

KIC 010328458

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})
010328458-01	OBS	2214.01	2.352258	131.807243	303.0	1.921	17.2	19.8	0.75	4816	1.59	255.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010328458-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

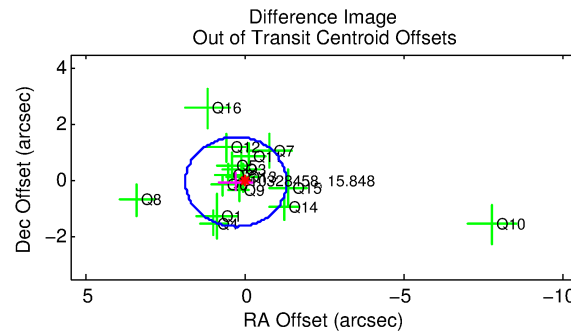
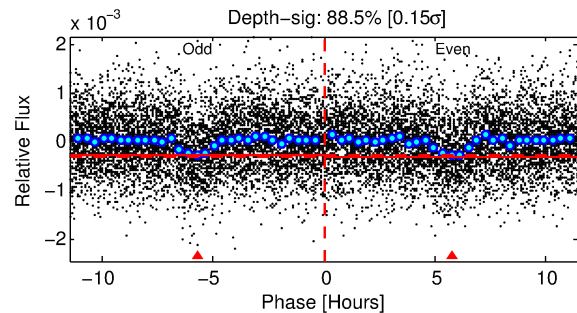
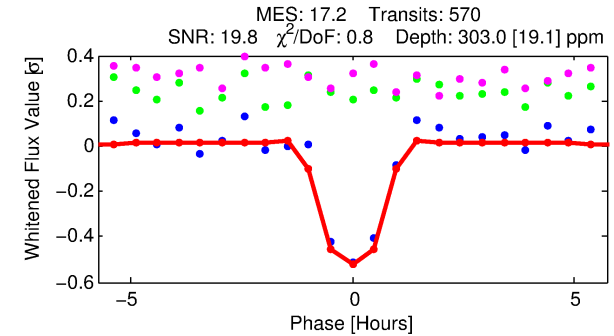
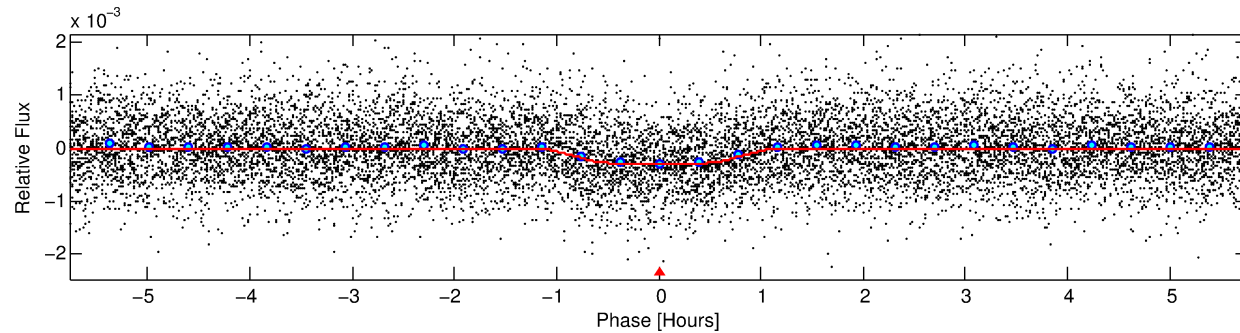
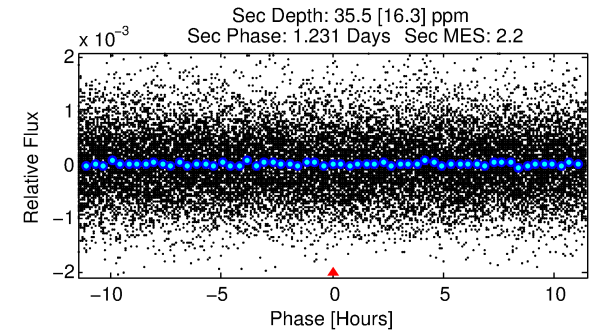
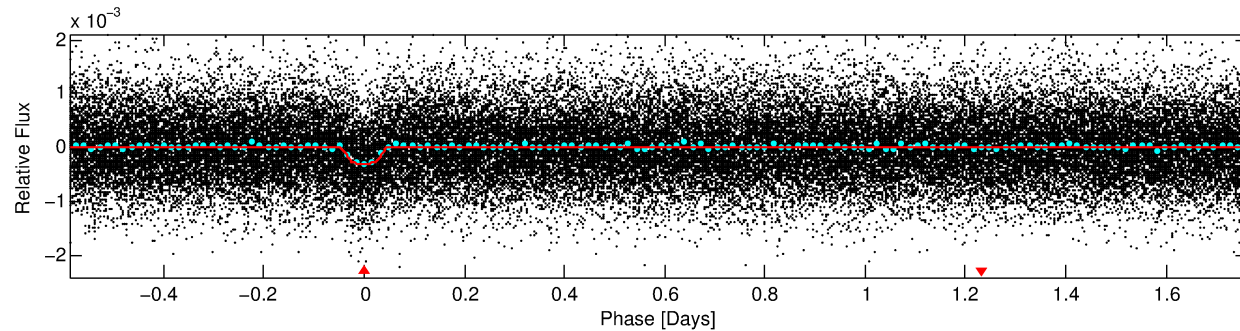
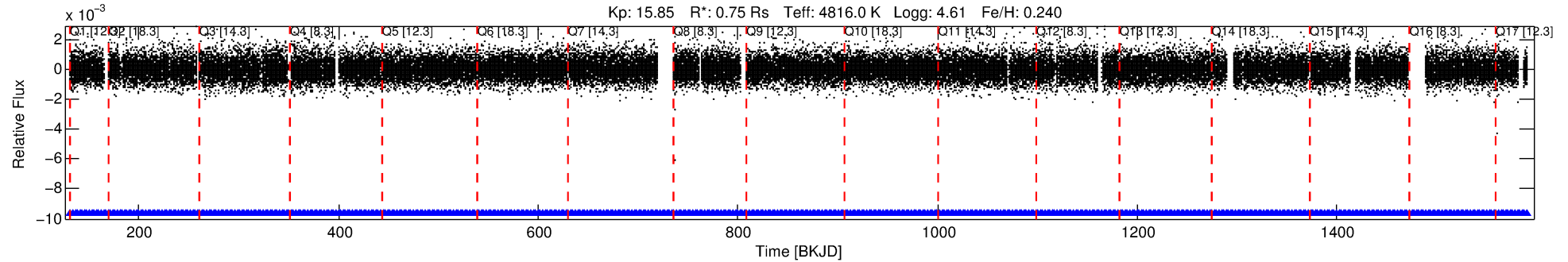
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010328458-01

No Significant Match Found

DV One-Page Summary

KIC: 10328458 Candidate: 1 of 1 Period: 2.352 d
KOI: K02214.01 Corr: 0.943



DV Fit Results:

Period = 2.35226 [0.00001] d
Epoch = 131.8072 [0.0016] BKJD
Rp/R* = 0.0194 [0.0095]
a/R* = 4.71 [8.18]
b = 0.89 [0.43]
Seff = 255.23 [40.64]
Teff = 1019 [41] K
Rp = 1.59 [0.78] Re
a = 0.0325 [0.0023] AU
Ag = 8.19 [8.86] [0.81σ]
Teffp = 2665 [722] K [2.28σ]

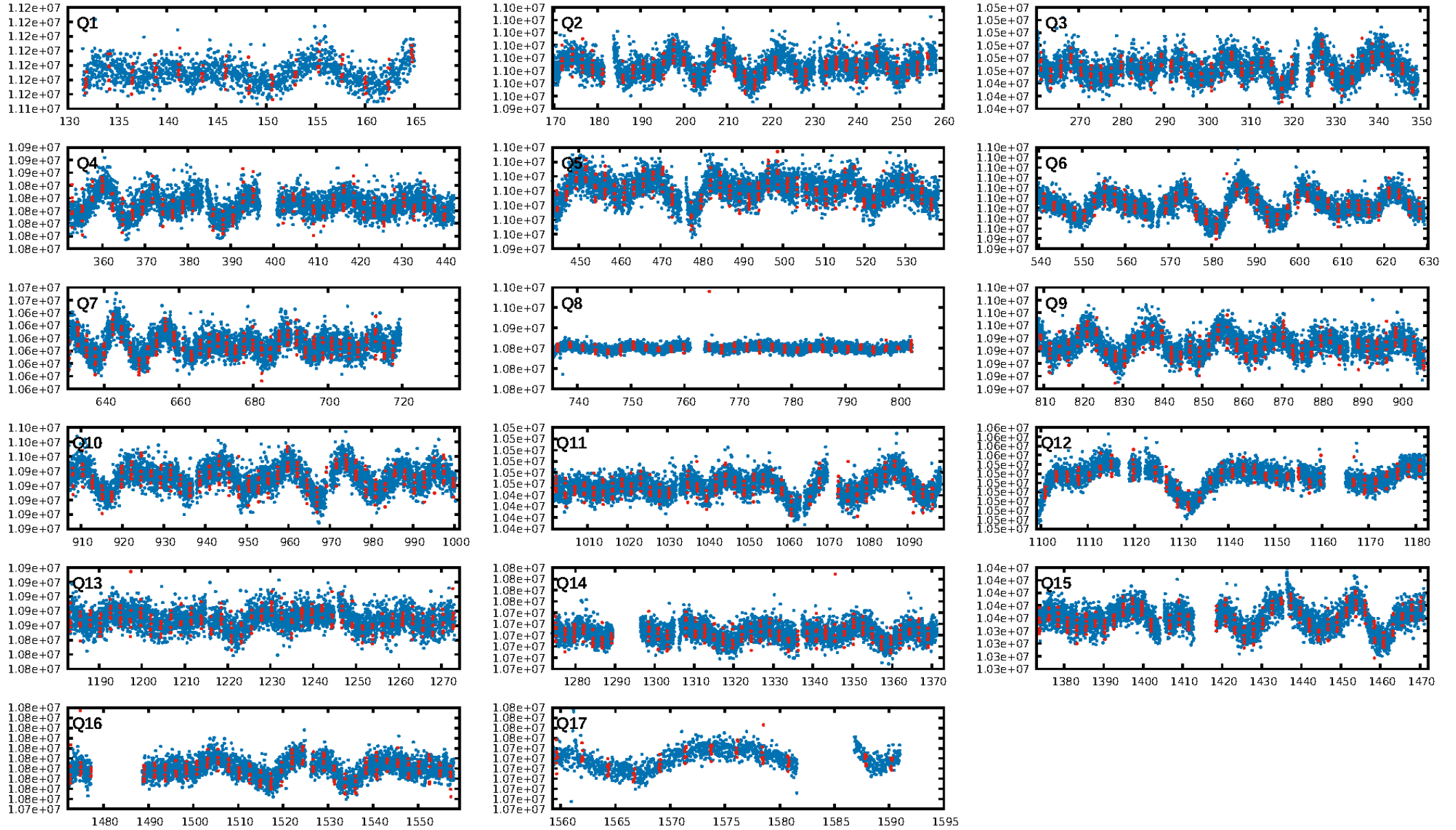
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.84e-65
RollingBand-fgt: 1.00 [543/543]
GhostDiagnostic-chr: 4.325
Centroid-sig: 60.7%
Centroid-so: 0.502 arcsec [0.71σ]
OotOffset-rm: 0.293 arcsec [0.55σ]
KicOffset-rm: 0.548 arcsec [0.97σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

