gammapy

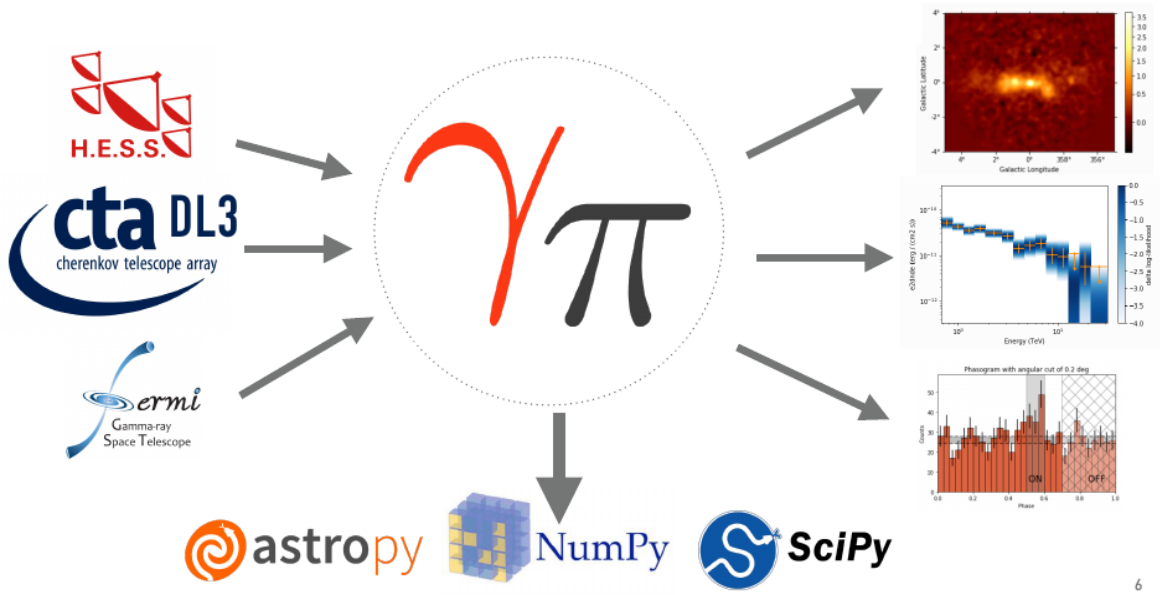
An open-source **Python** package for gamma-ray astronomy

