# Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-210

# SBIRS HIGH

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

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## Program Information

**Designation And Nomenclature (Popular Name)**

Space Based Infrared System High Component (SBIRS HIGH)

**DoD Component**

Air Force

## Responsible Office

**Responsible Office**

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**Date Assigned** May 8, 2011

## References

**SAR Baseline (Development Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 19, 1998

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 26, 2012

## Mission and Description

The Space Based Infrared Systems (SBIRS) High program is intended to satisfy key requirements delineated in the SBIRS Operational Requirements Document dated August 15, 1996, with Annex 1 dated July 17, 1998, within the available budget and schedule. SBIRS High is an integrated system consisting of multiple space and ground elements, with incremental deployment phasing, simultaneously satisfying requirements in the following mission areas: Missile Warning, Missile Defense, Technical Intelligence and Battlespace Awareness. The constellation architecture for SBIRS High includes Highly Elliptical Orbit (HEO) sensors and Geosynchronous Earth Orbit satellites, in addition to the following ground elements: a Continental United States-based Mission Control Station and Mission Control Station Backup, overseas Relay Ground Stations, Mobile Ground Stations, and associated communication links. The first increment of the SBIRS ground system was certified for operations in December 2001 and supports mission processing of the legacy Defense Support Program system satellites and fusion of HEO monotracks and other data. The SBIRS HEO system was certified for the Integrated Tactical Warning/Attack Assessment (ITW/AA) mission in November 2008 and the technical intelligence mission in August 2009.

## Executive Summary

### Acquisition Program Baseline (APB)

The Under Secretary of Defense for Acquisition, Technology and Logistics signed the SBIRS High APB on January 26, 2012. The revised APB incorporates the latest reconciled cost estimates and establishes new schedule milestones for delivery of the Geosynchronous Earth Orbit (GEO) satellites and associated ground segment upgrades necessary to ultimately satisfy the SBIRS requirements.

### GEO 1 Space Vehicle (SV)

The GEO 1 Flight Software System completed software qualification efforts in February 2011 with no liens against launch. The GEO 1 satellite was transported on a C-5 to Cape Canaveral Air Force Station on March 2, 2011. GEO 1 successfully launched aboard an Atlas V, with a Centaur upper stage, on May 7, 2011. The satellite deployments were successful and the team received first light data on June 21, 2011. Early on orbit system tests completed on July 14, 2011. GEO 1 is currently transitioning to its operational location and is on track to complete trial period and enter into operations in January 2013. Preliminary scanner and starer data was provided to the National System for Geospatial-Intelligence (NSG) in June 2011 for research and development purposes in support of the technical intelligence mission. Initially tuned GEO scanner and starer data has been available to begin technical intelligence characterization since December 8, 2011.

### GEO 2 SV

GEO 2 successfully completed the Baseline Integrated System Test on May 28, 2011 and deployment testing of the various assemblies (the deployable light shade, the antenna wing assembly and the contamination door assembly) on August 1, 2011. The Thermal Vacuum Test, which demonstrates the ability of the satellite to perform under the vacuum and temperature extremes experienced during launch and flight successfully concluded on November 10, 2011. The program is on track to deliver the GEO 2 space vehicle by June 2012. The current launch manifest assigned GEO 2 a primary launch date in May 2013. Consequently the program office is working with the development contractor to develop a storage plan and assessing associated costs and impacts.

### Ground Baseline Activity

The ground team completed contracting actions in April 2011 to execute a revised ground architecture strategy and product deliveries, scheduled to deliver in June 2016. The team recently completed the design adequacy assessment and determined that the design is at an adequate maturity level to begin software coding and test. The first major delivery of the new ground architecture is built upon an open architecture that allows the four different mission areas to be segregated to achieve future sustainment efficiencies and enable independent evolution of capability. The capability will be fielded at the primary and back-up Government ground processing facility, and it will replace the existing legacy operational ground system and other interim stand-alone software baselines. The system will perform integrated processing of data from both SBIRS and Defense Support Program operational vehicles.

### SBIRS Survivable / Endurable Element (S2E2)

The S2E2 project will provide the capability to satisfy the survivable/endurable requirement contained in the SBIRS 1996 Operational Requirements Document. The initial contract modification was awarded in July 2011. The first of the Mobile Ground System units with the required capability to process GEO data has a planned delivery of July 2015.

**GEO 3-4, Highly Elliptical Orbit (HEO) Payloads 3-4**

The SBIRS production effort continues to focus on hardware production and affordability. HEO 3 has started Integration and Testing. The sensor assembly is complete, and the contractor started payload assembly. GEO 3 integration has started on the spacecraft core. Propulsion, communication systems, and sensor assembly have begun. The program office exercised the GEO 4 production option in February 2011. Since then, the contractor delivered several key subassemblies, including the starer and scanner sensor Power and Electronics Assemblies and Thermal Control System, Focal Plane Arrays, and the Signal Processing Assembly.

The production contract is experiencing cost and schedule pressures due to development delays and test failures with Special Test Equipment as well as technical issues with the payload subassemblies resulting in a delayed delivery of several components for payload integration for GEO 3 and HEO 3. The program management team has implemented a series of actions aimed at mitigating the projected delays and controlling cost growth. The team streamlined schedules, reduced headcount at the prime contractor, eliminated over half of the recurring events requiring government approval, and scrubbed the technical and schedule baselines to capitalize on production efficiencies, while carefully balancing program risk. The SBIRS program is aggressively pursuing cost efficiencies in all current and planned contracts, consistent with Air Force and Under Secretary of Defense for Acquisition Technology and Logistics (USD(AT&L)) initiatives to ensure better buying power and implement should cost management.

**GEO 5-6**

During this period, the team gained approval on several documents supporting the GEO 5-6 acquisition. The sole source Justification and Approval document was signed by the Service Acquisition Executive in July 2011 and the Acquisition Strategy document was signed by the SAE on October 11, 2011. The USD(AT&L) granted the Air Force the authority to proceed with initial non-recurring engineering and parts procurement for SBIRS GEO 5-6. The Under Secretary of Defense for Acquisition, Technology and Logistics directed the GEO 5-6 effort be established as a major subprogram to the SBIRS High program under section 2430a of title 10, United States Code. Subsequent SARs will address the GEO 5-6 effort as a subprogram to SBIRS High. The Integrating Integrated Product Team meeting was held on December 15, 2011 to discuss the major elements of the strategy. The acquisition strategy was approved on February 26, 2012. The GEO 5-6 follow-on production Defense Acquisition Board decision is scheduled for July 2012.

**Software Statement**

There are no significant software-related issues with this program at this time.

