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**Larry M. Stepp
Roberto Gilmozzi**
Editors

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R. Ragazzoni, A. Baruffolo, Osservatorio Astronomico di Padova, INAF (Italy); C. J. Biddick,
O. P. Kuhn, Large Binocular Telescope Observatory, Univ. of Arizona (United States);
E. Diolaiti, Osservatorio Astronomico di Bologna, INAF (Italy); D. Thompson, A. Rakich, Large
Binocular Telescope Observatory, Univ. of Arizona (United States)
- 7012 1N **Control analysis of the TMT primary segment assembly** [7012-58]
P. M. Thompson, Systems Technology, Inc. (United States); D. G. MacMynowski, M. J. Sirota,
TMT Observatory Corp. (United States)
- 7012 1O **E-ELT primary mirror control system** [7012-59]
M. Dimmler, T. Erm, B. Bauvir, B. Sedghi, H. Bonnet, M. Müller, A. Wallander, European
Southern Observatory (Germany)
- 7012 1P **Analysis of the TMT mount control system** [7012-60]
P. M. Thompson, Systems Technology, Inc. (United States); D. G. MacMynowski, M. J. Sirota,
TMT Observatory Corp. (United States)
- 7012 1Q **Acceleration feedback control on an AT** [7012-61]
B. Sedghi, B. Bauvir, M. Dimmler, European Southern Observatory (Germany)

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R. D. Gehrz, Univ. of Minnesota (United States); E. E. Becklin, Univ. Space Research
Association, NASA Ames Research Ctr. (United States)
- 7012 1S **A balloon-borne stratospheric telescope for Venus observations** [7012-63]
E. F. Young, M. A. Bullock, Southwest Research Institute (United States); A. Kraut, G. Orr,
K. Swartzlander, T. Wimer, E. Wong, P. Little, Harvey Mudd College (United States);
Y. Nakaya, Kogakuin Univ. (Japan); R. Mellon, Equinox Interscience, Inc. (United States);
L. Germann, Left Hand Design Corp. (United States)

SESSION 15 SITE TESTING AND CHARACTERIZATION I

- 7012 1T **E-ELT site characterization status** [7012-64]
J. Vernin, UMR6525 Fizeau, Nice-Sophia Antipolis Univ. (France); C. Muñoz-Tuñón, Instituto de Astrofísica de Canarias (Spain); M. Sarazin, European Southern Observatory (Germany)
- 7012 1U **Giant Magellan Telescope site evaluation and characterization at Las Campanas Observatory** [7012-65]
J. E. Thomas-Osip, G. Prieto, GMT/Las Campanas Observatory (Chile); M. Johns, M. M. Phillips, Observatories of the Carnegie Institute of Washington (United States)
- 7012 1V **Inuksuit: robotic astronomical site-testing stations in the Canadian High Arctic** [7012-66]
E. Steinbring, B. Leckie, P. Welle, T. Hardy, Herzberg Institute of Astrophysics, National Research Council Canada (Canada); B. Cole, D. Bayne, Environment Canada (Canada); B. Croll, Univ. of Toronto (Canada); D. E. Walker, R. G. Carlberg, Cerro Tololo Inter-American Observatory (Chile); G. G. Fahlan, Herzberg Institute of Astrophysics, National Research Council Canada (Canada); B. Wallace, Defence Research and Development Canada (Canada); P. Hickson, Univ. of British Columbia (Canada)
- 7012 1W **G-Scidar measurements of the optical turbulence with standard and high vertical resolution at Mt. Graham** [7012-67]
J. Stoesz, E. Masciadri, Osservatorio Astrofisico di Arcetri (Italy); S. Hagelin, Osservatorio Astrofisico di Arcetri (Italy) and Uppsala Univ. (Sweden); F. Lascaux, Osservatorio Astrofisico di Arcetri (Italy); S. Egner, Max-Planck-Institut für Astronomie (Germany)

