

KIC 007031504

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007031504-01	OBS	No	0.566792	131.838821	42.6	4.748	9.7	10.6	0.98	6211	0.75	6896.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031504-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

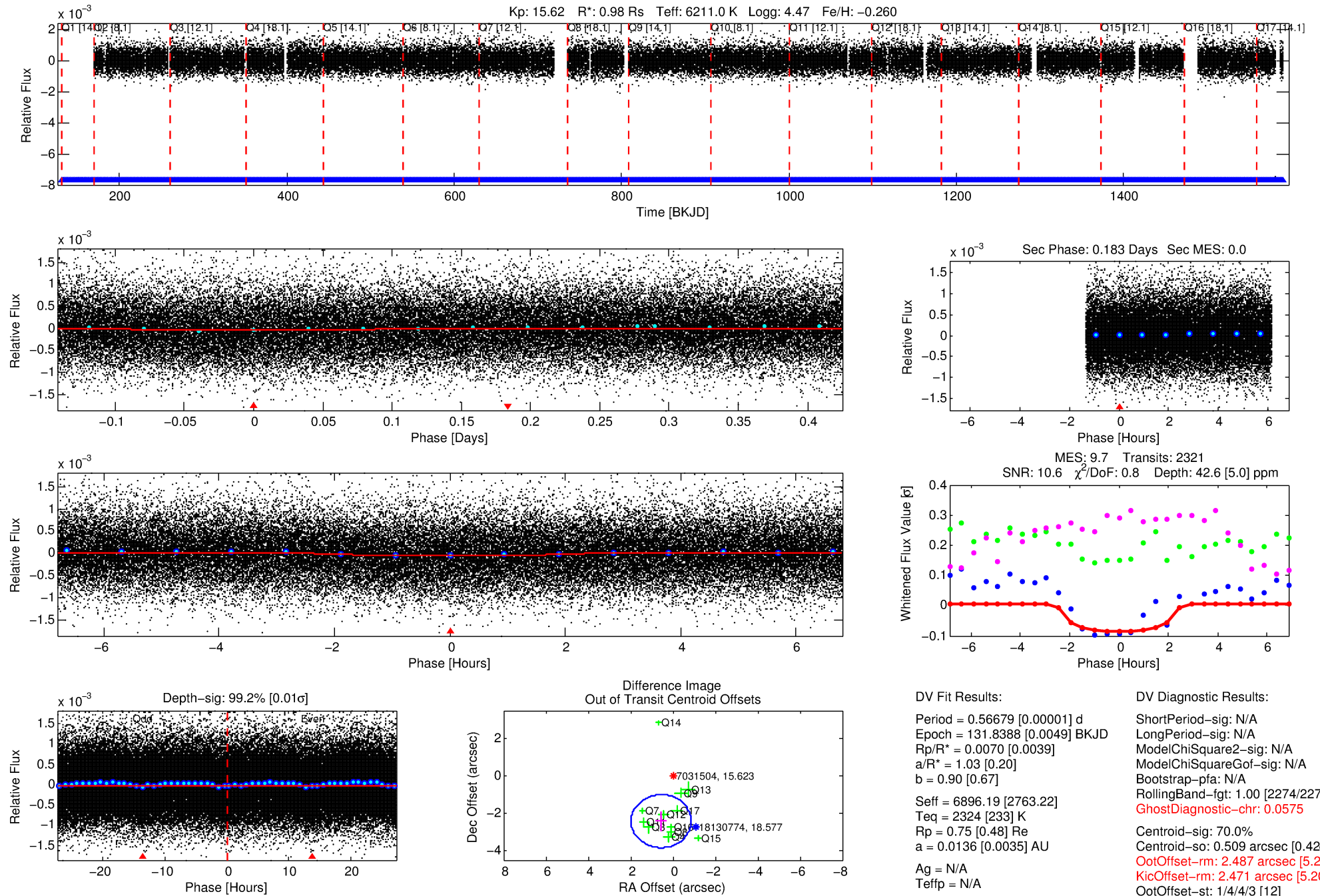
Ephemeris Match Information For 007031504-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007031504-01	7031504	RR-Lyr-pri	7198959	1:1	1029.8	78	-247	7.86	15.62	14495.00	Direct-PRF	0	1.21	17.83

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

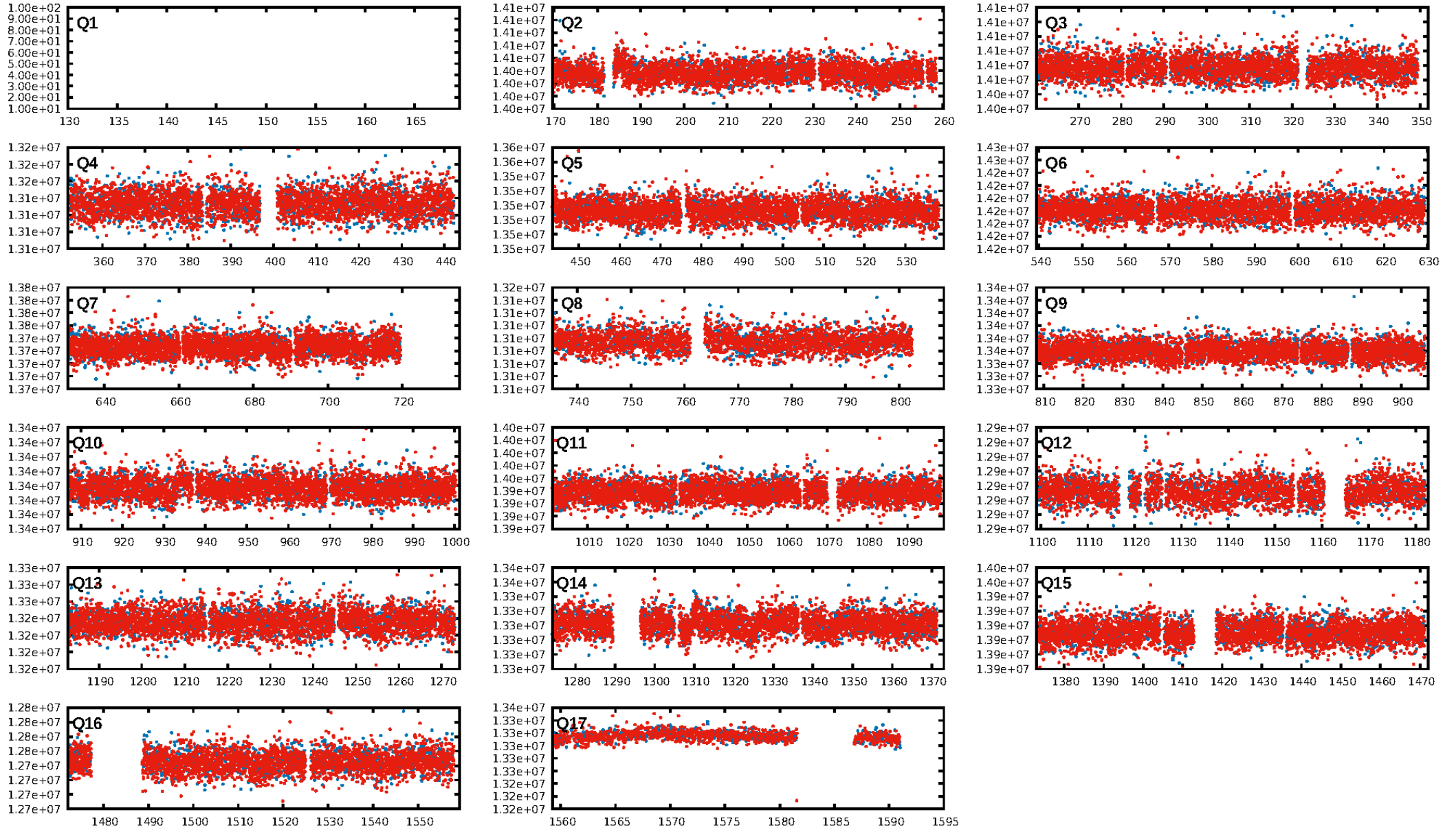
KIC: 7031504 Candidate: 1 of 1 Period: 0.567 d



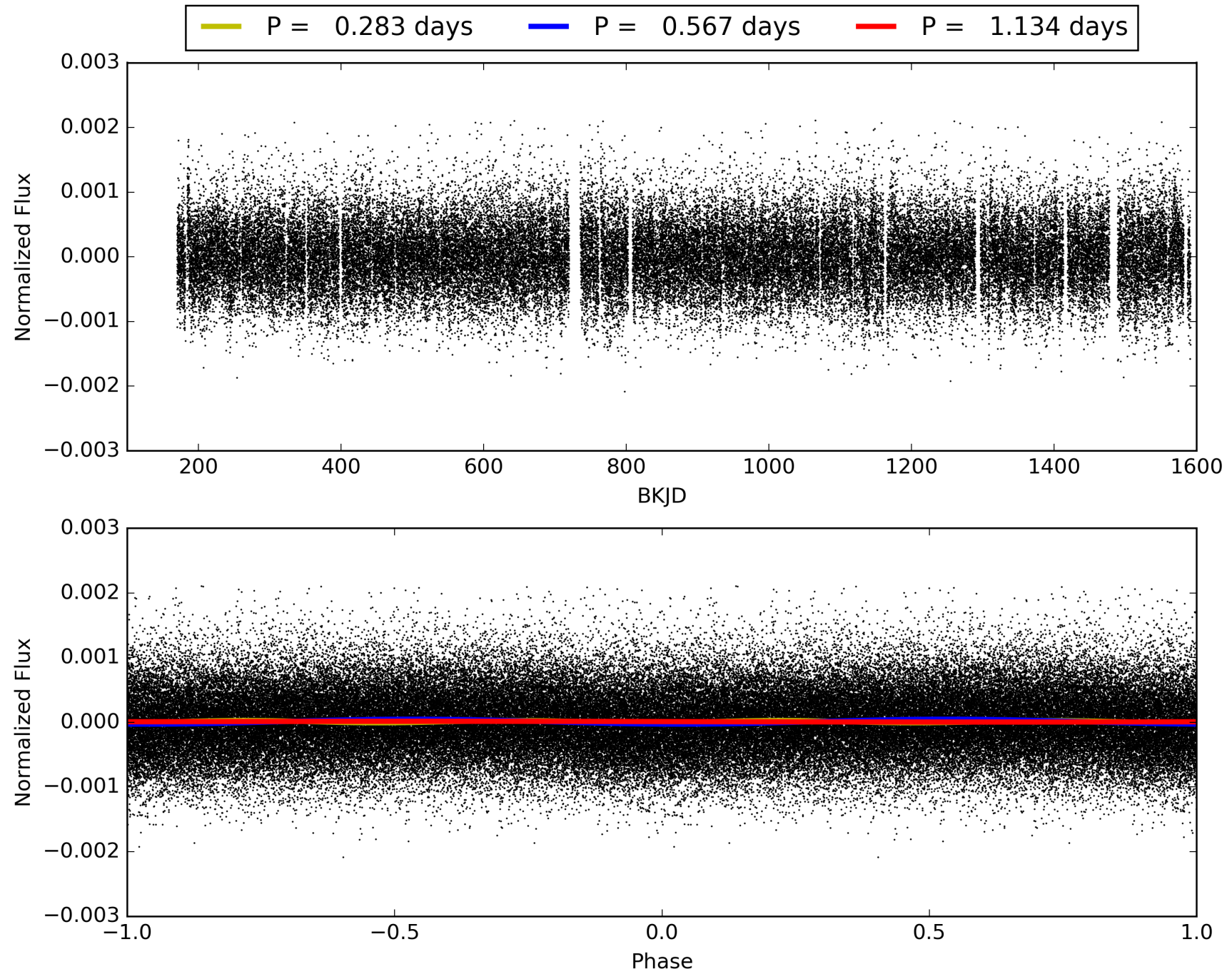
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:24:01 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007031504-01, PDC Light Curves

