

The Dark Energy Camera (DECam) Project

Conceptual Design Report

**Version 0.1
25 April 25, 2006**

The Dark Energy Survey Collaboration ¹

¹Fermi National Accelerator Laboratory, University of Illinois at Urbana-Champaign,
University of Michigan, ...

1. Introduction: The Science Context of the Dark Energy Survey

2. Justification for the DECam Project

2.1 Mission Need for a Ground-Based Dark Energy Experiment

2.2 Does the DECam Project Satisfy Option 1 in the Mission Need Statement?

2.3 Comparison of DECam to Alternatives for This Mission Need

2.4 The Schedule and Cost Range of DECam

3. Description of the DECam Project

3.1 Site Selection

3.2 Performance Parameters of the Blanco Telescope and the DECam Instrument

3.3 DECam Conceptual Design

3.4 Work Breakdown Structure for the Project

3.5 Preliminary Interface Control Documents for the Project

3.6 Project Deliverables

4. Management Concerns and Impact of the DECam Project

4.1 Public and Stakeholder Input

4.2 Environment, Safety, and Health

4.3 Safeguards and Securities Plan and Vulnerability Assessment

4.4 Preliminary Plan for Demobilization of Replaced Facilities

4.5 Preliminary Plan for Decontamination and Decommissioning

4.6 Preliminary Project Execution Plan

4.7 Project Constraints

4.8 Reviews

Appendices

Appendix A: Mission Need Statement – Ground-Based Dark Energy Experiment

Appendix B: