

KIC 010386984

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})
010386984-01	OBS	0739.01	1.287078	132.489541	706.2	1.558	50.9	60.4	0.53	3736	1.60	136.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010386984-01	OBS	PC	1.00	0	0	0	0	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.

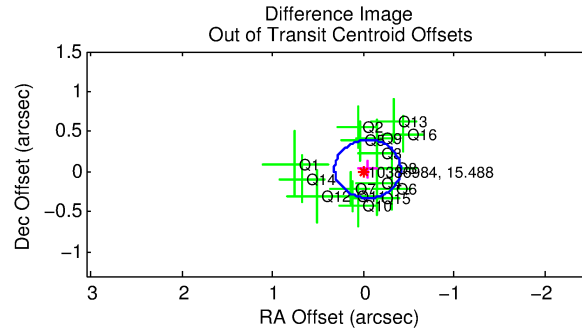
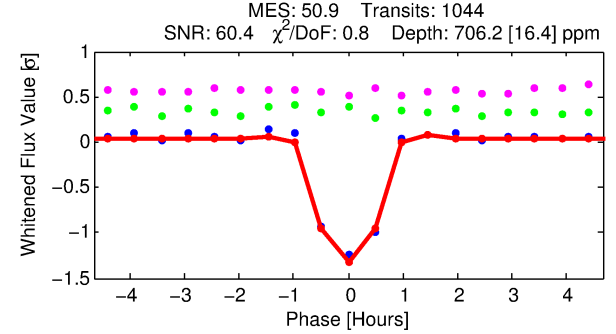
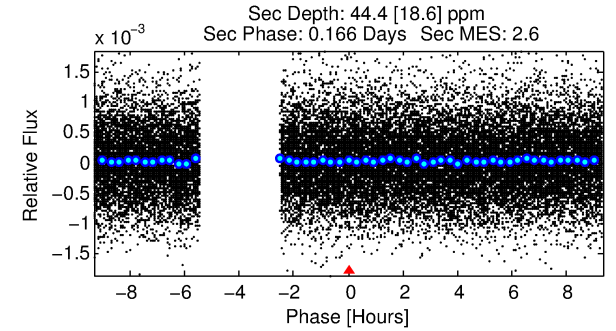
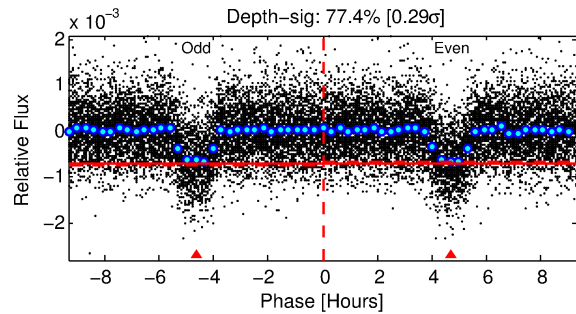
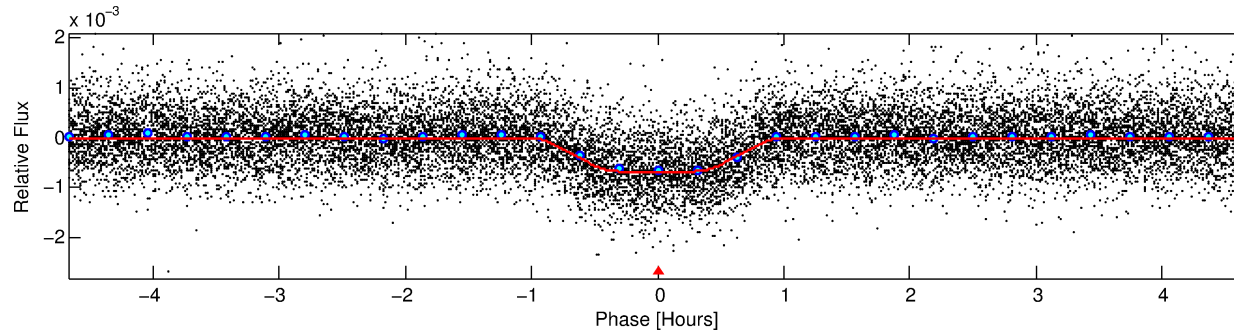
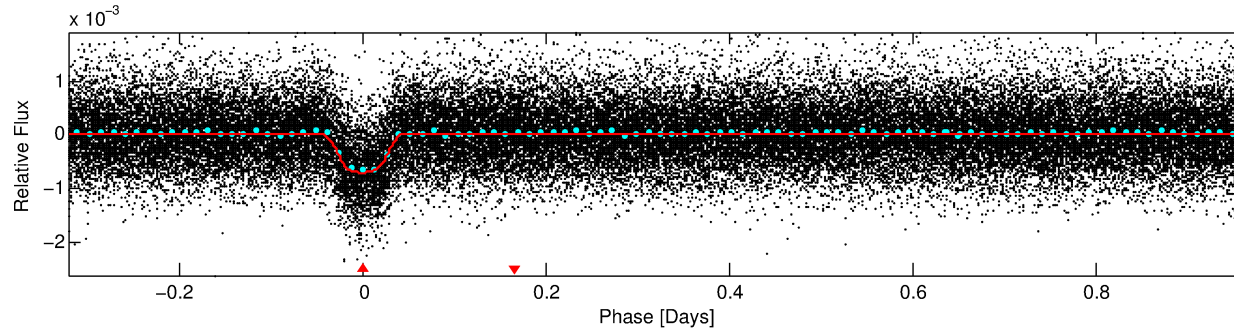
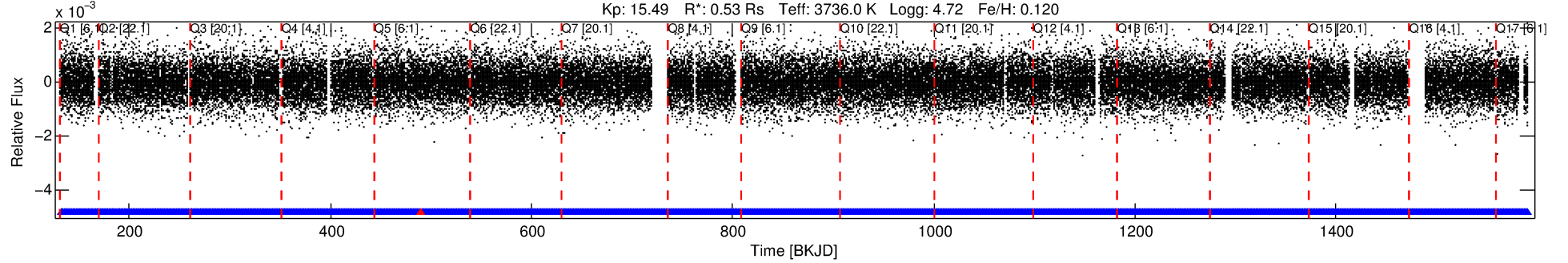
Ephemeris Match Information For 010386984-01

No Significant Match Found

DV One-Page Summary

KIC: 10386984 Candidate: 1 of 1 Period: 1.287 d
KOI: K00739.01 Corr: 0.984

Kp: 15.49 R*: 0.53 Rs Teff: 3736.0 K Logg: 4.72 Fe/H: 0.120



DV Fit Results:

Period = 1.28708 [0.00000] d
Epoch = 132.4895 [0.0004] BKJD
Rp/R* = 0.0280 [0.0042]
a/R* = 3.82 [2.14]
b = 0.84 [0.21]
Seff = 136.51 [17.45]
Teq = 872 [28] K
Rp = 1.60 [0.28] Re
a = 0.0188 [0.0013] AU
Ag = 3.36 [1.75] [1.35σ]
Teffp = 1824 [238] K [3.98σ]

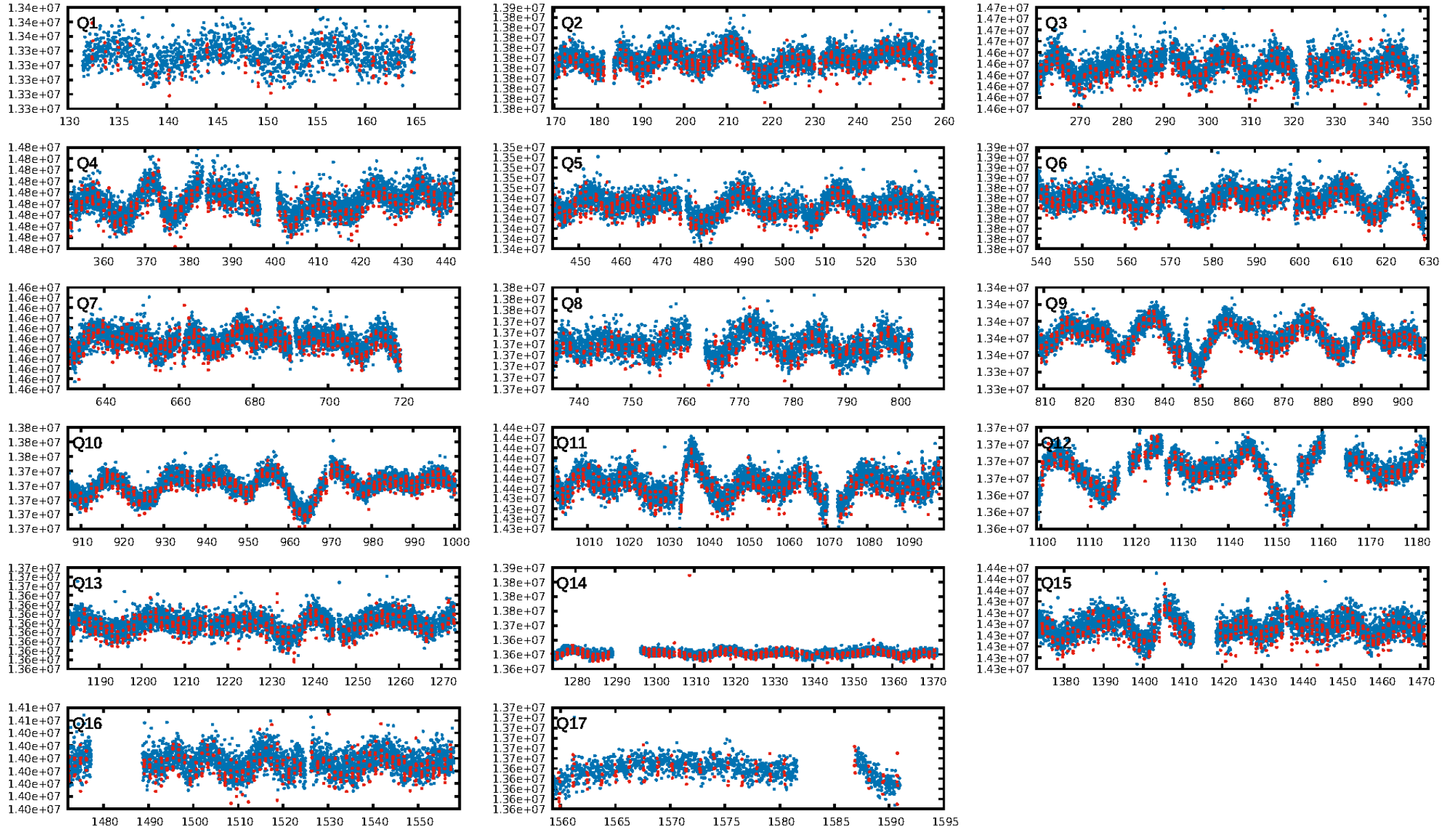
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [996/997]
GhostDiagnostic-chr: 3.202
Centroid-sig: 3.6%
Centroid-so: 0.645 arcsec [2.78σ]
OotOffset-rm: 0.058 arcsec [0.48σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.710 arcsec [6.25σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

