

KIC 004937512

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})
004937512-01	OBS	No	0.534708	131.925716	18.3	1.421	7.6	7.8	2.78	6728	1.20	62119.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004937512-01	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.

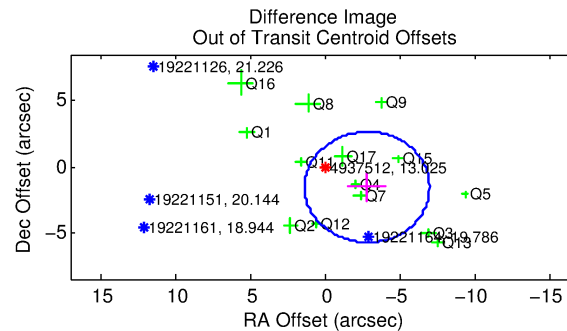
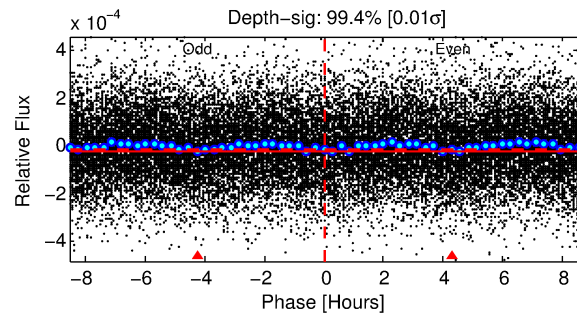
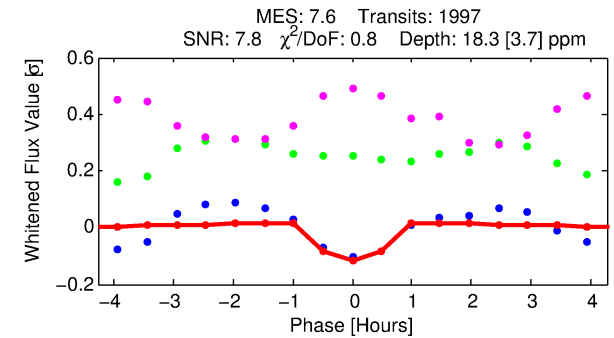
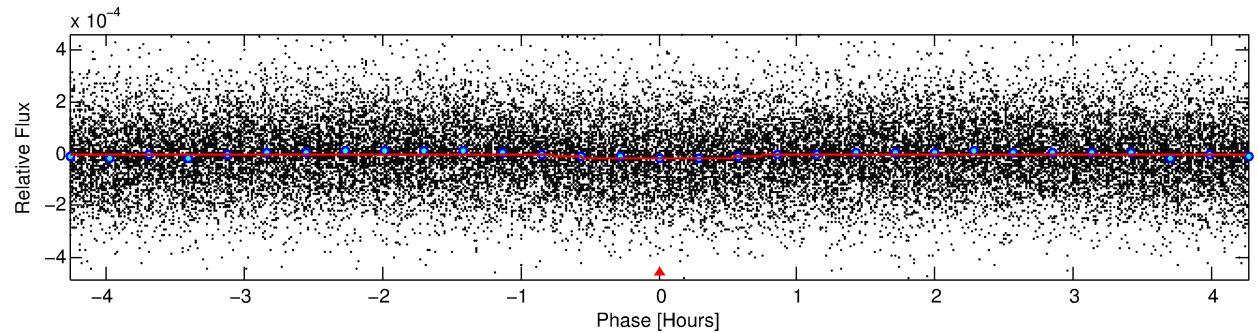
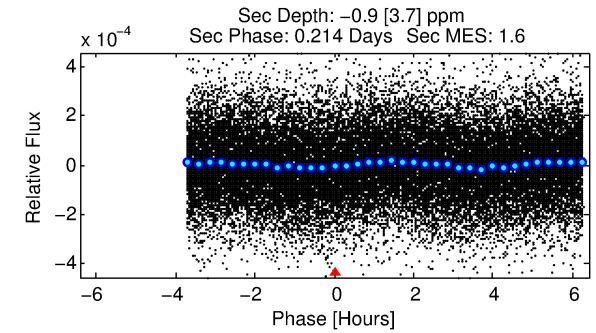
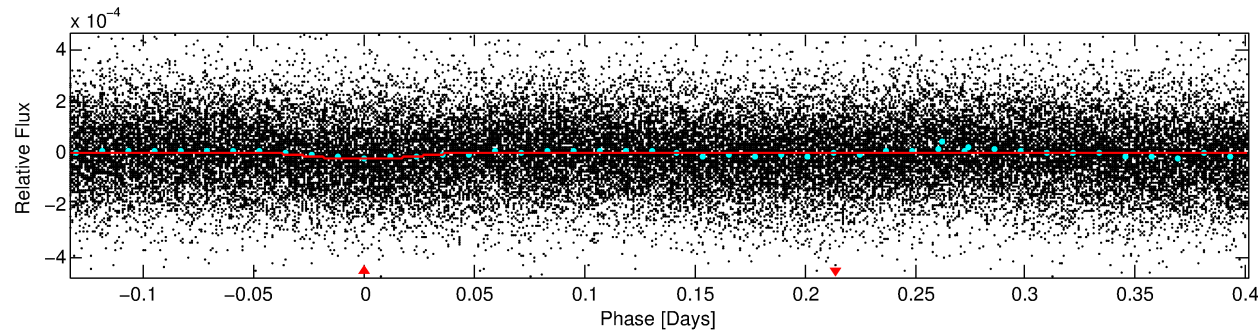
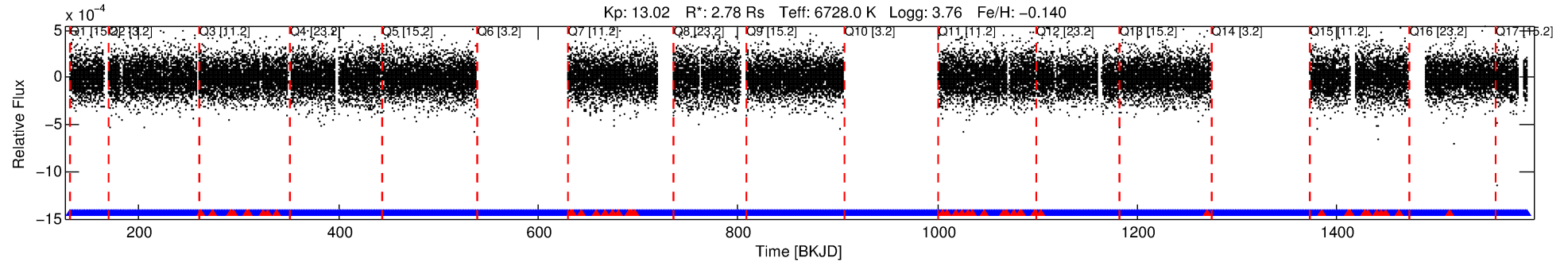
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004937512-01

