

KIC 010862284

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})
010862284-01	OBS	8034.01	9.144709	139.291123	232.3	5.534	12.1	12.3	0.92	5849	1.62	119.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010862284-01	OBS	FP	0.01	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

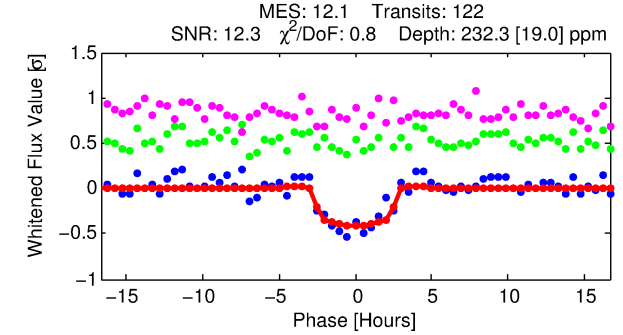
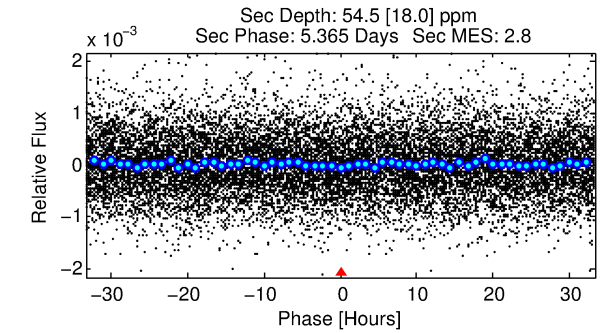
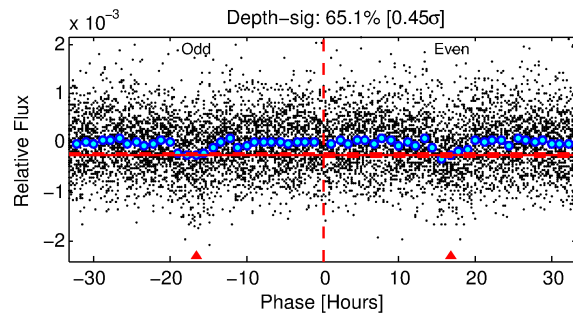
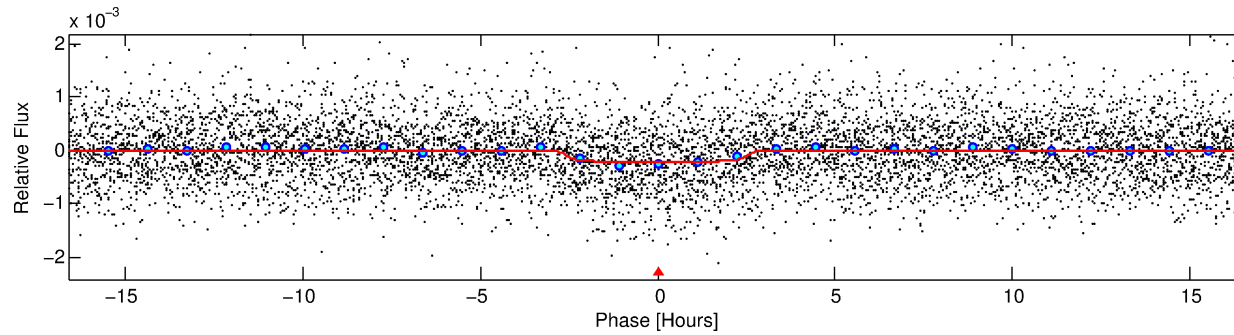
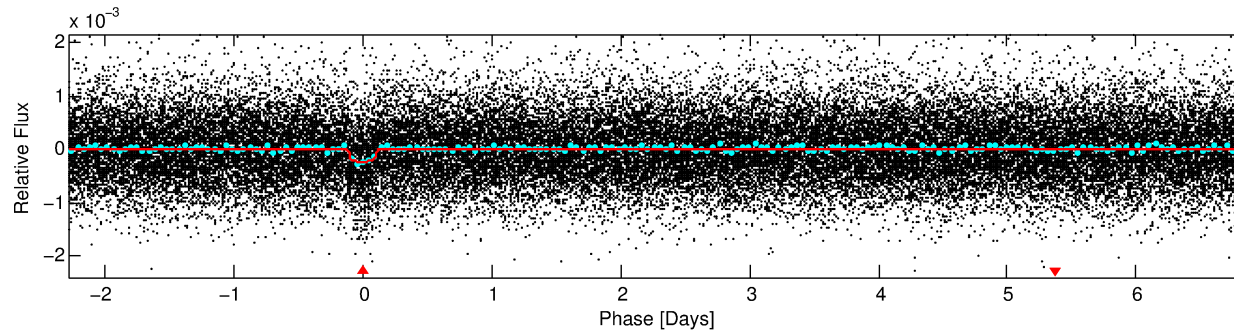
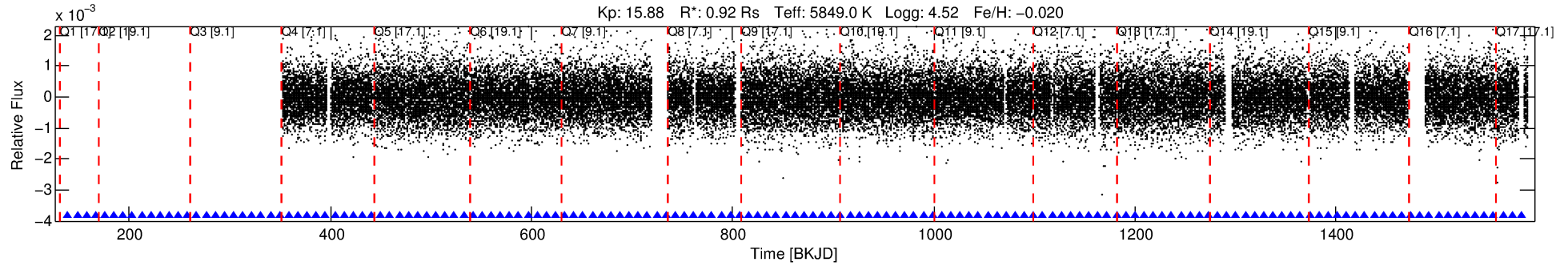
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010862284-01

No Significant Match Found

DV One-Page Summary

KIC: 10862284 Candidate: 1 of 1 Period: 9.145 d



DV Fit Results:

Period = 9.14471 [0.00011] d
Epoch = 139.2911 [0.0099] BKJD
Rp/R* = 0.0161 [0.0056]
a/R* = 6.71 [10.83]
b = 0.87 [0.47]
Seff = 119.82 [51.18]
Teq = 844 [90] K
Rp = 1.62 [0.77] Re
a = 0.0860 [0.0238] AU
Ag = 84.51 [73.39] [1.14 σ]
Teffp = 3955 [773] K [4.00 σ]

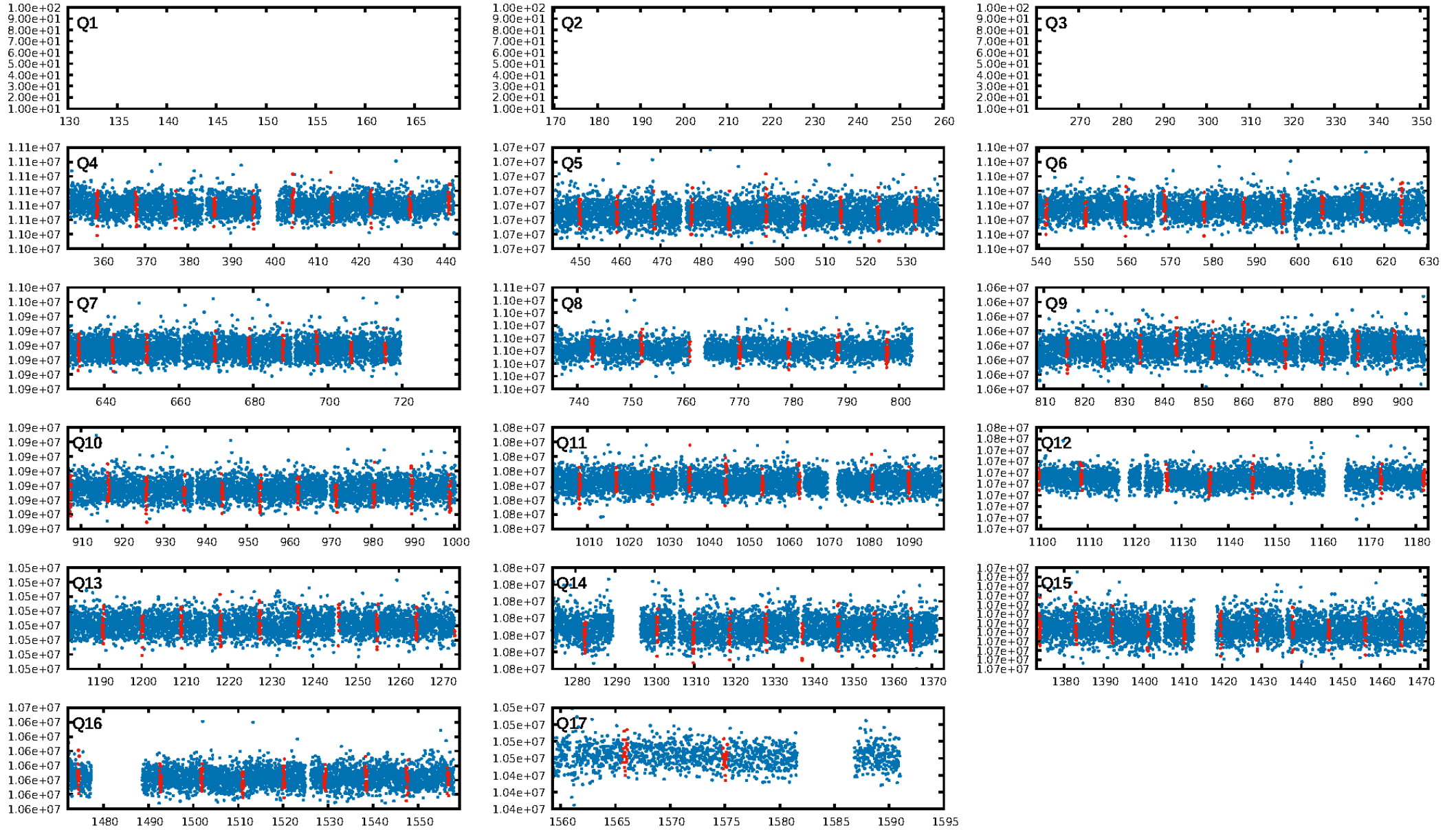
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.28e-33
RollingBand-fgt: 1.00 [120/120]
GhostDiagnostic-chr: -0.4444
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

