

# Ultra-High-Energy Cosmic Rays propagation in extragalactic space from a single source

Investigating the ultra-high-energy cosmic rays (UHECRs) is crucial to understand the most energetic phenomena in the Universe. The main focus of this project is to study the propagation of cosmic rays at energy about  $10^{18}$  eV. You will learn to calculate cosmic ray flux at Earth from a single source for different parameters. The results will be compared to the measurement of energy spectrum and the composition from the Pierre Auger Observatory.

## Field

C3: Theory of Astroparticle Physics

## DESY Place

Zeuthen

## DESY Division

AP

## DESY Group

THAT

## Special Qualifications:

Basic knowledge of python. Also familiarity with high-energy astrophysics

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