MONTHLY OBSERVER'S CHALLENGE

Las Vegas Astronomical Society

Compiled by:

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&

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M-1 (NGC-1952) Crab Nebula

Introduction

The purpose of the observer's challenge is to encourage the pursuit of visual observing. It is open to everyone that is interested, and if you are able to contribute notes, drawings, or photographs, we will be happy to include them in our monthly summary. Observing is not only a pleasure, but an art. With the main focus of amateur astronomy on astrophotography, many times people tend to forget how it was in the days before cameras, clock drives, and GOTO. Astronomy depended on what was seen through the eyepiece. Not only did it satisfy an innate curiosity, but it allowed the first astronomers to discover the beauty and the wonderment of the night sky.

Before photography, all observations depended on what the astronomer saw in the eyepiece, and how they recorded their observations. This was done through notes and drawings and that is the tradition we are stressing in the observers challenge. By combining our visual observations with our drawings, and sometimes, astrophotography (from those with the equipment and talent to do so), we get a unique understanding of what it is like to look through an eyepiece, and to see what is really there. The hope is that you will read through these notes and become inspired to take more time at the eyepiece studying each object, and looking for those subtle details that you might never have noticed before. Each new discovery increases one's appreciation of the skies above us. It is our firm belief that careful observing can improve your visual acuity to a much higher level that just might allow you to add inches to your telescope. Please consider this at your next observing session, as you can learn to make details jump out. It is also a thrill to point out details a new observer wouldn't even know to look for in that very faint galaxy, star cluster, nebula, or planet.

M-1 (NGC-1952) Crab Nebula

Messier 1, also known as NGC-1952 is a supernova remnant. It was first observed as a modern (relatively) astronomical object in 1731 by John Bevis. However, it was seen by Arab, Chinese and Japanese astronomers in 1054 when the star exploded.

The center of the nebula has a pulsar, neutron star that is not visible to amateur visual observers. The nebula shines at a deceptively bright mag. 8.4 but it can be difficult to observe due to sky conditions. The type of filter used is also critical as an O-III filter will not work very well. Since it is not an emission nebula, the O-III will block much of the light, yet this filter can also bring out certain details, depending on aperture and that particular night. Other filters such as UHC and LPRs tend to work better.

Observations/Drawings/Photos

Roger Ivester: Observer From North Carolina

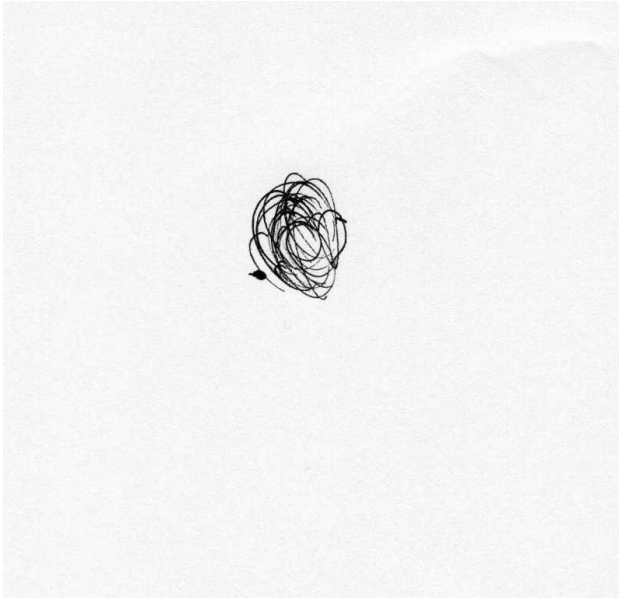
Using my 10-inch f/4.5 equatorial reflector, this object appeared large and bright. It had an irregular shape, a soft grey color, and was brighter in the NW region. Elongated NE-SW, it was situated almost equally between two somewhat faint stars in alignment with the orientation of the nebula. It showed uneven texture with a dark streak crossing the SE part. The edges of the nebula were irregular and uneven, fading gradually outward from the brighter middle. The NW side faded more abruptly than the SE part. The crab was best viewed at 100-125X as higher magnification did not improve the view or increase fine detail. I couldn't see the "S" shape described by Skiff & Luginbuhl and Fred Rayworth of Nevada using a 16-inch. On an extraordinary night, January 20, 1996 while observing with Bob Eskridge in a dark location in the South Mountains approximately 35 minutes north of Boiling Springs NC. While observing through Bob's 14.5-inch reflector, I saw a beautiful "shimmering" of faint stars with the nebula. I could see at least (4) faint stars embedded within the nebula...a first for me. I've been unable to see the stars since, as I've tried many times before and since with my 10-inch. With the 14.5-inch I could also see a curving tail.

Fred Rayworth: Observer From Nevada

NOTE: I originally submitted 29 observations from December 1984 through November 2007 on a spreadsheet. Rob attempted to summarize the best he could.

8-inch f/9.4 using an E32mm eyepiece with four entries: Very faint, and circular.

16-inch f/6.4 reflector with entries from March 1987 through November 2007: The "S" shape was evident. Very faint, but couldn't see the "S" shape on every night. Fairly bright and diffuse, and could see mottling in the nebula. Just a very soft glow most nights.



Rob Lambert: Observer From Nevada

Rob uses a Mallincam system and provided an image of his most recent session.

Dr. Don Olive: Observer From North Carolina

Dr. Don Olive; Observer and Astronomy and Physics at Gardner-Webb University and Director of the Williams Observatory in Boiling Springs, NC.

I took this image below from New Mexico.