

Press Release 2021

THE FLIGHT OF THE MISSION EUSO-SPB2, ON A STRATOSPHERIC BALLOON, HAS ENDED



The NASA stratospheric balloon for the EUSO-SPB2 (Extreme Universe Space Observatory - Super Pressure Balloon) mission in, which Italy also participates thanks to ASI Italian Space Agency and INFN, rose into the sky on the morning of Saturday 13 May. Taking off from the Wānaka airport base (New Zealand) of the Columbia Scientific Balloon Facility (CSBF), the mission used a Super Pressure Balloon, a latest generation stratospheric balloon platform used

by NASA for a few years to operate scientific payloads of high weight and dimensions for flights of very long duration. However, after the launch procedures were completed successfully, a problem in maintaining the expected altitude during the flight, caused by an anomalous loss of the balloon, forced NASA to terminate the mission prematurely. The balloon has therefore safely completed its flight over the Pacific Ocean, after almost 35 hours. Developed in the context of the JEM-EUSO programme, which intends to explore the use of innovative investigative tools for multimessenger astronomy, the EUSO-SPB2 mission had the objective of testing a new type of space detector for the observation of neutrinos and very high energy cosmic rays to integrate the measurements carried out on other cosmic messengers by the current space missions. ASI and INFN have been participating in this experiment since 2021, as part of an international collaboration that includes NASA and research institutes and universities in the USA, France, Japan, Poland, Russia, Sweden, Czech Republic, Slovakia and Switzerland. The Italian researchers were responsible for the realization of the data acquisition system, the trigger system and the control software of the EUSO-SPB2 Fluorescence Telescope. Through a collaboration agreement with the University of Chicago, institution responsible for the EUSO-SPB2 mission, ASI and INFN provided the Italian hardware contribution to the mission and participated in all phases of testing, space qualification, assembly and launch. EUSO-SPB2 was the second and final mission of NASA's balloon launch campaign from New Zealand this year. The Italian contribution to the mission will continue in the analysis of the data that have been produced by the observations by EUSO-SPB2