

Interactive comment on “Single Point Positioning with Vertical Total Electron Content estimation based on single epoch data” by Artur Fischer et al.

Anonymous Referee #2

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The paper is devoted to the estimation of an absolute position together with ionospheric corrections. The estimation of ionospheric corrections and the position coordinates in one computation process makes the proposed method independent of external data. This topic is in the scope of the Geoscientific Instrumentation, Methods and Data Systems. The problem is presented clearly in the paper. However, some concerns should be clarified: 1. Equation (7): based on cited literature: Leick et al., 2015, the argument of the trigonometric function is a zenith angle at the piercing point. Is it the case in the proposed algorithm? 2. Equation (16): The authors should give the formulas for calculating the entries of the design matrix A . 3. Equation (14), (15), (17), (18), (20): I suggest to denote vectors with small, bold letters. 4. Equation (19): In my opinion, the weight matrix should be denoted as W instead of P . 5. Equation (24): Consequently,

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the name of the gradient vector should be changed. The calculation of the entries of the gradient vector should be explained. 6. The authors should describe the results listed in Table 3 in more detail. I recommend the article for publication after clarification of the remarks mentioned above.

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