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On the role of abrupt solar wind pressure changes in forbidden energetic electron enhancements

The manuscript investigates the phenomenon of forbidden energetic electron (FEE) enhancements. The authors found that these FEE enhancements are closely linked to abrupt and significant changes in solar wind pressure, with injections occurring within 10-20 minutes of the pressure change impacting the magnetosphere. The local time of these injections appears to be determined by the sign of the solar wind pressure jump, with positive jumps leading to nighttime

Minor comment

While Figure 1 shows time profiles for the 31 March 2001 and 9 November 2004 events, it would be beneficial to also see detailed satellite pass visualizations similar to Figure 6 for these earlier cases. Additionally, what was the specific orbit portion (e.g., ascending/descending, latitudinal range during equatorial crossing) of the satellites when detecting these enhancements?

Given that the FEE enhancements are observed near the equator, and considering the unique electrodynamics of this region, including the South Atlantic Anomaly (SAA) as a loss region for these particles and the presence of the equatorial electrojet, could these features influence the observed characteristics or the generation mechanism of FEEs? For instance, recent work by Da Silva et al. (2025) (10.3389/fspas.2025.1550635) discusses electron precipitation over the SAMA during the May 10, 2024 storm, and Da Silva et al. (2022) (2022 10.3389/fspas.2022.970308) discusses sporadic layers in the SAMA. While the current manuscript focuses on solar wind pressure, a brief discussion on whether these equatorial peculiarities might modulate the effects of the proposed inductive electric fields or the observability of FEEs could be valuable.

I mentioned that because I did not see much discussion about the peculiarities on the equator regions in terms of electric fields. Does the equatorial electrojet and/or SAMA could have some influence on those observations?

In the first conclusion item you mention about the geomagnetic storm phases not being associated with FEE enhancements. As I understood, you analyzed two cases in the recovery phase, and one in the main phase. How can you state that FFE does not show preference from three case studies?

The paper is well-written and the findings are significant. I recommend it for publication after addressing some minor comments.