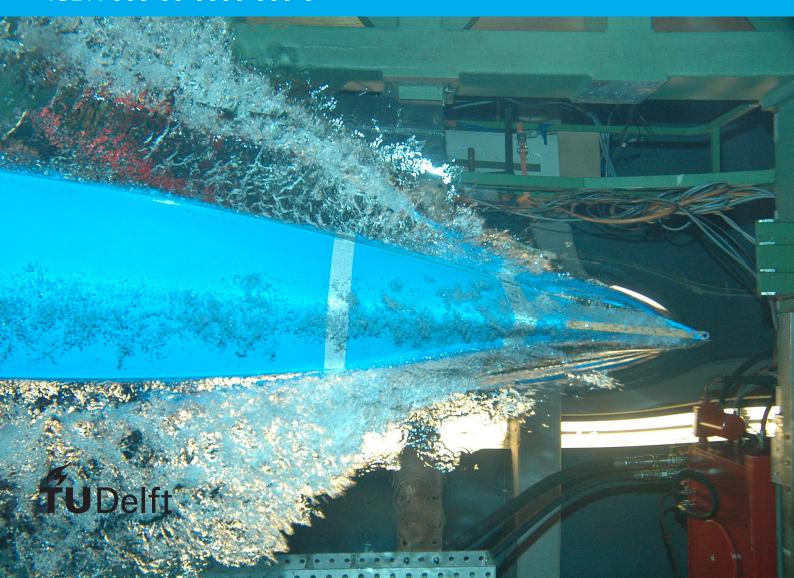
Title

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J. Random Author

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ISBN 000-00-0000-000-0





by

J. Random Author

to obtain the degree of Master of Science at the Delft University of Technology, to be defended publicly on Tuesday January 1, 2013 at 10:00 AM.

Student number: 1234567

Project duration: March 1, 2012 - January 1, 2013

Thesis committee: Prof. dr. ir. J. Doe, TU Delft, supervisor

Dr. E. L. Brown, TU Delft Ir. A. Aaronson, Acme Corporation

This thesis is confidential and cannot be made public until December 31, 2013.

An electronic version of this thesis is available at http://repository.tudelft.nl/.



Preface

Preface...

J. Random Author Delft, January 2013

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1

Introduction

1.1. Near-Earth Asteroids

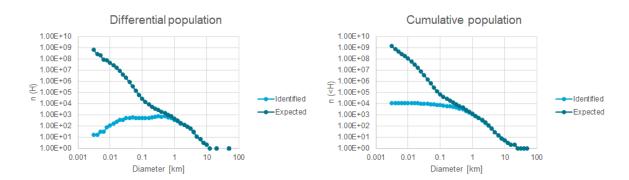


Figure 1.1: State of asteroid identification progress as of August 2014, compared to the expected number of asteroids per diameter. **PopulationHarris**

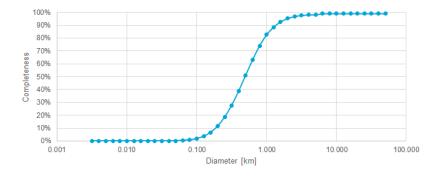


Figure 1.2: Expected survey completeness as a function of near-Earth asteroid diameter. PopulationHarris

1.2. Identification of NEA's

1.3. Current Proposals

 \sum

Research Outline

- 2.1. Problem Statement
- 2.2. A Multi-Spacecraft Approach
- 2.3. Research Questions and Expected Outcomes

3

Survey Modelling

- 3.1. Population of Asteroids
- 3.2. Background Signal
- 3.3. Target Signal
- 3.4. Hardware Properties and Signal-to-Noise Ratio
- 3.5. Search Strategy and Cadence
- 3.6. Detection and Identification

4

Experimental Methodology

- 4.1. Simulation Overview
- 4.2. Implementation
- 4.3. Optimization Methods
- 4.4. Experimental Process

Results

- 5.1. Number of Spacecraft
- 5.2. Payload
- 5.3. Orbital Elements I: Co-orbital Spacecraft
- 5.4. Orbital Elements II: Non Co-orbital Spacecraft
- 5.5. Explanation of Observed Phenomena
- 5.6. Predicted Performance and Implications for Missions Design



Sensitivity Analysis

- **6.1. Expected Performance**
- 6.2. Optimization Results
- 6.3. Hardware and Survey Properties

Conclusion

- 7.1. Opportunities for Mission Design
- 7.2. Recommendations for Further Research



Verification and Validation

- A.1. Modelling of Observations
- A.2. Survey-specific Properties
- A.3. Survey Performance
- A.4. Optimization