


# 보 도 자 료

	◆ 2025. 7. 16. (수) 배포	
	◆ 총 7쪽 (본문 2쪽, 첨부 5쪽)	
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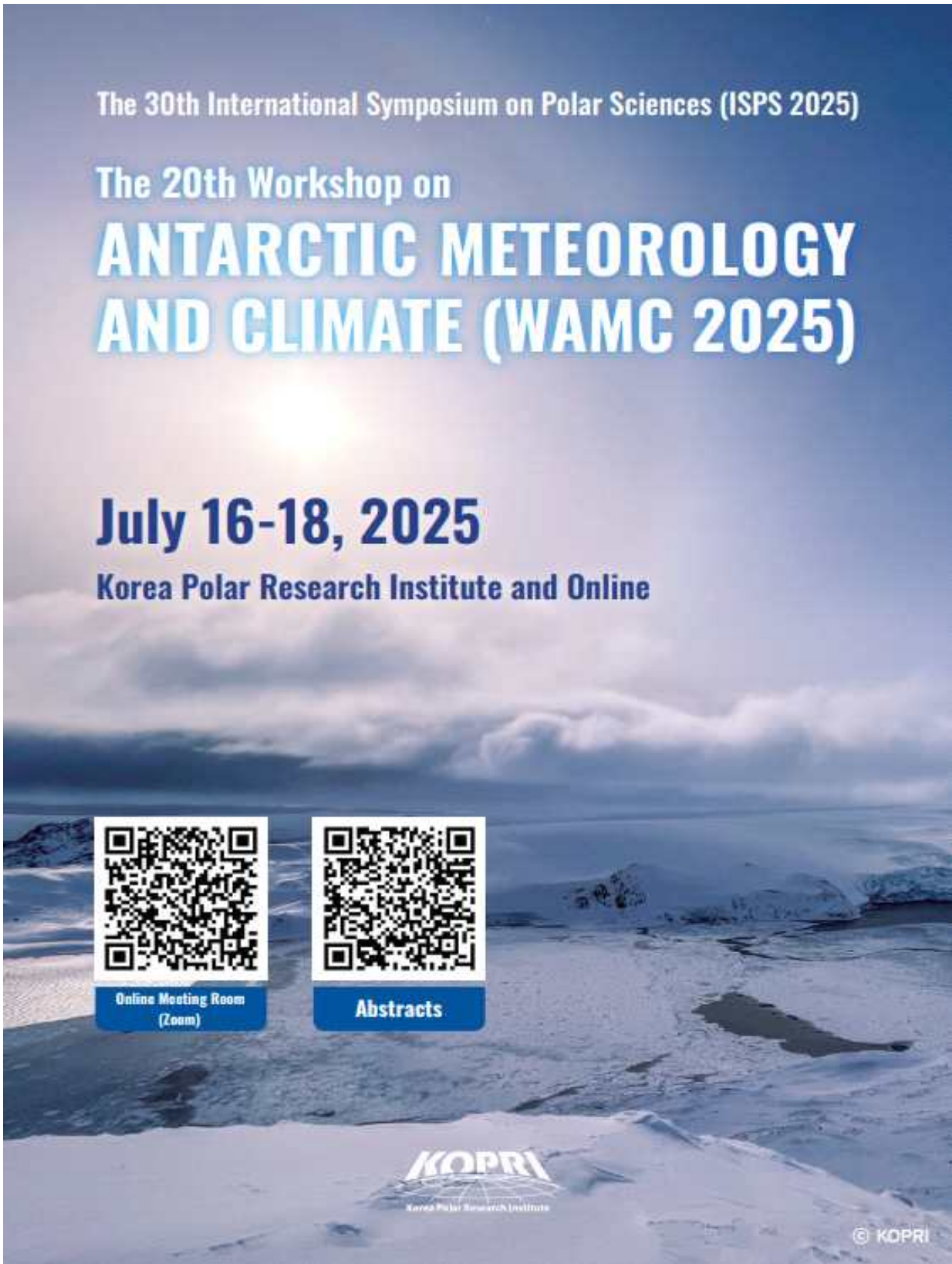
## 남극에서 답을 찾는 기후변화 감시와 예측

