25th International TOVS Study Conference (ITSC-25)

8th - 14th May 2025 Goa, India

Wednesday 7th May 2025

18:00 - 20:00 Registration

Thursday 8th May 2025

8:00 - 9:00 Registration

9:00 - 9:30 Opening session

	Reima Eresmaa and Fiona Smith *ITWG co-chairs*	Opening of ITSC-25
	NCMRWF representatives	Welcome words from NCMRWF
	Reima Eresmaa and Fiona Smith *ITWG co-chairs*	Practical information

Session 1 - Coordination of satellite systems, operations and end-user support

Session Chairs: Reima Eresmaa and Fiona Smith

9:30 - 10:15 oral presentations (each 12 minutes + 3 minutes discussion)

1.01	Sreerekha Thonipparambil *EUMETSAT*	User preparation for EUMETSAT's next generation sounding missions on MTG-S and EPS-SG
1.02	Vinia Mattioli *EUMETSAT*	EUMETSAT Polar System - Second Generation: highlights on the passive microwave missions
1.03	Jordan Gerth (recorded presentation) *NOAA*	Risks of RFI with environmental satellite sensing based on spectrum proceedings and regulations

10:15 - 10:45 Health break

10:45 - 11:30 oral presentations (each 12 minutes + 3 minutes discussion)

1.04	Heikki Pohjola *WMO*	WMO Gap Analysis for Space-based Component of the WMO Integrated Global Observing System (WIGOS) Using WMO OSCAR/Space Tools
1.05	Liam Gumley *SSEC, University of Wisconsin-Madison*	The WMO DBNet service for providing low latency sounder data to NWP centers: Recent progress and future plans
1.06	Simon Elliott *EUMETSAT*	Global satellite data exchange in the era of WIS 2.0

11:30 - 11:35 poster introductions with no visual aids (each 1 minute)

1p.01	Heikki Pohjola *WMO*	The Direct Broadcast Network Benefits for United Nation´s Early Warnings for All Initiative
1p.02	Heikki Pohjola *WMO*	WMO Core and Recommended Satellite Data

Session 2 - Impact studies

Session Chairs: Kozo Okamoto and Indira Rani

11:35 - 11:50 poster introductions with no visual aids (each 1 minute)

2p.01	Christina Köpken-Watts *DWD*	Observation data impact studies in the global ICON/EnVar system of DWD
2p.02	Sumit Kumar *NCMRWF*	NCMRWF operational NWP system: status and observation impact analysis
2p.03	Hao Hu *CMA Earth System Modeling and Prediction Centre (CEMC)*	Impacts of microwave instruments onboard FengYun-3F on numerical weather prediction
2p.04	Suryakanti Dutta *NCMRWF/MoES*	Assessment of NOAA-21 ATMS using NCMRWF Global Forecast System

2p.05	Sujata Pattanayak *National Centre for Medium Range Weather Forecasting, MoES*	Impact of Microwave Sounder Data from Polar-orbiting Satellites in NCMRWF Global Forecast System
2p.06	Ahreum Lee *KIAPS*	Assimilation of clear-sky radiances from GOES-16 and 18 in the KIM data assimilation system
2p.07	Reima Eresmaa *Finnish Meteorological Institute*	The impact of microwave sounder radiance assimilation in convective-scale limited-area NWP over the Nordic region and in the Arctic
2p.08	Nahidul Samrat *Bureau of Meteorology*	Satellite Sounder Absence: Evaluating the Impact of Satellite Sounder Observation Across Diverse Geographic Regions
2p.09	Fiona Smith *Bureau of Meteorology*	Satellite Observation Impacts in Australian NWP Models

11:50 - 12:00 Group photo

12:00 - 13:30 Lunch break

Session 3 - New microwave capabilities

Session Chairs: Mary Borderies and Dorothee Coppens

13:30 - 13:40 poster introductions with no visual aids (each 1 minute)

