## Thirty Galaxy Trios <br> observed by Marie Lott

| Trio 01 NGC 48 / 49 / 51 | Trio 11 NGC 1721 / 1725 / 1728 | Trio 28 NGC 4326 / 4333 / 4339 |
| :---: | :---: | :---: |
| Trio 02 NGC 127 / 128 / 130 | Trio 12 NGC 2292 / 2293 / 2295 | Trio 40 NGC 6927 / 6928 / 6929 |
| Trio 03 NGC 138 / 139 / 141 | Trio 13 NGC 2375 / 2377 / 2379 | Trio 42 NGC 7270 / 7271 / 7275 |
| Trio 04 NGC 142 / 143 / 144 | Trio 14 NGC 2385 / 2388 / 2389 | Trio 43 NGC 7273 / 7274 / 7276 |
| Trio 05 NGC 232/235/235 ${ }^{\circ}$ | Trio 15 NGC 2510 / 2511 / 2513 | Trio 44 NGC 7445 / 7446 / 7449 |
| Trio 06 NGC 392 / 394 / 397 | Trio 17 NGC 2854 / 2856 / 2857 | Trio 45 NGC 7463 / 7464 / 7465 |
| Trio 07 NGC 426 / 429 / 430 | Trio 18 NGC 2872 / 2873 / 2874 | Trio 46 NGC 7499 / 7501 / 7503 |
| Trio 08 NGC 554 / 555 / 556 | Trio 24 NGC 3379 (M105)/3384/3389 | Trio 48 NGC 7699 / 7700 / 7701 |
| Trio 09 NGC 1057 / 1060 / 1061 | Trio 25 PGC 36723/36733/36742 | Trio 49 NGC 7769 / 7770 / 7771 |
| Trio 10 NGC 1062 / 1066 / 1067 | Trio 27 NGC 4278 / 4283 / 4286 | Trio 50 NGC 7778 / 7779 / 7781 |

## Telescopes, Exposures, and Locations

Remote telescopes were used through SLOOH unless indicated otherwise. The SLOOH telescopes were either in the Canary Islands at the Observatorio del Teide, Izaña, Tenerife or in Chile at the Santa Martina Observatory, La Dehesa, Santiago, Chile. Full specs on the SLOOH scopes are available here. SLOOH images were captured as multiple (2-6) 50-second luminance exposures, stacked in DeepSkyStacker, run through FitsScrubber, and then had curves or levels tweaked in Photoshop. The resulting images were inverted for display here. All SLOOH images are oriented with North up and East left.
Astrometry was performed at nova.astronometry.net
Magnitudes are taken from Sky Safari; in many cases these are dimmer than those listed in the program booklet.

- Canary One: $20^{\prime \prime}$ CDK, FLI PL09000 camera
- Canary Two: 17" CDK, FLI PL16803 camera
- Chile Two: 17" CDK, FLI PL16803 camera
- Deerlick Astronomy Village ("DAV") in Sharon GA: 8" SCT with Mallincam DS10c camera

Trio 01
NGC 48 / 49 / 51 in Andromeda
2023-09-21 02:00Z, SLOOH Canary One

a) NGC 51, mag 14.4
b) NGC 49, mag 15.2
c) NGC 48 mag 14.9
d) IC 1536, mag 15.5
e) IC 1535, mag 15.1
f) IC 1534 , mag 15.1

A nice trio of spiral galaxies ( $a, b, c$ ) lined up diagonally. A set of three smaller IC galaxies (d,e,f) lie below.

Trio 02
NGC 127 / 128 / 130 in Pisces
2023-10-14 22:10Z SLOOH Canary One


a) NGC 128, mag 11.6
b) NGC 130, mag 14.8
c) NGC 127, mag 15.3
d) UGC 298, mag 16.0
e) PGC 1760, mag 15.9
f) NGC 125, mag 12.4
g) NGC 126, mag 15.4
h) IC 17, mag 14.8

This trio features a long spiral (a) standing on its tail with two tiny dot-like companions (b,c) to its immediate east and west. Five other small galaxies (d-h) are easily spotted in the field.

## Trio 03

## NGC 138 / 139 / 141 in Pisces

2023-11-06 03:05Z SLOOH Chile Two


a) NGC 138, mag 14.7
b) NGC 139, mag 15.4
c) NGC 141, mag 15.3

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``` small spiral galaxies, difficult initially to pick out due to the brighter stars in the field. The trio is 560-660 Mly away.

