

	<p>Atacama Pathfinder EXperiment</p> <hr/> <p>Safety Plan</p>	<p>APEX-APX-PLA-0004</p> <p>Revision: 1.0</p> <p>Release: 2004-09-18</p> <p>Category: 1</p> <p>Author: L.-A. Nyman</p>
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APEX Safety Plan

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Change Record

REVISION	DATE	AUTHOR	SECTIONS/PAGES AFFECTED	REMARKS
0.1	30.04.04	Nyman	new issue	
0.2	05.05.04	Nyman		Minor additions RG
0.3	16.07.04	R. Kurz	All	Editing for APEX
0.3b	25.07.04	Nyman	6	Definition of SCS
0.4	11.8.04	Nyman	All	Incl. comments from R.Güsten & M.Boecker
0.5	18.09.04	Nyman	All	Clarified the definition of APEX base and APEX telescope site. Changed reference to the Paranal Safety Engineer.
1.0	27.09.04			Approval of R0.5 by Board



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1 Purpose

The purpose of this document is to outline a comprehensive safety program for the APEX project. The personal safety and health of each APEX employee, contractor employee, and visitor is of primary importance. Prevention of occupationally-induced injury and illness are of high priority.

To be successful, such a program must reflect proper attitudes toward injury and illness prevention on the part of management and employees. It requires cooperation in all safety and health matters among employees, their co-workers, and visitors.

The APEX Management Plan (AD-01) specifies that the APEX Station Manager has authority over all safety aspects of the APEX activities at the APEX Site in Chile. The ultimate responsibility for safety, however, cannot be delegated to an individual. Adequate attention to safety is the responsibility of all personnel – APEX staff, partner staff, contractors, and visitors. Each person at the site is expected to comply with all identified safety and health standards, rules and regulations pursuant to our policy for prevention of all accidents.

2 Scope

This plan defines the safety responsibilities and management practices required to produce a safe environment for work at the APEX Site, but does not describe in detail the safety rules, regulations and procedures. The APEX Partners have established safety programs applicable to activities at their existing facilities (e.g., RD-01 for MPIfR and AD-08 for ESO). The high altitude of the APEX telescope site in Chile presents unique hazards that necessitate safety measures beyond the established programs (see RD-02 for background information on work at high altitudes). A common approach will be taken within the APEX project for these additional safety measures. Because the APEX Site is under the operational control of ESO, the general ESO safety policies, rules and regulations (AD-08) apply. The additional safety rules, regulations and procedures specifically applicable to the APEX Site are defined in APEX safety documents (AD-02 to -07).

The APEX telescope is located within the ALMA science preserve at Chajnantor where the ALMA Director has overall responsibility for safety. APEX will have an understanding with the ALMA Director that includes:

1. Agreement on safety rules, regulations and procedures,
2. Agreement on waiver forms for contractors and visitors,
3. Agreement on medical examinations required for work at high altitude,
4. Collaboration between the two organizations (including mutual assistance in case of emergencies, access for APEX staff to the ALMA clinic, the use of the ALMA road, road maintenance, collaboration in radio communication on the site, etc.).



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3 Acronyms/Definitions

ACHS Asociacion Chilena de Seguridad

LSO La Silla Observatory

SCS Site Certified Staff

APEX Partners – the signatories of the APEX Memorandum of Understanding:

Max-Planck-Institut fur Radioastronomie (MPIfR),
European Southern Observatory (ESO),
Onsala Space Observatory (OSO), and
Ruhr-Universitat Bochum (RUB).

APEX Site – the site of APEX construction and operations in Chile that consists of

APEX Base located in Sequitor near San Pedro de Atacama (altitude 2440 meters)

APEX Telescope site located in the ALMA Science Reserve on the Chajnantor plateau east of San Pedro de Atacama (altitude 5050 meters)

APEX Staff – the employees of the APEX Partners who are assigned to work on APEX at the APEX Site on a regular basis.

APEX Partner Staff – the employees of the APEX Partners who periodically work on APEX at the APEX Site, but not on a regular basis.



