The BRITE-Constellation Mission

Konstanze Zwintz*1

¹Institute of Astronomy, KU Leuven – Celestijnenlaan 200D, 3001 Leuven, Belgium

Abstract

The BRITE-Constellation (BRight Target Explorer) mission consists of six nano-satellites aiming to study the variability of the brightest stars in the sky. Austria, Poland, and Canada contribute two spacecrafts each. All satellites have the same structure: they are 20 cm cubes with a CCD photometer fed by 3 cm aperture telescopes, where the main difference between pairs of satellites is the instruments' passband. All satellites have been launched, but one was lost during the phase of detaching from the launcher. The main BRITE-Constellation scientific objective is to measure low-level oscillations and temperature variations in stars brighter than 4.0 mag in order to study stellar pulsations, spots, and granulation, detect planets around massive stars, and enlarge the base of proven constant photometric standard stars. On behalf of the BRITE-Constellation team, I will describe the main characteristics of the mission, the main scientific goals, some technical difficulties encountered after the launches, the extensive ground-based follow-up campaigns, and selected first results.

^{*}Speaker