

KIC 005308537

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})
005308537-01	OBS	4409.01	14.265215	143.216834	66.6	3.607	11.7	12.3	1.29	5825	1.24	125.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005308537-01	OBS	PC	1.00	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.

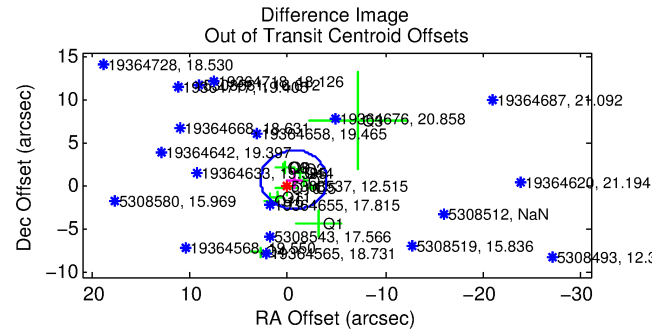
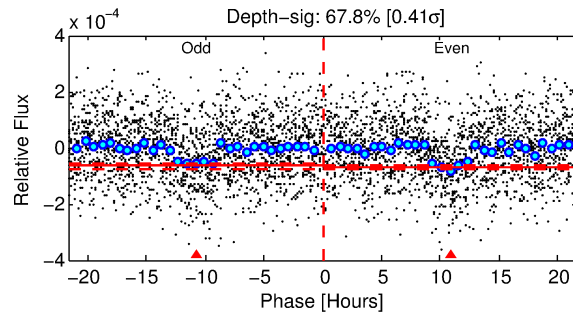
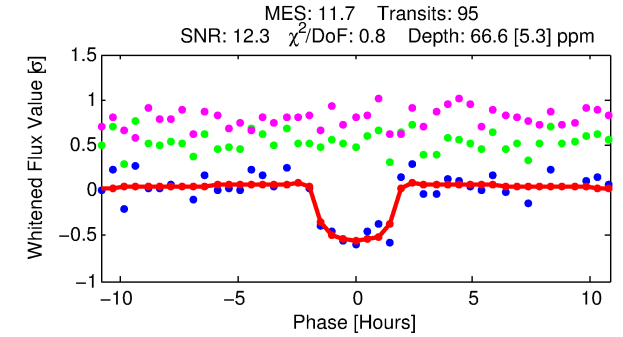
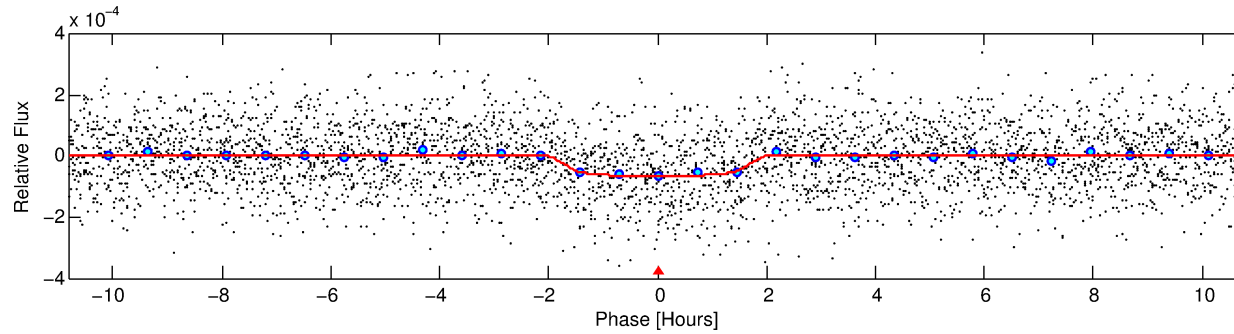
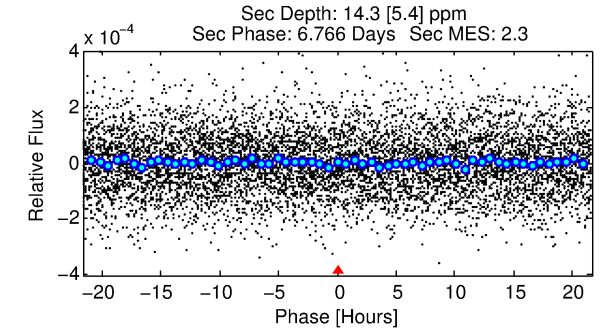
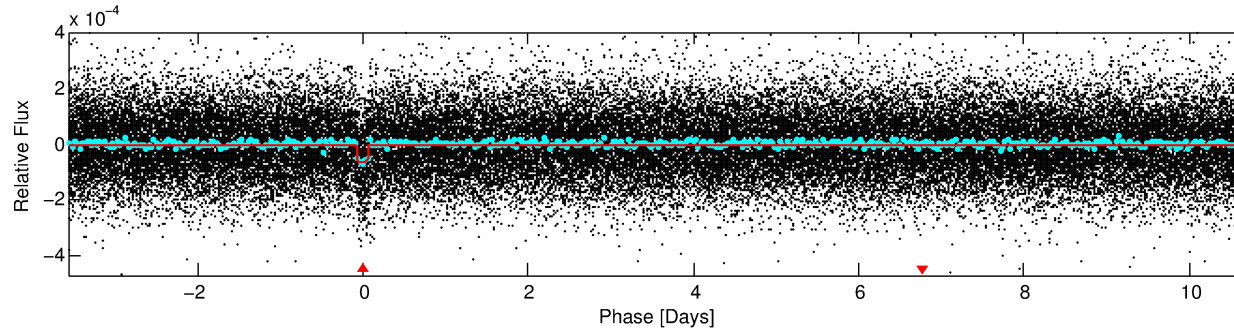
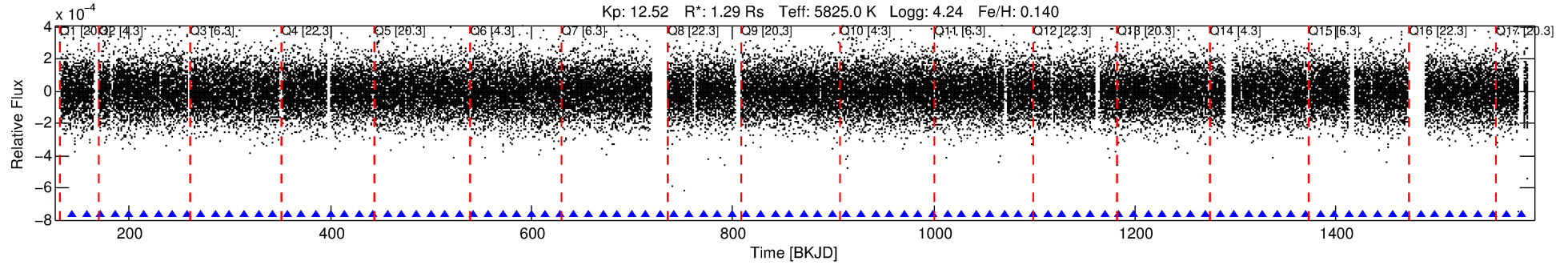
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005308537-01

No Significant Match Found

DV One-Page Summary

KIC: 5308537 Candidate: 1 of 1 Period: 14.265 d
KOI: K04409.01 Corr: 0.991



DV Fit Results:

Period = 14.26522 [0.00010] d
Epoch = 143.2168 [0.0061] BKJD
Rp/R* = 0.0088 [0.0041]
a/R* = 14.42 [31.98]
b = 0.89 [0.53]
Seff = 125.60 [34.79]
Teq = 854 [59] K
Rp = 1.24 [0.61] Re
a = 0.1170 [0.0193] AU
Ag = 69.86 [72.44] [0.95σ]
Teffp = 3816 [959] K [3.08σ]

