

KIC 008105719

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})
008105719-01	OBS	5476.01	148.171010	202.328954	402.7	13.775	8.7	8.0	1.18	5635	2.50	4.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008105719-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_DIFFS

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 008105719-01

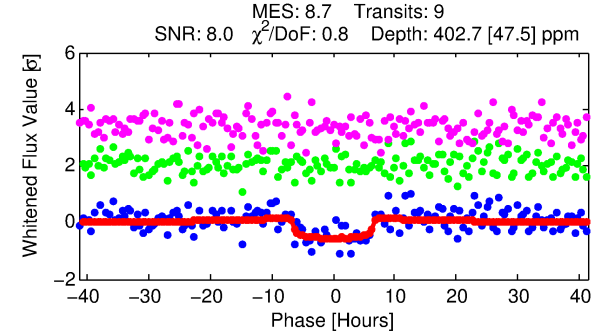
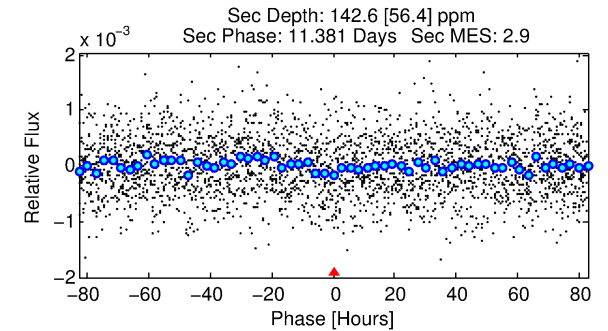
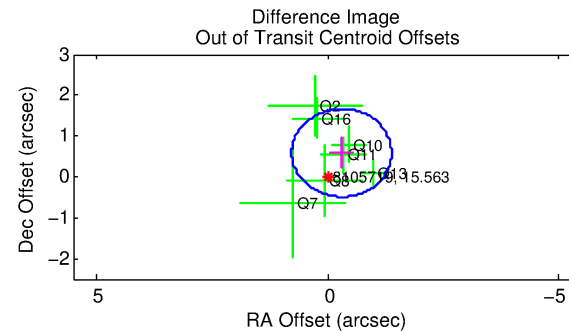
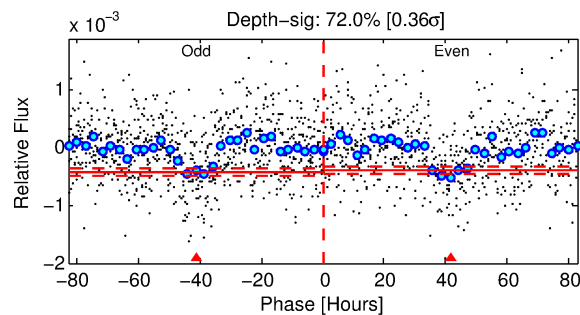
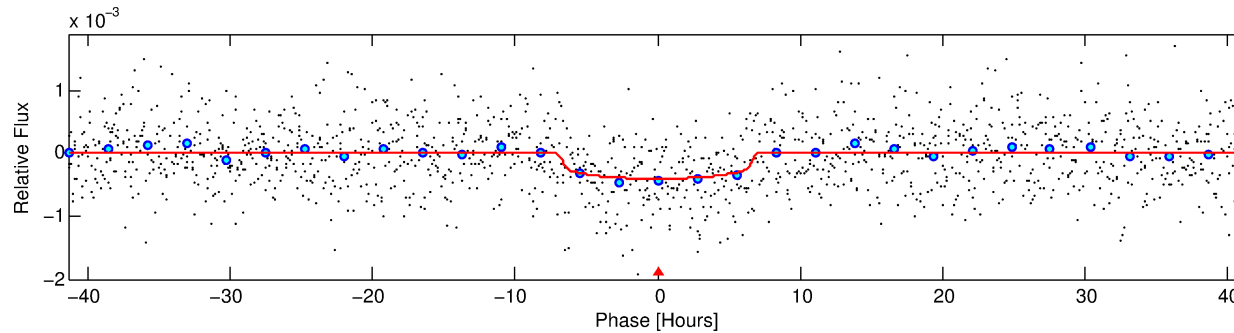
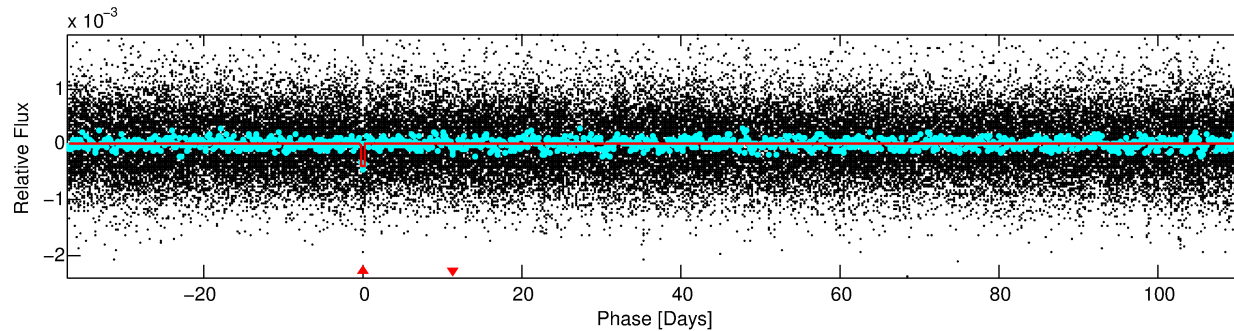
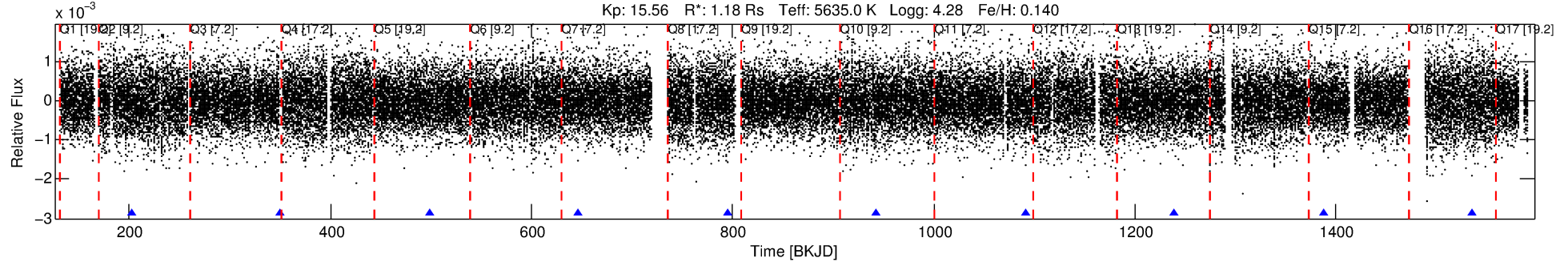
No Significant Match Found

DV One-Page Summary

KIC: 8105719 Candidate: 1 of 1 Period: 148.171 d

KOI: K05476.01 Corr: 0.984

Kp: 15.56 R*: 1.18 Rs Teff: 5635.0 K Logg: 4.28 Fe/H: 0.140



DV Fit Results:

Period = 148.17101 [0.00404] d
Epoch = 202.3290 [0.0216] BKJD
Rp/R* = 0.0193 [0.0114]
a/R* = 64.52 [156.91]
b = 0.65 [2.18]
Seff = 4.30 [1.16]
Teq = 367 [25] K
Rp = 2.50 [1.53] Re
a = 0.5422 [0.0887] AU
Ag = 3704.08 [4705.84] [0.79σ]
Teffp = 4429 [1377] K [2.95σ]

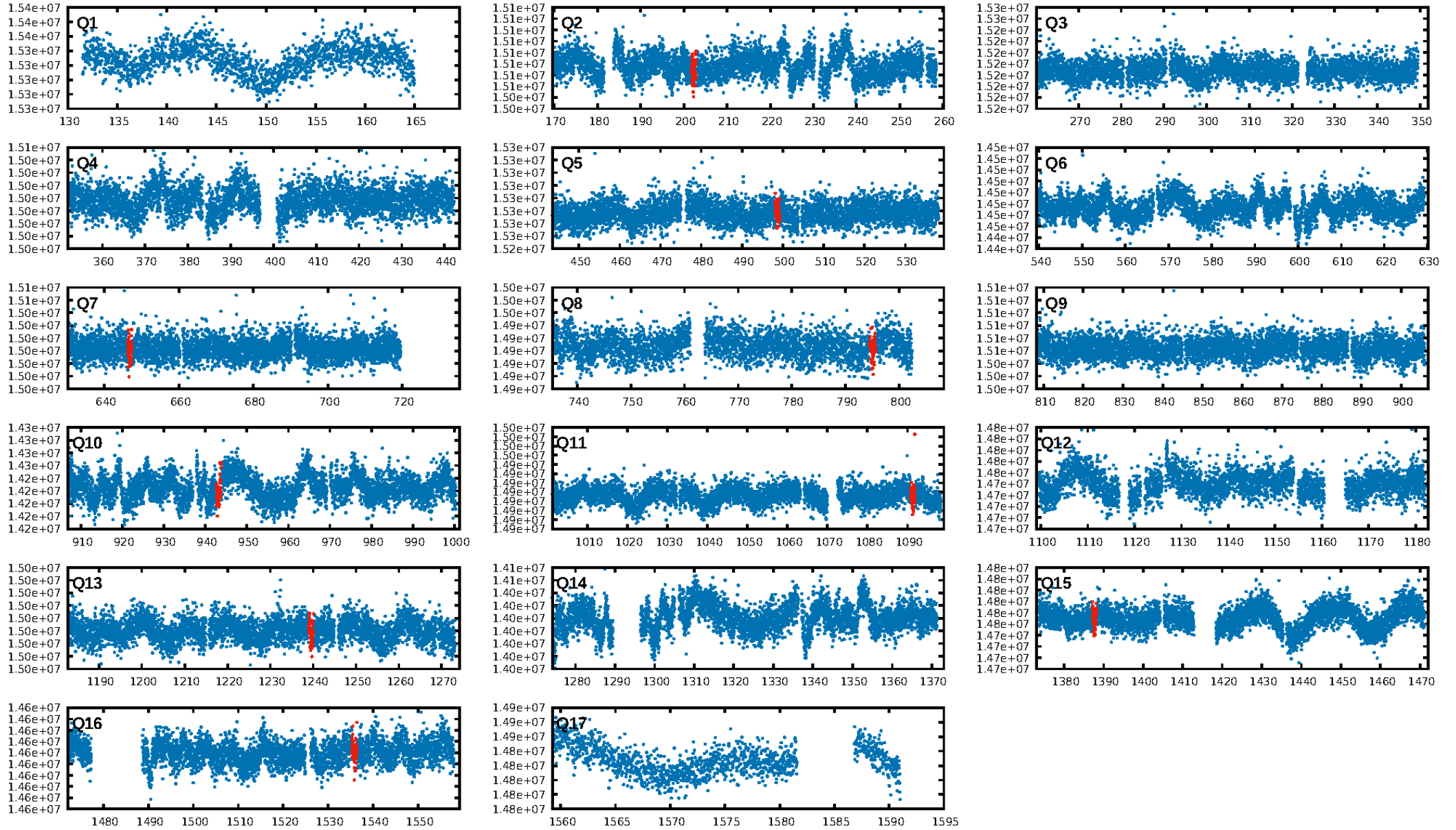
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.63e-13
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 1.415
Centroid-sig: 0.2%
Centroid-so: 4.375 arcsec [2.33σ]
OotOffset-rm: 0.662 arcsec [1.84σ]
KicOffset-rm: 0.687 arcsec [2.22σ]
OotOffset-st: 2/2/2/1 [7]
KicOffset-st: 2/2/2/1 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [8/8]

