

KIC 010266860

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
010266860-01	OBS	7996.01	2.178129	132.033324	25.9	2.042	7.9	8.5	1.85	6511	1.10	4375.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010266860-01	OBS	FP	0.00	0	0	0	1	CENT_KIC_POS—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.

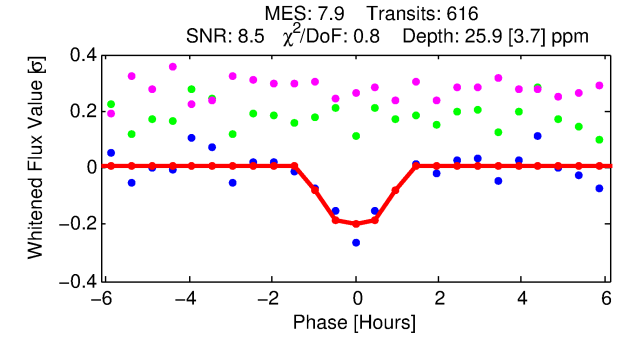
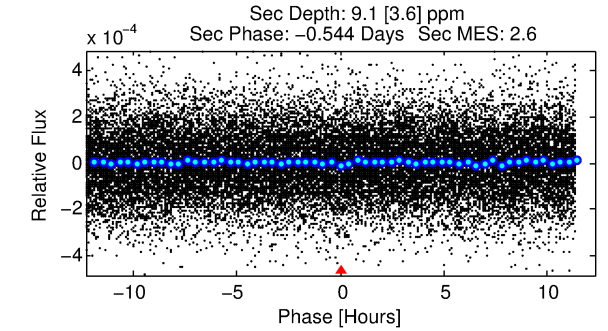
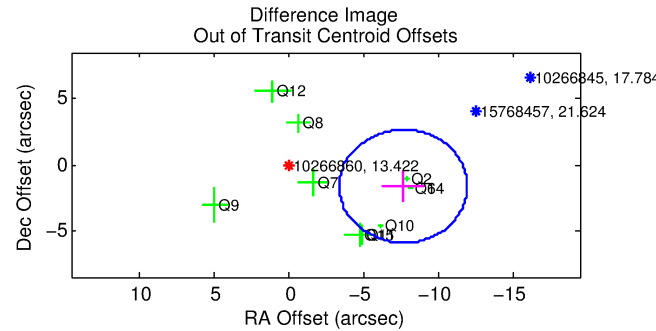
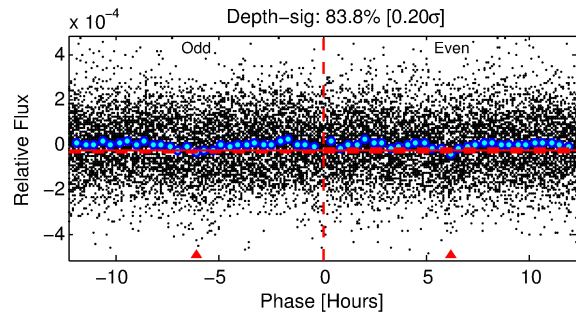
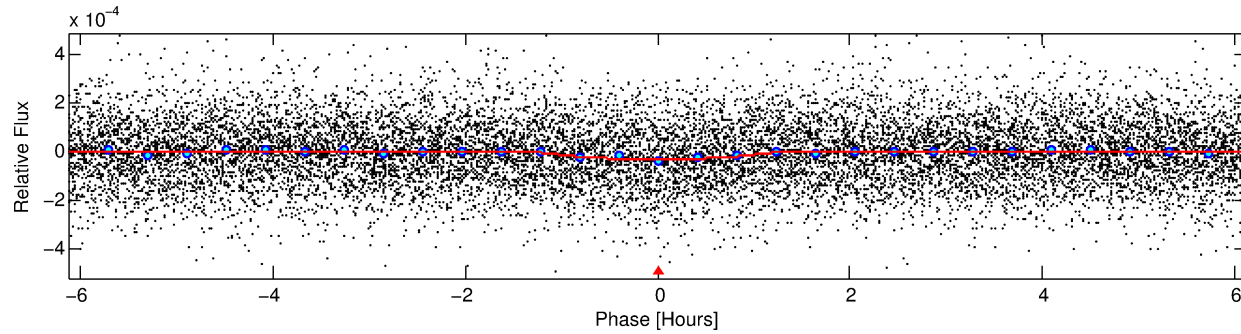
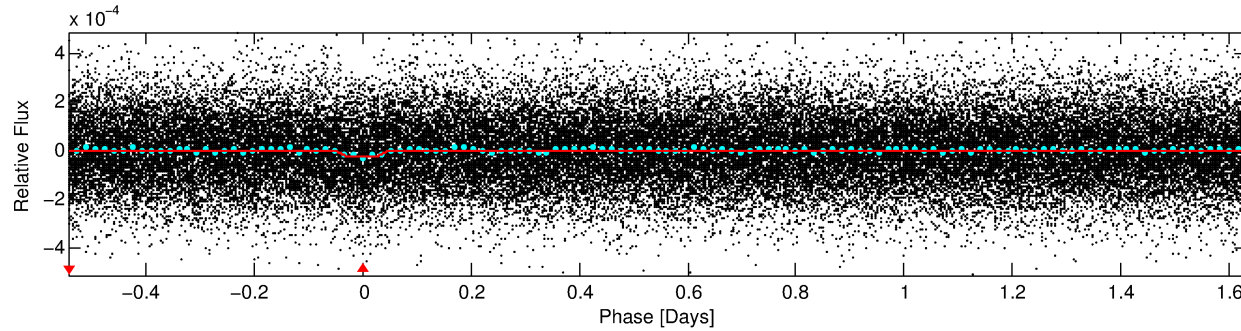
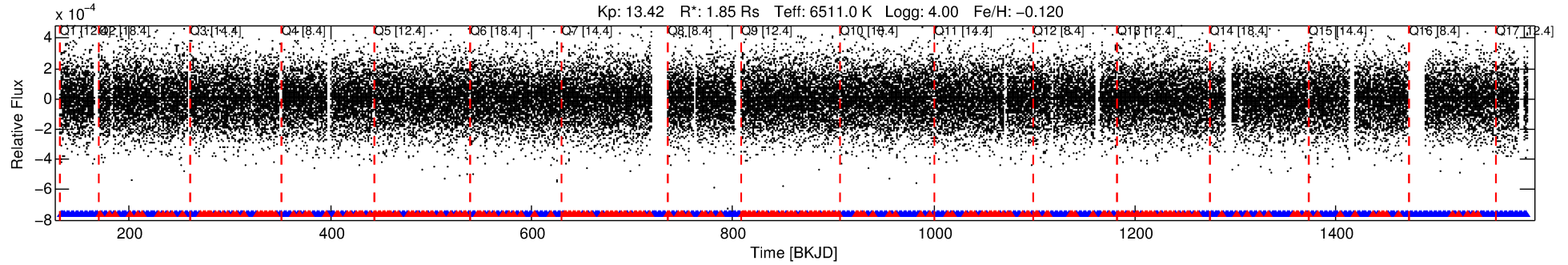
Ephemeris Match Information For 010266860-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
010266860-01	10266860	FL-Lyr-pri	9641031	1:1	4294.0	32	4	9.18	13.43	16733.00	Col-Anomaly	0	0.77	0.61

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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 σ_P < 5.0 and σ_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: 10266860 Candidate: 1 of 1 Period: 2.178 d



DV Fit Results:

Period = 2.17813 [0.00002] d
Epoch = 132.0333 [0.0039] BKJD
Rp/R* = 0.0055 [0.0025]
a/R* = 3.77 [9.41]
b = 0.90 [0.57]
Seff = 4375.00 [1803.08]
Teq = 2074 [214] K
Rp = 1.10 [0.59] Re
a = 0.0355 [0.0088] AU
Ag = 5.20 [5.65] [0.74 σ]
Teffp = 4841 [1230] K [2.22 σ]

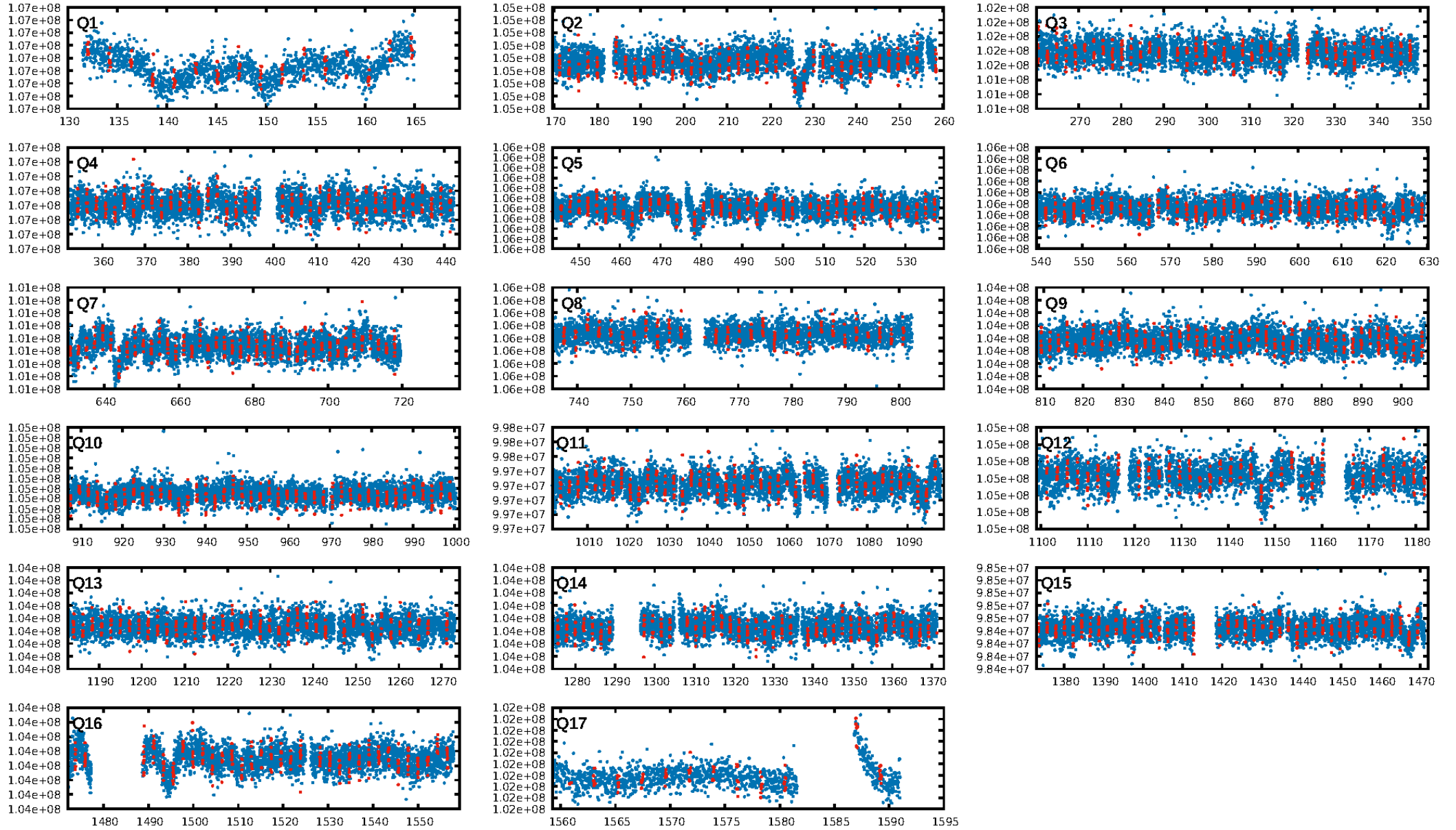
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.28e-15
RollingBand-fgt: 0.57 [338/588]
GhostDiagnostic-chr: 0.4097
Centroid-sig: 0.0%
Centroid-so: 8.210 arcsec [5.74 σ]
OotOffset-rm: 7.865 arcsec [5.52 σ]
KicOffset-rm: 7.800 arcsec [5.73 σ]
OotOffset-st: 4/3/2/1 [10]
KicOffset-st: 4/3/2/1 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

