

Current Status and Future Plans of SMOKA

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SMOKA (Subaru-Mitaka-Okayama-Kiso-Archive system)

SMOKA is the science archive system providing access to public data of the Subaru Tel., the 188cm tel. at the Okayama Astrophysical Observatory, the 105cm Schmidt tel. at the Kiso Observatory of the University of Tokyo, MITSuME tel.s of Science Tokyo and Kyoto University, the 150cm Kanata tel. of Hiroshima University, Nayuta tel. at Nishi-Harima Observatory, and Seimei tel. of Kyoto University. Everyone can get the data for the purposes of astronomical research or education. SMOKA is developed and operated by the Astronomy Data Center of NAOJ.

• Updates Since Subaru UM 2025

- FastPDI data is released (May 2026~)
(The release had been on hold by the observatory because the FITS files are lossy compressed.)
- Reduced data of HONIR of Kanata telescope is released (Jan. 2026~)

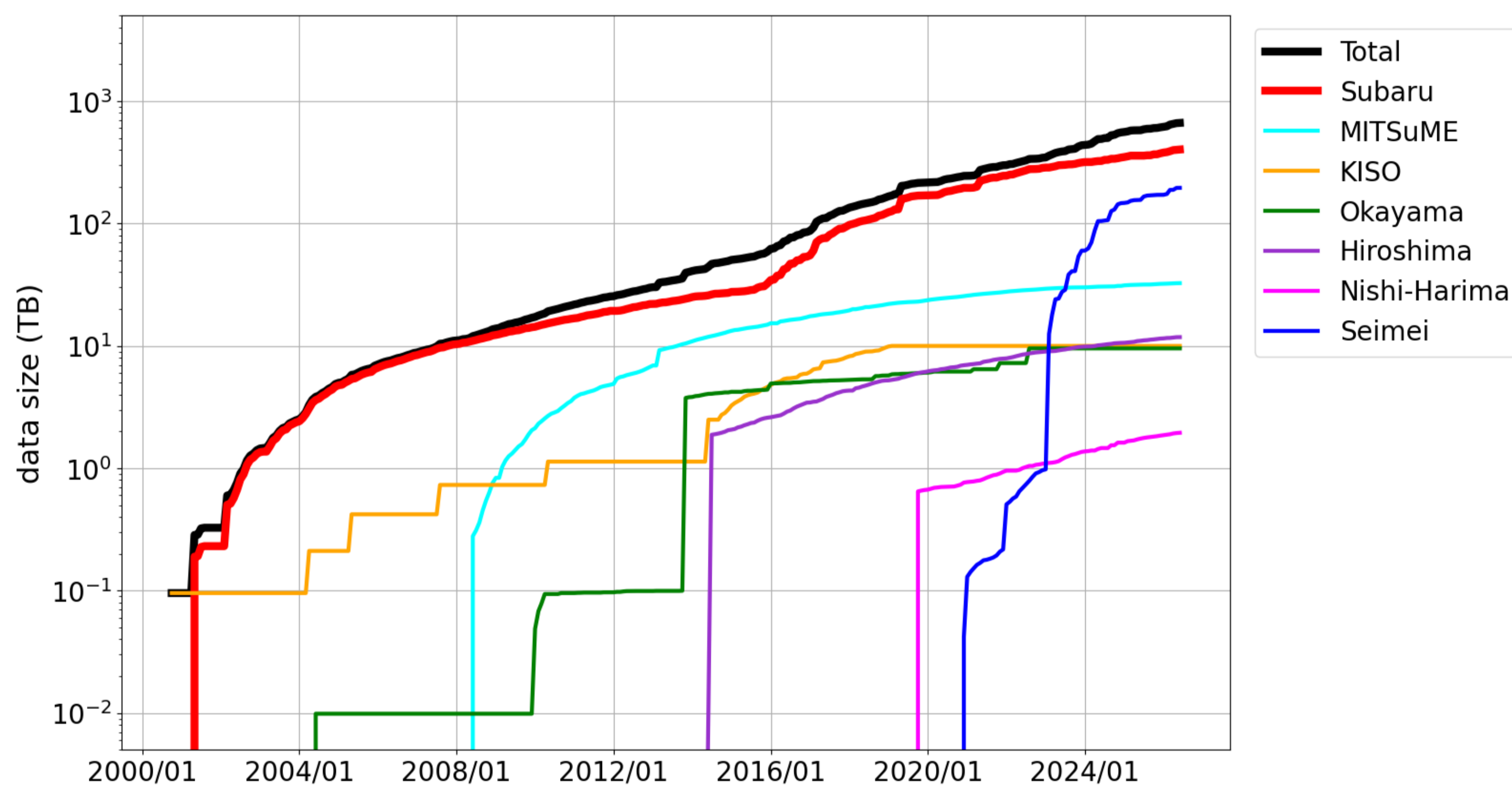
Current Status of SMOKA Data Archive

- SMOKA main system archives data from 37 Instruments

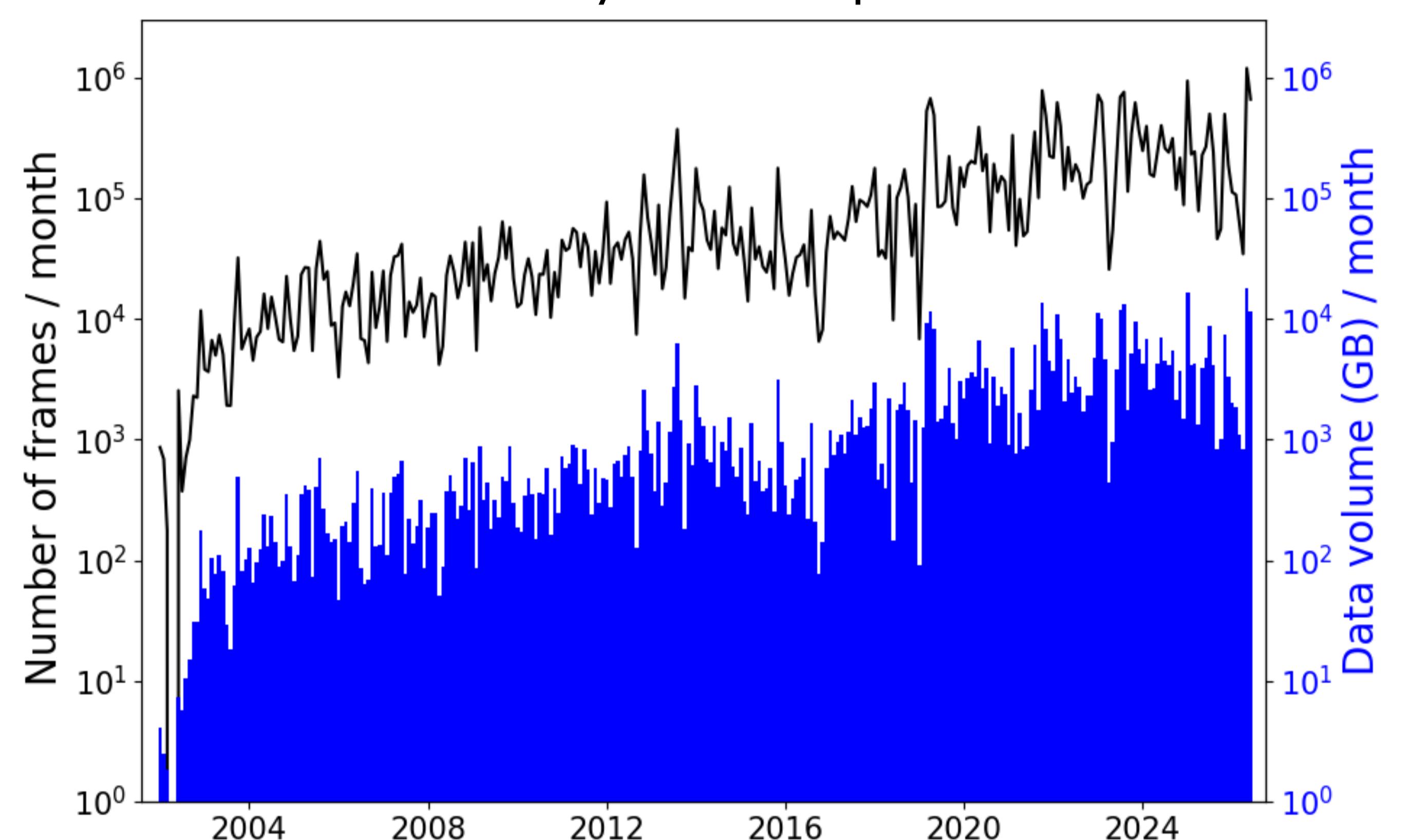
Subaru	S-Cam, FOCAS, HDS, IRCS, OHS/CISCO, MIRTOS, COMICS, CIAO, CAC, Kyoto-3DII, MOIRCS, HiCIAO, FMOS, HSC, CHARIS, IRD, SWIMS, MIMIZUKU, VAMPIRES, FastPDI
Okayama 188cm	SNG, OASIS, HIDES, ISLE, KOOLS, MuSCAT
Kiso Schmidt	1kCCD, 2kCCD, KWFC
MITSuME	MTA (AKENO), MTO (OKAYAMA)
Kanata	HOWPol, HONIR
Seimei	KOOLS-IFU, TriCCS, GAOES-RV
Nayuta	NIC

