

Sensitivity test:

(1) TRUNK

(2) EXPK: conductivity corrected

by equation (11) in Peters-Lidard et al 1998 (p1212)

<http://forge.ipsl.jussieu.fr/orchidee/ticket/406>

(3) EXPKC: both conductivity & capacity corrected

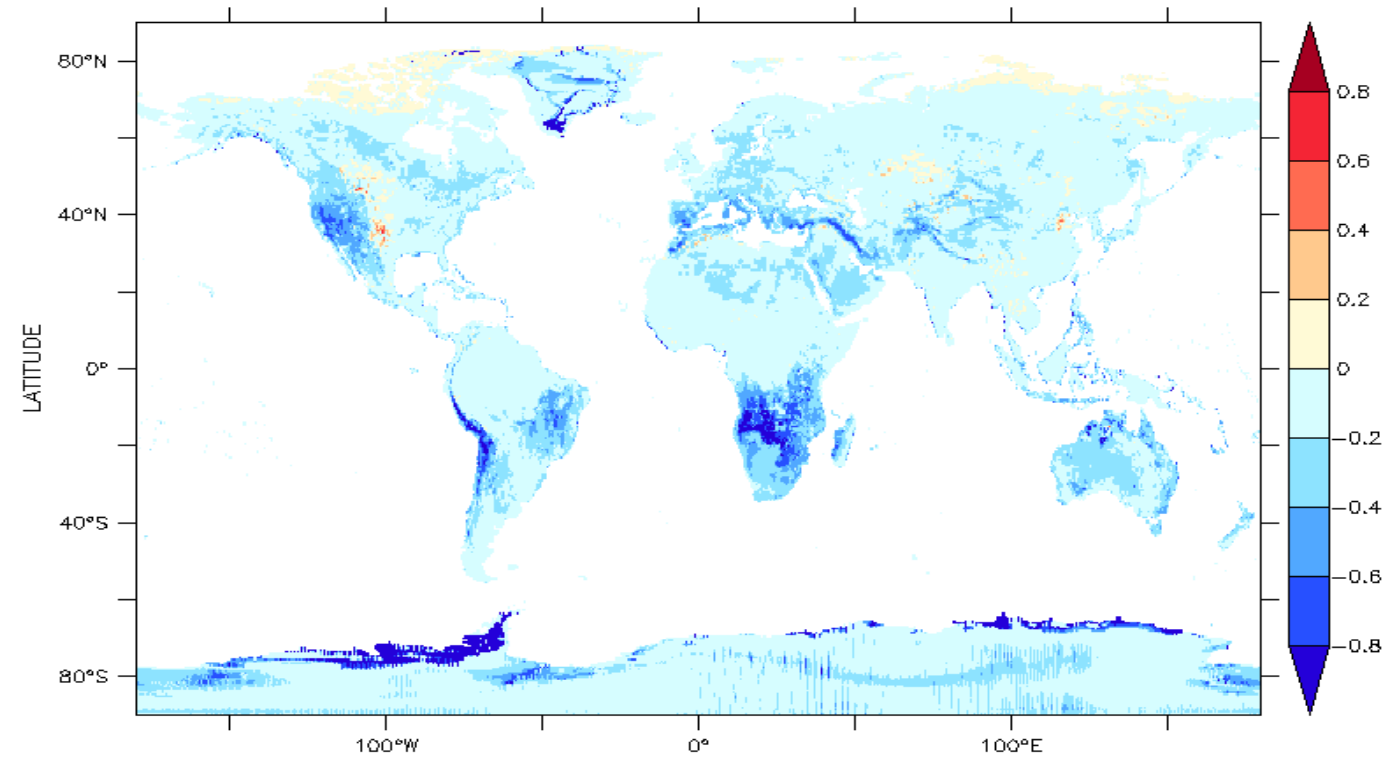
Capacity corrected by:  $C_{v,t} = (1 - \theta_s) * C_{v,d} + \theta * C_{v,w}$

Simulation:

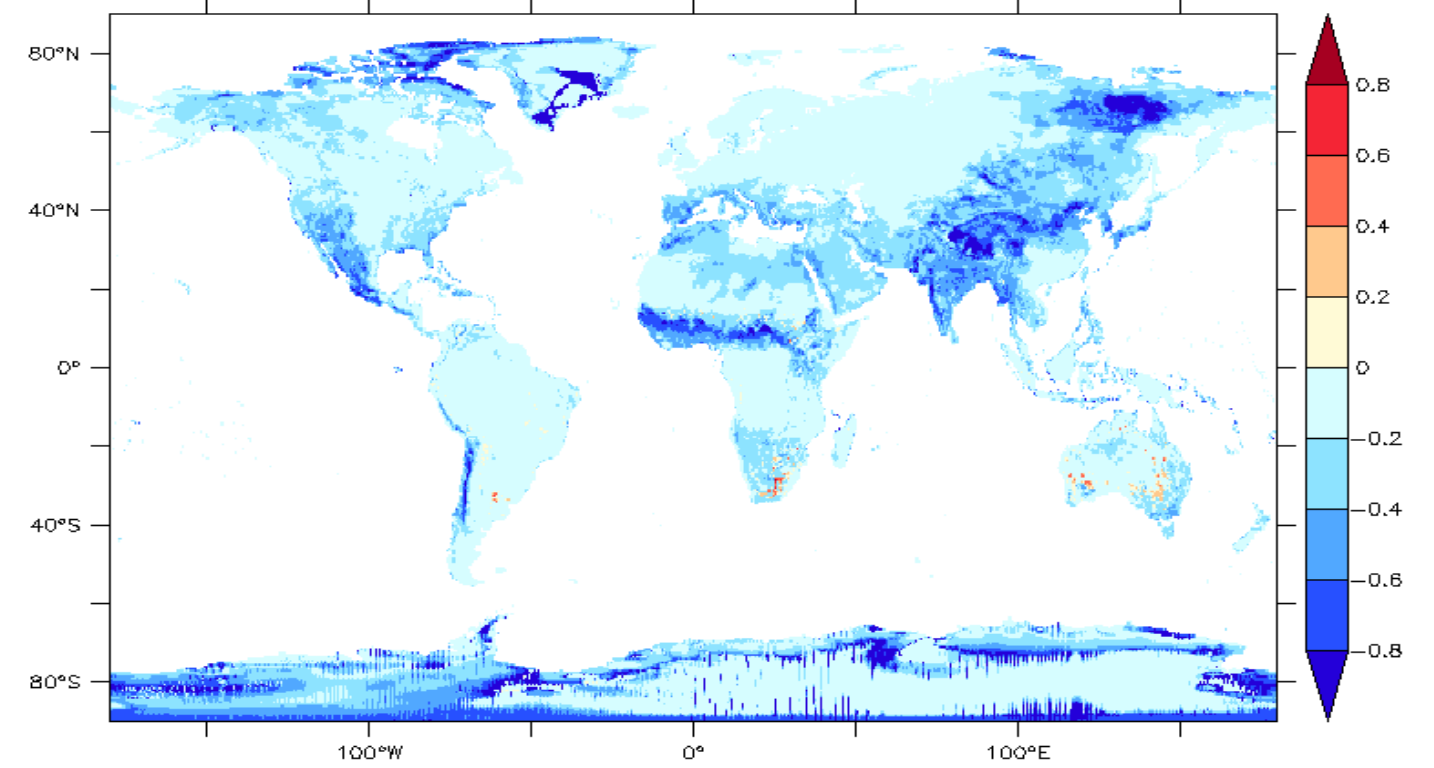
Forcing: WFDEI\_GPCC; Offline run (trunk); freezing not activated.

Spinup: 1979-1984 (5 years). Comparison: 1985 (1 year).

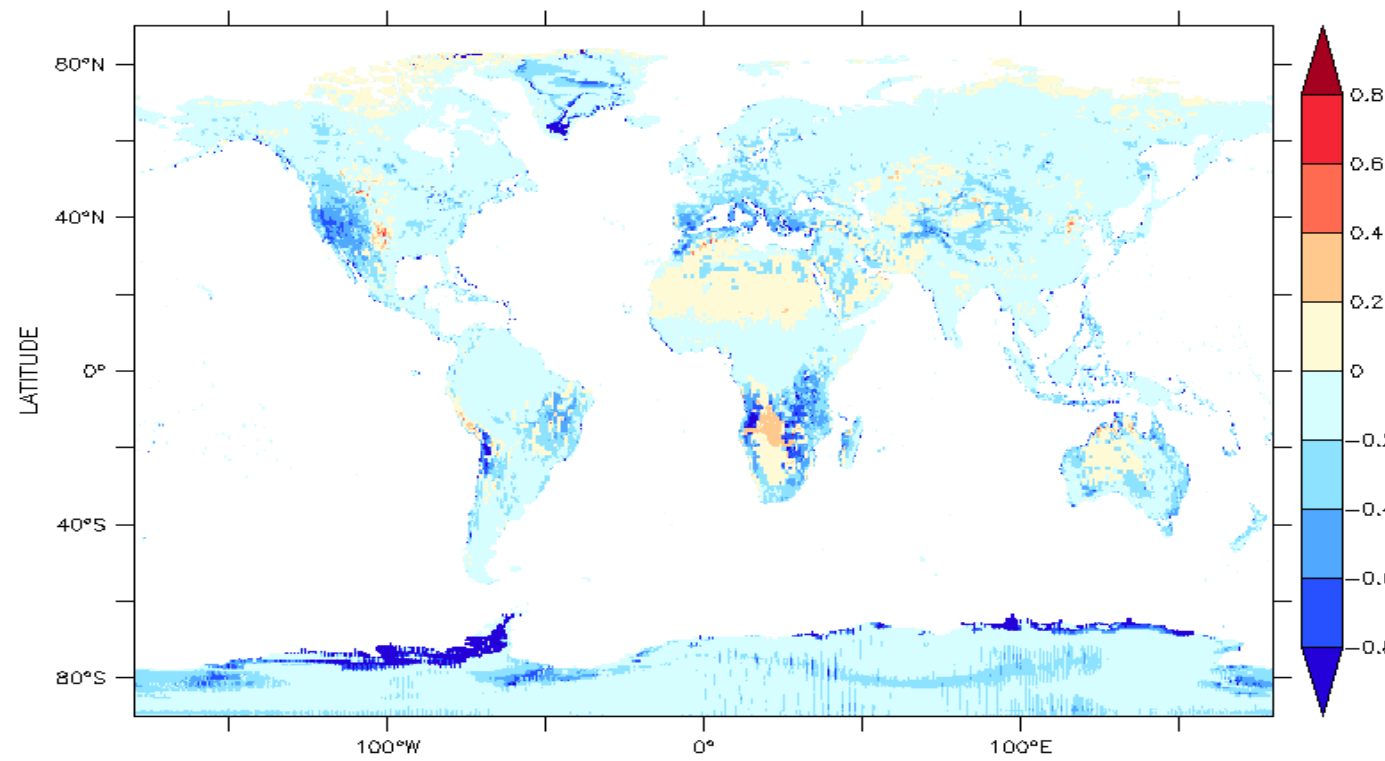
Surface T.: EXPKC – EXPK (unit: °C): JJA



