AstroLeague Multiple Star Observing Program FAQ

1. **The Appendix, (List of Objects), has some errors in the data.**

There were some errors that occurred when we uploaded the Excel spreadsheet of objects to the web page. Also, the data on the List of Objects may change over time. Check Stelle Doppie for the latest Lit., data, from the Washington Double Star Catalog. We are updating the List on a regular basis. We hope to have the errors corrected soon.

2. **I can't find the identifiers in my planetarium program.**

The Appendix List indicate identifiers that are not on some planetarium programs. Check Stelle Doppie for a list of the most common identifiers. If you still don't find the name of the object in your planetarium program contact me and I can help.

3. **I need an Excel format of the Appendix, (List), I that I can work with.**

The Appendix is in a PDF format. If you are unable to convert it to the Excel format on your computer or with an APP, let me know and I will send you a copy. You can download the PDF file to Word. Here's a video on YouTube explaining how to convert the Word file to Excel: https://www.youtube.com/watch?v=5K4o_vRlua0

4. **My observing setup only images 1.4"/pixel. Some of the Separations are too tight.**

If your setup or eye cannot decipher a close separation or a dim object in the system, simply indicate the approximate location of the object both on the image,(with a small "X"), and in your notes. Try to include at least one or more field stars and of course the correct Cardinal Points on you image of an object. You can also borrow a setup from a fellow astronomer in your club to observe the tight separations.

5. **Please make a note of revisions on the Appendix, (List), to avoid confusion.**

This can only be accomplished by the web master. Please **NOTE**, these systems change all the time. Check **Stelle Doppie** for the latest literature on any given system on the List. In most cases, the web pages at the Astro League are updated without a posting. Kindly bear with us as this is a new program and the web page is still under construction. You may contact me at your convenience for updates.

6. **Some systems have stars other than the system stars. Do you want just the system stars or all that are seen?**

Many of the systems are embedded in rich star fields. Place as many stars in the field as you can to help anchor the system in the FOV. You can notate, (label), some field stars on your sketch as long as the component stars of the system are labeled and in the correct position angles**.** You may label stars, "A", "B", "C", etc. if you think that it will avoid confusion. Remember, each sketch should be a stand-alone observation of a star system. All the necessary information about the observer name, address, etc. Observations should include: object name, date and time (local or UT), Latitude and Longitude, power(s), seeing and Transparency, instrument used, and a drawing or image of the multiple star system.

7. **The way I've been working programs is to research what I'll be looking at, studying the lists, putting objects into area groups (constellations work too) and seeing what scope would be best. You did this w/ this program?**

This program is a collaboration between three avid and accomplished double star observers over two years in the making. We stove to make it work for observers in the northern latitudes and in all parts of the celestial sphere. I suggest you make a short list of 10 or 20 objects based on what constellations are in the sky throughout a given night. You can go to each system on the List in Stella Doppie and view a lot of information on the Lit. Click on "Complete" and you see a whole lot more helpful info. Struve 1169 in Cam for example has an additional identifier PKO 21 made from a much later observation. Notice that the AB pair are orbital. There are nearly twenty orbital pair systems on the List that can be viewed with good amateur equipment, (some are less than 1.0"). When you click on "Complete" you get a graph showing S & E coordinates. These graphs are very helpful. There is also an Aladin image from an all sky survey.

8. **What EP did you use the most?**

Start with the EP that works best with your setup for a wide field of view that can include the complete system and some field stars. If you can get a good split and can notate the dimmer companions, you need go no further. I sometimes make a small rendition using the highest power EP that captures the full system. It depends a lot on the OTA you are using and the power of you EP. We have been encouraging applicants to include as many field stars as are visible in any given EP/FOV. Those stars establish the juxtaposition of the system components. Also, Cardinal Points are critical in that they help the observer establish the position angles of the components without having to measure them with an Astronomic EP. If the seeing at your location does not allow viewing of 9^{th} or 10^{th} magnitude stars, come back to that system when the conditions are better.

9. **Are digital drawings made with a stylus on a tablet accepted?**

Digital drawings made with a stylus on a tablet are acceptable for submission as long as the observer follows the Rules and Regulations as set out in the Program guidelines on the Astronomical League web page.

10. **Is it permissible to submit observations that were made prior to the start of this Program?**

Yes, previous observations are acceptable. Be sure that the necessary information of name, date, location, etc. are clearly indicated on each observation.

11. **Is there a Skylist on SkySafari for the objects in the Program?**

Yes, the Skylist is available, compatible with the more advanced SkySafari like SkySafari Pro. Send us an email request and we will return the link to you.

12. **As I understand the "A" is always the primary and the B, C, ... are given in decreasing brightness order (that is increasing magnitudes)**

This is **not** necessarily the case in multiple star systems. The first identification of double stars occurred many years ago, even as early as the 1700's. As observers and telescopes advanced, other components in the system were identified. Some of the subsequent companion stars may be brighter than the original pair and still be part of the system. We have tried to notate the magnitudes of the components on the List as carefully as possible to enable applicants to make accurate observations. Please Note: **Cardinal Points are critical on your sketches. Be sure your Cardinal Points are clearly marked on the outside of your FOV so that the position angles of the stars can be verified.** The size of the "dot" you make on your sketch can help indicate its magnitude in relation to the other stars in the system. Again, you may label stars, "A", "B", "C", etc. if you think that it will avoid confusion. Also **NOTE** that some of the companion stars are at a great distance and may now be in the FOV at higher power.

13. **I'm having trouble observing some of the tight and dim companions stars.**

We need to be aware that this program is not for beginners. There are challenges in recording many of the systems. You may place an "X" at a spot on your sketch where you think a component star that is too dim for your optics/eye to see. Be sure to make your "guesstimate" as accurate to the Lit. as possible, i.e. Separation and Position Angle. As was so aptly stated by J.F. Kennedy at the onset of the Lunar Landing Program, we choose to do these things **"not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept."**

14. **What ways can I send you my observations**?

There are a variety of ways to submit your observations. If they are sketches on paper, you can scan them and send them electronically. Once they are scanned there are some good possibilities. Shared Google Drive: In this option we can set up a Google Drive shared account. Whatever you upload to your Drive will show up on mine. Email: If the files aren't too large they can be attached to an email. This could be done in a series of emails if the files are too large. They can be compressed to a Zip File and attached to an email. Thumb drive: You can send me the thumb drive via snail mail. I can even return it to you. Photocopy: Simply copy them at an Office Max or photocopy shop and send the copies snail mail. Lastly you can take the risk of sending the originals and I'll snail mail them back to you after I've reviewed them, this is NOT advised.