

KIC 010544677

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})
010544677-01	OBS	2244.01	19.735290	138.584771	299.8	4.837	14.5	14.9	1.04	6329	2.70	72.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010544677-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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 010544677-01

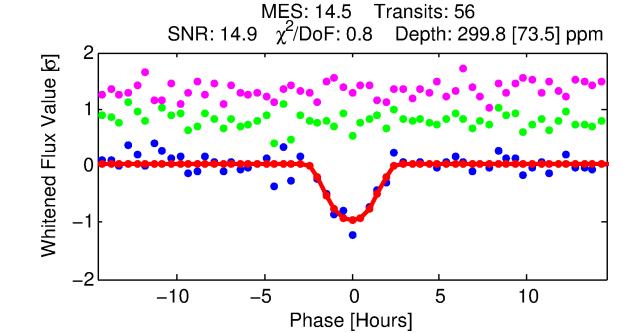
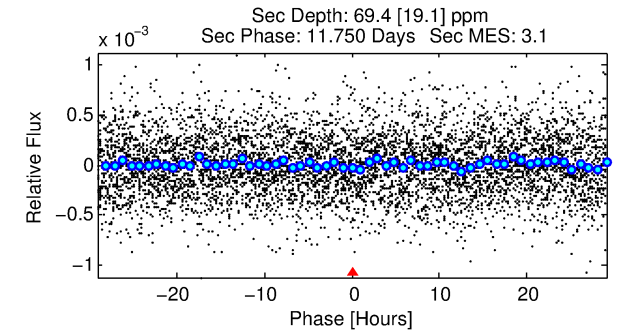
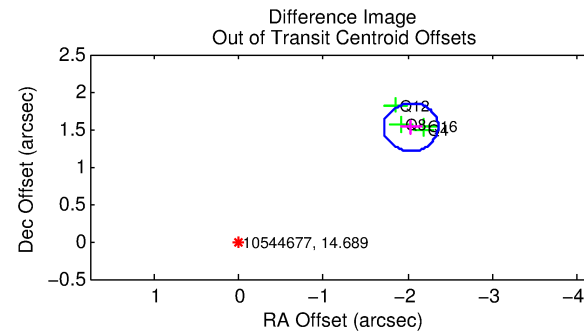
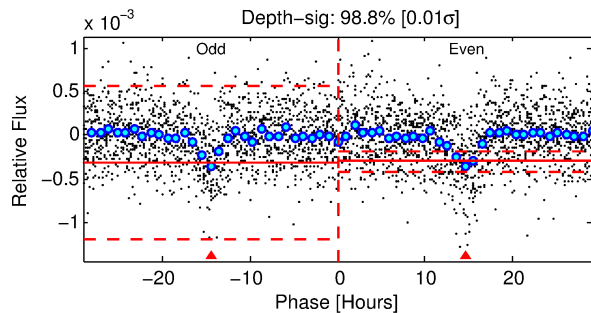
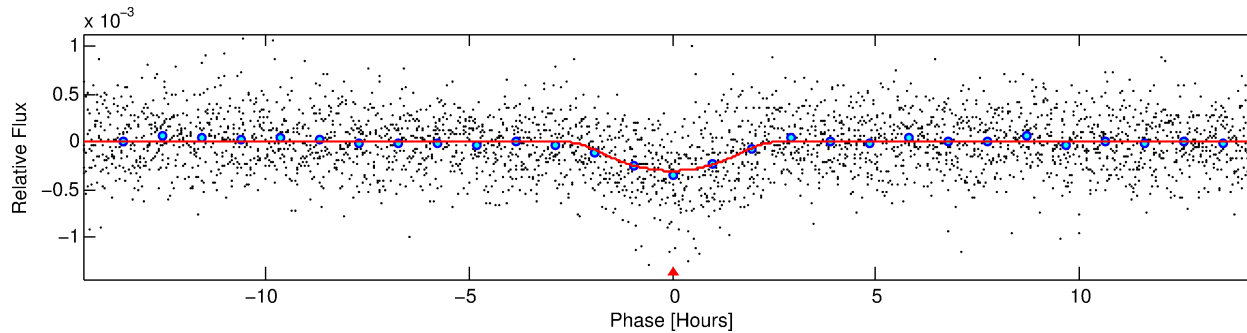
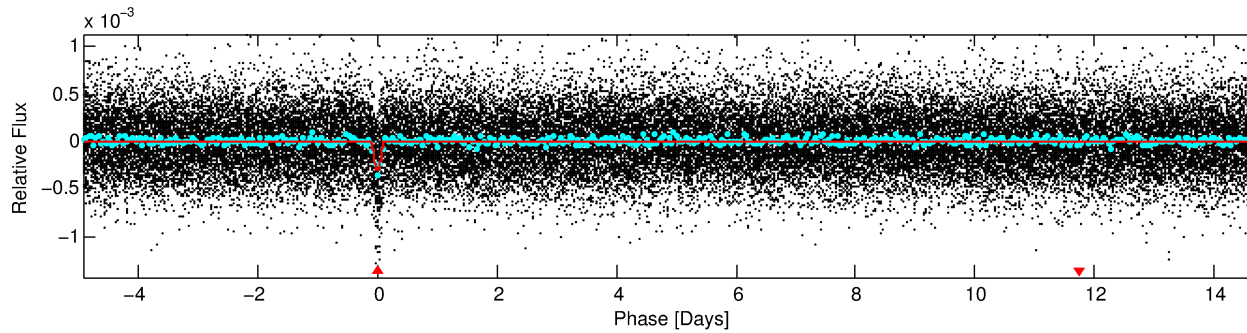
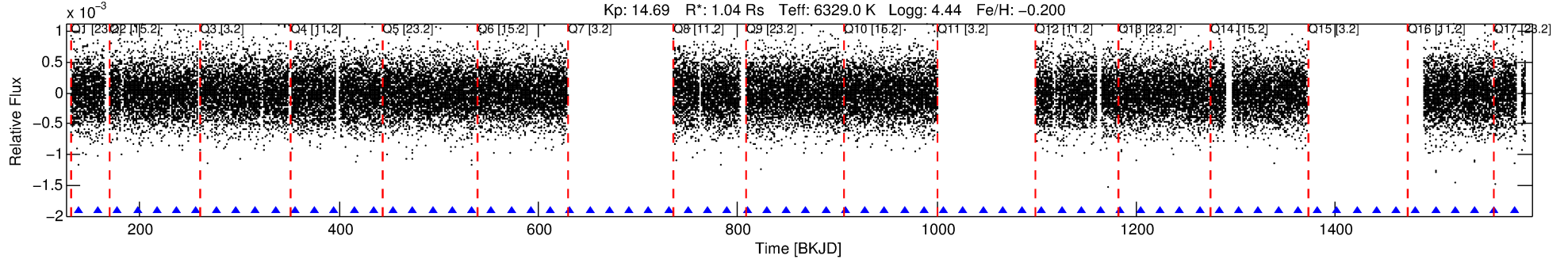
No Significant Match Found

DV One-Page Summary

KIC: 10544677 Candidate: 1 of 1 Period: 19.735 d

KOI: K02244.01 Corr: 0.968

Kp: 14.69 R*: 1.04 Rs Teff: 6329.0 K Logg: 4.44 Fe/H: -0.200



DV Fit Results:

Period = 19.73529 [0.00018] d
Epoch = 138.5848 [0.0071] BKJD
Rp/R* = 0.0237 [0.0156]
a/R* = 8.56 [2.74]
b = 0.99 [0.03]
Seff = 72.22 [30.35]
Teq = 743 [78] K
Rp = 2.70 [2.00] Re
a = 0.1474 [0.0409] AU
Ag = 113.77 [160.17] [0.70σ]
Teffp = 3753 [1273] K [2.36σ]

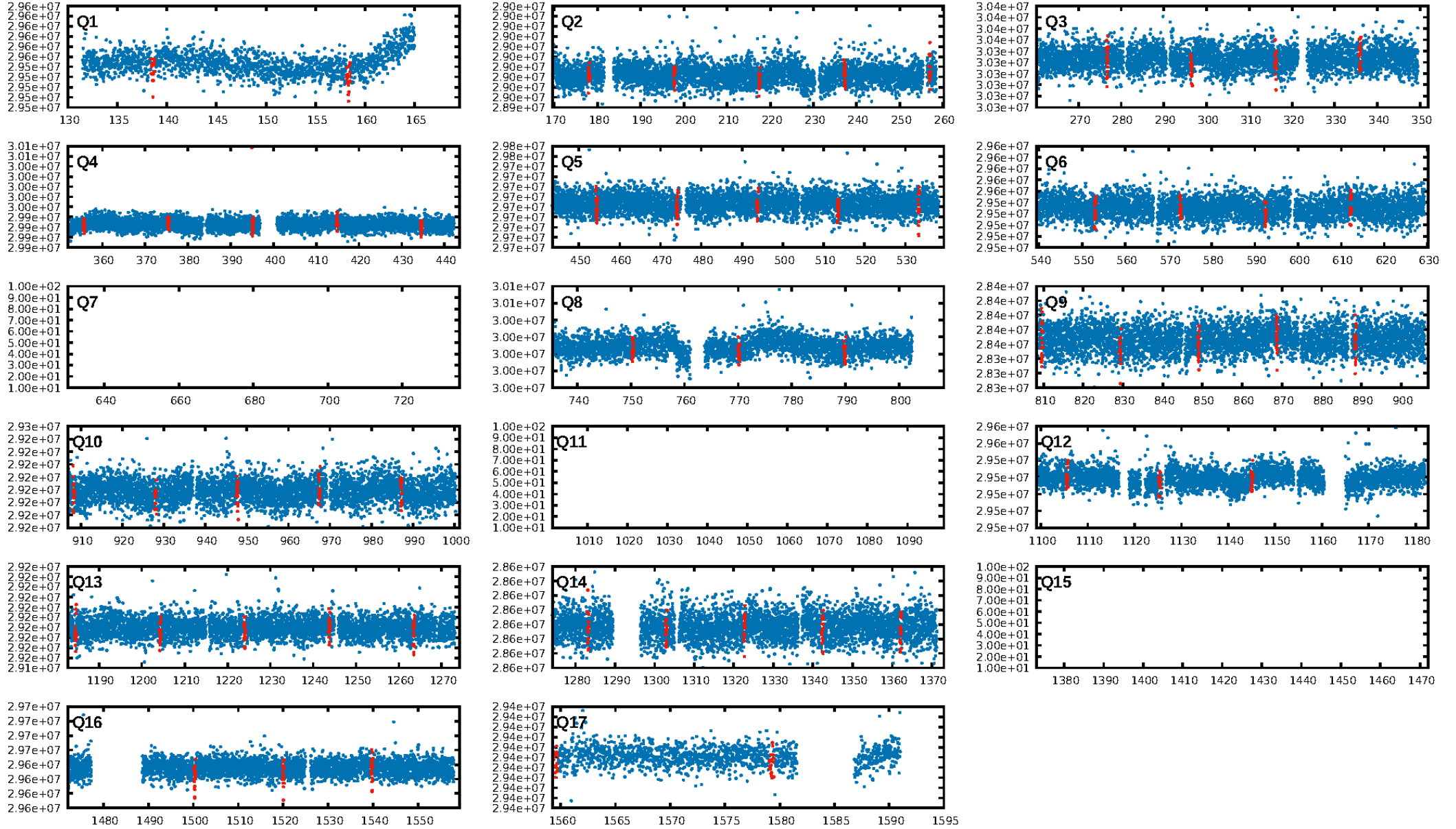
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.31e-46
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: -0.2768
Centroid-sig: 0.0%
Centroid-so: 19.181 arcsec [32.24σ]
OotOffset-rm: 2.546 arcsec [23.85σ]
KicOffset-rm: 8.037 arcsec [85.56σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [14/14]

