

近赤外線観測装置のサマリ

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Comparison: Imaging

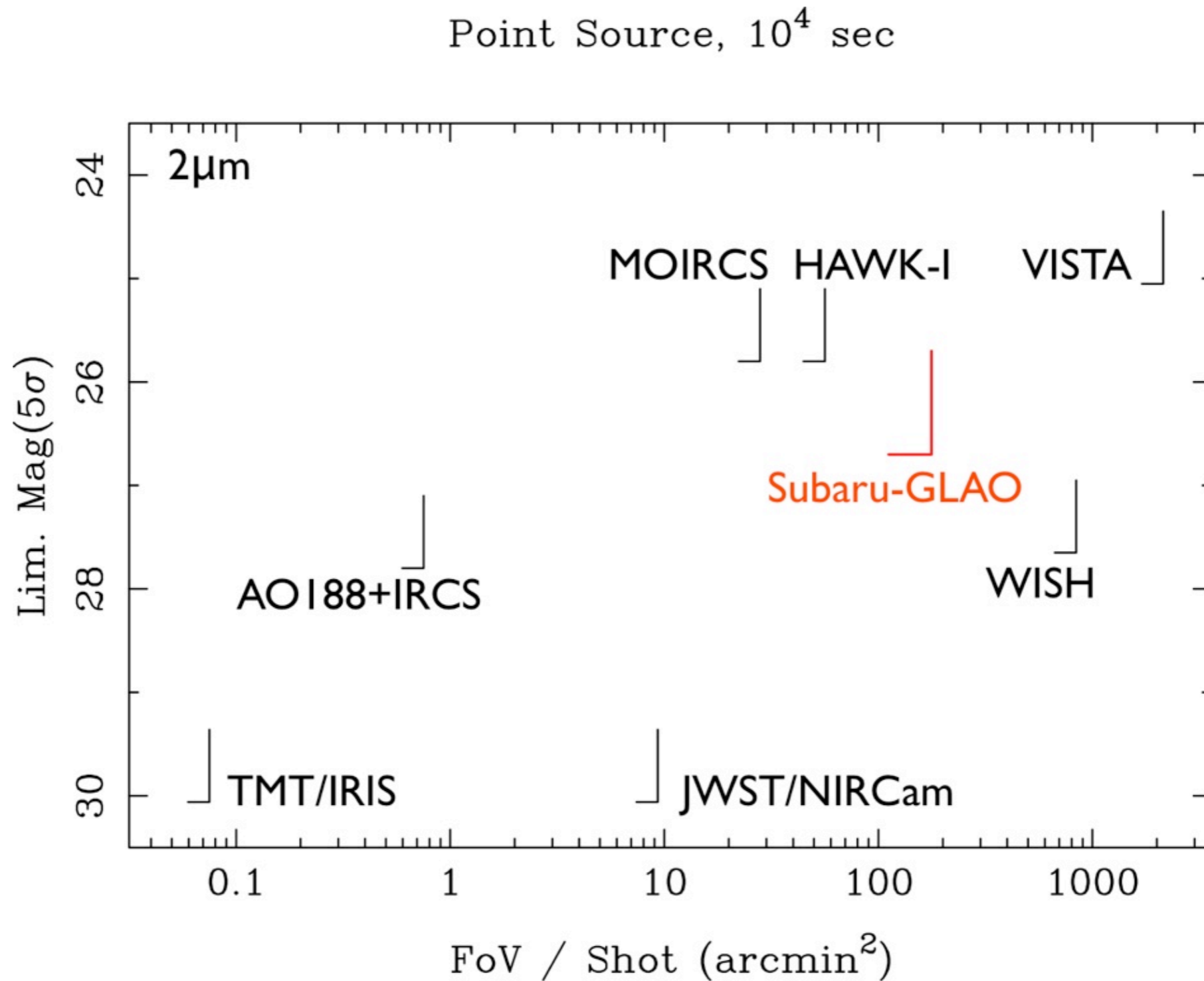
	Subaru MOIRCS	Subaru GLAO	TMT IRIS	HST WFC3/IR	JWST NIRCам
望遠鏡口径	8.2m	8.2m	30m	2.4m	6.5m
波長域	0.9-2.5 μ m	0.9-2.5 μ m	0.84-2.4 μ m	0.9-1.7 μ m	0.9-2.3 μ m / 2.4-5.0 μ m
空間 サンプリング	0.117"/pix 0.4"@2 μ m	~0.1"/pix 0.2"@2 μ m	4 mas 10mas@1 μ m	0.13"/pix FWHM~ 0.25"	32 mas / 64 mas
視野	28 \square '	~120 \square '	0.075 \square '	4.65 \square '	9.7 \square '

