Highlights of Spanish Astrophysics XII, Proceedings of the XVI Scientific Meeting of the Spanish Astronomical Society held on July 15 - 19, 2024, in Granada, Spain. M. Manteiga, F. González Galindo, A. Labiano Ortega, M. Martínez González, N. Rea, M. Romero Gómez, A. Ulla Miguel, G. Yepes, C. Rodríguez López, A. Gómez García and C. Dafonte (eds.), 2025

TelCorAl beta release: a user-friendly web app for telluric correction

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Abstract

Infrared spectra that are observed at ground-based telescopes are heavily contaminated by absorption features from the Earth's atmosphere. The decontamination process, known as telluric correction, is usually complex and time-consuming, mainly because of the intricate and unstable behaviour of the atmospheric transmission spectrum. TelCorAl (Telluric Correction from Alicante) is a web application that deals with these complications. On the one hand, the Python 3 core extracts the atmospheric transmission spectrum from fitting the observation of a Vega-type standard star, and uses it to correct telluric absorptions from science spectra. On the other hand, the user-friendly web interface shows useful plots and allows users interact with the processes to fine-tune the results.

In the previous scientific meeting of the SEA, we gave a talk to present the TelCorAl method together with a preliminary version of the web interface. Since then, both the Python code and the web app have significantly evolved toward a more robust beta version that is released for final testing by a broader audience.

The TelCorAl beta release is announced for the first time in this poster, and made publicly available during the 2024 SEA meeting.

My poster in zenodo.org can be found here