

List of papers in Impact Journals in 2023

1. Abdulxamidov, F.; Rayimbaev, J.; Abdujabbarov, A.; **Stuchlík, Z.**; *Spinning magnetized particles orbiting magnetized Schwarzschild black holes*, PHYSICAL REVIEW D, 108, 4, 2023, (IF: 5)
2. **Bakala, P.**; Bakalová, A.; La Placa, R.; Falanga, M.; Stella, L.; *Extreme amplification regimes of the Schwarzschild gravitational lens*, ASTRONOMY & ASTROPHYSICS, 673, May 2023, 2023, (IF: 6,5)
3. Beneš, P.; **Blaschke, F.**; *Shapes of magnetic monopoles in effective SU(2) models*, PHYSICAL REVIEW D, 107, 12, 2023, (IF: 5)
4. Bezbakh, A. A.; Belogurov, S. G.; **Chudoba, V.**; Fomichev, A. S.; Gorshkov, A. V.; Grigorenko, L. V.; Kaminski, G.; Khirk, M. S.; Knyazev, A. G.; Krupko, S. A.; Mauey, B.; **Muzalevskii, I. A.**; Nikolskii, E. Yu.; Quynh, A. M.; Sharov, P. G.; Slepnev, R.S.; Stepantsov, S. V.; Ter-Akopian, G. M.; Wolski, R.; *Detector Array for the 7H Nucleus Multi-Neutron Decay Study*, PHYSICS OF PARTICLES AND NUCLEI LETTERS, 20, 4, 2023, (IF: 0.5)
5. **Blaschke, F.**, **Karpíšek, O. N.**, **Rafaj, L.**; *Mechanization of a scalar field theory in 1+1 dimensions: Bogomol'nyi-Prasad-Sommerfeld mechanical kinks and their scattering*, PHYSICAL REVIEW E, 108, 4, 2023, (IF: 2,4)
6. Casadio, R.; Giusti, A.; **Ovalle, J.**; *Quantum rotating black holes*, JOURNAL OF HIGH ENERGY PHYSICS, 2023, 5, 2023, (IF: 5,4)
7. **Cemeljic, M.**; Brun, A. S.; *Trends in torques acting on the star during a star-disk magnetospheric interaction*, ASTRONOMY & ASTROPHYSICS, 679, November 2023, 2023, (IF: 6,5)
8. **Cemeljic, M.**; **Kluzniak, W.**; Parthasarathy, V.; *Magnetically threaded accretion disks in resistive magnetohydrodynamic simulations and asymptotic expansion*, ASTRONOMY & ASTROPHYSICS, 678, October 2023, 2023, (IF: 6,5)
9. **Cremaschini, C.**; *Planck length in classical and quantum Hamiltonian formulations of general relativity*, EUROPEAN PHYSICAL JOURNAL C, 83, 8, 2023, (IF: 4,4)
10. **Cremaschini, C.**; *Polytropic representation of non-isotropic kinetic pressure tensor for non-ideal plasma fluids in relativistic jets*, PHYSICS OF FLUIDS, 35, 6, 2023, (IF: 4,6)
11. **Cremaschini, C.**; **Kovář, J.**; **Stuchlík, Z.**; Tessarotto, M.; *Polytropic representation of the kinetic pressure tensor of non-ideal magnetized fluids in equilibrium toroidal structures*, PHYSICS OF FLUIDS, 35, 1, 2023, (IF: 4,6)
12. **Cremaschini, C.**; Tessarotto, M.; *Statistical Formulation of Background Independence in Manifestly-Covariant Quantum Gravity Theory*, SYMMETRY-BASEL, 15, 5, 2023, (IF: 2,7)
13. **Cremaschini, C.**; Tessarotto, M.; *Unconstrained Lagrangian Variational Principles for the Einstein Field Equations*, ENTROPY, 25, 2, 2023, (IF: 2,7)
14. Dinesh, A.; Bhatta, G.; Adhikari, Tek P.; Mohorian, M.; Dhital, M.; Chaudhary, Suvas C.; **Pánis, R.**; Gora, D.; *Constraining X-Ray Variability of the Blazar 3C 273 Using XMM-Newton Observations over Two Decades*, ASTROPHYSICAL JOURNAL, 995, 2, 2023, (IF: 4,9)

15. Gialamas, I. D.; Karam, A.; **Pappas, T.**; *Gravitational corrections to electroweak vacuum decay: metric vs. Palatini*, PHYSICS LETTERS B, 840, May 2023, 2023, (IF: 4,3)
16. Gialamas, I. D.; Karam, A.; **Pappas, T.**; Tomberg, E.; *Implications of Palatini gravity for inflation and beyond*, INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS, 20,13,2023, (IF: 1,8)
