



Contribution ID: 1

Type: **Poster**

## Examining Kilonova with Expanding Photospheres

*Friday 25 March 2022 16:05 (1h 40m)*

The daily X-shooter spectra of AT2017gfo provides the most detailed information of any Kilonova to date. Indeed, the recently discovered spectral signatures of Strontium (Sr) yields constraints on the ejecta density, expansion velocity and potential asymmetry. In this talk, we present the spectral information hidden within the Sr-lines, while applying the methodology of expanding photospheres. Ultimately, this framework provides tight statistical and consistent constraints on the expansion rate of the universe, while probing the asymmetry of the Kilonova explosion.

### Field of study

Astrophysics

### Supervisor

Darach Watson

**Author:** SNEPPEN, Albert

**Presenter:** SNEPPEN, Albert

**Session Classification:** Poster session