

KIC 004679687

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})
004679687-01	OBS	4049.01	1.027899	132.447962	854.0	0.915	34.0	53.8	0.87	5432	3.10	1769.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004679687-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_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.

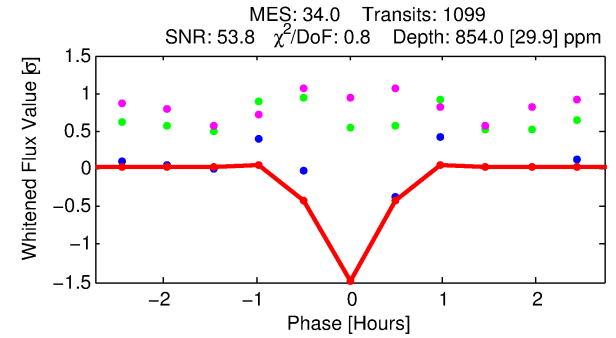
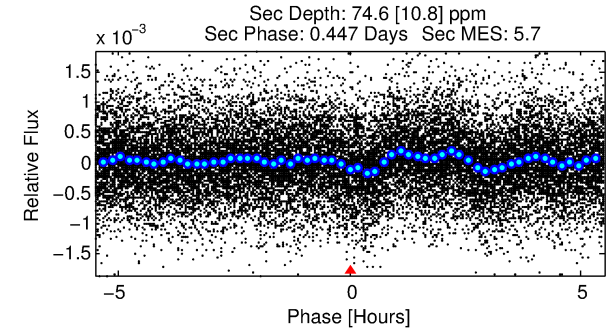
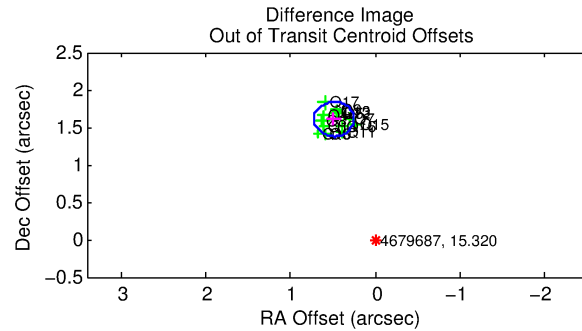
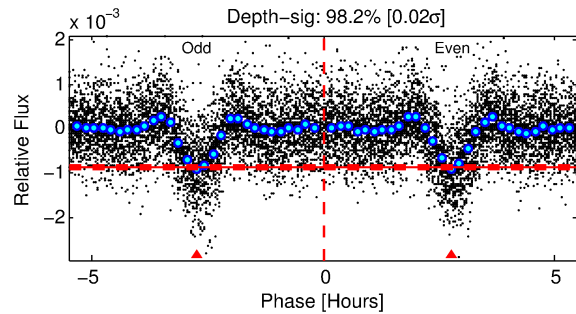
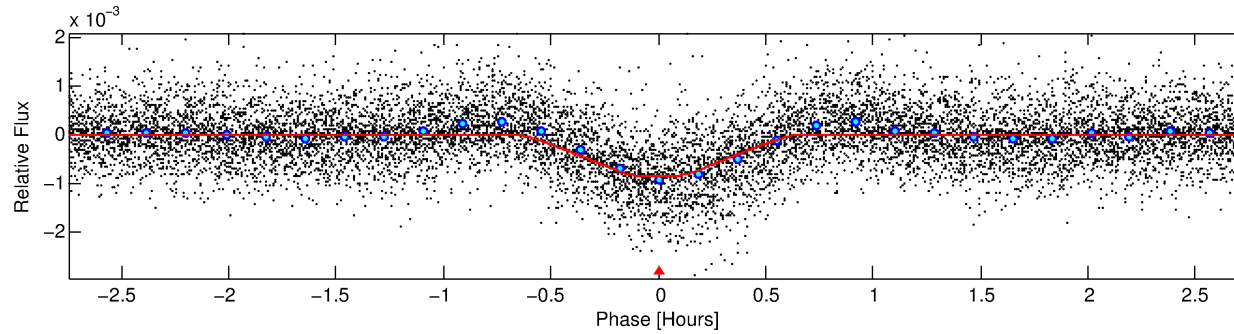
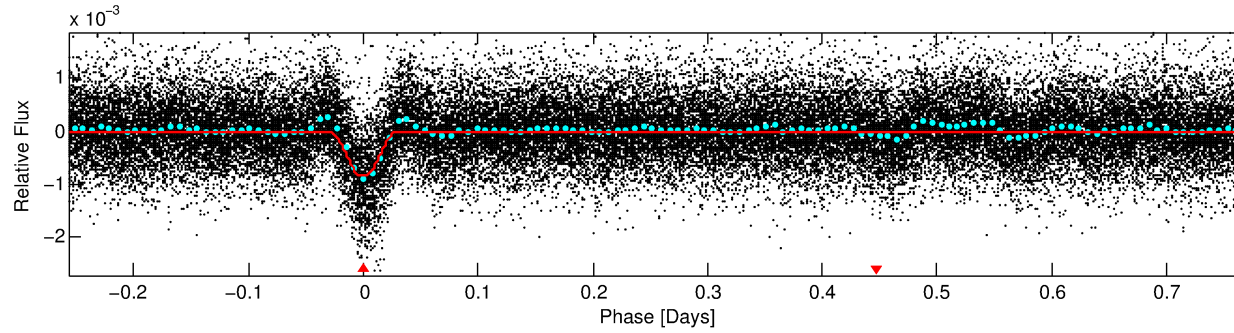
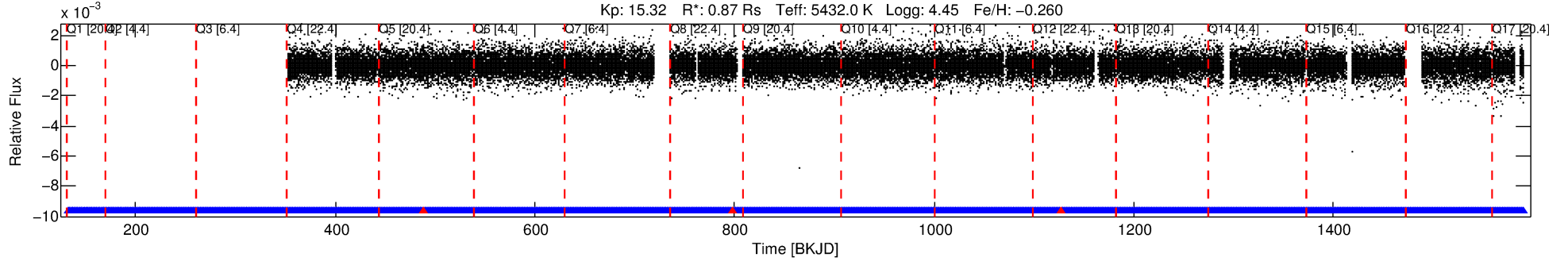
Ephemeris Match Information For 004679687-01

No Significant Match Found

DV One-Page Summary

KIC: 4679687 Candidate: 1 of 1 Period: 1.028 d
KOI: K04049 Corr: No Ephemeris Match

Kp: 15.32 R*: 0.87 Rs Teff: 5432.0 K Logg: 4.45 Fe/H: -0.260



DV Fit Results:

Period = 1.02790 [0.00000] d
Epoch = 132.4480 [0.0003] BKJD
Rp/R* = 0.0326 [0.0040]
a/R* = 4.44 [2.14]
b = 0.90 [0.11]
Seff = 1769.34 [609.00]
Teq = 1654 [142] K
Rp = 3.10 [0.80] Re
a = 0.0183 [0.0037] AU
Ag = 1.43 [0.60] [0.72σ]
Teffp = 2798 [226] K [4.29σ]

