Method: Fu-Liou GOesR LooK-Up-Table (FLUGOR LUT)

- The Langley Fu-Liou SW code an 18 band 2-stream correlated-k delta-edddington code was run using 35 vertical levels to generate two Look-Up-Tables (LUT). One clear-sky (7 variables) another for cloudy-sky (8 variables) together they form a pseudo 15 variable LUT. Outputs are TOA broadband albedo and broadband surface transmission. In this validation test LUT inputs are the same as the Full RT CRS Ed2b product.

FLUGOR LUT Inputs:
- f (solar zenith angle, PW, O),
- Surface (albedo, elevation),
- Cloud (fraction, optical depth, Rd or De, height),
- Aerosol (tau, ssa)

FLUGOR LUT Output:
- BROADBAND SURFACE TRANSMISSION
- BROADBAND TOA ALBEDO

Validation Comparisons:
- Five years of instantaneous daily daytime CERES overpass data at 45 sites
- Full Fu-Liou radiative transfer code results from CERES CRS Ed2b product using CERES observed fluxes, MODIS based cloud and aerosols. Comparisons at TOA and Surface
- Surface data at 45 sites from ARM, BSRN, CMDL, SURFRAD processed in to 15 minute averages taken from CERES/CAVE/Ceres Arm Validation Experiment website.