

## VST in the era of the large sky surveys



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# The Universe in Full Color : Multi-Wavelength Studies of the Cosmic Star Formation History

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“”The Universe in Full Color : Multi-Wavelength Studies of the Cosmic Star Formation History””

The coming of age of multi-wavelength astrophysics over the past decade has allowed us to probe deep and wide into the distant universe at all wavelengths thanks to the combination of ground-based and space-based instrumentation. This giant leap in observational capabilities has provided much insight into how different wavelengths can be used to reliably trace star formation rates and thus place stronger constraints on the cosmic star formation history and on computer simulations trying to reproduce it.

However, optimally merging different datasets remains a formidable challenge due to the size and complexity of upcoming surveys. The HELP-IDIA Panchromatic PrOject (HIPPO - <http://www.mattavaccari.net/hippo/>) aims to tackle these challenge by combining the datasets and the tools developed by HELP (<http://herschel.sussex.ac.uk>) with the cloud computing infrastructure deployed by IDIA (<http://www.idia.ac.za>) to create a cloud-computing environment for the science exploitation of multi-wavelength surveys.

I will introduce HIPPO’s main objectives and illustrate the cloud-based operational model developed at IDIA. I will then detail how VST GTO and Public Survey data are being incorporated within its multi-wavelength database to support upcoming MeerKAT radio surveys of the southern skies and thus better enable studies of the cosmic star formation history.”

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