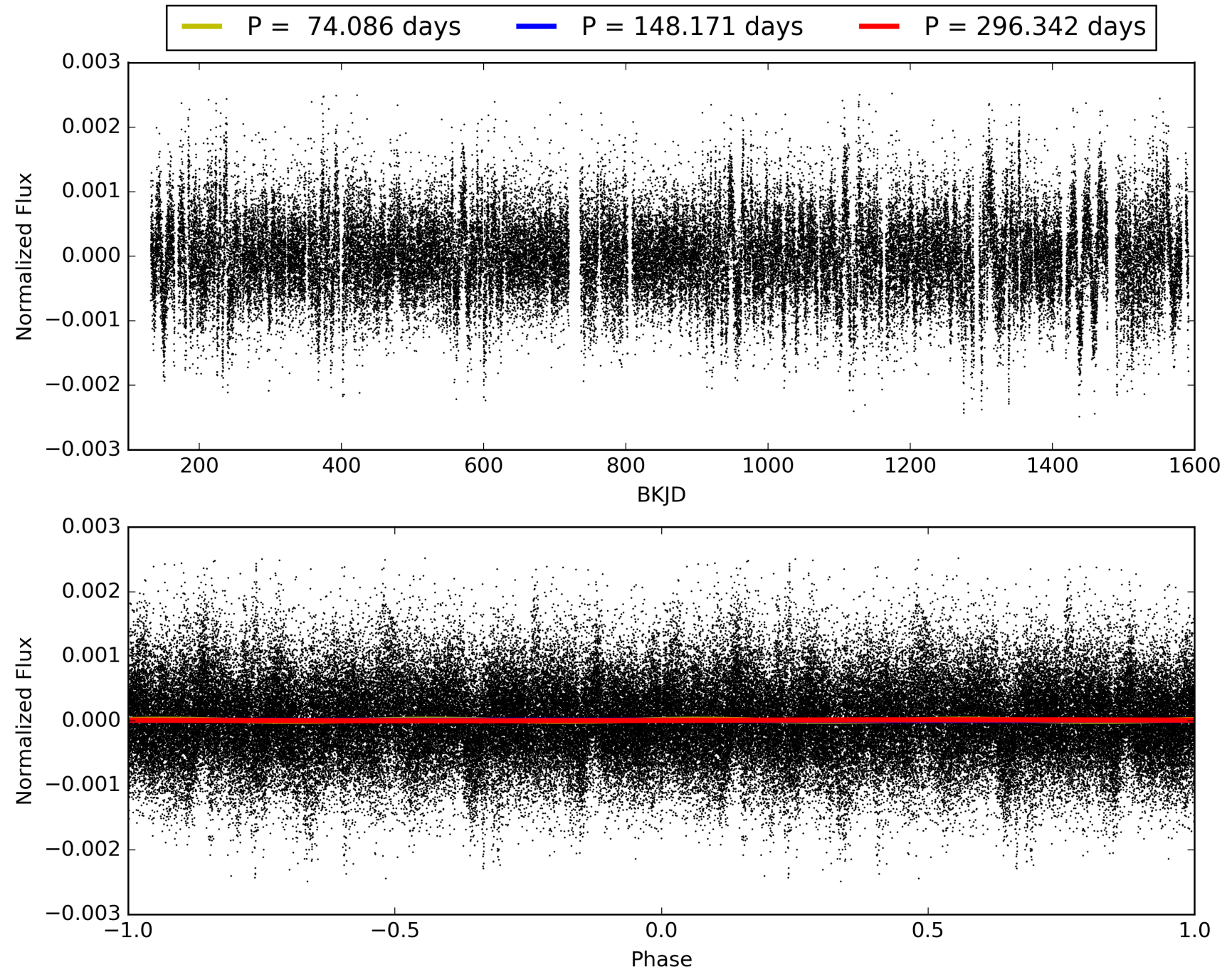
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:55:36 Z