SESSION 16 SITE TESTING AND CHARACTERIZATION II

- 7012 1X **Status of the Thirty Meter Telescope site selection program (Invited Paper)** [7012-68]
M. Schöck, TMT Observatory Corp. (United States); S. Els, Cerro Tololo Inter-American Observatory (Chile); R. Riddle, W. Skidmore, T. Travouillon, TMT Observatory Corp. (United States); R. Blum, National Optical Astronomy Observatory (United States); E. Bustos, Cerro Tololo Inter-American Observatory (Chile); P. Gillett, TMT Observatory Corp. (United States); B. Gregory, Cerro Tololo Inter-American Observatory (Chile); J. Nelson, Univ. of California, Santa Cruz (United States); A. Otárola, TMT Observatory Corp. (United States); J. Seguel, J. Vasquez, Cerro Tololo Inter-American Observatory (Chile); K. Vogiatzis, TMT Observatory Corp. (United States); D. Walker, Cerro Tololo Inter-American Observatory (Chile); L. Wang, TMT Observatory Corp. (United States)
- 7012 1Y **Site selection for extremely large telescopes using the FriOWL software and global re-analysis climate data** [7012-69]
E. Graham, Univ. of Bern (Switzerland); M. Sarazin, H. Kurlandczyk, European Southern Observatory (Germany); M. Neun, Univ. of Zurich (Switzerland); C. Mätzler, Univ. of Bern (Switzerland)
- 7012 1Z **Submillimeter observing conditions on Cerro Chajnantor** [7012-70]
S. J. E. Radford, California Institute of Technology (United States); R. Giovanelli, G. E. Gull, C. P. Henderson, Cornell Univ. (United States)

- 7012 20 **Temporal variability of the seeing of TMT sites** [7012-71]
T. Travouillon, TMT Observatory Corp. (United States); S. G. Els, Cerro Tololo Inter-American Observatory (Chile); R. L. Riddle, M. Schöck, A. W. Skidmore, TMT Observatory Corp. (United States); E. Bustos, J. Seguel, D. Walker, J. Vasquez, R. Blum, P. Gillett, B. Gregory, Cerro Tololo Inter-American Observatory (Chile)
- 7012 21 **Combining turbulence profiles from MASS and SLODAR: a statistical study of the evolution of the seeing at Paranal** [7012-72]
G. Lombardi, European Southern Observatory (Chile), Univ. of Bologna (Italy), and Bologna Astronomical Observatory, INAF (Italy); J. Navarrete, European Southern Observatory (Chile); M. Sarazin, European Southern Observatory (Germany)

SESSION 17 SITE TESTING AND CHARACTERIZATION III

- 7012 22 **The Multi Aperture Scintillation Sensor (MASS) used in the site selection of the Thirty Meter Telescope (TMT)** [7012-73]
S. G. Els, Cerro Tololo Inter-American Observatory (Chile) and TMT Observatory Corp. (United States); M. Schöck, TMT Observatory Corp. (United States); J. Seguel, Cerro Tololo Inter-American Observatory (Chile); W. Skidmore, TMT Observatory Corp. (United States); D. Walker, A. Tokovinin, Cerro Tololo Inter-American Observatory (Chile); V. Kornilov, Sternberg Astronomical Institute (Russia); R. Riddle, T. Travouillon, TMT Observatory Corp. (United States); E. Bustos, J. Vasquez, Cerro Tololo Inter-American Observatory (Chile); R. Blum, National Optical Astronomy Observatory (United States); B. Gregory, Cerro Tololo Inter-American Observatory (Chile); P. Gillett, TMT Observatory Corp. (United States)
- 7012 23 **An analysis of light pollution at the Thirty Meter Telescope candidate sites** [7012-74]
R. L. Riddle, TMT Observatory Corp. (United States); D. Walker, Cerro Tololo Inter-American Observatory (Chile); M. Schöck, TMT Observatory Corp. (United States); S. G. Els, Cerro Tololo Inter-American Observatory (Chile); W. Skidmore, T. Travouillon, TMT Observatory Corp. (United States); E. Bustos, J. Seguel, J. Vasquez, Cerro Tololo Inter-American Observatory (Chile); R. D. Blum, National Optical Astronomy Observatory (United States); P. Gillett, TMT Observatory Corp. (United States); B. Gregory, Cerro Tololo Inter-American Observatory (Chile)

