Recording Deep-Sky Observations

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(Editor's Note: These are guidelines and suggestions, not requirements.)

Basic Data: date, location, observing instrument, eyepieces (magnification), and filters used (if any).

General Observing Conditions: 1. Weather; 2. Transparency (estimate the limits of visual magnitude directly overhead, whether naked-eye or telescopic); and 3. Seeing (test for atmospheric turbulence over your observing site by viewing the slightly out-of-focus image of a star or planet: "poor seeing" is evidenced by a rapidly shimmering image, "good seeing" by a slow, rippling image, and "superb seeing" by a dead calm image. Rate your seeing on a scale from 1 (best) to 5 (worst).

General Questions (respond only to those questions which apply to the object under observation): 1. Sketch the object. (A picture is worth a thousand words.) 2. How did you find the object? Was it difficult or easy to find? Were there any bright stars, double stars, or other notable objects nearby? 3. How difficult or easy was the object to see once you found it? Did it require averted vision, or could you observe it directly? 4. Was there anything unusual or peculiar about the object? 5. How large was the object? (If possible, use arc-minutes and arc-seconds.) What was its shape? If not round, (a) How was it oriented in the sky?, and (b) What, if any, earthly objects did its shape suggest? 6. Could you resolve individual stars? How many? 7. What color was the object and/or individual stars within it? How bright was it, and how bright were the individual stars? 8. Were some parts of the object brighter than others? How did the brightness change with distance from the center? 9. Were there any dark areas indicating the possible presence of a dark nebula? 10. What was the best magnification for observing the object?

Questions Specific to the Object Under Observation

Open Clusters. 1. Was the cluster **(r)** rich, with 100+ stars, **(m)** moderately rich, with 50-100 stars, or **(p)** poor, with less than 50 stars? 2. Were the stars in the cluster (a) detached from the surrounding star field and concentrated toward the center, (b) detached but weakly concentrated toward the center, (c) detached with no concentration toward the center, or (d) not well detached from the surrounding star field? 3. Was any nebulosity present? Does a nebula filter suggest that there may be a bright nebula associated with the cluster?

Globular Clusters. 1. Were there any chains of stars? 2. How centrally concentrated were the resolved stars? Compare the size of the unresolved glow with the distribution of the resolved stars.

Bright Nebulae. 1. At high magnification, does the nebula (a) remain, (b) resolve, or (c) disappear? 2. Does a filter improve contrast and/or expand the apparent size of the nebula?

Planetary Nebulae. 1. Using the Vorontsov-Velyaminov scale, describe the appearance of the nebula: (a) stellar; (b) smooth disk (bright center, uniform brightness, traces of ring structure); (c) irregular disk (irregular brightness, traces of ring structure); (d) annular (ring structure); (e) irregular form (similar to a diffuse nebula); or (f) anomalous form (no regular structure).

Galaxies. 1. Was there a nucleus? If so, what was its size, shape and brightness? 2. Were there any bright spots outside the nucleus to possibly indicate the presence of star clusters or nebulae? 3. Was the galaxy's surface (a) mottled, or (b) smooth? 4. Were the edges of the galaxy (a) ragged, or (b) even? Were they (a) clearly defined, or (b) vague? Were there any dust lanes? Spiral arms?

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