

KIC 004284147

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})
004284147-01	OBS	6402.01	1.161118	132.236359	101.4	4.408	8.8	9.1	1.24	6572	1.36	4609.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004284147-01	OBS	FP	0.03	1	0	0	0	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.

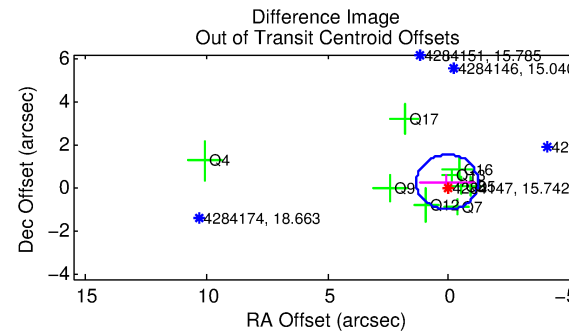
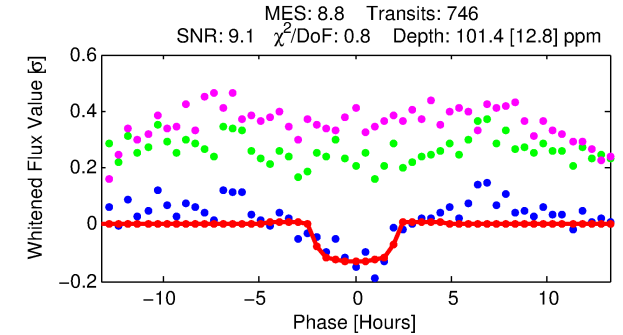
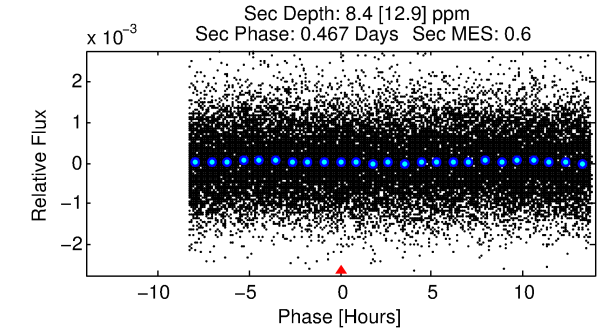
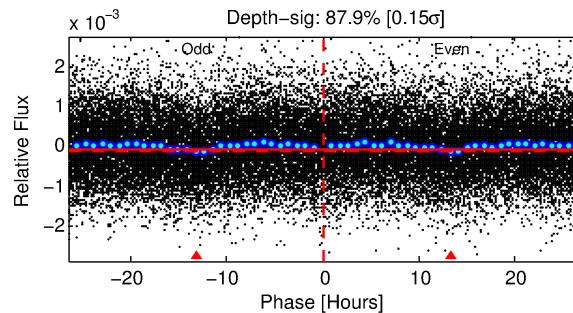
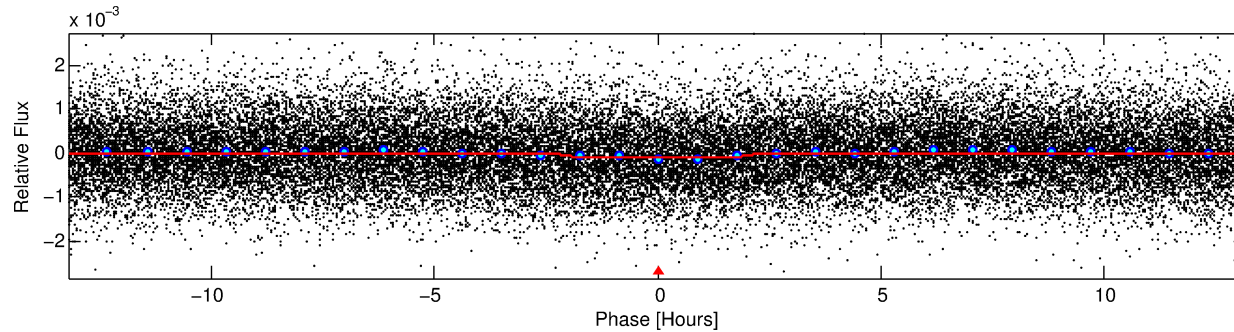
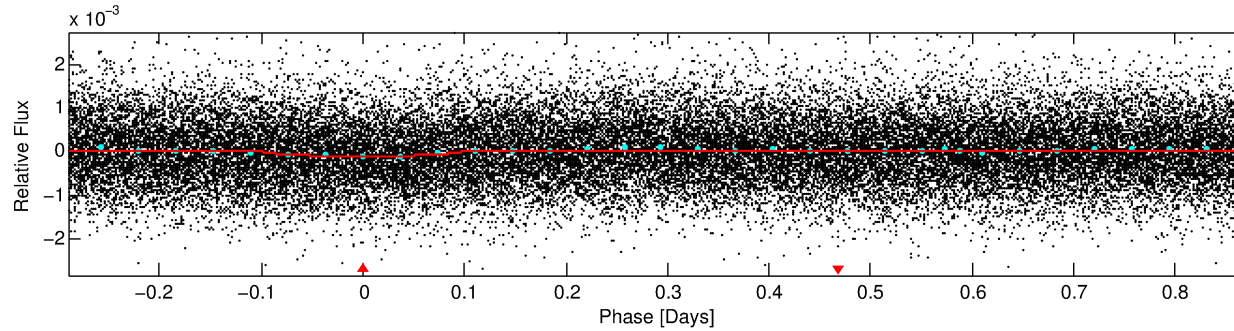
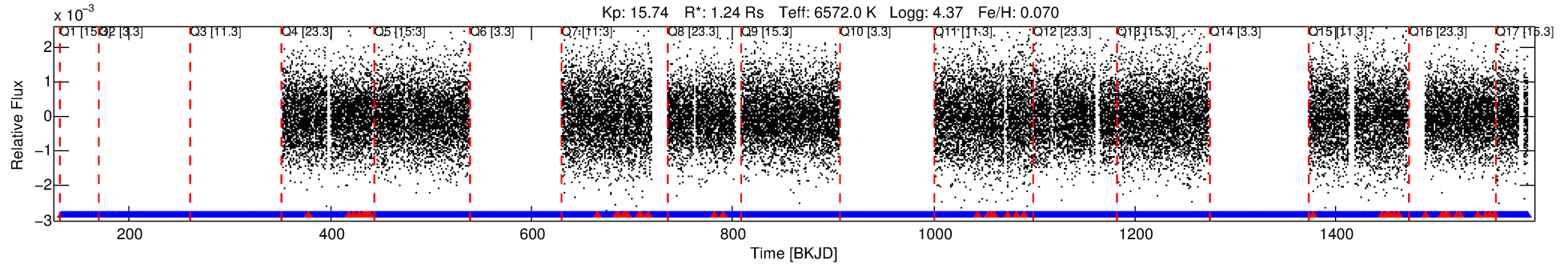
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004284147-01

No Significant Match Found

DV One-Page Summary

KIC: 4284147 Candidate: 1 of 1 Period: 1.161 d
KOI: K06402.01 Corr: 0.851



DV Fit Results:

Period = 1.16112 [0.00001] d
Epoch = 132.2364 [0.0055] BKJD
Rp/R* = 0.0101 [0.0087]
R* = 1.59 [4.55]
b = 0.76 [2.65]
Seff = 4609.60 [1837.08]
Teq = 2101 [209] K
Rp = 1.36 [1.25] Re
a = 0.0236 [0.0059] AU
Ag = 1.40 [3.28] [0.12 σ]
Teffp = 3532 [2049] K [0.69 σ]