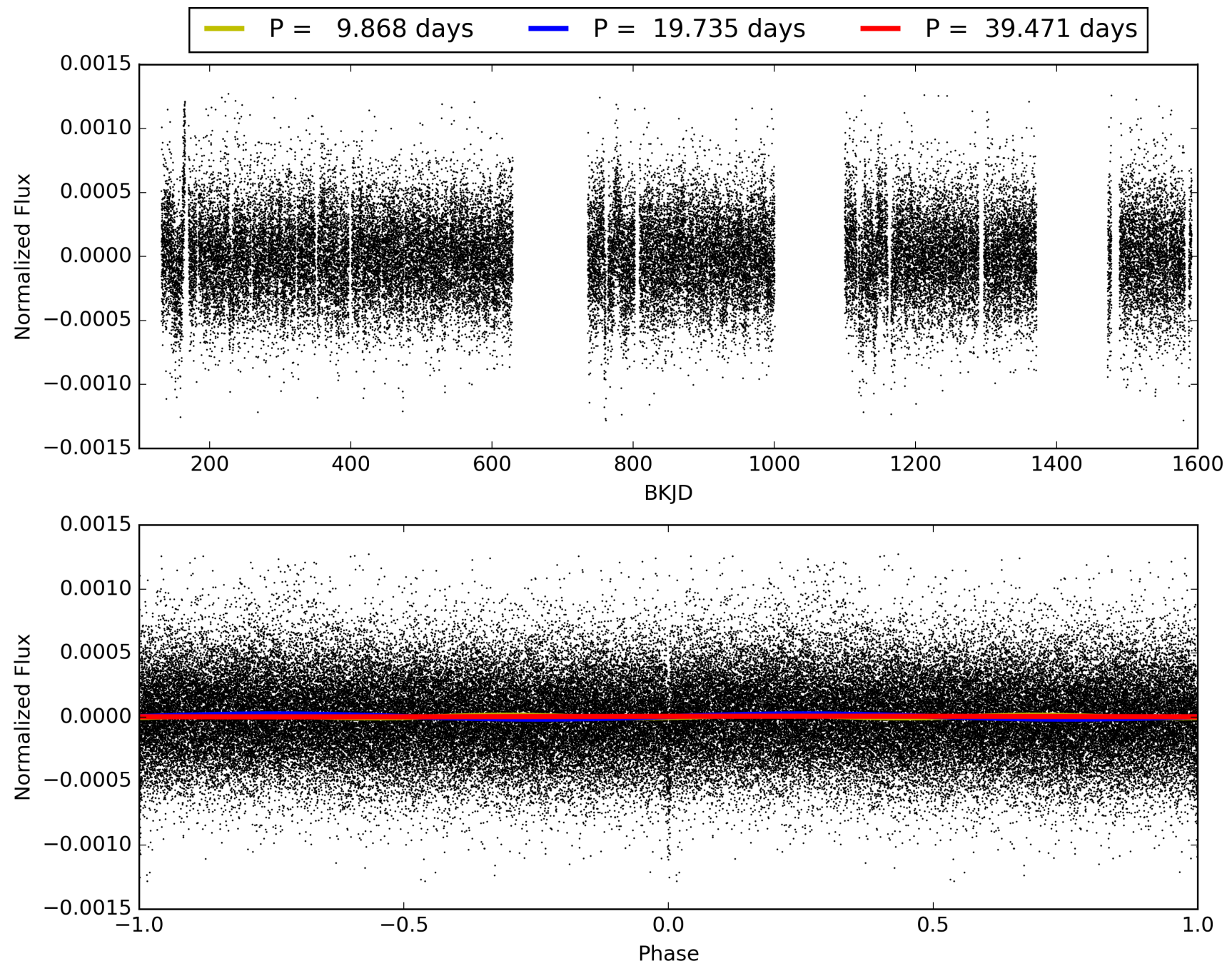
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:54:38 Z

