

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

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

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

1.01	Sreerekha Thonipparambil <i>EUMETSAT</i>	User preparation for EUMETSAT's next generation sounding missions on MTG-S and EPS-SG
1.02	Vinia Mattioli <i>EUMETSAT</i>	EUMETSAT Polar System - Second Generation: highlights on the passive microwave missions
1.03	Jordan Gerth <i>NOAA</i>	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 <i>WMO</i>	WMO Gap Analysis for Space-based Component of the WMO Integrated Global Observing System (WIGOS) Using WMO OSCAR/Space Tools
1.05	Liam Gumley <i>SSEC, University of Wisconsin-Madison</i>	The WMO DBNet service for providing low latency sounder data to NWP centers: Recent progress and future plans
1.06	Simon Elliott <i>EUMETSAT</i>	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	Francisco Bermudo <i>CNES - Centre National d'Etudes Spatiales</i>	IASI-NG Program: General Status Overview
1p.03	Heikki Pohjola <i>WMO</i>	The Direct Broadcast Network Benefits for United Nation's Early Warnings for All Initiative
1p.04	Heikki Pohjola <i>WMO</i>	WMO Core and Recommended Satellite Data

Session 2 - Impact studies

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

2p.01	Christina Köpken-Watts <i>DWD</i>	Observation data impact studies in the global ICON/EnVar system of DWD
2p.02	Sumit Kumar <i>NCMRWF</i>	NCMRWF operational NWP system: status and observation impact analysis
2p.03	Hao Hu <i>CMA Earth System Modeling and Prediction Centre (CEMC)</i>	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	Ruixia Liu China Meteorological Administration	Assimilation of Hyperspectral Infrared Atmospheric Sounder(HIRAS) Data of FengYun-3E and Assessment of Its Impact on Analyses and Forecasts
2p.08	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.09	Nahidul Samrat Bureau of Meteorology	Satellite Sounder Absence: Evaluating the Impact of Satellite Sounder Observation Across Diverse Geographic Regions
2p.10	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

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	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	Mitch Goldberg The City College of New York	The Limb Adjustment of the TROPICS Microwave Sounder Constellation
3.04	Hélène Dumas Météo-France	Preliminary assessment of the Arctic Weather Satellite microwave sounder with the ARPEGE global model
3.05	David Duncan ECMWF	Evaluation of the Arctic Weather Satellite in the ECMWF system

Session 4 - New infrared capabilities

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 IASING at ECMWF
4p.03	Thomas Carrel-Billiard Météo-France	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	Yoshifumi Ota Meteorological Research Institute (MRI), Japan Meteorological Agency (JMA)	Quality assessment of radiance data obtained by GIIRS onboard FY-4B satellite
4p.06	Ruoying Yin CEMC	The assimilation of FY-4B GIIRS radiance data in CMA-GFS 4Dvar system
4p.08	Bryan Karpowicz UMBC/GESTAR II/NASA (on behalf of Erica McGrath-Spangler)	Evaluation of GEO Sounder Impact for Numerical Weather Prediction

