

6th National Seminar on Snow on the day of Pyry* in collaboration with the COST ES1404 Action

(*Blizzard)

Finnish Meteorological Institute (FMI), 2 November 2015

Seminar summary

Kirsti Jylhä (FMI), 22 March 2018

Sessions and presentations

The seminar agenda included an opening session, a keynote speak, two forenoon sessions, followed by general discussions, three afternoon sessions, a panel discussion, and a closing. The seminar was opened by



Ali Nadir Arslan (FMI), the coordinator of the ESSEM COST Action ES1404, "A European network for a harmonised monitoring of snow for the benefit of climate change scenarios, hydrology and numerical weather prediction" (<http://www.harmosnow.eu/>). The 2nd Management Committee (MC) and Working Group meetings of the COST Action was held in Helsinki on November 2-4, 2015, jointly with the 6th seminar on snow on the day of Pyry. The idea was to

disseminate national snow activities to wider international audiences using an opportunity of the international network of the COST Action on Snow.

The keynote speak about major developments in the ECMWF snow model and data assimilation for NWP in the past few years was given by Patricia de Rosnay (ECMWF). She told, among others, about validation of the snow model against in situ snow observations and highlighted the large impact of snow on Numerical Weather Forecast.



The forenoon sessions, first about snow properties and the second about snow observations and instrumentation were convened by Jouni Peltoniemi (Finnish Geospatial Research Institute FGI) and Juha Lemmetyinen (FMI). Six oral and four poster presentations were given and discussed.



The first afternoon session about snow in models was convened by Laura Rontu (FMI) and was started by a talk of Samantha Pullen (UK Met Office). Her subject was satellite snow product assimilation in weather models. She concluded that H-SAF snow cover will add valuable additional snow data to supplement the rather sparse and variable coverage by SYNOP observations, in particular contributing important observations of snow-free surface.



The last two sessions, one about snow and climate, and the other about living with snow and ice, were chaired by Hilppa Gregow (FMI) and Marja Aarnio-Frisk (FMI), respectively. Altogether, seven talks and a poster were presented during the afternoon sessions.

The panel consisted of the sessions chairs. The seminar was closed by Kirsti Jylhä (FMI). She told that the first Pyry seminar was organized in 2009 and the purpose of the annual or bi-annual seminars have been to promote co-operation and flow of information among snow and ice researches in Finland. This year the seminar had a broader goal, as it was for the first time linked to the COST action HARMOSNOW. Jylhä also gave details about the Snow Team (lumitiimi) of FMI, snow email list (lumi-on@posti.fmi.fi) and snow wiki (<http://litdb.fmi.fi/apache2-default/snow/index.php> with username and password).



Discussions about the topics of the seminar were continued during an ice-breaker buffet.

The agenda of the workshop and the list of registered participants (88 in total) are given in appendix. Seminar was open for anyone interested. The seminar language was English.

The presentations and several abstracts are available at <http://www.harmosnow.eu/index.php?page=Workshops> => [6th National Seminar on Snow on the day of Pyry* in collaboration with the COST ES1404 Action \(*Blizzard\), November 2, 2015](http://www.harmosnow.eu/index.php?page=02.11.2015,%20Helsinki) or directly: <http://www.harmosnow.eu/index.php?page=02.11.2015,%20Helsinki>

Acknowledgement

Financial support from the COST Action ES1404 for the seminar is gratefully acknowledged. The seminar was organised by the Snow Team of FMI. Practical assistance was provided by Taru Olsson, Anna Luomaranta, Cemal Melih Tanis and Riitta Aikio, and people from the Communications unit of FMI.



6th National Seminar on Snow on the day of Pyry* in collaboration with the COST ES1404 Action

(*Blizzard)

Date: Monday, November 2, 2015, at 9.00-16.30

Place: Finnish Meteorological Institute (FMI), room Brainstorm (P-floor),
Erik Palménin aukio 1, 00560 Helsinki
(<http://en.ilmatieteenlaitos.fi/how-to-find-dynamicum>)

Agenda

9.00–9.30 Registration & Refreshments

9.30–9.45 Opening: Ali Nadir Arslan (FMI)

09.45–10.15 Keynote speak: Patricia de Rosnay (ECMWF): Overview of snow modelling and data assimilation activities at ECMWF