\section*{Trio 04}

\section*{NGC 142 / 143 / 144 in Cetus}

2023-09-15 02:05Z SLOOH Chile Two

a) NGC 142, mag 14.6 This is another trio of
b) NGC 143, mag 15.3
c) NGC 144, mag 14.4 small spiral galaxies in an unremarkable field. All are 380 Mly away.

\section*{Trio 05}

\section*{NGC 232 / 235 / 235A in Cetus}

2023-10-19 07:15z SLOOH Chile Two

a) NGC 232, mag 14.45
b) NGC 235, mag 13.15*
c) NGC 235A, mag unk./ NGC235B, mag14.01
d) NGC 230, mag 15.60
e) IC 1573 , mag 16.69 *PGC2569? in Sky Safari

This is another trio of small spiral galaxies, interesting because bright NGC 235 is sitting right on top of more diffuse NGC 235A. The NGC235/ 235A pair is 310 Mly away but nearby NGC232 is closer at 270 Mly. Two other tiny galaxies are to the lower right (SW).

\section*{Trio 06}

NGC 392 / 394 / 397 in Pisces
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a) NGC 392, mag 12.6 The brightest of this trio galaxies
b) NGC 394, mag 14.8
c) NGC 397, mag 15.7
d) IC 1619, mag 15.35
would blend into the field except for its fuzziness as it is the same magnitude as the three evenly spaced stars lined up to the west (right). The other two galaxies in the target trio are each slightly smaller than the one before. A little IC galaxy lies to the lower right.

\section*{NGC 426 / 429 / 430 in Cetus}

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a) NGC 430, mag 12.4
b) NGC 426, mag 12.8
c) NGC 429, mag 14.5
d) UGC 771, mag 14.9
e) UGC 753, mag 16.0
f) IC 1643 , mag 15.2
g) UGC 1640, mag 15.5

This target is a relatively bright trio consisting of two ellipticals ( \(\mathrm{a}, \mathrm{b}\) ) and a spiral (c). The latter has a cute little arm spurting off the top. Other galaxies mag 16 or brighter are labeled, but numerous fainter smudges can be detected in the northern (top) third of the field.

Trio 08
NGC 554 / 555 / 556 in Cetus
2023-10-15 01:10Z Canary One

a) NGC 554, mag 13.6
b) NGC 555, mag 15.3
c) NGC 556, mag 15.6
d) PGC 1333780, mag 16.2
e) PGC 133779, mag 16.3

This is a diminutive trio dangling in a loose string, with only one member brighter than mag 14. Two other tiny PGC galaxies continue the drizzle downwards. A nice mag 7 star, HD 8767, brightens up the field.

\section*{Trio 09: NGC 1057 / 1060 / 1061 in Triangulum Trio 10: NGC 1062 / 1066 / 1067 in Triangulum}

a) NGC 1057, mag 15.7
b) NGC 1060, mag 13.0
c) NGC 1061, mag 15.1
d) NGC 1062, mag 15.6
e) NGC 1066, mag 14.3
f) NGC 1067, mag 14.6

These two trios make such a pretty grouping! Other small fuzzies can also be detected in the field. I especially like little NGC 1062 (d), a dainty edge-on spiral.

\section*{Trio 11}

NGC 1721 / 1725 / 1728 in Eridanus
2023-10-19 03:45Z Chile Two

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a) NGC 1728 , mag ~13
b) NGC 1725, mag 12.6
c) NGC 1721, mag 12.8
d) NGC 1723, mag 12.5

This target is a striking little galaxy trio arranged in a triangle. Above them is another triangle (but one made of stars) with propeller-like NGC 1723 inside.

