Results of dcpam are compared with MGS^1 - TES^2 and MRO^3 - MCS^4 data. MGS-TES and MRO-MCS data used for comparison are those in $MY26^5$ and MY30. Those observational data are downloaded from the PDS⁶.

¹Mars Global Surveyor

²Thermal Emission Spectrometer

³Mars Reconnaissance Orbiter ⁴Mars Climate Sounder

⁵MY stands for Mars Year

⁶Planetary Data System

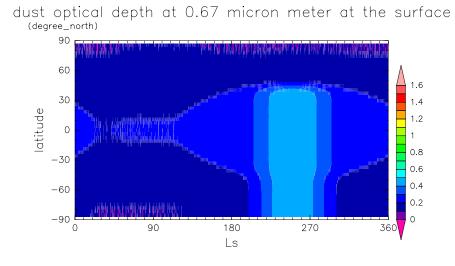


Figure 1: Daily mean dust optical depth prescribed in dcpam

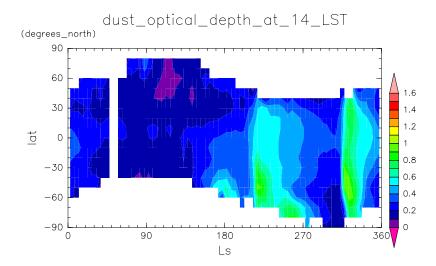


Figure 2: Double of dust optical depth observed by MGS-TES in MY26 \$2\$

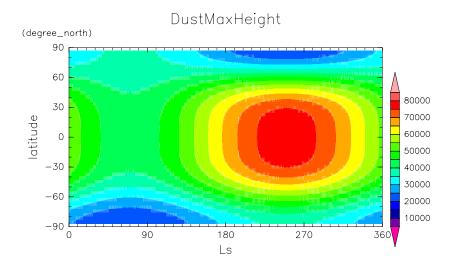
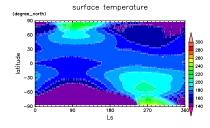


Figure 3: Daily mean maximum height of dust distribution prescribed in dcpam



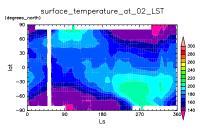


Figure 4: $\mathrm{T_s}$ at 02 LST by dcpam

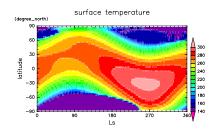


Figure 6: $\mathrm{T_s}$ at 02 LST by MGS

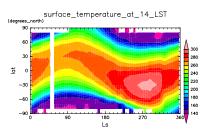
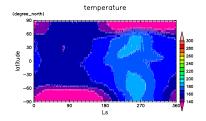


Figure 5: $\mathrm{T_s}$ at 14 LST by dcpam

Figure 7: $\mathrm{T_s}$ at 14 LST by MGS



air_temperature_at_02_LST orth) (deg ť 180 Ls

Figure 8: T at 18 Pa and at 02 LST by dcpam

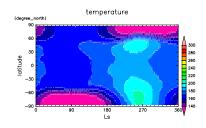


Figure 12: T at 18 Pa and at 02 LST by MGS

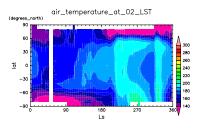


Figure 9: T at 50 Pa and at 02 LST by dcpam

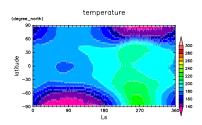


Figure 13: T at 50 Pa and at 02 LST $\,$ by MGS

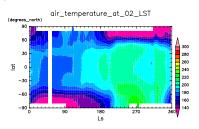
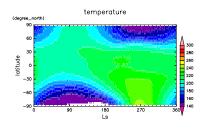
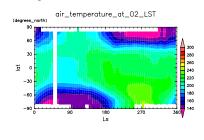


Figure 10: T at 136 Pa and at 02 LST by dcpam



LST by dcpam

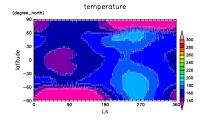
Figure 14: T at 136 Pa and at 02 LST by MGS