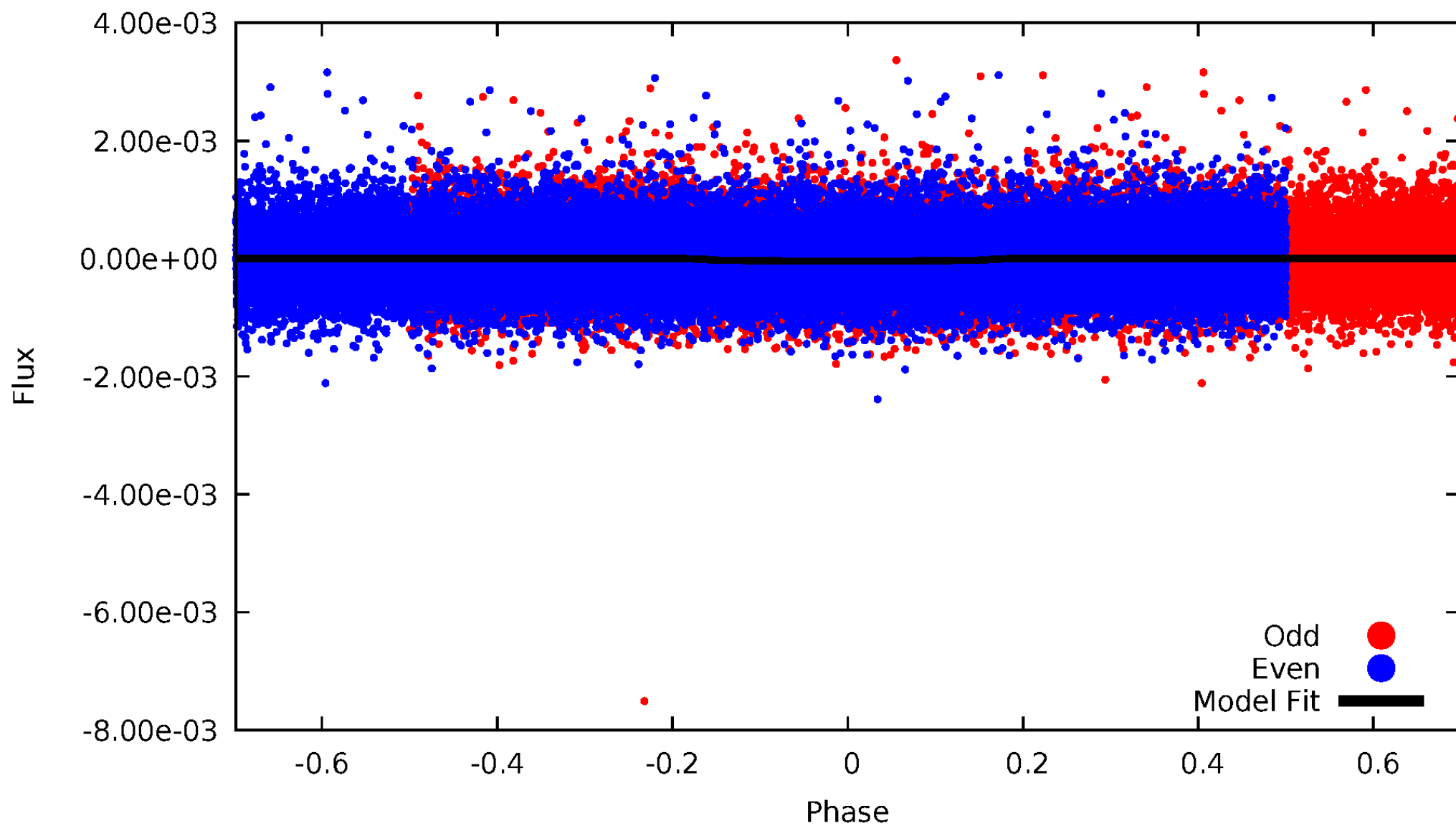


TCE 007031504-01



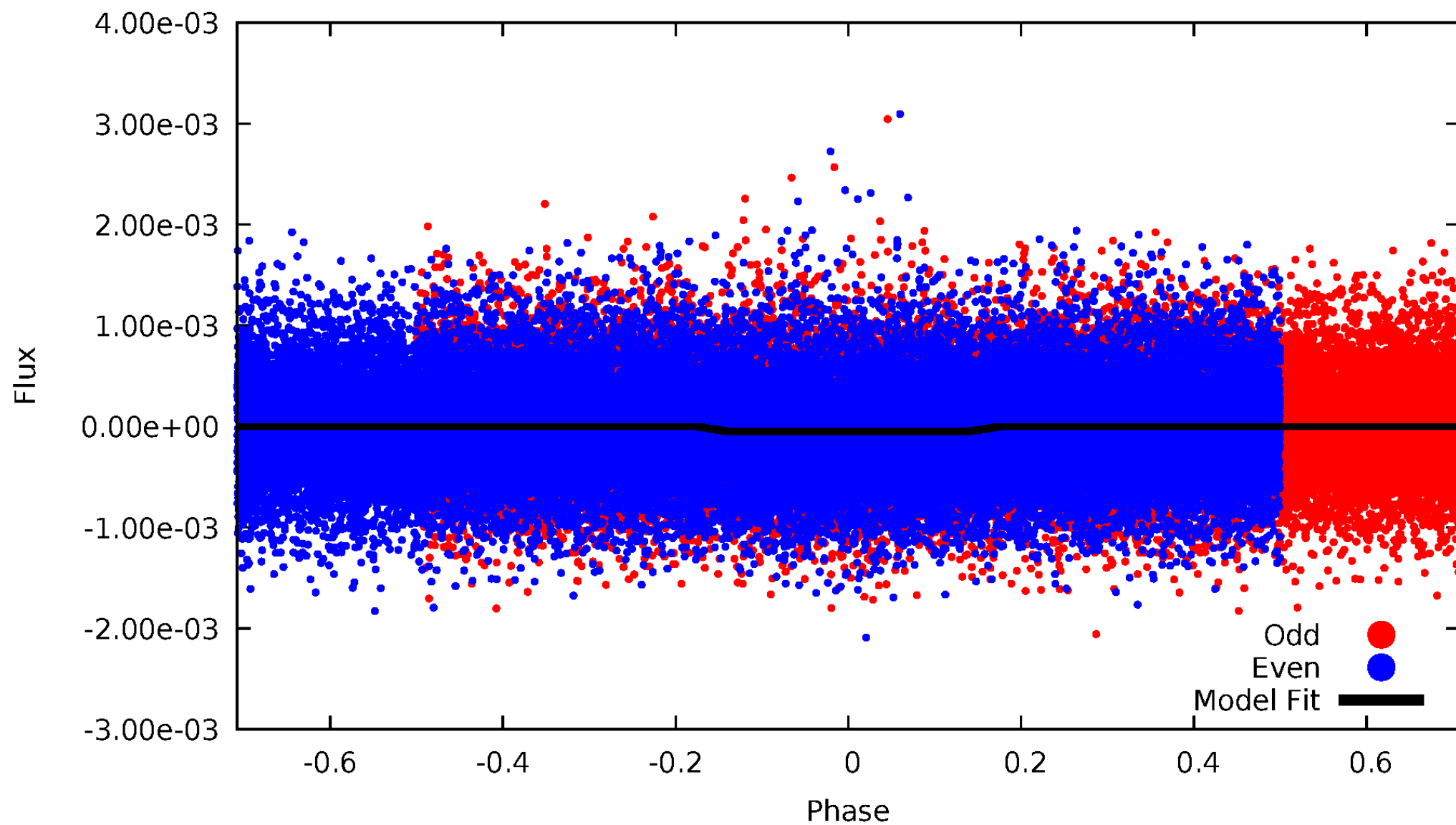
DV Odd/Even

TCE 007031504-01



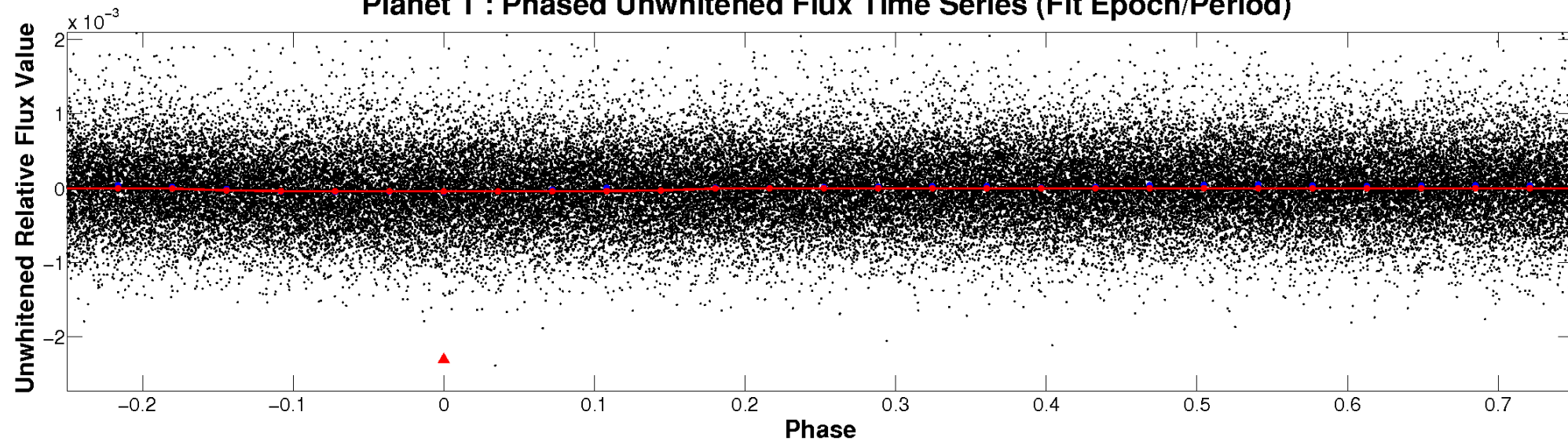
ALT Odd/Even

TCE 007031504-01

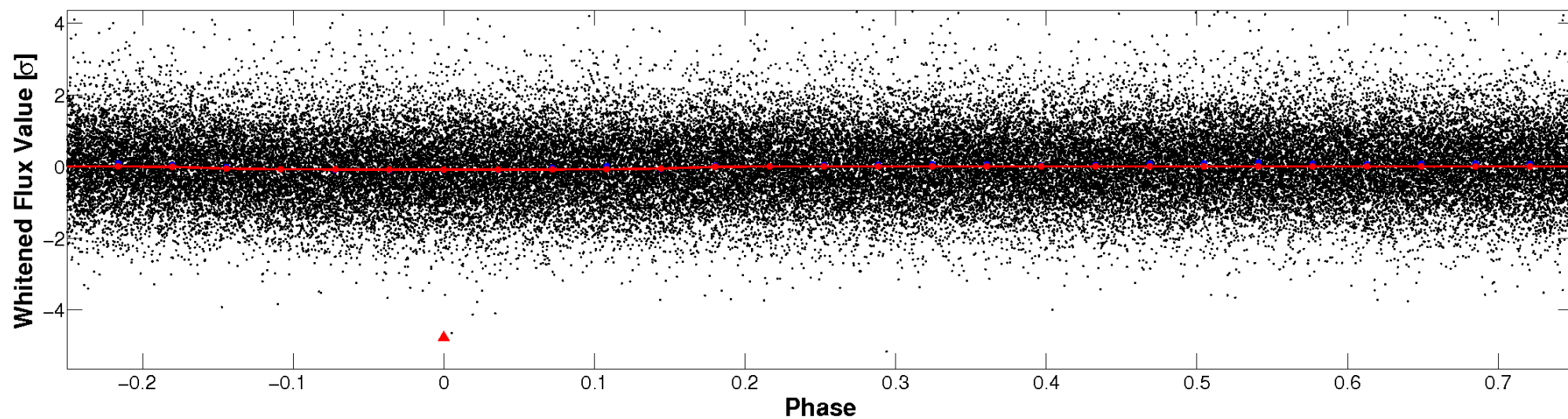


