INTEX-B Sensors and Parameters for DC-8 and C-130

DC-8 | C-130

INTEX-B DC-8 Sensors/Parameters

Sensor(s)	Parameter(s)
Nitric Oxide Chemilumimescence	Ozone
UV Lidar	Ozone and aerosol profile
Laser Induced Flourescence	NO, NO2, HCHO
Laser Induced Flourescence and thermal dissociation	NO2, Noy, Nitric Acid, Peroxynitrates, Alkyl
GC-ECD/PID/RGD	PANs, OVOCs, nitriles
Deriavative HPLC and flourescence	H2O2, CH3OOH, HCHO
Tunable Diode Laser Absorption Spectrometry	CH2O
Laser Induced Flourescence	OH, HO2
Chemical Ionization Mass Spectrometry	SO2, HNO4, NO, HCl
Whole air sample collection; GC-FID/EC/MS analysis	VOCs (NMHC, halocarbons, alkyl nitrates)
Tunable Diode Laser Absorption Spectrometry	CO, CH4
Non-Dispersive Infrared	CO2
Open path Tunable Diode Laser Absorption Spectrometry	H2O
Mist chamber/IC	Bulk aerosol composition, HNO3
Particle measuring probes, differential mobility analyzer, CN counters	Aerosol composition, microphysics, and optical properties
CN counters, cloud aerosol and precipitation Spectrometer, soot photometer	Aerosol number density, size, light scattering properties; cloud liquid water content
Spectrally resolved radiometer, Zenith and Nadir	Actinic fluxes and photolytic frequencies
DC-8 Data Acquisition and Distribution, Crogenic hygrometer, actinometer	NAV, MET, In Situ Water Vapor/Cryo and J(NO2) Measurements
aqueous collection followed by Chemiluminescence detection with acidinium ester	Hydrogen Peroxide
Cold Vapor Atomic Fluorescence Spectrometry	Mercury

INTEX-B C-130 Parameters

Sensor(s)	Parameter(s)
Chemical Ionization Mass Spectrometry	HNO3, H2O2, organic acids
Particle Into Liquid Sampling (PILS)/IC	Aerosol bulk ionic composition
DFG Tunable Diode Laser	Formaldehyde
Chemilumimescence	NO, NO2, NOy, O3
Spectrally resolved radiometer, Zenith and Nadir	Actinic fluxes and photolytic frequencies
FTIR in transmission mode	Orgaics
DMT streamwise thermal-gradient CCN instrument	CCN
http://www.eol.ucar.edu/raf/Bulletins/b9appdx_B.html	NAV, MET, In Situ Water Vapor/Cryo and J(NO2) Measurements
CIMS	OH, H2SO4, and MSA

SP-2	Aerosols nummber and mass concentration
PTR-MS	C4-carbonyls, C6-carbonyls, C8-benzene, C9-benzene, Acetaldehyde, Acetonitrile, Methanol, Butanal, Acetic Acid, Acetone, Benzene, Hydroxy Acetone, Toluene
Aerodyne HR-ToF Aerosol Mass Spectrometer	Aerosols
UV Pulsed Fluorescence	SO2
PAN CIGARette Thermal Decomposition Chemical Ionization Spectrometer	peroxyacyl nitrates
Tandem Differential Mobility Analyzer, Differential Mobility Analyzer	Aerosols, Aerosol Particle Properties
Particle measuring probes, differential mobility analyzer, CN counters	Aerosol composition, microphysics, and optical properties
CIMS	HO2 and HO2+RO2
VUV fluorescence	CO
electron tomography with transmission electron microscopy (TEM)	Soot Aerosol
Whole air sample collection; GC-FID/EC/MS analysis	VOCs (NMHC, halocarbons, alkyl nitrates)
Trace Organic Gas Analyzer	Oxygenated Volatile Organic Compound

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