

Global Mapping of Near-Earth Magnetic Fields Measured by the KitSat-1 and KitSat-2

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We tested the magnetic field measurements from the KitSat-1 and KitSat-2 by comparing them with the IGRF model. The magnetic data have been collected by a three-axis fluxgate magnetometer on each satellite at an altitude of 1,300km and 800km, respectively. To avoid highly variable magnetic disturbances at the polar region, the field map has been drawn within the limits of 50 degrees in latitude. Each data is averaged over the square of 5 X 5 degrees in both latitude and longitude. In these results, we selected the relatively quiet periods and the sampling rate was 30 sec. It is shown that the results from these measurements are consistent with the IGRF map over the global surface map.

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