3p.01	Niels Bormann *ECMWF*	Evaluations and exploratory assimilation trials with data from the TROPICS constellation in the ECMWF system
3p.02	Niels Bormann *ECMWF*	Forecast impact expected from EPS-Sterna's 325 GHz channels
3p.03	Benjamin Ruston *UCAR/JCSDA*	JEDI Skylab Demonstration of Microwave Small Satellites
3p.04	Brett Candy *UK Met Office*	An initial evaluation of the Sterna radiometer data using Met Office NWP fields
3p.05	Stephanie Guedj *The Norwegian Meteorological Institute*	Early evaluation of the Arctic Weather Satellite (AWS) data assimilation in regional NWP systems
3p.06	Vinia Mattioli *EUMETSAT*	EUMETSAT microwave sounder constellation: the EPS-Sterna Programme
3p.07	David Duncan *ECMWF*	Preparations for EPS-SG microwave instruments at ECMWF
3p.08	David Duncan *ECMWF*	Analysis of Radio Frequency Interference (RFI) from 6.9 to 89 GHz in an NWP system

13:40 - 14:55 oral presentations (each 12 minutes + 3 minutes discussion)

3.01	Allen Huang *University of Wisconsin Madison* for Richard Delf, *Weather Stream*	The Global Environment Monitoring System (GEMS): a constellation of passive microwave radiometers on a CubeSat platform
3.02	B R R Hari Prasad Kottu *National Centre for Medium Range Weather Forecasting*	Impact of Microsat-2B Radiance Data Assimilation in the NCMRWF Global Forecast System
3.03	Hélène Dumas *Météo-France*	Preliminary assessment of the Arctic Weather Satellite microwave sounder with the ARPEGE global model
3.04	David Duncan *ECMWF*	Evaluation of the Arctic Weather Satellite in the ECMWF system
3.05	Mitch Goldberg *The City College of New York*	The Limb Adjustment of the TROPICS Microwave Sounder Constellation

Session 4 - New infrared capabilities

Session Chairs: Dave Tobin and Ethel Villeneuve

14:55 - 15:05 poster introductions with no visual aids (each 1 minute)

4p.01	Chris Burrows *ECMWF*	Data quality assessment and assimilation of HIRAS-2 on FY-3E
4p.02	Chris Burrows *ECMWF*	Preparation for the next generation hyperspectral infrared sounders MTG-IRS and IASI-NG at ECMWF
4p.03	Olivier Audouin Météo-France (on behalf of Thomas Carrel-Billiard)	Preparing Météo-France's Numerical Weather Prediction Models for the Assimilation of anticipated MTG-IRS sounder data
4p.04	Stefano Migliorini *Met Office*	Plans for assimilation of MTG-IRS observations at the Met Office
4p.05	Tomoya Urata *Japan Meteorological Agency*	Preliminary studies for the assimilation of Himawari-10/GHMS in the JMA's NWP systems
4p.06	Ruoying Yin *CEMC*	The assimilation of FY-4B GIIRS radiance data in CMA-GFS 4Dvar system

15:05 - 16:05 Poster viewing (Sessions 1, 2, 3, and 4) and Coffee break

16:05 - 17:05 oral presentations (each 12 minutes + 3 minutes discussion)

4.01	Naoto Kusano *JMA, ECMWF*	Assimilation of GIIRS on-board FY-4B in the ECMWF IFS
4.02	Young-Jun Cho *Numerical Modeling Center, Korea Meteorological Administration*	Forecast Impact of Simulated GeoHIS based on KIM-OSSE
4.03	Andrew Heidinger (recorded presentation) *NOAA NESDIS GEO*	NOAA's GXS Sounder
4.04	John Van Naarden *L3Harris*	Himawari-10 Sounder Overview and Update

17:05-17:35 Introductions to the ITWG Working Groups (each 5 minutes)

- Advanced sounders
- Products and software
- International issues and future systems
- Numerical weather prediction
- Climate
- Radiative transfer and surface properties

18:00 - Ice-breaker event

Friday 9th May 2025

Session 5 - Radiative transfer studies

Session Chairs: Vito Galligani and Ben Johnson

8:45 - 10:00 oral presentations (each 12 minutes + 3 minutes discussion)

5.01	Benjamin Johnson *UCAR/JCSDA*	The JCSDA Community Radiative Transfer Model
5.02	Jun Yang *CMA Earth System Modeling and Prediction Centre*	Progress in Advanced Radiative Transfer Modeling System (ARMS)
5.03	Jean-Marie Lalande *CNRM, Meteo France, CNRS*	Enhancing Atmospheric Transmittance Estimation for TOVs through Advanced Statistical Approaches
5.04	Tiziano Maestri *University of Bologna, Physics and Astronomy Department "Augusto Righi"*	On Fast Computations of Upwelling Far- and Mid-Infrared Radiances for All-Sky analysis
5.05	Xu Liu (recorded presentation) *Science Directorate, NASA Langley Research Center*	Recent Progress on PCRTM and its Applications in MW, IR, and Solar Spectral Regions

