

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Calling Planet Earth - Space Outreach to the General Public (6)

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A CRITICAL GEOGRAPHIC EXAMINATION OF THE INFORMAL SCIENCE EDUCATION
ACTIVITIES OF A COMMUNITY-BASED ASTRONOMY ORGANIZATION**Abstract**

On average, residents of the United States and Canada spend less than 5 percent of their life in schools, and the majority of science learning takes place outside of school (Falk Dierking, 2010). Largely, these opportunities have been provided by “science-rich cultural institutions” (CAISE, 2010), such as science centers and museums that have traditionally been clustered in areas of high concentrations of education and economic attainment.

The purpose of this study is to describe how public access to astronomy is shaped by an informal science education program. We explore the relationships among residential demographics, proximity to educational and cultural institutions, and the reach of informal science to offer insights regarding the successes and failures of informal science outreach.

We do this by examining data from popscope, an informal community-based program that engages the public through sidewalk astronomy events in urban communities, primarily in Canada and the United States. We apply a critical geographic access framework (Dache-Gerbino, 2018) to examine popscope location data in Baltimore, Maryland from 136 public events between 2015 and 2019. Using Google Maps, we conduct a spatial and proximity analysis of the (1) longitude and latitude for popscope events and (2) the location of nearby educational and cultural institutions, with reference to demographic characteristics of the neighborhoods where popscope events have taken place.

The astronomy community has the potential to strengthen science education and improve public science literacy. Making astronomy more accessible is needed now more than ever, as countries of the world embark on a new era of space exploration. Our findings are relevant to educators and policymakers as they implement and advocate for more accessible informal astronomy outreach activities, with the goal of sustaining science education in North America. We hope to produce a critical, evidence-based picture of the reach of an informal science program that reveals both opportunities for greater access and gaps in informal science education networks in urban communities.

References

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