

# Contents

<b>1</b>	<b>Executive Summary (1 pg)</b>	<b>1</b>
<b>2</b>	<b>PICO in Brief (2 pages)</b>	<b>1</b>
<b>3</b>	<b>Science (22 pgs)</b>	<b>1</b>
3.1	Fundamental Physics . . . . .	1
3.2	Extragalactic Science . . . . .	1
3.3	Galactic Science . . . . .	2
3.4	Legacy Science . . . . .	2
3.5	Foregrounds . . . . .	2
3.6	Systematic Errors . . . . .	3
<b>4</b>	<b>Instrument Implementation (10 pgs)</b>	<b>3</b>
<b>5</b>	<b>Mission Implementation (5 pgs)</b>	<b>3</b>
<b>6</b>	<b>Technology Development (4 pgs)</b>	<b>3</b>
<b>7</b>	<b>Cost (6 pgs)</b>	<b>4</b>

# **1 Executive Summary (1 pg)**

blah



Figure 1: example

# **2 PICO in Brief (2 pages)**

blah



Figure 2: example

# **3 Science (22 pgs)**

## **3.1 Fundamental Physics**

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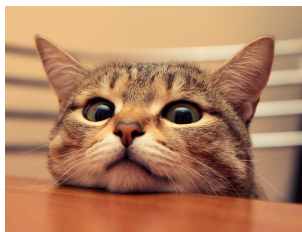


Figure 3: example

## **3.2 Extragalactic Science**

blah



Figure 4: example

### 3.3 Galactic Science

blah



Figure 5: example

### 3.4 Legacy Science

blah



Figure 6: example

### 3.5 Foregrounds

blah



Figure 7: example

### **3.6 Systematic Errors**

blah



Figure 8: example

## **4 Instrument Implementation (10 pgs)**

blah



Figure 9: example

## **5 Mission Implementation (5 pgs)**

blah



Figure 10: example

## **6 Technology Development (4 pgs)**

blah



Figure 11: example

## 7 Cost (6 pgs)

blah



Figure 12: example

## References

**ACS** attitude control system

**ADC** analog-to-digital converters

**ADS** attitude determination software

**AHWP** achromatic half-wave plate

**AMC** Advanced Motion Controls

**ARC** anti-reflection coatings

**ATA** advanced technology attachment

**BRC** bolometer readout crates

**BLAST** Balloon-borne Large-Aperture Submillimeter Telescope

**CANbus** controller area network bus

**CIB** cosmic infrared background

**CMB** cosmic microwave background

**CMM** coordinate measurement machine

**CSBF** Columbia Scientific Balloon Facility

**CCD** charge coupled device

**DAC** digital-to-analog converters

**DASI** Degree Angular Scale Interferometer

**dGPS** differential global positioning system

**DfMUX** digital frequency domain multiplexer

**DLFOV** diffraction limited field of view

**DSP** digital signal processing

**EBEX** E and B Experiment

**EBEX2013** EBEX2013

**ELIS** EBEX low inductance striplines

**ETC** EBEX test cryostat

**FDM** frequency domain multiplexing

**FPGA** field programmable gate array

**FCP** flight control program

**FOV** field of view

**FWHM** full width half maximum

**GPS** global positioning system

**HDPE** high density polyethylene

**HIM** high index materials

**HWP** half-wave plate

**IA** integrated attitude

**IP** instrumental polarization

**JSON** JavaScript Object Notation

**LDB** long duration balloon

**LED** light emitting diode

**LCS** liquid cooling system

**LC** inductor and capacitor

**LZH** Lazer Zentrum Hannover

**MCP** multi-color pixel

**MSM** millimeter and sub-millimeter

**MLR** multilayer reflective

**MAXIMA** Millimeter Anisotropy eXperiment IMaging Array

**NASA** National Aeronautics and Space Administration

**NDF** neutral density filter

**PCB** printed circuit board

**PE** polyethylene

**PME** polarization modulation efficiency

**PSF** point spread function

**PV** pressure vessel

**PWM** pulse width modulation

**RMS** root mean square

**SLR** single layer reflective

**SMB** superconducting magnetic bearing

**SQUID** superconducting quantum interference device

**SQL** structured query language

**STARS** star tracking attitude reconstruction software

**SWS** sub-wavelength structures

**TES** transition edge sensor

**TDRSS** tracking and data relay satellites

**TM** transformation matrix

**UHMWPE** ultra high molecular weight polyethylene

**UMN** University of Minnesota