
tiegcm2.0 Documentation

Release 2.0

NCAR/HAO

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Contents:

TIEGCM2.0 BENCHMARK RUNS: SELECTED RESULTS

Benchmark runs are provided in three groups:

- Full-year Climatology (solar min,max)
- Seasonal (Equinox, Solstice, solar min,max)
- Solar Storm Events (heelis_gpi, weimer_imf)

Note: Climatology and Seasonal runs were made with constant solar conditions as follows:

- Solar Minimum Conditions:

POWER = 18.
CTPOTEN = 30.
F107 = 70.
F107A = 70.

- Solar Maximum Conditions:

POWER = 40.
CTPOTEN = 60.
F107 = 200.
F107A = 200.

Note: All links are to multi-frame pdf plot files, as follows:

utvert

UT time (daily or hourly) vs Zp pressure

utlat

UT time (daily or hourly) vs Latitude

singleut

Instantaneous global maps and latitude and longitude slices

Note:

These fields are plotted: TN , UN , VN , WN , HE , NE , TE , TI , HMF2 , NMF2 , POTEN , Z

1.1 Full-year Climatologies (Solar min,max)

- 5.0-degree model resolution:
 - tiegcm_res5.0_climatology_smax (utvert, utlat)
 - tiegcm_res5.0_climatology_smin (utvert, utlat)
- 2.5-degree model resolution:
 - tiegcm_res2.5_climatology_smax (utvert, utlat)
 - tiegcm_res2.5_climatology_smin (utvert, utlat)

1.2 Seasonal (Equinox, Solstice, Solar min,max)

- 5.0-degree model resolution:
 - tiegcm_res5.0_decsol_smax (utvert, utlat, singleut)
 - tiegcm_res5.0_decsol_smin (utvert, utlat, singleut)
 - tiegcm_res5.0_junsol_smax (utvert, utlat, singleut)
 - tiegcm_res5.0_junsol_smin (utvert, utlat, singleut)
 - tiegcm_res5.0_mareqx_smax (utvert, utlat, singleut)
 - tiegcm_res5.0_mareqx_smin (utvert, utlat, singleut)
 - tiegcm_res5.0_sepeqx_smax (utvert, utlat, singleut)
 - tiegcm_res5.0_sepeqx_smin (utvert, utlat, singleut)
- 2.5-degree model resolution:
 - tiegcm_res2.5_decsol_smax (utvert, utlat, singleut)
 - tiegcm_res2.5_decsol_smin (utvert, utlat, singleut)
 - tiegcm_res2.5_junsol_smax (utvert, utlat, singleut)
 - tiegcm_res2.5_junsol_smin (utvert, utlat, singleut)
 - tiegcm_res2.5_mareqx_smax (utvert, utlat, singleut)
 - tiegcm_res2.5_mareqx_smin (utvert, utlat, singleut)
 - tiegcm_res2.5_sepeqx_smax (utvert, utlat, singleut)
 - tiegcm_res2.5_sepeqx_smin (utvert, utlat, singleut)

1.3 Geomagnetic Storm Events (heelis_gpi, weimer_imf)

- 5.0-degree model resolution:
 - tiegcm_res5.0_dec2006_heelis_gpi
 - * days 330-360 daily utvert

- * days 330-360 daily utlat
- * days 347-352 hourly utvert
- * days 347-352 hourly utlat
- * singleut 349,12,0
- tiegcm_res5.0_dec2006_weimer_imf
 - * days 330-360 daily utvert
 - * days 330-360 daily utlat
 - * days 347-352 hourly utvert
 - * days 347-352 hourly utlat
 - * singleut 349,12,0
- tiegcm_res5.0_jul2000_heelis_gpi
 - * days 192-202 daily utvert
 - * days 192-202 daily utlat
 - * days 195-200 hourly utvert
 - * days 195-200 hourly utlat
 - * singleut 198,0,0
- tiegcm_res5.0_jul2000_weimer_imf
 - * days 192-202 daily utvert
 - * days 192-202 daily utlat
 - * days 195-200 hourly utvert
 - * days 195-200 hourly utlat
 - * singleut 198,0,0
- tiegcm_res5.0_nov2003_heelis_gpi
 - * days 323-328 daily utvert
 - * days 323-328 daily utlat
 - * days 323-328 hourly utvert
 - * days 323-328 hourly utlat
 - * singleut 325,0,0
- tiegcm_res5.0_nov2003_weimer_imf
 - * days 323-328 daily utvert
 - * days 323-328 daily utlat
 - * days 323-328 hourly utvert
 - * days 323-328 hourly utlat
 - * singleut 325,0,0
- tiegcm_res5.0_whi2008_heelis_gpi
 - * days 081-106 daily utvert

- * days 081-106 daily utlat
 - * days 085-090 hourly utvert
 - * days 085-090 hourly utlat
 - * singleut 88,0,0
- tiegcm_res5.0_whi2008_weimer_imf
 - * days 081-106 daily utvert
 - * days 081-106 daily utlat
 - * days 085-090 hourly utvert
 - * days 085-090 hourly utlat
 - * singleut 88,0,0
- 2.5-degree model resolution:
 - tiegcm_res2.5_dec2006_heelis_gpi
 - * days 330-360 daily utvert
 - * days 330-360 daily utlat
 - * days 347-352 hourly utvert
 - * days 347-352 hourly utlat
 - * singleut 349,12,0
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- * days 323-328 hourly utlat
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RELATED TIEGCM DOCUMENTS AND LINKS

- [Main TGCM website](#)
- [TIEGCM Release Documentation](#) for version 2.0.
- [TIEGCM User Guide](#) for version 2.0.
- [Model Description](#)
- [tgcmgroup email list](#)