

KIC 004750341

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})
004750341-01	OBS	4884.01	0.987543	131.686377	36.7	3.035	8.5	7.7	1.15	5571	0.84	3050.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004750341-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

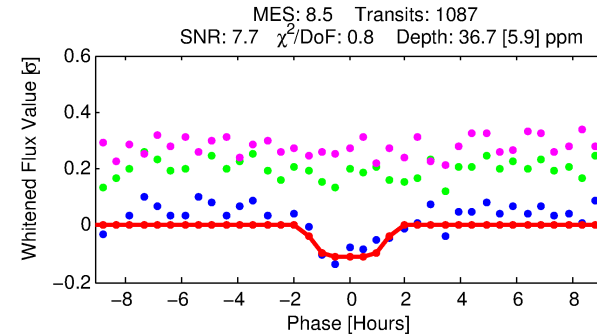
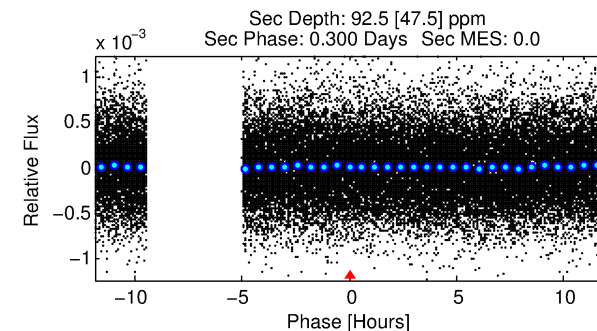
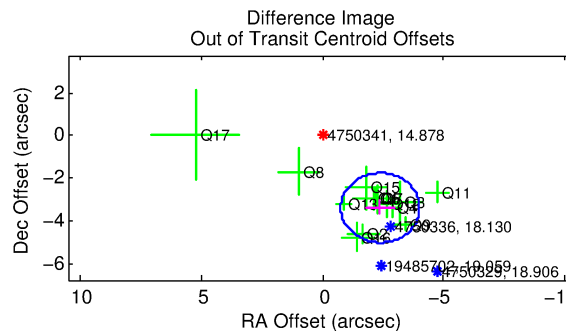
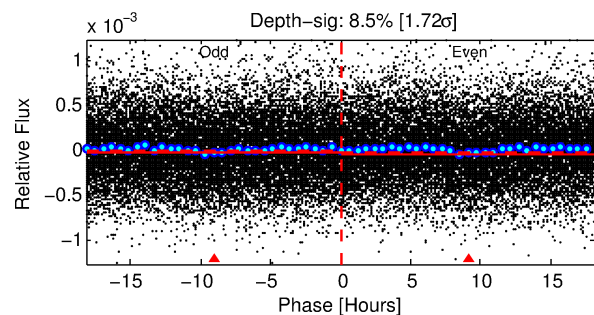
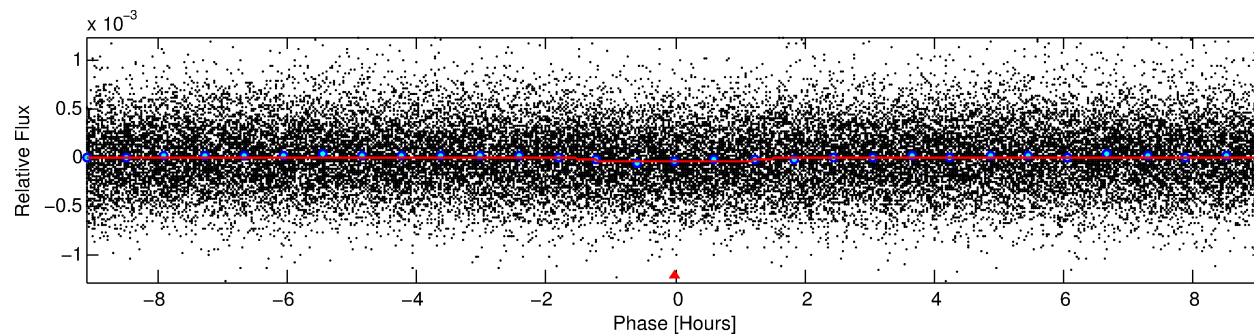
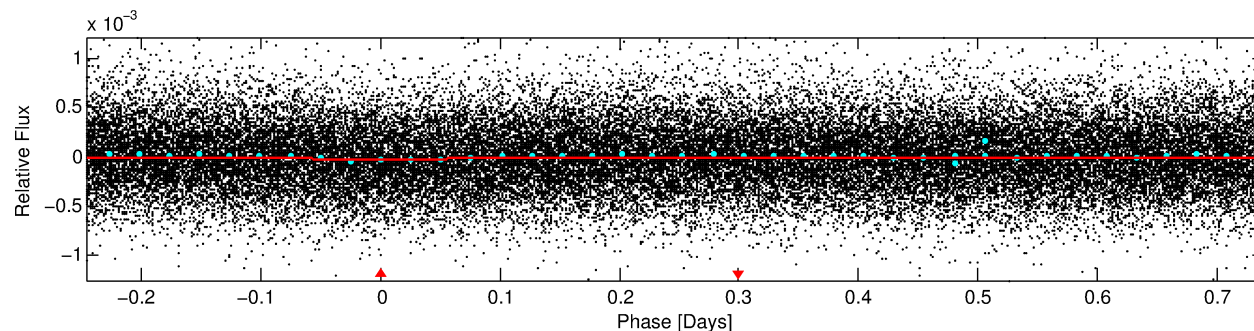
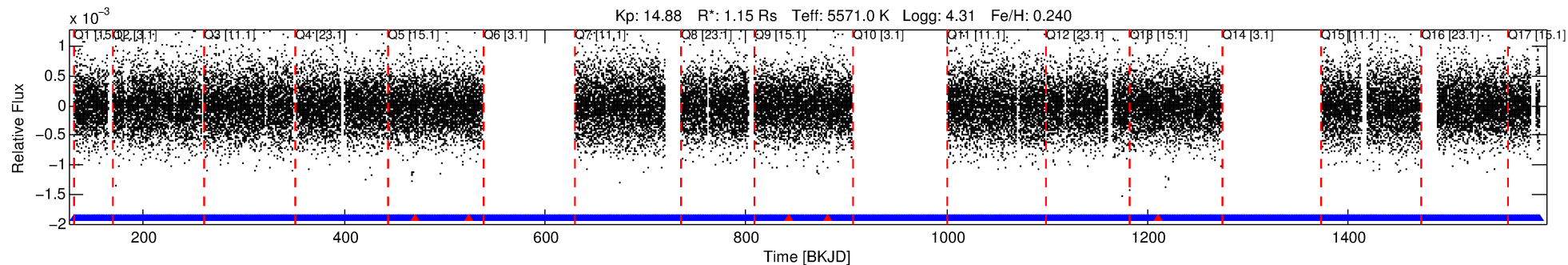
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004750341-01

No Significant Match Found

DV One-Page Summary

KIC: 4750341 Candidate: 1 of 1 Period: 0.988 d
KOI: K04884 Corr: No Ephemeris Match



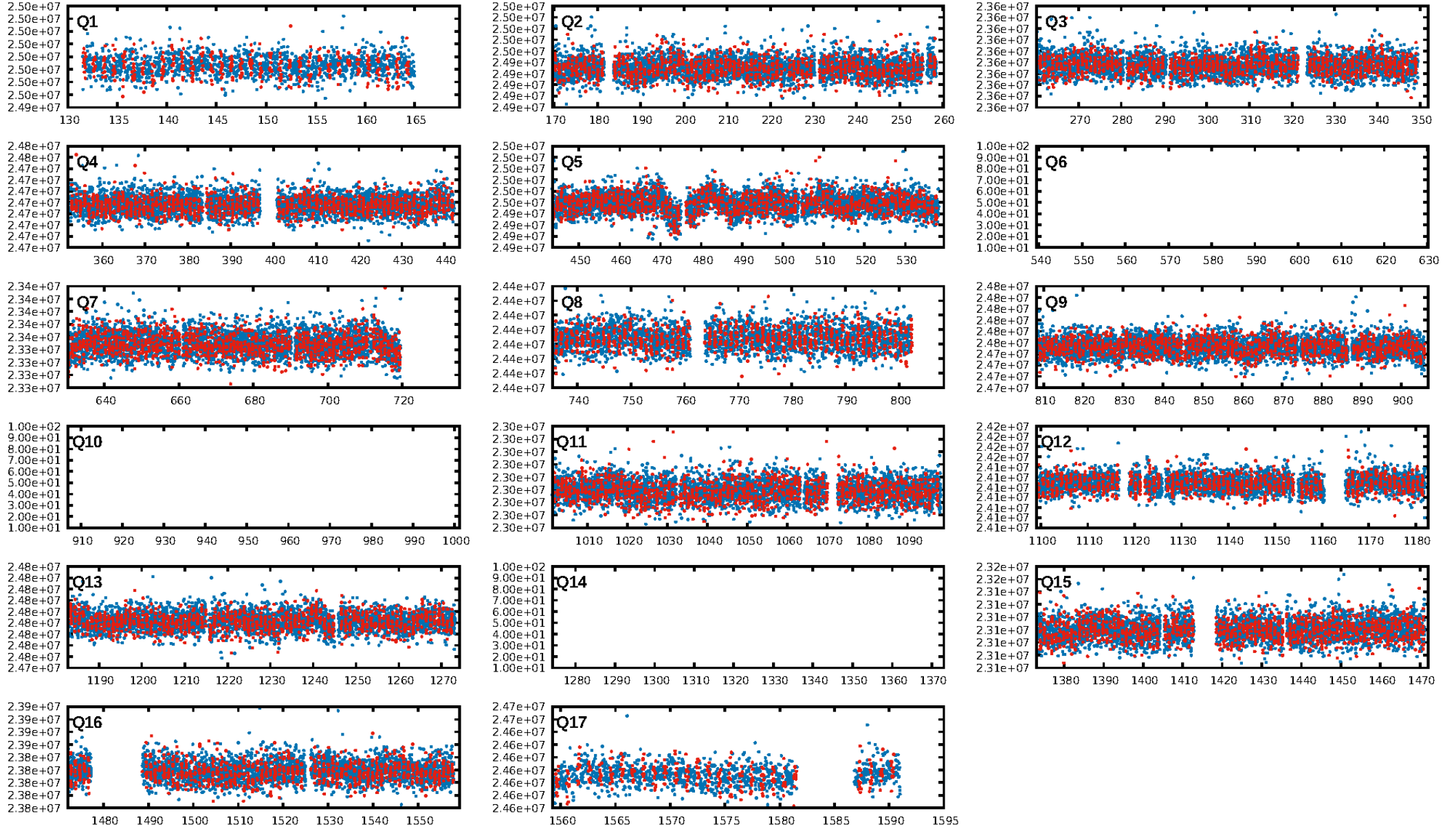
DV Fit Results:

