**AEi Systems, LLC Booth Spaces: 50T** 

Loyal Winter

5777 West Century Boulevard, Suite 876

Los Angeles, CA 90045 Phone: (310) 216-1144 Email: Loyal@aeng.com

www.aeng.com

AEi Systems is a world leader in Worst Case Circuit Analysis (WCCA), failure and reliability analysis, SPICE modeling, and power systems analysis and design.

Worst Case Circuit Analysis is a cost-effective means of reviewing a design to determine with a high degree of confidence that potential defects and deficiencies have been identified and eliminated prior to and during the design, test and production phases and before actual delivery. Each WCCA is a quantitative assessment of hardware performance that accounts for manufacturing, environmental and aging effects on electronic circuits and devices.

AEi Systems serves nearly every significant IC and aerospace manufacturer and many of their customers including, Raytheon, Boeing, Lockheed Martin, Aeroflex, National Semiconductor, International Rectifier, Texas Instruments, and ITT Corporation.

AeroAstro, Inc. **Booth Spaces: 3 & 5** 

Maureen Huston 8100 SouthPark Way, A-1 Littleton, CO 80120 Phone: (303) 798-2121

Email: Maureen. Huston@aeroastro.com

www.aeroastro.com

AeroAstro, a division of Radyne Corporation, is a leader in producing small satellites and related technologies as well as sophisticated communications and sensor products. AeroAstro's 20-year heritage is one of engineering innovation, simplicity of design, reliability, and rapid space-readiness.

AeroAstro has developed and launched a variety of highly capable spacecraft platforms under 200kg, including STPSat-1 on the first ESPA launch in March 2007. Our spacecraft and components incorporate modular architectures and plug-n-play technologies in an efficient, highly responsive design and integration environment.

Leveraging our experience with space-based communications, AeroAstro developed a cost-effective low-data-rate communications system. The Sensor Enabled Notification System (SENS) transmits data over the Globalstar Satellite Network and uses specialized appliqués, designed and built by AeroAstro, to allow reception of the simplex data transmissions. SENS is now operational throughout the United States, Canada, Mexico, Australia, the Middle East, Asia, and South America.

**Aeroflex Colorado Springs** 

**Booth Space: 29** 

Teresa Farris 4350 Centennial Boulevard Colorado Springs, CO 80907

Phone: (719) 594-8035

Email: teresa.farris@aeroflex.com

www.aeroflex.com/radhard

Aeroflex Colorado Springs is a supplier of integrated circuits and custom circuit card assemblies. We supply a broad range of standard products for high-rel applications including microcontrollers, logic, programmable logic, FPGAs, 4M, 8M and 16M memories, serial communication interfaces for MIL-STD-1553, 1773, RadClock<sup>TM</sup>, an LVDS and SpaceWire family of products and our new UT699R LEON 3FT Microprocessor. Our RadHard-by-Design ASICs handle design complexities up to 3,000,000 usable gates, offers advanced technologies down to 0.25um and are RadHard to 1 Mega rad. Aeroflex offers Circuit Card Assembly capabilities, which consists of full assembly, test and coat in a high mix/low to medium volume operation.

**Aeroflex Motion Control** 

Booth Space: 27 Karl Anderson 350 Kennedy Drive Hauppauge, NY 11788 Phone: (661) 799-9363

Email: karl.anderson@aeroflex.com www.aeroflex.com/Motioncontrol

Aeroflex Motion Controls offers a wide range of capabilities in the design and manufacture of components and systems for the space market. Our products include rotary and linear actuators, brushless DC motors, gimbals, scanners and electronic controllers. Wherever precision, power and packaging goals need to be manufactured in a design-to-cost environment, Aeroflex is globally competitive.

Aeroflex has been providing motion control products since the early 1940's. Aeroflex entered the motor business in the early 1950's to fulfill internal needs for higher performance motors for gimbaled applications. Aeroflex provides stepper (both hybrid and permanent magnet), brushless, full and limited-angle torquers, arc segment, zero-cogging, solenoid and voice coil motors.

Precision gimbals for pointing and tracking, stabilized platforms and pedestals are a core of the Aeroflex Motion Control division. Coupled with our electronic motion controllers and adaptive software, Aeroflex can provide a complete turn-key multi-axis system to meet your requirements.

## **Aeroflex Plainview**

**Booth Space: 25** 

Teresa Farris 35 South Service Road Plainview, NY 11803 Phone: (516) 752-5610

Email: teresa.farris@aeroflex.com

www.aeroflex.com/radhard

Aeroflex Plainview is a manufacturer of advanced microelectronic Multi-Chip Modules (MCMs) for airborne, space, shipboard, ground based avionics. Our full breadth of space related products include Mil-STD-1553, high speed low power PWM controller, Motor Driver, Resolver-to-digital converter, Analog Multiplexer modules, Solid State Relays, and Voltage Regulators. DC-DC converter MCMs using Chip-on-Board technology for military and space applications.

Our latest product release is a Battery Electronics Unit (BEU), a Li-Ion battery balancer and cell telemetry electronics unit. It performs autonomous cell balancing, high cell limit indication and low cell limit indication. A 1553 bus is used for individual cell telemetry and commands including closure of a cell bypass relay in the eventuality of a cell failure, and connecting the battery's reconditioning load. The BEU system has fully redundant telemetry, control and balance functions.

Aeroflex also offers a variety of Broadband, RF and Microwave products for aerospace and space applications.

#### Aerostar International, Inc.

**Booth Spaces: 85 & 87** 

Deb Husby PO Box 5057 1814 F Avenue

Sioux Falls, SD 57117-5057 Phone: (605) 331-3500

Email: dhusby@aerostar.com

www.aerostar.com

Reliable proving platforms for your satellite program are what Aerostar International has been manufacturing for over 60 years. We are world leader in the design and fabrication of high altitude balloons, low and high altitude airships and tethered aerostats for high altitude operations. Strategic partnerships with the foremost scientific research facilities allow us to expand our expertise allowing us to manufacture applications which accomplish our customer's goals.

High altitude balloons, airships and tethered aerostats are used for applications in which validation of your equipment is required prior to deployment. Some of our products fly at altitudes higher than aircraft can fly and lower than a satellites orbit, enabling long duration flights lasting from hours to days. Scientific data collection, communications and intelligence gathering all are accomplished on balloons. Our high altitude research balloons carry payloads from a few pounds to up 6000 pounds and can reach altitudes up to 45 kilometers. Our products can successfully fly your payloads.

# Air Force Research Laboratory, Space Vehicles Directorate Booth Space: 30

Eva Blaylock 3550 Aberdeen Avenue SE, B. 497 Kirtland AFB, NM 87117

Phone: (505) 846-6315

Email: eva.blaylock@kirtland.af.mil

With headquarters at Kirtland Air Force Base, N.M. and an additional research facility at Hanscom Air Force Base, Mass., the Space Vehicles Directorate develops and transitions space technologies for more effective, more affordable warfighter missions. The directorate also leverages commercial, civil and other government resources that ensure America's defense advantage. Primary focus areas include: radiation hardened electronics; space power; space structures and control; space based sensing; space environmental effects; autonomous maneuvering; and balloon and satellite flight experiments.

## Aitech Defense Systems, Inc.

**Booth Space: 49** Anthony Lai

9301 Oakdale Avenue Chatsworth, CA 91311

Phone: (818) 700-2000 Email: alai@rugged.com

www.rugged.com

Aitech is a leading supplier of radiation tolerant and radiation hardened computer systems optimized for harsh environments. The product offering includes off-the-shelf cards, powered enclosures, subsystems and hardware integration services for defense and space applications. Aitech promotes open architecture in standard industry and military-specified form factors such as VME, CompactPCI and PCI Mezzanine Card (PMC). Established in 1983, Aitech has a long and impressive track record delivering superior cost-performance, reliability, and time-to-market benefits to our worldwide customers in launch vehicle, missiles, satellites and human space flight applications. With full real-time operating systems' compatibility across various pedigrees of our off-the-shelf

products, Aitech has the solution you are looking to field in high altitude, near space, LEO, MEO, GEO, interplanetary and deep space environments.

