FY2014 Q2
Quarterly Report for the Period January 1st – March 31st, 2014
Center for the Advancement of Science in Space

Cooperative Agreement Number:	**NNH11CD70A**
Name:	**Center for the Advancement of Science in Space, Inc.**
Date Submitted:	
Section I	**General Status Report**
Section II	**Department Report**
Section III	**Business Status Report**
Section IV	**Performance Metrics**

Section I: GENERAL STATUS REPORT

Board of Directors

Quarterly Summary of Activities:

During this quarter, CASIS's Chairwoman, Dr. France Cordova resigned as a result of her acceptance to chair the National Science Foundation. Dr. Lewis Duncan was named interim Chairman of CASIS's Board of Directors.

CASIS inducted five new board members to provide further diversity in its expertise and reach into the commercial and academic communities. They include Lt. General James Abrahamson, Joseph Formichelli, Ioannis Miaoulis, Philip Schein and Carolyn Ticknor.

CASIS board members met formally with Dr.s Julie Robinson and Ellen Stofan to discuss science initiatives for the International Space Station National Laboratory, collaborative opportunities, and key areas for both NASA and CASIS to focus with respect to utilizing the National Lab for research purposes. The board also met with Mr. Michael Suffredini to discuss and further clarify the mission of CASIS, the availability of NASA resources, and the cooperative nature in which both entities must work.

The board introduced four new subcommittees and met initially in March to provide further guidance and support to finance management, development, science & technology, and strategy.

Business Development

Quarterly Summary of Activities:

Primary Business Development (BD) activity focused on the three point strategy of National Key Accounts, Ecosystem Development and Muliplier Relationships.

BD formalized its key account strategy and developed a list of 52 flagship companies in the life science, energy, chemical, cleantech, materials, infotech and aerospace sectors. For each

targeted entity, the company's products and services were analyzed to map against the ISS NL offering and from that a capture strategy was developed. Utilizing the network of CASIS's Board of Directors and other strategic stakeholders, the list of companies was ranked in order of best opportunity for project development based on senior level contacts, known R&D interests and other variables considered important. BD has engaged in preliminary meetings with key accounts, as well as conducting a two-day working session with scientists and engineers from Milliken, a National top producer of consumer products.

Penetration of ecosystems accelerated through on-going relationships with multipliers. In Houston a high degree of activity took place with the Rice Alliance, Houston Technology Corporation and NASA's BD team. Through these interactions, the BD team is building relationships with energy and chemical companies. Both the Silicon Valley and San Diego ecosystems have been developed through relationships with industry associations and consultants. Additionally, CASIS has developed an event in San Diego with the CONNECT organization which will bring together southern California's large companies in the Life Science, Cleantech and Infotech spaces. Special Attention will be given towards recruiting companies on the CASIS key account strategy list. In Boston, the BD team finalized its Mass Challenge strategy, has begun reviewing applications and has also partnered with Mass Challenge to roll out the program in Houston. Denver will be addressed in Q3 during the National Space Symposium taking place in May.

During Q2, BD managed 24 active opportunities, 16 of which are aggressively being developed into flight proposals. The team delivered 7 commercial project white papers for consideration of proposal development. To date, two have converted to full proposals and currently being evaluated in the science, economic and operational review process. BD also continued to support the Ops team on 10 current flight projects.

Section II: DEPARTMENT REPORT

Operations

Quarterly Summary of Activities:

Payload Development, Integration, and Launch Updates:
The payload development and integration activities in support of the CASIS sponsored investigations scheduled for launch during ARK-1/Increment 37/38 (Sept. 2013 – March 2014) were completed on time. However, launch delays associated with SpaceX-3 have produced some significant risks to the projected science gain and project costs for a few of the CASIS funded and sponsored projects. The following is a list of payloads impacted and a very high level description of those impacts:

- "Crystallization of Medically Relevant Proteins using Microgravity". PI Sergey Korolev: (b) (4)

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(b) (4)

The rescheduled launch date for SpaceX-3 is now April 18, 2014. CASIS is working with its sponsored investigators and other members of the organization to development mitigation strategies that can be deployed in the future in order to minimize science loss and cost increases due to the logistics of space transportation.