10:00 - 10:15 poster introductions with no visual aids (each 1 minute)

5p.01	Brett Candy *UK Met Office*	Development of new fast radiative transfer coefficients for microwave sensors
5p.02	Vito Galligani *Centro de Investigaciones del Mar y la Atmósfera (CIMA)*	Exploring how uncertainties in NWP model microphysics are carried through to microwave radiance space / Exploring their relative importance compared with radiative transfer inconsistencies
5p.03	Christina Köpken-Watts *DWD*	Extending the fast forward operator MFASIS-NN for solar channels to NIR and water vapour sensitive channels, and aerosol affected profiles
5p.04	Cristina Lupu *ECMWF*	Evaluation of RTTOV-14 in the ECMWF NWP system
5p.05	Yi-Ning Shi *China Meteorological Administration*	Improvements of the microwave gaseous absorption scheme based on statistical regression and its performance in observation operators for satellite and ground-based microwave radiometers
5p.06	Emma Turner *ECMWF*	A new and extended diverse 40,000 atmospheric profile dataset from the CAMS atmospheric composition forecasting system
5p.07	Viviana Volonnino *CNRM, Université de Toulouse, Météo-France, CNRS*	Impact of Spectroscopy on IASI and FORUM Clear-Sky Simulations using RTTOV

10:15 - 10:45 Health break

Session 6 - Generation of products

Session Chairs: Anna Booton and Graeme Martin

10:45 - 11:45 oral presentations (each 12 minutes + 3 minutes discussion)

6.01	Bryan Karpowicz (recorded presentation) *UMBC/GESTAR II/NASA*	Assimilation of Reconstructed Radiances from IASI and CrIS Principal Component Scores into the GEOS-ADAS
6.02	Joe Taylor *SSEC, University of Wisconsin-Madison*	The Cross-track Infrared Sounder (CrIS) NASA PCA RED Product
6.03	Dorothee Coppens *EUMETSAT* (on behalf of Jonas Wilzewski)	Hyperspectral infrared L2 product development at EUMETSAT
6.04	Hyun-sung Jang *AMA / NASA LaRC*	Planetary Boundary Layer Height Estimation: Methodology and Case Study using NAST-I FIREX-AQ Field Campaign Data

11:45 - 12:00 poster introductions with no visual aids (each 1 minute)

6p.01	Svetlana Akishina *St. Petersburg State University*	Methodology for determination of the ozone vertical distribution elements from satellite spectral measurements of IR thermal radiation
6p.02	Anna Booton *Met Office*	Update on the NWP SAF satellite data processing packages: AAPP, IRSPP and MWIPP
6p.03	Xavier Calbet *AEMET*	Retrievals of Water vapor inhomogenities within the field of view
6p.04	Liam Gumley *SSEC, University of Wisconsin-Madison*	Community Satellite Processing Package (CSPP) for Low Earth Orbit (LEO) Satellites: Recent Updates and Future Plans
6p.05	Bozena Lapeta *IMGW-PIB*	Quality of the ATOVS-derived precipitation amount over Poland during the flood event in September 2024
6p.06	Xiaoqing Li *National Satellite Meteorological Center, China Meteorological Administrtion*	A precipitation retrieval algorithm for FY-3E microwave sounders
6p.07	Minghua Liu *Nanjing University of Information Science and Technology*	All-Sky Temperature and Humidity Retrieval from the MWRI-RM Onboard the FY-3G Satellite
6p.08	Dorothee Coppens on behalf of Simon Warnach *HamTec Consulting Ltd.*	Level 2 validation and monitoring activities at EUMETSAT for future hyperspectral infrared mission
6p.09	Dorothee Coppens *EUMETSAT* (on behalf of Jose Luis Villaescusa Nadal)	Validation of IASI Temperature and Humidity using 11 years of airplane (AMDAR) measurements

12:00 - 13:30 Lunch break

Session 7 - Exploitation of artificial intelligence and machine learning

Session Chairs: Magnus Lindskog and Stephanie Guedj

13:30 - 14:45 oral presentations (each 12 minutes + 3 minutes discussion)

