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Large Amplitude Plasma Waves Near the Comet C-G Diamagnetic Cavity Boundary: What Are They and What is the Role for Cometary Plasma Dynamics?

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Large amplitude plasma waves detected adjacent to and just outside the comet diamagnetic cavity boundary at comet 67P have been studied using the combined magnetic field, thermal electron and neutral particle measurements. The boundary waves appear to be steepened shocks. However the nature of the shocks appears to be different for inbound passes and for outbound passes. These differences will be illustrated in detail and the possible role that the shocks/waves play in cometary plasma dynamics will be discussed.