**PFS (Prime Focus Spectrograph)**, a next generation facility instrument on Subaru Telescope, is a very wide-field, massively multiplexed, and optical & near-infrared spectrograph. The instrument has been developed by the international team at the initiative of Kavli IPMU. The project is coming into the construction phase aiming at system integration & commissioning in 2017-2018 and science operation in 2019, with three key science areas: Cosmology, galaxy/AGN evolution, & Galactic archaeology.

### PFS collaboration
Across 6 countries: JPN, TPE, USA, BRA, FRA, GER.

### HSC & PFS for “SuMIRe”
Kavli IPMU is leading the project “SuMIRe” (Subaru Measurement of Images and Redshifts), of which two wheels are PFS & Hyper Suprime Cam (HSC, a very wide-field CCD imager) on Subaru.

### PFS – Fast facts
- Wide field: ~1.3 deg diameter (Hexagonal)
- Highly multiplexed: 2400 fibers,
- Quick fiber reconfiguration: ~60 sec (TBC)
- Fiber diameter: ~1.1 arcsec
- Positioner pitch: 8mm (~88 arcsec), with patrol areas overlapped between adjacent ones.
- Optical-NIR coverage: 380-1260nm at once.

### Spectrograph System “SpS” (LAM, PU, JHU, LNA)
- 4 identical units → 2400 spectra total.
- Located in an env-ctrl’d clean room on the TUE-IR floor in the dome.

### Expected timeline
- Three parts: PFI ("Cable C"), Telescope ("B"), SpS ("A").
- Two connectors: "C-B" & "B-A".
- Take images of back-lit fibers on the prime focus all at once.
- Installed as an instrument at Cs.

### Throughput model

### Sensitivity estimation

### Metrology Camera (ASIAA)
- "SM-3", "NN" Spectrograph Module
- "MC-2" Metrology Camera System
- "CAP": Prime Focus Instrument
- "CAB": Fiber Cable on Telescope

### & DEL & AIT at Subaru

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**Construction, subsystem integration & test**

**Science operation**

**System integration**

**On-sky commissioning**