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# Skyguide

2020 - III

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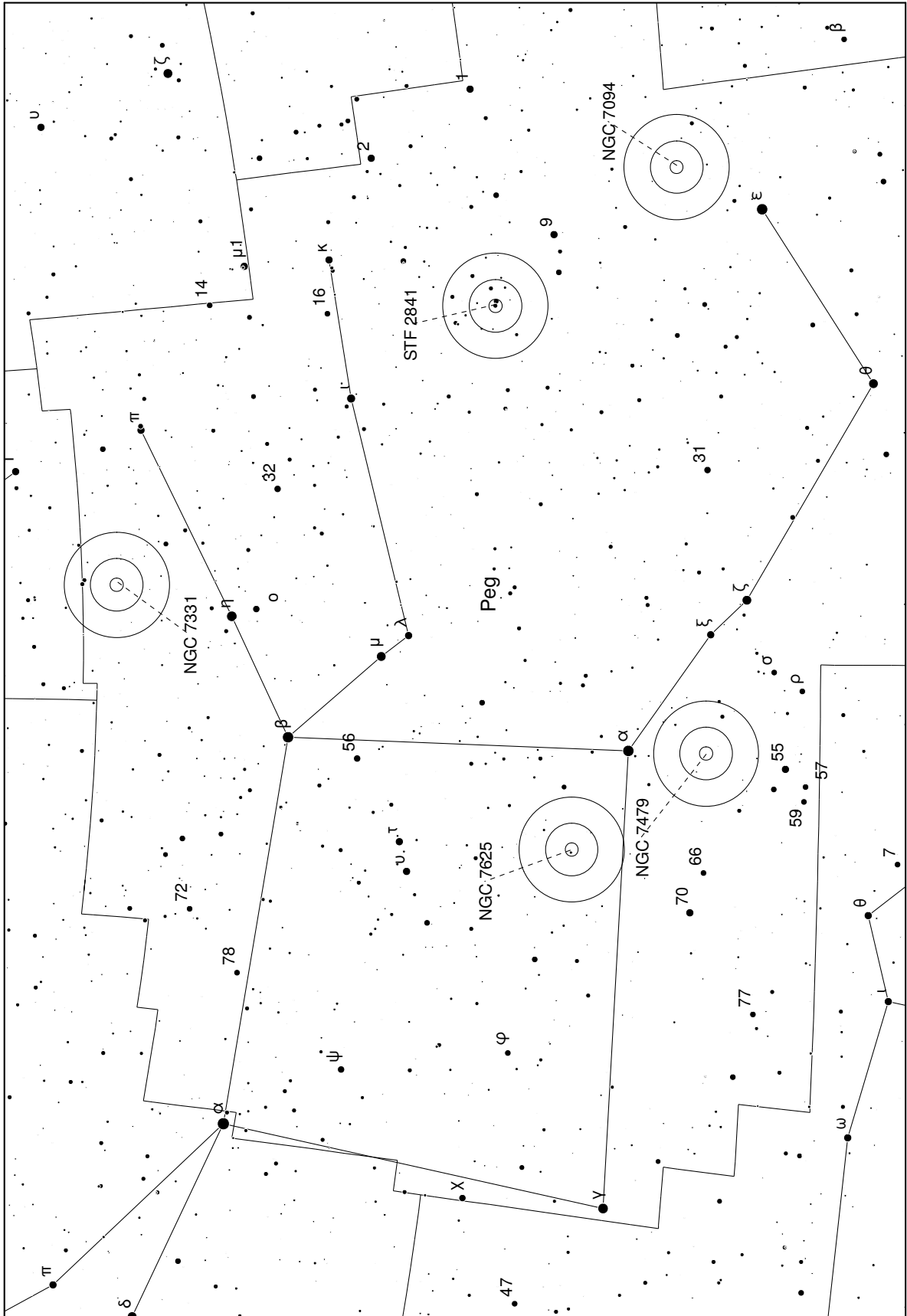
