The paper *Can interplanetary magnetic field reach the Venus surface?* provides an estimate of the interplanetary magnetic field (IMF) diffusion time across the atmosphere of Venus – to be compared with previous simulation work, apparently underestimating it, and with upcoming observations by BepiColombo. The estimation is based on observed profiles of relevant quantities and numerical integration. I see the paper as a timely contribution, however, a few questions should be explained in more detail before publication.

1. Convective transport of the magnetic field is completely ignored. Is this related to the impact of the IMF draping around the planet on the magnetic Reynolds number? Please comment.

2. I do not fully understand the 'reset' of the magnetic field (p. 2, L5-6). Once the magnetic field enters the diffusive environment, i.e. the conductive ionosphere, the diffusive transport is local: If magnetic energy is supplied in sufficient amount to overcome ohmic losses, the IMF will make it to Venus surface. On the other hand, perhaps at that time the IMF has changed and the diffused magnetic field is no longer equal to the original IMF. Please clarify.

3. Along the same line, the 'reset' is discussed only in terms of the four-sector structure of the IMF. What about variability on top of this large scale pattern (which is essential e.g. for magnetic activity at Earth)? Does it matter less for Venus, in particular at solar minimum?

4. Please explain briefly why 'Pedersen conductivity transmits the magnetic field by diffusion' (p.3, L4-5). Also, phrasing could be perhaps adjusted a bit, since Pedersen current actually converts the magnetic energy into heat (see also 2).

5. The Pedersen conductivity is attributed to electrons (Eq. 5), partly because electron-neutral collision frequency is much larger than ion-neutral collision frequency. However, the conductance formula can be cast as ne/B (\nu_en/f_ge/(1+\nu_en^2/f_ge^2) + similar ion term), therefore what actually matters is the ratio of the collision frequency to the respective (electron or ion) gyro-frequency. At Earth, most of the Pedersen current is carried in the E ionospheric layer by ions, while electrons, already non-collisional at E heights, carry the Hall current. Please comment the case at Venus in more detail.

6. The difference between the estimated diffusion time and the simulation result is larger than an order of magnitude. Please discuss this more closely. Incidentally, I was no able to find the less than one hour estimate (p. 1, L19) in the study of Martinecz et al. (2009).

7. The suggested test by BepiColombo relies on the stability of the IMF during the flyby (see also 2 and 3 above). Please comment.

8. Minors:
- p. 1, L9: about => around ?
- L12: Orbiter
- L14: studied => observed ?
- L16-17: The field magnitude becomes diminished => Further down, the field magnitude decreases
- L21: as a proof => as very accurate ?
- p. 2, L3: becomes reset when the external field (in the induced magnetic field) reverses its orientation => please rephrase (see also 2).
- L8: report our study => find ?
- L10: delete 'by permeability'. For the substance of the message, see also 2, 3.
- L17: L is,…, \mu_0 … is, and \sigma is…
- L20: strictly => exactly
- L25: I think '(or diffusion speed)' should be deleted.
- p. 3, L3: z^2 => \Delta z^2 (i.e. z_max^2 – z_min^2); <\sigma> => \sigma (no brackets); diffusivity => conductivity.
- L4-5: Please rephrase 'Since the Pedersen conductivity transmits the magnetic field by diffusion' (see also 4).
- L20: from Venus Express
- L31: referred => inferred