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

TCE 010544677-01, PDC Light Curves

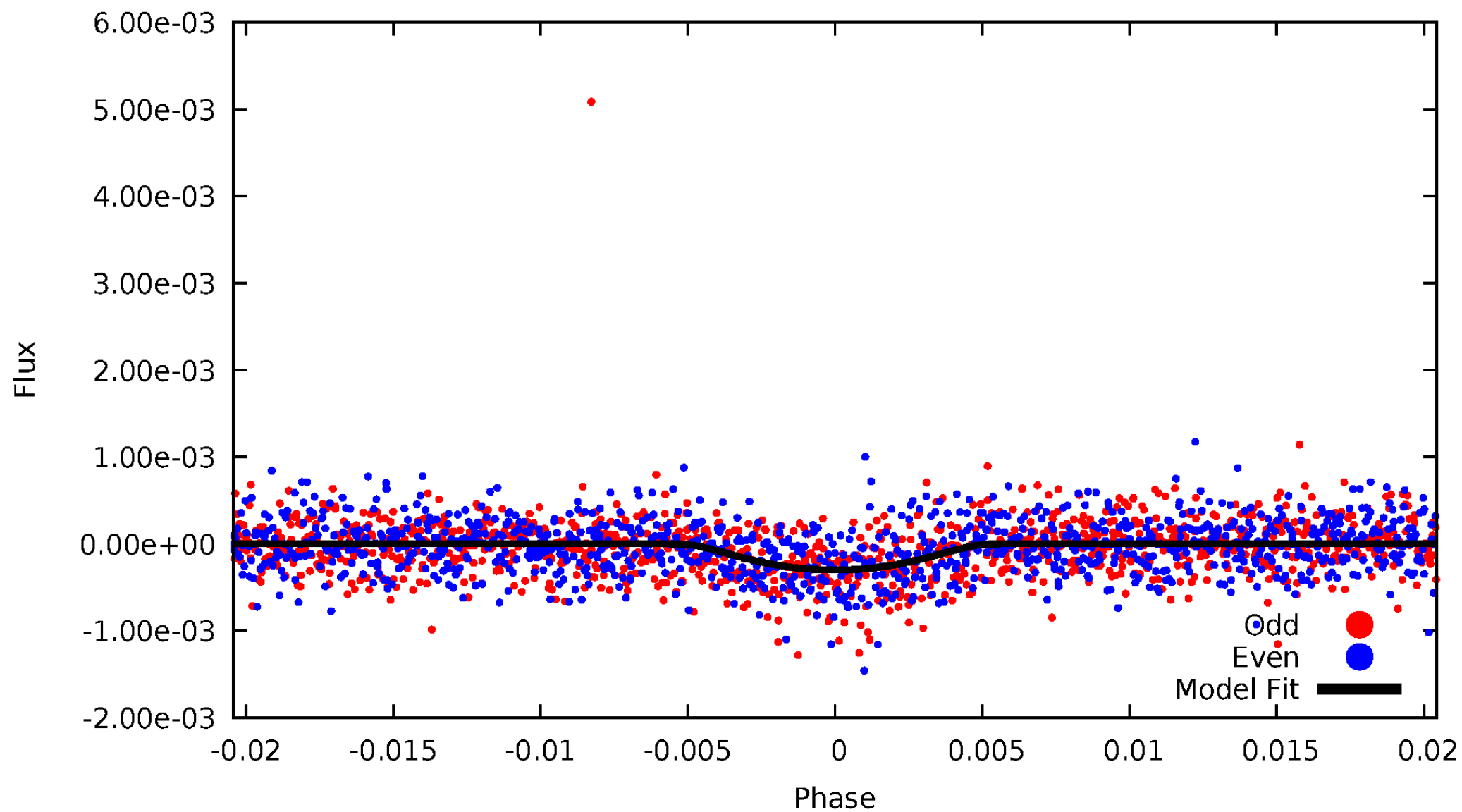


TCE 010544677-01



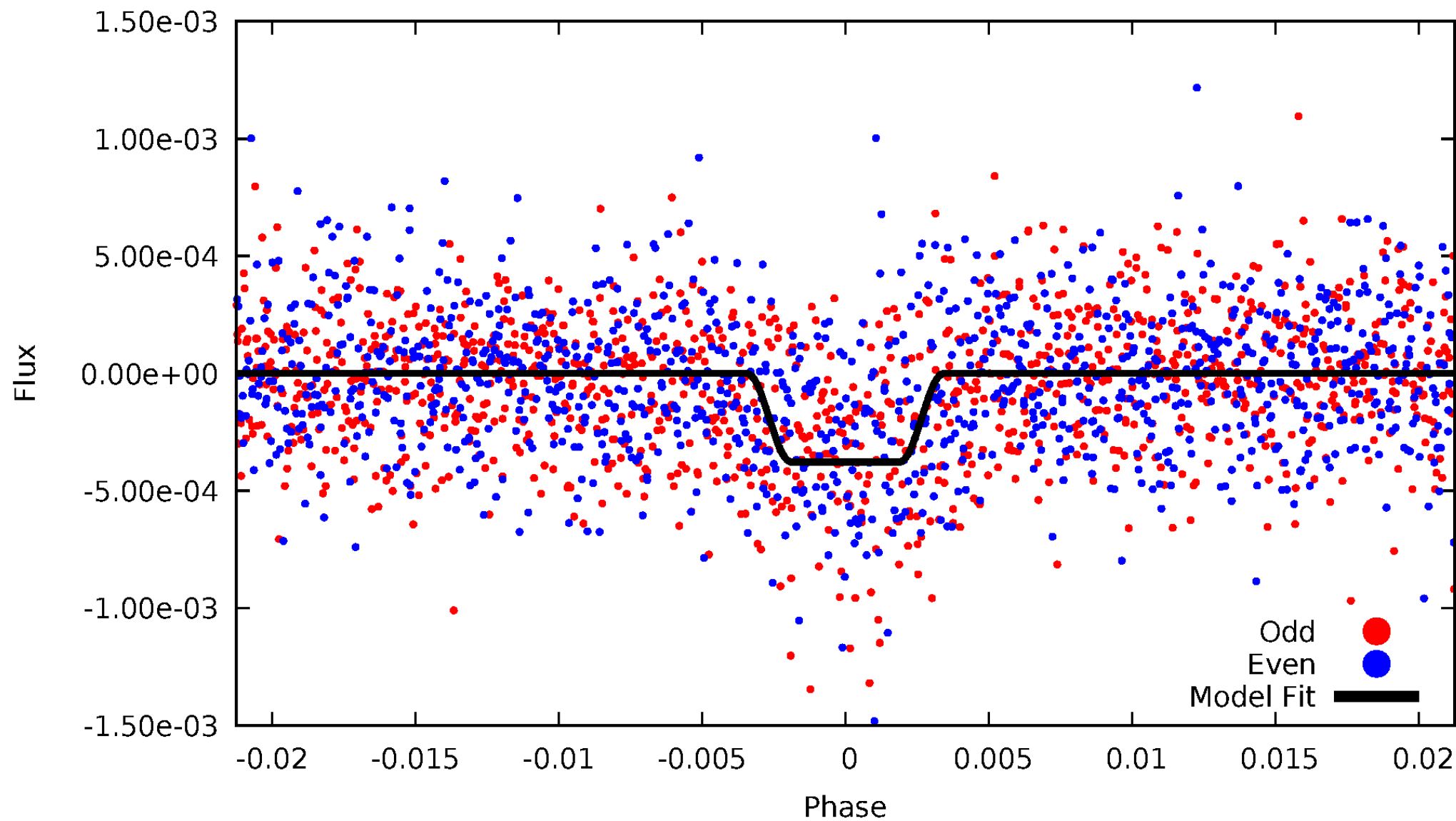
DV Odd/Even

TCE 010544677-01



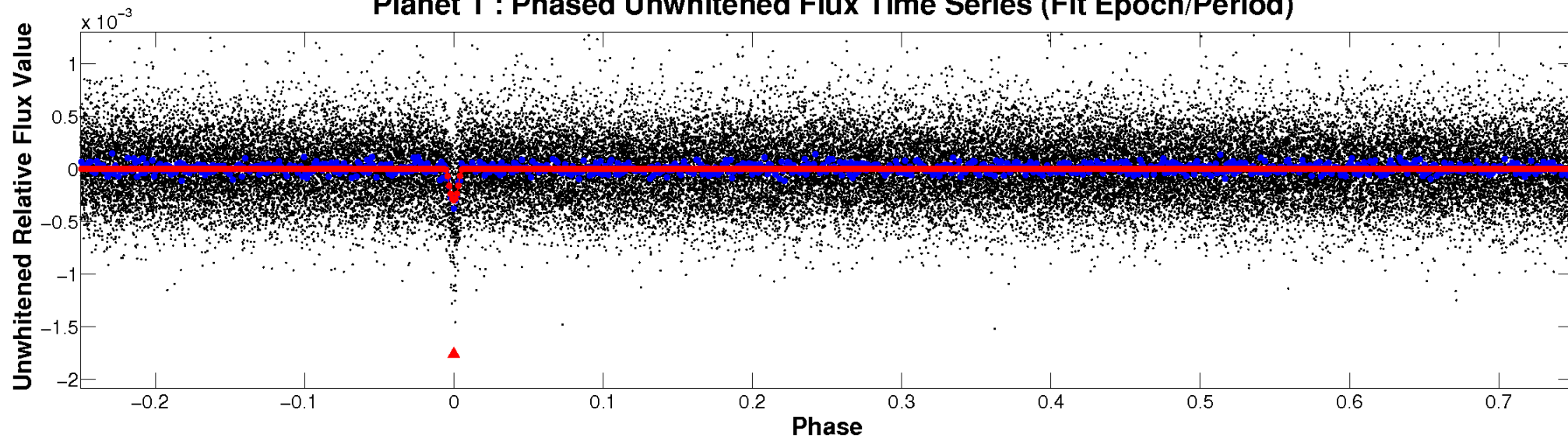
ALT Odd/Even

TCE 010544677-01

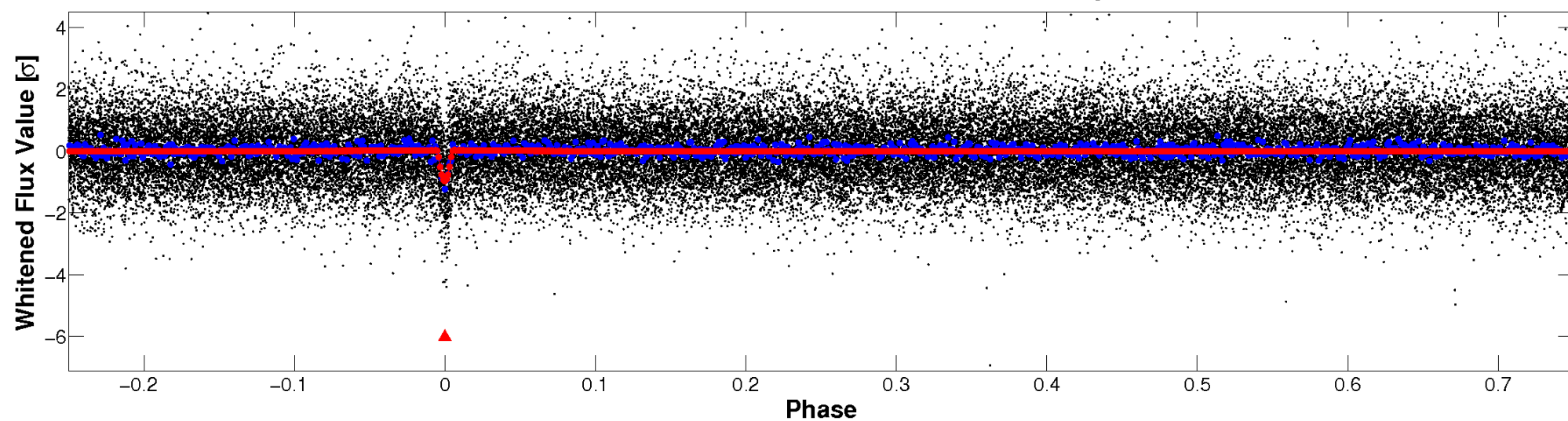


Non-Whitened Vs. Whitened Light Curve

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

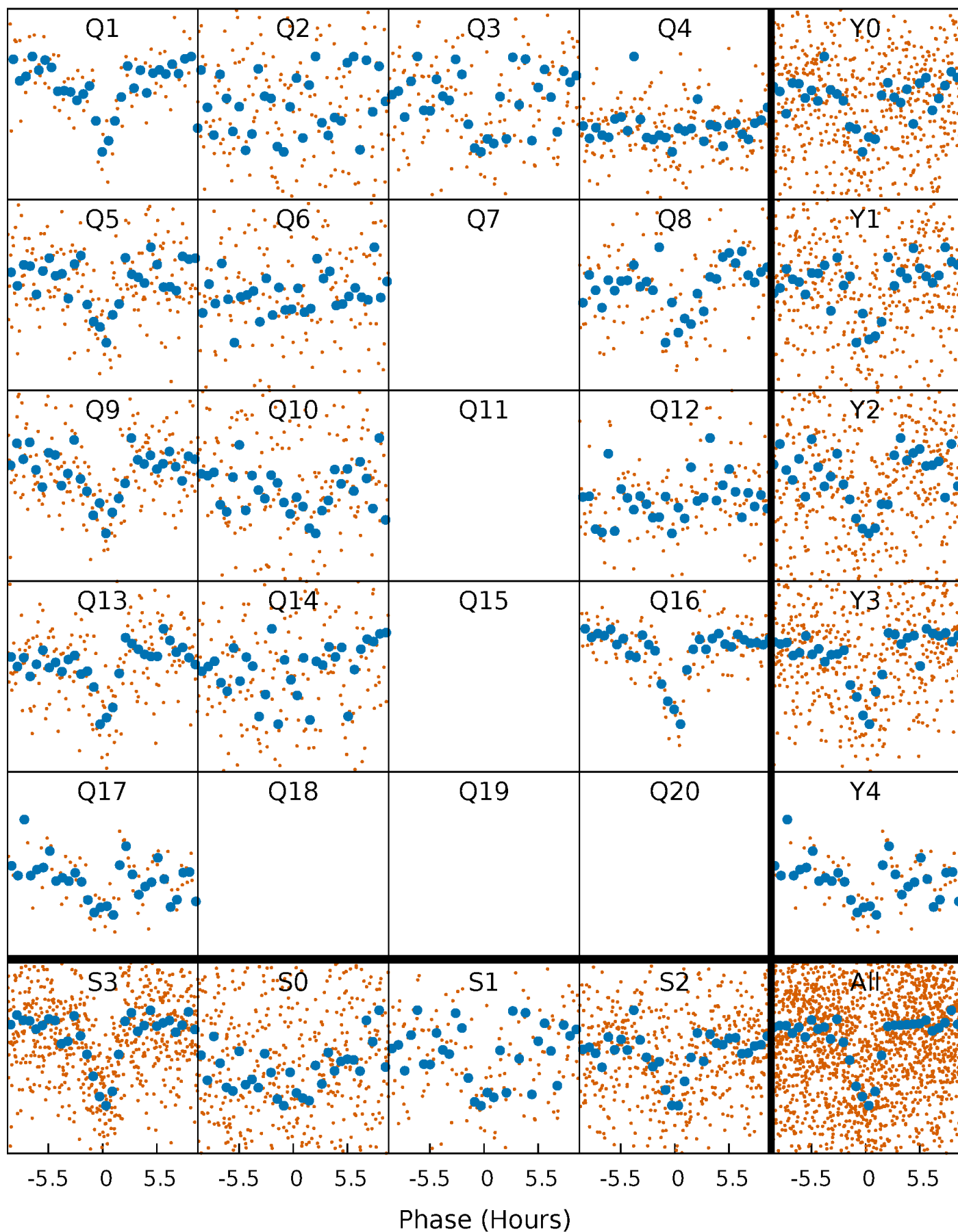


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



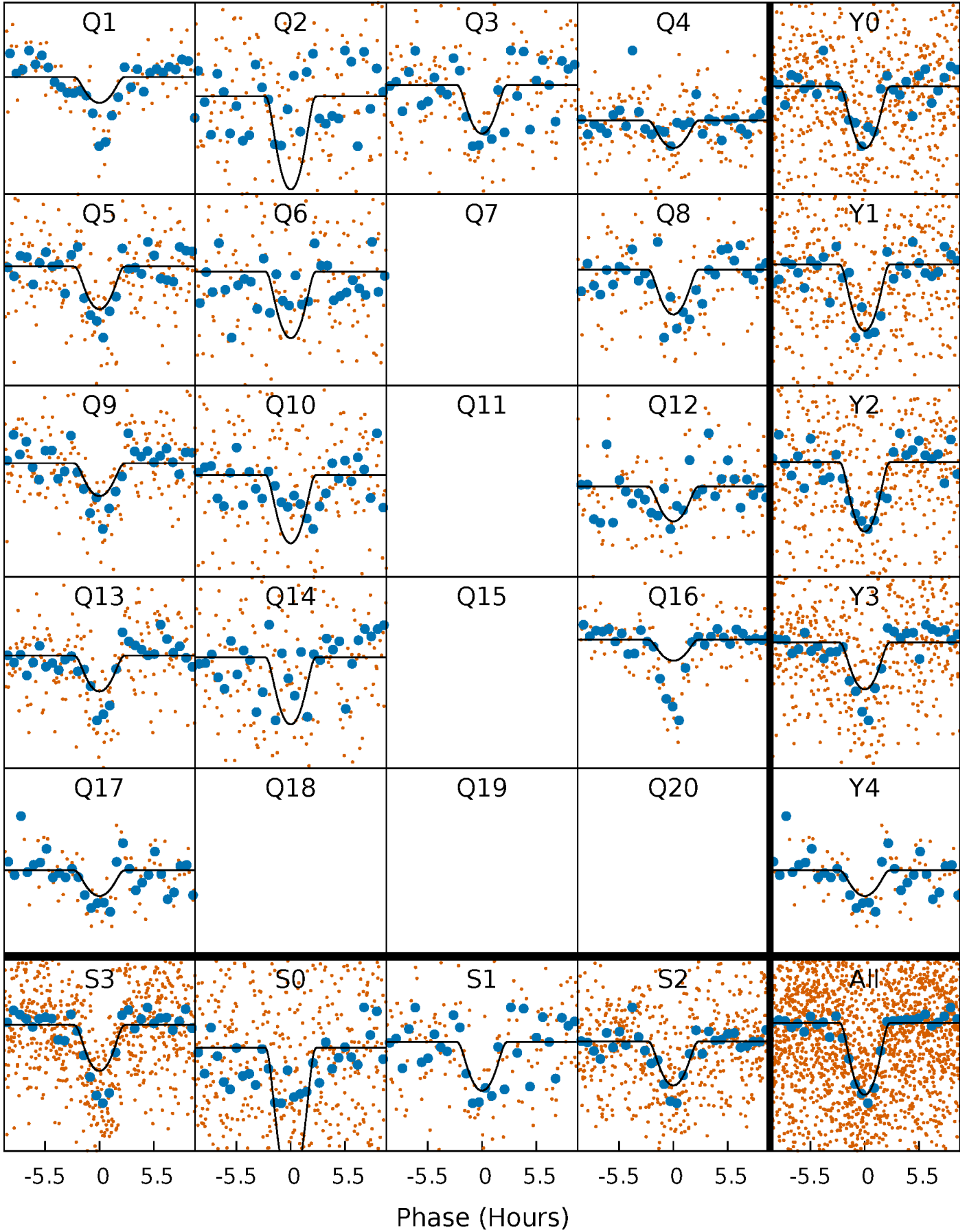
PDC Quarter-Phased Transit Curves

TCE 010544677-01 P= 19.735290 Days $T_0=138.584771$ (BKJD)