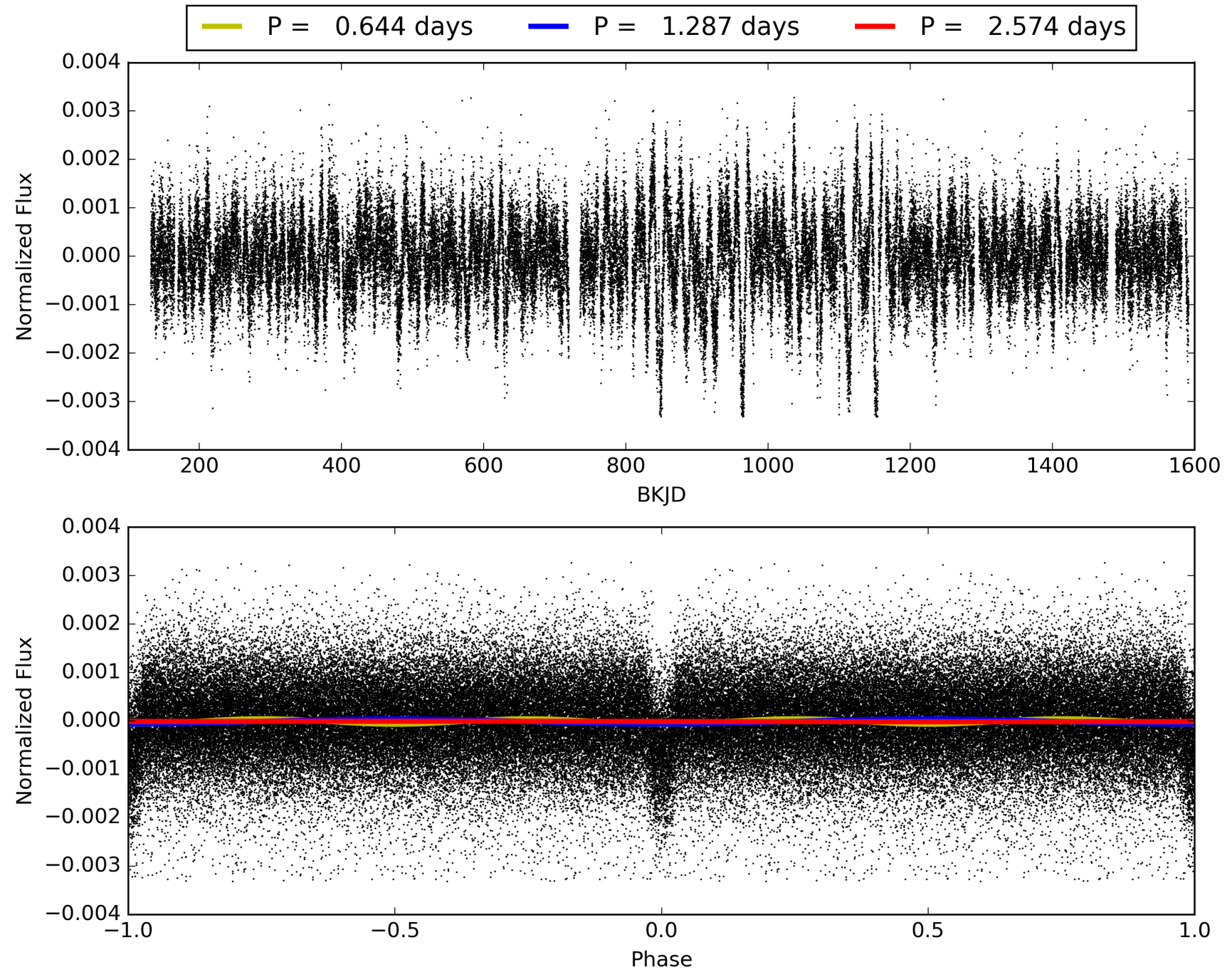
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:11:46 Z

