



A Few Considerations About Operating in Chile

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The Astronomy Record in Chile

- Foreign Observatories have successfully operated in Chile for nearly half a century, through democratic and authoritarian regimes.
- Chilean governments have shared a common policy of welcoming the establishment of world class foreign observatories, recognizing them as agents of scientific and technical fallout in the country.
- Chile has one of the soundest property and labor law environments in Latin America, open to foreign investment and operation.
- Astronomy initiatives have "diplomatic status" and they can import goods free of taxation, be exempt from value added tax, among other exceptional privileges.
- Quality of infrastructure, technical and banking services and "modernizing trends" are the best in the region.
- National and local administrations are affected by extremely low levels of corruption and only moderate amounts of red tape.
- Relationships between foreign observatories and Chilean astronomical institutions are very friendly and they operate in a mutually "altruistic" mode.

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Operating Modes of Foreign Observatories in Chile

- Establishment of foreign observatories in Chile takes place under guidelines contemplated in the "Astronomy Law", nr 15172.
- A foreign, non-profit organization (such as AURA, AUI or Carnegie) establishes legal presence in Chile and enters a cooperative agreement with a Chilean academic institution (such as Universidad de Chile or P. Universidad Catolica).
- That partnership requests recognition as recipient of the privileges described in the Astronomy Law and operation of the observatory takes place under that legal umbrella.
- The Chilean partner administers the 10% of the telescope time allocated, by law, to scientists at Chilean institutions.

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Options for Establishing CCAT in Chile

- One of the existing partners, already endowed with legal standing, establishes a partnership with a Chilean institution and jointly with that partner applies for the benefits of the law 15172.
- A new legal entity is formed, and it will represent CCAT in Chile.

Note:

A revision of the Law nr 15172 lies dormant in the Chilean Congress. It will have an impact on the way the Astronomy business is conducted in Chile, if passed.

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Site Issues and New Political Paradigms

In the last year, the bureaucratic path to obtaining permits for astronomical site activities has become much more complex and slower.

This reflects a political shift towards increased recognition of the rights of indigenous populations, higher sensitivities towards the value of the historical record found in the field and increased protection of the physical and biological environment.

Requests that until recently were processed by CONICYT (National Committee for Science and Technology) within a matter of days now require clearance by CONADI (National Committee for indigenous affairs) and by local committees. While these new practices enhance the protection of the environment, preserve the historical record and protect local rights, they also increase the scheduling burden for initiatives that require agile implementation, such as site surveying.

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Practicalities and CCAT Operation Modes - 1

- It will be necessary to hire the services of a legal office in Santiago, to process the implementation of the Astronomy Law protection and to monitor legal issues. This could be one of the offices already serving AUI, AURA, Carnegie.
- During normal operation of CCAT, instruments and other hardware will enter Chile by air through Santiago. It will be necessary to hire shipping and customs clearing personnel. This may be better done by contracting such services from AUI/ALMA.
- However, the maintenance of a close contact with the national agencies is desirable. In the possible absence of a CCAT facility in Santiago, that may be best achieved by establishing close collaborations with Chilean academic institutions, as their senior faculty can act as effective links to the government agencies.

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Practicalities and CCAT Operation Modes - 2



- The baseline paradigm for the CCAT operation contemplates independent facilities, staff and services.
- This does not reflect any final decision on the observatory operational mode, but rather the easiest way to estimate a costing profile.
- Operation of an independent support facility at the lower altitude near San Pedro is part of the baseline operations paradigm. It may also be the most likely to be reconsidered. The most important reason is that it will be difficult to maintain good quality of services: a 20 person operation may not have critical mass to achieve that goal (power, water, gasoline, food, contracting with remote providers of services and manpower).
- Possible alternatives:
 - join forces with another operation of comparable size (e.g. APEX)
 - contract space and services with ALMA
 - rent space at a local hotel (e.g. CBI mode)

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Timescales



- The process of establishing legal presence in Chile will require 6-9 months.
- The CCAT schedule contemplates start of site development activities in the first half of 2007. By then, we need to have selected a site, fulfill environmental-etc. impact studies, obtain permissions from various agencies.
- The current schedule for site selection activities projects a decision on the Cerro Chajnantor site, at the very earliest, by the middle of 2006.
- The CCAT schedule is tight, but possible, provided that legal measures to establish partnership and legal presence in Chile are initiated as soon as the go ahead for the next phase of the project is obtained.

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