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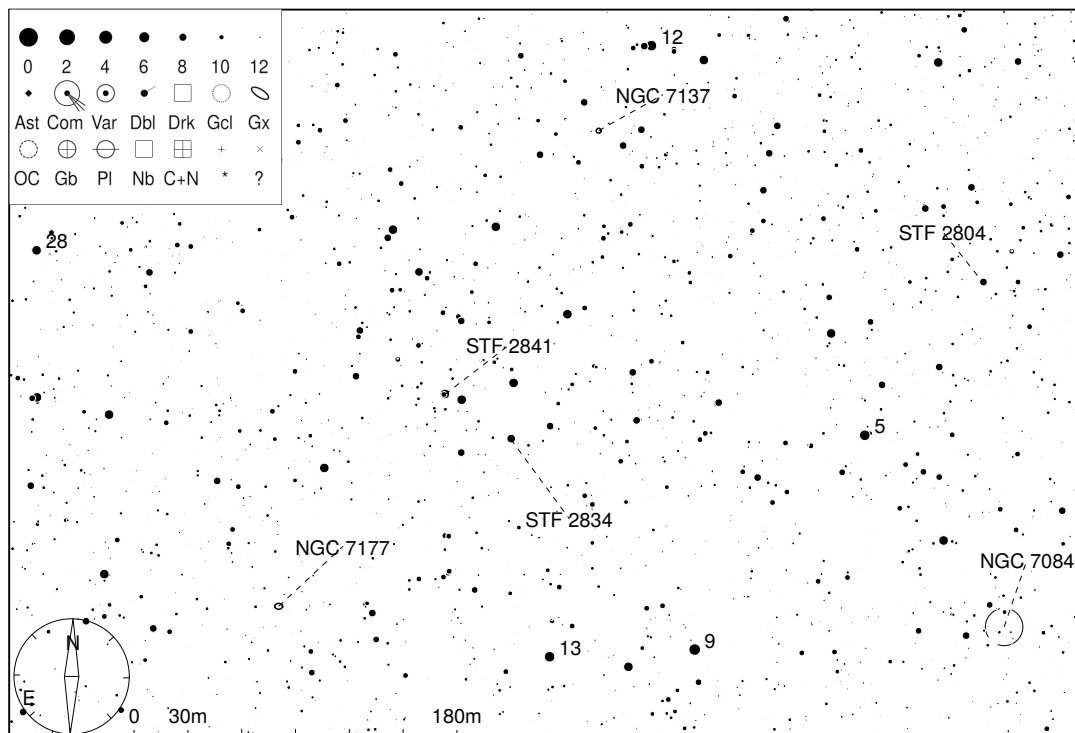
# Skyguide - A Short Introduction

