

KIC 007937576

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})
007937576-01	OBS	No	2.522707	133.498824	12.4	20.595	7.9	7.1	2.19	6691	0.88	4890.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007937576-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

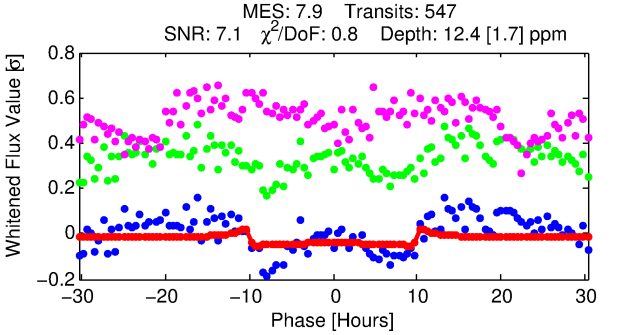
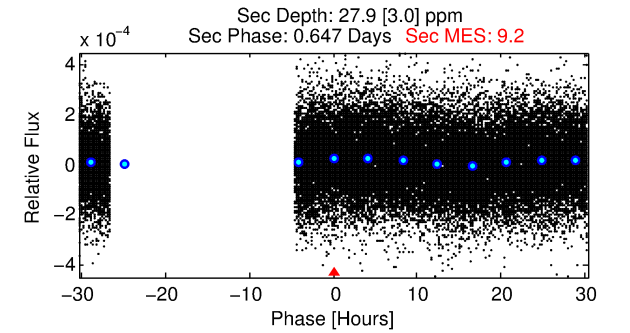
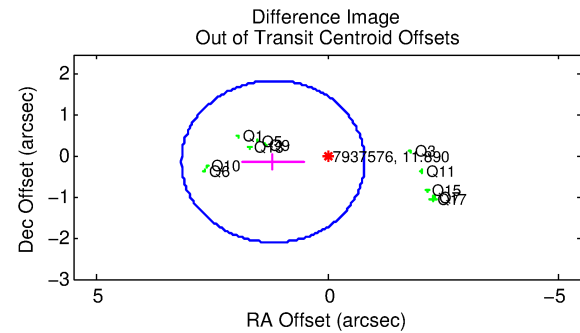
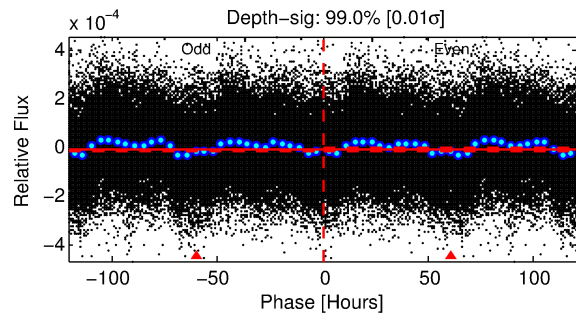
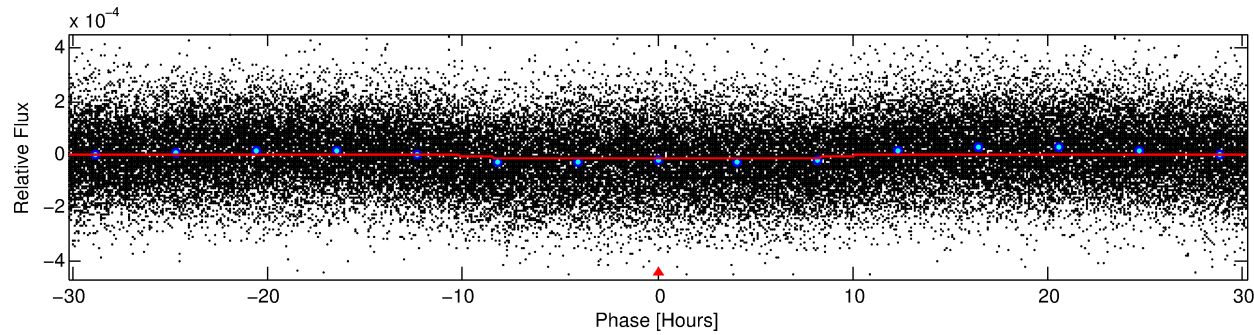
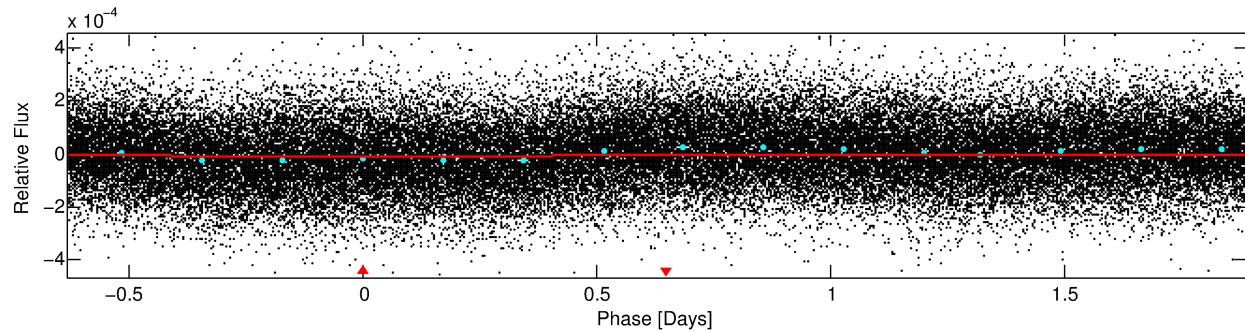
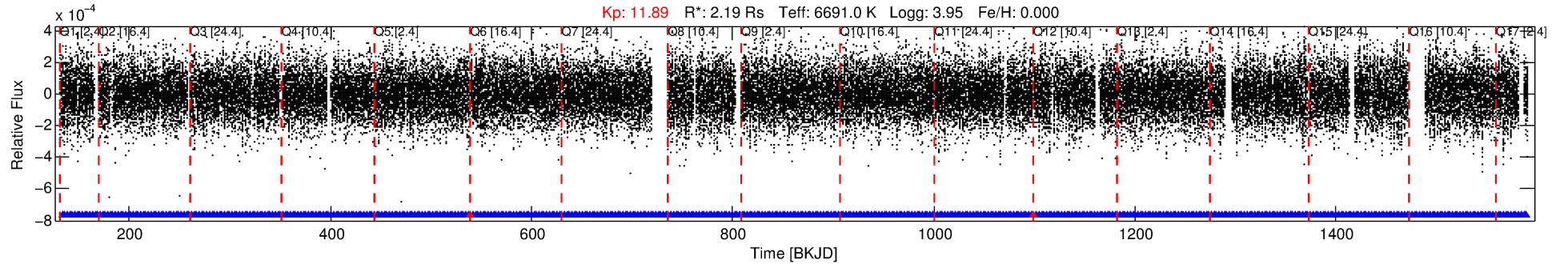
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007937576-01

No Significant Match Found

DV One-Page Summary

KIC: 7937576 Candidate: 1 of 1 Period: 2.523 d



DV Fit Results:

Period = 2.52271 [0.00005] d
Epoch = 133.4988 [0.0107] BKJD
Rp/R* = 0.0037 [0.0008]
a/R* = 1.04 [0.10]
b = 0.87 [0.36]
Seff = 4890.32 [2837.61]
Teq = 2132 [309] K
Rp = 0.88 [0.37] Re
a = 0.0419 [0.0146] AU
Ag = 34.89 [25.29] [1.34 σ]
Teffp = 8013 [974] K [5.75 σ]

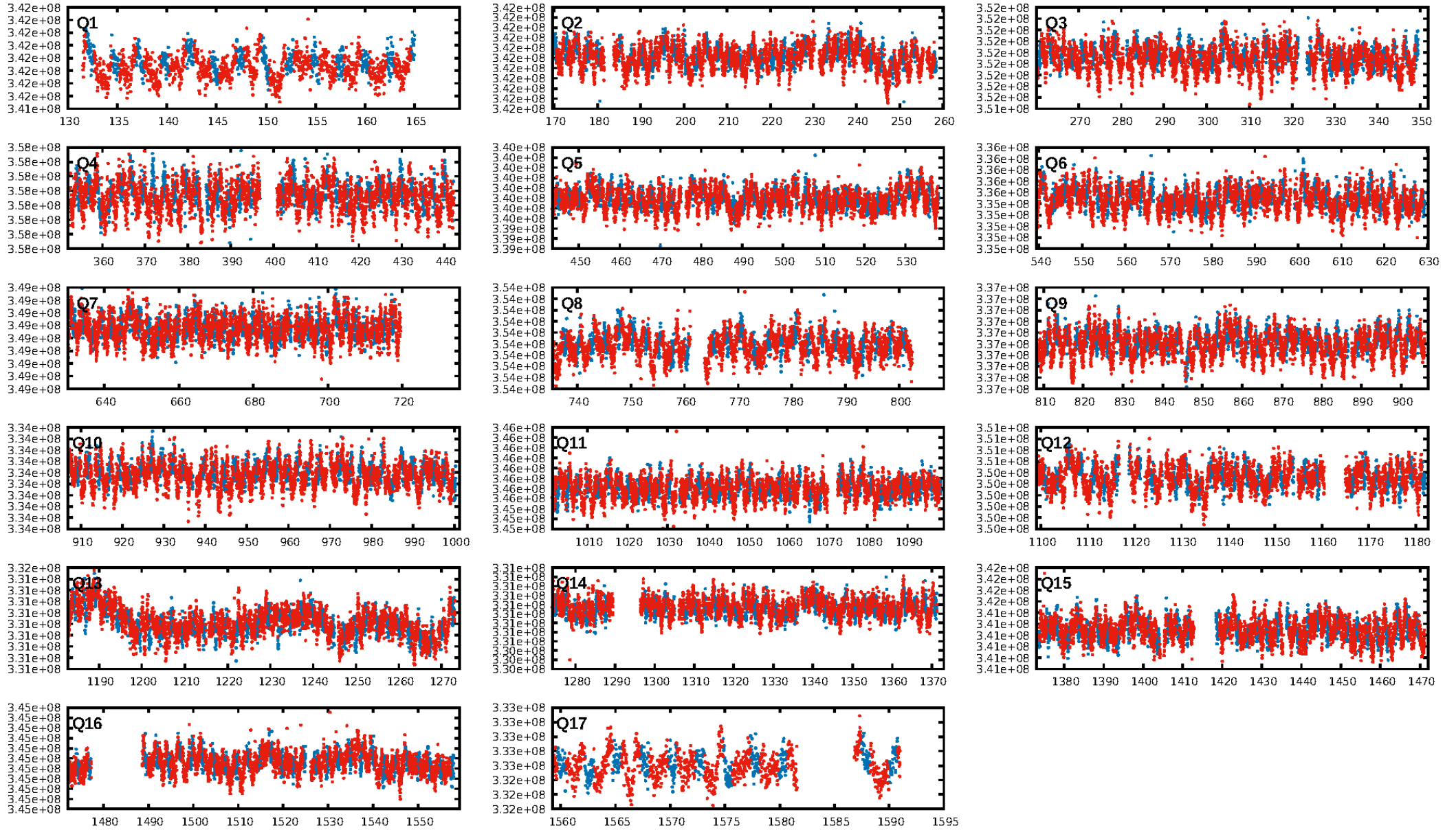
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [520/522]
GhostDiagnostic-chr: 1.521
Centroid-sig: 35.8%
Centroid-so: 0.577 arcsec [0.74 σ]
OotOffset-rm: 1.183 arcsec [1.79 σ]
OotOffset-st: 2/4/0/5 [11]
KicOffset-rm: 1.212 arcsec [1.98 σ]
KicOffset-st: 2/4/0/5 [11]
DiffImageQuality-fgm: 0.91 [10/11]
DiffImageOverlap-fno: 1.00 [17/17]