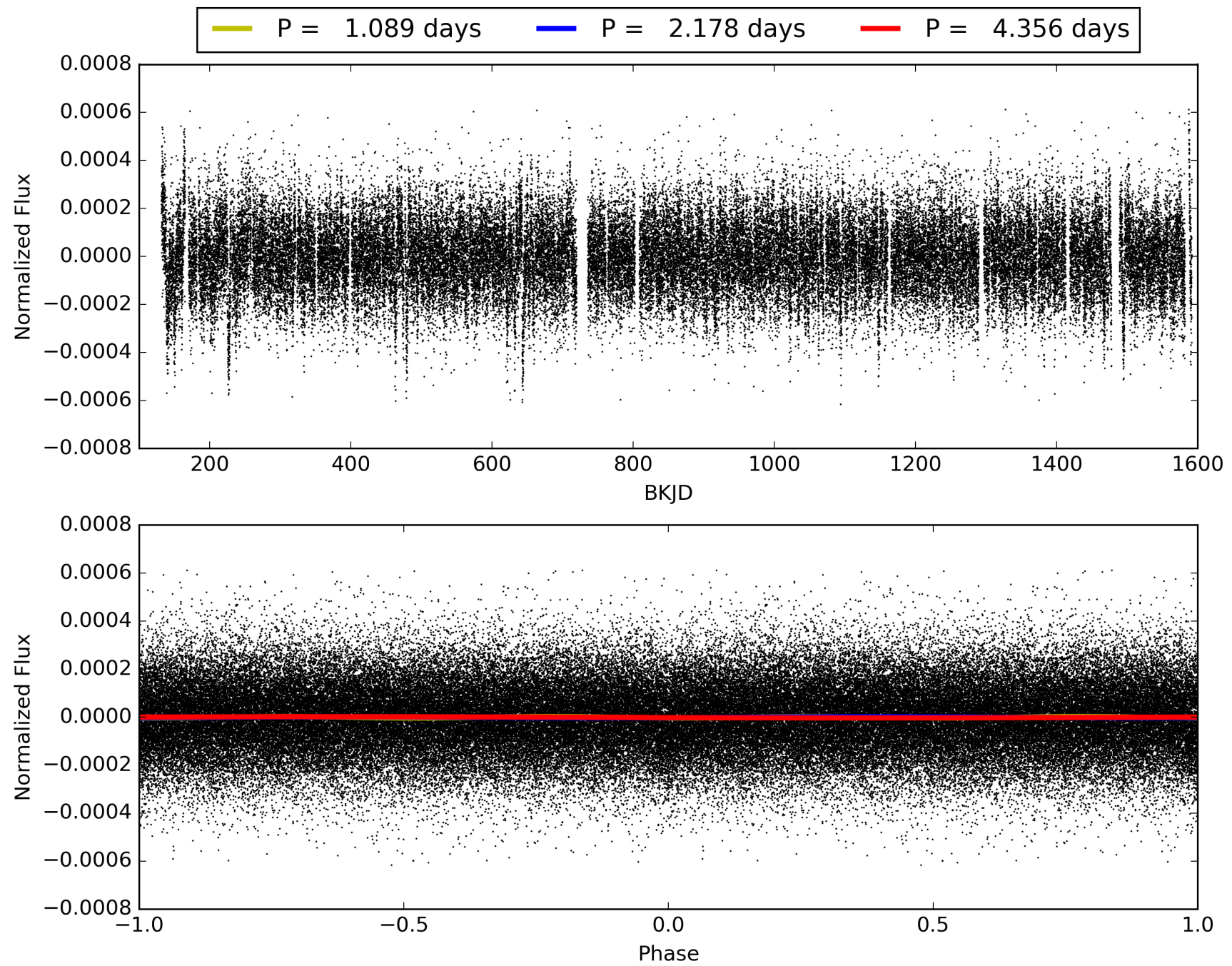
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:24:24 Z

