

# High $z$ Sources detected in CO - October 2003

Source Name	$z$	Telescopes line	CO Line [Jy km s <sup>-1</sup> ]	1.2 mm Cont. [mJy]	Ref.	
⇒ IRAS 10214+4724	2.28	12-m; 30-m	3→2	4.1±0.9	9.6±1.4	[1,2]
⇒ Cloverleaf	2.56	PdB; 30-m	3→2	9.9±0.6	18±2	[3]
⇒ BR 1202-0725	4.69	PdB; NRO	5→4	2.4±0.3	12.6±2.3	[4,5]
⇒ BRI 1335-0417	4.41	PdB	5→4	2.8±0.3	10.3±1.0	[6]
53W002	2.39	OVRO; PdB	3→2	1.20±0.15	1.7±0.4	[7,8]
MG 0414+0534	2.64	PdB	3→2	2.6±0.4	40±2 <sup>†</sup>	[9]
SMM J02399-0136	2.80	OVRO; PdB	3→2	3.1±0.4	7.0±1.2	[10,11]
⇒ APM 08279+5255	3.91	PdB; 30-m	4→3	3.7±0.5	17.0±0.5	[12]
⇒ BRI 0952-0115	4.43	PdB	5→4	0.91±0.11	2.8±0.6	[13]
⇒ Q1230+1627B	2.74	PdB	3→2	0.80±0.26	2.7±0.6	[13]
SMM J14011+0252	2.57	OVRO	3→2	2.4±0.3	≈ 3	[14]
4C60.07	3.79	PdB	4→3	2.50±0.43	4.5±1.2	[15]
6C1909+722	3.53	PdB	4→3	1.62±0.30	< 3	[15]
HR 10	1.44	PdB	5→4	1.35±0.20	4.9±0.8	[16]
MG 0751+2716	3.20	PdB	4→3	5.96±0.45	6.7±1.3	[17]
⇒ PSS 2322+1944	4.12	PdB	4→3	4.21±0.40	9.6±0.5	[18]
B3 J2330+3927	3.09	PdB	4→3	1.3±0.3	4.2±0.6	[19]
TN J0121+1320	3.52	PdB	4→3	1.2±0.4		[20]
⇒ J 1409+5628	2.56	PdB	3→2	3.28±0.36	10.7±0.6	[21]
⇒ J 1148+5251	6.42	VLA & PdB	3→2	0.18±0.04	5± 0.6	[22,23]
SMM J04431+0201	2.51	PdB	3→2	1.4±0.2	1.1±0.3	[24]
SMM J09431+4700	3.34	PdB	4→3	1.1±0.1	2.3±0.4	[24]
SMM J16358+4057	2.38	PdB	3→2	2.3±1.2	2.6±0.2	[24]
cB58	2.73	PdB	3→2	0.37±0.08	1.06±0.35	[25]

References – [1] Brown & van den Bout (1992); [2] Solomon et al. (1992); [3] Barvainis et al. (1994); [4] Omont et al. (1996a); [5] Ohta et al. (1996); [6] Guilloteau et al. (1997); [7] Scoville et al. (1997); [8] Alloin et al. (2000); [9] Barvainis et al. (1998); [10] Frayer et al. 1998; [11] Genzel et al. (2002); [12] Downes et al. (1999); [13] Guilloteau et al. (1999); [14] Frayer et al. (1999); [15] Papadopoulos et al. (2000); Andreani et al. (2000); [17] Barvainis, Alloin & Bremer (2002); [18] Cox et al. (2002); [19] de Breuck et al (2003a); [20] de Breuck et al. (2003b); [21] Beelen et al. (2003); [22] Walter et al. (2003); [23] Bertoldi et al. (2003a, b); [24] Neri et al. (2003); [25] Baker et al. (2003).

Sources in blue are known to be lensed Sources in bold face are quasars <sup>†</sup> Non-thermal emission