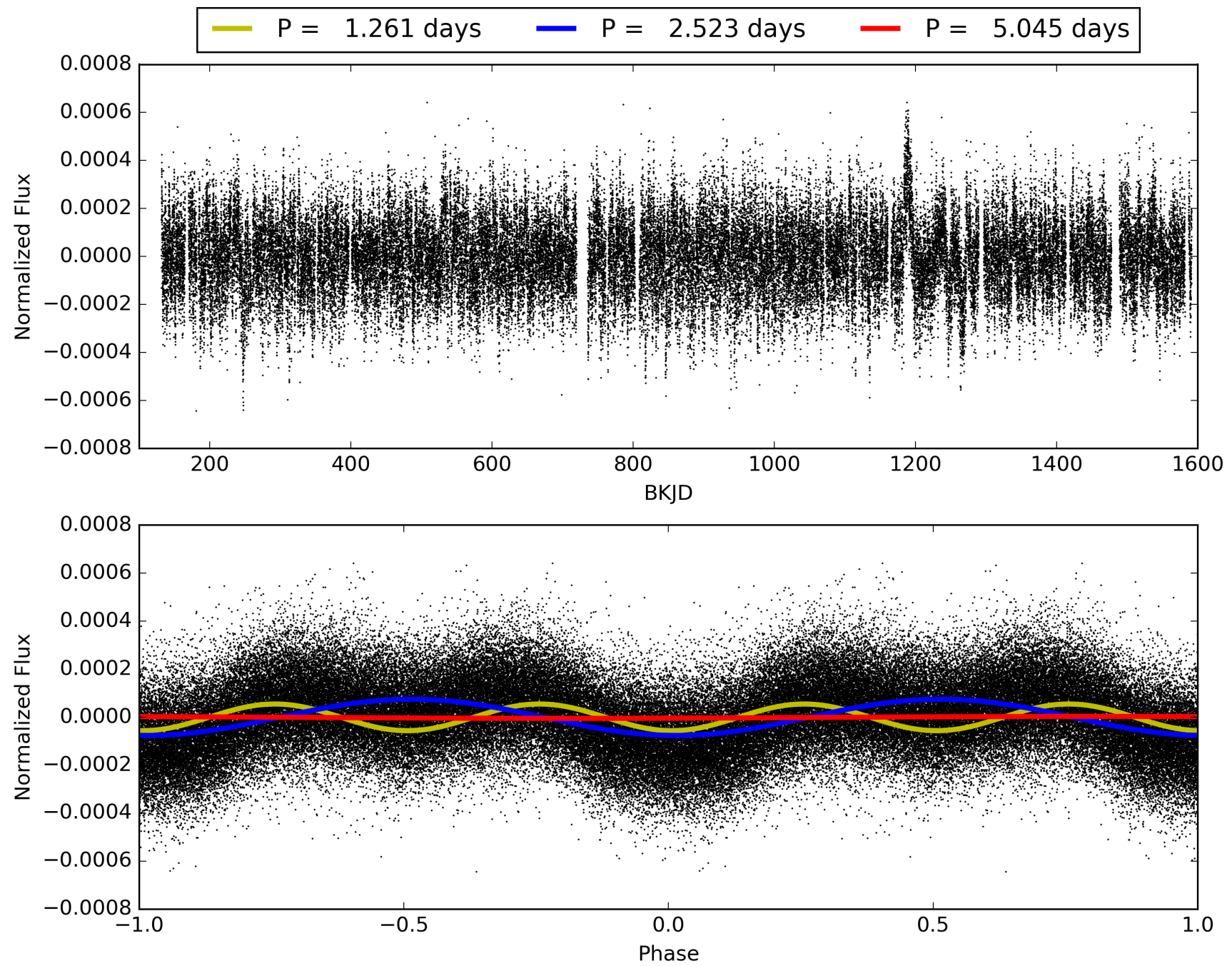
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:18:08 Z