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

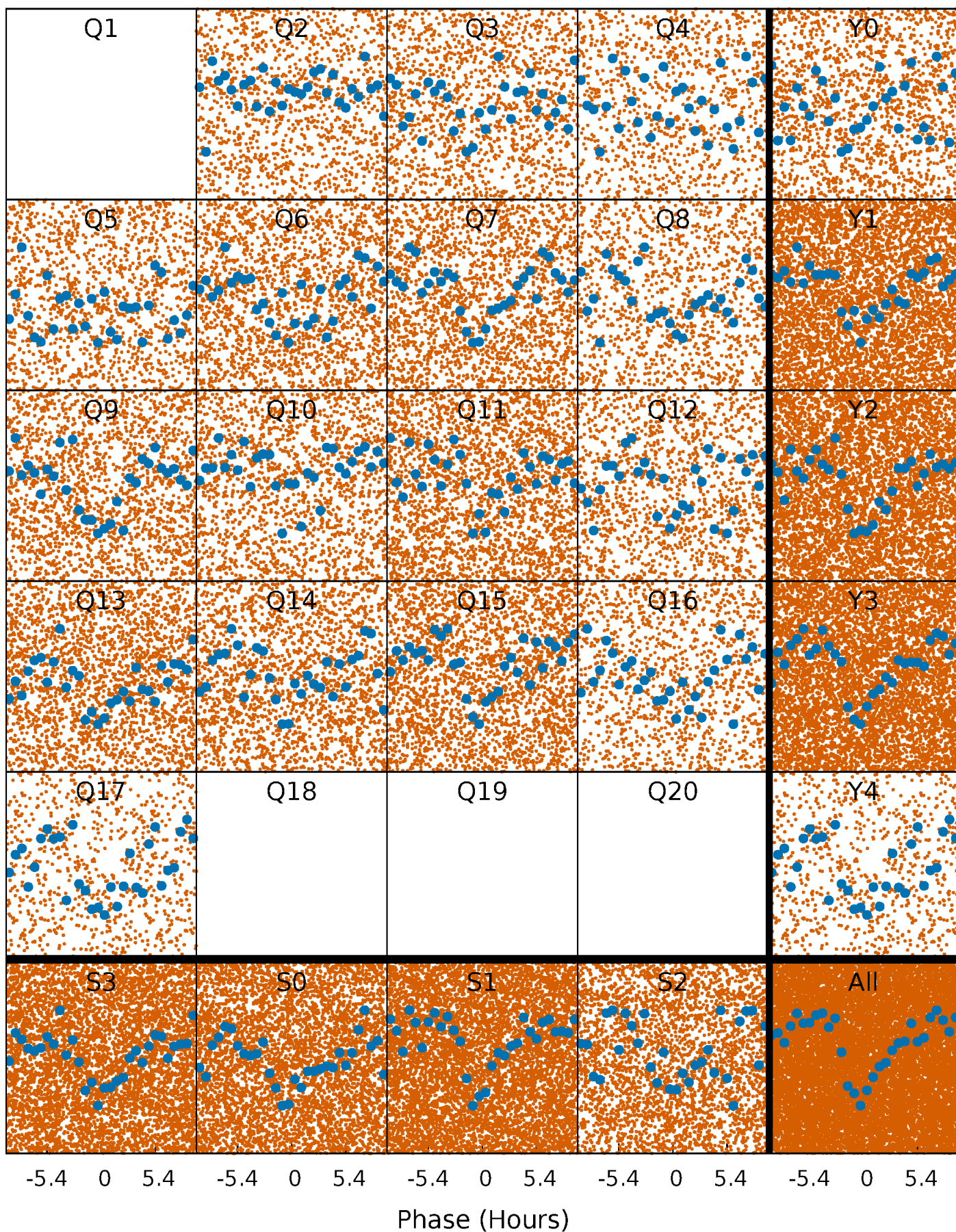


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



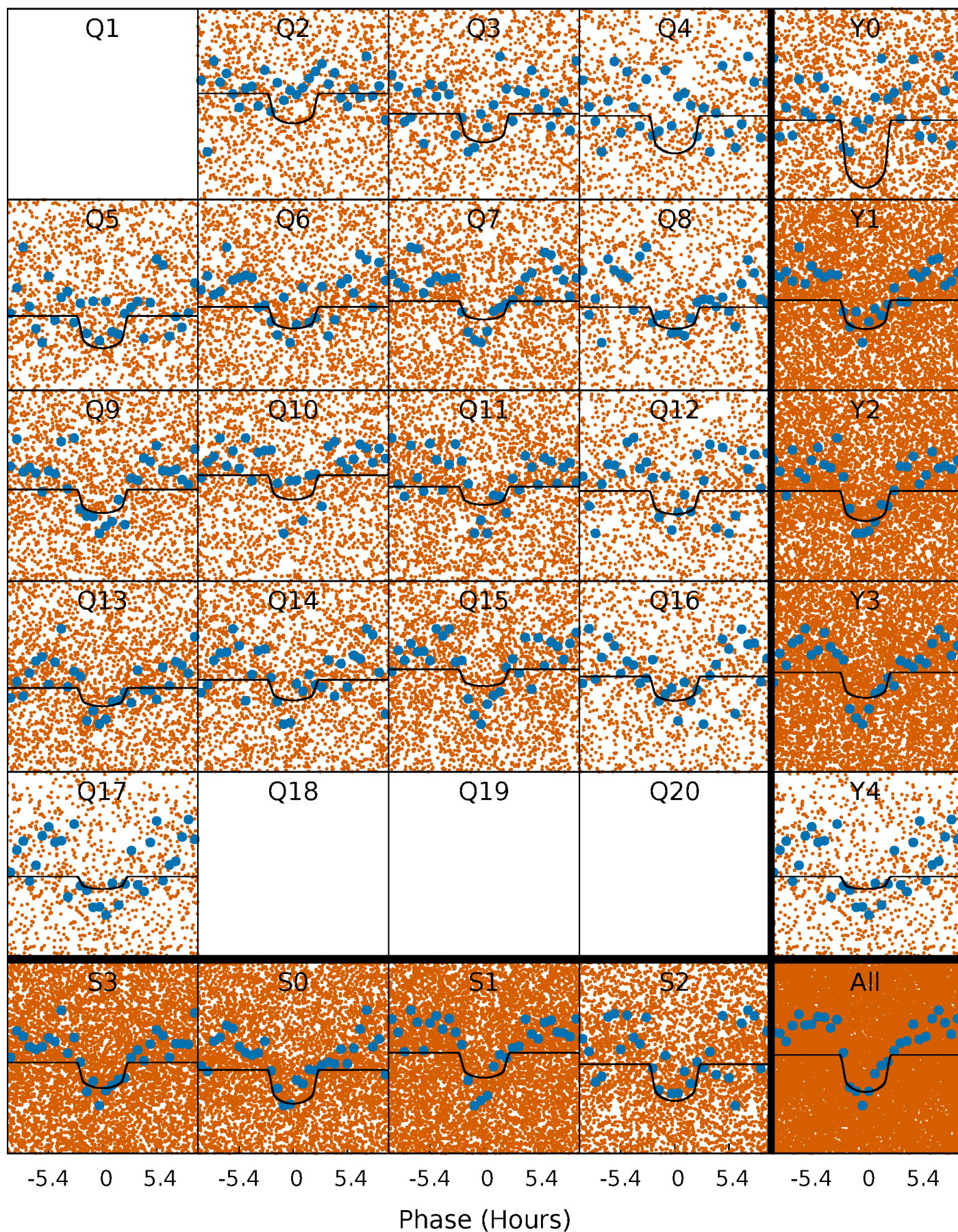
PDC Quarter-Phased Transit Curves

TCE 007031504-01 P= 0.566792 Days $T_0=131.838821$ (BKJD)



