

KIC 004576934

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})
004576934-01	OBS	No	1.019665	132.041887	14.7	4.901	7.6	5.1	2.21	7221	0.87	24025.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004576934-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

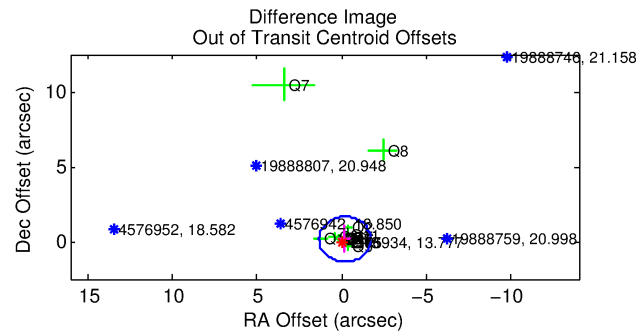
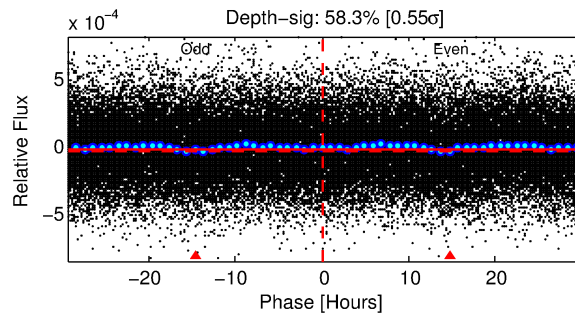
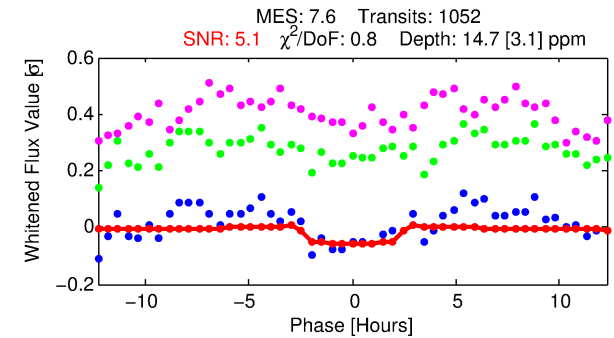
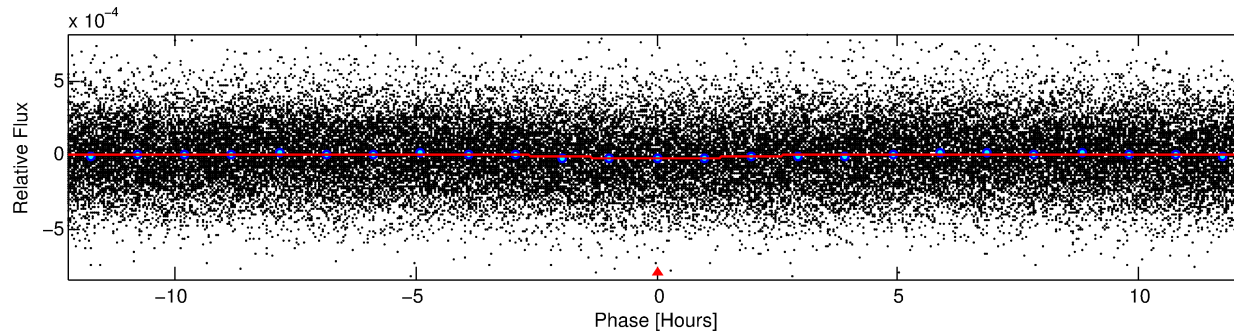
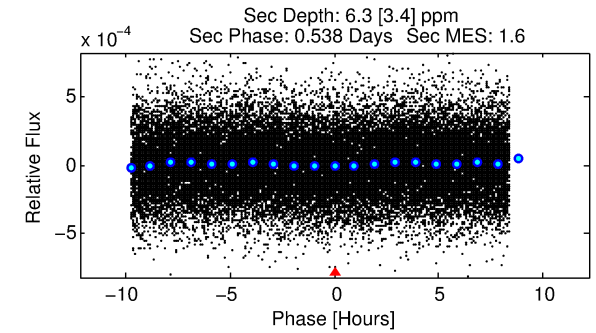
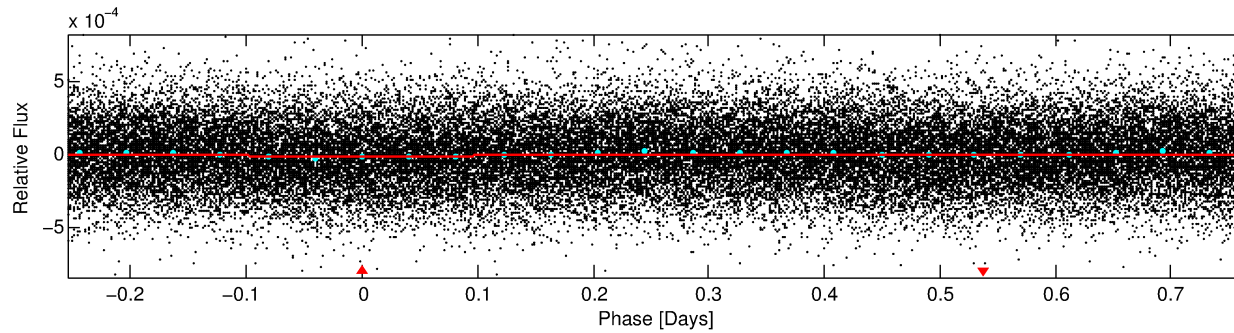
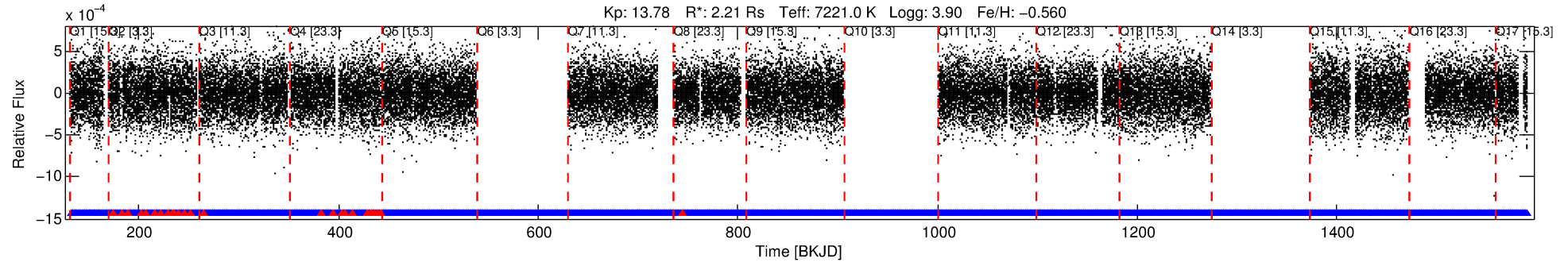
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004576934-01

No Significant Match Found

DV One-Page Summary

KIC: 4576934 Candidate: 1 of 1 Period: 1.020 d



DV Fit Results:

Period = 1.01966 [0.00003] d
Epoch = 132.0419 [0.0090] BKJD
Rp/R* = 0.0036 [0.0028]
a/R* = 1.62 [4.54]
b = 0.39 [9.84]
Seff = 24025.54 [16432.29]
Teq = 3175 [543] K
Rp = 0.87 [0.77] Re
a = 0.0222 [0.0092] AU
Ag = 2.29 [4.00] [0.32σ]
Teffp = 6036 [2466] K [1.13σ]

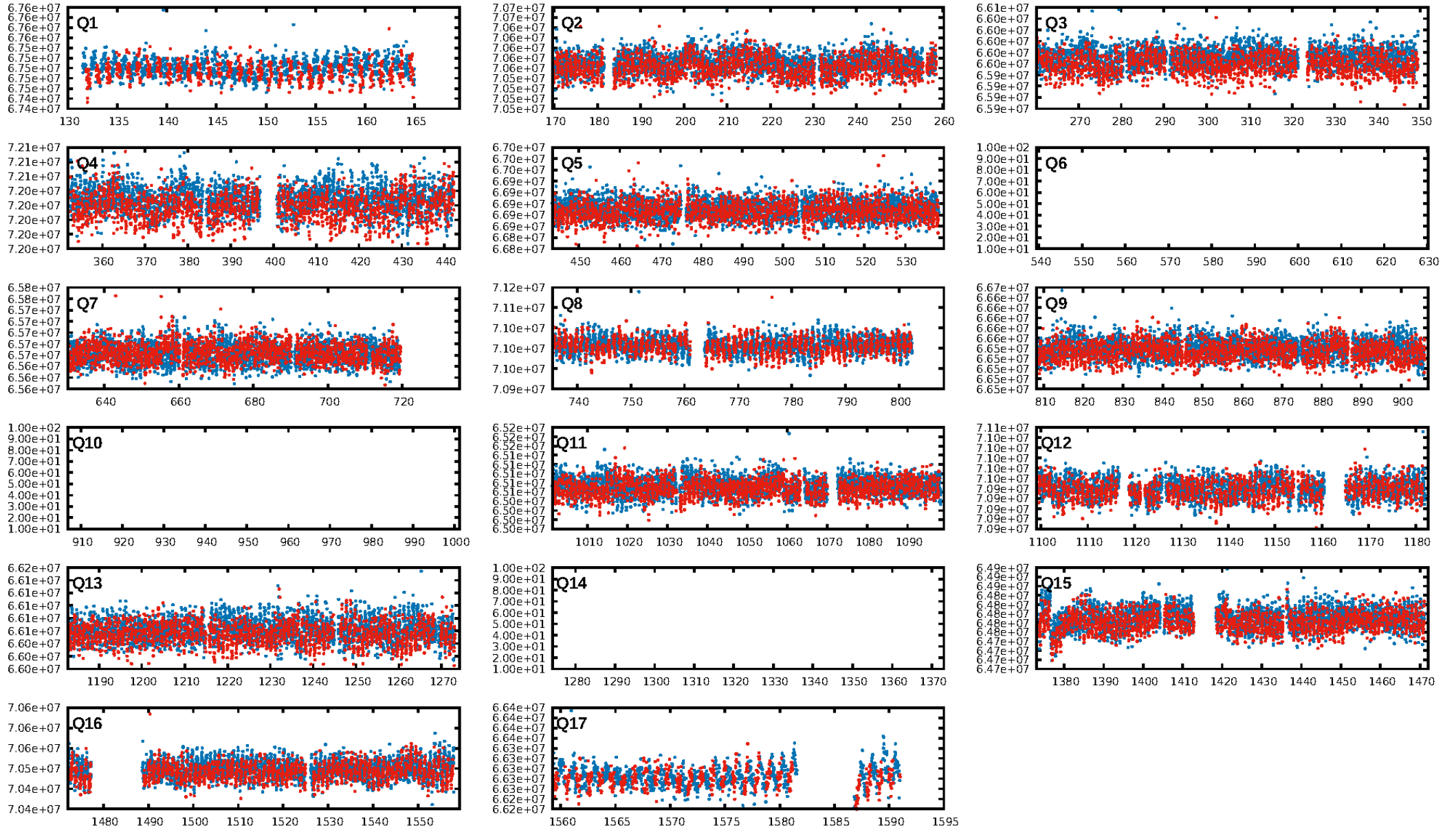
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.13e-11
RollingBand-fgt: 0.97 [967/993]
GhostDiagnostic-chr: 2.562
Centroid-sig: 15.5%
Centroid-so: 2.394 arcsec [0.99σ]
OotOffset-rm: 0.236 arcsec [0.47σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-rm: 0.181 arcsec [0.37σ]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.85 [11/13]
DiffImageOverlap-fno: 1.00 [14/14]

