Shedding new light on Gamma-Ray Bursts with polarization data

Report of Contributions

Contribution ID: **2**　　　　　　　　　　　　　　　　　　Type: **not specified**

Detailed polarization measurements of 5 GRBs by POLAR

Monday, 26 November 2018 14:00 (30 minutes)

Presenter: Prof. ZHANG, Shuang-Nan (IHEP)

Session Classification: Measurements past and future

Contribution ID: **3**   Type: **not specified**

Details of the first POLAR analysis

Monday, 26 November 2018 14:30 (30 minutes)

Presenter: Mr LI, Zhengheng (IHEP)

Session Classification: Measurements past and future

Contribution ID: 4   Type: **not specified**

Plans for GRB analysis with POLAR data at IHEP

Thursday, 29 November 2018 11:30 (30 minutes)

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

Session Classification: Data Analysis

Contribution ID: **5**   Type: **not specified**

Plans for future analysis POLAR data in Geneva

Thursday, 29 November 2018 11:10 (20 minutes)

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

Session Classification: Data Analysis

Contribution ID: **6**   Type: **not specified**

GRB Localization with POLAR

Thursday, 29 November 2018 09:45 (30 minutes)

Presenter: Mr WANG, Yuanhao

Session Classification: Data Analysis

Contribution ID: **7**
Type: **not specified**

Polarization measurements with the eXTP mission

Wednesday, 28 November 2018 15:30 (20 minutes)

Presenter: Prof. ZHANG, Shuang-Nan (IHEP)

Session Classification: Future prospects

Contribution ID: **8**   Type: **not specified**

GRB Prompt Emission: an overview

Tuesday, 27 November 2018 13:15 (45 minutes)

Presenter: Prof. TOMA, Kenji (Tohoku University)

Session Classification: GRB: Prompt Emission Theories

Contribution ID: **9**   Type: **not specified**

Theoretical interpretation of the detected circular polarization and the polarimetry of kilonova 170817

Wednesday, 28 November 2018 11:45 (45 minutes)

Presenter: Prof. TOMA, Kenji (Tohoku University)

Session Classification: Future prospects

Contribution ID: **10**   Type: **not specified**

SPHiNX

Wednesday, 28 November 2018 14:35 (20 minutes)

Presenter: PEARCE, Mark (KTH)

Session Classification: Future prospects

Contribution ID: **11**
Type: **not specified**

Prospects for prompt emission polarimetry of GW/GRBs

Presenter: Dr PRODUIT, Nicolas (Universite de Geneve (CH))

Session Classification: Future prospects

Contribution ID: **12**   Type: **not specified**

What do we need from future instruments?

Wednesday, 28 November 2018 13:15 (30 minutes)

In light of the discussions from yesterday, what type of measurements are most important for the future? Energy dependence, time dependence? Do we prefer many "ok" measurements or do we prefer a few very detailed ones (quantity vs quality)?

What are the lessons learned from previous missions which can benefit the future ones?

Presenter: PRODUIT, Nicolas (Universite de Geneve (CH))

Session Classification: Discussions

Contribution ID: **13**
Type: **not specified**

CDCI: POLAR data demonstration

Thursday, 29 November 2018 15:30 (45 minutes)

Presenter: Dr GAUVIN, Neal (Universite de Geneve (CH))

Session Classification: Novel Analysis methods

Contribution ID: 14 Type: **not specified**

POLAR-2

Wednesday, 28 November 2018 14:10 (20 minutes)

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

Session Classification: Future prospects

Contribution ID: **15**   Type: **not specified**

Polarization of GRB Prompt Emission: An overview

Tuesday, 27 November 2018 14:00 (45 minutes)

Presenter: GILL, Ramandeep (CITA)

Session Classification: GRB: Prompt Emission Theories

Contribution ID: **16**
Type: **not specified**

Polarization Predictions of Photospheric Models

Tuesday, 27 November 2018 15:15 (45 minutes)

Presenter: Prof. BELOBORODOV, Andrei

Session Classification: GRB: Prompt Emission Theories

Contribution ID: **17**   Type: **not specified**

Synchrotron and Jitter Polarization Models towards POLAR Observations

Tuesday, 27 November 2018 16:00 (45 minutes)

Presenter: Prof. MAO, Jirong (YNAO)

Session Classification: GRB: Prompt Emission Theories

Contribution ID: **18**
Type: **not specified**

New work by Ramdandeep Gill

Presenter: GILL, Ramandeep (CITA)

Session Classification: GRB: Prompt Emission Theories

Contribution ID: **19**　　　　　　　　　　　　　　　　　　Type: **not specified**

Discussion

Tuesday, 27 November 2018 16:45 (1h 15m)

How do the theories presented today compare to the measured data?