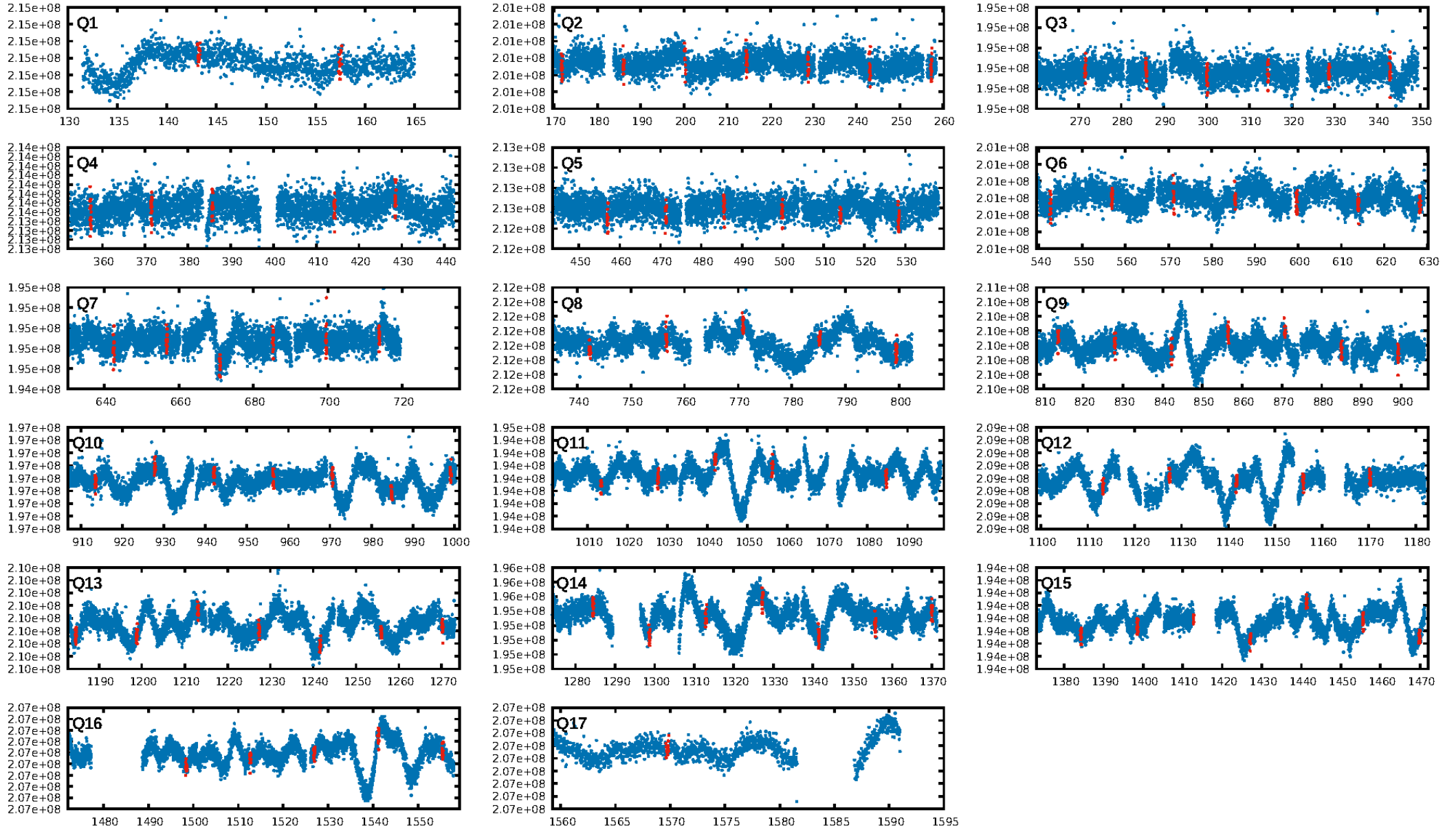
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.31e-30
RollingBand-fgt: 1.00 [92/92]
GhostDiagnostic-chr: -1.893
Centroid-sig: 76.9%
Centroid-so: 0.445 arcsec [0.46σ]
OotOffset-rm: 0.989 arcsec [0.88σ]
KicOffset-rm: 0.971 arcsec [0.87σ]
OotOffset-st: 4/3/2/3 [12]
KicOffset-st: 4/3/2/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

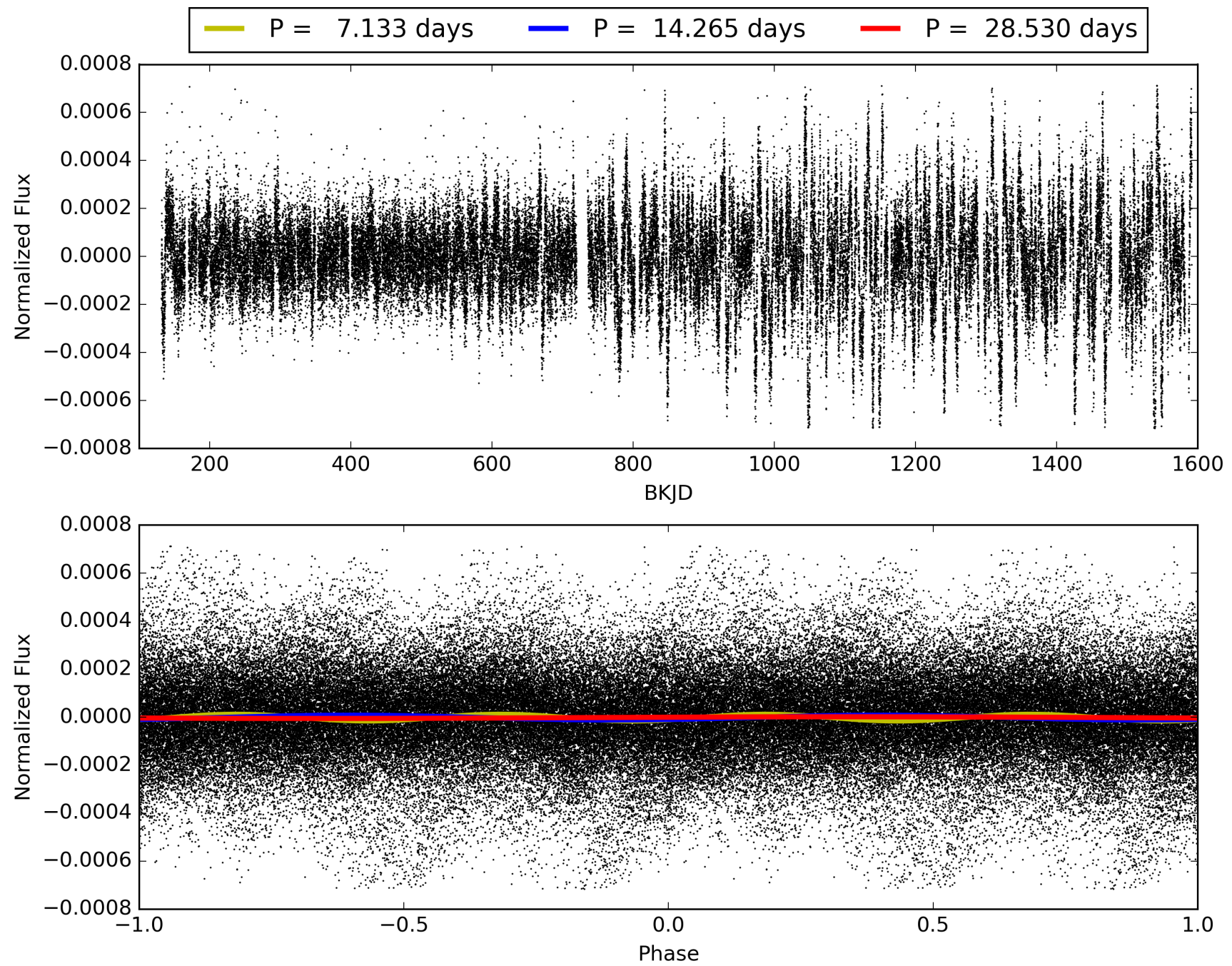
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:29:58 Z