No Significant Match Found

DV One-Page Summary

KIC: 4937512 Candidate: 1 of 1 Period: 0.535 d



DV Fit Results:

Period = 0.53471 [0.00002] d
Epoch = 131.9257 [0.0025] BKJD
Rp/R* = 0.0040 [0.0055]
a/R* = 2.94 [19.52]
b = 0.02 [433.12]
Seff = 62119.65 [32988.18]
Teq = 4026 [534] K
Rp = 1.20 [1.72] Re
a = 0.0151 [0.0050] AU
Ag = N/A
Teffp = N/A

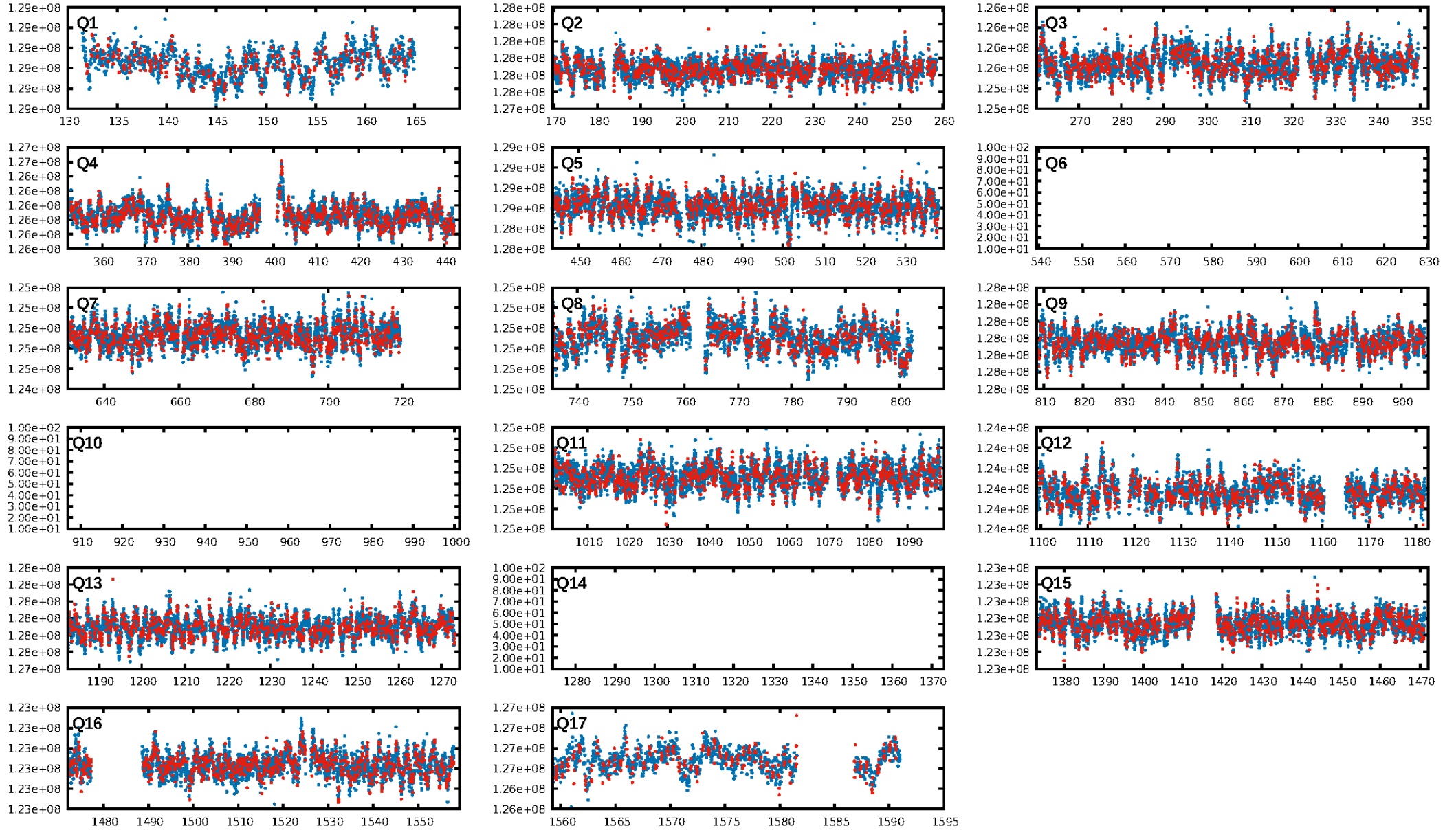
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.84e-13
RollingBand-fgt: 0.97 [1836/1885]
GhostDiagnostic-chr: 0.9227
Centroid-sig: 0.1%
Centroid-so: 3.285 arcsec [2.81σ]
OotOffset-rm: 3.227 arcsec [2.31σ]
KicOffset-rm: 3.160 arcsec [2.28σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

