

Advancing a Universal Analysis Framework for High-Energy Spectro-Polarimetry



Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome and Overview of workshop Goals and Objectives

Monday 10 February 2025 09:00 (30 minutes)

Presenters: Dr PRODUIT, Nicolas (Universite de Geneve (CH)); KOLE, Merlin (Universite de Geneve (CH)); LI, Hancheng

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 2

Type: **not specified**

How to fix the broken field of Gamma-Ray Polarimetry

Monday 10 February 2025 09:30 (15 minutes)

Presenter: KOLE, Merlin (Universite de Geneve (CH))

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 3

Type: **not specified**

Latest Advances in GRB Prompt Emission and Polarimetry

Monday 10 February 2025 09:45 (15 minutes)

Presenter: GILL, Ramandeep (CITA)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 4

Type: **not specified**

Analytical simulations of GRB Prompt Polarizations

Monday 10 February 2025 10:00 (15 minutes)

Presenter: PARSOTAN, Tyler (NASA Goddard)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 5

Type: **not specified**

Multi-Wavelength Polarization of GRB Jets

Monday 10 February 2025 10:45 (15 minutes)

Presenter: BIRENBAUM, Gal (The Raymond and Beverly Sackler School of Physics and Astronomy)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 6

Type: **not specified**

POLAR GRB Data Analysis

Monday 10 February 2025 11:00 (15 minutes)

Presenters: DE ANGELIS, Nicolas (Universite de Geneve (CH)); KOLE, Merlin (Universite de Geneve (CH))

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 7

Type: **not specified**

COSI Mission and Cosipy Library Development

Monday 10 February 2025 11:30 (15 minutes)

Presenter: MARTINEZ, Israel (NASA Goddard)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 8

Type: **not specified**

Standard Data Format, Coordinate Transformation and Polpy Interface

Monday 10 February 2025 11:45 (15 minutes)

Presenters: MATE, Sujay (Tata Institute of Fundamental Research (TIFR)); LI, Hancheng

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 9

Type: **not specified**

Integrating POLAR and AstroSat-CZTI GRB Data with 3ML

Monday 10 February 2025 18:00 (15 minutes)

Presenters: Dr MATE, Sujay (Tata Institute of Fundamental Research, Mumbai, India); PATHAK, Utkarsh (Indian Institute of Technology Bombay)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: **10**

Type: **not specified**

X-ray Polarimetry with IXPE

Monday 10 February 2025 18:30 (15 minutes)

Presenter: MULERI, Fabio (INAF)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: **11**

Type: **not specified**

The Chasing All Transients Constellation Hunters (CATCH) Mission

Monday 10 February 2025 19:30 (15 minutes)

Presenter: TAO, Lian (Institute of High Energy Physics)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 12

Type: **not specified**

The enhanced X-ray Timing and Polarimetry (eXTP) Mission

Monday 10 February 2025 19:45 (15 minutes)

Presenter: GE, Minyu (Institute of High Energy Physics)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 13

Type: **not specified**

POLAR-2 supplemental: Broadband Spectroscopy Detector (BSD)

Monday 10 February 2025 20:00 (15 minutes)

Presenter: SUN, Jianchao (Institute of High Energy Physics, Chinese Academy of Sciences)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 14

Type: **not specified**

POLAR-2 supplemental: Low-energy Polarization Detector (LPD)

Monday 10 February 2025 20:15 (15 minutes)

Presenter: XIE, Fei (Guangxi University)

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 15

Type: **not specified**

Group Discussion and Planning for Days 2-5

Monday 10 February 2025 21:00 (1 hour)

Presenters: Dr PRODUIT, Nicolas (Universite de Geneve (CH)); KOLE, Merlin (University of New Hampshire (US)); LI, Hancheng; GILL, Ramandeep

Session Classification: Presentations and Workshop Kickoff

Contribution ID: **16**

Type: **not specified**

Group I: Gamma-ray polarimeters

Tuesday 11 February 2025 09:00 (4 hours)

Session Classification: Group work

Contribution ID: 17

Type: **not specified**

Group II: X-ray polarimeters

Tuesday 11 February 2025 09:00 (4 hours)

Session Classification: Group work

Contribution ID: **18**

Type: **not specified**

Group III: Theoretical modelling

Tuesday 11 February 2025 09:00 (4 hours)

Session Classification: Group work

Contribution ID: **19**

Type: **not specified**

Group IV: Software development

Tuesday 11 February 2025 09:00 (4 hours)

