



Satellite-borne study of seismic phenomena by low frequency magnetic field observations

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A combined scalar-vector magnetic field experiment will be flown on the upcoming CSES mission (China Seismo-Electromagnetic Satellite).

Magnetic field data from DC to 30 Hz will be measured with an accuracy of about 10 pT. A fluxgate instrument will provide the 3 magnetic field components and a new type of an optically pumped magnetometer [see Pollinger, 2010] will measure the magnitude of the ambient magnetic field.

The satellite will operate in a Sun synchronous polar orbit at an altitude of about 500 km and with an inclination of 97°.

We present a model of magnetic field fluctuations in the upper ionosphere based on previous satellite observations and on a model of the lithospheric-atmospheric-ionospheric coupling.

Pollinger et al., *CDSM-a new scalar magnetometer*, EGU General Assembly 2010