The Skyguide should mainly give you some suggestions for own observations and will briefly describe 5 objects annually for every season. It contains easy as well as difficult objects, which are sorted by ascending difficulty. How difficult an object is, depends on several factors, especially quality of sky, aperture of the used telescope and the experience of the observer.

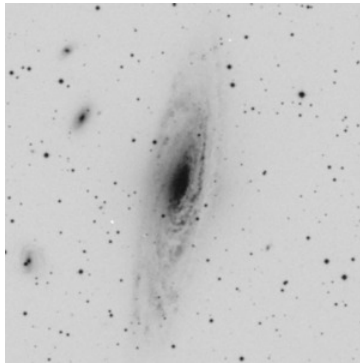
For each object the most important information are given and if applicable a [DSS](#) image (Digitized Sky Survey). In addition you will find a chart, created by the free software [Cartes du Ciel](#) (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude of about 8.0 mag. Telrad rings ( $0.5^\circ$ ,  $2^\circ$ ,  $4^\circ$ ) on the chart mark the position of the object. But basically I recommend creating your own finder charts. The visual descriptions are mainly based on own observations and only serve as a reference point.



<b>Constellation</b>	Peg
<b>Coordinates</b>	21h54m17.44s / +19°43'05.30"
<b>Brightness</b>	6.5 mag / 8.0 mag
<b>Angular Distance</b>	22.4"
<b>Position Angle</b>	110°
<b>Year</b>	2018

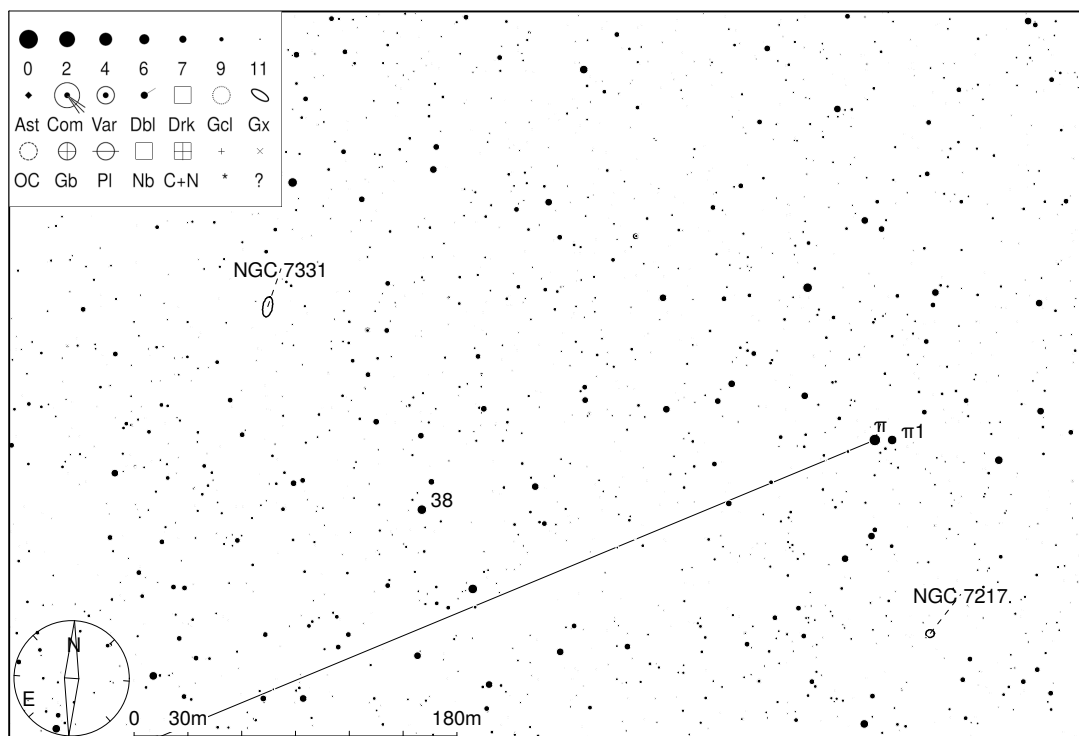


STF 2841 with the components A and BC is a rather wide double star, whose spectral classes are specified with KOIII (yellow-orange) and F7V (yellow-white). According to measurements this is only an optical double star. The pair BC can be found under the designation COU 432 with an angular distance of only 0.1" and is a physical pair. Nevertheless, STF 2841 A-BC is visually very attractive, since it can be observed with a small telescope due to its large angular distance and shows a nice color contrast. Thus the components are often seen by observers as yellowish-orange and bluish. Sissy Haas describes the colors in her book "Double Stars for small telescopes" as yellowish peach and Atlantic blue. In the immediate vicinity there is also the double star STF 2834 (AB, 6m9, 9m9, 4.2", 298°) and a bit further away STF 2804 (AB, 7m7, 8m0, 3.4", 359°).

