

# Skyportal / ICARE

GRANDMA's Astronomical Data Management Platform



# Why ICARE ?

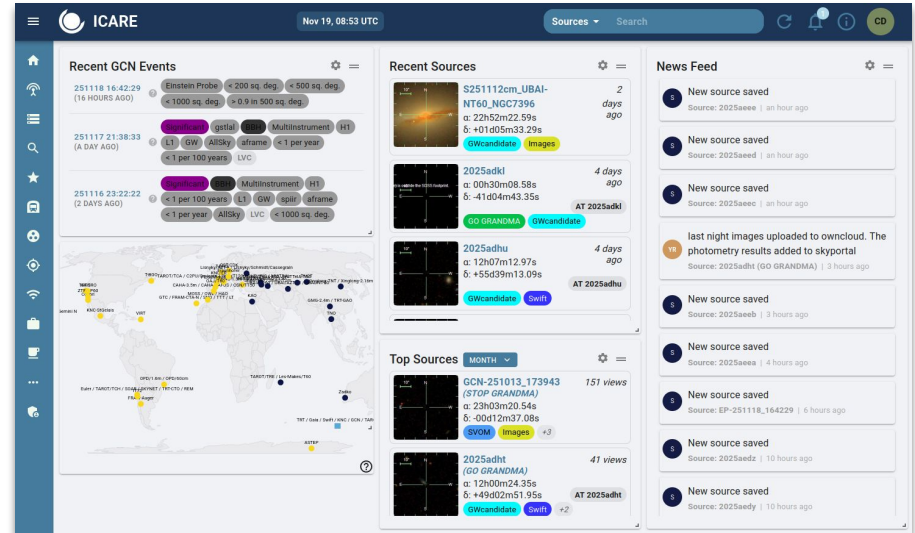
The challenge:

- Millions of alerts per night
- Rare multi-messenger events requiring rapid response
- Coordination of 30+ GRANDMA telescopes worldwide
- Need for real-time collaboration

The solution: ICARE

(<https://skyportal-icare.ijclab.in2p3.fr/>)

- SkyPortal customized for GRANDMA's needs
- Single platform: alerts → analysis → follow up



The screenshot displays the ICARE web interface. At the top, it shows the date and time as 'Nov 19, 08:53 UTC'. The interface is divided into several sections:

- Recent GCN Events:** Lists three events with their timestamps and associated instruments. For example, the first event at 251118 16:42:29 (16 HOURS AGO) involves Einstein Probe, with parameters like <math>< 200 \text{ sq. deg.}</math> and <math>< 500 \text{ sq. deg.}</math>. It also lists instruments like L1, GW, Afsky, and LVC.
- Recent Sources:** Shows a list of astronomical sources with their names (e.g., S251112cm\_UBAL-NT60\_NGC7396), coordinates, and associated instruments like GWcandidate and Images.
- Top Sources:** Lists sources with their view counts. For instance, GCN-251013\_173943 (STOP GRANDMA) has 151 views, and 2025adht (GO GRANDMA) has 41 views.
- News Feed:** A vertical list of notifications, including 'New source saved' and 'last night images uploaded to owcloud. The photometry results added to skyportal'.

A world map is visible in the background, showing the locations of various telescopes and observatories.

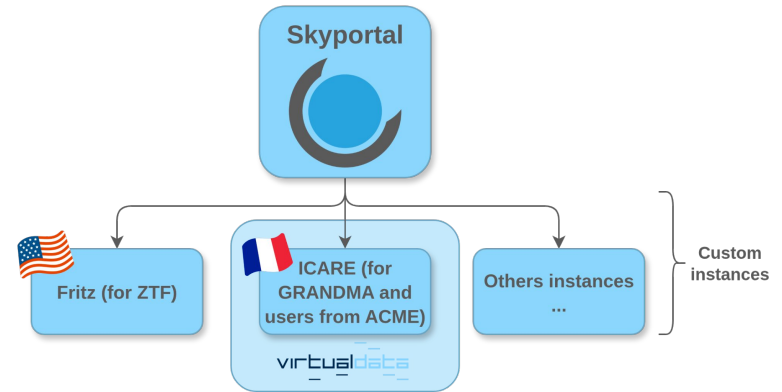
# What are SkyPortal and ICARE?

