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Constraining the Propagation of Galactic Cosmic Rays Using Measurements of the Composition and Energy Spectra of Dominantly Secondary Isotopes KELLY LAVE, Washington University, MARK WIEDENBECK, JPL/Caltech, ALAN CUMMINGS, ANDREW DAVIS, RICHARD LESKE, RICHARD MEWALDT, EDWARD STONE, Caltech, W. ROBERT BINNS, MARTIN ISRAEL, LAUREN SCOTT[1], Washington University, ERIC CHRISTIAN, GEORGIA DE NOLFO, TYCHO VON ROSENVINGE, NASA GSFC, ACE/CRIS COLLABORATION — Using measurements from the Cosmic Ray Isotope Spectrometer (CRIS) on-board the Advanced Composition Explorer (ACE), we report isotopic abundances and energy spectra for dominantly secondary isotopes, produced by interstellar fragmentation of heavier species, in the energy range of 50-500 MeV/nucleon. We also consider secondary-to-primary ratios that are fit using a simple leaky box model of cosmic ray transport in the Galaxy combined with a spherically symmetric solar modulation model. CRIS measurements reported here include data from two consecutive solar minima, between 1997-1998 and 2008-2009, when the solar magnetic field was of opposite polarity. These results are used to constrain the propagation of cosmic rays in the Galaxy, as well as better understand how the effects of gradient and curvature drifts in the interplanetary magnetic field change over the solar cycle.

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