List of abstracts accepted for CBDO 2024 in order of submission, October 10, 2024.

CBDO 001
The Orbital Eccentricities of Directly Imaged Companions Using Observable-based Priors: Implications for Population-level Distributions
Clarissa R. Do Ó, Kelly K. O'Neil, Quinn M. Konopacky, Tuan Do, Gregory D. Martinez, Jean-Baptiste Ruffio, and Andrea M. Ghez
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CBDO 002
The co-orbital dynamics in binary systems
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CBDO 003
ALR_Sim_tracks - trajectory simulator software to assist the search for favourable trajectories for the exploration of the triple Asteroid 2001-SN263 from the Laser Altimeter point of view
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CBDO 004
Capture trajectories for NEAs using three-body dynamics
Dr. Priscilla Sousa-Silva, Dr. Denilson Paulo Souza dos Santos, Dr. Luiz Alberto de Paula, Júlia Gomes da Costa and Henrique Babo Terra
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CBDO 005 - A
Dimensioning and design (2D and 3D) of the laser altimeter for the ASTER Mission
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CBDO 006 - A
Vision Transformers for identifying asteroids interacting with secular resonances
Valerio Carruba (1), Safwan Aljbaae (2,3), Evgeny Smirnov (4), Gabriel Caritá (2)
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CBDO 007
Understanding and describing a phase transition from limited to unlimited diffusion for a billiard system
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CBDO 008 - A
The five largest satellites of Uranus: astrometric observations spread over 29 years at the Pico dos Dias Observatory
Camargo, J.I.B. (1), Veiga, C.H. (1), Vieira-Martins, R. (1), Fienga, A. (2), Assafin, M. (3)
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CBDO 009 - A
Preliminary Design of Trajectories for Rendezvous with 2001 SN263
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CBDO 010
The geomagnetic field and charge generation for satellites
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CBDO 011
Rendezvous formalism applied into final stage correction maneuverings of LEO-DRO Cislunar Transfer
Ricardo José Schwarz, Helton da Silva Gaspar
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CBDO 012
Numerical validation of electric charging from current induced by the geomagnetic field
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CBDO 013 - A
Low-energy trajectories generated in the Earth-Moon system destined to the Jovian system
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CBDO 014
A Magnetotorque Model with External Coils for CubeSat Attitude Control
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CBDO 015
Characterization of the Rings of the Centaur Chariklo
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CBDO 016
Orbital Precision of Himalia through Numerical Integrations and Statistical Analysis of Observations
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CBDO 017
Light Deflection in Stellar Occultations: A Challenge for Astrometry
Maísa Poiani (1), Altair Ramos Gomes Junior (1), Julio Ignacio Bueno de Camargo (2)
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CBDO 018
Qualitative analysis of the dynamic evolution of planetary systems
Eduardo Verrone Sanches, Tatiana A. Michtchenko
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CBDO 019
The effect of impactor mass-ratio in the accretion of Uranus and Neptune
Leandro Esteves, André Izidoro, Othon Winter
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CBDO 020 - A
Orbital dynamics of space debris considering natural perturbations and resonance effects
Calisto José da Silva Neto (1), Jean Paulo dos Santos Carvalho (2), Eva Tresaco (3), Rodolpho Vilhena de Moraes (4)
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CBDO 021
Machine Learning Applied to Asteroid Study in the LSST Era
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CBDO 022
Searching for long lasting natural orbits around moons in the Solar System
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CBDO 023
An analytical model for the dynamical evolution of two-planet extrasolar systems in wide binaries stars
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CBDO 024 - A
Orbital Stability of Small Satellites in Trans-Neptunian Dwarf Planet Systems
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CBDO 025
Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies considering three distinct internal structures: Application to (21) Lutetia
Marcelo Lisboa Mota (1), Safwan Aljbaae (2), Antonio F. B. A. Prado (2)
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CBDO 026
Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies: Application to (285263) 1998 QE2
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CBDO 027
Investigation of orbits around the asteroid (16) Psyche
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CBDO 028 - A
Energy Variation of Space Debris considering Orbital Maneuvers and Ground-Based Laser
Jorge K. S. Formiga, Denilson P. S. Santos, Antonio F.B.A. Prado, Rodolpho V. de Moraes
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CBDO 029
Stellar Occultations observed by the CHEOPS Space Telescope
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CBDO 030
Estimation of Orbital Errors of Space Telescopes
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CBDO 031 - A
A study on the chaotic dynamics of comet 1P Halley
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CBDO 032
OGLE-2019-BLG-1470L AB c Exoplanet Orbital Dynamics Analysis
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CBDO 033
Tridimensional Dynamics of Small Satellites
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CBDO 034
Comparison of aerodynamic control algorithms for satellites in LEO to increase its orbital decay
Prof. Dr. Antônio Fernando Bertachini de Almeida Prado (1), Dr. Jhonathan Murcia-Piñeros (2), Matheus Henrique de Abreu Miranda (1)
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CBDO 035
Non-transiting exoplanet characterization using TTV pattern and Deep Learning
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CBDO 036
Analysis and two-dimensional modelling of diffraction effects in stellar occultations
Lucas Naves Rodrigues, Altair Ramos Gomes Junior
