

UH DMS Flux	Meta Data Report
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Operation description:	Continuous measurement of atmospheric DMS concentration at 20 Hz, sampled from the 18m level of the bow jackstaff
Sampling times and locations:	Continuous, expect for periods when ship speed and heading is changing frequently, typically during the tracer injection.
Overall sampling strategy:	Air is sampled into a 3/8" ID teflon tube at a flow rate of 110-120 Standard Liters Per Minute (SLPM) and brought to a lab van located on the O2 deck, forward of
Expected initial data products:	DMS concentration: raw 20 Hz and 1 min average.
Expected distributed data products, and time-frame for distribution:	Hourly average DMS flux; 1 min and hourly average DMS concentration. Hourly estimated DMS transfer velocity (in collaboration with NOAA ESRI /Fairall
Analytical method	A continuous internal standard gas (isotopically labeled: d-3 dimethylsulfide in nitrogen) is injected into the sample flow at the inlet tip. In the lab van, the sample flow is subsampled at 3-4 SLPM into an atmospheric pressure ionization mass spectrometer (APIMS), where the ambient to standard DMS isotopomer ratio is measured at 20 Hz. We calculate the ambient DMS concentration from the isotopomer ratio, sample flow rate and known concentration of standard in the sample air.
Instrument details	Atmospheric Pressure Ionization Mass Spectrometer: designed and built at Univ. of Hawaii, based on the APIMS developed in Alan Bandy's lab at Drexel.
Operation Log	
Affected data	Comments
3/1/2008 2300 GMT	Commence atmospheric DMS flux measurements.
3/3/2008 1640 GMT	End atmospheric DMS sampling.
3/3/2008 1826 GMT	Commence seawater DMS measurements.
3/6/2008 1800 GMT	End seawater DMS trials.
3/7/2008 0045 GMT	Commence atmospheric DMS flux measurements.
3/7/2008 2130 GMT	Suspend DMS measurements during injection and buoy deployment.
3/8/2008 2134 GMT	Resume atmospheric DMS flux measurements.
3/19/2008 1300 GMT	Stop DMS flux system during downwind survey legs.
3/19/2008 1500 GMT	Restart DMS flux system on upwind survey legs.
3/19/2008 2000 GMT	Stop DMS flux system.
3/20/2008 1300 GMT	Restart DMS flux system during CTD.
3/20/2008 1957 GMT	Stop DMS flux system during tracer injection.
3/21/2008 1600 GMT	Restart DMS flux system.
3/22/2008 1240-1300 GMT	Stop DMS flux system briefly to adjust source flow.
3/23/2008 1055-1100 GMT	Stop DMS flux system briefly to remove inlet filter.
3/24/2008 0004-0027 GMT	Stop DMS flux system briefly due to ship exhaust
3/25/2008 2020 GMT	Stop DMS flux system: sensitivity gone.
3/26/2008 0200 GMT	Restart DMS flux system after cleaning mass spec inlet aperture.
3/26/2008 1500-1600 GMT	Missing data, files not written.
4/4/2008 1600 GMT	END atmospheric DMS sampling.
4/4/2008 1800 GMT	Begin 2nd trial, seawater DMS sampling.