

SAGAMORE HILL SOLAR RADIO FLUX VALUES

(from SGD Explanation of Data Reports)

Daily Solar Flux Values from Sagamore Hill -- The Sagamore Hill Solar Radio Observatory (located at 42 deg 37' 54.36" N 70 deg 49' 15.15"W) began operating solar patrols at 8800, 4995, 2695, 1415, and 609 MHz in 1966. The patrol was extended to 15400 MHz in 1967, to 242 MHz in early 1969, and to 410 MHz in early 1971. Flux calibrations in units of 10-22Wm-2Hz-1 are made at about meridian transit each day. All flux data are corrected to Sun-Earth distance of 1 Astronomical Unit (AU).

The Air Force Geophysics Laboratory (AFGL -- currently the Air Force Research Laboratory, Space Vehicles Directorate) transferred operation of the observatory to Detachment 2, 3rd Weather Wing of the U.S. Air Weather Service (currently the Air Force Weather Agency) in October 1978. However, AFRL continued to work in an advisory capacity to the observatory and, in collaboration with Detachment 2 completed an absolute calibration of several frequencies using Cassiopeia A and the moon as a reference source. The results are presented in the table below (apply correction factor to all data before indicated date). Reference to this calibration report, if one exists, is unknown.

Frequency (MHz)	Data to Date	Correction Factor
242	01 Aug 79	1.55
410	03 Aug 79	1.33
609	21 Nov 79	1.33
609	21 Nov 79 - 27 Sep 80	1.17
1415	15 Nov 79	1.11
8800	23 Oct 81	0.85
8800	23 Oct 81 - 21 Nov 81	1.07