

Radio Emission from Extrasolar Planets and the Astronomy & Astrophysics 2020 Decadal Survey

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The 2020 Astronomy & Astrophysics Decadal Survey (“Astro2020”) has begun. Initiated in 1970, the U.S. astronomy and astrophysics community has conducted a decadal review of its current status and plans for the future, with the aim of making consensus recommendations about priorities. Conducted under the auspices of the National Academies, the Astronomy & Astrophysics Decadal Surveys have been viewed widely as both important and successful, with many recommended projects or programs having been subsequently implemented. One measure of the success of the Astronomy & Astrophysics Decadal Surveys is that decadal surveys, or similar exercises, have been initiated in other fields (e.g., planetary science, heliophysics, particle physics).

Many elements from the 2010 Decadal Survey are expected to be retained, even though the complete structure of Astro2020 is still being developed. Community input is widely regarded as an essential element of Decadal Surveys, and the 2010 Decadal Survey requested white papers on a variety of topics, notably including science frontiers for the next decade. For the 2010 Decadal Survey, hundreds of white papers were submitted, including multiple papers on extrasolar planets and one white paper on their magnetospheric radio emissions.

In advance of Astro2020, there have been related activities requesting community input on the topics of extrasolar planets and astrobiology. The National Academies requested input on the topics of “Astrobiology Science Strategy for the Search for Life in the Universe” and “Exoplanet Science Strategy,” with the latter activity having produced a recent report.

In this paper, I review submissions to the Astro2010 Decadal Survey, the Astrobiology Science Strategy, and the Exoplanet Science Strategy from the standpoint of radio emissions from extrasolar planets. I then look toward potential submissions for science white papers for the Astro2020 Decadal Survey, the deadline for which is **January 18**.

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