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2.3 Recent SLR tracking improvements at Herstmonceux

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Daytime tracking of GNSS satellites represents a challenge for many stations of the SLR network. The inherently weak return signals from laser retroreflector arrays mounted on high-orbiting objects make GNSS the most difficult targets of the missions supported by the ILRS. Daytime operations impose further complications, as the background noise levels are drastically increased, accurate pointing and beam alignment may be compromised by thermal effects, and the mandatory use of spectral filters reduces the receiver transmission. The latest of a long list of system maintenance and upgrade changes carried out at Herstmonceux station have enabled a more consistent and reliable daytime tracking of GNSS. Among these, a laser upgrade and the improvement of the daytime filters setup have provided a noticeable enhancement to our tracking capabilities of challenging targets. Here we present these recent developments and comment on possible future enhancements that should be relevant for other stations of the network.