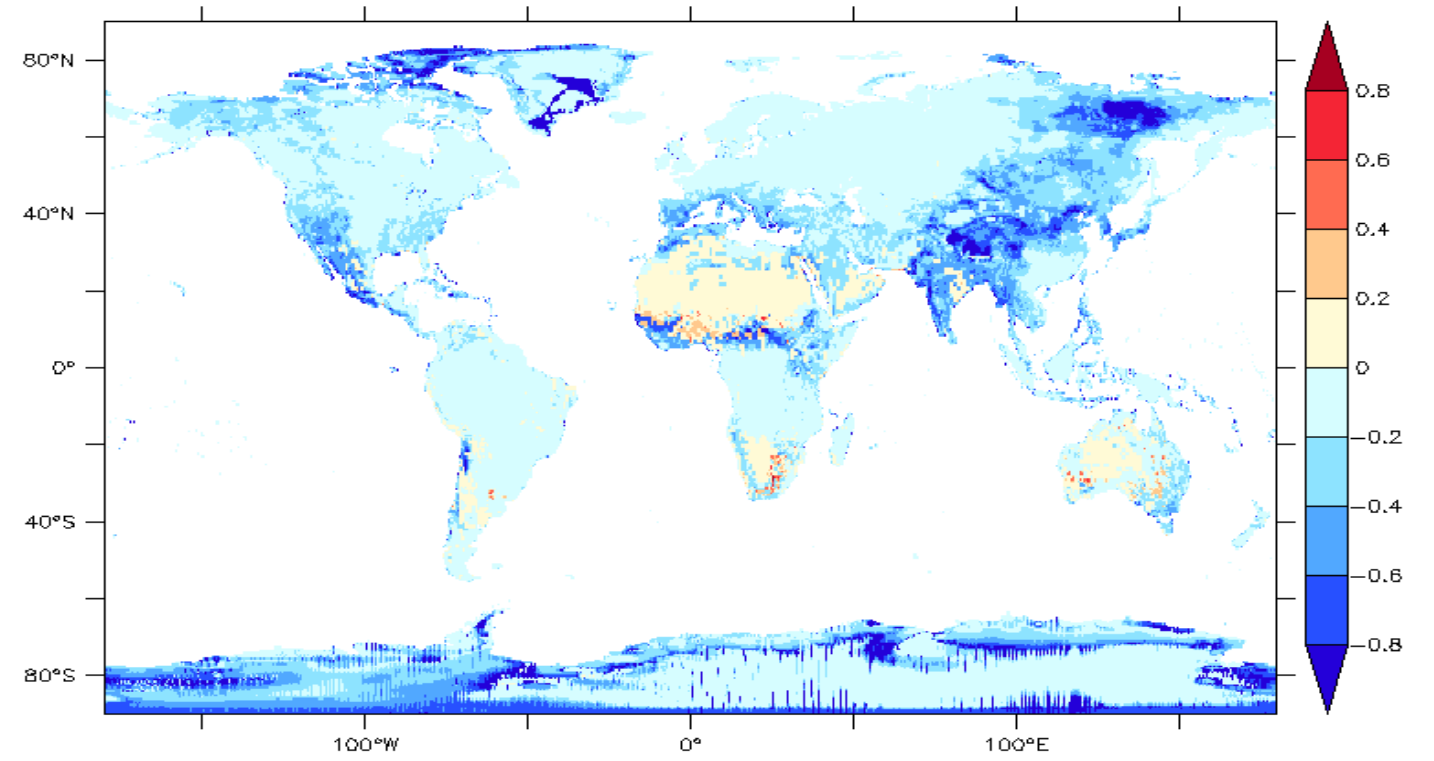
DJF



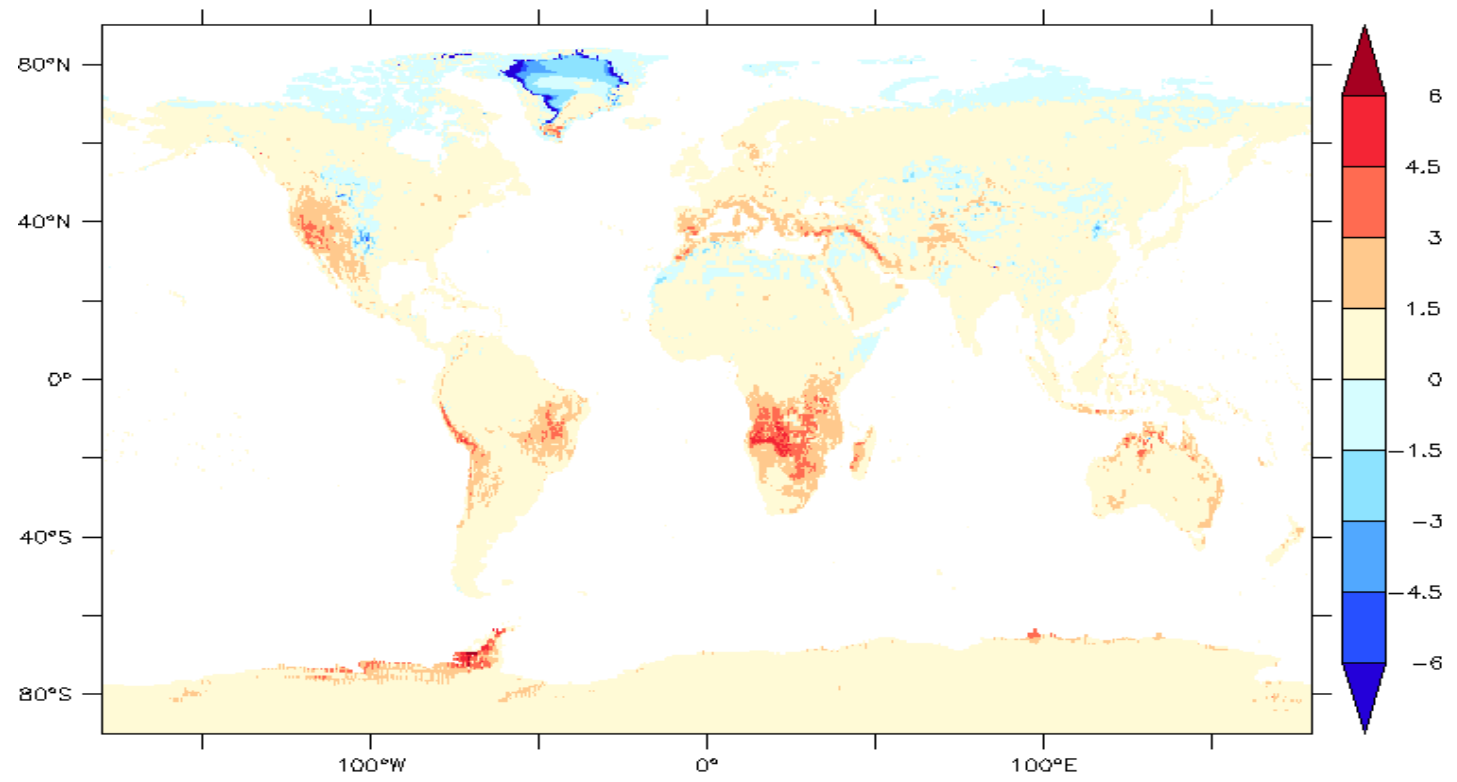
Surface T.: EXPKC – TRUNK (unit: °C): JJA



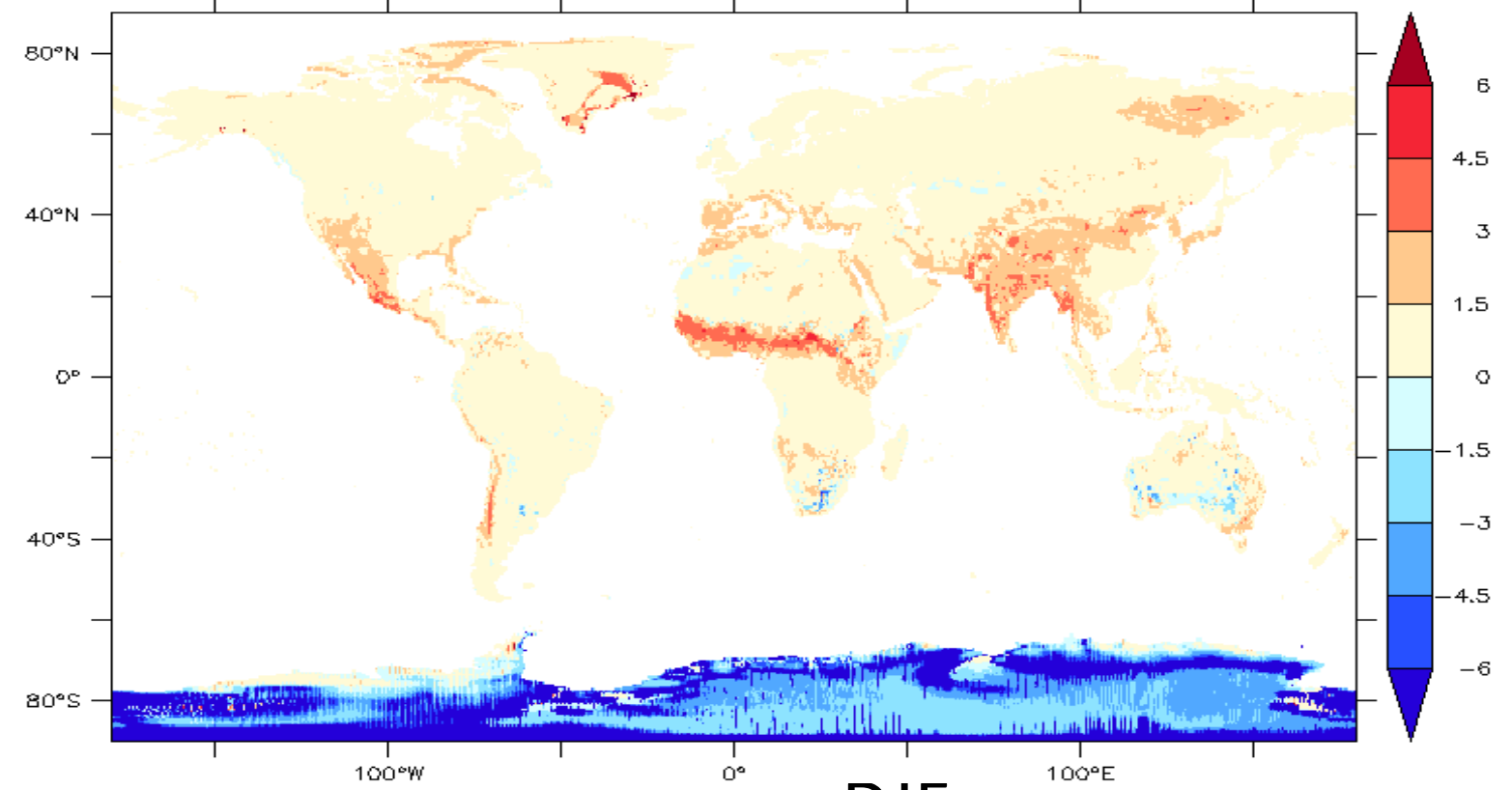
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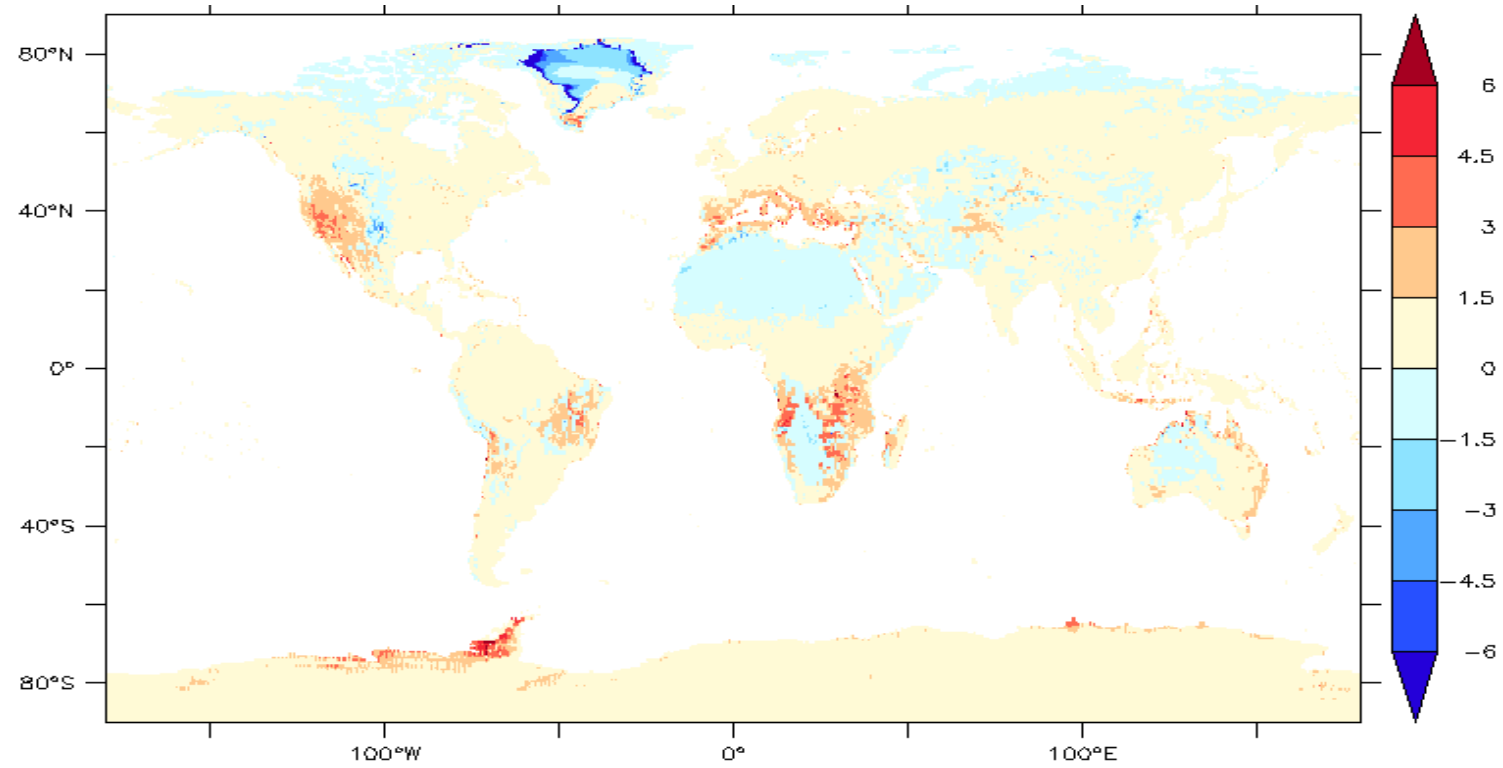
Net Rad.: EXPKC-EXPK (unit: W/m<sup>2</sup>): JJA



