Detailed Program

MONDAY, December 2nd		
11:00	Welcome coffee and registration	
13:30	Opening session	Pierre Coheur [ULB] Cyril Crevoisier [LMD] Marc Crapeau [EUMETSAT] Olivier Vandermarcq [CNES]
INTRODUCTION AGENCY		
14:00	IASI/IASI-NG : a major program for science and society	Carole Deniel [CNES]
14:15	Current and Future EUMETSAT Hyperspectral Infrared Missions: IASI, IASI-NG and IRS	Dorothee Coppens [EUMETSAT]
ENVIRONMENTAL MONITORING		
14:30	Towards a long-term, consistent record of anthropogenic and volcanic sulphur dioxide (SO2) from IASI	Bruno Franco [ULB]
14:45	Near real-time assimilation of volcanic sulfur dioxide from IASI and other sensors in the MOCAGE model: various case studies	Mickael Bacles [CNRM - CNRS]
15:00	NH3 point source emissions and lifetimes derived from 15 years of IASI observations	Lieven Clarisse [ULB]
15:15	Long-range transport of pollution from intense wildfires in the northern hemisphere observed by IASI in 2008-2023	Antoine Ehret [LATMOS - IPSL]
15:30	Questions + Discussions	
15:45	Coffee break	
16:15	What IASI Can Tell us in the Aftermath of the Hunga Tonga Exceptional Eruption	Cathy Clerbaux [CNRS]
16:30	Principal Component Analysis of IASI measurements for the detection of extreme atmospheric events	Pascal Prunet [SPASCIA]
16:45	Questions + Discussions	
16:55	Poster introduction on Environmental monitoring S1- 01- MUSICA Retrieval of Vertical Concentration Profiles of SO2 Using the IASI Satellite Instrument, Nga Ying Lo [Karlsruhe Institute of Technology - Institute of Meteorology and Climate Research] S1- 02- The development of a mechanistic ammonia volatilization model, based on IASI data retrieved from the Metop-A & Metop-B missions, Mauri Rosiers [Université libre de Bruxelles] S1- 03- Machine learning techniques for spatial interpolation of the IASI Land Surface Temperature, Dew Point Temperature and water deficit index, Fabio Della Rocca [IAC-CNR] S1- 04- Development of the False Alarm Filtering Method for GEO-KOMPSAT-2A Forest Fire Detection Product, Chae Seoyoung [EWHA WOMANS UNIVERSITY] S1-23 - Evaluation of the contribution of IASI and IASI-NG for the characterization of carbon monoxyde over the Globe, Vincent Guidard [CNRM - UMR3589, Météo-France & CNRS]	
RADIATIVE TRANSFER & SPECTROSCOPY		
17:00	Development of a Principal Components-Based Radiative Transfer Model and its Application to IASI CH4 retrievals	Charles Robert [BIRA-IASB]
17:15	Mineral dust and residual biomass ash aerosols: experimental complex refractive indices retrieval	Maria Chehab [LOA]
17:30	The FIT-FORUM project: status and perspectives	Tiziano Maestri [University of Bologna]
17:45	Questions + Discussions	
17:55	Poster introduction on Radiative transfer & Spectroscopy S2- 05- Line lists for the 16 μm, 11 μm, and 8 μm bands of nitrous acid (HONO), Agnes Perrin [LMD, IPSL] S2- 06- Impact of Spectroscopy on IASI and FORUM Clear-Sky Simulations, Viviana Volonnino [CNRM, Université de Toulouse, Météo-France, CNRS]	
18:00	***Daily Interaction in auditorium***	
18:30	Welcome cocktail	

TUESDAY, December 3rd		
RETRIEVAL TECHNICS		
9:15	Measuring clear-air vertical velocity profiles with IASI	Basile Poujol [LMD - IPSL]
9:30	On the road to MTG IRS retrieval of CO using interferograms - case of IASI	Nejla Eco [LATMOS]
9:45	The next generation of EUMETSAT hyperspectral infrared geophysical and principal components products	Marc Crapeau [EUMETSAT]
10:00	Questions + Discussions	
10:20	Poster introduction on retrieval technics S3- 08- Convolutional Neural Networks for Cloud Classification using IASI observations, Chris Burrows [ECMWF] S3- 09- Investigating possible contributions of IASI/IASI-NG for bridging the upcoming gap of limb sounding observation capabilities, Matthias Schneider [Karlsruhe Institute of Technology] S3- 10- Retrieval of atmospheric CH4 profiles from hyperspectral infrared satellite observations: an inversion approach based on Physically Informed Neural Network, Rocco Giosa [Università degli Studi della Basilicata] S3- 11- Expected impact of IASI-NG on methane retrieval, Rémy Orset [LMD - CNRS]	
10:25	Coffee break	
10:55	Introduction of the Side meeting objectives and content	Cyril Crevoisier [LMD]
L2 VALIDATION		
11:10	Level 2 validation and monitoring activities at EUMETSAT for future IASI-NG mission	Simon Warnach [HAMTEC Consulting Ltd.]
