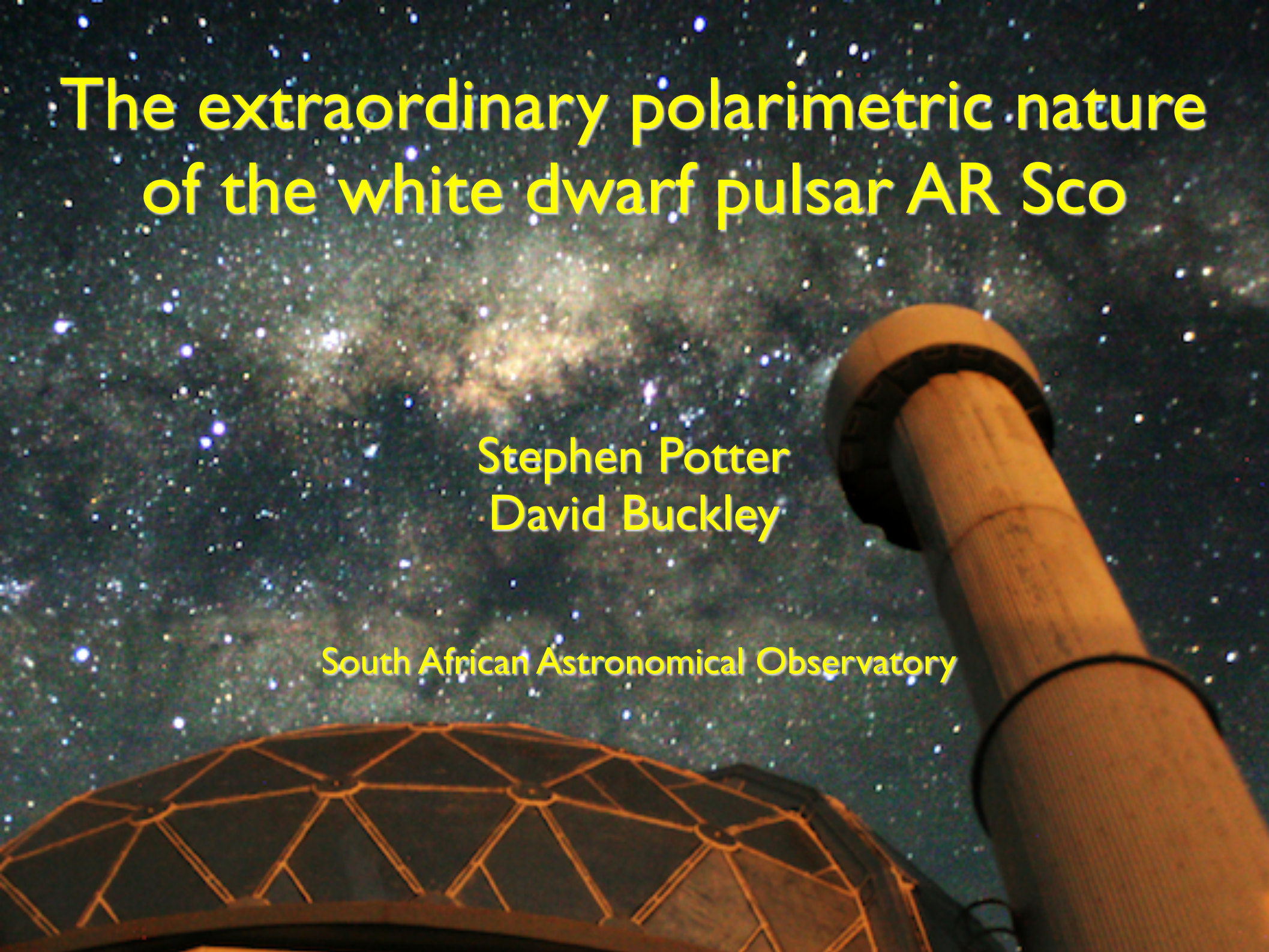


The extraordinary polarimetric nature of the white dwarf pulsar AR Sco

Stephen Potter
David Buckley

South African Astronomical Observatory



AR Sco

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

SED – synchrotron emission - Optical, Radio

David Buckley and myself in March 2016 with HIPPO

discovered optically pulsed polarized emission

GOALS:

Detailed polarimetry covering multiple orbits in 2016 and 2017

Present a Geometrical model

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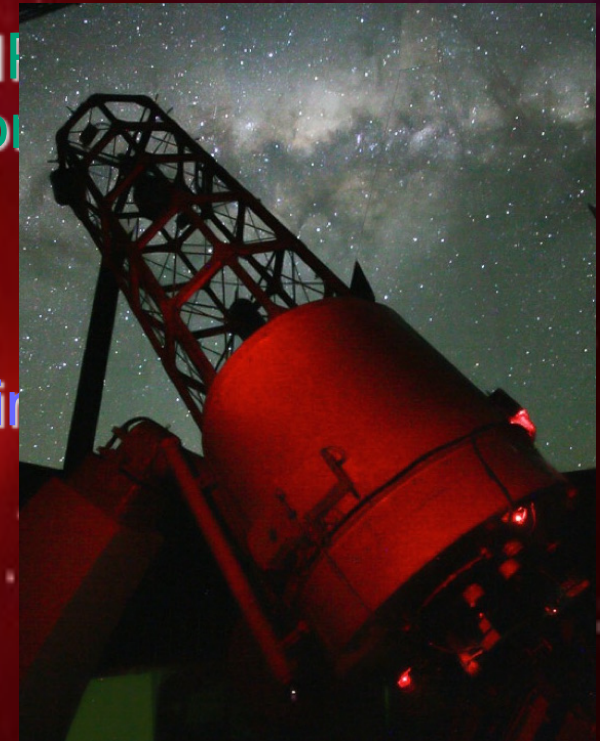
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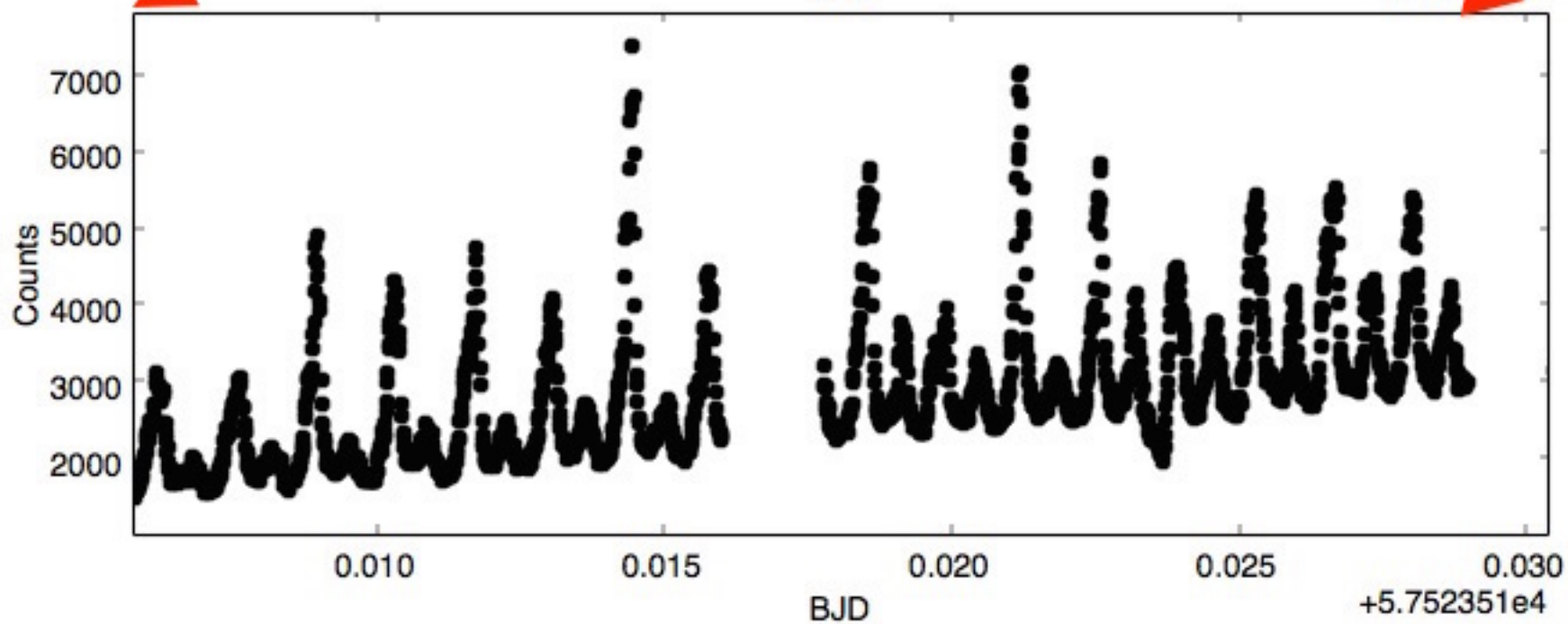
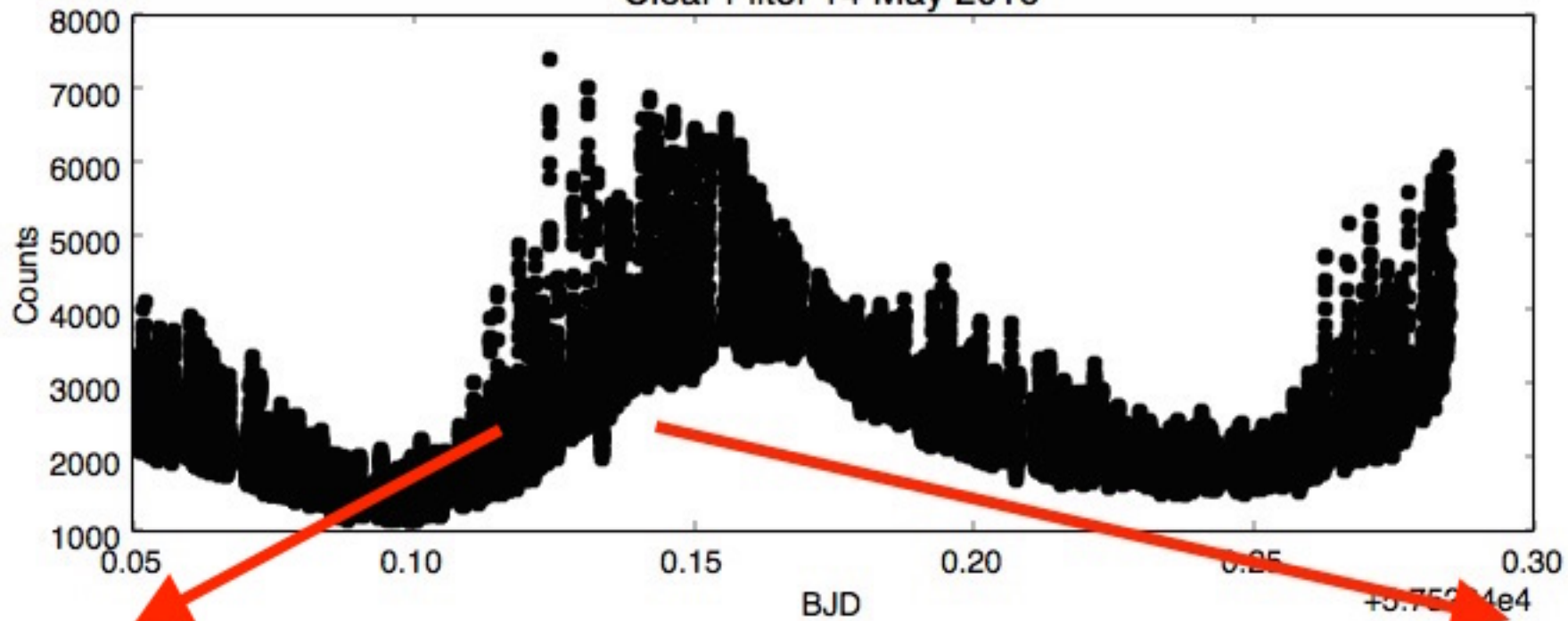
GOALS:

