



DARK ENERGY
Survey



Fermilab

Dark Energy Survey (DES) Working Group Meeting

June 13, 2006

1:00 – 3:00 PM

Snake Pit

Agenda

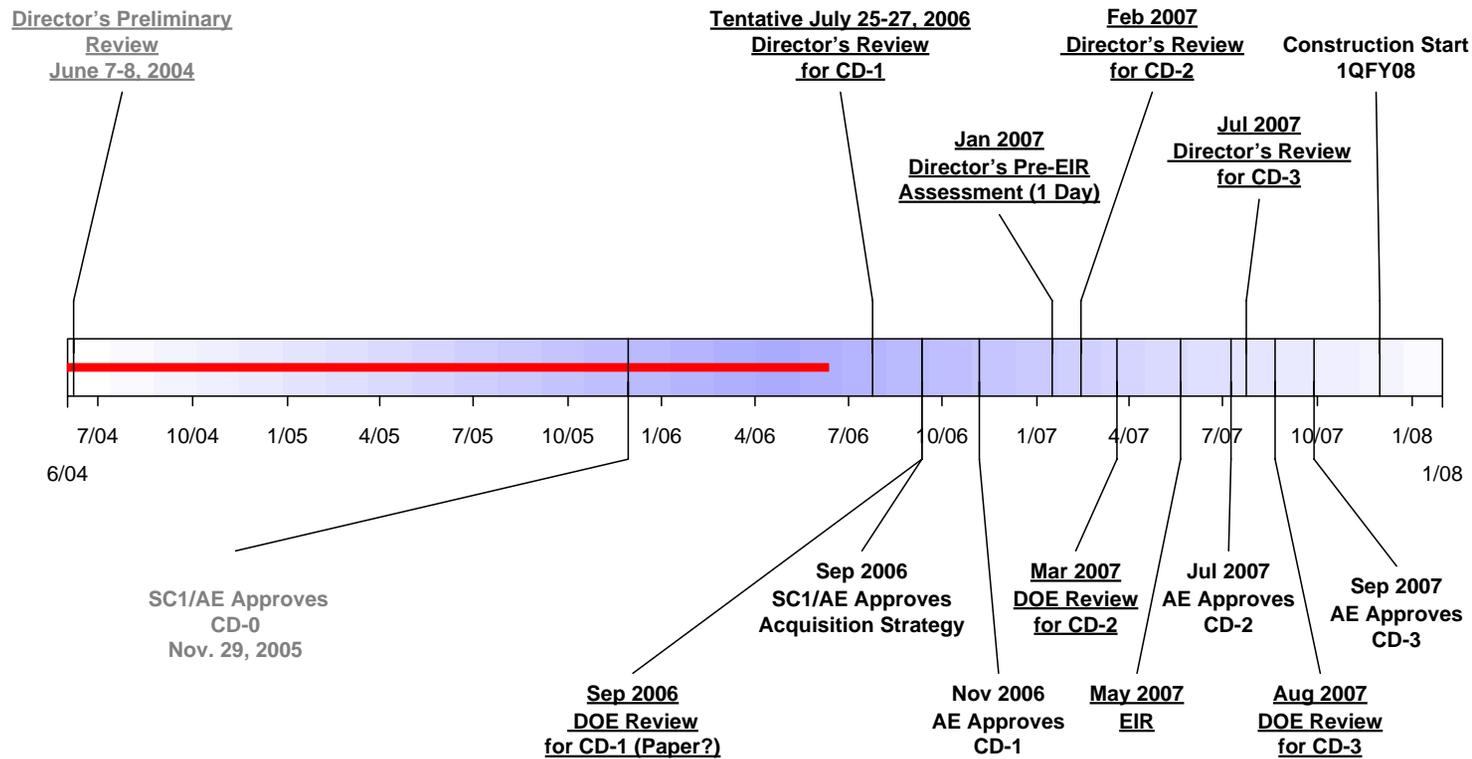
- 1) Discuss DES Timeline [Ed/Dean]
- 2) DES Status / Progress on All CD-1 Documentation [Wyatt] Had a goal of Friday, June 16 for drafts of all. Use EXCEL Spreadsheet provided earlier or a modified version with dates of actuals and projections. Be sure to include status and description of the Resource Loaded Schedule.
- 3) DES CD-1 Director's Review [Ed]
 - a) Date: July 25-27, 2006 [Reserved]
 - b) Charge [Done?]
 - c) Agenda [Well along]
 - i) DES identify ruthless Timekeeper to keep speakers on schedule
 - d) Current Status of Recruiting Reviewers [Halting Progress]
 - e) Review web page; establish in late June and start posting material.
 - f) Cost "Drill Down" Executive Session example for a CD-1 Review
 - g) DES responses to June 2004 Preliminary Director's Review Recommendations
- 4) Status of Open Action Items from the prior meetings: [Brenna/Wyatt]