The payload development and integration activities associated with payloads scheduled to fly to the ISS during the ARK-2/Increment 39/40 (March 2014 – Sept. 2014) continue on a nominal schedule to meet the requirements of the projected launch dates. The updated "in work" flight plan for the cargo resupply missions occurring during ARK-2 is as follows:

- SpaceX-3/Dragon: April 18, 2014
- Orbital-2/Cygnus: May 5, 2014
- SpaceX-4/Dragon: August 8, 2014

New Payload Development Activities Initiated in Q2:
The operations department has initiated payload development and integration activities for the following new projects awarded and selected during Q2:

- Hnu-Nanopoint, a commercial company awarded with the opportunity to produce an ultra-portable, remote-controlled, automated microfluidics platform for general biological interrogations and planned stem cell research
- Dr. Rasha Hammamiah, Dept. of Defense, Cell science study utilizing the Bioculture System (BIOS) at NASA Ames Research Center

Staff Changes
Justin Kugler, formerly Operations Strategic Analyst was "ported" over to the CASIS business development department. We brought aboard Dr. Bill McLamb to serve as an Operations Project Manager. Bill brings with him a Ph D. in cell biology with a strong background in microgravity research and developing payloads for shuttle and the space station. Bill will provide CASIS with a combination of science and operations perspectives and experience.

Science & Technology Portfolio Management

Quarterly Summary of Activities:

2014 Solicitation/RFP Plan
The following RFPs are planned for FY14 (release dates are estimates):

- Materials Science (late April/early May 2014)
- The final FY14 RFP is planned for an August 2014 release, but topic is yet to be determined

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Released Solicitations

Remote Sensing: Ongoing from last quarter, the Portfolio Management (PM) team finalized revisions to the CASIS Request for Proposals (RFP) "Remote Sensing from the International Space Station." As noted in the Q1 report, release of an RFP in this area was based on feedback from industry experts, and since CASIS received considerable feedback and questions from the research community, CASIS suspended the original RFP in order to incorporate additional information for a more well-defined solicitation. The RFP was re-released on January 13, 2014, soliciting proposals focused on terrestrial benefit via Earth observations, atmospheric science, planetary science, or remote sensing of space. Specifically, ideal projects would (1) use existing hardware or (2) develop and deploy new remote sensing sensors or instrumentation for short-term technology testing/demonstration on the National Lab. CASIS received 49 Letters of Intent in response to this RFP and 26 full proposals. Of the submitted proposals, 13 came from academic institutions, 10 from commercial entities, and 3 from non-NASA government agencies.

Materials Science Hardware: On March 6, 2014, CASIS released a Request for Information (RFI) titled "Identification of Hardware and Implementation Partners in Support of Materials Science Experimentation on the International Space Station U.S. National Laboratory." This RFI precedes a planned CASIS RFP in the area of materials science. It sought to identify and gather information from entities capable of serving as implementation partners and/or hardware providers in support of ISS materials science experimentation for the upcoming RFP. CASIS received one response to this RFI demonstrating that the CASIS Operations team fully canvassed the implementation partner community and did not miss many available hardware options or providers of implementation services. CASIS plans to release a materials science RFP in Q3 2014.

Enabling Technologies: On February 26, 2014, CASIS released an RFP titled "Enabling Technology To Support Science in Space For Life On Earth." This RFP is soliciting technologies that enhance the value of the space station research platform: technologies, research platforms, and operational concepts that enable new or improve existing analytical capabilities to benefit space science on the ISS National Lab for Earth benefit. Specifically, ideal projects would propose enabling technologies in (1) scientific instruments and data collection; (2) materials, structures, and manufacturing; or (3) operational procedures that advance the capability of the ISS National Lab as an R&D platform. Initial RFP submissions are due early in Q3 FY14.

Outreach Initiatives

In support of ongoing and future RFPs, as well as National Lab capabilities in general, CASIS PM staff members have participated in various outreach activities and added several conferences during Q2.

