Cosmic Ray Anisotropy Workshop CRA2019



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Observation and Interpretation of Small-Scale Cosmic-Ray Anisotropies

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The arrival directions of Galactic cosmic rays are highly isotropic. This is expected from the presence of turbulent magnetic fields in our Galactic environment that repeatedly scatter charged particles during propagation. However, various cosmic ray observatories have identified weak anisotropies of various angular sizes and with relative intensities of up to a level of 1 part in 1,000. Whereas large-scale anisotropies are generally predicted by standard diffusion models, the appearance of small-scale anisotropies down to an angular size of 10 degrees is surprising. In this talk I will summarise the current experimental status of Galactic cosmic ray anisotropies and review theoretical ideas for the origin of small-scale anisotropies.

Primary author: AHLERS, Markus (Niels Bohr Institute)

Presenter: AHLERS, Markus (Niels Bohr Institute)