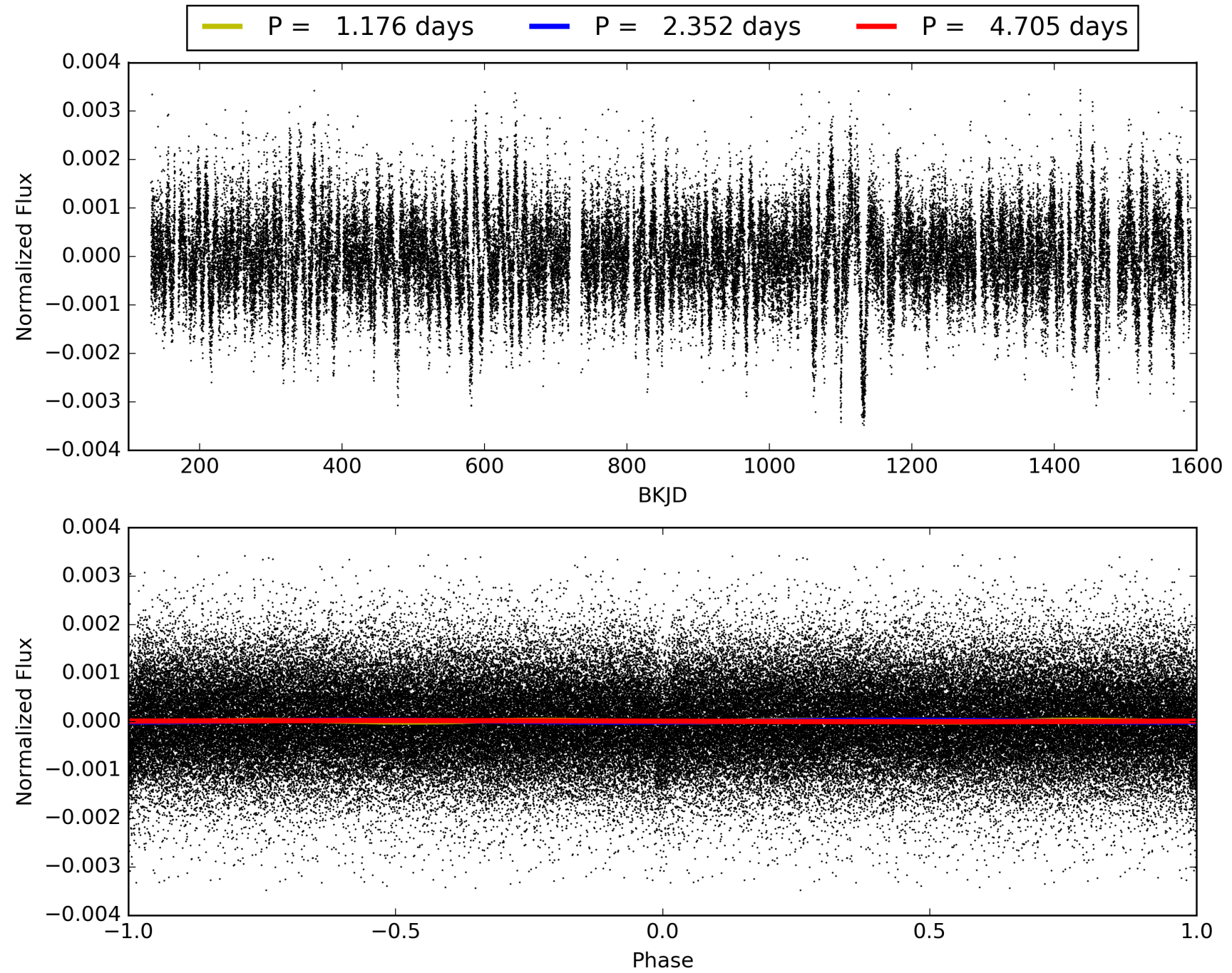
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:51:48 Z