17. **Hensh, S.**; Liberati, S.; Vitagliano, V.; *Tidal heating in a Riemann-Cartan spacetime*, PHYSICAL REVIEW D, 107, 6, 2023, (IF: 5)
18. Homola, P.; Marchenko, V.; Napolitano, A.; Damian, R.; Guzik, R.; Alvarez-Castillo, D; Stuglik, S.; Ruimi, O., **Tursunov, A.**; *Observation of large-scale precursor correlations between cosmic rays and earthquakes with a periodicity similar to the solar cycle*, JOURNAL OF ATMOSPHERIC AND SOLAR-TERRESTRIAL PHYSICS, 247, June 2023, 2023, (IF: 1,9)
19. Karas, V.; **Stuchlík, Z.**; *Magnetized Black Holes: Interplay between Charge and Rotation*, UNIVERSE, 9, 6, 2023, (IF: 2,9)
20. Kalenda, P.; Neumann, L.; **Wandrol, I.**; Procházka, V.; Ostrihansky, L.; *Theory of continental drift-causes of the motion. Historical review and observations*, GEODYNAMICS, 2023, 34, 2023, (IF: 0,3)
21. Kalenda, P.; Neumann, L.; **Wandrol, I.**; Procházka, V.; Ostrihansky, L.; *Theory of continental drift - causes of the motion. Outline of the theory*, GEODYNAMICS, 2023, 35, 2023, (IF: 0,3)
22. Karas, V.; **Klimovičová, K.**; **Lančová, D.**; Stolc, M.; Svoboda, J.; **Török, G.**; **Matuszková, M.**; **Šrámková, E.**; **Šprňa, R.**; **Urbanec, M.**; *Timing of accreting neutron stars with future X-ray instruments: towards new constraints on dense matter equation of state*, CONTRIBUTIONS OF THE ASTRONOMICAL OBSERVATORY SKALNATE PLESO, 53, 4, 2023, (IF: 0,5)
23. Kayanikhoo, F.; **Cemeljic, M.**; **Wielgus, M.**; Kluzniak, W.; *Energy dissipation in astrophysical simulations: results of the Orszag-Tang test problem*, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, 527, 4, 2023, (IF: 4,8)
24. Kokori, A.; Tsiaras, A.; Edwards, B.; Jones, A.; Pantelidou, G.; **Kučáková, H.**; *ExoClock Project. III. 450 New Exoplanet Ephemerides from Ground and Space Observations*, ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, 265, 1, 2023, (IF: 8,7)
25. **Kološ, M.**; Shahzadi, M.; **Tursunov, A.**; *Charged particle dynamics in parabolic magnetosphere around Schwarzschild black hole*, EUROPEAN PHYSICAL JOURNAL C, 83, 4, 2023, (IF: 4,4)
26. **Konoplya, R. A.**; *Further clarification on quasinormal modes/circular null geodesics correspondence*, PHYSICS LETTERS B, 838, March 2023, 2023, (IF: 4,3)
27. **Konoplya, R. A.**; *Quasinormal modes and grey-body factors of regular black holes with a scalar hair from the Effective Field Theory*, JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, 2023, 7, 2023, (IF: 6,3)
28. **Konoplya, R. A.**; *Quasinormal modes in higher-derivative gravity: Testing the black hole parametrization and sensitivity of overtones*, PHYSICAL REVIEW D, 107, 6, 2023, (IF: 5)
29. **Konoplya, R. A.**; *The sound of the event horizon*, INTERNATIONAL JOURNAL OF MODERN PHYSICS D, 32, 14, 2023, (IF: 2,2)

30. **Konoplya, R. A.; Ovchinnikov, D.;** Ahmedov, B.; *Bardeen spacetime as a quantum corrected Schwarzschild black hole: Quasinormal modes and Hawking radiation*, PHYSICAL REVIEW D, 108, 10, 2023, (IF: 5)
31. **Lančová, D.;** Yilmaz, A.; Wielgus, M.; Dovčiak, M.; Straub, O.; **Török, G.;** *Spectra of puffy accretion discs: the kynbb fit*, ASTRONOMISCHE NACHRICHTEN, 344, 4, 2023, (IF: 0,9)
32. **Toshmatov, B.;** Ahmedov, B.; **Stuchlík, Z.;** *Phonon motion around (2+1)-dimensional acoustic black hole*, EUROPEAN PHYSICAL JOURNAL C, 83, 10, 2023, (IF: 4,4)