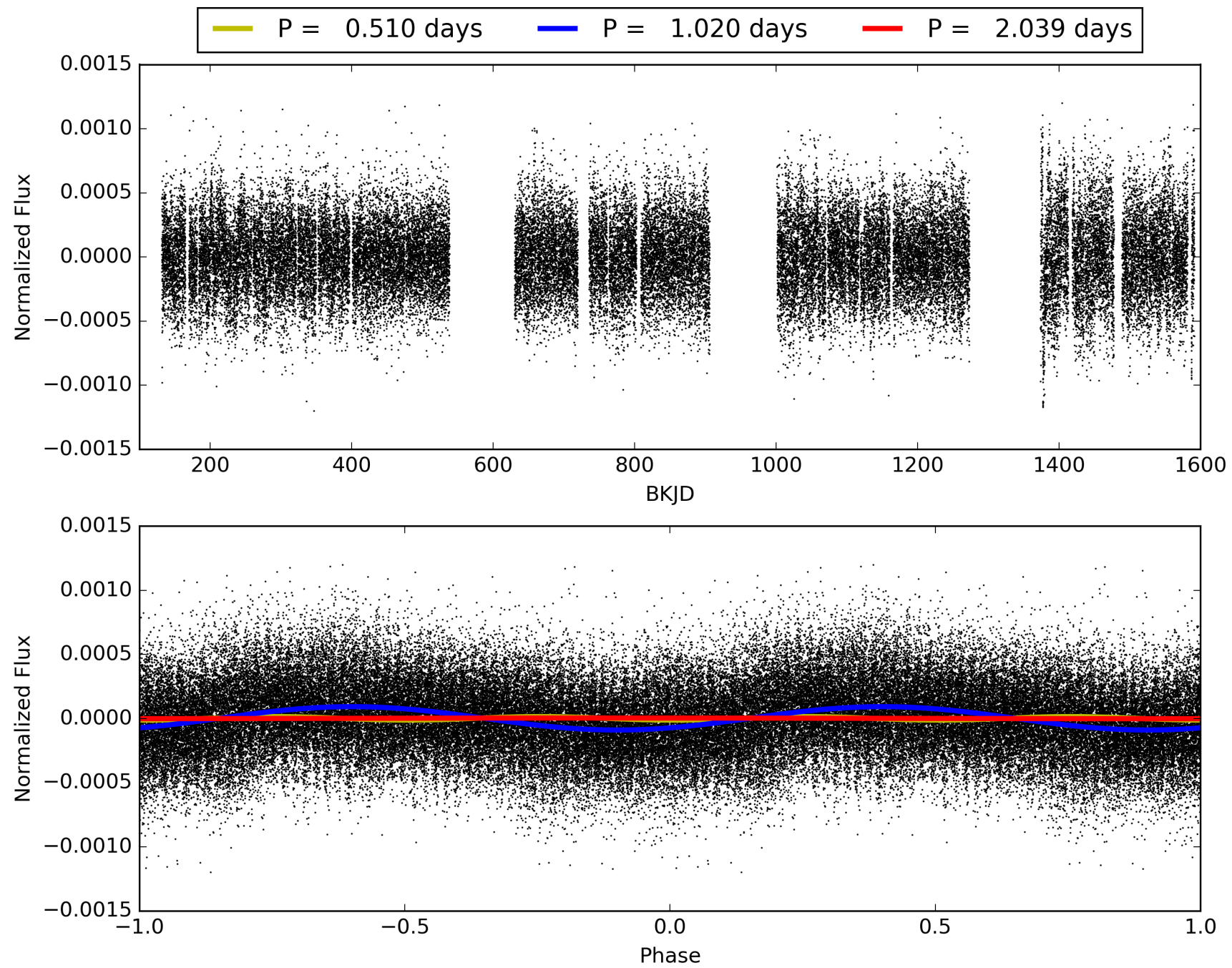
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:03:32 Z