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

TCE 008105719-01, PDC Light Curves

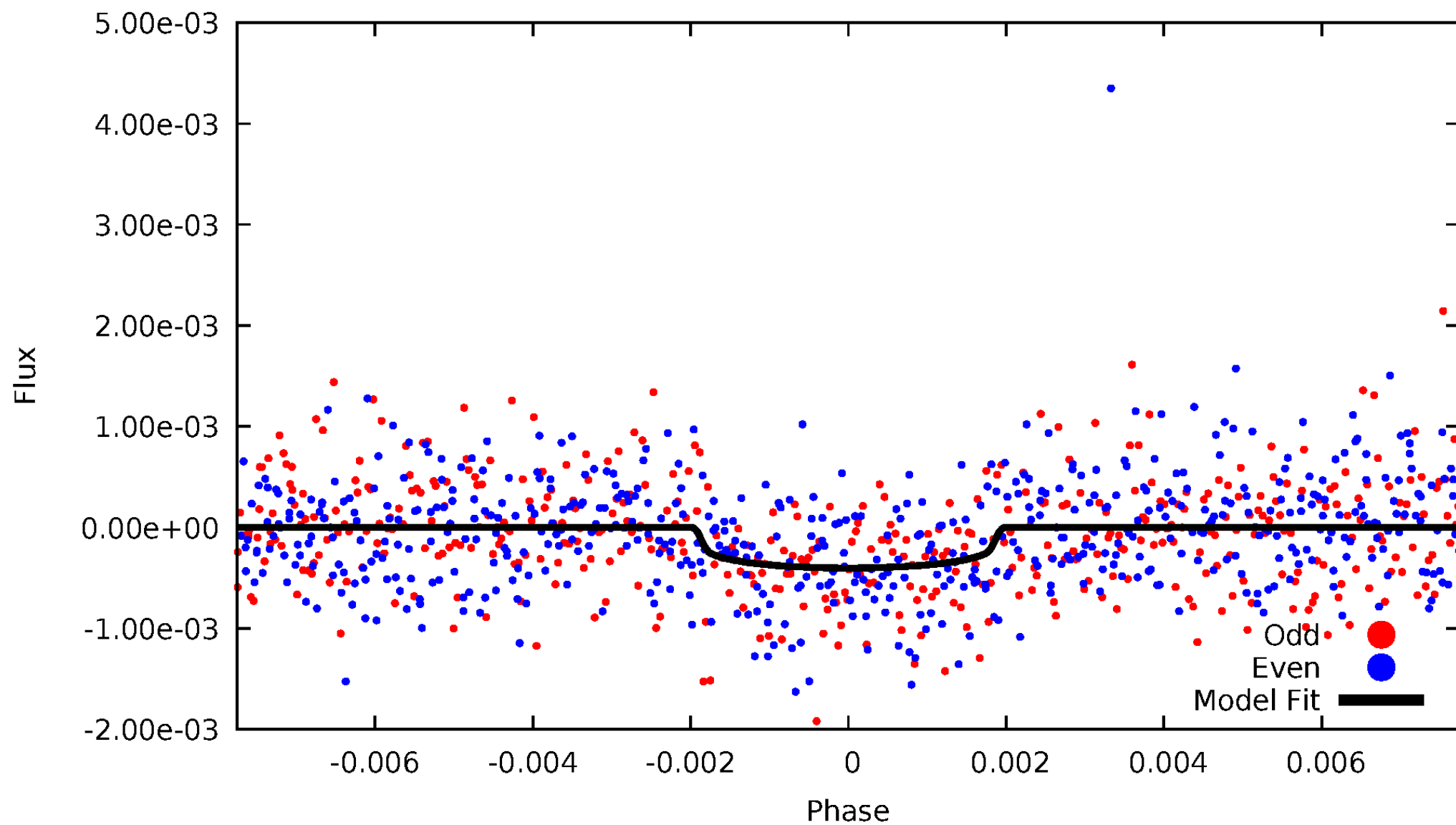


TCE 008105719-01



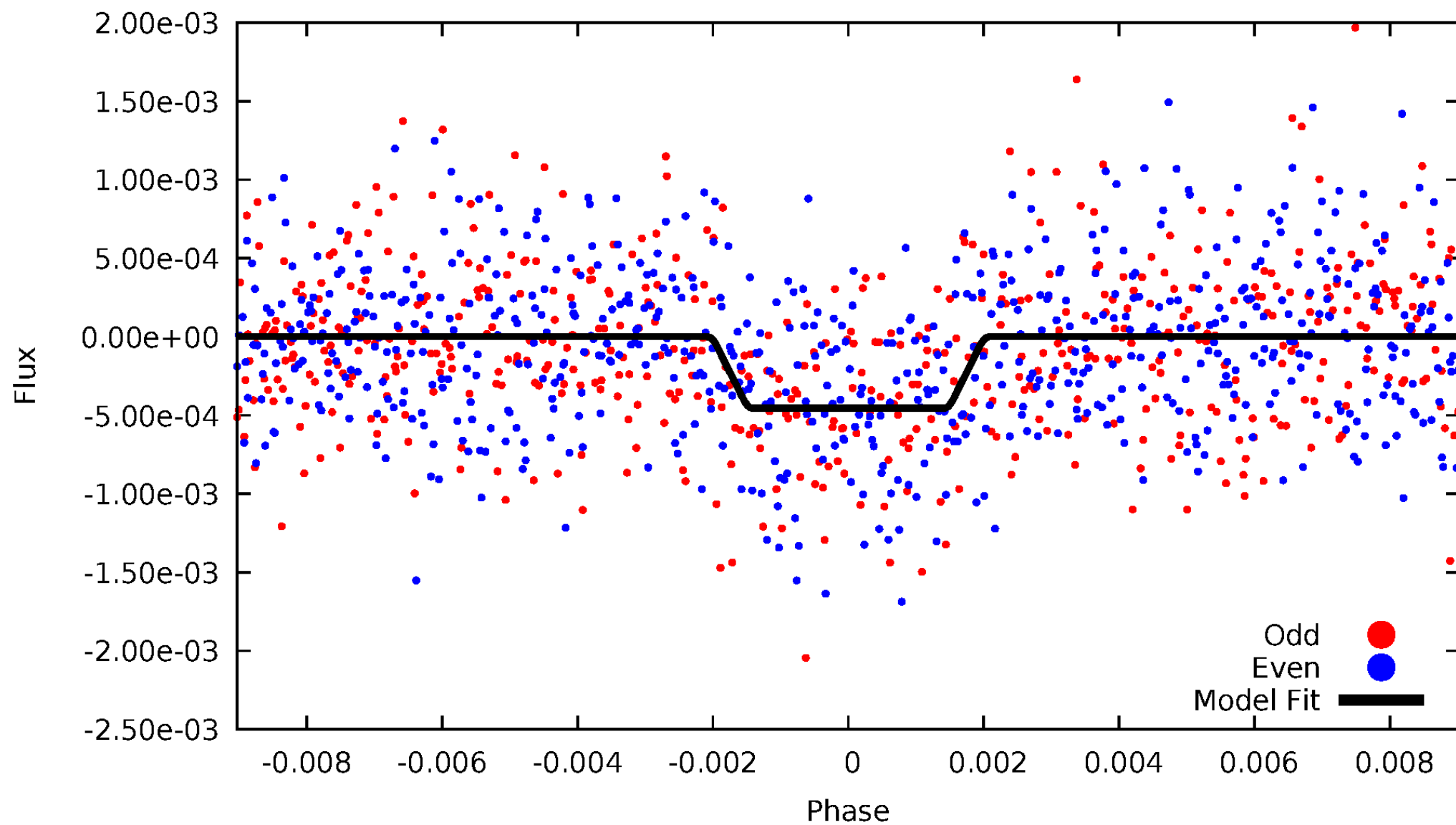
DV Odd/Even

TCE 008105719-01



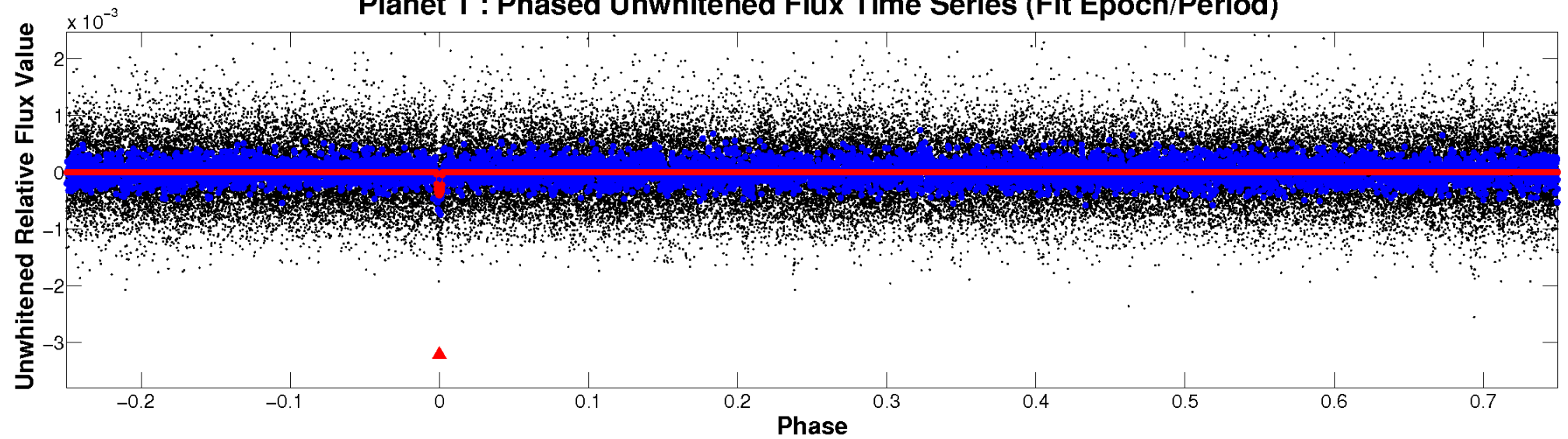
ALT Odd/Even

TCE 008105719-01

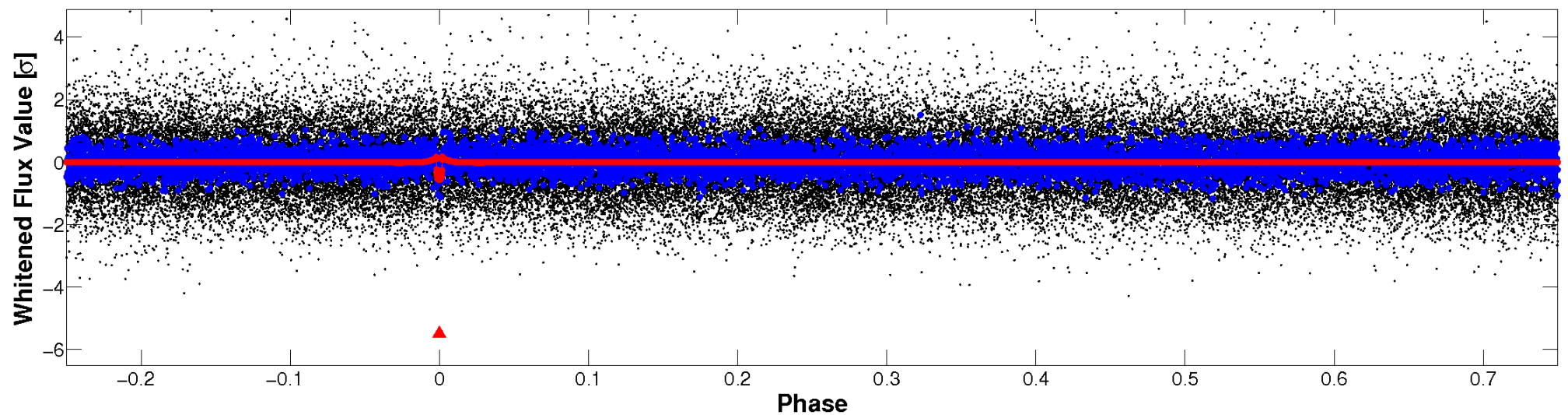


Non-Whitened Vs. Whitened Light Curve

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

