

Line	Item	Change from Budget Estimate
1	Chabot Space and Science Center	800
1	Process Integrated Mechanism for Human-Computer Collaboration and Coordination	1,000
1	Fully-Integrated Solar-Powered Interior Lighting Technology	1,600
1	Nanotechnology based biosensors and bio-threat detectors	2,000
1	Hybrid Materials for Thermal Management in Thin Films and Bulk Composites	1,600
1	Coal Transformation Laboratory	1,000
1	Development and Validation of Advanced Design Technologies for Hypersonic Research	2,400
1	High Energy Laser for Detection, Inspection and Non-destructive Testing	5,000
1	UNR-Millimeter Wave-Based Fatigue Countermeasure Technology	700
2	Battlespace: Reducing Military Decision Cycles	2,400
2	High Temperature Hydrogen Energy Production Facility	1,000
2	Partnership in Innovative Preparation for Educators and Students (PIPES) and the Space Education Consortium (SEC)	1,600
2	Secure Gridster Network Centric Operations	2,400
2	University Research Initiatives	8,000
2	Frank Seaver Science and Engineering Complex	1,000
4	Tricorder Detector	1,200
4	National Center for Integrated Civilian-Military Domestic Disaster Medical Response	2,000
4	Comprehensive Clinical Phenotyping and Genetic Mapping for the Discovery of Autism Susceptibility Gene	1,500
5	Chrome Free Environmentally Friendly Corrosion Protection for Aircraft	1,600
5	Free Electron Laser Capabilities for Aerospace Microfabrication	1,600
5	Intelligent Carbon Nano-tube Based Computer Devices for Space Applications	4,800
5	Aircraft Active Corrosion Protective Compounds	1,000
5	Accelerated Insertion of Advanced Materials and Certification for Military Aircraft Structure Material	2,800
5	Blast Resistant Concrete Products	1,600
5	Large Area, APVT Materials Development for High Power Devices	1,600
5	Plasma-Sphere Array for Flexible Electronics	1,600
5	Advanced Carbon Fiber Research and Testing Initiative	3,000
5	Institute for Science and Engineering Simulative (ISES)	2,500
5	Science for Sustainment initiative to Improve Mission	1,600
5	ONAMI Safer Nanomaterials and Nanomanufacturing	3,200
5	Pennsylvania Nanomaterials Commercialization Center	1,600
5	High Temperature Aerogel Materials for Global Strike Vehicles	1,600
5	Polymer Nanocomposites for Energy Storage and Pulsed Power	800
5	Carbon Nano-Materials for Advanced Aerospace Applications, AQW Rice University	1,600
5	University of Houston Consortium for Nanomaterials for Aerospace Commerce and Technology (CONTACT)	2,400
5	Gallium Nitride (GaN) RF Power Technology	1,600
5	Life Shield Blast Resistant Panels	1,000
5	Advanced Aerospace Carbon Foam Heat Exchangers	1,600
5	Advanced Engineered Non-Linear Optical Materials for Critical Wavelengths	960
5	Air Force Minority Leaders Program	6,000
5	Durable Hybrid Coatings for Aircraft Systems	1,200
5	Fire and Blast Resistant Materials for Force Protection	1,600
5	Nanocomposites for Lightning Protection of Composite Airframe Structures	1,600
5	Nanotechnology research	5,000
5	Polymer Stress and Sensor Damage Sensors for Composites	2,900
6	Cognitive UAV	1,000
6	Modeling and Simulation for Rapid Integration and Technology Evaluation	1,000
6	Advancement of Intelligent Aerospace Systems (AIAS) for the U.S, Air Force	2,000
6	Characterization of Airborne Environment for Tactical Lasers	4,000
6	SingleMode Optical Connectors for Advanced Air Vehicles	800