5

Figure 11: T at 370 Pa and at 02

Figure 15: T at 370 Pa and at 02LST by MGS



air_temperature_at_14_LST

Figure 16: T at 18 Pa and at 14 LST by dcpam

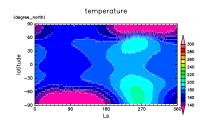


Figure 20: T at 18 Pa and at 14 LST by MGS $\,$

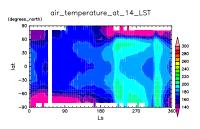


Figure 17: T at 50 Pa and at 14 LST by dcpam

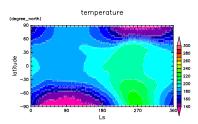


Figure 21: T at 50 Pa and at 14 LST by MGS

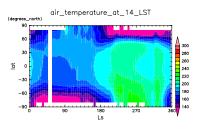


Figure 18: T at 136 Pa and at 14 LST by dcpam

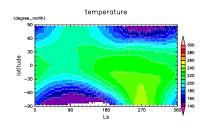
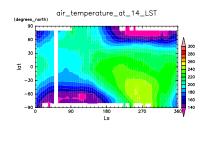


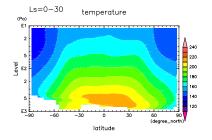
Figure 22: T at 136 Pa and at 14 LST by MGS $\,$

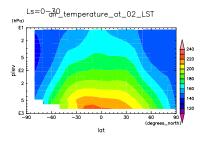


6

Figure 19: T at 370 Pa and at 14 LST by dcpam

Figure 23: T at 370 Pa and at 14 LST by MGS





30 deg by dcpam

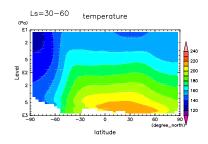
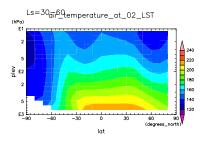
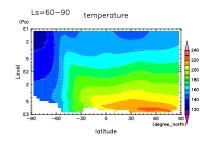


Figure 24: Temp at 02 LST and Ls=0- $\,$ Figure 27: Temp at 02 LST and Ls=0- $\,$ 30 deg by MGS

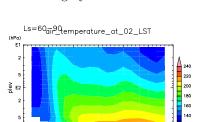


Ls=30-60 deg by dcpam

Figure 25: Temp at 02 LST and Figure 28: Temp at 02 LST and Ls=30-60 deg by MGS



Ls=60-90 deg by dcpam

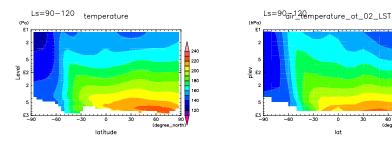


60 (degrees_r

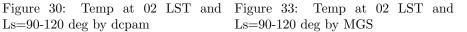
Figure 26: Temp at 02 LST and Figure 29: Temp at 02 LST and Ls=60-90 deg by MGS $\,$

lat

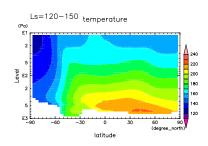
E3 E



Ls=90-120 deg by dcpam



120



Ls=120r_150perature_at_02_LST (hPa) E1 240 220 200 180 160 140 120 <u>}</u> E2 E3 60 (deal lat

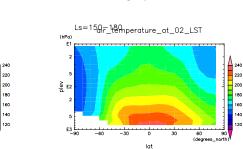
Figure 31: Temp at 02 LST and Figure 34: Temp at 02 LST and Ls=120-150 deg by dcpam

Ls=150-180 temperature

(Pa) E1

evel E2

E3



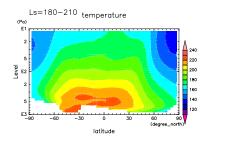
Ls=120-150 deg by MGS

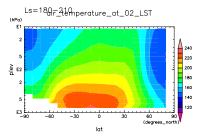
Ls=150-180 deg by dcpam

latitude

60 (dear

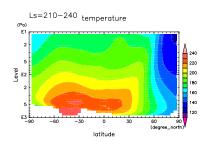
Figure 32: Temp at 02 LST and Figure 35: Temp at 02 LST and Ls=150-180 deg by MGS $\,$





