

Recent SAAO Science Highlights

Stephen Potter

South African Astronomical Observatory



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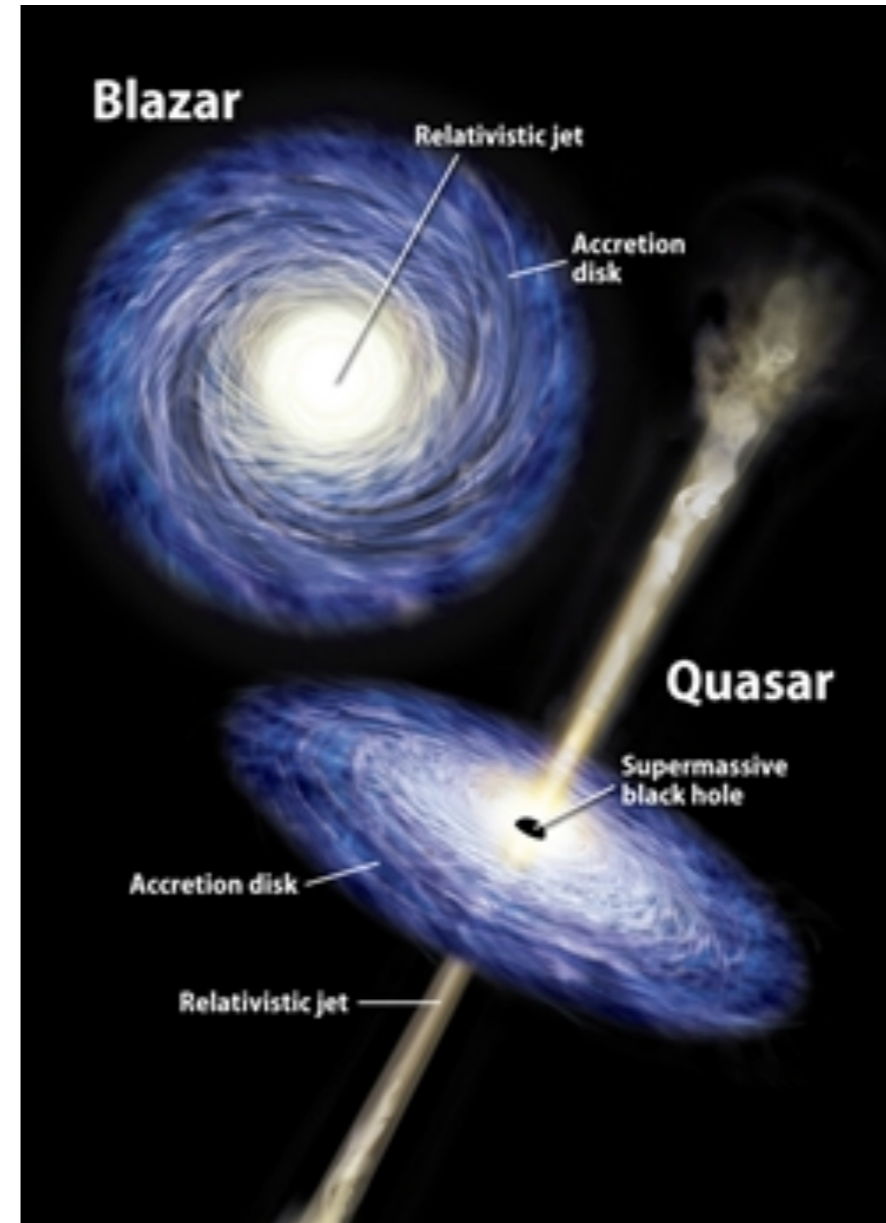
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H.E.S.S, HIPPO (1.9m) and PKS2155



