

THE 1st LHAASO SYMPOSIUM



Sunday, 28 May 2023 – Friday, 2 June 2023

Tianfu Cosmic Ray Research Centre

Scientific Programme

The First LHAASO Symposium Program
3.5 days - three full days and one half day

all invited talks: 30min +5min for discussions = 35 min
Morning sessions - Plenary Sessions
Afternoon Sessions - Oral talks

May 29th

8:55-9:00 Zhen Cao: Welcome speech

Morning session I (GALACTIC CR) Chair: Felix Aharonian

9:00-9:35 Zhen Cao + Songzhan Chen: LHAASO Experiment (General+ first catalog) Zhen Cao + Songzhan Chen

9:35-10:10 Mikhail Malkov (online): Galactic Cosmic Rays - Acceleration and propagation

10:10-10:45 Werner Hofmann: CTA and complementarity of techniques

10:45-11:15 Coffee break & group picture

Morning session II (GALACTIC CR) Chair: Songzhan Chen

11:15-11:50 Stefano Gabici: Stellar Clusters/SNR and Cosmic Rays

11:50-12:25 Siming Liu: LHAASO SNRs

12:25-13:00 Ruizhi Yang: LHAASO - Stellar Clusters

Afternoon session I (GALACTIC CR) Chair: Ruizhi Yang

15:30-15:50 Huirong Yan: Turbulent magnetic fields: detections, and implications on CRs

15:50-16:10 Gwenael Giacinti: CR Propagation in the Galaxy, and Diffuse Galactic Gamma-Ray Emission at Very High Energies

16:10-16:30 Xuening Bai: First-principle simulations of cosmic-ray transport in the self-confinement regime

16:30-16:50 Giovanni Morlino: Star Clusters as gamma-ray sources

16:50-17:10 Silvia Celli: Particles and Radiation from Supernova Remnants

17:10-17:30 coffee break

Afternoon session II (MULTIWAVELENGTH) Chair: Hao Zhou

17:30-17:50 Yang Ji (speaker: Yang Su): The Milky Way Imaging Scroll Painting (MWISP) Survey Project: New Molecular Line Data along the Northern Galactic Plane

17:50-18:10 Jin Chichuan: The Einstein Probe Mission

18:10-18:30 Giovanni Pareschi: Update on ASTRI: Technology and science using wide-field aplanatic IACT telescopes

18:30-18:50 Giorgia Sironi: ASTRI Optical design

May 30th

Morning session I (PWN) Chair: Siming Liu

9:00-9:35 Dmitry Khangulyan: Pulsar Wind Nebulae

9:35-10:10 Ruoyu Liu: LHAASO results on PWNe and Pulsar Halos

10:10-10:45 Jian Li: Binaries seen in Gamma ray

10:45-11:15 Coffee break & poster time

Morning session II (CRs) Chair: Huihai He

11:15-11:50 Samuel Ting (speaker: Zuhao Li): Galactic Cosmic Rays- general review

11:50-12:25 Shoushan Zhang: LHAASO - Cosmic Rays

12:25-13:00 Paolo Lipari: CR Spectra in the knee region

14:00-14:30 Poster time

Afternoon session I (PWN) Chair: Ruoyu Liu

14:30-14:50 Renfeng Xu: LHAASO PWN tail: PSR J1740+1000

14:50-15:10 Zhe Li: LHAASO Millisecond pulsar PWN: J0218+4232:

15:10-15:30 Yingying Guo: LHAASO Geminga spectrum and morphology

15:30-15:50 Josepf Gelfand: How do pulsars generate extended VHE sources? A PWN tale

15:50-16:10 Laura Olivera-Nieto: Spatially resolved TeV emission from the jets of the microquasar SS 433

16:10-16:30 coffee break

Afternoon session II (DIFFUSE & CR) Chair: Qiang Yuan

17:30-17:50 Dmitry Semikoz (online): Diffuse gamma-ray and neutrino background from Milky Way Galaxy