Period = 0.98754 [0.00002] d
Epoch = 131.6864 [0.0053] BKJD
Rp/R* = 0.0068 [0.0058]
a/R* = 1.42 [2.81]
b = 0.91 [0.74]
Seff = 3050.86 [1046.67]
T_{eq} = 1895 [163] K
Rp = 0.84 [0.75] Re
a = 0.0193 [0.0043] AU
Ag = 26.50 [48.02] [0.53σ]
T_{effp} = 6648 [2971] K [1.60σ]

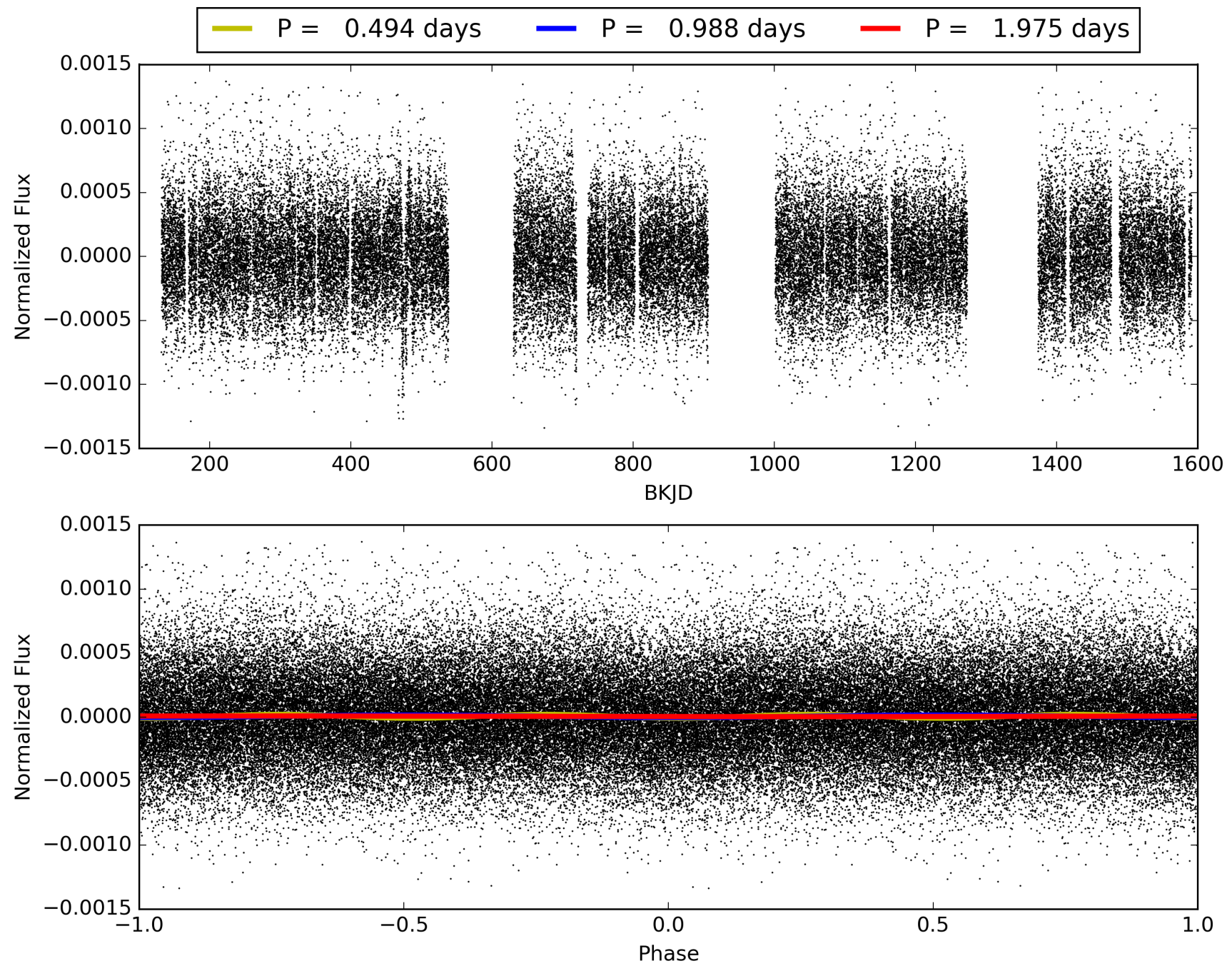
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.07e-17
RollingBand-fgt: 1.00 [1021/1026]
GhostDiagnostic-chr: 0.9622
Centroid-sig: 0.0%
Centroid-so: 9.221 arcsec [4.41σ]
OotOffset-rm: 4.129 arcsec [7.61σ]
KicOffset-rm: 4.212 arcsec [7.00σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004750341-01, PDC Light Curves

