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# A nonliner Alfvénic coherent Strucure as Plasma Flow Terminator

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We present a Cluster event in which a strong magnetic barrier is observed at the magnetopause outer edge. Similarly to already studied Interball-1 and Polar events, we describe the barrier as a nonlinear Alfvénic coherent structure with dominating magnetic pressure. The barrier separates a high-beta flowing magnetosheath (MSH) and a hotter stagnant MSH plasma with dominating ion pressures and nearly sonic flow speed at the outer barrier edge. Almost incompressible Alfvénic wave packets with perpendicular electric and magnetic perturbations are observed at $\sim$ 1.2 mHz, that corresponds to the eigen frequency of the MSH waveguide resonance for fast magnetosonic waves. The barrier wave packet is highly structured down to the proton gyroradius scale. We discuss possible mechanisms for the Alfvénic structure generation (first of all, Alfvénic collapse). The barrier structuring is compared with the self-focusing instability predicted by computer modeling of the Alfvén wave nonlinear evolution. Experimental evidence of a plasma jet with ram pressure much over that in the solar wind fits the model predictions.