HSC z~6/7 quasar survey

- **Target fields**
  - Wide: 1400sqdeg, VIKING(J_{AB}<22.1)+UKIDSS(<21.0)
  - Deep: 27sqdeg (UKIDSS-DXS 16sqdeg)
- **selection**
  - z~6: (i-z) vs.(z-y)
  - z~7: (z-y) vs.(y-J)
- **Expected numbers**
  - z~6: W=280($m_{1450(1+z)}$<24), D=50($m_{1450(1+z)}$<25)
  - z~7: W=50($m_{1450(1+z)}$<23.4), D=3($m_{1450(1+z)}$<25.3)
- **Science cases**
  - QLF (SMBH, photon budget) → z=6, z=7, faint QSOs
  - Constraint on reionization → z=6, z=7
  - IGM opacity mapping → z=6, space density
  - metallicity evolution (5<z<7) → z=7(6)
  - Protocluster around QSOs → z=6(7)

A/Is

- How to proceed follow-up spectroscopy ?
  - Subaru, Gemini, Keck, VLT, …
- color selection: 1color or 2color or photo-z or probabilistic selection ?
- How to compete with on-going z=7 surveys ?
  - UKIDSS/LAS survey: 1QSO/4000sqdeg, follow-up in i&Y
  - VISTA/VIKING 1mag deeper with 2QSOs?/180sqdeg no deep z-band, follow-up in i'
- Deep follow-up imaging strategy ?
- Any specific science cases w/dwarf stars (~20,000/2,000 L/T dwarfs at z<24, 1000sqdeg)?
- First year science ?