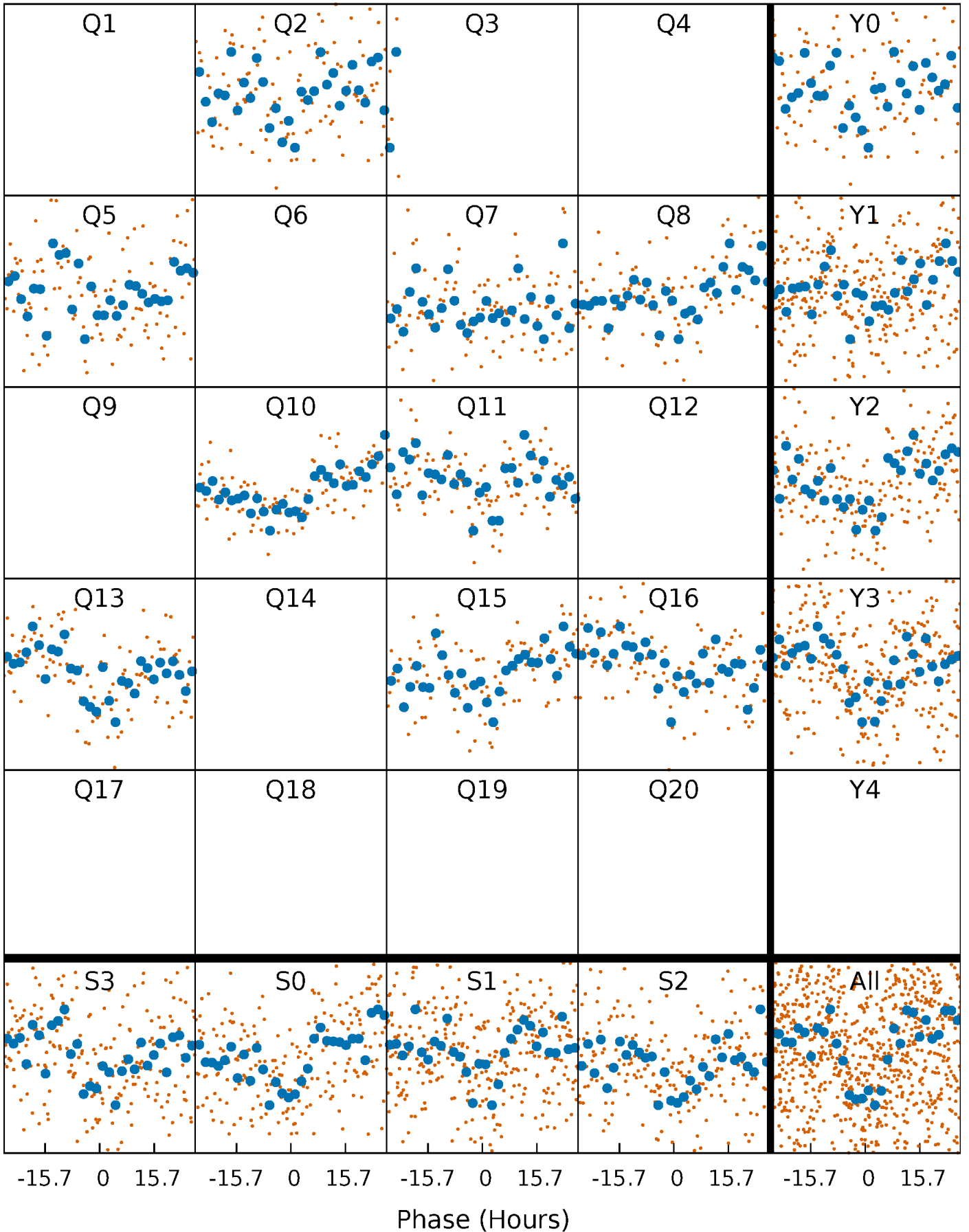


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



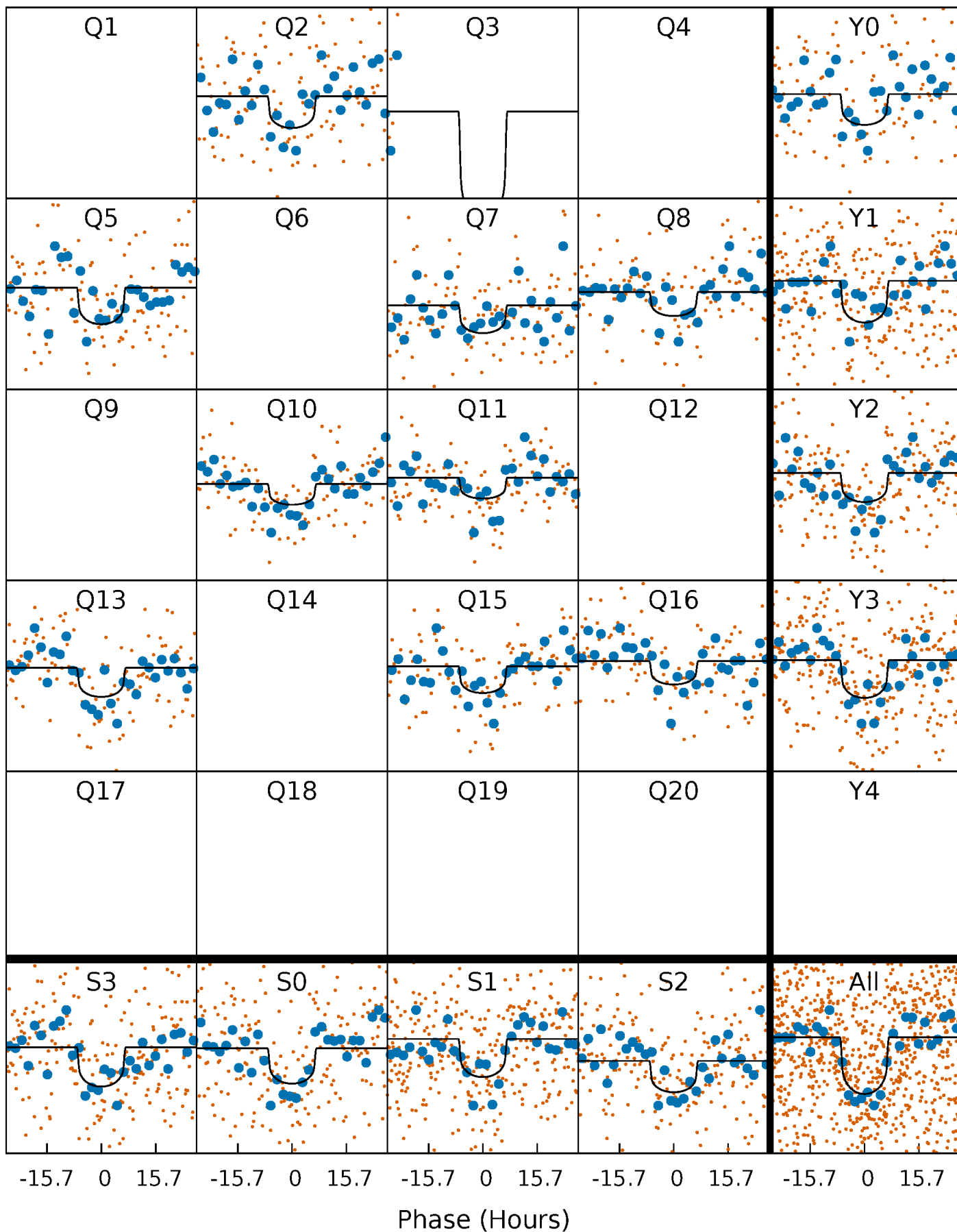
PDC Quarter-Phased Transit Curves

TCE 008105719-01 P=148.171010 Days $T_0=202.328954$ (BKJD)



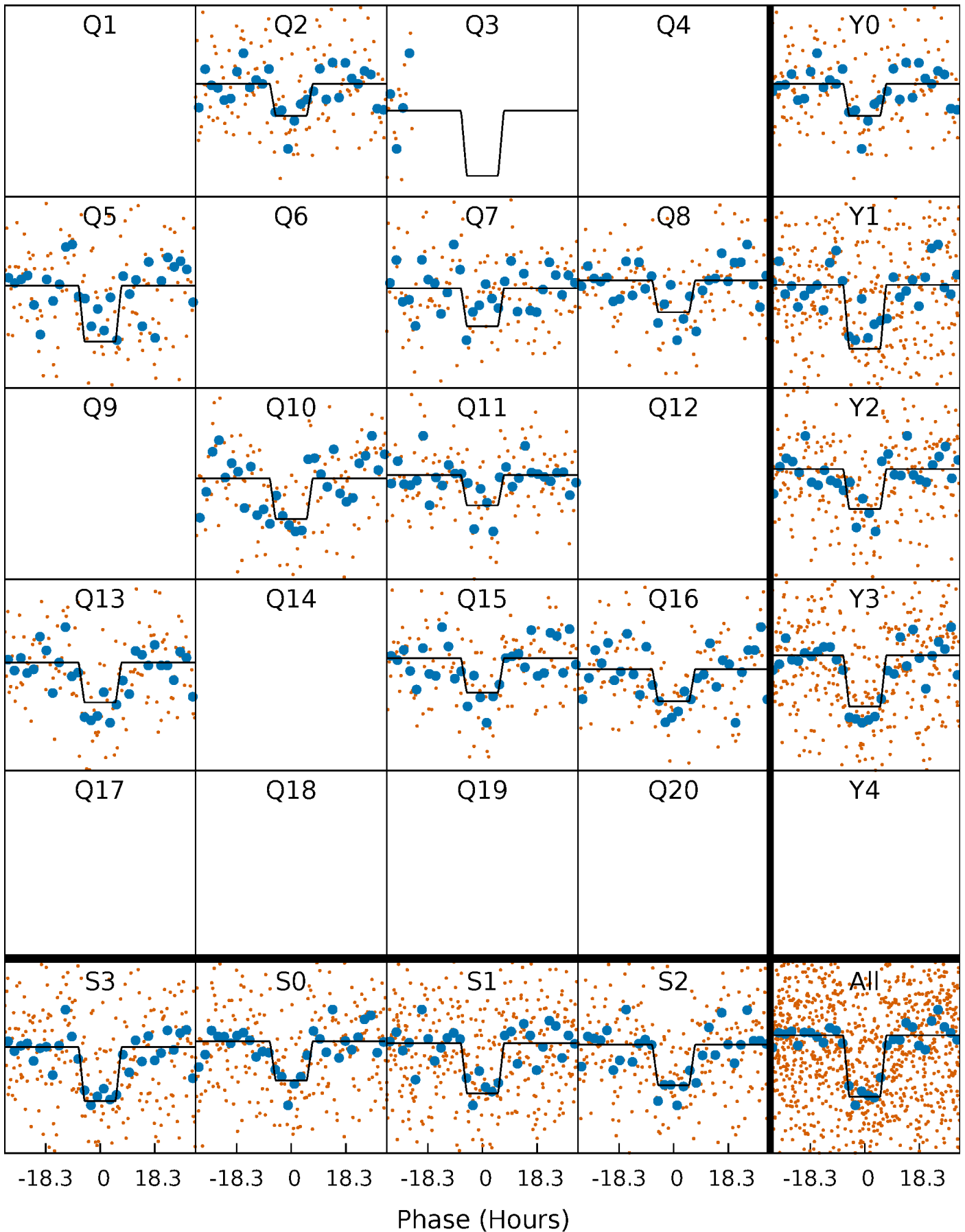
DV Quarter-Phased Transit Curves

TCE 008105719-01 P=148.171010 Days $T_0=202.328954$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

