

KIC 004857734

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})
004857734-01	OBS	No	1.351898	132.083574	73.8	2.361	7.2	6.4	0.70	5165	0.77	651.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004857734-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

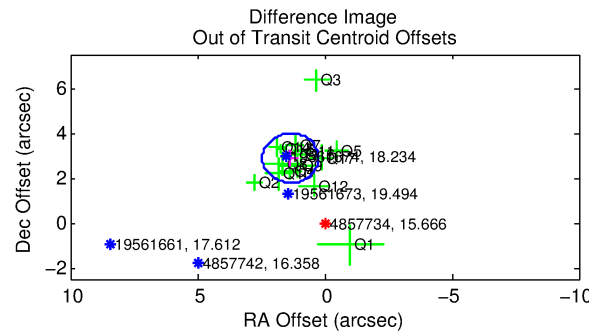
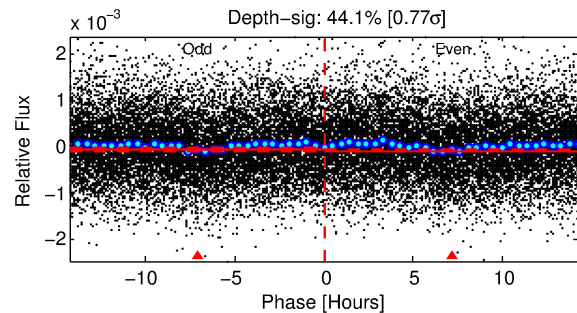
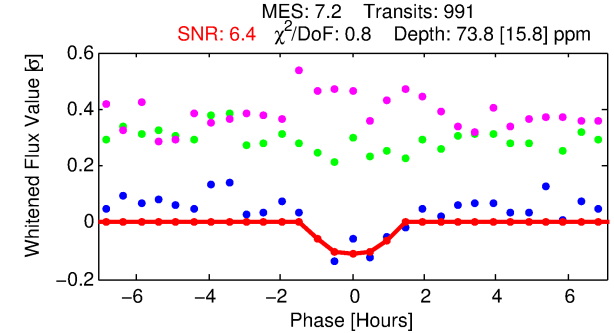
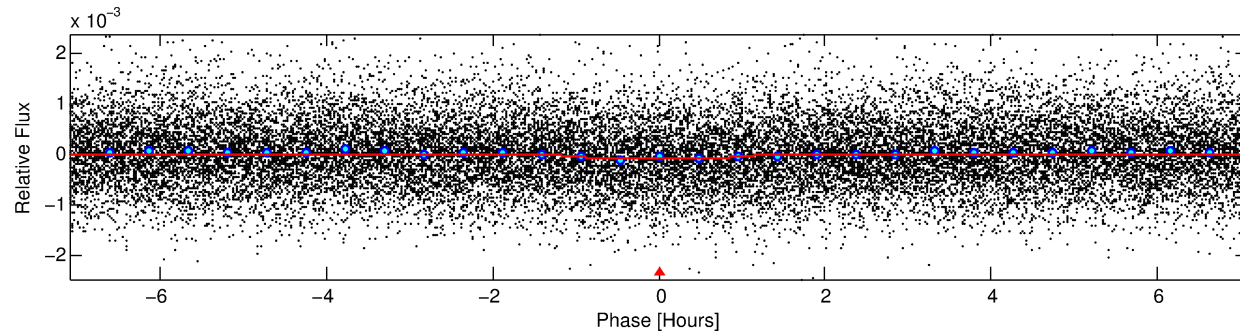
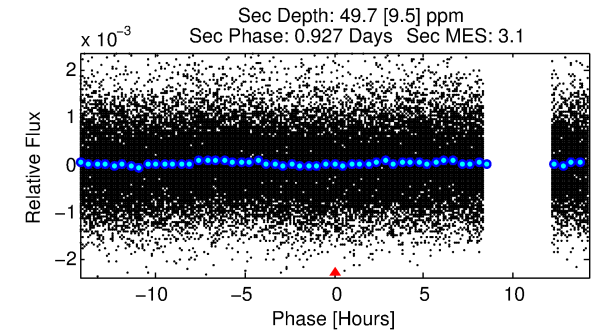
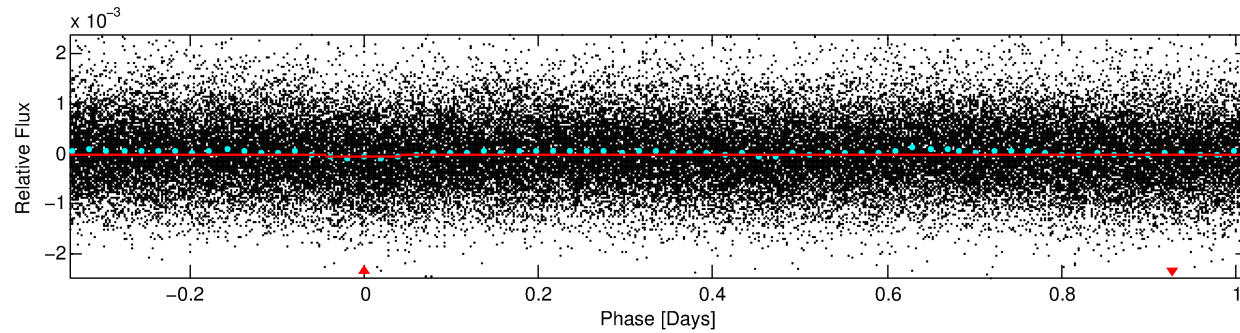
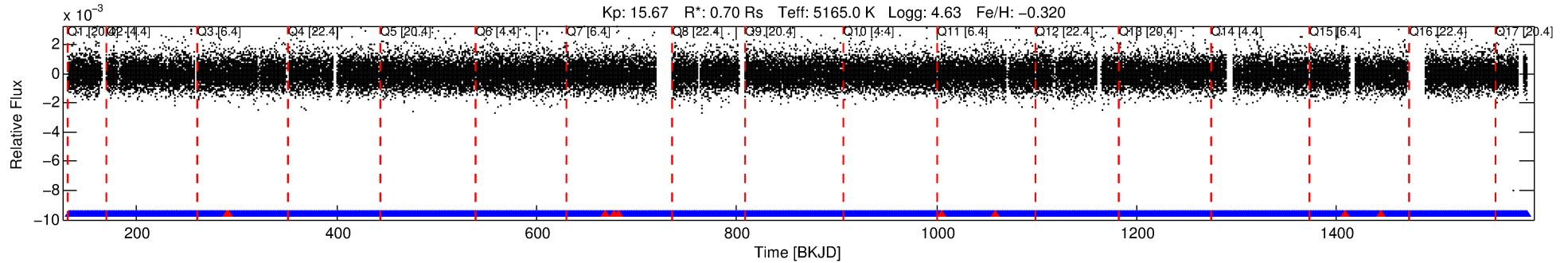
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004857734-01

No Significant Match Found

DV One-Page Summary

KIC: 4857734 Candidate: 1 of 1 Period: 1.352 d



DV Fit Results:

Period = 1.35190 [0.00002] d
Epoch = 132.0836 [0.0052] BKJD
Rp/R* = 0.0100 [0.0098]
a/R* = 1.89 [6.15]
b = 0.94 [0.58]
Seff = 651.84 [124.23]
Teq = 1288 [61] K
Rp = 0.77 [0.76] Re
a = 0.0220 [0.0024] AU
Ag = 22.39 [44.14] [0.48σ]
Teffp = 4333 [2134] K [1.43σ]

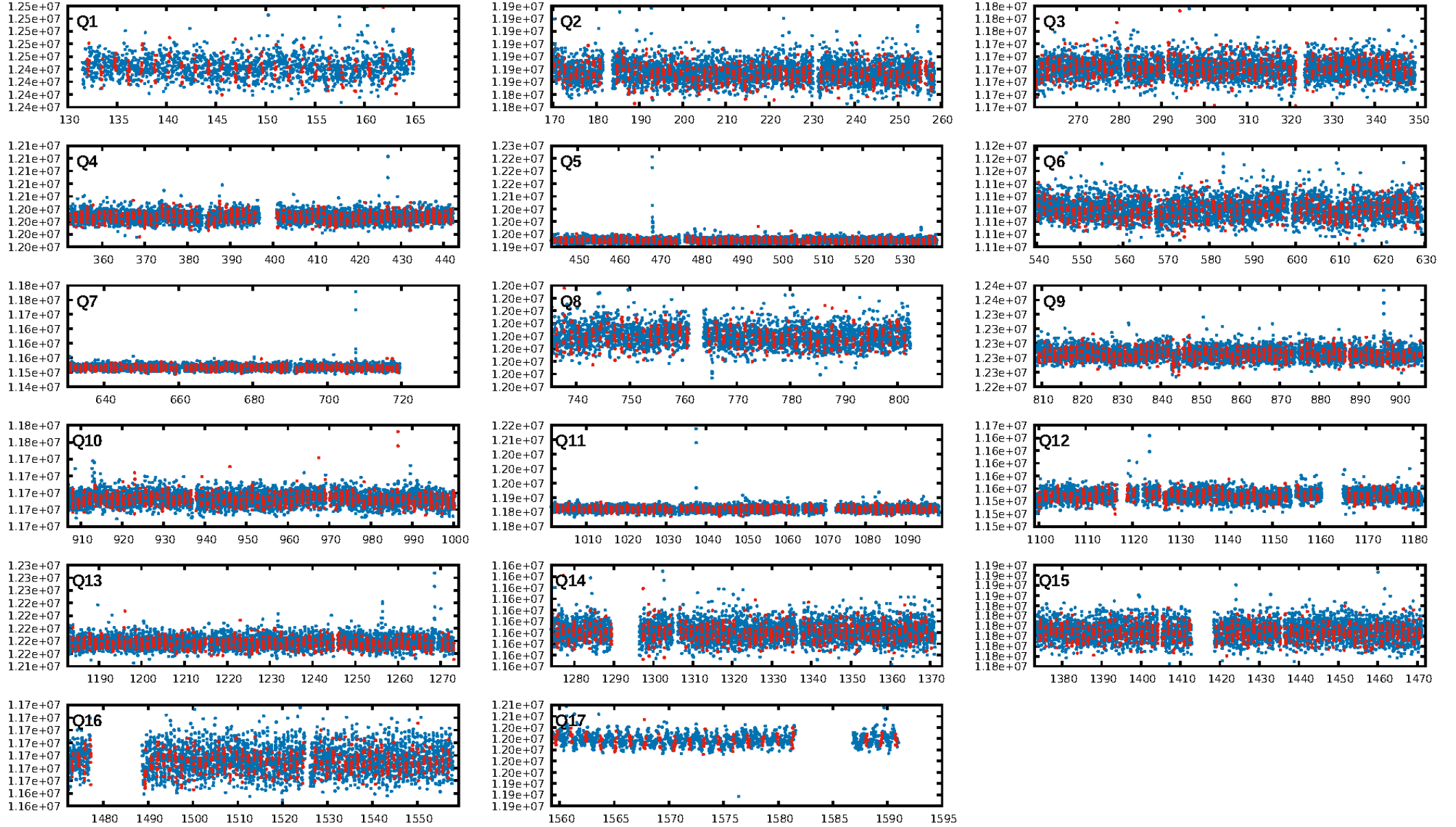
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-12
RollingBand-fgt: 0.99 [937/946]
GhostDiagnostic-chr: 0.7647
Centroid-sig: 0.3%
Centroid-so: 3.645 arcsec [1.92σ]
OotOffset-rm: 3.179 arcsec [8.67σ]
KicOffset-rm: 2.912 arcsec [8.04σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