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

TCE 007937576-01, PDC Light Curves

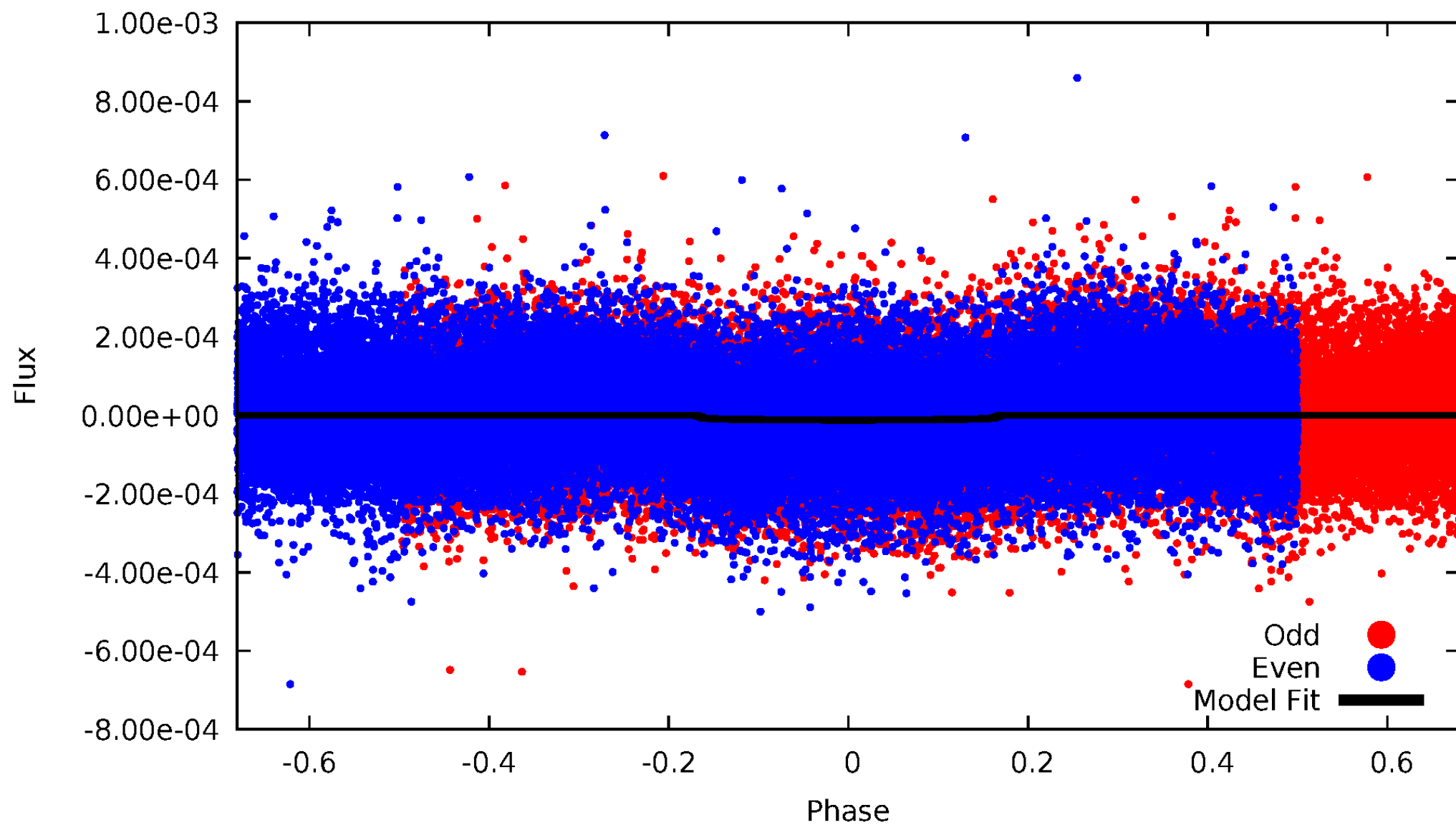


TCE 007937576-01



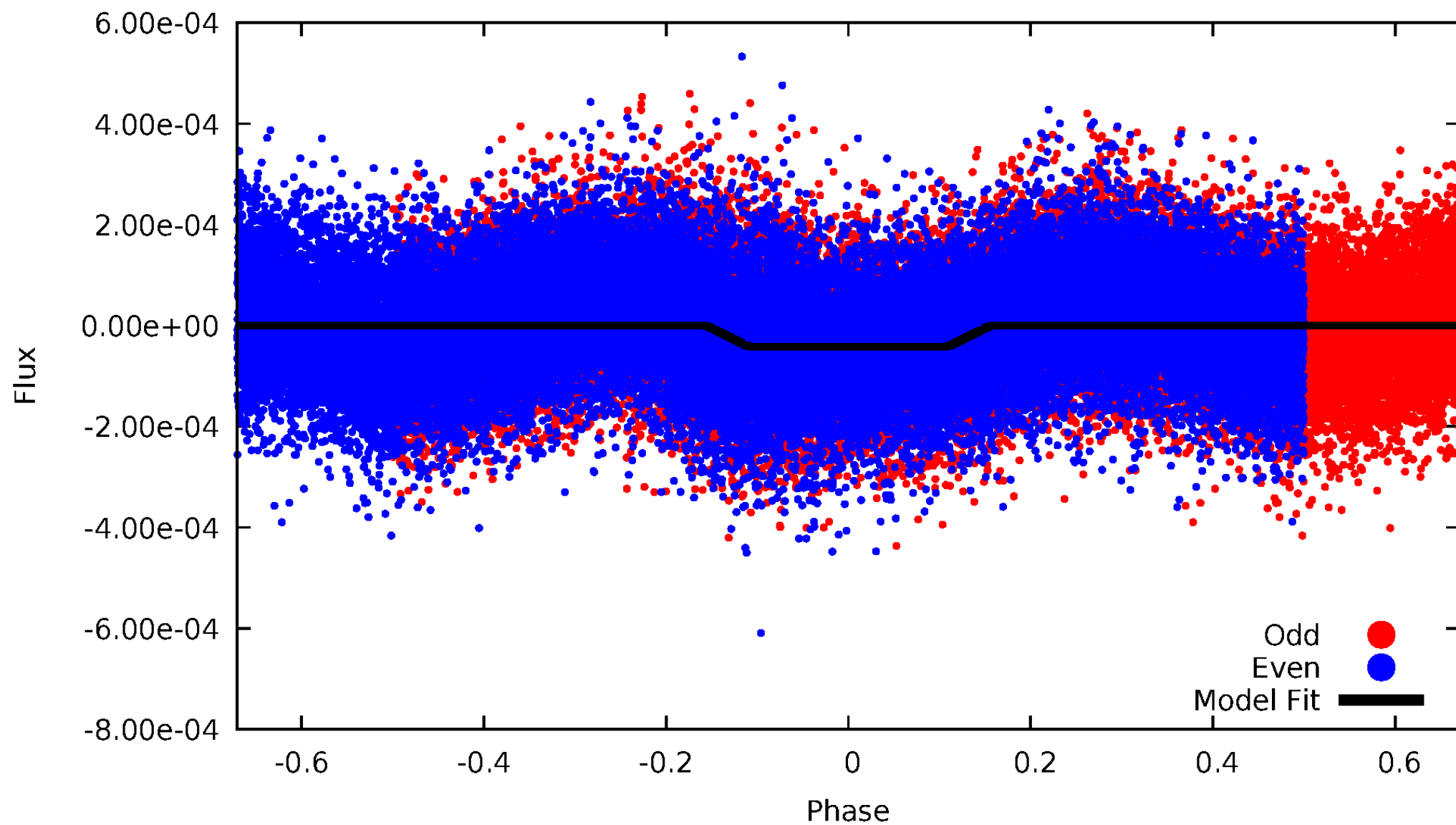
DV Odd/Even

TCE 007937576-01



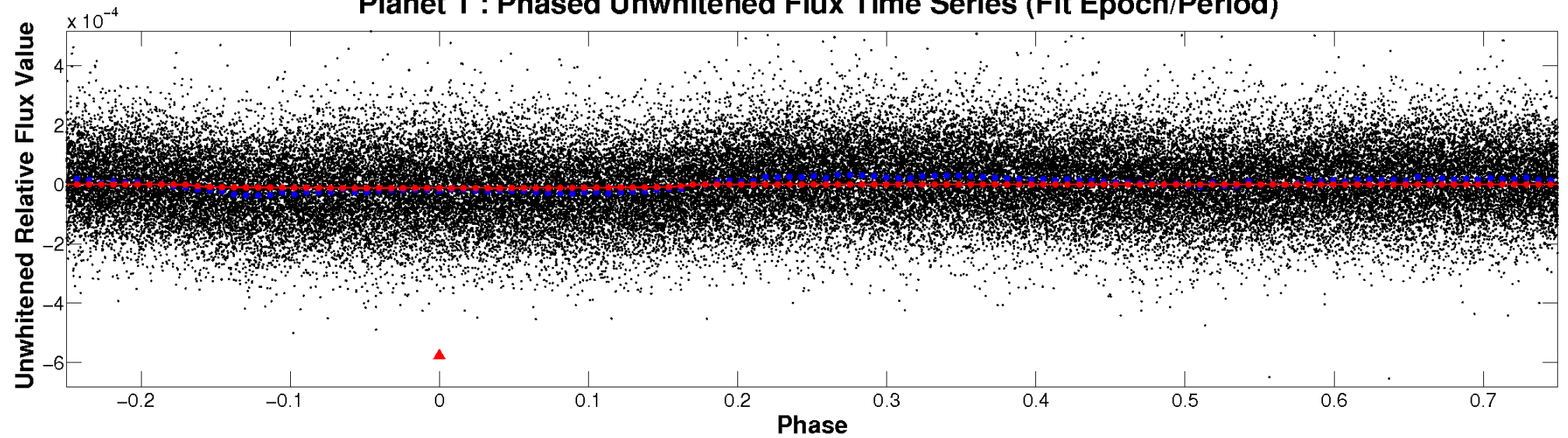
ALT Odd/Even

TCE 007937576-01

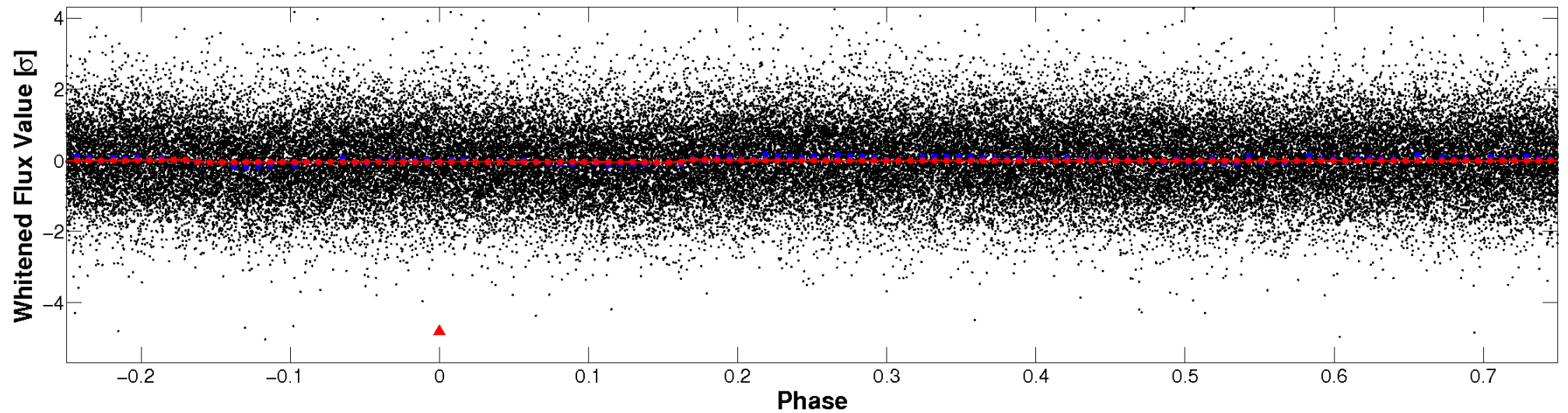


Non-Whitened Vs. Whitened Light Curve

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