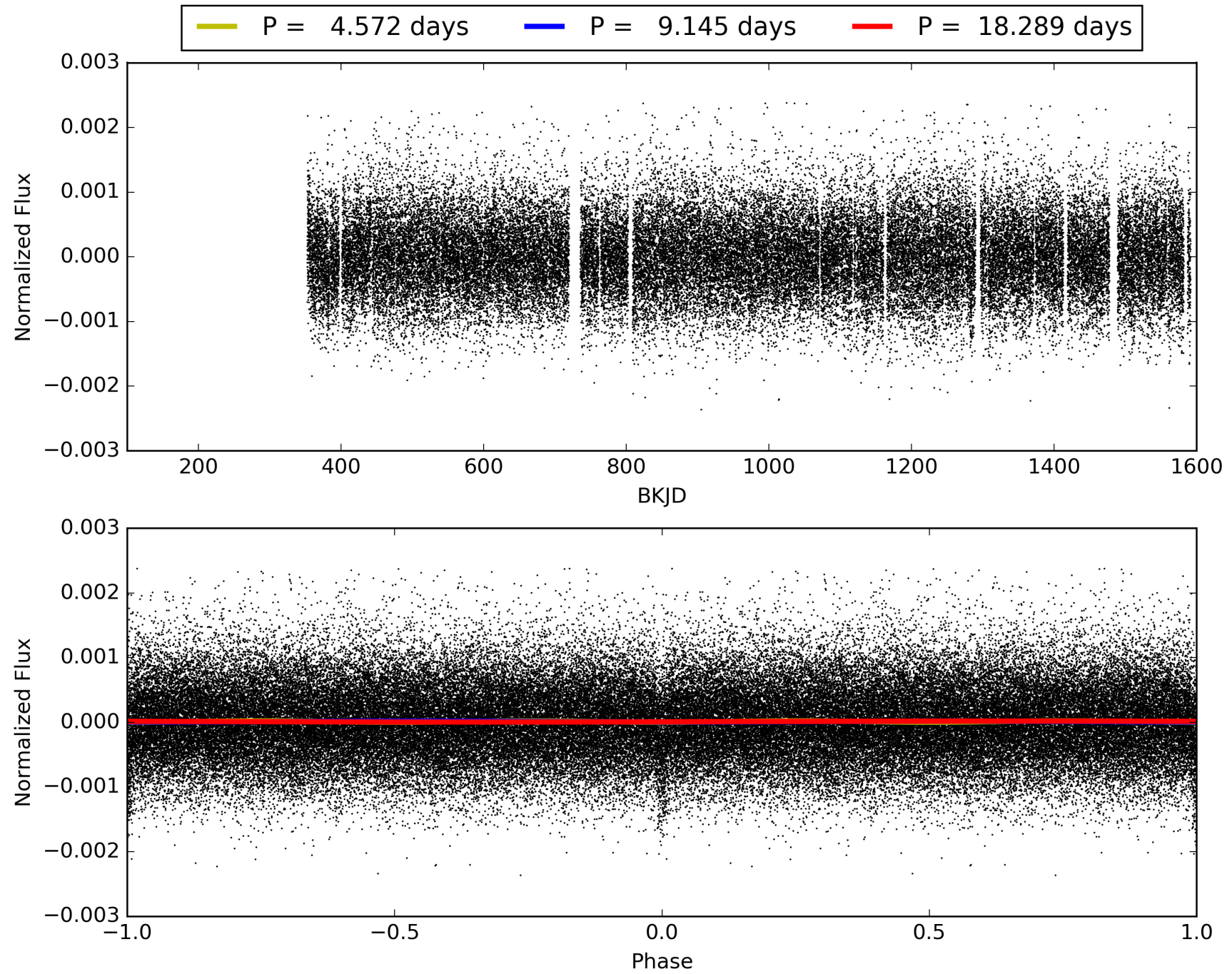
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:12:16 Z

