

The authors present evidence of the effect of the 26 December 2019 solar eclipse on the ionosphere. They showed this using Total Electron Content (TEC) data from Global Navigation Satellite System (GNSS) receivers over the Indonesian region. Also, ionosonde data from Canadian Advanced Digital Ionosonde (CADI) in two locations were used to complement the TEC observation. Using the Solar Dynamics Observatory (SDO), they tracked the umbra of the eclipse spatiotemporally. Their investigation methods are clear. The authors gave much emphasis to the effect of the eclipse on the ionosphere particularly the reduction in the TEC and Ionosonde observations as well as the time delay. This current work contributes to literature by showing how this type of eclipse affects the ionosphere in the Indonesian region. The authors addressed all the comments pointed out in the previous version of the manuscript. The current version of the manuscript has improved. I, therefore, recommend the work be published after the implementation of the comments and corrections.

Comments:

Abstract

Page 1, Line 1: Change to - We report **the** investigation of the ionospheric **response** to the passage of an annular solar eclipse over Southeast Asia on 26 December 2019, using multiple sets of observations.

Page 1, Lines 14-15: Change to - The GPS TEC data mapping along a set of cross-sectional **cuts** indicate that the greatest TEC reduction actually occurred to the north of the solar eclipse path, opposite of the direction from which the lunar shadow fell.

Introduction

Page 2, Line 30: Change to - (see Aplin et al. (2016) for an overview).

Page 3, Lines 54-55: Change to **ionospheric response to solar eclipse**
. I think “ionospheric response” is more suitable in this context. This is because here, you are investigating the effects of the solar eclipse on the ionosphere, not the other way round.

Page 3, Lines 69-71: Rewrite as: - Section 2 of this paper describes the methodology, Section 3 describes the results, Section 4 presents the discussion of the findings, and Section 5 the conclusion presents.

2 Instruments and Methodology

In the instrumentation and methodology, the symbols of the instruments are not defined in the text. I suggest the authors describe the symbols in the text. This should also be done for symbols in the entire manuscript.

Page 4, Line 112: - Insert “the” as: From two **the** frequencies f_1 and f_2 ,
.....

Figure 3 Caption, Page 5 and Line 139-140: The authors only described the path and instantaneous position of the lunar shadow on 26 December 2019 (panel b) but did not do that for the other days (i.e. panels (a) and (c)). I suggest you give these details as well.

Page 6, Lines 151 – 161: I will suggest the authors present a sample keogram.

3 Observation Results

Page 10, Line 285: - Change “and” to “to” as: The baseline TEC was determined by averaging the TEC values from 25 **to** 27 December 2019,

Page 11, Lines 321-322: - On the left panel of Figure 12a, I think, instead of using the left panel, the authors should use the sub-labels, that is, (i), (ii), and (iii). So, the labeling can be Figure 12a(i). This will make it easier for the reader to follow. Please check through the entire text and make these changes.

Page 11, Line 334: - Please change nearing the maximum eclipse. to approaching the maximum eclipse.

Page 12, Line 367: - The tip of this bulge occurs started at latitude Please remove the “occurs”.

Page 13, Line 390: - Please, there is a repetition of “the”, kindly remove one.

4 Discussion

Page 15, Lines 465-466: - Please change “The significant difference with Adeniyi et al.’s (2007) findings might be due to the different type of solar eclipse that occurred” to “The significant difference in the findings of Adeniyi et al. (2007) might be due to the different type of solar eclipse that occurred”.

Page 15, Lines 532-534: - I will suggest that the authors revise this sentence.