

MicroObservatory – Using Online Telescopes

Your objective is to get several images of galaxies that we can use for the next unit.

Go to <http://mo-www.harvard.edu/MicroObservatory/>

Go to *Telescopes* (on sidebar)

Choose one of the telescopes

Enter username btss; password: universe

Galaxies Settings ...

Camera: Main

Filter: Clear

Exposure: 60 seconds

Zoom: Out Focus: Default

Point Telescope: If target not on pull-down list, use coordinates and input RA and Dec.

Suggested galaxies to observe

Middle of this Month	RA highest at midnight
Jan	07h
Feb	09
Mar	11
Apr	13
May	15
Jun	17
Jul	19
Aug	21
Sep	23
Oct	01
Nov	03
Dec	05

Find the current month in the table. The number at right shows the Right Ascension that will be highest at midnight.

A Right Ascension that is several hours less (or more) than this will be highest that many hours earlier (or later) in the evening.

Example: In March, a galaxy with RA of 11 will be highest around midnight. A galaxy with RA of 7 will be highest 4 hours before midnight, at 8 PM.

✓	GALAXY	SKY COORDINATES			
	Choose one galaxy from each Galaxy Set. Galaxies are very faint, so use an exposure time of 45-60 seconds.	These coordinates are provided for classrooms that have usernames and passwords for the full access "Telescope Control Form." You won't need them for the MicroObservatory Guest Observer Portal.			
		Right Ascension (R.A.)		Declination (Dec.)	
		Hours	Minutes	Degrees	Minutes
	Galaxy Set 1				
	NGC 253	00 ^h	47.7 ^m	-25 ^o	16 [']
	M 31 (Andromeda)	01	42.7	41	16
	M 33 (NGC 598)	01	33.8	30	39
	NGC 891	02	22.6	42	21
	M 81	09	55.6	69	4
	M 101	14	3.2	54	21
	NGC 5907	15	15.9	56	19
	Galaxy Set 2				
	NGC 2903	09	32.2	21	30
	M 96	10	46.8	11	49
	M 65	11	18.8	13	5.7
	M 109	11	57.7	53	22
	M 104 (Sombrero)	12	40	-11	37
	M 106	12	18	47	25.3
	M 51 (Whirlpool)	13	29.9	47	12
	Galaxy Set 3				
	NGC 4013	11	58.5	43	57
	NGC 4636	12	42.9	02	41
	M 58	12	37.7	11	49
	NGC 5005	13	10.9	37	3
	Galaxy Set 4				
	NGC 2300	07	32.3	85	42.5
	NGC 2543	08	13	36	15
	NGC 3614	11	18.3	45	45
	NGC 4124	12	8.1	10	22.7
	NGC 4565	12	36.3	25	59

Other places to get images from MicroObservatory – *Get Images* (on sidebar) – there is a list of recent images, scroll through and find a galaxy or click on the *Archive* link at the top and go to Galaxy folder.