



Supplement of

**Atmospheric and cryospheric observations in the high-altitude
Zarafshon River Basin and the Hydrographic Party Glacier (GHP),
Tajikistan, 2018–2025**

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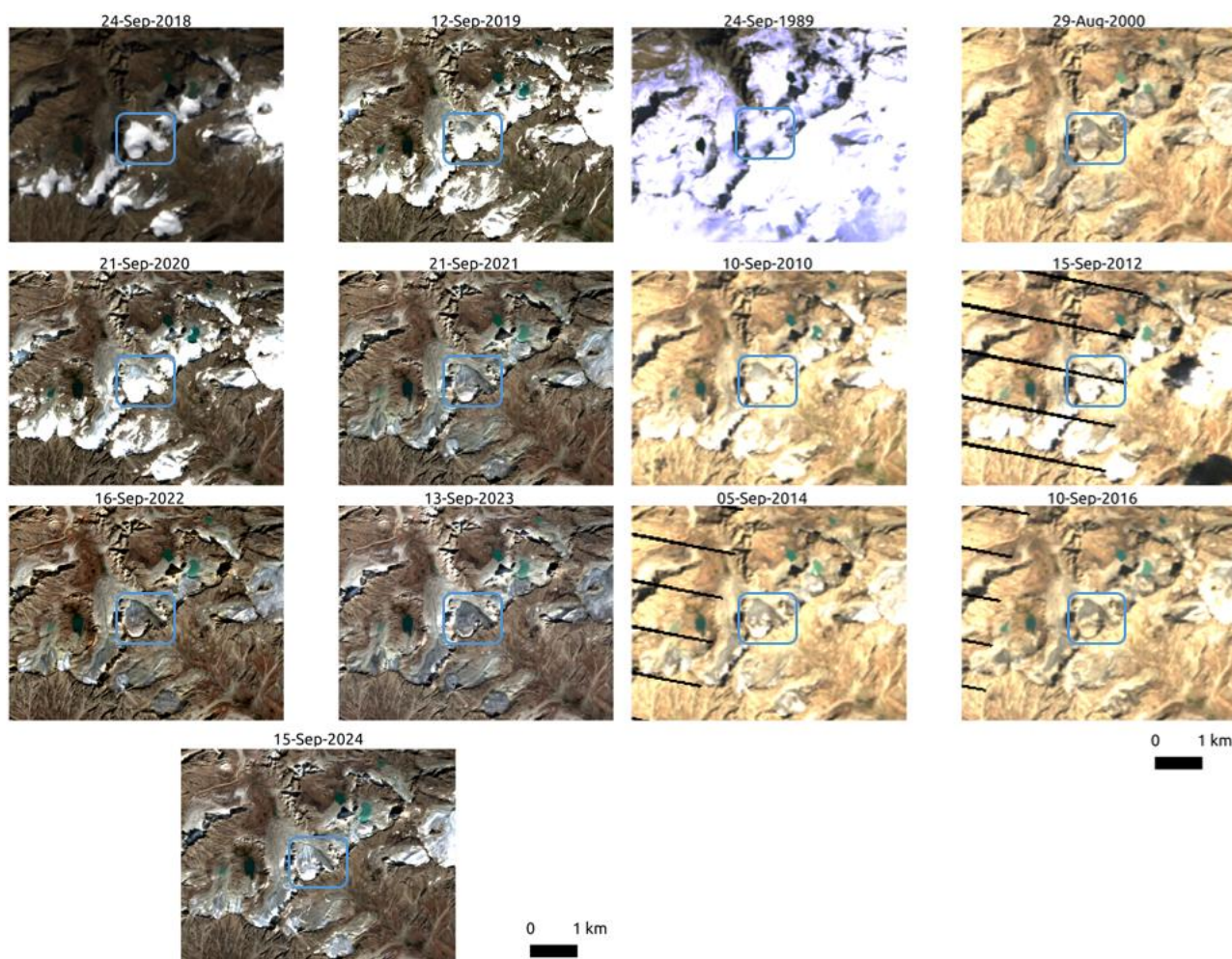


Figure S1. Yearly September true color composites from satellite imagery of GGP for the duration of this project (1989–2024). GGP is highlighted with a blue rectangle.