4p.09	Tomoya Urata Japan Meteorological Agency	Preliminary studies for the assimilation of Himawari-10/GHMS in the JMA's NWP systems
15:05 - 16:05 Poster viewing (Sessions 1, 2, 3, and 4) and Coffee Break		
16:05 - 17:20 oral presentations (each 12 minutes + 3 minutes discussion)		
4.01	Senyi Kong Zhejiang University	All-sky assimilation of high temporal GIIRS radiance in CMA-GFS using 4D-Var
4.02	Naoto Kusano JMA, ECMWF	Assimilation of GIIRS on-board FY-4B in the ECMWF IFS
4.03	Young-Jun Cho Numerical Modeling Center, Korea Meteorological Administration	Forecast Impact of Simulated GeoHIS based on KIM-OSSE
4.04	Andrew Heidinger NOAA NESDIS GEO	NOAA's GXS Sounder
4.05	John Van Naarden L3Harris	Himawari-10 Sounder Overview and Update
17:20-17:50		
Advanced sounders		
Climate		
International issues and future systems		
Numerical weather prediction		
Products and software		
Radiative transfer and surface properties		
18:00 - Ice-breaker event		
Friday 9th May 2025		
Session 5 - Radiative transfer studies		
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	Xu Liu Science Directorate, NASA Langley Research Center	Recent Progress on PCRTM and its Applications in MW, IR, and Solar Spectral Regions
5.03	Jun Yang CMA Earth System Modeling and Prediction Centre	Progress in Advanced Radiative Transfer Modeling System (ARMS)
5.04	Jean-Marie Lalande CNRM, Météo France, CNRS	Enhancing Atmospheric Transmittance Estimation for TOVs through Advanced Statistical Approaches
5.05	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
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	Changjiao Dong School of Atmospheric Physics, Nanjing University of Information Science and Technology	Parameterization of Zeeman-Splitting Effect for Microwave Upper Atmosphere Sounding Channels in Advanced Radiative Transfer Modeling System (ARMS)
5p.03	Vito Galligani Centro de Investigaciones del Mar y la Atmósfera (CIIMA)	Exploring how uncertainties in NWP model microphysics are carried through to microwave radiance space / Exploring their relative importance compared with radiative transfer inconsistencies
5p.04	Yang Han CMA	Comparison of Dobson and Mironov Soil Dielectric Constant Models in Advanced Radiative Transfer Modeling System (ARMS)
5p.05	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.06	Cristina Lupu ECMWF	Evaluation of RTTOV-14 in the ECMWF NWP system
5p.07	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.08	Emma Turner ECMWF	A new and extended diverse 40,000 atmospheric profile dataset from the CAMS atmospheric composition forecasting system
5p.09	Viviana Volonnino CNRM, Université de Toulouse, Météo-France, CNRS	Impact of Spectroscopy on IASI and FORUM Clear-Sky Simulations using RTTOV
5p.10	Ziqiang Zhu Chinese Academy of Meteorological Sciences	An updated Vector Discrete Ordinate Radiative Transfer (VDISORT) model developed for the Advanced Radiative transfer Modeling System (ARMS)

10:15 - 10:45 Health break

Session 6 - Generation of products

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

6.01	Bryan Karpowicz 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 inhomogeneities 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 Administration	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	Simon Warnach HamTec Consulting Ltd.	Level 2 validation and monitoring activities at EUMETSAT for future hyperspectral infrared mission
6p.09	Daniel Zhou NASA LaRC	Thermodynamic Variation in the Planetary Boundary Layer from NAST-I Measurements During the WH2yMSIE Field Campaign
6p.10	Lihang Zhou NOAA	NOAA LEO Products Updates for ITWG
6p.11	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

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 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	Andrew Collard NOAA/NCEP/EMC (on behalf of Azadeh Gholoubi Khonacha)	Using Machine learning for SMAP Soil moisture retrieval
7p.03	Swapn Mallick Swedish Meteorological and Hydrological Institute (SMHI)	Deep Learning Approach to Estimating Uncertainty in the Copernicus Arctic Regional Second Generation Reanalysis: A Prototype
7p.04	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.05	Likun Wang University of Maryland	Estimating Tropospheric Methane from Cross-track Infrared Sounder (CrIS) Spectra using a Machine Learning Method
7p.06	Yunfan Yang Institute of atmospheric physics	Reconstruction of 3D Radar Reflectivity using Passive Microwave Imager Radiance

Session 8 - Climate studies

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

8p.01	Younousse Biaye Université Gaston Berger de Saint-Louis	Study of the evolution of the Sahelian climate based on satellite observations and ATOVS data
8p.02	Caroline Bresciani University of Santa Maria (UFSM)	Increase in Aerosol Concentration in the Upper Troposphere over the Amazon Region: A Case Study Using Observational Data
8p.03	Katyelle Ferreira da Silva Bezerra Universidade Federal de Alagoas	Understanding fire behavior in the legal Amazon biome: a climatological and remote sensing approach
8p.04	Helber Gomes Institute of Atmospheric Sciences/Federal University of Alagoas (ICAT/UFAL)	Monitoring the impact of droughts and heatwaves on wildfire activities in the Brazilian Cerrado biome using the VIIRS satellite
8p.05	Nathalie Selbach Deutscher Wetterdienst	25 Years of a Sustained Generation of Satellite-Based Climate Data Records by EUMETSAT CM SAF
8p.06	Bomin Sun IMSG at NOAA/NESDIS/STAR	Utilization of GRUAN-GSICS-GNSS RO ("3-G") to Cross-Validate Atmospheric Sounding: Significance in Climate Change Monitoring
8p.07	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)