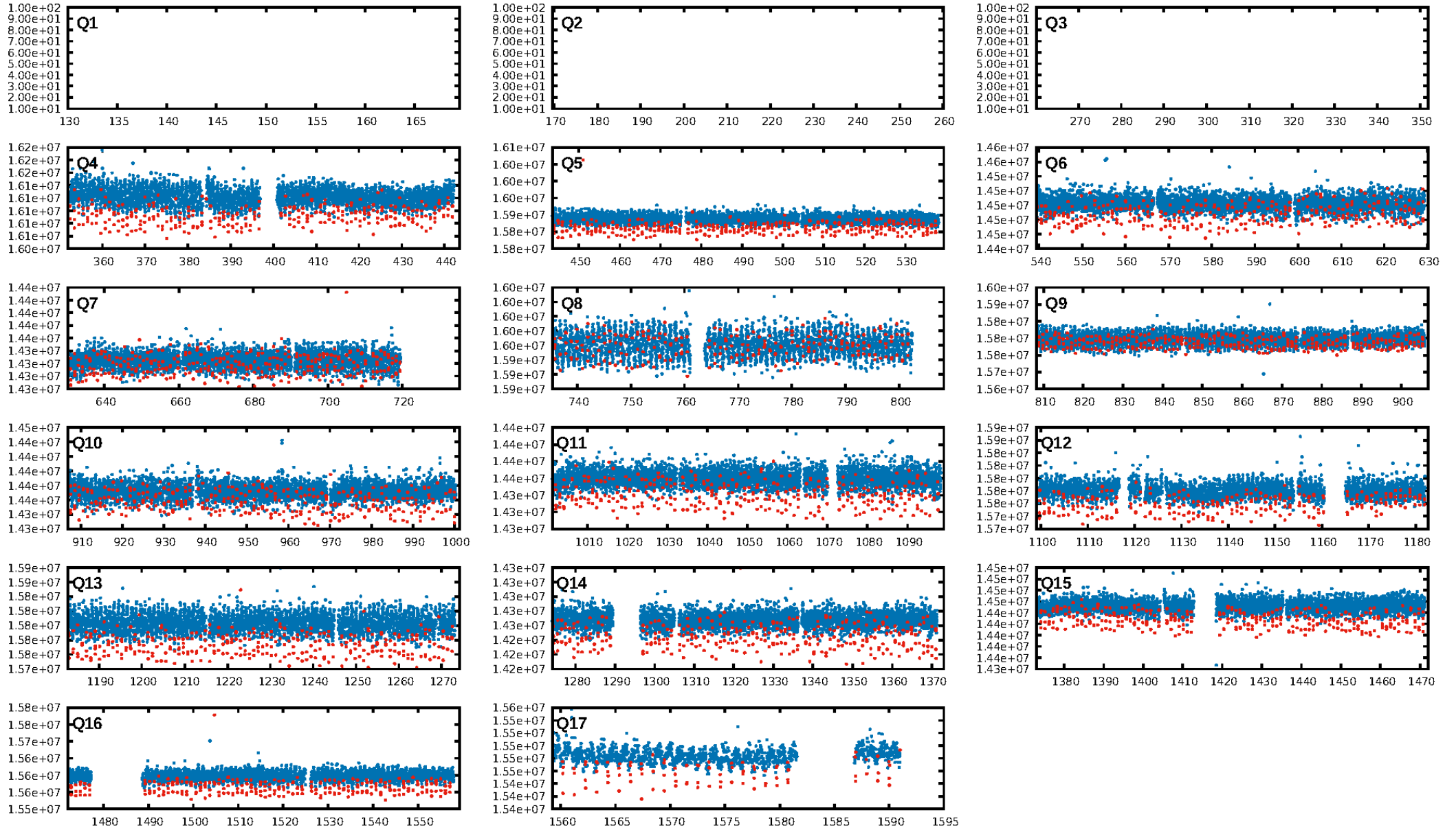
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-236
RollingBand-fgt: 1.00 [1070/1073]
GhostDiagnostic-chr: 1.603
Centroid-sig: 0.0%
Centroid-so: 3.941 arcsec [17.60σ]
OotOffset-rm: 1.680 arcsec [21.62σ]
KicOffset-rm: 1.669 arcsec [22.69σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

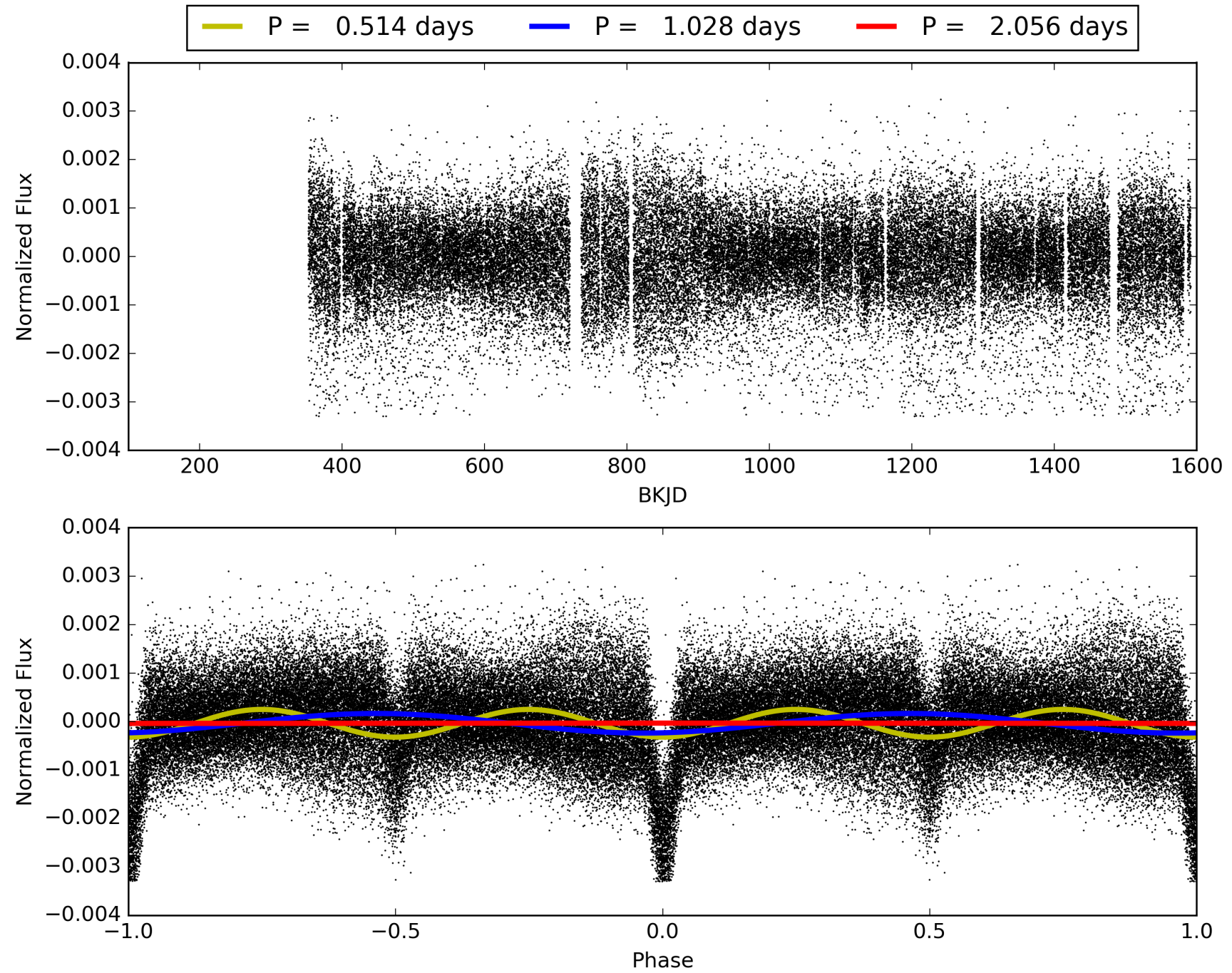
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:47:19 Z