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

TCE 004576934-01, PDC Light Curves

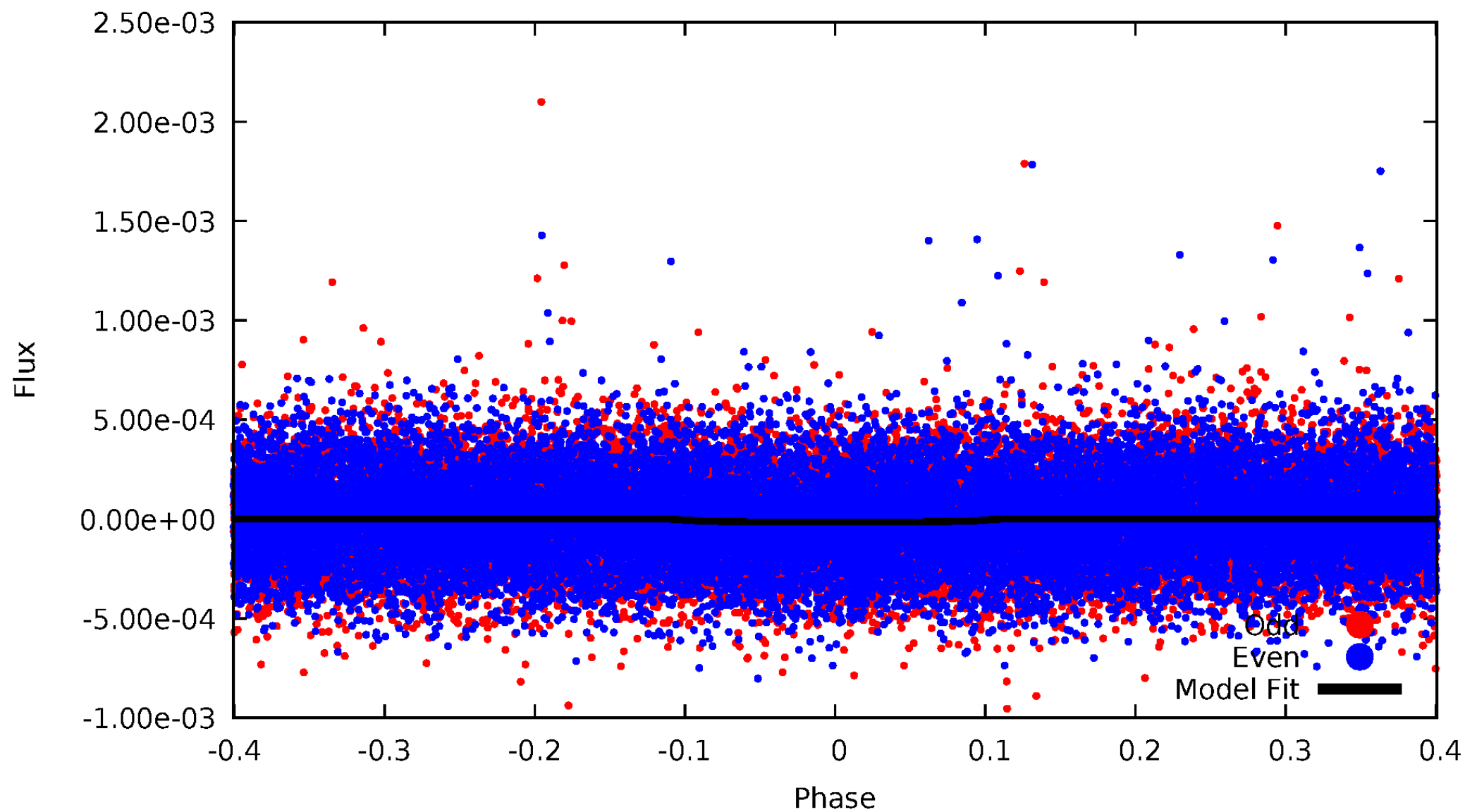


TCE 004576934-01



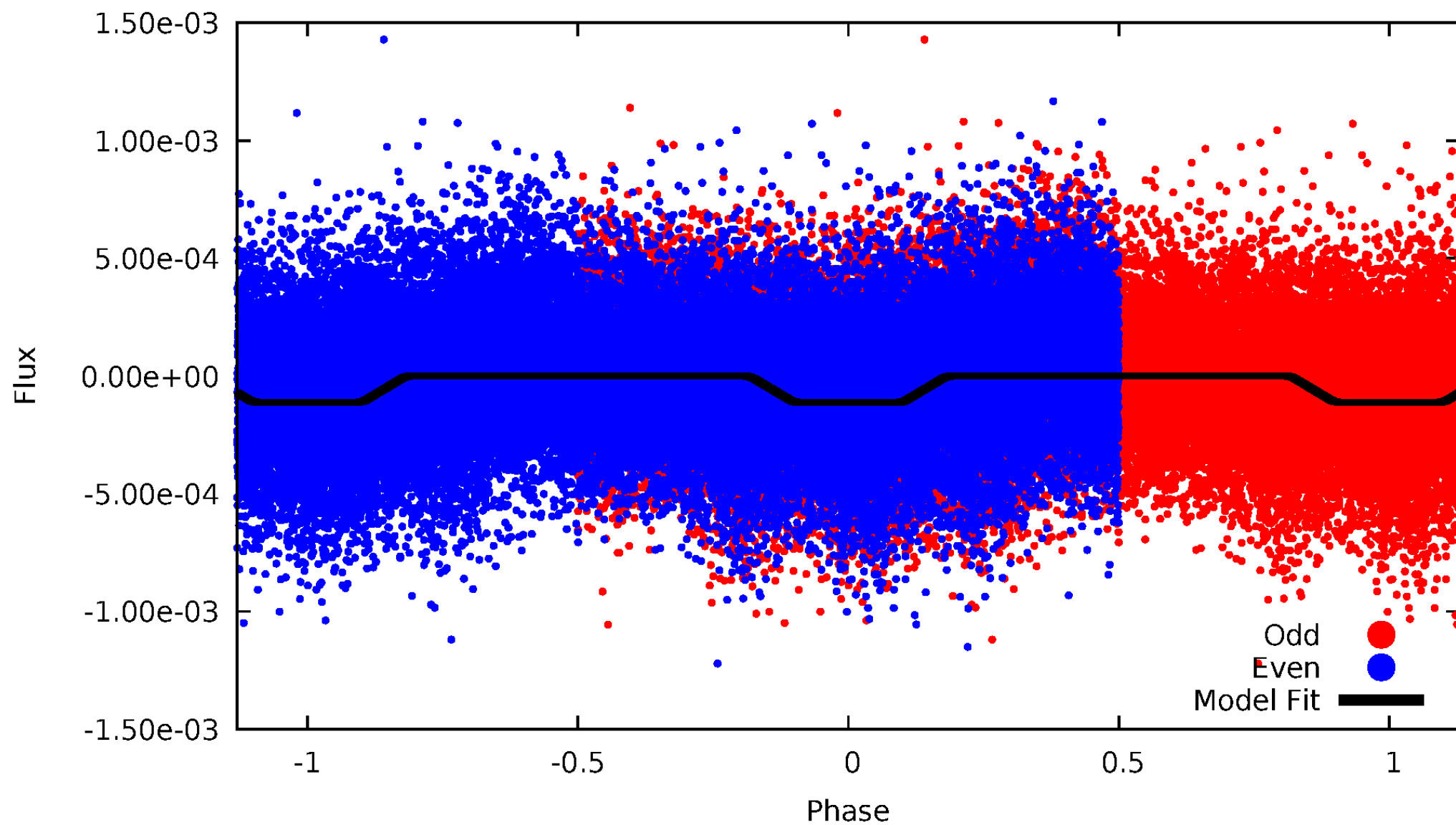
DV Odd/Even

TCE 004576934-01

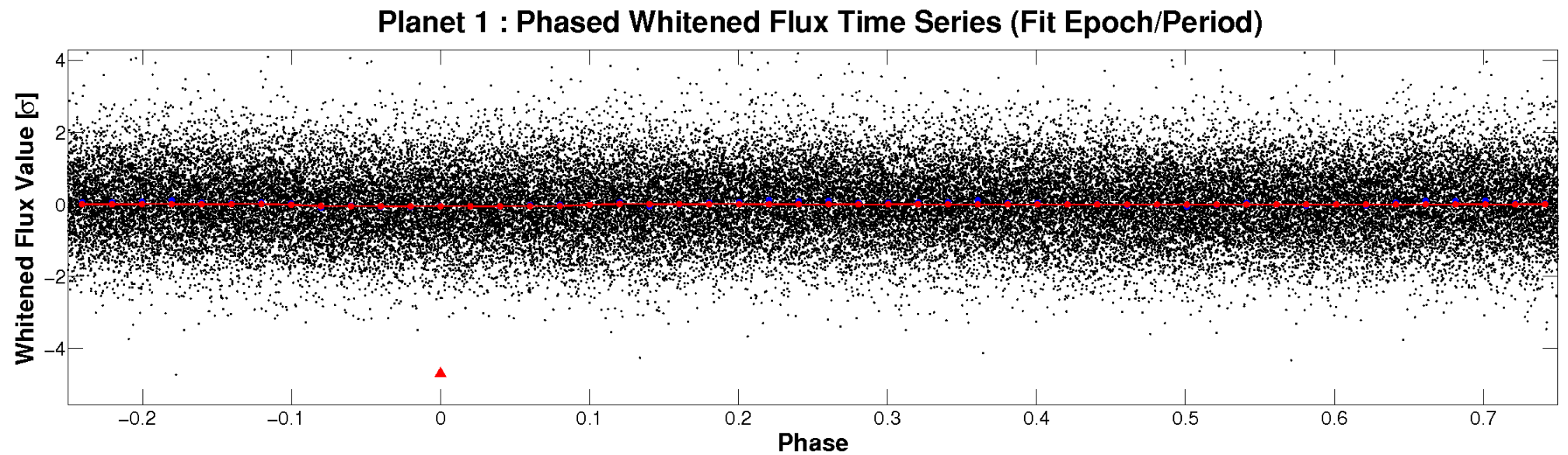
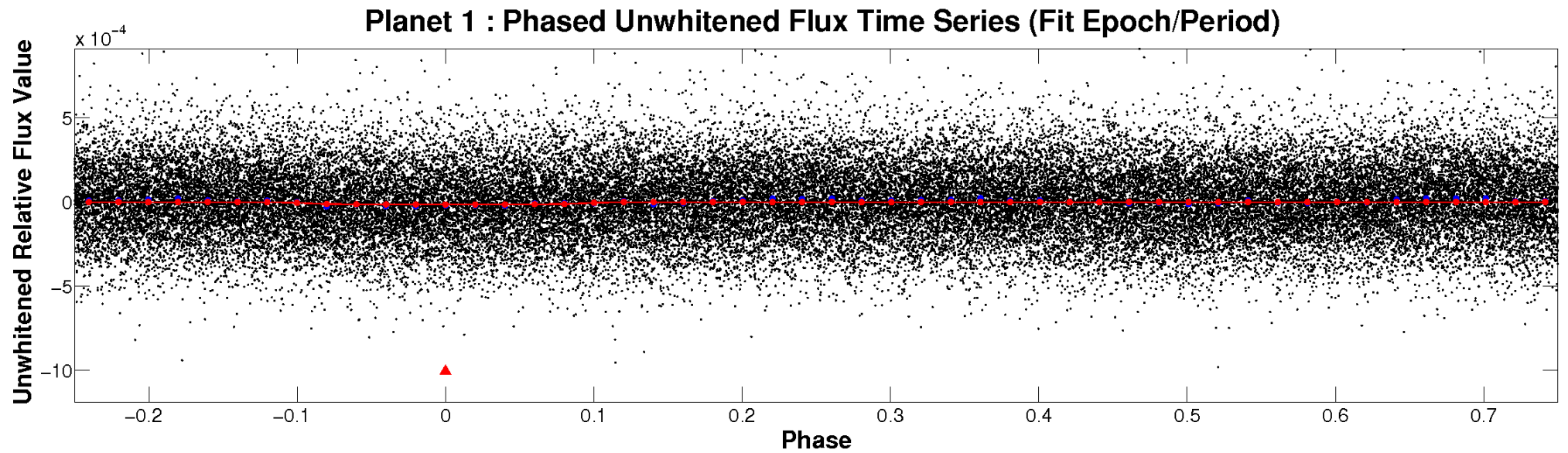