11:25	Pollution in Paris assessed using the synergy of IASI satellite and the QUALAIR super-site ground-based observations	Camille Viatte [LATMOS - IPSL]
11:40	Ozone profiles from EUMETSATs current and future hyperspectral sounding missions	Stefan Staperlberg [EUMETSAT]
11:55	Vaidation of IASI Level 2 products using vertical profiles measured by balloon-borne AirCore air sampler	Jérôme Pernin [LMD/CNRS]
12:10	Questions + Discussions	
12:25	Poster introduction on L2 validation S4- 13- Evaluation of nitrous oxide retrievals from IASI/Metop A, Yannick Kangah [SPASCIA]	
12:30	Lunch break	
IASI NG SESSION		
14:00	IASI-NG Program: General Status Overview	Francisco Bermudo [CNES]
14:15	IASI-NG Instrument development status and performances	Antoine Penquer [CNES]
14:30	IASI-NG: Instrument TVAC tests performance results	Pierre Rieu [CNES]
14:45	IASI NG : Preliminary System Performances	Quentin Cebe [CNES]
15:00	In orbit validation of IASI-NG: strategy and objectives	Jérémie Ansart [CNES]
15:15	IASI-NG monitoring tools	Jose-Luis Villaescusa Nadal [EUMETSAT]
15:30	Questions + Discussions	
15:50	Poster introduction on IASI NG S5- 14- Mechanical & Thermal Architecture of IASI NG instrument, Laurent Doumic [CNES] S5- 16- IASI-NG: Overview of the processing algorithms, Pierre Rieu[CNES] S5- 17- IASI-NG operational L1C processing chains: development, validation and products, Julien Nosavan [CNES] S5- 18- Overview of geometry in IASI-NG processing, Emmanuel Dufour [Magellium]	
16:00	Coffee break	
16:30	Poster Session	Side Meeting in specific room : Validation
17:30	*Daily Interaction in auditorium*	
18:00	IASI NG Event	
19:30	Adjourn	

WEDNESDAY, December 4th		
NUMERICAL WEATHER PREDICTION		
9:00	Assimilation of IASI retrieved LST in the surface analysis system of ARPEGE NWP global model	Zied Sassi [CNRM]
9:15	Assimilation of IASI All-sky radiances for Numerical Weather Prediction	Antoine Chemouny [Météo-France & CNRS]
9:30	Impact of the future IASI-NG hyperspectral infrared sounder in the ARPEGE Numerical Weather Prediction model	Nadia Fourrie [Météo-France & CNRS]
9:45	Evaluating the impact of the CMIM satellite constellation on NWP using an OSSE framework, Thomas Carrel-Billiard [Météo France]	Thomas Carrel-Billiard [Météo France]
10:00	Water vapour isotopologue observations from space and their scientific potential	Matthias Schneider [Karlsruhe Institute of Technology]
10:15	Questions + Discussions	
10:35	Poster introduction on Numerical Weather Prediction S6- 19- Challenges in the use of hyperspectral infrared radiance observations in coupled global ocean/atmosphere assimilation systems, Chris Burrows [ECMWF]	
10:40	Coffee break	
CLOUDS & AEROSOLS		
11:10	Optical, chemical and μ-physical aerosol properties from laboratory study to IASI measurements: application to volcanic ash and desert dust.	Hervé Herbin [LOA]
11:25	Relationship between Latent and Radiative Heating Fields in the Tropics from synergistic satellite data	Xiaoting Chen [LMD - CNRS]
11:40	Detection of Polar Stratospheric Clouds with IASI	Manon Hermans [ULB]
11:55	Simulation of volcanic and fire ashes spectra with σ-IASI/F2N	Lorenzo Cassini [University 'La Sapienza']
12:10	Questions + Discussions	
12:20	Poster introduction on Clouds & Aerosols S7- 20- Laboratory measurements of the optical properties of mineral dust aerosols in the MIR and FIR spectral domains to support the exploitation of IASI-NG and FORUM forthcoming missions, Hervé Herbin [Université de Lille, CNRS, UMR 8518, LOA, F-59000 Lille, France] S7- 21- IASI cloud detection on the Antarctic plateau and comparison with ground-based interferometric measurements, Michele Martinazzo [University of Bologna] S7- 22- Towards the assimilation of IASI radiances for sand and dust, Etienne Gruet [CNRM - Météo-France and CNRS] S7- 24- The IASI Mineral Aerosol Profiling from InfraRed spectra version 5.1, Sophie Vandenbussche [Royal Belgian Institute for Space Aeronomy] S7- 25- Can We Detect the Decrease in Global Flight Activity over the North Atlantic during the Spring 2020 Covid-19 Lockdown from IASI Spectra?, Anni Maattanen [CNRS LATMOS/Jussieu]	
