

AmLight: Supporting Major Facilities and Shared-CI Resource Providers in the U.S., Latin America and Africa
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■ **AmLight is a purpose-built international R&E network infrastructure**

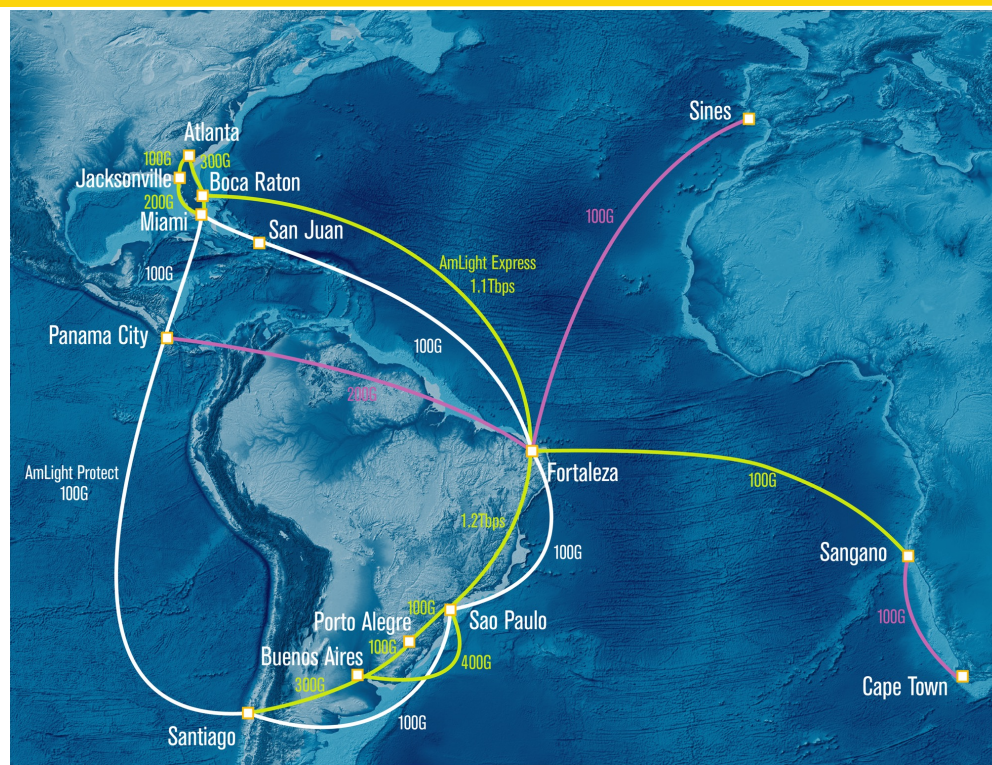
- Supports the Vera Rubin Observatory and U.S. astronomy projects, major facilities, scientific workflows, network testbeds, and the R&E communities in the U.S., Latin America, and Africa

■ **AmLight: The Next Frontier Towards Discovery in the Americas and Africa is a new 5-year project awarded in 2025**

- **Operate and evolve a production-grade international network**, connecting major facilities and research communities across the Americas and Africa
- **Deliver workflow-aware networking** that meets the performance and reliability needs of large-scale science

■ **Characteristics of the AmLight international R&E network**

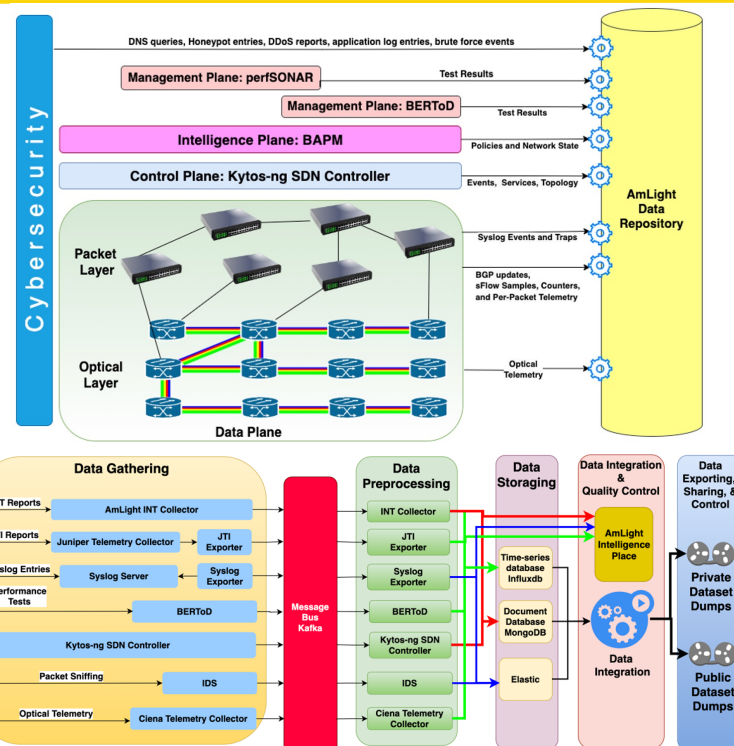
- Multi-terabit international connectivity across four continents
- Software-defined networking, enabling autonomic network operations
- Highly instrumented for deep visibility into the network
 - High-precision telemetry
 - Automated link testing and diagnostics instrumentation



This material is based upon work supported by the NSF under grant award# 2537489

AmLight as a Data Provider to support ML and AI communities

- AmLight is providing datasets to support ML and AI communities
 - The LLM-Driven Data Labeling for Training ML Models (LLMDaL) project, NSF OAC award# 2530965,
 - Fine tunes LLMs to convert AmLight network data into high-quality labeled cybersecurity ready-for-science datasets
 - If interested in labeled cybersecurity data, please response to the [LLMDaL questionnaire](#)
- A **Data Production Pipeline** is being built to transform raw AmLight network data into FAIR, ready-for-science datasets for ML and AI research communities
- Datasets will be shared by leveraging collaborative projects
 - [Open Science Data Federation \(OSDF\)](#) for broad distribution
 - [COMUNDA portal](#) for access to datasets
 - [FIU's Research Dataverse Repository and Smart Data Pipeline of the EnviStor project](#) (NSF award# 2322308) for FAIR compliance



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