LONG TERM RESIDUAL MODULATION OF GALACTIC COSMIC RAYS: MORE DATA

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Galactic cosmic ray (GCR) intensity data have been analyzed by Stozhkov et al (JGR, v.105, p.9, 2000) and by Ahluwalia (GRL, v.27, p.1603, 2000), for 4 consecutive solar activity minima for the period 1963 to 1998. Data obtained with a variety of detectors located at the global sites as well as the balloon altitudes are used in both analyses. A systematic decrease is observed in all data sets near the solar minmum epochs during 1965 to 1987 period. The medium rigidity of response (Rm), of these detectors, to GCR spectrum lies in the range: 1 GV < Rm < 67 GV. The observed decrease (residual GCR modulation) is ascribed to a supernova explosion (> 10,000 years ago) in the near interstellar medium by Stozhkov et al. Ahluwalia questions this inference; he ascribes it to the long term modulation of GCR flux by the solar wind, within the heliosphere. Additional data (not presented before), obtained by IMP 8, are presented in support of the heliospheric modulation hypothesis.