Line	Item	Change from Budget Estimate
7	Warfighter Pocket XP-Next Gen	1,600
7	Imaging Tools for Human Performance Enhancement and Diagnostics	1,600
7	Ubiquitous RFID Chem/Bio Detection	800
7	Component Object Model (COM) Attitude Control System Simulation/Trainer	4,000
7	Solid Electrolyte Oxygen Separator	3,200
8	Development & Testing of Advanced Paraffin-based Hybrid Rockets for Space Applications	1,600
8	Center for Solar Electricity and Hydrogen	2,400
8	LOX/Methane Cooled Upper Stage Rocket Engine	1,000
8	Modified F-22 Maintenance-Free Nickel Cadmium Aircraft Batteries for the F-16	1,400
8	Advanced Vehicle and Propulsion Center	1,600
8	Integrated Electrical Starter/Generator	2,000
8	Hydrocarbon Boost Technology Demonstrator	1,200
8	THEMA - Thermal and Energy Management for Aerospace	3,500
8	WASH Oxygen Sensor and Cell Level Battery Controller	1,200
8	Active Combustion Control System for Military Aircraft	3,500
8	Advanced Fuel Cell Based Power System for Small UAVs	800
8	Alternative Energy Research	10,000
8	High Energy Superior Lithium Battery Technology	6,000
8	VDVP for UAV/UCAV Aircraft Engines	1,600
9	Optical Maximum Entropy Verification (OMEV)	800
9	Sensor Fusion	1,600
9	OPAL (Optically Pumped Atomic Laser for Defense)	3,200
9	Center for Advanced Sensor and Communications Antennas	1,000
9	Low Voltage, Wideband Electro-Optic Polymer Modulator	2,400
9	SuperResolution Sensor System (S3)	5,000
11	Advanced Modular Avionics for Operationally Responsive Space Use	2,000
11	Multicontinuum Technology for Space Structures	2,000
11	Mission Design and Analysis Tool	500
11	Shielding Rocket Payloads	350
11	Deployable Structure Systems for Space	1,600
11	Field Programmable Gate Arrays	1,600
11	HAARP	3,200
11	Microsatellite Target System	1,600
11	Nuclear Test Seismic Research	2,400
11	Reconfigurable Electronics and NonVolatile Memory Research	2,000
12	Advanced Nanotube Micro-Munition Weapon Technology Initiative	1,200
13	Ceramics for Next-Generation Tactical Laser Systems	2,400
14	Compact Laser Terminal for Airborne Network Centric Warfare	2,000
14	Adaptive Optics Lasercom	1,600
14	Cyber Attack Mitigation and Exploitation Laboratory II (CAMEL II)	1,900
20	Continuous Integrated Vehicle Health Monitoring System	1,200
20	Encapsulated Ballistic Protection System (EBPS)	1,000
20	Coated Field repair (2K Gun)	1,000
20	National Aerospace Leadership Initiative	16,000
20	EMI Grid Fabrication Technology	1,600
20	Aircraft Evaluation Readiness Initiative (AERI)	2,000
20	Hybrid Bearings	2,400
20	Metals Affordability Initiative	5,000
20	Strategic Biofuels Supply Program	1,600
20	Materials Integrity Management Research for Air Force Systems (PE 0603112F)	500
21	TacNode-Tactical Airborne Communications Node	3,200
21	Active Unmanned Air Vehicle (UAV) Phenomenology (AUP) & ART Technology Transition	4,000
21	Moving Target Strike	1,600

Line	Item	Change from Budget Estimate
22	Advance Aerospace Titanium Structures initiative	1,600
22	Big Antennas Small Structures Efficient Tactical (BASSET) UAV	800
23	FRESH (Field Renewable Energy System Hybrids) Li Ion Battery Program	1,000
23	Versatile Affordable Advanced Turbine Engine (VAATE) Small Turbofan (STF)	3,600
23	Ceramic Matrix Composite (CMC) Airfoil Capability Enhancements	1,000
23	Texas Research Institute for Environmental Studies	1,200
23	BiPolar Wafer-cell Nickel Metal Hydride Battery	2,000
