

KIC 007450360

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})
007450360-01	OBS	No	0.938712	131.757009	25.4	3.296	8.3	9.4	4.41	7045	2.54	75555.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007450360-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

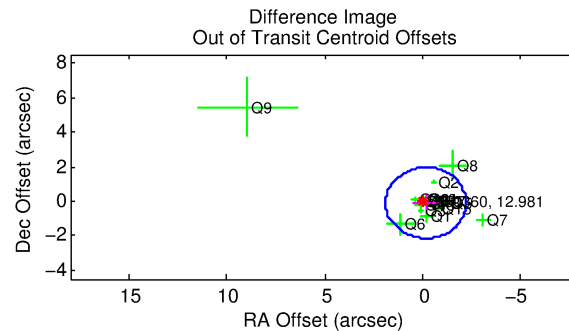
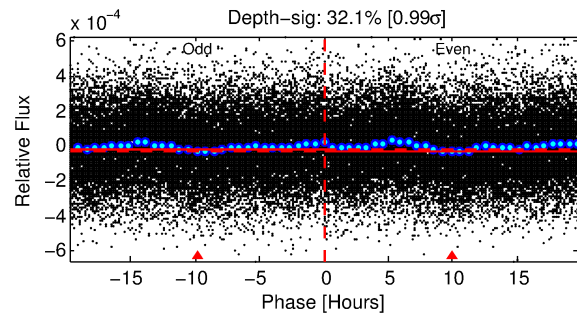
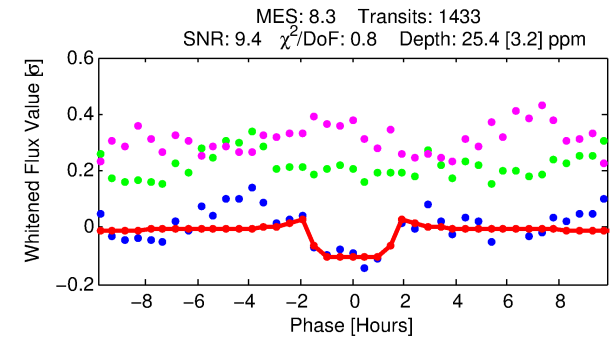
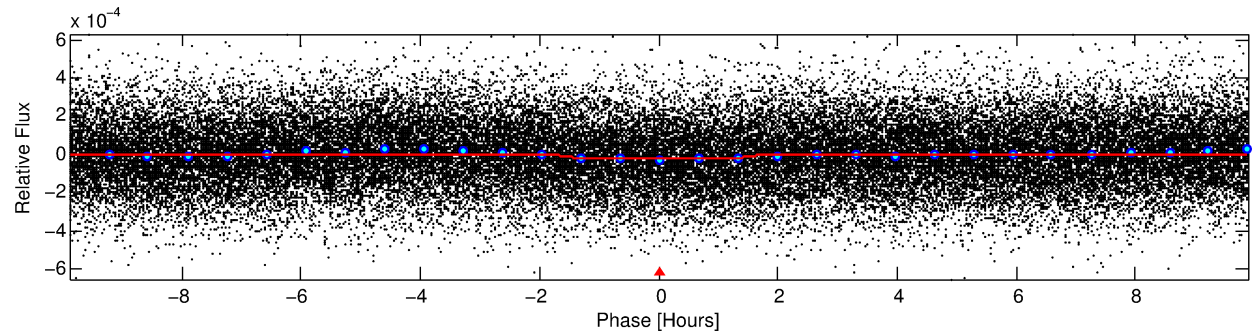
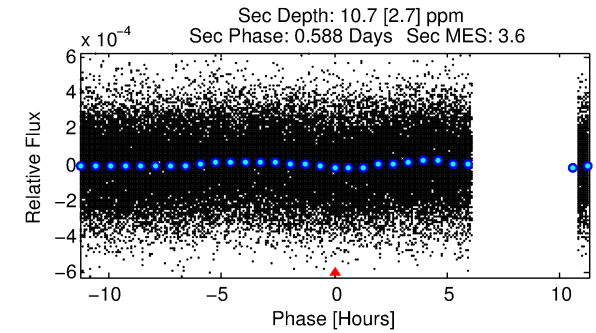
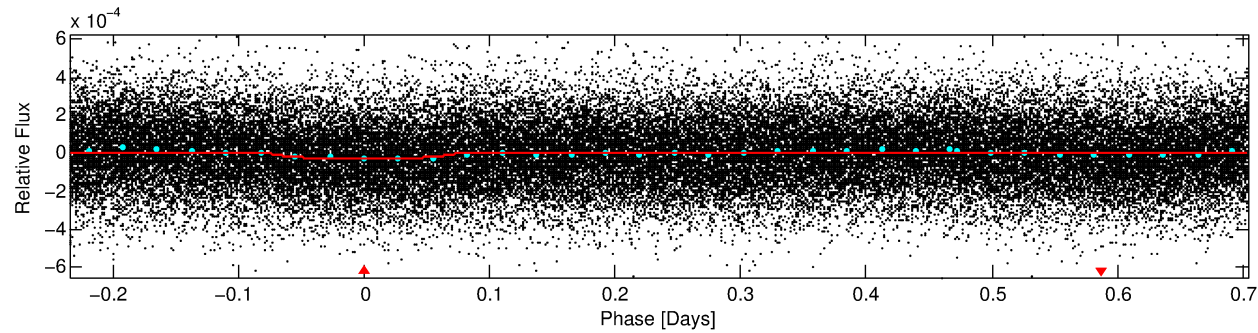
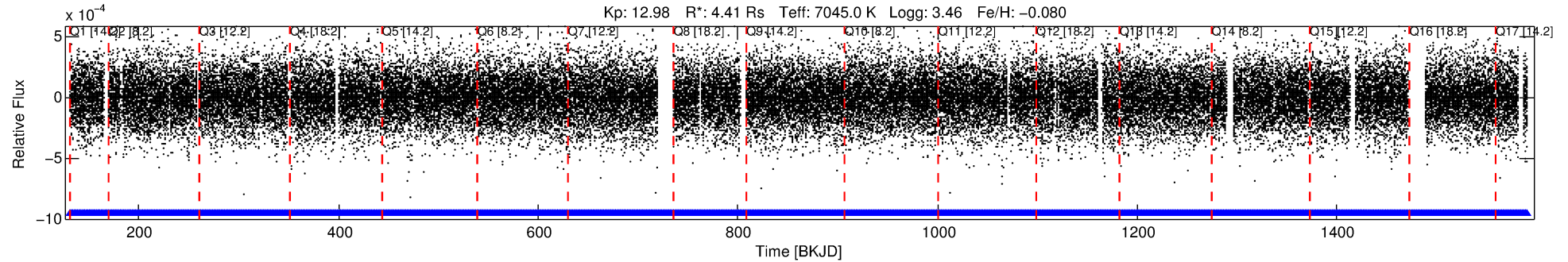
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007450360-01

No Significant Match Found

DV One-Page Summary

KIC: 7450360 Candidate: 1 of 1 Period: 0.939 d



DV Fit Results:

Period = 0.93871 [0.00001] d
Epoch = 131.7570 [0.0030] BKJD
Rp/R* = 0.0053 [0.0013]
a/R* = 1.42 [1.09]
b = 0.88 [0.41]
Seff = 75555.08 [51762.30]
Teq = 4228 [724] K
Rp = 2.54 [1.26] Re
a = 0.0239 [0.0099] AU
Ag = 0.52 [0.46] [-1.05σ]
Teffp = 5550 [810] K [1.22σ]

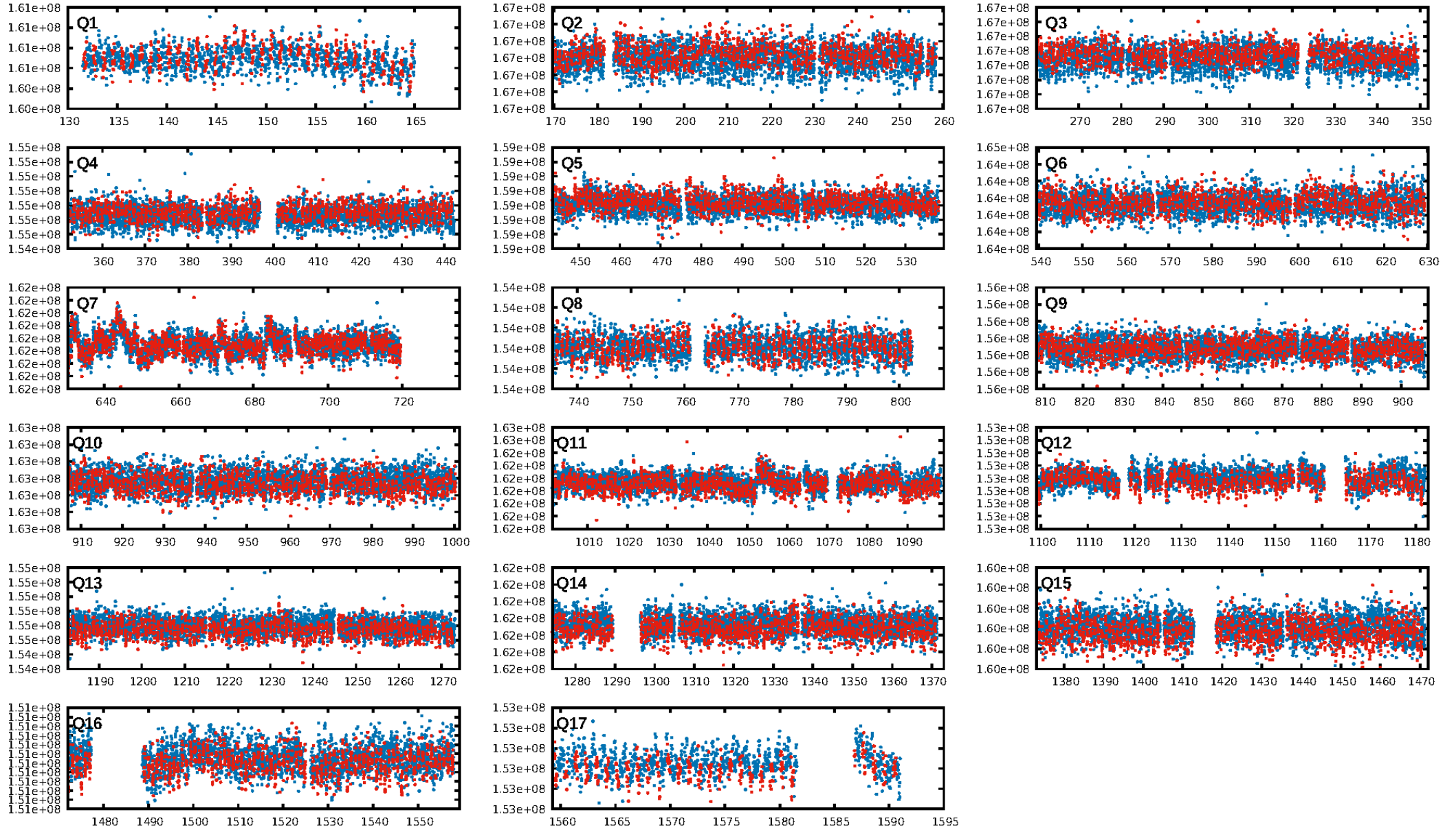
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.47e-12
RollingBand-fgt: 1.00 [1368/1368]
GhostDiagnostic-chr: 60.17
Centroid-sig: 26.9%
Centroid-so: 0.870 arcsec [1.29σ]
OotOffset-rm: 0.196 arcsec [0.29σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.346 arcsec [0.54σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