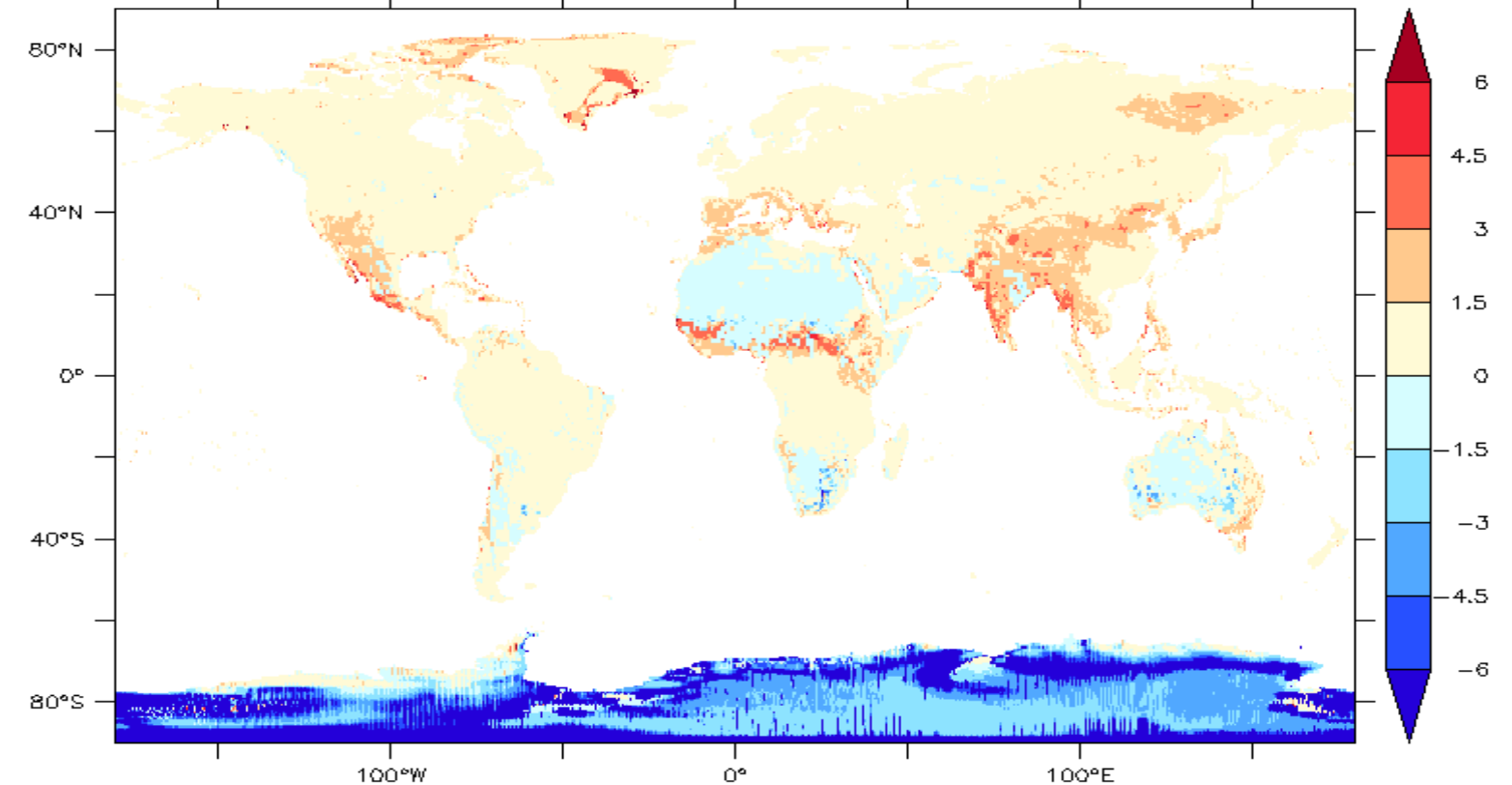
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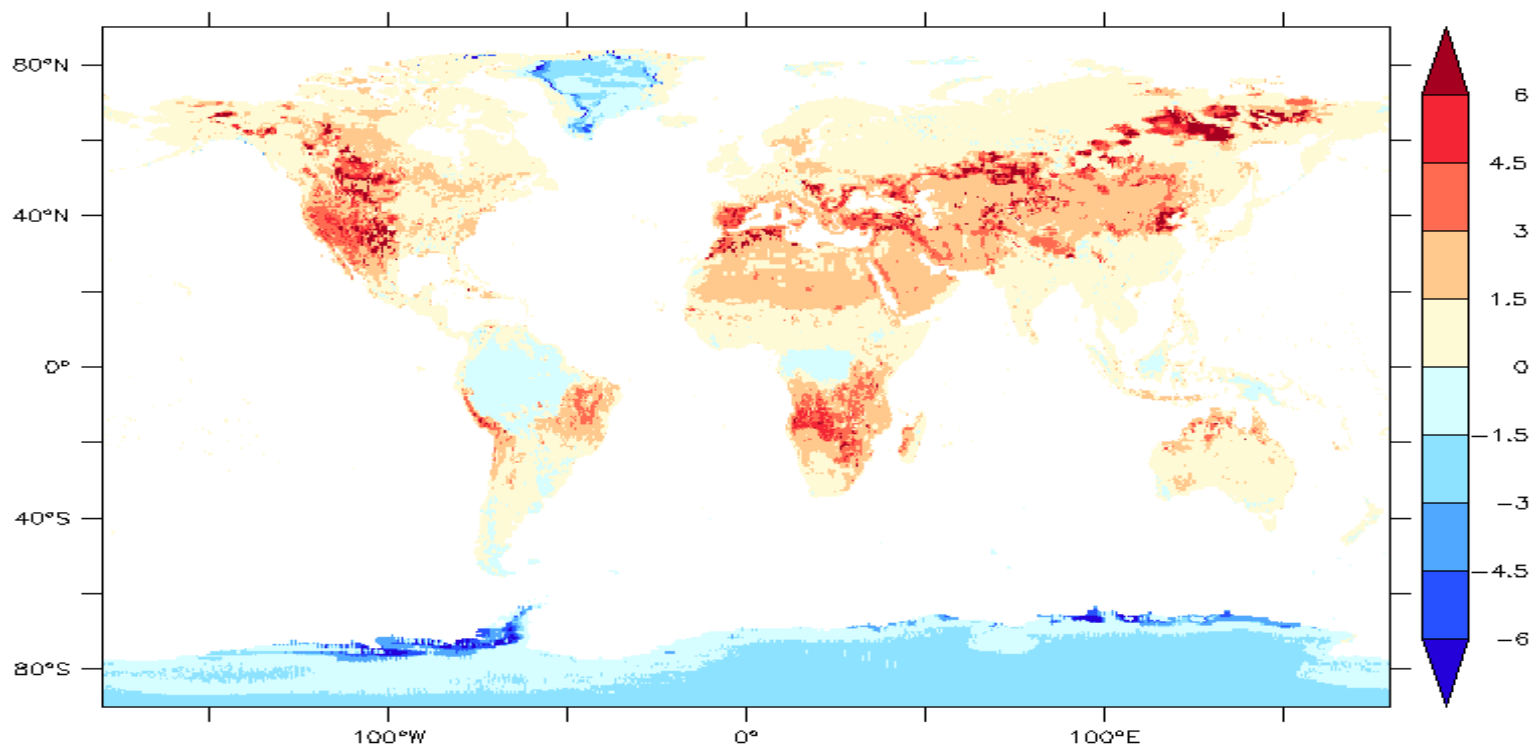
Net Rad. : EXPKC-TRUNK (unit: W/m<sup>2</sup>): JJA