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

TCE 010266860-01, PDC Light Curves

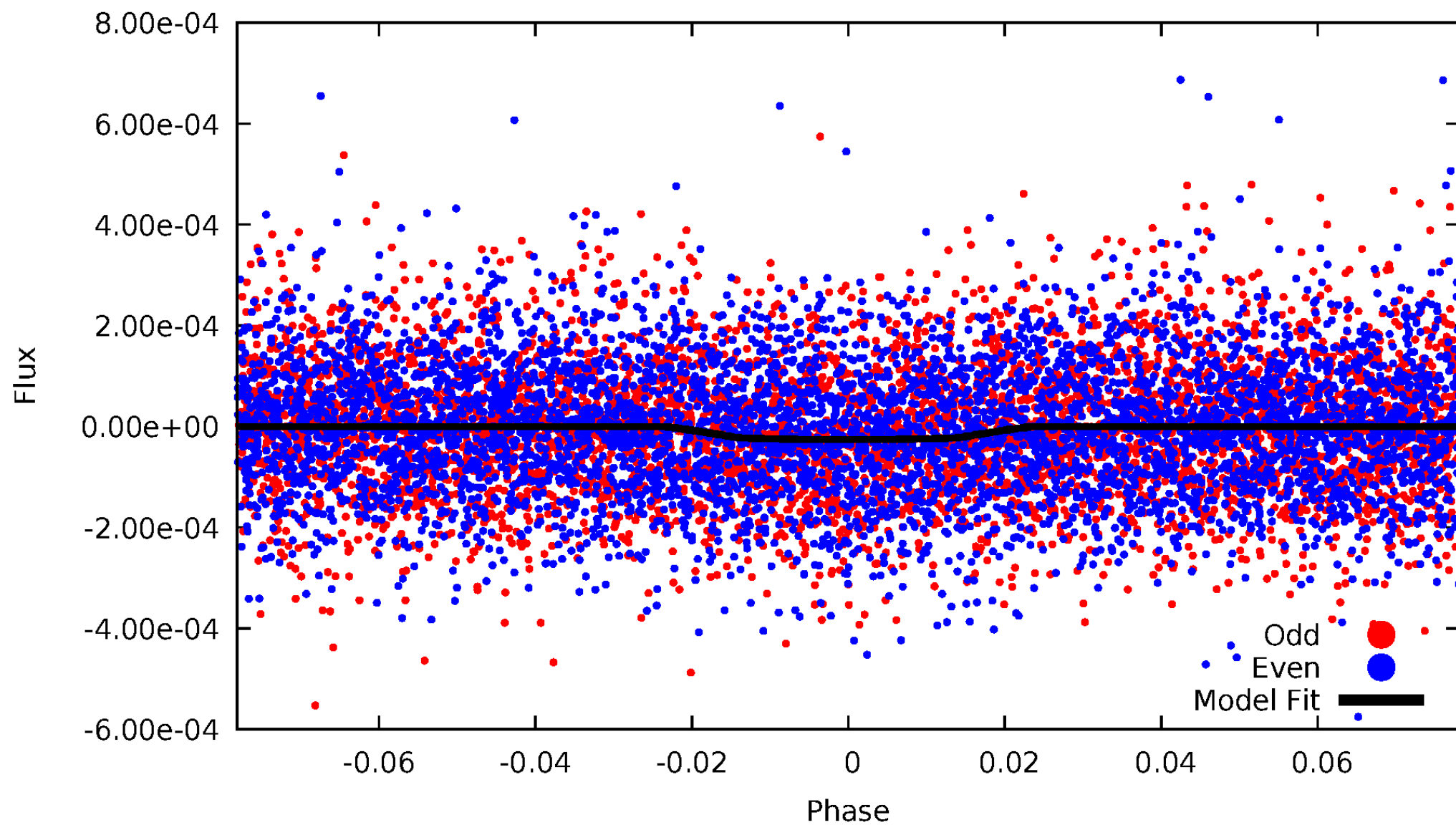


TCE 010266860-01



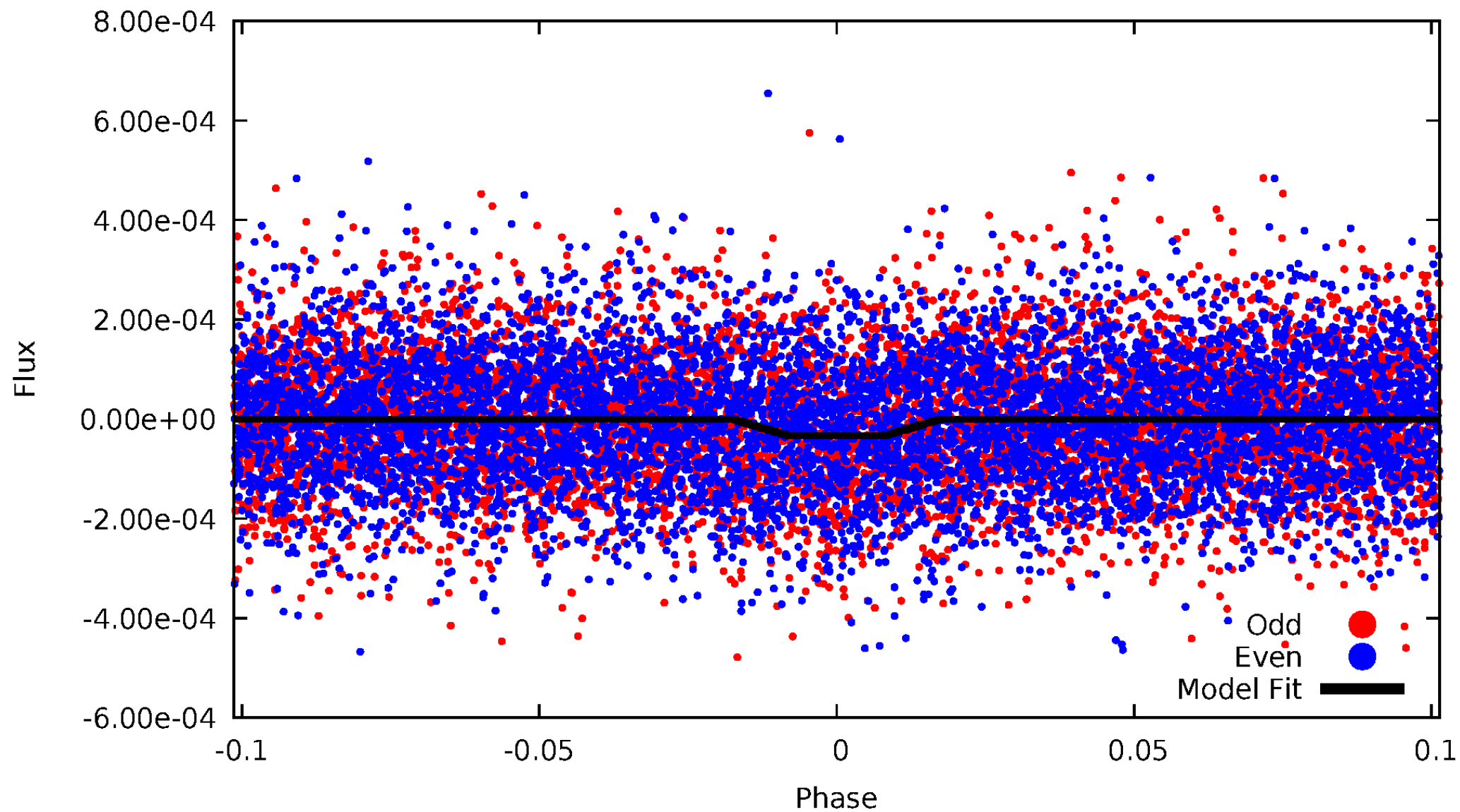
DV Odd/Even

TCE 010266860-01



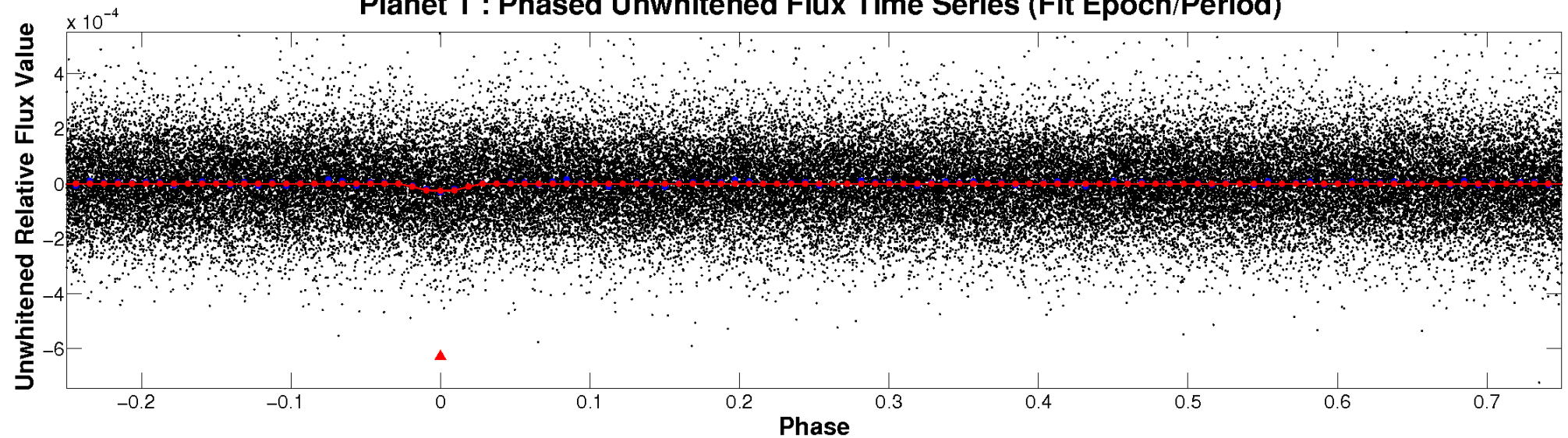
ALT Odd/Even

TCE 010266860-01

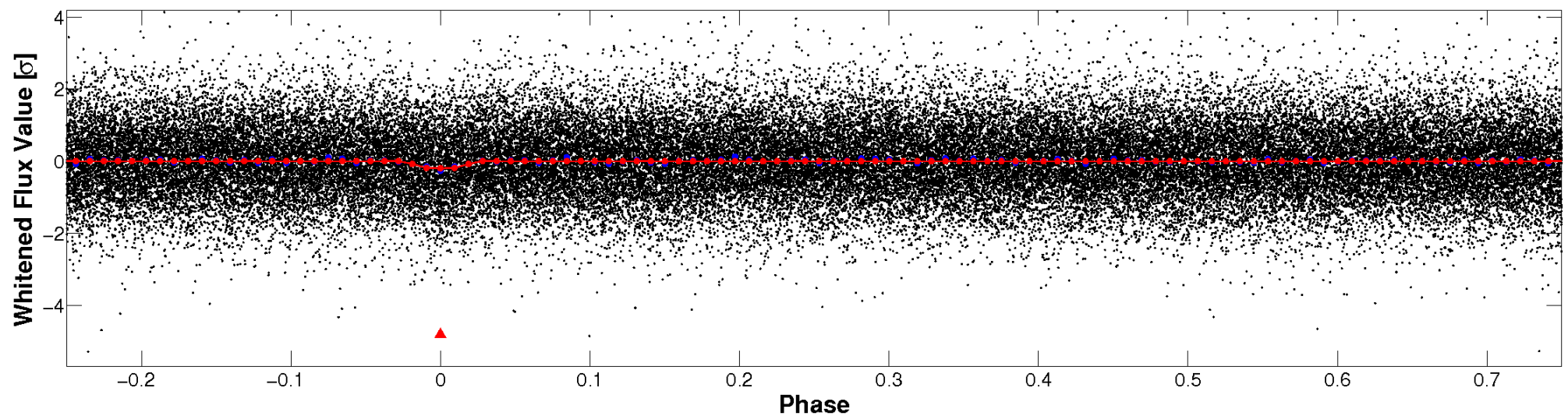


Non-Whitened Vs. Whitened Light Curve

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

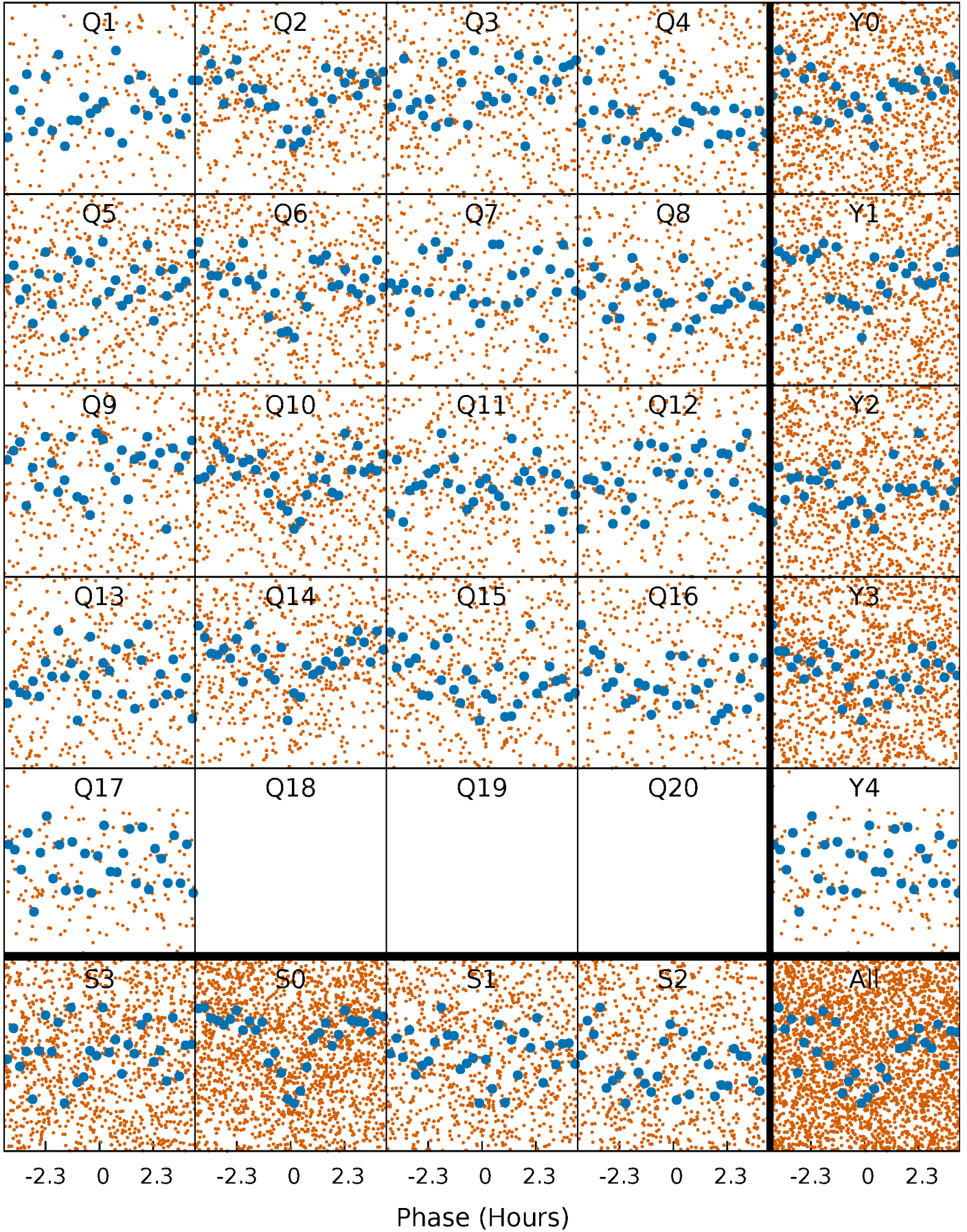


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



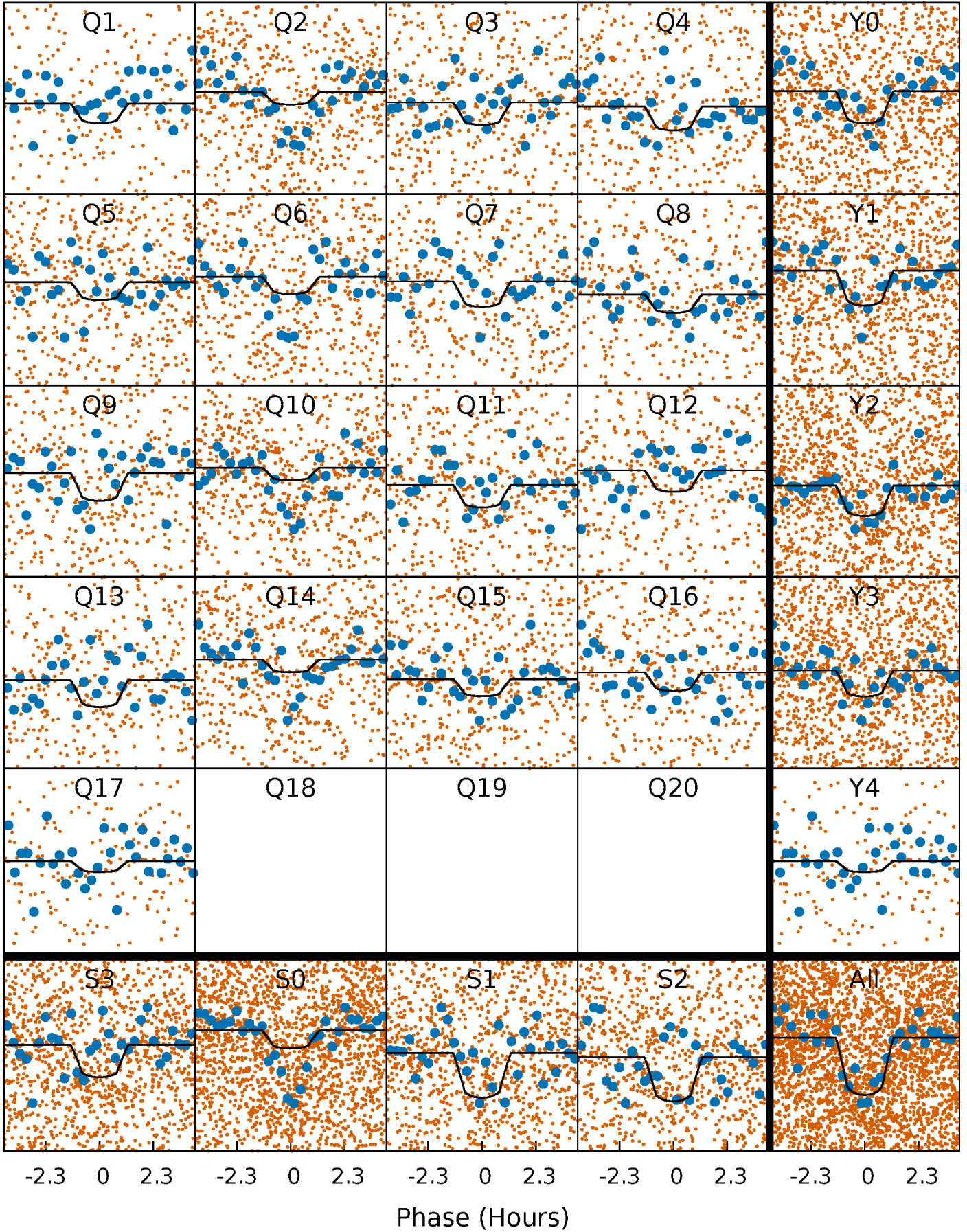
PDC Quarter-Phased Transit Curves

TCE 010266860-01 P= 2.178129 Days $T_0=132.033324$ (BKJD)



