

KIC 007454990

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})
007454990-01	OBS	No	0.915982	132.080388	22.8	2.707	8.8	8.3	3.35	8050	1.86	76548.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007454990-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

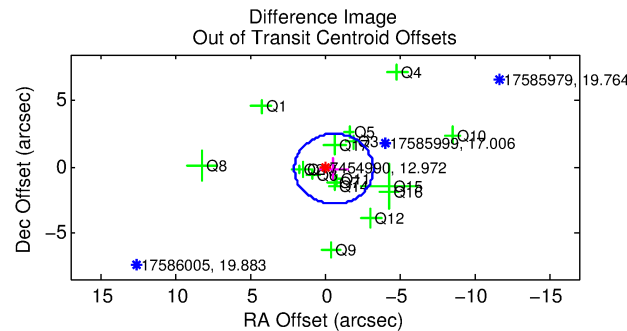
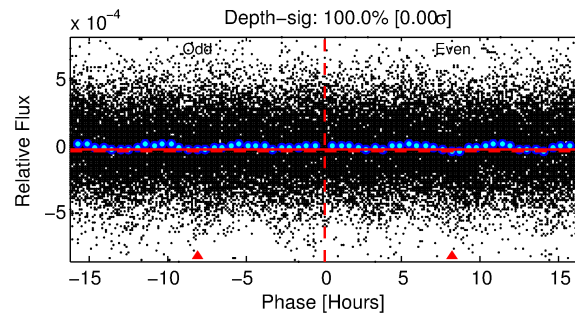
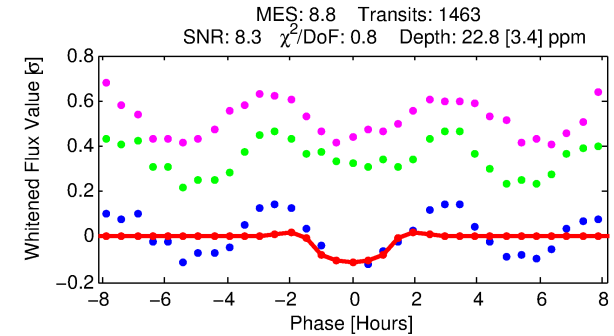
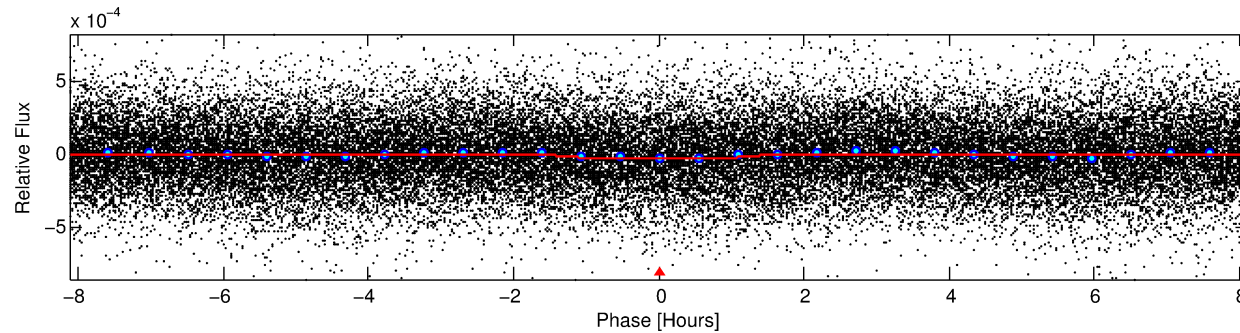
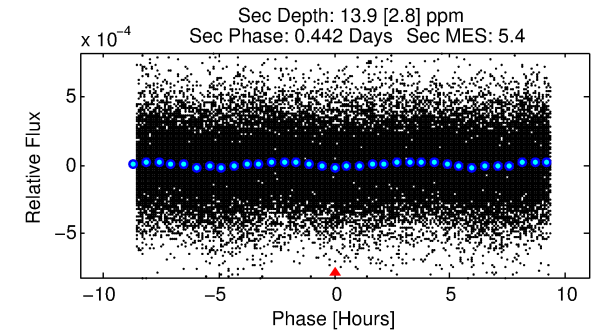
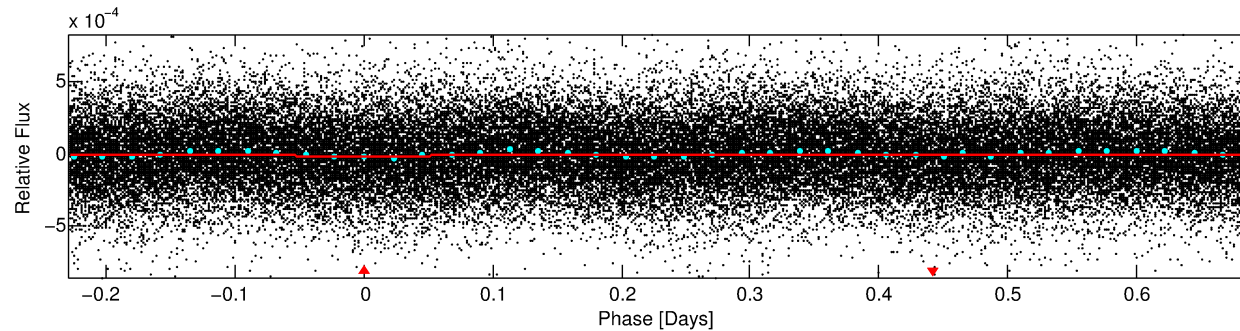
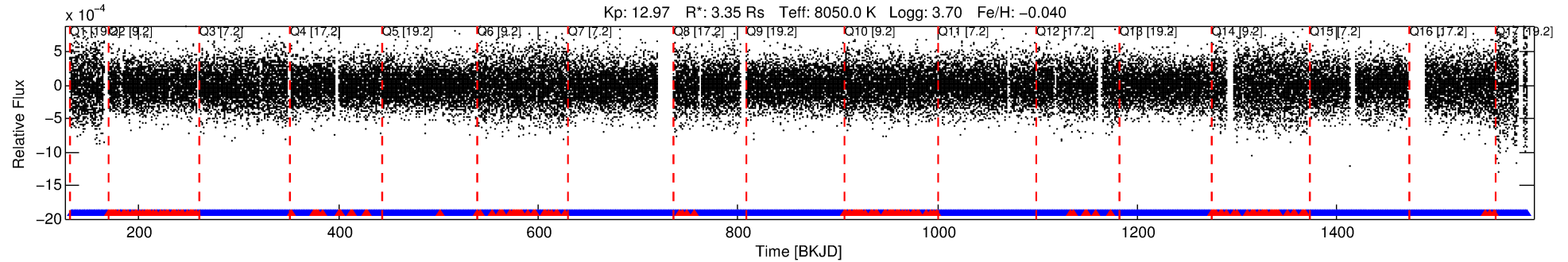
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007454990-01

No Significant Match Found

DV One-Page Summary

KIC: 7454990 Candidate: 1 of 1 Period: 0.916 d



DV Fit Results:

Period = 0.91598 [0.00001] d
Epoch = 132.0804 [0.0040] BKJD
Rp/R* = 0.0051 [0.0020]
a/R* = 1.49 [2.01]
b = 0.90 [0.53]
Seff = 76548.58 [57014.77]
Teff = 4241 [790] K
Rp = 1.87 [1.19] Re
a = 0.0235 [0.0109] AU
Ag = 1.21 [1.33] [0.16σ]
Teffp = 6881 [1441] K [1.61σ]

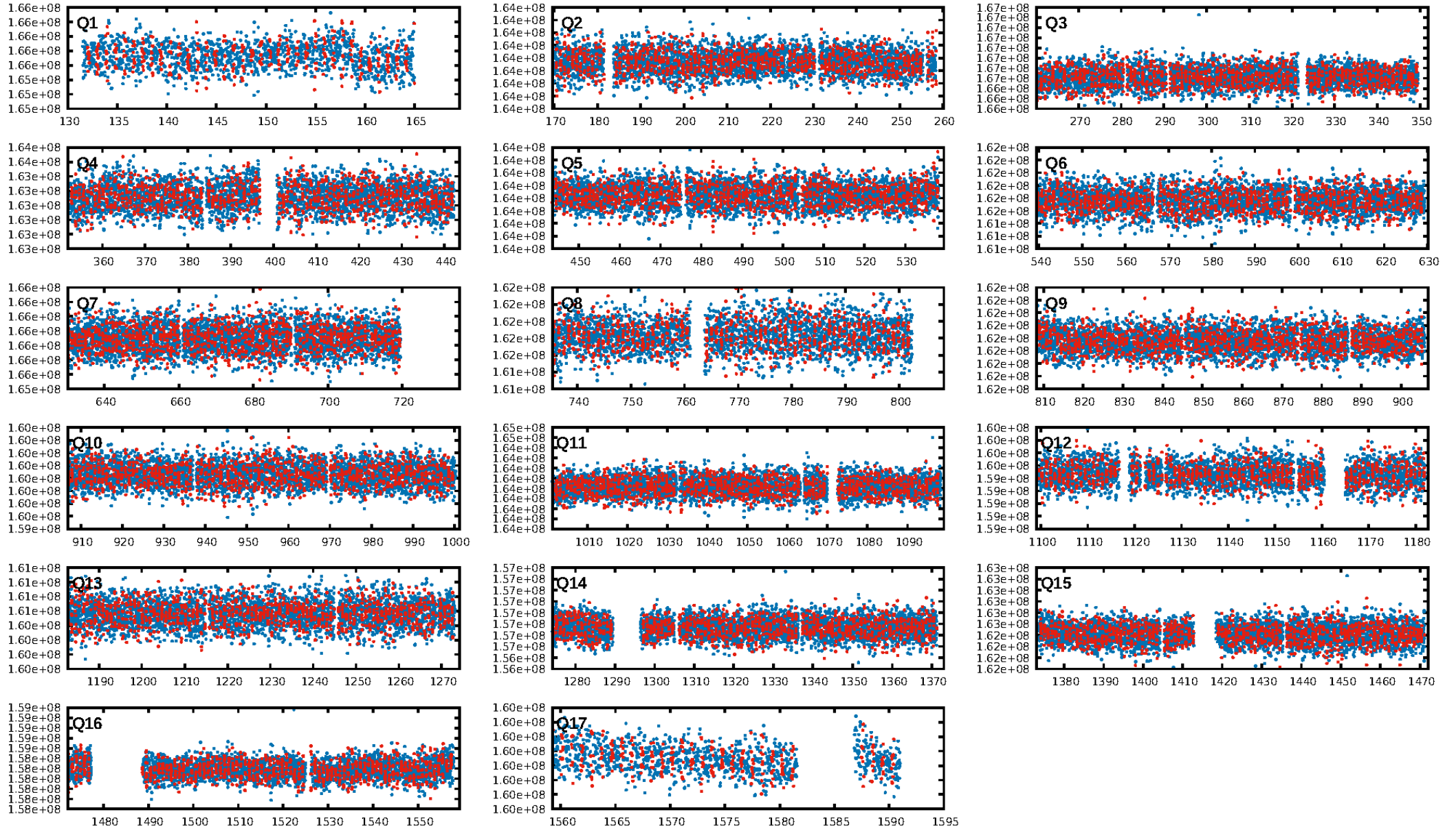
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.14e-18
RollingBand-fgt: 0.88 [1225/1398]
GhostDiagnostic-chr: 0.9021
Centroid-sig: 0.0%
Centroid-so: 2.407 arcsec [3.30σ]
OotOffset-rm: 0.640 arcsec [0.73σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.855 arcsec [0.96σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

