Verification of ELT performance by Monte Carlo Simulations

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The European Laser Timing (ELT) is an optical time transfer experiment that will be carried out to the ESA mission ACES (Atomic Clock Ensemble in Space). This fundamental physics mission will bring two high performance clocks on board of the international space station (ISS). The clocks will be combined to compose a timescale of unprecedented accuracy and precision in space. The optical time transfer between ground clocks and the ACES timescale will be carried out by SLR stations equipped with hydrogen masers. To verify the targeted precision for time transfer we performed a Monte Carlo Simulation. In this paper we will introduce the simulation program, explain the data analysis method and show recent results. We will focus on different ranging conditions and on difficulties which are related to the multiple retroreflectors mounted on the ISS and the poor attitude information given.