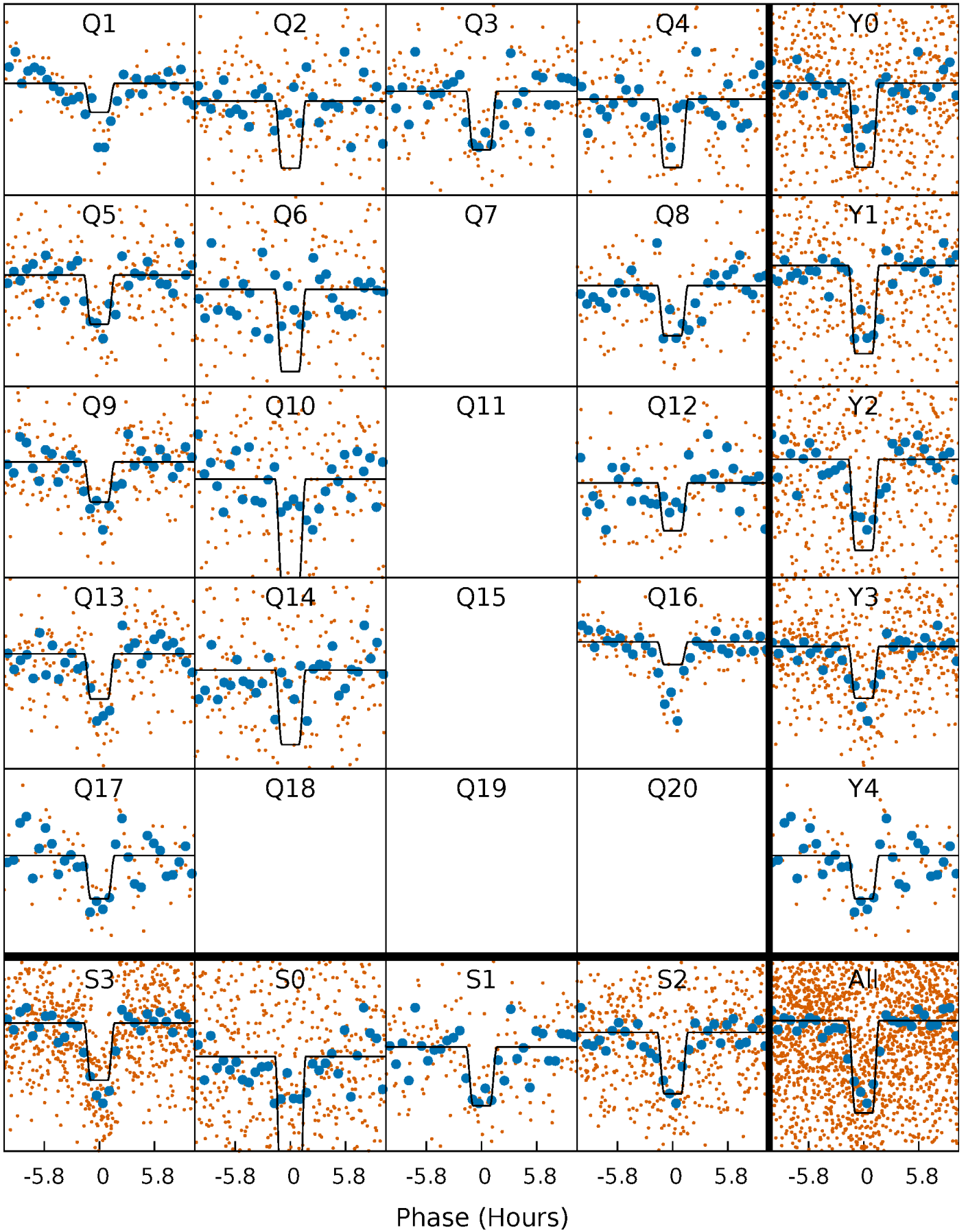
DV Quarter-Phased Transit Curves

TCE 010544677-01 P= 19.735290 Days $T_0=138.584771$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

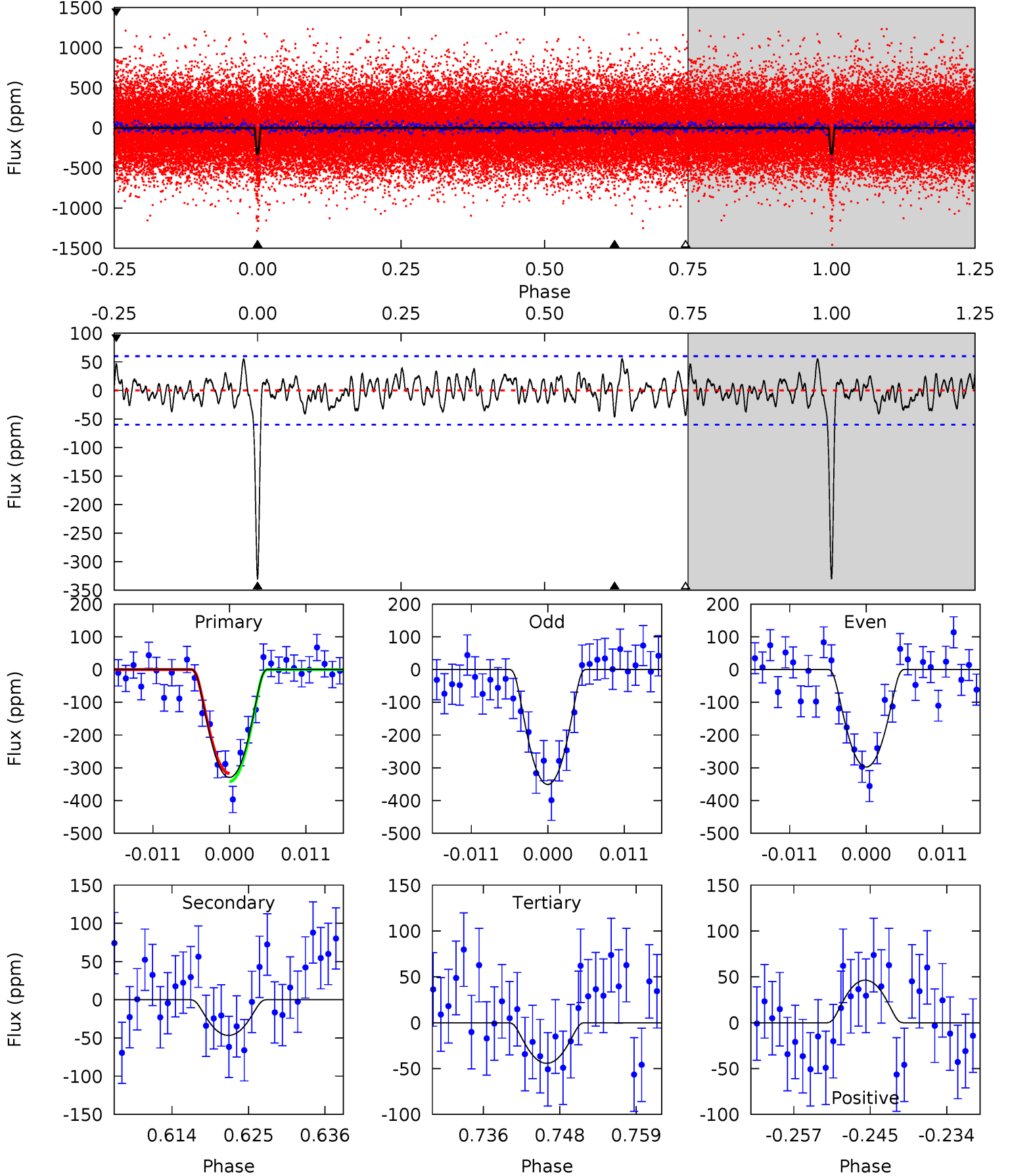
TCE 010544677-01 P= 19.735293 Days $T_0=138.584220$ (BKJD)