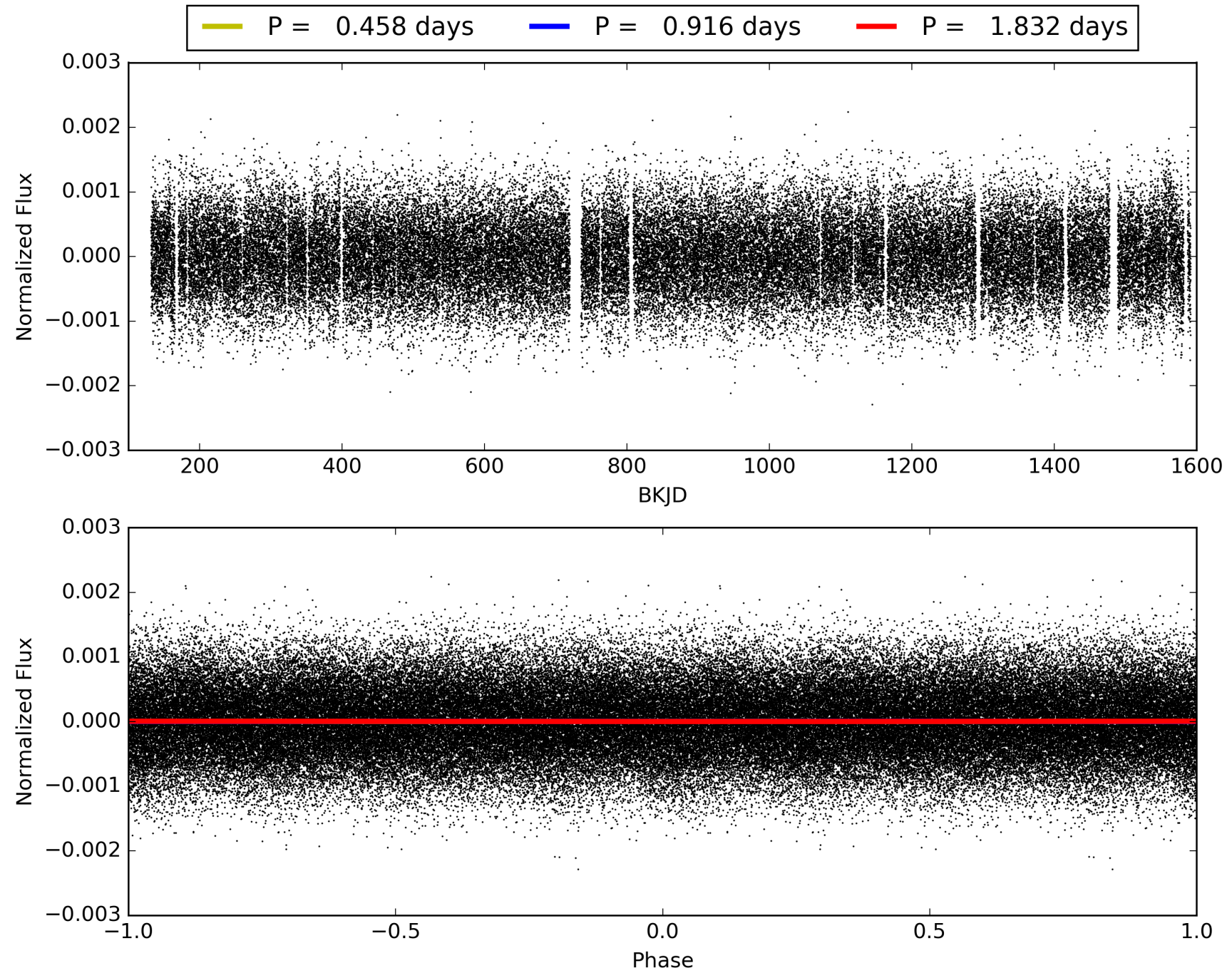
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:25:56 Z