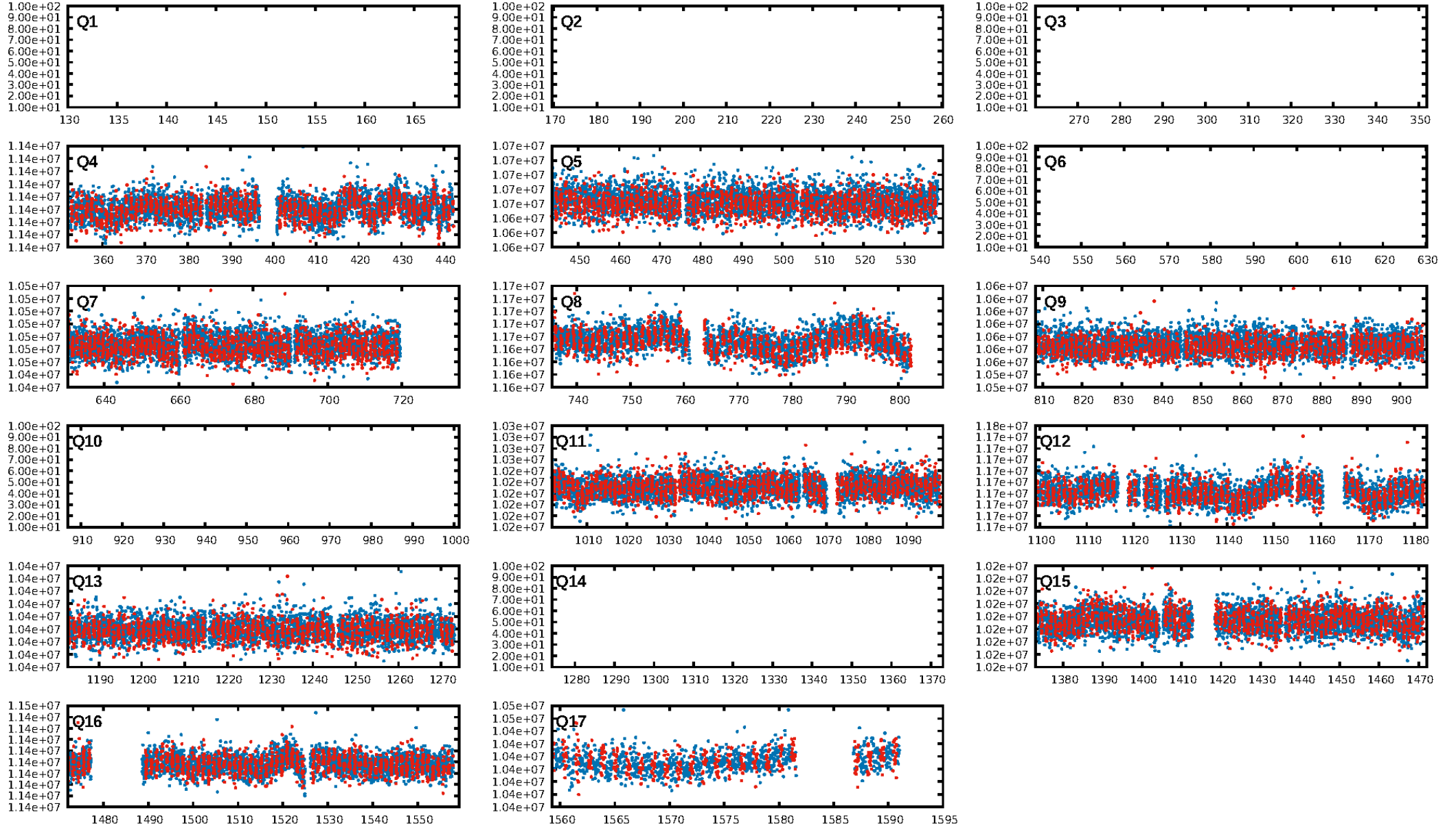
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.53e-16
RollingBand-fgt: 0.93 [675/722]
GhostDiagnostic-chr: 1.177
Centroid-sig: 51.6%
Centroid-so: 1.315 arcsec [0.97 σ]
OotOffset-rm: 0.286 arcsec [0.67 σ]
OotOffset-st: 0/1/4/4 [9]
KicOffset-rm: 0.260 arcsec [0.59 σ]
KicOffset-st: 0/1/4/4 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [11/11]

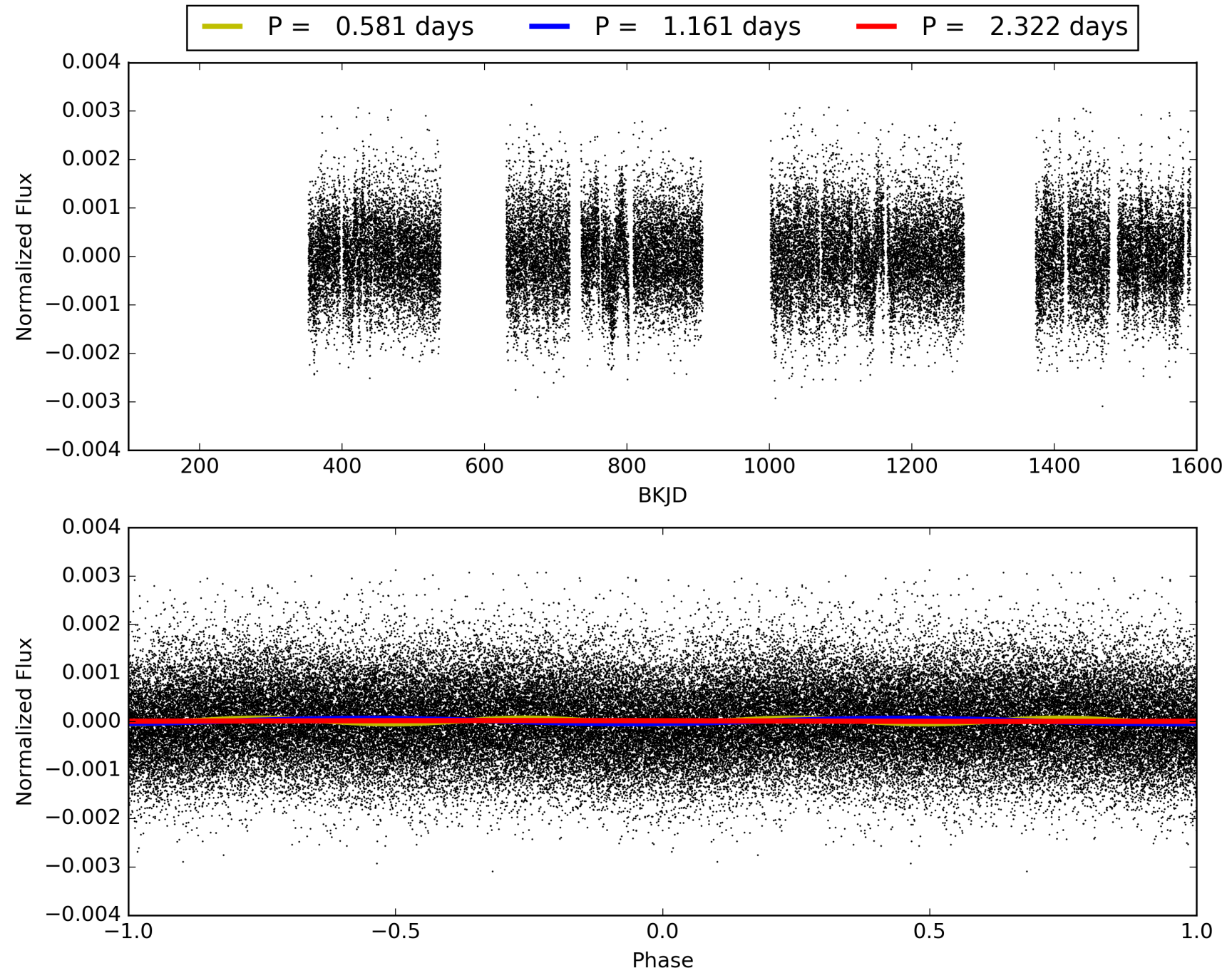
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:14:28 Z

