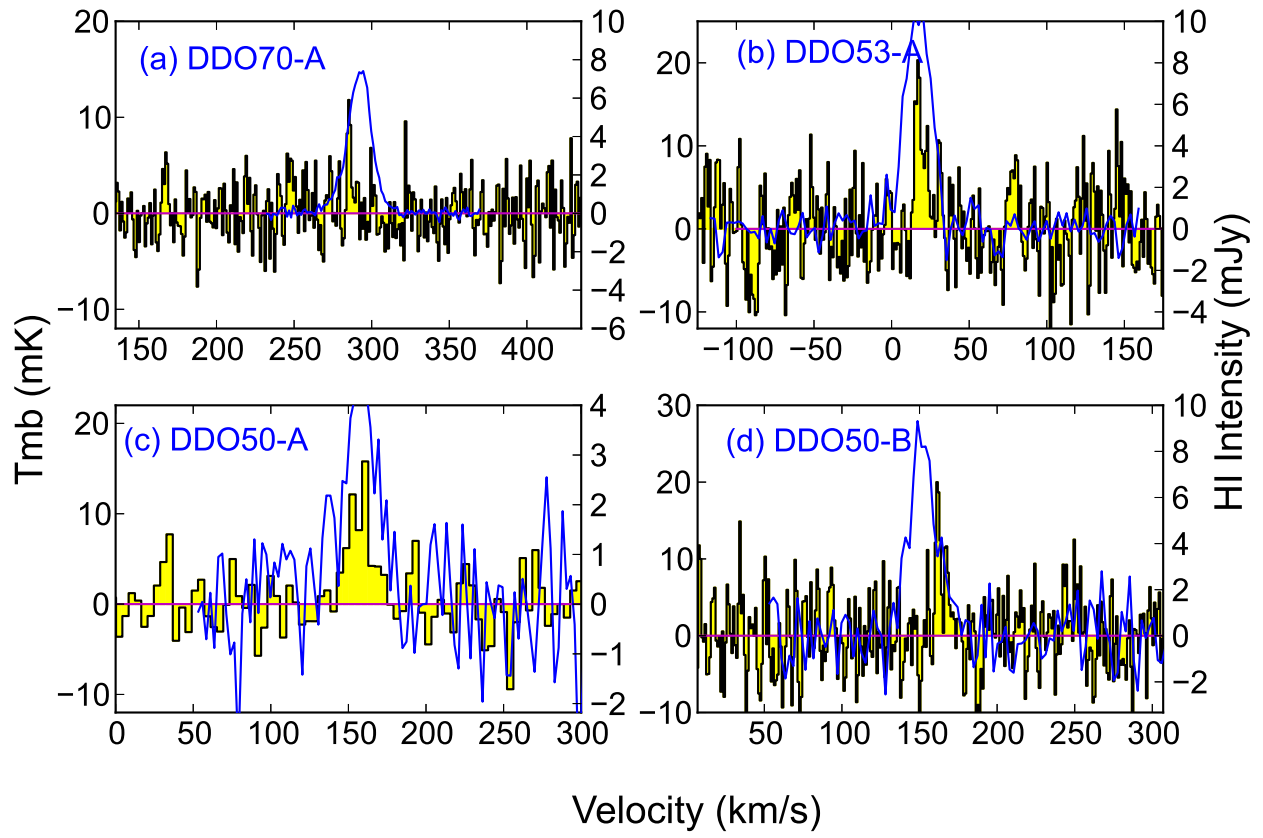
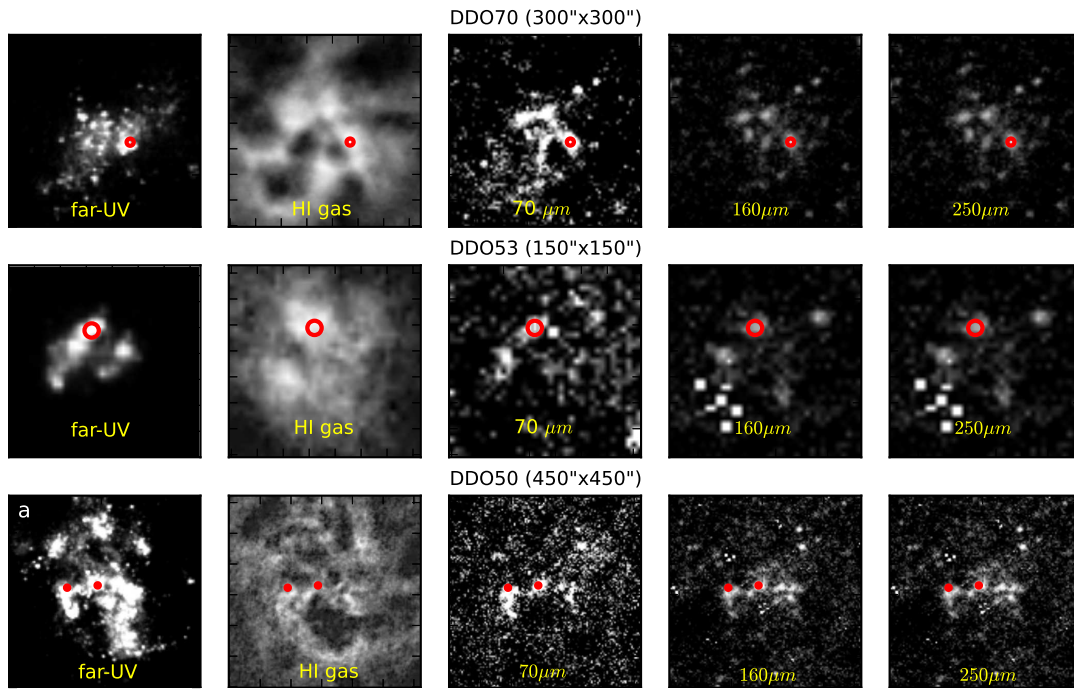
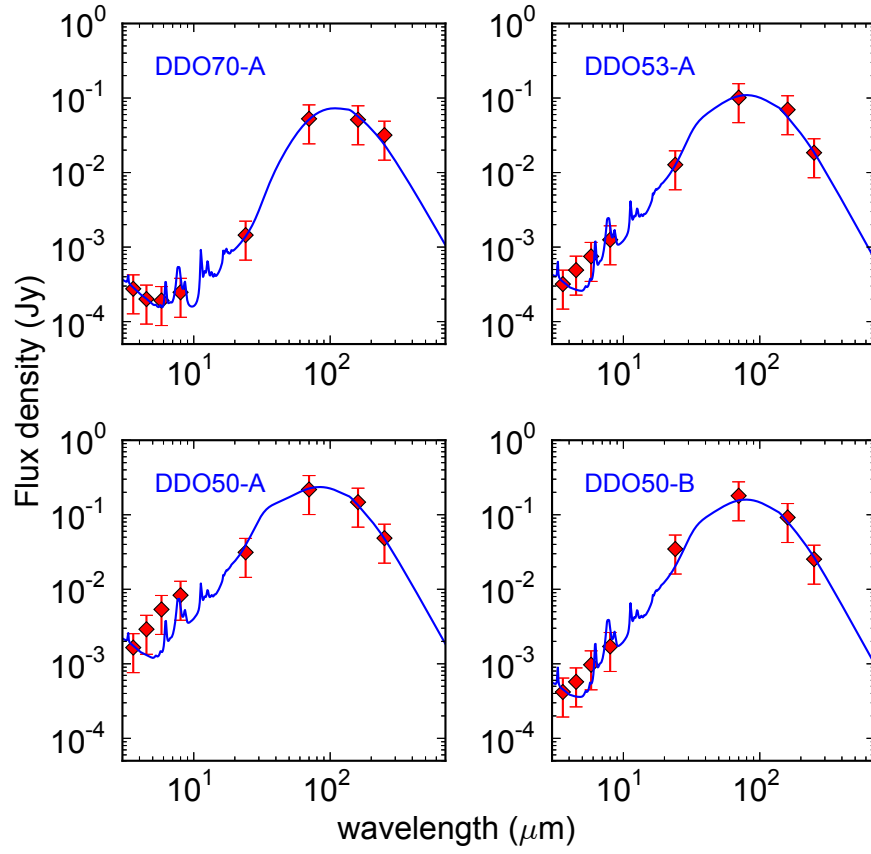