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

TCE 010328458-01, PDC Light Curves

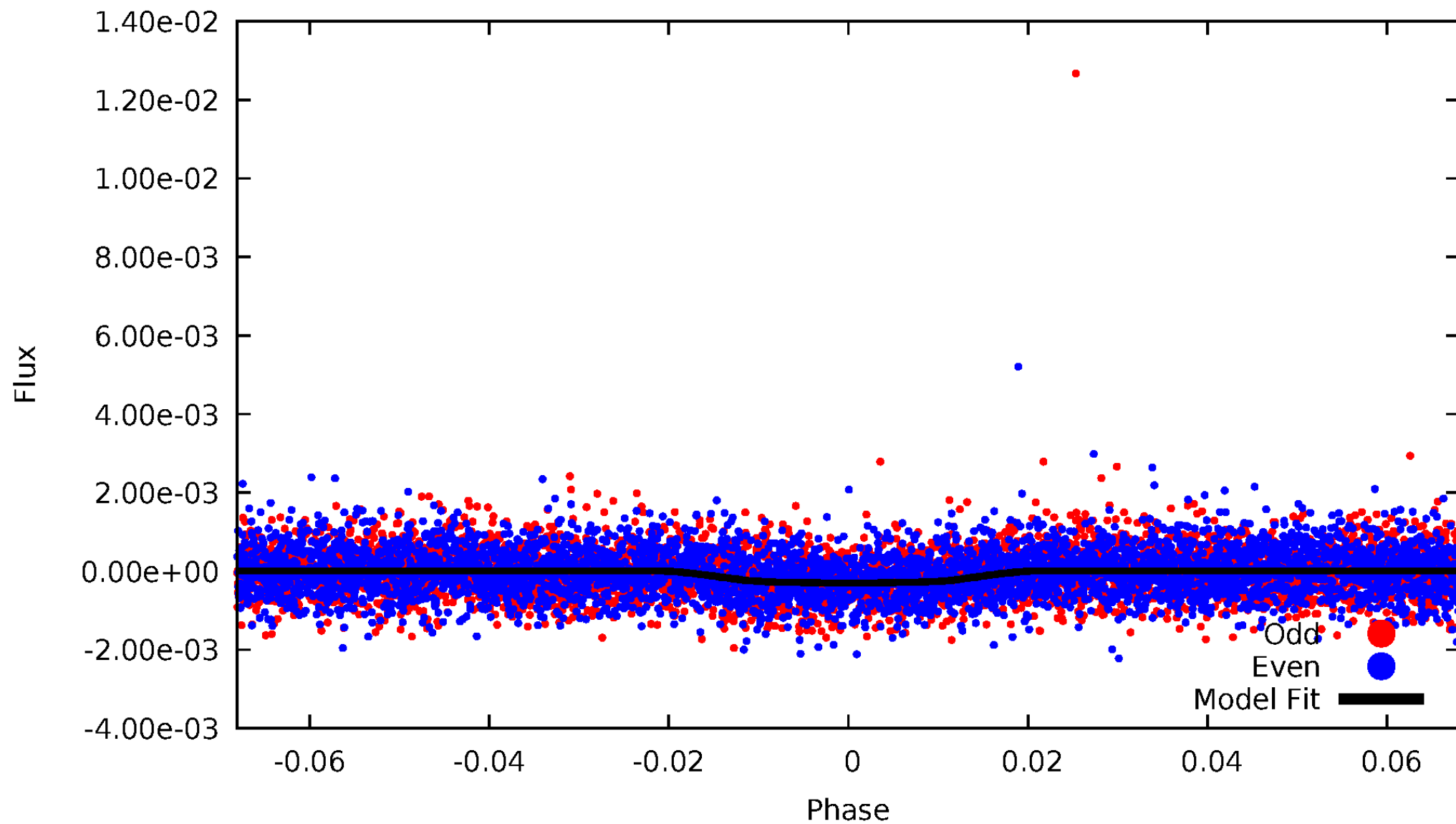


TCE 010328458-01



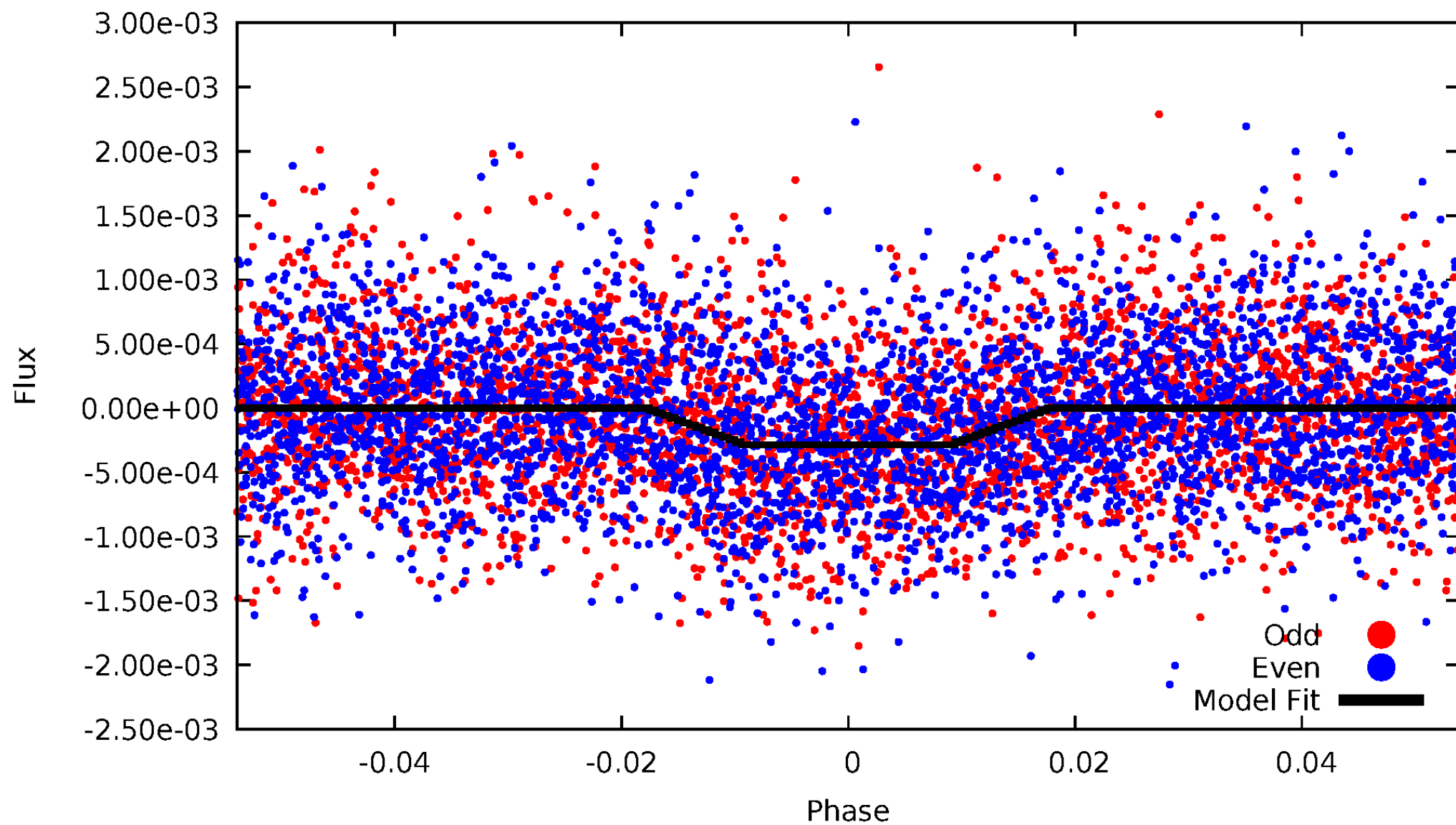
DV Odd/Even

TCE 010328458-01

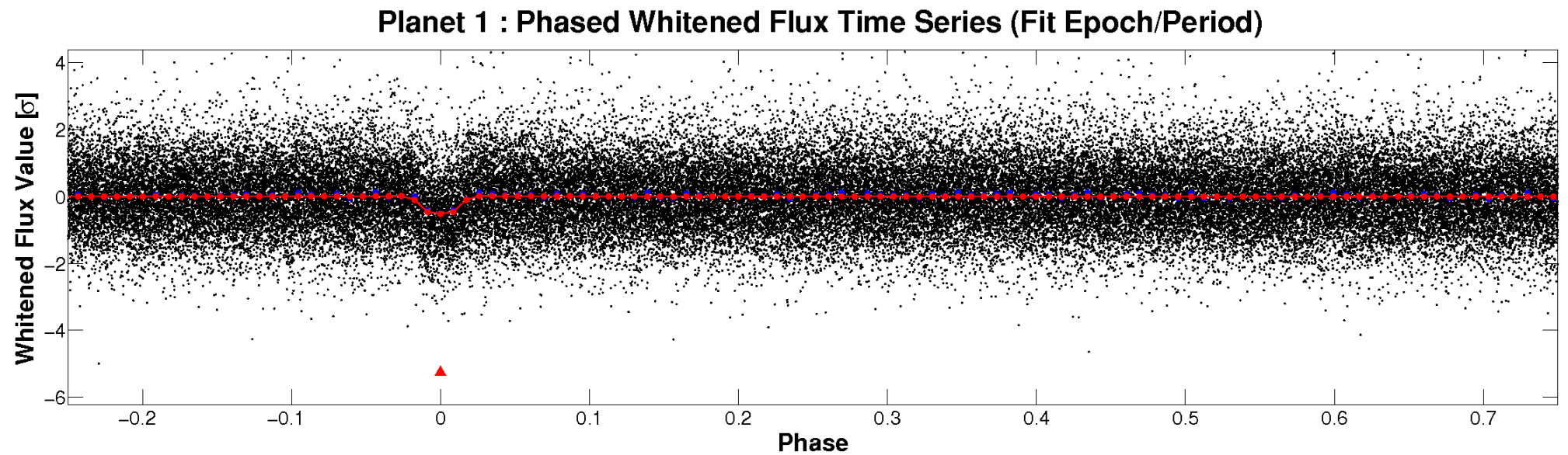
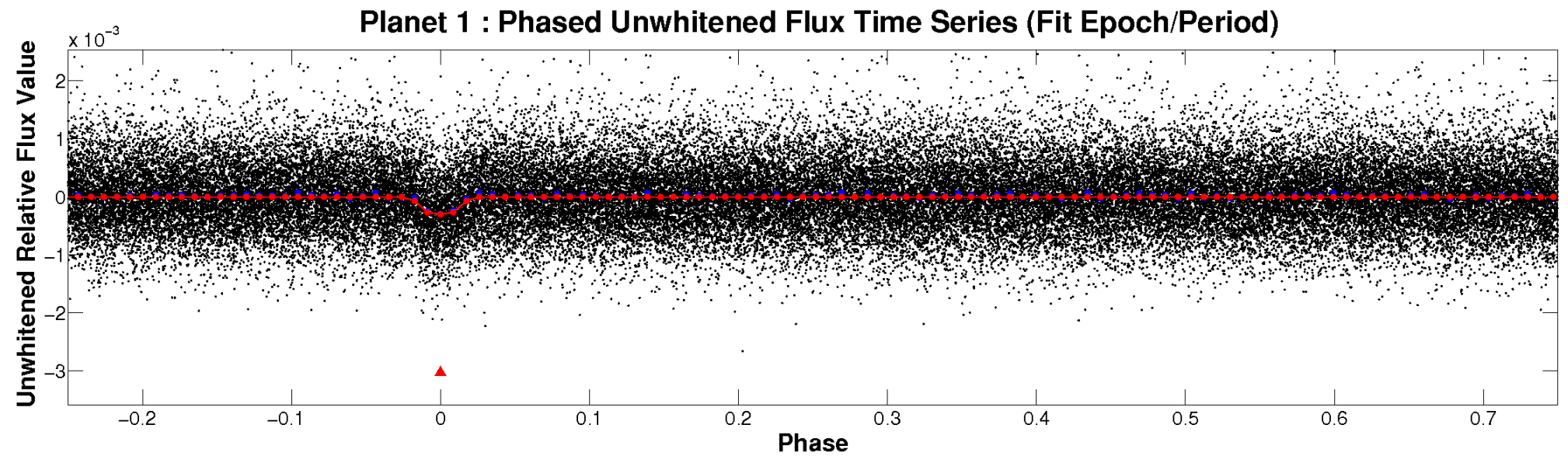


ALT Odd/Even

TCE 010328458-01

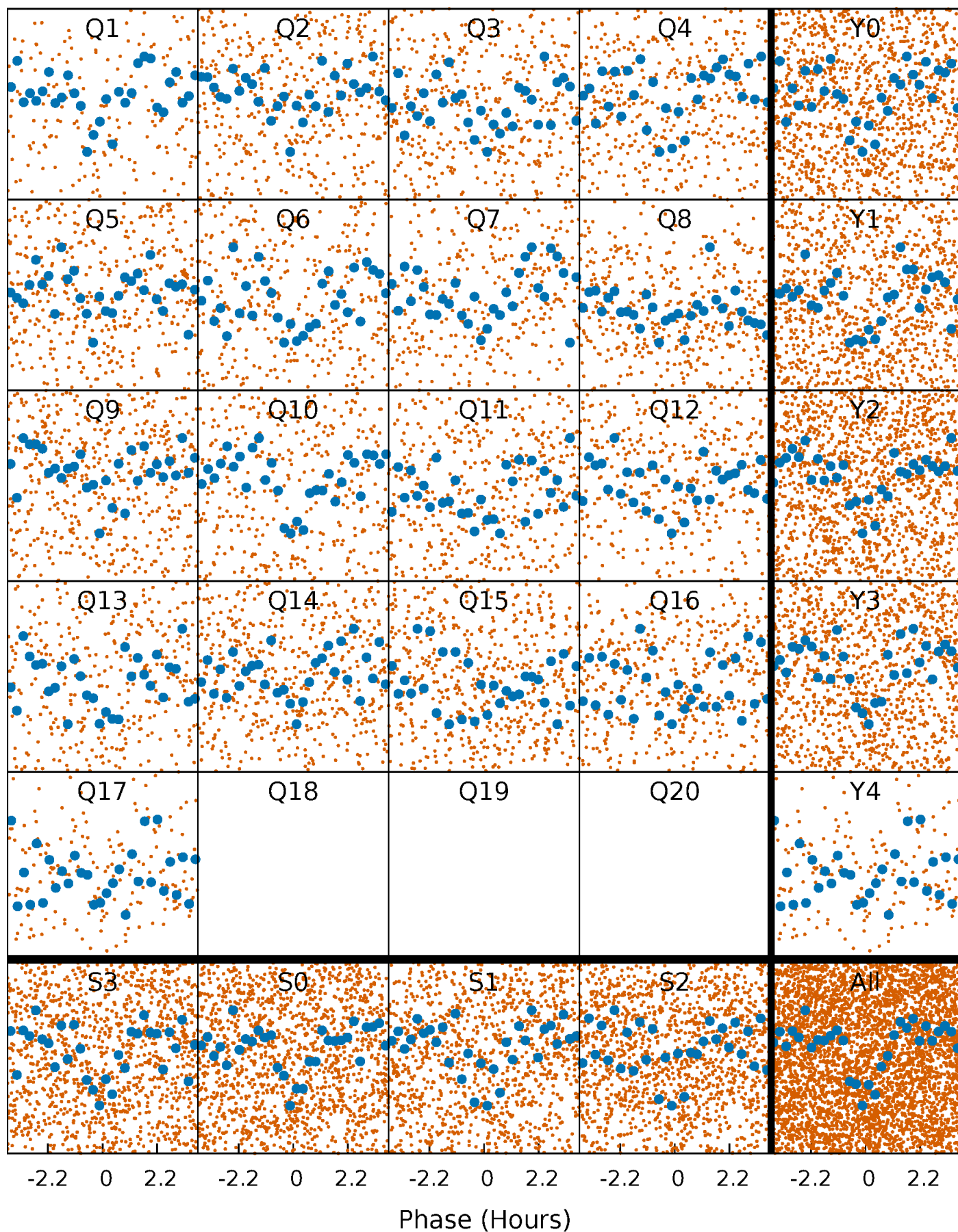


Non-Whitened Vs. Whitened Light Curve



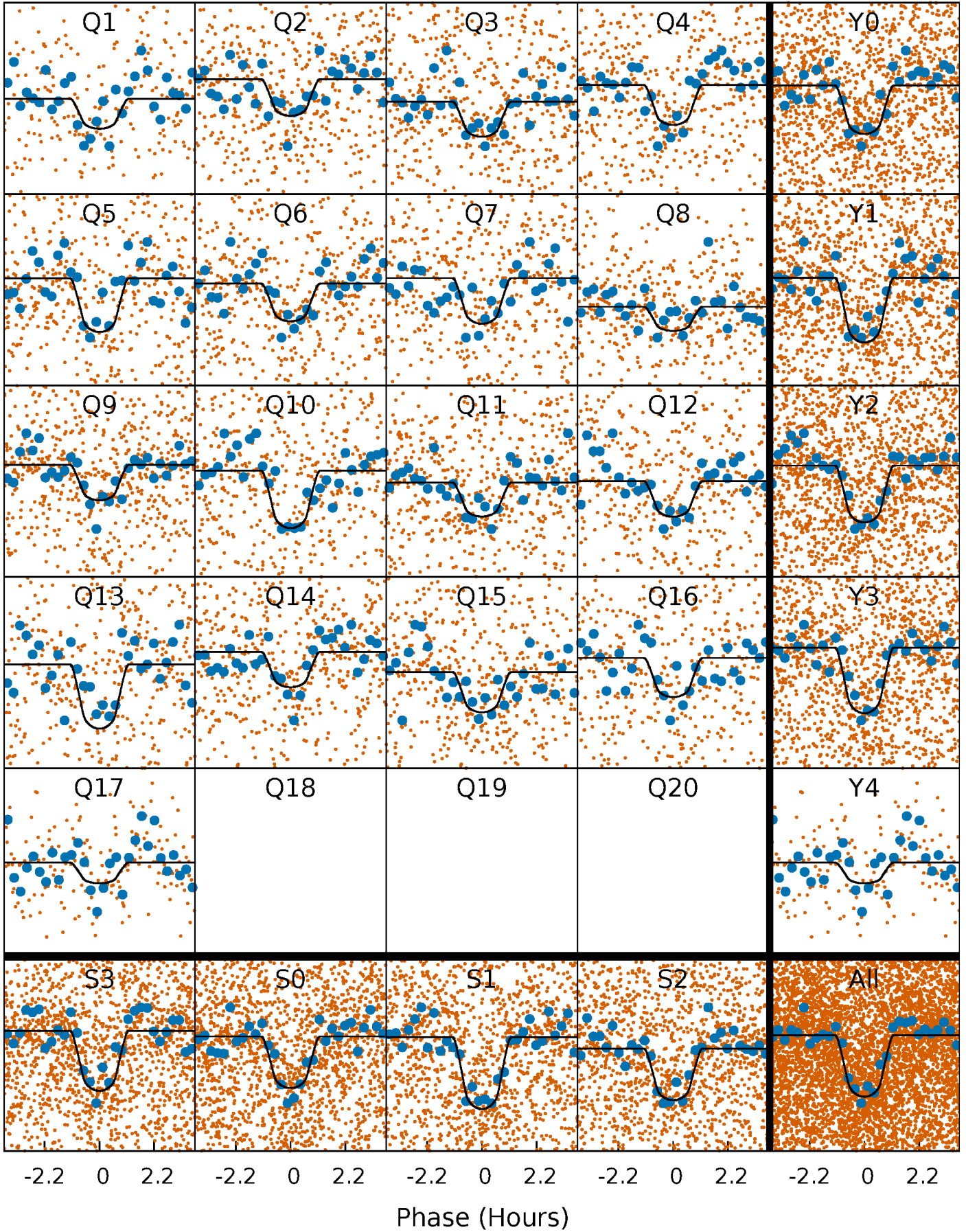
PDC Quarter-Phased Transit Curves

TCE 010328458-01 P= 2.352258 Days $T_0=131.807243$ (BKJD)