Dark Energy Survey Project Timeline for Critical Decisions & Reviews



Updated 12-Jun-06



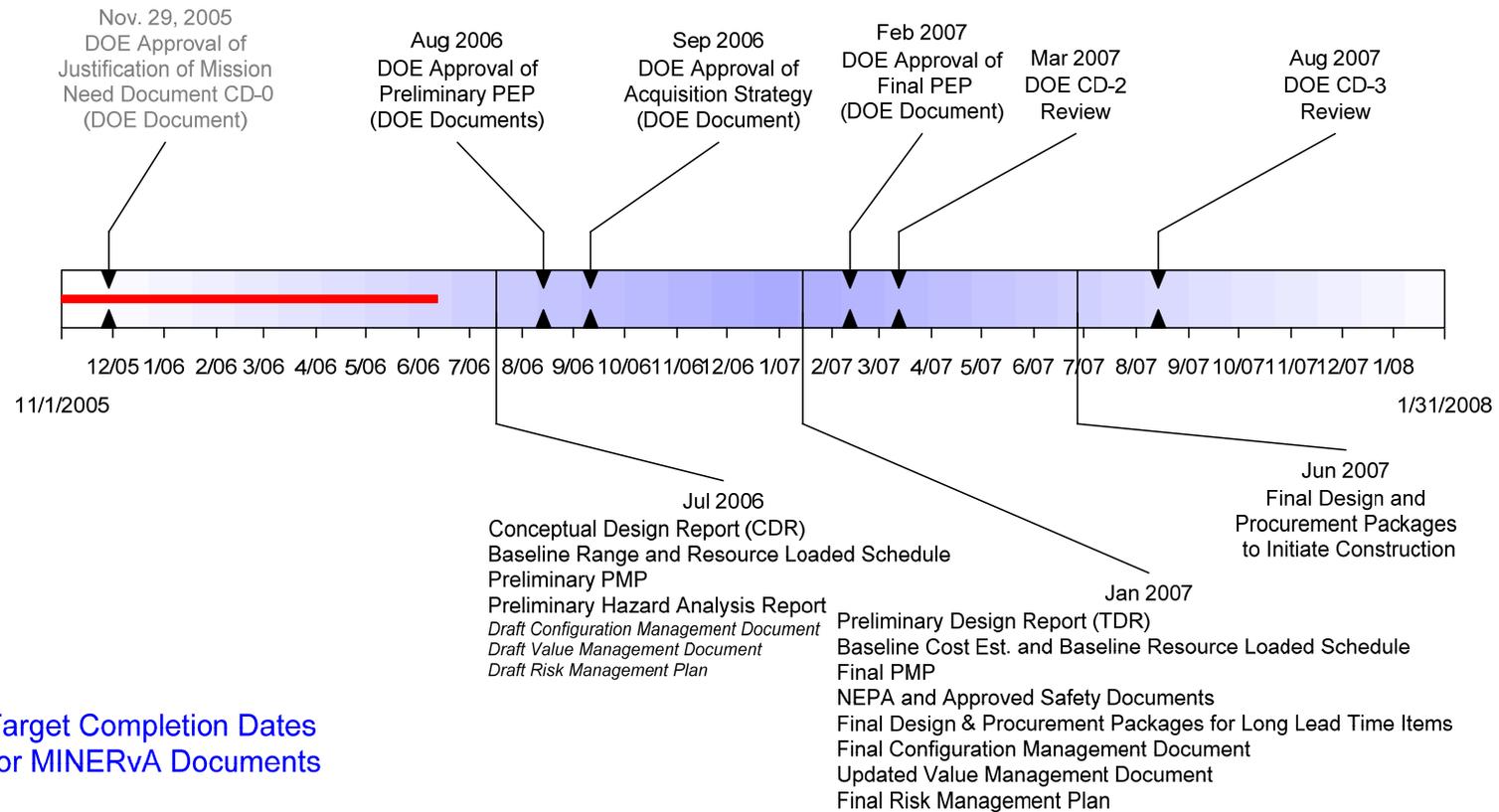


Dark Energy Survey Project Draft Critical Decisions Prerequisites



Updated 04-Apr-06

Estimated Need by Dates for DOE Approvals and Documents



Target Completion Dates for MINERvA Documents

Note:
Items marked in Red indicates change from prior version

Draft Agenda

Tuesday, July 25, 2004 – Location

8:00–9:00 AM	Executive Session (Comitium - WH2SE)	Ed Temple
9:00–9:10 AM	Introduction (Curia II – WH2SW)	Hugh Montgomery
9:10–9:25 AM	DES Project overview, How DECam is defined	John Peoples
9:25–9:55 AM	AO, CTIO site, telescope environment, user community, how DECam fits in the CTIO program...	Alistair?
9:55–10:25 AM	DES Science goals and requirements	Jim Annis
10:25–10:55 AM	Break	
10:55–10:10 AM	DES in the context of the Dark Energy Task Force Rpt	J. Frieman
11:10–12:10 PM	DECam Project Overview, Management, Organization, Cost, Schedule	Brenna Flaughner
12:10–12:40 PM	Data Management	Joe or Christina
12:40–1:30 PM	Lunch (2 nd Floor Crossover)	
1:30–2:00 PM	CCD characterization, yield	Juan
2:00 - 2:20 PM	CCD readout electronics	Terri
2:20–2:40 PM	Optics: design, procurement assembly and testing plans	Peter