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

TCE 010386984-01, PDC Light Curves

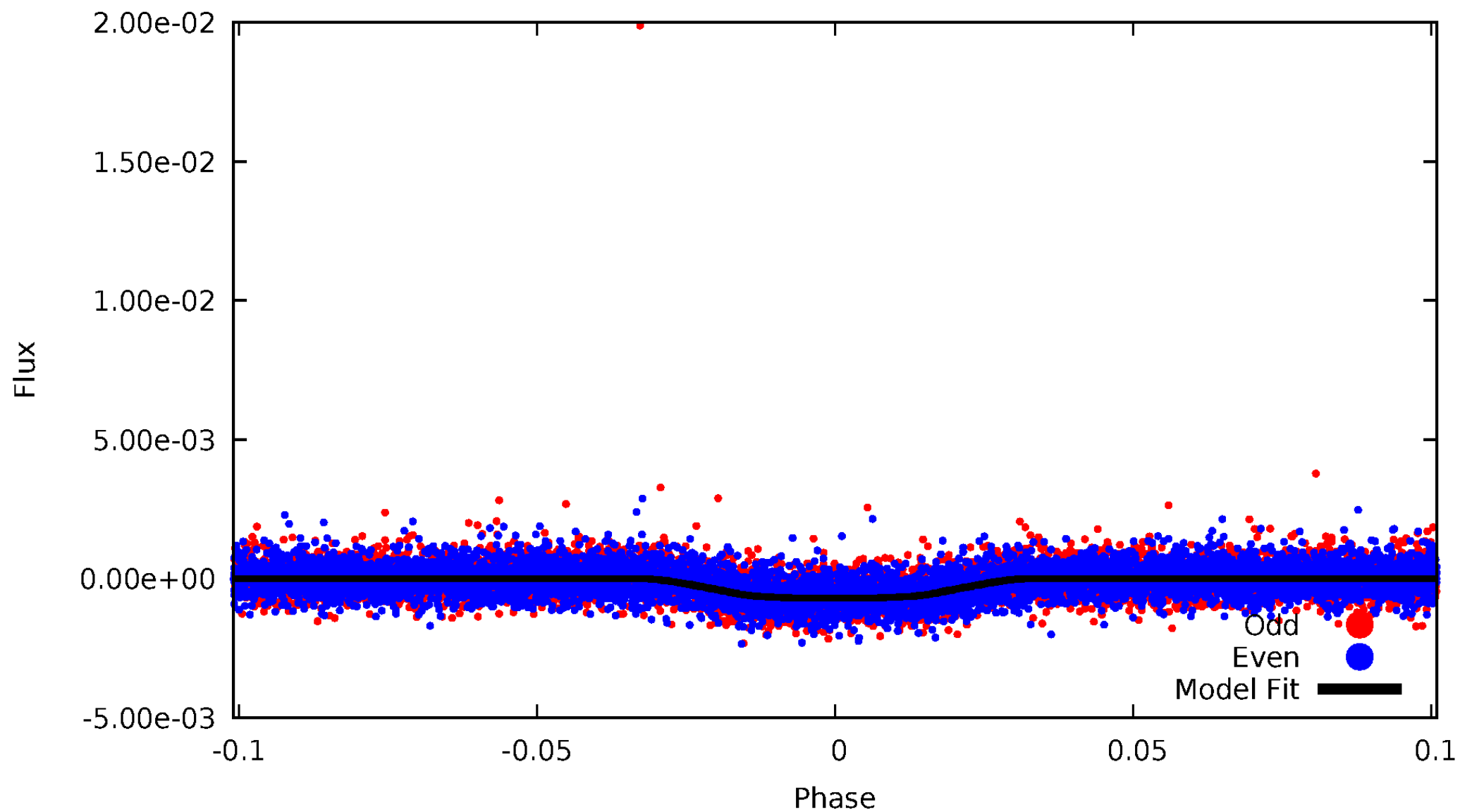


TCE 010386984-01



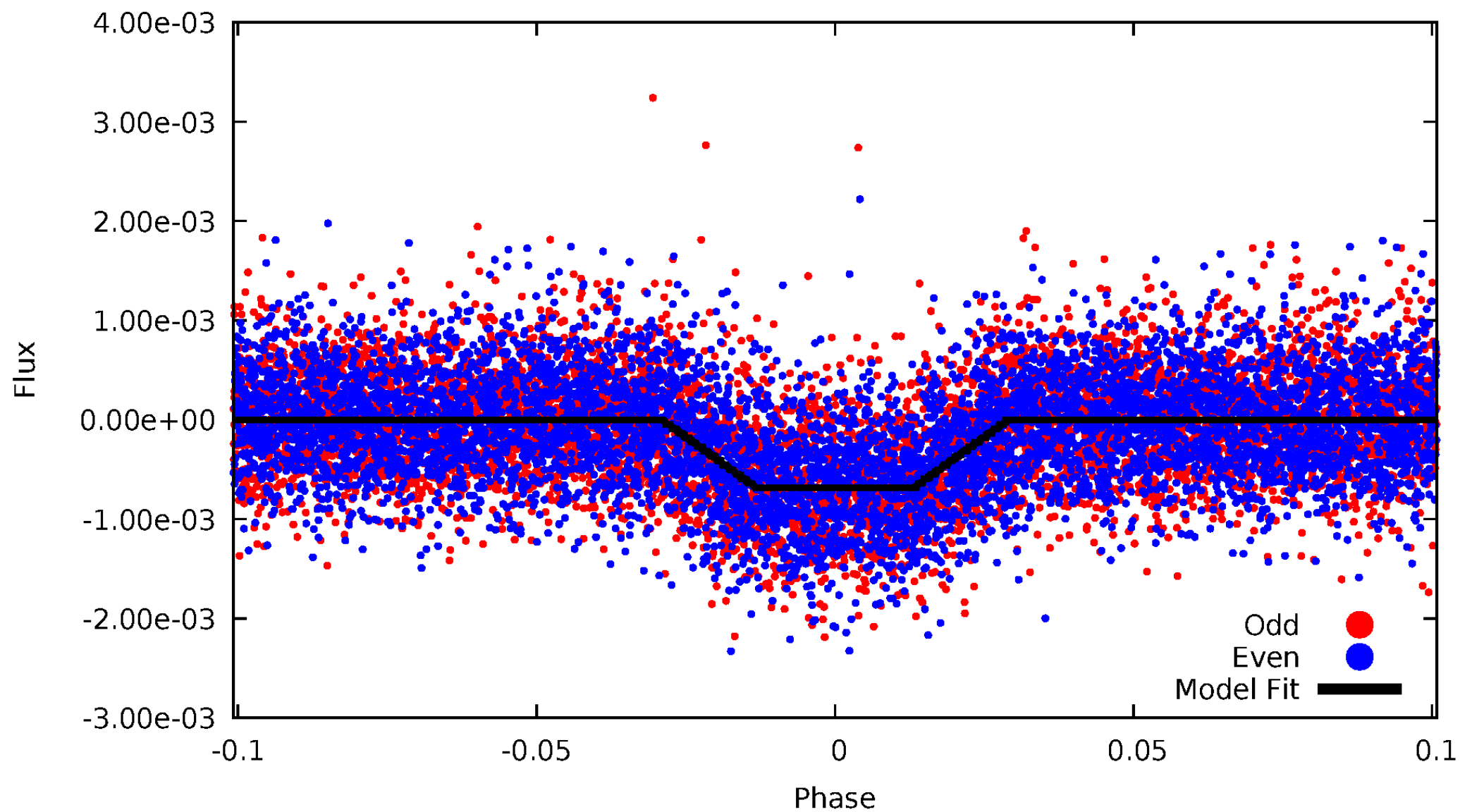
DV Odd/Even

TCE 010386984-01



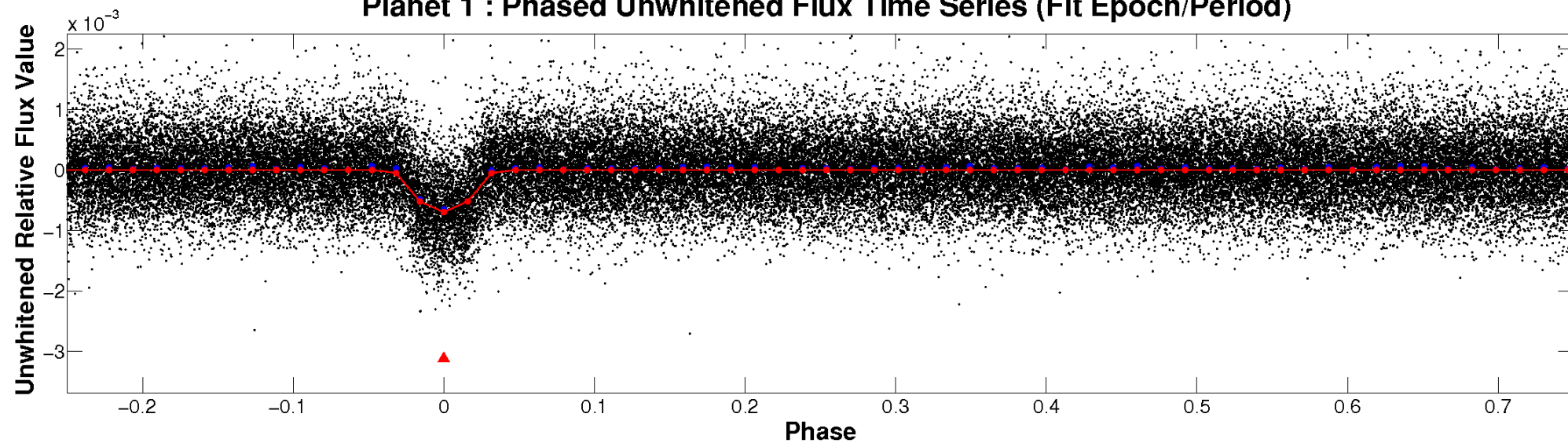
ALT Odd/Even

TCE 010386984-01

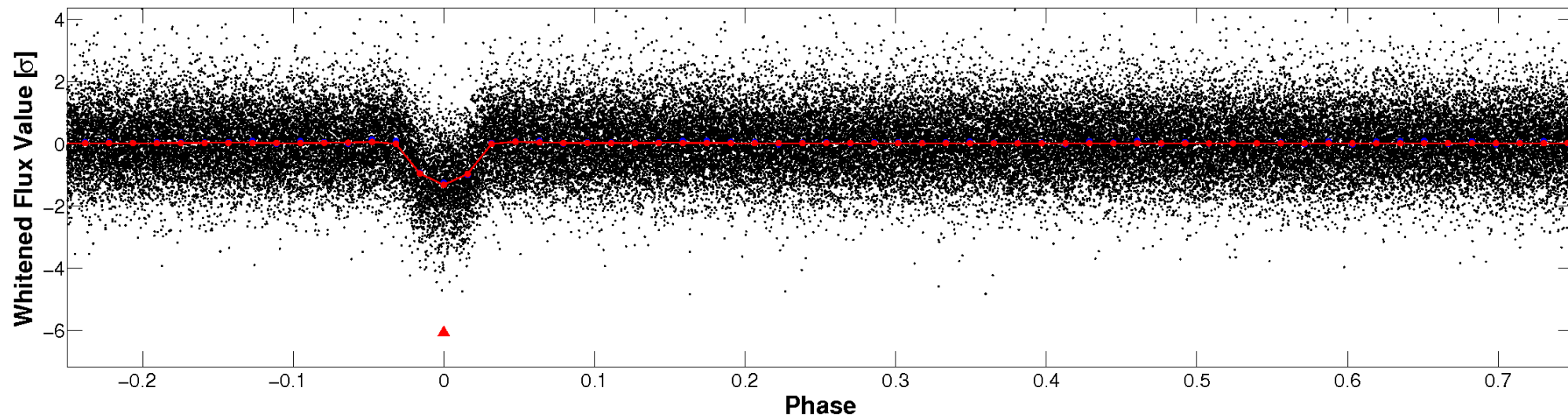


Non-Whitened Vs. Whitened Light Curve

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

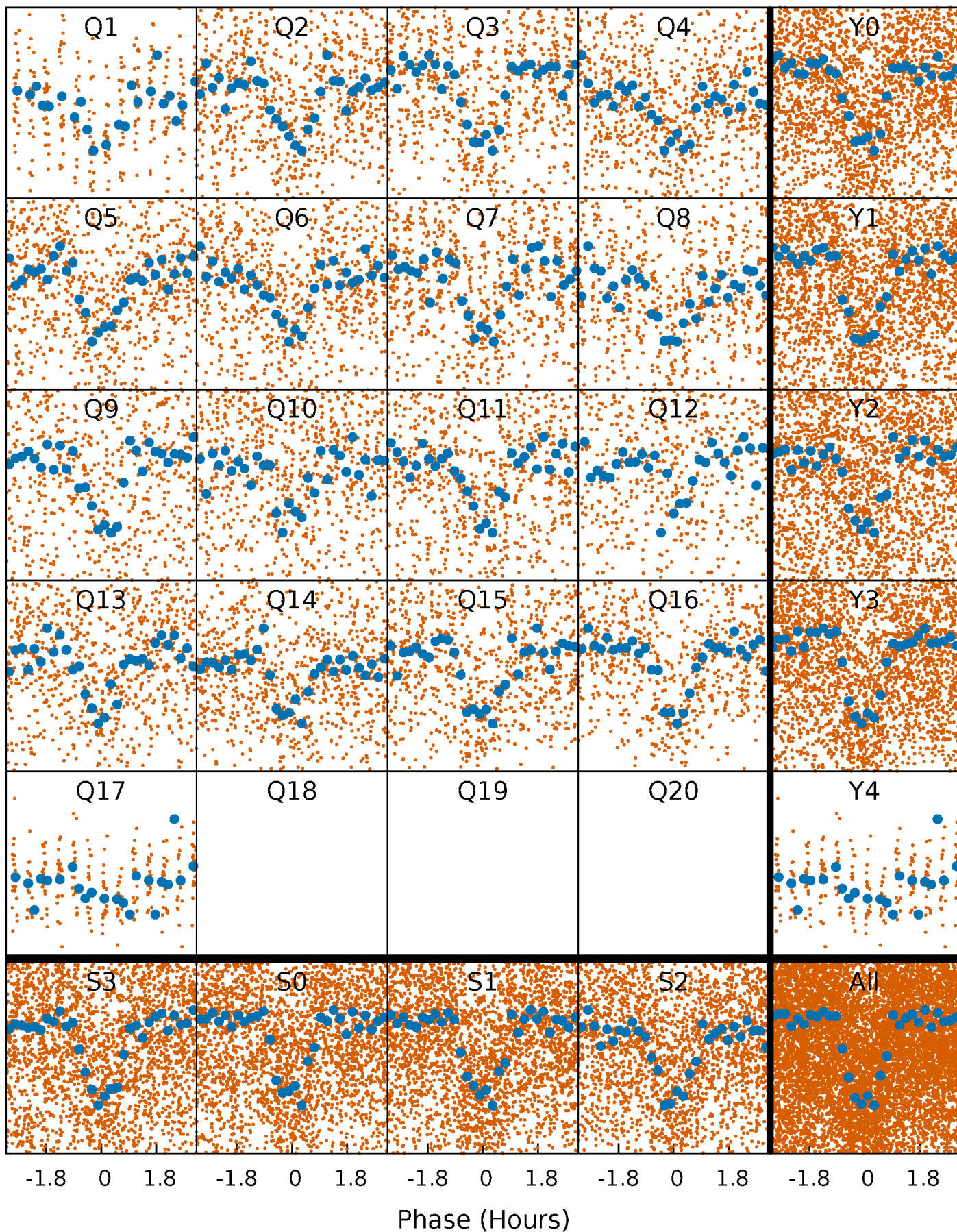


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



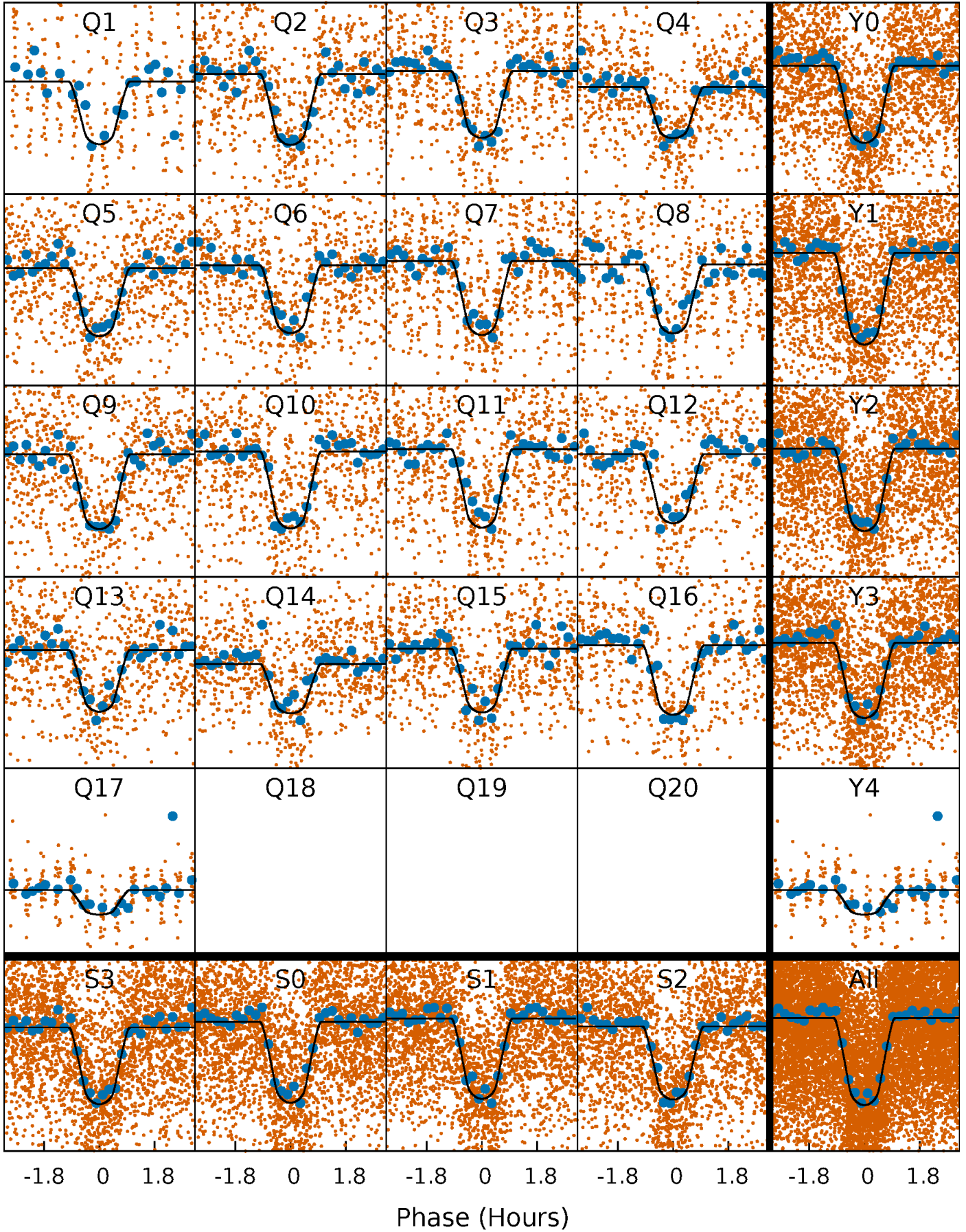
PDC Quarter-Phased Transit Curves

TCE 010386984-01 P= 1.287078 Days $T_0=132.489542$ (BKJD)



