

'Serpentine Emission' at the high latitude station Davis (17–23 September 1981)

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Almost a decade has passed since Gul'elmi and Dovbnya in 1974 introduced the high latitude class of magnetic pulsations known as 'Serpentine Emission'. These pulsations are observed in the polar cap, and have a period range of 0.5–10 s. Their name arises from their typical signature on a frequency vs time diagram, which has a sinuous 'serpent-like' appearance.

'Serpentine Emission' pulsations are thought to be caused

by hydromagnetic waves coming from the interaction of the solar wind with the earth's magnetosphere. The daily variation of the pulsations shows a maximum under the cusp of the magnetic field known as 'magnetic noon'. This cusp occurs where the magnetic field lines divide the day-time and night-time sides of the earth.

An analysis has recently been made of 'Serpentine Emission' observed at Davis, Antarctica.