

# A broker proposal for LSST-France

The broker initiative: Emille Ishida (LPC), Julien Peloton (LAL), and many other contributors!

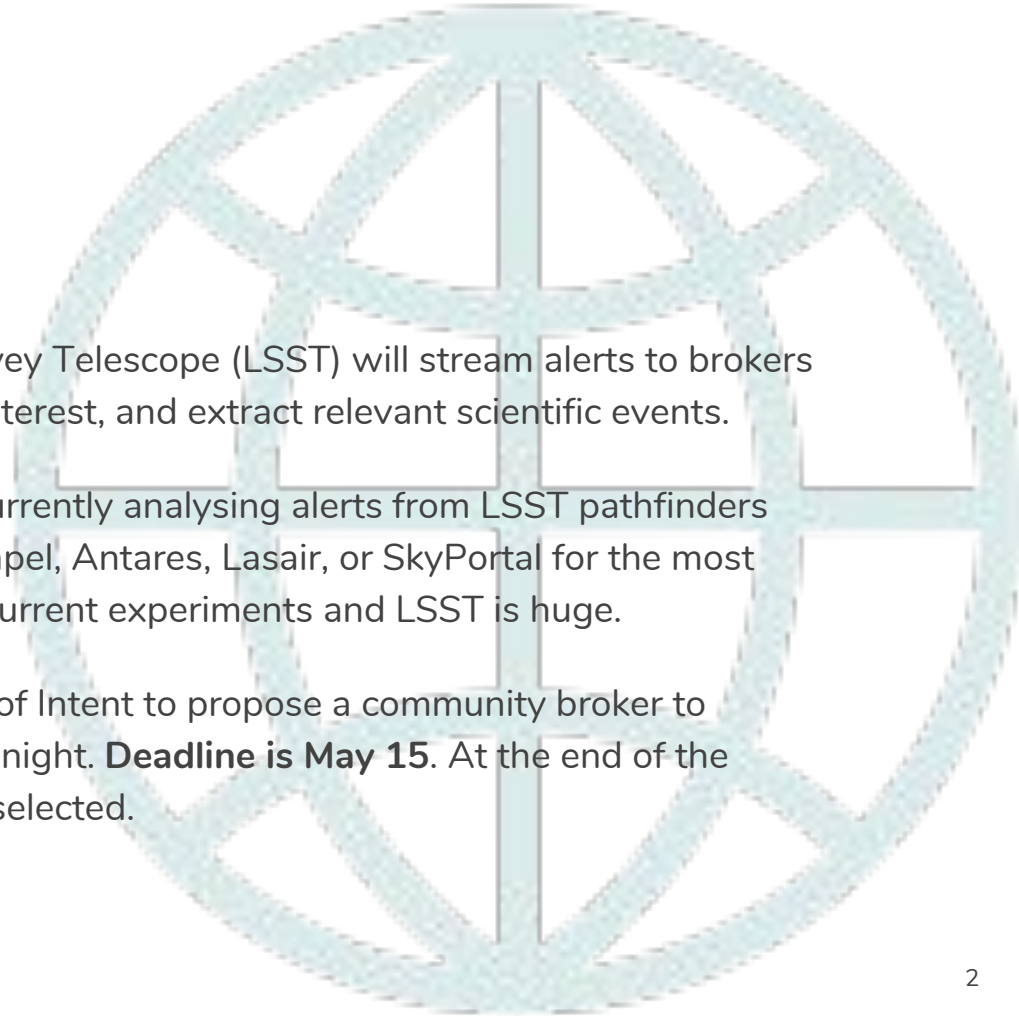


# Overview

Every night, the Large Synoptic Survey Telescope (LSST) will stream alerts to brokers to refine the selection of events of interest, and extract relevant scientific events.

Among several, a few brokers are currently analysing alerts from LSST pathfinders (ZTF, HiPS, ...), such as ALeRCE, Ampel, Antares, Lasair, or SkyPortal for the most recent ones. But the step between current experiments and LSST is huge.

LSST DM has made a call for Letter of Intent to propose a community broker to analyse LSST streamed alerts every night. **Deadline is May 15.** At the end of the process, Only a few brokers will be selected.





# Understanding the LSST challenges

- 01 Working efficiently at scale: large stream, data persistence, resiliency, metrics, and auto-remediation.
- 02 Multi-modals analytics capability (streaming & batch) to deal with the complexity of the data, and rarity of interesting events.
- 03 Multi-tenant infrastructure for real-time and post-processing, allowing for as much use cases and users as possible.

**3.5M**

Observations for 10 years

**10K**

Alerts per observation

**3PB**

Alert volume after 10 years



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Detailed proposal:

[https://docs.google.com/document/d/1\\_S7Sv5mLWarwliKs7X1WeECi8PwMM13nedO1HA6A16E/edit#](https://docs.google.com/document/d/1_S7Sv5mLWarwliKs7X1WeECi8PwMM13nedO1HA6A16E/edit#)



## What is next?

**You are welcome to join** - target audiences are scientists & engineers

Discussions among the LSST-France community

Doodle for planning the next discussion:

<https://doodle.com/poll/huynv5qa6fd3gctx>