Proposals Selected for Negotiation of Contracts

Alabama (5)

CFD Research Corp.
215 Wynn Dr.
Huntsville, AL 35805
Silvia Harvey (256) 726-4858
09-2-X9.02-9443 ARC

Integrated Inflatable Ballute for Planetary Entry [1]

CFD Research Corp.
215 Wynn Dr.
Huntsville, AL 35805
Silvia Harvey (256) 726-4858
09-2-X9.01-9440 ARC

Computational Tool for Coupled Simulation of Nonequilibrium Hypersonic Flows with Ablation [2]

CFD Research Corp.
215 Wynn Dr.
Huntsville, AL 35805
Silvia Harvey (256) 726-4858
09-2-X1.03-9438 MSFC

Improved Design of Radiation Hardened, Wide-Temperature Analog and Mixed-Signal Electronics [3]

CFD Research Corp.
215 Wynn Dr.
Huntsville, AL 35805
Silvia Harvey (256) 726-4858
09-2-S3.02-9436 GSFC

Software for Automated Generation of Reduced Thermal Models for Spacecraft Thermal Control [4]

CFD Research Corp.
215 Wynn Dr.
Huntsville, AL 35805
Silvia Harvey (256) 726-4858

09-2-X2.03-9435 MSFC


• Arizona (14)

Desert Beam Technologies, LLC
3542 N. Geronimo Avenue
Tucson, AZ 85705
Jerome Moloney (520) 520-5786

09-2-S1.04-8479 JPL

High Power Room Temperature Terahertz Local Oscillator [6]

Jansen’s Aircraft Systems Controls, Inc.
2303 W. Alameda Drive
Tempe, AZ 85282
Emerson Turner (602) 602-4156

09-2-A2.02-9291 GRC

Novel Active Combustion Control Concept for High-Frequency Modulation of Atomized Fuel Flow [7]

NP Photonics, Inc.
9030 S. Rita Road
Tucson, AZ 85747
James Fountain (520) 799-7424

09-2-S1.01-8433 LaRC

Tunable Narrow Linewidth, Low Noise 2.05 Micron Single Frequency Seeder Laser [8]

NP Photonics, Inc.
0930 S. Rita Road
Tucson, AZ 85747
James Fountain (520) 799-7424
09-2-S1.01-8403 LaRC

High Power Narrow Linewidth 1.26 Micron Ho-Doped Fiber Amplifier [9]

Paragon Space Development Corporation
3481 E. Michigan Street
Tucson, AZ 85714
Carole Hammond (520) 382-4814
09-2-X4.02-9770 LaRC

Verification and Validation of an Innovative Inflatable Structure [10]

Paragon Space Development Corporation
3481 E. Michigan Street
Tucson, AZ 85714
Carole Hammond (520) 382-4814
09-2-X2.05-9667 JSC


Paragon Space Development Corporation
3481 E. Michigan Street
Tucson, AZ 85714
Carole Hammond (520) 382-4814
09-2-X3.01-8530 JSC

Contaminant Robust System for Oxygen Production from Lunar and Martian Resources [12]

Ridgetop Group, Inc.
6595 North Oracle Road
Tucson, AZ 85704
Milena Thompson (520) 520-3300
09-2-A1.12-9941 ARC

Physical Modeling for Anomaly Diagnostics and Prognostics [13]
Ridgetop Group, Inc.
6595 North Oracle Road
Tucson, AZ 85704
Milena Thompson (520) 520-3300
09-2-A2.09-9940 GRC
Embedded Data Acquisition Tools for Rotorcraft Diagnostic Sensors [14]

Ridgetop Group, Inc.
6595 North Oracle Road
Tucson, AZ 85704
Milena Thompson (520) 520-3300
09-2-X1.03-9937 MSFC

Ridgetop Group, Inc.
6595 North Oracle Road
Tucson, AZ 85704
Milena Thompson (520) 520-3300
09-2-S1.02-9911 JPL
High-Speed, Low-Power ADC for Digital Beam Forming (DBF) Systems [16]

SJT Micropower
16411 N. Skyridge Lane
Fountain Hills, AZ 85268
Trevor Thornton (480) 510-0229
09-2-X1.03-9811 GSFC
Unconditionally Stable Low Dropout Regulators for Extreme Environments [17]

ZONA Technology, Inc.
9489 East Ironwood Square Drive
Scottsdale, AZ 85258
Jennifer Scherr (480) 480-9988
09-2-A2.07-9816 LaRC
Flight Dynamic Simulation with Nonlinear Aeroelastic Interaction using the ROM-ROM Procedure [18]
ZONA Technology, Inc.
9489 East Ironwood Square Drive
Scottsdale, AZ 85258
Jennifer Scherr (480) 480-9988
09-2-A2.04-9806 AFRC

• Arkansas (1)
Arkansas Power Electronics International, Inc.
535 W. Research Center Blvd., Suite 209
Fayetteville, AR 72701
Sharmila Mounce (479) 443-5759
09-2-S3.04-8940 GRC
Silicon Carbide (SiC) Power Processing Unit (PPU) for Hall Effect Thrusters [20]

• California (38)
Applied Poleramic, Inc.
6166 Egret Court
Benicia, CA 94510
Brian Hayes (707) 707-6738
09-2-X5.03-9388 GRC
Long Out-time, Out-of-Autoclave Cure Composites [21]

ChromoLogic, LLC
133 N. Altadena Drive, Suite 307
Pasadena, CA 91107
Naresh Menon (626) 626-9974
09-2-X15.01-9505 JSC
Novel Fluid Preservation System [22]
Chronos Technology (Div. of FMI, Inc.)
15302 Bolsa Chica Street
Huntington Beach, CA 92649
Kouros Sariri (714) 373-8100
09-2-S5.05-9495 JPL
A Compact, Radiation Hardened, Stable, Low Power, Programmable Crystal Oscillator for Extreme Temperature and High Reliability Space Application [23]

Crystal Research, Inc.
48501 Warm Springs Blvd., Suite 103
Fremont, CA 94539
Suning Tang (510) 445-0833
09-2-O1.02-9839 GRC
A Multi-Band Photonic Phased Array Antenna for High-Data Rate Communication [24]

Crystal Research, Inc.
48501 Warm Springs Blvd., Suite 103
Fremont, CA 94539
Suning Tang (510) 445-0833
09-2-S1.09-9778 ARC

Deployable Space Systems
955 Nysted Drive
Solvang, CA 93463
Brian Spence (805) 805-1313
09-2-S1.06-8554 GSFC
Elastic Deployable Composite Tubular Roll-Out Boom [26]

Deployable Space Systems
955 Nysted Drive
Solvang, CA 93463
Brian Spence (805) 805-1313
09-2-S3.03-9404 GRC
Mass-Optimized Ultra Flex Solar Array with Integrated IMM Cell Flexible Blanket [27]

Deployable Space Systems
955 Nysted Drive
Solvang, CA 93463
Brian Spence (805) 805-1313
09-2-S3.03-8863 GRC

