

# Catalog parameters



Vocabulary of all the parameters and terms related with the catalogs.

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## Catalog parameters

**Event** – seismic event, earthquake

**ID** – unique identifier of the seismic event (Event ID)

**Time** – origin time, time of the earthquake occurrence

**Lat** – latitude of earthquake epicenter

**Long** – longitude of the earthquake epicenter

**Depth** – depth of the earthquake

**Elevation** – elevation of the earthquake

**X** – cartesian coordinate of the earthquake

**Y** – cartesian coordinate of the earthquake

**Z** – cartesian coordinate of the earthquake

**EPI\_err** – error of the epicenter location

**Depth\_err** – error of depth location

**NI** – number of stations used in location

**M0** – seismic moment

**Mw** – moment magnitude

**ML** – local magnitude

**Ns\_decomp** – number of station used in moment tensor inversion

**DecompMethod** – method used to decompose moment tensor

**MTrr** – Full solution: Moment tensor rr component (r – up) (convention used by USGS USE (up, south, east originally rr, tt, pp)), if needed may be changed into Aki & Richards, 2002 NED (north, east, down))

**MTss** – Full solution: Moment tensor ss component (s – South)

**Mtee** – Full solution: Moment tensor ee component (e – East)

**MTrs** – Full solution: Moment tensor rs component

**Mtre** – Full solution: Moment tensor re component

**Mtse** – Full solution: Moment tensor se component

**MT\_err** – Full solution: Moment tensor error

**RMSerror** – root mean square error of the MT inversion (eg. Amplitude fitting rms – currently not used in TCS AH catalogs))

**ISO** – isotropic MT component

**CLVD** – CLVD component

**DC** – Double-Couple component

**StrikeA** – Strike of nodal plane A

**DipA** – Dip of nodal plane A

**RakeA** – Rake of nodal plane A

**SlopeA** – Inclination of nodal plane A

**StrikeB** – Strike of nodal plane B

**DipB** – Dip of nodal plane B

**RakeB** – Rake of nodal plane B

**SlopeB** – Inclination of nodal plane B

**Strike\_err** – Strike error

**Dip\_err** – Dip error

**Rake\_err** – Rake error

**Slope\_err** – Inclination error

**Plunge\_T** – Plunge of T-axis

**PlungeT\_err** – T-axis plunge error

**Trend\_T** – Trend of T-axis

**TrendT\_err** – T-axis trend error

**Plunge\_P** – Plunge of P-axis

**PlungeP\_err** – P-axis plunge error

**Trend\_P** – Trend of P-axis

**TrendP\_err** – P-axis trend error

**DCrr** – Double-Couple solution: Moment tensor rr component (r - up)

**DCss** – Double-Couple solution: Moment tensor ss component (s - South)

**DCee** – Double-Couple solution: Moment tensor ee component (e - East)

**DCrs** – Double-Couple solution: Moment tensor rs component

**DCre** – Double-Couple solution: Moment tensor re component

**DCse** – Double-Couple solution: Moment tensor se component

**DC\_err** – Double-Couple solution: Moment tensor error

**DCStrikeA** – Double-Couple solution: Strike of nodal plane A

**DCDipA** – Double-Couple solution: Dip of nodal plane A

**DCRakeA** – Double-Couple solution: Rake of nodal plane A

**DCStrikeB** – Double-Couple solution: Strike of nodal plane B

**DCDipB** – Double-Couple solution: Dip of nodal plane B

**DCRakeB** – Double-Couple solution: Rake of nodal plane B

**DCStrike\_err** – Double-Couple solution: Strike error

**DCDip\_err** – Double-Couple solution: Dip error

**DCRake\_err** – Double-Couple solution: Rake error

**DCPlunge\_T** – Double-Couple solution: Plunge of T-axis

**DCPlungeT\_err** – Double-Couple solution: T-axis plunge error

**DCtrend\_T** – Double-Couple solution: Trend of T-axis

**DCtrendT\_err** – Double-Couple solution: T-axis trend error

**DCPlunge\_P** – Double-Couple solution: Plunge of P-axis

**DCPlungeP\_err** – Double-Couple solution: P-axis plunge error

**DCtrend\_P** – Double-Couple solution: Trend of P-axis

**DCtrendP\_err** – Double-Couple solution: P-axis trend error

**TNrr** – TN solution: Moment tensor rr component (r - up)

**TNss** – TN solution: Moment tensor ss component (s - South)

**TNee** – TN solution: Moment tensor ee component (e - East)

**TNrs** – TN solution: Moment tensor rs component

**TNre** – TN solution: Moment tensor re component

**TNse** – TN solution: Moment tensor se component

**TN\_err** – TN solution: Moment tensor error

**TNStrikeA** – TN solution: Strike of nodal plane A

**TNDipA** – TN solution: Dip of nodal plane A

**TNRakeA** – TN solution: Rake of nodal plane A

**TNStrikeB** – TN solution: Strike of nodal plane B

**TNDipB** – TN solution: Dip of nodal plane B

**TNRakeB** – TN solution: Rake of nodal plane B

**TNStrike\_err** – TN solution: Strike error

**TNDip\_err** – TN solution: Dip error

**TNRake\_err** – TN solution: Rake error

**TNPlunge\_T** – TN solution: Plunge of T-axis

**TNPlungeT\_err** – TN solution: T-axis plunge error

**TNTrend\_T** – TN solution: Trend of T-axis

**TNTrendT\_err** – TN solution: T-axis trend error

**TNPlunge\_P** – TN solution: Plunge of P-axis

**TNPlungeP\_err** – TN solution: P-axis plunge error

**TNTrend\_P** – TN solution: Trend of P-axis

**TNTrendP\_err** – TN solution: P-axis trend error

**NsP** – No of stations used in the P-wave spectral analysis

**E** – total seismic energy

**E\_err** – total seismic energy error

**Ep** – P-wave energy

**Ep\_err** – P-wave energy error

**fp** – P-wave corner frequency

**fp\_err** – P-wave corner frequency error

**rad\_eff\_P** – Radiation efficiency P-waves

**Qp** – Quality factor Pwaves

**NsS** – No of stations used in the S-wave spectral analysis

**Es** – S-wave energy

**Es\_err** – S-wave energy error

**fs** – S-wave corner frequency

**fs\_err** – S-wave corner frequency error

**Qs** – Quality factor Swaves

**rad\_eff\_S** – Radiation efficiency S-waves

**R** – source radius

**R\_err** – source radius error

**R\_model** – Source radius model used (Brune, Madariaga, Sato&Hirasawa)

**rad\_eff** – Radiation efficiency

**sigma\_a** – Apparent stress

**delta\_sigma** – Static stress drop

**sigma\_d** – Dynamic stress drop

**sigma\_rms** – RMS dynamic stress drop

**vr** – Rupture velocity

**vr\_model** – Rupture velocity model (unilateral etc.)

**SW\_eff** – Savage-Wood efficiency

**u** – Fault slip

## Catalog related terms

**P-axis** – Pressure axis

**T-axis** – Tension axis

**TN** – Null-trace solution

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