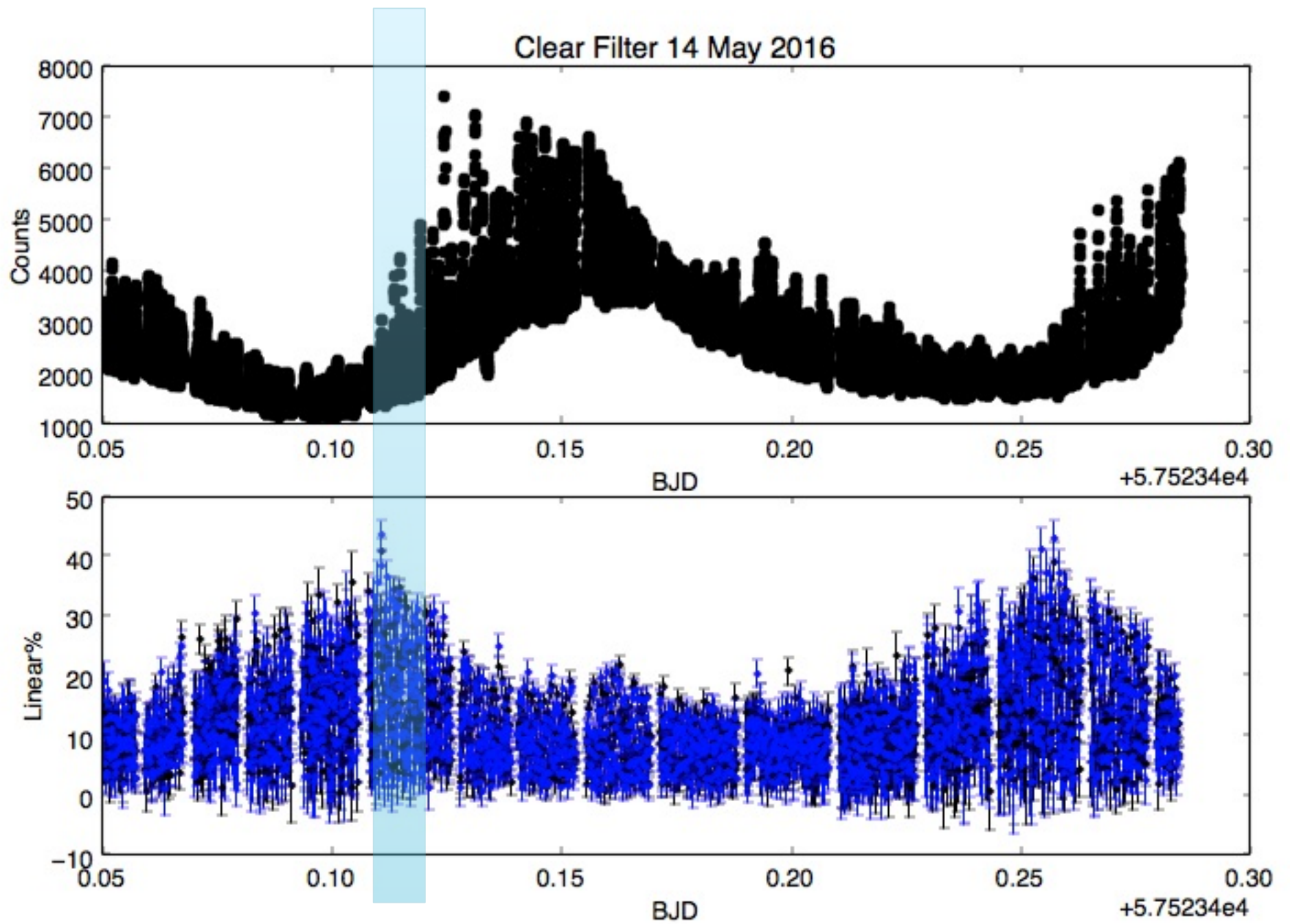
Detailed polarimetry covering multiple orbits in

Present a Geometrical model

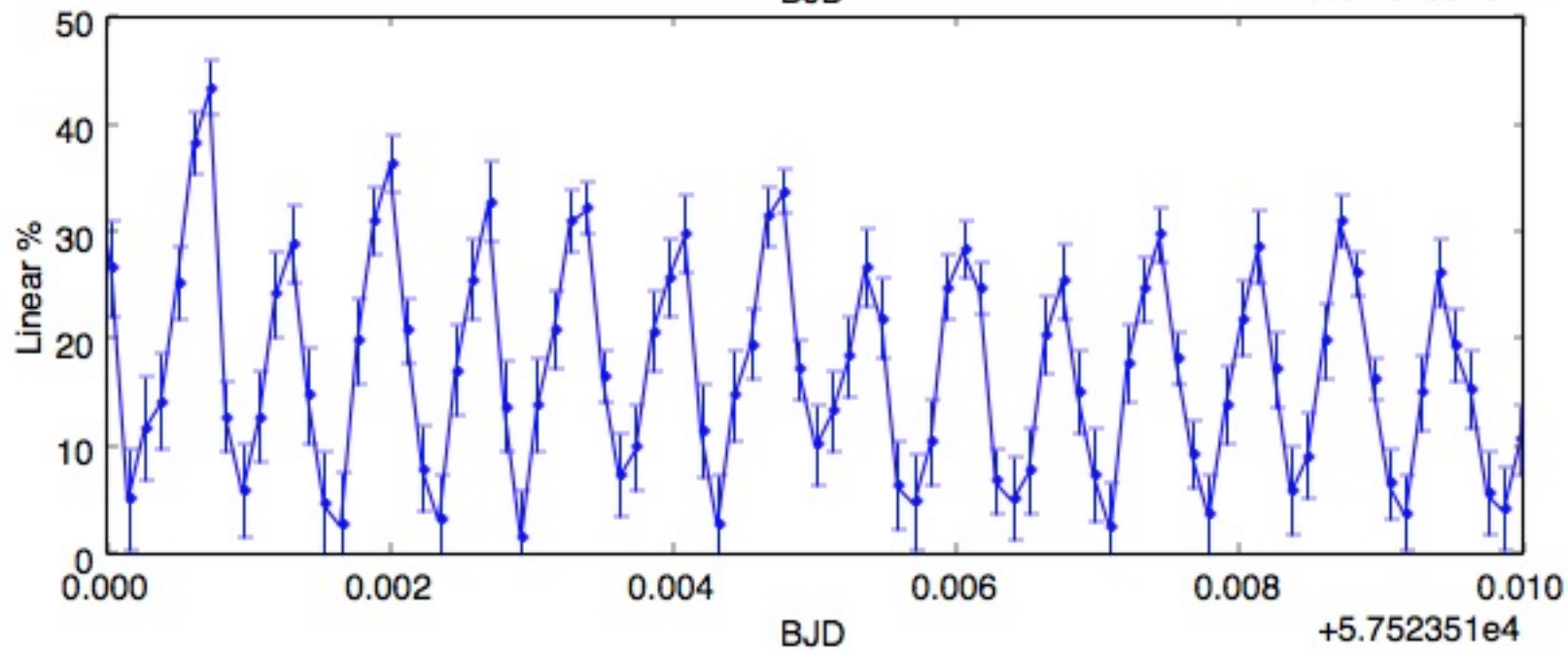
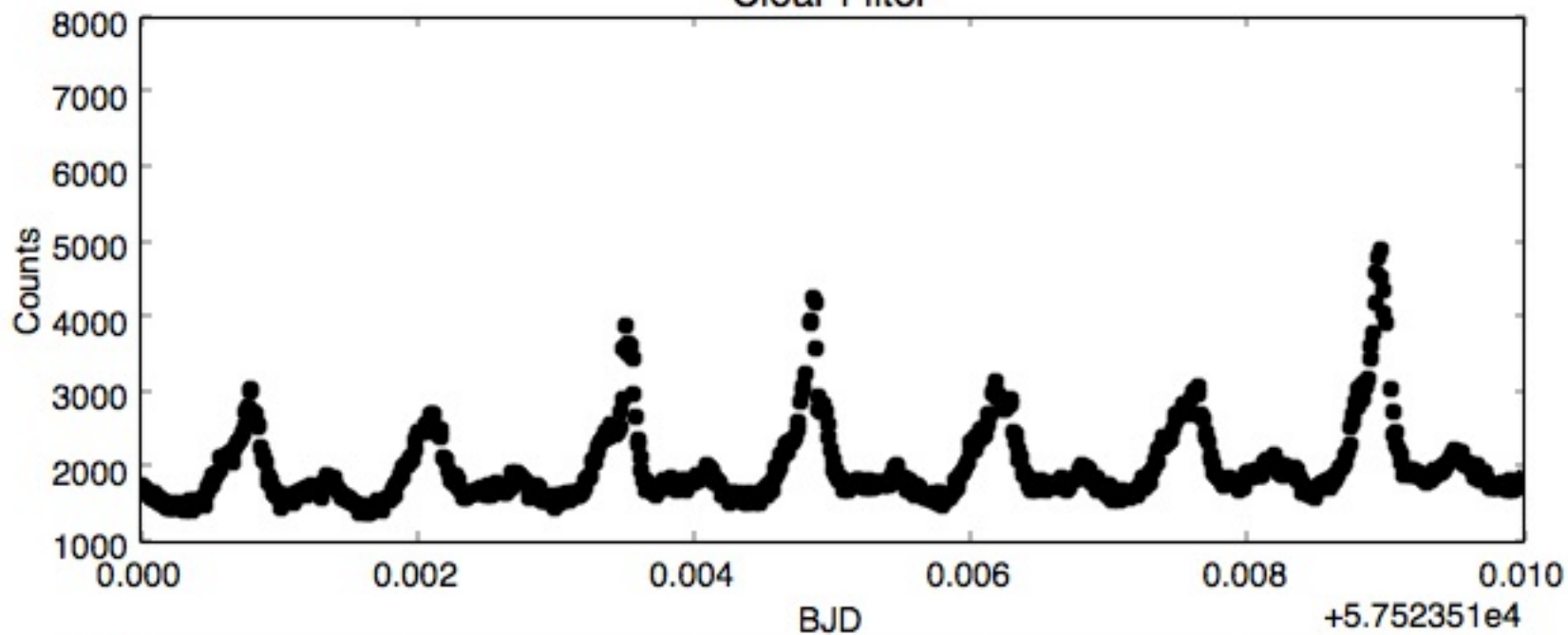