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CBDO 037
Prediction of Gravitational Microlensing
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CBDO 038
Stellar Occultations by the Trojan (2363) Cebriones
I. B. Batista, B. E. Morgado, F. Braga-Ribas, A. R. Gomes-Júnior, M. Assafin, B. Sicardy, R. Vieira-Martins, SORA Developers and Observers.
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CBDO 039 - A
The Effect of Triton's Evolution on Neptune's Spin Axis
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CBDO 040
Impact of Insertion Errors on the Performance of Small Satellite Constellations
Antonio Fernando Bertachini de Almeida Prado (1), Leonardo Barbosa Torres dos Santos (1), Lucas Marcone Bernardino Da Silva (2), Lucas José da Silva Pacheco (2)
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CBDO 041
Aster Project: A New Launch Window with Multiple Swing-bys and Technological Parameters
Felipe C. Peixoto, Antônio Delson C. de Jesus
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CBDO 042 - A
On the Dynamics around Quaoar: its shape and the unstable limit
Othon Winter (1), Taís Ribeiro (1), Gustavo Madeira (2), Silvia Giuliatti Winter (1), Felipe Braga-Ribas (3), Giuliano Margot (3)
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CBDO 043
Analysis of interplanetary missions involving gravity-assisted maneuvers with the moon and the use of photonic solar sails
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CBDO 044 - A
Isochronous Bifurcations
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CBDO 045 - A
Long and short-duration orbits around the Moon for diferente types of missions
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CBDO 046 - A
Heliotropic Orbits around the 65803 Didymos Binary Asteroid System: Effects of Zonal Harmonics, Solar Radiation Pressure, and Third-Body Perturbations
Guilherme de Oliveira Paes (1), Maisa de Oliveira Terra (2), Rodolpho Vilhena de Moraes (1), Jean Paulo dos Santos Carvalho (3)
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CBDO 047 - A
The Tesseral Resonance 3:1 in the Jacobi Ellipsoid
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CBDO 048 - A
Double lunar swing-by from periodic orbits in the restricted four-body problem
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CBDO 049
Analysing the dynamics of Kepler-90 planetary system
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CBDO 050 - A
Design of a Frozen Orbit for GARATÉA-L mission
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CBDO 051 - A
Semi-Analytical Theory for a Lunar Probe Orbit
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CBDO 052
Analysis of the asteroid Phereclos from stellar occultations
Matheus V. Marques (1), A. R. Gomes-Júnior (1), F. Braga-Ribas (3), R. Vieira-Martins (4)
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CBDO 053 - A
Multi-objective optimization applied to a satellite constellation for the BiomeSat mission
Evandro Marconi Rocco, Liana Dias Gonçalves, José Batista da Silva Neto, Rogério Rodrigues Floriano Pereira, Antonio Carlos de Oliveira Pereira Junior, Ronan Arraes Jardins Chagas
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CBDO 054 - A
Study of a satellite constellation for INPE's BiomeSat mission
Liana Dias Gonçalves, Evandro Marconi Rocco, José Batista da Silva Neto, Rogério Rodrigues Floriano Pereira, Ronan Arraes Jardins Chagas, Antonio Carlos de Oliveira Pereira Junior
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CBDO 055 - A
Retrograde Symmetrical Periodic Orbits in the Circular Restricted 3-body Problem
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CBDO 056 - A
Use of a Rational Agent to determine the attitude of a Solar Sail
Meireles, Lucas G. (1), Winter, Othon C. (1), Prado, Antônio F. B. de A. (2)
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CBDO 057
Orbital analysis of the Kiruna Meteor (2023/2/27)
Daniela Cardozo Mourão (1), Bárbara Celi Braga Camargo (1), Gabriel Borderes Motta (2), Tima Sergienko (2), Urban Brändström (2)
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CBDO 058
The Moon as a possible source of Earth's co-orbital bodies
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CBDO 059
Application of Orbital Correction Maneuvers by Continuous Thrust in Frozen Orbits Around Venus
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CBDO 060
Optimizing Hyperparameters in a Convolutional Neural Network Model for Image Analysis
Isadora R. C. Silva, Joao P. I. Gosmin, Rita C. Domingos, Ivan A. A. Garde
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CBDO 061 - A
A numerical analysis of planar colliding binary companions
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CBDO 062
Monitoring the movement of small celestial bodies at FESJ/UNESP Station.
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CBDO 063
Genetic Algorithm Simulation of Mitigation Maneuver Spacecraft-Asteroid Bennu and Yarkovsky Effect
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CBDO 064
Dynamical evolution of a system composed by extended deformable bodies with complex rheologies
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CBDO 065
Island myriads in periodic potentials
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CBDO 066 - A
Deep Learning Identification of Asteroids Interacting with g – s Secular Resonances
Abreuçon A. Alves, Valerio Carruba, Eduardo M. S. Delfino, Vinícius Rivera Silva
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CBDO 067 - A
Surface Properties of the Jovian Trojan (58931) Palmys
Peixoto, VF; Camargo, JIB; Morgado, BE; Ferreira, FS, Boufleur, RC; Braga-Ribas, F; Assafin, M; Gomes-Júnior, AR; Vieira-Martins, R; desenvolvedores SORA e Observadores.
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CBDO 068
Dynamical structure of compact planetary systems
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CBDO 069
Multi-fluid hydrodynamical simulations of circumbinary planet formation via pebble accretion
Ana Guimarães, Gavin A.L. Coleman, Richard P. Nelson, Othon Winter, Rafael Sfair
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CBDO 070
Machine learning approach for mapping stability regions around planetary systems
Tiago Francisco Leal Pinheiro, Rafael Sfair, Giovana Ramon