7.01	Chris Burrows *ECMWF*	Skilful weather predictions from observations alone: general concept
7.02	Niels Bormann *ECMWF*	Skilful weather predictions from observations alone: the role of passive sounders
7.03	Wei Han (recorded presentation) *CMA Earth System Modeling and Prediction Centre (CEMC)*	Assimilation of all satellite observations using AI: some primary results
7.04	Alice Abramowicz *KNMI*	Prototype for bias-correction of microwave radiance observations using machine learning methods
7.05	Alexander Polyakov *Saint-Petersburg University*	Neural network approach to determination of total and tropospheric ozone columns from spectral measurements of outgoing thermal radiation

14:45 - 14:55 poster introductions with no visual aids (each 1 minute)

7p.01	Niels Bormann *ECMWF*	Sea ice surface emissivity modelling using data assimilation and machine learning
7p.02	Swapan Mallick *Swedish Meteorological and Hydrological Institute (SMHI)*	Deep Learning Approach to Estimating Uncertainty in the Copernicus Arctic Regional Second Generation Reanalysis: A Prototype
7p.03	Niobe Peinado-Galan *AEMET*	Analysis of severe convection situations in Africa and Europe with the new NWCSAF sSHAI product derived from IASI as a proxy for MTG-IRS data
7p.04	Likun Wang *University of Maryland*	Estimating Tropospheric Methane from Cross-track Infrared Sounder (CrIS) Spectra using a Machine Learning Method
7p.05	Yunfan Yang *Institute of atmospheric physics*	Reconstruction of 3D Radar Reflectivity using Passive Microwave Imager Radiance
7p.06	Azadeh Gholoubi Khonacha *NOAA/NWS/NCEP/EMC*	Using Machine learning for SMAP Soil moisture retrieval

Session 8 - Climate studies

Session Chairs: Bill Bell and Nathalie Selbach

14:55 - 15:00 poster introductions with no visual aids (each 1 minute)

8p.01	Nathalie Selbach *Deutscher Wetterdienst*	25 Years of a Sustained Generation of Satellite-Based Climate Data Records by EUMETSAT CM SAF
8p.02	David Tobin *CIMSS/SSEC*	22 Years of Hyperspectral Infrared Satellite Observations: Creating Climate Data Records and Examining Trends in Top-of-atmosphere Spectral Radiances, Integrated Nadir Longwave Radiance (INLR), and Outgoing Longwave Radiation (OLR)
8p.03	Younousse Biaye *Unversité Gaston Berger de Saint-Louis*	Study of the evolution of the Sahelian climate based on satellite observations and ATOVS data

15:00 - 16:00 Poster viewing (Sessions 5, 6, 7, and 8) and Coffee break

16:00 - 17:15 oral presentations (each 12 minutes + 3 minutes discussion)

8.01	Shibin Balakrishnan *India Meteorological Department*	Embarking the journey of Fundamental Climate Data Records (FCDR) of Indian Meteorological Satellites.
8.02	Bill Bell *ECMWF*	The assimilation of radiances in the ECMWF ERA6 global reanalysis.
8.03	Timo Hanschmann *EUMETSAT*	Microwave temperature sounder fundamental climate data records for climate applications
8.04	Graeme Martin *UW-Madison / SSEC*	The NASA CrIS Level 1B Version 4 Software and Product
8.05	Likun Wang *University of Maryland*	New Stratospheric Temperature Climate Data Records by Merging SSU with AIRS

Saturday 10th May 2025

9:00 - 10:15 Working groups session 1

Advanced sounders

Products and software

International issues and future systems

10:15 - 10:45 Health break

10:45 - 12:00 Working groups session 1 continued

12:00 - 13:30 Lunch break

13:30 - 14:45 Working groups session 2

Numerical weather prediction

Climate

Radiative transfer and surface properties

14:45 - 15:15 Health break

15:15 - 16:30 Working groups session 2 continued

16:30 - 16:45 Health break

16:45 - 18:00 Technical subgroups meetings

Fast RTMs

Sunday 11th May 2025

Local excursions and socializing

Monday 12th May 2025

Session 9 - Advances in assimilation methods

Session Chairs: Roger Randriamampianina and Hyoung-Wook Chun

8:45 - 10:15 oral presentations (each 12 minutes + 3 minutes discussion)