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

TCE 004679687-01, PDC Light Curves

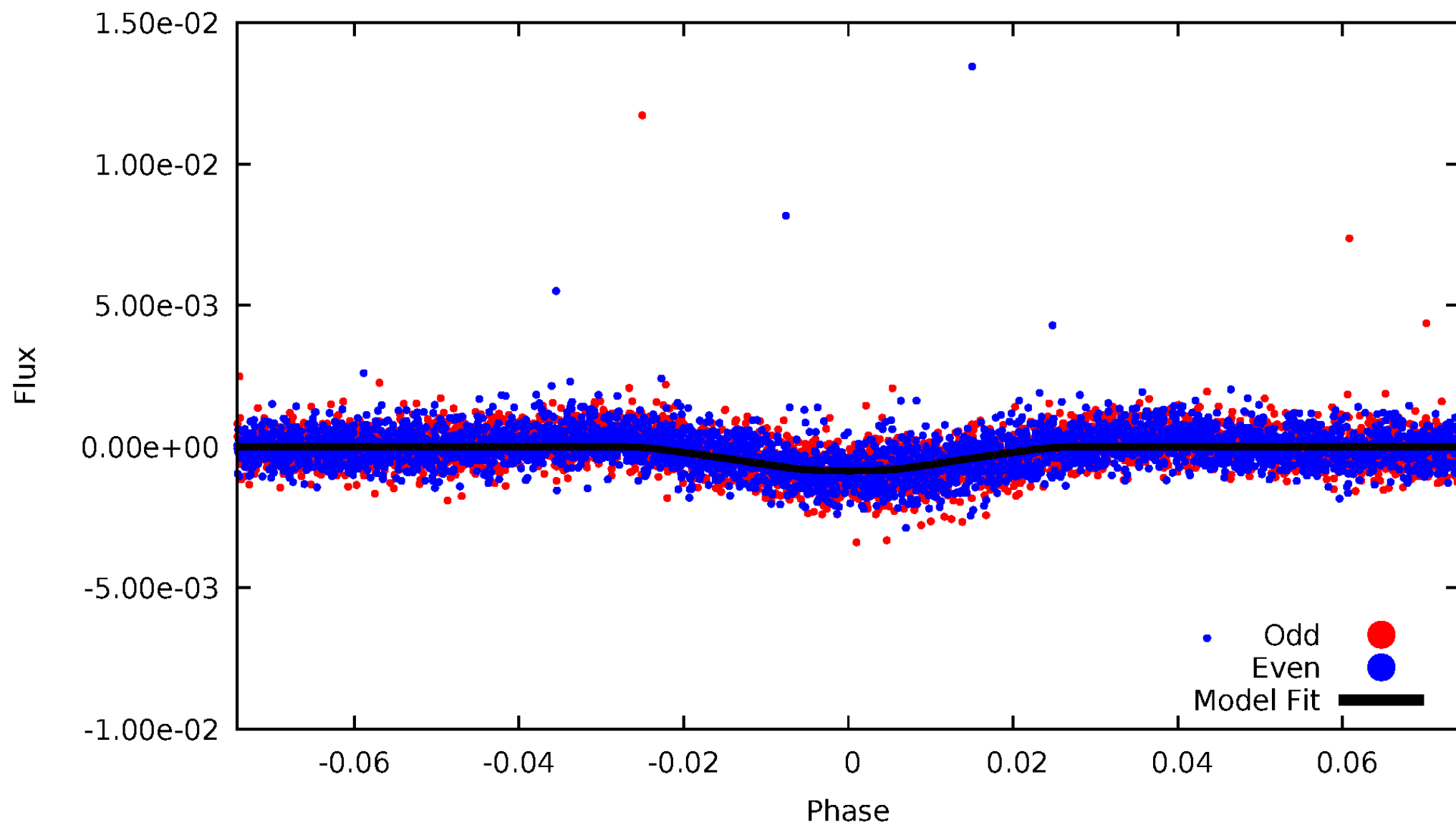


TCE 004679687-01



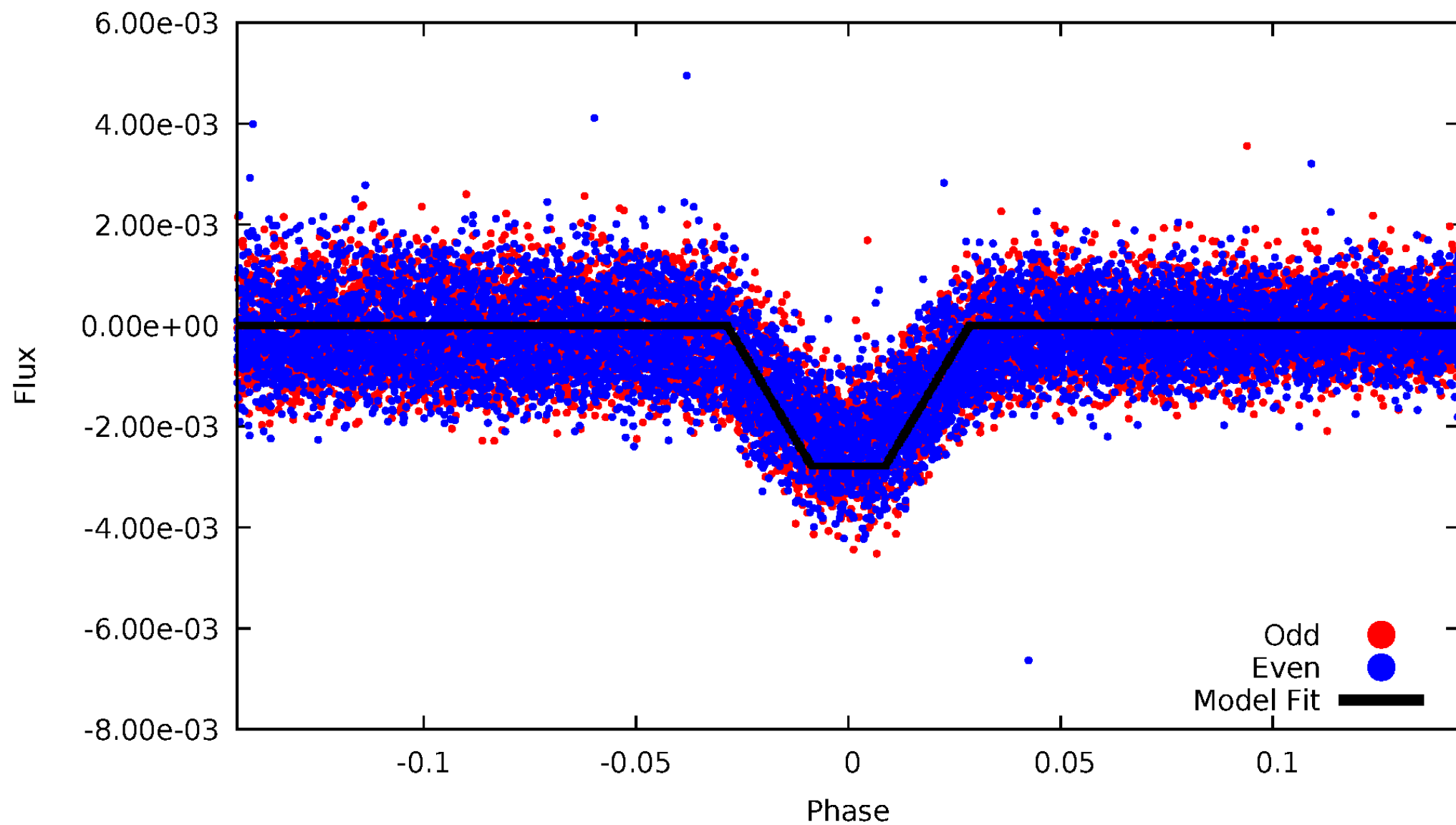
DV Odd/Even

TCE 004679687-01



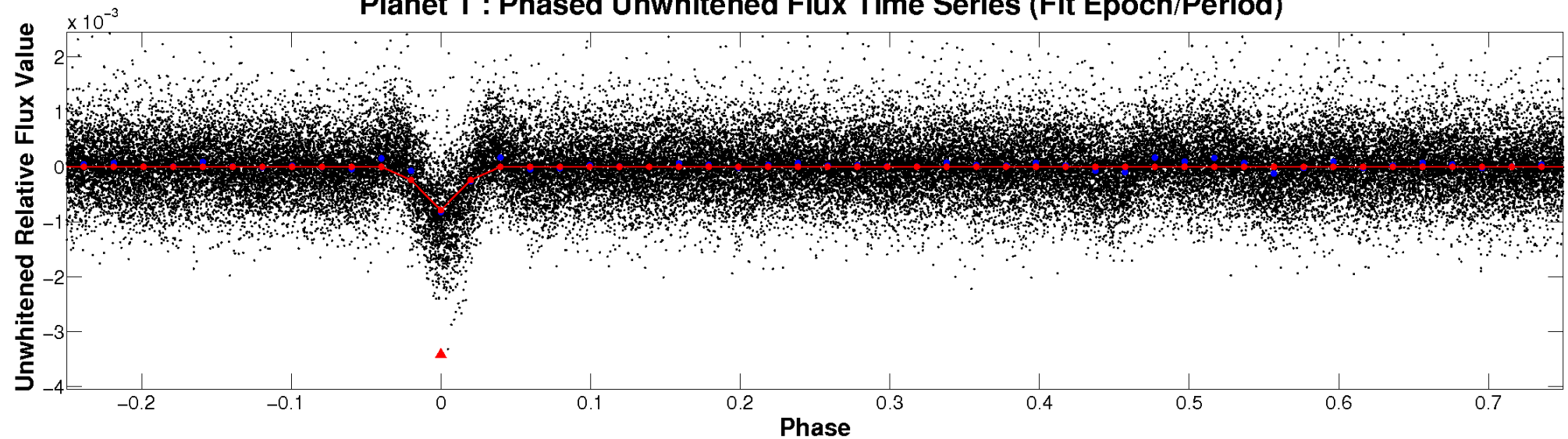
ALT Odd/Even

TCE 004679687-01

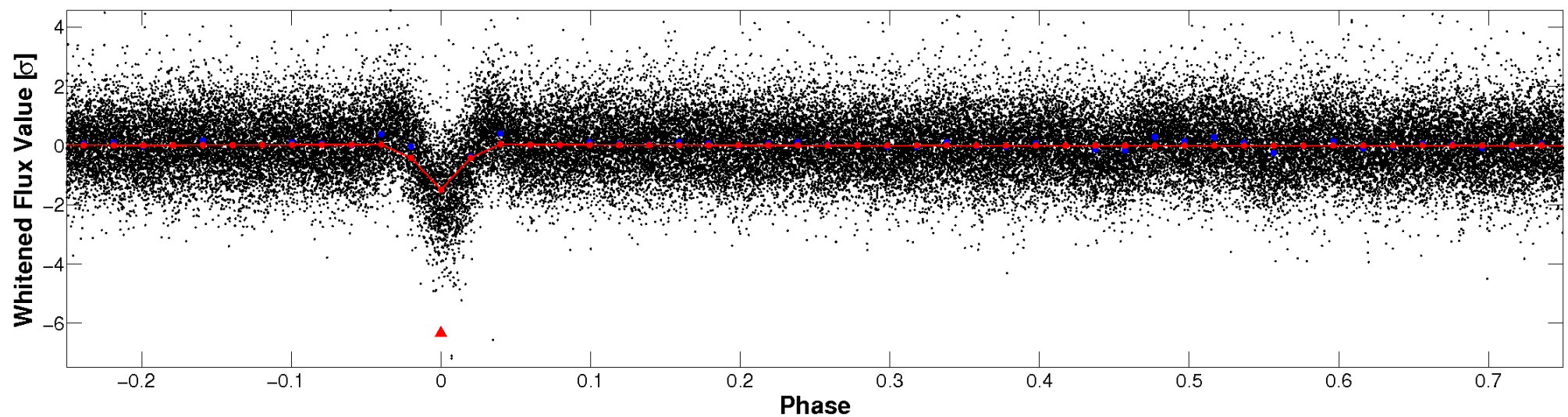