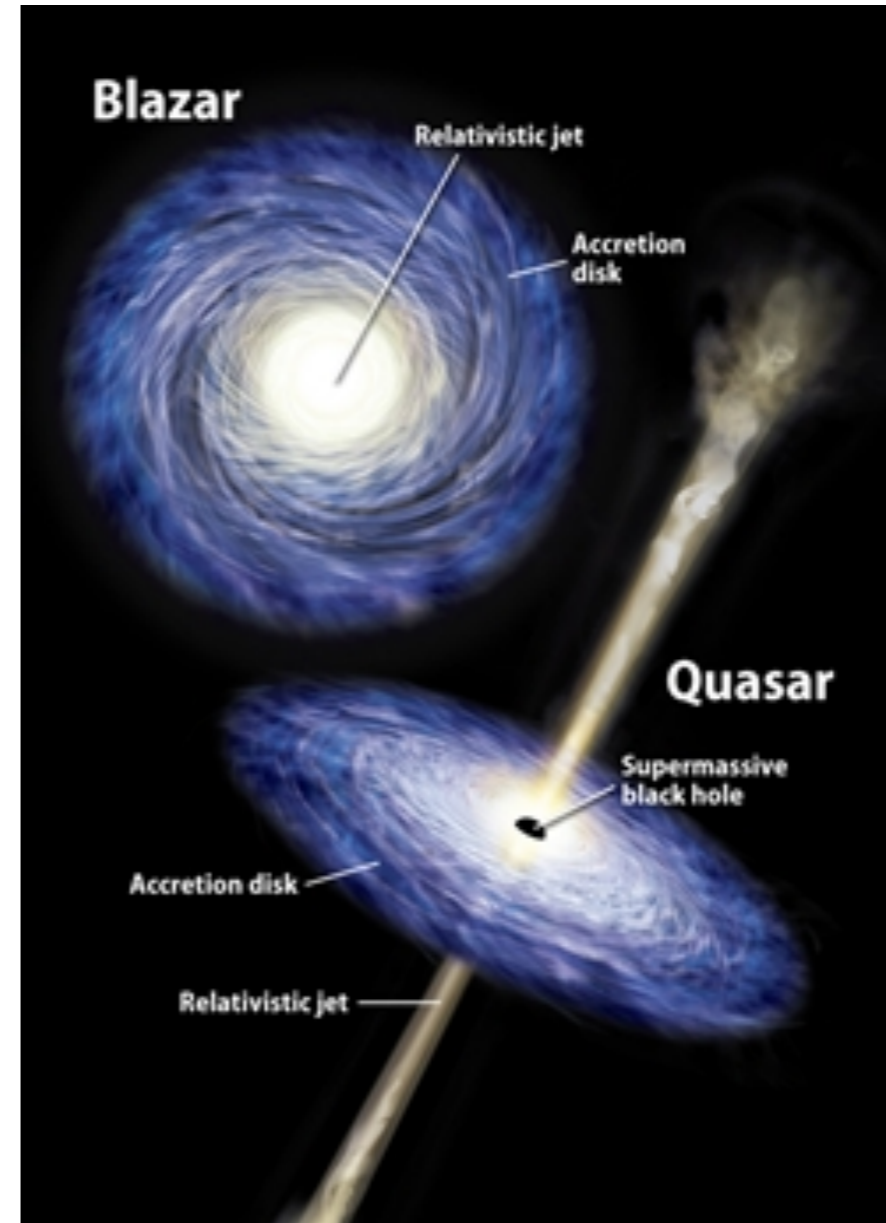
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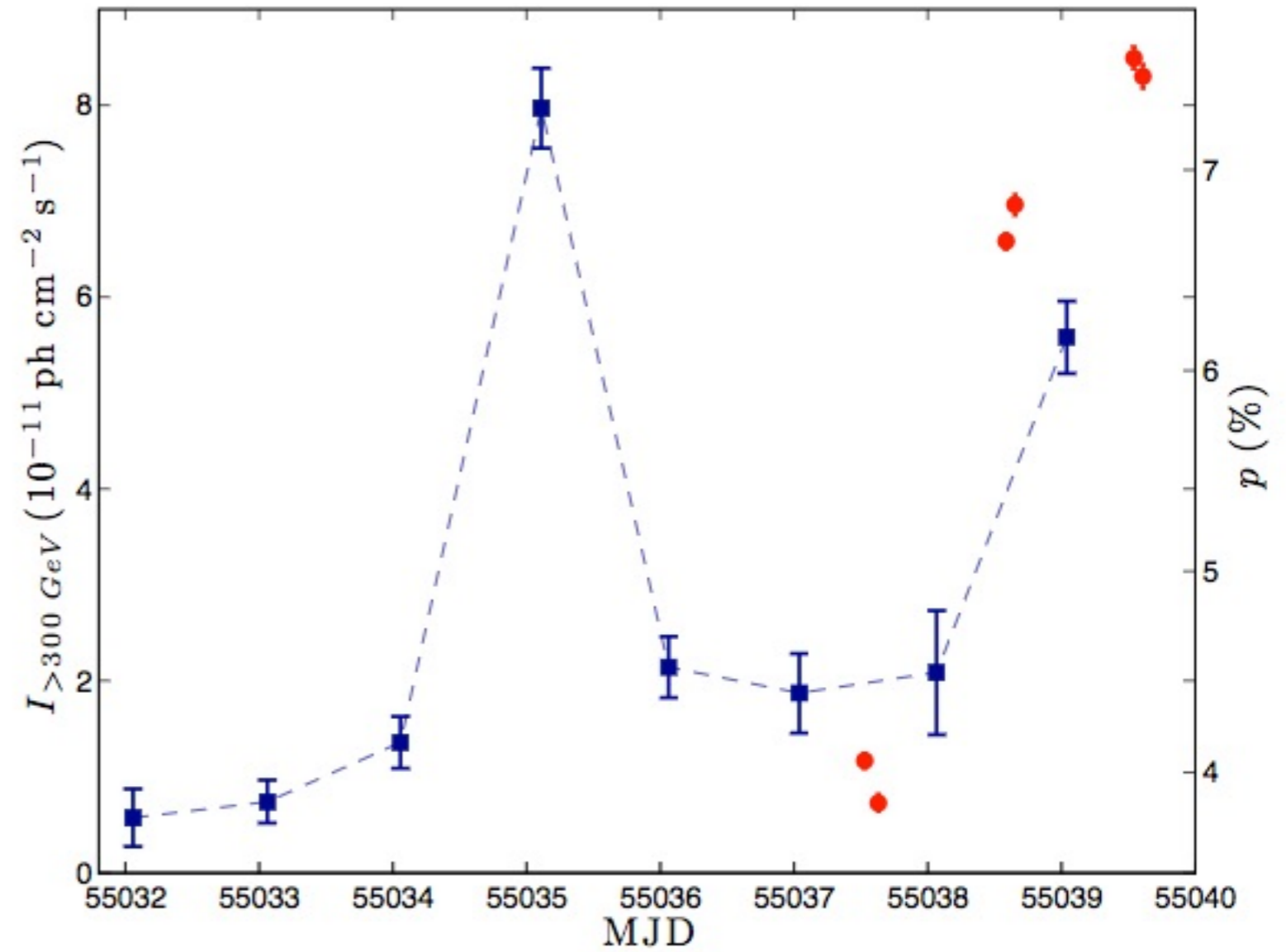
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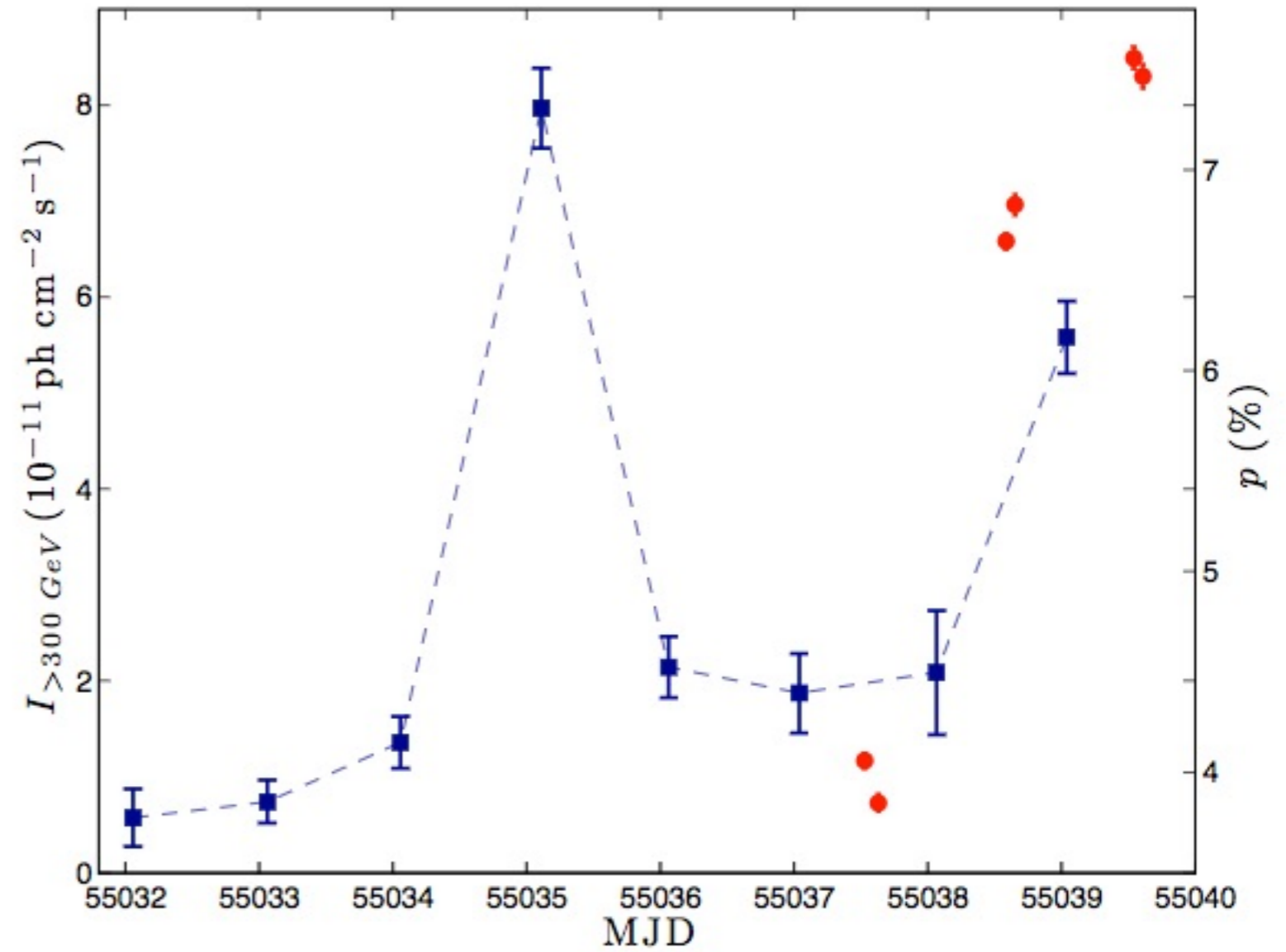
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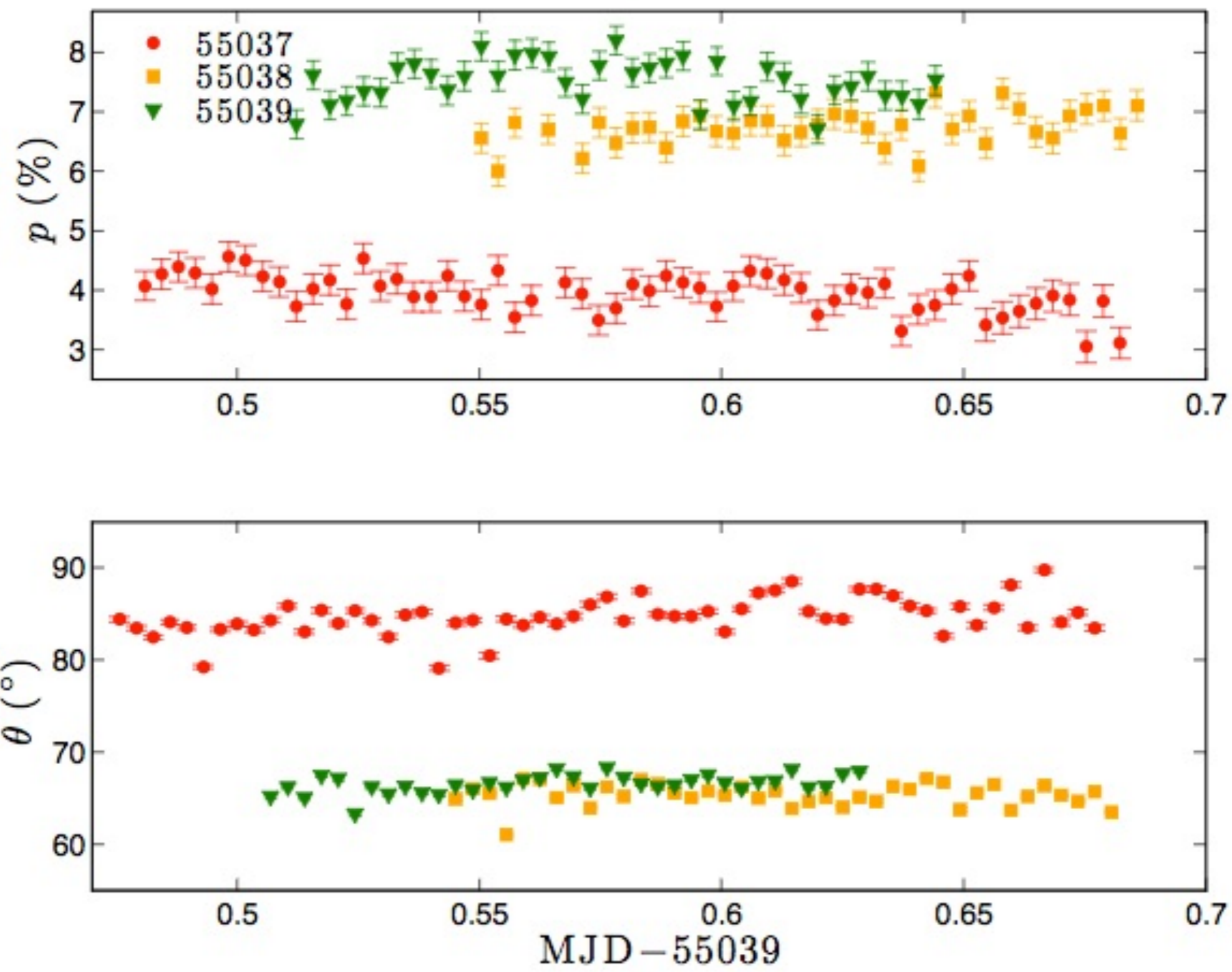


