2026 AR Recon workshop and 2nd Observational campaigns workshop for better weather forecasts

Programme

Monday
Agenda

2026 AR Recon workshop

Agenda times automatically adjust to the selected time zone

The selected timezone is Europe/London

	Opening	
09:00 to 09:30	**Arrival and registration**	
	Session 1: AR Recon Operations Moderator: TBC	
09:30 to 10:00	**AR Recon Overview**	Marty Ralph (CW3E, Scripps Institution of Oceanography, UC San Diego)
10:00 to 10:30	**US Air Force Reserve Command Perspective on AR Recon: Past, Present and Future**	TBC
10:30 to 11:00	**Enhancing Global Weather Prediction: Operational Milestones, Challenges, and Fleet Modernization of the NOAA Atmospheric Rivers Reconnaissance Effort**	Nikki Hathaway (NOAA AOC)
11:00 to 11:30	**Coffee break**	
11:30 to 12:00	**Sampling Synoptic Scale Patterns in the Western Hemisphere with Airborne Radio Occultation Observations during GARRP 2026**	Noah Barton (Scripps Institution of Oceanography)
12:00 to 12:30	**Targeted observations of Atmospheric Rivers with surface drifters**	Martha Schonau (Lagrangian Drifter Laboratory, Scripps Institution of Oceanography)
12:30 to 14:00	**Lunch break**	
	Session 2: AR Recon Operations Moderator: TBC	

14:00 to 14:30	**Observed Air–Sea Interaction During Atmospheric River Events in the Central Pacific**	J. Thomas Farrar (Woods Hole Oceanographic Institution)
14:30 to 15:00	**Evolution of Center for Western Weather and Water Extreme's Land-Based Observing Efforts and Coordination with Atmospheric River Reconnaissance**	Subin Yoon (University of California San Diego)
15:00 to 15:30	**AR Recon's "Final Mile": Mobile Radar Platforms and the RAPID-FIRE Field Campaign** Virtual presentation	Jonathan Rutz (Center for Western Weather and Water Extremes)
15:30 to 16:00	**Coffee break**	
16:00 to 16:30	**Observing Atmospheric Rivers with NASA's Current and Next Generation Satellite Missions**	Derek Posselt (Jet Propulsion Laboratory, California Institute of Technology)
16:30 to 17:00	**Importance of AR Recon**	TBC
17:00 to 17:15	**Poster introductions**	
17:15 to 18:45	**Icebreaker and poster session**	

Tuesday
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	Welcome	
09:15 to 09:30	**Welcome to Day 2**	Marty Ralph (CW3E, Scripps Institution of Oceanography, UC San Diego) Vijay Tallapragada (NOAA/NWS/NCEP/EMC)
	Session 3: Modelling, DA and Impact Studies Moderator: TBC	
09:30 to 09:50	**Impact of AR Recon (and GARRP) Observations on NCEP Operational GFS Forecasts**	Vijay Tallapragada (NOAA/NWS/NCEP/EMC)
09:50 to 10:10	**AR-AFSv2: Enhancing Near-Real-Time Atmospheric River Forecasts for the 2025–2026 Winter Season in the US West Coast** Virtual presentation	Keqin Wu (Lynker at ECM/NCEP/NOAA)
10:10 to 10:30	**Mediterranean Extreme Events Experiment (M3E) and Storm Harry**	David Lavers (ECMWF)
10:30 to 10:50	**Tropical and Extratropical Pacific Buoy Surface Pressure Observation Impacts**	Carolyn Reynolds (U.S. Naval Research Laboratory)
10:50 to 11:00	**Assessing the Impact of WindBorne Balloons on the February 2026 AR and East Coast Blizzard through Data Denial Experiments** Virtual presentation	Tomer Burg (WindBorne Systems)
11:10 to 11:30	**Coffee break**	