- On January 13-17, CASIS attended AIAA SciTech 2014, the aerospace industry's largest R&D conference, in National Harbor, Maryland. We successfully engaged with the AIAA Corporate Membership Committee and AIAA senior staff, including the Chief Operating Officer and Director of Communications, to promulgate the CASIS value proposition in AIAA messaging and event planning. This activity also secured CASIS an invitation to be a key content partner in the upcoming SPACE 2014 conference.
- On February 6, CASIS hosted an ISS Workshop at the University of Florida in Gainesville, FL. As a land/sea/space grant university with 5,000 faculty, $750M in annual research funding, and significant investments in technology transfer, UF holds

potential for mutually beneficial partnerships with CASIS across multiple disciplines and market sectors. Approximately 50 graduate students, technicians, post-doctoral researchers, research professors, and research deans attended the CASIS presentations (roughly 80% from the life sciences), and the following Q&A session was very active and well attended. A lunch with UF Administrators was productive and well attended, including research deans from multiple life, physical and engineering science departments in addition to UF Vice President for Research Dr. David Norton. Approximately 20-25 persons attended the life science breakout session following the lunch; the physical science session had 8-10 people. CASIS expects resulting future discussions with and proposals from the faculty in Chemical Engineering, the Center for Remote Sensing, and the small/nanosat earth imaging development group.

- On February 10, CASIS hosted an ISS Workshop titled "Your Research in Space" at Florida Institute of Technology in Melbourne, FL. The event was co-hosted by FIT, and Kennedy Space Center also participated. The four-hour workshop began with a signing ceremony to mark a partnership between FIT and CASIS, performed by Dr. Anthony Catanese, president of FTI, and CASIS President and Executive Director Greg Johnson. CASIS representatives presented a CASIS overview and outlined opportunities for researchers to fly experiments on ISS, and a KSC representative spoke about ISS research opportunities from the NASA perspective. Approximately 50 people from the university and local science/technology industry attended, leading to several potential proposal ideas and leads.
- On February 13-17, CASIS attended the annual meeting of the American Association for the Advancement of Science. AAAS is the world's largest general scientific society and publisher of several journals. AAAS was founded in 1848 and includes 261 affiliated societies and academies of science, serving 10 million individuals. Thousands of leading scientists, engineers, educators, and policymakers attended the conference, with hundreds of members of the media and science communicators. CASIS had a booth at the event, and CASIS President and Executive Director Greg Johnson spoke on a NASA panel of researchers and administrators.
- On February 20, CASIS Senior Research Pathway Manager Dr. Michael Roberts, alongside Executive Director and former astronaut Greg Johnson, supported the NASA Explorer Schools program by participating in the "Ask an Expert: NES Video Chat Program." This live video chat program is a forum for high school students to ask questions about life and research in space.
- On March 16-20, CASIS attended The American Chemical Society (ACS) 2014 annual spring meeting in Dallas, TX. The main theme of the conference was promoting chemical and material research that focus on energy, and this happens to be an important target area for CASIS in the near future. About 12,000 people attended the conference from both academic and commercial backgrounds. CASIS was present to interact with commercial chemical and material companies at the exhibition to raise awareness about having them develop chemical and materials research projects on the ISS, especially with the Materials RFP due to be released in the late spring time frame. CASIS was also able to network with chemical supply/instrumentation companies that conduct a large amount of business with large chemical manufacturers, and they might be able to spread the word about ISS research to these large-scale companies as well. There was also interaction with the ACS marketing department to discuss future ways to promote CASIS within the ACS, which is a very large national scientific society.
- On March 25, Dr. Roberts presented an overview of CASIS at a symposium, "Stem cell

culture in space: Using the space environment to investigate new approaches to collaboration," in Hiroshima, Japan. The symposium was chaired by Dr. Louis Yuge, Professor in the Graduate School of Biomedical and Health Sciences at Hiroshima University, and was attended by more than 80 graduate students, medical students, and research faculty.

Proposal Review Process

During Q2, CASIS finalized revisions to its proposal review processes. The revisions specify specific procedures to be used as part of agreements with outside organizations (such as competitions/partnerships with accelerators) as well as changes to the review processes for both solicited and unsolicited proposals.

