

Alba FERNANDEZ BARRAL



After obtaining the *Physics Degree* in Universidad de Santiago de Compostela (USC), Dr. Alba Fernández-Barral accomplished the master's degree in *Astrophysics, Particle Physics and Cosmology* at the Universitat de Barcelona (UB). Afterwards, she joined the gamma-ray group in the Institut de Física d'Altes Energies (IFAE, Barcelona) to perform her *PhD thesis*, where she became an active member within the MAGIC Collaboration working as principal investigator in different projects of the Galactic Working Group, with special emphasis on binary systems and pulsar wind nebulae, as well as within the CTA Collaboration, focused on the characterization and validation of different subsystems of the Large-Sized Telescope (LST) camera, currently located in La Palma. Already at IFAE, she participated at several national and local outreach activities to bring the high-energy Universe to the high-schools. Along this thesis period, she carried out three research sojourns of several months each, granted on mobility scholarships, in USA (one at the Michigan Technological University, one at NASA Goddard Space Flight Center and the University of Maryland, to work with the *Fermi-LAT* and the HAWC Collaborations) and another in Germany (at the Max-Planck-Institut für Kernphysik). During the thesis, she published five articles as main author, including the detection of high-energy gamma rays from the famous microquasar Cygnus X-1, and signed more than 50 collaboration articles. She successfully defended her thesis "*Extreme particle acceleration in microquasar jets and pulsar wind nebulae with the MAGIC Telescopes*" on October 2017 at IFAE, obtaining the maximum qualification *Excellent Cum Laude*, with *International Doctoral Research Component* for her work on foreign institutes. The thesis was also nominated by the Universitat Autònoma de Barcelona (UAB) for the Springer Theses Award as a recognition of outstanding PhD research, and it was selected and published by Springer in 2018. In December 2017, Alba started a postdoctoral position at the Università di Padova following her research in gamma-ray astrophysics. In September 2018, she joined the Cherenkov Telescope Array Observatory as the Outreach and Education Coordinator, where she leads the overall STEM (science, technology, engineering and mathematics) education program development.