IASI 2020 Preliminary Programme

Monday 16 November

11:00	**Welcome coffee & registration**		
13:30	**Opening session**		Adrien Deschamps (CNES), Thomas August (EUMETSAT)
14:00	**Programmatic overviews** The EPS/Metop and EPS-SG/Metop-SG Systems		Dieter Klaes and Peter Schlüssel (EUMETSAT)
14:30	IASI: a key element in the CNES Earth Observation Program		Selma Cherchali (CNES)
	Session 1 : IASI mission & services	**Chairpersons :** Pierre Coheur, Cyril Crevoisier	
15:00	Performances status and evolutions of the 3 in-flight IASI instruments		Laura Le Barbier (CNES) / Laurence Buffet (CNES)
15:30	Operational IASI L2 products at EUMETSAT: status and user studies		Thomas August (EUMETSAT)
15:50	Introduction Posters 48, 50, 52, 53, 54, 55, 56, 133		
16:05	***Coffee break***		
	Session 2: Climate	**Chairpersons** Reima Eresmaa, Nadia Fourrie	
16:40	Monthly means of IASI L1C spectra: use for comparing the radiometry of the 3 IASI sounders and for climate studies		CAMY-PEYRET Claude (IPSL)
17:00	Retrieval of Earth Outgoing Longwave Radiation and atmospheric heating rates with IASI		TELLIER Yoann (CNRS/IPSL)
17:20	Spectrally resolved OLR from IASI measurements		WHITBURN Simon (ULB)
17:40	Study of atmospheric temperatures from the thermal infrared sounder IASI		BOUILLON Marie (LATMOS)
18:00	Introduction Posters 18, 22		
18:05	**Poster viewing**		
19:00	**Welcome cocktail**		

Tuesday 17 November

	Session 3: Retrieval techniques — **Chairpersons:** Carmine Serio, Thomas August	
8:45	Improved IASI Ozone retrievals with a tropopause dependent a priori	BARRET Brice (Laboratoire d'Aréologie/CNRS-Université de Toulouse)
9:05	Investigating tropospheric moisture pathways with MUSICA IASI water isotopologue data	DIEKMANN Christopher (KIT)
9:25	Global distribution of lowermost tropospheric ozone pollution derived from multispectral synergism of IASI and GOME-2 satellite measurements	CUESTA Juan (LISA – CNRS/UPEC/UP)
9:45	IASI gridded L3 products: an application to air quality	DE FEIS Italia (Istituto per le Applicazioni del Calcolo "M. Picone" CNR)
10:05	Introduction Posters 107, 108, 109, 110, 112, 115, 117, 118, 119, 120, 121	
10:20	***Coffee break***	
	Session 4: L1 Calibration and intercomparison — **Chairpersons:** Raymond Armante, Dave Tobin	
10:50	**KEYNOTE:** Intercalibrating hyperspectral missions	TOBIN Dave (SSEC, University of Wisconsin-Madison)
11:20	How well do HIRAS and GIIRS compare to IASI? A preliminary look at China's hyperspectral IR products	COPPENS Dorothee (EUMETSAT)
11:40	Potential of the Moon as a calibration target for IASI instruments	SIC Bojan (NOVELTIS)
12:00	An On-orbit, High-Accuracy Standard for Reducing Climate Trend Detection Times	REVERCOMB Henry (University of Wisconsin-Madison)
12:20	Introduction Posters 68, 69, 70, 72, 73, 134	
12:35	***Lunch break***	
	Session 5 : Environmental monitoring — **Chairpersons:** Cyril Crevoisier	
14:00	IASI observations at the city scale	CLERBAUX cathy (LATMOS/IPSL/CNRS)
14:20	Impact of the Precursors Emissions Reductions on the Recent Evolution of Pollutants in China	DUFOUR Gaëlle (LISA/CNRS)
14:40	Role of atmospheric ammonia on PM formation in Toronto, Mexico and Paris megacities	VIATTE Camille (LATMOS)
15:00	Evaluation of emissions and long-range transport from wildfires using IASI observations	TURQUETY Solene (Sorbonne/ LMD/IPSL)
15:20	Introduction Posters 37, 39, 41, 45	
15:35	**Poster session**	
16:30	***Coffee break***	
17:00	Principal Component Analysis of IASI measurements for the detection of extreme events	PRUNET Pascal (SPASCIA)
17:20	Measurements of HCl in the volcanic plumes of Calbuco (2015) and Raikoke (2019)	CLARISSE Lieven (ULB/SQUARES)
17:40	First Space Detection of Anthropogenic Point Sources of Ethylene (C2H4)	FRANCO Bruno (ULB/SQUARES)
18:00	**Adjourn**	

