Public Appeal - LASARsat Satellite Observation

June 25, 2026

Intended for: Observatories, astronomical institutions, amateur astronomers, and the general public

Dear colleagues and astronomy enthusiasts,

On behalf of the entire LASAR and LASARsat team, I would like to invite you to participate in a unique scientific mission. In the coming months, we will be turning on onboard LEDs at predetermined times. The goal of this experiment is to test the optical visibility of small CubeSat-type satellites from Earth and to practically verify the functionality of onboard orientation and communication systems. Thanks to the LEDs, it is possible to optically observe the satellite's transit through Earth's shadow. During such a transit, the satellite does not reflect any sunlight and would normally not be observable at all.

Expected Phenomenon

During transits over Central Europe (primarily the Czech Republic), LASARsat will transmit a defined blinking pattern in two-minute intervals with a frequency of 0.5 Hz (1s ON - 1s OFF). Under favorable meteorological conditions, this phenomenon should be well observable using astronomical equipment. However, a mount capable of tracking satellites based on TLE data is required. During past transits, we measured a magnitude of about 12 mag for the LED-illuminated transit. We would like to take this opportunity to invite you to attempt to capture and record this phenomenon.

How Can You Get Involved?

- **Tracking and recording:** Try to capture the satellite visually or photographically during the planned windows. Light curves, photographs, or video recordings are highly appreciated.
- **Reporting results:** Any data—whether successful photographic documentation or negative observations (due to cloud cover, low brightness, or other factors)—is welcome. We will also appreciate photos from the observation process itself!
- **Sharing parameters:** Please always include your exact location (coordinates), the equipment used, and the conditions during tracking.
- **Further observations:** We would like to repeat this opportunity several times during the summer and will keep you informed in a similar manner.

Where to Send Observation Reports?

Please send your reports, photographs, and technical data from the observations to our contact email address: **pozorovani@lasar.info**.

In the subject line of the email, please state: **"Pozorování LASARsat - (Your Name / Institution Name)"**.

LED Activation Schedule - Week 26/2026

Below is a table with the planned LED activation times (times are given in Coordinated Universal Time - UTC). We recommend downloading the current orbital parameters (TLE) from standard astronomical databases (e.g., CelesTrak or N2YO) no earlier than 48 hours before the transit (the later, the better for the most up-to-date elements).

Date	**Activation Time (UTC)**	**Max. Elevation (Prague)**	**Blinking Frequency / Note**
2026-06-26 (Fri)	22:26:10 - 22:28:10	18.5°	0.5 Hz
2026-06-27 (Sat)	23:17:28 - 23:19:28	31.2°	0.5 Hz

- *Left:* Visualization of the orbit for 2026-06-26 22:26:10 UTC
- *Right:* Visualization of the orbit for 2026-06-27 23:17:28 UTC (Orbitron software)

If you have any questions, please do not hesitate to contact us by replying to this email (**richard.nikel@dospace.today**).

You can also find up-to-date information regarding the observation on our social media **@lasarcrew**.

Thank you very much in advance for your cooperation, and we look forward to your observational success in the night sky.

Clear skies,

Richard Nikel

LASARsat Mission Commander