ALT Odd/Even

TCE 004576934-01

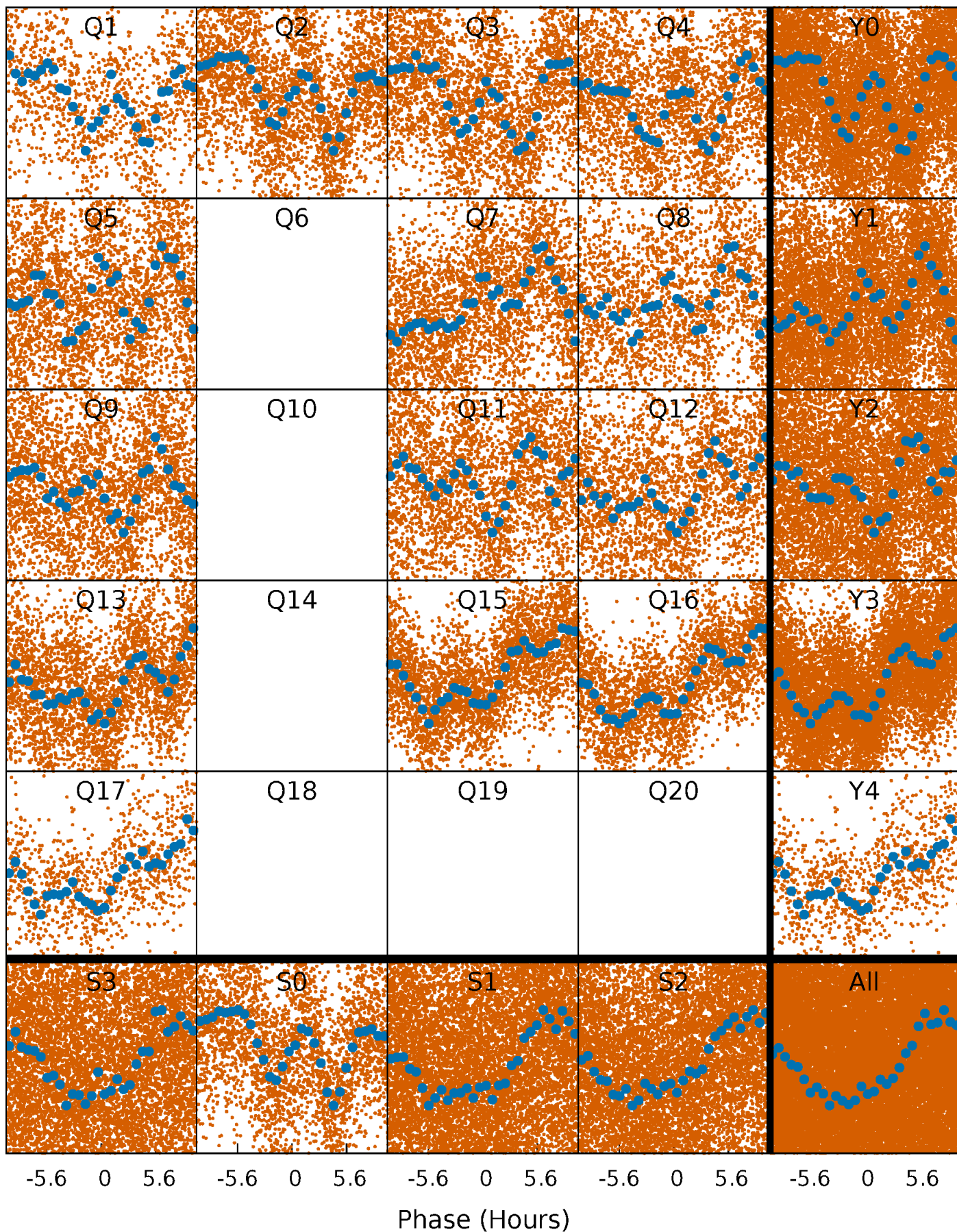


Non-Whitened Vs. Whitened Light Curve



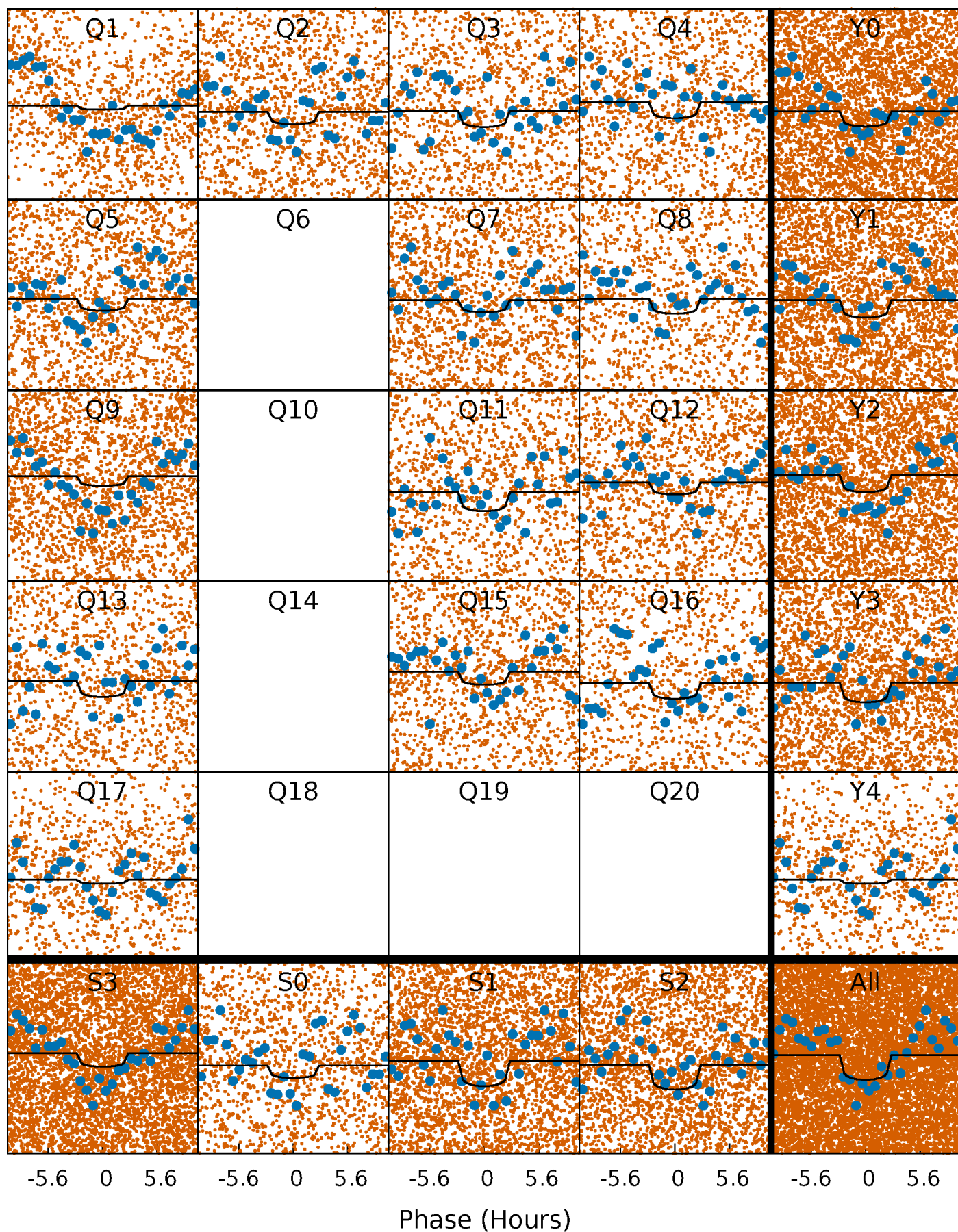
PDC Quarter-Phased Transit Curves

TCE 004576934-01 P= 1.019665 Days $T_0=132.041887$ (BKJD)



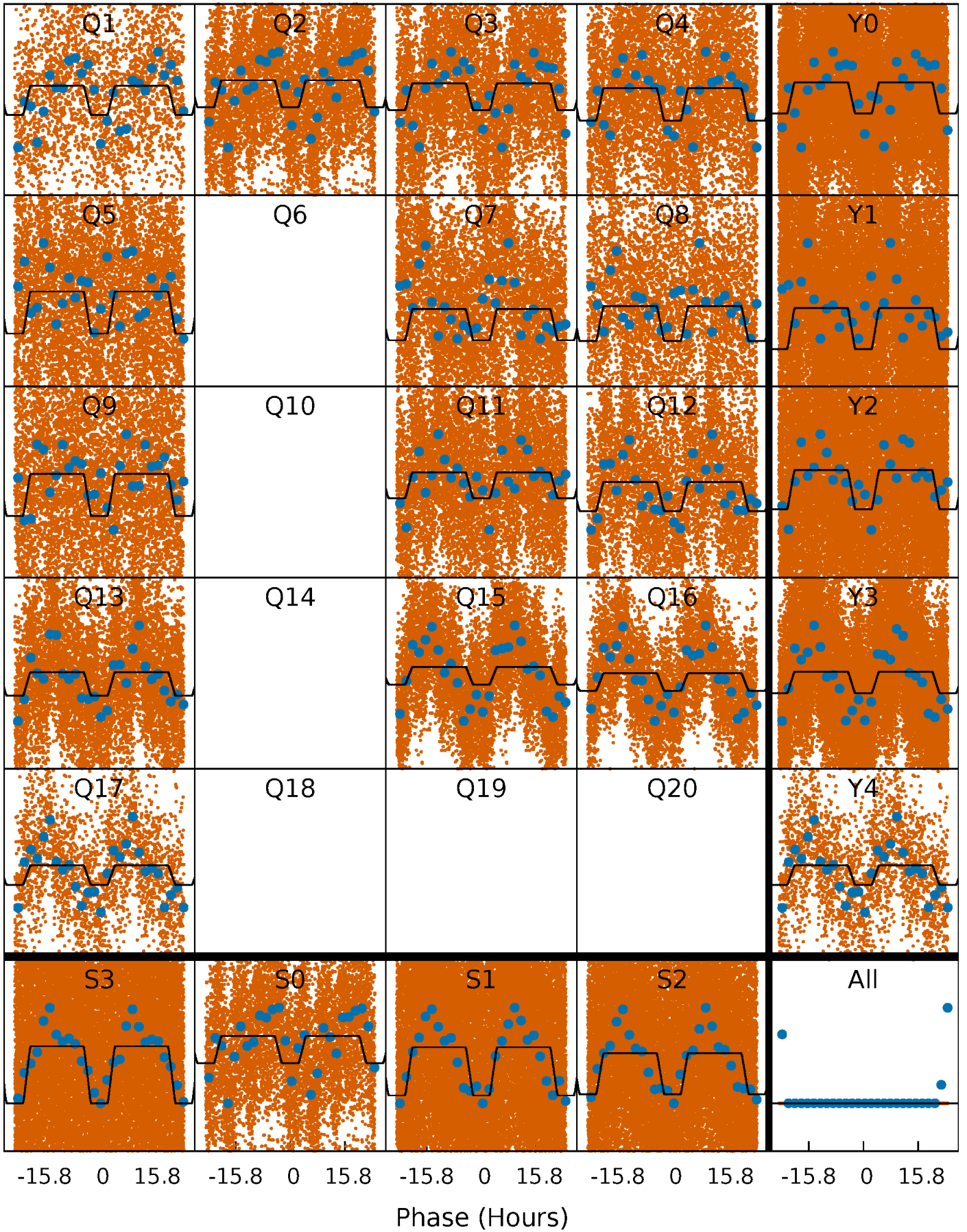
DV Quarter-Phased Transit Curves

TCE 004576934-01 P= 1.019665 Days $T_0=132.041887$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

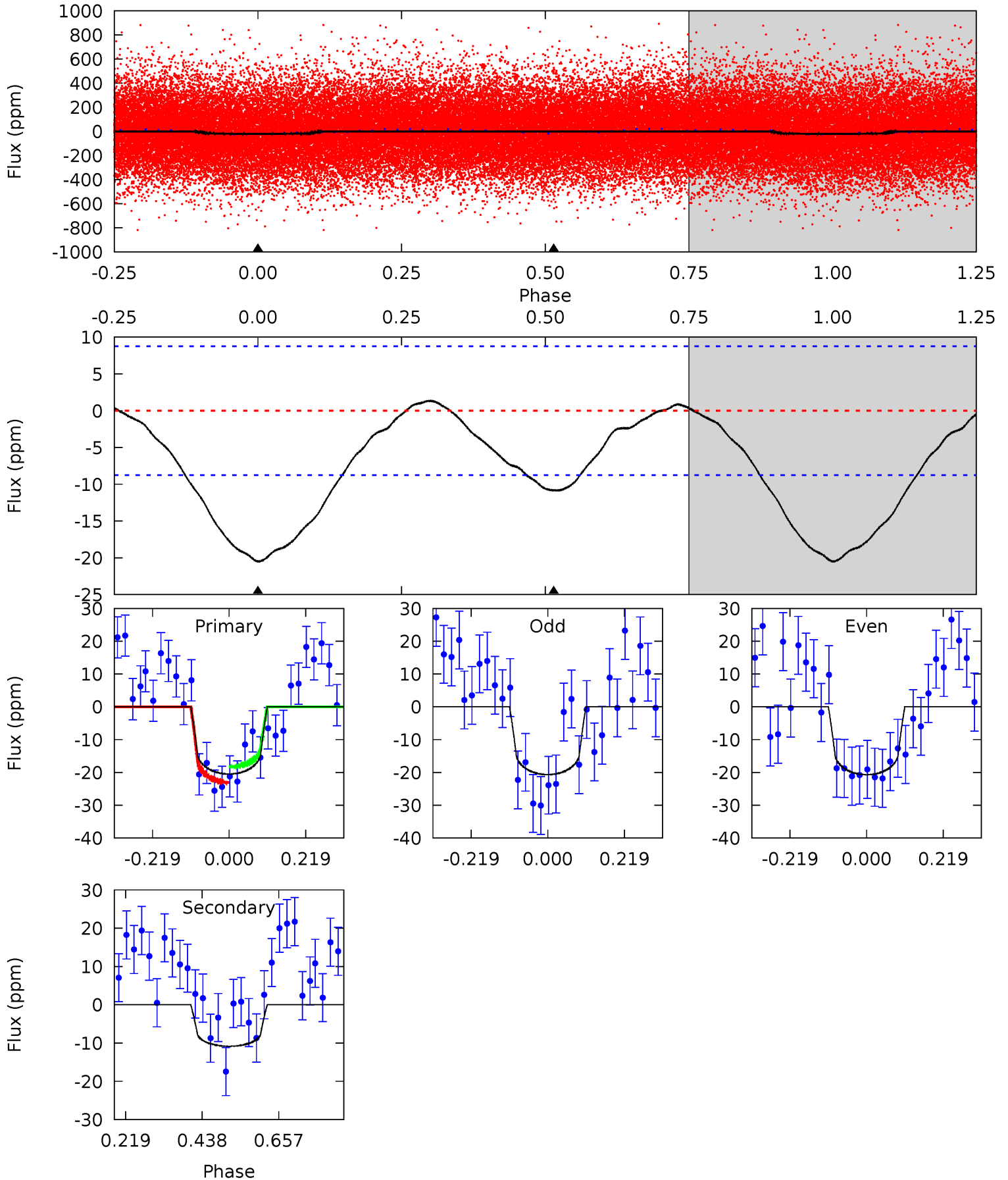
TCE 004576934-01 P= 1.019714 Days $T_0=131.942722$ (BKJD)



