National Aeronautics and Space Administration

Proposal Instructions
Amateur Radio on the International Space Station (ARISS)
July 15 2012– January 15, 2013

While aboard the International Space Station, crews participate in live amateur radio contacts, also known as ARISS contacts. ARISS is a NASA Education activity that uses the unique environment of spaceflight to increase student interest in science, technology, engineering and mathematics.

ARISS radio contacts last approximately 10 minutes and provide students and educators the opportunity to interact with crewmembers through a question and answer session. An ARISS radio contact should not be an isolated one-day event, but should be part of a well-planned education experience. Participants should have the opportunity to engage in a variety of interdisciplinary pre- and post-contact activities.

The purpose of the proposal is for you to provide NASA with the relevant information needed to evaluate your proposed ARISS radio contact and surrounding education plan. All prospective organizations must submit a completed proposal form to JSC-TFS-ARISS@mail.nasa.gov no later than **January 30, 2012.**

Prior to completing this proposal form, it is **strongly recommended** that you read "ARISS: A Planning Guide". The planning guide can be obtained by contacting Teaching From Space, a NASA Education office, at JSC-TFS-ARISS@mail.nasa.gov or (281) 244-1919.

Please read the following information carefully.

- Respond to **every item** on the proposal form. Do not leave items blank.
- Use the current proposal form. Older versions of the proposal form **will not be accepted.**
- Although customer preference is taken into consideration when NASA schedules ARISS radio contacts, final dates and times are determined by mission requirements. Requesting one specific day is often something that cannot be accommodated.
- Customers must demonstrate the flexibility to handle possible changes to a scheduled ARISS radio contact date and time.
- There is a **seven-page maximum** (in addition to the instruction pages) for completing the proposal form. Incomplete proposals or proposals that do not follow guidelines **will not be considered.**

- Proposals are evaluated by committee during a formal review process. Following the review, customers will be informed of the evaluation committee's decision. If your proposal is selected, you will be provided with additional information and instructions.

- Crew time will be limited to a **maximum** of 10 minutes. Time set aside for the ARISS radio contact could be shortened or cancelled at the last minute due to unforeseen technical or operational circumstances.

- Participants are required to submit the NASA educator and student survey forms to the NASA Office of Education Performance Measurement (OEPM) system following the ARISS radio contact. Teaching From Space will provide survey forms for each participant.

- In addition to the NASA educator and student survey forms, each customer is required to complete a NASA evaluation form and return it to ARISS. The ARISS Mentor will provide the evaluation form to organizations lead for the ARISS contact.

- Proposals will be evaluated based on the following criteria:
    - **Education**
        - Is the ARISS radio contact and surrounding comprehensive education plan useful to the education community, and does the plan strengthen the ability to engage students in science, technology, engineering and mathematics (STEM)?
        - Does the education plan include STEM and amateur radio activities?
        - Does the education plan include NASA resources and mission-related content?
        - Will the ARISS radio contact and surrounding education plan make a demonstrable contribution to attracting diverse students to careers in STEM?
    - **Logistics**
        - Does the proposal demonstrate flexibility should an ARISS radio contact shift dates and/or times?
        - Does the proposal include a plan to ensure that a high number of participants will complete and submit the NASA evaluation and NASA educator and student surveys?
        - Does the proposal provide a clear overview of the contact including location that accommodates a large number of students, audience, transportation (if needed), and technology?
    - **Outreach**
        - Does the proposal include a detailed media/outreach plan?
        - Does the proposal include plans to involve the community in the ARISS radio contact and/or education plan?
        - Is the overall event (ARISS radio contact, pre- and post-activities) designed to leverage partnerships with local, regional or national partners?

- Will the ARISS radio contact draw participants from other NASA Education opportunities and/or help connect participants to other NASA Education opportunities?

- **Reporting**
  - Does the proposal include a plan to ensure that a high number of participants will complete and submit the NASA educator and student surveys?