SESSION 18 SITE TESTING IN ANTARCTICA

- 7012 24 **Using All Sky Cameras to determine cloud statistics for the Thirty Meter Telescope candidate sites** [7012-76]
W. Skidmore, M. Schöck, TMT Observatory Corp. (United States); E. Magnier, Institute for Astronomy (United States); D. Walker, AURA/CTIO (Chile); D. Feldman, California Institute of Technology (United States); R. Riddle, TMT Observatory Corp. (United States); S. Els, AURA/CTIO (Chile); T. Travouillon, TMT Observatory Corp. (United States); E. Bustos, J. Seguel, J. Vasquez, AURA/CTIO (Chile); R. Blum, NOAO (United States); P. Gillett, TMT Observatory Corp. (United States); B. Gregory, AURA/CTIO (Chile)
- 7012 25 **Optical turbulence and outer scales above Dome C in Antarctica** [7012-77]
H. Trinquet, A. Agabi, J. Vernin, M. Azouit, E. Aristidi, E. Fossat, Observatoire de la Côte d'Azur, CNRS, Univ. de Nice Sophia Antipolis (France)

- 7012 26 **Gattini: a multisite campaign for the measurement of sky brightness in Antarctica** [7012-78]
A. Moore, California Institute of Technology, Caltech Optical Observatories (United States); G. Allen, Solar Mobility (Australia); E. Aristidi, LUAN, Univ. de Nice (France); M. Ashley, Univ. of New South Wales (Australia); T. Bedding, Univ. of Sydney (Australia); C. Beichman, Jet Propulsion Lab. (United States); R. Briguglio, Univ. di Roma La Sapienza (Italy); M. Busso, Univ. di Perugia (Italy); M. Candidi, IFSI, INAF (Italy); D. Ciardi, Michelson Science Ctr. (United States); X. Cui, Nanjing Institute of Astronomical Optics & Technology (China); G. Cutispoto, E. Distefano, Osservatorio Astrofisico di Catania, INAF (Italy); P. Espy, British Antarctic Survey (United Kingdom); J. Everett, Univ. of New South Wales (Australia); L. Feng, Purple Mountain Observatory (China); J. Hu, Z. Jiang, National Astronomical Observatories (China); S. Kenyon, Univ. of New South Wales (Australia); C. Kulesa, Steward Observatory, Univ. of Arizona (United States); J. Lawrence, Univ. of New South Wales (Australia); B. Le Roux, OAMP/LAM (France); T. Leslie, Univ. of New South Wales (Australia); Y. Li, Polar Research Institute of China (China); D. Luong-Van, A. Phillips, Univ. of New South Wales (Australia); W. Qin, Polar Research Institute of China (China); R. Ragazzoni, Osservatorio Astrofisico di Padova, INAF (Italy); R. Riddle, TMT project, California Institute of Technology (United States); L. Sabbatini, Univ. di Roma La Sapienza (Italy); P. Salinari, Osservatorio Astrofisico di Arcetri, INAF (Italy); W. Saunders, Anglo-Australian Observatory (Australia); Z. Shang, Tianjin Normal Univ. (China); D. Stello, Univ. of Sydney (Australia); J. Storey, Univ. of New South Wales (Australia); B. Sun, Polar Research Institute of China (China); N. Suntzeff, Cerro Tololo Inter-American Observatory, National Optical Astronomy Observatory (Chile) and Texas A&M Univ. (United States); M. Taylor, Univ. of New South Wales (Australia); G. Tosti, Univ. di Perugia (Italy); N. Tothill, Univ. of Exeter (United Kingdom); T. Travouillon, California Institute of Technology, Caltech Optical Observatories (United States); G. Van Belle, European Southern Observatory (Germany); K. Von Braun, Michelson Science Ctr. (United States); L. Wang, J. Yan, Purple Mountain Observatory (China); H. Yang, Polar Research Institute of China (China); X. Yuan, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories (China); Z. Zhu, Purple Mountain Observatory (China); X. Zhou, National Astronomical Observatories (China)
- 7012 27 **The PLATO Antarctic site testing observatory** [7012-79]
J. S. Lawrence, Univ. of New South Wales (Australia); G. R. Allen, Solar Mobility (Australia); M. C. B. Ashley, C. Bonner, Univ. of New South Wales (Australia); S. Bradley, Univ. of Auckland (New Zealand); X. Cui, Nanjing Institute of Astronomical Optics Technology (China); J. R. Everett, Univ. of New South Wales (Australia); L. Feng, Purple Mountain Observatory (China); X. Gong, Nanjing Institute of Astronomical Optics Technology (China); S. Hengst, Univ. of New South Wales (Australia); J. Hu, Z. Jiang, National Astronomical Observatory of China (China); C. A. Kulesa, Univ. of Arizona (United States); Y. Li, Polar Research Institute of China (China); D. Luong-Van, Univ. of New South Wales (Australia); A. M. Moore, California Institute of Technology (United States); C. Pennypacker, Univ. of California, Berkeley (United States); W. Qin, Polar Research Institute of China (China); R. Riddle, Thirty Meter Telescope Observatory Corp. (United States); Z. Shang, Tianjin Normal Univ. (China); J. W. V. Storey, Univ. of New South Wales (Australia); B. Sun, Polar Research Institute of China (China); N. Suntzeff, Texas A&M Univ. (United States); N. F. H. Tothill, Univ. of Exeter (United Kingdom); T. Travouillon, California Institute of Technology (United States); C. K. Walker, Univ. of Arizona (United States); L. Wang, Purple Mountain Observatory (China) and Texas A&M Univ. (United States); J. Yan, Purple Mountain Observatory (China) and National Astronomical Observatory of China (China); J. Yang, Purple Mountain Observatory (China); H. Yang, Polar Research Institute of China (China); D. York, Univ. of Chicago (United States); X. Yuan, Nanjing Institute of Astronomical Optics Technology (China); X. G. Zhang, Purple Mountain Observatory (China); Z. Zhang,

Polar Research Institute of China (China); X. Zhou, National Astronomical Observatory of China (China); Z. Zhu, Purple Mountain Observatory (China)