33. **Konoplya, R. A.; Stuchlík, Z.;** Zhidenko, A.; **Zinhailo, A. F.;** *Quasinormal modes of renormalization group improved Dymnikova regular black holes*, PHYSICAL REVIEW D, 107, 10, 2023, (IF: 8)
34. **Konoplya, R. A.;** Zhidenko, A.; *Analytic expressions for quasinormal modes and grey-body factors in the eikonal limit and beyond*, CLASSICAL AND QUANTUM GRAVITY, 40, 24, 2023, (IF: 3,5)
35. **Konoplya, R. A.;** Zhidenko, A.; *Bernstein spectral method for quasinormal modes of a generic black hole spacetime and application to instability of dilaton-de Sitter solution*, PHYSICAL REVIEW D, 107, 4, 2023, (IF: 5)
36. **Konoplya, R. A.;** Zhidenko, A.; *General black-hole metric mimicking Schwarzschild spacetime*, JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, 2023, 8, 2023, (IF: 6,3)
37. Kueny, Jay K.; Chandler, Colin O.; Devogele, M.; Moskovitz, N.; Pravec, P.; **Kučáková, H.;** Hornoch, K.; Kusnirak, P.; Granvik, M.; Konstantopoulou, Ch.; Janssen, Nicholas E.; Moran, S.; Siltala, L.; Fedorets, G.; Ferrais, M.; Jehin, E.; Kareta, T.; Hanus, J.; *Implications for the Formation of (155140) 2005 UD from a New Convex Shape Model*, PLANETARY SCIENCE JOURNAL, 4, 3, 2023, (IF: 3,4)
38. **Lichard, P.;** *New narrow resonance in the $e^+e^- \rightarrow \phi\eta$ data by the Belle collaboration*, PHYSICAL REVIEW D, 108, 9, 2023, (IF: 5)
39. Martinů, J.; **Novotný, J.;** **Adámek, K.;** **Čermák, P.;** Kozel, J.; Školoudík, D.; *A survey of feature detection methods for localisation of plain sections of axial brain magnetic resonance imaging*, BIOMEDICAL SIGNAL PROCESSING AND CONTROL, 82, April 2023, 2023, (IF: 5,1)
40. Mishra, R.; **Cemeljic, M.;** Kluzniak, W.; *Accretion disc backflow in resistive MHD simulations*, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, 523, 3, 2023, (IF: 4,8)
41. Mishra, R.; **Cemeljic, M.;** Varela, J.; Falanga, M.; *Auroras on Planets around Pulsars*, ASTROPHYSICAL JOURNAL LETTERS, 959, 1, 2023, (IF: 7,9)
42. Nikolskii, E. Yu.; **Muzalevskii, I. A.;** Krupko, S. A.; **Bezbakh, A. A.;** **Chudoba, V.;** *Study of proton and deuteron pickup reactions ($d,^3\text{He}$), ($d,^4\text{He}$) with ^8He and ^{10}Be radioactive beams at ACCULINNA-2 fragment separator*, NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, 541, p. 121-125, 2023, (IF: 1,3)
43. **Novotný, J.;** Adamek, K.; Clark, M. A.; Giles, M.; Armour, W.; *Accelerating Dedispersion Using Many-core Architectures*, ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, 269, 1, 2023, (IF: 8,7)
44. **Ovalle, J.;** *Black holes without Cauchy horizons and integrable singularities*, PHYSICAL REVIEW D, 107, 10, 2023, (IF: 5)

45. **Ovalle, J.**; Casadio, R.; Giusti, A.; *Regular hairy black holes through Minkowski deformation*, PHYSICS LETTERS B, 844, September 2023, 2023, (IF: 4,3)
46. **Pánis, R.**; Adamek, K.; Marwan, N.; *Averaged recurrence quantification analysis Method omitting the recurrence threshold choice*, EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, 232, 1, 2023, (IF: 2,8)
47. **Petrásek, M.**; **Kovář, J.**; **Stuchlík, Z.**; *Stationary observers in Kerr-de Sitter spacetimes*, INTERNATIONAL JOURNAL OF MODERN PHYSICS D, 32, 12, 2023, (IF: 2,2)
48. **Posada, C.**; **Stuchlík, Z.**; *Slowly rotating Tolman VII solution*, CLASSICAL AND QUANTUM GRAVITY, 40, 13, 2023, (IF: 3.5)
