**Review**

of the paper by I. Paulino et al. «Ionospheric responses to the 14 October 2023 annular solar eclipse over Brazil: A case study of fixed-frequency isoline variations»

This manuscript addresses a pressing issue: the study of the ionosphere's response to an annular solar eclipse. The study contains interesting observational results. The manuscript's main shortcomings are as follows.

1. The figures should show the times of sunrise and sunset on Earth and in the ionosphere.

2. It is unclear whether the authors are using true or virtual heights.

3. The work lacks summary tables for altitude increases/decreases, delay times of key processes, etc.

4. What does the decrease in altitude after the eclipse reflect compared to control days? It might be more appropriate to use *reference days* instead of *control days*.

5. It is necessary to separate the effects associated with a decrease in electron density and variations in vertical drift velocity.

6. There are no formulas describing the main effects. It would be helpful for the authors to study and consider some of the next papers in their review, as well as papers by other authors

Chernogor L. F., Mylovanov Yu. B. Ionospheric effects of the August 11, 2018, solar eclipse over the People’s Republic of China // Kinematics and Physics of Celestial Bodies. – 2020. – Vol. 36, No. 6. – Pp. 274–290. https://doi.org/10.3103/S0884591320060021

Chernogor L. F., Garmash K. P. Ionospheric Processes during the Partial Solar Eclipse above Kharkiv on June 10, 2021 // Kinematics and Physics of Celestial Bodies. – 2022. – Vol. 38, No. 2. – Pp. 61–72. https://doi.org/10.3103/S0884591322020039

Chernogor L. F., Mylovanov Yu. B. Ionospheric Effects of the June 10, 2021, Solar Eclipse in the Arctic // Kinematics and Physics of Celestial Bodies. – 2022. – Vol. 38, No. 4. – Pp. 197–209. https://doi.org/10.3103/S088459132204002X

Chernogor L. F., Garmash K. P., Guo Q., Luo Y., Rozumenko V. T., Zheng Y. Some Features of the Ionospheric Radio Wave Characteristics Over China Observed During the Solar Eclipse of 21 June 2020 // Radio Science. – 2022. – Vol. 57, Is. 10. – id:e2022RS007492. https://doi.org/10.1029/2022RS007492

Chernogor L. F., Garmash K. P., Guo Q., Rozumenko V. T., Zheng Y. Ionospheric effects of the 5–6 January 2019 solar eclipse over the People's Republic of China: results from oblique sounding // Ann. Geophys. – 2022. – Vol. 40. – Pp. 585–603. https://doi.org/10.5194/angeo-40-585-2022

Chernogor L. F., Mylovanov Yu. B. Features of Ionospheric Effects of the Solar Eclipse Occurred on the Morning of October 25, 2022 // Kinematics and Physics of Celestial Bodies. – 2024. – Vol. 40, No. 2. – Pp. 77–87. https://doi.org/10.3103/S0884591324020028

7. There is a contradiction in the conclusions 1 and 4. Altitude reduces at onset and increases at commencement. How is this possible?

8. Please consider whether the terms “phase progression” and “recovery phase” are appropriate here, or if alternative terminology might be more precise.