



Satellite Observations of Pc1 Pearl Waves

K. Mursula (1)

(1) University of Oulu, Finland

Pc1 pearls have been observed on ground since about 70 years. During this time several hundred publications have been written on the various properties of Pc1 pearl waves, the related theory, and possible applications. It is also known since long that Pc1 waves with a clear pearl structure are only a fraction of all Pc1 waves (magnetospheric electromagnetic ion cyclotron waves) that are observed on ground, and that this fraction depends on the latitude of observations, increasing from high to low latitudes. In situ observations of electromagnetic ion cyclotron waves in the Earth's magnetosphere have been made since the 1970s by several satellites on different orbits. However, satellite observations of clear Pc1 pearls are still rather few. Here we aim to review the present status satellite-based observations of Pc1 pearls, and evaluate their contribution to the understanding of this phenomenon.