Please direct any questions to JSC-TFS-ARISS@mail.nasa.gov or (281) 244-1919.

ARISS Radio Contact Proposal Form

July 15 2012 – January 15, 2013

GENERAL INFORMATION	
Organization	Name: Parkside Elementary School Address: 685 Mercer Street Atlanta, GA 30312 Web Site: tinyurl.com/parksidepandas
ARISS radio contact Facilitator Point of Contact Note: Facilitator must be employed by the organization	Name: Bejanae Kareem or Ronnie Thomas Address: 685 Mercer Street Atlanta, GA 30312 Telephone: 404-802-4100 Fax: 404-802-4199 Email: bejanae.kareem@gmail.com or rlthomas@atlanta.k12.ga.us
If selected, are there any dates beginning in TBD through TBD that your organization cannot support? If yes, please provide further information.	Overall, our school has a flexible schedule and excellent parental support. There are some dates were we would have to make adjustments in order to generate a large turn-out (i.e. Spring Break runs April 2nd-6th, End of the Year testing April 17th-27th and Summer Vacation May 23rd-July 15th).
Please provide the preferred time for the contact to be held (please specify appropriate time zone).	Our school would prefer for contact to be held between 8:30 a.m. and 4 p.m. Eastern Standard Time.
Provide target audience information. Check all that apply.	_X__K-4 students ___5-8 students ___9-12 students ___University level students ___Pre-service educators _X_Other (PK & 5 grade) Total audience numbers for ARISS radio contact: Entire school (550+ including students, educators, community partners and media persons)
Is this event tied to a specific crew member or event? If yes, please provide	Yes, the ARISS event is tied to our school's NASA Week and Amateur Radio Club. NASA Week and Amateur Radio Club are extensions of our school's STEM and Global Citizenship initiatives.

information.	

For the following items, please provide as much detail and information as appropriate.

1. Provide information on your organization, its purpose, educational objectives and the population it serves.

Response: Parkside Elementary School is a highly respected educational facility located on Mercer Street in urban Atlanta. The facility is recognized as a Title I public school with over 500 students enrolled in pre-kindergarten to 5th grade. The student population is comprised of 77% Black, 13% White, 6% Hispanic and 4% Asian students. With 44 full-time classroom teachers, the school uses a wide range of technology equipment to help students learn and grow as individuals, including Mac computers, video iPods and interactive white boards among many other types of technology. The school also has numerous clubs which students can join including a chess club, robotics club, public speaking club and rocketry club among many others.

At Parkside Elementary School, our objective is to ensure that each student is offered a quality education in a safe, caring and orderly environment. Educational experiences at Parkside will provide global perspectives and appreciation for cultural diversity. We will encourage high academic performance and involve our students in a rigorous and challenging curriculum to prepare students to become independent thinkers and doers. We will maximize each student's growth and development through collaborative efforts of the home, the community, and business partners, with an ultimate goal of our students becoming productive citizens.

2. Explain why your organization wants an ARISS radio contact. Include information on how an ARISS radio contact will enhance the educational objectives of your organization.

Response: Parkside strongly believes our children should be equipped with an appreciation for culture and diversity. Thus we launched a Global Citizenship initiative in 2009. The Global Citizenship initiative was aimed at preparing diverse 21st century learners to succeed and compete in a global community. The school-wide initiative features exposing and celebrating various countries and cultures across the globe during the month of May with culminating events such as a multicultural book fair, food tasting and fashion expo. We have had great success with our Global Citizenship program and having an ARISS radio contact would further enhance this educational objective. By making radio contact with the ISS, our school community would be provided with a unique opportunity to cultivate a deeper understanding of global citizenship and global awareness. Our students will discover that people all over the world have common needs and can collaborate with each other to accomplish desired tasks just as the crew members aboard the ISS.

