

A few feelings from commissioning a new instrument PFS

Yuki Moritani (Subaru Telescope)

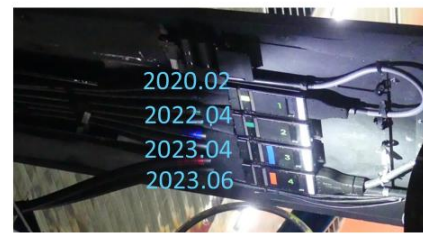
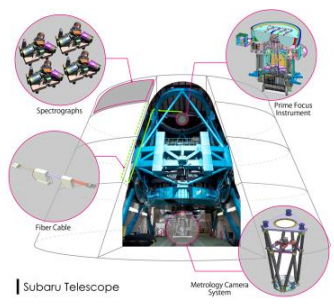
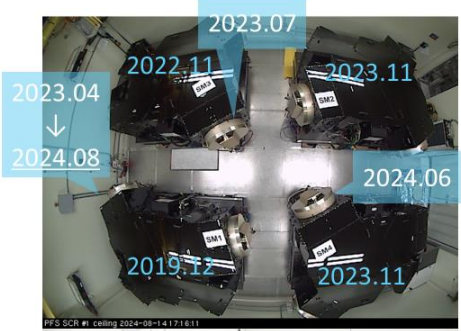
PFS: a new instrument at Subaru Telescope

- 2024.07: Readiness review for open use
- 2024.08: Completion of installing all the hardware
- 2025.03.22: First Light
 - 3/19-3/21 Eng. nights (3)、 3/22-4/3 Sci. nights (13)

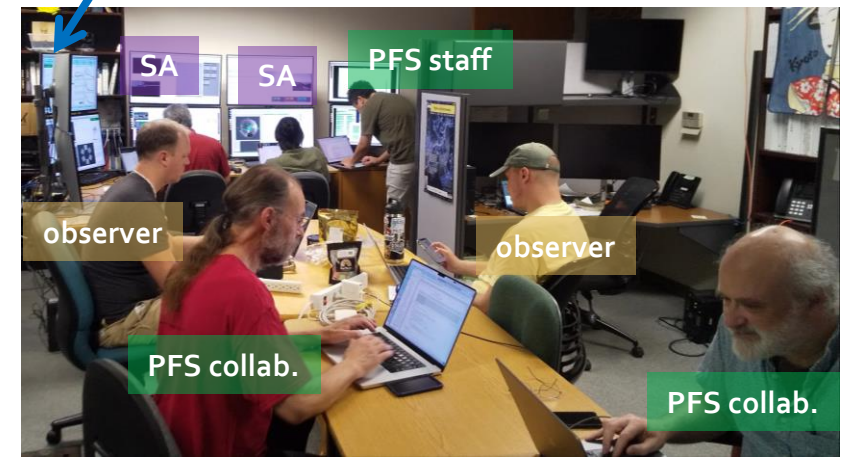


Dark nights were fully populated with PFS proposals...
↑
The instrument was under troubleshoot and test after it until 1 weeks before. Workload of observation preparations, confirmation of procedure and software, newly found issues.

All hardware were integrated at Subaru



2 x NO (summit)



SpS: see above for installation month
VPHG (LR) correction: 2023.11
VPHG (MR) correction: 2024.02
Repair SM2 fiber connector: 2024.05

Fiber Cable: see above for installation month

cf) Press Release (2025.01)
<https://www.nao.ac.jp/news/topics/2025/20250110-subaru.html>
<https://subarutelescope.org/jp/news/topics/2025/01/09/3498.html>
<https://www.ipmu.jp/ja/20250110-PFS>

Snapshot of FL night

From commissioning to long-term operation

- PFS was developed under international collaboration. Japanese institutes didn't produce the major component.
 - FTE of collaborators decreased after delivery
 - Transfer from the project to the observatory

Assuming leave the project soon to share the tasks.
 <-> Responsibility of each task.
 There are items for which it is not clear (to me who will take over the tasks in the end.)
- Transition phase. more instruments, more trouble, less people, narrower sight
 - 2 observation run with full system (2024.08 & 2025.03)
 - Less robustness against irregular event:
large impact of power outage, cutout of coolant supply
 - (complicated organizations)

There always have been some troubles, large and small.
 "Manager" to focus on management.
- Shortage of spare parts
 - For instance, spectrograph cameras use 16 cryocooler in total
 - 2 coolers were failed and replaced already. No working spare so far.
 - Recently it is difficult to get budget as for a completed instrument

Suggestions how to apply the budget .
- Instrument looked stable from the observation, but it is not sure PFS can survive 10 years.
 - Do we enough resources and sufficient documents?

We should discuss long-term operation now.