

Interactive comment on “Analysis of geomagnetic measurements prior the Maule (2010), Iquique (2014) and Illapel (2015) earthquakes, in the Pacific Ocean sector of the Southern Hemisphere” by Enrique G. Cordaro et al.

Enrique G. Cordaro et al.

ecordaro@dfi.uchile.cl

Received and published: 5 May 2019

Dear Natascha Töpfer and reviewers,

We have considered your suggestions and thoughts.

The changes made to the manuscript are highlighted in yellow. Below this letter you will find the answers to the referees.

Best Regards, E.G. Cordaro on behalf of the authors.

[Printer-friendly version](#)

[Discussion paper](#)



Comments for the Referee #1:

C1-“Part of section 2 is just a repeat of information given in introduction”

R: We made a revision in section one and two to not repeat information given before. To be more explicit in section two, we do not repeat what we said in the introduction.

C2-“The author should use Z/Z^* ” Page 1 Lines 46-48

R: In this work we use field B_z or Z , and not Z/H , Z/Z^* because it's how we call this component in past works. In the next work we considerate the suggestion made

C3-“Revealed anomalies in the magnetic field recordings are not related to some global phenomenon.” and “the authors have to bear in mind that there is recently a criticism regarding the formula proposed by Dobrovolsky et al. (1979)”

Page 3, lines 48-55

R: To response this comment, In the globality of the results we could use distant magnetometers to corroborate if the behavior of the anomalies is similar to that registered in South America in dates close to large earthquake. However, we have six years of total registrations in South America, During these six years several earthquakes of magnitude greater than ,e.g, Mw 7.8 (Nepal 2015 magnitude) occurred around the world. No behavior similar that obtained for Chilean earthquakes was obtained , so this phenomenon cannot be global in natures That's why we use the Dobrosky area as a reference. Although the deformation are not visible on the surface of the earth from a few hundred kilometers from the future epicenter, it does not necessary imply that there are no changes of stress under the earth's surface at greater distance . (see in 10.1016/j.pce.2003.12.003.

C4: “it is not clearly stated which are the periods over which each spectrum of figura 3a-c was calculated”

R: To response this comment, the period of each spectrum on Fig3a-c were added.

Printer-friendly version

Discussion paper



C5: “For the peak at 5.154 uHz claimed to be related to the Iquique earthquake in Fig. 3d it is not clear why it presents intensity changes over the different studied time periods and what does this mean. ”

Page 4, Lines 45-48

R: The changes of intensity require more studies to understand what they mean. This frequencies and numbers are what nature give to us, therefore measurements, so Geophysical measurements obtained are appropriate for highlighting fundamental frequencies at the Iquique earthquake.

C6: “What happens around (but close to) the periods of Dst <10 nT”

Page 5, Lines 33-35

R: Disturbance storm time , computed in 4 mid-latitude observatories to obtain the average measurement of magnetic field variations, this allows us to detect variations of magnetic field and magnetic storms when they occur) In this case is absolute values of DST

Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2019-9>, 2019.

Printer-friendly version

Discussion paper

