

С П Р А В К А

за изпълнението на минималните национални изисквания по чл. 26 от ЗРАСРБ
 за научна област 4.1 Физически науки /Обща теория на относителността и релятивистка
 астрофизика/,.....
 професионално направление4.1 Физически науки.....
 от ...гл. ас. д-р Галин Николаев Гюлчев- кандидат
 за заемане на академична длъжност ... доцент.....

| Номер и съдържание на показател | Общ брой точки | Номер на приложение с данни за постижения и брой точки по показатели* |
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| Група от показатели А | | |
| Показател 1: Дисертационен труд за присъждане на образователна и научна степен "доктор" | 50 | |
| Група от показатели Б | | |
| Показател 2: Дисертационен труд за присъждане на научна степен "доктор на науките" | 0 | |
| Група от показатели В | | |
| Показател 3: Хабилатационен труд - монография | 100 | Монография № 20 от приложение 1 |
| общо група от показатели В | 100 | |
| Група от показатели Г | | |
| Показател 7: Научна публикация в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus), извън хабилатационния труд | 205 | Статии № 10-19 от приложение 1 |
| общо група от показатели Г | 205 | |
| Група от показатели Д | | |
| Показател 11: Цитирания в научни издания, монографии, колективни томове и патенти, реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus) | 246 | Приложение 2 |
| общо група от показатели Д | 246 | |
| Група от показатели Е | | |
| Показател 14: Участие в национален научен или образователен проект | 90 | № КП-06-ПН-38/3 № КП-06-ПН-38/12 № BG051PO001-3.3.06-0040 № 57/08.05.2014 DMU-03/6 № 80-10-129/15.04.2019 № 80-10-205/24.04.2017 DO 02-257 № 60/2008 |

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| Показател 15: Участие в международен научен или образователен проект | 20 | № ДКОСТ 01/6 от 19.10.2018. |
| Показател 16: Ръководство на национален научен или образователен проект | 40 | № 80-10-102/16.04.2020 № 80-10-210/24.04.2017 |
| общо група от показатели Е | 150 | |

| Допълнителни изисквания на ФзФ | | |
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| Показател 22: Успешно защитил дипломант | 1 (мин. 1) | Научен ръководител на Веселина Калинова (съвместна публикация № 17 в приложение 1), успешно защитила на 22.07.2010 г. в гр. София |
| Показател 23: Брой публикации от група I през последните 3 години | 5 (мин. 1) | Приложение 1 |
| Показател 24: Брой публикации от група I в групи от показатели В и Г | 7 (мин. 7) | Приложение 1 |
| Показател 27: Брой публикации в групи от показатели В и Г със съществен принос на кандидата | 5 (мин. 4) | Приложение 1 |
| Показател 28: h-фактор | 8 (мин. 5) | Inspire-NEP |
| Показател 31: Учебно-преподавателски опит, часове | 1990 часа (мин. 540) | <i>Лекции по дисциплините</i> (период 2018-2020 г.) „Теоретична астрофизика“, „Електродинамика“, „Частни диференциални уравнения“, „Частни диференциални уравнения“ (на английски език), „Обикновени диференциални уравнения“ (на английски език), „Увод във физиката на черните дупки“, „Математични методи на физиката – ЧДУ“, „Математични методи в оптометрията“; <i>семинарни упражнения по дисциплините</i> (период 2018-2020 г.) „Физика“, „Физика“ (на английски език), „Математични методи на физиката – ОДУ и ЧДУ“; |

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| Показател 31: Учебно-преподавателски опит, часове | 1990 часа (мин. 540) | „Обикновени диференциални уравнения“ (на английски език), „Математични методи в оптометрията“, „Частни диференциални уравнения“ (на английски език), „Математични методи на физиката – ЧДУ“ |
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*Данните за научна публикация задължително включват пълно библиографско описание на публикацията (включително пълен списък на авторите) плюс името на база от данни, реферираща и индексираща съответното издание (за научните публикации в издания, реферирани и индексирани в световноизвестни бази от данни с научна информация)

Подпис:.....

