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An Exposure Time Calculator for CASTOR's UV Multi-Object Spectrograph

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The Cosmological Advanced Survey Telescope for Optical and UV Research (CASTOR) is a proposed 1 meter space telescope under development by the National Research Council of Canada, the Canadian Space Agency, and partner institutions around the world. It will serve as a successor to the Hubble Space Telescope (HST) at short wavelengths, providing continued access to the ultra-violet (UV) and blue-optical at high spatial resolution ($\sim 0.15''$) over a field of view $\sim 100\times$ larger than HST. The UV Multi-Object Spectrograph (UVMOS) is a medium resolution ($R\sim 1500$) spectrograph based on the BATMAN spectrometer that is proposed as a parallel instrument onboard CASTOR. A UVMOS has been identified as one of the possible Canadian contributions towards NASA's Habitable Worlds Observatory. Here we present a pixel-based, user-friendly, extensible exposure time calculator (ETC) for the CASTOR UVMOS instrument, adaptable for other space-borne MOS missions, as well as illustrative science cases outlining the unique capabilities offered by CASTOR UVMOS in the next decade.

Did you give a contributed talk at CASCA 2026?

No

If you are selected for a poster, would you be interested in giving a short flash talk on your work?

Yes

What is your career level?

PhD

Which keyword describes the area of focus of this talk?

Instrumentation

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