

KIC 007137798

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})
007137798-01	OBS	6836.01	2.253546	132.484364	170588.6	5.169	5622.3	4030.6	1.66	6951	107.97	4230.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007137798-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—DEEP_V_SHAPED

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.

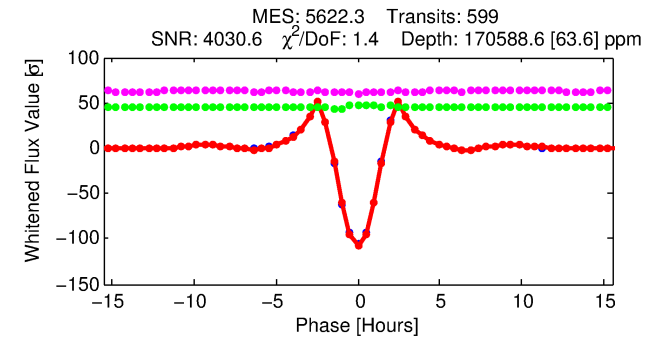
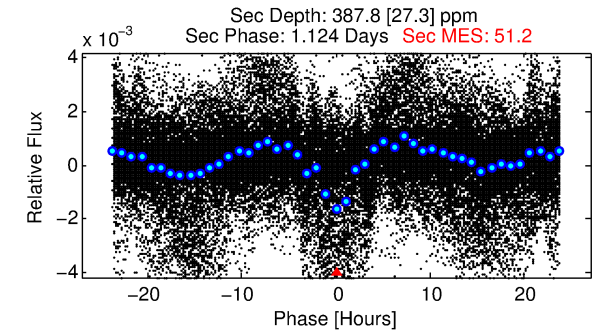
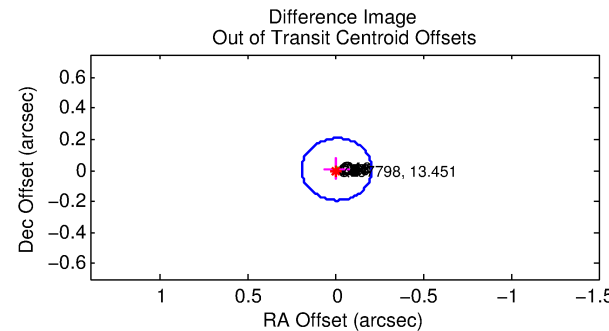
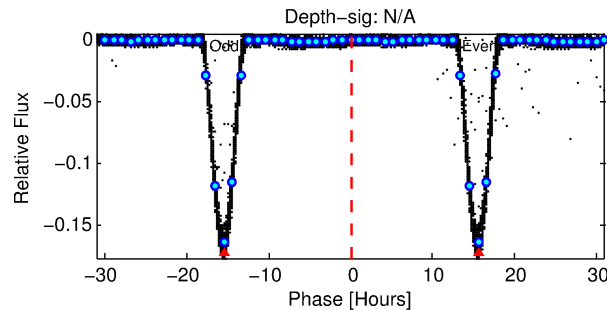
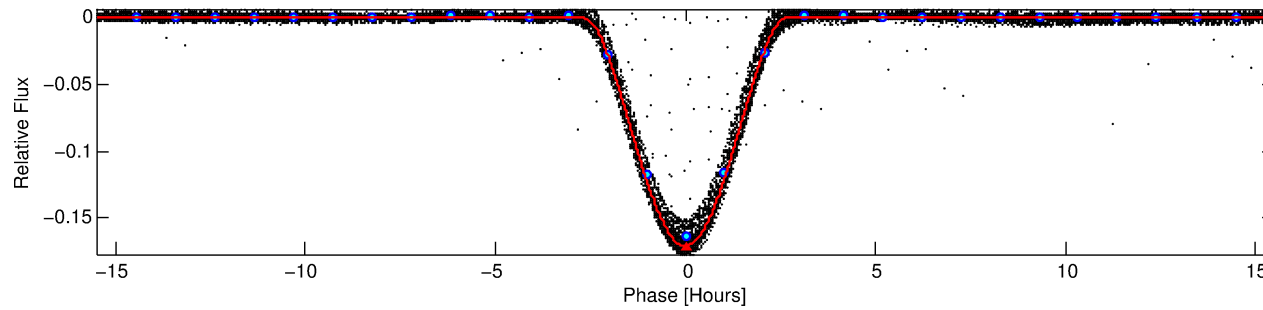
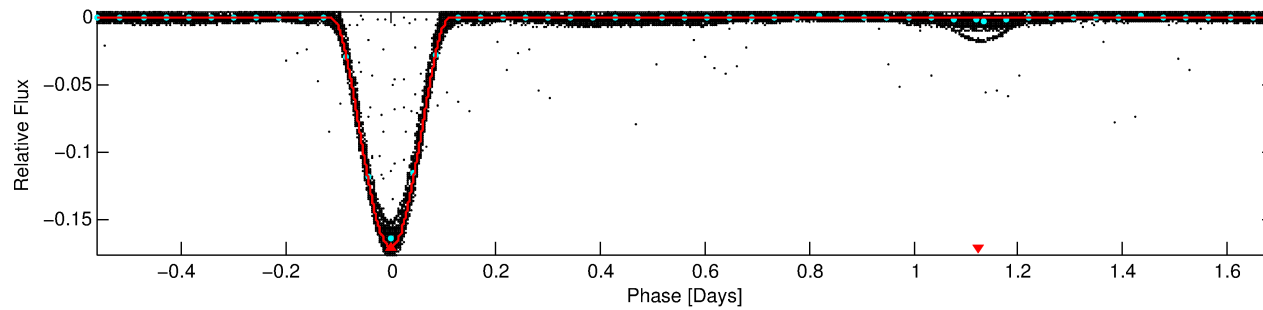
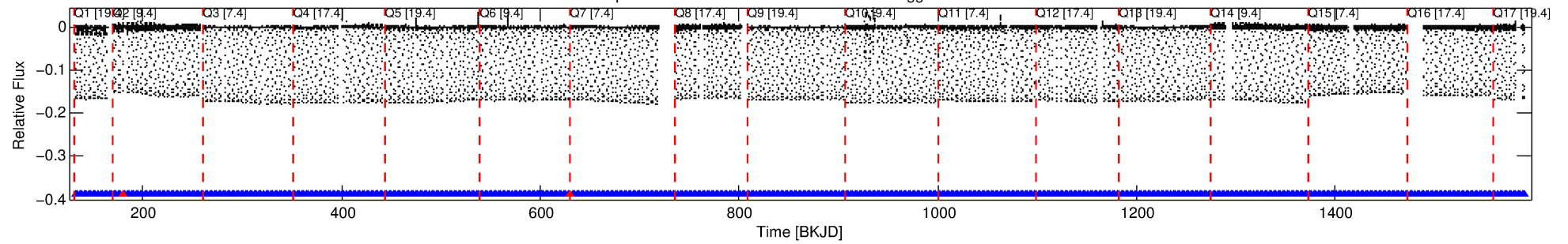
Ephemeris Match Information For 007137798-01

No Significant Match Found

DV One-Page Summary

KIC: 7137798 Candidate: 1 of 1 Period: 2.254 d
KOI: K06836.01 Corr: 0.993

Kp: 13.45 R*: 1.66 Rs Teff: 6951.0 K Logg: 4.12 Fe/H: -0.320



DV Fit Results:

Period = 2.25355 [0.00000] d
Epoch = 132.4844 [0.0000] BKJD
Rp/R* = 0.5953 [0.0072]
a/R* = 4.46 [0.01]
b = 0.94 [0.01]
Seff = 4230.08 [1736.69]
Teq = 2056 [211] K
Rp = 107.97 [31.66] Re
a = 0.0370 [0.0093] AU
Ag = 0.02 [0.01] [-101.86σ]
Teffp = 1264 [57] K [-3.62σ]

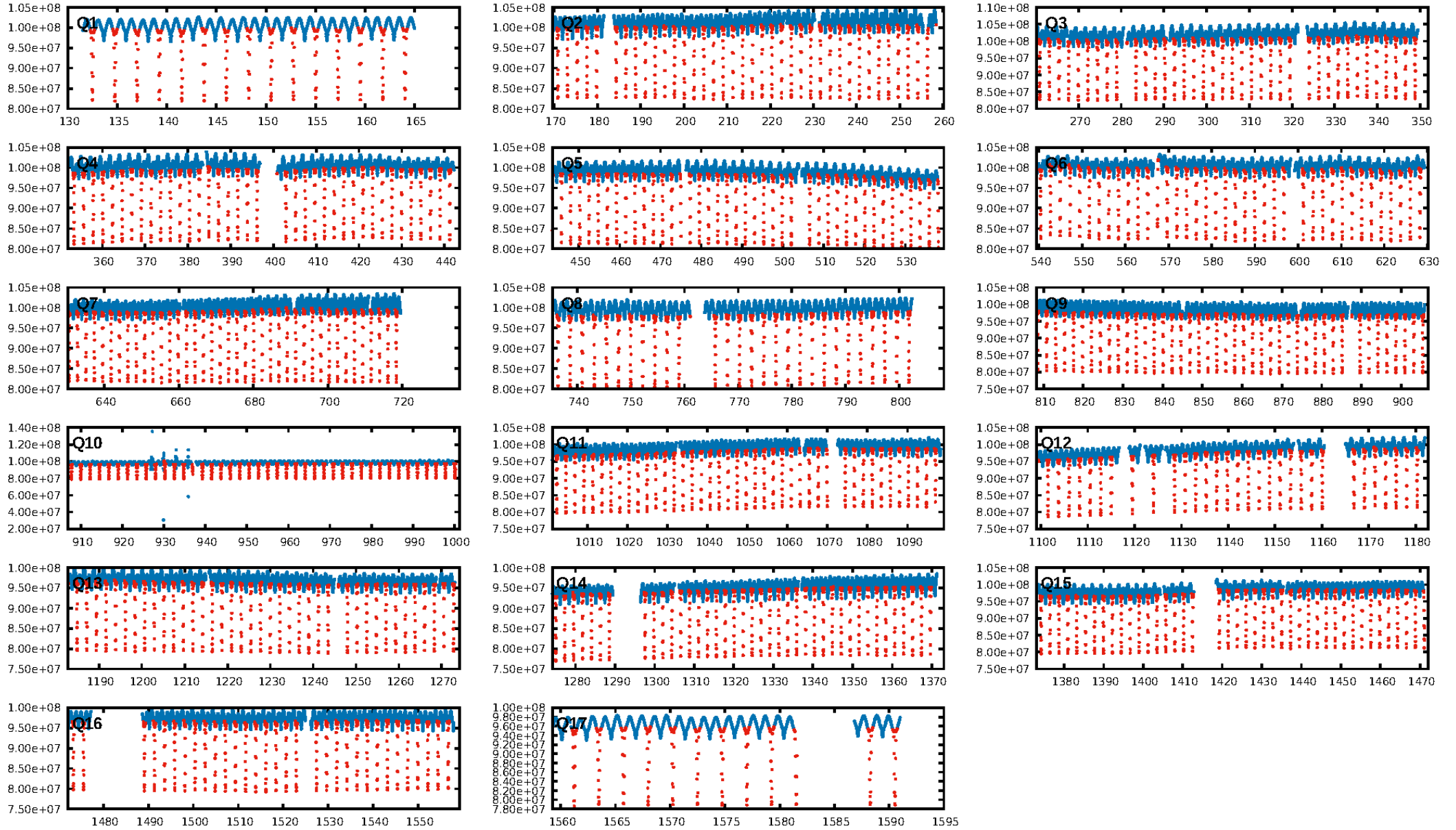
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [570/572]
GhostDiagnostic-chr: 1.289
Centroid-sig: 0.0%
Centroid-so: 0.163 arcsec [491.23σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.156 arcsec [2.30σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