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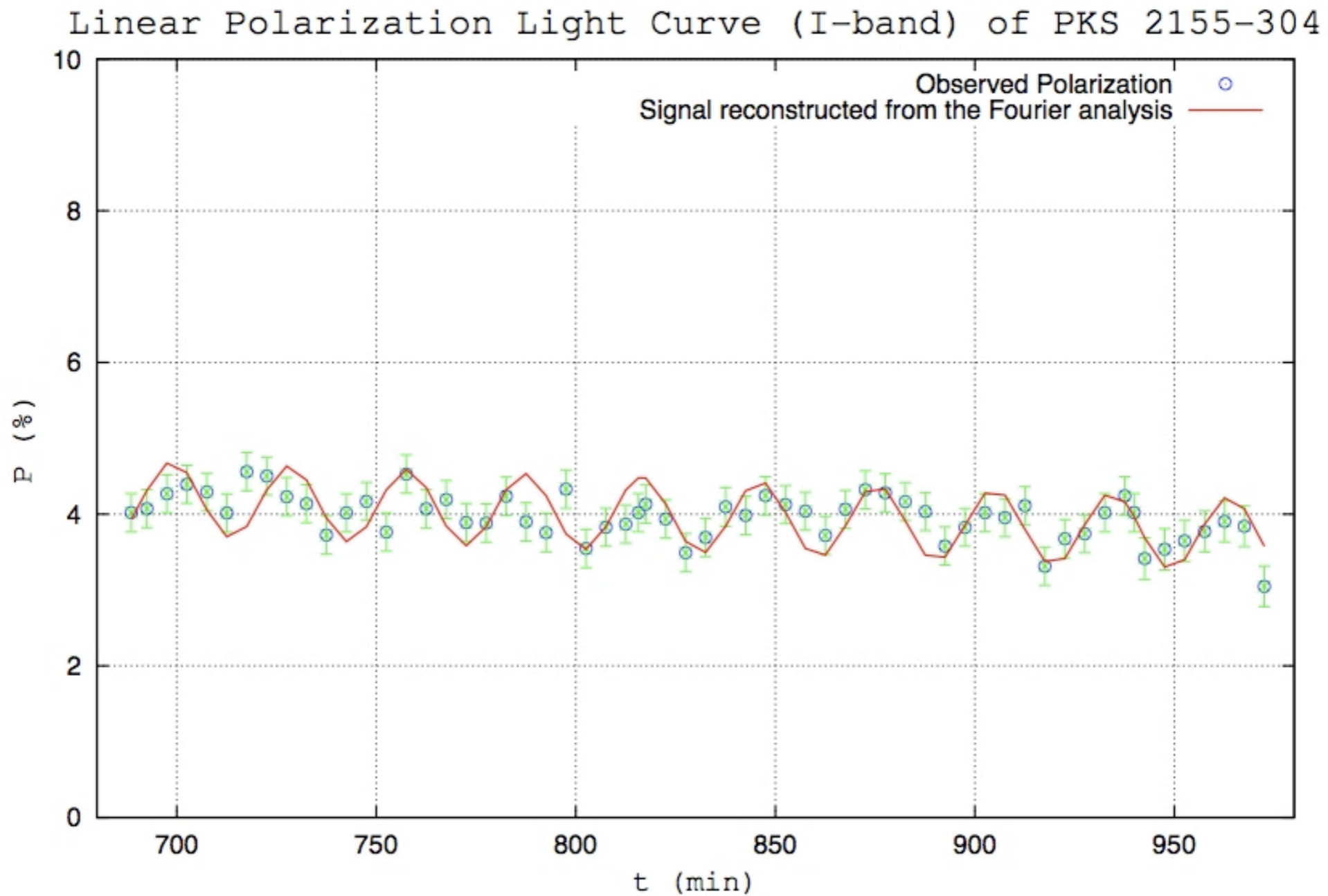
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Evidence for quasi-periodic oscillations in the optical polarization of the blazar PKS 2155-304



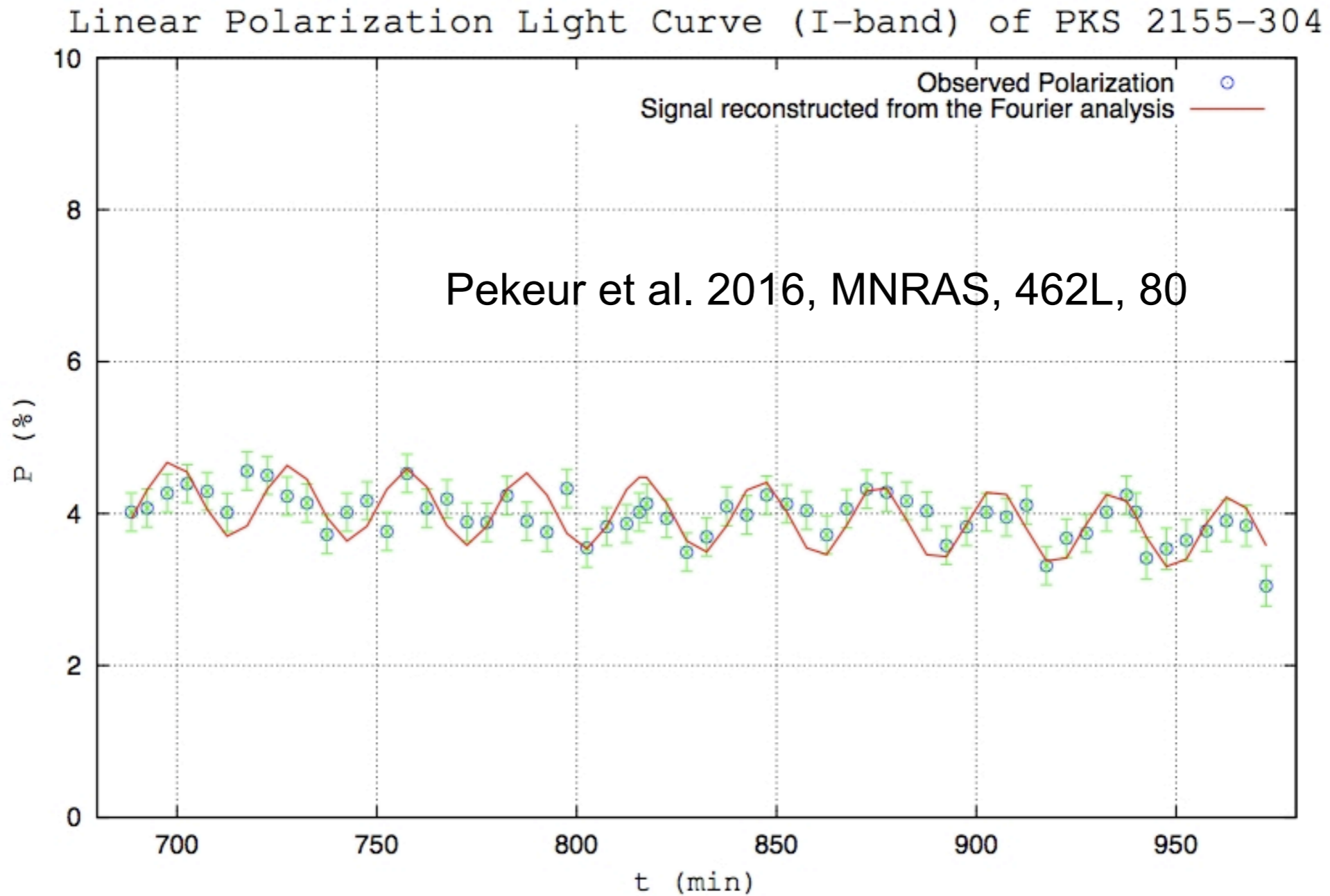
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Marsh et al, Nature, 2016