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

TCE 004284147-01, PDC Light Curves

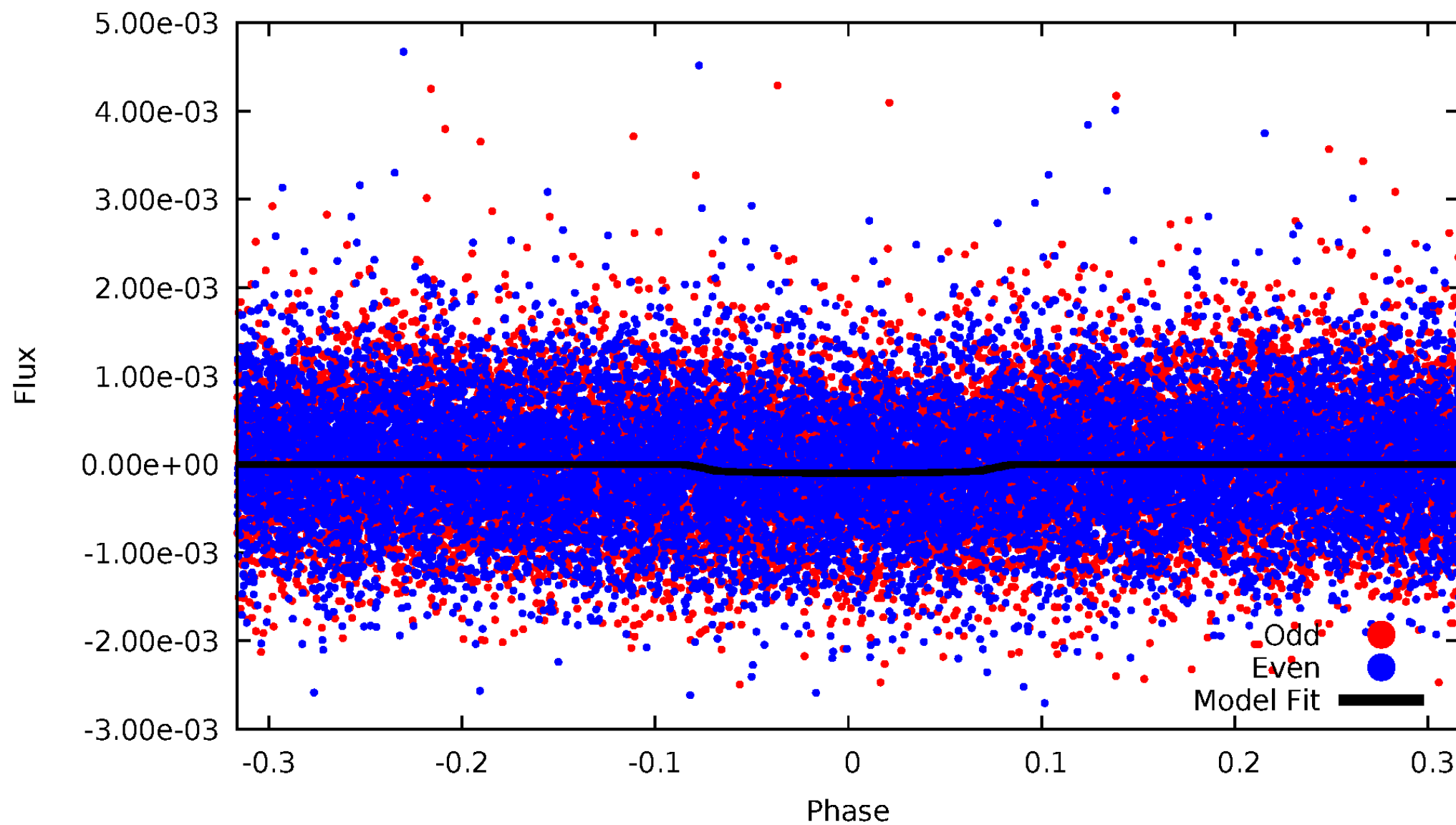


TCE 004284147-01



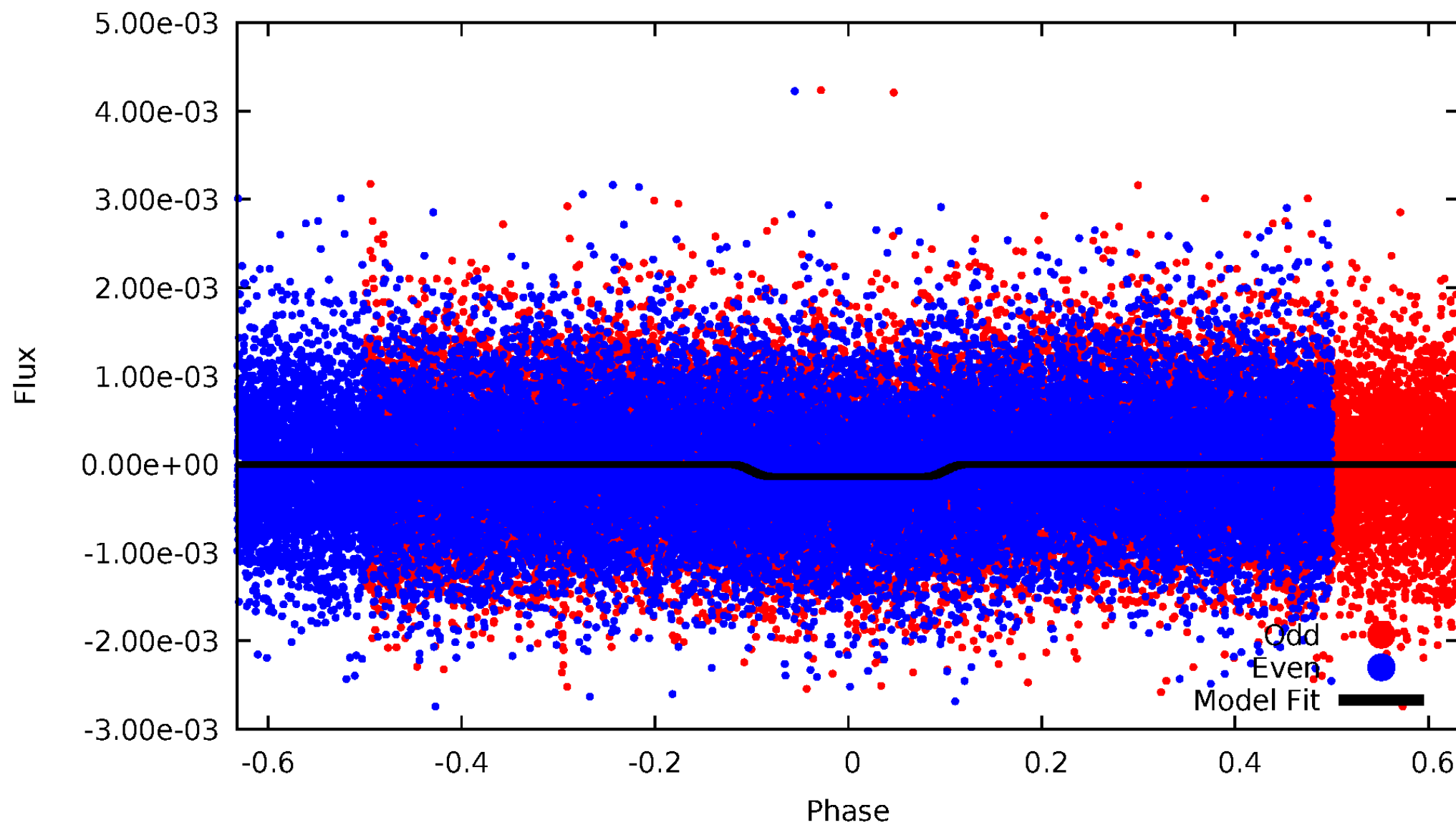
DV Odd/Even

TCE 004284147-01



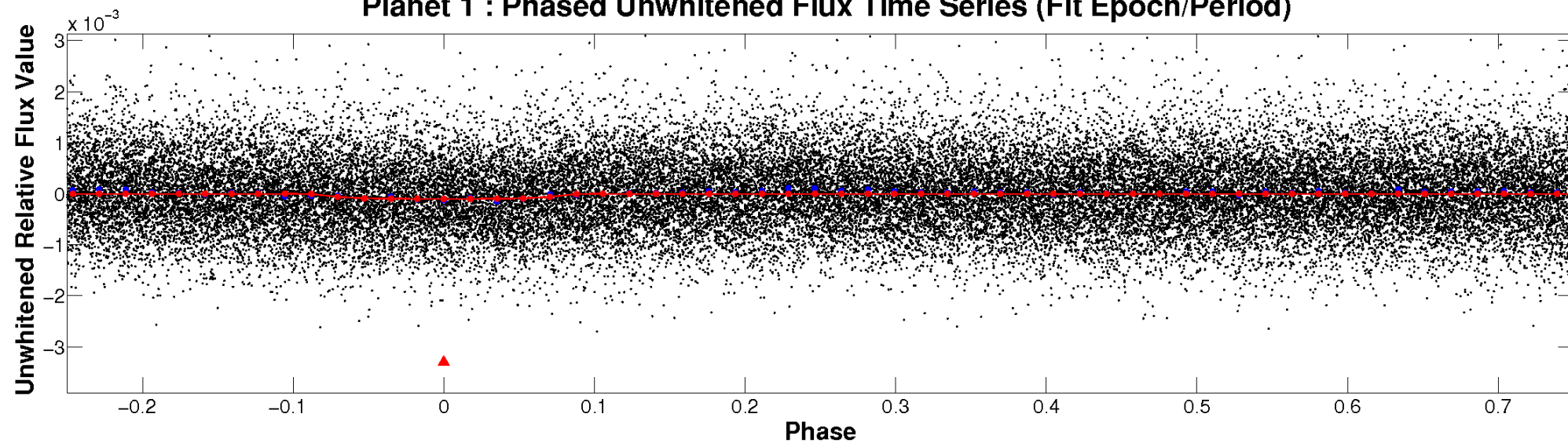
ALT Odd/Even

TCE 004284147-01

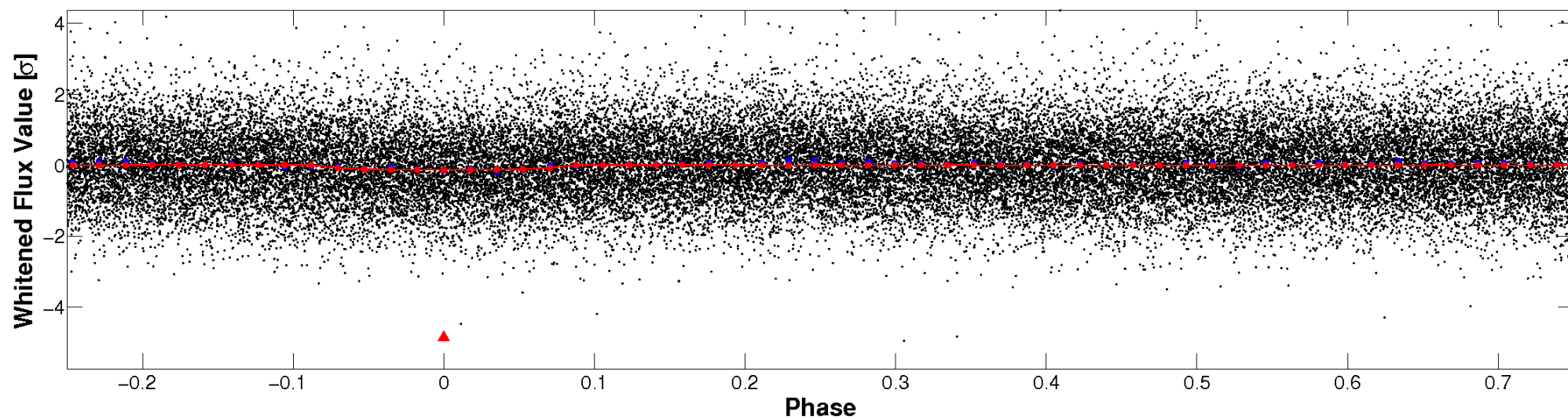


