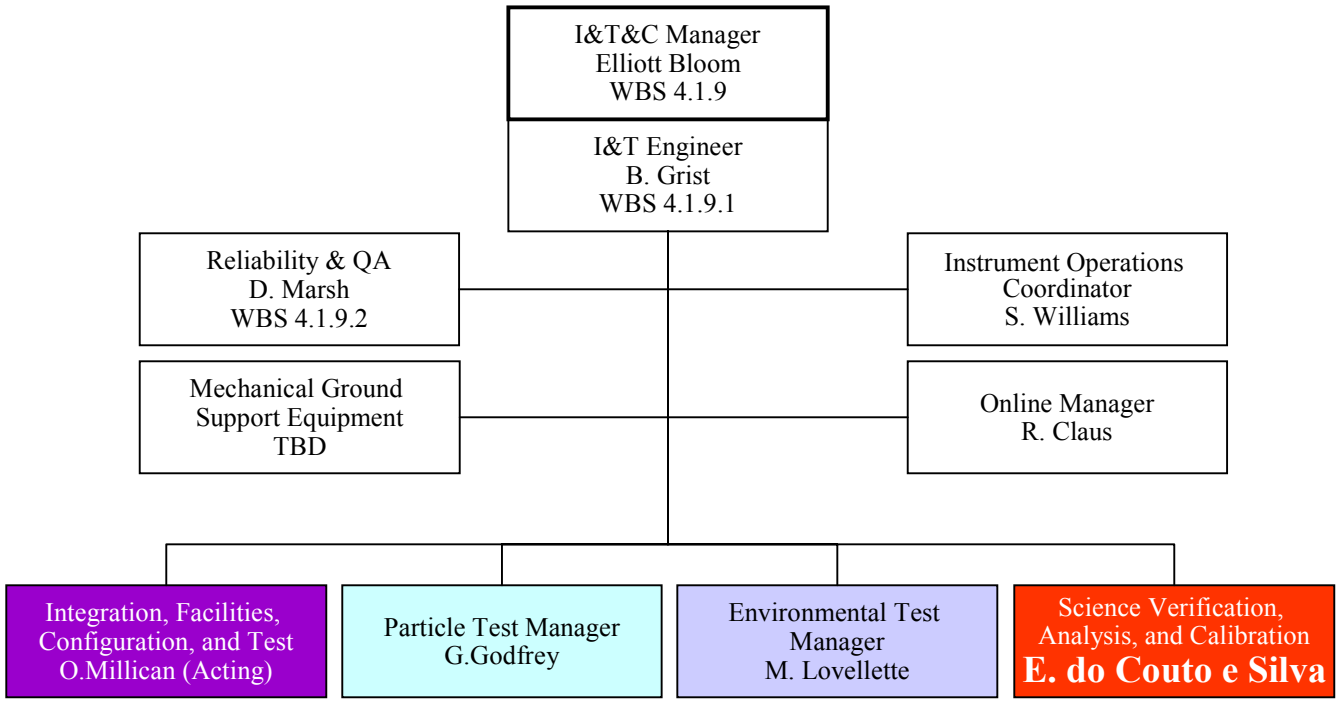
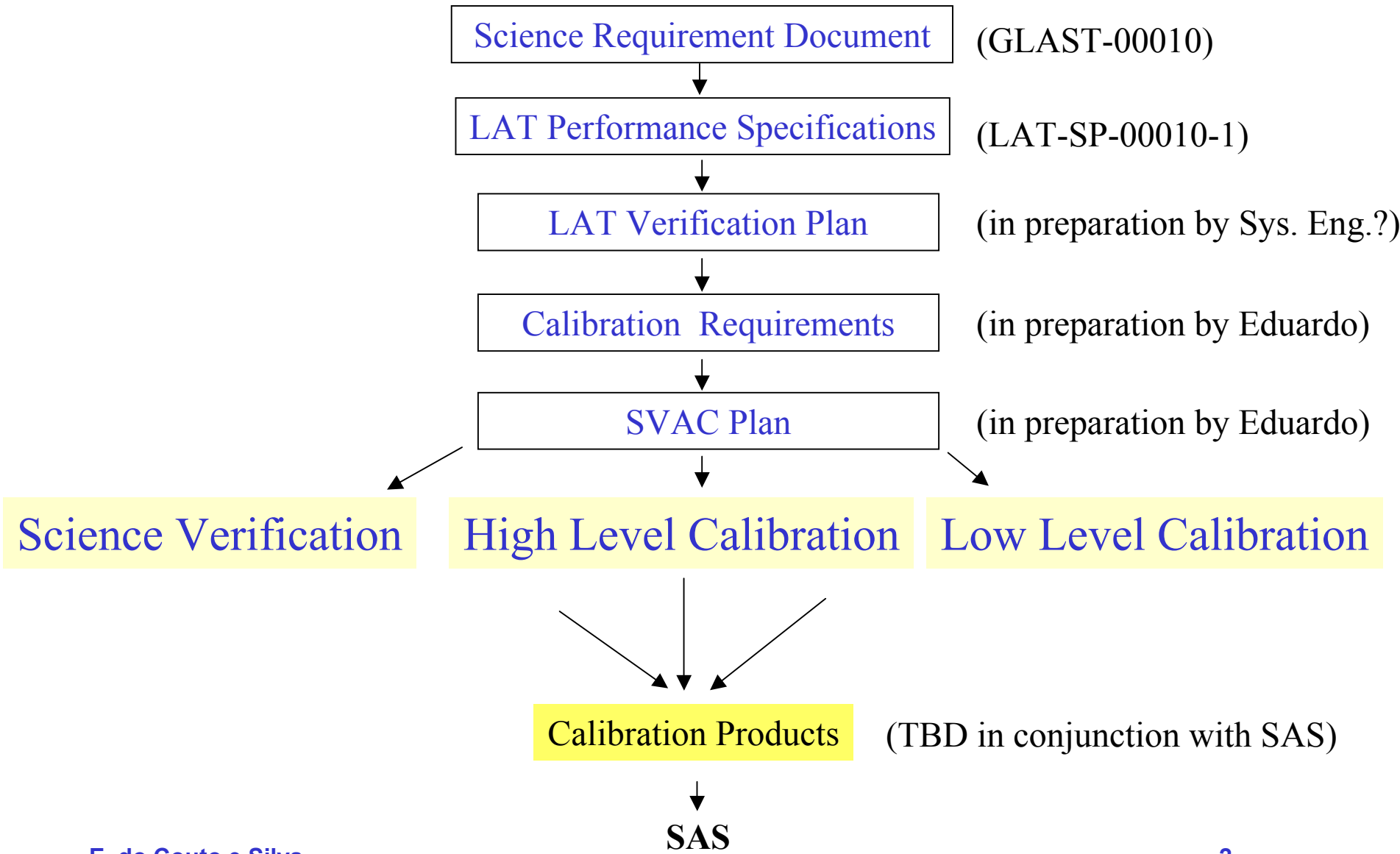
I&T&C Organization Chart



