

Type IV source catalog

The catalog was compiled by checking the dynamic spectrum from Wind and STEREO A&B spacecraft during periods of every reported metric type-IV burst, CME and type-II burst since 1996. Every identified decameter hectometric (DH) type-IV burst is checked to have a counterpart in metric domain, searching across burst catalogs.

Catalog Columns:

CME Date, CME Time, Flare loc: Date , time and location of the CME associated with the type-IV event as per LASCO CME catalog.

Dur 14 MHz (min): Duration in minutes of the type-IV event at 14 MHz as seen by the satellite that recorded the longest duration event.

End freq (MHz): The lowest frequency up to which the type-IV extends as seen by the spacecraft which observed the event the furthest below in frequency.

M/S: Moving/ Stationary type-IV. If any one spacecraft saw it moving, then this is marked as moving type-IV

Best view satellite: Satellite that observed the event to the furthest down in frequency and for the longest duration.

STB-Earth Angle (deg): Separation between Earth and STEREO B spacecraft

STA-Earth Angle (deg): Separation between Earth and STEREO A spacecraft

Wind M/S: Notes if the event in Moving (M) or stationary (S) type-IV in Wind/WAVES data

STA M/S: If the event in Moving (M) or stationary (S) type-IV in STEREO A/SWAVES data

STB M/S: If the event in Moving (M) or stationary (S) type-IV in STEREO B/SWAVES data

Satellite: Lists the satellites that recorded the event

Src in Wind FoV (deg): The source location along the solar azimuth as seen by Wind

Src in STA FoV (deg): The source location along the solar azimuth as seen by STEREO A

Src in STB FoV (deg): The source location along the solar azimuth as seen by STEREO B

Solar cycle: solar cycle number

DH type-II event: Is there a DH type-II event attached? Yes (Y) or No (N)

Event Quality, Data Quality: Quality indices

We introduce 2 quality indices:

Event quality: Sxly → S: Shape ; l: Intensity. $(x,y) \in [1,2,3]$

1 - 3 : increasing order of quality of the event as seen in DH dynamic spectrum.

Data quality: WxAyBz → W,A,B → Wind,STA,STB. $(x,y) \in [0,1,2]$

0: No data; 1: data exists but not good, 2: Good data