Ls=180-210 deg by dcpam

Figure 36: Temp at 02 LST and Figure 39: Temp at 02 LST and Ls=180-210 deg by MGS $\,$



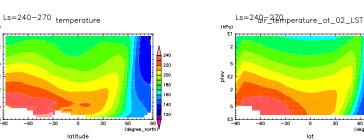
Ls=210r_440perature_at_02_LST (hPa) E1 <u>}</u> E2 180 160 140 120 E3 60 (degrees_n lat

Ls=210-240 deg by dcpam

(Pa) E1

evel es

E3



Ls=240-270 deg by dcpam

Figure 37: Temp at 02 LST and Figure 40: Temp at 02 LST and Ls=210-240 deg by MGS

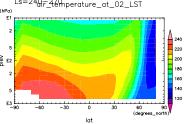
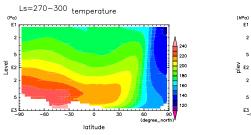
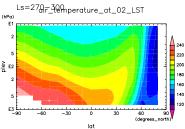


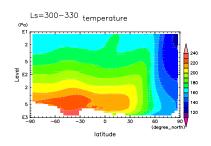
Figure 38: Temp at 02 LST and Figure 41: Temp at 02 LST and Ls=240-270 deg by MGS $\,$





Ls=270-300 deg by dcpam

Figure 42: Temp at 02 LST and Figure 45: Temp at 02 LST and Ls=270-300 deg by MGS



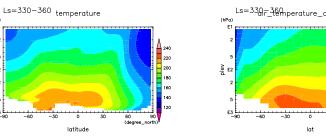
Ls=300r_temperature_at_02_LST (hPa) E1 220 <u>}</u> E2 200 180 160 140 120 5 E3 E 60 (degrees_n lat

Ls=300-330 deg by dcpam

(Pa) E1

evel E2

E3



Ls=330-360 deg by dcpam

Figure 43: Temp at 02 LST and Figure 46: Temp at 02 LST and Ls=300-330 deg by MGS

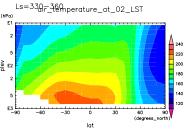
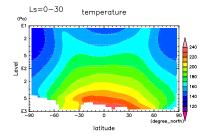
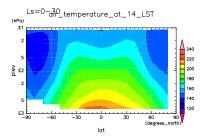


Figure 44: Temp at 02 LST and Figure 47: Temp at 02 LST and Ls=330-360 deg by MGS $\,$





30 deg by dcpam

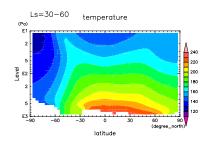
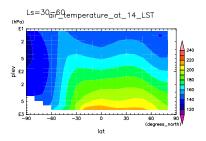
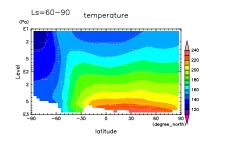


Figure 48: Temp at 14 LST and Ls=0- $\,$ Figure 51: Temp at 14 LST and Ls=0- $\,$ 30 deg by MGS



Ls=30-60 deg by dcpam

Figure 49: Temp at 14 LST and Figure 52: Temp at 14 LST and Ls=30-60 deg by MGS



Ls=60-90 deg by dcpam

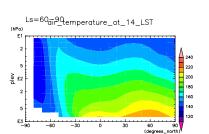
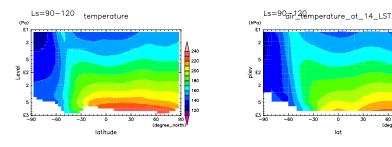
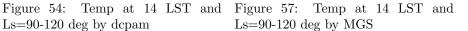


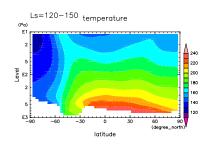
Figure 50: Temp at 14 LST and Figure 53: Temp at 14 LST and Ls=60-90 deg by MGS $\,$



Ls=90-120 deg by dcpam

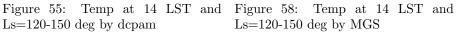


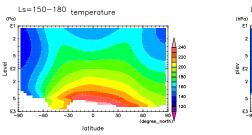
120



Ls=120r_15mperature_at_14_LST (hPa) E1 220 200 180 160 140 120 _____ E2 5 E3 E lat

