PRIDE of Tasmania out of this world

It is an audacious mission to Jupiter’s frozen moons that could unlock the secrets to life, and now the University of Tasmania will play a key role in the historic European Space Agency (ESA) project launching in 2022.

When the spacecraft called JUICE (Jupiter Icy Moons Explorer) blasts off from French Guiana in three years, it will carry a payload of 11 different instruments and experiments on board, including the Planetary Radio Interferometer and Doppler Experiment (PRIDE).

The University of Tasmania recently signed a memorandum of understanding with the Joint Institute for VLBI in Europe, paving the way for the Mt Pleasant Radio Observatory to be included in PRIDE, which aims to investigate the gravity fields of Jupiter and its moons.

And while the spacecraft will not arrive at Jupiter until 2029, the Mt Pleasant telescope will provide support, relaying vital information during its seven-year voyage through the solar system.

“JUICE is the largest mission ever planned by ESA on planetary exploration and the scientific community have great expectations for it,” University of Tasmania astronomer Guifre Molera Calves said. “This collaboration means that we will have first-hand access to unrevealed information of Jupiter and our solar system.”

The Head of Physics Simon Ellingsen said the MOU announcement built on a long and rich history of University of Tasmania involvement in international space missions.

“With the Australian Space Agency funding an upgrade to Tasmania’s spacecraft tracking facilities we are looking forward to playing an even bigger role in the future supporting both Australian-led and international projects,” Professor Ellingsen said.

JUICE is the first large-class mission in ESA’s Cosmic Vision 2015-2025 program and will spend at least three years making detailed observations of gas giant Jupiter and three of its largest moons, Ganymede, Callisto and Europa.