SOLMIRUS

ATMOSPHERIC IMAGING SYSTEMS

ASIS-M1i · ASIS-M1v · ASIVA

MADE IN THE U.S.A.

ATMOSPHERIC IMAGING SYSTEMS

Solmirus Corporation designs and manufactures **advanced all-sky imaging instruments** used by scientific institutions, defense agencies, observatories, and research organizations worldwide.

Our systems combine **precision optics**, **infrared and visible sensors**, and **integrated analysis software** to continuously monitor sky conditions and atmospheric properties — day and night, autonomously.

Each instrument is engineered for unattended, continuous operation in demanding field environments, and is backed by direct engineering support and deep application expertise.

OUR INSTRUMENTS

ASIS-M1I

All Sky Imaging System — Infrared

A dedicated infrared all-sky imaging system designed for autonomous, continuous operation. The ASIS-M1i delivers **real-time sky cover, cloud detection, and precision spectral radiance measurements** for production deployments where a single-purpose, high-reliability instrument is required.

ASIS M1i

ASIS-M1V

All Sky Imaging System — Visible

The visible-wavelength counterpart to the ASIS-M1i, providing **high-resolution all-sky imagery** for **cloud detection, sky quality assessmen**t, and **atmospheric monitoring**. Designed to operate standalone or as part of a multi-sensor instrument cluster alongside the M1i.

ASIS-M1V

ASIVA

All Sky Infrared Visible Analyzer

Solmirus' most capable instrument. The ASIVA is a multi-purpose infrared and visible sky imaging platform designed for research applications requiring simultaneous dual-band analysis. **Configurable filter wheels, customizable data products**, and a **modular architecture** make the ASIVA the instrument of choice for demanding science and advanced application development.

ASIVA

For product information: info@solmirus.com · solmirus.com

DATA PRODUCTS & SOFTWARE

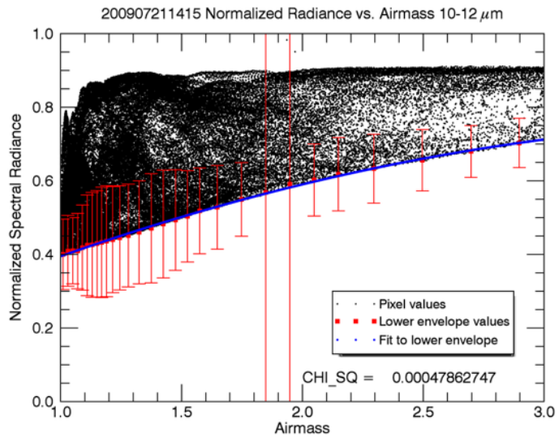
All Solmirus instruments ship with a real-time data analysis pipeline and web-based monitoring interface.
Standard data products include:

Infrared

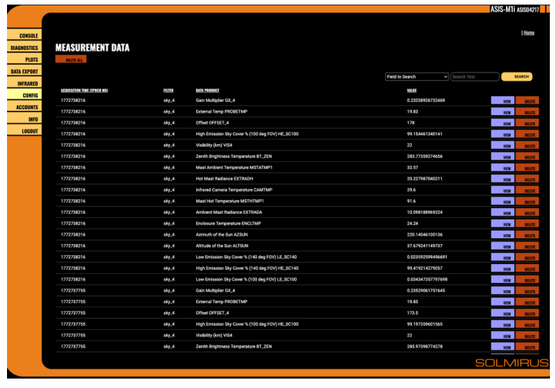
- Cloud / no-cloud reporting
- Fractional sky cover and cloud height determination
- Photometric quality assessment
- Sky opacity and transmission determination
- Visible / IR image correlation and integration
- Precipitable water vapor (PWV) determination
- Sky and cloud brightness temperature measurements
- All-sky (180° FOV) radiometric maps and analysis