/гл.ас. д-р Галин Гюлчев/

Приложение 1

| № | Публикация | Съществен принос | Точки | Група | Степен/ Длъжност |
|---|--|---------------------|-------|-------|---------------------|
| 1 | <i>G. N. Gylulchev and S. S. Yazadjiev, „Kerr-Sen dilaton-axion black hole lensing in the strong deflection limit“, Phys. Rev. D 75, 023006 (2007), IF (4.984-2007), Q1.</i> | Да | 25 | I | доктор |
| 2 | <i>G. N. Gylulchev and S. S. Yazadjiev, „Gravitational Lensing by Rotating Naked Singularities“, Phys. Rev. D 78, 083004 (2008), IF (5.388-2008), Q1.</i> | Да | 25 | I | |
| 3 | <i>G. N. Gylulchev and S. S. Yazadjiev, „Analytical Kerr-Sen Dilaton-Axion Black Hole Lensing in the Weak Deflection Limit“, Phys. Rev. D 81, 023005 (2010), IF (5.379-2010), Q1.</i> | Да | 25 | I | |
| 4 | <i>G.N. Gylulchev and S.S. Yazadjiev, „Strong gravitational lensing by Kerr-Sen dilaton-axion black hole“, Proceedings of the Sixth International Conference of the Balkan Physical Union, Istanbul, Turkey, August 22-26, AIP Conf. Proc. 899 (2007) no.1, pp. 145-146, SJR (0.184-2007), Q3.</i> | Да | 10 | III | |
| 5 | <i>G. Gylulchev and S. Yazadjiev, „Gravitational lensing by rotating naked singularities in the equatorial plane“, Proceedings of the 33rd International Conference on Applications of Mathematics in Engineering and Economics (AMEE'07), AIP Conf. Proc. 946 (2007) no.1, pp. 106-118, SJR (0.171-2007), Q3.</i> | Да | 10 | III | |
| 6 | <i>G. N. Gylulchev and S. S. Yazadjiev, „Garfinkle-Horovitz-Strominger dilaton black hole gravitational lensing in the strong deflection limit“, Modern mathematical physics. Proceedings, 4th Summer School, Dedicated to Irina Ya. Arefeva's Jubilee, Belgrade, Serbia, September 3-14 (2006), SFIN A 1, pp. 229-238, SJR (0.18-2006), Q3.</i> | Да | 10 | III | |

