

**14th European Polar Low Working Group meeting**  
**Workshop on ‘Polar lows and mesoscale weather extremes’**  
**5-6 April 2018, Trier, Germany**

Location:

*University of Trier, Behringstr. 21, 54296 Trier, Germany (Campus 2, room H11)*

Program (updated 20 March 2018)

**Thursday 5 April**

09:00 - 09:20	Welcome and Opening
<b>Session 1 : Polar Low studies using satellite data and in-situ data</b>	
09:20 - 09:40	Comparative analysis of winter and summer mesocyclogenesis over the Sea of Japan GURVICH, I.A.; <b>PICHUGIN</b> , M.K.
09:40 - 10:00	Infrasonic signatures of polar lows – comparing a decade of polar low tracks to infrasonic detections NÅSHOLM, S.P.; ASSINK, J.D.; BLANC, E.; <b>BLIXT</b> , E.M.; CLAUD, C.; GIBBONS, S.J.; HAUCHECORNE, A.; KERO, J.; LE PICHON, A.; NOER, G.; POL-TIREAU, K.; ROJO, M.; SMETS, P.S.
10:00 - 10:20	In situ measurements of surface winds, waves and sea state in polar low events ROJO, M.; <b>CLAUD</b> , C.; NOER, G.; CARLETON, A.
10:20 - 10:40	Polar Lows and Medicanes: Differences and similarities <b>DAFIS</b> , S.; CLAUD, C.
10:40 - 11:00	<b>Coffee break</b>
<b>Session 1 continued</b>	
11:00 - 11:20	Characteristics of severe weather systems over the Chukchi Sea from satellite measurements and reanalysis datasets <b>PICHUGIN</b> , M.K.; GURVICH, I.A.; ZABALOTSKI, E.V.
11:20 - 11:40	Automatic Detection of Polar Mesocyclones using Satellite Microwave Humidity Sounders <b>MELSHEIMER</b> , C.
11:40 - 12:00	A proposed airborne and ground-based field campaign to study cold-air outbreaks and polar lows <b>GEERTS</b> , B.
<b>Session 2 : Climatological Aspects of Polar Lows</b>	
12:00 - 12:20	Southern Ocean polar mesocyclones as simulated in the WRF high resolution hindcast <b>VEREZEMSKAYA</b> , P.; STEPANENKO, V.; GULEV, S.
12:20 - 13:30	<b>Lunch</b>

<b>Session 2 continued</b>	
13:30 - 13:50	An objective global climatology of polar lows based on reanalysis data <b>STOLL, P.</b> ; GRAVERSEN, R.G.; NOER, G.; HODGES, K.
13:50 - 14:10	Polar Mesoscale Cyclone Climatology for the Nordic Seas based on the ERAInterim Reanalysis MICHEL, C.; <b>TERPSTRA, A.</b> ; SPENGLER, T.
14:10 - 14:30	Investigation of Januaries polar lows genesis conditions between 2003 and 2011 using Arctic System Reanalysis (ASR) <b>RADOVAN, A.</b> , CREWELL, R.S; RINKE, A.; KNUDSEN, E.M.
14:30 - 14:50	Polar lows from a downscaled climate model ensemble – variability, trends and relation to sea ice <b>LANDGREN, O.</b> ; SEIERSTAD, I.; SELAND, Ø.; HAUGEN, J.E.; IVERSEN, T.
14:50 - 15:10	<b>Coffee break</b>
<b>Session 3 : Polar Lows in Reanalyses and Model Simulations</b>	
15:10 - 15:30	A comparison of polar low representation between ECMWF global models and Arome Arctic limited area model <b>HALLERSTIG, M.</b>
15:30 - 15:50	Modification of polar low development by sea ice and the orography of Svalbard SERGEEV, D.E.; RENFREW, I.A., <b>SPENGLER, T.</b>
15:50 – 16:10	Investigation on Polar lows response to climate change in a high resolution global climate model <b>BRESSON, H.</b> ; SHAFFREY, L.; HODGES, K.; ZAPPA, G.
16:10 - 16:30	Influence of surface fluxes on polar low development: idealised simulations <b>TERPSTRA, A.</b> ; SPENGLER, T.
16:45 - 17:30	<b>Social event (visit of the art laboratory Trier, complimentary)</b>
<b>20:00 -22:00</b>	<b>Dinner (complimentary)</b> Directions will be given during the workshop.