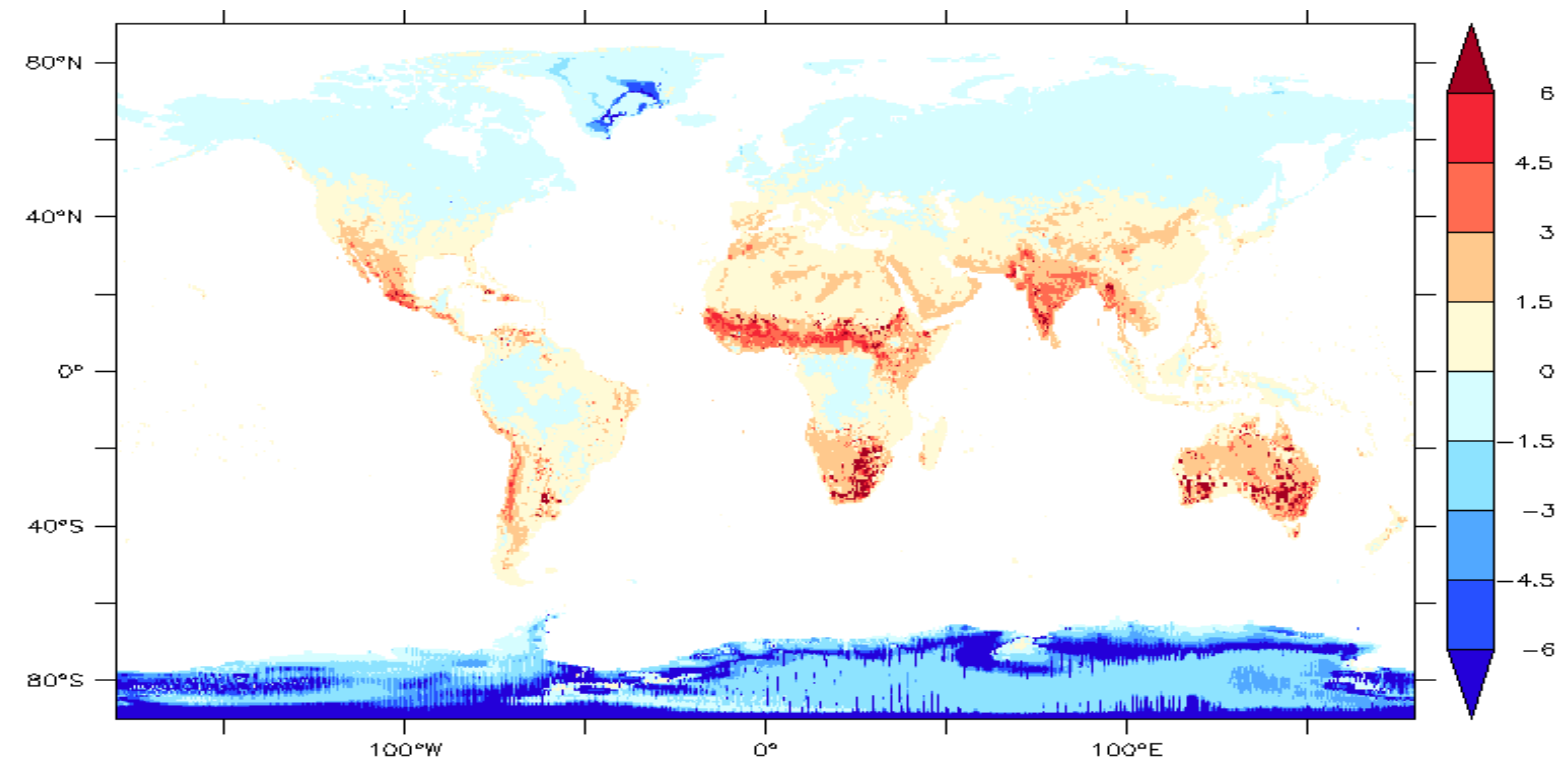
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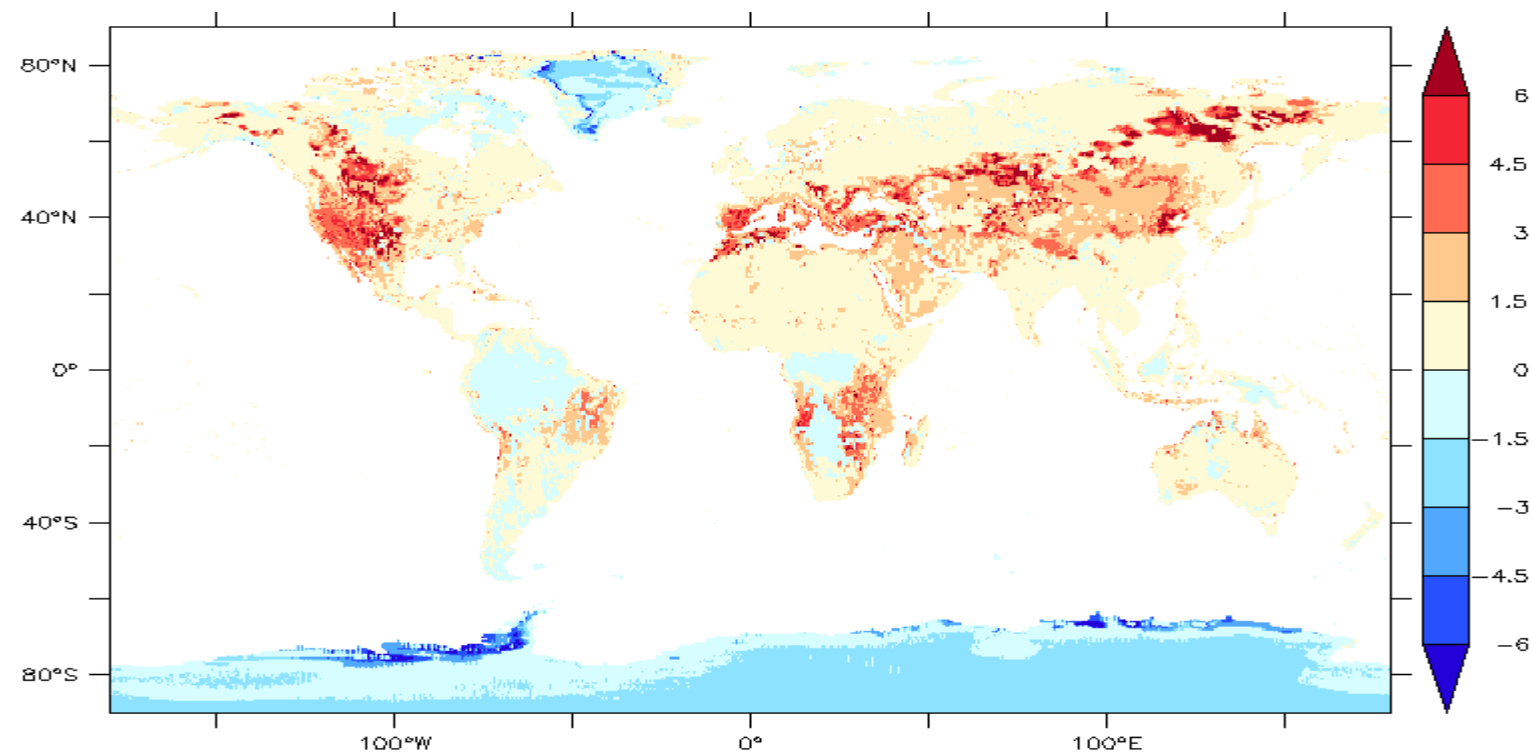
Sensible H: EXPKC - EXPK (unit: W/m<sup>2</sup>): JJA



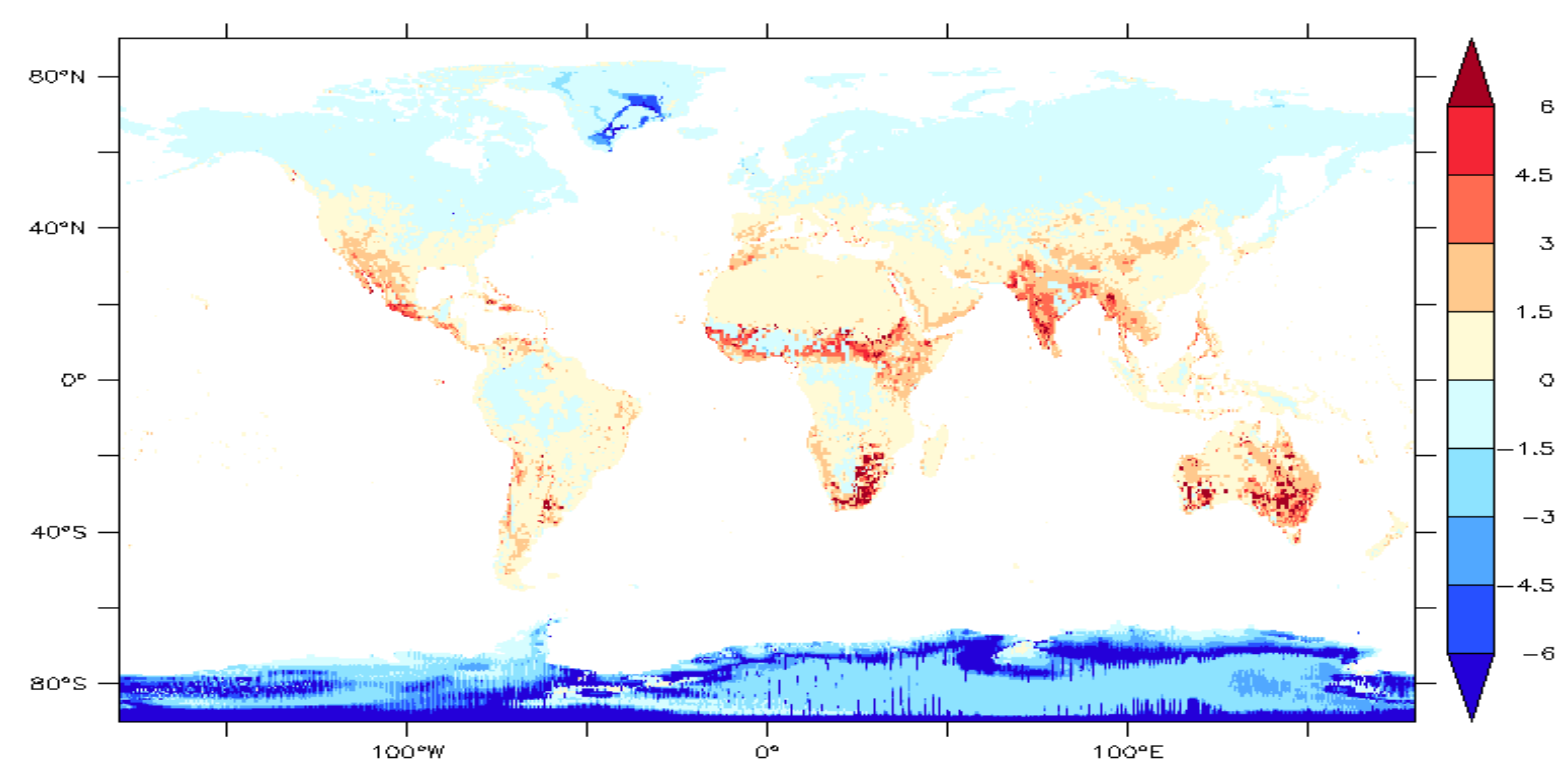
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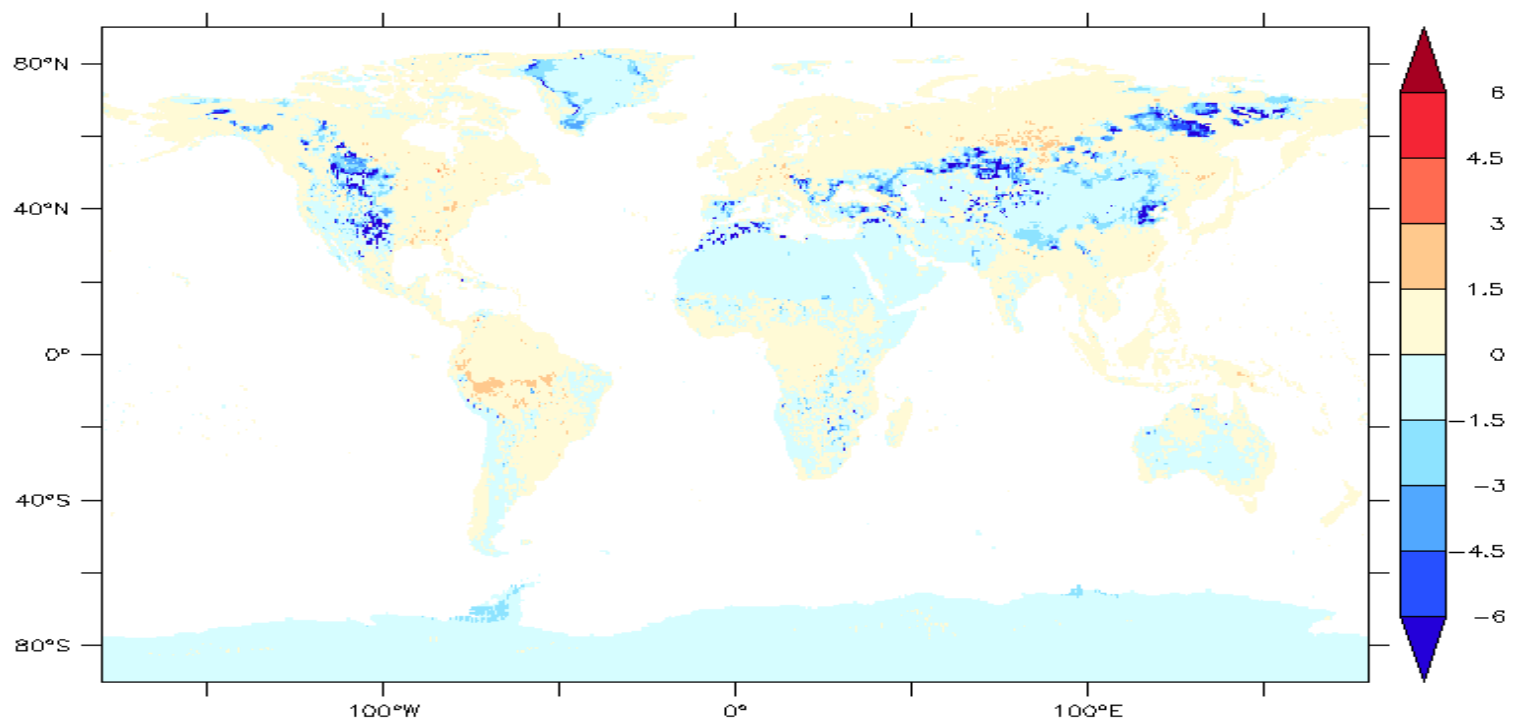
Sensible H: EXPKC - TRUNK (unit: W/m<sup>2</sup>): JJA