Session Classification: Group work

Contribution ID: 20

Type: **not specified**

Group I: Gamma-ray polarimeters

Tuesday 11 February 2025 14:00 (3 hours)

Session Classification: Group work

Contribution ID: **21**

Type: **not specified**

Group II: X-ray polarimeters

Tuesday 11 February 2025 14:00 (3 hours)

Session Classification: Group work

Contribution ID: 22

Type: **not specified**

Group III: Theoretical modelling

Tuesday 11 February 2025 14:00 (3 hours)

Session Classification: Group work

Contribution ID: 23

Type: **not specified**

Group IV: Software development

Tuesday 11 February 2025 14:00 (3 hours)

Session Classification: Group work

Contribution ID: 24

Type: **not specified**

Progress Check and Cross-Group Collaboration

Tuesday 11 February 2025 17:00 (1 hour)

Session Classification: Group work

Contribution ID: 25

Type: **not specified**

Group I: Gamma-ray polarimeters

Wednesday 12 February 2025 09:00 (4 hours)

Finalizing Algorithms, Software Tools, and Dataset Interfaces

Session Classification: Group work

Contribution ID: 26

Type: **not specified**

Group II: X-ray polarimeters

Wednesday 12 February 2025 09:00 (4 hours)

Finalizing Algorithms, Software Tools, and Dataset Interfaces

Session Classification: Group work

Contribution ID: 27

Type: **not specified**

Group III: Theoretical modelling

Wednesday 12 February 2025 09:00 (4 hours)

Finalizing Algorithms, Software Tools, and Dataset Interfaces

Session Classification: Group work

Contribution ID: **28**

Type: **not specified**

Group IV: Software development

Wednesday 12 February 2025 09:00 (4 hours)

Finalizing Algorithms, Software Tools, and Dataset Interfaces

Session Classification: Group work

Contribution ID: 29

Type: **not specified**

Collaborative Integration Testing

Wednesday 12 February 2025 14:00 (3 hours)

Applying the Developed Framework to Existing Datasets

Session Classification: Integration Testing

Contribution ID: 30

Type: **not specified**

Refinement of Integration and Documentation Preparation

Wednesday 12 February 2025 17:00 (1 hour)

Session Classification: Integration Testing

Contribution ID: 31

Type: **not specified**

Joint Integration Testing

Thursday 13 February 2025 09:00 (4 hours)

Testing with simulation/observation data of POLAR/POLAR-2, AstroSat, IXPE, COSI, CATCH, eXTP, etc.

Session Classification: Integration Testing

Contribution ID: 33

Type: **not specified**

Development of Use Cases and Standardized Pipelines

Thursday 13 February 2025 14:00 (3 hours)

Presenters: KOLE, Merlin (Universite de Geneve (CH)); Dr PRODUIT, Nicolas (Universite de Geneve (CH)); GILL, Ramandeep (CITA)

Session Classification: Application to Use Cases

Contribution ID: 34

Type: **not specified**

Review and Refinement of Use Cases

Thursday 13 February 2025 17:00 (1 hour)

Session Classification: Application to Use Cases

Contribution ID: 35

Type: **not specified**

Documentation and Memo Preperation

Friday 14 February 2025 17:00 (2 hours)

Documenting Framework and Planning Next Steps

Session Classification: Future planning

Contribution ID: 36

Type: **not specified**

Closing Remarks and Future Collaboration Planning

Friday 14 February 2025 19:00 (1 hour)

Presenters: Dr PRODUIT, Nicolas (Universite de Geneve (CH)); KOLE, Merlin (Universite de Geneve (CH))

Session Classification: Future planning

Contribution ID: 37

Type: **not specified**

Stokes Analysis Techniques in Gamma-Ray Polarimetry (TBD)

Monday 10 February 2025 18:15 (15 minutes)

Presenters: ZAID, Jimmy (UNH); KOLE, Merlin (University of New Hampshire (US))

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 41

Type: **not specified**

The Gamma-ray Data Tools (GDT)

Monday 10 February 2025 18:45 (15 minutes)

Presenter: Dr BALA, Suman

Session Classification: Presentations and Workshop Kickoff

Contribution ID: 42

Type: **not specified**

ThreeML Framework for High-Energy Astronomy

Monday 10 February 2025 11:15 (15 minutes)

Presenter: DI LALLA, Niccolò

Session Classification: Presentations and Workshop Kickoff