Clear Filter 14 May 2016

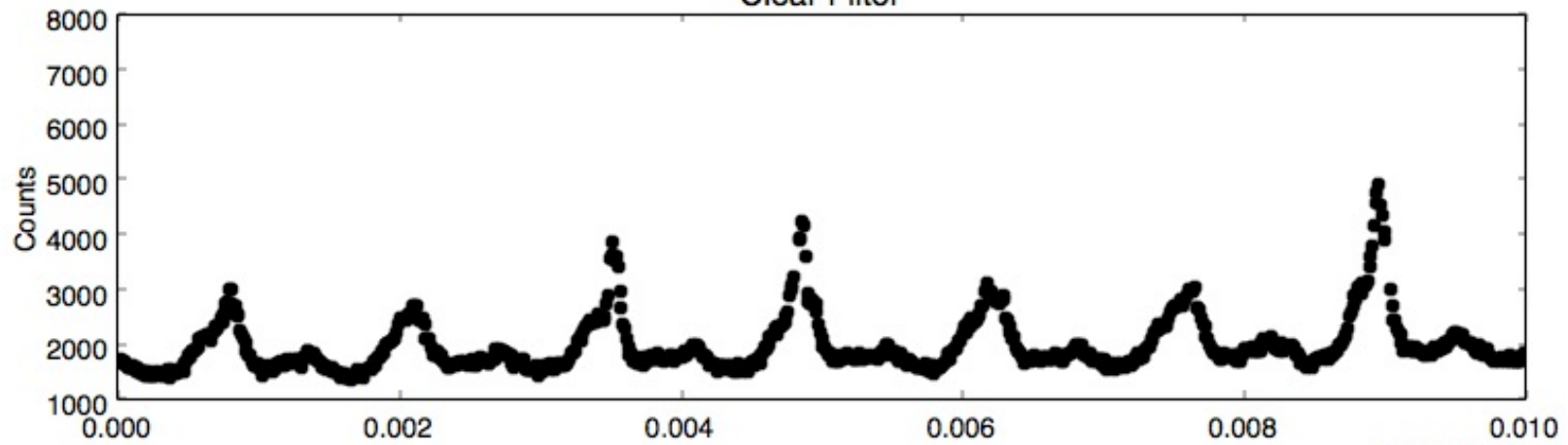




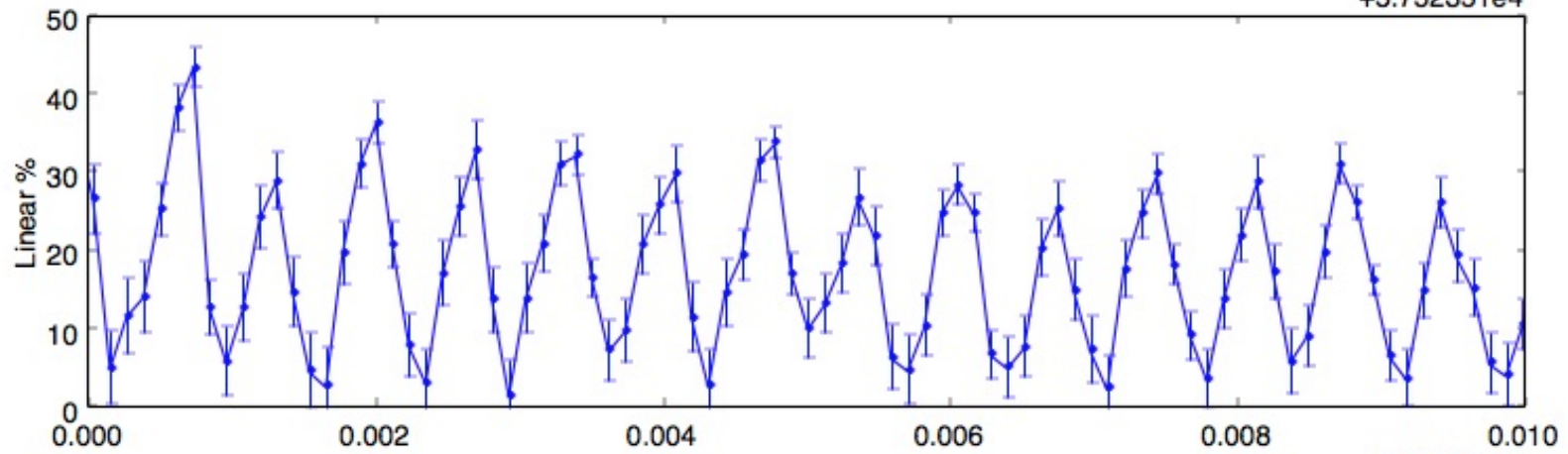
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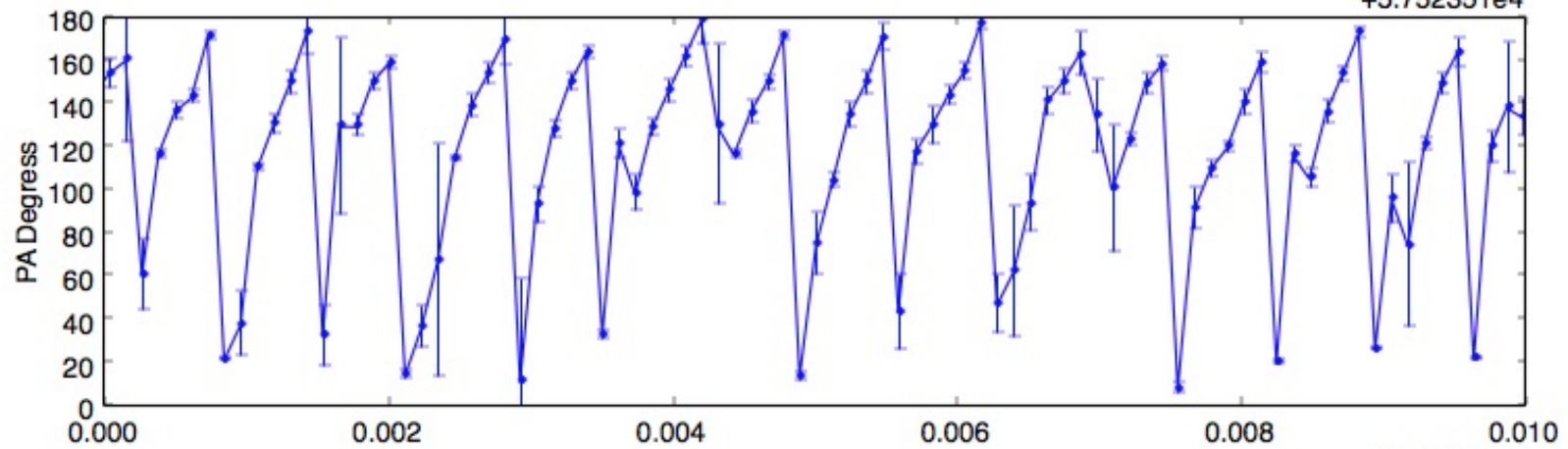
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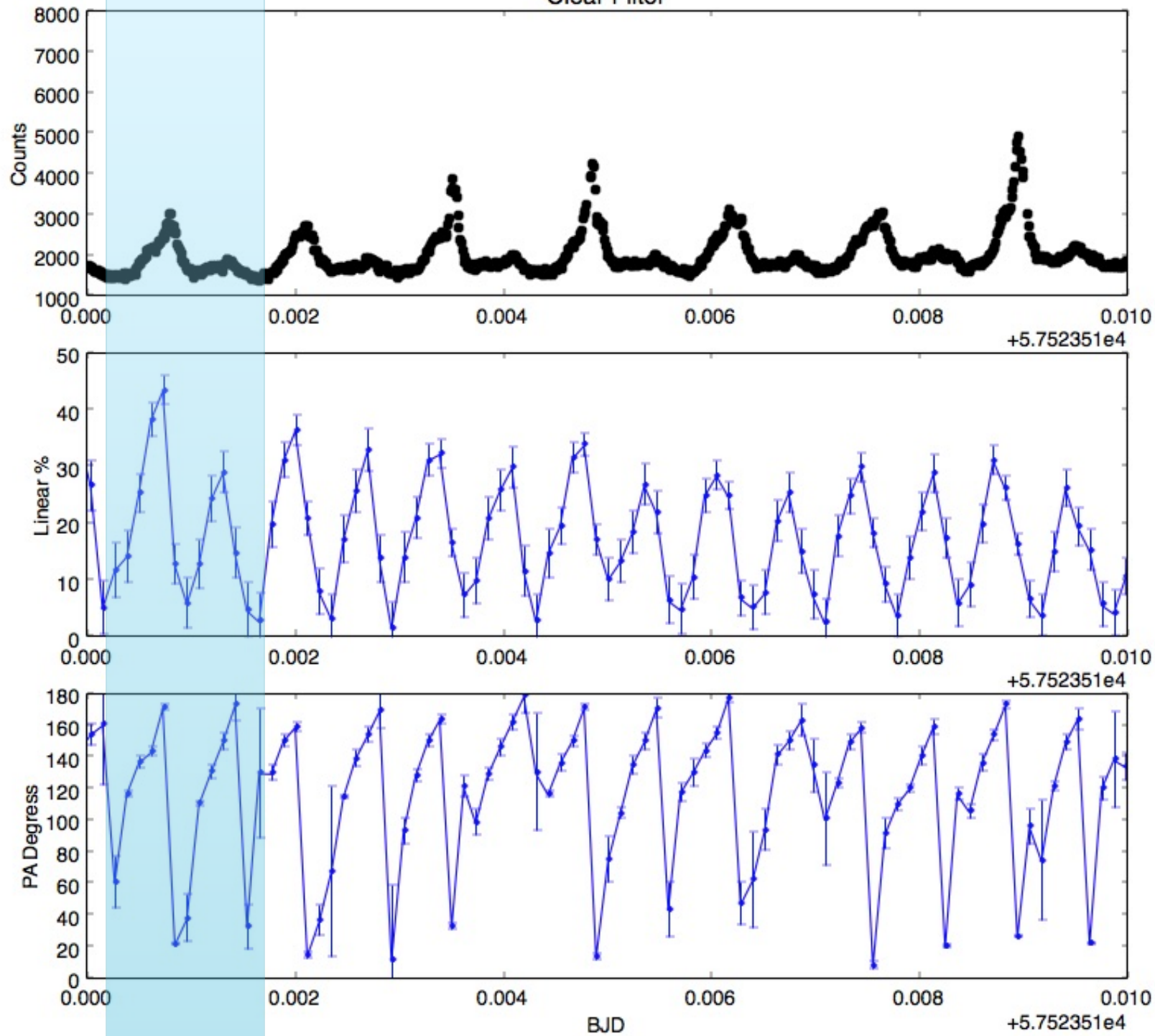
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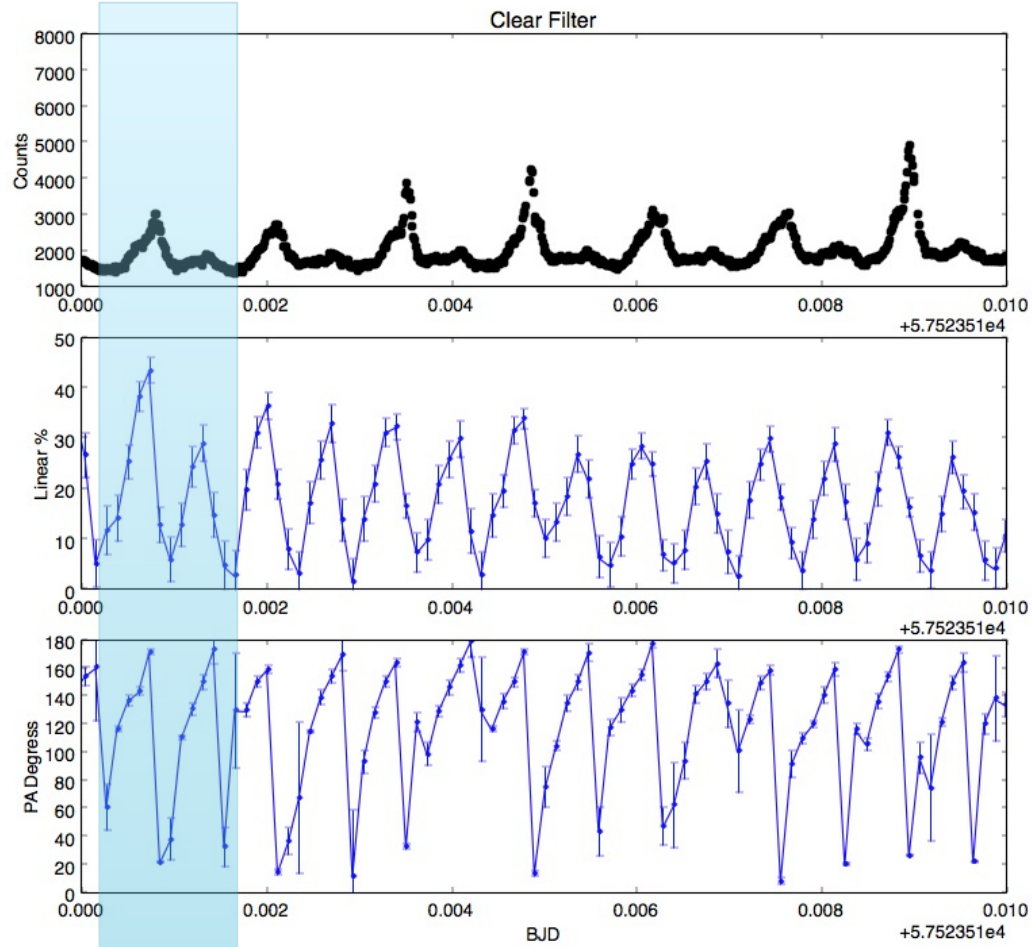
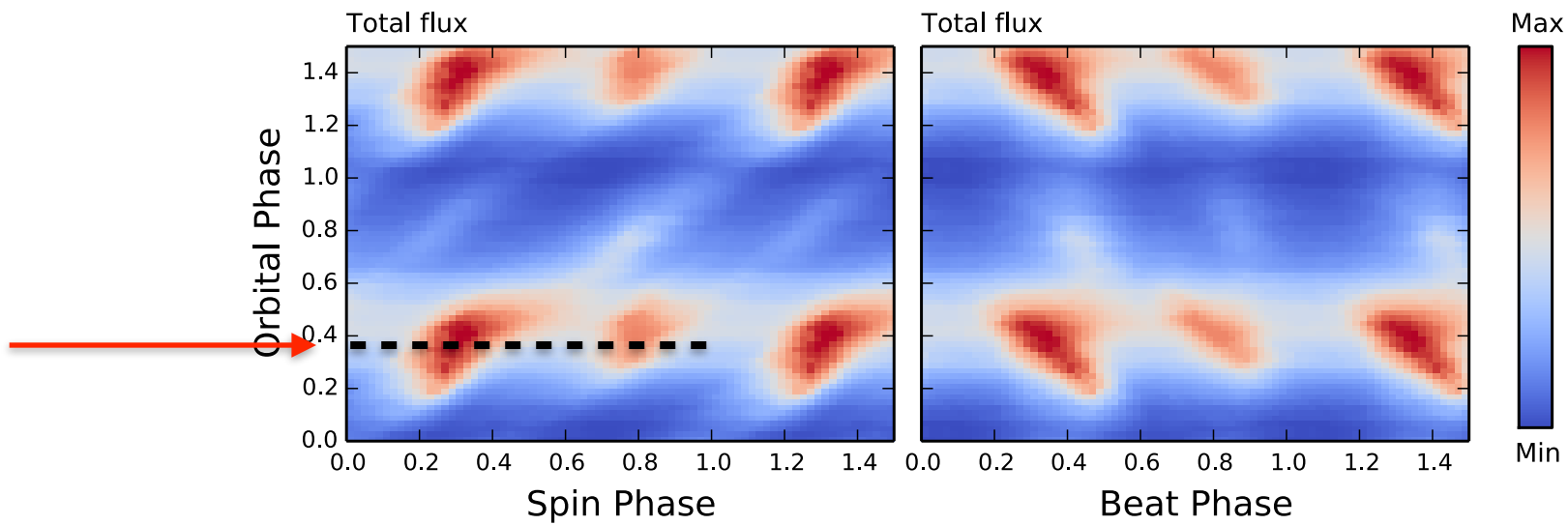