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CBDO 071 - A
A semi-analytical approach to retrograde mean motion resonances
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CBDO 072
Numerical Analysis of CubeSat Orbit Using Aerodynamic Perturbative Forces and Debris Monitoring in Low Earth Orbit
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CBDO 073 - A
Resonant interactions between objects on counter-revolving orbits
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CBDO 074
Innovative Approaches in Nanosatellite and Tether Systems for Cost-Effective Space Missions
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CBDO 075 - A
The secular tidal evolution of a binary system in the viscous regime and singular perturbation theory
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CBDO 076
Dynamical evolution of a debiased size distribution of Near Earth Objects
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CBDO 077
Orbital dynamics of the third body in the polar V808 Aurigae
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CBDO 078
Space Debris: Analysis and Preventive Mitigation
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CBDO 079
Transfer of Near-Earth Objects (NEOs) to the Centaurs' region
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CBDO 080
Structure of Chariklo's rings using a stellar occultation observed by the JWST
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CBDO 081
Machine learning techniques for the design of Spinning Theter System
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CBDO 082
Multivariate analysis as a Spatial Debris mitigation strategy
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CBDO 083 - A
Investigation about the internal structure of the trans-Neptunian asteroid Arrokoth
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CBDO 084
A phenomenological wobbling model for isolated pulsars and the braking index
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CBDO 085 - A
Orbital mechanics around non-homogeneous elongated asteroids
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CBDO 086
Exocomet dynamics in the Kepler-90 extrasolar system
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CBDO 087 - A
Evaluation of centroiding algorithms for an autonomous star tracker
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CBDO 088 - A
Tidal evolution in dwarf planets systems
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CBDO 089 - A
Stable configurations for the retrograde planet in the ν Octantis system
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CBDO 090
A Study on Space Debris Generated by a Break-Up Event
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CBDO 091 - A
Planetary resonances: properties for arbitrary eccentricities and mutual inclinations
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CBDO 092
Accretion and Uneven Depletion of the Main Asteroid Belt
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CBDO 093 - A
Stellar Occultation Technique for studying the Trojan (1172) Aneas
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CBDO 094 - A
A scenario for the origin of moons around super-Earths and their detectability
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CBDO 095 - A
Equilibrium figure for Quaoar using stellar occultation
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CBDO 096 - A
Secular dynamics of small bodies perturbed by an eccentric giant planet
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CBDO 097 - A
Exploring the Formation of the TOI-1130 Planetary System Using a Hydrodynamic Approach
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CBDO 098
Development of an electronic system for a CanSat
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CBDO 099
Earth-to-Earth transfer via powered lunar swing-by
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CBDO 100 - A
The migration of Mimas and the implications for the resonant motion of small Saturnian moons
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CBDO 101
Study of the Transport Dynamics in the Three-Body Problem
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CBDO 102