17:50-18:10 Zhuo Li: Multi-messenger approach of searching for PeVatrons and UHECR sources

18:10-18:30 Enrico Perreti: Particle acceleration and multi-messenger radiation from extragalactic outflows

18:30-18:50 Susumu Inoue: Cosmic rays and diffuse gamma-ray emission from the Milky Way

May 31st

Morning session I (CR DIRECT) Chair: Shoushan Zhang

9:00-9:35 Xiang Li: CR Spectra below knees

9:35-10:10 Qiang Yuan: LHAASO Diffuse

10:10-10:45 Pierre Sokolsky (online) : Extragalactic Cosmic Rays

10:45-11:15 Coffee break

Morning session II (EXTRAGALACTIC) Chair: Min Zha

11:15-11:50 Bing Zhang: GRBs and their Afterglows

11:50-12:25 Xiangyu Wang: LHAASO-Extragalactic (GRB afterglows and AGN)

12:25-13:00 Paolo Coppi: Gamma Ray Emitting AGN:

Afternoon session I (CR & EXTRAGALACTIC) Chair: Xiangyu Wang

14:30-14:50 Hengying Zhang: Measurements of mean logarithmic mass of cosmic rays near the knee region by LHAASO

14:50-15:10 Zha Min: LHAASO AGN: NGC 1275 and Mrk 421

15:10-15:30 Shigeo Kimura: Galactic black holes as PeVatrons

15:30-15:50 coffee break

Afternoon session II (GRB/NEUTRINO/DM) Chair: Xiaojun Bi

15:50-16:10 Jirong Mao: Jitter Mechanism as a Kind of Coherent Radiation: GRB 221009A beyond 10 TeV

16:10-16:30 Katsuaki Asano: Early TeV Gamma-Ray Afterglow of GRBs

16:30-16:50 Guoyuan Huang: Probing the Glashow resonance and beyond with ultrahigh energy neutrino telescopes

16:50-17:10 Bing T. Zhang: Nuclear and electron cascades induced by UHECRs

17:10-17:30 Xiaoyuan Huang: LHAASO Dark matter: Dwarf Spheroidal Galaxies
17:30-17:50 Shicong Hu: LHAASO Updating with WCDA for LHAASO J2108+5157 or LHAASO J0341+5258

18:30-20:30 Reception Dinner

Jun 1st

Morning session I (MULTIMESSENGER & MULTIWUVELENGTH) Chair: Zhiguo Yao
9:00-9:35 Xiaojun Bi: LHAASO - Fundamental Physics (DM, LIV, etc.)

9:35-10:10 Barbara Patricelli: Gravitaion waves and GRBs
10:10-10:40 Coffee break

Morning session II (MULTIMESSENGER & MULTIWUVELENGTH) Chair: Zhen Cao

10:40-11:15 Donggeun Tak: Fermi - summary of the Fermi Results
11:15-11:50 Wei Wang: Low Energy Neutrinos
11:50-12:25 Ke Fang: High Energy Neutrinos
12:25-12:45 Felix Aharonian: Concluding remark

Afternoon

Self-arrangement

(Jun 2nd

Visit to LHAASO Observatory Site in Daocheng

the flights are recommended:

1. from Chengdu Tianfu International Airport to Daocheng Yading Airport, Jun 2nd, CA2561, 07:40 (TFU, T2) -09:00 (DCY)
2. from Daocheng Yading Airport to Chengdu Tianfu International Airport, Jun 3rd, CA2562, 09:50 (DCY) -11:15 (TFU, T2)

There will be bus to take visitors from Xinglong Lake hotel to Tianfu airport, from Daocheng Yading airport to LHAASO site on June 2, and from the hotel in Daocheng to Yading airport on June 3.)

Gamma Ray Burst

Gamma Ray Astronomy

Cosmic Ray Physics

Neutrinos

Gravitational Waves

Multi-messenger Astronomy