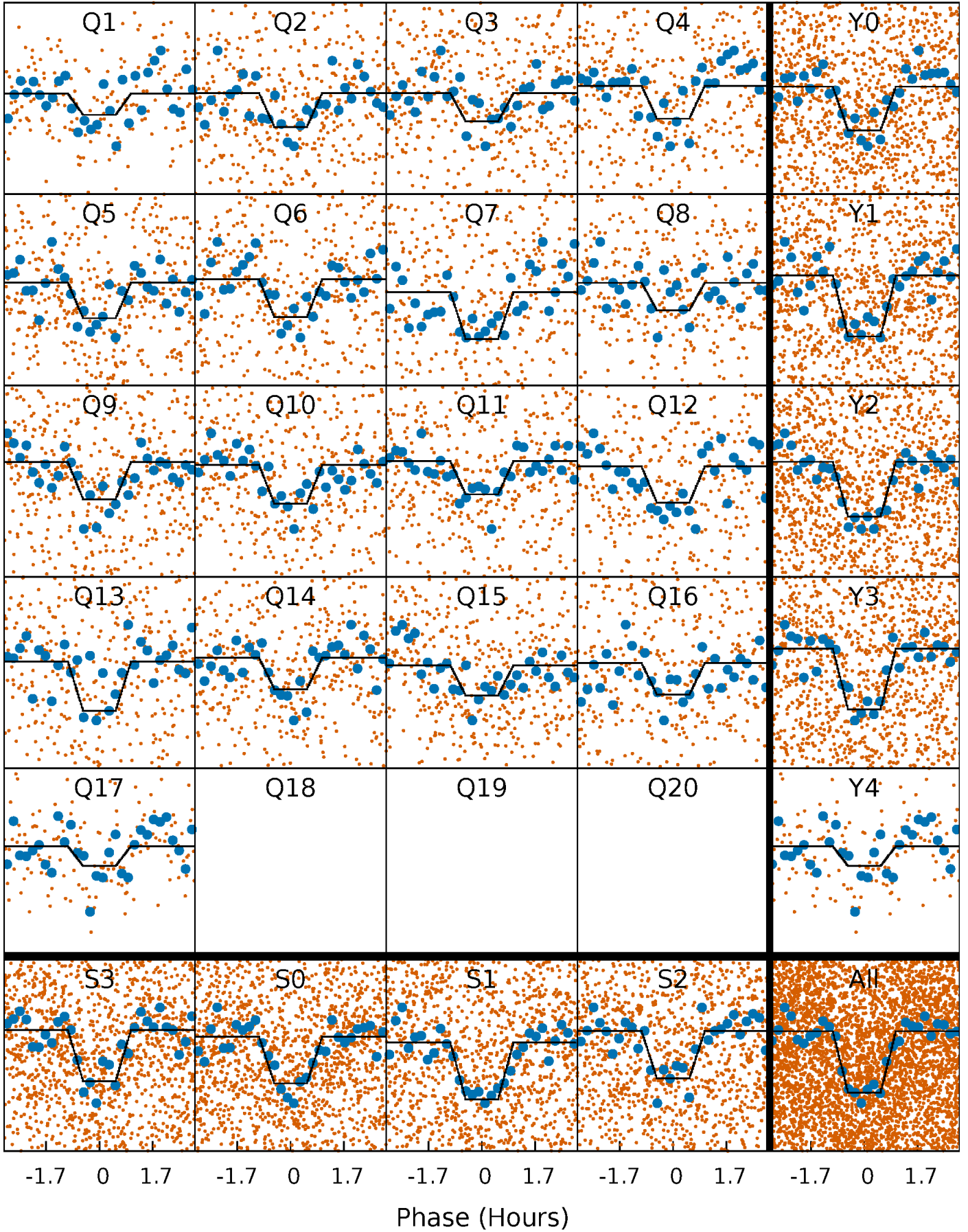
DV Quarter-Phased Transit Curves

TCE 010328458-01 P= 2.352258 Days $T_0=131.807243$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

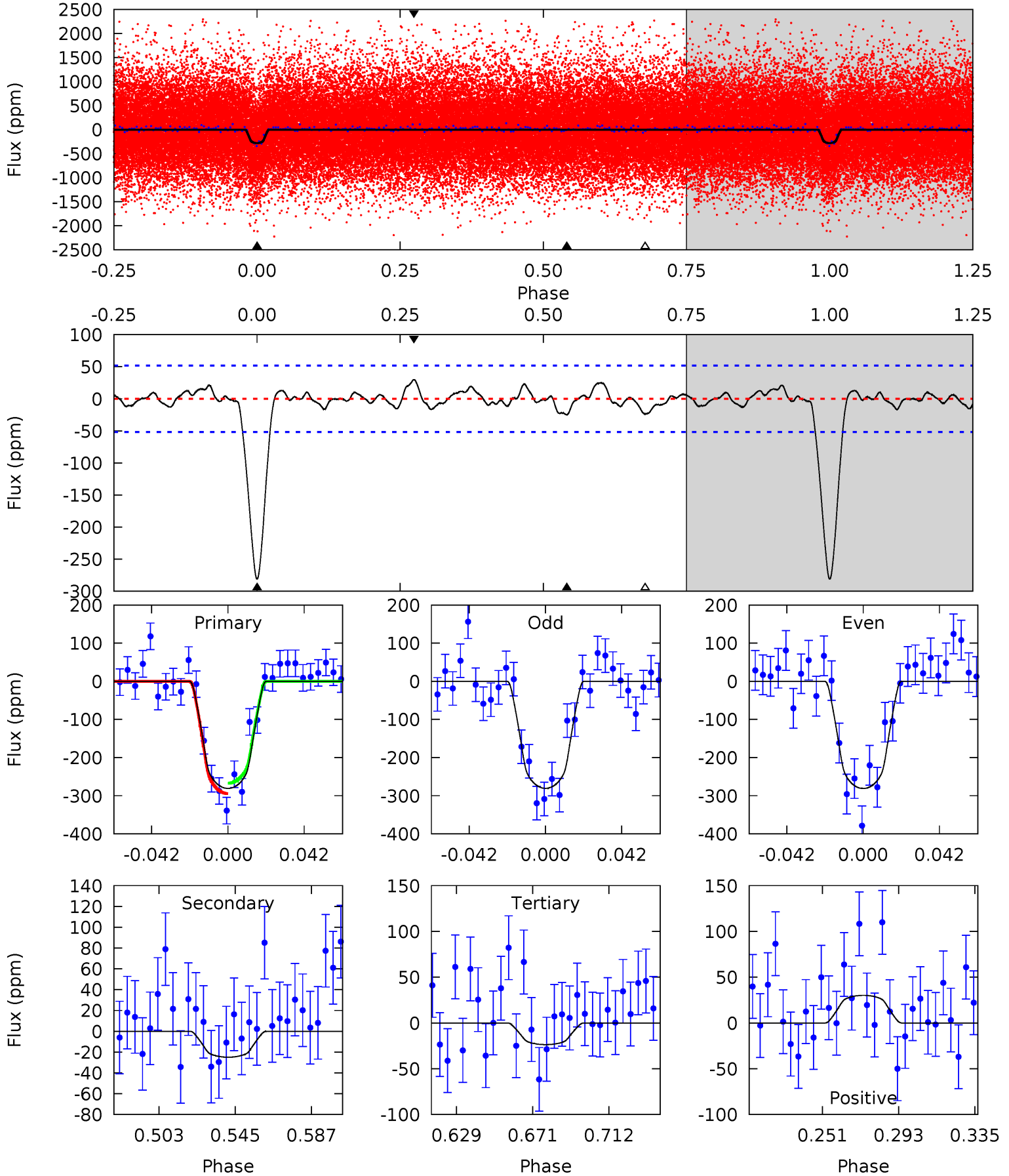
TCE 010328458-01 P= 2.352272 Days $T_0=131.803165$ (BKJD)



DV Model-Shift Uniqueness Test

010328458-01, P = 2.352258 Days, E = 129.454985 Days

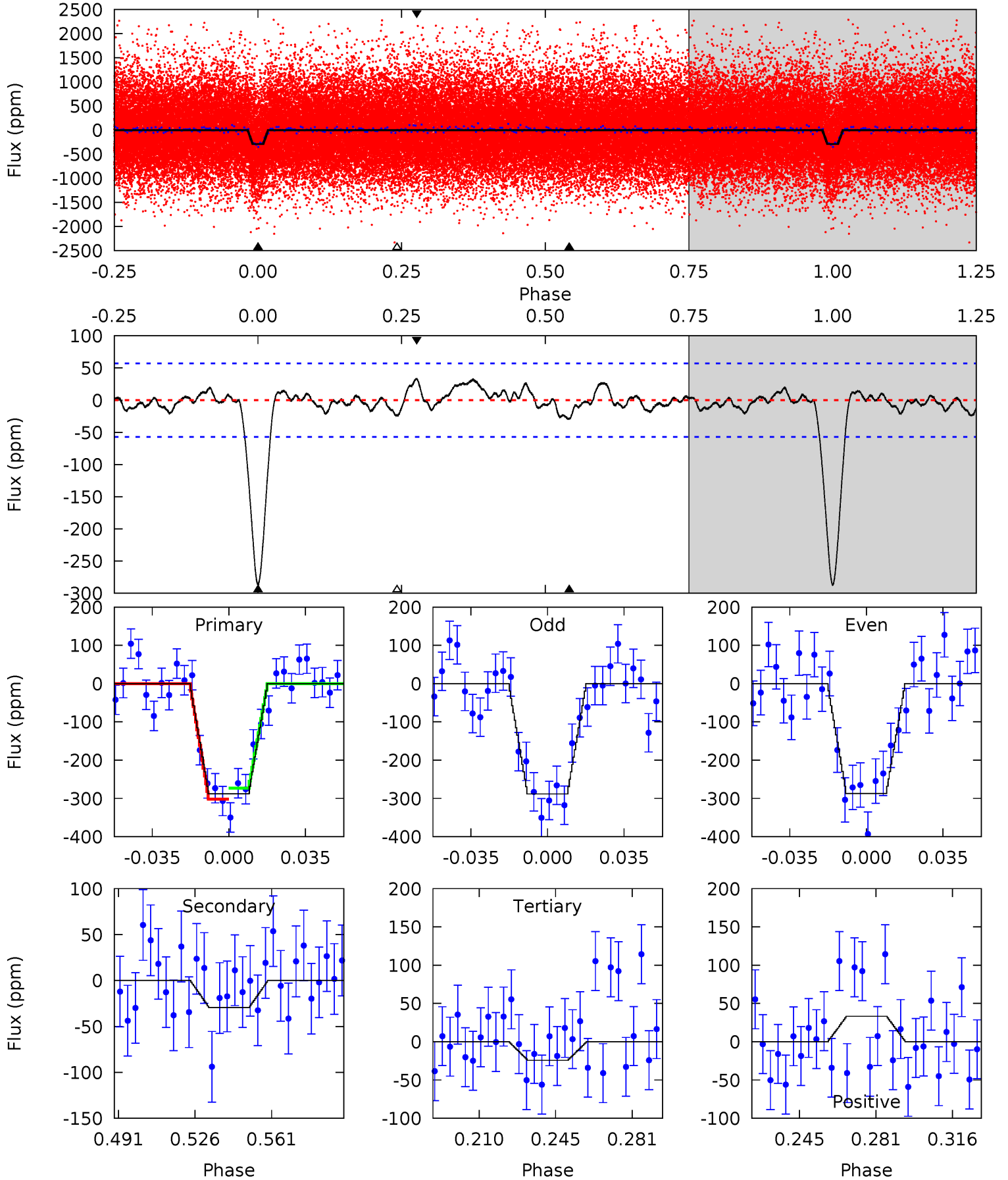
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	2.28	2.17	2.76	4.74	2.03	0.94	23.6	23.0	0.11	-0.48	0.02	0.94	0.10	1.25



