Survey Progress Rate

• Progress rate is ~ 75 % of what we originally anticipated when we prepared the proposal (~ 1.5 years before the commissioning).

• What was wrong?
  
  • Weather: Ratio of Survey quality night (T > 0.3, seeing < 1”.3): 60 % not 70 %: 0.85 (unlucky)

  • Weather has long time scale noise (1/f noise) that might causes large deviation from the average

  • Time between exposures: 35 sec not 20 sec: 0.93 (hardware team was optimistic)

  • Addition of short (30 sec) exposure: 0.94 (team’s decision)

  \[0.85 \times 0.93 \times 0.94 \approx 0.75\]
Summary

- HSC-SSPは300 nights allocated, ~ 200 nights used

- Expected Completion Ratio (after 300 nights)  D/UD:80 %, W:72 %

- Primary reason of the delay: Significantly bad weather (15 % lost)
  - Plus additional dead time that we did not anticipate when we had been preparing the proposal

- If we have additional 30 nights, the completion ration of all the layer (UD/D/W) exceed 80 % and more rectangular W footprint will be realized which is more useful and deserves legacy survey.

- We hope to finish the survey with the reasonable level of completion ratio (80 %) before the survey team breaks apart and before the other major survey starts.

30 more nights approved by SAC
Recent Progress

Bad Weather

Volcano

Tel. Shutdown
Survey prospect

If we have 30 more nights

Wide: 84% and more rectangular survey field

We still keep the same prospect.
There has been a delay in the schedule due to the primary mirror recoating.

Iwata-san says that the increased additional period of 7.6 months will be approved by SAC.

But, there has been a concern within the collaboration that the proprietary period of the processed data is too short (9 months) to fully exploit the data.

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**Plan in 2018**

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<th>Internal release</th>
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<td>S20A</td>
<td>2020/09?</td>
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</table>

- **PDR1 on 2017/02**
  - 160 deg$^2$

- **PDR2 on ~2019/05**
  - 305 deg$^2$

- **PDR3 on ~2021/05**

**Weak Lensing Catalog of PDR1 was released in mid 2019.**
Seeing in i-band

Unique Data set