

SMOG-P and ATL-1 display automatic spectrum files and telemetry with gndapp

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1 Foreword

This document describes the display of automatic spectrum files for SMOG-P, ATL-1, and SMOG-1 satellites with gndapp.

2 Description

Gndapp automatically plots the received auto spectrum images during reception. It is possible to load saved packages into the program. The source can be gndapp packets log files (logs folder smogp_packets.txt, atl1_packets.txt or smog1_packets.txt), but may be packets received by other programs. In both cases, the same steps must be performed, except that the gndapp packets files must be simply copied, while for packages from other sources, the hexadecimal content of the package must be copied with a line feed between the packages. The "manual packet input" window should be opened according to figure 1. This can be done by pressing "load packets" in the "Options" drop-down menu in the upper left corner or by pressing ctrl + o. The contents of gndapp smogp_packets.txt or atl1_packets.txt or smog1_packets.txt should be copied to the popup window. If the package is from another source, the package must be inserted in hexadecimal format, separated by an enter. This content is in pkts or json files, depending on the program.

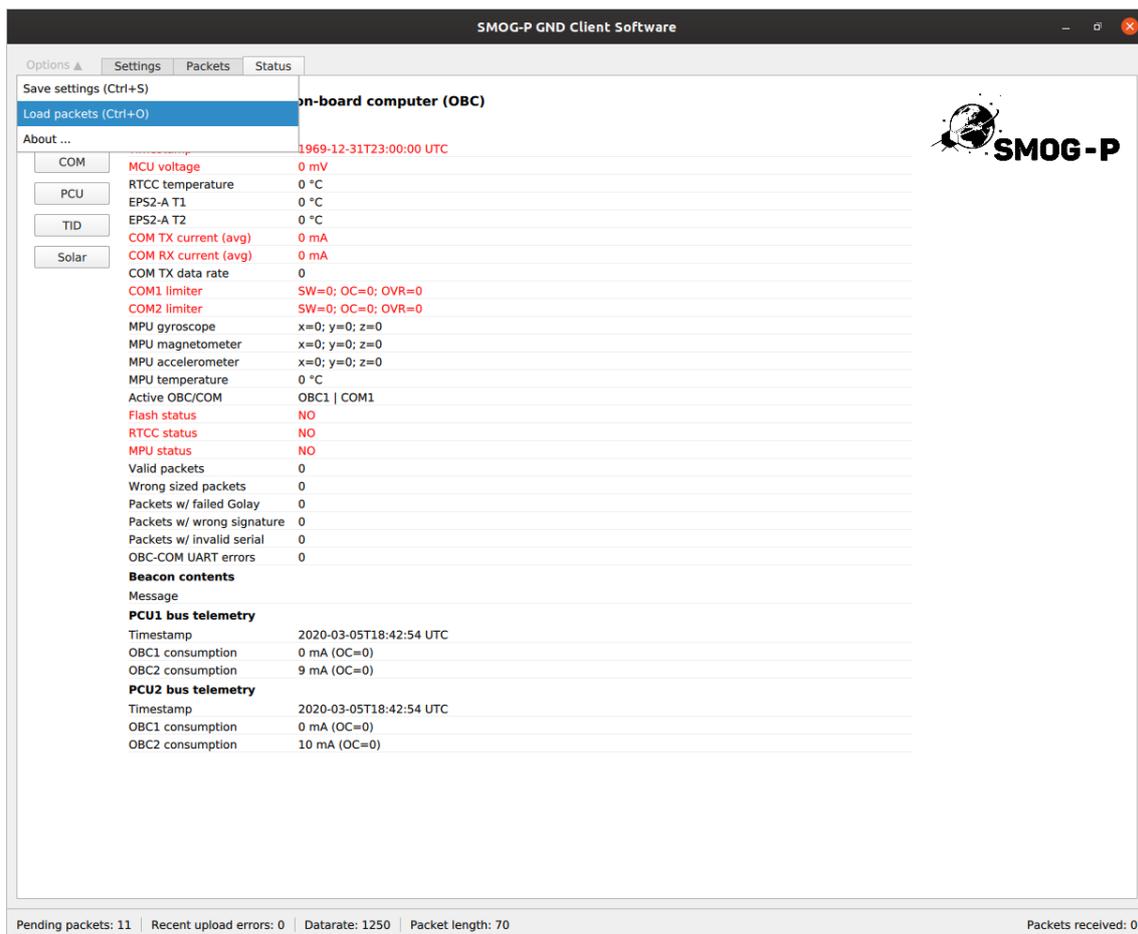


Figure 1: Load Packages window

The figure 2 shows when packets come from an external source (contents of the gndsw packets folder). Each row is longer, just the rest of the rows can't fit in the window.