## Threshold Breaches

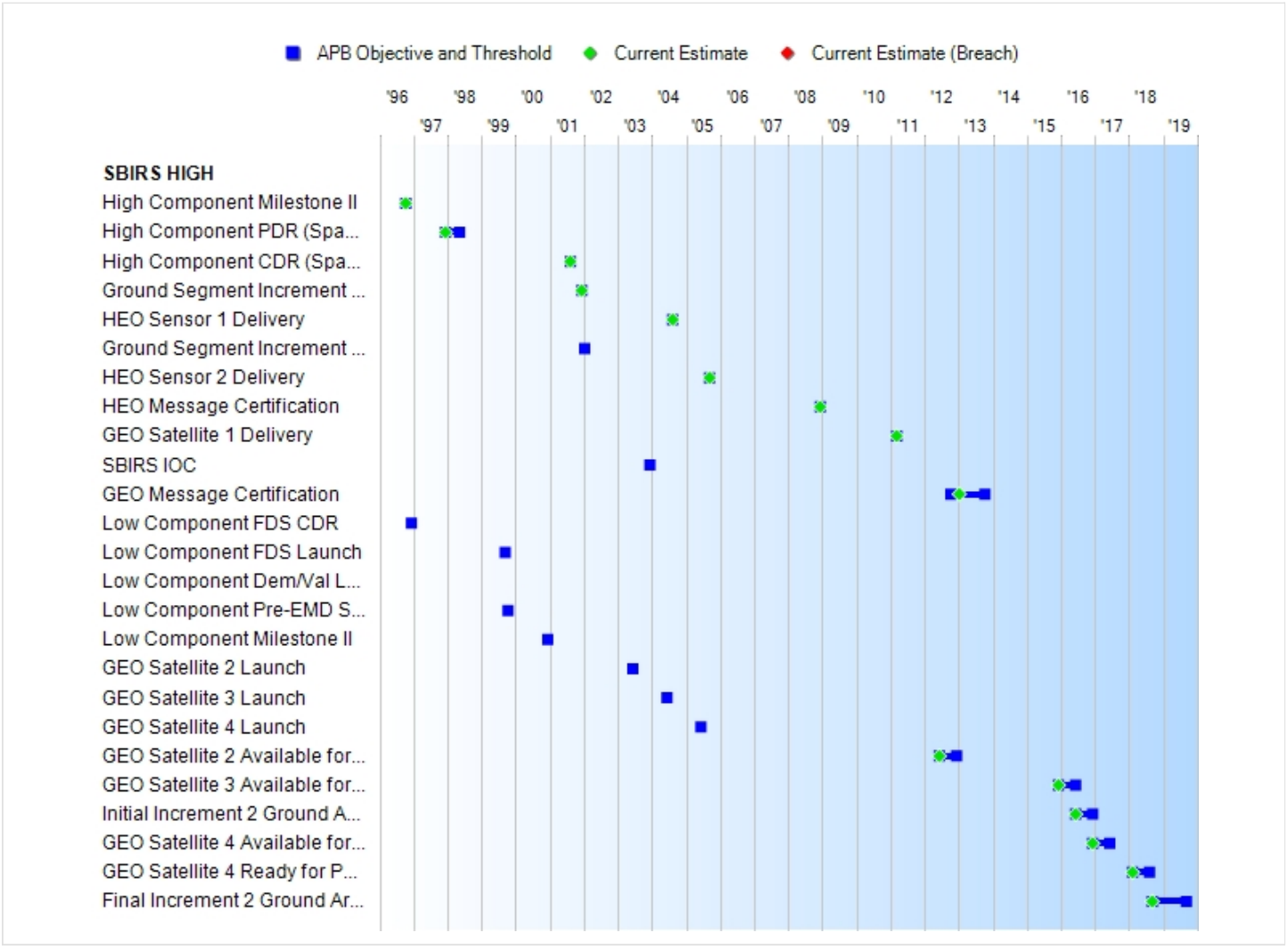
| APB Breaches | | |
|---|---|---|
| **Schedule** | | ☐ |
| **Performance** | | ☐ |
| **Cost** | RDT&E | ☐ |
| | Procurement | ☑ |
| | MILCON | ☐ |
| | Acq O&M | ☐ |
| **Unit Cost** | PAUC | ☐ |
| | APUC | ☐ |

| Nunn-McCurdy Breaches | | |
|---|---|---|
| **Current UCR Baseline** | | |
| | PAUC | None |
| | APUC | None |
| **Original UCR Baseline** | | |
| | PAUC | None |
| | APUC | None |

**Explanation of Breach**

The deviation against the procurement appropriation is due to a quantity difference between the Acquisition Program Baseline (APB), signed January 26, 2012, and the SAR. The APB contains four units, while the SAR contains six. The Under Secretary of Defense for Acquisition Technology and Logistics directed the Air Force to establish a baseline for Geosynchronous Earth Orbit (GEO) satellites 5 and 6 as a major sub-program of SBIRS High. When the subprogram is established and the GEO satellites are baselined separately, the procurement deviation will be resolved.

## Schedule


APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'96
'97
'98
'99
'00
'01
'02
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
'17
'18
'19
SBIRS HIGH
High Component Milestone II
High Component PDR (Spa...
High Component CDR (Spa...
Ground Segment Increment ...
HEO Sensor 1 Delivery
Ground Segment Increment ...
HEO Sensor 2 Delivery
HEO Message Certification
GEO Satellite 1 Delivery
SBIRS IOC
GEO Message Certification
Low Component FDS CDR
Low Component FDS Launch
Low Component Dem/Val L...
Low Component Pre-EMD S...
Low Component Milestone II
GEO Satellite 2 Launch
GEO Satellite 3 Launch
GEO Satellite 4 Launch
GEO Satellite 2 Available for...
GEO Satellite 3 Available for...
Initial Increment 2 Ground A...
GEO Satellite 4 Available for...
GEO Satellite 4 Ready for P...
Final Increment 2 Ground Ar...