Studying plasma with electrostatic energy analyzer with different geometries and a RF choker filter

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CBDO 103

Rendezvous Maneuvers Optimized by Genetic Algorithm for Space Debris Removal

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CBDO 104 - A

Testing (911) Agamemnon 3D model with new Stellar Occultations and synthetic light curve generations.

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CBDO 105

Conception and build of a Langmuir's probe for analysis of a RF discharge generated plasma.

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CBDO 106

Constraining physical and orbital parameters for possible extrasolar ring systems

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CBDO 107

Cloud Space Debris: Behavior Analysis of Debris in Clouds and Prospection of Collection Missions

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CBDO 108 - A
A Hamiltonian for 1/1 rotational secondary resonances, and application to small satellites of Saturn and Jupiter
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CBDO 109
Stable Regions in the Kepler-80 System
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CBDO 110 - A
Determining the size and shape of the Trojan (1143) Odysseus through stellar occultation technique, reverse light curve analysis and 3D modeling
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CBDO 111 - A
Rings diversity around Small Solar System bodies: Discoveries and Detection Limits
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CBDO 112
Collision Avoidance Maneuvers Optimization Using Evolutionary Algorithms
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CBDO 113 - A
Staging and trajectory optimization of VLM-1 satellite launch vehicle
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CBDO 114
Twistless bifurcations on isochronous islands
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CBDO 115
Exploring the Lambert Problem: An Analysis of Orbital Maneuvers
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CBDO 116
University Satellite Instrumentation - Cubesat V2
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CBDO 117
Dynamic tides in the exoplanetary system CoRoT-3b.
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CBDO 118 - A
Surface Characteristics of Asteroid (346724) 2011 UW158: A Large Super-Fast Rotator
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CBDO 119
Decomposition of Symmetrical Classes of Central Configurations
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CBDO 120 - A
On the Absence of Coorbital Satellites in the Galilean System
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CBDO 121
Searching for orbits around Io considering the Laplacian resonance
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CBDO 122 - A
Dynamics around Psyche
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CBDO 123
Photometric Study of TNOs and Centaurs Observed by the Dark Energy Survey
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CBDO 124
Dynamics of dust particles from IDP collisions in the Saturn system.
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CBDO 125 - A
On the attraction of ellipsoids and the properties of the Newtonian attraction
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CBDO 126
Faint Young Sun Paradox: dynamic evolution and habitability
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CBDO 127 - A
Mapping Slopes Across the Surface of Red Asteroid (269) Justitia
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CBDO 128 - A
Machine learning techniques for autonomous satellite guidance during terminal rendezvous operations
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CBDO 129
Bifurcations of a Symmetric Family of Dziobek Configurations
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CBDO 130
Mitigating Actuator Faults in Spacecraft Formation Flying through a Reconfigurable Guidance Strategy
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CBDO 131
Study of the Main Challenges in the Use of the Ensemble Kalman Filter in the Attitude Estimation Problem of Spacecraft
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CBDO 132 - A
Simulation of measurements for low Earth orbit satellite GPS receivers
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CBDO 133
Existence and Stability of Moon's Stationary Polar Orbits
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CBDO 134
Dynamics of a particle around a non-spherical symmetrical body with a deep depression
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CBDO 135 - A
Spacecraft Formation Flying Control Considering Solar Panel Failures and Differential Perturbations
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CBDO 136 - A
Secular Regimes in the Planetary Case of the 3-Body Problem at high (e, i).
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CBDO 137
Investigating Dynamical Structures in the TOI-178 System
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CBDO 138
Space System Engineering Process to design orbit for an electromagnetic detection payload
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CBDO 139
Utilizing Cosmic Microwave Background Measurements for Improved Interstellar Navigation Systems
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CBDO 140
Existence and stability of equilibrium points above the poles on the Sun-Earth-Sail Problem
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CBDO 141 - A
Design of a Stepper Motor-based Control System for a Stratospheric Probe Tracking Antenna
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CBDO 142
Trade-off Families of Transfer Trajectories in the Cislunar region
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CBDO 143
Perilune Poincare Maps: a NRHO's Station Keeping Approach
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CBDO 144
An analytical study on the solar radiation pressure and planetary oblateness perturbations over orbital dynamical systems.
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CBDO 145 - A
On the topology of mean motion resonances in the full range of eccentricity and inclination
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CBDO 146
Formation Flying Design Applied for an Aurora Borealis Monitoring Mission
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CBDO 147
Classifying 4-body cocicular central configurations
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CBDO 148
The Shearless Attractor
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CBDO 149 - A
Physical characteristics of Jupiter’s Trojans combining the stellar occultation techniques with dimensionless 3D model
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CBDO 150
Lunar Artificial Satellite Constellation: Geometric Prowess Optimization
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CBDO 151
Dynamics and Control of Spacecraft Formation Flying Applied to Space-based Solar Power Missions
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CBDO 152 - A
Convergence of orbits to the stationary state for a family of two-dimensional nonlinear mappings
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CBDO 153 - A
The effect of eccentricity on the insolation and habitability of exoplanets
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CBDO 154 - A
Reinforcement Learning-Based Optimization of Controller Gains for Terminal Rendezvous Maneuvers
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CBDO 155 – Rejected