Comparison: Spectroscopy

	Subaru MOIRCS	Subaru GLAO	TMT IRIS	HST WFC3/IR	JWST NIRSpec
波長域	0.9-2.5 μ m	0.9-2.5 μ m	0.84-2.4 μ m	0.9-1.7 μ m	0.6-5 μ m
空間 サンプリング	0.117"/pix 0.4"@2 μ m	~0.1"/pix 0.2"@2 μ m	4 - 50 mas	0.13"/pix FWHM~ 0.25"	0.2"x0.45"
視野	~25 \square '	~120 \square '	0.2-10 \square "	4.65 \square '	12.24 \square '(MSA) 3"x3"(IFS)
分光機能	Single-Slit MOS IFS	Multi-IFS	IFS	Slitless	Slits Microshutters IFS
波長分解能	600-3000	-3000?	4000-10000	TBW	100, 1000, 2700

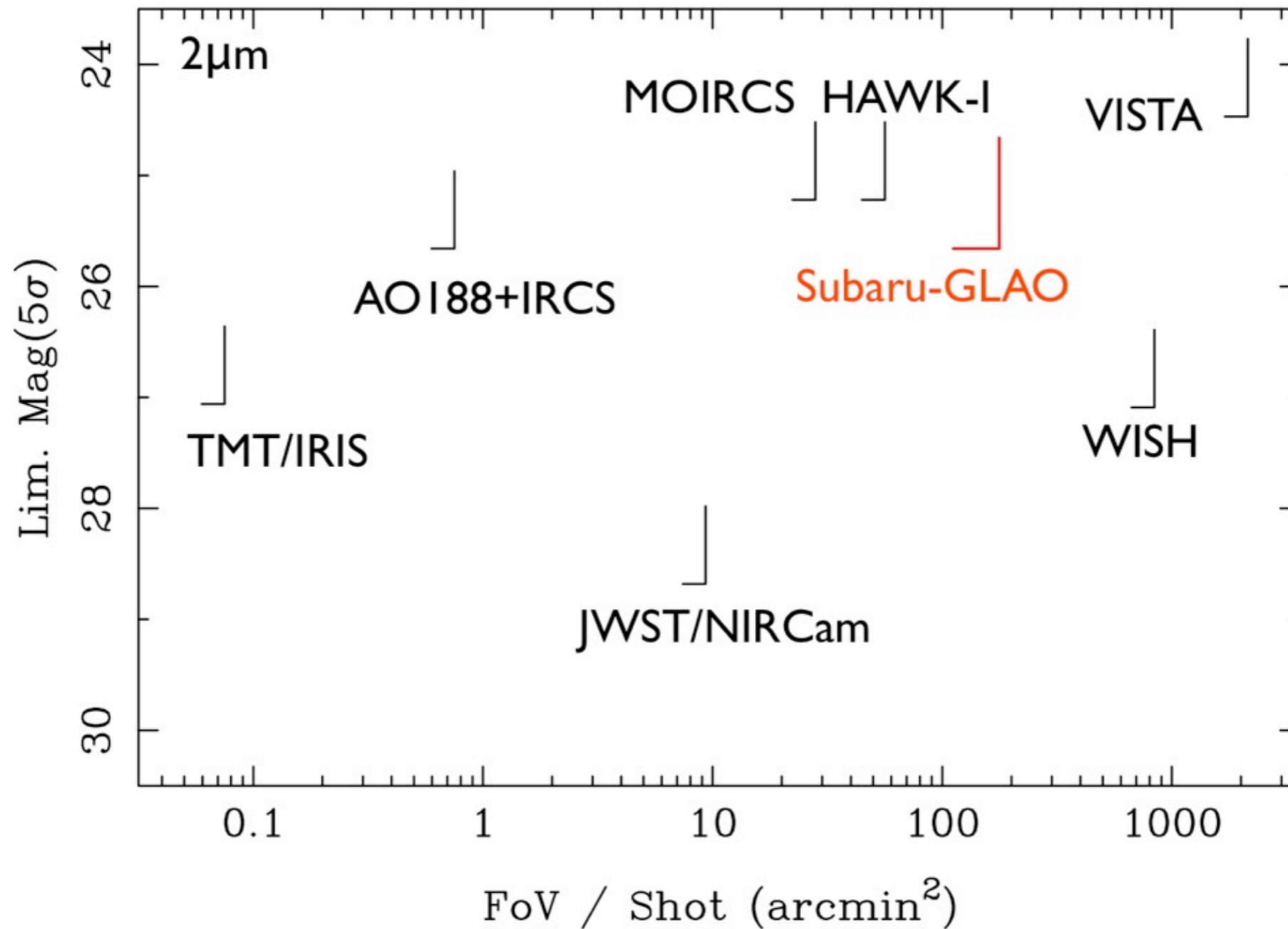
Broad-band Imaging

Expected Sensitivity in Imaging: Point Sources



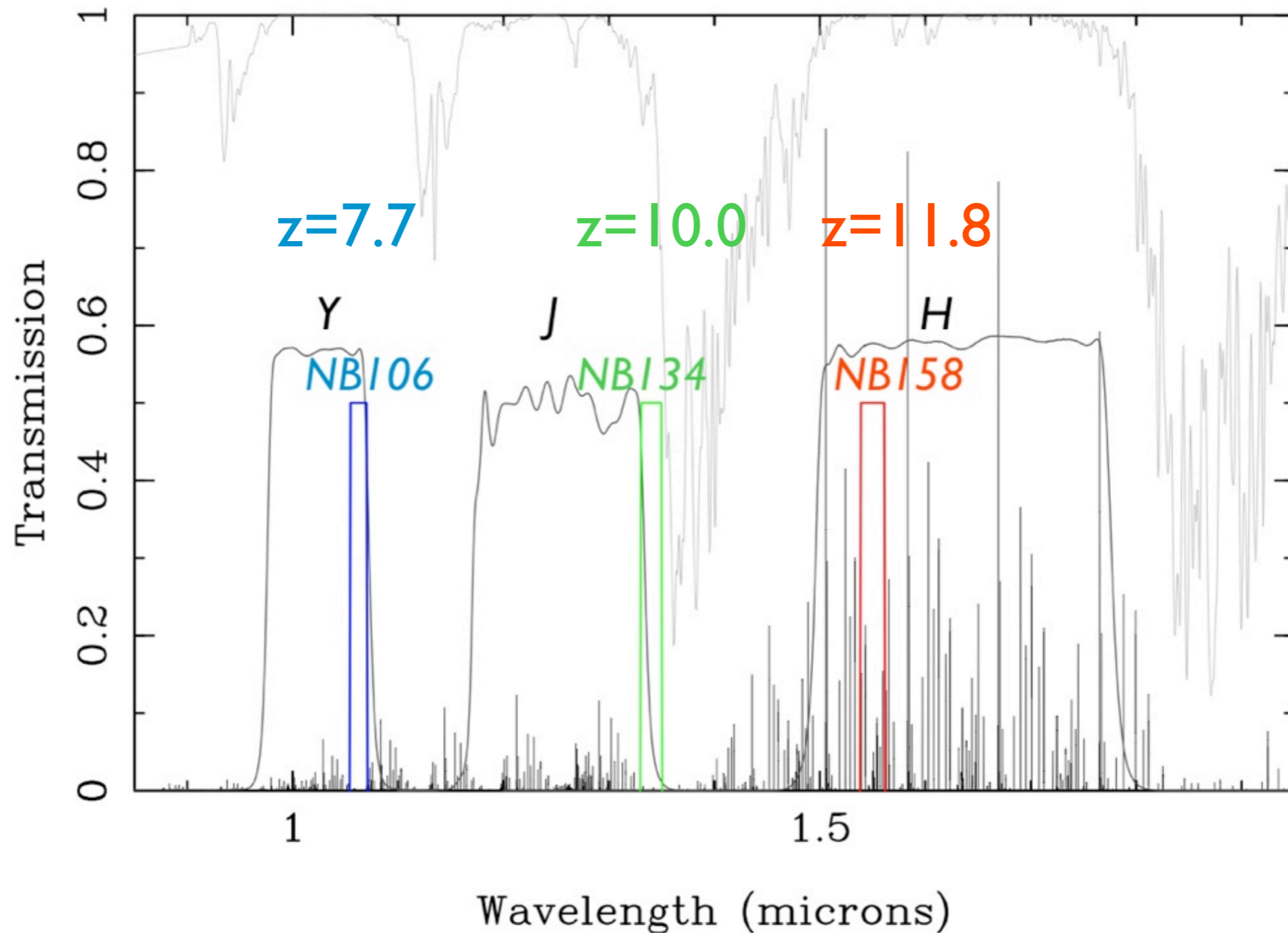
Expected Sensitivity in Imaging: Extended Sources

