

VST in the era of the large sky surveys



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GBOT (Ground Based Optical Tracking) - astrometric monitoring of the Gaia satellite from the ground

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The GBOT (Ground Based Optical Tracking) campaign is part of the ground-breaking Gaia satellite mission and aids Gaia in achieving the ambitious goals in astrometric accuracy. Our group based at ARI and the Observatoire de Paris obtains and reduces astrometric data obtained by 2m class telescopes from several partner institutions on a daily basis, among them, ESO's VST telescope on Cerro Paranal in Chile. The results are regularly delivered to ESOC (Darmstadt) as an input for the Gaia orbit reconstruction, which is necessary to compensate for systematic effects, such as aberration. Additionally we are routinely scanning our data for asteroids which happen to be in the field; thus far finding more than 17,000 objects, ~40% of them new. In order to confirm these objects, and to determine more about their nature, we have recently begun adding a follow up programme, also using the VST. These additional observations are invoked within 48 hours after the original GBOT

observations, and are targeted in such a way, that as many of the candidates observed before can be recovered. This could serve as an example of how instruments such as the VST can supplement large whole sky surveys.

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