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## **A new method of identifying metal-rich asteroids**

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The compositions of asteroids are relevant not only to investigations of the evolution of the solar system and estimations of their potential to wreak devastation on impacting the Earth, but also to considerations of their value to asteroid miners. Reflection spectroscopy provides a guide to composition but the spectra of metal-rich asteroids are largely featureless, which makes it difficult to identify them. Therefore, only a few metal-rich near-Earth asteroids have been identified to date.

We have used data from the thermal-infrared survey WISE/NEOWISE (Wright et al. 2010; Mainzer et al. 2011a) as well as from the Infrared Astronomical Satellite, IRAS, (Tedesco et al., 2002) to explore a new method of identifying metal-rich asteroids by virtue of their relatively high thermal inertia. By fitting the datasets with a simple thermal model (NEATM; Harris 1998), and calculating the angle between the spin vector and the solar direction we have further explored the potential of the results of Harris and Drube (2014) to provide insight into relationships between asteroid thermal properties, surface composition, radar albedos, spin rate, etc.

We present the latest results of our work and provide a demonstration of its potential.

### References:

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