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Energetic Neutral Atom (ENA) images of the disturbed ring current recorded by the NUADU instrument on TC-2 and complementary data obtained by HENA/IMAGE during favorable relative positions of the orbits of the two spacecraft

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China's Explorer-2 spacecraft (TC-2) was launched into an elliptical orbit (700 x 39,000 km) around the Earth at an inclination of 90° on 25 July, 2004. Included in the payload is an Energetic NeUtral Atom (ENA) imager NUADU, which can provide a full 4π image on the completion of each spacecraft spin in the energy range 45 - > 158 keV. In late 2004 early 2005 the IMAGE spacecraft, which carries a high-energy neutral atom imager (HENA) featuring data channels that, to some extent, overlap with those of NUADU, approached 90° magnetic latitude. During this favourable relative position of the spacecraft orbits, data obtained by NUADU and HENA during disturbed geomagnetic conditions are presented and discussed.

Keywords: Energetic Neutral Atom; Imager; Disturbed geomagnetic condition; Ring current; Double Star; TC-2; IMAGE; HENA