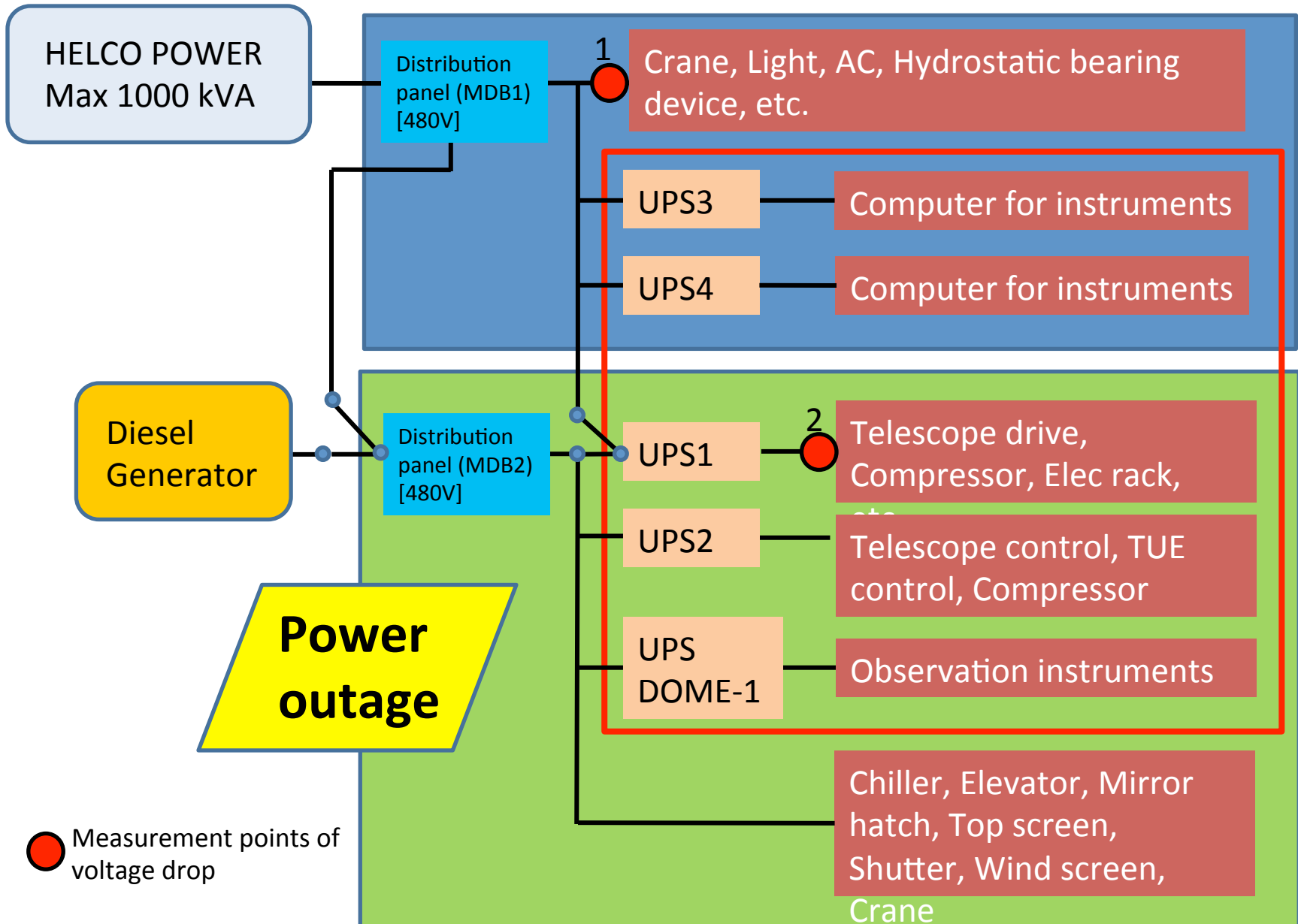


Measurement of Instantaneous voltage drop in power source at Subaru

Tomonori Tamura
Subaru telescope

Power supply facility at Subaru