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

TCE 005308537-01, PDC Light Curves

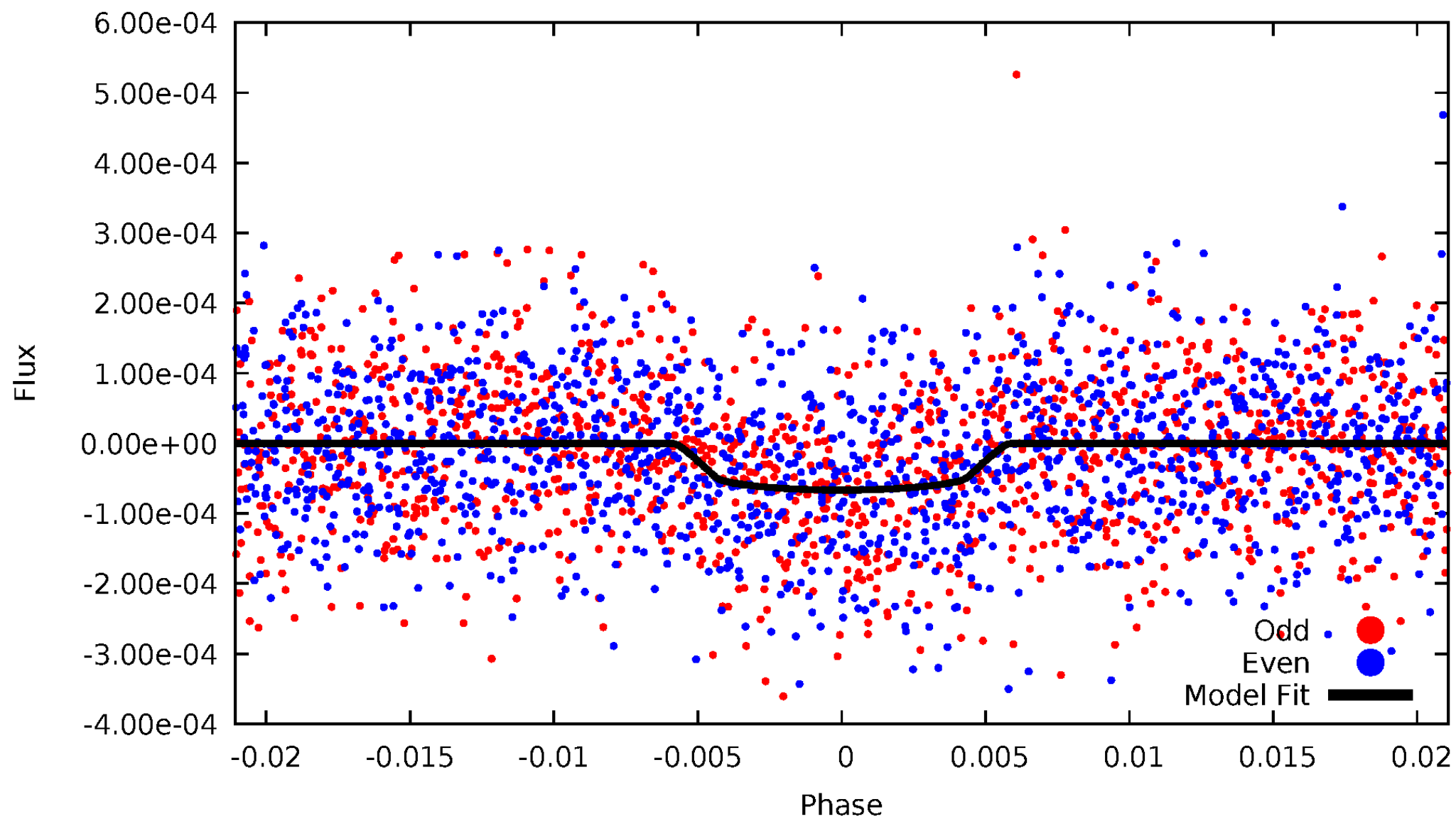


TCE 005308537-01



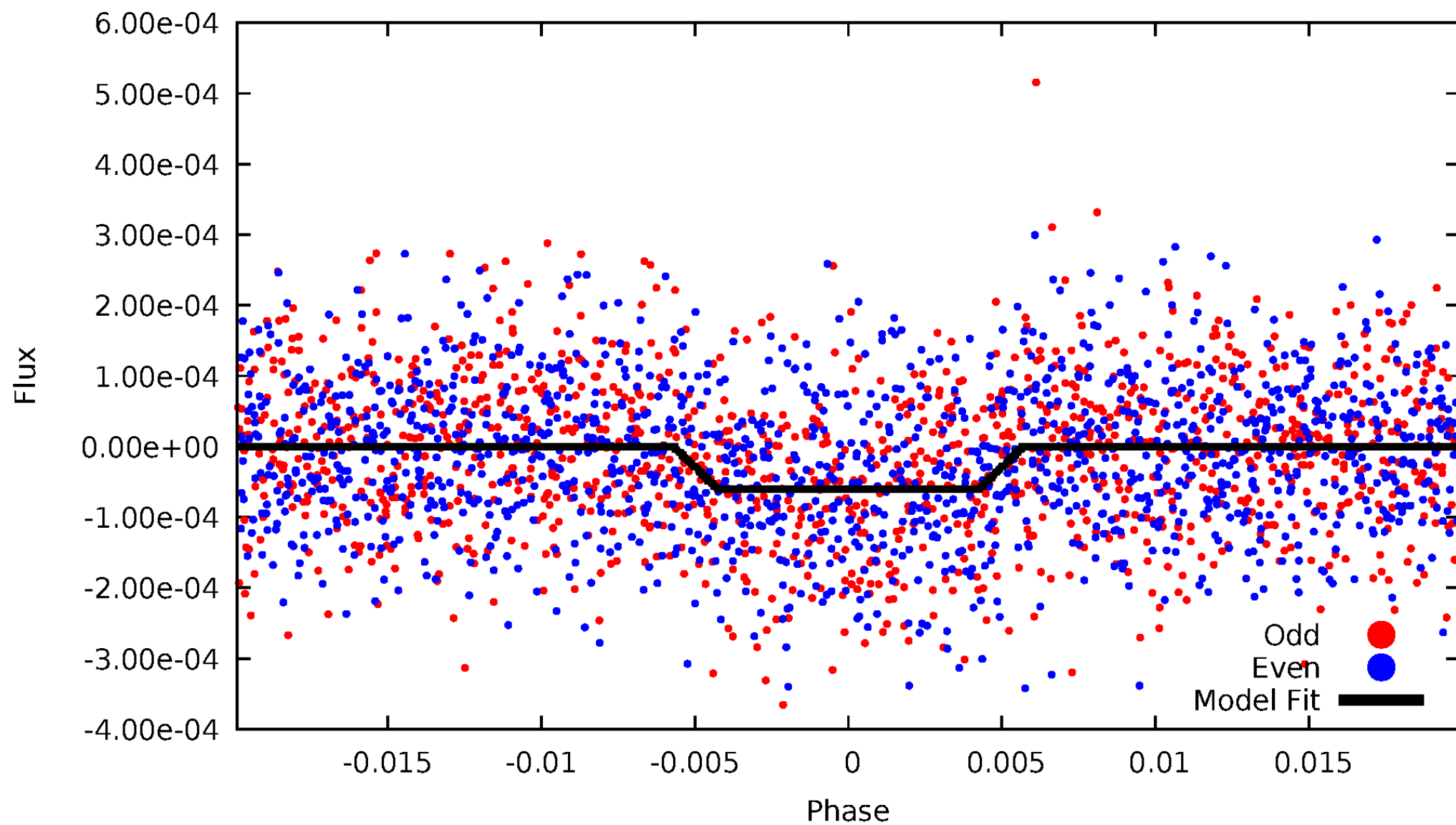
DV Odd/Even

TCE 005308537-01

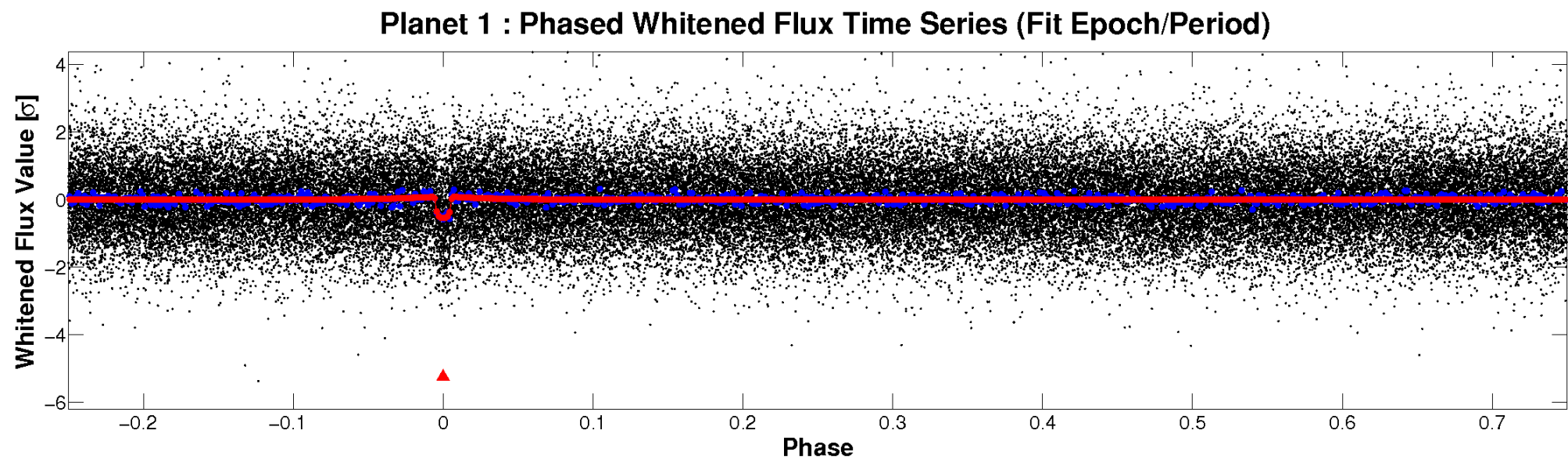
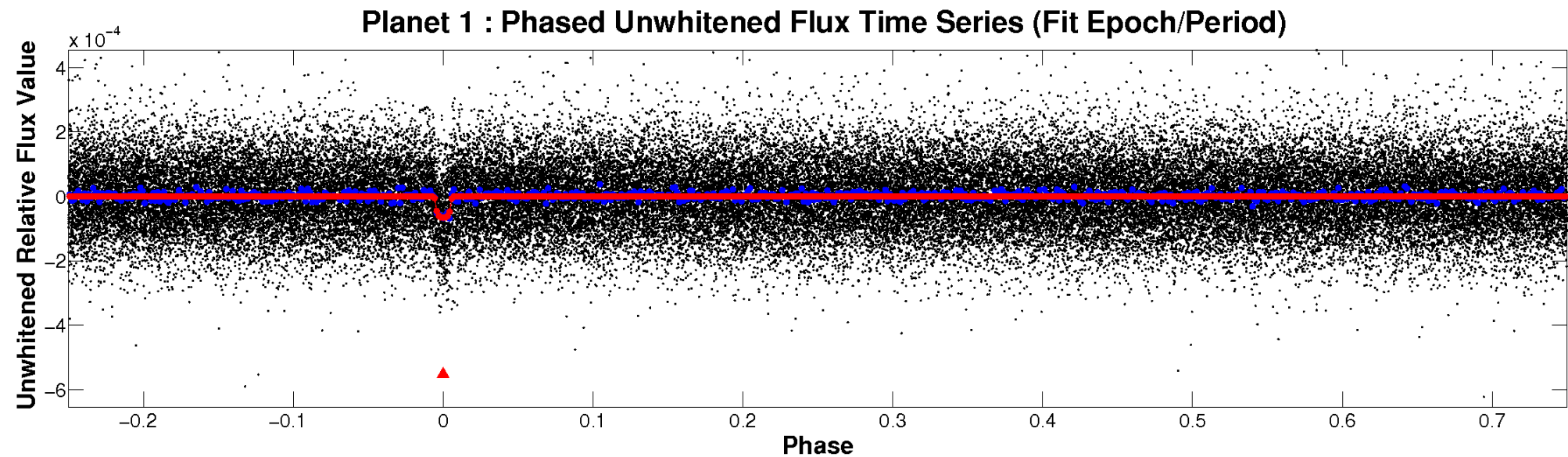


ALT Odd/Even

TCE 005308537-01

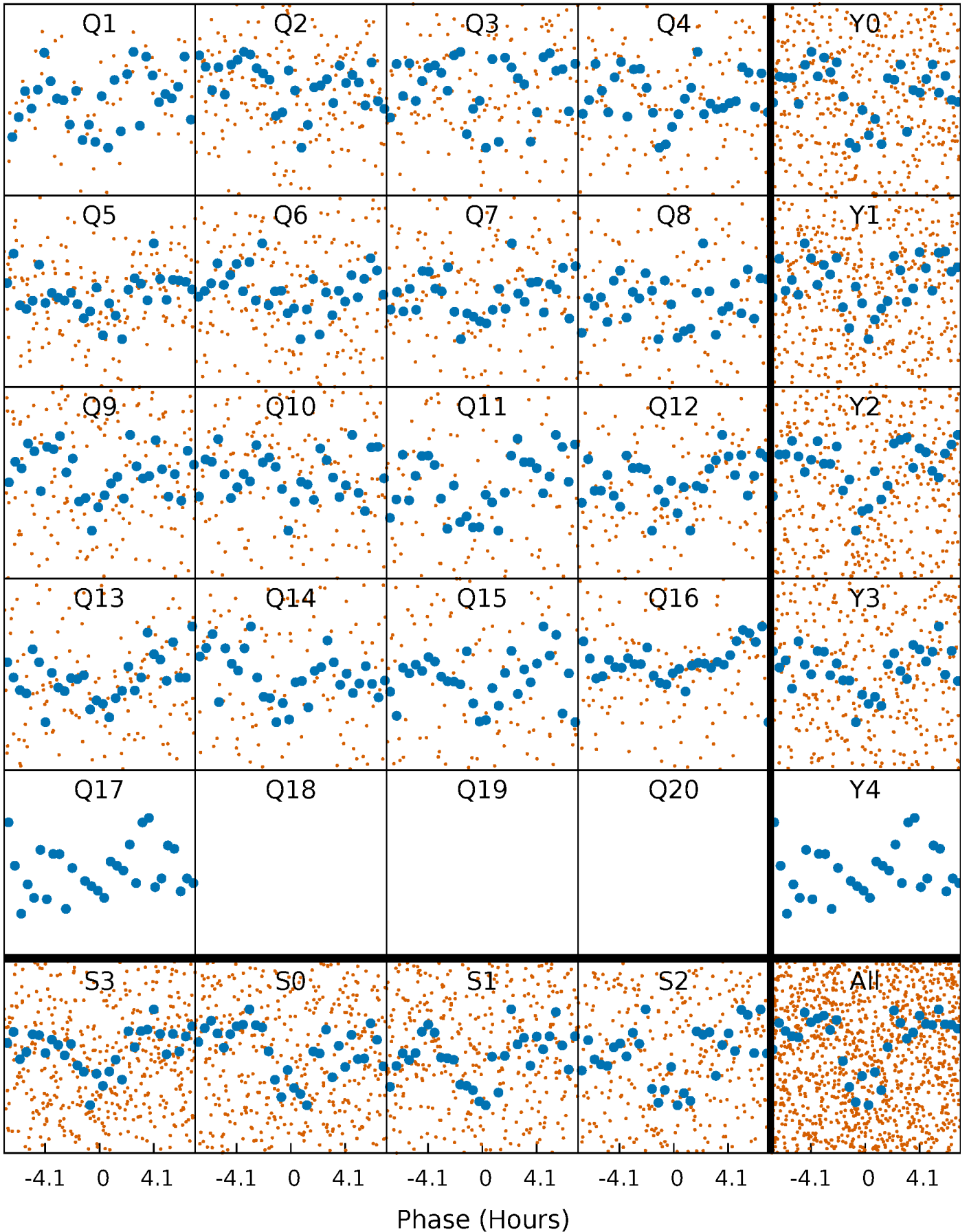


Non-Whitened Vs. Whitened Light Curve



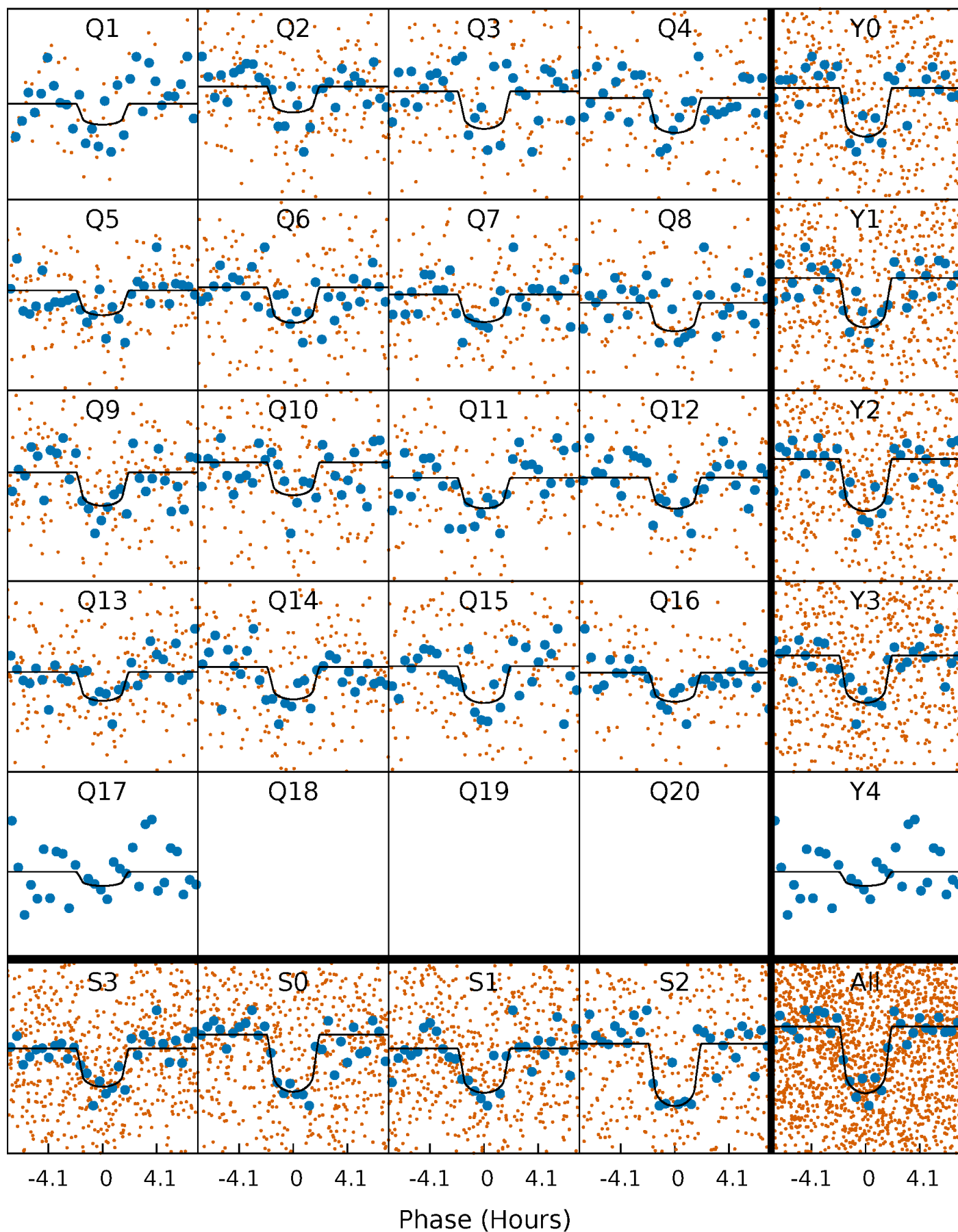
PDC Quarter-Phased Transit Curves

TCE 005308537-01 P= 14.265215 Days $T_0=143.216834$ (BKJD)



