

SOLar Radiation Based Established Techniques for aTmospheric Observations: SORBETTO

Rome and Frascati, 6 – 10 February 2023

time	Monday 6	Tuesday 7	Wednesday 8	Friday 10
8-8:30	Registration			
8:30-8:40	Presentation of the school	SPECTROMETRY	SATELLITE REMOTE SENSING	HARMONIA COST ACT. DAY
8:40-10:15	<p style="text-align: center;">RADIATION THEORY</p> <p>8:40-8:55 An overview of the radiative transfer study progress and future targets of the research. <i>T. Nakajima online connected</i></p> <p>8:55-9:15 Atmospheric composition, climate forcing and air quality. <i>G. Casasanta</i></p> <p>9:15- 9:45 Basics of radiation modeling and inversion principles in remote sensing of the atmosphere, GRASP. <i>O. Dubovik</i></p> <p>9:45-10:15 Atmospheric radiative transfer theory and practical approaches used for inversion. <i>M.Momoi</i></p>	<p>8:30-8:55 Instruments basics: calibration and characterizations of spectrometers. <i>J. Grobner</i></p> <p>8:55- 9:15 Brewer methodology. <i>H. Diemoz</i></p> <p>9:15-9:35 Doas methodology. <i>E. Castelli</i></p> <p>9:35-9:55 Pandonia Global network. <i>A. Kreuter</i></p> <p>9:55-10:15 Spectral solar measurements with array spectroradiometers. <i>N. Kouremeti</i></p>	<p>8:30-9:05 An overview on satellite remote sensing. <i>O. Dubovik</i></p> <p>9:05-9:40 Overview on ESA satellites. <i>C. Retscher</i></p> <p>9:40-10:15 Overview on Cal/Val activities. <i>J. Von Bismark</i></p>	<p>8:30-8:45 The Harmonia COST action. <i>S.Kazadzis</i></p> <p>8:45-9:00 <u>WG1</u>: The QUATRAM campaigns. <i>M.Campanelli</i></p> <p>9:00-9:15 <u>WG2</u>: Spectral AODs <i>L. Doppler</i></p> <p>9:15-9:40 <u>WG3</u>: Aerosol assimilation to models and end user aerosol requirements. <i>A. Benedetti, invited talk</i></p> <p>9:40-9:55 <u>WG4</u>: Aerosol properties from all-sky cameras. <i>R. Roman, Invited talk</i></p> <p>9:55- 10:20 ACTRIS research infrastructure and the Center of Aerosol Remote Sensing. <i>L. Mona, invited talk</i></p>
10:15-10:30	Questions	Questions	Questions	Questions
10:30-11	Coffee break (offered)	Coffee break (offered)	Coffee break (offered)	Coffee break (offered)

	PHOTOMETRY	METROLOGY	SATELLITE MISSIONS	
11-12:45	<p>11:00-11:15 Instruments basics: calibration and characterizations of photometers (PFR, POMs, Cimel). <i>V. Estelles</i></p> <p>11:15-11:45 Aerosol optical properties from lunar, solar and stellar remote sensing: an overview of the different techniques and methods. <i>L. Doppler; A. Barreto</i></p> <p>11:45- 12:00 The Skynet network. <i>M.Campanelli, V. Estelles</i></p> <p>12:00-12:25 AERONET Network (stationary and mobile photometry) <i>P. Goloub</i></p> <p>12:25-12:45 GAW and Homogenisation activities of aerosol networks at PMOD/WRC. <i>S. Kazadzis</i></p>	<p>11:00-11:20 Metrology support to atmospheric composition measurements. <i>S. Nevas</i></p> <p>11:20-11:50 Traceability concepts for Aerosol optical depth measurements. <i>N. Kouremeti</i></p> <p>INSTRUMENT MANAGEMENT</p> <p>11:50-12:15 Instrument and network operations best practices <i>M. Campanelli, A. Kreuter</i></p> <p>12:15-12:45 Rules for instruments managements. <i>S. Casadio</i></p>	<p>11:00-11:35 Aerosol related observations in Copernicus Sentinel-5P, CO2M Mission and 3MI on MetOp-SG. <i>O. Dubovik</i></p> <p>11:35-12:10 Air quality observations in Copernicus, esp Sentinel-5 Precursor mission and an outlook to Sentinel-4/5 <i>C. Zehner</i></p> <p>12:10-12:45 Greenhouse gas observations in Copernicus with S5p, GHGSat and CO2M (35). <i>Y. Meijer</i></p>	<p>11:00 – 11:15 Effects of columnar No2 and O3 on aerosol retrievals. <i>P. Raptis, invited talk</i></p> <p>OBSERVATORIES</p> <p>11:15-11:35 BAQUININ and CIRAS. <i>S. Casadio, G.Casasanta</i></p> <p>11:35-11:50 Deutscher Wetterdienst / Meteorologisches Observatorium Lindenberg. <i>L. Doppler</i></p> <p>11:50-12:05 Izaña Atmospheric Research Center <i>A. Barreto</i></p> <p>12:05-12:20 Physikalisches-Meteorologisches Observatorium Davos, World Radiation Center <i>J. Grobner</i></p> <p>12:20-12:35 ENEA Climate Observatory at Lampedusa <i>A. di Sarra</i></p> <p>12:35-12:50 ATOLL, Atmospheric Observatory of LILLe <i>P. Goloub</i></p> <p>12:50-13:05 RIMA GOA calibration platform and the CAELIS tool <i>R. Roman</i></p>
12:45-13	Questions	Questions	Questions	
13-14	Lunch ice break (offered)	Lunch	Lunch	Lunch
14-17	Laboratory on theory and photometry in Computer room	Laboratory on spectrometry and metrology in Computer room	VISIT ESRIN	<p>14-15 Questions and Conclusions</p> <p>15-17 HARMONIA core group meeting</p>

THURSDAY 8:

10-12: Sapienza instruments show; 15:00 bus for Martignano; 16:30 visit of Agriturismo; 17:30 talk about crops management; 18:00 lecture by M. Celesti: "Crops and agricultural satellite observations (Copernicus CHIME & FLEX)"; 19:30 Dinner and social event