Non-Whitened Vs. Whitened Light Curve

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

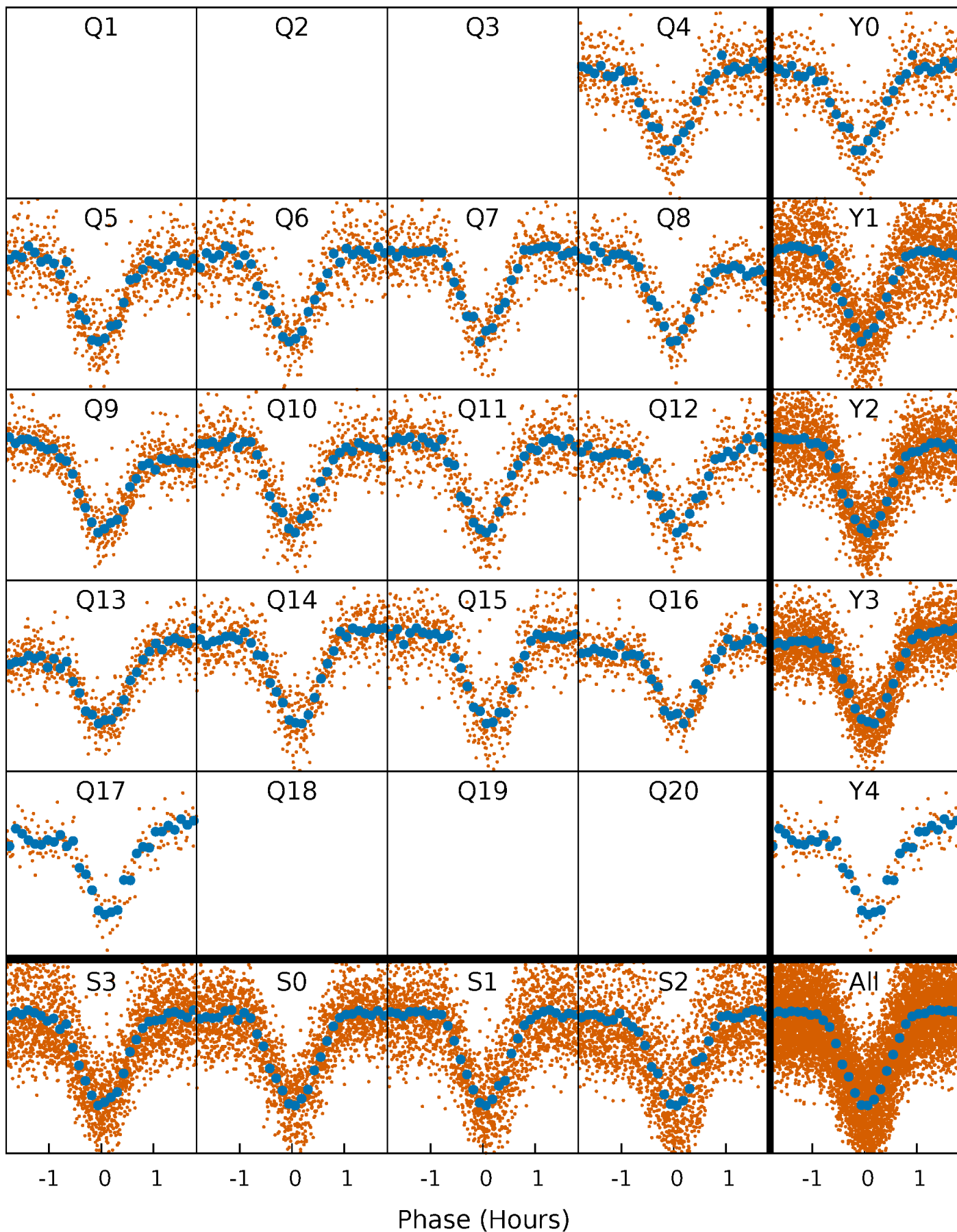


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



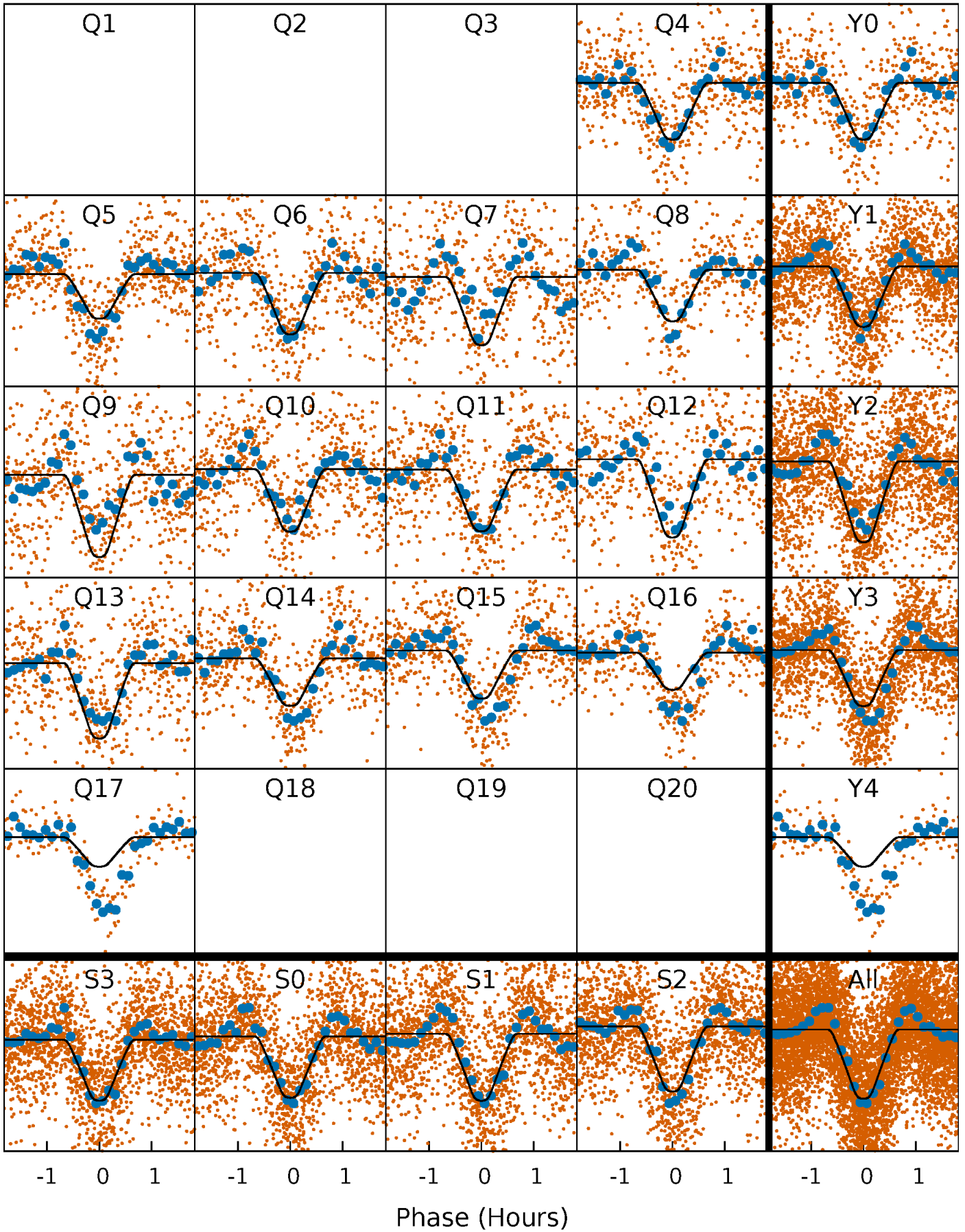
PDC Quarter-Phased Transit Curves

TCE 004679687-01 P= 1.027899 Days $T_0=132.447962$ (BKJD)