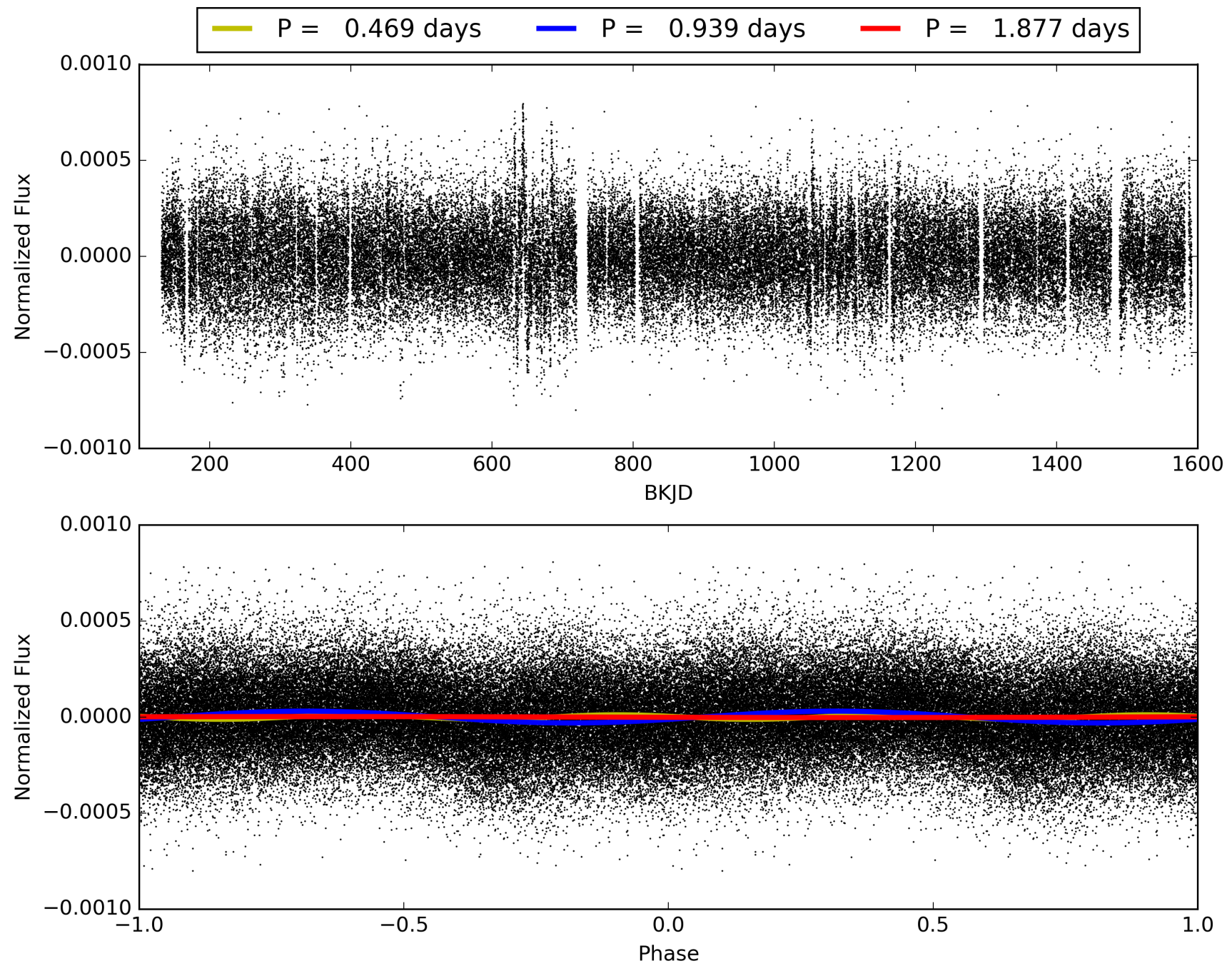
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:43:01 Z