3. Describe how your organization will use the ARISS radio contact to support local STEM goals and objectives. Describe the pre- and post-ARISS radio contact activities for students and educators. Also, include how you plan to incorporate NASA and amateur radio content and education resources into these activities.

Response: The science program of Atlanta City Schools embraces the philosophy and premise of the Georgia Department of Education and the National Science Education Standards. Our district's goals for science education are to expose students to:

a) experience the richness and excitement of knowing about and understanding the natural world;
b) engage intelligently in public discourse and debate about matters of scientific and technological concern; and
c) increase their economic productivity and personal responsibility through their knowledge, understanding, and skills as environmentally, scientifically, and technologically literate persons in their careers and personal endeavors.

Parkside Elementary has taken drastic steps to close the achievement gap and enhance student interest in STEM. Parkside has launched a STEM initiative to inspire students to seek future careers in the areas of Math and Science and also experience some of the research challenges facing today's scientists and engineers. Phase I of our STEM initiative was to establish a robotics club. Phase II was to increase the number of students in the robotics club and implement a rocketry club. Our school has been tremendously successful in meeting the following goals that our school's robotics club was featured on CNN in December of 2010. The ARISS contact supplements our district and the next phase of our school's STEM initiative; to develop an amateur radio club in addition to dedicating an instructional week to NASA related activities for our school community to partake.

Prior to contact with the ISS, Parkside will establish Parkside's Amateur Radio club (PAR) in fall 2011. The radio club will be geared toward special education students of ages 8-12; both males and females. PAR members will meet after-school to learn about radio waves, the ISS, amateur radio equipment and its uses. The focus of PAR is to develop communication, questioning, technical and geographical skills. PAR members will prepare 10-20 questions for the ARISS contact. PAR members will also practice mock ARISS contact to prepare for the actual event in front of live video cameras and lights.

Not only will the PAR members benefit from exposure to the impact of science and technology, but members will share their radio and global awareness knowledge with classmates and teachers by making contact with hams around the globe during geography lessons with the support of licensed radio ham, Chris Balch.

Another pre-ARISS activity will be for students and educators to utilize NASA resources focused on space exploration, technology and problem-solving during our school's NASA Week. Classes will participate in STEM concepts by applying and witnessing them in a real world setting such as creating 3D satellite art displays, designing hydroponic gardens, utilizing Toys in Space and Rocketry curriculum. Post events include incorporating NASA resources into earth science standards and activities long term.

4. Provide demographics (such as ages and gender) on your targeted audience for the ARISS radio contact and surrounding activities.

Response: During our school-wide NASA Week, each student from pre-kindergarten to 5th grade will participate in NASA content and educational resources. We plan to incorporate the ARISS contact within this week of events. Parkside Amateur Radio club members (female and male special education students, ages 8-12) will interview ISS crew members. Students, parents, educators, district and local business partners will view this exchange through our school's live video recording equipment and closed circuit televisions. After the ARISS contact, we will share this event through several media outlets.

5. Provide an overview of your proposed ARISS radio contact, including the location, transportation details (if needed), and how you will have the required technology in place.

Response: Parkside Elementary utilizes 21st century technology to provide morning announcements to teachers and students. Our students present the announcements live just like a news-station. We have Promethean boards in each classroom and video equipment, microphones and lights to record the morning announcements and feed it to each room. Similar to the morning announcements, the ARISS radio contact will take place in the media center with Parkside's Amateur Radio club. Our ham licensed radio community partner, Chris Balch, has agreed to attend the ARISS event, provide our school with radio equipment needed to make contact and share his technical expertise. Since the ARISS contact will take place in our school's media center, transportation will not be required for our target audience. If for some unforeseen reason the radio equipment does not work properly, the media center is equipped with landlines (to make a telebridge contact) that contain a speaker to project the volume of the ARISS contact to be captured on video.