11:30 to 11:50	**Evaluation of 2026 AR Recon Observations for the Analysis and Forecasting of Atmospheric Rivers and Downstream Winter Storms Using MPAS-JEDI** Virtual presentation	Minghua Zheng (UC San Diego)
11:50 to 12:10	**Assessing the Impacts of Airborne Radio Occultation Assimilation in AR Recon 2025 and Its Interactions with Other Observations in MPAS-JEDI**	Nghi Do (UC San Diego)
12:10 to 12:30	**Impact of 2D ROPP Forward Operators and Airborne Radio Occultation Assimilation on Global Numerical Weather Prediction**	Hui Christophersen (U.S. Naval Research Laboratory)
12:30 to 14:00	**Lunch break**	
	Session 4: Science Advances Moderator: TBC	
14:00 to 14:20	**Dynamically Linking Two High-Impact Atmospheric River Events**	James Doyle (U.S. Naval Research Laboratory)
14:20 to 14:40	**Taking Hyperspectral Data Inversion and Assimilation to a new Limit**	Katerina Giamalaki (University of Hawaii at Manoa)
14:40 to 15:00	**The Anti-AR of March 2026: Dynamics Leading to Extreme Heat over the Western U.S.**	Chris Davis (University of Massachusetts, Amherst)
15:00 to 15:20	**Investigating the Impact of Numerical Model Uncertainty in the Marine Boundary Layer on the Predictability of Atmospheric Rivers and Onshore Precipitation**	Kevin Lupo (Center for Western Weather and Water Extremes, Scripps Institution of Oceanography, University of California San Diego)
15:20 to 15:50	**West-WRF Physics and AI: CW3E's Latest Developments for the Prediction of Atmospheric Rivers and Extreme Events**	Luca Delle Monache (CW3E/SIO/UCSD)
15:40 to 16:00	**Coffee break**	
16:00 to 17:00	**Panel Discussion - Future of AR Recon**	TBC

Wednesday
Agenda

2nd Observational campaigns workshop for better weather forecasts

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	Morning session	
09:00 to 09:30	**Introduction**	TBC
09:30 to 10:00	**The THORPEX Legacy: Achievements and lessons for the future from 10 years of THORPEX observational campaigns**	David Richardson (ECMWF)
10:00 to 10:30	**Meteorological Linkages Between the Field Campaigns of January-February 2026**	Chris Davis (University of Massachusetts, Amherst)
10:30 to 11:00	**TBC**	Marty Ralph (CW3E, Scripps Institution of Oceanography, UC San Diego)
10:30 to 11:00	**Coffee break**	
11:00 to 11:30	**Missing pieces in a weather forecasting puzzle?**	Richard Forbes (ECMWF)
11:30 to 11:50	**Observations distinguishing processes affecting weather system dynamics**	John Methven (University of Reading)
11:50 to 12:10	**Airborne campaigns for better understanding Arctic amplification**	Susanne Crewell (University of Cologne)
12:10 to 12:30	**TBC**	
12:30 to 14:00	**Lunch break**	
	Afternoon session	

14:00 to 14:20	**Observing high-impact winter cyclones with coordinated multi-platform measurements during NAWDIC**	Bastian Kirsch (Karlsruhe Institute of Technology)
14:20 to 14:40	**NASA’s NURTURE Field Campaign: High-Resolution Observations of the Atmospheric Dynamics Resulting in High-Impact Weather**	Steven Cavallo (University of Oklahoma)
14:40 to 15:00	**The TEAMx Observational Campaign**	Mathias Rotach (University of Innsbruck)
15:00 to 15:20	**The Tropical Pacific Observing System (TPOS) Equatorial Pacific Experiment (TEPEX): Bridging Tropical Air-Sea Coupling and Global Forecast Accuracy**	Jose Algarin (NOAA Climate Program Office)
15:20 to 15:50	**Coffee break**	
15:50 to 16:10	**Atmospheric River Dropsonde Observations During the NAWDIC Campaign**	Magdalena Kracheletz (KIT)
16:10 to 16:30	**WindBorne Atlas: A Global Sounding Balloon Constellation**	Todd Hutchinson (WindBorne Systems)
16:30 to 17:30	**Poster session**	

