



GUIDELINES FOR OBSERVERS AT THE LBT

Updated May 19, 2014 - CV

These guidelines for visitors to the LBT contain three sections, medical alerts, road warnings, and safety guidelines. Please return the signed acceptance declaration (last page) to Bonnie Ferguson at the LBT (Fax: +1-928-828-1191) prior to your arrival in order to ensure that your access to the telescope is not delayed or cancelled for lack of proper documentation.

CONFIRMATION THAT ONE HAS READ, FULLY UNDERSTOOD AND ACCEPTED THE ADVICE AND INSTRUCTIONS GIVEN IN THESE GUIDELINES - COMPLETION OF THIS DOCUMENT IS REQUIRED OF ALL VISITORS.

MEDICAL ALERTS

The LBT is located on the summit of Mt. Graham at an altitude of 3221 meters (~10,500 ft). Ascent to this altitude exposes you to a reduction in atmospheric pressure, which can result in a variety of medical conditions. Due to this high altitude visitors to the LBT site may suffer from one or more of the following symptoms: headaches, dizziness, tiredness, irritability, insomnia, reduced intellectual capacity, impaired exertion tolerance, and vomiting. It is also possible, although unlikely, to develop one or both of the severe mountain sicknesses, pulmonary and cerebral edema, both of which can be fatal.

IN THE EVENT OF THESE SEVERE MEDICAL PROBLEMS, YOU SHOULD IMMEDIATELY INFORM AN LBT STAFF MEMBER.

The altitude may also aggravate pre-existing conditions, particularly cardio-vascular and respiratory diseases. Individuals with these conditions should make sure to seek professional medical advice before planning any trips to the summit. Bottled oxygen is available at the LBT for emergency use.

It is in your best interest to stay rested and, ideally, to avoid heavy meals and alcohol on the day before your trip to the mountain. Please note that you should also carry with you and drink plenty of bottled water or juice in order to compensate for the low humidity and to avoid dehydration at the summit.

Avoid unprotected eye exposure to glare and bright sunlight at the summit by wearing dark glasses, preferably with UV-coated lenses. It is recommended that you have a hat

and sun block if you will be outside during the day as the sunlight can be very intense, especially in the summer. Jackets are recommended for cold weather, regardless of the time of year.

ROAD ADVISORIES AND WARNINGS

The drive from Tucson to Mt. Graham takes approximately three hours. Approximately two hours are on standard highways until you reach the Mt. Graham International Observatory Base Camp. The last hour is on winding mountain roads with the final six miles unpaved. Though the road is well maintained, you should be aware that conditions can change markedly on the mountain at short notice. You should therefore ensure that the vehicle you will be using to make the trip is adequate for such a journey.

1. Before leaving Tucson or MGIO, drivers should check tire pressure (including the spare), have sufficient fuel and ensure the vehicle is in good condition and has basic tools.
2. Drivers and passengers must wear their safety belts at all times while the vehicle is in motion. This is a state law.
3. Roads leading to the summit can be very dangerous and present a hazard to those driving or riding as a passenger. Drivers must be extremely cautious on the paved and unpaved road, and be aware of steep slopes and drop-offs.
4. Drivers must obtain a radio tuned to the MGIO repeater frequency at the MGIO Base Camp before proceeding up the road to the summit. At the bottom or top of the access road, drivers must inquire on the radio if there is any down or up hill traffic on the access road and announce their departure from either location after confirmation there is no other traffic. Drivers must respond by radio to traffic inquires.
5. Drivers must be alert to on-coming traffic as well as wildlife on the road. Do not litter. Do not disturb nor feed wild animals and take care not to run them over.
6. Drivers must proceed with caution at all times, but particularly when visibility is poor (e.g. fog, darkness, at sunrise or sunset) or when climatic conditions (such as excess rain, snow or ice) could constitute an increased hazard risk. During winter conditions drivers must proceed with extreme caution and be prepared to use chains and drive slowly at all times.
7. Drivers must obey all traffic signs and reduce speed accordingly to match current road and weather conditions. Excessive speed has been found to be a major factor in the majority of accidents that occur on mountain roads.
8. Please take into account that the brakes on your vehicle must be in very good condition. They could be a lifesaver. Remember that when driving down the

mountain you should always use low gears. Avoid driving downhill in a high gear with your brakes constantly applied, as doing so could mean you have no brakes left when you get to the bottom.

9. Driving too close behind another vehicle making its way up or down the mountain can also be a serious safety hazard. Please allow a safe distance between your vehicle and the vehicle ahead of you.
10. Snow plows and road graders have the right-of-way on mountain roads and passing any service vehicle must be coordinated by radio contact with the equipment operator.
11. For travel at night or on weekends particularly in snow or bad weather conditions, drivers should initiate radio contact with the LBTO on the mountain upon their departure from the summit or base camp and send an "all clear" signal upon arrival at their destination.

