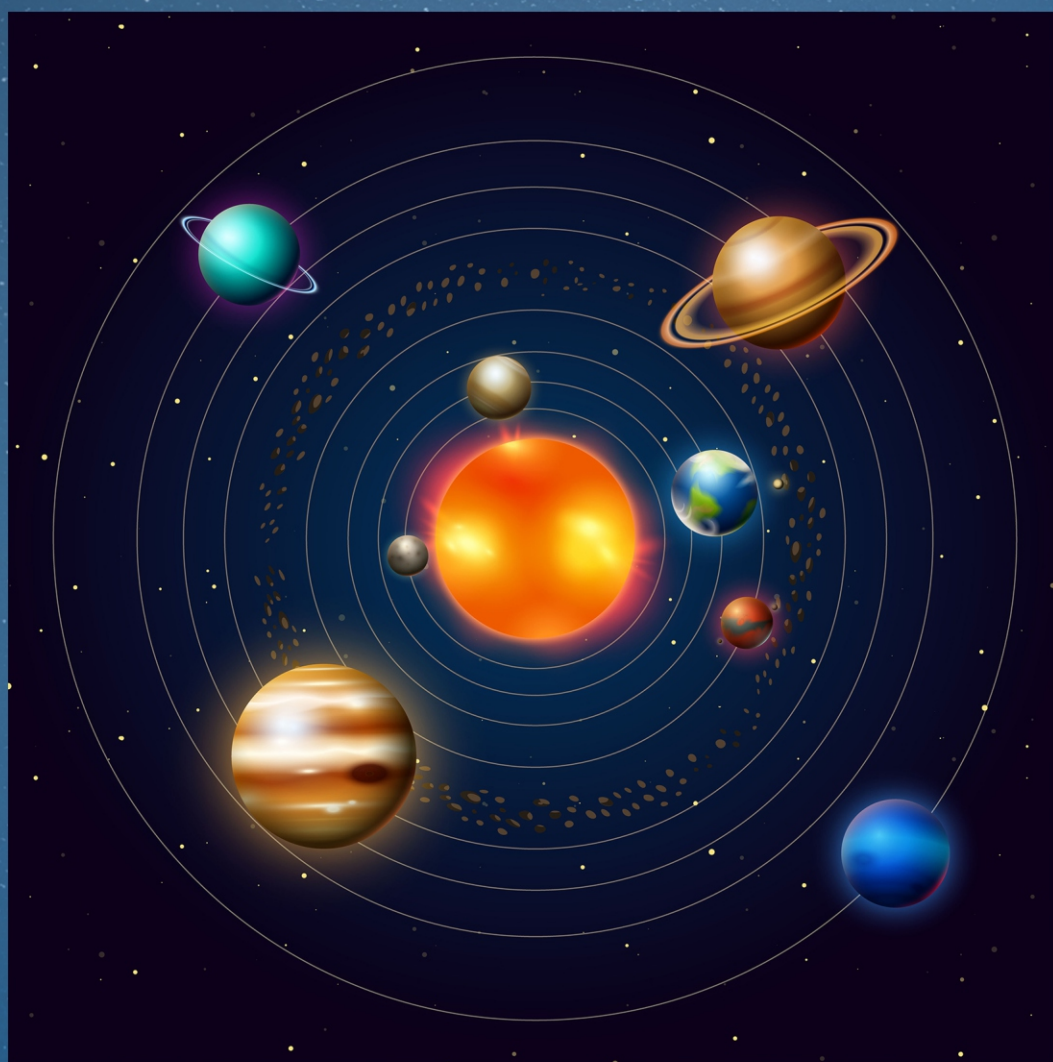


International Journal of Astronomy and Astrophysics



ISSN: 2161-4717



<https://www.scirp.org/journal/ijaa>

Journal Editorial Board

ISSN 2161-4717 (Print) ISSN 2161-4725 (Online)

<https://www.scirp.org/journal/ijaa>

Editor-in-Chief

Prof. Michael D. Smith

University of Kent, UK

Editorial Board

Dr. Mushtaq Ahmad

National University of Computer & Emerging Sciences, Pakistan

Dr. Luigi Maxmilian Caligiuri

University of Calabria, Italy

Prof. Vahram Chavushyan

Instituto Nacional de Astrofisica, Mexico

Prof. Enise Nihal Ercan

Bogaziçi University, Türkiye

Prof. Guillermo A. Gonzalez

Universidad Industrial de Santander, Colombia

Prof. Anatol Guglielmi

Russian Academy of Sciences, Russia

Dr. Mark Jeffrey Henriksen

University of Maryland, USA

Prof. Nadia Kaltcheva

University of Wisconsin Oshkosh, USA

Prof. Rafik A. Kandalyan

Al-Bayt University, Jordan

Prof. Muhammad Ayub Khan Yousuf Zai

University of Karachi, Pakistan

Dr. Vladimir Kondratyev

Bogoliubov Laboratory of Theoretical Physics, JINR, Ukraine

Prof. Alexander M. Krymskii

Southern Federal University, Russia

Dr. Sunil Kumar Maurya

College of Arts and Sciences, University of Nizwa, Oman

Prof. Jonathan Peter Merrison

Mars Simulation Wind Tunnel Facilities, UK

Prof. Gopalakrishnarao Parthasarathy

National Geophysical Research Institute-CSIR, India

Prof. Hadia Hassan Selim

National Research Institute of Astronomy and Geophysics, Egypt

Prof. Ram Krishan Sharma

Karunya University, India

Prof. Yuriy G. Shkuratov

Kharkov National University, Ukraine

Table of Contents

Volume 15 Number 3

September 2025

Linear Stability of Non-Axial Libration Points in the Kite Configuration of First Kind