| Milestones | SAR Baseline Dev Est | Current APB Development Objective/Threshold | | Current Estimate | |
|---|---|---|---|---|---|
| High Component Milestone II | OCT 1996 | OCT 1996 | OCT 1996 | OCT 1996 | |
| High Component PDR (Space and Ground Increment 2) | DEC 1997 | DEC 1997 | MAY 1998 | DEC 1997 | |
| High Component CDR (Space and Ground Increment 2) | SEP 1999 | AUG 2001 | AUG 2001 | AUG 2001 | |
| Ground Segment Increment 1 Certification | AUG 1999 | DEC 2001 | DEC 2001 | DEC 2001 | |
| HEO Sensor 1 Delivery | SEP 2001 | AUG 2004 | AUG 2004 | AUG 2004 | |
| Ground Segment Increment 2 Certification | JAN 2002 | N/A | N/A | N/A | |
| HEO Sensor 2 Delivery | SEP 2003 | SEP 2005 | SEP 2005 | SEP 2005 | |
| HEO Message Certification | N/A | DEC 2008 | DEC 2008 | DEC 2008 | |
| GEO Satellite 1 Delivery | N/A | MAR 2011 | MAR 2011 | MAR 2011 | |
| SBIRS IOC | DEC 2003 | N/A | N/A | N/A | |
| GEO Message Certification | N/A | OCT 2012 | OCT 2013 | JAN 2013 | (Ch-1) |
| Low Component FDS CDR | DEC 1996 | N/A | N/A | N/A | |
| Low Component FDS Launch | SEP 1999 | N/A | N/A | N/A | |
| Low Component Dem/Val Launch | TBD | N/A | N/A | N/A | |
| Low Component Pre-EMD Start | OCT 1999 | N/A | N/A | N/A | |
| Low Component Milestone II | DEC 2000 | N/A | N/A | N/A | |
| GEO Satellite 2 Launch | JUN 2003 | N/A | N/A | N/A | |
| GEO Satellite 3 Launch | JUN 2004 | N/A | N/A | N/A | |
| GEO Satellite 4 Launch | JUN 2005 | N/A | N/A | N/A | |
| GEO Satellite 2 Available for Delivery | N/A | JUN 2012 | DEC 2012 | JUN 2012 | |
| GEO Satellite 3 Available for Delivery | N/A | DEC 2015 | JUN 2016 | DEC 2015 | |
| Initial Increment 2 Ground Architecture | N/A | JUN 2016 | DEC 2016 | JUN 2016 | |
| GEO Satellite 4 Available for Delivery | N/A | DEC 2016 | JUN 2017 | DEC 2016 | |
| GEO Satellite 4 Ready for PEO Certification | N/A | FEB 2018 | AUG 2018 | FEB 2018 | |
| Final Increment 2 Ground Architecture | N/A | SEP 2018 | SEP 2019 | SEP 2018 | |

## Acronyms And Abbreviations

CDR - Critical Design Review
Dem/Val - Demonstration/Validation
EMD - Engineering, Manufacturing and Development
FDS - Flight Demonstration System
GEO - Geosynchronous Earth Orbit
HEO - Highly Elliptical Orbit
IOC - Initial Operational Capability
PDR - Preliminary Design Review
PEO - Program Executive Officer

## Change Explanations

(Ch-1) The current estimate for GEO Message Certification changed from September 2012 to January 2013 due to

issues experienced in the initial phases of on orbit testing and activation.

| Memo |
| --- |
| GEO Satellite Delivery is defined as a Directorate-accepted satellite ready for shipment to the launch facility. |

## Performance

Classified Performance information is provided in the classified annex to this submission.

## Track To Budget

**General Memo**

Research, Development, Test and Evaluation PE 0604441F and Missile Procurement Air Force PE 0305915F, ICN MSSBIR, are shared. PE 0604441F includes funds for the Space Modernization Initiative and architecture studies that are not part of this Major Defense Acquisition Program (MDAP). ICN MSSBIR includes funds for Highly Elliptical Orbit (HEO) payloads 3 and 4 that are not part of this MDAP.

**RDT&E**

| | | | | |
|---|---|---|---|---|
| APPN 3600 | BA 05 | PE 0604441F | (Air Force) | |
| | Project 3616 | SBIR High Element EMD/SBIRS High EMD | | |
| | Project A040 | Commercially Hosted Infrared Payload (CHIRP) | | (Sunk) |

**Procurement**

| | | | | |
|---|---|---|---|---|
| APPN 3020 | BA 05 | PE 0305915F | (Air Force) | |
| | ICN MSSBIR | SBIR High Missile Procurement | (Shared) | |
| APPN 3080 | BA 03 | PE 0305915F | (Air Force) | |
| | ICN 836720 | SBIR High Other Procurement | | |

**MILCON**

| | | | | |
|---|---|---|---|---|
| APPN 3300 | BA 01 | PE 0604441F | (Air Force) | |
| | Project F0300051 | SBIRS ARCHI-EMD (SPACE) Military Construction | | (Sunk) |

**Acq O&M**

| | | | | |
|---|---|---|---|---|
| APPN 3400 | BA 01 | PE 0305915F | (Air Force) | |
| | Subactivity Group 1G01 | SBIRS Operation and Maintenance | | (Sunk) |

## Cost and Funding

## Cost Summary

### Total Acquisition Cost and Quantity

| Appropriation | BY1995 $M | | | BY1995 $M | TY $M | | |
|---|---|---|---|---|---|---|---|
| | SAR Baseline Dev Est | Current APB Development Objective/Threshold | | Current Estimate | SAR Baseline Dev Est | Current APB Development Objective | Current Estimate |
| RDT&E | 3016.6 | 8544.3 | 9398.7 | 8522.7 | 3386.5 | 10299.1 | 10304.8 |
| Procurement | 496.7 | 2512.0 | 2763.2 | **5127.4**[1] | 584.5 | 3327.8 | 7176.9 |
| Flyaway | 496.7 | -- | -- | 4337.3 | -- | -- | 6062.0 |
| Recurring | 496.7 | -- | -- | 3529.2 | -- | -- | 4987.7 |
| Non Recurring | 0.0 | -- | -- | 808.1 | -- | -- | 1074.3 |
| Support | 0.0 | -- | -- | 790.1 | -- | -- | 1114.9 |
| Other Support | 0.0 | -- | -- | 790.1 | -- | -- | 1114.9 |
| Initial Spares | 0.0 | -- | -- | 0.0 | -- | -- | 0.0 |
| MILCON | 26.0 | 52.0 | 57.2 | 52.0 | 28.5 | 57.0 | 57.0 |
| Acq O&M | 140.2 | 137.5 | 151.3 | 137.3 | 147.8 | 161.1 | 161.1 |
| Total | 3679.5 | 11245.8 | N/A | 13839.4 | 4147.3 | 13845.0 | 17699.8 |

[1] ***APB Breach***

Confidence Level for Current APB Cost 55% - Research, Development, Test and Evaluation cost profile is based on the April 2011 Air Force Service Cost Position (SCP) at a 57% confidence level. The Missile Procurement, Air Force cost profile for Geosynchronous Earth Orbit (GEO) satellites 3 and 4 is based on the April 2011 SCP at a 54% confidence level, with fact-of-life modifications.

The costs above reflect the 2013 President's Budget for the Future Years Defense Program (FYDP) for Geosynchronous Earth Orbit satellites 1-6, Highly Elliptical Orbit payloads 1 and 2, and ground modifications to meet the requirements in the SBIRS Operational Requirements Document, plus the cost to complete beyond the FYDP.

| Quantity | SAR Baseline Dev Est | Current APB Development | Current Estimate |
|---|---|---|---|
| RDT&E | 3 | 2 | 2 |
| Procurement | 2 | 2 | 4 |
| Total | 5 | 4 | 6 |

The above quantity represents six Geosynchronous Earth Orbit (GEO) satellites.

