THE FRENCH GEOMAGNETIC NETWORK: PRESENT STATUS AND FUTURE PROSPECTS

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France has a long tradition of geomagnetic observations, going back to the 16th century. Since 1883, Earth's magnetic field variations have been continuously recorded at the National Magnetic Observatory, first located in the Paris area, then in Chambon-la-Forêt, about 100 km south of Paris. From the 1950s to the 1970s, the Paris Institute of Physics of the Earth (IPGP) and some other French institutions installed seven geomagnetic observatories in Africa, Antarctica, Tahiti and a few islands in the Southern Indian Ocean. Beginning in the early 1990s and continuing until today, IPGP developed long-term collaboration programs with several foreign institutions, in order to jointly upgrade ancient geomagnetic observatories no longer meeting modern quality standards (for example, Borok, Russia), or set up new observatories in interesting locations (for example, Easter Island). The French geomagnetic network today includes 16 observatories, all of them INTERMAGNET Magnetic Observatories, with two more being currently installed (see www.bcmt.fr). Data from 9 observatories are transmitted in real-time for space weather monitoring purposes. This presentation will review the present status of the French geomagnetic network, focusing on recent instrument developments and new data products addressing scientific and societal needs. Perspectives will also be discussed, including the use of observatory data during the upcoming ESA Swarm satellite mission.