0.5'' Extended Source, 10^4 sec

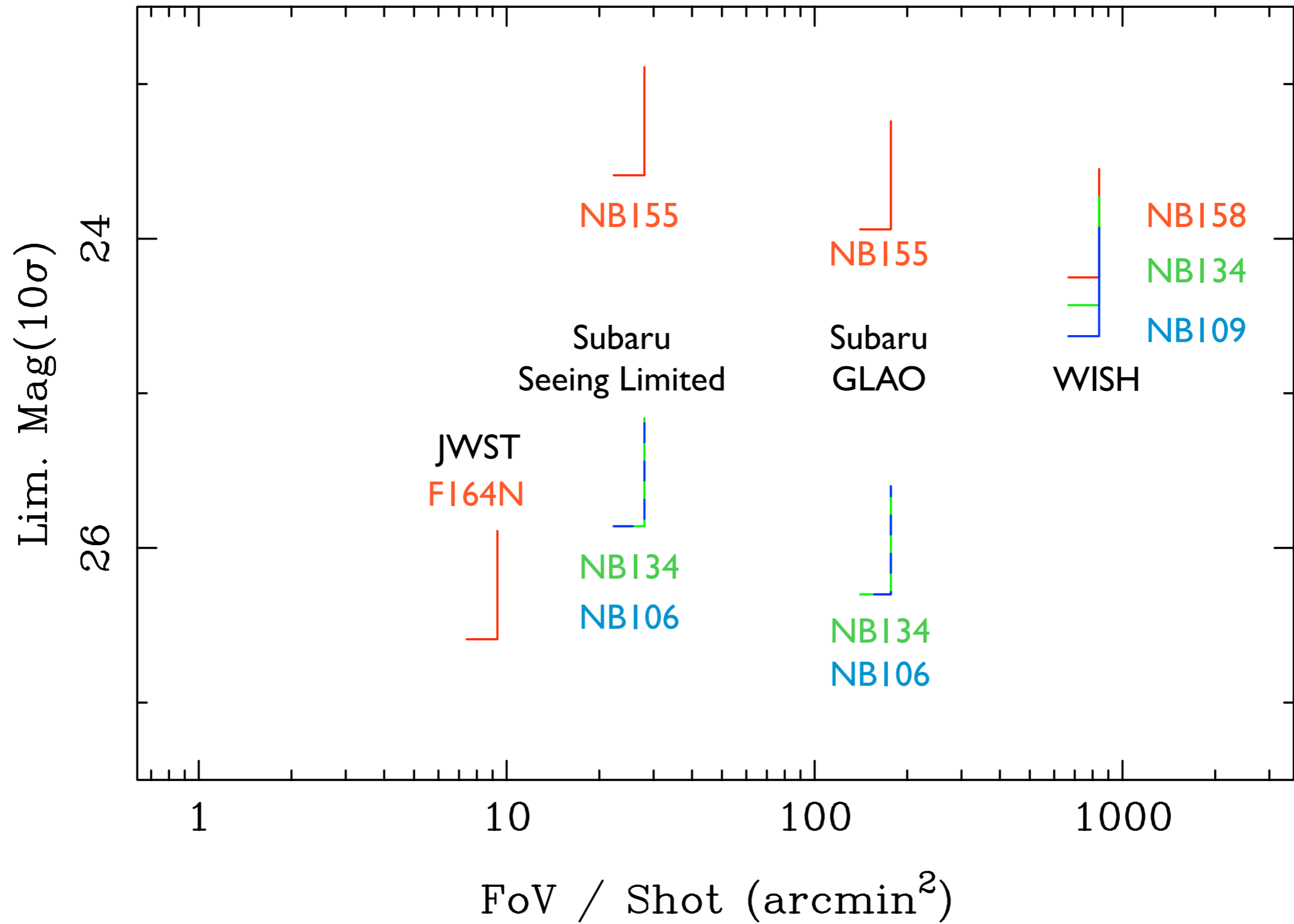


Narrow-band Imaging

NBF Proposal for Subaru GLAO (Tentative)



