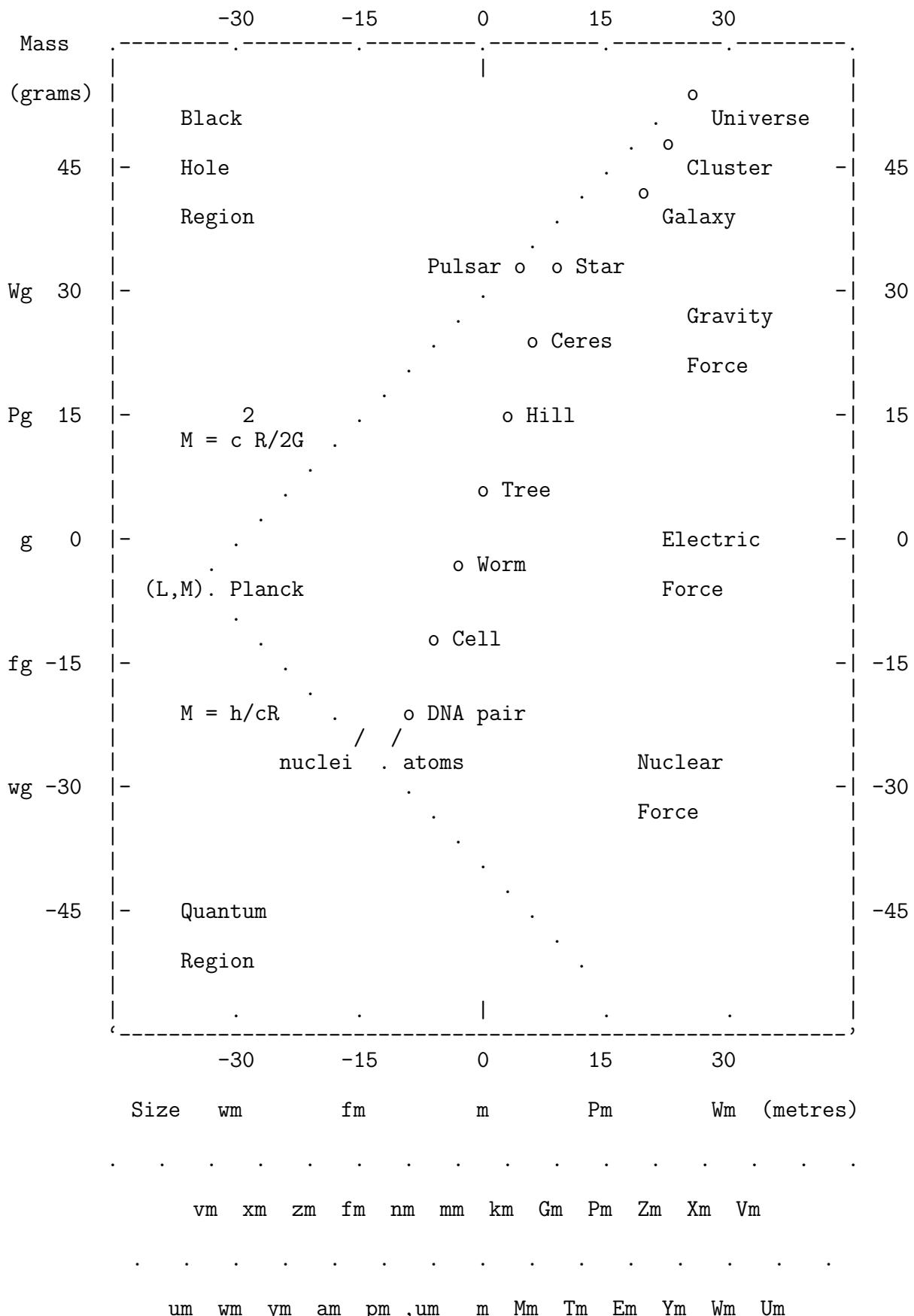


Mass and Size of Objects in the Universe on a log log Scale



Objects lie outside the black hole and quantum regions.

The radius ( $R$ ) of a black hole of mass  $M$  is:  $2GM / c^2$ .

The quantum Compton wavelength of a mass  $M$  is:  $h / Mc$ .

Regarding size, a factor of thousand separates objects:

DNA basepair (1nm), a cell (1micron), C. Elegans (1mm),  
tree (1 m), hill (1km), big asteroid (1Mm), sun ( $\sim 1Gm$ ).

A billion separates the masses if the density is 1g/cc:

DNA basepair (1zg), a cell (1pg), sequenced worm (1mg),  
tree (1Mg), hill (1Pg), big asteroid (1Yg), sun ( $\sim 2Vg$ ).

A string theory article in Scientific American July '00  
suggests that two extra 1 mm curled up space dimensions  
could mean that the law of gravity changes from inverse  
square to inverse fourth power for distances below a mm.

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SI system of units with recent extensions for large and small

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gram	g	0	g	gram
milligram	mg	- 3	3	kilogram
microgram	,ug	- 6	6	Mg
nanogram	ng	- 9	9	Gg
picogram	pg	-12	12	Tg
femtogram	fg	-15	15	Pg
attogram	ag	-18	18	Eg
zeptogram	zg	-21	21	Zg
yoctogram	yg	-24	24	Yg
xennogram	xg	-27	27	Xg
wodekogram	wg	-30	30	Wg
vendekogram	vg	-33	33	Vg
udodekogram	ug	-36	36	Ug

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