

## DISCOVER-AQ P-3B Trace Gas Parameters

Sensor	Measurement	Parameter	Unit	Description
NO2 LIF	Trace Gases: Nitrogen Compounds	NO2_LIF	pptv	Nitrogen Dioxide mixing ratio
NO2 LIF	Trace Gases: Nitrogen Compounds	PNs	pptv	Peroxynitrates mixing ratio
NO2 LIF	Trace Gases: Nitrogen Compounds	ANs	pptv	Alkyl nitrates mixing ratio
NO2 LIF	Trace Gases: Nitrogen Compounds	HNO3	pptv	Nitric Acid mixing ratio
NO2 LIF	Trace Gases: Nitrogen Compounds	NO2noise	pptv	Uncertainty from photon counting noise at 1 second
NO2 LIF	Trace Gases: Nitrogen Compounds	PNsnoise	pptv	Uncertainty from photon counting noise at 1 second
NO2 LIF	Trace Gases: Nitrogen Compounds	ANsnoise	pptv	Uncertainty from photon counting noise at 1 second
NO2 LIF	Trace Gases: Nitrogen Compounds	HNO3noise	pptv	Uncertainty from photon counting noise at 1 second
DACOM	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CO_ppbv	ppbv	Carbon Monoxide mixing ratio
DACOM	Trace Gases: Carbon and Hydrocarbon Compounds: Alkanes	CH4_ppbv	ppbv	Methane mixing ratio
DLH	Meteorological and Navigational Parameters	H2O_ppmv	ppmv	Water Vapor Mixing Ratio
DFGAS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CH2O_pptv	pptv	Formaldehyde mixing ratio
DFGAS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CH2O_LOD_pptv	pptv	1-sigma limit of detection
DFGAS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CH2O_SMU_pptv	pptv	1-sigma systematic measurement uncertainty
DFGAS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CH2O_TMU_pptv	pptv	1-sigma total measurement uncertainty
LI-COR 6252	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	CO2(ppmv)	ppmv	Carbon dioxide mixing ratio
4-channel chemiluminescence instrument	Trace Gases: Nitrogen Compounds	NO_pptv	pptv	Nitric Oxide Mixing Ratio
4-channel chemiluminescence instrument	Trace Gases: Nitrogen Compounds	NOy_pptv	pptv	Total Reactive Nitrogen Mixing Ratio
4-channel chemiluminescence instrument	Trace Gases: Nitrogen Compounds	NO2_pptv	pptv	Nitrogen Dioxide Mixing Ratio
4-channel chemiluminescence instrument	Trace Gases: Hydrogen and Oxygen Compounds	O3_ppbv	ppbv	Ozone Mixing Ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	MVK_MAC_ppbv	ppbv	Sum of methyl vinyl ketone and methacrolein

PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	MVK_MAC_uncertainty_ppbv	ppbv	Uncertainty for Sum of methyl vinyl ketone and methacrolein measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Acetaldehyde_ppbv	ppbv	Acetaldehyde mixing ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Acetaldehyde_uncertainty_ppbv	ppbv	Uncertainty for Acetaldehyde mixing ratio measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Acetone_ppbv	ppbv	Acetone mixing ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Acetone_uncertainty_ppbv	ppbv	Uncertainty for Acetone mixing ratio measurement
PTR-MS	Trace Gases: Nitrogen Compounds	Acetonitrile_ppbv	ppbv	Acetonitrile mixing ratio
PTR-MS	Trace Gases: Nitrogen Compounds	Acetonitrile_uncertainty_ppbv	ppbv	Uncertainty for Acetonitrile mixing ratio measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Alkenes & Alkynes	Isoprene_ppbv	ppbv	Isoprene mixing ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Alkenes & Alkynes	Isoprene_uncertainty_ppbv	ppbv	Uncertainty for Isoprene mixing ratio measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Methanol_ppbv	ppbv	Methanol mixing ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Oxygenates and Acids	Methanol_uncertainty_ppbv	ppbv	Uncertainty for Methanol mixing ratio measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Alkenes & Alkynes	Monoterpenes_ppbv	ppbv	Sum of Monoterpenes
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Alkenes & Alkynes	Monoterpenes_uncertainty_ppbv	ppbv	Uncertainty for Sum of Monoterpenes measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Aromatics	Toluene_ppbv	ppbv	Toluene mixing ratio
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Aromatics	Toluene_uncertainty_ppbv	ppbv	Uncertainty for Toluene mixing ratio measurement
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Aromatics	Xylenes_ETB_ppbv	ppbv	Sum of Ethylbenzene, m-xylene, and p-xylene
PTR-MS	Trace Gases: Carbon and Hydrocarbon Compounds: Aromatics	Xylenes_ETB_uncertainty_ppbv	ppbv	Uncertainty for Sum of Ethylbenzene, m-xylene, and p-xylene measurement

