

GRIB2 Octet Configuration for CIMSS Convective Initiation, Overshooting Top, and Related Derived Products

Identification of originating/generating center (Section 1, Octet 7) = 7 (US National Weather Service – NCEP)

Identification of originating/generating subcenter (Section 1, Octet 9) = 12 (NESDIS Office of Research and Applications)

For more information on NCEP-conforming GRIB2 files such as these, visit http://www.nco.ncep.noaa.gov/pmb/docs/grib2/grib2_doc.shtml

Analysis or forecast generating process (Section 4, Octet 14) = 214 (Reserved) for GOES-East and Hawaii, 213 (Reserved) for GOES-West

Product Description	Section 0, Octet 7	Section 4, Octet 9	Section 4, Octet 10	Section 4, Octet 11	Section 4, Octet 23	Section 4, Octet 29	GRIB2 Desc. of Sec 4, Octet 11	GRIB2 Desc. of Sec 4, Octet 23
Convective Initiation, Instantaneous, contains non-dim values between 0 and 3 with 5 representing ice cloud mask	0	0	6	194	200	255	Convective Cloud Efficiency (CUEFI)	Entire Atmosphere (EA)
Convective Initiation, Accumulated, contains non-dim values between 0 and 4	0	8	6	194	252	255	Convective Cloud Efficiency (CUEFI)	Deep Convective Cloud Top (DCTL)
Cloud Top Cooling, Instantaneous, contains negative values in K per 15 min	0	0	0	9	200	255	Temperature Anomaly (TMPA)	Entire Atmosphere (EA)
Cloud Top Cooling, Accumulated, contains negative values in K over 60 min	0	8	0	9	243	255	Temperature Anomaly (TMPA)	Convective Cloud Top (CCTL)
Objective Overshooting (OS) Top Detection, Data does not conform to Table 4.204 (See next page)	0	0	6	10	200	255	Thunderstorm Coverage (THUNC)	Entire Atmosphere (EA)
Overshooting (OS) Top Magnitude, contains negative values in K	0	0	0	9	252	255	Temperature Anomaly (TMPA)	Deep Convective Cloud Top (DCTL)
Cloud-top Turbulence Probability based on OS Top (Deprecated)	0	0	19	21	200	255	In-cloud Turbulence (CTP)	Entire Atmosphere (EA)
Lightning Probability based on OS Top (Deprecated)	0	0	19	2	200	255	Thunderstorm Probability (TSTM)	Entire Atmosphere (EA)
Surface Severe Weather Probability based on OS Top and Thermal Couplet (Deprecated)	0	0	19	215	200	255	Probability of Severe Thunderstorms (PRSVR)	Entire Atmosphere (EA)
Objective Thermal Couplet (TC) Detection, Data does not conform to Table 4.204 (See next page)	0	0	6	10	7	255	Thunderstorm Coverage (THUNC)	Tropopause
Thermal Couplet (TC) Magnitude, contains negative values in K	0	0	0	9	7	255	Temperature Anomaly (TMPA)	Tropopause

Last updated by Jordan Gerth, April 20, 2011

Potential Section 7 Data Values for THUNC data that does not conform to Table 4.204

Applies to Overshooting (OS) Top Detection and Objective Thermal Couplet (TC) Detection messages

<u>Int</u>	<u>Description</u>
0	Does not match any condition 5 to 12
1-4	Reserved by NCEP (See Table 4.204)
5	Pixel associated with 80% severe weather risk within 60 km of overshooting top (must have a thermal couplet signature)**
6	Pixel associated with a 25% or greater turbulence risk within 25 km of overshooting top*
7	Pixel associated with a 35% lightning risk within 10 km of overshooting top*
8	Pixel associated with a 50% lightning risk within 10 km of overshooting top*
9	Pixel associated with a 65% lightning risk within 10 km of overshooting top*
10	Pixel associated with a 70% lightning risk within 10 km of overshooting top*
11	Overshooting top location*
12	Thermal couplet (warm region) location**
*	Only for OS Top Detection messages
**	Only for TC Detection messages

Last updated by Jordan Gerth, June 11, 2010