

KIC 005121173

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})
005121173-01	OBS	6126.01	17.436062	143.263160	392.5	45.289	9.4	22.0	2.64	6313	10.14	482.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005121173-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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 005121173-01

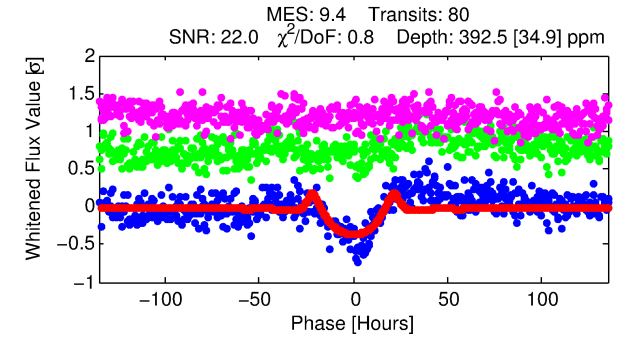
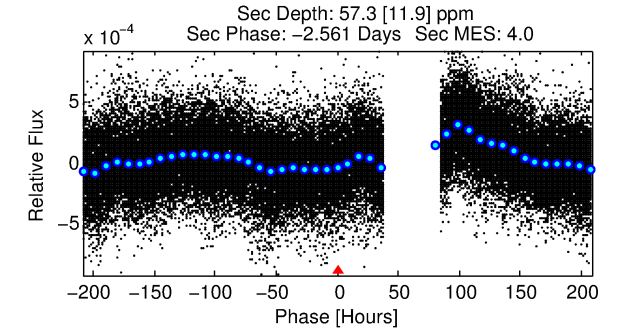
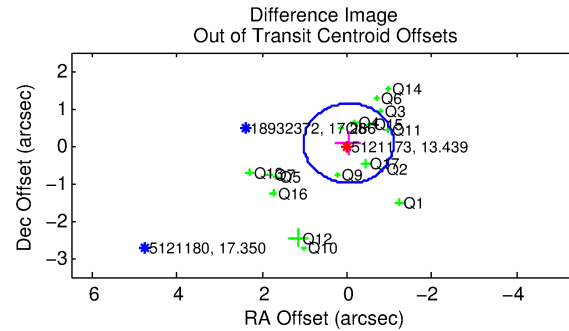
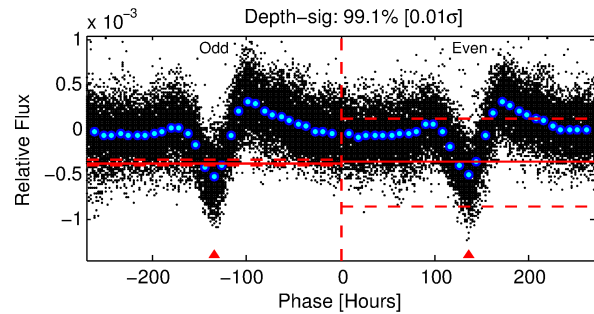
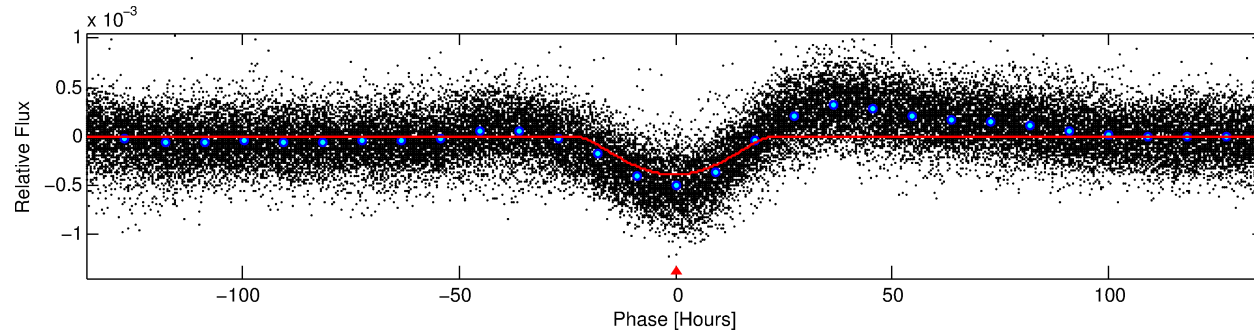
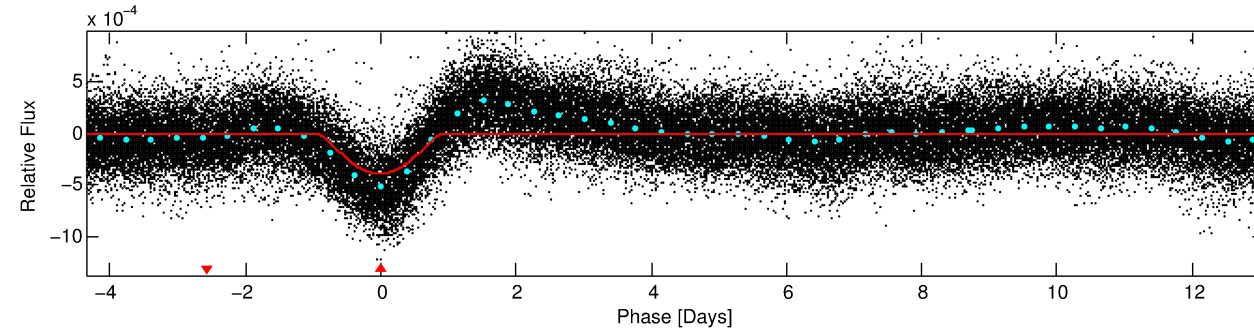
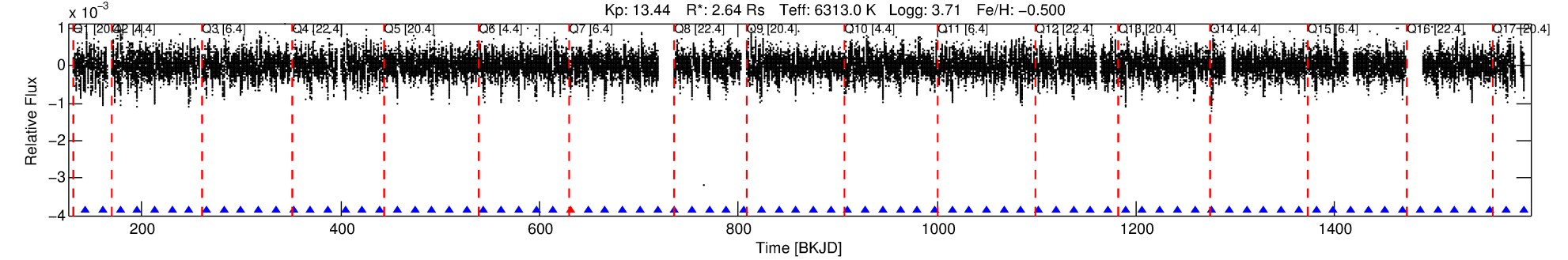
No Significant Match Found

DV One-Page Summary

KIC: 5121173 Candidate: 1 of 1 Period: 17.436 d

KOI: K06126 Corr: No Ephemeris Match

Kp: 13.44 R*: 2.64 Rs Teff: 6313.0 K Logg: 3.71 Fe/H: -0.500



DV Fit Results:

Period = 17.43606 [0.00062] d
Epoch = 143.2632 [0.0291] BKJD
Rp/R* = 0.0352 [0.0136]
a/R* = 1.28 [0.03]
b = 1.00 [0.02]
Seff = 482.78 [285.97]
Teff = 1195 [177] K
Rp = 10.15 [5.49] Re
a = 0.1434 [0.0518] AU
Ag = 6.30 [6.20] [0.85σ]
Teffp = 2928 [595] K [2.79σ]

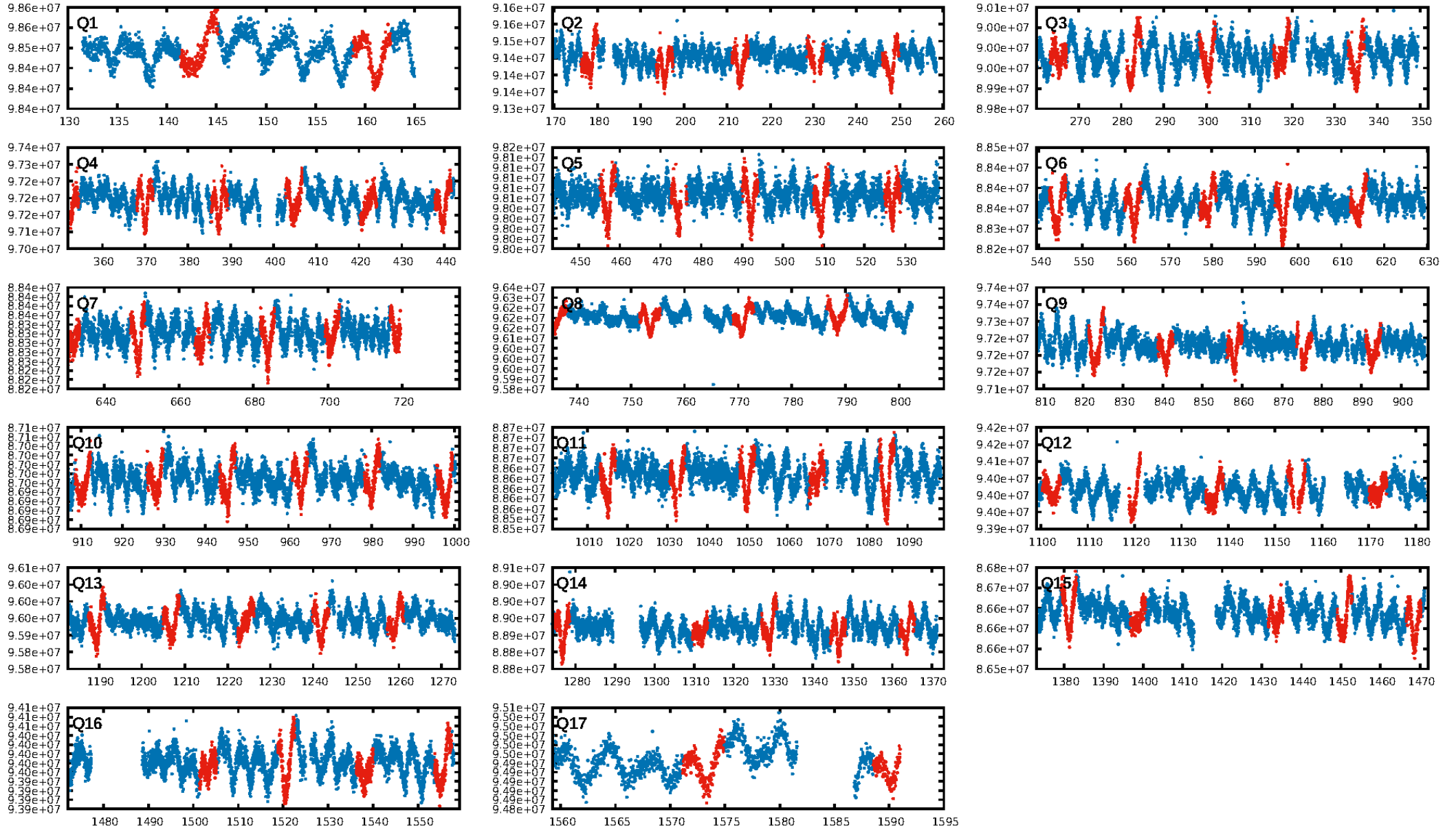
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.54e-20
RollingBand-fgt: 0.99 [75/76]
GhostDiagnostic-chr: 1.764
Centroid-sig: 0.0%
Centroid-so: 0.494 arcsec [3.43σ]
OotOffset-rm: 0.084 arcsec [0.24σ]
KicOffset-rm: 0.104 arcsec [0.36σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