DV Model-Shift Uniqueness Test

004576934-01, P = 1.019665 Days, E = 131.022222 Days

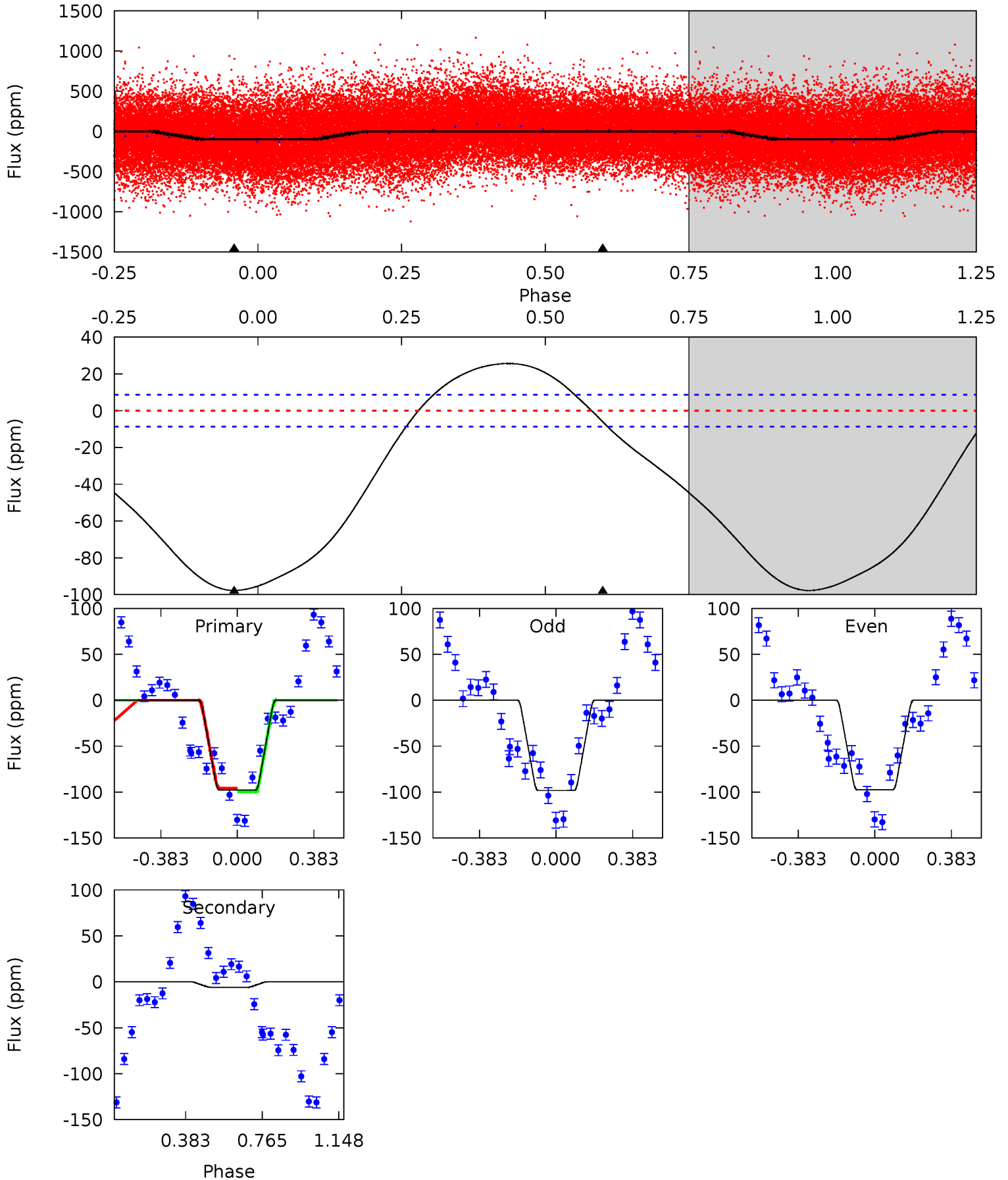
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	5.44	0	0	4.40	1.23	0.53	10.3	10.3	5.44	5.44	0.01	0.96	0.06	1.19



Alt Model-Shift Uniqueness Test

004576934-01, P = 1.019714 Days, E = 130.923008 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.1	2.98	0	0	4.27	0.87	5.37	48.1	48.1	2.98	2.98	0.23	1.05	0.21	1.02



Stellar Parameters For KIC 004576934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7221^{+263}_{-351}	$3.899^{+0.382}_{-0.127}$	$-0.560^{+0.300}_{-0.300}$	$2.208^{+0.486}_{-0.972}$	$1.409^{+0.193}_{-0.313}$	$0.184^{+0.579}_{-0.069}$
	+4%/-5%	+10%/-3%	+54%/-54%	+22%/-44%	+14%/-22%	+314%/-37%
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 004576934-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 2	$0.90^{+0.64}_{-0.51}$	4345^{+337}_{-456}	6187^{+4513}_{-1426}	$3.513^{+15.944}_{-2.301}$
Alt.	-6 ± 2	$2.41^{+0.77}_{-0.79}$	4324^{+374}_{-485}	-2341^{+6088}_{-1237}	$0.291^{+0.336}_{-0.152}$

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 $A_{obs} \gg 1.0$

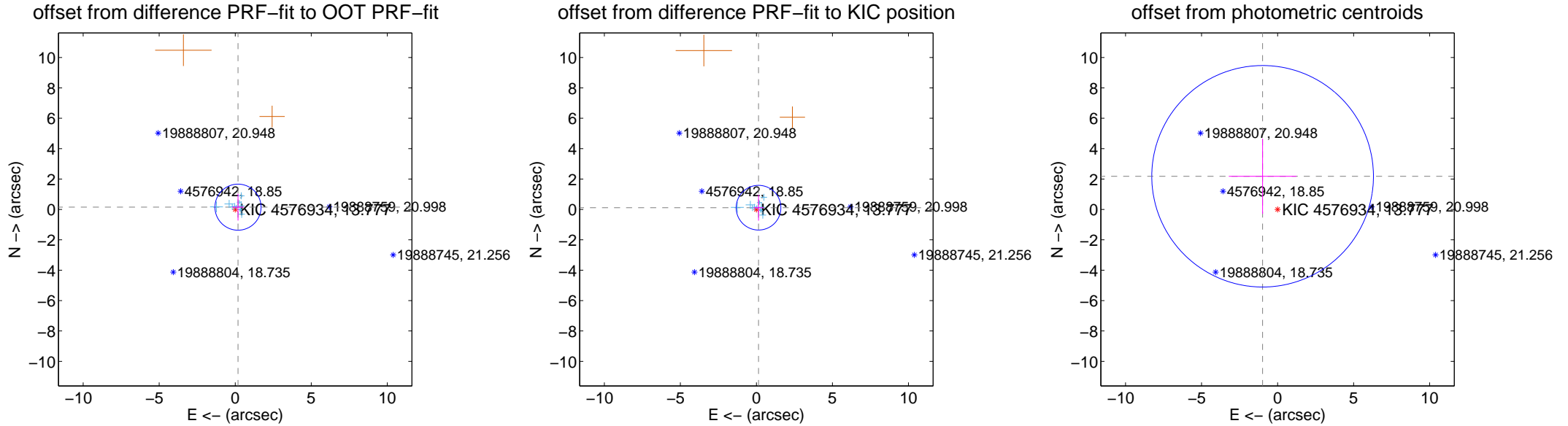
DV Centroid Data

Supplemental centroid analysis for 004576934-01. Kepler magnitude: 13.78. Transit SNR 5.12