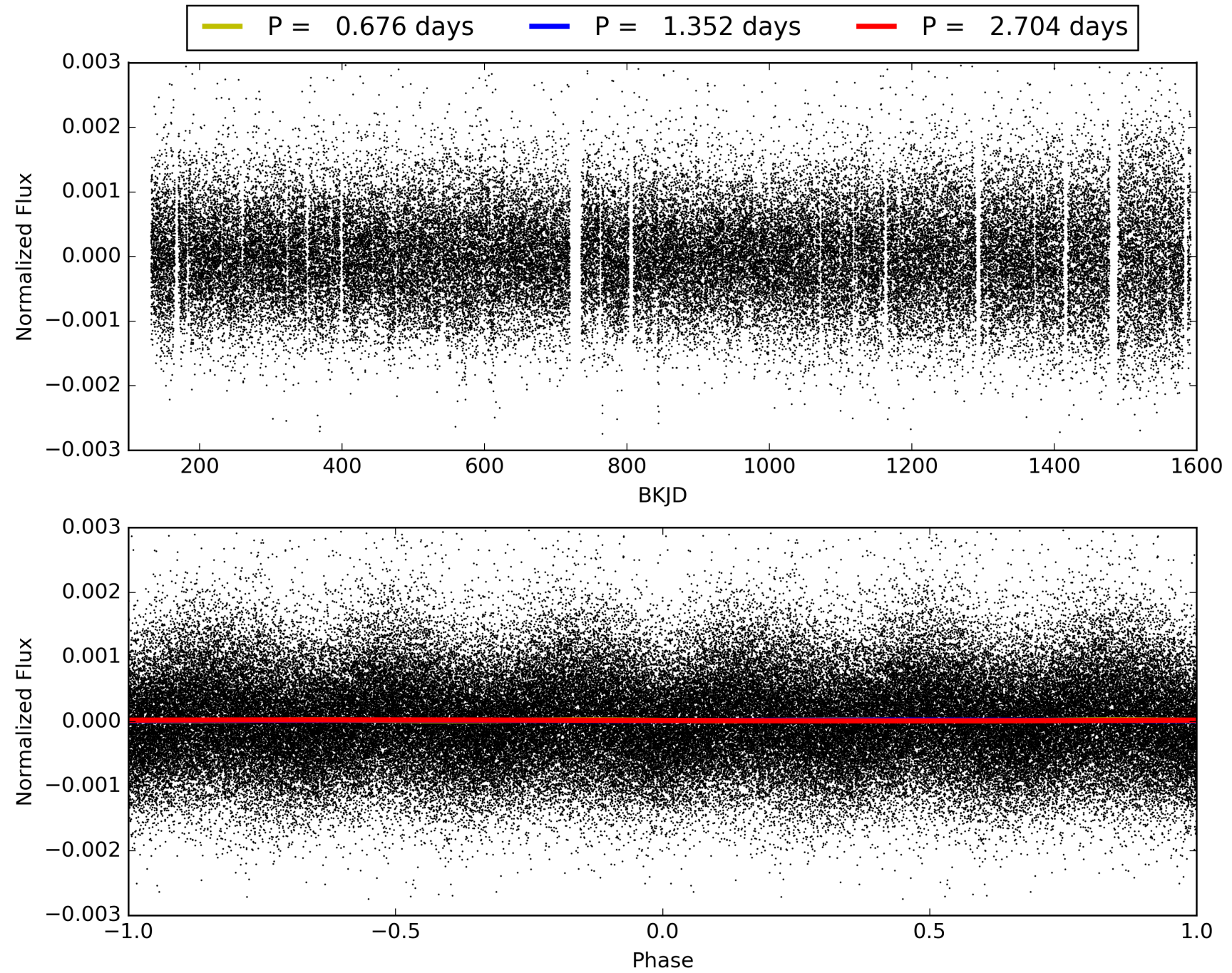
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:08:14 Z