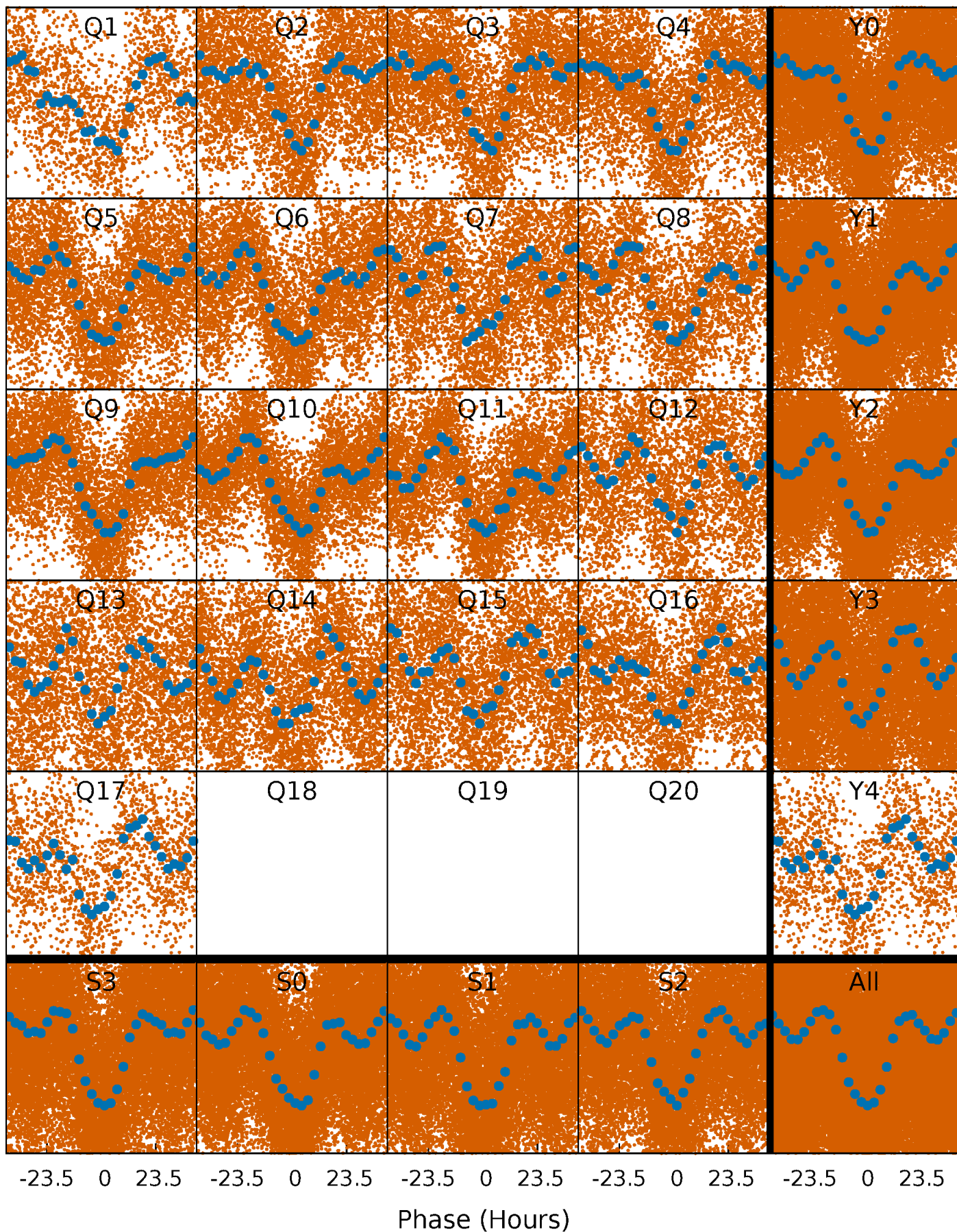


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



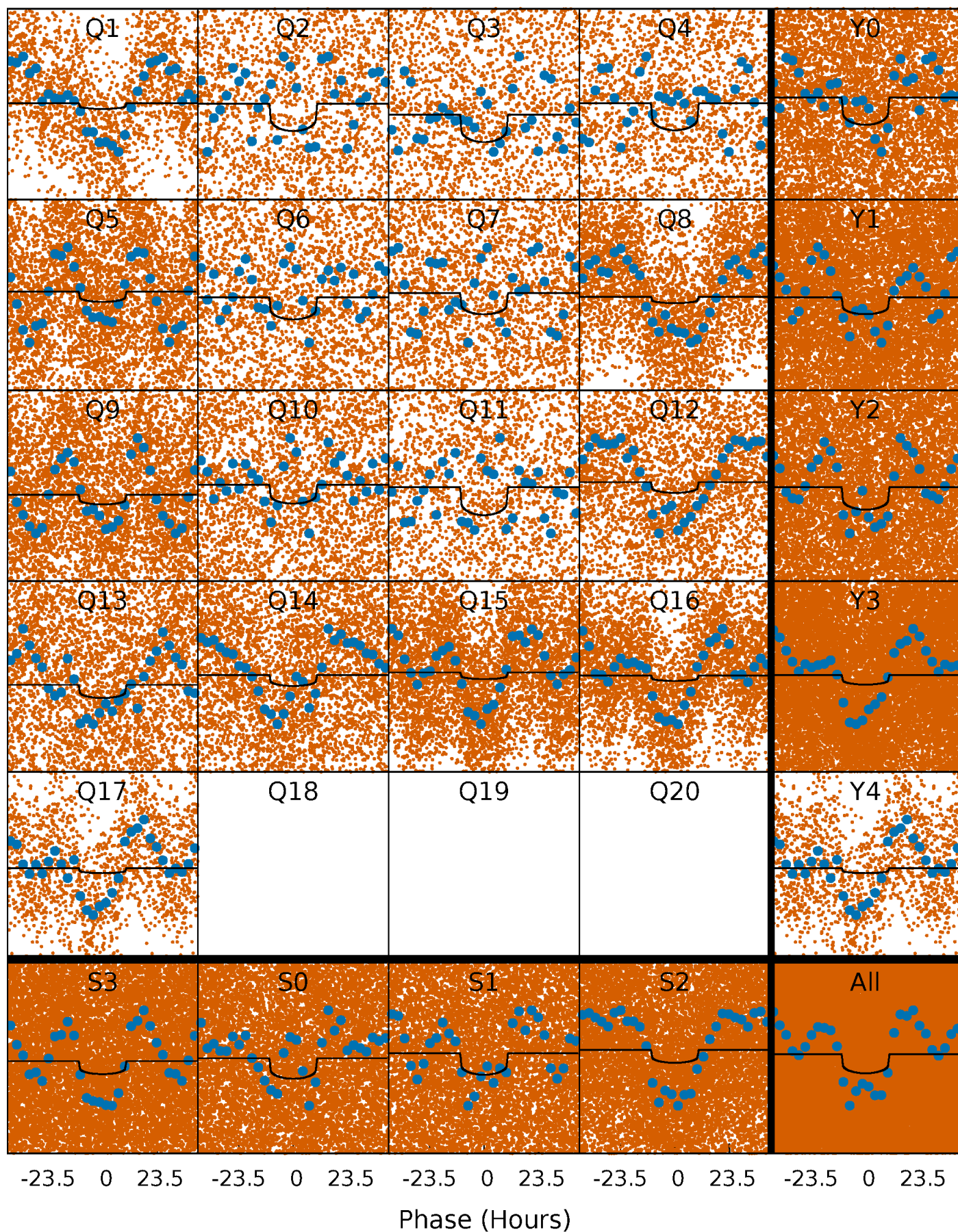
PDC Quarter-Phased Transit Curves

TCE 007937576-01 P= 2.522707 Days $T_0=133.498824$ (BKJD)



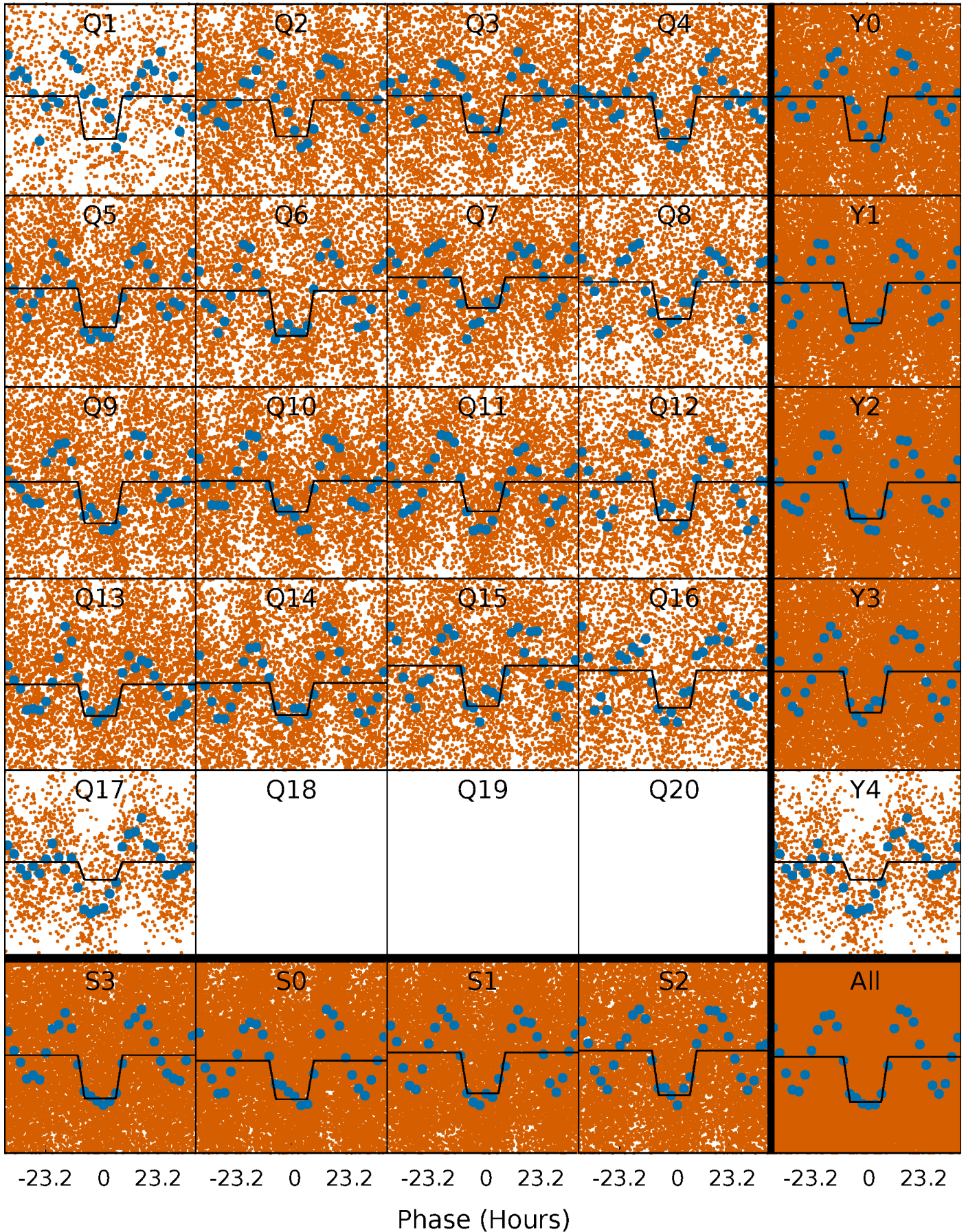
DV Quarter-Phased Transit Curves

TCE 007937576-01 P= 2.522707 Days $T_0=133.498824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