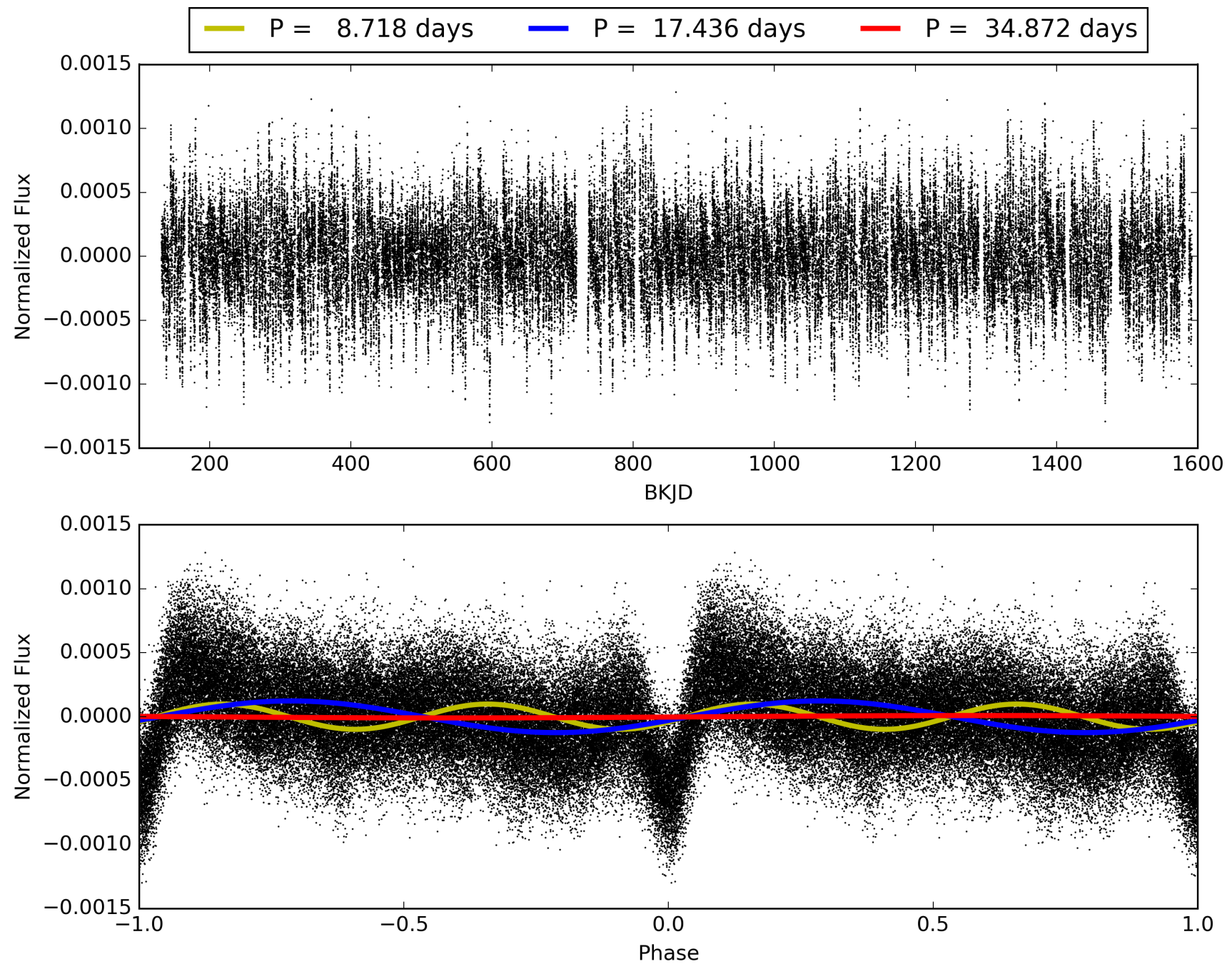
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:10:29 Z

