

KIC 004937340

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})
004937340-01	OBS	No	0.932190	132.275219	21.3	2.485	9.6	8.1	1.09	5734	0.59	3574.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004937340-01	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.

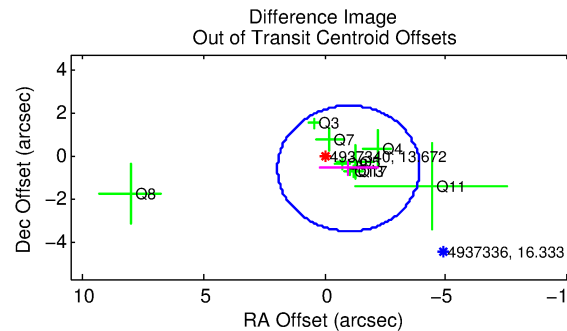
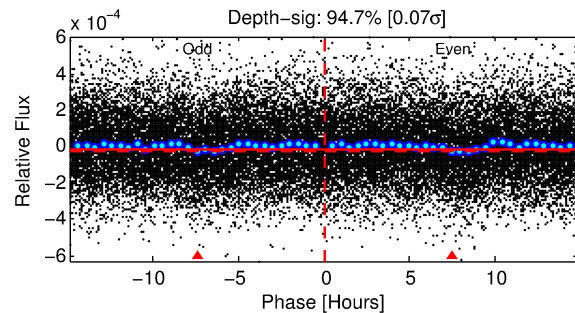
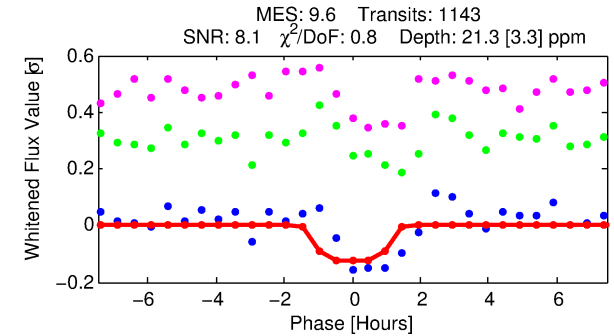
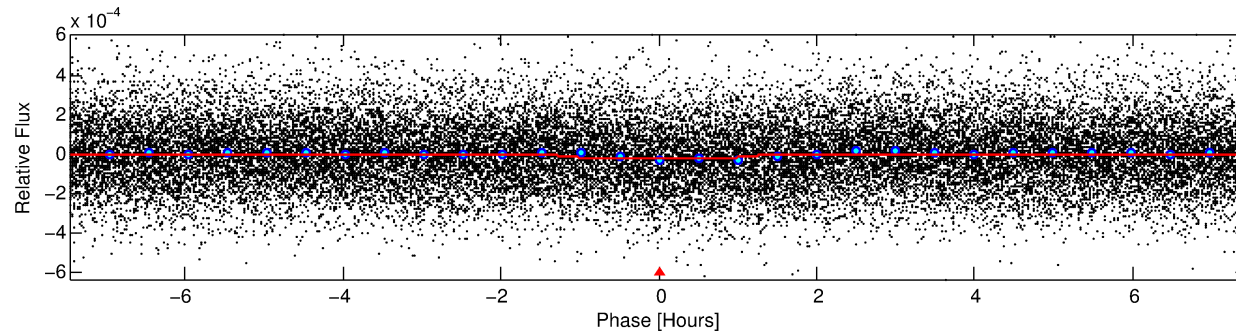
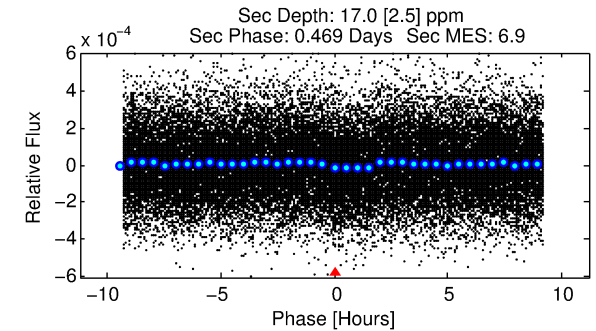
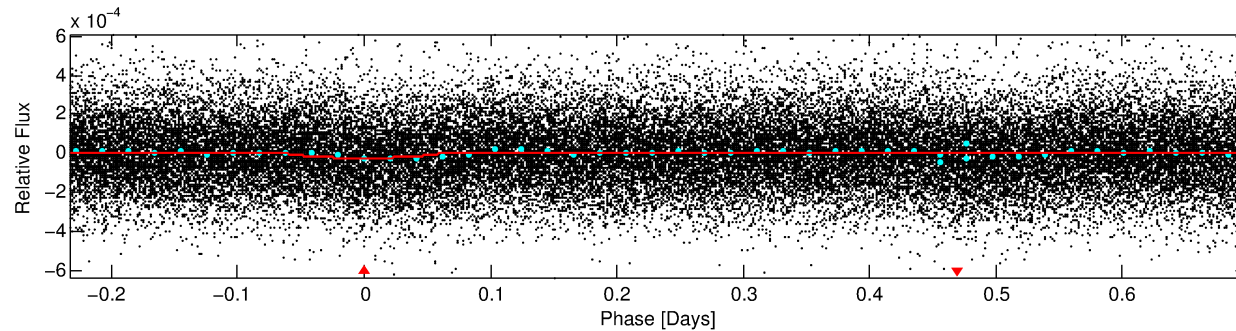
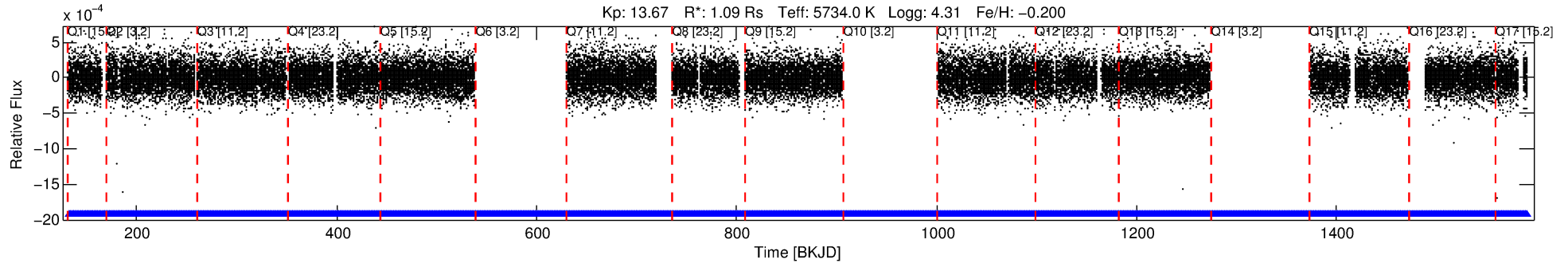
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004937340-01

No Significant Match Found

DV One-Page Summary

KIC: 4937340 Candidate: 1 of 1 Period: 0.932 d



DV Fit Results:

Period = 0.93219 [0.00001] d
Epoch = 132.2752 [0.0041] BKJD
Rp/R* = 0.0050 [0.0030]
a/R* = 1.59 [2.78]
b = 0.90 [0.62]
Seff = 3574.97 [981.41]
Teq = 1972 [135] K
Rp = 0.60 [0.36] Re
a = 0.0179 [0.0029] AU
Ag = 8.45 [10.33] [0.72σ]
Teffp = 5198 [1551] K [2.07σ]

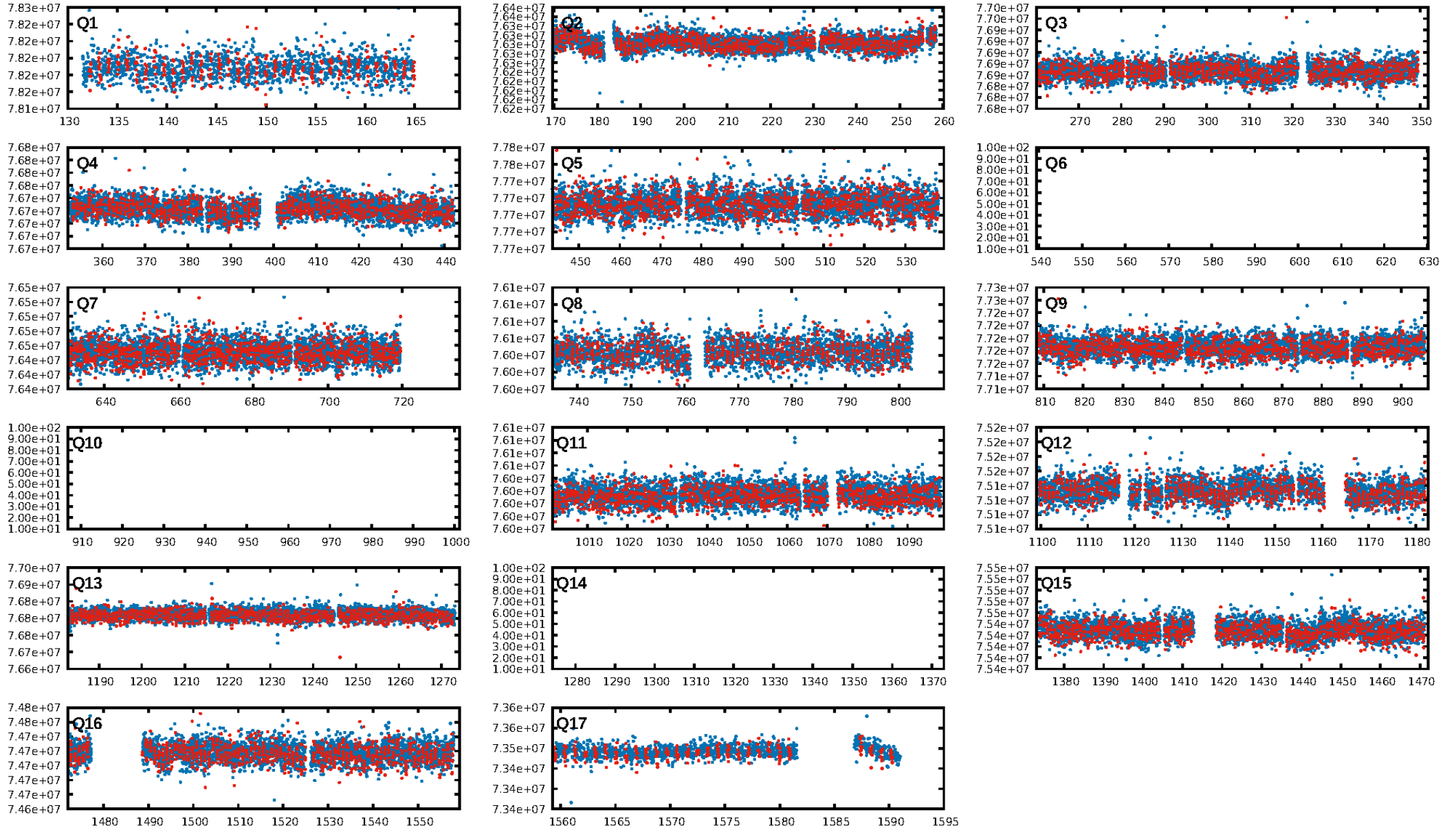
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.77e-22
RollingBand-fgt: 1.00 [1079/1079]
GhostDiagnostic-chr: -12.35
Centroid-sig: 0.0%
Centroid-so: 4.497 arcsec [2.42σ]
OotOffset-rm: 1.153 arcsec [1.18σ]
KicOffset-rm: 1.209 arcsec [1.25σ]
OotOffset-st: 0/3/2/4 [9]
KicOffset-st: 0/3/2/4 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [14/14]