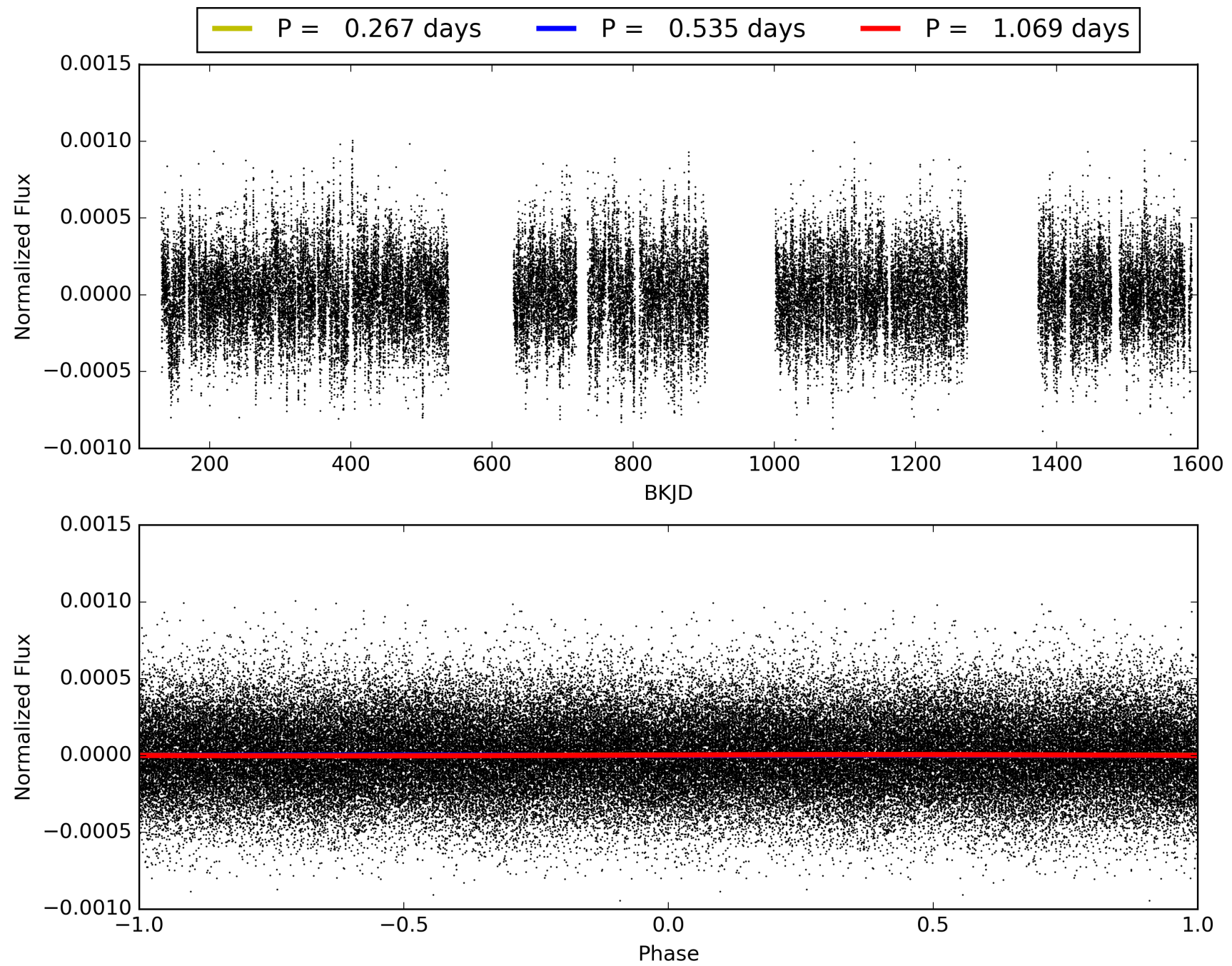
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:01:05 Z

