

PALLAS



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Decision support for space and ground systems operations using predictive diagnostics

Accelerated decision-making for mission-critical operations

PALLAS is an advanced decision-support system that enhances space and ground operations through predictive diagnostics, intelligent automation, and integrated situational awareness. By analyzing data from individual components to entire systems, PALLAS detects anomalies early, recommends optimal actions, and maintains uninterrupted performance across antennas, spacecraft, and communications networks.

For ground systems without telemetry data, PALLAS leverages a proprietary data-collection system and integrated sensors to monitor critical equipment health in real-time, feeding data to AI-driven analytics that predict failures before they happen.

Key features

- **“What if” scenario modeling** for rapid decision evaluation
- **Mission replay and pre-play** for training, planning, and assessment
- **Payload/sensor planning** and scheduling
- **Payload/sensor optimization** to maximize collection opportunities
- **Workflow previews** for tasking and collection sequences
- **System-failure prevention analysis** using predictive diagnostics

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Mission benefits



AI/ML-driven decision advantage

Advanced analytics enable precise, real-time decision-making for complex space and ground systems



Maximized operational availability

Predictive diagnostics prevent unplanned downtime and identify issues before they impact mission operations



Lower lifecycle and maintenance costs

Supports preventative maintenance instead of reactive “operate-to-failure” approaches



Reduced risk of damage and rework

Early detection and automated recommendations help avoid costly component failures and collateral effects

Vital situational awareness

PALLAS is built to convert high-velocity measurement data into early warnings, analytical clarity, and operator-ready actions. Continuous access to real-time insights helps operators determine the correct course of action with confidence and efficiency.

End-to-end mission insight

PALLAS unifies remote sensing capabilities, machine learning, analytical storage, interactive investigation, and configurable alerting and monitoring into a single decision-support pipeline. Advanced analytics enable predictive maintenance, optimal scheduling, and clear recovery options for mission or system downtime.

The system also presents clear action paths through internal simulations that incorporate remote sensing data, sensor tasking, and workflow previews. The result is not simply a system for observing activity, but a mission-support capability that helps personnel determine significance, prioritize response, and act from a defensible analytical basis.

Together, these capabilities provide decision-makers with the information they need to anticipate outcomes, evaluate alternatives, and guide operations toward the most effective plan of action.

