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Electric fields in the ion cyclotron frequency range

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Electric fields in the solar wind in the range of the ion cyclotron frequency have been difficult to investigate, especially from spinning spacecraft, for which the spin rate is generally in the same frequency range. Yet this frequency range is particularly important, not only because of the enhanced resonant interactions with ions, but also because there are several electrostatic wave modes, such as electrostatic ion cyclotron waves and Bernstein modes, which might be important there. The sensors of the EFW experiment on Cluster have been successfully designed to minimize photoelectric effects, and have made such an investigation possible. The results of such an investigation will be presented