

Arp Peculiar Galaxy Club Chair:

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Introduction:

The Astronomical League, realizing that the face of amateur astronomy is changing, and wanting to stay on the cutting edge of technology, is pleased to announce its new CCD imaging program. This new club is based on the 338 objects found in the Arp Catalog of Peculiar Galaxies. 100 of the 338 Arp galaxies must be imaged with a CCD camera to qualify for the Club's certificate. Just because this is a CCD imaging program, doesn't mean that we want to exclude the observers and astrophotographers from this club. Those amateurs either observing or photographing 100 of the 338 Arp galaxies will also qualify for the Club's certificate. Please remember, though, before you start this program, that this program was developed for advanced amateurs, and may not be suitable for beginners. This is because CCD imaging requires quite a lot of equipment including a telescope, a computer, a CCD camera, imaging program, and atlases and databases. For observers and astrophotographers, a majority of the 338 galaxies fall in the 12th. to 18th. magnitude range. However, there are over 100 Arp objects below magnitude 13.5.

We feel that this new program will challenge even the most serious of amateur astronomers. We sincerely hope that you find this program rewarding, and will look forward to your completion of the Club.

Halton C. Arp.

Halton C. Arp is one of the key actors in the contemporary debate on the origin and evolution of galaxies in the universe. His landmark compilation of peculiar galaxies, the Atlas of Peculiar Galaxies, led him to challenge the fundamental assumption of modern cosmology, that redshift is a uniform indicator of distance. He continues the search at the Max Planck Institute for Physics and Astrophysics.

Rules and Regulations:

To qualify for the AL's Arp Peculiar Galaxy Club Certificate, you need only be a member of the Astronomical League, either through an affiliated club or as a Member-at-Large, and image 100 of the 338 objects in the Arp Peculiar Galaxy Catalog. You may select which 100 objects that you want to image. Any CCD camera may be used, whether commercial or home-built. Since many of the Arp objects are multiple galaxies, only the brightest member of the group need be imaged, but it would be nice if you could image the entire group. Also, photo enhancing of your image is not required, but, again, if you choose to do so then that will be accepted. The images should be submitted in the GIF, JPG, BMP, TIFF, or PCX formats. When properly compressed or

archived, 100 of these images in the 25-28KB range should fit on two 1.44MB floppy disks. Use more if you require it. For locating the Arp galaxies, it is recommended that you use a good star atlas such as the "Uranometria 2000.0", Volumes I & II published by Willmann-Bell, Inc., or a good computer atlas like Emil Bonanno's "MegaStar" by E.L.B. Software (elb@ix.netcom.com). After submission of your images, with your permission, we will try to place the images on a Web page so that other amateur astronomers may access them.

For observers, you may select any 100 of the 338 galaxies in the catalog, and observe only the brightest member of the group if you so choose. Since this is an advanced observing program for light buckets, it is recommended that you use a telescope with an aperture of 12.5 inches or larger, and observe from a dark sky site. To record your observations, you may use log sheets similar to those found in the back of the Astronomical League's manual *Observe: A Guide to the Messier Objects*. You can order the *Observe* manual through Marion Bachtell, Astronomical League Sales, P.O. Box 572, West Burlington, Ia. 52655-9998. The price is \$4.50, including postage. If you use your own log sheets, they should include: object, date, time, power, seeing, type of instrument, and observing notes.

To receive your Arp Peculiar Galaxy Club Certificate, simply send your images/observations/astrophotos along with your name, address, phone number, and club affiliation to:

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Upon verification, your certificate will be forwarded either to you or your club's Award's Co-ordinator, whomever you choose. Each certificate will be numbered and lettered according to how it was acquired, either through CCD imaging, observation, or astrophotography.

The List:

The list is provided in Arp Catalog number order. Because of the size of the catalog (338 objects), only a limited amount of information can be provided. In addition to the Arp number, you are given additional catalog names that the object is known under, and the Right Ascension and Declination of each object (Epoch 2000). For more information, we recommend a good catalog such as the "Deep Sky Field Guide to the Uranometria 2000.0" published by Willmann-Bell, Inc., or a computer catalog (I used The Arizona Database V. 8.0). Finally, for those of you that like to do constellation mopping or would like to plan your program around what is visible in the sky at certain times of the year, we have provided the Arp Peculiar Galaxy Catalog by constellation. I wish all of you the best of luck in this new program.

Acknowledgement

I and the Astronomical League wish to gratefully acknowledge Dennis Webb of the Houston Astronomical Society for his suggestion to create this program, and for the wonderful work that he has put into

investigating the Arp Peculiar Galaxy Catalog as reflected in this program.

- John Wagoner