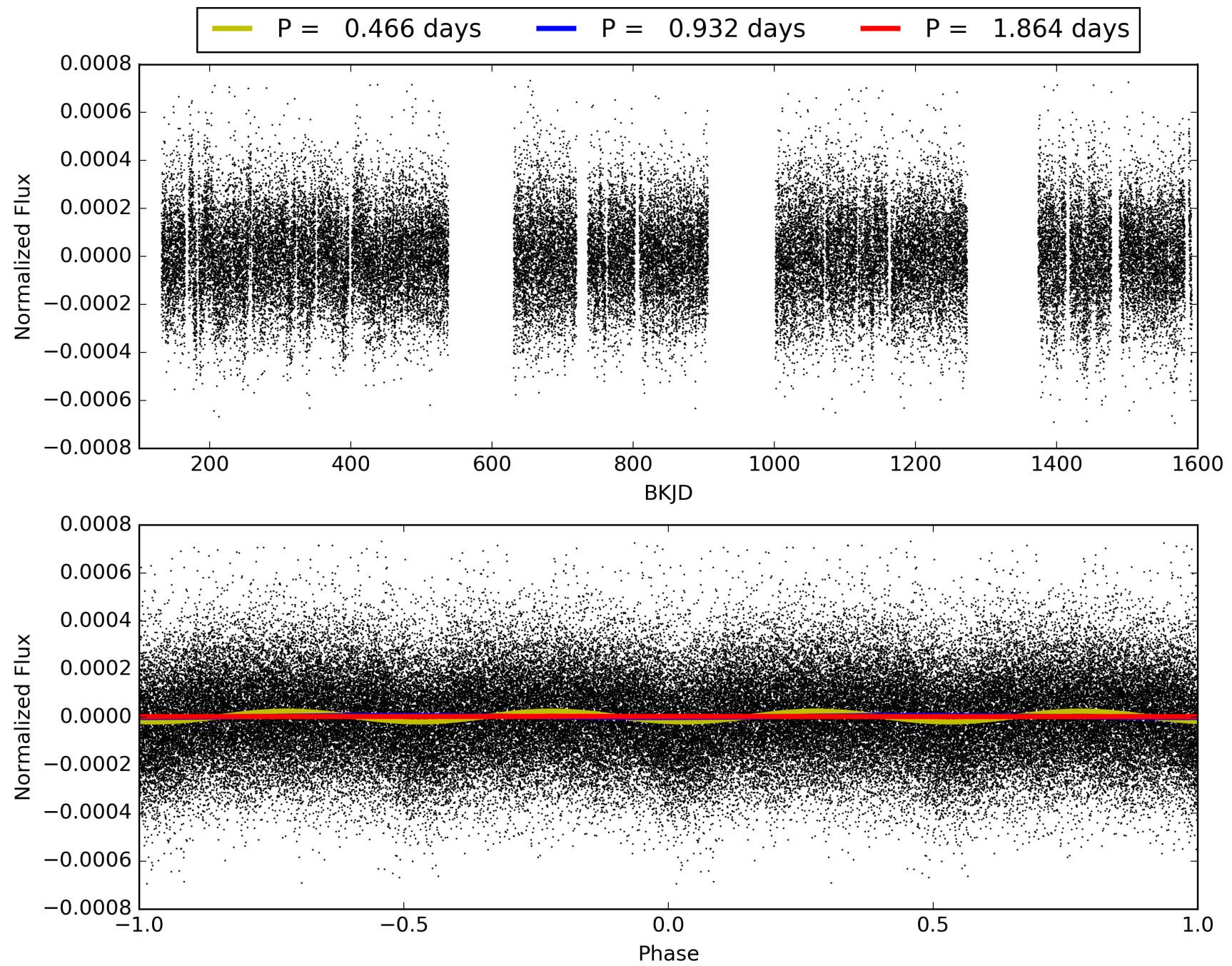
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:17:45 Z