9.01	Hui Christophersen *U.S. Naval Research Laboratory Marine Meteorology Division*	Adaptive Estimation of ATMS Observation Uncertainty to Improve Atmospheric Prediction
9.02	Ethel Villeneuve *ECMWF*	Expanding the use of geostationary satellite data at ECMWF
9.03	Erin Jones (recorded presentation) *UMD ESSIC @ NASA GMAO*	Developing a SWIR/MWIR-based Cloud Detection for CrIS in CADS
9.04	Qifeng Lu *CMA / CEMC*	Enhancing Numerical Weather Prediction Accuracy through EN4DVAR and Novel Satellite Data Assimilation
9.05	Young-Chan Noh *Korea Polar Research Institute*	Vertical localization for the microwave humidity sounder in the ensemble Kalman filter
9.06	William Campbell (recorded presentation) *U.S. Naval Research Laboratory*	Graph Theoretic Observation Thinning for Satellite Radiances

10:15 - 10:45 Health break

10:45 - 11:15 oral presentations (each 12 minutes + 3 minutes discussion)

9.07	Xi Shuang *Center for Earth System Modelling and Prediction of China Meteorological Administration*	Effect of bias correction sample selection on FY-3D satellite microwave humidity data assimilation in CMA_GFS model
9.08	Thomas Buey *Meteo France*	Introducing horizontal correlations of satellite observation errors into the data assimilation system of the AROME model

11:15 - 11:30 poster introductions with no visual aids (each 1 minute)

9p.01	Olivier Audouin *Meteo France*	Assimilating FCI data within the Météo-France models
9p.02	Olivier Audouin *Meteo France*	Assimilation of CrIS sounder data in FSR format in the ARPEGE model
9p.03	Maria Eugenia Dillon *Consejo Nacional de Investigaciones Científicas y Técnicas; Servicio Meteorológico Nacional*	Usage of L2 soundings in the data assimilation and numerical weather prediction system at the Argentinian NMS: present implementation and experiments.
9p.04	Na-Mi Lee *Korea Meteorological Administration*	Diagnostics of CrIS Preprocessing System in Korean Integrated Model (KIM)
9p.05	Cristina Lupu *ECMWF*	Assimilation of data from the FCI onboard MTG-I1 into the ECMWF system
9p.06	Hiroyuki Shimizu *Japan Meteorological Agency*	Development for better utilization of AMSR3 humidity sounding channels in JMA's global NWP system
9p.07	Liam Steele *ECMWF*	Assessing the thinning scale for humidity sounding observations at ECMWF

Session 10 - All-sky assimilation

Session Chairs: Mitch Goldberg and Stefano Migliorini

11:30 - 12:15 oral presentations (each 12 minutes + 3 minutes discussion)

10.01	Mary Borderies *Météo-France/cnrm*	Perturbations of all-sky microwave radiances forward operator specifications within the Ensemble of Data Assimilation system of Météo-France
10.02	Christina Köpken-Watts *DWD*	Operational all-sky assimilation of geostationary water vapour channels in a regional ensemble Kalman filter NWP system
10.03	Izumi Okabe *MRI / Japan Meteorological Agency*	Global all-sky radiance assimilation for geostationary satellite imagers

12:15 - 13:45 Lunch break

13:45 - 14:15 oral presentations (each 12 minutes + 3 minutes discussion)

10.04	Kozo Okamoto *JMA/MRI*	Global all-sky radiance assimilation for IASI
10.05	Liam Steele *ECMWF*	Enhancing the exploitation of all-sky microwave sensors at ECMWF using inter-channel error correlations

14:15 - 14:20 poster introductions with no visual aids (each 1 minute)

10p.01	Antoine Chemouny *CNRM/CNES*	Assimilation of IASI all-sky radiances for Numerical Weather Prediction
10p.02	Christina Köpken-Watts *DWD*	ICON and IFS model cloud evaluation using visible imagers on geostationary satellites

Session 11 - Calibration of sensors

Session Chairs: Jerome Vidot and Liam Gumley

14:20 - 14:30 poster introductions with no visual aids (each 1 minute)