SESSION 19 NEW ANTARCTIC FACILITIES

- 7012 28 **A 30-m submillimeter telescope with active reflector** [7012-80]
X. Cui, National Astronomical Observatories, Nanjing Institute of Astronomical Optics and Technology (China); D. Su, National Astronomical Observatories, Nanjing Institute of Astronomical Optics and Technology (China) and Univ. of Nanjing (China); Y. Wang, D. Yang, G. Li, National Astronomical Observatories, Nanjing Institute of Astronomical Optics and Technology (China)
- 7012 29 **A 40-cm infra-red telescope in Antarctica** [7012-81]
C. Murata, T. Ichikawa, R. G. Lundock, Y. Taniguchi, H. Okita, Astronomical Institute, Tohoku Univ. (Japan)
- 7012 2A **ACWI: an experiment to image the Cosmic Web from Antarctica** [7012-82]
A. M. Moore, C. Martin, Caltech Institute of Technology (United States); N. C. Maitless, Harvard Graduate School of Design (United States); T. Travouillon, Caltech Institute of Technology (United States)
- 7012 2B **Toward a large telescope facility for submm/FIR astronomy at Dome C** [7012-83]
G. A. Durand, V. Minier, P.-O. Lagage, E. Daddi, S. El Khououdi, N. Schneider-Bontemps, M. Talvard, CEA, DSM, IRFU, Service d'Astrophysique (France); C. Veyssière, G. A. Durand, C. Walter, CEA, DSM, IRFU, SIS (France); L. Sabbatini, Univ. of Rome La Sapienza (Italy); Z. Challita, Lab. H. Fizeau, CNRS, OCA, Univ. de Nice (France) and IPEV (France); J. W. V. Storey, Univ. of New South Wales (Australia); P. Calisse, Cardiff Univ. (United Kingdom); A. Pierre, IPEV (France); M. Busso, Univ. di Perugia (Italy)
- 7012 2C **The Antarctica Wide-field High-resolution Infrared Telescope (WHITE)** [7012-84]
D. Burgarella, B. Le Roux, M. Langlois, G. Lemaître, Observatoire Astronomique Marseille Provence, Lab. d'Astrophysique de Marseille, Univ. d'Aix-Marseille, CNRS (France); T. Fusco, ONERA-DOTA (France); M. Ferrari, Observatoire Astronomique Marseille Provence, Lab. d'Astrophysique de Marseille, Univ. d'Aix-Marseille, CNRS (France)
- 7012 2D **Antarctic Schmidt Telescopes (AST3) for Dome A** [7012-85]
X. Cui, X. Yuan, X. Gong, National Astronomical Observatories, Nanjing Institute of Astronomical Optics & Technology (China) and Chinese Ctr. for Antarctic Astronomy (China)

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- 7012 2E **Seismic hazard: analysis and design of large ground-based telescopes** [7012-86]
F. W. Kan, J. Antebi, Simpson Gumpertz & Heger (United States)
- 7012 2F **The Giant Magellan Telescope (GMT): structure design update** [7012-87]
S. Gunnels, Paragon Engineering (United States); F. Kan, A. Sarawit, Simpson Gumpertz & Heger (United States)

- 7012 2G **TMT telescope structure system: design and development progress report** [7012-88]
K. Szeto, S. Roberts, Herzberg Institute of Astrophysics, National Research Council Canada (Canada); M. Gedig, G. Austin, C. Lagally, S. Patrick, D. Tsang, Empire Dynamic Structures (Canada); D. MacMynowski, M. Sirota, L. Stepp, Thirty Meter Telescope Project (United States); P. M. Thompson, Systems Technology, Inc. (United States)
- 7012 2H **Photogrammetry measurement of the AMiBA 6-meter platform** [7012-89]
Y. D. Huang, Academia Sinica, Institute of Astronomy and Astrophysics (Taiwan); P. Raffin, M.-T. Chen, P. Altamirano, P. Oshiro, ASIAA (Taiwan)
- 7012 2I **Design concepts for primary mirror support structures of large telescopes for optical and submillimeter astronomy** [7012-90]
C. L. Stutzki, H. Tamai, Stutzki Engineering, Inc. (United States); T. A. Sebring, Cornell Univ. (United States)

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- 7012 2J **Vibration measurements at the Large Binocular Telescope (LBT)** [7012-92]
M. Brix, V. Naranjo, Max-Planck-Institut für Astronomie (Germany); U. Beckmann, Max-Planck-Institut für Radioastronomie (Germany); R. Bertram, LBT Observatory, Univ. of Arizona (United States); T. Bertram, Univ. Köln (Germany); J. Brynnel, LBT Observatory, Univ. of Arizona (United States); S. Egner, W. Gaessler, T. M. Herbst, M. Kuerster, R. R. Rohloff, Max-Planck-Institut für Astronomie (Germany); S. Rost, Univ. Köln (Germany); J. Schmidt, Max-Planck-Institut für Astronomie (Germany)