**Skyportal:** Open-source platform originally developed for ZTF which allows:

- Ingestion of millions of alerts
- Collaborative classification and annotation
- Follow-up observation coordination
- TNS and GCN integration

**ICARE:** instance of SkyPortal customized for GRANDMA

- IAM authentication
  - **Slack** for GRANDMA people
  - **ORCID** or **Edugain** for people inside/outside of GRANDMA
- GRANDMA telescopes and time allocations already set in ICARE
- Extensions like **photometry validation**



# Development Team & Coordination

GRANDMA Coordinator: Camille Douzet

- Maintains ICARE production instance
- Develops GRANDMA-specific features
- Manages user accounts & permissions
- Liaison to SkyPortal team

Core SkyPortal Team (International, ~8 developers)

- USA: UC Berkeley, Caltech, U. Minnesota
- France: IJCLAB
- Coordinate multi-collaboration features
- Weekly telecon: Thursday 6:30 PM CET

ICARE is updated each **Wednesday**, release notes are posted in Slack #icare-skyportal

# User rights

- Overview of Skyportal roles:

Role	What you can do
View Only	View sources and data
Full User	Comment, classify, upload data, request observations
Group Admin	Everything above + manage team, shifts, sources
Super Admin	Full system access

- Common needs:

Need	What you can do
Organize shifts	Ask for <i>Manage Shifts</i> ACL
Validate photometry points	Ask for <i>Manage Sources</i> ACL
Modify imported photometry points	Ask for <i>Manage photometry</i> ACL

You can see your ACL on your profile

# Main tasks

Task	Status
Feature: adding source tags	On-going: Source tags are available, need to be associated to groups (for data privacy)
Enhancement: Refactor photometry points management	On-going: Manage Photometry ACL has been created such as extinction computation
Enhancement: Data sharing between Skyportal instances	On-going: External service in progress
Enhancement: Change ICARE update procedure to Docker container	PoC on-going
Enhancement: GCN crossmatch automatization (synchronize localization, t0, add a label with the corresponding instrument, add uncertainties...)	Todo

*This list is not exhaustive, the full list is on the wiki. Feedback helps to set development priorities*

# Tips

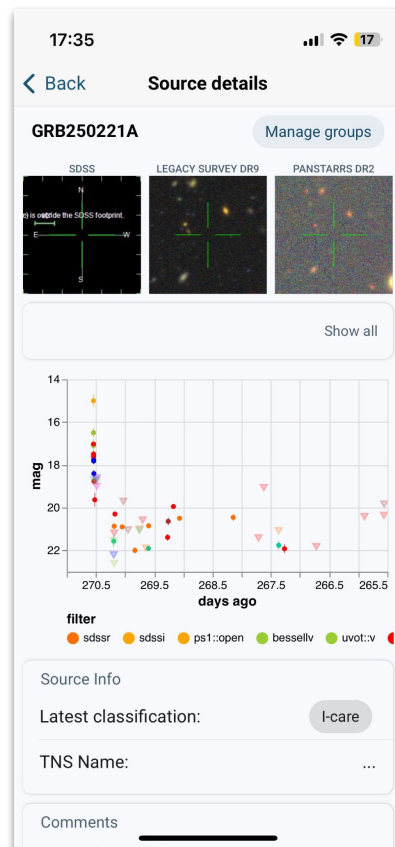
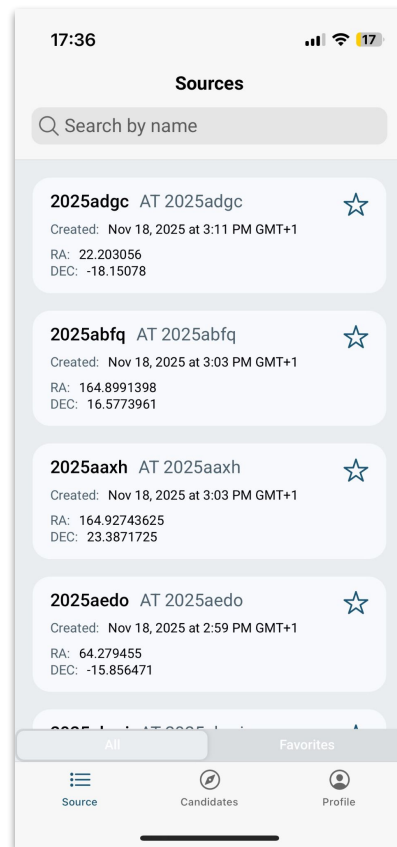
- **Enable email or Slack notifications** when you are mentioned in a comment on your profile.
- Request access to a group in **Skyportal Groups** page.