극지연구소, 인천 송도에서 제30차 국제 극지과학 심포지엄 개최

- 극지연구소(소장 신형철)가 오늘(16일)부터 18일(금)까지 사흘간 인천 송도 극지연구소에서 '제30차 국제 극지과학 심포지엄(ISPS 2025\*)'을 개최한다고 밝혔다.
- 국제 극지과학 심포지엄(ISPS 2025, The International Symposium on Polar Sciences)은 극지 과학 분야의 최신 연구 성과를 공유하고 국내외 연구자 간 협력 기반을 강화하기 위해 1988년 시작된 국제 학술대회로, 극지연구소는 2004년 설립 후 지금까지 행사를 주관해 오고 있다.
- 이번 심포지엄은 '제20차 남극 기상·기후 워크숍\*(WAMC 2025)'과 연계해 진행되며, 남극 지역의 기상관측 체계, 수치 모델링, 기후 변화 분석 등 극지 대기과학 전반에 걸친 다양한 주제 발표와 심도 있는 토론이 이뤄질 예정이다.  
\* 남극 기상기후 워크숍(WAMC, Workshop on Antarctic Meteorology and Climate): 남극 지역의 기상 및 기후와 관련된 최신 연구성과를 공유하고 국제협력 강화를 목적으로 매년 개최되는 국제워크숍
- 최근 남극에서 온난화 현상이 잇따라 관측되고 있으며, 이는 지구 전역에서 발생 중인 기상이변과도 관련이 높은 것으로 과학계는 보고 있다. 이에 따라 기후위기 대응과 미래 예측을 위한 남극 연구의 중요성은 더욱 높아졌다.

- 이번 심포지엄에는 미국, 이탈리아, 일본 등에서 130여 명의 남극 기후 분야 연구자들이 온·오프라인으로 참여하며, 총 8개 세션에서 50여 건의 발표를 통해 남극 대기와 기후 시스템 변화에 대한 논의를 이어간다.
- 행사 첫날인 7월 16일에는 ▲자동기상관측시스템(AWS) 운영 사례 ▲남극 기후 데이터 분석 ▲해빙 변화 감지 기술 등이 중점적으로 다뤄지며, 17일과 18일에는 ▲남극 대기 순환 ▲남극 강수 및 오존 변화 ▲남극 온난화 영향 분석 등 다양한 남극 기후 현상 연구에 대한 발표가 진행된다.
- 신진과학자와 기성과학자 간의 소통을 위한 세미나도 열린다. 극지연구소 최태진 책임연구원이 연사로 나서 30여 년간 수행해 온 남극 대기과학과 기상 연구에 대한 경험을 공유할 예정이다.
- 신형철 극지연구소 소장은 "30회라는 의미 있는 이정표를 맞이하며 각국의 남극 기상·기후 연구자들을 초청하게 되어 매우 뜻깊게 생각한다. 이번 심포지엄이 국제 협력의 토대 위에서 기상 예측의 정확도를 높이고 미래 기후 변화 대응 역량을 강화하는 데 중요한 계기가 되길 기대한다."고 말했다.

## **붙임 1. 제30차 국제 극지과학 심포지엄 (ISPS 2025) 프로그램북**



# Program

All times are in KST (UTC+9).

## July 16 (Wednesday)

08:10 – 08:40 Registration

### Opening

Sejong Conference Room

08:40 - 08:50 Introduction of KOPRI

08:50 - 08:55 Welcome Address  
Hyoung Chul Shin, President of KOPRI

08:55 – 09:00 WAMC Opening

### Session 1. AWS

Chair : Taejin Choi (Korea Polar Research Institute)

Sejong Conference Room

09:00 - 09:20 **S1-1. Sabina Kucieba (British Antarctic Survey)**  
An Overview of AWS Servicing at Halley and Rothera Research Stations and Unusual Phenomena Observed at Halley During the Summer Season *Virtual*

09:20 - 09:40 **S1-2. Lee Welhouse (AMRDC, University of Wisconsin - Madison)**  
The Automatic Weather Station and Polar Climate and Weather Station Field Season 2024-2025 *Virtual*