DV Model-Shift Uniqueness Test

010544677-01, $P = 19.735290$ Days, $E = 118.849481$ Days

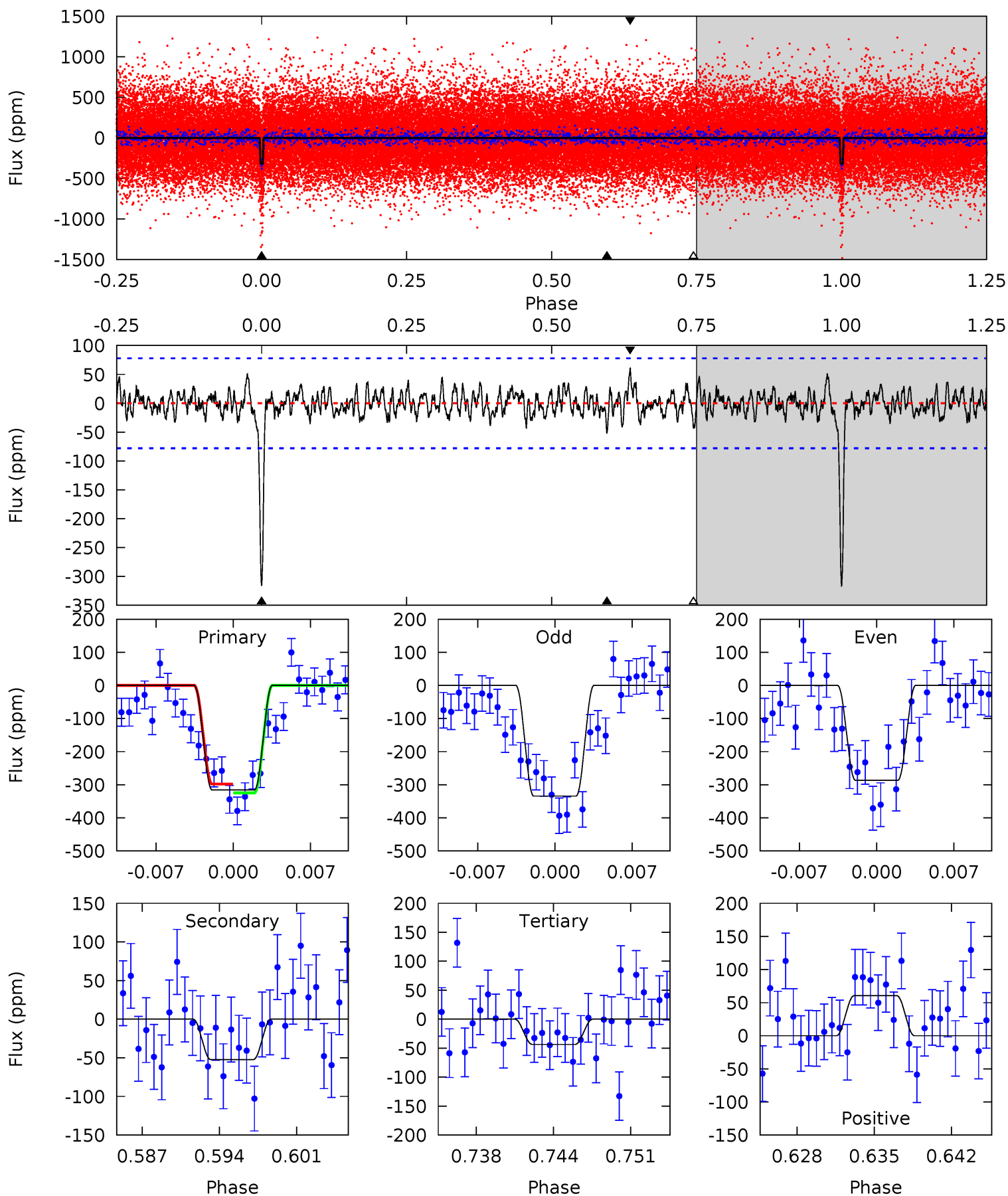
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	3.89	3.69	3.87	5.01	2.54	1.47	23.8	23.6	0.19	0.02	2.22	1.14	0.14	1.07



Alt Model-Shift Uniqueness Test

010544677-01, $P = 19.735293$ Days, $E = 118.848927$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.43	2.86	3.96	5.10	2.71	1.11	17.8	16.7	0.57	-0.54	1.55	1.21	0.16	0.87



Stellar Parameters For KIC 010544677

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6329^{+169}_{-207}	$4.440^{+0.054}_{-0.216}$	$-0.200^{+0.250}_{-0.300}$	$1.045^{+0.349}_{-0.116}$	$1.095^{+0.154}_{-0.154}$	$1.352^{+0.383}_{-0.706}$
	+3%/-3%	+1%/-5%	+125%/-150%	+33%/-11%	+14%/-14%	+28%/-52%
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 010544677-01 / KOI 2244.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 12	$2.94^{+1.95}_{-1.56}$	1061^{+80}_{-52}	3700^{+1208}_{-525}	60^{+219}_{-38}
Alt.	-52 ± 15	$2.54^{+1.81}_{-1.55}$	1063^{+80}_{-55}	4003^{+1746}_{-692}	93^{+481}_{-65}

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 $A_{obs} \gg 1.0$

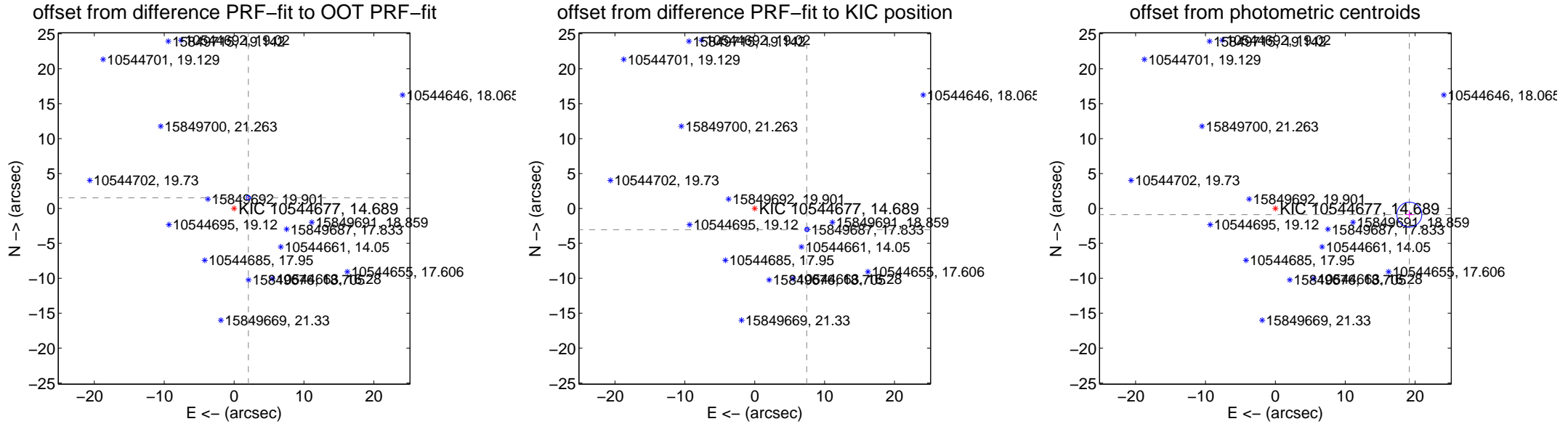
DV Centroid Data

Supplemental centroid analysis for 010544677-01. Kepler magnitude: 14.69. Transit SNR 14.90

There are 4 quarters with good PRF difference image offsets

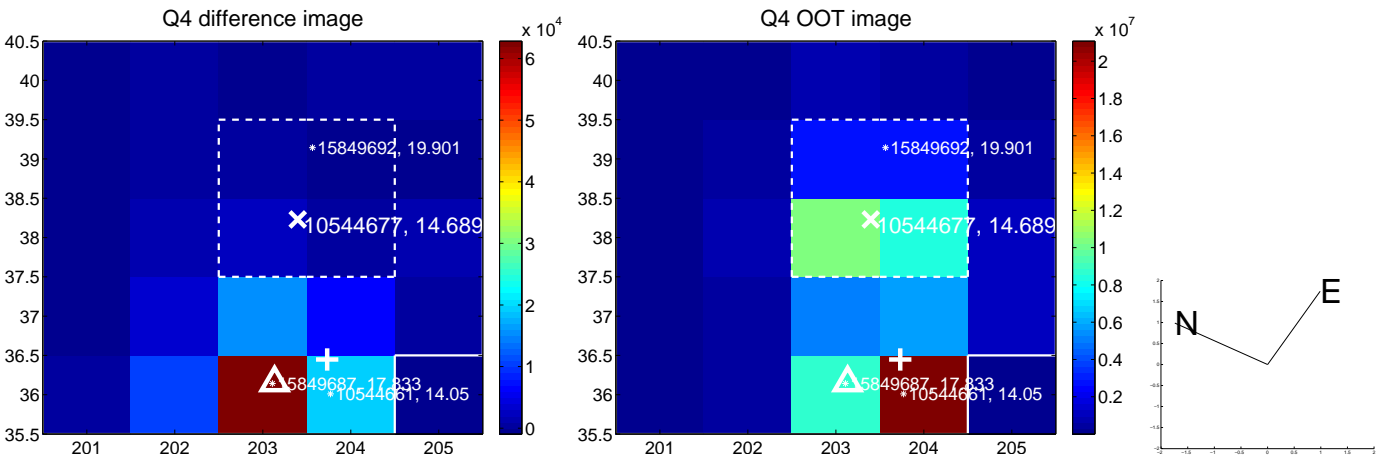
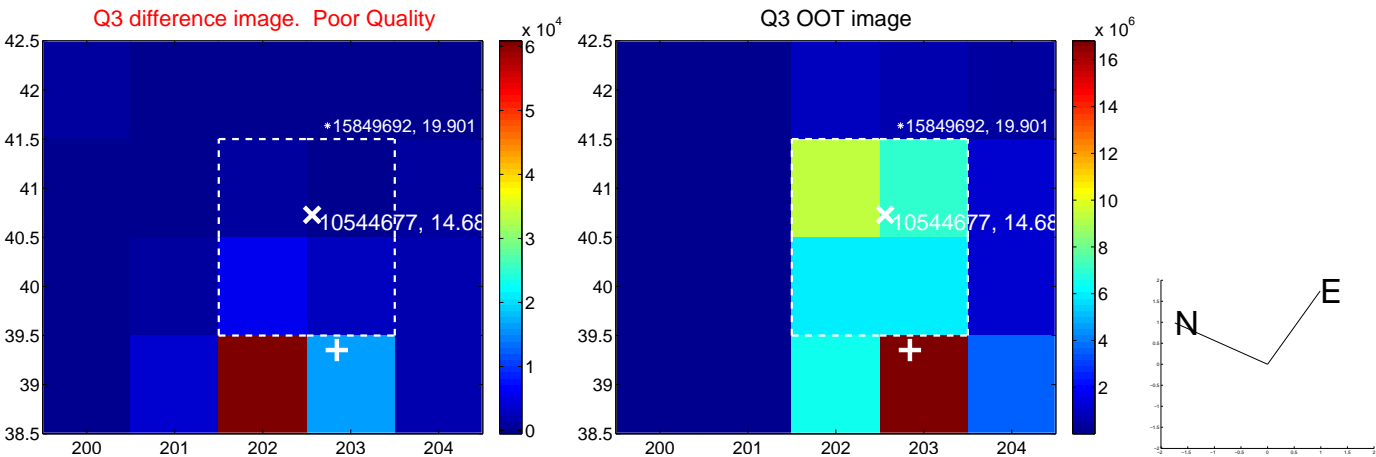
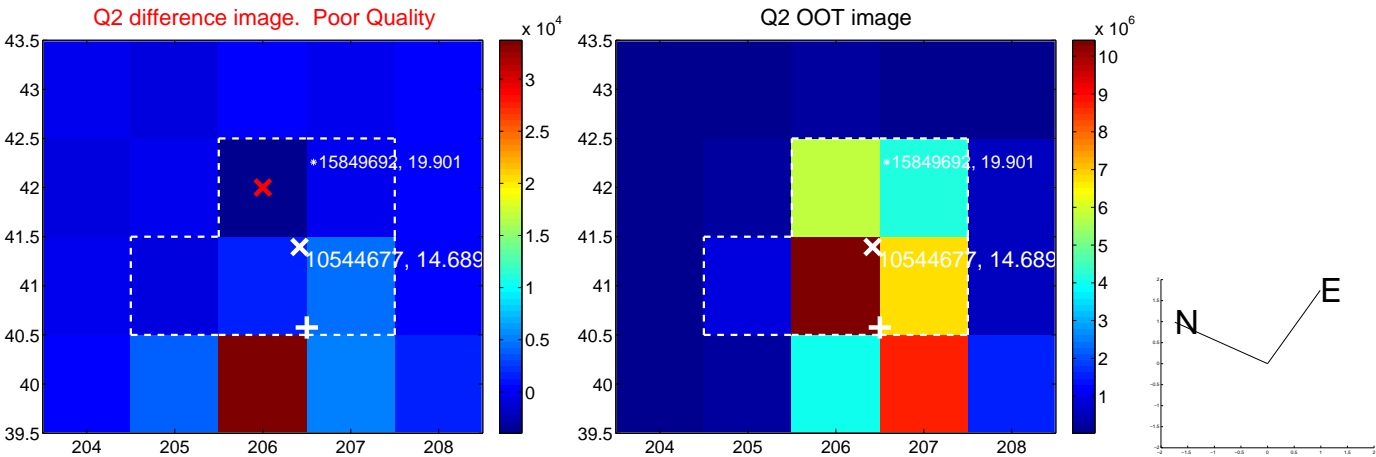
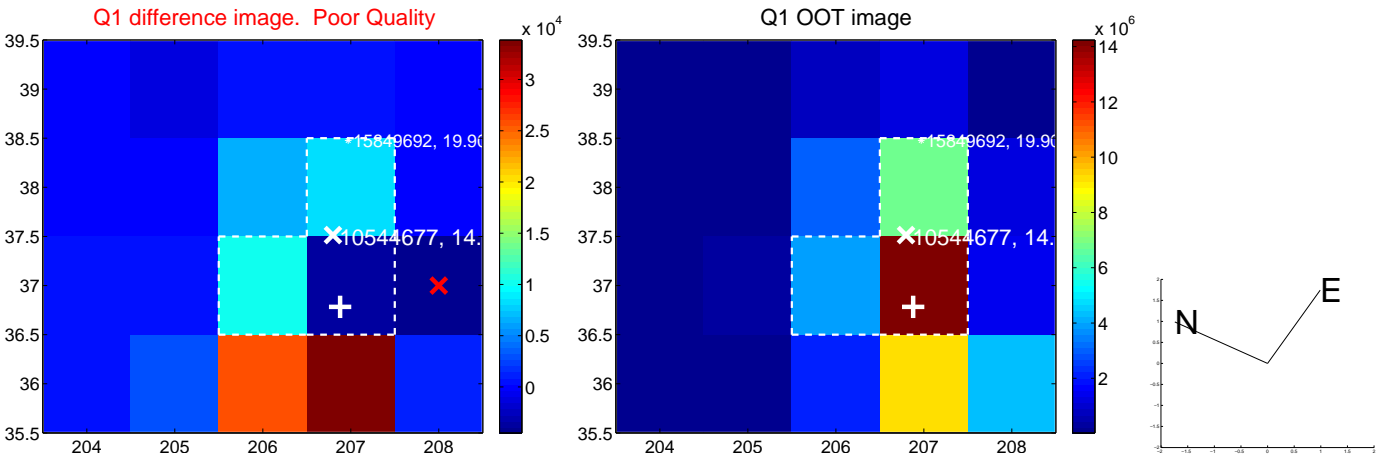
The OOT PRF centroid is offset from the target star catalog position by about 6.92 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.546 ± 0.107	23.85	-2.037 ± 0.120	1.527 ± 0.079
PRF-fit source offset from KIC position	8.037 ± 0.094	85.56	-7.441 ± 0.081	-3.037 ± 0.094
photometric centroid source offset	19.18 ± 0.59	32.24	-19.16 ± 0.59	-0.88 ± 0.62