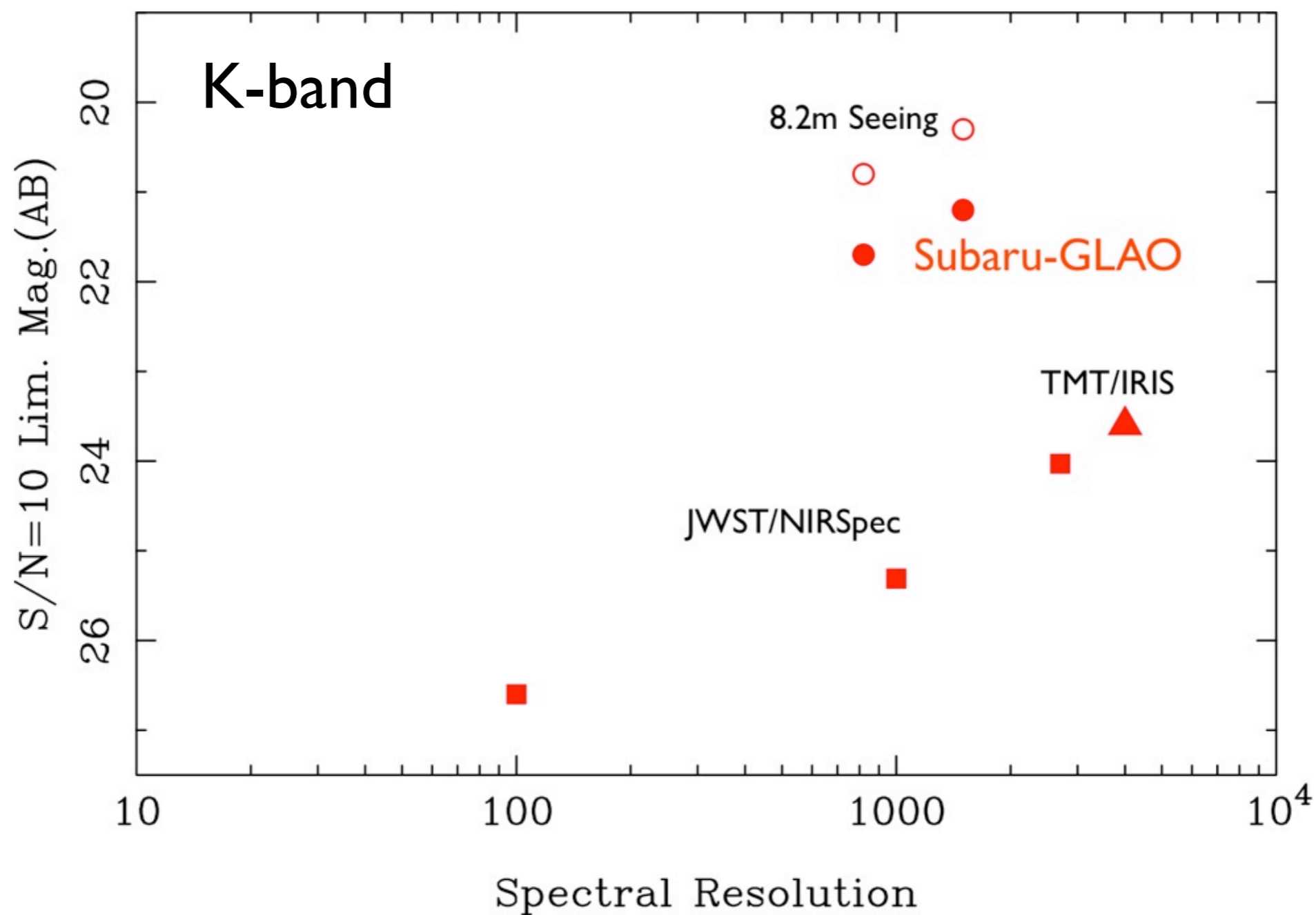
NBF, Point Source, 10hrs



Spectroscopy

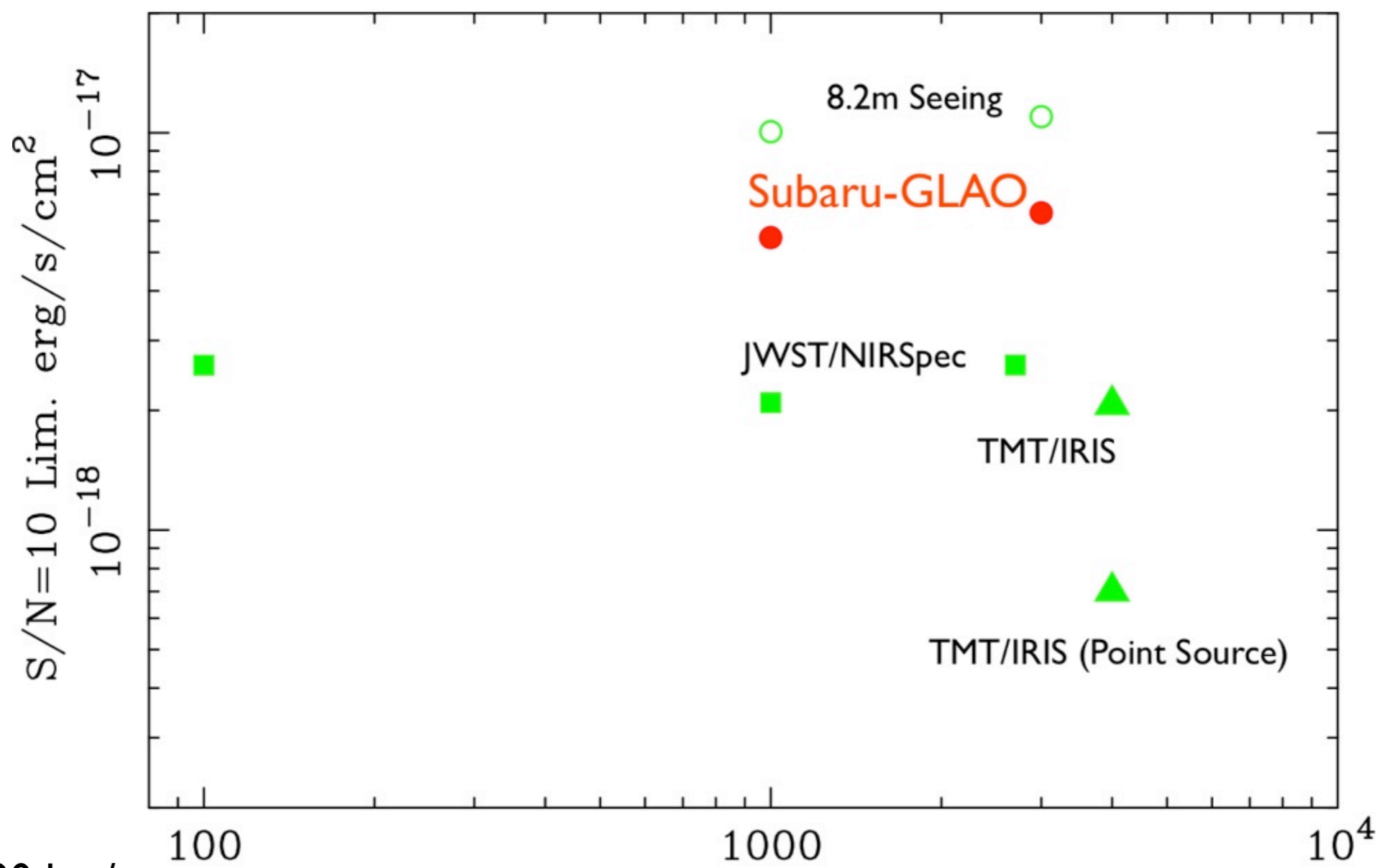
1 hr, S/N=10 Point Source **Continuum** Sensitivity