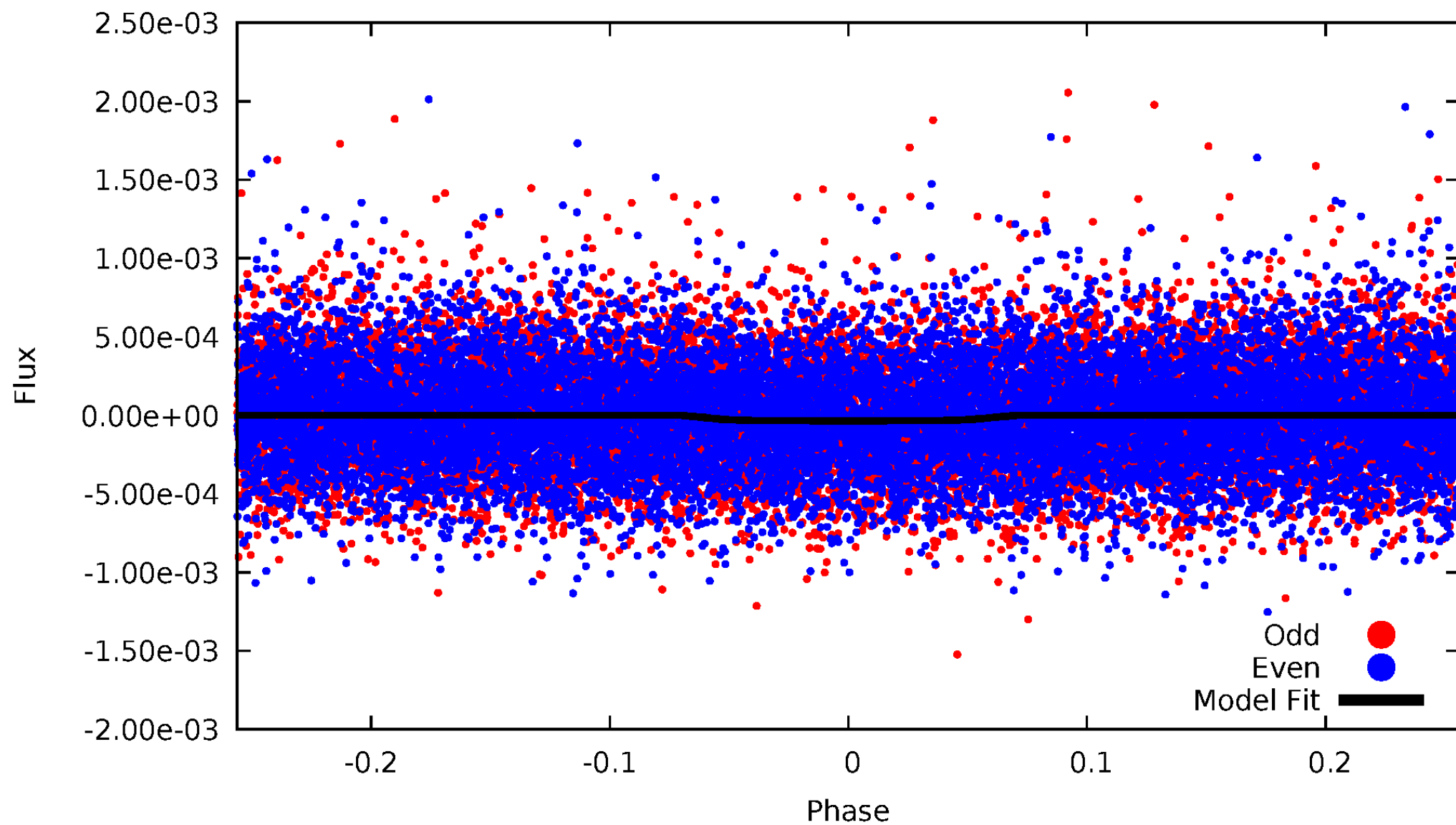


TCE 004750341-01



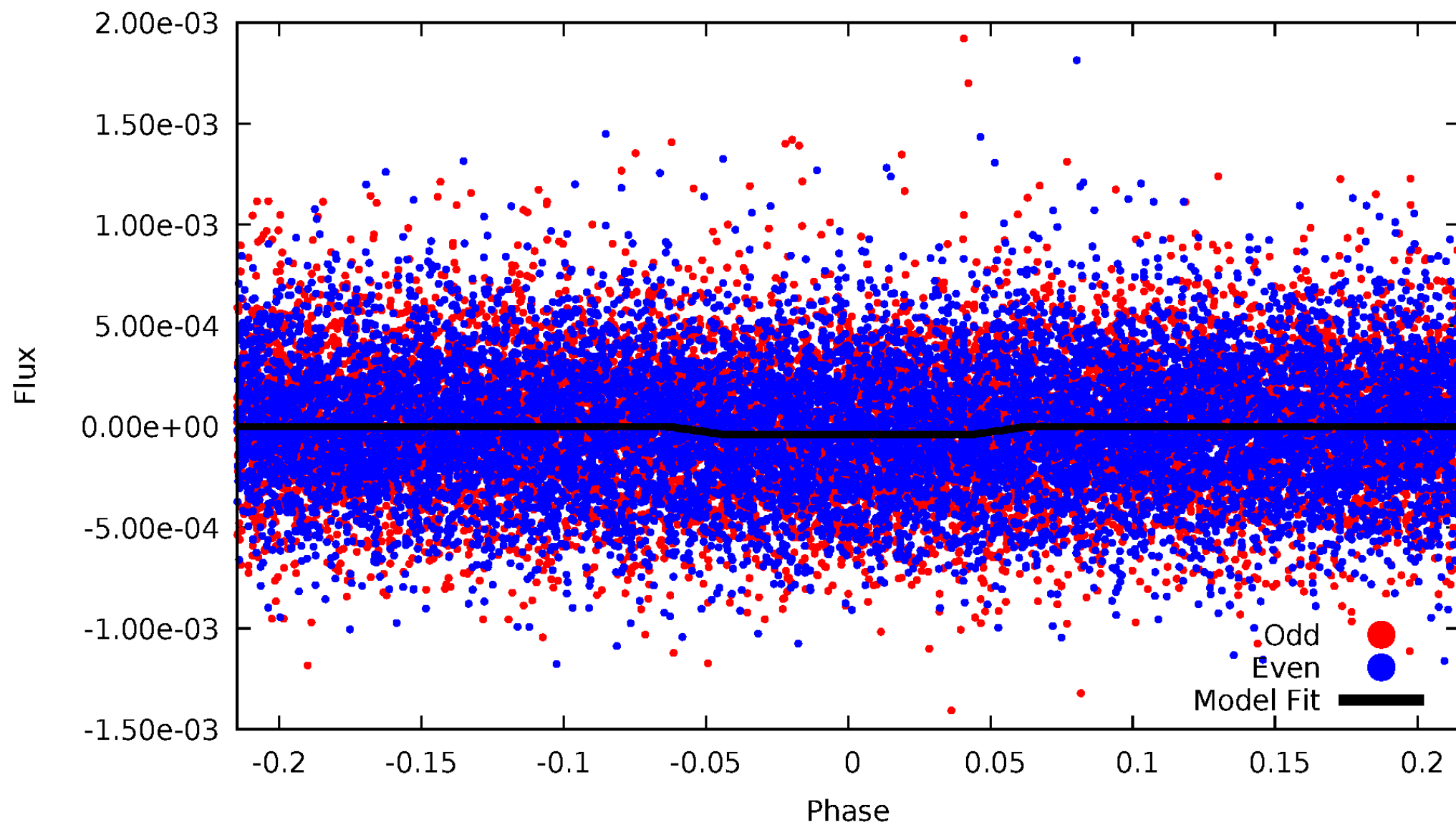
DV Odd/Even

TCE 004750341-01

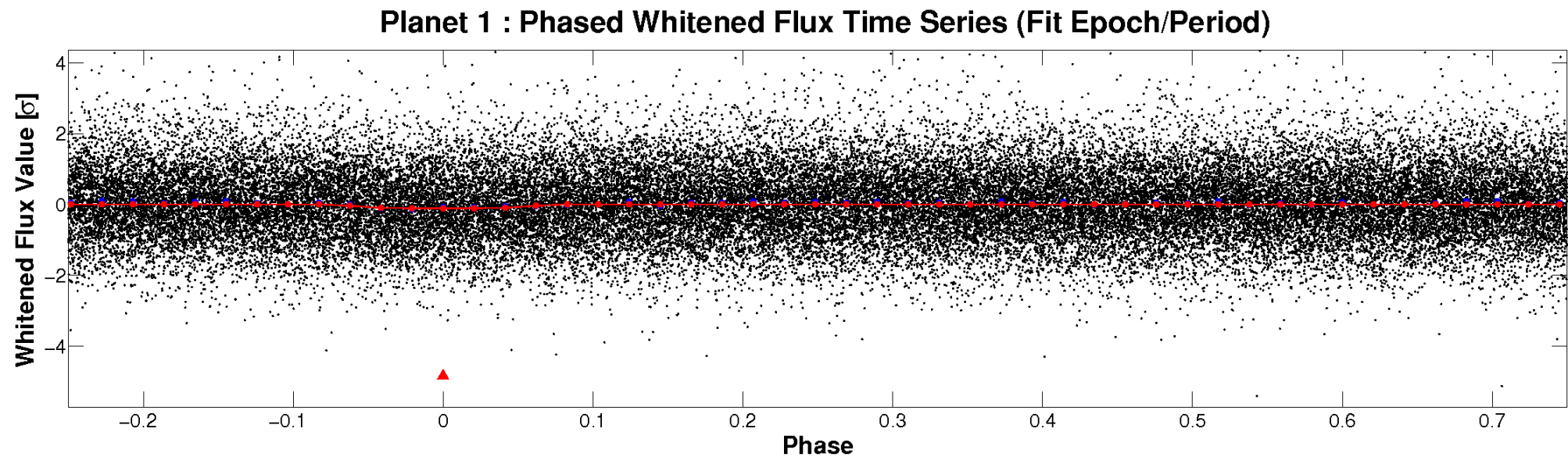
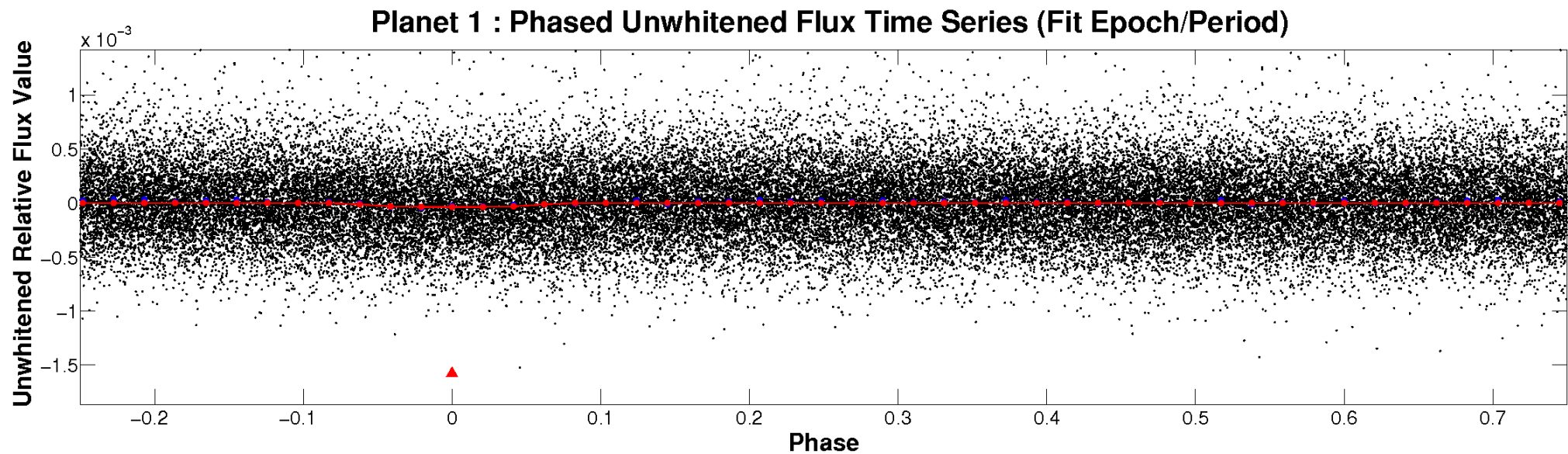


