

JS 76 143
BJ 145 143

S10-92
ARS ONLY
98778
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Change in Interplanetary Shock Acceleration Preceding STIP Interval XVII

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The intensity and frequency of shock acceleration events in the interplanetary medium decreased dramatically in early 1985. Low energy ions were observed by IMP 8 at 1 AU and Voyagers 1 and 2 at 22 and 16 AU respectively. Voyager 1 was at 25° heliographic latitude while IMP 8 and Voyager 2 were near the solar equatorial plane. The decrease in low energy shock events led to a drop in the average ion flux by a factor of 20 to 50. It started about day 10 of 1985 in the ~ .5 MeV channel on IMP 8 and took ~ 75 days to reach the new, lower, background level. The decrease at the Voyagers started ~ 50 days later. The time delay between the start of the decrease at IMP and at Voyager 2 implies that decrease was convected outward with a velocity of ~ 535 km/sec. The intensity and frequency of interplanetary shock events remained at the lower level for at least 1.5 years.