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

TCE 007454990-01, PDC Light Curves

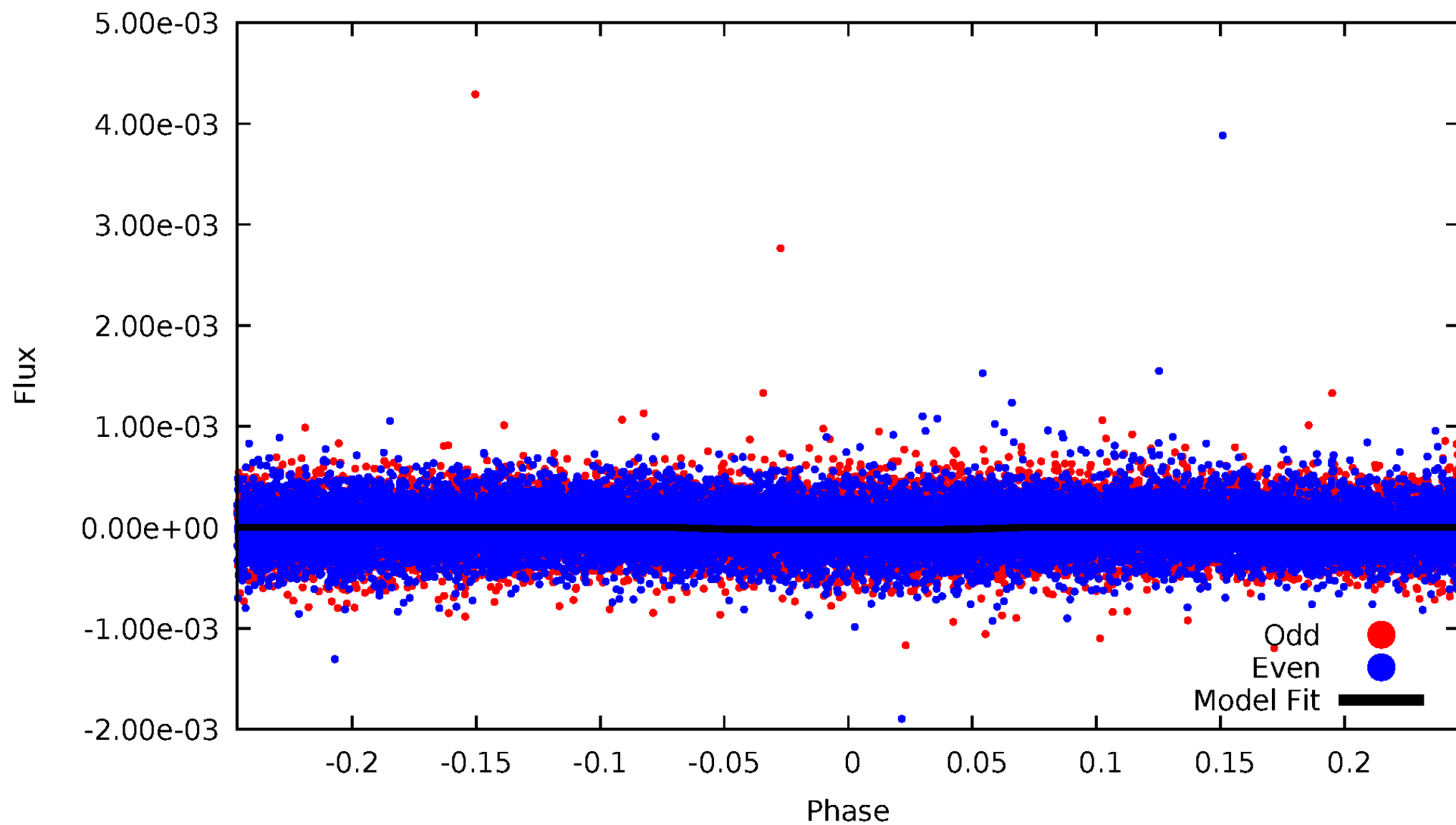


TCE 007454990-01



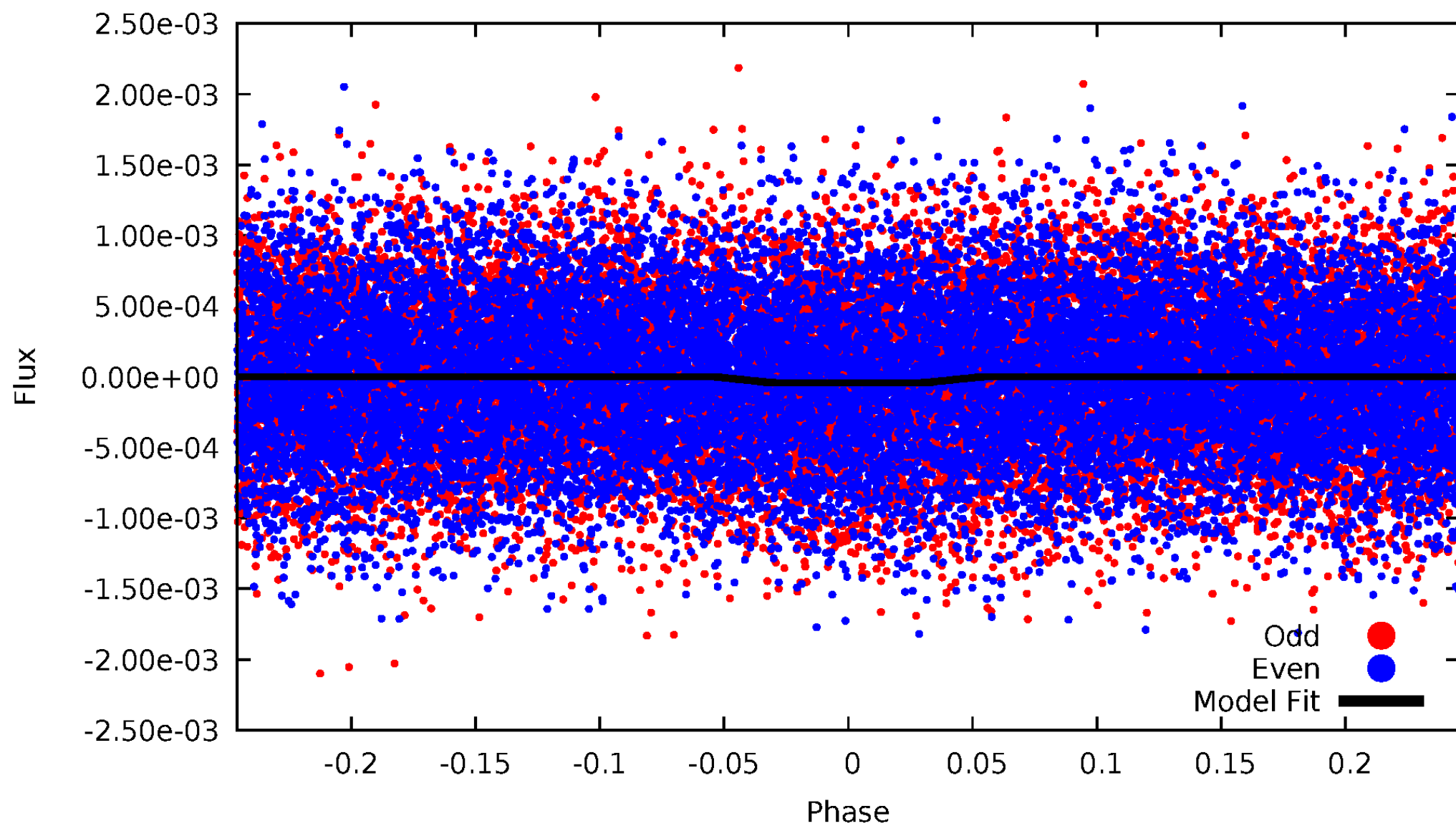
DV Odd/Even

TCE 007454990-01

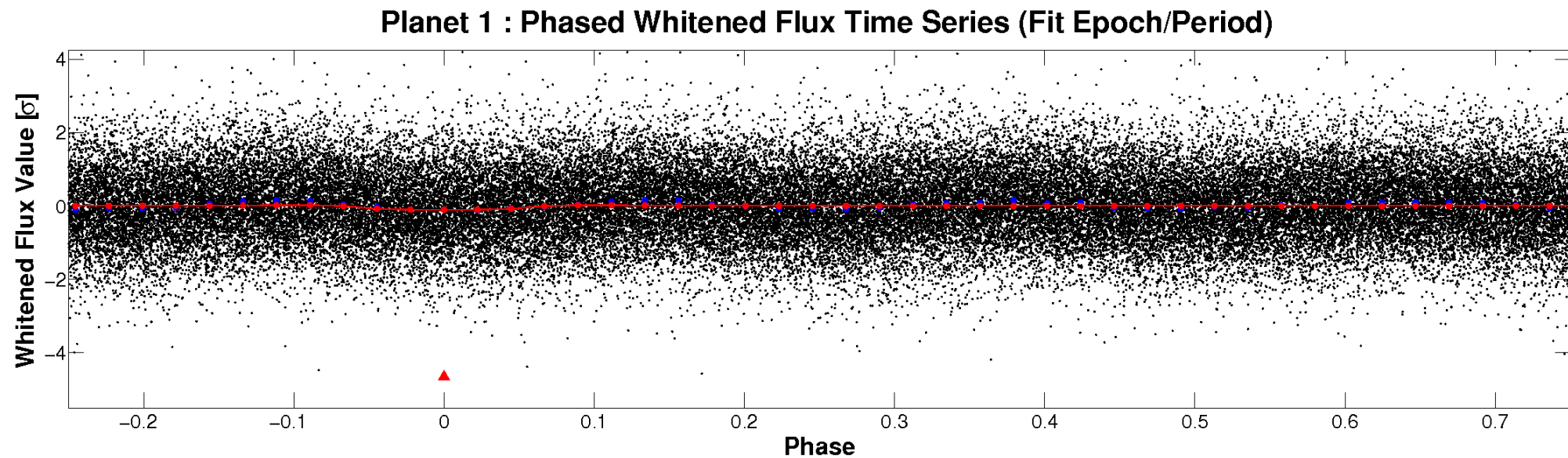
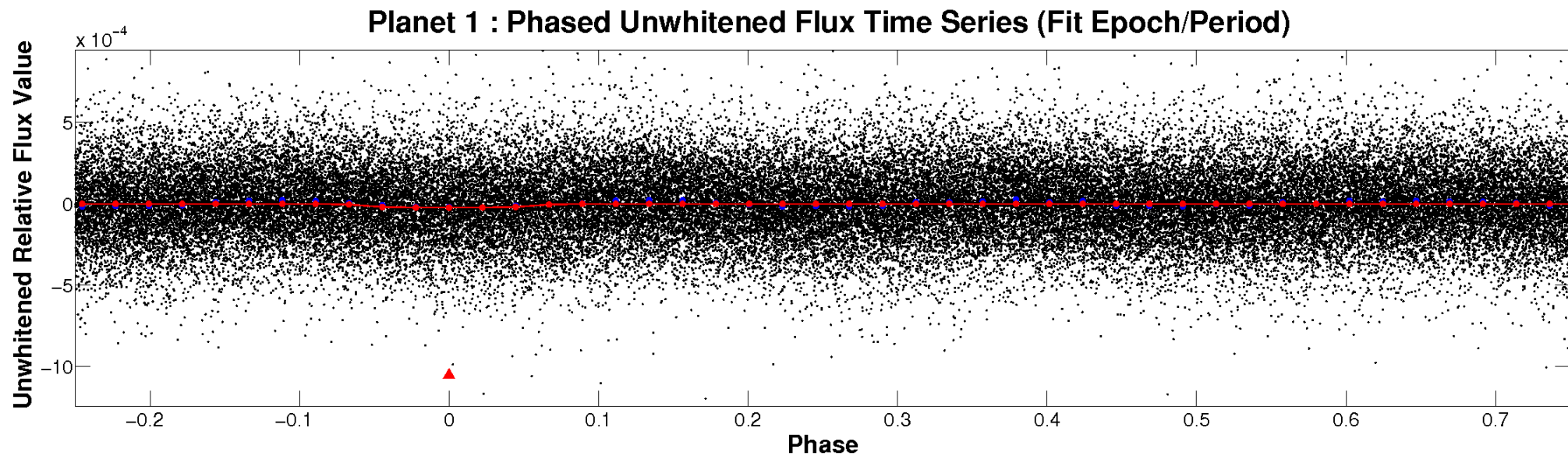