09:40 – 10:00 **S1-3. Lee Welhouse (AMRDC, University of Wisconsin - Madison)**  
The Automatic Weather Station and Polar Climate and Weather Station Field Season 2025-2026 Future Plan *Virtual*

10:00 – 10:20 Coffee Break

### Session 2. Data & Observations

Chair : Yonghan Choi (Korea Polar Research Institute)

Sejong Conference Room

10:20 - 10:40 **S2-1. Jinfei Wang (Sun Yat-sen University)**  
Identification of Antarctic sea ice regimes using objective data mining *In-person*

10:40 - 11:00 **S2-2. Simone Pulimeno (Ca' Foscari University of Venice)**  
Polar-AOD network : strengthening aerosol climatologies for the polar observing community *Virtual*

11:00 – 11:20 **S2-3. Matthew Lazzara (AMRDC, University of Wisconsin - Madison)**  
The Antarctic Meteorological Research and Data Center Data Repository : A Project Update *Virtual*

11:20 – 11:40 **S2-4. David Mikolajczyk (AMRDC, University of Wisconsin - Madison)**  
The Antarctic Meteorological Research and Data Center Website : An overview and discussion of the AMRDC website, featured projects, and real-time data display *Virtual*

11:40 – 12:00 **S2-5. Amin Beiranvand Pour (INOS, University Malaysia Terengganu)**  
PRISMA hyperspectral remote sensing satellite data for mineralogical mapping in Antarctica *Virtual*

12:00 - 13:30 Lunch Break

12:40 - 13:10 KOPRI Campus Tour

### Session 3. Forecasting & Modeling

Chair : Mariana Fontolan Litell (The Ohio State University)

Sejong Conference Room

13:30 - 13:50 **S3-1. Michael Johnson (NIWC LANT Polar Programs)**  
NPP Meteorology 2025 : Overview, Plans, and Goals *Virtual*

13:50 - 14:10	<b>S3-2. Kevin W. Manning (NSF National Center for Atmospheric Research)</b> AMPS Update - July 2025	<i>In-person</i>
14:10 - 14:30	<b>S3-3. Mariana Fontolan Litell (Byrd Polar and Climate Research Center - The Ohio State University)</b> Forecast Impact of Additional Radiosonde Ascents During the Year of Polar Prediction – Southern Hemisphere (YOPP-SH) Winter Campaign	<i>In-person</i>
14:30 - 14:50	<b>S3-4. Isabella Onsi (NIWC LANT Polar Programs)</b> Early Career Perspective on Antarctic Operations	<i>Virtual</i>
14:50 - 15:10	Coffee Break	
15:10 - 15:30	<b>S3-5. Keith Hines (Byrd Polar and Climate Research Center, The Ohio State University)</b> Skillful Polar WRF Cloud Modeling of a Warm Winter Atmospheric River at the Antarctic Peninsula	<i>Virtual</i>
15:30 - 15:50	<b>S3-6. Saurav Dey Shuvo (Byrd Polar and Climate Research Center, The Ohio State University)</b> Simulating the 12 February 2020 North Dakota Blizzard: An Application of a Blowing Snow Algorithm Coupled with the Polar Weather Research and Forecasting Model	<i>Virtual</i>
15:50 - 16:10	<b>S3-7. Étienne Vignon (Laboratoire de Météorologie Dynamique /CNRS)</b> Advanced precipitation scheme in ICOLMDZ with improved microphysics and subgrid cloud-hydrometeor interactions to better simulate polar precipitation	<i>Virtual</i>
16:10 - 16:30	<b>S3-8. Jenna Palmer (NPP Meteorology)</b> Improving Antarctic Fog Forecasting using Data Analytics	<i>Virtual</i>
16:30 - 16:50	<b>S3-9. Phil Reid (Australian Bureau of Meteorology)</b> Coupled model sea ice forecasts - some results and complexities	<i>Virtual</i>
16:50 - 17:10	Group Photo	

