with all the WO crew has been organized by Claire Le Calvez on the organization of the station during the winter

Februray the 5th : a new formation with all the WO crew has been done to remind the cleaning of the grease vat.

February the 7th : meeting with the WO crew after the departure of the summer crew, about some specific organization points (hours of meals, incinolets, closure of the shower of the 2nd floor of the noisy building, discussion about the general cleaning of the station, information about personnal websites)

February the 7th : videoconference with Media Palmezzano di Forli school. The same day, we received from Dumont d'Urville 850 kg of fresh food.

Mail exchanges about the organization of the phone bonus with Marco Maggiore, amount of 25€ per week to be confirmed.

The winter over began on February the 8th at 01:02 UTC.

4. Communications Evidence and Activities

Jonathan Zaccaria

Radio

This week I took in charge all telecommunications and meteo informations with the help of the station leader to satisfy the requirements of ALCI pilots and support them in their tasks. No problem to report. When I am not available, the station leader (or Alex Salam if we are both outside) will substitute me to assure a permanent radio link when people are outside (decision of the Station Leader). I decided to place the radio battery charger downstairs at the 1st floor so that everybody can charge his battery by himself.

Network

I can note that sometimes, the mailer here at Concordia does not manage to reach the Italian mailer to receive email (fetch). This problem has already happened during the summer campaign. I want to point out that this problem appeared once more, whereas no modifications had been done on the email server. I cancelled all email folder of summer campaigners on the email server. Nevertheless, their account still exist on LDAP (database of email account), I put them "inactive". But, sometimes, we can see that some emails sended to summer campainers or previous winterovers arrived here at Concordia. I will mention both problems to Simona Longo next week.

I created a "lidar" account and a "wintercrew" account with the agreement of the winter-over Station Leader. There is an FTP problem to send daily meteo data to Italy since they changed IP address in Italy. I will study this problem newt week to change configuration here.

Now there are 3 email connections a day instead of 4 connections.

Informatics

The PC of GWTU crashed. I managed to retrieve some data (archives of GWTU) with some particular tools. Instead of changing computer, I reinstalled the operative system as well as drivers. The PC is now fully operational (with network and linked to bt on iomega). It remains a problem : the software used to communicate with the machinery is protected by a random key. I am waiting the answer from the manufacturer (Advantech) via Claire Le Calvez and Michel Munoz to receive the new soft key. I substituted the PC of the biomed lab by a new one.

I prepared a new PC ready to substitute another one in case of crash.

I moved the PC located in the videoroom of summer camp in the living room at Concordia.

The VHF radio at summer camp was powered by batteries. There was something switched off since last black out (I probably forgot to switch on a power supply). The electrician fixed the problem.

5. Logistic Evidences and Activities

Claire Le Calvez

Les travaux prioritaires au cours de cette semaine ont été :

- Passation de consignes pour les nouveaux hivernants
- Dépotage des conteneurs arrivés par le raid et rangement du matériel
- Accueil des avions
- Fermeture du camp été
- Préparation du site pour l'hiver

Le 07/02/09 : dernier avion vers DdU avec 14 personnes DEBUT DE L'HIVERNAGE

5.1 CENTRALES ÉLECTRIQUES

5.1.1 CENTRALE DU CAMP ETE et CAMP ETE

Le 04/02/09 : Arrêt et hivernage de la centrale – vidange des réseaux de glycol et d'huile

Au camp d'été, lors du départ du dernier avion, sont alimentés :

- La centrale
- Les groupes Alsthom et Cummins
- Le garage
- L'hôpital qui sert de stockage à -20°C pour le matériel scientifique
- La radio

5.1.2 CENTRALE DE CONCORDIA

- Le 02/02/09 : Révision 250h GE3
- Le 03/02/09 : Rapatriement et mise en place de la cuve à eau W01 qui était au camp été pour la campagne d'été
- Rinçage du pot catalytique lavé à la soude
- Le 06/02/09 : Révision 250h GE1

5.1.3 TRAVAUX EFFECTUES ET EN COURS

- AMEN : aménagement, CENT : centrale, ELEC : électricité, LOG : logistique, MECA : mécanique, PLOM : plomberie, RADIO : radio, SECU : sécurité