23	Family of Motors Capability Demonstration	6,400
23	Silicon Carbide Power Electronics for More Electric Aircraft	5,500
23	Versatile Affordable Advanced Turbine Engine, High Speed Turbine Engine Demonstrator	4,800
24	Variable Transmittance Visor	1,000
24	Virtual Medical Trainer	2,400
24	Battlefield Automatic Life Status Monitor (BALSM)	1,600
24	Low Cost/Improved Performance Helmet Display and Life Support Technologies	2,700
24	Water Purification with Fused Carbon Nanotube Nanostructured Material	2,400
25	BLADES (Real-Time Battlefield Laser Detection System)	1,500
25	Innovative Polymeric Materials for Three-Dimensional (3-D) Microdevice Construction	1,000
25	Advanced Threat Alert Advanced Technology Demonstration	1,700
28	Small Low Cost Reconnaissance Spacecraft	1,800
28	Micromachined Switches for Next Generation Modular Satellites	2,400
28	Microsatellite Serial Manufacturing	1,600
28	Satellite Coherent Optical Receiver (SCORE)	2,000
28	Systematic Approach to Radiation Hardened Electronics (SHARE)	2,400
28	Intelligent Free Space Optical Satellite Communications Node	1,600
28	Radially Segmented Launch Vehicle (RSLV) Risk Reduction Program	1,600
28	COTS Technology for Space Situational Awareness	2,000
28	Large Automated Production of Expendable Launch Structures (LAPELS)	4,300
28	Thin Film Amorphous Solar Arrays	3,200
30	High Accuracy Network Determination System (HANDS)	5,200
30	Maui Space Surveillance System (MSSS) Operations & Research	23,000
30	PanSTARRS	9,000
32	Body Armor Improved Ballistic Protection	1,600
33	All Electric Laser	1,900
33	Applications of LIDAR to Vehicles with Analysis (ALVA)	8,400
33	Real-time Optical Surveillance Applications ... ,	1,600
33	Satellite Active Imaging National Testbed Program	2,400
33	Compound Zoom for Airborne Reconnaissance (CZAR)	1,600
34	Interoperability Network to Fuse and Exchange Real- Time Information	800
34	Collaboration Gateway	1,000
34	Massively Parallel Optical Interconnects for Battlespace Information Exchange	3,900
40	Multilingual Text Mining Platform for intelligence Analysts	1,000
41	Tactical Automated Security System (TASS) Advanced Communications Module	2,400
45	Multi-mission Deployable Optical System	4,000
51	Conventional Strike Missiles Capability Demonstration	4,800
54	Assessment of Alternative Enemy for Aircraft Ground Equipment (AGE)	2,400
54	Transforming Waste Plastics Into Alternative Fuels	1,000
54	Transformation and Modernization of Air Force Weapons Systems	2,400
54	Microcomposite Coatings for Chrome Replacement	800
54	02 Diesel Air Quality Project	1,600
60	Ballistic Missile Technology	4,000
61	Autonomous Systems	4,000
67	B-1 Bomber 16 Carry Adapter	9,000
68	AT-6B	2,400

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70	Small Diameter Bomb	5,800
72	Rapid Replacement of Mission Critical Logistics Electronic Components	1,600
76	Space Control Test Capabilities	4,000
76	RAIDRS Block 20 (Air Force unfunded requirement)	7,000
82	1-1000 Warhead Technology Demonstration	1,200
84	Improvised Ordnance Detonator -Advanced Development	1,600
86	ACES II Ejection Seat Improvement	1,000
88	Program Engineering Interoperability Framework	1,600
88	Enterprise Services for Reach Back Capabilities (ESRBC)	3,000
88	MEDSTARS Integration with Global Combat Support System	1,600
88	Airborne Web Services (AWS) Spiral 5	800