6. Provide information on your organization's plan to secure your target audience in case there is a shift in dates and/or times (i.e . "Plan B")

Response: We are fortunate because our school has a flexible schedule and a principal willing to accommodate the ARISS event. Currently we plan to schedule our NASA Week around the ARISS event. If radio contact can not be made during our school's scheduled NASA Week, then we have created a Plan B and C. Plan B includes planning our school's annual Career Day around the changed ARISS date. Career Day includes a variety of career based activities. Making contact with the ISS would integrate well into Career Day since students would have an opportunity to speak with an actual crew member and learn about space exploration, space technologies and the education needed to become an astronaut.

Plan C will be implemented if there is a shift in radio contact time. Our school has excellent parental support. If contact time needs to be made later in the day, then we can plan our annual Math & Science Night workshop around this event. Our Math & Science nights are very successful and would be a great way to share our NASA partnership with more community members.

7. Describe your plans to ensure the NASA evaluation is completed and a large number of student and educator participants complete NASA educator and student surveys.

Response: Having previous experience with NASA's TFS RGO program, I understand the importance, benefit, and timeliness of completing and submitting evaluations by NASA's desired time-frame. Ronnie Thomas and I will distribute paper surveys prior to the ARISS contact. Classes will be reminded to complete the surveys immediately following the ARISS event. I will personally collect surveys from each class prior to the end of the instructional day. If NASA evaluations are provided electronically, Parkside houses a variety of technology resources for our educators and students. Our school owns two MAC mobile carts that hold 40 computers, a computer lab with 25 computers as well as, each classroom contains four desktop computers. Utilizing these resources, students and educators will have easy access to complete NASA evaluation surveys. Our school's media specialist will post the NASA evaluation link on our school's private website the day of the event for easy student and teacher access. I will create a rotation schedule that will provide a class set of computers to each class so evaluations can promptly be completed post the ARISS event.

8. Describe your media/promotion plan. Be specific where possible.

Response: If provided with this one in a lifetime opportunity to make contact with ARISS, our school will create press releases and flyers pre- and post-ARISS to several media outlets and community partners. Parkside's community partners include Atlanta Gas Light Resources, the Alliance Theatre, Cool Girls, Summer Hill Outreach, Porch Press, Grant Park News, PTA and Zoo Atlanta. The event will be publicized on our school and district's website (in form of webcast), Twitter, Facebook and newsletters. An active parent of our school is a news reporter for a local Atlanta news channel. She is willing to cover the event to share with the Atlanta community. We also plan to reach out to local radio stations and a previous CNN contact that featured our school's robotics club last year.

9. Describe involvement with other NASA programs. List all NASA partnerships that will be part of the ARISS radio contact and surrounding activities. Share how you will use the ARISS radio contact to encourage student participation in other NASA programs.

Response: Our school currently implements NASA's rocketry curriculum for our rocket club. Also, coaches of our school's RoboPandas robotics team utilizes NASA ePDN classes to stay abreast of best practices and how best to integrate robotics content into other curriculum areas.

I first became involved with NASA programs when I attended the Reduced Gravity Education Program this summer. Parkside Elementary students collaborated with students from Arizona schools via Skype to discover if zero gravity would affect the longevity of bubbles and their surface tension. From the TFS Flight Week, an array of other NASA programs and activities were shared. Once I learned about the ARISS opportunity, I was thrilled to apply because our school is implementing Phase III of our STEM initiative, creating an amateur radio club during the 2011-2012 school year. Also from the activities shared during flight week, Ronnie Thomas, who attended Space Academy for Educators in summer of 2010 and RGO this year, suggested the idea of dedicating a week to

learning about various educational activities NASA has to offer on space.

As of now, our school does not have any NASA partnerships connected with the ARISS project. We plan to apply for School Radio Station Equipment from the ARRL Education & Technology Program in November 2011. However, by designing a NASA Week, participating in ARISS, including NASA and Space Camp activities at our school's annual Math & Science Night for parents, sharing the Teaching From Space research project results and providing a staff development of other NASA programs, such as NASA Explorer Schools, that apply to earth science curriculum standards, we strongly believe these structures will add an element of excitement and increased engagement for students, parents and teachers whom do not normally take an interest in STEM or know of NASA resources.