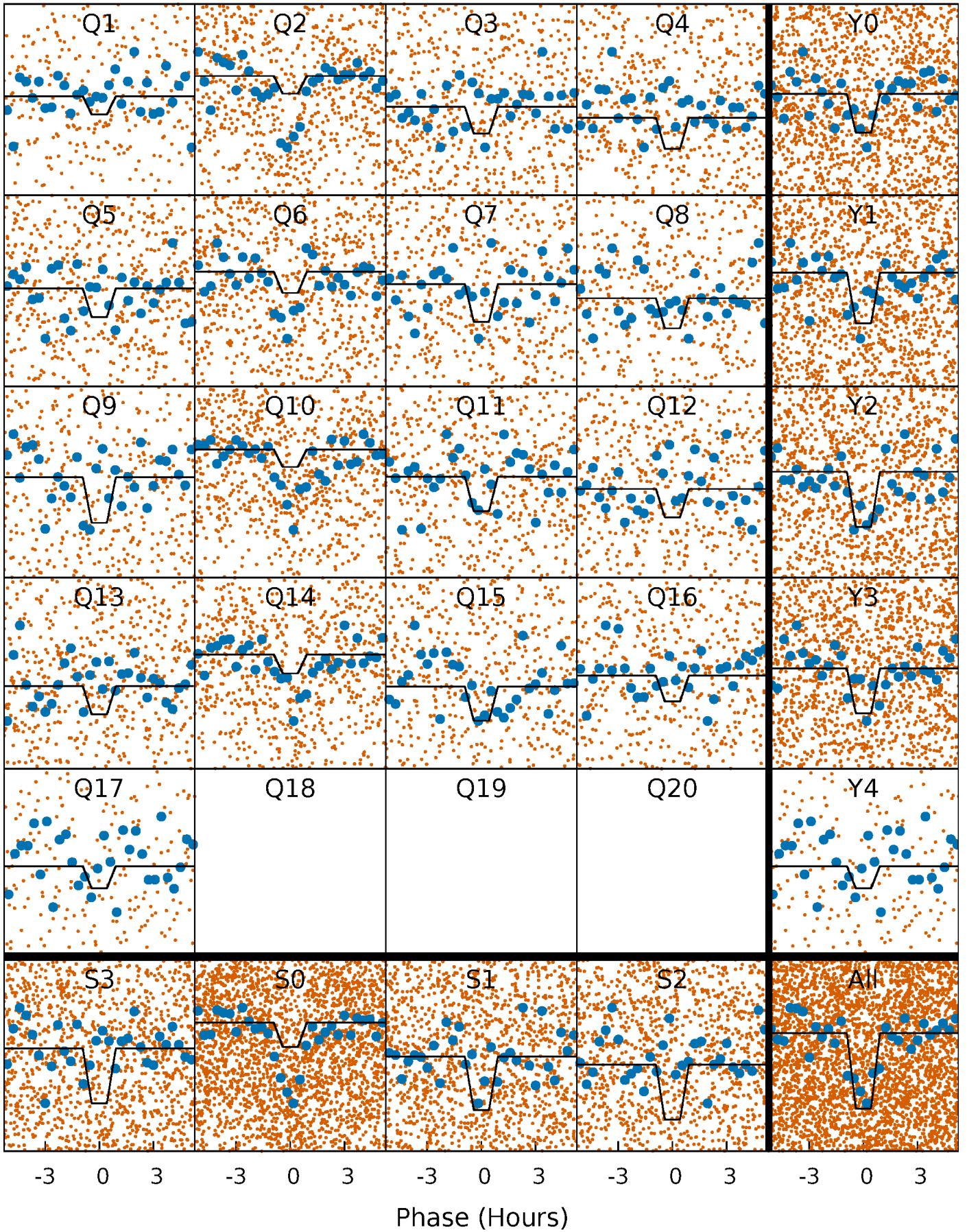
DV Quarter-Phased Transit Curves

TCE 010266860-01 P= 2.178129 Days $T_0=132.033324$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

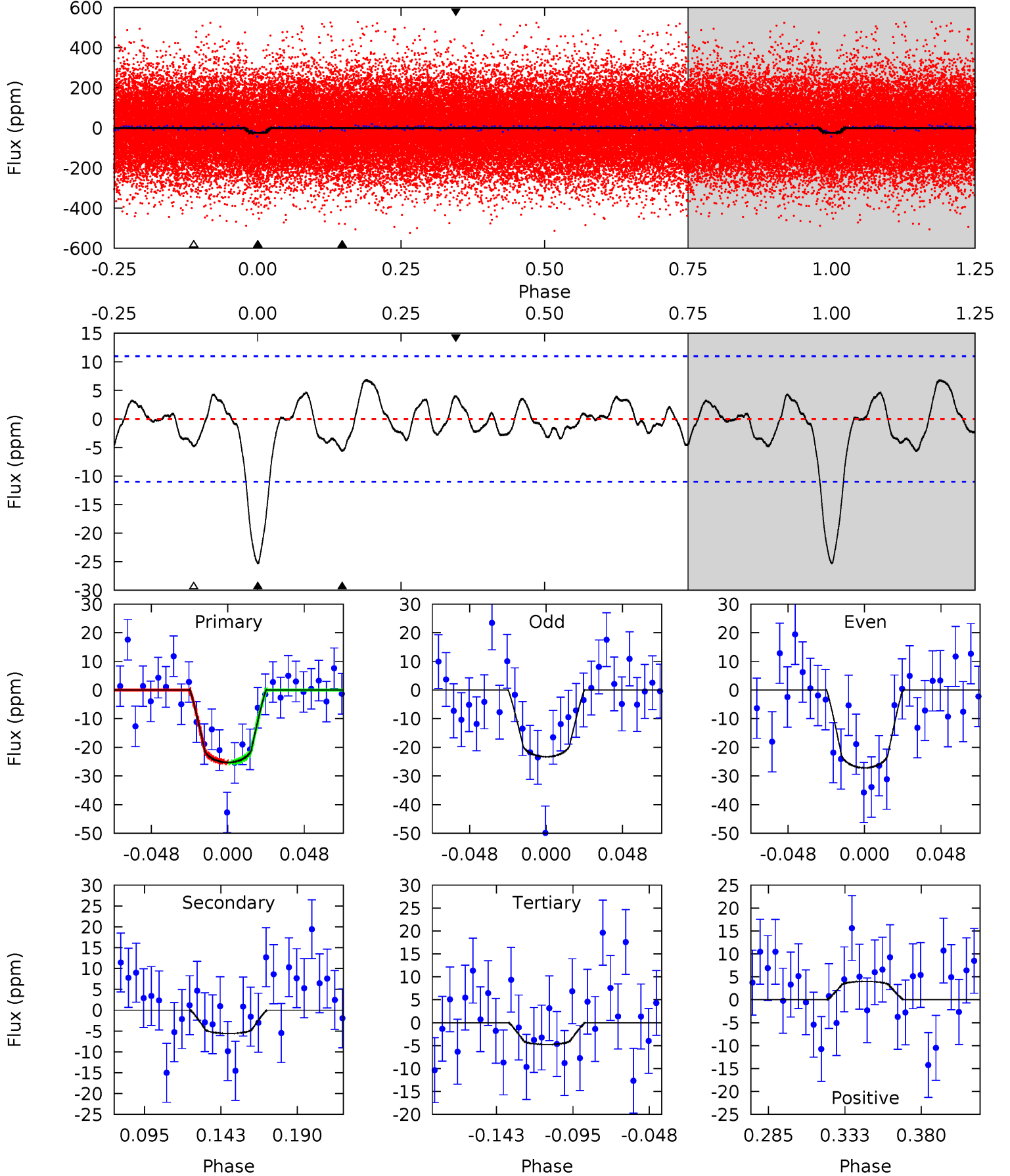
TCE 010266860-01 P= 2.178104 Days $T_0=132.042228$ (BKJD)



DV Model-Shift Uniqueness Test

010266860-01, P = 2.178129 Days, E = 129.855195 Days

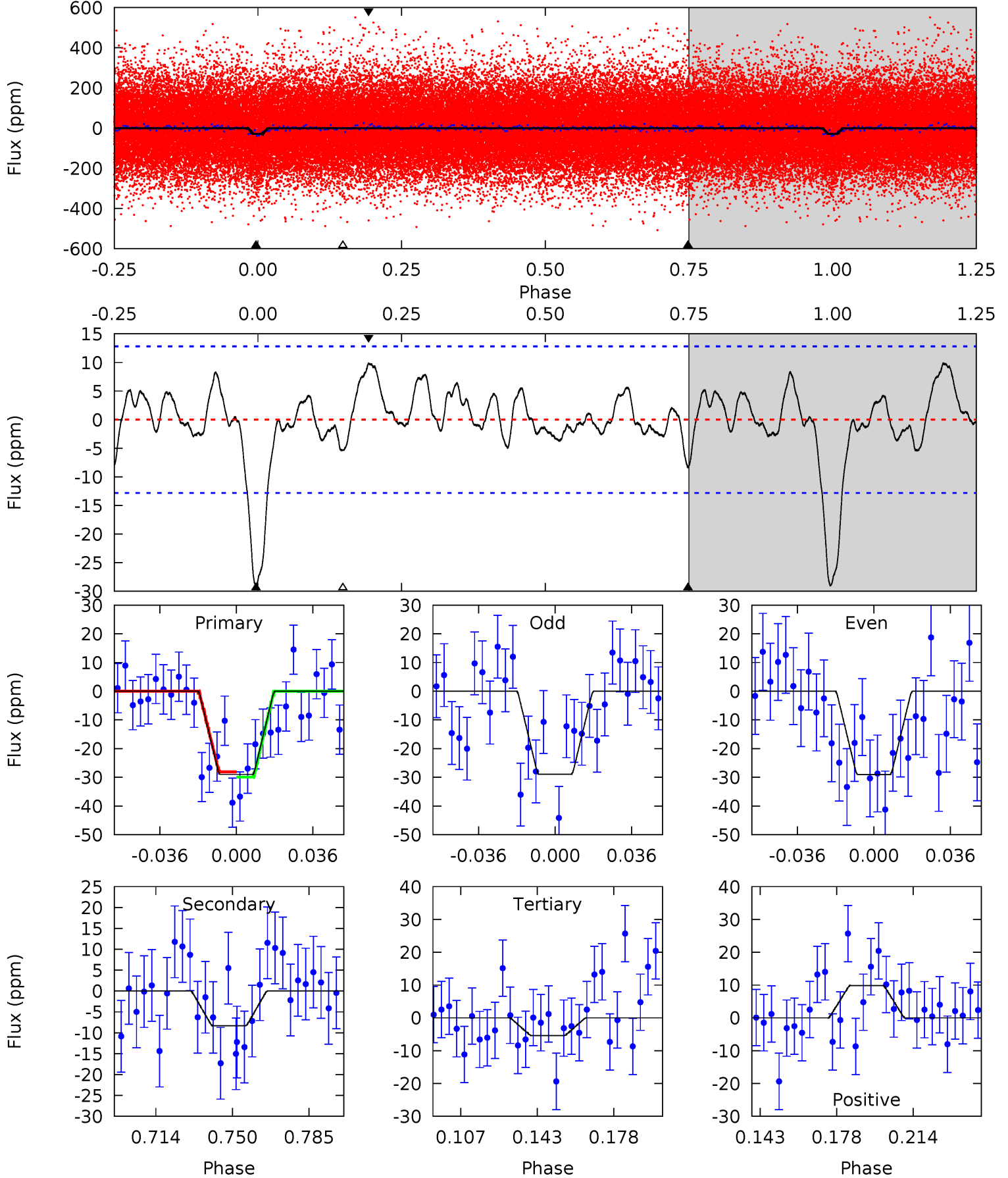
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	2.41	2.05	1.72	4.72	1.98	1.00	8.81	9.14	0.36	0.69	0.83	0.99	0.21	0.03