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

TCE 007450360-01, PDC Light Curves

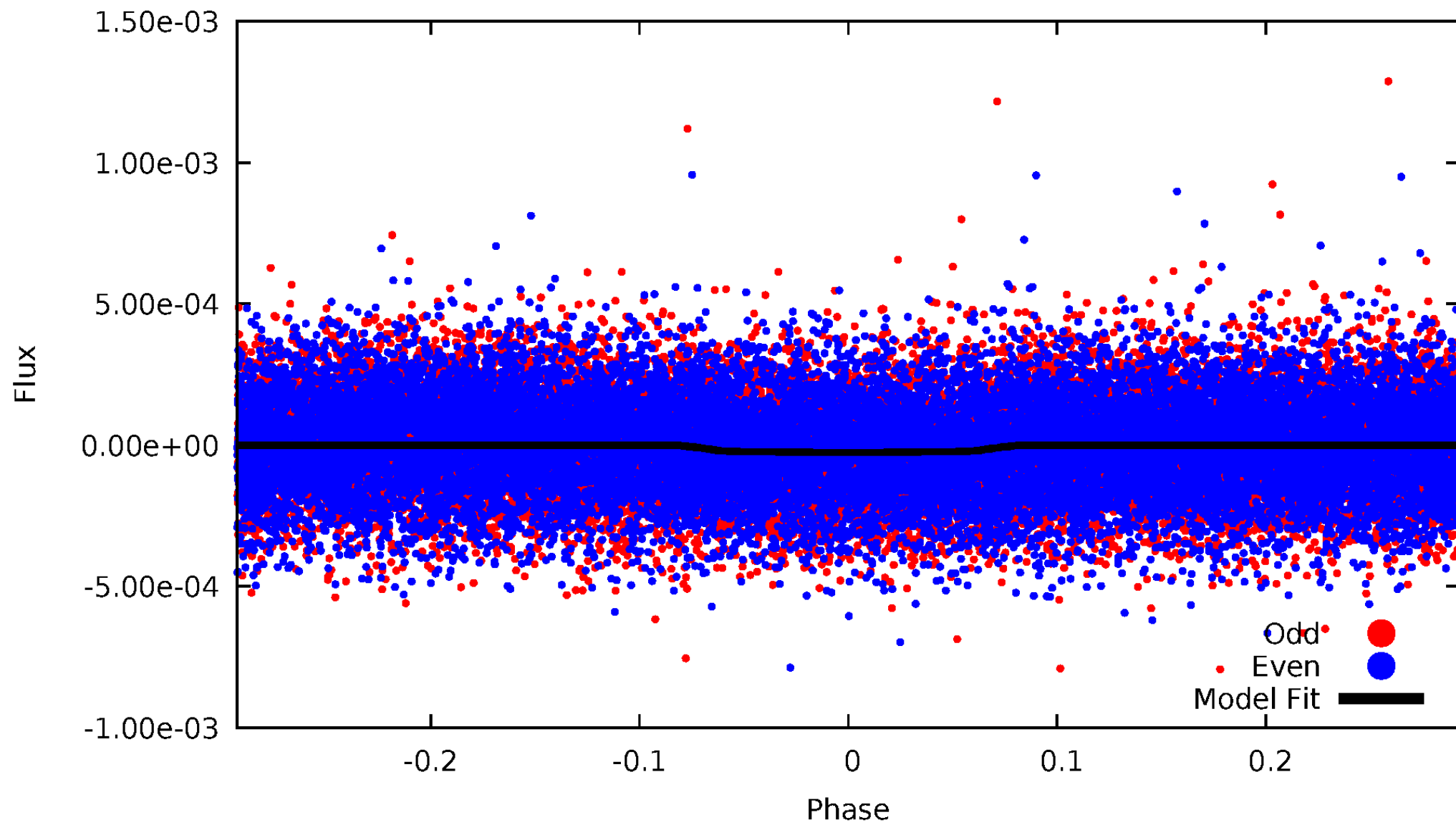


TCE 007450360-01



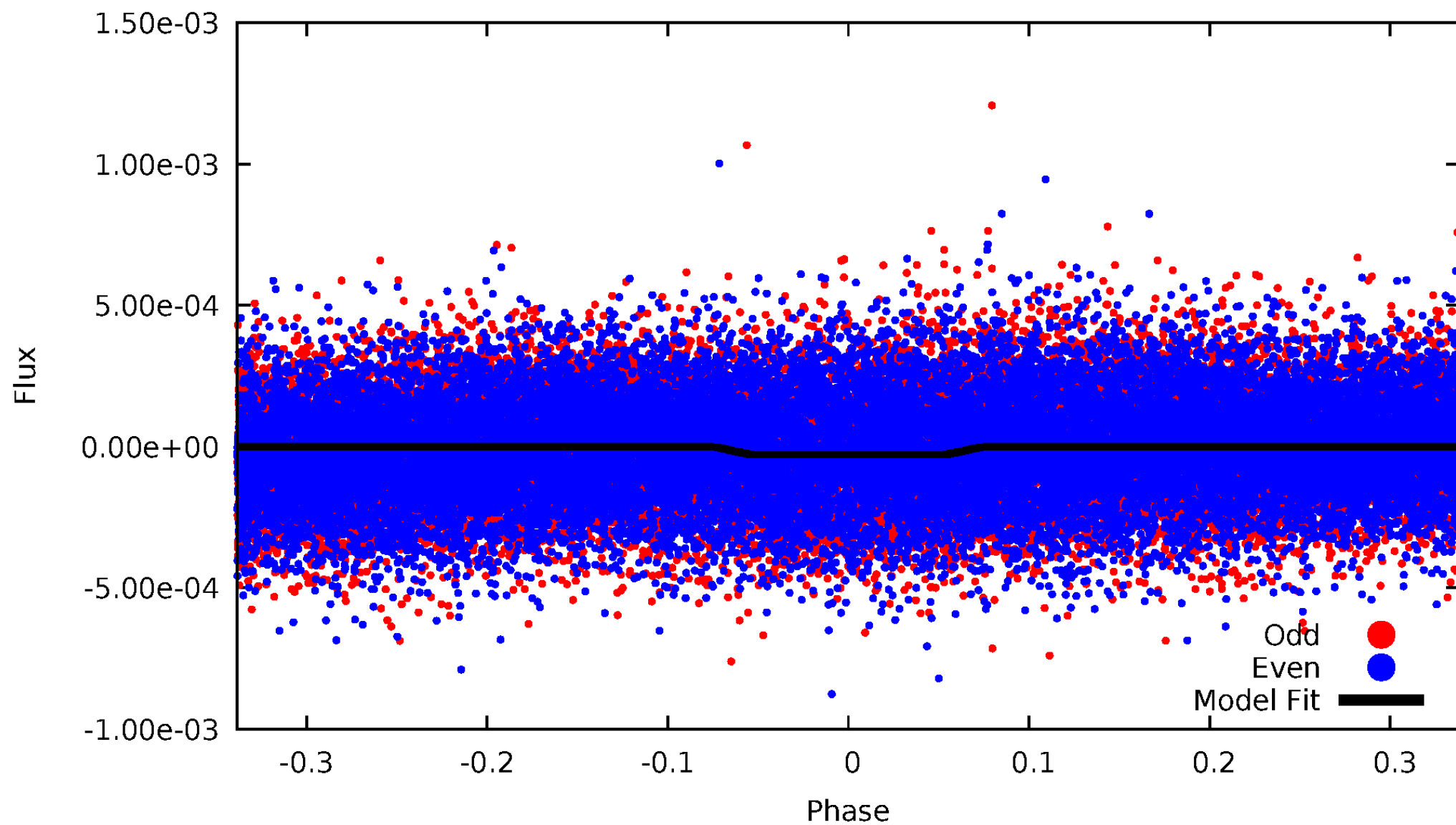
DV Odd/Even

TCE 007450360-01



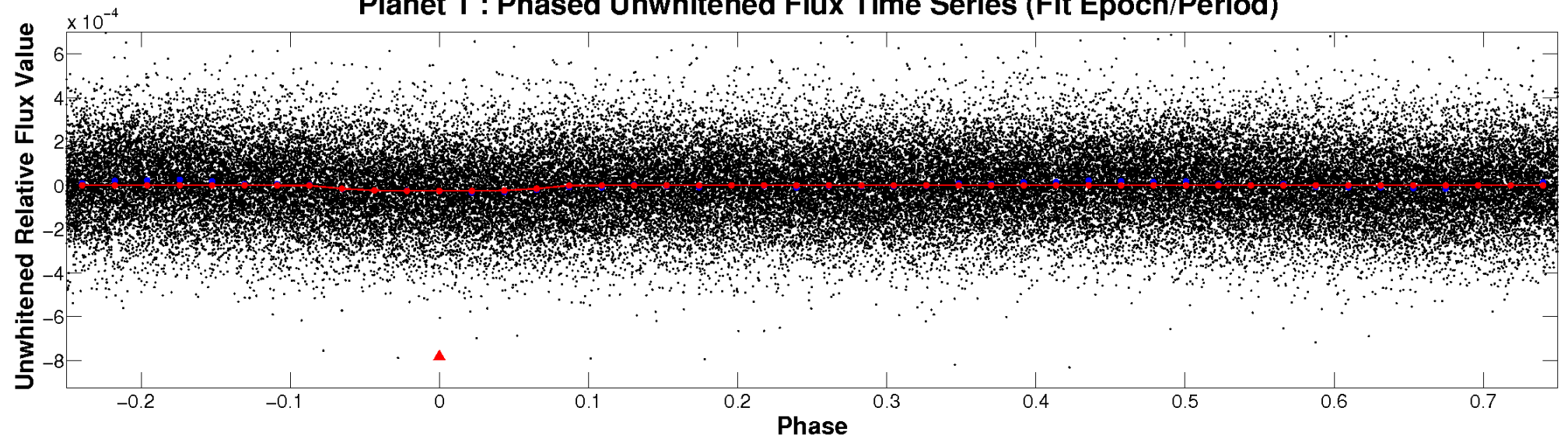
ALT Odd/Even

TCE 007450360-01

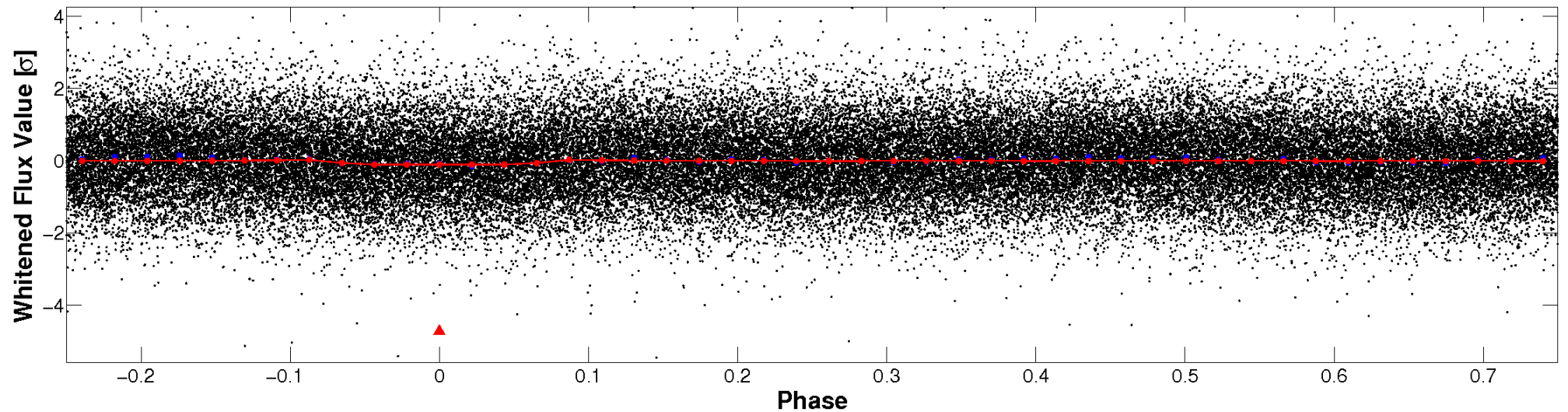


Non-Whitened Vs. Whitened Light Curve

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

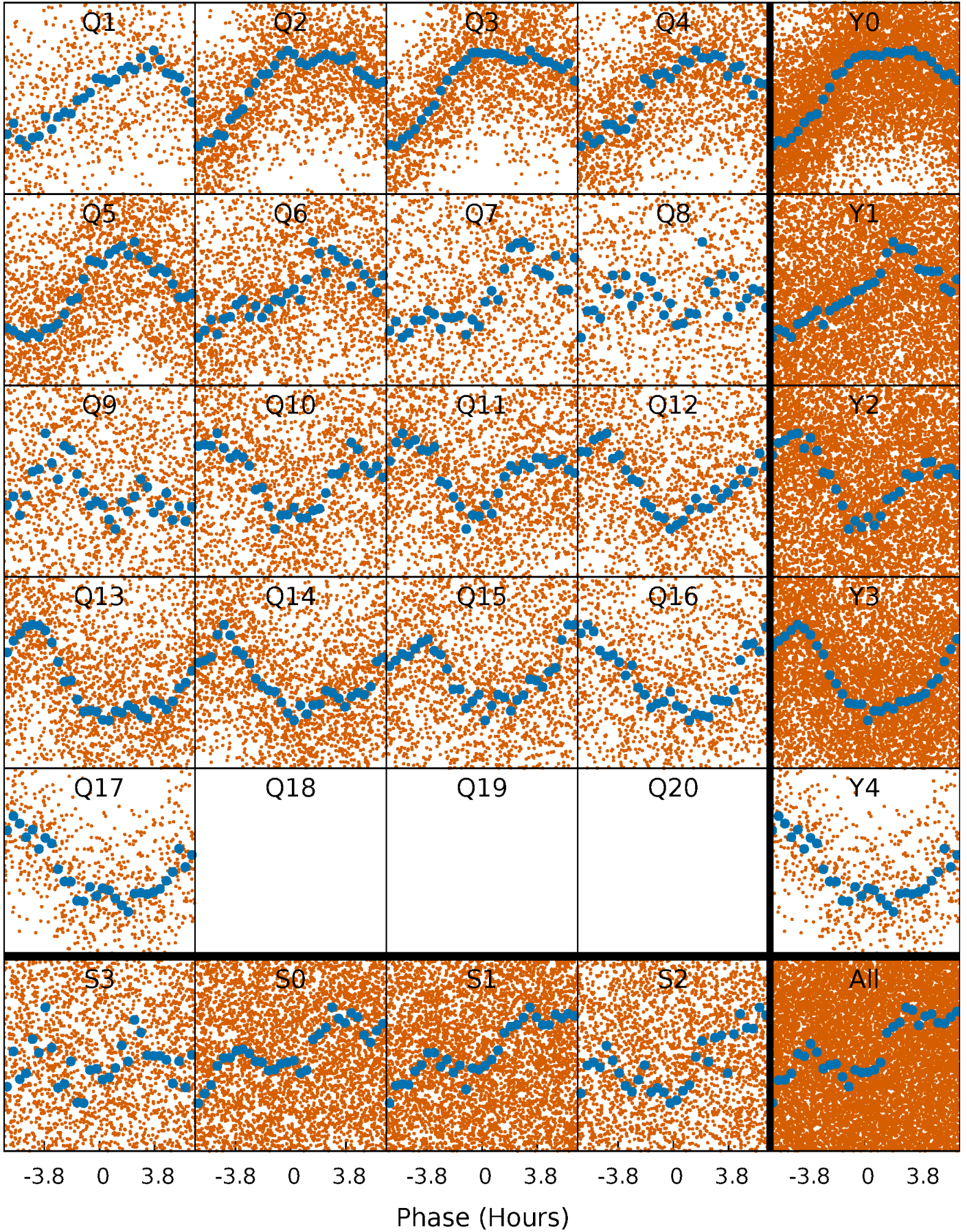


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



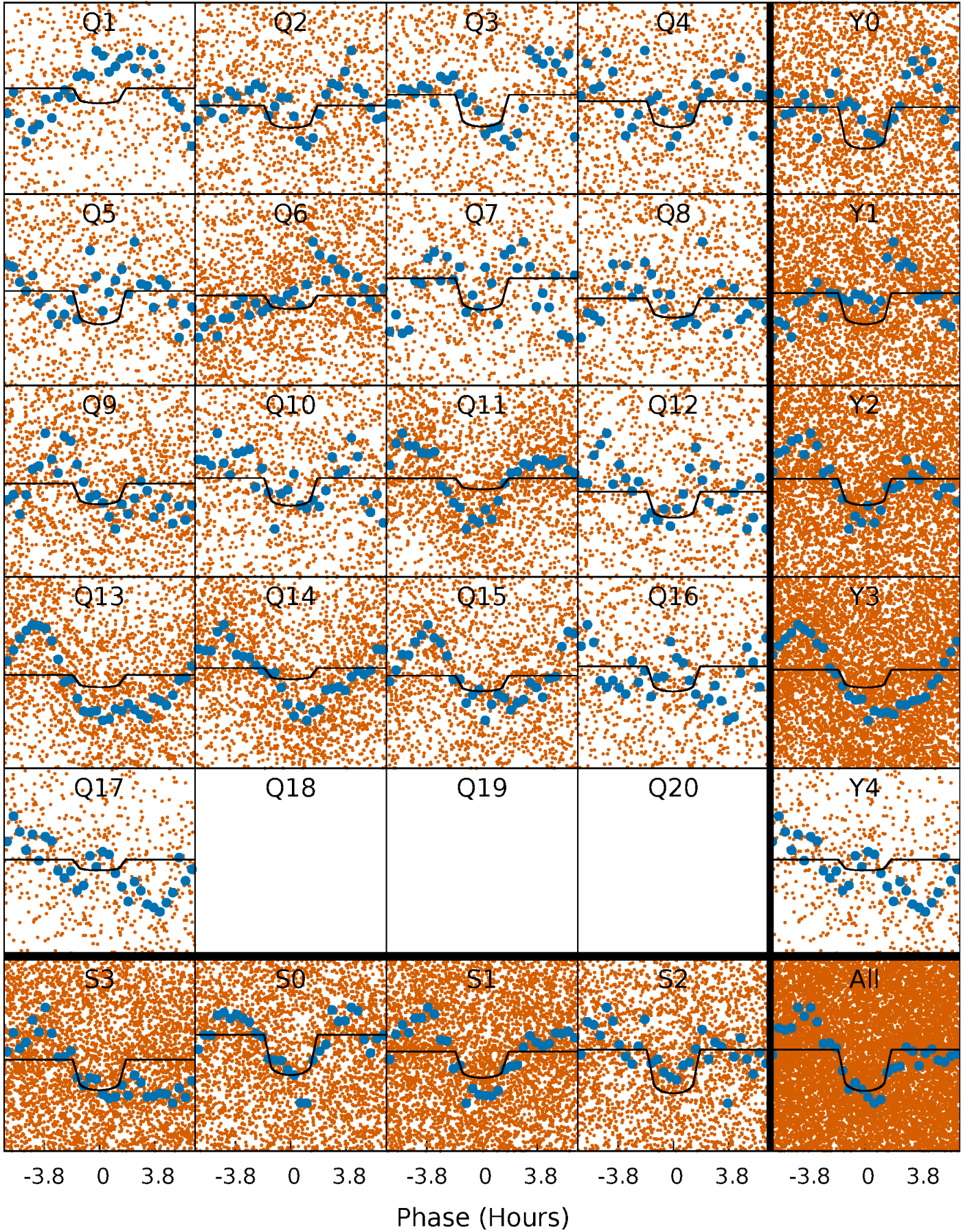
PDC Quarter-Phased Transit Curves

TCE 007450360-01 P= 0.938712 Days $T_0=131.757009$ (BKJD)