Lightweight IMM Multi-Junction Photovoltaic Flexible Blanket Assembly [28]

Firestar Engineering, LLC
1122 Flightline Street, #76
Mojave, CA 93501
Greg Mungas (303) 626-8819
09-2-S3.08-8305 AFRC

NOFBX Single-Stage-to-Orbit Mars Ascent Vehicle Engine [29]

Hyper-Therm High-Temperature Composites
18411 Gothard Street, Units B&C
Huntington Beach, CA 92648
Wayne Steffier (714) 375-4085
09-2-A2.01-9131 LaRC

SiC Matrix Composites for High Temperature Hypersonic Vehicle Applications [30]

Innosense, LLC
2531 West 237th Street, Suite 127
Torrance, CA 90505
Kisholoy Goswami (310) 310-2011
09-2-O3.02-9623 KSC

Polymer-Reinforced, Nonbrittle, Lightweight Cryogenic Insulation for Reduced Life-Cycle Costs [31]

Innosense, LLC
2531 West 237th Street, Suite 127
Torrance, CA 90505
Kisholoy Goswami (310) 310-2011
09-2-X2.04-9618 JSC

**Nonflammable Crew Clothing Utilizing Phosphorus-Based Fire-Retardant Materials** [32]

**Innovative Engineering Solutions**
26200 Adams Avenue
Murrieta, CA 92562
Michael Gruszczynski (951) 951-7600

09-2-X10.01-9134 JSC

**Propellant Flow Actuated Piezoelectric Rocket Engine Igniter** [33]

**Los Gatos Research**
67 East Evelyn Avenue, Suite 3
Mountain View, CA 94041
Anthony OKeefe (808) 726-7022

09-2-X3.01-9113 JSC

**Novel Instrumentation for Lunar Regolith Oxygen Production Facilities** [34]

**Makel Engineering, Inc.**
1585 Marauder Street
Chico, CA 95973
Susana Carranza (512) 512-0718

09-2-X13.03-9519 JSC

**Advanced Cookware and Techniques for Food Preparation at Reduced Pressure and Gravity** [35]

**MetroLaser, Inc.**
8 Chrysler
Irvine, CA 92618
Christina Arnold (949) 949-0688

09-2-A4.01-8856 GRC

**A Novel, Portable, Projection, Focusing Schlieren System** [36]

**Microcosm, Inc.**
4940 W. 147th Street
Hawthorne, CA 90250
Lynn Shimohara (310) 219-2700

09-2-S3.04-9659 GRC

Unibody Composite Pressurized Structure (UCPS) for In-Space Propulsion [37]

Microcosm, Inc.
4940 W. 147th Street
Hawthorne, CA 90250
Lynn Shimohara (310) 219-2700
09-2-O4.02-9182 GSFC

X-ray Detection and Processing Models for Spacecraft Navigation and Timing [38]

Microcosm, Inc.
4940 W. 147th Street
Hawthorne, CA 90250
Lynn Shimohara (310) 219-2700
09-2-O4.04-9179 GSFC


Optimal Synthesis, Inc.
95 First Street, Suite 240
Los Altos, CA 94022
Victor Cheng (650) 650-8585
09-2-A3.01-8549 ARC

Stochastic Queuing Model Analysis to Support Airspace Super Density Operations (ASDO) [40]

Optimal Synthesis, Inc.
95 First Street, Suite 240
Los Altos, CA 94022
P. Menon (650) 650-8585
09-2-A3.01-8137 LaRC

Statistical Decision Support Tools for System-Oriented Runway Management [41]

Pacific Microchip Corp.
3916 Sepulveda Blvd. #108
Culver City, CA 90230
Dalius Baranauskas (310) 940-3083
09-2-S1.03-9002 JPL

Low Power 2-Bit ADC Array with Serial Output [42]

Redondo Optics, Inc.
811 N. Catalina Avenue, Suite 1100
Redondo Beach, CA 90277
Edgar Mendoza (310) 292-7673
09-2-S1.11-8154 MSFC

Remote UV Fluorescence Lifetime Spectrometer [43]

Seacoast Science, Inc.
2151 Las Palmas Drive, Suite C
Carlsbad, CA 92011
Loius Haerle (760) 760-0083
09-2-S1.08-9140 ARC

Atmospheric Aerosol Analysis using Lightweight Mini GC [44]

Space Micro, Inc.
10401 Roselle Street, Suite 400
San Diego, CA 92121
David Strobel (858) 858-0700
09-2-S3.01-9888 GSFC

Space Qualified, Radiation Hardened, Dense Monolithic Flash Memory [45]

Stottler Henke Associates, Inc.
951 Mariner's Island Blvd., Suite 360
San Mateo, CA 94404
Nathaniel Henke (650) 931-2719
09-2-X1.01-8666 ARC

PM/IDE - An Integrated Development Environment for Planning Models [46]

Surface Optics Corporation
11555 Rancho Bernardo Road
San Diego, CA 92127
Julie Anderson (858) 858-7404
09-2-O1.02-8188 JPL

**Stress-Matched RF and Thermal Control Coatings for Membrane Antennas** [47]

**Systems Technology, Inc.**
13766 Hawthorne Blvd.
Hawthorne, CA 90250
Suzie Fosmore (310) 679-2281
09-2-A1.07-9237 AFRC

**Real-Time Methods for Adaptive Suppression of Adverse Aeroservoelastic Dynamics** [48]

**Systems Technology, Inc.**
13766 Hawthorne Blvd.
Hawthorne, CA 90250
Cecy Pelz (310) 679-2281
09-2-A1.09-9235 AFRC

**Smart Adaptive Flight Effective Cue (SAFE-Cue)** [49]

**Techno Planet Incorporated**
17340 Rayen Street
Northridge, CA 91325
Scott Stanley (818) 709-7815
09-2-S5.02-8626 JPL

**Sealed Planetary Return Canister (SPRC)** [50]

**TechnoScience Corporation**
P.O. Box 60658
Palo Alto, CA 94306
Jam Farhoomand (650) 650-9833
09-2-S1.04-9317 JPL

**An Implant-Passivated Blocked Impurity Band Germanium Detector for the Far Infrared** [51]
Transition45 Technologies, Inc.
1963 North Main Street
Orange, CA 92865
Edward Chen (714) 283-2118
09-2-A2.01-8248 GRC
Shape Memory Alloy-Based Periodic Cellular Structures [52]

Trex Enterprises Corporation
10455 Pacific Center Court
San Diego, CA 92121
Mary MacDonald (858) 646-5490
09-2-S2.04-9341 MSFC
Minimally Machined HoneySiC Mirrors for Low Areal Cost and Density [53]

Ultracor
136 Wright Brothers Avenue
Livermore, CA 94551
Stan Wright (925) 925-3010
09-2-A2.01-9895 AFRC
SiC-SiC and C-SiC Honeycomb for Advanced Flight Structures [54]

