

Parameter definitions

Observatory parameters

beam_semi-major_axis: Semi-major axis of the detection beam in arcminutes.
beam_semi-minor_axis: Semi-minor axis of the detection beam in arcminutes.
rotation_angle: The rotation angle of the beam with respect to Right Ascension (RA) in degrees.
sampling_time: The sampling time of the datataking instrument in milliseconds.
bandwidth: The frequency bandwidth of the datataking instrument in MHz.
nchan: The number of frequency channels across the bandwidth.
centre_frequency: The centre observing frequency of the datataking instrument in MHz.
npol: The number of polarisations of the datataking instrument.
bits_per_sample: The number of bits per sample of the datataking instrument.
gain: The telescope instrument gain in K/Jy.
tsys: The telescope instrument system temperature in K.
backend: The name of the datataking instrument (e.g. BPSR, GUPPI).
beam: The number or designation of the detection beam, if applicable.

Observation parameters

observation_start_MJD: The MJD start time of the planned observation.
observation_end_MJD: The MJD end time of the planned observation.
observation_duration: The duration of the planned observation.
observation_RA: The RA position of the boresight of the primary beam.
observation_DEC: The Dec position of the boresight of the primary beam.
target_name: The name of the planned target, if applicable (e.g. FRB 121102).
scan_type: Options: “Fixed” or “Drift”.

Event parameters

dm: The best-fit dispersion measure of the FRB in pc cm^{-3}
dm_error: The error on the best-fit dispersion measure in pc cm^{-3}
width: The width (or duration) of the pulse in milliseconds.
snr: The signal-to-noise ratio of the detected pulse.
flux: The peak flux density of the radio pulse in Janskys calculated using the radiometer equation.
gl: The Galactic longitude in degrees.
gb: The Galactic latitude in degrees.

Advanced parameters

MW_dm_limit: The modeled integrated Milky Way dispersion measure along the line of sight in pc cm^{-3}
galactic_electron_model: The name of the model used to estimate the Galactic dispersion measure contribution. Fixed options available for this parameter include “NE2001”, “TC93”, “YMW16”, and “Other”. If “Other” is used, please specify DOI or description of model in the parameter description.
redshift_inferred: The inferred redshift estimated based on e.g. the dispersion measure. Specify method of calculation in the description.
redshift_host: The redshift of the FRB host galaxy. Specify “photometry” or “spectroscopy” in the description.
dispersion_smearing: The intrachannel smearing of the pulse due to channel width and dispersion measure in milliseconds.
scattering: The scatter broadening of the pulse due to scattering in milliseconds. A value of “None” here could mean either that no scattering has been detected or that a measurement/fit has not been made.
scattering_model: Scattering screen model used to measure scattering parameter. Value is any of the following options: “one-sided exponential”(standard), “Kolmogorov thin screen”, “Kolmogorov uniform medium”, “Kolmogorov thin-screen truncated”, “Power law thin”, “Power law thick”, “other”. In case of “other”, specify the method that was used.
dm_index: The dispersion measure index of the FRB.
dm_index_error: The error on the dispersion measure index of the FRB.
scattering_timescale: The scattering timescale modeled along the line of sight at 1 GHz in ms.
scatter_index: The scattering index of the FRB.
scatter_index_error: The error on the scattering index of the FRB.
spectral_index: The spectral index of the FRB.

spectral_index_error: The error on the spectral index of the FRB.
width_error_upper: The upper error on the measured width of the FRB in milliseconds.
width_error_lower: The lower error on the measured width of the FRB in milliseconds.
flux_calibrated: The peak flux density in Janskys measured using instrument calibration. The description element for this parameter should be used to describe the calibration method.
flux_error_upper: The upper error on the measured flux density of the FRB in Janskys.
flux_error_lower: The lower error on the measured flux density of the FRB in Janskys.
fluence: The fluence of the FRB in Jansky milliseconds.
fluence_error_upper: The upper error on the fluence in Jansky milliseconds.
fluence_error_lower: The lower error on the fluence in Jansky milliseconds.
linear_pol: The linear polarization fraction of the FRB.
linear_pol_error: The error on the linear polarization fraction of the FRB.
circular_pol: The circular polarization fraction of the FRB.
circular_pol_error: The error on the circular polarization fraction of the FRB.
rm: The rotation measure of the FRB in radians m^{-2} .
rm_error: The error on the rotation measure in radians m^{-2} .

WhereWhen element

Time: The time the FRB occurred in the format YYYY-MM-DDThh:mm:ss.ssssss to whatever precision the arrival time is known.

Position2D: The RA (entry C1) and Dec (entry C2) coordinates of the FRB as well as the radius of the error circle on the position, all given in units of degrees. Note: for elliptical beams this is an imperfect position description; however, the length of the semi-major axis of the error ellipse should be used as the radius.

How element

Instrument details: An optional link to a webpage describing the relevant parameters of the instrument used to detect the FRB or a webpage providing more information about the survey/project.

Data: An optional link to the location where the data for the FRB can be downloaded.

Why element

importance: The importance of an event between 0 and 1, with higher importance scores corresponding to more confidence in the event. Each survey or team may have a different scoring scale for the events detected through their searches but some elaboration on the criteria used to derive the score should be given, if possible, in the description entry in the Why element.

Name: The name of the FRB in the format FRBYMMDD.