



A new European low-latitude magnetometer array for space weather applications

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The National Observatory of Athens is currently setting up a magnetometer array in Greece, in collaboration with the Austrian Academy of Sciences. The array is expected to eventually consist of four low-latitude ground-based observation sites of the Earth's magnetic field (planned for August 2008). These stations will be latitudinally equi-spaced between 31° and 36° corrected geomagnetic latitude. One of the primary research objectives assigned to this project will be the study of geomagnetic field line resonances (FLRs). The latter is a well-established phenomenon taking place in the Earth's magnetosphere. It can be pictured as the formation of standing magneto-hydrodynamic waves on magnetic field lines with fixed ends at the conjugate ionospheres (Vellante et al., 2004). An interesting option in this field of research would be to compare ultra-low-frequency (ULF) wave observations in space made by a magnetic satellite mission and on the ground acquired by this low-latitude magnetometer array.