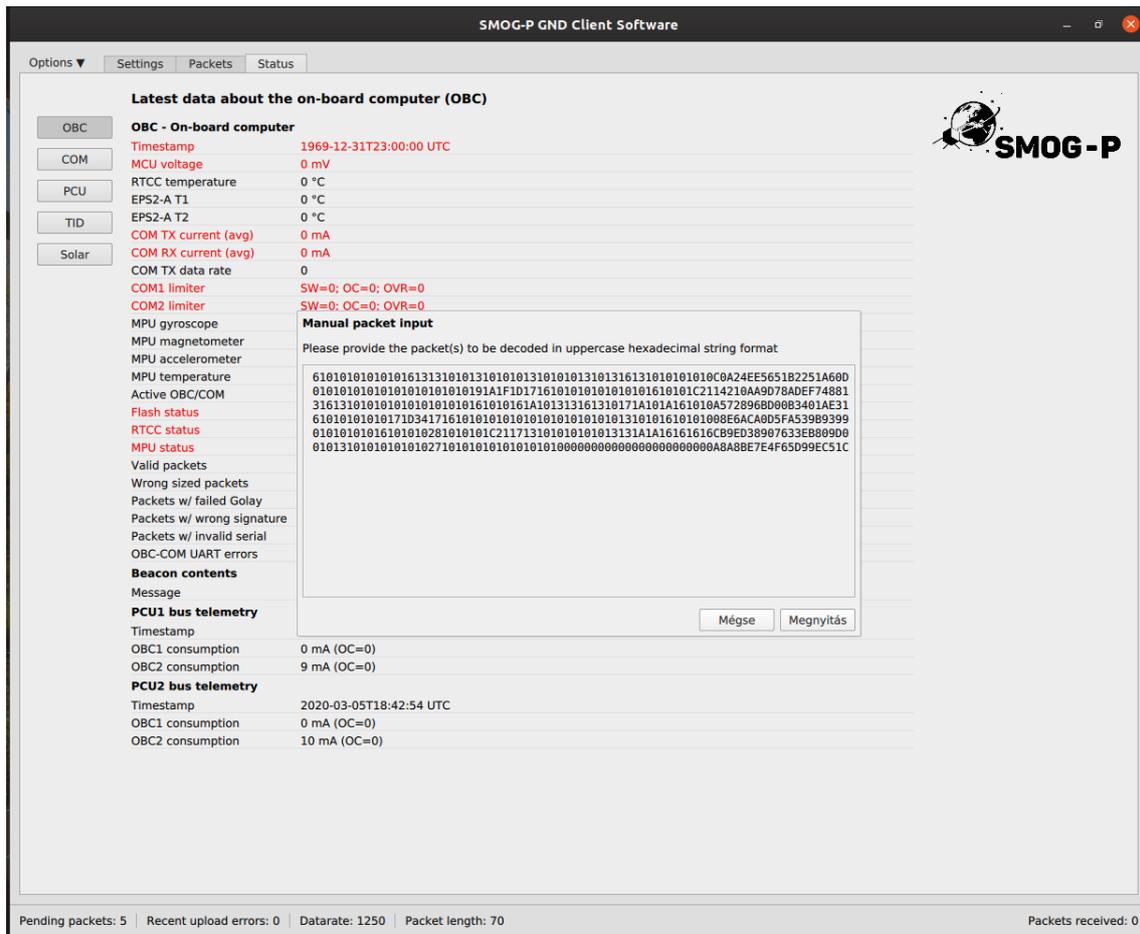


Figure 2: Hexadecimal content of packages

If we did everything right and the loaded packets contain automatic spectrum packets, a graph similar to 3 will be displayed. In parallel, the spectrum data is saved in the downloads folder with png and csv extensions.