#### **ATCi**

**Booth Space: 61** Eric Luttermoser

450 North McKemy Chandler, AZ 85226

Phone: (480) 308-4591 Email: eric@atci.net www.atci.com

ATCi offers complete systems integration and technical services. From front-end consulting, planning, to integrating, installing and managing technology solutions, ATCi has the depth and experience to respond to unique challenges and opportunities.

ATCi's award winning flagship product, Simulsat has the capacity to receive C, KU, and X-Band signals from 35 satellites at the same time and takes up less space than two parabolics. Additionally, as new satellites launch, new programming options appear, or existing satellites move, a simple feed change is all it takes.

ATCi also offers many products that offer customers expanded capacity, design excellence and value. Among them:Spectrum Monitoring, uplinks, teleports, headend components, parabolics, test equipment, matrix switches, and satcom fiberoptics solutions.

ATCi also offers turn-key services: Teleport and Broadcast Services – including new niche channel launch and Webcasting, Digital Headend Services, Uplink and Systems Integration.

#### **ATK**

Booth Spaces: 63, 65, & 67

Mark Anderes 5050 Powder Mill Road Beltsville, MD 20705 Phone: (301) 902-4866

Email: mark.anderes@atk.com

www.ATK.com

ATK is a \$4.5 billion premier aerospace and defense company. We provide agile, innovative products that are designed to survive in the most hostile of environments. We are a world-class provider of satellite subsystems and components as well as launch capabilities. Our products range from composite structures for space and launch applications (optical benches, dimensionally stable satellite assemblies, and launch system structures) to proven propulsion systems such as the space shuttle Reusable Solid Rocket Motor, Graphite Epoxy Motor, CASTOR®, Orion, and STAR<sup>TM</sup>. From aerospace to defense, ATK is committed to the exploration of new markets and the continued success of our products.

Ball Aerospace & Technologies Corp.

Booth Space: 77
Hallie Walden
1600 Commerce Street
Boulder, CO 80301
Phone: (303) 533-4368
Email: hwalden@ball.com

www.ballaerospace.com

Ball Aerospace & Technologies Corp. supports critical missions for important national agencies such as the Department of Defense, NASA, NOAA and other U.S. government and commercial entities. The company develops and manufactures spacecraft, advanced instruments and sensors, components, data exploitation systems and RF solutions for strategic, tactical and scientific applications. Over the past 50 years, Ball Aerospace has been responsible for numerous technological and scientific 'firsts' and now acts as a technology innovator for the aerospace market.

## **Boeing**

**Booth Spaces: 24 & 26** 

Colin Marker
Boeing Satellite Development Center
MS W-E04-M160
1700 E. Imperial Hwy
El Segundo, CA 90245
Phone: (310) 662-6117

Email: colin.marker@boeing.com

www.boeing.com

Boeing is the world's largest aerospace company with capabilities in airplanes, satellites, launch vehicles, rotorcraft, electronic and defense systems, missiles, and advanced information and communication systems. The company's reach extends to customers in 145 countries around the world.

Boeing Space and Intelligence Systems (S&IS) is the company's center for all intelligence, government, and commercial space systems. S&IS employs 6,800 people working in more than 20 operating locations nationwide.

Headquartered in El Segundo, CA, Boeing's Satellite Development Center is the world's largest satellite factory. In the SDC Boeing manufactures satellites for commercial, national defense, science and environmental applications.

In 1963 Boeing launched Syncom, the world's first synchronous communications satellite. Today, nearly 40 percent of the commercial satellites in service worldwide were built by Boeing. The company's spacecraft routinely relay digital communications, telephone calls, video conferences, television programming, mobile communications, Internet connectivity and direct-to-home entertainment.

## **Broad Reach Engineering**

**Booth Space: 31**Daniel P. Smith

1113 Washington Avenue, Suite 200

Golden, CO 80401

Phone: (303) 216-9777 Ext. 205 Email: dsmith@broad-reach.net www.broadreachengineering.com

Broad Reach Engineering is a leading provider of modern Rad-Hard, and Rad-Tolerant high performance, high reliability miniature avionics and real time software. Our new GPS receivers are called 'Pyxis' and are tri-frequency L1/L2/L5/(E5a) compatible with Galileo. These GNSS receivers are designed to work in LEO, GEO & HEO orbits, and available to perform radio occultations for atmospheric soundings. Our new 400MIP class PowerPC Rad-Hard processor is nearing completion with commercial prototypes available now.

Most of our avionics are designed for 3U cPCI compatible digital interface cards, processor boards, DSPs, solid state memory, motor controllers, power control and peripheral cards with common interfaces, as well as specialized I/O for unique payload requirements. Delivered avionics include missions such as: COSMIC, XSS-11, AMS, TACSAT-2, TerraSAR-X, Kompsat-5, Tandem-X, SMART-2/ST-7, SUMO, LRO and others.

Our goal is to facilitate the success of scientists and experimentalists through high performance avionics and embedded software systems that directly improve the mission and scientific bottom line.

Busek Co. Inc. Booth Space: 80

Bruce Pote 11 Tech Circle Natick, MA 01760

Phone: (508) 655-5565 Email: bpote@busek.com

www.busek.com

Electric propulsion systems are Busek's core business. We are the leading source for Hall thruster and micropropulsion technologies. Our principal products include: Hall effect thrusters (200W to 20kW), colloid thrusters, micro-pulsed plasma thrusters, thermionic cathodes and carbon nanotube field emission cathodes. We also provide customized power electronic systems and depending on customer requirements can deliver fully integrated propulsion systems. Other advanced devices under development at Busek include micro-ion engines, micro-resistojets and air-breathing Hall thrusters. Busek also has extensive vacuum test chambers equipped with state-of-the-art diagnostic, performance measuring and plume instrumentation to support thruster development and customer sponsored testing.

Busek's propulsion products have flight heritage. Our 200W Hall effect thruster was successfully operated for one year on-orbit during the TacSat-2 mission. Our micro-PPT was launched in March 2007 on FalconSat-3 and continues to operate successfully, and our colloid thruster has been delivered to JPL for the NASA/ESA ST-7 LISA Pathfinder satellite.

## CANEUS SSWG (Small Satellite Working Group) and NPS (Micro-Nano-Pico-Satellites) Booth Space: 51T

Milind Pimprikar, Chairman CANEUS International, Canada Andy Quintero, Aerospace Corp, USA Fredrik Bruhn, AAC, Sweden 1425-404 Rene Levesque Blvd. West Montreal, Quebec, Canada, H4X 2G6

Phone: (514) 499-3959 or (310) 600-7140

Email: Milind.Pimprikar@caneus.org or andrew.quintero@aero.org

www.caneus.org/smallsat or sswg.caneus.org

CANEUS Small Satellite Working group (SSWG) was established in response to stakeholder needs to create and sustain a robust Small Satellite Industry Sector. CANEUS SSWG is the world's catalyst for the small (Micro/Nano/Pico) satellite industry to bring breakthrough technologies to the space community by ensuring space qualification, lower cost, reliability and added-value. By setting global direction, creating opportunities for flexible collaboration and conducting strategic R&D, CANEUS SSWG delivers significant ROI to its members.

An important goal of the CANEUS SSWG is to mitigate risk by pooling the financial resources and developments from several countries. The CANEUS Organization applies its principles of international coordinated development to create a SEMATECH like structure, by bringing together all stakeholders.

The SSWG has five sub-groups dedicated to (a) develop standards so as to ensure international interoperability, (b) identify launch opportunities and services, (c) provide governmental liaison and strategic development (d) address Intellectual Property and ITAR Issues and (e) develop Integration program.

