

KIC 007374746

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})
007374746-01	OBS	3537.01	1.366946	132.204971	172957.0	3.409	13049.3	6642.7	0.76	5353	41.89	916.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007374746-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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.

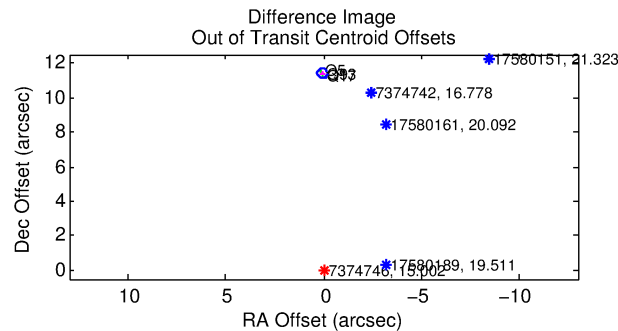
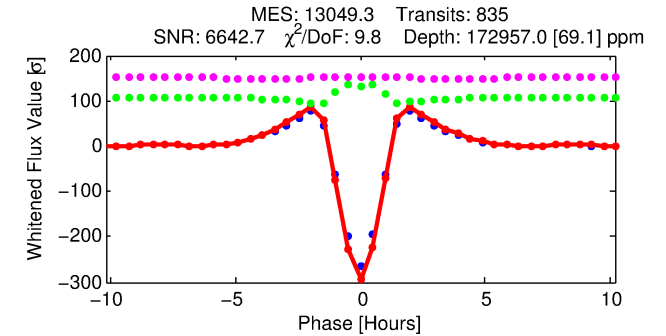
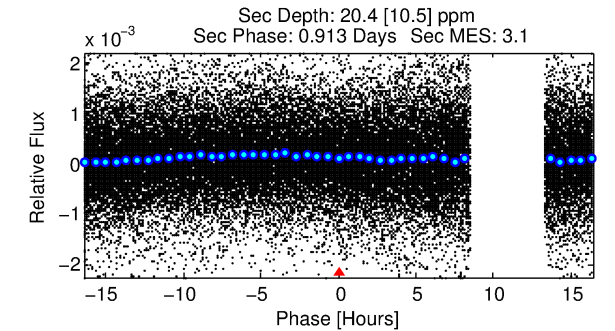
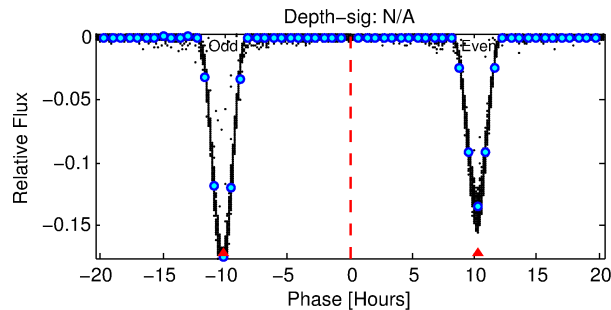
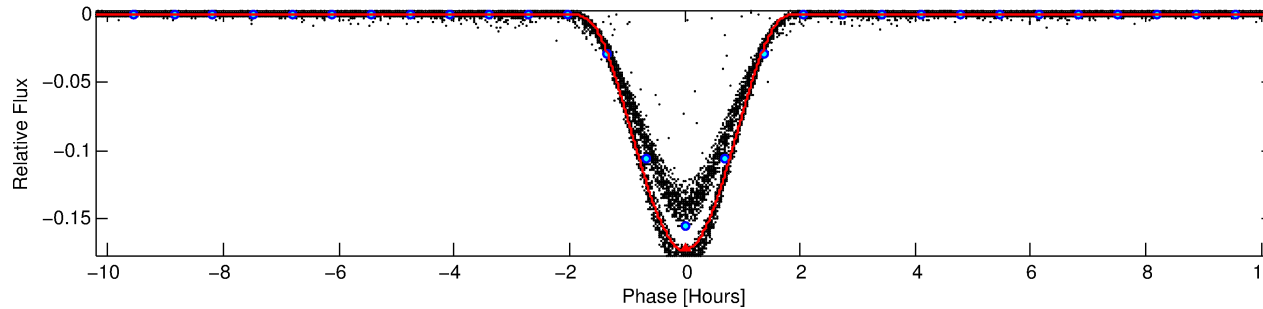
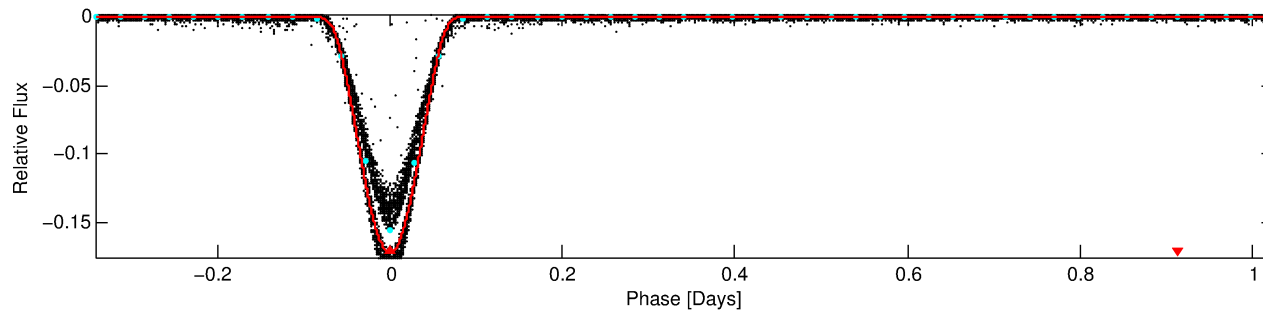
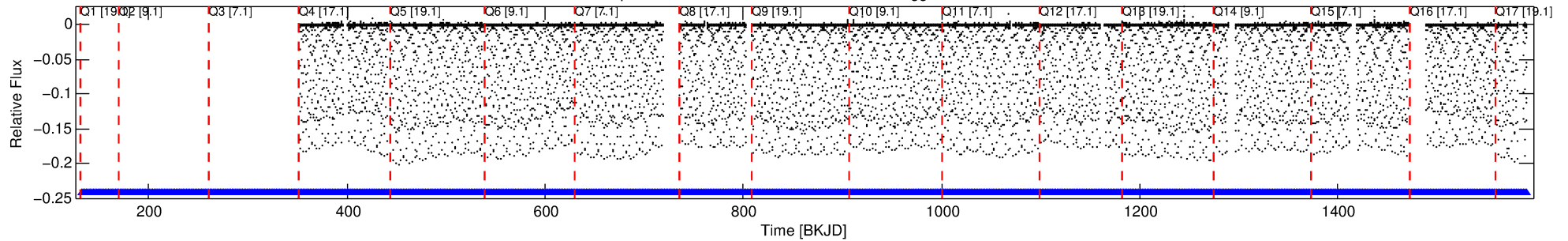
Ephemeris Match Information For 007374746-01

No Significant Match Found

DV One-Page Summary

KIC: 7374746 Candidate: 1 of 1 Period: 1.367 d
KOI: K03537.01 Corr: 0.998

Kp: 15.00 R*: 0.76 Rs Teff: 5353.0 K Logg: 4.53 Fe/H: -0.520



DV Fit Results:

Period = 1.36695 [0.00000] d
Epoch = 132.2050 [0.0000] BKJD
Rp/R* = 0.5071 [0.0217]
a/R* = 4.06 [0.02]
b = 0.80 [0.03]
Seff = 916.95 [211.39]
Teq = 1403 [81] K
Rp = 41.89 [6.08] Re
a = 0.0214 [0.0026] AU
Ag = 0.00 [0.00] [-613.91σ]
Teffp = 505 [68] K [-8.50σ]

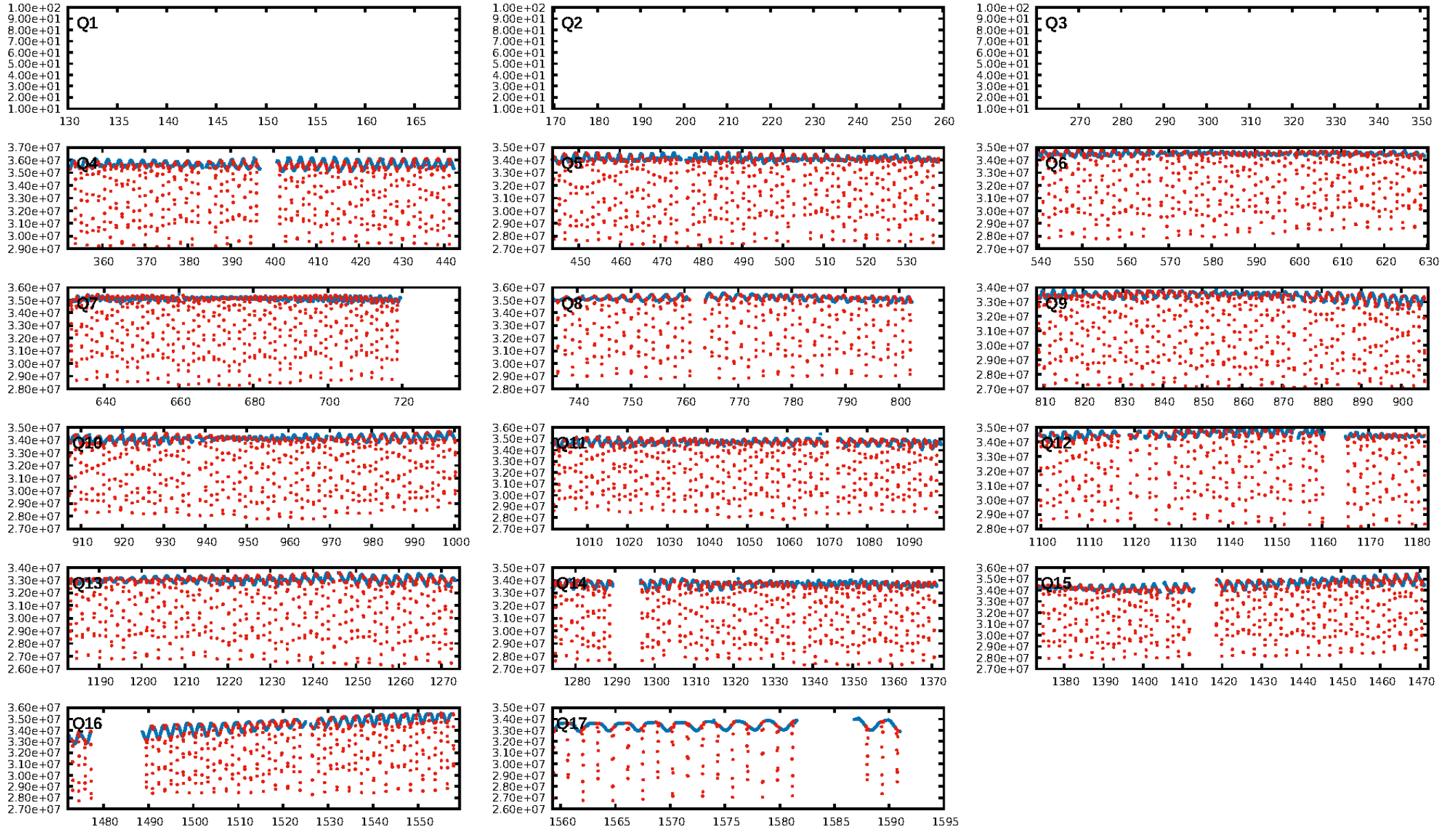
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [815/815]
GhostDiagnostic-chr: 2.422
Centroid-sig: 0.0%
Centroid-so: 0.547 arcsec [600.32σ]
OotOffset-rm: 11.402 arcsec [126.13σ]
KicOffset-rm: 0.441 arcsec [6.54σ]
OotOffset-st: 0/0/0/4 [4]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

