THE COSMIC RAY RADIAL AND LATITUDINAL INTENSITY GRADIENTS IN THE INNER AND OUTER HELIOSPHERE 1996-2001.3

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The spatial intensity gradients of 150-380 MeV/n galactic cosmic ray He and 30-60 MeV/n H and He are studied over the 1996-2001.3 time period using data from the Goddard MED experiment on IMP 8 and the COSPIN/KET telescope on Ulysses. This combination provides information on the radial intensity gradients in the inner solar system over the solar minimum period of cycle 22 as well as latitudinal gradients since Ulysses has just completed its slow latitudinal scan to 80ºS and has started its fast scan to 80ºN. With the onset of significant solar activity, the intensity gradients of 30-60 MeV/n H and He become very small as their Compton Getting factor approaches 1 at low energies. However the radial intensity gradient, G_r, is essentially constant over the period 1996-2000.5 at a mean radial distance of 3 AU. Surprisingly this is also the value predicted by Fujii and McDonald over the complete 1974-1996 period using the IMP/Pioneer/Voyager data and radial dependence of the form $G_0 r^{\alpha}$. After 2000.5 the heliolatitude of Ulysses begins to change at a more rapid rate and this will be used to determine the latitudinal gradient over the slow latitudinal scan and the initial part of the fast scan.