CDA InterCorp LLC Booth Space: 59 Fred Crosno 450 Goolsby Boulevard Deerfield Beach, FL 33442 Phone: (954) 596-6230

Email: fcrosno@cda-intercorp.com

www.cda-intercorp.com

CDA InterCorp's Controllable Drive Actuators, Eddy Current Dampers, and complementary Rotary Transducers are being utilized in many performance critical applications for aerospace customers. CDA's standard modular design concept, with off-the-shelf-technology, provides high reliability aerospace-heritage components with unparalleled performance per unit volume. Every module within CDA's product line is an established, qualified component. A new application can derive the benefit of custom performance with qualified modular hardware. While critical internal materials and processes are standard, the external mounting configurations and winding characteristics can readily be tailored to satisfy specific system performance and mechanical interface requirements. Most of our current applications are mission critical and some are even flight safety critical. CDA actuators were selected to deploy the corrective optics on the Hubble Space Telescope and have been selected for use on numerous applications on NASA's James Webb Space Telescope.

## Clyde Space Limited

Booth Space: 76 Craig Clark 1 Technology Terrace West of Scotland Science Park Glasgow G20 0XA Scotland, United Kingdom Phone: 44(0) 141 946 4440

Email: enquiries@clyde-space.com

www.clyde-space.com

Clyde Space are power systems specialists located in Glasgow, Scotland. We are dedicated to providing reliable, high performance, yet cost-effective, power subsystem solutions for small satellites including off-the-shelf CubeSat power systems, solar arrays, and batteries.

Our product portfolio of power system products can reliably support missions with power requirements from 1W to over 2.5kW; and each of our products demonstrates significant heritage.

Clyde Space boasts some of the best analogue and power electronics expertise in Europe, as well as impressive systems design ability. This combination of detailed design, systems design and hands-on mission experience means that our customers are provided with a complete and appropriate solution for their programme. We pride ourselves in providing quality, affordable products with excellent customer service and will support our customers throughout the duration of their mission.

## Colorado Satellite Services Booth Spaces: 47 & 48

Jim White 45777 Rampart Road Parker, CO 80138-4316 Phone: (303) 840-1907 Email: sales@eyassat.com

www.eyassat.com

EyasSat<sup>TM</sup> (patent pending) is a modular, working satellite for the classroom. Colorado Satellite Services markets the EyasSat and works with universities all over the country to give their students hands-on experience with reusable, low-cost hardware that is carefully designed to mimic the subsystems of flying spacecraft. The included EyasSat curriculum material gives students of any level the chance to touch and feel power,

communications, data handling, ADCS, and experiment modules without fear of damaging space-rated components. The U.S. Air Force uses EyasSat to help their satellite operations personnel gain a practical understanding of the spacecraft they work with every day. The CSS engineering team has a half dozen spacecraft on orbit to its credit, and has used this experience to bring satellite technology into the classroom. Stop by and see how you can use EyasSat semester after semester to give your students the practical experience that cements their theoretical knowledge.

CSA Engineering Booth Space: 79

Joseph Maly 2565 Leghorn Street

Mountain View, CA 94043-1613

Phone: (650) 210-9000

Email: jmaly@csaengineering.com

www.csaengineering.com

CSA Engineering provides products in vibration suppression and precision motion control including launch load attenuation systems, secondary payload adapters, ground test equipment including very low frequency suspension/isolation systems, vibration generators, hexapod positioners, flight motion simulators, finite element analysis, vibration damping, control systems and dynamic testing.

CSA's vibration isolation and damping systems mitigate jitter on-orbit in satellite cameras, telescopes and other instruments. Our patented SoftRide launch load alleviation systems reduce vibration and shock loads on whole satellites without a large mass penalty. The EELV Secondary Payload Adapter (ESPA) Ring is part of the upcoming LCROSS mission to the moon and also allows up to six secondary payloads to be launched with a larger primary on Atlas V or Delta IV. We recently installed a 240-ton vacuum-compatible vibration-isolated and self-leveling optical bench in a space simulation facility, and have also upgraded static test facilities for loading large-diameter launch vehicle adapters.

## **Design Net Engineering**

**Booth Space: 4**Gerald Murphy
10311 West Hampden Avenue, #A107
Lakewood, CO 80227

Phone: (303) 462-0096

Email: gmurphy@design-group.com

www.design-group.com

Design\_Net Engineering specializes in the design, development and manufacture of custom electronics and associated software for aerospace instrumentation and avionics. Our systems design approach with supporting disciplines including FMECA, Structural, Radiation, and Thermal analyses, consistently meets the demanding life cycle needs of our customers. Our instrumentation and electronics designs supported NASA missions such as the Floating Potential Probe (ISS), FUSE (APL), COS (GSFC Hubble), LTMPF (JPL), NPP (GSFC) as well as DoD programs such as PnPSat.

DNet's core strengths in instrumentation and the supporting avionics hardware and high reliability software are coupled with an exceptional record for meeting aggressive schedules. Our internal "R & D" programs support the DoD responsive space initiative and the Operationally Responsive Space program resulting in development of highly modular and configurable Plug and Play architectures that reduce cost and increase reliability.

Design\_Net is ISO 9001-2000 compliant and fully qualified for space flight hardware manufacturing.

#### **Dynacon Inc.**

**Booth Space: 83**David R Cooper

3565 Nashua Drive

Mississauga, Ontario L4V 1R1

Canada

Phone: (905) 672-8828 Ext. 244

Email: drc@dynacon.ca

www.dynacon.ca

Dynacon is a space engineering company whose products include microsatellites, attitude control systems, and their components. At the level of complete microsatellite systems, Dynacon is Prime Contractor for CSA's highly-successful MOST space astronomy microsatellite operational since June 30, 2003. Dynacon is also Prime Contractor for the next Canadian microsatellite, NEOSSat for space surveillance. At the subsystem level, Dynacon provides ACS engineering and design services to satellite manufacturers world-wide, specializing in high-performance, 3-axis stabilized attitude control systems and sub-systems for micro and small satellites (FEDSAT, CHIPSat). At the component level, Dynacon's specialty is low-cost, high-performance ACS products. Two models of the Dynacon MicroWheel<sup>TM</sup> Reaction Wheel (0.2 and 1.0 Nms) are available (18 are flying, many additional Reaction Wheels have been delivered including NPSAT, MDA-DSE, STP-SIV, XSAT, Egyptsat, Proba-2, QuickSat). The MicroDirector<sup>TM</sup> software library provides a foundation for implementing a wide range of attitude estimation and control functions.

## **Ecliptic Enterprises Corporation**

**Booth Space: 36** 

Rex Ridenoure

398 West Washington Boulevard, Suite 100

Pasadena, CA 91103

Phone: (626) 798-2436 Ext. 403

Email: RRidenoure1@EclipticEnterprises.com

www.eclipticenterprises.com

Ecliptic provides systems for accessing and experiencing space and other extreme environments.

Our popular RocketCam<sup>TM</sup> imaging systems and related data-transport systems are used routinely on launch vehicles, spacecraft and other remote platforms to provide dramatic engineering- and PR-quality color video. Ecliptic is the world's leading supplier of such systems and is delivering systems now that can be used onboard smaller satellites and their launchers.

Our new RocketPod<sup>TM</sup> secondary payload launch system (derived from the RocketCam integration architecture) promises to dramatically reduce the cost of getting CubeSat-class payloads into space.

Ecliptic pursues and supports other special projects involving aerospace avionics, small space payloads and instrumentation, and ground systems.

Stop by our booth to see samples of RocketCam and RocketPod hardware, view recent RocketCam video clips and discuss your project with our engineers. And stop by to pick up your copy of the newest version of our popular DVD, "RocketCam Greatest Hits."

RocketCam video clips and Ecliptic company information can be found at our website, www.eclipticenterprises.com.

General Dynamics C4 Systems Booth Spaces: 40 & 41

Jean M. Hale 400 John Quincy Adams Road Taunton, MA 02780

Phone: (508) 880-4030

Email: jean.hale@gdc4s.com

General Dynamics C4 Systems, a leader in securing space communications for over 40 years, successfully designs, develops and manufactures state-of-the-art high speed, space-based, Type 1-certified encryption products and corresponding ground encryptors in numerous space missions for large bandwidth data transmission. Our Space encryption products and capabilities are characterized by four essential metrics - Space Qualified Technologies, High reliability, NSA Certification and Processes for SPACE and optimized for SWaP solutions. Visit our booth at 40 and 41 to discuss your Information Assurance needs in SPACE.

