

Solar & Terrestrial Physics Division, NOAA/NGDC

Dst INDICES -----

Dst (Disturbance Storm Time) equivalent equatorial magnetic disturbance indices are derived from hourly scalings of low-latitude horizontal magnetic variations. They show the effect of the globally symmetrical westward flowing high altitude equatorial ring current, which causes the "main phase" depression worldwide in the H-component field during large magnetic storms.

Hourly H-component magnetic variations are analyzed to remove annual secular change trends from records of a worldwide array of low-latitude observatories. A cosine factor of the site latitude transforms residual variations to their equatorial equivalents and harmonic analysis isolates the term used as the Dst index.

Reference: Sugiura, M., Hourly values of equatorial Dst for the IGY, Ann. Int. Geophys. Year, 35, 9, Pergamon Press, Oxford, 1964.

Data Provider: [World Data Center for Geomagnetism, Kyoto](#)

Dst INDICES RECORD FORMAT

Column	Fmt	Description
1-	3	I3 Index Name or Station Code
4-	5	I2 Year (last 2 digits)
6-	7	I2 Month
8	A1	Geomagnetic Field Component H,D,Z,X,Y, or *=final, P=preliminary, Q=quick look
9- 10	I2	Day
11- 16	I6	Reserved Area (all spaces)
17- 20	I4	Tabular or Base Value (100 nT units for H,Z,X,Y and degrees for D)
21- 24	I4	Value for 1st hour of day
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.		H,Z,X,Y in units of 1 nT; D in units of 0.1 min
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113-116	I4	Value for 24th hour of day
117-120	I4	Daily Mean Value

To obtain absolute hourly value add base value to entry.