

Genuine spectral energy distribution of AGN

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in collaboration with

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Xian, October, 2006

Central parsec of galaxies program at MPIA

Nearest Active Galactic Nuclei studied at the diffraction limit
of ESO/VLT: $\theta < 0.1''$ (1- 20 pc)



→ target selection for interferometry at 10 μ m

$\theta \sim 0.03''$ (~ 0.5 pc)

→ target selection for interferometry at 2 μ m

$\theta \sim 0.01''$ (~ 0.2 pc)

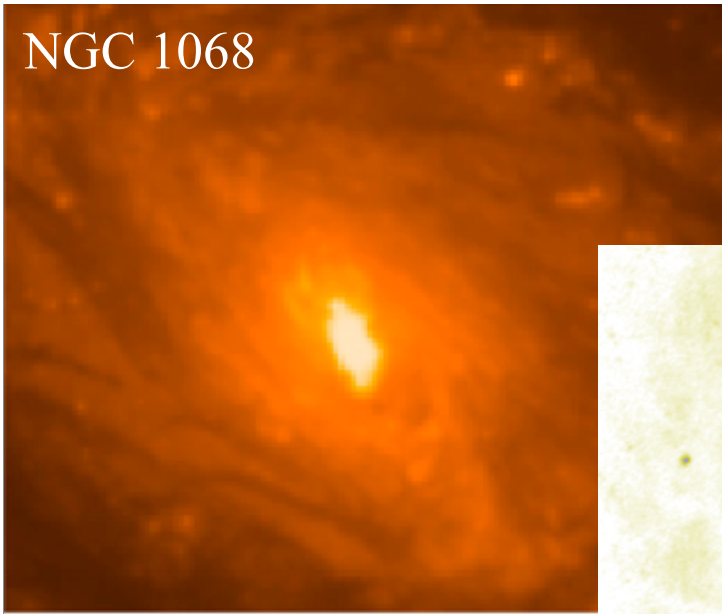
→ ALMA targets, at ~ 300 μ m:

$\theta \sim 0.05''$ (~ 1 pc)

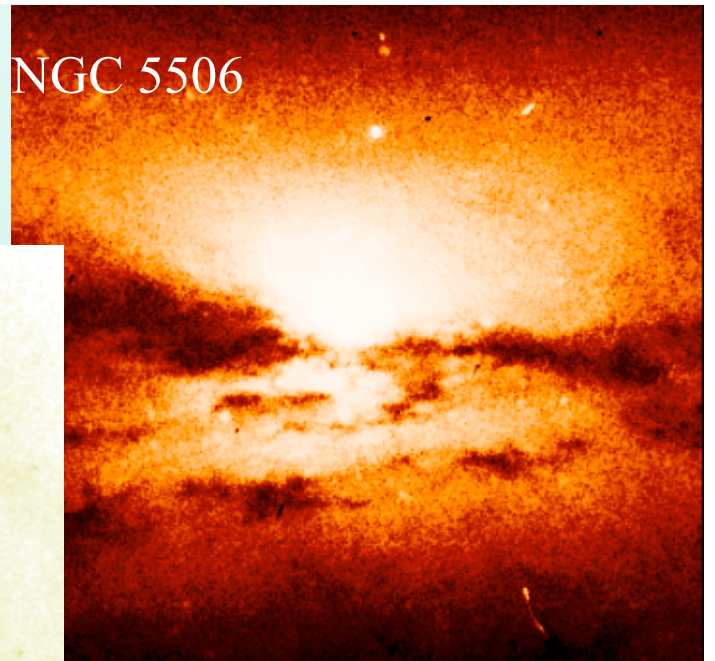
Some of the nearest ...