11p.01	Harshitha Bhat *CLC Space GmbH*	EUMETSAT's IRS L2 Cal/Val and monitoring activities
11p.02	Hareef Baba Shaeb Kannemadugu *National remote sensing centre, Indian Space research Organisation*	Radiosonde Network for NICES (RANN): data products, satellite data validation and applications in air pollution research and atmospheric dynamics
11p.03	Vinia Mattioli *EUMETSAT*	EUMETSAT Polar System - Second Generation: pre-launch characterization of the microwave sounder (MWS) onboard Metop-SGA1
11p.04	Joe Taylor *SSEC, University of Wisconsin-Madison*	High Spatial and Spectral Resolution Infrared Observations from the Scanning High-resolution Interferometer Sounder (S-HIS): Recent Datasets and Next-Gen Sensor Development
11p.05	Qifeng Lu *CMA / CEMC (on behalf of Lu Lee)*	FY-4B/GIIRS on-orbit status and post-launch calibration activities

14:30 - 15:15 oral presentations (each 12 minutes + 3 minutes discussion)

11.01	Quentin Cebe *CNES*	IASI-NG : Overview of L1 processing and performances
11.02	Guillaume Deschamps *EUMETSAT*	Spectral Response Function Retrieval of spaceborne Fourier Transform Spectrometers – Application to Metop IASI
11.03	Fuzhong Weng *CMA Earth System Modeling and Prediction Centre*	An energy-conservation system developed for calibrating satellite microwave instruments

15:15 - 16:15 Poster viewing (Sessions 9, 10, and 11) and Coffee break

Session 8 - Climate studies

Session Chairs: Heikki Pohjola and Sreerekha Thonipparambil

16:15 - 16:30 oral presentations (each 12 minutes + 3 minutes discussion)

8.05	Guido Masiello *University of Basilicata*	Comprehensive Infrared forward-inverse analysis of the Ozone hole with IASI

Session 12 - Space agency reports

Session Chairs: Heikki Pohjola and Sreerekha Thonipparambil

16:30 - 17:45 oral presentations (each 12 minutes + 3 minutes discussion)

12.01	Bojan Bojkov *EUMETSAT*	Overview of the EUMETSAT operated missions and their applications
12.02	Kozo Okamoto *JMA/MRI*	Status report of space agency: JMA and JAXA
12.03	Pradeep Thapliyal *Space Applications Centre (ISRO)*	ISRO Agency Report: Present and future satellite instruments in support of Met-Ocean applications
12.04	Lihang Zhou (recorded presentation) *NOAA*	An Update of NOAA Satellite Missions for ITWG
12.05	Francisco Bermudo *CNES - Centre National d'Etudes Spatiales*	Overview of CNES Earth Observation programs