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

TCE 004937340-01, PDC Light Curves

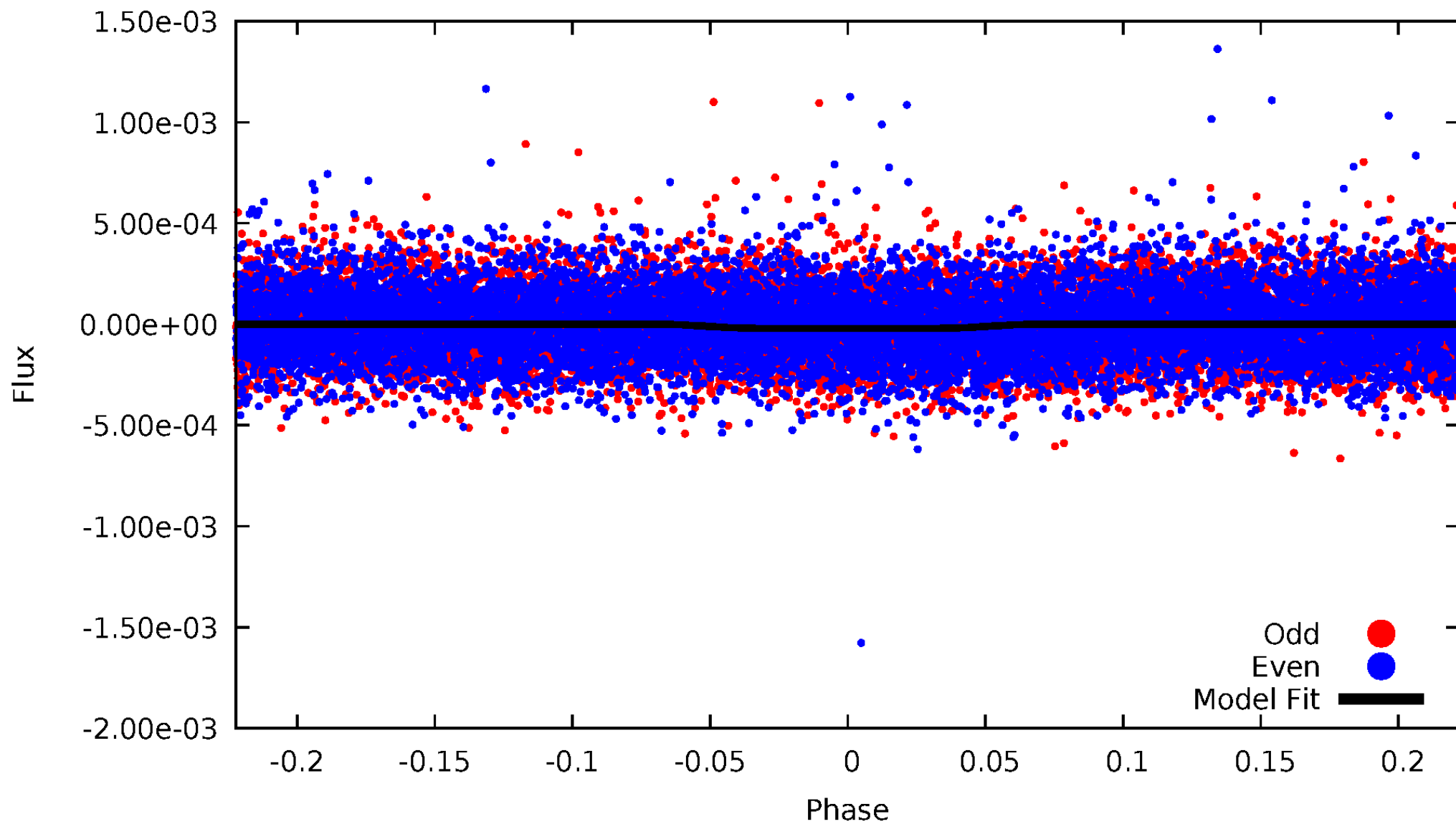


TCE 004937340-01



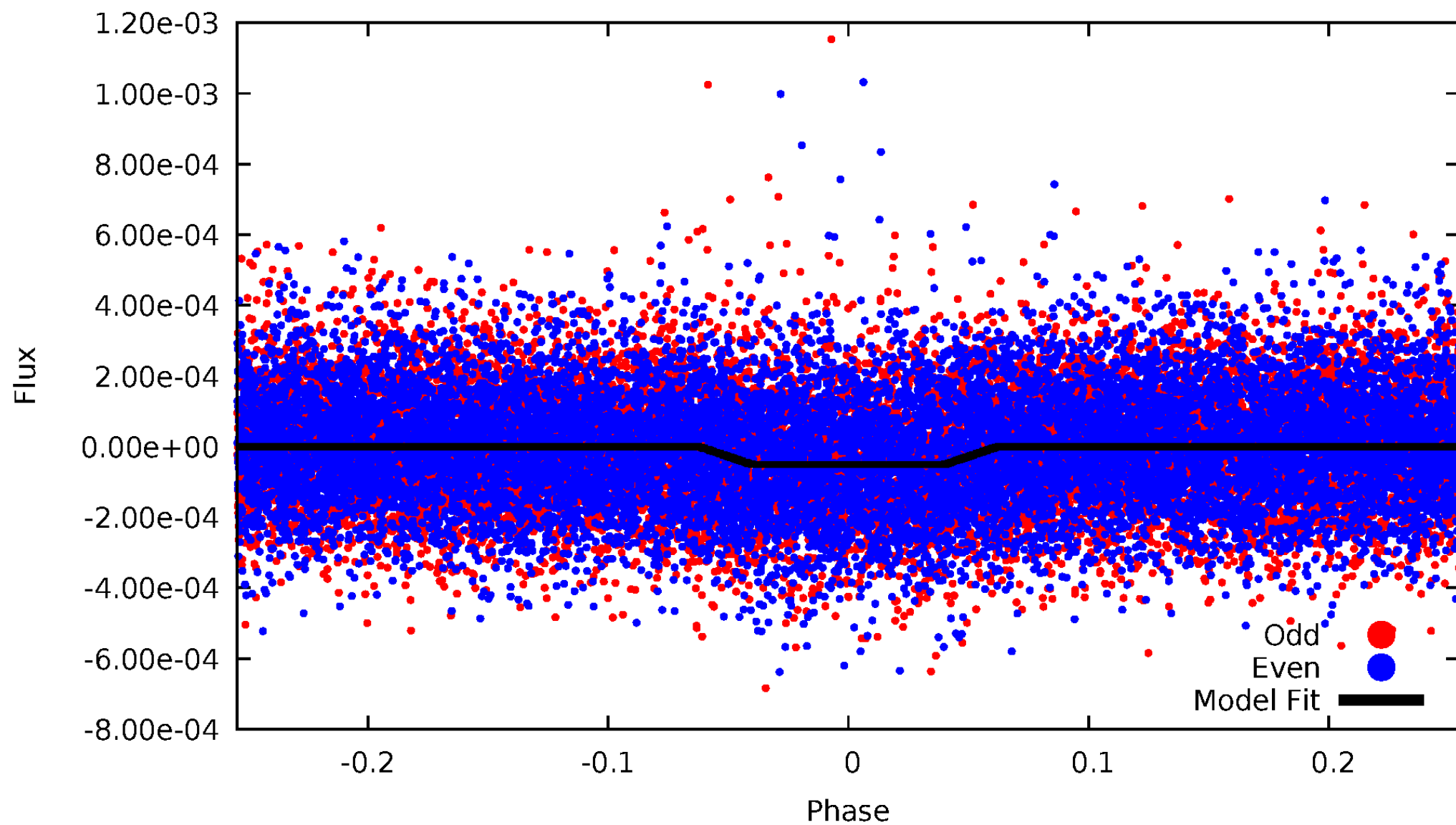
DV Odd/Even

TCE 004937340-01

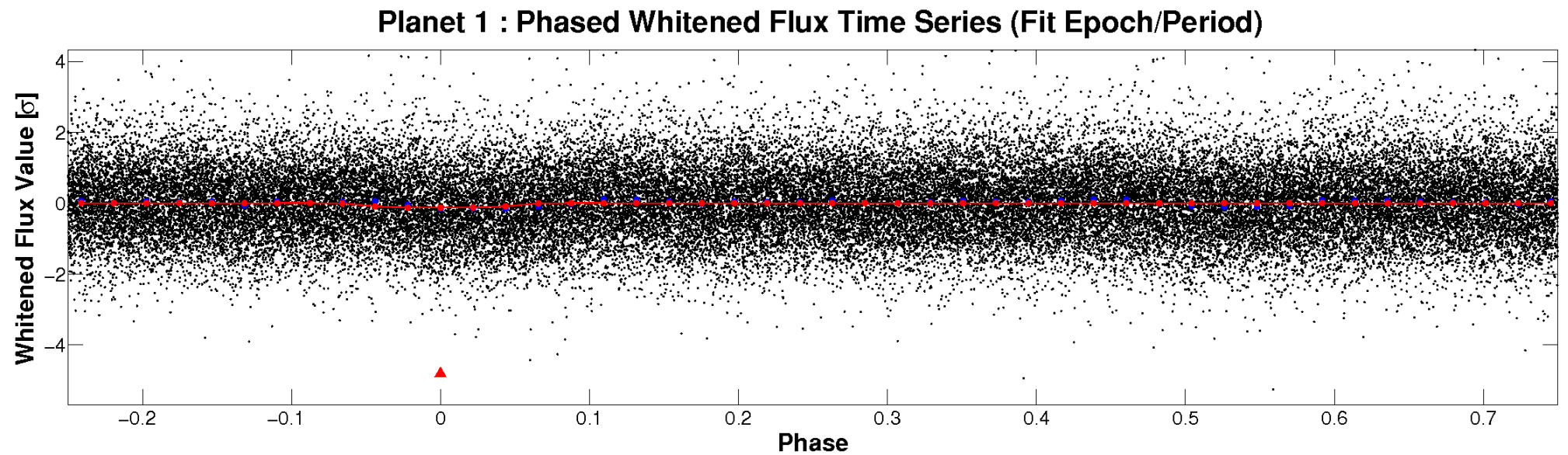
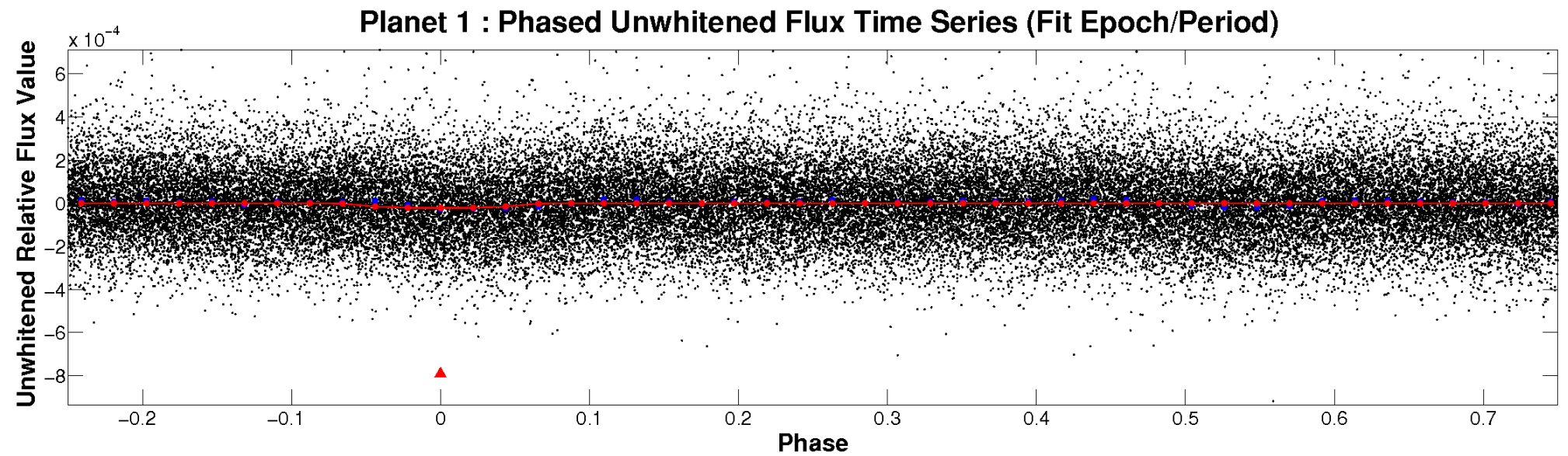