Ls=120-150 deg by dcpam





Ls=150-180 deg by dcpam

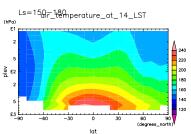
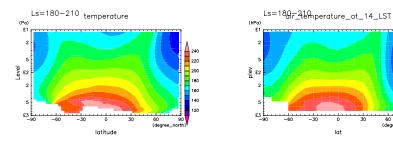
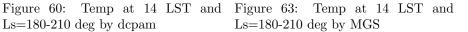


Figure 56: Temp at 14 LST and Figure 59: Temp at 14 LST and Ls=150-180 deg by MGS $\,$



Ls=180-210 deg by dcpam

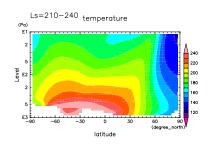


120

220

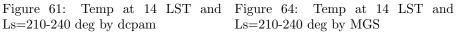
120

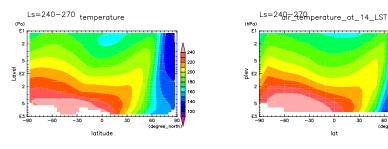
60 (degrees_r



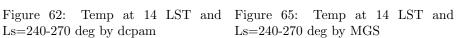
Ls=2101-249mperature_at_14_LST (hPa) E1 220 <u>}</u> E2 200 180 160 140 120 E3 60 (degrees_r

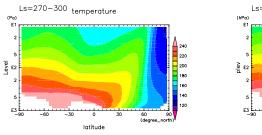
Ls=210-240 deg by dcpam

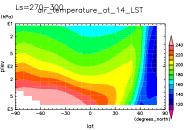




Ls=240-270 deg by dcpam

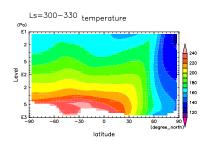






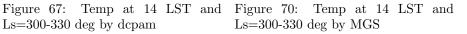
Ls=270-300 deg by dcpam

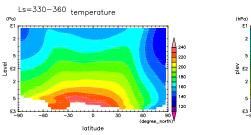
Figure 66: Temp at 14 LST and Figure 69: Temp at 14 LST and Ls=270-300 deg by MGS $\,$



Ls=300r_temperature_at_14_LST (hPa) E1 <u>}</u> E2 180 160 140 120 E3 60 (degrees_n lat

Ls=300-330 deg by dcpam





Ls=330-360 deg by dcpam

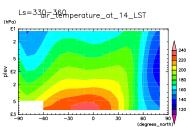
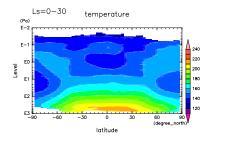
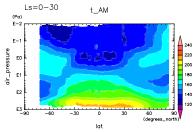


Figure 68: Temp at 14 LST and Figure 71: Temp at 14 LST and Ls=330-360 deg by MGS $\,$





 $30~{\rm deg}$ by dcpam

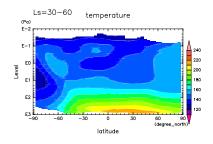
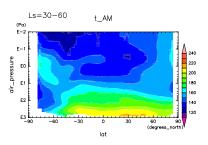


Figure 72: Temp at 03 LST and Ls=0- $\,$ Figure 75: Temp at 03 LST and Ls=0- $\,$ $30~{\rm deg}$ by MRO

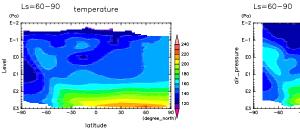


Ls=30-60 deg by dcpam

Figure 73: Temp at 03 LST and Figure 76: Temp at 03 LST and Ls=30-60 deg by MRO

t_AM

220



Ls=60-90 deg by dcpam

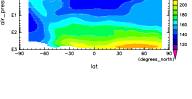
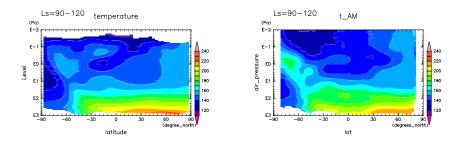
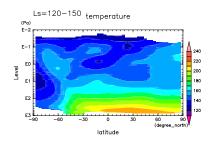