19:00 - Banquet dinner

Tuesday 13th May 2025

Session 13 - NWP centre status reports

Session Chairs: Niels Bormann and Brett Candy

8:45 - 9:45 one-slide introductions to poster presentations (each 3 minutes)		
13p.01	Olivier Audouin *Meteo France*	Ongoing developments on satellite radiance assimilation at Météo-France
13p.02	Hui Christophersen *U.S. Naval Research Laboratory Marine Meteorology Division*	Recent Earth observation developments at the U.S. Naval Research Laboratory
13p.03	Hyoung-Wook Chun *KMA*	Satellite Radiance Data Assimilation at Korea Meteorological Administration
13p.04	Mohamed Dahoui *ECMWF*	ECMWF NWP changes
13p.05	Christina Köpken-Watts *DWD*	Overview of recent developments in satellite radiance data assimilation at DWD
13p.06	Qifeng Lu *CMA / CEMC*	Status of Satellite Data Assimilation at CMA NWP system
13p.07	Isabel Monteiro *KNMI*	Present and future use of satellite atmospheric sounding data in United Weather Centres West
13p.08	Hidehiko Murata *Japan Meteorological Agency*	Recent upgrades and progresses of satellite radiance data assimilation at JMA
13p.09	Stefano Migliorini *Met Office*	Satellite radiance assimilation at the Met Office
13p.10	John P George *NCMRWF, Ministry of Earth Sciences (Government of India)*	NCMRWF NWP status since ITSC-24
13p.11	Fiona Smith *Bureau of Meteorology*	Updates to the use of Radiance Observations in Bureau of Meteorology Operational Models
13p.12	Ahreum Lee for Yanqiu Zhu *NASA/GSFC/GMAO*	Status and ongoing developments of satellite data assimilation in NASA GMAO's GEOS
13p.13	Dirceu Herdies CPTEC/INPE	Advances in Data Assimilation at CPTEC/INPE
13p.14	Zheng-Qi Wang for Alain Beaulne and Aleksandra Tatarevic *Environment and Climate Change Canada*	Latest upgrades and developments in the use of satellite radiances at ECCC
09:45 - 10:00 oral presentation		
13.01	Andrew Collard (Recorded Presentation) *NOAA/NCEP/EMC*	Progress and plans for the use of radiance data in the NCEP global and regional data assimilation systems
Session 14 - Future microwave technologies		
Session Chairs: Allen Huang and David Duncan		
10:00 - 10:30 oral presentations (each 12 minutes + 3 minutes discussion)		
14.01	Manju Henry for Kristen Bathmann *Spire Global*	Deep Learning-Based Retrievals from Spire's Hyperspectral Microwave Sounder
14.02	Bill Blackwell *MIT Lincoln Laboratory*	Recent Advances in Microwave Sounding: Smallsat Constellations, Beam-steering Arrays, and Cognitive Sensing
10:30 - 11.00 Health break		
11:00 - 12:15 oral presentations (each 12 minutes + 3 minutes discussion)		
14.03	Antonia Gambacorta (recorded presentation) *NASA Goddard Space Flight Center*	The Advanced Ultra-high Resolution Optical RAdiometer (AURORA) Pathfinder
14.04	Manju Henry *Spire Global UK Ltd.*	Development and pre-launch characterisation of a Hyperspectral Microwave sounder In Orbit Demonstrator
14.05	Ryan Honeyager *The Tomorrow Companies, Inc.*	The Tomorrow Microwave Sounder program: an assessment of the observations and observing system impacts
14.06	Satya Kalluri (recorded presentation) *NOAA*	Experiments in Support of Next Generation Low Earth Orbit Microwave Sounder Formulation at NOAA
14.07	Zaizhong Ma *UMD/CISESS*	Simulation and Evaluation of NOAA Next-gen Microwave Satellite Observation System with the ECMWF EDA method
12:15 - 12:20 poster introductions with no visual aids (each 1 minute)		
14p.01	Mary Borderies *Météo-France/cnrm*	Impact of WIVERN 94GHz brightness temperature observations on global NWP model forecasts using an OSSE framework
14p.02	Niels Bormann *ECMWF*	Developing the use of hyperspectral MW observations for global NWP in an Ensemble of Data Assimilations (EDA)
14p.03	Allen Huang *University of Wisconsin Madison* for Richard Delf, *Weather Stream*	The Global Environment Monitoring System (GEMS) suite of novel passive microwave instrumentation
12:20 - 13:50 Lunch break		

Session 15 - Impacts in Indian regional applications

Session Chairs: Christina Köpken-Watts and Chris Burrows

13:50 - 13:55 poster introductions with no visual aids (each 1 minute)

15p.01	Rishi Kumar Gangwar *Space Applications Centre (Indian Space Research Organisation)*	Atmospheric Temperature and Moisture Profiles from Recently Launched INSAT-3DS Sounder
15p.02	Ashim Kumar Mitra *India Meteorological Department*	Analysis of diurnal nature of spatial variability of Land Surface Temperature in Delhi NCR using Sentinel 3 and INSAT-3D/R satellite data
15p.03	Devanil Choudhury *National Centre for Medium Range Weather Forecasting, Ministry of Earth Sciences, India*	Assimilating NOAA-21 Data for Enhanced Forecasting of Deep Depressions in India
15p.04	Ashish Routray *NCMRWF, MoES*	Assimilation of Microwave Imager Radiance Data in NCUM-R-4DVAR System and Its Impact on Simulation of TCs over Bay of Bengal

13:55 - 14:55 oral presentations (each 12 minutes + 3 minutes discussion)

15.01	Indira Rani S *NCMRWF, Ministry of Earth Sciences*	Radiance assimilation over the extra-tropics and polar regions: Impact on the simulation of Indian Monsoon
15.02	Srinivas Desamsetti *National Centre for Medium Range Weather Forecasting (NCMRWF), MoES*	DBNet data assimilation during cyclone events- Advantage of timeliness
15.03	Sujata Pattanayak *National Centre for Medium Range Weather Forecasting, MoES*	Seasonal Impact of INSAT-3DR Satellite Radiance in NCMRWF Global Forecast System
15.04	Prashant Kumar *Space Applications Centre, ISRO*	All-sky radiance assimilation of INSAT-3DS Sounder Radiance in the WRF Model