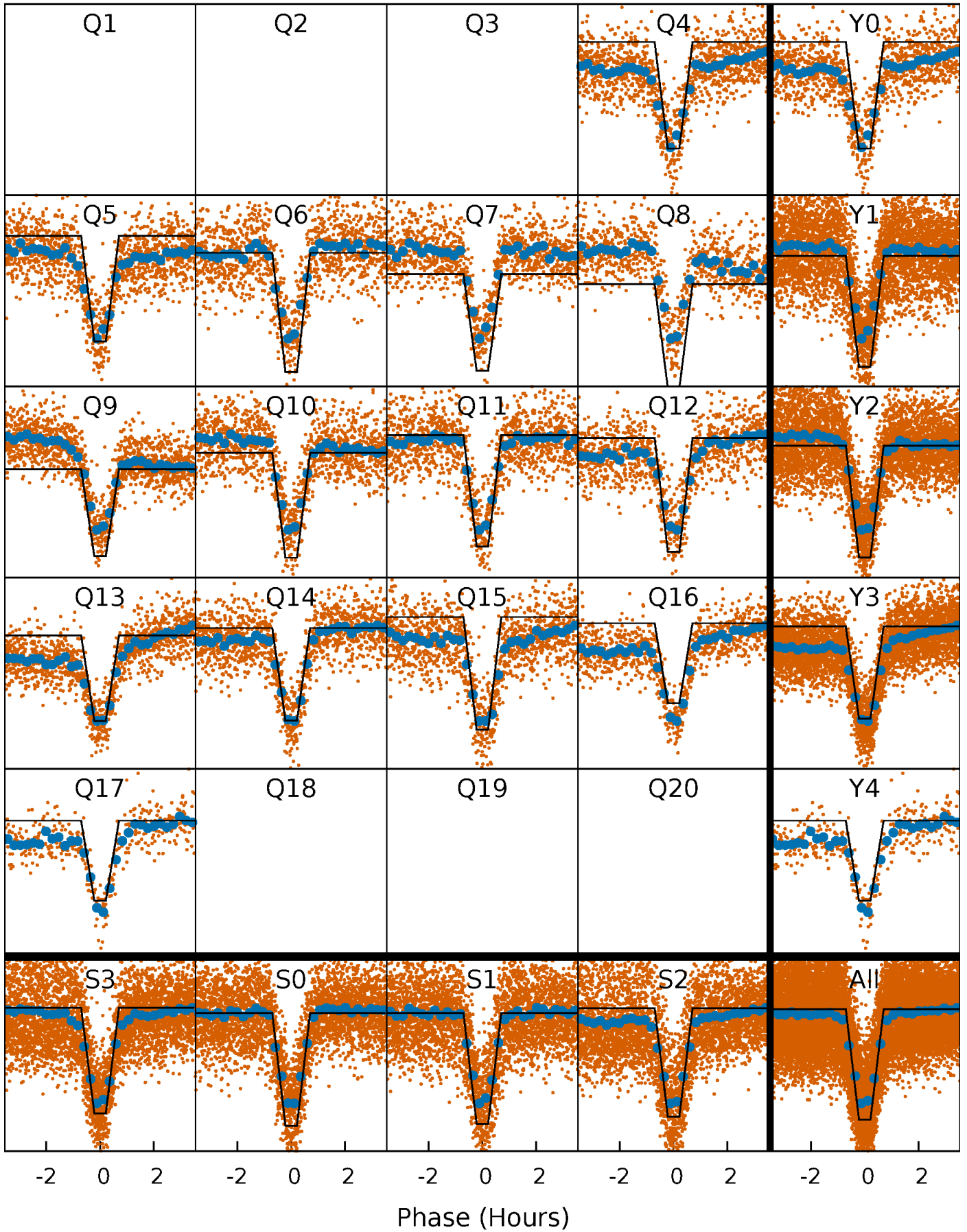
DV Quarter-Phased Transit Curves

TCE 004679687-01 P= 1.027899 Days $T_0=132.447962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

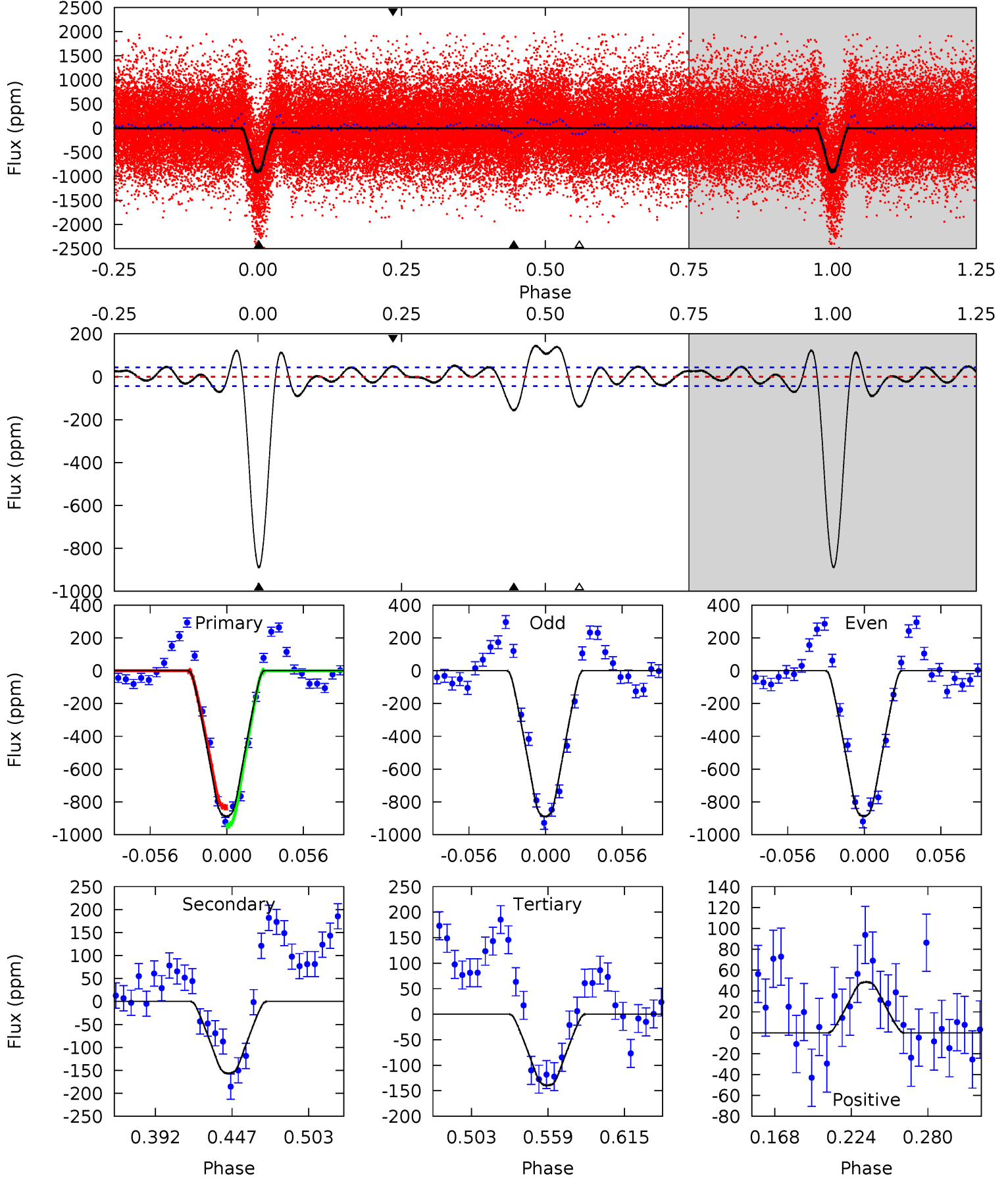
TCE 004679687-01 P= 1.027902 Days $T_0=132.446606$ (BKJD)



DV Model-Shift Uniqueness Test

004679687-01, P = 1.027899 Days, E = 132.447962 Days

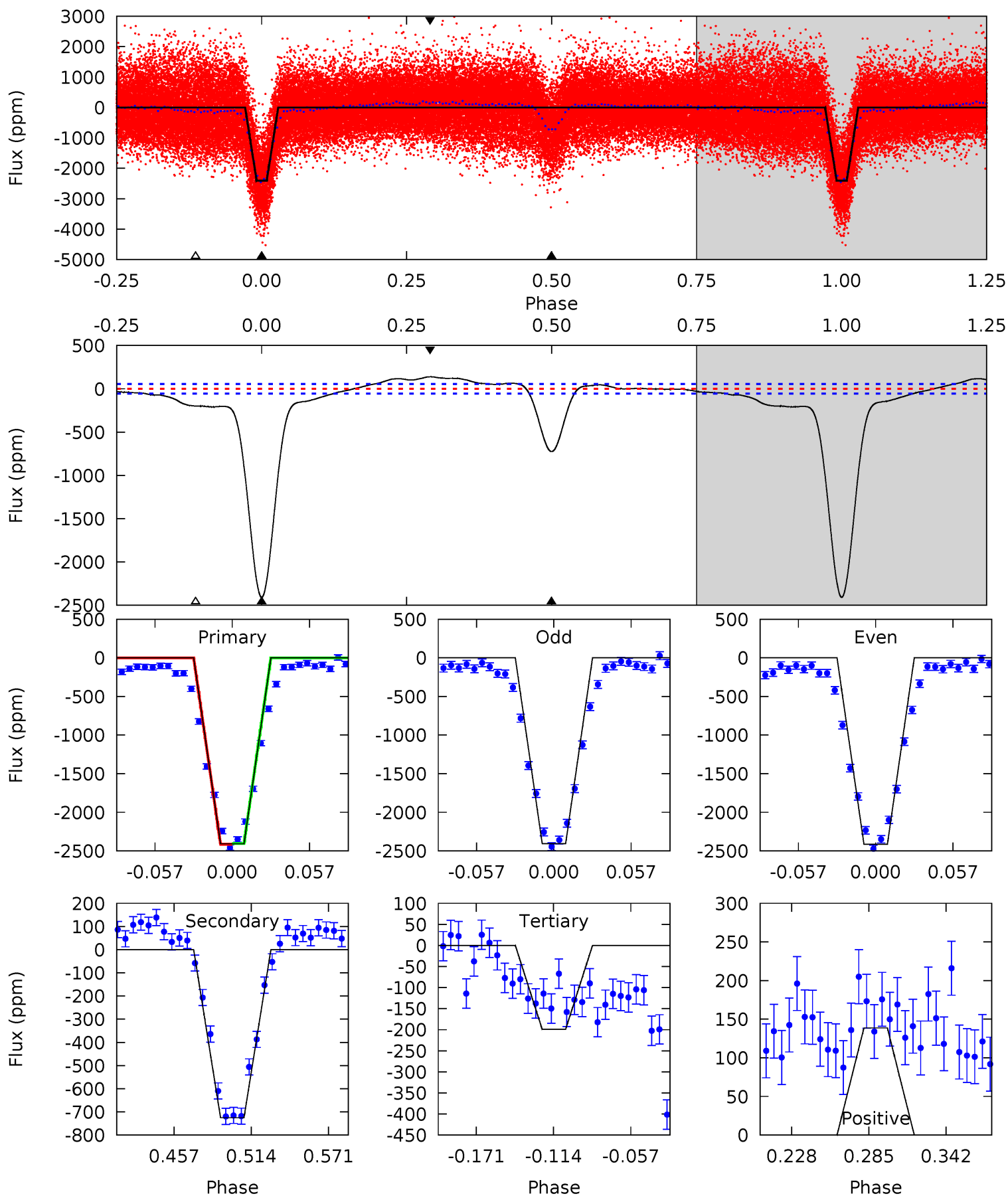
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
94.9	16.7	14.9	5.19	4.69	1.91	4.75	80.0	89.8	1.82	11.5	0.09	1.00	0.14	6.14