## Cost and Funding

## Funding Summary

**Appropriation and Quantity Summary**
**FY2013 President's Budget / December 2011 SAR (TY$ M)**

| Appropriation | Prior | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | To Complete | Total |
|---|---|---|---|---|---|---|---|---|---|
| RDT&E | 8347.5 | 621.6 | 365.4 | 267.4 | 191.1 | 190.7 | 116.1 | 205.0 | 10304.8 |
| Procurement | 2794.1 | 355.7 | 463.7 | 562.8 | 569.6 | 535.2 | 557.3 | 1338.5 | 7176.9 |
| MILCON | 57.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 57.0 |
| Acq O&M | 147.6 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 161.1 |
| PB 2013 Total | 11346.2 | 990.8 | 829.1 | 830.2 | 760.7 | 725.9 | 673.4 | 1543.5 | 17699.8 |
| PB 2012 Total | 11401.8 | 976.5 | 920.2 | 802.3 | 659.0 | 671.6 | 659.9 | 1483.9 | 17575.2 |
| Delta | -55.6 | 14.3 | -91.1 | 27.9 | 101.7 | 54.3 | 13.5 | 59.6 | 124.6 |

| Quantity | Undistributed | Prior | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | To Complete | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Development | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Production | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| PB 2013 Total | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| PB 2012 Total | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Delta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Cost and Funding

## Annual Funding By Appropriation

**Annual Funding TY$**
**3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway TY $M | Non End Item Recurring Flyaway TY $M | Non Recurring Flyaway TY $M | Total Flyaway TY $M | Total Support TY $M | Total Program TY $M |
|---|---|---|---|---|---|---|---|
| 1995 | -- | -- | -- | -- | -- | -- | 113.0 |
| 1996 | -- | -- | -- | -- | -- | -- | 164.0 |
| 1997 | -- | -- | -- | -- | -- | -- | 193.0 |
| 1998 | -- | -- | -- | -- | -- | -- | 337.9 |
| 1999 | -- | -- | -- | -- | -- | -- | 502.6 |
| 2000 | -- | -- | -- | -- | -- | -- | 400.0 |
| 2001 | -- | -- | -- | -- | -- | -- | 550.1 |
| 2002 | -- | -- | -- | -- | -- | -- | 524.5 |
| 2003 | -- | -- | -- | -- | -- | -- | 782.9 |
| 2004 | -- | -- | -- | -- | -- | -- | 621.8 |
| 2005 | -- | -- | -- | -- | -- | -- | 587.1 |
| 2006 | -- | -- | -- | -- | -- | -- | 706.6 |
| 2007 | -- | -- | -- | -- | -- | -- | 693.0 |
| 2008 | -- | -- | -- | -- | -- | -- | 583.3 |
| 2009 | -- | -- | -- | -- | -- | -- | 542.4 |
| 2010 | -- | -- | -- | -- | -- | -- | 521.5 |
| 2011 | -- | -- | -- | -- | -- | -- | 523.8 |
| 2012 | -- | -- | -- | -- | -- | -- | 621.6 |
| 2013 | -- | -- | -- | -- | -- | -- | 365.4 |
| 2014 | -- | -- | -- | -- | -- | -- | 267.4 |
| 2015 | -- | -- | -- | -- | -- | -- | 191.1 |
| 2016 | -- | -- | -- | -- | -- | -- | 190.7 |
| 2017 | -- | -- | -- | -- | -- | -- | 116.1 |
| 2018 | -- | -- | -- | -- | -- | -- | 97.0 |
| 2019 | -- | -- | -- | -- | -- | -- | 108.0 |
| **Subtotal** | **2** | **--** | **--** | **--** | **--** | **--** | **10304.8** |

**Annual Funding BY$**
**3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 1995 $M | Non End Item Recurring Flyaway BY 1995 $M | Non Recurring Flyaway BY 1995 $M | Total Flyaway BY 1995 $M | Total Support BY 1995 $M | Total Program BY 1995 $M |
|---|---|---|---|---|---|---|---|
| 1995 | -- | -- | -- | -- | -- | -- | 111.3 |
| 1996 | -- | -- | -- | -- | -- | -- | 158.7 |
| 1997 | -- | -- | -- | -- | -- | -- | 184.3 |
| 1998 | -- | -- | -- | -- | -- | -- | 320.6 |
| 1999 | -- | -- | -- | -- | -- | -- | 471.9 |
| 2000 | -- | -- | -- | -- | -- | -- | 370.0 |
| 2001 | -- | -- | -- | -- | -- | -- | 501.7 |
| 2002 | -- | -- | -- | -- | -- | -- | 473.3 |
| 2003 | -- | -- | -- | -- | -- | -- | 696.9 |
| 2004 | -- | -- | -- | -- | -- | -- | 540.0 |
| 2005 | -- | -- | -- | -- | -- | -- | 497.2 |
| 2006 | -- | -- | -- | -- | -- | -- | 580.8 |
| 2007 | -- | -- | -- | -- | -- | -- | 555.0 |
| 2008 | -- | -- | -- | -- | -- | -- | 458.0 |
| 2009 | -- | -- | -- | -- | -- | -- | 420.3 |
| 2010 | -- | -- | -- | -- | -- | -- | 399.0 |
| 2011 | -- | -- | -- | -- | -- | -- | 392.8 |
| 2012 | -- | -- | -- | -- | -- | -- | 457.8 |
| 2013 | -- | -- | -- | -- | -- | -- | 264.7 |
| 2014 | -- | -- | -- | -- | -- | -- | 190.5 |
| 2015 | -- | -- | -- | -- | -- | -- | 133.7 |
| 2016 | -- | -- | -- | -- | -- | -- | 131.1 |
| 2017 | -- | -- | -- | -- | -- | -- | 78.4 |
| 2018 | -- | -- | -- | -- | -- | -- | 64.3 |
| 2019 | -- | -- | -- | -- | -- | -- | 70.4 |
| **Subtotal** | **2** | **--** | **--** | **--** | **--** | **--** | **8522.7** |

The cost profile above includes $22M in FY 2011 and $16.6M in FY 2012 for the Commercially Hosted Infrared Payload, project number A040.

Funds for Space Modernization Iniative efforts are excluded from this report. Those Research and Development funds are not associated with the baseline SBIRS program.

The omitted profile is (Then Year $):
FY 2013 $83.2M
FY 2014 $90.1M
FY 2015 $50.0M
FY 2016 $35.0M
FY 2017 $31.0M

**Annual Funding TY$**
**3020 | Procurement | Missile Procurement, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway TY $M | Non End Item Recurring Flyaway TY $M | Non Recurring Flyaway TY $M | Total Flyaway TY $M | Total Support TY $M | Total Program TY $M |
|---|---|---|---|---|---|---|---|
| 2008 | -- | 172.6 | -- | 90.9 | 263.5 | 5.9 | 269.4 |
| 2009 | 1 | 812.1 | -- | 460.5 | 1272.6 | 21.4 | 1294.0 |
| 2010 | -- | 126.5 | 1.1 | 15.5 | 143.1 | 43.3 | 186.4 |
| 2011 | 1 | 561.2 | -- | 303.3 | 864.5 | 40.9 | 905.4 |
| 2012 | -- | 127.9 | 6.0 | 139.6 | 273.5 | 32.6 | 306.1 |
| 2013 | 2 | 336.0 | 10.3 | -- | 346.3 | 70.3 | 416.6 |
| 2014 | -- | 424.2 | 14.6 | 28.6 | 467.4 | 67.2 | 534.6 |
| 2015 | -- | 419.3 | 21.9 | 32.5 | 473.7 | 69.6 | 543.3 |
| 2016 | -- | 372.9 | 71.6 | 3.4 | 447.9 | 79.6 | 527.5 |
| 2017 | -- | 376.8 | 90.6 | -- | 467.4 | 82.3 | 549.7 |
| 2018 | -- | 884.6 | 157.5 | -- | 1042.1 | 88.8 | 1130.9 |
| 2019 | -- | -- | -- | -- | -- | 92.7 | 92.7 |
| 2020 | -- | -- | -- | -- | -- | 99.2 | 99.2 |
| **Subtotal** | **4** | **4614.1** | **373.6** | **1074.3** | **6062.0** | **793.8** | **6855.8** |