- Total data: 44 million frames, 684 TB
 - Subaru data: 23 million frames, 419 TB
- Monthly data request volume: 0.1 - 1 million frames (Data size: 1-10 TB)
- Annual registered users: 221 (FY2025)

Trend of SMOKA released data volume



Monthly data request

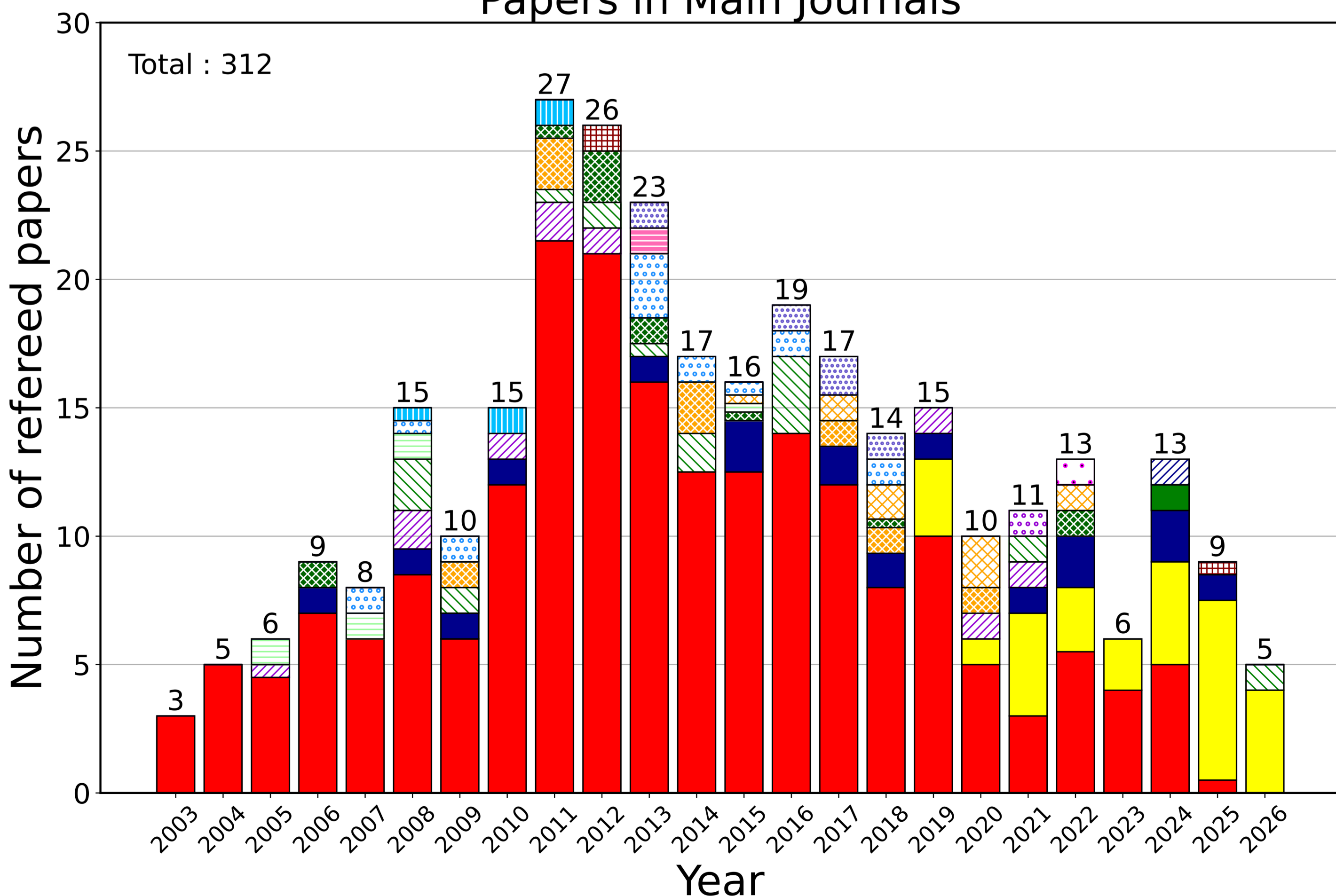


- SMOKA sub-systems: Tomo-e Gozen, Photographic Plates Archive (Kiso and Okayama), SkyMonitor Imaging Data (Okayama, Kiso, Hiroshima, Akeno, Subaru)

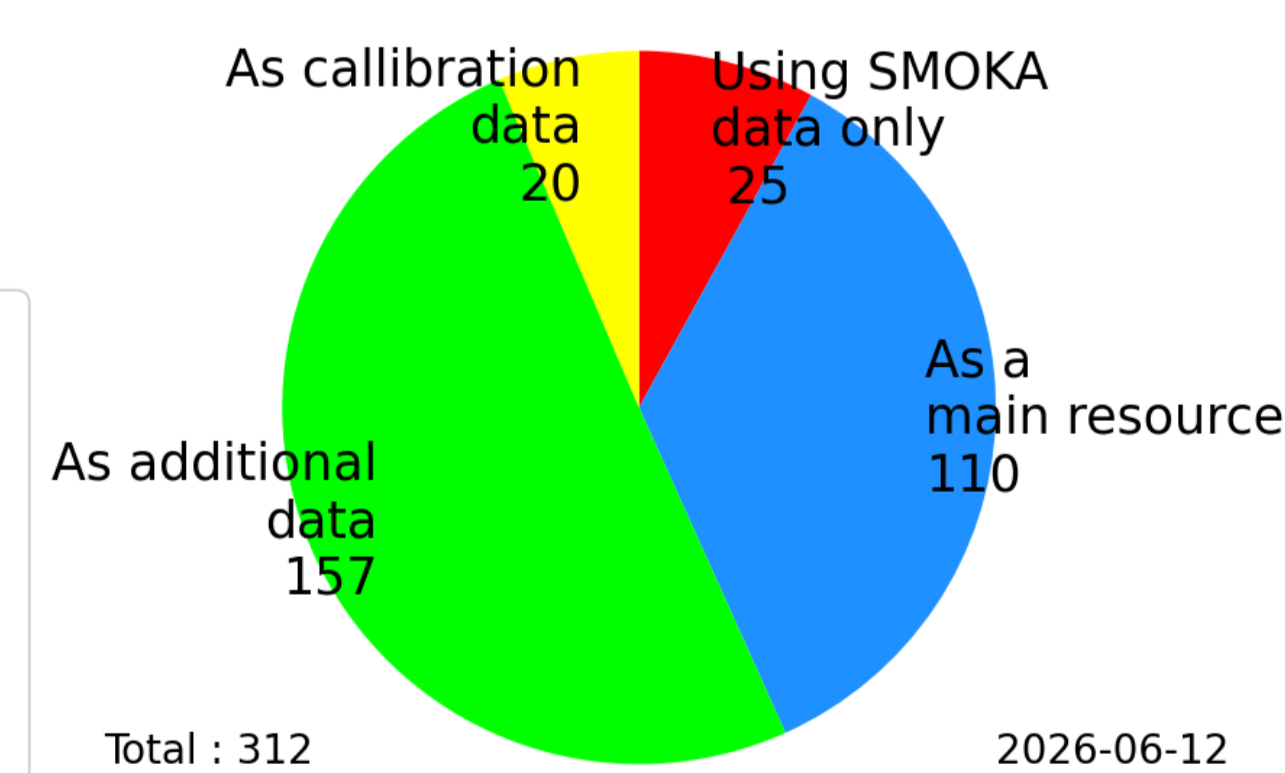
Current Status of Publications Using SMOKA