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| 7 | <i>Ivan Zh. Stefanov, Stoytcho S. Yazadjiev, and Galin G. Gylulchev, „Connection between Black-Hole Quasinormal Modes and Lensing in the Strong Deflection Limit”, Phys. Rev. Lett. 104, 251103 (2010), IF (7.954-2010), Q1.</i> | | 25 | I | главен асистент |
| 8 | <i>G. Gylulchev and S. Yazadjiev, „Gravitational lensing by Kerr-Sen dilaton-axion black hole in the weak deflection limit”, Proceedings of the 2nd Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences (AMiTaNS 10), AIP Conf. Proc. 1301 (2010) no.1, pp. 327-335, SJR (0.166-2011), Q3.</i> | Да | 10 | III | |
| 9 | <i>I. Stefanov, S. Yazadjiev and G. Gylulchev, „Relation between the Parameters of a Gravitational Lens and the Frequencies of Black-hole Quasi-normal Modes”, Proceedings of the 2nd Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences (AMiTaNS 10), AIP Conf. Proc. 1301 (2010) no.1, p. 355, SJR (0.166-2011), Q3.</i> | | 10 | III | |
| 10 | <i>Galina N. Gylulchev, Ivan Zh. Stefanov, „Gravitational lensing by phantom black holes”, Phys. Rev. D 87 (6), 063005 (2013), IF (5.340-2013), Q1.</i> | Да | 25 | I | Доцент |
| 11 | <i>Ivan Zh. Stefanov, Galin G. Gylulchev, Stoytcho S. Yazadjiev, „Quasiperiodic oscillations and Tomimatsu-Sato $\delta = 2$ space-time”, Phys. Rev. D 87 (8), 083005 (2013), IF (5.340-2013), Q1.</i> | | 25 | I | |
| 12 | <i>Galina Gylulchev, Petya Nedkova, Vassil Tinchev, Stoytcho Yazadjiev, „On the shadow of rotating traversable wormholes”, Eur. Phys. J. C 78: 544 (2018), IF (4.843-2018), Q1.</i> | Да | 25 | I | |
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| 13 | A. Övgün, G. Gyulchev, K. Jusufi, „ Weak Gravitational lensing by phantom black holes and phantom wormholes using the Gauss–Bonnet theorem “, <i>Annals of Physics</i> 406, 152-172 (2019), IF (2.110-2018), Q1. | Да | 25 | I | Доцент |
| 14 | Kimet Jusufi, Ayan Banerjee, Galin Gyulchev, Muhammed Amir, „ Distinguishing rotating naked singularities from Kerr-like wormholes by their deflection angles of massive particles “, <i>Eur. Phys. J. C</i> 79:28 (2019), IF (4.719-2019), Q1. | | 25 | I | |
| 15 | G. Gyulchev, P. Nedkova, T. Vetsov and S. Yazadjiev, „ Image of the Janis-Newman-Winicour naked singularity with a thin accretion disk “, <i>Phys. Rev. D</i> 100, 024055 (2019), IF (4.719-2019), Q1. | Да | 25 | I | |
| 16 | G. Gyulchev, Jutta Kunz, P. Nedkova, T. Vetsov and S. Yazadjiev, „ Observational signatures of strongly naked singularities: image of the thin accretion disk “, <i>Eur. Phys. J. C</i> 80, 11, 1017 (2020), IF (4.770-2020), Q1. | Да | 25 | I | |
| 17 | V. Kalinova and G. Gyulchev, „ Gravitational Aberration of a Cluster of Galaxies: Dark Matter “, <i>Proceedings of the 3rd School and Workshop on Space Plasma Physics, AIP Conf. Proc.</i> 1356, published July 20, (2011) no.1, pp. 60-66, SJR (0.161-2011), Q3. | | 10 | III | |
| 18 | G. Gyulchev and I. Z. Stefanov, „ Strong Gravitational Lensing by Phantom Black Holes “, <i>Proceedings of the 13th Marcel Grossmann Meeting on General Relativity</i> , pp. 2091-2093 (2013), World Scientific, Singapore, SJR (0.128-2013), Q3. | Да | 10 | III | |
| 19 | G. Gyulchev, P. Nedkova, V. Tinchev and Y. Stoytcho, „ Cusp structure in shadows casted by rotating wormholes “, <i>Proceedings of the 10th Jubilee Conference of the Balkan Physical Union, AIP Conf. Proc.</i> 2075 (2019) no.1, 040005, SJR (0.19-2019), Q3. | Да | 10 | III | |

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| 20 | Галин Гюлчев, Стойчо Язджиев, „Гравитационни леци“, Университетско Издателство „Св. Климент Охридски“, 2017 г., монография | Да | 100 | | Доцент |
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Подпис:.....