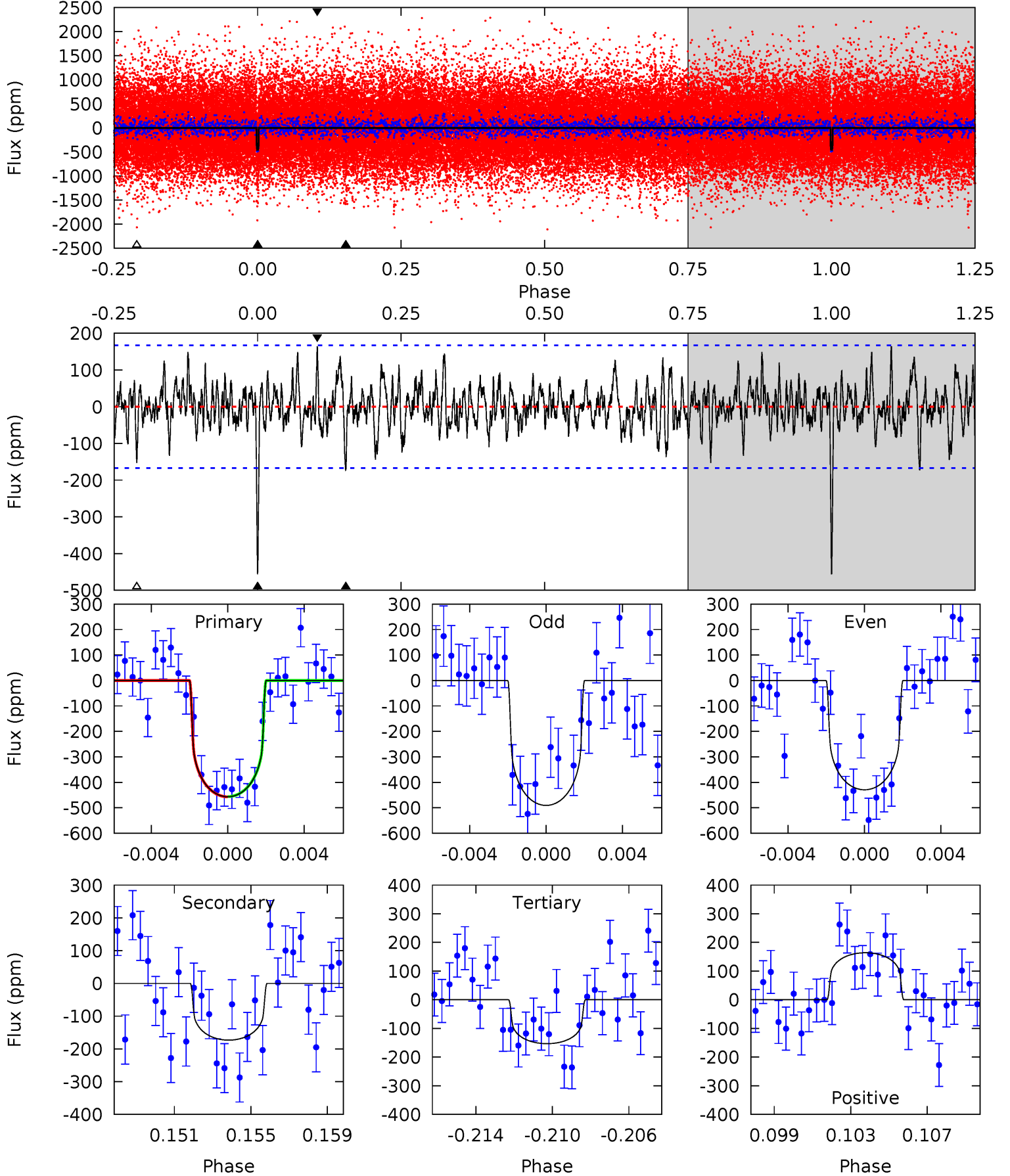
TCE 008105719-01 P=148.177366 Days $T_0=202.305103$ (BKJD)



DV Model-Shift Uniqueness Test

008105719-01, $P = 148.171010$ Days, $E = 54.157944$ Days

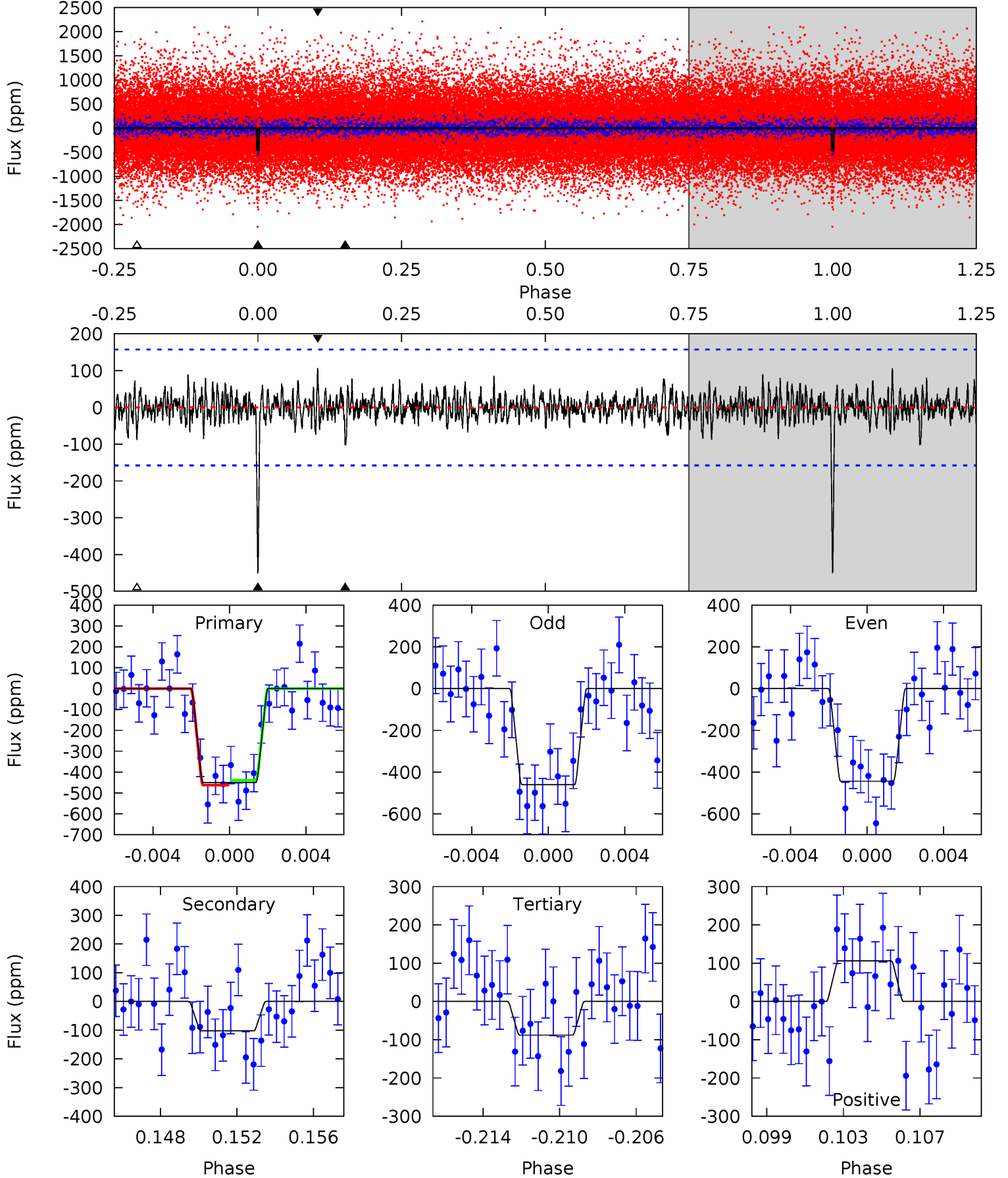
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	5.39	4.77	5.10	5.20	2.88	1.50	9.44	9.11	0.62	0.29	0.95	0.89	0.26	0.02



Alt Model-Shift Uniqueness Test

008105719-01, P = 148.177366 Days, E = 54.127737 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	3.38	2.90	3.49	5.19	2.87	0.88	12.0	11.4	0.49	-0.11	0.27	0.93	0.19	0.38



Stellar Parameters For KIC 008105719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5635^{+76}_{-76}	$4.278^{+0.156}_{-0.104}$	$0.140^{+0.150}_{-0.150}$	$1.183^{+0.180}_{-0.198}$	$0.967^{+0.076}_{-0.048}$	$0.823^{+0.537}_{-0.280}$
	+1%/-1%	+4%/-2%	+107%/-107%	+15%/-17%	+8%/-5%	+65%/-34%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008105719-01 / KOI 5476.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-173 ± 32	$2.45^{+1.55}_{-1.25}$	512^{+22}_{-25}	4802^{+1763}_{-811}	4610^{+14792}_{-2899}
Alt.	-103 ± 30	$2.83^{+1.46}_{-1.41}$	512^{+21}_{-26}	4078^{+1291}_{-572}	2130^{+6091}_{-1307}

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

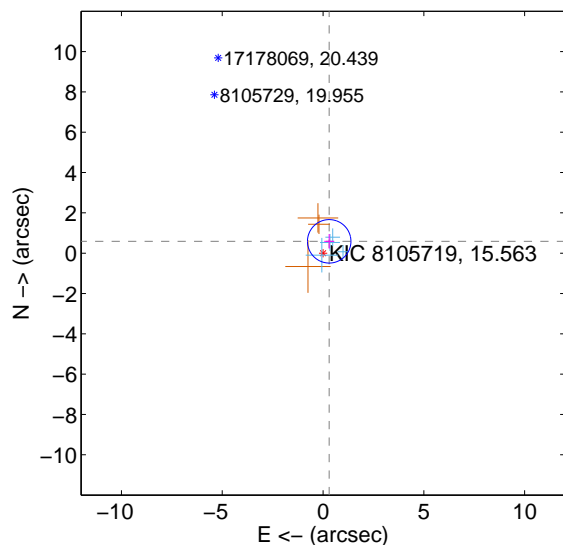
Supplemental centroid analysis for 008105719-01. Kepler magnitude: 15.56. Transit SNR 8.00

