

Polar Low Workshop

5-6 April 2018

Location:

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

Program (updated 31 Jan. 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	Characteristics of severe weather systems over the Chukchi Sea from satellite measurements and reanalysis datasets PICHUGIN, M.K.; GURVICH, I.A.; ZABALOTSKI, E.V.
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	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.
11:20 - 11:40	Automatic Detection of Polar Mesocyclones using Satellite Microwave Humidity Sounders MELSHEIMER, C.
Session 2 : Climatological Aspects of Polar Lows	
11:40 - 12:00	Southern Ocean polar mesocyclones as simulated in the WRF high resolution hindcast VEREZEMSKAYA, P.; STEPANENKO, V.; GULEV, S.
12:00 - 12:20	An objective global climatology of polar lows based on reanalysis data STOLL, P.; GRAVERSEN, R.G.; NOER, G.; HODGES, K.
12:20 - 13:30	Lunch

Session 2 continued	
13:30 - 13:50	Polar Mesoscale Cyclone Climatology for the Nordic Seas based on the ERAInterim Reanalysis MICHEL, C.; TERPSTRA, A.; SPENGLER, T.
13:50 - 14:10	Investigation of Januaries polar lows genesis conditions between 2003 and 2011 using Arctic System Reanalysis (ASR) RADOVAN, A., CREWELL, R.S.; RINKE, A.; KNUDSEN, E.M.
14:10 - 14:30	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.
14:30 - 14:50	Coffee break
Session 3 : Polar Lows in Reanalyses and Model Simulations	
14:50 - 15:10	A comparison of polar low representation between ECMWF global models and Arome Arctic limited area model HALLERSTIG, M.
15:10 - 15:30	Modification of polar low development by sea ice and the orography of Svalbard SERGEEV, D.E.; RENFREW, I.A., SPENGLER, T.
15:30 - 15:50	Investigation on Polar lows response to climate change in a high resolution global climate model BRESSON, H.; SHAFFREY, L.; HODGES, K.; ZAPPA, G.
15:50 – 16:10	Influence of surface fluxes on polar low development: idealised simulations TERPSTRA, A.; SPENGLER, T.
16:10 - 16:30	Discussion
16:30 - 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	Characteristics and synoptic environment of Polar Lows over the Barents Sea CLAUD, C. ; VICOMTE, M. ; ROJO, M. ; MALLET, P.-E. ; NOER, G.
09:20 - 09:40	Lapse-rate feedback assessment in the Arctic from reanalysis data and model simulations AKPEROV, M.G. ; DEMBITSKAYA, M.A. ; MOKHOV, I.I. ; RINKE, A.
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	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.
11:20 - 11:40	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.
11:40 - 12:00	Wind gust forecasting methods – an overview SUOMI, I.
12:00 - 12:20	Impact of model resolution on the representation on the air-sea interaction associated with the North Water Polynya MOORE, G.W.K. ; VÅGE, K.
12:20 - 12:40	Explosive Cyclones over the Northern Atlantic from October 2000 to September 2016 SUN, Y. ; FU, G.
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	A study of a boundary layer front near Svalbard using aircraft measurements and numerical model simulations HEINEMANN, G. ; SCHEFCZYK, L.
14:10 - 14:30	The Role of Coastline and Orography in the Formation of Convergence Zones in Cold Air Outbreaks WATANABE, S.I. ; NIINO, H. ; SPENGLER, T.
14:40 - 14:50	A proposed airborne and ground-based field campaign to study cold-air outbreaks and polar lows GEERTS, B.
14:50 - 15:10	Poster viewing and coffee break
15:10 - 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.