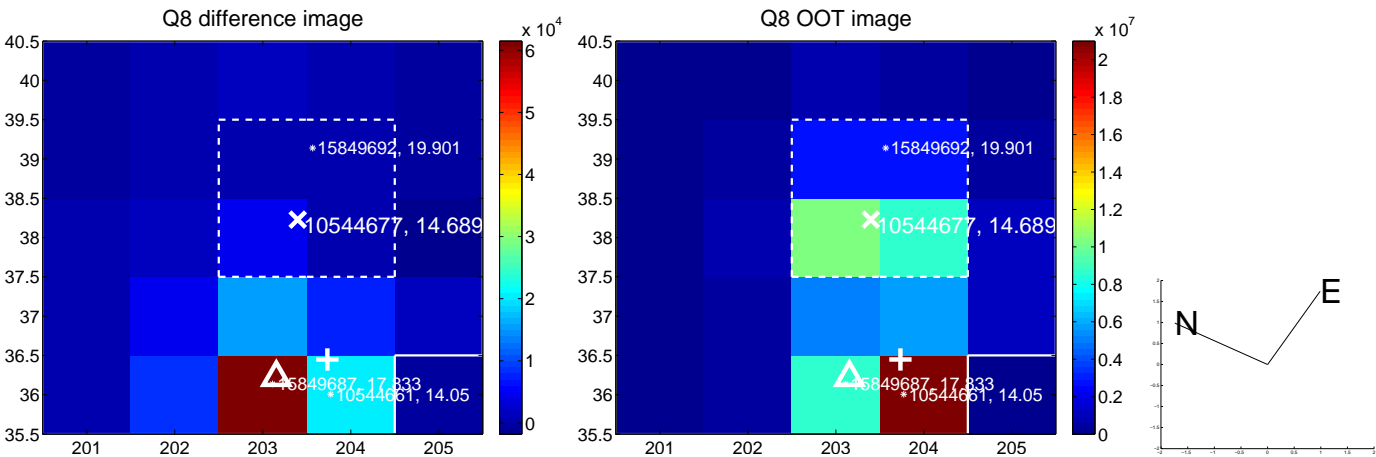
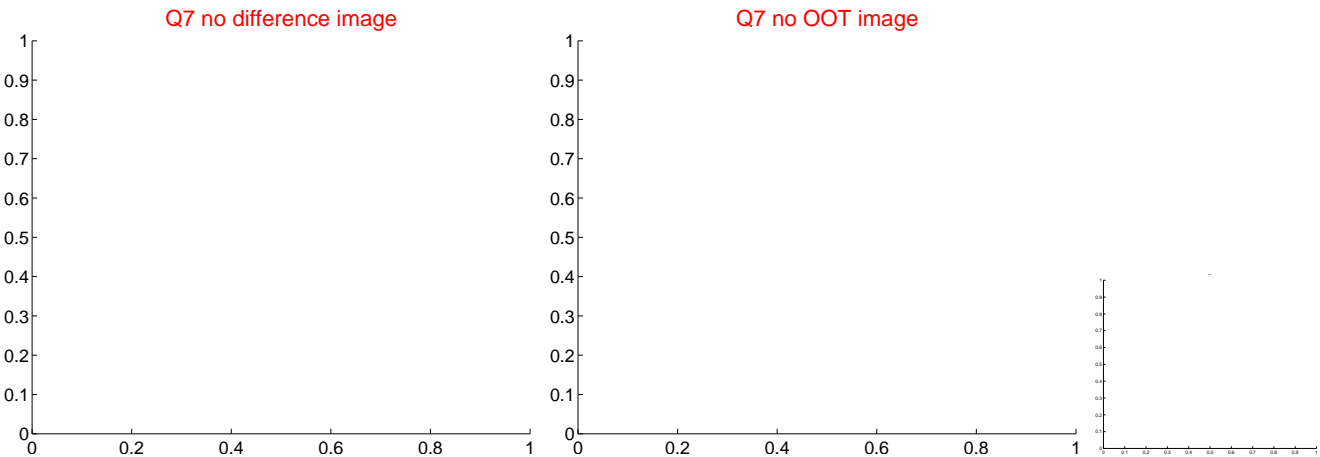
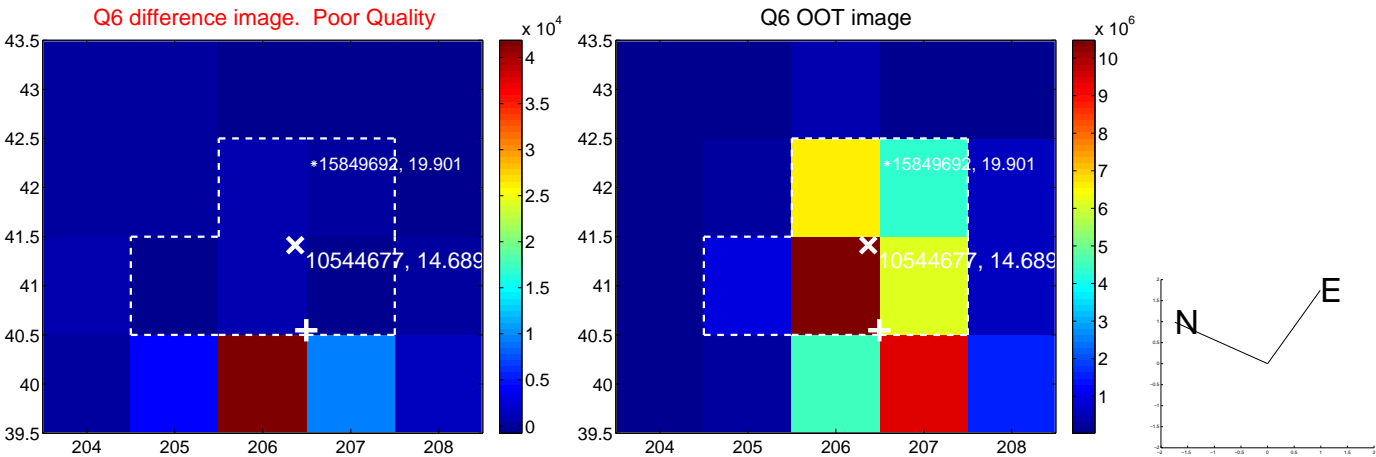
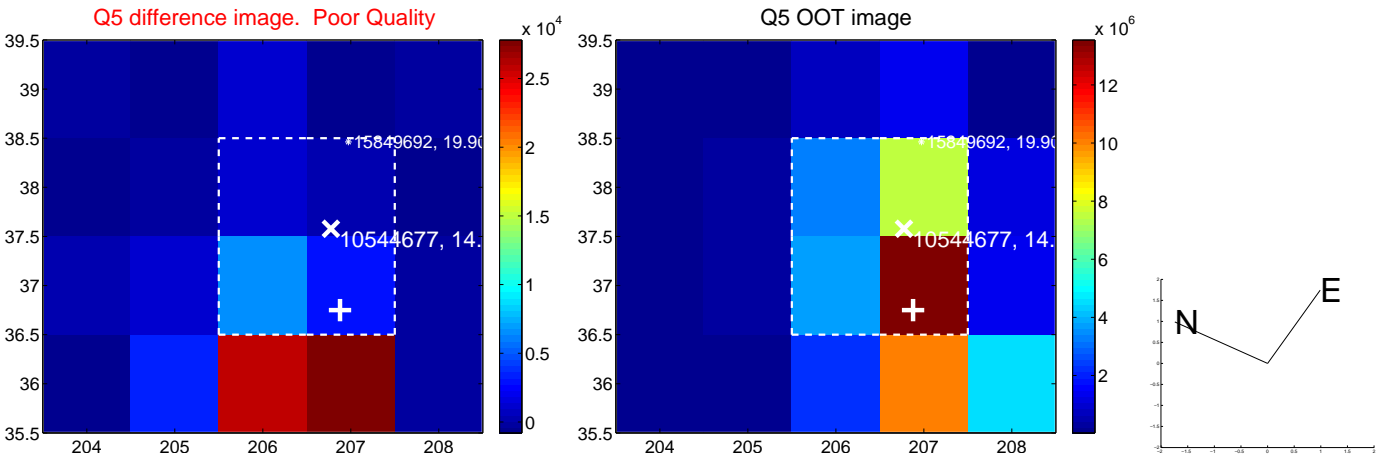