Alt Model-Shift Uniqueness Test

010266860-01, P = 2.178104 Days, E = 129.864124 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	3.11	2.01	3.67	4.78	2.10	1.24	8.79	7.13	1.10	-0.56	0.02	1.10	0.25	0.33



Stellar Parameters For KIC 010266860

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6511^{+175}_{-175}	$4.003^{+0.234}_{-0.126}$	$-0.120^{+0.300}_{-0.250}$	$1.851^{+0.428}_{-0.475}$	$1.261^{+0.221}_{-0.181}$	$0.280^{+0.361}_{-0.120}$
	+3%/-3%	+6%/-3%	+250%/-208%	+23%/-26%	+18%/-14%	+129%/-43%
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 010266860-01 / KOI 7996.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 2	$1.09^{+0.53}_{-0.50}$	2864^{+193}_{-202}	4286^{+1487}_{-746}	$3.157^{+8.379}_{-2.032}$
Alt.	-8 ± 3	$1.15^{+0.54}_{-0.51}$	2864^{+187}_{-206}	4644^{+1341}_{-758}	$4.489^{+9.474}_{-2.668}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

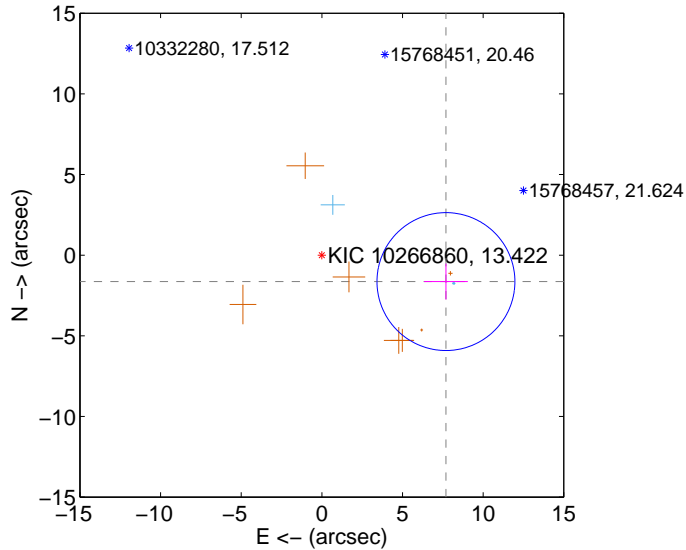
Supplemental centroid analysis for 010266860-01. Kepler magnitude: 13.42. Transit SNR 8.46

There are 3 quarters with good PRF difference image offsets

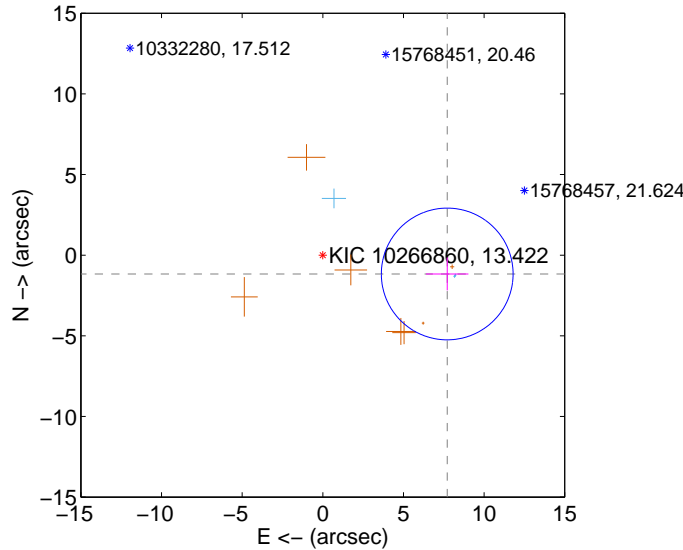
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.865 ± 1.425	5.52	-7.692 ± 1.354	-1.638 ± 1.116
PRF-fit source offset from KIC position	7.800 ± 1.361	5.73	-7.713 ± 1.318	-1.166 ± 1.019
photometric centroid source offset	8.21 ± 1.43	5.74	-7.31 ± 1.45	-3.73 ± 1.37

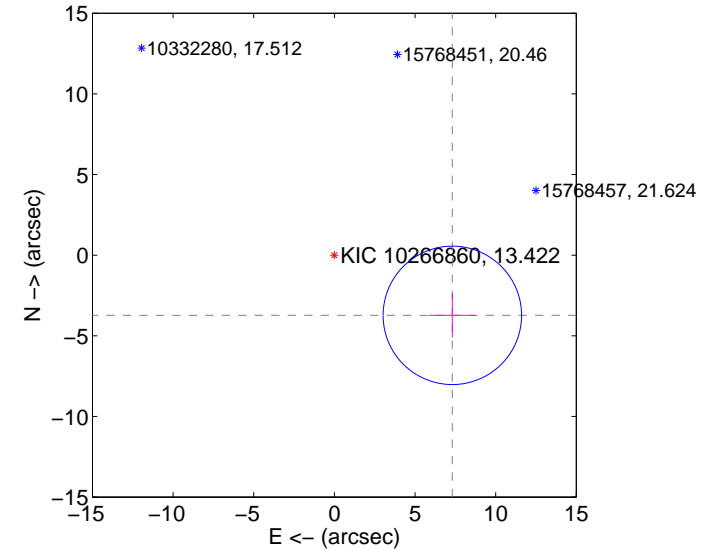
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

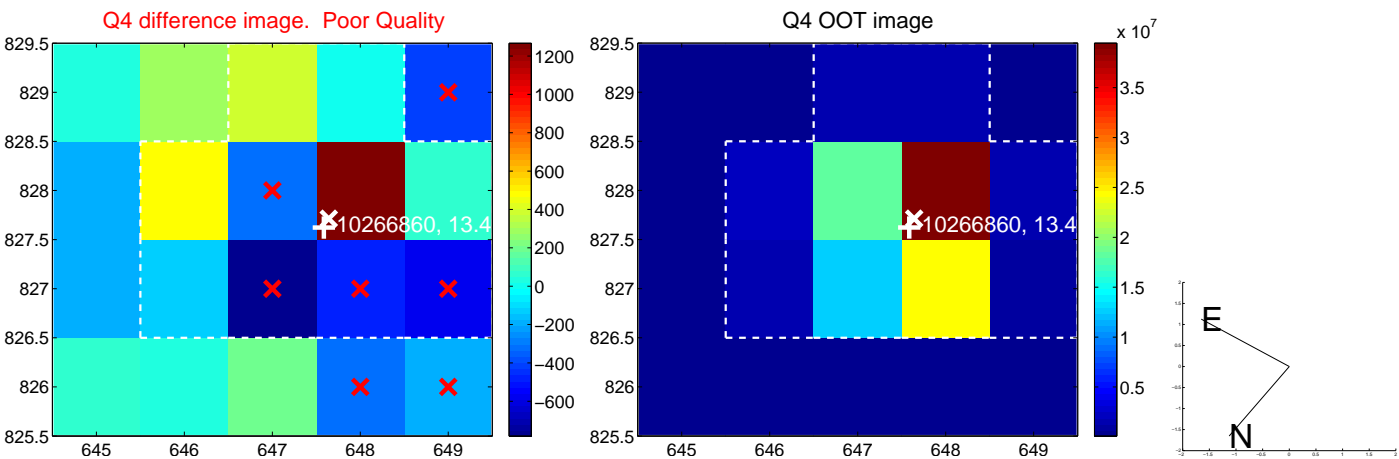
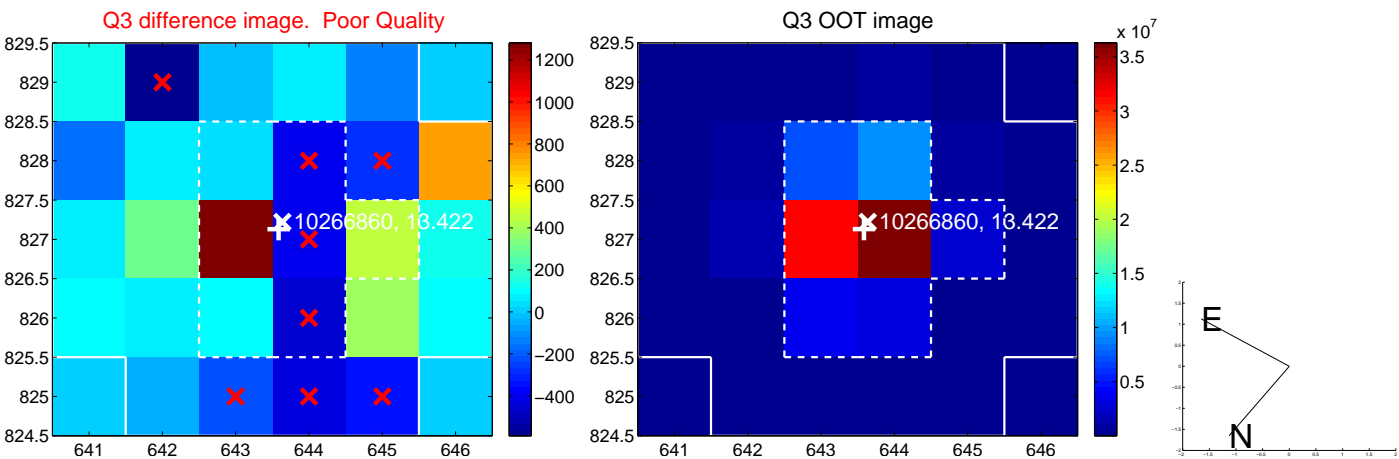
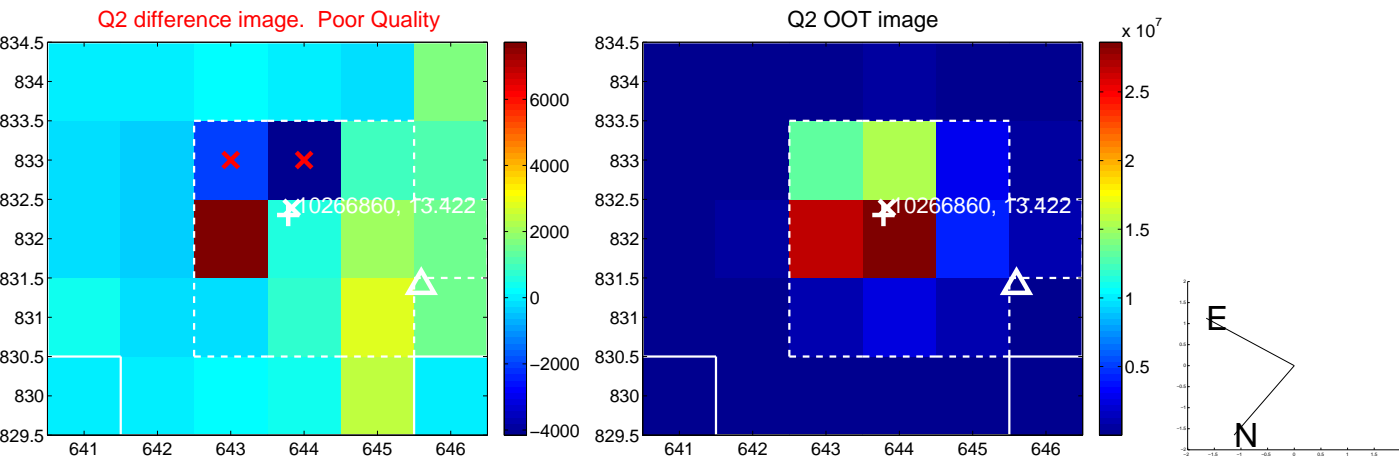
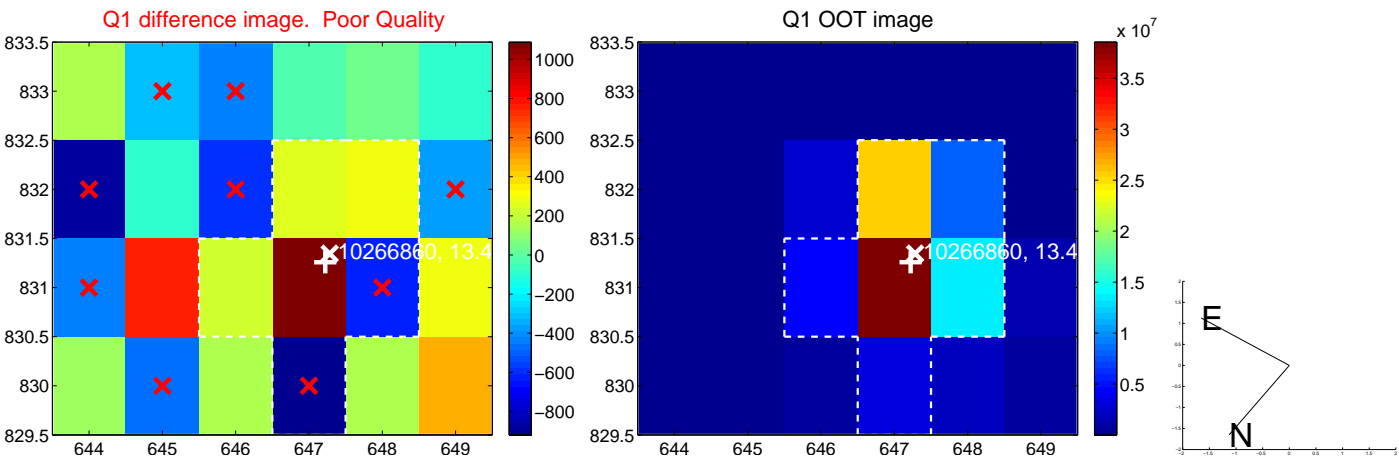