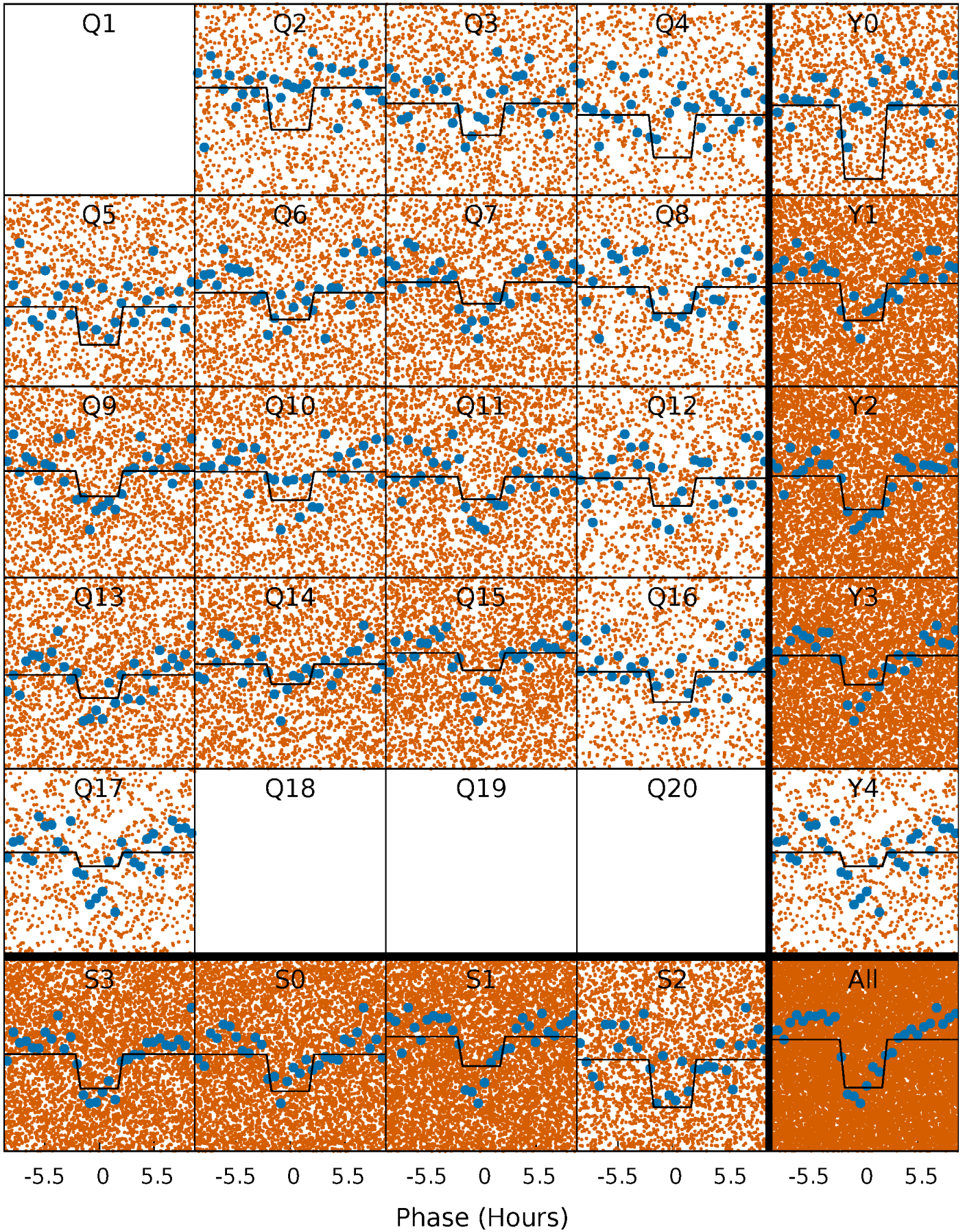
DV Quarter-Phased Transit Curves

TCE 007031504-01 P= 0.566792 Days $T_0=131.838821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

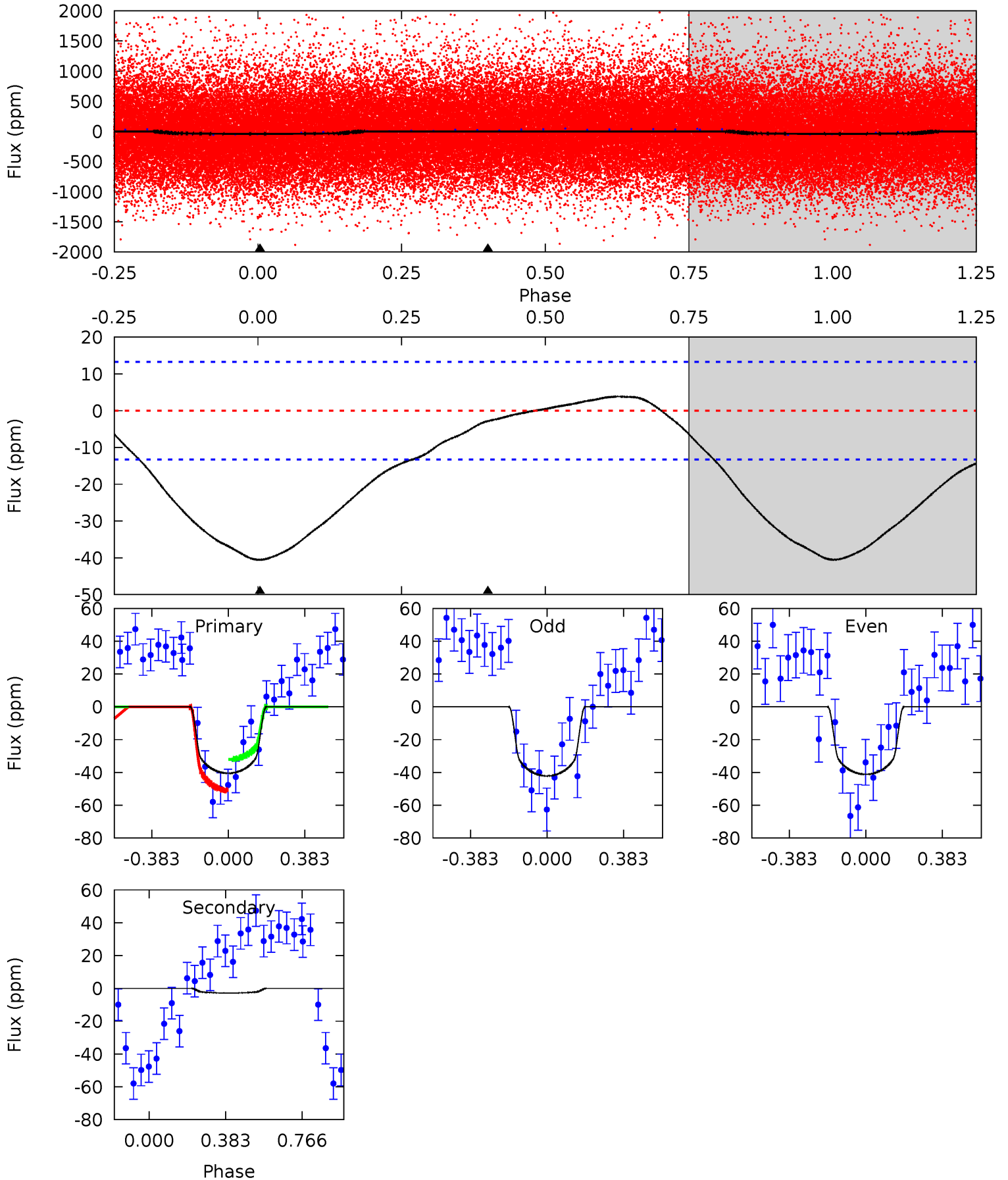
TCE 007031504-01 P= 0.566795 Days $T_0=131.839329$ (BKJD)



