

400 Years of Astronomical Telescopes

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In preparation for the “International Year of Astronomy 2009,” the editors of *Experimental Astronomy* were planning to devote a special issue of the journal to the development of observational astronomy over the past 400 years. With the aims and scope of *Experimental Astronomy* being perfectly matched by a conference entitled “400 Years of Astronomical Telescopes” organized by the Leiden Observatory in September 2008, journal editors and conference chairs agreed to publish the papers presented at that meeting in a fully refereed special issue of *Experimental Astronomy*. Today, we are happy and grateful that this enterprise materializes as two full special volumes of our journal.

The “International Year of Astronomy 2009” is celebrating the first astronomical use of the telescope by Galileo initiating an enormous wealth of astronomical discoveries over the past 400 years. As with many inventions, the astronomical telescope was probably the result of developments by numerous people. Around the end of the sixteenth century, the making and polishing of spectacle lenses had been gradually improved and magnifying optics and combinations of optical components had been developed. Significant progress was made by people like Juan Roget in Spain, Sacharias Janssen and Jacob Metius in the Netherlands, and Raffaello Gualterotti in Italy. However, it was

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the spectacle maker, Hans Lipperhey from Middelburg (The Netherlands), who came up with the idea to stop down the aperture of the objective lens, which significantly sharpened the magnified image. On 25 September 1608, he presented his instrument to Prince Maurice of Nassau in The Hague and applied for a patent. While the patent was denied (it could be easily copied and used by foreign military), the application placed this important date in the history books.

Approaching the “International Year of Astronomy 2009,” it soon became clear that historical societies, amateur astronomers, and the worldwide activities for the IYA2009 are likely to generate numerous meetings on telescopes, mainly focused, however, on the historical perspective and on public outreach. Hence, there was the challenge to define an attractive, unique, and focused scope for a meeting on “400 Years of Astronomical Telescopes.” The SOC agreed to include all types of telescopes that are being used for the detection of astronomical signals (including key technologies), covering the entire electromagnetic spectrum, as well as neutrino detectors. In addition, the SOC wanted to include closely related sociological and political topics, which are usually not covered by scientific conferences.

As it was the goal of the conference on “400 Years of Astronomical Telescopes” that all presentations would provide overviews of the various fields rather than promoting specific projects, the SOC worked toward a program that consisted exclusively of review talks by speakers who are recognized as leaders in their fields. We are proud publishing their papers in volumes 25 and 26 of *Experimental Astronomy–Astrophysical Instrumentation and Methods*.

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