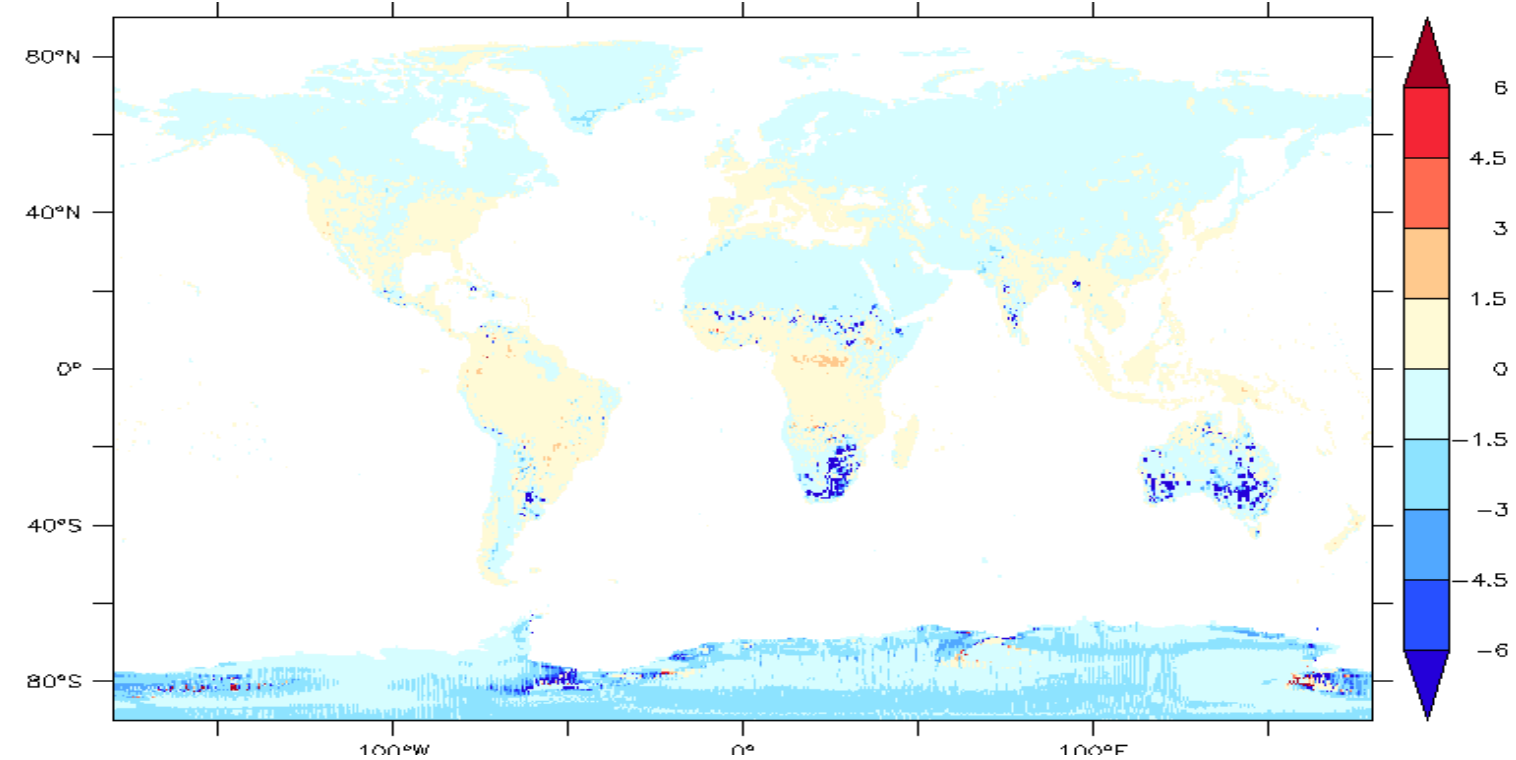
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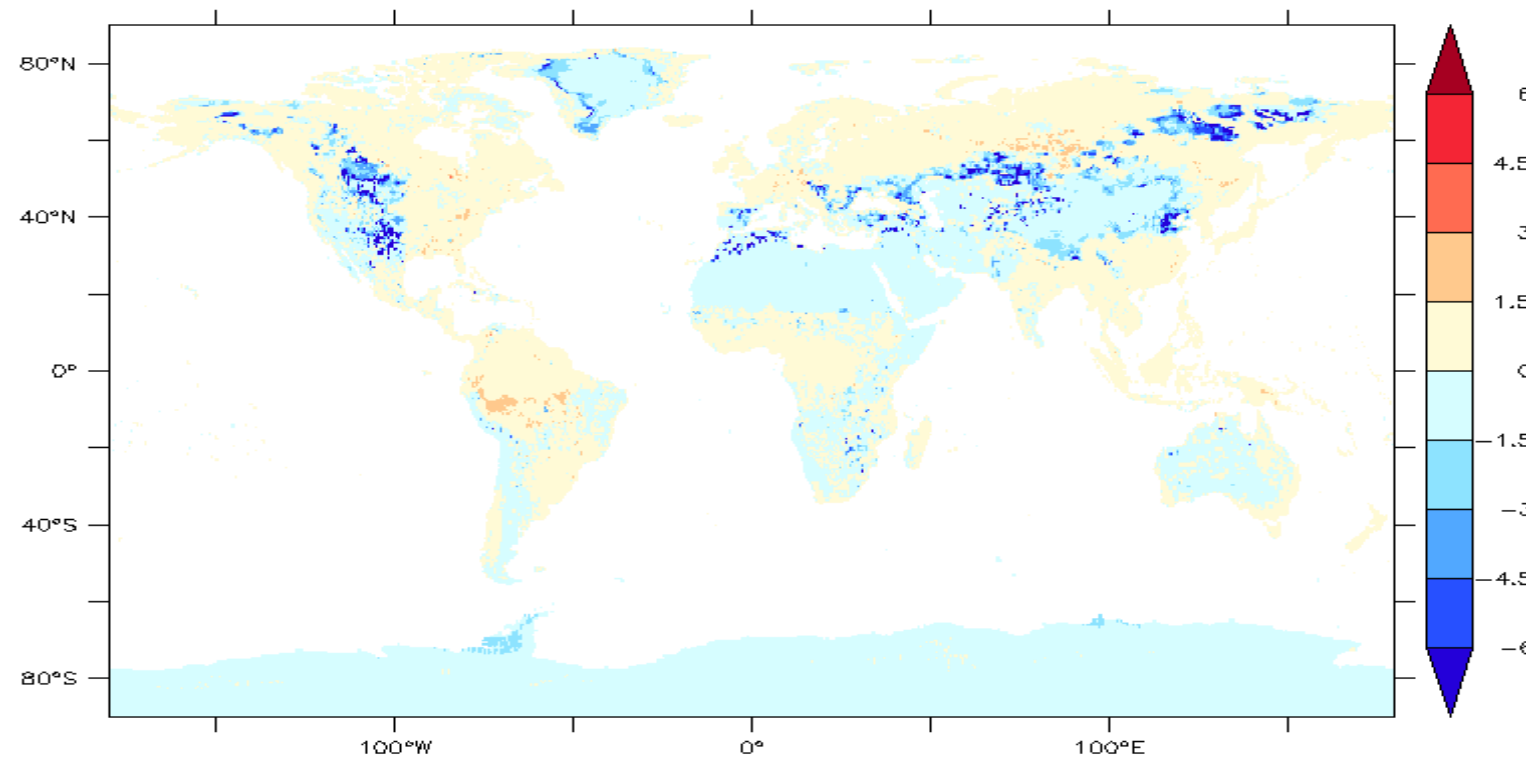
Latent H: EXPKC - EXPK (unit: W/m<sup>2</sup>): JJA