DV Model-Shift Uniqueness Test

007031504-01, P = 0.566792 Days, E = 131.838821 Days

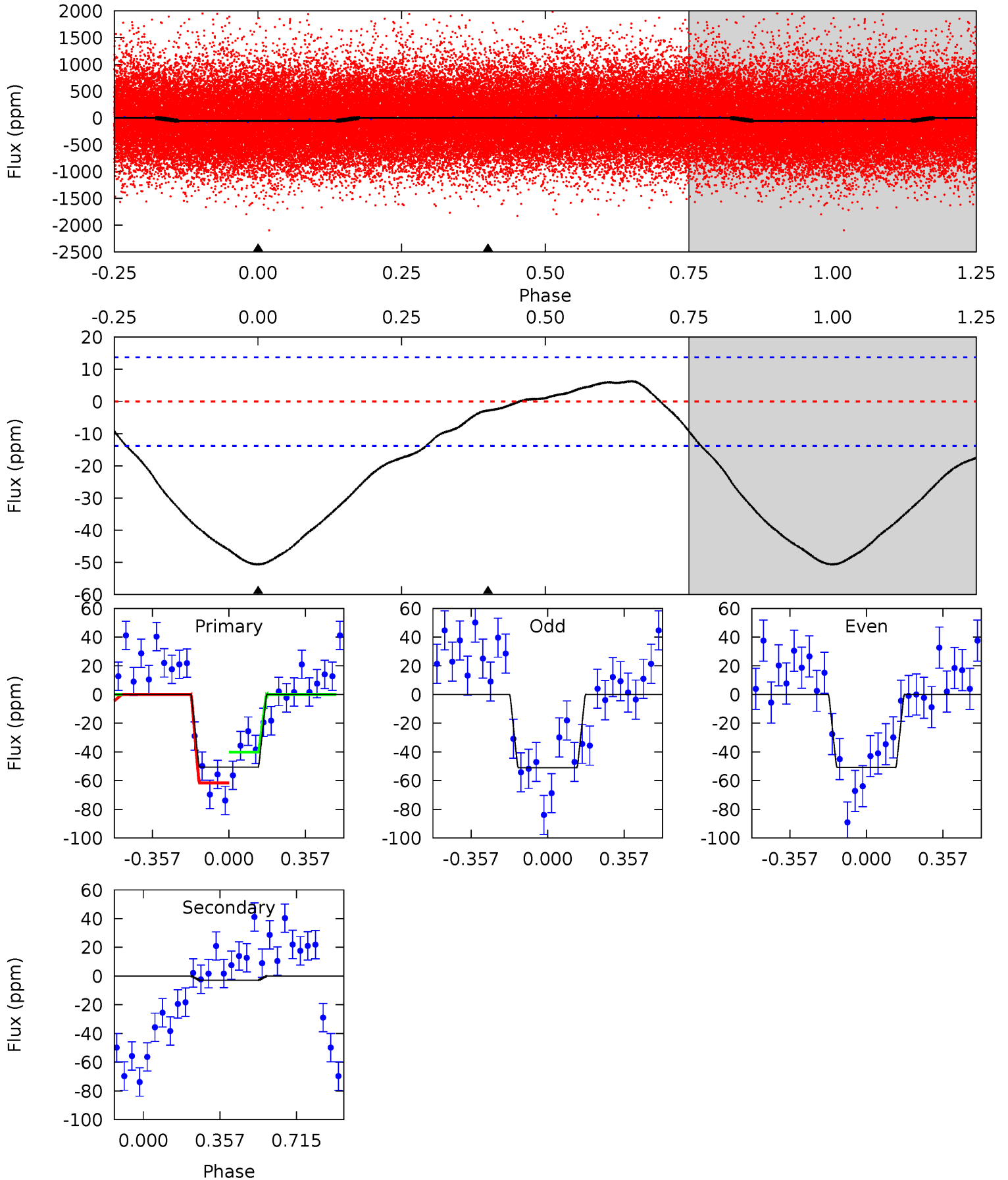
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	0.91	0	0	4.27	0.87	1.04	13.1	13.1	0.91	0.91	0.16	1.04	0.09	3.02



Alt Model-Shift Uniqueness Test

007031504-01, P = 0.566795 Days, E = 131.839329 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	0.89	0	0	4.29	0.92	1.51	15.8	15.8	0.89	0.89	0.02	0.94	0.11	3.33



Stellar Parameters For KIC 007031504

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6211^{+188}_{-225}	$4.475^{+0.054}_{-0.202}$	$-0.260^{+0.250}_{-0.300}$	$0.976^{+0.305}_{-0.102}$	$1.037^{+0.147}_{-0.134}$	$1.571^{+0.420}_{-0.793}$
	+3%/-4%	+1%/-5%	+96%/-115%	+31%/-10%	+14%/-13%	+27%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007031504-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 3	$0.82^{+0.44}_{-0.44}$	3316^{+257}_{-177}	2683^{+1697}_{-6044}	$0.380^{+1.565}_{-0.393}$
Alt.	-3 ± 3	$0.83^{+0.43}_{-0.41}$	3302^{+238}_{-178}	2705^{+1547}_{-6022}	$0.375^{+1.414}_{-0.369}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

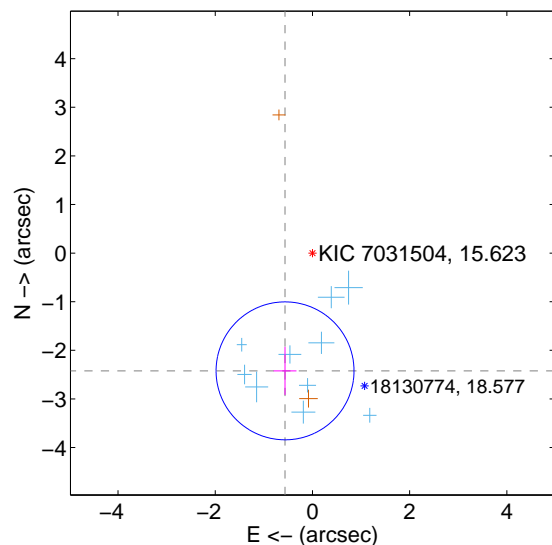
Supplemental centroid analysis for 007031504-01. Kepler magnitude: 15.62. Transit SNR 10.60

There are 10 quarters with good PRF difference image offsets

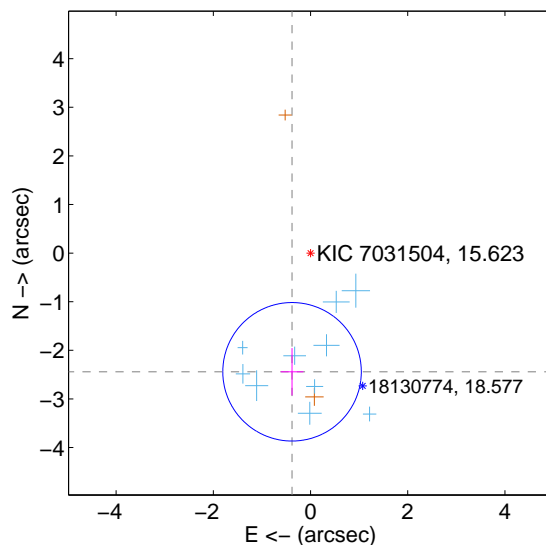
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.487 ± 0.473	5.26	0.563 ± 0.235	-2.422 ± 0.495
PRF-fit source offset from KIC position	2.471 ± 0.475	5.20	0.380 ± 0.235	-2.442 ± 0.487
photometric centroid source offset	0.51 ± 1.21	0.42	0.27 ± 1.23	0.43 ± 1.21

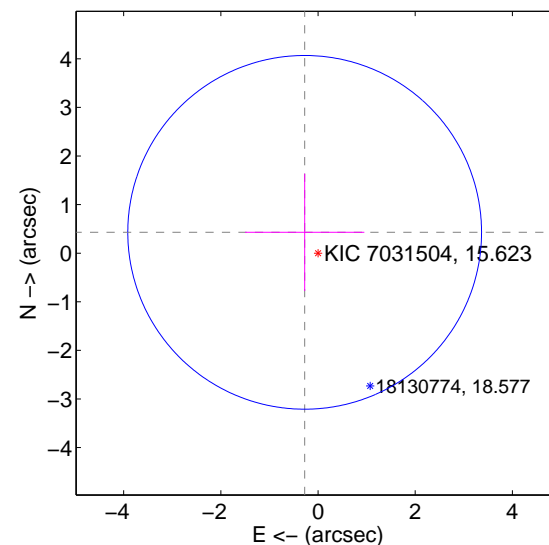
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