Non-Whitened Vs. Whitened Light Curve

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

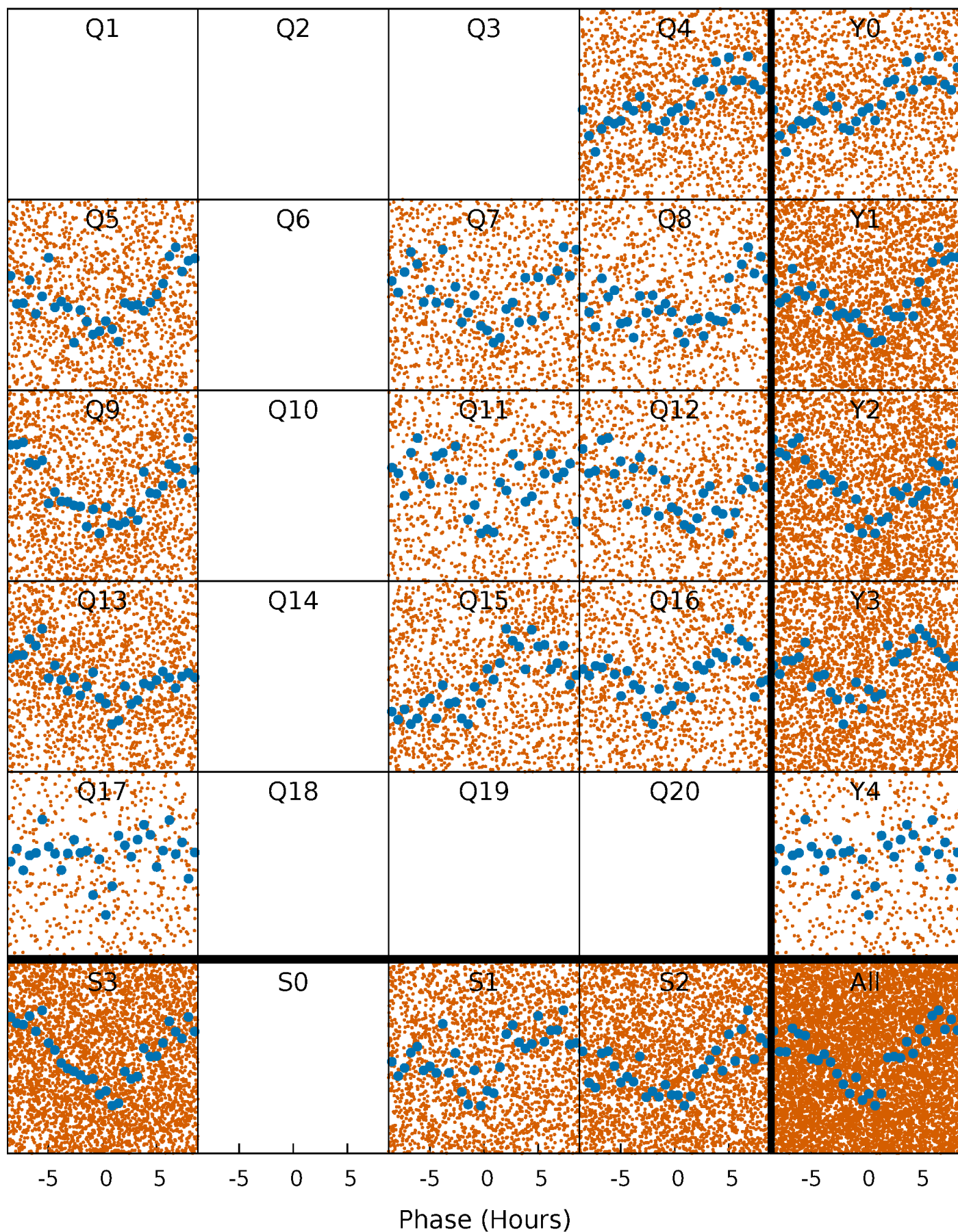


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



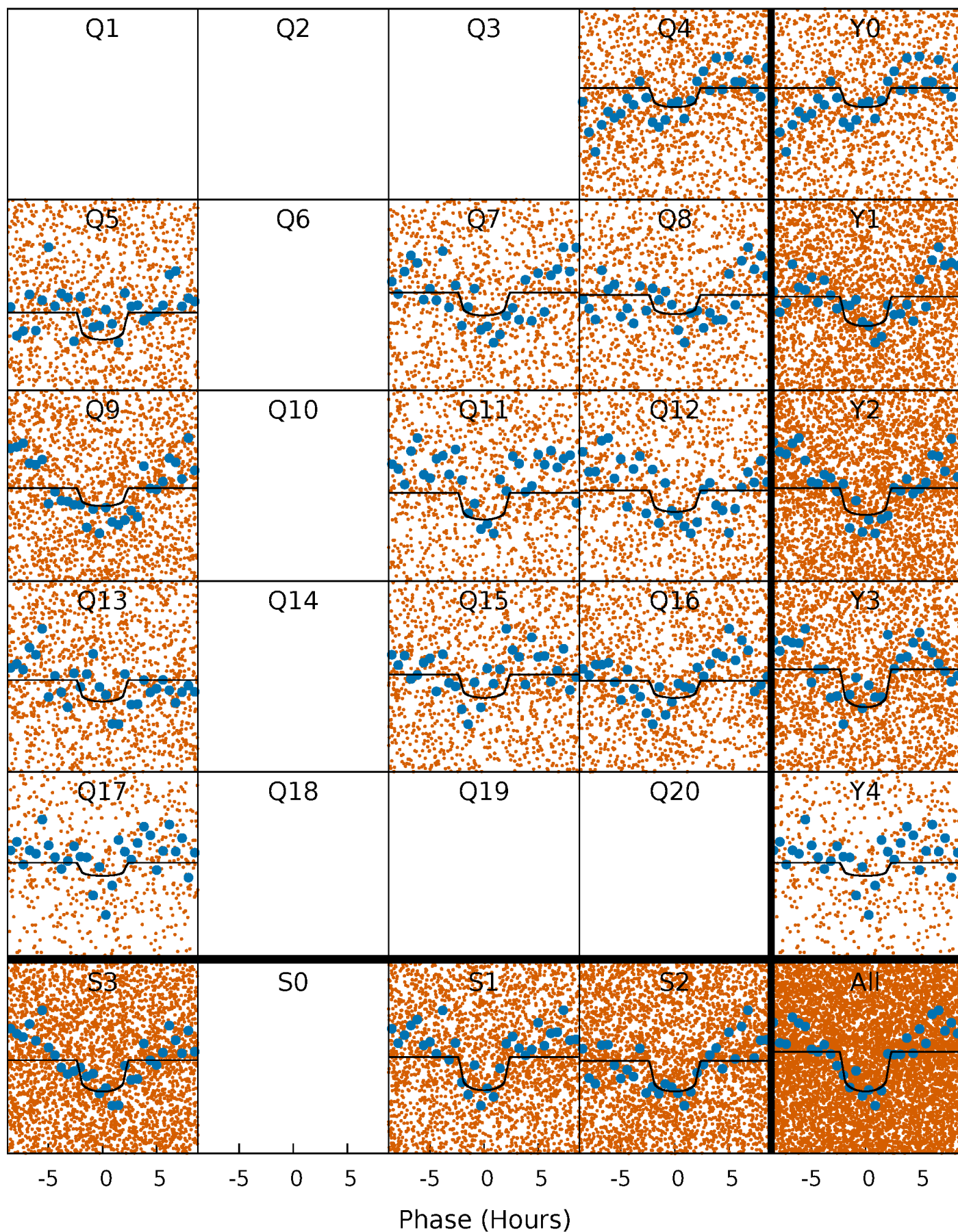
PDC Quarter-Phased Transit Curves

TCE 004284147-01 P= 1.161118 Days $T_0=132.236359$ (BKJD)