Alt Model-Shift Uniqueness Test

004679687-01, P = 1.027902 Days, E = 132.446606 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
200.0	60.2	16.5	11.5	4.68	1.90	8.12	183.5	188.5	43.7	48.7	0.42	0.99	0.05	0.42



Stellar Parameters For KIC 004679687

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5432^{+204}_{-185}	$4.446^{+0.144}_{-0.176}$	$-0.260^{+0.300}_{-0.300}$	$0.872^{+0.198}_{-0.132}$	$0.775^{+0.122}_{-0.052}$	$1.645^{+0.979}_{-0.754}$
	+4%/-3%	+3%/-4%	+115%/-115%	+23%/-15%	+16%/-7%	+59%/-46%
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 004679687-01 / KOI 4049.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-156 ± 9	$3.15^{+0.52}_{-0.45}$	2315^{+154}_{-121}	3669^{+234}_{-171}	$2.988^{+1.072}_{-0.793}$
Alt.	-725 ± 12	$5.06^{+0.86}_{-0.59}$	2326^{+176}_{-141}	4100^{+179}_{-152}	$5.298^{+1.446}_{-1.365}$

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 $A_{obs} \gg 1.0$

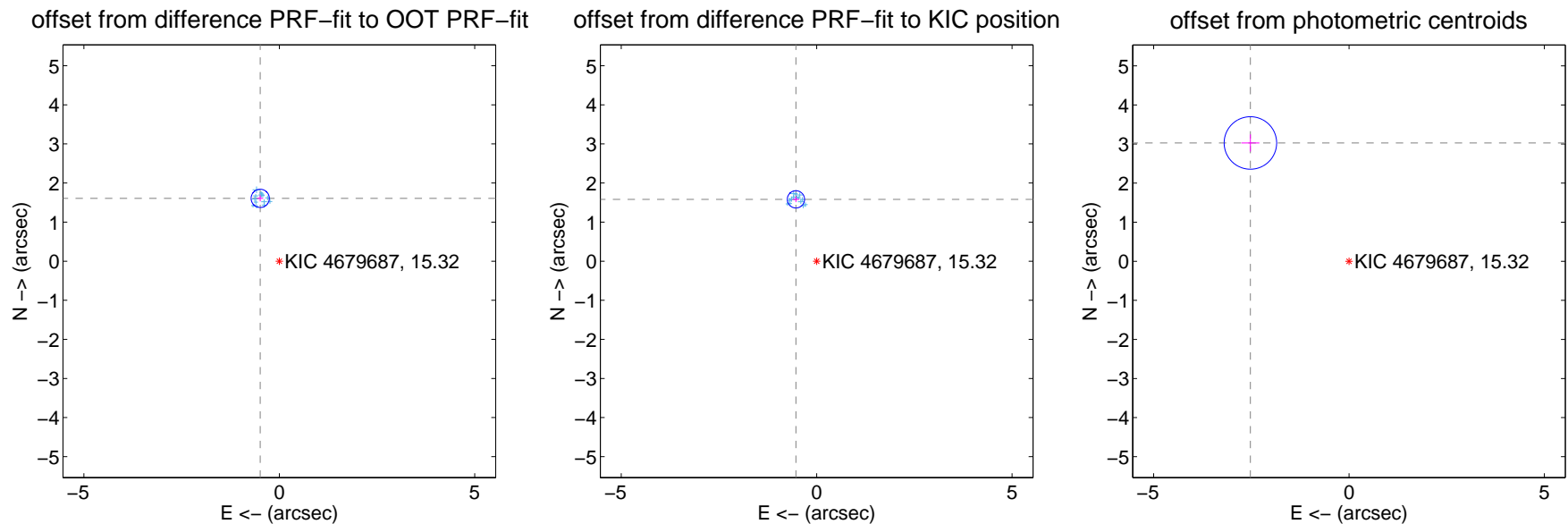
DV Centroid Data

Supplemental centroid analysis for 004679687-01. Kepler magnitude: 15.32. Transit SNR 53.81

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.680 ± 0.078	21.62	0.489 ± 0.076	1.607 ± 0.078
PRF-fit source offset from KIC position	1.669 ± 0.074	22.69	0.530 ± 0.080	1.582 ± 0.073
photometric centroid source offset	3.94 ± 0.22	17.60	2.52 ± 0.23	3.03 ± 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.