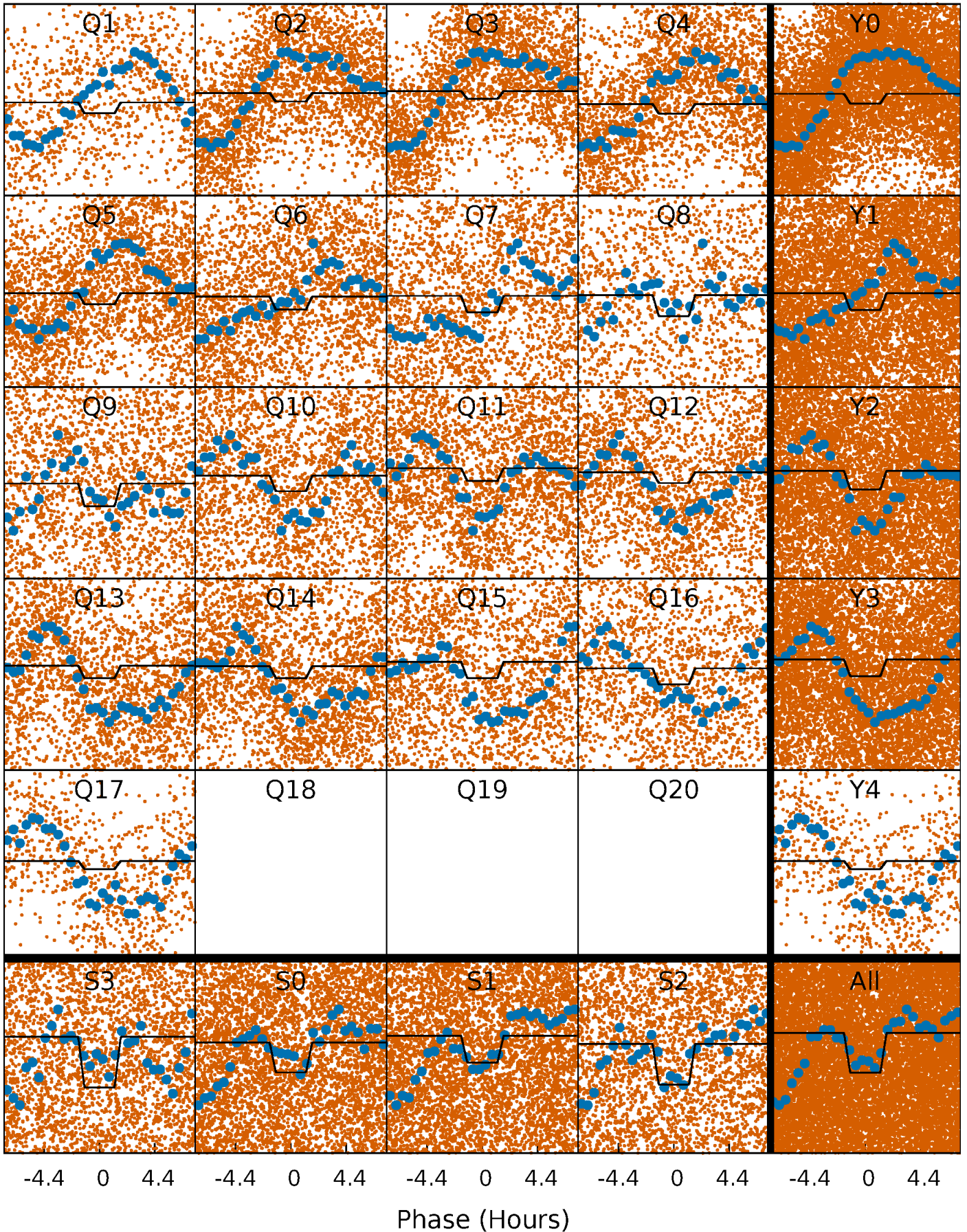
DV Quarter-Phased Transit Curves

TCE 007450360-01 P= 0.938712 Days $T_0=131.757009$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

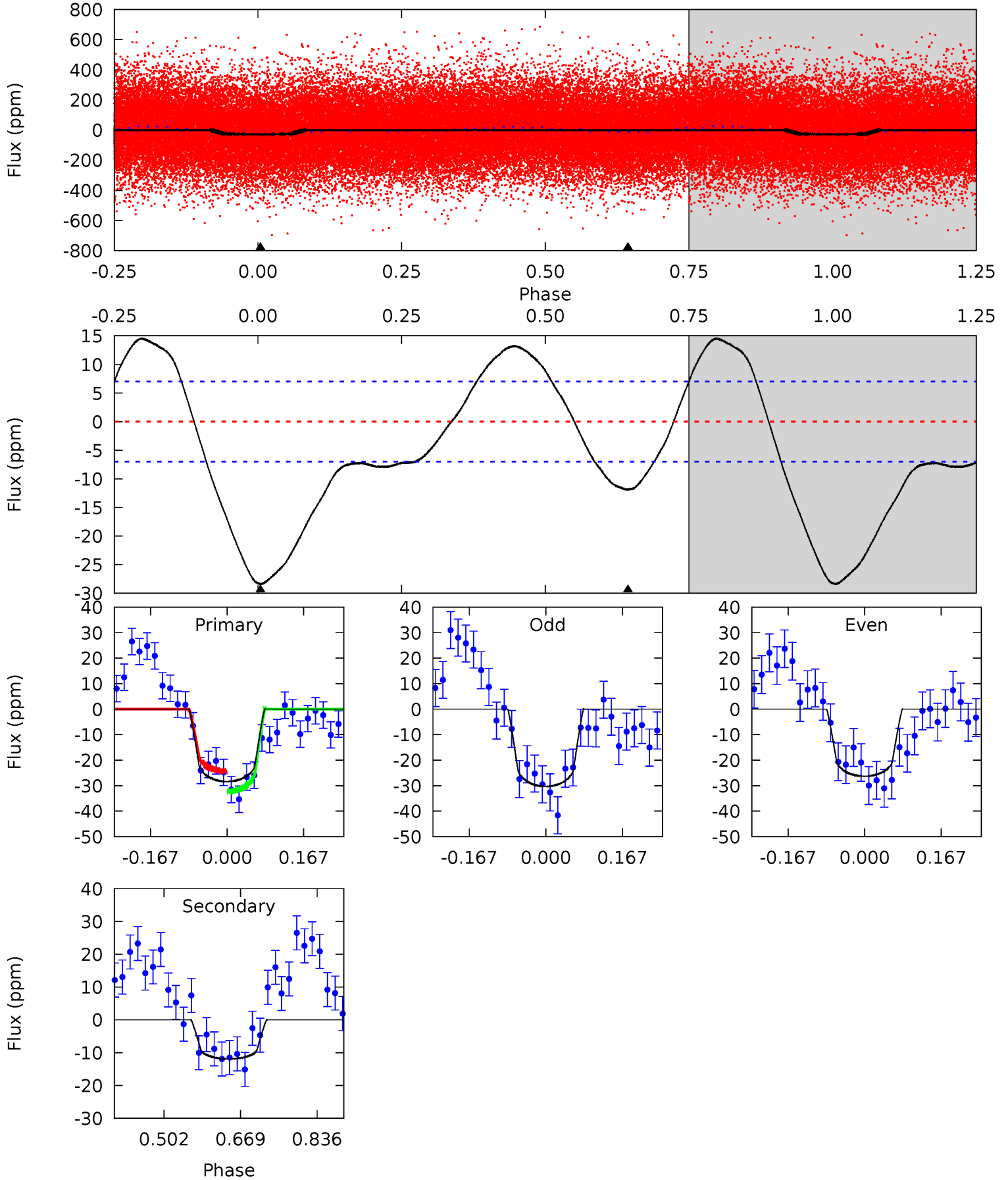
TCE 007450360-01 P= 0.938685 Days $T_0=131.764081$ (BKJD)



DV Model-Shift Uniqueness Test

007450360-01, P = 0.938712 Days, E = 130.818297 Days

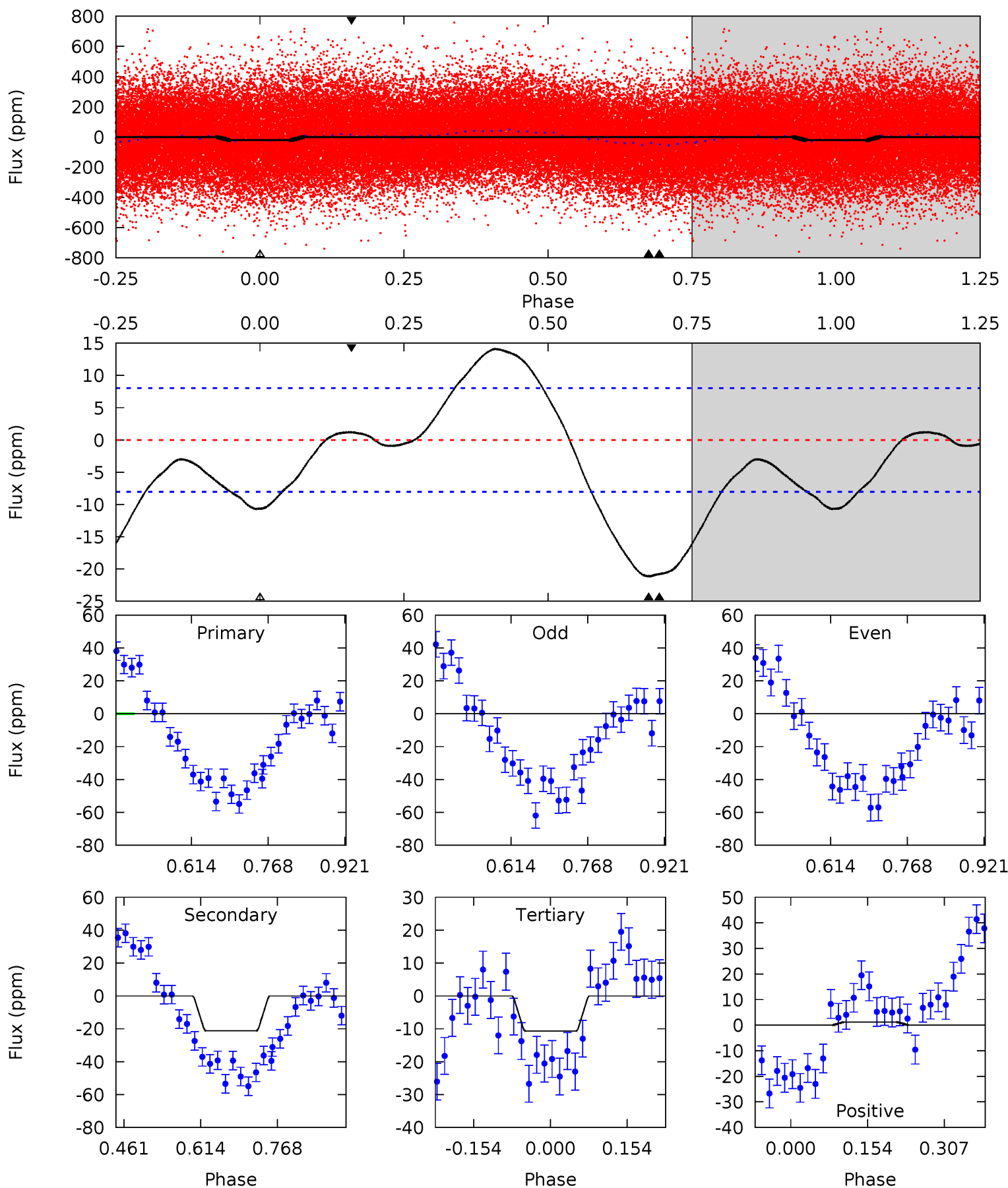
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	7.58	0	0	4.46	1.38	5.44	18.1	18.1	7.58	7.58	1.28	1.01	0.34	2.51



