Factors affecting the Habitability of Earth-like Exoplanets

This presentation will briefly review central factors affecting the potential habitability of terrestrial type exoplanets. First, we focus on atmospheres and the effect of their mass and composition. Second, we discuss the effect of the central star and the influence of UV and cosmic rays. Third, we investigate the effect of biogeochemical interactions. Finally, in order to link with observations we calculate theoretical spectroscopic signal-to-noise ratios based on a hypothetical "Earth" placed at 10pc calculated for the James Webb Space Telescope and the European Extremely Large Telescope instrument specifications.