

Supernova Survey Plan w/ Tomo-e Gozen

10,000 deg² – 2 hr cadence – 18 mag depth
10,000 deg² – 1 day cadence – 19 mag depth

- **no filter**: effectively g+r bands
- 1 visit
 - **3 sec exposure**: [0.5 sec exposure] x 6
 - **~18 mag** $\Leftrightarrow$ **18.7 mag**
 - 2x3 or 2x2 dithering to fill the gaps
 - ~60 deg² (partially vignetted by ~30%)
- time interval for the same field: **2 hours**
- survey area (per 2 hours): **~10,000 deg² (EL>30 deg)**
 $\Leftrightarrow$ 5,000 deg²
- 3–5 times visits per night
 - ~19 mag for daily stacked data
- weather factor: usable (half), photometric (30%)

Tomo-e Gozen + KOOLS/IFU SN Survey

- alert system: observatory management (Ohsawa, Morokuma)
- “really interesting” (Maeda)
- shock breakout (Suzuki)
 - multi-band imaging + (1-epoch) spectroscopy
- WD TDE, Ultra-Long GRB (Ioka)
 - very rare
- Kanata (Yamanaka)
 - <5 days after explosion
 - young SNe in known nearby galaxies
 - NIR, world-wide facilities
- SNe Ia (Jiang)
 - <3 days after explosion
 - go deeper (a factor of 2?), 5000 deg²
- CSM around SNe Ia (Nagao)
 - wide & shallow, <5 days after explosion
 - NIR/opt follow-up, polarization?

Observations for SN studies

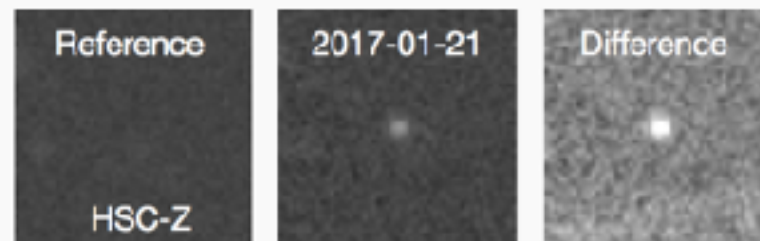
- ❑ Discovery: Kiso/Tomo-e Gozen
- ❑ “quick” Spectroscopy: Kyoto 3.8-m/
KOOLS-IFU
- ❑ photometry (incl. NIR), spectroscopy
monitoring: Kanata/HONIR, KISS
collaborators?, “post” OISTER??
- ❑ photometry: MITSuME???
- ❑ late phase photometry, spectroscopy:
Subaru?, TAO?

How to Share Candidates, Data, ...

HSC transient server List Object Account Logout

18mrq

Transient ID: 23368 Variable_id: 758213
Number of detections: 8 (NY's selection, paramcand)



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tominaga(2017-02-13) tominaga(2017-02-13) tominaga(2017-02-13) suzuki(2017-tominaga(2017-02-13) tominaga(2017-02-13) tominaga(2017-02-13) suzuki(2017-01-24) moriya(2017-tominaga(2017-02-13) 02-06)

Ra, Dec (Decimal)	Ra, Dec	tract	patch	x,y
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Host Ra, Dec (Decimal)	Extend	Spec-z	Type_COSMOS	Distance	Photo-z	Cosmos id	Host id
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Image links	hscMap	SDSS	Finding Chart
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fits files	9813 0,5	9813 1,5	9813 2,5
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“no-human” alerts for bright candidates