Instarsat, LLC Booth Space: 42 John J. Webb, Jr.

DO Doy 2041

PO Box 3041

Durham, NC 27715 Phone: (919) 477-7212

Email: jwebb@instarsat.com

www.instarsat.com

Instarsat is an innovative space technology company that is developing a new generation of small and medium class satellites for commercial, civil, and military markets.

To address the emerging demand for more cost-effective space systems, Instarsat's focus is on providing high performance satellites and sub systems that encompass breakthrough improvements in quality and reliability.

Because of our unique product development program, Instarsat brings to the space marketplace valuedriven space systems with proven heritage that meet the needs and exceed the expectations of a broad range of customer mission requirements and key stakeholders.

## ISAJ (Intelligent Space Alternatives from Japan)

**Booth Space: 70** 

ISAJ Secretary

Lab. Cafe, 7th floor, Meiwa-Hongo Building, 4-1-3

Tokyo 112-0000

Japan

Email: info@isaj.jp

http://isaj.jp/

ISAJ aims for contribution toward Earth's sustainable development through promoting the use of space for peaceful purposes and the importance of international cooperation by utilizing space technologies. To achieve this goal, ISAJ carries out the following missions: 1. Expansion in the satellite usage for international cooperation; and 2. Utilizing micro-nano satellites for education.

## ISIS – Innovative Solutions In Space BV Booth Space: 81

Wouter Jan Ubbels Rotterdamseweg 145

2628AL Delft

The Netherlands

Phone: 31(0)152569018 Fax: 31(0)152788842 Email: info@isispace.nl

www.isispace.nl or www.piggybacklaunch.com

ISIS – Innovative Solutions In Space is a company fully dedicated to small satellites. We provide a range of products and services for micro- and nano-satellite developers. The R&D activities of ISIS focus on microsatellite platform technology and include TM/TC systems, software defined radio, highly integrated sensor suites, micro-electronics, inflatable technologies, and lightweight structural parts. The company is currently expanding its microsatellite product range and expects to offer turnkey solutions in 2009.

ISIS also acts as a launch broker for spacecraft up to 50 kilograms and aims to provide piggyback launch opportunities twice per year. Furthermore, ISIS provides related services and products such as acceptance testing and launch adaptors. The company currently supports the CubeSat community with launch opportunities and off-the-shelf products such as a CubeSat structure, VHF/UHF transceiver and Ground Station. Custom solutions can be provided as well by our engineers in close cooperation with the design teams.

## **Kwajalein Range Services LLC**

**Booth Space: 37** 

Jack McCreary
United States Space and Missile Defense Command
PO Box 1500

Huntsville, AL 35807 Phone: (256) 955-1576

Email: jack.mccreary@smdc.army.mil

www.smdc.army.mil/rts.html

"WORLD CLASS" RANGE...... Ronald Reagan Ballistic Missile Defense Test Site (RTS) has a successful launch history to include a recent ground launched LEO mission. The immeasurable value of RTS is based on its geographical equatorial location, unique radars, instrumentation, support of deep space operations and surveillance, launch facilities, and extensive flexibility for test scenarios.

The four RTS mission areas are: Space Control, Space Support, Missile Defense T&E and Emerging Technologies. These elements are supported by dedicated expertise, capabilities (assets & location) and flexibility to rapidly change to meet customer requirements.

Launch sites allow for flight trajectories in virtually all azimuths for LEO and Geo synchronous orbits. Future connectivity (FY09) will allow for Mission Control and data flow to the Huntsville Range Operations Control Center (ROCC).

### **L-3 Communications**

Booth Spaces: 16 & 18

Paul Brammer 9020 Balboa Avenue San Diego, CA 92123 Phone: (800) 351-8483

Email: Sales.TW@L-3Com.com

www.L-3Com.com/TW

Today, L-3 Telemetry & RF Products serves commercial, military, and civilian customers worldwide, with a product offering that includes TT&C satellite transponders, high data rate satellite transmitters, high-power amplifiers, high-reliability receivers/transmitters, encryption/decryption units, video compression/decompression units, tactical intelligence radios, tactical HF/SSB and microwave radios, telemetry ground system components and solutions, and specialized telemetry and surveillance products.

All Telemetry & RF Products solutions are offered with complete systems engineering and integration services and are backed by a global customer support organization. The company has more than 50 years of experience in telemetry, data acquisition and RF technology and serves virtually every major aerospace organization in the world.

#### LaBarge, Inc.

**Booth Space: 43** 

Roger Johnston 9900 Clayton Road St Louis, MO 63124

Phone: (314) 997-0800

Email: roger.johnston@labarge.com

www.labarge.com

LaBarge, Inc. (Amex: LB) is a leader in precision electronics manufacturing for a diverse OEM customer base. The company provides its customers with sophisticated electronic and electromechanical products through turnkey contract manufacturing services. LaBarge's broad-based capabilities include the manufacture of high-reliability cables and interconnect systems, printed circuit cards, box-level assemblies and higher-level assemblies, backed by design and engineering support, program management, flexible manufacturing and testing.

LaBarge-built high-reliability hardware and systems support critical functions where durability and peak performance are vital, including military aircraft, radar systems, satellites and satellite launch vehicles, airport security equipment, oilfield tooling, mine management systems, medical applications and industrial systems.

Headquartered in St. Louis, LaBarge operates state-of-the-art manufacturing facilities in Arkansas, Missouri, Oklahoma, Pennsylvania and Texas. Facilities are certified to ISO 9001:2000 and AS9100:2004 quality standards. Founded in 1953, LaBarge has approximately 1,400 employees and reported \$250 million in revenues in 2007.

## **Lockheed Martin Space Systems**

Booth Spaces: 8 & 10

Carol Hail PO Box 179

Denver, CO 80201 Phone: (303) 971-5920

Email: carol.l.hail@lmco.com www.lockheedmartin.com

Rapidly responding to customer needs with small satellites isn't new at Lockheed Martin. Since the late 1960s, Lockheed Martin has played a significant role in innovation and implementation of small satellites, having produced over 150 satellites in the small class, with many of those efforts below 600kg. Repeatedly demonstrating our ability to design, manufacture and launch systems in very short timeframes, Lockheed Martin has a successful track record across a range of system sizes and applications.

#### **MDA**

**Booth Space: 69** 

Wendy Keyzer 13800 Commerce Parkway Richmond, British Columbia Canada V6V 2J3

Phone: (604) 231-2743

Email: wendy@mdacorporation.com

www.mdacorporation.com

MDA is a space contractor with over 40 years of experience in the development of innovative space systems. The Company delivers turnkey, fixed-price Earth observation, space surveillance, space science, and information delivery satellite missions. Complementing its mission capability is its heritage in the design, development and supply of spacecraft payloads and subsystems, including optical, radar and communication

payloads, antennas, digital, microwave, and power equipment for communications. MDA employs state-of-the-art test and integration facilities supported by extensive engineering expertise and state-of-the-art design tools.

Building on experience gained by successfully delivering complex space systems, MDA has extended its capabilities into the development of operationally responsive small satellite missions and payloads that combine value and responsiveness with end-to-end functionality, including the full ground segment. MDA offers a suite of low cost, highly capable payloads compatible with emerging affordable platforms and launchers that meet tomorrow's requirements for rapid and affordable access to space today.

Micro Aerospace Solutions, Inc.

**Booth Space: 55** 

Don Platt 2280 Pineapple Avenue Melbourne, FL 32935 Phone: (321) 243-4633

Email: dplatt@micro-a.net

www.micro-a.net

Micro Aerospace Solutions, Inc. (MAS) is a small business based in Melbourne, Florida on Florida's spacecoast. Our goal is to provide low-cost yet innovative solutions to new and difficult challenges. Some of our areas of expertise include small spacecraft attitude detection/control and propulsion systems. Other areas include the development of command and data handling, embedded systems and electronics systems. We offer consulting services to help with your system design and test needs. We can assist in system design and analysis during any phase of the system life cycle from initial concept through operations. Our talented staff can provide knowledgeable engineering support on a variety of projects at minimal cost. Our solutions offer great performance with low mass, power and cost. We can accomplish this because of our low overhead and use of commercial-off-the-shelf components where applicable, often in unique ways to provide added value for our customers.