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

TCE 010862284-01, PDC Light Curves

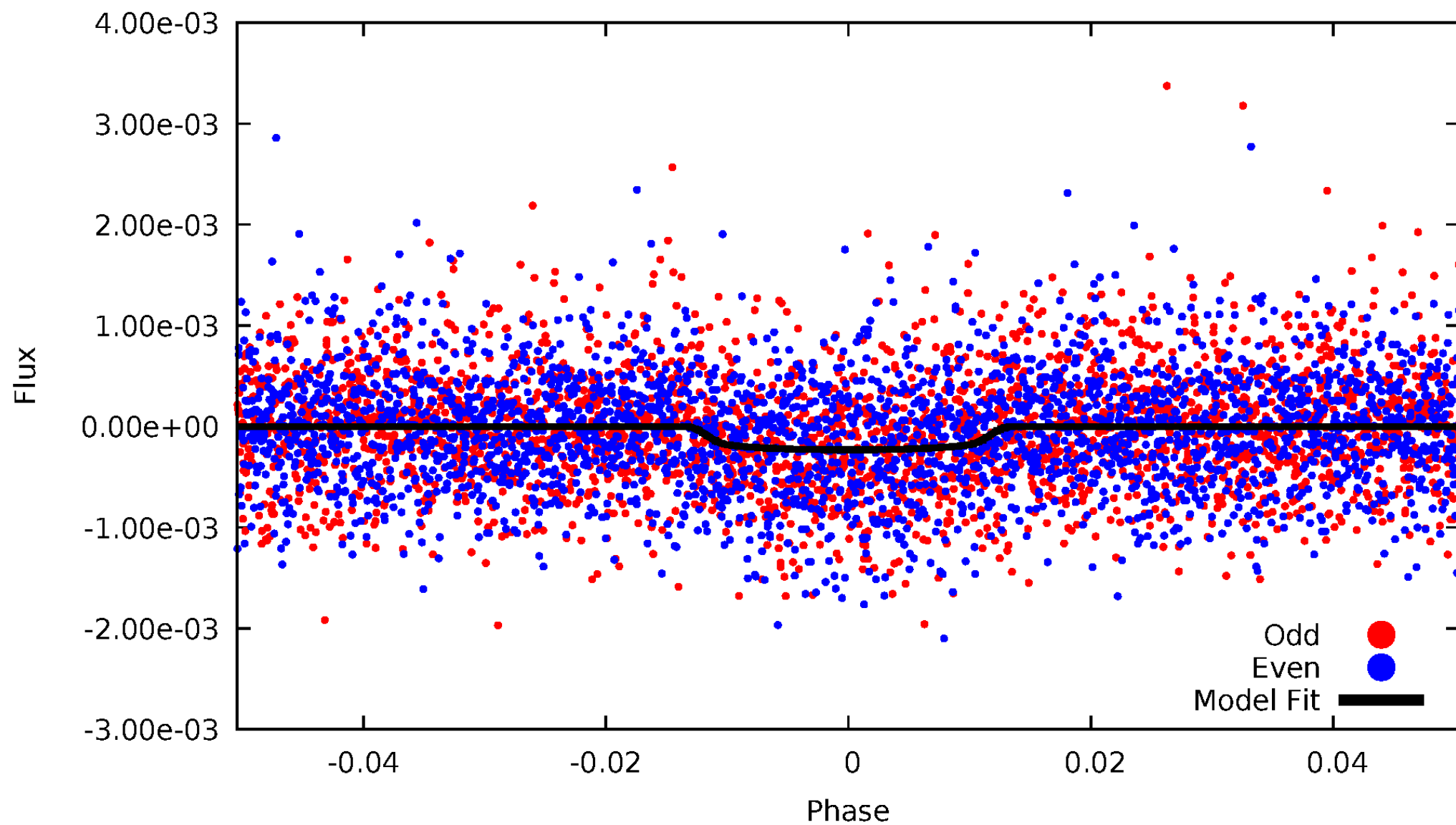


TCE 010862284-01



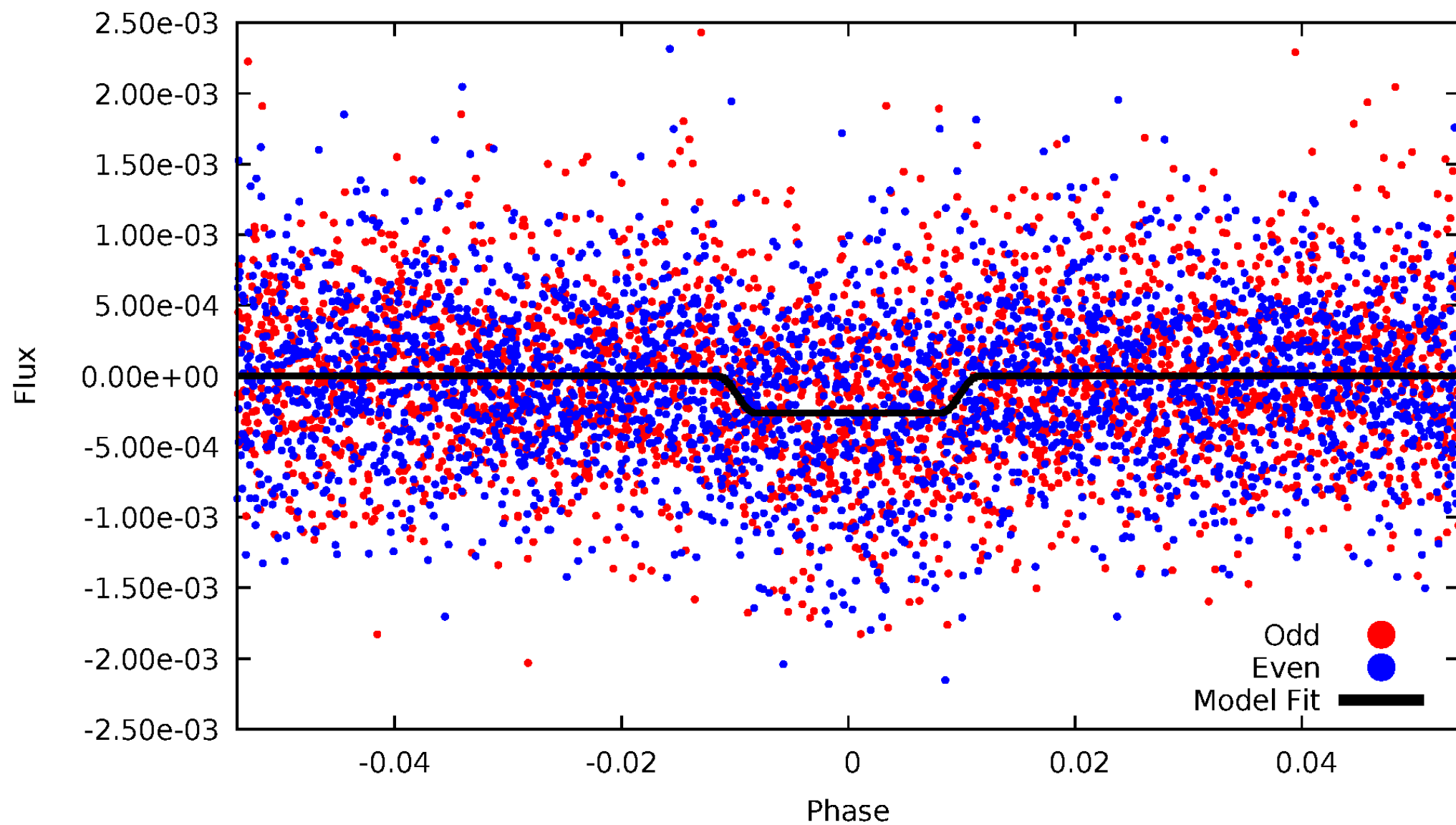
DV Odd/Even

TCE 010862284-01

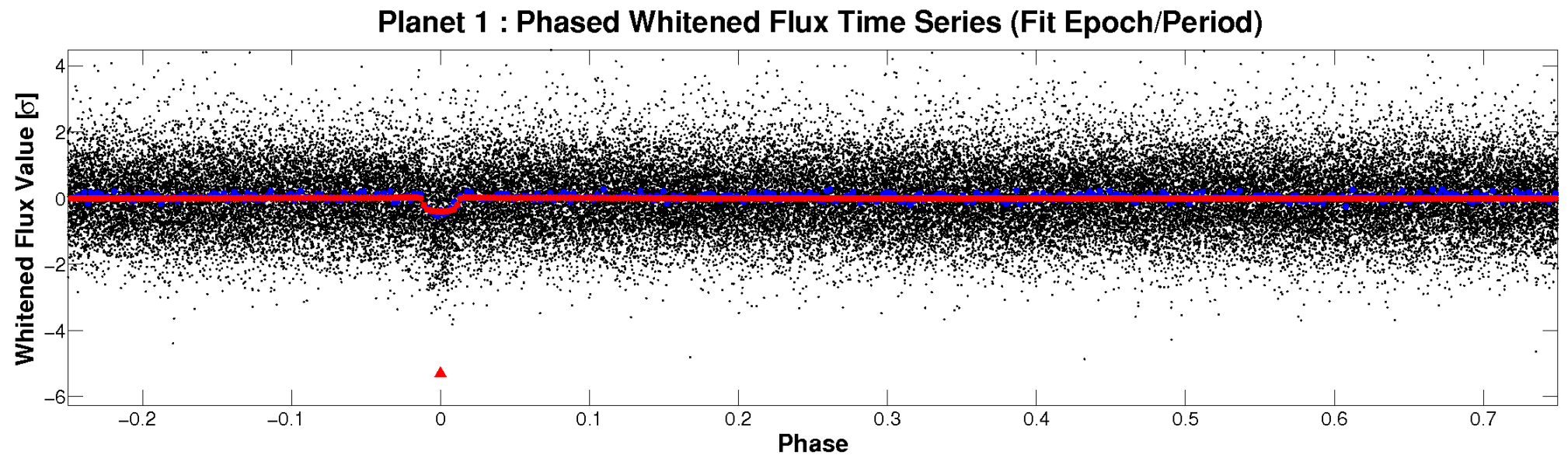
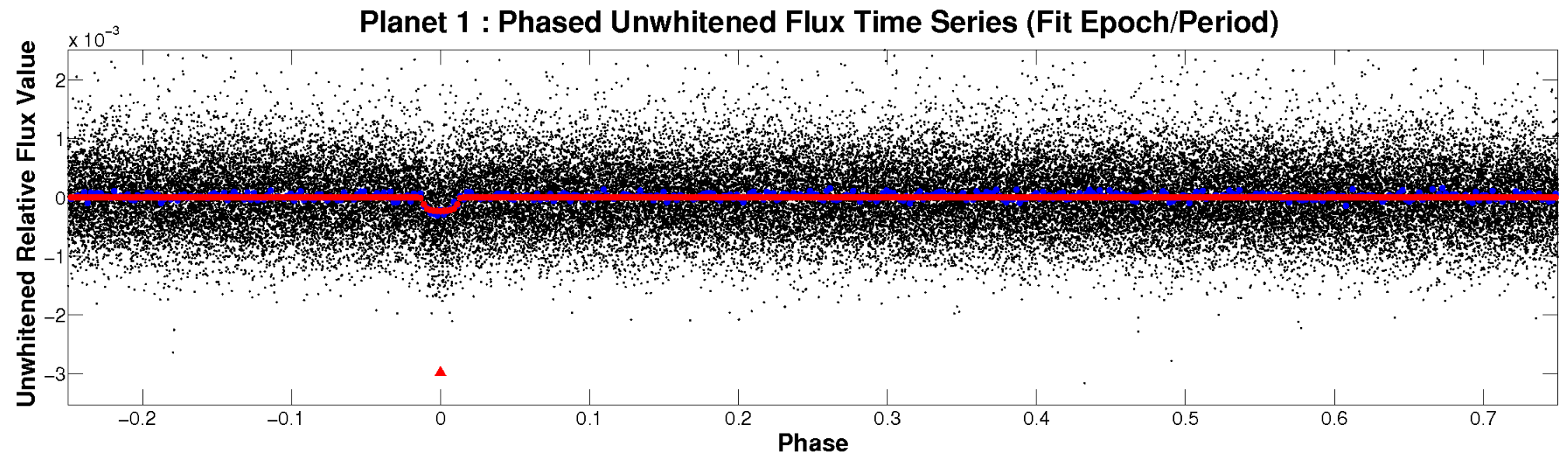