ALT Odd/Even

TCE 004750341-01

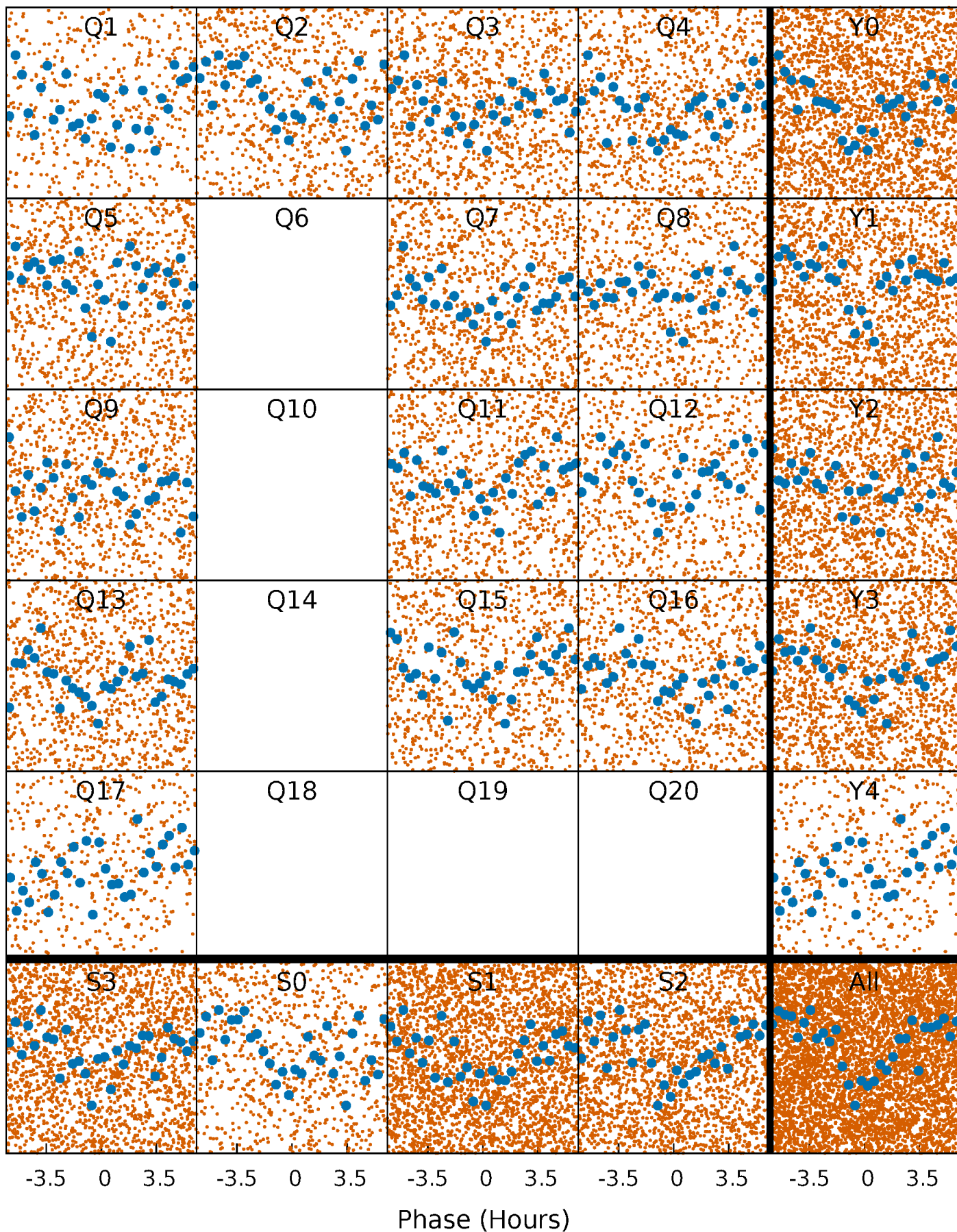


Non-Whitened Vs. Whitened Light Curve



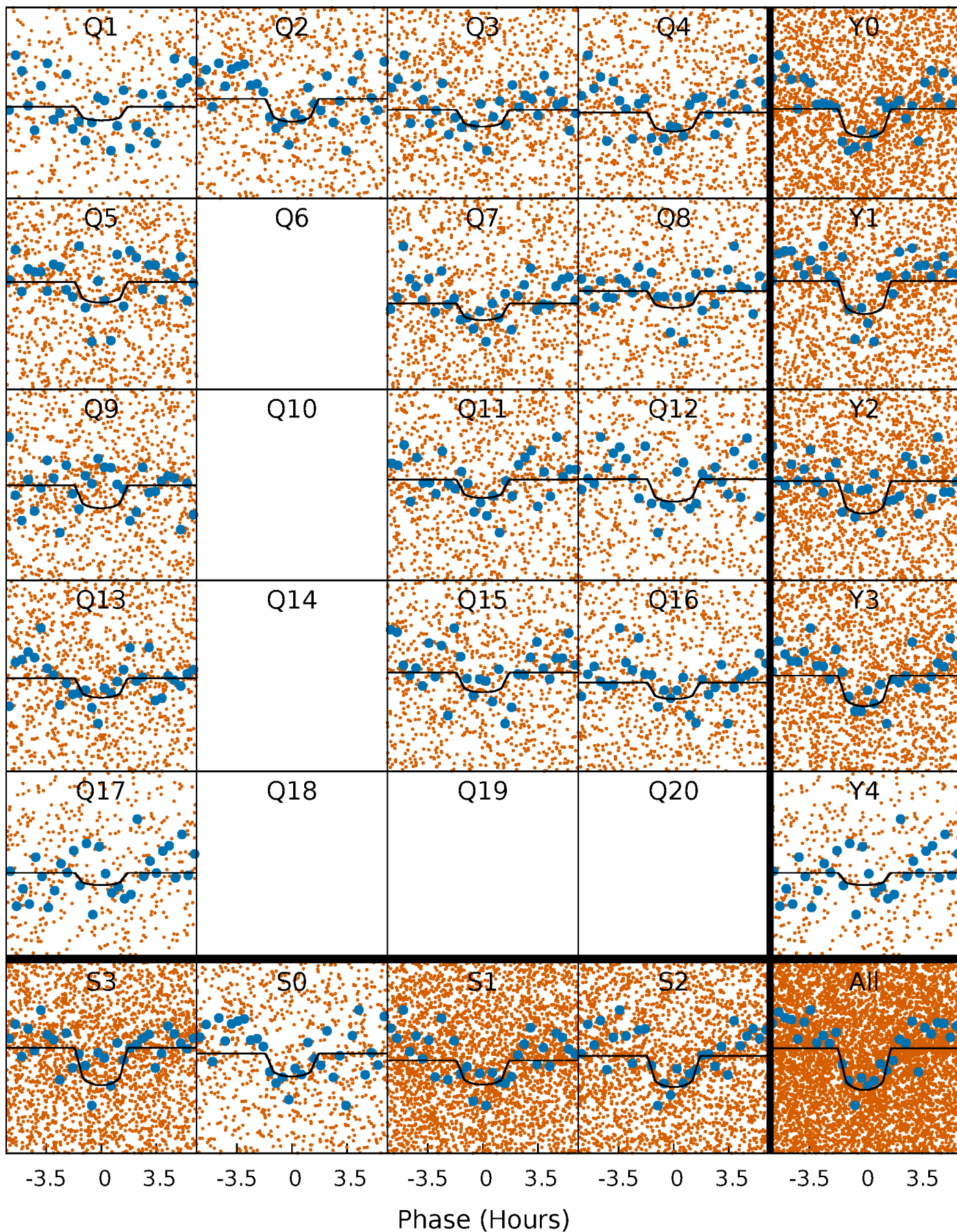
PDC Quarter-Phased Transit Curves

TCE 004750341-01 P= 0.987543 Days $T_0=131.686377$ (BKJD)



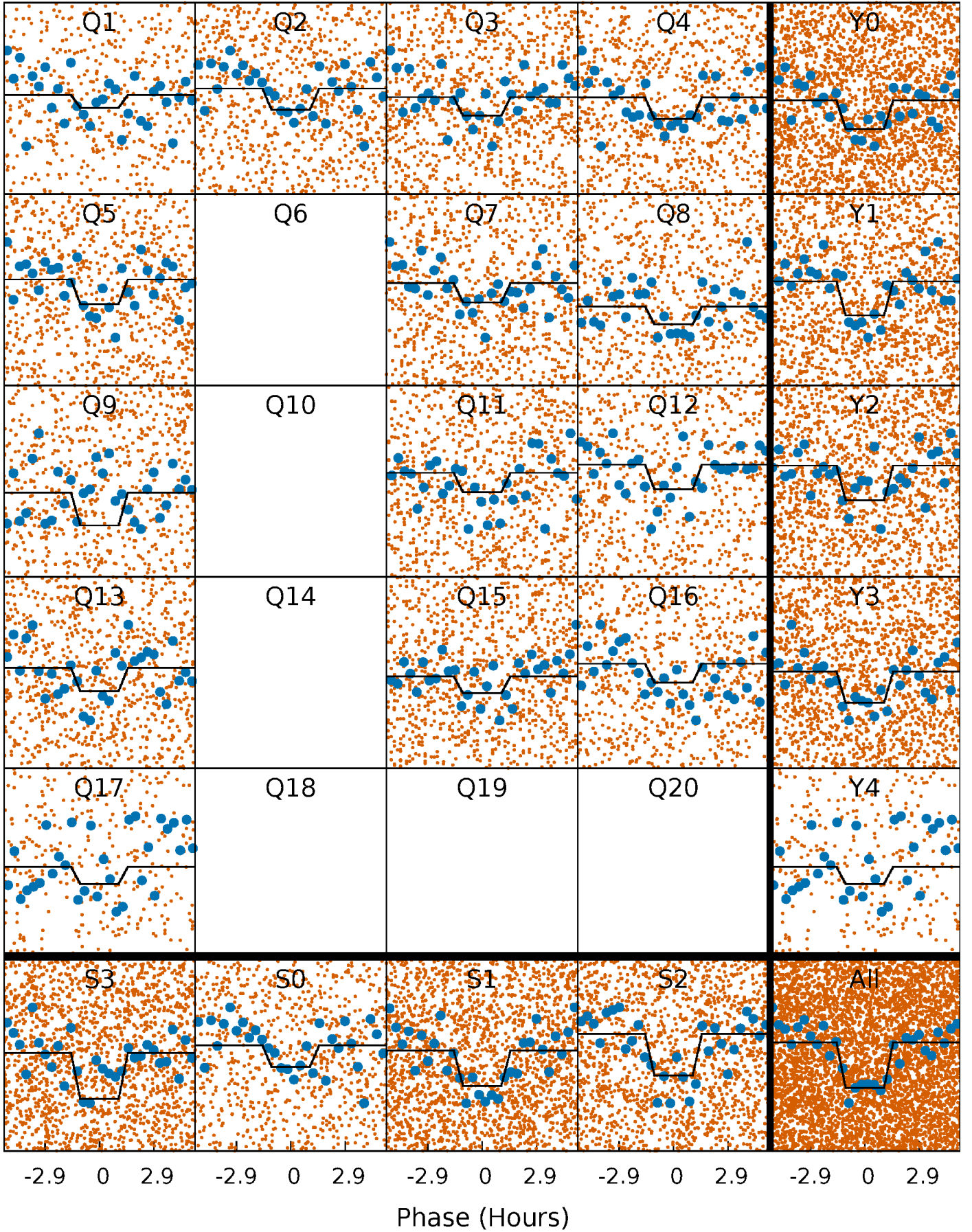
DV Quarter-Phased Transit Curves

TCE 004750341-01 P= 0.987543 Days $T_0=131.686377$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

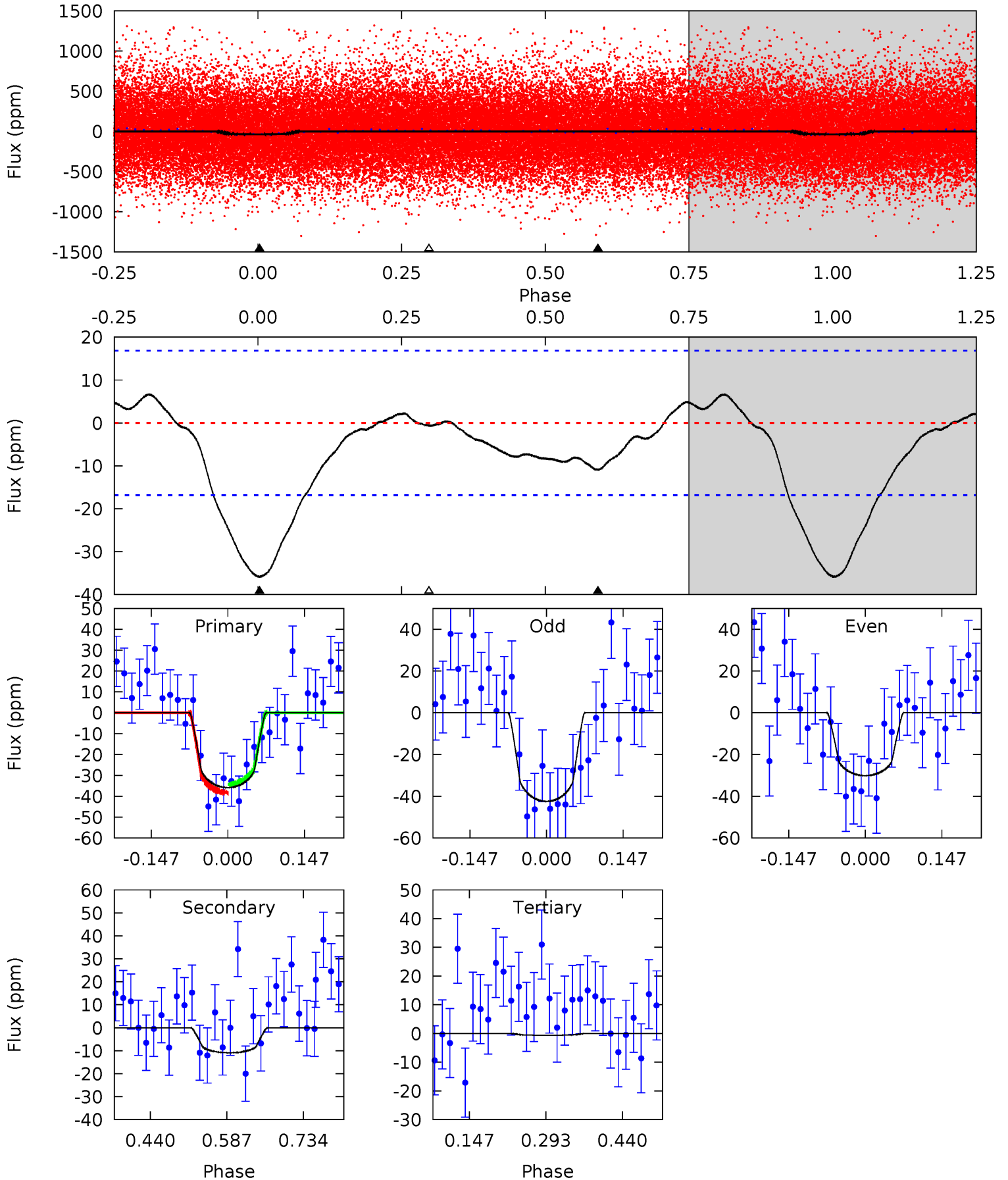
TCE 004750341-01 P= 0.987573 Days $T_0=131.663306$ (BKJD)