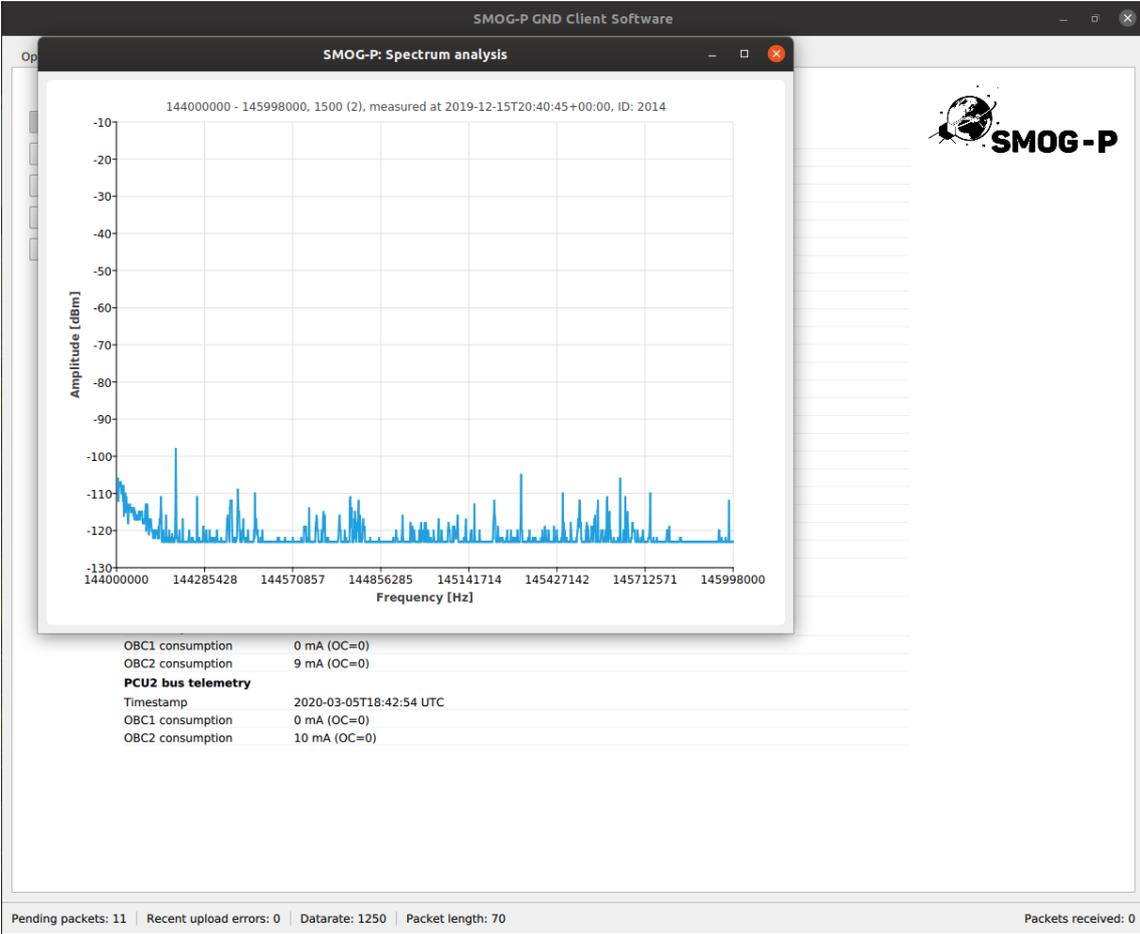


Figure 3: Display of spectrum

3 SMOGCLI2 pkts source

Open the pkts file with excel or libreOffice calc with parameters refer to 4. Then copy the data field content to gndapp manual packet input as shown in figure 5.