Alt Model-Shift Uniqueness Test

007450360-01, P = 0.938685 Days, E = 130.825396 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	11.8	5.93	0.67	4.47	1.43	4.11	5.64	10.9	5.83	11.1	1.71	0.92	0.40	0.96



Stellar Parameters For KIC 007450360

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7045^{+170}_{-243}	$3.461^{+0.396}_{-0.066}$	$-0.080^{+0.250}_{-0.250}$	$4.414^{+0.209}_{-1.882}$	$2.055^{+0.052}_{-0.415}$	$0.034^{+0.103}_{-0.007}$
	+2%/-3%	+11%/-2%	+312%/-312%	+5%/-43%	+3%/-20%	+305%/-22%
Source	PHO1	FLK73	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 007450360-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 2	$2.36^{+0.70}_{-0.68}$	5806^{+282}_{-569}	4911^{+1235}_{-1205}	$0.661^{+0.641}_{-0.289}$
Alt.	-21 ± 2	$2.35^{+0.76}_{-0.69}$	5784^{+292}_{-600}	6011^{+1205}_{-958}	$1.180^{+1.136}_{-0.512}$

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 $A_{obs} \gg 1.0$

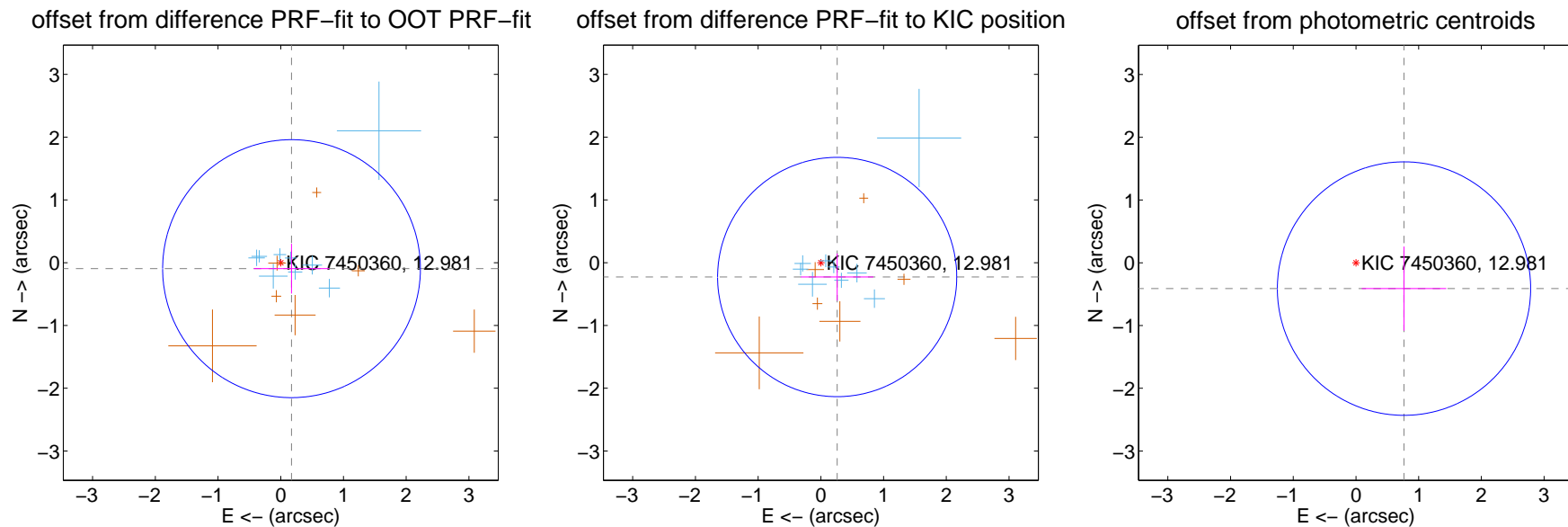
DV Centroid Data

Supplemental centroid analysis for 007450360-01. Kepler magnitude: 12.98. Transit SNR 9.43

There are 9 quarters with good PRF difference image offsets

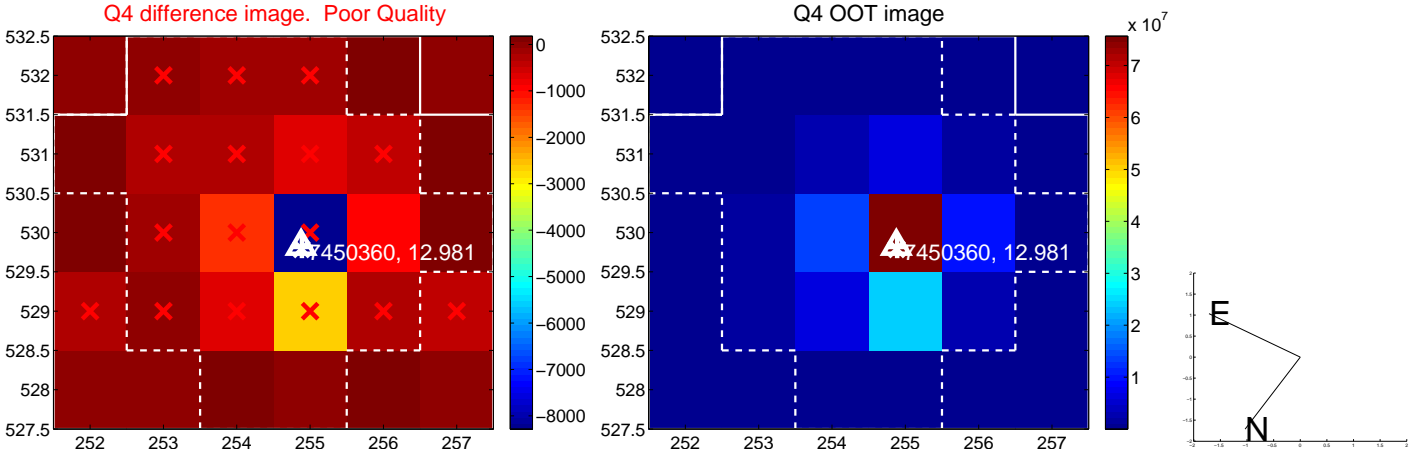
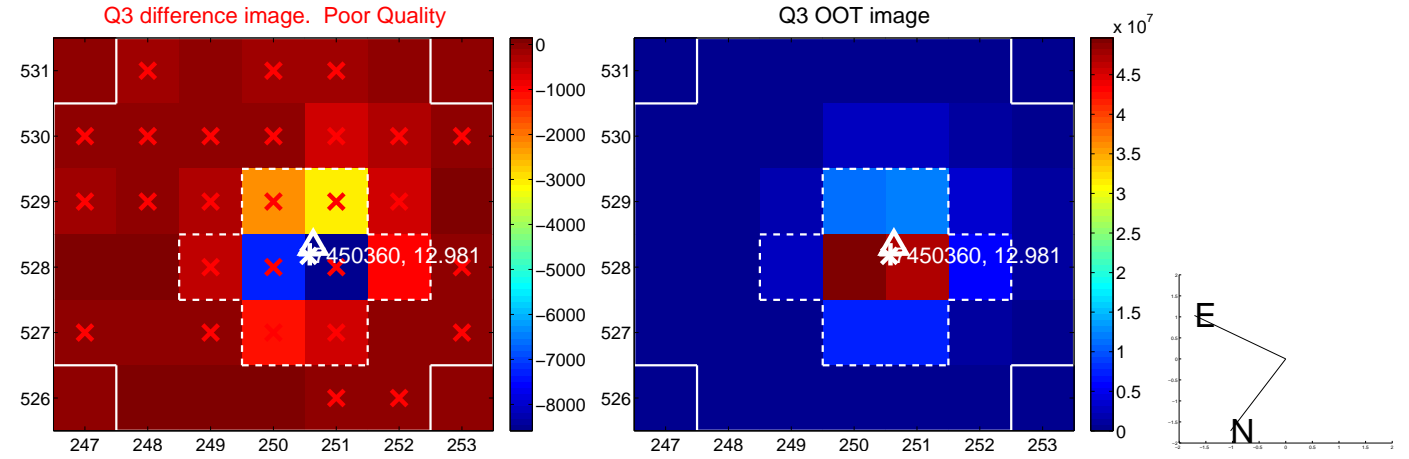
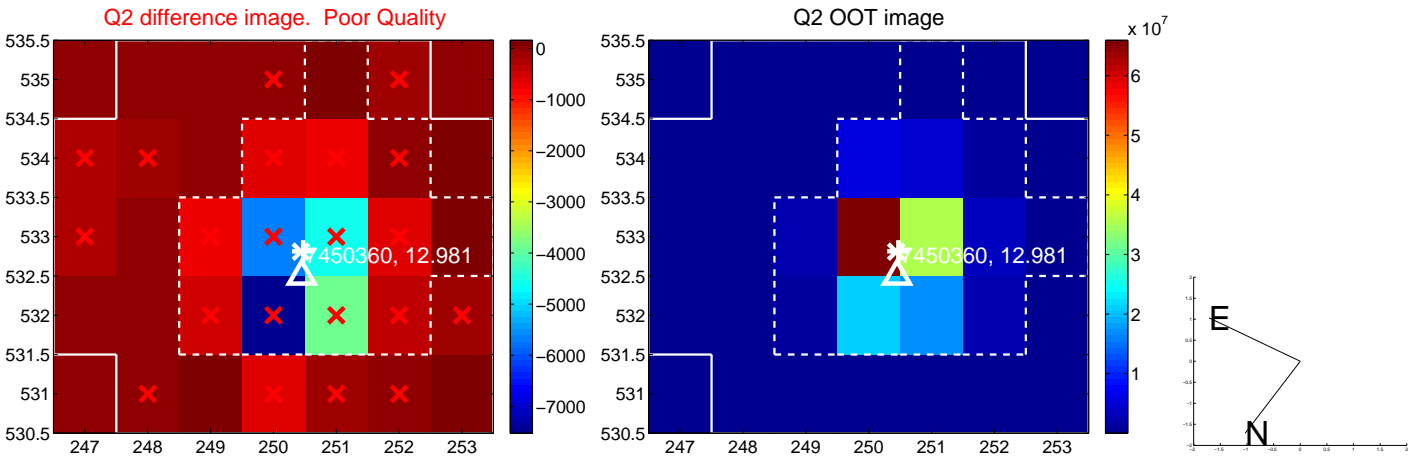
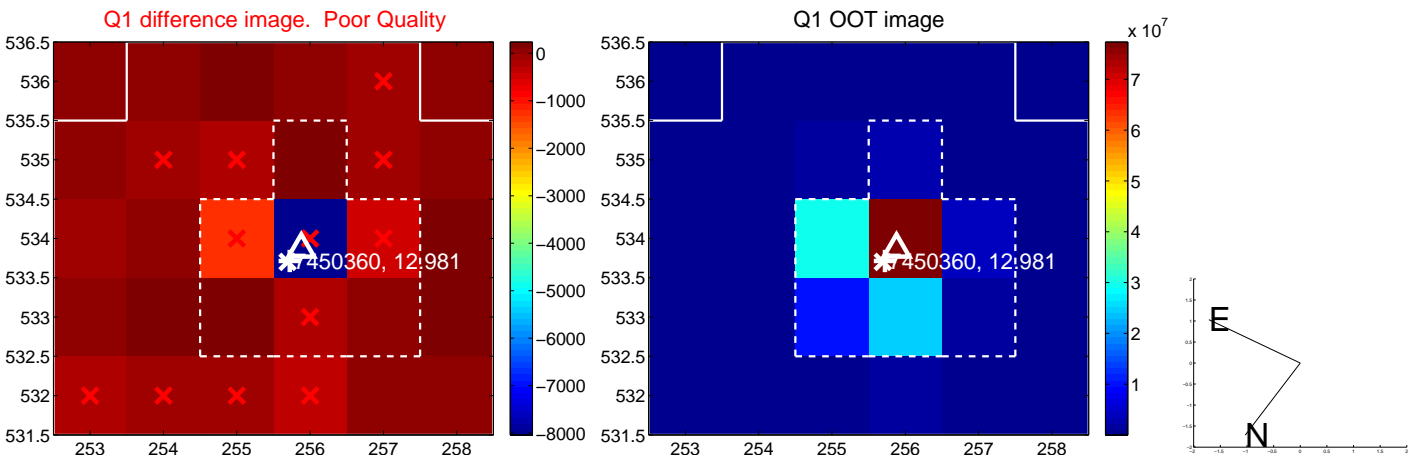
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.196 ± 0.685	0.29	-0.172 ± 0.602	-0.095 ± 0.396
PRF-fit source offset from KIC position	0.346 ± 0.635	0.54	-0.260 ± 0.578	-0.228 ± 0.376
photometric centroid source offset	0.87 ± 0.67	1.29	-0.77 ± 0.67	-0.41 ± 0.67

