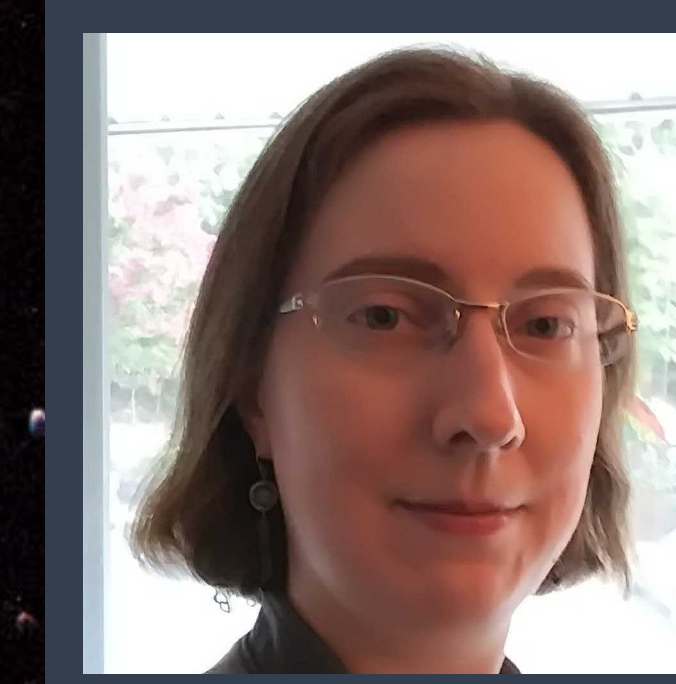


Constraints on Post-Superflare Exo-Auroral Emission with SOAR and the Evryscope Fast Transient Engine