DV Model-Shift Uniqueness Test

004750341-01, P = 0.987543 Days, E = 130.698834 Days

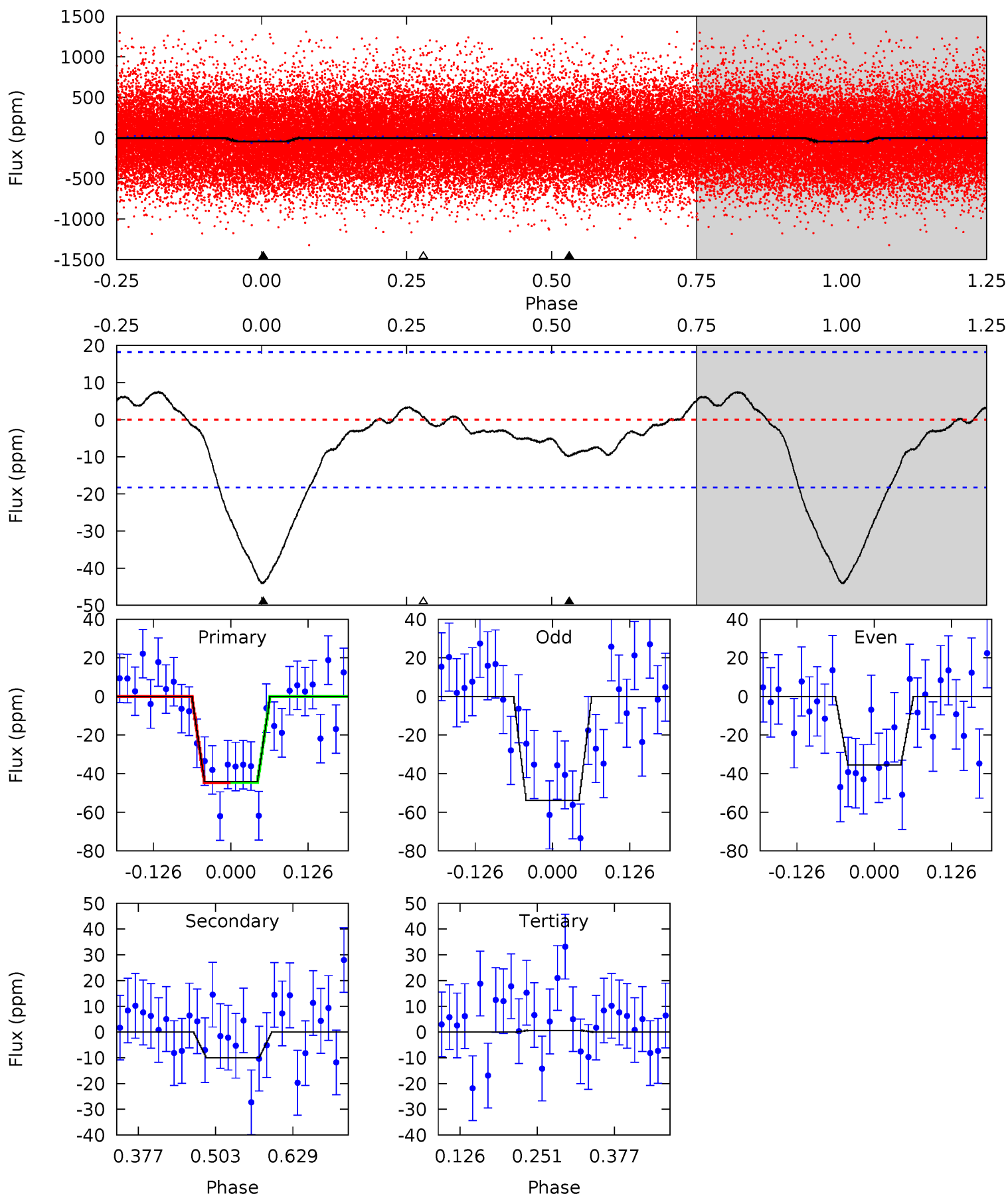
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.54	2.90	0.16	0	4.48	1.45	0.95	9.37	9.54	2.74	2.90	1.64	0.94	0.16	0.52



Alt Model-Shift Uniqueness Test

004750341-01, P = 0.987573 Days, E = 130.675733 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	2.47	-0.16	0	4.52	1.53	0.83	11.1	10.9	2.63	2.47	2.28	0.99	0.15	0.01



Stellar Parameters For KIC 004750341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5571^{+166}_{-166}	$4.310^{+0.175}_{-0.175}$	$0.240^{+0.150}_{-0.300}$	$1.145^{+0.304}_{-0.221}$	$0.976^{+0.104}_{-0.085}$	$0.917^{+0.806}_{-0.423}$
	+3%/-3%	+4%/-4%	+62%/-125%	+27%/-19%	+11%/-9%	+88%/-46%
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 004750341-01 / KOI 4884.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11 ± 4	$0.93^{+0.69}_{-0.57}$	2652^{+180}_{-173}	3883^{+1996}_{-883}	$2.343^{+14.510}_{-1.622}$
Alt.	-10 ± 4	$0.92^{+0.71}_{-0.56}$	2638^{+189}_{-158}	3807^{+1824}_{-889}	$2.258^{+11.870}_{-1.629}$

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 $A_{\text{obs}} \gg 1.0$

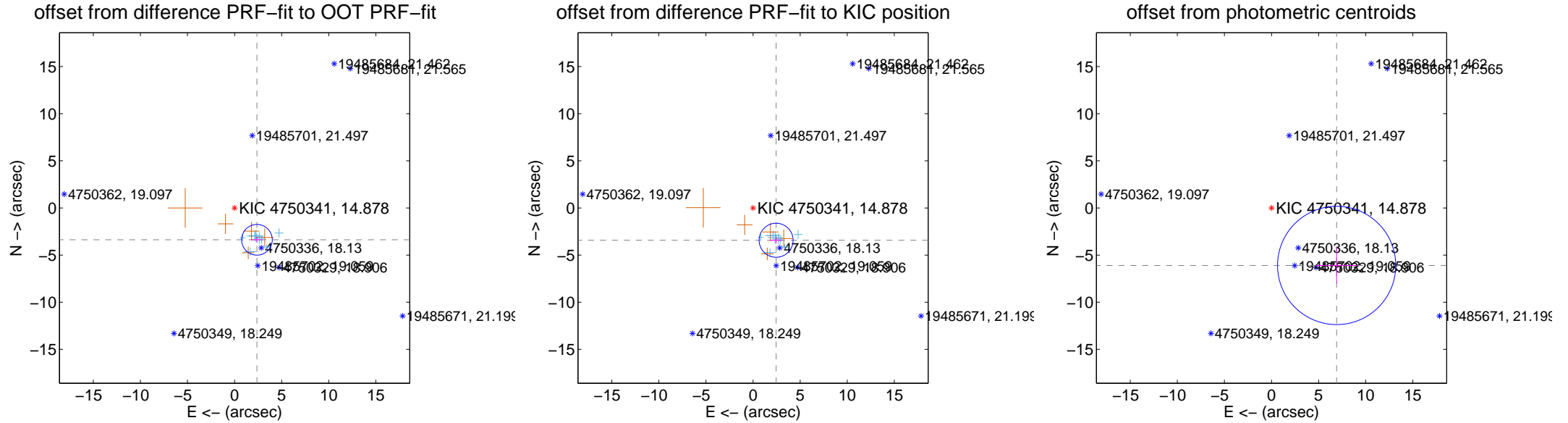
DV Centroid Data

Supplemental centroid analysis for 004750341-01. Kepler magnitude: 14.88. Transit SNR 7.66

