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## Turbulence conditions at the beginning of the space age: a preliminary analysis

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Solar cycle 20, in the mid 1960s, was very unusual in that the usual cosmic ray intensity decline towards solar maximum was not accompanied by an increase in heliospheric magnetic field magnitude as seen in subsequent solar cycles. This presents something of a quandary where cosmic ray modulation studies are concerned. This study presents a novel investigation of historic magnetic field spacecraft observations from this period, in an attempt to increase our understanding of modulation conditions, particularly those concerning the diffusion of cosmic rays, during this time. The available magnetic field data in this period have not been previously subjected to modern turbulence analyses, probably due to the high percentage of omissions and low cadence of data. This study presents the preliminary results of an analysis designed to take these challenges into account in order to study turbulence conditions in this time, and to compare these conditions to those present in subsequent solar minima.

**Apply to be considered for a student award (Yes / No)?**

yes

**Level for award (Hons, MSc, PhD, N/A)?**

MSc

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