10. List your community partnerships that will be part of the ARISS radio contact and surrounding activities. Specifically, list any plans to involve local amateur radio organizations in your contact. Explain how your partnerships will be established or improved because of the ARISS radio contact.

Response: In an effort to have a quality and successful amateur radio club, we have reached out to our community business partners. Local attorney and licensed radio amateur, Chirs Balch, enthusiastically agreed to volunteer his time, technical expertise and resources to provide our school with the necessary radio equipment needed to implement our amateur radio club by fall 2010. Chris understands a plethora of challenges radio amateurs face setting up their shacks. His legal and radio expertise will provide a great benefit to our students and teachers in experiencing and understanding the value of being informed, global citizens through amateur radio technology.

ARISS Radio Contact Proposal Form
Day of ARISS radio contact Timeline

Create a sample internal-use schedule that outlines the day of the ARISS radio contact for staff members. This sample schedule would be used for internal coordination and planning (transportation of students, technology setup, activities, etc.). This document **would not be used** as a program for the ARISS radio contact audience. For this sample document, assume your ARISS radio contact is scheduled from 11:15am – 11:25am.

Day of ARISS Radio Contact Schedule

7:45 am-Students arrive to homeroom class
[Students will complete morning writing prompt: "If you are an astronaut, what would life in space be like?"]
8:15-8:30-Morning announcements via live feed in Media Center
[Morning announcements would highlight today's special ARISS event and a space fact.]
[After morning announcements, HAM radio equipment will be set up and tested with the help of Chris Balch, Licensed Radio Amateur, Ronnie Thomas, Science Lab Coordinator, Tommy Clay, Media Specialist, and Bejanae Kareem, ARISS Radio Facilitator]
8:30-9:30-Toys in Space
[Classes will compare and predict how a variety of toys will perform in space using NASA's Toys in Space curriculum.]
9:30-10:30- Hydroponic Garden
[Classrooms will build their own hydroponic garden using "space seeds" and discuss how this could benefit people around the world and astronauts in space.]
10:30-11:10-Space Symposium
[Parents, community partners, media and visitors of the event will arrive by 10:30 am and report to the Media Center.]
[Classrooms will share their responses to the morning writing prompt and discuss the importance of space exploration and space technology.]
[Classrooms will watch video presentation featuring the Teaching from Space bubble research project of the 5th grade science club.]
[Students will rotate to the bathroom so there will not be any interruptions during the ARISS contact.]
11:10-Principal's Report
[Five minutes prior to the ARISS contact, our principal will make an announcement on the PA of the ISS contact. Teachers will be asked to turn on their Promethean Boards and connect them to the CCTV.]
[Thirty seconds prior to the ARISS contact a countdown will display on the live feed.]
11:15-11:25-ARISS contact via live feed in Media Center
[All classes will tune in to watch the ISS contact with Parkside's Amateur Radio Club.]
11:30-1:00 pm Lunch rotation begins
[Students will eat lunch in the classroom and sample astronaut food as desert.]
11:30 am-2:15 pm-ARISS evaluation rotation begins/NASA related activities
[While classes are waiting to pick up lunch or to complete the NASA evaluation, students and teachers will share their reactions from the ARISS contact and write a letter to an ISS crew member asking further questions that may not have been answered during the ARISS contact.]
[Pre-kindergarten classes will utilize the classroom desktops to complete the NASA evaluation survey with the assistance of teacher assistants (if age appropriate). Kindergarten through 3rd grade classes will rotate to the computer lab by grade level to complete the NASA evaluation surveys in 30 minute increments. Fourth and 5th grade classes will utilize the MAC mobile carts to complete the NASA evaluation surveys. All evaluations will be

completed by the end of the school day.]
2:15-2:30 pm-Student dismissal