There are 11 quarters with good PRF difference image offsets

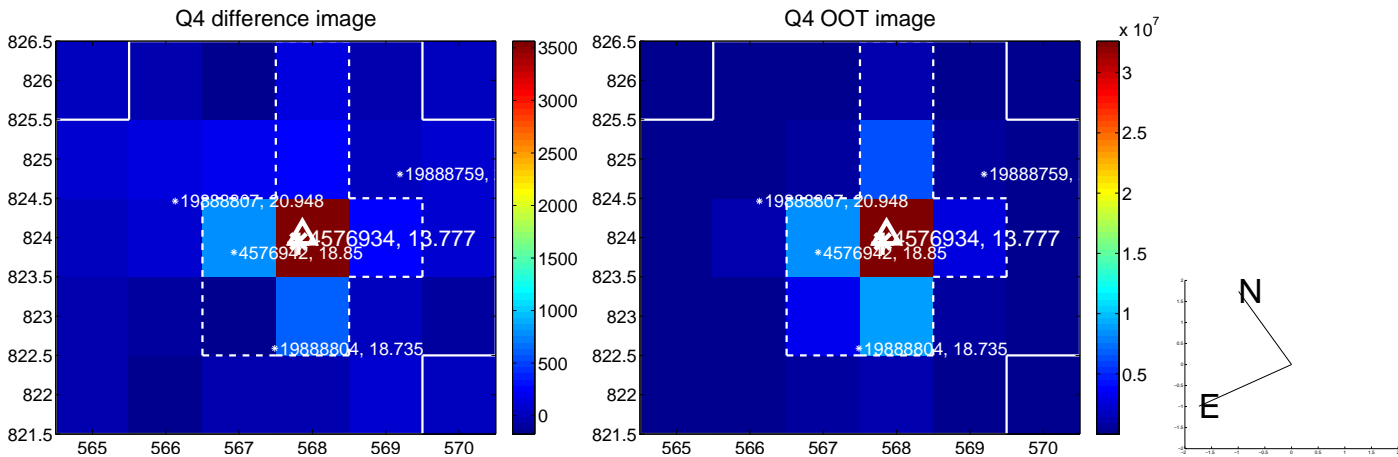
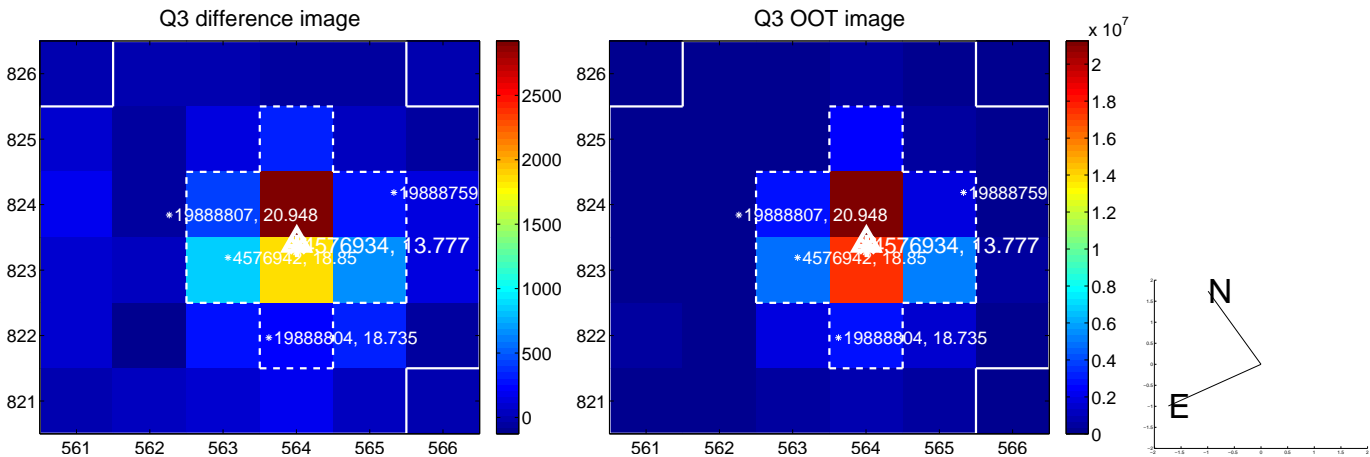
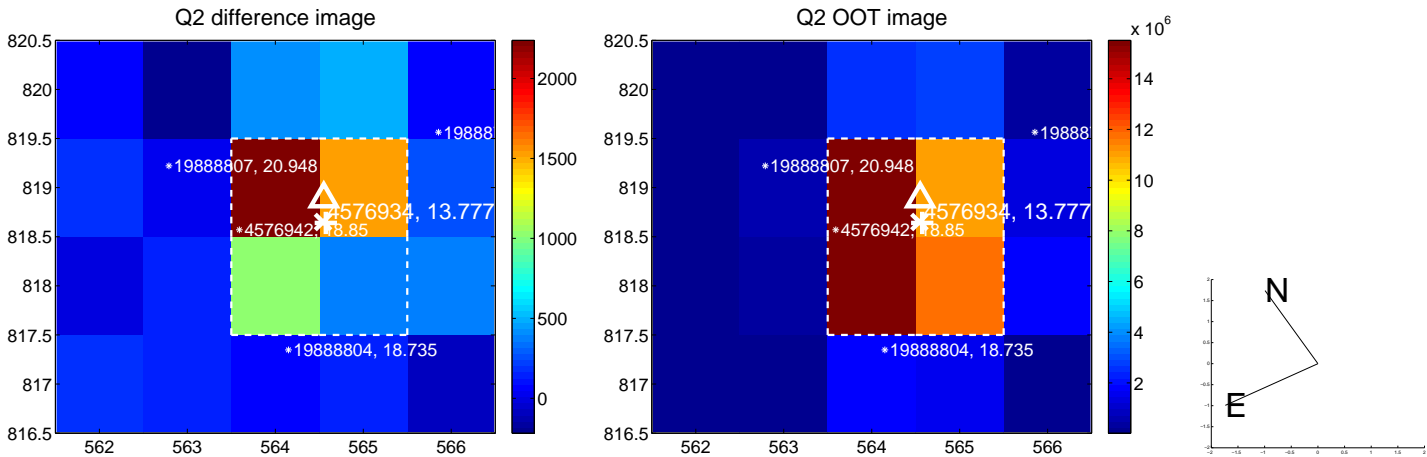
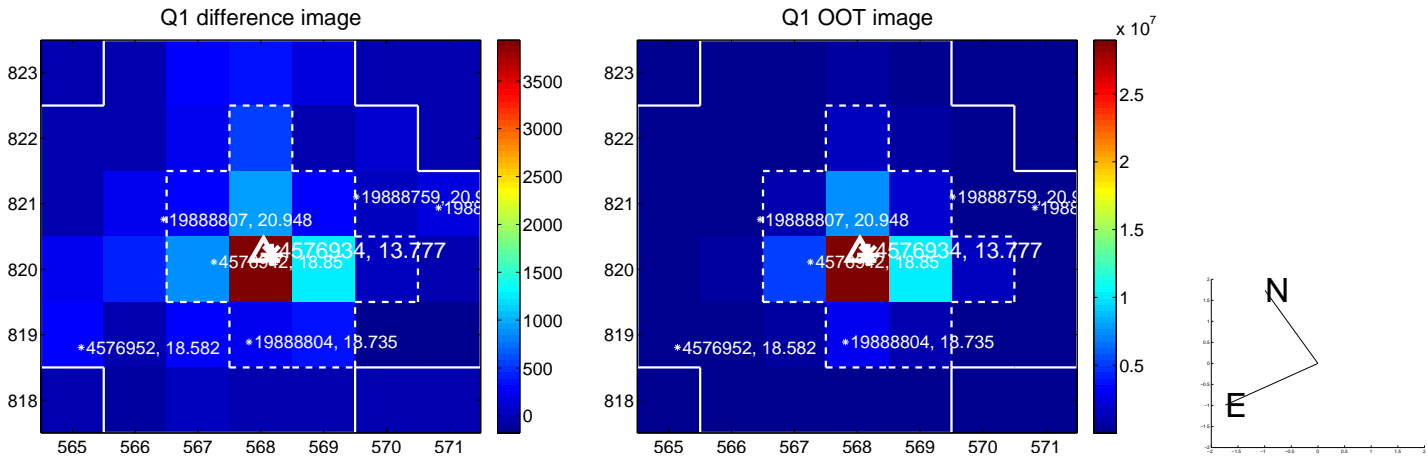
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.236 ± 0.505	0.47	-0.183 ± 0.377	0.149 ± 0.884
PRF-fit source offset from KIC position	0.181 ± 0.490	0.37	-0.140 ± 0.324	0.114 ± 0.855
photometric centroid source offset	2.39 ± 2.43	0.99	0.99 ± 2.22	2.18 ± 2.47

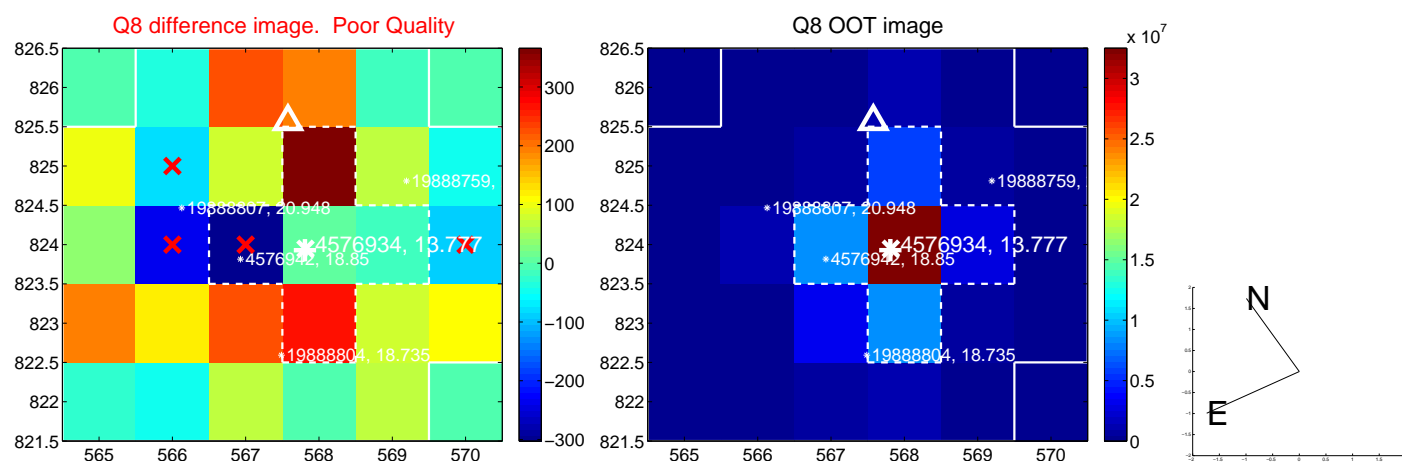
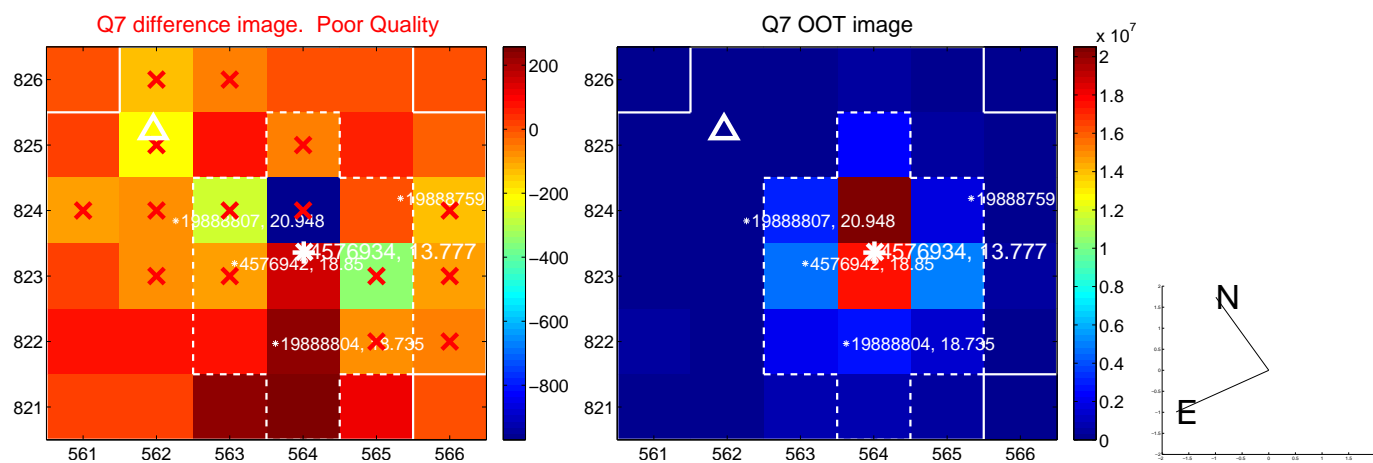
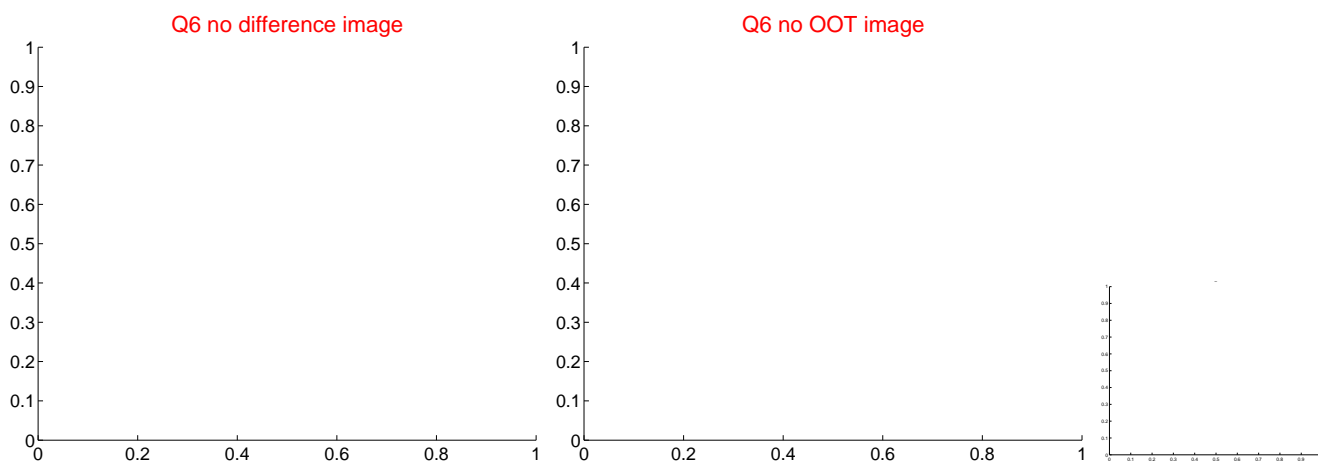
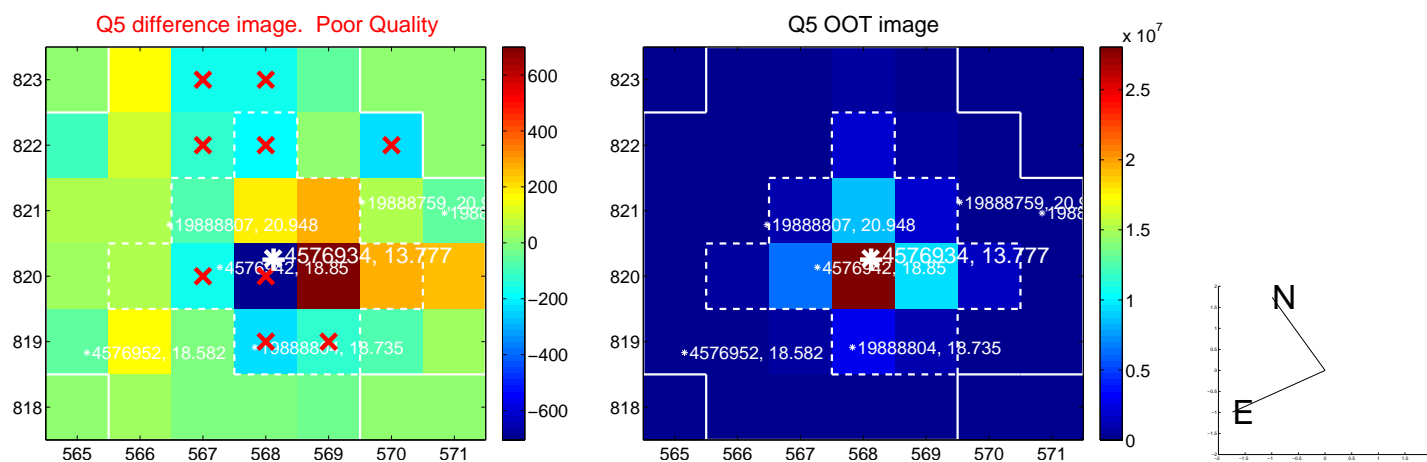


