



## **Small-scale solitary waves observed by Ulysses.**

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The Ulysses spacecraft has now been in its unique polar orbit of the Sun for a little over 14 years. As such its solar wind dataset represents the longest and most complete set of data, available to date. Recently, by examining the highest resolution magnetometer data (1 sec) some small-scale ( $\sim 30$ sec) solitary pulses in the field magnitude have been observed. These pulses in magnitude correspond to a rotation in the field direction. The source of these unusual events is still under investigation. However, upon completion of a survey of the entire Ulysses dataset, approximately 60 events have been observed of varying quality. This may not be representative of the natural occurrence of these events as their amplitude ( $\sim 0.1$ nt) and period ( $\sim 30$ sec) are small enough that their signatures may be often swamped by the naturally varying ambient solar wind. We present here statistics regarding the size and occurrences of these events, as observed by Ulysses.