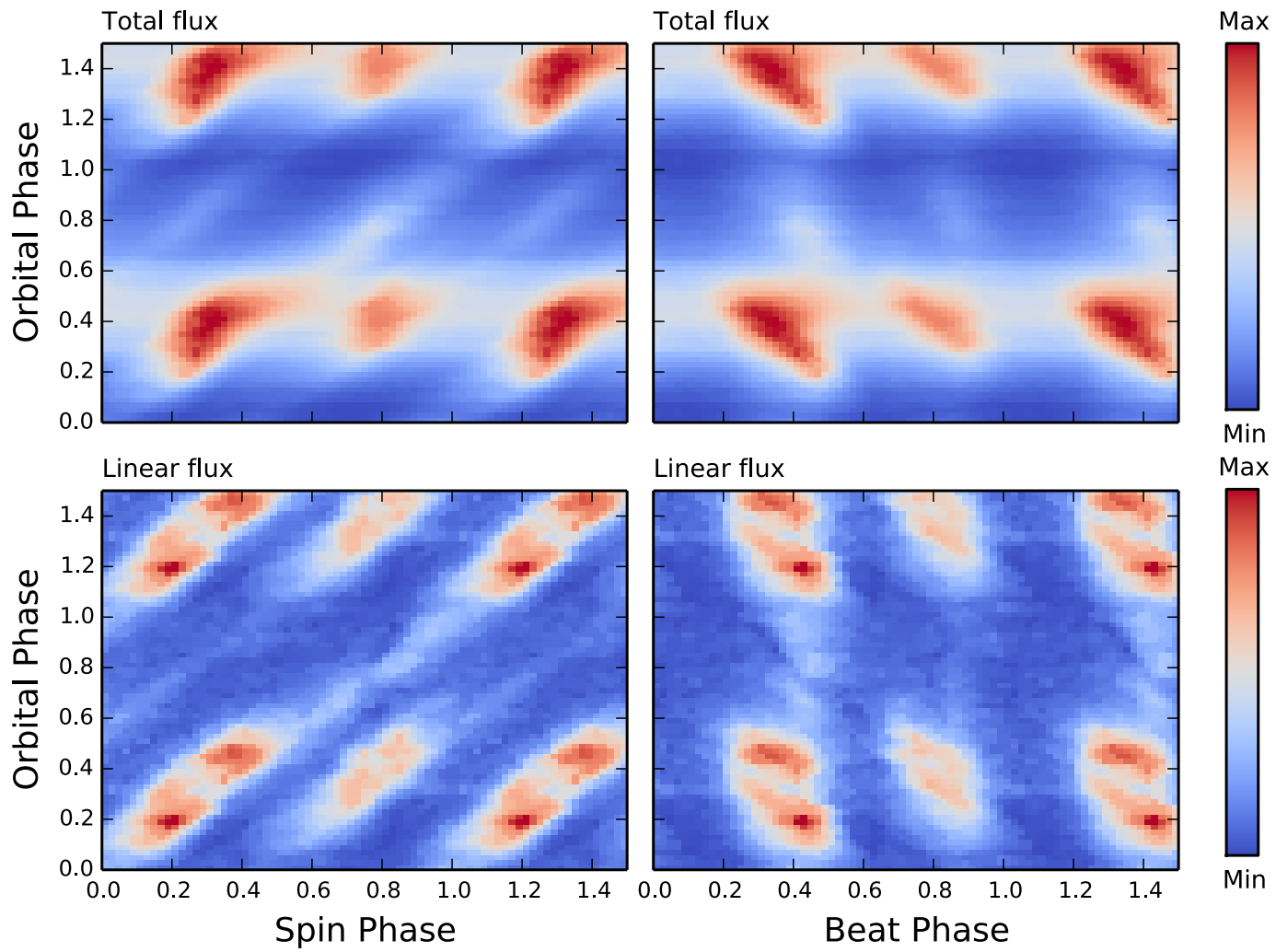
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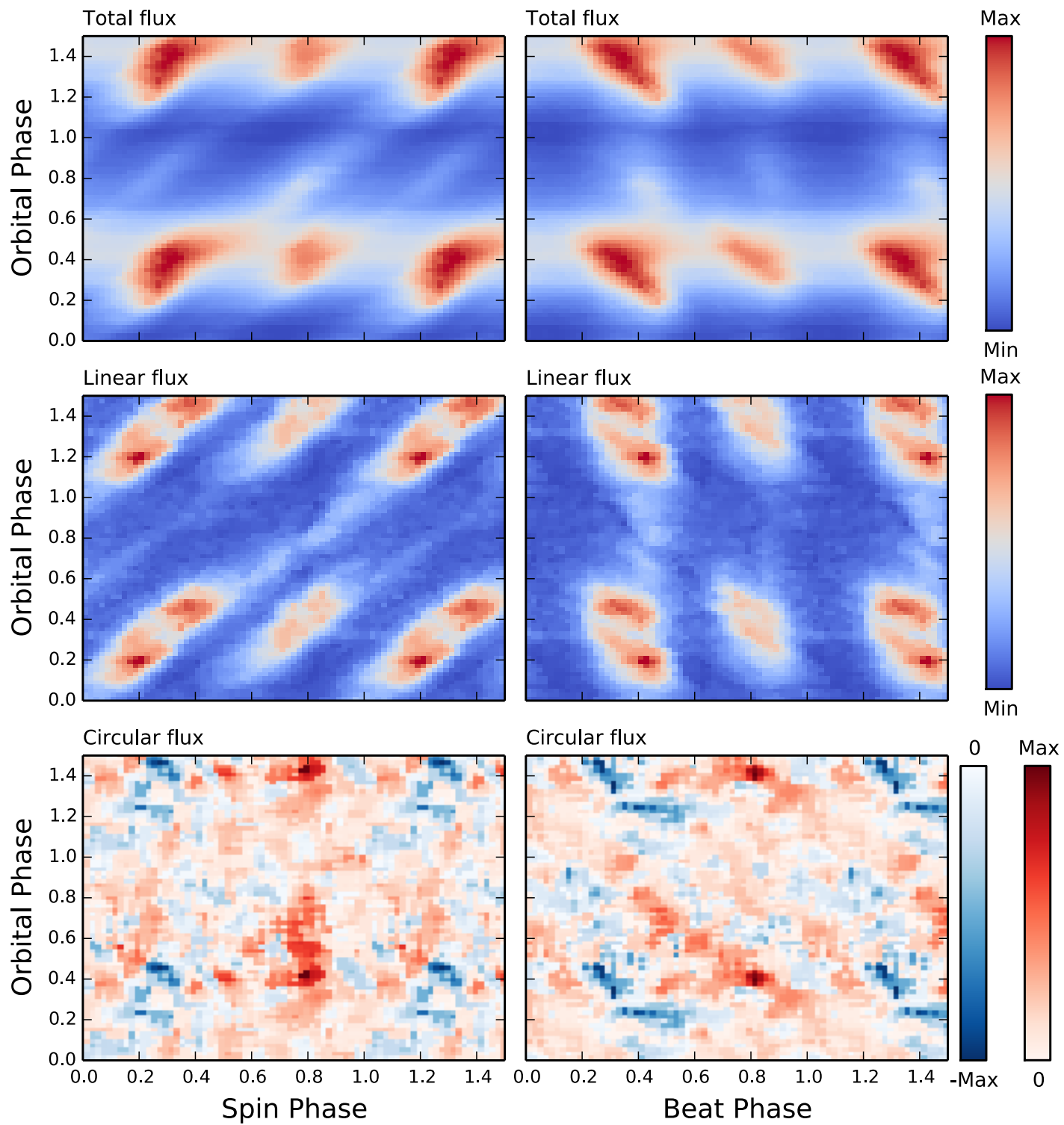
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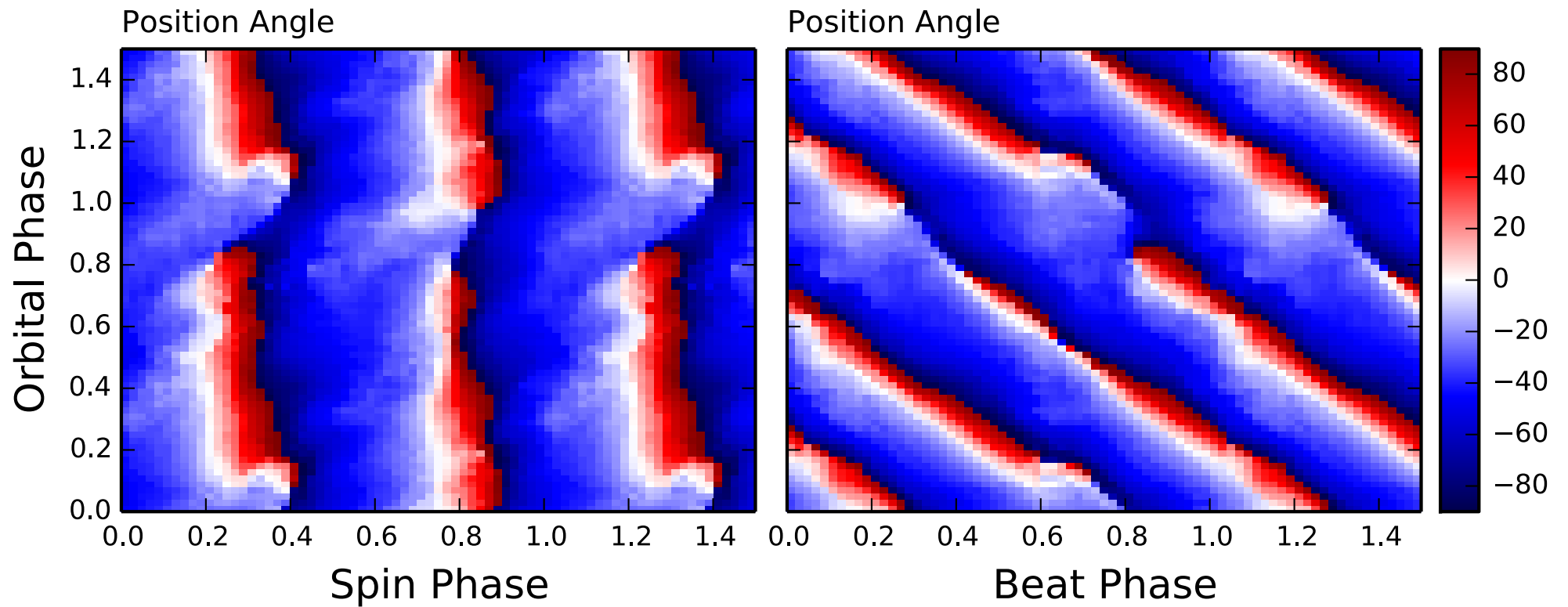