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

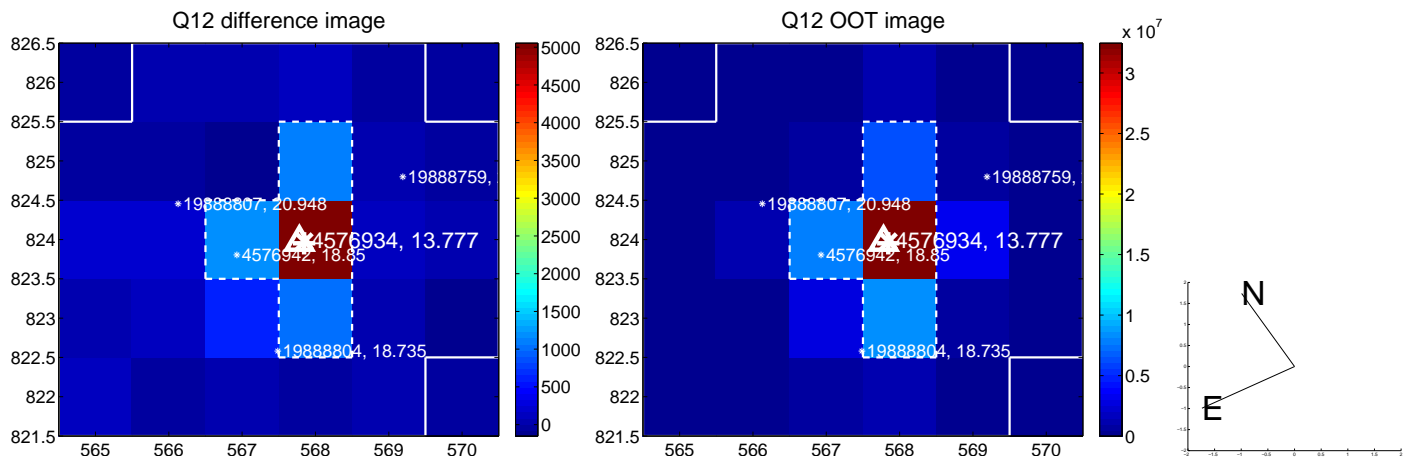
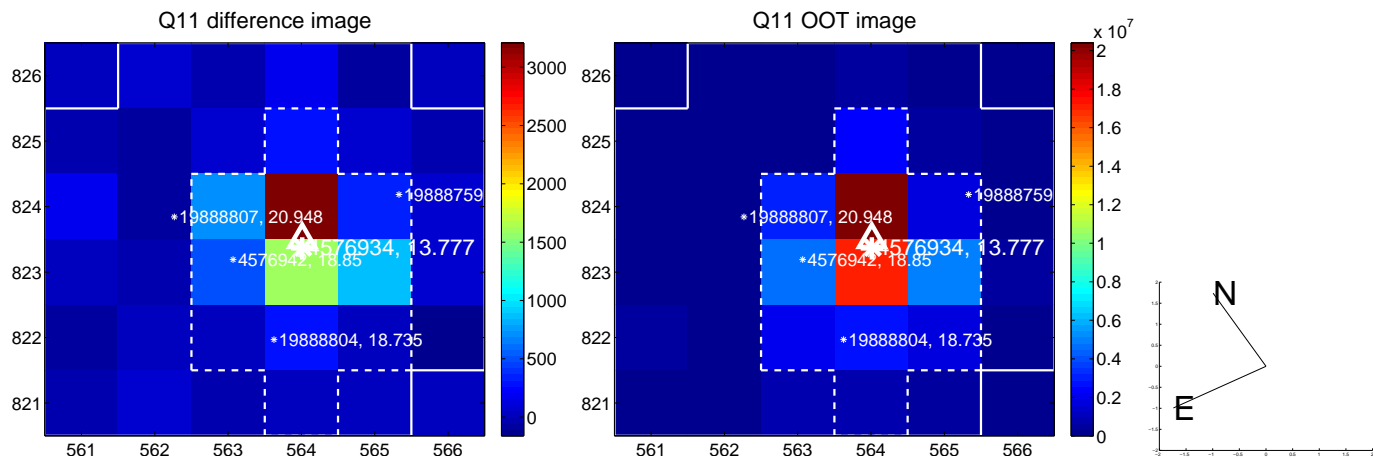
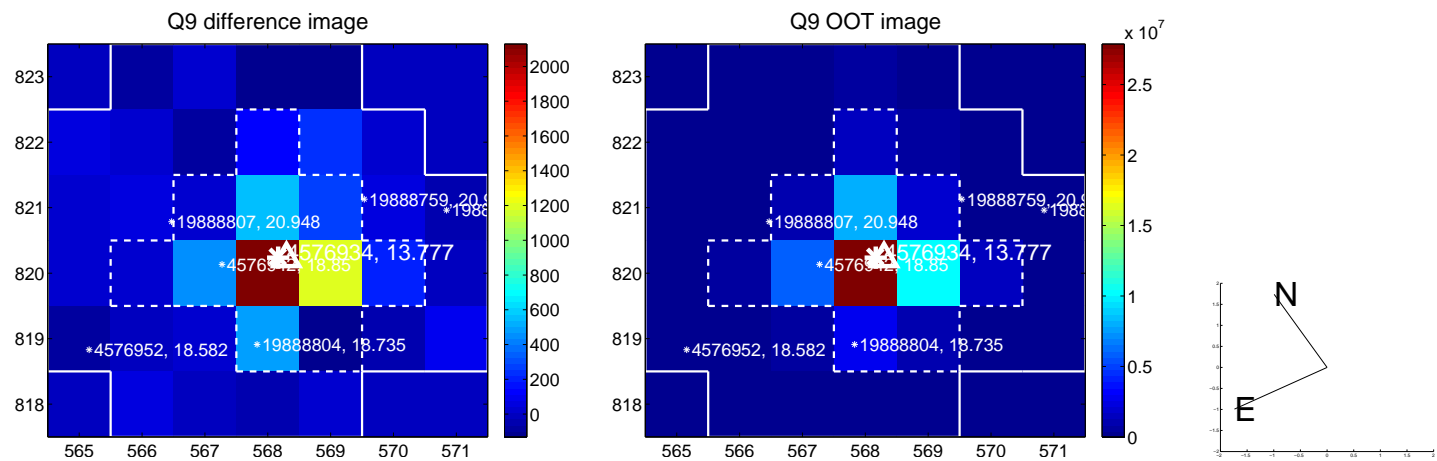
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