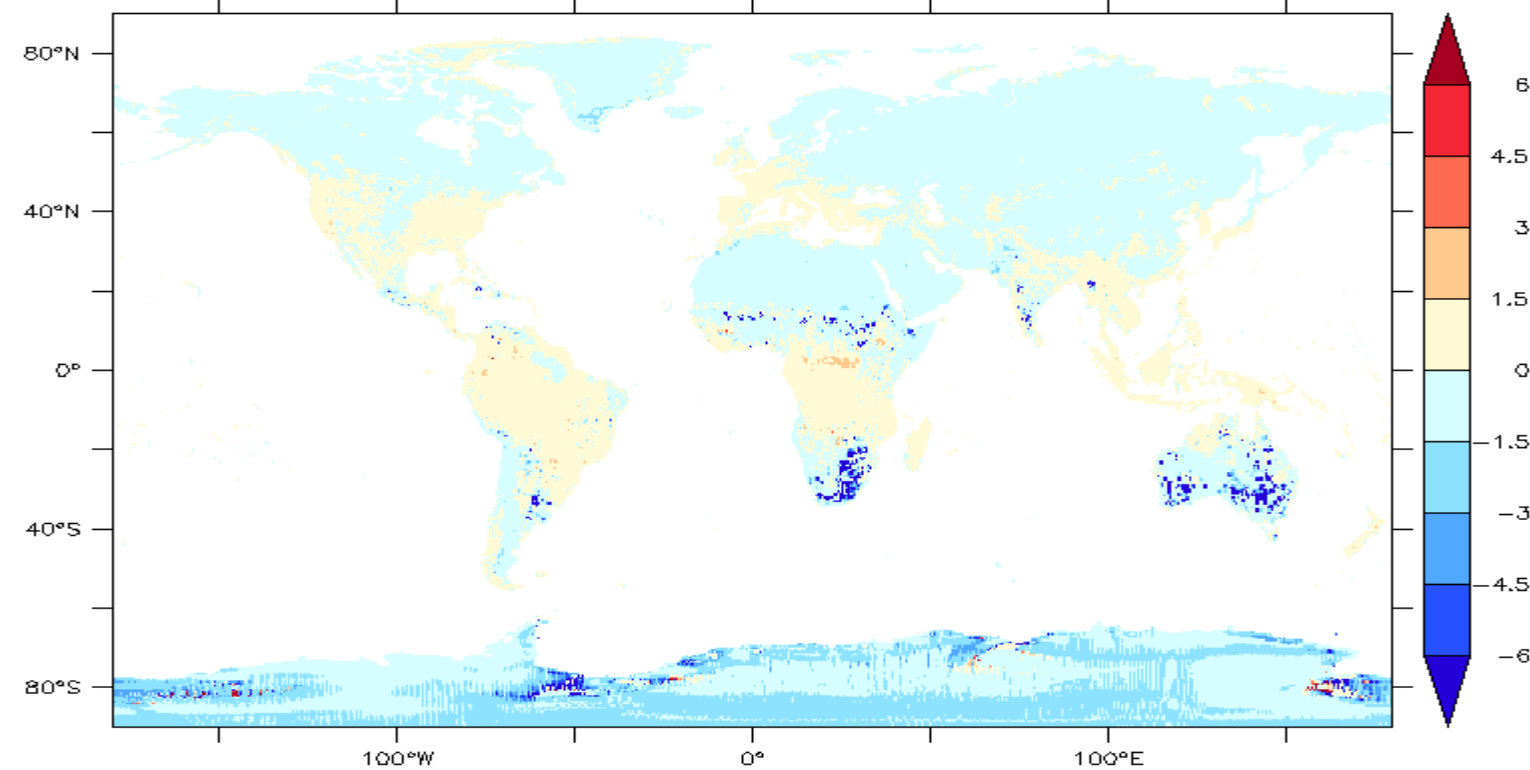
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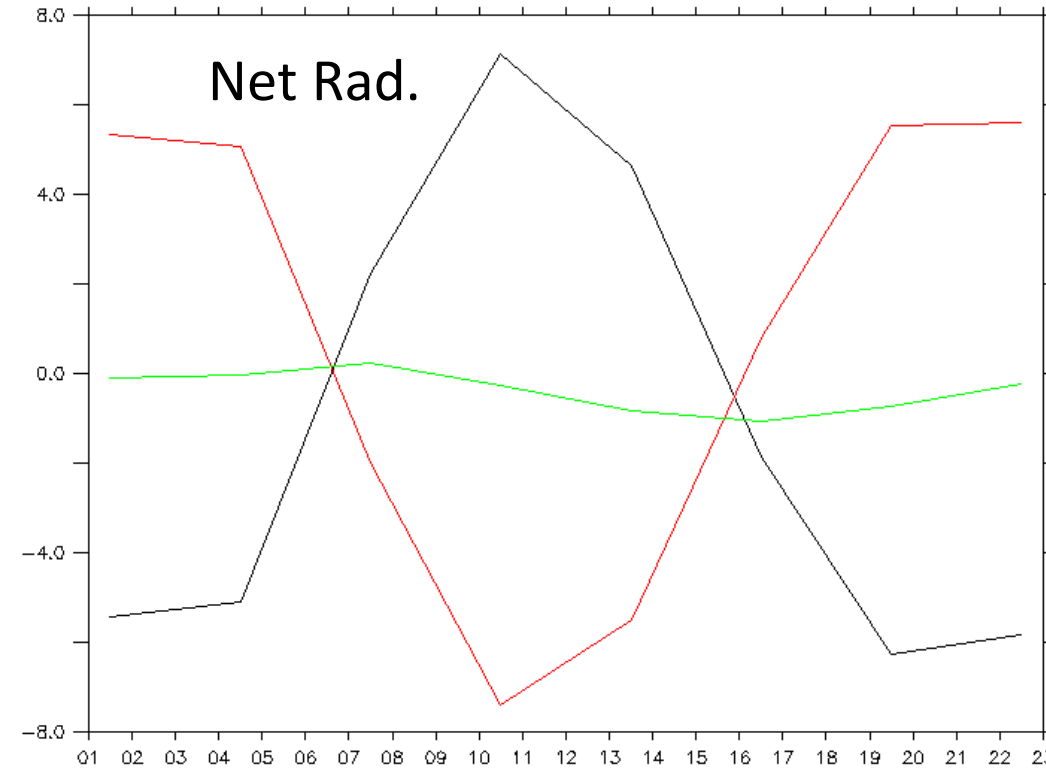
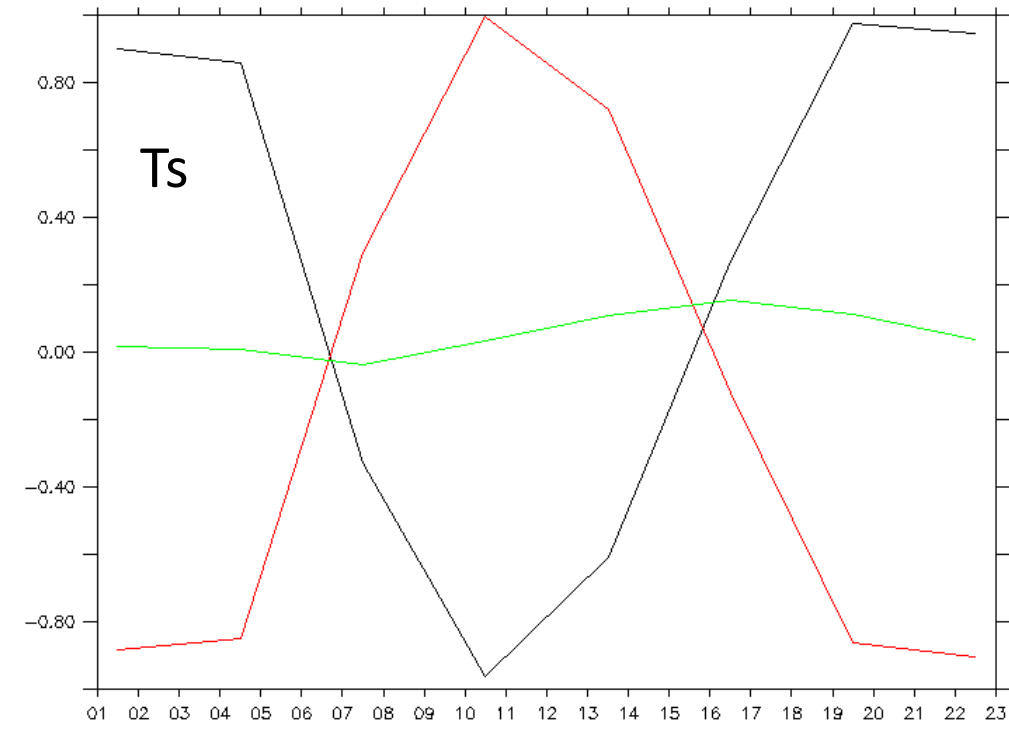
Latent H: EXPKC - TRUNK (unit: W/m<sup>2</sup>): JJA