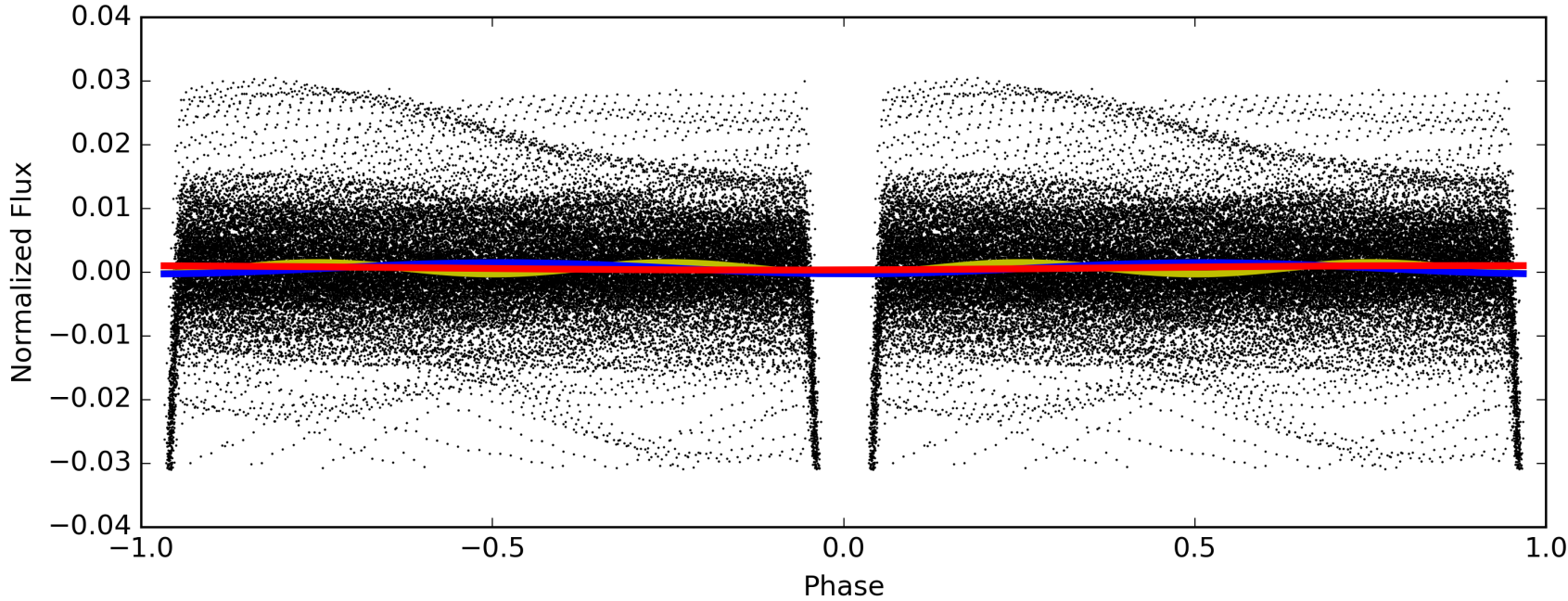
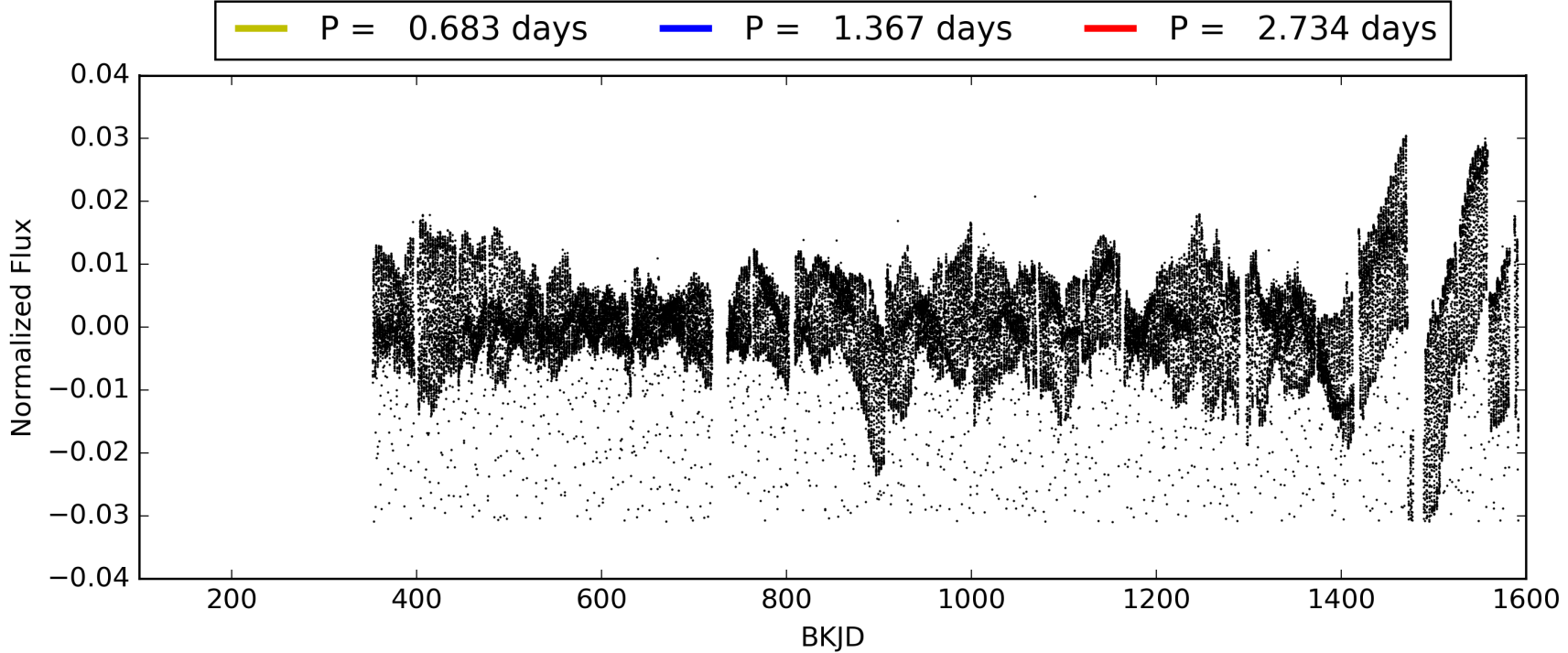
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:29:54 Z

