

Boise Astronomical Society

Deep Sky 101

Observing Program

Welcome to the Boise Astronomical Society's *Deep Sky 101* observing program. This program is meant to serve as a follow-on or adjunct to the Messier Club from the Astronomical League.

The Rationale

After the Messier list of objects, additional lists such as the Herschel 400, Caldwell and others, are difficult to impossible for smaller aperture scopes. This list is meant to serve as an object list for those who don't have access to 10" + scopes and would like to continue their exploration of the deep sky.

The List

The list is comprised of 101 objects, each of which has been vetted to be visible in a 4" or smaller instrument. While not all objects on the list will be spectacular in a small instrument, they are all visible. No Messier objects are included in the list, as we did not want to compete with the Messier Club, which is still the best list for instruments in the 4" – 6" range. Some brighter objects from other lists are included. Objects on the list are mainly drawn from the NGC catalog, but objects in the Melotte, Trumpler, IC, Collinder and Stock catalogs are also included.

By necessity (for small instrument visibility), the majority of objects are open clusters, but there are galaxies, globular clusters, planetary nebulae and bright nebulae, as well. While this list was compiled with visibility in small instruments in mind, larger scopes are certainly not precluded, for, as in all deep sky observing, more aperture means more detail is visible. Also, while object size was screened to make a list of "telescopic" (i.e., not binocular), objects, some of them are in the one degree range, so low power and wide fields of view are necessary.

Finding Methods

All methods – star hopping, manual setting circles, digital setting circles ("push-to") and full go-to are legal. No distinction is made for finding method. The objective is to observe the objects.

Equipment Necessary

A set of star charts at the level of *Sky and Telescope's Pocket Sky Atlas*, a telescope in the range of 4" and low power (one degree plus field), medium and high power eyepieces. A narrow band filter ("UHC") will be helpful for some objects, but isn't a necessity. Recommended other references: *The Night Sky Observer's Guide*, Kemple and Sanner, Willmann-Bell, and the internet. Just Google the object for more information than you likely want.

Logging Requirements

The standard logging requirements will be adequate for the *Deep Sky 101* program.

Object

Constellation

Date

Time

Observing Location

Sky Conditions (However you rate your sky, just be consistent)

Instrument

Eyepiece/Magnification

Verbal Description of what you see

A log sheet will be provided along with the list in PDF format on boiseastro.org which you can use, but your own log is just as acceptable – hand written, typed or fully electronic.

The Rewards

In addition to the satisfaction of finding and observing the objects, BAS will award a certificate and pin to all members who complete the list.

I hope you enjoy observing this list and have as much fun with it as I did in putting it together and observing the objects. Some of the objects are challenging in a small scope. It is not a “gimme” list, but all are truly visible in a 4” telescope. Some of the open clusters are sparse, but bright, while others are rich and dim. Clear skies and fun observing.

Steve