There are 4 quarters with good PRF difference image offsets

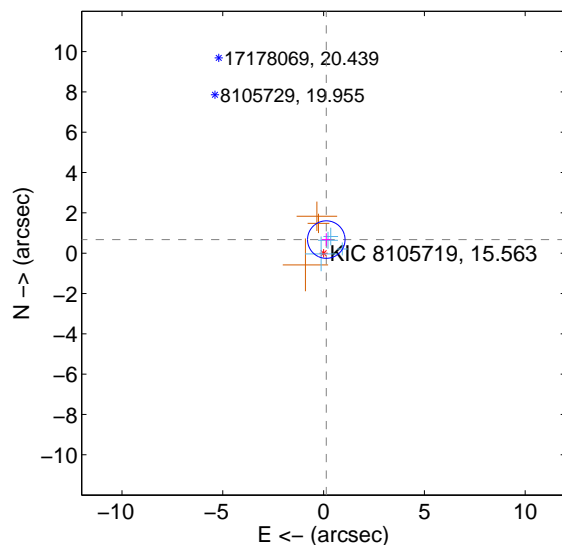
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.662 ± 0.359	1.84	-0.306 ± 0.245	0.588 ± 0.361
PRF-fit source offset from KIC position	0.687 ± 0.310	2.22	-0.134 ± 0.224	0.674 ± 0.319
photometric centroid source offset	4.37 ± 1.87	2.33	-3.72 ± 1.88	2.31 ± 1.85

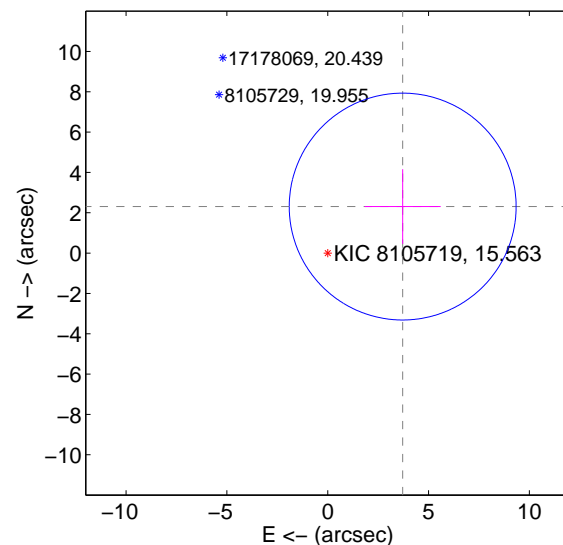
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

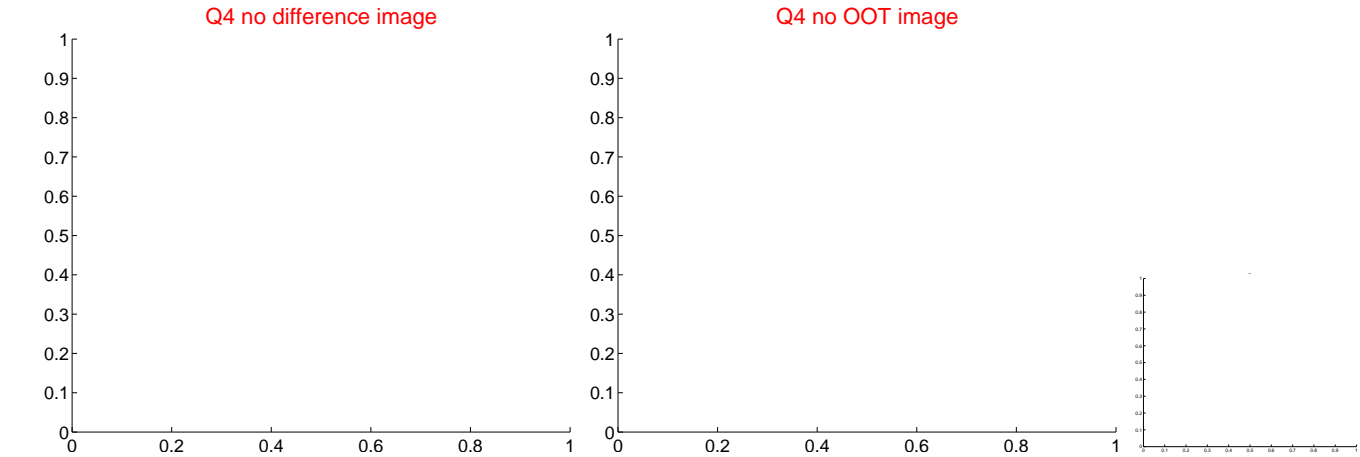
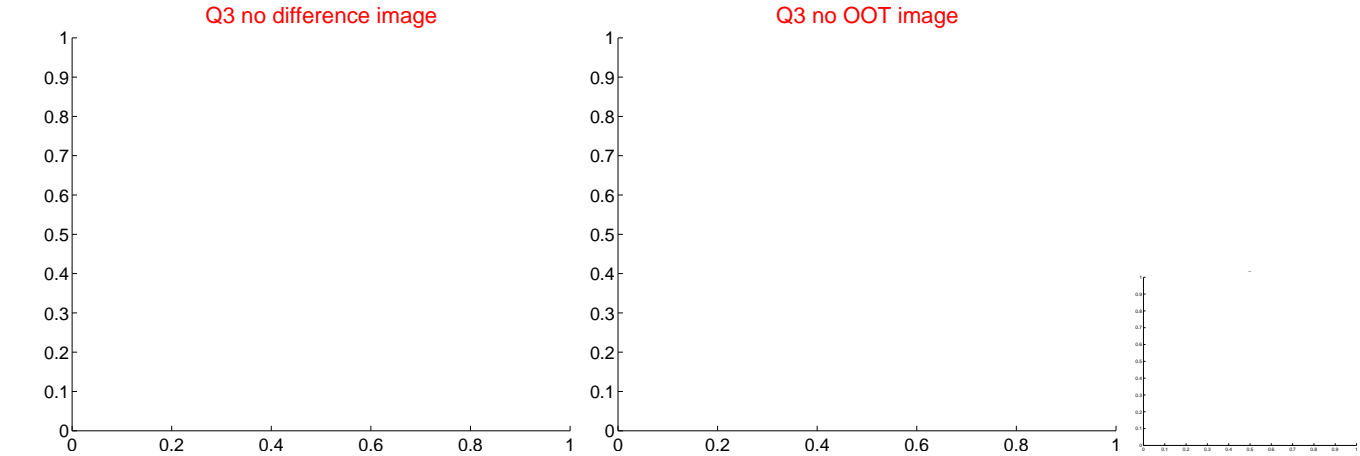
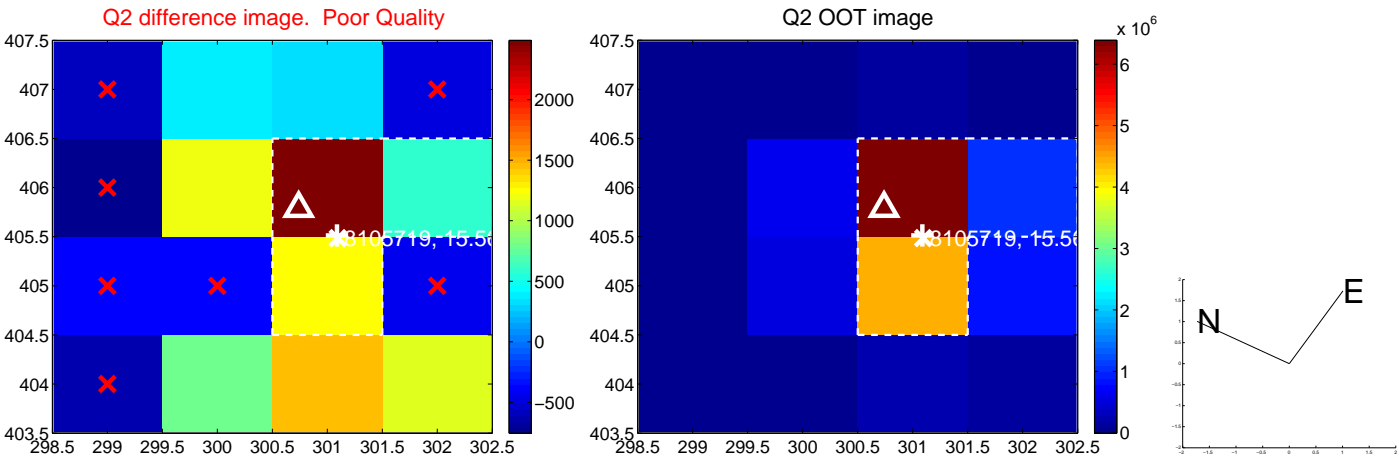
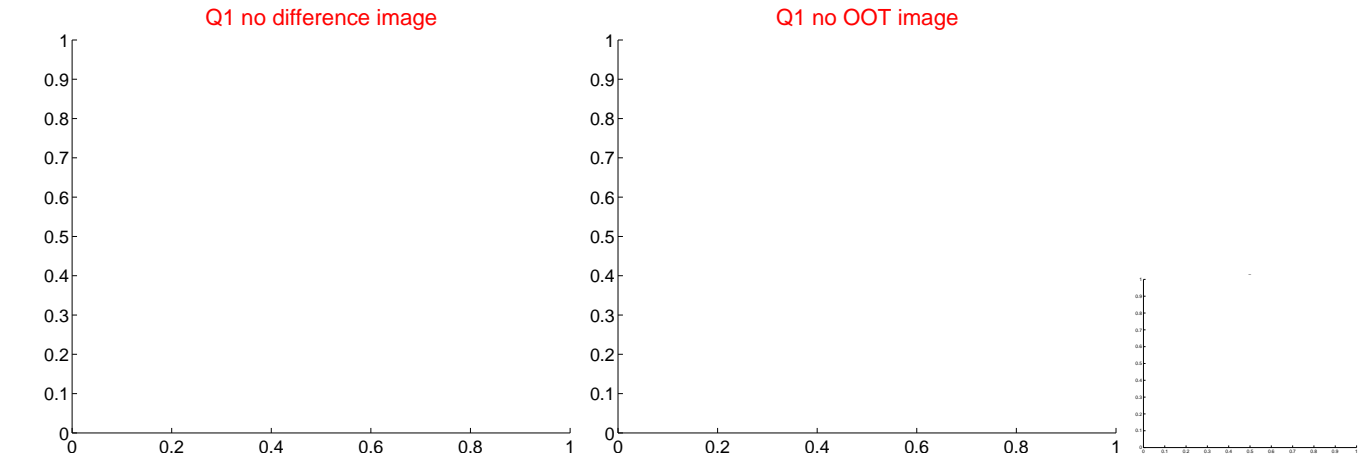


