

Satellite Remote Sensing of Air Quality Data, Tools, and Applications

Organized by
 NASA's Applied Remote Sensing Training Program (ARSET), and
 Indian Institute of Tropical Meteorology,
 Ministry of Earth Sciences, Government of India, Pune
 Tuesday, May 23, 2017 – Friday, May 26, 2017
 Indian Institute of Tropical Meteorology, Pune, India

Tentative Training Agenda

Key:

HO: Hands-On, **LC:** Lecture, **DM:** Demonstration, **PP:** Participant Presentation, **DS:** Discussion, **TB:** To Be Decided

Day 1 (AM) - Tuesday			
Session I: Introduction and First Exposure to Satellite Air Quality Measurements			
Speaker	Time	Topic	Format
	09:00-09:30	Registration and Logistics	Informal
	09:30-10:30	Opening Ceremony	
	10:30-11:00	TEA BREAK	
IITM	11:00-11:45	Overview of Indian Air Quality Monitoring Program and Future Directions	LC, DS
ARSET	11:45-12:30	Satellite Capabilities for Air Quality Monitoring: An Overview – P3	LC, DS
	12:30-02:00	LUNCH BREAK	

Day 1 (PM) - Tuesday			
Session II: Satellite Imagery, Data Formats and Access			
Speaker	Time	Topic	Format
ARSET	02:00-02:45	Satellite Imagery Access, Interpretation, and Tools for Dust, Smoke, and Pollution – P4, E1	LC, DM, HO
ARSET	02:45-03:45	Fundamentals of Satellite Remote Sensing – P5	LC, DS
	03:45-04:00	BREAK	
ARSET	04:00-04:30	Satellite Data Products, Levels, and Formats – P6	LC, DS
ARSET	04:30-05:30	Exploring and Ordering Level 3 Satellite Data with the Giovanni Web Tool – E2	HO, DS, PP
ARSET	05:30-06:00	Q&A and review of day 1	DS, PP
	06:00	Day 1 Adjourn	

DAY 2 (AM) - Wednesday			
Session III: Satellite Aerosols Data, Tools and Applications			
Speaker	Time	Topic	Format
ARSET	08:30-08:45	Q&A, review of day 1, logistics	
ARSET	08:45-09:00	Download Level 2 Aerosol Products – E3	HO
SAC	09:00–09:30	Remote Sensing of Aerosols from Indian Satellites: Algorithms, Products and Validation – Part 1	LC, DS
SAC	09:30-10:00	Remote Sensing of Aerosols from Indian Satellites: Algorithms, Products and Validation – Part 2	LC, DS

	10:00-10:15	TEA BREAK	
ARSET	10:15-11:15	Satellite Aerosol Products, Evaluation, Applications, and Limitations – P8_1, P8_2	LC, DS
ARSET	11:15-12:00	Conversion of Satellite Aerosol Measurements to PM _{2.5} Air Quality (Excel exercise) – E4s.	HO, PP
ARSET	12:00-12:30	Theoretical Basis for Converting Satellite Observations to Ground-Level PM _{2.5} Concentrations – P9	LC, DS
	12:30-02:00	LUNCH BREAK	

Day 2 (PM) - Wednesday			
Session IV: Estimation of Ground Level PM_{2.5} Concentrations with Satellite Data			
Speaker	Time	Topic	Format
ARSET	02:00-02:30	Theoretical Basis for Converting Satellite Observations to Ground-Level PM _{2.5} Concentrations – Continuation talk – P9	LC, DS
ARSET	02:30-03:45	Reading and Mapping MODIS Level 2 Aerosol Data Set & PM _{2.5} (Panoply/Python) – E5	HO, PP
	03:45-4:00	TEA BREAK	
ARSET	04:00-05:00	Satellite Based PM _{2.5} Data Sets and Access – P10	DM, HO
ARSET	05:00-05:30	Q&A and Case Study Analysis Grouping	DS
	05:30	Day 2 Adjourn	

Day 3 (AM) - Thursday			
Session V: Satellite based fire and emissions products			
Speaker	Time	Topic	Format
ARSET	08:30-08:45	Q&A, Review of Day 2	DS
IIRS	08:45-09:30	ISRO Capacity Building Program-Overview and Opportunities	LC, DM
IIRS	09:30-10:15	Indian Satellite Data for Air Quality Monitoring	LC, DS
ARSET	09:45-10:45	Satellite Based Fires Products – Method, Data Access and Applications – P12, E6	LC, HO
	10:15-10:30	TEA BREAK	
ARSET	10:30-11:30	Satellite Based Fires Products – Method, Data Access and Applications – P12, E6	LC, HO
IITM	11:30-12:30	Satellite Based Characterization of Emissions – Method and Application – Part 1	LC, HO
	12:30-02:00	LUNCH BREAK	

Day 3 (PM) - Thursday			
Session VI: E Trace Gas Products			
Speaker	Time	Topic	Format
IITM	02:00-02:30	Satellite Based Characterization of Emissions – Method and Application – Part 2	LC, HO
ARSET	02:30-03:00	Satellite Remote Sensing of Trace Gases (NO ₂ , SO ₂ , CO) – P14	LC, DS

ARSET	03:00-04:00	Trace Gases Data Access, Tools and Analysis – E8	HO, PP
	04:00-04:15	TEA BREAK	
IMD	04:00-05:00	RAPID System from IMD	LC, DM
ARSET	05:00-05:30	Discussion, Q&A and Review of Day 1, 2 & 3	
	05:30	Day 3 Adjourn	

Day 4 (AM) -Friday			
Session VII: Air Quality Case Studies by Participants			
Speaker	Time	Topic	Format
ARSET	08:30-09:00	Additional Tools and Resources for Case Studies – E9	LC, DM
	09:00-11:00	Case Study Analysis in Groups	HO
	11:00-12:00	Case Study Presentations and Discussion	PP
	12:30-01:00	Training Review, Feedback and Moving Forward	HO, DS
	01:00	Adjourn	