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4 Documents

4.1 Applicable documents

AD-01	APEX Management Plan	APEX-MPI-PLA-0001
AD-02	APEX Safety Regulations	APEX-APX-PRO-0001
AD-03	APEX List of Safety material	APEX-APX-LIS-0001
AD-04	APEX Safety Training	APEX-APX-PRO-0002
AD-05	APEX Visitor Waiver Release Form	APEX-APX-PRO-0003
AD-06	APEX Contractor Waiver Release Form	APEX-APX-PRO-0004
AD-07	APEX Medical Examination	APEX-APX-PRO-0005
AD-08	Manual of ESO's Policies, Rules and Regulations concerning Safety, Health And Environmental Protection; Issue 2, 1 Sep 1997	SAF-POL-ESO-00000-0001

4.2 Reference documents

RD-01	MPIfR Safety Regulations	APEX-MPI-PLA-0100
RD-02	Safety at ESO Web Page/Work at High Altitude http://www.eso.org/safety/high_alt.html	



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5 Safety Responsibilities

5.1 Agreement between APEX partners

The APEX partners shall agree on a common set of safety regulations (AD-02).

The APEX partners shall agree on a common list of medical examinations to be taken by their employees before going to the APEX Site (and especially the APEX telescope site) in Chile (AD-07). The list should be common to the list for ALMA staff and included in the agreement with ALMA (mentioned in Section 2).

The APEX partners shall agree on safety training that shall be taken by staff (AD-04).

5.2 Approval

The APEX Board shall approve all safety documents, rules and procedures.

5.3 Authority

All staff from APEX and the APEX partners are under the authority of the Station Manager regarding all safety aspects during work at the APEX Site. He has the ultimate word as to the safety of the work place and is responsible for any incident reporting.

5.4 Staff

All staff are responsible for the health and safety of themselves and their fellow workers. All employees must follow the safety regulations.

All staff planning to work at the APEX Telescope site shall undergo the agreed medical examination (AD-07) prior to going to Chajnantor. The names of all medically-certified staff shall be submitted to the APEX Station Manager.

5.5 Visitors

All visitors must sign a Visitor Waiver and Release Form (AD-05), and submit it to the APEX Station Manager or his representative before visiting the APEX Telescope site.

5.6 Contractors

All contractors working at the APEX Telescope site must sign a contractor waiver and release form (AD-06) and submit it to the Station Manager or his representative.

Contractors planning to work at the APEX Telescope site shall undergo the necessary medical examinations for working at altitudes above 3000 m (see AD-06).



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6 Safety Management

As specified in the APEX Management Plan (AD-01), the APEX Station Manager has authority for all aspects of safety at the APEX Site in Chile, and is hence responsible for safety management. Within the APEX management structure the APEX Station Manager reports to the APEX Board regarding safety. Because APEX is operated in Chile under ESO's La Silla Observatory (LSO), the APEX Station Manager connects into ESO safety management structure via the Paranal Safety Engineer. The Station Manager shall appoint in writing an APEX staff member as APEX Safety Officer to carry out safety-related tasks under the supervision of the APEX Station Manager. APEX staff and APEX partner staff who have taken all safety courses (AD-04) may become Site certified Staff (SCS) who are certified to be responsible for the safety during work at the APEX telescope site.

6.1 Emergency Services

ESO has an agreement with ACHS in Calama and the local clinic in San Pedro to have access to their services for emergency treatments. The agreement includes APEX staff, APEX partner staff and visitors.

6.2 Safety Regulations

The APEX Station Manager shall, together with the Paranal Safety Engineer and representatives from the APEX partners, produce the APEX safety regulations (AD-02).

The APEX staff, partner staff, visitors and contractors shall be bound by the APEX safety regulations.

6.3 Safety Materials

The APEX Station Manager shall produce a list of safety equipment and materials (AD-03) required to provide a safe working environment at the APEX Site, and shall ensure that these items are acquired, periodically checked and maintained in proper working condition.

6.4 Training

The APEX Station Manager shall define the safety training, including the preparation of training materials, to be given to APEX staff and partner staff (AD-04). It shall include initial training and periodic retraining.

6.5 Safety Budget

The APEX Station Manager shall define a safety budget (for safety material, training etc.), which shall be approved by the Board.