Alt Model-Shift Uniqueness Test

010328458-01, P = 2.352272 Days, E = 129.450893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	2.47	2.04	2.79	4.78	2.11	1.01	22.0	21.3	0.44	-0.31	0.05	0.91	0.10	1.20



Stellar Parameters For KIC 010328458

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4816^{+143}_{-143}	$4.608^{+0.020}_{-0.060}$	$0.240^{+0.200}_{-0.300}$	$0.748^{+0.059}_{-0.048}$	$0.836^{+0.030}_{-0.083}$	$2.811^{+0.386}_{-0.531}$
	+3%/-3%	+0%/-1%	+83%/-125%	+8%/-6%	+4%/-10%	+14%/-19%
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 010328458-01 / KOI 2214.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 11	$1.68^{+0.81}_{-0.73}$	1437^{+50}_{-49}	2928^{+611}_{-373}	$4.625^{+10.889}_{-2.799}$
Alt.	-30 ± 12	$1.43^{+0.82}_{-0.72}$	1437^{+49}_{-43}	3181^{+871}_{-443}	$7.832^{+24.529}_{-4.918}$

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 $A_{obs} \gg 1.0$

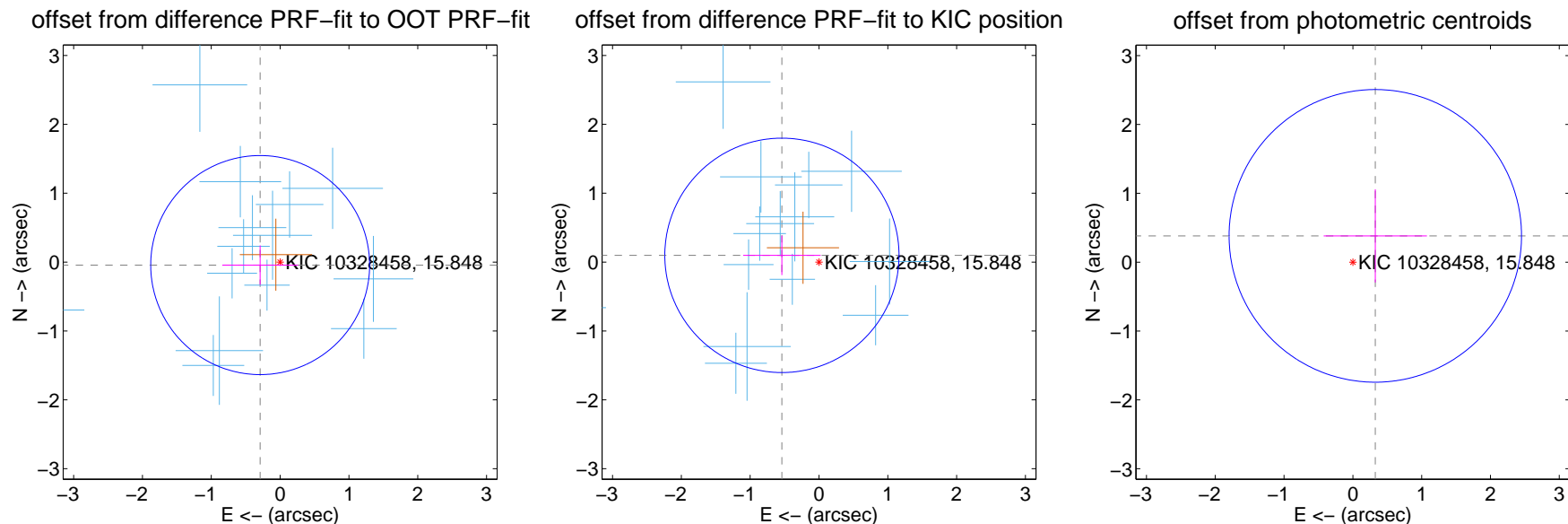
DV Centroid Data

Supplemental centroid analysis for 010328458-01. Kepler magnitude: 15.85. Transit SNR 19.77

There are 14 quarters with good PRF difference image offsets

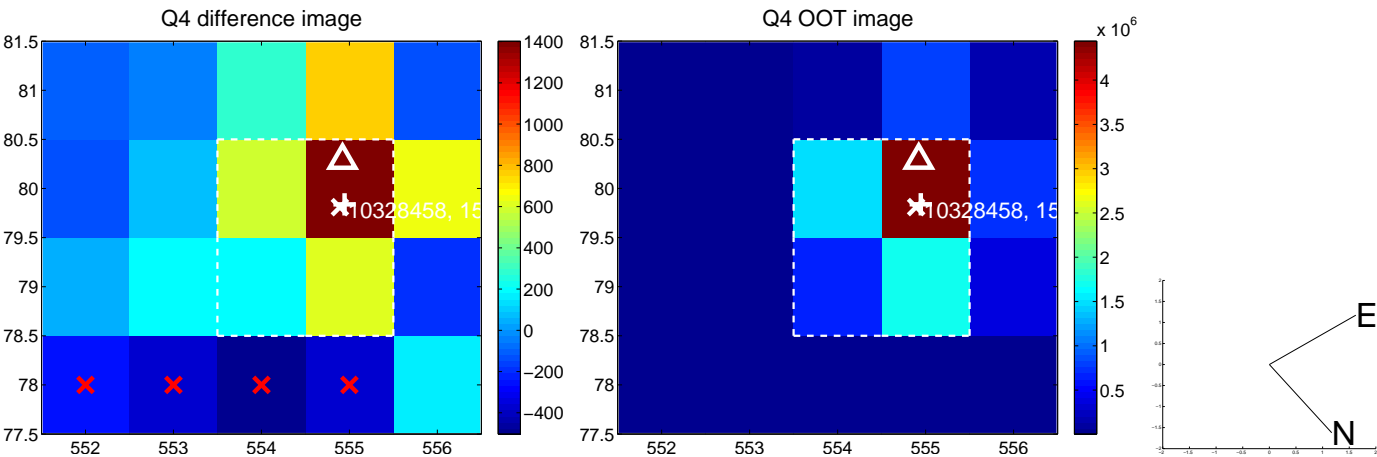
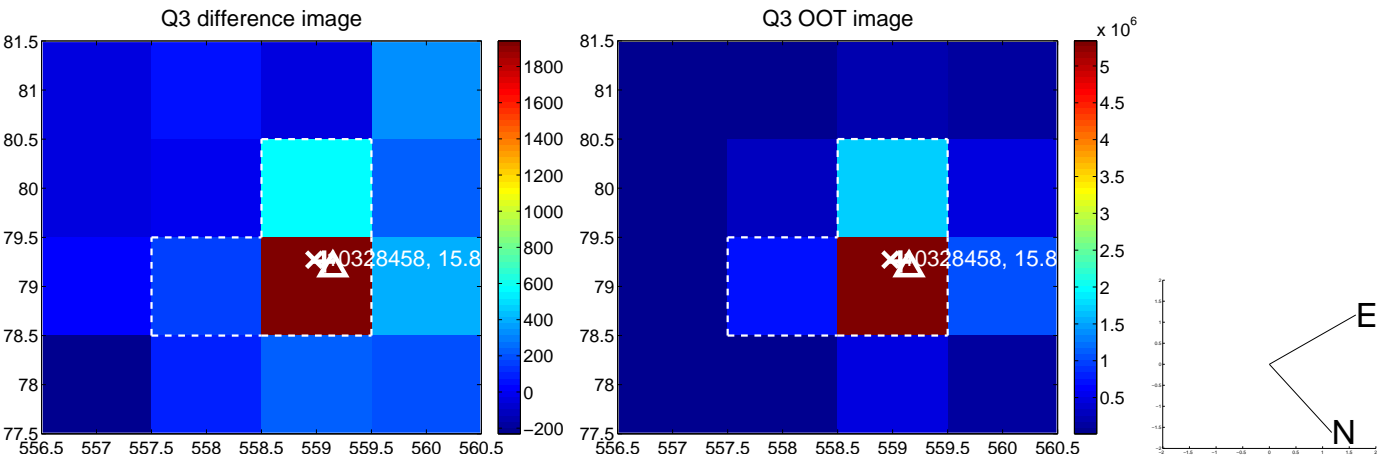
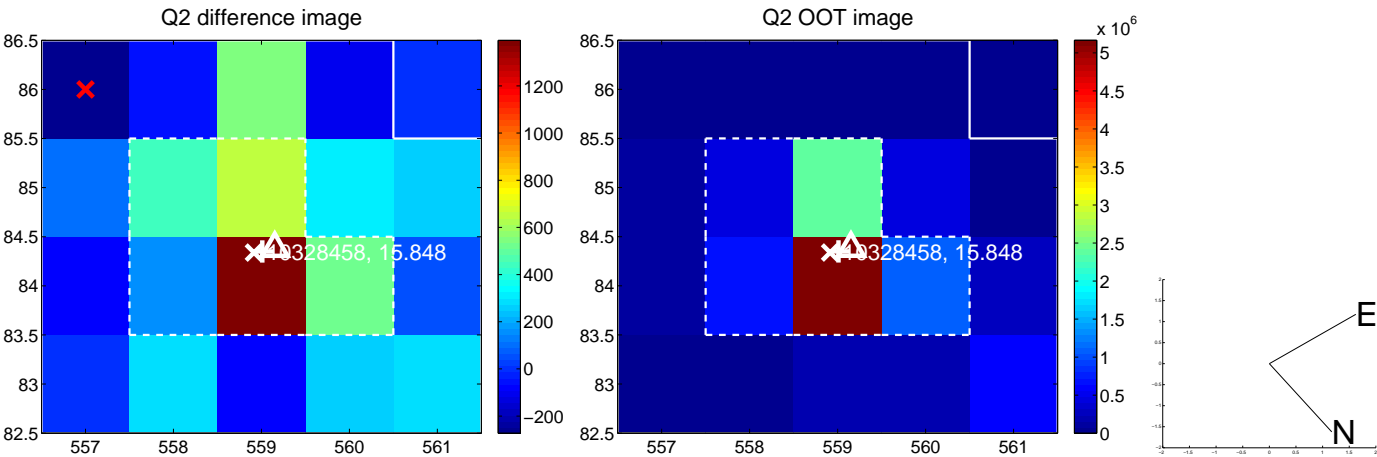
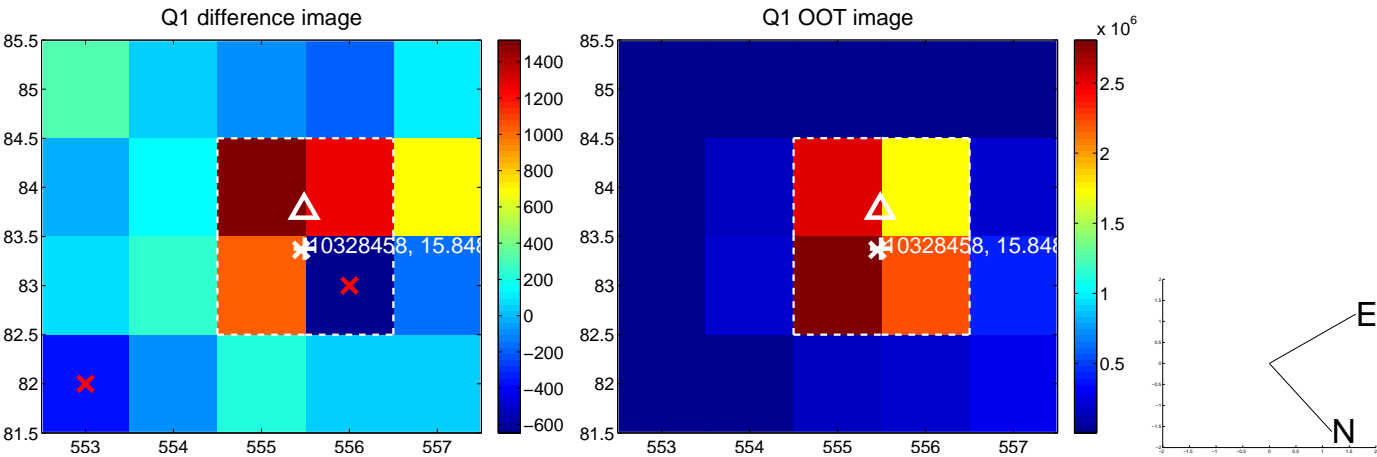
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.293 ± 0.530	0.55	0.290 ± 0.550	-0.043 ± 0.285
PRF-fit source offset from KIC position	0.548 ± 0.567	0.97	0.539 ± 0.564	0.098 ± 0.287
photometric centroid source offset	0.50 ± 0.71	0.71	-0.33 ± 0.75	0.38 ± 0.68