#### **Microcosm Astronautics Books**

**Booth Space: 6** Pam Esquinca 4940 W 147th Street Hawthorne, CA 90250

Phone: (310) 219-2700 or (866)-ASTROBK

Email: bookstore@smad.com

www.astrobooks.com

Our unique bookstore carries a huge selection of astronautics books, over 250 titles! These include our world renowned Space Mission Analysis and Design and Reducing Space Mission Cost. We pride ourselves on supplying the space industry with high quality books at very low prices, and providing our professional assistance in finding the right book for your astronautical needs. It's easy to order on-line, by phone, or by email or visit us from 8am-5pm PST, Monday through Thursday at our near-to-LAX location. Our goal is to make access to our books and services incomparable. We also have wholesale prices for retailers and institutes of higher learning. This year we will be introducing a couple of new editions to our Space Technology Library Series, and plan to use this conference to showcase them.

MicroSat Systems, Inc. **Booth Spaces: 82, 84, & 86** Janel Marsilio

8130 Shaffer Parkway Littleton, CO 80127

Phone: (303) 285-1830

Email: jmarsilio@microsatsystems.com

www.microsatsystems.com

MicroSat Systems, Inc. offers high performance microsatellites and spacecraft subsystems including; space power systems, advanced miniaturized avionics and lightweight composite structures. Our heritage, innovation and modular bus approach allows us to provide reliable, lower cost spacecraft for distinct mission applications to government and commercial customers.

## NASA-Ames Micro-Nano Spacecraft and Payloads Office (Small Spacecraft Division) Booth Space: 62

John Hines, Elwood Agasid Small Spacecraft Division NASA-Ames Research Center Mail Stop 202-3

Moffett Field, CA 94035

Phone: (650) 604-5538 / (650) 604-0558

Email: john.w.hines@nasa.gov / elwood.f.agasid@nasa.gov

www.nasa.gov/centers/ames

NASA-Ames Research Center's Micro-Nano Spacecraft and Payloads (MNSP) Office's multidisciplinary team of government, industry, and academic partners develop, integrate, and use small space systems (5-50 kg) for NASA science, exploration, mission operations and technology maturation. Activities originated with GeneSat-1 and GeneBox projects—two 5 Kg Nanosatellites flown in the Cubesat configuration in 2006 aboard the USAF Minotaur (TacSat-2) and Bigelow Aerospace Genesis missions, respectively. The range of space missions and systems development include spacecraft platforms, payloads and instruments, integration and testing, launch vehicle accommodations and adapters, mission operations and ground systems, project engineering and management. NASA spaceflight standards and project lifecycle guidelines are tailored for small complete micro-nanosatellite mission implementation. Missions currently in development include nanosatellite technology demonstrations for biological payloads and nanosail de-orbit capability, pharmacologic drug efficacy, and astrobiology organic exposure, with a multi-year endeavor planned for Fundamental Space Biology and Astrobiology, Advanced Exploration capabilities, and Space Science Technology.

## NASA-Ames Research Center Small Spacecraft Division (SSD)

Booth Space: 60
Peter Klupar
Mail Stop 202-3

NASA-Ames Research Center

Moffett Field, CA 94035 Phone: (650) 604-2295

Email: pklupar@mail.arc.nasa.gov

www.nasa.gov/centers/ames

The NASA-Ames Research Center Small Spacecraft Office (SSO) is charged with the development of small, low-cost, fast response spacecraft and missions in support of NASA Exploration, Science, and space infrastructure objectives. This "Venture Class" of spacecraft and missions, range from 5-200 Kg and are envisioned to cost in the neighborhood of \$100M, for the larger sizes. NASA Ames hopes to enable the capability for frequent access to space, and demonstrate innovative, higher risk technologies, and development and operations approaches. A further goal is to provide venues and projects to train future spacecraft and mission professionals, by enabling applied, goal-oriented collaboration and innovative teaming approaches. To support these objectives, NASA-Ames has established an advanced Mission Design Center, a Center for Engineering Innovation, and a Multi-Mission Operations Center. These and other facilities and resources are

being utilized to provide a tightly integrated, full space mission life cycle development and utilization environment.

# NASA/Goddard Space Flight Center/Wallops Flight Facility Booth Space: 66

Scott H. Schaire Wallops Flight Facility Wallops Island, VA 23337

Phone: (757) 824-1120

Email: Scott.H.Schaire@nasa.gov www.nasa.gov/centers/wallops/

NASA's Wallops Flight Facility (WFF), located on Virginia's Eastern Shore, provides low-cost responsive suborbital and orbital flight project services to government, industry, and academia customers. As WFF is dedicated to furthering science, technology, and commercial responsive access to space, WFF provides facilities and expertise to enable frequent flight opportunities worldwide. WFF manages an array of research carriers, including sounding rockets, scientific balloons, science aircraft, unmanned aerial vehicles, and small spacecraft systems. WFF provides operational support through its launch range, mobile range, research airport, and orbital tracking station. In addition to flight projects, WFF is also home to Earth Science researchers as well as engineers responsible for developing flight systems and advanced technologies. WFF posseses highly capable flight hardware fabrication and testing capabilities used to support both its NASA and non-NASA customers.

Orbital Sciences Corp. Booth Spaces: 17 & 19

Ken O'Keefe

21839 Atlantic Boulevard

Dulles, VA 20166

Phone: (703) 406-5532

Email: okeefe.ken@orbital.com

www.orbital.com

Orbital Sciences Corporation is a leading manufacturer of smaller spacecraft, launch vehicles, and human spaceflight systems. Orbital supplies low Earth orbit (LEO) spacecraft, geosynchronous Earth orbit (GEO) satellites, and planetary spacecraft for Earth and space science, communications, national security, remotesensing, and technology demonstration missions. Orbital also develops and manufactures launch vehicles for boosting small- to medium-class satellites into low-Earth orbit, and missile defense interceptor and target launch vehicles. Orbital is designing and building the Launch Abort System for NASA's Orion Crew Exploration Vehicle, Abort Test Boosters for validating the system, and is partnering with NASA to develop the Commercial Orbital Transportation Services system for the International Space Station. Orbital provides a wide range of space-related technical services, including specialized analytical, engineering and production services. Since 1982, Orbital has developed, built and delivered 642 satellites, launch vehicles and other space systems. Nearly 200 additional systems are under contract through 2014.

## **Planetary Systems Corporation**

Booth Space: 75 Michael Whalen 2303 Kansas Avenue Silver Spring, MD 20910 Phone: (301) 495-0737

Filolic. (301) 493-0737

Email: whalen.mike@planetarysystemscorp.com

www.planetarysys.com

Planetary Systems Corporation (PSC) provides lightweight, cost-effective and test verified separation systems for the aerospace industry.

The Lightband separation systems enable payload deployment and missile staging at lower cost with less shock than any system available today. PSC has invested over two million dollars and over eight years of R&D to develop the Lightband. PSC is entirely US-owned and operated, with all products designed, developed, built and tested at a single location the Washington DC area.

Pumpkin, Inc. Booth Space: 74

Dr. Andrew E. Kalman 750 Naples Street San Francisco, CA 94112 Phone: (415) 584-6360

Email: info@cubesatkit.com http://www.cubesatkit.com

Pumpkin provides off-the-shelf hardware and software solutions for CubeSat and other nanosatellite missions. Our affordable CubeSat Kit(TM) family of products provides a thoroughly engineered foundation upon which to build your nanosatellite.

Each CubeSat Kit contains everything you need to get started right away, as well as a fully conforming CubeSat Flight Model. The high-strength, low-mass CubeSat Kit structure is modular and is easily scaled to satisfy mission requirements. The ultra low-power on-board electronics and Salvo(TM) RTOS software are designed to handle a variety of mission tasks (C&DH, COM, etc.). A wide range of transceivers is supported.

With over 100 CubeSat Kits delivered to customers, the CubeSat Kit represents the largest installed based of common nanosatellite architecture in the world.