Continuum Limits for 1 hour



1 hr, S/N=10 Line Sensitivity for $H\alpha$ at $z=2.3$ ($2.16\mu\text{m}$)

$H\alpha$ at $z=2.3$



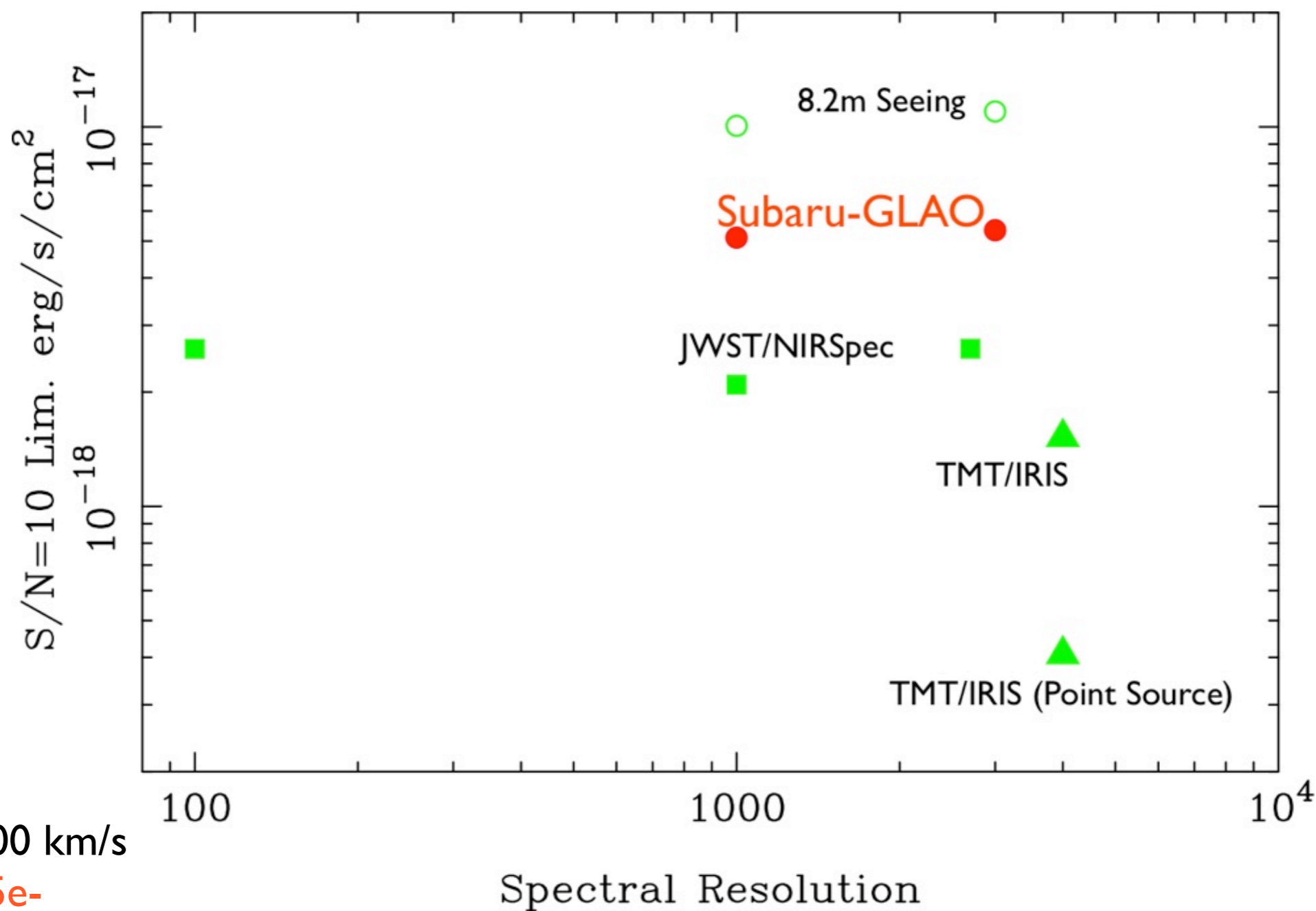
0.25" size, 400 km/s

read noise=10e- (NIRSpec: 5e-)

* Between OH lines*