/гл. ас. д-р Галин Гюлчев/

Приложение 2

| № | Цитати | Цитираща статия № |
|----|---|----------------------|
| 1 | X. Lu and Y. Xie, "Time delay of photons coupled to Weyl tensor in a regular phantom black hole," <i>Eur. Phys. J. C</i> , vol. 80, p. 625, 2020. | 10 |
| 2 | X.-Y. Zhu and Y. Xie, "Strong deflection gravitational lensing by a Lee-Wick ultracompact object," <i>Eur. Phys. J. C</i> , vol. 80, p. 444, 2020. | |
| 3 | A. Ditta and G. Abbas, "Circular orbits and accretion process near a regular phantom black hole," <i>Gen. Rel. Grav.</i> , vol. 52, p. 77, 2020. | |
| 4 | C.-Y. Wang, Y.-F. Shen and Y. Xie, "Weak and strong deflection gravitational lensings by a charged Horndeski black hole," <i>JCAP</i> , vol. 04, p. 022, 2019. | |
| 5 | X. Lu and Y. Xie, "Weak and strong deflection gravitational lensing by a renormalization group improved Schwarzschild black hole," <i>Eur. Phys. J. C</i> , vol. 79, p. 1016, 2019. | |
| 6 | C. M. Sendra, "Regular scale-dependent black holes as gravitational lenses," <i>Gen. Rel. Grav.</i> , vol. 51, p. 83, 2019. | |
| 7 | F.-Y. Liu, Y.-F. Mai, W.-Y. Wu and Y. Xie, "Probing a regular non-minimal Einstein-Yang-Mills black hole with gravitational lensings," <i>Phys. Lett. B</i> , vol. 795, p. 475–481, 2019. | |
| 8 | S. Aygün, H. Baysal, C. Aktaş, İ. Yılmaz, P. K. Sahoo and İ. Tarhan, "Teleparallel energy-momentum distribution of various black hole and wormhole metrics," <i>Int. J. Mod. Phys. A</i> , vol. 33, p. 1850184, 2018. | |
| 9 | R. Zhang and J. Jing, "Strong gravitational lensing for photons coupled to Weyl tensor in a regular phantom black hole," <i>Eur. Phys. J. C</i> , vol. 78, p. 796, 2018. | |
| 10 | J. Naji, "Strong Gravitational Lensing by the R-Charged Non-Extremal Black Hole," <i>Annals Phys.</i> , vol. 395, p. 112–126, 2018. | |
| 11 | F. Canfora, E. F. Eiroa and C. M. Sendra, "Spherical Skymion black holes as gravitational lenses," <i>Eur. Phys. J. C</i> , vol. 78, p. 659, 2018. | |
| 12 | S. Chen, L. Zhang and J. Jing, "A new asymptotical flat and spherically symmetric solution in the generalized Einstein-Cartan-Kibble-Sciama gravity and gravitational lensing," <i>Eur. Phys. J. C</i> , vol. 78, p. 981, 2018. | |
| 13 | J. Liang, "Strong gravitational lensing by regular electrically charged black holes," <i>Gen. Rel. Grav.</i> , vol. 49, p. 137, 2017. | |
| 14 | M. Azreg-Aïnou, S. Bahamonde and M. Jamil, "Strong Gravitational Lensing by a Charged Kiselev Black Hole," <i>Eur. Phys. J. C</i> , vol. 77, p. 414, 2017. | |
| 15 | S. Chakraborty and S. SenGupta, "Strong gravitational lensing – A probe for extra dimensions and Kalb-Ramond field," <i>JCAP</i> , vol. 07, p. 045, 2017. | |
| 16 | M. Sharif and S. Iftikhar, "Strong field gravitational lensing by a stringy charged black hole," <i>J. Exp. Theor. Phys.</i> , vol. 124, p. 886–894, 2017. | |