TRAVAUX SITE CONCORDIA		
1BB	AMEN	<ul style="list-style-type: none"> - Rangement du local de stockage des peintures - Rangement et inventaire de la zone ou est stocké le sikka et le scotch derrière le poteau du GES
Camp été	AMEN	<ul style="list-style-type: none"> - Le 03/03/09 : nettoyage de la base vie en prévision de l'hiver et fermeture hydraulique de la base vie - Fermeture progressive des différentes tentes et bâtiments en fonction des départs du personnel - Le 04/02/09 : Vidange et hivernage de la cuve à boues sur la cargo line - Le 04/02/09 : Hivernage de la Barruzzi sur la cargo line - Le 05/02/0 : Fermeture du workshop EPICA - Le 07/02/09 : Fermeture du Rebusco, de la tente du milieu et de l'incinolet extérieur <p>→ La radio, l'Alstom, Le Cummins, la centrale et l'hôpital sont alimentés. Le garage l'est également jusqu'à sa fermeture et l'hivernage du Merlo et du Bull</p>
Camp été Hôpital	AMEN	<ul style="list-style-type: none"> - Isolation des portes de l'hôpital avec du styrodur pour que le local de stockage du matériel scientifique reste à -20 / -30 pendant l'hiver
Centrale	ELEC	<ul style="list-style-type: none"> - Contrôle des niveaux haut et bas sur la caisse journalière chaufferie encore en défaut (2 fois cette semaine)
Centrale camp été	LOG	<ul style="list-style-type: none"> - Mise à disposition du nouveau S+ dans la centrale du camp été. Il reste à fabriquer un cache autour de la fenêtre pour la sortie des gaz d'échappement
Concordia	AMEN	<ul style="list-style-type: none"> - Révision des escaliers de la menuiserie et de la centrale - Réparation des poignées de porte des shelters Tour US et HF - Pose de plaques en bois sur les conteneurs non pourvus pour la pose des étiquettes (savoir ce qu'il y a dans chaque conteneur) pour l'hiver - Réparation sur les capots de la pompe avion - Réparation sur fenêtres et révision des serrures des portes extérieures
Concordia	ELEC	<ul style="list-style-type: none"> - Rangement des conteneurs de stockage de pièces électriques – en cours
Cuve extérieure	ELEC	<ul style="list-style-type: none"> - Remplacement de la jauge Mobrey et de la PT100 sur la cuve à eau W01 rapatrié il y a 2 jours du camp été
Fondoir	PLOM	<ul style="list-style-type: none"> - Le 02/02/09 : vidange et nettoyage
Garage	MECA	<ul style="list-style-type: none"> - MERLO : Toujours en fonctionnement - PB270 : Toujours en fonctionnement - 953B : Toujours en fonctionnement - BULL D4E : Toujours en fonctionnement - FLEXMOBIL : <ul style="list-style-type: none"> o Le 04/02/09 : Hivernage du Flexmobil sur une plateforme de neige. Pose de la bâche - GRUE : <ul style="list-style-type: none"> o Le 02/02/08 : Hivernage sur une plateforme et pose de la bâche - TOYOTA <ul style="list-style-type: none"> o Le 02/02/08 : Hivernage dans le tubosider - Skidoos : <ul style="list-style-type: none"> o Réparations diverses et variées sur tous les skidoos o Hivernage des skidoos ne fonctionnant pas dans le tubosider (bombardier, skidoo diesel) o Hivernage du Grizzly n°5 dans un conteneur Open top - Remise à l'endroit de la remorque que le raid n'a pas pu emporter
GWTU	TELECOM	<ul style="list-style-type: none"> - PC HS – changement de PC, réinstallation du logiciel en cours. Il faut nue nouvelle clé soft pour le logiciel (une clé par PC)
Menuiserie Garage pour l'hiver	AMEN	<ul style="list-style-type: none"> - Rangement de la menuiserie et aménagement en garage pour l'hiver (sol, chauffage, fûts pour l'hiver) - Mise à disposition d'extincteurs
Menuiserie Garage hiver	ELEC, PLOM MECA	<ul style="list-style-type: none"> - Révision générale des S+ de la menuiserie transformé en garage

