Solar Wind Pressure Variations and Auroras

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POLAR UV imaging results has shown that there are at least 3 different types of aurora caused by solar wind ram pressure variations. Interplanetary shocks cause dayside auroras that propagate from noon towards dawn and dusk with (mapped) solar wind speeds. Gradual, intense solar wind ram pressure (GISWRP) events cause dawn and dusk flank auroras. In addition fast interplanetary shocks can trigger nightside auroral substorms. The mechanisms for each of these three types of auroras will be discussed.

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