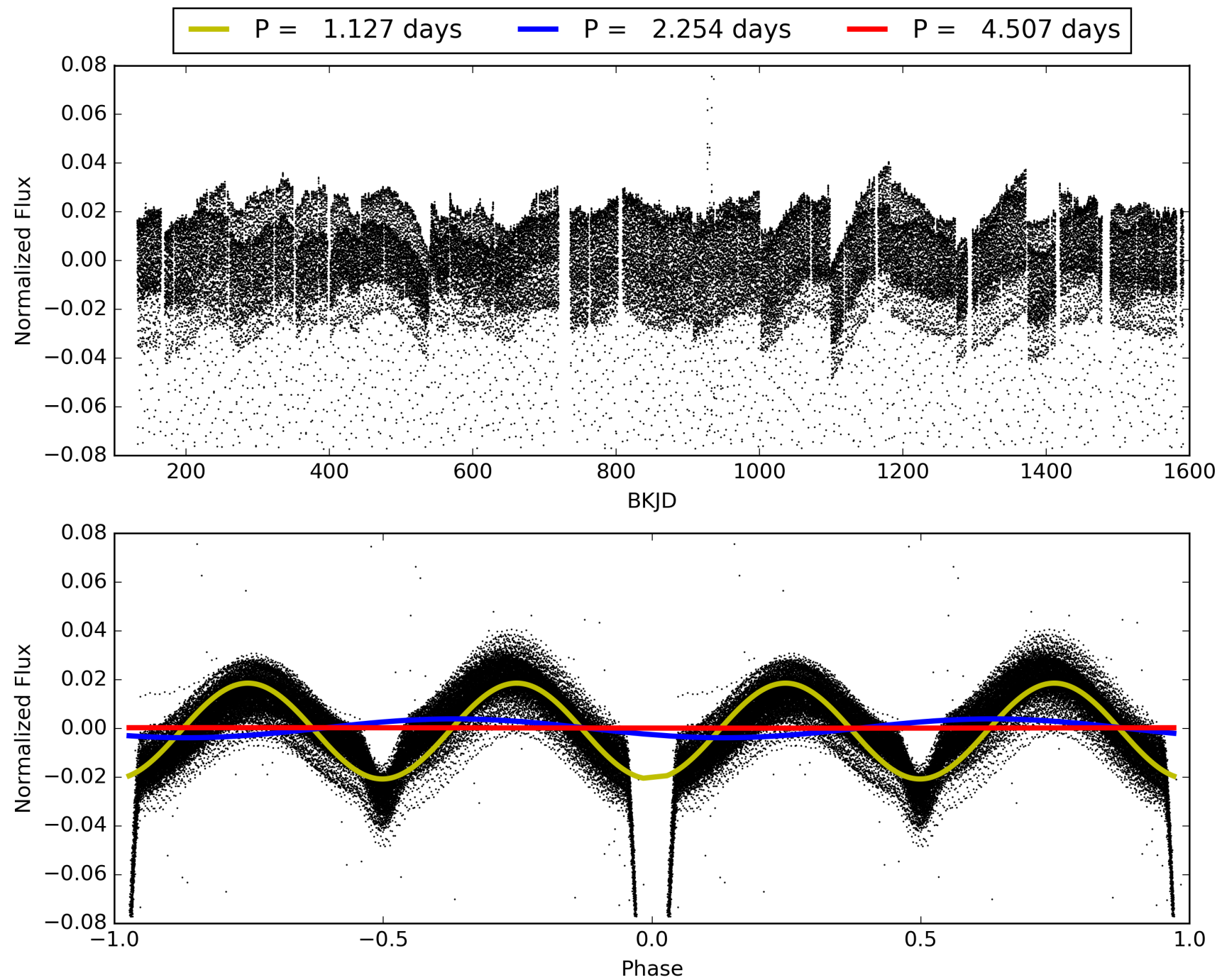
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:50:42 Z