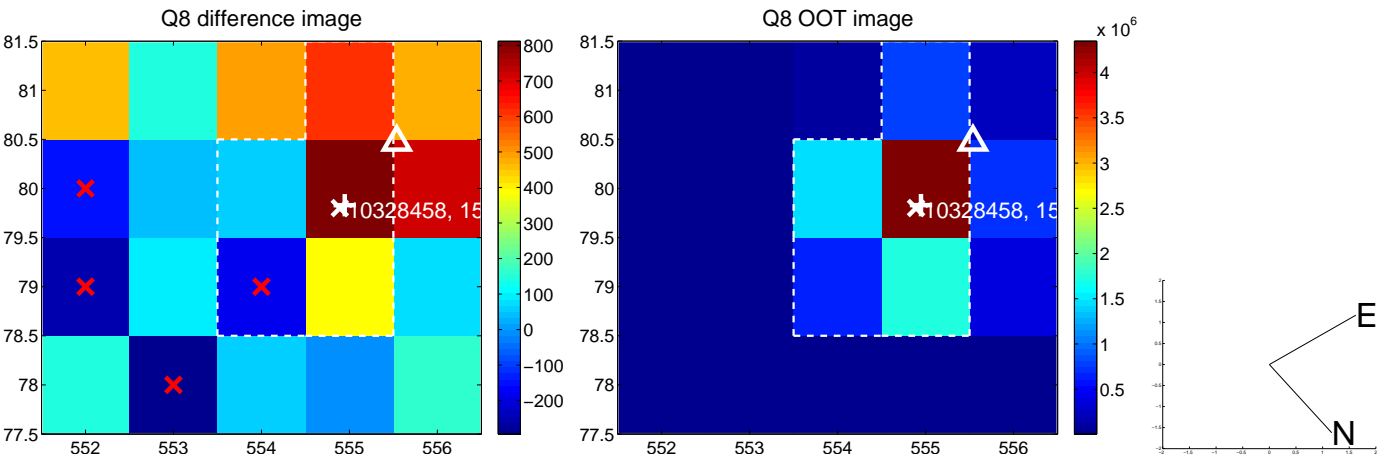
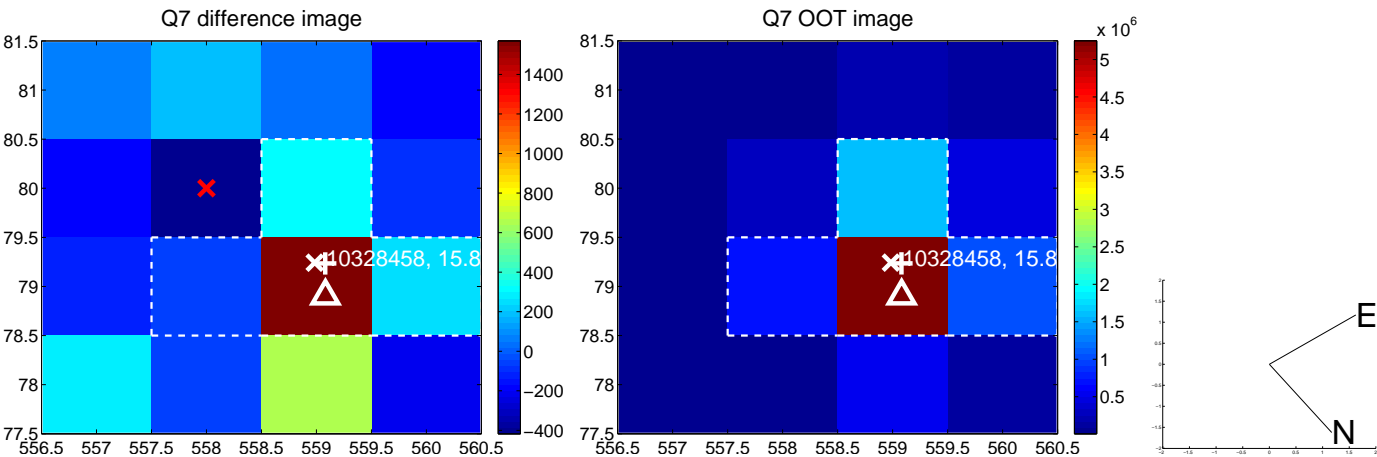
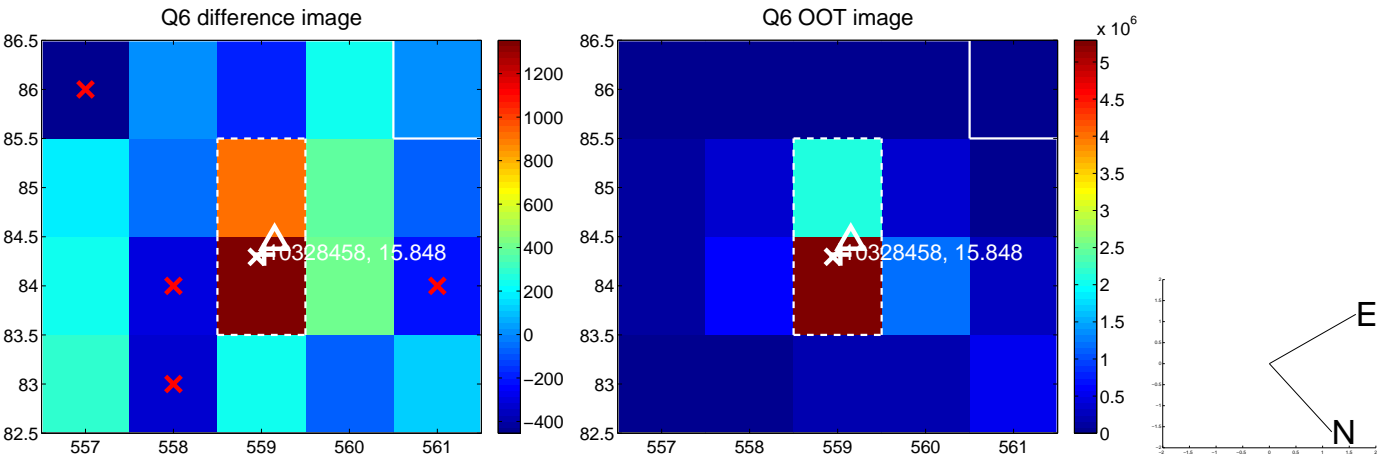
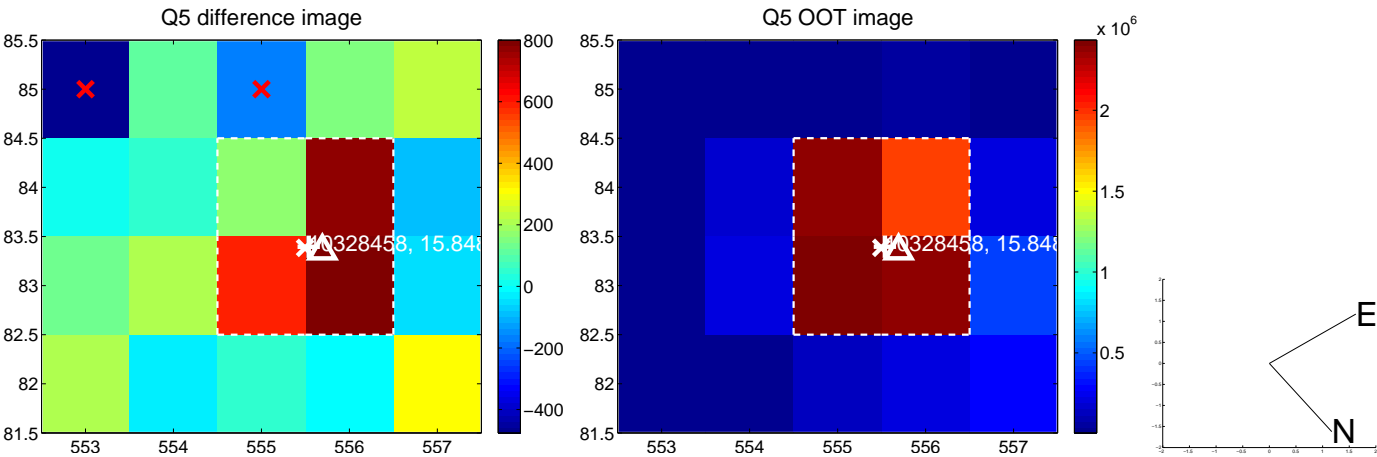