white dwarf radio pulsar with a M-dwarf secondary

3.56hr orbit

117s, 118s, modulations from radio to UV

measured WD spin down powers the non-thermal emission

Optical spectrum – synchrotron emission

Observed in 2016 with HIPPO, 1.9m SAAO

discovered optically pulsed polarized emission



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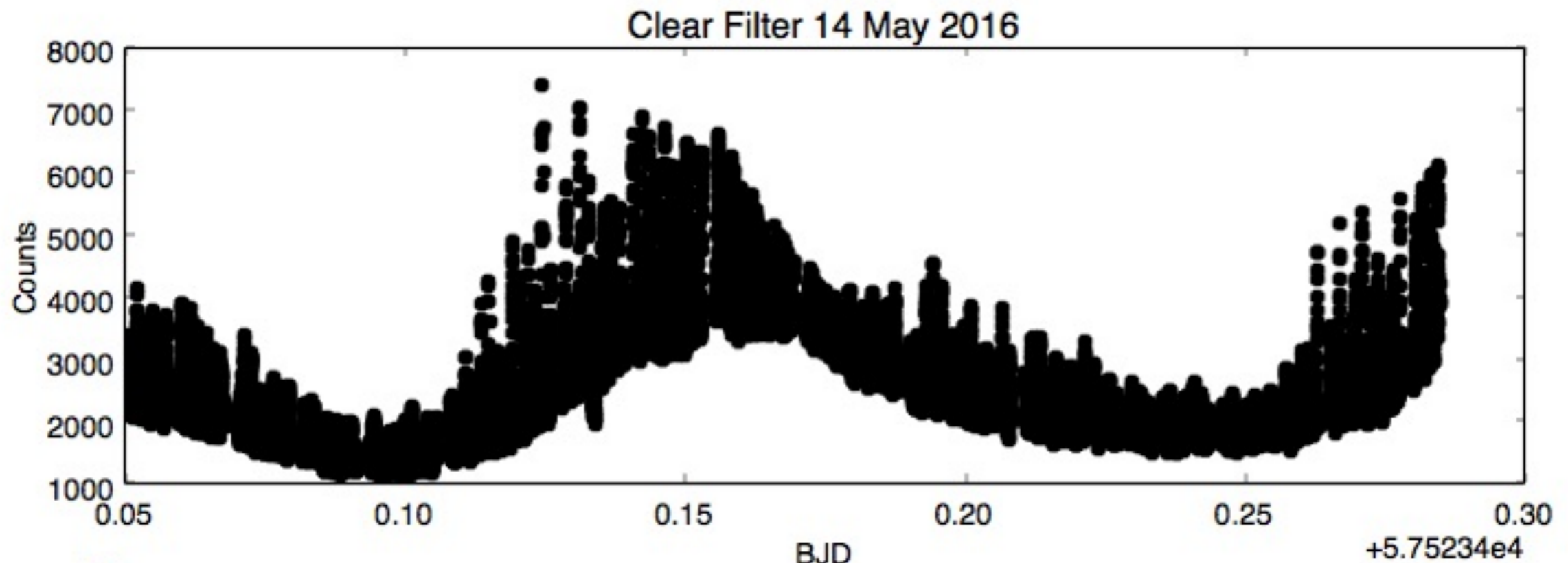
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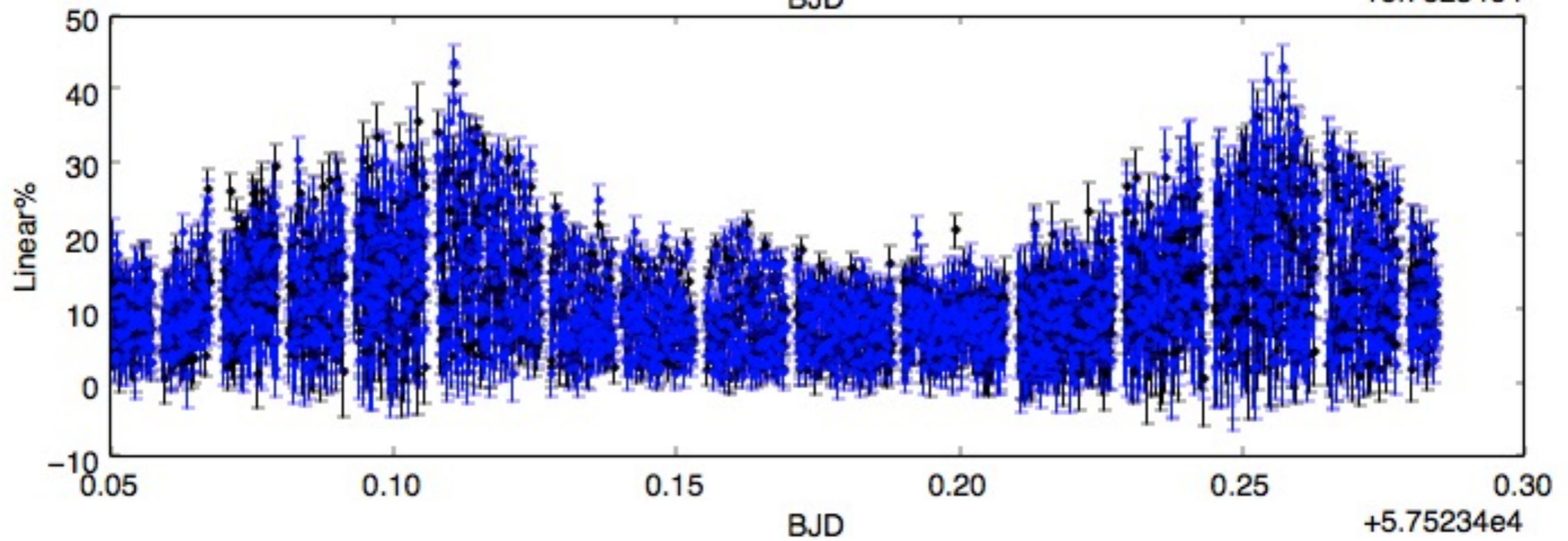
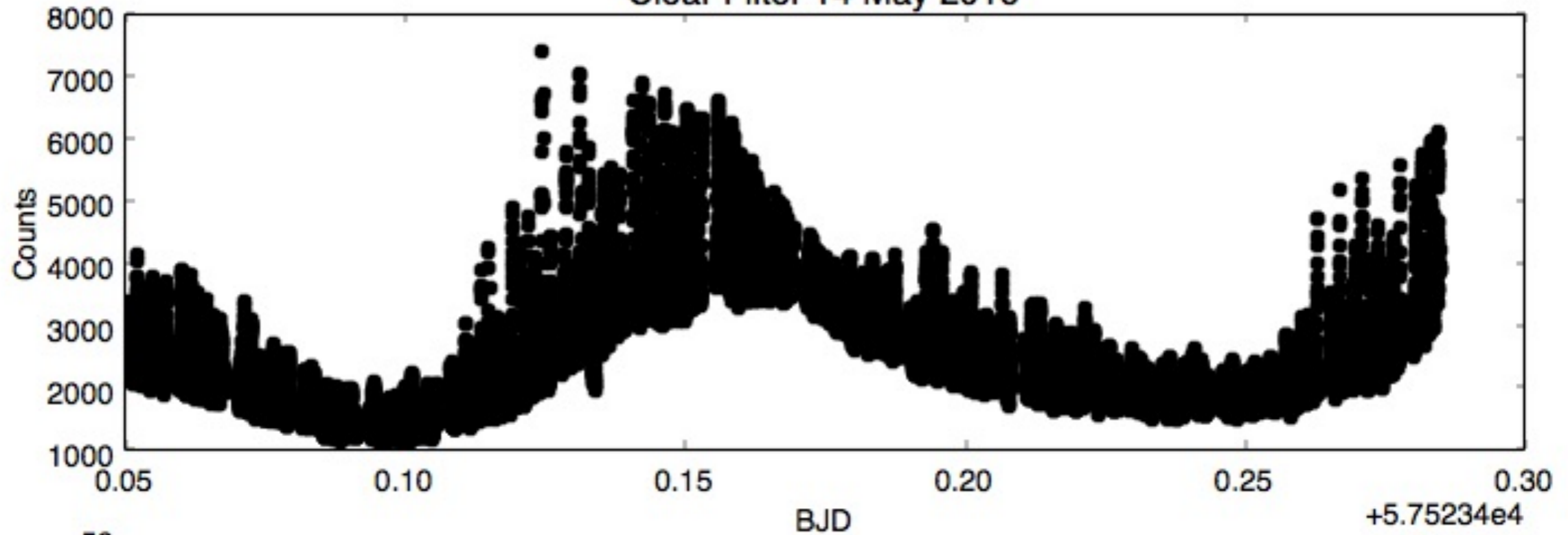
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Clear Filter 14 May 2016