ALT Odd/Even

TCE 007454990-01

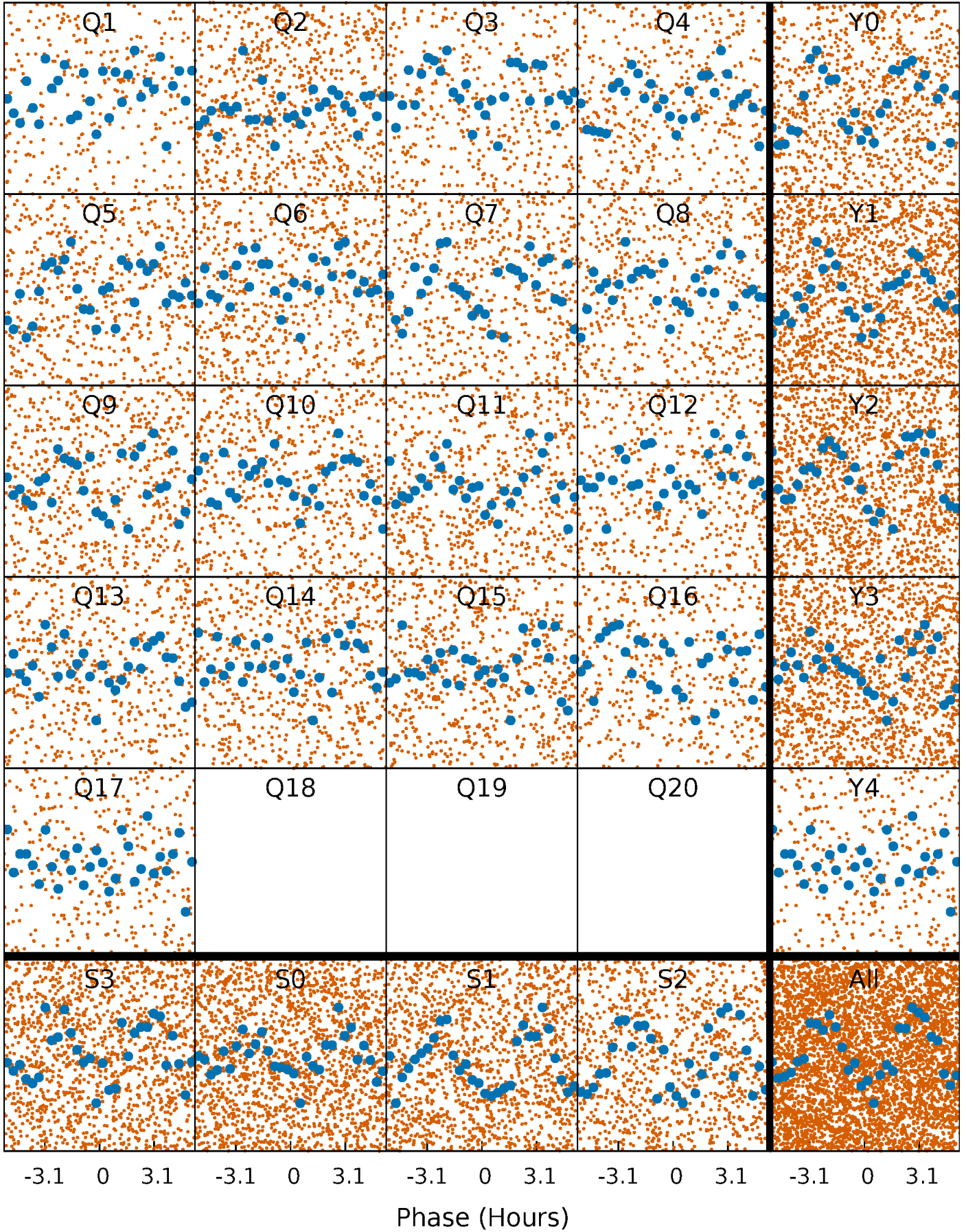


Non-Whitened Vs. Whitened Light Curve



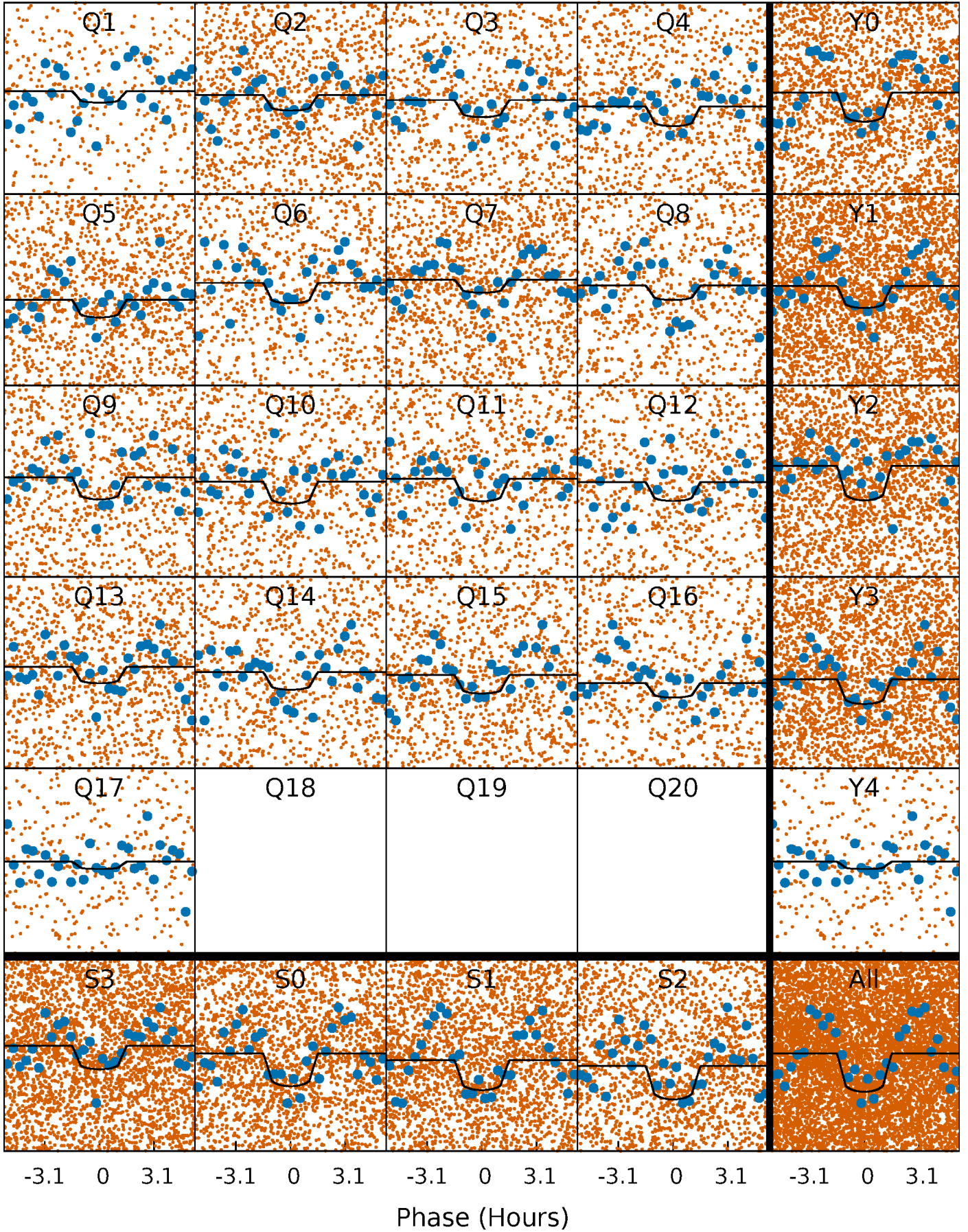
PDC Quarter-Phased Transit Curves

TCE 007454990-01 P= 0.915982 Days $T_0=132.080388$ (BKJD)



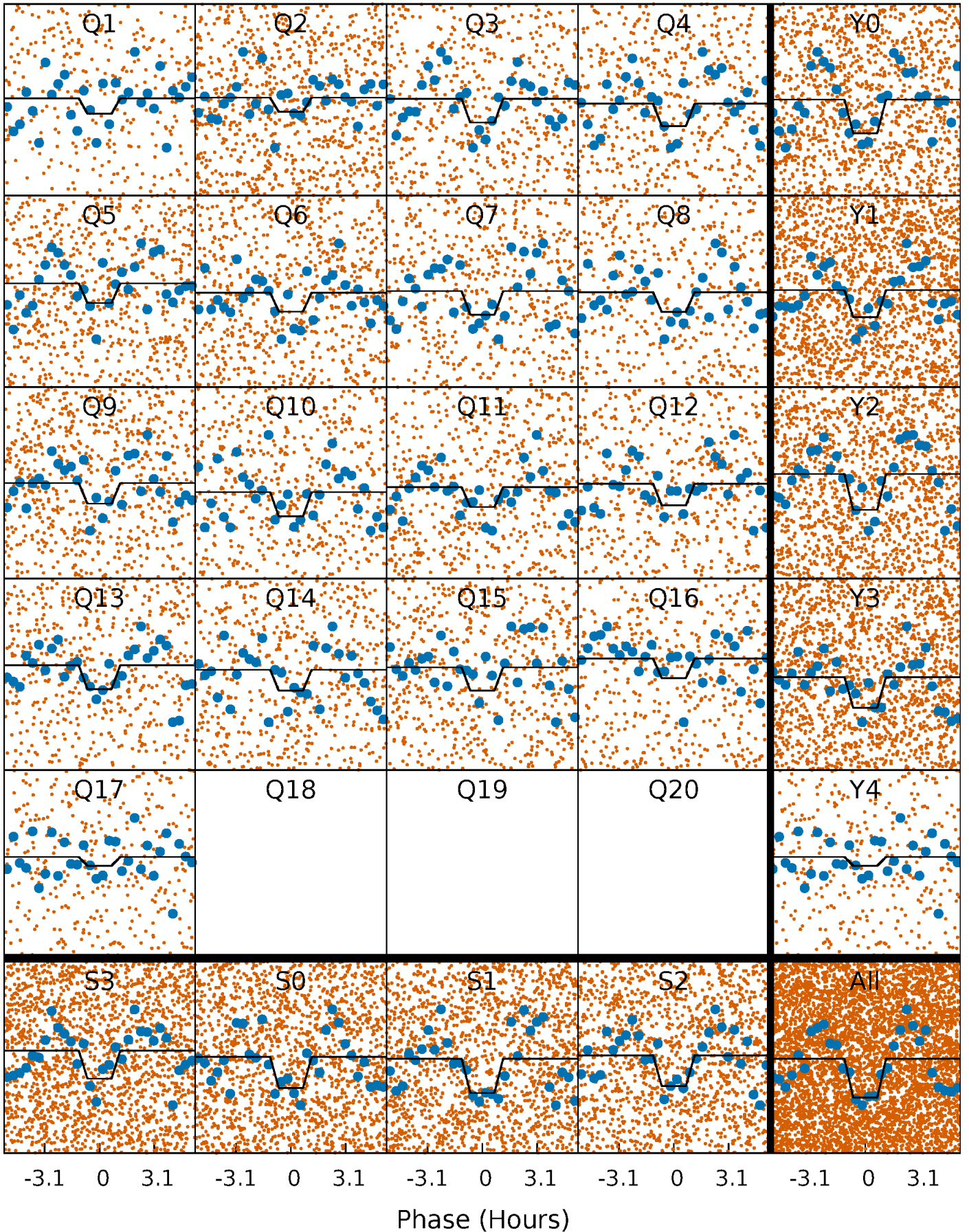
DV Quarter-Phased Transit Curves

TCE 007454990-01 P= 0.915982 Days $T_0=132.080388$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

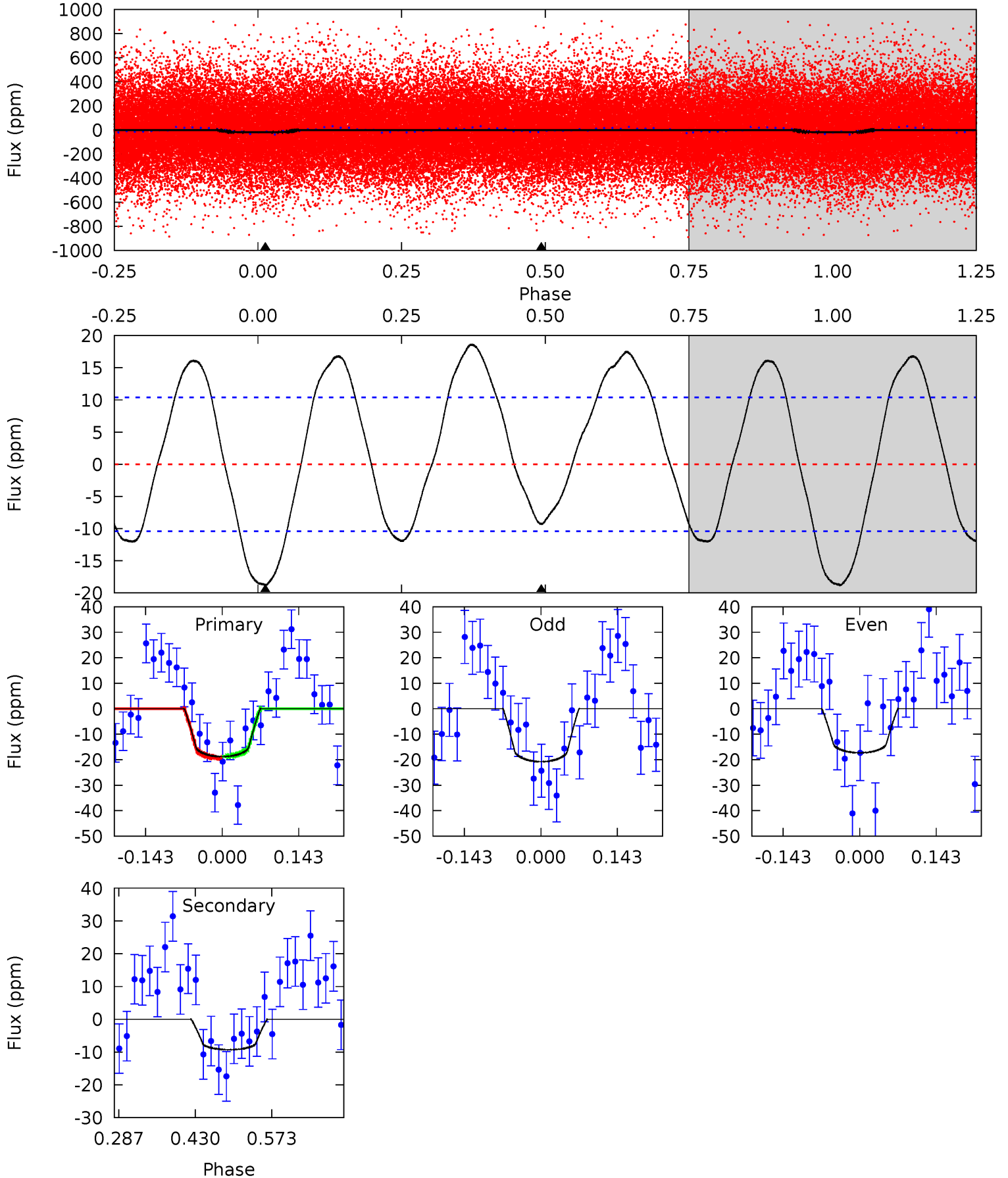
TCE 007454990-01 P= 0.916003 Days $T_0=132.079740$ (BKJD)