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

TCE 007137798-01, PDC Light Curves

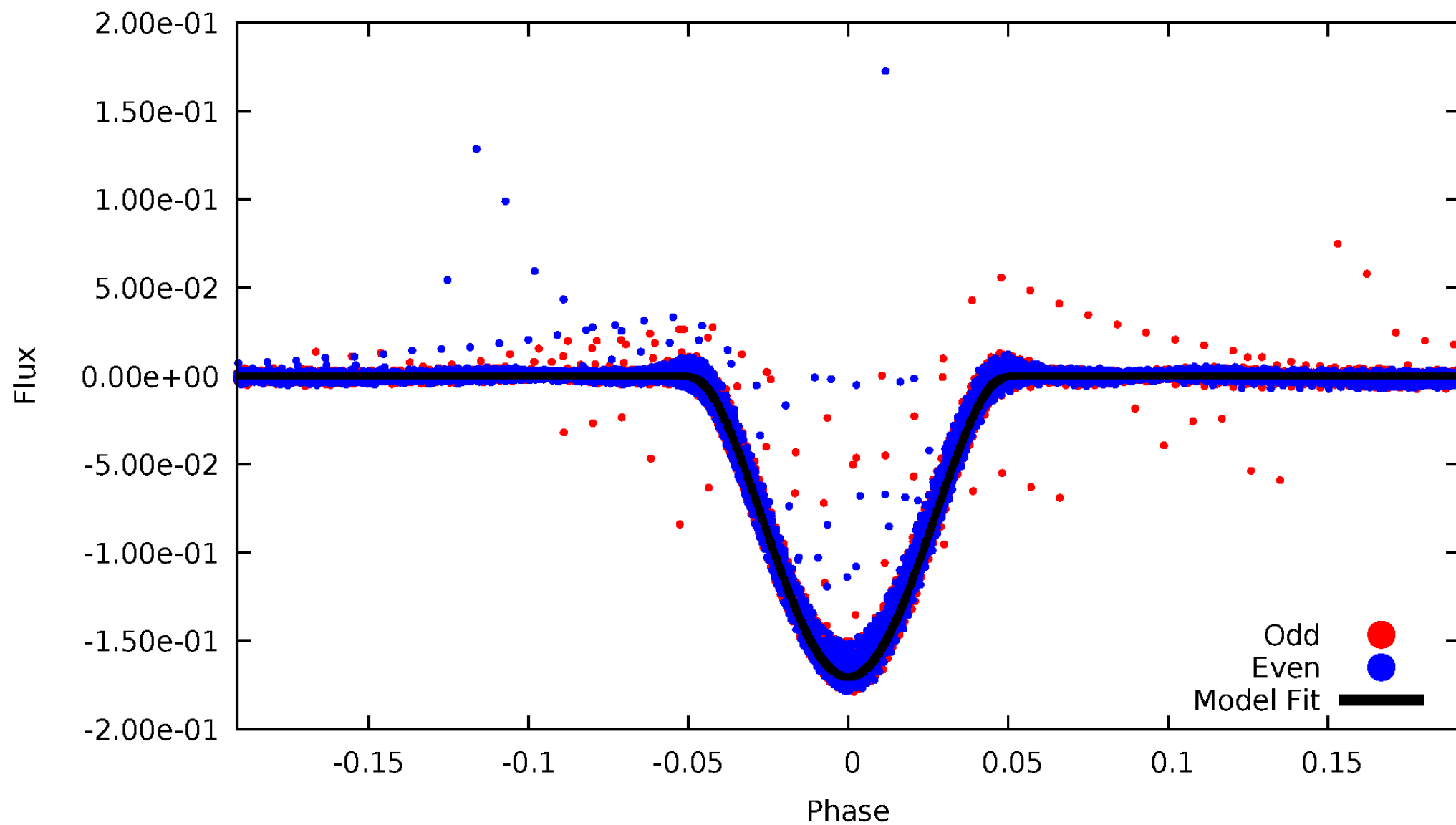


TCE 007137798-01



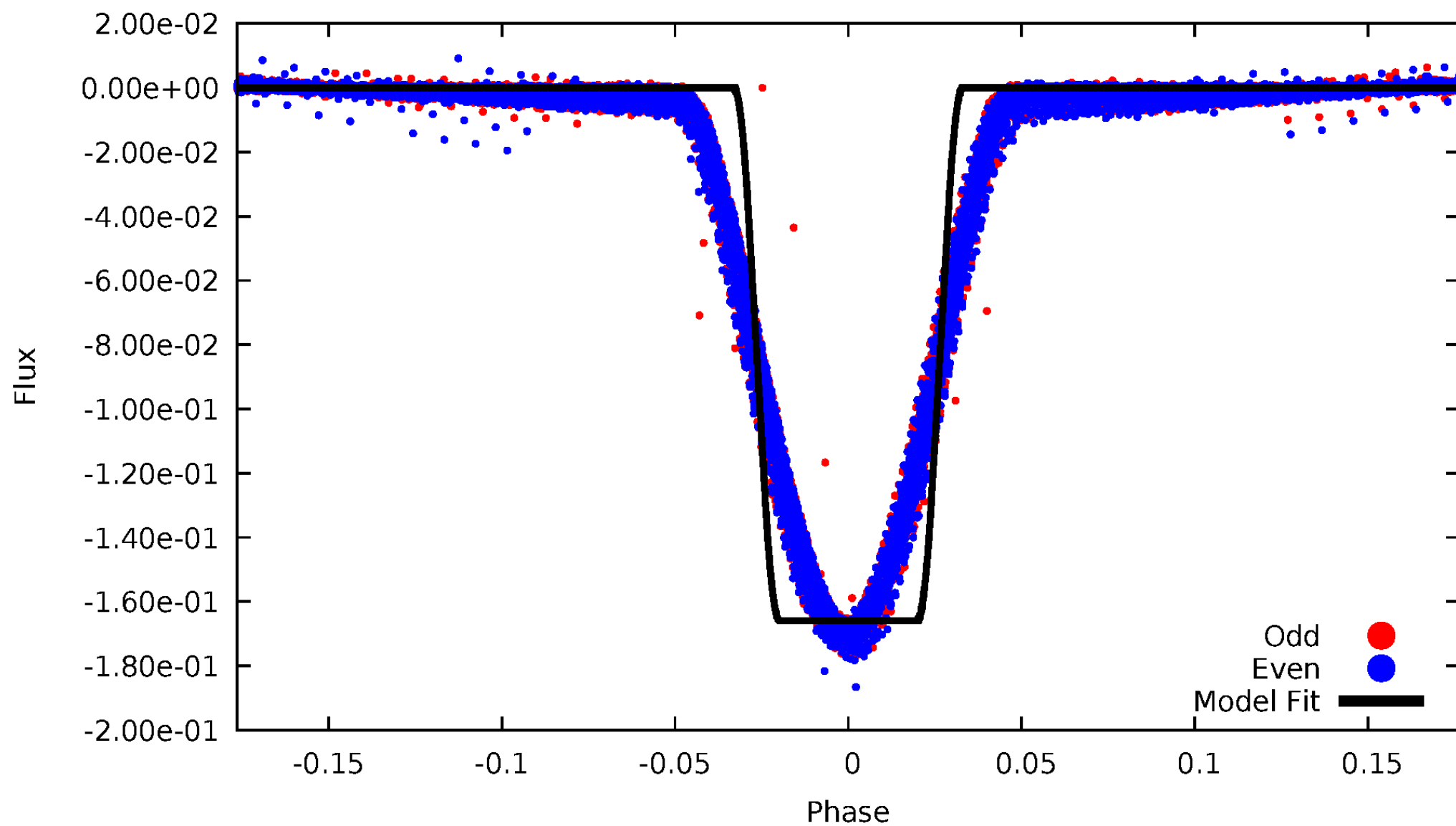
DV Odd/Even

TCE 007137798-01



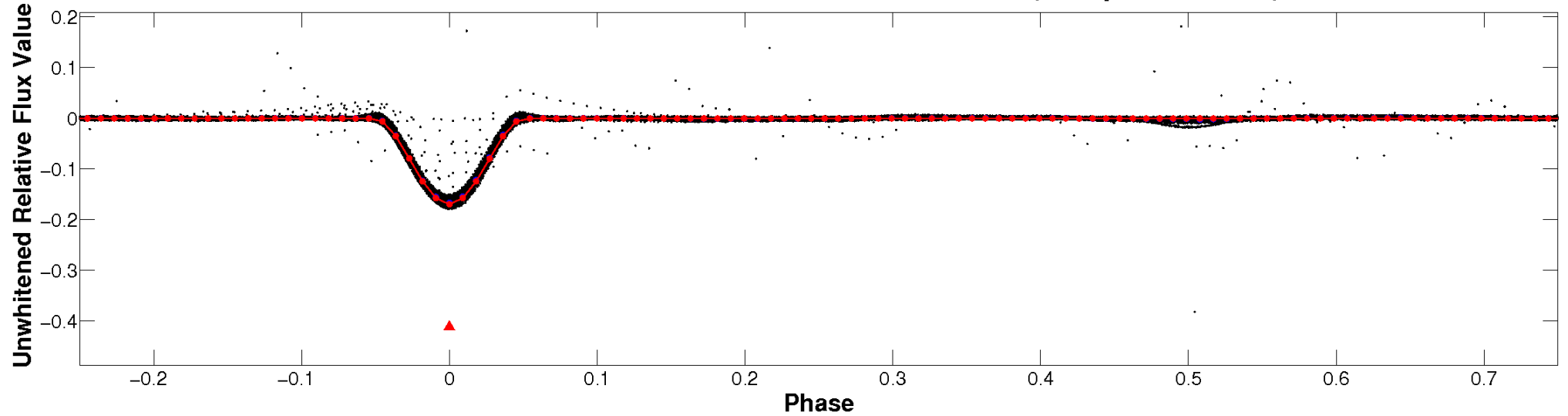
ALT Odd/Even

TCE 007137798-01

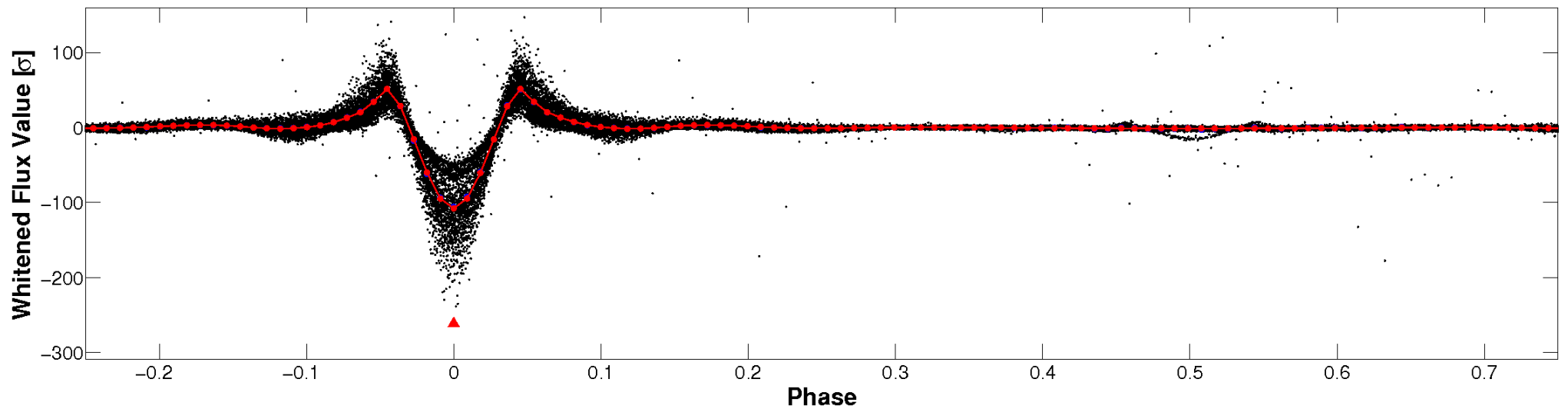


Non-Whitened Vs. Whitened Light Curve

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

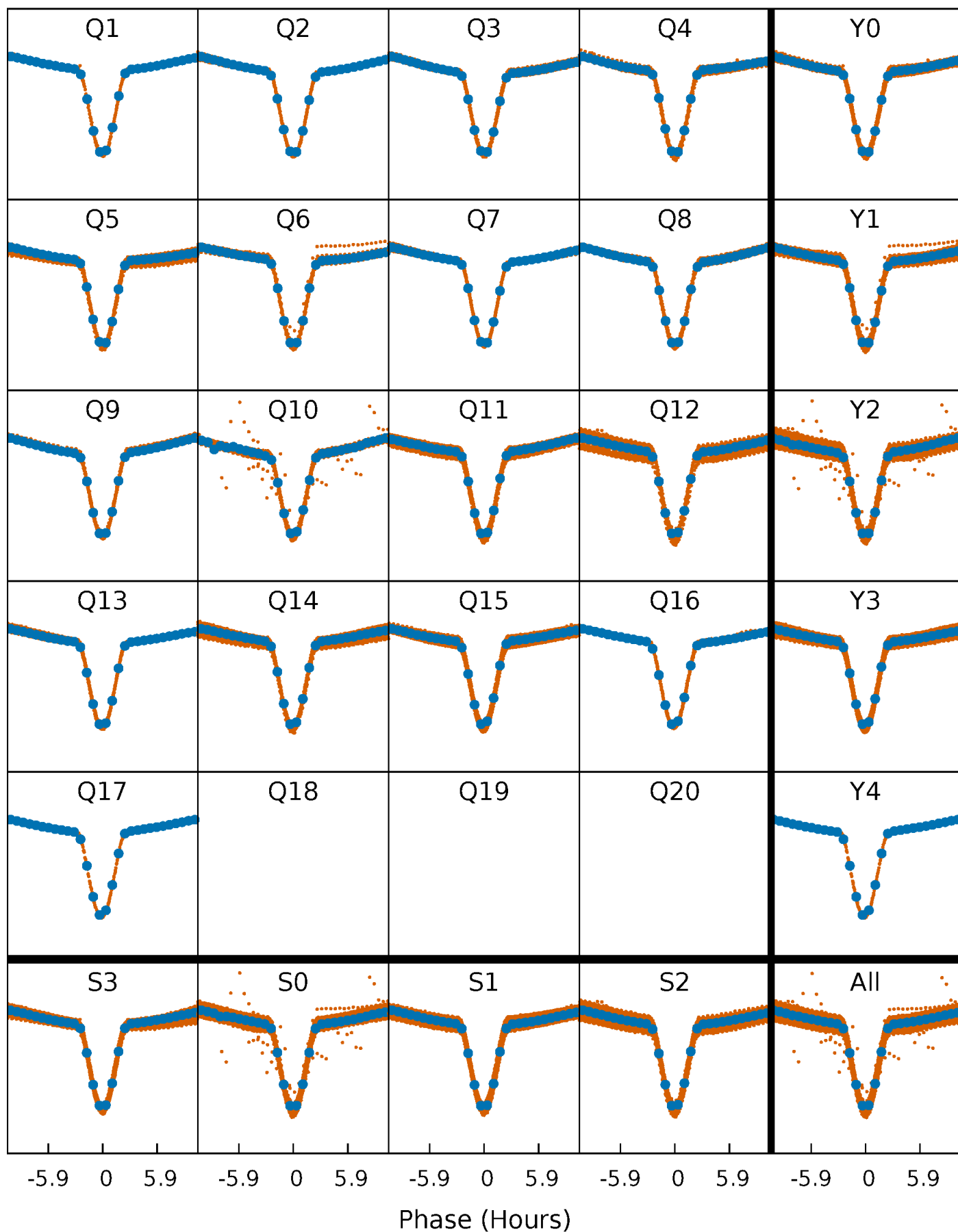


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



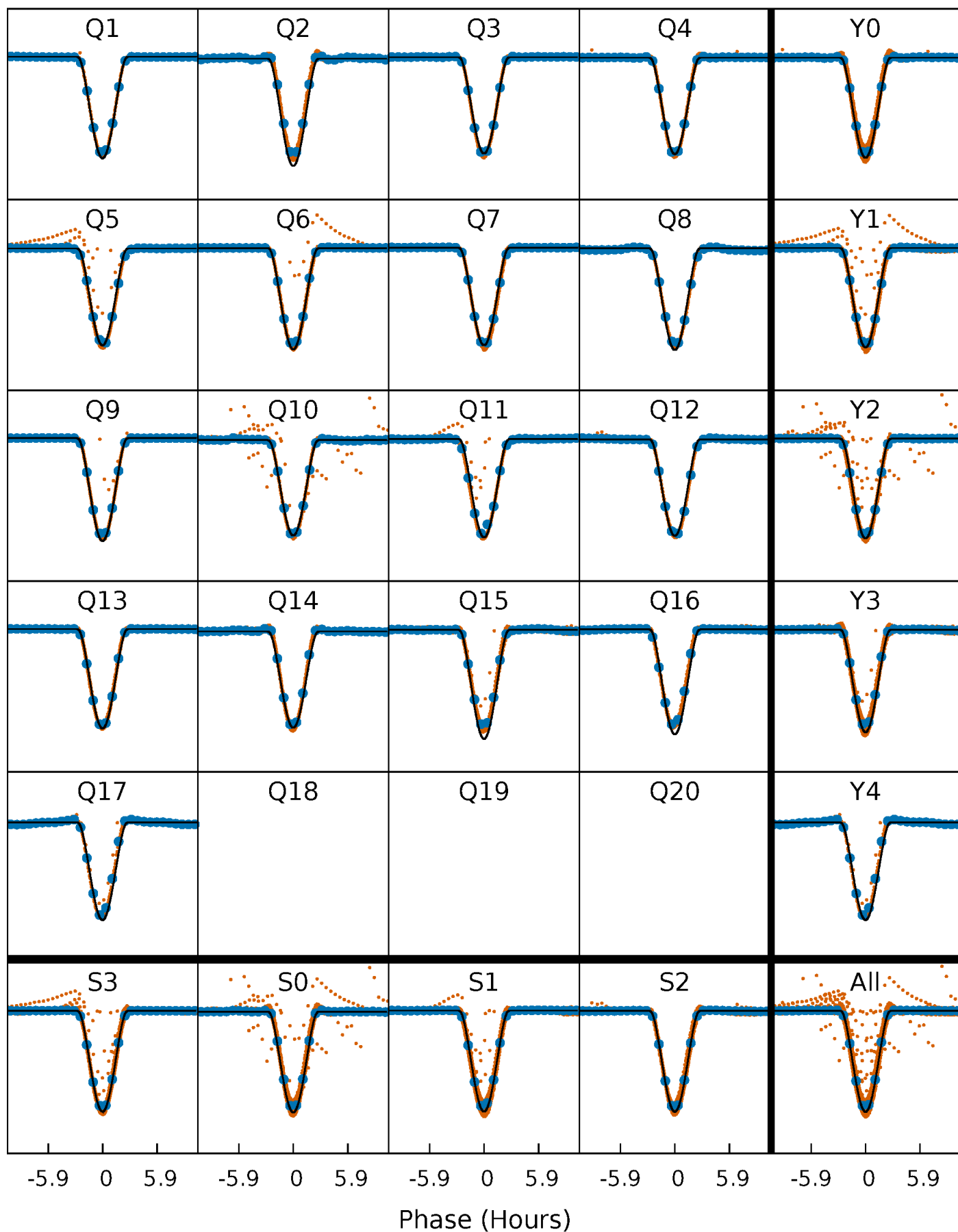
PDC Quarter-Phased Transit Curves

TCE 007137798-01 P= 2.253546 Days $T_0=132.484364$ (BKJD)