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

TCE 004857734-01, PDC Light Curves

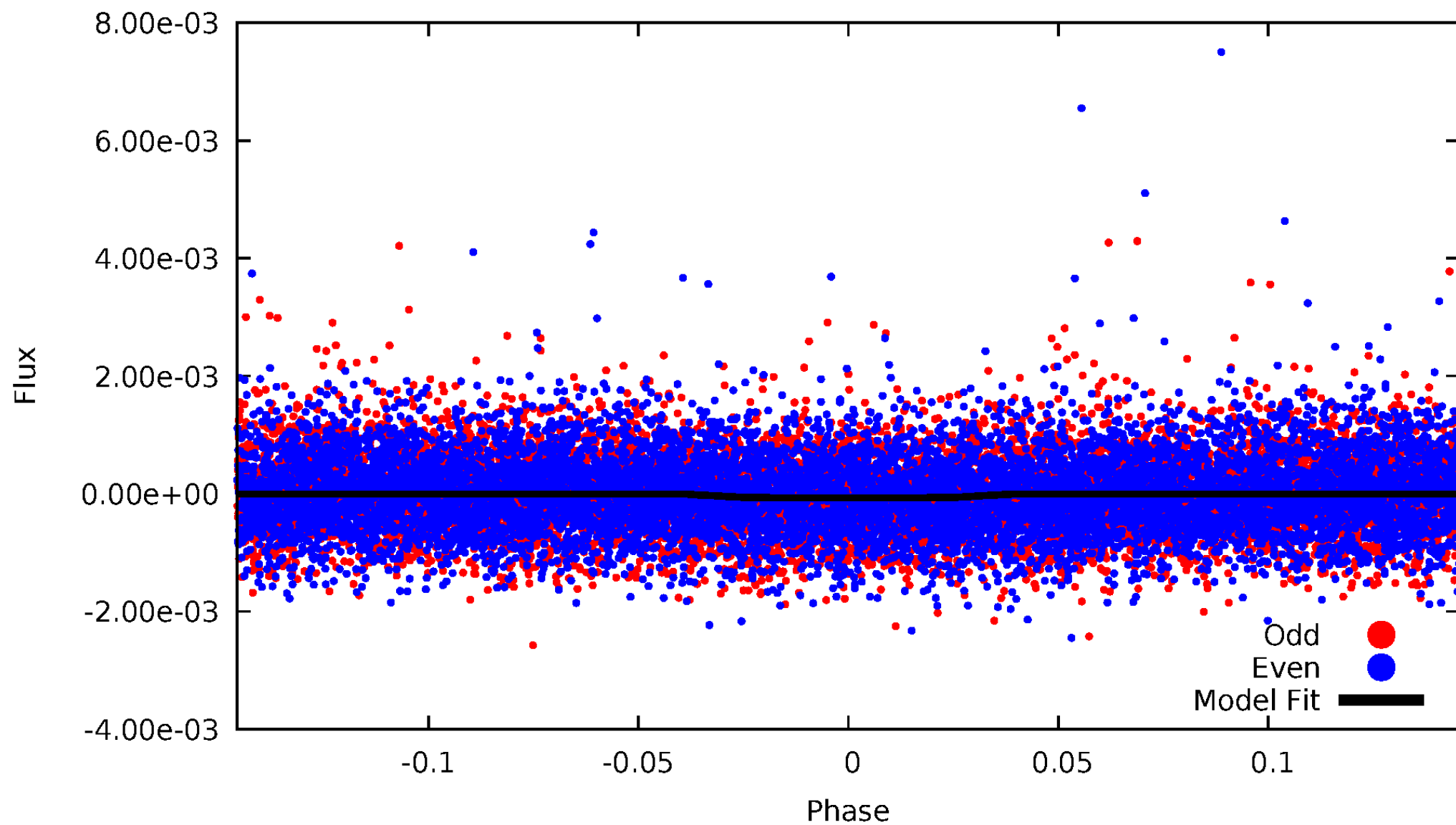


TCE 004857734-01



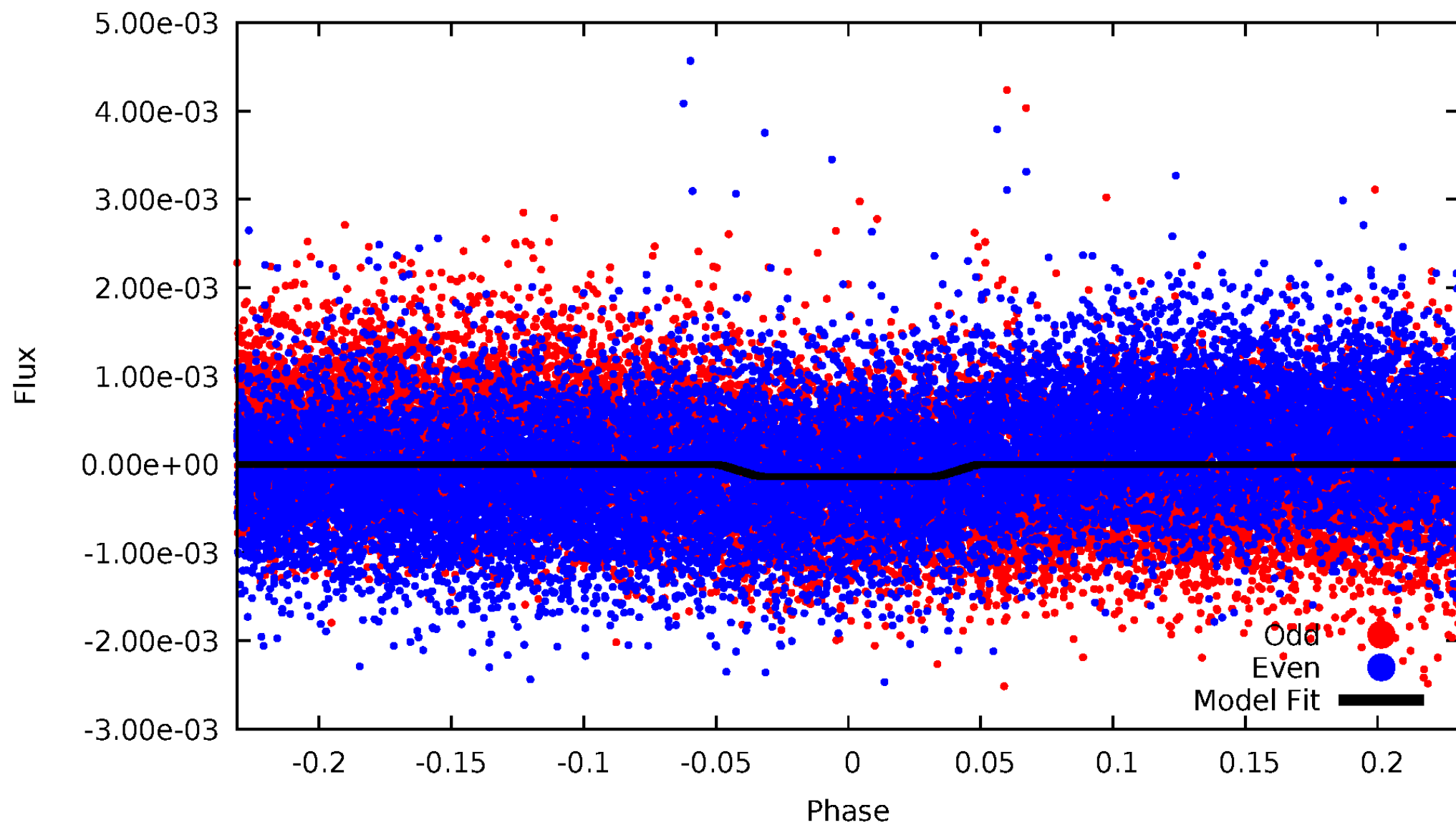
DV Odd/Even

TCE 004857734-01



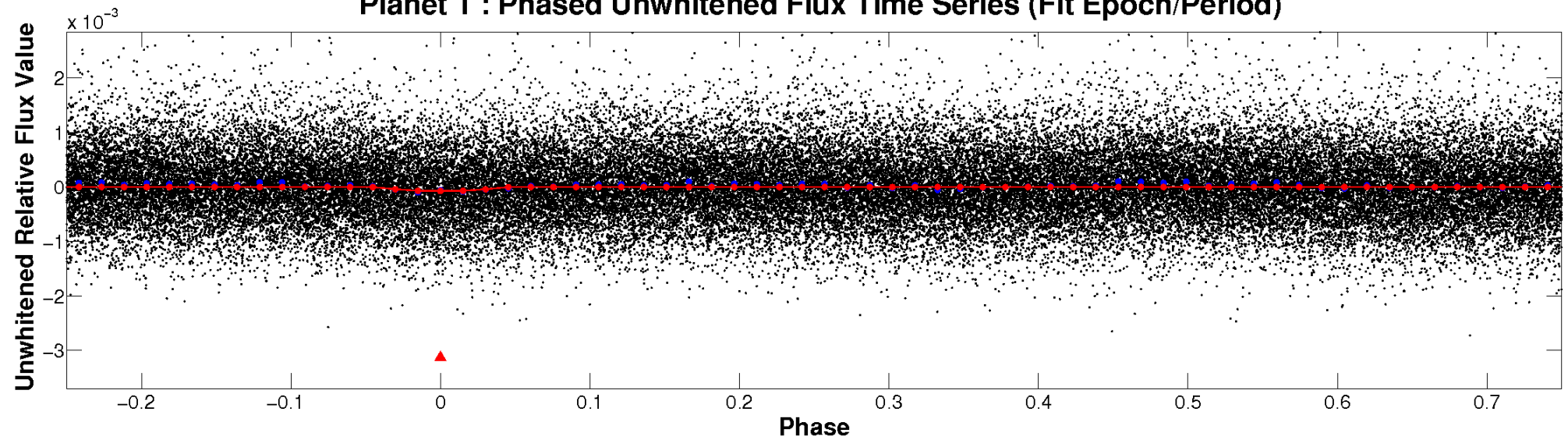
ALT Odd/Even

TCE 004857734-01

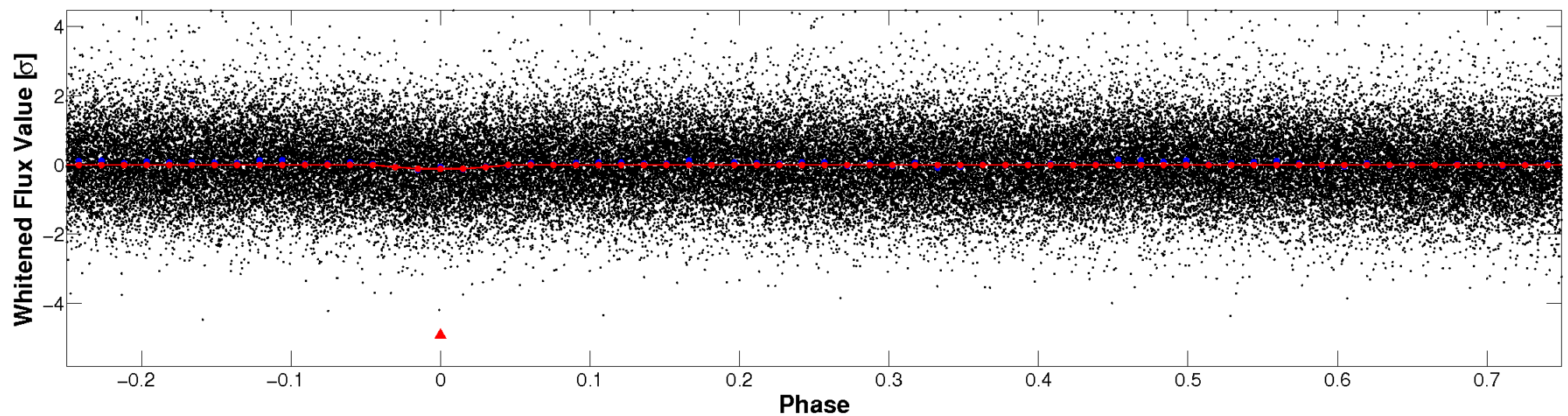


Non-Whitened Vs. Whitened Light Curve

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

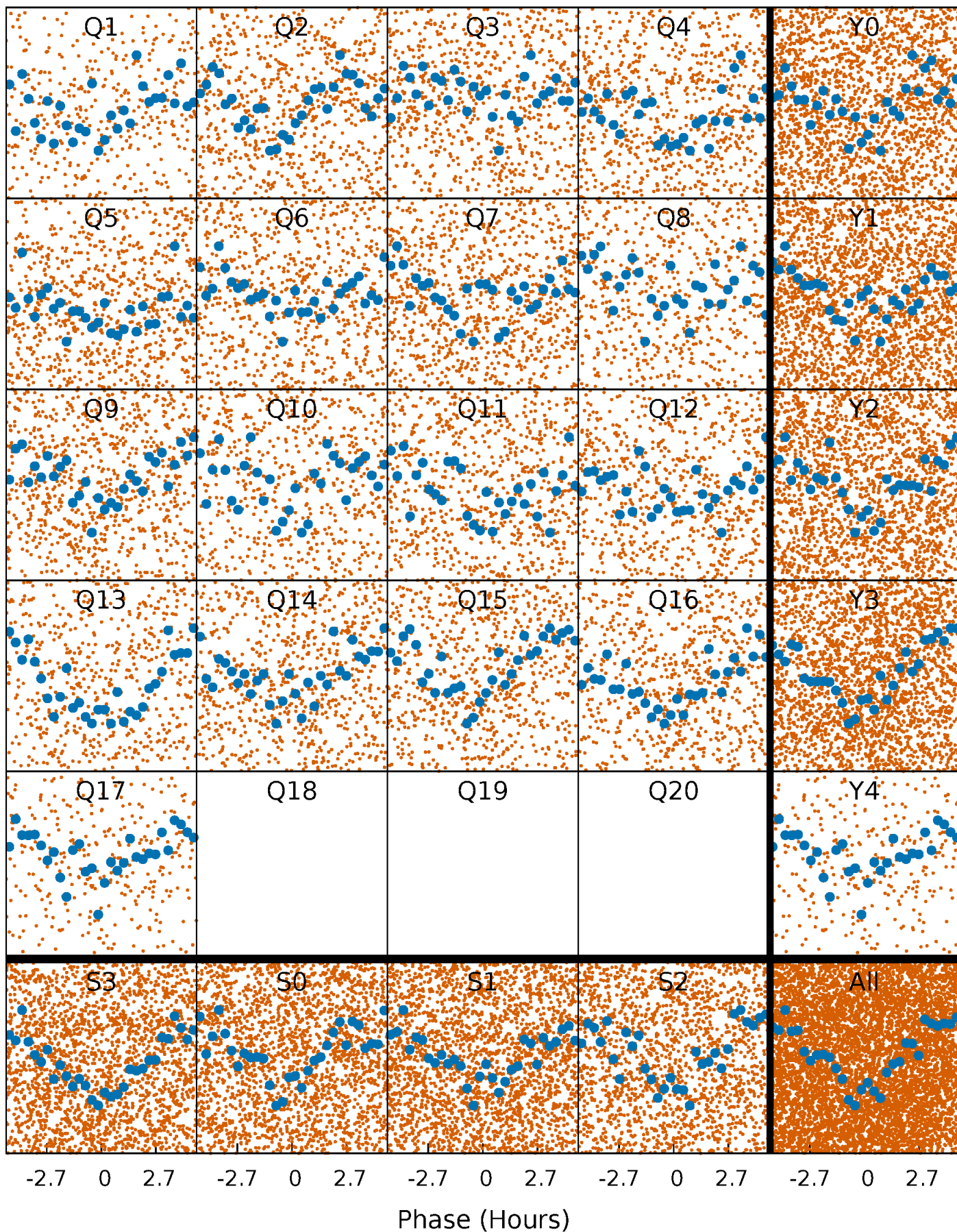


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



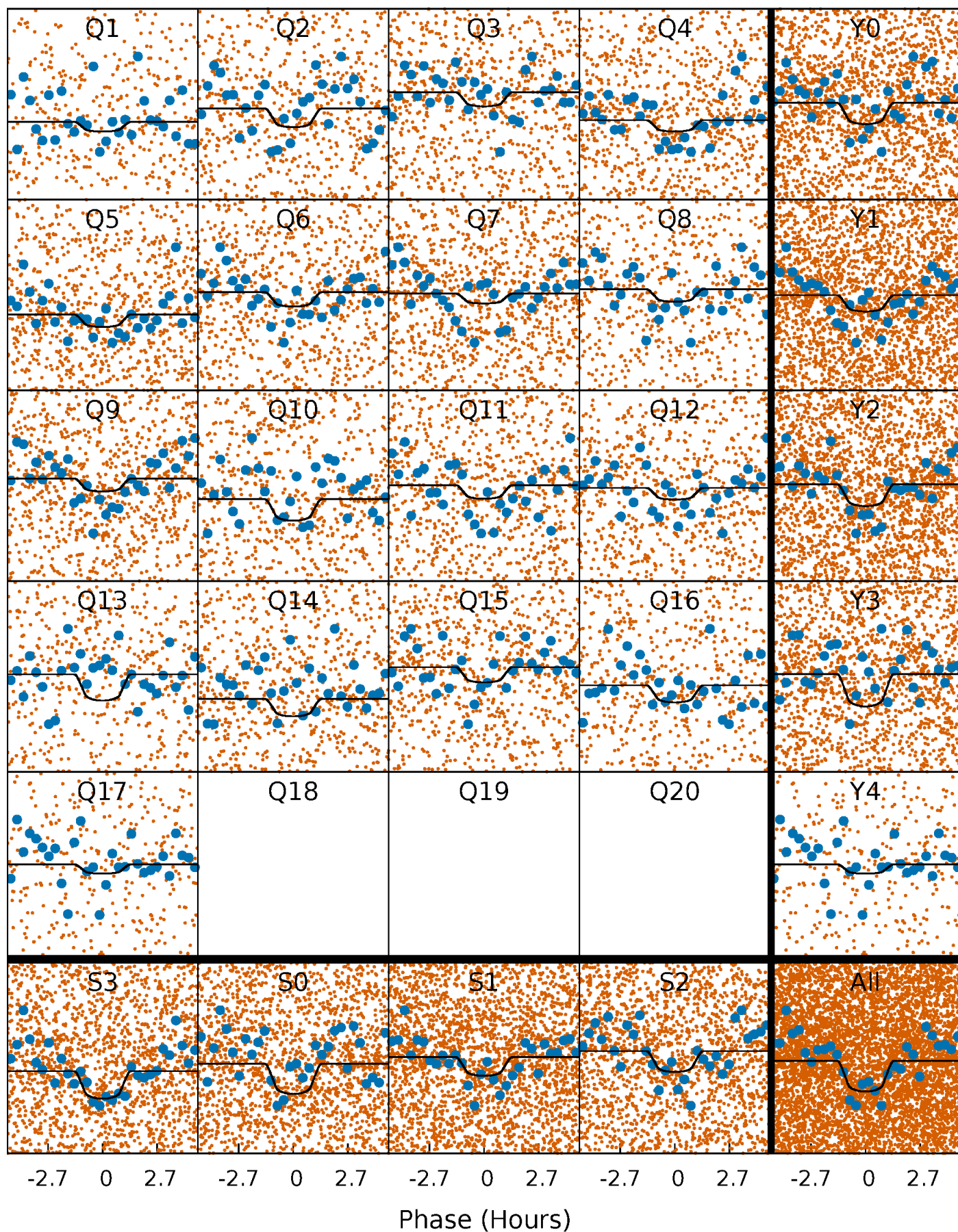
PDC Quarter-Phased Transit Curves

TCE 004857734-01 P= 1.351898 Days $T_0=132.083574$ (BKJD)