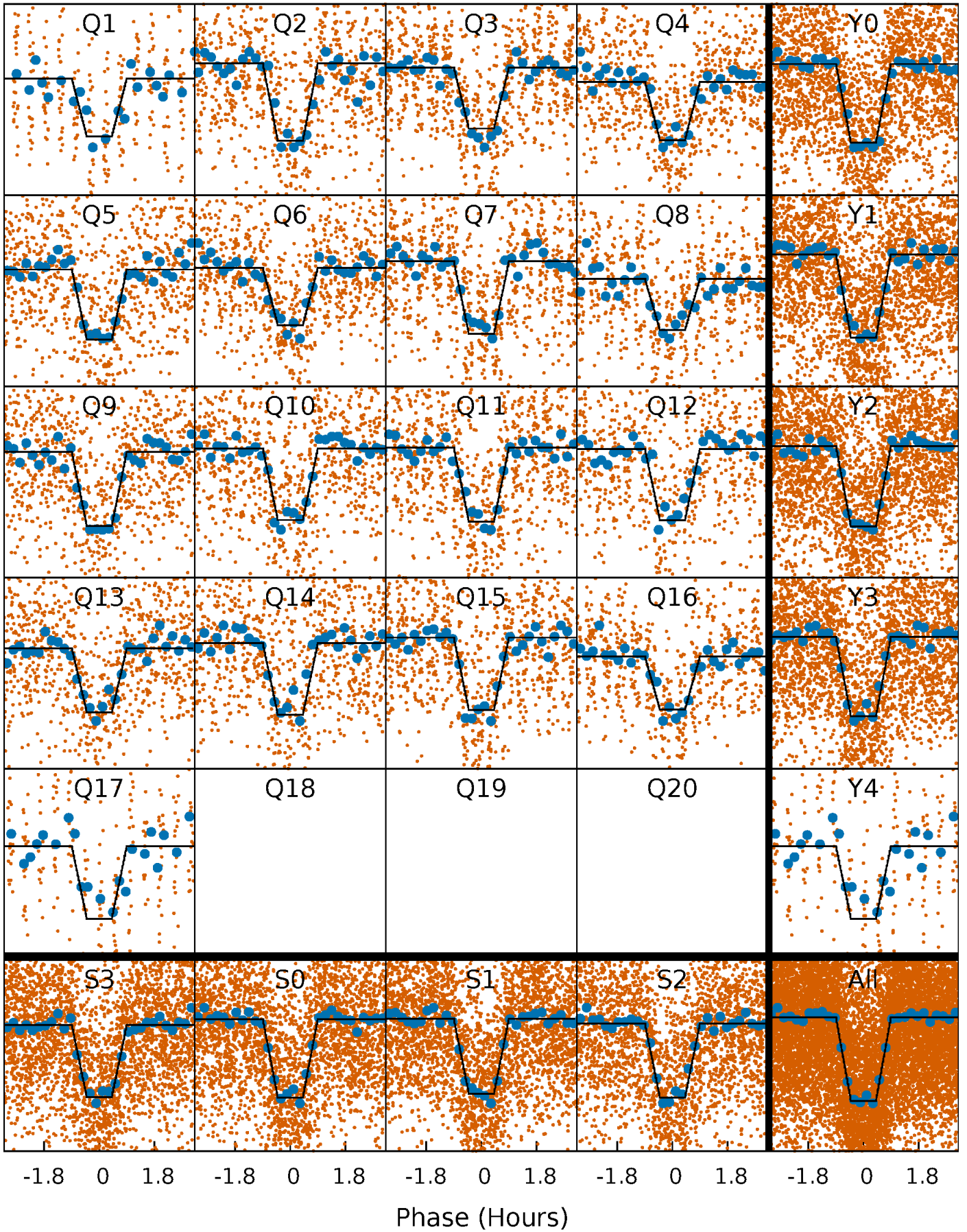
DV Quarter-Phased Transit Curves

TCE 010386984-01 P= 1.287078 Days $T_0=132.489542$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

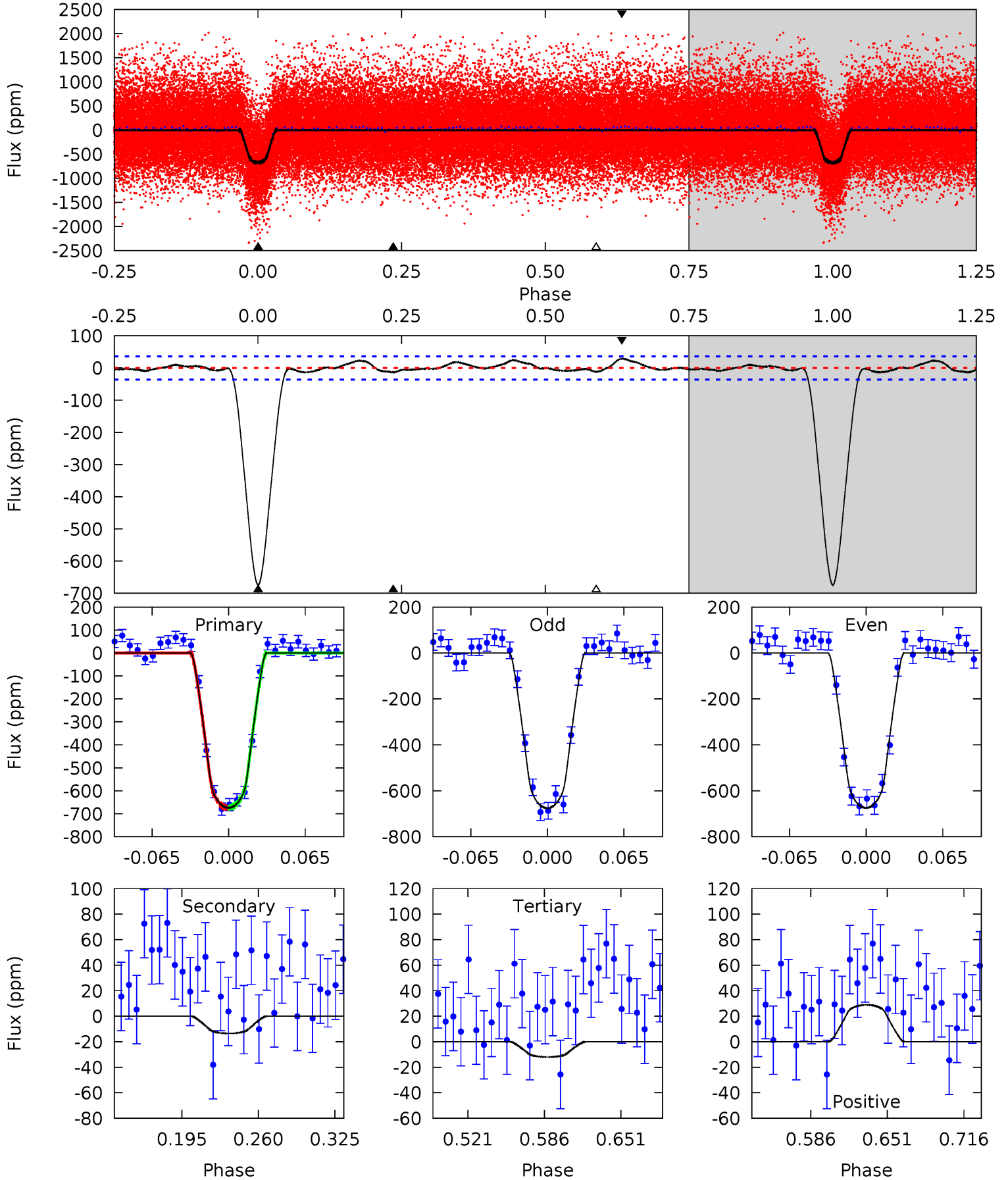
TCE 010386984-01 P= 1.287082 Days $T_0=132.487586$ (BKJD)



DV Model-Shift Uniqueness Test

010386984-01, P = 1.287078 Days, E = 131.202464 Days

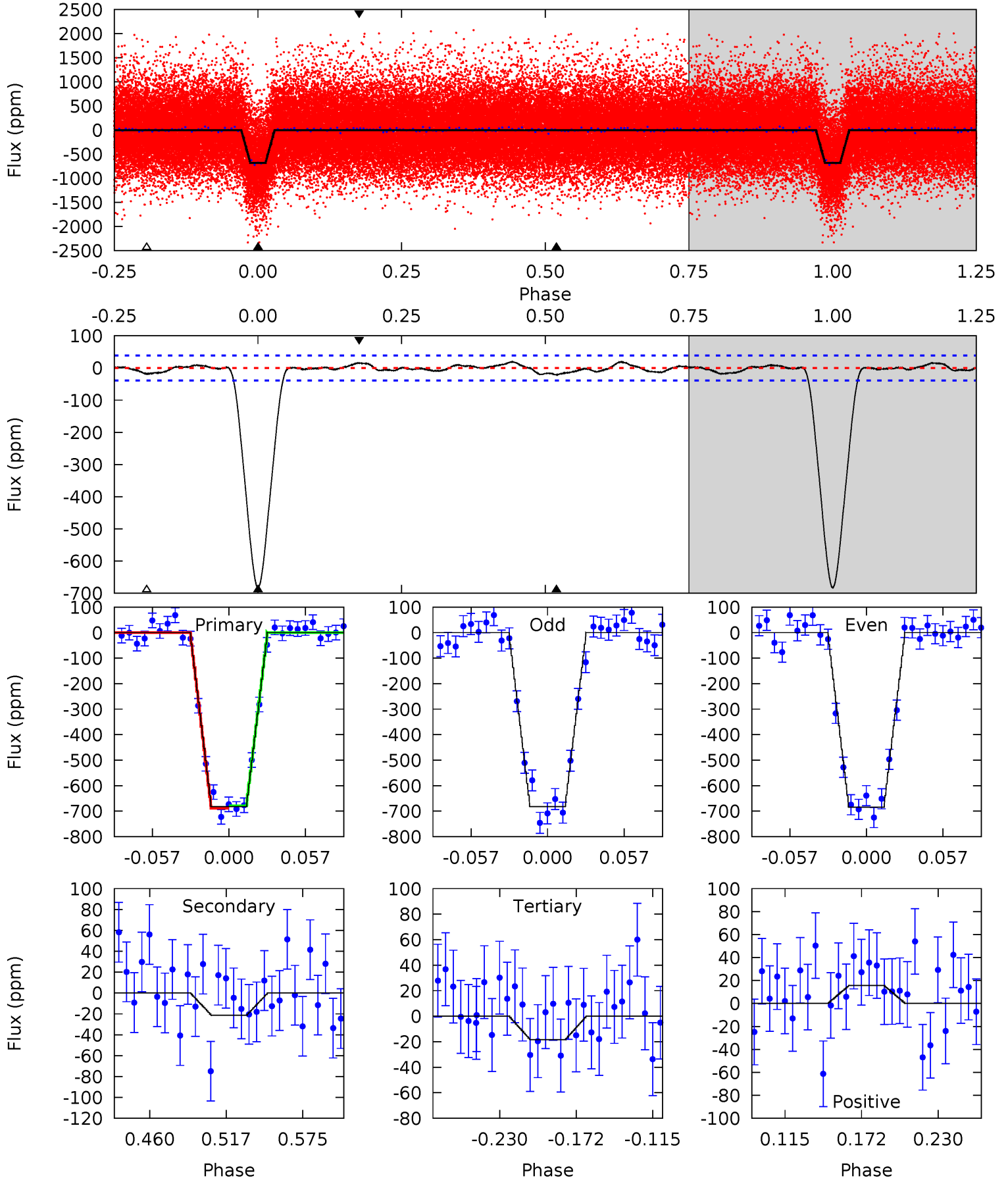
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
87.3	1.74	1.55	3.74	4.65	1.84	1.26	85.7	83.5	0.19	-2.00	0.09	0.97	0.04	0.17