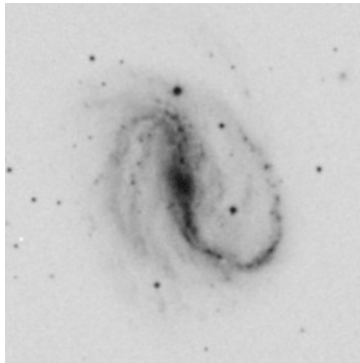


**Constellation** Peg  
**Coordinates** 22h37m04.10s / +34°24'57.31"  
**Brightness** 9.5 mag  
**Size** 10.7×4.4'

DSS II (blue) - 11.0×11.0'

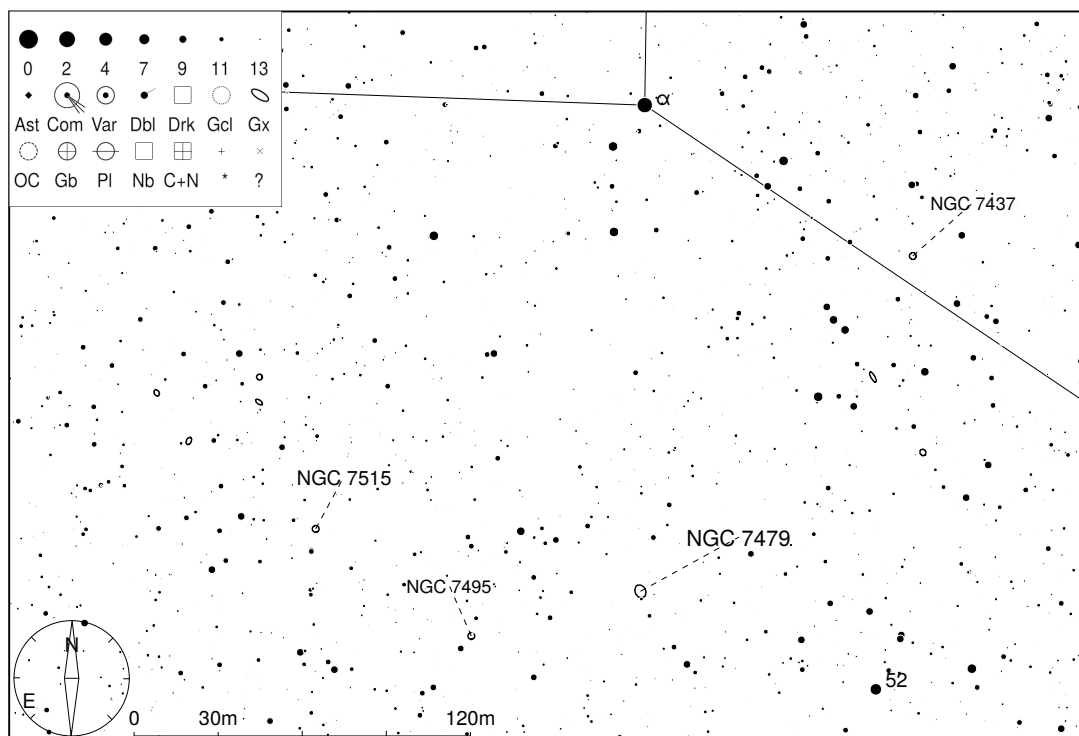


A rather well known galaxy is NGC 7331, which forms the Deer-Lick group together with four other faint galaxies, but without any gravitational connection to each other. NGC 7331 is best known for its apparent neighborhood to Stephan's Quintet (Hickson 92). For a long time NGC 7331 was thought to be very similar to the Milky Way, but was later disproved, because the Milky Way is a barred spiral galaxy in contrast to NGC 7331. According to investigations the direction of rotation of the inner and outer regions is opposite. Visually, an experienced observer under a dark sky can already see the galaxy as a small faint nebula with 8x40 binoculars. Even in a telescope at low magnification it appears only as a small, elongated nebula. With increasing magnification the brighter, elongated center becomes clearly visible, which is surrounded by an oval halo.