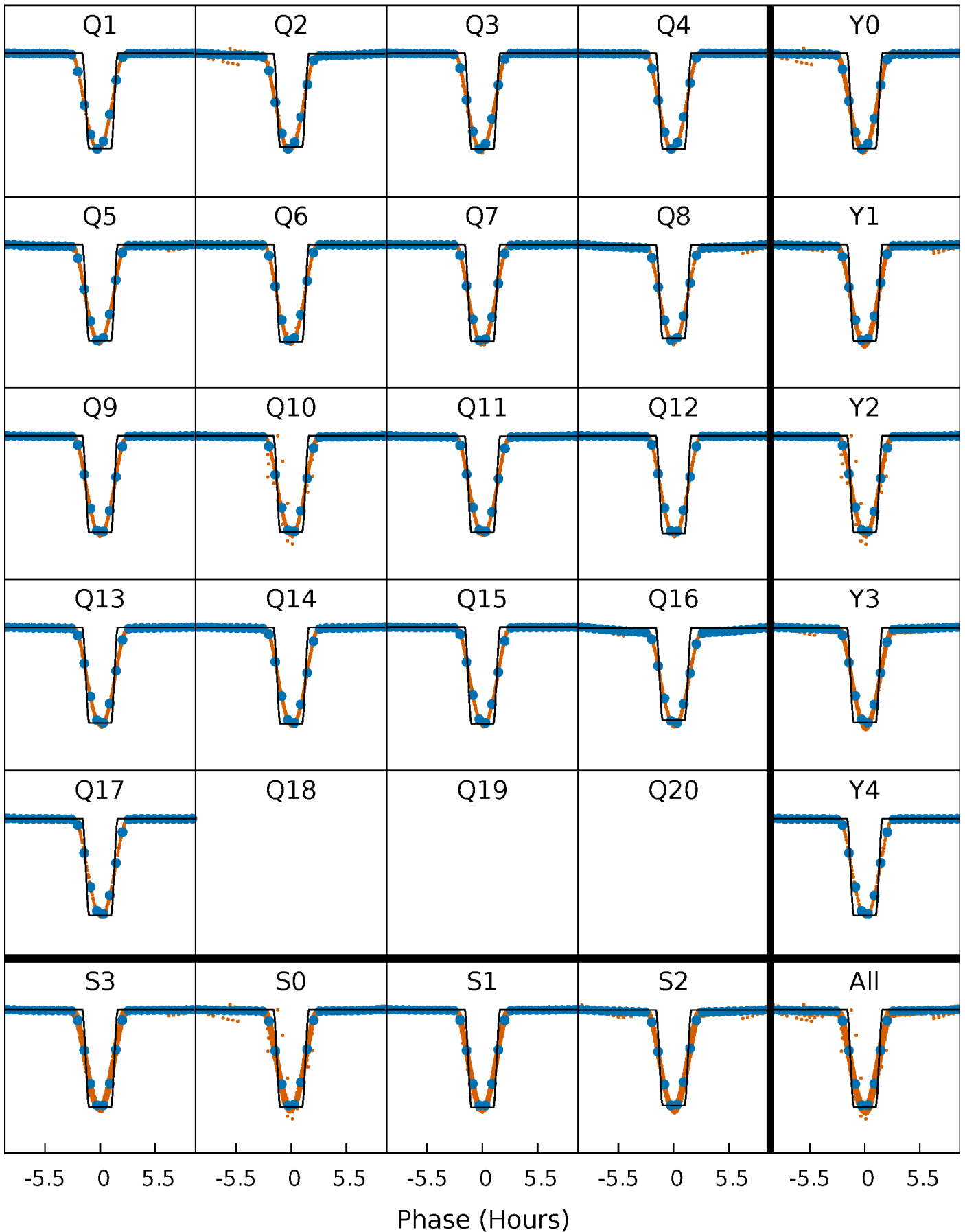
DV Quarter-Phased Transit Curves

TCE 007137798-01 P= 2.253546 Days $T_0=132.484364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

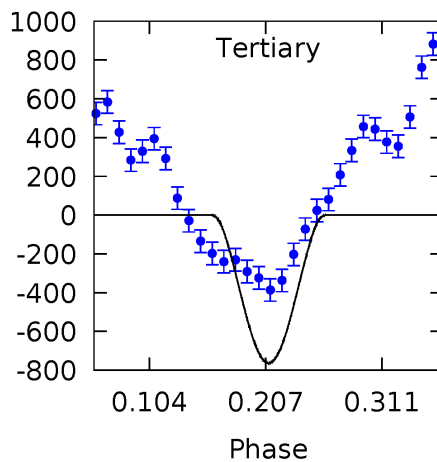
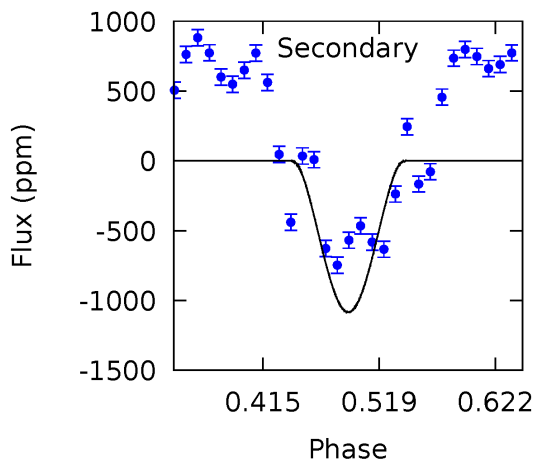
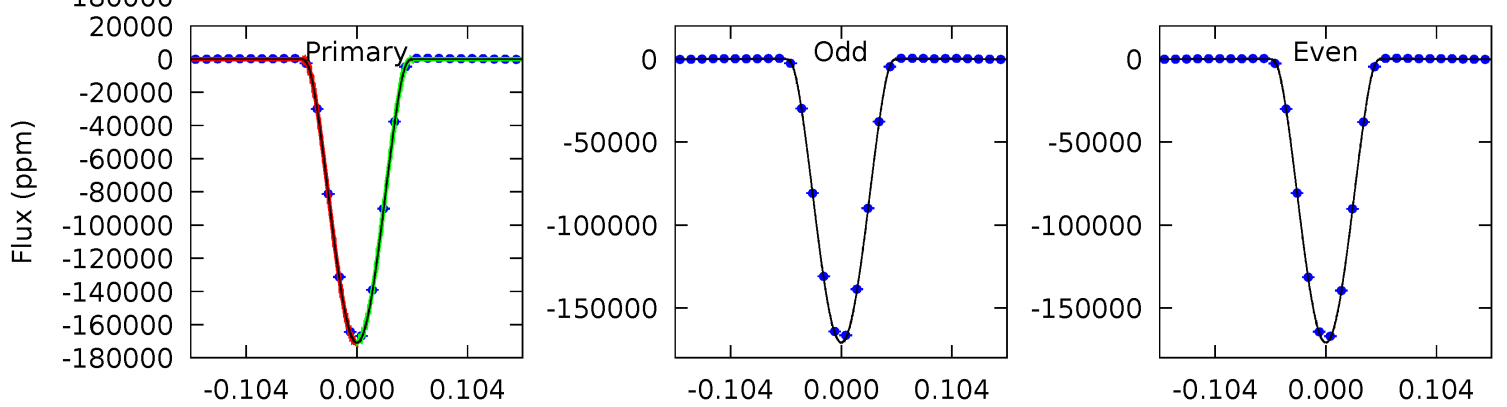
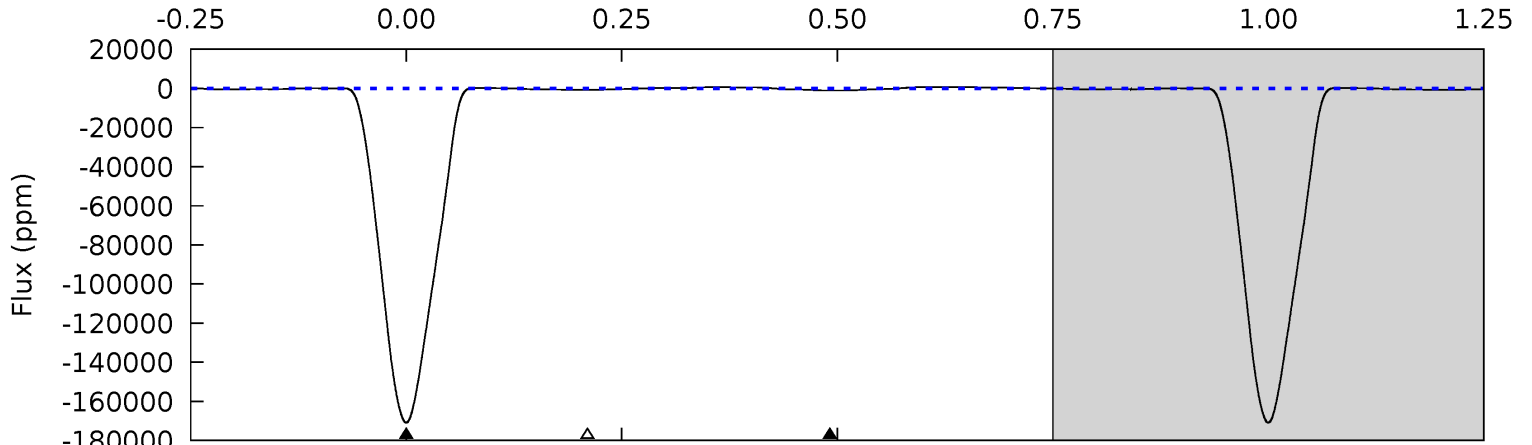
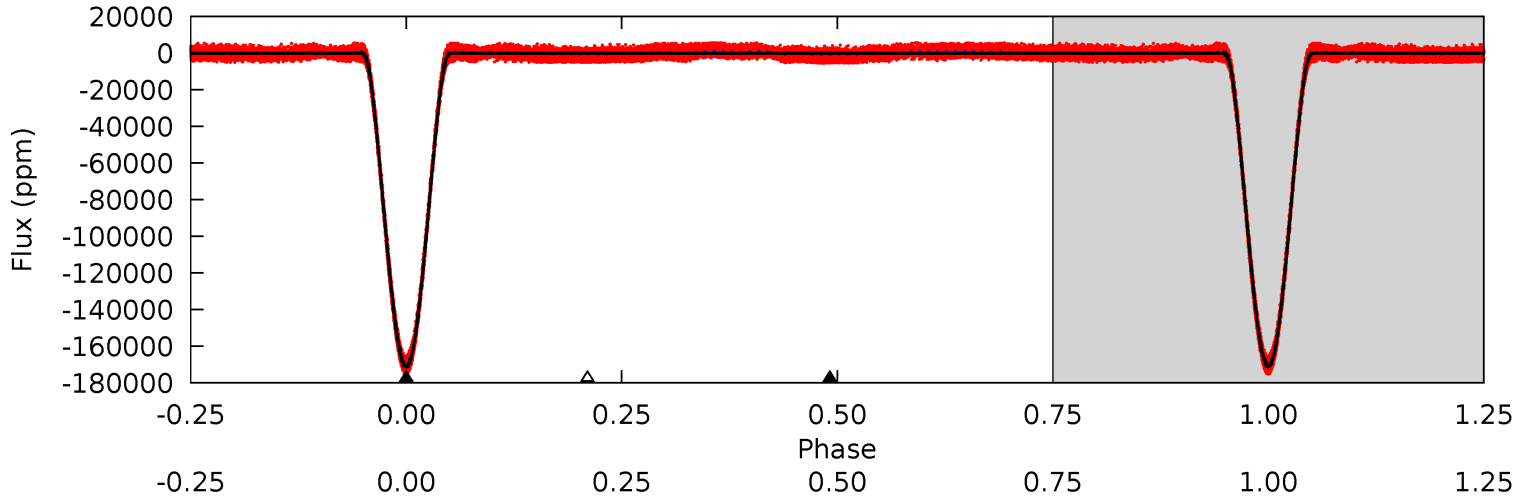
TCE 007137798-01 P= 2.253518 Days $T_0=132.492894$ (BKJD)



