Towards Turnkey SLR Systems: New ESA Laser Ranging Station (ELRS)

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A new, mostly COTS based "Laser Ranging Station for Cooperative Targets" is being built for European Space Agency (ESA) by a consortium of European companies and institutes (D, A, CH, LV) under the lead of DiGOS Potsdam GmbH. The objective of the ELRS is to establish a flexible and economical basis for various applications. Starting from laser ranging to cooperative targets, it allows for easy future upgrades, like for non-cooperative targets/debris ranging, for space-to-ground laser communication, and for serving as a general test bed for optical technologies. The whole system is designed for fully automated operation in future. We will present the multi-purpose concept and the flexibilities of the design of ELRS.