Wednesday 18 November

	Session 6: NWP	**Chairpersons:** Vincent Guidard, Robin Faulwetter	
8:45	**KEYNOTE:** IASI impact in NWP		SMITH Fiona (Australian Bureau of Meteorology)
9:15	Impact of IASI data assimilation on the weather analyses and forecasts		FOURRIE Nadia (CNRM/Météo France and CNRS)
9:35	The use of variable O3 in the 4D-Var to improve IASI assimilation in ARPEGE NWP model		COOPMANN Olivier (CNRM, Université de Toulouse, Météo France, CNRS)
9:55	Assimilation of Reconstructed Radiances from PC compressed Hyperspectral Sounder IASI data in the ICON EnVar		MAY Silke (DWD)
10:15	***Coffee break***		
10:45	Impact of IKFS-2 and IASI data in the data assimilation system of the Hydrometcentre of Russia		USPENSKY Alexander (State Research Center Planeta)
11:05	Advances in the operational use of IASI at ECMWF		ERESMAA Reima (ECMWF)
11:25	**Session 7: Spectro & RTM**	**Chairpersons:** Claude Camy-Peyret, Jerome Vidot	
11:40	Evaluation of the spectroscopic parameters with remote sensing data: Example of the new release of GEISA-2019		ARMANTE Raymond (LMD/IPSL/CNRS)
12:00	New Developments in PCRTM Fast Radiative Transfer Model and Its Applications		LIU Xu (NASA Langley Research Center)
12:20	Introduction Posters 122, 123, 125, 126, 128		
12:35	***Lunch break***		
	Session 8 : Regional and nowcasting applications	**Chairpersons:** Chawn Harlow, Guido Masiello	
14:00	IASI Real-Time Processing and Applications in Community Satellite Processing Package (CSPP)		HUANG Allen (SSEC/CIMSS, University of Wisconsin Madison)
14:20	Introduction Posters 103, 104, 105		
	Session 9 : L2 validation, techniques and campaigns	**Chairpersons:** Chawn Harlow, Guido Masiello	
14:35	The results of the Metop-C IASI Level 2 Commissioning		CRAPEAU Marc (EUMETSAT)
14:55	Characterizing atmospheric vertical distributions of thermodynamic variables and trace gases with combined ground-based and airborne measurements to validate space missions: the MAGIC initiative		CREVOISIER Cyril (LMD/CNRS)
15:15	Introduction Posters 76, 77, 78, 79, 82, 83, 85, 87		
15:30	**Poster session**		
16:30	***Coffee break***		
17:00	Meteorological lidar- and IASI-derived vertical atmospheric profiles of temperature and water vapor		CHAZETTE Patrick (LSCE)
17:20	On the Use of Routine Airborne Observations for Evaluating IASI Profile Retrievals		WAGNER Timothy (SSEC/ University of Wisconsin Madison)
17:40	Ground-based measurements from CHRIS for the validation of satellite observations: Application to IASI		EL KATTAR Marie-Thérèse (Université de Lille)
18:00	**Adjourn - Validation working group**		

Thursday 19 November

	Session 10: IASI-NG	**Chairpersons:** Nadia Fourrie, Laura Le Barbier	
8:45	IASI-NG Program: General Status Overview		BERMUDO Francisco (CNES)
9:05	IASI-NG L1 processing : new algorithms to calibrate a new instrument		LUITOT Clement (CNES)
9:25	Evaluation of a first IASI-NG channel selection for Numerical Weather Prediction		VITTORIOSO Francesca (CNRM, Météo France & CNRS)
9:45	MUSICA IASI products and opportunities of Metop-SG		SCHNEIDER Matthias (Karlsruhe Institute of Technology)
10:05	Introduction Posters 59, 60		
10:10	Introduction Posters "Clouds and aerosols" and "Surface properties": 25, 26, 27, 29, 31, 32, 33, 34, 35 and 129		
10:25	***Coffee break***		
	Session 11: Atmospheric composition	**Chairpersons:** Cathy Clerbaux, Pierre Coheur	
10:55	**Keynote:** (TBC)		TBC
11:25	Comparison between the assimilation of IASI Level 2 ozone retrievals and Level 1 radiances in a chemical transport model		EMILI Emanuele (CERFACS)
11:45	Antarctic ozone enhancement during the 2019 sudden stratospheric warming event		SAFIEDDINE Sarah (CNRS/LATMOS)
12:05	Spatio-temporal variability of the three major anthropogenic greenhouse gases CO2, CH4 and N2O as seen from IASI onboard three successive Metop platforms		MEILHAC Nicolas (LMD/CNRS)
12:25	Introduction Posters 3, 6, 7, 11, 12, 13, 14, 16, 17		
12:40	***Lunch break***		
14:00	Two decades of MOPITT carbon monoxide measurements: Comparison with IASI and other satellite sensors		EDWARDS David (NCAR)
14:20	Global N2O retrievals from IASI: First results and comparison with reference observations		VANDENBUSSCHE Sophie (Royal Belgian Institute for Space Aeronomy)
14:40	Satellite monitoring of ammonia: from point sources to long-term trends		VAN DAMME Martin (ULB)
15:00	**Session 12: Other instruments**	**Chairpersons:** Dorothee Coppens, Adrien Deschamps	
15:15	An assessment of the quality of the GIIRS instrument using ECMWF model fields		BURROWS Chris (ECMWF)
15:35	Meteosat Third Generation Infrared Sounder (MTG-IRS): Bringing technology to a higher altitude		MIRAS Didier (THALES ALENIA SPACE)
15:55	FORUM EE9 Mission: Level 2 Products and Synergies With IASI-NG		RIDOLFI Marco (University of Bologna)
16:15	Intro posters "Other instruments": 93, 95, 96, 97, 98, 99, 100		
16:30	**Poster session & Coffee break**		
18:00	**Adjourn**		
19:00	**Conference dinner**		