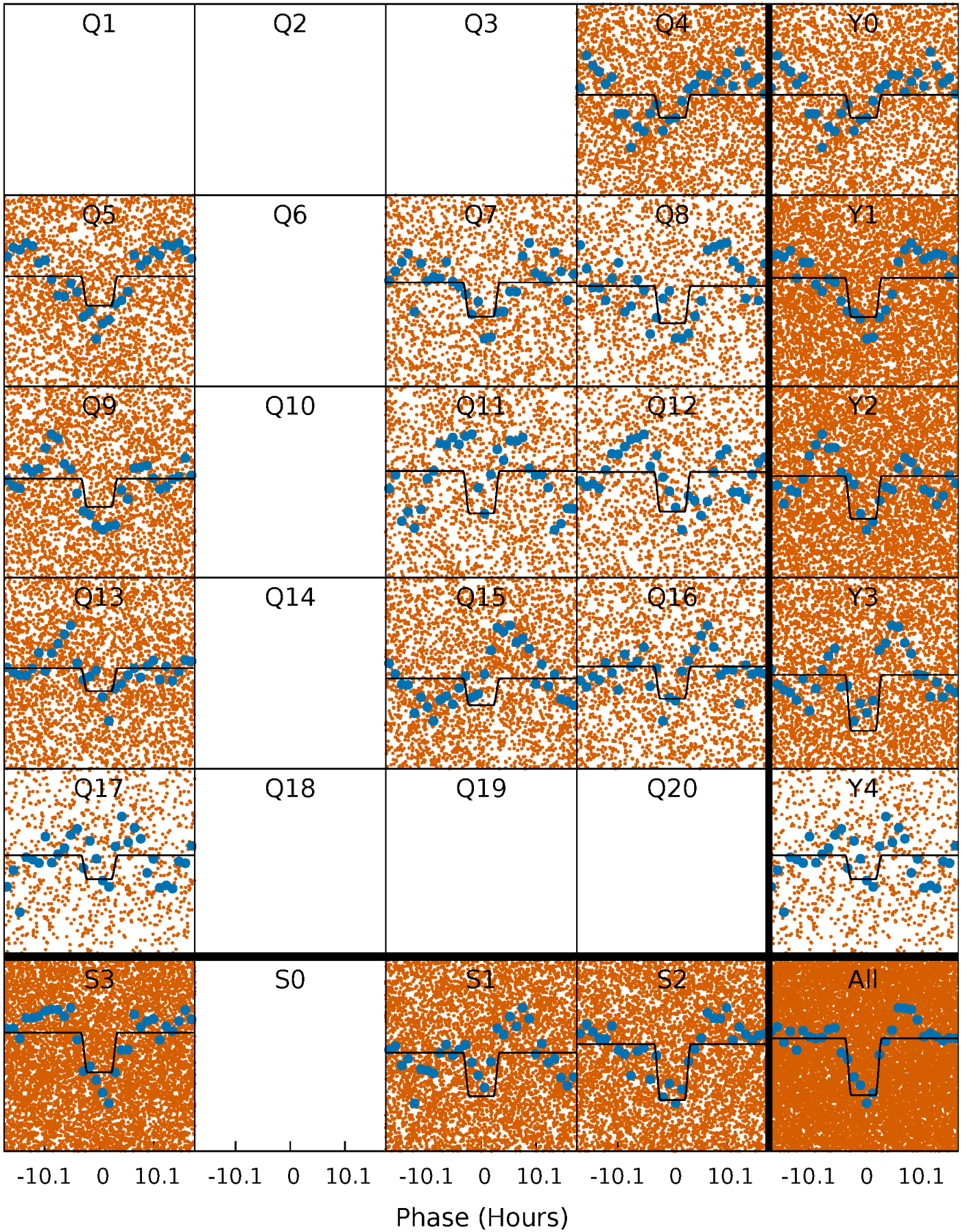
DV Quarter-Phased Transit Curves

TCE 004284147-01 P= 1.161118 Days $T_0=132.236359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

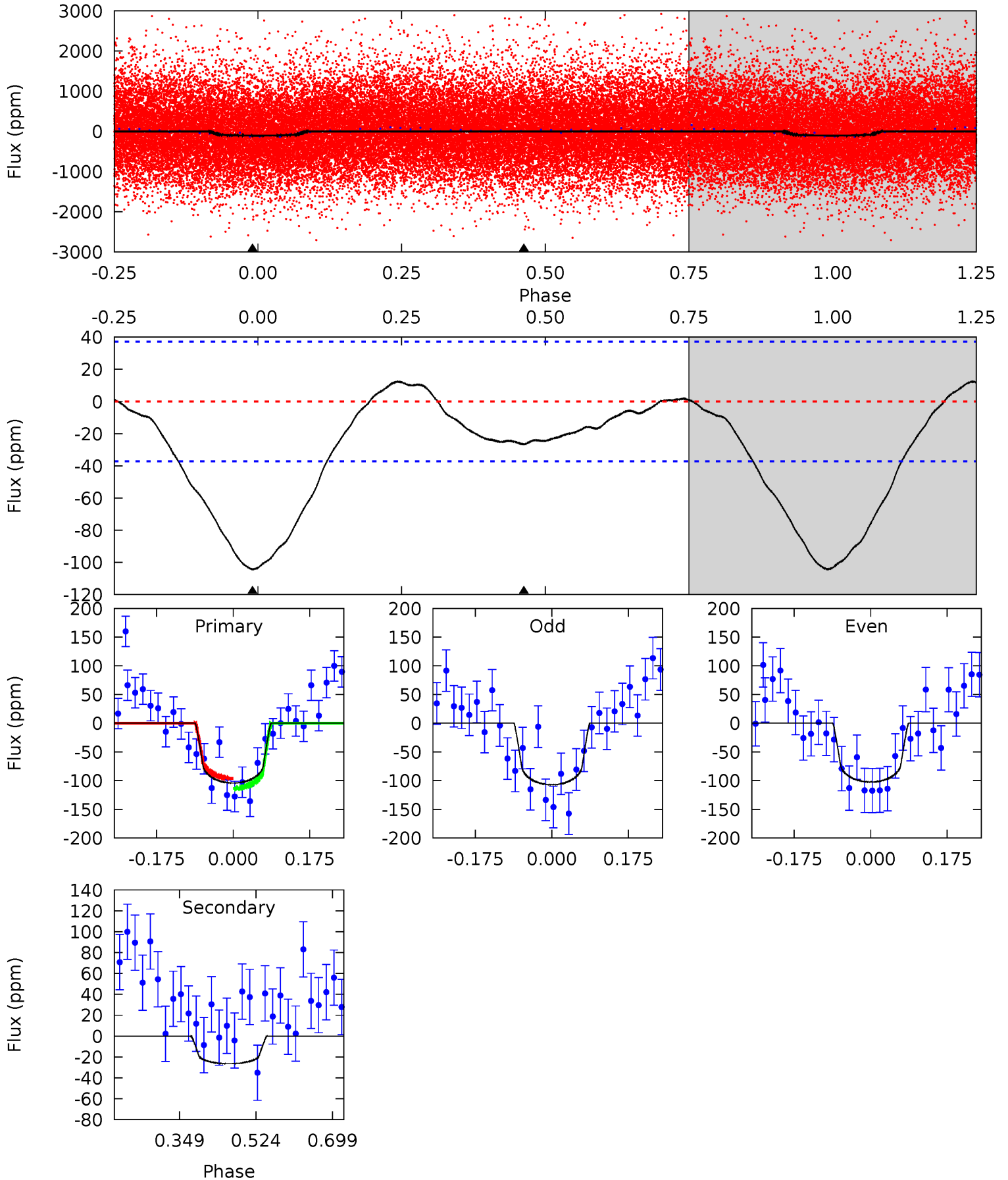
TCE 004284147-01 P= 1.161086 Days $T_0=132.241101$ (BKJD)



DV Model-Shift Uniqueness Test

004284147-01, P = 1.161118 Days, E = 132.236359 Days

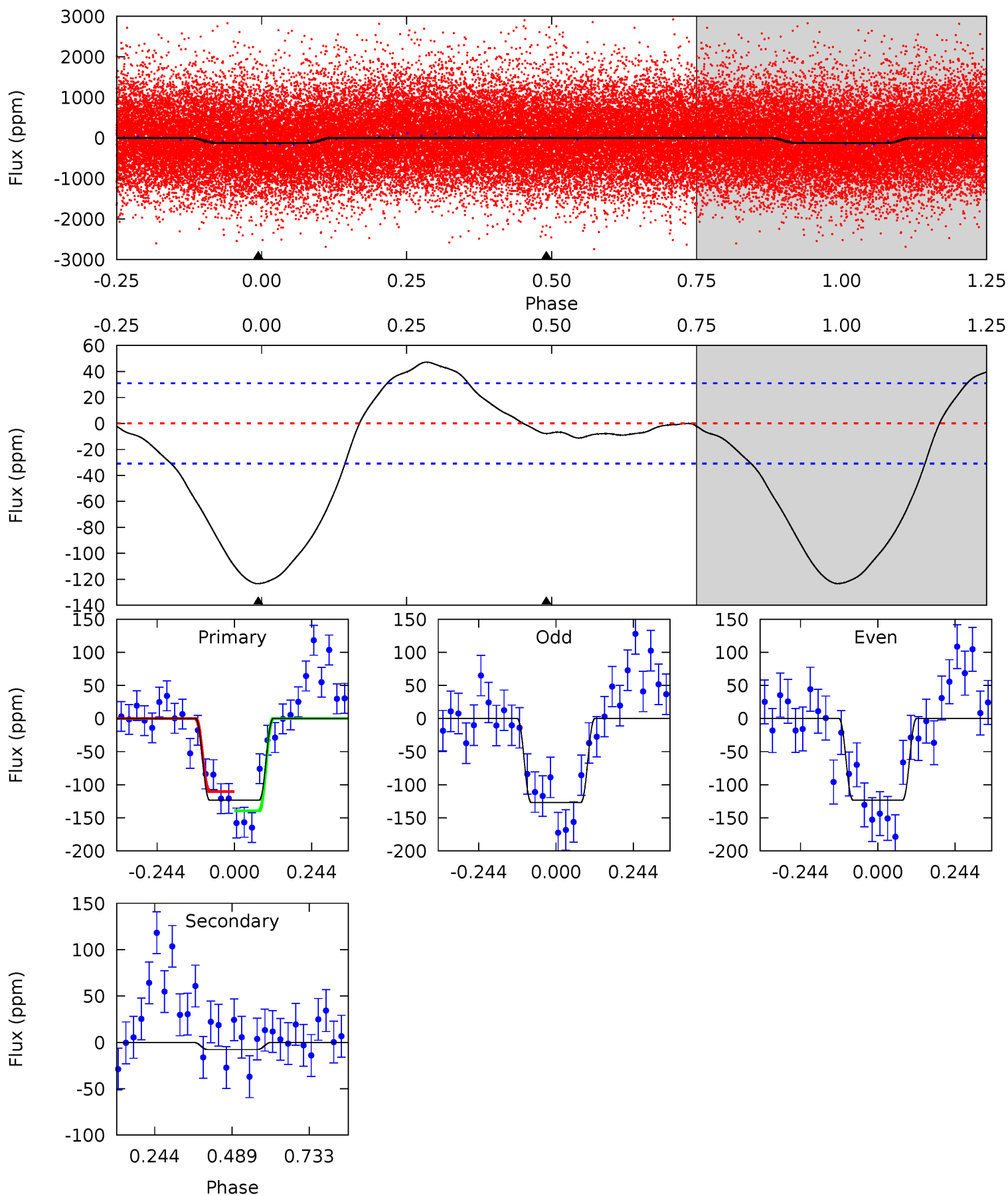
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.17	0	0	4.45	1.36	0.83	12.5	12.5	3.17	3.17	0.29	0.90	0.11	1.04