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

TCE 005121173-01, PDC Light Curves

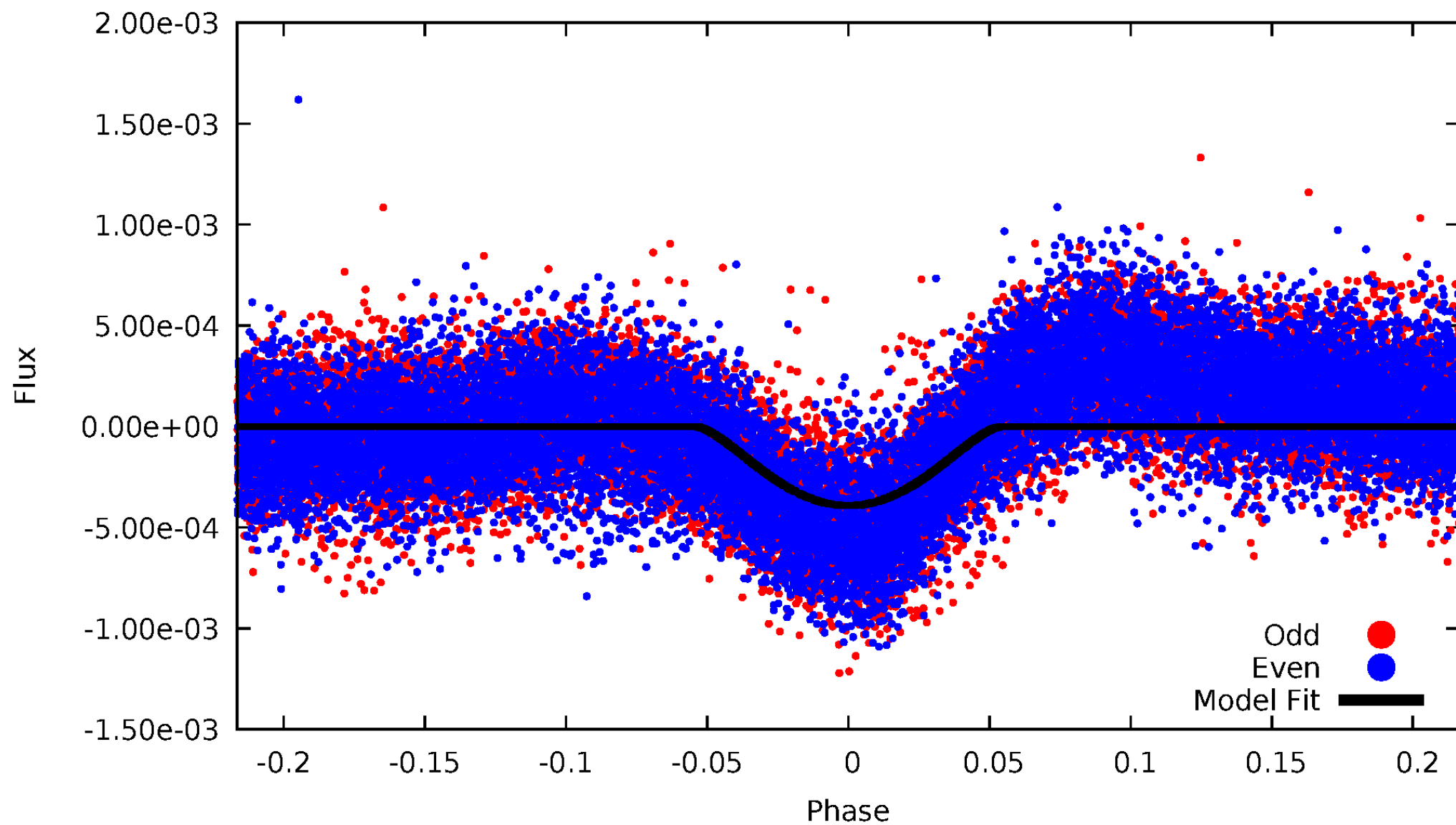


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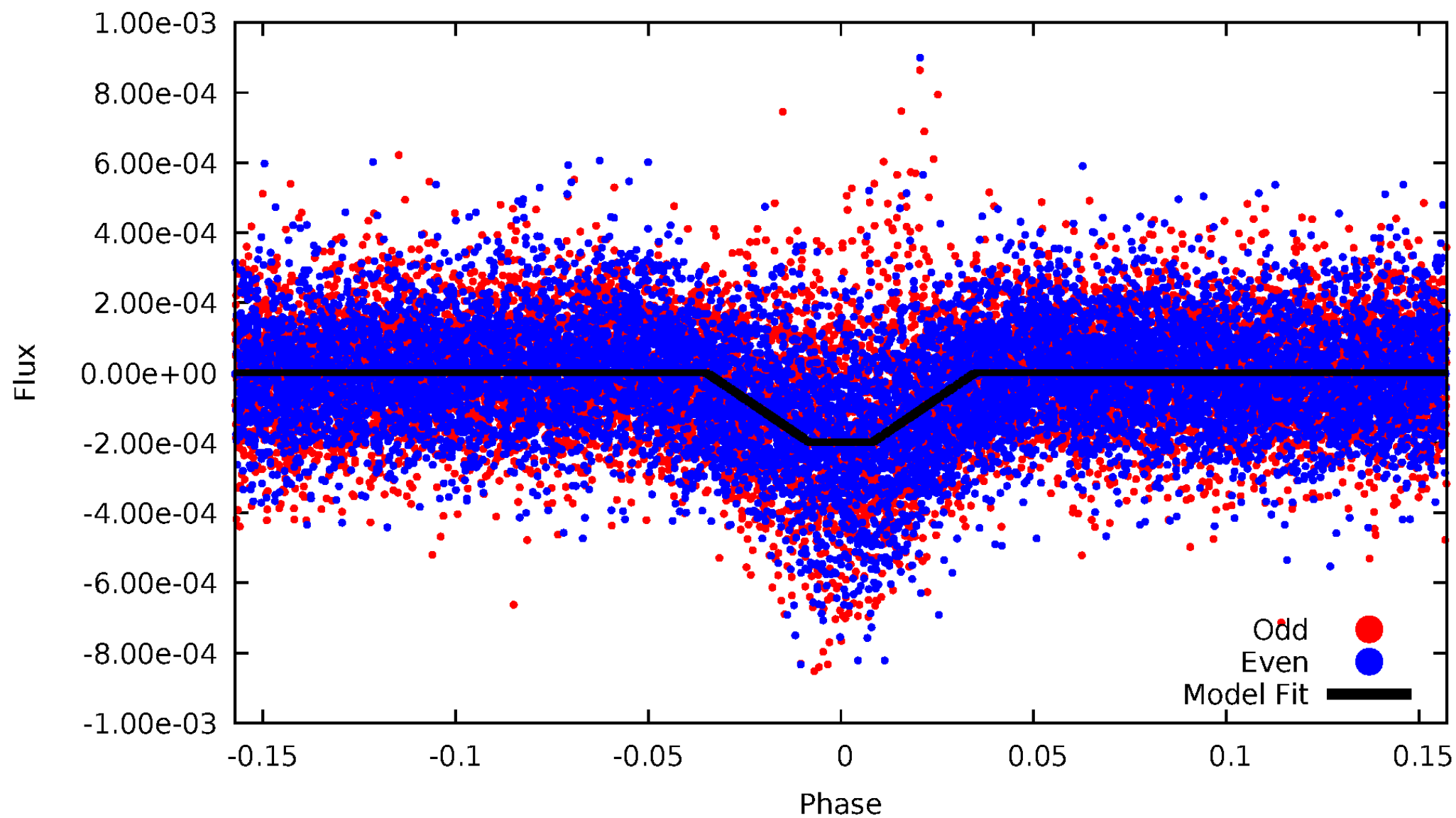
DV Odd/Even

TCE 005121173-01

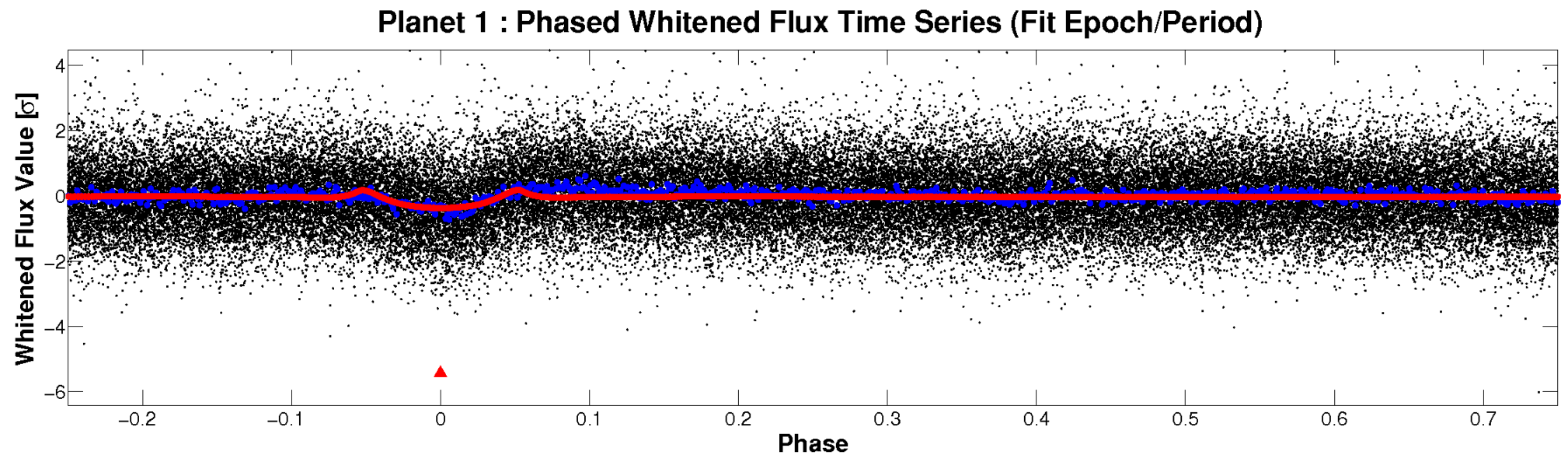
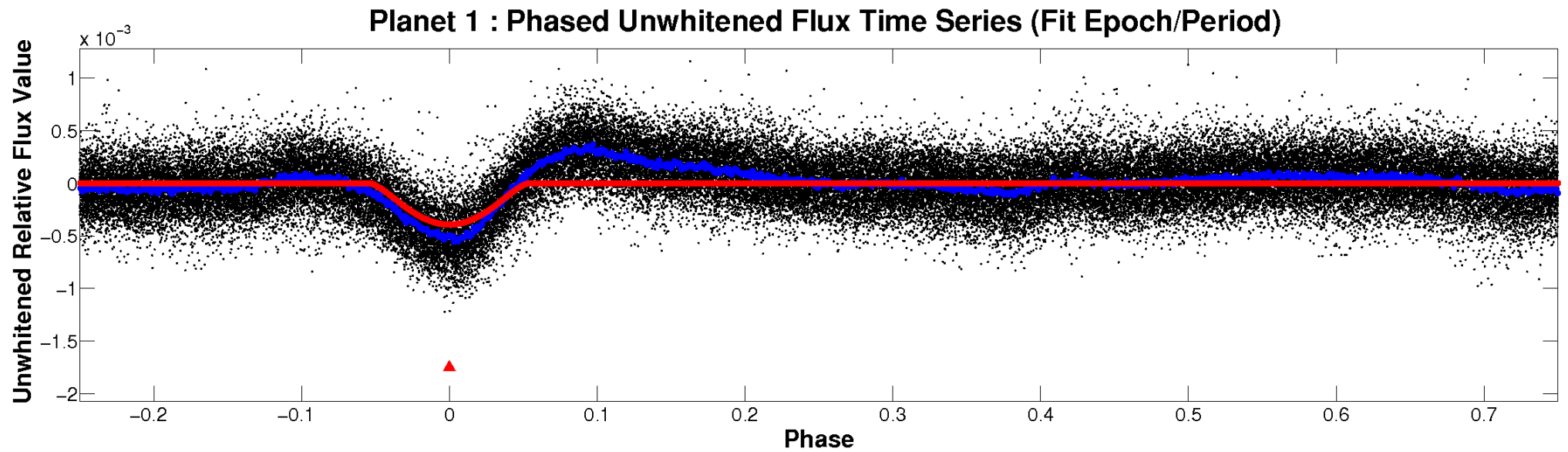


