

Role of heavier-than-helium nuclei in neutron monitor response: latest results

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Heavier-than-proton nuclei are responsible for up to 50% of neutron monitor (NM) response depending on the solar modulation and geomagnetic rigidity cutoff for given NM. Therefore, careful consideration of these species is important for careful analysis of NM data, including the reconstruction of the solar modulation potential using NM network data. Recently, the AMS-02 experiment allowed us to directly verify the NM response to heavy particles. In this work, we compare the expected contribution of heavy nuclei into the NM response considering different models of the local interstellar spectrum and different levels of solar activity.

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