- Refereed Papers using SMOKA data 2003-2026/06: 312 papers (A&A, ApJ, AJ, PASJ, MNRAS, PASP, etc.)

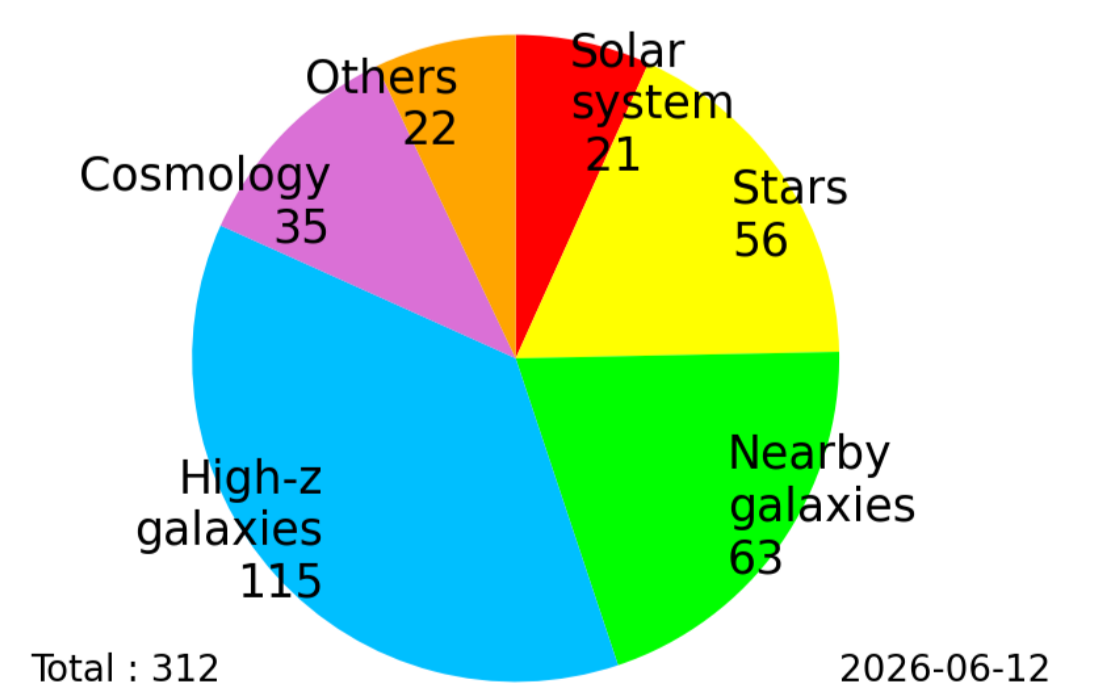
Papers in Main Journals



Use Cases of SMOKA Data



Subject of Research using SMOKA Data



Future Plans

1. Data Release
 - **Subaru: PFS (2026/9),**
 - TAO: NICE, SWIMS, MIMIZUKU, ...
 - Seimei: MIDSSAR
 - Photographic Plate: Dodaira
2. New Service
 - Weather classification for Okayama All Sky images