\section*{Trio 12}

NGC 2292 / 2293 / 2295 in Canis Major
2023-02-26 04:05Z Chile Two

a) NGC 2293, mag 11.1
b) NGC 2292, mag 11.8
c) NGC 2295, mag 13.6

This trio stands out in the busy starfield only because most of the surrounding stars are so very tiny - it's as if the galaxies are sitting in a spill of fine grained salt

\section*{Trio 13 (right, a-b-c): NGC 2373 / 2375 / 2379 in Gemini} Trio 14 (left, d-e-f): NGC 2385 / 2388 / 2389 in Gemini

2023-11-12 00:40Z Canary One

a) NGC 2375, mag 14.9
b) NGC 2379, mag 14.6
c) NGC 2373, mag 14.6
d) NGC 2385, mag 15.1
e) NGC 2388, mag 14.6
f) NGC 2389, mag 12.8

I was determined to fit these two galaxy trios into the same field of view (just barely made it!) All six are spirals. Trio 13 (right) forms a simple bowed arch. Trio 14 (left), as grouped visually with its neighboring brighter stars, reminds me a lot of M45.

\section*{Trio 15}

\section*{NGC 2510 / 2511 / 2513 in Canis Minor}

\section*{2023-11-11 02:30Z Canary 2 ultrawide, cropped}


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a) NGC 2513, mag 11.6
b) NGC 2510, mag 14.5
c) NGC 2511, mag 14.9
d) PGC 22526, mag 14.7
e) UGC 4171, mag 14.5

This trio has one bright galaxy (c) that is fairly easy to detect due to its round shape and hazy collar. The other two members \((a, b)\) are smaller, dimmer, and, as such, hide among stars of similar brightness in the busy field.

\section*{Trio 17}

\section*{NGC 2854 / 2856 / 2857 in Ursa Major}

2023-11-11 03:45Z Canary Two ultrawide, cropped


Trio 18
NGC 2872 / 2873 / 2874 in Leo
2023-11-11 02:50Z Canary Two

a) NGC 2874, mag 12.4
b) NGC 2872, mag 11.8
c) NGC 2873, mag 16.1

This trio has two bright members \((a, b)\) \& one that is barely detectable in this image (c). NGC 2872 is an oval elliptical galaxy; the other two are spirals. NGC 2874 shows off nicely with its diagonal placement from our perspective This trio is closer than many others in the target list, "only" 150-178 Mly from us.

Trio 24
Messier 105 / NGC 3384 / 3389 in Leo
2023-11-27 05:15Z Canary One

a) NGC 3379 (M105), mag 9.3

This trio of beauties features two bright ellipticals (a,b) \& one small but obvious spiral (c). The latter is roughly twice as
b) NGC 3384, mag 9.9 far away ( 63 Mly ) as the brighter pair
c) NGC 3389, mag 11.9 (31-37 Mly). Our little spiral (c) looks a little raggedy around the edges.

Trio 25 (Wild's Triplet)
PGC 36723 / PGC 36733 / PGC 36742 in Virgo
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a) PGC 36723, mag 15.3
b) PGC 36733, mag 14.3
c) PGC 36742, mag 15.9

The two brighter galaxies ( \(\mathrm{a}, \mathrm{b}\) ) in this trio have an obvious bridge between them, while the dainty third galaxy, PGC 36742 (c), floats off by itself. This tiny fellow is shaped like an integral sign. The bright, larger galaxies ( \(a, b\) ) have multi-nucleated cores, especially evident in PGC 36733 (b). The western-most (a) is highly distorted. All are spirals.

Trio 27
NGC 4278 / 4283 / 4286 in Coma Berenices
2023-28-23 03:45Z Canary One

a) NGC 4278, mag 10.0

This trio lines up nicely in a diagonal
b) NGC 4283, mag 12.0 formation across this field, although they are
c) NGC 4286, mag 14.5
, distances from us. The two brightest of the three ( \(a, b\) ) are ellipticals while the dimmest (c) is a tiny spiral. At the top of the field lies
d) NGC 4274, mag 10.3 pretty spiral NGC 4274. Note: this image was taken during a full moon \& I was unable to remove all of the light gradients without removing detail from the galaxies.

Trio 28
NGC 4326 / 4333 / 4339 in Virgo



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a) NGC 6928, mag 12.5 What a nice field! Our trio of spirals has
b) NGC 6927, mag 15.4
c) NGC 6930, mag 12.8
two easily detectable members ( \(\mathrm{a}, \mathrm{c}\) ) and one small smudgy one (b). Arranged perpendicular to one another, the two largest ( \(\mathrm{a}, \mathrm{c}\) ) are elongated \(\&\) somewhat ragged looking. Hundreds of tiny stars speckle the background. Brighter stars in the field add to the interest.


a) NGC 7270, mag 14.9
b) NGC 7271, mag 16.0
c) NGC 7275 , mag 14.9
d) PGC 68716, mag 15.7

This small trio of galaxies (circled) is hiding among a scattering of moderately bright stars in a busy field. The most obvious galaxy of the three is NGC 7275 (c), a small thin splinter that is floating off on the east (left) side of the group. The other two (a,
b) almost disappear into the star field. An unrelated PGC galaxy (d) is easier to spot, sitting below a diagonal string of tiny stars at the bottom right.