Friday 20 November

	Session 13: Clouds and aerosols	**Chairpersons :** Laurent Labonnote, Claude Camy-Peyret	
9:30	Validation and operational monitoring of cloud products derived from IASI measurements.		STAPELBERG Stefan (EUMETSAT)
9:50	Building a 3D view of Upper Tropospheric cloud systems from synergistic satellite observations for a better understanding of the relation between anvil properties and convection		STUBENRAUCH Claudia (LMD)
10:10	IASI cloud mask comparison between global broadcast and local processing		ASSERAY Mathieu (Météo France CNRM/CEMS/SONDAGE)
10:30	Ice cloud properties retrieval from high spectral resolution measurements in the thermal infrared: Application to IASI and IASI-NG		LEONARSKI Lucie (University of Lille – LOA)
10:50	***Coffee break***		
	Session 14: Surface properties	**Chairpersons:** Raymond Armante, Jerome Vidot	
11:20	IASI-derived sea surface temperature dataset for climate studies		PARRACHO Ana Claudia (LATMOS/IPSL)
11:40	Stand alone night-time sea surface temperature retrieved by the IASI/Metop suite: Toward long time series		CAPELLE virginie (LMD/Ecole polytechnique)
12:00	IASI emissivity based vegetation and soil water stress indices to monitor natural and agricultural ecosystems		MASIELLO Guido (University of Basilicata)
12:20	**Closing session**		
12:45	**End**		

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SESSION 1: IASI MISSION

S1- 48 - AERIS: data and services for Atmosphere
BRISSEBRAT Guillaume, AERIS CNRS

S1- 50 - How to maintain IASI products quality over time ?
BUFFET Laurence, CNES

S1- 52 - IASI L1 reprocessing status and plans at EUMETSAT
VASQUEZ Mayte, EUMETSAT

S1- 53 - Climate data record of IASI temperature and humidity from Metop-A and -B
HUCKLE Roger, EUMETSAT

S1- 54 - A new TIGR dataset for statistical studies of the atmosphere
PERNIN Jérôme, Laboratoire de Météorologie Dynamique

S1- 55 - The IASI/AERIS portal: dissemination of atmospheric data in open access
BOYNARD Anne, LATMOS/IPSL

S1- 56 - OPS-LRS, a software for DB users to process IASI
ROQUET Pascale, Météo-France - CNRS, CNRM UMR3589

S1- 133 - EUMETSAT activities for IASI-C commissioning
GUEDJ Stéphanie, EUMETSAT

SESSION 2: CLIMATE

S2- 18 - Validation of a 2007-2018 homogeneous reprocessed dataset of temperature and humidity profiles derived from IASI-A and IASI-B measurements with IGRA-v2 radiosonde data
STAPELBERG Stefan, EUMETSAT

S2- 22 - Long time series of essential climate variables from 3 successive Metop/IASI
CREVOISIER Cyril, LMD/CNRS

SESSION 3: RETIEVAL TECHNIQUES

S3- 107- N2O retrieval with conjugate gradient least squares
HULTBERG Tim Helge, EUMETSAT

S3- 108 - AOEI, an Adaptive Optimal Estimation for IASI
AUGUST Thomas, EUMETSAT

S3- 109 - Data Fusion of IASI and GOME-2 measurements
ZOPPETTI Nicola, IFAC-CNR

S3- 110 - IASI instrument noise covariance matrix
CAMY-PEYRET Claude, IPSL (Institut Pierre-Simon Laplace)

