Nat. Hazards Earth Syst. Sci. Discuss., 2, C2203–C2204, 2014
www.nat-hazards-earth-syst-sci-discuss.net/2/C2203/2014/

Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Anomalies of zenith tropospheric delay following the M_w 7.8 Haida Gwaii earthquake" *by* Y. B. Yao et al.

Anonymous Referee #2

Received and published: 5 October 2014

The paper discuss Zenith Tropospheric Delay in the IGS - GPS data in occasion of the M 7.8 Haida Gwaii earthquake. The authors claim to propose a differential method superior to conventional methods for detecting ZTD anomalies. I do not agree that such ZTD signals are clearly related to the earthquake. The proposed ZTD differential method lack of mathematical description. The way ECMWF data are interpolated is not described. The differential signal showed in Figure 4 seems not clearly related to the earthquake and could be associated to statistical noise typical of the GPS processing. Further analysis involving different earthquakes with different magnitudes need to confirm the statement " Acoustic waves generated from the Mw 7.8 Haida Gwaii earthquake caused anomalous ZTD variations in the troposphere (e.g., atmosphere pressure, temperate, atmosphere density), whereas the anomalies or their mutual ef-

fect led to variations in the atmospheric refractive index. Finally, the originated acoustic waves caused ZTD anomalies " hence I can not say that this paper is acceptable for publication.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 3533, 2014.