M. Alam, M. R. Hassan, S. Suman, M. A. Hassan, P. Kumar, M. S. Ahamad, S. Sultana 197

Halo CMEs and Solar Flux F10.6 Impact on Cloud Cover for Sc23: Case Study Africa

M. M. Farghaly, A. A. Tharwat 218

Seasonal Variation Analysis for Solar Activity Influence on “Planetarische Kennziffer” (Kp) Index during Solar Cycle 23

M. M. Farghaly, S. S. Khodairy, A. A. Tharwat, M. A. Sharaf, M. E. Awad, R. H. Abdelhamid 243

The Warm Dark Matter plus Baryon Linear Power Spectrum

B. Hoeneisen 264

Relativistic Effects on the Existence of Libration Points in the Sitnikov Problem

S. Sultana, M. R. Hassan, L. Kumar, M. A. Hassan, P. Kumar, Shubhra, M. Alam 282

International Journal of Astronomy and Astrophysics (IJAA)

Journal Information

SUBSCRIPTIONS

The *International Journal of Astronomy and Astrophysics* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2025 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

Copyright for individual papers of the journal:

Copyright © 2025 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

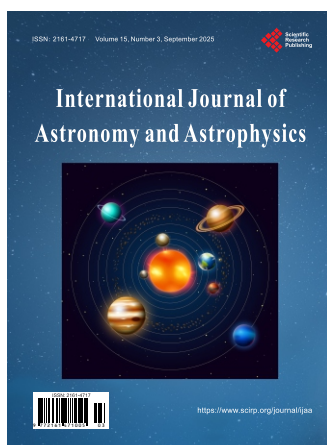
Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: ijaa@scirp.org



Call for Papers

International Journal of Astronomy and Astrophysics (IJAA)

ISSN 2161-4717 (Print) ISSN 2161-4725 (Online)
<https://www.scirp.org/journal/ijaa>

International Journal of Astronomy and Astrophysics (IJAA) is an international scientific journal dedicated to the publication and public discussion of high quality original research in all the fields of astrophysics and space sciences and related technology. All the manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copies.

Editor-in-Chief

Prof. Michael D. Smith

University of Kent, UK

Editorial Board

Dr. Mushtaq Ahmad
 Dr. Luigi Maxmilian Caligiuri
 Prof. Vahram Chavushyan
 Prof. Enise Nihal Ercan
 Prof. Guillermo A. Gonzalez
 Prof. Anatol Guglielmi

Dr. Mark Jeffrey Henriksen
 Prof. Nadia Kaltcheva
 Prof. Rafik A. Kandalyan
 Prof. Muhammad Ayub Khan Yousuf Zai
 Dr. Vladimir Kondratyev
 Prof. Alexander M. Krymskii

Dr. Sunil Kumar Maurya
 Prof. Jonathan Peter Merrison
 Prof. Gopalakrishnarao Parthasarathy
 Prof. Hadia Hassan Selim
 Prof. Ram Krishan Sharma
 Prof. Yuriy G. Shkuratov

Subject Coverage

The journal publishes original papers including but not limited to the following fields:

- Astrogeodynamics
- Astrophysics
- Cosmic Rays and Gamma Astronomy
- Dynamics of Celestial Bodies in the Solar System and Artificial Bodies
- Extrasolar Planets
- Formation and Evolution of Galaxies and Their Clusters
- Formation and Evolution of Stars
- Heliospheric Physics
- High-Energy and Cataclysmic Processes in Astrophysics
- Interstellar Matter
- Interstellar Medium: Star Formation Regions
- Kinematics and Structure of the Galaxy
- Large-Scale Structure of Universe Formation and Evolution of Galaxies
- Last Stages of Stellar Evolution and Chemical Evolution of the Galaxy
- Magnetospheric Physics
- Microquasars and High-Energy Astrophysics
- Neutron Astronomy
- New Astronomical Techniques and Methods
- Planets, Comets, Asteroids and Dust
- Pulsar Magnetospheres
- Solar and Stellar Physics
- Solar Magnetic Activity and Heliogeospace Environments
- Solar/Interstellar Terrestrial Relations
- Solar-Terrestrial Physics and Space Weather
- Space Observation and Exploration
- Supernovae and Evolution of the Universe

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the IJAA.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

<https://www.scirp.org/journal/ijaa>

E-mail: ijaa@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific
Research
Publishing**

Website: <https://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org