There are 9 quarters with good PRF difference image offsets

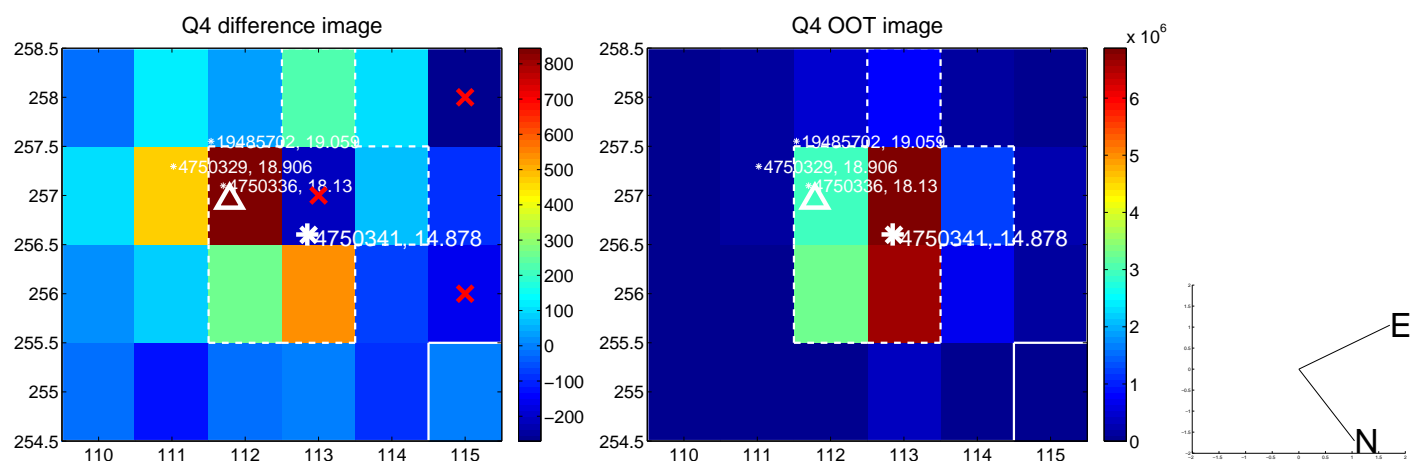
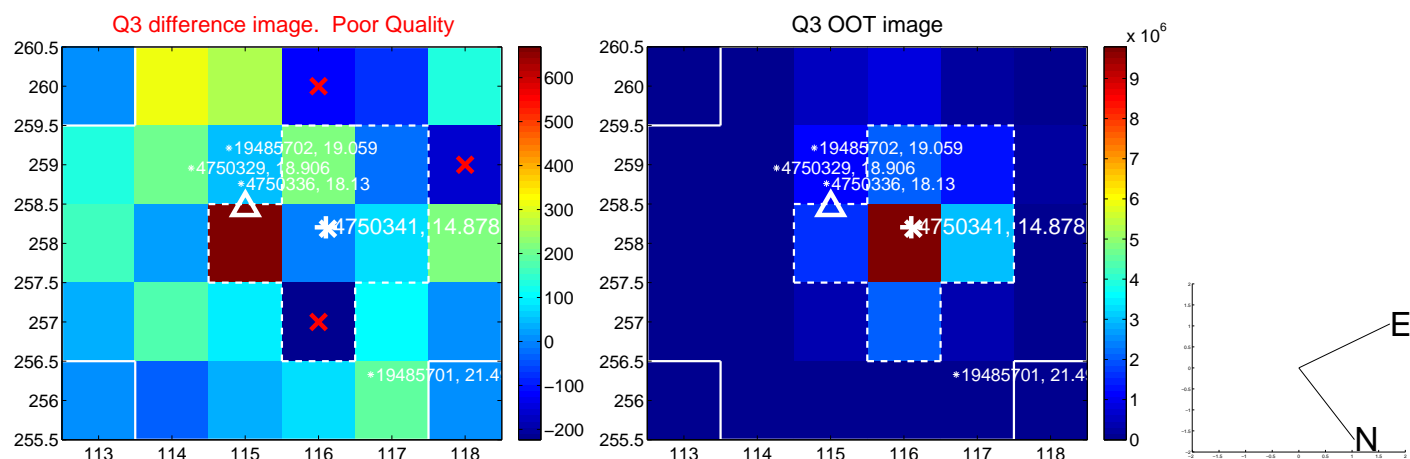
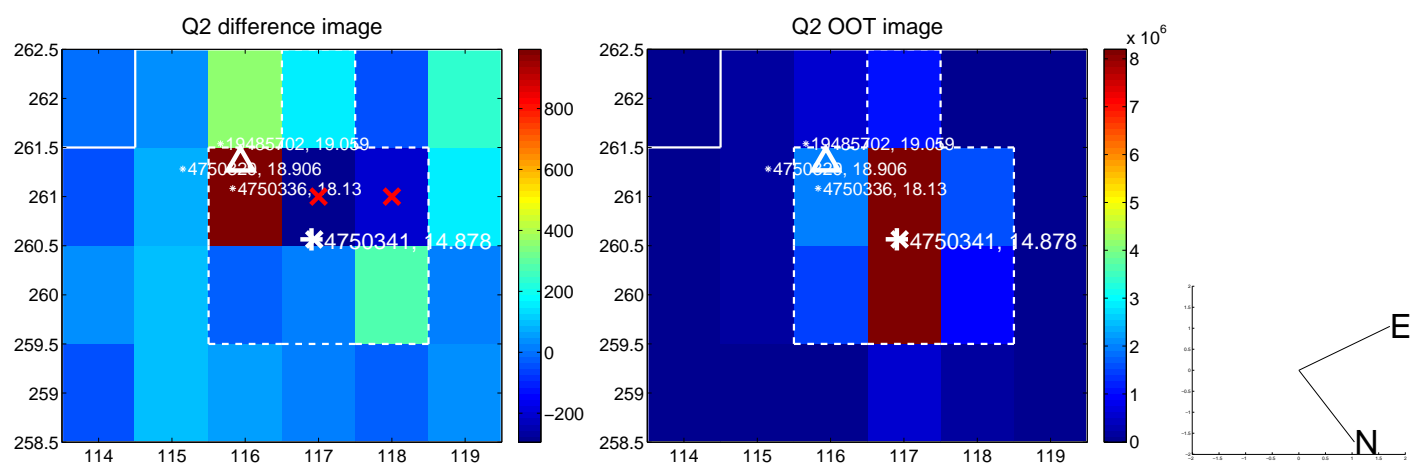
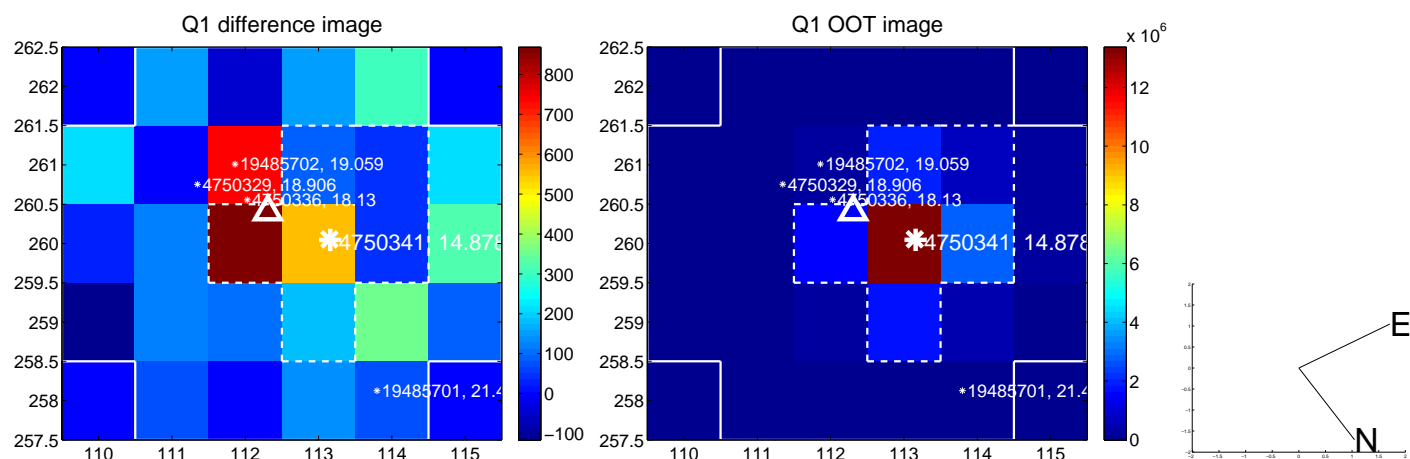
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.129 ± 0.542	7.61	-2.374 ± 0.597	-3.378 ± 0.305
PRF-fit source offset from KIC position	4.212 ± 0.602	7.00	-2.449 ± 0.643	-3.427 ± 0.335
photometric centroid source offset	9.22 ± 2.09	4.41	-6.92 ± 2.22	-6.10 ± 1.91

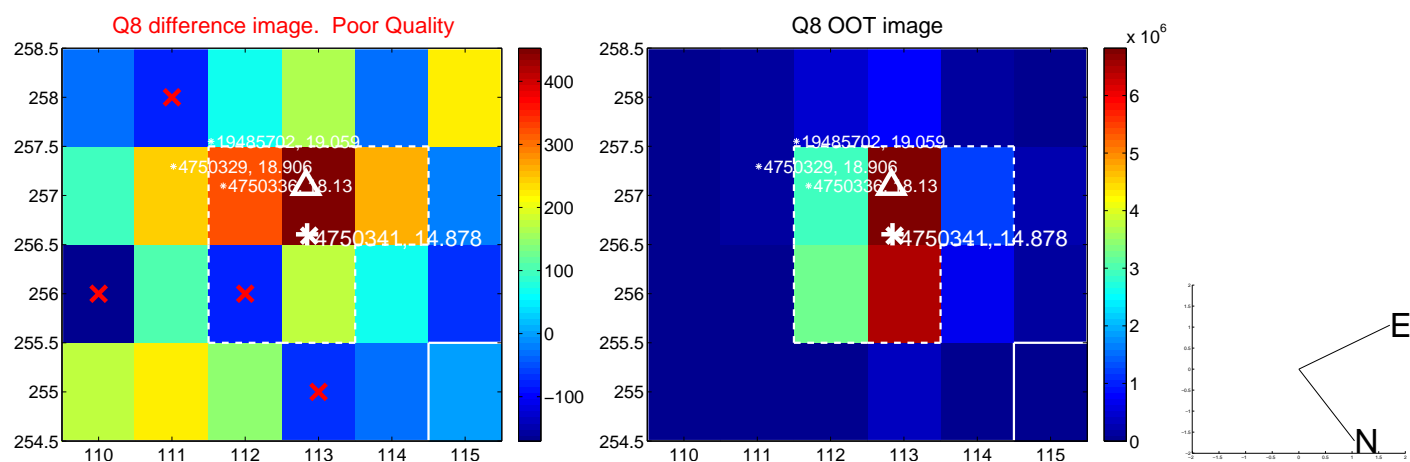
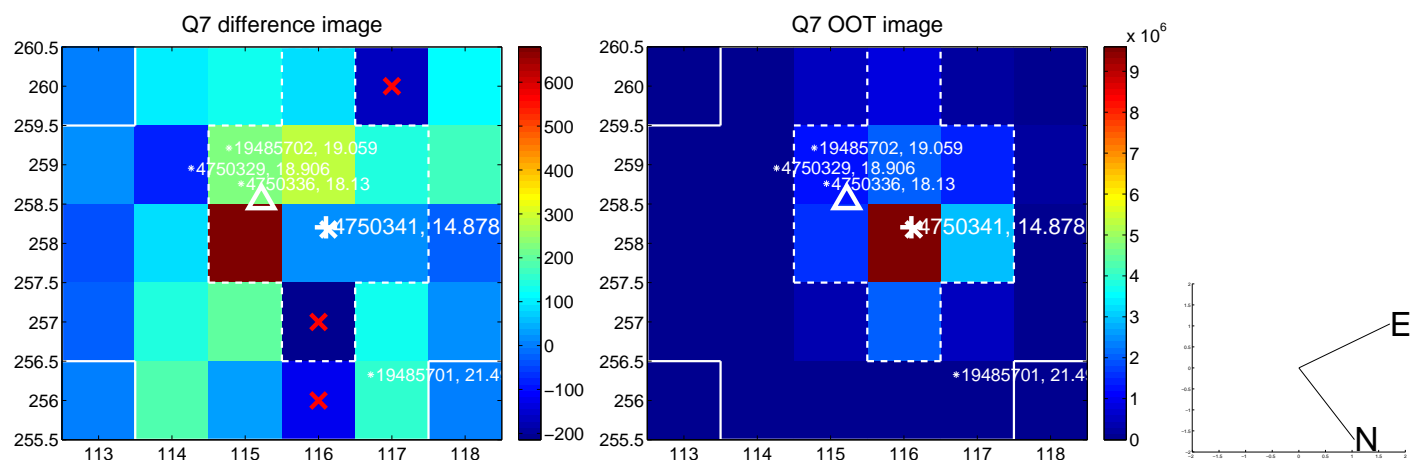
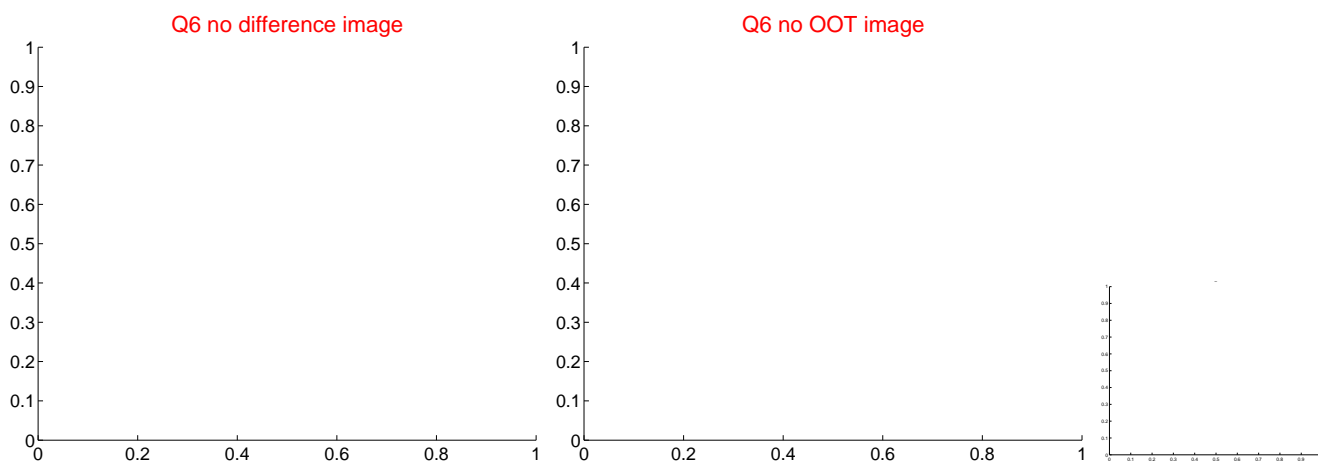
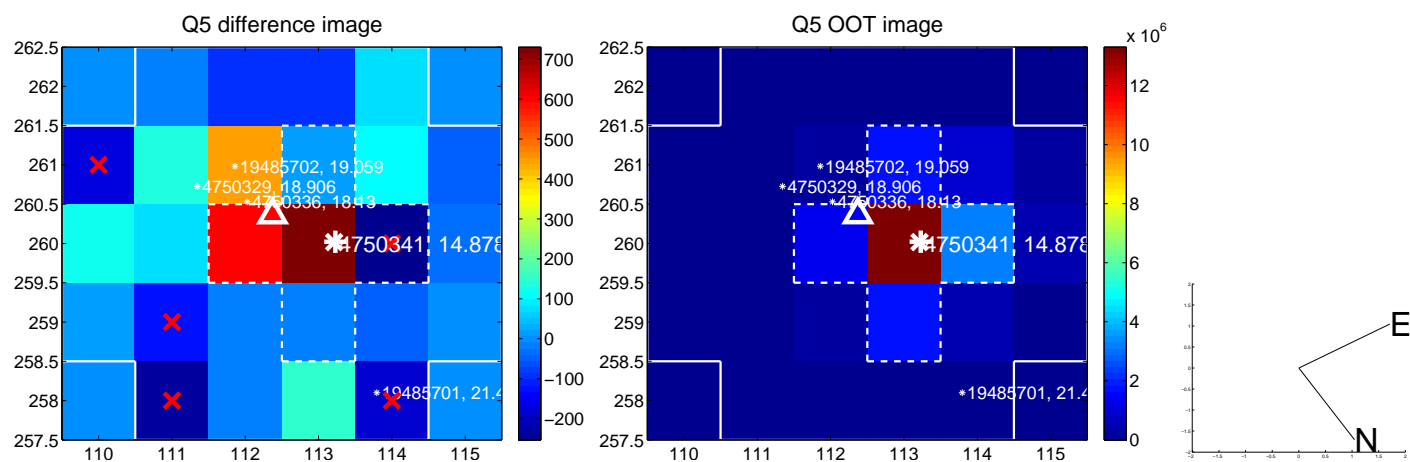