DV Model-Shift Uniqueness Test

007137798-01, P = 2.253546 Days, E = 130.230818 Days

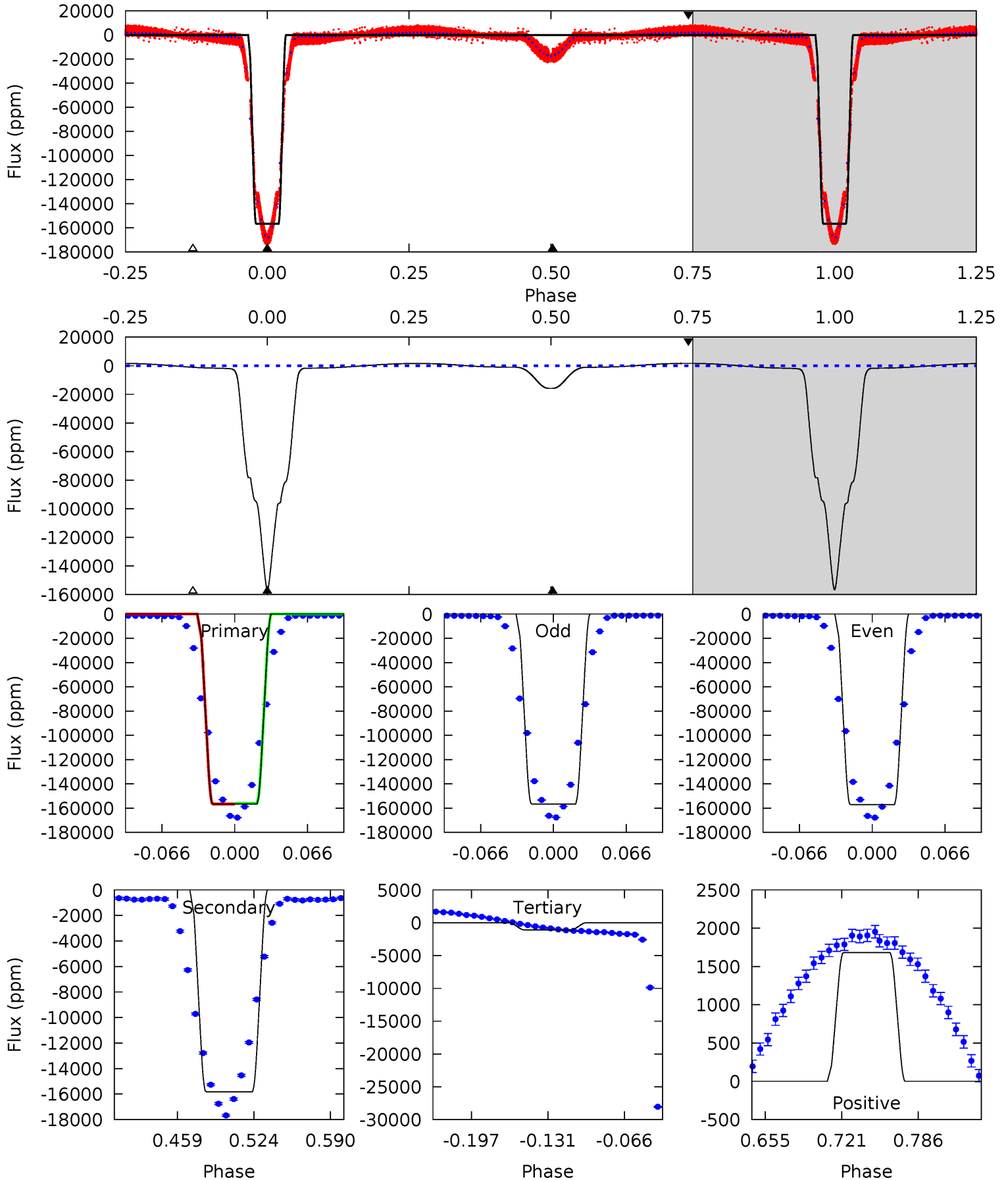
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7630	48.4	34.1	0	4.56	1.63	20.1	7596	7630	14.3	48.4	1.18	0.98	0.00	20.7



Alt Model-Shift Uniqueness Test

007137798-01, P = 2.253518 Days, E = 130.239376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4415	445.9	31.0	47.4	4.65	1.84	32.4	4384	4368	414.9	398.4	7.19	1.00	0.01	8.92



Stellar Parameters For KIC 007137798

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6951^{+192}_{-288}	$4.119^{+0.209}_{-0.171}$	$-0.320^{+0.300}_{-0.300}$	$1.662^{+0.487}_{-0.443}$	$1.328^{+0.190}_{-0.232}$	$0.408^{+0.474}_{-0.189}$
	+3%/-4%	+5%/-4%	+94%/-94%	+29%/-27%	+14%/-17%	+116%/-46%
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 007137798-01 / KOI 6836.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1084 ± 22	$107.94^{+17.61}_{-15.80}$	2863^{+228}_{-223}	-2894^{+161}_{-157}	$0.070^{+0.023}_{-0.016}$
Alt.	-15816 ± 35	$73.46^{+12.17}_{-10.51}$	2855^{+208}_{-227}	4020^{+91}_{-108}	$2.224^{+0.742}_{-0.543}$

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 $A_{obs} \gg 1.0$

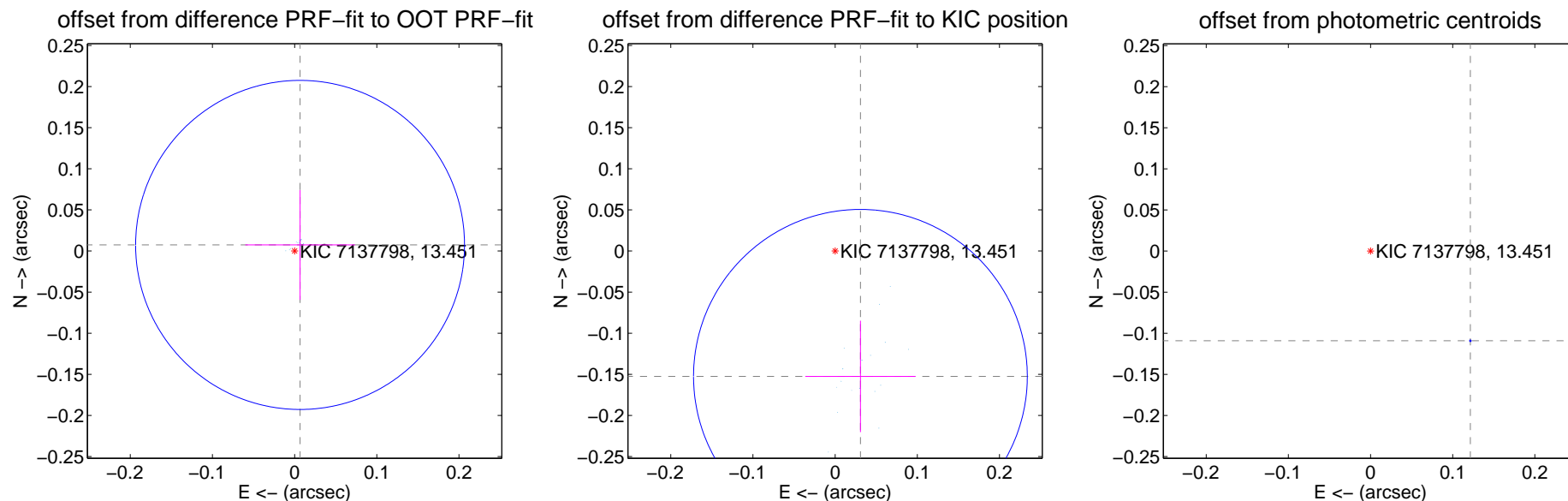
DV Centroid Data

Supplemental centroid analysis for 007137798-01. Kepler magnitude: 13.45. Transit SNR 4030.56

