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Ozone and UV-B Radiation Workshop

A workshop "Understanding Ozone and Ultraviolet-B (UV-B) Radiation: Past Accomplishments and Future Opportunities," organized under the auspices of the Inter-American Institute for Global Change Research (IAI), was held in Buenos Aires, Argentina from March 9-11, 1998. This meeting brought together over 100 scientists from across the Americas to discuss the state of knowledge with regard to measuring stratospheric and tropospheric ozone and the surface flux of ultraviolet radiation over Latin America. Organized in conjunction with the U.S. National Aeronautics and Space Administration (NASA) and the Secretariat for Science and Technology of Argentina, major emphases of the workshop were to better understand the strengths and weaknesses of ground- and space-based ozone measurements, and to enhance coordination of existing activities.

Historically, there has been little ground-based measurements of ozone and UV radiation over South America. Much of the motivation for the meeting came from the growing recognition that this situation is changing, and that newly initiated measurement programs have begun to significantly increase data availability. Coupled with the growing availability of new satellite data driving a need for correlative and complementary measurements, especially in the tropics and southern mid-latitudes, the time is right for enhancing coordination of these activities.

The workshop also identified areas that are in need of further development. There was a clear recognition of the unique role that Latin America plays in the global environment. South America covers a very broad latitude range, and has a major influence on atmospheric circulation in the southern hemisphere. The Andes mountains, covering a latitudinal range of more than 60 degrees and having altitudes up to 7 km, provide a unique function, not only because of their forcing of gravity waves, but because of the opportunity they provide for satellite instruments to differentiate between columns of air over high mountains and nearby sea level. In addition, there are appreciable emissions of trace gases and particles from both natural and human activity in Latin America that can be expected to have important effects on both regional and global scales.

The need for vertical profiles of ozone, especially in the Andean region, was identified. There was also a strong desire to have at least one major research station at which a range of instruments doing column and vertical profiling measurements could be located. Such a station

would ideally become affiliated with the Network for Detection of Stratospheric Change (NDSC), the major international observing program that has a number of primary and complementary stations around the world, although none at present are in Latin America.

There was expressed a deep concern that measurement programs in South America, like those elsewhere, can only be successful if there is a strong commitment to continued support for instrument operation, maintenance, and calibration, along with the required personnel support. It was felt that support also needs to be provided to assure that data are validated, prepared in a standard format, and deposited with the appropriate international archive, especially the World Ozone/Ultraviolet Radiation Data Center in Toronto, Canada.

Finally, there was a recognition that scientists in the U.S. and Latin America should consider whether additional educational efforts should be taken to facilitate improved productivity by Latin American researchers. It was felt that this could potentially include the organization of training programs to better inform Latin American scientists about the use of satellite data for atmospheric chemistry and related meteorological parameters.

The workshop proved to be an important opportunity for exchanging information and forging new collaborative relationships. Participants were optimistic that the momentum generated by the meeting could, and indeed must be continued to address the important science and societal issues related to ozone depletion. A follow-on meeting will be hosted by the Brazilian Instituto Nacional de Pesquisas Espaciais (INPE) in 2000. Results from the Latin American science community on ozone and UV radiation are expected to be an important part of the Second World Congress of the Stratospheric Processes and their Role in Climate subgroup of the World Climate Research Programme, scheduled to be held in Mar del Plata, Argentina, in late 2000.

Additional information on this workshop will appear in a proposed *EOS* article (Transactions, American Geophysical Union) and the workshop report.
