

PBL "Science Traceability Matrix"

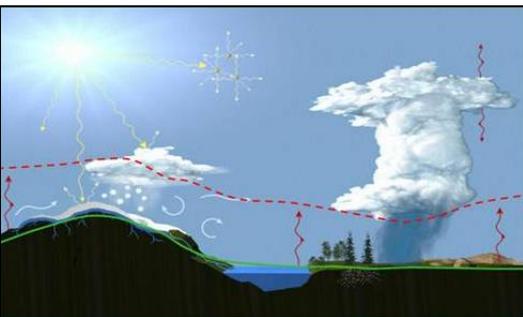
Complexity of Needs, Quantities & Approaches

Science Objective

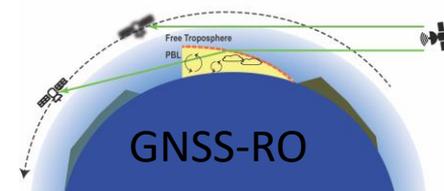
Quantities of Interest

Measurement Approach

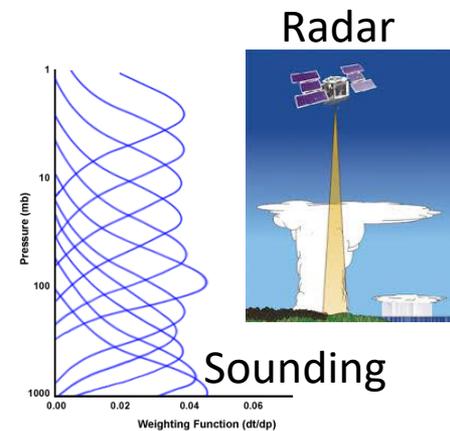
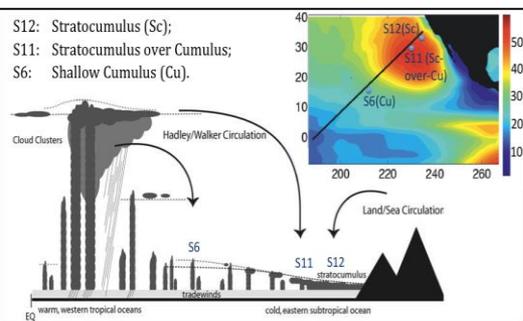
Weather, Clouds, Storms



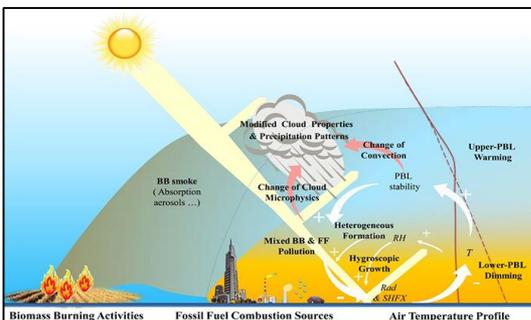
- **Thermodynamic profiles:** temperature and water vapor profiles within PBL at vertical resolutions ~ 200 m.
- **Near-surface** – wind speed/direction, temperature, humidity, ozone, aerosol, air-sea/land fluxes of trace gases, moisture, momentum, heat.
- **Integral variables:** PBL height, inversion strength, liquid water path, integrated water vapor, entrainment.



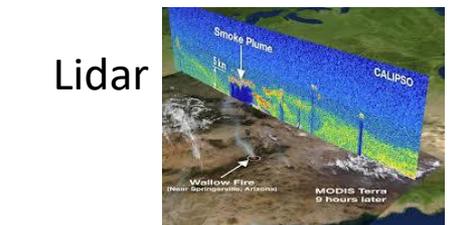
Cloud-Climate Feedback



AQ & Trace Gas Fluxes



What are the most feasible & cross-cutting approaches?



Multi-Angle