

Toward a Management Plan for the Trilateral ALMA Project

Expanded ALMA Executive Committee
(Draft 10 October 2001)

Summary

1. Management Principles for the Trilateral ALMA Project

The E-AEC has reviewed the potential applicability to the trilateral project of the ALMA Management Plan that was developed for the bilateral project; we believe that an adequate framework exists which can be adapted with some modification to serve effectively the needs of the trilateral project. In particular, the same principles that informed the bilateral management plan should also serve to guide the trilateral plan. Specifically:

- The construction, commissioning and operation of ALMA will be governed by an international Agreement between three *Parties*, the NSF acting for North American organizations involved, ESO acting for European organizations involved, and NAOJ acting for Japanese organizations involved;
- The Parties will establish an ALMA Board as the supervisory and regulatory body for the Project; the ALMA Board is not a legal entity;
- The Parties will each appoint an *Executive* empowered to act on behalf of the Party to carry out the tasks required to construct and operate ALMA; the Executives are legal entities. Funding for the Project will be provided by the Parties to their respective Executive;
- The Parties will establish new institutions for ALMA only if absolutely necessary;
- The Parties will make equal value contributions. To the maximum extent possible the Parties will share the ALMA work equitably and receive equal intellectual and economic benefit from their ALMA participation;
- The ALMA Board will establish an International Project Office (IPO) to provide the central focus for the management and control of the Project. The Board will select the personnel for the IPO by international search;
- The ALMA Board will establish standing Management and Science Advisory Committees for the ALMA Project;
- The Executives will each establish a *Project Office* with a project Manager and the project management structure they regard as necessary to manage their assigned ALMA tasks;
- The Executives' project management, acting together, will establish the project Work Breakdown Structure (WBS) and divide the WBS tasks such that tasks of approximately equal value and equal risk are assigned to each Executive;

2. An Implementation of the Management Principles for the Trilateral ALMA Project

The management structure needed for the trilateral ALMA Project must be one capable of assuring that the usual project goals of cost, performance and schedule compliance are achieved. But in addition, the *guiding principles* make it clear that it must also be one in which the work can be done by three Executive Agencies making use of the staff and resources of those Executives. The principle that no new institution be established as an organizational entity for ALMA means that the project must be organized so that the work is managed and coordinated jointly but resources are allocated separately. It is a significant challenge to create a management structure that satisfies all these requirements. The nature of the ALMA Project as the production of a set of tightly integrated instrumentation assemblies makes it impossible to separate the project into three independent parts that can be controlled by interface documents; a tightly integrated management is necessary for a tightly integrated project.

As a solution to this problem, we recommend that the management structure for the trilateral ALMA Project be based on the concept of Integrated Product Teams (IPTs).