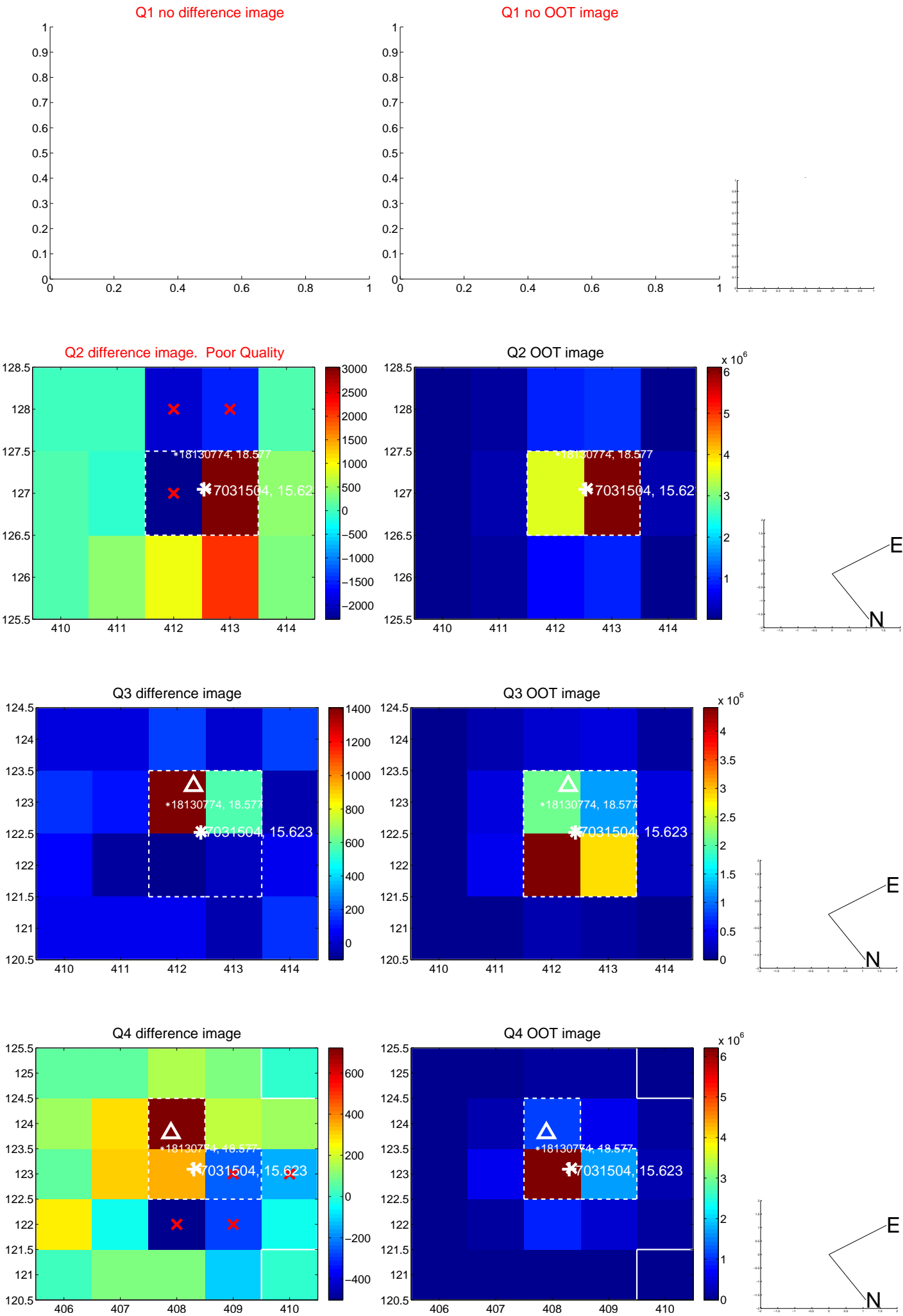


offset from photometric centroids

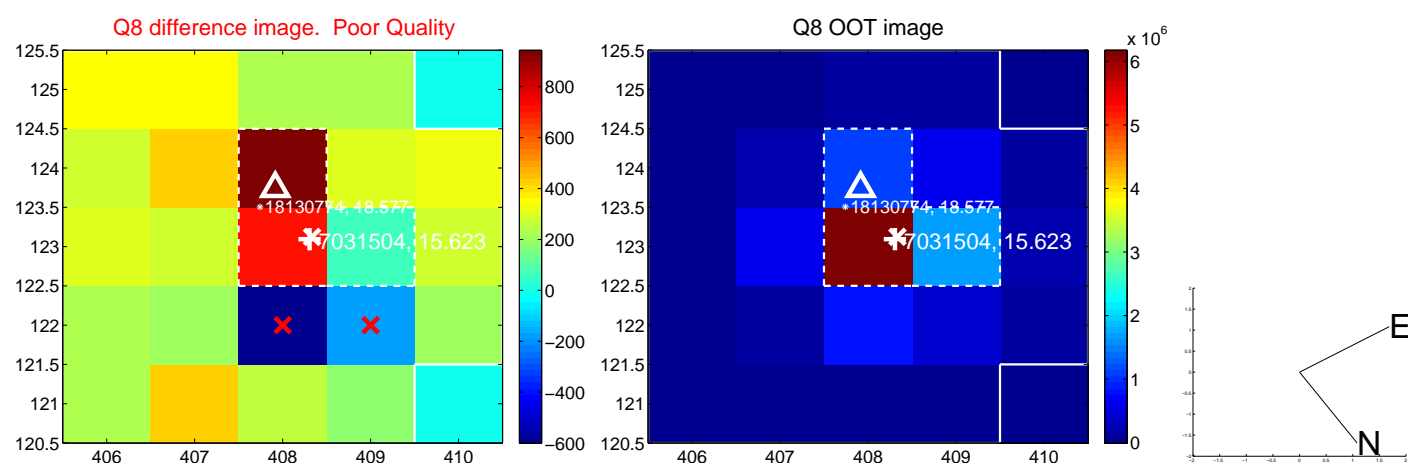
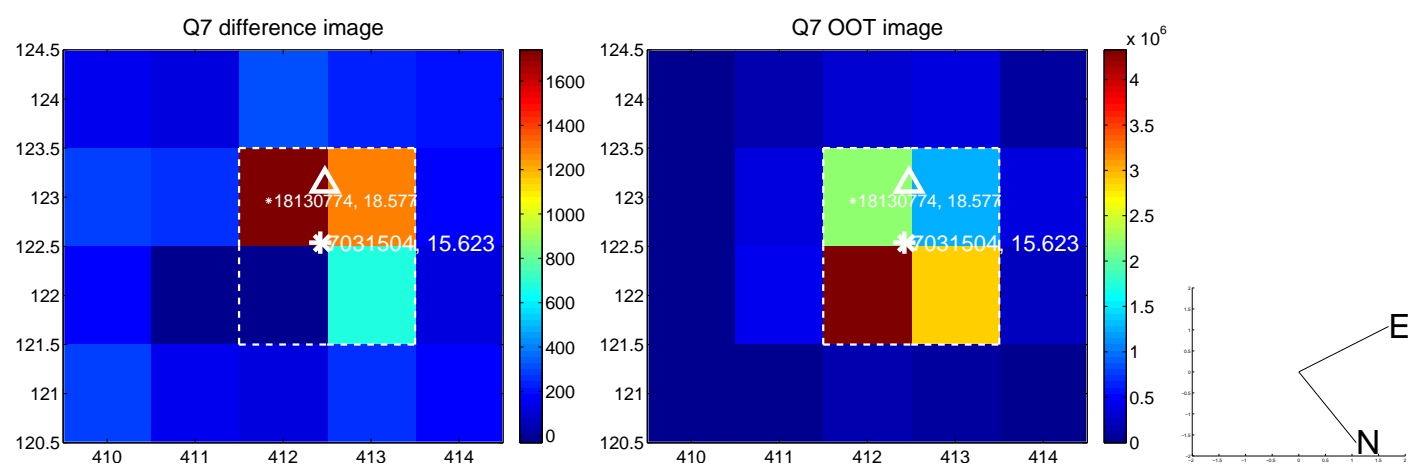
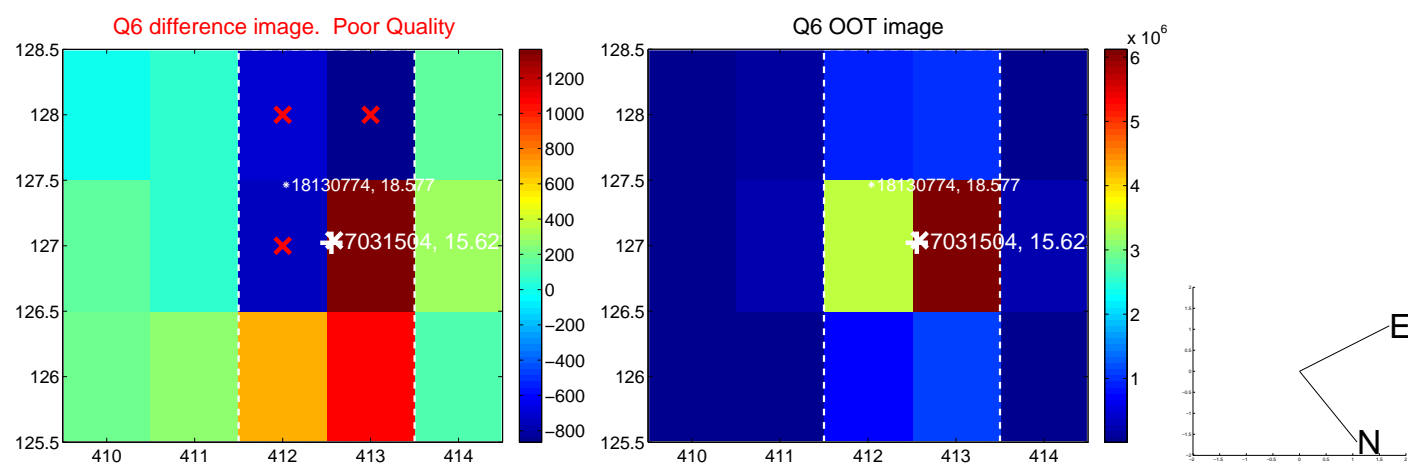
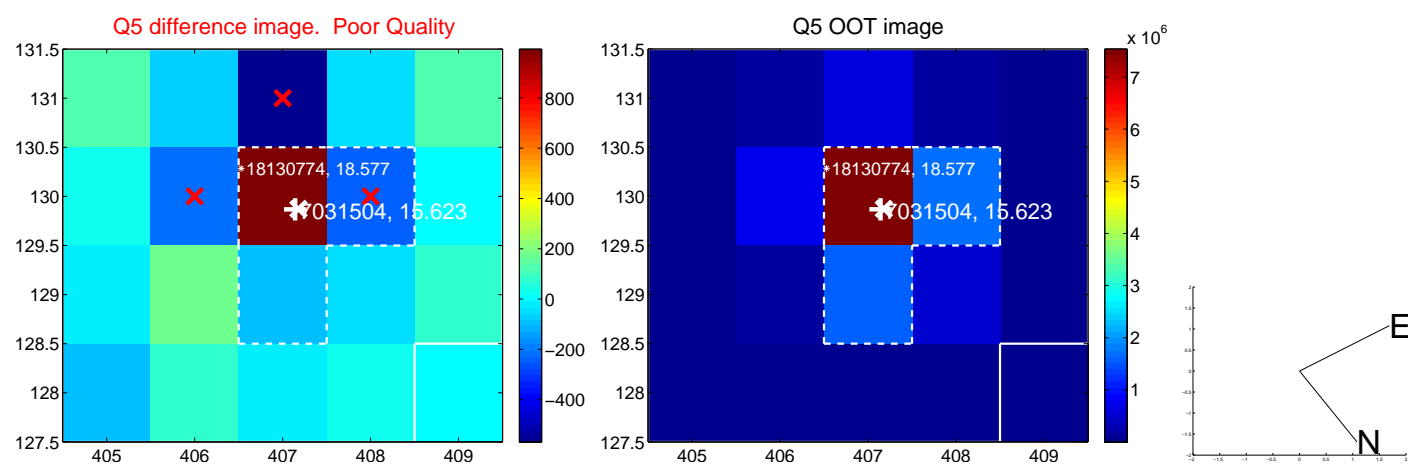