12:30	Lunch break	
ATMOSPHERIC COMPOSITION		
14:00	Direct satellite measurements of the radiative forcing of long-lived halogenated gases	Simon Whitburn [ULB - RMIB]
14:15	Comprehensive Analysis of Antarctic Ozone Hole Dynamics Using Day-Night IASI Infrared Observations	Guido Masiello [University of Basilicata]
14:30	Carbon monoxide during pollution events in Asia: evolution and trends from 17 years of IASI data	Selviga Sinnathamby [LATMOS]
14:45	Potential of TIR+SWIR combination from space measurements for CH4 retrievals: application to IASI and S5P	Nicolas Nesme [SPASCIA]
15:00	Assimilation of IASI NH3 satellite observations with the LETKF methodology in the LOTOS-EUROS model	Tyler Wizenberg [TNO]
15:15	Study of greenhouse gases emitted by biomass burnings with a decade of infrared observation of CO2, CH4 and CO by IASI	Victor Bon [LMD]
15:30	Last evolutions of the mid-troposphere column of methane as seen by IASI onboard three successive Metop platforms	Nicolas Meilhac [LMD/FX-CONSEIL]
15:45	Questions + Discussions	
16:05	Poster introduction on Atmospheric Composition S8- 26- The Daily Variation of NH3 over Agricultural Areas in Asia Using Combined Satellite Measurements, Adriana Iorga [University of Leicester] S8- 27- Assimilation of IASI & CrIS radiances in the MOCAGE transport chemistry model at Météo-France to improve ozone and carbon monoxide, Olivier Coopmann [CNRM, Météo-France & CNRS] S8- 28- Detection and retrieval of nitrous acid (HONO) in global fire plumes throughout the IASI time series, Bruno Franco [ULB] S8- 29- Vertical Information Content in CO2 Retrievals from IASI, Jonas Wilzewski [EUMETSAT] S8- 30- Using GEOS-Chem vertical profiles for an improved IASI-NH3 product, Martin Van Damme [ULB & BIRA-IASB] TBC S8- 31- 17 years of IASI CO retrievals, Maya George [LATMOS] S8- 32- Airborne measurements of ammonia emissions: A case study over a livestock farm in Grosseto, Italy, Lara Noppen [ULB]	
16:15	Coffee break	
16:45	Poster Session	
17:30	*Daily Interaction in auditorium*	
18:00	Adjourn	
19:00	Conference Dinner	

THURSDAY, December 5th		
TRENDS IN CLIMATE VARIABLES		
9:00	Establishing essential climate variable data records from 3 successive Metop/IASI	Cyril Crevoisier [LMD/CNRS]
9:15	Characteristics of Arctic middle level cloud and Its Correlation with Extreme Sea Ice Anomalies	Jian Liu [National satellite Meteorological Center - China Meteorological Administration]
9:30	Earth's skin temperature: the underrated variable tracer of the global climate	Sarah Safieddine [LATMOS/IPSL]
9:45	Mineral dust trends from 16 years of consistent 3D IASI MAPIR v5.1 data	Sophie Vandenbussche [Royal Belgian Institute for Space Aeronomy]
10:00	Fast spectral retrieval of Outgoing Longwave Radiation and heating rate from infrared sounders applied to the long time series obtained with IASI A,B and C observations	Raymond Armante [LMD/IPSL/CNRS]
10:15	Monitoring the sea surface temperature from IASI for climate application	Virginie Capelle [LMD - Ecole polytechnique]
10:30	Questions + Discussions	
10:50	Poster introduction on Trends in climate variables S9- 34- Evaluation of the infrared spectral signature of ARPEGE-Climat in clear-sky conditions using IASI observations, Quentin Libois [CNRM] S9- 35- 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), David Tobin [Space Science and Engineering Center] S9- 36- Tropospheric ozone distributions and trends from IASI and CrIS, Anne Boynard [LATMOS/IPSL; SPASCIA]	