88	Distributed Mission Interoperability Toolkit (DMIT)	4,000
88	ASSET eWing and Data Fusion Technology Integration Base	4,000
88	Global Awareness Presentation Services (GAPS)	2,400
89	Electronic Warfare Modeling, Simulation and Wireless Testing Center	3,600
91	Joint Strike Fighter F136 Alternate Engine	240,000
91	Production Initiatives	100,000
91	Small Business Technology Insertion Program	25,000
94	Enhanced Smart Triple Ejector Rack	1,600
94	Aging Landing Gear Life Extension	2,000
105	FPS-16 Radar Mobilization Upgrade	1,600
105	Holloman High Speed Test Track	3,600
111	Ballistic Missile Range Safety Technology	4,000
113	Internal Base Facility Energy Independence - Wind/Turbine	1,000
114	Base Facility Energy Independence	3,200
120	B-52 CCJ	4,000
120	Common Reconfigurable Advanced Thermal Management System	500
128	Predator Aircrew Mission Training System (PMATS) Upgrade	3,200
131	F-15 AN/ALR-56C RWR Digital Receiver Upgrade	5,600
131	AESA Development and Demonstration	6,000
131	F-15 AESA Radar Upgrade	2,400
141	Compass Call	4,000
157	SYERS Demonstration	16,000
157	Joint STARS Electro -Optical Adjunct	800
160	MAICE	1,600
160	Research Visualization Facility	1,200
167	Pointing and Stabilization System Upgrade for Cobra Ball	2,500
174	Cyber Security Defend and Attack Exercise	2,400
174	MontonaCyber Security Attack and Defend Exercises	800
175	Technical Order Optimization	1,200
176	Carbon Nanotube Enhanced Power Sources for Space	1,200
176	Command & Control Service Level Management (C2SLM) program	8,000
180	Ku Beyond Line of Sight Satcom Datalink for Senior Scout	6,400
185	TAMDAR System Integration and Performance Evaluation on Unmanned Aerial Systems	800
185	Operations Risk Management Visualization and Integration	800
186	Terminal Radar Approach Control (TRACON) Quick Connect Panel and Switchgear	720
186	Terminal Surveillance and Approach System (TSAS)/ATCALs	3,000
203	Rivet Joint Network Interface Growth	2,400
203	Combat Sent Wideband Sensor Upgrade Program	4,000
204	Advanced Architecture Designs Supporting U.S. Army Net Centric Warfare (AADSUNW)	800
205	Integrator Unmanned Aircraft System Advanced Concepts Development	3,500
205	Center of Excellence for Defense UAV Education	3,200
205	Multi-Sensor Detect, See, & Avoid	5,000

Line	Item	Change from Budget Estimate
217	Air Force C-130 Propeller De-Icing System Safety Upgrade Using Metal Fiber Brushes	1,200
217	C-130 AICAT CBM+	2,400
218	Inductive Thermography Systems Inspections	1,600
228	Combat Casualty Management System	2,900
231	Technology Insertion Demonstration and Evaluation (TIDE)	1,200
231	Laser Peening for Friction Stir Welded (FSW) Aerospace Structures	1,000
231	Production of Nanocomposites for Aerospace Applications	1,600
231	High Temperature, Laser Sintered Polymeric Material Digital Product Definition	2,000
231	Prepreg Thickness Variability Reduction Program	1,600
231	Rapid Manufacturing and Repair of Composite Components	1,600
231	Refigurable Tooling Systems	1,600
233	Expert Organizational Development System (EXODUS)	1,200
234	Alternative Energy Fuel Cell Power Generation	2,000
234	Strategic Airlift Aircraft Availability Improvements	2,800
234	Heavy Duty Hybrid Electric Vehicle	2,000
234	Alternate Carbon Stationary Fuel Cell Demonstrator	3,200
234	WR-ALC Special Operations Forces	3,000
234	Alternate Energy Research	<u>10,000</u>
	Total	960,230