**Side meeting:**  
Modeling Long-term Climate Change with Ice Sheet Evolution in Germany

Penguin Seminar Room (In-person Only)

### Session 4. Poster Session

*In-person Only*

*Sejong Conference Room*

17:10 - 18:00	<b>S4-1. Qinghua Yang (Sun Yat-sen University, Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai))</b> A dataset of the edge of each polynya in the Antarctica	
	<b>S4-2. Clare Eayrs (Korea Polar Research Institute)</b> Enhancing Antarctic Forecasting and Services through the Polar Coupled Analysis and Prediction for Services (PCAPS) Project	
	<b>S4-3. Enbo Ge (Chinese Academy of Meteorological Sciences)</b> Temperature characteristics of ABL at Zhongshan Station, Antarctica observed by MTP	
	<b>S4-4. Matteo Willeit (Potsdam Institute for Climate Impact Research)</b> Convection in the Southern Ocean triggered by Heinrich events	
	<b>S4-5. Ran Yang (School of Atmospheric Sciences, Sun Yat-sen University)</b> Unveiling the Compound Nature of Antarctic Extremes: Regional Drivers and Seasonal Variability of Precipitation and Warm Events	
	<b>S4-6. Hyeogdo Kweon (Department of Atmospheric Sciences, Yonsei University)</b> Spatiotemporal Correlation Between Antarctic Springtime Stratospheric Ozone and Meteorological Factors Based on MERRA-2 Reanalysis	
18:00 - 20:30	Welcome Dinner	<i>Cafeteria</i>

## July 17 (Thursday)

08:50 – 09:00 Registration & Beginning of the 2nd-day Workshop

### Session 5. Research-I

Chair : Jordan Powers (NSF National Center for Atmospheric Research)

Sejong Conference Room

09:00 - 09:20	<b>S5-1. Taejin Choi (Korea Polar Research Institute)</b> Ten-Year Measurements of Surface Radiation and Turbulent Heat Flux at Jang Bogo Station, Terra Nova Bay, Antarctica	In-person
09:20 - 09:40	<b>S5-2. Jordan Powers (National Center for Atmospheric Research)</b> A Modeling Investigation of an Antarctic Mass Loss Event	In-person
09:40 – 10:00	<b>S5-3. Satyajit Singh Saini (Indian Institute of Technology Roorkee)</b> Seasonal Variability and Long-Range Transport of Black Carbon Aerosols over East Antarctica: Observational Insights from Bharati Station	In-person
10:00 – 10:20	<b>S5-4. Hendrik Huwald (Ecole Polytechnique Federale de Lausanne)</b> Instrumentation of a tall tower at Princess Elisabeth station to study the vertical energy exchange during blowing snow events in Antarctica	In-person
10:20 – 10:40	Coffee Break	
10:40 - 11:00	<b>S5-5. Diana Francis (Khalifa University)</b> Role of Foehn winds in snow sublimation and land-ice changes	Virtual
11:00 – 11:20	<b>S5-6. Ricardo Fonseca (Khalifa University)</b> Atmospheric Triggers of Ice-Shelf Fronts Calving Events in Antarctica	Virtual
11:20 – 11:40	<b>S5-7. Naohiko Hirasawa (National Institute of Polar Research)</b> Detection of extremely weak precipitation	Virtual
11:40 – 12:00	<b>S5-8. Naoyuki Kurita (Nagoya University)</b> Summer warming in the East Antarctic interior triggered by southern Indian Ocean anthropogenic warming	Virtual
12:00 - 13:30	Lunch Break	
	<b>12:10 - 13:00 Seminar for Early Career Researchers (Speaker: Taejin Choi (KOPRI))</b>	Penguin Seminar Room (In-person Only)

### Session 6. Research-II

Chair : Sang-Jong Park (Korea Polar Research Institute)

