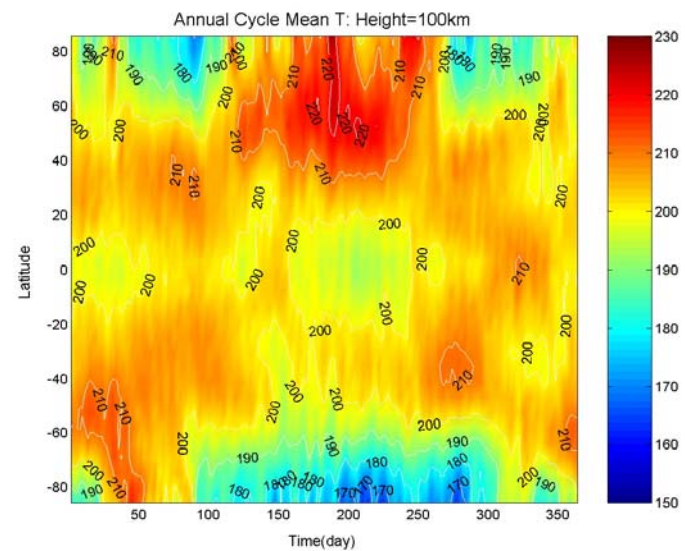
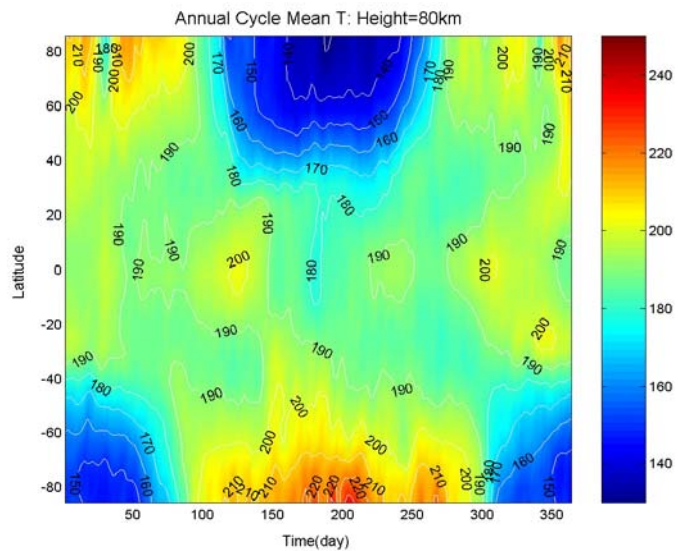
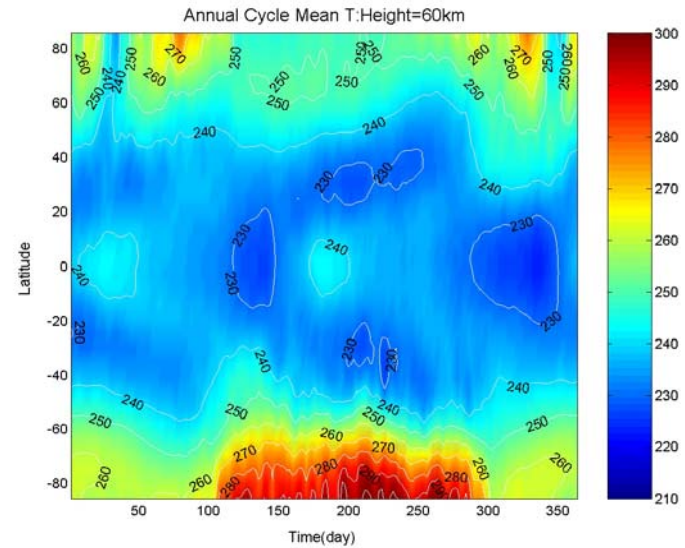
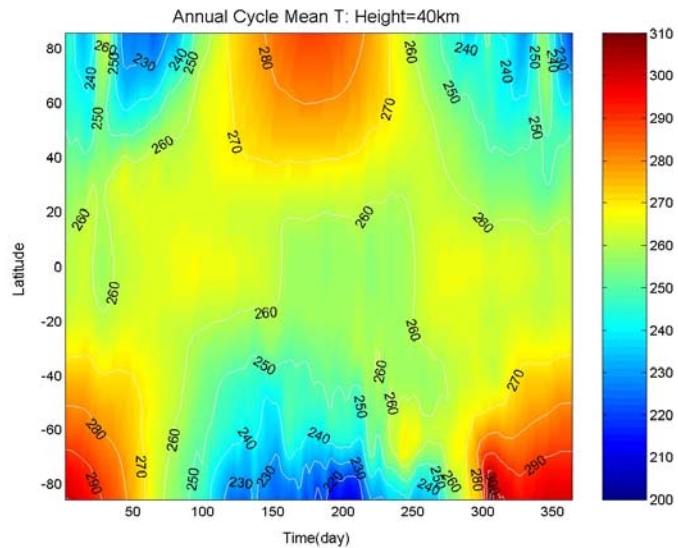