Alt Model-Shift Uniqueness Test

010386984-01, P = 1.287082 Days, E = 131.200504 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.5	2.59	2.22	1.90	4.68	1.90	0.98	80.3	80.6	0.37	0.69	0.12	0.98	0.03	0.61



Stellar Parameters For KIC 010386984

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3736^{+75}_{-84}	$4.724^{+0.046}_{-0.021}$	$0.120^{+0.150}_{-0.150}$	$0.525^{+0.030}_{-0.045}$	$0.533^{+0.035}_{-0.039}$	$5.174^{+1.113}_{-0.515}$
	+2%/-2%	+1%/-0%	+125%/-125%	+6%/-9%	+7%/-7%	+22%/-10%
Source	SPE70	SPE60	SPE70	DSEP		

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

Secondary Eclipse Parameters for KIC 010386984-01 / KOI 0739.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 8	$1.59^{+0.25}_{-0.26}$	1209^{+30}_{-32}	2085^{+180}_{-333}	$1.050^{+0.825}_{-0.620}$
Alt.	-21 ± 8	$1.49^{+0.24}_{-0.23}$	1212^{+30}_{-33}	2265^{+159}_{-164}	$1.851^{+1.114}_{-0.753}$

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 $A_{obs} \gg 1.0$

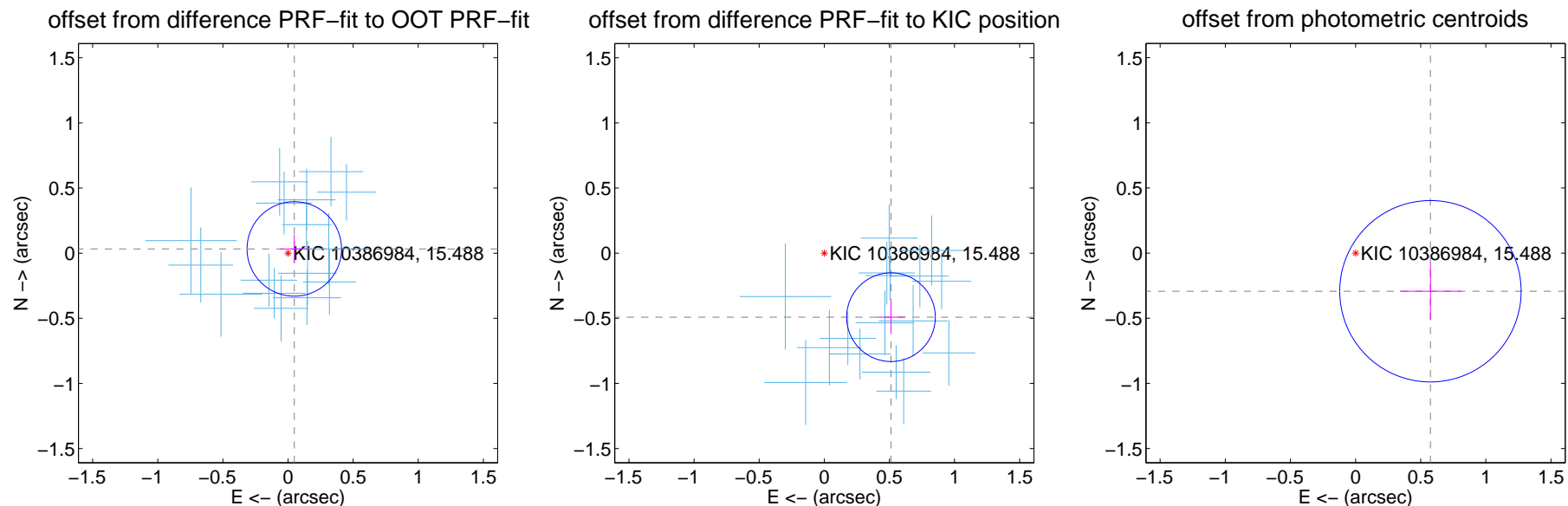
DV Centroid Data

Supplemental centroid analysis for 010386984-01. Kepler magnitude: 15.49. Transit SNR 60.42

There are 16 quarters with good PRF difference image offsets

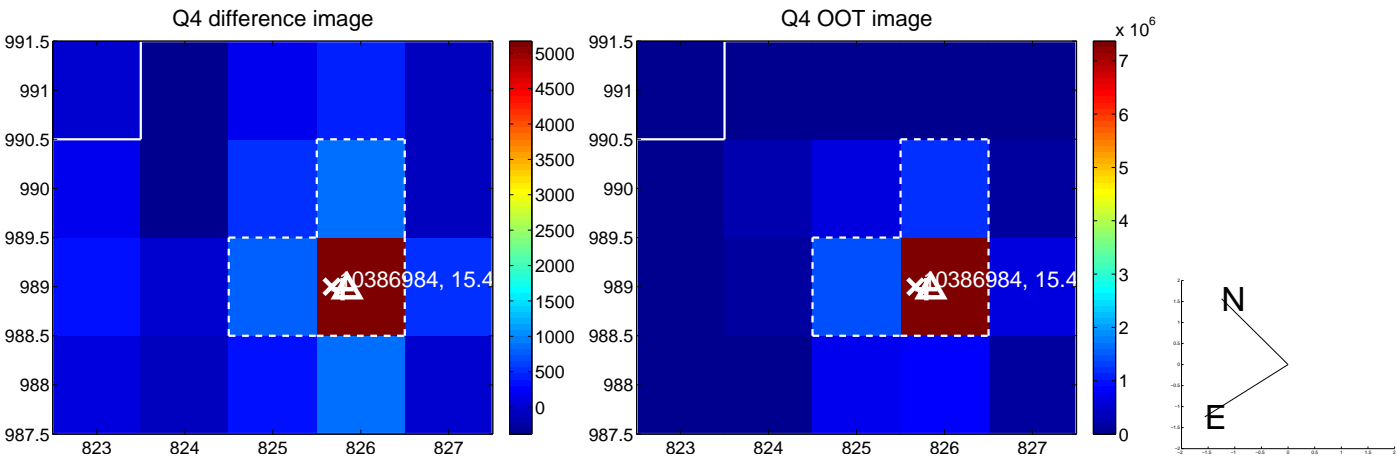
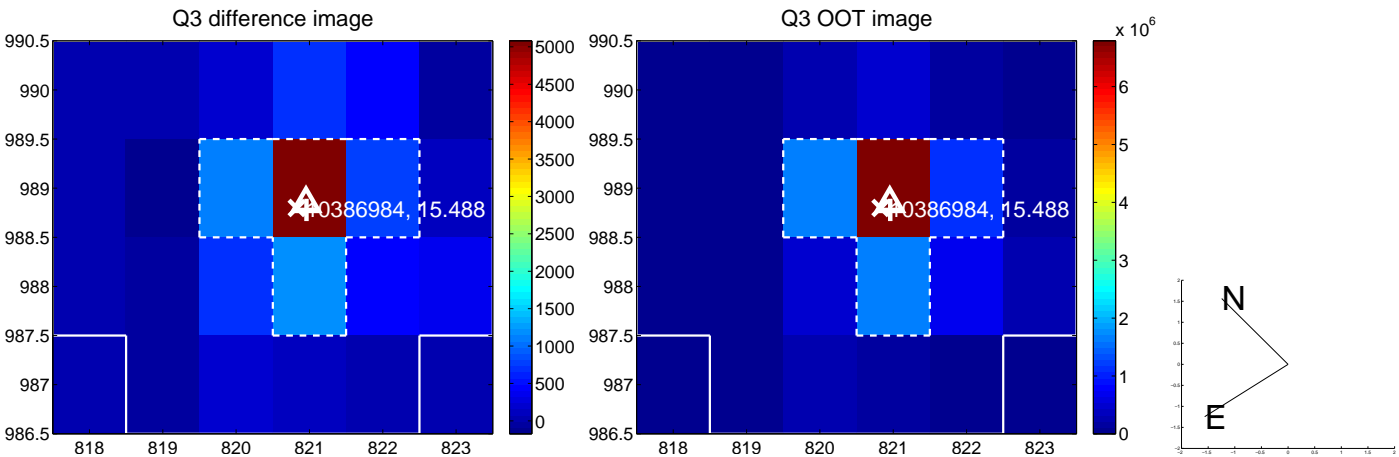
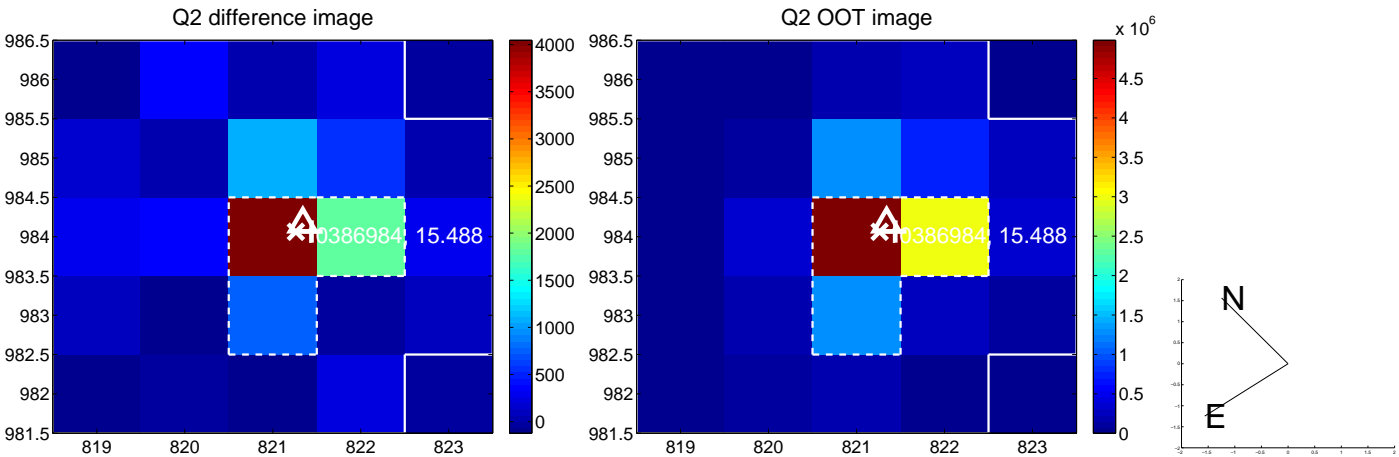
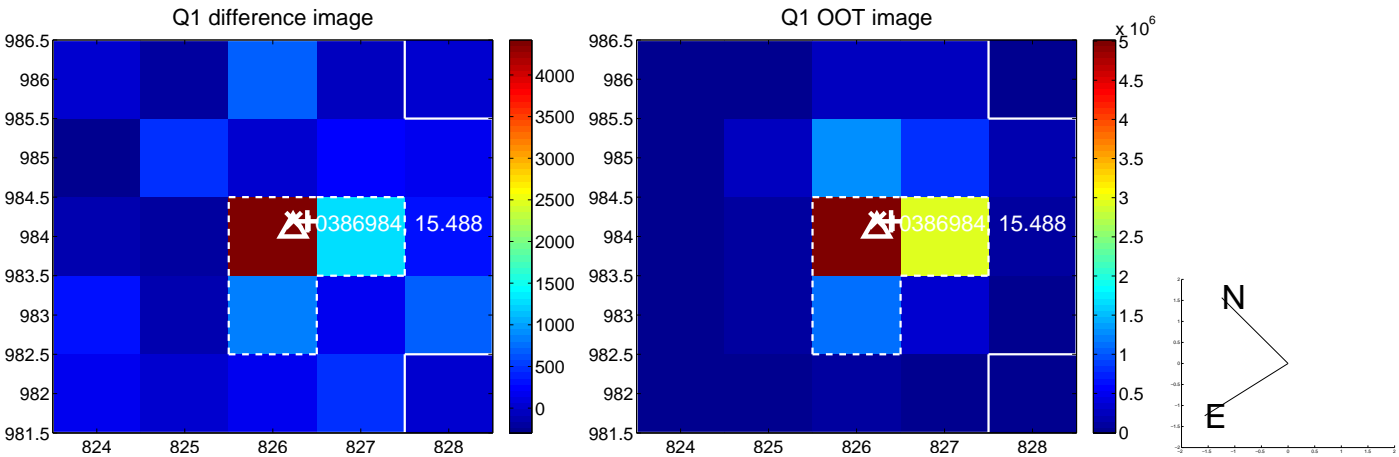
The direct PRF centroid is offset from the target star catalog position by about 0.82 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.058 ± 0.121	0.48	-0.048 ± 0.108	0.032 ± 0.110
PRF-fit source offset from KIC position	0.710 ± 0.113	6.25	-0.512 ± 0.109	-0.492 ± 0.118
photometric centroid source offset	0.65 ± 0.23	2.78	-0.57 ± 0.23	-0.29 ± 0.22