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

TCE 004937512-01, PDC Light Curves

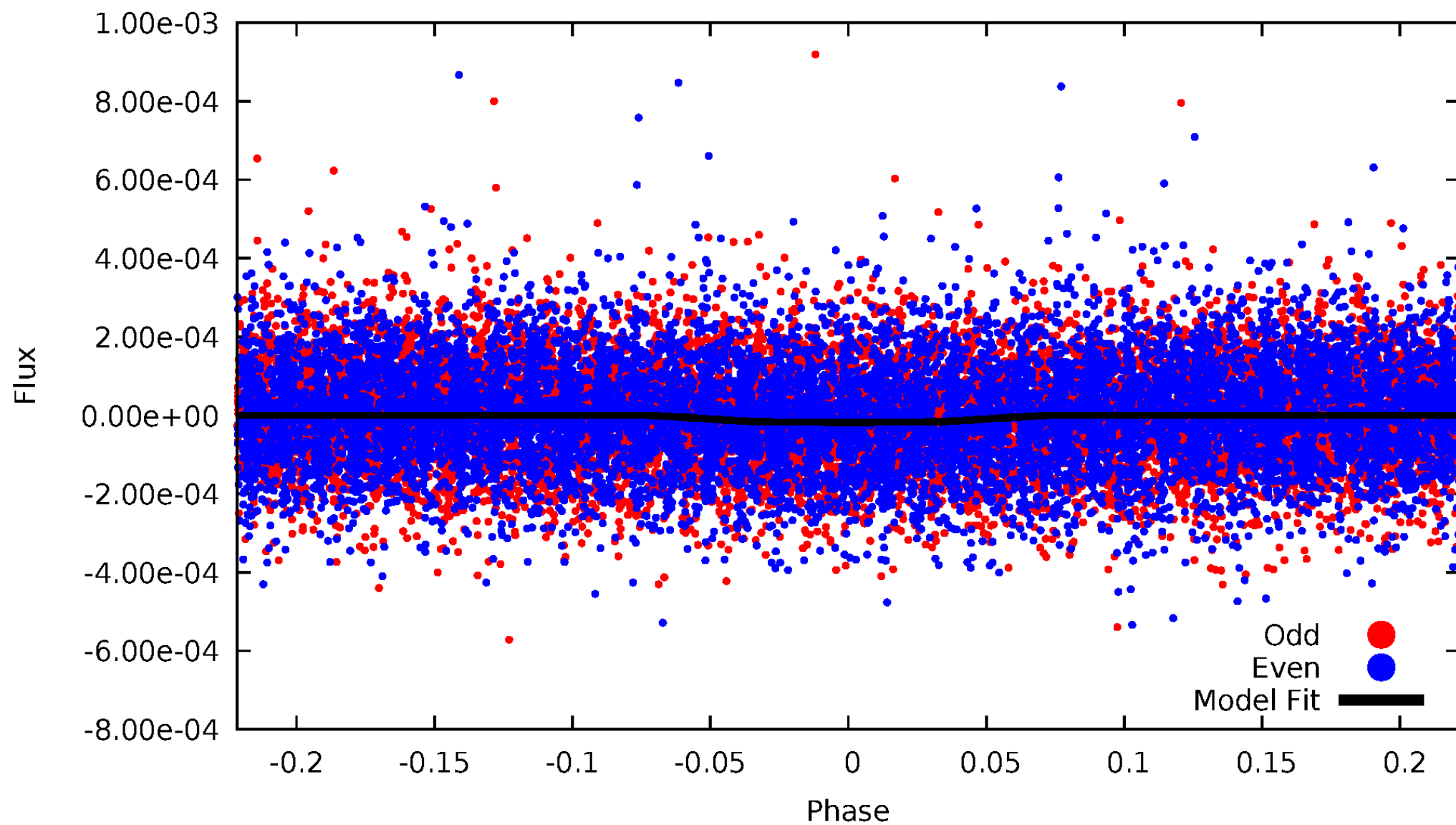


TCE 004937512-01