10.15-11.00 Session A. Snow properties Chair: Jouni Peltoniemi (Finnish Geospatial Research Institute FGI)

- A1.** Petri Räisänen (FMI): Parameterization of single-scattering properties of snow
- A2.** Annakaisa von Lerber (FMI): Microphysics of falling snowflakes: What can we measure?
- A3.** Roberta Pirazzini (FMI): Relationship between snow microstructure and albedo from measurement and modelling perspectives

11.00–11.20 Refreshments & Posters

11.20–12.05 Session B. Snow observations and instrumentation Chair: Juha Lemmetyinen (FMI)

- B1.** Anna Kontu (FMI): SORAX - Sodankylä Radiometer Experiment
 - B2.** Leena Leppänen (FMI) Arctic Snow Microstructure Experiment
 - B3.** Jouni Peltoniemen (FGI): Measurements of snow reflectance, what new can we still find?
- POSTERS:
- B4.** Otto Hyvärinen (FMI): Can satellite-based snow products help in Quality Control of automatic in-situ snow observations in Nordic region?
 - B5.** Roberta Pirazzini (FMI): SVC Dual-sphere spectro-albedometer: an accurate instrument to continuously measure spectral albedo in cold and remote areas.
 - B6.** Niilo Siljamo (FMI): Recent developments of the H-SAF MSG/SEVIRI and Metop/AVHRR based snow extent products
 - B7.** Annakaisa von Lerber (FMI): Instrumentation of measuring solid precipitation

12.05–12.20 General discussion

12.20–13.05 Lunch (self-paid)



13.05–13.45 Session C. Snow in models Chair: Laura Rontu (FMI)

C1. Samantha Pullen (UK Met Office): Satellite snow product assimilation in weather models

C2. Vesa Kolhinen (SYKE): Modelling snow water equivalent and thickness in Watershed Simulation and Forecasting System at SYKE

POSTERS:

C3. Jaakko Ikonen (FMI): Hydro-validation of the H13 - Snow Water Equivalent Product in Northern Finland – Ounasjoki Case Study (2012 – 2014)

13.45–14.35 Session D. Snow and climate Chair: Hilppa Gregow (FMI)

D1. Jouni Räisänen (UH): Future changes in mean and extreme snowfall in Northern Europe, as simulated by the ENSEMBLES RCMs

D2. Ioanna Merkouriadi (UH): Long-term trends and seasonal variability of winter conditions in Finnish Lapland

D3. Anna Luomaranta (FMI): Multimodel estimates of the changes in the Baltic Sea ice cover during the present century

14.35–15.00 Refreshments & Posters

15.00–15.50 Session E. Living with snow and ice Chair: Marja Aarnio-Frisk (FMI)

(**E1.** Mika Kalakoski (FMI): Experiences from the Finnish Antarctic Research Program FINNARP)

E2. Marjo Hippo (FMI): Road weather modelling and snow drift index

E3. Mirjam Orvomaa (SYKE): Ground frost variation in Finland.

15.50–16.30 Panel / General discussion

16.30 Closing of the seminar: Kirsti Jylhä (FMI)

16.30 –18.30 Ice-breaker / Buffet

Seminar is open for anyone interested. The seminar language is English.

Registration by 28 October 2015 at <https://www.webpolsurveys.com/S/BD63B8D8B85A041F.par>

Welcome!

COST is an intergovernmental framework for European Cooperation in Science and Technology, allowing the coordination of nationally-funded research on a European level. **ESSEM COST Action ES1404**, “A European network for a harmonised monitoring of snow for the benefit of climate change scenarios, hydrology and numerical weather prediction”, aims at building a better connection between snow measurements and models, between snow observers, researchers and forecasters, for the benefit of various stakeholders and the entire society. The Action will scrutinise activities related to snow science in terms of (1) observations, (2) instrumentation and (3) data assimilation, aiming at better effectiveness, harmonisation and coverage of snow data.



FINNISH METEOROLOGICAL INSTITUTE



EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

The 2nd Management Committee (MC) and Working Group meetings of the COST Action are planned to be held in Helsinki on November 2-4, 2015, jointly with the 6th seminar on snow on the day of Pyry. The idea is to disseminate national snow activities to wider international audiences using an opportunity of the international network of the COST Action on Snow.

