

V-256: Dr. Natallia Sudnik, St. Petersburg, from 8-31 January 2018

We would like to thank NOVA's continued support for this visit of Dr. Natallia Sudnik, Minsk Pedagogical University, from 8 – 31 January 2018.

We continued to work on our project to understand the rapid variability in the circumstellar optical lines of the O7.5 giant ξ Persei. After the completion of the analysis of the more than 400 high-quality spectra, we modeled the spectra and derived the average lifetimes of the proposed magnetic prominences, which is in the order of hours. This is similar to what we found earlier for the O star λ Cep, which suggests that this is a common phenomenon in O stars. Earlier we had discovered the rotation period of 2.04 days in ξ Per, by analyzing 12 years of UV spectra. This implies that the star has a permanent (weak) magnetic field, for which we could now predict the most favorable phases when it could be measured. By coincidence all previous attempts were clustered around unfavorable phases. We have submitted an interim proposal to the TBL at the Pic-du-Midi, to measure the field. The program was accepted and has started at March 10. We have drafted a paper to be submitted to A&A.