

Dark matter or correlated errors: Systematics of the AMS-02 antiproton excess

based on [2005.04237](#) in collaboration with M. Korsmeier, M. Winkler

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We revisit the **AMS-02 antiproton excess** considering systematic errors that could 'fake' the signal. **Unaccounted error correlations** have a large effect on the significance of the signal.

The dominant correlated errors come from cross sections for cosmic-ray absorption in the detector. We compute them in a global fit of nuclear scattering data, utilizing the Glauber-Gribov theory. Their inclusion questions the robustness of the excess but reveals a strong sensitivity to the diffusion model at low rigidities.