LBTO SAFETY GUIDELINES

MGIO has dedicated University of Arizona Police Department personnel who will act as the first point of contact outside of the building in case of any emergencies that may occur at the summit. Their contact number is 520-621-8273 and they are available by MGIO radio as well by paging any Star Unit. Safford has a medical center with healthcare professionals and emergency equipment. However, in the event of an emergency or injury requiring transport down the mountain, the telescope's remote location means that no guaranteed time can be given as to when one would reach a hospital or clinic. Be aware that the information contained in the section entitled "Road Warnings" is a guide for travel times under normal circumstances.

The LBT is continuously improving its facilities. While safety is paramount at LBT you may encounter potentially hazardous situations. The following, while not an exhaustive list, are examples of some of the hazards that you should be conscious of while at the observatory. Please understand and respect the risks involved while working in this environment.

1. Know how to use the phone/page/intercom system to call for assistance. If you are unfamiliar with this system please ask an LBT staff member for assistance.
2. The Telescope Operator on duty has full responsibility for the safety of personnel and equipment while observing. They have final say in all decisions regarding your safety and the safety of all of the instrumentation and observatory equipment during the night.
3. Flashlights are recommended at all times and are required after sunset. The power has been known to go out and you might be in a position where you need light to get to a safe location. Always be careful when walking in the dark.

4. Please follow instructions on all posted warning signs.
5. Visitors to the mountain will have full access to the ground floor lobby as well as the entire second floor. Upon arrival, LBT personnel can accompany first-time visitors to the viewing gallery on the sixth floor to see the telescope and chamber. After this initial tour visitors may have unaccompanied access to the viewing gallery. Always inform the telescope operator or another LBT staff member of where you are going and how long you are likely to be gone.
6. The following areas within the LBT building are off limits at all times to visitors unless accompanied by LBT personnel or explicit permission has been given by the LBTO Director or his designee: the first floor high bay area and instrument lab, as well as all auxiliary offices and labs on the first floor; the third floor lower and upper sections; the fourth floor equipment room; the fifth floor telescope chamber; and all levels above the sixth floor viewing gallery. Please respect these restrictions as special training is required for entrance into these areas.
7. Be aware that there may be tools and materials on the floor in high traffic areas where work is taking place. Please watch where you step to avoid tripping. Exercise extreme caution when walking on slippery metal surfaces (e.g. the telescope chamber floor), uncarpeted areas and elevated platforms.
8. When using the scissors lift do not climb on or over the railing. Harnesses are not required in the scissors lift. However if you intend on climbing out of the lift, you must have a fall arrest harness on and be properly tied off. Boom lifts require training and a fall arrest harness to be worn at all times.
9. Low-hanging equipment or materials could present a hazard. Some heavy overhead lifting activities might also be taking place. You must stay well away from any activity involving the use of a crane, and from any other heavy equipment or structures in motion. If the crane is in use hard hats are required. If you are in the same room with an operating crane, a hardhat must be worn. If someone is working over your head, a hardhat must be worn. While safe working practices are in place, there is always a risk of falling tools or materials, so please make sure you are aware of what is happening above you.
10. In the unlikely event you handle any liquid cryogenics, use personal protective equipment.
11. In the unlikely event you are operating power tools or machines you must be qualified to do so. Proper safety equipment must be worn and all safety guards must be in place.
12. Check your fire or emergency evacuation route and meeting area that is posted on a map in your bedroom. A fire risk always exists during certain operations, particularly welding, soldering, grinding and other work where an open flame is involved. In the event of a fire some materials may emit dense and highly toxic

smoke. In the case of a fire, carefully and calmly follow the instructions of LBT personnel.

13. If you go outside of the building during winter be aware of overhangs with falling ice and snow, and please park vehicles away from the building.
14. If you intend to hike on the mountain federal regulations require you to stay within the yellow ropes and on the access road above switchback five as well as above 10,000 ft. elevation. Below 10,000 ft. it is possible to hike in the forest. Make sure you take an MGIO radio with you to ensure that you hear the road traffic on the access road and inform an LBT staff member of where you are going and how long you are likely to be gone.

We encourage you to report safety hazards that require correction and any other conditions that you believe should be included in this list of safety guidelines.

The warnings and advice given in these forms are given freely and without legal obligation. The LBTO does not accept any liability for visitors to Mt. Graham with respect to the potential adverse effects of altitude, driving accidents or any other hazard. If you intend to visit the telescope site you are required to sign the acceptance declaration provided and you therefore assume all risks.

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ACCEPTANCE DECLARATION: I have read and understand the "GUIDELIES FOR VISITORS TO THE LBT" and further agree to act in accordance with this guidance. I accept that the LBTO shall not be held responsible for any accidents while I am at the telescope during the visit.

NAME: _____

SIGNATURE: _____ DATE: _____

Please return this signed form to Bonnie Ferguson at the LBT (Fax: +1-928-828-1191) prior to your arrival at the LBT mountain site.