

Workshop on the use of automatic measuring systems on glaciers

Program and Participants

IASC Workshop, 23-26 March 2011, Pontresina (Switzerland)



Institute for Marine and Atmospheric Research,
Utrecht University, the Netherlands

(April 13, 2011)

Program

Wednesday 23 March

- 14:00 - 14:15 Welcome [Carleen Tijm-Reijmer](#)
- 14:15 - 14:35 WMO Guidelines for Automation of Surface Observations [Miroslav Ondras](#)
- 14:35 - 14:55 The Importance of in-situ Glacier Observations in the Global Cryosphere Watch (GCW) [Barry Goodison](#)
- 14:55 - 15:25 Technology for autonomous monitoring and investigations of polar environments [Alberto Behar](#)
- 15:25 - 15:55 **Coffee break**
- 15:55 - 16:15 New AWS - activities in Antarctica started by the Alfred-Wegener-Institute [Bernd Loose](#)
- 16:15 - 16:35 AWS measurements at the Belgian Antarctic station Princess Elisabeth, Dronning Maud Land [Irina Gorodetskaya](#), [N. van Lipzig](#), [M. van den Broeke](#), [W. Boot](#), [C. Reijmer](#) and [A. Mangold](#)
- 16:35 - 16:55 Quantifying melt energy from IMAU AWS in Antarctica and Greenland [Michiel van den Broeke](#), [W. Boot](#), [C. Reijmer](#), [P. Smeets](#), [P. Kuipers Munneke](#), [R. van de Wal](#) and [J. Oerlemans](#)
- 16:55 - 17:15 High-elevation weather stations on glaciers in the Tropics, continued [Douglas Hardy](#)
- 17:15 - 17:35 On hose clamps and electric tape – eight years of maintaining a low-budget AWS network on McCall Glacier, arctic Alaska [M. Nolan](#), [Douglas Hardy](#)
- 17:35 - 18:00 **POSTER SESSION**

Thursday 24 March

- 08:30 - 08:45 Automatic Weather Stations in the Cordillera Blanca (Peruvian Andes) [Martin Großhauser](#) and [S. Galos](#)
- 08:30 - 08:45 Innsbruck Tropical Glaciology Group East African AWSs [R. Prinz](#), [L. Nicholson](#), [Michael Winkler](#), [N. Cullen](#), [G. Kaser](#) and [T. Mölg](#)
- 09:00 - 09:20 24 weather stations on Greenland, 25 things to go haywire [Dirk van As](#), [S. Nielsen](#), [A. Ahlstrøm](#), [S.B. Andersen](#), [M.L. Andersen](#), [M. Citterio](#), [R.S. Fausto](#) and [F.M. Nick](#)
- 09:20 - 09:40 Internals and performance of the GEUS automatic weather stations [Michele Citterio](#)
- 09:40 - 10:00 Autonomous AWS and GPS observations at Helheim Glacier, East Greenland [Morten L. Andersen](#), [M. Nettles](#), [P. Elósegui](#), [J.L. Davis](#), [G.S. Hamilton](#), [E. Malikowski](#), [I. Gonzalez](#), [M. Okal](#) and [B. Johns](#)

- 10:00 - 10:30 Introduction to the excursion to the Vadret da Morteratsch [Hans Oerlemans](#)
- 12:00 - 16:30 **EXCURSION**