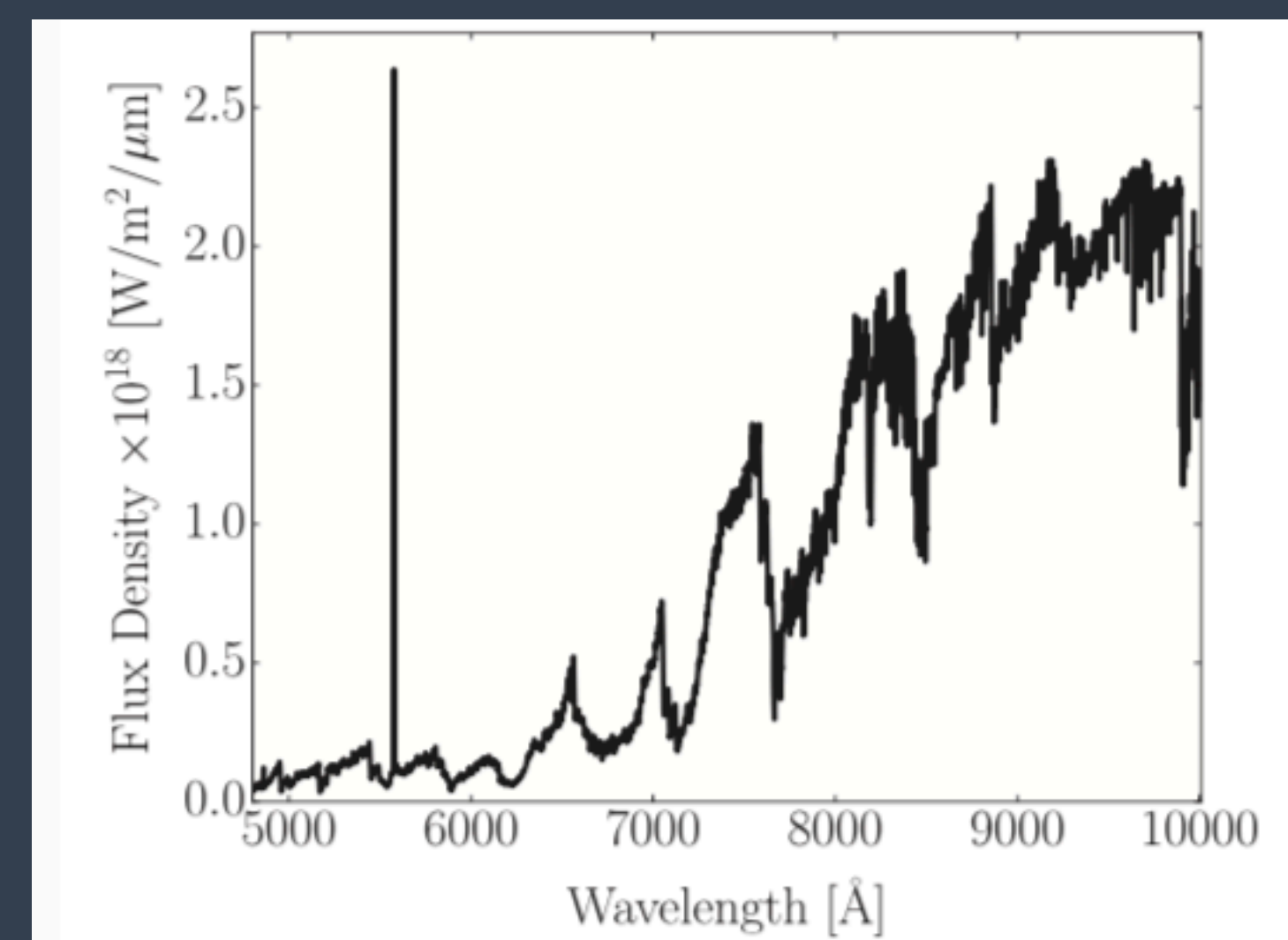
Presenter: Amy Glazier

Amy L. Glazier, Nicholas M. Law, Hank Corbett, Ward S. Howard, Alan Vasquez Soto, Ramses Gonzalez, Nathan W. Galliher, Jeffrey K. Ratzloff

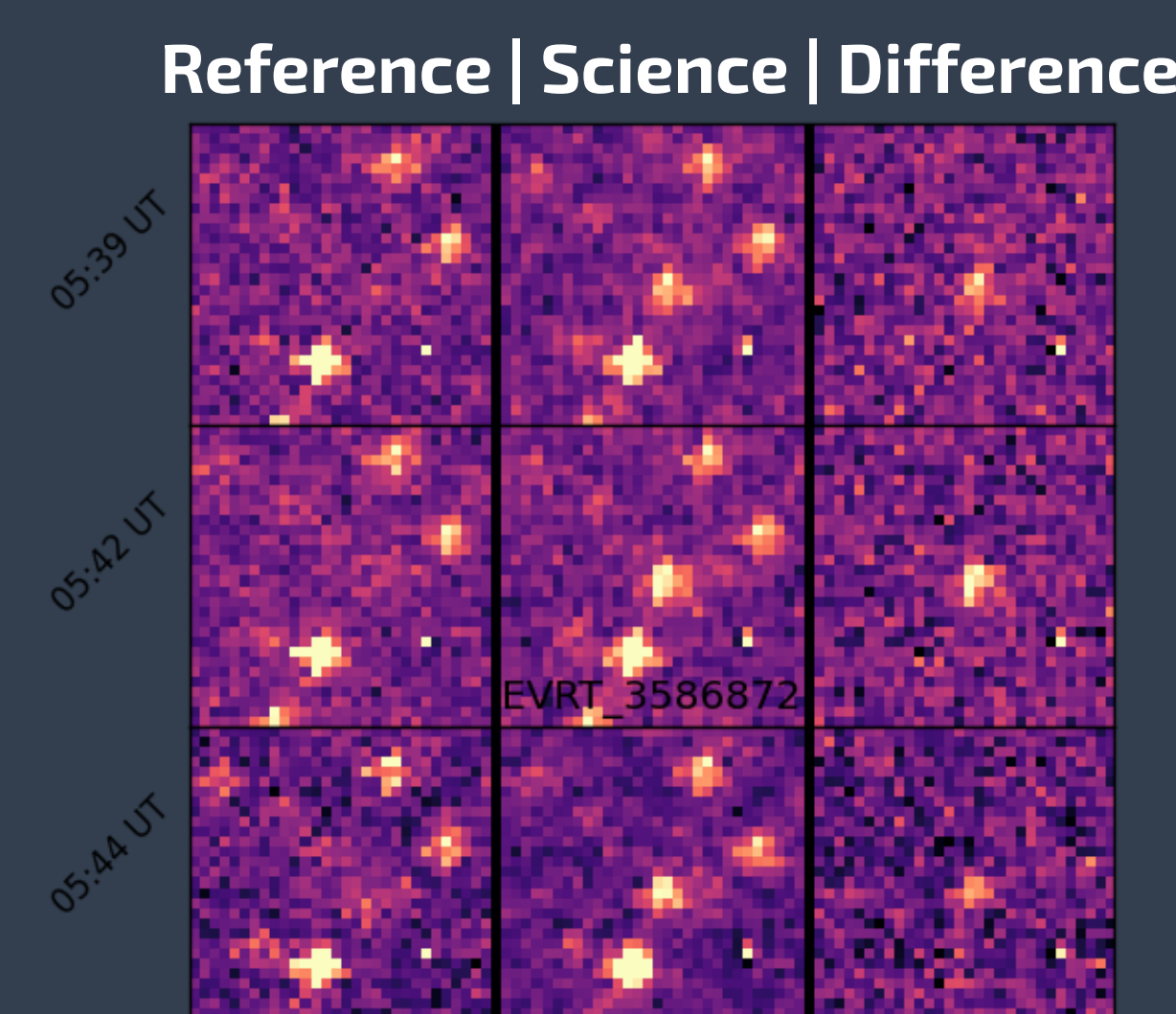
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1. Oxygen emits at 5577 Å during aurorae