Q1 no difference image



Q1 no OOT image



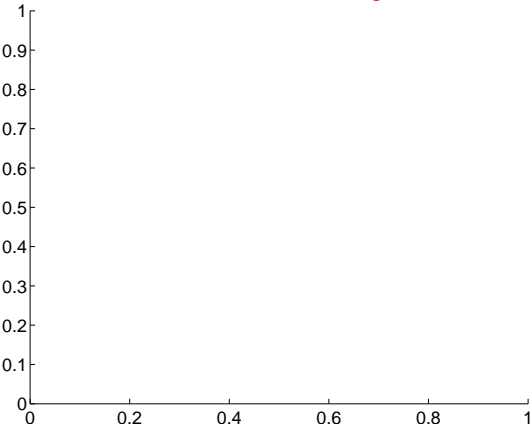
Q2 no difference image



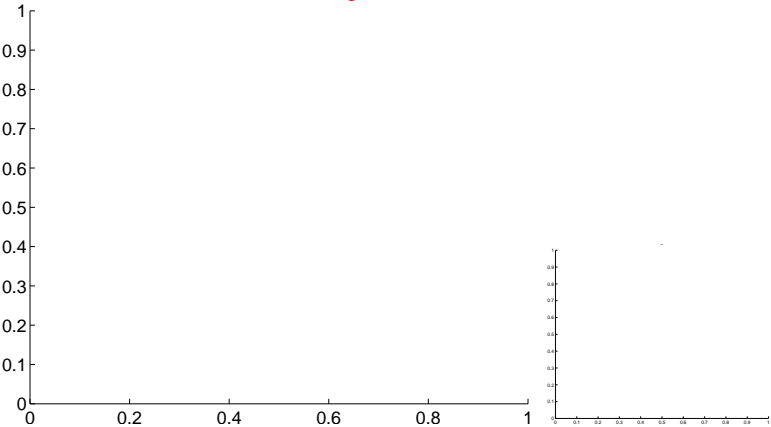
Q2 no OOT image



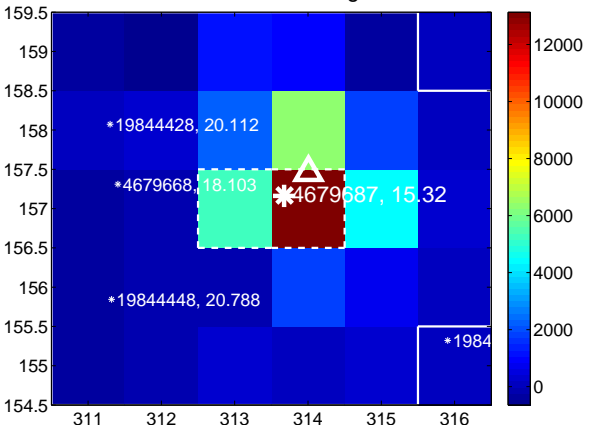
Q3 no difference image



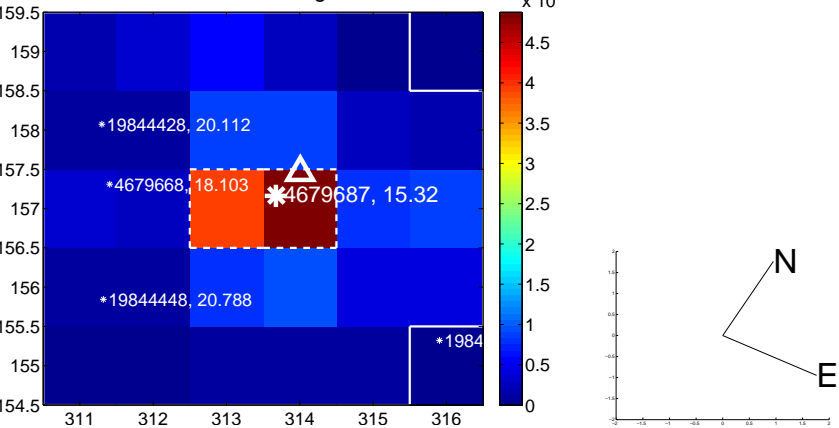
Q3 no OOT image



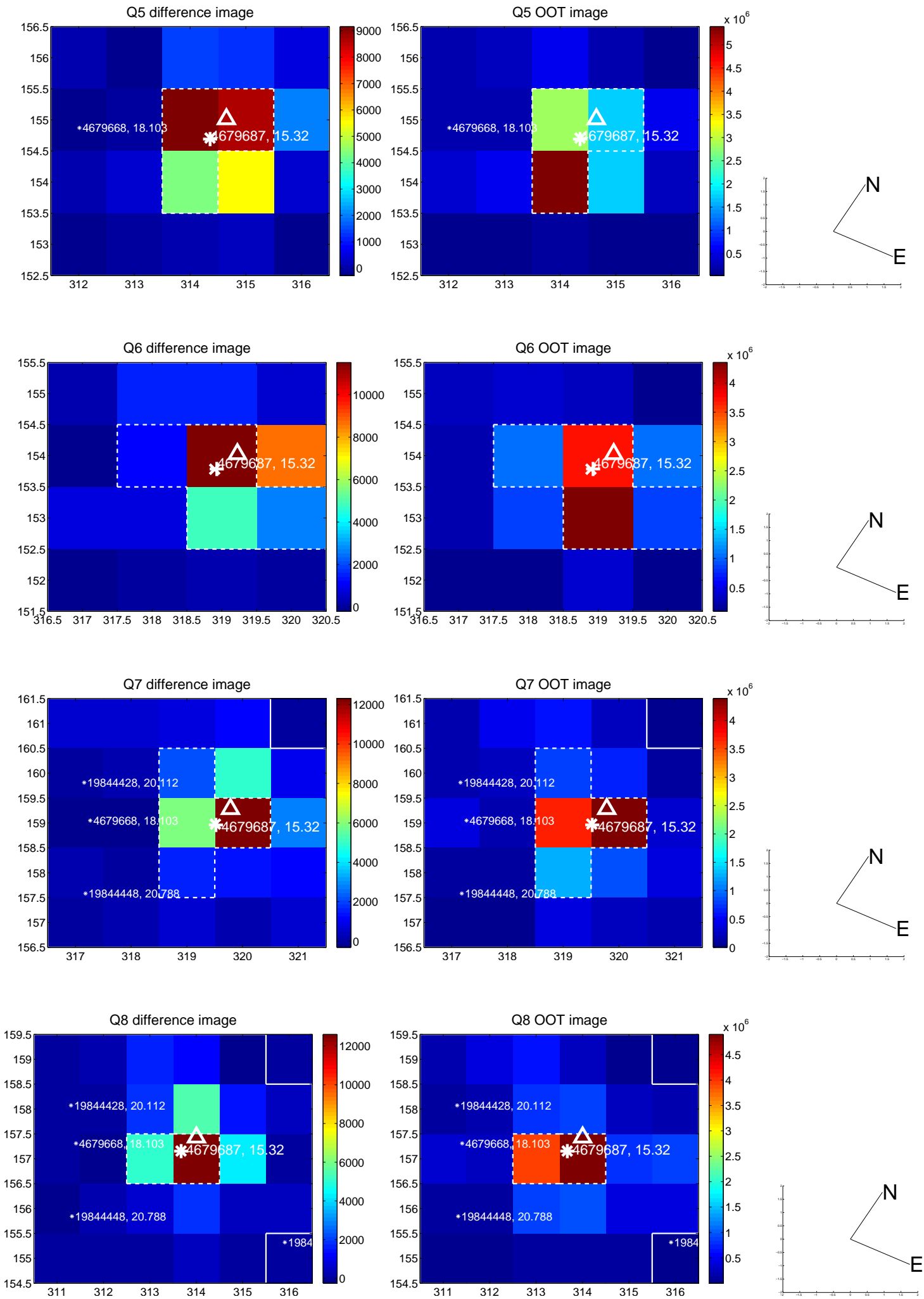