15:05 - 16:05 Poster viewing (Sessions 5, 6, 7, and 8) and Coffee Break

16:05 - 17:20 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	moved to the end of session 11 (Monday 12th May)	
8.06	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

Climate

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

Products and software

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

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	William Campbell U.S. Naval Research Laboratory	Graph Theoretic Observation Thinning for Satellite Radiances
9.04	Erin Jones UMD ESSIC @ NASA GMAO	Developing a SWIR/MWIR-based Cloud Detection for CrIS in CADS
9.05	Qifeng Lu CMA / CEMC	Enhancing Numerical Weather Prediction Accuracy through EN4DVAR and Novel Satellite Data Assimilation
9.06	Young-Chan Noh Korea Polar Research Institute	Vertical localization for the microwave humidity sounder in the ensemble Kalman filter

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 <i>Consejo Nacional de Investigaciones Científicas y Técnicas; Servicio Meteorológico Nacional</i>	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 <i>Korea Meteorological Administration</i>	Diagnostics of CrIS Preprocessing System in Korean Integrated Model (KIM)
9p.05	Peter Levens <i>Met Office</i>	NWP-based assessment of MTG-I FCI
9p.06	Cristina Lupu <i>ECMWF</i>	Assimilation of data from the FCI onboard MTG-I1 into the ECMWF system
9p.07	Hiroyuki Shimizu <i>Japan Meteorological Agency</i>	Development for better utilization of AMSR3 humidity sounding channels in JMA's global NWP system
9p.08	Liam Steele <i>ECMWF</i>	Assessing the thinning scale for humidity sounding observations at ECMWF
9p.09	Sina Voshtani <i>Environment and Climate Change Canada</i>	Evaluating the role of anchor observations for radiance observation bias correction
9p.10	Joel Bedard <i>Environment and Climate Change Canada</i>	Revisiting spatial thinning approaches for satellite data assimilation
9p.11	Joel Bedard <i>Environment and Climate Change Canada (on behalf of Laurence Courso)</i>	An automated DFS satellite channel selection method for data assimilation: sensitivity to data volume and covariance matrices using CrIS observations
Session 10 - All-sky assimilation		
<i>11:30 - 12:15 oral presentations (each 12 minutes + 3 minutes discussion)</i>		
10.01	Mary Borderies <i>Météo-France/cnrm</i>	Perturbations of all-sky microwave radiances forward operator specifications within the Ensemble of Data Assimilation system of Météo-France
10.02	Christina Köpken-Watts <i>DWD</i>	Operational all-sky assimilation of geostationary water vapour channels in a regional ensemble Kalman filter NWP system
10.03	Izumi Okabe <i>MRI / Japan Meteorological Agency</i>	Global all-sky radiance assimilation for geostationary satellite imagers
<i>12:15 - 13:45 Lunch break</i>		
<i>13:45 - 14:15 oral presentations (each 12 minutes + 3 minutes discussion)</i>		
10.04	Kozo Okamoto <i>JMA/MRI</i>	Global all-sky radiance assimilation for IASI
10.05	Liam Steele <i>ECMWF</i>	Enhancing the exploitation of all-sky microwave sensors at ECMWF using inter-channel error correlations
<i>14:15 - 14:20 poster introductions with no visual aids (each 1 minute)</i>		
10p.01	Antoine Chemouny <i>CNRM/CNES</i>	Assimilation of IASI all-sky radiances for Numerical Weather Prediction
10p.02	Sylvain Heilliette <i>Environment Canada</i>	Recent updates and progress towards increased All-Sky assimilation at Environment Canada
10p.03	Christina Köpken-Watts <i>DWD</i>	ICON and IFS model cloud evaluation using visible imagers on geostationary satellites
Session 11 - Calibration of sensors		
<i>14:20 - 14:30 poster introductions with no visual aids (each 1 minute)</i>		
11p.01	Yihong Bai <i>National Satellite Meteorological Center, China Meteorological Administration</i>	Spatial Resolution Enhancement of Microwave Radiation Imager (MWRI) Data
11p.02	Harshitha Bhat <i>CLC Space GmbH</i>	EUMETSAT's IRS L2 Cal/Val and monitoring activities
11p.03	Guillaume Deschamps <i>EUMETSAT</i>	Spectral Response Function Retrieval of spaceborne Fourier Transform Spectrometers – Application to Metop IASI
11p.04	Hareef Baba Shaeb Kannemadugu <i>National remote sensing centre, Indian Space research Organisation</i>	Radiosonde Network for NICES (RANN): data products, satellite data validation and applications in air pollution research and atmospheric dynamics
11p.05	Vinia Mattioli <i>EUMETSAT</i>	EUMETSAT Polar System - Second Generation: pre-launch characterization of the microwave sounder (MWS) onboard Metop-SGA1
11p.06	Joe Taylor <i>SSEC, University of Wisconsin-Madison</i>	High Spatial and Spectral Resolution Infrared Observations from the Scanning High-resolution Interferometer Sounder (S-HIS): Recent Datasets and Next-Gen Sensor Development
<i>14:30 - 15:15 oral presentations (each 12 minutes + 3 minutes discussion)</i>		
11.01	Quentin Cebe <i>CNES</i>	IASI-NG : Overview of L1 processing and performances

