

(Image: EP Science Center, National Astronomical Observatories, CAS/Sci Visual)

About the Cover:

Einstein Probe (EP), an astronomical satellite built by the Chinese Academy of Sciences (CAS) in cooperation with its European partners, detected a weird source in X-rays. Unlike any previously documented transient, it was unusually bright, and evolved very fast. Its furious flares, first emerged in X-rays, shortly hardened and peaked at tens of MeV in the gamma-ray band, sustaining for hours. The peak flares decayed soon, and a soft X-ray afterglow rose to dominate the spectrum.

What drastic cosmic event could have produced such a bright, fast evolving radiation? Find it out in page 28.

BCAS
www.bcas.cas.cn

March 2026
Vol.40 No.1
Pages 1 – 64

Editor-in-chief

HOU Jianguo

Executive Vice Editor-in-chief

CHANG Jin

Vice Editors-in-chief

FU Bojie, GUO Huadong, LI Guojie, POO Muming,
RAO Ziheng and WANG Keqiang

Editor

SONG Jianlan

Associate Editors

GUO Haiyan

YAN Fusheng

Design & Layout

YUAN Miao

General Editorial Office
Tel/Fax: +8610 62542631
Email: bulletin@casid.cn
P.O. Box 8712, Beijing 100190, China

Sponsored by the Chinese Academy of Sciences
Published by Science Press
Printed by Beijing Reach Mine Printing Co., Ltd.

Domestic subscription (1 year): 400 yuan.
Domestic and overseas distribution: Science Press

Launched in 1987, the *Bulletin of the Chinese Academy of Sciences (BCAS, ISSN 1003-3572)* is a quarterly magazine published every March, June, September and December. Copyright © 2026 by the Chinese Academy of Sciences. Please note that the views expressed in *BCAS* are those of the authors, and are not necessarily those of the Academy or the editors. For subscription, please contact Science Press at +8610 64017032, mazhiyong@mail.sciencep.com.

Authors are encouraged to submit data related to their papers to the Science Data Bank at the following link: <https://www.scidb.cn/en>.

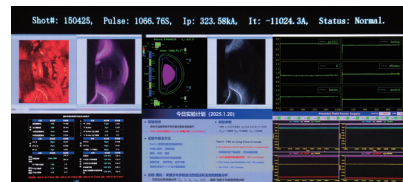
2 IN THIS ISSUE

IN BRIEF

- 5 New International Paleontology Award Named After Chinese Scholar
- 5 Ammonia Synthesis at Room Temperature
- 6 Mitochondria in a Capsule
- 7 A Molecular Bridge for Leukemia
- 8 The Hidden Plumbing of Healthy Soil

ANNUAL SPECIAL

- 9 Top 10 News of S&T Advances for 2025: Chinese Academicians' Picks



Members of the Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineering (CAE) voted for the top 10 news of S&T advances, respectively of China and the rest of the world, for the previous year.

[Top 10 News for S&T Advances of China for the Year 2025](#)

[Top 10 News of Oversea S&T Advances for the Year 2025](#)

- 23 “Artificial Sun” Tops the ‘25 List of Leading News for S&T Advances of China Elected by Academicians

- 26 EAST Overcomes Empirical Limit on Plasma Density

HIGHLIGHTS

- 28 Likely First Capture of an Intermediate-mass Black Hole Devouring a White Dwarf

ARTICLE

- 33 Reframing the Strategic Framework for a Climate Just Transition: A Global South Perspective



Climate just transition shall not neglect the Global South's needs for industrialization, energy access, and poverty reduction. In his article, the author gives a three-dimensional framework balancing development and climate goals.

IN DEPTH

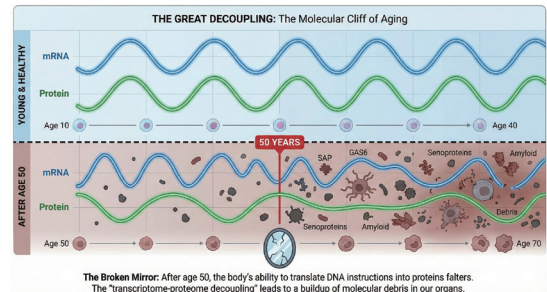
- 41 LHAASO Unveils Likely Origin of UHE Cosmic Rays, and Formation of the “Knee”



With help from this mammoth observatory of cosmic rays, scientists are now able to unravel two mysteries at once: the possible source of the ultra-high energy particles in cosmic rays, and the expedited loss of such particles at around 3 peta-electronvolts.

- 48 Designing Microbes to Decompose Industrial Wastes

- 52 Mapping Life: From the Whispers of a Cell to the Symphony of an Organ



Mapping Life across Time: A new proteome atlas reveals the “Great Decoupling” between mRNA and proteins, marking a dramatic molecular cliff of aging around age 50.

SCIENCE WATCH

Basic Research

- 56 Researchers Realize Room-temperature Two-dimensional Multiferroic Metal

Technology & Engineering

- 58 Overcoming the VUV Bottleneck: A New High-Performance Nonlinear Optical Crystal

Life Sciences

- 60 Engineered iTreg-Mediated Immune Tolerance in Zebrafish Overcomes Allograft Rejection for Rapid Gamete Production

Earth Sciences

- 62 Oldest Known Bony Fish Fossils Uncover Early Vertebrate Evolution