



An open **catalog** for  
**gamma-ray** astronomy

# status & plans

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# Overview

- Status
  - What do we have in gamma-cat today?  
(and in Gammapy and [gamma-sky.net](#) as it relates to gamma-cat)
- Vision / plan for gamma-cat
- Work required to get there
- Discussion
  - What are your thoughts / vision for gamma-cat?  
What's on these slides is just as basis for discussion today.
  - Let's make a plan and then implement it in the coming months!

# Status

- Didn't have time to make slides. Sorry!
- Let's look at what we have directly:
  - <https://github.com/gammapy/gamma-cat/>
  - <https://gamma-cat.readthedocs.io/>
  - <http://gamma-astro-data-formats.readthedocs.io/>

# Vision

- gamma-cat is \*the\* open data collection and source catalog for VHE gamma-ray astronomy, used by many gamma-ray astronomers regularly.
- At least for now: we don't add Fermi-LAT or HAWC (little extra value over the existing catalogs), focus on HESS & MAGIC & VERITAS (very valuable)
- Expose all available data via [gamma-cat.readthedocs.io](https://gamma-cat.readthedocs.io), content and formats are well-documented. Two products: “data collection” and “source catalog”.

# Vision

- Many data formats we use are documented at [gamma-astro-data-formats](#) (we add e.g. lightcurves). We encourage HESS, MAGIC, VERITAS, CTA to use those formats for future publications directly.
- We implement `gammapy.catalog.gammacat` as a convenience. But `gamma-cat` stands on its own, data access just requires a FITS / YAML / ECSV reader.
- Some data exposed on [gamma-sky.net](#), but `gamma-cat` should stand on it's own. We invest our time now in [gamma-cat.readthedocs.io](#), not in [gamma-sky.net](#), that project might die.
- Anyone can contribute via <https://github.com/gammapy/gamma-cat/>. Some people will, but we shouldn't expect a lot. Try to grow a small team of people that add or review new data, make the `gamma-cat` project sustainable (from what I can tell, all similar smaller efforts in the past 10 years died).
- Write a paper in a refereed astro journal to get credit and advertise the project (like <https://sne.space/>)

# Work

- A lot of Python scripting in the gamma-cat and Gammapy repos (~ 1 month full-time?)
  - Re-write scripts to work via index files in input and output folder; generate cat from data collection; expose all data and summary views via Python / Sphinx static site generator
- Data format definitions in the gamma-astro-data-format repo and the gamma-cat docs; some re-formatting of files we already have in gamma-cat (~ 1 week full-time?)
  - Add light-curves; YAML model serialisation would be larger effort, but is something I want to implement in Gammapy now anyways.
- Write good docs for users and contributors (~ 1 week full-time?)

*Ready for gamma-cat 1.0 release and advertising it widely to users?*

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*IMO lower priority, because not required for gamma-cat to be really useful*

- More data entry for HESS, VERITAS, MAGIC (each ~ 1 month full-time?)
- Write a paper about gamma-cat (~ 1 month full-time?)

# Discussion

- What are your thoughts / vision for gamma-cat?  
*(What's on these slides is just as basis this discussion.)*
- Do we have the manpower / want to invest the time?
- Can we define some goals / timescale for a “gamma-cat 1.0” release where we advertise gamma-cat widely?
- Who does what? Who reviews which pull requests?
- Monthly gamma-cat calls useful to help make progress?  
Or Github / Slack sufficient, no regular calls needed?