ALT Odd/Even

TCE 004937340-01

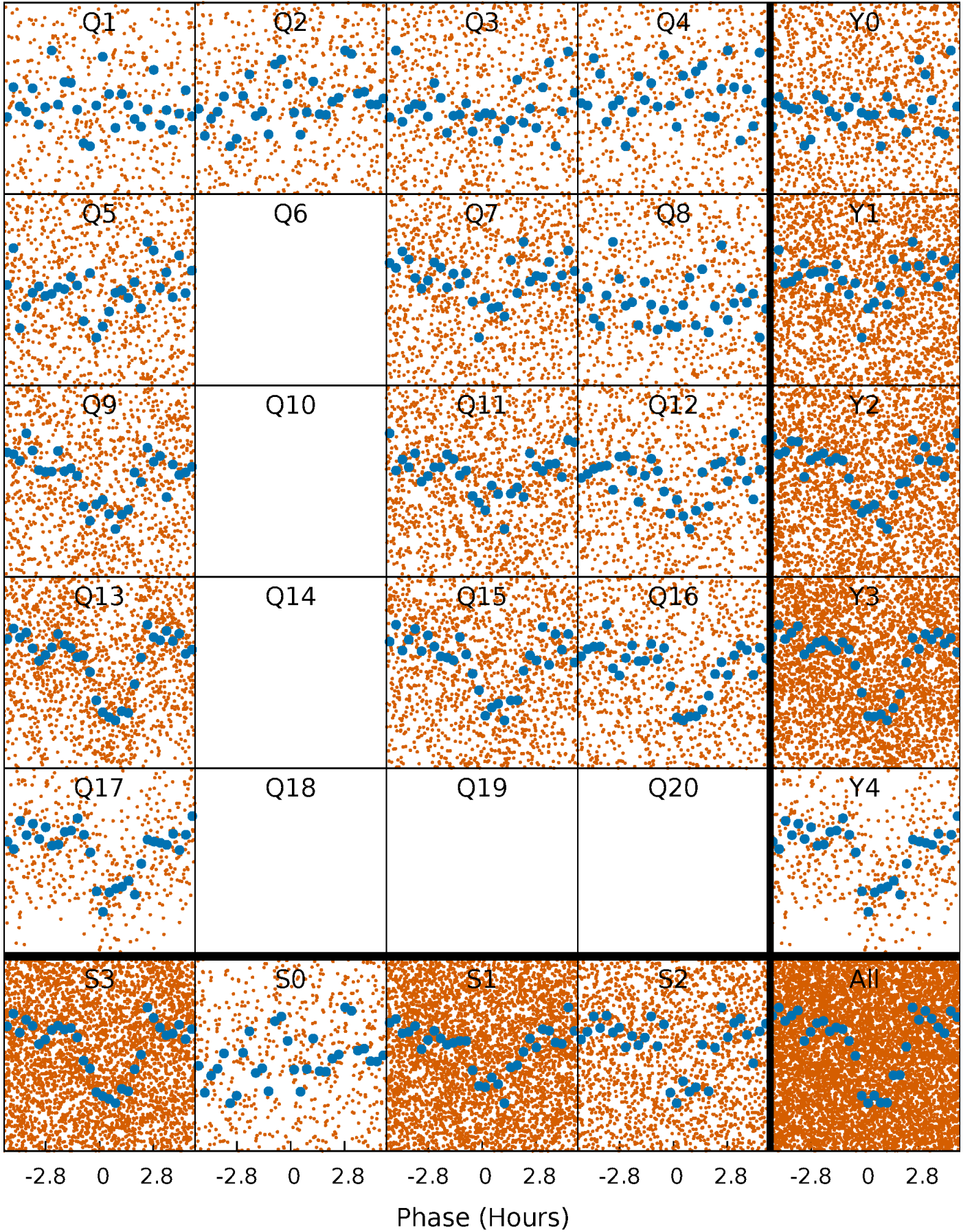


Non-Whitened Vs. Whitened Light Curve



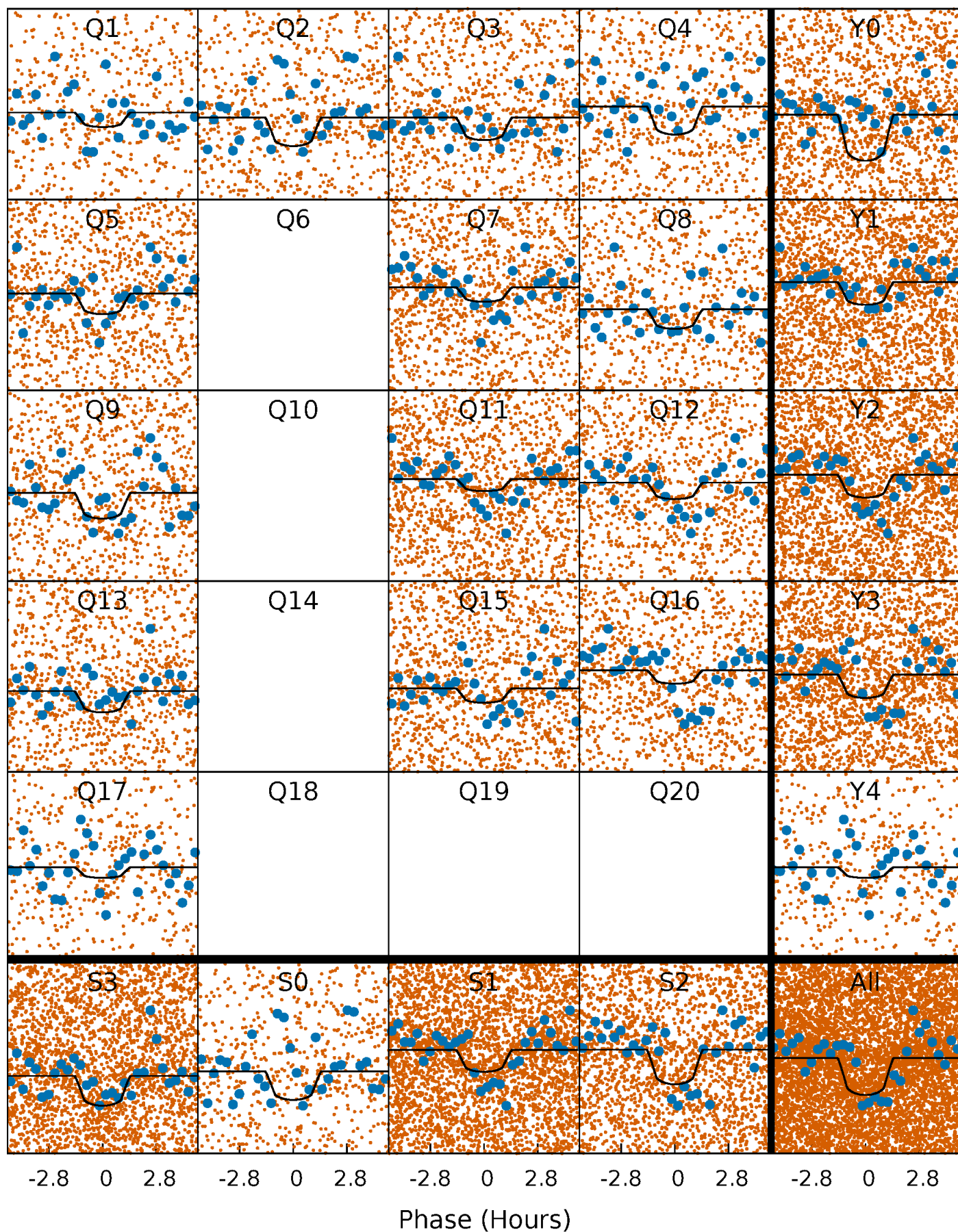
PDC Quarter-Phased Transit Curves

TCE 004937340-01 P= 0.932190 Days $T_0=132.275219$ (BKJD)



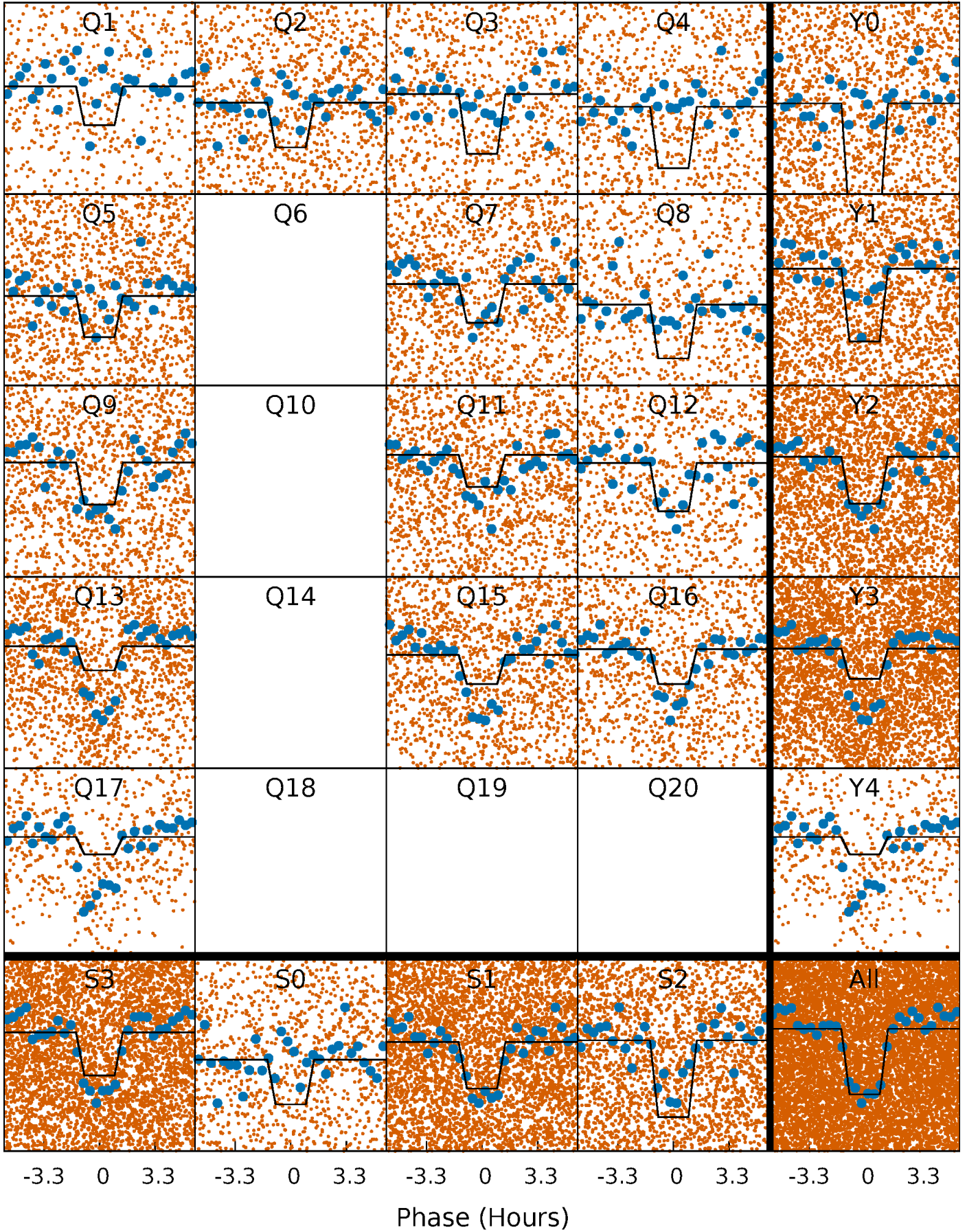
DV Quarter-Phased Transit Curves

TCE 004937340-01 P= 0.932190 Days $T_0=132.275219$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

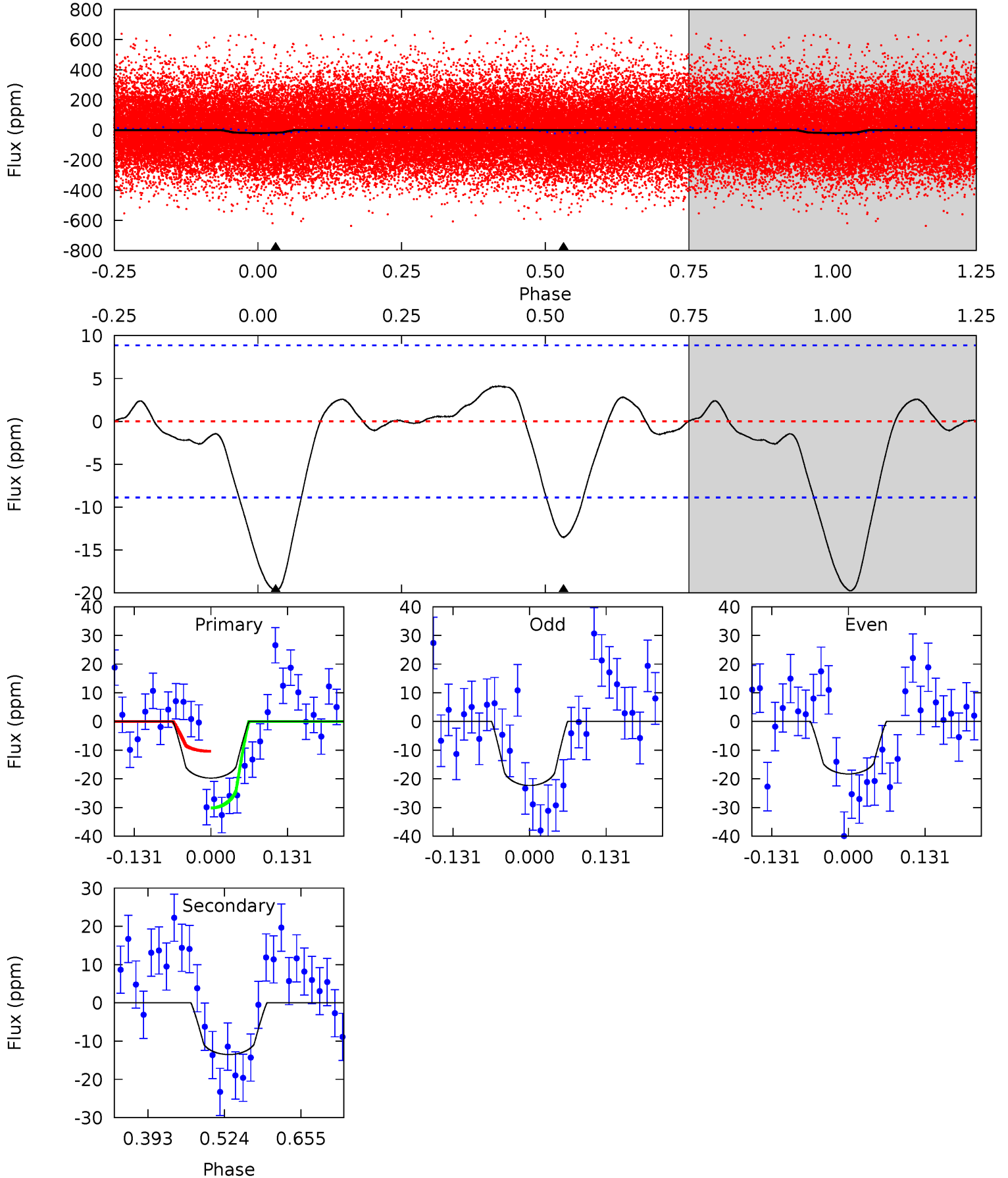
TCE 004937340-01 P= 0.932222 Days $T_0=132.265707$ (BKJD)