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

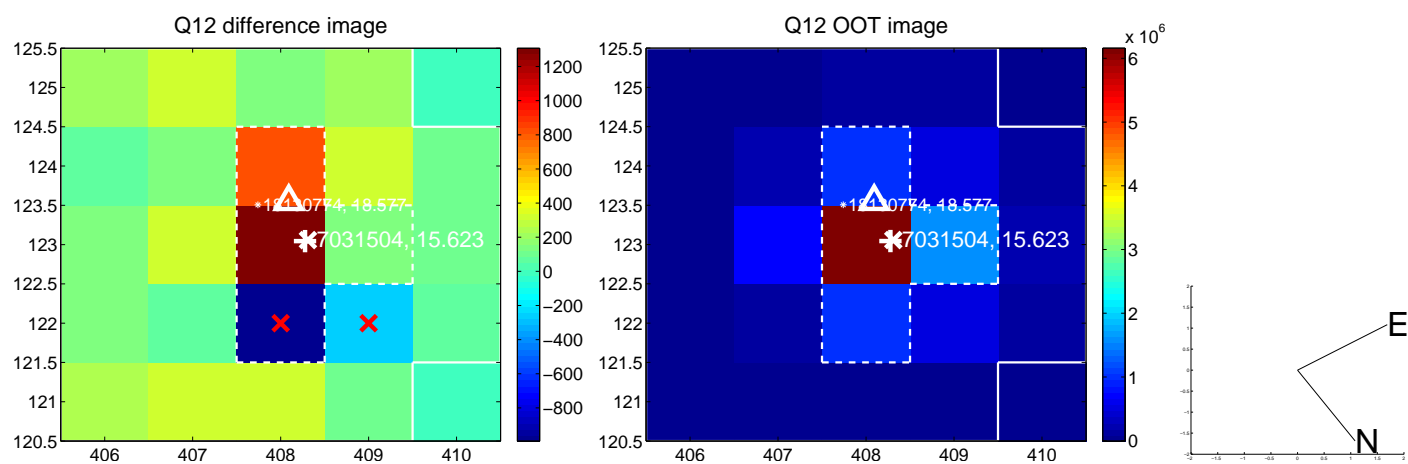
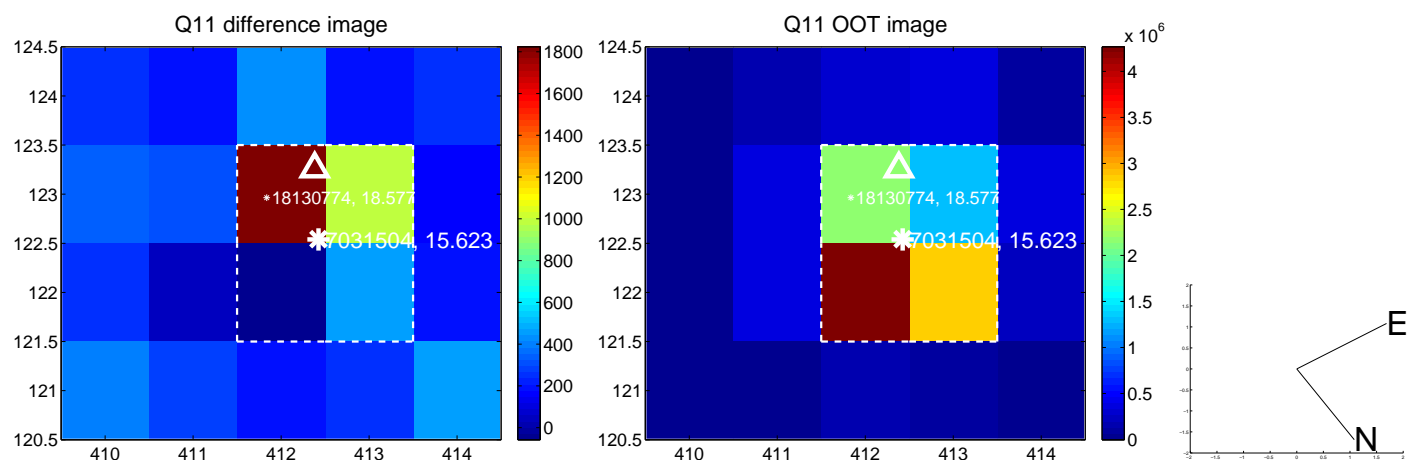
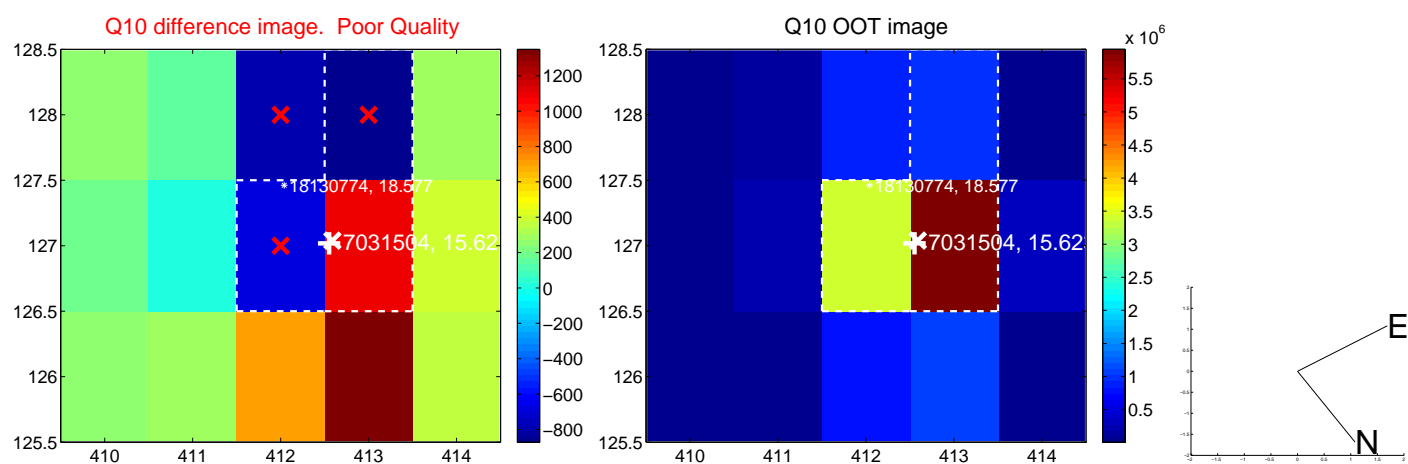
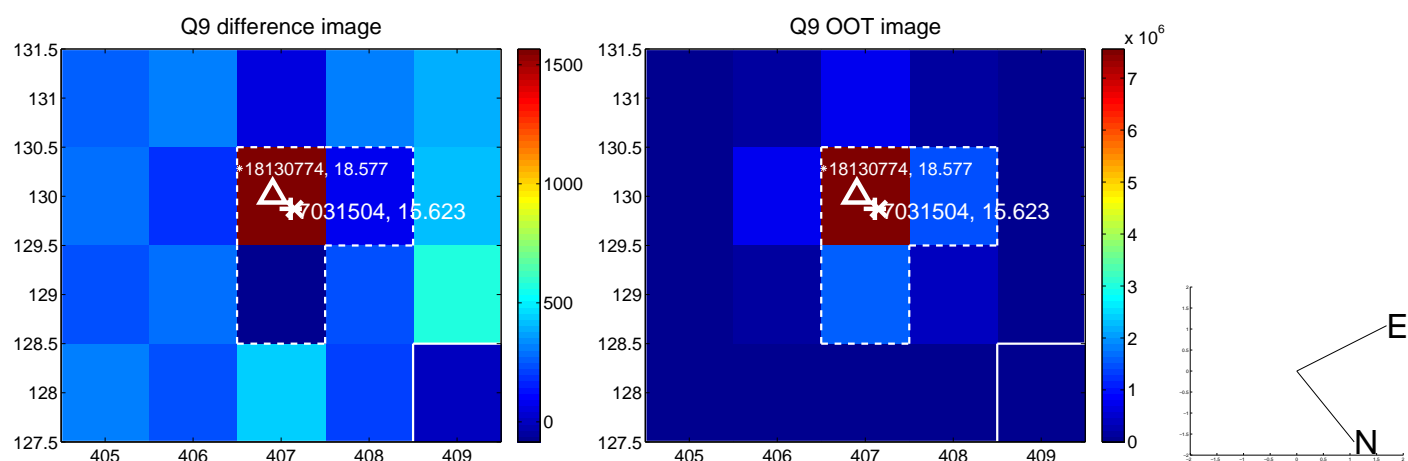
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