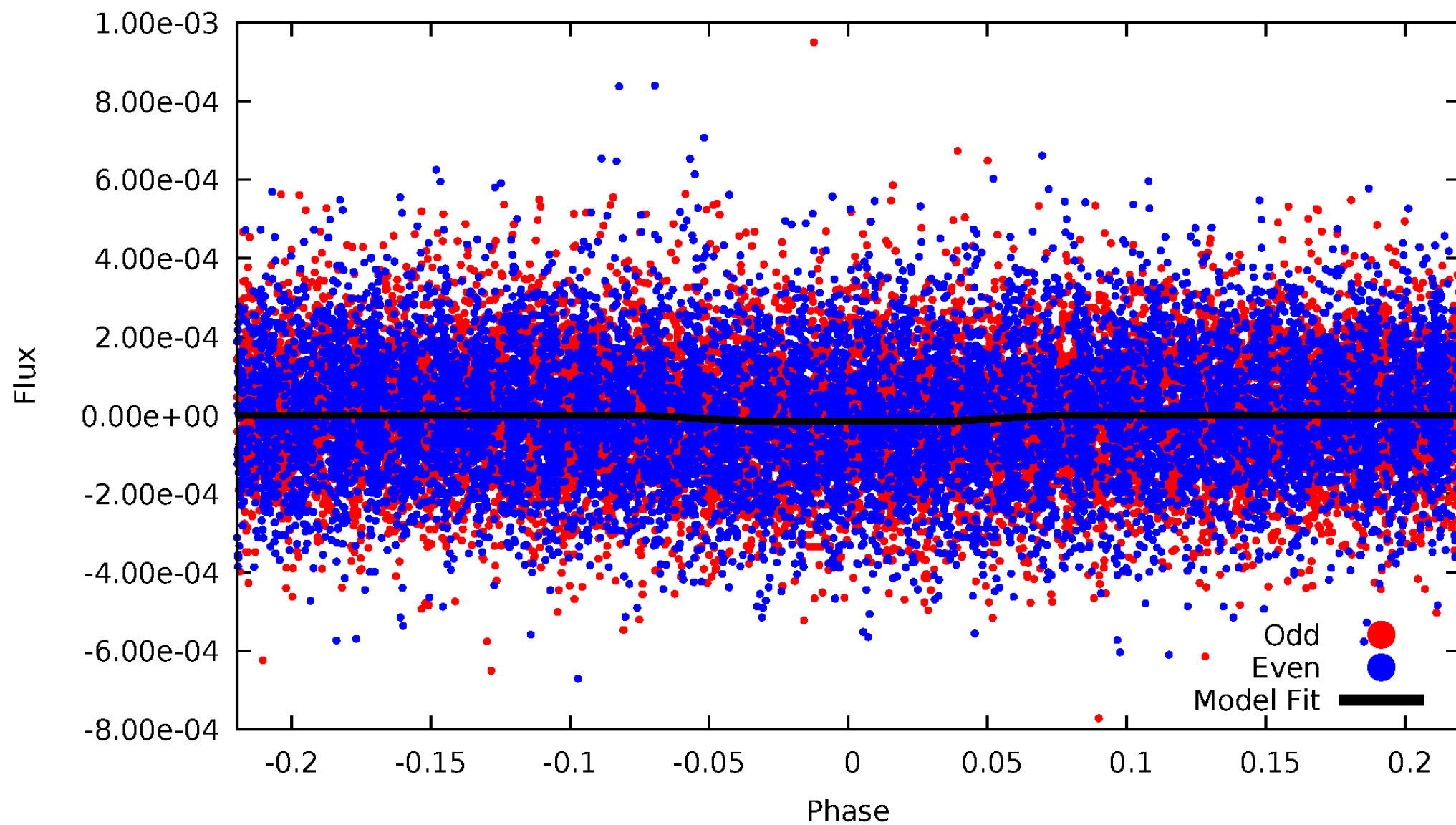
DV Odd/Even

TCE 004937512-01



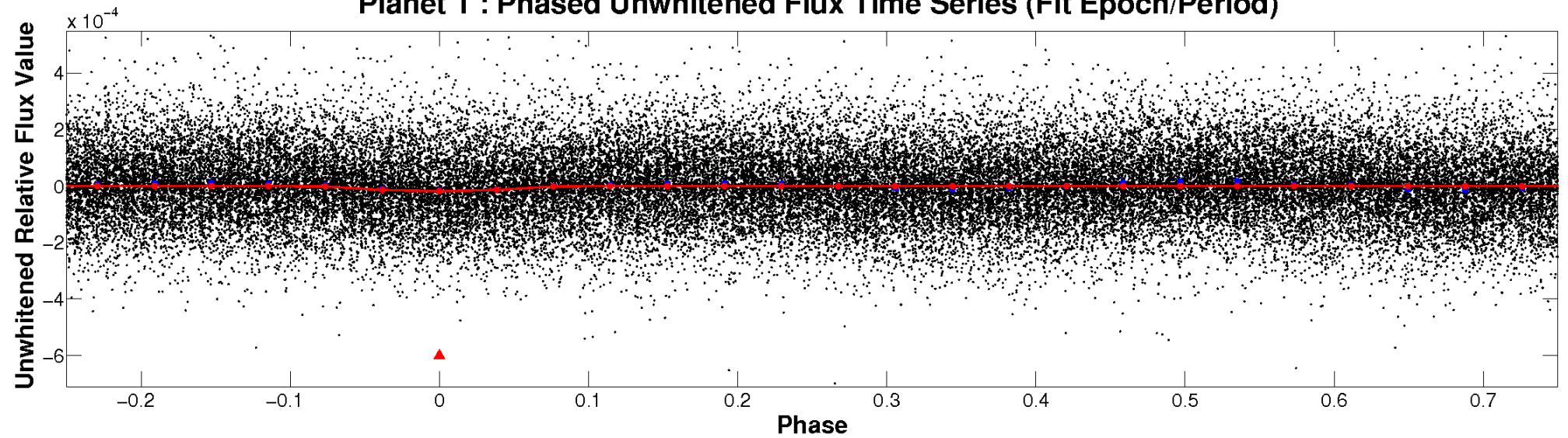
ALT Odd/Even

TCE 004937512-01

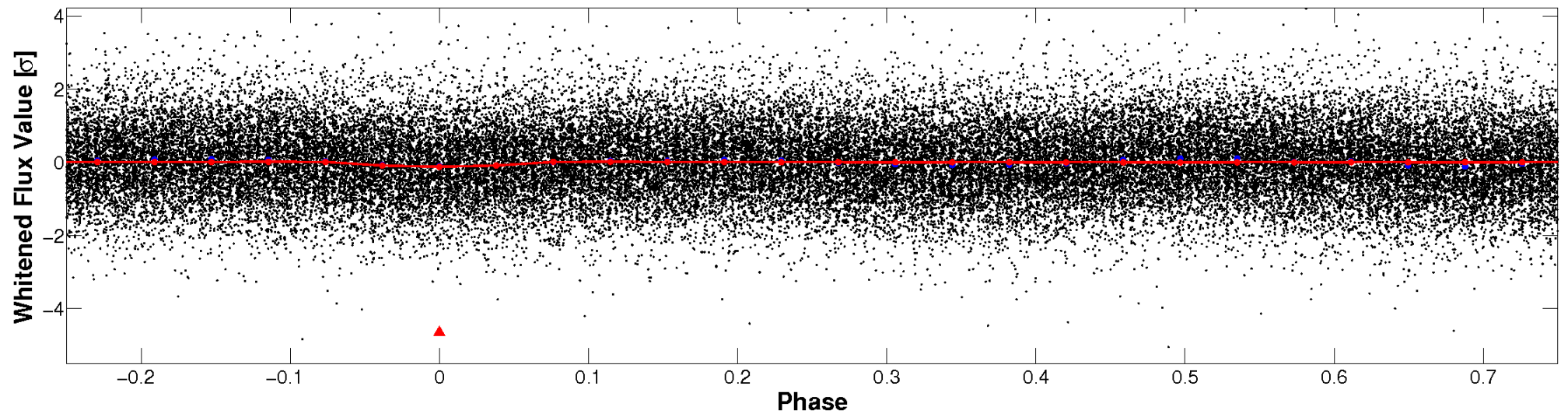


