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Review of the NSF Enhancing Access to the Radio Spectrum (EARS) Solicitation

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1. Extended Abstract

The United States National Science Foundation (NSF) requests investigators to propose research programs to address specific research questions. Different NSF directorates sometimes jointly announce these research questions in joint documents, called *solicitations*. This presentation focuses on the products resulting from the "Enhancing Access to the Radio Spectrum (EARS)" Solicitation [1]. The joint solicitation concerned a number of topics, including Spectrum Management, Radio Frequency Interference and Radio Astronomy. The 1) Directorate for Computer & Information Science & Engineering (CISE), Division of Computer and Network Systems, 2) Directorate for Engineering (ENG), Division of Electrical, Communications and Cyber Systems and 3) Directorate for Mathematical & Physical Sciences (MPS), Division of Astronomical Sciences jointly issued the solicitation.

The EARS solicitation closed in 2016. This is an appropriate time to review the research publications resulting from the 213 awards resulting from review of a total of 998 proposals received.

The research covers a very large range of topics and a selection of these research results is highlighted. In particular we review the topics jointly of interest to the three Directorates.

The solicitation has been re-issued research with more focus on CISE and ENG topics under a new solicitation, entitled "Spectrum Efficiency, Energy Efficiency, and Security (SpecEES): Enabling Spectrum for All" [2].

2. References

1. National Science Foundation 2015, "Enhancing Access to the Radio Spectrum (EARS): Addressing Future Challenges.", https://www.nsf.gov/pubs/2016/nsf16537/nsf16537.pdf

2. National Science Foundation, 2016, "Spectrum Efficiency, Energy Efficiency, and Security (SpecEES): Enabling Spectrum for All", https://www.nsf.gov/pubs/2016/nsf16616/nsf16616.pdf