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Multi-satellite tracking at SGF Herstmonceux

The Herstmonceux laser ranger is an extremely prolific and accurate component of the ILRS network. It is consistently in the top ten most productive stations of the network, as demonstrated by the ILRS monthly report cards [ILRS web], and its LAGEOS observations have been shown to be accurate at a level of about 1-2mm [JoG paper]. In this presentation we outline the steps we have taken to develop and maintain our significant contribution as a high-performance ILRS station. We describe how satellite priorities and budgetary considerations effect observing session scheduling, and how we are able to work effectively despite the less than perfect weather. We discuss the positive impact on speed of acquisition and daytime capability that resulted from an upgrade of the kHz laser and improvement of below-optimum spectral filter transmission. We discuss the tools that are available to help the observer make satellite priority decisions, especially among the large and increasing numbers of GNSS satellites on the ILRS roster, determine in real-time the precision of each NP as the returns arrive, and to monitor local aircraft movements.