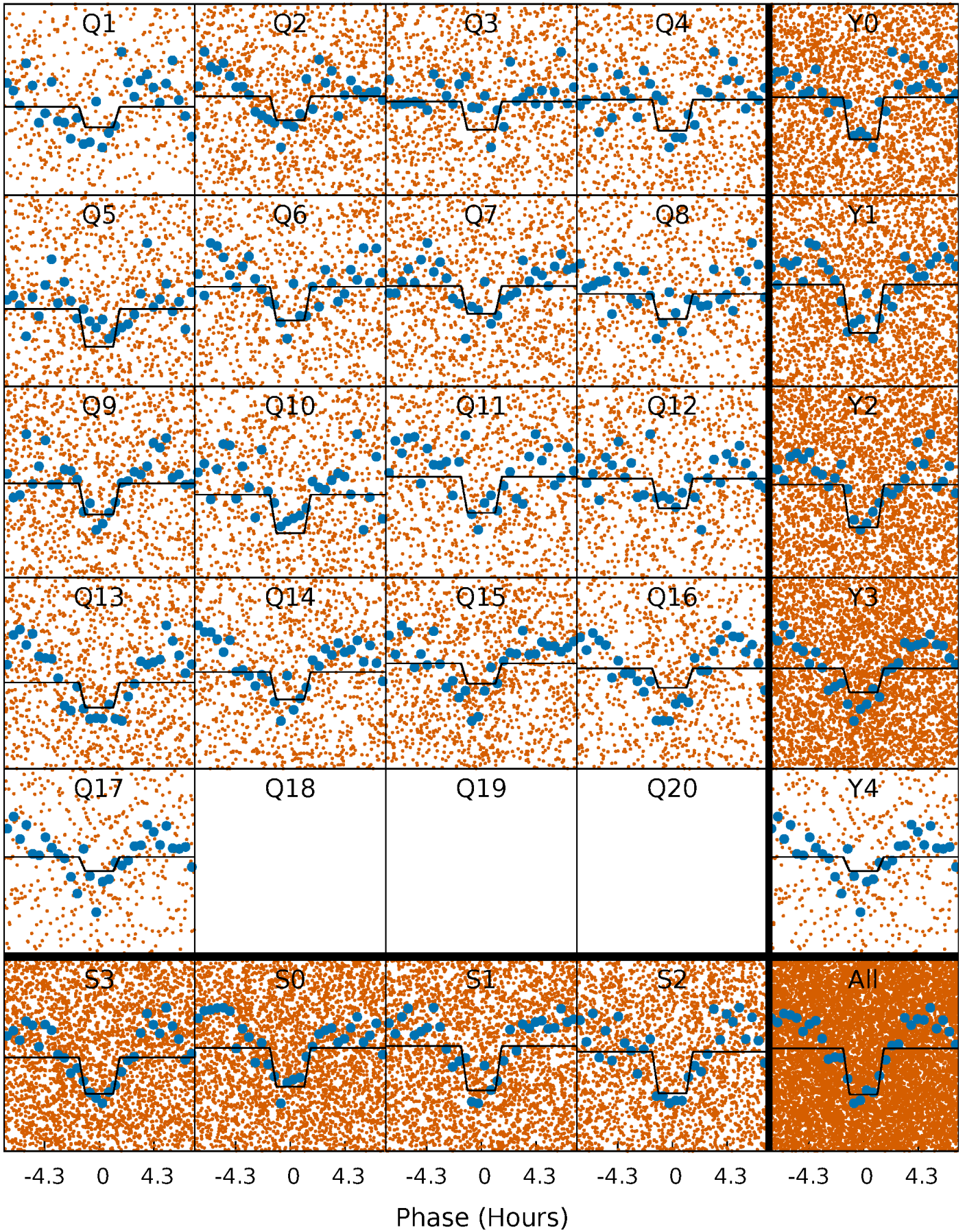
DV Quarter-Phased Transit Curves

TCE 004857734-01 P= 1.351898 Days $T_0=132.083574$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

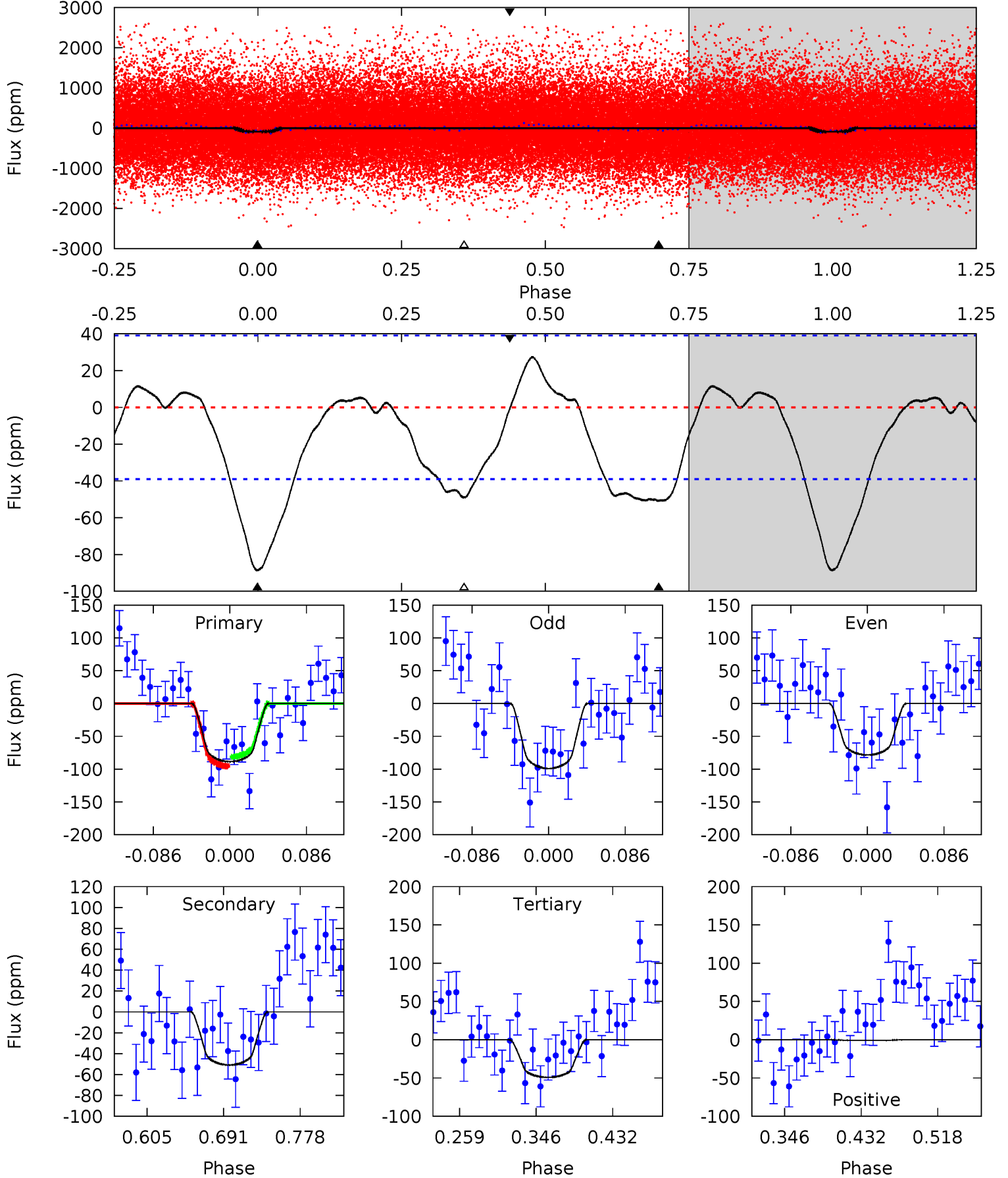
TCE 004857734-01 P= 1.351906 Days $T_0=132.080253$ (BKJD)



DV Model-Shift Uniqueness Test

004857734-01, P = 1.351898 Days, E = 130.731676 Days

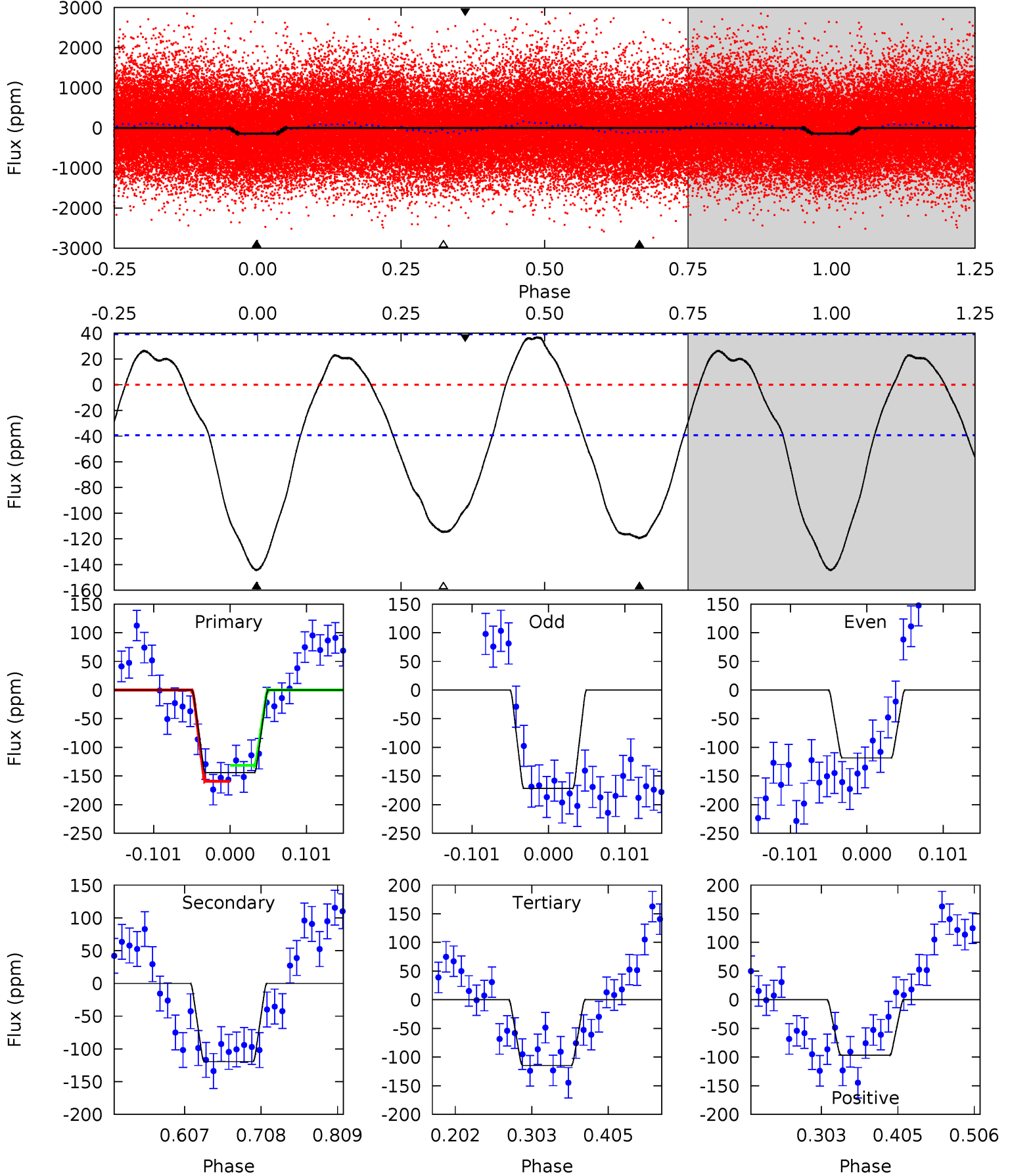
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	5.99	5.77	-0.09	4.60	1.71	2.31	4.66	10.5	0.22	6.08	1.22	0.95	0.24	0.85



