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Development of High Resolution Magnetometers for Space Plasma Study at SPDL

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Space plasma has the unique property of being highly collisionless and thus conducting. As a result, the magnetic field is highly perturbed due to the complex motion of charged particles. Measurement of high resolution magnetic field is very important for providing information on the physics of small spatial and temporal scales of collective plasma which cannot be achieved by particle instruments. Satellite Payload Development Laboratory (SPDL) at National Central University was founded in 2002 with the goal of developing high resolution space instruments for in-situ exploration and study of magnetspheric and collisionless space plasma by space science major students. In this talk we present the achievement and recent progress on the development of high resolution magnetometers by the efforts of SPDL members.

Keywords: Magnetometer, Space Plasma