

47th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –
The Next Steps (A4)
SETI 1: SETI Science and Technology (1)

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THE “VANISHING & APPEARING SOURCES DURING A CENTURY OF OBSERVATIONS”
(VASCO) PROJECT – CURRENT STATUS

Abstract

In the era of large astronomical surveys, it is now possible to efficiently search for objects having certain predicted signatures of astro-engineering, like Dyson spheres. However, these signatures (“artifacts”) can often be confused with signatures from natural astrophysical sources e.g. dust. We propose to replace the search for signatures of astro-engineering with a search for “physically impossible” (or extremely improbable) effects. Such an approach can point us towards presently unknown physical phenomena or – in the most favorable of circumstances – identify interesting SETI targets for follow-up radio observations. In this talk, I present an international, cross-disciplinary project between IT research/astronomy, the “Vanishing and Appearing Sources during a Century of Observations” (VASCO) project, where we scan the sky for objects that have physically disappeared from the sky during the last decades. A combination of new and old sky surveys together with state-of-the-art machine-learning techniques are used to identify the most interesting mismatches between the sky surveys. I will present the background of the project, our side quests, and present a status update.