

400 Years of Astronomical Telescopes: A Review of History, Science and Technology

PROGRAMME

Monday 29 September 2008

09:00	<i>Welcome, registration and coffee</i>	
09:40	Opening address by ESTEC	Martin Kessler
09:50	Opening address by the IAU	Karel van der Hucht
Session 1	History of Optical Telescopes Chair: Peter Abrahams (Antique Telescope Society)	
10:00	The Beginnings in the Netherlands, from Lipperhey to Huygens	Albert van Helden
10:50	Galileo's Telescope: History, Scientific Analysis, and Replicated Observations	Giorgio Strano
11:40	<i>Coffee break</i>	
12:00	The Era of Newton, Herschel & Lord Rosse	Jim Bennet
12:35	The Great 19th Century Refractors	James Lequeux
13:10	<i>Lunch break</i>	
Session 1	History of Optical Telescopes (cont.) Chair: Harry van der Laan (Leiden Observatory)	
14:10	In the Grip of the Big Telescope Age	David DeVorkin
14:45	Beautiful and Cantankerous Instruments: Telescopes, Technology, and the Changing Practice of Astronomy	Patrick McCray
15:20	<i>Coffee break</i>	
15:50	The History of Optical Instruments	Guy Monnet
Session 2	History of Non-Optical Telescopes	
16:25	The History of Radio Telescopes	Woody Sullivan
17:00	History of Infrared Telescopes and Astronomy	George Rieke
17:35	<i>To Space Expo</i>	
18:00	<i>Welcoming Reception @ Space Expo & Announcement of Selected Poster Presentations</i>	

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Session 3	History of Non-Optical Telescopes (cont.) Chair: Joachim Truemper (Max Planck Institut fuer extraterrestrische Physik)	
09:00	History of X-ray Telescopes and Astronomy	Riccardo Giacconi
09:50	History of Gamma - Ray Telescopes and Astronomy	Klaus Pinkau
10:25	History of Solar Telescopes and Astronomy	Oskar von der Luehe
11:00	<i>Coffee</i>	
11:20	Imaging VHE Gamma-Ray Telescopes	Heinz Voelk
11:55	History of Neutrino Telescopes/Astronomy	Atsuto Suzuki
Session 4	Miscellaneous Aspects and Projects Chair: Donald Morton (National Research Council of Canada)	
12:45	400 Years of Astrometry: From Tycho Brahe to Hipparcos	Erik Hog
13:20	<i>Lunch break</i>	
14:20	History of Astronomical Discoveries	Malcolm Longair
15:10	Capabilities of Amateur Telescopes	Detlef Koschny
15:45	<i>Coffee break</i>	
16:05	Building the Hubble Space Telescope	Bob O'Dell
16:40	Zooming in on the Galactic Center	Reinhard Genzel
17:50	<i>Buses to Museum Boerhaave</i>	
18:15	<i>Boerhaave: Arrival</i>	
18:30	<i>Boerhaave: Welcome - Dirk van Delft</i>	
18:35	<i>Boerhaave: "Leiden Observatory" - Harry van der Laan</i>	
19:00	<i>Boerhaave: Introduction to Exhibit - Hans Hooijmaijers</i>	
19:20	<i>Boerhaave: Exhibition and walking dinner</i>	
21:00	<i>Busses back to the hotels</i>	

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Wednesday 1 October 2008

Session 5	Fundamental Telescope Technologies Chair: Dietrich Lemke (Max Planck Institut fuer Astronomie)	
09:00	Technology: Mirror Casting, Polishing, Segmentation, and Active Optics	Lothar Noethe
09:35	Telescope Designs: Technology Keeping Up with Design or Vice Versa	Jason Spyromilio
10:10	A breakthrough in astronomy: the advent of adaptive optics	Pierre Léna
10:45	<i>Coffee break</i>	
11:15	Technology: Interferometry (All Wavelengths)	Andreas Quirrenbach
11:50	The Rise of the Submillimetre	Ian Robson
12:25	Back to the Future: Technology Directions for Radio Astronomy	Jim Cordes
13:00	<i>Lunch break</i>	
14:00	<i>Poster Presentations</i> Chair: Remko Stuik (Leiden Observatory)	
15:00	<i>Coffee break</i>	
15:30	Realisation of X-ray telescopes - from design to performance	Bernd Aschenbach
16:05	Technology: Gamma-ray telescopes	Neil Gehrels
Session 6	Political and Sociological Aspects	
16:40	ESO's Past and Future	Lo Woltjer
17:15	Telescope Technology to Harvest Solar Energy	Roger Angel
18:00	<i>Buses to Dinner Cruise</i>	
18:30	<i>Dinner Cruise</i>	

