

# INTRODUCTION

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Welcome to the bi-annual report of the Isaac Newton Group of Telescopes. This report is prepared at a time where the observatory finds itself at a crossroads. On the one hand, the telescopes, after more than 20 years of successful operation continue to deliver excellent science and new opportunities, while on the other hand we live in uncertain and turbulent times when funding for continued operation of the telescopes is under pressure.

But if history is our guide to the future, with the WHT having contributed to over 1500 science papers in refereed journals and having played an important role in shaping a generation of scientists, my expectation is that also in future years the ING telescopes will provide a valuable resource to astronomers. Also during the past two years the ING telescopes contributed to exciting research fields ranging from trans-Neptunian objects, through exo-planets and brown dwarfs, to gamma-ray bursters, galaxy formation and evolution, as you can read in this report.

The positive outlook onto the future is underpinned by the prospects of exciting new scientific potential offered by recent and planned developments at the WHT. Just to mention a few highlights: recently a Rayleigh laser beacon was completed that greatly enhances the sky coverage of the adaptive optics system, thus providing Adaptive Optics survey capability. A new imager and low-resolution spectrograph, ACAM, is in an advanced state of development for the WHT, and together with the Center for Astrophysics and Geneva Observatory we are advancing the development of an extremely stable high-resolution spectrograph that will be in operation in 2010 and will have a major impact in the search for extra-solar planets, and ultimately even Earth-size planets.

Developments at the ING must be seen in a wider, European perspective. During the last few years, ideas have been developed to facilitate collaboration on medium-size telescopes across Europe. It is generally recognised that these telescopes remain a valuable scientific resource, but at the same time financial realities make it difficult to maintain and develop them. Cooperation must be the answer. Such a long-term vision of creating a pan-European facility in which the ING will play a central role is strongly endorsed by the partners in the ING and actively pursued in the OPTICON network. Hopefully in the next few years we will see this become a reality.

And at the end of the day, literally, the domes open and photons are being collected with the aim of unveiling the physics of the universe around us. This is only possible thanks to the continued effort from the team of committed, enthusiastic, and competent people forming the ING, day-after-day, night-after-night. Our team is prepared for the future.



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*Director of ING*