

VERITAS follow-up observation of the blazar TXS 0506+056



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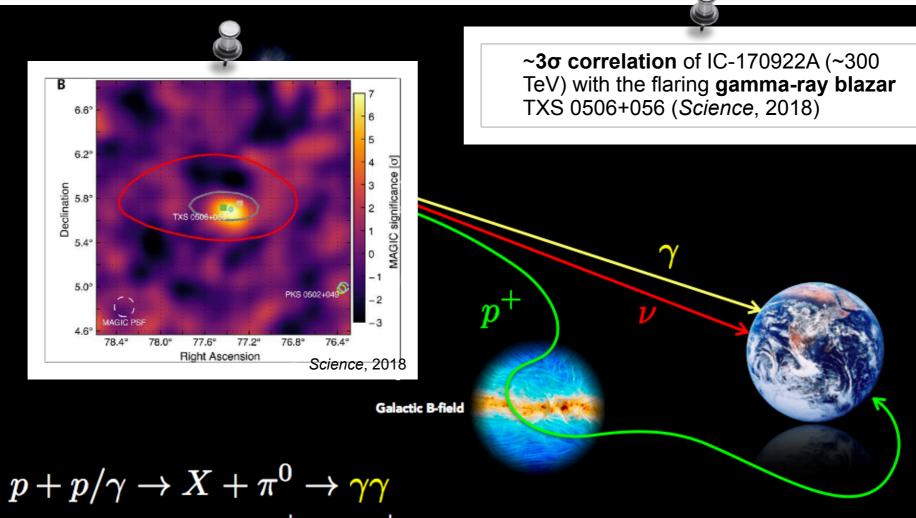
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Motivation



 $\begin{array}{c} p+p/\gamma \rightarrow X + \pi^{\circ} \rightarrow \gamma\gamma \\ \rightarrow X + \pi^{+} \rightarrow \mu^{+} + \nu_{\mu} \\ \mu^{+} \rightarrow e^{+} + \nu_{e} + \overline{\nu}_{\mu} \end{array} \text{ (oscillates to ~1:1:1)} \end{array}$



VERITAS follow-up observation and an associated multiwavelength campaign of the potential neutrino blazar TXS 0506+056, collected between October 10, 2018 to March 1, 2021.

Conclusions

- TXS 0506+056 is in a quiet state from year 2018 to 2021 and shows a consistent flux level compare to previous VERITAS observations collected in 2017-2018.
- A X-ray flare (higher than average flux by a factor of ~2) was observed on MJD 58902.
- Clear variabilities were observed in optical, X-ray and high energy gamma-ray bands.