We also offer CubeSat Kit customization and other engineering services. Our technical expertise includes systems engineering, fabrication, software design and programming. Please visit our SmallSat booth and http://www.cubesatkit.com to learn more.

#### **Raytheon**

Booth Space: 72 Randall E. Gricius Missile Systems 1151 East Hermans Road TU/ 808/20

Tucson, AZ 85706 Phone: (520) 794-5841

Email: Randall\_E\_Gricius@raytheon.com

www.raytheon.com

Raytheon Company is a space systems provider with global space sales ranking number five in 2006. The combined strength of Missile Systems, Space and Airborne Systems, Network Centric Systems, Intelligence and Information Systems, Integrated Defense Systems and the Raytheon Technical Services Company provides a vast array of innovative full system solutions for the space community including the emerging Operationally Responsive Space and growing Space Control markets.

Raytheon offers leading technologies in areas including satellite command and control, mission and resource management, end-to-end information and network management, modeling and simulation, systems engineering, producibility and space sensors.

Other areas of expertise include space packaging and quality, radar and communication technologies, directed energy, plug-and-play designs, networking technologies, missile/space vehicle and avionics design, mission assurance and manufacturing.

Raytheon's focus on low-cost, versatile products and programs allows our customers to expand the envelope of space capabilities.

## Redefine Technologies, Inc.

Booth Space: 56 Steve Wichman 44 Linn Lane Golden, CO 80403

Phone: (720) 317-5182

Email: steve.wichman@redefine.com

www.redefine.com

Redefine Technologies specializes in embedded programming, reconfigurable avionics, and advanced systems design for space and ground applications. Our newest Testbed for Responsive Experiments and Demonstrations in Space (TREADS) allows your company or organization to launch new technology into LEO, MEO and HEO orbits. Your technology (software, PCB or component) is the 'primary payload'. You will increase your TRL and perform the science/tactical experiments you want with minimal integration and launch cost overhead. Our expertise has developed a near-100% mission survivability approach to your payloads, an ability to remotely 'pre-integrate' your payloads onto the spacecraft, and the programming/hardware support required on five satellites over the past eight years. We have an extensive Research and Development Team that keeps our tools on the leading edge - we're continually "spinning technology into future resources TM."

### **Rockwell Collins Deutschland GmbH**

**Booth Space: 44** 

Wolfgang Kupferschmitt

Director Space Products / TELDIX <sup>®</sup> Space Wheels Grenzhofer Weg 36 69123 Heidelberg Germany

Phone: 49 6221 512 293

Email: wkupfers@rockwellcollins.com

www.rockwellcollins.com

Rockwell Collins is a world leader in the production of momentum and reaction wheels for spacecraft applications and the European market leader in airborne data processing for tactical military aircraft.

Our standard wheels feature lightweight design, 15 year life time, and ITAR-free electronics. Delivery time is less than 12 months for off the shelf products.

Rockwell Collins TELDIX <sup>®</sup> Space Wheels are available in five different sizes with an angular momentum storage capacity spanning a range between 0.04 Nms and 68 Nms. The wheels accommodate the requirements of attitude control systems for satellites weighing less than 65 kg as well as for geostationary satellites reaching a mass of three tons or more.

To date, 750 wheels installed in 290 satellites have been launched, representing more than 3,225 years of in-orbit operation (as of January 2008).

## **Routes AstroEngineering**

Booth Space: 7 Blair Gordon 303 Legget Drive Ottawa, ON K2K 2B1 Canada

Phone: (613) 592-0748 x112

Email: b\_gordon@routes.com

www.routes.com

ROUTES ASTROENGINEERING designs and manufactures scientific instruments and payload/bus equipment; including solar panels, power control and distribution units (PCDUs), and spacecraft solid-state mass memory products. Established in 1988, Routes has developed equipment for suborbital rocket payloads, LEO satellites, Space Shuttle, and International Space Station. Our clients and partners include Government, commercial aerospace companies, and academic institutions.

We have developed optical scientific instruments that operate in the UV, visible, and IR wavelengths, and are used for astronomy, atmospheric, auroral, and life/physical sciences research. We have developed RF instruments that probe the magnetosphere.

Our payload & bus products include space solar panels that offer state-of-the-art performance, PCDUs for smallsats and microsats, and on-board data storage units that offer Terabit capacity using non-volatile FLASH technology.

Our facility is fully qualified for space manufacturing with compliance to ISO 9001-2000 and NASA certified assemblers.

ROUTES ASTROENGINEERING, developing space instruments and subsystems: From Concept to Flight.

Saab Space AB Booth Space: 23 Michael Miller

Michael Miller

222 North Sepulveda Boulevard, Suite 2000

El Segundo, CA 90245 Phone: (310) 662-4760

Email: michael.miller@saabus.com

www.saabgroup.com

Saab Space - part of your mission! Saab Space is an independent supplier of space qualified equipment to satellite and payload primes and launcher operators worldwide within the product niches: command and data handling systems; microwave electronics; antennas; payload adapters & separation systems; satellite structures; ground support equipment; thermal isolation; and sounding rocket guidance systems.

Saab Space is a leading supplier of adapters and separation systems for launchers offering modular designs with low-shock separation system technology and multiple spacecraft launch solutions.

Saab Space computer systems and signal processing know-how contributes to a large number of scientific, earth observation and navigation missions.

Saab Space frequency converters are used in several major operators telecom payloads.

Our family of wide coverage antennas, well-known since 30 years, covers frequencies from L-band up to and including Ka-band. They are used in TT&C, data downlink and array applications.

## Satellite Services Ltd

Booth Space: 32

J. Barrington-Brown

70 Larksway

Bishops Strotford, Hertfordshire CM234DG

United Kingdom

Phone: 31 71 402 8120 Email: jbb@satserv.co.uk

www.satserv.co.uk

Satellite Services Ltd designs and manufactures satellite sub-systems for supply to the Cubesat and small satellite markets and for European Space Agency programmes. They also design and manufacture

electronics for spaceborne scientific instruments. Satellite Services is a 'One Stop Shop' for the complete suite of sub-systems including sensors, actuators, power systems, computer systems and communications equipment. Satellite Services business model offers the delivery of 'semi-standardised' sub-systems where the core circuitry has flight heritage, but the electrical and mechanical interfaces can be adapted to suit the customer's satellite system architecture reducing overall costs and increasing platform efficiency.

Satellite Services is part of the SSBV Group which owns, or has major shareholding in, companies in The Netherlands, UK, Portugal and Australia.

## **SEAKR Engineering, Inc.**

**Booth Space: 11** 

Dave Jungkind 6221 S Racine Circle Centennial, CO 80111 Phone: (303) 790-8499

Email: dave.jungkind@seakr.com

www.seakr.com

SEAKR Engineering, Incorporated is a world-leading provider of advanced state-of-the-art electronic avionics for space and airborne applications. Since its inception in 1982, SEAKR has delivered over one hundred flight units. More than sixty of these units have launched and are operating per mission requirements. SEAKR's leading edge space avionics includes layer III IP routers and modems as well as software-defined radios, high-performance payload processors, modular command and data handling systems, and solid state recorders. SEAKR has a reputation for high-level performance and reliability in severe environments. SEAKR is a small business proud to serve its customers and country.

For more information about this and other SEAKR products, call, or write SEAKR Engineering, Incorporated, 6221 South Racine Circle; Centennial, CO. 80111-6427, 303.790.8499 or email at info@seakr.com and visit our Web Site at www.seakr.com.

#### **SIMULIA**

Booth Space: 9
Ian Stevenson
6910 Cordwood Court
Boulder, CO 80301

Phone: (303) 664-5444

Email: Ian.Stevenson@3ds.com

www.simulia.com

SIMULIA delivers a scalable portfolio of Realistic Simulation solutions including the Abaqus Finite Element Analysis and CATIA Integrated Analysis product suites, multiphysics solutions for insight into challenging engineering problems, and SIMULIA SLM for managing simulation data, processes, and intellectual property. The Abaqus FEA product suite enables engineers to evaluate physical performance of aerospace products from launch event vibration analyses, to failure analyses of composites, to dynamic impact events. Additional capabilities include thermal, stress, fatigue, durability, transportation, and handling simulations. By building on established technology, respected quality, and superior customer service, SIMULIA helps aerospace companies improve product performance, reduce physical prototypes, and drive innovation.