General user call – October 26th, 2020

B. Khélifi, on behalf of the gammapy Coordination Committee

A Science Tools package

- Python package aiming to produce HE/VHE astrophysical products

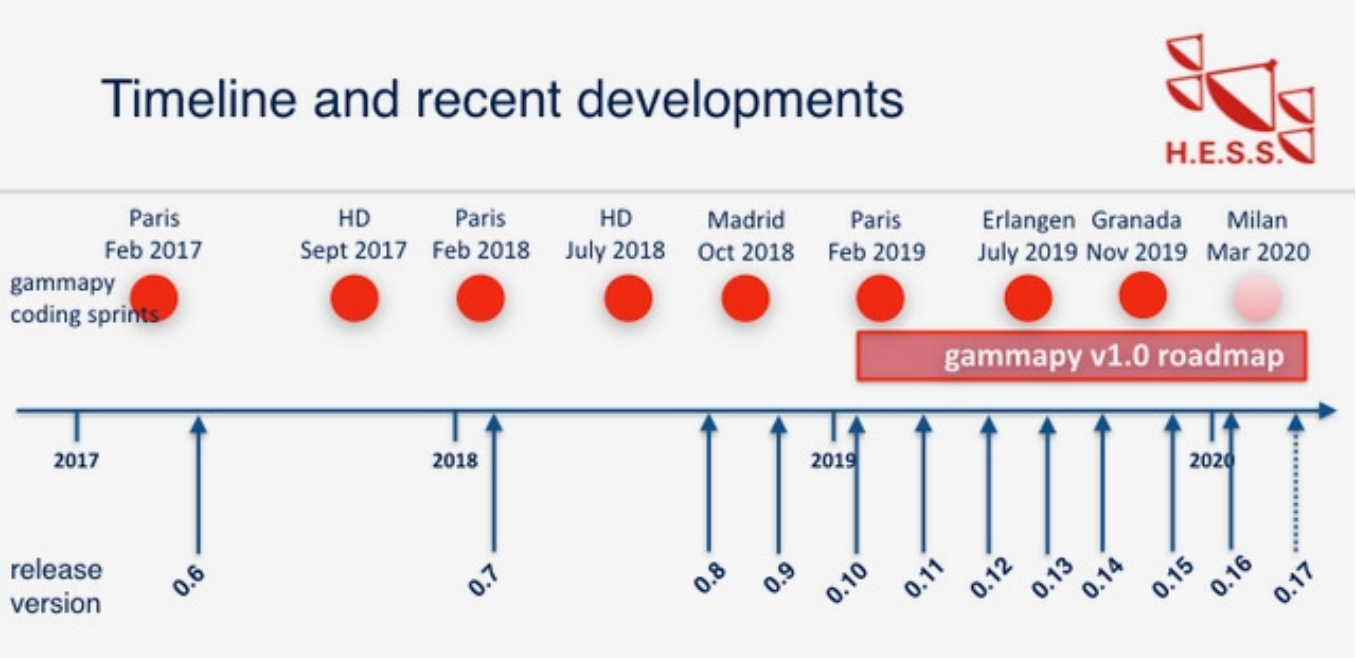


https://gammapy.org

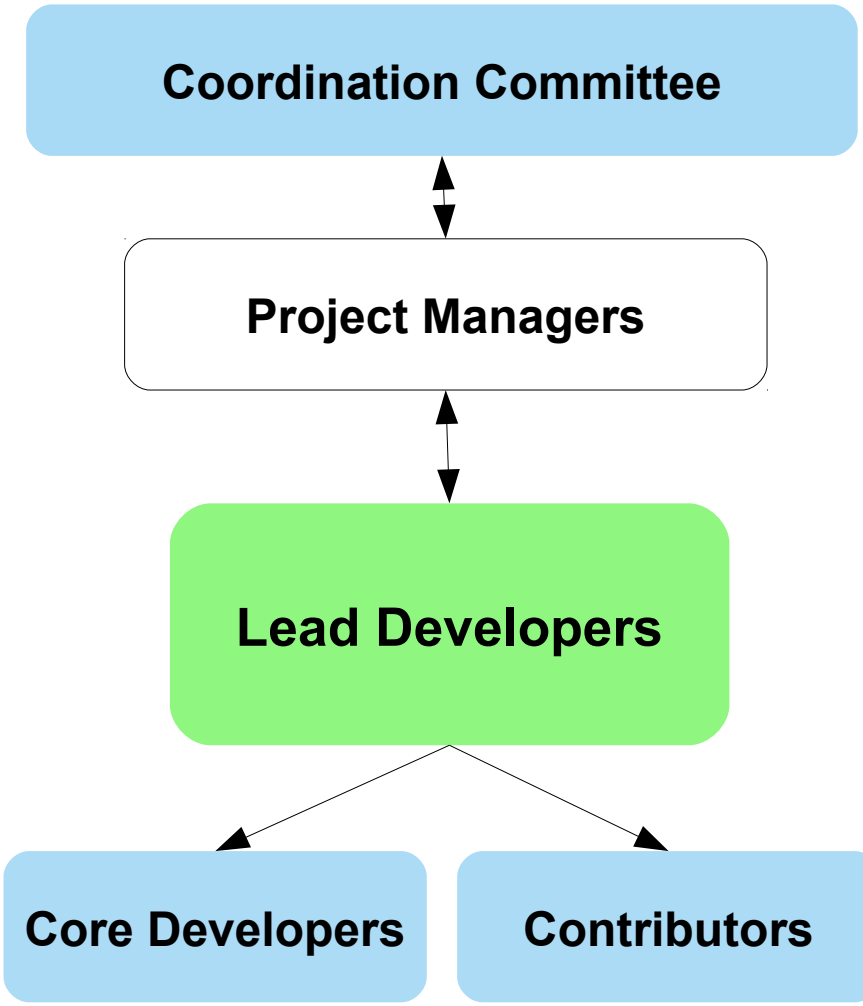
• gammapy is proposed to the CTA Observatory to be its official Science Tools package