\section*{Trio 43}

\section*{NGC 7273 / 7274 / 7276 in Lacerta}

2023-10-07 21:20Z Canary One


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a) NGC 7273, mag 14.7
b) NGC 7274, mag 13.2
c) NGC 7276, mag 13.9

This fuzzy trio forms a string dangling almost vertically in the field. The largest of the three, elliptical NGC 7274 (b) is in the center and sports an extensive halo. Smaller NGC 7276 (c), also an elliptical, has a similar but scaled-down halo. The only spiral in the trio, NGC 7273 (a), appears more condensed, with a thinner haze surrounding it.


a) NGC 7445, mag 15.6
b) NGC 7446, mag 15.4
c) NGC 7449, mag 16.3
d) UGC 12298, mag 14.9

This trio forms an elongated triangle. NGC 7445 (a) is a spiral galaxy; NGC 7446 (b) and 7449 (c) are ellipticals. Another nice spiral is seen in the upper left of the field, UGC 12298 (d), although it is not a member of our target trio.


a) NGC 7463, mag 13.2
b) NGC 7464, mag 14.4
c) NGC 7465, mag 12.6
d) HD 217732, mag 6.6
e) HD 217602, mag 8.2

This trio is scrunched up on the east side of a bright star (e). The brightest galaxy, NGC 7465 (c), is a barred spiral. The faintest, NGC 7464 (b), is classified as an E1 "peculiar" galaxy, although here it appears as a small round dot with no discernable details. The large galaxy riding on top, NGC 7463 (a), is a suspected barred spiral. A bright mag 6.6 star (d) dominates the field to the NE.

a) NGC 7499, mag 13.0
b) NGC 7501, mag 13.5
c) NGC 7503, mag 13.3
d) Abell 2551
e) HD 218717, mag 7.4

This trio of similarly bright galaxies consists of one elliptical (b) and two spirals ( \(\mathrm{a}, \mathrm{c}\) ), although no structural detail can be detected. A mag 7 star shines brightly to the SSW and small galaxy group Abell 2551 is spotted to the NNE.

a) NGC 7699, mag 15.7
b) NGC 7700, mag 15.0
c) NGC 7701, mag 14.4
d) IC 1501 , mag 14.6

All three members of this galaxy trio are spirals ( \(a, b, c\) ); two of these are obviously elongated but the other simply looks like a round dot. Overlapping galaxies NGC7694/7695 appear together (e), stretched-out, plump in the NW corner. A tiny IC galaxy (f) is identified by
e) NGC 7694/5, mag 13.9/15.9 astrometry but is otherwise
f) IC 5330 , mag 15.3
indistinguishable from a half dozen nearby stars of similar brightness. Another IC galaxy lies in the south (d).


a) NGC 7769, mag 11.7
b) NGC 7770, mag 14.4
c) NGC 7771, mag 12.9

All three members of this galaxy trio are spirals. Two of them, NGC 7769 (a) \& 7771 (c), are relatively large and bright; the third, NGC 7770 (b), is much smaller and dimmer. This dim one looks like a slightly squashed dot and can be found underneath the much larger and elongated NGC 7771 (c). The brightest of all three, NGC 7769 (a) is rounded oval, lying just to the NW of the other two.

\section*{Trio 50}

NGC 7778 / 7779 / 7781 in Pisces
2023-10-06 23:00Z Canary One

a) NGC 7778, mag 12.7
b) NGC 7779, mag 12.6
c) NGC 7781, mag 15.0
d) NGC 7782, mag 12.1
e) NGC 7780, mag 14.8

Two medium roundish galaxies, one actually a spiral (a) and the other an elliptical (b) are joined by a tiny flea-like spiral to make up this trio. Two other galaxies, both spirals, are nearby: a much larger one (d) commands the field in the NE and a rather small one (e ) floats up high near the northern edge.```