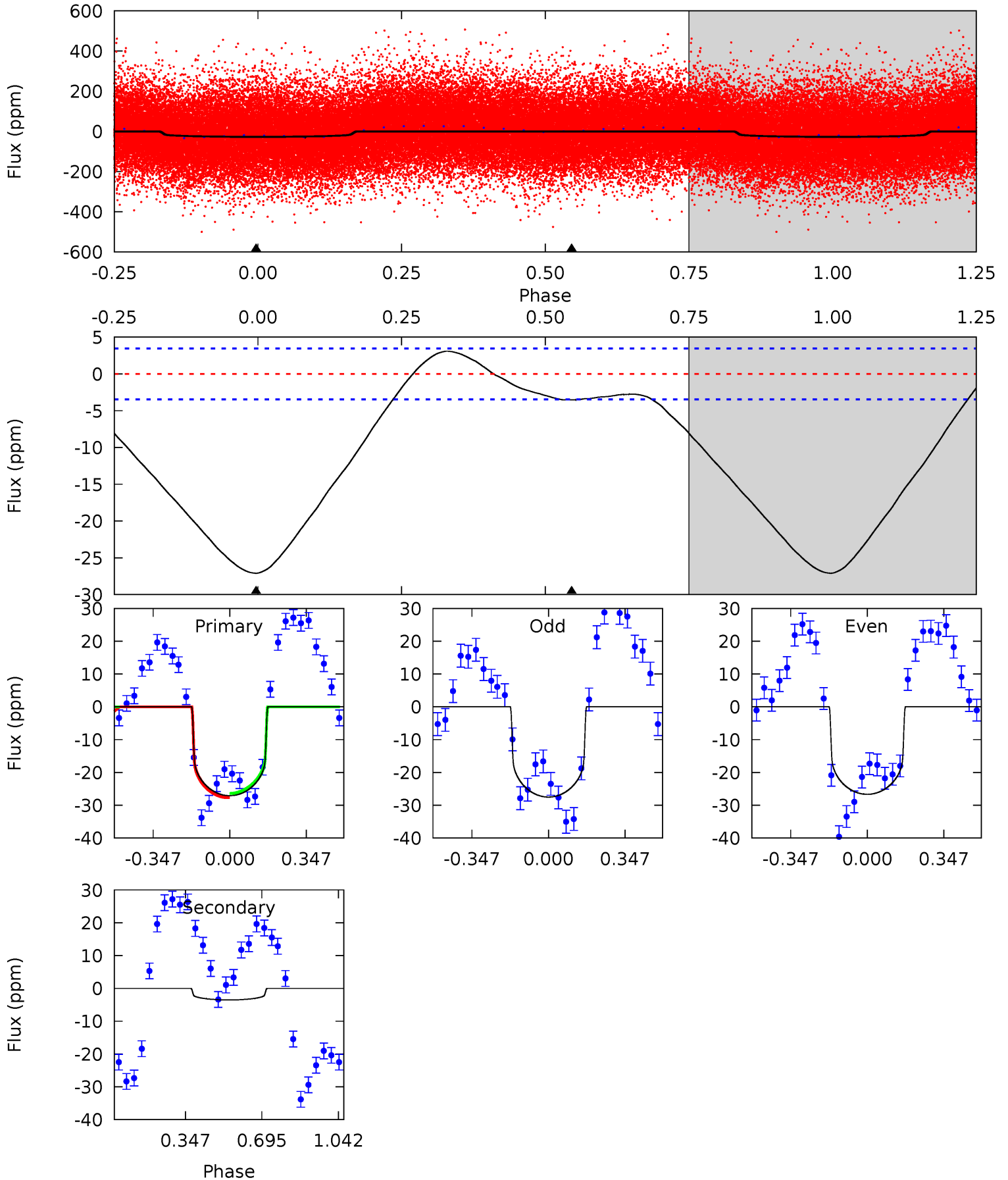
TCE 007937576-01 P= 2.522685 Days $T_0=133.498557$ (BKJD)



DV Model-Shift Uniqueness Test

007937576-01, P = 2.522707 Days, E = 130.976117 Days

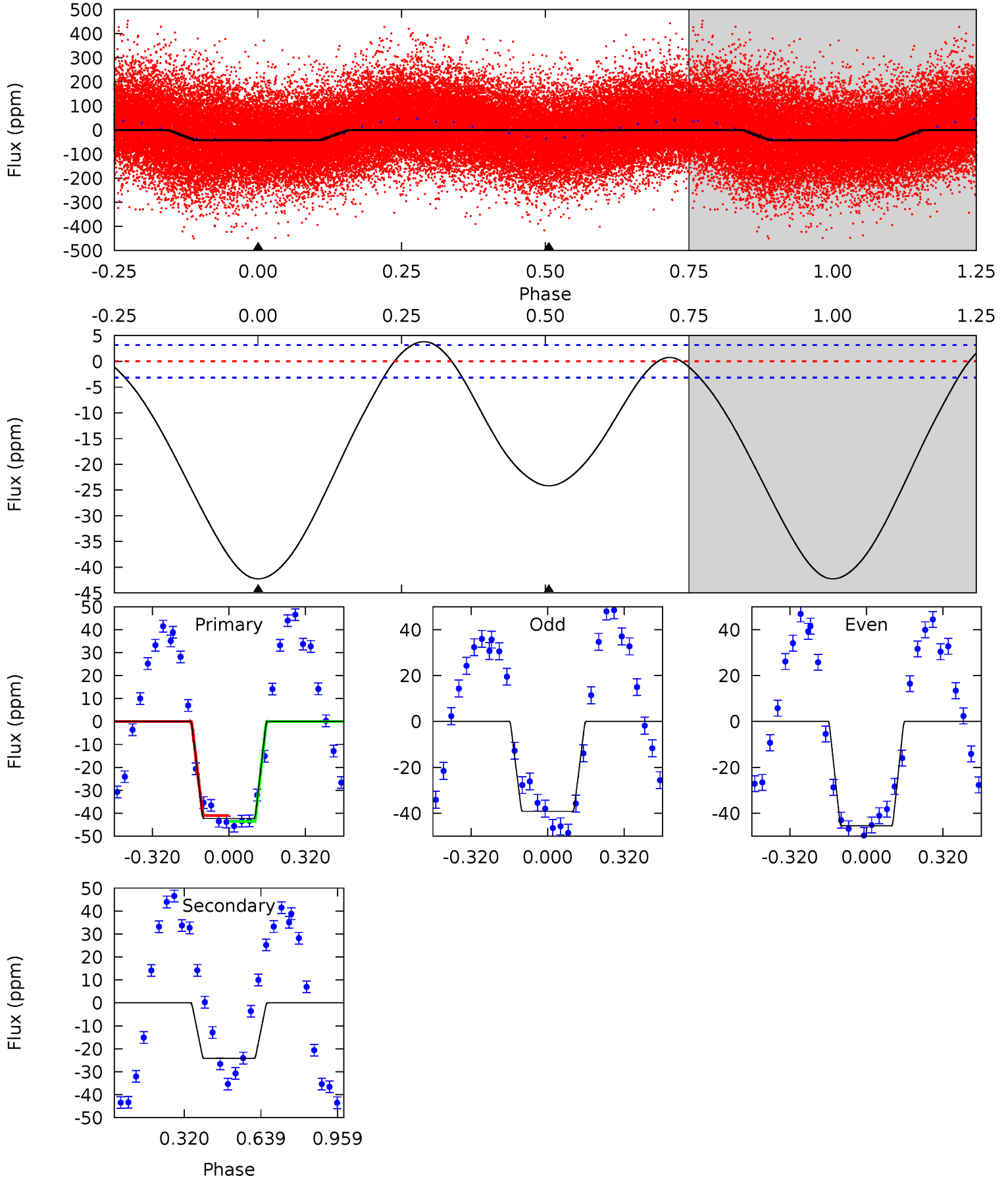
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.7	4.40	0	0	4.30	0.94	3.54	33.7	33.7	4.40	4.40	0.52	1.05	0.10	0.86



Alt Model-Shift Uniqueness Test

007937576-01, P = 2.522685 Days, E = 130.975872 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.4	32.8	0	0	4.31	1.00	3.02	57.4	57.4	32.8	32.8	4.26	1.05	0.08	1.76



Stellar Parameters For KIC 007937576

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6691^{+189}_{-259}	$3.946^{+0.329}_{-0.164}$	$0.000^{+0.250}_{-0.300}$	$2.185^{+0.572}_{-0.787}$	$1.535^{+0.190}_{-0.354}$	$0.207^{+0.461}_{-0.097}$
	+3%/-4%	+8%/-4%	+inf%/-inf%	+26%/-36%	+12%/-23%	+222%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007937576-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$0.82^{+0.27}_{-0.23}$	2917^{+235}_{-280}	4772^{+644}_{-479}	$4.773^{+4.947}_{-2.127}$
Alt.	-24 ± 1	$1.47^{+0.33}_{-0.36}$	2916^{+256}_{-285}	5762^{+439}_{-365}	11^{+7}_{-4}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

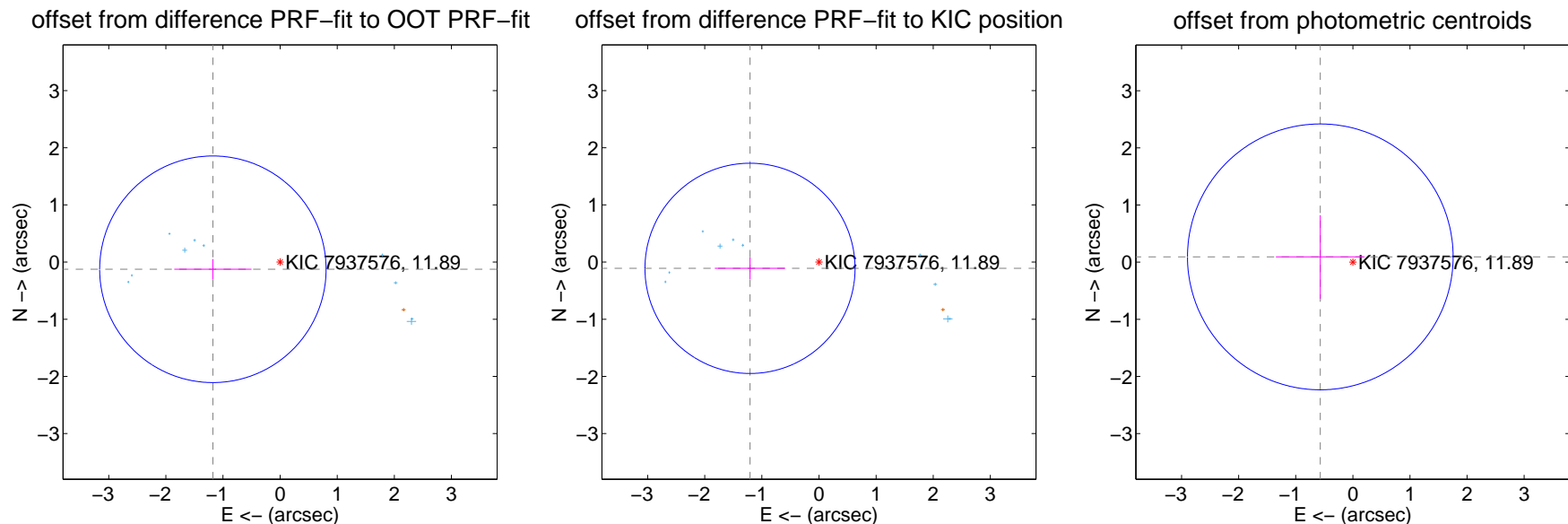
DV Centroid Data

Supplemental centroid analysis for 007937576-01. **Kepler magnitude: 11.89.** Transit SNR 7.13

