Preliminary SEDs of Type I AGNs of COSMOS Survey
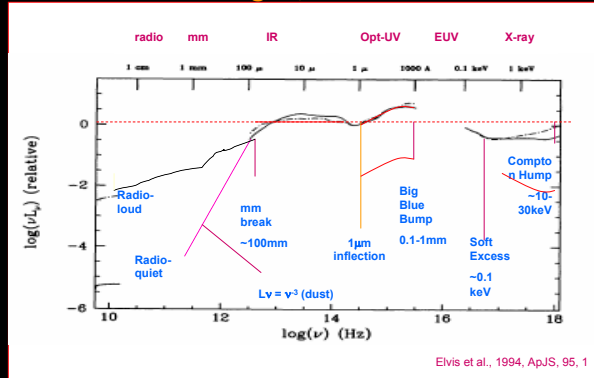
Heng Hao (CfA), Martin Elvis (CfA), David English(CfA),Jon Trump(UAZ), Marcella Brusa(MPE), Vincenzo Mainieri (MPE), Peter Capak (Caltech), Mara Salvato, Suvi Gezari,,Nick Scoville (Caltech), Dave Schiminovich(Columbia U.), Chris Impey (UAZ), Pat McCarthy (Carnegie), John Huchra (CfA)

Pre-COSMOS SED Status

- Most studies use only mean SED & bolometric corrections.
- ✓Yet SED spread is significant:~1dex in UV, FIR
- ✓No theory
- ✓No corrections
- **Small sample:** 29 radio-quiet, 18 radio-loud
- **Low z:** 0.05 - 0.9
- **Low S/N:** in X-ray, UV, FIR
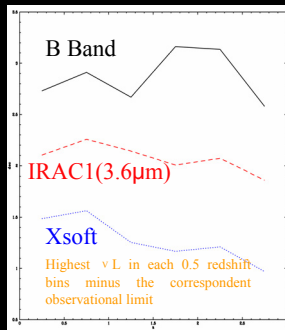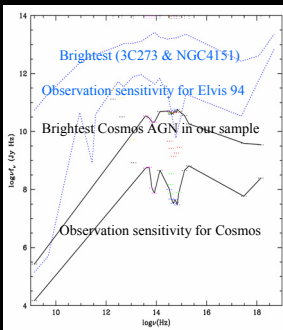- **Biased**

(Elvis et al. 1994, ApJS,95,1)

Quasar 'Spectral Energy Distributions' (SEDs):
From 29 @ z<1, to 1000 to z~2

Elvis et al., 1994, ApJS, 95, 1

COSMOS: Summary

- Large samples:
COSMOS: ~ 1000 quasars
Brusa et al., Trump et al., Mainieri et al. 2006
- Low bias: *ugriz* selected
- High S/N
- Large z range: ~<3
- Full X-ray/UV/opt/NIR/FIR/mm/Radio coverage
- Excellent opt-IR SEDs
- Magellan/VLT spectra

This poster gives some examples of preliminary SEDs of Type I AGNs of COSMOS survey.

- Sample description: first look of the about 70 Type I AGNs
Magellan's XMM VLA selection
z range: 0.3458~2.804 iauto range: 18.344~24.755
- Still to come: second season IMACs AGN,21 band Subaru

"Spectral Window Function"

- Define a "spectral window function" based on observational sensitivity limits and the largest observational ν value.
- The first figure on the left shows the spectral window function of the past (blue dotted) and current cosmos survey. (The past window function is largely broadened by the extremely bright 3C273)
- The second figure on the left shows the window function width (logvL) at three different band in redshift bins.

High Lum.

Low Lum.

High S/N

Low S/N

X loud

Hot dust

High z

X quiet

No dust

Low z