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A--HIGH POWER UPLINK

Solicitation Number: NNH12429421R
Agency: National Aeronautics and Space Administration
Office: Headquarters
Location: Office of Procurement (HQ)

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Original Synopsis

Mar 13, 2012
2:34 pm

[Changed](#)

Mar 15, 2012
10:52 am

Solicitation Number:
NNH12429421R

Notice Type:
Presolicitation

Synopsis:

Added: Mar 13, 2012 2:34 pm

NASA/HQ has a requirement to provide high resolution, high power uplink capability at Ka-band for the use in characterizing Near Earth Objects (NEOs), orbital debris, and to fill knowledge gaps in space situational awareness. In fiscal year 2012 NASA will begin to build on its three element interferometer testbed consisting of 12m dishes to demonstrate: 1) uplink arraying with real time characterization and correction of atmospheric turbulence, 2) significant power and gain increases enabling high resolution object imaging and 3) real-time continual system phase control eliminating the need for costly, highly stable components. IntelArrays Inc. is uniquely positioned to provide overall responsibility for the technical implementation of an X-band and Ka-band uplink arrays, innovative technology concepts, designs and arraying solutions, as well as systems engineering support and technical assistance for KSC engineering, InterTronic Solutions, Inc. (ISI), and other specialized hardware designers. NASA is rapidly moving into the Ka-band era, and a Ka-band radar can improve the knowledge of NEOs and other objects of interest by orders of magnitude in preparation for crewed missions and to satisfy the NEO tracking directive from Congress. However, for Ka-band adaptive optics to work, we must be able to compensate for atmospheric fluctuations in real time. ISI will reassemble and recommission the 12m antennas necessary to support this requirement. Under contract with NASA Headquarters, IntelArrays Inc. will investigate the feasibility and performance of Ka-band adaptive array combining algorithms with real-time atmospheric fluctuations for use in ground-based distributed phased arrays consisting of widely-spaced small aperture antennas. The research and development efforts will allow NASA to explore options in architecture and technology to include

GENERAL INFORMATION

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A -- Research & Development

NAICS Code:
541 -- Professional, Scientific, and Technical Services/541712 -- Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

a high power, high resolution radar system for NEOs, orbitaldebris, and space situational awareness studies. IntelArrays' principals are the originators of and the only team in the world that hasdemonstrated operationally feasible, real-time radio frequency adaptive opticstechniques. Their unique qualifications will enable future architecture of the radarsystem and technologies that will enable capability and performance enhancement of ordersof a greater magnitude while at the same time improving the operability and decreasingthe operations and maintenance costs of the current system.NASA/HQ intends to award a sole source contract to IntelArrays, Inc. The sole sourceauthority used is only one responsible source 10 U.S.C 2304(c)(1) Only one responsiblesource and no other supplies or series will satisfy agency requirements (See FAR6.302-1).Interested organizations may submit their capabilities and qualifications to perform theeffect in writing to the identified point of contact no later than 2:30 p.m. local timeon 03/22/2012. Such capabilities/qualifications will be evaluated solely for thepurpose of determining whether or not to conduct this procurement on a competitive basis. A determination by the Government not to compete this proposed effort on a full and opencompetition basis, based upon responses to this notice, is solely within the discretionof the Government.Oral communications are not acceptable in response to this notice.

Additional Info:

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Contracting Office Address:

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