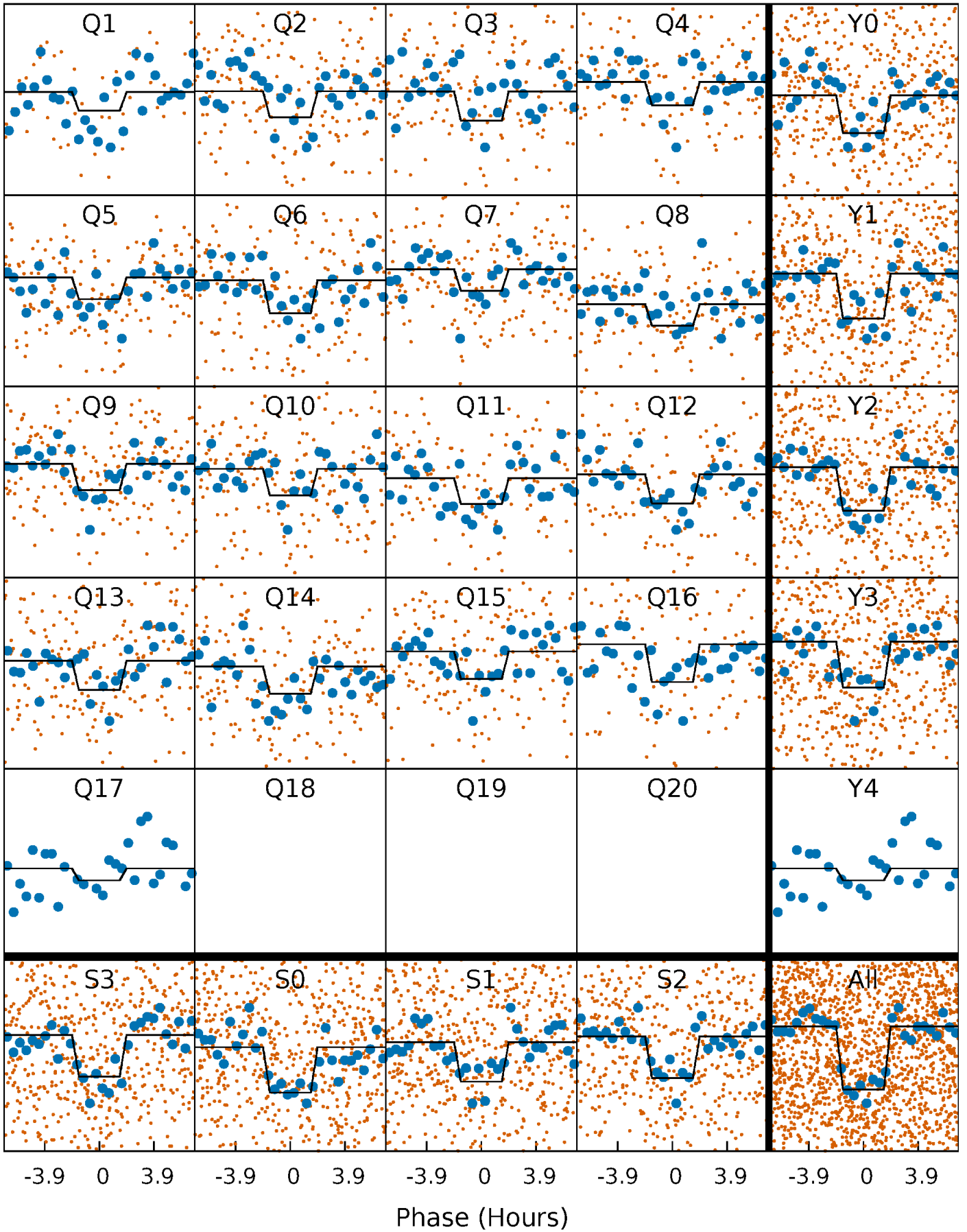
DV Quarter-Phased Transit Curves

TCE 005308537-01 P= 14.265215 Days $T_0=143.216834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

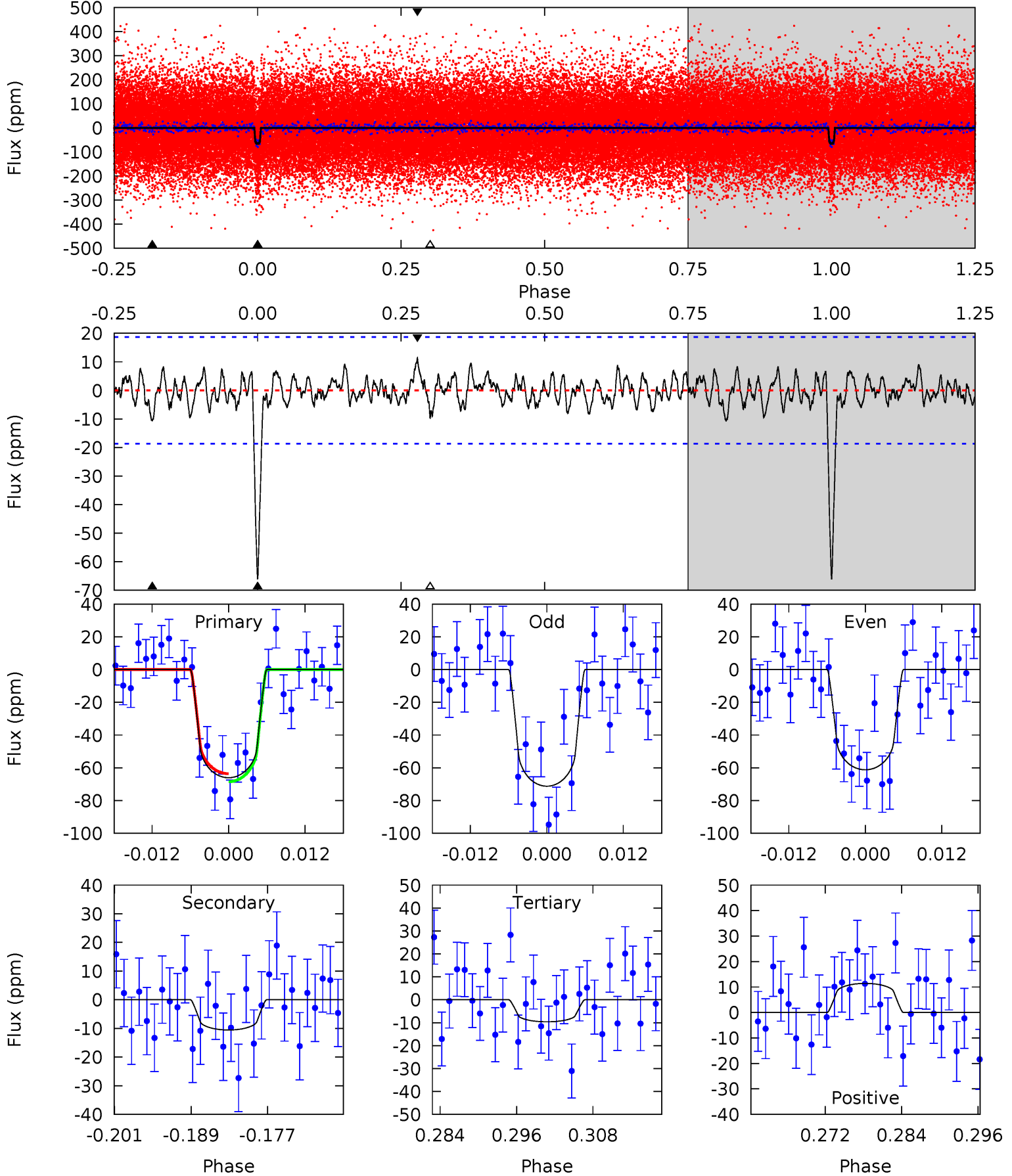
TCE 005308537-01 P= 14.265345 Days $T_0=143.211278$ (BKJD)



DV Model-Shift Uniqueness Test

005308537-01, P = 14.265215 Days, E = 128.951619 Days

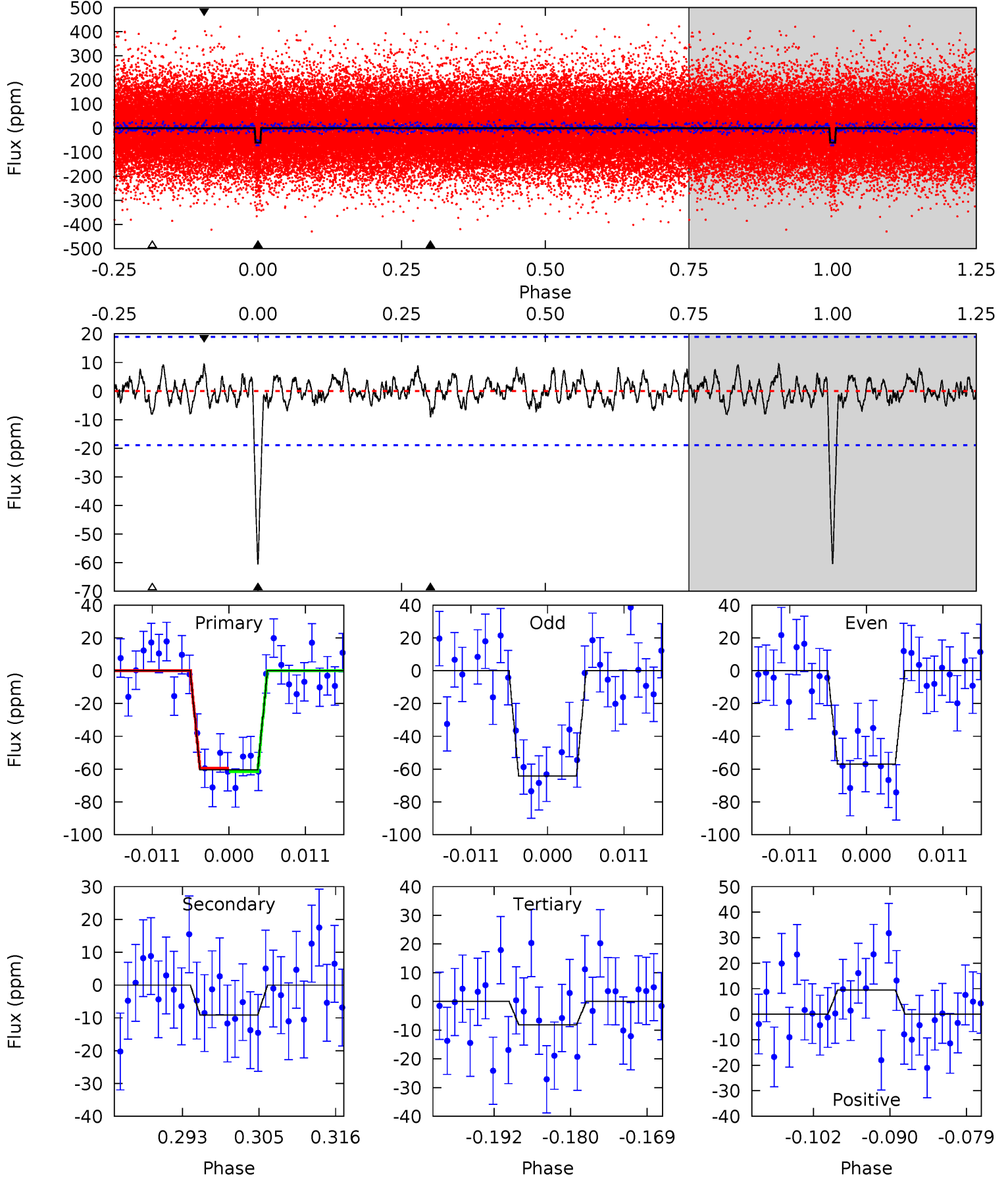
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	2.82	2.57	3.05	4.99	2.52	1.01	15.1	14.6	0.25	-0.23	1.34	0.98	0.15	0.65



Alt Model-Shift Uniqueness Test

005308537-01, $P = 14.265345$ Days, $E = 128.945933$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	2.41	2.15	2.50	5.00	2.53	0.90	13.8	13.5	0.25	-0.10	0.97	0.88	0.14	0.28



Stellar Parameters For KIC 005308537

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5825^{+105}_{-117}	$4.237^{+0.156}_{-0.104}$	$0.140^{+0.150}_{-0.150}$	$1.291^{+0.220}_{-0.220}$	$1.049^{+0.098}_{-0.071}$	$0.687^{+0.469}_{-0.239}$
	+2%/-2%	+4%/-2%	+107%/-107%	+17%/-17%	+9%/-7%	+68%/-35%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005308537-01 / KOI 4409.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 4	$1.21^{+0.63}_{-0.57}$	1189^{+49}_{-60}	3861^{+1105}_{-495}	52^{+147}_{-31}
Alt.	-9 ± 4	$1.11^{+0.57}_{-0.59}$	1188^{+52}_{-60}	3898^{+1330}_{-593}	55^{+188}_{-35}

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 $A_{obs} \gg 1.0$

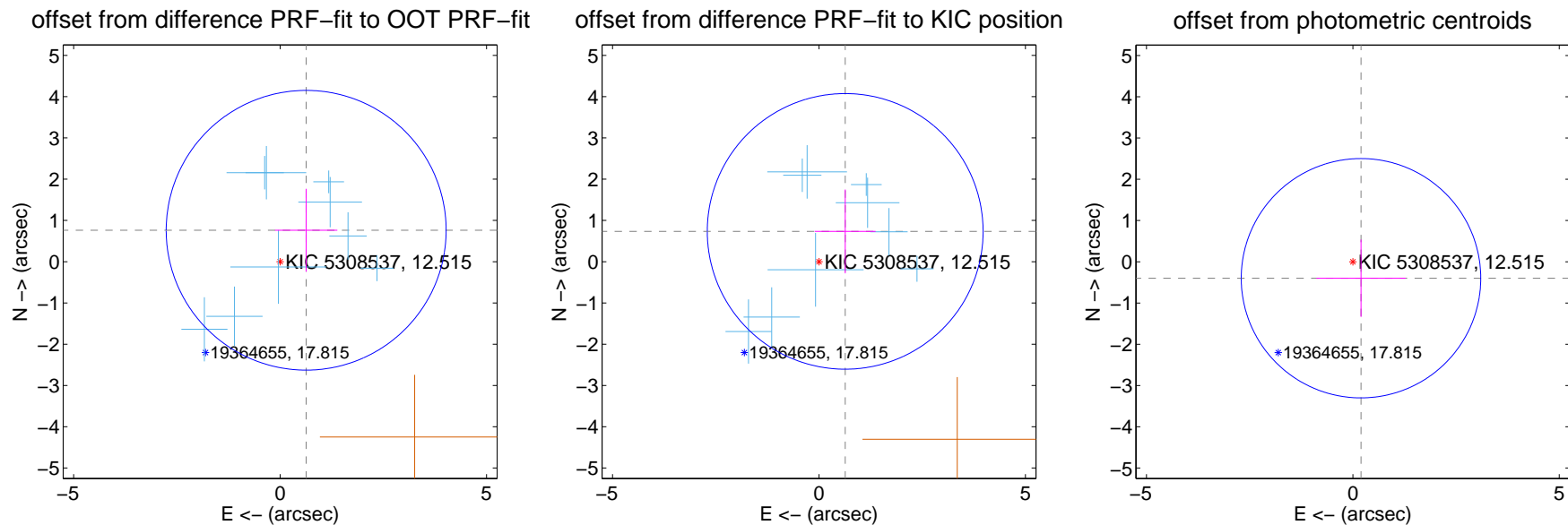
DV Centroid Data

Supplemental centroid analysis for 005308537-01. Kepler magnitude: 12.52. Transit SNR 12.31

There are 9 quarters with good PRF difference image offsets

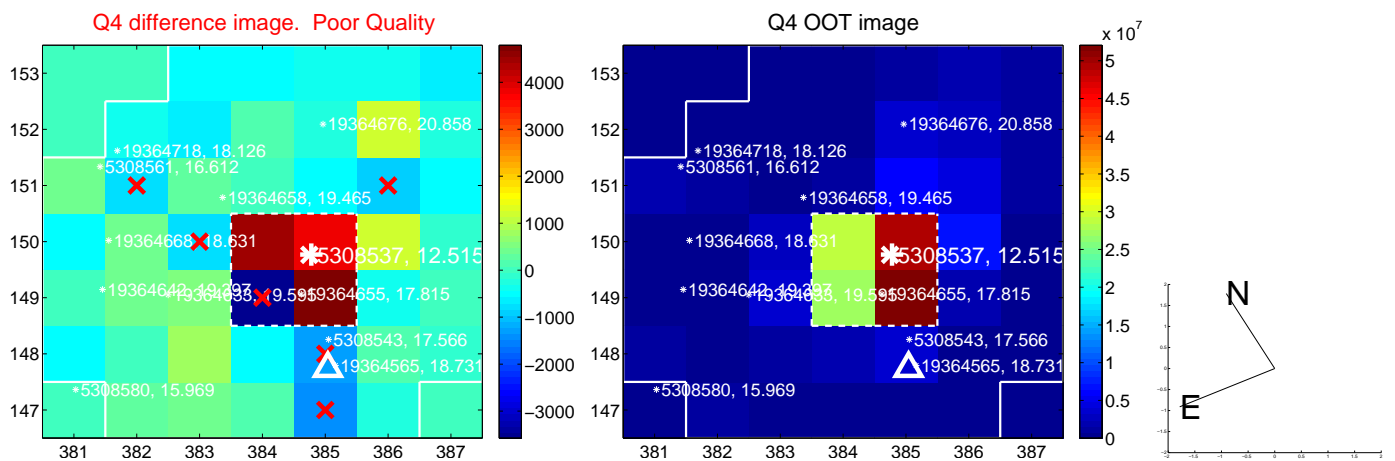
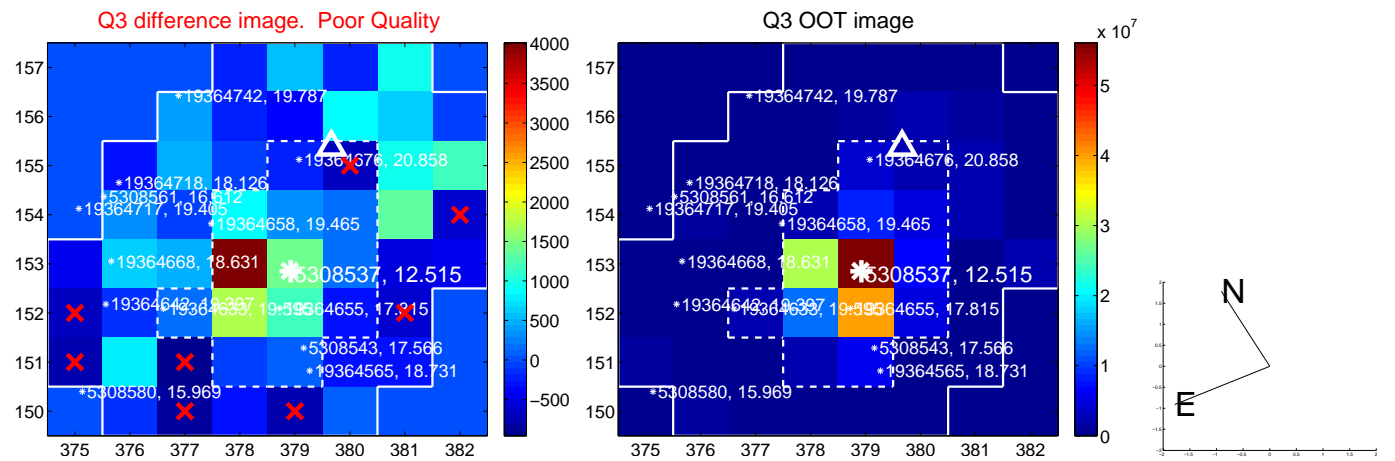
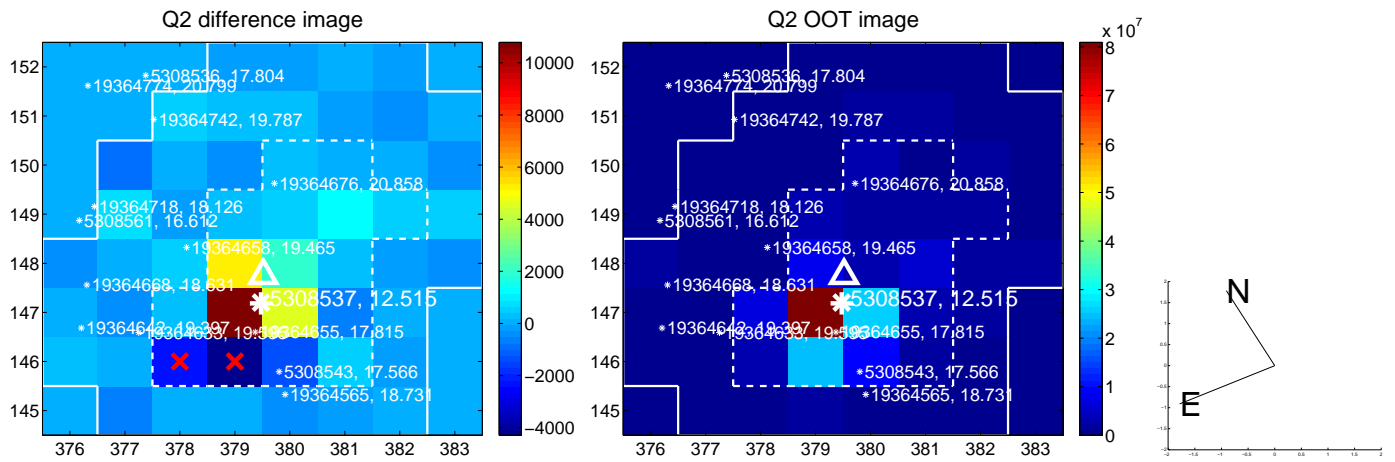
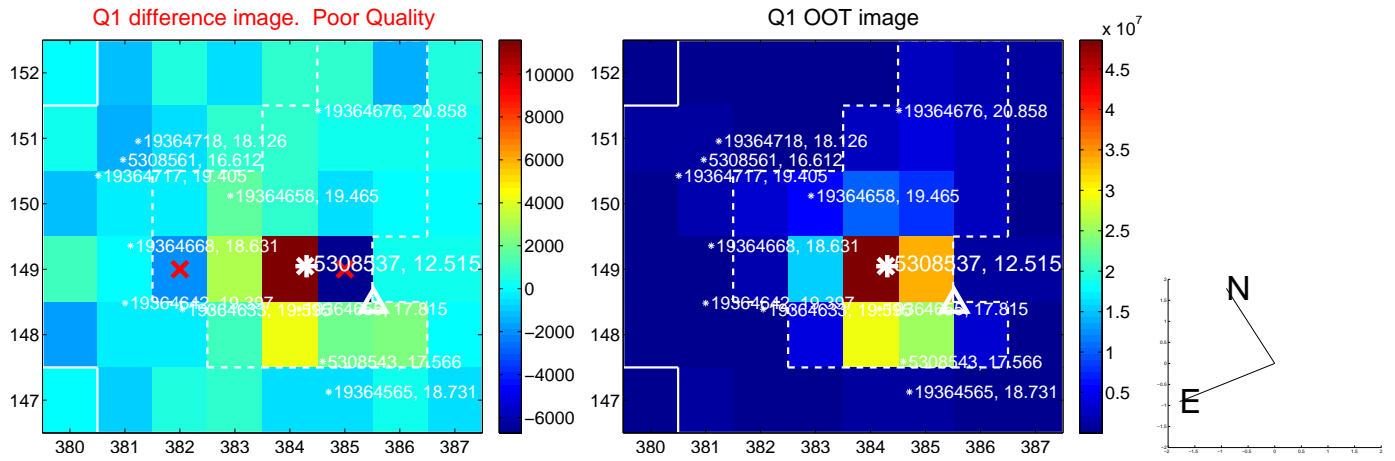
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.989 ± 1.130	0.88	-0.631 ± 0.755	0.762 ± 1.005
PRF-fit source offset from KIC position	0.971 ± 1.113	0.87	-0.635 ± 0.737	0.735 ± 1.016
photometric centroid source offset	0.44 ± 0.97	0.46	-0.20 ± 1.08	-0.40 ± 0.94

