

# Results from Subaru April/May searches, proposed IAU circular

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# Subaru/Suprime-Cam

- Most wide field imaging camera on 8-10 m class telescope .  
10 2k x 4k CCD (FOV~33x26 arcmin).
- Good image quality with active mirror support.  
Average seeing is 0.6-0.7 arcsec.

# Observation

Field	Reference			Search		
SS1	Mar 19	54 min.	26.0	Apr 9	48 min.	26.6
SS2	Mar 19	54 min.	26.6	Apr 9	48 min.	26.4
SS3	Mar 19	54 min.	26.7	Apr 9	48 min.	26.9
SS4	Mar 19	54 min.	26.1	Apr 9	48 min.	26.6
SDF	Apr 12	166 min.	27.1	May 7	116 min.	26.7
SDFe	Apr 9	54 min.	26.6	May 9	44 min.	26.2
SDFw	Apr 11	60 min.	26.1	May 8	57 min.	26.4

Limiting magnitude is 5 sigma in 2 arcsec radius.

On May 7 (SDF search), seeing was bad (~1.0 arcsec).

# Candidates Search

- Image subtraction and candidates search were carried out separately at LBL and Hilo(Apr)/Tokyo(May).
- Number of candidates was 43 from our and 72 combined with LBL candidates.
- Our search was conservative compared to LBL.

# Spectroscopic Follow-up

Name	Mag(i')	redshift	Type	Spectroscopy	HST	J-band
S02-000	23.4	0.278	Ia	VLT/FORS2		
S02-001	25.1	1.42	?	VLT/FORS2		
S02-002	24.7	1.086	Ia	VLT/FORS2	HIZN1	VLT/ISAAC GEMINI/NIRI
S02-025	25.4	?	?	VLT/FORS2		
S02-016	24.8	0.561	Ia?	Keck/ESI		
S02-035	25.5	1.37	?	Keck/ESI		
S02-027	24.1	0.9?	?	GEMINI/GMOS		
S02-049	24.2	0.88	Ia	GEMINI/GMOS	LOZN1	
S02-055	24.2	?	?	GEMINI/GMOS		
S02-064	22.4	0.33	Ic?	GEMINI/GMOS		
S02-026	24.7	?	?	Subaru/FOCAS		
S02-032	24.0	1.1	Ia?	Subaru/FOCAS	LOZN2	VLT/ISAAC
S02-075	23.7	0.79	Ia?	VLT/FORS2 GEMINI/GMOS	LOZN3	

# Spectroscopic Follow-up

- Out of 13 candidates observed :  
3 have no information,  
3 have no SN spectrum but redshift only,  
7 are probably SNe.
- There is no apparent AGN/QSO.
- Positional standard stars are saturated and the positional accuracy is not good.

# S02-075

- Due to bad weather at Mauna Kea, few spectroscopy for May candidates.
- However, we need a candidate to follow with HST/ACS.
- S02-075 was selected from photometric redshift analysis ( $z \sim 0.8$ ,  $B/T \sim 0.9$ ).  
S02-075 is in SDF field and multi-color data was available.

# Proposed IAU circular

Name	Date	R.A.	Decl.	Mag(i')	redshift	Type
S02-000	2002-04-09	14:03:54.08	+04:59:49.0	23.4	0.278	Ia
S02-002	2002-04-09	14:04:18.16	+05:19:25.6	24.7	1.086	Ia
S02-016	2002-04-09	14:04:00.13	+04:59:50.6	24.8	0.561	Ia?
S02-032	2002-04-09	14:03:39.82	+05:46:50.6	24.0	1.1	Ia?
S02-049	2002-04-09	14:00:23.29	+05:45:41.9	24.2	0.88	Ia
S02-064	2002-05-09	13:25:46.62	+27:34:21.1	22.4	0.33	Ic?
S02-075	2002-05-07	13:24:25.92	+27:44:33.9	23.7	0.79	Ia?