Alt Model-Shift Uniqueness Test

004857734-01, P = 1.351906 Days, E = 130.728347 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	13.9	13.3	-11.2	4.56	1.64	5.51	3.45	28.0	0.56	25.1	3.11	1.05	0.20	1.63



Stellar Parameters For KIC 004857734

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5165^{+153}_{-138}	$4.633^{+0.033}_{-0.077}$	$-0.320^{+0.300}_{-0.300}$	$0.702^{+0.096}_{-0.052}$	$0.782^{+0.066}_{-0.088}$	$3.183^{+0.555}_{-0.821}$
	+3%/-3%	+1%/-2%	+94%/-94%	+14%/-7%	+8%/-11%	+17%/-26%
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 004857734-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 8	$0.90^{+0.73}_{-0.56}$	1816^{+70}_{-64}	4198^{+2219}_{-772}	15^{+93}_{-11}
Alt.	-119 ± 9	$1.04^{+0.75}_{-0.61}$	1822^{+66}_{-64}	4695^{+2663}_{-805}	29^{+150}_{-19}

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 $A_{obs} \gg 1.0$

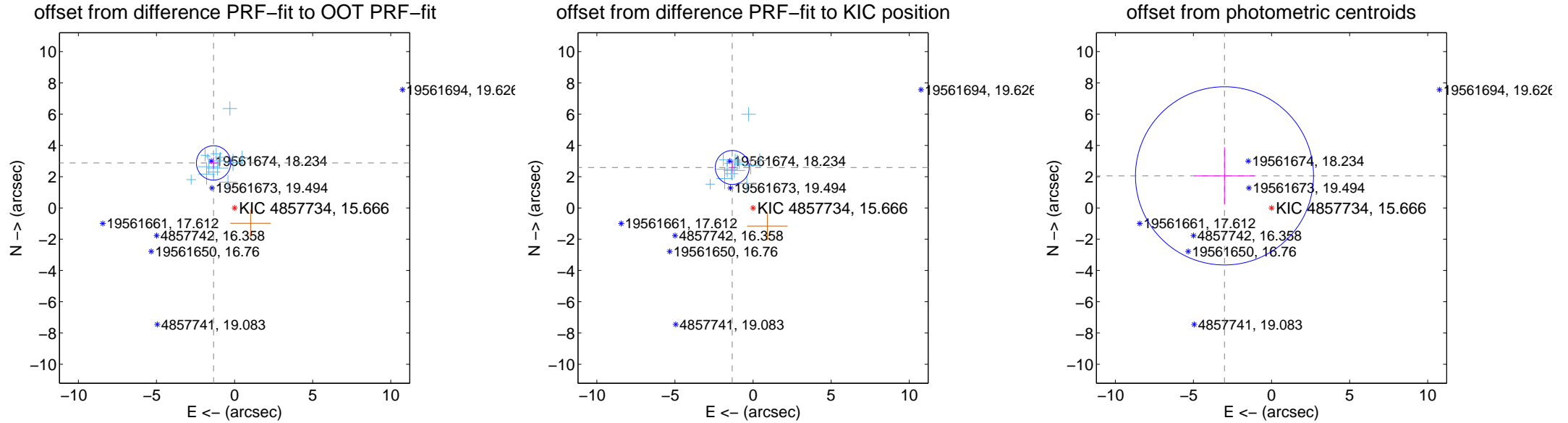
DV Centroid Data

Supplemental centroid analysis for 004857734-01. Kepler magnitude: 15.67. Transit SNR 6.36

There are 14 quarters with good PRF difference image offsets

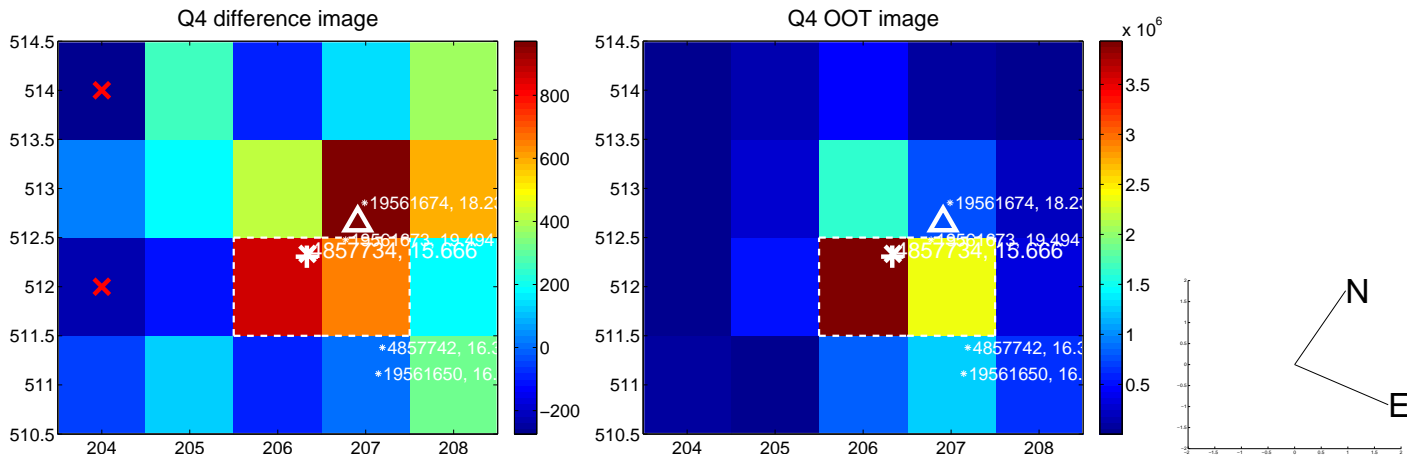
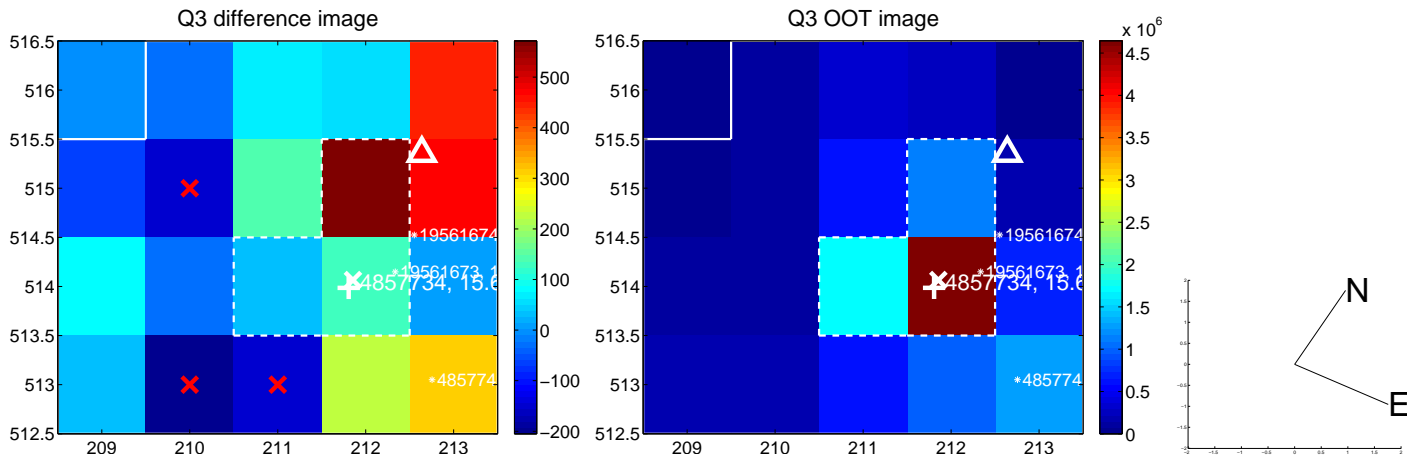
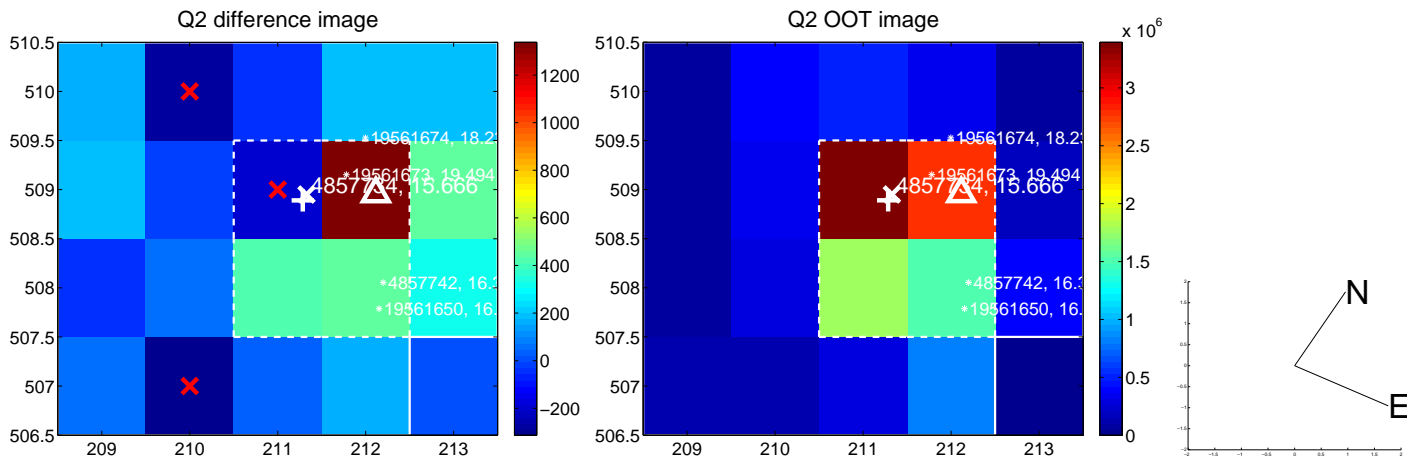
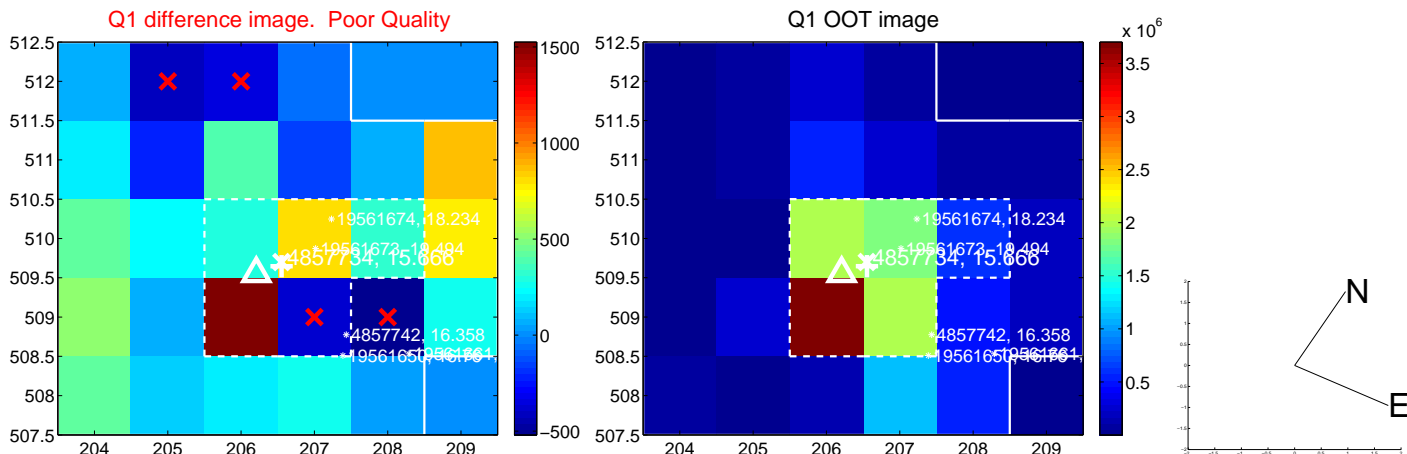
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.179 ± 0.367	8.67	1.346 ± 0.260	2.880 ± 0.365
PRF-fit source offset from KIC position	2.912 ± 0.362	8.04	1.332 ± 0.237	2.589 ± 0.379
photometric centroid source offset	3.64 ± 1.90	1.92	3.01 ± 1.93	2.05 ± 1.83

