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**The effects of platform altitude and terrain type on the false alarm rate in infrared small target detection**

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There are many challenges in the field of infrared (IR) small target detection due to the noise-like characteristics of the target. While the development of detection algorithms continues, very little research has sought to understand what creates false targets in IR scenes. The aim of this research is to identify the main factors that contribute to false target generation in the field of IR small target detection. Scenarios with cluttered backgrounds were used to evaluate the effect of a flying platform on the false alarm rate. Both urban and rural scenes were evaluated at different platform altitudes. The study found that IR clutter is generally higher in urban scenes than in rural scenes and that an increase in altitude results in increased false targets. Future work for this study involves the investigation of specific materials in the urban scene that result in the generation of false targets, and scenario conditions such as weather, view angle, time of day, etc. that lead to higher false targets.