I&T Preparation 4.1.9.3	I&T Preparation 4.1.9.3	I&T Preparation 4.1.9.3	I&T Preparation 4.1.9.3
EM1 Model I&T&C	EM1 Model I&T&C		EM1 Model I&T&C
Calibration Unit I&T 4.1.9.4	Calibration Unit I&T 4.1.9.4		Calibration Unit I&T 4.1.9.4
Flight LAT I&T 4.1.9.6	Flight LAT I&T 4.1.9.6	Flight LAT I&T 4.1.9.6	Flight LAT I&T 4.1.9.6
Mission I&T Support 4.1.9.7	Mission I&T Support 4.1.9.7	Mission I&T Support 4.1.9.7	Mission I&T Support 4.1.9.7

Science Verification, Analysis and Calibration (SVAC) System



SVAC System Responsibilities

(currently being reviewed by subsystems)

1. Verify the Science and Calibration Requirements
2. Prepare calibration requirements, SVAC program and define SVAC products to be delivered to SAS (with continuous review from subsystems)
3. Coordinate that schedule from subsystems and SVAC match (B. Grist)
4. Coordinate Data Analysis that involve SAS software with support from subsystems (beam test, cosmic rays, environmental tests, spacecraft tests)
5. Provide resources to analyze data from tests (if requested by subsystems)
6. Provide a database to store SVAC data with an interface that allows subsystem managers to track the activities and the performance of the device during integration
7. Provide the final I&T&C calibration products to SAS

SVAC Data

SVAC Data come from tests on several hardware units

Hardware Units

(delivered by subsystems)

- Engineering Model (EM1)
  1 tower
- Flight Module (FM)
  1 tower
- Calibration Unit (CU)
  4 towers
- LAT
  16 towers

Tests

(managed by I&T&C Particle Tests – G. Godfrey)

- Cosmic Ray Tests
  EM1, FM, CU, LAT
- Particle Beam Tests
  CU
- Environmental tests
  LAT
- Airplane tests
  LAT
- Spacecraft Integration
  LAT

SVAC Program Highlights

(to be reviewed by subsystems)

1. Science Verification shall occur during particle beam tests using the Calibration Unit.
2. Final alignment shall be performed not only on the calibration unit but also on the LAT using cosmic ray data
3. To avoid overtesting , only low level calibrations shall be performed during all steps of integration (verification test matrices shall soon be reviewed)
4. SVAC Database must be in place before the tests on the Calibration Unit and shall be prototyped on EM1 and FMA and FMB. The prototyping phase shall address both SAS and EGSE interfaces
5. Final I&T&C calibration products (TBD) shall be produced in an adequate format to match the SAS calibration requirements (TBR)

