

## **EVLA Project Book: INTRODUCTION**

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### Revision History:

2001-Aug-01: Initial release

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The goal of the Very Large Array Expansion (EVLA) Project is to improve most of the key observational capabilities of the Very Large Array (VLA) by at least an order of magnitude. The Project is divided into two Phases. Phase I will, by the application of modern technologies, improve the sensitivity, bandwidth, spectral resolution and frequency coverage of the existing 27 element array. Initial funding has been provided for Phase I and work has commenced on planning and design for this phase. Phase II will increase the angular resolution of the existing VLA by adding additional array elements around New Mexico. Also to be considered in Phase II are the addition of a condensed array configuration smaller than the existing D configuration and the addition of low frequency observing bands to the existing antennas. Phase II has not yet been proposed for funding. Initially, this Project Book will describe only the Phase I project. If and when the Phase II project commences, this book will be expanded to include it.

This Project Book is intended to satisfy several functions. It is the principal description of the science requirements, the technical specifications, the design selected to achieve the specifications, the schedule on which tasks are to be accomplished, and the task responsibilities. Where one task interacts with another either in the design or integration, the interface requirements are specified.

After an initial period of project definition, when all subsystems have completed Preliminary Design Review (PDR), the Project Book will be placed under configuration control. At that time specifications in the Project Book – technical specifications, interface specifications or schedule – will be controlled by EVLA System Engineering. Changes will not be made to the configuration without the process specified by System Engineering, through the Control Board, being followed and approval granted.

The Project Book is the fundamental reference for what is, and is not, in the Project. As decisions are made and implemented those decisions will be incorporated into the Project Book. The Project Book is kept electronically and is always available on-line for reference by the Project and interested others. A revision history is included to aid change tracking. Although it is a living document and will evolve, it is at all times the current, and complete, Project configuration. Maintenance of the Project Book is the responsibility of EVLA Systems Engineering.