There are 10 quarters with good PRF difference image offsets

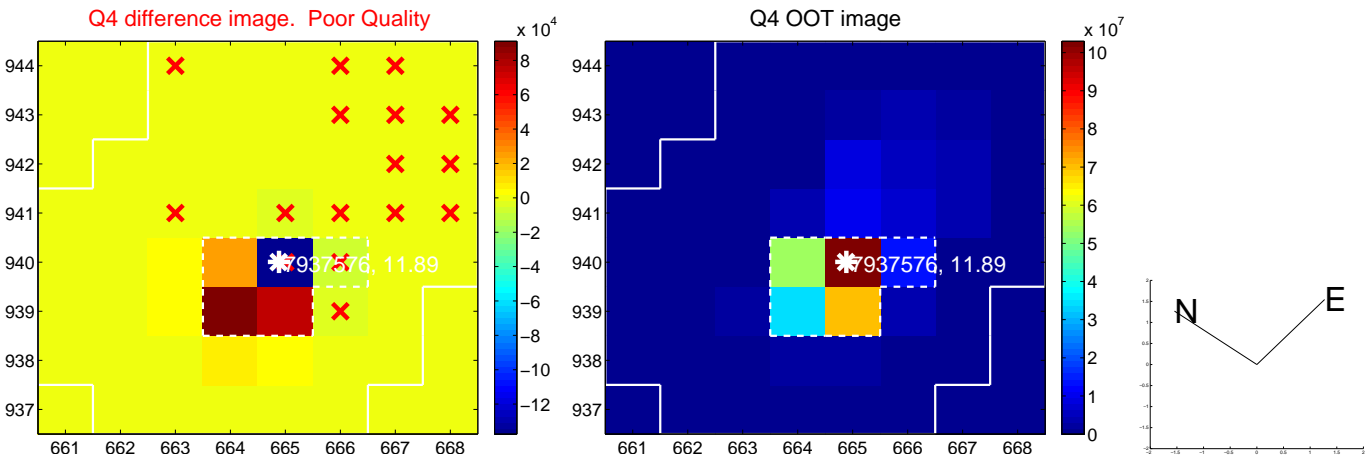
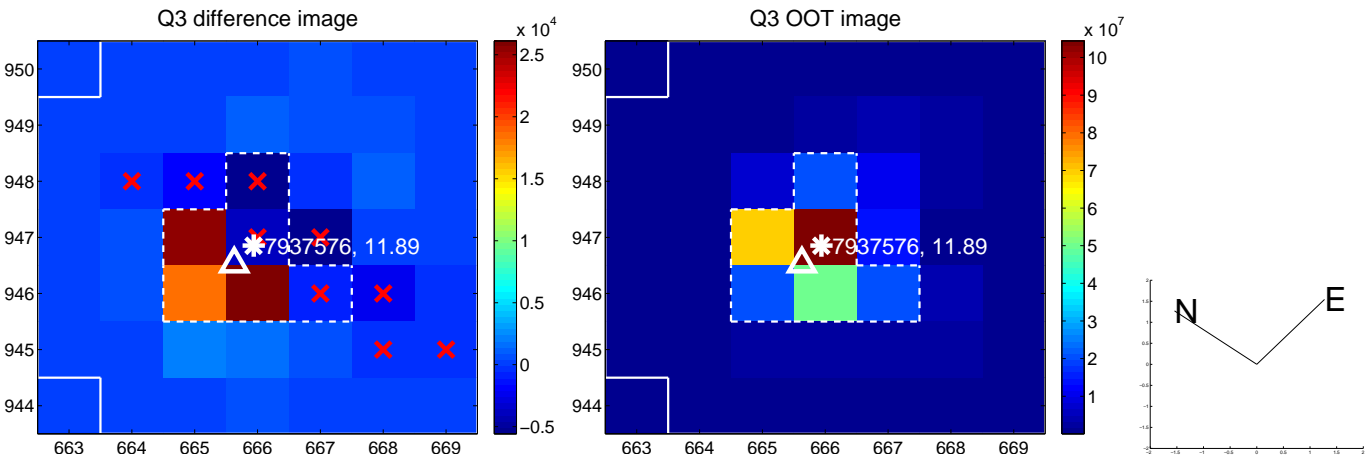
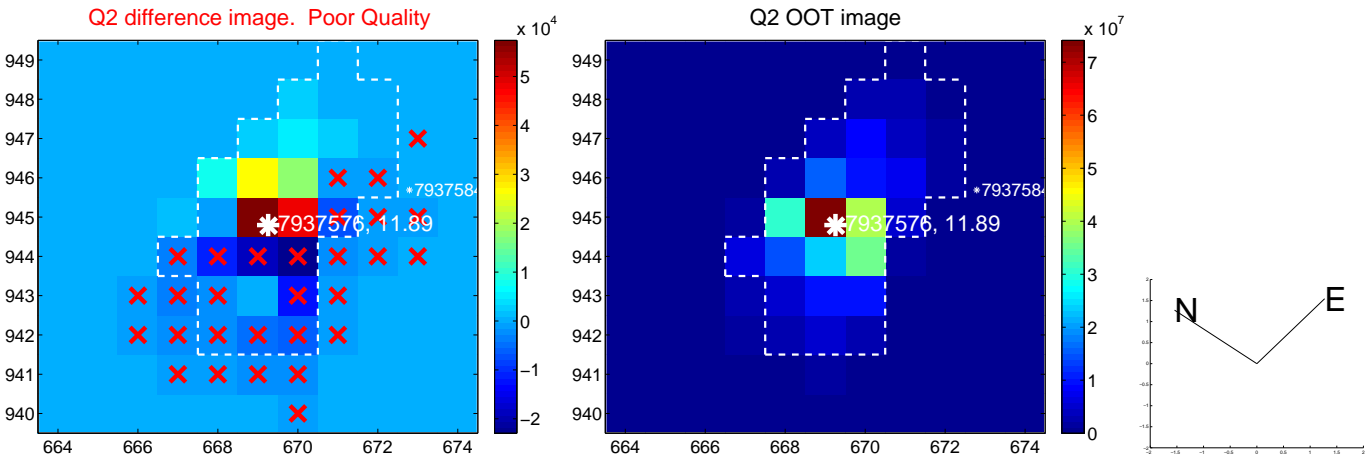
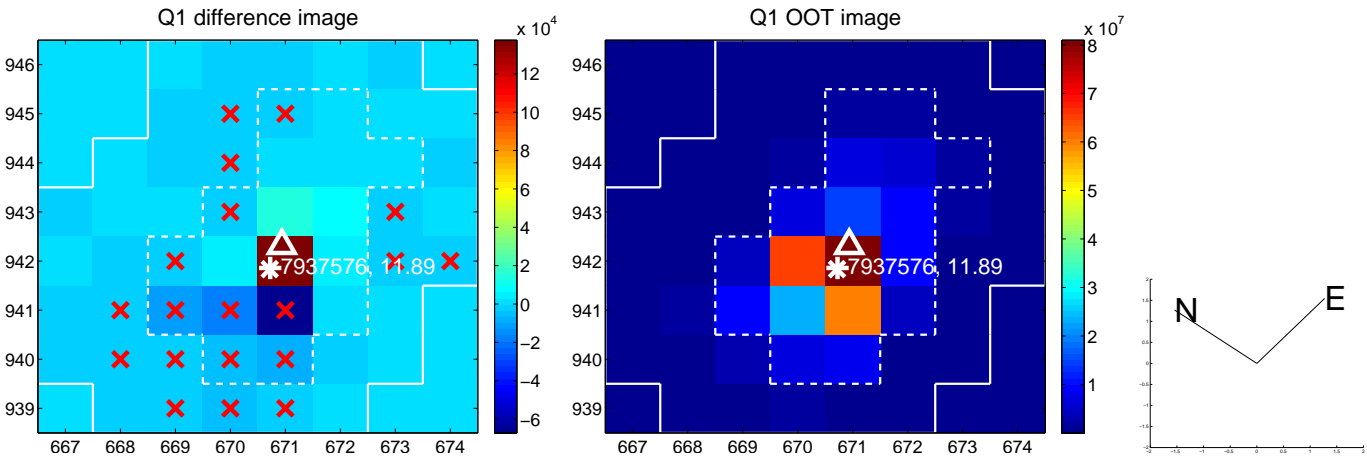
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.183 ± 0.661	1.79	1.177 ± 0.676	-0.126 ± 0.179
PRF-fit source offset from KIC position	1.212 ± 0.613	1.98	1.207 ± 0.615	-0.110 ± 0.192
photometric centroid source offset	0.58 ± 0.78	0.74	0.57 ± 0.78	0.09 ± 0.73

