The upgrading of the Borowiec SLR station in 2006/2007

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The presentation shows changes performed in the Borowiec SLR station (7811) in the last months of 2006 and in 2007. The SLR system is modernize for detect returns from high satellites especially GALILEO, and for improving the quality and efficiency of tracking. The part of these tasks including detailed Nd:YAG laser adjustment, installation of a new transmitting telescope with remote control of divergence of the laser beam and modernization of the laser building especially operator's and laser rooms with a new air-condition system are finished. As the effect are the first returns from GIOVE-A and GPS and significant increase of the number of returns and accuracy of the measurements for LAGEOS satellites. The next step is re-cover of the main and secondary mirrors and installation the new mirrors and their regulation systems in Coude part. The most important change will be installation of a new HAMAMATSU PMT-MCP detector with 30% quantum efficiency and small Transit Time Spread. Additionally, in receiving part will be installed the new interference and neutral filters, remote control of the space filter and camera CCD for control of the output laser beam position by the main mirror. The main changes in electronic part include installation of the new gating systems for stop channel of the time interval counter and photomultiplier photocathode. The Stanford time interval counter was tested in Herstmonceux for determination the range corrections. The software changes include installation of a new real time control system under Linux and modernization of the base software with transmit and receive data in the real time. The installation of an indoor calibration target will be last task in 2007.We expect significant improving of the results of the laser ranging, but full information about effectiveness of these changes will be available in the next year.