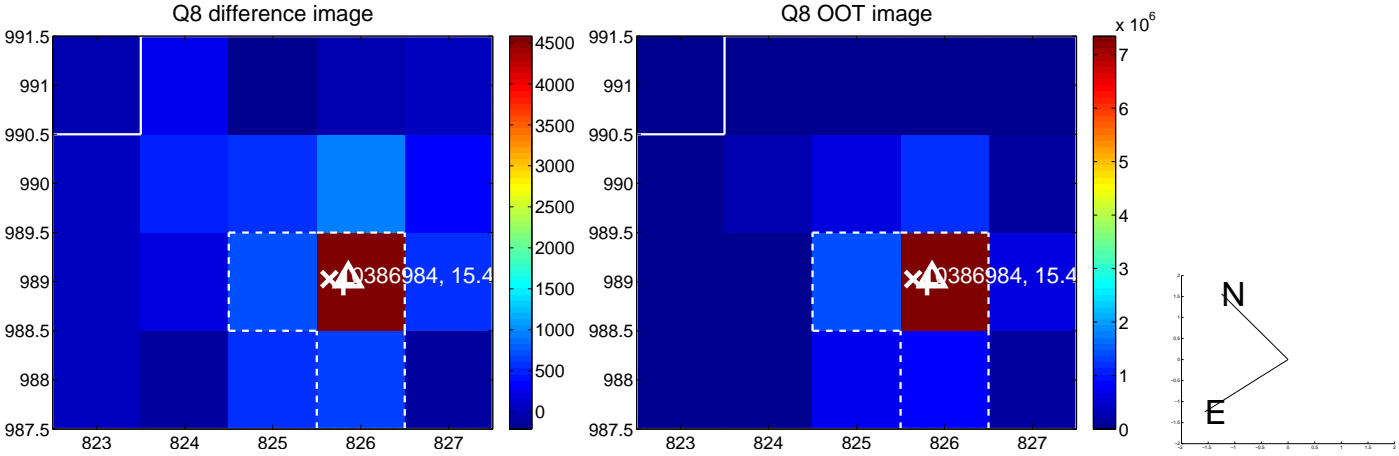
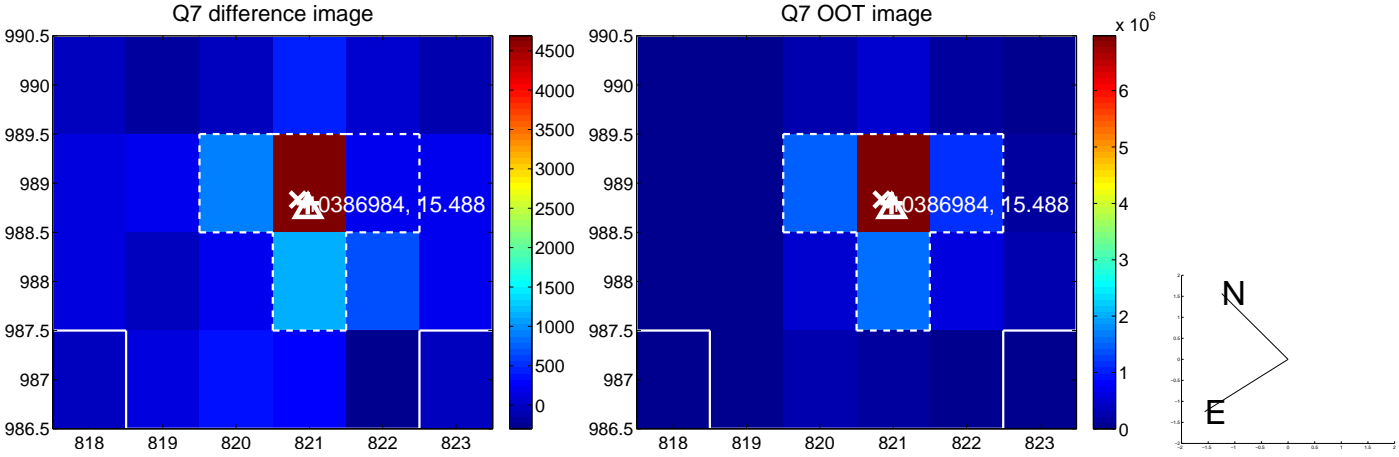
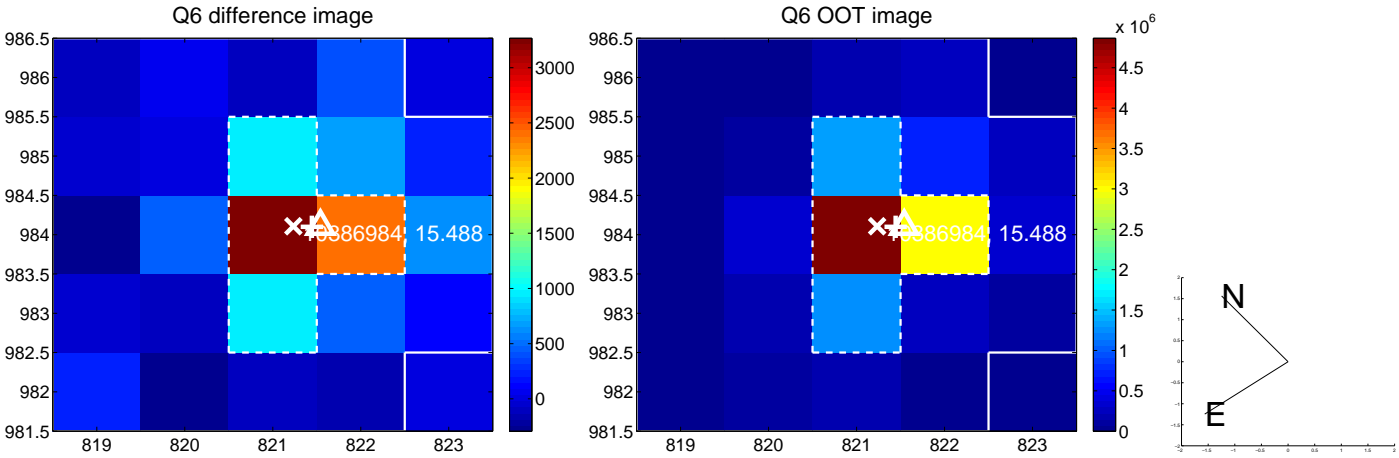
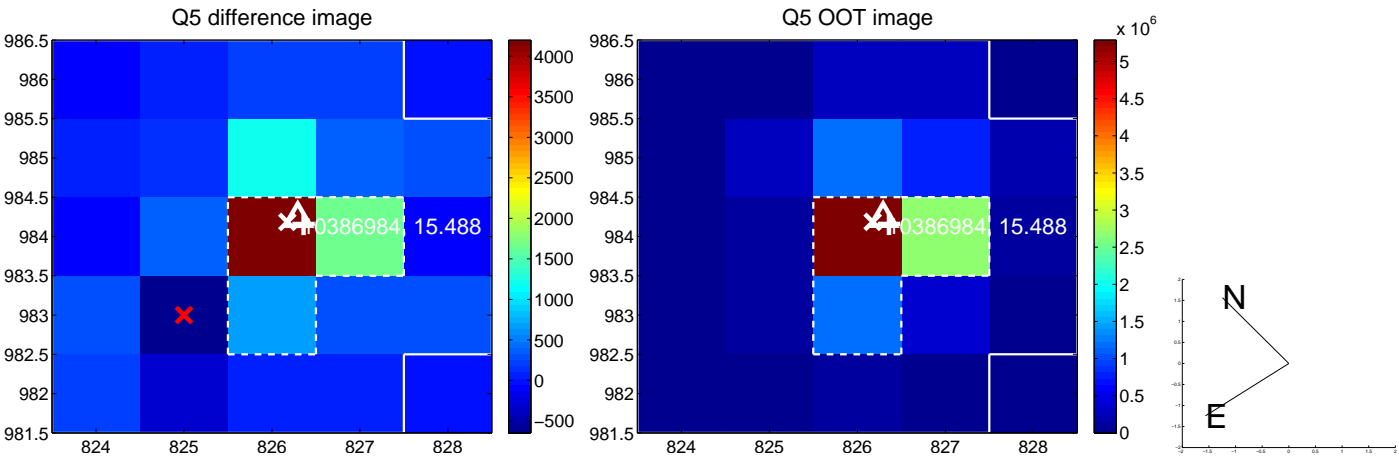