**Annual Funding BY$**
**3020 | Procurement | Missile Procurement, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 1995 $M | Non End Item Recurring Flyaway BY 1995 $M | Non Recurring Flyaway BY 1995 $M | Total Flyaway BY 1995 $M | Total Support BY 1995 $M | Total Program BY 1995 $M |
|---|---|---|---|---|---|---|---|
| 2008 | -- | 134.6 | -- | 70.9 | 205.5 | 4.6 | 210.1 |
| 2009 | 1 | 624.2 | -- | 354.0 | 978.2 | 16.4 | 994.6 |
| 2010 | -- | 95.5 | 0.8 | 11.7 | 108.0 | 32.7 | 140.7 |
| 2011 | 1 | 416.2 | -- | 224.9 | 641.1 | 30.3 | 671.4 |
| 2012 | -- | 93.2 | 4.4 | 101.7 | 199.3 | 23.8 | 223.1 |
| 2013 | 2 | 240.8 | 7.4 | -- | 248.2 | 50.3 | 298.5 |
| 2014 | -- | 298.8 | 10.3 | 20.1 | 329.2 | 47.3 | 376.5 |
| 2015 | -- | 290.1 | 15.2 | 22.5 | 327.8 | 48.1 | 375.9 |
| 2016 | -- | 253.4 | 48.7 | 2.3 | 304.4 | 54.1 | 358.5 |
| 2017 | -- | 251.6 | 60.5 | -- | 312.1 | 54.9 | 367.0 |
| 2018 | -- | 580.1 | 103.4 | -- | 683.5 | 58.2 | 741.7 |
| 2019 | -- | -- | -- | -- | -- | 59.7 | 59.7 |
| 2020 | -- | -- | -- | -- | -- | 62.8 | 62.8 |
| **Subtotal** | **4** | **3278.5** | **250.7** | **808.1** | **4337.3** | **543.2** | **4880.5** |

The Missile Procurement Air Force (MPAF) funding profile above represents funding for Geosynchronous Earth Orbit satellites 3 through 6 as displayed in the associated P-5 exhibits in the FY 2013 President's Budget. MPAF funds for Highly Elliptical Orbit 3 and 4 payloads are excluded above, but are reflected in the associated P-5 exhibit in the FY 2013 President's Budget.

The omitted profile is (Then Year $):
FY 2008 $124.6M
FY 2009 $529.8M
FY 2010 $277.6M
FY 2011 $33.5M
FY 2012 $18.7M
FY 2013 $37.7M
FY 2014 $48.6M
FY 2015 $37.7M
FY 2016 $10.5M
FY 2017 $21.1M
FY 2018 $7.7M

**Cost Quantity Information**
**3020 | Procurement | Missile Procurement, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway (Aligned with Quantity) BY 1995 $M |
|---|---|---|
| 2008 | -- | -- |
| 2009 | 1 | 823.3 |
| 2010 | -- | -- |
| 2011 | 1 | 506.8 |
| 2012 | -- | -- |
| 2013 | 2 | 1948.4 |
| 2014 | -- | -- |
| 2015 | -- | -- |
| 2016 | -- | -- |
| 2017 | -- | -- |
| 2018 | -- | -- |
| 2019 | -- | -- |
| 2020 | -- | -- |
| **Subtotal** | **4** | **3278.5** |

**Annual Funding TY$**
**3080 | Procurement | Other Procurement, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway TY $M | Non End Item Recurring Flyaway TY $M | Non Recurring Flyaway TY $M | Total Flyaway TY $M | Total Support TY $M | Total Program TY $M |
|---|---|---|---|---|---|---|---|
| 2004 | -- | -- | -- | -- | -- | 96.4 | 96.4 |
| 2005 | -- | -- | -- | -- | -- | -- | -- |
| 2006 | -- | -- | -- | -- | -- | 3.6 | 3.6 |
| 2007 | -- | -- | -- | -- | -- | 6.5 | 6.5 |
| 2008 | -- | -- | -- | -- | -- | 3.8 | 3.8 |
| 2009 | -- | -- | -- | -- | -- | 1.9 | 1.9 |
| 2010 | -- | -- | -- | -- | -- | 2.0 | 2.0 |
| 2011 | -- | -- | -- | -- | -- | 24.7 | 24.7 |
| 2012 | -- | -- | -- | -- | -- | 49.6 | 49.6 |
| 2013 | -- | -- | -- | -- | -- | 47.1 | 47.1 |
| 2014 | -- | -- | -- | -- | -- | 28.2 | 28.2 |
| 2015 | -- | -- | -- | -- | -- | 26.3 | 26.3 |
| 2016 | -- | -- | -- | -- | -- | 7.7 | 7.7 |
| 2017 | -- | -- | -- | -- | -- | 7.6 | 7.6 |
| 2018 | -- | -- | -- | -- | -- | 7.8 | 7.8 |
| 2019 | -- | -- | -- | -- | -- | 7.9 | 7.9 |
| **Subtotal** | **--** | **--** | **--** | **--** | **--** | **321.1** | **321.1** |

**Annual Funding BY$**
**3080 | Procurement | Other Procurement, Air Force**

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 1995 $M | Non End Item Recurring Flyaway BY 1995 $M | Non Recurring Flyaway BY 1995 $M | Total Flyaway BY 1995 $M | Total Support BY 1995 $M | Total Program BY 1995 $M |
|---|---|---|---|---|---|---|---|
| 2004 | -- | -- | -- | -- | -- | 84.1 | 84.1 |
| 2005 | -- | -- | -- | -- | -- | -- | -- |
| 2006 | -- | -- | -- | -- | -- | 3.0 | 3.0 |
| 2007 | -- | -- | -- | -- | -- | 5.2 | 5.2 |
| 2008 | -- | -- | -- | -- | -- | 3.0 | 3.0 |
| 2009 | -- | -- | -- | -- | -- | 1.5 | 1.5 |
| 2010 | -- | -- | -- | -- | -- | 1.5 | 1.5 |
| 2011 | -- | -- | -- | -- | -- | 18.5 | 18.5 |
| 2012 | -- | -- | -- | -- | -- | 36.6 | 36.6 |
| 2013 | -- | -- | -- | -- | -- | 34.2 | 34.2 |
| 2014 | -- | -- | -- | -- | -- | 20.1 | 20.1 |
| 2015 | -- | -- | -- | -- | -- | 18.4 | 18.4 |
| 2016 | -- | -- | -- | -- | -- | 5.3 | 5.3 |
| 2017 | -- | -- | -- | -- | -- | 5.1 | 5.1 |
| 2018 | -- | -- | -- | -- | -- | 5.2 | 5.2 |
| 2019 | -- | -- | -- | -- | -- | 5.2 | 5.2 |
| **Subtotal** | **--** | **--** | **--** | **--** | **--** | **246.9** | **246.9** |

$78M in FY 2009 Other Procurement Air Force funds for Highly Elliptical Orbit 3 ground modifications are excluded. It is a replenishment effort and is baselined separately.