Changes to the review process for solicited proposals: Submissions in response to formal CASIS RFPs will now be received in a Step-1/Step-2 format, in concordance with other granting organizations in the space industry and at the recommendation of the CASIS Science and Technology Advisory Panel. Previously, CASIS requested brief letters of intent in advance of full proposal submission. Beginning with the Enabling Technologies RFP detailed above, CASIS no longer requires a letter of intent but instead requests a Step-1 proposal, which is an abbreviated proposal that contains project summary information and a statement of relevance to the CASIS mission but lacks a detailed project plan. All information submitted in the Step-1 proposal will be reviewed by CASIS and, possibly, by third parties providing assistance in proposal review. Step-1 Proposals are subject to preliminary operational, scientific, and economic evaluations that result in the encouragement or discouragement of submission of full Step-2 proposals. Step-2 is an invited submission of a full proposal, which should contain the same scientific goals and/or technology objectives identified in the Step-1 Proposal. CASIS review of full solicited proposals (now submitted in Step-2) is unchanged.

Changes to the review process for unsolicited proposals: Since mid-Q1 FY14, all qualified unsolicited opportunities have been discussed in a review with the Chief Scientist (CS) and Chief Economist (CE). During this review, the CS and CE receive an overview of qualified project ideas. The CS and CE provide feedback on these preliminary project ideas, resulting in the encouragement or discouragement of full unsolicited proposal submissions. Received full proposals fall into the same review process as proposals that are submitted through traditional solicitations. However, changes to this process are denoted in the revised proposal review process finalized this quarter.

- CASIS staff will now perform an internal Economic review for unsolicited proposals, engaging an external expert to provide subject matter expertise only as needed.
- A decision regarding whether to include external subject matter experts in the Scientific review of unsolicited proposals will now be based on the following guidelines:
    - For proposals requesting greater than or equal to $100k of CASIS grant funding: Scientific review by two external subject matter experts will be performed as normal. An exception to this guideline may be made in the case of proposal submission by another government agency that has already performed review for scientific merit. In such cases, CASIS may forego this review step and accept the results of the existing science review.
    - For proposals requesting less than $100k of CASIS grant funding: The CASIS CS, along with the Executive Director and CE as needed, will advise as to whether CASIS staff possess sufficient expertise in the subject area to perform an internal scientific review. If so, internal review by at least one CASIS staff

member will be performed. If not, review by one external subject matter expert will be performed.

Proposals Submitted as Part of an Agreement with an External Organization: Newly established guidelines for this review process address proposals originating as part of partnership, subcontract, or other agreement with an outside organization. Deviations from the standard solicited review process include:

- CASIS may choose to forego the economic review of proposals if the outside organization has already performed such an evaluation and the CASIS CE finds the qualifications of the reviewers to be sufficient to accept their statement of merit.
- Scientific review is performed as in the Unsolicited Proposals review process, including the delineation of projects/external reviewer engagement based on requested funding (+/- $100k).

In addition to revising the proposal review process, CASIS is also developing a robust database of external subject matter experts to serve as reviewers. Previously, CASIS has engaged various external organizations to perform this identification and recruitment of reviewers. To minimize costs associated with external review, CASIS will now perform as much of the identification and recruitment process as possible in-house.

Awarded Projects
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Additionally, underway in Q2 is a business accelerator competition, the 14th annual Rice Business Plan Competition (RBPC), for which CASIS is a partner. Forty-two teams hailing from some of the world's top universities will vie for more than $1 million in prizes in this year's RBPC, to be held at Rice University on April 10-12. The winner will take home a grand prize valued at more than $450,000, including seed funding and the opportunity to ring the closing bell at NASDAQ OMX Marketsite. Various other awardees will receive funding from a variety of organizations—and CASIS may award select organizations with up to $25,000 for pursuit of space-based project ideas.