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

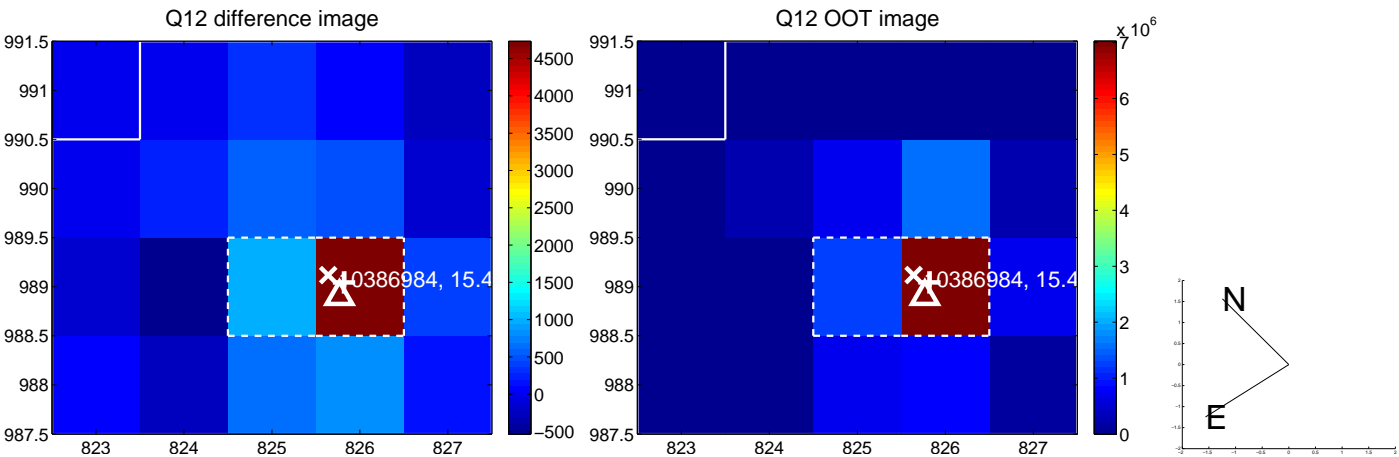
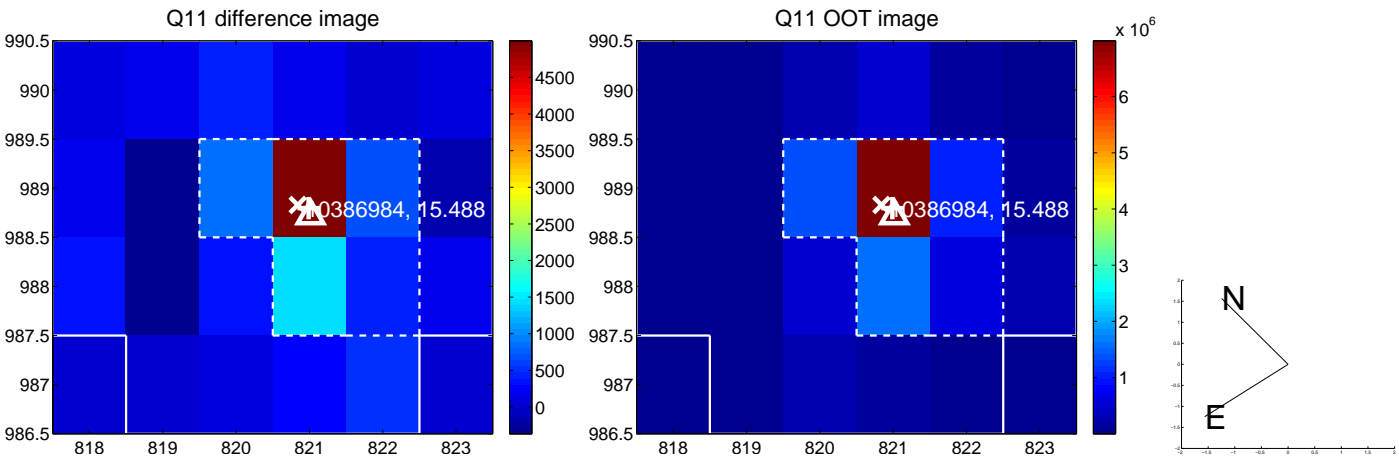
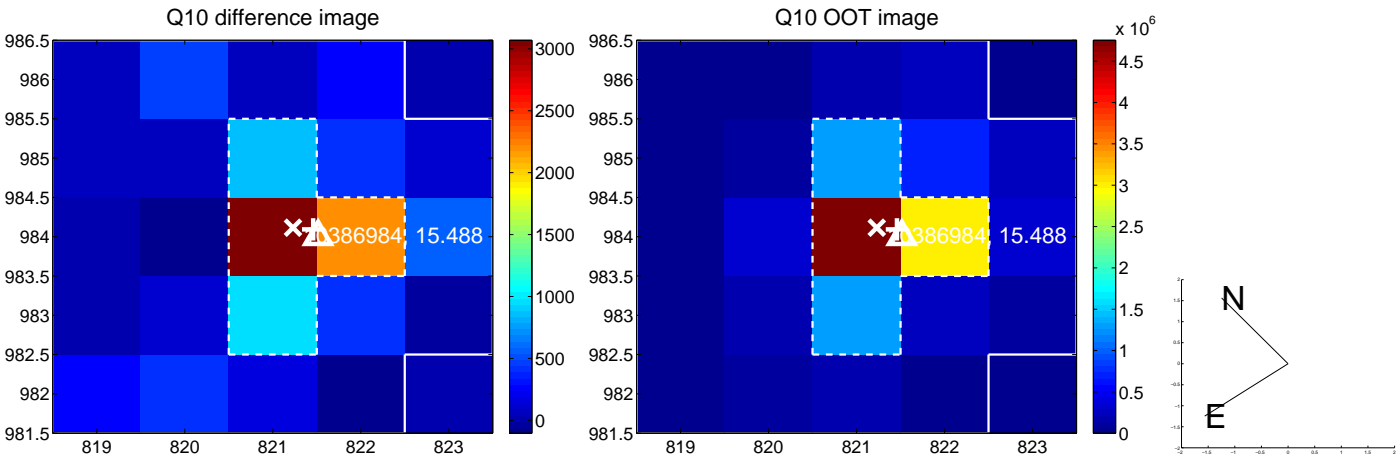
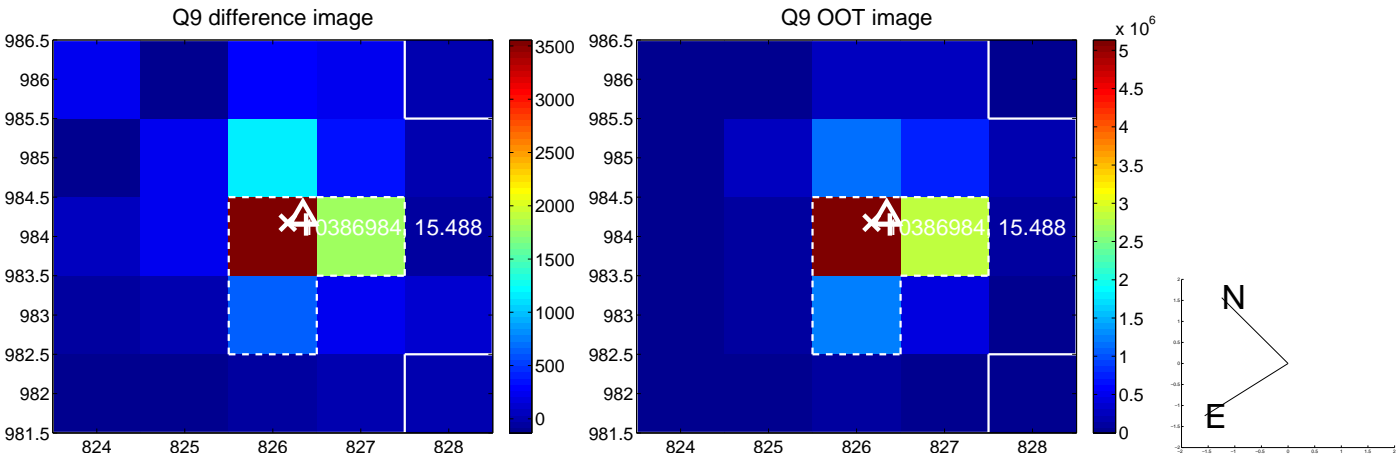
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



