



## **STEREO hot flow anomaly observations during Earth orbit phase and in the deep geotail**

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Several hot flow anomaly (HFA) like events were observed by STEREO during its Earth orbit phase in November-December 2006 and in the far tail beyond the orbit of the Moon in February-March, 2007. The magnetic signature of the tangential discontinuities was visible, but the resolution of the plasma ion data is not sufficient for our analysis, so a method is thus given to identify HFAs without solar wind velocity measurements. The ejected beam and the current sheet of the young-HFA events were not situated in the same plane according to the results of the hybrid HFA simulations. These very far HFA event observations confirm the previous simulations and theories that the HFAs have a large extent in the direction of the current sheet. The event observed in the geotail suggests that the lifetime of the HFAs might be much longer than expected.