There are 17 quarters with good PRF difference image offsets

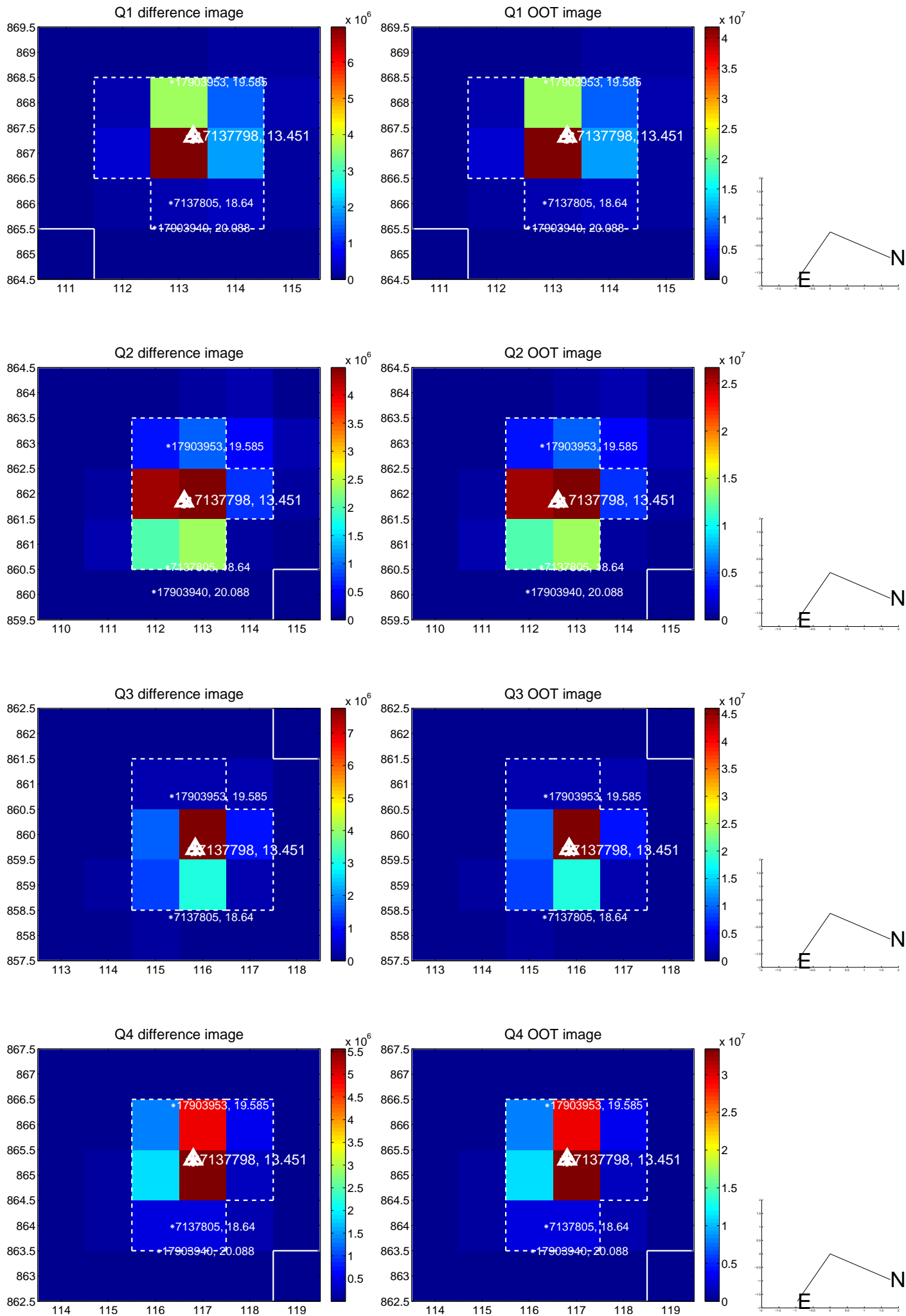
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	-0.007 ± 0.067	0.007 ± 0.067
PRF-fit source offset from KIC position	0.156 ± 0.068	2.30	-0.031 ± 0.067	-0.153 ± 0.068
photometric centroid source offset	0.16 ± 0.00	491.23	-0.12 ± 0.00	-0.11 ± 0.00

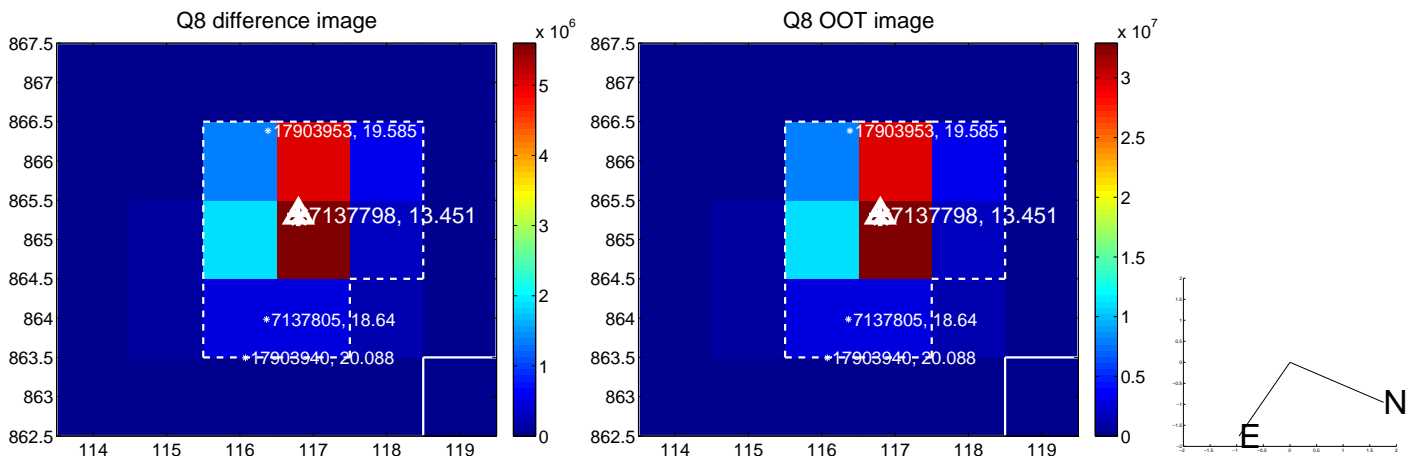
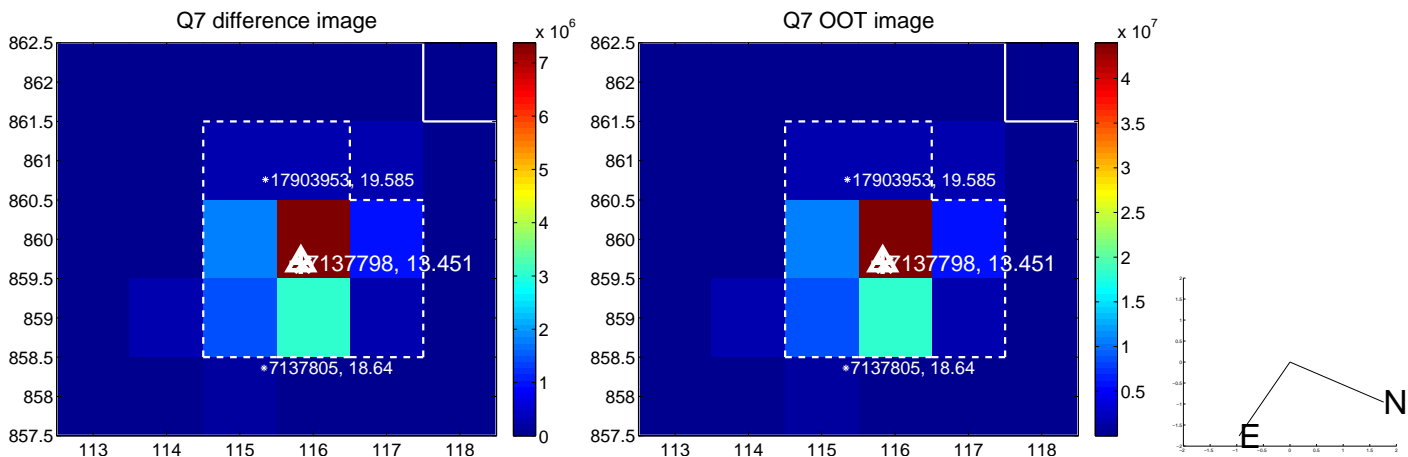
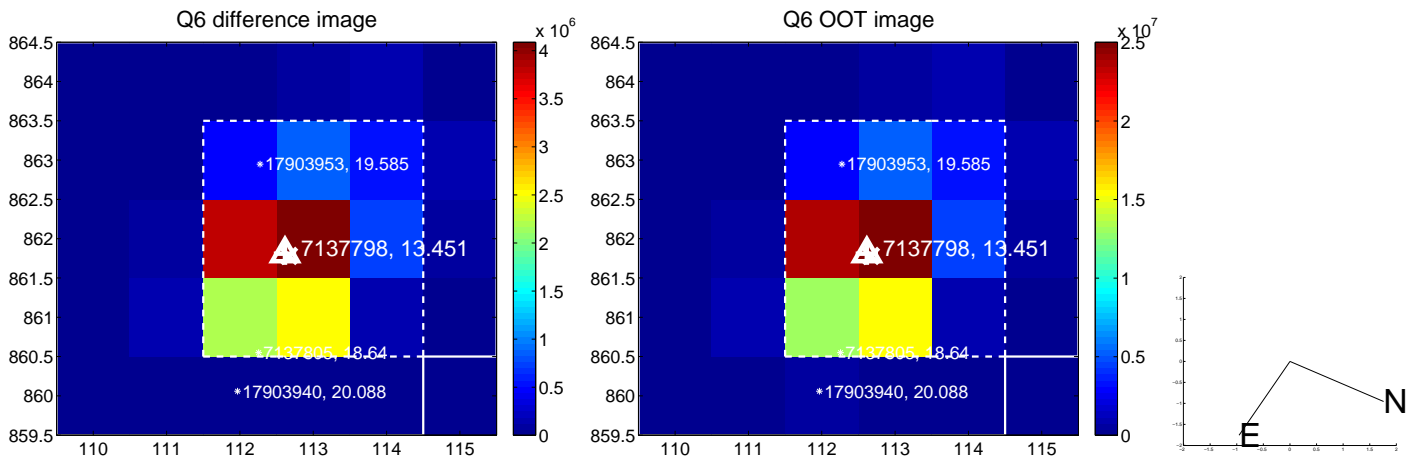
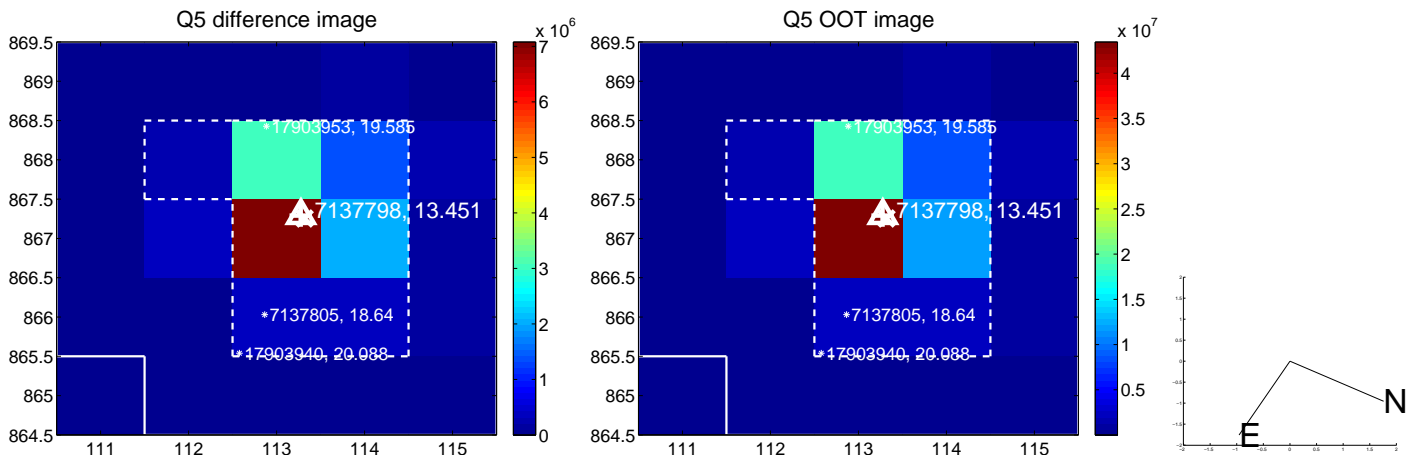