ALT Odd/Even

TCE 010862284-01

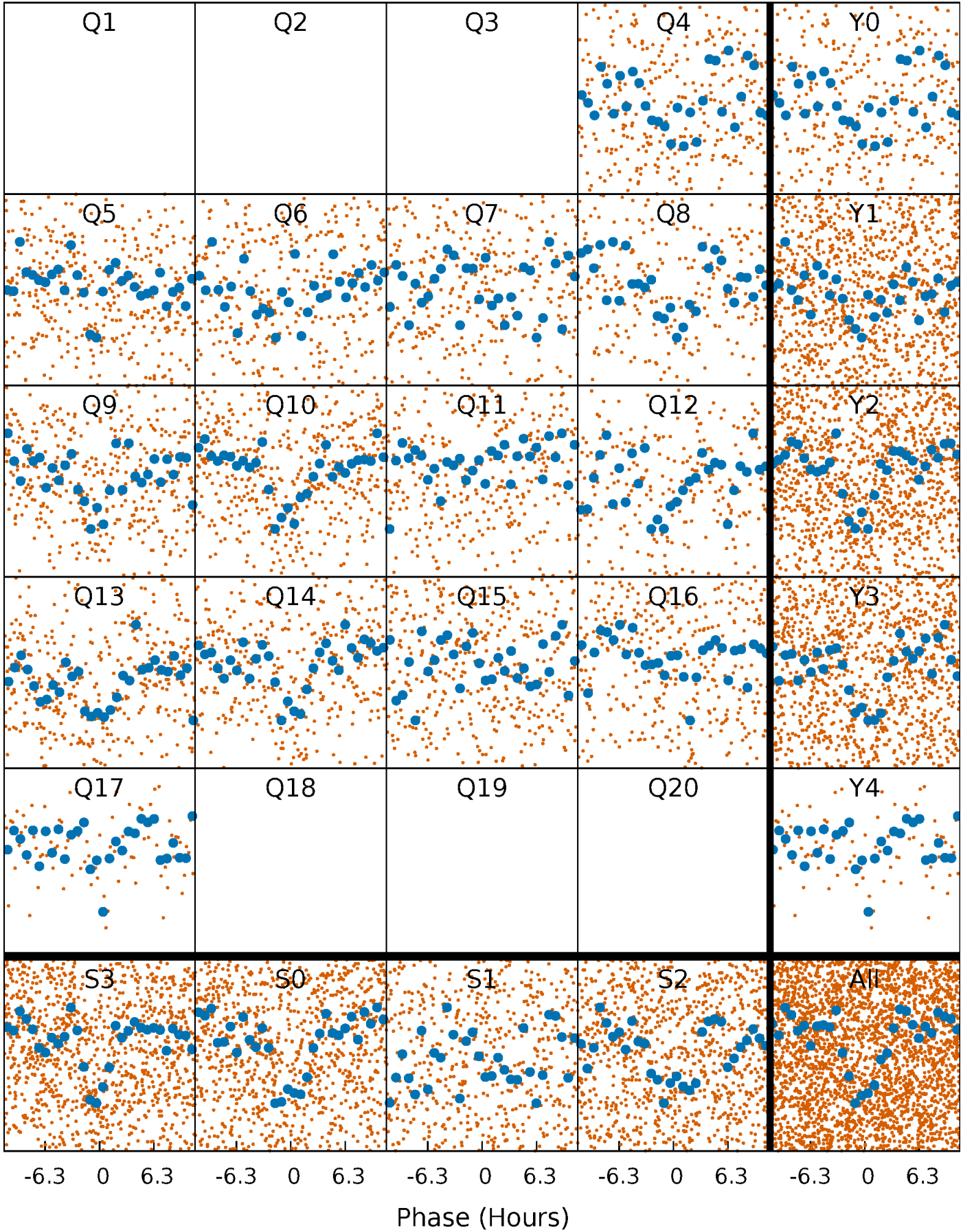


Non-Whitened Vs. Whitened Light Curve



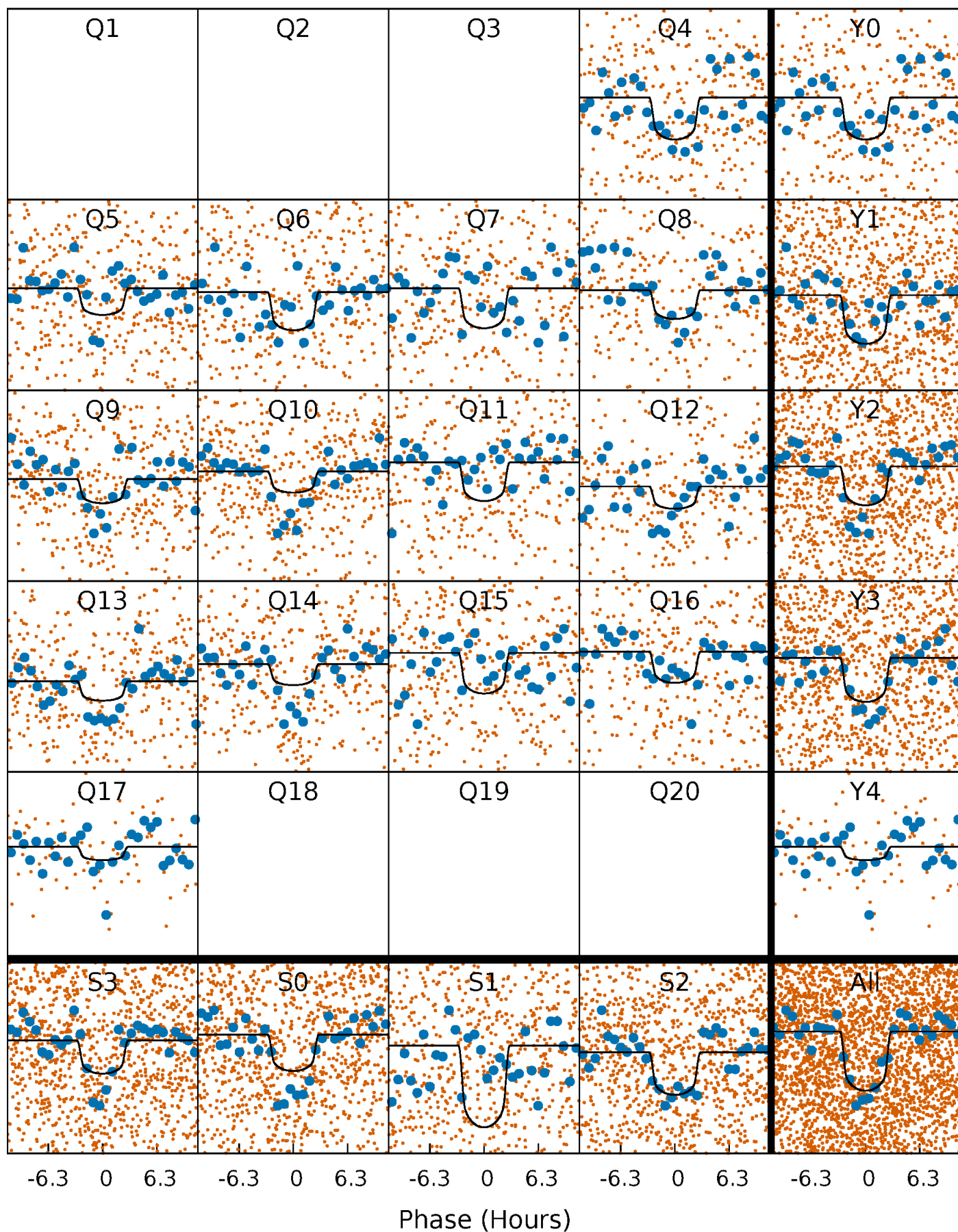
PDC Quarter-Phased Transit Curves

TCE 010862284-01 P= 9.144709 Days $T_0=139.291123$ (BKJD)



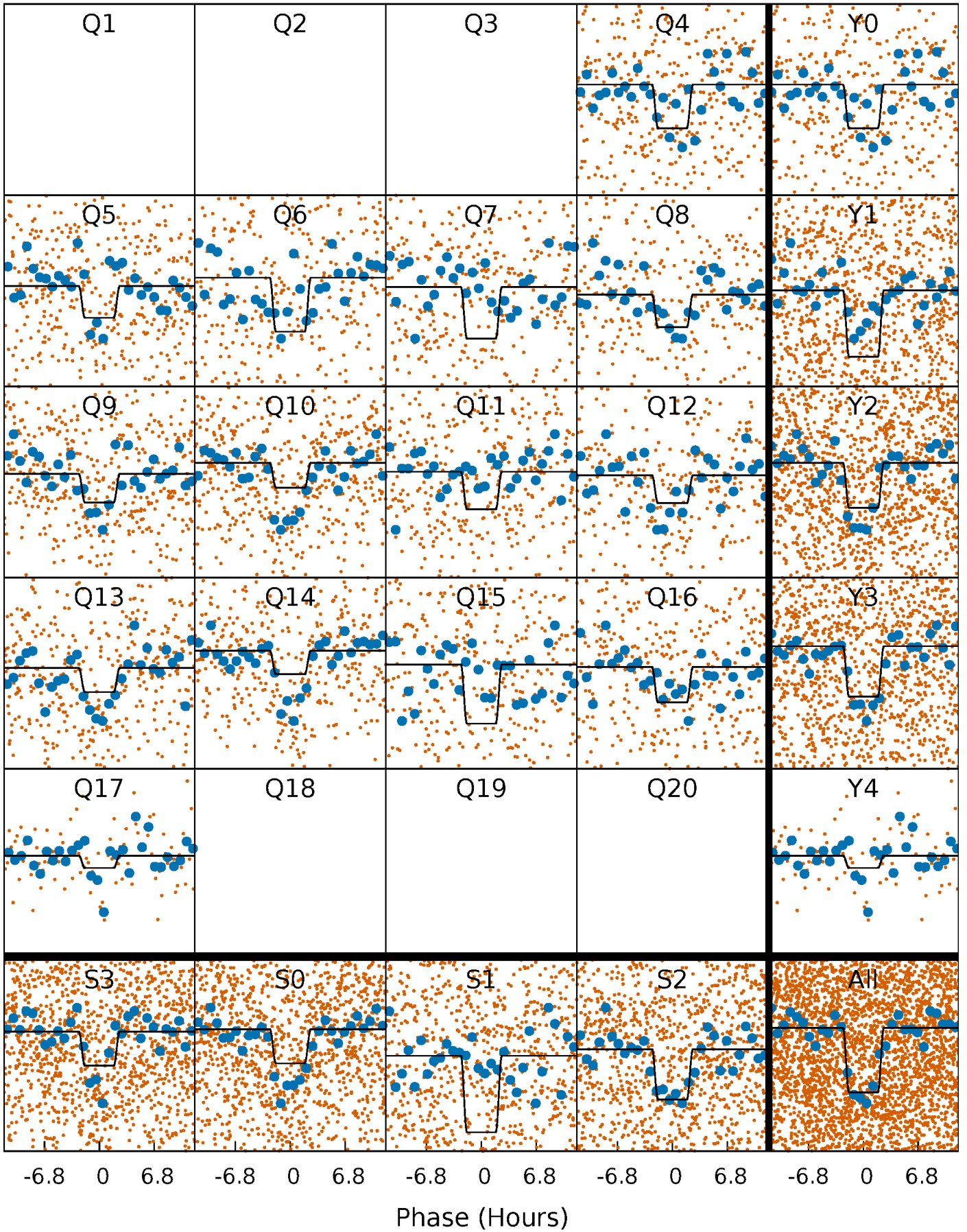
DV Quarter-Phased Transit Curves

TCE 010862284-01 P= 9.144709 Days $T_0=139.291123$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

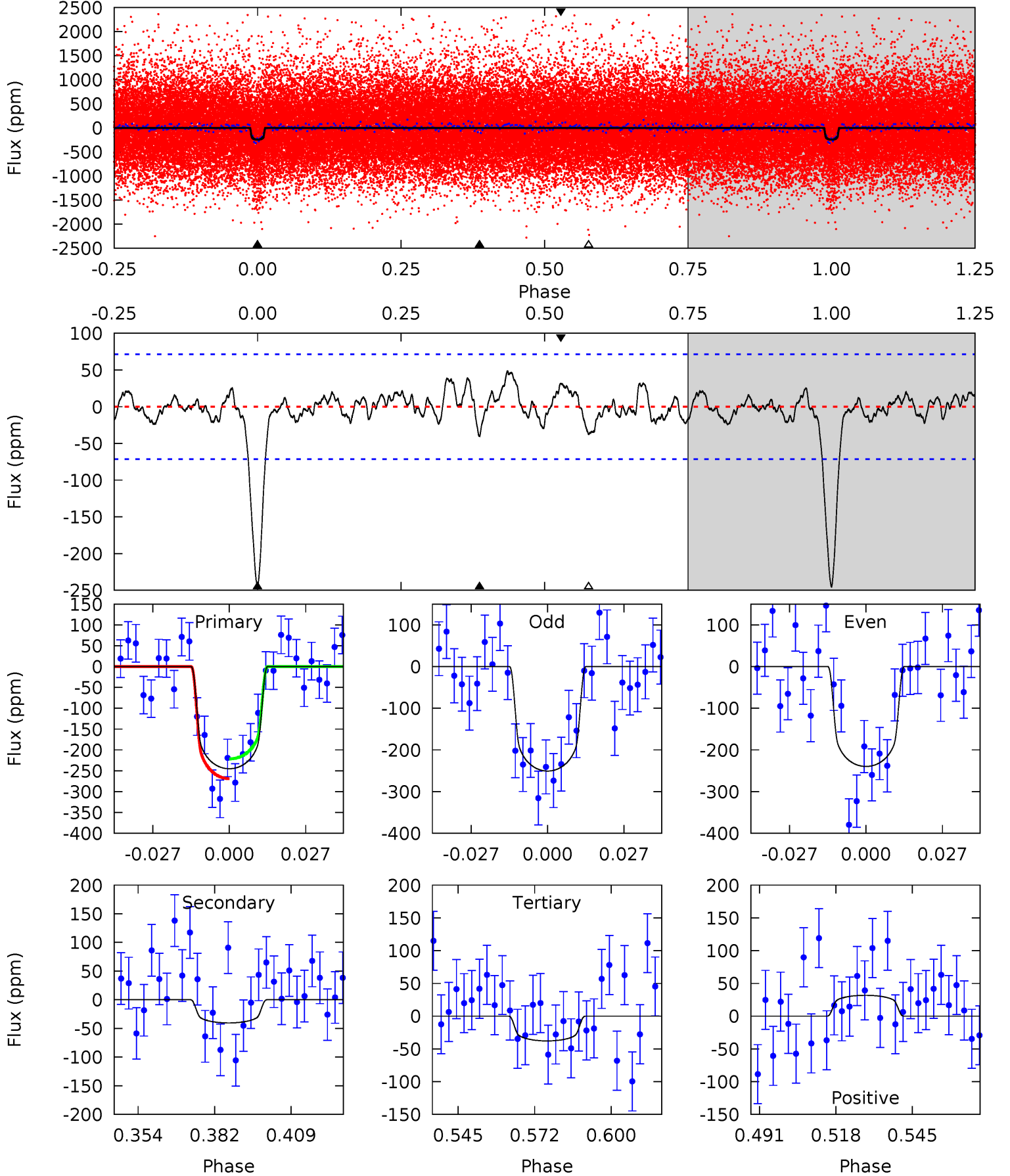
TCE 010862284-01 P= 9.144880 Days $T_0=139.270495$ (BKJD)



