

PREFACE		
	<i>Maria Gritsevich, Alberto J. Castro-Tirado, Petr Kubánek, Shashi B. Pandey, and David Hiriart</i>	vii
LIST OF PARTICIPANTS		ix
GROUP PHOTOGRAPH		xi
DEVELOPMENT OF ASTRONOMICAL OBSERVATORIES FROM THE LATE 19TH TO THE 21ST CENTURY	<i>M. A. Castro Tirado</i>	1
CHARACTERIZATION OF THE KL4040 SCMOS FOR USE ON THE BOY- DEN RESEARCH TELESCOPES	<i>W. Smit, H. J. van Heerden, & B. van Soelen</i>	9
CONSIDERATIONS ON AUTOMATING OLDER TELESCOPES: THE BOY- DEN 1.5 M TELESCOPE	<i>H. J. van Heerden, P. J. Meintjes, B. van Soelen, W. Smit, I. P. van der Westhuizen, & H. Szegedi</i>	13
MODERNIZATION OF COLOTI OPTICAL OBSERVATORY: REMOTE CONTROL AND AUTOMATION FOR MULTIMESSENGER FOLLOW-UP	<i>P. Cristarella Orestano, S. Cutini, S. Germani, S. Palmerini, & G. Tosti</i>	19
DON: AUTOMATION OF THE VATICAN ADVANCED TECHNOLOGY TELESCOPE	<i>P. Gabor</i>	23
AUTONOMOUS TELESCOPE AND SCIENTIFIC INFRASTRUCTURE DE- VELOPMENTS AT TUG	<i>O. Erece, Y. Kilic, & K. Uluc</i>	27
OAUI-CDK500: A NEW KRAKÓW ROBOTIC TELESCOPE	<i>S. Zola, G. Stachowski, S. Kurowski, T. Kundera, W. Waniak, D. E. Reichart, V. Kouprianov, J. B. Haislip, L. Wyrzykowski, & P. J. Mikołajczyk</i>	31
BUILDING A LIMITED BUDGET ROBOTIC OBSERVATORY	<i>M. Odeh</i>	37

CONTENTS

TOWARDS A FULLY ROBOTIC SOLAR OBSERVATORY AT THE UNIVERSITY OF GÖTTINGEN	<i>S. Martens & T. O. Husser</i>	43
THE IMPACT OF THE SITE QUALITY OF THE ZADKO OBSERVATORY ON ITS SCIENTIFIC RESULTS	<i>B. Gendre, R. Tonello, M. Studdert, D. Coward, A. Klotz, E. Moore, J. Moore, & F. Panther</i>	49
ADVANCED WEATHER CONTROL SYSTEM AT THE TJO TELESCOPE	<i>F. Domene, E. Herrero, P. Gil, D. Baroch, & A. Rojas</i>	55
SKY BRIGHTNESS MEASUREMENTS WITH THE ALLSKY CAMERA AT THE UNIVERSITY OF GÖTTINGEN	<i>K. J. Schimpf & T. O. Husser</i>	63
ZERO POINT MAGNITUDES OF ALL-SKY IMAGES FOR DETERMINING CLOUD CONDITIONS	<i>C. H. D. van Gend, N. Erasmus, J. Tonry, L. Denneau, M. Hlakola, & S. B. Potter</i>	69
OBSERVATORY CONTROL SYSTEM AT SOUTH AFRICAN ASTRONOMICAL OBSERVATORY	<i>Sunil Chandra, Steve B. Potter, Carel van Gend, Nicolas Erasmus, & Roufurd Julie</i>	71
MANAGEMENT OF A MULTI-USER ROBOTIC OBSERVATORY	<i>J. Moore, B. Gendre, D. Coward, F. Panther, & E. Moore</i>	77
AUTONOMOUS SCHEDULING AT THE TJO TELESCOPE	<i>D. Baroch, E. Herrero, P. Gil, F. Domene, A. Rojas, & N. Ribó</i>	81
UNSYNCHRONIZED FIREBALL ANALYSIS AND CHALLENGES IN DIMENSIONLESS ATMOSPHERIC FLIGHT PARAMETRIZATION: THE SPMN230522 SUPERBOLIDE AS A CASE STUDY	<i>E. Peña-Asensio, P. Grèbol-Tomás, J.M. Trigo-Rodríguez, M. Gritsevich, A. Rimola, M. Corretgé-Gilart, C. Guasch, C. Alcaraz, V. Ibáñez, A. Gómez, & J. Gómez</i>	87
COMETARY OUTBURSTS AND EVOLUTION OF EJECTED PARTICLES	<i>M. Gritsevich, M. Nissinen, J. Ryske, A. J. Castro-Tirado, I. Pérez-García, M. Weso, J. M. Trigo-Rodríguez, E. Peña-Asensio, I. Boaca, T. Prystavski, M. Husárik, O. Ivanova, A. Sánchez, & J. M. Llenas</i>	93
INTERSTELLAR VISITORS AND ELUSIVE EXTRASOLAR METEORITES	<i>E. Peña-Asensio, J. M. Trigo-Rodríguez, M. Gritsevich, H. Socas-Navarro, J. Visuri, & A. Rimola</i>	101
EARLY-TIME OPTICAL SPECTRAL SHAPE MEASUREMENTS OF GRB 200925B	<i>Z. Abdullayev, T. Komesh, B. Grossan, E. Abdikamalov, Z. Maksut, M. Krugov, S. Myrzakul, D. Tuiakbayeva, & A. Kostangeldinova</i>	109
AN INTERMEDIATE LUMINOSITY GRB 210210A: THE EARLY ONSET OF THE EXTERNAL FORWARD SHOCK IN THE X-RAY?	<i>R. Gupta, A. K. Ror, S. B. Pandey, J. Racusin, M. Moss, A. Aryan, N. Klingler, & A. J. Castro-Tirado</i>	115
PROMPT AND AFTERGLOW ANALYSIS OF THE <i>FERMI-LAT</i> DETECTED GRB 230812B	<i>A. K. Ror, S. B. Pandey, A. Aryan, S. Kumar, & A. J. Castro-Tirado</i>	133
THE CORE COLLAPSE OF A $16.5 M_{\odot}$ STAR	<i>A. Aryan, S. B. Pandey, R. Gupta, A. K. Ror, & A. J. Castro-Tirado</i>	145

