TRIGGERED VLF EMISSIONS OBSERVED BY THE CLUSTER WIDEBAND PLASMA WAVE RECEIVER NEAR THE PLASMAPAUSE

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The Cluster Wideband (WBD) plasma wave receiver occasionally observes triggered VLF emissions close to the magnetic equator when the Cluster spacecraft are located near their perigee ($\sim$4 Re). At this location the spacecraft are often skimming the plasmapause and passing through density cavities that are smaller than the separation distance of the spacecraft. The triggered VLF emissions are mainly observed in the frequency range 2-6 kHz with particular spectral features, e.g., continuous narrow-band, quasi-periodic components and S-shaped fine structure. Such examples of the triggered emissions as observed by more than one Cluster spacecraft are presented along with data obtained simultaneously from other Cluster particle and wave instruments. Based on these data we investigate the correlation between the observations of these VLF triggered emissions and the structure of the local plasmapause using data obtained from the IMAGE EUV instrument. Finally, we briefly discuss some of the possible mechanisms that could account for the triggered VLF emissions.