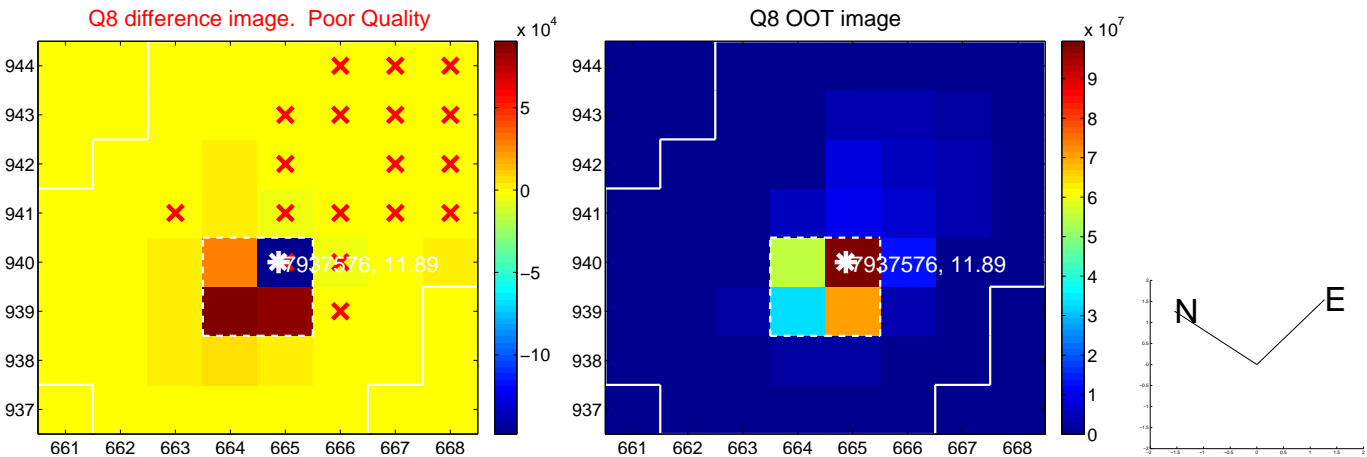
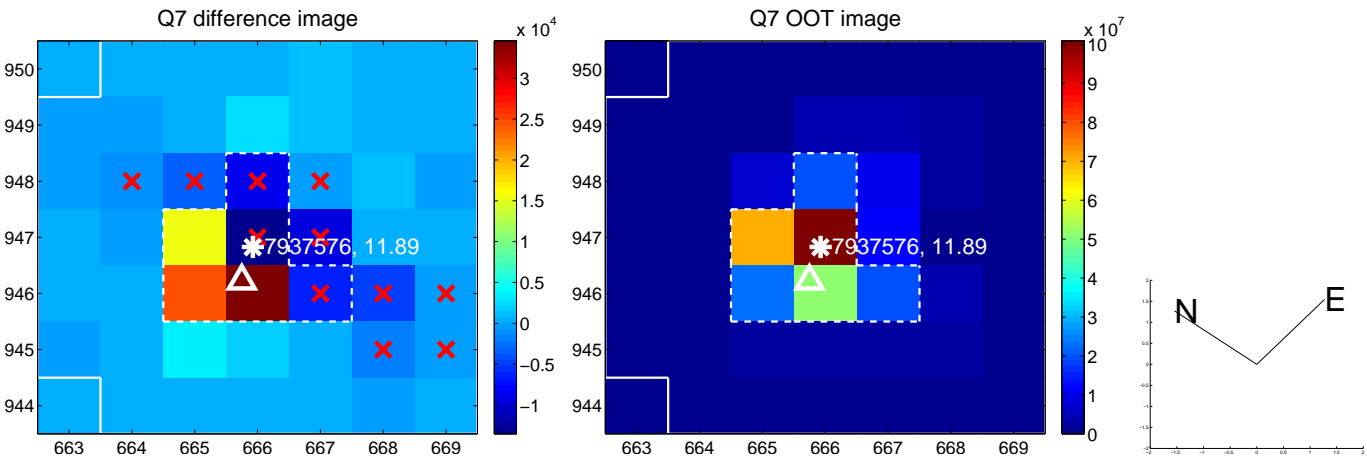
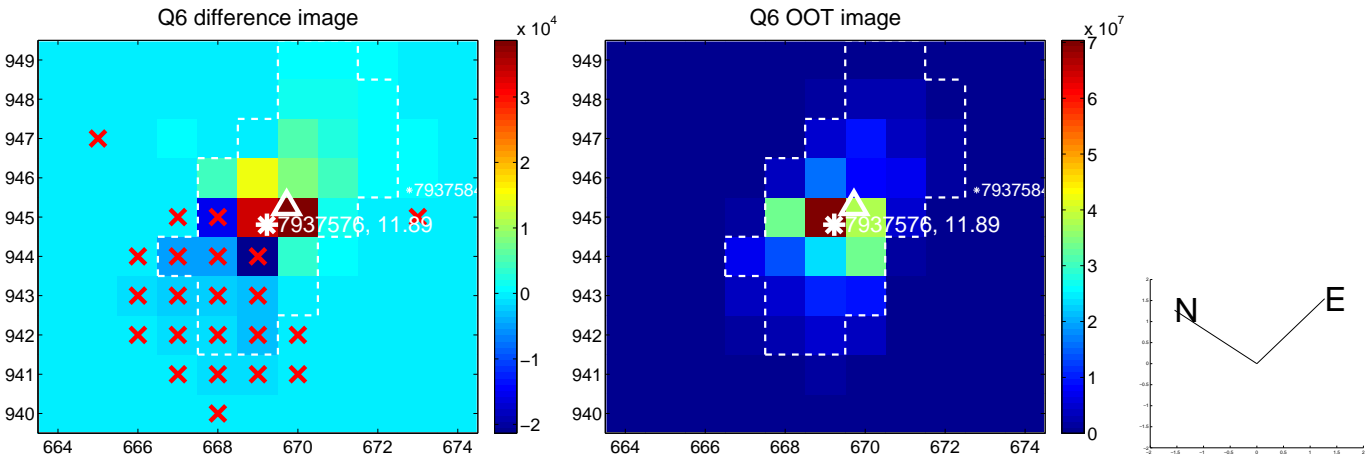
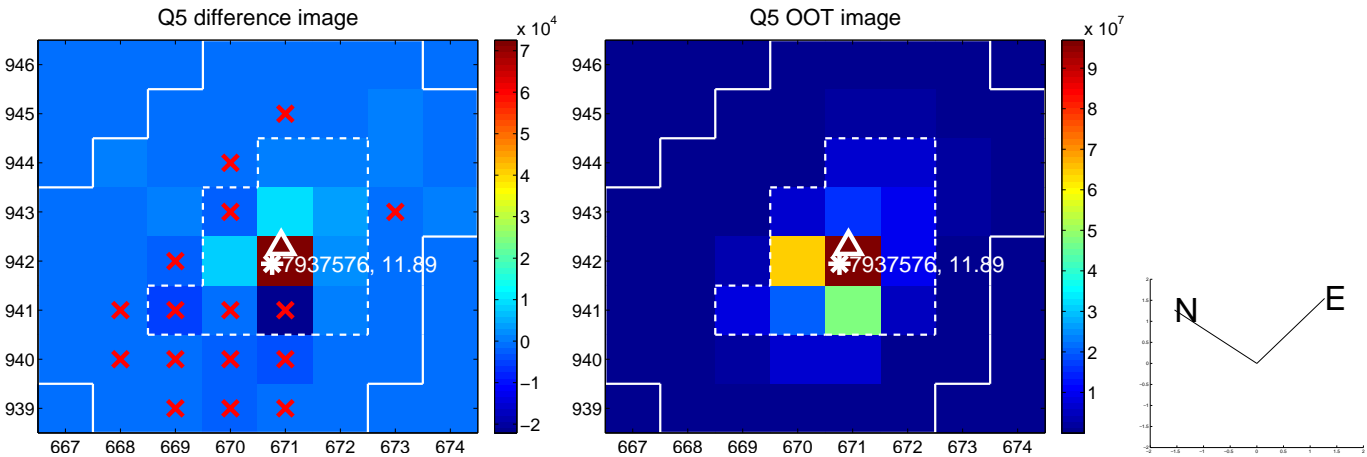


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

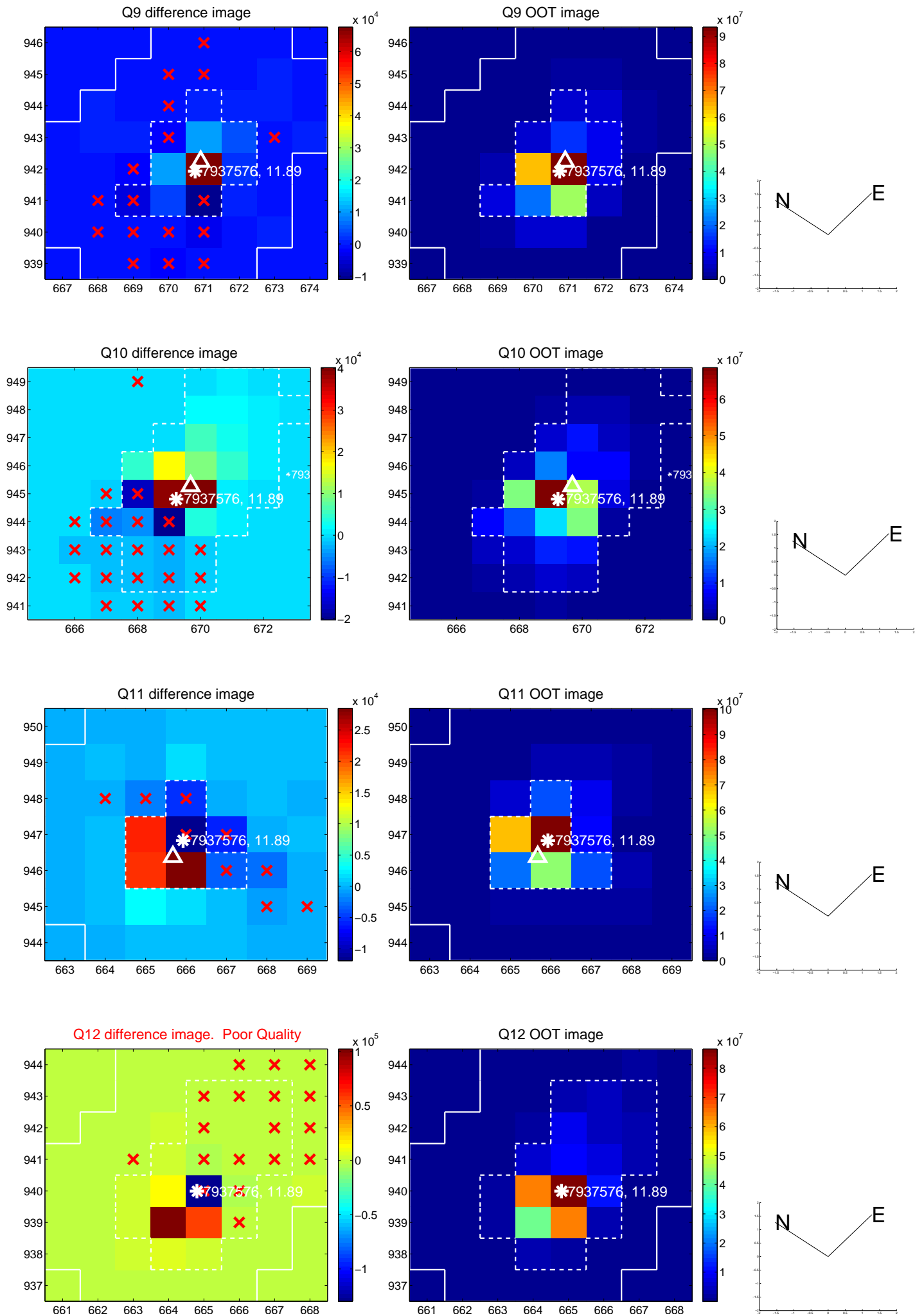
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