Friday 6 April

<b>Session 4 : Environments for Polar Low Genesis and Operational Aspects</b>	
09:00 - 09:20	Energy and helicity dynamics of Polar Lows <b>VAZAEVA, N.V.</b> , O.G. CHKHETIANI, M.V. KURGANSKY, L.O. MAXIMENKOV
09:20 - 09:40	Characteristics and synoptic environment of Polar Lows over the Barents Sea <b>CLAUD, C.</b> ; VICOMTE, M.; ROJO, M.; MALLET, P.-E.; NOER, G.
09:40 - 10:00	A methodology for identification and classification of polar lows at the MET-Norway <b>NOER, G.</b>
<b>Session 5 : Polar Mesoscale Weather Phenomena and AOI</b>	
10:00 - 10:20	Characteristics of Explosive Cyclones over the Northern Pacific <b>ZHANG, S.</b> ; <b>FU, G.</b> ; <b>CHUNGU, L.</b> ; <b>JINGWU, L.</b>
10:20 - 10:40	<b>Short oral poster presentations (3 min)</b>
10:40 - 11:10	<b>Poster viewing and coffee break</b>
11:10 - 11:30	Explosive Cyclones over the Northern Atlantic from October 2000 to September 2016 <b>SUN, Y.</b> ; <b>FU, G.</b>
11:30 - 11:50	Analyses and Numerical Tests of an Explosive Cyclone over the Northwestern Pacific <b>LI, P.</b> ; <b>SUN, B.</b> ; <b>FU, G.</b> ; <b>SUN, Y.</b>
11:50 - 12:10	State and perspectives of the concept of large-scale conditioning of coastal weather extremes for deriving forecasts and statistics of such phenomena <b>VON STORCH, H.</b> ; <b>ZAHN, M.</b> ; <b>CAVICCHIA, L.</b> ; <b>LI, D.</b>
12:10 - 12:30	Wind gust forecasting methods – an overview <b>SUOMI, I.</b>
12:30 - 13:30	<b>Lunch and poster viewing</b>
<b>Session 5 continued</b>	
13:30 - 13:50	A Lagrangian Climatology of Wintertime Cold Air Outbreaks in the Irminger and Nordic Seas and Their Role in Shaping Air–Sea Heat Fluxes <b>PAPRITZ, L.</b> ; <b>SPENGLER, T.</b>
13:50 - 14:10	The Role of Coastline and Orography in the Formation of Convergence Zones in Cold Air Outbreaks <b>WATANABE, S.I.</b> , <b>NIINO, H.</b> , <b>SPENGLER, T.</b>
14:10 - 14:30	A study of a boundary layer front near Svalbard using aircraft measurements and numerical model simulations <b>HEINEMANN, G.</b> ; <b>SCHEFCZYK, L.</b>
14:30 - 14:50	<b>Future research programmes related to PLs and mesoscale weather extremes</b>
14:50 - 15:10	<b>Poster viewing and coffee break</b>
15:10 - 16:00	<b>Discussion and closing remarks</b>

#### Posters

**Li, Yu**; **Fu, G.**: Analyses of a Pair of Explosive Cyclones over the Northwestern Pacific in December 2014

**Pang, H.**; **Fu, G.**: Case Study of Potential Vorticity Tower in Three Explosive Cyclones over Eastern Asia

**Zhang, X.**; **Fu, G.**: Analyses of a Remarkable Explosive Cyclone over the Northeastern Pacific in December 2006

**Chen, L.J.**; **Fu, G.**: Analyses of 'Eye' of an Explosive Cyclone over the Northwestern Pacific in January 2015

**Parker, C.**: Simulating Polar Lows over the Barents Sea using Polar WRF.

**VAZAEVA, N.**, **AKPEROV, M.G.**; **DEMBITSKAYA, M.A.**; **MOKHOV, I.I.**; **RINKE, A.**: Lapse-rate feedback assessment in the Arctic from reanalysis data and model simulations

**Cancelled**

Atmospheric response to the representation of the sea-ice lead structure in the Marginal Ice Zone  
BATRAK, Y., **MUELLER**, M.

Impact of model resolution on the representation on the air-sea interaction associated with the North  
Water Polynya **MOORE**, G.W.K. ; VÅGE, K.