1 hr, S/N=10 Line Sensitivity for H α at z=2.3 (2.16 μ m)

H α at z=2.3

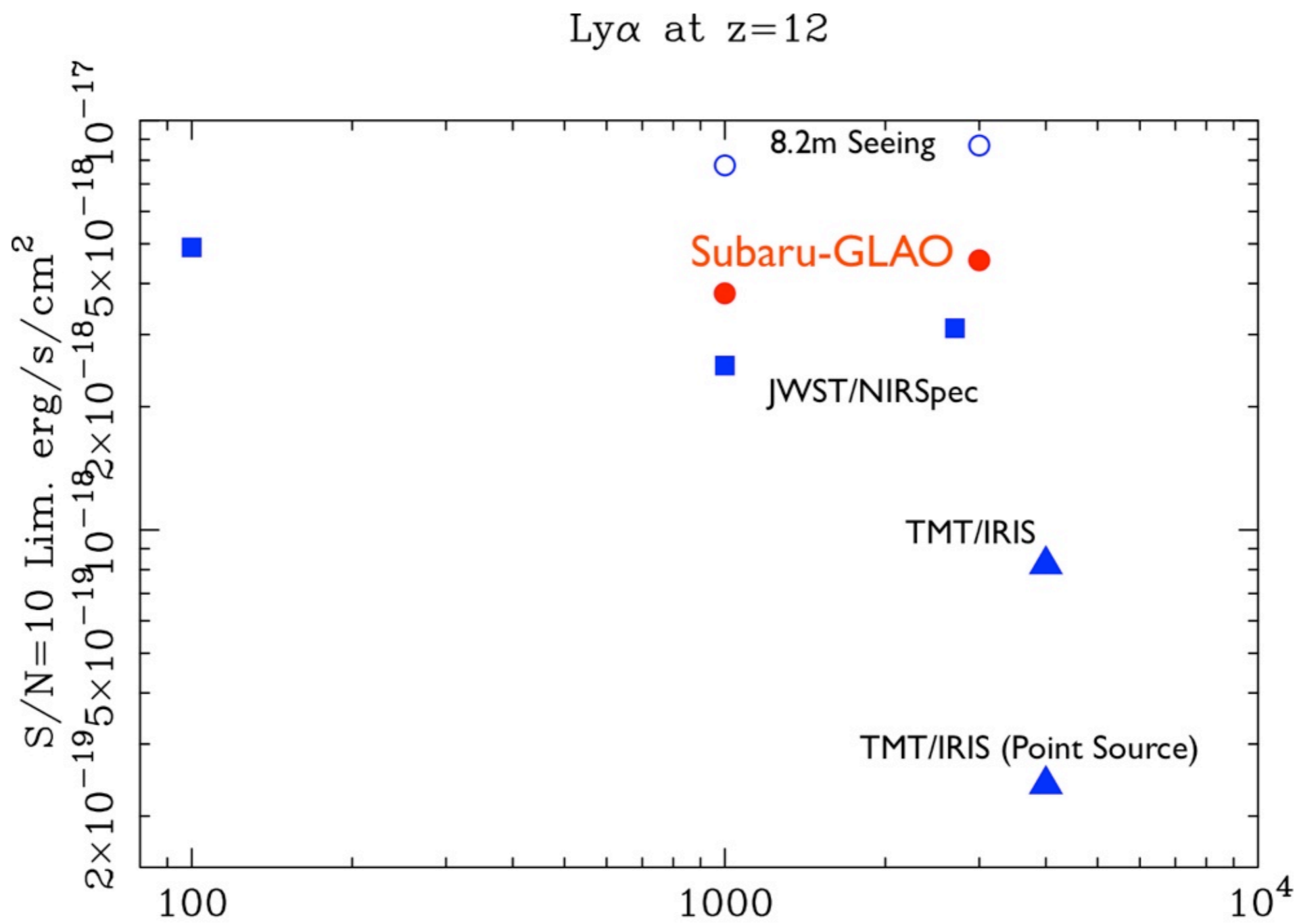


0.25" size, 400 km/s

read noise=5e-

* Between OH lines*

1 hr, S/N=10 Line Sensitivity for Ly α at z=12 (1.58 μ m)

