AGENDA v.3: MISR Science Team Meeting December 2023
Beckman Institute Auditorium, California Institute of Technology

Tuesday, December 19

Welcome and introduction   Moderator: David Diner

8:15 AM	Sign-in	All	45
9:00 AM	Welcome and opening remarks	David Diner	15
9:15 AM	MISR georegistration and data product updates in response to changes in Terra orbit	Veljko Jovanovic/. Kevin Mueller	20
9:35 AM	Discussion/buffer	All	11

Aerosols and air quality   Moderator: Sina Hasheminassab

9:46 AM	Global and regional aerosol observations from 2000 to 2022	Michael Garay	17
10:03 AM	MISR constraints on wildfire, volcanic, and dust plume aerosol properties	Ralph Kahn	17
10:20 AM	Break	All	20
10:40 AM	Towards improved MISR aerosol retrievals over land: An ensemble approach	Marcin Witek	17
10:57 AM	Expanding the coverage of MISR aerosol retrievals over shallow, turbid, and eutrophic waters	Robert Nelson	17
11:14 AM	From MISR to VIIRS: constraining VIIRS aerosol models using the MISR research algorithm and the development of a new over-water aerosol retrieval algorithm for VIIRS	James Limbacher	17
11:31 AM	National scale PM2.5 speciation modeling in China with MISR aerosol data and data fusion	Yang Liu	17
11:48 AM	Discussion/buffer	All	12
12:00 PM	Lunch	All	90
1:30 PM	Application of an aerosol retrieval optimization algorithm to AirMSPI, POLDER, and collocated MISR/MODIS measurements	Feng Xu	17
1:47 PM	Aerosol optical property and plume height retrievals from FIREX-AQ AirMSPI data	Olga Kalashnikova	17
2:04 PM	An analysis of vertical plume extent forecasted with the WRFx System and WRF-SFIRE using MISR plume height data	Kathleen Clough	17
2:21 PM	Evaluating spatial structures of aerosols simulated by climate models against MISR: Application of topological data analysis	Kyo Lee	17
2:38 PM	Discussion/buffer	All	12

Poster session I (West Patio)

2:50 PM	Poster viewing and break	All	50

Sea ice   Moderator: Jae Lee

3:40 PM	Twenty-one years of MISR sea ice surface albedo and their validation at both poles using airborne albedometer instruments	Laura Aguilar	17
3:57 PM	Mapping Arctic sea-ice surface roughness with MISR	Thomas Johnson	17
4:14 PM	MISR derived sea ice roughness for safe travel on the sea ice for Inuit populations	Michel Tsamados	17
4:31 PM	A machine learning approach to cloud-detection over Arctic sea ice	Anne Nolin	17
4:48 PM	Discussion/buffer	All	12
5:00 PM	Adjourn for the day		

Dinner/social event

6:30 PM	El Portal Mexican restaurant, 695 E. Green St., Pasadena

Wednesday, December 20

Land surfaces   Moderator: Jae Lee

9:00 AM	Forest biomass in the Southwestern U.S. at 1 kilometer scale from MISR and GEDI: Assessment with NASA Carbon Monitoring System data	Mark Chopping	17
9:17 AM	Monitoring changes and biophysical processes of equatorial forests using TERRA MISR and DSCOVR EPIC data	Yuri Knyazikhin	17
9:34 AM	Sentinel-2 global mosaics of surface spectral albedo at 10m/20m: a comparison with MISR, MODIS and VIIRS	Jan-Peter Muller	17
9:51 AM	Discussion/buffer	All	12
10:03 AM	Break	All	20

Clouds and radiation   Moderator: Eugene Clothiaux

10:23 AM	Global and regional cloud height observations from 2000 to 2022	Roger Davies	17
10:40 AM	Towards a 23-year record of two-layered cloud properties through the fusion of Terra-MODIS thermal infrared radiances with MISR stereoscopic heights	Larry Di Girolamo	17
10:57 AM	Non-Gaussian PDFs of TOA SW Flux from MISR and CERES	Jae Lee	17
11:14 AM	Spatiotemporal variability relationships of shallow cloud height and planetary boundary layer height over the Northeast Pacific using satellite (MISR and GNSS-RO) observations and reanalysis	Terence Kubar	17
11:31 AM	Do climate model biases influence cloud feedbacks?	Roger Marchand	17
11:48 AM	Discussion/buffer	All	12
12:00 PM	Lunch	All	90
1:30 PM	ESA Harmony multi-angle thermal IR tandem retrievals: a study of retrievals of 3D wind and cloud-top height using radiative simulations based on ECSIM	Jan-Peter Muller	17
1:47 PM	3D tomographic reconstruction of convective clouds: A new approach based on machine learning	Anthony Davis	17
2:04 PM	Towards operational 3D cloud tomography: Leveraging machine learning and multi-angle passive imaging	Linda Forster	17
2:21 PM	Insights into stereoscopic cloud top height retrievals and the microphysical interpretation of rainbow scattering from 3D radiative transfer simulations	Jesse Loveridge	17
2:38 PM	Discussion/buffer	All	12

Poster session II (West Patio)

2:50 PM	Poster viewing and break	All	50

Clouds and radiation (continued)

3:40 PM	Observations of the macrophysical properties of cumulus cloud fields sampled during CAMP2Ex from MISR, MODIS and ASTER	Michie De Vera	17
3:57 PM	An evaluation of liquid cloud droplet effective radius derived from MODIS, airborne remote sensing, and in situ measurements from CAMP2Ex	Dongwei Fu	17
4:14 PM	Discussion/buffer	All	11

Wrap-up

4:25 PM	Wrap-up	David Diner	10
4:35 PM	Meeting adjourn		

Posters

No.	Title	Lead author	
1	Wildfire-induced smoke aerosols simulated by the Aerosol Chemistry Model Intercomparison Project (AerChemMIP) models	Jonathan Barnes	
2	Planned updates to MISR radiometric calibration and characterization	Carol Bruegge	
3	Forest biomass in the Southwestern U.S. at 1 kilometer scale from MISR and GEDI: Assessment with NASA Carbon Monitoring System datasets	Mark Chopping	
4	Breaking the complexity barrier in 3D cloud remote sensing with deep machine learning and large-eddy simulation	Anthony Davis	
5	Impact of Canadian wildfires on mid Atlantic's region air quality: An analysis using ASDC data	Mahmoud Hazem	
6	Evolving particles in the 2022 Hunga-Tonga Hunga-Ha'apai volcano eruption plume	Ralph Kahn	
7	Effects of atmospheric dust on solar energy generation in South Africa	Olga Kalashnikova	
8	The practical application of Atmospheric Tomography with 3D Radiative Transfer (AT3D) using the Multi-angle Imaging SpectroRadiometer (MISR)	John Lundstrom	
9	Advancing global cloud detection in satellite imagery with spatial and spectral awareness via deep learning	Joseph Nied	
10	Mapping surface roughness and clouds over Arctic sea ice	Anne Nolin	