2:40–3:10 PM	Mechanical Overview (camera, barrel, cage, hexapod...)	Stefanik
3:10–3:30 PM	Simulations and Photo-z's	Lin and/or Stoughton
3:30–3:45 PM	BREAK	
3:45–4:45 PM	Breakouts Sessions (Sessions 2, 3 and 4 only) See Breakout Detail Section for Room Assignments	
5:00–6:30 PM	Executive Session (Comitium WH2SE)	Ed Temple

Draft Agenda (continued)

Wednesday, July 26, 2006

8:00–8:45 AM	Cost and Schedule Executive Session (Comitium WH2SE)	Ed Temple
8:45 – 12:45	Breakouts Sessions (BREAK at 10:15 outside of Comitium)	
	1) Management, Cost and Schedule (Comitium - WH2SE)	Brenna Flaughter, Wyatt Merrit, John Peoples
	2) CCD Packaging, Characterization, Testing in Cubes and multi-CCD vessel, Camera vessel design and prototype (Snake Pit – WH2NE)	Estrada, Diehl, Cease
	3) Optics, filters, bandpasses, filter changer, Barrel hexapod, prime focus cage, mechanics, and integration at CTIO (Racetrack – WH7X)	T. Abbott, Stefanik, Doel, Bigelow
	4) CCD readout electronics and SISPI (Black Hole – WH2NW)	Shaw, Thaler, Merritt
12:45–1:45 PM	LUNCH (2 nd Floor Crossover)	
1:45–2:45 PM	DES Respond to Committee Questions from 1 st Day and Additional Questions from Breakouts (Comitium, WH2SE)	Brenna Flaughter, Wyatt Merritt, John Peoples
2:45 PM	Executive Session and Report Writing (Comitium, WH2SE)	