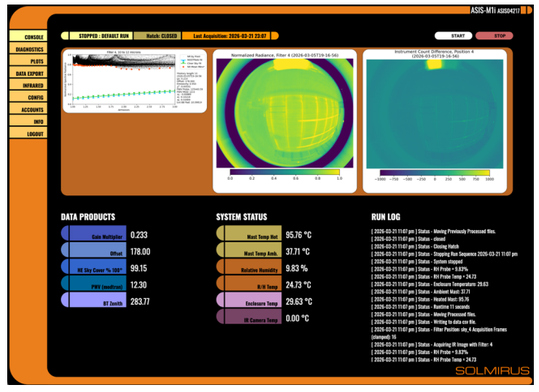
Visible

- Cloud / no-cloud reporting
- Sky Cover Percentage



Custom data products can be developed by the customer or by Solmirus to suit specific application requirements. Visible system data products available upon request.





APPLICATIONS

ATMOSPHERIC SCIENCE

Research-quality all-sky measurements of sky cover, spectral radiance, cloud temperature, cloud height, and optical depth.

OPTICAL COMMUNICATIONS (FSO) & DIRECTED ENERGY

Real-time atmospheric awareness for laser communication networks, high-energy laser systems, and ground-to-space optical links. Turbulence profiling, transmission monitoring, and site characterization for operational programs

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SOLAR POWER FORECASTING

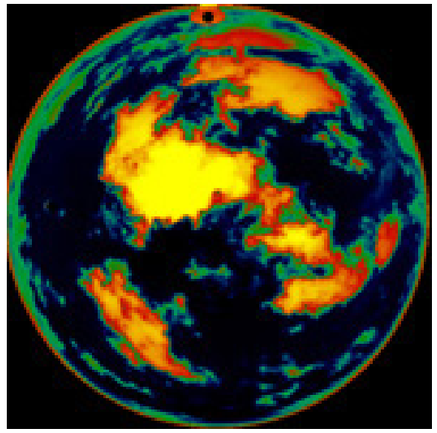
Continuous sky monitoring for site surveying, irradiance forecasting, cloud cover tracking, and solar resource assessment.

ASTRONOMY & OBSERVATORY OPERATIONS

Sky quality reporting, photometric condition monitoring, telescope scheduling automation, and observatory go/no-go decision support.

ADDITIONAL APPLICATIONS

Weather and meteorology stations · Cloud detection and sensing · Aviation



ALL SYSTEMS INCLUDE

Enclosure	Ruggedized, white powder-coated weatherproof stainless steel and aluminum
Thermal Management	Peltier heating/cooling subsystem with internal temperature sensors
Computer	Ruggedized industrial embedded control computer
Operating Temp	-50°C to +50°C
Power	120 / 230V AC
Connectivity	Ethernet (Cat 5/6 or Fiber Optic)
Data Pipeline	Real-time analysis pipeline with web-based monitoring interface
API	Comprehensive API for instrument control, data retrieval, and automation
Access	Accessible via Web UI, API, and Remote Desktop
Mounting	Stainless steel base with mounting holes

** Additional options and specifications vary by model.*

SOLMIRUS Miratlas

In partnership with Miratlas, Solmirus delivers the only complete, off-the-shelf solution for Atmospheric Characterization for Reliable Ground-to-Space Laser Communications.

Combining Solmirus' all-sky infrared and visible imaging instruments with Miratlas' atmospheric turbulence and propagation characterization technologies, our integrated platform gives optical communication programs the real-time environmental intelligence they need to operate with confidence.

miratlas.com

ABOUT SOLMIRUS

Since 2004, Solmirus has deployed all-sky infrared and visible imaging systems across a broad range of scientific, defense, and commercial applications.

Our instruments operate at research institutions, government agencies, and operational facilities worldwide — trusted by organizations including NASA JPL, NOAA, USAF, PNNL, IITM and organizations globally. Every deployment is backed by deep application expertise and direct engineering support.

CONTACT US

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