Non-Whitened Vs. Whitened Light Curve

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

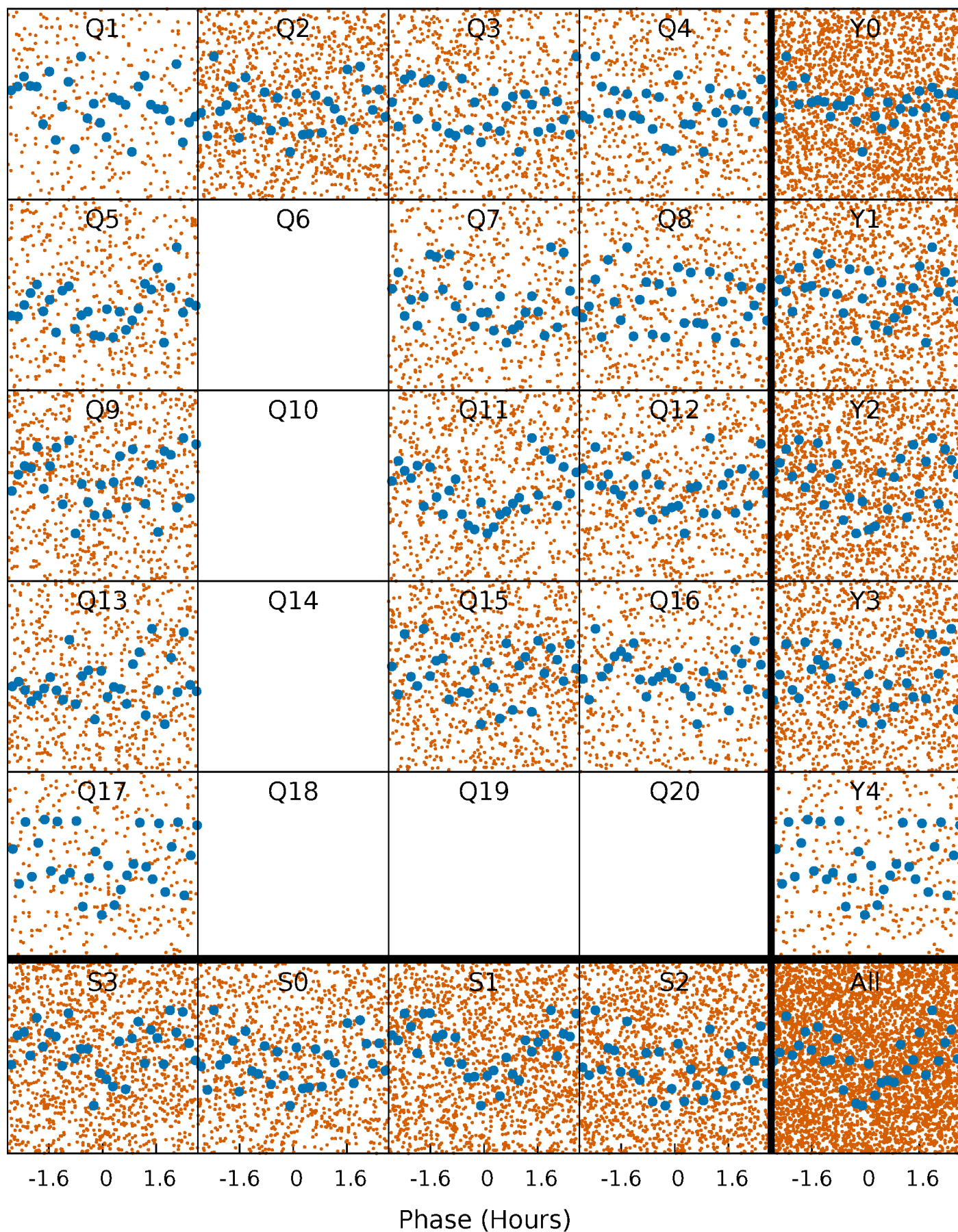