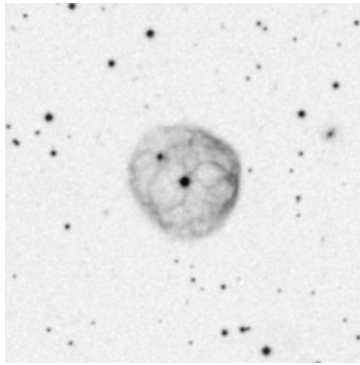


**Constellation** Peg  
**Coordinates** 23h04m56.67s / +12°19'22.36"  
**Brightness** 10.8 mag  
**Size** 4.1×3.1'

DSS II (blue) - 5.0×5.0'

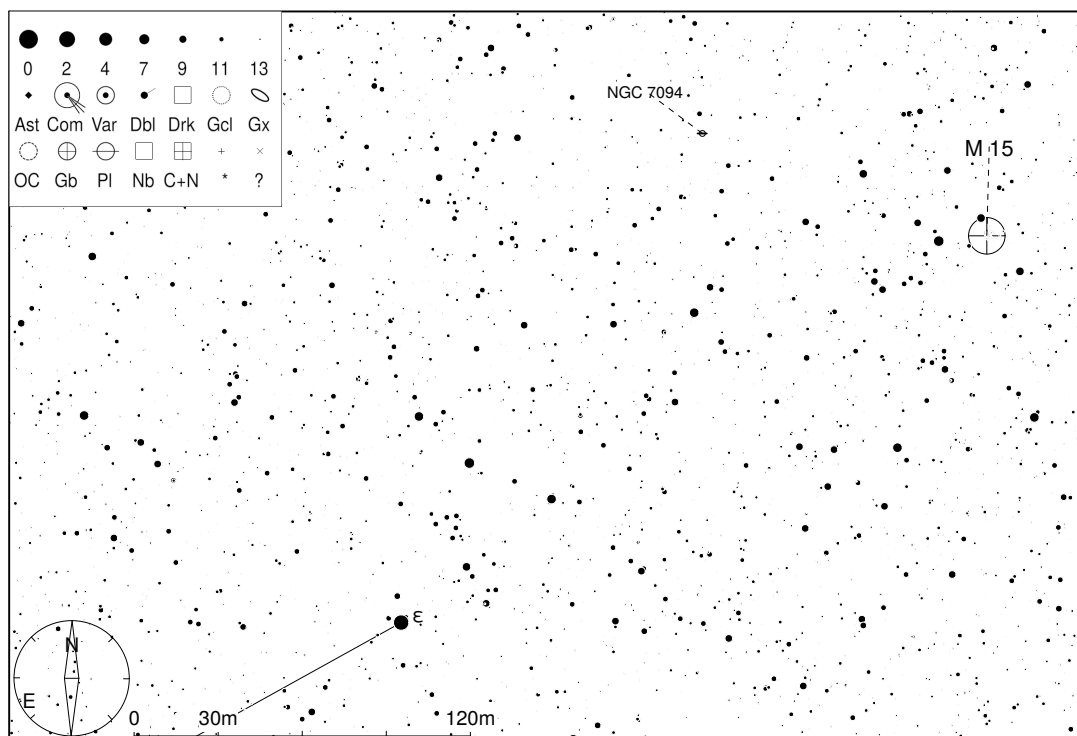


The barred spiral galaxy NGC 7479 is particularly rich in structures at an estimated distance of 105 million light years. Remarkable is the bar and a prominent spiral arm. Because of its very bright galaxy nucleus, this galaxy is classified as a Seyfert galaxy. The asymmetric spiral structure is possibly due to a fusion with a much smaller galaxy with a low mass. Visually, the bright, elongated core region is particularly noticeable at a medium sized telescope. The halo appears only very faint. With apertures from 12 inches upwards the spiral arms are accessible, at 8 inches at least indicated.

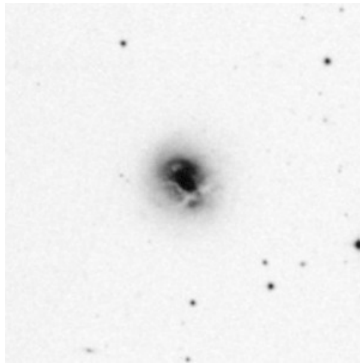


**Constellation** Peg  
**Coordinates** 21h36m52.97s / +12°47'19.00"  
**Brightness** 13.3 mag  
**Size** 1.6×1.6'

DSS II (blue) - 5.0×5.0'