DV Model-Shift Uniqueness Test

007454990-01, P = 0.915982 Days, E = 131.164406 Days

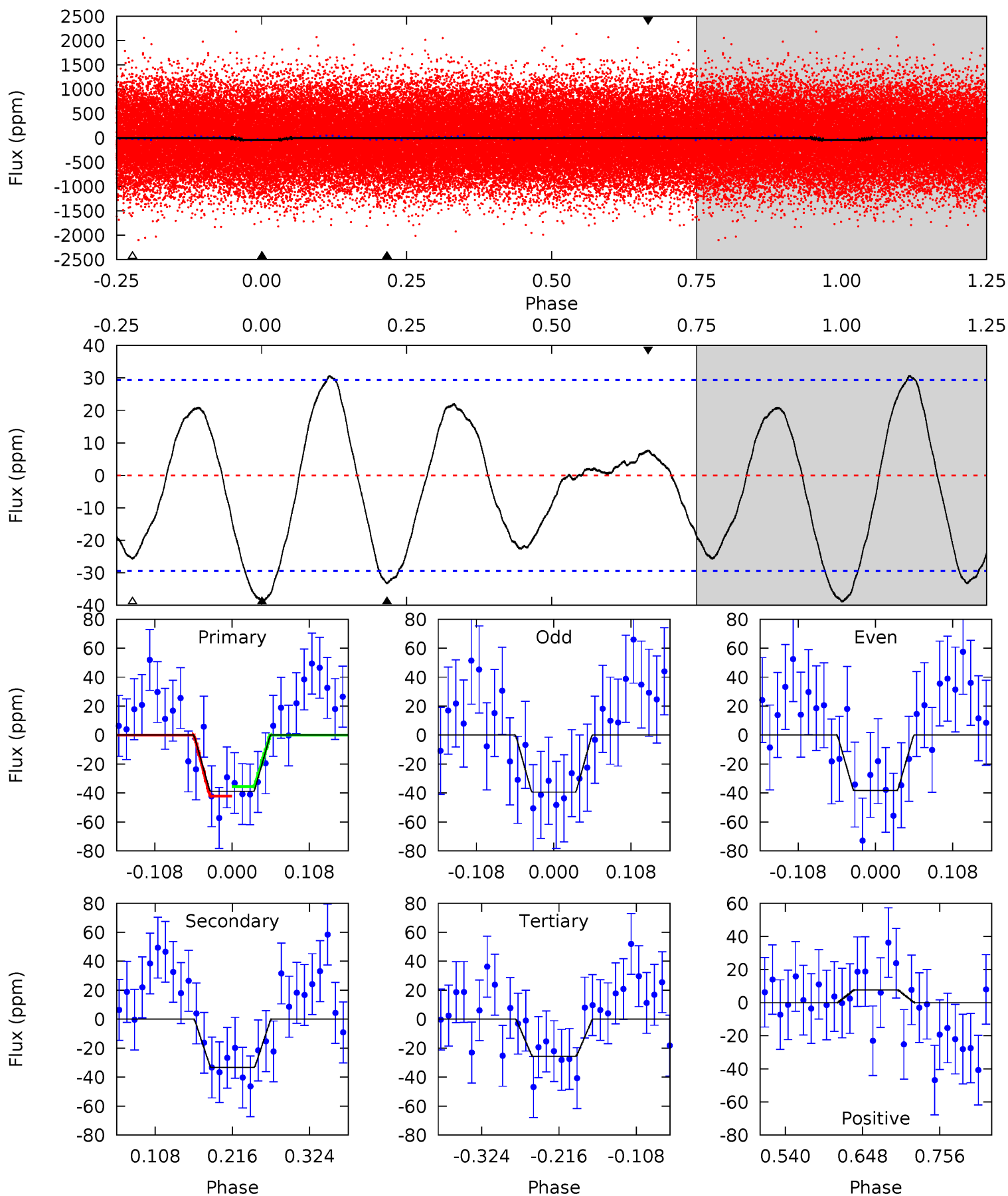
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.11	4.01	0	0	4.49	1.46	4.09	8.11	8.11	4.01	4.01	0.75	0.96	0.50	0.12



Alt Model-Shift Uniqueness Test

007454990-01, P = 0.916003 Days, E = 131.163737 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.01	5.15	3.97	1.18	4.55	1.61	2.03	2.04	4.83	1.18	3.96	0.09	0.95	0.44	0.50



Stellar Parameters For KIC 007454990

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8050^{+223}_{-335}	$3.702^{+0.420}_{-0.112}$	$-0.040^{+0.200}_{-0.400}$	$3.354^{+0.839}_{-1.679}$	$2.067^{+0.351}_{-0.482}$	$0.077^{+0.341}_{-0.031}$
	+3%/-4%	+11%/-3%	+500%/-1000%	+25%/-50%	+17%/-23%	+442%/-40%
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 007454990-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 2	$1.70^{+0.82}_{-0.69}$	5751^{+447}_{-723}	5362^{+1980}_{-1379}	$0.909^{+1.712}_{-0.491}$
Alt.	-33 ± 6	$2.14^{+0.91}_{-0.76}$	5770^{+426}_{-712}	7133^{+2101}_{-1225}	$2.179^{+3.028}_{-1.089}$

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 $A_{obs} \gg 1.0$

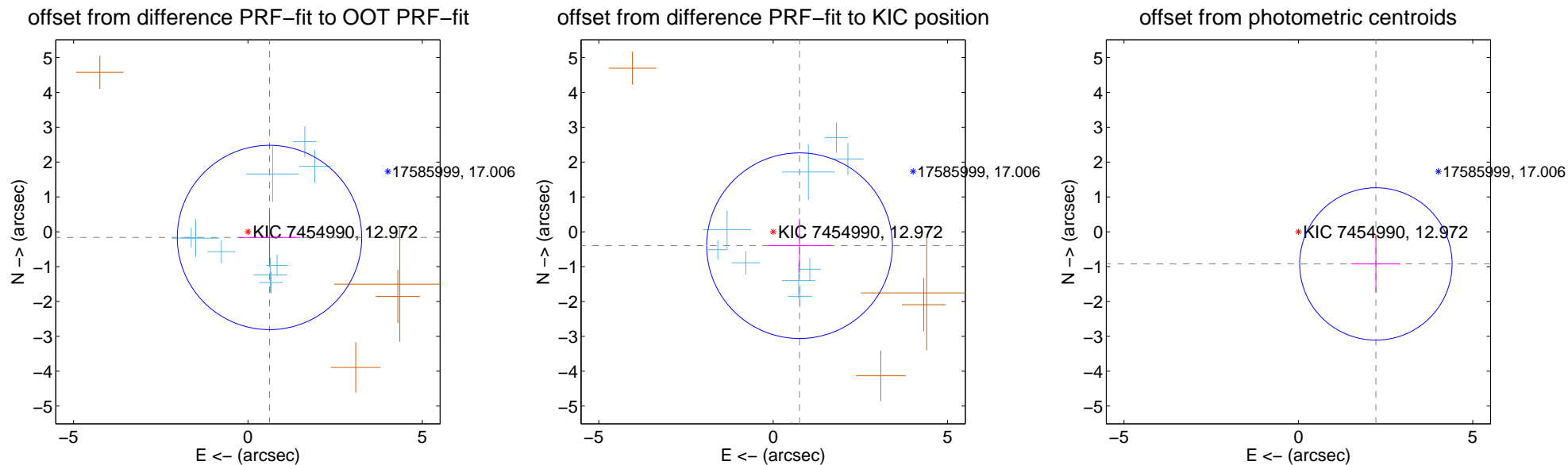
DV Centroid Data

Supplemental centroid analysis for 007454990-01. Kepler magnitude: 12.97. Transit SNR 8.29

