Appendix P: Acronyms

AACE	Association for the Advancement of Cost Engineering
AATe	Architectural Assessment Tool—enhanced
ABC	Agency Baseline Commitment
AC	Alternating Current
ADA	Americans with Disabilities Act
AFCAA	Air Force Cost Analysis Agency
AFCRUH	Air Force Cost Risk and Uncertainty Handbook
AFRC	Armstrong Flight Research Center
AFSCN	Air Force Satellite Control Network
AHP	Analytic Hierarchy Process
AIA	American Institute of Architects
AIAA	American Institute of Aeronautics and Astronautics
AIS	Automated Information System
ANOVA	Analysis of Variance
AO	Announcement of Opportunity
AOA	Analysis of Alternatives
APMC	Agency Program Management Counsel
ARC	Ames Research Center
ASTM	American Society for Testing and Materials
ATP	Authority/Authorization to Proceed
BCA	Business Case Analysis
BCR	Benefit/Cost Ratio
BCWS	Budgeted Cost of Work Scheduled
BoE	Basis of Estimate
BOL	Beginning of Life
BPR	Baseline Performance Review
BST	Beginning of System Test
BY	Base Year
CAD	Cost Analysis Division
CADRe	Cost Analysis Data Requirement
CAIG	Cost Analysis Improvement Group
CAIV	Cost As an Independent Variable
CBA	Cost Benefit Analysis
CBE	Current Best Estimate
CBI	Confidential Business Information
CBS	Cost Breakdown Structure
CCE	Current Cost Estimate
CDF	Cumulative Distribution Function
CDR	Critical Design Review
CEA	Cost Estimation and Analysis
CEH	Cost Estimating Handbook

CER	Cost Estimating Relationship
CES	Cost Element Structure
CFD	Cash Flow Diagram
CFU	Cost of First Unit
CL	Confidence Level
COBRA	Complexity-Based Requirements Analysis
COCOMO	Constructive Cost Model
COF	Construction of Facilities
CONOPS	Concept of Operations
ConstY	Constant Year Dollars
COTS	Commercial Off-the-Shelf
CRF	Capital Recovery Factor
CRM	Continuous Risk Management
CSRUH	Joint Cost and Schedule Risk and Uncertainty Handbook
CurrY	Current Year Dollars
CV	Coefficient of Variation
CY	Calendar Year or Constant Year or Current Year
DC	Direct Current
DCAA	Defense Contract Audit Agency
DCF	Discounted Cash Flow
DCPLX	Development Complexities
DEL	Payload Delivery
DES	Discrete Event Simulation
DL	Design Life
DODI	Department of Defense Instruction
DPMC	Directorate Program Management Counsel
DSN	Deep Space Network
E2O	Earth-to-Orbit
EA	Economic Analysis or Environmental Assessment
EAC	Estimate at Completion
ECASG	Executive Cost Analysis Steering Group
EIS	Environmental Impact Statement
EIV	Errors in Variables
EM	Engineering Model
ENR	Engineering News Record
EOC	Elements of Cost
EOL	End of Life
EOM	End of Mission
EOY	End-of-Year
ESA	European Space Agency
EST	End of System Test
ETC	Estimate to Complete
EUAC	Equivalent Uniform Annual Cost
EUAW	Equivalent Uniform Annual Worth

EVM	Earned Value Management
EVMS	Earned Value Management System
ExAOCM	Exploration Architectures Operations Cost Model
FAR	Federal Acquisition Regulation
FBS	Functional Breakdown Structure
FLA	First Launch Availability
FP&D	Facility Planning and Design
FPA	Focal Plane Array
FPAM	Focal Plane Array Business-as-Should-Be Cost Model
FTE	Full-Time-Equivalents
FV	Future Value
FY	Fiscal Year
G&A	General and Administrative
GAO	Government Accountability Office
GDS	Ground Data System
GEM-FLO	Generic Environment for Modeling Future Launch Vehicle Operations
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GR&A	Ground Rules and Assumptions
GRC	Glenn Research Center
GSE	Ground Support Equipment
GSFC	Goddard Space Flight Center
HQ	Headquarters
HVAC	Heating, Ventilation, and Air Conditioning
I&T	Integration and Test
IBR	Integrated Baseline Review
ICAM	Industrial Base Capability Assessment
ICC	Initial Operating Capability
ICE	Independent Cost Estimate
ICSAT	Integrated Cost and Schedule Analysis Tool
IdMAX	Identity Management and Account Exchange
IMS	Integrated Master Schedule
IPAO	Independent Program Assessment Office
IPT	Integrated Product Team
IR	Infrared
IRR	Internal Rate of Return
ISS	International Space Station
IT	Information Technology
JACS	Joint Analysis of Cost and Schedule
JCL	Joint Cost and Schedule Confidence Level
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
KDP	Key Decision Point
KDR	Key Driving Requirement