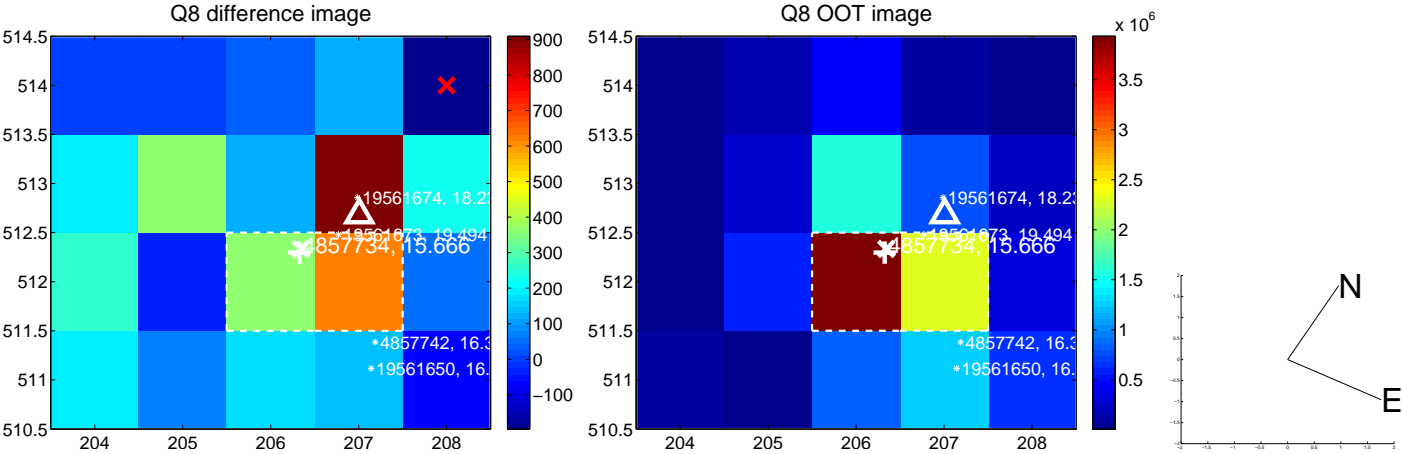
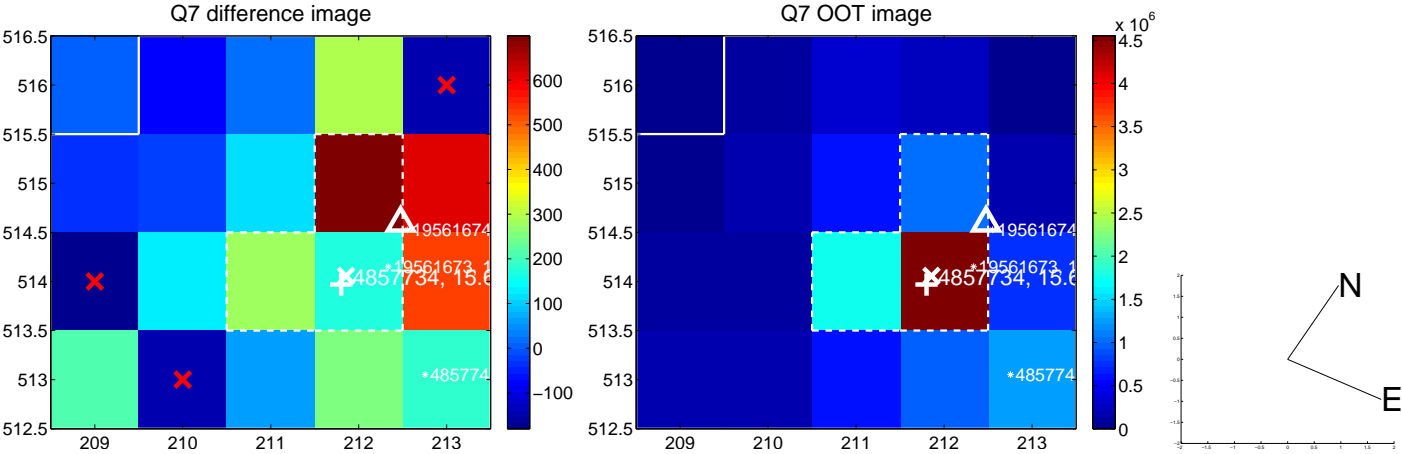
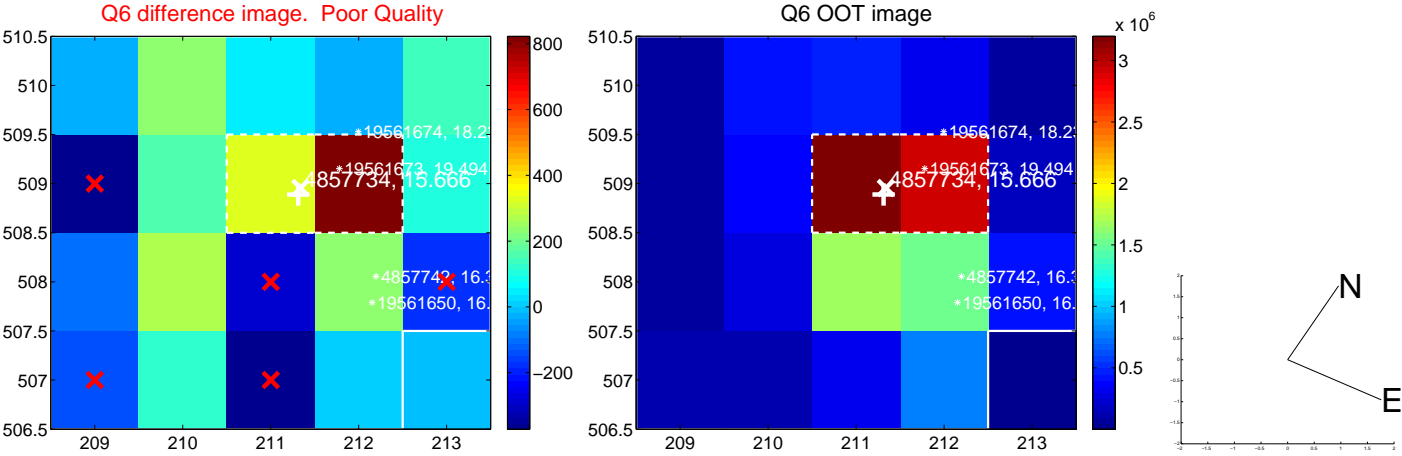
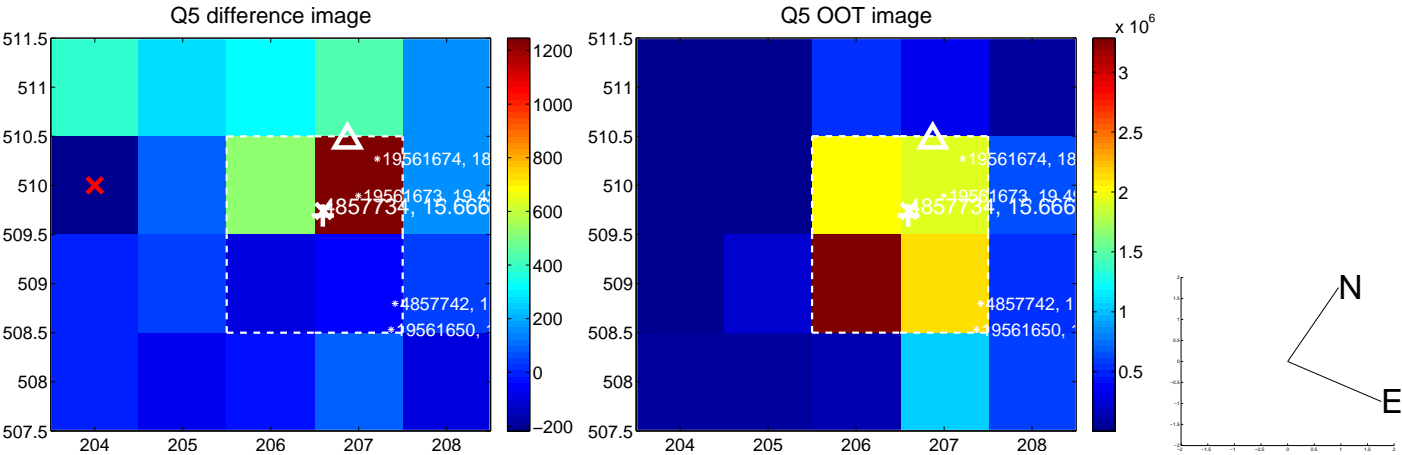