		1''/pc	N_H	$L(2-10\text{keV})$	Nucleus size 2 μm
RG/S2	CenA	16	10^{23}	$6 \cdot 10^{41}$	<1 pc
S2	Circinus	19	10^{23}	$2 \cdot 10^{41}$	~2 pc
S1	N1097	70	10^{21}	$5 \cdot 10^{40}$	<10 pc
S2	N1068	70	$>10^{23}$	$>10^{44}$	~1x2pc (10 μm)
S1.9	N5506	180	10^{22}	10^{43}	<10 pc
S2	N7582	150	$>10^{23}$	10^{43}	<12 pc
S2	ESO428-014	158			~20 pc
Qso	3C 273	4600		10^{47}	<300 pc

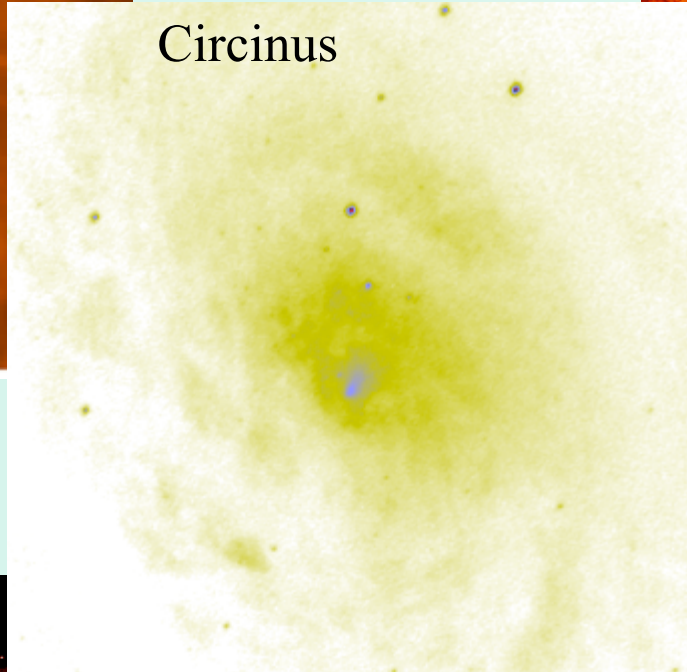
NGC 1068



NGC 5506



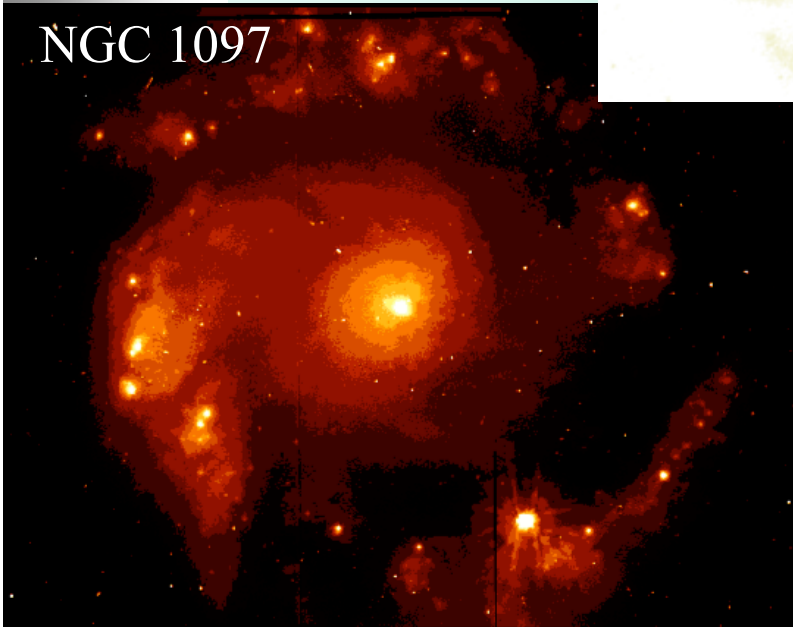
Circinus



NGC 7582



NGC 1097



NGC 5506

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< 10 pc

