



RSPR seminars

Dr Ricardo Hueso
Universidad del
País Vasco (Bilbao, Spain)

“Saturn atmospheric dynamics after Cassini and before JWST and the E-ELT: The role of small size telescopes”

“The Cassini mission provided a wealth of data on the Saturn atmosphere including detailed winds and their vertical structure, meteorology of particular vortices, atmospheric waves including the north polar hexagon, seasonal changes in cloud morphology and colors and detailed multi-wavelengths observations of convective storms from small size to giant scale. These phenomena were covered during the time-span of the Cassini mission which was roughly equivalent to half a Saturn year. However Saturn’s atmosphere is a dynamic system that we don’t fully understand with many intriguing open questions. New observational capabilities under development will be extremely competitive in all fields of Astronomy. Current ground-based observations of Saturn at high-spatial resolution are scarce but amateur observers operating small telescopes and sometimes 1-m size telescopes are producing new data with a quality impossible to imagine a decade ago. I will show how current amateur observations of Saturn can discover and follow-up major events in the planet and trigger specific observations in larger telescopes. I will show HST observations of the planet acquired in 2015 that were triggered by amateur observations and not by Cassini observations of the planet. I will also show further observations of Saturn obtained by our research group using the 2.2m telescope at Calar Alto using the PlanetCam instrument. The analysis of Saturn ground-based amateur observations over the last two years can be directly compared with Cassini images identifying specific features as they evolve through the changing seasons. These low-spatial resolution but highly frequent observations will help to focus new questions on Saturn’s atmosphere at the epoch of the extremely competitive telescopes”.



Monday, May 14th at 2 pm in Physics LTA