

Galaxy Hopping Though Leo the Lion

Leo offers a nice look at a variety of galaxies types as well as 2 very nice double stars. Galaxies of course are usually much harder both to locate and to catch much detail. They are hard to locate due to being so small in size. A very helpful technique in seeing some detail is called Averted Vision. By looking slightly away from your target while keeping your attention on it, features such as spiral arms and subtle mottling can become apparent where none was seen before. Use the Chart included with this newsletter.

Object Descriptions¹

M65 (Spiral Galaxy, Sb) - 2.5 deg. south and 1 deg. east of Theta Leonis. Very Good Visible in 10x50 binoculars, faint cigar shaped fuzzy patch with brighter middle in 2.4". 6" brings out nuclear region and brightens the galaxy. 10" shows hint of dark lane on east side. M66 is to the east and NGC 3628 is to the north-east.

M66 (Spiral Galaxy, Sa) - .5 deg. south and 1.5 deg. east of Theta Leonis. Very Good Visibility in 10x50 binoculars but appears as a moderate sized fuzzy spot in a 2.4". Looks asymmetrical in 6" with brighter nuclear region off center. 8" shows hints of spiral arm on west side of galaxy and some slight mottling. 10" shows

some dark detail and vaguely shows both arms. One on the west is long like the arm of a crab.

M95 (Spiral Galaxy, SBb) - 1 deg. north and 1.5 deg. west of 53 Leonis. Fair Faint, nearly circular fuzzy spot with slightly brighter center. Nucleus becomes more definite in 6" or 8" scopes but no other detail noted in apertures up to 10". (A barred spiral).

M96² (Spiral Galaxy, Sa) - Forms trio with M95, M105. Has a bright nucleus, easy in direct vision, is the landmark for the region.

M105 (Elliptical Galaxy, E1) - 2 deg. north and 1/3 deg west of 53 Leonis. Fair Moderate to small faint circular fuzzy patch gradually brighter towards the middle. Larger instruments will make it seem brighter but will add no detail. Small scope users will see fainter NGC 3384 just to the north-east. 4" will show NGC 3389 to the east of M105 also.

Alpha Leonis or Regulus — Regulus is a double star (mg 1.4 & 7.7) with it's companion being 177" away and is visible, even in binoculars.

Gamma Leonis or Algeiba - Algeiba is a double star
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1. Unless otherwise noted, Object notes are by David Knisely, DeepSky 2000 Software
2. Object notes by Geoff Chester, DeepSky 2000 Software

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(mg 2.2 & 3.5), described by Burnham as one of the finest double stars in the sky. They are both yellow in color but the pair is very close and difficult for low power telescopes to resolve.

Star-hop to alpha Leonis or Regulus. Our first star-hop is very easy since the Double Star, Regulus is the brightest star in Leo and will easily be found with your finder scope or Telrad.

Star-hop to M65, and M66. Our next star-hop takes us to the galaxies M65, and M66. Both galaxies are visible in the same telescopic field of view along with a third galaxy, NGC 3628. We start this star-hop at the star *Theta Leonis* or *Cherton* on the chart below. The hop is an easy one, moving south about 2-3 degrees to 5th magnitude 73 Leonis and one degree east to the galaxies. A magnitude 6.9 star is immediately to the north of M65 and M66. At 109X M65 is oval in shape with a bright nucleus; M66 seems a bit brighter than M65 and distinctly brighter than NGC 3628, both of which are in the same field of view; NGC 3628 is very dim with little detail visible and appears oriented south-west to north-east.

Star-hop to Gamma Leonis. In this star hop we are looking for *Al Geiba*, *Gamma Leonis*, which is regarded as one of the finest double stars in the sky. Once there, you'll need to use the highest power you have in order to get the best possible view. To get to *Al Geiba*, start from *Regulus* and head north to the next star in Leo, *Eta Leonis*. From *Eta Leonis*, the next star in Leo to the northeast is *Al Geiba*.

Star-hop to M105. From *Regulus*, extend a line east-north-east to the 3.3 magnitude star *Theta Leonis*. A little more than half way from *Regulus* to *Theta Leonis* is the dimmer star *52 Leonis*. About 1 1/2 degrees south and a touch east of *52 Leonis* is the galaxy M105. This may be 1 or 2 fields of view away from *52 Leonis* depending on your telescope and eyepiece combination. Additionally, *52 Leonis* and M105 may be visible in the same field of view in binoculars. At 87X, M105 will ap-

pear to have a very compact nucleus.

Star-hop to M96. Our next star-hop begins at M105 and leads us to M96. From M105, M96 is only about 3/4 degree to the south-south-west. You may even be able to see both galaxies in the same field of view if your eyepiece has that much coverage by placing M105 at one side in the field of view and looking to the south-south-west. If not, simply nudge your scope in that direction as you keep your eye to the eyepiece. With patience, M96 will come into view. At 87X, M96's nucleus and halo are evident, but elongated.

Star-hop to M95. Our next star-hop is a short one to M95. You won't have to go far from M96 to find its neighboring galaxy, M95, since it is about 1 or 2 fields of view away in your telescope. M95 is almost due west of M96. You may be able to get there by simply aligning M96 on the eastern edge of your eyepiece's field of view. In doing so, you might be able to see both galaxies in the field of view with M95 in the western side of your field of view. If not, a simple nudge to the west should bring M95 into the field of view. At 87X M95 as a small diffuse object, but with a compact nucleus.

- Compiled by Andy Weeks



Object ID	Other ID	Type	R.A.	Decl.	Epoch	Size	Mag	Description
NGC 3623	M65	Gx	11 18 54.0	+13 05 00.0	2000	10	9.3	-B* vL* mE 165deg +/- * gbMBN; = M65
NGC 3627	M66	Gx	11 20 12.0	+12 59 00.0	2000	8.7	9	-B* vL* mE 150deg * mbM* 2 st np; = M66
NGC 3351	M95	Gx	10 44 00.0	+11 42 00.0	2000	7.4	9.7	-B* L* R* pgmbMN; = M95
NGC 3368	M96	Gx	10 46 48.0	+11 49 00.0	2000	7.1	9.2	-vB* vL* IE* vsymbM* r; = M96
NGC 3379	M105	Gx	10 47 48.0	+12 35 00.0	2000	4.5	9.3	-vB* cL* R* psbM* r; = M105

Note: Star hops were based on Star Hopping by Art Russell. His website can be found at:

<http://education.gsu.edu/spehar/FOCUS/Astronomy/star-hop/Monthly/msh04-1.htm>