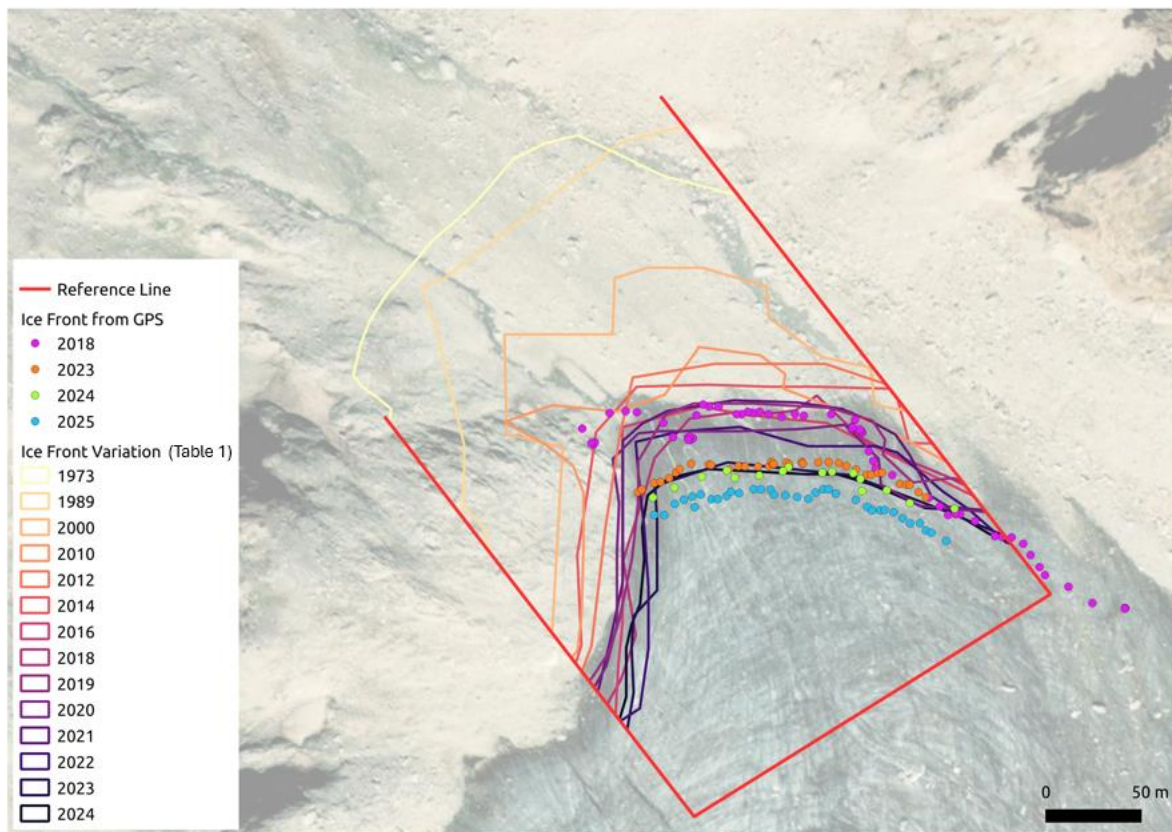


Figure S2. Front variation of GGP terminus from 1973 (Vladimirova et al., 1976) to 2024, and the GPS surveys conducted during expeditions. Image source Bing Maps (© Microsoft) and imagery data © 2025 Maxar.



Figure S3. Surface area of GGP as reconstructed from 1973 expedition (Vladimirova et al., 1976) and 2024 Sentinel-2 satellite remote sensing image. The background satellite image is a Sentinel-2 true color composite from 15th September 2024.

1. Additional process settings for Pix4Dmapper software

The following processing settings were used: key points image scale: full; image scale: 1; calibration: automatic; calibration method: standard. point cloud densification image scale: multiscale, 1/2 (half image size); point density: optimal; minimum number of matches: three; matching image pairs: aerial grid or corridor; targeted number of key points: automatic; rematch: automatic; 3D textured mesh: medium resolution, use color balancing for textures.