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K2 and Herschel/PACS light curve of the Centaur 2060 Chiron

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Abstract

Recently 2060 Chiron was identified to harbor a ring system (Ortiz et al. 2015) similar to the other Centaur 10199 Chariklo (Braga-Ribas et al. 2014).

We observed 2060 Chiron in the visible range in Campaign 12 of the Kepler/K2 mission, that lasted from Dec 15 2016 to March 4 2017. We obtained the thermal light curve with the PACS photometer camera of the Herschel Space Observatory as a "Must Do Observation", taken at 70 and 160 μm on 25 December, 2012.

The presence of the ring affects the rotational light curve both in the visible range and in the thermal infrared. With our new observations we can disentangle the contribution of the main body and the ring material.

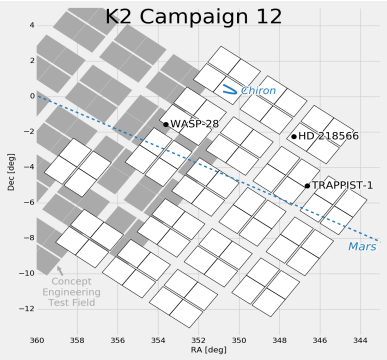

Figure 1: Visibility of 2060 Chiron in the Kepler/K2 Campaign 12.

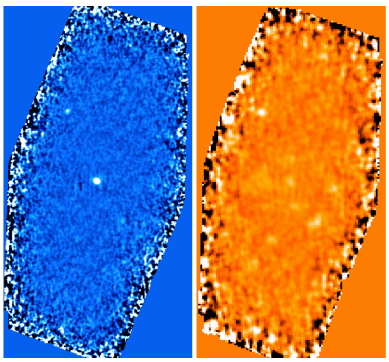

Figure 2: Chiron as seen by the Herschel/PACS in the blue (70 μm) and red (160 μm) bands.

Acknowledgements

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References

[1] Ortiz, J. L.; Duffard, R.; Pinilla-Alonso, N. et al. 2015, A&A, 576A, 18

[2] Braga-Ribas, F.; Sicardy, B.; Ortiz, J. L. et al. 2015, Nature, 508, 72