3.6 kpc

Circinus

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- 2 pc

NGC 1097

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< 10 pc

NGC 1068

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< 4 pc

~300 pc

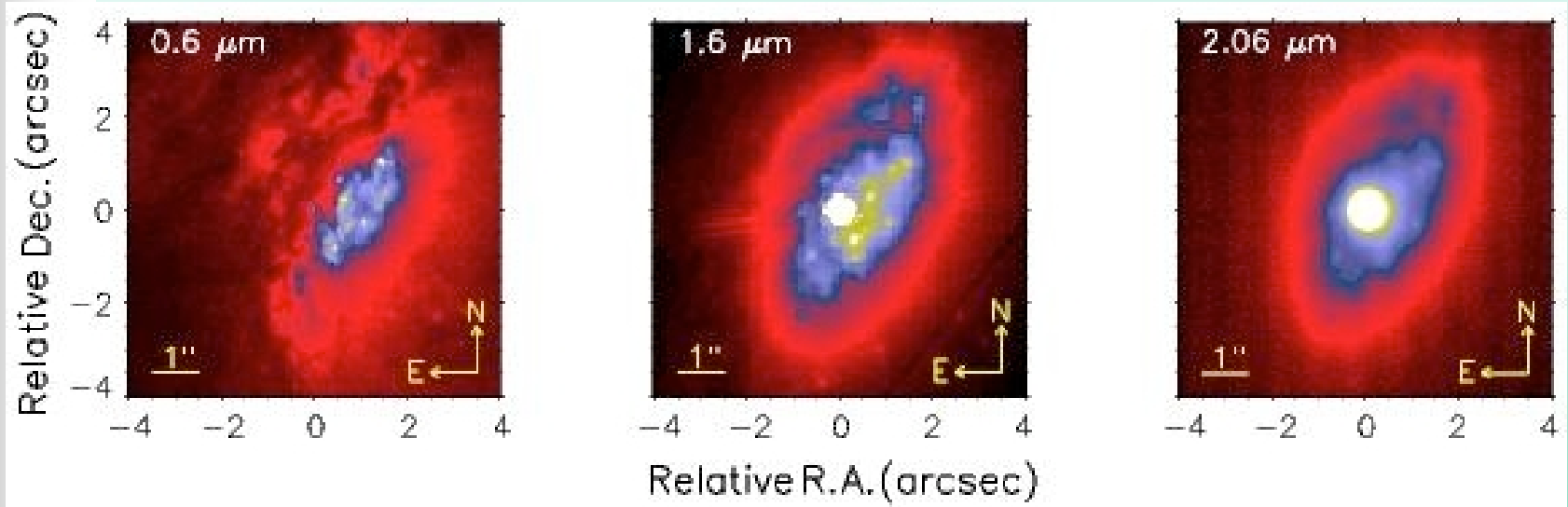
Cen A

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< 1 pc

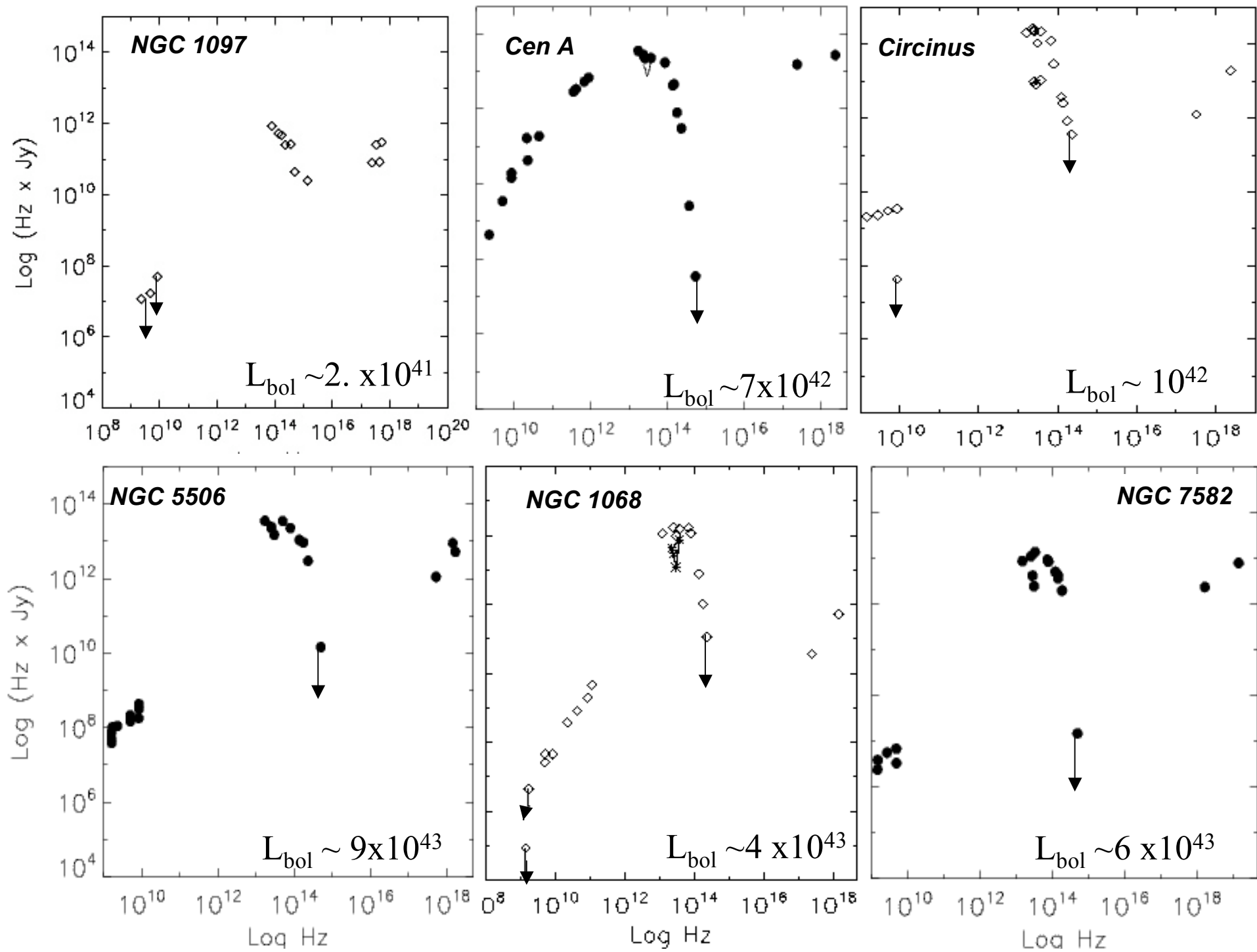
3C 273