Supplementary Figure 1 | The CO $J=2-1$ spectra (yellow area) overlaid with the HI spectra (blue lines). The whole velocity range is ± 150 km/s.



Supplementary Figure 2 | The multi-wavelength image of galaxies: from left to right, the far-UV, HI atomic gas, 70 μm , 160 μm and 250 μm images. The red circle in each panel indicates the IRAM beam size.



Supplementary Figure 3 | The infrared SED of each IRAM-30m pointing region: the symbols denote the observed photometry with the error bars defined as the standard deviation. The solid line is the best-fitted dust model.

Supplementary Table 1 The infrared photometry and SED fittings

name	f(3.6 μ m) (mJy)	f(4.5 μ m) (mJy)	f(5.6 μ m) (mJy)	f(8.0 μ m) (mJy)	f(24 μ m) (mJy)	f(70 μ m) (mJy)	f(160 μ m) (mJy)	f(250 μ m) (mJy)	χ^2 /d.o.f.	M_{dust} ($M_{\odot}$)
DDO70/A	0.28 $\pm$ 0.138	0.20 $\pm$ 0.100	0.19 $\pm$ 0.096	0.25 $\pm$ 0.12	1.45 $\pm$ 0.72	52 $\pm$ 26	51 $\pm$ 25	31 $\pm$ 15	0.37	(1.9 $^{+1.5}_{-0.9}$)x10 ²
DDO53/A	0.32 $\pm$ 0.159	0.49 $\pm$ 0.245	0.75 $\pm$ 0.375	1.25 $\pm$ 0.63	12.72 $\pm$ 6.36	101 $\pm$ 50	69 $\pm$ 34	18 $\pm$ 9	0.19	(6.1 $^{+1.6}_{-1.2}$)x10 ²
DDO50/A	1.65 $\pm$ 0.825	2.91 $\pm$ 1.453	5.37 $\pm$ 2.683	8.32 $\pm$ 4.16	31.29 $\pm$ 15.65	218 $\pm$ 109	147 $\pm$ 73	48 $\pm$ 24	1.12	(1.5 $^{+0.5}_{-0.3}$)x10 ³
DDO50/B	0.42 $\pm$ 0.209	0.57 $\pm$ 0.286	0.97 $\pm$ 0.485	1.71 $\pm$ 0.85	34.70 $\pm$ 17.35	179 $\pm$ 89	91 $\pm$ 45	25 $\pm$ 12	1.24	(7.1 $^{+1.2}_{-0.9}$)x10 ²

The photometric error is dominated by the systematic uncertainty that is set to be 50% of the flux as detailed in the text.