TRAVAUX SITE CONCORDIA		
Site	LOG	<ul style="list-style-type: none"> - Tri et rangement des bouteilles de gaz suite à réception RAID 3 - Mise à disposition des conteneurs vides en prévision du stockage des déchets de l'hiver – 3 conteneurs sont disponibles - Transfert de fûts de kérosène pour avoir un conteneur vide pour les déchets - Dénéigement du site (camp été / plateforme Concordia / cargoline) suite à la tempête de vendredi - Mise en conteneur de déchets de bois et déplacement du conteneur plein sur la cargoline - Rangement de matériel de tout ordre sur le site en préparation de la fin de campagne - Préparation de fûts pour les déchets - Transfert de vivres périmés du magasin au 2BB vers le conteneur de déchets organiques - Rangement autour du garage du camp été et de la menuiserie - Identification avec des étiquettes de tous les conteneurs de stockage de matériel / déchets pour l'hiver - Tri des elingues
Site	LOG	<ul style="list-style-type: none"> - Le 02/02/09 : - Départ du raid à 6h00 notre heure - Le 03/02/09 : arrivé de l'avion ALCI à 15h - Le 04/02/09 : vidange de la cuve à boues de Concordia - Le 04/02/09 : vidange de la cuve à boues du camp été et hivernage sur la cargoline - Le 05/02/09 : Avion ALCI DC – Mc MURDO – DC avec 12 passagers aller et 1 retour - Le 05 et 06/02/2009 : plein des réservoirs des tentes avec du kérosène - Le 07/02/09 : Avion ALCI DC – DDU – DC avec 14 passagers aller et des vivres frais (environ 1 tonne) au retour
Site	LOG / Avion	<ul style="list-style-type: none"> - Préparation de la piste d'avion avec le PB270 (fait avant chaque vol prévu et après chaque vol) – beaucoup de sastruggis après la tempête de vendredi - Passage du kass après chaque vol
Site	SECURITE	<ul style="list-style-type: none"> - Le 02/02/08 : essai de la porte de secours avec manche OTIS au 2^{ème} étage BC pour tout le personnel présent
Tente vêtements	ELEC	<ul style="list-style-type: none"> - Vérification de l'alimentation électrique de la tente vêtements

TRAVAUX SCIENCES CONCORDIA		
Programme/ Lieu	Domaine	Travaux
Labo Glacio	LOG	<ul style="list-style-type: none"> - Mise à disposition de 2 bouteilles d'hélium dans le labo et d'une bouteille d'hydrogène sur le toit
HAMSTRAD	LOG	<ul style="list-style-type: none"> - Assistance pour le stockage de son matériel : rangement du matériel scientifique HAMSTRAD à différents endroits en fonction des contraintes de températures des équipements - La niche ne supporte pas les écarts de température et se déforme. Les déformations entre la niche et le LD24 sont très importantes et empêchent de réaliser une isolation correcte
SHELTER PHYSIQUE	AMEN ELEC	<ul style="list-style-type: none"> - Pose des gardes corps reçus par le raid en prévision de l'hiver (enfin juste les poteaux avec de la corde entre eux) - Pose d'un éclairage provisoire à l'intérieur du shelter pour l'hiver
TOUR US	LOG	<ul style="list-style-type: none"> - Contrôle des tensions des haubans, remise à niveau de tous les haubans extérieurs (500 N/M au lieu de 600)
Tente ASTRONOMIE	ELEC	<ul style="list-style-type: none"> - Remplacement du radiateur 6 kW par un radiateur 2 kW pour IRAIT dans le shelter à l'intérieur de la tente
KIWO ex AASTINO	AMEN	<ul style="list-style-type: none"> - Rangement et retrait de tout le matériel obsolète du « kiwi », ancien shelter de Aastino. Les 2 gros réservoirs de carburant à l'intérieur ne peuvent pas être démontés car ils ne passent pas par la porte (ils ont été montés à l'intérieur au cours de l'assemblage du shelter). Il faut les découper pour les enlever bout par bout ... Ce ne sera pas fait cette année.
SUPERDARN	ELEC	<ul style="list-style-type: none"> - Câblage de l'armoire départ vers zone Superdarn avec le 5G35 tiré la semaine dernière depuis la centrale

DIVERS :

- ❑ Le 03/02/2009 : Réunion avec tous les hivernants à 8H30 pour rappeler les principes d fonctionnement en hivernage.
- ❑ Le 06/02/2009 : Réunion avec l'équipe technique d'hiver pour la présentation des listes de travaux prévus cet hiver.