offset from photometric centroids

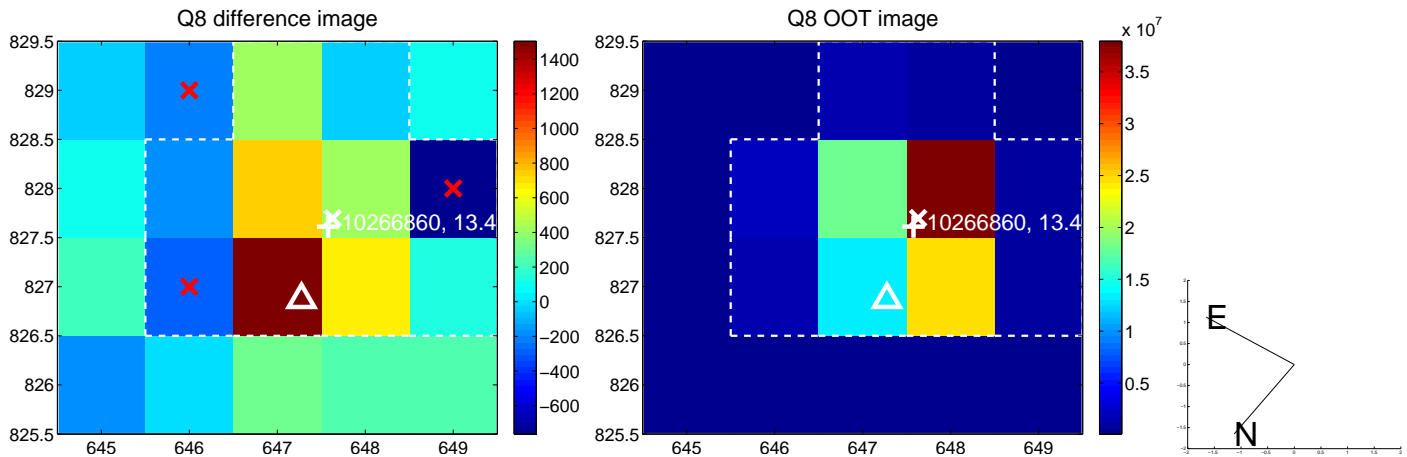
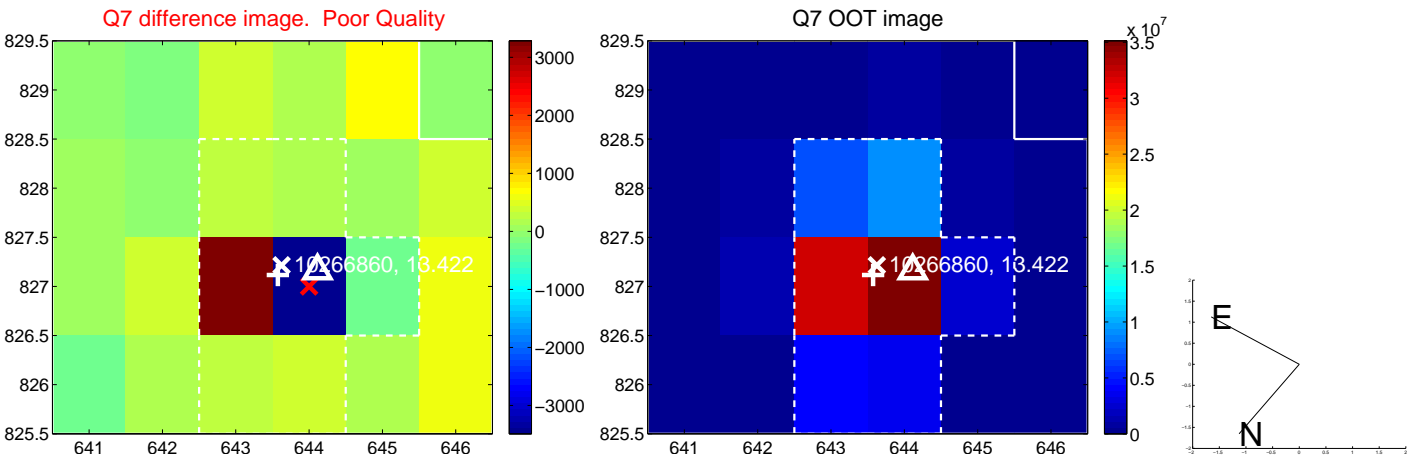
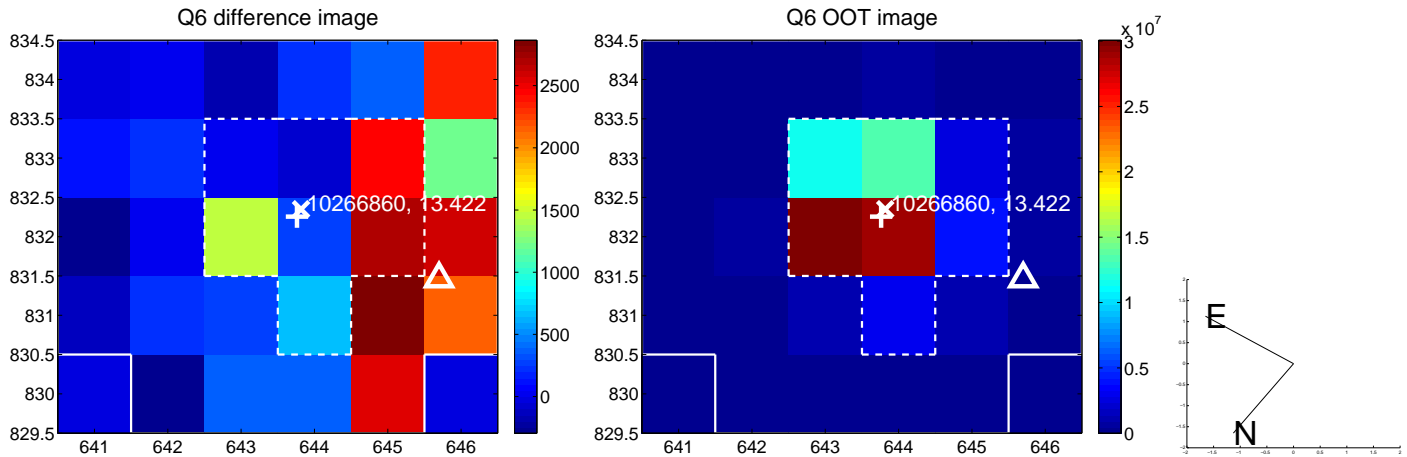
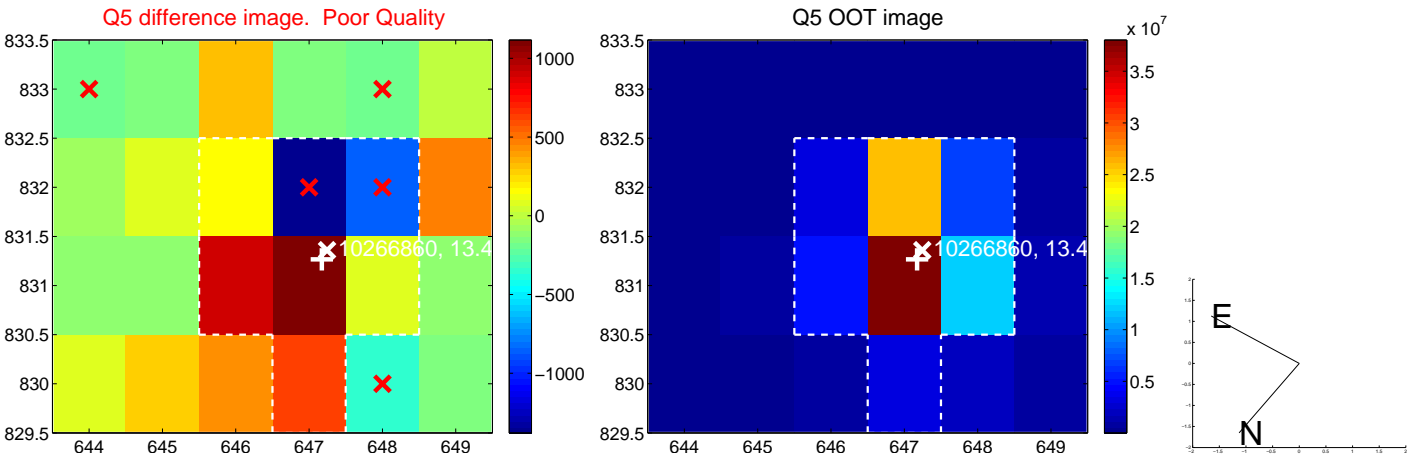