**Annual Funding TY$**
**3300 | MILCON | Military Construction, Air Force**

| Fiscal Year | Total Program TY $M |
|---|---|
| 1997 | 14.5 |
| 1998 | 14.0 |
| 1999 | -- |
| 2000 | -- |
| 2001 | 2.8 |
| 2002 | 18.8 |
| 2003 | 6.9 |
| **Subtotal** | **57.0** |

**Annual Funding BY$**
**3300 | MILCON | Military Construction, Air Force**

| Fiscal Year | Total Program BY 1995 $M |
|---|---|
| 1997 | 13.7 |
| 1998 | 13.1 |
| 1999 | -- |
| 2000 | -- |
| 2001 | 2.5 |
| 2002 | 16.7 |
| 2003 | 6.0 |
| **Subtotal** | **52.0** |

**Annual Funding TY$**
**3400 | Acq O&M | Operation and Maintenance, Air Force**

| Fiscal Year | Total Program TY $M |
|---|---|
| 1998 | 10.4 |
| 1999 | 17.0 |
| 2000 | 15.6 |
| 2001 | 17.6 |
| 2002 | 18.2 |
| 2003 | 0.3 |
| 2004 | 6.9 |
| 2005 | 7.0 |
| 2006 | 5.4 |
| 2007 | 7.6 |
| 2008 | 9.7 |
| 2009 | 10.2 |
| 2010 | 10.2 |
| 2011 | 11.5 |
| 2012 | 13.5 |
| **Subtotal** | **161.1** |

**Annual Funding BY$**
**3400 | Acq O&M | Operation and Maintenance, Air Force**

| Fiscal Year | Total Program BY 1995 $M |
|---|---|
| 1998 | 9.9 |
| 1999 | 16.0 |
| 2000 | 14.4 |
| 2001 | 16.1 |
| 2002 | 16.4 |
| 2003 | 0.3 |
| 2004 | 6.0 |
| 2005 | 5.9 |
| 2006 | 4.4 |
| 2007 | 6.1 |
| 2008 | 7.6 |
| 2009 | 7.9 |
| 2010 | 7.8 |
| 2011 | 8.6 |
| 2012 | 9.9 |
| **Subtotal** | **137.3** |

## Low Rate Initial Production

There is no Low Rate Initial Production for the SBIRS High Program.

## Foreign Military Sales

None

## Nuclear Cost

None

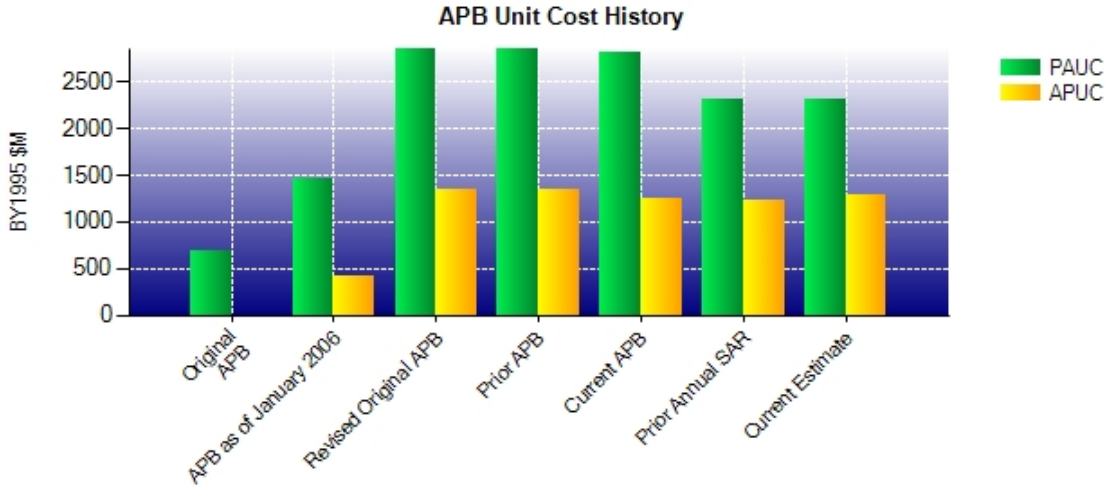
## Unit Cost

## Unit Cost Report

| Unit Cost | BY1995 $M Current UCR Baseline (JAN 2012 APB) | BY1995 $M Current Estimate (DEC 2011 SAR) | BY % Change |
|---|---|---|---|
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 11245.8 | 13839.4 | |
| Quantity | 4 | 6 | |
| Unit Cost | 2811.450 | 2306.567 | -17.96 |
| Average Procurement Unit Cost (APUC) | | | |
| Cost | 2512.0 | 5127.4 | |
| Quantity | 2 | 4 | |
| Unit Cost | 1256.000 | 1281.850 | +2.06 |

| Unit Cost | BY1995 $M Revised Original UCR Baseline (MAR 2006 APB) | BY1995 $M Current Estimate (DEC 2011 SAR) | BY % Change |
|---|---|---|---|
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 8569.3 | 13839.4 | |
| Quantity | 3 | 6 | |
| Unit Cost | 2856.433 | 2306.567 | -19.25 |
| Average Procurement Unit Cost (APUC) | | | |
| Cost | 1342.8 | 5127.4 | |
| Quantity | 1 | 4 | |
| Unit Cost | 1342.800 | 1281.850 | -4.54 |

## Unit Cost History




| | | BY1995 $M | | TY $M | |
|---|---|---|---|---|---|
| | Date | PAUC | APUC | PAUC | APUC |
| **Original APB** | OCT 1996 | 693.980 | N/A | 732.340 | N/A |
| **APB as of January 2006** | SEP 2002 | 1467.640 | 420.500 | 1684.180 | 499.133 |
| **Revised Original APB** | MAR 2006 | 2856.433 | 1342.800 | 3386.200 | 1723.200 |
| **Prior APB** | MAR 2006 | 2856.433 | 1342.800 | 3386.200 | 1723.200 |
| **Current APB** | JAN 2012 | 2811.450 | 1256.000 | 3461.250 | 1663.900 |
| **Prior Annual SAR** | DEC 2010 | 2307.400 | 1226.625 | 2929.200 | 1690.875 |
| **Current Estimate** | DEC 2011 | 2306.567 | 1281.850 | 2949.967 | 1794.225 |