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

TCE 007374746-01, PDC Light Curves

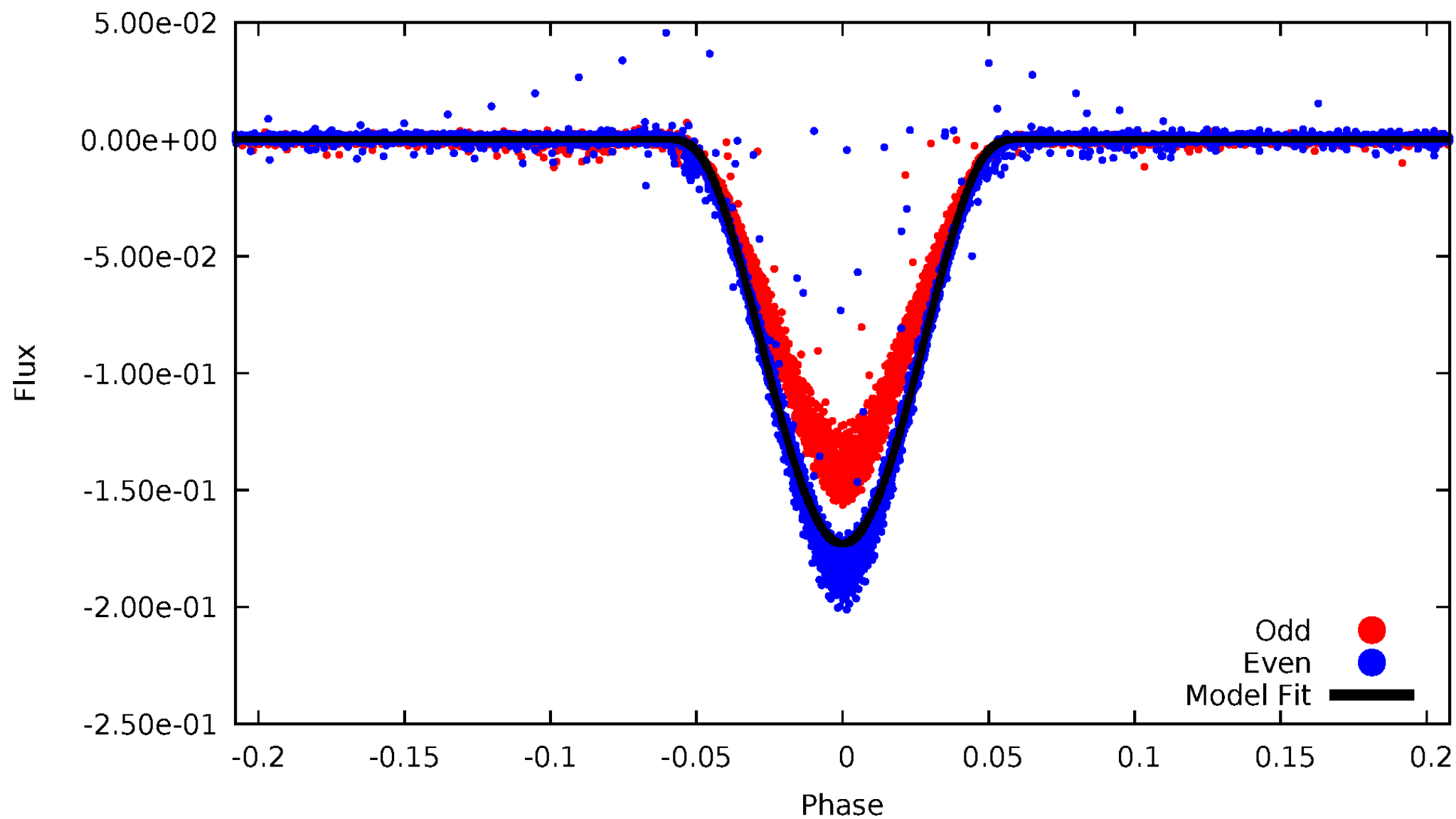


TCE 007374746-01



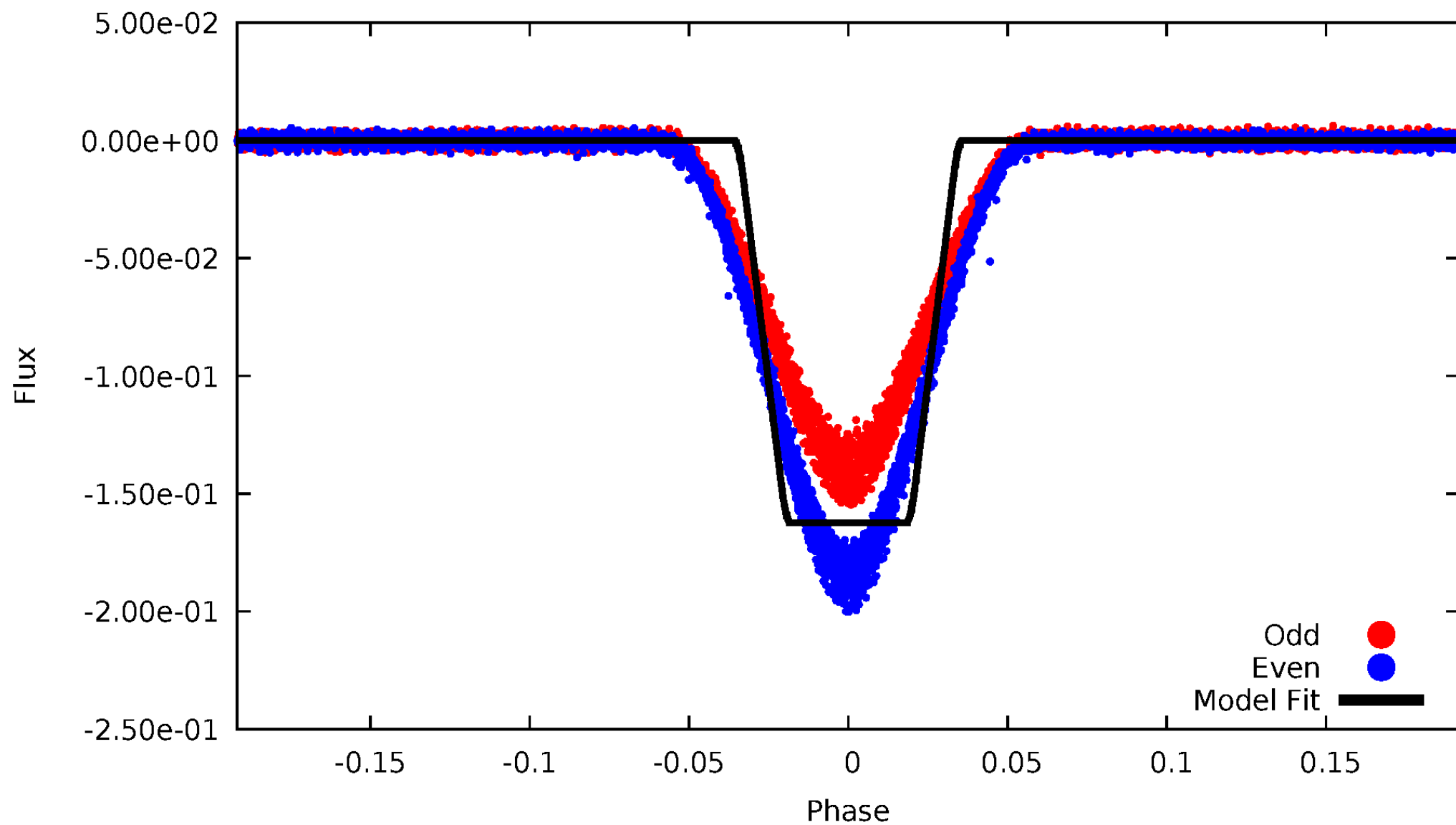
DV Odd/Even

TCE 007374746-01



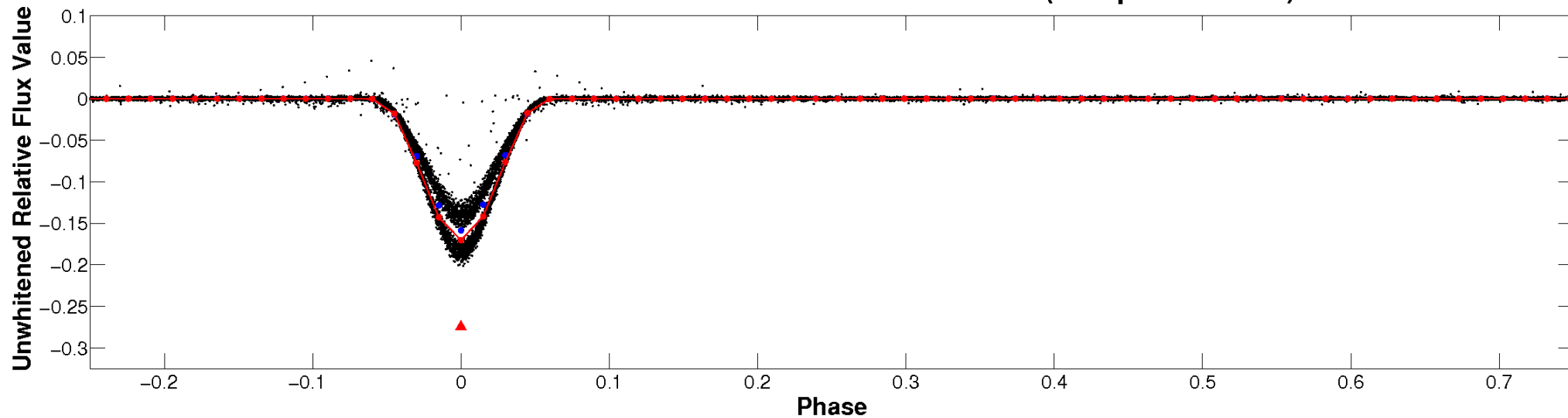
ALT Odd/Even

TCE 007374746-01

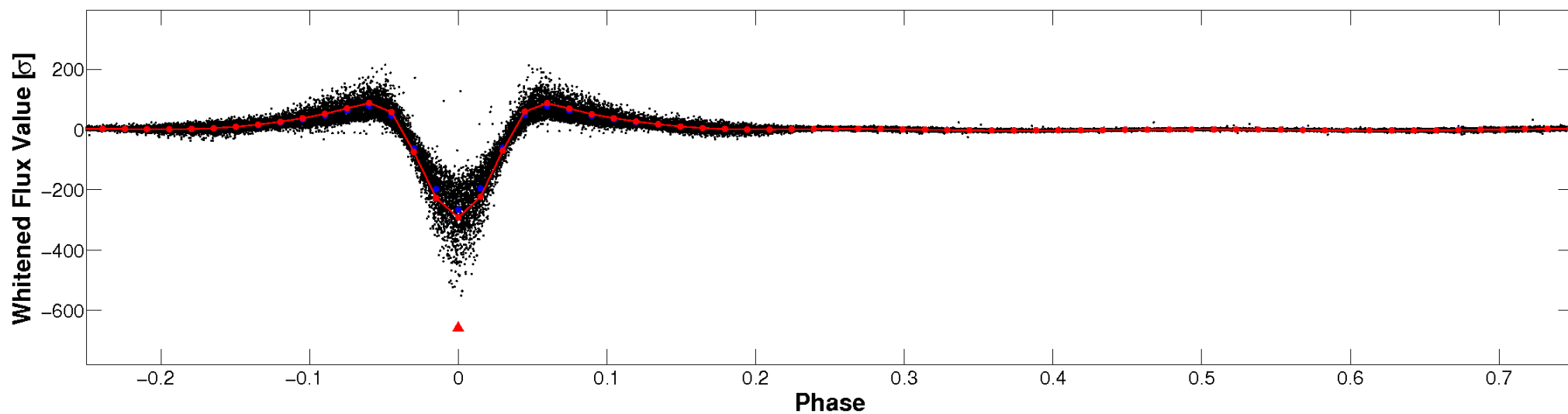


Non-Whitened Vs. Whitened Light Curve

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

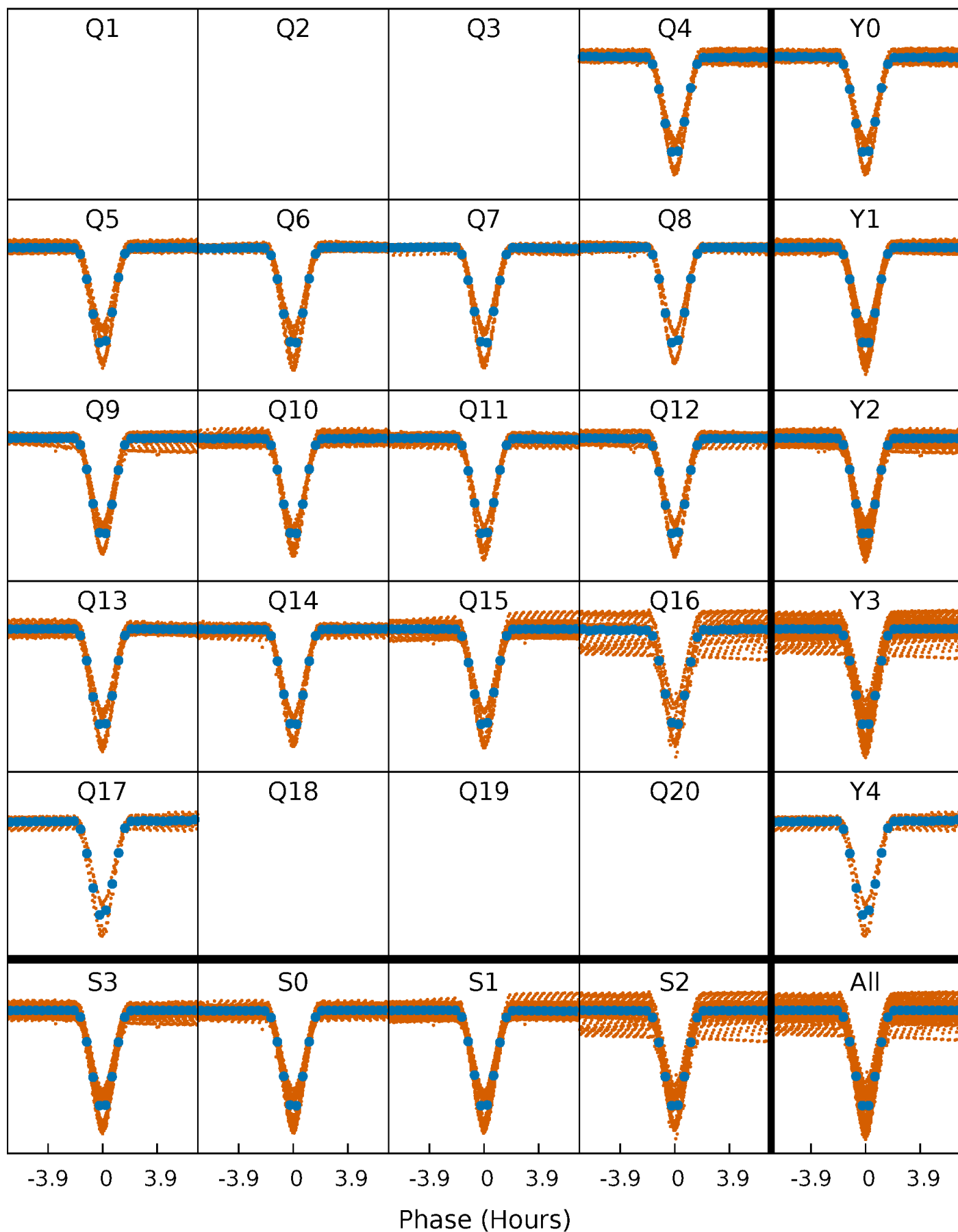