The genesis

- From H.E.S.S. to MWL/MM data analysis



Project organization




B. Khelifi


C. van Eldik

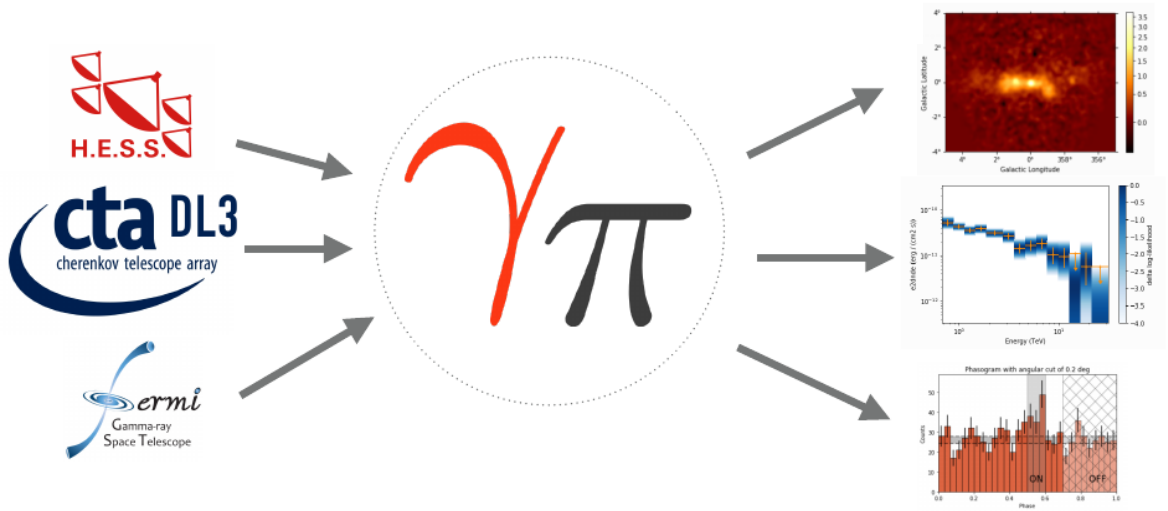

A. Donath


R. Terrier

Towards MWL/MM joint analysis

- Joint analysis of *reduced high-level data* allow better statistical constraints, and the treatment of (relative) systematics uncertainties is possible
  - No more use of 'flux points', computed by using pre-defined spectral shape
  - Use of the spatial information from different instruments
  - Data without a significant detection are used and bring statistical constraints
- The software design of gammapy permits joint analysis,
  ie multi-wavelength and multi-messenger astronomy
  - First tests already made with
    Fermi-LAT/HESS/MAGIC/VERITAS/FACT/, HESS/HAWC,
    HESS/Chandra, CTA/Km3Net
- The Coordination Committee wishes to open the project to the whole HE/ VHE community

Meeting agenda



Gammapy - a Python package for (not-only) γ-ray astronomy

A. Donath (MPIK, Heidelberg)

Input data formats for gammapy: DL3 and beyond

R. Terrier (APC, Paris)

Joint analysis of the Crab nebula

C. Nigro (IFAE, Barcelona)