

SPOC Light Use Policy

Adopted by the SPOC Advisory Committee: January 20, 2007

Adoption of a light use policy at the Stansbury Park Observatory Complex (SPOC) is of particular importance during dark nights (i.e., when observing under a moonless sky) after twilight has ended and after observing has started.

Rationale for Policy

- Most all of the observing we do at SPOC is **visual** observing.
- We have multiple scope bays operating at SPOC which implies the need to be respectful of one another's differing use of SPOC. We also need to be respectful of SLAS members who set up on the lawn and their use of SPOC.
- SPOC is not a true dark sky site. However, it can be made fairly dark, allowing for a fair degree of dark adaptation. This is especially true within the walls of the observatory, which serve to help block local light intrusion. This will be increasingly true of the SPOC lawn once light shields are constructed. Seemingly inconsequential light leaks can be very disruptive and destructive to night vision.
- Some simple changes to policies, along with a small amount of discipline on the part of SPOC users, will go a long way towards alleviating current problems caused by white light use at SPOC. This will allow us to get the most out of the darkness offered by the site, and the most out of the photons captured by our telescopes.

Light Use Policy

- Executive Summary: On dark nights, once observing has started at the end of twilight, **use red lights only, don't use white lights.**
 - Computer monitors in the Harmon's Observatory should be red filtered while observing is in progress.
 - Bright red LED flashlights or headlamps will be supplied for use by observatory operators and these lights will be stored in the Harmon's Observatory control room and Refractor House.
 - Bright red LED flashlights or headlamps should be used to check the roof tracks before opening and closing the roof. These should also be used if someone has to search for something in the control room, or storage area, etc.
 - Don't turn on white lights in the control room while observing is in progress. In the current situation, this is true even when the doors to the control room are closed. (However, see below.)
 - If an individual deems it necessary to use white lights while observing is in progress, e.g., in the Harmon's Observatory control room, use a flashlight rather than an area light, in order to minimize the effects on others.
 - If we want to allow the use of white area lights in the control room while observing is going on, then we should carefully evaluate light leaks from the control room around the doors. We should consider the use of some of the simpler photographic darkroom construction techniques, e.g., better seals around the doors, especially under the doors.
 - When storing or retrieving equipment, use only red lights in the storage room of the Refractor House while observing is in progress. We should consider installing red area lights in the storage room.
 - Opening and closing the scope bays should be done using red lights only. Use the bright red LED flashlights or headlamps for cases where visual acuity is necessary for opening and closing. For example, operators should place the cover on the 32" primary mirror of the Grim Scope using a bright red LED headlamp.

- SLAS members setting up on the lawn should also avoid the use of white lights.
- Please avoid shinning bright red flashlights or headlamps into people's faces.
- Recognize that during public nights, when the public is still present, we will need to be more flexible. Towards the end of public nights, as the public thins out, we should become more scrupulous about the light use policy.
- Solving the car headlight problem, while SLAS members' cars are leaving the lawn area around SPOC, is more difficult because of the danger to pedestrians. One possibility is to use "car guides", volunteers using red-light flashlights, to help guide cars out of the area. Another possibility would be to have scheduled "cars-are-leaving" times.

Green Laser Policy

High intensity green laser pointers appear to be a fact of life in amateur astronomy these days. They can be invaluable tools, but they can also be annoying or downright dangerous. In recognition of this, green lasers have already been prohibited from some prominent star parties (e.g., the Winter Star Party in Florida). Those using green lasers should adhere to the following.

Green lasers should:

- **Only** be pointed at celestial objects **well above the horizon**. In doing so, use them in such a way that the beam cannot possibly hit a person. Be very careful when motioning with them low in the sky towards the horizon.
- **Never** be aimed into the sky if there is any danger of hitting an airplane with their beam.
- **Never** be pointed at a person's face or any other part of a person's body.
- **Never** be pointed at walls or the ground to demonstrate how bright they are.
- **Never** be pointed at trees, houses, or other structures.

Appendix: Why People Use White Lights

As further background for the SPOC Light Use Policy, it is important to understand why people use white lights in the first place. Here is a partial list of reasons:

- For convenience and because people are used to white light in their normal lives.
- For increased visual acuity, or coverage, when searching for something or when performing a task requiring delicate motor skills and visual assessment.
- For safety of the observatory scopes while opening and closing the scope bays.
- Because people forget to turn off their lights (e.g., car dome lights) ahead of time.
- Because people have cars with designs making it difficult to turn off dome lights, door lights, head lights, backup lights, etc.
- To asses captured color CCD images using color vision.
- For pedestrian safety outside, when cars are moving onto or off of the lawn.

The use of bright red LED flashlights or headlamps can address cases where increased visual acuity, delicate motor skills, and visual assessment are required. Opening and closing the observatory bays using only red lights has been found to be unproblematic, with the exception of placing the cover on the 32" primary mirror of the Grim Scope by a lone operator. This problem can be solved if the operator uses a bright red LED headlamp, which we intend to supply.

Issues of convenience, forgetting to turn off car dome lights, or the use of unfiltered computer screens, can be partially solved if SPOC users and observatory operators use some discipline and forethought; something which is helped by having an established, well understood light use policy.

The most important issues that remain have to do with car headlights and pedestrian safety.