**Sinclair Interplanetary Booth Space: 28**Doug Sinclair

268 Claremont Street Toronto ON M6J 2N3

Canada

Phone: (647) 286-3761

Email: dns@sinclairinterplanetary.com

www.sinclairinterplanetary.com

Sinclair Interplanetary exemplifies the cottage-industry nature of modern microsatellites. Ten spacecraft launched in the past six years have carried equipment from this one-man shop. Qualified off-the-shelf products include reaction wheels and digital sun sensors. This year a tiny star tracker will make its debut! Custom avionics such as power supplies, actuator drives and C&DH components are available on extremely aggressive schedules.

Whether you are getting ready to start phase A of your satellite project, or you are in a last-minute panic as the launch looms, Sinclair Interplanetary can lend a hand. Please take a moment to visit the booth, say 'hello,' and see if I can solve your problems.

#### **Southwest Research Institute**

**Booth Space: 12** Buddy Walls

6220 Culebra Road San Antonio, TX 78238-5166

Phone: (210) 522-3823

Email: buddy.walls@swri.org

www.swri.org

Southwest Research Institute (SwRI) was founded in 1947 as a public service scientific corporation to provide contract R&D to both industrial and government clients. The Institute provides extraordinarily technical capabilities through 11 technical operating divisions, with approximately 3300 staff members and gross annual revenue of \$380 million.

SwRI's Department of Space Systems has a long and distinguished track record of producing high quality, high reliability spacecraft computers for NASA, DoD, ESA, and commercial space missions. Since the first SC-1 spaceflight computer was developed in 1979, SwRI has developed hardware for over 50 space flight missions without a single on-orbit failure. The track record of the last 26 years is a product of a strong commitment to support the current and future needs of the space community. SwRI is recognized as one of the leaders in space instrument design and development, command and data handling (C&DH) systems and mission management.

## Space Dynamics Laboratory Booth Spaces: 38 & 39

Jim Marshall 1695 North Research Park Way North Logan, UT 84341

Phone: (435) 797-4725

Email: jim.marshall@sdl.usu.edu

www.spacedynamics.org

The Space Dynamics Laboratory (SDL), a nonprofit research corporation owned by Utah State University, has over five decades of experience in developing innovative solutions for complex science and military sensing needs. SDL's expertise includes ground-, air- and space-based IR, visible, and UV sensors; hyperspectral, polarimetric, and hypertemporal systems; small satellites and supporting technologies; rapid, experimental development of prototype hardware and associated software; concept validation studies and demonstrations; real-time intelligence, surveillance and reconnaissance data compression, visualization, and exploitation systems; contamination control and stray light analysis; and cryogenic and thermal management systems. SDL is a recognized international leader in sensor system characterization and calibration, and hosts the Annual Conference on Characterization and Radiometric Calibration for Remote Sensing. Headquartered in a 200,000

ft<sup>2</sup> research complex in Logan, Utah, SDL also operates facilities in Boston, Albuquerque, and Washington DC, and employs over 300 professional and technical personnel.

Space Micro Inc. Booth Space: 71

10401 Roselle Street, Suite 400

San Diego, CA 92121 Phone: (858) 332-0700

Email: sales@spacemicro.com

www.spacemicro.com

Space Micro leveraging technologies from the commercial sector with innovative and patent-protected design improvements, Space Micro offers RH (radiation-hardened) products that achieve levels of performance unsurpassed in size, weight and power utilization.

RH single board computers in the Proton<sup>TM</sup> Series include the Proton200k<sup>TM</sup>, which performs at levels up to 900MFLOPS or 4,000 MIPS while using only 5-7W of power at an SEU rate of <1E-4/day using Space Micro's TTMR<sup>TM</sup> (Time Triple Modular Redundancy) technology. The Proton400k<sup>TM</sup> offers 4,000 MIPS SEU corrected performance with a PowerPC processor and VxWorks RTOS.

RH Communications products include Space Micro's uSGLS<sup>TM</sup> and uSTDN<sup>TM</sup> transponders and uKa<sup>TM</sup> transmitter. RH components include a 4Gb Flash module and a 2.5Gbps Forward Error Correction IC.

Space Micro offers satellite builders the option of choosing strictly commercial components for prototype and experimental flights to having the same circuit design populated with radiation mitigated components that meet space and military requirements for in-orbit longevity.

**SpaceDev** 

Booth Spaces: 1 & 2

Mark Bailey

1722 Boxelder Street Louisville, CO 80027 Phone: (720) 407-3112

Email: markb@starsys.com

www.spacedev.com

SpaceDev has developed a reputation for delivering extraordinary results in small satellites, hybrid propulsion systems, and spacecraft mechanical systems. SpaceDev capabilities cover the entire range of design, development, manufacturing, assembly, and test. SpaceDev satellites range from small nanosats to ORS class busses. Hybrid propulsion solutions range from the first (and only) manned commercial launch of Spaceship 1 to systems that provide orbital transfer for small satellites. Mechanical systems include docking/servicing systems, deployable structures, cover systems, electro-magnetic and phase-change actuators, low shock separation systems, battery bypass switches, and passive thermal control.

**SpaceX** 

Booth Space: 35 Lauren Dreyer 1 Rocket Road Hawthorne, CA 90250

Phone: (310) 363-6392 Email: Lauren@spacex.com

www.spacex.com

SpaceX is developing a family of launch vehicles intended to reduce the cost and increase the reliability of both manned and unmanned space transportation ultimately by a factor of ten. With its Falcon line of launch vehicles, SpaceX is able to offer light, medium and heavy lift capabilities to deliver spacecraft into any inclination and altitude, from low Earth orbit to geosynchronous orbit to planetary missions. Falcon 1, ideally suited for small satellite missions, is the world's lowest cost per flight to orbit of a production rocket.

As winner of the NASA Commercial Orbital Transportation Services competition, SpaceX will conduct three flights of its Falcon 9 launch vehicle and Dragon spacecraft for NASA, culminate with Dragon berthing with the ISS and returning safely to Earth. When the Shuttle retires in 2010, Falcon 9 / Dragon will have the opportunity to provide crew and supply services to the Space Station.

## STAR-Dundee Ltd Booth Space: 33

Peter Mendham c/o School of Computing University of Dundee Dundee DD1 4HN United Kingdom

Phone: 44 1382 386729

Email: peter@star-dundee.com

www.star-dundee.com

STAR-Dundee Ltd specialises in supporting users and developers of SpaceWire, a standard for data communications onboard satellites and spacecraft. SpaceWire has emerged as one of the main spacecraft data-handling networks since official publication in January 2003. It is now being used on many ESA, NASA and JAXA spacecraft and by research organisations and space industry across the world. SpaceWire's speed, simplicity, flexibility and interoperability have contributed to its growing popularity, something which staff at STAR-Dundee have been instrumental in for more than 15 years.

STAR-Dundee produces a wide range of equipment to enable the development, simulation and testing of SpaceWire networks and devices.

STAR-Dundee also provides first-class and acclaimed technical support to SpaceWire developers, making available over 40 person-years experience in SpaceWire technology which includes authorship of the SpaceWire standard. STAR-Dundee has been developing and producing SpaceWire equipment for more than five years, and has customers in over 20 countries.

## StratoStar Systems LLC

**Booth Space: 14** 

Jason Krueger 236 West Reade Avenue Upland, IN 46989

Phone: (765) 382-0451

Email: JKrueger@StratoStar.net

www.StratoStar.net

StratoStar Systems is a supplier of Near-Space platforms for satellite testing and other Near-Space related applications. We have products and services which allows anyone to access Near-Space, following our company slogan of "Gateway to Near-Space." Our main product is StratoSAT Complete Flight Package, which is a turnkey system including: Near-Space Platform (StraotSAT), Mobile Tracking System, Software, Hardware and everything you will need to conduct your own launches into Near-Space using a high-altitude balloon. This will allow you to test your satellite components or even an entire satellite in the space like environment of Near-Space. StratoStar's StratoSAT technology has been launched over 100 times with a recovery rate of 100%, we

have also developed an Altitude Control System (ACS) which extends the flight of a standard latex highaltitude balloon up to 12 hours, giving you more time to test your satellite in Near-Space for less money.