49. **Pugliese, D.**; Quevedo, H.; *On black hole surface gravity*, EUROPEAN PHYSICAL JOURNAL C, 83, 5, 2023, (IF: 4,4)
50. **Pugliese, D.**; **Stuchlík, Z.**; *On photons and matter inversion spheres from complex super-spinars accretion structures*, EUROPEAN PHYSICAL JOURNAL C, 83, 3 2023, 2023, (IF: 4,4)
51. **Pugliese, D.**; **Stuchlík, Z.**; *Super-spinning Kerr attractors: Observational signatures of accretion tori and proto-jets*, NUCLEAR PHYSICS B, 992, July 2023, (IF: 2,8)
52. Rayimbaev, J.; Abdujabbarov, A.; **Bardiev, D.**; Ahmedov, B.; Abdullaev, M.; *Motion of charged and magnetized particles around regular black holes immersed in an external magnetic field in modified gravity*, EUROPEAN PHYSICAL JOURNAL PLUS, 138, 4, 2023, (IF: 3,4)
53. **Slaný, P.**; *Test particle motion along equatorial circular orbits in the revisited Kerr-de Sitter spacetime*, PHYSICAL REVIEW D, 108, 8, 2023, (IF: 5)
54. Smelcer, L.; Wolf, M.; **Kučáková, H.**; Zasche, P.; Kara, J.; Hornoch, K.; Zejda, M.; Auer, R. F.; *A photometric study of NSVS 7453183: a probable quadruple system with long-term surface activity*, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, 520, 1, 2023, (IF: 4,8)
55. **Šrámková, E.**; **Matuszsková, M.**; **Klimovičová, K.**; Horák, J.; Straub, O.; **Urbanec, G.**; **Urbanec, M.**; Karas, V.; **Török, G.**; **Lančová, D.**; *Oscillations of fluid tori around neutron stars*, ASTRONOMISCHE NACHRICHTEN, 344, 1-2, 2023, (IF: 0,9)
56. Stupka, A. A.; **Kopteva, E. M.**; Saliuk, M. A.; **Bormotova, I. M.**; *Virial theorem for a cloud of stars obtained from the Jeans equations with second correlation moments*, EUROPEAN PHYSICAL JOURNAL C, 83, 7, 2023, (IF: 4,4)
57. Tessarotto, M.; **Cremaschini, C.**; *On the Quantum Regularization of Singular Black-Hole Solutions in Covariant Quantum Gravity*, SYMMETRY-BASEL, 15, 6, 2023, (IF: 2,7)
58. **Toshmatov, B.**; Mavlyanov, K.; Abdulazizov, B.; Mamadjanov, A.; Atamurotov, F.; *Quasinormal modes of acoustic black hole*, ANNALS OF PHYSICS, 458, 1, 2023, (IF: 3)
59. **Toshmatov, B.**; Ahmedov, B.; *Tidal forces in parametrized spacetime: Rezzolla-Zhidenko parametrization*, PHYSICAL REVIEW D, 108,08, 2023, (IF: 5)
60. **Toshmatov, B.**; **Stuchlík, Z.**; Ahmedov, A.; *Can electromagnetic charge inhabit in Rastall gravity?*, PHYSICS OF THE DARK UNIVERSE, 41, August 2023, 2023, (IF: 5,5)

61. Vieira, Ronaldo S. S.; **Kluzniak, W.**; *Astrophysical cloaking of a naked singularity*, MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, 523, 3, 2023, (IF: 4,8)
62. **Vrba, J.**; Rayimbaev, J.; **Stuchlík, Z.**; Ahmedov, B.; *Charged particles motion and quasiperiodic oscillation in Simpson-Visser spacetime in the presence of external magnetic fields*, EUROPEAN PHYSICAL JOURNAL C, 83, 9, 2023, (IF: 4,4)
63. **Wandrol, I.**; Frydrysek, K.; Cepica, D.; *Analysis of the Influence of Thermal Loading on the Behaviour of the Earth's Crust*, APPLIED SCIENCES-BASEL, 13, 7, 2023, (IF: 2,7)
64. White, J.; **Adámek, K.**; Roy, J.; Dimoudi, S.; Ransom, Scott M.; Armour, W.; *Bits Missing: Finding Exotic Pulsars Using bfloat16 on NVIDIA GPUs*, ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, 265, 1, 2023, (IF: 8,7)
65. Zasche, P.; Henzl, Z.; Masek, M.; Uhlar, R.; Kara, J.; Merc, J.; **Kučáková, H.**; *Detection of seven 2+2 doubly eclipsing quadruple systems*, ASTRONOMY & ASTROPHYSICS, 675, Jul 2023, 2023, (IF: 6,5)