

A Training School on Aerosol–Cloud Interactions and Microphysical Processes

TENTATIVE PROGRAMME

Venue: IIT Kanpur

Date: March 07-15, 2009

DAY 1 - March 07, 2009

Registration: 08:30 - 09:30 am

Time	Topic/Lecturer
09:30-09:35 am	Welcome Remarks / Dr. S.N. Tripathi, IIT Kanpur
09:35-09:45 am	Inauguration / Director, IIT Kanpur
09:45-10:00 am	<i>Tea Break</i>
10:00 am -12:00 pm	Cloud Thermodynamics / Professor G.S. Bhat, IISc Bangalore
12:00 am -13:00 pm	Aerosol Microphysics-Theory / Dr. S.N. Tripathi, IIT Kanpur <ul style="list-style-type: none"> ▪ Gas-to-particle Conversion (Nucleation Theories)
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 16:00 pm	Laboratory (Environmental Engineering Lab, Fog Chamber Lab, Aerosol Lab, Sun Photometer, AWS, Engine Emission Lab)
16:00 – 17:00 pm	Cloud Thermodynamics (Contd.)/ Professor G.S. Bhat

DAY 2 - March 08, 2009

Time	Topic/Lecturer
09:00-11:00 am	Aerosol Microphysics-Theory (Contd.)/ Dr. S.N. Tripathi, IIT Kanpur <ul style="list-style-type: none"> ▪ Condensational Growth ▪ Coagulation
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 13:00 pm	Aerosol Instrumentation / Dr. Tarun Gupta, IIT Kanpur <ul style="list-style-type: none"> • Optical Techniques
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 17:00 pm	Laboratory (Outdoor Sampling using Optical Particle Counter)

DAY 3 - March 09, 2009

Time	Topic/Lecturer
09:00-11:00 am	Cloud Microphysics-Theory / Dr. S. N. Tripathi, IIT Kanpur <ul style="list-style-type: none"> • Cloud Droplet Activation (Modified Kohler Theory) • Cloud Droplet Growth • Droplet-Droplet Interaction (Collision and Coalescence)
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 13:00 pm	Aerosol Instrumentation (Contd.) / Dr. Tarun Gupta, IIT Kanpur <ul style="list-style-type: none"> • Electrical Techniques, Photo Acoustic Techniques
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 17:00 pm	Laboratory (Introduction to Inductively Coupled Plasma Mass Spectrometry Ion Chromatograph, Scanning Mobility Particle Sizer and Photo Acoustic Soot Spectrometer)

DAY 4 - March 10, 2009

Time	Topic/Lecturer
09:00-10:00 am	Cloud Instrumentation (Contd.) / Dr. S.N. Tripathi, IIT Kanpur <ul style="list-style-type: none">• Cloud Droplet Probe, Cloud Imaging Probe, Liquid Water Content
10:00-10:15 am	<i>Tea Break</i>
10:15-13:00 pm	Laboratory (Cloud Combination Probe)
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 15:30 pm	Cloud Instrumentation / Dr. S.N. Tripathi, IIT Kanpur Cloud Condensation Nucleus Counter
15:30 pm - 17:00 pm	Laboratory (Cloud Condensation Nuclei Counter)

DAY 5 – March 11, 2009: NO LECTURE (HOLI)

DAY 6 - March 12, 2009

Time	Topic/Lecturer
09:00-11:00 am	Field Campaigns for Aerosol Characterisation and Impact Assessment: Indian Efforts/ Dr. K. Krishnamoorthy, SPL, VSSC
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 12:00 pm	Ice Microphysics-Theory / Dr. Pradeep Kumar, University of Pune <ul style="list-style-type: none">• Nucleation and Growth of Ice- 1
12:00 pm - 13:00 pm	Contd. (Dr. K. Krishnamoorthy)
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 16:00 pm	Contd. (Dr. Pradeep Kumar, University of Pune) <ul style="list-style-type: none">• Nucleation and Growth of Ice- 2• Ice in the Atmosphere Laboratory
16:00 – 17:00 pm	Laboratory (Sun Photometer, Pyranometer, AWS, Environmental Monitoring Lab)

DAY 7 - March 13, 2009

Time	Topic/Lecturer
09:00-11:00 am	Aerosol-Cloud Interactions and Numerical Modelling / Dr. S.N. Tripathi, IIT Kanpur <ul style="list-style-type: none">• Aerosol Microphysical Models• Cloud Microphysical Models
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 13:00 pm	(contd.)
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 17:00 pm	Laboratory (Modeling-Computer Lab)

DAY 8 - March 14, 2009

Time	Topic/Lecturer
09:00-11:00 am	Global Simulations / Professor O.P. Sharma, IIT Delhi <ul style="list-style-type: none">• GCM Simulations of Aerosol Direct Effects• GCM Simulations of Aerosol Indirect Effects
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 12:00 pm	(contd.)
12:00 pm – 13:00 pm	CTCZ Pilot Experiment / Dr. S.N. Tripathi, IIT Kanpur <ul style="list-style-type: none">• Aircraft Measurements
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 17:00 pm	Laboratory (APS and Aethalometer, Issues with Aircraft Sampling)

DAY 9 - March 15, 2009

Time	Topic/Lecturer
09:00-11:00 am	Cumulus Parameterization Schemes/Professor R. Nanjundaiah, IISc Bangalore
11:00-11:15 am	<i>Tea Break</i>
11:15 am - 12:00 pm	Application / Dr. Hari Singh, IMD
12:00 pm - 13:00 pm	Cumulus Parameterization Schemes (contd.) / Professor R. Nanjundaiah, IISc Bangalore
13:00 – 14:00 pm	<i>Lunch</i>
14:00 – 17:00 pm	Informal Discussion with Participants