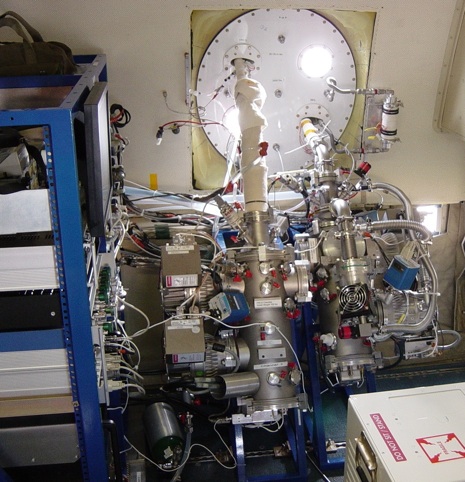
**Nitric Acid (HNO3)**



**Principal Investigator:**

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**Principle of the Measurement**

Chemical Ionization Mass Spectrometry (CIMS) using SiF5- ion chemistry

**Species Measured**

Nitric Acid

**Time Response**

1 Second

**Detection Limit**

Precision on 1s data: 20 pptv (1 sigma) depending on field project

**Accuracy**

±(15% + 100 pptv) depending on field project

**Manufacturer**

custom built

**Field Projects**

SOS 1999

TexAQS 2000

ITCT 2002

ICARTT 2004

Mesa 2005

TexAQS 2006

2008 ARCPAC (used to measure halogens)

CalNex 2010

**Key Publications**

Neuman, J. A., L. G. Huey, R. W. Dissly, F. C. Fehsenfeld, F. Flocke, J. C. Holecek, J. S. Holloway, G. Hübler, R. Jakoubek, D. K. Nicks Jr., D. D. Parrish, T.B. Ryerson, D. T. Sueper, and A. J. Weinheimer, Fast-response airborne in situ measurements of HNO3 during the Texas 2000 Air Quality Study, J. Geophys. Res., 107(D20), 4436, doi:10.1029/2001JD001437, 2002.

Neuman, J. A., T. B. Ryerson, L. G. Huey, R. Jakoubek, J. B. Nowak, C. Simons, and F. C. Fehsenfeld, Calibration and evaluation of nitric acid and ammonia permeation tubes by UV optical absorption, Environ. Sci. Technol., 37, 1975-2981, doi:10.1021/ES06422L, 2003.