

General Coordinates Network (GCN): NASA's Next Generation Time-Domain and Multimessenger Astronomy Alert System

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The Gamma-ray Coordinates Network (GCN) is a public collaboration platform run by NASA for the astronomy research community to share alerts and rapid communications about high-energy, multimessenger, and transient phenomena. Over the past 30 years, GCN has helped enable many seminal advances by disseminating observations, quantitative near-term predictions, requests for follow-up observations, and observing plans. GCN distributes alerts between space- and ground-based observatories, physics experiments, and thousands of astronomers around the world. With new transient instruments from across the electromagnetic spectrum and multimessenger facilities, this coordination effort is more important and complex than ever. We introduce the General Coordinates Network, the modern evolution of GCN built on modern, open-source, reliable, and secure alert distribution technologies, and deployed in the cloud. The new GCN is based on Apache Kafka, the same alert streaming technology that has been selected by the Vera C. Rubin observatory. In this talk, we will present the status and design of the new GCN, a tutorial on how to stream alerts, and a vision of its growth as a community resource in the future.

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Classification de Session: Conference day