DV Model-Shift Uniqueness Test

004937340-01, P = 0.932190 Days, E = 131.343029 Days

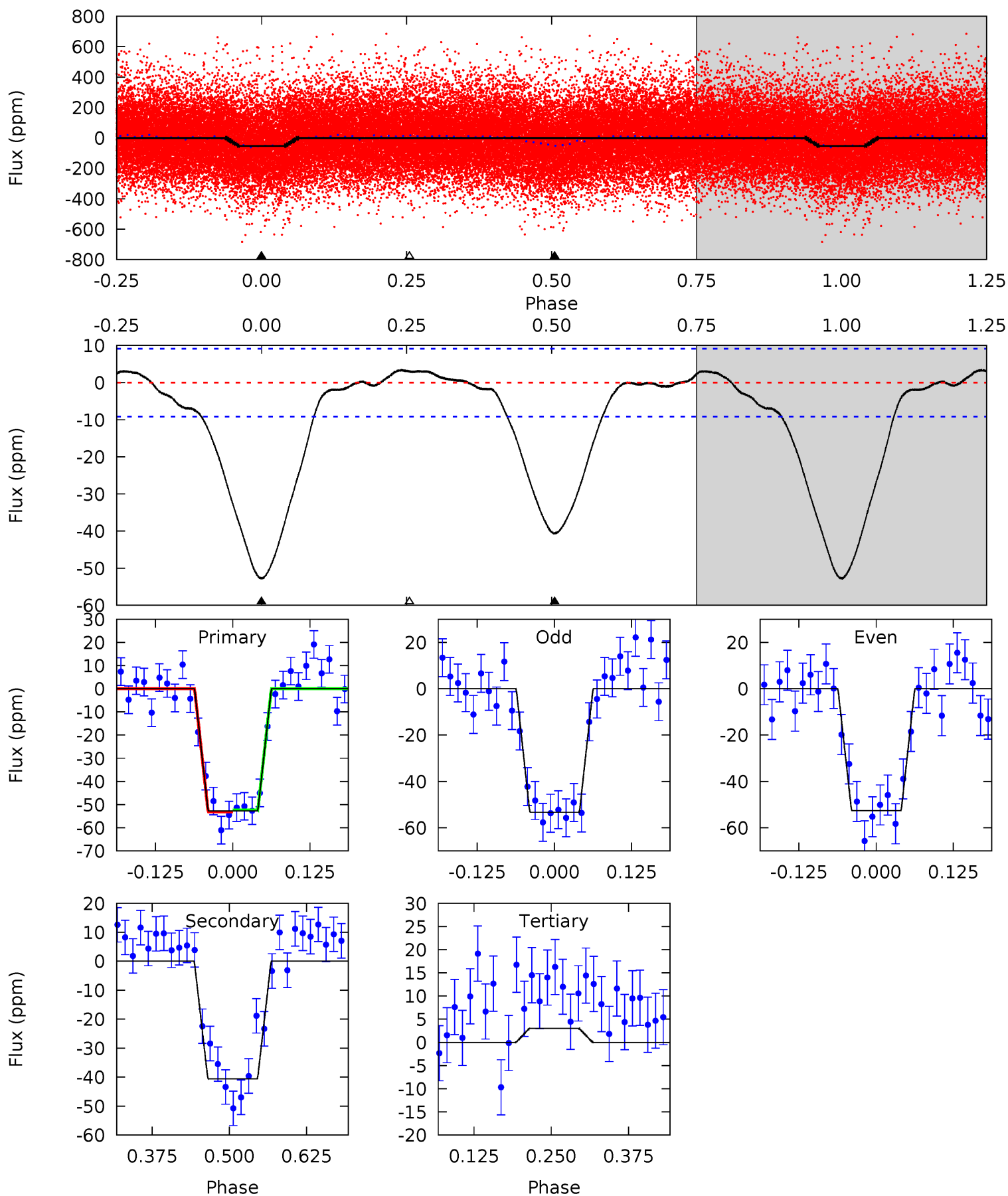
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	6.87	0	0	4.51	1.51	0.71	10.0	10.0	6.87	6.87	1.03	0.99	0.17	5.03



Alt Model-Shift Uniqueness Test

004937340-01, P = 0.932222 Days, E = 131.333485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	20.1	-1.48	0	4.52	1.53	1.13	27.5	26.0	21.5	20.1	0.17	0.95	0.06	0.20



Stellar Parameters For KIC 004937340

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5734^{+77}_{-77}	$4.309^{+0.162}_{-0.108}$	$-0.200^{+0.150}_{-0.150}$	$1.086^{+0.168}_{-0.168}$	$0.876^{+0.068}_{-0.043}$	$0.963^{+0.723}_{-0.298}$
	+1%/-1%	+4%/-3%	+75%/-75%	+15%/-15%	+8%/-5%	+75%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004937340-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 2	$0.61^{+0.33}_{-0.32}$	2744^{+123}_{-133}	4837^{+1976}_{-811}	$6.399^{+19.675}_{-3.873}$
Alt.	-41 ± 2	$0.81^{+0.35}_{-0.36}$	2742^{+120}_{-142}	5497^{+1659}_{-838}	11^{+23}_{-6}

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 $A_{obs} \gg 1.0$

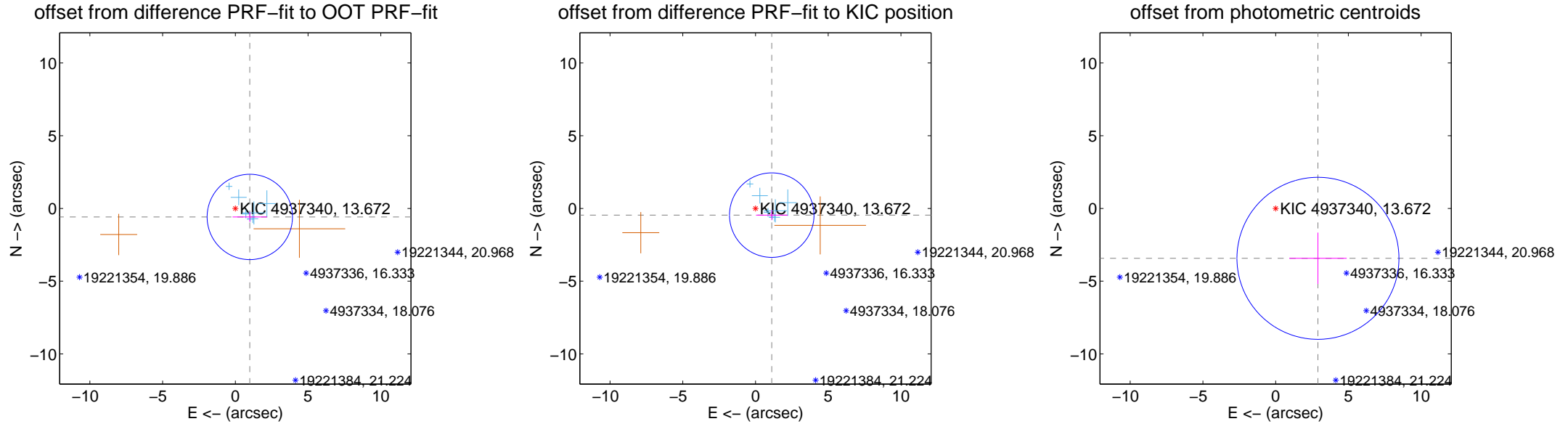
DV Centroid Data

Supplemental centroid analysis for 004937340-01. Kepler magnitude: 13.67. Transit SNR 8.12

