

Research in Astronomy and Astrophysics

Vol. 26 No. 3

2026 March

CONTENTS

Invited Reviews

The Formation of Electron-capture Supernovae: A Review

Bo Wang, Dongdong Liu, Yunlang Guo and Zhanwen Han 032001

Data Paper

Dataset for Recognition and Detection Based on Solar Radio Spectrogram Data

Yan Liu (刘岩), Hongqiang Song (宋红强), Fabao Yan (严发宝) and Yanrui Su (苏艳蕊) 037001

Research Papers

The Influential Roles of Gravity, Turbulence, and Magnetic Fields in Shaping the Physical Evolution of Dense Massive Clumps

Moses Onyemaechi Asogwa, Seblu Humne Negu, Gemechu Muleta Kumssa et al. 035001

ASCNet: Research on All-sky Camera Image Classification at the Muztagh ata Site

Siqi Wang, Qi Fan, Wenbo Gu, Haozhi Wang, AYZADA Jumahali et al. 035002

Spectral Variability of the Star HD 141569A

H. N. Adigozalzade, N. Z. Ismailov, U. Z. Bashirova and S. A. Alishov 035003

First Time Observed M-shaped Coronal Mass Ejection Associated with a Blowout Jet and an Extreme Ultraviolet Wave

Yu-Hu Miao, Lin-Hua Deng, Chao-Wei Jiang, Abouazza Elmhamdi, Jiang-Tao Su et al. 035004

Searching Radio Pulsars for Fourteen Unidentified Very-high-energy Sources

Qi-Wei Lu, Dong Zheng, Zhong-Xiang Wang, Yi Xing and Zhong-Li Zhang 035005

AM-GMCNet: An Adaptive Morphology-aware Residual Network for Galaxy Morphology Recognition

Peng Liu, Yangyang Guo, Hao Fu, Lin He, Zhou Yang and Xue Mei 035006

Stray Light Characterization and Suppression in Laboratory Testing of Coronagraphs

Xiao-Yu Yu, Wei-Tao Liu, Ning Tang, Da-Yang Liu, Xian-Liang Mao et al. 035007

Modeling and Analysis of the New FAST Feed Cabin Configuration under Different Illumination Modes

Jia-Ning Yin, Rui Yao and Peng Jiang 035008

Study of Four Nulling Pulsars with FAST

Jingbo Wang, Jintao Xie, Jing Zou and Jianfei Tang 1 035009

The Precipitable Water Vapor at the Lenghu Site on the Tibetan Plateau

Jing Ma (马静), Licai Deng (邓李才), Kun Wang (王坤) et al. 035010

An Automatic Knowledge Graph Construction Method from Astronomical Literatures via Large Language Models

Jia-Qi Wang, Jin-Qu Zhang and Zhi-Qiang Zou 035011

AI Agent for Source Finding by SoFiA-2 for SKA-SDC2

Xingchen Zhou, Nan Li, Peng Jia, Yingfeng Liu, Furen Deng et al. 035012

Lightcurve Features of Magnetar-powered Superluminous Supernovae with Gravitational-wave Emission and High-energy Leakage

Jinghao Zhang, Yacheng Kang, Jiahang Zhong, Hong-Bo Li, Liang-Duan Liu et al. 035013

Pulsar Sparking: What if Mountains are on the Surface?

Zi-Hao Xu, Wei-Yang Wang, Shun-Shun Cao and Ren-Xin Xu 035014

Phenomenological Model for the Maximum Mass of a Rotating Magnetized Neutron Star

Abbas Al-Faouri, Ali Taani and Mohammed Abu-Saleem 035015

New Observations and TTV Analyses of the Exoplanetary Systems WASP-36 and XO-3

Xinyu Zhu, Leilei Sun, Shenghong Gu, Xiaobin Wang, Haijun Tian et al. 035016

Selective Actuator Adjustment Method Based on Mixed-integer Nonlinear Programming and Heuristic Genetic Algorithm for Radiation Pattern Optimization of Leighton Chajnantor Telescope

Jia You, Zheng Wang, Long Cheng, Run-Fu Peng and Yong Bi 035017

Automated Identification of the Tip of the Red Giant Branch in Globular Clusters with Gaia Data

Yi Yang, Zhenzhen Shao, Xiaofeng Wang and Xiaochen Zheng 1 035018

Organic Acid Chemistry in ISM: Detection of Formic Acid and its Prebiotic Chemistry in Hot Core G358.93–0.03 MM1

Arijit Manna, Sabyasachi Pal, Sekhar Sinha and Sushanta Kumar Mondal 035019

Exploring the Structure and Evolution of Four Young Open Clusters near the Galactic Mid-plane via Gaia DR3

W. H. Elsanhoury, S. Taşdemir, D. C. Çınar, R. Canbay and A. Ahmed 035020

Design of a Real-time Command Transmission System for 14.5 m Optical Infrared Telescope Servo Control Based on Reflective Memory Network Interrupt Mechanism

Yan-Peng Guo, Shi-Hai Yang, Zhuang-Zhuang Deng, Yun Li, Cong Pan et al. 035021

Corrigendum: “A Novel Apparatus for Rotating Fluid Experiments and Newly Discovered Parameter Space of Triadic Resonance in a Rotating and Latitudinal Librating Triaxial Ellipsoid” (2025, RAA, 25, 115020)

Xiuyu Chen, Changshun Liu, Ligang Li and Dali Kong 039501

Erratum: “Data-driven Simulations of Magnetic Field Evolution in Active Region 11429: Magneto-frictional Method Using PENCIL CODE” (2024, RAA, 24, 025007)

P. Vemareddy, Jörn Warnecke and Ph. A. Bourdin 039601