KPP	Key Performance Parameter
KSC	Kennedy Space Center
kWe	kilowatt-electric
LaRC	Langley Research Center
LCC	Life-Cycle Cost
LCCE	Life-Cycle Cost Estimate
LOE	Level of Effort
LOGO	Limit of Government Obligation
LSBF	Least Square Best Fit
LV	Launch Vehicle
LVCM	Launch Vehicle Cost Model
MA	Management Agreement
MADCAM	Microwave and Digital Cost Analysis Model
MAUT	Multi-Attribute Utility Theory
MCC	Mission Control Center
MCPLX	Manufacturing Complexities
MEL	Master Equipment List
MESSOC	Model for Estimating Space Station Operations Costs
MODA	Mission Operations and Data Analysis
MOY	Middle-of-Year
MPAR	Major Program Annual Report
MPE-ZPB or ZMPE	Minimum Percentage Error–Zero Percentage Bias
MSE	Mean Squared Error
MSFC	Marshall Space Flight Center
MSFC	Marshall Space Flight Center
MUPE	Minimum Unbiased Percentage Error
MW_{th}	megawatt thermal
NAFCOM	NASA Air Force Cost Model
NAR	Non-Advocate Review
NASA	National Aeronautics and Space Administration
NCG	NRO Cost Group
NDA	Non-Disclosure Agreement
NEO	Near-Earth Object
NICM	NASA Instrument Cost Model
NODIS	NASA Online Directives Information System
NPR	NASA Procedural Requirement
NPV	Net Present Value
NRA	NASA Research Announcement
NRE	Non-Recurring Engineering
NRO	National Reconnaissance Office
NSCKN	NASA Safety Center Knowledge Now
NTP	Notice to Proceed/Nuclear Thermal Propulsion
O&M	Operations and Maintenance
O&S	Operations and Support

OBS	Organizational Breakdown Structure
OCE	Office of the Chief Engineer
OCFO	Office of the Chief Financial Officer
OCM	Operations Cost Model
ODC	Other Direct Costs
OIG	Office of Inspector General
OIS-D	Operational Intercom System—Digital
OLS	Ordinary Least Squares
OMB	Office of Management and Budget
ONCE	One NASA Cost Engineering
OoE	Office of Evaluation
OPRA	Oracle Primavera Risk Analysis
P/pM	Program/project Manager
P/S	Planner/Scheduler
PA&E	Program Analysis and Evaluation Office
PCC	Program Cost Commitment
PCEC	Project Cost Estimating Capability
PCLS	Probabilistic Cost-Loaded Schedule
PDR	Preliminary Design Review
PDRI	Project Definition Rating Index
PER	Preliminary Engineering Report/Phasing Estimating Relationship
PLS	Partial Least Squares
PMCM	Parametric Mission Cost Model
PMP	Project Management Plan
POC	Point of Contact
PPBE	Planning, Programming, Budgeting, and Execution
PP&C	Program Planning and Control
PV	Present Value
QTIPS	Quantitative Techniques Incorporating Phasing and Schedule
R2	Coefficient of Determination
RAM	Responsibility Assignment Matrix
RCA	Root Cause Analysis
RDT&E	Research, Development, Test, and Evaluation
REDSTAR	Resource Data Storage and Retrieval System
RFP	Request for Proposal
ROM	Rough Order of Magnitude
ROR	Rate of Return
RSAT	Risk Scenario Automation Tool
RSD	Relative Standard Deviation
RTG	Radioisotope Thermoelectric Generator
SBU	Sensitive But Unclassified
SCAT	Software Cost Analysis Tool
SE	Standard Error of Estimate
SE&I	Systems Engineering and Integration

SEMP	Systems Engineering Management Plan
SEPM	Systems Engineering/Program Management
SER	Schedule Estimating Relationship
SERRA	Schedule Estimating Relationship Risk Assessment
SIES	Supervision, Inspection, Engineering, and Services
SIR	Savings/Investment Ratio or Systems Integration Review
SIV	Savings/Investment Ratio
SLOC	Source Lines-of-Code
SLR	Simple Linear Regression
SMD	Science Mission Directorate
SME	Subject Matter Expert
SNPPCM	Space Nuclear Power/Propulsion Cost Model
SOW	Statement of Work
SQL	Structured Query Language
SRB	Standing Review Board
SRR	Software Requirements Review
SSC	Stennis Space Center
SSCM	Small Satellite Cost Model
SSE	Sum of Squared Errors
SSR	Sum of Squared Regression
SST	Sum of Squared Total
STE	Special Test Equipment
T&E	Test and Evaluation
TBE	Technical Baseline Estimate
TCO	Total Cost of Ownership
TD	Time Dependent
TDRSS	Tracking and Data Relay Satellite System
TI	Time Independent
TOA	Total Obligation Authority
TOC	Total Ownership Cost
ToR	Terms of Reference
TRANSCOST	Space Transportation Cost Model
TRL	Technology Readiness Level
TY	Then Year
UFE	Unallocated Future Expense
UPS	Uninterruptible Power System
USCM	Unmanned Spacecraft Cost Model
VAI	Vision Analytics, Inc.
VBA	Visual Basic for Application
VHSIC/VLSI	Very High Speed Integrated Circuits/Very Large Scale Integration
WBS	Work Breakdown Structure
WYE	Work Year Equivalents
ZPB/MPE or ZMPE	Zero Percent Bias/Minimum Percent Error