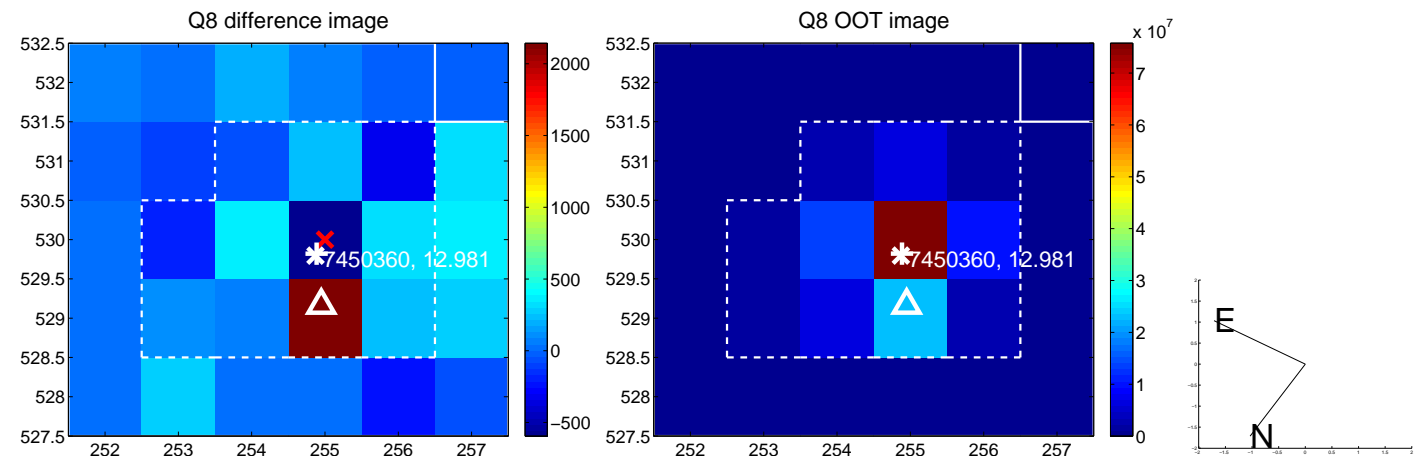
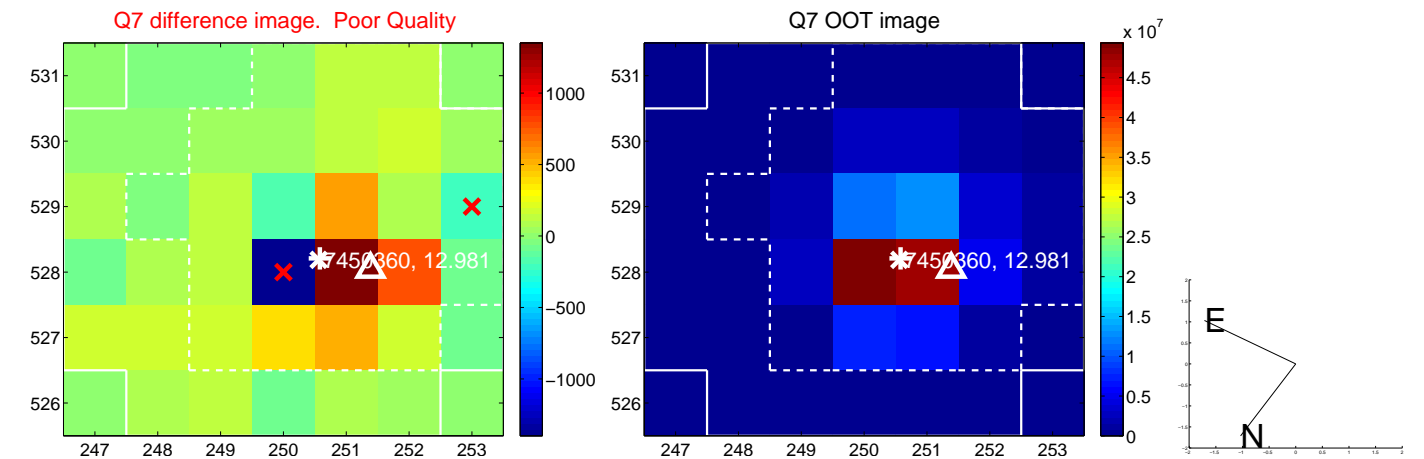
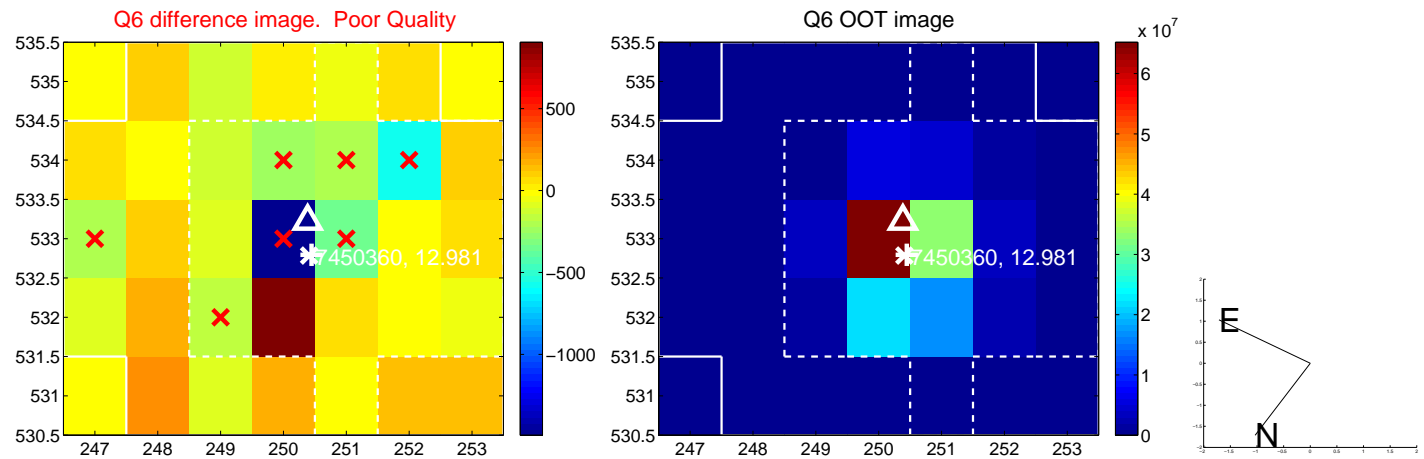
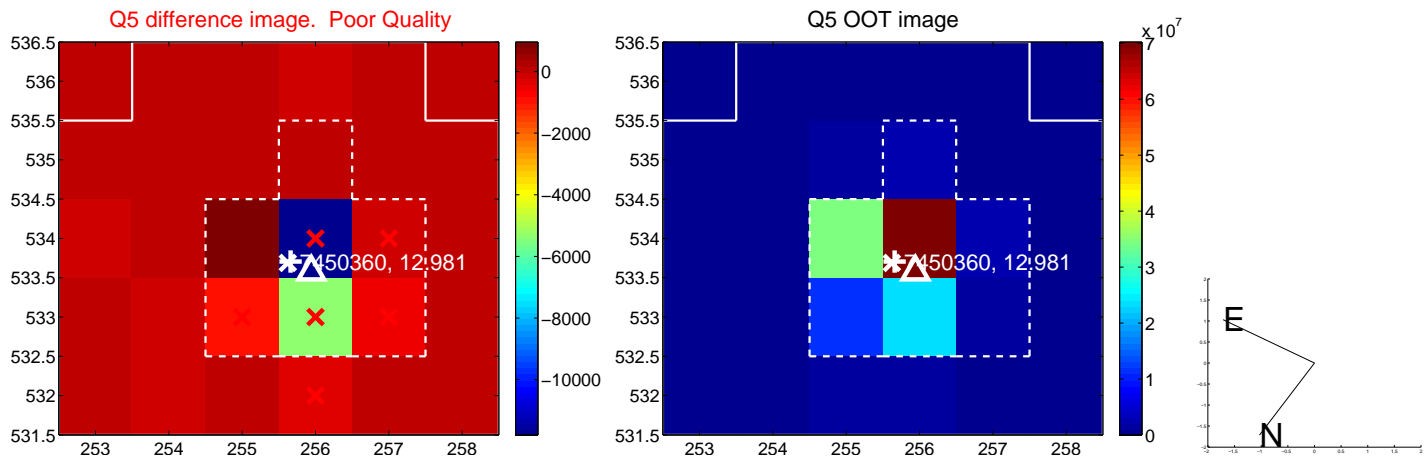


