Ann. Geophys. Discuss.,
https://doi.org/10.5194/angeo-2020-48-RC1, 2020

Annales Geophysicae Discussions
Open Access
EGU

Interactive comment on "High-latitude crochet: solar flare-induced magnetic disturbance independent from low-latitude" *by* Masatoshi Yamauchi et al.

Anonymous Referee #1

Received and published: 4 August 2020

High-latitude crochet: solar ïňĆare-induced magnetic disturbance independent from low-latitude By Yamauchi et al.

The paper presents a new type of the solar ïňĆare effect on the dayside ionospheric current at high latitudes equatorward of the cusp during quiet periods. Right after the X9.3 ïňĆare on 6 September 2017, magnetic stations at 68-77âŮę geographic latitudes near local noon detected northward geomagnetic deviations (ΔB) for more than 3 hours, with peak amplitudes >200 nT, without any accompanying substorm activities.

The paper is interesting and may be accepted for publication after addressing the minor comments below.

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Discussion paper

There could be many solar flares of this type. Then how this particular one produced such a large ionospheric current lasting over 3 hours and producing peak ΔB >200 nT?

Title says 'independent from low-latitudes'. But the effect is also observed in ASY indices (Figure 2a), is it consistent with the title?

Figures 1-3 are included with the text and other Figures are put at the end. It would easy if all Figures go with the text.

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