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- 7012 2K **VST primary mirror active optics power distribution system** [7012-94]
C. Molfese, VSTceN, INAF (Italy); A. Busatta, EIE—European Industrial Engineering (Italy)
- 7012 2L **The Earthshine Telescope Project** [7012-95]
M. Owner-Petersen, T. Andersen, A. Ardeberg, Lund Observatory (Sweden); P. Thejll, H. Gleisner, Danish Meteorological Institute (Denmark)
- 7012 2O **Observatorio UC at Santa Martina: a small observing facility operated by PUC** [7012-99]
M. Baffico, Pontificia Univ. Catolica de Chile (Chile); G. Avila, D. Baade, E. Bendek, C. Guirao, European Southern Observatory (Chile); O. Gonzalez, P. Marchant, V. Salas, I. Toledo, S. Vasquez, L. Vanzi, Pontificia Univ. Catolica de Chile (Chile)
- 7012 2P **Transient optical sky survey automated telescope system** [7012-100]
E. Hadjiyska, P. Lubin, Univ. of California, Santa Barbara (United States); S. Taylor, Raytheon Co. (United States); G. Hughes, California Polytechnic State Univ. (United States)
- 7012 2Q **Gemini primary mirror in-situ wash** [7012-101]
T. Vucina, M. Boccas, C. Araya, Gemini Observatory (Chile); C. Ah Hee, C. Cavedoni, Gemini Observatory (United States)
- 7012 2R **The Pan-STARRS PS4 telescope suite** [7012-102]
J. S. Morgan, W. Burgett, Pan-STARRS, Univ. of Hawaii (United States); J. U. Teran, M3 Engineering & Technology Corp. (United States)

- 7012 2S **Ground-based complex for detection and investigation of fast optical transients in wide field** [7012-104]
E. Molinari, Osservatorio Astronomico di Brera (Italy); G. Beskin, Special Astrophysical Observatory (Russia); S. Bondar, Institute for Precise Instrumentation (Russia); S. Karpov, V. Plokhotnichenko, V. de-Bur, Special Astrophysical Observatory (Russia); G. Greco, C. Bartolini, A. Guarnieri, A. Piccioni, Univ. degli Studi di Bologna (Italy)
- 7012 2T **The University of Tokyo Atacama 1.0-m telescope** [7012-105]
S. Sako, Institute of Astronomy, Univ. of Tokyo (Japan); T. Aoki, Kiso Observatory, Univ. of Tokyo (Japan); M. Doi, T. Handa, K. Kawara, K. Kohno, T. Minezaki, N. Mitani, T. Miyata, K. Motohara, Institute of Astronomy, Univ. of Tokyo (Japan); T. Soyano, Kiso Observatory, Univ. of Tokyo (Japan); T. Tanabe, M. Tanaka, Institute of Astronomy, Univ. of Tokyo (Japan); K. Tarusawa, Kiso Observatory, Univ. of Tokyo (Japan); Y. Yoshii, Institute of Astronomy, Univ. of Tokyo (Japan); L. Bronfman, M. T. Ruiz, Univ. of Chile, Santiago (Chile)
- 7012 2U **High-resolution image reconstruction technique applied to the optical testing of ground-based astronomical telescopes** [7012-106]
Z. Jin, J. Lin, Z. Liu, Yunnan Astronomical Observatory (China)
- 7012 2W **CCD charge transfer efficiency test with the new DES clock board** [7012-108]
J. Campa, Ctr. de Investigaciones Energeticas, Medioambientales y Tecnologicas (Spain); L. Cardiel, Institut de Física d'Altes Energies (Spain); J. Castilla, J. De Vicente, Ctr. de Investigaciones Energeticas, Medioambientales y Tecnologicas (Spain); J. Estrada, Fermi National Accelerator Lab. (United States); I. Karliner, Univ. of Illinois at Urbana-Champaign (United States); D. Kubik, Fermi National Accelerator Lab. (United States); G. Martinez, Ctr. de Investigaciones Energeticas, Medioambientales y Tecnologicas (Spain); T. Shaw, W. Stuermer, Fermi National Accelerator Lab. (United States)