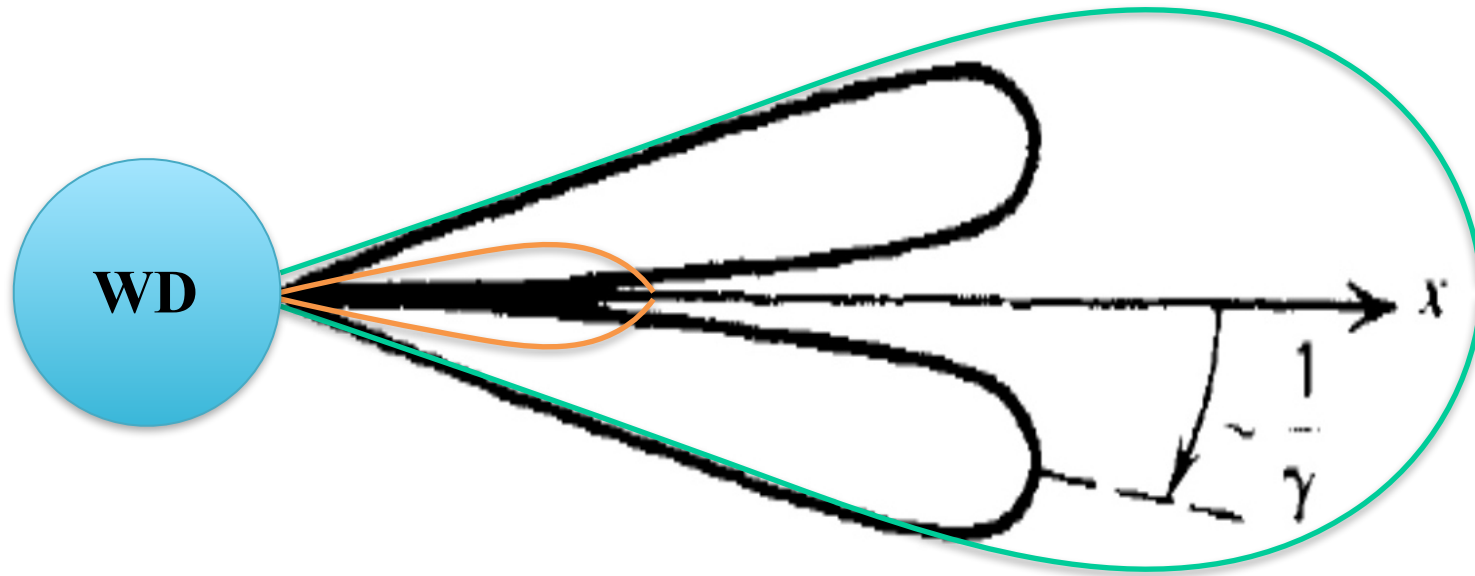


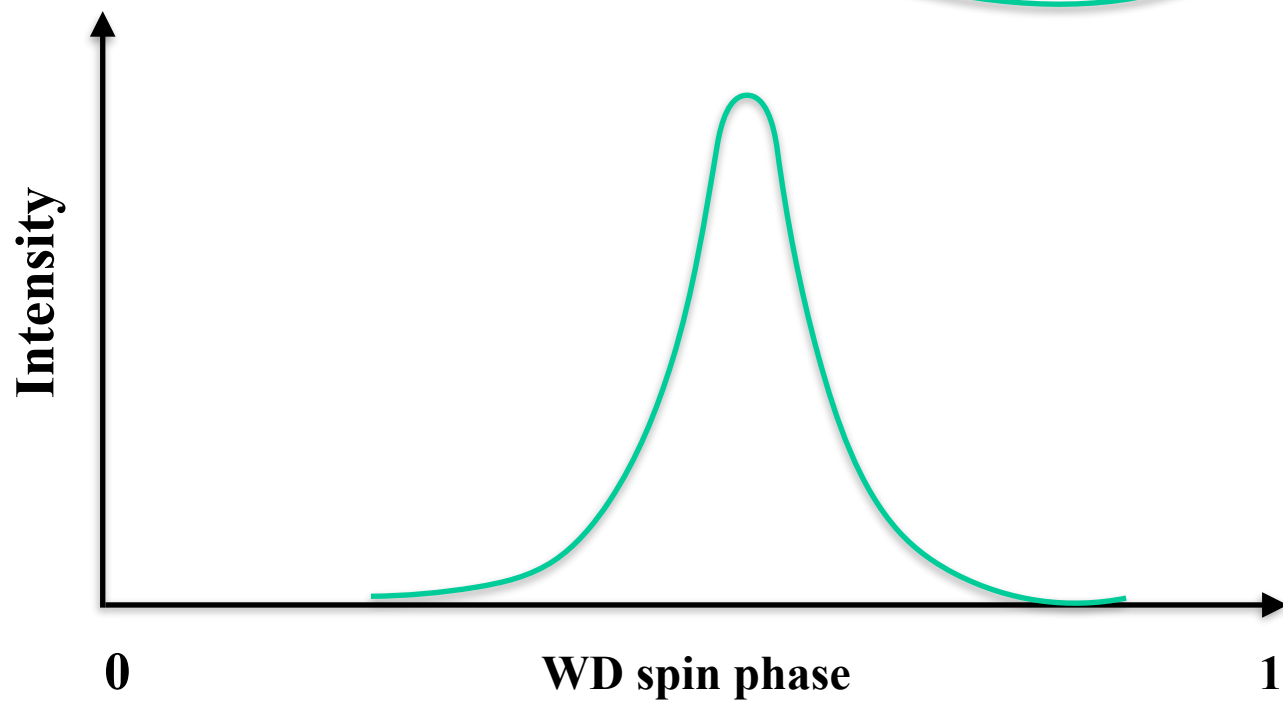
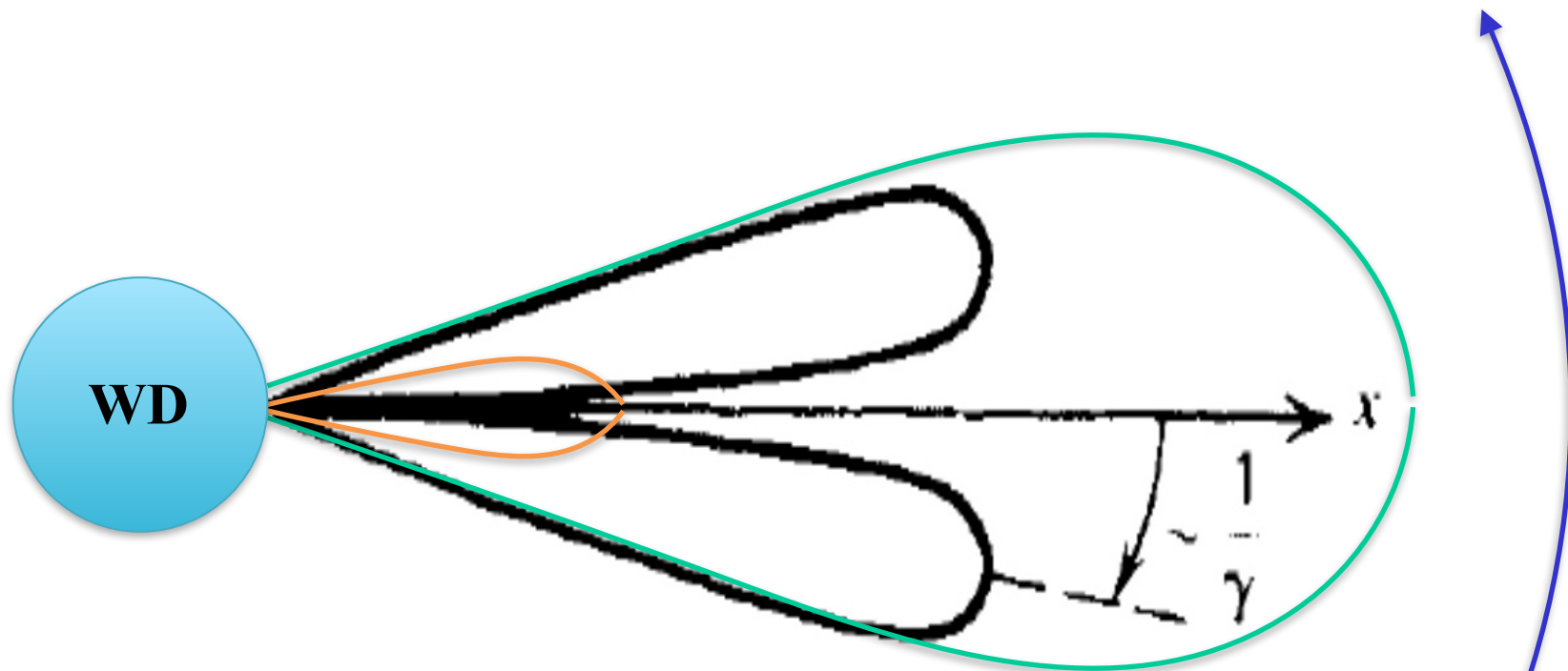
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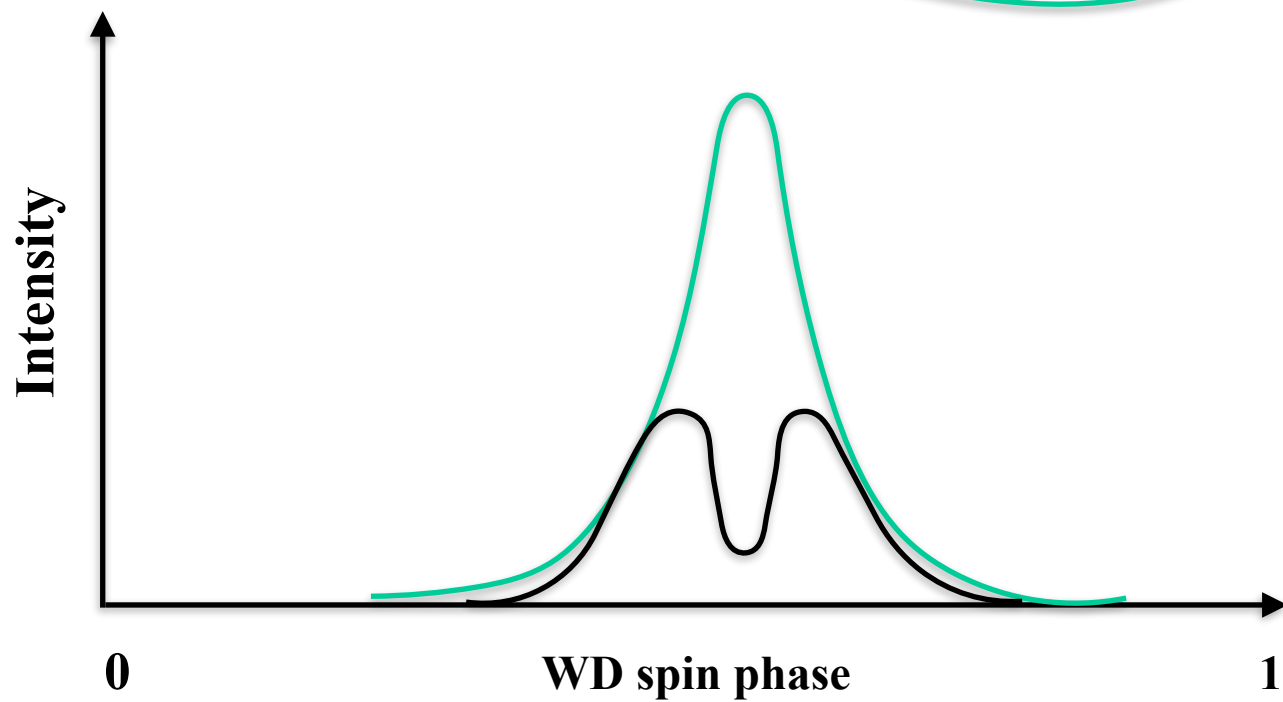
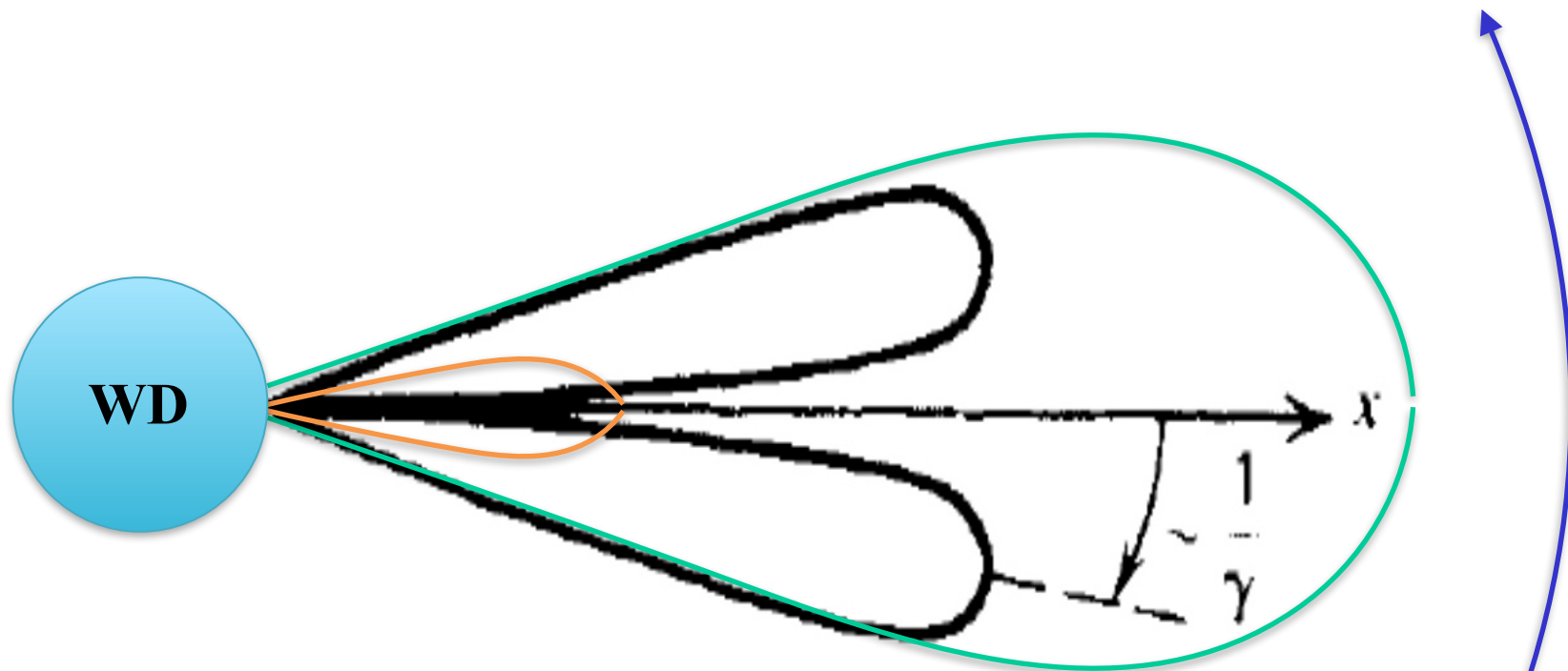