offset from photometric centroids

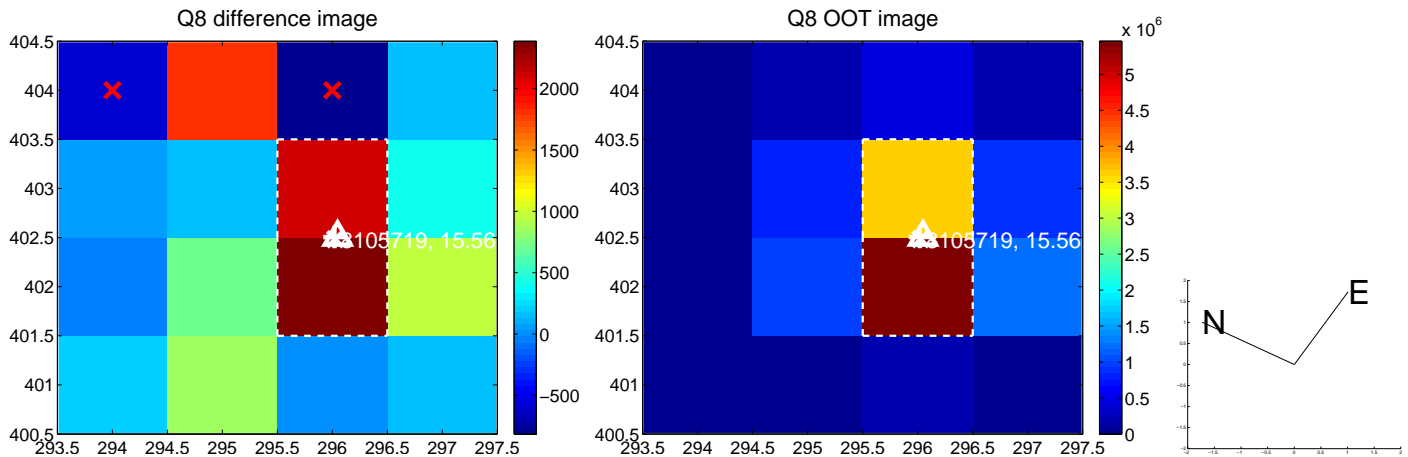
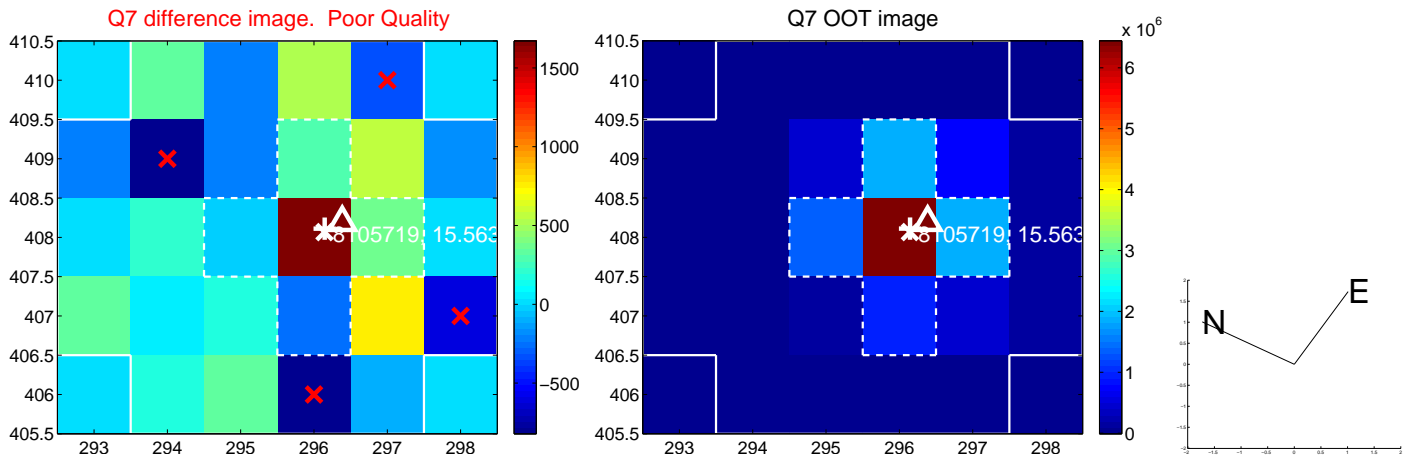
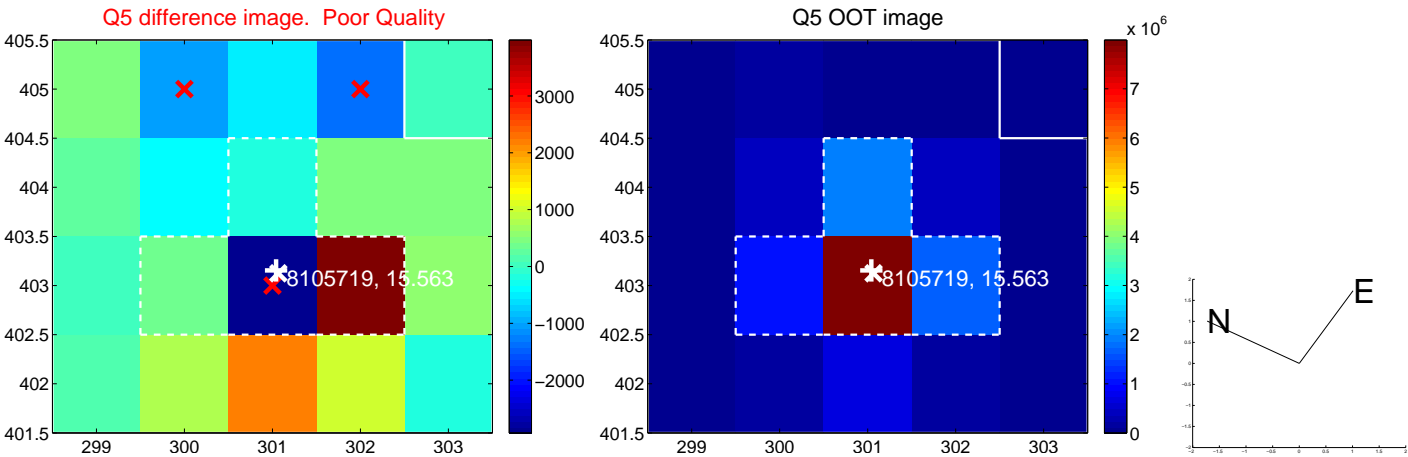


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



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.