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

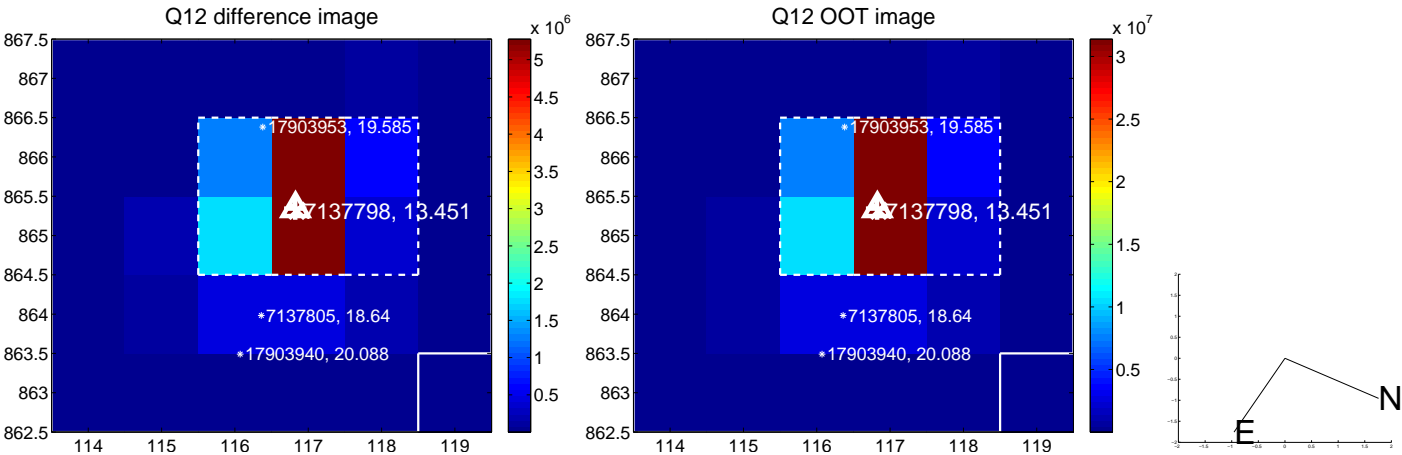
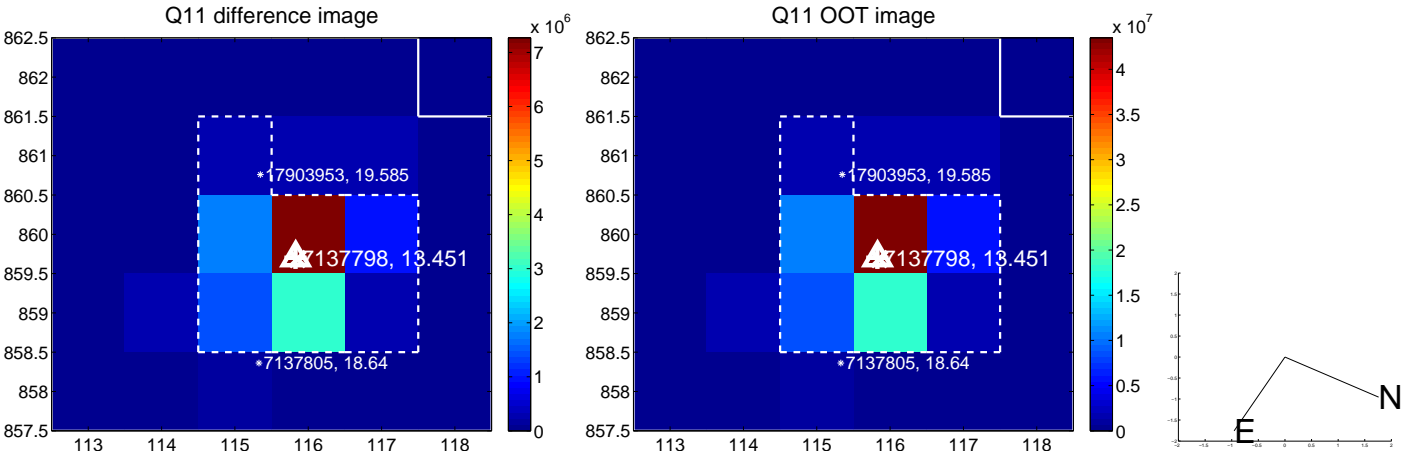
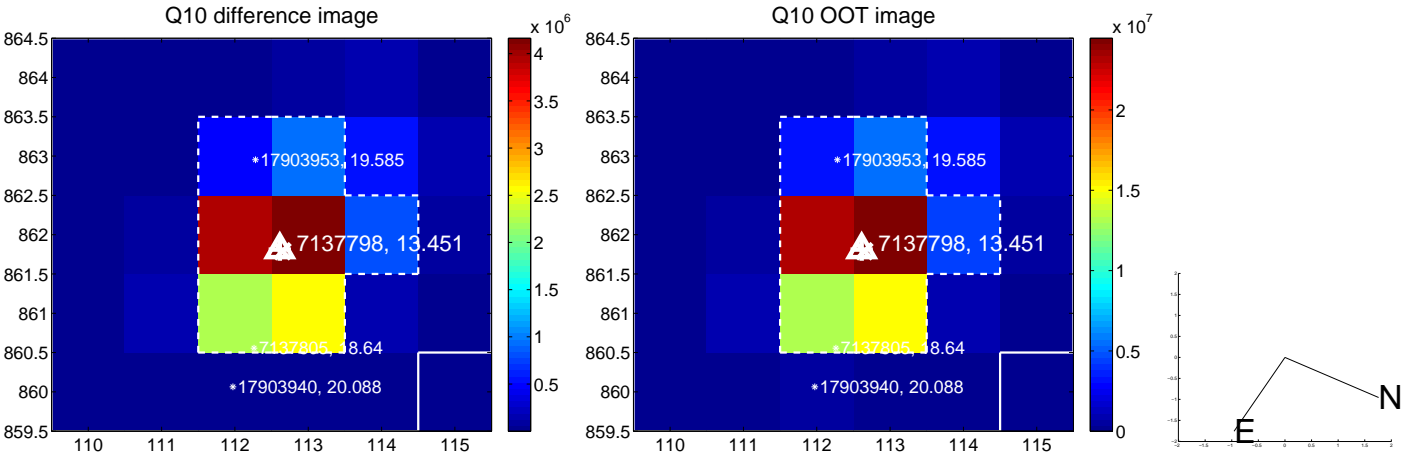
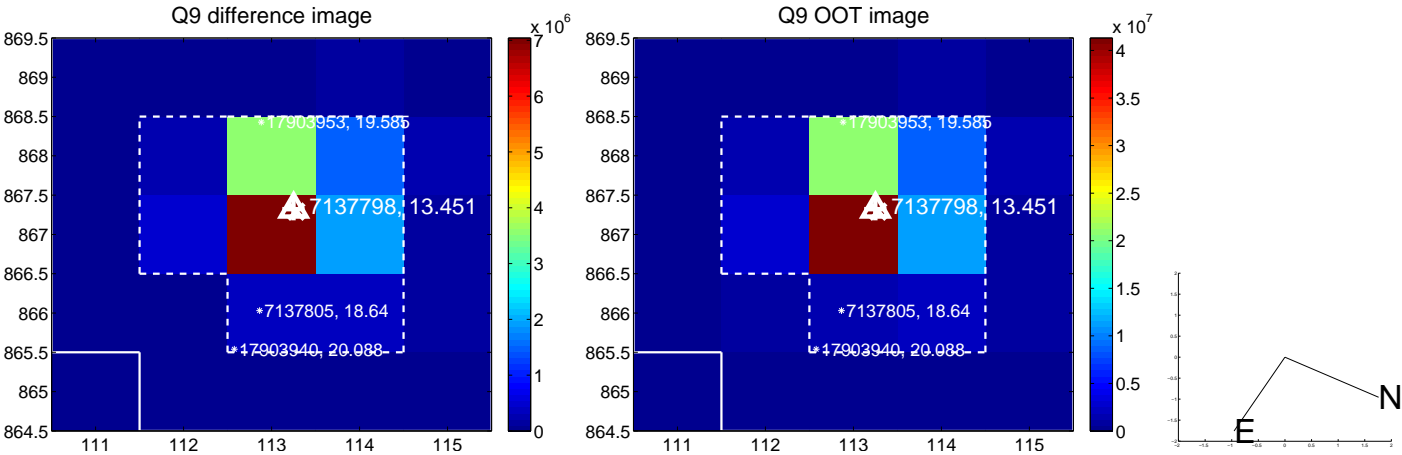
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