There are 7 quarters with good PRF difference image offsets

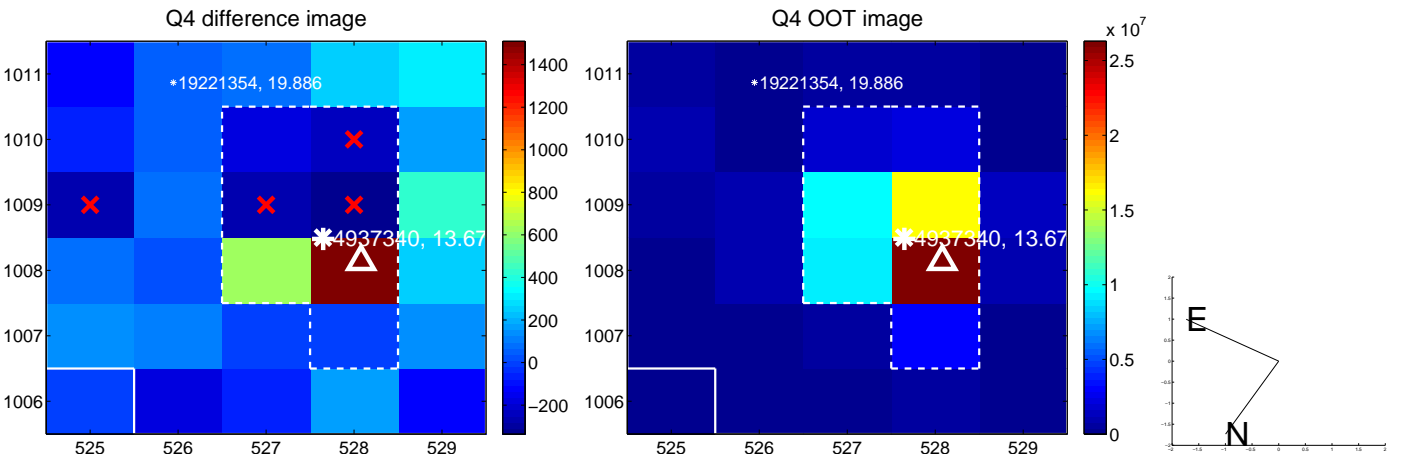
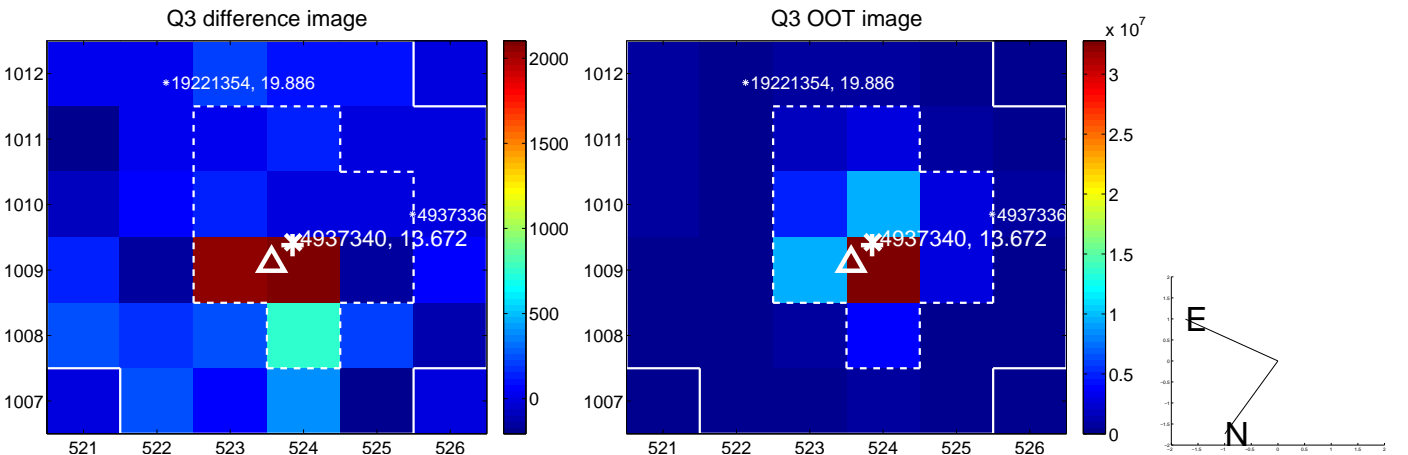
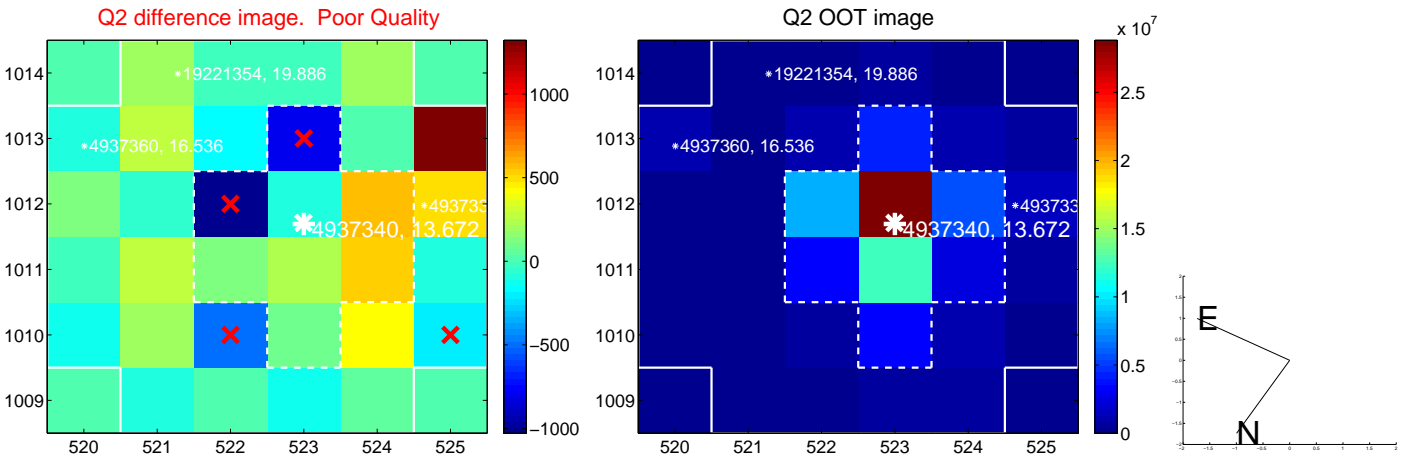
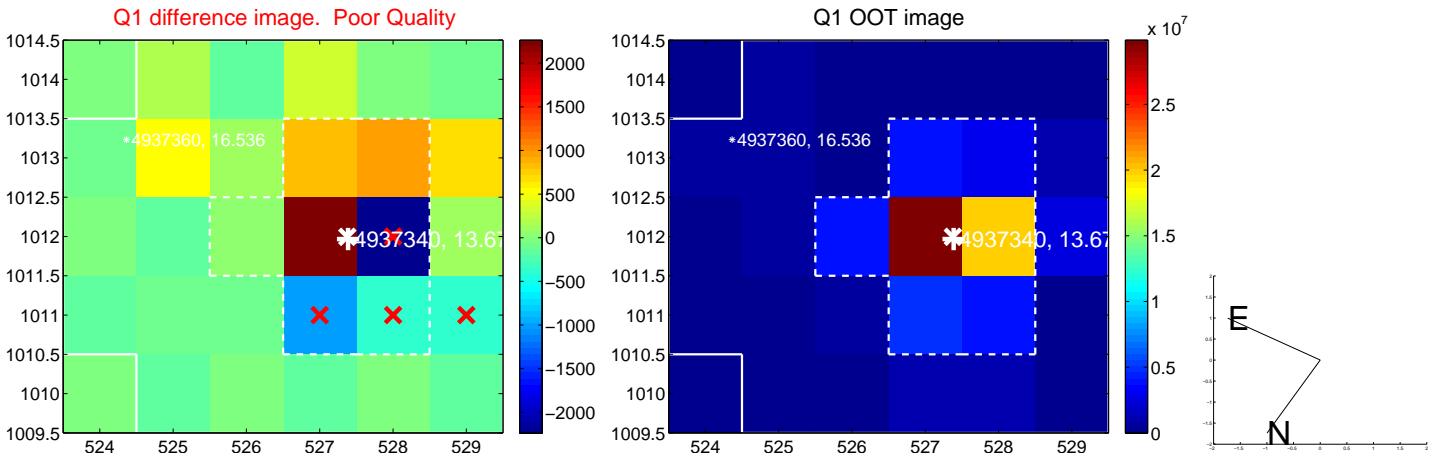
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.153 ± 0.978	1.18	-0.994 ± 1.188	-0.584 ± 0.333
PRF-fit source offset from KIC position	1.209 ± 0.968	1.25	-1.118 ± 1.089	-0.459 ± 0.347
photometric centroid source offset	4.50 ± 1.86	2.42	-2.91 ± 1.98	-3.43 ± 1.77

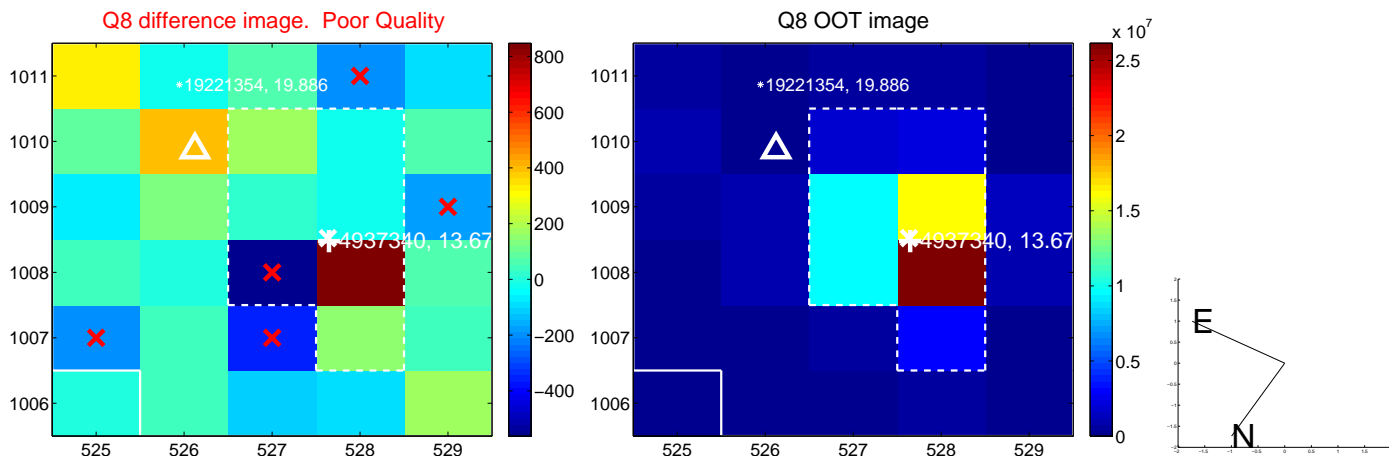
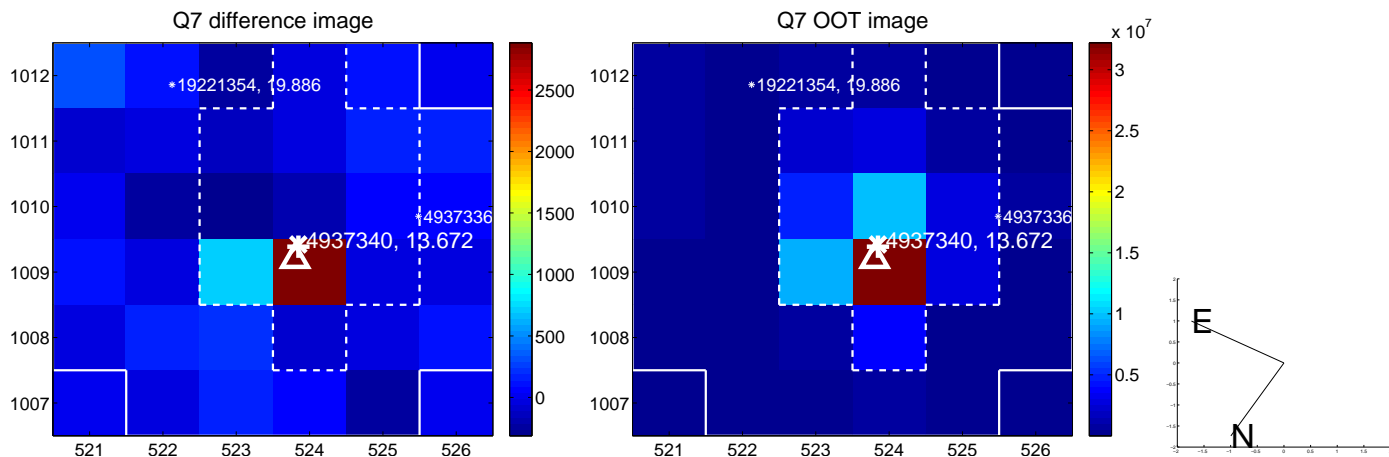
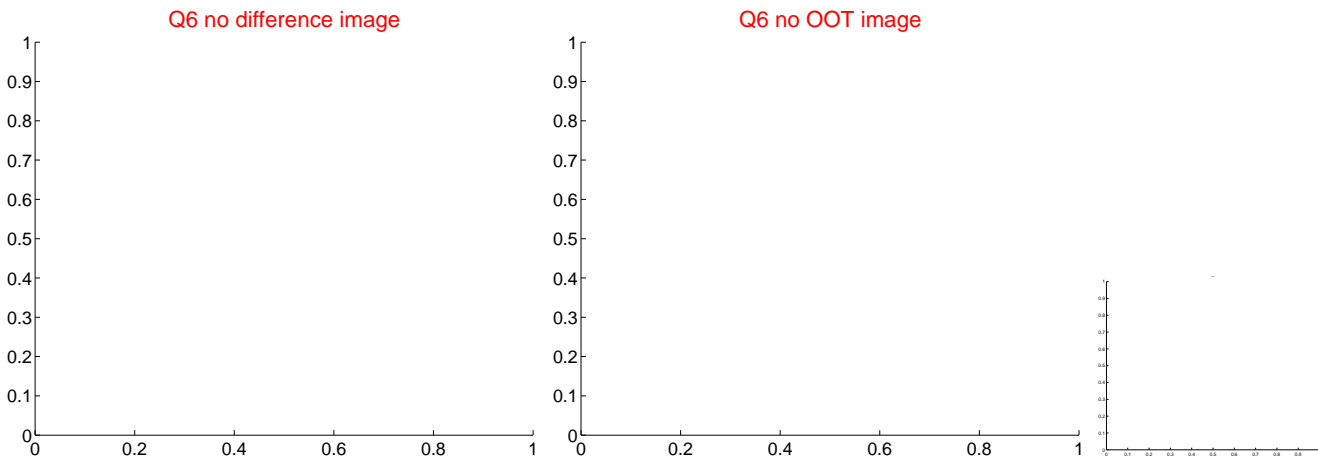
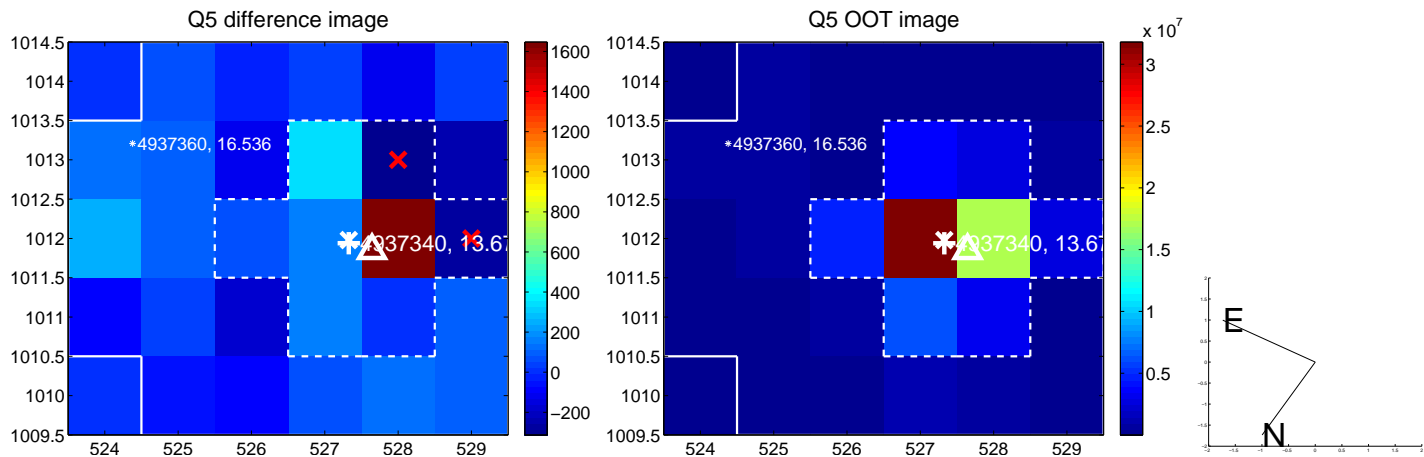


