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Item Study of cosmic ray spectral hardening using GALPROP HONGYI WU, EUN-SUK SEO, University of Maryland, College Park, VLADIMIR PTUSKIN, IZMIRAN, Moscow —

• The cosmic ray experiment AMS-02 confirmed the earlier experimental results of ATIC-2, CREAM and PAMELA measurements on the presence of spectral hardening at about 200 GV magnetic rigidity with high-accuracy measurements of nuclei energy spectra. The secondary nuclei data indicated that the hardening of the source spectrum could be an explanation, but there exist further discrepancies that cannot be explained by the current simple model of cosmic ray propagation. To specify the problems and study the origins of spectral hardening, we use the numerical code GALPROP to compute the propagation of cosmic rays under various assumptions on the rigidity dependence of cosmic ray sources and propagation parameters in Galactic models.

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