Part Three

- 7012 2X **New robotic telescopes by Halfmann-Teleskoptechnik GmbH and Tuparev Technologies Inc.** [7012-109]
K. Bischoff, Halfmann Teleskoptechnik (Germany); F. V. Hessman, Institut für Astrophysik (Germany); G. Tuparev, E. Atanasova, P. Peshev, Tuparev Technologies (Netherlands)
- 7012 2Y **The Gemini MCAO infrastructure: laser service enclosure and support structure** [7012-110]
C. P. Cavedoni, Gemini Observatory (United States); S. Bombino, M. Sheehan, S. Karewicz, S. Hardash, Gemini Observatory Northern Operations Ctr. (United States); G. Perez, P. Collins, C. d'Orgeville, M. Boccas, D. Maltes, G. Gausachs, R. Rogers, Gemini Observatory Southern Operations Ctr. (Chile)
- 7012 2Z **The impact of seismicity on high angular resolution astronomy: the case of El Teide Observatory, Canary Islands** [7012-111]
A. Eff-Darwich, Univ. de La Laguna (Spain) and Instituto de Astrofísica de Canarias (Spain); B. García-Lorenzo, Instituto de Astrofísica de Canarias (Spain); L. Bonatto, Institute of Earth Sciences, Jaume Almera (Spain); L. E. Hernández-Gutierrez, Consejería de Obras Públicas y Transportes del Gobierno de Canarias (Spain); R. Viñas, J. A. Rodríguez-Losada, Univ. de La Laguna (Spain); M. J. Blanco, Instituto Geográfico Nacional (Spain); C. Muñoz-Tuñón, Instituto de Astrofísica de Canarias (Spain)

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- 7012 30 **Evaluation of thermal control coatings exposed to ambient weather conditions at Haleakalā High Altitude Observatory** [7012-112]
L. Phelps, National Solar Observatory (United States)
- 7012 31 **The feasibility of large refracting telescopes for solar coronal research** [7012-113]
P. G. Nelson, S. Tomczyk, D. F. Elmore, D. J. Kolinski, High Altitude Observatory (United States)
- 7012 32 **The participation of the Instituto de Astrofísica de Canarias in the European Solar Telescope** [7012-114]
M. Collados, A. Calcines, J. J. Díaz, F. Gracia, C. Grivel-Gelly, R. López, H. Mangharam, E. Páez, A. Pérez, J. L. Rasilla, L. F. Rodríguez, J. Sánchez-Capuchino, H. Socas-Navarro, Instituto de Astrofísica de Canarias (Spain)
- 7012 33 **Advanced Technology Solar Telescope M1 thermal control system design, modeling, and prototype testing** [7012-115]
E. Hansen, S. Bulau, L. Phelps, AURA, National Solar Observatory (United States)
- 7012 34 **Assessment of local seeing within a telescope lab environment** [7012-116]
R. Biérent, Ecole Nationale Supérieure de Physique de Grenoble (France); T. Rimmele, J. Marino, National Solar Observatory (United States)
- 7012 35 **Optomechanical and thermal design of the Multi-Application Solar Telescope for USO** [7012-117]
S. Denis, P. Coucke, E. Gabriel, C. Delrez, AMOS SA (Belgium); P. Venkatakrishnan, Udaipur Solar Observatory (India)

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- 7012 36 **The European ALMA production antennas: new drive applications for better performances and low cost management** [7012-119]
L. Giacomel, C. Manfrin, G. Marchiori, European Industrial Engineering (Italy)