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

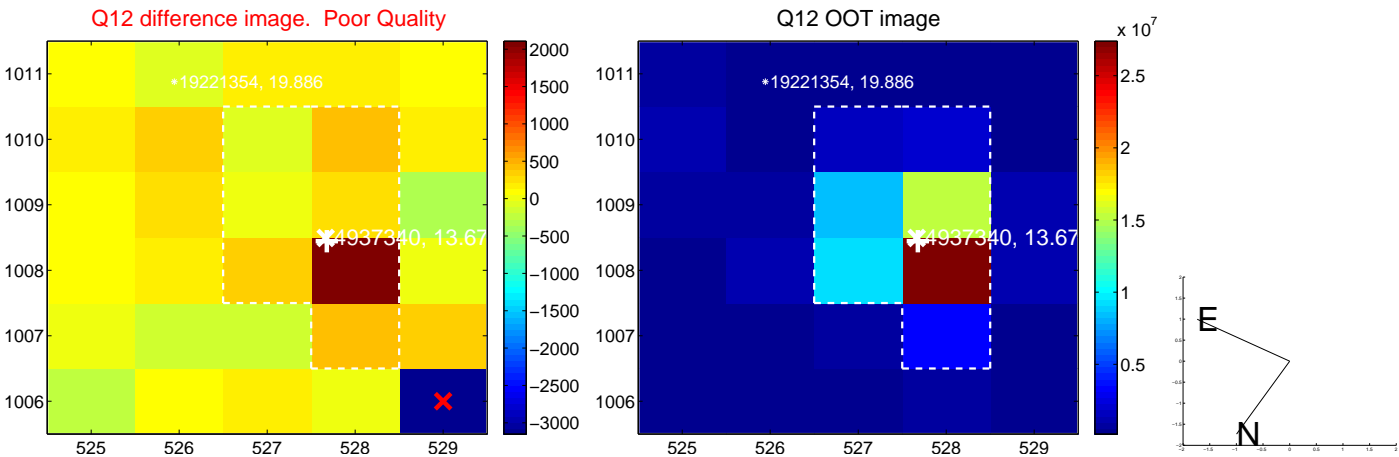
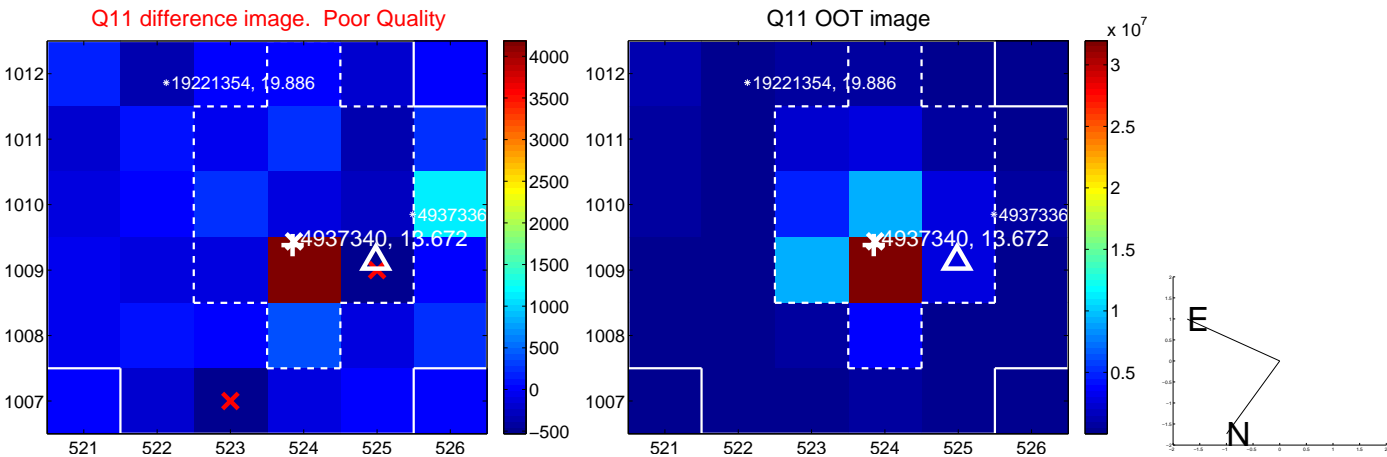
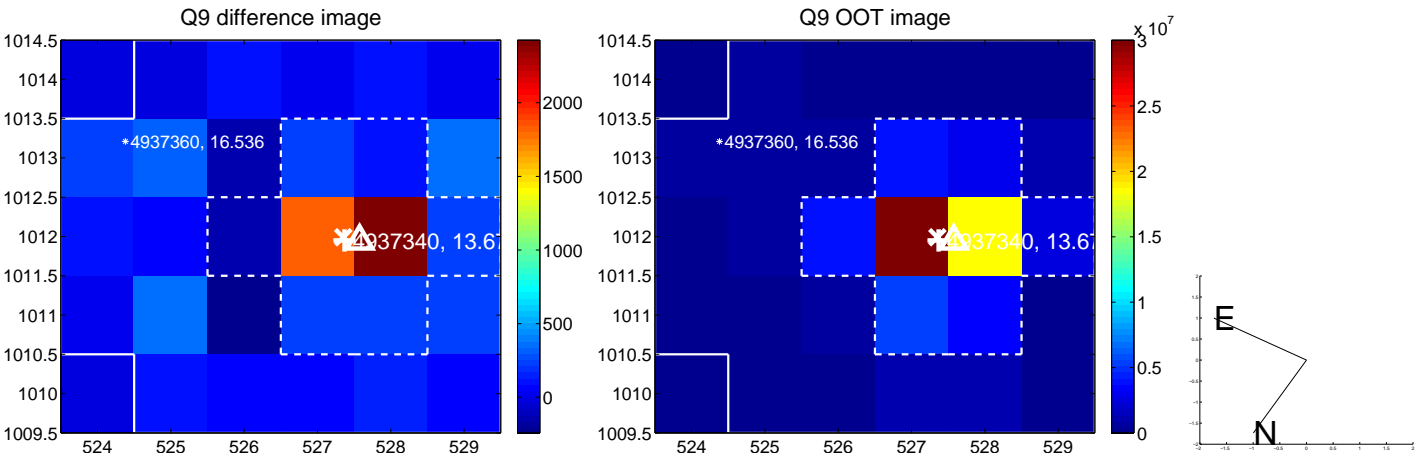
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



