Contents

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



Figure 1: example0

1 Executive Summary (1 pg)

blah

see Fig. 1

see Fig. 2

see Fig. 3



Figure 2: example

2 PICO in Brief (2 pages)



Figure 3: example

3 Science (22 pgs)

3.1 Fundamental Physics

blah



Figure 4: example

3.2 Extragalactic Science

blah



Figure 5: example

3.3 Galactic Science

blah



Figure 6: example

3.4 Legacy Science



Figure 7: example

3.5 Foregrounds

blah



Figure 8: example

3.6 Systematic Errors

blah



Figure 9: example

4 Instrument Implementation (10 pgs)



Figure 10: example

5 Mission Implementation (5 pgs)

blah



Figure 11: example

6 Technology Development (4 pgs)

blah



Figure 12: example

7 Cost (**6 pgs**)



Figure 13: 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