**Successful Recovery of an Orbital Meteorite using drones and Machine Learning.**

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We report the first success of our methodology to recover fresh meteorite falls using a drone to survey the fall area, and a machine learning algorithm to scour the images for meteorites [1,2]. The meteorite (not yet classified) fell on 1 April 2021 near the border of Western and South Australia, on the Kybo station, Lintos paddock. Our drone was able to survey the 5 km2 fall area in 3 days, and although the machine learning algorithm began to fall behind data collection, it was lucky enough to process the image containing the target meteorite. The algorithm correctly identified the meteorite with a confidence of 1.0 (a perfect score). The team on-site then used a 4-staged process of elimination to identify false positives and further investigate promising candidates (Anderson et al. 2022). The meteorite was discovered less than 50 m from the fall line, weighing 70.37 g. Initial CT scans as well as SEM data suggest a texture consistent with an H4 chondrite, although classification-definitive mineral chemistry data is forthcoming. We hope that this discovery will spur the recover of meteorite with determined orbits in the future.

**References:** [1] Anderson et al. (1997) *Meteoritics and Planetary Science 55(11)*:2461-2471. [2] Anderson et al. (2022) arXiv:2203.01466.