Q4 difference image



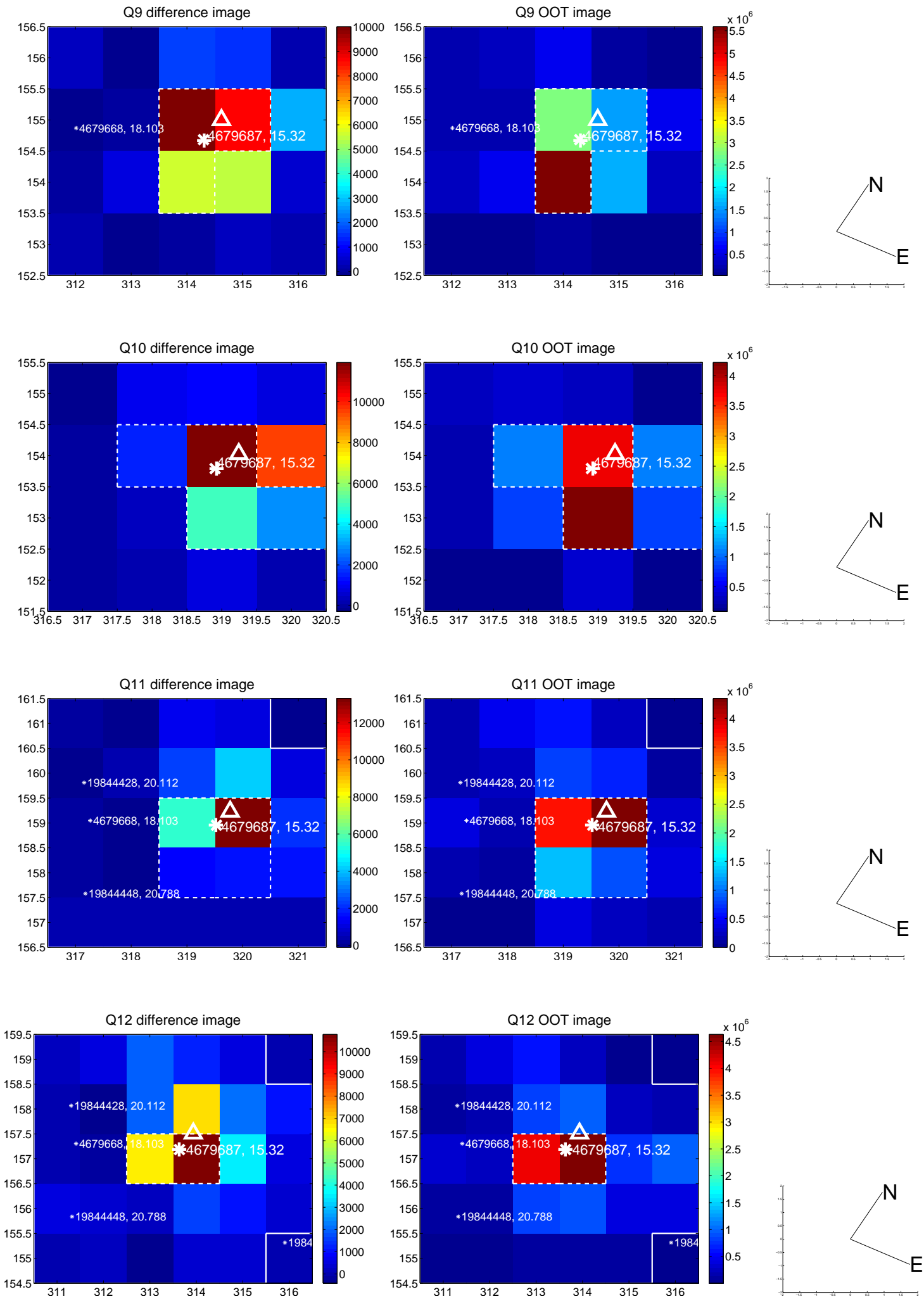
Q4 OOT image



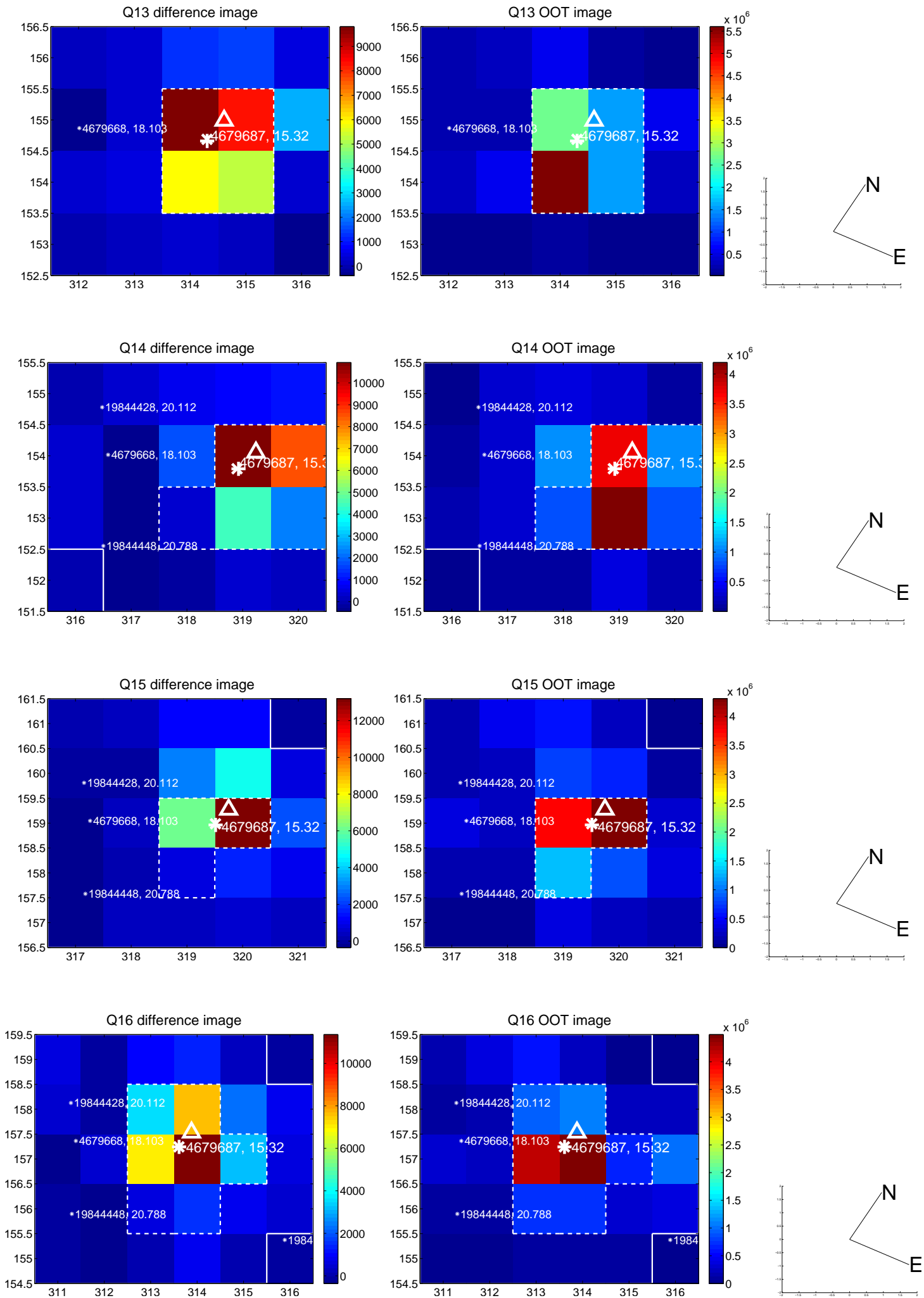
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



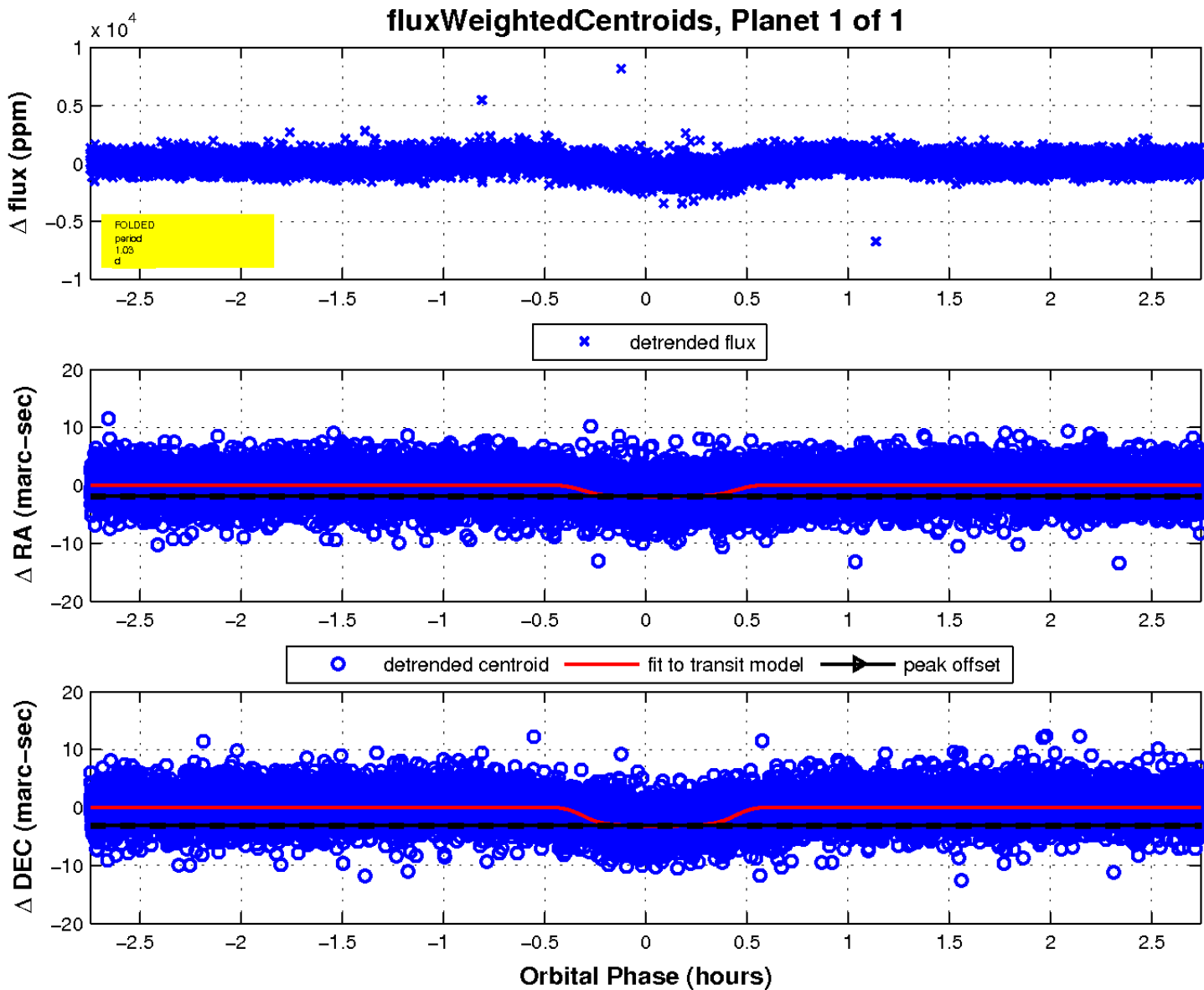
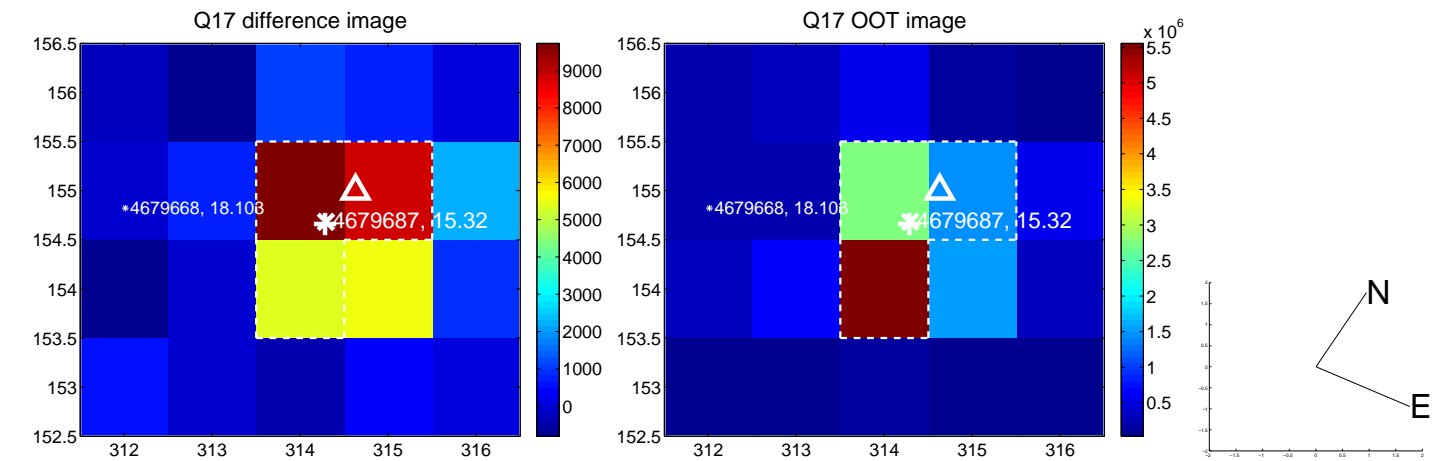
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

