High Energy Astrophysics research at Sabancı University concentrates on the structure, dynamics, and evolution of neutron stars, black holes, white dwarfs, matter in their environments, as well as the radiation emitted by these compact objects. Instrumentation research with room temperature semiconductors is also pursued.

The research particularly aims at understanding the structure of matter at the highest densities, up to and beyond 10^{15} g cm^{-3}, under extreme magnetic fields of up to10^{15} G and the most rapid possible rotation rates, with rotation periods as short as milliseconds. Theoretical research, as well as observations with international X-ray and gamma ray observatory satellites, in addition to optical observations at the TÜBİTAK National Observatory, are pursued. The Sabancı University Astrophysics and Space Forum also hosts workshops and fosters scientific collaboration with astrophysicists in Turkey and abroad. Specifically, Sabancı University is the host institute of the FP6 Transfer of Knowledge project ASTRONS , and organizes international workshops on neutron stars and instrumentation every year. Thanks to ASTRONS and other resources, the institute acquires long and short term distinguished visitors, such as Tomaso Belloni, Niels Lund, Marat Gilfanov, Feryal Özel, Dimitrios Psaltis, K. S. Cheng, or Werner Becker.

The current faculty at Sabancı consists of Dr. Ali Alpar, Dr. Ersin Göğüş, Dr. Ünal Ertan, Dr. Emrah Kalemci, Dr. Hakkı Ögelman (adjunct, visits every year). Dr. Trevor Sidery is the ASTRONS postdoc, and we plan to hire another ASTRONS postdoc in 2009. Four graduate students continue their PhD studies on high energy astrophysics at Sabancı. The education and research environment at Sabanci is English.

Detailed information on high energy astrophysics can be found at Astrophysics and Space Forum and Sabanci Physics Program web pages http://astrons.sabanciuniv.edu/asf and http://www.sabanciuniv.edu/mdbf/physics/eng/
.