6. Medical Service

Dr Eric Lotz

Curative care

- 6 consultations : one epistaxis, one hand cut needing 3 surgical stitches, one front cut, two finger cuts, one hand burn

Hospitalisations

- No need

Telemedicine

- No need

Transfers

- The electrician came back from Christchurch on February the 5th, the document for the working stop (arrêt de travail) was sent by email to Martine Godec (IPEV) and Dr Bachelard.

Preventive care

- Medical : sexual prevention done with the two females of the winter-over crew, I gave to each an emergency contraception pill.
- Block alimentation : 850 kg of fresh food received from Dumont d'Urville.
- Base safety : training of the crew with the emergency evacuation slide (see pictures) Mood
- The return of the electrician increased the mood of the crew, which is now very high.

Research

- 0

Equipments

- One of the two autoclaves has a technical problem (vacuum ?). The technical crew will have a look at it. I told them it was more urgent to finish their external work since I have another autoclave working properly.
- Medications received from Christchurch with the plane coming from McMurdo, database of items received sent to the Senior Medical Officers in Italy and France. A cooling box was present in the pack for the suxamethonium. It was written on it to send it back to Christchurch but unfortunately no means of transport were possible. It will be sent back at the beginning of the next summer season (November 2009).
- 6 aerosol masks were received from the medical service of Dumont d'Urville with the last plane.

Medical Training

- 0

Procedures

- Summer season report was sent to the Senior Medical Officers in Europe and to the summer campaign Station Leader.

Others

- A copy of the CD of the summer crew medical files was done and given in a sealed pack to Nicola La Notte to the intention of Dr Fabio Catalano. This demand was made to me by the summer campaign Station Leader.

8. Scientific activities

ASTRONOMY

908 : ASTROCONCORDIA – SONICS, 1040 : CAMISTIC, 1194 : GATTINI

Cyprien Pouzenc, Denis Petermann

N° 908 – AstroConcordia

Lundi 2 :

1. Déneigement devant la porte de la coupole.
2. GSM & DIMM : Relance des manip. par pointage du Soleil pour retrouver Canopus, vérification et remise en état des connecteurs.

SONIC :

1. Prétraitement des données de janvier par minute via un programme envoyé par Éric Aristidi. Envoi des résultats aux responsables.
2. Les données de la sonde n°2 (appartenant à Tony Travouillon) sont toujours mauvaises.
3. Après étude de la documentation, les SONIC sont donnés à + ou - 2°C (!).

Mardi 3 :

- Continuation de mise à jour de la documentation sur les différentes missions.
- Shelter : suite à une coupure de courant, une partie du tableau électrique a sauté (Q2). Réactivation dans la nuit.
- SONIC : suite aux problèmes de données sur la sonde n°2, mail au constructeur Applied Technologies, Inc.

Mercredi 4 :SONIC :

1. Références de la sonde n°2, défaillante :
Product : Sonic Wind System
Model n° : SATI-3SX
Serial n° : 061103
2. La sonde n°6 fonctionne à nouveau après déconnexion/reconnexion (plantage ?).
3. Développement d'un logiciel de retournement des câbles (première version pour DIMM).

Jeudi 5 :SONIC :

- Échange de mails avec Applied Technologies Inc.
- Redémarrage du datapacker de SONIC1 qui envoyait des données erronées.

GSM : Relance des manip. par pointage du Soleil pour retrouver Canopus.

LUCAS : Envoi de photos de l'installation aux responsables.

Vendredi 6 :SONIC :

1. Échange de mails avec Applied Technologies Inc.
 2. Essai d'inversion des configurations des ports séries de SONIC1 et SONIC2 : aucun changement malgré leurs différences...
 3. Impossibilité de changer le format de sortie des données afin de les uniformiser, malgré l'aide de la documentation.
 4. Simplification des scripts.
 5. Références du datapacker de SONIC1 :
Product : Data Packer
Model n° : PAD-004
Serial n° : 061102
- Références du datapacker de SONIC2 :
Product : Data Packer
Model n° : PAD-006
Serial n° : 070904
Firmware : 1.51e
- Bonne nouvelle : après une bonne galère dans la configuration du datapacker de SONIC1, la sonde n°2 refonctionne ! Étrange : il faut la configurer avec une parité inverse à toutes les autres sondes. Cela résoud également le problème des arrêts d'acquisition d'une minute et des fichiers vides une fois sur deux.
 - Réarmement du disjoncteur Q2 alimentant la moitié des installations du shelter.
 - Câblage définitif du ventilateur de la colonne installée la semaine dernière dans le shelter.
 - Vérification des régulateurs de température de GSM1 et GSM2, un contact du Sub-D du connecteur de chauffage de GSM2 est cassé.
 - Réalignement de GSM1

Samedi 7 :

ASTEP Sud : run_astep planté dans la matinée, relance en mode debug. Mail aux responsables.