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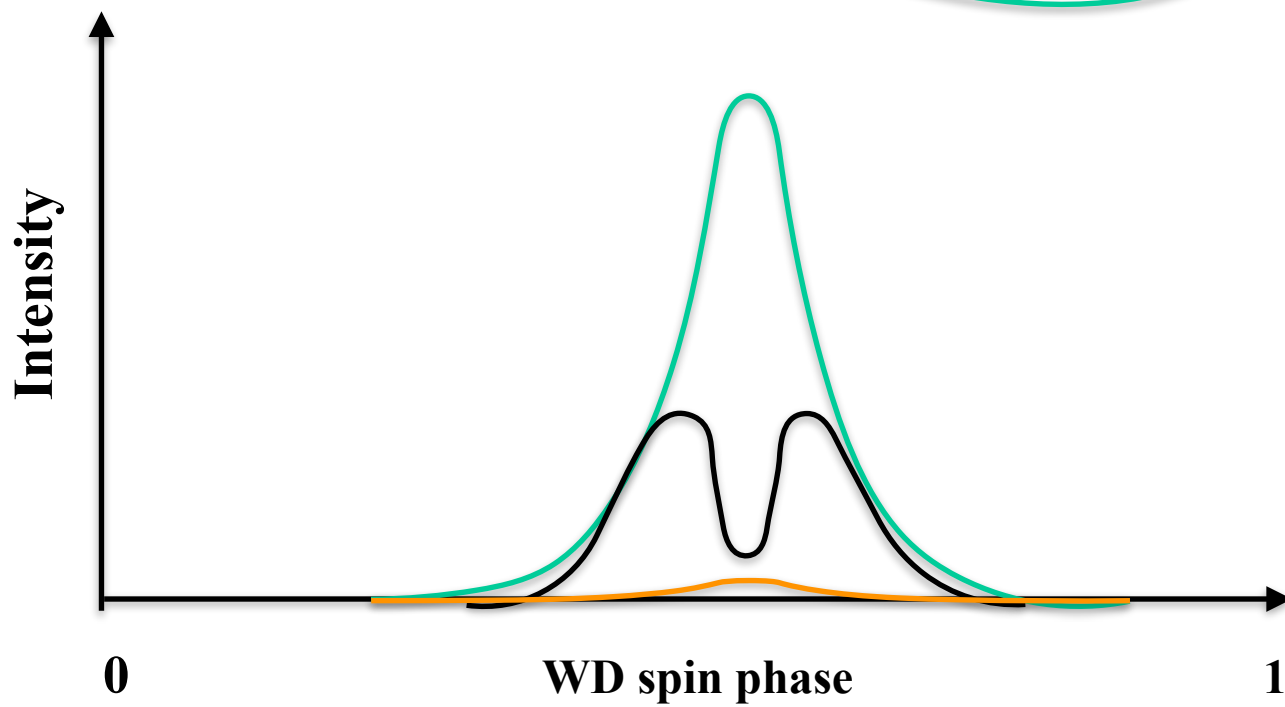
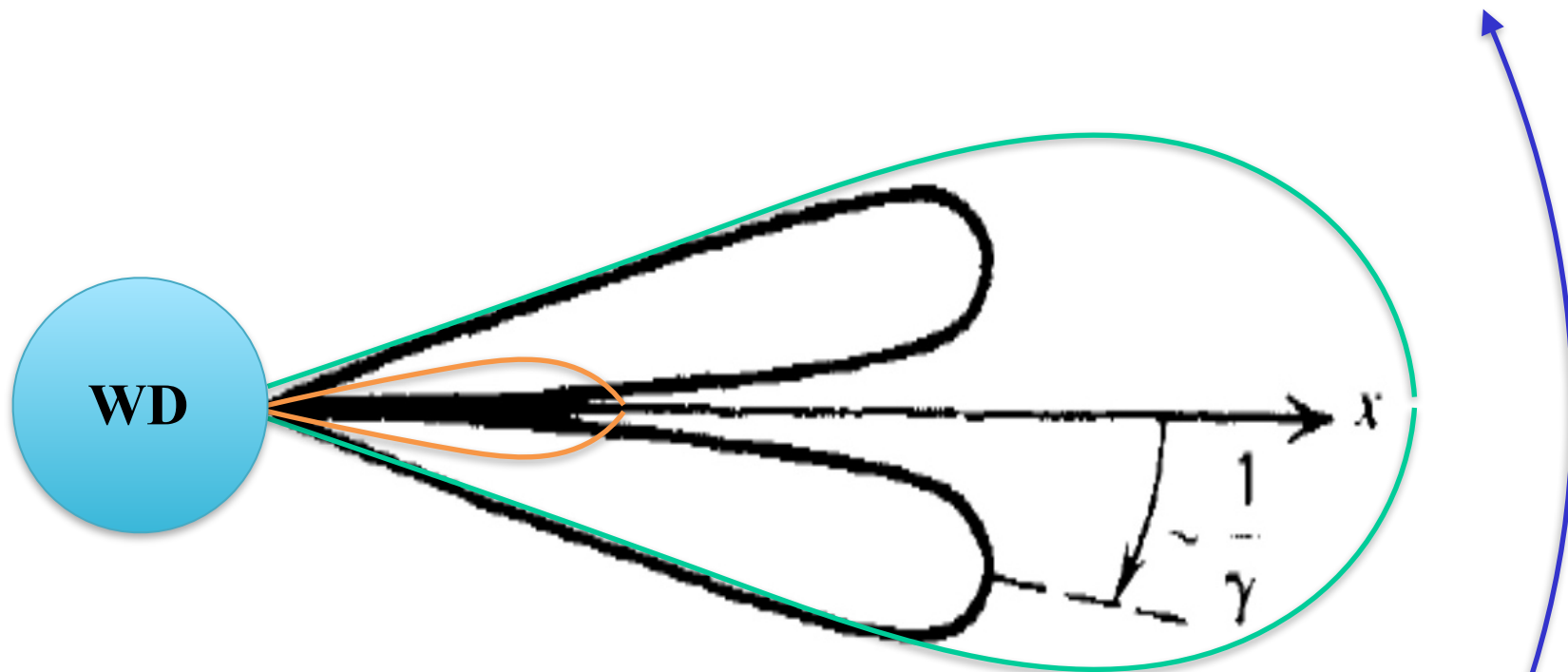
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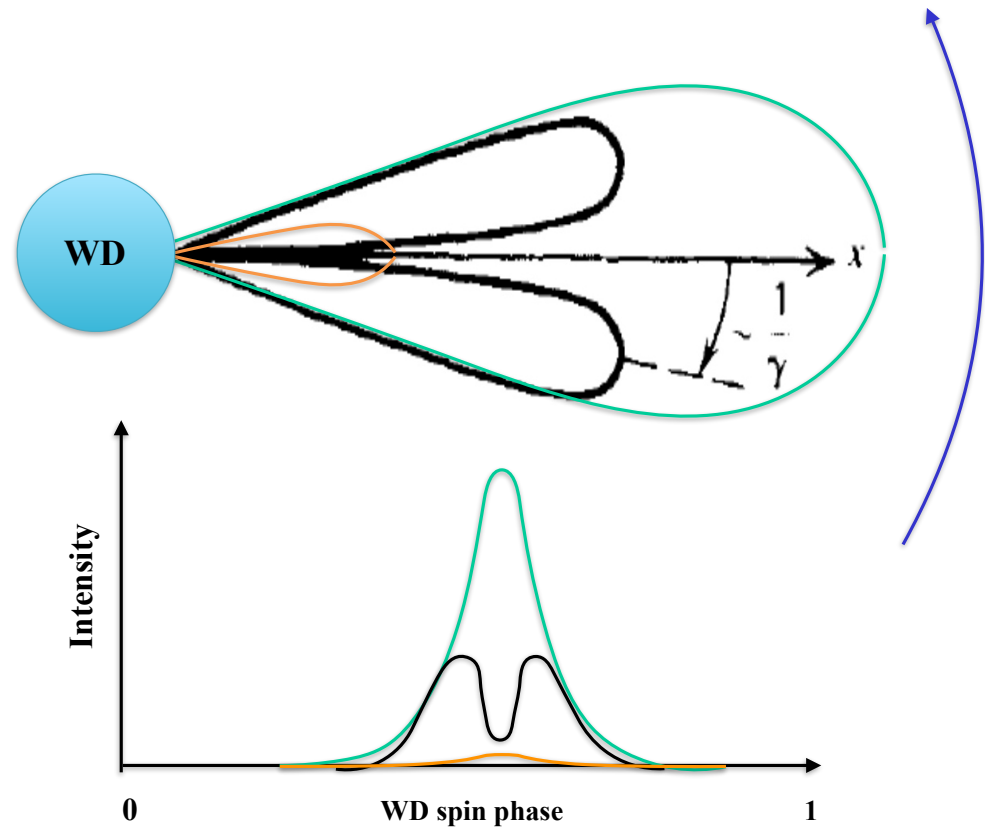
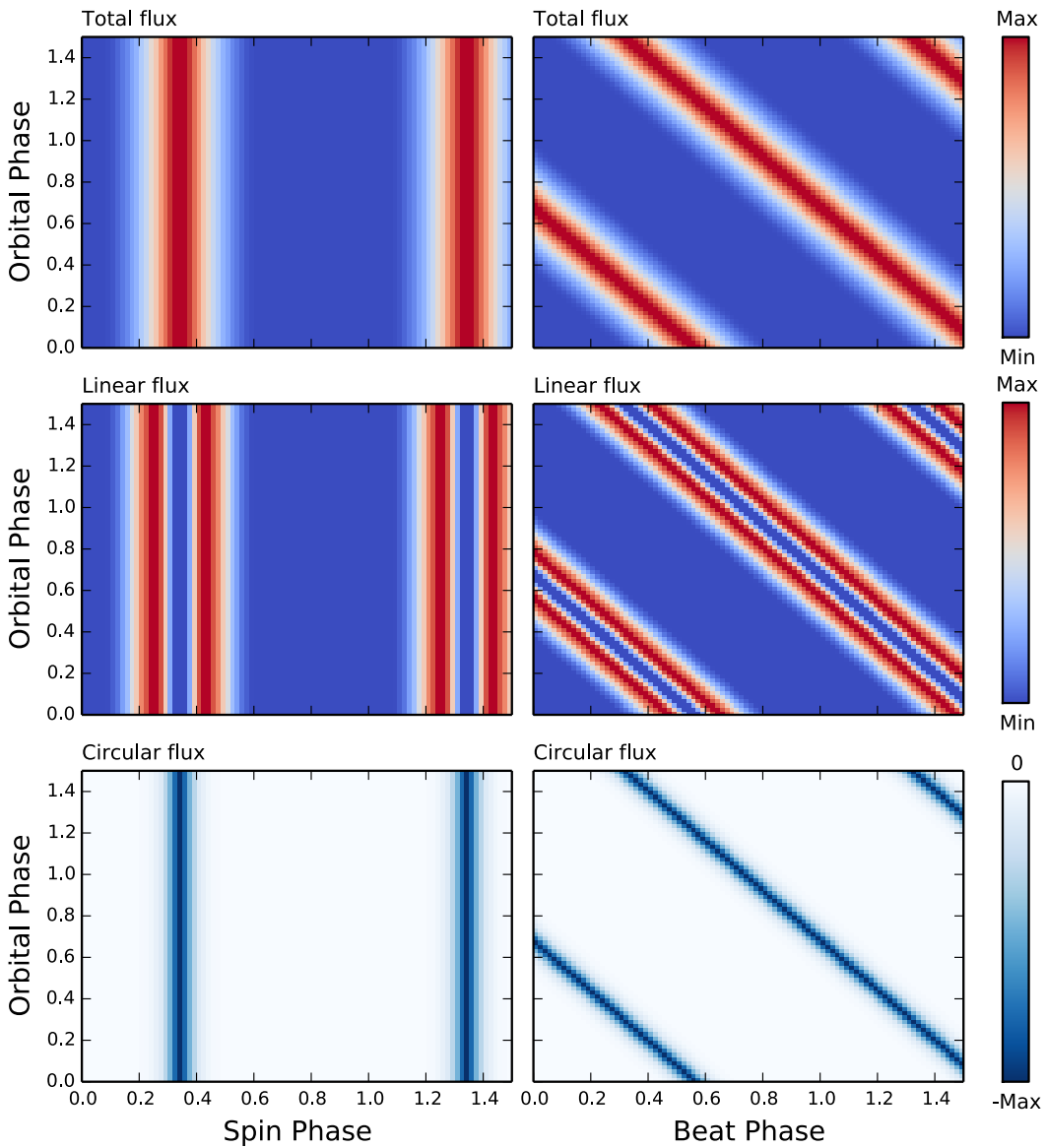