From [Luger et al. \(2017\)](#):
Simulated high-resolution visible spectrum of Proxima Cen b with a 0.1 TW OI auroral emission at 5577 Å

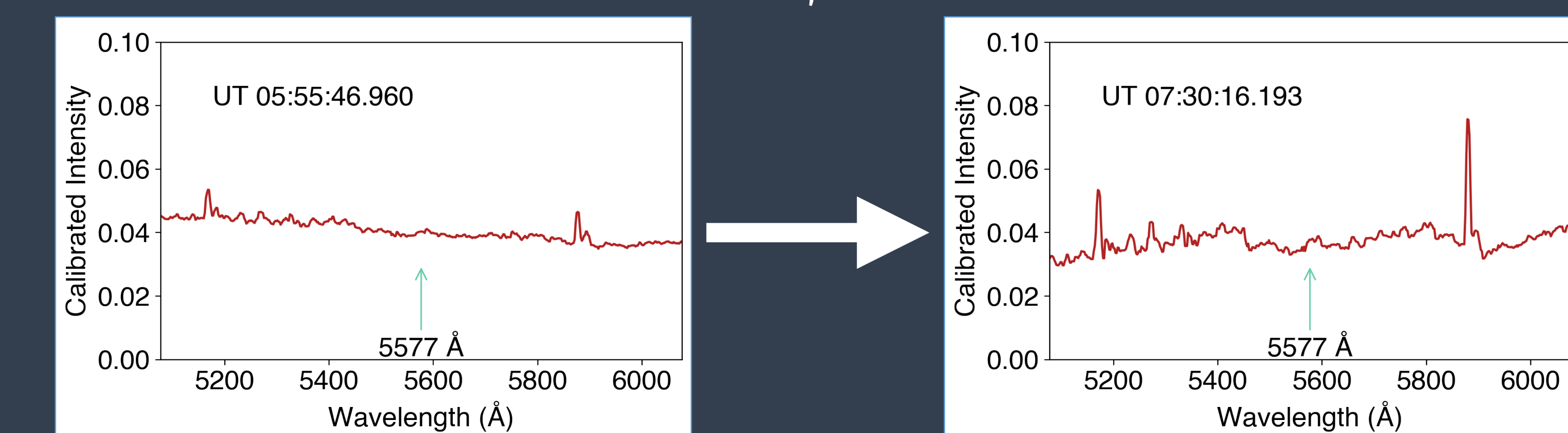


2. Evryscope-South finds flares in real time and Evryscope Fast Transient Engine flags them for rapid spectroscopic follow-up



3. Within 15 minutes of detection, SOAR obtains time series spectra of flare to be analyzed for signs of exo-auroral emission

Flare observed 2020-02-14, ~15 minutes after detection



Strong continuum early in flare; line emission stronger as flare progresses

Particle events associated with superflares could cause auroral emission from planets with Earthlike atmospheres. We search for signs of these exo-aurorae.



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