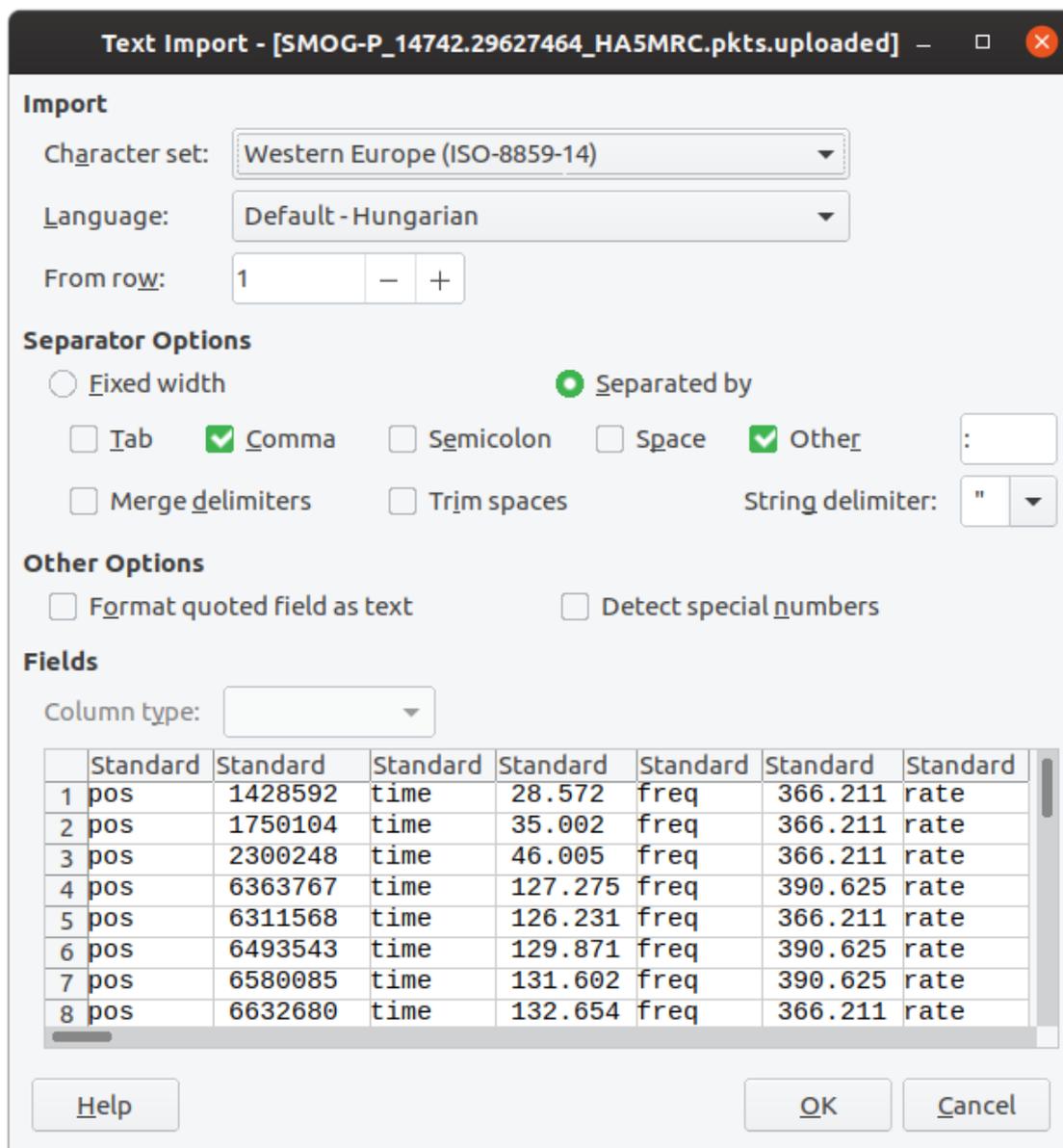


Figure 4: libreOffice load pkts file

SMOG-P_14742.29627464_HA5MRC.pkts.uploaded - LibreOffice Calc

File Edit View Insert Format Styles Sheet Data Tools Window Help

10 B I U A % 74 OQ OQ

V37:V53 fx Σ = 0737FAB85E150019000500430015313230AF5E5353415F303530300000292E3B2D332A2C32343530283634362C2E2F3434342D312C2F2F3

	Q	R	S	T	U
34	data_snr	12.878	data_ber	0.000	data
35	data_snr	13.772	data_ber	0.000	data
36	data_snr	14.470	data_ber	0.000	data
37	data_snr	14.937	data_ber	0.000	data
38	data_snr	15.549	data_ber	0.000	data
39	data_snr	15.277	data_ber	0.000	data
40	data_snr	16.079	data_ber	0.000	data
41	data_snr	15.170	data_ber	0.000	data
42	data_snr	15.877	data_ber	0.000	data
43	data_snr	15.878	data_ber	0.000	data
44	data_snr	15.951	data_ber	0.000	data
45	data_snr	17.141	data_ber	0.000	data
46	data_snr	17.235	data_ber	0.000	data
47	data_snr	16.942	data_ber	0.000	data
48	data_snr	17.019	data_ber	0.000	data
49	data_snr	16.330	data_ber	0.000	data
50	data_snr	16.330	data_ber	0.000	data
51	data_snr	16.695	data_ber	0.000	data
52	data_snr	16.969	data_ber	0.000	data
53	data_snr	16.396	data_ber	0.000	data
54	data_snr	16.950	data_ber	0.000	data
55	data_snr	17.986	data_ber	0.000	data
56	data_snr	18.074	data_ber	0.000	data
57	data_snr	15.057	data_ber	0.000	data
58	data_snr	16.905	data_ber	0.000	data
59	data_snr	16.556	data_ber	0.000	data
60	data_snr	17.412	data_ber	0.000	data
61	data_snr	17.204	data_ber	0.000	data
62	data_snr	17.252	data_ber	0.000	data
63	data_snr	16.176	data_ber	0.000	data
64	data_snr	16.139	data_ber	0.000	data
65	data_snr	17.330	data_ber	0.000	data
66	data_snr	17.066	data_ber	0.000	data
67	data_snr	18.752	data_ber	0.000	data
68	data_snr	18.815	data_ber	0.000	data
69	data_snr	18.573	data_ber	0.000	data
70	data_snr	18.052	data_ber	0.000	data
71	data_snr	18.030	data_ber	0.000	data
72	data_snr	18.181	data_ber	0.000	data
73	data_snr	17.677	data_ber	0.000	data
74	data_snr	14.752	data_ber	0.000	data
75	data_snr	14.080	data_ber	0.000	data

SMOG-P_14742.29627464_HA5MRC.pkts

Find

Sheet 1 of 1 Selected: 17 rows, 1 column Default Hungarian Average: ; Sum: 0 100%

Figure 5: pkts data column