CLARREO Pathfinder Inter-calibration Workshop: Summary

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Meeting Objectives:

✧ **CLARREO Pathfinder project status**

✧ **Overview of the Inter-calibration requirements, objectives, and opportunities**

✧ **Overview of the CPF instrument – expected performance parameters**

✧ **Overview of the CPF inter-calibration operations concept**

✧ **Overview of data & algorithms flow & data system**

✧ **Overview of sensors inter-calibration: CERES, VIIRS, GEO sensors, Land imagers**

✧ **Overview of characterization/calibration of surface sites**

✧ **Overview of Lunar calibration from space and ground**

- ✧ **CLARREO Pathfinder project overview:**
  Class D / Category 3 mission (high risk and low budget)
  MCR passed in August 2016
  On track to KDP-A in mid-January

- ✧ **CLARREO Pathfinder Inter-calibration requirements:**
  CERES and VIIRS sensors
  Enable inter-calibration of GEO and Land imagers, surface sites, Moon
  2D pointing operation on-orbit

- ✧ **HySICS Instrument:**
  Action: a meeting on the intercalibration operations after KDP-A
  Action: pre-work on the inter-calibration CONOPS
  Action: follow on the geo-location (software reuse, etc.)

- ✧ **CPF ATBD:**
  Input from entire team
  Review by broader community
  A lot of ideas how to do science – ATBD is the place to define it for the CPF
  Action: start ATBD draft after KDP-A

- ✧ **Data system:**
  Leverage MIIC (remote data access, predictors ? some basic analysis ?)
  CPF LaRC facility is in place (small cluster, storage, etc.)
  Actions: meeting on data processing after KDP-A
  Actions: meeting at GSFC on OPeNDAP server at LAADS
  Actions: meeting on data catalog (L0, L1, L4)

✧ **CERES:**
  PSF uncertainty ? Uniform scenes and larger spatial averaging;
  Sampling is limited;
  Radiometric scale and RSR correction is priority;
  Action: CERES support in Phase-A and PSF software.

✧ **VIIRS:**
  Scene ID – interpolation of cloud and aerosol parameters, additional noise;
  Absolute, RSR and RVS are priorities;
  Action: meeting at GSFC on L1/L2 NASA data products;
  Action: VIIRS support in place in Phase-A.

✧ **GEO imagers:**
  NOAA GOES-R, EUMETSAT (imager and GERB same ops) 1st priority;
  5 ABI-like GEO imager if possible;
  RSR SBAF corrections – can use CPF nadir data !
  Action: meet with.

✧ **Land imagers:**
  Surface sites (e.g. 2) 1st priority;
  Landsat/Sentinel direct inter-calibration for radiometric scale 2nd priority;
  Sentinel-2B would require pointing (+/- 30 degs).

✧ **Calibration of Moon:**
  CPF approach: studies and planning in Phase-A;
  Independent NIST effort from ground.

✧ **Inter-calibration approaches:**
   Collect ideas for studies and algorithms (e.g. RSR in orbit, etc.);
   Map out the ideas vs CPF schedule and budget.

✧ **NEST WORKSHOP:**
   About 6 months (KDP-A dependent);
   2-Day;
   More technical;
   Location – Boulder, CO ?