There are 9 quarters with good PRF difference image offsets

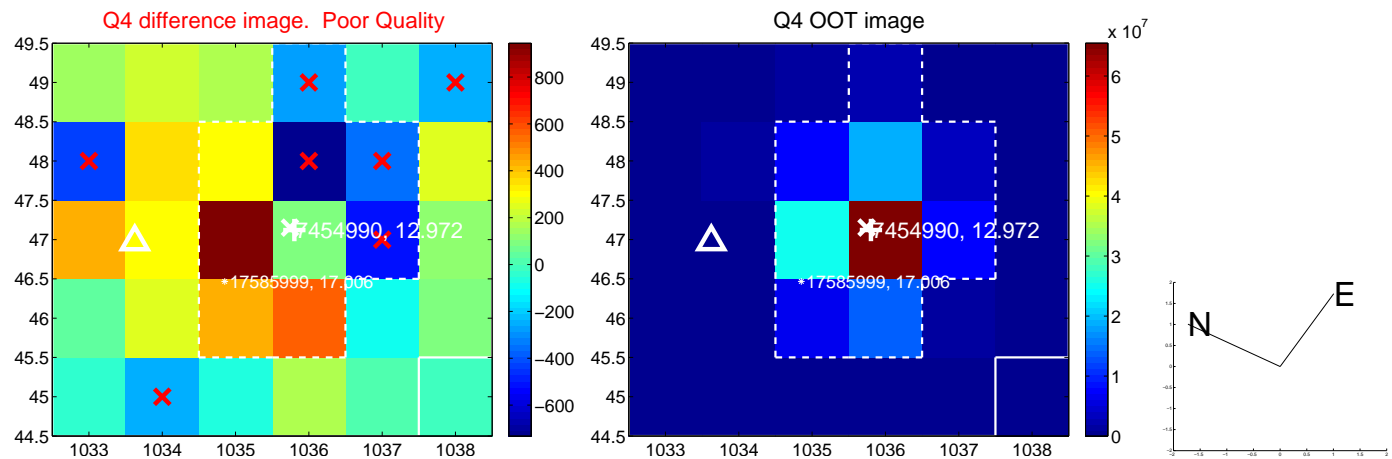
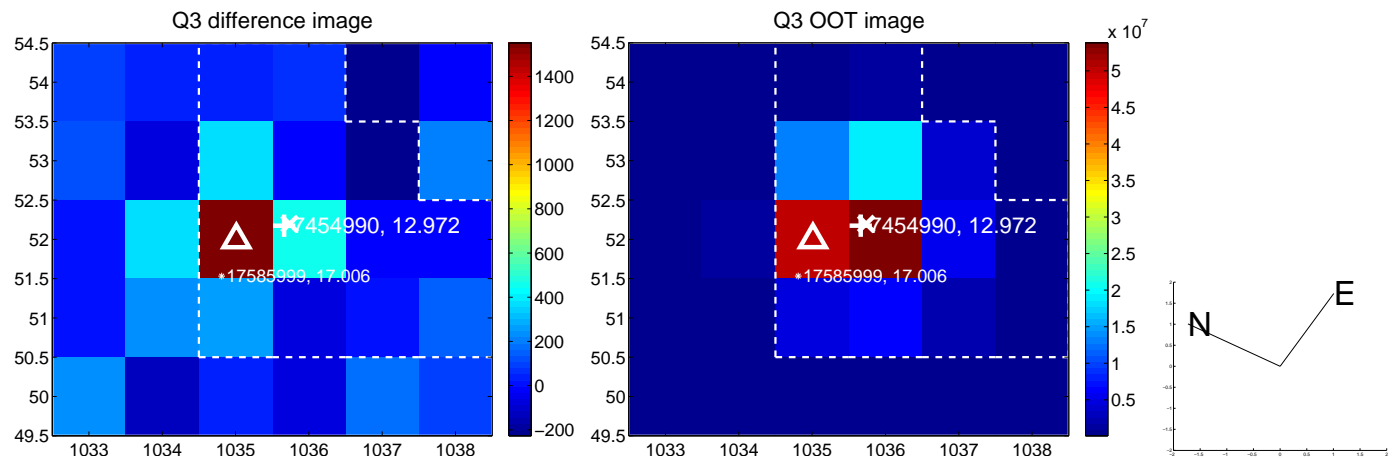
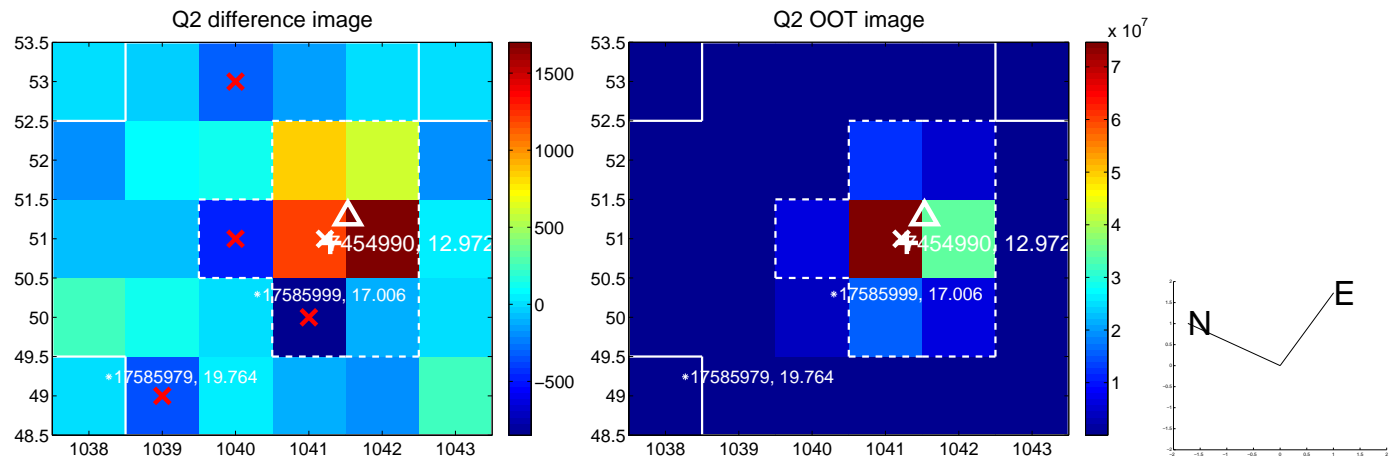
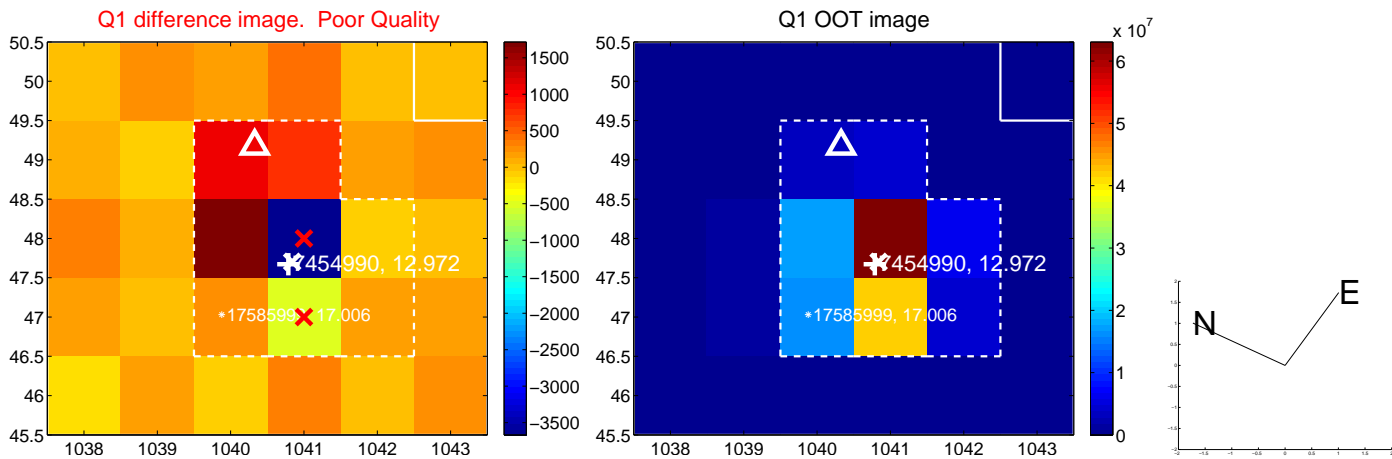
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.640 ± 0.882	0.73	-0.618 ± 0.888	-0.163 ± 0.767
PRF-fit source offset from KIC position	0.855 ± 0.888	0.96	-0.757 ± 0.916	-0.399 ± 0.775
photometric centroid source offset	2.41 ± 0.73	3.30	-2.22 ± 0.71	-0.92 ± 0.82