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



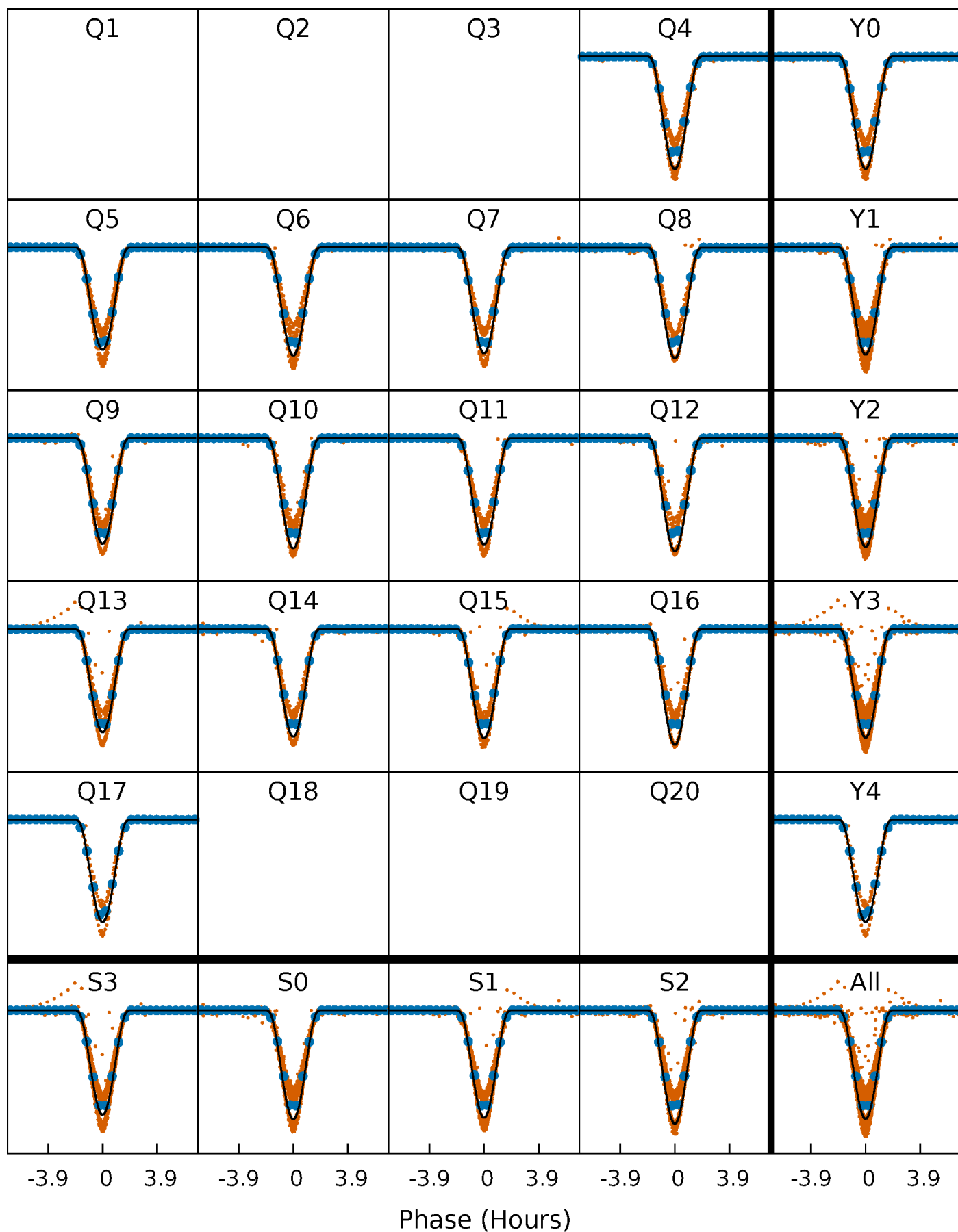
PDC Quarter-Phased Transit Curves

TCE 007374746-01 P= 1.366946 Days $T_0=132.204971$ (BKJD)



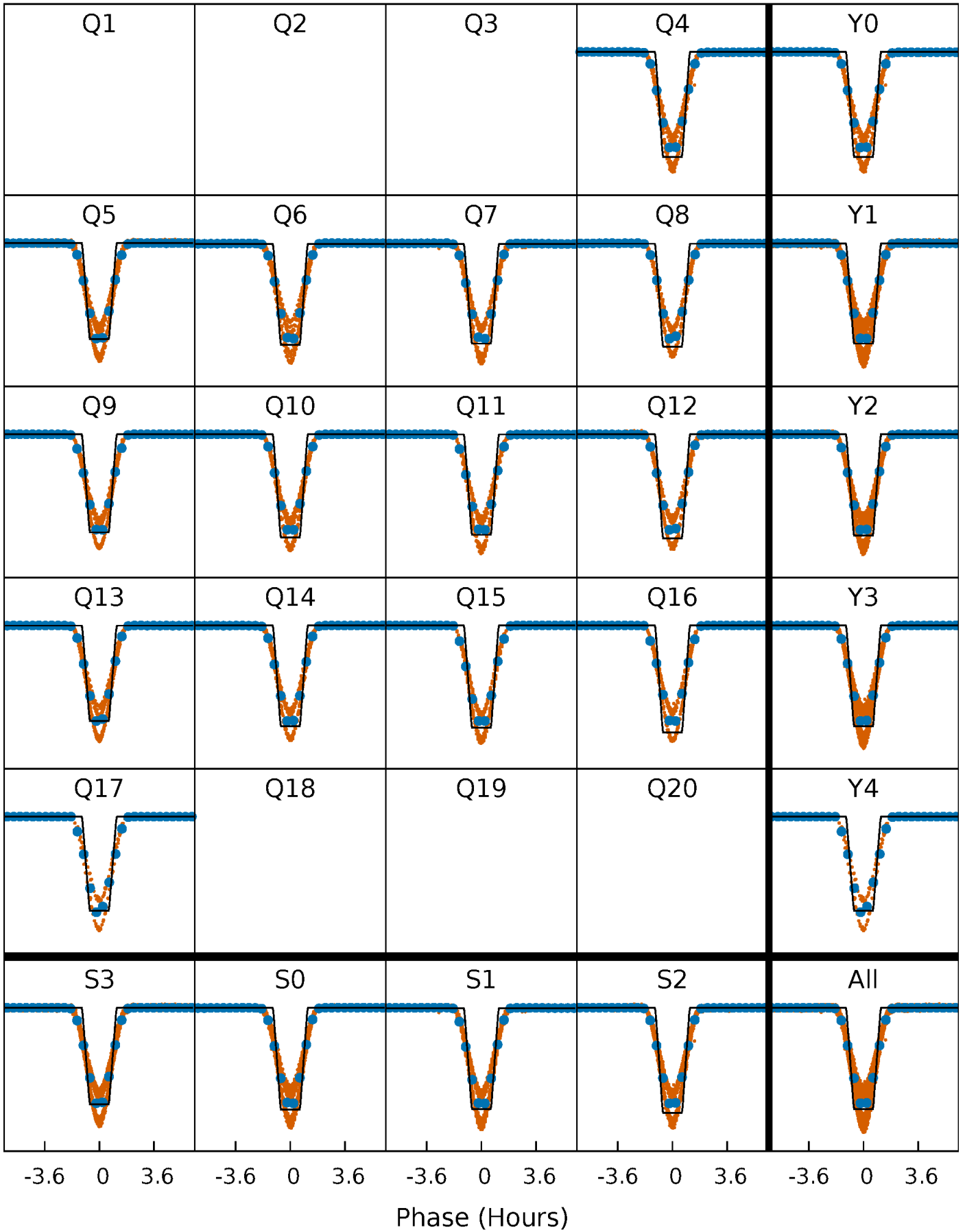
DV Quarter-Phased Transit Curves

TCE 007374746-01 P= 1.366946 Days $T_0=132.204971$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

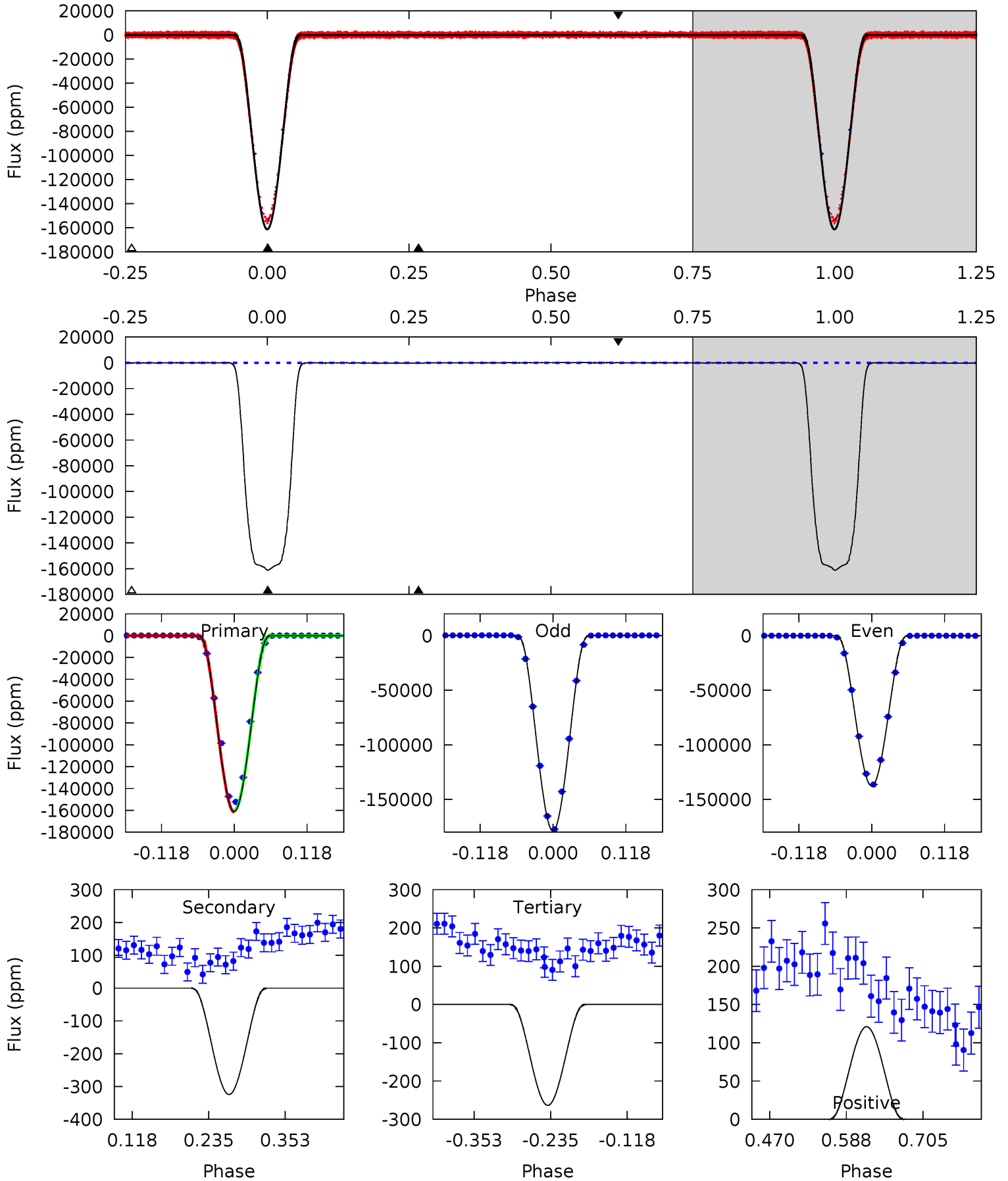
TCE 007374746-01 P= 1.366946 Days $T_0=132.204598$ (BKJD)