ALT Odd/Even

TCE 005121173-01

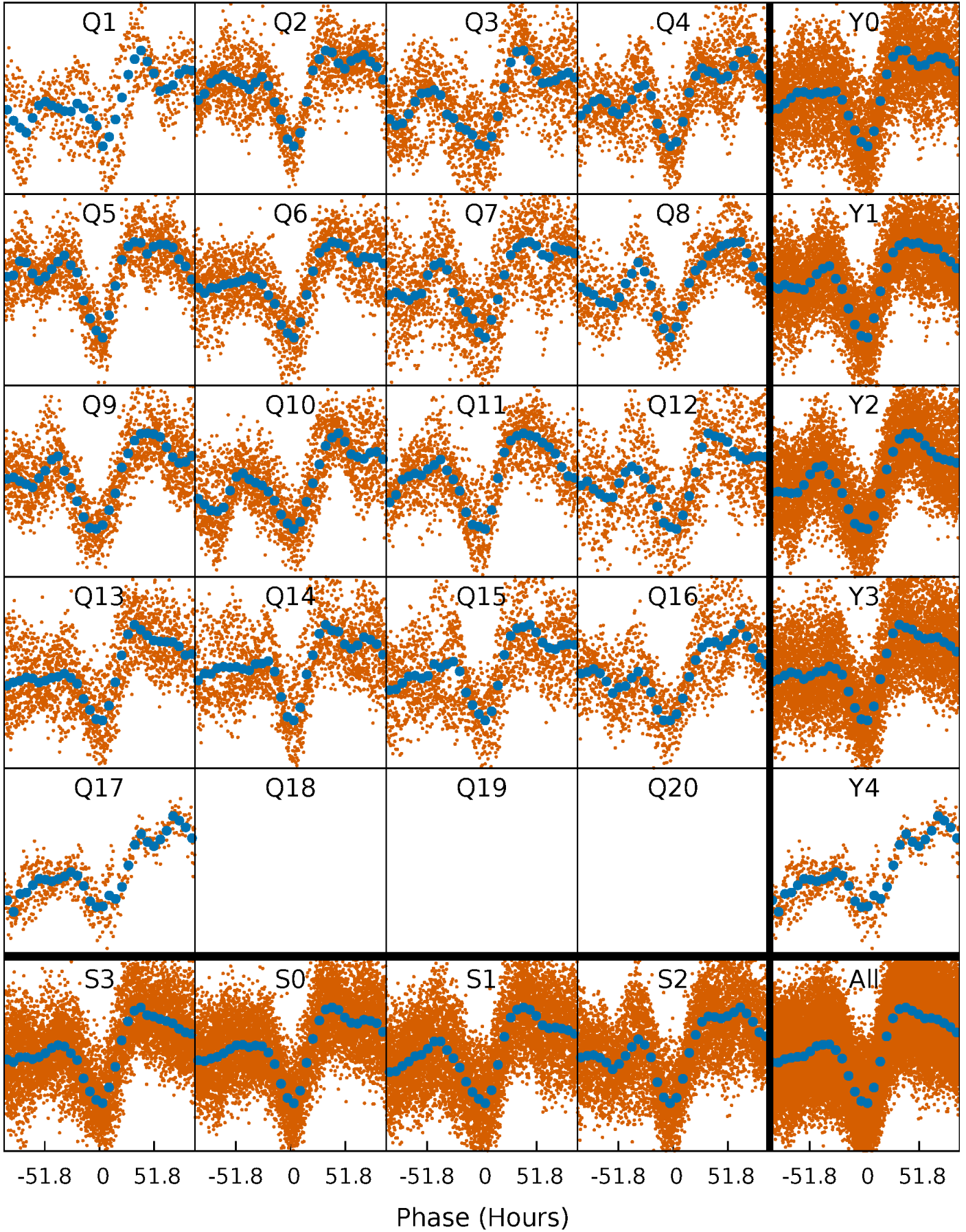


Non-Whitened Vs. Whitened Light Curve



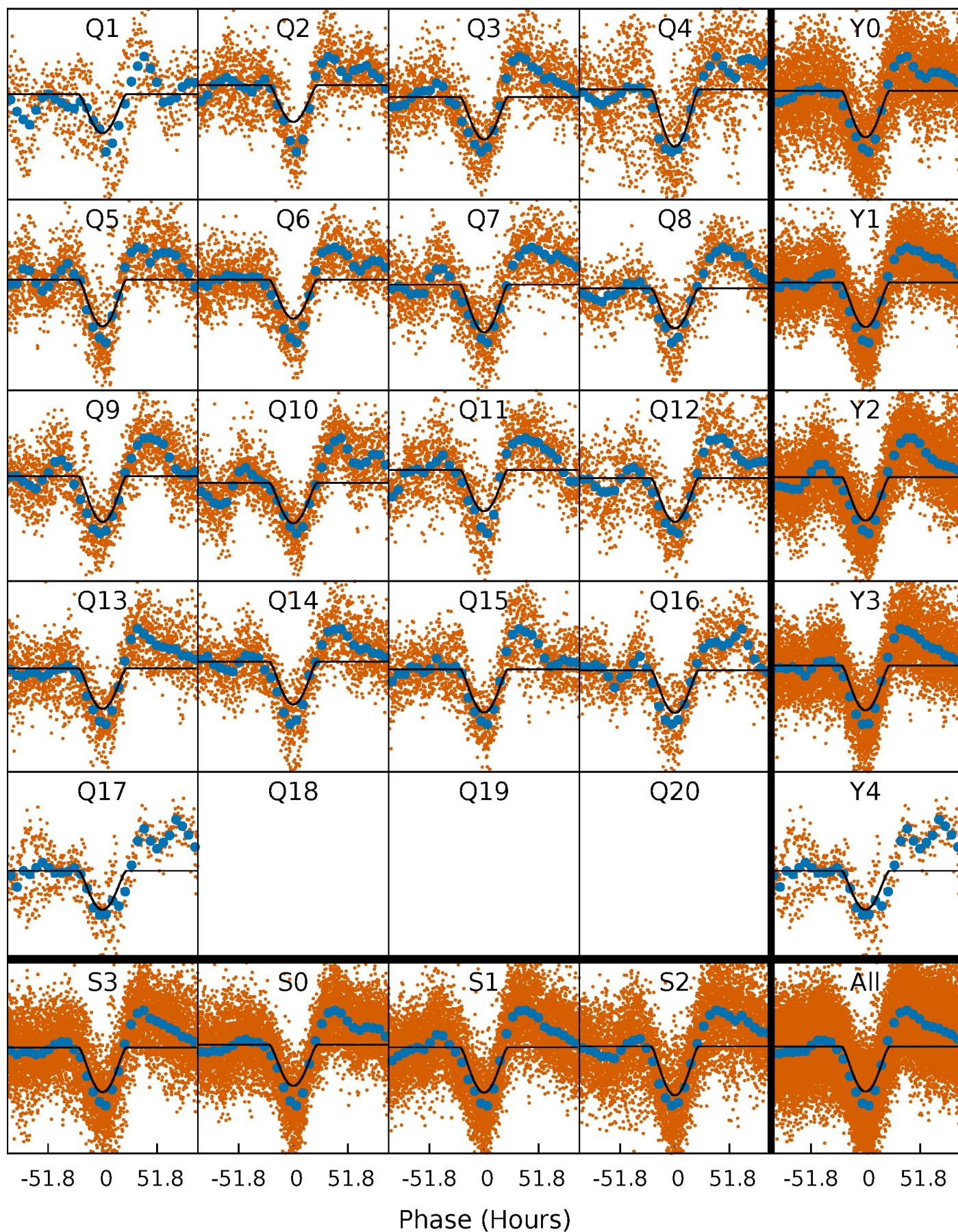
PDC Quarter-Phased Transit Curves

TCE 005121173-01 P= 17.436062 Days $T_0=143.263160$ (BKJD)



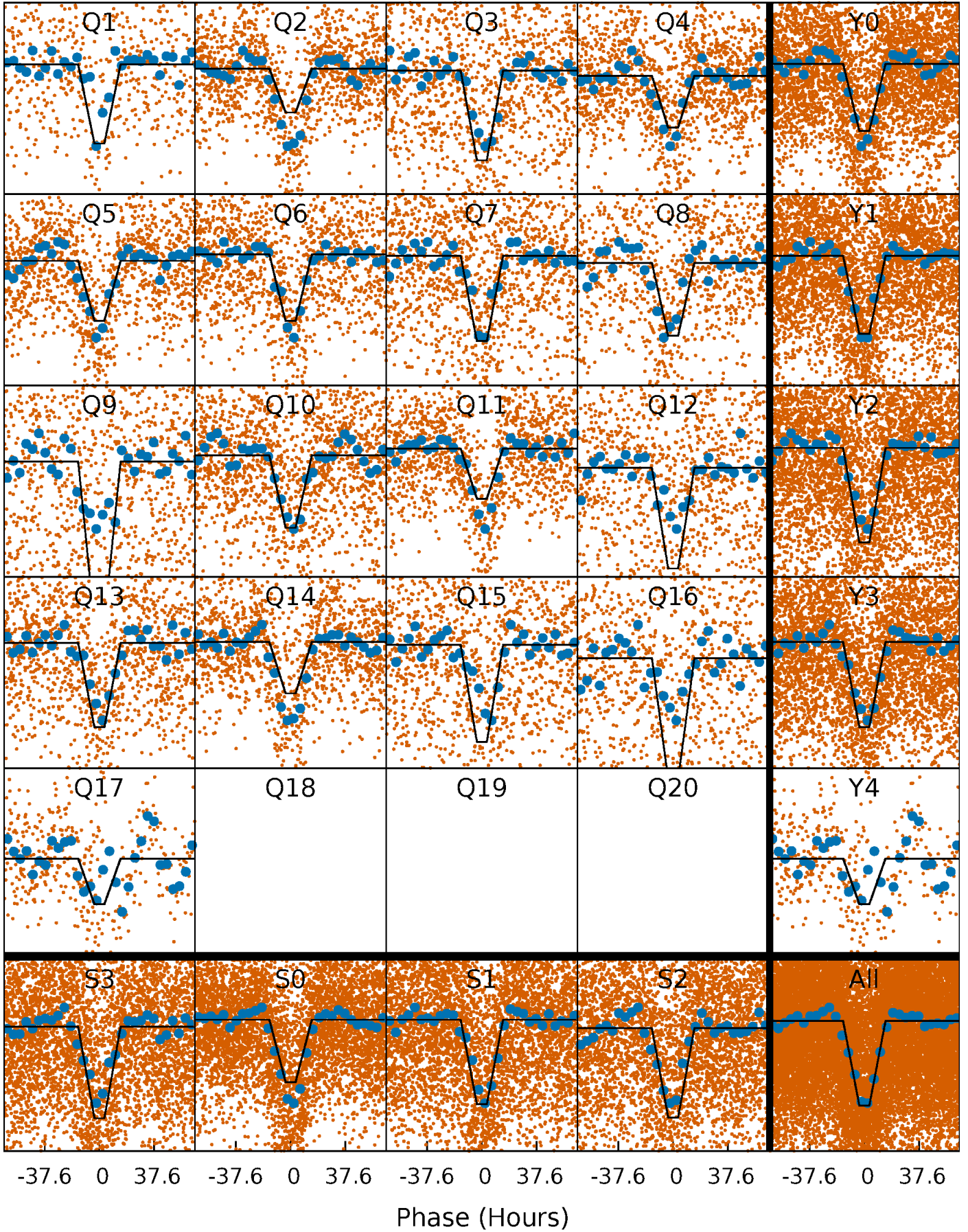
DV Quarter-Phased Transit Curves

TCE 005121173-01 P= 17.436062 Days $T_0=143.263160$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

