

## The Development of the Sir Crispin Tickell High-Altitude Global Climate Observatory in Mexico (MEX)

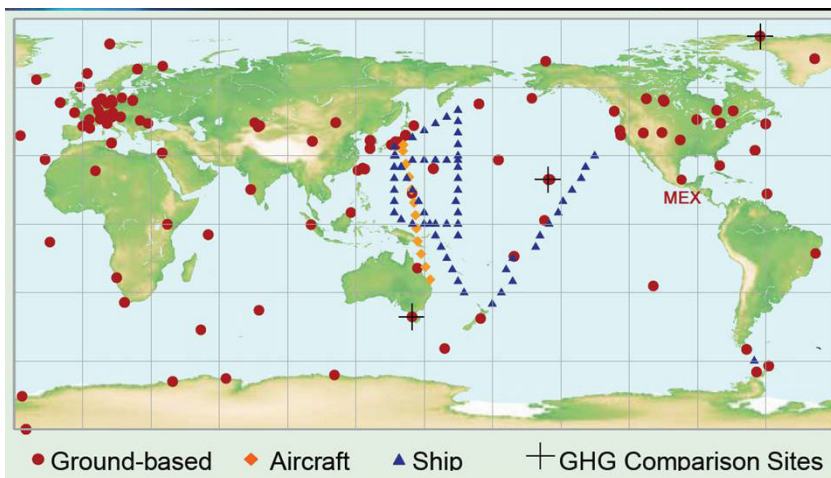
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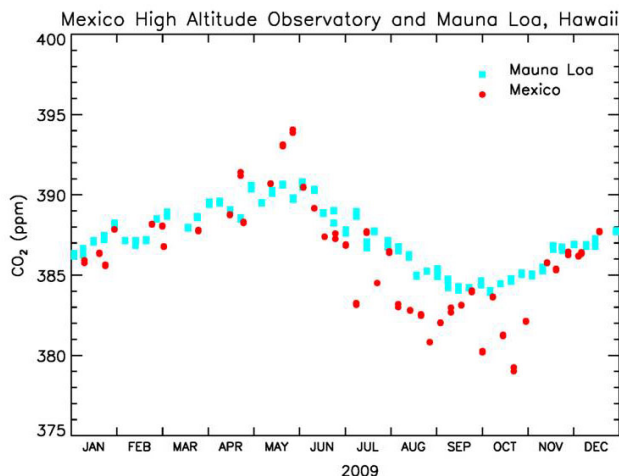
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The High-Altitude Global Climate Observatory, named after Sir Crispin Tickell, a United Kingdom diplomat and global issues visionary, has under development since 2005 in Mexico's highlands to fill a “crucial-gap” of the World Meteorological Organization (WMO) Global Atmospheric Watch (GAW) and other Global Climate Observation networks. At an altitude of 4,550 meters above sea level (m.a.s.l.) the new High Altitude Global Climate Observation Center is located on Sierra Negra Volcano at Longitude 97°w10' and Latitude 19°n59'. This is at similar latitude to the Mauna Loa (MLO) baseline climate observatory (3,397 m.a.s.l.), that has been in operation since 1958. The extra-dry, high-altitude tropical location above the boundary region, near the Gulf of México, added to the lack of near-by vegetation or pollution sources, makes of the MEX observatory a prime location for conducting Green House Gases (GHG) monitoring, Aerosols, Radiation and other essential climate variables observation and research programs. In close Latitudinal alignment with MLO, the MEX high-altitude station enjoys easy accessibility from major international research centers. Preliminary GHG data is presented from the NOAA ESRL Global Monitoring Division's flask-based network. Data is compared between MEX and MLO observatory for the 2009 period. The status of the high altitude observatory development, operation and outreach programs are discussed.



**Figure 1.** Location of the High Altitude Global Climate Observatory above 4,500 m.a.s.l. in Sierra Negra Volcano in Mexico. Since 2009 the observatory contributes to the WMO-GAW global network for carbon dioxide (CO<sub>2</sub>) and NOAA ESRL Carbon Cycle global network.



**Figure 2.** The chart shows CO<sub>2</sub> concentration levels comparison between Mexico High Altitude Climate Observatory and MLO, Hawaii in 2009.