CONTENTS

EARLY EMISSION OF SHORT OPTICAL TRANSIENTS <i>S. Wu, V. M. Lipunov, A. J. Castro-Tirado, Y.-D. Hu, K. Zhirkov, & N. V. Tyurina</i>	153
GERRY : FINDING ELECTROMAGNETIC COUNTERPARTS IN GRAVITATIONAL WAVES FOLLOW-UP CAMPAIGNS <i>D. O’Neill</i>	161
BLACK HOLE TOM – AN AUTOMATIC TOOL FOR PHOTOMETRIC TIME-DOMAIN DATA <i>P. J. Mikolajczyk, P. Zielński, L. Wyrzykowski, A. Krawczyk, & K. Kotysz</i>	167
ATTITUDE CONTROL STUDY ON ARTIFICIAL SATELLITES AND SPACE DEBRIS USING LASER DATA <i>R. Martínez & M. Á. Sánchez</i>	173
A UNIQUE LOOK ON MICROMETEORITES: WHEN SPECTROSCOPY MEETS CITIZEN SCIENCE <i>M. R. López-Ramírez, J. Laserna, M. Hanna, J. Moilanen, & M. Gritsevich</i>	179
USING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN EDUCATION OF ASTRONOMY, PHYSICS AND MATHEMATICS <i>F. Bahrani</i>	183
DEVELOPING SCHOOL SCIENCE SKILLS THROUGH THE SCIENCE-IES ROBOTIC TELESCOPE PROJECTS <i>J. R. Girón-Gambero</i>	187
TULANCINGO-I: THE K BAND MEXICAN RADIOTELESCOPE <i>D. Hiriart, E. Colorado, F. Diaz, T. Calvario, H. Serrano, D. Rojas, & S. Kurtz</i>	193
IMAGING STOKES PHOTOMETER-POLARIMETER FOR THE BOOTES GLOBAL TELESCOPE NETWORK <i>S. Guziy, I. Syniaevsky, Ye. Oberemok, O. Ivanova, & A. J. Castro-Tirado</i>	197
THE INTELLIGENT OBSERVATORY <i>N. Erasmus, S. B. Potter, C. H. D. van Gend, S. Chandra, H. L. Worters, M. Hlakola, & R. Julie</i>	201
SOFTWARE COMPONENTS OF THE INTELLIGENT OBSERVATORY <i>C. H. D. van Gend, S. B. Potter, N. Erasmus, S. Chandra, M. Hlakola, H. Worters, & R. Julie</i>	209
NEW ROBOTIC TELESCOPE: THE BIG EYE TO OBSERVE THE TRANSIENT UNIVERSE <i>C. M. Gutiérrez, J. Barrera, J. Bento, D. Copley, C. M. Copperwheat, F. J. De Cos, M. Escriche, J. J. Fernández-Valdivia, A. P. Garner, J. Gracia, D. G. Heffernan-Clarke, H. E. Jermak, J. León Gil, A. M. McGrath, C. Miossec, A. Oria, A. Ranjbar, R. Rebolo, C. Rodríguez-Pereira, F. Sánchez-Lasheras, R. J. Smith, I. A. Steele, & M. Torres</i>	217
AUTHOR INDEX	225