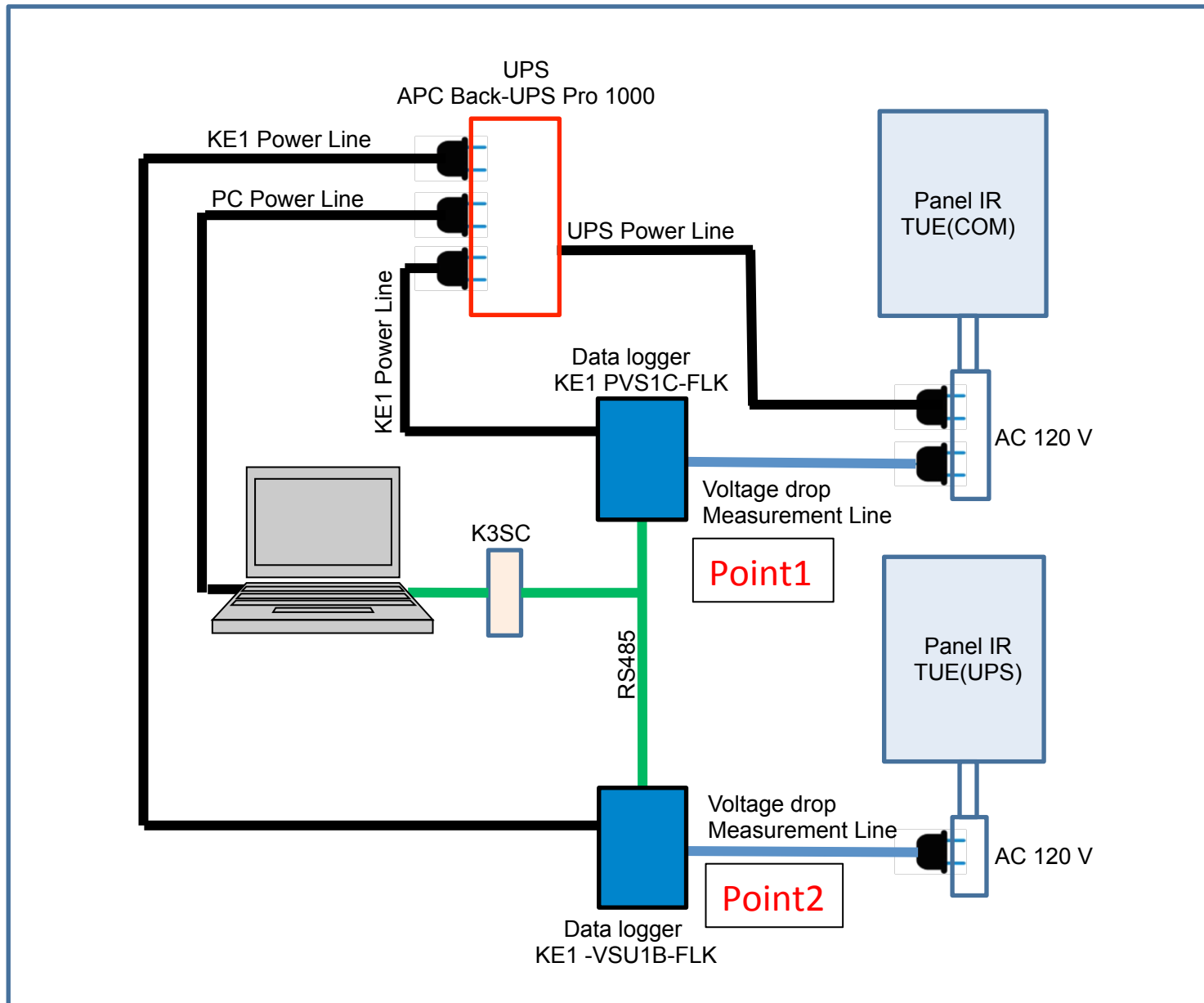


Measurement of instantaneous voltage drop

- ▶ Purpose: Investigation for our new instrument (PFS: Prime Focus Spectrograph)