10:55	Coffee break	
EXPLORER MISSIONS		
11:25	Overview of the French activities in support of the FORUM space mission	Quentin Libois [CNRM]
11:40	CAIRT mission and possible synergies with IASI-NG	Piera Raspollini [IFAC - CNR]
11:55	Analysis of CAIRT tangent point errors	Luca Sgheri [CNR - IAC]
12:10	Retrieval studies using the Far-IR spectral measurements performed by FIRMOS-B from stratospheric balloon flights	Marco Ridolfi [CNR - INO]
12:25	Questions + Discussions	
12:35	Poster introduction on Explorer Missions S10- 38- The Complete Data Fusion extended to two-dimensional products, Cecilia Tirelli [IFAC - CNR] TBC S10- 39- FARM: FAst Retrieval Model for the Simultaneous Inversion of Co-located Spectral Radiance Measurements, Marco Ridolfi [Istituto Nazionale di Ottica] S10- 40- Development of the MetOp Scene Generator Module (MSGM) for the ESA FORUM End-to-End Simulator, Giuliano Liuzzi [University of Basilicata]	
12:40	Poster introduction on Meteorological Programs S13- 46- AI methods to derive skin temperature from GIIRS, Sarah Safieddine [LATMOS/IPSL/CNRS/Sorbonne Université] S13- 48- Hybrid PCA representation of Cross-track Infrared Sounder (CrIS) data: the CrIS NASA Version 4 L1B and PCA RED Products, Joe Taylor [University of Wisconsin-Madison] S13- 49- Preparing to assimilate the future IRS infrared sounder into the MOCAGE chemistry transport model for ozone and carbon monoxide, Olivier Coopmann [CNRM, Météo-France & CNRS] S13- 50- An overview of the MTG-IRS Level-2 Products, Marc Crapeau [EUMETSAT] S13- 51- Fourier Transform Spectrometers Monitoring: Application to MTG-S IRS, Dorothee Coppens [EUMETSAT] S13- 52- MTG-IRS L2 offline monitoring toolkit, Harshitha Bhat [CLC Space GmbH] TBC	
12:45	Lunch break	
IASI INSTRUMENTS PRODUCTS AND SERVICES		
14:15	IASI instrument status and performance	Dimitri Kilymis [CNES]
14:30	The instrument noise covariance matrix of IASI	Claude Camy-Peyret [IPSL] TBC
14:45	The spectral calibration algorithm convergence anomaly on IASI-B and IASI-C: analysis and relation to geophysical events	Dimitri Kilymis [CNES]
15:00	A multi-year global synergetic IASI-TROPOMI satellite product of tropospheric CH4	Kanwal Shahzadi [Karlsruhe Institute of Technology (KIT)]
15:15	An infrared emissivity atlas based on IASI	Tim Helge Hultberg [EUMETSAT]
15:30	The IASI/AERIS portal: dissemination of atmospheric data in open access	Anne Boynard [LATMOS/IPSL; SPASCIA]
15:45	Questions + Discussions	
16:05	Poster introduction on IASI instruments, products and services S12- 41- AERIS: data and services for Atmosphere, Sébastien Payan [AERIS] S12- 42- Production of IASI FDR and CDRs at EUMETSAT, Marie Doutriaux-Boucher [EUMETSAT] S12- 44- The IASI Flux and Temperature project, Valentine Jacquet [LATMOS/IPSL]	
16:10	Coffee break	
16:40	Poster session	
17:40	*Daily Interaction in auditorium*	
18:20	Adjourn	

FRIDAY, December 6th		
METEOROLOGICAL PROGRAMS		
9:15	FY-4B/GIIRS performance status and the on-orbit calibration activities	Lu Lee [National Satellite Meteorological Center, China Meteorological Administration]
9:30	Tracking wildfire emissions of CO, NH3, and HCOOH in Southeast Asia from FY-4B/GIIRS	Zhao-Cheng Zeng [Peking University]
9:45	FY-3F HIRAS on orbit calibration performance and comparison with IASI	Chengli Qi [National Satellite Meteorological Center, China Meteorological Administration]
10:00	Spatiotemporal variability of ammonia (NH3) derived from the future IRS geostationary satellite and IASI observations	Nadir Guendouz [LATMOS]
10:15	Questions + Discussions	
10:35	Coffee break	
11:05	Closing session in Auditorium	
11:45	Adjourn	