### SAR Unit Cost History

#### Current SAR Baseline to Current Estimate (TY $M)

| Initial PAUC Dev Est | Changes | | | | | | | | PAUC Current Est |
|---|---|---|---|---|---|---|---|---|---|
| | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | |
| 829.460 | 14.850 | 172.640 | 95.817 | 84.400 | 1568.250 | 0.000 | 184.550 | 2120.507 | 2949.967 |

#### Current SAR Baseline to Current Estimate (TY $M)

| Initial APUC Dev Est | Changes | | | | | | | | APUC Current Est |
|---|---|---|---|---|---|---|---|---|---|
| | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | |
| 292.250 | 15.525 | 358.375 | 3.475 | 0.000 | 847.775 | 0.000 | 276.825 | 1501.975 | 1794.225 |

## SAR Baseline History

| Item/Event | SAR Planning Estimate (PE) | SAR Development Estimate (DE) | SAR Production Estimate (PdE) | Current Estimate |
|---|---|---|---|---|
| Milestone I | N/A | N/A | N/A | N/A |
| Milestone II | N/A | OCT 1996 | N/A | OCT 1996 |
| Milestone III | N/A | N/A | N/A | N/A |
| IOC | N/A | DEC 2003 | N/A | N/A |
| Total Cost (TY $M) | 2670.3 | 4147.3 | N/A | 17699.8 |
| Total Quantity | N/A | 5 | N/A | 6 |
| Prog. Acq. Unit Cost (PAUC) | N/A | 829.460 | N/A | 2949.967 |

## Cost Variance

## Cost Variance Summary

| Summary Then Year $M | | | | | |
|---|---|---|---|---|---|
| | RDT&E | Proc | MILCON | Acq O&M | Total |
| SAR Baseline (Dev Est) | 3386.5 | 584.5 | 28.5 | 147.8 | 4147.3 |
| Previous Changes | | | | | |
| Economic | -14.0 | -10.0 | -1.4 | +1.8 | -23.6 |
| Quantity | -152.7 | +2018.0 | -- | -- | +1865.3 |
| Schedule | +561.0 | +13.9 | -- | -- | +574.9 |
| Engineering | +514.2 | -- | +7.8 | -15.6 | +506.4 |
| Estimating | +6298.6 | +3259.4 | +22.1 | +27.1 | +9607.2 |
| Other | -- | -- | -- | -- | -- |
| Support | -- | +897.7 | -- | -- | +897.7 |
| Subtotal | +7207.1 | +6179.0 | +28.5 | +13.3 | +13427.9 |
| Current Changes | | | | | |
| Economic | +40.4 | +72.1 | -- | +0.2 | +112.7 |
| Quantity | -- | -- | -- | -- | -- |
| Schedule | -- | -- | -- | -- | -- |
| Engineering | -- | -- | -- | -- | -- |
| Estimating | -329.2 | +131.7 | -- | -0.2 | -197.7 |
| Other | -- | -- | -- | -- | -- |
| Support | -- | +209.6 | -- | -- | +209.6 |
| Subtotal | -288.8 | +413.4 | -- | -- | +124.6 |
| Total Changes | +6918.3 | +6592.4 | +28.5 | +13.3 | +13552.5 |
| CE - Cost Variance | 10304.8 | 7176.9 | 57.0 | 161.1 | 17699.8 |
| CE - Cost & Funding | 10304.8 | 7176.9 | 57.0 | 161.1 | 17699.8 |

| Summary Base Year 1995 $M | | | | | |
|---|---|---|---|---|---|
| | RDT&E | Proc | MILCON | Acq O&M | Total |
| SAR Baseline (Dev Est) | 3016.6 | 496.7 | 26.0 | 140.2 | 3679.5 |
| Previous Changes | | | | | |
| Economic | -- | -- | -- | -- | -- |
| Quantity | -128.4 | +1477.4 | -- | -- | +1349.0 |
| Schedule | +416.6 | -115.1 | -- | -- | +301.5 |
| Engineering | +460.5 | -- | +6.8 | -13.5 | +453.8 |
| Estimating | +4983.1 | +2392.2 | +19.2 | +10.8 | +7405.3 |
| Other | -- | -- | -- | -- | -- |
| Support | -- | +655.3 | -- | -- | +655.3 |
| Subtotal | +5731.8 | +4409.8 | +26.0 | -2.7 | +10164.9 |
| Current Changes | | | | | |
| Economic | -- | -- | -- | -- | -- |
| Quantity | -- | -- | -- | -- | -- |
| Schedule | -- | -- | -- | -- | -- |
| Engineering | -- | -- | -- | -- | -- |
| Estimating | -225.7 | +86.1 | -- | -0.2 | -139.8 |
| Other | -- | -- | -- | -- | -- |
| Support | -- | +134.8 | -- | -- | +134.8 |
| Subtotal | -225.7 | +220.9 | -- | -0.2 | -5.0 |
| Total Changes | +5506.1 | +4630.7 | +26.0 | -2.9 | +10159.9 |
| CE - Cost Variance | 8522.7 | 5127.4 | 52.0 | 137.3 | 13839.4 |
| CE - Cost & Funding | 8522.7 | 5127.4 | 52.0 | 137.3 | 13839.4 |

Previous Estimate: September 2011

| RDT&E | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +40.4 |
| Adjustment for current and prior escalation. (Estimating) | -12.2 | -16.2 |
| Revised estimate due to Congressional General Reductions in FY 2011 for Federally Funded Research and Development Center. (Estimating) | -4.5 | -6.2 |
| Revised estimate for cost-to-complete SBIRS High. Previous estimate assumed a November 2011 Geosynchronous Earth Orbit (GEO) 1 launch. Current estimate updated to reflect May 2011 launch and reduced requirements to complete Increment 2. (Estimating) | -209.0 | -306.8 |
| RDT&E Subtotal | -225.7 | -288.8 |

| Procurement | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +72.1 |
| Adjustment for current and prior escalation. (Estimating) | -12.8 | -17.0 |
| Refined estimate. (Estimating) | 0.0 | -0.1 |
| Revised estimate due to updated allocation between Geosynchronous Earth Orbit Satellites 3 and 4, and Highly Elliptical Orbit (HEO) payloads 3 and 4, which are excluded from this report. (Estimating) | -54.6 | -78.4 |
| Revised estimate due to Congressional mark in FY 2011 against GEO 5 advance procurement. (Estimating) | -18.6 | -25.0 |
| Revised estimate for GEO satellites 5 and 6 based on revised efficiencies projection. (Estimating) | -5.9 | -8.0 |
| Revised estimate for GEO satellites 3 and 4 and HEO payloads 3 and 4 launch, operations and checkout requirements. (Estimating) | +175.8 | +255.4 |
| Revised estimate due to change in estimating assumptions resulting from inflationary guidance related to non-pay/non-fuel. (Estimating) | +14.2 | +21.0 |
| Revised estimate due to reduced flyaway costs. (Estimating) | -7.3 | -9.8 |
| Revised estimate due to Congressional General Reduction in FY 2011. (Estimating) | -4.7 | -6.4 |
| Adjustment for current and prior escalation. (Support) | -1.6 | -2.1 |
| Increase in Other Support due to revised estimate of support requirements for the GEO satellites 5 and 6, extending support requirements to FY 2020. (Support) | +136.9 | +212.5 |
| Decrease in Other Support resulting from inflationary guidance related to non-pay/non-fuel. (Support) | -0.5 | -0.8 |
| Procurement Subtotal | +220.9 | +413.4 |

| Acq O&M | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +0.2 |
| Adjustment for current and prior escalation. (Estimating) | -0.2 | -0.2 |
| Acq O&M Subtotal | -0.2 | 0.0 |

