

SOLAR ASTRONOMY DATA BASE: Packaged Information on Diskette

John A. McKinnon
National Geophysical Data Center
Boulder, Colorado 80303 USA

In its role as a library, the National Geophysical Data Center has transferred to diskette a collection of small, digital files of routinely measured solar indices for use on an IBM-compatible desktop computer. Recording these observations on diskette, allows us to distribute specialized information to researchers with a wide range of expertise in computer science and solar astronomy.

We made every data set self-contained by including formats, extraction utilities, and plain-language descriptive text. Moreover, for several archives, two versions of the observations are provided—one suitable for display, the other for analysis with popular software packages. Since the files contain no control characters, each one can be modified with any text editor.

Table 1. Selected solar and geophysical data on diskette. Nearly all tabulated values published monthly in *Solar-Geophysical Data* are available on sets of IBM-compatible diskettes. We partitioned each archive into a family of files that contain short, chronologically sorted records for either 1 month or a year. Except in two cases, these files are not images of tables published earlier.

| Data Set Description | Observation Period | | Gaps* | (MB) | Disks |
|--------------------------------------|--------------------|---------|-------------------|------|-------|
| IMF Sector Boundaries | 01 1947 | 12 1989 | | 0.3 | 1 |
| Mean Solar Magnetic Field | 03 1968 | 12 1989 | | 0.3 | 1 |
| Geomagnetic Indices (Kp, Ap, Cp, C9) | 01 1932 | 09 1989 | | 1.5 | 1 |
| Neutron Monitors Climax/Huancayo | 01 1953 | 10 1989 | | 39.2 | 8 |
| Flare Patrol Intervals | 01 1955 | 10 1989 | 65, 66, <u>67</u> | 20.5 | 5 |
| Flare Reports (not grouped) | 04 1938 | 10 1989 | | 33.8 | 10 |
| Coronal Index of Solar Activity | 01 1964 | 12 1986 | | 0.2 | 1 |
| Total Solar Irradiance | 11 1978 | 07 1989 | | 0.3 | 1 |
| Solar Lyman-Alpha Flux | 01 1982 | 03 1989 | | 0.1 | 1 |
| Solar Radio Flux Ottawa (10.7 cm) | 02 1947 | 01 1990 | | 0.5 | 1 |
| Solar Radio Bursts-Fixed Frequency | 01 1960 | 10 1989 | <u>60</u> | 31.8 | 9 |
| Sunspot Count Zurich/International | 01 1749 | 10 1989 | | 0.7 | 1 |
| Sunspot Groups Greenwich | 05 1874 | 11 1981 | | 13.7 | 5 |
| Sunspot Groups USAF/Mt. Wilson | 01 1962 | 07 1989 | | 5.9 | 2 |
| Calcium Plage Regions | 01 1962 | 12 1986 | | 6.3 | 2 |
| Regions of Solar Activity | 01 1969 | 08 1982 | | 5.7 | 2 |

*Notation under "Gaps" heading: **bold** = preliminary; underline = partial; plain = missing.

Diskette versions of familiar solar data sets cannot banish all the computer demons of the past. But for small archives they do offer more than a 100-fold increase in convenience over magnetic tapes. To obtain more information about our products, contact the National Geophysical Data Center, Mail Code E/GC2, 325 Broadway, Boulder, Colorado 80303 USA. Phone (303) 497-6346, FAX (303) 497-6513, SPAN 9555::HCOFFEY.