

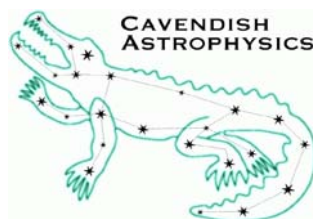
MRO FTT-NAS

Conceptual Design Report

The Cambridge Delay Line Team

rev 0.1

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Change Record

Revision	Date	Author(s)	Changes

Objective

A single sentence saying what purpose this document serves....

Scope

Here we outline the scope of the document: what is/isn't covered. Perhaps refer to other documents containing related material.

Reference Documents

RD1 Top-level requirements INT-406-TSP-XXXX

RD2

Applicable Documents

These are other review documents for review which are directly applicable, e.g.

AD01 Derived Requirements INT-406-VEN-XXXX

Acronyms and Abbreviations

BCA	Beam Combining Area	Interferometer	
BCF	Beam Combining Facility	MRAO	Mullard Radio Astronomy Observatory
BRS	Beam Relay System	NAS	Narrow-field Acquisition System
DL	Delay Line	NMT	New Mexico Tech
DLA	Delay Line Area	OPD	Optical Path Delay
FTT	Fast Tip-tilt	SCS	Supervisory Control System
FLC	First Light Camera	TBC	To be confirmed
ICD	Interface Control Document	TBD	To be determined
MROI	Magdalena Ridge Observatory	WFS	Wide ...

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1 Introduction

This is the introduction.

This is a new paragraph.

1.1 Top level requirements

Refer to top level requirements and include table here?

1.1.1 Subsubsection

This is a subsubsection of the introduction.

2 Derived Requirements

Explain assumptions Address in subsections. Refer to document. Brief explanation of how these were obtained.

2.1 Assumptions

2.2 Derived requirements overview

2.2.1 Pixel scale

2.2.2 FTT mode sub-frame size

2.2.3 Image quality

2.2.4 Stability of tip-tilt zero point

2.2.5 Thermal management

2.2.6 Closed loop bandwidth

2.2.7 Limiting Sensitivity

2.2.8 Dynamic range

3 Optical Layouts

Present layouts considered with a comparison table and reasons for choosing preferred candidate(s) for further analysis.

3.1 Candidate layouts

Discussion of issues affecting the choice of layouts followed by subsections containing a layout, description and comparative qualities.

3.1.1 One

3.1.2 Two

3.1.3 Three

3.1.4 Four

3.1.5 Comparison of candidate layouts

Comparison of layouts. Reasons for choosing preferred layout(s)

3.2 *Preferred layouts*

3.2.1 Error budgets and sensitivities

3.2.2 Feasibility

3.2.3 Comparison of costs

4 Camera Selection

4.1 *Candidate cameras*

4.2 *Camera evaluation*

5 Conceptual Opto-Mechanical Design

5.1 *Layout*

5.2 *Mechanical analyses*

5.3 *Base-plate design*

5.4 *Optical mount design*

5.5 *Camera mount*

6 Conceptual Thermal Design

6.1 *Thermal control*

6.1.1 Camera enclosure analysis

6.1.2 Control enclosure analysis

6.1.3 Conceptual design of thermal control

6.2 *Camera enclosure design*

6.2.1 Control enclosure design

7 Conceptual Electronics Design

8 Conceptual Software Design

8.1 *Software requirements*

8.2 *Software design*

9 Interfaces

10 CoDR Summary