Science and Technology Advisory Panel
During the quarterly meeting of the CASIS Science and Technology Advisory Panel (STAP), panel members discussed the proposed RFP topics compiled in Q1 by the PM team. (As discussed in the Q1 report, the CASIS PM team systematically and comprehensively gathered information from internal and external sources—and following discussions regarding diversification of the National Lab research portfolio, commercial relevance of research topics, and potential interest level, the team compiled a list of 10 suggested RFP titles.) The STAP ranked the RFP topic areas/potential titles as follows:

1. Disease models
2. Energy storage, generation, capture
3. Biophysics (**including delivery systems/vaccine development**)
4. Microstructure studies of materials
5. Reaction chemistry
   Omics and systems biology

Remote sensing (follow-on, after initial results from 1st RFP come in)
6. Fluid dynamics
Plant biology

The STAP recommended that CASIS delay issuing follow-on RFPs in bioscience areas already solicited (protein crystal growth, stem cell biology) until initial results from currently awarded projects show promise.

In addition, CASIS has on-boarded a new member to the STAP, a subject matter expert in the field of Energy (a priority research area identified by the STAP). Dr. Carl Kirkconnell is the chief technology officer for Iris Technology Corporation in Irvine, CA. His present research focuses on delivering alternative power solutions to the United States military. He has 22 years of practical engineering and management experience with an emphasis in energy systems, thermal sciences, cryogenics, and space-based systems. He is recognized internationally as an expert in the field of cryogenic refrigeration and has a broad range of experience that includes infrared sensors, superconductivity, thermo-optical switching devices, spacecraft and space-borne payloads, electro-optical systems, micro electromechanical systems, and lasers. The PM team is also in the process of recruiting an additional STAP member in the life sciences.

Marketing & Communications

Quarterly Summary of Activities:

In January, CASIS welcomed its new Director of Marketing and Communications, Brian Talbot to the team. This was a necessary role that had not been filled in a fulltime capacity since December 2012. Within this role, Mr. Talbot is responsible for the direction of all marketing and communication initiatives for the organization, while playing a large hand in all external affairs, to include those in Washington D.C., where he will be based. In an effort to increase its message to the national media, CASIS partnered with the public relations firm, Kelly Fogelman Group, to pitch the organization and the opportunities that come through station exploration. During the Orbital-1 launch at Wallops Island, VA, the marketing and communication department filmed a brief documentary on the research brokered by CASIS that was part of the historic launch which sent the first CASIS-sponsored investigations to the ISS. Also at this launch, a representative of the department served as the official CASIS spokesperson at the NASA science briefing. CASIS also released another video focused on the overall research initiatives that were brokered as part of Advancing Research Knowledge 1 (ARK1). To coincide with ARK1, CASIS developed a microsite dedicated strictly to the research brokered by the organization intended to reach the ISS National Laboratory during this increment period. The site includes videos on the organization and descriptions of research onboard both Orbital Sciences Corp. and SpaceX launch vehicles. Moving forward for each increment, CASIS will create a similar microsite that is intended to educate its audience on brokered research by the organization (ARK2 microsite is currently in development).

CASIS also participated in a variety of outreach events that were intent on driving inquiry and potential flight projects. These events ranged in both regional (Florida Institute of Technology and University of Florida) and national opportunity, such as partnering with NASA at

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Destination Station Los Angeles. During the events in Los Angeles, the marketing and communication team also took this time to begin discussions on bringing onboard a spokesperson capable of bringing the research on the ISS to the living rooms of the average American.

Additionally, the marketing and communications department continued its traditional outreach efforts including social media and the distribution of 9 news releases to the public-at-large. It was responsible for the development of marketing and advertising campaigns geared around two distributed RFPs (Remote Sensing and Enabling Technologies) to the research community, which continue to generate enhanced response as each solicitation brings additional clarity on effective marketing strategies. CASIS became incredibly active through social media in a variety of programs, such as the "Live From the ISS" program that aired on National Geographic, where in one day the organization increased its twitter audience by nearly 1,000 "followers." Since inheriting the National Laboratory's twitter handle in 2012, CASIS has doubled the audience size to over 42,000.