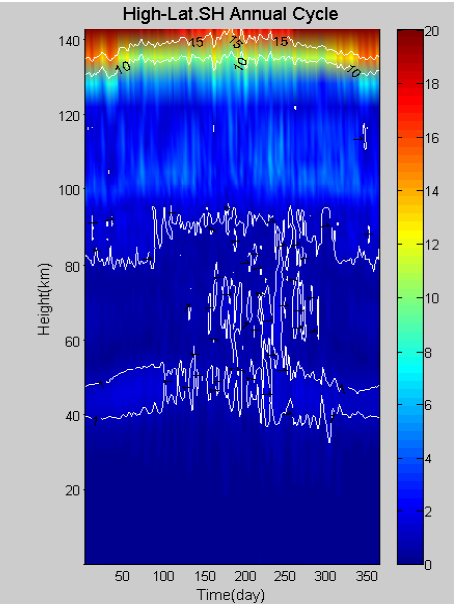
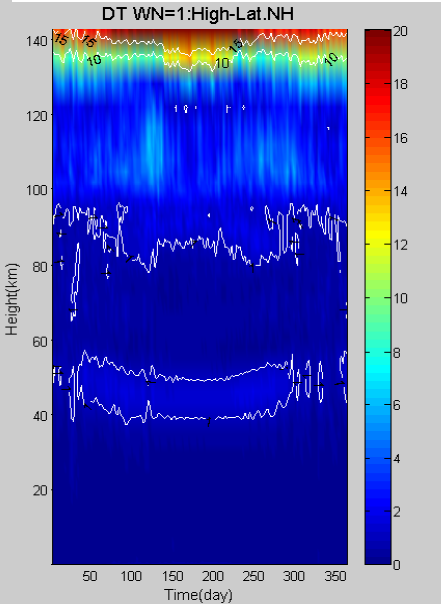
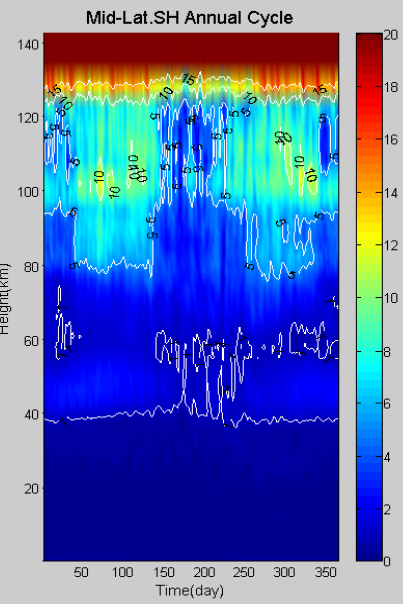
