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**DMSP Observations of Auroral Arcs that Brighten**<sup>1</sup> JOSE BARONA, RANDALL BRADSHAW, ROBERT BRUNTZ, RAMON LOPEZ, UT Arlington — Using images from the POLAR UVI substorm movie database, we have identified the local time, latitude, and universal time, to within a couple of minutes, of auroral brightenings. Using that list we have identified a number of events in which DMSP spacecraft pass directly over the portion of the arc that either was about to brighten or had just brightened. In some of these cases, there is apparent evidence of an ion acceleration region in the magnetotail. Our presentation will discuss in general the characteristics of electron and ion precipitation during these events.

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