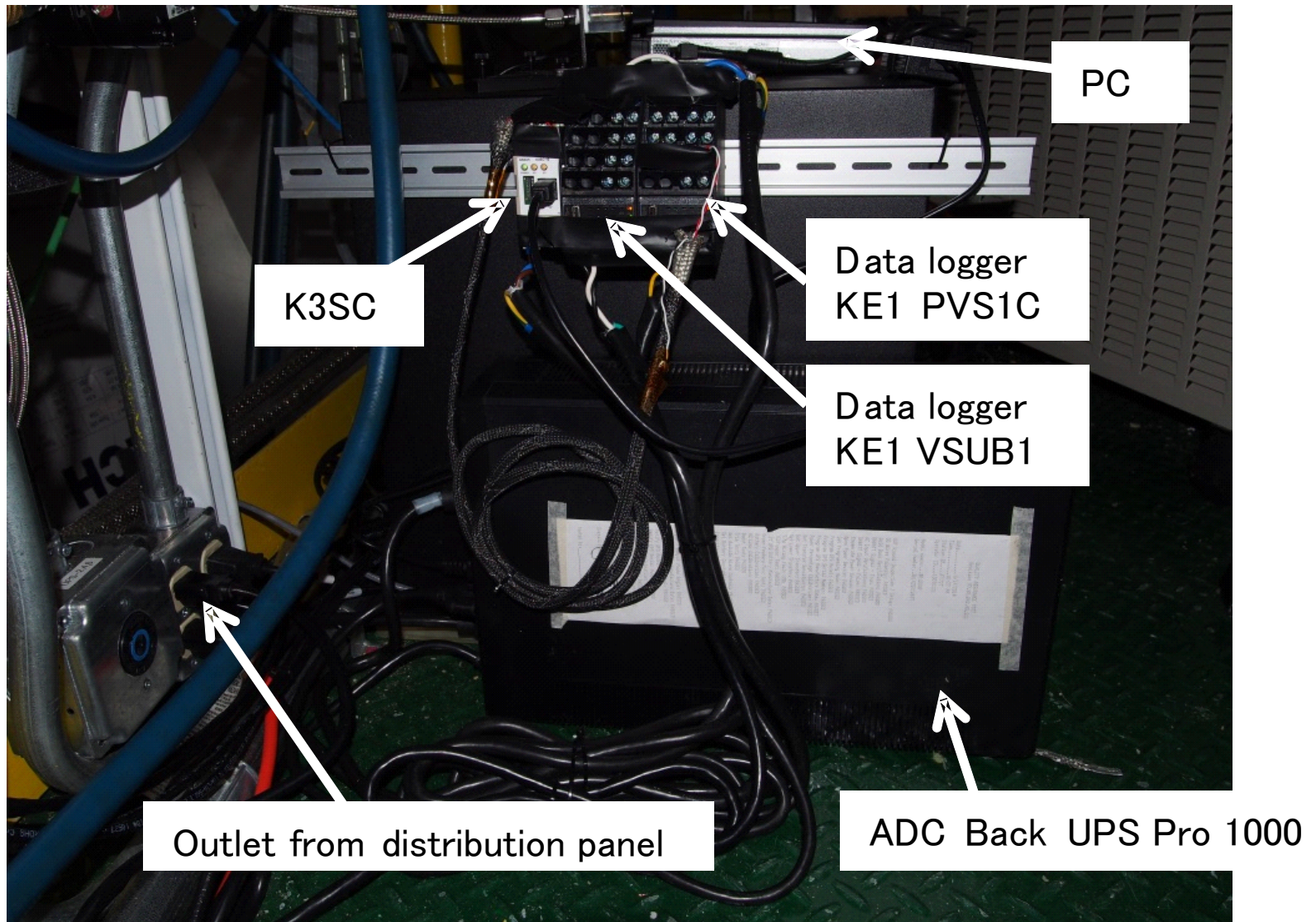
- ▶ Measurement location
 - 120 VAC outlet of distribution panel at TUE IR floor.
 - Point1: no UPS1
 - Point2: after UPS1

- ▶ Measurement devices
 - 1) OMRON KE1-PVS1C-FLK (Power/Momentary Voltage Sag Monitor Unit)
 - 2) OMRON KE1-VSU1B-FLK (Momentary Voltage Sag Monitor Unit)



Schematic diagram of Measurement devices

Measurement devices

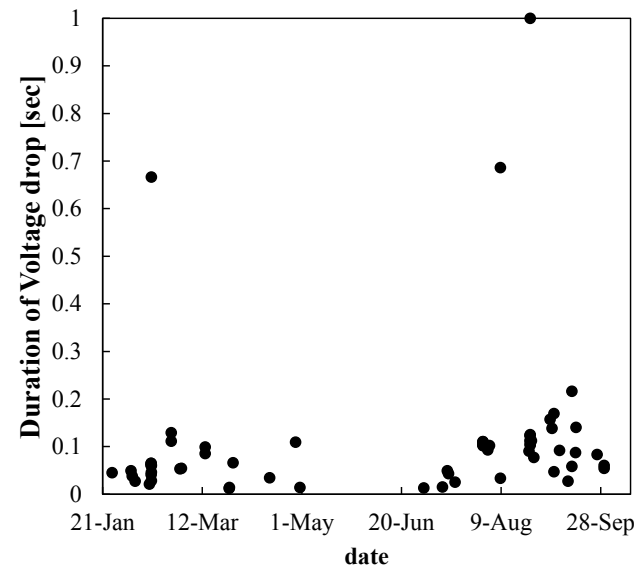
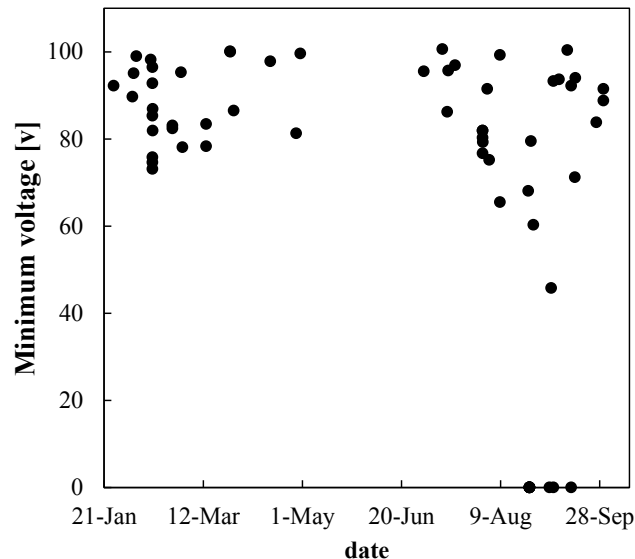