11.02	Lu Lee <i>National Satellite Meteorological Center, CMA</i>	FY-4B/GIIRS on-orbit status and post-launch calibration activities
11.03	Chengli Qi <i>National Satellite Meteorological Center, China Meteorological Administration</i>	FY-3 HIRAS on orbit calibration performance and updates

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

16:15 - 16:45 oral presentations (each 12 minutes + 3 minutes discussion)

11.04	Fuzhong Weng <i>CMA Earth System Modeling and Prediction Centre</i>	An energy-conservation system developed for calibrating satellite microwave instruments
8.05	Guido Masiello <i>University of Basilicata</i>	Comprehensive Infrared forward-inverse analysis of the Ozone hole with IASI

Session 12 - Space agency reports

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

12.01	Bojan Bojkov <i>EUMETSAT</i>	Overview of the EUMETSAT operated missions and their applications
12.02	Kozo Okamoto <i>JMA/MRI</i>	Status report of space agency: JMA and JAXA
12.03	Pradeep Thapliyal <i>Space Applications Centre (ISRO)</i>	ISRO Agency Report: Present and future satellite instruments in support of Met-Ocean applications
12.04	Lihang Zhou <i>NOAA</i>	An Update of NOAA Satellite Missions for ITWG

19:00 - Banquet dinner

Tuesday 13th May 2025

Session 13 - NWP centre status reports

8:45 - 9:45 one-slide introductions to poster presentations (each 3 minutes)