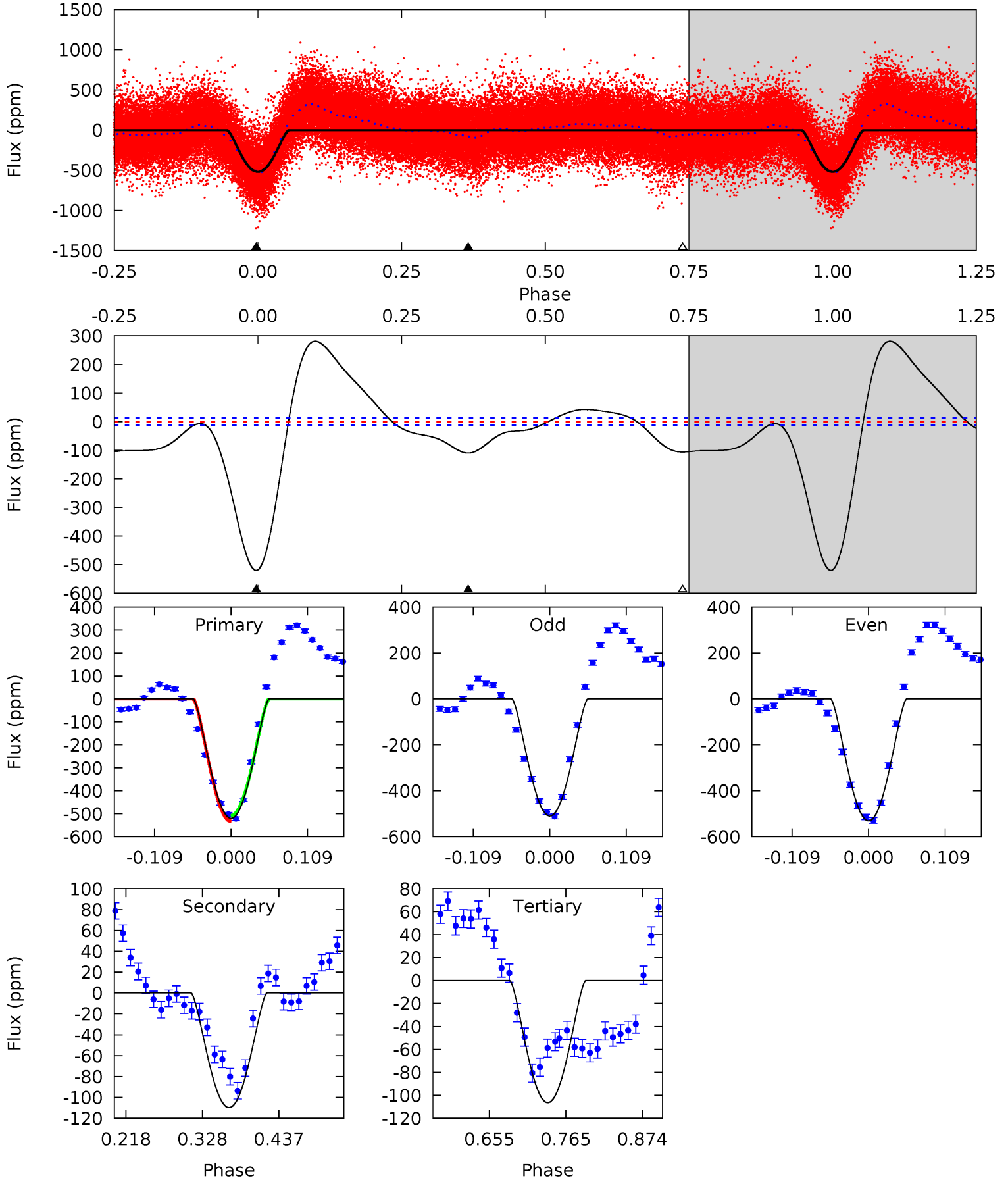
TCE 005121173-01 P= 17.434937 Days $T_0=143.462207$ (BKJD)



DV Model-Shift Uniqueness Test

005121173-01, P = 17.436062 Days, E = 125.827098 Days

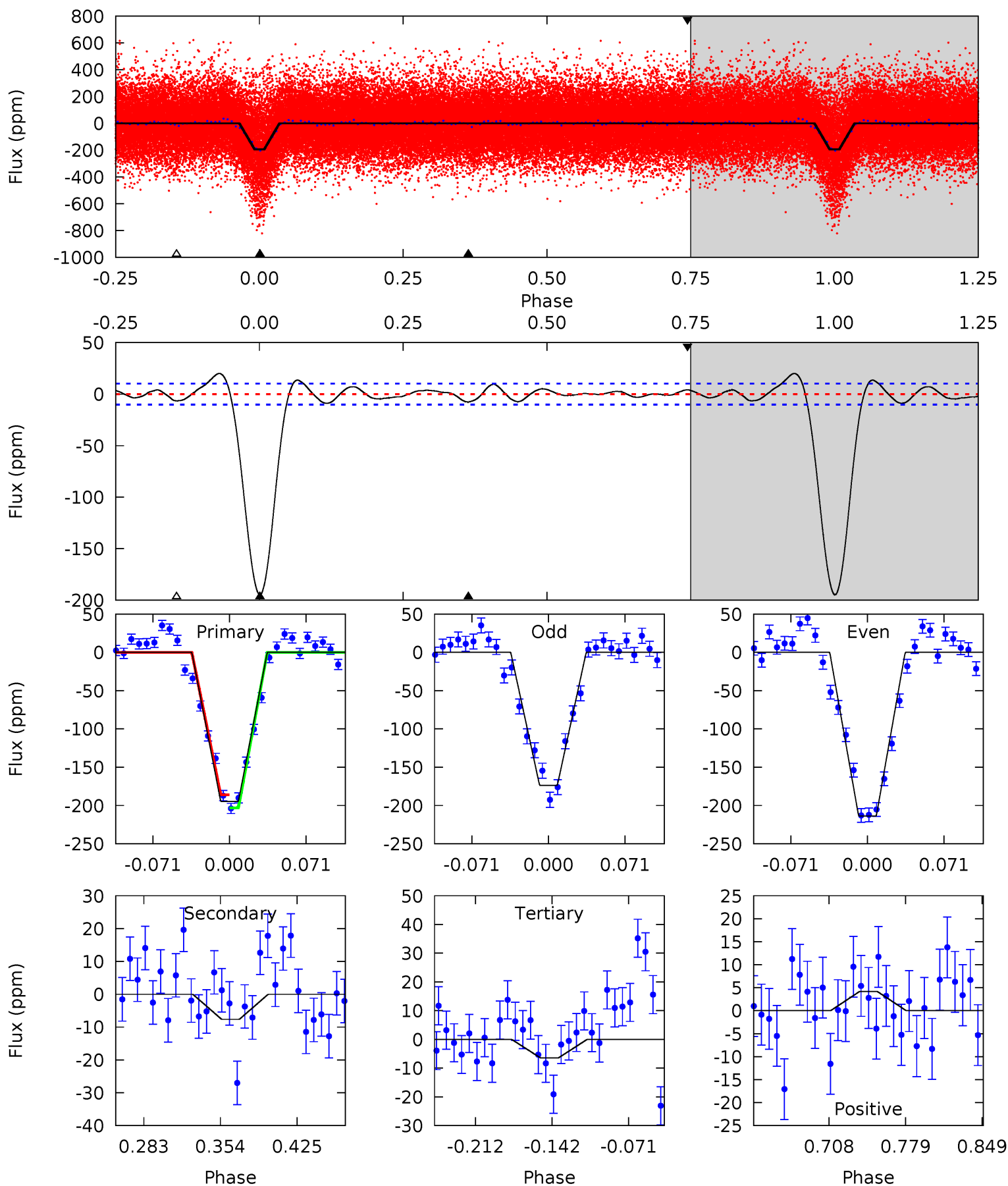
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
190.1	40.1	38.9	0	4.55	1.60	34.5	151.2	190.1	1.24	40.1	3.92	0.93	0.35	4.42



Alt Model-Shift Uniqueness Test

005121173-01, P = 17.434937 Days, E = 126.027270 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.0	3.49	2.96	1.91	4.64	1.81	2.13	86.1	87.1	0.53	1.58	9.14	1.12	0.09	3.86



Stellar Parameters For KIC 005121173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6313^{+205}_{-228}	$3.706^{+0.336}_{-0.105}$	$-0.500^{+0.350}_{-0.300}$	$2.641^{+0.429}_{-1.002}$	$1.291^{+0.232}_{-0.284}$	$0.099^{+0.228}_{-0.032}$
	+3%/-4%	+9%/-3%	+70%/-60%	+16%/-38%	+18%/-22%	+231%/-33%
Source	PHO1	FLK73	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 005121173-01 / KOI 6126.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-110 ± 3	$9.49^{+4.34}_{-3.95}$	1639^{+104}_{-148}	3827^{+725}_{-440}	14^{+27}_{-7}
Alt.	-8 ± 2	$4.39^{+3.50}_{-2.55}$	1631^{+115}_{-154}	3109^{+1167}_{-492}	$4.132^{+19.627}_{-2.783}$

