

### **E.4.2 Solar Spectral Flux Radiometer (SSFR)**

Characteristics:

- 300 nm - 2500 nm spectral range
- hemispheric or narrow field of view (1 mrad)
- 5-15 nm resolution
- 1 Hz spectral sampling rate
- calibration: integrating sphere, standard lamp, standard diffuser, cavity radiometer
- Pressure/Temperature chamber tested
- zenith pointing

Data Products:

- solar spectral radiance or irradiance
- spectral reflectance and transmittance:  $R(\mu_o) = F / \mu_o F_o$ ;  $T(\mu_o) = F / \mu_o F_o$
- bi-directional spectral reflectance and transmittance:  $R(\mu, \mu_o) = I(-1) / \mu_o F_o$ ;  
 $T(\mu, \mu_o) = I(0 < \mu < 1) / \mu_o F_o$
- surface spectral albedo
- derived products provided: TBD; other possible derived products: cloud water phase, optical depth, particle size, liquid/ice water path, liquid/ice water content