



Motion and time evolution of SLAMS at the Earth's parallel bow shock

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Embedded within collisionless quasi-parallel shocks are magnetic structures with enhanced magnetic field magnitude called SLAMS (short, large-amplitude magnetic structures). SLAMS are thought to play an essential role in the plasma thermalisation process at the shock transition and we use Cluster observations at a range of tetrahedron scales to explore the characteristics of these structures. In particular we estimate their orientation and motion relative to the background plasma, with the aim of deriving the underlying geometry of the structures. We also present evidence for the time evolution of the structures on time scales of a few seconds as they are convected towards the shock.