13p.01	Olivier Audouin <i>Meteo France</i>	Ongoing developments on satellite radiance assimilation at Météo-France
13p.02	Alain Beaulne <i>Environment and Climate Change Canada</i>	Latest upgrades and developments in the use of satellite radiances at ECCC
13p.03	Hui Christophersen <i>U.S. Naval Research Laboratory Marine Meteorology Division</i>	Recent Earth observation developments at the U.S. Naval Research Laboratory
13p.04	Hyoung-Wook Chun <i>KMA</i>	Satellite Radiance Data Assimilation at Korea Meteorological Administration
13p.05	Andrew Collard <i>NOAA/NCEP/EMC</i>	Progress and plans for the use of radiance data in the NCEP global and regional data assimilation systems
13p.06	Mohamed Dahoui <i>ECMWF</i>	ECMWF NWP changes
13p.07	Christina Köpken-Watts <i>DWD</i>	Overview of recent developments in satellite radiance data assimilation at DWD
13p.08	Qifeng Lu <i>CMA / CEMC</i>	Status of Satellite Data Assimilation at CMA NWP system
13p.09	Isabel Monteiro <i>KNMI</i>	Present and future use of satellite atmospheric sounding data in United Weather Centres West
13p.10	Hidehiko Murata <i>Japan Meteorological Agency</i>	Recent upgrades and progresses of satellite radiance data assimilation at JMA
13p.11	Stuart Newman <i>Met Office</i>	Satellite radiance assimilation at the Met Office
13p.12	John P George <i>NCMRWF, Ministry of Earth Sciences (Government of India)</i>	NCMRWF NWP status since ITSC-24
13p.13	Fiona Smith <i>Bureau of Meteorology</i>	Updates to the use of Radiance Observations in Bureau of Meteorology Operational Models
13p.14	Yanqiu Zhu <i>NASA/GSFC/GMAO</i>	Status and ongoing developments of satellite data assimilation in NASA GMAO's GEOS

Session 14 - Future microwave technologies

9:45 - 10:30 oral presentations (each 12 minutes + 3 minutes discussion)

14.01	Kristen Bathmann <i>Spire Global</i>	Deep Learning-Based Retrievals from Spire's Hyperspectral Microwave Sounder
14.02	Bill Blackwell <i>MIT Lincoln Laboratory</i>	Recent Advances in Microwave Sounding: Smallsat Constellations, Beam-steering Arrays, and Cognitive Sensing
14.03	Ke Chen <i>Huazhong University of Science and Technology</i>	Assessment of the Potential Impact of Microwave Sounders on Polar-orbiting and Geostationary Satellites on Numerical Weather Prediction through OSSEs with CMA NWP model

10:30 - 11:00 Health break

11:00 - 12:15 oral presentations (each 12 minutes + 3 minutes discussion)

14.04	Antonia Gambacorta <i>NASA Goddard Space Flight Center</i>	The Advanced Ultra-high Resolution Optical Radiometer (AURORA) Pathfinder
14.05	Manju Henry <i>Spire Global UK Ltd.</i>	Development and pre-launch characterisation of a Hyperspectral Microwave sounder In Orbit Demonstrator
14.06	Ryan Honeyager <i>The Tomorrow Companies, Inc.</i>	The Tomorrow Microwave Sounder program: an assessment of the observations and observing system impacts
14.07	Satya Kalluri <i>NOAA</i>	Experiments in Support of Next Generation Low Earth Orbit Microwave Sounder Formulation at NOAA
14.08	Zaizhong Ma <i>UMD/CISESS</i>	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 <i>Météo-France/cnrm</i>	Impact of WIVERN 94GHz brightness temperature observations on global NWP model forecasts using an OSSE framework
14p.02	Niels Bormann <i>ECMWF</i>	Developing the use of hyperspectral MW observations for global NWP in an Ensemble of Data Assimilations (EDA)
14p.03	Richard Delf <i>Weather Stream</i>	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

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

15p.01	Rishi Kumar Gangwar <i>Space Applications Centre (Indian Space Research Organisation)</i>	Atmospheric Temperature and Moisture Profiles from Recently Launched INSAT-3DS Sounder
15p.02	Ashim Kumar Mitra <i>India Meteorological Department</i>	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 <i>National Centre for Medium Range Weather Forecasting, Ministry of Earth Sciences, India</i>	Assimilating NOAA-21 Data for Enhanced Forecasting of Deep Depressions in India
15p.04	Ashish Routray <i>NCMRWF, MoES</i>	Assimilation of Microwave Imager Radiance Data in NCMRWF-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 <i>NCMRWF, Ministry of Earth Sciences</i>	Radiance assimilation over the extra-tropics and polar regions: Impact on the simulation of Indian Monsoon
15.02	Srinivas Desamsetti <i>National Centre for Medium Range Weather Forecasting (NCMRWF), MoES</i>	DBNet data assimilation during cyclone events- Advantage of timeliness
15.03	Sujata Pattanayak <i>National Centre for Medium Range Weather Forecasting, MoES</i>	Seasonal Impact of INSAT-3DR Satellite Radiance in NCMRWF Global Forecast System
15.04	Prashant Kumar <i>Space Applications Centre, ISRO</i>	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