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

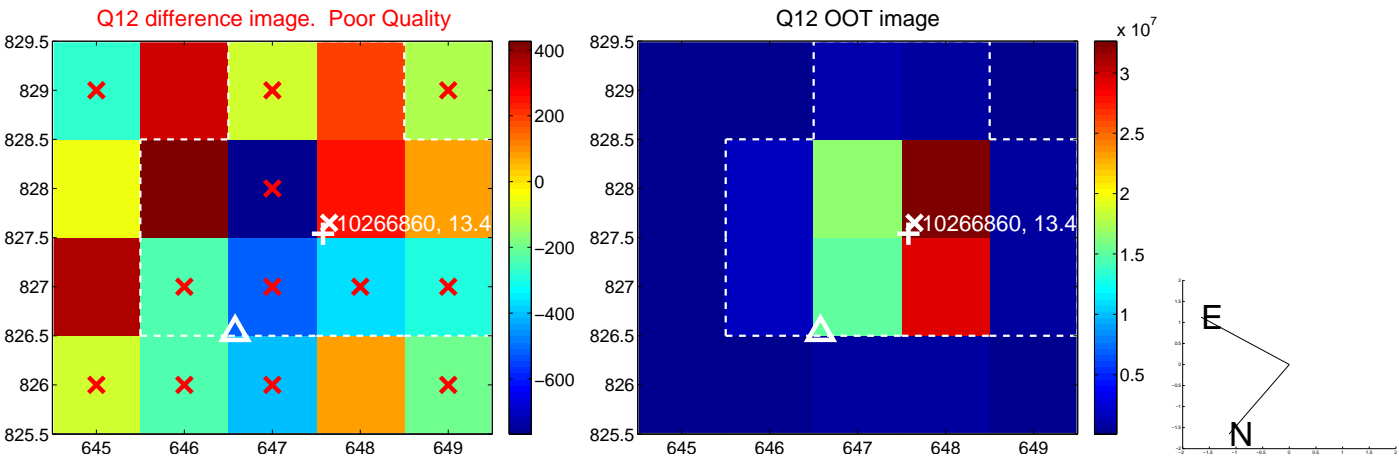
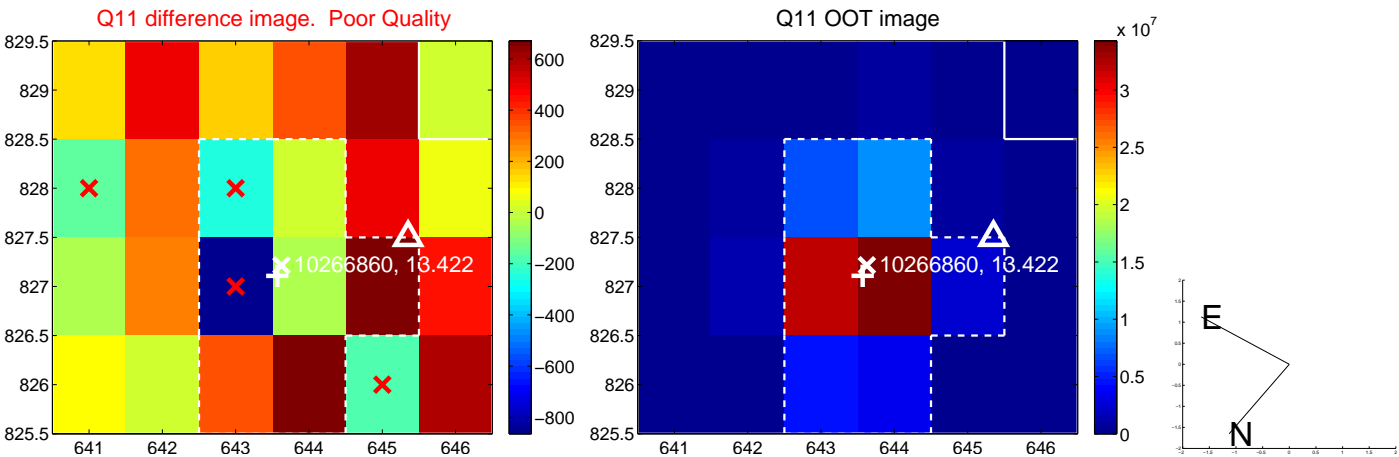
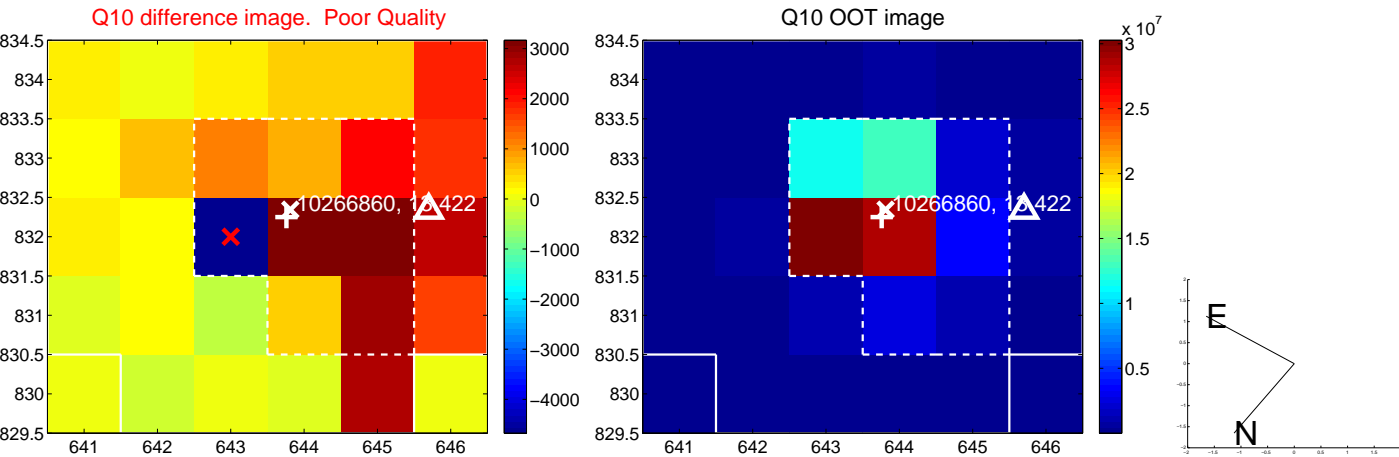
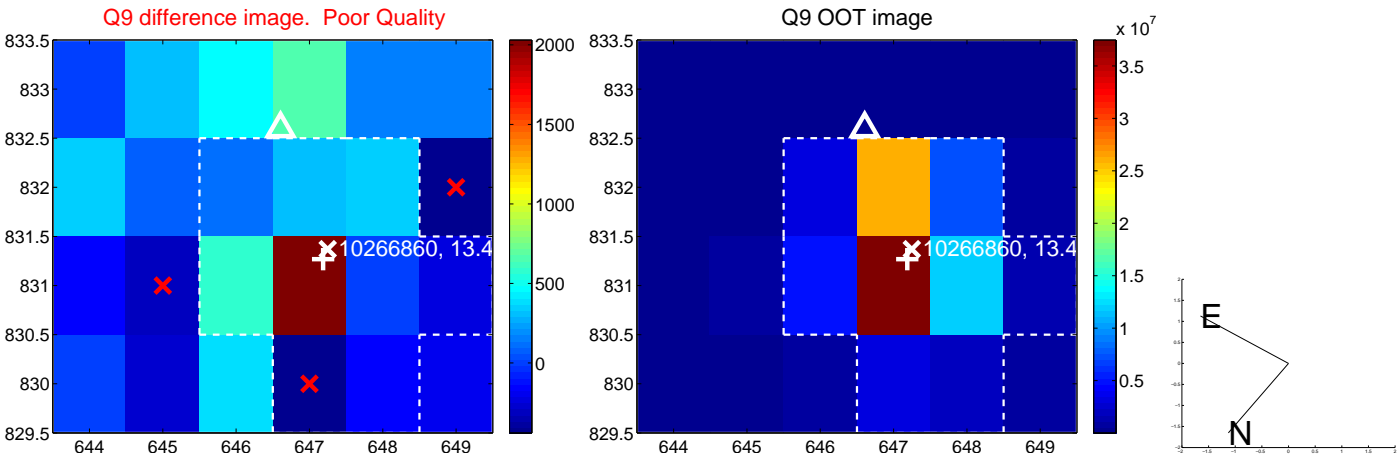
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