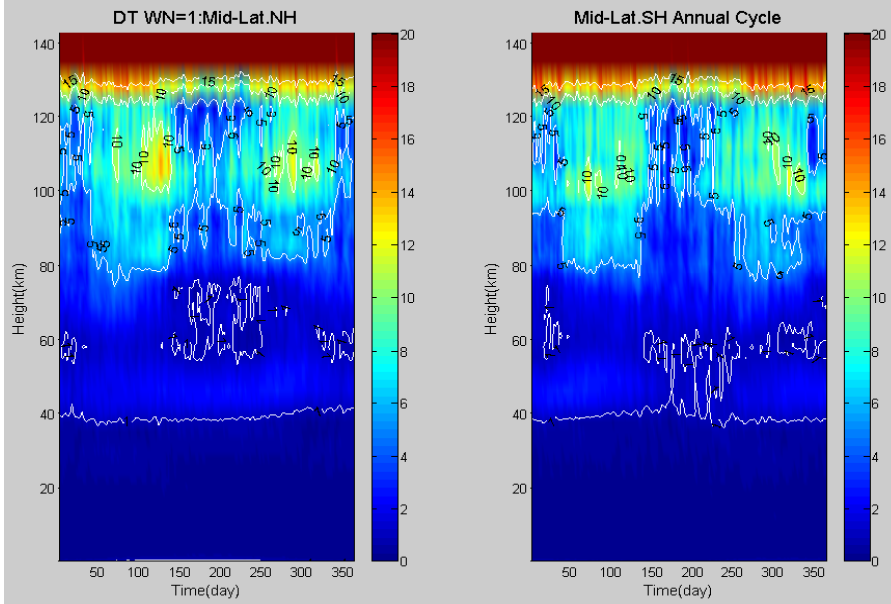
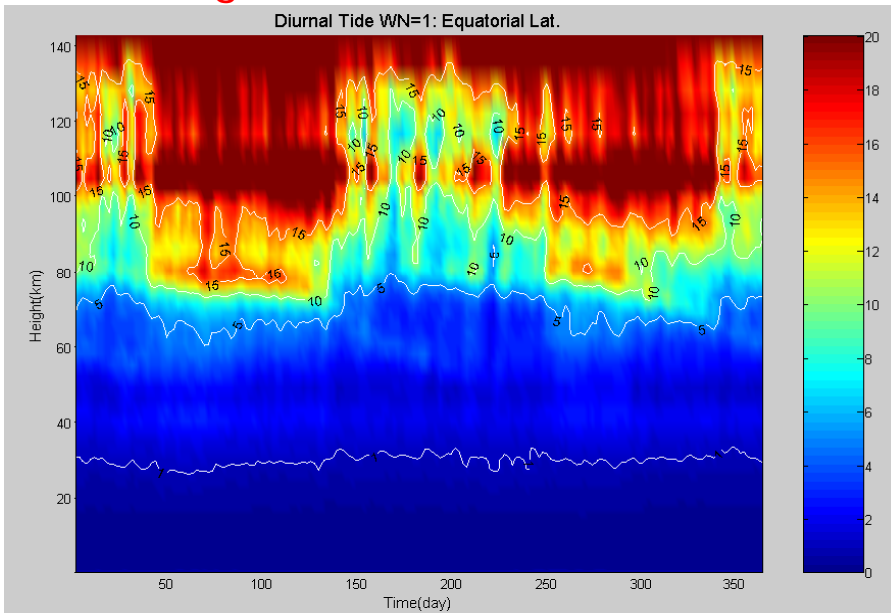
T Annual Cycle (40, 60, 80, 100 km)

