SORBETTO

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SORBETTO

SOlar Radiation Based Established Techniques for aTmospheric Observations

International Summer School

SOlar Radiation Based Established Techniques for aTmospheric Observations:

SORBETTO

ONLINE | 13 – 15 September 2021


Sta parlando: Natalia Kouremeti
In attesa di visualizzare lo schermo di Webinar Fermi
Tutti
Webcam
Zoom
Screenshot
Monica Campanelli
Yasjka Maijer
Nakajima Teruyuki
Stefano Casadio
Julian Gröbner
Africa Barreto
Lionel Doppler
Saulius Nevas
Henri Diémoz
Christian Retscher
David Fuertes
Jonas.Von.Bismarck
Philippe Goloub
Natalia Kouremeti
Oleg Dubovik
Victor Estelles
Stelios Kazadzis
Axel Kreuter

SORBETTO 13-15 September 2021	Teacher	Institution / Nationality	Italian Local time: (UTC+2)
Connection tests			9:00 - 9:15
Presentation of the school	M.Campanelli and Julian Gröbner		9:15 – 9:30
Ground based instruments			
Monday 13 morning			
Theory			
Black Body and solar spectrum Basic Radiometric quantities	T. Nakajima	AORI / Japan	9:30-10:00
Scattering (Rayleigh, Mie) and Absorption by aerosol and gases RTE: Beer Law and RTE solutions;	T. Nakajima	AORI / Japan	10:00-11:00
Questions			*11:00-11:20*
break			*11:20-11:40*
Basics on aerosol retrieval algorithms from different remote sensing techniques (GRASP)	O.Dubovik/David Fuertes	LOA/CNRS France	11:40-12:40
Questions			12:40-13:00
break			*13:00-14:00*
Monday 13 afternoon			
Photometry			
SKYNET network, products	T. Nakajima/V. Estelles	AORI /Japan UV/Spain	14:00-14:25
AERONET network, solar and polarized instruments, products	Philippe Goloub	LOA/CNRS France	14:25-15:05
Lunar photometry	Africa Barreto	AEMET/Spain	15:05-15:30
Questions			*15:30-15:50*
break			*15:50-16:10*
Mobile photometry and integrated observation	Philippe Goloub	LOA/CNRS France	16:10-16:30
GAW and Homogenisation activities of aerosol networks at PMOD/WRC	Stelios Kazadzis	PMOD/WRC/ Swiss	16:30-17:10
Questions			*17:10-17:30*
Tuesday 14 morning			
Spectrometry			
Aerosol optical properties from lunar, solar and stellar remote sensing: an overview of the different techniques and methods	Lionel Doppler	DWD/Germany	9:30-10:00
Brewer	H. Diemoz	Arpa_VDA/Italy	10:00-10:30
Doas	Folkard Wittrock	UniBrem / Germany	10:30-11:00
Questions			*11:00-11:20*
Break			*11:20-11:40*
Pandonia	Axel Kreuter	Luftblick/Austria	11:40-12:10

Spectral solar measurements with array spectroradiometers	Natalia Kouremeti	PMOD/WRC/ Swiss	12:10–12:40
Questions			*12:40-13:00*
Break			*13:00-14:00*
Tuesday 14 afternoon			
Metrology applied to solar radiometry			
Metrology support to atmospheric composition measurements	Saulius Nevas	PTB/Germany	14:00 -14:30
Traceability concepts for Aerosol optical depth measurements	Natalia Kouremeti	PMOD/WRC/Swiss	14:30-15:00
On site Calibrations (Sun photometers)	Monica Campanelli	ISAC-CNR/Italy	15:00-15:30
Questions			*15:30-15:50*
Break			*15:50-16:10*
Instrument and network operations best practices	Axel Kreuter/M.Campanelli	LuftBlick /Austria; CNR Italy	16:10-16:40
BAQUININ project	Stefano Casadio	SERCO / Italy	16:40-17:10
Questions			*17:10-17:30*
Wednesday 15 morning			
Satellite			
Overview on satellite remote sensing	O. Dubovik	LOA/CNRS France	9:30 -10:00
Overview on satellite ESA missions	Christian Retscher	ESA	10:00-10:30
Overview on Cal Val activities	Jonas Von Bismarck	ESA	10:30-11:00
Questions			*11:00-11:20*
Break			*11:20-11:40*
Aerosol-related observations of Copernicus Sentinel-5P, CO2M Mission and 3MI on MetOp-SG	Oleg Dubovik	LOA/CNRS France	11:40-12:40
Questions			*12:40-13:00*
Break			*13:00-14:00*

Wednesday 15 afternoon			
Copernicus Sentinel-5 Precursor mission measurements and applications (including an outlook to Sentinel-4/5)	Claus Zehner	ESA	14:00-14:45
Guide to Anthropogenic Greenhouse Gas Monitoring (CO2 & CH4) from Satellites.	Yasjka Meijer	ESA	14:45-15:30
Questions			*15:30-15:50*
break			*15:50-16:10*
Traceability of solar radiation measurements & the project MAPP	Julian Gröbner	PMOD/WRC/ Swiss	16:10-16:40
Conclusions	M.Campanelli and Julian Gröbner		16:40-17:10

Italian Local time (UTC+2)	**Monday 13** 9:00-9:30 Welcome Campanelli-Gröbner	**Tuesday 14**	**Wednesday 15**
9:30 -13:00 (20 min questions at 11:00 20 min break at 11:20)	Welcome: <u>Theory</u>: Nakajima (1h:30') Dubovik/Fuertes(1h')	<u>Spectrometry</u>: Doppler- lunar,solar,stellar (30') Diemoz -Brewer (30') Wittrock – Doas (30') Kreuter – Pandora (30') Kouremeti - Spectral solar measurements (30')	<u>Satellite:</u> Dubovik – remote sensing (30') Retscher- ESA missions (30') Von Bismarck – cal/val (30') Dubovik – aerosol observations (1h)
14:00 – 17:30 (20 min questions at 15:30; 20 min break at 15:50)	<u>Photometry</u>: Nakajima/Estelles – SKYNET (25') Goloub- AERONET (40') Barreto- Lunar (25') Goloub – Mobile photometry (20') Kazadzis - GAW(40')	<u>Metrology applied to solar radiometry:</u> Nevas – Metrology support (30') Kouremeti- Traceability for AOD (30') Campanelli -on site calibration (30') Kreuter/Campanelli – network managements (30') Casadio– BAQUNIN (30')	Zehner – Sentinel 5p (45') Meijer – GHG (45') Gröbner – traceability/MAPP(30') Conclusions