Surrey Satellite Technology Ltd.

Booth Spaces: 13 & 15

Teresa Green Tycho House 20 Stephenson Road Guildford, Surrey GU27YE United Kingdom

Phone: 44 (0)1483 803803 Email: t.green@sstl.co.uk

www.sstl.co.uk

Surrey Satellite Technology Ltd (SSTL) specializes in the design, manufacture and operation of high performance small satellites. SSTL has launched 27 small satellite missions for international customers and employs 270 staff across three locations in the UK working on LEO, GEO and interplanetary missions, all of which exploit SSTL's expertise in providing cost-effective technologies and techniques. SSTL customers include ESA, NASA, USAF, the US Department of Energy LANL, and commercial customers across the globe. Fourteen satellites are currently under construction at SSTL's facilities for customers in Canada, Nigeria, Spain, Russia, USA, and UK, including a follow-on contract from the European Space Agency for a second navigation satellite, GIOVE-A2. Seven satellites are scheduled for launch in 2008.

## **Tiger Innovations LLC**

**Booth Space: 34** 

Rob Atkin

8500 Leesburg Pike, Suite 409

Vienna, VA 22182 Phone: (703) 407-1236

Email: ratkin@tigerinnovations.com

www.tigerinnovations.com

Tiger Innovations, L.L.C. is a well-qualified, high technology, small business with a broad range of experience in specialty software/computer architecture design and implementation. We have extensive experience with custom hardware, software, and communication protocol design and implementation. Our focus is on providing highly capable, low cost spacecraft avionics and ground support equipment ideally suited for small satellite missions.

Tiger Innovations Spacecraft Ground Support Products include a Spacecraft Control Box, SGLS Simulator, Two-Channel Frame Synchronizer, 16-channel Solar Array Simulator, and the StreamLINK Command and Telemetry Software. We also offer the Integrated Test Rack, a complete, turn-key integration and test solution that has supported multiple spacecraft missions.

In addition to EGSE, we also offer the Integrated Electronics Module, a low mass, low power avionics unit, with STPSat-1 flight heritage.

## Universal Space Network, Inc.

**Booth Space: 73** 

John Heberle 417 Caredean Drive, Suite A Horsham, PA 19044

Phone: (215) 328-9130

Email: jheberle@uspacenet.com

www.uspacenet.com

Universal Space Network, Inc. (USN) provides satellite telemetry, tracking and communications services from a global network of remote ground stations called PrioraNet. PrioraNet offers worldwide satellite tracking, telemetry and control (TT&C) and data downlink services on a lease 'by the pass' basis. Customers gain access to PrioraNet services through Network Management Center (NMC) facilities in Pennsylvania, California and Sweden, which is owned by PrioraNet partner the Swedish Space Corporation. Through this single point of interface a subscriber gains access to satellite ground stations in strategically selected locations around the world.

USU College of Engineering Booth Space: 78

Logan, UT 84322-4100 Phone: (435) 797-2775 www.engineering.usu.edu

4100 Old Main Hill

The Mechanical and Aerospace Engineering Department, the Electrical and Computer Engineering Department, and the Space Dynamics Laboratory at Utah State University continue to build a strong reputation in the aerospace arena. Faculty research continues to grow and expand, providing students valuable experience while completing their degrees. Agencies sponsoring research at USU include NASA, AFRL, Lockheed, ONR, and others. Funding is used to provide students with research opportunities and help them prepare for an exciting career in aerospace engineering. Advanced aerospace topics taught at USU include Spacecraft Systems Engineering, Space Environment, Propulsion Systems, Astrodynamics, Spacecraft Attitude Control, Space Navigation, and Optimal Spacecraft Guidance. Many of these courses are available live on the Internet through the USU Distant Education Program. Students benefit from these quality classes and hands-on research associated with the Small Satellite project, the Chimaera Hybrid Rocket project, and other sponsored research projects. USU students send more experiments into space than any other university in the world. *Think* aerospace career--*Think* Utah State!

## Vanguard Composites Group, Inc.

Booth Space: 58 Duane Krumweide 7740 Kenamar Court San Diego, CA 92121 Phone: (858) 587-4200

Email: dkrumweide@vanguardcomposites.com

www.vanguardcomposites.com

DR Technologies, Inc. and its Vanguard Composites Group subsidiary specialize in the application of advanced composites for spacecraft structures that need stiffness, precision and stability, as well as multifunctional applications such as electronic packaging and space power.

Vanguard specializes in spacecraft bus structures, antenna reflectors, dimensionally-stable optical benches for space telescopes and sensors, and multi-functional composite structures including lightweight thermal management electronics enclosures. Vanguard's capabilities include full engineering, with extensive capabilities in advanced composites design and analysis. We can work in a design-to-spec or build-to-print environment, to build, test, and deliver anything from simple composite components to challenging structural assemblies.

DR also has an emerging business in Space Power, Optical and Thermal products which includes advanced, low cost solar panels, high accuracy ultra-lightweight reflective optics, and thermal control radiators. Ongoing SBIR efforts have developed these technologies for small spacecraft and special applications. This area features high performance advanced technology products such as standardized modular solar arrays, loop heat pipe radiator panels, infra-red and submillimeter mirrors, and solar concentrators.

## **VCSFA/Mid-Atlantic Regional Spaceport**

**Booth Space: 68**Billie M. Reed

4111 Monarch Way, Suite 201

Norfolk, VA 23508 Phone: (757) 440-4020 Email: BReed@vaspace.org www.marsspaceport.com

The Mid-Atlantic Regional Spaceport (MARS) is an FAA licensed, operational spaceport located at the NASA Wallops Flight Facility on the mid-Atlantic coast. MARS is a cooperative venture of Virginia and Maryland administered by the Virginia Commercial Space Flight Authority. MARS provides low cost access to midinclination orbits for ELVs, and supports sub-orbital launches, RLV launch and landing, and payload recovery. Its location provides unobstructed access to the ISS for cargo/re-supply missions. MARS offers two FAA licensed launch pads, sub-orbital launch rails, vehicle/payload storage and processing facilities, co-located airport, flexible mission support, and an accommodating schedule for commercial and government aerospace customers. Its unique location, capabilities, and cost advantages make it the test, demonstration, and operational launch site of choice for ELV/RLV programs by government and industry alike. MARS's exemplary support of the TACSAT 2, TACSAT 3, NASA HYBOLT and NFIRE missions demonstrate its commitment to responsive, cost efficient small satellite deployment.

### Yardney Technical Products, Inc.

**Booth Space: 57** 

Bill Yalen

82 Mechanic Street

Pawcatuck, CT 06379

Phone: (860) 599-1100 Ext. 406 Email: wyalen@yardney.com

www.yardney.com

Small Satellite Batteries from Yardney Technical Products, Inc.:

- -Premier provider of high-performance aerospace batteries;
- -NASA programs since the beginning of manned spaceflight;
- -State of the art *Lithion* brand Lithium-ion batteries;
- -Space battery designs from 14V 150V, 10.5Ah 300Ah, as light as 3.4kg;
- -Extraordinary delivery, performance, and reliability record, including:
  - -Mars Exploration Rovers 10.5Ah x 2 (operating on Mars over four years and counting!);
  - -Phoenix Mars Lander 33Ah x2 (Model 9616);
  - -Orbital Express (4 Li-ion batteries):
    - -ASTRO 43Ah x 2 (Model L1147),
    - -NextSat 30Ah (Model 9522), and
    - -Orbital Replacement Unit (ORU) 30Ah;
  - -XSS-11 30Ah (Model 9492);
  - -Spectrum ASTRO 60Ah (Model 9653);
  - -TacSat-2 micro satellite 30Ah (Model 9492);
  - -PnPSat 30Ah (Model 9522);
  - -And more!

For ultra-reliable high-energy density batteries, see Yardney.