

Information for ALMA visitors



General Information

The ALMA Operations Support Facility (OSF), at 2,900 meters above sea level, is located southeast of San Pedro de Atacama (40-minute drive). The OSF is where the base camp, cafeteria, offices, labs and control room are located.

The drive from the OSF to the Array Operations Site (AOS), located at 5,000 m, takes about 50 minutes (~30 km). Only ALMA certified vehicles are allowed to drive to the AOS. Children under 16 years are not allowed to go up.

Weather and clothing:

At the OSF days are generally warm and sunny, but nights can be very cold. At the AOS the wind chill can lower temperature considerably. Adequate clothing is recommended, i.e. ski parka or down jacket, gloves, hat with ear protection, warm pants and hiking/trekking boots. Sun glasses and high protection sunscreen are needed at the OSF and AOS. Weather conditions in San Pedro de Atacama can be checked at:

<http://www.accuweather.com/forecast.aspx?partner=netweather&loc=SAM|CL|CI002|SAN%20PEDRO%20DE%20ATACAMA&metric=1>

Safety

A visit to the AOS, which is near Cerro Chajnantor, has some significant safety, security and health implications. Before arrival at the ALMA site, visitors will be shown a safety video or talk explaining the rules and procedures that have to be followed. Visitors must follow all safety instructions.

Visitors to the high site are required to:

- Have slept at least one night in San Pedro de Atacama or Calama before they can go up to the AOS
- Undergo a medical check-up (blood pressure and oxygen level) at the OSF polyclinic. Those who do not pass the test are not be allowed to continue to the AOS
- Sign a waiver form (if they are not employees)

High Altitude Health Issues

There are some inherent risks involved in traveling to high altitude. When visiting the ALMA observatory site, you should be prepared to recognize and respond to the symptoms of altitude sickness caused by the lower level of oxygen available at high elevations. The human body adjusts to changes in altitude, but this acclimatization takes time and varies from person to person.

Prevention

The simplest way to avoid or reduce the symptoms of altitude sickness is to ascend slowly to give your body time to become accustomed to changes in oxygen concentration. It is also important to increase your intake of fluids to counteract symptoms of dehydration induced by dry mountain air and increased respiratory rate. Spending a night at an altitude of 7920 feet or 2,400 m (Calama or San Pedro de Atacama) helps your body to adjust.

Recommendations

Symptoms of altitude sickness occur during ascent, not descent. If you, or a member of your party, becomes ill during ascent, you should always assume the problem is due to altitude sickness and act accordingly.

Avoid drinking alcohol or taking any unnecessary medications, since their effects may be increased at high altitudes. Sleeping pills, tranquilizers and narcotic-based pain relievers, in particular, can cause serious problems at high altitudes because they can decrease the breathing rate. Consult with your health care provider about any medications you plan to bring with you.

Types of Altitude Illness

Acute mountain sickness (AMS) may include one or several of the following symptoms:

- Headache
- Insomnia
- Irritability
- Dizziness
- Muscle aches
- Fatigue

- Loss of appetite
- Nausea or vomiting
- Swelling of the face, hands and feet

Danger signs include severe headache, extreme fatigue or breathlessness (especially while resting), and any neurological problems such as stumbling, confusion, poor judgment or changes in consciousness. It is crucial to descend until symptoms begin to diminish if these signs are present.

If you experience mild AMS symptoms, limit your activity level. If appropriate for your medical status, aspirin or ibuprofen can be used for headache. If symptoms become worse during the visit, it is very important to descend until symptoms improve.

Consult your health care provider or travel medicine specialist for specific recommendations about prevention and treatment.

High Altitude Cerebral Edema (HACE) a worsening of AMS symptoms, with the addition of changes in consciousness and/or a loss of coordination as intracranial pressure increases. Those affected may appear confused and begin to stumble or stagger. They can have severe headaches and incapacitating fatigue. This is a dangerous form of altitude sickness. *It is crucial for the affected person to descend and receive drug and oxygen treatment.* Watch each other for symptoms, since affected people may be unable to identify the problem. People who have experienced HACE should not visit the high site.

High Altitude Pulmonary Edema (HAPE) is a buildup of fluid in the lungs that can occur along with HACE or as a separate illness. Those affected experience breathlessness and fatigue when walking, having a sense of fullness or pressure in the chest. Affected individuals can eventually be short of breath even while resting. *HAPE sufferers must be guided back to lower altitude and receive drug and oxygen treatment as soon as illness is diagnosed.*

Health Conditions

If you have had altitude problems previously, if you have heart or lung problems, or if you are planning to go to extremely high altitudes, consult your health care provider to discuss your options for prevention and treatment of illness.

We want your visit to be pleasant!