## Contracts

**Appropriation: RDT&E**

| | |
|---|---|
| Contract Name | **SBIRS High EMD Mod** |
| Contractor | Lockheed Martin Corporation |
| Contractor Location | Sunnyvale, CA 94089 |
| Contract Number, Type | F04701-95-C-0017, CPAF |
| Award Date | November 08, 1996 |
| Definitization Date | November 08, 1996 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 1590.1 | N/A | 2 | 6224.2 | N/A | 2 | 9215.0 | 9275.2 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (12/25/2011) | -322.3 | -10.6 |
| Previous Cumulative Variances | -340.0 | -6.0 |
| Net Change | +17.7 | -4.6 |

**Cost And Schedule Variance Explanations**

The favorable net change in the cost variance is due to level-of-effort and material under-runs, as well as staff reductions.

The unfavorable net change in the schedule variance is due to technical delays in Space Vehicle, Integrated Ground Product and Operations and Support.

**Contract Comments**

The difference between the initial contract price target and the current contract price target is due to multiple program restructures and program extensions.

The current Engineering, Manufacturing and Development contractor Estimated Price at Completion is $9,215M, compared to $9,108M in the September 2011 SAR. The increase since the previous SAR is due to added scope for FY 2012 contractor logistics support. The government’s Estimated Price at Completion is $9,275M and is consistent with the 2011 Service Cost Position.

The difference between the current target contract price and the contractor and program manager's estimated price at completion is due to the multiple contract re-baselines. The current target price does not include the cumulative Over Target Baseline (OTB) value, while the estimated price at completion does incorporate the OTBs.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **SBIRS Follow-on Production** |
| Contractor | Lockheed Martin Corporation |
| Contractor Location | Sunnyvale, CA 94089 |
| Contract Number, Type | FA8810-08-C-0002, CPAF |
| Award Date | March 14, 2008 |
| Definitization Date | April 08, 2009 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 370.0 | N/A | 0 | 2939.7 | N/A | 2 | 3000.6 | 3334.0 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (12/25/2011) | -53.0 | -34.4 |
| Previous Cumulative Variances | -52.0 | -39.8 |
| Net Change | -1.0 | +5.4 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to Pointing and Control Assembly-related inefficiencies and rework.

The favorable net change in the schedule variance is due to the completion of the Highly Elliptical Orbit Gimbal Drive Assembly and other subcontractor deliveries, as well as process improvement initiatives that have recovered previous schedule variances.

**Contract Comments**

The difference between the initial contract price target and the current contract price target is due to additional scope. The program office exercised the Highly Elliptical Orbit (HEO) 3 and 4, and Geosynchronous Earth Orbit (GEO) satellite 3 and 4 production efforts, increasing the quantity from zero to two, HEO 3 ground modification effort, and various studies and launch vehicle integration Contract Line Items.

The contractor Estimated Price at Completion is $2,951.2M, compared to $2,921.8M in the September 2011 SAR. The increase is due to additional scope for the HEO Training Center, Focal Plane Assembly spares, and ground modifications. The government's Estimated Price at Completion is $3,327.8M, derived from the April 2011 Air Force Service Cost Position, which assumes a December 2015 GEO 3 delivery and a February 2013 HEO 3 delivery.

A series of actions and reviews were implemented by the government to mitigate further delays and overruns, including a schedule risk-based Baseline Review to evaluate program technical and schedule baselines and risks. The review included deep-dives into the Pointing and Control Assembly and Special Test Equipment efforts. The review completed in January 2012. The program office is addressing the review's findings, with all actions scheduled to complete in Spring 2012.

## Deliveries and Expenditures

| Deliveries To Date | Plan To Date | Actual To Date | Total Quantity | Percent Delivered |
|---|---|---|---|---|
| Development | 0 | 1 | 2 | 50.00% |
| Production | 0 | 0 | 4 | 0.00% |
| Total Program Quantities Delivered | 0 | 1 | 6 | 16.67% |

| Expenditures and Appropriations (TY $M) | | | |
|---|---|---|---|
| Total Acquisition Cost | 17699.8 | Years Appropriated | 18 |
| Expenditures To Date | 9690.4 | Percent Years Appropriated | 69.23% |
| Percent Expended | 54.75% | Appropriated to Date | 12337.0 |
| Total Funding Years | 26 | Percent Appropriated | 69.70% |

## Operating and Support Cost

| Assumptions And Ground Rules |
|---|
| Operations and Maintenance funds support the activation of the SBIRS High System, including Component ground operating and training facilities at worldwide sites. SBIRS Increment 1 ground system became operational in December 2001. These funds support the procurement of temporary facilities, minor construction, office equipment, furniture, travel, supplies, and communication links necessary for the activation of the SBIRS Mission Control Station, the Mission Control Station Backup, Outside Continental United States Relay Ground Stations, and Initial Qualification Training facility. Also supported with these funds are the repair and transportation of Government Furnished Equipment and Temporary Duty costs for training of the initial cadre of operators. Disposal costs are not included in this estimate.<br><br>The SBIRS High profile reflects a 30-year Life Cycle Cost and is based upon the Operations and Maintenance Database jointly maintained by Headquarters, Air Force Space Command (HQ AFSPC) and the program office, reviewed and updated in January 2010.<br><br>Comparable Operating and Support cost estimates for the legacy system, Defense Support Program, are not available. |

| Costs BY1995 $M | | |
|---|---|---|
| **Cost Element** | **SBIRS HIGH Avg Annual Cost for SBIRS High System** | **Defense Support Program** |
| Unit-Level Manpower | 42.76 | -- |
| Unit Operations | 3.55 | -- |
| Maintenance | 50.32 | -- |
| Sustaining Support | 31.02 | -- |
| Continuing System Improvements | 0.00 | -- |
| Indirect Support | 10.97 | -- |
| Other | -- | -- |
| Total Unitized Cost (Base Year 1995 $) | 138.62 | -- |

| Total O&S Costs $M | SBIRS HIGH | Defense Support Program |
|---|---|---|
| Base Year | 4158.6 | -- |
| Then Year | 6421.1 | -- |