DV Model-Shift Uniqueness Test

010862284-01, P = 9.144709 Days, E = 139.291123 Days

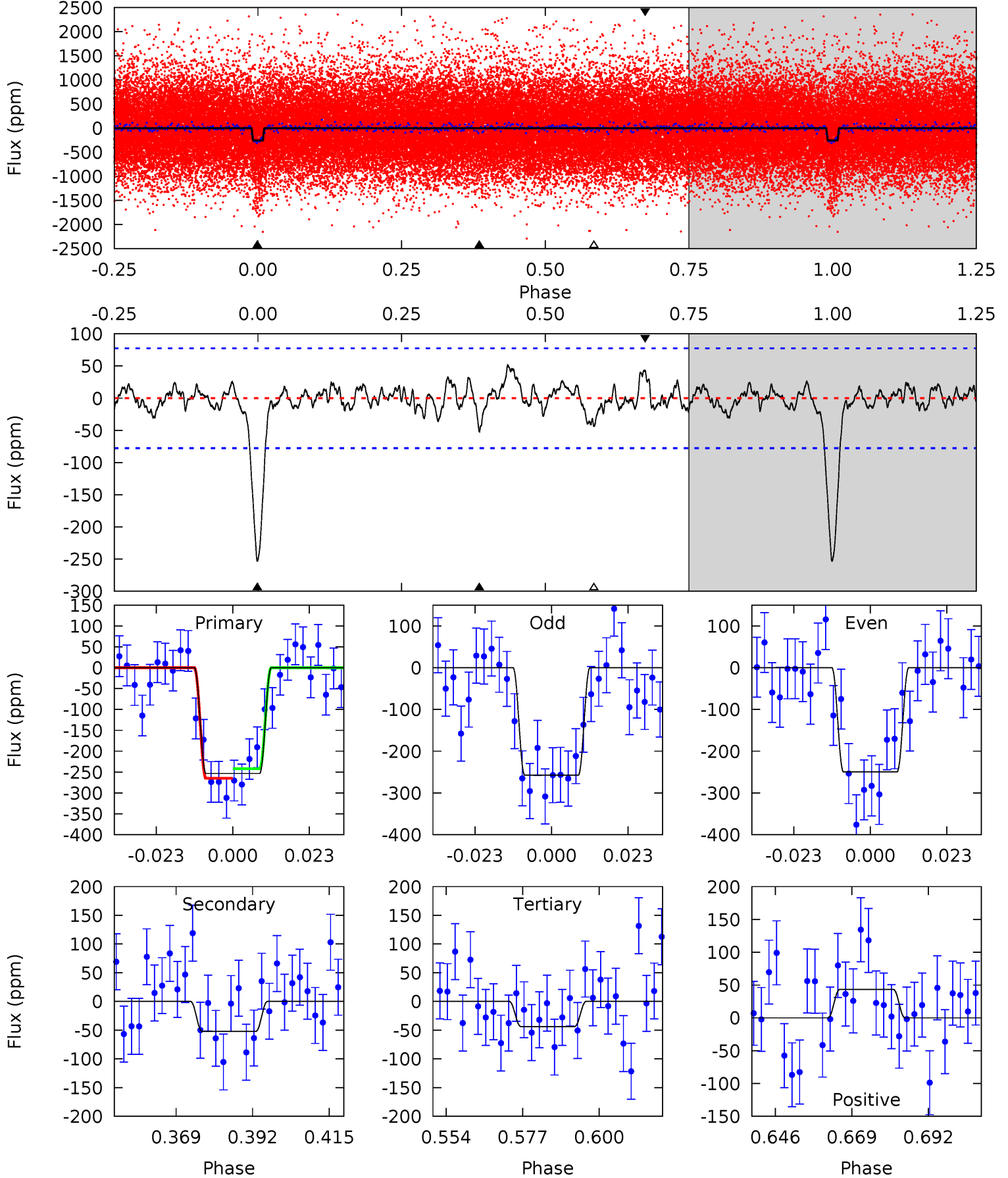
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	2.73	2.56	2.15	4.83	2.21	1.06	14.0	14.4	0.17	0.58	0.37	1.05	0.17	1.61



Alt Model-Shift Uniqueness Test

010862284-01, P = 9.144880 Days, E = 139.270495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	3.26	2.75	2.72	4.86	2.27	1.00	13.2	13.2	0.52	0.54	0.25	1.18	0.17	0.72



Stellar Parameters For KIC 010862284

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5849^{+184}_{-205}	$4.517^{+0.039}_{-0.221}$	$-0.020^{+0.300}_{-0.300}$	$0.919^{+0.301}_{-0.075}$	$1.014^{+0.127}_{-0.127}$	$1.839^{+0.389}_{-0.982}$
	+3%/-4%	+1%/-5%	+1500%/-1500%	+33%/-8%	+13%/-13%	+21%/-53%
Source	KIC0	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 010862284-01 / KOI 8034.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 15	$1.69^{+0.66}_{-0.58}$	1211^{+92}_{-64}	3946^{+810}_{-464}	52^{+87}_{-29}
Alt.	-52 ± 16	$1.71^{+0.62}_{-0.64}$	1213^{+90}_{-62}	4139^{+915}_{-450}	70^{+113}_{-36}

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

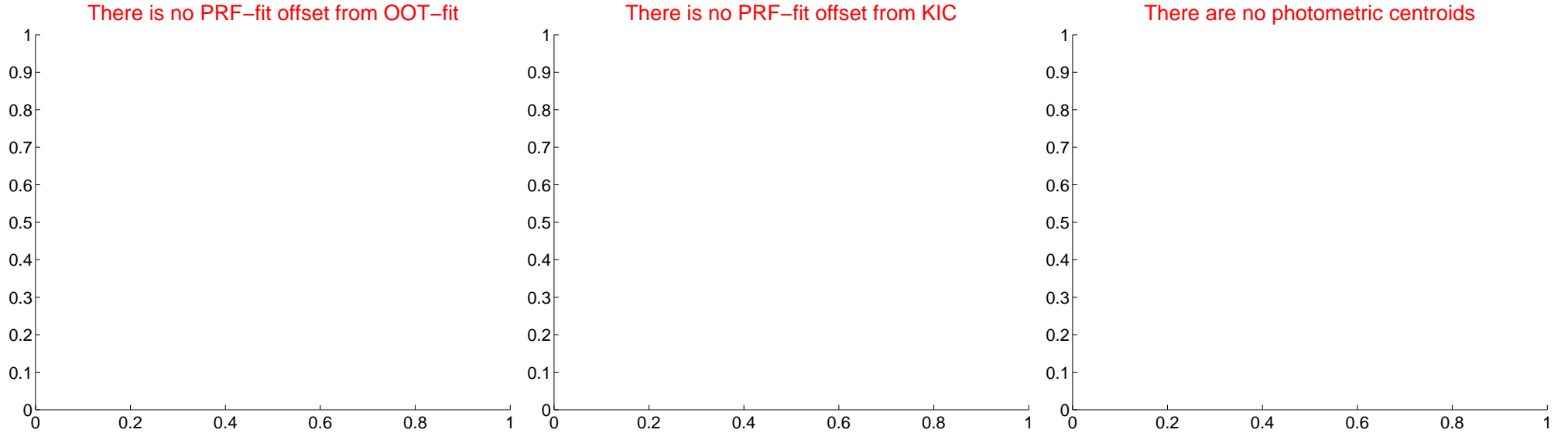
DV Centroid Data

Supplemental centroid analysis for 010862284-01. Kepler magnitude: 15.88. Transit SNR 12.33

There are 0 quarters with good PRF difference image offsets

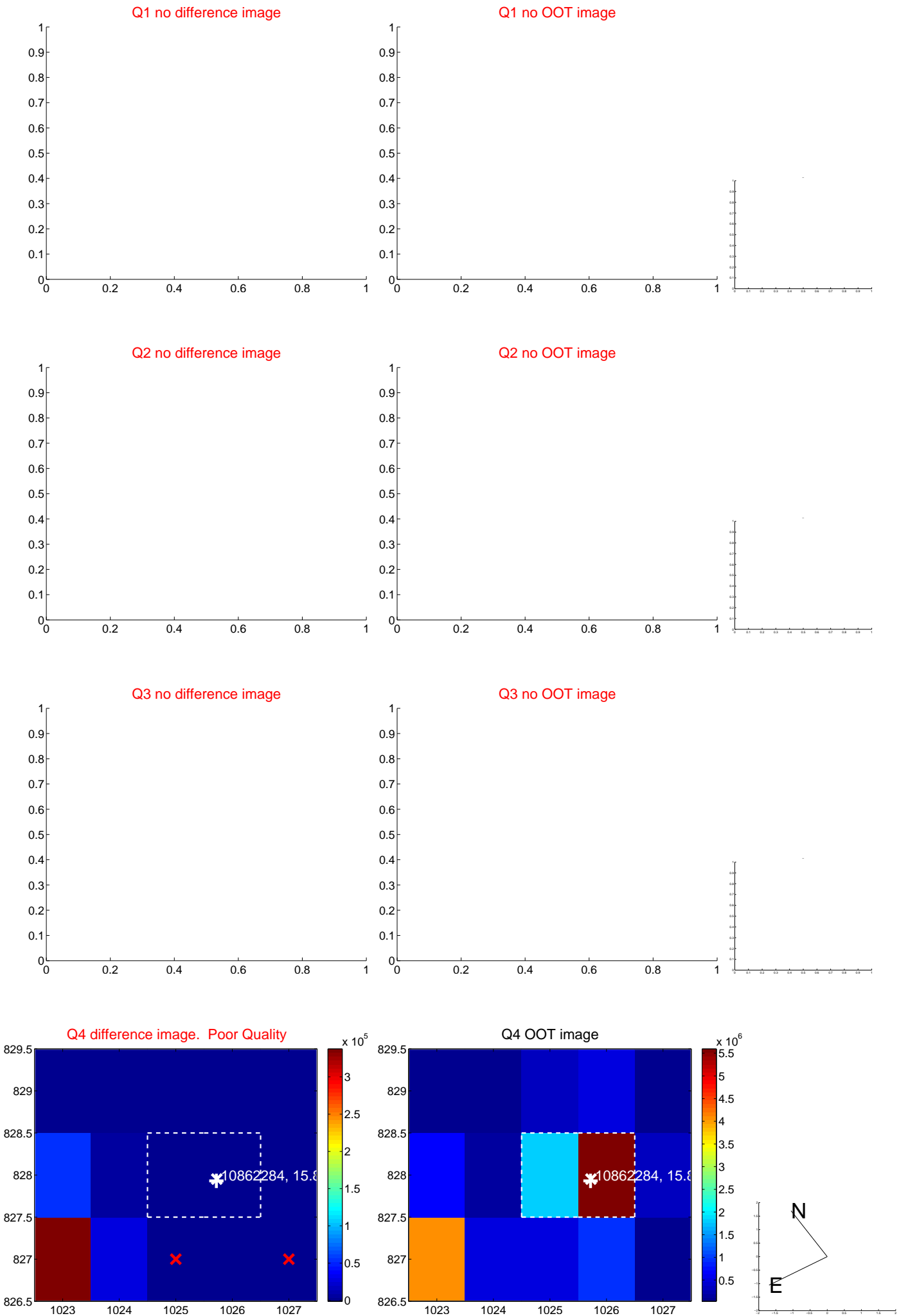
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