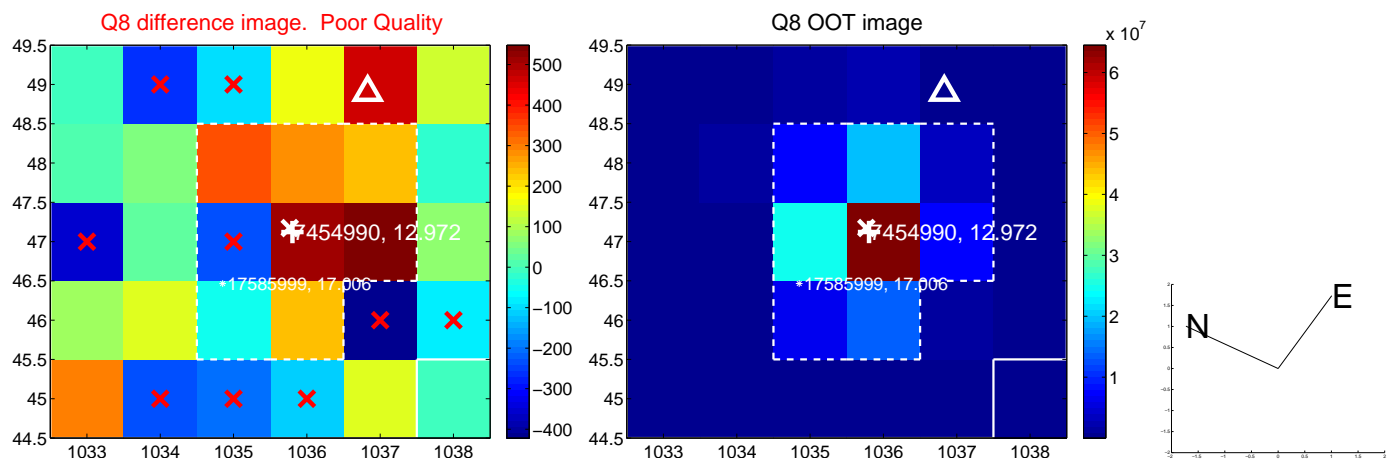
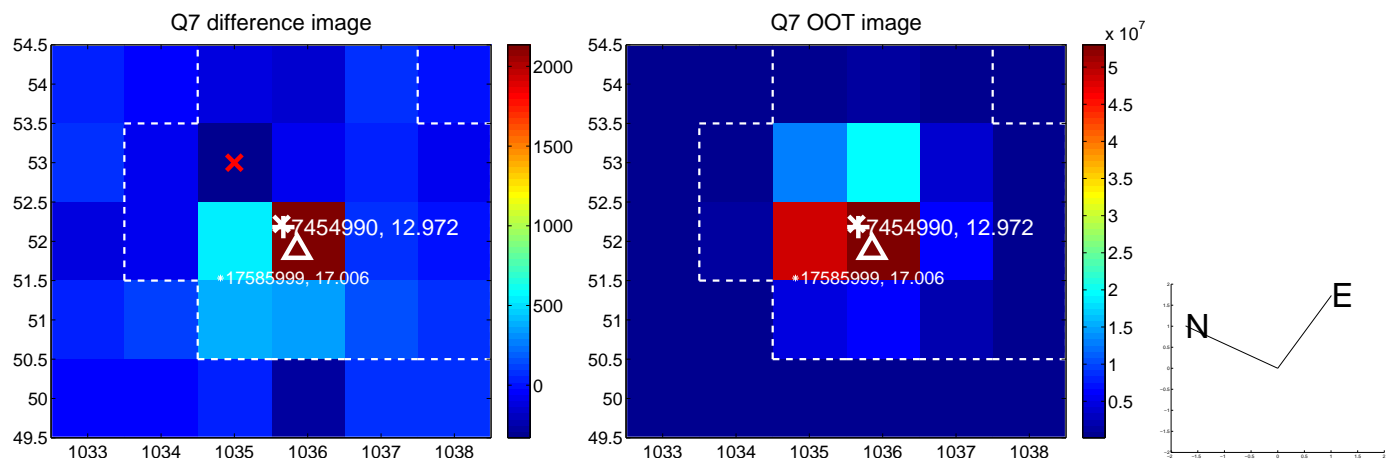
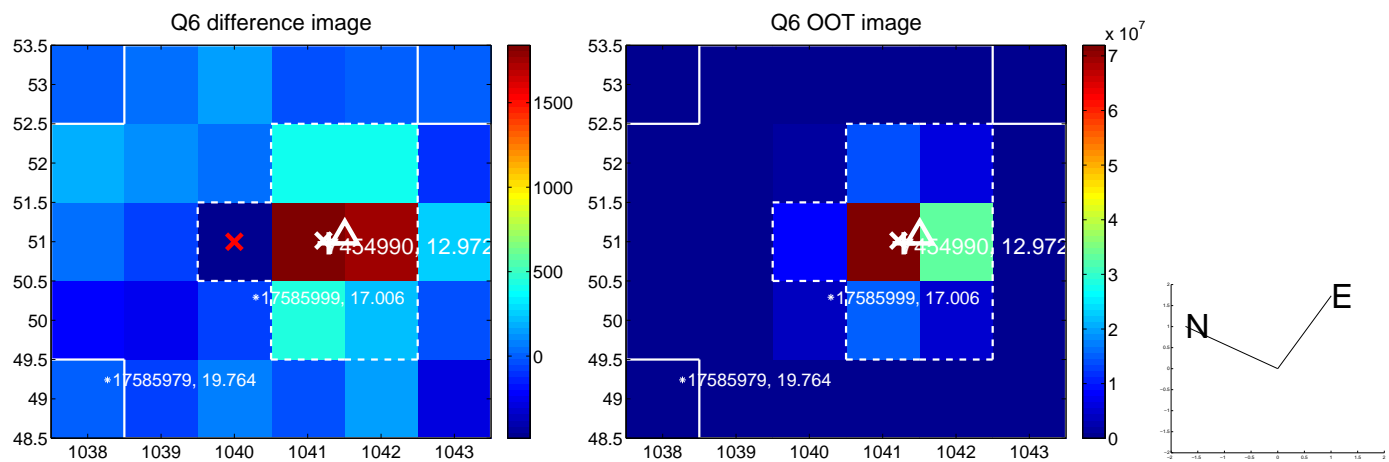
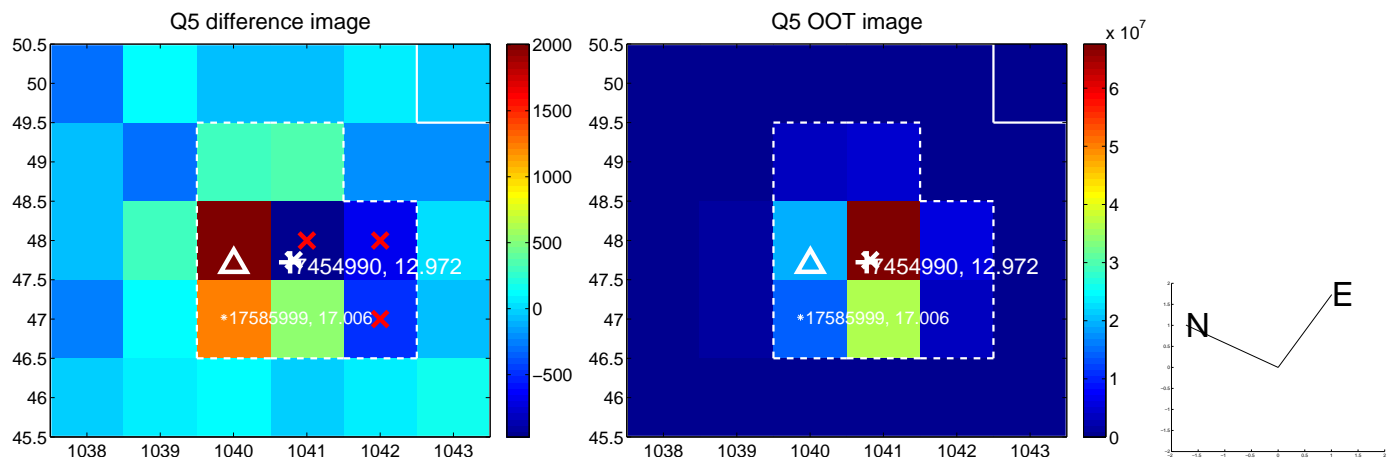


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

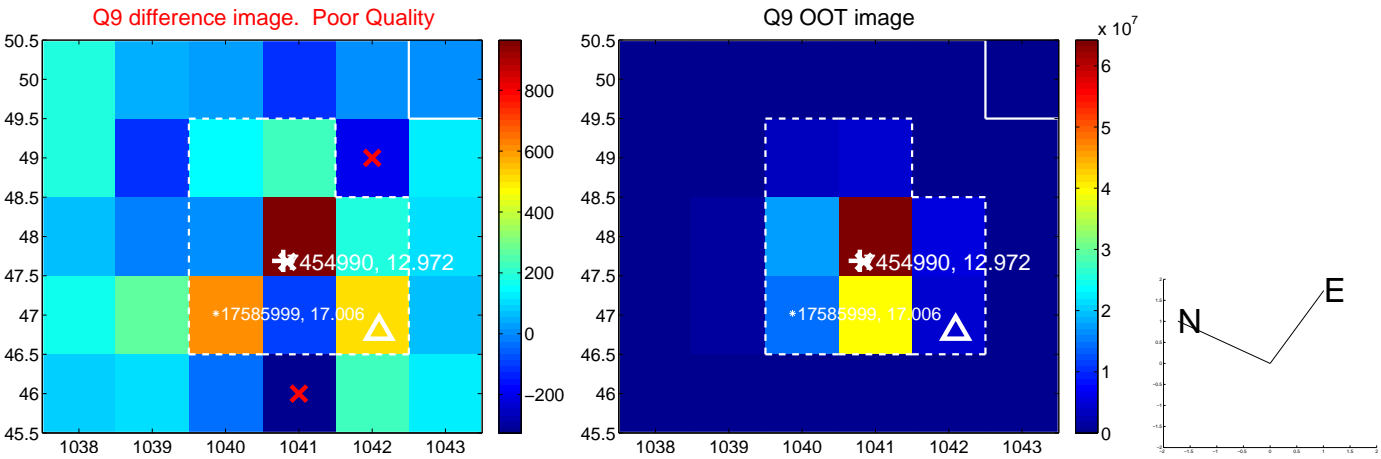
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