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

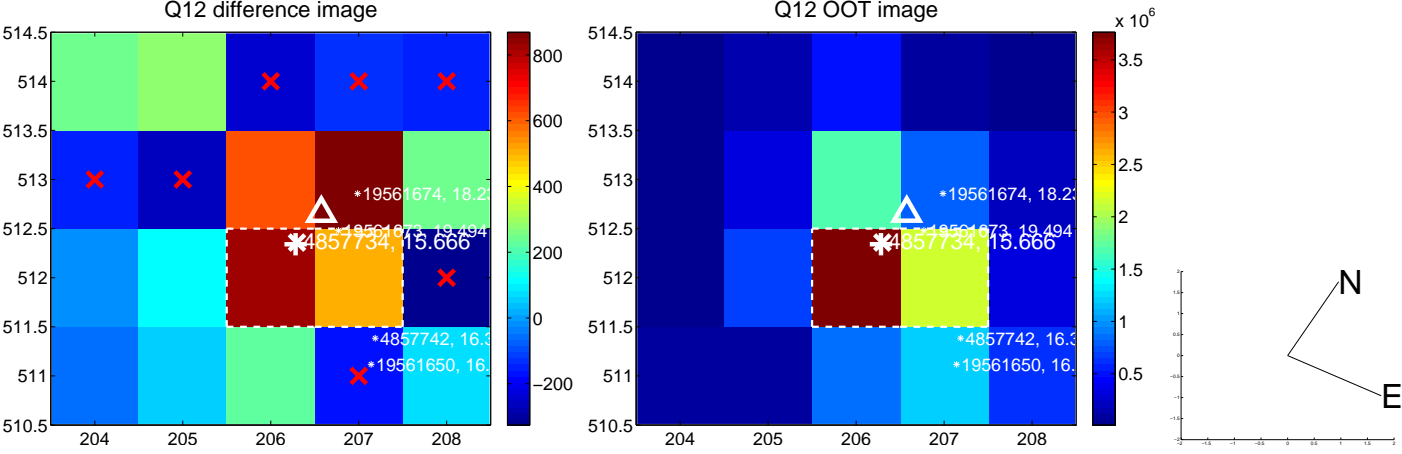
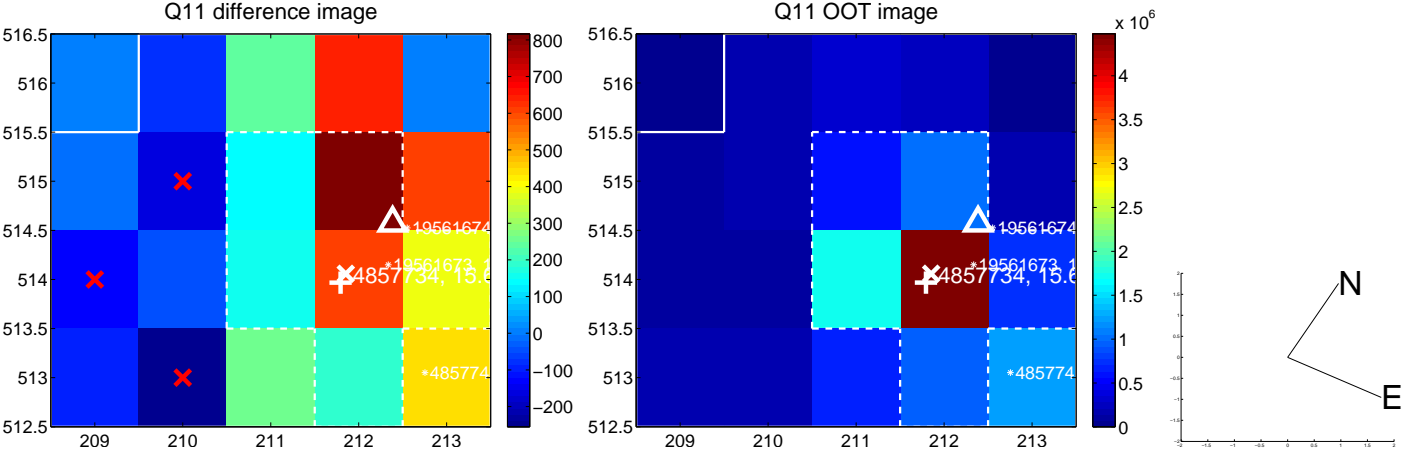
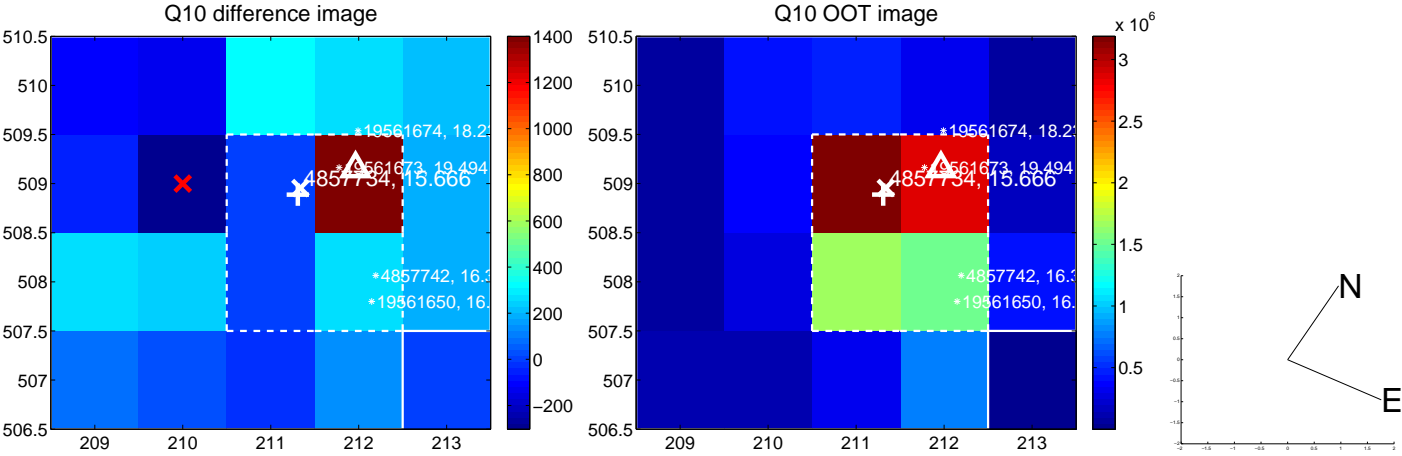
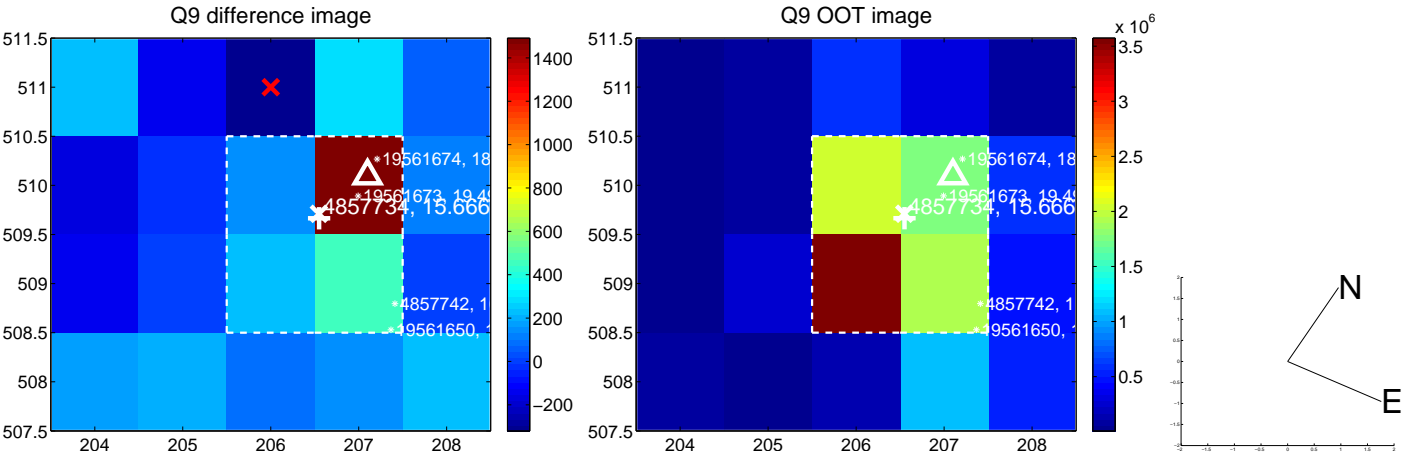
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