Measurement Result of Point1 (no UPS)

* We didn't detect an instantaneous
voltage at Point2 after UPS.

Table 1. Monthly instantaneous voltage drop data
The measurement was suspended between May and June.

	Number of times	Number of days
Jan-2015	1	1
Feb-2015	15	6
Mar-2015	6	4
Apr-2015	3	3
May-2015	—	—
Jun-2015	—	—
Jul-2015	10	6
Aug-2015	13	6
Sep-2015	13	9
Total	61	35



Problems

- ▶ Glitch of facility equipment and device for instrument.
- ▶ Trip of breaker

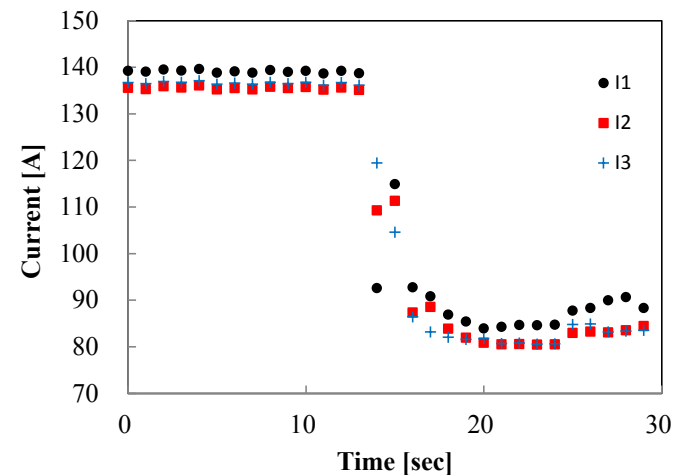
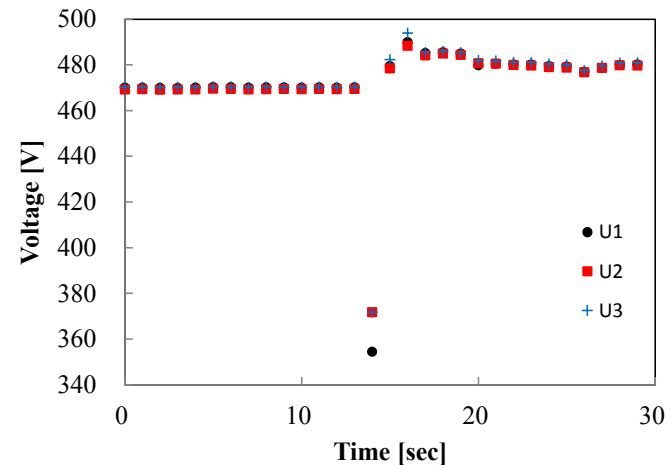
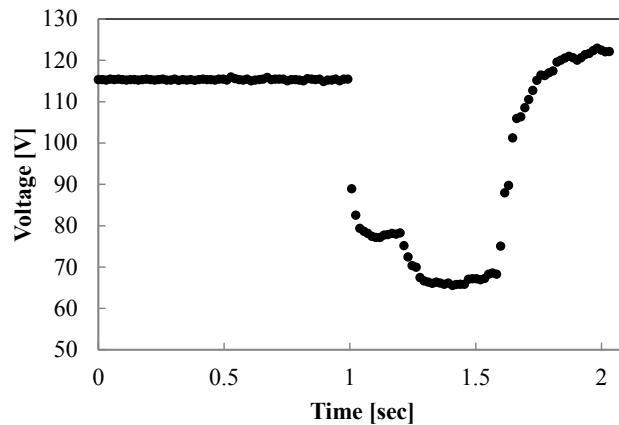


Fig. Instantaneous voltage drop data on Aug. 8, 2015 at 16:26.
(Left) OMRON KE1, Voltage drop data, (Top right) HIOKI PW3360, Voltage drop data, (Bottom) HIOKI PW3360, Current data