Alt Model-Shift Uniqueness Test

004284147-01, P = 1.161086 Days, E = 132.241101 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	1.10	0	0	4.37	1.16	2.87	17.4	17.4	1.10	1.10	0.26	0.98	0.28	2.03



Stellar Parameters For KIC 004284147

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6572^{+187}_{-258}	$4.365^{+0.062}_{-0.200}$	$0.070^{+0.250}_{-0.350}$	$1.238^{+0.371}_{-0.159}$	$1.298^{+0.156}_{-0.208}$	$0.964^{+0.319}_{-0.466}$
	+3%/-4%	+1%/-5%	+357%/-500%	+30%/-13%	+12%/-16%	+33%/-48%
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 004284147-01 / KOI 6402.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 8	$1.63^{+1.17}_{-1.00}$	2993^{+237}_{-176}	4420^{+2433}_{-922}	$2.742^{+16.049}_{-1.793}$
Alt.	-8 ± 7	$1.72^{+1.22}_{-1.00}$	3001^{+216}_{-163}	3167^{+1462}_{-6204}	$0.675^{+3.132}_{-0.618}$

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

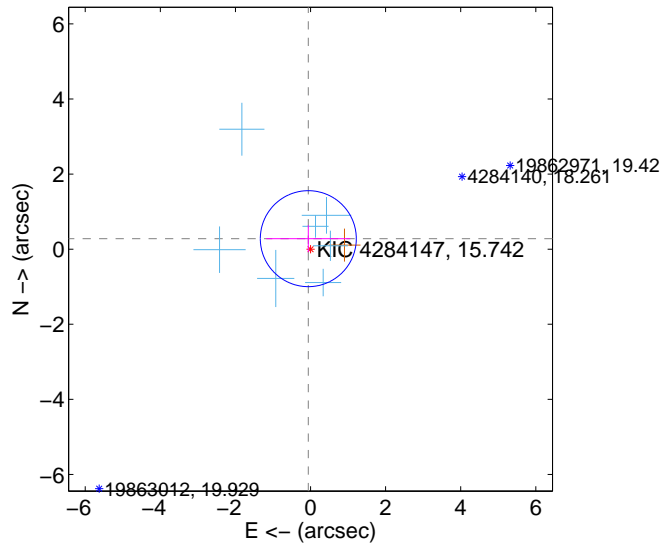
Supplemental centroid analysis for 004284147-01. Kepler magnitude: 15.74. Transit SNR 9.05

There are 7 quarters with good PRF difference image offsets

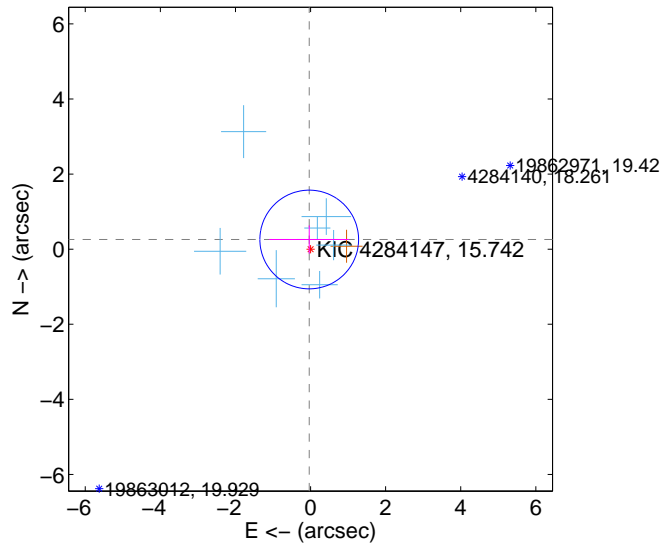
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.286 ± 0.426	0.67	0.059 ± 1.120	0.280 ± 0.359
PRF-fit source offset from KIC position	0.260 ± 0.438	0.59	0.035 ± 1.065	0.258 ± 0.375
photometric centroid source offset	1.32 ± 1.35	0.97	1.29 ± 1.36	0.27 ± 1.25

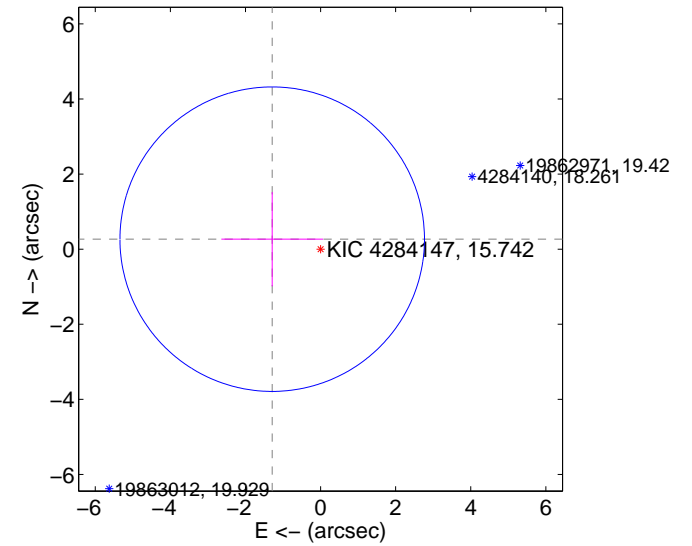
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

