

Ann. Geophys. Discuss., referee comment RC3  
<https://doi.org/10.5194/angeo-2021-13-RC3>, 2021  
© Author(s) 2021. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## Comment on angeo-2021-13

Anonymous Referee #3

---

Referee comment on "Characteristics of Ionospheric Scintillation in Chengdu, China" by Song Zhang et al., Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2021-13-RC3>, 2021

---

This paper gives superficial account of daytime and nighttime sudden changes in S4 index computed from an invalidated hardware digital receiver the model and make of which are unknown and untraceable.

Authors even could not give proper location of receiver. I quote lines 11 from Abstract and Line 67 From Main paper where they write "Chengdu (104.07°N, 30.67°E)". It's a Typo but it shows a great degree of carelessness from authors that it repeats two times. So the wrong coordinates of the receiver location is typo issue or not is not verifiable.

Whole content of paper is based upon flimsy statements, arguments and results. Daytime and night time sudden impulsive rise in S4 index (that mostly seems random noise/interference as shown in figure 1 and 4) are termed as post sunset or ionospheric scintillations. More surprisingly, this has been analyzed and annual variations are also given. Authors must see first set the benchmarking of the receiver used, validate result with some high-grad receive and then record data and make a study.

I am not convinced by the set of results given in figure 1 to 4 and quality of data and analysis by any means.

Further wrong citations are given. Even many cited papers are not given in the list of references. Some of such missing citations are given wrong credit of some formula and study. So there seems a direct indication of mis-appropriation of existing literature.

Introduction 41 to 56 is filled with details of unreasonable low quality of papers (possibly available only in Chinese) which are missing from the list of references. Also, when such a vast global literature exists in this domain and living in the era of internet and global flow

of information, authors have remained ignorant of major existing knowledge on ionospheric irregularities. It's quiet shocking and painful.

Reading the paper up to page 4 gives frightening feeling of how authors have used flimsy and unverifiable noisy data set into some kind of figures.

Anyone who has some sense of a scientific rigor and ionospheric scintillations would find this work as non-scientific. I understand it is possible that some low graduate student might have written this paper. In such a case, senior and experience faculty must see that fundamentals of the report are properly placed with a literature survey and see a scientific rigor to arrive at the results.

My suggestion to the Editor is to immediately reject this paper. I do not see a core basis of argument and/or scientific data set that can be improved by some degree of presentation or reformation. In fact, the authors may be suggested take a course on ionospheric variations, ionospheric irregularities of daytime and night time along with training on how to examine, analyses and report new set of observations using existing scientific literature with great care and sensitivity/accuracy..