**Plenary Talk** PV IV Tue 9:00 HSZ/AUDI

**Characterising exoplanet atmospheres with the Webb space telescope** — •Pierre-Olivier Lagage — CEA Paris-Saclay, Gif-sur-Yvette, France

Thanks to its large collecting area (25 square meters) and its large wavelength coverage (0.6 * 28 microns), the Webb space telescope is a game changer. In the exoplanet domain, it takes us right into what can be called the second chapter of the study of exoplanets: the characterization of their atmosphere (atomic and molecular composition, presence of hazes and clouds, vertical temperature-pressure profile, presence of zonal circulation, just to name a few). Such information is needed to test and improve the chemistry and dynamics incorporated in the atmospheric models applied to alien worlds which have no equivalent in the Solar System. Two types of observations are in use: direct imaging thanks to coronagraphic observations and spectroscopic observations of transiting exoplanets. A large diversity of exoplanets, ranging from giant exoplanets with masses several times that of Jupiter to Earth-sized rocky exoplanets, has started to be characterized. In this talk, I will discuss the first results, which are remarkable, and show the great perspectives in front of us.