Ultramet
12173 Montague Street
Pacoima, CA 91331
Craig Ward (818) 818-0236
09-2-X10.01-8636 GRC
Low-Cost, High-Performance Combustion Chamber for LOX/CH4 Propulsion, Phase II [55]

Ultramet
12173 Montague Street
Pacoima, CA 91331
Craig Ward (818) 818-0236
09-2-X8.01-8628 MSFC
Aerogel-Filled Foam Core Insulation for Cryogenic Propellant Storage, Phase II [56]
Ventions, LLC
1142 Howard Street
San Francisco, CA 94103
Amit Mehra (202) 202-2846
09-2-X10.01-9015 MSFC
Regeneratively-Cooled, Turbopump-Fed, Small-Scale Cryogenic Rocket Engines [57]

VIP Sensors
32242 Paseo Adelanto, Suite C
San Juan Capistrano, CA 92675
Alexis Karolys (949) 949-3558
09-2-A4.02-9523 AFRC
Fiber Optic Pressure Sensor Array [58]

- Colorado (16)
  Atmospheric Observing Systems, Inc.
  1930 Central Avenue, Suite A
  Boulder, CO 80301
  Eva Forberger (303) 303-3389
  09-2-S1.08-9355 JPL
  Calibration/Validation Technology for the CO2 Satellite [59]

  Black Forest Engineering, LLC
  P.O. Box 8059
  Colorado Springs, CO 80933
  Stephen Van Duyne (719) 593-9501
  09-2-S1.09-8528 JPL
  Thermopile Detector Radiation Hardened Readout [60]

  Blue Sun Enterprise, Inc.
  1942 Broadway Street, Suite 314
  Boulder, CO 80302
Christopher Grasso (720) 394-8897
09-2-S5.04-8643 JPL
Reactive Rendezvous and Docking Sequencer [61]

Boulder Nonlinear Systems, Inc.
450 Courtney Way, Unit 107
Lafayette, CO 80026
Mark Tanner (303) 303-0077
09-2-S1.08-8772 GSFC
Hyperspectral Image Projector with Polarization Capability [62]

Colorado Power Electronics, Inc.
120 Commerce Drive, Unit 3
Fort Collins, CO 80524
Bryce Hesterman (970) 482-0191
09-2-S3.04-8077 GRC
Low-Cost High-Performance Hall Thruster Support System [63]

Numerica Corporation
4850 Hahns Peak Drive, Suite 200
Loveland, CO 80538
Jeff Poore (970) 461-2000
09-2-A3.01-8419 ARC
Estimation and Prediction of Unmanned Aerial Vehicle Trajectories [64]

Numerica Corporation
4850 Hahns Peak Drive, Suite 200
Loveland, CO 80538
Jeff Poore (970) 461-2000
09-2-O4.04-8416 GSFC
Continuation Methods and Non-Linear/Non-Gaussian Estimation for Flight Dynamics [65]

Pioneer Astronautics
11111 W. 8th Avenue, Unit A
Lakewood, CO 80215
Robert Zubrin (303) 303-0890
09-2-X3.02-9169 GRC

Lunar Organic Waste Reformer [66]

Quest Product Development Corporation
6833 Joyce Street
Arvada, CO 80007
Alan Kopelove (303) 303-5088
09-2-X8.01-8258 GRC

Wrapped-MLI: Thermal Insulation for Cryogenic Piping [67]

SEAKR Engineering, Inc.
6221 S. Racine Circle
Centennial, CO 80111
Scott Anderson (303) 790-8499
09-2-S4.01-9047 ARC

Very Dense High Speed 3u VPX Memory and Processing Space Systems [68]

Sporian Microsystems, Inc.
515 Courtney Way, Suite B
Lafayette, CO 80026
Michael Usrey (303) 516-9075
09-2-A2.02-9410 GRC

Ultra High Temperature Capacitive Pressure Sensor [69]

TDA Research, Inc.
12345 W. 52nd Avenue
Wheat Ridge, CO 80033
John Wright (303) 940-2347
09-2-X2.01-8518 JSC

CO2 Removal from Mars EMU [70]

Tech-X Corporation
Simulation Tool for Dielectric Barrier Discharge Plasma Actuators at Atmospheric and Sub-Atmospheric Pressures [71]

Tech-X Corporation
5621 Arapahoe Avenue, Suite A
Boulder, CO 80303
Leslie Rosczyk (720) 720-1855
09-2-A2.05-9058 GRC

Fortran Testing and Refactoring Infrastructure [72]

Vescent Photonics, Inc.
4865 E. 41st Avenue
Denver, CO 80216
Jennifer Kellogg (303) 296-6766
09-2-S1.01-8410 GSFC

Electro-Optic Laser Scanners for Space-Based Lidar [73]

Zybek Advanced Products, Inc.
2845 29th Street
Boulder, CO 80301
Michael Weinstein (303) 530-2727
09-2-X6.02-8148 MSFC

Industrial Scale Production of Celestial Body Simulants [74]

Connecticut (2)

Precision Combustion, Inc.
410 Sackett Point Road
North Haven, CT 06473
Olga Furmanek (203) 203-3700
09-2-X2.01-8688 MSFC

[link]

Novel Catalytic Reactor for CO2 Reduction via Sabatier Process [75]

Qualtech Systems, Inc.
99 East River Drive
East Hartford, CT 06108
Sudipto Ghoshal (860) 761-9341

09-2-X1.01-8239 ARC

[link]

Automation of Health Management, Troubleshooting and Recovery in Lunar Outpost [76]

- Delaware (3)
  
  AlphaSense, Inc.
  28 Hillstream Road
  Newark, DE 19711
  Xin Zhang (302) 468-0980

  09-2-O1.04-9344 JSC

  [link]

  RF Front End Based on MEMS Components for Miniaturized Digital EVA Radio [77]

  EM Photonics
  51 East Main Street, Suite 203
  Newark, DE 19711
  Eric Kelmelis (302) 456-9003

  09-2-S6.01-9378 ARC

  [link]

  GPU-Accelerated Sparse Matrix Solvers for Large-Scale Simulations [78]

  Princeton Optronics, Inc.
  1 Electronics Drive
  Mercerville, DE 08619
  Narayan Bhatta (609) 584-9696

  09-2-S1.01-9431 LaRC

  [link]

  Narrow Wavelength, Frequency Modulated Source at 1.5 Wavelength [79]
• **Florida (4)**
  
  **Advanced Materials Technology, Inc.**
  9324 Mandrake Court  
  Tampa, FL 33647  
  Akbar Ghaneh-Fard (813) 994-6360  
  09-2-X8.01-9482 KSC
  
  Manufacture of Novel Cryogenic Thermal Protection Materials [80]

  **APECOR**
  3259 Progress Drive, Suite A  
  Orlando, FL 32826  
  John Elmes (407) 275-1174  
  09-2-S3.05-8550 GRC
  
  High-Temperature, Wirebondless, Ultra-Compact Wide Bandgap Power Semiconductor Modules for Space Power Systems [81]