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

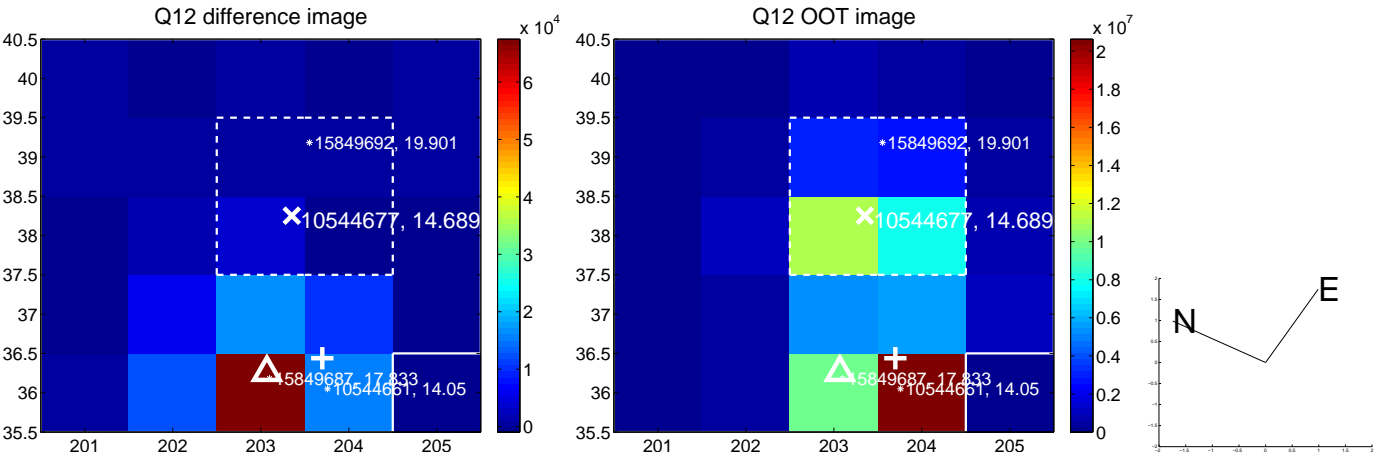
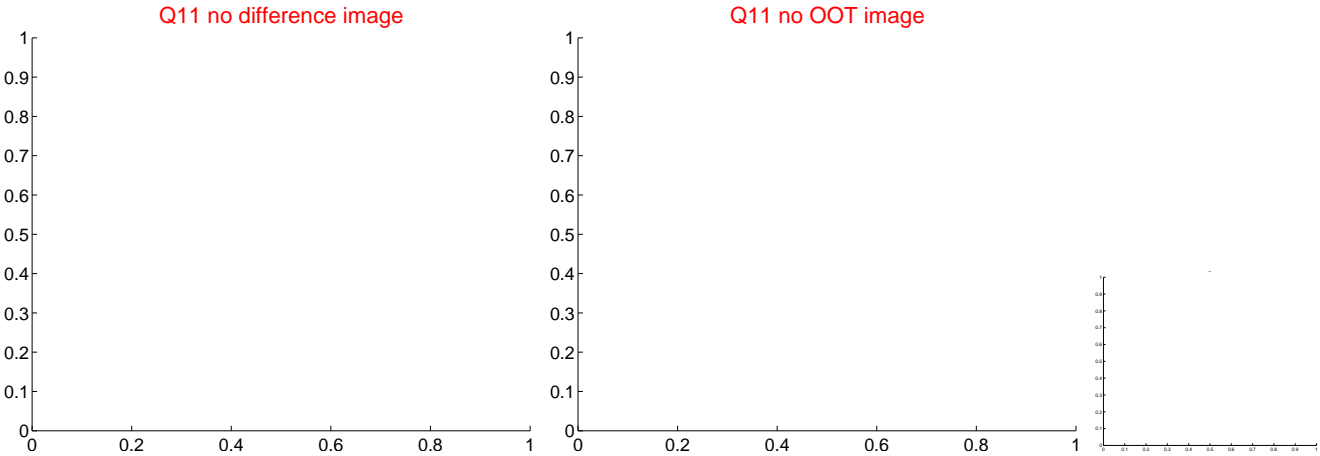
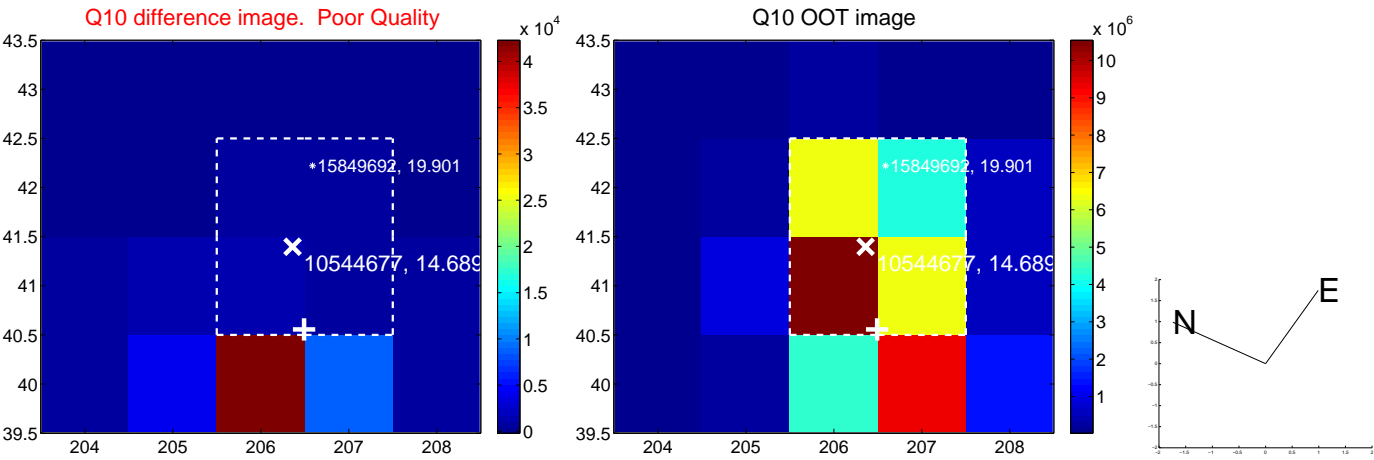
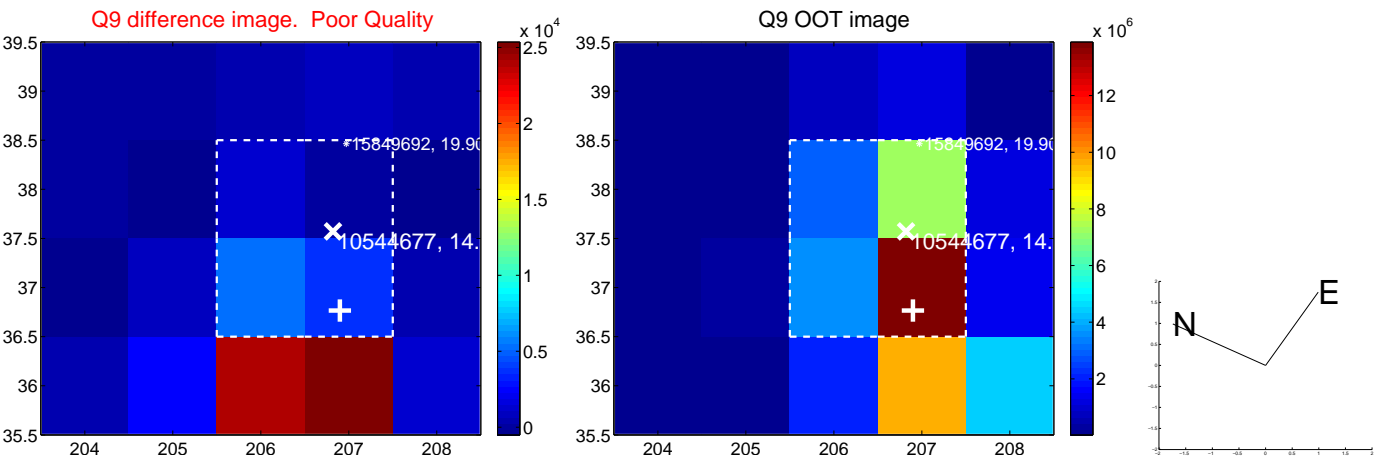
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