Thursday July 27th

8:30–2:00 PM	Closeout Dry Run with working lunch (Comitium, WH2SE) Breaks taken as necessary.	
2:00 PM	Closeout (Curia II WH2SW)	

Draft Agenda (continued)

Breakouts Details with possible talks identified

	1) Management (Comitium - WH2SE)	
20 min	Critical paths, CCD procurement plans	Flaughter
30 min	CD-1 Documents	Wyatt
	2) CCD Packaging, testing, Characterization, infrastructure (Snake Pit – WH2NE)	
20 min	CCD testing rate, production plans	Estrada
20 min	Camera description and multi-CCD test vessel, cooling	Cease
20 min	Cube and Multi-CCD vessel infrastructure and controls	Diehl
	3) CCD readout Electronics and SISPI (Racetrack – WH7X)	
20 min	Barcelona developments	Laia?
20 min	Madrid Developments	Gustavo?
20 min	SISPI	Thaler
20 min	Telescope Controls upgrade	Abbott
20 min	Guiding	Castander
	4) Optics, mechanical, filters, integration (Black Hole – WH2NW)	
20 min	Photoz-s and filter definition	Lin and/or Ofer?
20 min	Filter changer	Bigelow
20 min	Hexapods	Leger
20 min	Focus and alignment	Gladders, Kent

Status on Reviewers

DES / DECam Review Committee					
CCD Packaging / Testing / Characterization					
Kahn	Lesser no	Rockosi no	Kron	Damerell	
	XXXXXX ?	Jacoby ?		plan to ask	
Readout Electronics					
Smith-m	Wilson	Tschirhart			
Optics / Mechanical etc.					
Epps no	Stanek no	Baldwin silent	Baum		
Fabricant-m	Kerby				
Management					
Lindgren	Kron (pt)	Kahn (pt)	Hoffer	Mantsch no	Temple
				Boroski no	
				Kaducak	
Cost					
Kaducak	Lindgren	Hoffer			
Schedule					
Hoffer	Kaducak	Lindgren			

Cost/Schedule Review Guidance

*These are CD-2
Requirements.*

Now at CD-1.

*We should use
as a guide for
assessing a
baseline “range”
or appropriate
contingency.*

Project Technical, Cost, and Schedule Baseline Development

To Succeed in Cost / Schedule Arena

Estimate must be

Complete

Scope well understood and defined

Technical goal must be clear

Technology to be used to meet this goal known

Designate how technical systems will be acquired

I.e. buy, have fabricated, self fabricated

Buy parts / fabricate / assemble

How will this be accomplished

Self fabricate / assemble – lab or university(ies)

How will person power requirements be met

And paid for

All tasks defined and specified in a work breakdown structure

WBS dictionary

Documented at lowest level of WBS and include

M&S – materials and services

SWF – salaries, wages, & fringes

Accompanied by schedule showing appropriate durations

Adders – overheads / G&A (general & administrative)

Escalated – shown both with and without escalation with funding

profile based on laboratory/DOE/Federal

budget/appropriation guidance

Cost/Schedule Review Guidance

(Continued)

Reviewable

Estimate must “roll-up” from the lowest level to the total and reviewers must be able to drill down from the top to the lowest level

Credible

Basis of estimate must be specified

Catalog prices

Similar work, where cost is documented

Engineering estimates

WAG – wild ass guess

This material forms basis for DOE approving a baseline, for Fermilab/Collaboration Project Management to measure performance and take appropriate corrective actions during execution and for Laboratory Management and DOE to monitor progress.

Cost/Schedule Review Guidance

(Continued)

Baseline Reviews

When preparing a baseline, it can be helpful to be aware of and prepared for the types of things a Director's Technical/Cost/Schedule/Management Review Committee or a DOE Baseline Review Committee will be looking for. The following provides some insight into such reviews. Review Committees are frequently broken up into subgroups which are then assigned to look at specific systems or subprojects within a project.