  **Florida Turbine Technologies, Inc.**
  1701 Military Trail, Suite 110  
  Jupiter, FL 33458  
  Lloyd Mazer (561) 561-6337  
  09-2-X10.01-9575 MSFC
  
  Magnetically Actuated Seal [82]

  **OptiGrate Corporation**
  3267 Progress Drive  
  Orlando, FL 32826  
  Igor Ciapurin (407) 381-4115  
  09-2-S1.01-8384 GSFC
  
  Monolithic Rare Earth Doped PTR Glass Laser [83]

• **Georgia (1)**
  
  **Genziko, Inc.**
**Illinois (4)**

**Aries Design Automation, LLC**
2705 W Byron St
Chicago, IL 60618
Miroslav Velev (773) 773-6633
09-2-O1.03-8382 GRC
[Reconfigurable VLIW Processor for Software Defined Radio](#) [85]

**Cbana Laboratories**
2021 South First Street, Suite 206
Champaign, IL 61820
Timothy Hoerr (217) 333-6841
09-2-X2.03-8721 JPL
[Micro GC's for Contaminant Monitoring in Spacecraft Air](#) [86]

**MicroLink Devices**
6457 Howard Street
Niles, IL 60714
Noren Pan (847) 588-3001
09-2-S3.03-8143 GRC
[High Radiation Resistance Inverted Metamorphic Solar Cell](#) [87]

**Optical Engines, Inc.**
5412 S IL Route 31, Suite 5
Crystal Lake, IL 60012
Donald Sipes (815) 815-8303
09-2-O1.06-8122 JPL

High Power Uplink Amplifier for Deep Space Communications [88]

- **Indiana (1)**
  - Techshot, Inc.
    7200 Highway 150
    Greenville, IN 47124
    Mark Deuser (812) 923-9591
  09-2-O3.03-9290 GRC
  Observation Platform for Dynamic Biomedical and Biotechnology Experiments using the ISS Light Microscopy Module [89]

- **Kentucky (2)**
  - Advanced Dynamics, Inc.
    1500 Bull Lea Road, Suite 203
    Lexington, KY 40511
    Patrick Hu (859) 699-0441
  09-2-A2.04-8558 LaRC
  State-of-the-art, Multi-Fidelity Modeling and Simulation (M&S) Tool for Nonlinear Aeroelasticity [90]

  **TIER1 Performance Solutions**
  6 E. 5th Street, Suite 400
  Covington, KY 41011
  Terence Andre (859) 663-2115
  09-2-X13.01-9342 JSC
  Human Factors Analysis Support Tool (H-FAST) [91]

- **Maine (2)**
  - Fiber Materials, Inc.
    5 Morin St
    Biddeford, ME 04005
David Audie (207) 207-5911
09-2-X9.01-8952 ARC

**Phenolic Impregnated Carbon Ablator (PICA) Gap Filler for Heat Shield Assemblies** [92]

**Fiber Materials, Inc.**
5 Morin St
Biddeford, ME 04005
David Audie (207) 207-5911
09-2-X9.02-8827 ARC

**Multi-Layered Integrated Airframe System** [93]

- **Maryland (8)**

**Applied Sensor Research & Development Corporation**
1195 Baltimore-Annapolis Blvd., Unit #2
Arnold, MD 21012
Jacqueline Hines (410) 410-4664
09-2-X5.01-8081 MSFC

**Passive Wireless Temperature Sensors with Enhanced Sensitivity and Range** [94]

**Emergent Space Technologies, Inc.**
6301 Ivy Lane, Suite 720
Greenbelt, MD 20770
Everett Cary (301) 345-1535
09-2-O4.02-8458 GSFC

**Multi-Purpose Radio Signal Generation System** [95]

**Global Science & Technology, Inc.**
7855 Walker Drive, Suite 200
Greenbelt, MD 20770
Jack Kelly (240) 542-1104
09-2-S6.03-8400 MSFC

**Systems and Services for Real-Time Web Access to NPP Data** [96]
Intelligent Automation, Inc.
15400 Calhoun Drive, Suite 400
Rockville, MD 20855
Mark James (301) 294-5221
09-2-S6.02-8720 ARC

A Sensor Management Tool for Use with NASA World Wind [97]

Intelligent Automation, Inc.
15400 Calhoun Drive, Suite 400
Rockville, MD 20855
Mark James (301) 294-5221
09-2-A3.02-8211 LaRC

Integrated Testbed for Environmental Analysis of NextGen Concepts using ACES [98]

Masstech, Inc.
6992 Columbia Gateway Drive, Suite 200
Columbia, MD 21046
Richard Lee (443) 539-1742
09-2-A3.02-8812 LaRC

Lidar Wind Profiler for the NextGen Airportal [99]

Maxion Technologies, Inc.
5000 College Avenue, Ste 3121
College Park, MD 20740
B. David Green (978) 978-0003
09-2-X2.04-8356 GRC

A Quantum Cascade Laser-Based CO Sensor for Fire Warning [100]

Starodub, Inc.
3504 Littledale Road
Kensington, MD 20895
Nicolas Gagarin (301) 929-0964
09-2-S6.03-8921 GSFC
Non-Linear Non Stationary Analysis of Two-Dimensional Time-Series Applied to GRACE Data [101]

- **Massachusetts (24)**
  
  **Arradiance, Inc.**
  142 North Road
  Sudbury, MA 01776
  Ken Stenton (978) 978-8291
  09-2-S1.05-9730 GSFC
  
  Functionalized Nano-Film Microchannel Plate: A Single High Aspect Ratio Device for High Resolution, Low Noise Astronomical Imaging [102]

  **Aspen Aerogels, Inc.**
  30 Forbes Road, Bldg. B
  Northborough, MA 01532
  Kevin Schmidt (508) 691-1161
  09-2-X8.01-8579 MSFC
  
  Hybrid Aerogel-MLI Insulation System for Cryogenic Storage in Space Applications [103]

  **Autonomous Exploration, Inc.**
  385 High Plain Road
  Andover, MA 01810
  Julian Center (978) 269-4120
  09-2-O4.03-9337 GRC
  
  Advanced Bayesian Methods for Lunar Surface Navigation [104]

  **Boston Micromachines Corporation**
  30 Spinelli Place
  Cambridge, MA 02138
  Paul Bierden (617) 868-4178
  09-2-S2.02-9231 JPL
  
  Enhanced Fabrication Processes Development for High Actuator Count Deformable Mirrors [105]
Compact Low-Power Driver for Deformable Mirror Systems [106]

Busek Co., Inc.
11 Tech Circle
Natick, MA 01760
Judy Budny (508) 655-5565
09-2-S2.02-9229 JPL

Miniaturized Low-Power Piezo Microvalve for NanoSat and CubeSat Propulsion [107]

Busek Co., Inc.
11 Tech Circle
Natick, MA 01760
Judy Budny (508) 655-5565
09-2-S2.01-9277 JPL

