Open high-level data formats and software for gamma-ray astronomy

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Abstract. In gamma-ray astronomy, a variety of data formats and proprietary software exist, often developed for one specific mission or experiment. Especially for ground-based imaging atmospheric Cherenkov telescopes (IACTs), data and software have been so far mostly private to the collaborations operating the telescopes. However, there is a general movement in science towards open data and software and the next big IACT array, the Cherenkov Telescope Array (CTA), will be operated as an open observatory.

We have created a Github organisation at `https://github.com/open-gamma-ray-astro` where we are developing high-level data format specifications. A public mailing list was set up at `https://lists.nasa.gov/mailman/listinfo/open-gamma-ray-astro` and a first face-to-face meeting on the IACT high-level data model and formats took place in April 2016 in Meudon (France). The hope is that this open multi-mission effort will help to accelerate the development of open data formats and open-source software for gamma-ray astronomy, leading to synergies in the development of analysis codes and eventually better scientific results (reproducible, multi-mission). This poster will summarize what we have done so far, and has the goal to solicit comments and future contributions from the gamma-ray astronomy community.

Introduction

TODO: write introduction.

Example references: [1] and [2].

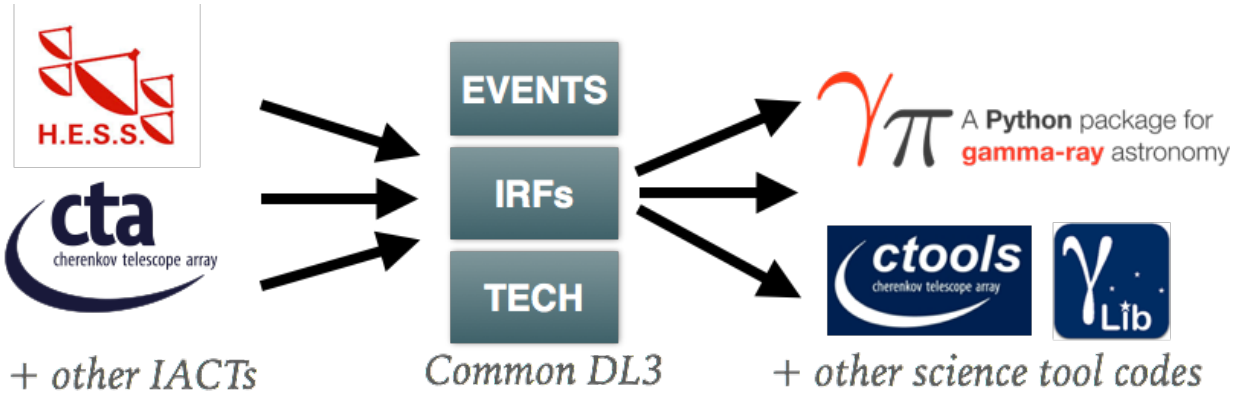

FIGURE 1. Example Figure.

ACKNOWLEDGMENTS

The reference section will follow the “Acknowledgment” section. References should be numbered using Arabic numerals followed by a period (.) as shown below, and should follow the format in the below examples.

REFERENCES

[1] A. Donath, C. Deil, M. P. Arribas, J. King, E. Owen, R. Terrier, I. Reichardt, J. Harris, R. Bühler, and S. Klepser, ArXiv e-prints September (2015), arXiv:1509.07408 [astro-ph.IM] .

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