Preface

This report is one of a series of operations reports written for the United States National Science Foundation (NSF) Office of Polar Programs, Ultraviolet Spectroradiometer Network, now in its 13th year of operation. The report is intended to complement Volume 9 network data that have been measured in 1999 and 2000. Like the Operations Reports of Volume 7 and 8, also this report is made available in pdf-format on our website www.biospherical.com.

The methods used for data processing were essentially the same as implemented for Volume 8. However, the contents of Database 4 have been changed and its structure is now identical to the format of the databases updated weekly on our website. In addition, daily dose databases have been added to the suite of standard data products. Daily doses were calculated by integrating spectral integrals and dose-rates over 24-hour time periods. Doses published on the Volume 9 CD-ROM also include data from previous years. This allows analyzing the variation of UV radiation observed during several years by opening only one database.

Quality control methods were further refined, which helped to further improve data accuracy. All data at Biospherical Instruments is organized in Microsoft® ACCESS database. Database tools are under constant development and allow identifying problematic data sets more efficiently.

For all sites, UV levels observed during the period of Volume 9 were generally comparable to levels measured in previous years. A detailed discussion on the variation of UV in 1999 and 2000 can be found in Chapter 7.

Column ozone data measured by Earth Probe/TOMS is again provided on our CD-ROMs, courtesy of Dr. Richard McPeters, NASA. Weather data was obtained from the National Climactic Data Center (NCDC), a division of NOAA, and is also included on the CD-ROMs.

We would again like to express our appreciation to all researchers that have utilized and published data from the NSF UV Network (see Appendix Section A2. “References”). We are always looking for publication references in which the network’s data have been used.

We are especially grateful to those who offered feedback on methods, algorithms, and data products. We continue to encourage this input and welcome suggestions on how we can further meet the needs of the scientific community. An easy-to-use feedback form can be found on our website.

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Acknowledgements

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Garry Harris from Research Instrument Systems was commissioned by NSF/OPP in the fall of 1987 to design and build the precursor to the SUV-100. Four instruments were manufactured between October 1987 and January 1988, and two were deployed at McMurdo Station and the South Pole in February 1988. In the original configuration no publishable data were produced by the two instruments, and both were substantially redesigned by Biospherical Instruments during the following season.

Key Contributors

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Susana Díaz of CONICET manages Ushuaia's operation, with assistance of G. Deferrari. Dr. E. Olivero, the current director of CADIC, provides facilities and personnel support. Former director Dr. J. Rabassa made this installation possible.

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Personnel at Biospherical Instruments

The Principal Investigator for the project is C.R. ("Rocky") Booth, the Chief Executive Officer and Research Director of Biospherical Instruments Inc. The Co-Principal Investigator is Dr. Germar Bernhard, an Atmospheric Physicist and UV researcher who joined us from the Fraunhofer Institute for Atmospheric Environmental Research (IFU) of Garmisch-Partenkirchen, Germany. The Project Manager is James ("Jim") C. Ehramjian, and he is responsible for the project's operational activities. Vi Quang and Stuart Lynch joined the group in 1999 as Data Analysts/Database Administrators performing data analysis, database development, programming, and website development.