High Efficiency Hall Thruster Discharge Power Converter [108]

Busek Co., Inc.
11 Tech Circle
Natick, MA 01760
Judy Budny (508) 655-5565
09-2-S3.04-8809 GRC

Magnesium Based Rockets for Martian Exploration [109]

Busek Co., Inc.
11 Tech Circle
Natick, MA 01760
Judy Budny (508) 655-5565
09-2-S3.08-8312 AFRC

Low Mass Low Power Hall Thruster System [110]
**EIC Laboratories, Inc.**

111 Downey Street  
Norwood, MA 02062  
David Rauh (781) 781-9450  
09-2-X7.01-8568 GRC

*Mesoporous Silicon-Based Anodes for High Capacity, High Performance Li-ion Batteries* [111]

**EIC Laboratories, Inc.**  
111 Downey Street  
Norwood, MA 02062  
David Rauh (781) 781-9450  
09-2-S1.11-8566 MSFC

*A Compact, Dual Excitation Raman Probe and Instrument for the Identification of Lunar Samples* [112]

**Eikos, Inc.**

2 Master Drive  
Franklin, MA 02038  
Michelle LeMay (508) 508-0300  
09-2-X6.02-8804 KSC

*Nanotube Electrodes for Dust Mitigation* [113]

**ElectroChem, Inc.**

400 West Cummings Park  
Woburn, MA 01801  
Radha Jalan (781) 938-5530  
09-2-X7.03-8742 JSC

*Novel Conductive Water Removal Membrane (CWRM) for PEM Passive Fuel Cell Operation* [114]

**Energid Technologies**

One Mifflin Place, Suite 400  
Cambridge, MA 02138  
Neil Tardella (617) 401-7090  
09-2-X1.01-9674 ARC

*Robotic Vehicle Proxy Simulation* [115]
Giner Electrochemical Systems, LLC
89 Rumford Avenue
Newton, MA 02466
Anthony Vaccaro (781) 529-0504
09-2-X7.03-9874 JSC

Water Management Membrane for Fuel Cells and Electrolyzers [116]

Giner Electrochemical Systems, LLC
89 Rumford Avenue
Newton, MA 02466
Anthony Vaccaro (781) 529-0504
09-2-X2.01-9873 MSFC

Development of a Cathode Liquid Feed Electrolyzer to Generate 3,600 PSI Oxygen for Both Lunar and Space Microgravity Environments [117]

Kaitech, Inc.
22 Mariners Drive
Marshfield, MA 02050
Richard Cox (781) 837-8465
09-2-S1.08-9836 SSC

Water Properties Sensor [118]

Milli Sensor Systems and Actuators, Inc.
93 Border Street
West Newton, MA 02465
Nunzi Sapuppo (617) 617-4872
09-2-S4.05-8441 ARC

Reaction Wheel with Embedded MEMS IMU [119]

Nanotrons
12A Cabot Road
Woburn, MA 01801
Jeanne Hladky (781) 781-6500
09-2-X5.02-8504 LaRC

*Functionalized Graphene Sheets-Polymer Based Nanocomposite for Cryotanks* [120]

**ORB Analytics, LLC**

5 Hillside Road

Carlisle, MA 01741

Samuel MacMullan (978) 501-3161

09-2-O1.01-9742 JPL

*Minimizing Implementation Loss in Soft-Decision GMSK Demodulators* [121]

**Q-Peak, Inc.**

135 South Road

Bedford, MA 01730

Peter Moulton (781) 275-9535

09-2-S1.01-9210 LaRC

*Pulsed, Single-Frequency, 2-um Seed Source for Coherent LIDAR Applications* [122]

**QM Power, Inc.**

441 Marlborough Street, #2

Boston, MA 02115

Patrick Piper (857) 857-3100

09-2-X4.03-8928 LaRC

*Lightweight High Efficiency Electric Motors and Actuators for Low Temperature Mobility and Robotics Applications* [123]

**Radiation Monitoring Devices, Inc.**

44 Hunt Street

Watertown, MA 02472

Gerald Entine (617) 617-6800

09-2-X14.01-9159 ARC

*Fast Neutron Dosimeter for the Space Environment* [124]

**Superconducting Systems, Inc.**

5 Fortune Drive

Billerica, MA 01821
Shahin Pourrahimi (978) 330-3021
09-2-S1.07-8699 GSFC

ADR Magnets Operating at 30-40K [125]

- Michigan (5)
  
  **Baker-Calling, Inc.**
  836 Brookside Drive
  Ann Arbor, MI 48105
  Karl Grosh (734) 645-0571
  09-2-A4.01-8257 LaRC

  Piezoelectric MEMS Microphones for Ground Testing of Aeronautical Systems [126]

  **Cybernet Systems Corporation**
  727 Airport Boulevard
  Ann Arbor, MI 48108
  Daniel Jarrell (734) 668-2567
  09-2-A1.02-8576 LaRC

  Automated NDE Flaw Mapping System [127]

  **ElectroDynamic Applications, Inc.**
  P.O. Box 131460
  Ann Arbor, MI 48113
  Jonathan Zagel (734) 786-1434
  09-2-A2.06-8042 ARC

  Fiber-Coupled Spectrometer for TPS Materials [128]

  **Michigan Aerospace Corporation**
  1777 Highland Drive, Suite B
  Ann Arbor, MI 48108
  John Dodds (734) 975-8777
  09-2-A1.04-9447 LaRC

  Molecular Air Data Clear Air Turbulence Sensor: MADCAT [129]
Translume, Inc.
655 Phoenix Drive
Ann Arbor, MI 48108
Eric Jacobson (734) 734-6371
09-2-S1.08-9774 GSFC
Small Submersible Robust Microflow Cytometer for Quantitative Detection of Phytoplankton [130]

- Minnesota (1)
  The IIIAN Company, LLC
  2700 East 28th Street, Suite 120
  Minneapolis, MN 55406
  Jody Klaassen (612) 612-1249
  09-2-O1.07-9857 JPL
  GaN Bulk Growth and Epitaxy from Ca-Ga-N Solutions [131]

- Mississippi (1)
  Optimal, LLC
  181 Summertree Road
  Starkville, MS 39759
  Greg Burgreen (662) 662-2286
  09-2-A2.08-8824 LaRC
  Discrete Geometry Toolkit for Shape Optimization [132]

- Missouri (1)
  IST-Rolla
  11560 Forest Lake Drive
  Rolla, MO 65401
  Sivasubramanya Balakrishnan (573) 201-1068
  09-2-O4.04-8246 JSC
Advanced Filtering Techniques Applied to Spaceflight [133]

- **Montana (4)**

  **ADVR, Inc.**
  
  2310 University Way, Building 1-1
  
  Bozeman, MT 59715
  
  Betsy Heckel (406) 522-0388
  
  09-2-S1.01-9529 LaRC

  [Integrated Planar Lightwave Circuits for UV Generation and Phase Modulation](#) [134]