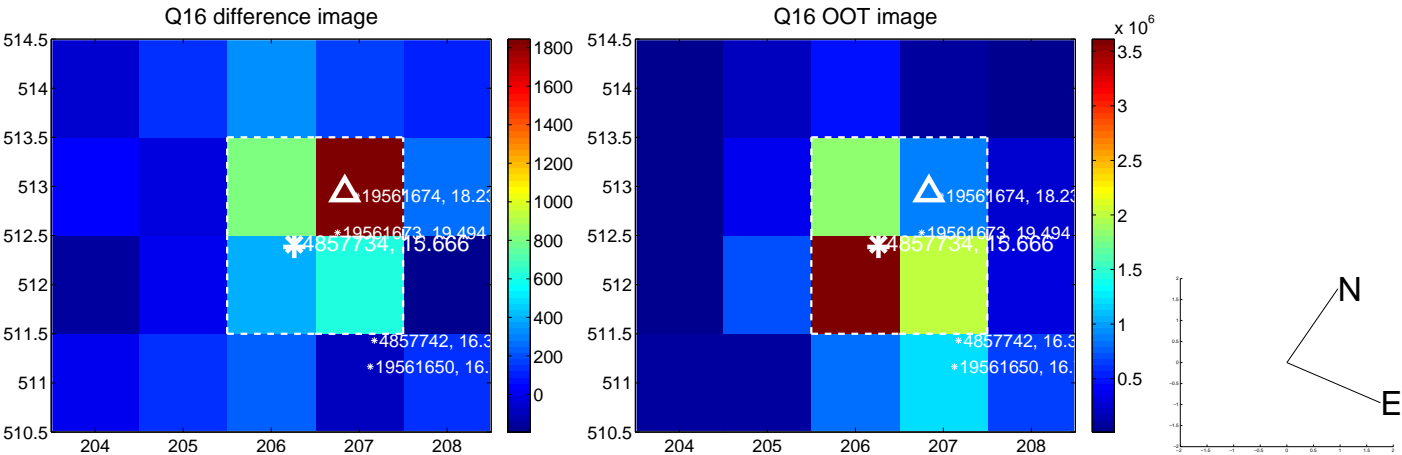
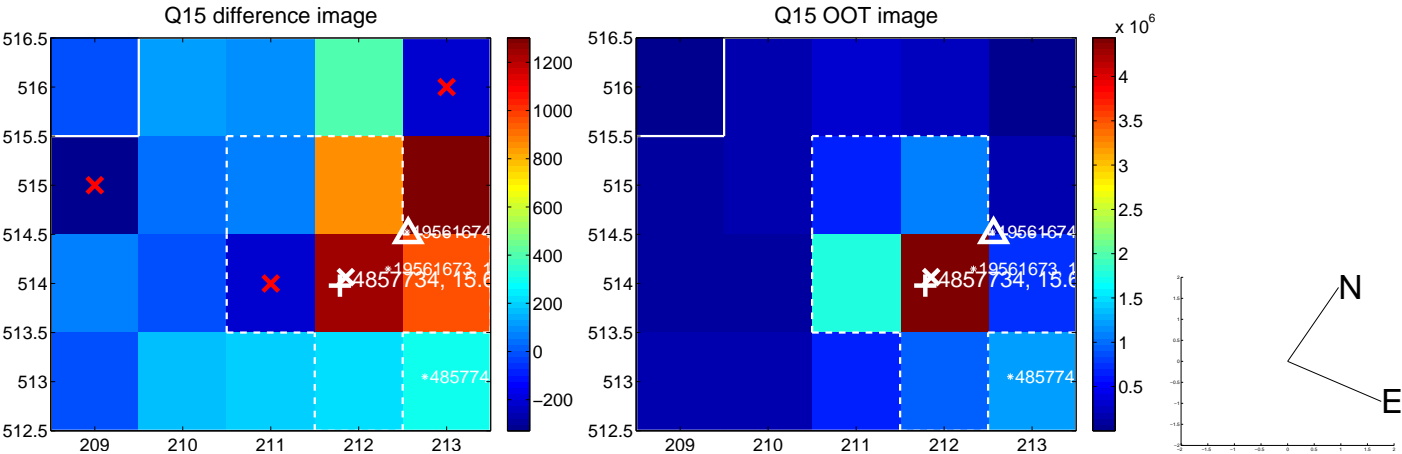
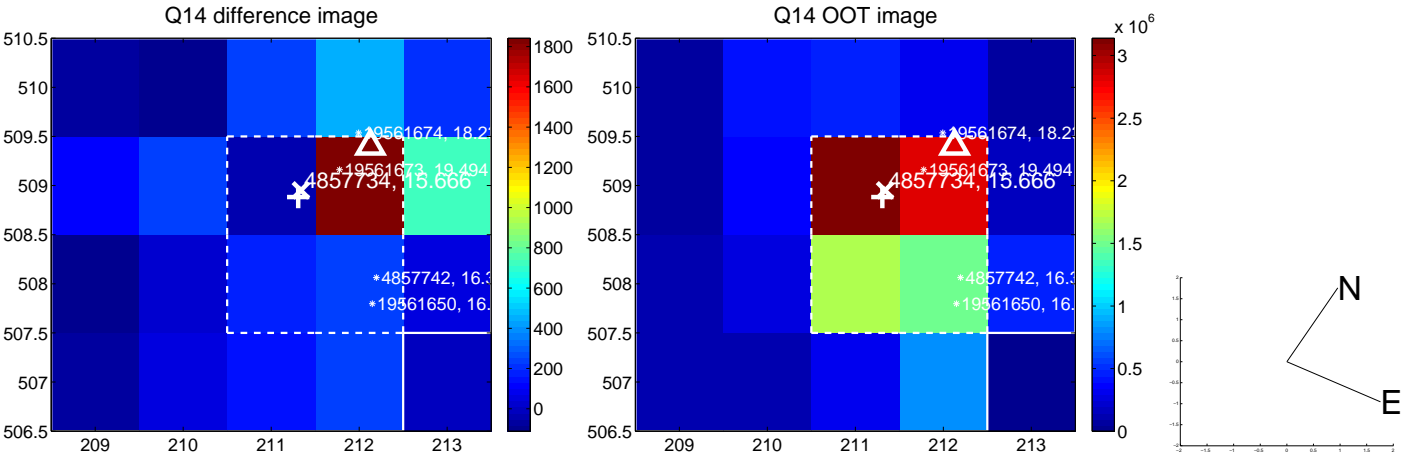
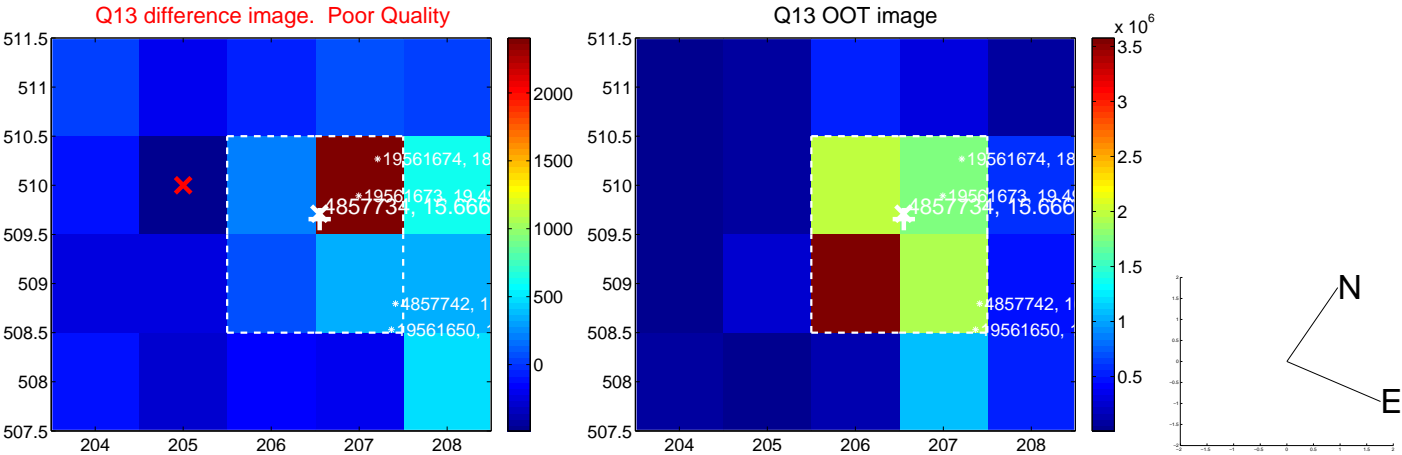
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



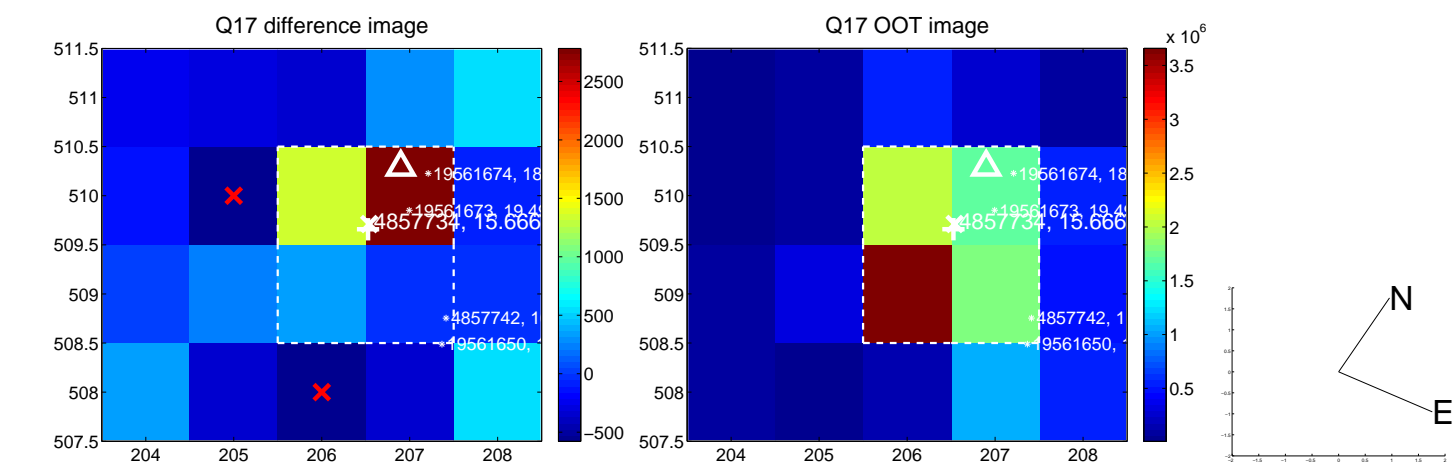
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



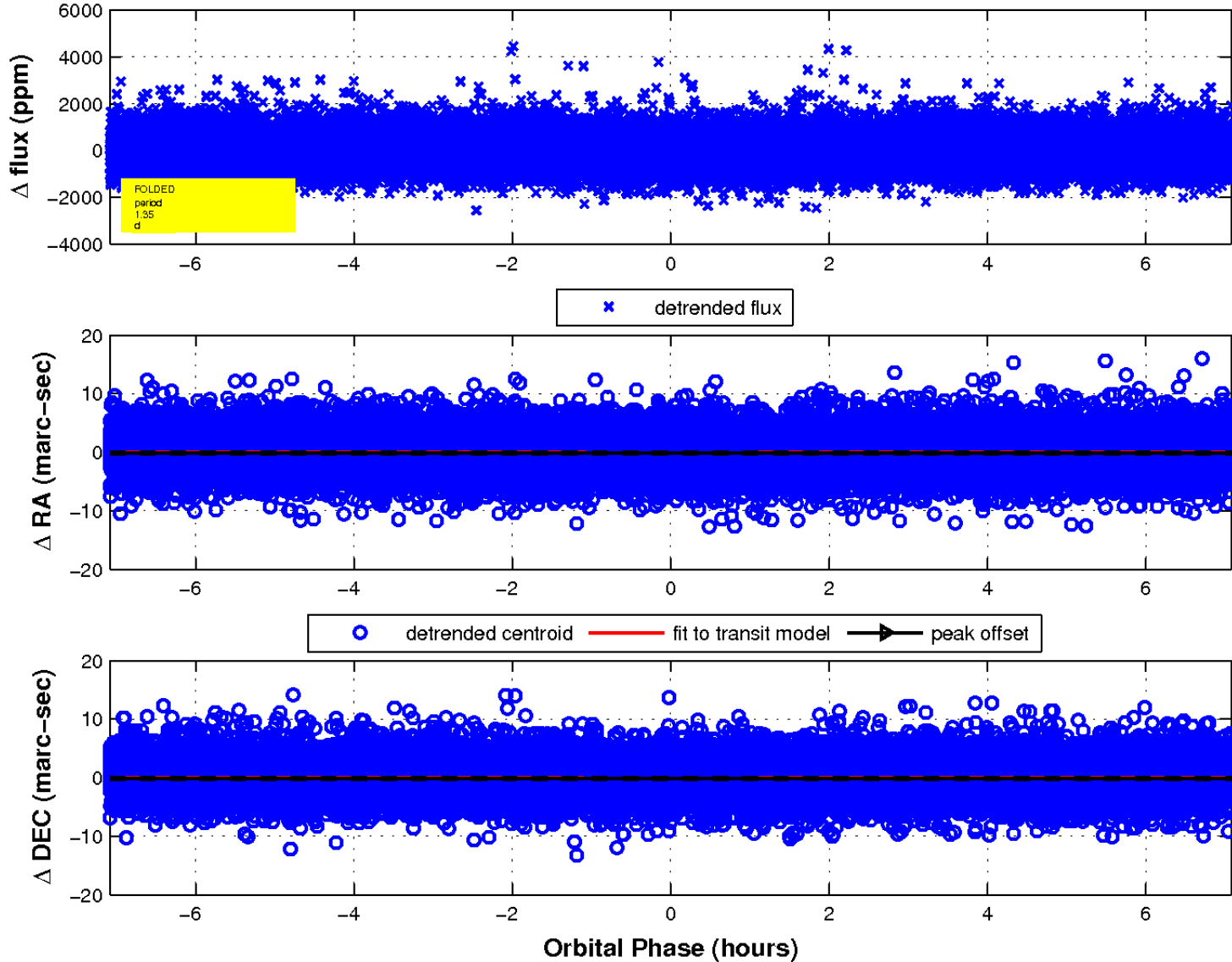
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