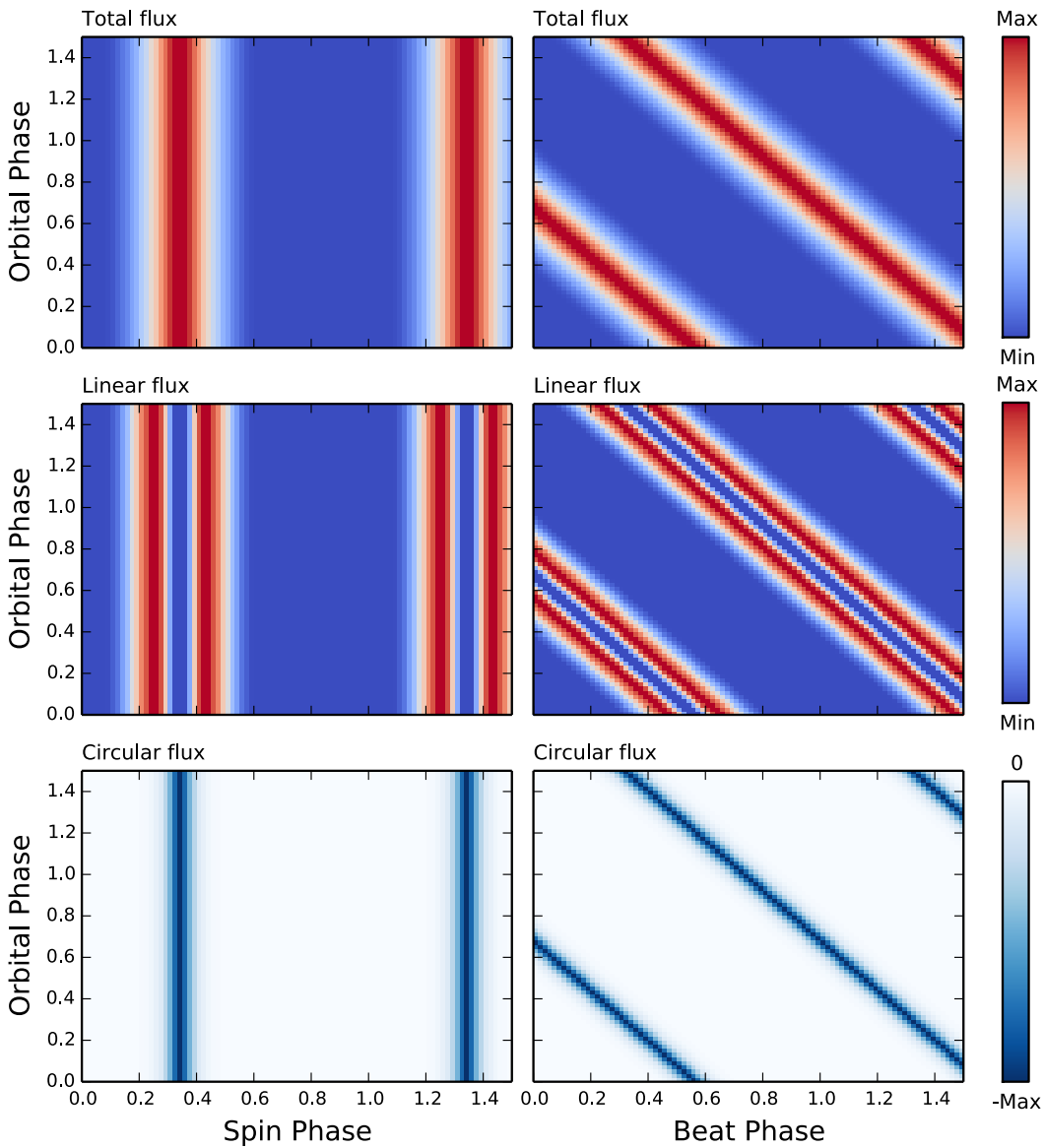




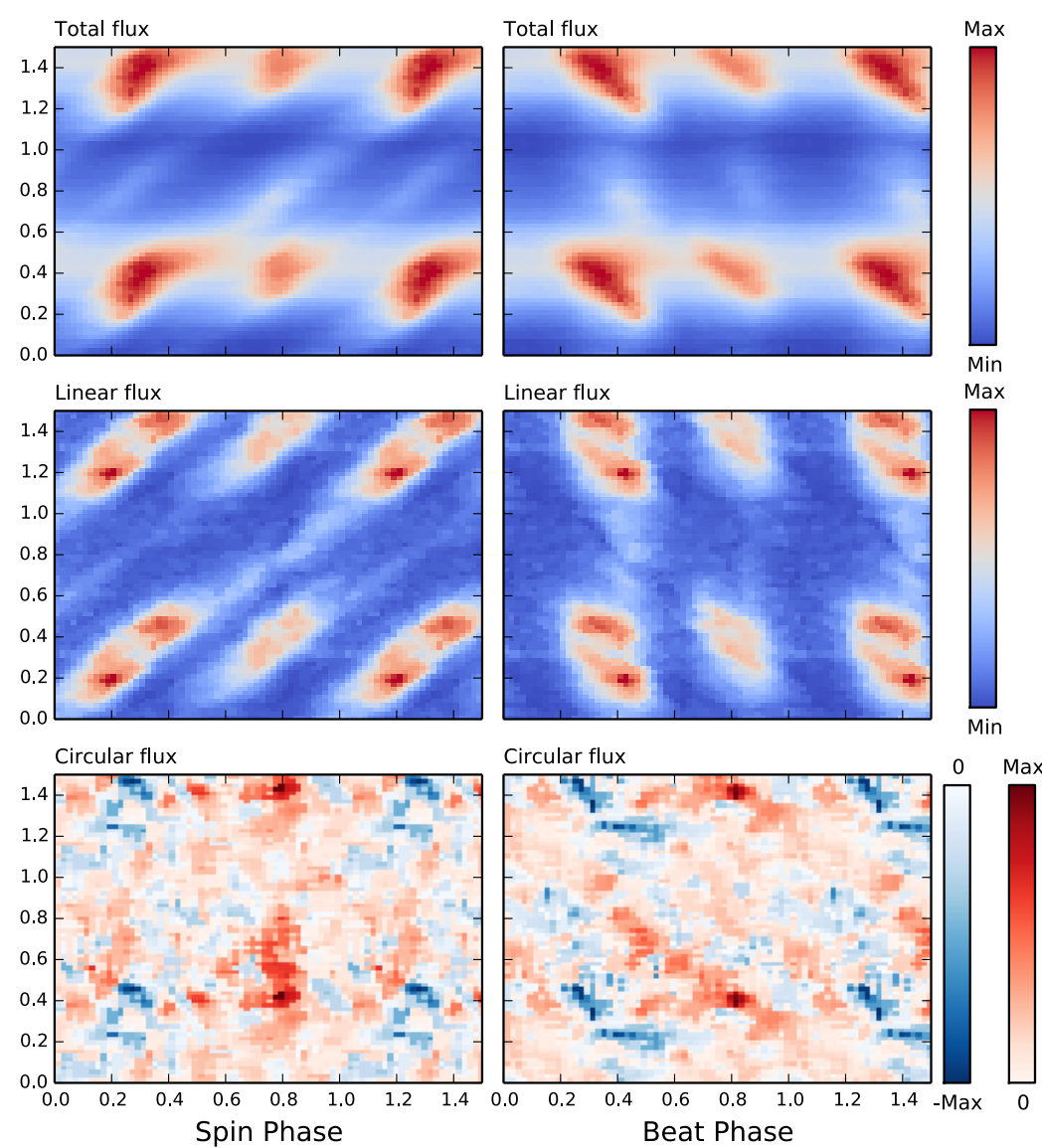
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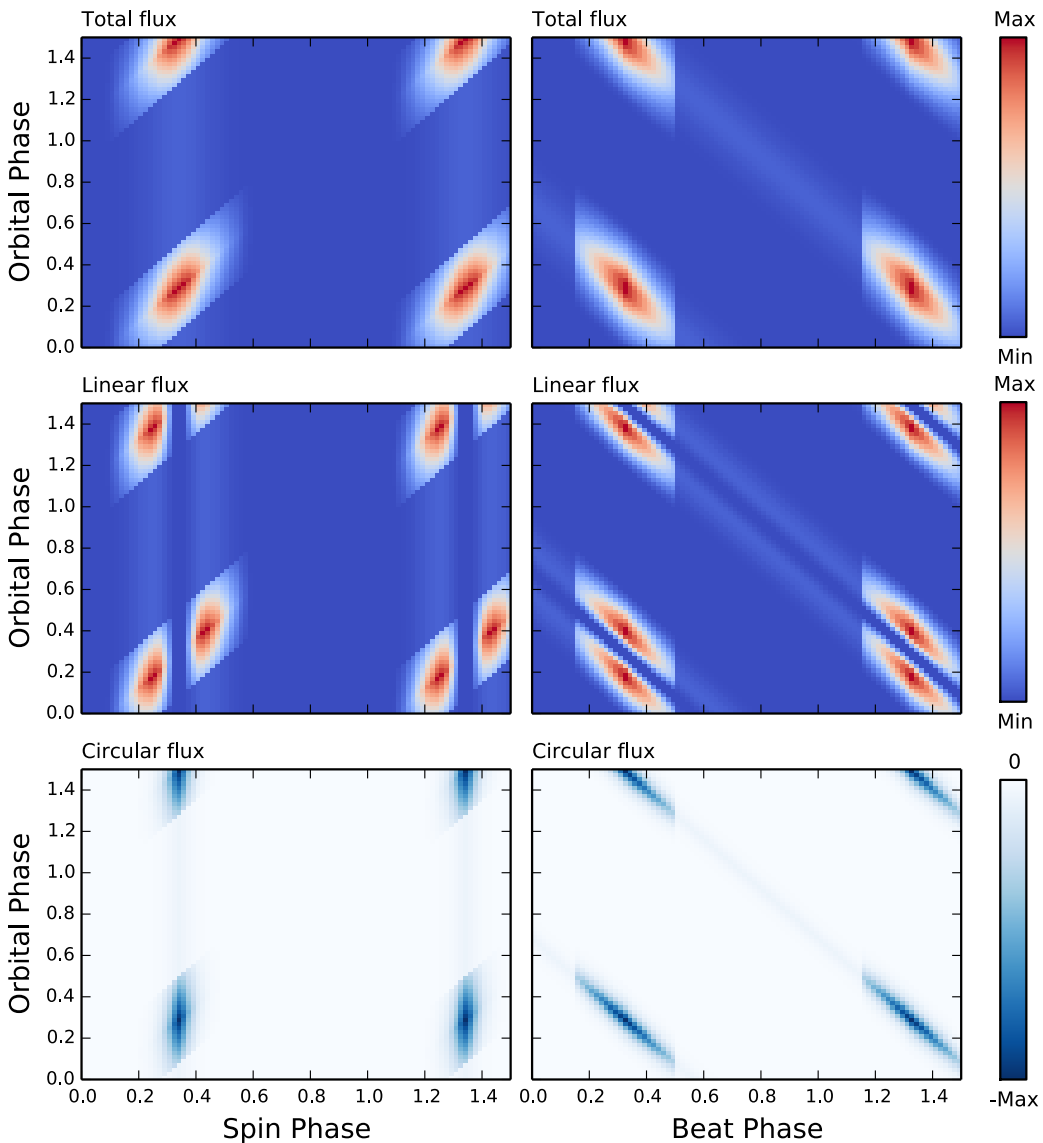