  **ADVR, Inc.**
  
  2310 University Way, Building 1-1
  
  Bozeman, MT 59715
  
  Betsy Heckel (406) 522-0388
  
  09-2-S1.01-9175 GSFC

  [Fiber Coupled Pulse Shaper for Sub-Nanosecond Pulse Lidar](#) [135]

  **ADVR, Inc.**
  
  2310 University Way, Building 1-1
  
  Bozeman, MT 59715
  
  Betsy Heckel (406) 522-0388
  
  09-2-O1.05-8381 GRC

  [High Fidelity Down-Conversion Source for Secure Communications using On-Demand Single Photons](#) [136]

  **Anasphere, Inc.**
  
  106 Pronghorn Trail
  
  Bozeman, MT 59718
  
  John Bognar (406) 406-9354
  
  09-2-S3.09-8252 ARC

  [Dropsonde System for Unmanned Aerial Vehicles](#) [137]
• New Hampshire (3)

**Creare, Inc.**
P.O. Box 71
Hanover, NH 03755
James Barry (603) 643-3800

09-2-S1.07-9643 GSFC

*Micromachined Active Magnetic Regenerator for Low Temperature Magnetic Coolers* [138]

**Creare, Inc.**
P.O. Box 71
Hanover, NH 03755
James Barry (603) 643-3800

09-2-S1.09-9459 MSFC

*Compact Vacuum Pump for Titan Lander Missions* [139]

**Creare, Inc.**
P.O. Box 71
Hanover, NH 03755
James Barry (603) 643-3800

09-2-X2.05-9202 JSC

*Nonventing Thermal and Humidity Control for EVA Suits* [140]

• New Jersey (8)

**Continuum Dynamics, Inc.**
34 Lexington Avenue
Ewing, NJ 08618
Barbara Agans (609) 538-0444

09-2-A2.09-8823 ARC

*Flight Adaptive Blade for Optimum Rotor Response (FABFORR)* [141]

**Discovery Semiconductors, Inc.**
119 Silvia Street
Ewing, NJ 08628
Abhay Joshi (609) 434-1311
09-2-S1.05-9827 GSFC

**Low-Noise, UV-to-SWIR Broadband Photodiodes for Large-Format Focal Plane Array Sensors** [142]

**Folded Structures Company, LLC**
1142a Old York Road
Ringoes, NJ 08551
Daniel Kling (908) 237-1955
09-2-X4.02-8435 LaRC

**Expandable/Foldable Structures for Habitat** [143]

**MaXentric Technologies**
2071 Lemoine Avenue, Suite 302
Fort Lee, NJ 07024
Houman Ghajari (858) 272-8800
09-2-O1.03-8119 GRC

**Fault Tolerant Software-Defined Radio on Manycore** [144]

**Mechanical Solutions, Inc.**
11 Apollo Drive
Whippany, NJ 07981
Michael Platt (973) 326-9920
09-2-A2.08-8224 GRC

**Design Environment for Multi-Fidelity and Multi-Disciplinary Components** [145]

**Mechanical Solutions, Inc.**
11 Apollo Drive
Whippany, NJ 07981
Michael Platt (973) 326-9920
09-2-A4.01-8214 GRC

**Blade Vibration Measurement System for Unducted Fans** [146]

**NEI Corporation**
201 Circle Drive N., Suite 102/103
Piscataway, NJ 08854
Ganesh Skandan (732) 868-3141
09-2-X7.01-8216 JPL
High Energy Density Li-Ion Batteries Designed for Low Temperature Applications [147]

Princeton Lightwave, Inc.
2555 Route 130 South, Suite 1
Cranbury, NJ 08512
Mark Itzler (609) 495-2551
09-2-O1.06-9687 JPL
NFAD Arrays for Single Photon Optical Communications at 1.5 um [148]

- New Mexico (1)
  Southwest Sciences, Inc.
  1570 Pacheco Street, Suite E-11
  Santa Fe, NM 87505
  Alan Stanton (505) 505-1322
  09-2-S1.08-9682 GSFC
  Compact Instrument for Measurement of Atmospheric Carbon Monoxide [149]

- New York (12)
  ACENT Laboratories, LLC
  3 Scott Lane
  Manorville, NY 11949
  Anthony Castrogiovanni (631) 801-2616
  09-2-A2.02-8867 LaRC
  A Compact Safe Cold-Start (CS2) System for Scramjets using Dilute Triethylaluminum Fuel Mixtures [150]

  Amplification Technologies, Inc.
  1400 Coney Island Avenue
  Brooklyn, NY 11230
Avery Kornbluth (718) 951-8021
09-2-O1.06-8219 JPL

**High Performance Negative Feedback Near Infrared Single Photon Counting Detectors & Arrays** [151]

**Honeybee Robotics Ltd.**
460 W. 34th Street
New York, NY 10001
Chris Chapman (212) 966-0661
09-2-X6.01-9794 KSC

**Parametric Optimization and Prediction Tool for Excavation and Prospecting Tasks** [152]

**Honeybee Robotics Ltd.**
460 W. 34th Street
New York, NY 10001
Chris Chapman (212) 966-0661
09-2-S4.05-9322 ARC

**TORC-SP: High Torque, Low Jitter Scissored-Pair CMG Technology** [153]

**Honeybee Robotics Ltd.**
460 W. 34th Street
New York, NY 10001
Chris Chapman (212) 966-0661
09-2-S5.02-9092 JPL

**Extreme Temperature Gearhead** [154]

**Honeybee Robotics Ltd.**
460 W. 34th Street
New York, NY 10001
Chris Chapman (646) 459-7802
09-2-S5.03-9090 JPL

**Arm-Deployed Rotary-Percussive Coring Drill** [155]
New York, NY 10001
Chris Chapman (212) 966-0661
09-2-S1.11-9088 MSFC

DIHeDRAL: Downhole Regolith Interrogation with Helium-Assisted Drill and LIBS [156]

Impact Technologies, LLC
200 Canal View Boulevard
Rochester, NY 14623
Carol Marquardt (585) 627-1923
09-2-O4.05-9401 GSFC

A Light Weight, Mini Inertial Measurement System for Position and Attitude Estimation on Dynamic Platforms [157]

Impact Technologies, LLC
200 Canal View Boulevard
Rochester, NY 14623
Carol Marquardt (585) 627-1923
09-2-X1.04-9306 ARC

Fusion of Built in Test (BIT) Technologies with Embeddable Fault Tolerant Techniques for Power System and Drives in Space Exploration [158]

MesoScribe Technologies, Inc.
7 Flowerfield, Suite 28
St. James, NY 11780
Jeffrey Brogan (631) 686-5710
09-2-X5.01-8826 LaRC

Composite Structure Monitoring using Direct Write Sensors [159]

MTECH Laboratories, LLC
P.O. Box 227
Ballston Spa, NY 12020
William Wilson (518) 518-6436
09-2-A2.01-9471 GRC