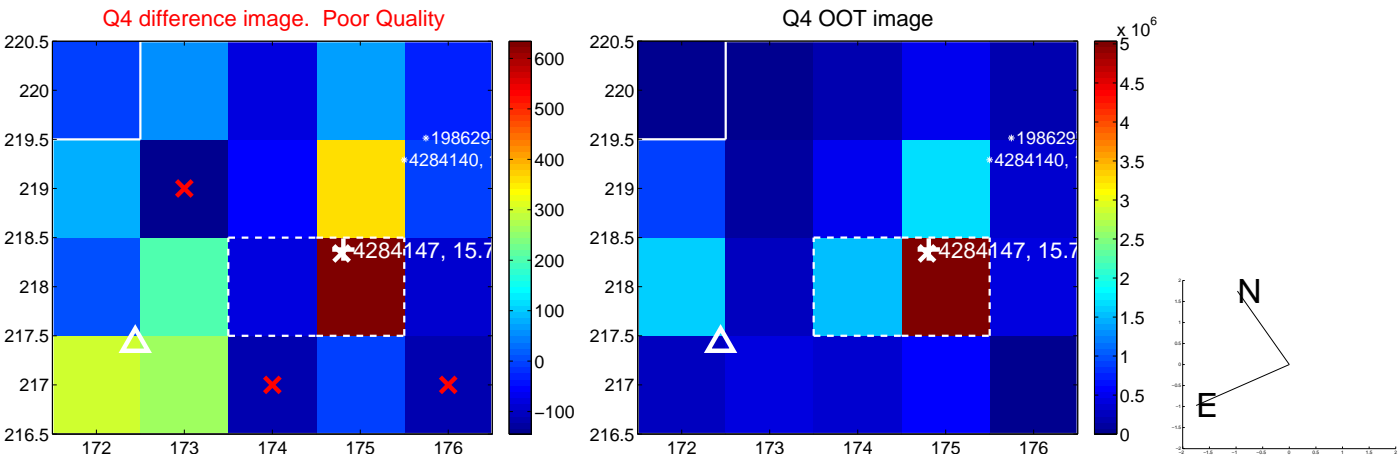


offset from photometric centroids

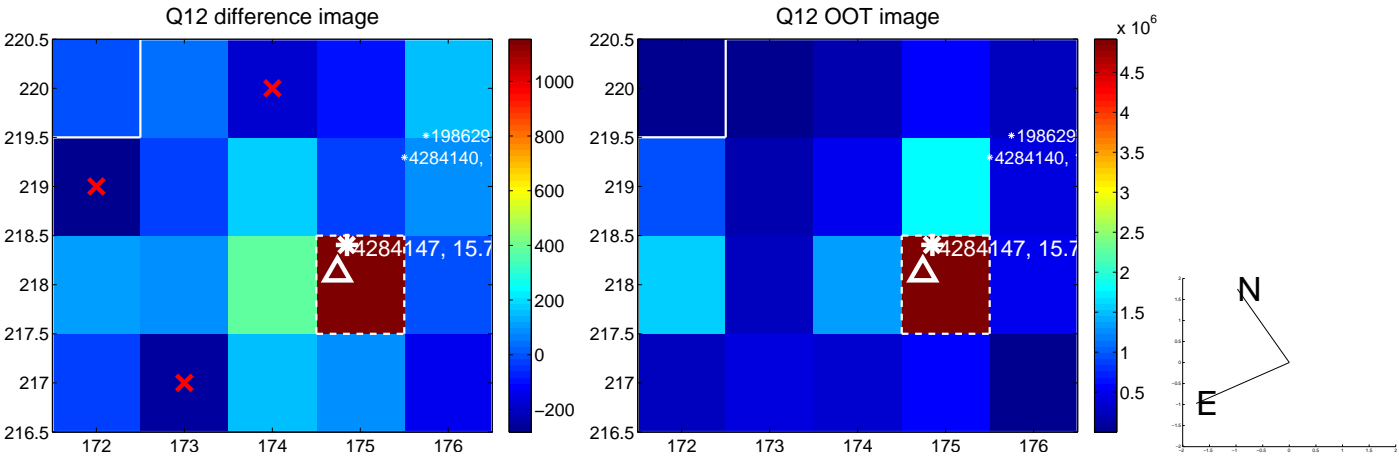
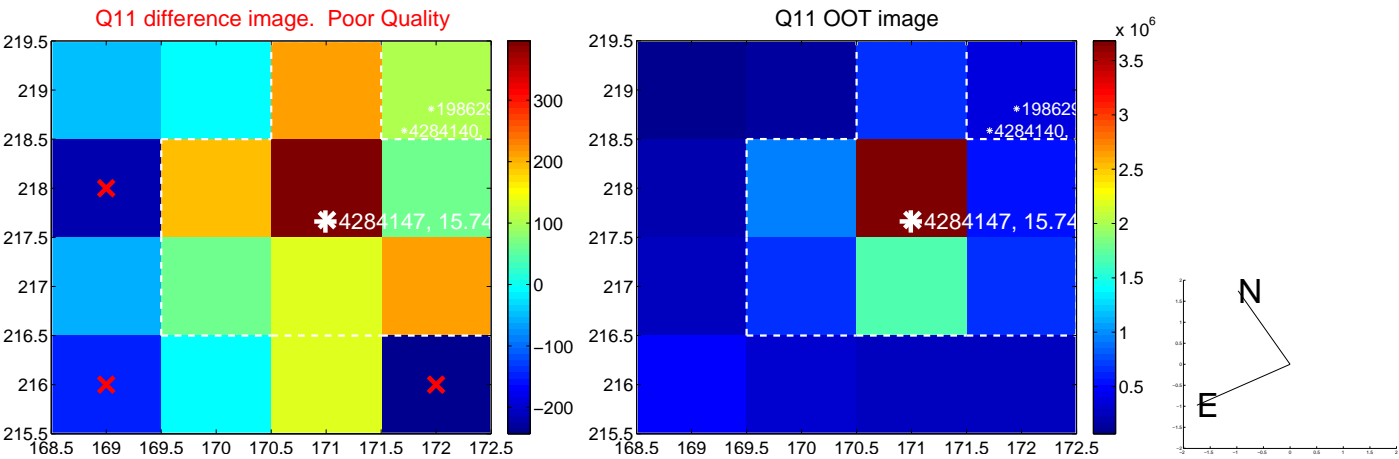
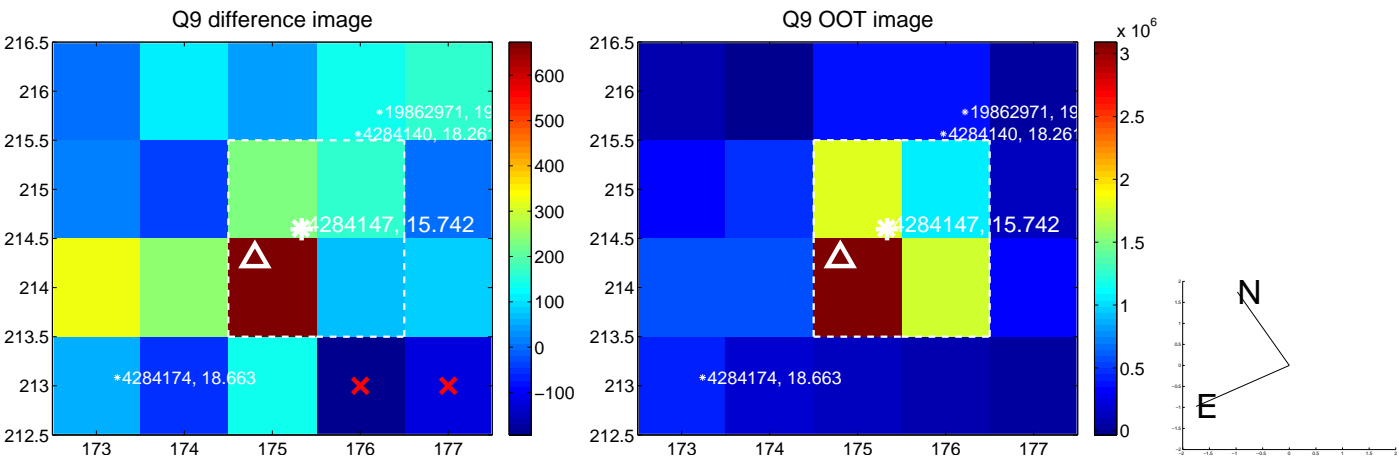


