

Preface

This report is one of a series of operation reports written for the United States National Science Foundation (NSF) Division of Polar Programs, Ultraviolet Spectroradiometer Network, now in its 12th year of operation. The report is intended to complement Volume 8 network data that have been measured in 1998 and 1999. Although it bears resemblance to its predecessors, there are several important changes.

The most significant change is the modified division of this report. Information on the network sites has been removed from Quality Control Chapter of previous reports and can now be found in a separate section. The description of published data has also been moved from the Appendix to the new Section 6, where data-related information is now in a central place. We hope that these changes help to more easily find information on the network and its data products.

Before 1997, network operations reports were only available as paper copies. The 1997-1998 network operations report was the first one that was additionally made available on our website www.biospherical.com in pdf-format. The Volume 8 report will also be available via the Internet. Compared to its predecessor, figures in the electronic version are now in color.

The methods used for data processing were only slightly changed compared to Volume 7. The format and number of data products are also identical in both volumes. However, quality control methods were further refined, which helped to further improve data accuracy. All data at Biospherical Instruments is now organized in Microsoft[®] ACCESS database. Database tools developed recently allow identifying problematic data sets more efficiently.

In late November 1998, UV levels observed in McMurdo and South Pole, significantly exceeded UV levels measured historically. A similar marked increase was observed at Palmer Station and Ushuaia in December 1998. All high-UV events are linked to unusually low values of total ozone column. It appears that the “ozone hole” in 1998 did not recover as quickly as in prior years and was present during times close to solstice, when solar elevations are highest. A more detailed discussion can be found in Section 7.

Earth Probe TOMS data is again provided on our CD-ROMs, courtesy of Dr. Richard McPeters. 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 has been used. These references are included in the reference sections of these reports and on our website.

We are especially grateful to those who offered feedback on methods, algorithms, and data products, and those who have contributed to the “Errata Section.” We continue to encourage this input and welcome suggestions on how we can further meet the needs of the scientific community.

To contact Biospherical Instruments Inc.:

5340 Riley Street
San Diego, CA 92110-2621
Phone: (619) 686-1888
Fax: (619) 686-1887
www.biospherical.com

For project data inquiries, please send an e-mail to nsfdata@biospherical.com

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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 well-published UV researcher who joined us from the Fraunhofer Institute for Atmospheric and Environmental Research (IFU) of Garmisch-Partenkirchen, Germany. The Project Manager is James ("Jim") C. Ebrahimian, 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. Joan Schwenker provided periodic support as a Technical Writer, and Web Site Author/Administrator.