DV Model-Shift Uniqueness Test

007374746-01, P = 1.366946 Days, E = 132.204971 Days

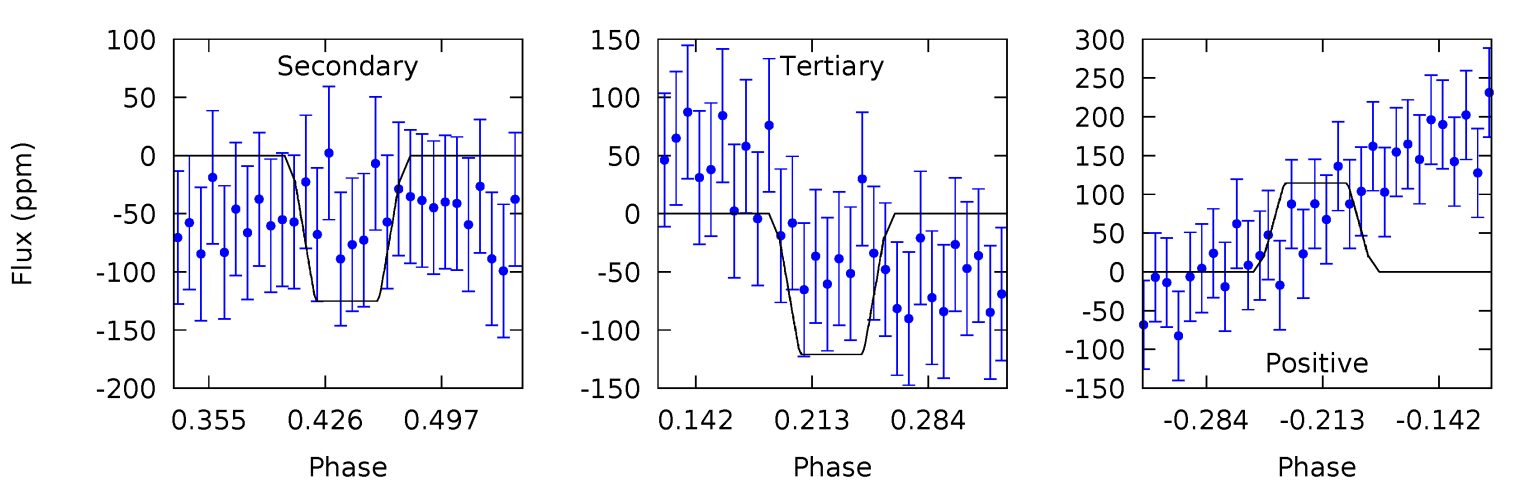
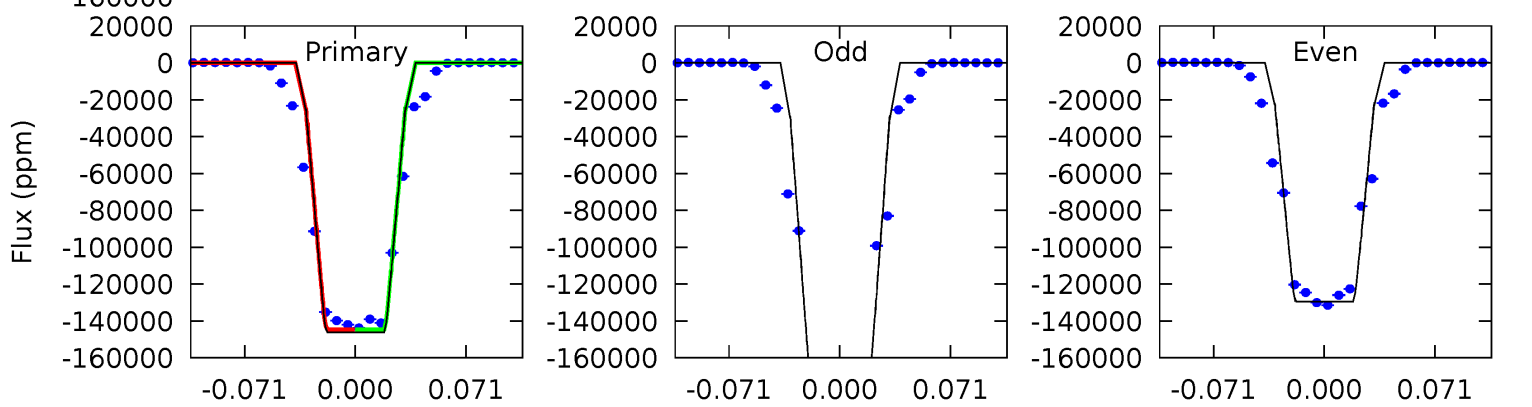
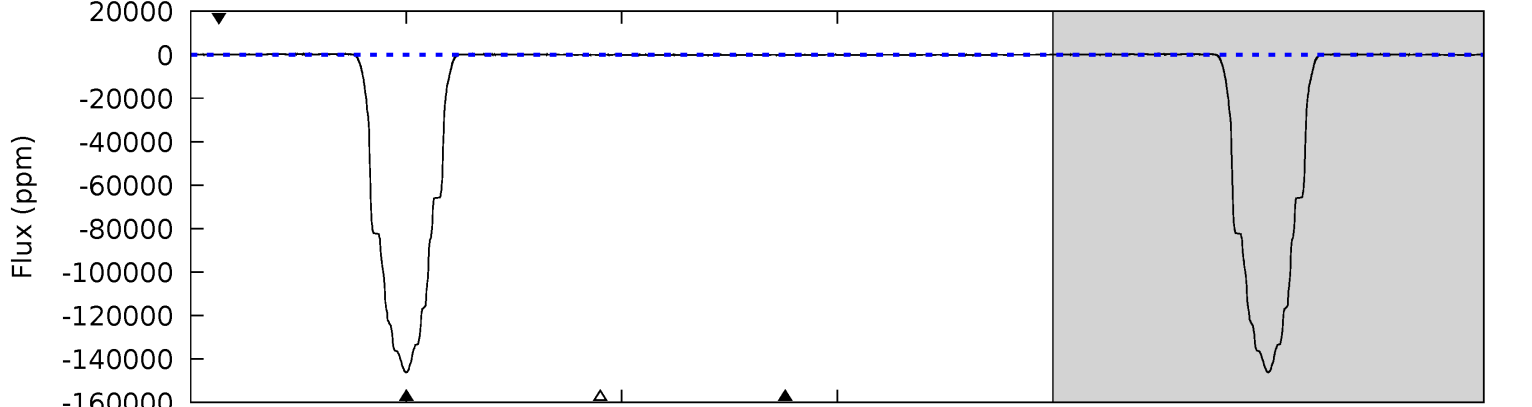
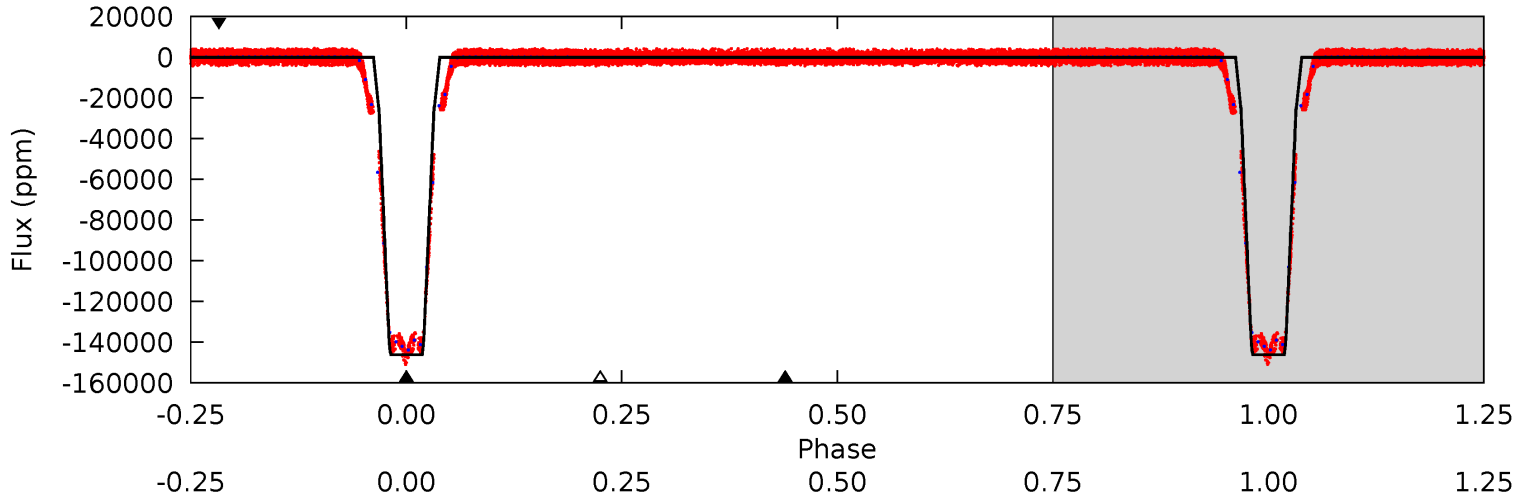
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10313	20.7	16.9	7.74	4.53	1.57	6.72	10296	10306	3.88	13.0	1774	1.03	0.00	0



Alt Model-Shift Uniqueness Test

007374746-01, P = 1.366946 Days, E = 132.204598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2844	2.43	2.35	2.23	4.64	1.81	1.98	2842	2842	0.08	0.20	553.5	0.96	0.00	0



Stellar Parameters For KIC 007374746

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5353^{+185}_{-185}	$4.527^{+0.104}_{-0.095}$	$-0.520^{+0.350}_{-0.300}$	$0.757^{+0.105}_{-0.084}$	$0.704^{+0.102}_{-0.044}$	$2.286^{+0.920}_{-0.659}$
	+3%/-3%	+2%/-2%	+67%/-58%	+14%/-11%	+14%/-6%	+40%/-29%
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 007374746-01 / KOI 3537.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-324 ± 16	$42.13^{+4.01}_{-3.48}$	1959^{+100}_{-99}	-2412^{+68}_{-67}	$0.047^{+0.009}_{-0.007}$
Alt.	-125 ± 51	$33.53^{+3.33}_{-3.02}$	1958^{+102}_{-90}	-2431^{+62}_{-69}	$0.028^{+0.013}_{-0.011}$

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

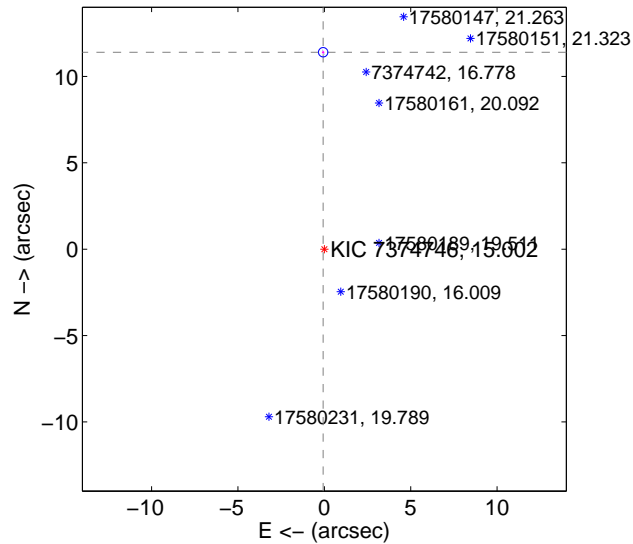
Supplemental centroid analysis for 007374746-01. Kepler magnitude: 15.00. Transit SNR 6642.70

There are 14 quarters with good PRF difference image offsets

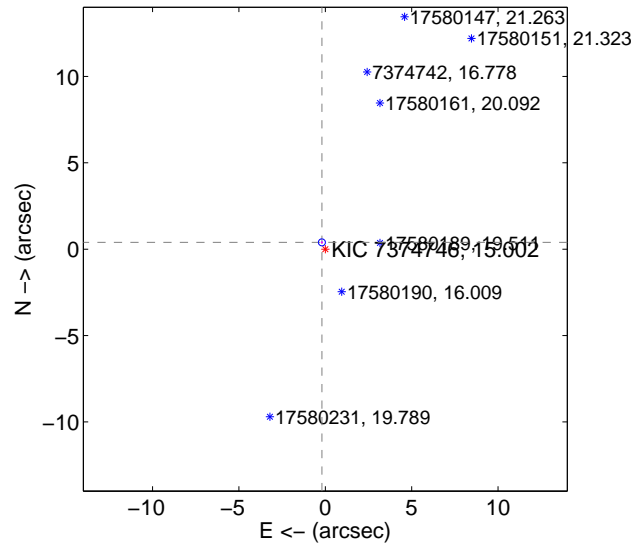
The OOT PRF centroid is offset from the target star catalog position by about 10.84 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.402 ± 0.090	126.13	0.068 ± 0.071	11.402 ± 0.090
PRF-fit source offset from KIC position	0.441 ± 0.067	6.54	0.197 ± 0.068	0.394 ± 0.067
photometric centroid source offset	0.55 ± 0.00	600.32	-0.15 ± 0.00	-0.53 ± 0.00

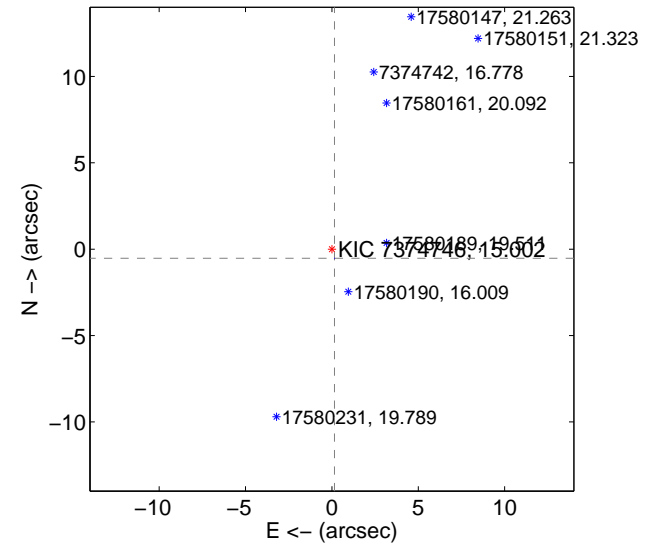
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