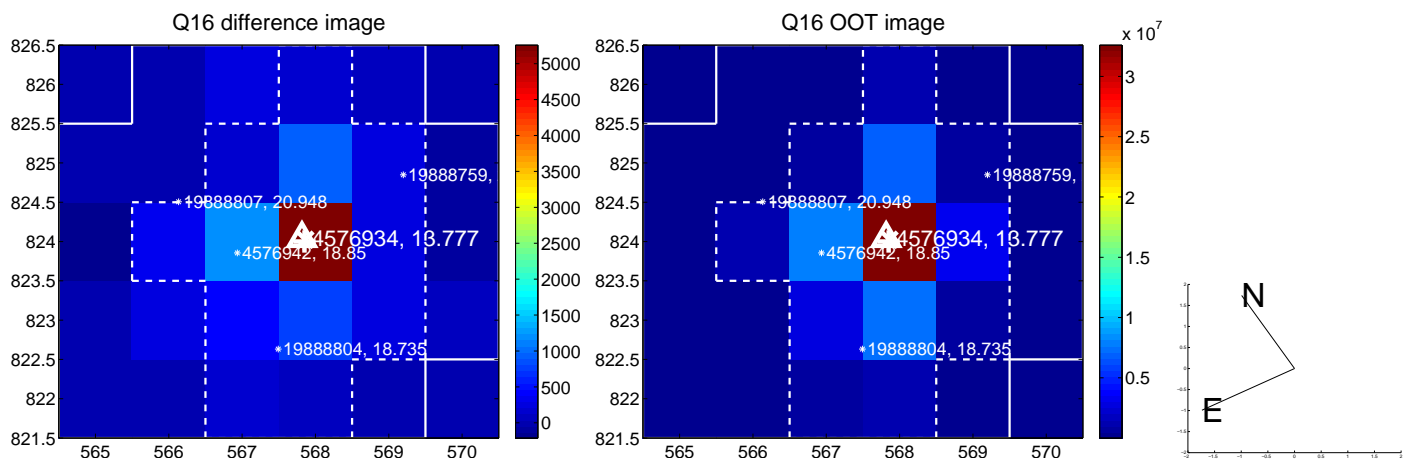
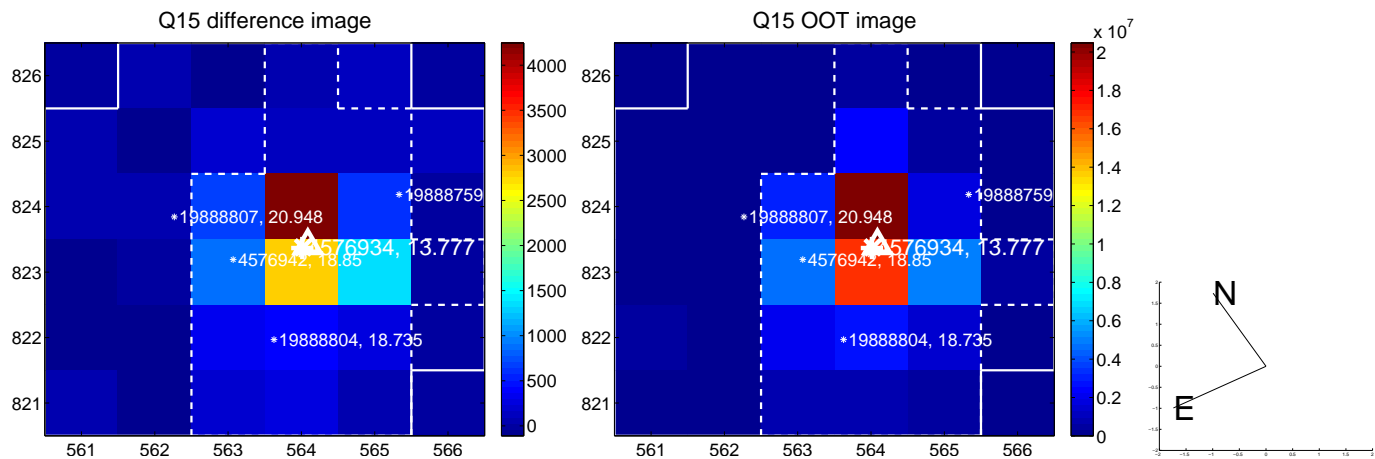
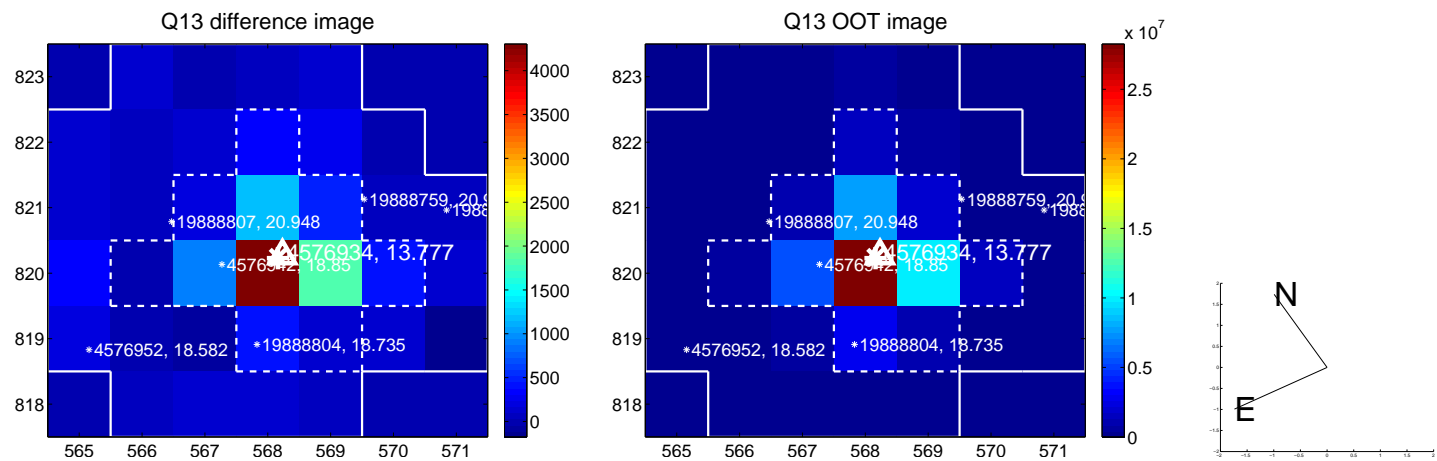
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



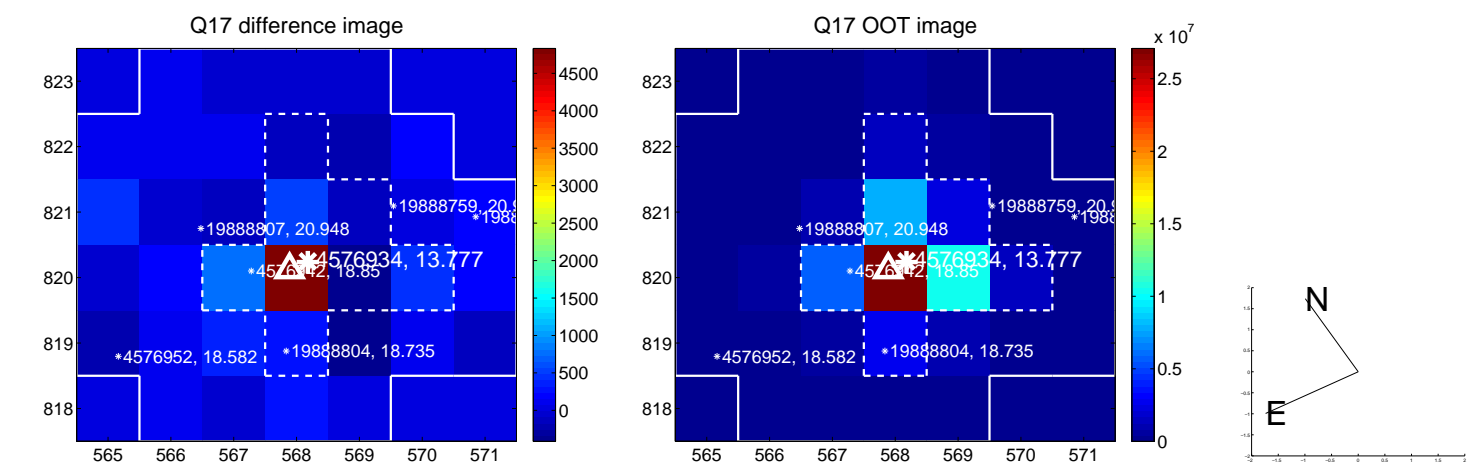
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



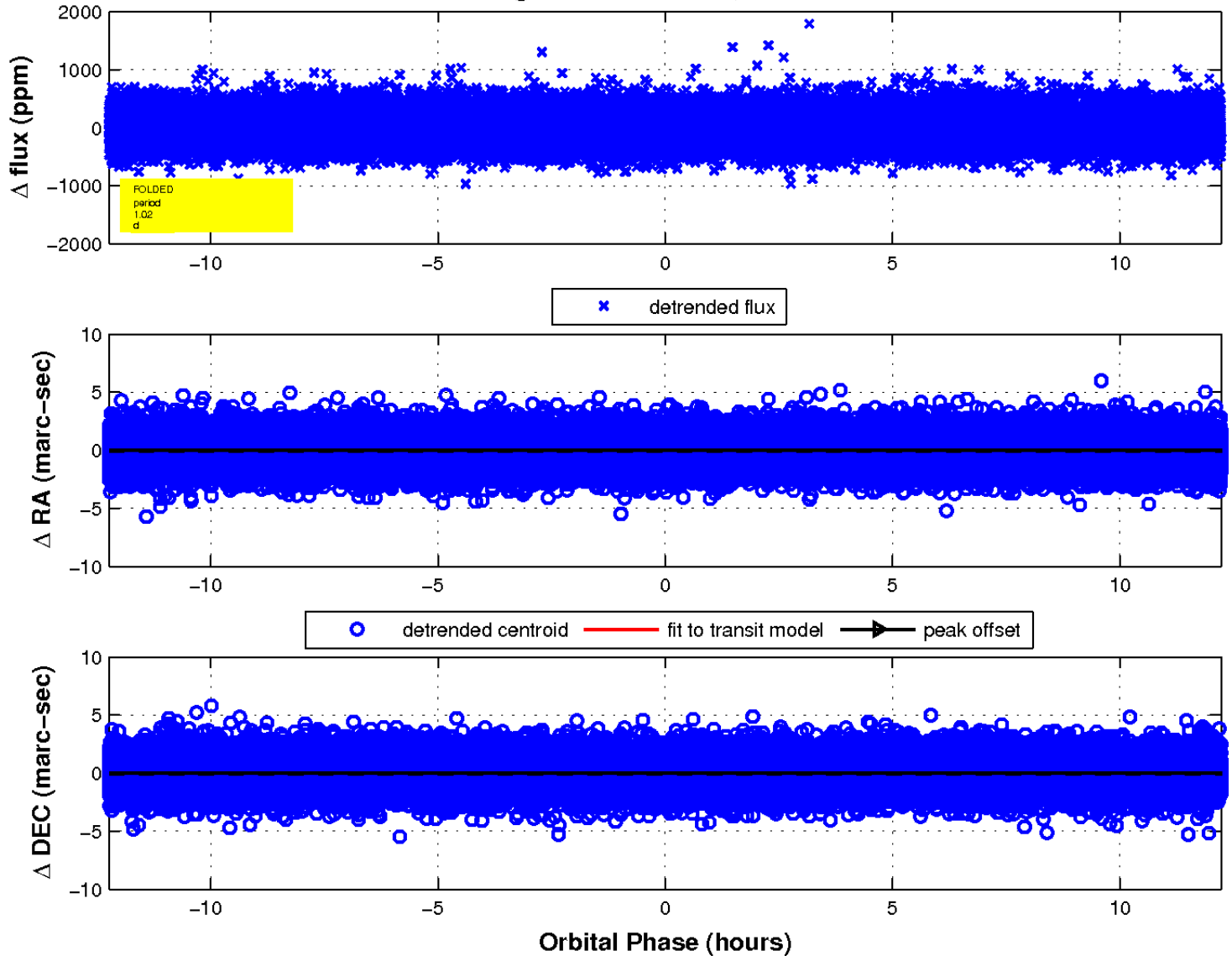
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