Fundraising & Development

Quarterly Summary of Activities:

Highlights of achievements in development and partnerships realized in Q2 2014 include:

Fund Development

- The Denver Foundation, in its partnership with CASIS, is engaged in fundraising to support our National Design Challenge Denver Pilot Project, now underway. Funds raised in addition to the CASIS grant already committed will allow for possible expansion of the program beyond the three area schools already selected to build ISS flight projects. To date, The Denver Foundation has secured $12,000 in cash gifts and has another $20,000 in potential gifts in process. *Current status: Fundraising continuing, with closure expected in April/May.*
- CASIS is close to signing an agreement, following an RFP conducted during Q2, Celebrities for Charity to partner with CASIS in soliciting 7-8 major foundations with which CFC has close relations. Plans call for these solicitations to focus on augmenting grant funding for supporting RFPs and unsolicited proposals. *Current status: Formal agreement in final draft and ready for execution. Expected project start in April/May.*
- In addition, CASIS reached a verbal agreement with Celebrities for Charity's sister organization, NetRaffle, to conduct a national fundraising event that, if successful, could provide CASIS with between $100,000 and $200,000 in unrestricted gifts. *Current status: Verbal agreement reached, formal agreement in draft, work expected to be expedited to begin second week of May and conclude early September.*
- Two grant writers were selected to begin work with CASIS in April, following a search conducted in Q2. One writer will be a full time staff member of the CASIS development & partnerships office, while the second grant writer will serve as a contractor adding additional capability. *Current status: Full-time grant writer engaged to start in June; beginning part time work in late April through end of May. Contract grant writer to be*

engaged by beginning of May.

- With the addition of our new grant writers, full implementation of a fundraising campaign through various crowdfunding sources will commence, beginning in Q3. These efforts will target support for specific research projects or STEM initiatives sponsored by CASIS, and will involve CASIS as many as ten crowdfunding sites on a regular basis. *Current status: First crowdfunding campaign solicitation expected in May. Approximately one per month following.*
- MOA was formalized with M.D. Anderson Cancer Center in Q1. Work in Q2 included discussion on establishment of a matching grant program between CASIS and MDACC (minimum value = $1 million match against CASIS funding of MDACC flight projects). *Current status: Discussions on finalization continue; MDACC legal and sponsored research offices are reviewing CASIS draft matching grant process document. Expected close and implementation in Q3.*
- Reached final agreement on a partnership with the Texas Emerging Technology Fund regarding the creation of a matching grant program valued at a minimum of $1 million. Joint press release is in draft to formally announce. TEFT informed CASIS that it intends to distribute $100 million in grants to Texas-based projects in calendar year 2014. Minimum value of match to CASIS sponsored commercial flight opportunities is $1.5 million. *Current status: Press release in draft, expect to issue in May. Implementation of project and grant reviews of flight proposals commencing in Q3. Matching funds are available immediately following press release announcing partnership.*
- Closed a matching commitment from Boeing for $250,000 to support additional flight project opportunities selected through the Mass Challenge program. Total funding to be awarded from CASIS and Boeing to support flight projects in 2014 is $600,000. *Current status: Flight projects being identified through Mass Challenge competition; awards to be made in late 2014.*
- Angelus Funding, through its partnership with CASIS, made its first investment in a commercial space company (NanoRacks). Pledge agreement signed by Angelus Funding will provide a gift of 20% of the value of this investment (initial investment + growth) upon exit in 2-3 years. Minimum value of eventual gift to CASIS is estimated by Angelus Funding to be approximately $50,000. *Current status: Finalized. Additional CASIS commercial flight investment opportunities currently under review by Angelus Funding.*

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Partnerships:

New partnerships were formalized in Q2 with Rice University and The Light Foundation. Total number of formal partnerships now stands at 34.

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STEM Education

Quarterly Summary of Activities:

National Design Challenge Pilot Project in Houston (NDC1):
The six flight experiments have been moved to Orbital 3 in October of 2014 due to additional requirements put forth by the NASA Safety Review Panel. Educators are wrapping up their experiments and will hand them over to NanoRacks prior to flight.

National Design Challenge Pilot Project in Denver Area (NDC2):
NDC 2 officially launched in January 2014 with the release of the RFA to schools in the Front Range of Colorado. Wings Over the Rockies Air and Space Museum is serving as the local implementation partner for the program. A total of six applications were submitted to CASIS in March 2014 from which three were selected for participation in the program. They are Bell Middle School - Vermicomposting in a closed system; 2) Centaurus High School - Effects of microgravity on bacterial lag phase; and 3) Chadfield High School -Effect of microgravity on the growth rate of hydrogen producing algae.

