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Asymmetric ring currents during the recovery phase of magnetic storms JESSICA EDWARDS, ISMAEL DIAZ, RAMON LOPEZ, Florida Institute of Technology, Department of Physics and Space Sciences — In this study we are comparing magnetic storms in which there is a fast shut off of energy from the solar wind versus storms in which the solar wind energy is slowly shut off. We are testing the hypothesis by O'Brien et al (2002) that slow shut off storms have assymetric ring currents during the recovery phase, whereas fast shut off storms will have symmetric ring currents during the recovery phase. If there is a symmetric ring current then there will be a symmetric disturbance and the Dst as measured from mid-lattitude stations should be similar in all features including the recovery phase. If there is an asymmetric ring current then the Dst profiles will look different and there will be delays in the recovery phases of those stations that see the ring current. We detrended the raw data from mid-latitude stations, calculated the disturbance at each station and looked for local time assymetry in these disturbances. Our preliminary results agree with the hypothesis set forth by O'Brien et al (2002) and we do see an asymmetry in the recovery phase of slow shut off storms.

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