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| 17 | S.-S. Zhao and Y. Xie, "Strong deflection gravitational lensing by a modified Hayward black hole," <i>Eur. Phys. J. C</i> , vol. 77, p. 272, 2017. |
| 18 | N. Tsukamoto and Y. Gong, "Retrolensing by a charged black hole," <i>Phys. Rev. D</i> , vol. 95, p. 064034, 2017. |
| 19 | J. Liang, "Regular Magnetic Black Hole Gravitational Lensing," <i>Chin. Phys. Lett.</i> , vol. 34, p. 050401, 2017. |
| 20 | R. Shaikh and S. Kar, "Gravitational lensing by scalar-tensor wormholes and the energy conditions," <i>Phys. Rev. D</i> , vol. 96, p. 044037, 2017. |
| 21 | J. Badía and E. F. Eiroa, "Gravitational lensing by a Horndeski black hole," <i>Eur. Phys. J. C</i> , vol. 77, p. 779, 2017. |
| 22 | X.-X. Zeng, X.-Y. Hu and L.-F. Li, "Effect of phantom dark energy on holographic thermalization," <i>Chin. Phys. Lett.</i> , vol. 34, p. 010401, 2017. |
| 23 | N. Tsukamoto, "Deflection angle in the strong deflection limit in a general asymptotically flat, static, spherically symmetric spacetime," <i>Phys. Rev. D</i> , vol. 95, p. 064035, 2017. |
| 24 | J. Liang, "Braneworld Black Hole Gravitational Lensing," <i>Commun. Theor. Phys.</i> , vol. 67, p. 407, 2017. |
| 25 | S. Chen, M. Wang and J. Jing, "Testing gravity of a regular and slowly rotating phantom black hole by quasi-periodic oscillations," <i>Class. Quant. Grav.</i> , vol. 33, p. 195002, 2016. |
| 26 | X. Lu, F.-W. Yang and Y. Xie, "Strong gravitational field time delay for photons coupled to Weyl tensor in a Schwarzschild black hole," <i>Eur. Phys. J. C</i> , vol. 76, p. 357, 2016. |
| 27 | S.-S. Zhao and Y. Xie, "Strong field gravitational lensing by a charged Galileon black hole," <i>JCAP</i> , vol. 07, p. 007, 2016. |
| 28 | M. Sharif and S. Iftikhar, "Equatorial gravitational lensing by accelerating and rotating black hole with NUT parameter," <i>Astrophys. Space Sci.</i> , vol. 361, p. 36, 2016. |
| 29 | Y. Huang, S. Chen and J. Jing, "Double shadow of a regular phantom black hole as photons couple to the Weyl tensor," <i>Eur. Phys. J. C</i> , vol. 76, p. 594, 2016. |
| 30 | J. DeAndrea and S. Patel, "Total Magnification and Magnification Centroid Due to Strongly Naked Singularity Lensing," 6 2015. |
| 31 | E. F. Eiroa and C. M. Sendra, "Regular phantom black holes as gravitational lenses," in <i>2nd Argentinian-Brazilian Meeting on Gravitation, Astrophysics, and Cosmology</i> , 2015. |
| 32 | M. Bu Taam and W. A. Sabra, "Phantom space-times in fake supergravity," <i>Phys. Lett. B</i> , vol. 751, p. 297–301, 2015. |
| 33 | W. A. Sabra, "Phantom Metrics With Killing Spinors," <i>Phys. Lett. B</i> , vol. 750, p. 237–241, 2015. |
| 34 | M. Sharif and S. Iftikhar, "Null Geodesics and Strong Field Gravitational Lensing of Black Hole with Global Monopole," <i>Adv. High Energy Phys.</i> , vol. 2015, p. 854264, 2015. |

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| 35 | S. W. Wei, Y. X. Liu and C. E. Fu, "Null Geodesics and Gravitational Lensing in a Nonsingular Spacetime," <i>Adv. High Energy Phys.</i> , vol. 2015, p. 454217, 2015. | 10 |
| 36 | J. Sadeghi, J. Naji and H. Vaez, "Strong gravitational lensing in a charged squashed Kaluza-Klein Gödel black hole," <i>Phys. Lett. B</i> , vol. 728, p. 170–182, 2014. | |
| 37 | E. F. Eiroa and C. M. Sendra, "Strong deflection lensing by charged black holes in scalar-tensor gravity," <i>Eur. Phys. J. C</i> , vol. 74, p. 3171, 2014. | |
| 38 | M. Azreg-Ainou, G. T. Marques and M. E. Rodrigues, "Phantom black holes and critical phenomena," <i>JCAP</i> , vol. 07, p. 036, 2014. | |
| 39 | J. P. DeAndrea and K. M. Alexander, "Negative Time Delay in Strongly Naked Singularity Lensing," <i>Phys. Rev. D</i> , vol. 89, p. 123012, 2014. | |
| 40 | M. E. Rodrigues, D. F. Jardim and S. J. M. Houndjo, "Thermodynamics of black plane solution," <i>Gen. Rel. Grav.</i> , vol. 45, p. 2309–2323, 2013. | |
| 41 | C. Ding, C. Liu, Y. Xiao, L. Jiang and R.-G. Cai, "Strong gravitational lensing in a black-hole spacetime dominated by dark energy," <i>Phys. Rev. D</i> , vol. 88, p. 104007, 2013. | |
| 42 | E. F. Eiroa and C. M. Sendra, "Regular phantom black hole gravitational lensing," <i>Phys. Rev. D</i> , vol. 88, p. 103007, 2013. | |
| 43 | M. Azreg-Ainou, "Light paths of normal and phantom Einstein-Maxwell-dilaton black holes," <i>Phys. Rev. D</i> , vol. 87, p. 024012, 2013. | |
| 44 | H. Saadat, "Gravitational lensing of STU black holes," <i>Int. J. Theor. Phys.</i> , vol. 52, p. 4569–4574, 2013. | |
| 45 | H. Saadat, "Deflection Angle and R-Charged Black Holes," <i>Int. J. Theor. Phys.</i> , vol. 53, p. 592–596, 2013. | |
| 46 | E. Deligianni, J. Kunz and P. Nedkova, "Quasi-periodic oscillations from the accretion disk around distorted black holes," <i>Phys. Rev. D</i> , vol. 102, p. 064023, 2020. | 11 |
| 47 | Z. Stuchlík and M. Kološ, "String loops oscillating in the field of Kerr black holes as a possible explanation of twin high-frequency quasiperiodic oscillations observed in microquasars," <i>Phys. Rev. D</i> , vol. 89, p. 065007, 2014. | |
| 48 | A. Kotrlova, Z. Stuchlik and G. Torok, "Multi-resonance orbital model applied to high-frequency quasi-periodic oscillations observed in Sgr A*," <i>Acta Astron.</i> , vol. 63, p. 275, 2013. | |
| 49 | A. N. Aliev and G. D. Esmer, "Hidden Symmetries and Geodesics of Kerr spacetime in Kaluza-Klein Theory," <i>Phys. Rev. D</i> , vol. 87, p. 084022, 2013. | 12 |
| 50 | K. Jusufi, P. Channuie and M. Jamil, "Traversable Wormholes Supported by GUP Corrected Casimir Energy," <i>Eur. Phys. J. C</i> , vol. 80, p. 127, 2020. | |
| 51 | A. Övgün and İ. Sakalli, "Testing Generalized Einstein-Cartan-Kibble-Sciama Gravity Using Weak Deflection Angle and Shadow Cast," 5 2020. | |
| 52 | S. Paul, "Strong gravitational lensing by a strongly naked null singularity," 7 2020. | |
| 53 | K. Jusufi, M. Jamil and T. Zhu, "Shadows of Sgr A* black hole surrounded by superfluid dark matter halo," <i>Eur. Phys. J. C</i> , vol. 80, p. 354, 2020. | |

