HSC Queue Mode Implementation Plan ~ Stage I, II, III ~

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Basic Principle

- Start simple
- Satisfying users requirements
 - Information : Logs, completion reports
 - Feedback : Q/A staff assignment
- Do not drop quality of operation.
- Do not drop quality of data.
 - Some parts should be checked manually at the beginning
 - QWG will help proactively in all STAGEs.

STAGEs for Queue Implementation

STAGE I: S16 A & B (Beginning)

• Only applicants of queue Mode in OPEN USE

STAGE II: S17 A & B (Stabilizing)

• 50% Queue + 50% Classical in OPEN USE only

STAGE III: S18 A & B (Settle down)

 80% Queue + 20% Classical in both OPEN USE and SSP

STAGE I: S16A and B

- OPEN USE (< 5 nights) + 1st and last nights of SSP + Sukima Time
- In CfP, open "Subaru Open Use queue mode program" for HSC.
 - Queue mode will be allocated at "Sukima"(隙間時間) in classical mode program and several queue mode nights.
 - No additional target request of classical programs.
 - In bad weather, Queue program has higher priority than backup programs.
 - The number of queue observation night depends on the number of the accepted queue programs.
 - Referees give science assessment for queue proposals.
 - SAs give technical assessment for queue proposals.

STAGE I: Queue Mode Programs

• Normal Queue Programs

Normal Queue Program: No lower limitation of observing time = 0.14 – 5 nights (=1 - 35 hrs)

- Filler Queue Programs (from S16B)
 - Bad weather Condition
 - Less then 4 hrs.
 - Priority is lower than Normal Queue Program but it will be useful for Queue filling.

STAGE I: Queue Operation Resources

Manage of Queue Schedule and Completion rate

- Operation Center: Imanishi, Pyo, Nakano + FQA staff
- With Queue planning and simulation program

Queue Observers

SAs, SSAs, Operators, HSC Astronomers

Queue Software Management

OCS team & CDM (ProMS and STARS system)

Quality Assessment

- Initial QA during observation with HSC quick look programs by SAs
- Final QA will be done by FQA staff in the next morning.

STAGE I : Software for S16 A & B

Phase II Tools	 Input observation plan and parameters by PI Make Observation block files Spread Sheet Format
Queue Planner	 Drafting and Investigation of Queue mode schedule Semester base, Each two weeks (one run) base Checking and modifying Queue mode Schedule daily base Update with the completeness of OBs .
Queue Selection & Execution tools	 Show queue list satisfying conditions [sorted by priority] Weight control system. Generate HSC OPE commands from OB information Marking and Commenting for OBs which were done
Data Delivery	 Distribute monitoring script to find new data acquisition to PIs. Observation Logs (Executed OBs) Weather Information Quality assessments

STAGE II: S17 A & B

- Allocate Queue programs in fixed rate
 - 20% Queue + 80% Classical (S17A)
 - 50% Queue + 50% Classical (S17B)
 - The allocation rate can be changed by the results of S16A & B queue observations
 - Increase the queue observation rate up to 50%
- OPEN USE + 1st and last nights of SSP + Sukima Time
- Allocate proposals to Queue mode in TAC or Sci. Div.
 - High ranking proposals in referee judgment
 - Proposals
 - strict requirements for scientific achievement (best seeing, photometric sky, dark night)
 - Targets with wide spreading over the all sky area
- Regular Queue scheduling is required

STAGE II: Queue Scheduling

- Semester and Run base scheduling check
 - Before starting Semester and One week before run
 - Update queue filling and lists updated
 - Check the availability of queue list considering various environment conditions
- Daily base scheduling with fine tuning
 - Update and fine tune queue lists before the observation everyday.

STAGE II: Queue Operation Resources

Manage of Queue Schedule and Completion rate

• Operation Center: Nakano, Imanishi, Pyo + FQA staff

Queue Observers

SA, SSA, Operators, HSC Astronomers

Queue Software Management

OCS team

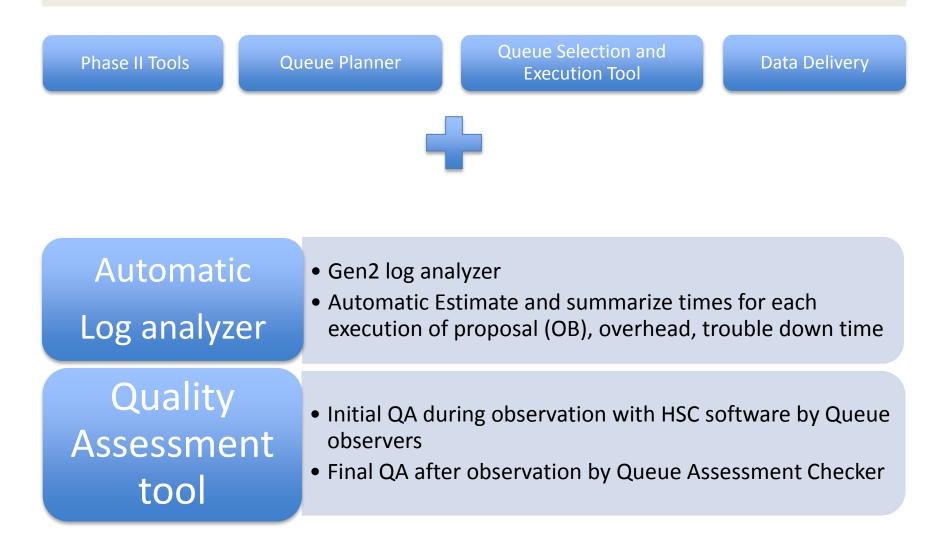
Queue Scheduling

- SSA + SA + HSC Astronomers
- Run base schedule check and daily base schedule revision

Quality Assessment

- FQA staff
- In the next morning, check frames commented by Queue observers with QA tools

STAGE II : Software for S17A & B



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STAGE III: S18 A and B

- Both Open USE and SSP
 - 80% Queue + 20% Classical
 - Dead time of SSP will be increasing → mixing
 Open USE and SSP in queue mode
 - The policy of how to take balance OPEN USE and SSP with queue should be determined.

Thanks

• Questions and Comments ?