CBDO 156 - A
Evolution and Stability of Low Orbits Around the Moon
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CBDO 157
Development of AI for Navigation of Space Systems Considering Orbital Dynamics and Astronomy: A Case Study with SpaceX Crew Dragon Docking Simulation
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CBDO 158
Space Communication Protocols: A Comprehensive Review of Standards and Technologies for Satellite and Nano Satellite Missions
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CBDO 159 - A
The Dynamics About Trojan Asteroid (11351) Leucus: A Very Slow Rotator
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CBDO 160 - A
Evolution of a Space Debris Cloud
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CBDO 161
Development of AI for Analysis of Public NASA Images to Discover New Celestial Bodies
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CBDO 162 - A
Revisiting the dynamics of the Prometheus-Pandora System
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CBDO 163 - A
Space Situational Awareness: an Overview of Satellite Collision Avoidance Maneuvers
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CBDO 164
Orbital and spectral analysis of the meteor captured on April 25, 2024, over the state of Mato Grosso
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CBDO 165 - A
Study of space debris mitigation by means of orbital redirection through reentry using a heliosynchronous solar sail
Leandro Forne Brejão (1), Antonio Fernando Bertachini de Almeida Prado (1,2), Jean Paulo dos Santos Carvalho (3), Daniela Cardozo Mourão (4)
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CBDO 166
Utilization of stochastic filters for Angles-Only Orbit Determination
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CBDO 167
The three-dimensional creep tide theory - Averaged equations and applications to long-term evolution of close-in exoplanetary systems
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CBDO 168 - A
Equilibrium Points and Surface Dynamics About Comet 67P/Churyumov-Gerasimenko
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CBDO 169
Dynamics of Rotation of Small Satellites of Saturn
Leonardo Vicente Jin Tetsuya Aoki, Nelson Callegari Júnior
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CBDO 170
Asteroids were born bigger: An implication of surface mass ablation during gas-assisted implantation into the asteroid belt
Rafael Ribeiro de Sousa, André Izidoro, Rogério Deienno
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CBDO 171 - A
Dynamics of a Solar Sail in Resonant Conditions with Solar Radiation Pressure Perturbation: Case of Mercury and Earth.
João Pedro Fagionato Agostinho, Tadashi Yokoyama, Victor Hugo Mota, Marcelo Domingos Marchesin
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CBDO 172 - N
Dynamics Study of Hippocamp: Future Resonant Scenario 13:11
Victor Hugo Mota, Tadashi Yokoyama, Marcos Tadeu dos Santos, João Pedro Fagionato Agostino
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CBDO 173 - A
Assessing the Collision Potential of Space Debris after Fragmentation
Ricardo O. Silva, Jorge K. S. Formiga, Denilson P. S. Santos
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CBDO 174 - A
Analysis of the stable regions of the Kepler-20 system through frequency analysis
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CBDO 175
Particle regions around Quaoar system
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CBDO 176
Revisiting derivative-free nonlinear Kalman filtering: implementation aspects of algorithms CDKF, DDKF, CKF, AND UKF
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CBDO 177 - A
Fundamentals of Dynamical Astronomy and Elementary Applications in Resonant Dynamics of Saturn's Small Satellites - The Pan-Prometheus Case
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CBDO 178
Development of an eletronic system for a CanSat
Bruno Gabriel Santos Prestes; Hildo Guillardi Júnior
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CBDO 179
Current scenario of space debris removal mechanisms
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CBDO 180
Space Debris Evolution: Case Studies
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CBDO 181
Quasi-critical and quasi-heliosinchronous orbits
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CBDO 182
Mathematical model of the orbital elevator motion
