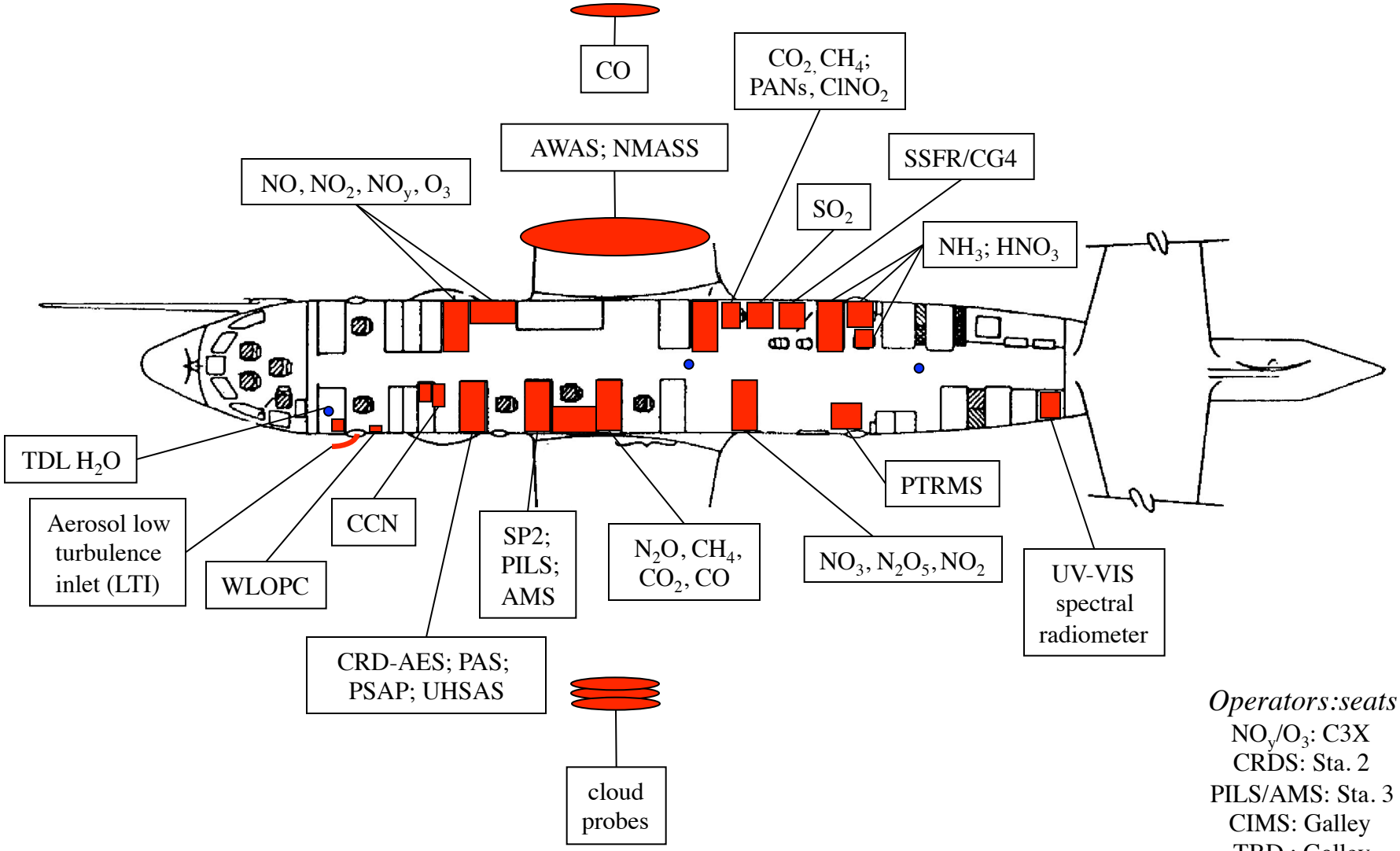
N43RF layout - CalNex 2010

NOAA-CSD version 3 12-8-2009



Operators:seats

NO_y/O_3: C3X

CRDS: Sta. 2

PILS/AMS: Sta. 3

CIMS: Galley

TBD : Galley

Location	Abbreviation	Full name	Description
Sta. FD	TDL H_2O	tunable diode laser water vapor	open-path fast-response tunable diode laser absorption spectrometer
Sta. FD	LTI	low turbulence inlet	decelerating inlet to provide sample air to aerosol instruments in fuselage
Sta. FD & B cab.	WLOPC	white-light optical particle counter	counts and sizes supermicron aerosol particles (mostly soil and sea-salt); samples from LTI
Sta. 2 forward	CCN	cloud condensation nucleus counter	counts number of particles that serve as a core for new cloud water droplets; samples from LTI
Sta. 2	CRD-AES	cavity ringdown-aerosol extinction spectrometer	measures total dry aerosol light extinction and extinction as f(RH); samples from LTI
Sta. 2	PSAP	particle soot absorption photometer	measures total aerosol light absorption by filter darkening; samples from LTI
Sta. 2	PAS	photoacoustic absorption spectrometer	measures total aerosol light absorption by photoacoustics; samples from LTI
Sta. 2	UHSAS	ultrahigh sensitivity aerosol size spectrometer	counts and sizes 0.07-1.0 μm aerosol particles; samples from LTI
Sta. 3	SP2	single-particle soot photometer	counts, sizes, and measures the mass and coating state of soot particles
Sta. 3	PILS	particle-into-liquid sampler	dissolves small aerosol particles into liquids for postflight chemical composition analysis; samples from LTI
Sta. 3	AMS	aerosol mass spectrometer	counts, sizes, and measures the chemical composition of aerosol particles; samples from LTI
Sta. C3X	$NO/NO_2/NOy/O_3$	nitrogen oxides and ozone	chemiluminescence detection with photolytic or catalytic conversion
Sta. 4	N_2O, CH_4, CO_2, CO	nitrous oxide, methane, carbon dioxide, and carbon	QCLS - quantum cascade laser absorption spectroscopy
Sta. 5	CO_2 and CH_4	carbon dioxide and methane	IR laser absorption in a high-finesse cavity
Sta. 5	PANs	peroxyacyl nitrates	chemical ionization mass spectrometry using I^- as reagent ion
Sta. 6a	SO_2	sulfur dioxide	pulsed UV fluorescence
Sta. 6b	SSFR/CG4	solar spectral flux radiometer and pyrgeometer	up- and down-welling irradiance of visible (SSFR) and infrared (CG4) light
Sta. 7	HNO_3	nitric acid	chemical ionization mass spectrometery using SiF_5^- as reagent ion

Location	Abbreviation	Full name	Description
Sta. 7	NH_3	ammonia	chemical ionization mass spectrometry using the protonated acetone dimer as reagent ion
Dual passenger	NO_3/N_2O_5	cavity ringdown absorption spectrometer	laser absorption in high-finesse cavities
Sta. 8	PTRMS	proton transfer reaction mass spectrometer	chemical ionization mass spectrometer using H_3O+ as reagent ion
J cab.	UV-VIS spectrometer	spectral actinic flux radiometer	measures solar radiation using spectroradiometers
AMPS pod	NMASS	nucleation mode aerosol size spectrometer	counts and sizes 0.004-0.07 nm aerosol particles
AMPS pod	AWAS	whole air sampler	canister samples for postflight GC analysis of hydrocarbons, alkyl nitrates, and halocarbons
CO pod	CO	carbon monoxide	vacuum UV resonance fluorescence
LWS 485	cloud probes	Droplet Measurement Technologies cloud probes	optical measurements to determine cloud droplet physical properties