

Research in Astronomy and Astrophysics

Vol. 24 No. 7

July 2024

CONTENTS

Invited Reviews

VLBI with SKA: Possible Arrays and Astrometric Science

Yingjie Li, Ye Xu, Jingjing Li, Shuaibo Bian, Zehao Lin, Chaojie Hao and Dejian Liu 072001

Research Papers

Can near-to-mid Infrared Spectral Energy Distribution Quantitatively Trace Protoplanetary Disk Evolution?

Mingchao Liu (刘明超), Jinhua He (何金华), Zhen Guo, Jixing Ge (葛继兴) et al. 075001

Toward a Direct Measurement of the Cosmic Acceleration: The Pilot Observation of HI 21 cm Absorption Line at FAST

Jiangang Kang, Chang-Zhi Lu, Tong-Jie Zhang and Ming Zhu 075002

Mid-infrared Period – Luminosity Relations of Gaia DR3 Long Period Variables

Xiaohan Chen, Xiaodian Chen, Licai Deng, Shu Wang and Tianlu Chen 075003

Astrometric Observations of NEA 1998 HH49 Using the Daocheng 50 cm Telescope

Huan Xu, Xiang-Ming Cheng, Yi-Gong Zhang, Teng-Fei Song, Zhen-Jun Zhang et al. 075004

Are Solar Active Regions Born with Neutralized Currents?

Aiyi Duan, Yaoyu Xing and Chaowei Jiang 075005

Supernova 1987A's Keyhole: A Long-lived Jet-pair in the Final Explosion Phase of Core-collapse Supernovae

Noam Soker 075006

Cross-method Analysis of Corotation Radii Data Set for Spiral Galaxies

V. S. Kostiuk, A. A. Marchuk and A. S. Gusev 075007

Design and Application of an S-band Fast Radio Bursts Search Pipeline for the Nanshan 26 m Radio Telescope

Yan-Ling Liu, Mao-Zheng Chen, Jian Li, Jian-Ping Yuan, Rai Yuen et al. 075008

Probing the Galactic Halo with RR Lyrae Stars. VI. The Radial Velocity Curve Templates of RRc Stars

Yue Huang, Min Fang, Gaochao Liu, Xianzhong Zheng, Sarah Ann Bird et al. 075009

Spectral Fittings of Warm Coronal Radiation with High Seed Photon Temperature: Apparent Low-temperature and Flat Soft Excess in AGNs

Ze-Yuan Tang, Jun-Jie Feng and Jun-Hui Fan 075010

UWLPIPE: Ultra-wide Bandwidth Low-frequency Pulsar Data Processing Pipeline

Ya-Zhou Zhang, Hai-Long Zhang, Jie Wang, Jian Li, Xin-Chen Ye et al. 075011

CSST Dense Star Field Preparation: A Framework for Astrometry and Photometry for Dense Star Field Images Obtained by the China Space Station Telescope (CSST)

Yining Wang, Rui Sun, Tianyuan Deng, Chenghui Zhao, Peixuan Zhao et al. 075012

GRB 210610B: The Internal and External Plateau as Evidence for the Delayed Outflow of Magnetar

Yi-Ning Wei (韦逸宁), Xiang-Gao Wang (王祥高), Da-Bin Lin (林达斌) et al. 075013

Observation of Complex Organic Molecules Containing Peptide-like Bonds Toward Hot Core G358.93–0.03 MM1

Arijit Manna and Sabyasachi Pal 075014

Long-term Variation of the Solar Polar Magnetic Fields at Different Latitudes

Shuhong Yang, Jie Jiang, Zifan Wang, Yijun Hou, Chumlan Jin et al. 075015

Evolution of High-energy Electron Distribution in Pulsar Wind Nebulae

Yi-Ming Liu, Hou-Dun Zeng, Yu-Liang Xin, Si-Ming Liu and Yi Zhang 075016

Investigating Sulfur Chemistry in the HD163296 Disk

Rong Ma, Donghui Quan, Yan Zhou, Jarken Esimbek, Dalei Li et al. 075017

The Active Compensation Technique for Large Reflector Antennas Based on Quadratic Curve Fitting

Tian-Xiang Zheng, Bin-Bin Xiang, Han-Wei Cui, Wei Wang, Pei-Yuan Lian et al. 075018

Lossless Compression Method for the Magnetic and Helioseismic Imager (MHI) Payload

Jianhong Hu, Dandan Xu and Cheng Li 075019

New HI Observations Toward the NGC 5055 Galaxy Group with FAST

Xiao-Lan Liu, Ming Zhu, Jin-Long Xu, Peng Jiang, Chuan-Peng Zhang et al. 075020

Identifying Three New AGNs among Fermi Unidentified Gigaelectronvolt Sources

Shun-Hao Ji, Zhong-Xiang Wang, Qiang-Meng Huang and Ruo-Heng Yang 075021

Calculating the Excitation Temperature for H₂CO Absorption Lines in Molecular Clouds

Jia Bu, Jarken Esimbek, Jianjun Zhou, Toktarkhan Komesh, Xindi Tang et al. 075022