

## The Solaris project. A timing survey for circumbinary planets around eclipsing binary stars.

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**Abstract.** The SOLARIS project aims to detect from the ground circumbinary planets with the timing of eclipses of eclipsing binary stars. For the SOLARIS project, we were granted 2.5 million Euro to establish a network of four robotic 0.5-m telescopes on three continents (Australia, Africa and South America) to carry out high cadence, high precision photometry of a sample of eclipsing binary stars. Three of the telescopes are already installed and the fourth one will become operational in early 2014. The project's web site is [www.projectsolaris.eu/](http://www.projectsolaris.eu/).

This effort is accompanied by our radial velocity (RV) survey for circumbinary planets which employs our novel iodine cell based technique tailored to provide very high precision RVs of double-lined binaries. Altogether these two efforts, targeting about 300 eclipsing binary stars, constitute the biggest ground based survey for circumbinary planets.

Moreover, we expect that both these efforts will have a significant impact on the observational stellar astronomy. In particular for at least half of our sample we expect to deliver masses of the stars with an accuracy 10-1000 times better than the current state of the art.