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| 54 | R. Kumar and S. G. Ghosh, "Shadow of rotating regular black holes and no-horizon spacetimes," 4 2020. |
| 55 | S. Haroon, K. Jusufi and M. Jamil, "Shadow Images of a Rotating Dyonic Black Hole with a Global Monopole Surrounded by Perfect Fluid," <i>Universe</i> , vol. 6, p. 23, 2020. |
| 56 | A. Övgün, İ. Sakallı, J. Saavedra and C. Leiva, "Shadow cast of noncommutative black holes in Rastall gravity," <i>Mod. Phys. Lett. A</i> , vol. 35, p. 2050163, 2020. |
| 57 | K. Jusufi, M. Jamil, H. Chakrabarty, Q. Wu, C. Bambi and A. Wang, "Rotating regular black holes in conformal massive gravity," <i>Phys. Rev. D</i> , vol. 101, p. 044035, 2020. |
| 58 | R. C. Pantig and E. T. Rodulfo, "Rotating dirty black hole and its shadow," 3 2020. |
| 59 | C.-Y. Chen, "Rotating black holes without Z_2 symmetry and their shadow images," <i>JCAP</i> , vol. 05, p. 040, 2020. |
| 60 | K. Jusufi, "Quasinormal Modes of Black Holes Surrounded by Dark Matter and Their Connection with the Shadow Radius," <i>Phys. Rev. D</i> , vol. 101, p. 084055, 2020. |
| 61 | S. Paul, R. Shaikh, P. Banerjee and T. Sarkar, "Observational signatures of wormholes with thin accretion disks," <i>JCAP</i> , vol. 03, p. 055, 2020. |
| 62 | S. Sau, I. Banerjee and S. SenGupta, "Imprints of the Janis-Newman-Winicour spacetime on observations related to shadow and accretion," <i>Phys. Rev. D</i> , vol. 102, p. 064027, 2020. |
| 63 | O. Y. Tsupko and G. S. Bisnovatyi-Kogan, "First analytical calculation of black hole shadow in McVittie metric," <i>Int. J. Mod. Phys. D</i> , vol. 29, p. 2050062, 2020. |
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