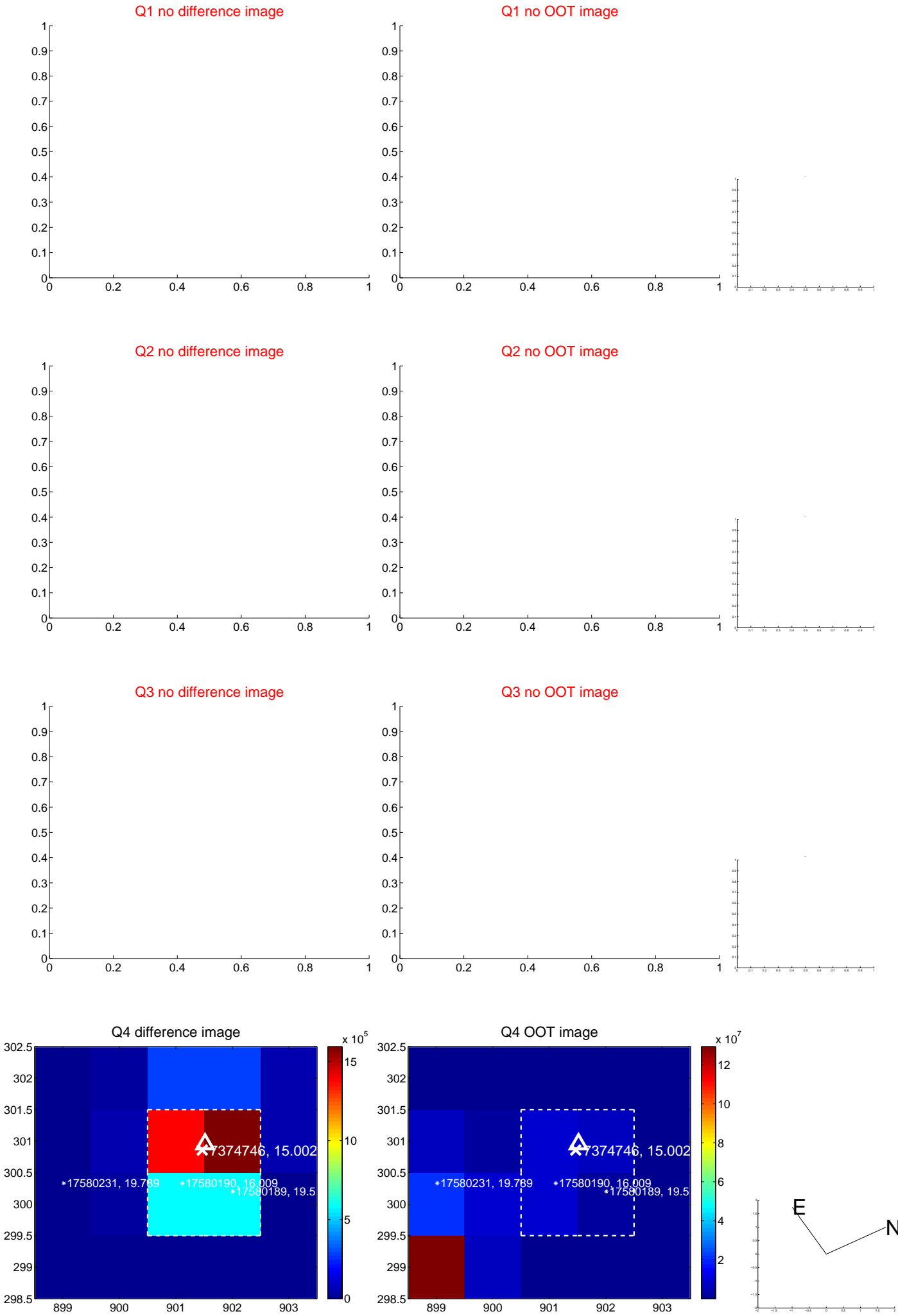


offset from photometric centroids

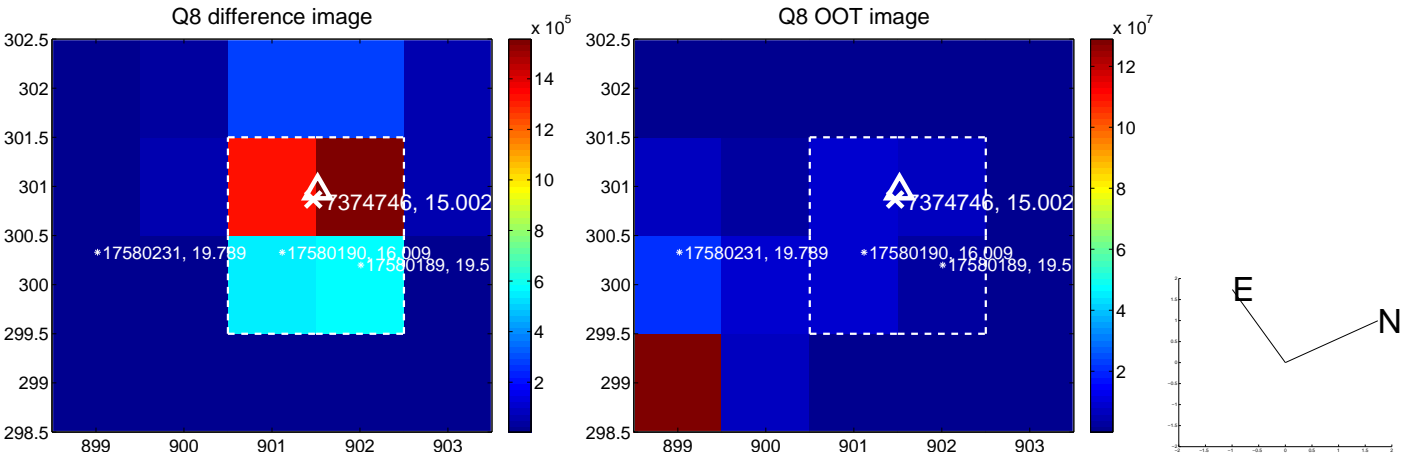
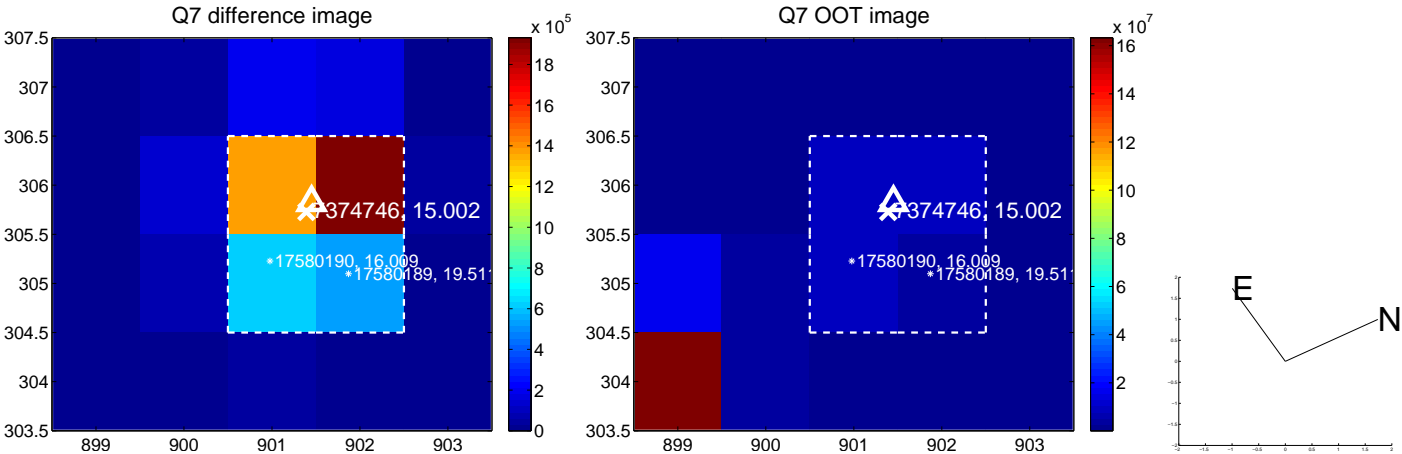
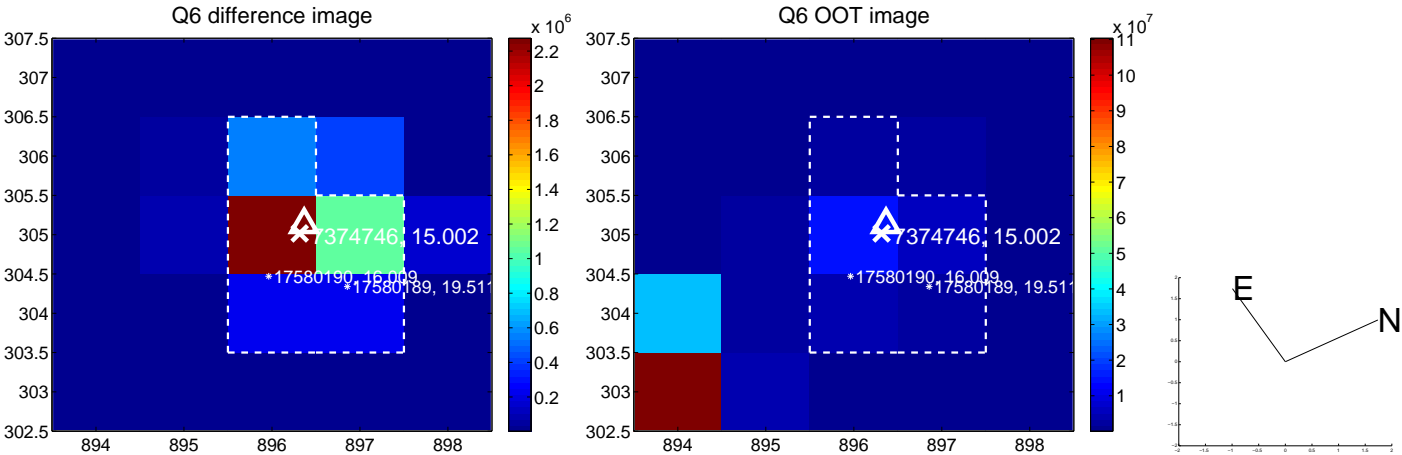
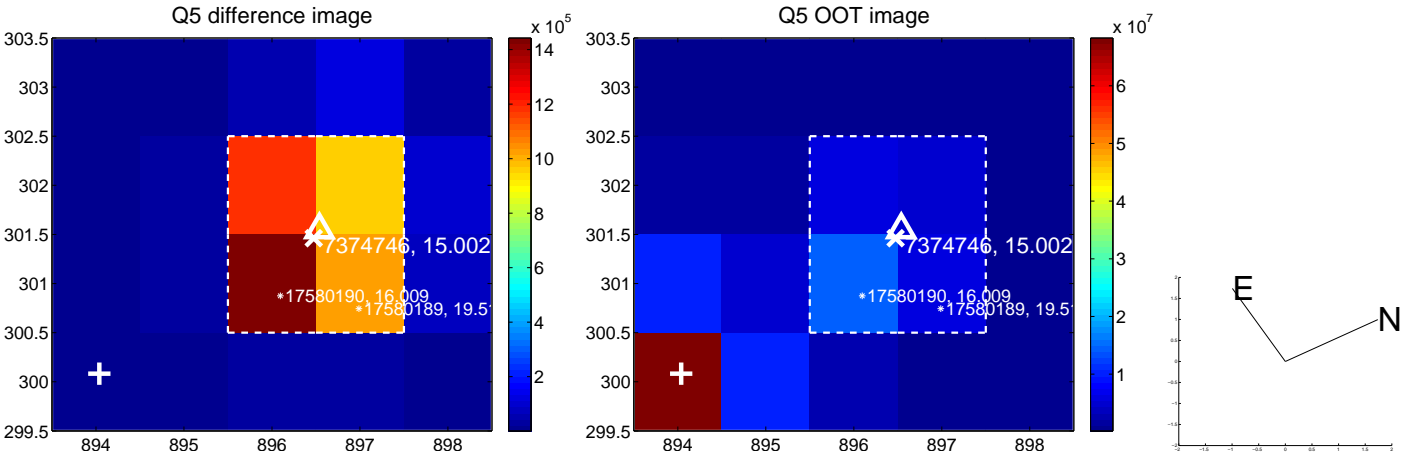