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CBDO 183
Method of satellite constellation design for on-orbit servicing of multisatellite space systems on orbits with given parameters
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CBDO 184
NEOMOD: Dynamical Model of Near-Earth Objects from a Decade of Catalina Sky Survey Observations
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CBDO 185
Stellar Occultations by Trans-Neptunian Objects
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CBDO 186
Geodetic and Geophysical Characterization of Ganymede with GALA, the Ganymede Laser Altimeter
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CBDO 187
Pathways of survival for exomoons and inner exoplanets
Michael Efroimsky and Valeri V. Makarov
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CBDO 188
Dynamic of Centaurs, link with the giant planets and other small body populations
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CBDO 189
Dynamics of a non-homogeneous straight segment: relative equilibria, stability, periodic solutions and singularities
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CBDO 190
Attitude Representations of Artificial Satellites and Applications
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CBDO 191 - N
Design and Construction of a System of Magnetic Field Induced by Coils in a Vacuum Chamber for Experiments with Plasma Physics
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CBDO 192 - N
Software Development for METAR Data Estimation for Performance Simulation Optimization in the Aeronautical Sector
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CBDO 193 - N
Optimization of the parameters of the covariance matrices of the Extended Kalman Filter for attitude estimation of the CBERS satellite
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CBDO 194 - N
Resonance Jumps in Space Debris Dynamics: Impacts on Low Earth Orbit
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CBDO 195 - N
Studying the effects of Earth's atmospheric refraction in Stellar Occultations
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CBDO 196 - N
Investigating the Parameter Space in Two-Dimensional Discrete Mappings by Lyapunov Exponents
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CBDO 197 - N
New transient co-orbital asteroids of Venus
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CBDO 198 - N
Practical Aspects of LCS Detection with FTLE in Astrodynamics
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CBDO 199 - N
Differential Algebra in the Three-Body Problem
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CBDO 200 - N
Preliminary results of the stellar occultation by the Trojan (4709) Ennomos.
Ghoulam Boudiba, Damya Souami, Felipe Braga Ribas, Helio Dutra, Eros Gradovski, Marcelo Assafin, Bruno Sicardy, Josselin Desmars, Djounai Baba Aissa, Khalil Dhaiffallah, Zineddine Bouyahaoui, Mourad Dehbaoui, Ennomos Occultation Team.
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CBDO 201 - N
Seismic wave propagation in loose granular media
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CBDO 202 - N
Analysis of Symmetric Periodic Orbits of Irregular Bodies through the Articulated Tripole-Segment System
Giulliano Assis Sodero Boaventura, Silvia Maria Giuliatti Winter
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CBDO 203 - N
Characterization of basins of attraction in 1D models and the extrapolation for higher dimension
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CBDO 204 - N
The Influence of Disk Mass on the Fragmentation of Protoplanetary Disks
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CBDO 205 - N
Study of families of symmetric periodic orbits around prolate bodies
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CBDO 206 - N
On the Spin-Orbit Phase-Space of an Artificial Satellite
Othon Winter, Tiago Pinheiro, Giovana Ramon, Lucas Pereira & Nelson Callegari
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CBDO 207 - N
Extrasolar planets: classifications and habitable zones
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CBDO 208 - N
Controlling telescope and image acquisition with RaspberryPI for stellar occultation observations
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CBDO 209 - N
The Veronese variety associated with Dziobek central configurations
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