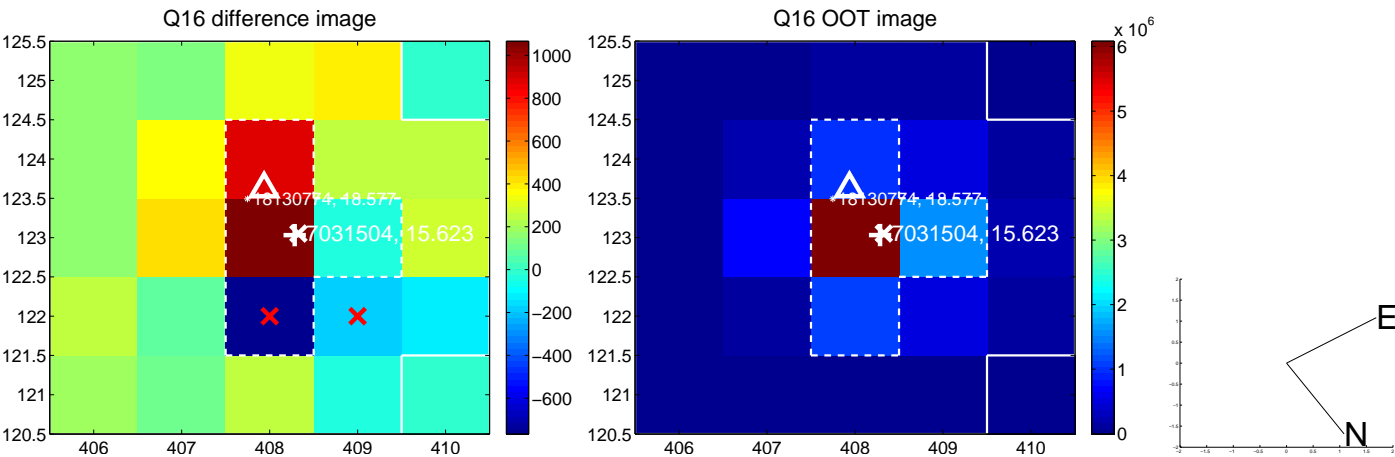
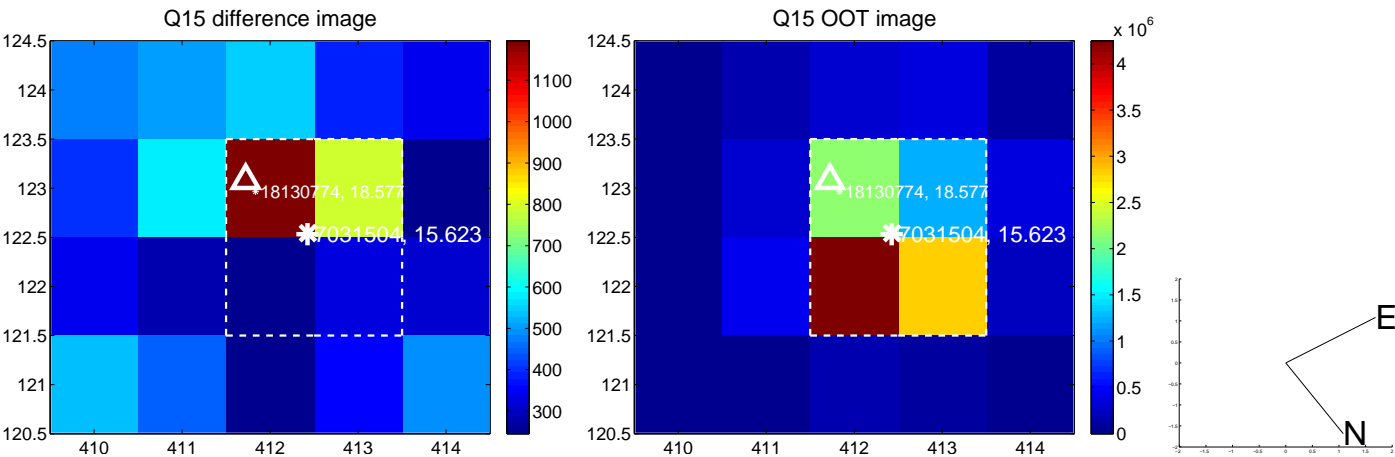
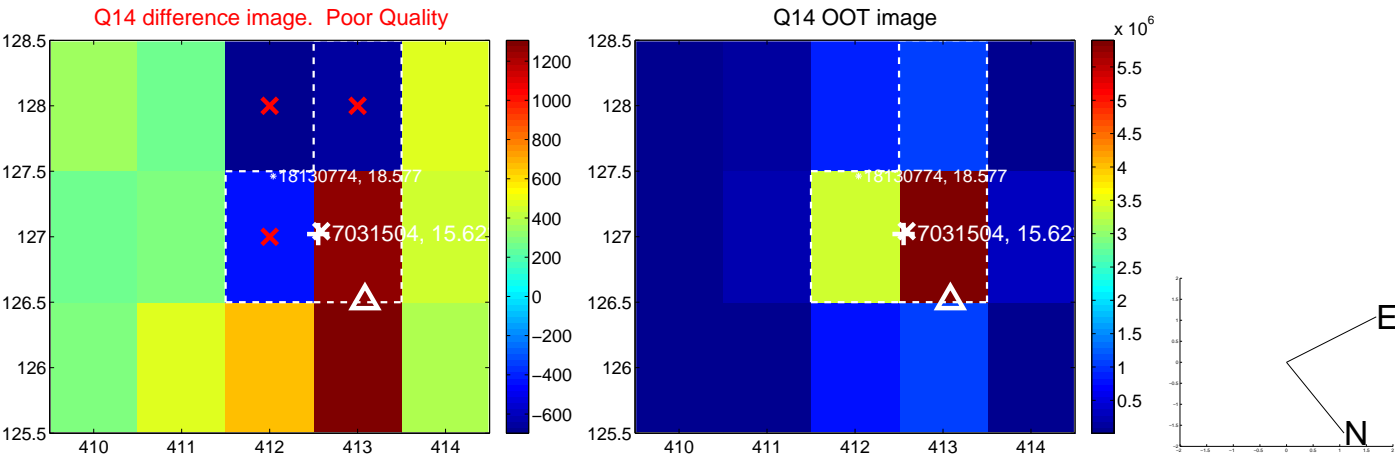
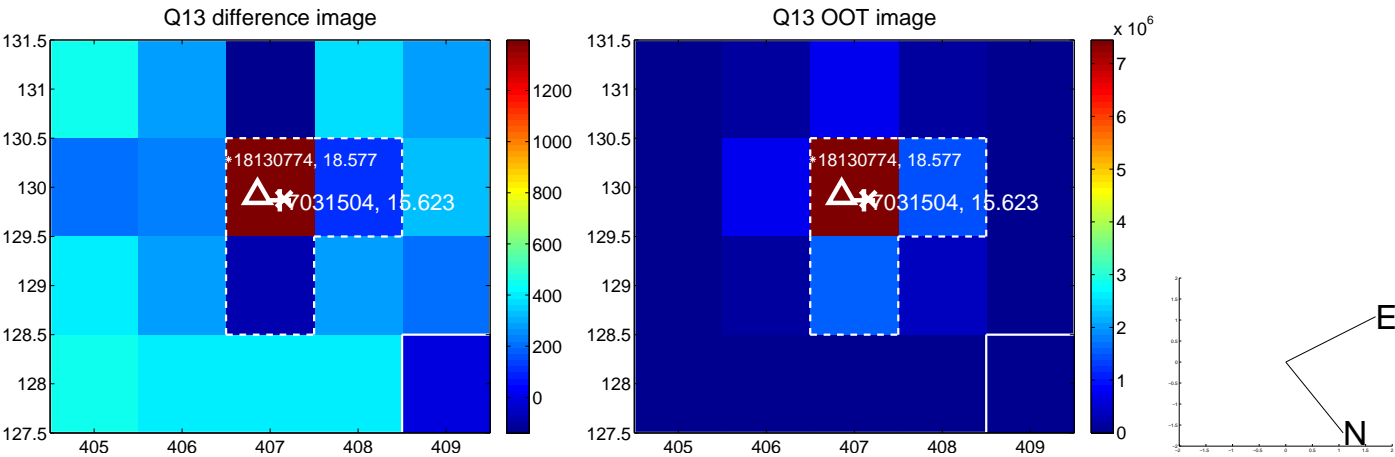
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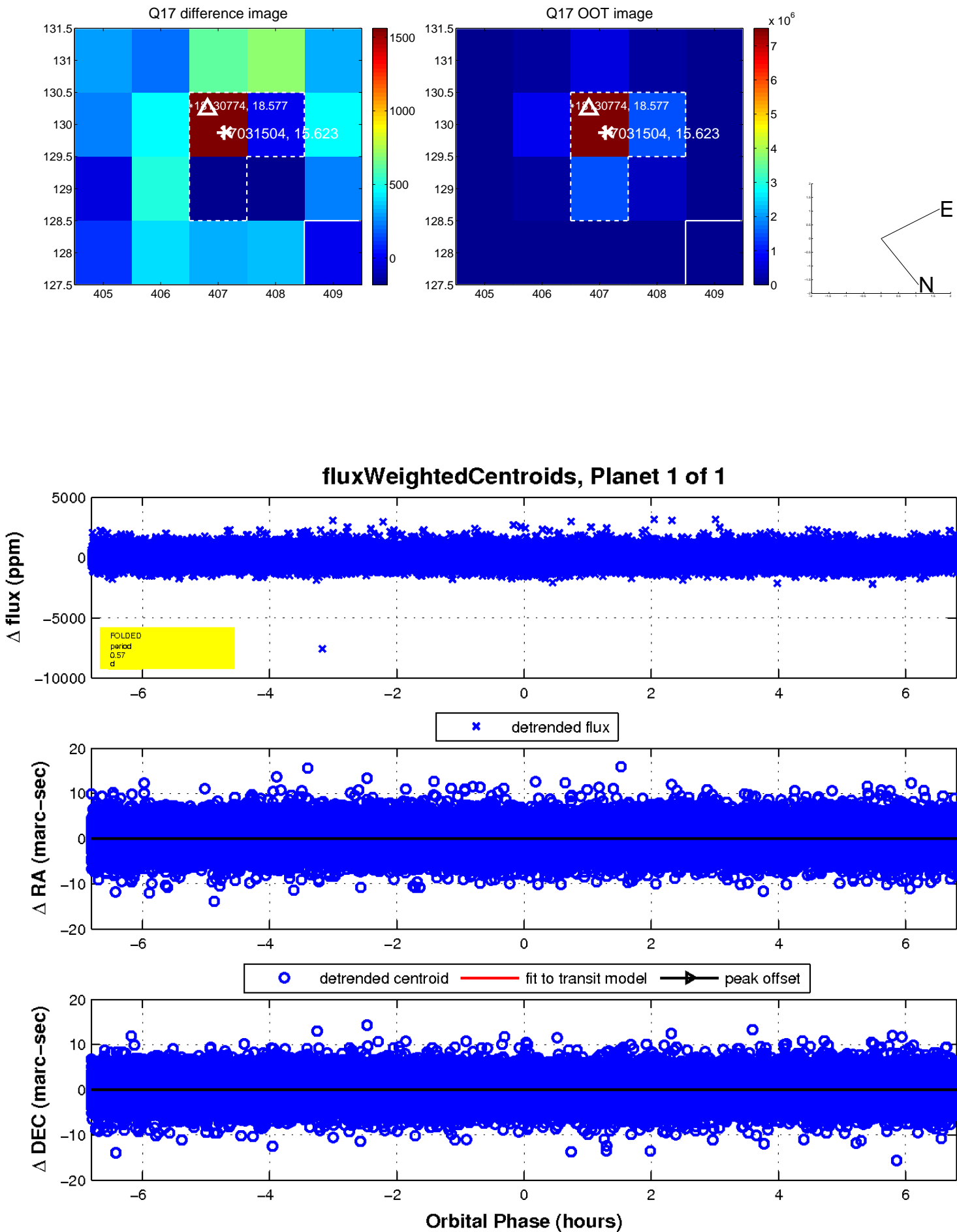
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UKIRT Image

Declination