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- 7012 37 **Replacement of the Green Bank Telescope azimuth track** [7012-120]
R. Anderson, A. Symmes, D. Egan, National Radio Astronomy Observatory (United States)
- 7012 38 **Improving the service life of the 100-meter Green Bank Telescope azimuth track** [7012-121]
A. Symmes, R. Anderson, D. Egan, National Radio Astronomy Observatory (United States)
- 7012 39 **Proposed design concepts of the FAST focus cabin suspension** [7012-123]
H. J. Kärcher, MT Mechatronics GmbH (Germany); H. Li, J. Sun, R. Nan, National Astronomical Observatories (China); M. Lazanowski, FNM, TU Darmstadt (Germany); S. Kern, B. Strah, F. Fomi, MiM, TU Darmstadt (Germany)

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- 7012 3A **Design and performances of the Shack-Hartmann sensor within the Active Phasing Experiment** [7012-124]
R. Mazzoleni, F. Gonté, I. Surdej, C. Araujo, R. Brast, F. Derie, P. Duhoux, C. Dupuy, C. Frank, R. Karban, L. Noethe, N. Yaitskova, European Organisation for Astronomical Research in the Southern Hemisphere (Germany)
- 7012 3B **ASM: a scaled down Active Segmented Mirror for the Active Phasing Experiment** [7012-127]
C. Dupuy, F. Gonté, C. Frank, European Southern Observatory (Germany)
- 7012 3C **Large capture range cophasing with the Liquid Crystal Tunable Filter** [7012-128]
M. Bonaglia, E. Pinna, F. Quiros-Pacheco, A. Puglisi, S. Esposito, Osservatorio Astrofisico di Arcetri (Italy)
- 7012 3D **The Pyramid Phasing Sensor (PYPS)** [7012-129]
E. Pinna, F. Quiros-Pacheco, S. Esposito, A. Puglisi, P. Stefanini, Osservatorio Astrofisico di Arcetri (Italy)
- 7012 3E **Double segmentation control with a single phasing sensor** [7012-130]
F. Quiros-Pacheco, E. Pinna, S. Esposito, A. Riccardi, Osservatorio Astrofisico di Arcetri (Italy)
- 7012 3F **Development of a novel actuator concept for position control of segmented mirrors of ELT** [7012-131]
H. Janssen, R. Geurink, M. Teuwen, B. v. Bree, Janssen Precision Engineering B.V. (Netherlands)
- 7012 3G **SALT segmented primary mirror: commissioning capacitive edge sensing system and performance comparison with inductive sensor** [7012-132]
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Introduction

The 2008 Ground-based and Airborne Telescopes conference brought together a large number of participants from around the world, and their oral and poster papers are contained in these proceedings. In this year's conference we had more invited papers than usual (16), reflecting the large number of significant telescope projects currently active, and the results were favorable—the invited talks were very well attended and generated a lot of interest.

The conference offered outstanding geographical and technical diversity, with reports about astronomy projects on all seven continents, involving both ground-based and airborne telescopes working in the UV, visible, IR, and radio wavelengths, and engaged in night-time and solar astronomy. It covered a full range of activities including planning, designing, constructing, integrating, commissioning, and upgrading new and existing telescopes, from portable telescopes used for site testing to extremely large telescopes with collecting areas up to a square kilometer.

The conference sessions included project reports on ground-based optical-IR telescopes, radio and sub-mm telescopes, airborne telescopes, solar telescopes, Antarctic telescopes, and future giant telescopes. There were also sessions on a number of technical subjects, including site testing, integration, and commissioning; telescope alignment and control; telescope structures; wind loading, and segmented mirror alignment and phasing.

It is gratifying to see that the high level of telescope-building activity that developed in the 1990s has continued strong into the 21st century, with successful completion of many projects and the initiation of many more that offer exciting scientific prospects for the coming decade. As many of the projects get bigger, finding funding for them will be a continuing challenge, but we are encouraged to see the emergence of strong astronomy programs in many of the rapidly developing countries of the world that offer the promise of broadening the base of astronomical facilities to serve this expanding community.

The conference chairs would like to thank the authors and conference attendees, the program committee members who devoted many hours to planning the conference and who served as the session chairs, and the conference organizers at SPIE.

Larry M. Stepp
Roberto Gilmozzi