Data format for solar flux measurements

Header

{Measuring location} {Sensor ID} {Type of measurement} {Integration time} {Measuring accuracy} \n

Columns from - to	Formatting	Description, unit and comments
0 – 0	#	Marking of the header line
2 – 5	CCCC WETZ	Identification of the measuring location/observatory
7 – 10	CCCC SFX1	Sensor ID (SFX1 = Solar Flux Telescope 1)
12 – 15	CCCC SFX	Type of measurement (SFX = Spectral flux density of solar radiation)
17 – 25	F.FFFe±II 0.500	Integration time [s]
27 – 35	F.FFFe±II 0.01	Relative repeatability according to system specification [1] (**not** [%])

Data line

{Time of day (UTC)} {Measurement data} {Status information} \n

Columns from - to	Formatting	Description, unit and comments
0 – 23	YYYY-MM-DDT hh:mm:ss.sssZ 2022-01-04T 12:05:15.234Z	Timestamp UTC according to ISO 8601 (seconds to three decimal places)
25 – 33	F.FFFe±II 178.0	Current azimuth of the sun [°]
35 – 43	F.FFFe±II 18.10	Current elevation of the sun [°]
45 – 53	F.FFFe±II 2800.0e6	Center frequency of the measurement [Hz]
55 – 63	F.FFFe±II 80.0e+6	Equivalent noise bandwidth [Hz]
65 – 73	F.FFFe±II 183.456	Calibrated spectral flux density [sfu] **after** correction for atmospheric attenuation and normalized to 1 AU
75 – 83	F.FFFe±II 182.287	Calibrated spectral flux density [sfu] **after** correction for atmospheric attenuation but **not** normalized to 1 AU
85 – 93	F.FFFe±II 180.046	Calibrated spectral flux density [sfu] **without** correction for atmospheric attenuation and **not** normalized to 1 AU
95 – 103	F.FFFe±II 2.862e-2	Measured power value [nW]
105 – 121	BBBBBBBB BBBBBBBB 00201100 00012020	Status/error code: The front eight digits refer to the measuring system itself, the back eight digits refer to external influences. (0 = OK, 1 = Warning, 2 = Error)