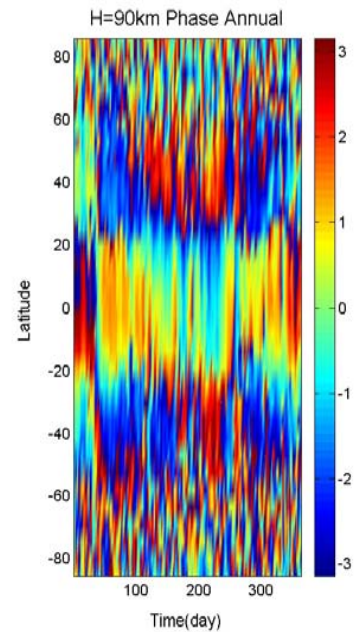
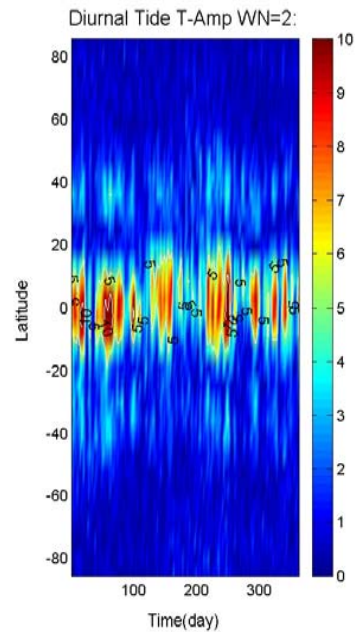
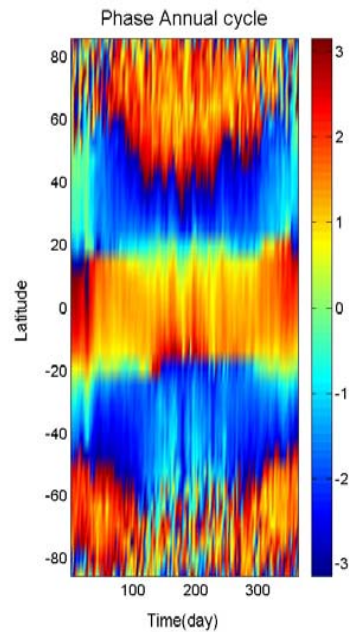
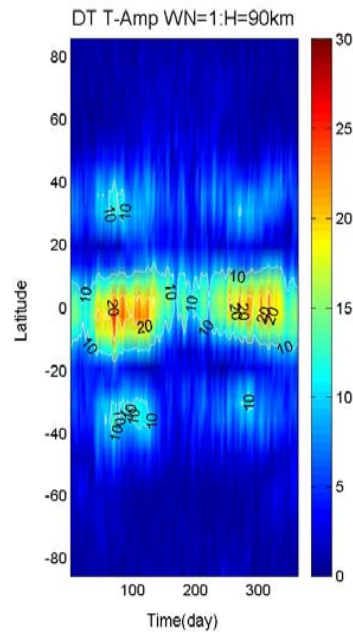
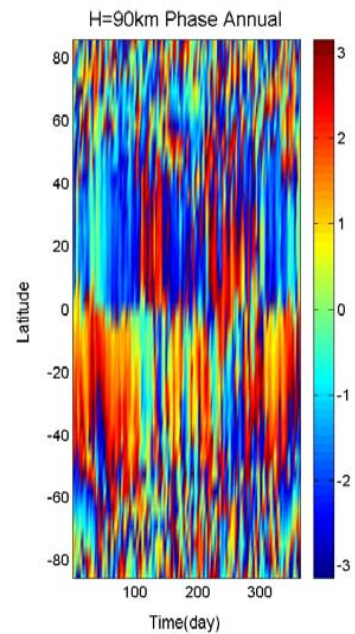
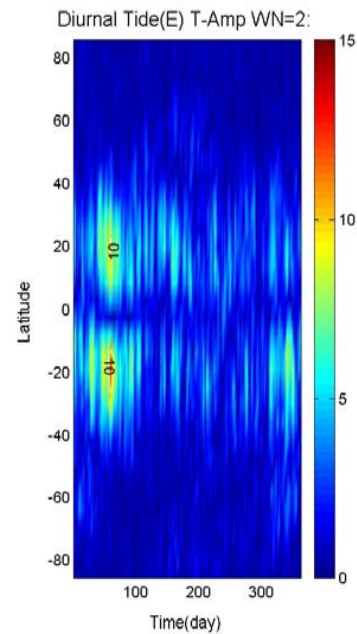
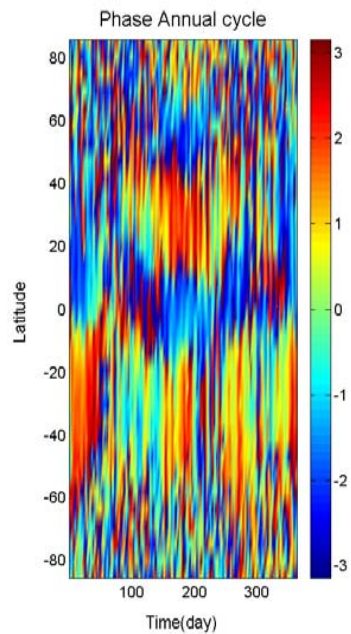
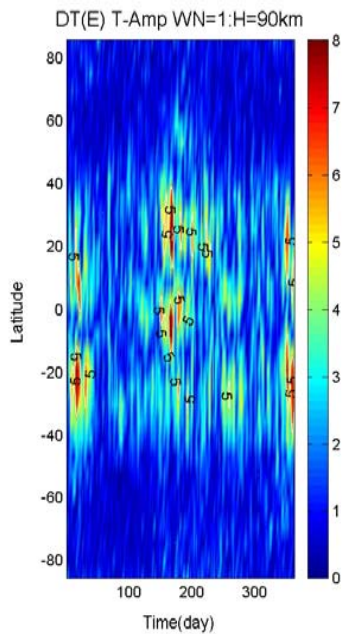