Sejong Conference Room

13:30 - 13:50	<b>S6-1. Christine Kaufhold (Potsdam Institute for Climate Impact Research)</b> Impact of Antarctic and Greenland Ice Sheet melting on sea level, regional climate, and future coastlines	In-person
13:50 - 14:10	<b>S6-2. Shoudong Zhao (Chinese Academy of Meteorological Sciences)</b> Observed Top Ten Heatwaves in the Antarctic Peninsula (1991–2023)	In-person
14:10 - 14:30	<b>S6-3. Sang-Jong PARK (Korea Polar Research Institute)</b> 35-YEARS OF CLIMATOLOGY OF THE KING SEJONG STATION, ANTARCTICA	In-person
14:30 - 14:50	<b>S6-4. Minghu Ding (Chinese Academy of Meteorological Sciences)</b> Blocking Events in East Antarctica	In-person
14:50 - 15:10	Coffee Break	
15:10 – 15:30	<b>S6-5. Evan Quinter (University of Delaware) and Mary Stack (University of Virginia)</b> Trends in Storminess Over the West Antarctic Peninsula : A Multi-Method Analysis of ERA5 Reanalysis Data (1979-2021)	Virtual

15:30 – 15:50	<b>S6-6. Cavaliere Alice (National Research Council, Institute of Polar Sciences, Italy)</b> Surface radiation budget data in a bipolar perspective: observations, comparison and exploiting for products	Virtual
15:50 – 16:10	<b>S6-7. David H. Bromwich (Byrd Polar and Climate Research Center, The Ohio State University)</b> Is Interior Antarctica on the Threshold of Major Climate Change?	Virtual
16:10 – 16:30	<b>S6-8. Xun (Jerry) Zou (Scripps Institution of Oceanography, University of California San Diego)</b> March 2022 East Antarctic Heatwave Under Different Background Climate Conditions	Virtual
16:30 – 16:50	Coffee Break	

### Session 7. Research-III

Chair : Ja-Ho Koo (Yonsei University)

Sejong Conference Room

16:50 – 17:10	<b>S7-1. Hyesun Choi (Korea Polar Research Institute)</b> Changes in the Timing of Stratospheric Final Warming and Their Link to Recent Antarctic Summer Climate	In-person
17:10 – 17:30	<b>S7-2. Ja-Ho Koo (Yonsei University)</b> Connection between the Antarctic stratospheric ozone and sea ice extent in the Weddell Sea in austral spring	In-person
17:30 – 17:50	<b>S7-3. Dong-Chan Hong (Seoul National University)</b> How does Antarctic ozone depletion affect the Southern Hemisphere climate?	In-person
17:50 – 18:10	<b>S7-4. Minju Park (Yonsei University)</b> Spatiotemporal characteristics of Antarctic springtime tropopause from ozonesonde observations and its relationship with total ozone column	Virtual

## July 18 (Friday)

08:50 – 09:00 Registration & Beginning of the 3rd-day Workshop

### Session 8. Research-IV

Chair : Eui-Seok Chung (Korea Polar Research Institute)

Sejong Conference Room

09:00 – 09:20	<b>S8-1. Rui Zhong (School of Atmospheric Sciences, Sun Yat-sen University)</b> Revisiting the Interaction Between Antarctic Sea Ice and Southern Ocean Cyclones	In-person
09:20 – 09:40	<b>S8-2. Kaixin Liang (Sun Yat-sen University)</b> Regional extreme Antarctic sea-ice retreat linked to tropical forcing	In-person
09:40 – 10:00	<b>S8-3. Peiyi Lin (School of Atmospheric Sciences, Sun Yat-sen University)</b> Dipolar Distribution of Cyclones and Its Influence on Sea Ice Extremes in the Amundsen–Bellingshausen Seas	In-person
10:00 – 10:20	<b>S8-4. Antonia Louise Radlwimmer (University of Otago)</b> Changing storm behaviour and its links to winter sea ice processes in the Ross Sea	In-person
10:20 – 10:40	Coffee Break	
10:40 – 11:00	<b>S8-5. Diana Francis (Khalifa University)</b> Atmospheric Drivers of Coastal and Open-Ocean Polynyas around Antarctica	Virtual
11:00 – 11:20	<b>S8-6. Feba Francis (Universite Catholique de Louvain)</b> Wind nudging experiments to simulate the 1970s drop in the sea ice extent in the Southern Ocean	Virtual

### Closing

Sejong Conference Room