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

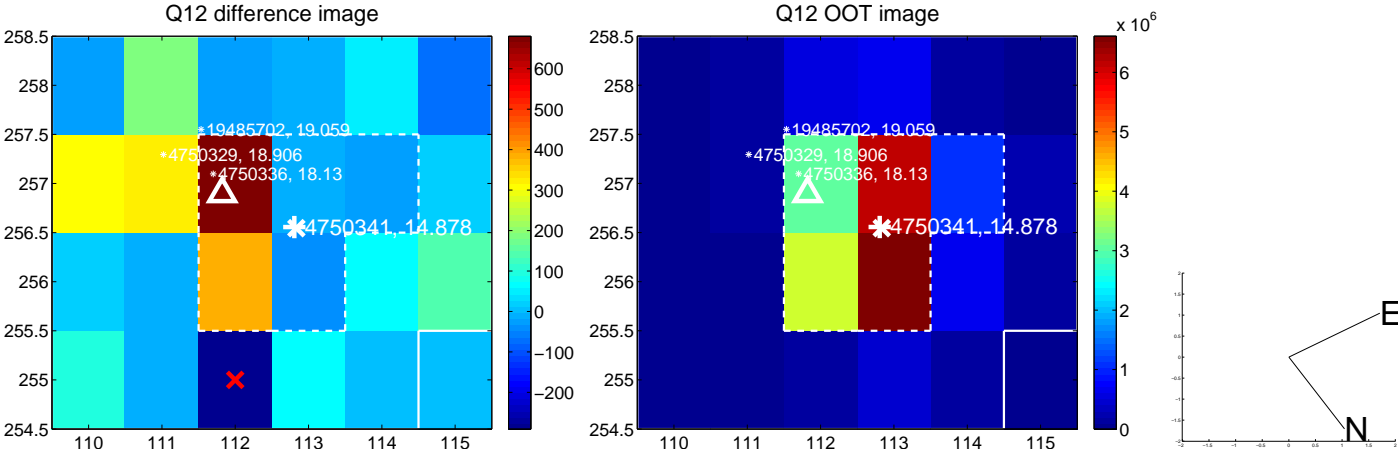
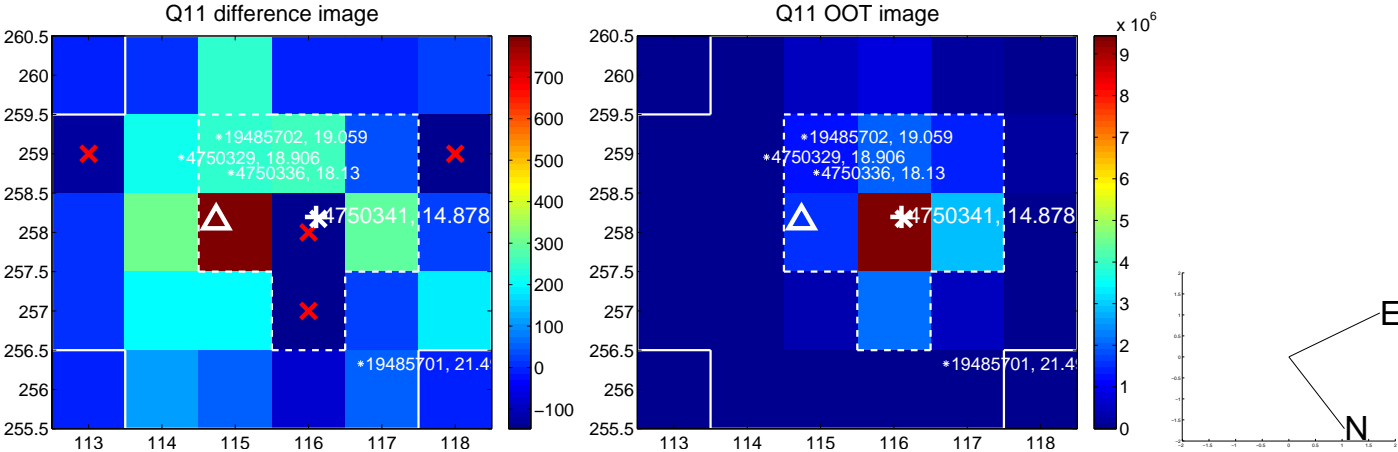
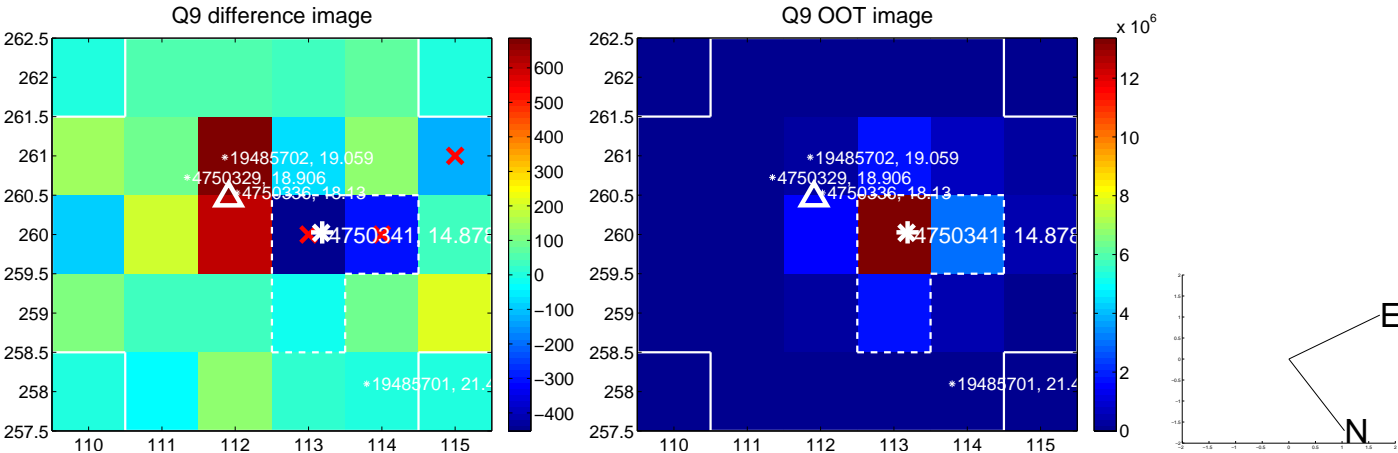
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



