

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 16 Feb. 2018)

Thursday 5 April

09:00 - 09:20	Welcome and Opening
Session 1 : Polar Low studies using satellite data and in-situ data	
09:20 - 09:40	Comparative analysis of winter and summer mesocyclogenesis over the Sea of Japan GURVICH, I.A.; PICHUGIN , 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.; BLIXT , 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.; CLAUD , C.; NOER, G.; CARLETON, A.
10:20 - 10:40	Polar Lows and Medicanes: Differences and similarities DAFIS , S.; CLAUD, C.
10:40 - 11:00	Coffee break
Session 1 continued	
11:00 - 11:20	Characteristics of severe weather systems over the Chukchi Sea from satellite measurements and reanalysis datasets PICHUGIN , M.K.; GURVICH, I.A.; ZABALOTSKI, E.V.
11:20 - 11:40	Automatic Detection of Polar Mesocyclones using Satellite Microwave Humidity Sounders MELSHEIMER , C.
11:40 - 12:00	A proposed airborne and ground-based field campaign to study cold-air outbreaks and polar lows GEERTS , B.
Session 2 : Climatological Aspects of Polar Lows	
12:00 - 12:20	Southern Ocean polar mesocyclones as simulated in the WRF high resolution hindcast VEREZEMSKAYA , P.; STEPANENKO, V.; GULEV, S.
12:20 - 13:30	Lunch

Session 2 continued	
13:30 - 13:50	An objective global climatology of polar lows based on reanalysis data STOLL, P. ; 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.; TERPSTRA, A. ; SPENGLER, T.
14:10 - 14:30	Investigation of January's polar lows genesis conditions between 2003 and 2011 using Arctic System Reanalysis (ASR) RADOVAN, A. , CREWELL, R.S; RINKE, A.; KNUDSEN, E.M.
14:30 - 14:50	Coffee break
14:50 - 15:10	Polar lows from a downscaled climate model ensemble – variability, trends and relation to sea ice LANDGREN, O. ; SEIERSTAD, I.; SELAND, Ø.; HAUGEN, J.E.; IVERSEN, T.
Session 3 : Polar Lows in Reanalyses and Model Simulations	
15:10 - 15:30	A comparison of polar low representation between ECMWF global models and Arome Arctic limited area model HALLERSTIG, M.
15:30 - 15:50	Modification of polar low development by sea ice and the orography of Svalbard SERGEEV, D.E.; RENFREW, I.A., SPENGLER, T.
15:50 – 16:10	Investigation on Polar lows response to climate change in a high resolution global climate model BRESSON, H. ; SHAFFREY, L.; HODGES, K.; ZAPPA, G.
16:10 - 16:30	Influence of surface fluxes on polar low development: idealised simulations TERPSTRA, A. ; SPENGLER, T.
16:45 - 17:30	Social event (visit of the art laboratory Trier, complimentary)
19:30	Dinner (complimentary) Directions will be given during the workshop.

Friday 6 April

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

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.*

Akperov, M.G; Dembitskaya, M.A.; Mokhov, I.I.; Rinke, A.; (Vazaeva, N.): *Lapse-rate feedback assessment in the Arctic from reanalysis data and model simulations*