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 $A_{obs} \gg 1.0$

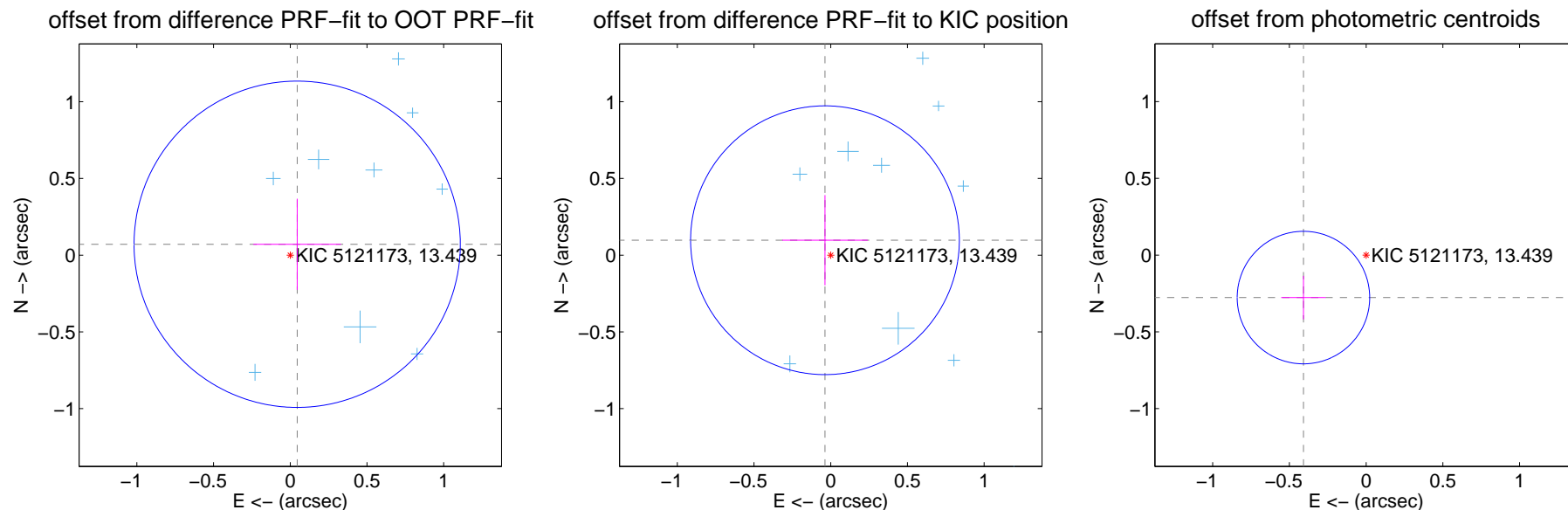
DV Centroid Data

Supplemental centroid analysis for 005121173-01. Kepler magnitude: 13.44. Transit SNR 22.04

There are 16 quarters with good PRF difference image offsets

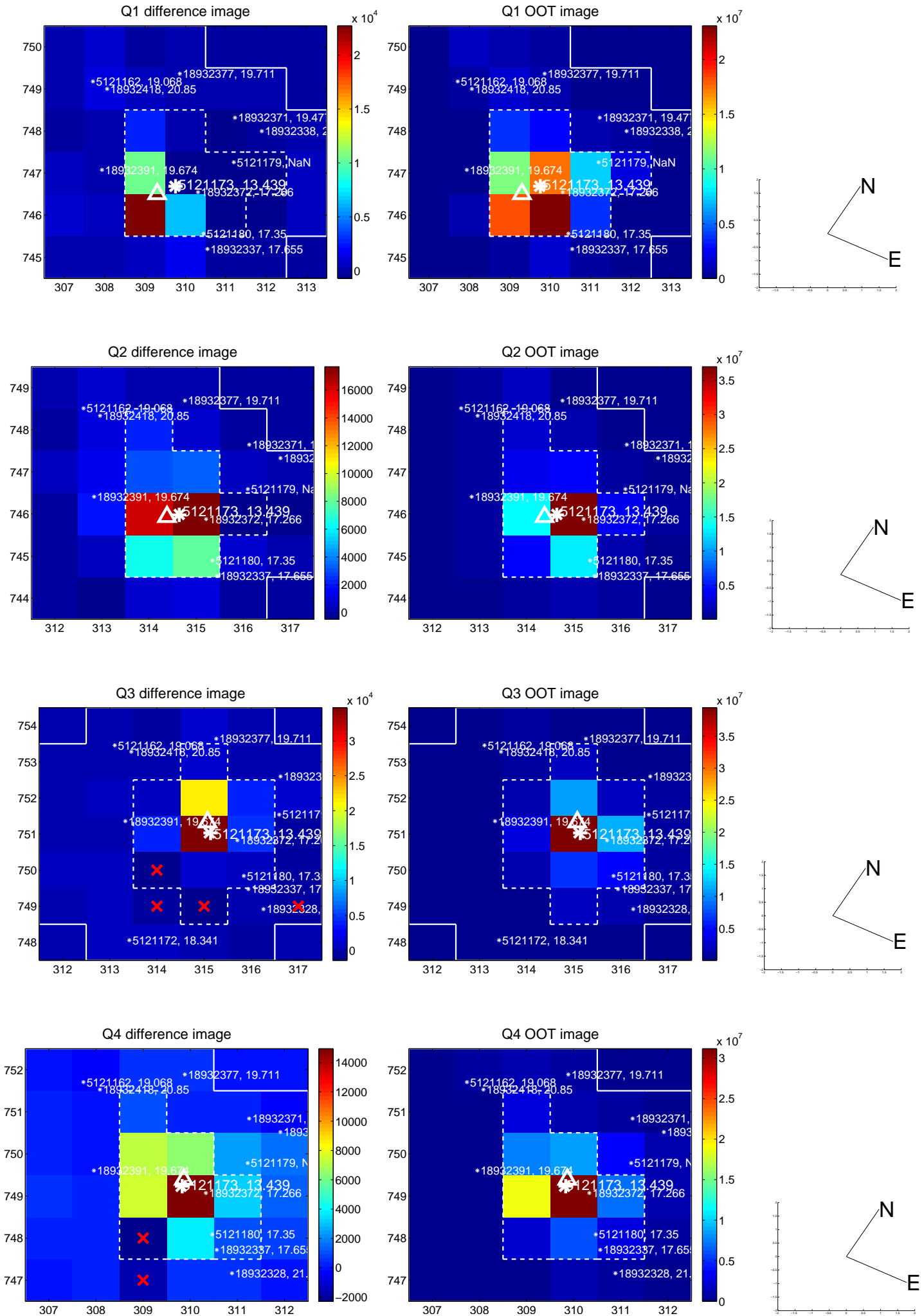
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.084 ± 0.355	0.24	-0.045 ± 0.286	0.071 ± 0.297
PRF-fit source offset from KIC position	0.104 ± 0.292	0.36	0.037 ± 0.279	0.097 ± 0.294
photometric centroid source offset	0.49 ± 0.14	3.43	0.41 ± 0.14	-0.28 ± 0.14