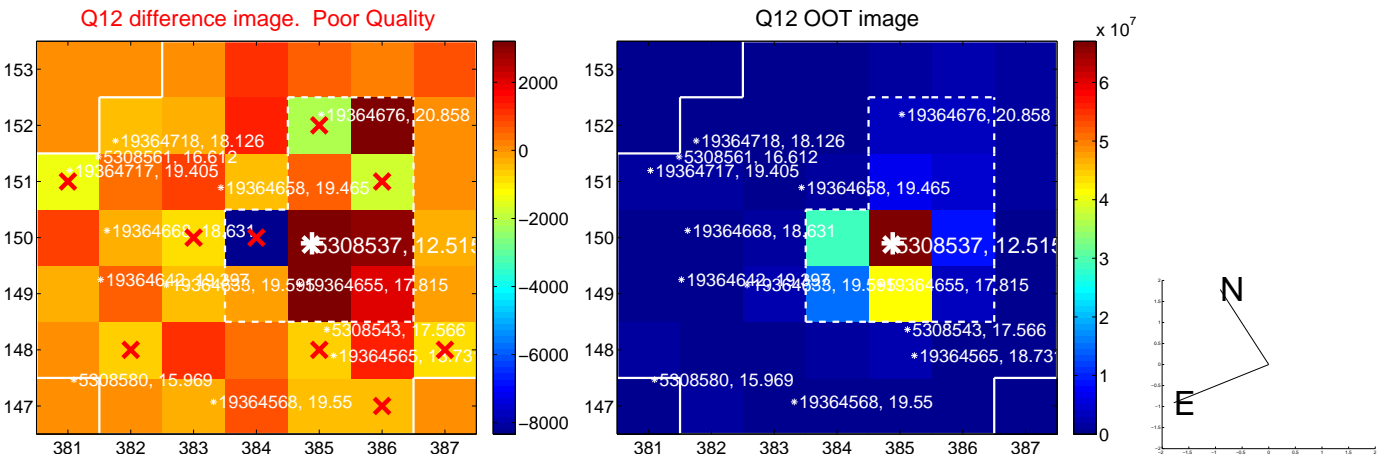
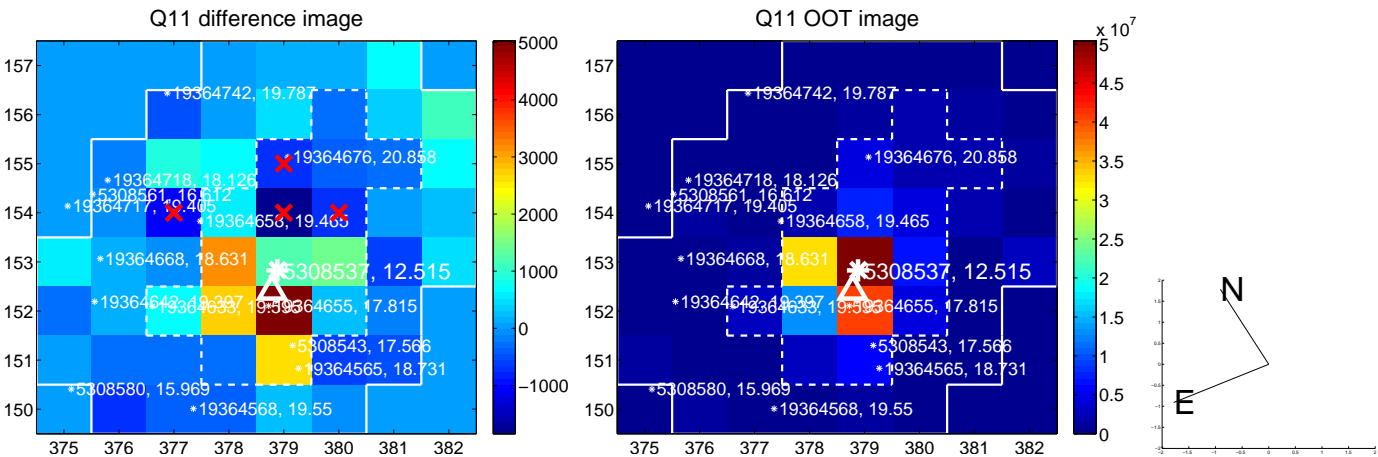
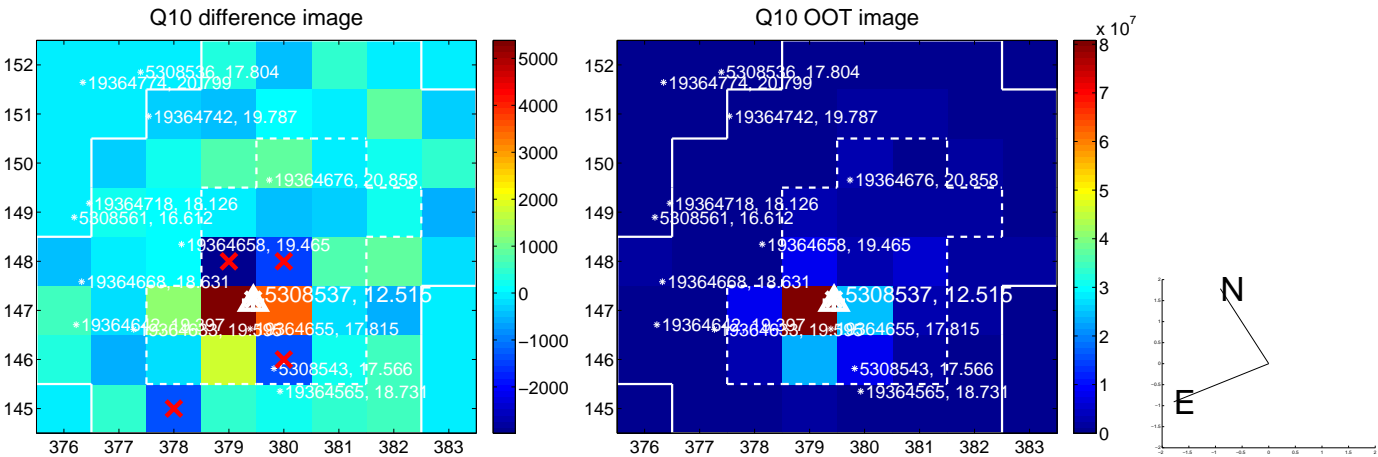
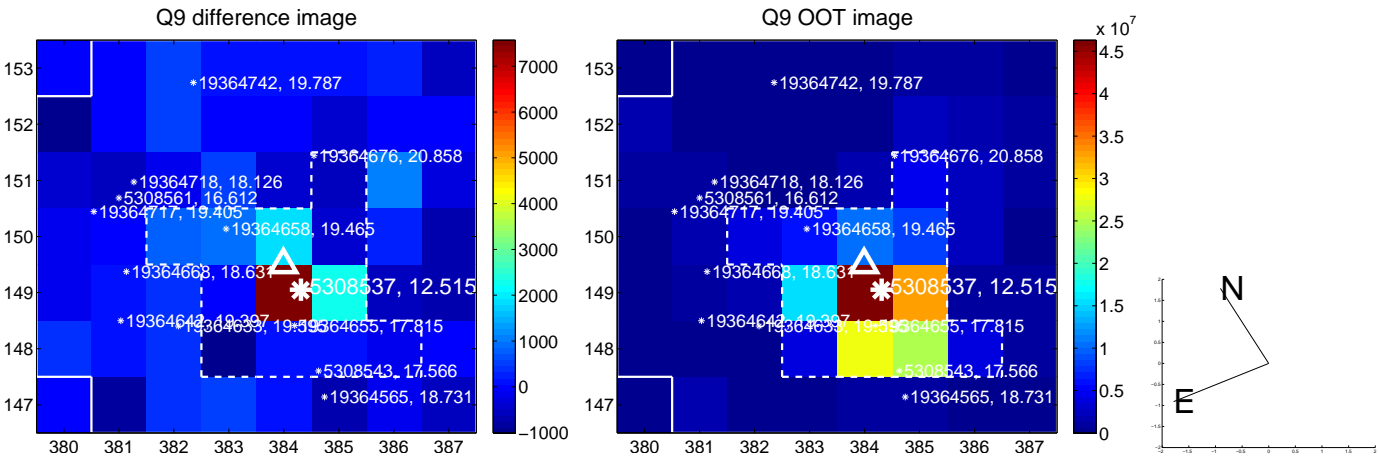