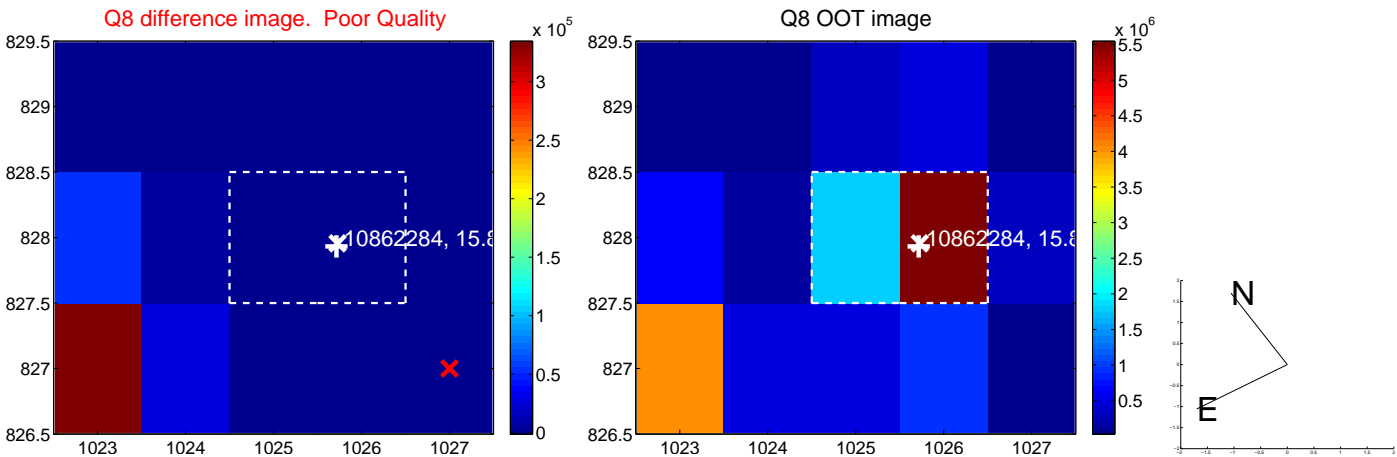
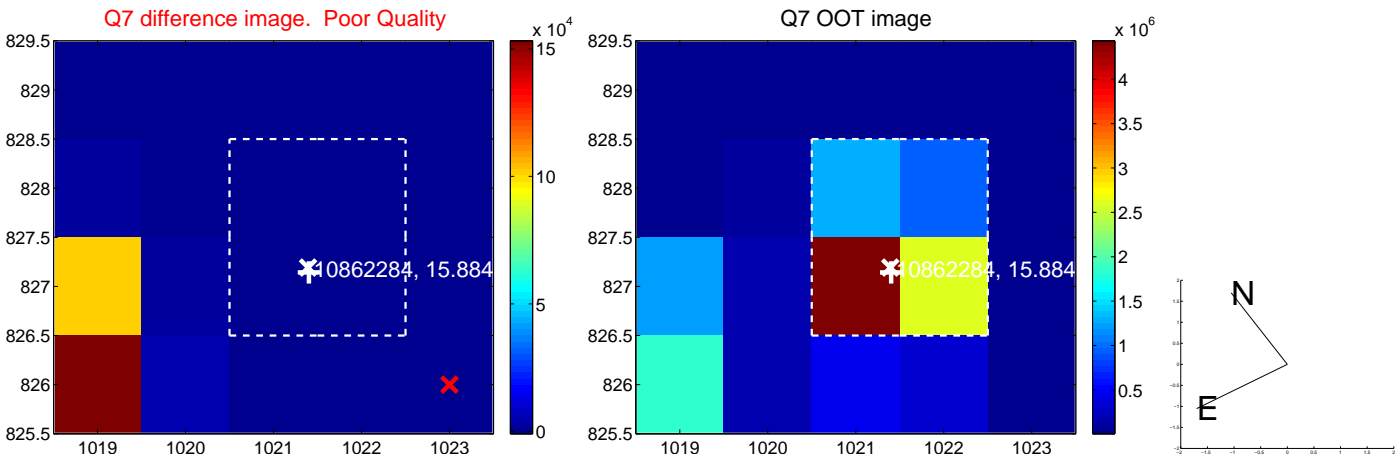
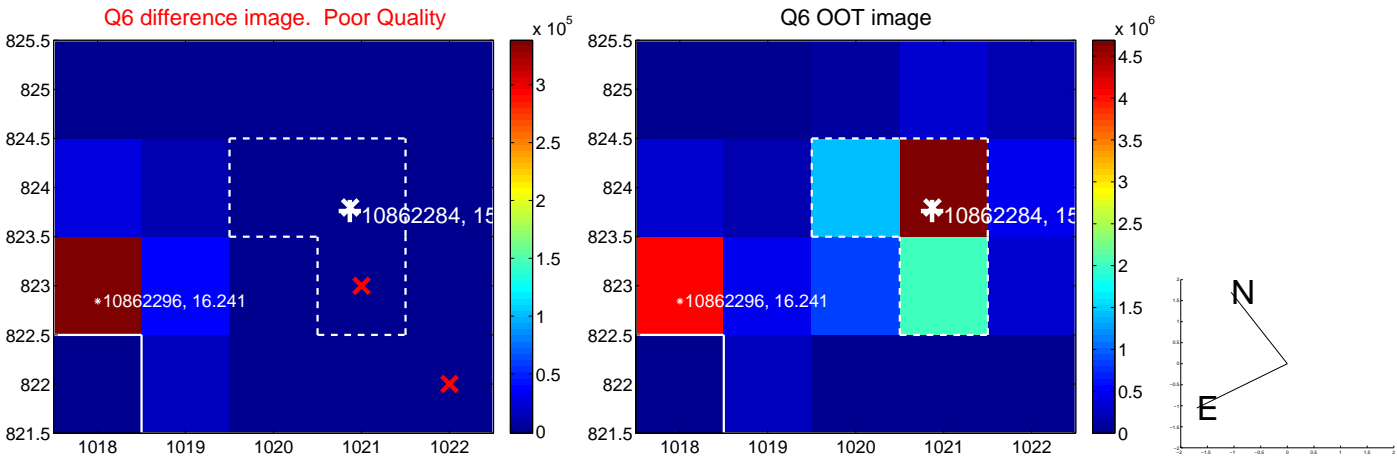
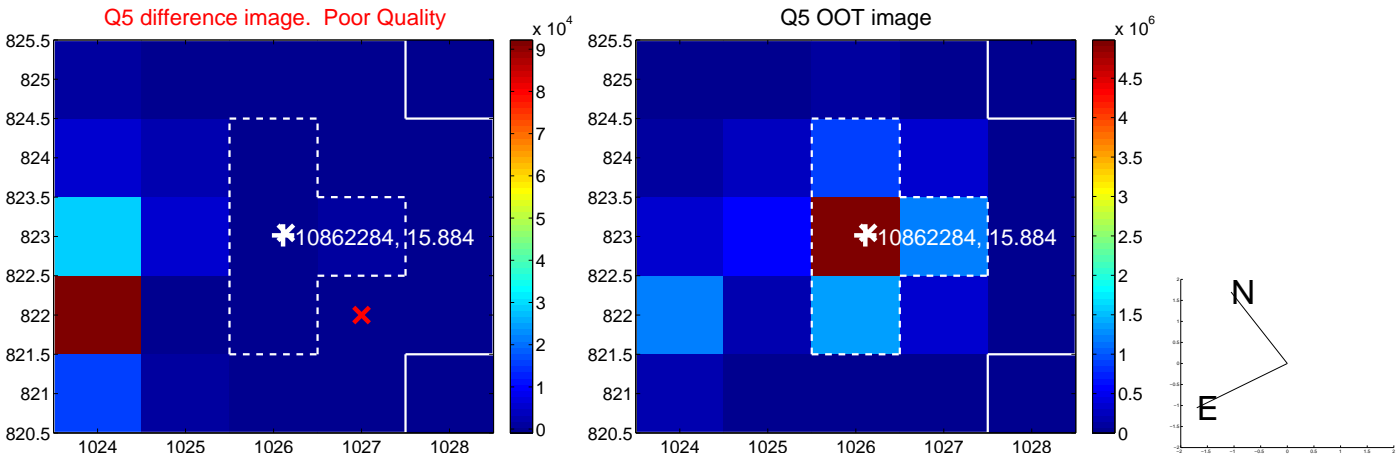