To be available for reviewers one week prior to the review

- Conceptual &/or Technical Design Reports

- Design Review materials (web address was provided)

 - Materials presented at most recent design review for system

- Detailed schedule for system (to be looked at during breakout sessions)

- Cost Estimate Details for system (will be provided at low levels of the WBS)

 - Including WBS Dictionary and BOE – Basis of Estimate detail sheets

 - (BOE notebooks will be available in breakout rooms)

Tabbed hardcopies of review materials and presentations to be available at the review.
Enough for committee, observers, and a half dozen extras

Cost/Schedule Review Guidance

(Continued)

Technical / Cost / Schedule / Management Review Guidelines
(things reviewers are asked to do)

Technical

Examine Design Review Materials (including TDRs & CDRs) for your system

Assess level at which **scope is understood and defined**

Assess level that **technical aspects of the system are understood, planned, designed, procured/fabricated and/or prototyped**

Cost

Choose >~5 top level WBS elements from your system

Drill down to successively lower levels of the WBS; while at each step

Understanding the **scope** of that element

Understanding the **schedule** for that element

Understanding the **basis of estimate (BOE)** for **both M&S and effort** for that element

Choose a few elements next lowest level of the WBS

And repeat this procedure until you get to the bottom level.

I.e., the lowest level of the WBS

Choose >~5 items in the system for which you have personal experience

Interact with the responsible managers to **determine if**

The Estimate is complete, documented, reviewable, and credible

Cost/Schedule Review Guidance

(Continued)

Check that there is a **detailed BOE for all work elements** in your system

Check whether the **estimate for your system “rolls-up”** from the lowest level WBS element to the total for your system

Does each level of the WBS contain all costs from lower level WBS elements

Assess the **“bottoms up” contingency that the WBS level 3 managers would assign** their components.

Assess the **“top down” contingency analysis assignments by the Project Manager**

Schedule

Is there a detailed schedule, including a critical path, for completing the project? Are milestones appropriate in number and type identified so that the project teams, Fermilab management, and DOE can effectively track and manage progress? Based on past experience, can the proposed schedules be met? Are appropriate schedule contingencies provided? Is there a “resource loaded schedule” and plan for providing the needed resources (M&S and technical support staff and physicists)?

Cost/Schedule Review Guidance

(Continued)

Funding

Have techniques such as forward funding by collaborators and phased funding of large contracts been appropriately incorporated into the planning? Does the anticipated funding profile support the resource requirements?

Management

Is an **appropriate / adequate project organizational structure** in place and **staffed** (or are plans in place) to do the job.

Has the **appropriate project management documentation** been prepared. Is it of a quality adequate for this stage of the project? Are **appropriate / adequate management systems** (Cost and Schedule Control System / Earned Value Reporting, Critical Path Management, Risk Management, etc.) in place or planned for use during project execution?

Action Items

- a) Redistribute NOAO MOU and aggressively pursue getting it signed off. [DES/Mont]
- b) Appoint a Project Manager for the DECam project. [Mont]
- c) Review the RLS. [Brenna/Ed/Dean]
- d) Meet in about 2 weeks to double-check on readiness for July Dir Review. [DES/OPMO]
- e) Update schedule and funding profile. [Brenna/Mont]
- f) Update agenda and send new version to Ed. [Brenna; DONE]
- g) Create initial draft of necessary CD-1 documents (Conceptual Design Report, Preliminary PEP, Preliminary PMP, Preliminary Hazard Analysis Report, ...) needed within the next two weeks (ie by 6/14/2006).
- h) Make sure Mont is aware of the funding needs, so that guidance can be given, a funding profile can be constructed, and the schedule can be iterated to fit within the funding profile. [John, Brenna, Wyatt]
- i) Next Meetings:
 - i) Tuesday, June 13, 1pm, Snakepit
 - ii) Friday, June 30, 2 pm, Black Hole
 - iii) Friday, July 7, 10 am, Snakepit
 - iv) Friday, July 14, 10 am, Snakepit
 - v) Tuesday, July 18, 1 pm, Black Hole
 - vi) Friday, July 21, 10 am, Snakepit