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

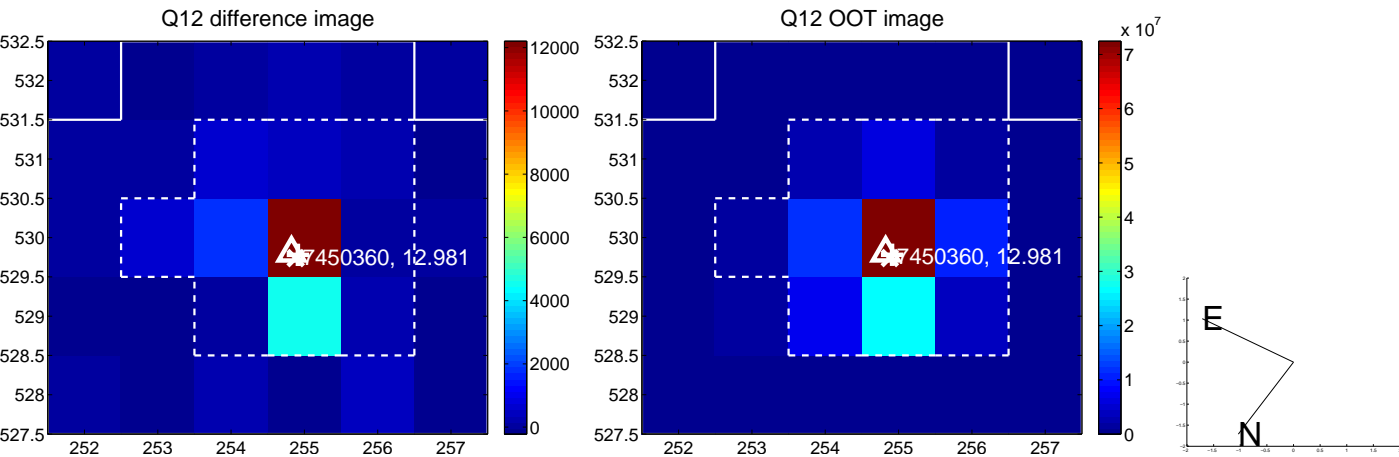
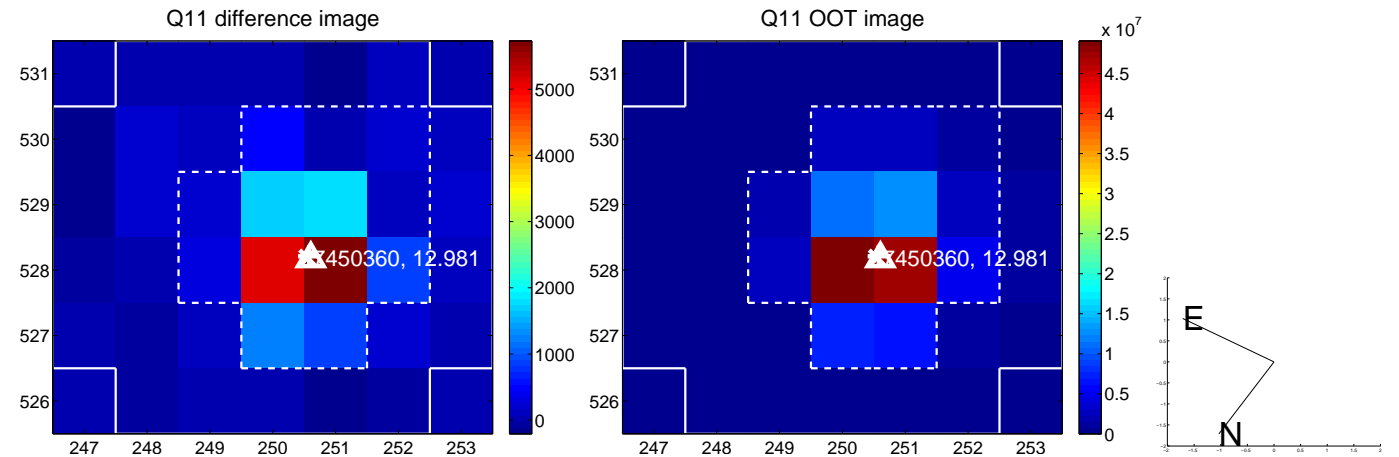
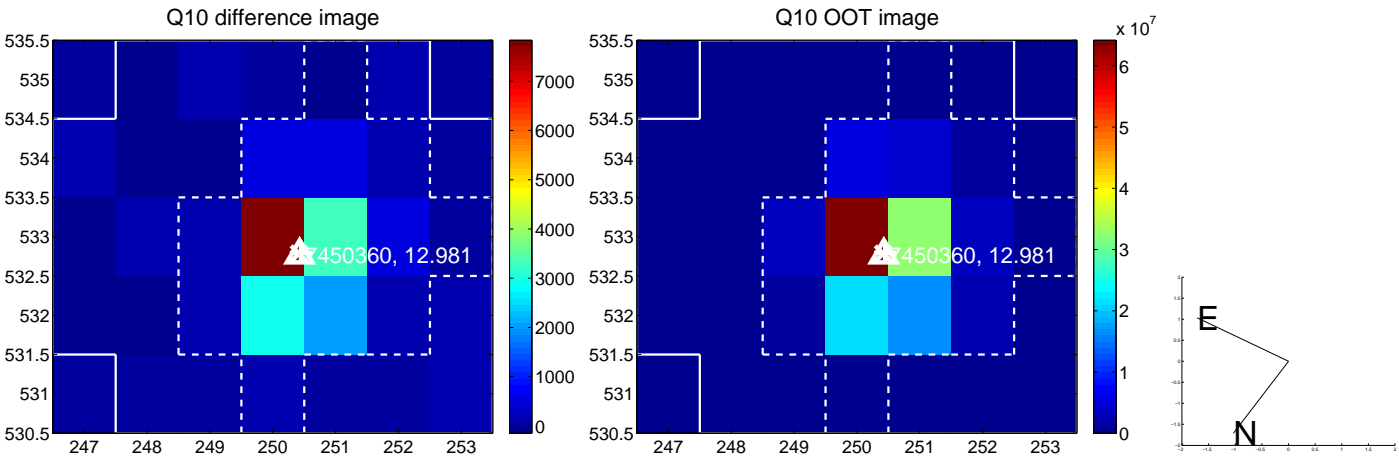
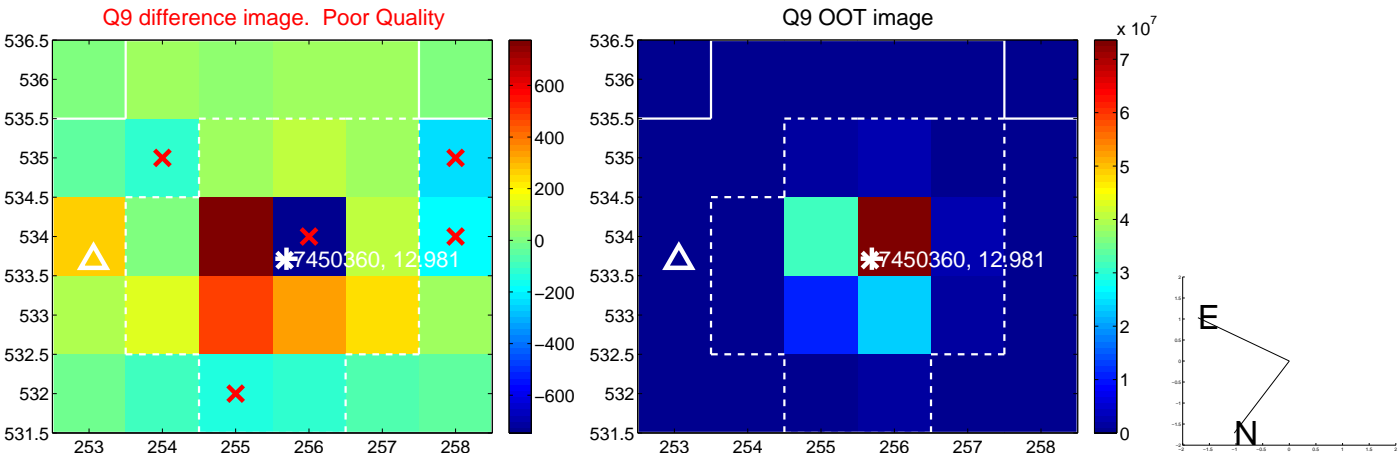
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