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

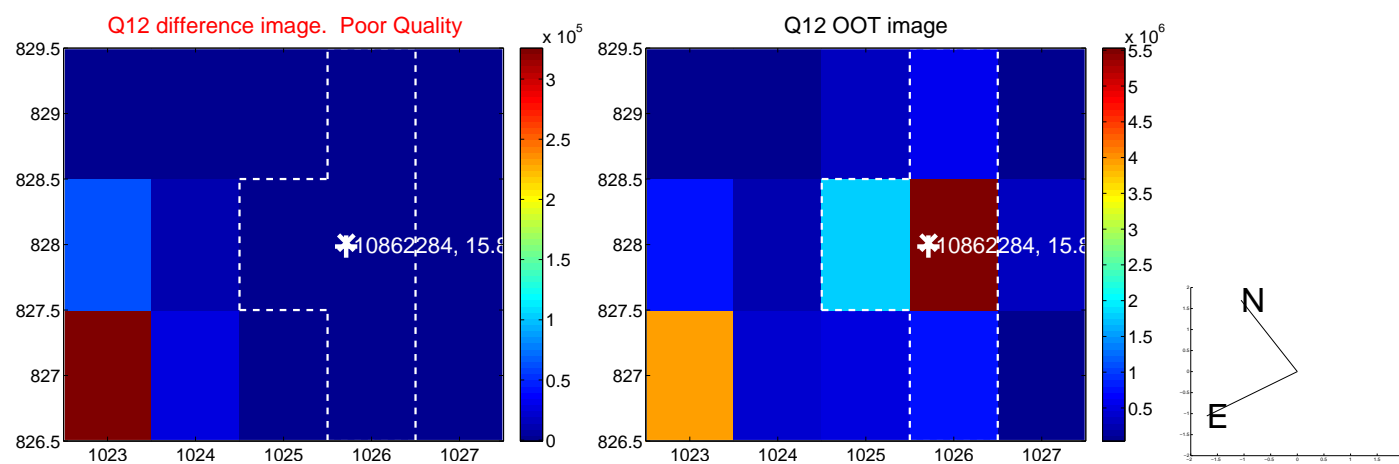
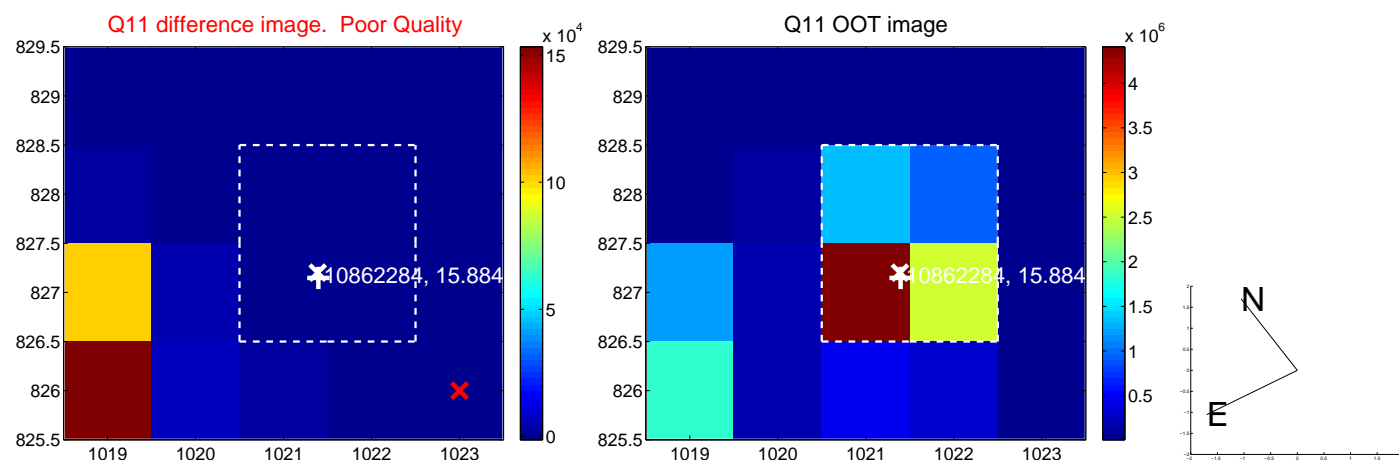
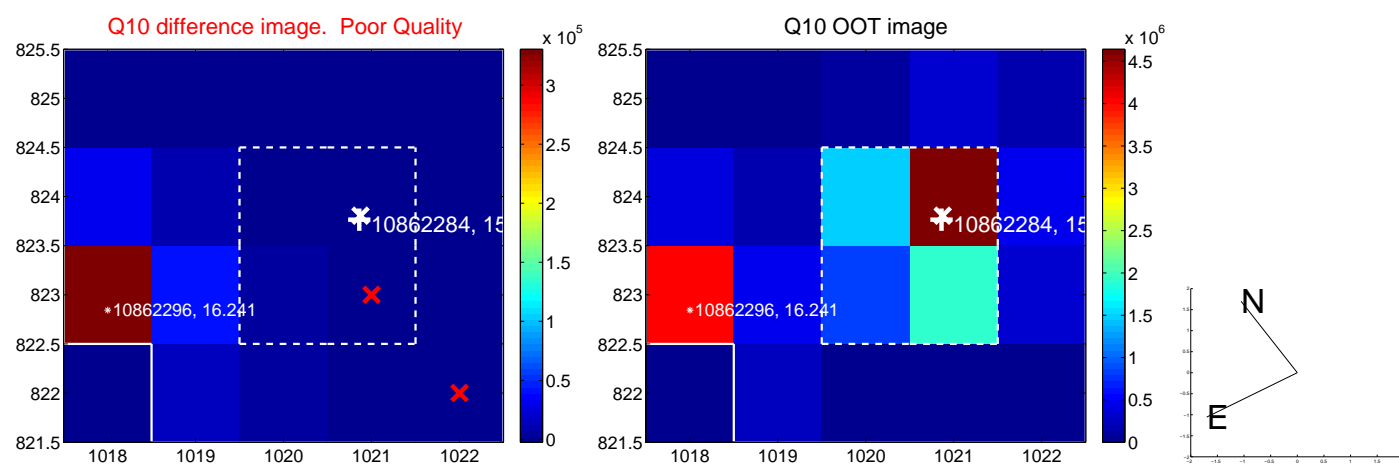
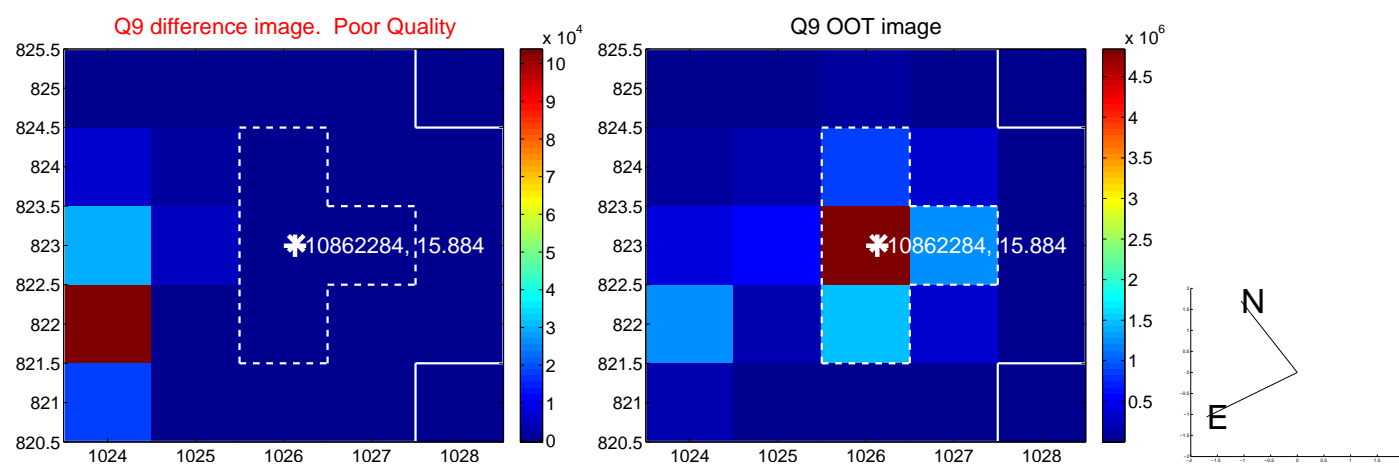
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