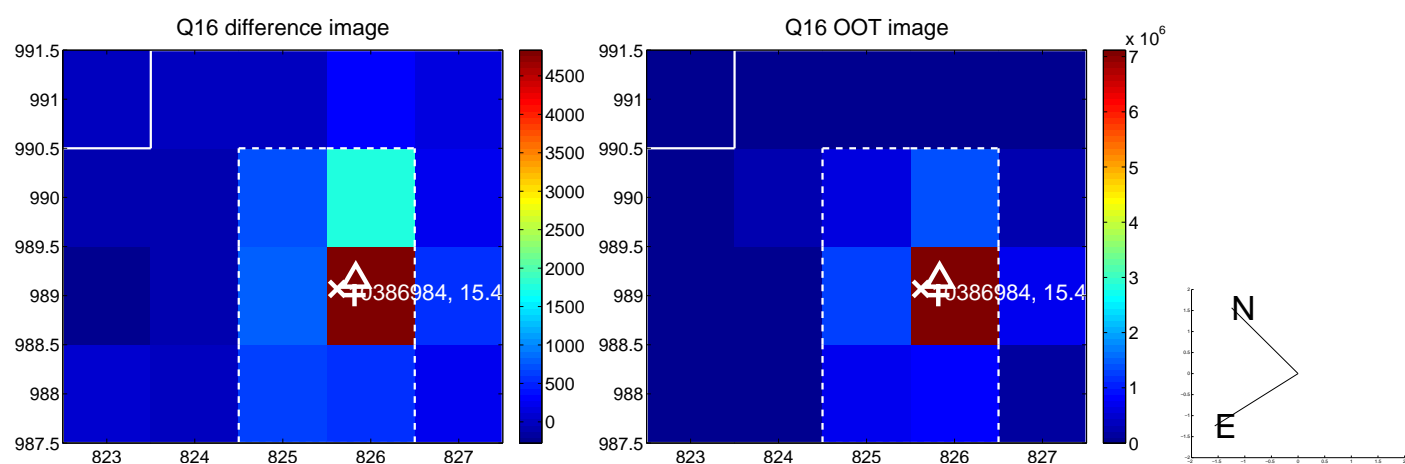
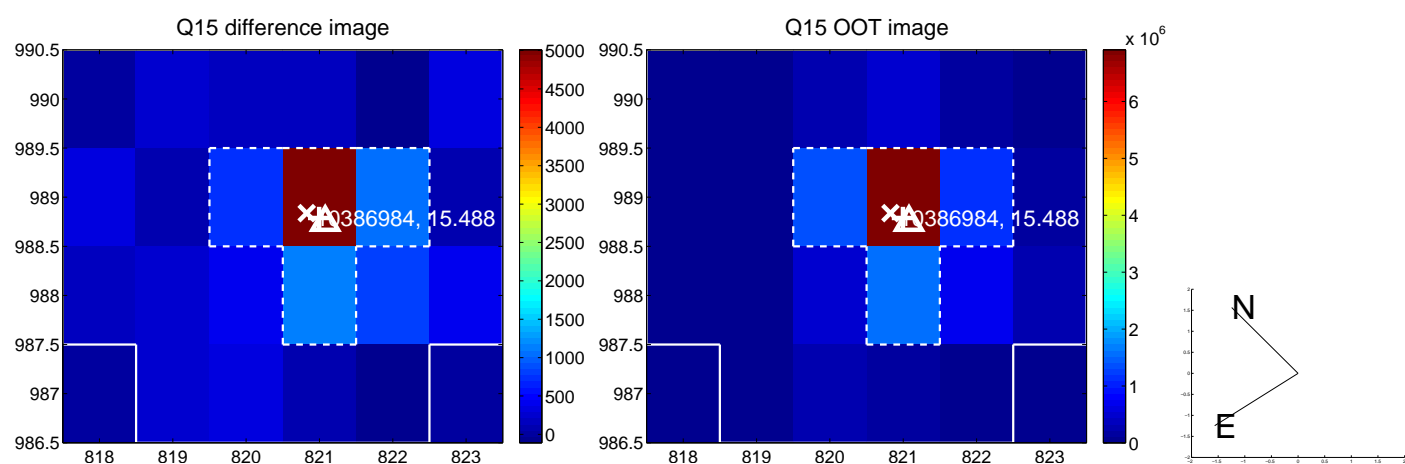
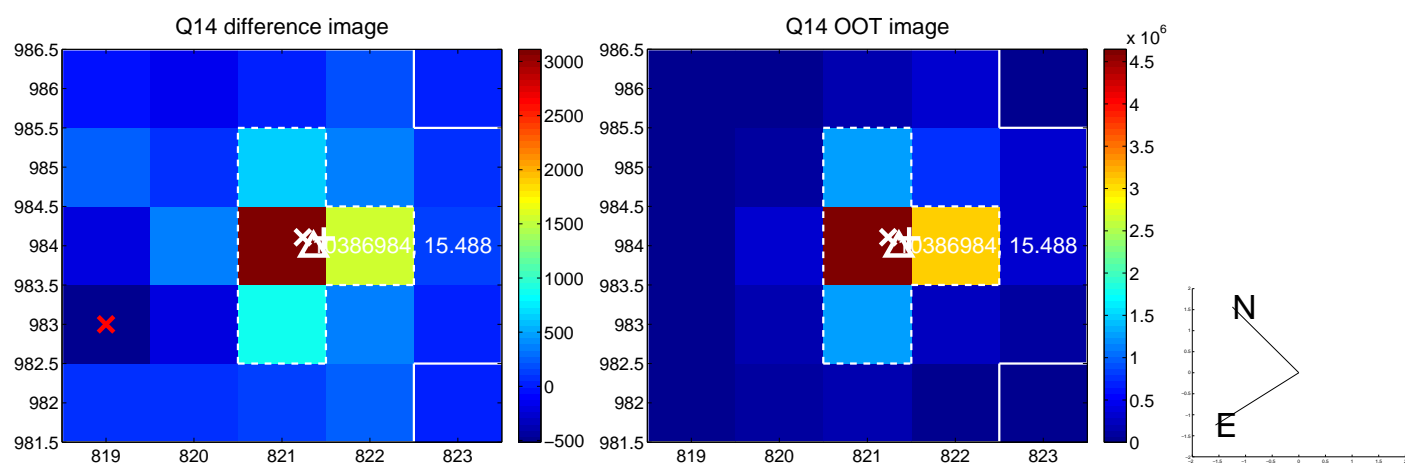
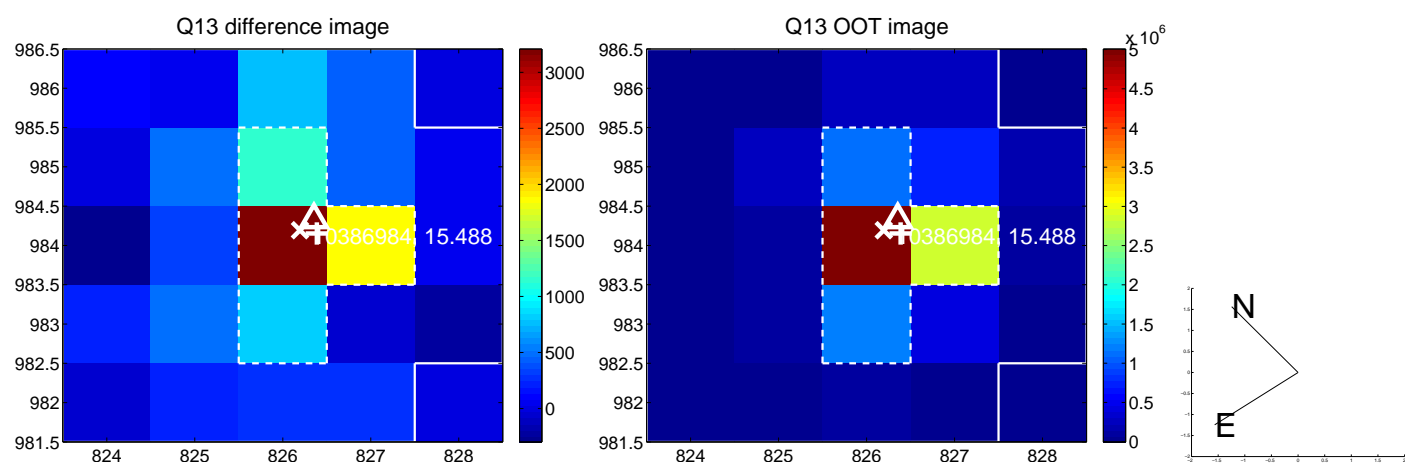
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



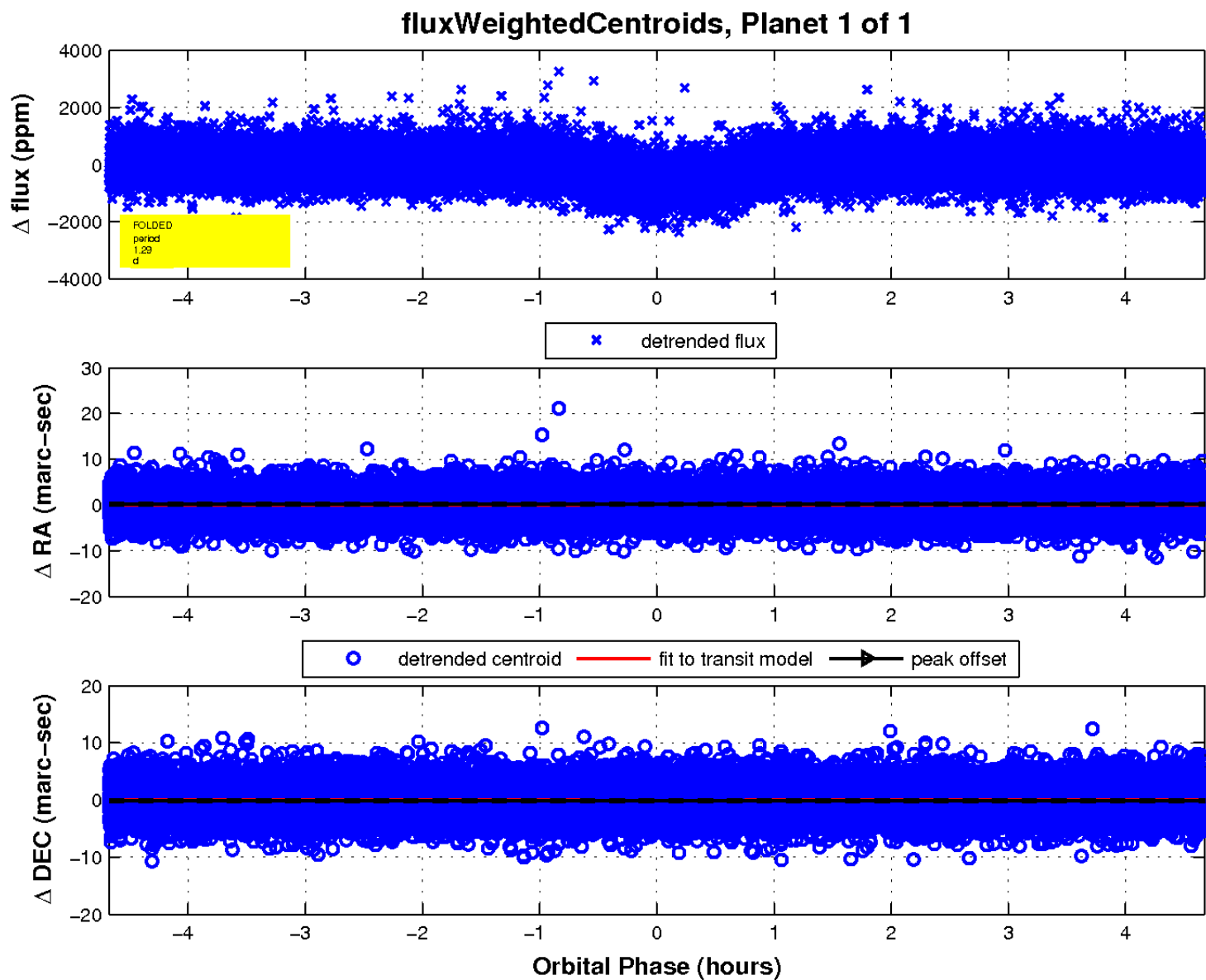
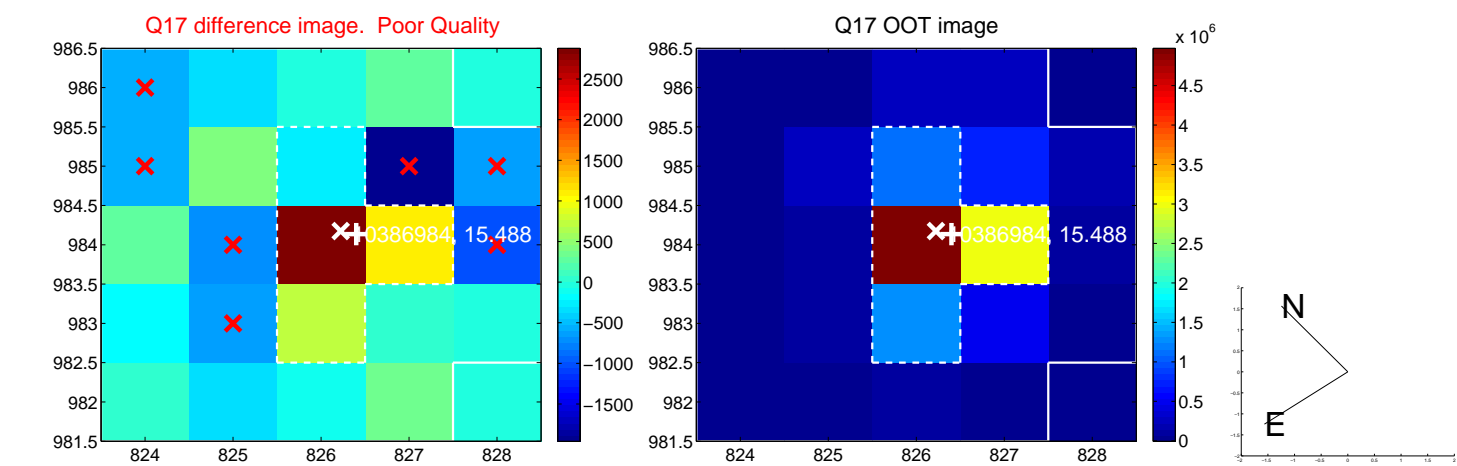
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