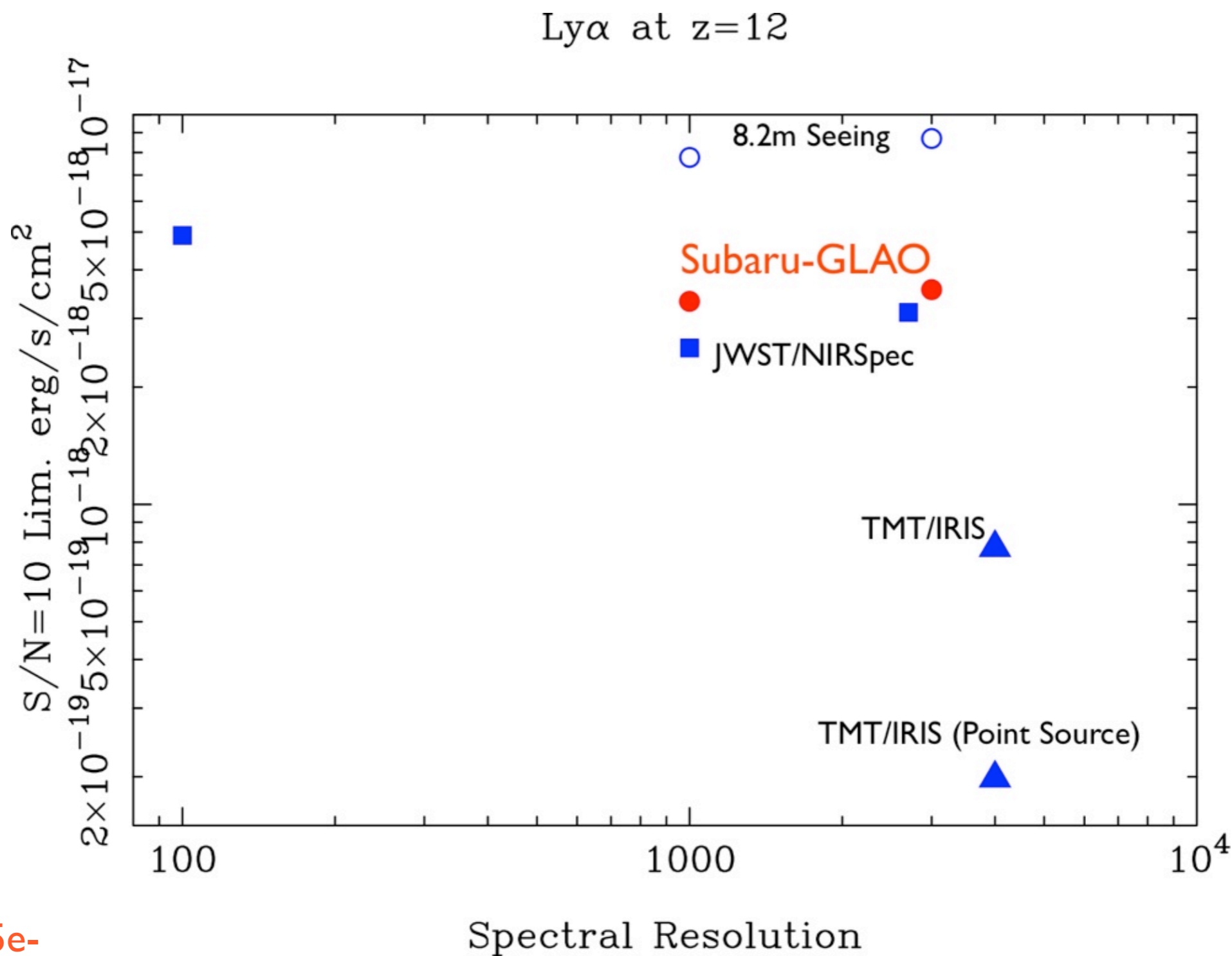


0.2" size

read noise=10e- (NIRSpec: 5e-)

* Between OH lines*

1 hr, S/N=10 Line Sensitivity for Ly α at z=12 (1.58 μ m)



0.2" size

read noise=5e-

* Between OH lines*