Geophysical Research Abstracts, Vol. 10, EGU2008-A-05670, 2008 SRef-ID: 1607-7962/gra/EGU2008-A-05670 EGU General Assembly 2008 © Author(s) 2008



A new surface ozone monitoring network deployed in Antarctica during the IPY

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During the Austral summer 2007/08, a network of ten low-powered autonomous surface ozone monitors was deployed along the southern Weddell Sea coastline and up the Dronning Maud Land plateau, Antarctica. The scientific rationale for monitoring surface ozone during the IPY period (2008/2010) is two-fold: (a) to study the timing and regional extent of springtime Ozone Depletion Events over a wide geographical area; and (b) to gather data in Antarctic Plateau outflow conditions in order to evaluate the effect of the Antarctic snowpack photochemistry upon the tropospheric ozone budget. The systems also measure local meteorological parameters to allow further interpretation of surface ozone observations. We present an overview of the network design, in particular its low-power sub-zero operable ozone monitor and sampling inlet, autonomous power supply and management platform, embedded data logger with programmable sampling duty cycle.