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

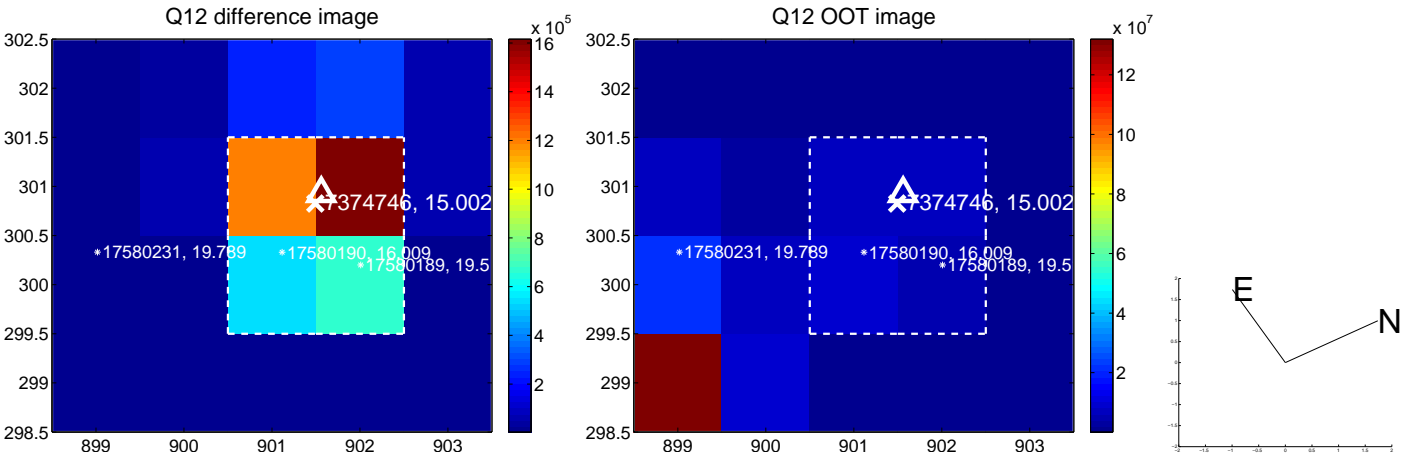
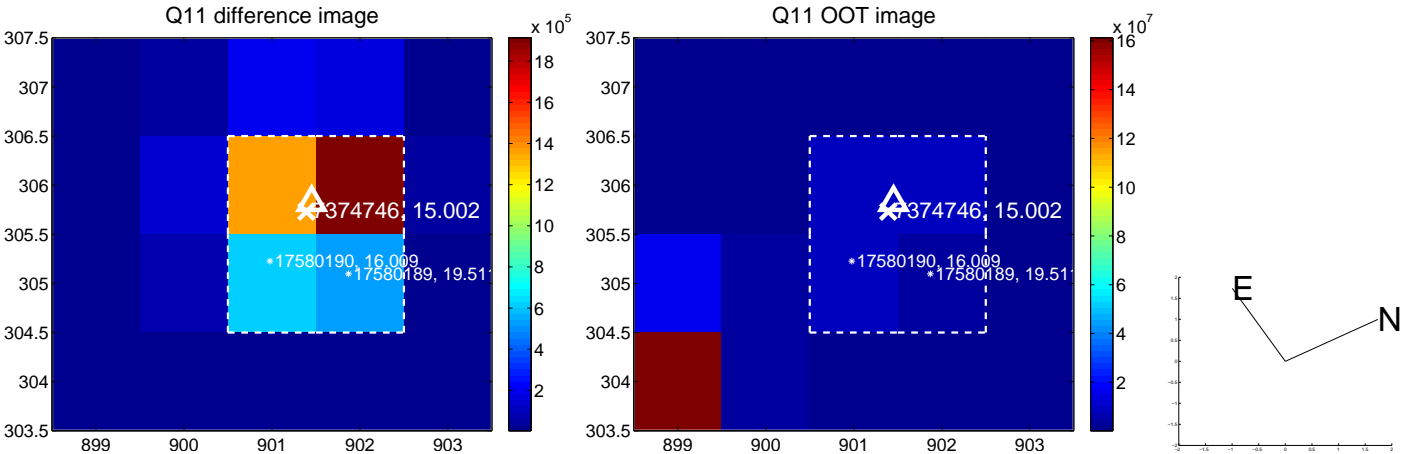
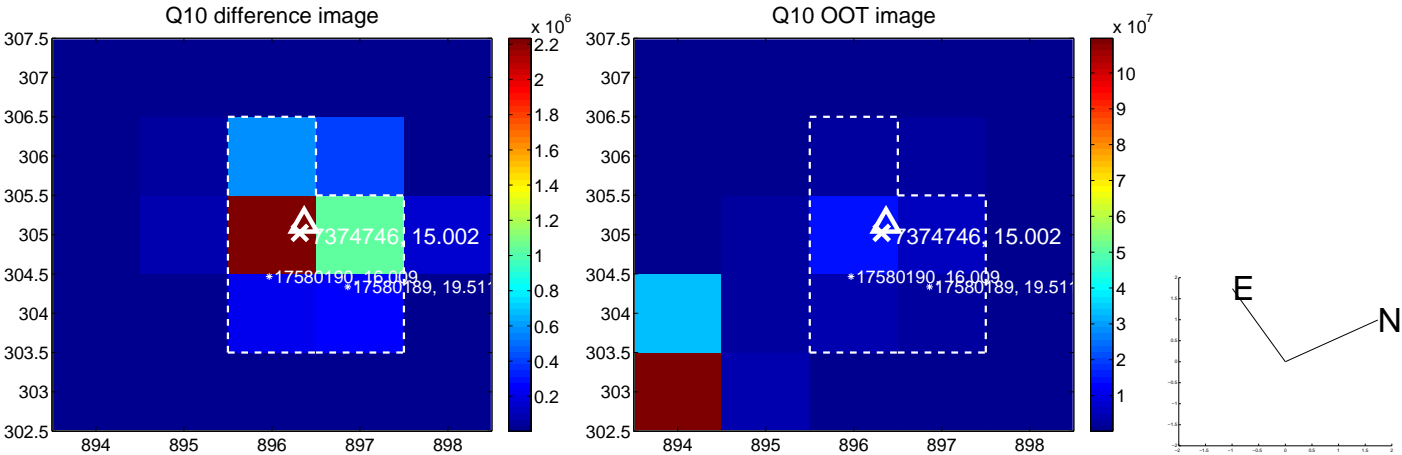
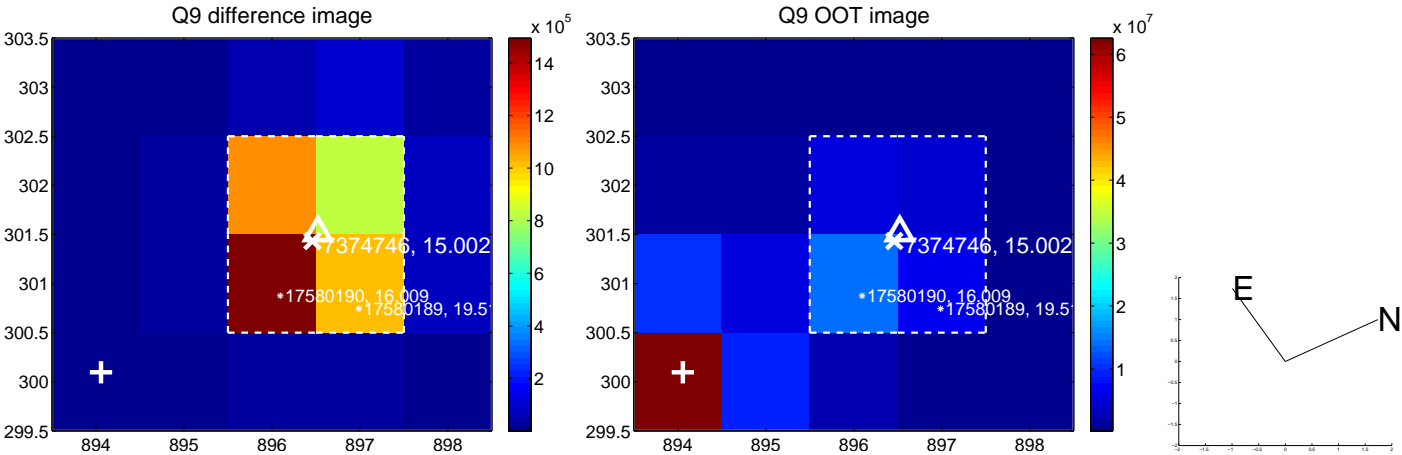
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