Session 16 - The use of surface-sensitive data and Session 17 - Regional Studies: poster introductions

Session Chairs: Cristina Lupu and Sumit Kumar

14:55 - 15:10 poster introductions with no visual aids (each 1 minute)

16p.01	Hyeyoung Kim *Korea Institute of Atmospheric Prediction System*	Study on extending the use of satellite microwave sounder data over the land
16p.02	Christina Köpken-Watts *DWD* (on behalf of Mahdiyeh Mousavi)	Assimilation of IASI Observations Over Land: Impact of Improved Surface Emissivity and Skin Temperature
17p.01	Erik Dedding *KNMI*	Towards a full exploitation of satellite radiance information using transformed retrievals in HARMONIE-AROME 4D-Var
17p.02	Reima Eresmaa *Finnish Meteorological Institute*	Variational Bias Correction of Polar-Orbiting Satellite Radiances in Convective-scale Data Assimilation
17p.03	Nahidul Samrat *Bureau of Meteorology*	Himawari Radiance Integration in the Bureau Limited-Area Assimilation System: Impact of Assimilation, Error Diagnostics and Treatment
17p.04	Magnus Lindskog *SMHI* (on behalf of Jana Sanchez-Arriola)	Characterisation and Handling of Errors of Satellite Radiances for km-scale Data Assimilation over Three Operational Domains
17p.05	Ruiqi Tan *College of Atmospheric Sciences, Lanzhou University*	Evaluating the Impact of East Asian Dust Aerosols on Infrared Radiation Simulation and Assimilation: Insights from FY4B GIIRS
17p.06	Zeping Zhang *Chinese Academy of Meteorological Sciences*	Improved Typhoon Forecasting Using 3D Winds Retrieved From Geostationary Interferometric Infrared Sounder in CMA-GFS
17p.07	Dirceu Herdies *CPTEC/INPE*	Use of Radar and Lightning Data Assimilation in Short-term Forecast over Brazil

Session 16 - The use of surface-sensitive data

Session Chairs: Cristina Lupu and Sumit Kumar

15:10 - 15:25 oral presentations (each 12 minutes + 3 minutes discussion)

16.01	Swapan Mallick *Swedish Meteorological and Hydrological Institute (SMHI)*	Significance and Impact of High-Resolution Variational Assimilation of Satellite Microwave Radiances over Difference Surfaces

15:25 - 16:25 Poster viewing (Sessions 13, 14, 15, 16, and 17) and Coffee break

16:25 - 17:10 oral presentations (each 12 minutes + 3 minutes discussion)

16.02	Roger Randriamampianina *Norwegian Meteorological Institute* (on behalf of Mate Mile)	An Observing System Simulation Experiment for satellite observations: Uncertainty estimation of emissivity retrieval over sea-ice and land

16.03	Zheng Qi Wang *McGill University / Environment and Climate Change Canada*	Simultaneous Estimation of Atmospheric Temperature, Surface Emissivity and Skin Temperature by Assimilating Surface-Sensitive Microwave Observations Over Land in a 1D-EnVar System
16.04	Hongyi Xiao *CMA Earth System Modeling and Prediction Center*	Toward the all-surface assimilation of surface-sensitive satellite data from microwave temperature- and humidity-sounding channels in CMA-GFS 4D-Var system

Session 17 - Regional studies

Session Chairs: Cristina Lupu and Sumit Kumar

17:10 - 17:40 oral presentations (each 12 minutes + 3 minutes discussion)

17.01	Tobiasz Górecki *Institute of Meteorology and Water Management – National Research Institute*	Taking Advantage of Vertical Temperature and Dew Point Profiles Derived from HEAP and MIRS Software: Validation Products over Poland and Case Study Analysis
17.02	Stephanie Guedj *The Norwegian Meteorological Institute*	Optimizing the assimilation of radiances in the operational AROME-Arctic NWP system

19:00 - Dinner outside

Wednesday 14th May 2025

Closing session

9:00 - 10:20 Recaps from the WG meetings (each 20 minutes)

- Advanced sounders
- Products and software
- International issues and future systems
- Numerical weather prediction

10:20 - 10:50 Health break

10:50 - 11:50 Recaps from the WG meetings (each 20 minutes)

- Climate
- Radiative transfer and surface properties
- Fast RTMs technical subgroup

11:50 - 12:00 Closing ceremonies