



**Better Calibration  
Better Data  
Better Decisions**

**FLARE**

**Vicarious Calibration Network**

[www.flare-network.com](http://www.flare-network.com)



**What is  
FLARE**

A global vicarious calibration network

On-demand signals and analysis for any imaging sensor in overpass



**What are  
FLARE's benefits**

Ensures high value radiometric calibration

Allows high frequency calibration

Provides a foundation for Analysis Ready Data (ARD)



**How to  
access FLARE**

Subscriber tasks the network to a satellite

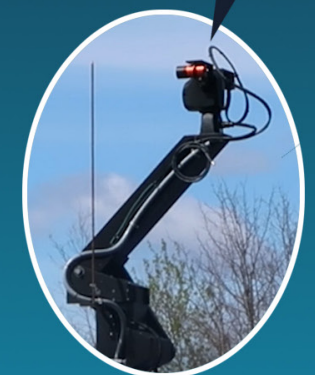
Return signal data and analysis via the cloud

## How does FLARE work



Satellite is calibrated with accurate radiometric references and minimal atmospheric effects

Metrology station measures solar radiance, background, and mirror reflectances



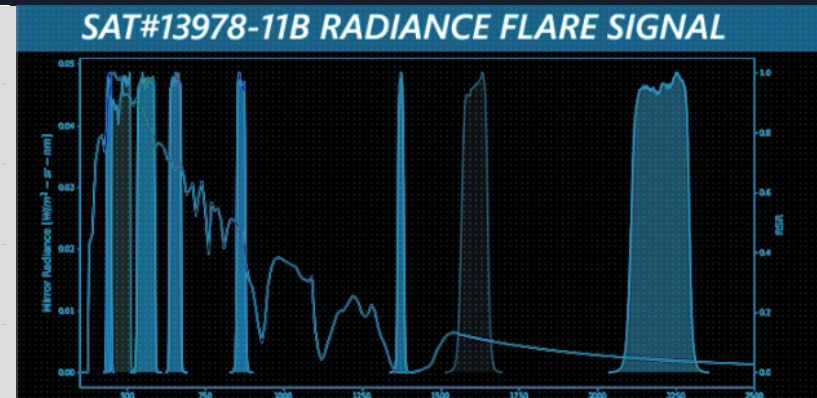
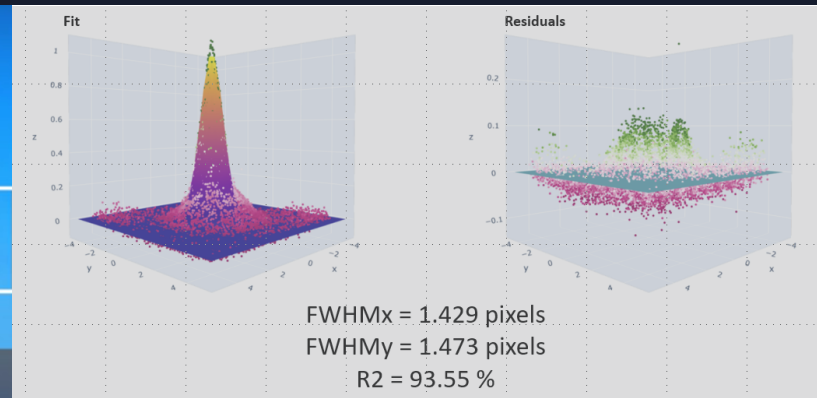
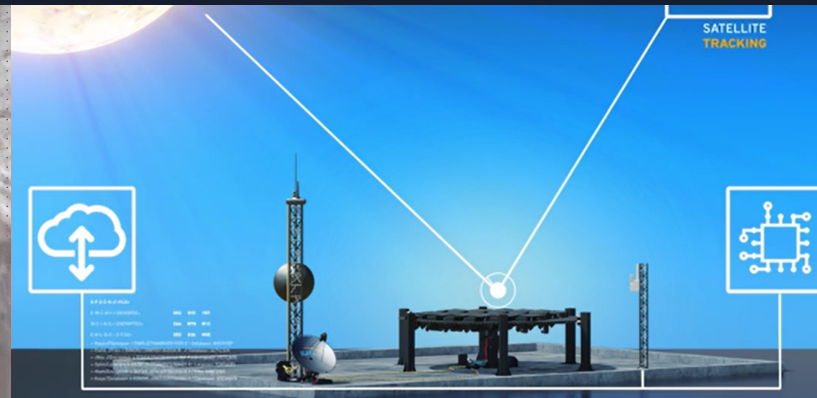
Mirrors direct sun to satellite



# Get the calibration you need when you need it

## SIGNAL PRODUCTS

## ANALYSIS PRODUCTS



### LOOK S

### LOOK R

### EVAL S

### EVAL R

The FLARE station acts as a point-source

Provides comprehensive ground-truth measurements to characterize imager performance in both the spatial and radiometric domains  
Includes LOOK S data package

Analysis of spatial signal data captured by the imager  
Combines LOOK S data stored in the FLARE database to provide comprehensive 2-D characterization of imager performance and resolving

Analysis of radiometric signal data captured by the imager  
Combines data associated with the LOOK stored in the FLARE database to provide per-band radiometric calibration coefficients

- ✓ Execution of a Tasked Look with FLARE as a point source
- ✓ Sub-pixel geolocation & time stamp
- ✓ Optical path sky image
- ✓ FLARE station health verification
- ✓ Signal enables imager PSF evaluation
- ✓ Look quality assessment

- ✓ LOOK S data package included
- ✓ At-sensor irradiance prediction (solar spectrum)
- ✓ Radiometric measurements
- ✓ Atmospheric transmission evaluation
- ✓ Look quality assessment
- ✓ Labsphere verified uncertainty statement

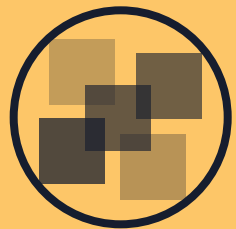
- ✓ Verification of image quality
- ✓ Framing of FLARE Region of Interest (ROI)
- ✓ PSF evaluation
- ✓ Validate FLARE location & sub-pixel geographical coordinates

- ✓ Verification of image quality
- ✓ Framing of FLARE Region of Interest (ROI)
- ✓ Calibration coefficient generation: Radiometric correction of DNs
  - Includes atmospheric correction
  - Uncertainty analysis and reports

## Today's Challenges



Sensor calibration requires costly assets and a highly specialized calibration team



Calibration is infrequent and uncertain, with low frequency of opportunities and inconsistent methods

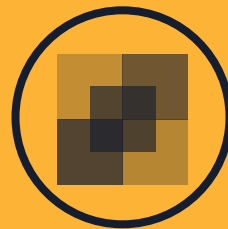


Current methods require interpretation and analysis, lack a shared standard and are dependent on models that are difficult to maintain over time

## Tomorrow's Solutions



The data you need, at the time you need it – filtering out bad data and providing it at the frequency customers need



Consistent calibration resulting in improved and increased radiometry and image quality



Harmonizing data across sensors, industry and technology through software



Control the cost, timing and value of calibration to your system

Learn More

[www.flare-network.com](http://www.flare-network.com)

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