Thursday
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	Morning Session	
09:00 to 09:20	**GTS to WIS2.0 data acquisition migration at ECWMF**	Cristiano Zanna (ECMWF)
09:20 to 09:40	**Merged Observatory Data Files to support model validation and development** Virtual presentation	Roberta Pirazzini (Finnish Meteorological Institute)
09:40 to 10:00	**Mapping campaigns**	Linus Magnusson (ECMWF)
10:00 to 10:20	**Discussion on data sharing after campaigns**	
10:20 to 10:50	**Coffee break**	
10:50 to 11:10	**Evaluation of the possible improvements of NWP products with the integration of observational data from dropsondes released from stratospheric platforms.**	Diana Islas Flores (University of Reading)
11:10 to 11:30	**Quality and use of UAS observations (Bäver project - Sweden)**	Jose Faundez Alarcon (SMHI)
11:30 to 11:50	**Drifting buoys data denial studies and impact of field campaign data**	Magnus Lindskog (ECMWF)
11:50 to 12:10	**Weather forecasting during Arctic expeditions: Experiences from ARTofMELT**	Michael Tjernström (Stockholm University)
12:10 to 12:30	**Observation influence in convective-scale data assimilation: Reanalysis and PAI diagnostics for the Swabian MOSES 2023 campaign in southwest Germany**	Maurus Borne (KIT)
12:30 to 14:00	**Lunch break**	

	Afternoon session	
14:00 to 14:20	**Improving mountain weather forecasts using TEAMx-UK observations**	Helen Dacre (University of Reading)
14:20 to 14:40	**FESSTVaL five years after: Insights from the field experiment on sub-mesoscale spatio-temporal variability in Lindenberg**	Bastian Kirsch (Karlsruhe Institute of Technology)
14:40 to 15:00	**Validation of vertical moisture structure in cold sectors of extratropical cyclones based on airborne lidar observations obtained during the NAWDIC campaign**	Annabell Weber (DLR)
15:00 to 15:20	**Spaceborne radar and lidar: from model evaluation to assimilation**	Robin Hogan (ECMWF)
15:20 to 15:50	**Coffee break**	
15:50 to 16:10	**Validation of ECMWF forecasts of the midlatitude waveguide nearby divergence using AR Recon dropwindsondes**	Ryan Torn (University at Albany, SUNY)
16:10 to 16:30	**Evaluating the lower stratospheric moist bias using airborne lidar and radiosonde observations**	Andreas Schäfler
16:30 to 16:50	**Using the Atmosphere-Ocean Single-Column Model (AOSCM) with HALO-AC3 and other observational campaigns to understand model representation of warm and moist air intrusions to the Arctic**	Gunilla Svensson (Stockholm University)
16:50 to 17:10	**Towards improving Arctic liquid cloud representation in the ECMWF model using MOSAiC observations**	Luise Schulte (ECMWF Visiting Scientist)
17:10 to 17:30	**SvalMIZ field campaigns for coupled NWP evaluation**	Sarah Keeley (ECMWF)
	Dinner	

Friday
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	Closing session	
09:00 to 09:20	**Field campaign data in observation-driven AI weather prediction: opportunities and challenges**	Peter Lean (ECMWF)
09:20 to 09:40	**Machine Learning Forecast Sensitivity**	James Doyle (U.S. Naval Research Laboratory)
09:40 to 10:00	**Observational campaigns in the age of AI: introducing ORCAS** Virtual presentation	Clare Eayrs (New York University)
10:00 to 10:20	**The Need for an Integrated, Multi-Scale Observational and Modeling Initiative to Improve Process Understanding of the Monsoon in Semi-arid Regions**	Bart Geerts (University of Wyoming)
10:20 to 10:50	**Coffee break**	
10:50 to 11:10	**TBC**	
11:10 to 12:10	**Panel discussion**	
12:10 to 12:30	**Wrap up**	
	Lunch	