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< 300 pc

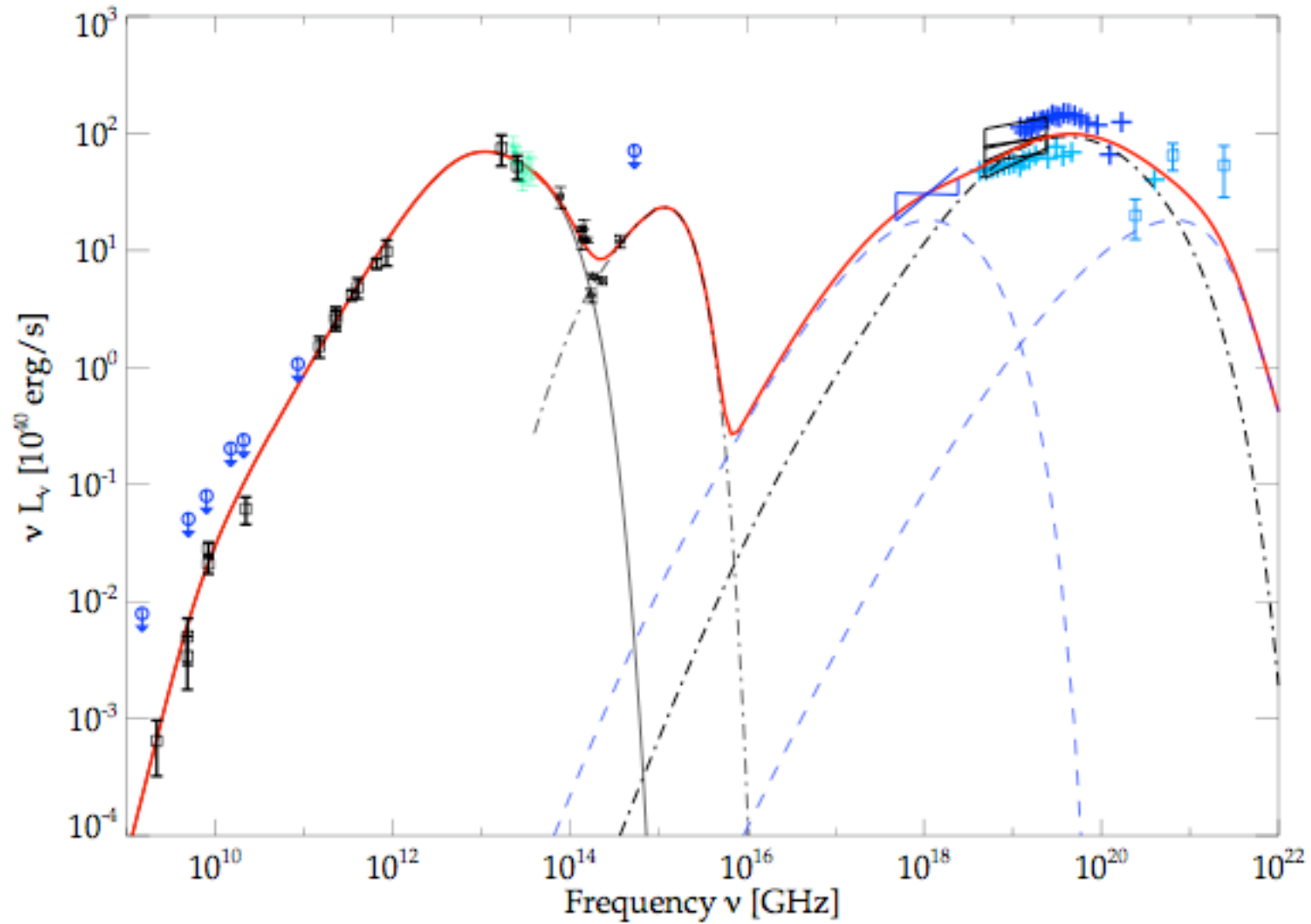
NGC 7582

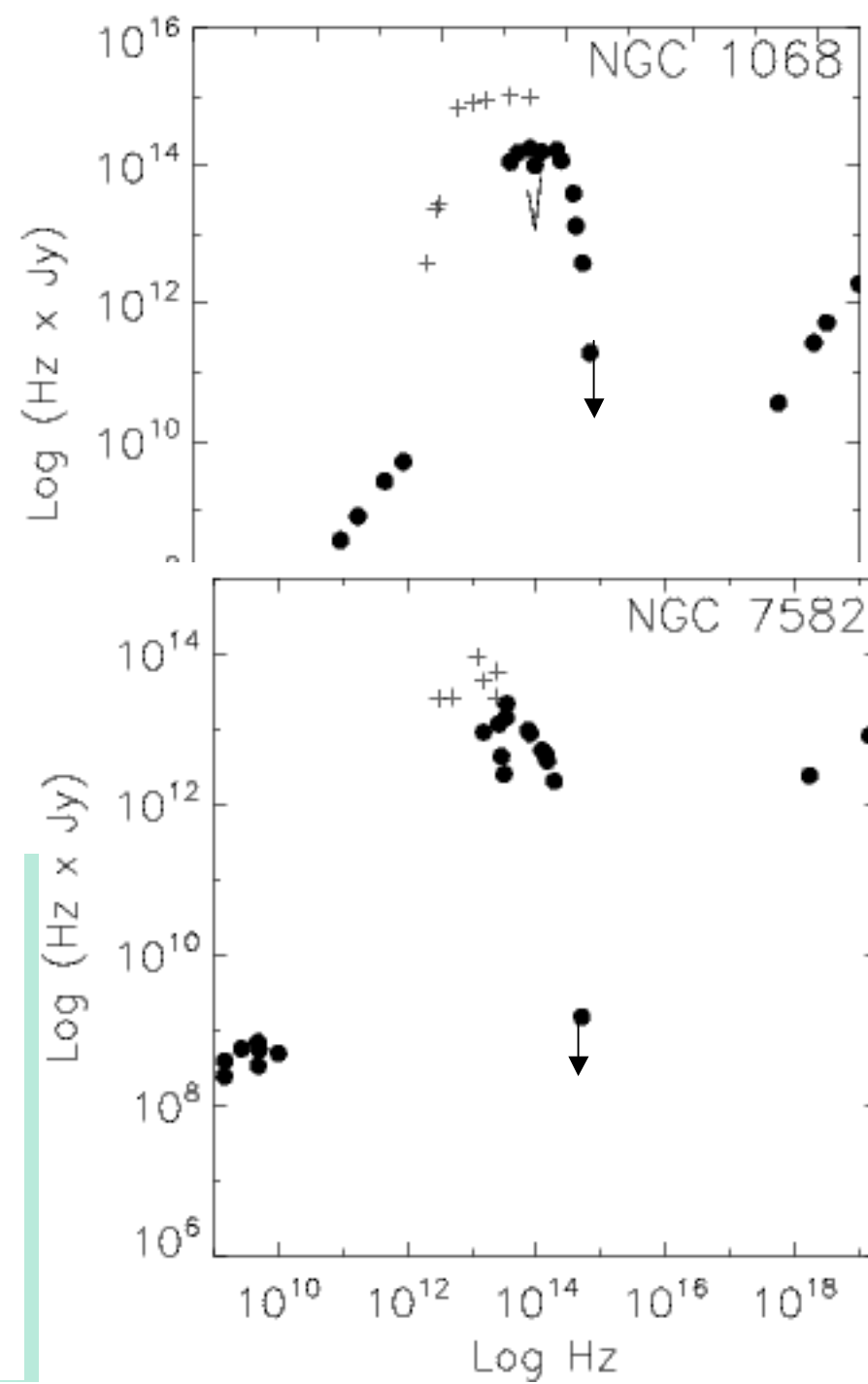
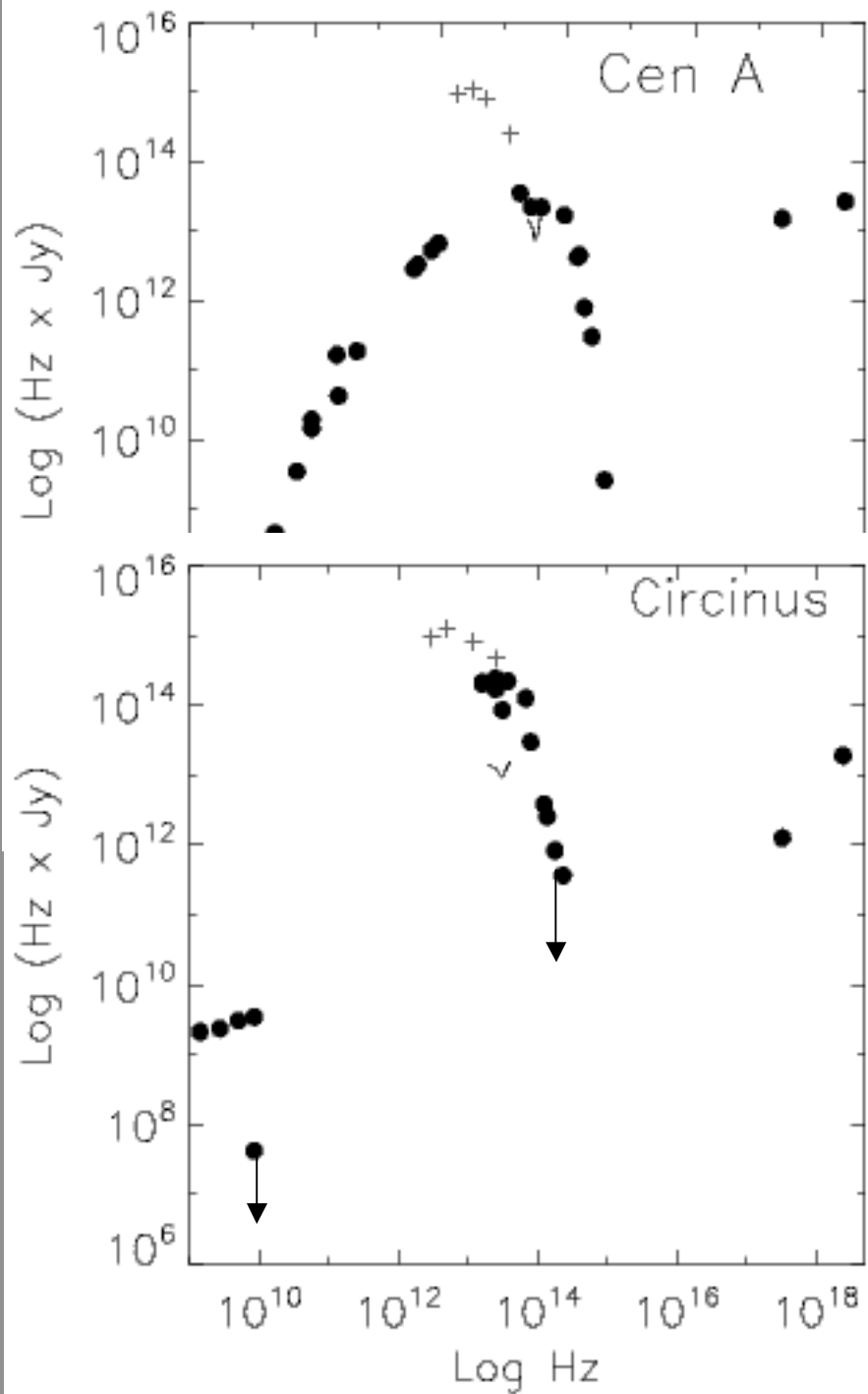


