

Interactive comment on “Comment on “Identification of the IMF sector structure in near-real time by ground magnetic data” by Janzhura and Troshichev (2011)” by Peter Stauning

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Reply to Interactive comments by Dr. O.A. Troshichev on “Comment on “Identification of the IMF sector structure in near-real time by ground magnetic data” by Janzhura and Troshichev (2011)” by Peter Stauning”

The interactive comments from Dr. Troshichev mentions: (a) the criticism concerning the method and results presented in [Janzhura and Troshichev, 2011] Reply: Yes, The

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abstract and the conclusions in my commentary state that “neither the illustrations nor the results presented there have been derived by the specified near-real time method. Figs. 1, 6, 7, and 8 display values derived by post-event calculations based on daily medians smoothed over 7 days centred on the day of interest.” I see no objection against this statement in the present comment from Dr. Troshichev.

(b) identifies this method with the unified PC derivation method [Troshichev et al., 2006] Reply: No. There is no such statement in my commentary.

(c) makes the conclusion that the IAGA endorsed PC index is to a large extent based on the methods described in Janzhura and Troshichev [2011]. Reply: Yes. The abstract and conclusion in my commentary state that “The commented paper, J&T2011, and its replica in Troshichev and Janzhura (2012), are significant since along with the publications Troshichev et al. (2006) and Troshichev et al. (2011) held in chapter 4 of Troshichev and Janzhura (2012), they form the basis for the derivation procedures (Matzka, 2014; Nielsen and Willer, 2019) applied for calculations of Polar Cap (PC) index values in the near-real time and post-event (final) versions endorsed by IAGA Resolution #3 (2013).” IAGA Resolution #3 (2013) was agreed at the IAGA Assembly in 2013 in response to the application for endorsement submitted jointly from AARI and DTU Space on 25 February 2013 and recommended by the Task Force comprising Drs. Menvielle, McCreedy, and Demetrescu. Their statement from 20 August 2013 reads: “The PC index being recommended for endorsement at IAGA 2013 in Merida, Mexico is that defined by the following publications: Troshichev et al. (2006 and 2009), Janzhura and Troshichev (2008), Janzhura and Troshichev (2011)”. The material presented to IAGA for the endorsement and description of the methods actually used for calculations of the “definitive” PCN indices are available at the DTU Space web portal: <ftp://ftp.space.dtu.dk/WDC/indices/pcn> I shall call on representatives from DTU Space, Drs. N. Olsen and A. Willer, to provide verification of the above statements.

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