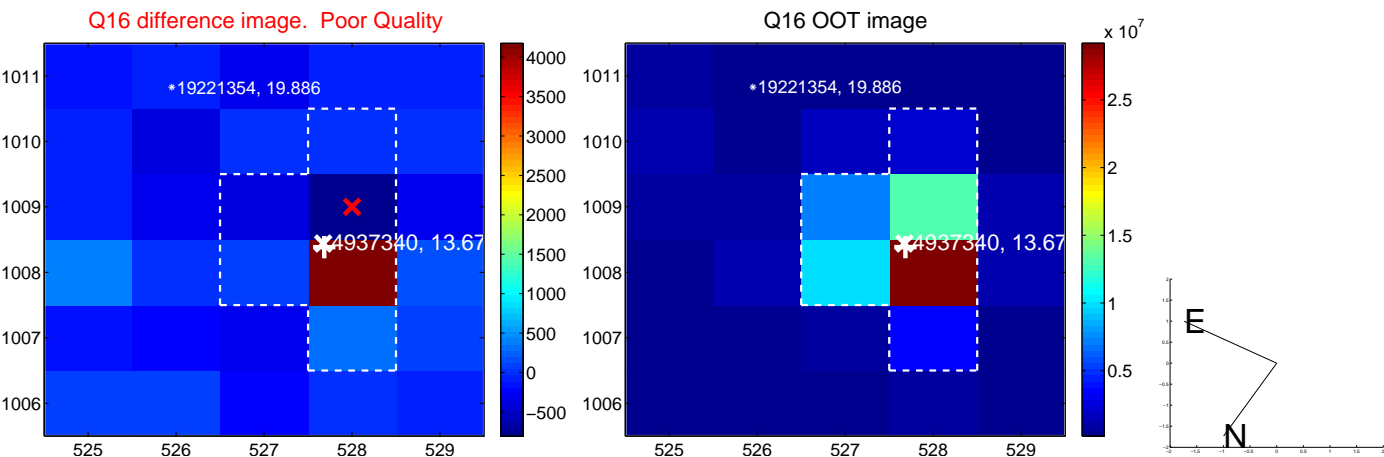
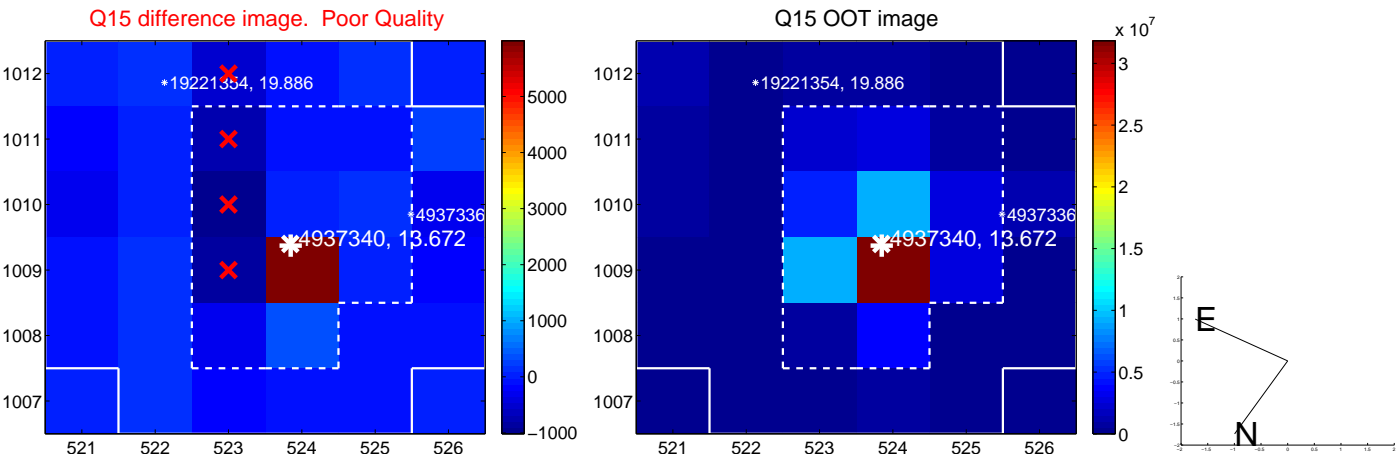
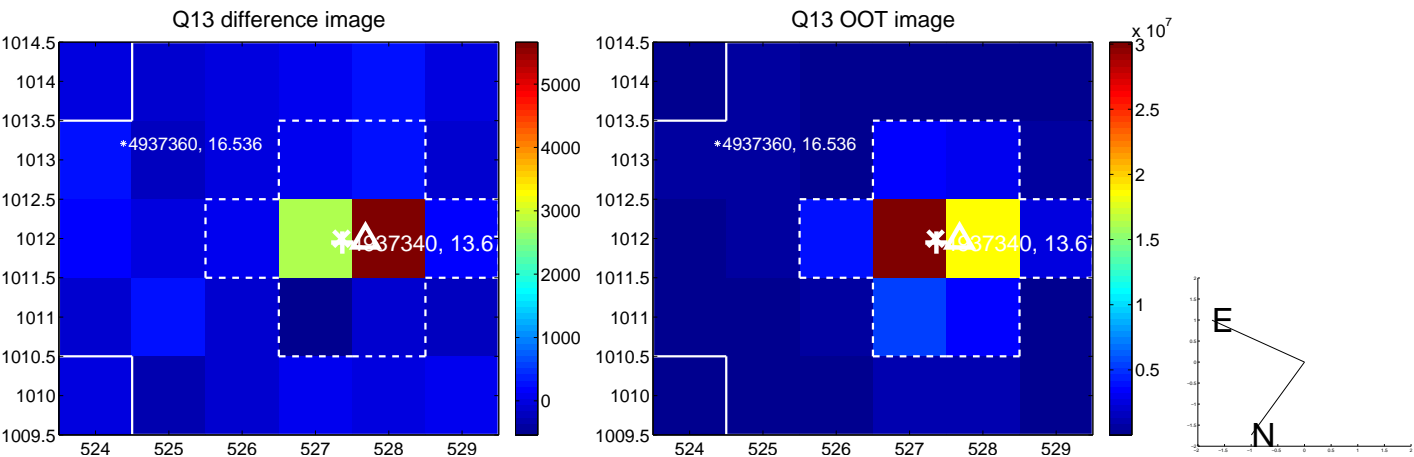
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



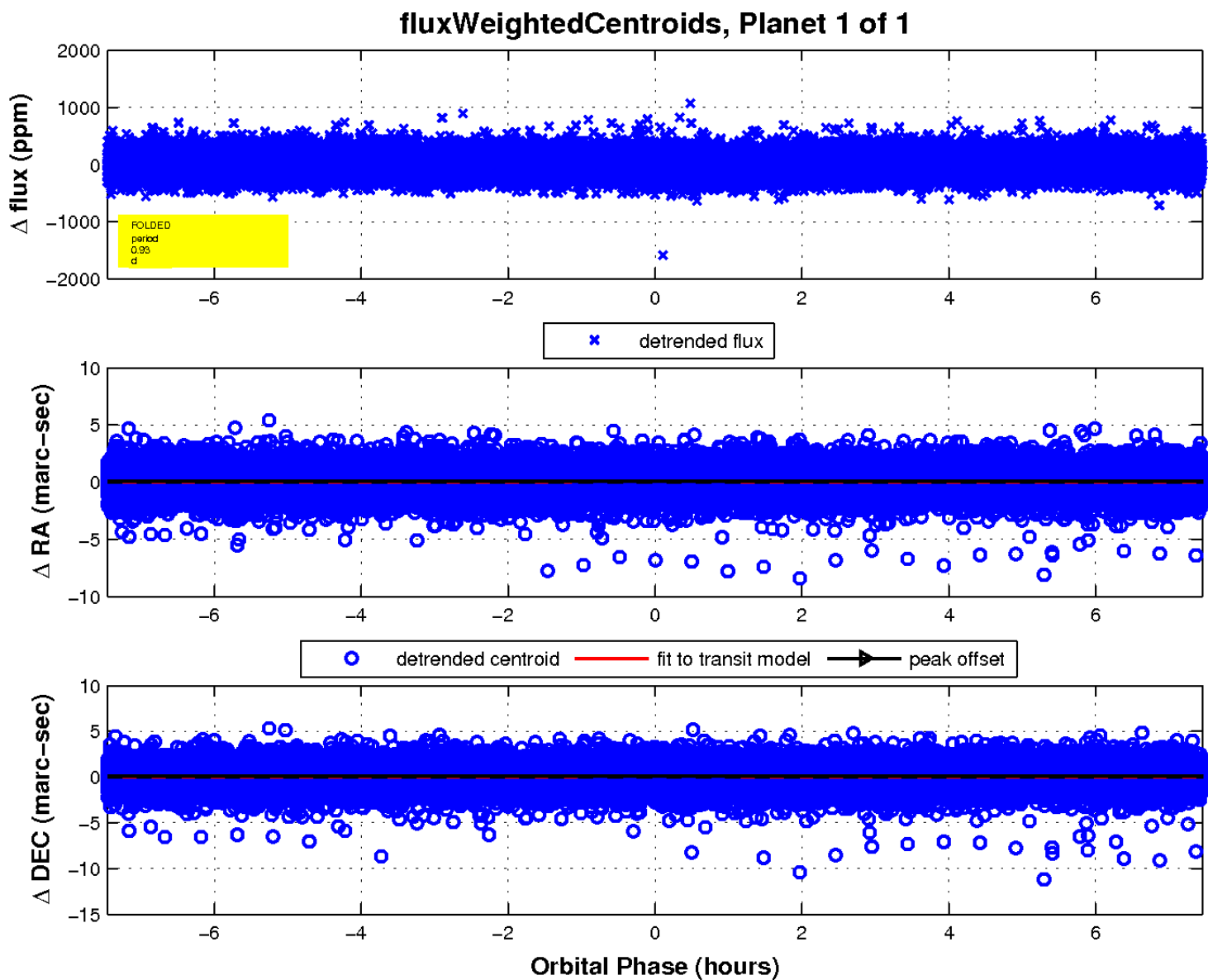
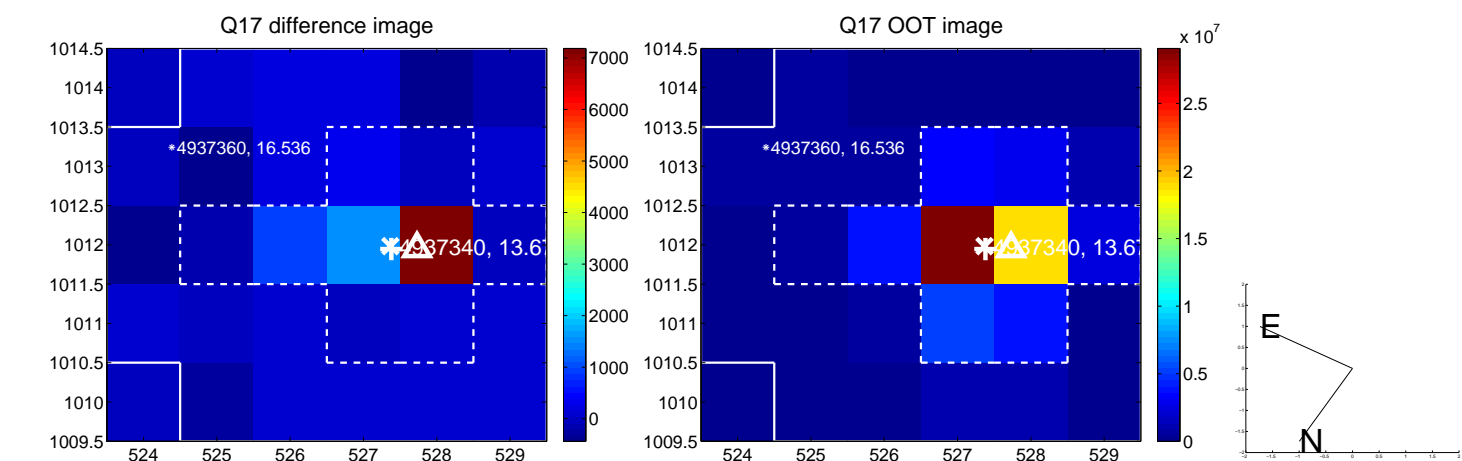
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

