On-line catalogs of Solar Energetic Protons at SRTI-BAS



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http://newserver.stil.bas.bg/SEPcatalog/

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Catalogs of Solar Energetic Particles

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Wind/EPACT proton event catalog

SOHO/ERNE proton event catalog

Other particle catalogs

Supported by

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Contact: R. Miteva Web-support: D. Danov

StatCounter "Number of Visits" from Jan. 12, 2017 until now is 000136



Note: Catalog release in 2017

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Solar cycle 23: 1996-2008

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Solar cycle 24: 2009-present

This catalog lists the proton enhancements from the <u>Wind/EPACT instrument</u> since 1996 in the two energy channels available. The catalog is organized as a table that presents the solar energetic particles (protons) observed during solar cycle 23 (1996-2008) and the ongoing solar cycle 24 (since 2009). The catalog provides the following information: onset, peak times (in UT) and peak proton intensity at 19÷28 energy channel and also the peak proton intensity at 28÷72 MeV energy channel. In addition, the solar sources (flares and coronal mass ejections, CMEs) of the proton events are identified, where possible, with their properties noted. Further information is given as a comment.

Explanatory notes:

Proton data: from CDAweb database provided with 92-sec time resolution.

Onset time: identified as the time of 3-sigma intensity value above pre-event level.

Peak time: identified at the maximum of the particle profile (local enhancements are not considered).

 J_p : peak proton intensity after subtraction of the pre-event level.

The reported here onset/peak times and J_D are based on 5-point smoothed data.

Abbreviations:

N/A: onset not found and/or it was fully masked by previous ongoing event

nd: next day pd: previous day

p: peak is poorly defined

SXR: soft X-ray u: uncertain

References:

If you use results from this catalog, we would appreciate if you acknowledge this website.

For catalog description, see <u>Miteva et al. (2016)</u>
For first statistical results, see <u>Miteva et al. (2017)</u>

Acknowledgements:

We use proton data provided by: CDAweb database;

flare information from: GOES flare listings and www.Solarmonitor.org;

and CME information from: CDAW LASCO CME catalog.

Contact: R. Miteva

Links: Space Climate Group Homepage

Space Research and Technology Institute Homepage



Note: Catalog release in 2017

Solar cycle 24: 2009-present

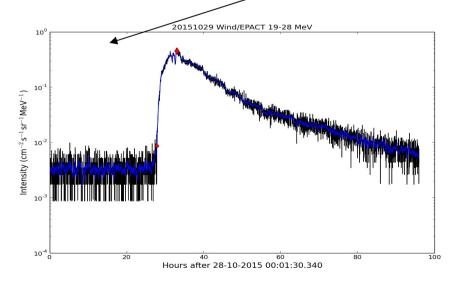
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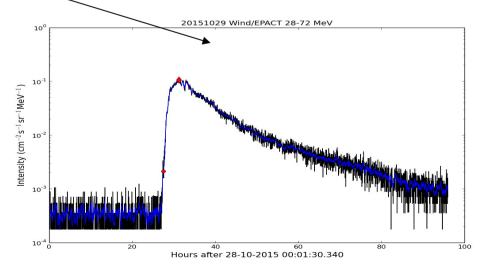
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Solar cycle 23: 1996-2008

Event date	19-28 MeV			28-72 MeV	Flare	CME	Comment
yyyy-mm-dd	onset time (UT)	peak time (UT)	$J_{\rm p}$ (cm ² s sr MeV) ⁻¹	$J_{ m p}$ (cm 2 s sr MeV) $^{-1}$	SXR class/ onset time (UT)/ location	time (UT)/ speed (km s ⁻¹)/ width (deg)	
2009	-	-	-	-	-	-	no SEP events
2010-05-07/08	-	-	-	-	-	-	data gap
2010-05-12/18	-	-	-	-	-	-	data gaps
2010-06-12	04:04	08:39	0.0123	0.002	M2.0/00:30/N23W43	01:32/489/119	
2010-08-03	15:13	18:25	0.0478	0.0014	u	u	
2010-08-07	22:45	01:43 nd	0.0111	0.0014	M1.0/17:55/N11E34	18:36/871/360	
2010-08-14	11:15	13:05	0.158	0.0184	C4.4/09:38/N17W52	10:12/1205/360	
2010-08-18	08:01	12:18	0.0486	0.0034	C4.5/04:45/N18W88	05:48/1471/184	
2010-09-09	03:02	04:25	0.0071	0.0007	C3.3/23:05 ^{pd} /N21W87	23:27 ^{pd} /818/147	
2010-12-07	-	-	-		-	-	data gap





SOHO/ERNE proton event catalog

Note: work in progress

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Solar cycle 23: 1996-2008

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Solar cycle 24: 2009-present

This catalog lists the proton enhancements from the **H**igh **E**nergy **D**etector (**HED**) aboard <u>SOHO/ERNE</u> instrument identified during solar cycle 23 (1996-2008) and the ongoing solar cycle 24 (since 2009). The catalog provides the following information: peak time (in UT) and peak intensity for the solar proton events in the different HED energy channels (in the range 17÷131 MeV). Further information is given as a comment.

Explanatory notes:

Peak time: identified at the maximum of the particle profile (local enhancements are not considered). J_p : peak proton intensity after subtraction of the pre-event level.

The reported here onset/peak times and Jp are based on non-smoothed data.

Abbreviations:

N/A: onset not found and/or it was fully masked by previous ongoing event

nd: next day pd: previous day

p: peak is poorly defined

SXR: soft X-ray u: uncertain

Contact: R. Miteva

Links: Space Climate Group Homepage

Space Research and Technology Institute Homepage

Future work

Full catalog release (after publication of dedicated paper)
Yearly update
Search/sort options
Cross-reference between catalogs