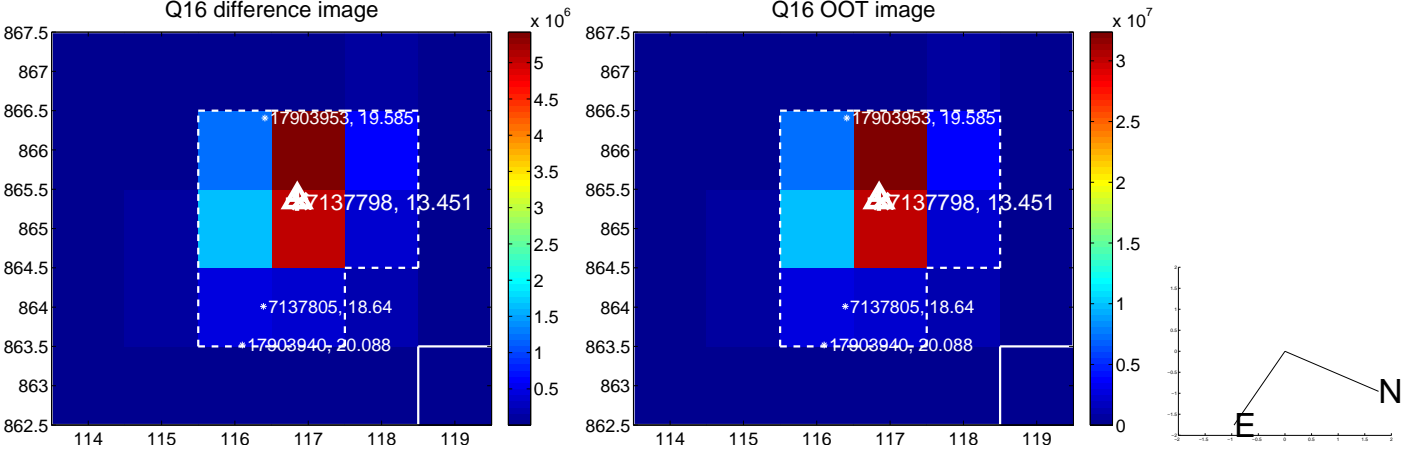
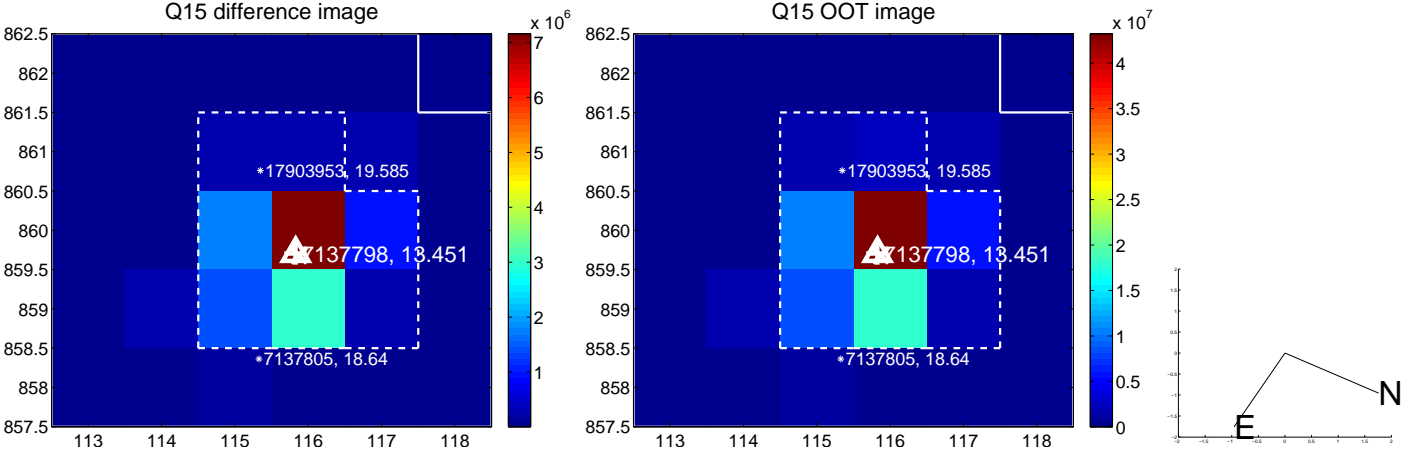
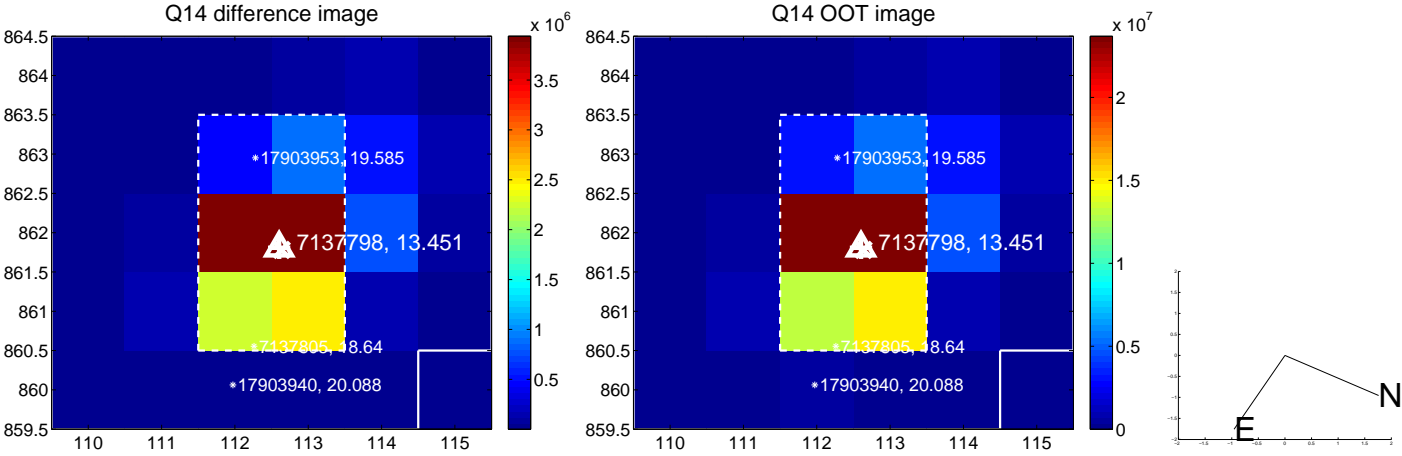
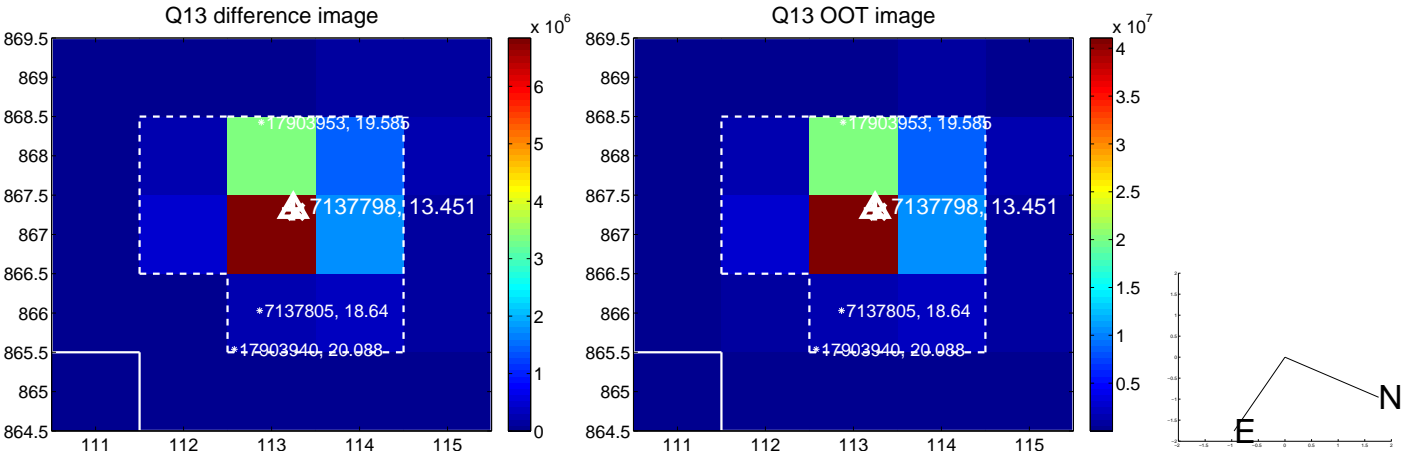
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



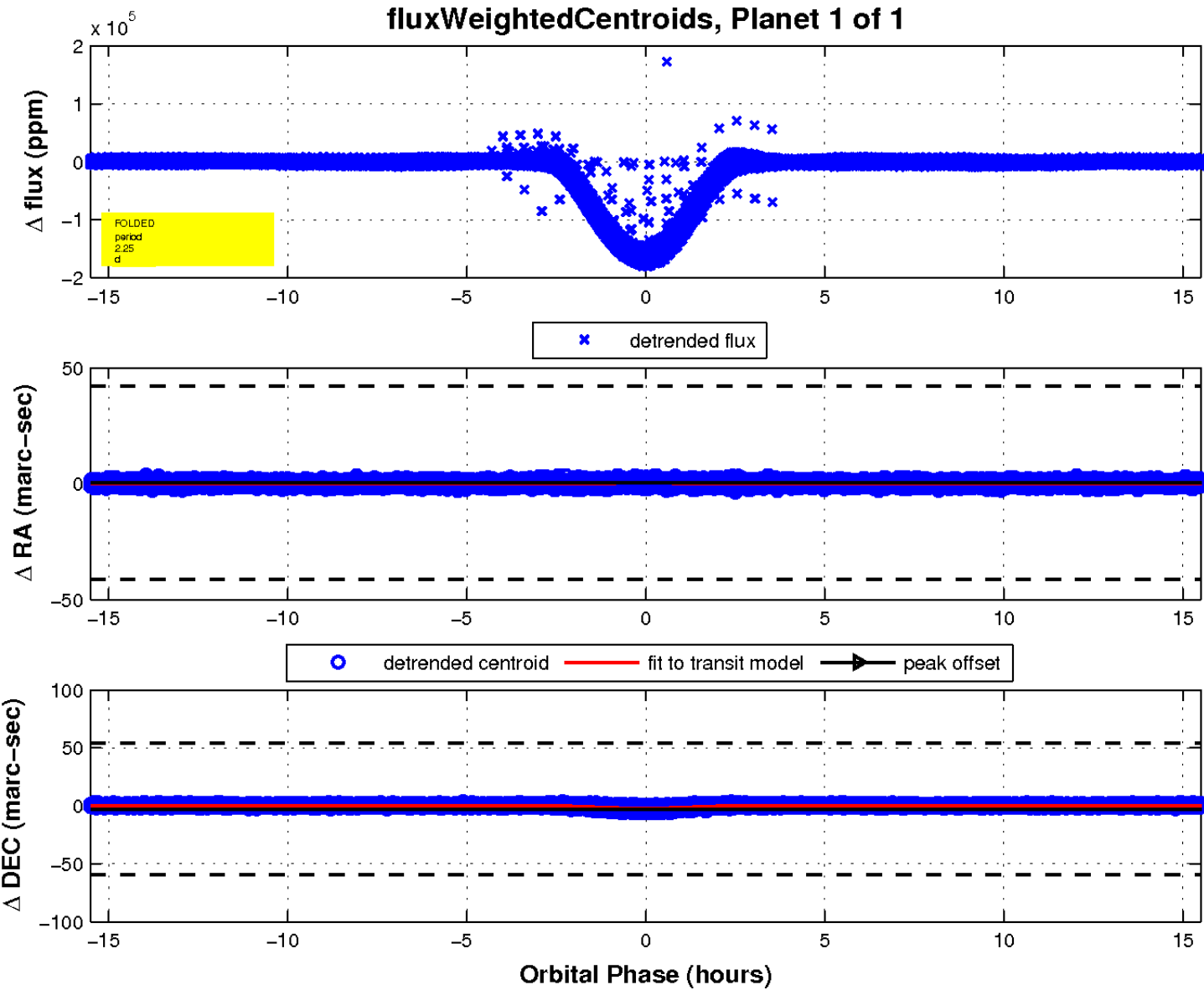
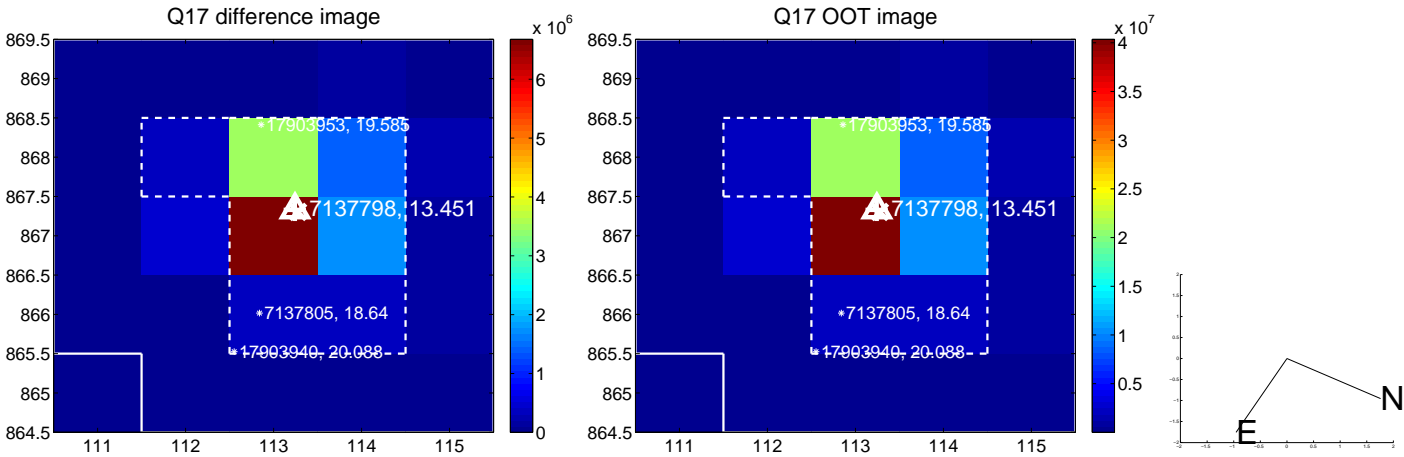
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