Annual Cycle of Westward Diurnal Tide (W1) at different latitudes region

- Equatorial latitudes: 20°N—20°S
- Middle latitudes: 20°N(S)—50°N(S)
- High latitudes: 50°N(S)—90°N(S)

- Westward Diurnal Tide has maximum in equatorial latitudes, and secondly maximum in middle latitudes.
- Westward Diurnal Tide has strong seasonal change, spring and fall are much stronger than Winter and summer.

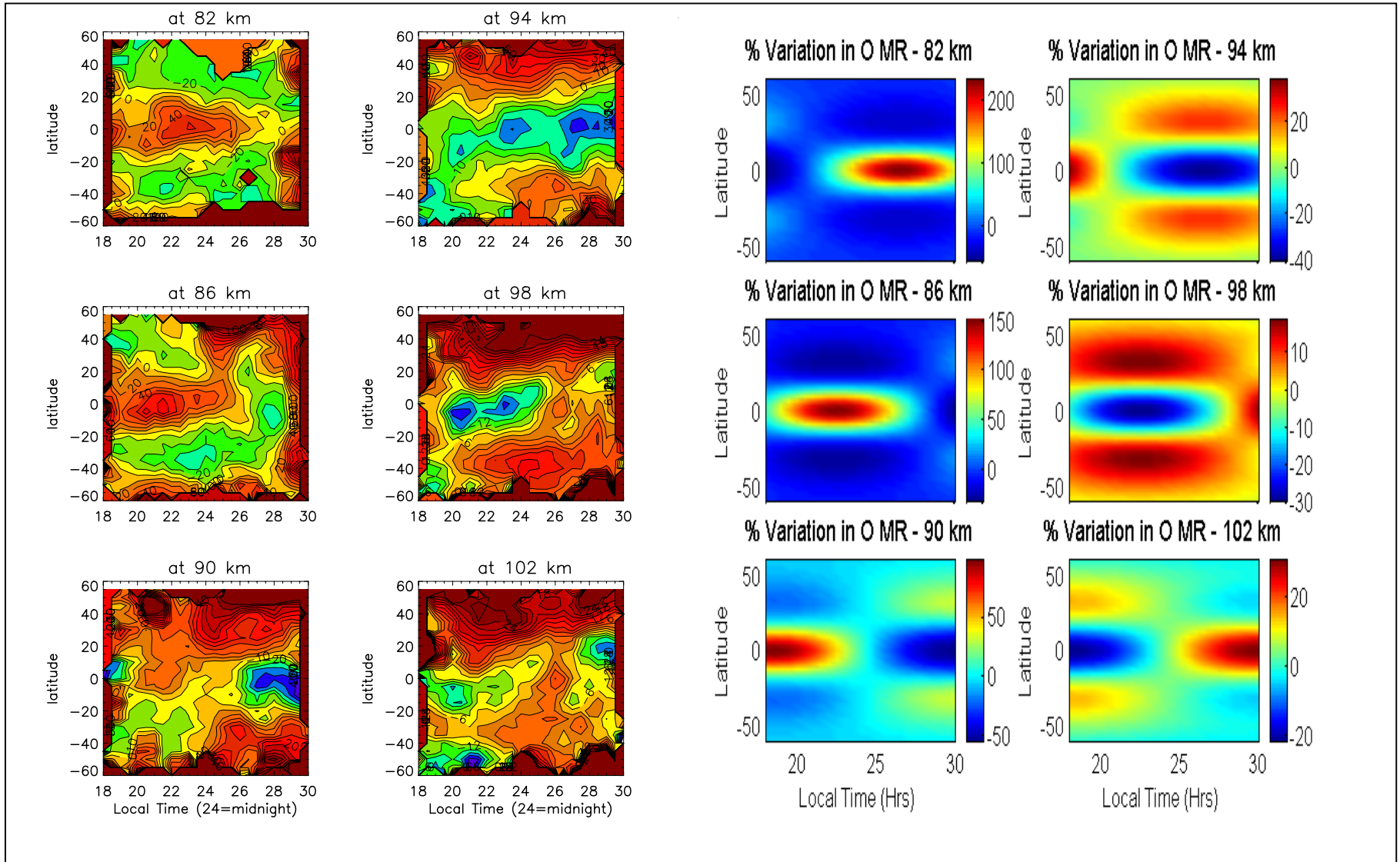




Tidal Variation with Altitude at Equinox (Aug-Oct 1992)

% Variation in MR (Our Data)

% Variation in MR (Simple Tidal Model)



CAWSES Proposal

- **How does the sun couple to the neutral atmosphere? What is the role of the MLT in this?**
- Overall goals for “lower” atmosphere :
 - Characterize tropopause to thermosphere region: waves, momentum, constituent and energy budgets, mean conditions and variability.
 - Examine the response to specific forcing events from above and below.
 - Observe the unique phenomena in this region (noctilucent clouds, PMSE, temperature inversion layers, mesospheric bores, sudden stratospheric warmings, ...).
- Activities in support of these goals:
 - Coordinated campaigns: latitudinal and longitudinal chains of stations along with multiple instrument observations. Can we characterize the forcing and the response in the mesosphere?
 - An inter-GCM comparison study for models extending into the thermosphere.
 - Coordination of multi-instrument observations of the MLT region for the study of the energetics