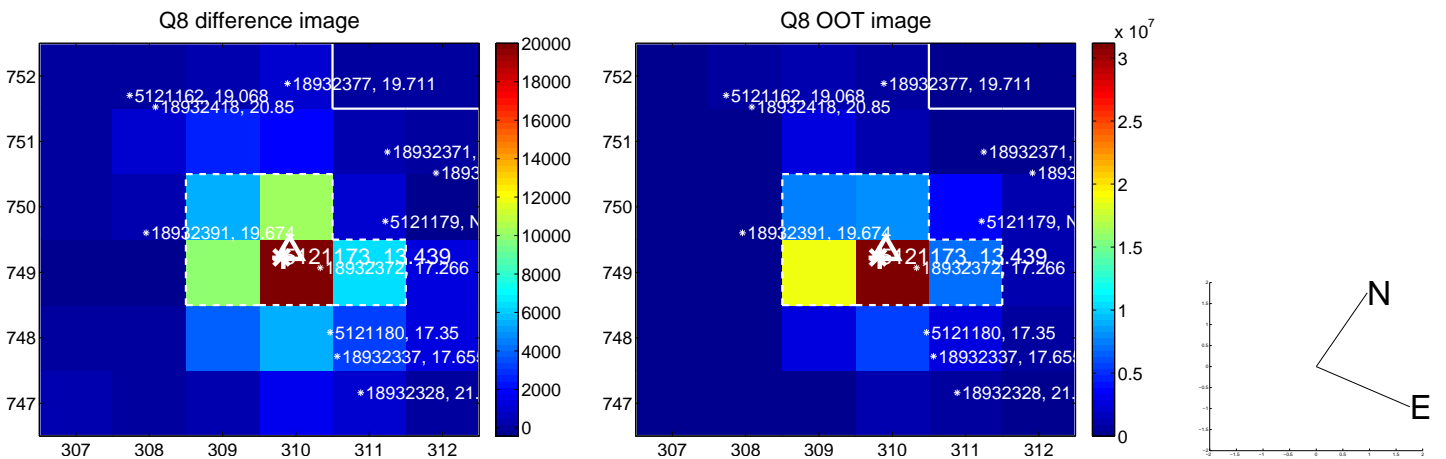
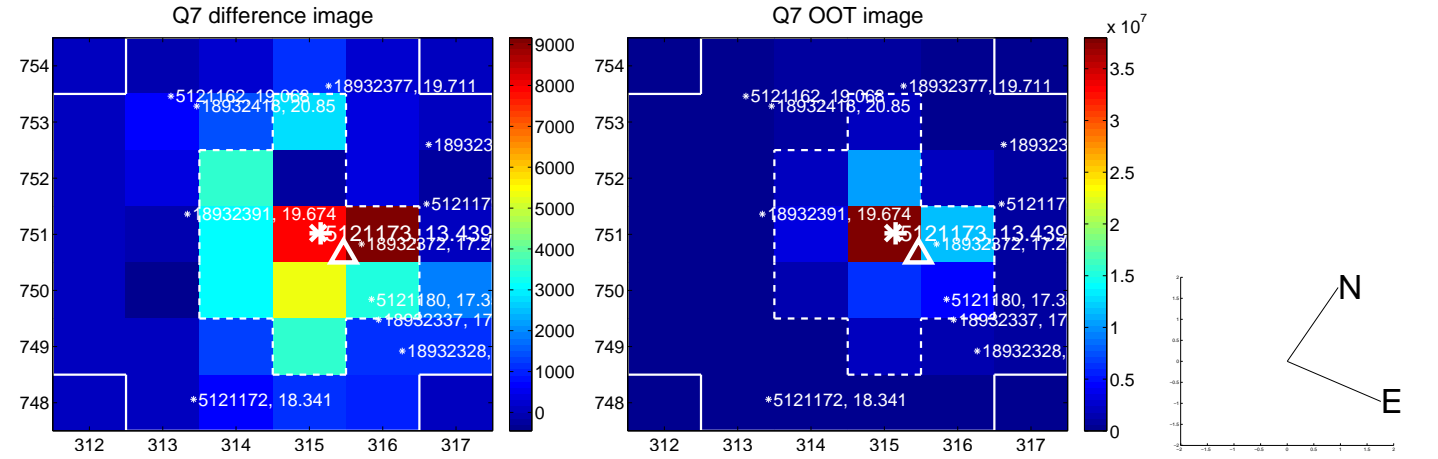
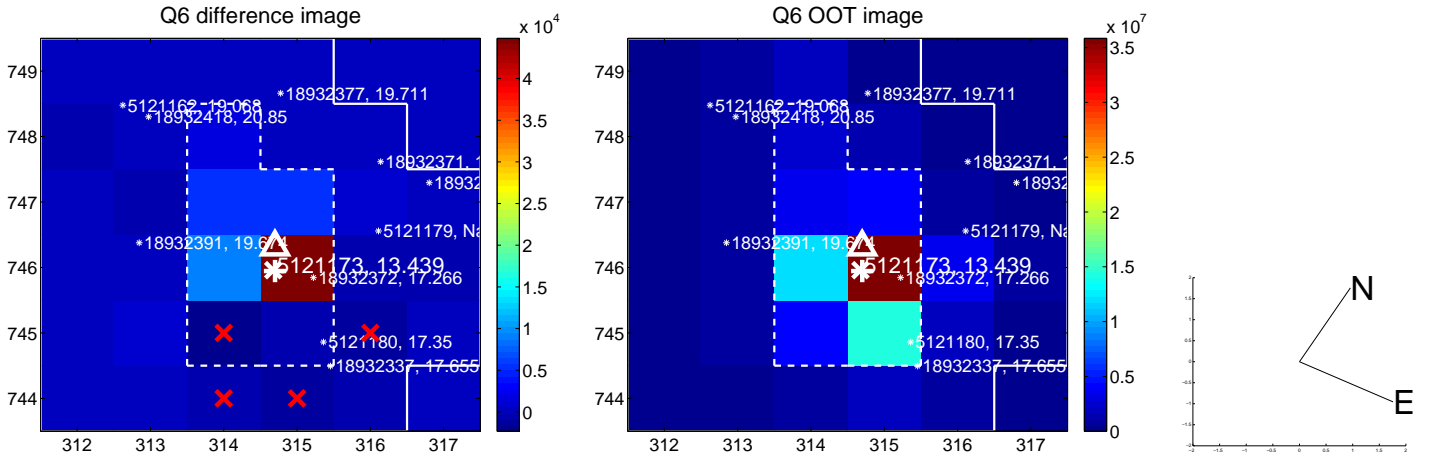
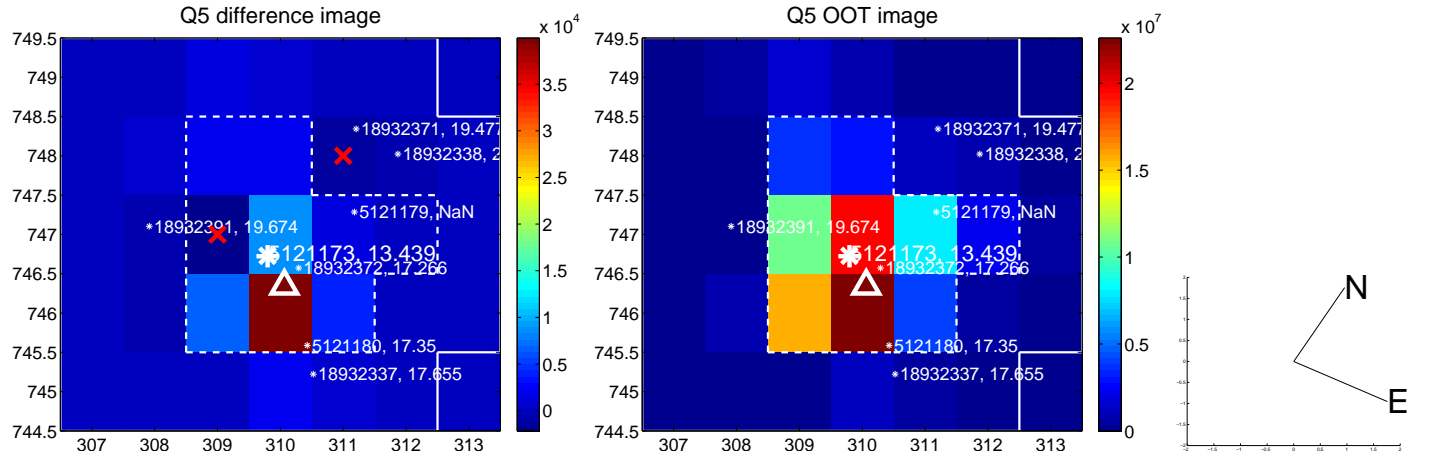


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

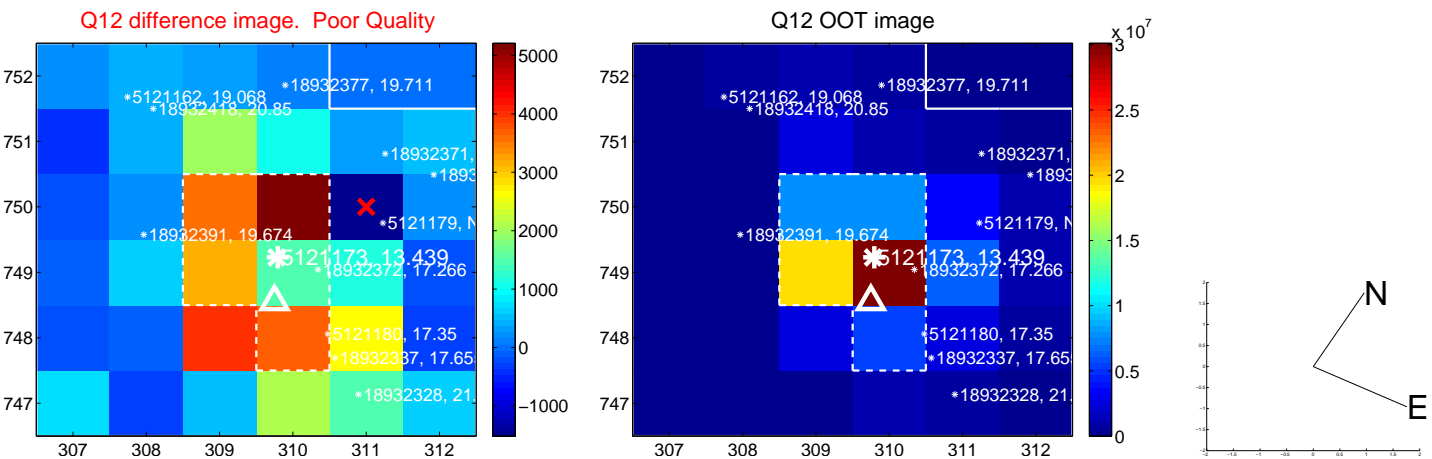
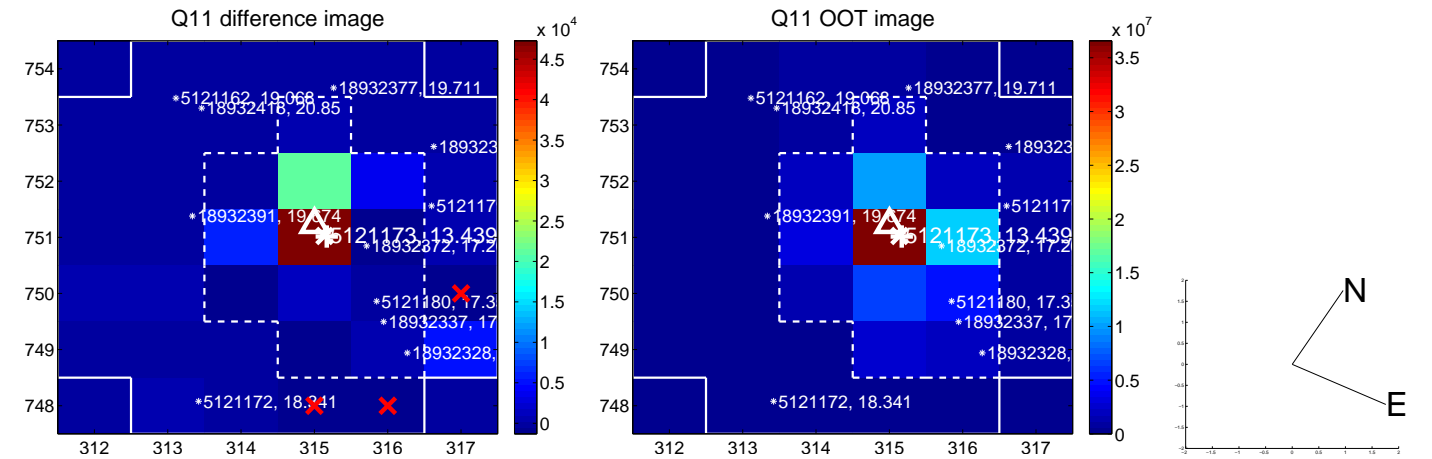
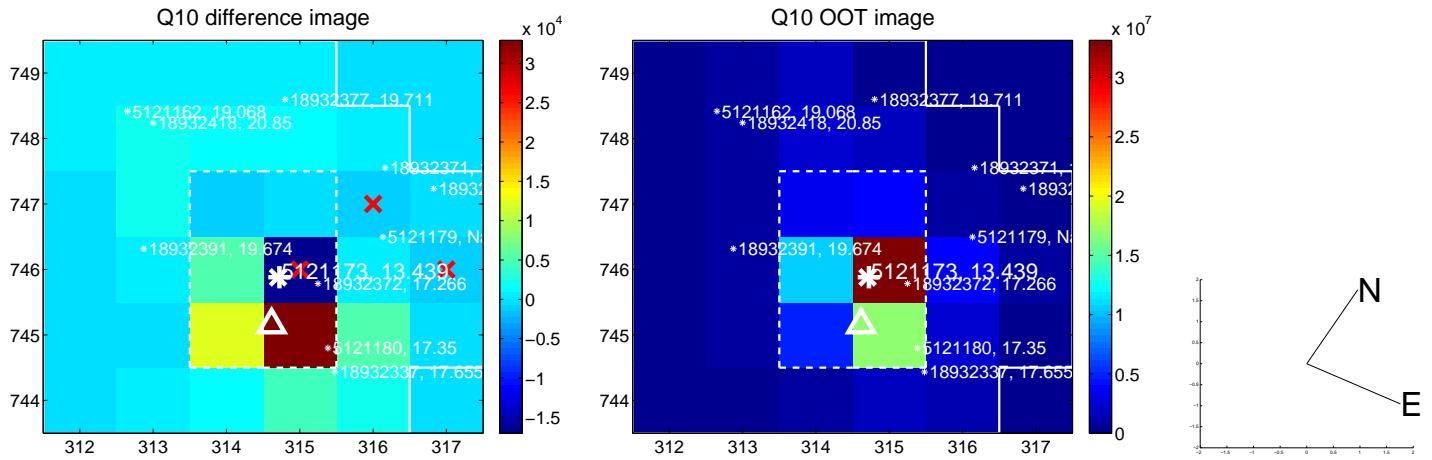
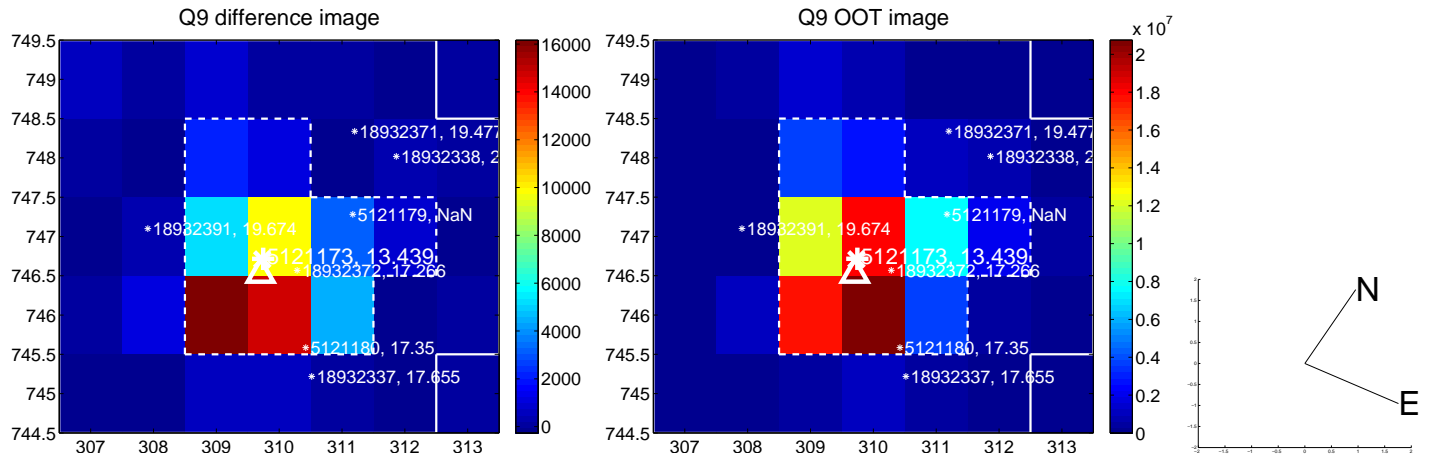
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