If you see this error after an update, try **Ctrl + Shift + R** to hard refresh the page.  
=> If the error persists, send a message to Skyportal developers

# Skyportal mobile application

- Developed by Antoine Le Calloch
- You can request access to Antoine by Slack or email : [alecallo@umn.edu](mailto:alecallo@umn.edu)
- Main features:
  - Checking sources
  - Candidates scanning
  - Request follow up observations





# How to ask a new feature or report a bug ?

- Create an issue on Github describing your need or the bug:
  - Skyportal (<https://github.com/skyportal/skyportal>)
  - ICARE (<https://github.com/grandma-collaboration/icare>)

OR

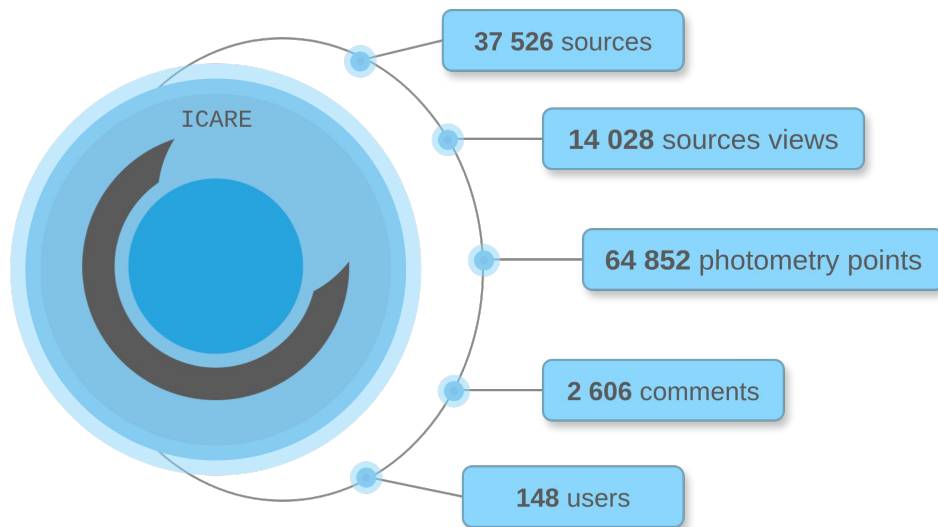
- Send a message :
  - On Slack, channel **#icare-skyportal**
  - On Slack to Camille
  - By email to [camille.douzet@ijclab.in2p3.fr](mailto:camille.douzet@ijclab.in2p3.fr)

List of defined needs: [SP and Stdpipe implementation.docx - Google Docs](#)

*Do not hesitate to ask questions or share feedback !*

# Next steps and ICARE numbers

- Allow sharing between different instances of Skyportal
- Prepare ICARE for LSST: brokers integration
- GCN crossmatch automatization



# Available resources

- GRANDMA wiki dedicated to Skyportal : <https://forge.in2p3.fr/projects/grandma/wiki/>
- GitHub repositories
  - Skyportal: <https://github.com/skyportal/skyportal>
  - ICARE: <https://github.com/grandma-collaboration/icare>
- Documentation
  - Skyportal: <https://skyportal.io/>
  - ICARE: <https://grandma-skyportal.readthedocs.io/>