SVAC Data (cont'd)

(being reviewed by subsystems)

Science verification

Effective Area
Energy Resolution
Point Spread Function
Field of View
Time Accuracy
Background Rejection
Deadtime
Source Location
Point Source Sensitivity
GRB,AGN location
GRB,AGN notification time

High Level Calibration

Subset of performance calibrations

ACD
- **Detection Efficiency (CT1)**
- **High Threshold detection (CT2)**

TKR
- **Single Tower Alignment (CT4)**
- **Multiple Tower Alignment (CT5)**
- **LAT & Observatory Alignment (CT6)**

CAL
- **PIN Diodes Optical Gain (CT10)**
- **Light Attenuation (CT11)**
- **Light Asymmetry (CT12)**

Low Level Calibration

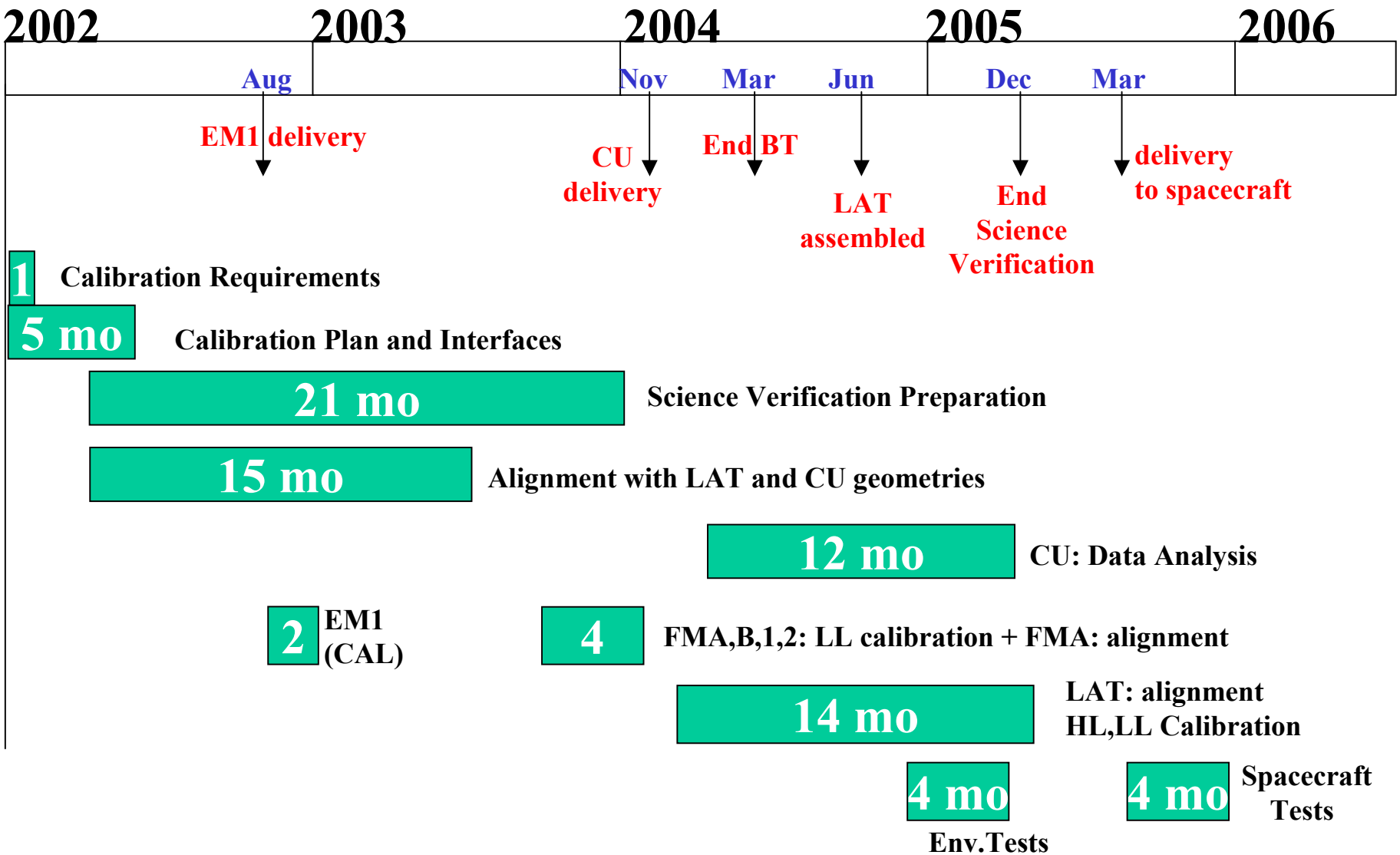
Subset of baseline calibrations

ACD
- **Pedestals (CT3)**

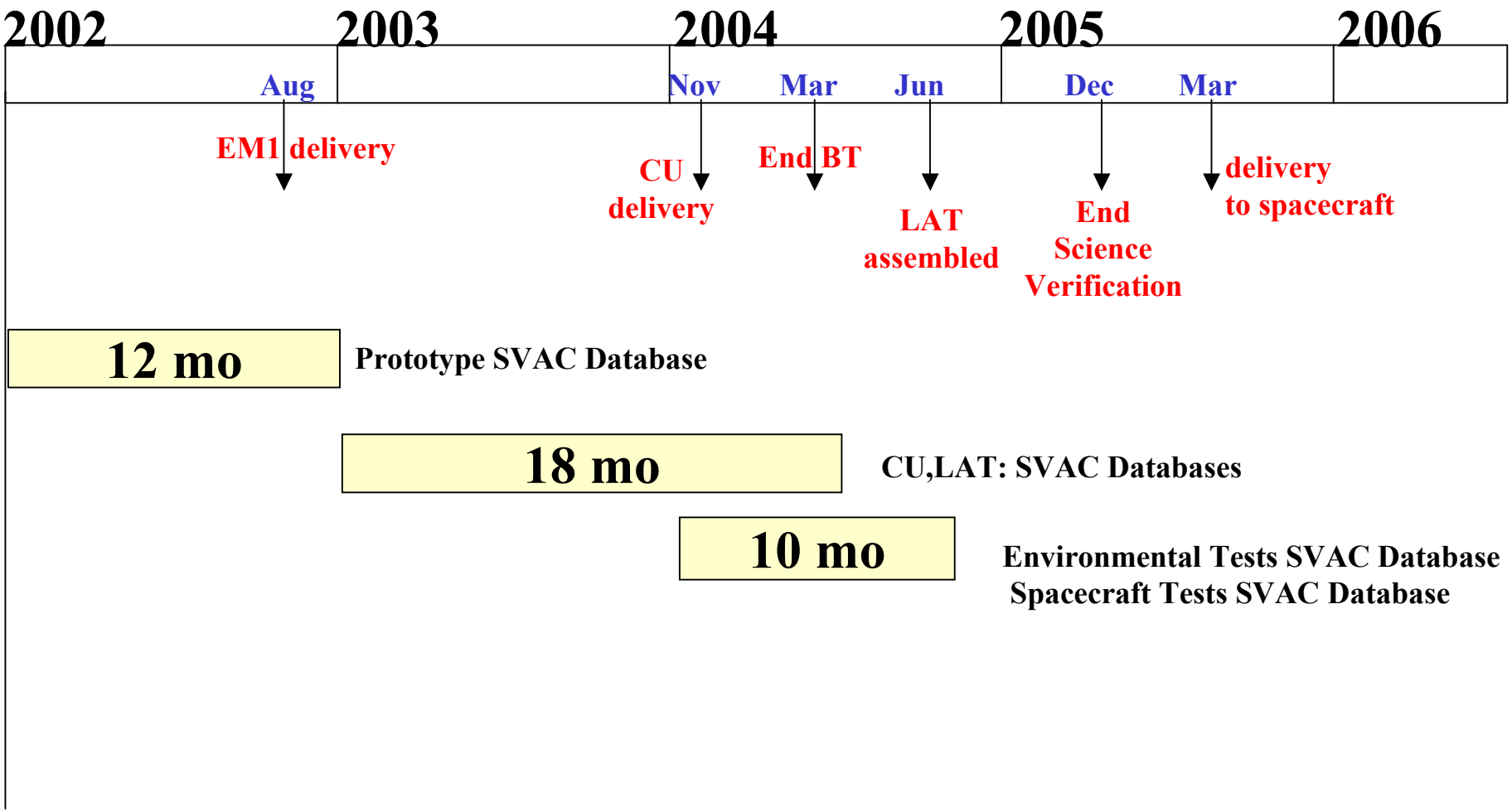
TKR
- **Noisy Strips (CT7)**
- **Dead Strips (CT8)**
- **Time-Over-Threshold (CT9)**

CAL
- **Pedestals (CT13)**
- **Energy range: Electronic Gain (CT14)**
- **Energy range: Electronic Gain Occupancy (CT15)**
- **Energy range: Integral non linearity (CT16)**
- **Energy range: Differential non linearity (CT17)**

Calibration Program (Fiscal Years)



Calibration Program (Fiscal Years)



Summary

1. We are now writing the calibration requirements, the SVAC Plan and the definitions of the SVAC products to be delivered to SAS (with continuous review from subsystems)
2. We have started to discuss the interfaces between all subsystems involved in the calibration activities
3. We have obtained a preliminary estimation of the manpower and cost estimates required.
4. We have already started few prototype activities