FIRSpex – proposal
Suggested Sensitivities

- Based on Tsys from BE presentation at 300K and 100K
- Using 85 cm aperture now
- Using 4 second integration
- Unresolved Line Sensitivity (ULS) Assumes 1 MHz resolution – will scale as rt(BW) for resolved lines – in fact only need modest resolution as galaxy rotation curves ~10's-100's km/s in width.

Species	Frequency (GHz)	Wavelength (μm)	Beam FWHM (arcmin)	50 km/s in MHz	Tsys SSB (K) @100 K	ULS (W m^{-2}) @100 K	Tsys SSB (K) @300 K	ULS (W m^{-2}) @300 K
CO (6-5)	691.0	433.9	2.1	115	800	4.9E-17	1500	9.1E-17
CI[609]	809.0	370.6	1.8	135	950	5.8E-17	2000	1.2E-16
NII[205]	1450.0	206.8	1.0	242	3000	1.8E-16	4500	2.7E-16
CII[158]	1900.0	157.8	0.8	317	5000	3.0E-16	7500	4.6E-16