S3- 112 - Overview on the MUSICA retrieval and product quality
SCHNEIDER Matthias, Karlsruhe Institute of Technology

S3- 115 - Tropospheric ozone retrieval from thermal infrared nadir satellite measurements using a self-adapting regularization.
EREMENKO Maxim, Laboratoire Interuniversitaire des Systèmes Atmosphériques, CNRS/UPEC/UPD/IPSL

S3- 117 - Uncertainty estimation via Neural Networks
DURAN GOMEZ Nuria, Magellium

S3- 118 - **Development of the University of Leicester IASI retrieval scheme to measure volatile organic compounds**
MOORE David, National Centre for Earth Observation

S3- 119 - **A novel method to retrieve CH4 mixing ratio profile from IASI and comparison with in situ data from the Mauna Loa validation station**
SERIO Carmine, Scuola di Ingegneria Univsersità della Basilicata

S3- 120 - Sensitivity study of CH4 retrievals in the TIR
ROBERT Charles, The Royal Belgian Institute for Space Aeronomy (BIRA-IASB)

S3- 121 - Elevated Moist Layers - Retrieving Complex Humidity Structures with IASI
PRANGE Marc, Universität Hamburg

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SCOTT Noelle, LMD/IPSL/CNRS

S4- 69 - **Inter-comparisons between IASI on-board METOP-C with other infrared sounders**
VINCENSINI Anaïs, Magellium

S4- 70 - **Radiometric inter-comparisons: cross calibration between IASI/AVHRR/IIS on-board METOP-C and massive averaging using IASI (A, B and C) Level 1C data**
ENACHE Silvia, Magellium Toulouse

S4- 72 - Hyperspectral Intercalibration: Theory and Results
TOBIN David, Space Science and Engineering Center

S4- 73 - Recent Calibration Validation of IASI with the High-Altitude Airborne Scanning High-resolution Interferometer Sounder (S-HIS)
TAYLOR Joe, Space Science and Engineering Center, University of Wisconsin-Madison

S4- 134 - Three IASIs operating in the same time: L1c products inter-comparison
GUEDJ Stéphanie, EUMETSAT

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S5- 39 - Ammonia-biosphere interaction from IASI and ERA5
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S5- 41 - Detection of extreme events with IASI observations
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S5- 45 - Fire plume heights estimated from IASI-derived trace gas abundances
LECOMTE Gilles, Université Libre de Bruxelles (ULB)

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S7- 123 - Sensitivities of comptuted radiance spectra to spectroscopic parameters
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S7- 125 - Status of the new GEISA-2019 release
ARMANTE RAYMOND, LMD/IPSL/CNRS

S7- 126 - The 4A/OP radiative transfer model: new developments and validation results within the frame of international space missions like IASI
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MAIER Jessica, CIMSS

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BALDIT Elisa, CNES

S10- 60 - **IASI-NG : System performance budget and verification strategy**
JURADO Eric, CNES

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EL AABARIBAOUNE MOHAMMAD, CERFACS

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KUTZNER Rebecca, Laboratoire Interuniversitaire des Systèmes Atmosphériques (LISA)

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ASTORECA Rosa, Université Libre de Bruxelles

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WESPES Catherine, Université Libre de Bruxelles (ULB)

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FRANCO Bruno, Université libre de Bruxelles (ULB), Spectroscopy, Quantum Chemistry and Atmospheric Remote Sensing (SQUARES)

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GUMLEY Liam, Space Science and Engineering Center, University of Wisconsin-Madison

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CUESTA Juan, LISA Laboratoire Interuniversitaire des Systèmes Amosphériques - CNRS/UPEC/UP

S13- 26 - **Three-dimensional pathways of dust over the summertime Sahara revealed by IASI**
CUESTA Juan, LISA Laboratoire Interuniversitaire des Systèmes Amosphériques - CNRS/UPEC/UP

S13- 27 - **New quantitative vertically-resolved retrievals of volcanic sulphate aerosols using IASI measurements**
SELLITTO Pasquale, LISA-UPEC

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VANDENBUSSCHE Sophie, Royal Belgian Institute for Space Aeronomy

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S13- 33 - **Chemical and optical properties of volcanic ash: Laboratory measurements and applications to IASI observations**
DEGUINE Alexandre, Université libre de Bruxelles

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CLARISSE Lieven, Université libre de Bruxelles (ULB), Spectroscopy, Quantum Chemistry and Atmospheric Remote Sensing (SQUARES)

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BIRMAN camille, CNRM, Météo-France and CNRS