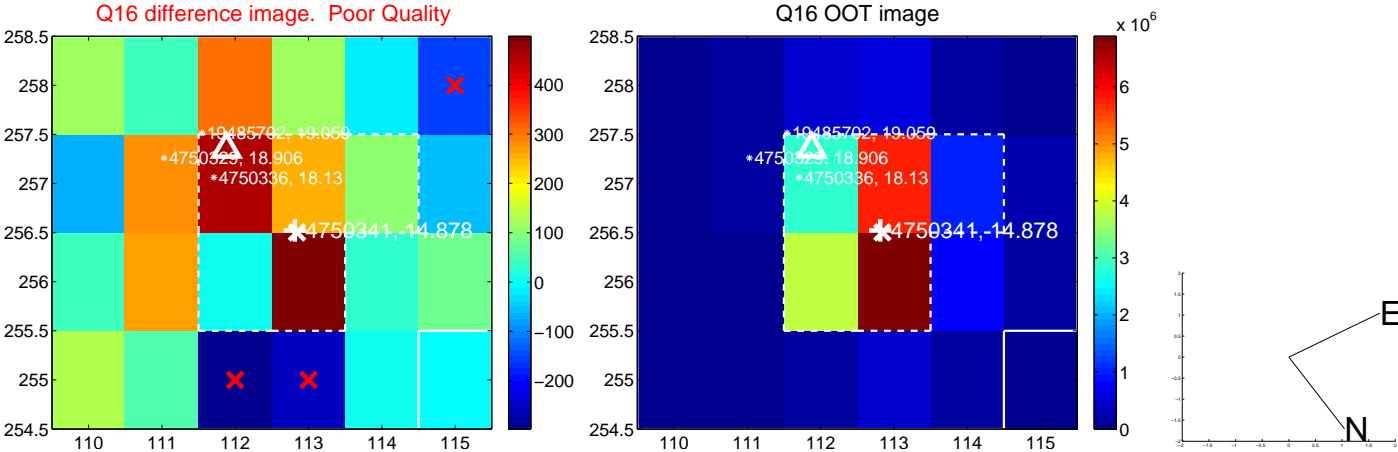
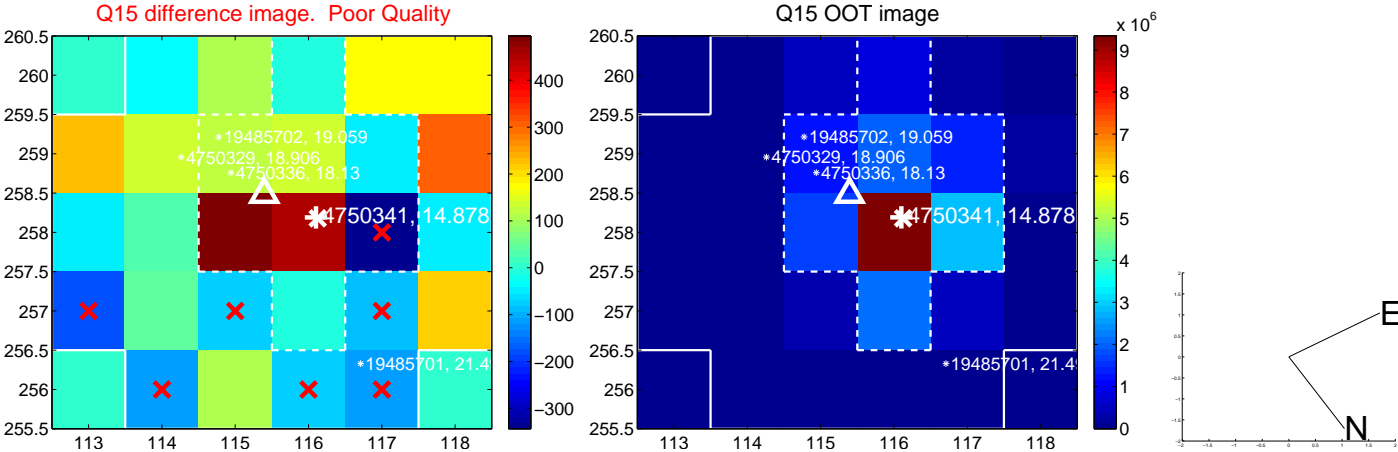
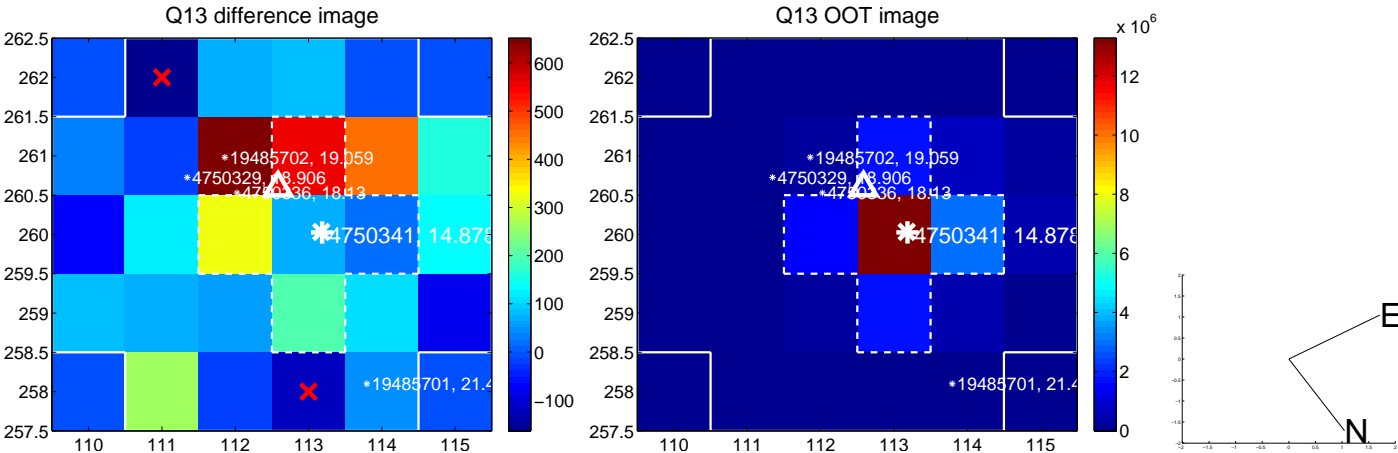
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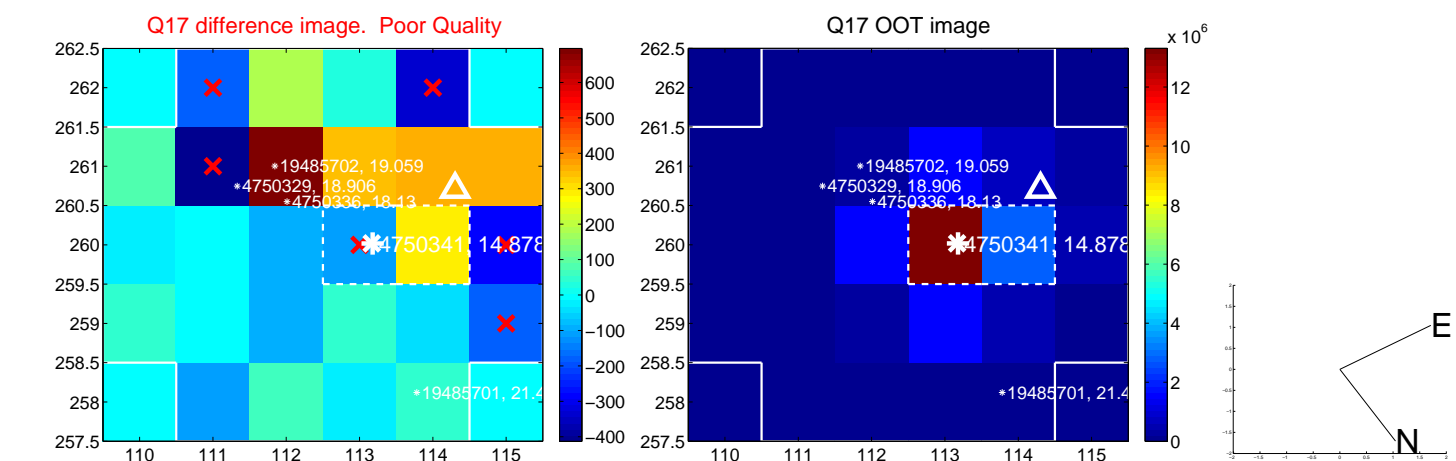
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



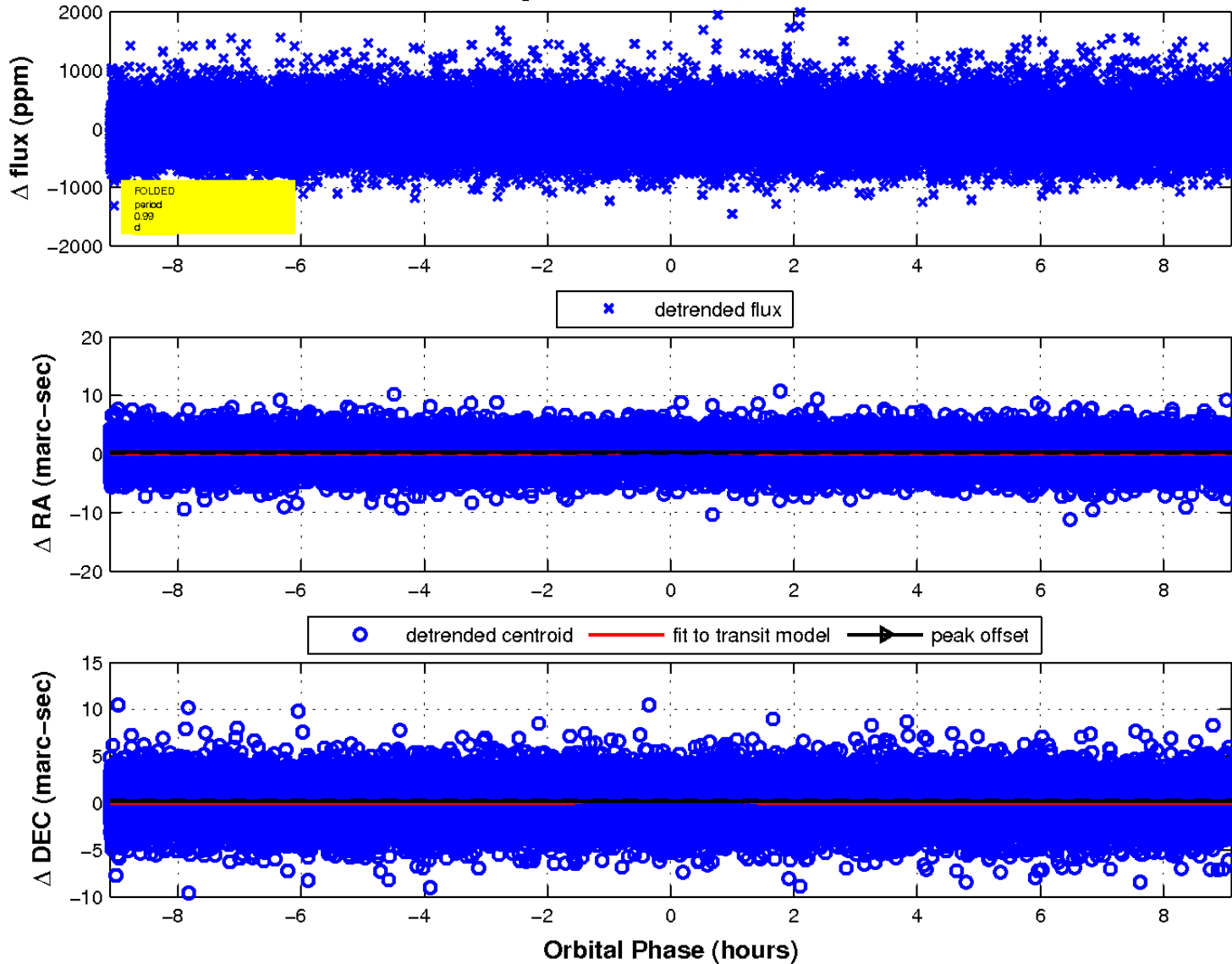
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