CASIS Academy Live:
Forty- seven students participated in two CAL events in March 2014. Dr. Kathleen Morse gave a presentation on radiation shielding and a demonstration that showed the performance of a microcomputer (cell phone) in extremely cold temperatures. There were 25 students from Brevard County in attendance and 134 unique views via the live webcast with NASA DLN. Dr. Jud Ready presented energy conservation with carbon nanotubes for 22 students at Rollins College followed by a live webcast from his lab at Georgia Tech. Students made carbon nanotube models.

Story Time From Space:
The videotapes of astronauts reading the stories from the cupola of the ISS were downloaded in January 2014. Fundraising continues for Phase 2. In parallel the T2 team is moving forward with completing the demonstrations that will complement the science content in the books. Jeffrey Bennett promoted STFS at the Colorado Chapter Conference of the International Reading Association for 2,000 educators.

BioServe CSI-06:
The Ants in Space experiment was published on the BioEd Online website, along with images and data from the experiment. BioServe sent ~100 ant habitats to schools nationwide (including the 5 CASIS Fellows).

CASIS Fellows:
Fellow Kaci Heins provided outreach to 19 educators at the Flagstaff Science Alliance. SEEC: Two NDC 1 educators and Alli Westover interacted with 100 educators at the SEEC conference at Space Center Houston in February 2014.

Brevard Public Schools 21st Century Community Learning Program:
CASIS will be a partner with Brevard Schools on two, five-year 21st Century Community Learning Center Program grants to the Florida Dept. of Education to fund eight underserved elementary schools in Northern and Central Brevard County. If funded, CASIS will provide STEM enrichment for nearly 600 students in grades K-12 over a five-year period.

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Administration

Quarterly budget and performance review with NASA

CASIS reviewed our Q1 2014 Financial Review and Grant Forecast with the NASA team on January 30, 2014.

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March 31st, 2014	Section III: BUSINESS STATUS REPORT					
	Actuals Q2 2014	Budget Q2 2014	Variance	Actual YTD 2014	Budget YTD 2014	Variance YTD 2014
Direct Labor	$1,195,325	$1,487,944	$(292,619)	$2,338,417	$2,831,029	$(492,612)
Grants to be Awarded	$166,331	$1,233,950	$(1,067,619)	$1,246,368	$2,368,950	$(1,122,582)
Equipment: Permanent > $5k	$7,637	$22,500	$(14,863)	$46,542	160,000	$(113,458)
Equipment: Expendable & Supplies	$58,453	$31,435	$27,018	$103,335	$93,270	$10,065
Other Direct Costs	$267,293	$403,306	$(136,013)	$534,898	$739,274	$(204,376)
Subcontract Costs	$800,412	$859,364	$(58,952)	$1,318,178	$1,828,709	$(510,531)
Travel	$158,216	$248,958	$(90,742)	$362,261	$489,380	$(127,119)

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Section IV: Performance Metrics			
Metrics	**Science**	**Technology**	**Education & Outreach**
Business & Portfolio Development			
Grants issued per research pathway	1	1	
Proposals meeting evaluation criteria	26	N/A	3
Unsolicited proposals[1]	5	2	
All proposals from multi-disciplinary team[2]	3 of 33; 9%		
Grants awarded[3]	0	0	
Unsolicited awards[3]	0	1	
Operations			
Flight projects total[5]	0		
Percent of flight projects from grants			
Percent of flight projects from non-grants[4]			
Financial Performance	**Grants**	**Direct**	**Indirect**
Cooperative Agreement Funding YTD	$1,246,368	$3,131,913	$1,647,242
Non-Cooperative Agreement Funding[6]	0	$1,000	$307,000

1 Proposals meeting evaluation criteria
2 Combined metric for grants and unsolicited proposals
3 Indicates number of awards
4 Manifested projects from unsolicited proposals or OGA's when indicated
5 As of first quarter report, no new projects have been manifested in the second quarter
6 Funding received outside of NASA funding and includes OGA funding when indicated