Lightweight, Efficient Power Converters for Advanced Turboelectric Aircraft Propulsion Systems [160]
Optimax Systems, Inc.
6367 Dean Parkway
Ontario, NY 14519
Thomas Kelly (585) 217-0729
09-2-S2.05-9386 MSFC

Removing Mid-Spatial Frequency Errors with VIBE [161]

• North Carolina (1)
  Blue Ridge Research and Consulting
  13 1/2 W. Walnut Street
  Asheville, NC 28801
  Bruce Ikelheimer (828) 252-2209
  09-2-O2.02-8697 SSC

  Energy-Based Acoustic Measurement System for Rocket Noise [162]

• Ohio (7)
  Cornerstone Research Group, Inc.
  2750 Indian Ripple Road
  Dayton, OH 45440
  Stephen Vining (937) 937-1877
  09-2-X4.02-9611 MSFC

  Self-Deploying, Composite Habitats [163]

  Cornerstone Research Group, Inc.
  2750 Indian Ripple Road
  Dayton, OH 45440
  Stephen Vining (937) 937-1877
  09-2-A2.03-9603 LaRC

  Adaptive Drainage Slots for Acoustic Noise Attenuation [164]
Cornerstone Research Group, Inc.
2750 Indian Ripple Road
Dayton, OH 45440
Stephen Vining (937) 937-1877
09-2-X5.03-9295 LaRC
Smart Tooling for Manufacturing Composites [165]

Lake Shore Cryotronics, Inc.
575 McCorkle Blvd.
Westerville, OH 43082
Philip Swinehart (614) 891-2243
09-2-S1.04-8553 JPL
Metal-Mesh Optical Filter Technology for Mid IR, Far IR, and Submillimeter [166]

N&R Engineering
6659 Pearl Road, #201
Parma Heights, OH 44130
Vinod Nagpal (440) 845-7020
09-2-A2.10-9062 GRC
Design Concepts for Cooled Ceramic Matrix Composite Turbine Vanes [167]

Nastec, Inc.
5310 West 161 Street, Suite G
Brook Park, OH 44142
Richard Klein (216) 464-8388
09-2-A1.08-9406 GRC
Aircraft Engine Life-Consumption Monitoring for Real-Time Reliability Determination [168]

Powdermet, Inc.
24112 Rockwell Drive
Euclid, OH 44117
Andrew Sherman (216) 404-0053
09-2-X4.01-8079 MSFC
Improved Metal-Polymeric Laminate Radiation Shielding [169]
- **Oregon (2)**
  
  **E-Beam, Inc.**
  
  21070 SW Tile Flat Road
  
  Beaverton, OR 97007
  
  Bernard Vancil (503) 628-0703
  
  09-2-O1.07-9345 JPL
  
  [Nano-Particle Scandate Cathode for Space Communications Phase 2][170]

  **UMPQUA Research Company**
  
  P.O. Box 609
  
  Myrtle Creek, OR 97457
  
  John Aker (541) 541-2655
  
  09-2-X2.02-9562 MSFC
  
  [Advanced Aqueous Phase Catalyst Development using Combinatorial Methods][171]

- **Pennsylvania (8)**
  
  **Advanced Cooling Technologies, Inc.**
  
  1046 New Holland Avenue
  
  Lancaster, PA 17601
  
  Jon Zuo (717) 717-6058
  
  09-2-S3.03-8061 GRC
  
  [Thermal Management System for Long-Lived Venus Landers][172]

  **Advanced Cooling Technologies, Inc.**
  
  1046 New Holland Avenue
  
  Lancaster, PA 17601
  
  Jon Zuo (717) 717-6058
  
  09-2-A2.01-8833 ARC
  
  [Interfacial Design of Composite Ablative Materials][173]
Advanced Cooling Technologies, Inc.
1046 New Holland Avenue
Lancaster, PA 17601
Jon Zuo (717) 717-6058
09-2-S3.02-8213 MSFC

Loop Heat Pipe with Thermal Control Valve for Passive Variable Thermal Link [174]

ArkLight
3210 N. Bay Hill Drive
Center Valley, PA 18034
Yuliya Zotova (484) 547-5375
09-2-S1.01-9879 LaRC

Frequency Up-Conversion Detection System with Single Photon Sensitivity within 1-1.8 [175]

Astrobotic Technology, Inc.
4551 Forbes Avenue
Pittsburgh, PA 15213
David Gump (703) 703-9616
09-2-X6.01-9100 KSC

Lightweight Robotic Excavation [176]

Combustion Research and Flow Technology
6210 Keller's Church Road
Pipersville, PA 18947
Katherine Young (215) 766-1520
09-2-A2.05-9389 LaRC

Uncertainty Quantification for Production Navier-Stokes Solvers [177]

Materials Research and Design
300 E. Swedesford Road
Wayne, PA 19087
Maisie Henry (610) 610-9000
09-2-S3.08-8144 MSFC

Refractory Coated/Lined Low Density Structures [178]
**Tennessee (4)**

**Analysis and Measurement Services Corporation**
9111 Cross Park Drive, Building A-100
Knoxville, TN 37923
Darrell Mitchell (865) 691-1756
09-2-A1.10-8957 GRC

*In-Flight and Pre-Flight Detection of Pitot Tube Anomalies* [180]

**Analysis and Measurement Services Corporation**
9111 Cross Park Drive, Building A-100
Knoxville, TN 37923
Darrell Mitchell (865) 691-1756
09-2-X7.02-8908 GRC

*Autonomous I&C Maintenance and Health Monitoring System for Fission Surface Power* [181]

**Dynamic Structures and Materials, LLC**
205 Williamson Square
Franklin, TN 37064
Jennifer Sturgis (615) 595-6665
09-2-X8.01-8727 JSC

*High Reliability Cryogenic Piezoelectric Valve Actuator* [182]

**Gloyer-Taylor Laboratories, LLC**
2212 Harton Blvd.
Tullahoma, TN 37388
Paul Gloyer (931) 393-5108
09-2-X10.01-9928 GRC

**UCDS Based Stable Injector Design** [183]

- **Texas (6)**

  **Carbon-Carbon Advanced Technologies, Inc.**
  4704 Eden Road
  Kennedale, TX 76060
  James Thompson (817) 985-2500
  09-2-X10.01-8831 GRC

  **Carbon-Carbon High Melt Coating for Nozzle Extensions** [184]

  **Integrated Micro Sensors, Inc.**
  10814 Atwell Drive
  Houston, TX 77096
  David Starikov (713) 748-7926
  09-2-X5.03-9578 LaRC

  **Drastic Improvements in Bonding of Fiber Reinforced Multifunctional Composites** [185]

  **Lynntech, Inc.**
  2501 Earl Rudder Freeway South
  College Station, TX 77845
  Gloria Hisaw (979) 979-0017
  09-2-X7.03-9598 JPL