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

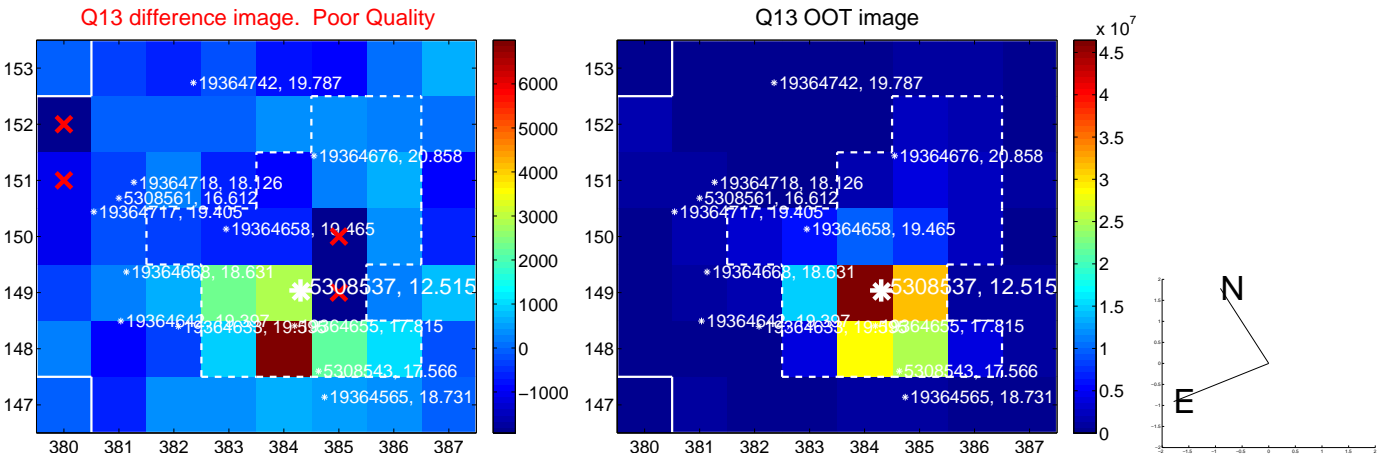
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



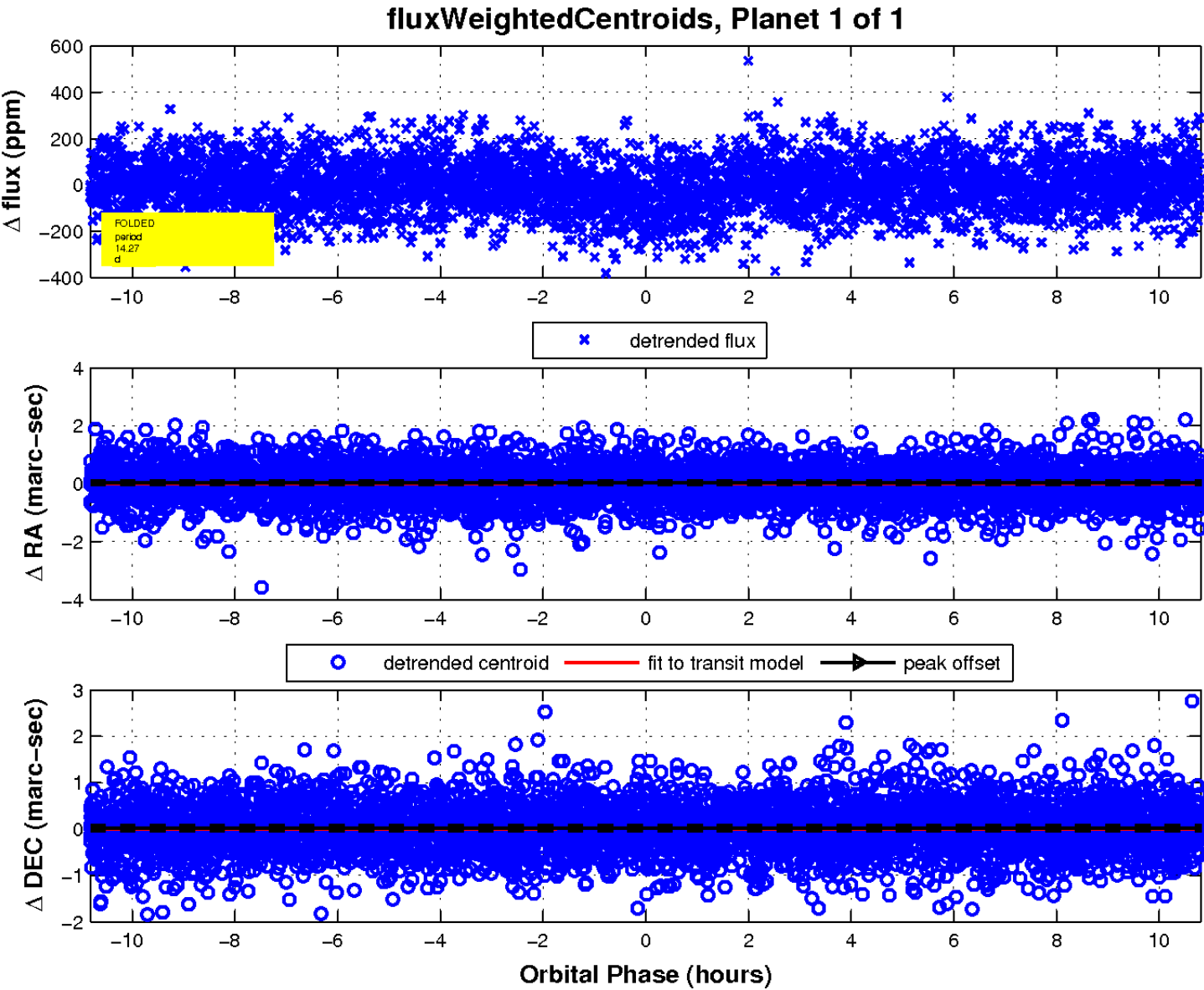
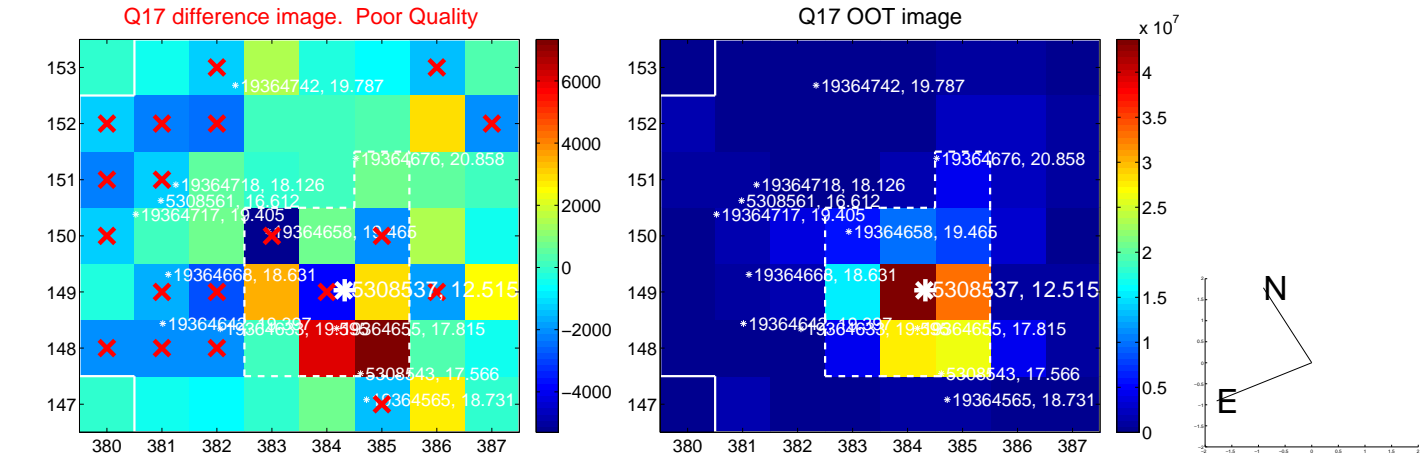
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

