NOAA CMDL International Measurement Programs

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CMDL is expanding global measurements of constituents capable of modifying the atmospheric radiative environment and those that cause depletion of stratospheric ozone. This past year carbon cycle flask sampling from ships was added in the Pacific and Atlantic Oceans as well as ground-based sampling in Brazil, Kenya, Russia, and Indonesia. In 2005 and 2006, cooperative flask measurements will be initiated at two sites in the Mediterranean, two in Mexico, and one in China. A tall tower carbon cycle measurement program will be established in China. CMDL scientists conducted in situ measurements of halocarbon and greenhouse gases from a rail car crossing Siberia in the Trans-Siberian Observations into the Chemistry of the Atmosphere program (TROICA-8) April 2004. Surface ozone programs were instituted in Bermuda, New Zealand, Iceland, and Summit, Greenland, and new sites will be established in China and Mongolia in 2005. An ozonesonde program began in spring 2005 at Summit, Greenland, to study stratospheric ozone depletion. Ozonesonde programs are planned for Costa Rica and Maldives in 2006. A balloonborne stratospheric water vapor site was established in Lauder, New Zealand, under Global Climate Observing System (GCOS) funding. New radiation monitoring sites were established at Alert and Eureka, Canada, under the Study of Environmental Arctic Change (SEARCH) program and a Baseline Surface Radiation Network (BSRN) station will be established at Xianghe, China, in 2006. New aerosol monitoring instrument packages will be installed at Cape Point, South Africa, and Mt. Waliguan, China, in 2005 and a radiation and aerosol station at Tiksi, Russia, in 2006. A CMDL mobile aerosol sampling system was installed in Puerto Rico and second will be deployed to Niamey, Africa, in late 2005.



Figure 1. Locations of CMDL measurement programs established in 2004 and 2005 and for initiation in 2006. Many of these are cooperative programs with other agencies, universities, and national and international entities. Support comes from programs such as GCOS, SEARCH, SHADOZ, NOAA/OGP, NASA, DOE, DOS, NSF, WMO, and EPA, to name a few.