

[baavss-alert] Request for monitoring of X Persei (4U 0352+309)

Jeremy Shears via groups.io

Please see the email below from Alexander Salganik, Turku University, of the very bright (6.0 to 6.8V) variable, X Per.

He provides the following further info, but please also upload your photometry (visual and digital) and spectroscopy to the BAA VSS databases:

“ I'd be happy to receive spectra directly. The main focus is on the H α line at 6563 Å, and the higher the resolution the better, as we're particularly interested in profile changes over time. If observers are able to include He I 6678 Å, He I 5876 Å or H β 4861 Å, that would also be very helpful, but H α is definitely the priority.

Regarding photometry, UBVRI coverage would be ideal if observers have the filters and the time. If not, R and V bands are the most important, with R being especially valuable due to its sensitivity to emission from the circumstellar disk.

Visual observations are also absolutely welcome: the more data, the better.”

Original message:

> I'm hoping this message can reach as many BAA members as possible who might be interested. I would like to propose restarting an optical spectral monitoring programme for the Be star X Persei, the optical counterpart of the X-ray pulsar system 4U 0352+309.

> My current research, as a PhD researcher at the University of Turku, Finland, focuses on the long-term X-ray light curve of 4U 0352+309 using data from Swift/BAT. Since around 2001, the source has exhibited three X-ray outbursts, occurring approximately every seven years. However, the next expected outburst has not occurred. Instead, the X-ray flux has dropped to its lowest level in over two decades.

> This unusually low state makes continued optical monitoring particularly valuable. In particular, high-resolution observations of the H α line profile and the overall spectral shape, or even just measurements of the H α equivalent width (EW), would be extremely helpful.

> If there is interest within the BAA community, even a single observation per week would be highly appreciated and scientifically valuable.

> Thank you for your time and consideration.

> Alexander Salganik

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