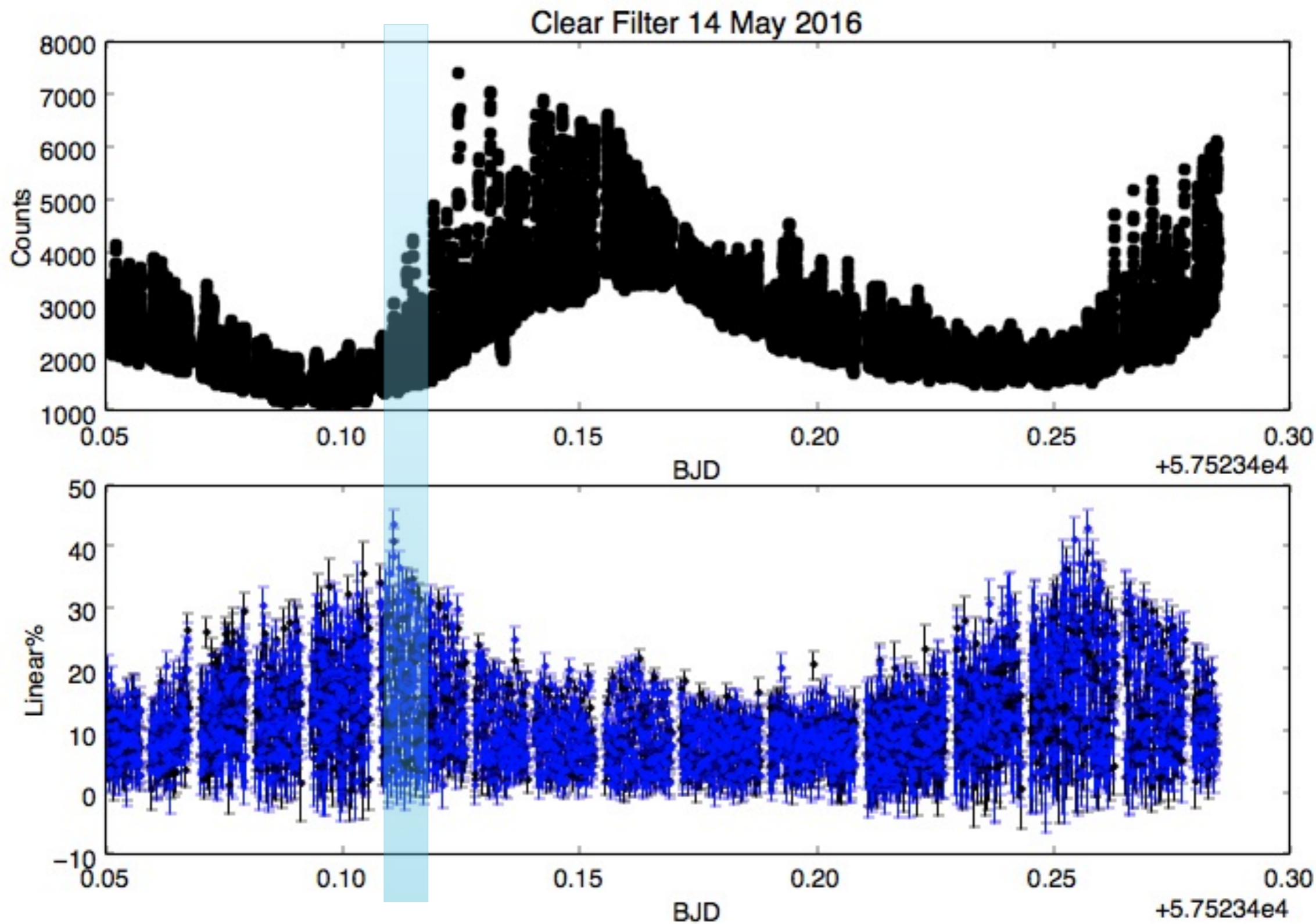


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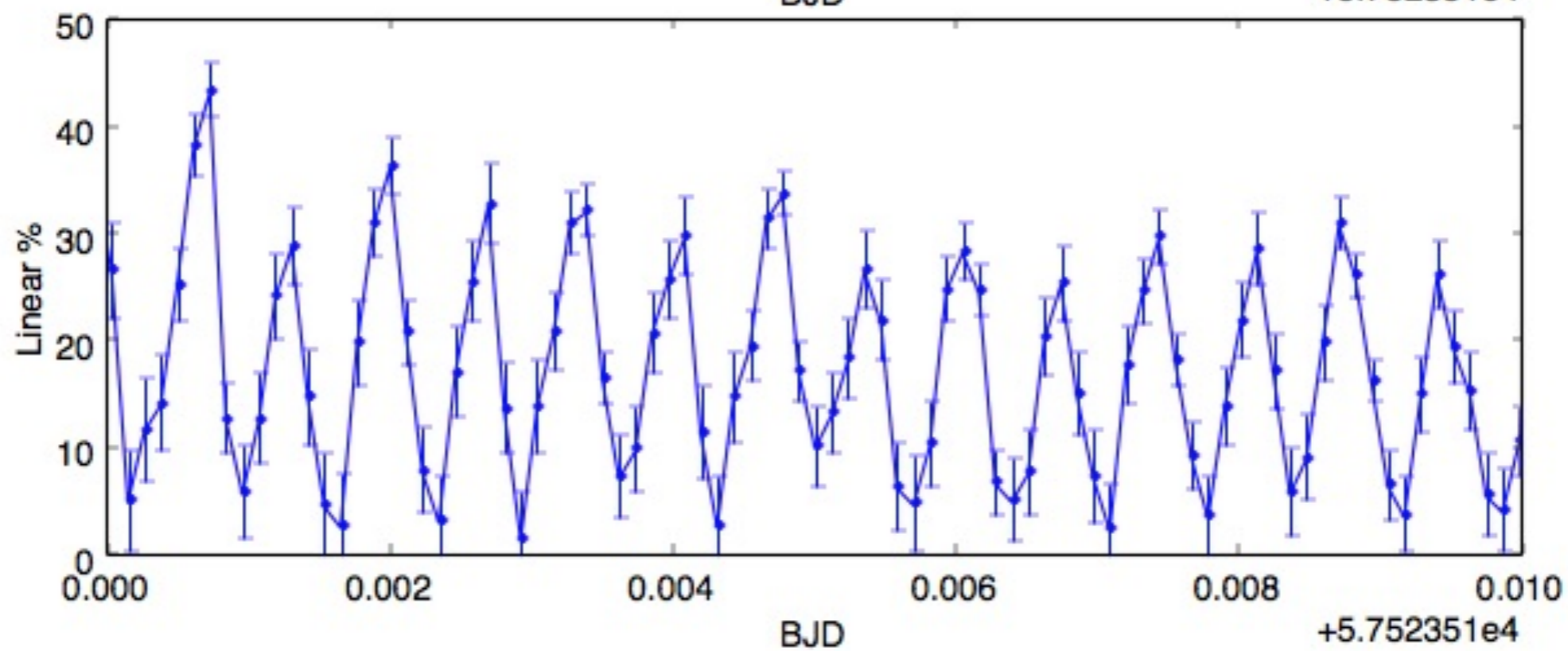
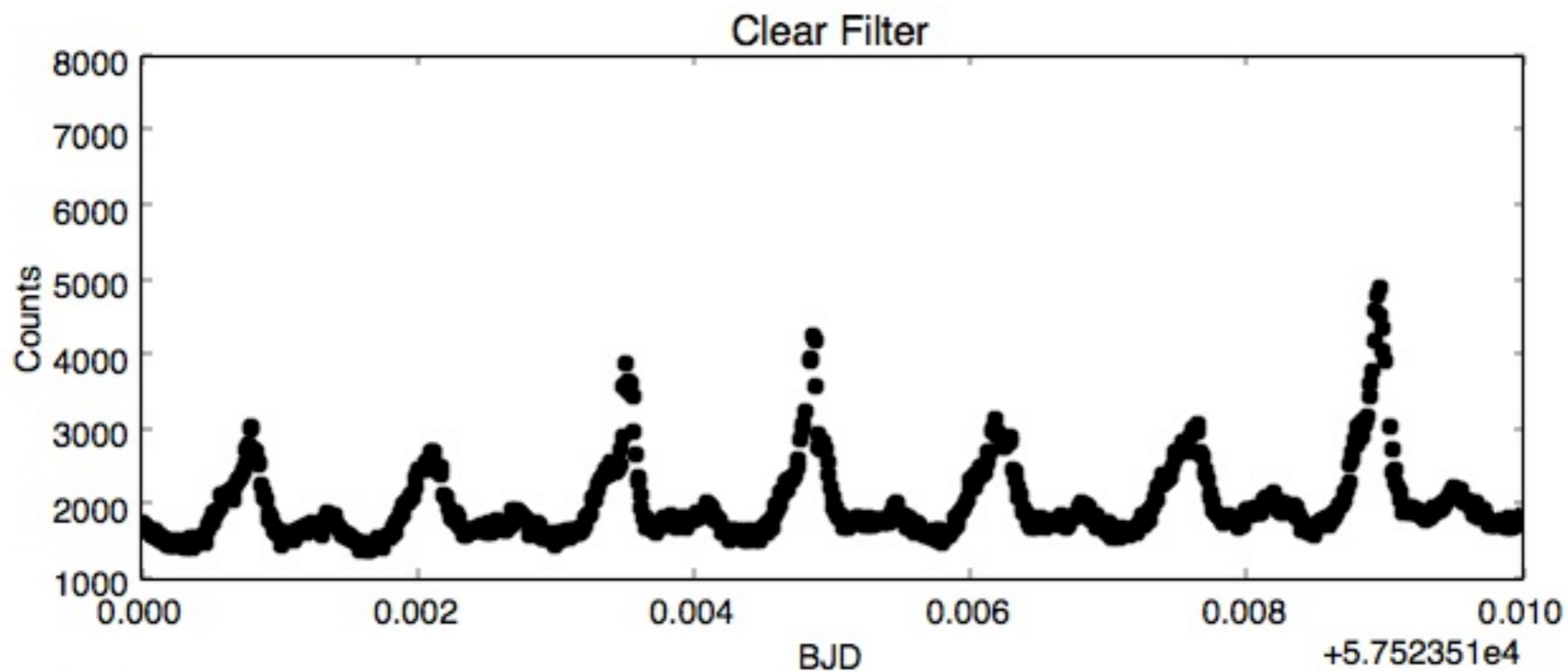