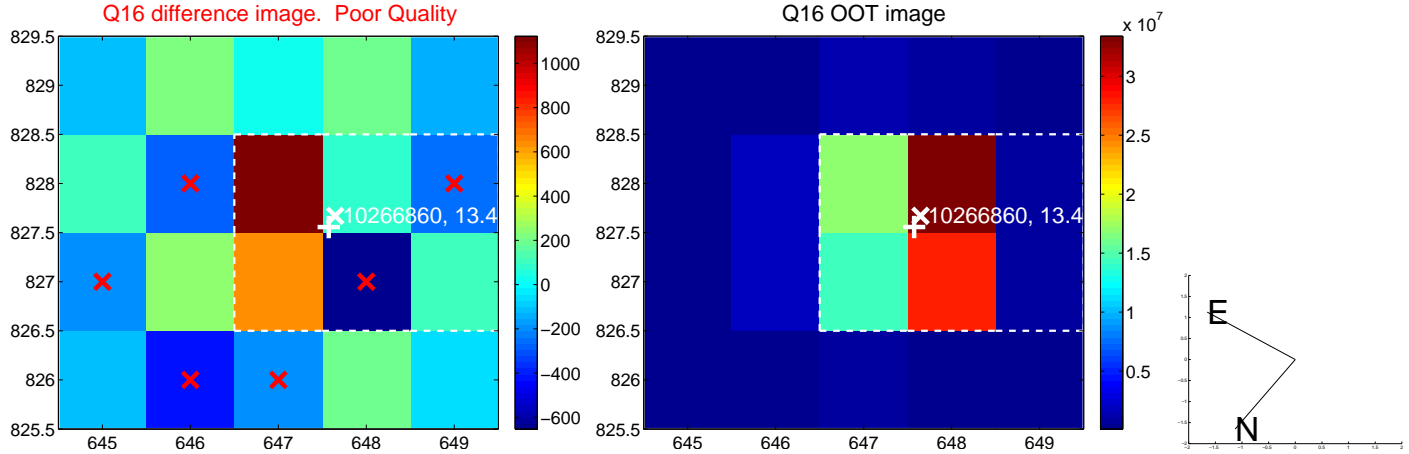
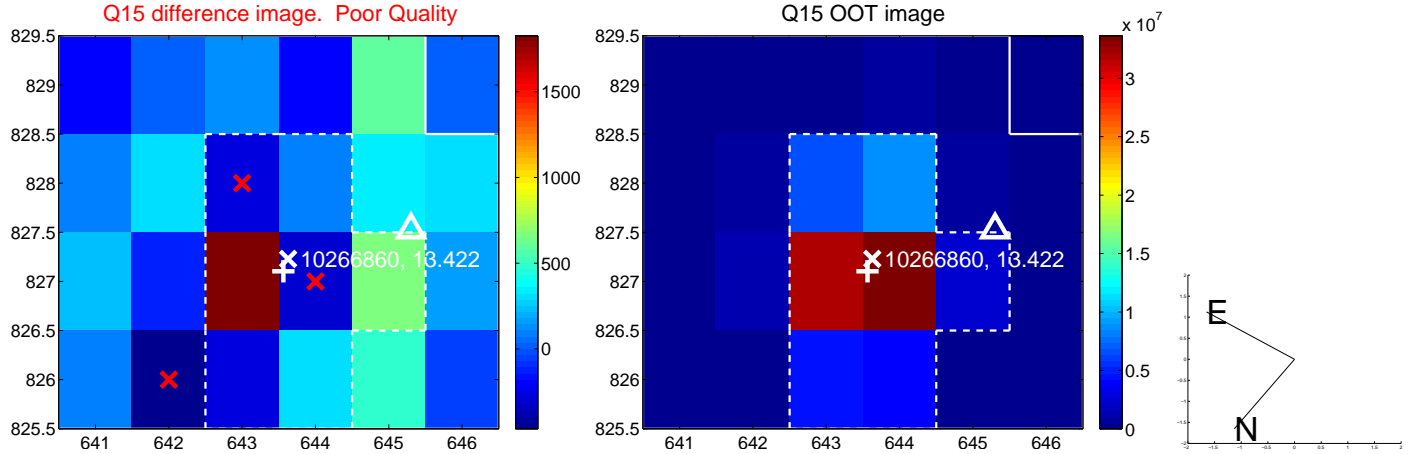
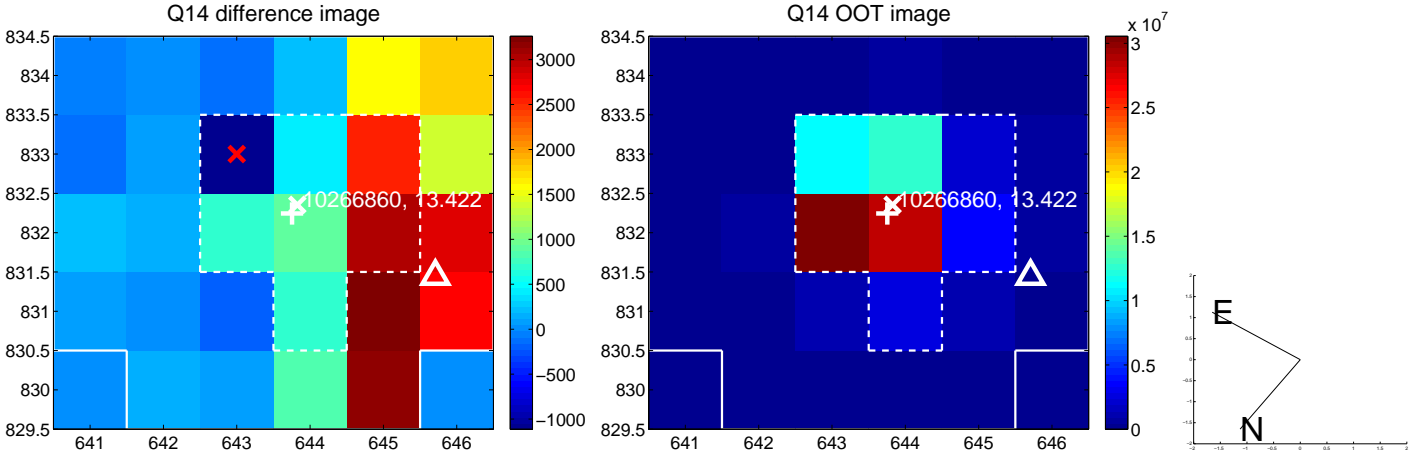
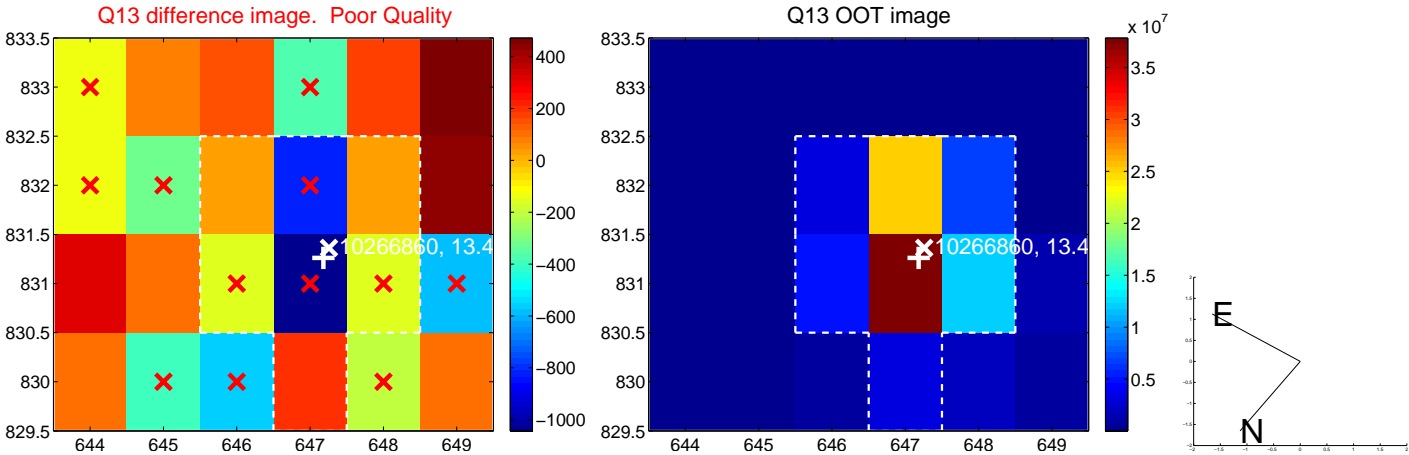
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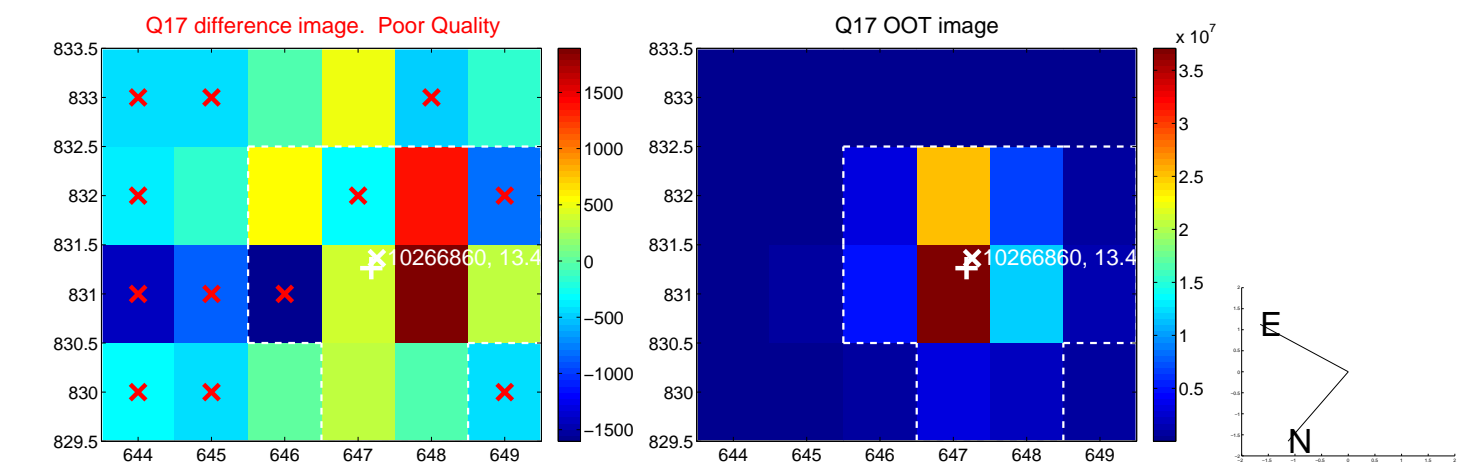
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



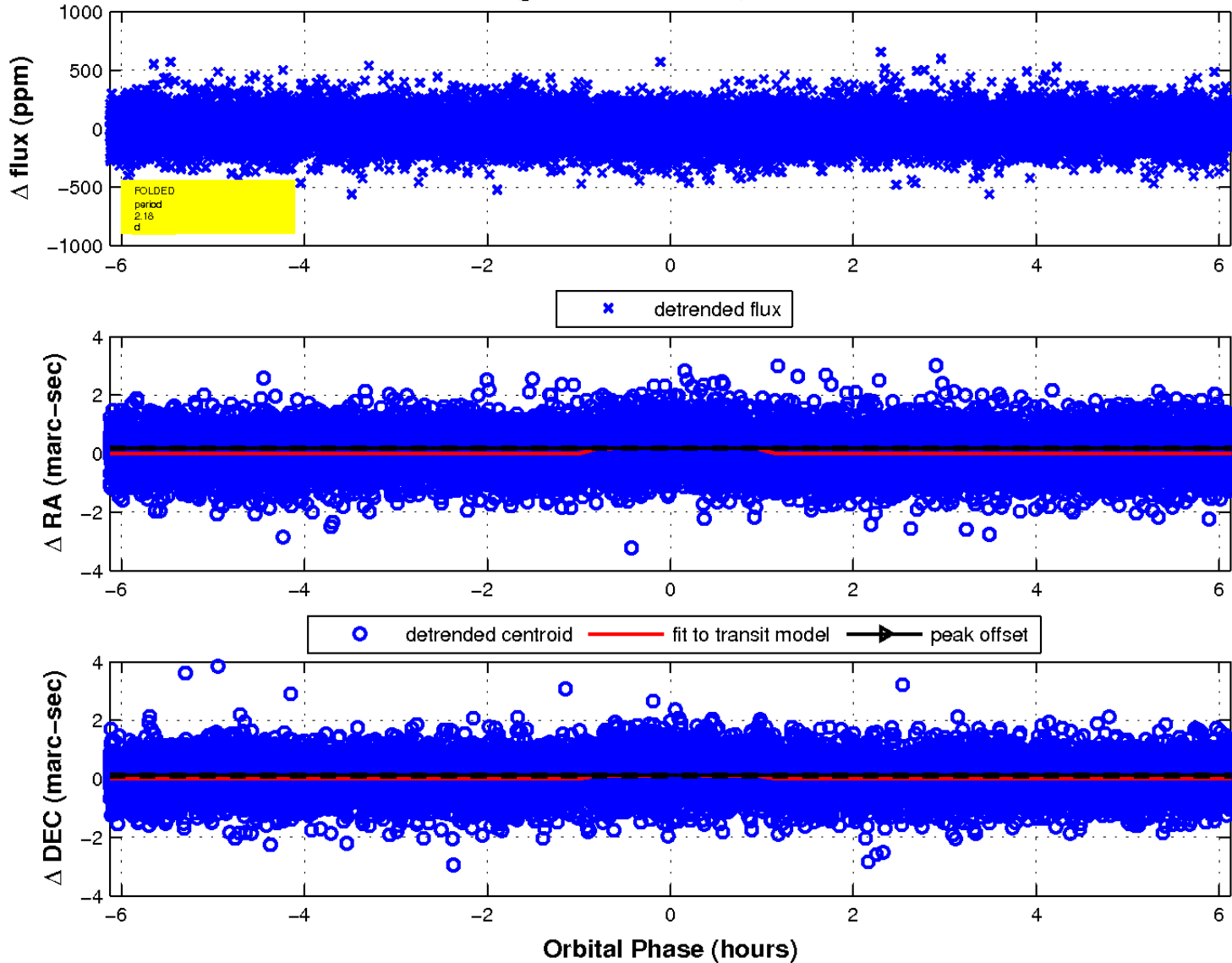
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