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

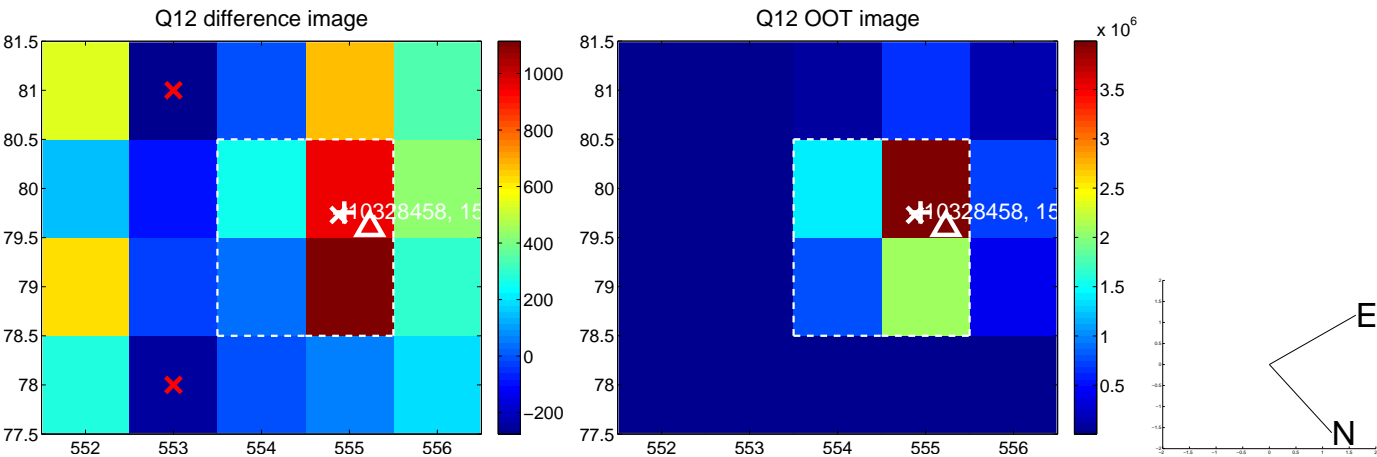
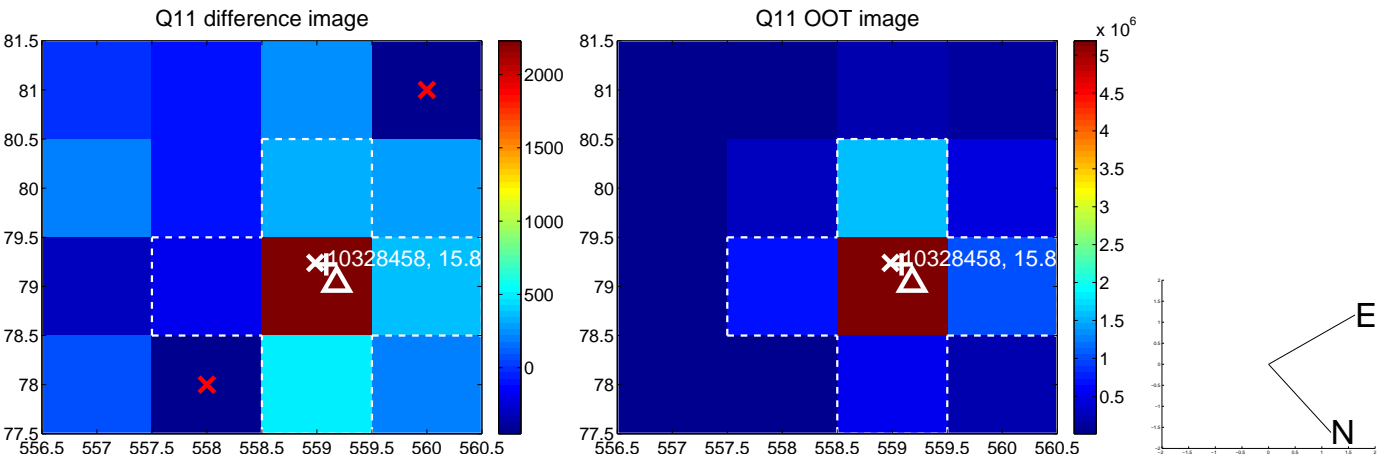
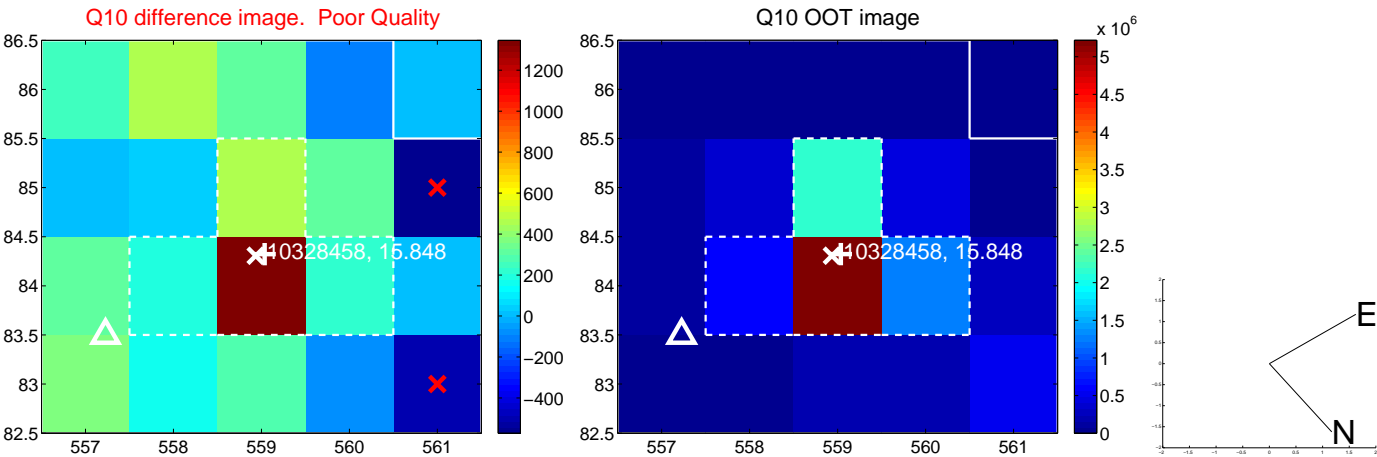
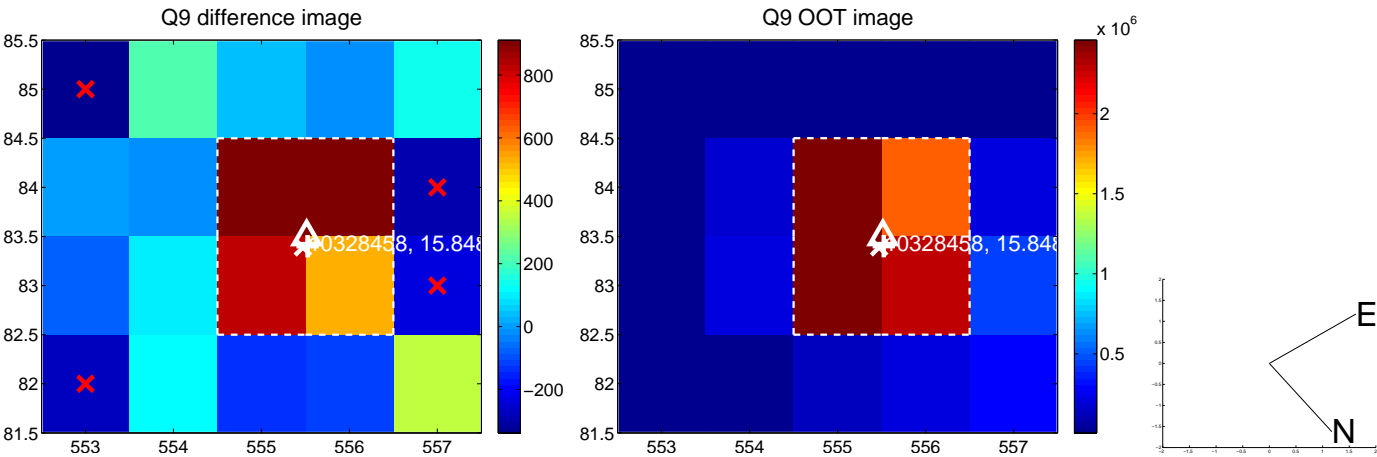
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