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

16p.01	Hyeyoung Kim <i>Korea Institute of Atmospheric Prediction System</i>	Study on extending the use of satellite microwave sounder data over the land
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16p.02	Mahdiyeh Mousavi <i>DWD</i>	Assimilation of IASI Observations Over Land: Impact of Improved Surface Emissivity and Skin Temperature
16p.03	Zied Sassi <i>CNRM, Météo-France & CNRS</i>	Assimilation of Land Surface Temperature retrieved from IASI infrared sensor in the surface analysis of ARPEGE NWP global model
17p.01	Erik Dedding <i>KNMI</i>	Towards a full exploitation of satellite radiance information using transformed retrievals in HARMONIE-AROME 4D-Var
17p.02	Reima Eresmaa <i>Finnish Meteorological Institute</i>	Variational Bias Correction of Polar-Orbiting Satellite Radiances in Convective-scale Data Assimilation
17p.03	Nahidul Samrat <i>Bureau of Meteorology</i>	Himawari Radiance Integration in the Bureau Limited-Area Assimilation System: Impact of Assimilation, Error Diagnostics and Treatment
17p.04	Magnus Lindskog <i>SMHI (on behalf of Jana Sanchez-Arriola)</i>	Characterisation and Handling of Errors of Satellite Radiances for km-scale Data Assimilation over Three Operational Domains
17p.05	Ruiqi Tan <i>College of Atmospheric Sciences, Lanzhou University</i>	Evaluating the Impact of East Asian Dust Aerosols on Infrared Radiation Simulation and Assimilation: Insights from FY4B GIIRS
17p.06	Xiaoyan Zhang <i>SAIC @ NOAA/NCEP/EMC</i>	Optimizing Satellite Radiance Data Assimilation in NOAA's Regional System: Transition to RRFsv2 with JEDI and Cloud-Affected Radiance
17p.07	Zeping Zhang <i>Chinese Academy of Meteorological Sciences</i>	Improved Typhoon Forecasting Using 3D Winds Retrieved From Geostationary Interferometric Infrared Sounder in CMA-GFS
17p.08	Dirceu Herdies <i>CPTec/INPE</i>	Use of Radar and Lightning Data Assimilation in Short-term Forecast over Brazil

Session 16 - The use of surface-sensitive data

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

16.01	Swapan Mallick <i>Swedish Meteorological and Hydrological Institute (SMHI)</i>	Significance and Impact of High-Resolution Variational Assimilation of Satellite Microwave Radiances over Difference Surfaces
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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 <i>Norwegian Meteorological Institute (on behalf of Mate Mile)</i>	An Observing System Simulation Experiment for satellite observations: Uncertainty estimation of emissivity retrieval over sea-ice and land
16.03	Zheng Qi Wang <i>McGill University / Environment and Climate Change Canada</i>	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 <i>CMA Earth System Modeling and Prediction Center</i>	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

17:10 - 17:55 oral presentations (each 12 minutes + 3 minutes discussion)

17.01	Tobiasz Górecki <i>Institute of Meteorology and Water Management - National Research Institute</i>	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 <i>The Norwegian Meteorological Institute</i>	Optimizing the assimilation of radiances in the operational AROME-Arctic NWP system
17.03	Zhiquan (Jake) Liu <i>NSF National Center for Atmospheric Research</i>	Joint all-sky ABI radiance and radar data assimilation with MPAS-JEDI's hybrid-3D/4D-EnVar at convection-permitting scale

19:00 - Dinner outside

Wednesday 14th May 2025

Closing session

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

Advanced sounders

Climate

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)

Products and software

Radiative transfer and surface properties

Fast RTMs technical subgroup

11:50 - 12:00 Closing ceremonies