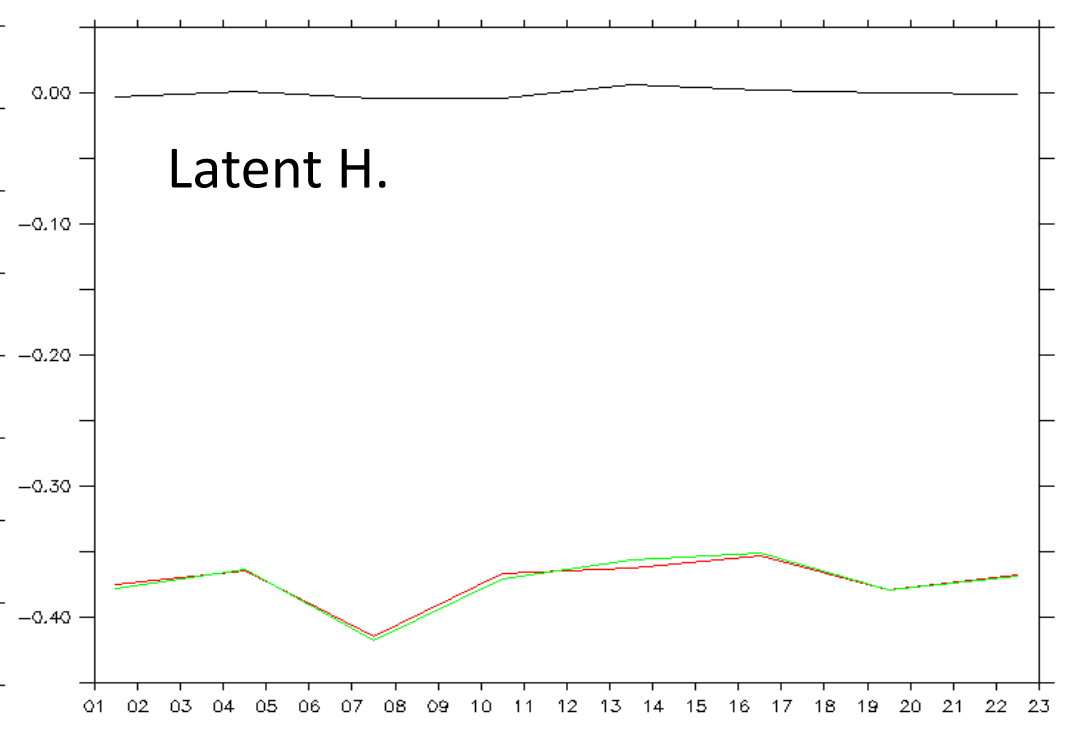
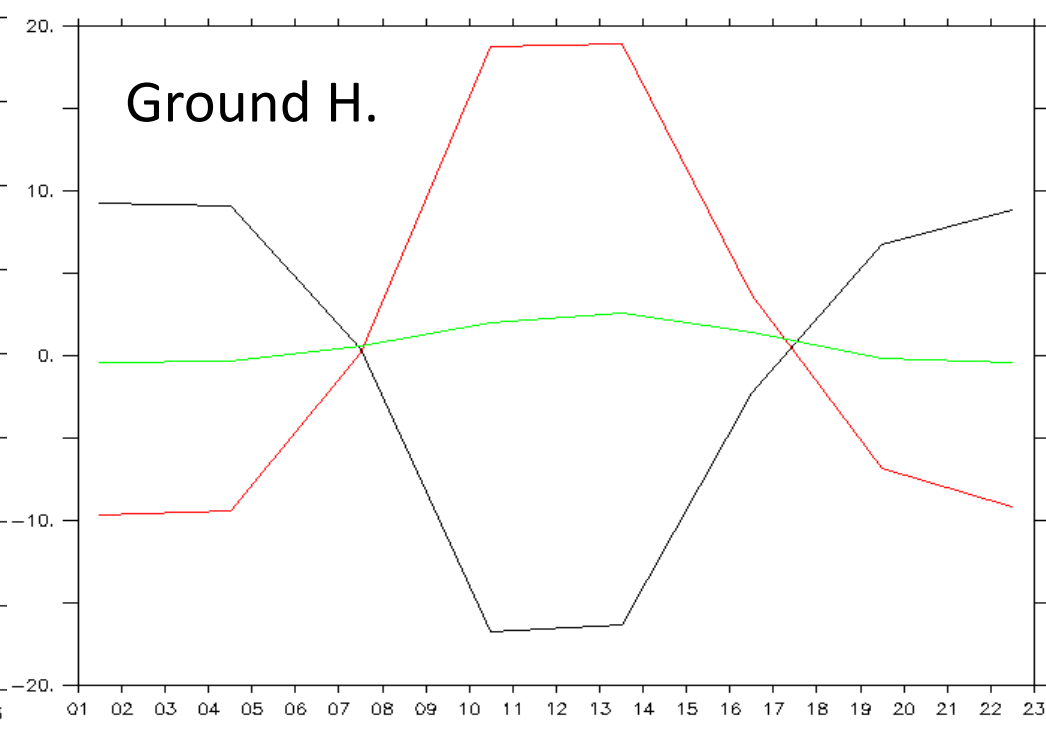
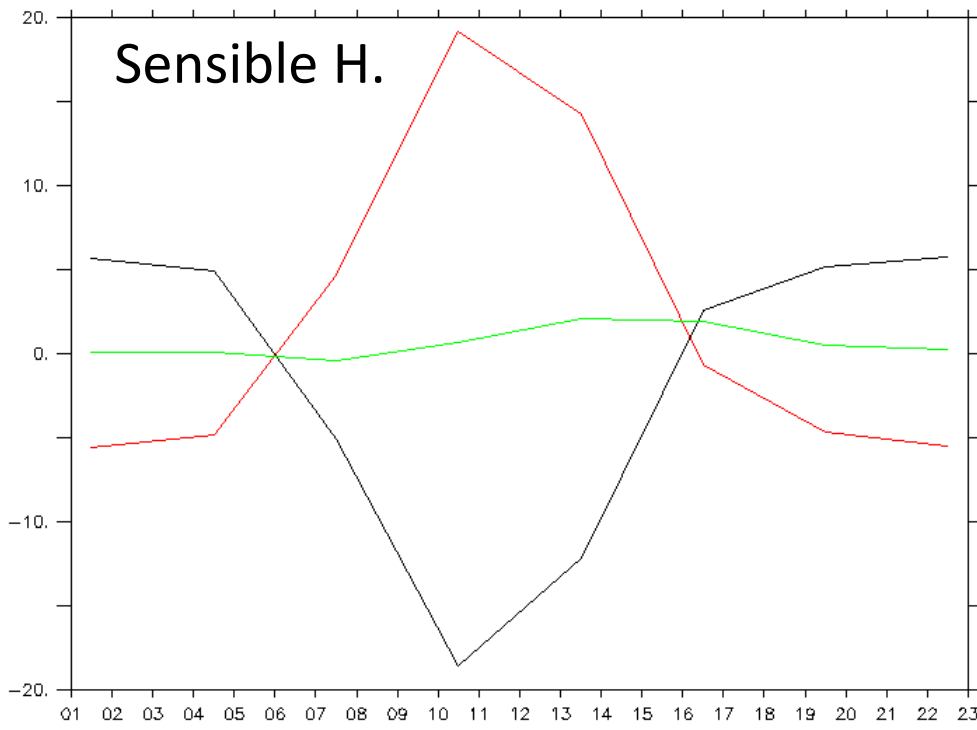
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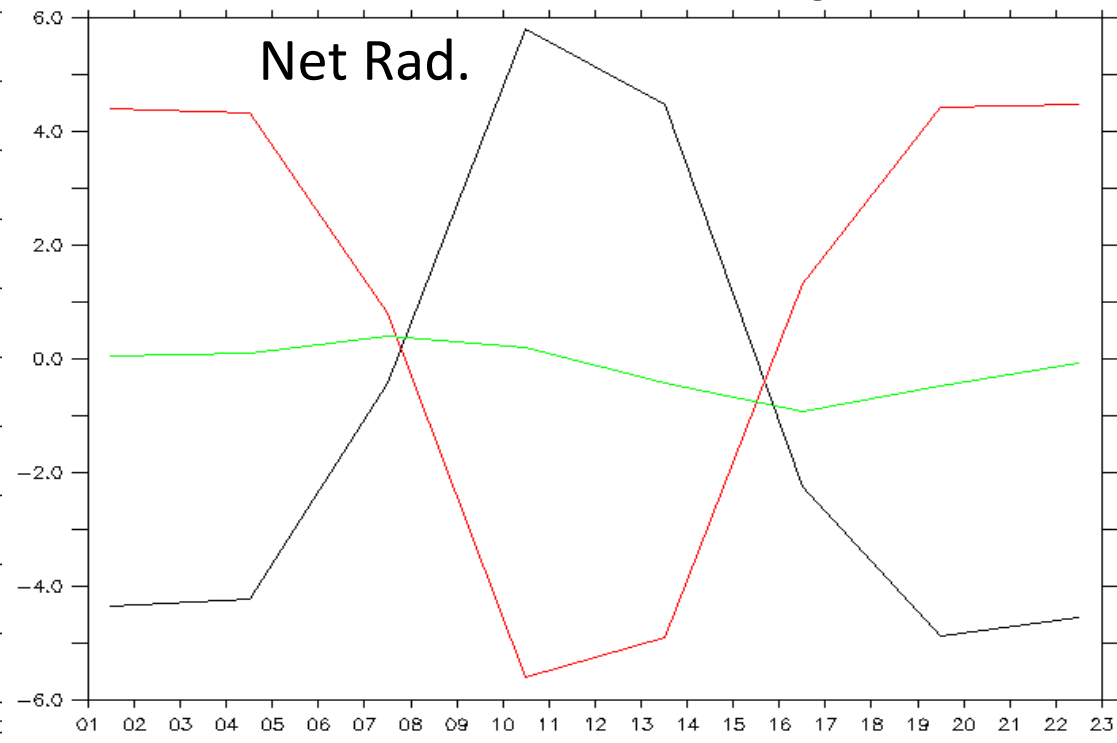
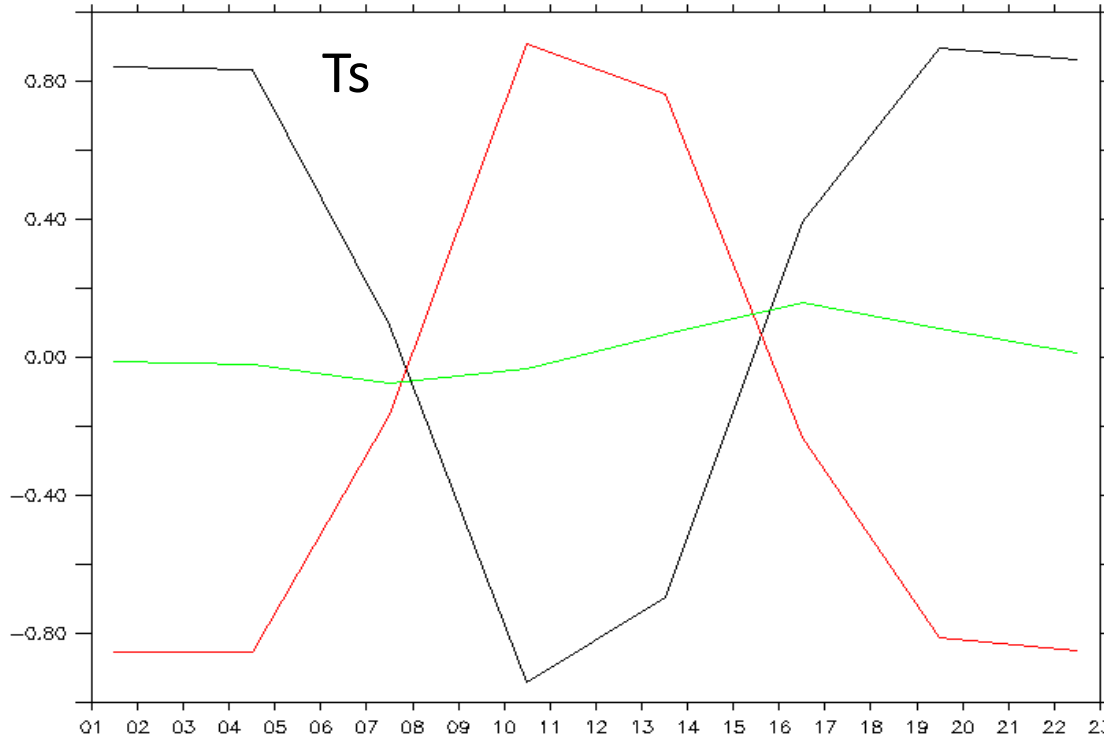
# EXPK-TRUNK, vs. **EXPKC-EXPK** vs. **EXPKC-TRUNK** (diurnal cycle, July)



