

The extrasolar planets have become one of the most exciting and promising research fields in modern astronomy. They could reveal the answers to some of the biggest questions such as the origin of life, planetary evolution, or the existence of extraterrestrial life in the universe. Exoplanets also present a unique option for scientific outreach as they are easy to imagine and understand. In this thesis, the current research, its history, and future plans are described with a focus on Czech participation in it. Especially the PLATO mission will give the Czech Republic a front seat in exoplanetary science. Various outreach activities are presented both conducted by the author and proposed for the future. A special focus was given to the work with talented high school students. Three activities were organized with the aim to present the research on the exoplanets to students and to give them the opportunity to try and participate in it. These activities covered the area of astronomical observations, the analysis of the light curves from the transit photometry, and finally the data processing of the stellar spectra for the radial velocity measurements. The activities were evaluated for future reference.