

Astro-COLIBRI



Discussion + Summary of the workshop so far

- Multi-messenger and time domain astrophysics as a lively field
- First breakthroughs followed by some frustrations => need for new approaches

- Recognizing software + engineering
 - Reference used software + platform
 - Attract and keep developers + platforms
- Where to store alerts/data (VOEvents)?
- Keep and increase interoperability
- Evolution of circulars
- Input from theory (predictions instead of only postdictions)
- ...

Sciathon: organisation + topics

- The first Sciathon in Astrophysics is an opportunity to develop ideas to answer important questions concerning the next steps in real-time multimessenger astrophysics
- Young (and motivated senior) scientists will work together within a period of 48 hours during the last phase of the workshop implementing ideas developed during the workshop
- 3 categories
 - New functions for Astro-COLIBRI (e.g. prototyping a new functionality, outline of graphical interface, etc.)
 - New use-cases and science for Astro-COLIBRI (e.g. outline deployments, new science cases, etc.)
 - Explaining multi-messenger transients (e.g. graphics, posters, Gamma-Catcher extensions, YouTube, etc.)

Possible topic

Social media

- set up an account and outline content for Instagram
- produce a YouTube video about Astro-COLIBRI or the workshop
- ...

Participants

1. Monica
2. Halim

Astrocolibri on Instagram

Possible topic

Display selected optical transients that has tag [exploded in nearby galaxy | associated with neutrino/GW | match theoretical model X]

- Candidate transfer / stream
- Subset selection and display ... (tag)

<https://docs.google.com/presentation/d/1kno-Xz1NMKmJTihd1BvqsDTGI2AmUE3aUaaoySzT3M/edit?usp=sharing>

Participants

1. Jowita
2. Jakob
3. Sven

location: NB 7/67

Possible topic 7

Improved display of historic alerts that belong together

- We overwrite alerts with the newest alerts and merge information
- Visualize a possible implementation in the front-end (drawing, graphics)

Participants

1. Erik (with 8)
2. Jurek (BSc)
3. Iryna
4. Massimiliano
5. Ilaria

location: HIB entrance

See [presentation we put together on this topic...](#)

Possible topic

Add for Swift GRBs automatic plot for XRT afterglow light curve

- Automatic update
- Add some context GRBs for lightcurve

Link to slides:

https://docs.google.com/presentation/d/16oAW4KRzu1ewXIC5Z1gZ0oEM4Hw8_urThvUG7HA0fEw/edit?usp=sharing

Participants

1. Ruslan
2. Alessio
3. Mathieu

location: NB 7/67

Coffee break

Possible topic

Assessment of latest ATels

- Currently searching through NASA ADS using their API
 - contains only ATels that are older than 1 week
- Discuss a framework for accessing latest ATels
- Develop a small python-based prototype

Participants

1. Atilla Kaan Alkan
2. Athy Aravinthan
3. Giacomo Sommani

Office: Athy's office NB7/71

Possible topic 8

provide scheduling of follow-up observations

- GWs
 - tiling of GW maps (which algorithms? libraries?)
 - selection of counterparts
- Neutrinos
 - selection of counterparts
- Multi-observatory scheduling?
- How to provide the information? New visualisation? API endpoint?

Participants

1. Monica (GW)
2. Halim (GW)
3. Damien Turpin

location: HIB entrance

Possible topic 2

Improvement to the observability assessment

- new visualisation
- use of external libraries
- need for interactivity? in which form?

Ideas for interactivity:

- change site from within the source details panel
- add a switch to visualize zenith angle instead of altitude

Things to add:

phase and avg distance from moon

Participants

1. Alessio

Possible topic 1

- watchlist of favourite sources (TXS...) for which you will get dedicated alerts of events whose uncertainty region contains the watchlist's sources. [We could have channels for some interesting sources, but need dedicated messaging to individual users if we want unlimited flexibility in choosing these sources]
- definition of monitoring source catalogs (e.g. blazar selections, TDEs, etc.)

Participants

1. Iryna?

Possible topic 5

improve links (both directions) with the amateur community

- how to alert the community? e.g. provide scheduling for the next night
- how to include their feedback/observations?
- additional links to amateur resources? e.g. integration of iTelescope.org
- ...

Participants

1.

Possible topic 6

Improve the VO compatibility

- API endpoints VO compatible
 - VO compatible cone search
 - VO compatible visibility assessment
 - ...
- integration of other VO services?

Participants

1.

Possible topic 9

Science- vs. outreach mode in app

Participants

- 1.

Possible topic 11

...

Participants

- 1.