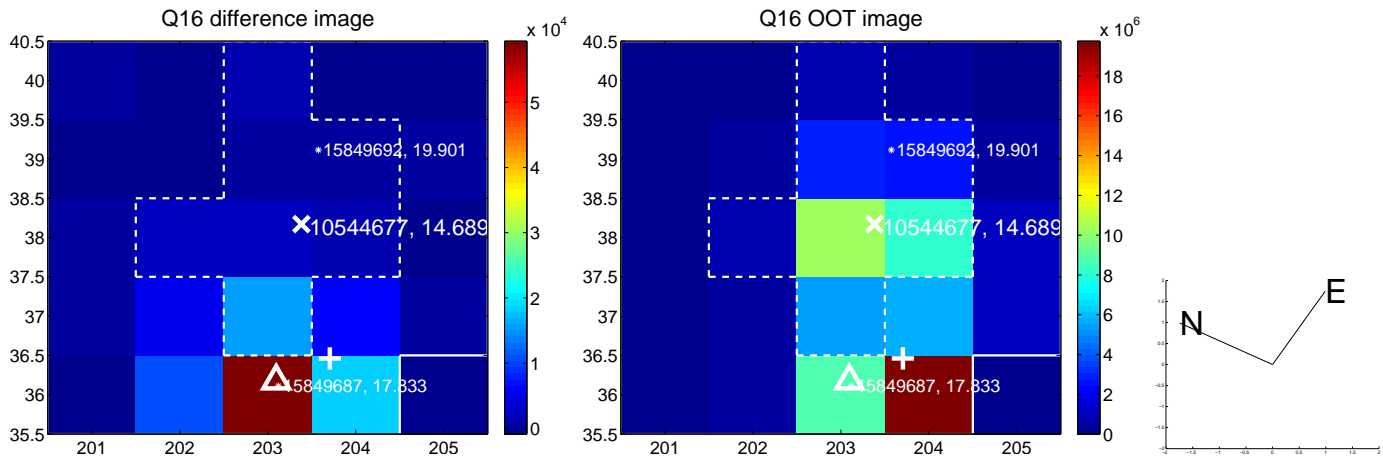
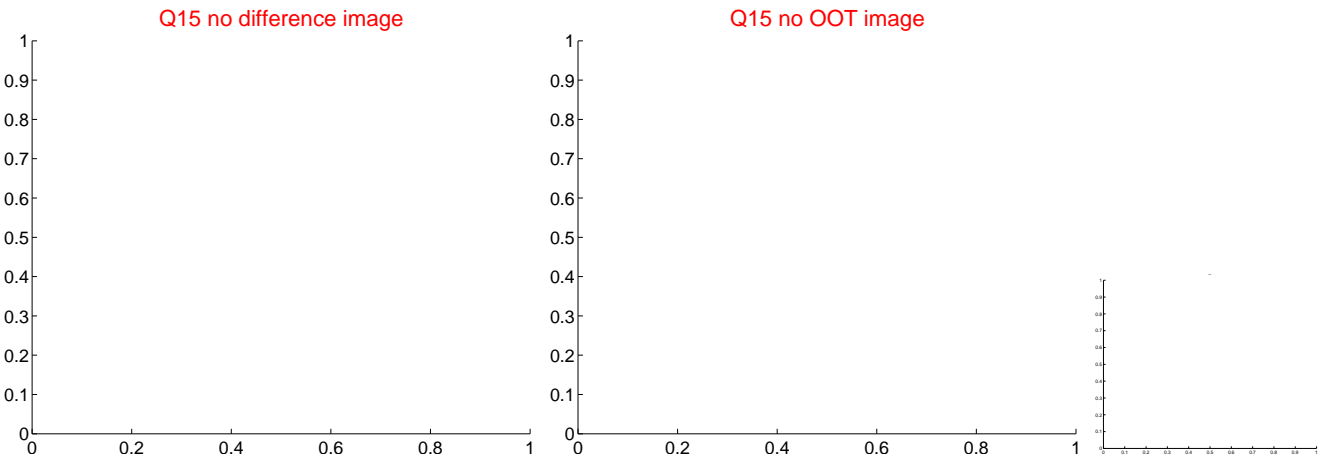
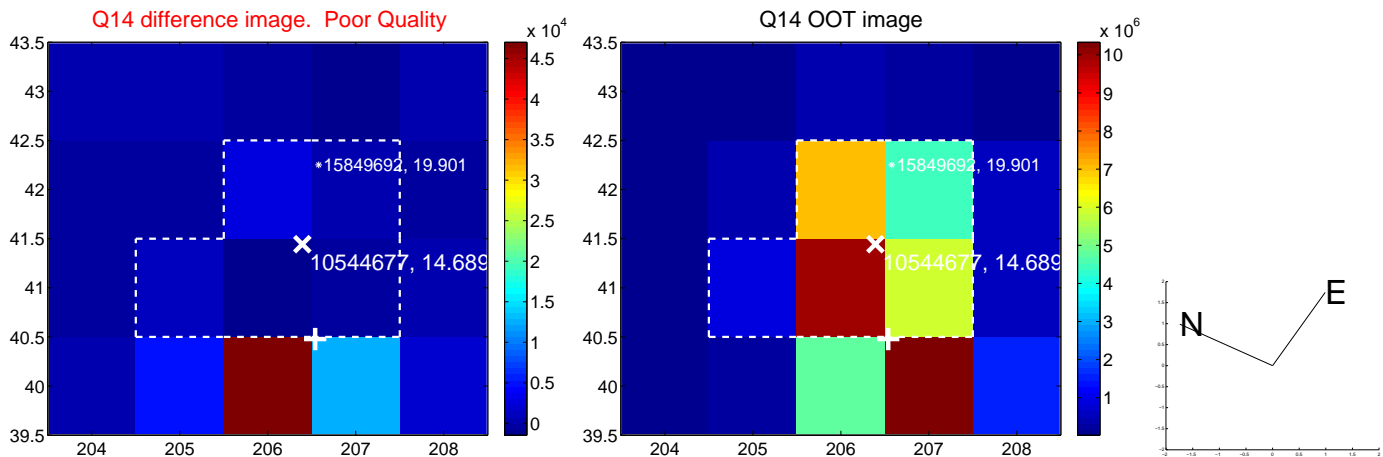
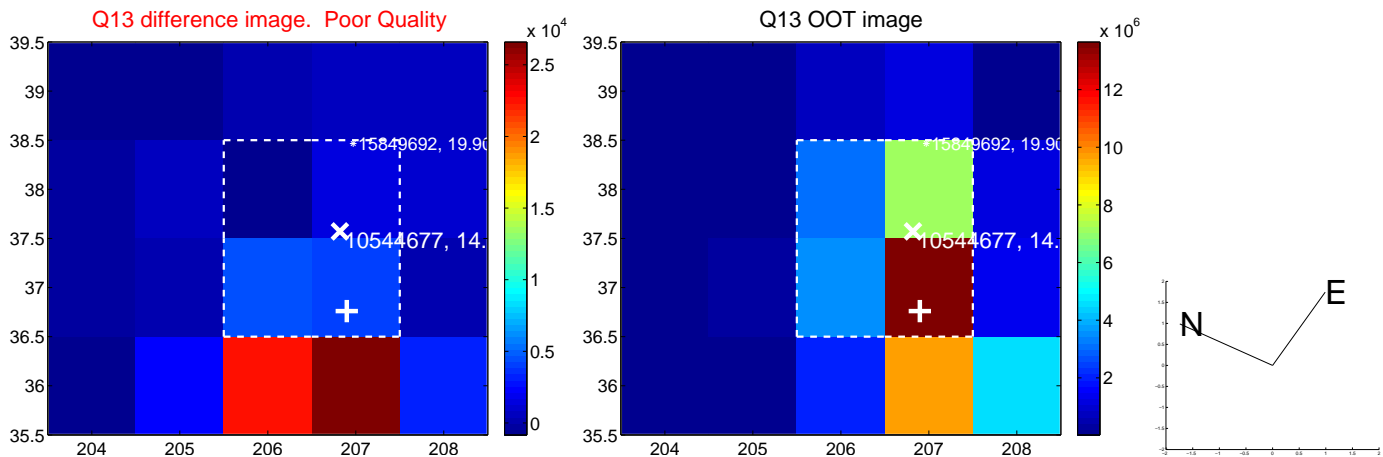
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



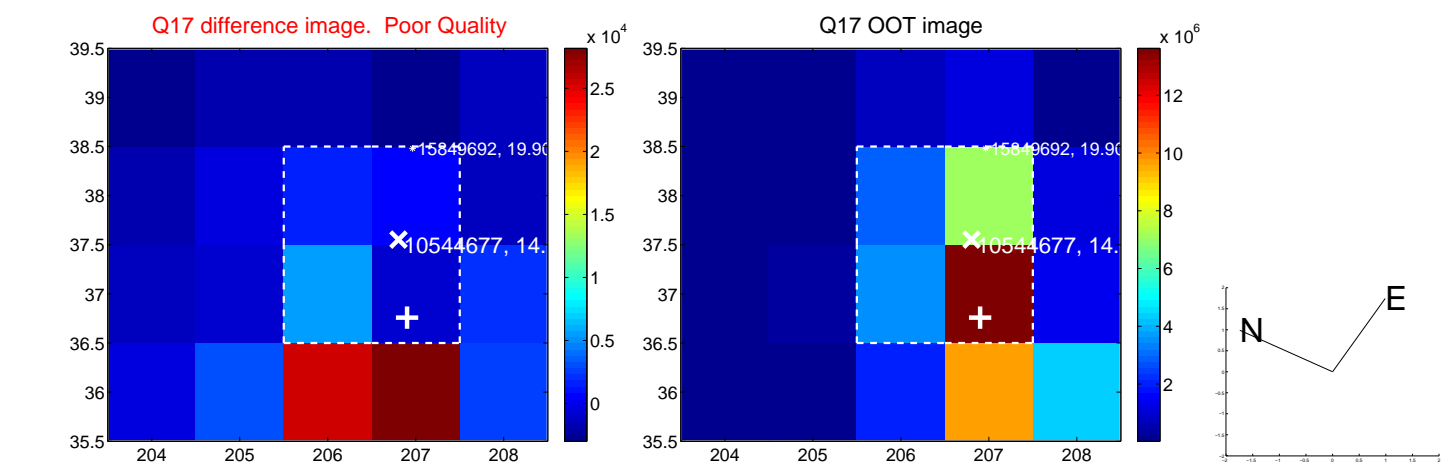
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



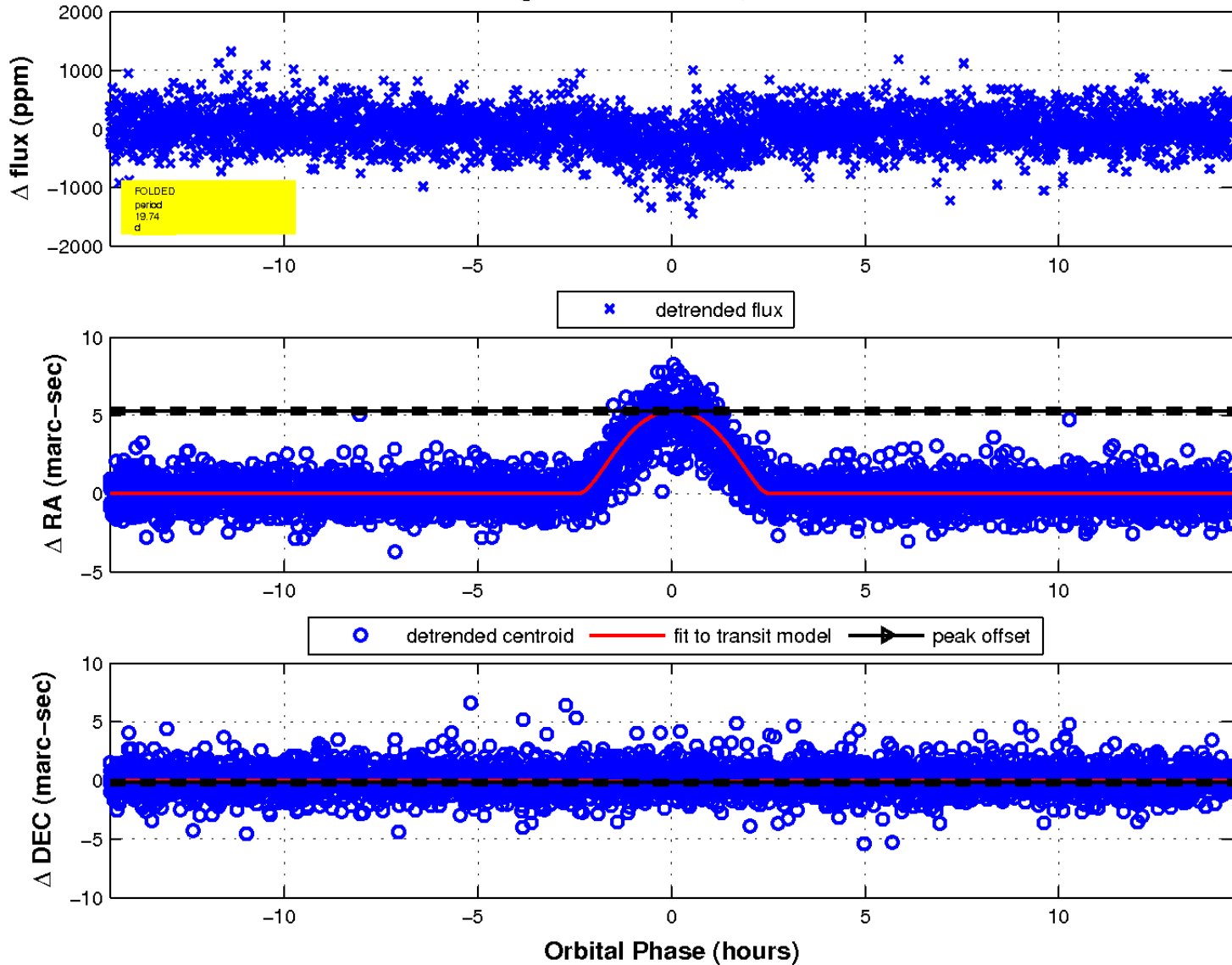
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

