

Dataset Format: Radio Solar Telescope Network (RSTN) Noontime Flux

Background – This document describes the format for daily noontime radio flux measurements from the USAF Radio Solar Telescope Network (RSTN). The RSTN/RIMS instrument is a part of the Solar Electro-Optical Network (SEON). Data from 1966 to present are available.

Data from May 1966 through December 1987 are from Sagamore Hill (SGMR) Massachusetts only. These data have been quality controlled and monthly means are in the data, indicated by a day value of 32. See Format A, below. From 1988 on, data are from Palehua (PALE) Hawaii, San Vito (SVTO) Italy, Learmonth (LEAR) Australia, and Sagamore Hill. These data have NOT been quality controlled and no monthly means are provided.

Only the following frequencies were measured from May 1966 to April 1969; 610 MHz, 1415 MHz, 2695 MHz, 4995 MHz and 8800 MHz. A 15400 MHz frequency was added in April 1969 and 245 MHz added in May 1969. The final frequency addition was 410 MHz in September 1971. Frequencies through 2695 MHz were reported in tenths of a MHz until August 1979, with all values thereafter being in integer format.

1. Format A [ASCII TEXT] – 01 May 1966 to 31 Jul 1979

RADIO FLUX (RF)
WDC A ARCHIVE FORMAT
MAY 1966 THROUGH JULY 1979

COLUMNS	FMT	DESCRIPTION
1- 2	I2	YEAR
3- 4	I2	MONTH
5- 6	I2	DAY (Monthly means are indicated by DAY=32)
7	1X	BLANK
8-11	A4	Station name(SGMR =Sagamore Hill, Massachusetts)
12-13	2X	BLANK
14-17	F4.1	245 MHz SOLAR FLUX*
18-21	4X	BLANK
22-25	F4.1	410 MHz SOLAR FLUX*`
26-29	5X	BLANK
30-33	F4.1	606 MHz SOLAR FLUX*
32-36	5X	BLANK
37-41	F5.1	1415 MHz SOLAR FLUX*
42-44	3X	BLANK
45-49	F5.1	2695 MHz SOLAR FLUX*
50-52	3X	BLANK
53-55	I3	4995 MHz SOLAR FLUX*
56-60	5X	BLANK
61-63	I3	8800 MHz SOLAR FLUX*
64-68	5X	BLANK
69-71	I3	15400 MHz SOLAR FLUX*

*Value is expressed in units of 10^{-22} W/M²/Hz.

2. Format B [ASCII TEXT] – 01 Aug 1979 to present

RADIO FLUX (RF)
WDC A ARCHIVE FORMAT
AUGUST 1979 - PRESENT

COLUMNS	FMT	DESCRIPTION	
1- 2	I2	YEAR	+
3- 4	I2	MONTH	+
5- 6	I2	DAY (NOTE: No monthly means are provided)	+
7	1X	BLANK	+
8-11	A4	Station name (SGMR=Sagamore Hill, Massachusetts PALE=Palehua, Hawaii SVTO=San Vito, Italy LEAR=Learmonth, Australia)	+
12	1X	BLANK	+
13-15	I3	245 MHz SOLAR FLUX*	+
16-20	5X	BLANK	+
21-23	I3	410 MHz SOLAR FLUX*	+
24-28	5X	BLANK	+
29-31	I3	606 MHz SOLAR FLUX*	+
32-36	5X	BLANK	+
37-39	I3	1415 MHz SOLAR FLUX*	+
40-44	5X	BLANK	+
45-47	I3	2695 MHz SOLAR FLUX*	+
48-52	5X	BLANK	+
53-55	I3	4995 MHz SOLAR FLUX*	+
56-60	5X	BLANK	+
61-63	I3	8800 MHz SOLAR FLUX*	+
64-68	5X	BLANK	+
69-71	I3	15400 MHz SOLAR FLUX*	+

*Value is expressed in units of 10^{-22} W/M²/Hz.

Data from 1988 on have not been quality controlled.

3. Station List

Station Code	Local Noon	Station Location
LEAR	0500 UTC	Learmonth Australia
PALE	2300 UTC	Palahua, Hawaii, U.S.A.
SGMR	1700 UTC	Sagamore Hill, Massachusetts, U.S.A.
SVTO	1200 UTC	San Vito, Italy