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Thursday 2 October 2008

Session 7	Political and Sociological Aspects (cont.)	
09:00	Telescopes and Sacred Mountains	Günther Hasinger
09:35	Environmental Threats to Astronomy - What to Do?	David Crawford
10:10	The Role of Observatories in Underdeveloped Countries	Kevin Govender
10:45	<i>Coffee</i>	
11:15	Telescopes Seen Through the Lens of Scientometrics	Virginia Trimble
11:50	Space Astronomy as Very Big Science	Robert Smith
12:25	Conceiving and Marketing NASA's Great Observatories	Martin Harwit
13:00	<i>Lunch</i>	
Session 8	Perspectives for Future Telescopes	
14:00	Future Technologies for Telescopes and Instruments	Colin Cunningham
14:35	Challenges and Perspectives for Future Telescopes	Tim de Zeeuw
15:25	<i>Conference Close</i>	
	Poster Session	
	<p>The Rise and Fall of Australian Colonial Observatories <i>Tasker, Ian</i> <i>University of Western Sydney (Australia)</i></p> <p>650 Years of Optics: From Alhazen to Fermat and Rømer <i>Hoeg, Erik</i> <i>Niels Bohr Institute, Copenhagen University (Denmark)</i></p> <p>History of Development of Astronomical X-ray Telescopes in the Eastern Europe <i>Hudec, Rene</i> <i>Astronomical Institute (Czech Republic)</i></p> <p>Astronomical X-ray Telescopes of Lobster Eye Type <i>Hudec, Rene¹; Pina, L.2; Sveda, L.2; Inneman, A.3; Semencova, V.3; Skulinova, M.1</i> <i>1Astronomical Institute AS CR (Czech Republic); 2CTU (Czech Republic); 3RITE (Czech Republic)</i></p> <p>Precursors of the Hubble Space Telescope <i>Morton, Donald</i> <i>National Research Council of Canada (Canada)</i></p> <p>The Astronomical Telescope between Kepler and Newton <i>Mahoney, Terence</i> <i>Instituto de Astrofísica de Canarias (Spain)</i></p> <p>Galileo 1610: an Original Play for the International Year of Astronomy <i>Larrouy, C.1; Lacoste, G.1; Blanc, M.1; Blanc, E.1; Habibi, E.1; Baratte, Y.1; Gibert, B.1; Fuerte, L.1; Gaboriaud, R.2; Gaboriaud, A.3; Von Ballmoos, P.4</i> <i>1Théâtre Extensible (France); 2Prodigima (France); 3CNES (France); 4CESR (France)</i></p>	

Solar Telescopes of the Crimean Astrophysical Observatory: History of Establishment and Discoveries

*Vavilova, Iryna*¹; *Stepanyan, N.N.*²

1Main Astronomical Observatory, NAS of Ukraine (Ukraine); 2Crimean Astrophysical Observatory (Ukraine)

Ukrainian T-Shape Radio Telescope UTR-2 and Ukrainian VLBI System URAN: 50 Years at the Service of Decameter Astronomy

*Vavilova, Iryna*¹; *Konvalenko, A.A.*²; *Miroshnichenko, A.P.*²

1Main Astronomical Observatory, NAS of Ukraine (Ukraine); 2Institute of Radio Astronomy, NAS of Ukraine (Ukraine)

The Infrared Space Observatory (ISO)

*Salama, Alberto*¹; *Cesarsky, C.*²; *Clegg, P.*³; *de Graauw, T.*⁴; *Kessler, M.F.*⁵; *Lemke, D.*⁶; *Steinz, H.*⁵

1ESA (Spain); 2ESO (Germany); 3Queen Mary, University of London (United Kingdom); 4SRON (Netherlands); 5ESA - ESTEC (Netherlands); 6Max-Planck-Institut für Astronomie (Germany)

Observations with Small Telescopes at the Terskol Observatory: Results and Benefits

Godunova, Vira; Tarady, V.K.; Sergeev, O.V.; Karpov, M.V.; Zhilyaev, B.E.

ICAMER Observatory (Ukraine)

Fraunhofer Refractor at Tartu Observatory

Annik, Kalju

Tartu Observatory (Estonia)

From Observation to Gaia Catalogue

Blasco, Carmen

ESA (Netherlands)

The Gaia Spacecraft and Instruments

Blasco, Carmen

ESA (Netherlands)

Gaia Mission Overview

Blasco, Carmen

ESA (Netherlands)

Amateur Robotic Telescope

Nieuwenhout, Frans

AWSV Metius (Netherlands)

Small Robotic Telescopes for HEA in Ondrejov

*Nekola, Martin*¹; *Strobl, Jan*¹; *Kocka, Matus*¹; *Hudec, Rene*¹; *Simon, Vojtech*¹; *Jelinek, Martin*²; *Polasek, Cyril*¹; *Munz, Filip*³

1Astronomical Institute of the Academy of Sciences (Czech Republic); 2IAA CSIC, Granada (Spain); 3IASF/INAF, Bologna (Italy)

Gaia's Scientific Rewards

Blasco, Carmen

ESA (Netherlands)

The Great Melbourne Telescope: A Contextual History

Gillespie, Richard

Museum Victoria (Australia)

XMM-Newton: Across the X-ray Universe

Gonzalez-Riestra, Rosario ; Rodriguez-Pascual, P.M.

XMM-Newton Science Operation Centre (Spain) v

AKARI: Space Infrared Cooled Telescope

*Onaka, Takashi*¹; *Salama, Alberto*²

1University of Tokyo (Japan); 2European Space Astronomy Centre, ESA (Spain)

Airborne Infrared Telescopes
Erickson, Edwin
NASA Ames Research Center (United States)

The Early Spread of the Telescope in Asia
Zoomers, Henk
Asian Historical Consultancy (Netherlands)

Galileo and the Birth of Science
Saucedo Morales, Julio
Universidad de Sonora (Mexico)

A Focusing Telescope for Gamma-ray Astronomy
von Ballmoos, Peter
CESR (France)

European Astronomy in Antarctica
Zinnecker, Hans
Astrophysikalisches Institut Potsdam (AIP) (Germany)

On the Telescopes in the Painting of Bruegel "The Vision"
Selvelli, Pierluigi
INAF (Italy)