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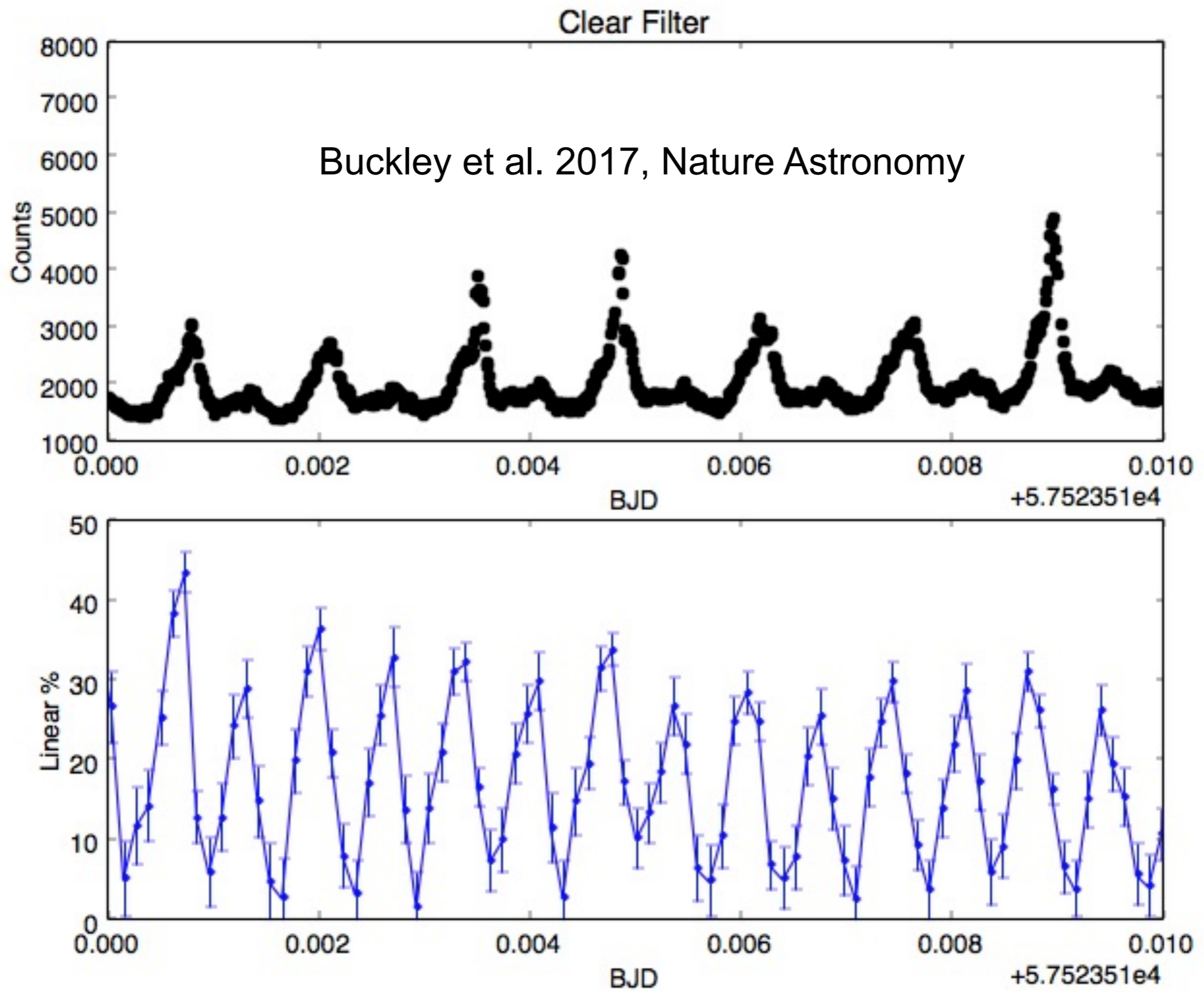


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Cepheid Variables in the Flared Outer Disk of our Galaxy

Feast et al., Nature, 2014



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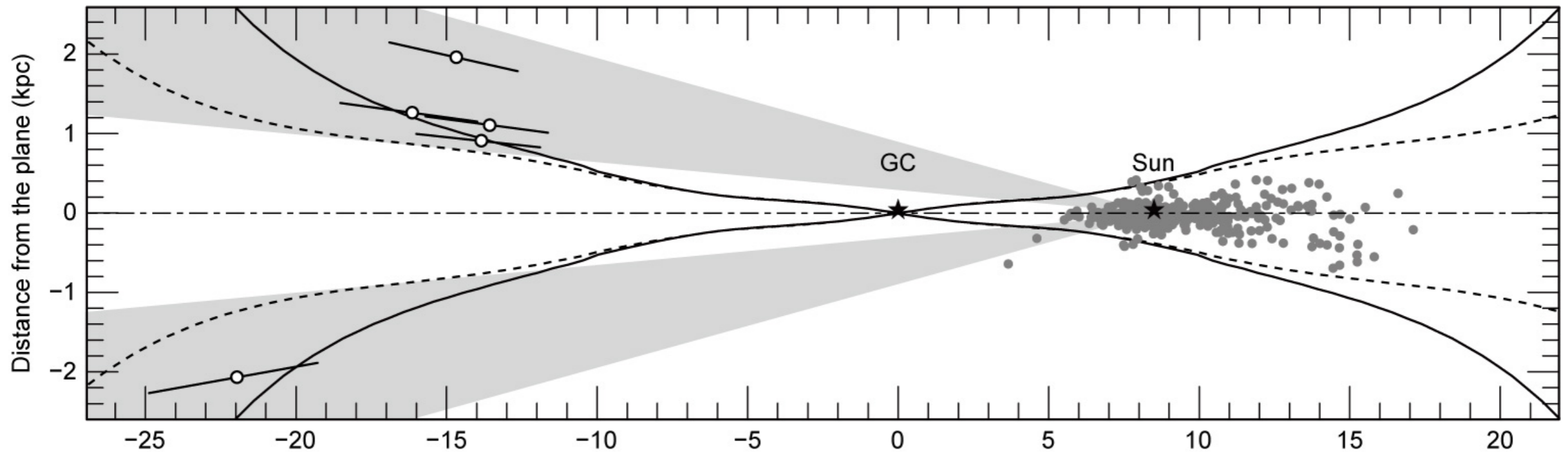
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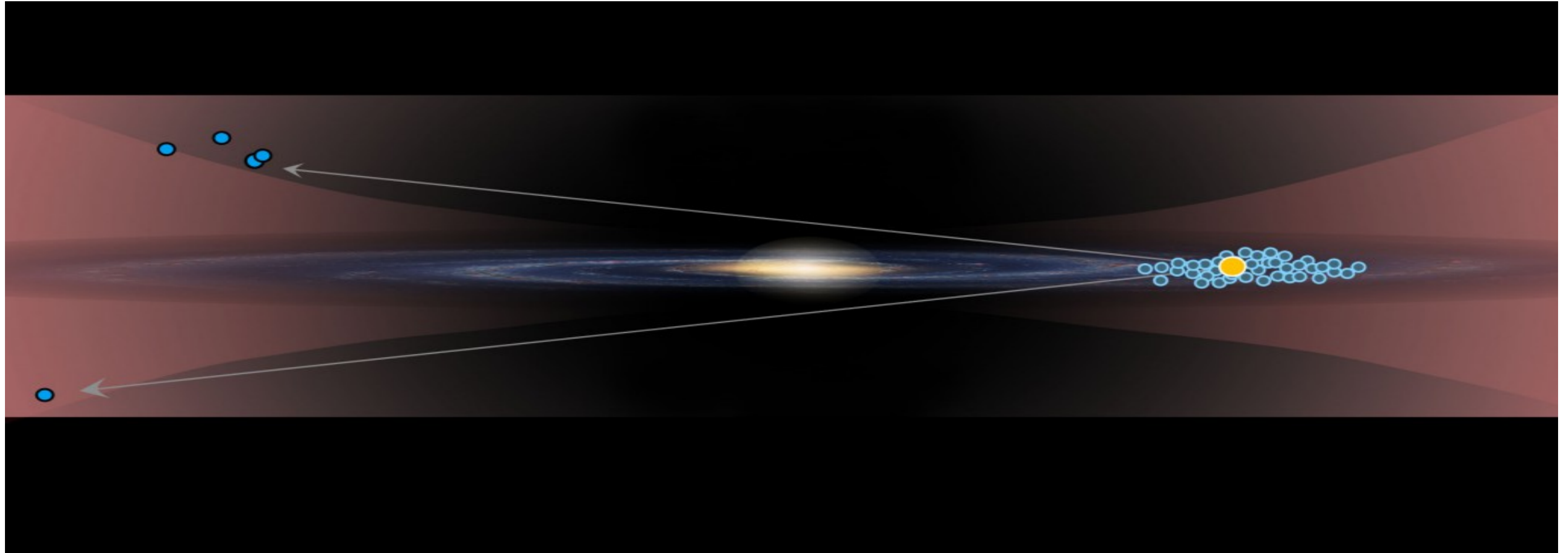
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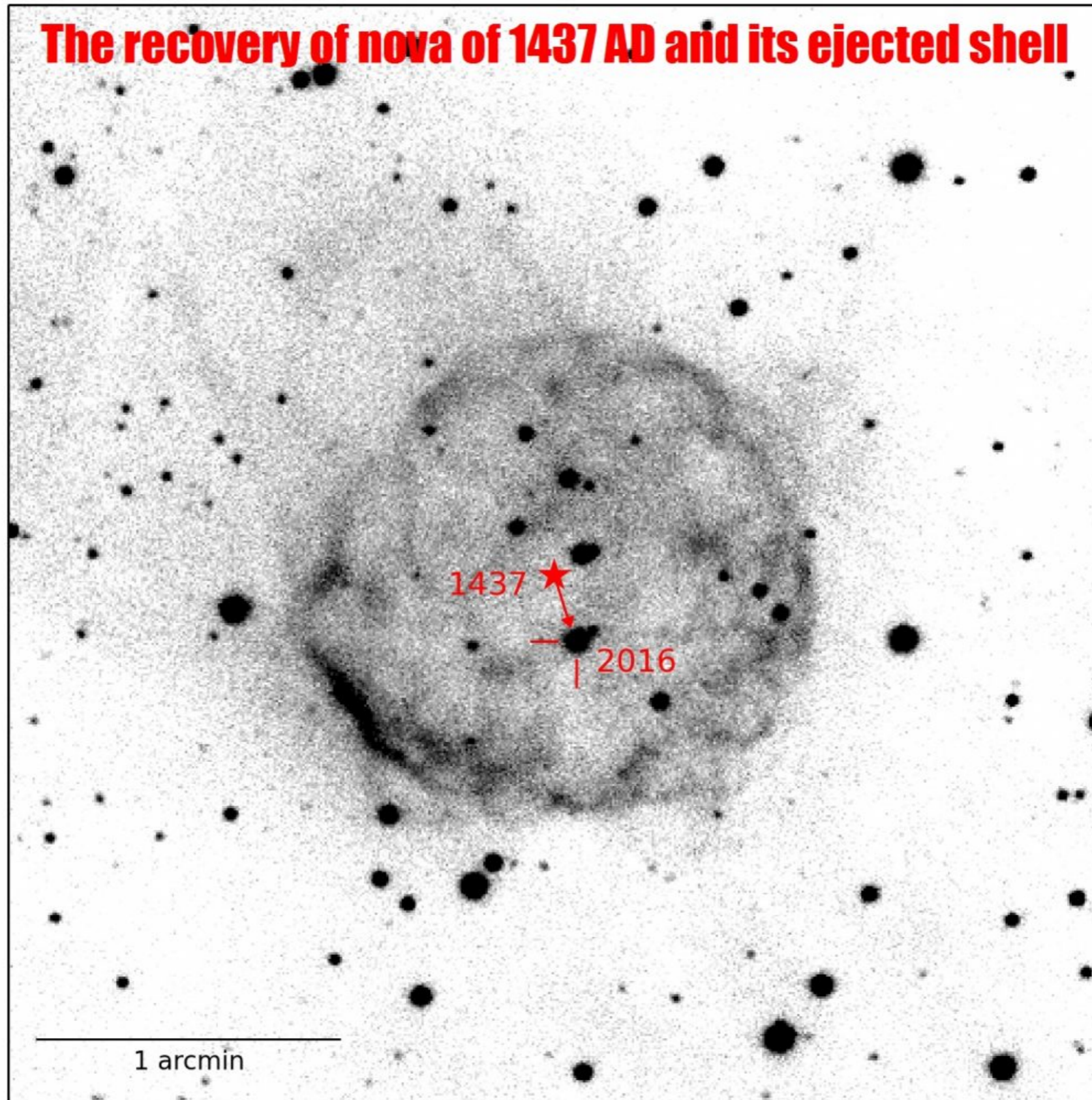