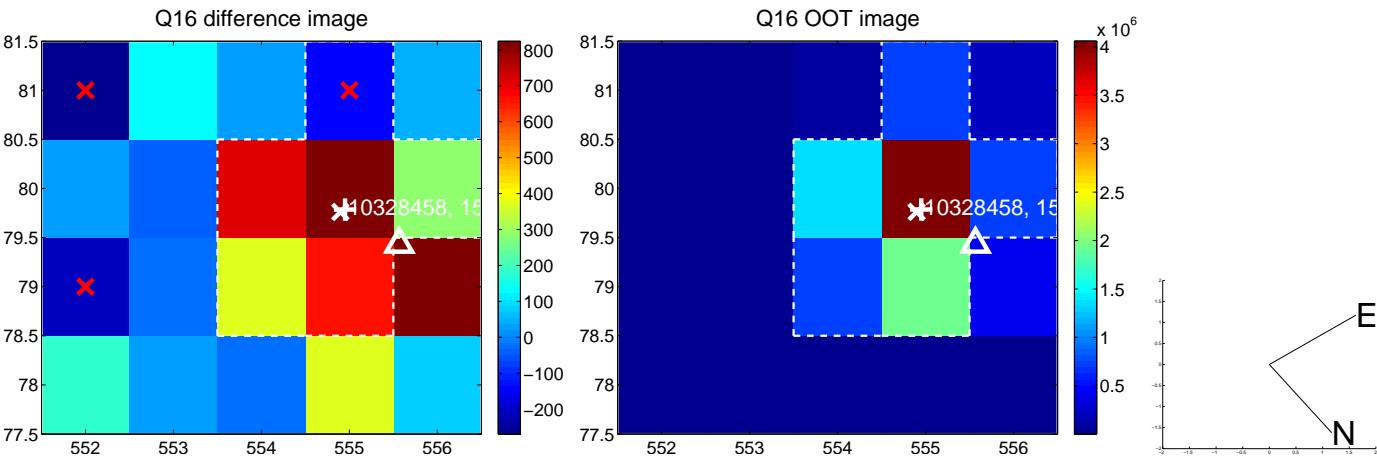
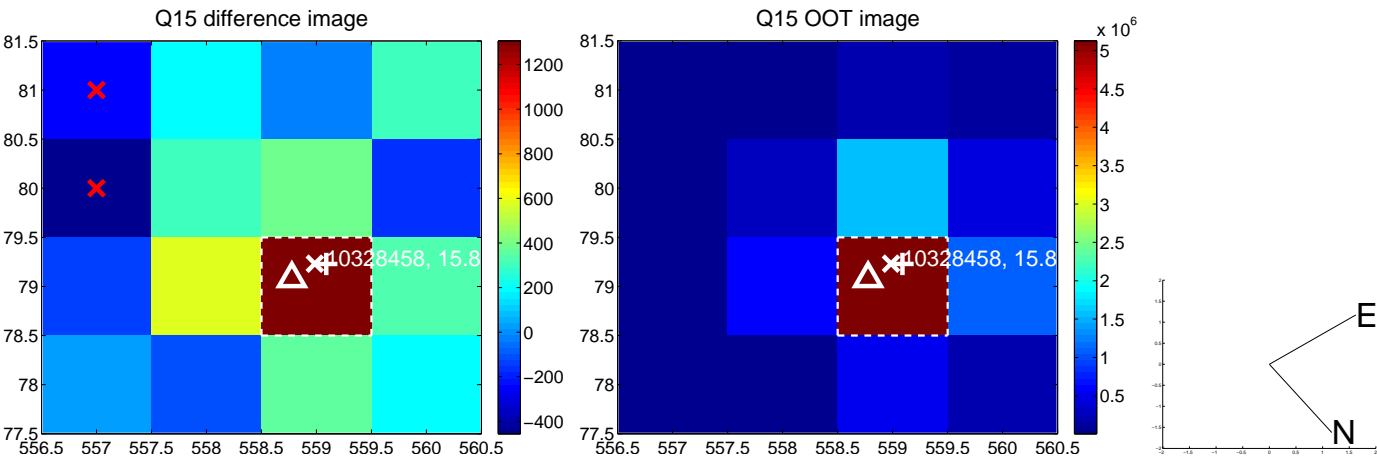
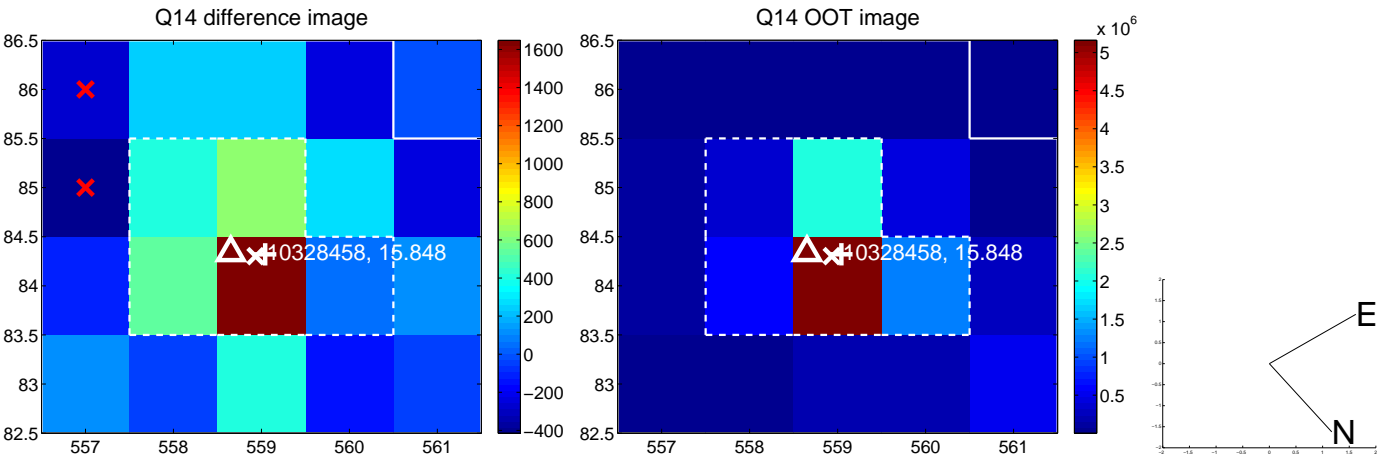
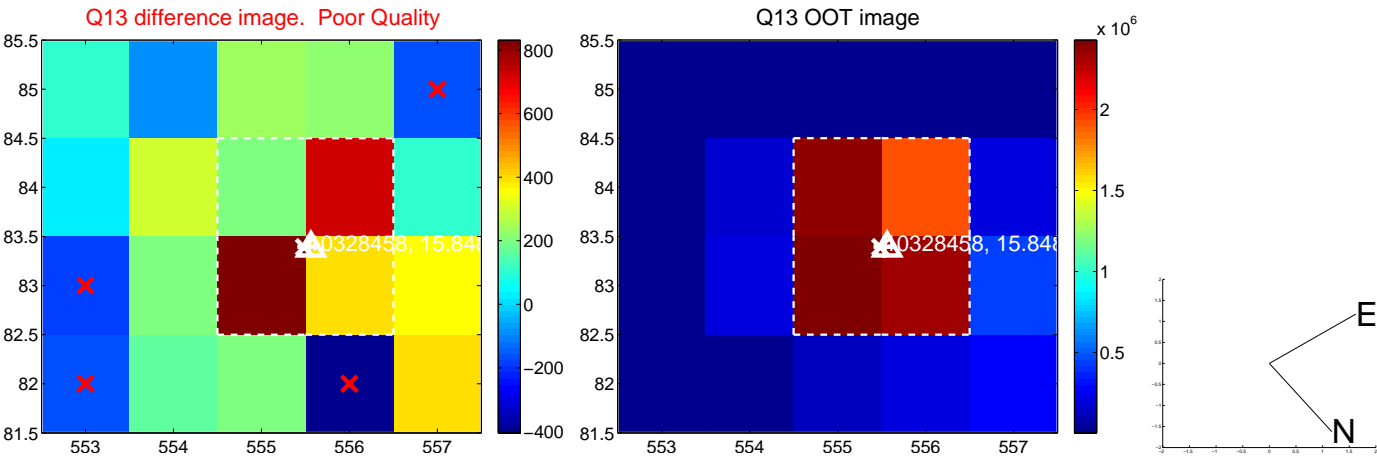
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



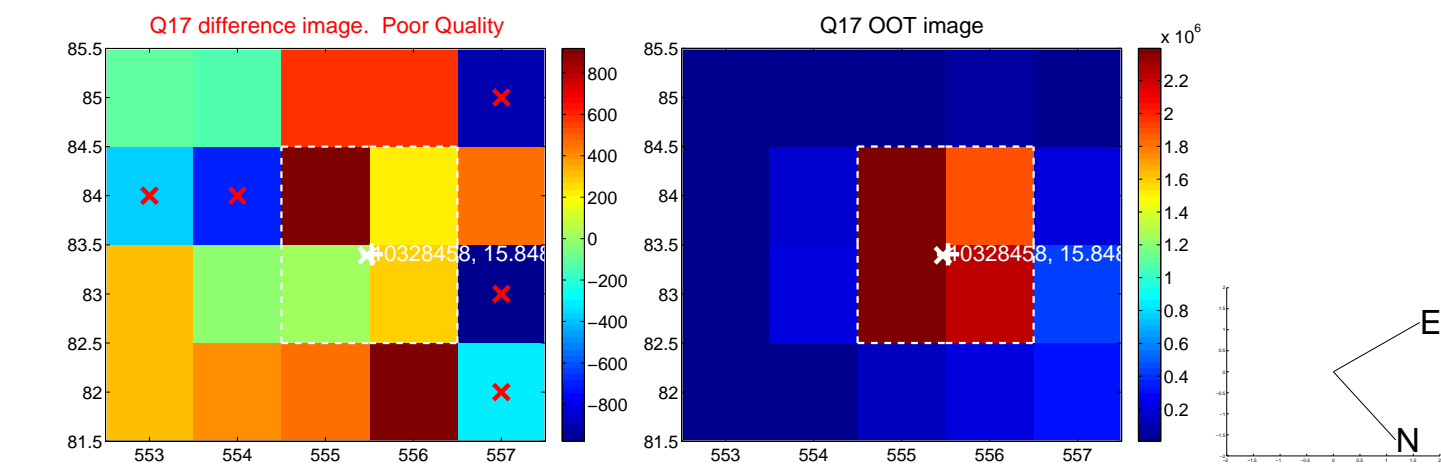
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



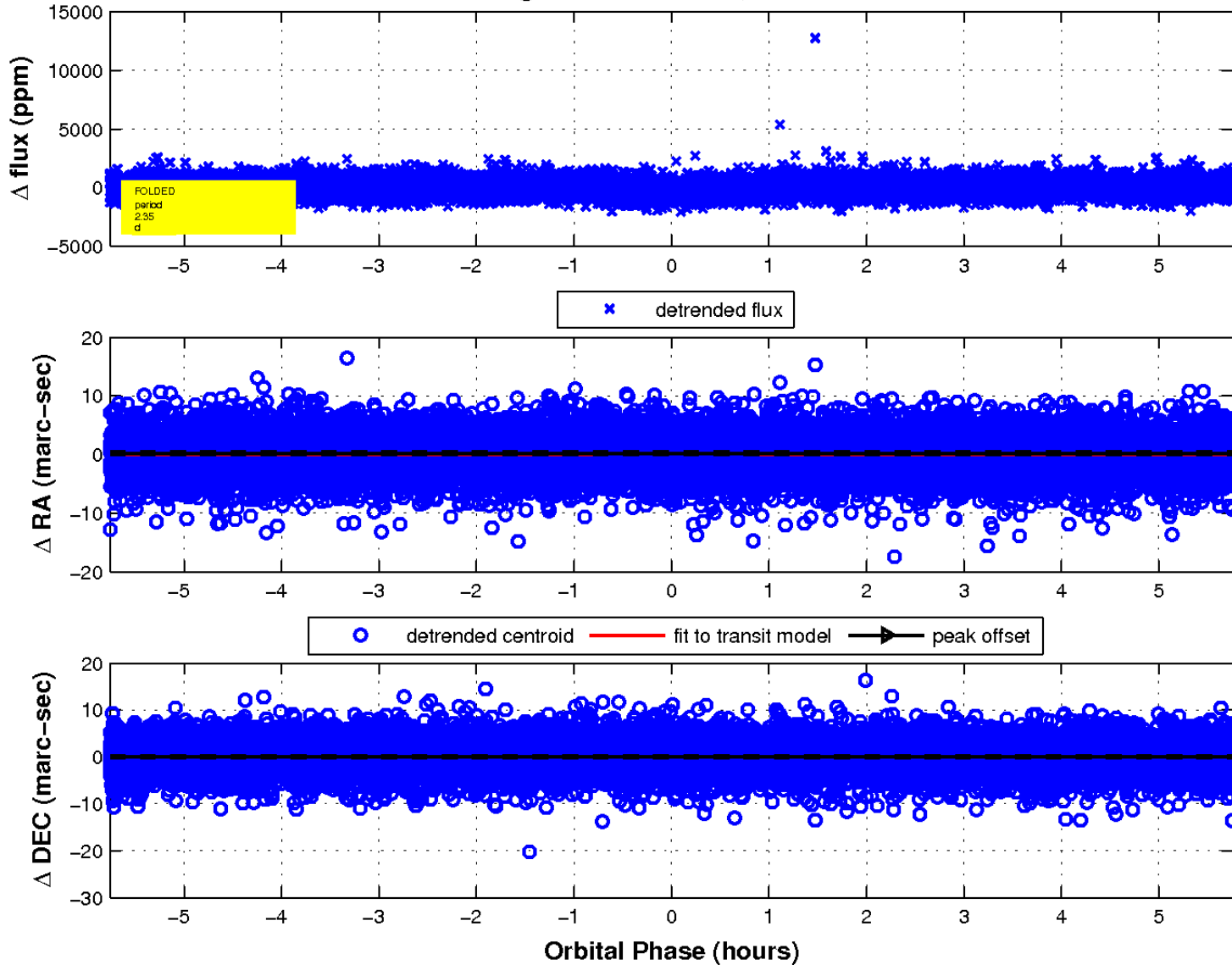
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