  **Advanced Oxygen Evolution Catalysts for PEM Electrolyzers** [186]

  **Polatomic, Inc.**
  1810 N. Glenville Drive, #116
  Richardson, TX 75081
  Jean Isham (972) 972-0099
  09-2-S1.06-8420 GSFC

  **Miniature Laser Magnetometer (MLM)** [187]
Tietronix Software, Inc.
1331 Gemini Avenue, Suite 300
Houston, TX 77058
Victor Tang (281) 404-7222
09-2-X1.01-8474 JSC

Executable SysML Model Development Accelerator for the Constellation Program [188]

TRACLabs, Inc.
100 N.E. Loop 410, Suite 520
San Antonio, TX 78216
David Kortenkamp (281) 461-7884
09-2-X6.01-8031 JSC

Advanced Modeling Tools for Controlling Complex Assets Across Time Delay [189]

• Virginia (18)

Analytical Mechanics Associates, Inc.
303 Butler Farm Road, Suite 104A
Hampton, VA 23666
Anu Bedi (757) 757-0000
09-2-O4.04-9465 GRC

Desensitized Optimal Filtering and Sensor Fusion Tool Kit [190]

Aurora Flight Sciences Corporation
9950 Wakeman Drive
Manassas, VA 20110
Scott Hart (617) 617-0536
09-2-S5.04-9755 JPL

SPHERES MOSR Rendezvous and Docking with the OS (RDOS) [191]

Aurora Flight Sciences Corporation
9950 Wakeman Drive
Manassas, VA 20110
Scott Hart (617) 617-0536
09-2-X11.02-9753 GRC

Space Suit Simulator (S3) for Partial Gravity EVA Experimentation and Training [192]

Barron Associates, Inc.
1410 Sachem Place, Suite 202
Charlottesville, VA 22901
Connie Hoover (434) 973-1215
09-2-O3.01-8967 GRC

Tactile Data Entry System [193]

Barron Associates, Inc.
1410 Sachem Place, Suite 202
Charlottesville, VA 22901
Connie Hoover (434) 434-1215
09-2-A1.03-8806 GRC

DARWIN-HC: A Tool to Predict Hot Corrosion of Nickel-Based Turbine Disks [194]

Barron Associates, Inc.
1410 Sachem Place, Suite 202
Charlottesville, VA 22901
Connie Hoover (434) 434-1215
09-2-A1.14-8756 LaRC

A Software-Assurance Design Approach for NextGen Enabling Technologies [195]

Barron Associates, Inc.
1410 Sachem Place, Suite 202
Charlottesville, VA 22901
Connie Hoover (434) 434-1215
09-2-A1.05-8718 LaRC

Simulator Evaluation of a Joint Human/Automated Upset Recovery System and Training Aid [196]

Barron Associates, Inc.
1410 Sachem Place, Suite 202
Charlottesville, VA 22901
Connie Hoover (434) 434-1215
09-2-A1.06-8711 ARC

Integrated Design and Analysis Environment for Safety Critical Human-Automation Systems [197]

**Bear Engineering**
2415 Two Turtles Road
Maidens, VA 23102
Karron Myrick (804) 239-7221
09-2-S5.03-9737 JPL

High Torque, Direct Drive Electric Motor [198]

**Fibertek, Inc.**
510 Herndon Parkway
Herndon, VA 20170
Tracy Perinis (703) 471-7671
09-2-S1.01-8552 LaRC

High Efficiency Laser for Aircraft/UAV and Space Lidar Missions [199]

**International Scientific Technologies, Inc.**
P.O. Box 757
Dublin, VA 24084
Wanda Gibson (540) 540-1424
09-2-X4.01-8309 LaRC

Multilayer Polymeric Shielding to Protect Humans from Galactic Cosmic Radiation [200]

**Luna Innovations Incorporated**
1 Riverside Circle, Suite 400
Roanoke, VA 24016
Shirley Evans (540) 540-8400
09-2-X7.02-9116 GRC

High-Speed Neutron and Gamma Flux Sensor for Monitoring Surface Nuclear Reactors [201]

**Metron Aviation, Inc.**
Unmanned Aerial Vehicle Integration into the NAS [202]

Metron Aviation, Inc.
45300 Catalina Court, Suite 101
Dulles, VA 20166
Bruno Salamon (703) 234-0819
09-2-A3.01-8821 ARC

Market Mechanisms for Airspace Flow Program Slots [203]

Mosaic ATM, Inc.
801 Sycolin Road, Suite 212
Leesburg, VA 20175
Chris Stevenson (800) 405-8576
09-2-A3.02-9691 ARC

ATC Operations Analysis via Automatic Recognition of Clearances [204]

Nuvotronics, LLC
7586 Old Peppers Ferry Road
Radford, VA 24141
Scott Meller (800) 341-2333
09-2-S1.02-8927 JPL

3D High Density Wave Interconnects [205]

Pyxisvision Incorporated
9801 Nugget Court
Bristow, VA 20136
Anthony Slotwinski (703) 703-5901
09-2-S2.05-8780 GSFC

Coherent Laser Radar Metrology System for Large Scale Optical Systems [206]
Vanilla Aircraft, LLC
2822 Mary Street
Falls Church, VA 22042
Jeremy Novara (703) 703-9070
09-2-S3.09-8087 GSFC
Cold Weather Technology Development for Low Altitude Ultra-Long Endurance Applications [207]

Washington (1)
MSNW, LLC
8551 154th Avenue NE
Redmond, WA 98052
John Slough (425) 867-8900
09-2-S3.04-9095 JPL
Low Mass Electromagnetic Plasmoid Thruster with Integrated PPU [208]

West Virginia (1)
Touchstone Research Laboratory, Ltd.
The Millennium Centre, 1142 Middle Creek Road
Triadelphia, WV 26059
Elizabeth Kraftician (304) 547-5800
09-2-X5.03-8372 MSFC
Multifunctional Metal Matrix Composite Filament Wound Tank Liners [209]

Wisconsin (3)
Orbital Technologies Corporation
Space Center, 1212 Fourier Drive
Madison, WI 53717
Eric Rice (608) 608-2730
09-2-X10.01-9473 GRC
Non-Toxic Ionic Liquid Fuels for Exploration Applications [210]
Orbital Technologies Corporation
Space Center, 1212 Fourier Drive
Madison, WI 53717
Thomas Crabb (608) 608-5000
09-2-X2.02-9461 ARC
High Efficiency, High Output Plastic Melt Waste Compactor (HEHO-PMWC) [211]

Orbital Technologies Corporation
Space Center, 1212 Fourier Drive
Madison, WI 53717
Eric Rice (608) 608-2760
09-2-X3.01-9415 KSC
Advanced Carbothermal Electric Reactor [212]

• Wyoming (1)

Wickman Spacecraft & Propulsion Co.
3745A Studer
Casper, WY 82604
John Wickman (307) 307-5895
09-2-S3.08-9779 GRC
Hot Gas TVC For Planetary Ascent Vehicle [213]