Model



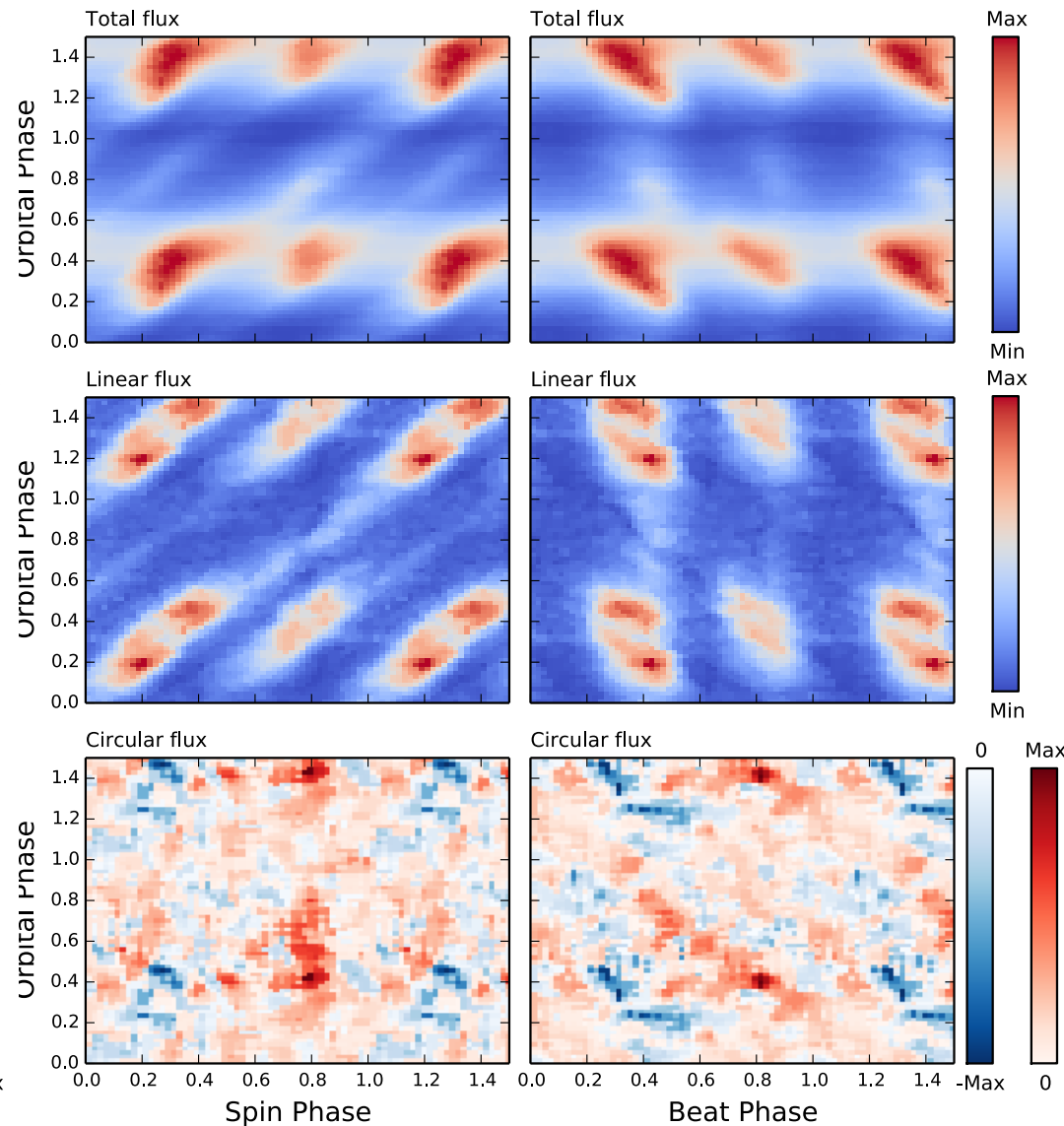
Observations



Model

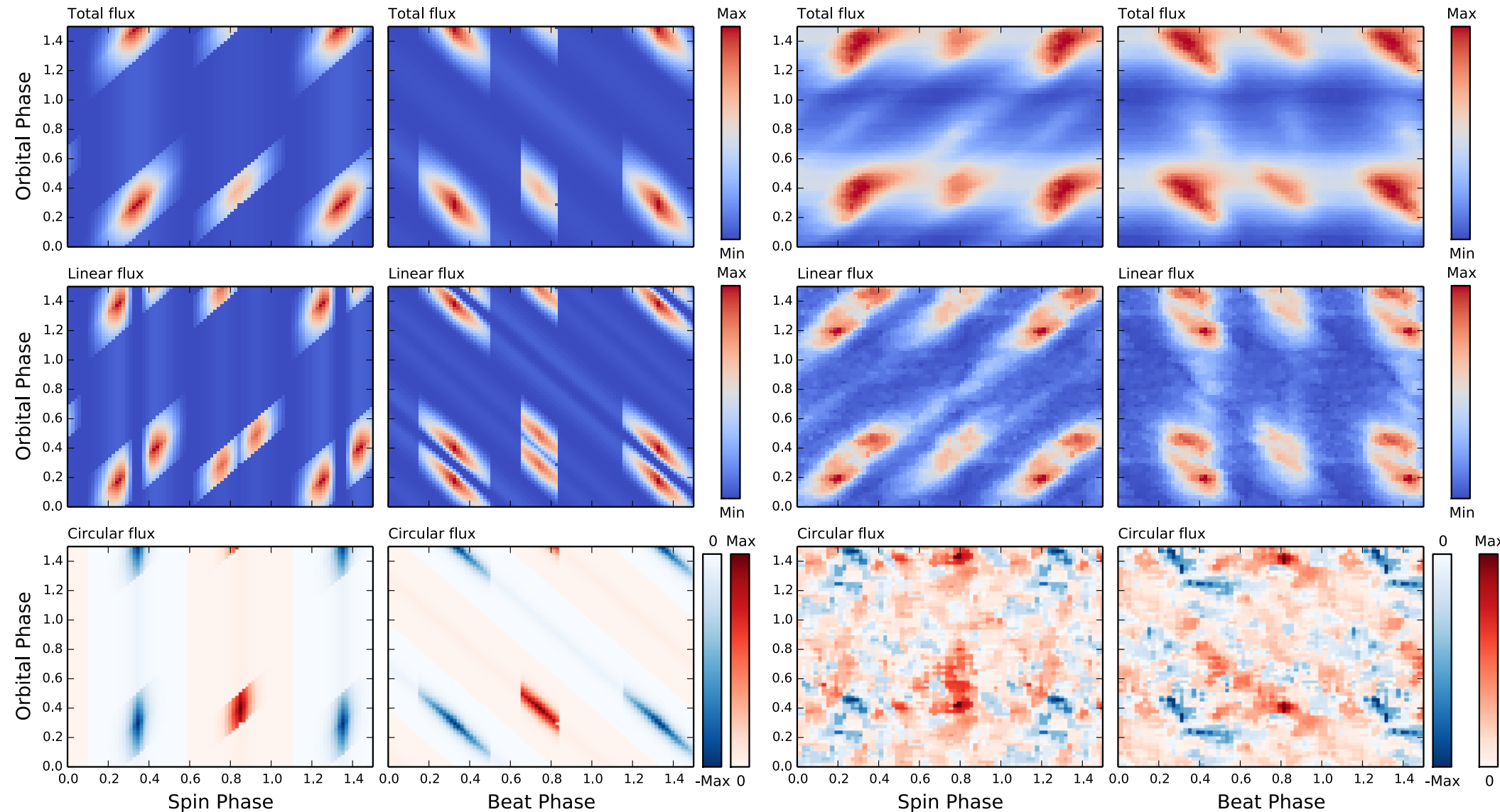


Observations



Model

Observations





Thank you