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CONTENTS

List of participants	11
Preface	13

SESSION A: GAMMA-RAY BURSTS AND ROBOTIC TELESCOPES

F. Giovannelli: The contribution of robotic telescopes to the knowledge of our Universe	15
J. Štrobl, M. Jelínek, C. Polášek, R. Hudec: D50: Autonomous robotic telescope in Ondřejov	49
P. Kroll: Proposal of optical sky monitoring with subsecond cadence	62
S. Karpov, J. Peloton: The rate of satellite glints in ZTF and LSST sky surveys	69
R. Hudec, M. Jelínek, J. Štrobl: Long term follow-up coverage of Gaia photometric alert sources by Ondřejov robotic telescopes	81
S. Pinter, L.G. Balazs, Z. Bagoly, I. Horvath: Gamma-Ray Bursts' redshift distribution's dependence on their duration	93
I.I. Racz: Estimating GRBs' cosmological distances	100
I.I. Racz, L.G. Balazs, I. Horvath: Redshift dependence of GRBs' observed parameters	115
M. Jelínek: Photometric pipeline for robotic telescopes	127

SESSION B: HIGH ENERGY ASTRONOMY

R. Hudec, V. Šimon, A. Read: X-ray astrophysics as secondary science with ESA/China SMILE satellite	136
R. Hudec: Comparison of Gaia BP/RP spectra with LDS (Low Dispersion Spectroscopy) photographic sky surveys	144
B. Koncz, A.P. Joó, S. Pintér: Investigating star formation in Illustris TNG galaxy mergers	153
A. P. Joó, B. Koncz, E. Pichler: Investigating star formation in nearby interacting galaxies	164
V. Karas, K. Klimovičová, D. Lančová, M. Štolc, J. Svoboda, G. Török, M. Matuszková, E. Šrámková, R. Šprňa, M. Urbanec: Timing of accreting neutron stars with future X-ray instruments: towards new constraints on dense matter equation of state	175
V. Šimon, R. Hudec: Development of an operation plan for observing the Galactic center region with the lobster-eye monitor	191

SESSION C: SMALL SATELLITES FOR ASTROPHYSICS

V. Tichý, M. Míka, R. Hudec: **Preliminary optical tests of lobster eye X-ray optics prototype for nano-satellite missions based on new technology** 198

V. Tichý, R. Hudec: **Overview of LOPSIMUL software, quick ray-tracing simulator of multi-foil reflective optical system** . . . 206

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WORKSHOP 2023**

Edited by:

Martin Jelínek & Marianna Dafčíková

May 22 – 26, 2023, Karlovy Vary, Czech Republic

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PREFACE

IBWS (INTEGRAL/BART workshop) is a series of successful international workshops dedicated to all aspects of high energy astrophysics and supporting ground-based experiments (e.g. robotic telescopes). Within these frameworks, the detailed program reflects the scientific interests of participants as we do not have invited talks but the contributions are submitted by the conference participants.

Originally, the IBWS (INTEGRAL/BART) workshops focused on the work of High energy astrophysics group (at that time dominated by young research fellows and students) in Astronomical Institute of the Academy of Sciences of the Czech Republic and relevant national and international collaborators from the field, with intensive student participation. During the early years, these activities were focused on the ESA INTEGRAL satellite and on the related ground-based robotic telescopes, e.g. the small robotic BART telescope at the Ondrejov Observatory.

Nowadays, the IBWS workshops promote regional collaboration in galactic and extragalactic high-energy astrophysics, both experimental as well as theoretical, with an emphasis on the interface between satellite projects and ground-based experiments (e.g. robotic telescopes). We continue our emphasis on wide participation and presentations of students and young research fellows.

The 17th of a series of INTEGRAL / BART Workshop was held in Karlovy Vary from 22 to 26 May 2023. This conference was a place for a meeting of the scientist, researchers, research fellow, professors and students from several countries, institutions and research areas.

The INTEGRAL/BART Workshop was organized by the High Energy Astrophysics Group of the Stellar Department of the Astronomical Institute of the Academy of Sciences of the Czech Republic together with the Czech Technical University in Prague (Czech Republic), the Friedrich Alexander University Astronomical Institute Observatory in Bamberg (Germany), the University of Wurzburg (Germany) and the Karlovy Vary Observatory. These institutions have also contributed their active participation on the contributions of presentations and expert discussions.

49 participants from 5 countries (Germany, Hungary, Switzerland, Italy, and the Czech Republic) attended this year's edition of this European regional conference.

The conference topics included astrophysical session covering both theoretical as well as observational aspects of high energy and very high energy astrophysics, both galactic and extragalactic, as well as gamma-ray bursts. The experimental session focused on small satellites for astrophysics, CubeSats and high-energy satellites with related ground-based instrumentation with data analyses.

The official conference program was divided into three sections:

- High energy astrophysics

- Gamma-Ray Bursts and Robotic Telescopes
- Small satellites for astrophysics & Instrumental session

Nevertheless, the conference was held in the idea of finding common bridges between these areas instead of their separation.

The program of the conference included 56 contributions from all fields. They were focused on high-energy satellite astrophysics, research of high energy cosmic sources, astrophysical applications of very small satellites, and also the use of robotic telescopes and the preparation of future space missions and experiments. For example, the results from the first Czech nanosatellite VZLUSAT-1 which was launched in June 2017, Slovak's CubeSat skCUBE and the introducing of new ESA satellite projects such as SMILE and THESEUS were discussed. The satellite designs for future astrophysical applications of small satellites (CubeSats), involving experts from the Czech Republic as well as the introduction of new projects and progresses by CubeSats experts from Germany and Hungary were presented.

The conference also featured the active participation of numerous university students.

René Hudec, SOC Chair

Ondřejov, November 2023