

45th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –  
The Next Steps (A4)  
Interactive Presentations (IP)

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QUANTIFYING THE COSMIC BACKGROUND

**Abstract**

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Microwave searches for extraterrestrial intelligence have, since the days of Project Ozma, sought "magic frequencies," natural markers in the electromagnetic spectrum which would be observable to (and hence, known by) any technological species in the cosmos. As our searches have expanded into the millimeter and sub-millimeter regions, one suggested observing frequency has been the peak of the Cosmic Microwave Background (CMB). Unfortunately, two popular techniques for calculating the CMB peak yield two entirely different (and equally accurate) solutions. In this paper, we attempt to resolve the apparent discrepancy, in an effort to narrow SETI search space.

Keywords:

Search for Extraterrestrial Intelligence, SETI, Cosmic Microwave Background, CMB, Planck's Law, Wien's Law, Planck's Constant, Wien's Constant, magic frequencies