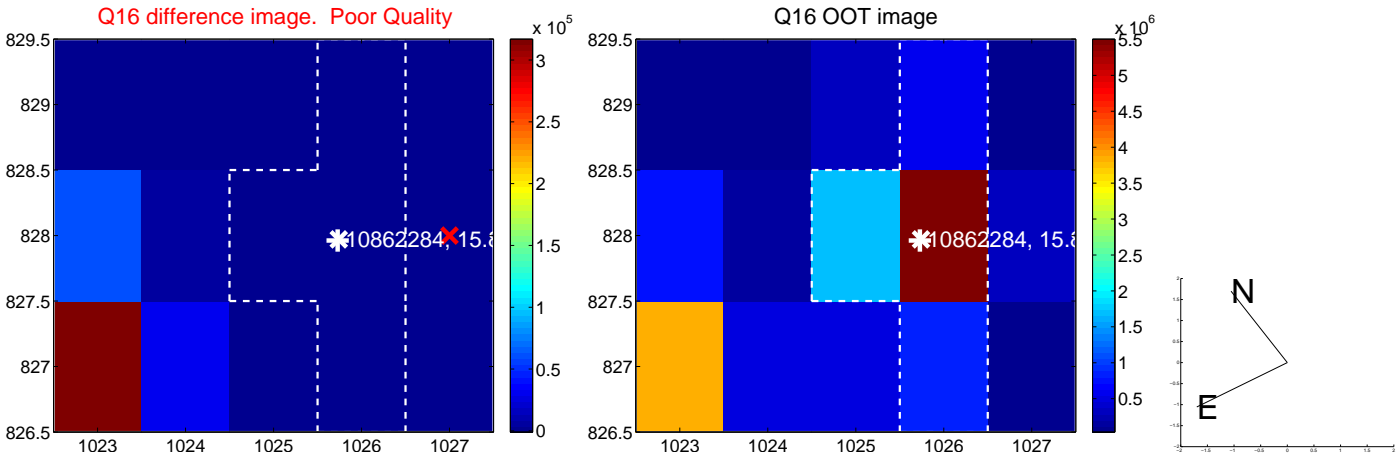
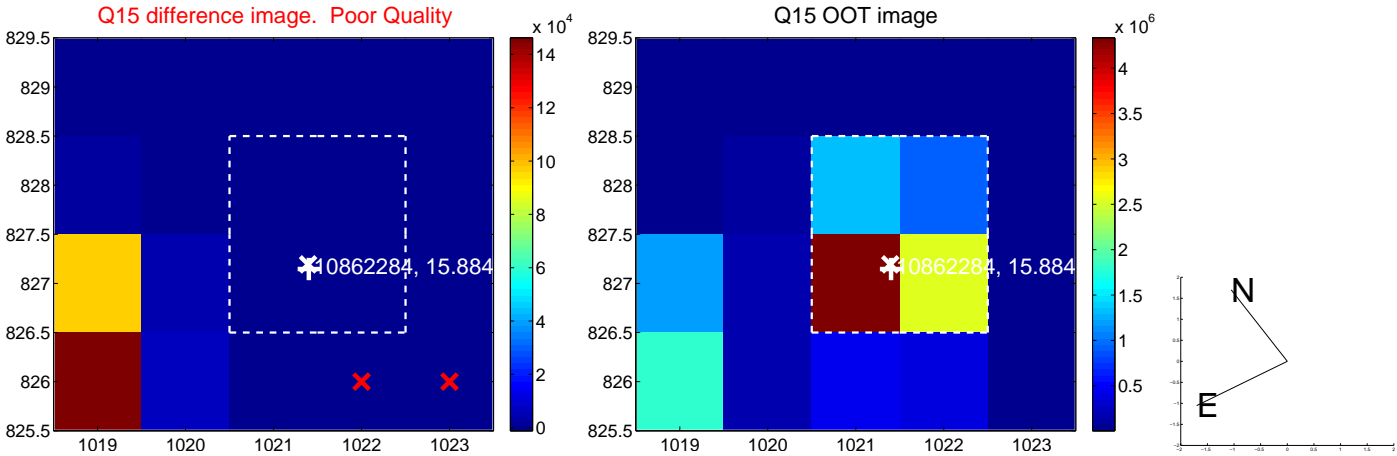
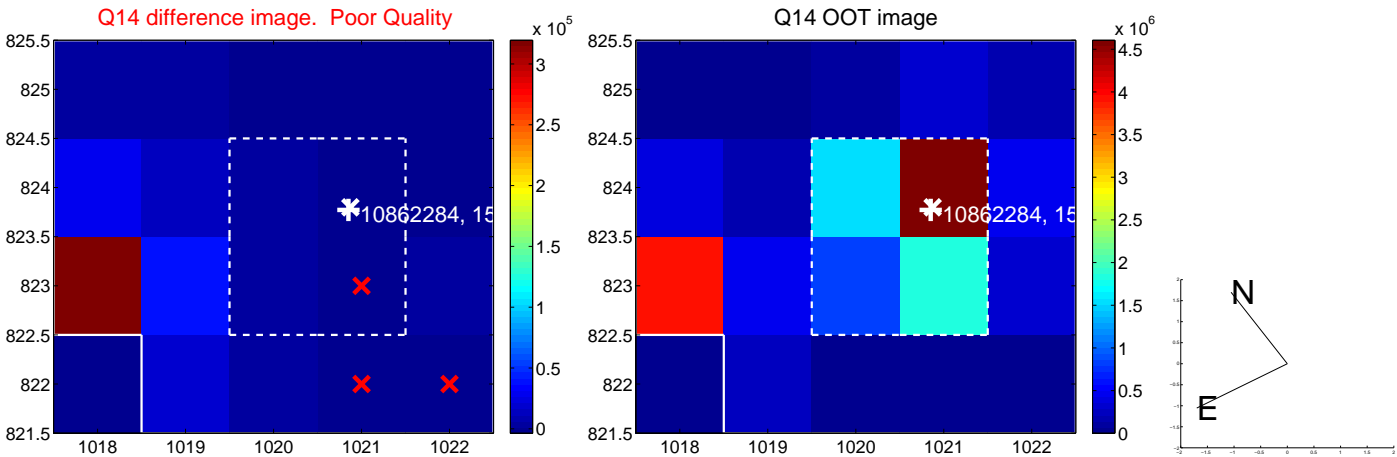
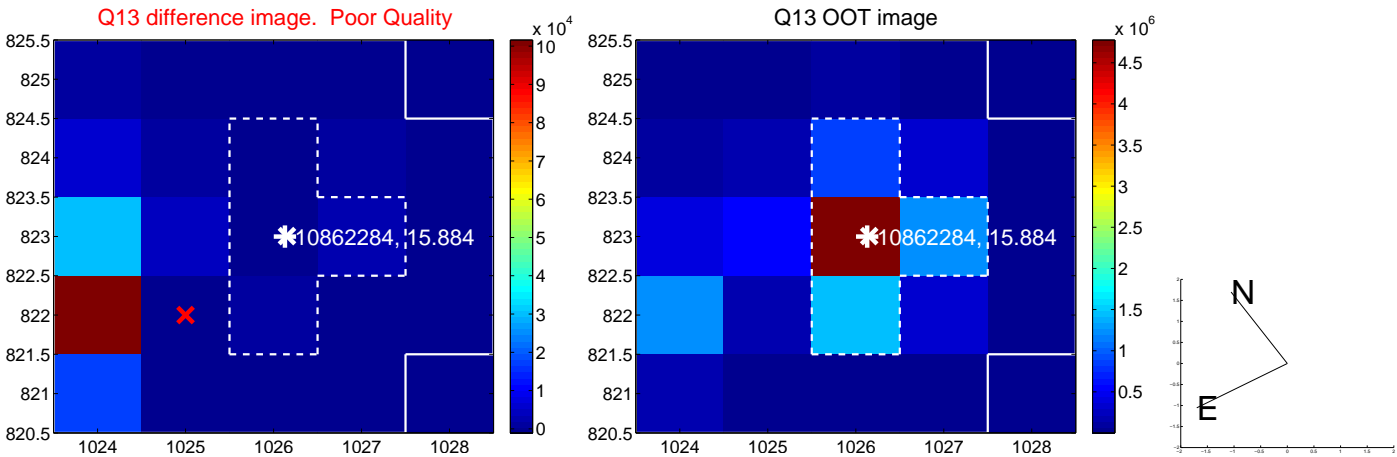
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



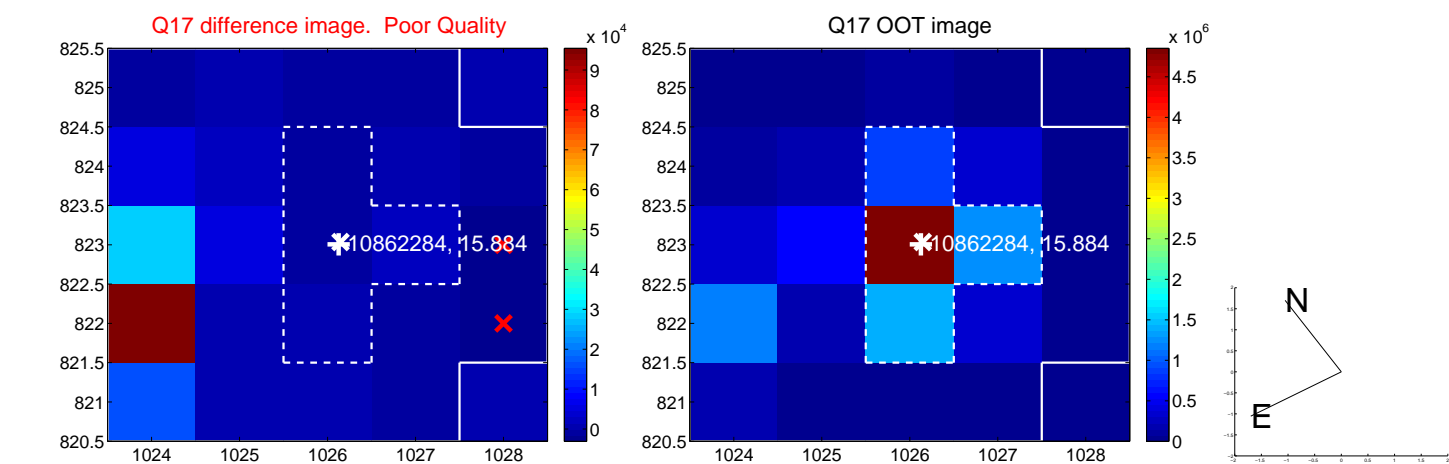
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



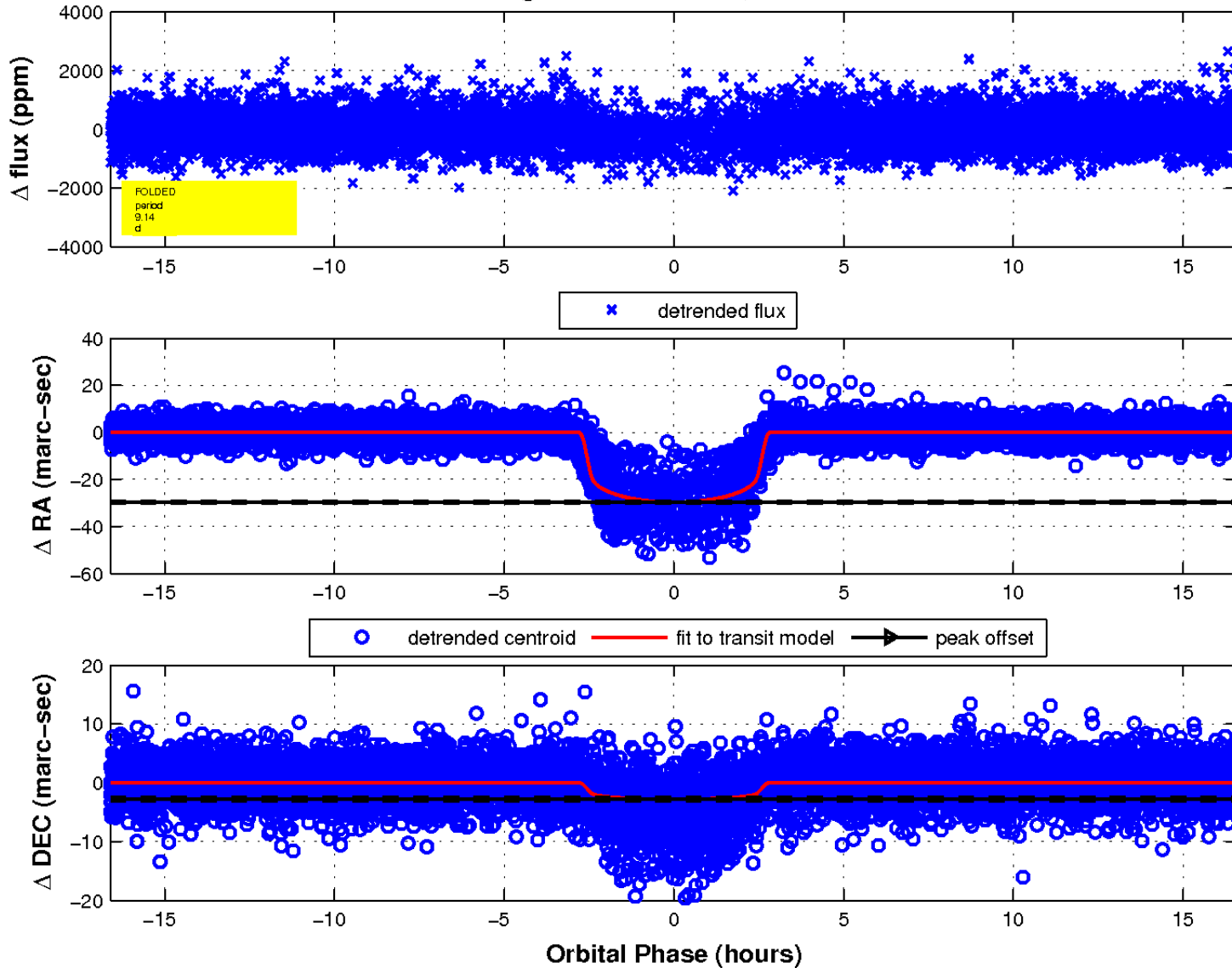
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

