## Surface rotation period extraction plots Solar-Like

Plots marked a, b, c,... correspond to light curves obtained with the PDC-MAP corrections on which a 100 days-filter was then applied.

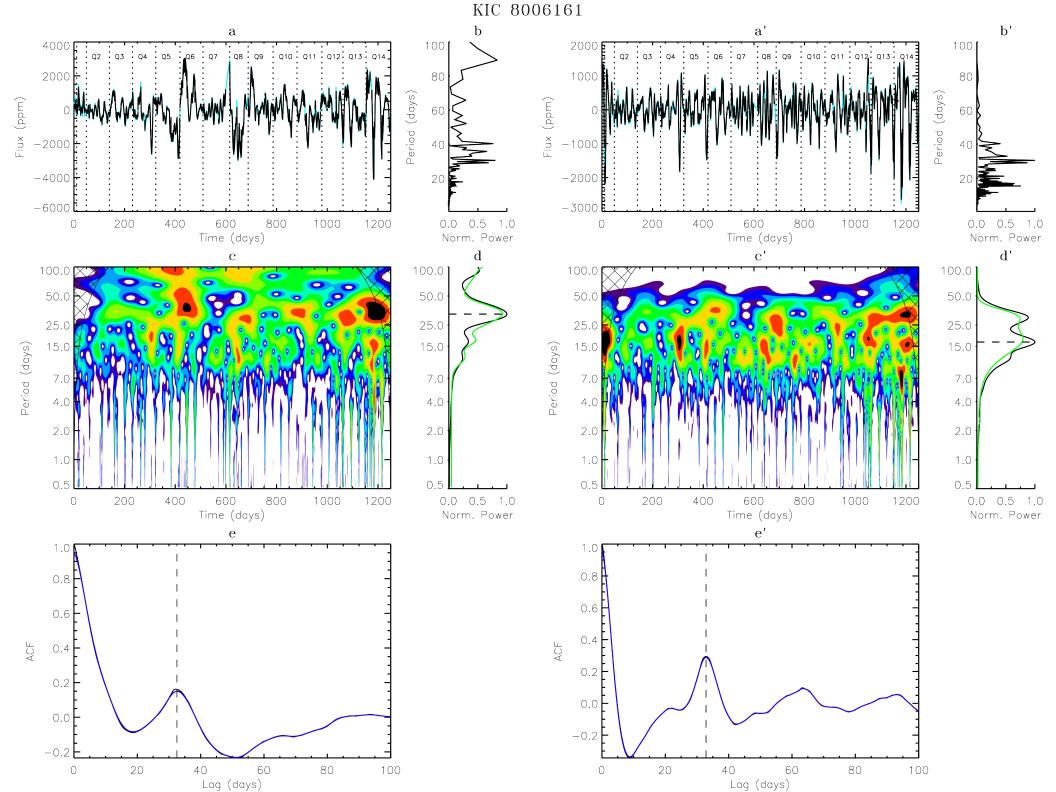
Plots marked a', b', c',... correspond to light curves obtained with the KADACS corrections using a filter of 30 days applied to the whole light curves.

For both corrections, the plots are as follows:

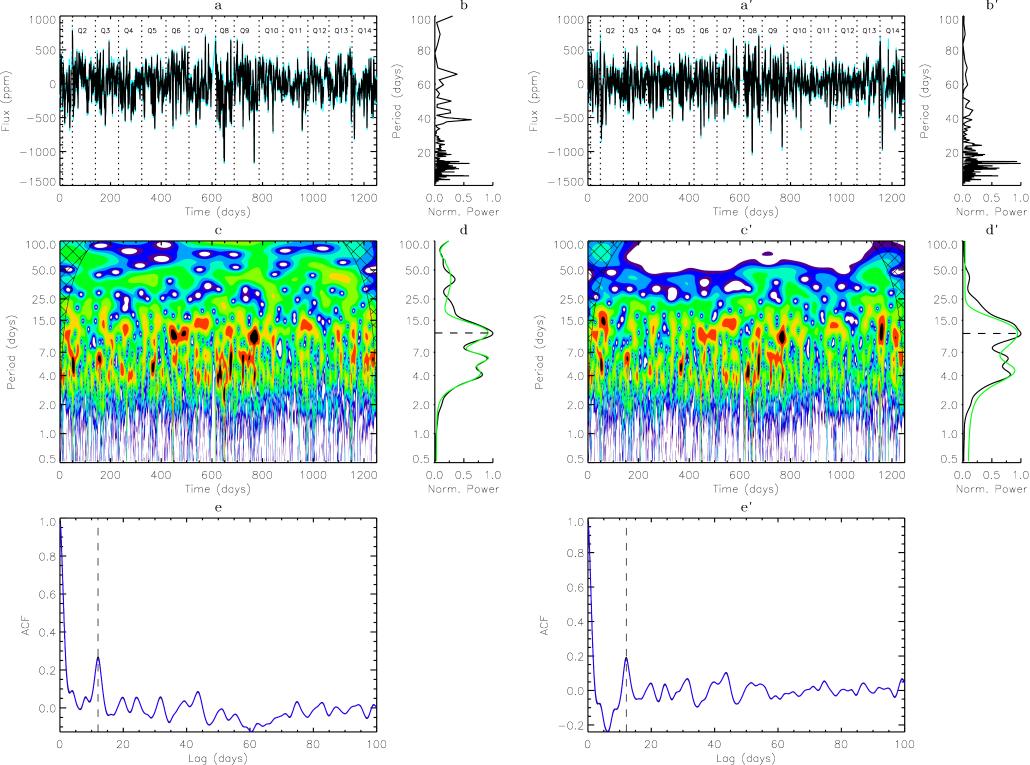
- a: Original light curve (light blue) and rebinned light curve (black). The vertical dotted lines mark the limits of the *Kepler* quarters.
- b: Power density spectrum of the rebinned light curve, normalised to its maximum.
- c: Wavelet Decomposition of the rebinned light curve. The red/black areas mark the most relevant periods while the blue/white areas mark the less relevant ones. The hatched region corresponds to the unreliable zone due to border effects.
- d: Global Wavelet Power Spectrum (i.e. the Wavelet Decomposition projected onto the periods axis) of the rebinned light curve, normalised to its maximum (black) and multiple gaussian functions fit (green). The horizontal dotted line marks the period retruned by this method.
- e: Autocorrelation Function (ACF) of the rebinned light curve (black) and smoothed ACF (blue). The vertical dotted line marks the period retruned by this method.

Lag (days)

Lag (days)



KIC 9139151 b' 100 100 80 500 80 Period (days) Period (days) 60 60 20 **−**1000 E -15000.0 0.5 1.0 Norm. Power 400 600 800 1000 0 200 400 600 800 1000 1200 1200 Time (days) Time (days) Norm. Power  $\mathbf{d}$ e' $\mathbf{d}'$  $\mathbf{c}$ 100.0 100.0 50.0 50.0 50.0 25.0 25.0 Period (days) 15.0 15.0 15.0 7.0 7.0 4.0 4.0 4.0 2.0 2.0 2.0 1.0 1.0 1.0 0.5 0.5 400 800 0.0 0.5 1.0 200 600 800 0.0 0.5 1.0 600 1000 1200 0 400 1000 1200 Norm. Power Time (days) Time (days) Norm. Power e'e 0.8 0.6



Lag (days)

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