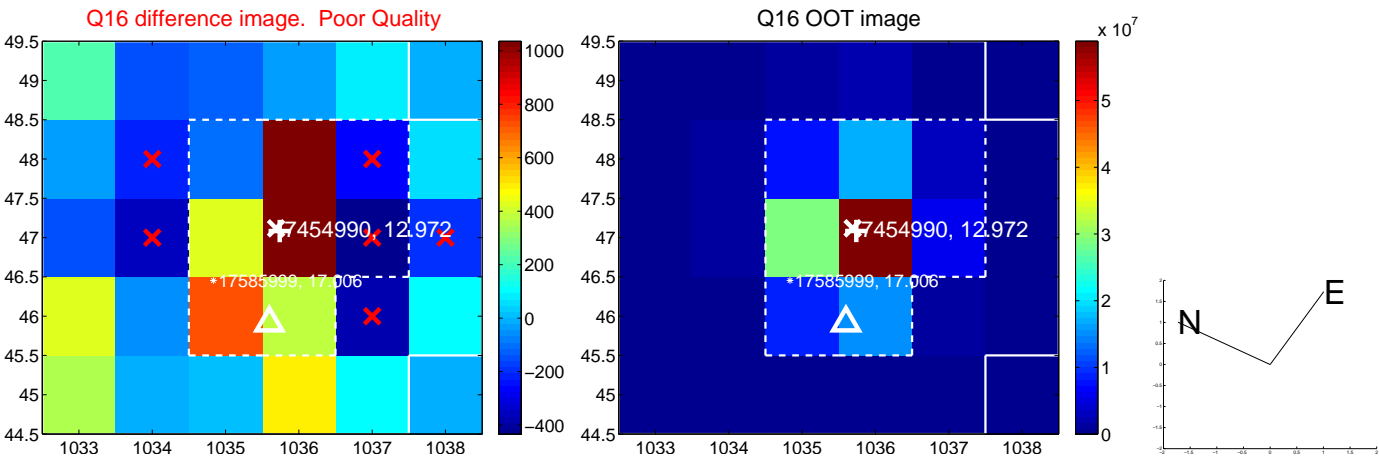
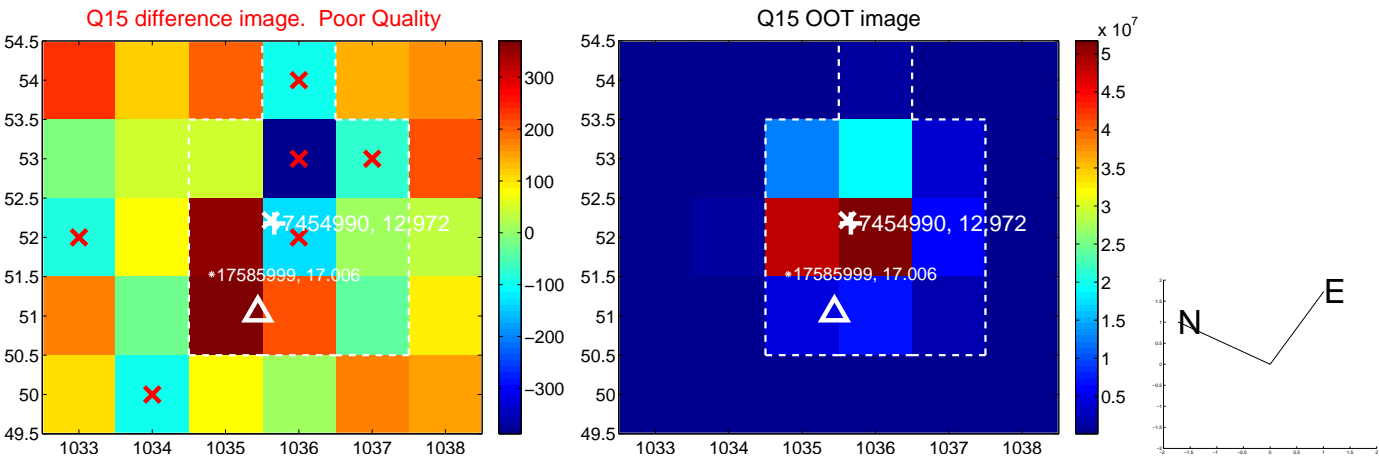
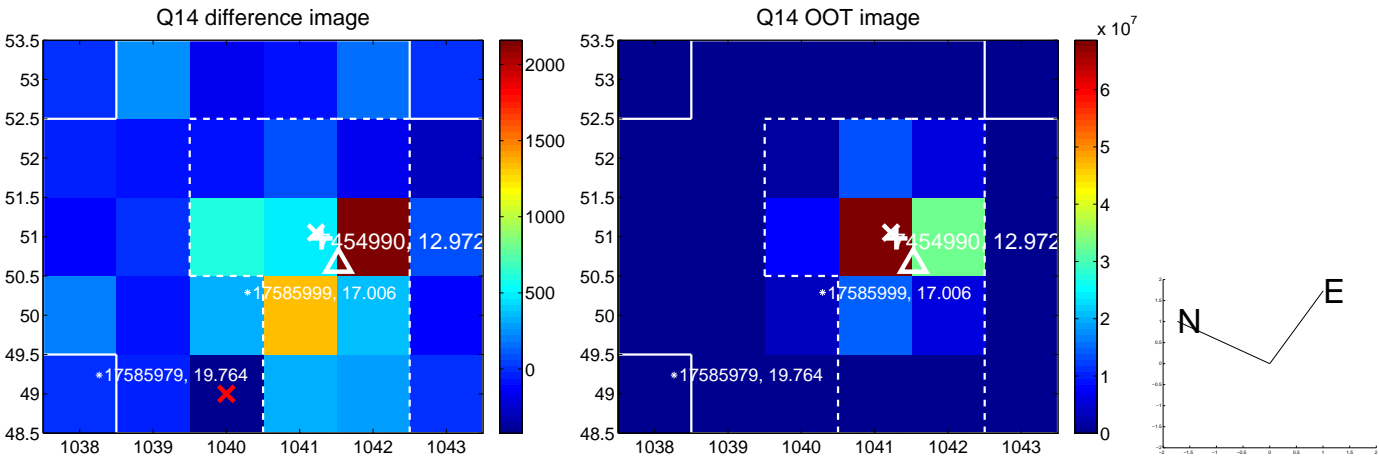
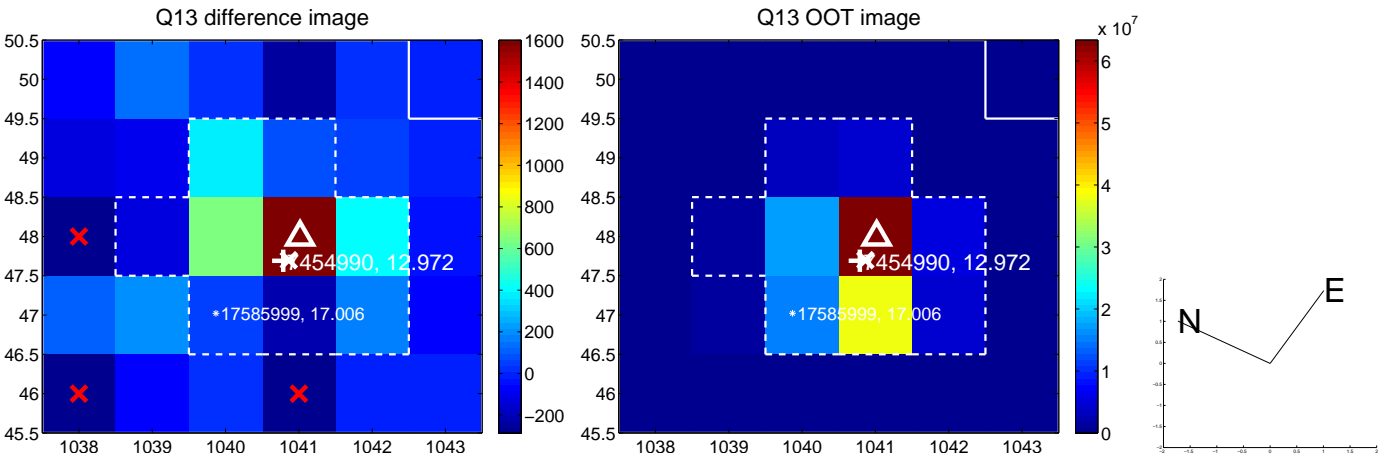
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



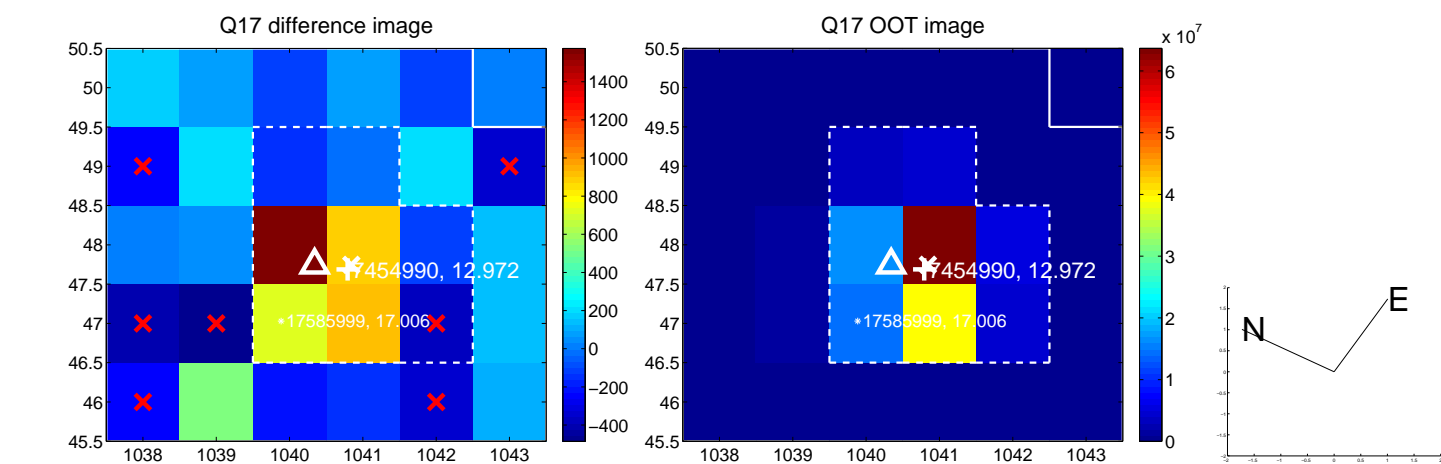
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



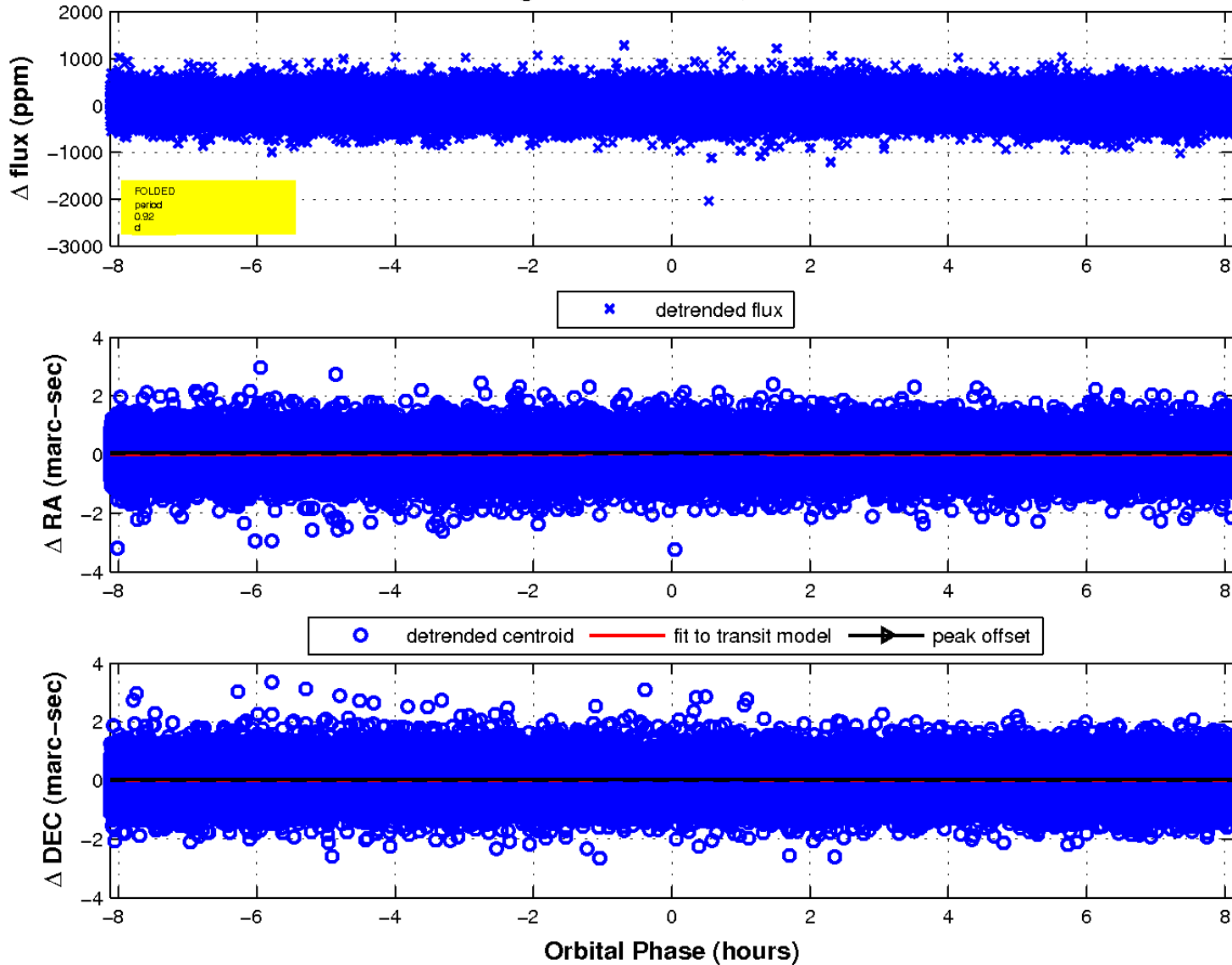
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