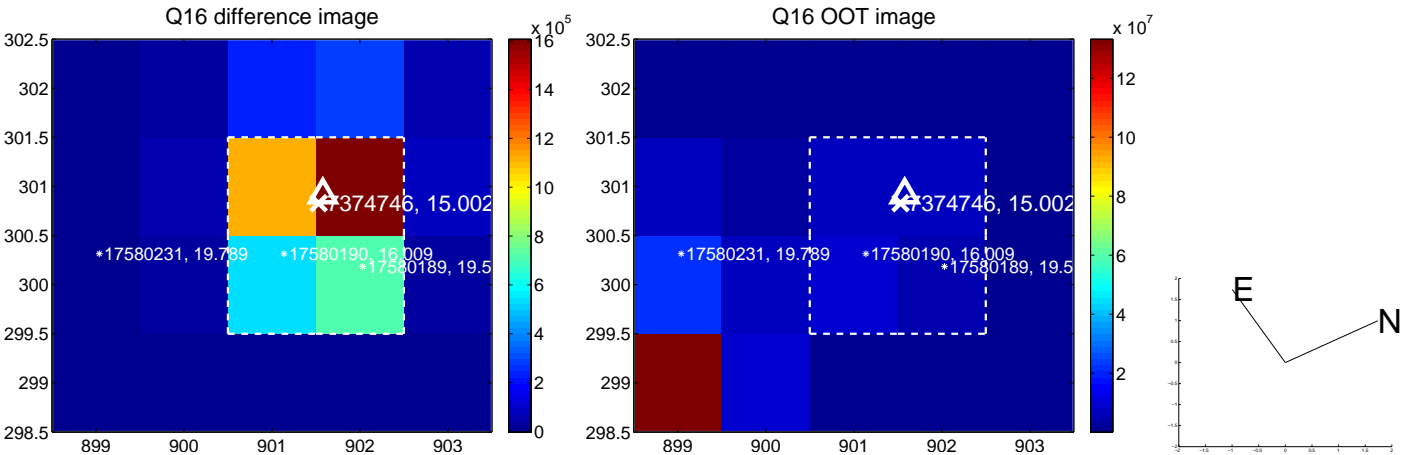
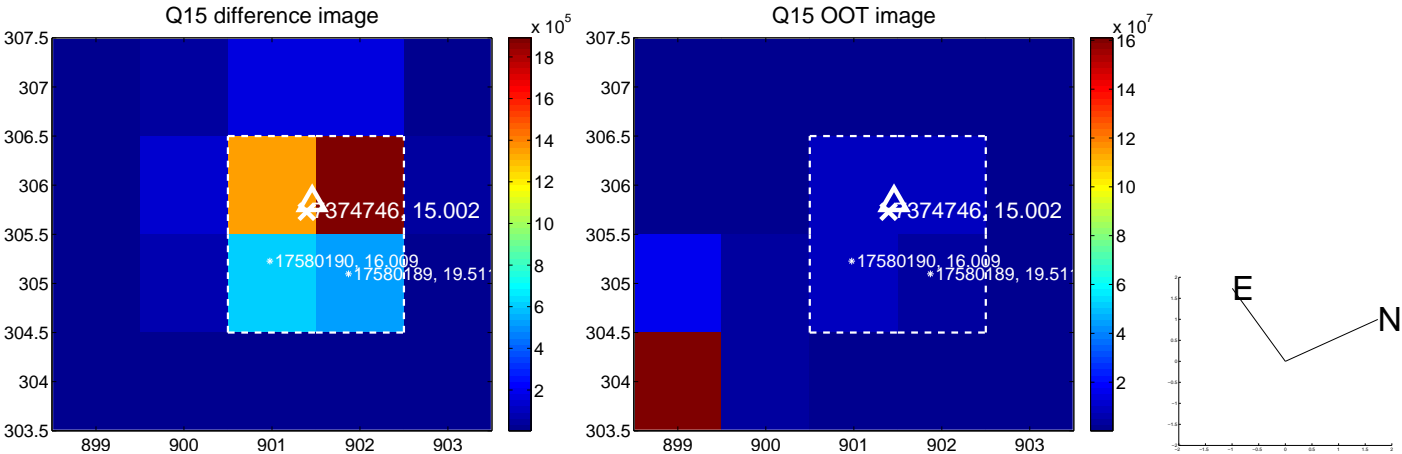
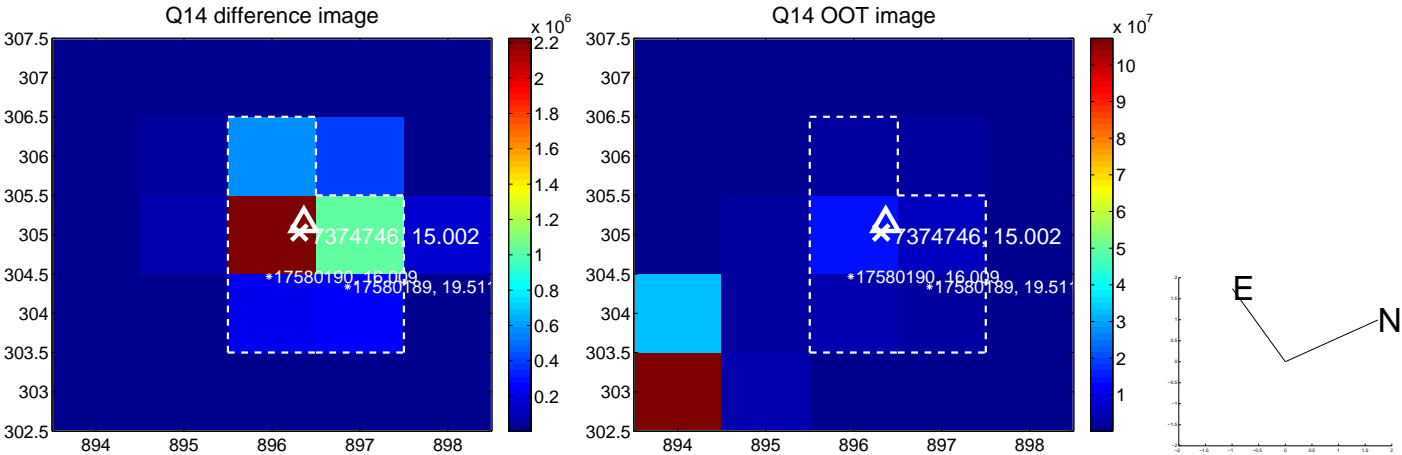
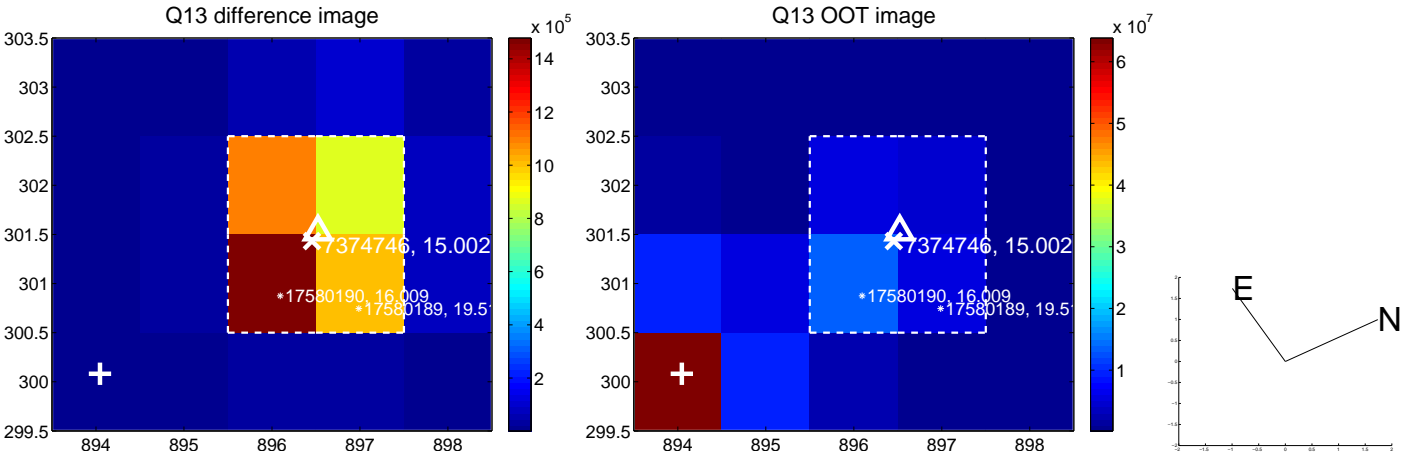
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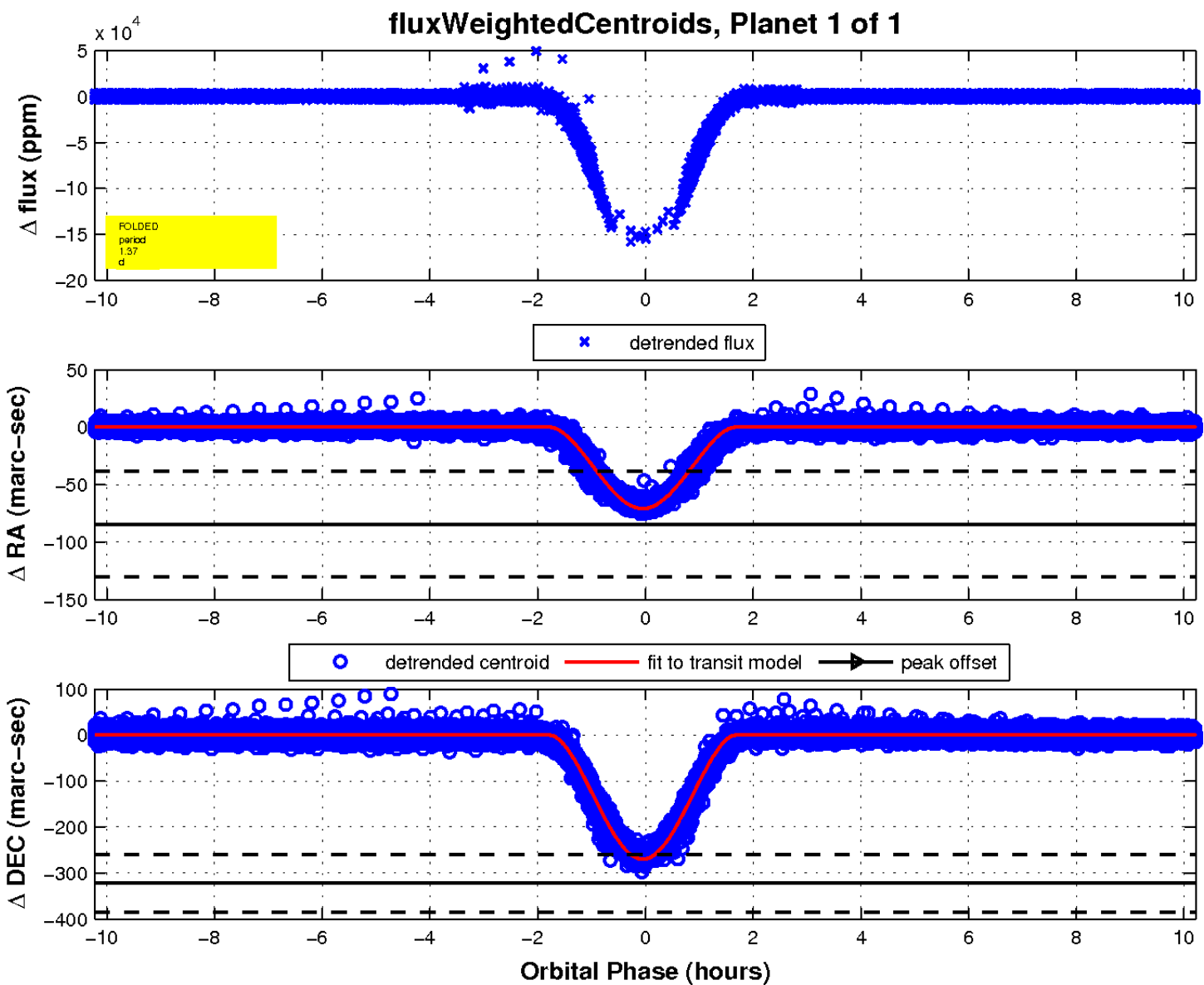
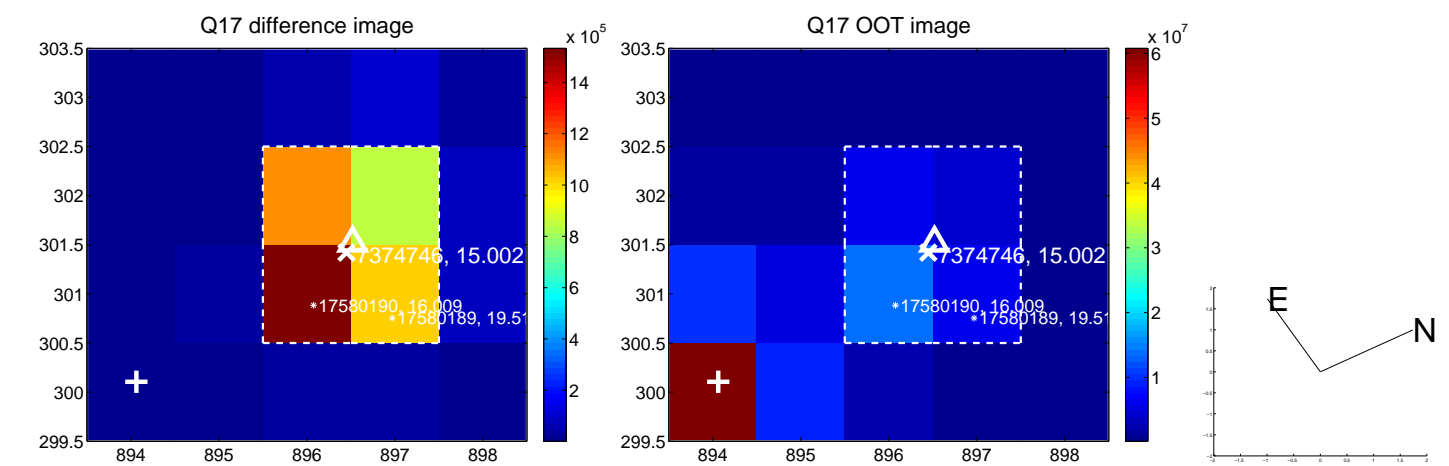
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