Figure 74: Temp at 03 LST and Figure 77: Temp at 03 LST and Ls=60-90 deg by MRO



Ls=90-120 deg by dcpam

Figure 78: Temp at 03 LST and Figure 81: Temp at 03 LST and Ls=90-120 deg by MRO



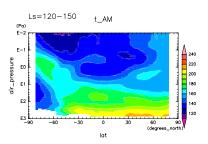
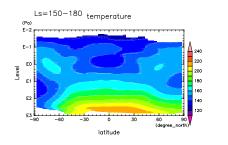


Figure 79: Temp at 03 LST and Figure 82: Temp at 03 LST and Ls=120-150 deg by dcpam

Ls=120-150 deg by MRO



Ls=150-180 deg by dcpam

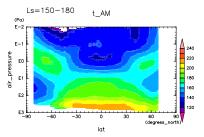
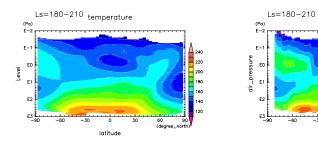
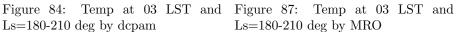


Figure 80: Temp at 03 LST and Figure 83: Temp at 03 LST and Ls=150-180 deg by MRO



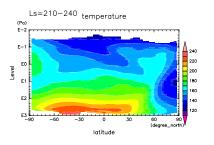
Ls=180-210 deg by dcpam



lat

t_AM

120



Ls=210-240 t_AM (Pa) E-2 E-1 air_pressure E0 220 200 180 160 140 120 E1 E2

60 (degrees_n

E3

Ls=210-240 deg by dcpam

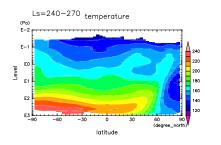


Figure 85: Temp at 03 LST and Figure 88: Temp at 03 LST and Ls=210-240 deg by MRO

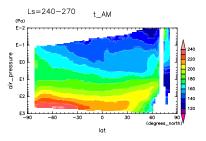
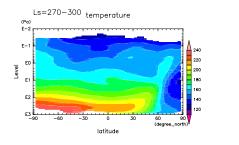
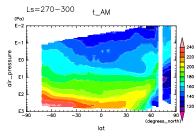


Figure 86: Temp at 03 LST and Figure 89: Temp at 03 LST and Ls=240-270 deg by dcpam

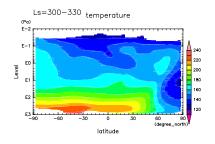
Ls=240-270 deg by MRO





Ls=270-300 deg by dcpam

Figure 90: Temp at 03 LST and Figure 93: Temp at 03 LST and Ls=270-300 deg by MRO



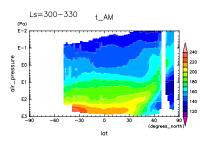
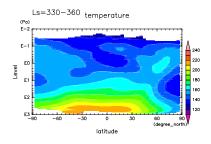


Figure 91: Temp at 03 LST and Figure 94: Temp at 03 LST and Ls=300-330 deg by dcpam



Ls=300-330 deg by MRO

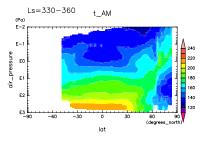
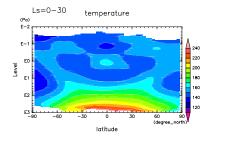
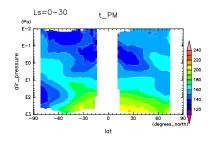


Figure 92: Temp at 03 LST and Figure 95: Temp at 03 LST and Ls=330-360 deg by dcpam

Ls=330-360 deg by MRO





 $30~{\rm deg}$ by dcpam

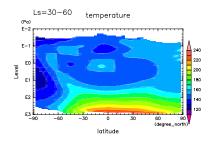
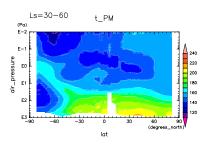


Figure 96: Temp at 15 LST and Ls=0- $\,$ Figure 99: Temp at 15 LST and Ls=0- $\,$ $30~{\rm deg}$ by MRO