SONIC : Mail aux responsables.

SBM : Point de mise en station.

Dimanche 8 :

SONIC : Mail aux responsables.

Missions de Christophe Genthon : modification des scripts de sauvegardes automatiques des données et d'envoi d'e-mail. Mail aux responsable.

N° 1040 – CamisticSamedi 7 :

Étude de la documentation et des infos disponibles sur la mission.

N° 1194 – GattiniMercredi 4 :

Information de la part de la Station Leader Chiara Montanari concernant cette mission de dernière minute à la charge des hivernants astro, soit disant automatique.

Visite des installations sur la terrasse du bâtiment calme et dans le faux plafond.

GEOMAGNETISM AND SEISMOLOGY

1144: DOMEX-2, 905, 906, 1178, 1183: Geodesia ed Osservatori a Dome C, 904: SAOZ, DC33: Geoelectric field

Jonathan ZaccariaSeismology

I planned to go to 2 remote station to make a change of configuration next week, before vehicles are stored for the winter.

Geomagnetism

Everything seems to work well, except the automatic email sending. Sometimes, some files are missing whereas locally all files are created and backed up on both PC in the geomagnetism lab. The problem has been reported. Waiting instructions from lab.

SAOZ

Due to email limitations, I am not sure all weekly data has been transferred this week. I asked by email to Andrea Pazmino. Waiting for answer.

DomeX

Finally, with the help of Giovanni Macelloni, I managed to restart the acquisition on day 4th of February. Unfortunately since to Sunday 8th of February, I have the same problem. The remote PC is no more accessible via ping or remote connection. I will check it tomorrow to the American tower.

Hamstrad

I am waiting for the official instructions from Philippe Ricaud by email to know exactly what to do and how often.

Lidar

Since a few days the laser does not work anymore. It is an electronic problem. After doing some tests with the help of Massimo Del Guasta, him and I are waiting answers from the manufacturer (Quantel).

Geoelectricfield

Nothing special.

ATMOSPHERIC PHYSICS AND GLACIOLOGY

1149 : METEO RMO, 1176 : BSRN, 1181 : AIR GLACS, 1144 : MAPME/DOMEX.

Laura Genoni**1149 – Meteo RMO**AWS

- Controllo mensile dello stato di pulizia dei sensori della stazione Argentini, scarico dei dati e successivo invio manuale dal pc bsrn-bo presente nel laboratorio di fisica dell'atmosfera.
- Verifica giornaliera del corretto invio dei dati di fisica dell'atmosfera dallo shelter Caro al pc meteotop ed ai responsabili di progetto.

Ballons

- Esecuzione giornaliera (19,30 LT – 11,30 UTC) dei radiosondaggi (RS). Scarico ed invio dei dati.
- Serie di prove nell'esecuzioni dei RS per migliorare la bontà dei dati confrontandoli con quelli ottenuti dai sensori della Torre Americana e da una nuova apparecchiatura, HAMSTRAD, installata nel nuovo shelter Salvietti.

1176 – BSRNBSRN -Tracker

- Giornalmente viene effettuato il controllo del corretto funzionamento della strumentazione, posta all'interno dello shelter Caro, e lo stato di pulizia delle apparecchiature poste all'esterno (puntamento del Tracker). Le

operazioni di pulizia del Tracker vengono registrate nel diario elettronico, appositamente creato, che viene inviato automaticamente ai responsabili di progetto in Italia, perché siano al corrente delle diverse manutenzioni che vengono condotte sulla suddetta strumentazione.

Gas in traccia e particelle aerosol

- Sono state eseguite le manutenzioni ordinarie sulle linee di misura GRIMM, DPMS, PSAP e UVRAD. La sostituzione dei filtri e la verifica dei flussi.
- Il giorno 5 gennaio è stata effettuata una sostituzione aggiuntiva dei filtri del GRIMM, del DMPS e del PSAP. Sono state inoltre eseguite le "operazioni di routine" sul UVRAD.

