

Peer Review

Review of: "Time-Resolved Hubble Space Telescope UV Observations of an X-Ray Quasi-Periodic Eruption Source"

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The paper contributes to a topic of high current interest, quasi-periodic eruptions (QPE) in active galactic nuclei (AGN). Combining the XMM-Newton and HST datasets provides coordinated UV and X-ray analysis of a QPE, which appears to be the first such result. The newly discovered QPE source eRO-QPE2 has the shortest known recurrence period. The results presented in this analysis provide new constraints on the physical nature of this QPE source, and by extrapolation, other similar QPE sources. Interesting conclusions are the constraints on properties of the accretion disk, the orbital parameters of the secondary, and the instability triggering the eruptions. The paper is clearly organized and presented.

I have very few comments for the authors.

The first two would be better adjudicated by the style editor, as my recollections may not be up to date.

Intro, last pp. ...UV data provide... instead of ... UV data provides..., since "data" is plural.

Various places with indefinite articles "a" versus "an" in combination with an abbreviation or acronym.

Other comments:

Figure 3: While I could take the authors on faith that "the decay phase is omitted for clarity," I felt that this comparison might be useful for some readers. If it does indeed make the figure too crowded to include the decay phase, that could be presented in a separate panel. Or alternatively, the decay phase could be presented in a separate figure in the Appendix.

Figure 4: Should be consistent about the orbiter radius being depicted in green. In the top panel, it is magenta.

Declarations

Potential competing interests: No potential competing interests to declare.