Friday 25 March

- 08:30 - 09:00 Recent developments at the IMAU: a new AWS generation & wireless subglacial measurements [Paul Smeets](#), [W. Boot](#), [M. van den Broeke](#) and [R. van de Wal](#)
- 09:00 - 09:20 Glaciological field studies at Zhadang Glacier, Tibet [Fabien Maussion](#)
- 09:20 - 09:40 Glacioclim, a glacio-meteorological network to study ablation processes over glaciers and snow covers [Patric Wagnon](#), [J.E. Sicart](#), [Yves Lejeune](#)
- 09:40 - 10:00 Installing a network of high altitude weather stations in the argentinean Andes [Sebastian Andres Crespo](#)
- 10:00 - 10:20 Automatic measurements of glaciers in the Arid Andes of Chile [Lindsey Nicholson](#), [C. Kinnard](#), [A. Cordero](#), [A. Rabatel](#), [H. Castebrunet](#), [V. Favier](#), [S. MacDonell](#), [R. Garrido](#), [J. Marín](#), [R. Ponce](#), [J.L. Castro](#) and [J. Araos](#)
- 10:20 - 10:50 **Coffee break**
- 10:50 - 11:10 Eddy covariance measurements on semi-arid Andean glaciers: power, memory and penitentes [Shelley MacDonell](#)
- 11:10 - 11:30 A versatile tower platform for glacier instrumentation: e.g. GPS and Eddy Covariance Measurements [Alex H. Jarosch](#), [F.S. Anslow](#), [J.M. Shea](#)
- 11:30 - 11:50 Using single frequency GPS receivers to determine glacier velocities [Carleen Tijm-Reijmer](#) and [W. Boot](#)
- 11:50 - 12:10 IceMole: An Autonomous Probe for Research in Ice [Engelbert Plescher](#)
- 12:10 - 12:30 Using geomatic techniques for glacier monitoring in the Pyrenees [Ibai Rico Lozano](#), [E. Serrano](#), [M.J. González Amuchastegui](#), [J.J. de San José](#) and [J. Matias](#)
- 12:30 - 14:00 **Lunch**
- 14:00 - 14:20 Observing glacier processes with time-lapse photography [Hans Oerlemans](#)
- 14:20 - 14:40 Monitoring hydrochemistry above and below glaciers (in Greenland and the Antarctic) [Liz Bagshaw](#), [J. Wadham](#), [S. Burrow](#), [M. Mowlem](#), [M. Tranter](#) and [A. Fountain](#)
- 14:40 - 15:00 Effects of soot, algae, and mineral dust on the albedo of the Plaine Morte Glacier, Switzerland [Margit Schwikowski](#), [E. Bühlmann](#), [P.-A. Herren](#)
- 15:00 - 15:20 AWS measurements on the Kahiltna Glacier, Central Alaska Range, USA [Joanna Young](#), [A. Arendt](#), [R. Hock](#), [R. Motyka](#), [S. Herreid](#), [J. Hulth](#)
- 15:20 - 15:50 Automated ablation measurements using a pressure transducer [Robert S. Fausto](#)
- 15:50 - 16:00 Conclusions [Carleen Tijm-Reijmer](#)

Posters

Posters are on display throughout the meeting

- IMAU Automatic Weather Stations [Wim Boot](#)
- IMAU European Automatic Weather Stations [Wim Boot](#)
- iWS-5: A new 2012 generation of low temperature, rapid deployment weather stations [Wim Boot](#)
- AWS measurements on glaciers in the Italian Alps [G. Diolaiuti](#), [Antonella Senese](#), [C. Mihalcea](#), [G.P. Verza](#), [M. Mosconi](#) and [C. Smiraglia](#)
- The 'ablation stakes' of the 21st century: Glacier Mass Balance Pods in a Wireless Sensor Network [John Hulth](#) and [J. Strömbom](#)
- AWS measurements on debris-covered glaciers in the Karakoram [Claudia E. Mihalcea](#), [E. Vuillermoz](#), [G. Diolaiuti](#), [G. Verza](#), [C. Mayer](#), [A. Lambrecht](#) and [C. Smiraglia](#)
- Cryospheric monitoring Sonnblick-Pasterze, Austria: Instruments and methods [Gernot Weyss](#), [W. Schöner](#), [B. Hynek](#), [R. Böhm](#), [D. Binder](#), [S. Reisenhofer](#), [M. Olefs](#) and [R. Unger](#)

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Excursion

The excursion will be to the Vadret da Morteratsch. On the snout of this glacier an AWS has been running since October 1995. We will visit the station and enjoy the scenery.

The group will be split into two:

(1) Downhill skiers

We will take the Diavolezza cable car and ski down from the mountain station (~3000 m) to the Vadret da Pers, and then to the Vadret da Morteratsch to visit the AWS (located at an altitude of ~2200 m). The route is marked but not prepared, and the difficulty corresponds to that of a **black** ski run in the normal terminology (but there are also long gently sloping stretches to recover...). Normal downhill skis can be used. Safety equipment (harness etc.) is not needed. At the AWS site we will meet the other group that will come from below.

(2) Those who are not good downhill skiers

From the Landgasthaus Morteratsch (~1800 m) we will walk to the glacier front (easy trail) and then, on snow shoes (or on backcountry skis for the experienced) up to the AWS (at ~2200 m). Here we will meet the downhill skiers. We will spend some time at the AWS. Then we will all go back to the Landgasthaus Morteratsch in different styles, and have a beer or so on the terrace. The train will bring us back to Pontresina.

Equipment

Equipment can be rented in Pontresina (also snow shoes).

Costs

Costs have to be covered by the participants. Train/bus: about 12 Swiss francs. Ticket cable car (only for the downhill skiers): about 33 Swiss francs.