Are there clear problems with any of the existing models given recent results?

Are we able to exclude any models?

Presenter:　Dr BÉGUÉ, Damien (MPE)

Session Classification:　GRB: Prompt Emission Theories

Contribution ID: **20**
Type: **not specified**

Polarization measurements of the GRB afterglow

Monday, 26 November 2018 16:15 (1 hour)

Presenter: Prof. MUNDELL, Carole

Session Classification: Measurements past and future

Contribution ID: **21** Type: **not specified**

GRB prompt emission polarization measurements by GAP

Monday, 26 November 2018 13:00 (1 hour)

Presenter: Prof. YONETOKU, Daisuke

Session Classification: Measurements past and future

Contribution ID: **22** Type: **not specified**

Review of the GRB afterglow polarization and recent work on GRB 170817A

Wednesday, 28 November 2018 10:30 (45 minutes)

Presenter: Prof. GRANOT, Jonathan

Session Classification: Future prospects

Contribution ID: **23**　　　　　　　　　　　　　　　　　　　Type: **not specified**

GRB 170817A afterglow measurements

Presenter: Prof. MUNDELL, Carole

Session Classification: Future prospects

Contribution ID: **24**   Type: **not specified**

Future prospects with GAP2

Wednesday, 28 November 2018 13:45 (20 minutes)

Presenter: Prof. YONETOKU, Daisuke

Session Classification: Future prospects

Contribution ID: 25   Type: **not specified**

The importance of localization

Thursday, 29 November 2018 09:30 (15 minutes)

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

Session Classification: Data Analysis

Contribution ID: **26**   Type: **not specified**

POLARIZATION ANALYSIS FOR REAL INSTRUMENTS

Thursday, 29 November 2018 10:15 (20 minutes)

The future of x-ray polarimetry looks bright. Unfortunately, the sources we look at are not. Low and high count measurements both require proper statistical treatment and the literature on polarization statistics is derived from regularity conditions designed for optical measurements. I will discuss these approaches and present a new approach appropriate for both idealized and real x-ray polarimeters. Additionally, I will show that concepts such as "bias" are purely the result of improper statistical treatment.

Presenter: Dr BURGESS, J. Michael (MPE)

Session Classification: Data Analysis

Contribution ID: **27**   Type: **not specified**

The BALROG for GRB localization

Thursday, 29 November 2018 10:35 (35 minutes)

Presenter: Mr BERLATO, Francesco (MPE)

Session Classification: Data Analysis

Contribution ID: **28**   Type: **not specified**

Synchrotron emission and polarization

Thursday, 29 November 2018 13:00 (1 hour)

We present the first joint fits of POLAR and GBM using proper likelihoods, a new forward-folding technique, and physical models. We will discuss the approach, the software (3ML) that enabled this analysis and the physical framework within which we interpret our results.

Presenter: Dr BURGESS, J. Michael (MPE)

Session Classification: Novel Analysis methods

Contribution ID: **29**　　　　　　　　　　　　　　　　　　Type: **not specified**

How do we make polarization analysis open?

Thursday, 29 November 2018 16:15 (1 hour)

With the increase in available polarization data it becomes possible to make this data public and allow any interested party to perform analysis on it. This requires simple, transparent thoroughly tested public tools as well as data in easy to use formats.

We aim to discus here what people from the theory and analysis community would like to do with public polarization data and how we can best provide such tools.

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

Session Classification:　Novel Analysis methods

Contribution ID: **30**   Type: **not specified**

Polarization measurements without a Compton Telescope and not for GRBs

Monday, 26 November 2018 15:30 (45 minutes)

Presenter: Dr SIEGERT, Thomas (MPE)

Session Classification: Measurements past and future

Contribution ID: **31**　　　　　　　　　　　　　　　　　　　　Type: **not specified**

GRB 170817A afterglow measurements

Wednesday, 28 November 2018 11:15 (30 minutes)

Presenter: Prof. MUNDELL, Carole

Session Classification: Future prospects

Contribution ID: **32**   Type: **not specified**

Polarization measurements of the afterglow

Wednesday, 28 November 2018 09:30 (1 hour)

Presenter: Prof. MUNDELL, Carole

Session Classification: Future prospects