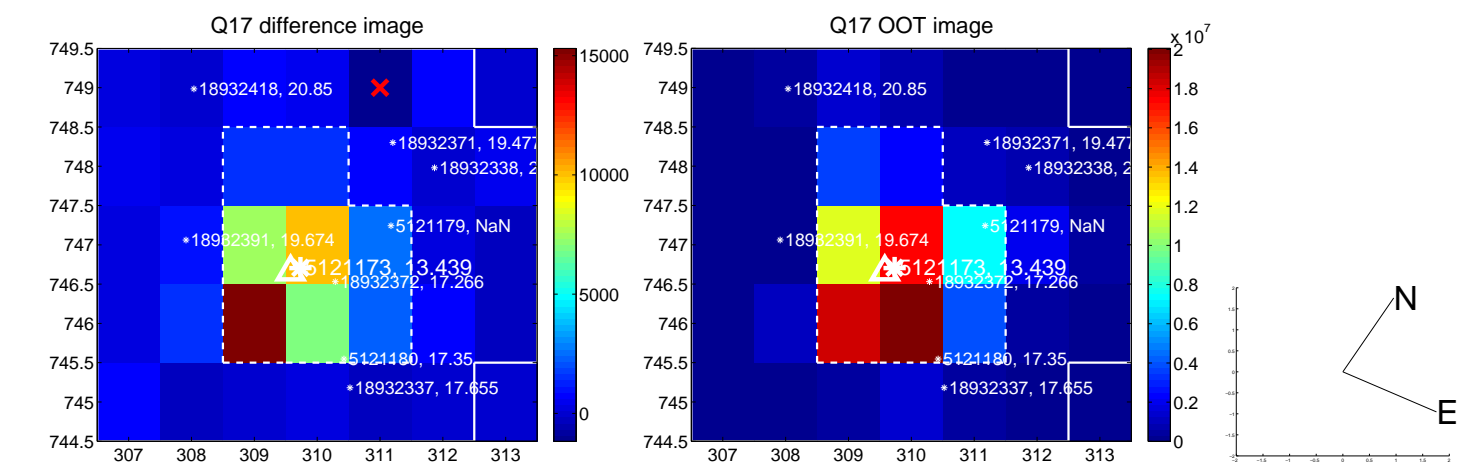
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



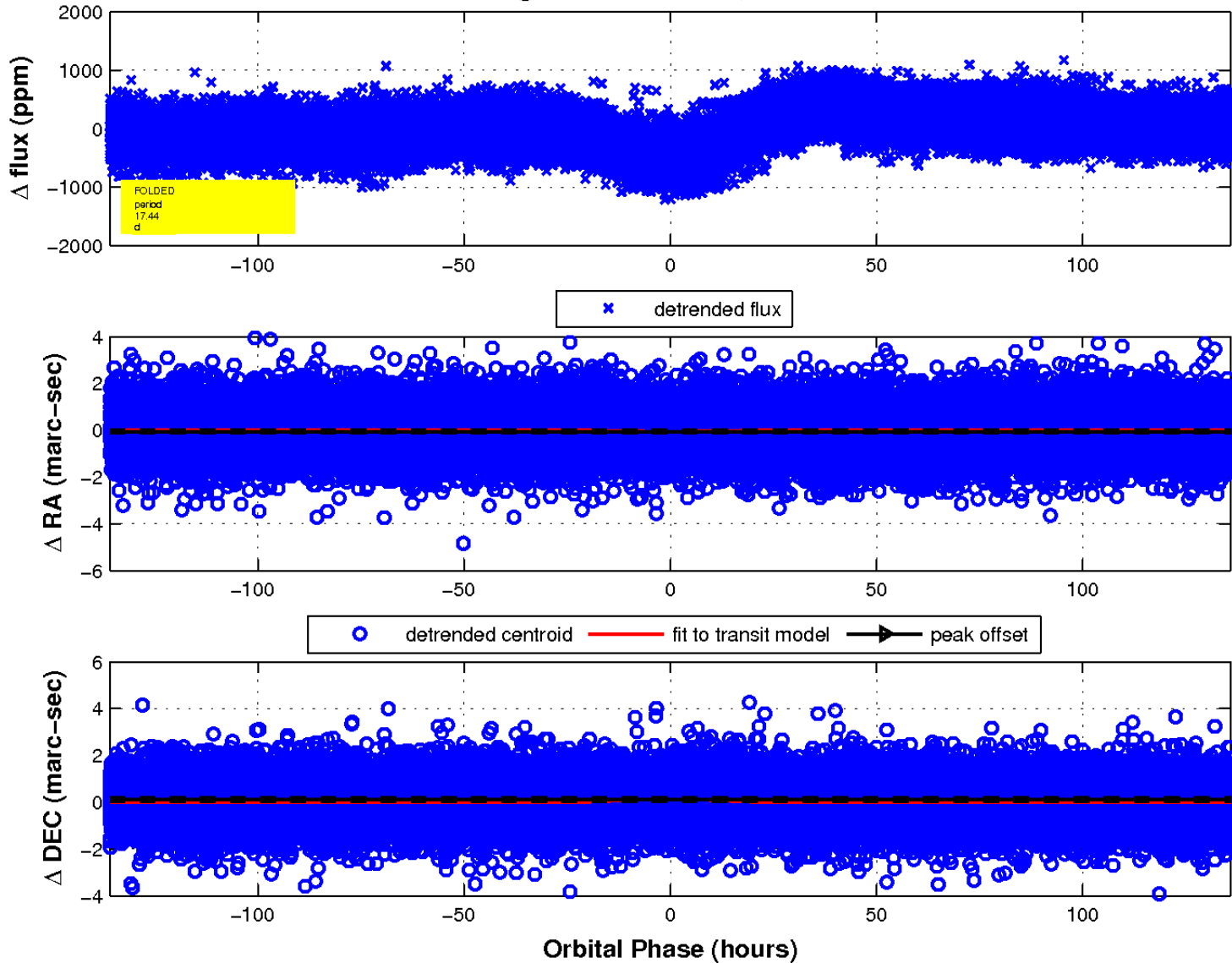
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