Cepheid Variables in the Flared Outer Disk of our Galaxy

Feast et al., Nature, 2014



The recovery of nova of 1437 AD and its ejected shell

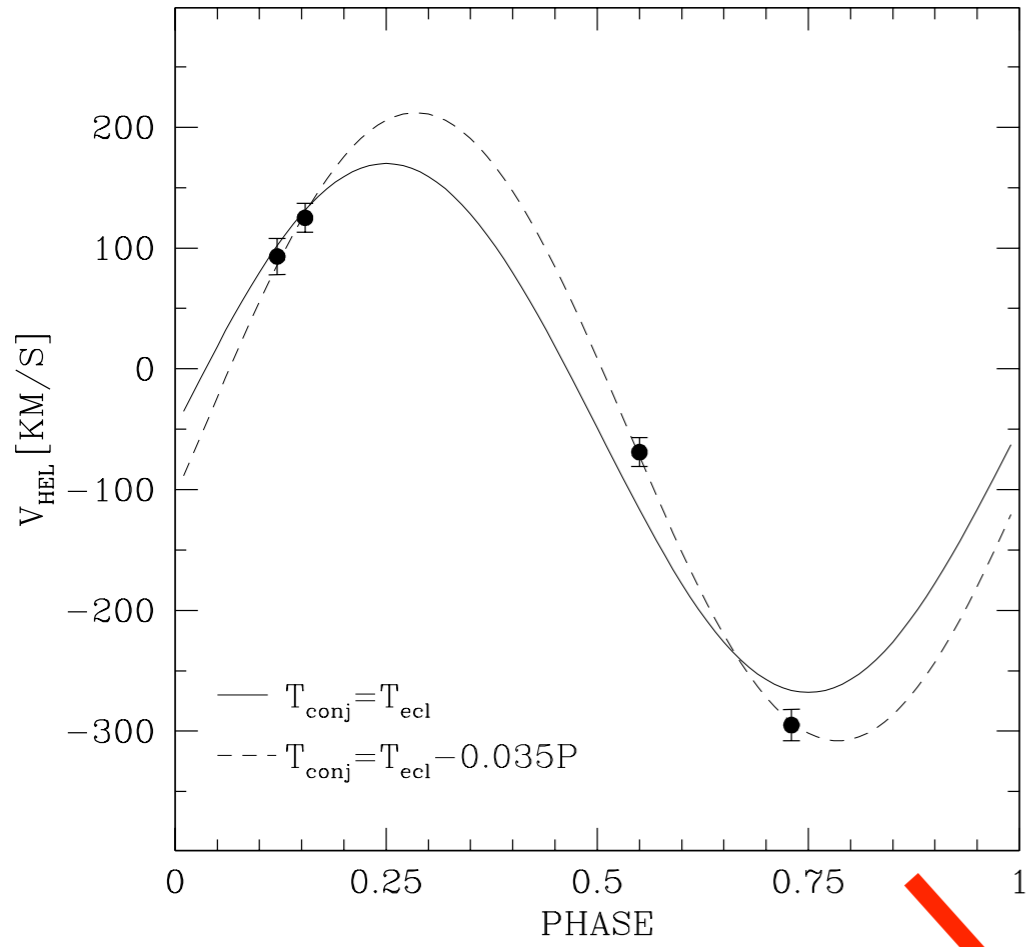


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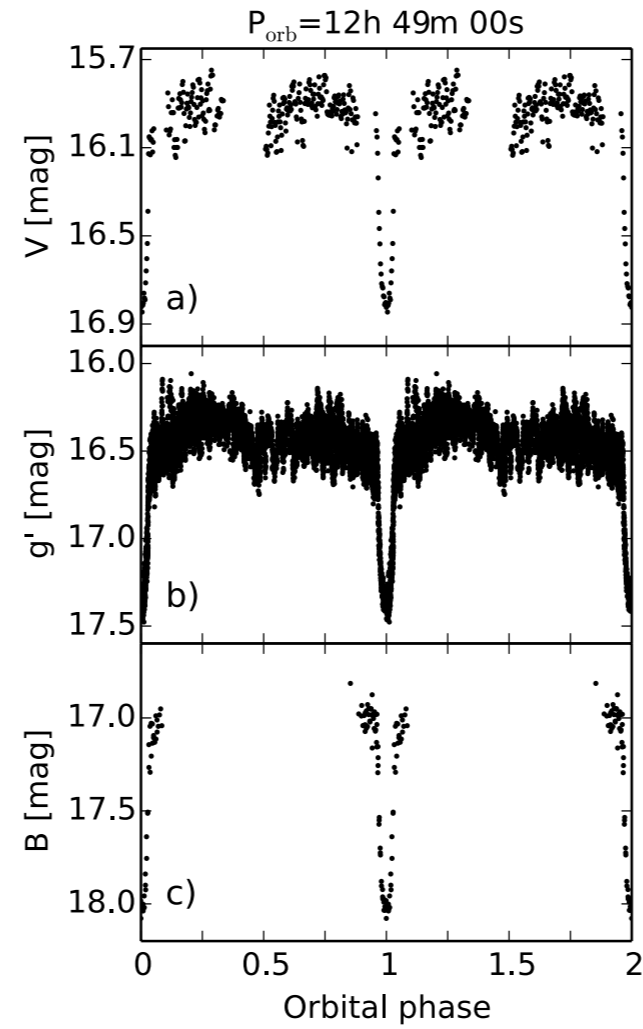
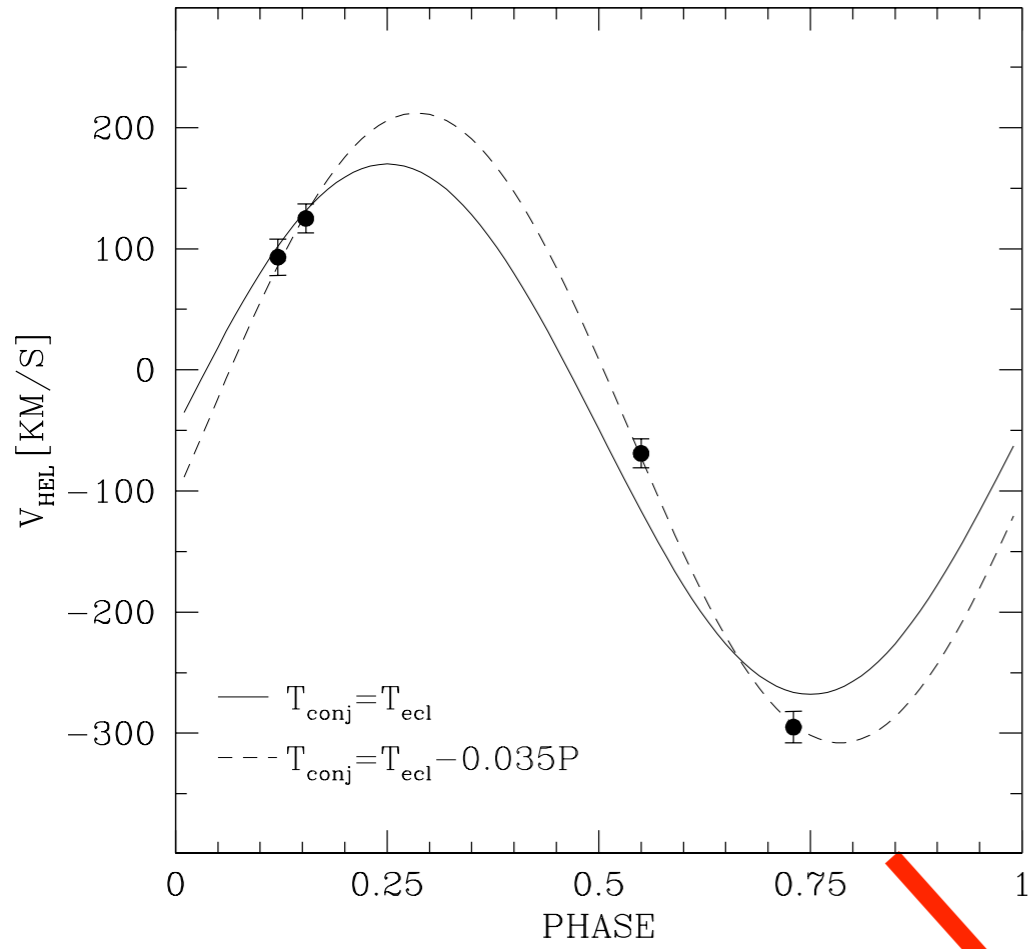
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Shara et al., Nature, 2017