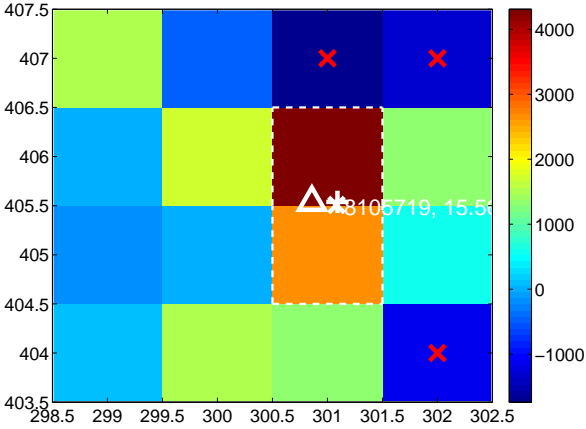
Q9 no difference image



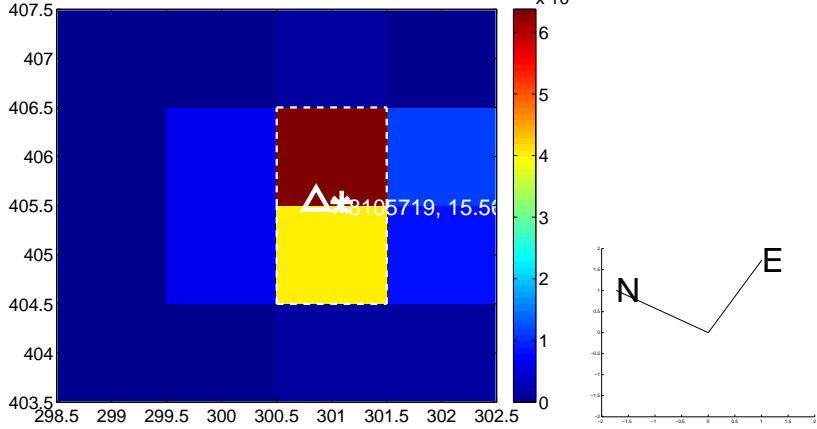
Q9 no OOT image



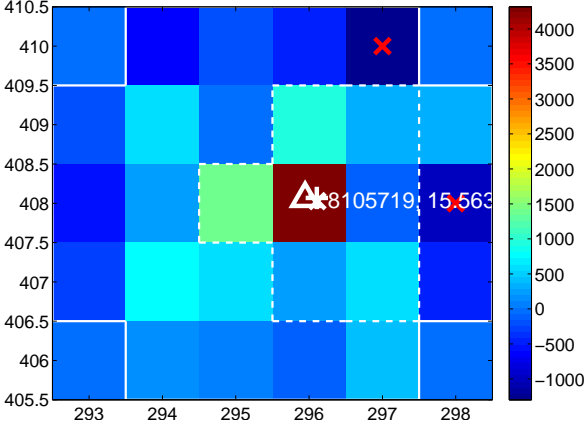
Q10 difference image



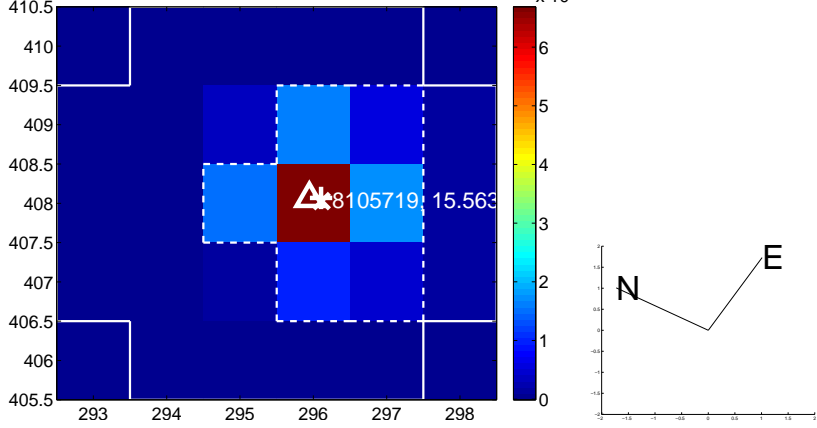
Q10 OOT image



Q11 difference image



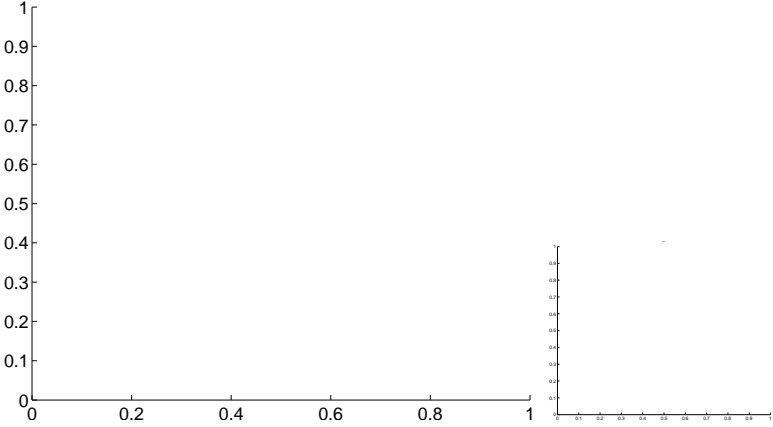
Q11 OOT image



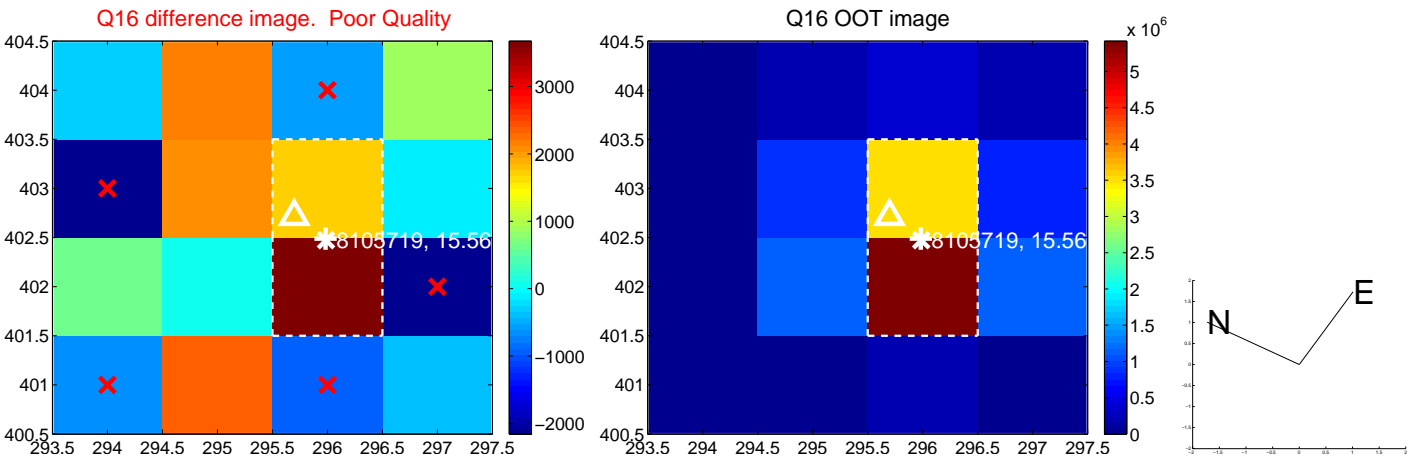
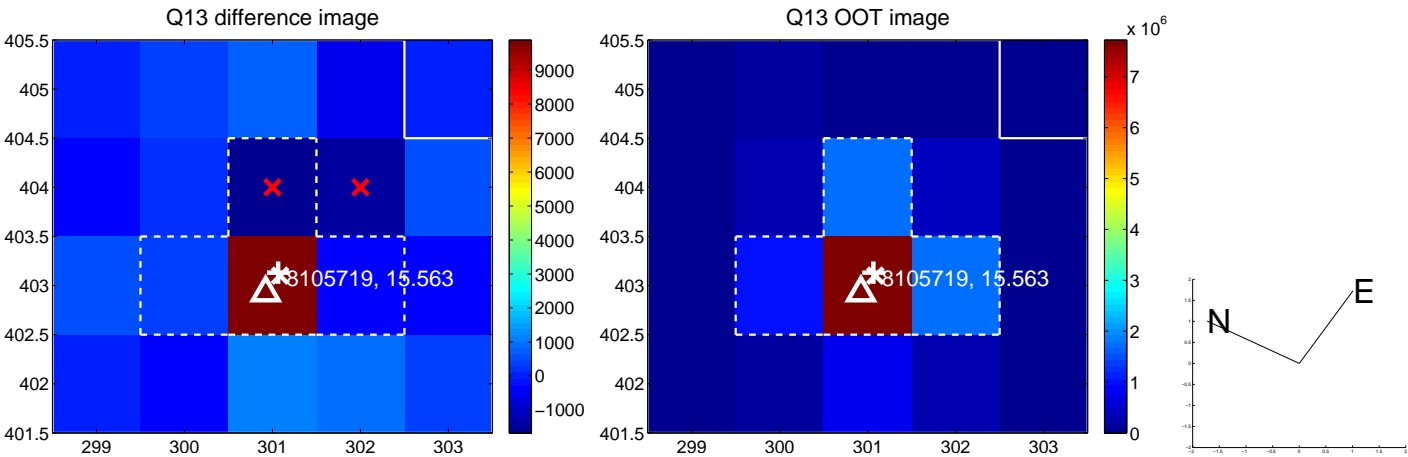
Q12 no difference image



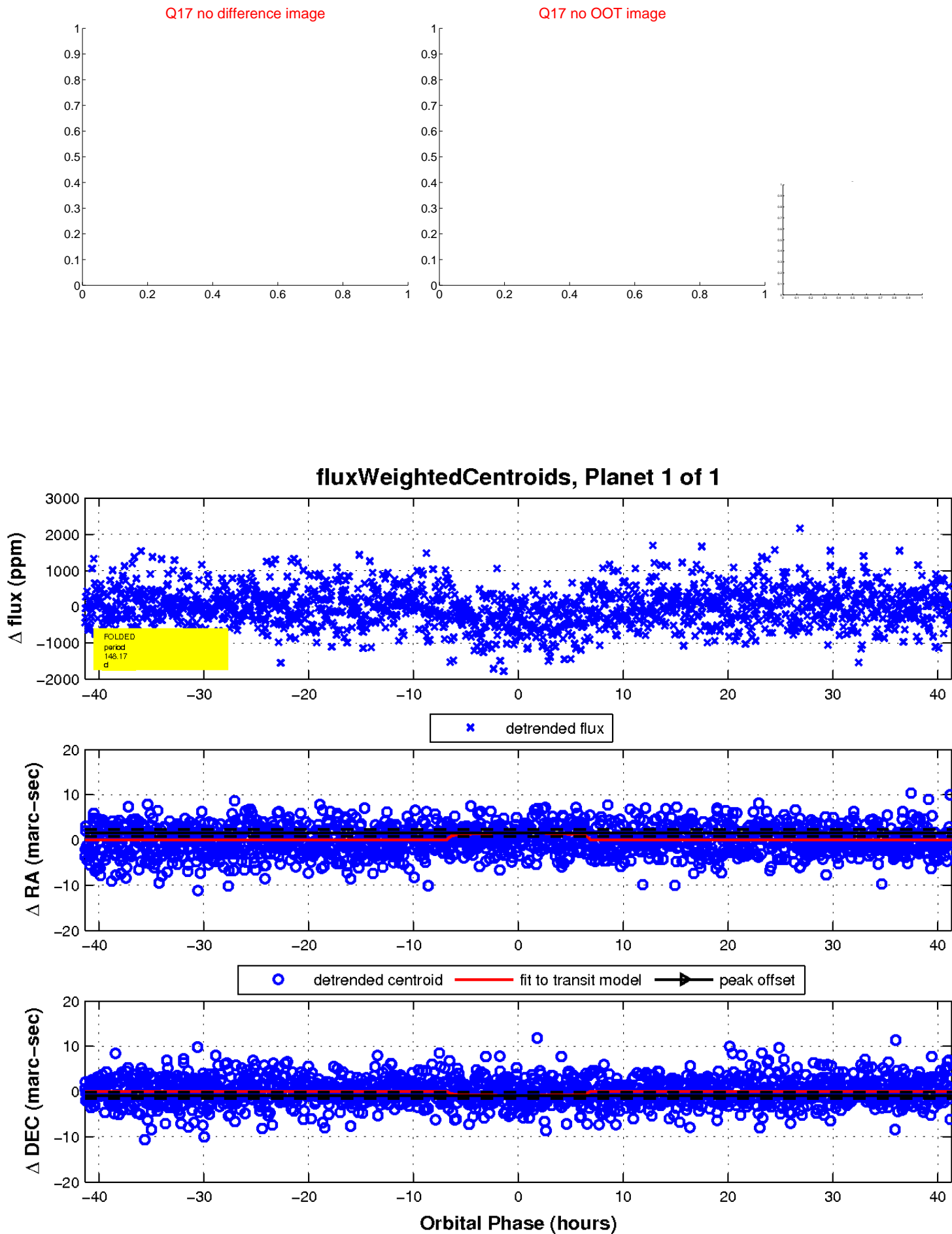
Q12 no OOT image



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.



UKIRT Image

Declination

