

Ultra Large Terrestrial International Magnetic Array (ULTIMA): A Global Magnetometer Network for Space Physics Research

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The Ultra Large Terrestrial International Magnetic Array (ULTIMA) is a new international consortium that aims at enhancing collaborative research and data exchange on the magnetosphere, ionosphere, and upper atmosphere through the use of ground-based magnetic field observatories. ULTIMA is composed of individual magnetometer arrays in different countries/regions, and it provides a platform for each of them to easily and efficiently collaborate with other arrays in order to expand observational coverage. ULTIMA also helps identify the importance and need of individual arrays to continue operation or establish new stations in their host countries. In this paper we introduce the organization of ULTIMA and its observational coverage. We also describe the plans for data exchange and distribution through individual data servers and virtual observatories, providing opportunities for the scientific community to access an unprecedented amount of integrated ground-based magnetometer observations for heliophysics research.