The effect of the August 11, 1999 total solar eclipse on geomagnetic pulsations

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A b s t r a c t : The solar eclipse on August 11, 1999, observed on many geomagnetic observatories, offered also a unique opportunity to look for an effect of the eclipse on geomagnetic pulsations. The pulsation activity 1 s data have been taken from Budkov observatory (in the X-component only), three German observatories and a conjugate-point station Hermanus, South Africa (all three components). The pulsation amplitudes exhibit a slight long-term minimum near the time of the eclipse. No similar minimum was observed on this day or on other days. After applying a filter procedure with narrower frequency bands one obtains a short-term decrease of pulsation signal in some bands. The strongest decrease has been found in the 15-20 s band. Both kinds of decrease in amplitudes appear on records from all stations used, even from Hermanus, where no eclipse occurred, in the same time (11.00 UT).

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