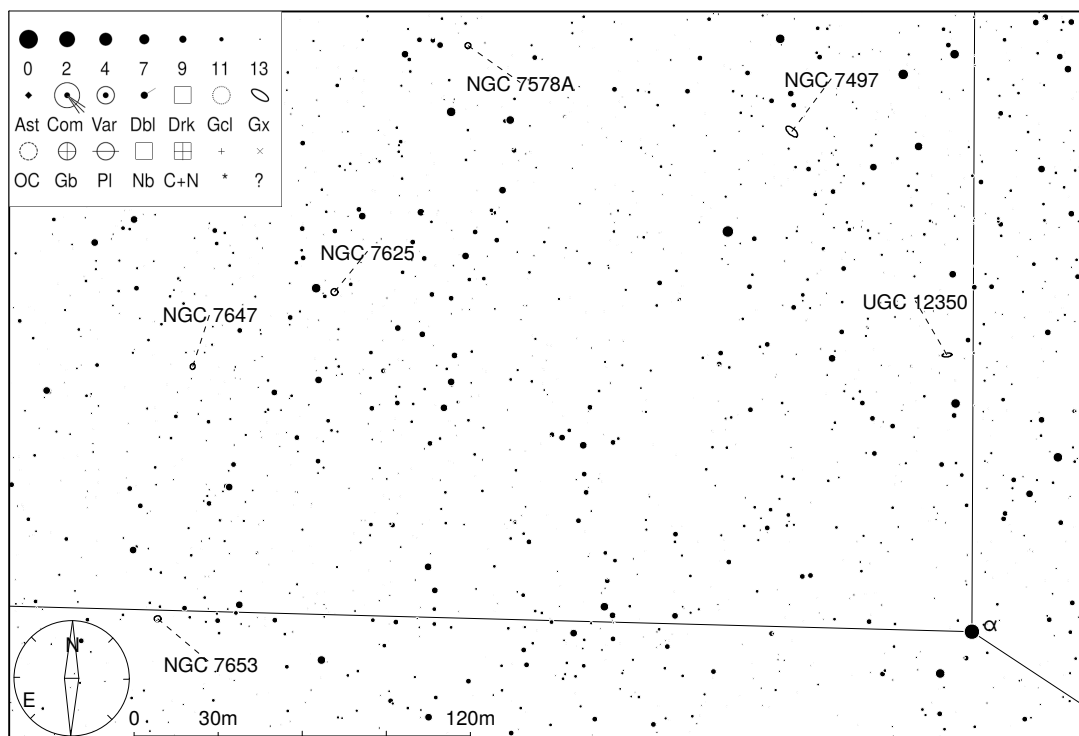


NGC 7094 is a quite old and therefore rather faint planetary nebula. The blue shining central star has a brightness of 13m0. On photographs numerous fine filaments inside the nebula are clearly visible. In general only little is known about the nature of the nebula. It is located only about 2° northeast of the prominent globular cluster Messier 15. At an aperture of 8 inches the nebula appears as a small round nebula at medium magnification with a nebula filter. The central star is already visible. Depending on the conditions a nebula filter is necessary for successful observation. There was hardly any visual difference between UHC and [OIII] filter. With an aperture of 12 inches the nebula appears more ring-shaped, with even larger instruments inner structures can be seen.



**Constellation** Peg  
**Coordinates** 23h20m30.13s / +17°13'32.16"  
**Brightness** 12.1 mag  
**Size** 1.6×1.4'

DSS II (blue) - 5.0×5.0'



NGC 7625 is a pretty unusual spiral galaxy, which was discovered by William Herschel on October 15, 1784. Due to its structure, it was included by Halton Christian Arp in his catalog under the category "Galaxies with irregularities, absorption and resolution". Due to the small angular size of the galaxy, it is difficult to photographically and visually identify its structures. However, the high surface brightness already allows observations with an aperture of 4 inches. With 8 inch aperture the galaxy appears roundish with a brighter core. Owners of very large telescopes can try to see the dark structures. Under excellent conditions these are visible with an aperture of 27 inches, as an observation by Uwe Glahn shows.