



Contribution ID: 839

Type: **Poster**

## Scrutinizing the impact of the solar modulation on antiproton excess

Antiprotons serve as a key target for indirect dark matter detection. Solar modulation significantly influences the search for dark matter through antiproton detection. As antiproton particles penetrate the solar system, they are affected by the heliospheric magnetic field and solar wind, especially those with rigidities below 40 GV. Recently, AMS-02 published results from an 11-year solar cycle study on antiprotons. In this analysis, we examine three methods for solving the Parker equation to systematically investigate the observed excess of antiprotons reported by AMS-02.

### Collaboration(s)

**Author:** DUAN, Kai-Kai

**Co-authors:** Mr WANG, Xiao; Mr LI, Wen-Hao; Dr XU, Zhi-Hui (Institute of Modern Physics, Chinese Academy of Sciences); TSAI, Yue-Lin Sming (Purple Mountain Observatory); FAN, Yi-Zhong

**Presenter:** DUAN, Kai-Kai

**Session Classification:** PO-Remote

**Track Classification:** Dark-Matter Physics