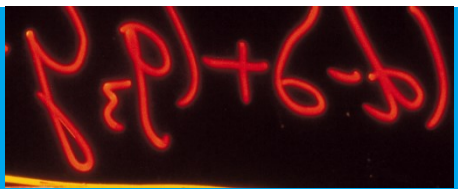
DESY

Particle and Astroparticle Physics Colloquium

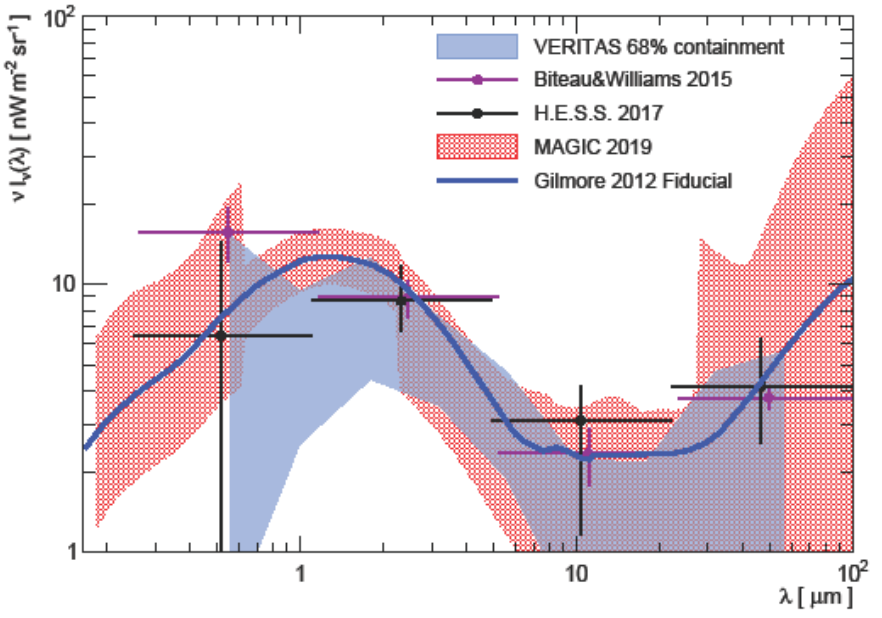


Blazars, the extragalactic background light, and 10+ years of Cherenkov Telescope observations.

Tuesday, 25 February, 2020, DESY Auditorium, 16:45 h

Elisa Pueschel (DESY)

Very-high-energy gamma-ray astronomy is typically concerned with standard astrophysical processes, such as particle acceleration and emission mechanisms in gamma-ray sources. Extreme extragalactic accelerators such as blazars, which launch relativistic jets aligned with our line of sight, are a key target for gamma-ray astronomy. However, blazars observations can also be used to study the low-energy photon fields encountered by the gamma rays as they travel cosmological distances to reach the observer. One of these fields, the extragalactic background light (EBL), encodes information about the early universe and its subsequent evolution. I will present the latest results from VERITAS, a ground-based imaging atmospheric-Cherenkov telescope array sensitive to gamma rays above 85 GeV, on the properties of the EBL. I will also discuss what we can learn about blazars based on the 10+ year dataset used for the EBL measurement, in terms of their spectral behavior and long-term flux variability, and close with an overview of future prospects.



- **Coffee, tea and cookies will be served at 16:30h**
- **After the colloquium there is a chance for private discussions with the speaker over drinks and pretzels**