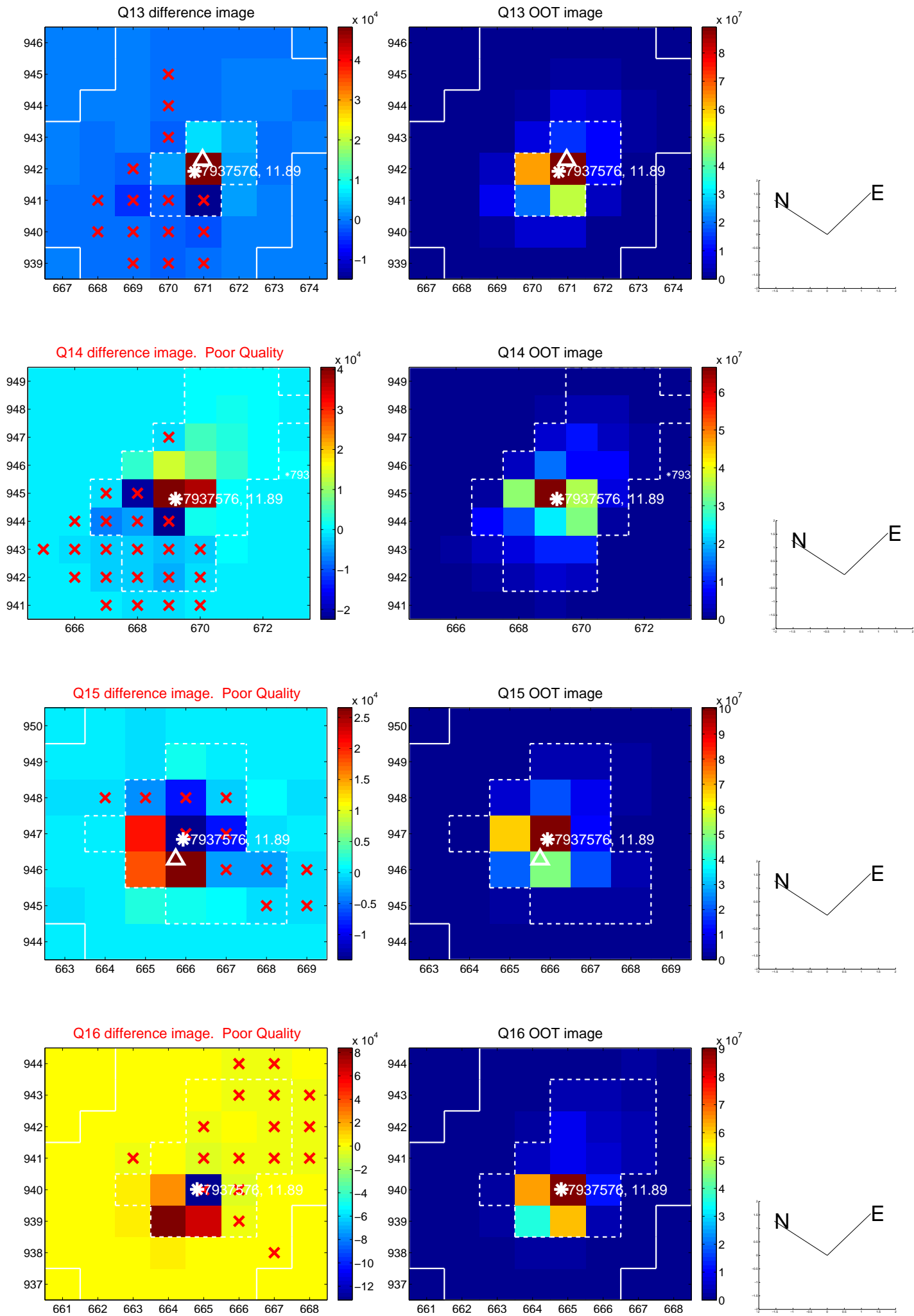
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



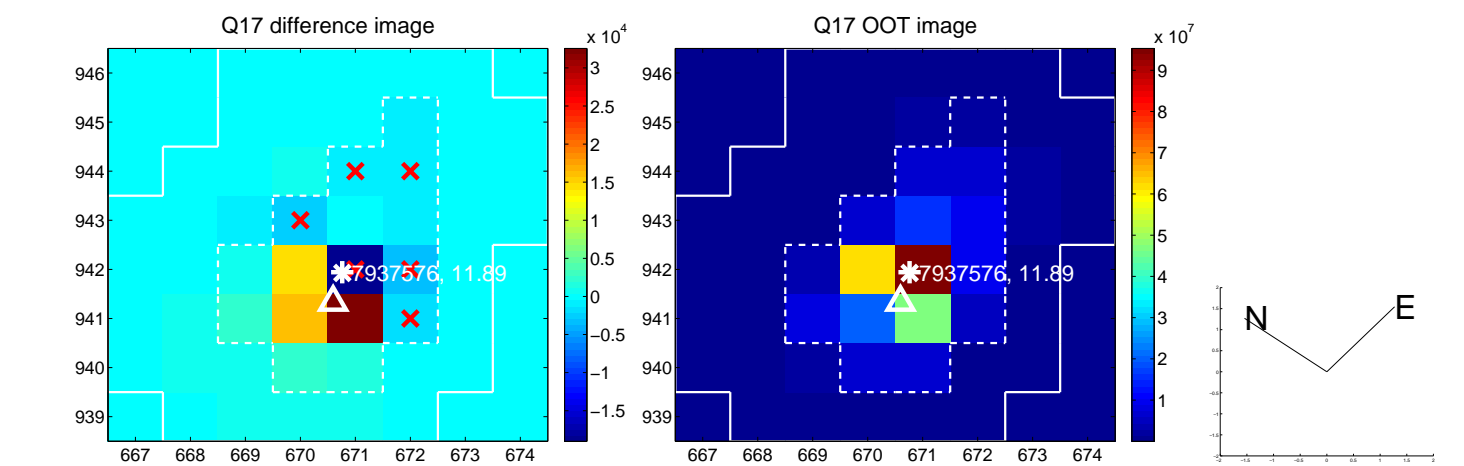
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



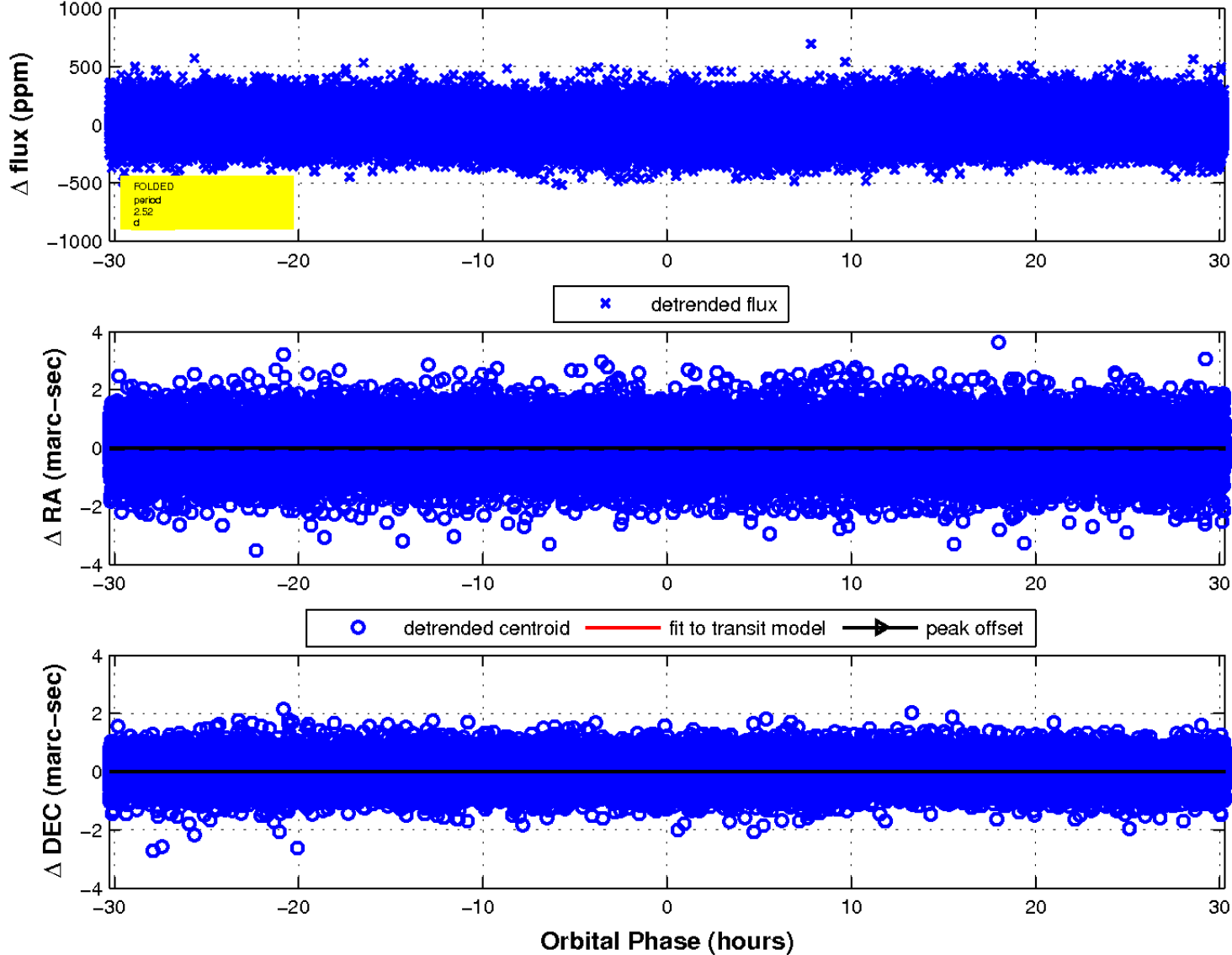
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