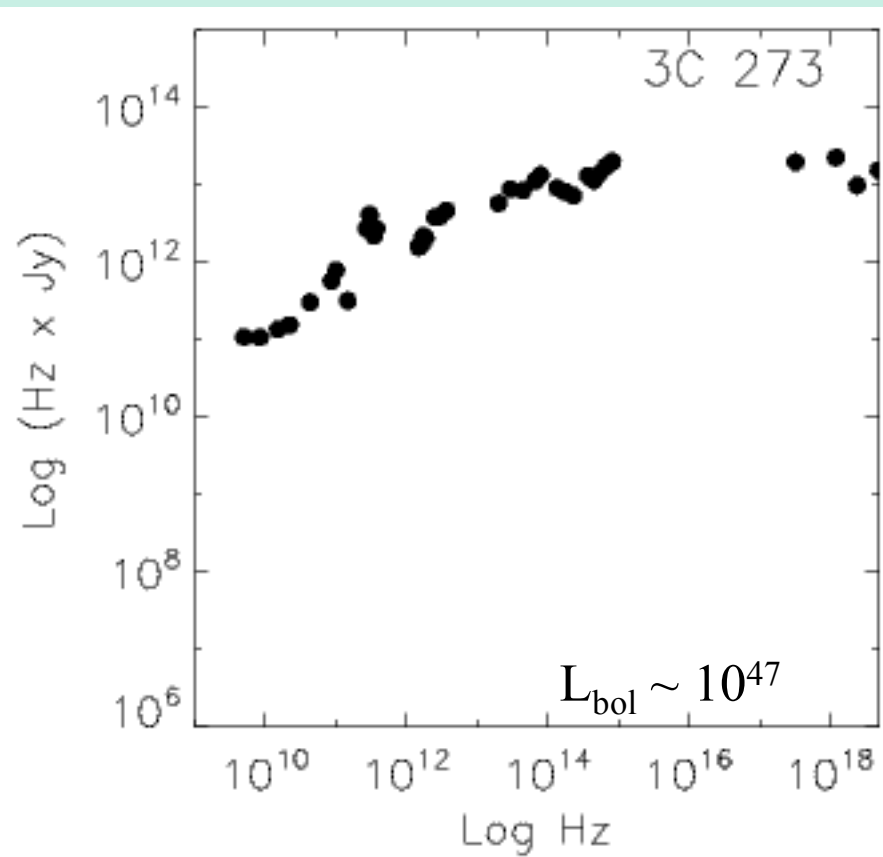
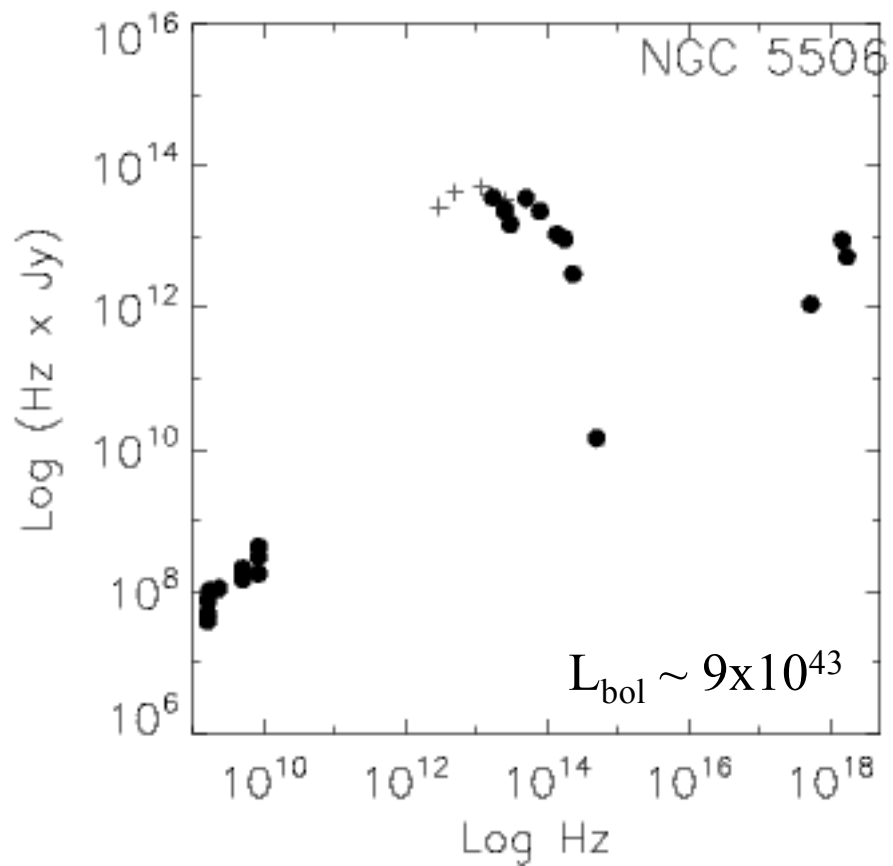
J. A. Fernandez, PhD, IAC



Centaurus A non-thermal emission (w. Th. Beckert, Bonn)







Some numbers from these SEDs

	Size 2 μ m	Lbol	Lbol-large / Lbol	Lx/Lbol	Av J-K	Av 9.6um	Av N _H
CenA	< 1pc	7 10 ⁴²	7	0.7	5	14	50
Circinus	2pc	10 ⁴²	8	0.2	7	21	50
N1097	<10pc	2 10 ⁴¹		0.2	1		0.5
N1068	2x1pc 10 μ m	4 10 ⁴³	20	0.03	10	30	>50
N5506	< 10pc	9 10 ⁴³	2	0.07	>5	15	5
N7582	< 12pc	6 10 ⁴³	3	0.5		20	50
3C 273	< 300pc	10 ⁴⁷		0.6			