



ASTRONOMICAL LEAGUE

**A FEDERATION OF ASTRONOMICAL SOCIETIES
A NON-PROFIT ORGANIZATION**

- ★ *To promote the science of astronomy;*
- ★ *By fostering astronomical education;*
- ★ *By providing incentives for astronomical observation and research;*
- ★ *By assisting communication among amateur astronomical societies.*

ASTRO NOTES

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Note 22: Preparing and Presenting a Paper

Presenting a paper at a club meeting or regional or national convention can be fun. But do not feel obliged to present a talk just because you are asked or an organization calls for papers. If you do decide to present a paper, the following guidelines may help you in your effort.

Preparation

Select your subject carefully. Not only must it be one on which you can speak authoritatively, it must be one in which the expected audience has an interest as well. Keep the intended audience in mind throughout your preparation and gear the technical level within their grasp. Remember, you are trying to pass on information and stimulate interest, not impress the audience with the depth of your knowledge.

Plan to talk for five minutes less than the allowed time. Decide how many points you can cover within this reduced time. Make an outline with those points as the major headings. Rearrange them until they follow in a logical order. Only then should you begin to write the connecting material which will make up the bulk of your presentation. Research any details of which you are not absolutely certain (and even check some of the details of which you are certain!).

Prepare a 100-200 word abstract of your planned talk. The abstract should cover the major points and conclusions that you plan to present. If prepared before writing your paper, the abstract, together with your outline, will help you keep to the themes you want to discuss. The program and publicity chairs will find your abstract helpful when they publicize the event, too.

Remember the teacher's rule-of-thumb, "Start by telling them what you're going to tell them. Then tell them. End by telling them what you've just told them." This technique is proven effective and the audience will come away secure in the knowledge they have gained.

Illustrations

Always prepare your illustrations ahead of time. Unless you are very proficient, you will not be able to talk effectively with your back to the audience while you attempt to draw your concepts on a board. Check with the sponsoring organization for the required or preferred format for your illustrations. Microsoft PowerPoint® is commonly used for computer-projected illustrations.

Photographic images must be of highest quality. An image that is too dark or too light does more harm than good as the audience struggles to make out the details.

Color can emphasize key areas, but do not over use colors or they will become distracting. Avoid colors far apart in the spectrum, e.g., red and blue, together. Near- and far-sighted members of the audience will have difficulty focusing on both of them.

If your illustrations include tables of data, avoid presenting too much information in a single table. The data will run together and your audience will lose interest rather than try to hunt for the key information. Highlight the key data and include only a few other examples.

Presentation

Speak loudly and clearly. Continually scan the room so you appear to be speaking directly to each member of the audience. If you are using a microphone, find the proper position for your head and try to stay as close as possible. Be particularly careful when turning away toward your illustrations: don't talk while you are facing away from the microphone.

If you use a projection pointer, rest your elbow on the podium or table or press your forearm to your side. This will help keep the pointer steady. If using an overhead projector, lay a pencil directly on the transparency to point out information. If using a computer projector, activate the computer mouse as a pointer. A constantly jiggling pointer distracts your audience and makes them think you are nervous and uncertain of your topic.

Unless it is absolutely necessary, minimize the development of mathematical formulae. The steps are not before the audience long enough to be copied or memorized and the development will detract from the main point: your conclusion. It is better to prepare the development in hard copy, either to hand out or to include in a published form of the paper.

If your paper is prepared completely in advance and you plan to read it, be sure to type it double spaced with clear, black letters. If you use a word processor, choose a font that is easy for you to read. Have extra copies available for interested individuals or the editor of the proceedings, if one is to be published. You may elect to have two written versions: one from which you read your presentation, and one for hand-out or publication which contains more technical detail or mathematical development.

If you speak extemporaneously, have a well-arranged outline or notes to be certain that you do not miss important points. Stick to your notes and avoid the temptation to ramble on about a few points and then fail to cover others as your time runs out.

After your presentation, ask yourself how you could have improved the talk. Make a few notes and refer to them the next time you are asked to speak. Soon, you'll be speaking like a pro.