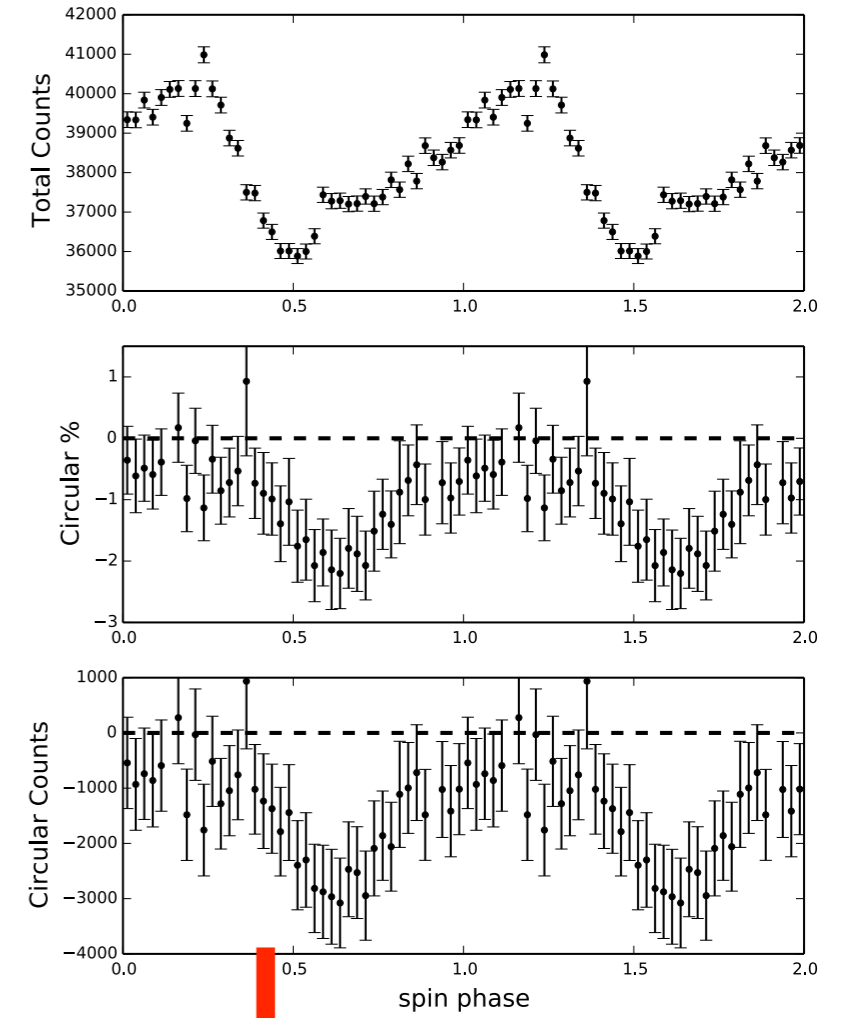
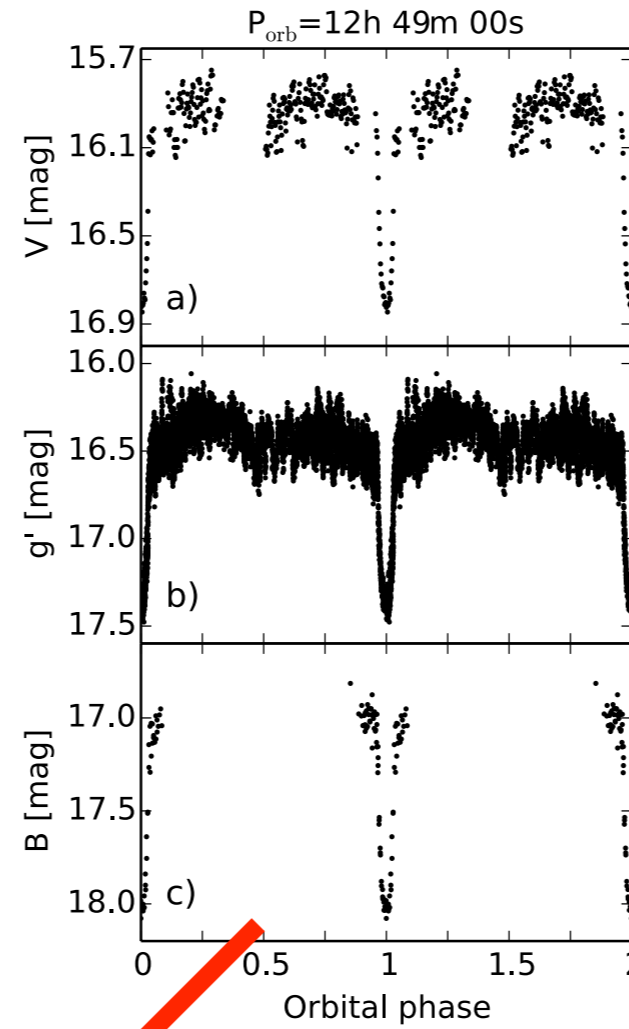
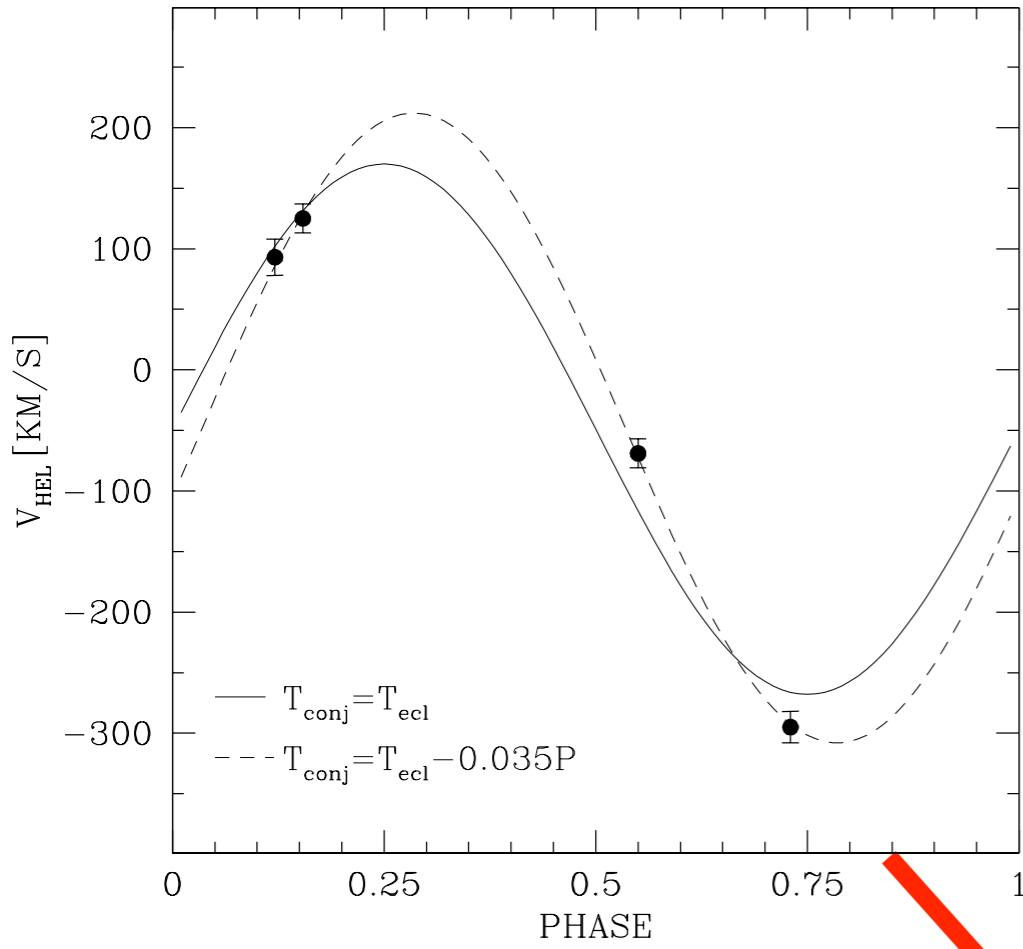
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Thank You



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