For more information:

Chair of the Action: Ali Nadir Arslan, FMI, ali.nadir.arslan@fmi.fi

<http://www.harmosnow.eu/>

http://www.cost.eu/COST_Actions/essem/Actions/ES1404

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Date: Monday, November 2, 2015, at 9.00-16.30

Surname	First name	Organization
Aarnio-Frisk	Marja	FMI
Aikio	Riitta	FMI
Anna	Frey	FMI
Anttila	Kati	FMI
Arslan	Ali Nadir	FMI
Atlaskina	Ksenia	University of Helsinki
BAZILE	Eric	Meteo-France
Brencic	Mihael	University of Ljubljana
Cedilnik	Jure	Slovenian Environment Agency
Citterio	Michele	GEUS
Dagsson-Waldhauserova	Pavla	University of Iceland + Agricultural University of Iceland
de Rosnay	Patricia	ECMWF
Fülöp	Tibor	Goodyear S.A.
Gierisch	Andrea	FMI
Gong	Yongmei	University of Helsinki
Gregow	Hilppa	FMI
Gritsevich	Maria	Finnish Geospatial Research Institute
Hannula	Henna-Reetta	FMI
Harjanne	Atte	FMI
Hickman	Brandon	University of Helsinki
Hiltunen	Mwaba	FMI
Hippi	Marjo	FMI
Hoppula	Petri	FMI
Hovestadt	Hadassa	Student, University of Helsinki
Huuskonen	Minna	FMI
Hyvärinen	Otto	FMI
Hämäläinen	Karoliina	FMI
Ikonen	Jaakko	FMI
Junila	Päivi	FMI
Jutila	Arttu	University of Helsinki
Juva	Katriina	University of Helsinki
Jylhä	Kirsti	FMI
Kalakoski	Mika	FMI
Kangas	Markku	FMI
Kivekäs	Niku	FMI
Kolhinen	Vesa	SYKE
Kontu	Anna	FMI
Korhonen	Johanna	SYKE
Kuusisto	Esko	SYKE
Kämäräinen	Matti	FMI
Lahtinen	Panu	FMI
Lehtonen	Ilari	FMI
Lemmettylä	Teemu	Suomen Hiihtoliitto Ry
Lemmetyinen	Juha	FMI
Leppänen	Leena	FMI

Loodla	Küllli	Estonian Environment Agency
López-Moreno	J. Ignacio	Pyrenean Institute of Ecology, Spain
Luomaranta	Anna	FMI
Manninen	Terhikki	FMI
Meinander	Outi	FMI
Merkouriadi	Ioanna	University of Helsinki
Moisander	Mikko	FMI
Moisseev	Dmitri	University of Helsinki
Myllyviita	Sini	-
Mäkinen	Jaakko	Finnish Geospatial Research Institute FGI
Nikkanen	Terhi	FMI
Nikolov	Dimitar	NIMH - BAS
Orvomaa	Mirjam	SYKE
Pirazzini	Roberta	FMI
Peltoniemi	Jouni	FGI
Pulido-Velazquez	David	IGME
Pullen	Samantha	Met Office, UK
Rautiainen	Kimmo	FMI
Ronkainen	Iina	FMI
Rontu	Laura	FMI
Rutter	Nick	Northumbria University
Räisänen	Jouni	University of Helsinki
Räisänen	Petri	FMI
Savijärvi	Hannu	University of Helsinki
Schoener	Wolfgang	University of Graz
Siljamo	Niilo	FMI
Similä	Markku	FMI
Sorman	Arda	Anadolu University
Stepanova	Daria	FMI
Suomi	Irene	FMI
Svensson	Jonas	FMI
Tanis	Cemal Melih	FMI
Tiira	Jussi	University of Helsinki
Tikanmäki	Maria	VTT
Tyynelä	Jani	FMI
Vehviläinen	Bertel	SYKE
Veijola	Katriina	FMI
Vint	Kairi	Estonian Environment Agency (ESTE)
Virtanen	Heikki	Finnish Geospatial Research Institute FGI
von Lerber	Annakaisa	FMI
Välisuo	Ilona	FMI
Ylhäisi	Jussi	FMI
Zubko	Nataliya	Finnish Geospatial Research Institute
Total: 88		