1181 – AIR GLACS

Prosegue il monitoraggio giornaliero del funzionamento dei campionatori di aerosol atmosferico a diverso cut off e a diversa risoluzione temporale; attraverso il cambio dei filtri a cadenza da giornaliera, a settimana-le ed a mensile, la manutenzione periodica delle pompe, sia mensile che ogni 2 mesi e fase di re-ingrassatura delle teste di misura necessaria solo saltuariamente.

Giornalmente (al mattino e al pomeriggio) ho raccolto campioni di neve superficiale per l'Università di Firenze e, quando presenti, campioni delle precipitazioni per l'Università di Trieste.

La scheda madre del campionatore a filtri di carbonio mal funzionante è stata spedita in Italia, in quanto anche il ricaricamento del software non ha dato risultati positivi.

Ogni lunedì eseguo la misura dell'altezza delle paline, situate in prossimità dello shelter Salvietti, per la stima della variazione dell'accumulo nevoso. Inoltre, questo lunedì (2 febbraio) mi sono recata a 3 km di distanza per la misura delle 50 paline per la determinazione dell'accumulo nevoso.

1144 – MAPME/DOMEX

Proseguono le osservazioni nivologiche giornaliere ed il riconoscimento della tipologia/morfologia dei cristalli di ghiaccio; sia raccogliendo su i "banchini" campioni delle precipitazioni, caratteristicamente sporadiche di questo periodo, che misurando lo spessore delle deposizioni sulle due tavolette posta da Andrea Crepez a poca distanza dai suddetti banchini.

ATMOSPHERIC CHEMISTRY AND GLACIOLOGY :

903 : CESOA, LGGE, 1011 : NITEDC,

Caroline Jullian

NITEDC :

- prélèvements de neige de surface et puits en compagnie de Jonathan qui m'accompagnera durant l'hiver ;
- 2 prélèvements de neige de surface supplémentaires (tous les 3 jours) ;
- Filtre HV2 : changement hebdomadaire + arrêt journalier le 3 février pour travaux.

CESOA :

- Dénudeurs : 2 prélèvements de 2 jours chaque.
- DMSO : 1 prélèvement par jour + une analyse hebdomadaire
- Ozoneur : changement de la pompe de prélèvement puis analyse en continu.
- DMS : 1 analyse hebdomadaire.
- Filtrations : changement shelter + tour et arrêt le 3 février pour cause de travaux. Contrôle de débit mensuel.

Contrôle journalier de la manip de Eric Lefèvre.

Vidéoconférence et travaux d'intérêt général suite aux différents départs des estivants.

HUMAN BIOLOGY AND MEDECINE

1063, 1069, 1072, 1074, 1075, 1095

Alex Salam

o Experiment CHOICE

Report

-Preperations made for February sampling.

o Experiment COMICS

Report

o Experiment BLUELIGHT

Report

-Equipment received and tests carried out on light sensor.

o Experiment NIGHTSOCKS

Report

-Equipment received and preparations made for summer experiment

Questions to Europe

Laura Genoni : Since I do not speak Italian and that her report is in Italian, I asked her to send me her eventual questions to the researchers in Europe in English. I don't have any answer for the moment, so I understand that she doesn't have any question for them.

Caroline Jullian : No question pointed out by her report.

Denis Petermann and Cyprien Pouzenc : No question pointed out by their report.

Alex Salam : No question pointed out by his report.

Jonathan Zaccaria :

- Network : some problems with email servers, to manage with Simona Longo.
- Informatics GWTU PC : the software used to communicate with the machinery is protected by a random key. Jonathan is waiting the answer from the manufacturer (Advantech) via Claire Le Calvez and Michel Munoz to receive the new soft key.
- Geomagnetism : Everything seems to work well, except the automatic email sending. Sometimes, some files are missing whereas locally all files are created and backed up on both PC in the geomagnetism lab. The problem has been reported. Waiting instructions from lab.
- SAOZ : Due to email limitations, I am not sure all weekly data has been transferred this week. I asked by email to Andrea Pazmino. Waiting for answer.
- HAMSTRAD : I am waiting for the official instructions from Philippe Ricaud by email to know. exactly what to do and how often.
- Lidar : Since a few days the laser does not work anymore. It is an electronic problem. After doing some tests with the help of Massimo Del Guasta, him and I are waiting answers from the manufacturer (Quantel).

Medical Service : No question.

Station Leader : Waiting confirmation from Marco Maggiore of the amount of the phone bonus for the winterovers.