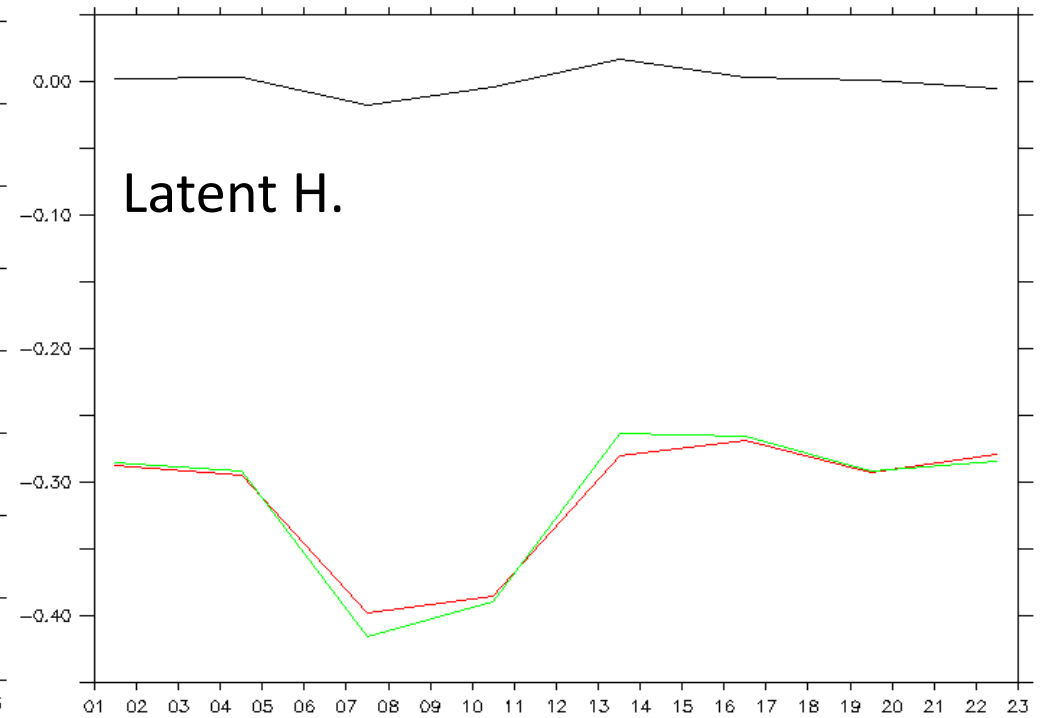
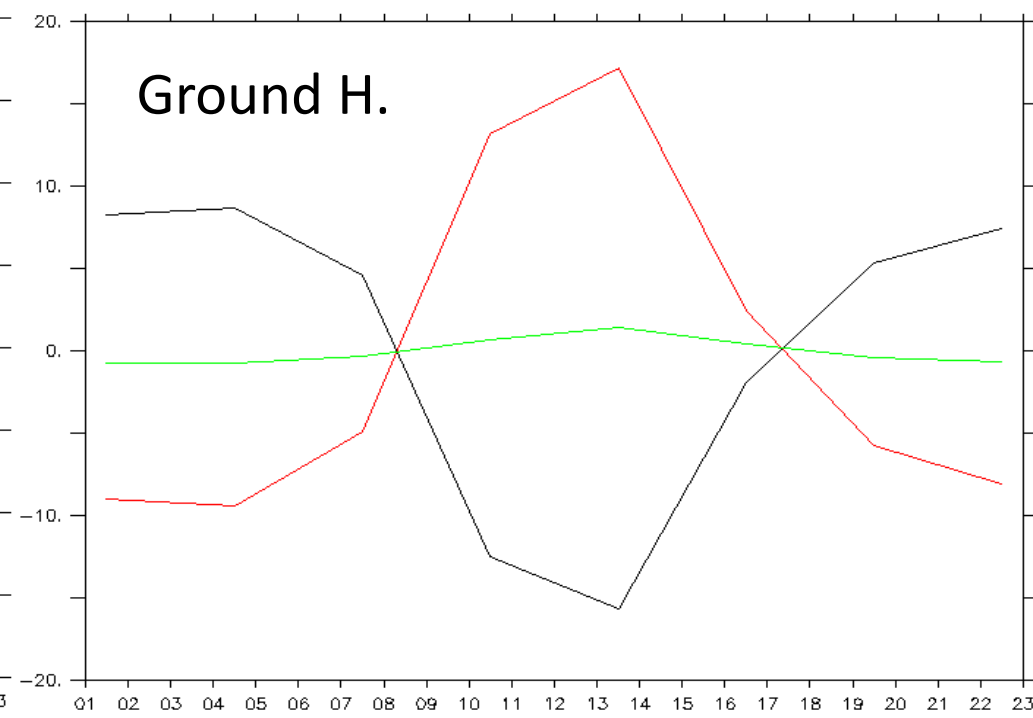
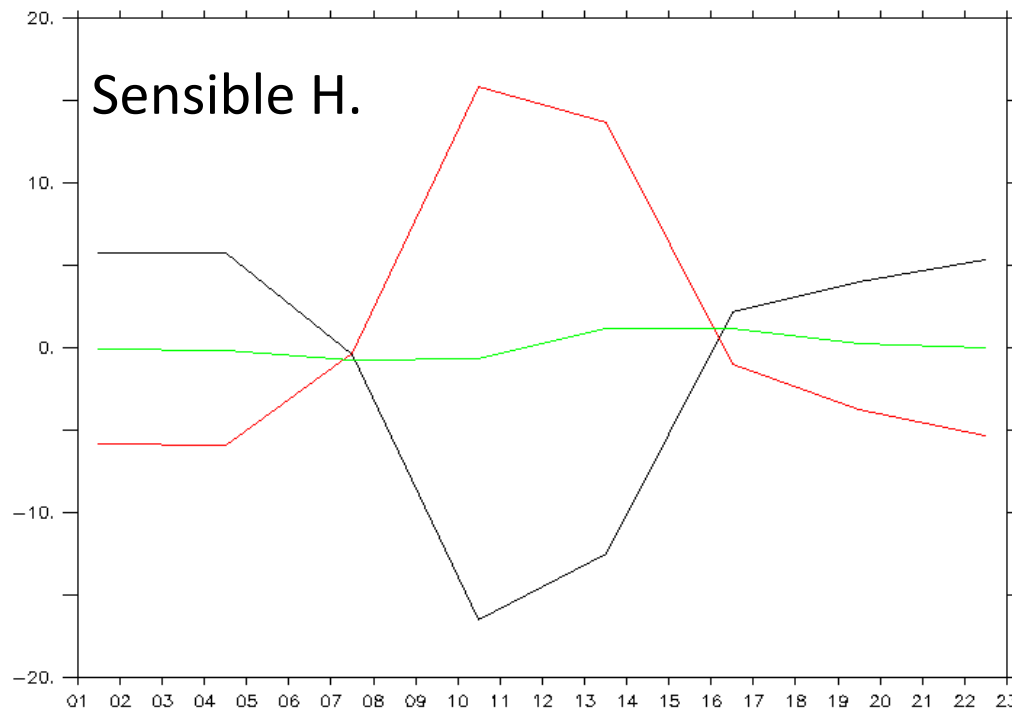
- A point of Sahara desert (7E, 20N)



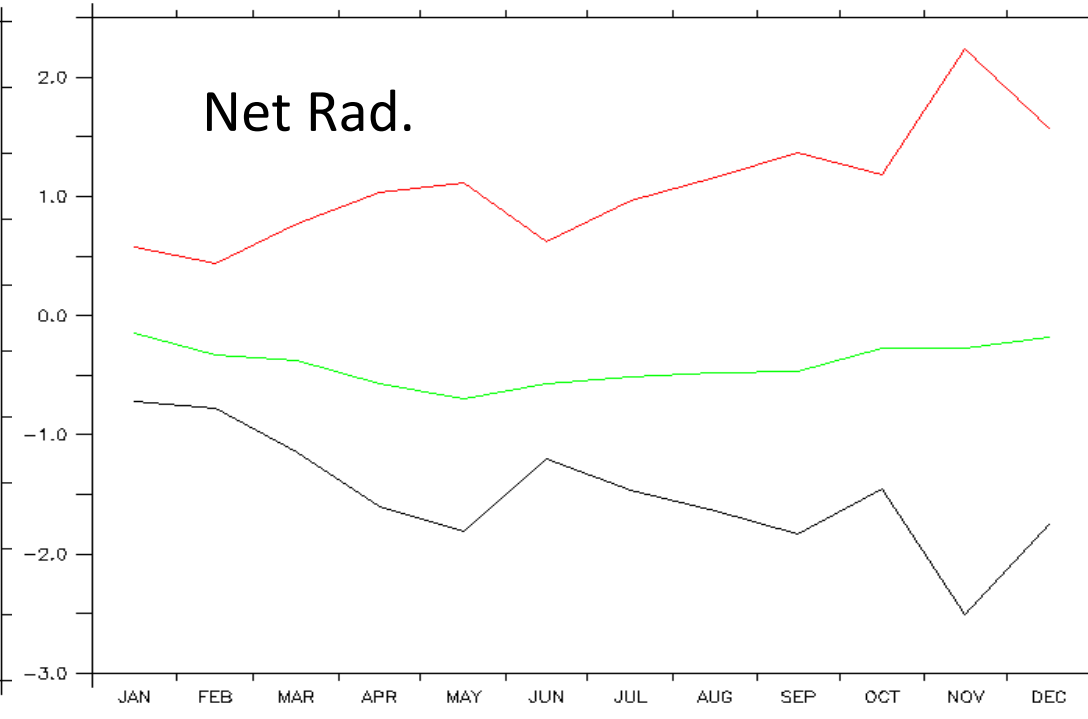
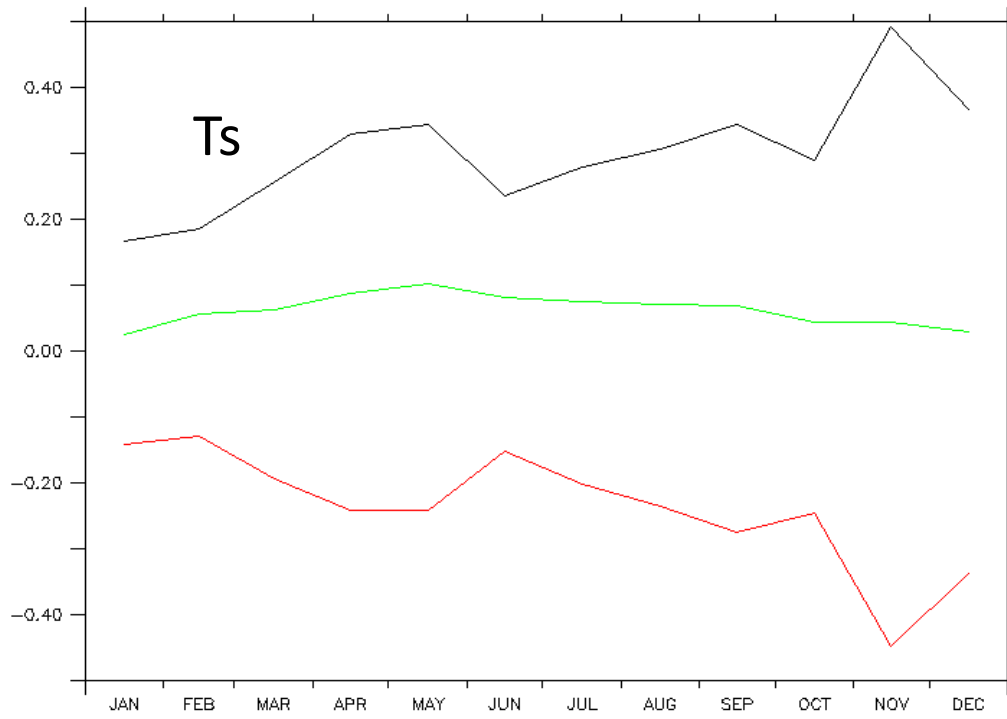
# EXPK-TRUNK, vs. **EXPKC-EXPK** vs. **EXPKC-TRUNK** (diurnal cycle, Jan.)



- A point of Sahara desert (7E, 20N)



# EXPK-TRUNK, vs. **EXPKC-EXPK** vs. **EXPKC-TRUNK** (seasonal cycle)



- A point of Sahara desert (7E, 20N)