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

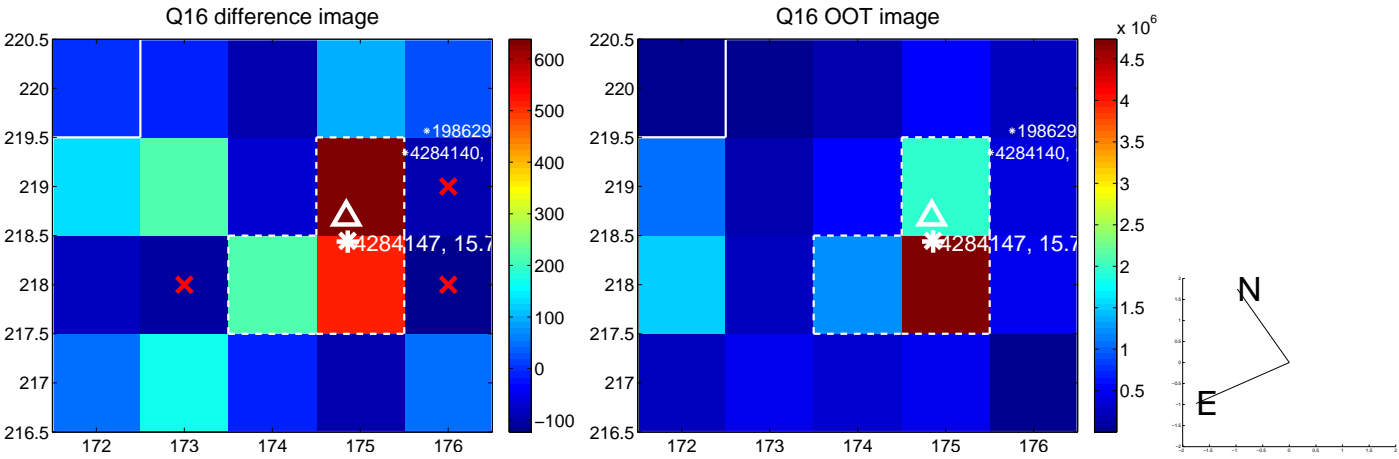
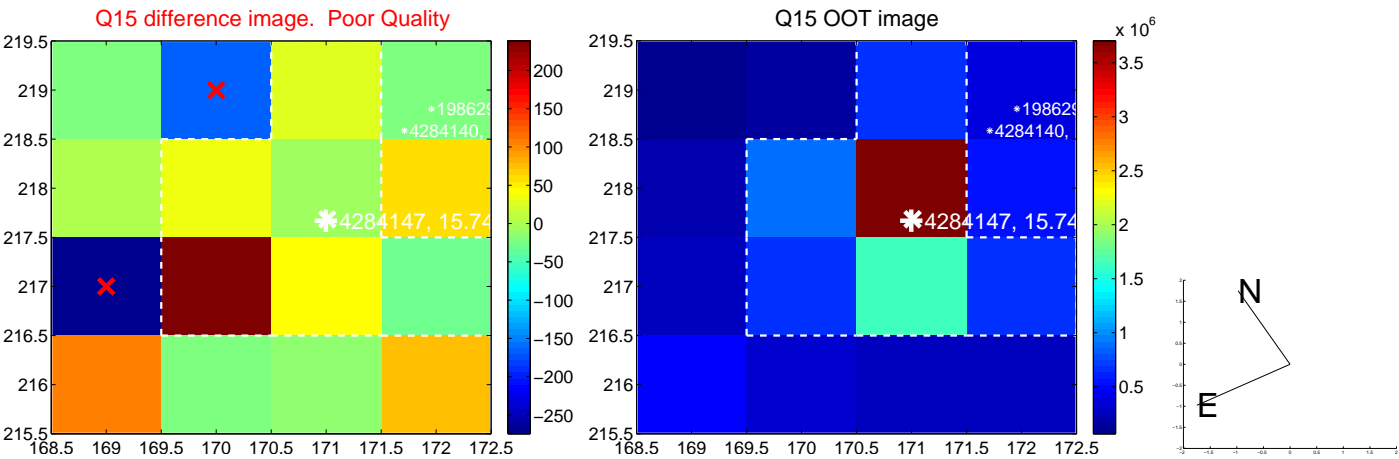
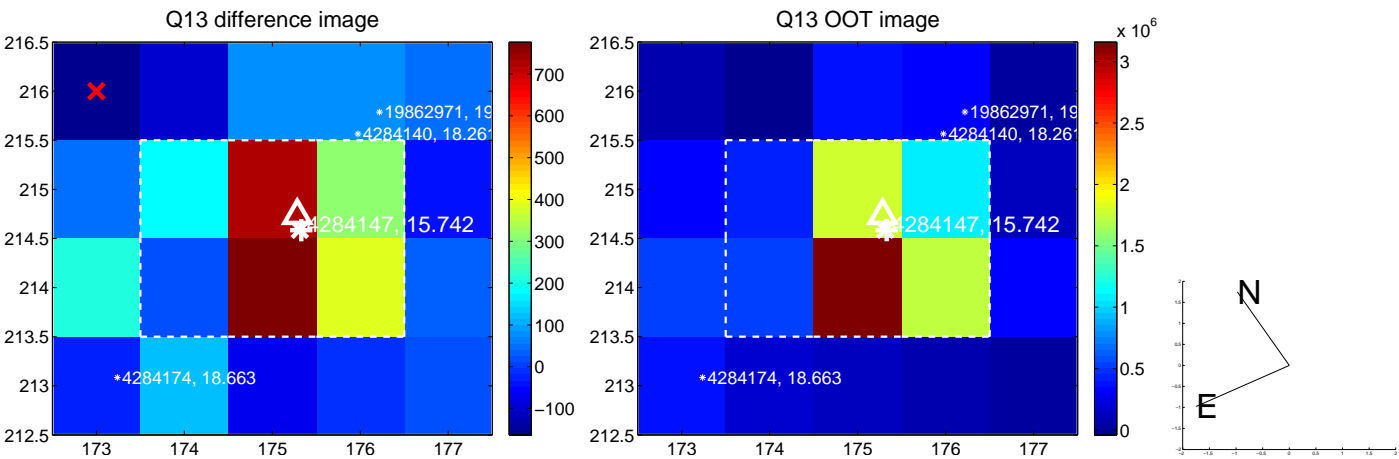
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



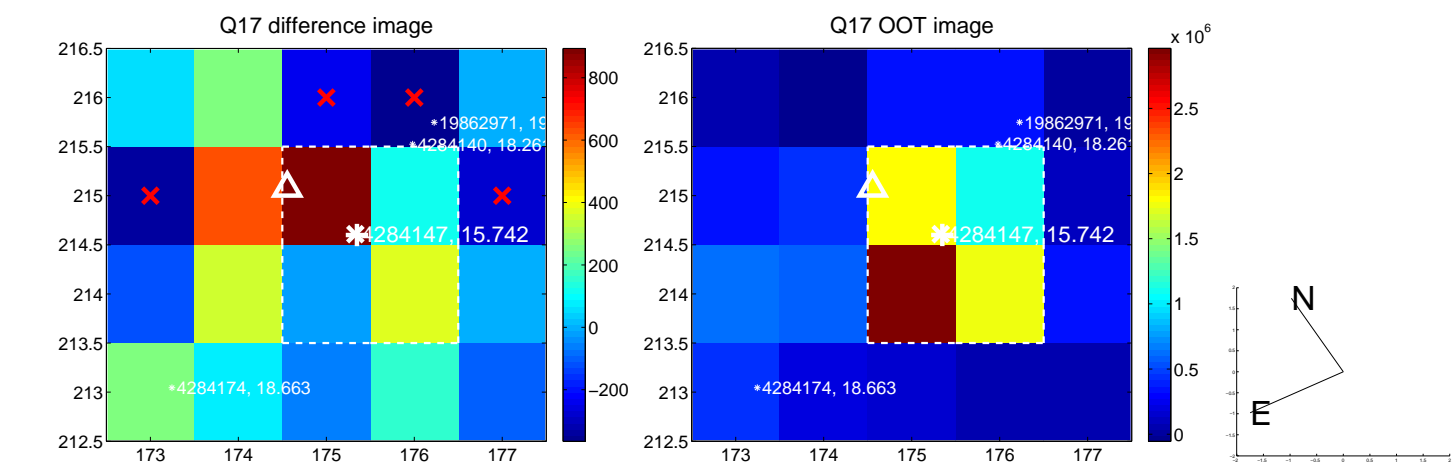
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



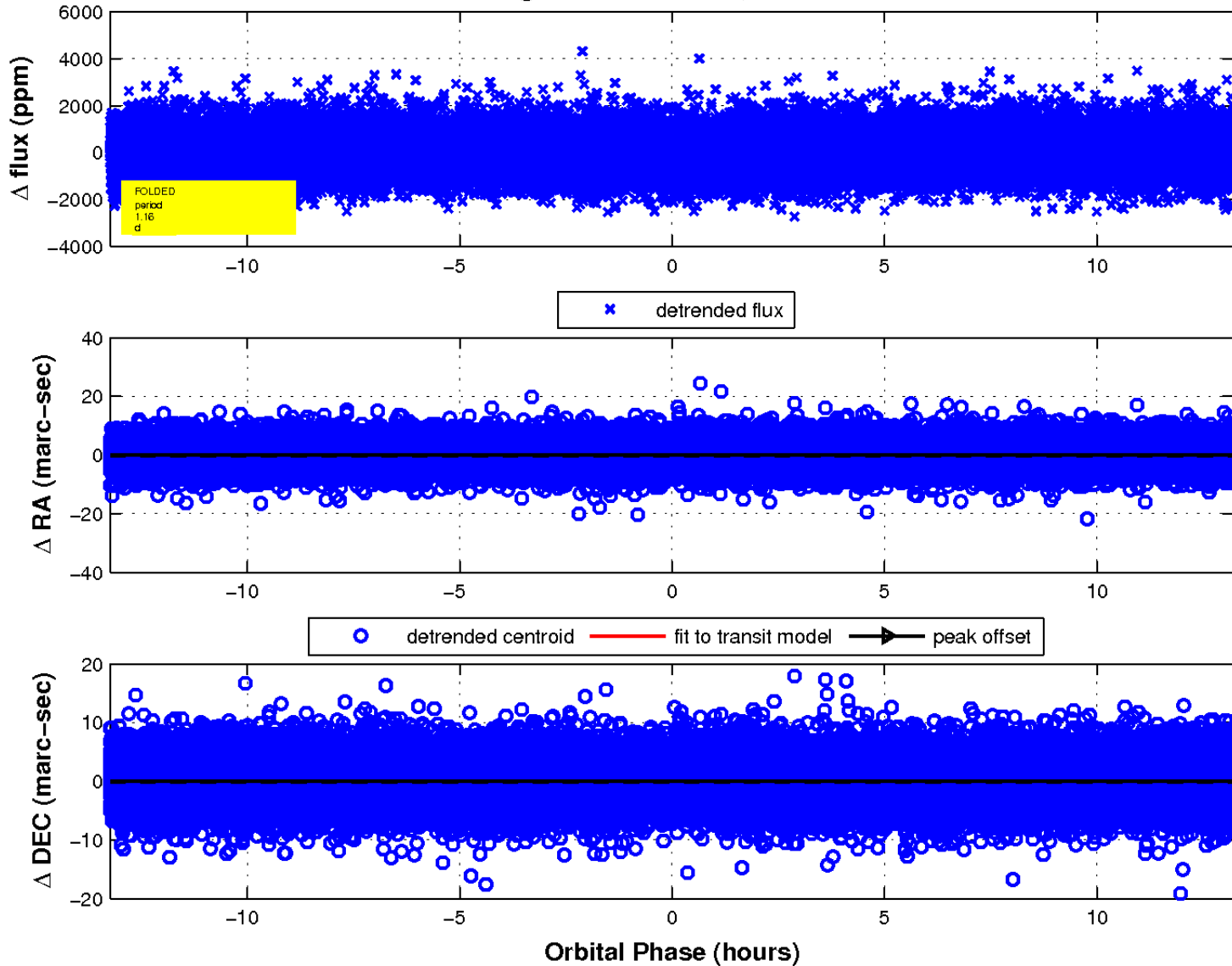
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