Ls=30-60 deg by dcpam

Figure 97: Temp at 15 LST and Figure 100: Temp at 15 LST and Ls=30-60 deg by MRO

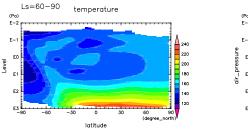
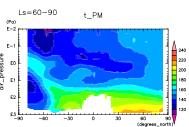
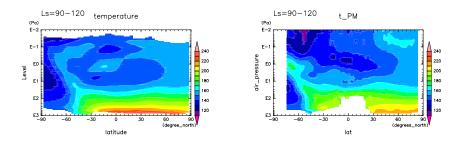


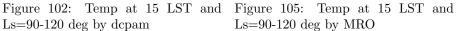
Figure 98: Temp at 15 LST and Figure 101: Temp at 15 LST and Ls=60-90 deg by dcpam

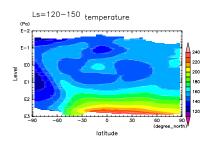


Ls=60-90 deg by MRO



Ls=90-120 deg by dcpam





Ls=120-150 t_PM (Pa) E-2 Eair_pressure EO E1 180 160 140 120 E2

E3 4

Ls=120-150 deg by dcpam

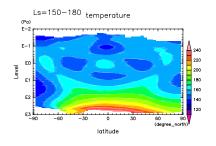


Figure 103: Temp at 15 LST and Figure 106: Temp at 15 LST and Ls=120-150 deg by MRO

lat

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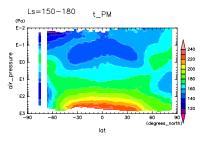
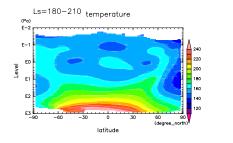
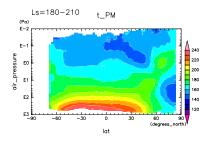


Figure 104: Temp at 15 LST and Figure 107: Temp at 15 LST and Ls=150-180 deg by dcpam

Ls=150-180 deg by MRO





Ls=180-210 deg by dcpam

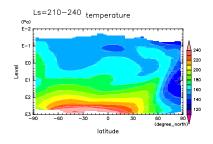
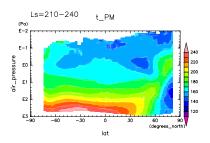
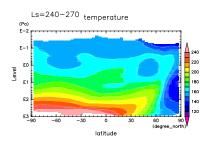


Figure 108: Temp at 15 LST and Figure 111: Temp at 15 LST and Ls=180-210 deg by MRO



Ls=210-240 deg by dcpam



Ls=240-270 deg by dcpam

Figure 109: Temp at 15 LST and Figure 112: Temp at 15 LST and Ls=210-240 deg by MRO

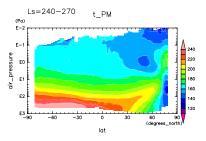
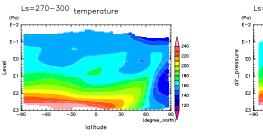
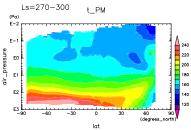


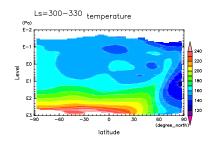
Figure 110: Temp at 15 LST and Figure 113: Temp at 15 LST and Ls=240-270 deg by MRO

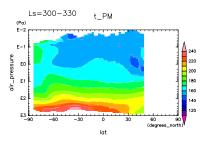




Ls=270-300 deg by dcpam

Figure 114: Temp at 15 LST and Figure 117: Temp at 15 LST and Ls=270-300 deg by MRO



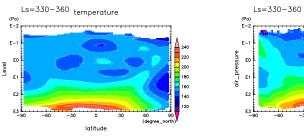


Ls=300-330 deg by dcpam

Figure 115: Temp at 15 LST and Figure 118: Temp at 15 LST and Ls=300-330 deg by MRO

t_PM

220



Ls=330-360 deg by dcpam

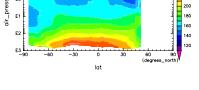


Figure 116: Temp at 15 LST and Figure 119: Temp at 15 LST and Ls=330-360 deg by MRO