

PERSONAL INFORMATION

Natalia Shagatova

📍 Astronomical Institute of the Slovak Academy of Sciences, Tatranská Lomnica, 059 60, Slovakia

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EDUCATION

Doctoral study in Astrophysics

2010 – 2015 Astronomical Institute of Slovak Academy of Sciences in Tatranska Lomnica; Slovakia

Thesis title: “*Mass outflow from cool giants in symbiotic stars*” (in Slovak language)

Master of Sciences in Theoretical physics

2008 – 2010 Comenius University in Bratislava; Faculty of Mathematics, Physics and Informatics; Slovakia

Thesis title: “*Models of the Universe with Anisotropic Dark Matter*” (in Slovak language)

Bachelor of Sciences in Physics

2005 – 2008 Comenius University in Bratislava; Faculty of Mathematics, Physics and Informatics; Slovakia

Thesis title: “*Equipartition Theorem in Relativistic Gas*” (in Slovak language)

WORK EXPERIENCE

2015 – present Researcher, Astronomical Institute of the Slovak Academy of Sciences, Slovakia

RESEARCH INTERESTS

mass transfer in interacting binaries, mass-outflow from evolved stars, hot compact objects, outbursts of recurrent novae

PUBLIC OUTREACH

2013 – present Public talks during open days at the Astronomical Institute of the Slovak Academy of Sciences:
“*The Life of Stars*”
“*Pauli Exclusion Principle in Stars*”
“*Research at the Astronomical Institute of the Slovak Academy of Sciences*”
“*What Are the Stars Hiding Us?*”
“*The Symbiotic Stars*”
“*Where Do Space and Time Come From?*”
“*Cosmology – the Origin and Evolution of the Universe*”
“*Scratchy in Cosmos: an Introduction to Coding and Interesting Facts about Astronomy for Kids*”

MOBILITY

2018 2 month research stay through Erasmus+ grant at Instituto de Astrofísica de Canarias, La Laguna, Tenerife
- goal: reduction and analysis of Swift X-ray Telescope (0.2-10 keV) spectra of recurrent nova RS Oph

PUBLICATIONS

Refereed Papers

Shagatova, N., Skopal, A., Shugarov, S. Yu., Komžík, R. M., Kundra, E., Teyssier, F. (2021): Wind mass transfer in S-type symbiotic binaries. III. Confirmation of a wind focusing in EG Andromedae from the nebular [O III] λ 5007 line, *A&A* 646, A116

Skopal, A., Shugarov, S. Yu., Munari, U., Masetti, N., Marchesini, E., Komžík, R. M., Kundra, E., **Shagatova, N.** et al. (2020): The path to Z And-type outbursts: The case of V426 Sagittae (HBHA 1704-05), *A&A* 636, A77

Sekeráš, M., Skopal, A., Shugarov, S., **Shagatova, N.**, Kundra E. et al. (2019): Photometry of Symbiotic Stars - XIV, Contributions of the Astronomical Observatory Skalnaté Pleso 49, 19

Shagatova, N., Skopal, A. (2017): Wind asymmetry imprint in the light curves of symbiotic binary SY Mus, *A&A* 602, A71

Shagatova, N., Skopal, A., Cariková, Z. (2016): Wind mass transfer in S-type symbiotic binaries, II. Indication of the wind focusing, *A&A* 588, A83

Shagatova, N. (2015): On the effect of ionization on the circumbinary material in symbiotic systems, Contributions of the Astronomical Observatory Skalnaté Pleso 45, 89

Skopal, A., **Shagatova, N.** (2012): Measuring the orbital inclination of Z Andromedae from Rayleigh scattering, *A&A*, 547, A45

Conference Proceedings

Shagatova, N., Skopal, A., Sekeráš, M., Teyssier, F., Shugarov, S. Yu. et al. (2019): H α orbital variations of the symbiotic star EG And from optical spectroscopy, Contributions of the Astronomical Observatory Skalnaté Pleso 49, 406

Shchurova, A., Skopal, A., Shugarov, S. Yu., Sekeráš, M., Komžík, R., Kundra, E., **Shagatova, N.** (2019): Mass-outflow from the active symbiotic binary BF Cyg during its 2015 and 2017 bursts, Contributions of the Astronomical Observatory Skalnaté Pleso 49, 411

Shagatova, N., Skopal, A. (2017): Attenuation of the light curves of the symbiotic binary SY Mus by circumstellar material, Proceedings of the conference "The B[e] Phenomenon: Forty Years of Studies", Prague, Czech republic, June/July 2016, ASP Conference Series, Vol. 508, 397

Shagatova, N., Skopal, A. (2015): Indication of the High Mass-transfer Ratio in S-type Symbiotic Binaries, Proceedings of the conference "Physics of Evolved Stars: A Conference Dedicated to the Memory of Olivier Chesneau", Nice, France, June 2015, EAS Conference Series 71, 195

Skopal A., Sekeráš M., **Shagatova N.** (2015): Evolved Stars as Donors in Symbiotic Binaries, Proceedings of the conference "Physics of Evolved Stars: A Conference Dedicated to the Memory of Olivier Chesneau", Nice, France, June 2015, EAS Conference Series 71, 189

Shagatova, N., Skopal, A. (2015): An Indication of the Enhanced Circumstellar Matter Near the Orbital Plane of the Symbiotic Star EG And, Proceedings of the conference "Living together: Planets, Host Stars, and Binaries", Litomyšl, Czech Republic, September 2014, Eds. Rucinski, S. M., Torres, G., Zejda, M., ASP Conference Series, Vol. 496, p. 245-246

Shagatova, N., Skopal, A. (2014): The density of neutral wind in symbiotic binary and its orbital inclination: the case of Z And, Proceedings of the workshop "Observing techniques, instrumentations and science for metre-class telescopes", Tatranská Lomnica, Slovak Republic, September 2013, Contributions of the Astronomical Observatory Skalnaté Pleso, Vol. 43, N. 3, p. 483-484

Other Papers

Teyssier, F., Boyd, D., Skopal, A., **Shagatova, N.**, Guarro, J. et al. (2019): Spectroscopic observations of symbiotic stars in 2019-Q2, Eruptive Stars Information Letter, 42, 2

Shagatova, N. (2017): Mass outflow from Cool Giants in Symbiotic Stars (Dissertation Summary), PASP 129, 067001

Skopal, A., Sekeráš, M., Shugarov, S., **Shagatova, N.** (2017): New burst of the active symbiotic star BF Cyg at the beginning of 2017, The Astronomer's Telegram, No. 10086