README FOR STEREO PLASTIC CARBON CHARGE STATE RATIO FILES
Last Update: March 19, 2010 (YC-ML, ABG, LBE)

Data Usage:

Data provided by the PLASTIC team at the University of New Hampshire are under NASA contract NAS5-00132.

Carbon charge state data provided here are courtesy of Y. Liu, A. Galvin, and L. Ellis.

These data are delivered to the public domain as soon as possible. Efforts are made to include the latest known calibrations; however, these are expected to undergo revision. We therefore suggest that users regularly return to this page and check the "Modification History" at the end of this "Readme" file.

If used in presentations or publications:

We strongly suggest that Dr. Galvin (toni.galvin@unh.edu) and Dr. Liu (yong.liu@unh.edu) be contacted to ensure that you are working with the latest release.

Please acknowledge STEREO PLASTIC Investigation (A.B. Galvin, PI) and NASA Contract NAS5-00132.

For reporting purposes, we request bibliography information for any publication, etc., using these data. Please send information on the use of these data to the PLASTIC PI:

Dr. A.B. Galvin
toni.galvin@unh.edu

If you have questions regarding data formats, please contact the PLASTIC Data System Manager:

Dr. Lorna Ellis
lorna.ellis@unh.edu

File Format:

ASCII files are tab-delimited text.

File Naming convention:

STx_L3_PLA_C_ChargeStateRatios_1hr_YYYY_Vxx.txt

Where:
"STx" is given as "STA" or "STB" for STEREO A and STEREO B, respectively.

"L3" indicates Level 3 data in the STEREO PLASTIC convention.

“PLA” indicates Plasma and Suprathermal Ion Composition (PLASTIC) Investigation.

“C” indicates Carbon data.

“ChargeStateRatios” is self-explanatory.

“1hr” indicates the accumulation interval (instrument cadence is 1 minute).

“YYYY” represents the year.

“Vxx” indicates Version number, with the processing version given by the xx.

“txt” indicates ASCII file.

STEREO PLASTIC CARBON CHARGE STATE RATIO PARAMETERS:

Carbon charge state ratio parameters provided here are derived from a 1D Maxwellian fit of data summed over an hour.

The instrument’s one minute measurement cycle consists of 128 logarithmically spaced energy-per-charge (E/Q) steps from ~80 keV/e down to ~0.3 keV/e. These are called ESA steps. Within each cycle, the instrument changes from the “main channel” aperture to a “small channel” aperture. The ESA step at which this change happens is called the schan_switch. At this time, only the main channel values are included in the carbon calculation.

Missing data are given as -1E+31 (for floats) and 999 (for integers).

Parameters provided are:

1. Year:	Year of the cycle start time for first cycle in hour accumulation
2. Doy:	Day of year of cycle start time for first cycle in hour accumulation
3. Hour:	Hour of cycle start time for first cycle in hour accumulation
4. date and time:	Cycle start time for first cycle in hour accumulation, truncated to nearest minute (format yyyy-mm-dd/hh:mm:ss)
5. C4+/C5+:	Ratio of C^{+4} to C^{+5}.
6. Quality Flag:	0 = no known issues 1 = reduced chi^2 > 20, use with caution 5 = data removed

Modification History

Mar 2010	V01	First issue of 1-hour data sets for STEREO A, from internal version 1b. Only main channel provided.