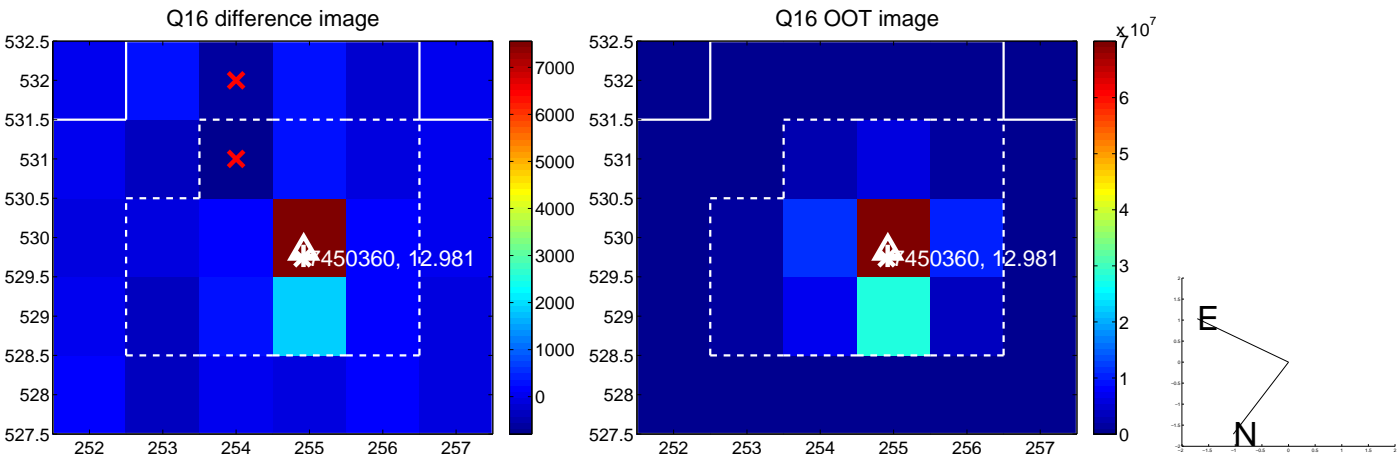
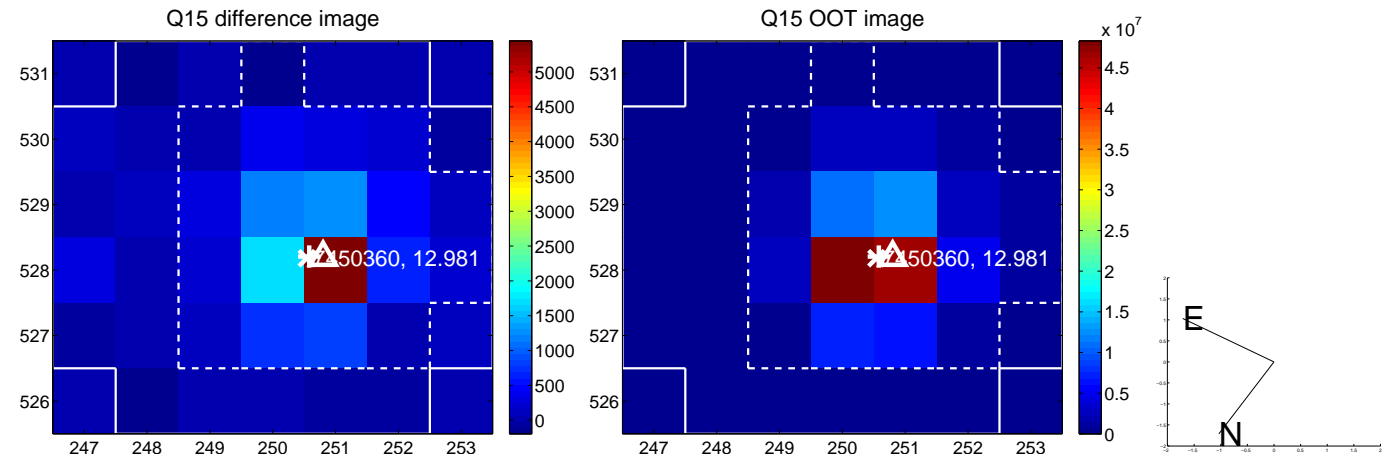
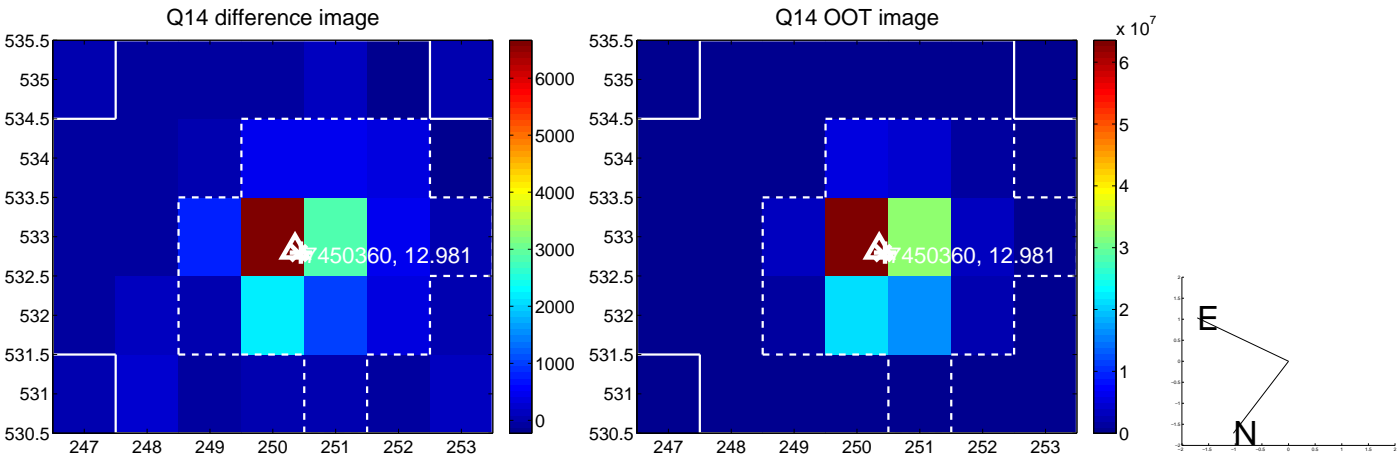
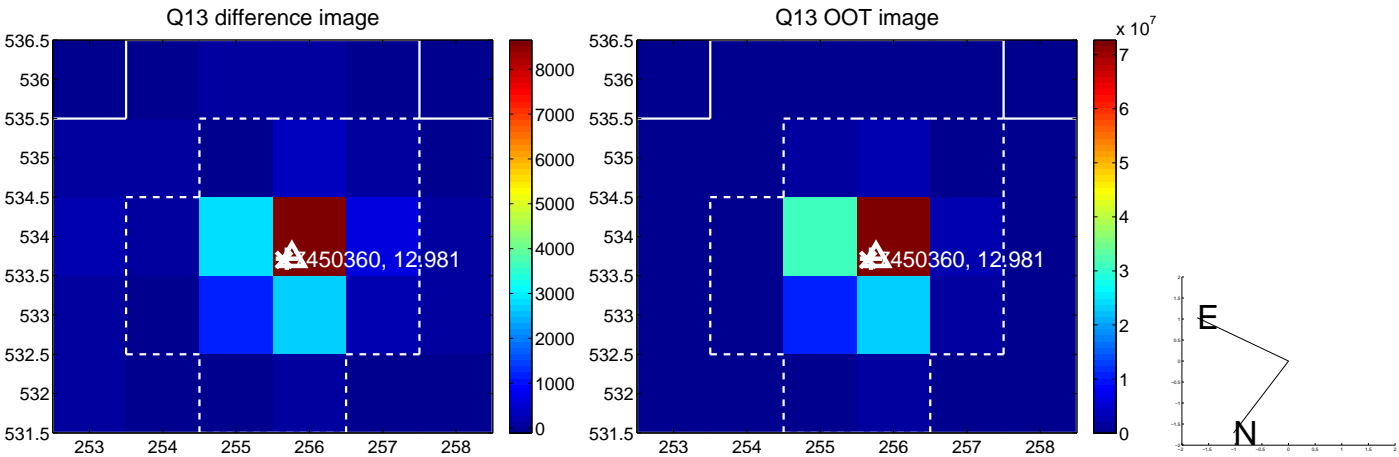
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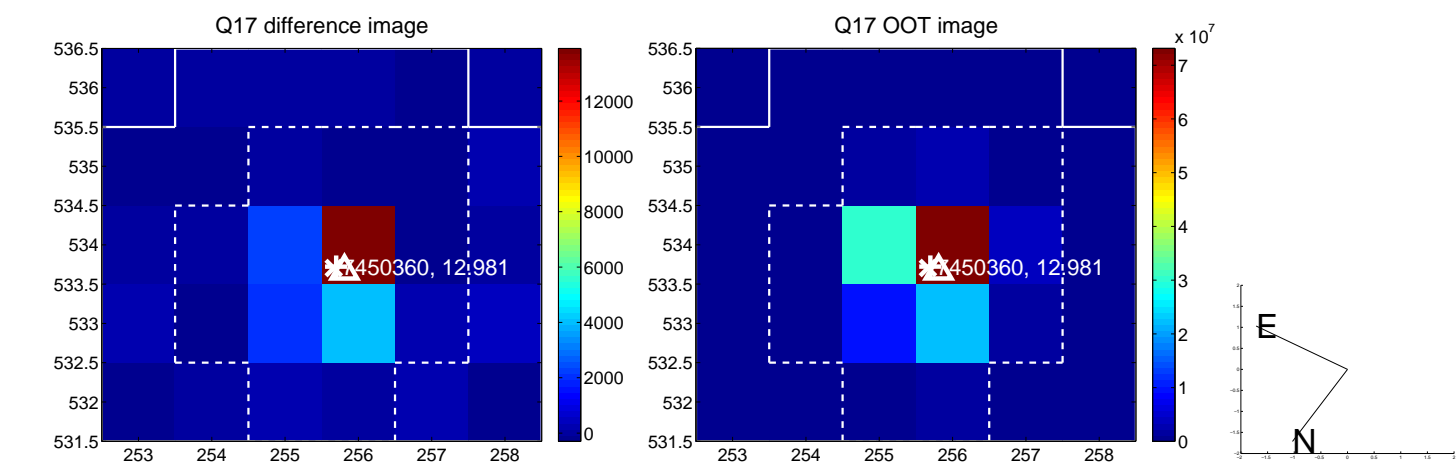
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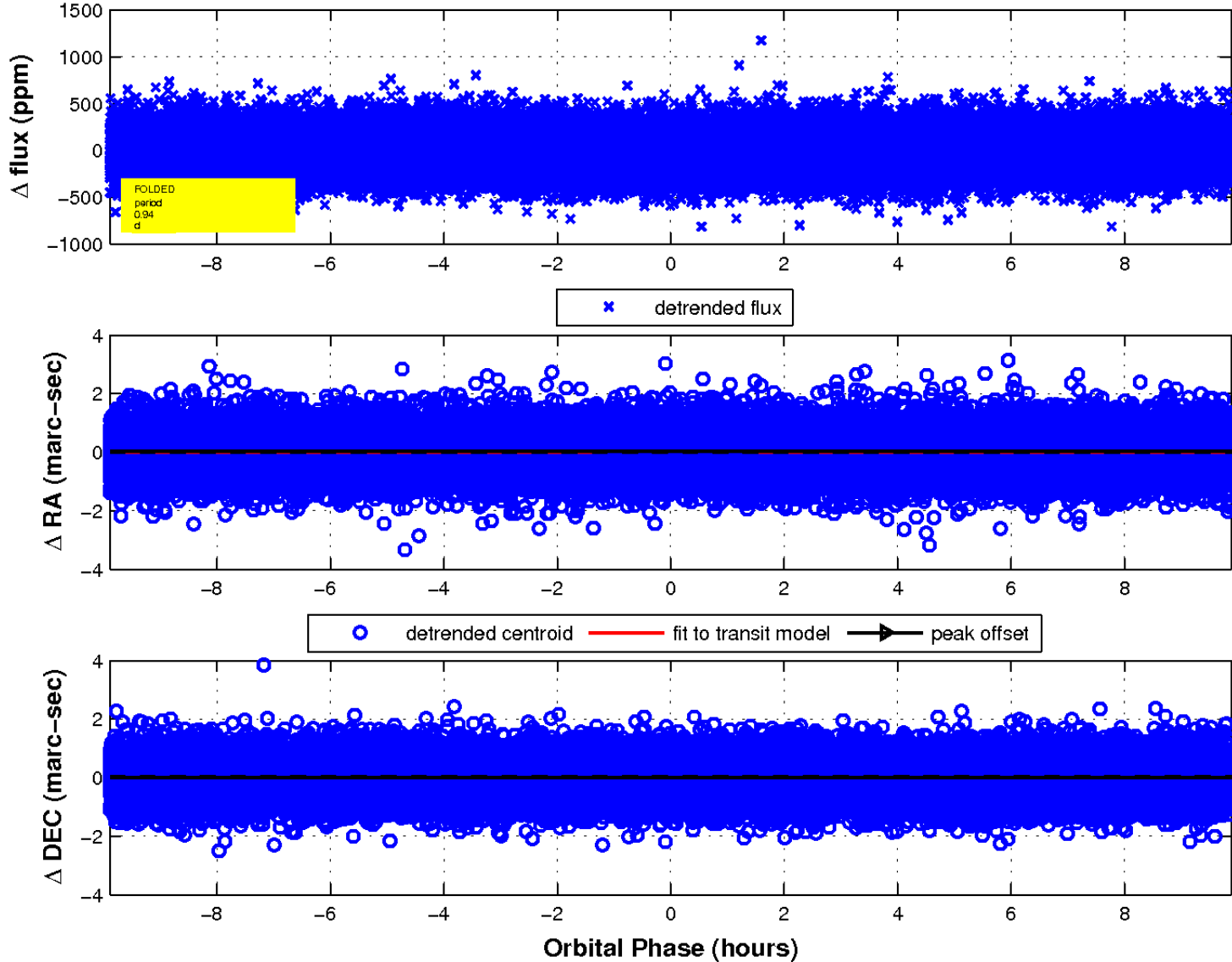
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

