

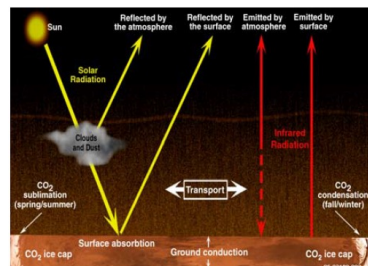
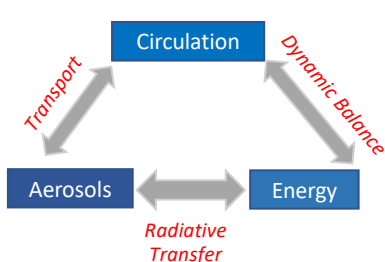
# Aeolus: A Mars Network Mission Addressing Climate and Surface Processes

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A Discovery Class mission with a temporally-precessing, global-coverage orbiter, and a network of (>18) globally distributed, simple landers

## Orbiter:

- Global latitudinal coverage
- Covers all local times multiple times a season
- Direct 2-D wind observations
  - $\pm 5$  m/s, down to  $< 5$  km,  $< 5$  km vertical resolution,  $\sim 10$  km resolution along-track
- Atmospheric Temperatures from limb sounding
  - like MGS TES w/ clouds & dust
- Nadir Spectral Radiometry
  - Reflected solar & thermal IR, dust & cloud opacity
  - Surface temperatures
- Trace Gas Spectrometer ( $H_2O$ ,  $CO$ ,  $O_3$ ) @ limb



## Lander Network:

- >18 landers ( $\pm 60^\circ$  latitude),  $\sim 300$  km landing ellipse
- $\sim 1.5$  kg science payload to surface,  $< 1000$  g landing
- 1 year lifetime
- Pressure, Air Temperature, sky brightness (& opacity), trace gases ( $H_2O$ ,  $CO$ ,  $O_3$ ,  $CH_4$ )
- Considering a simple wind sensor, saltation sensing & local dust opacity