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



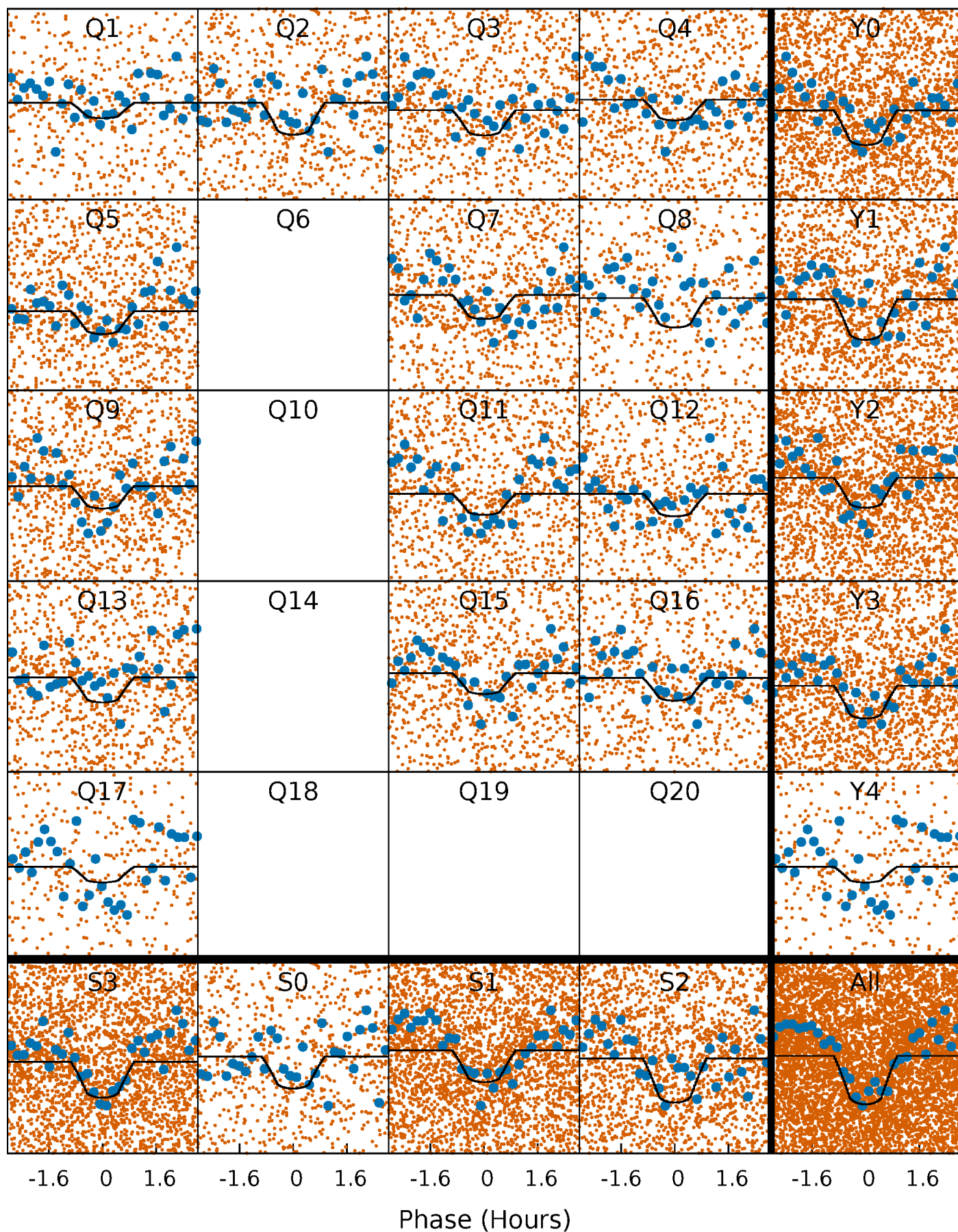
PDC Quarter-Phased Transit Curves

TCE 004937512-01 P= 0.534708 Days $T_0=131.925716$ (BKJD)



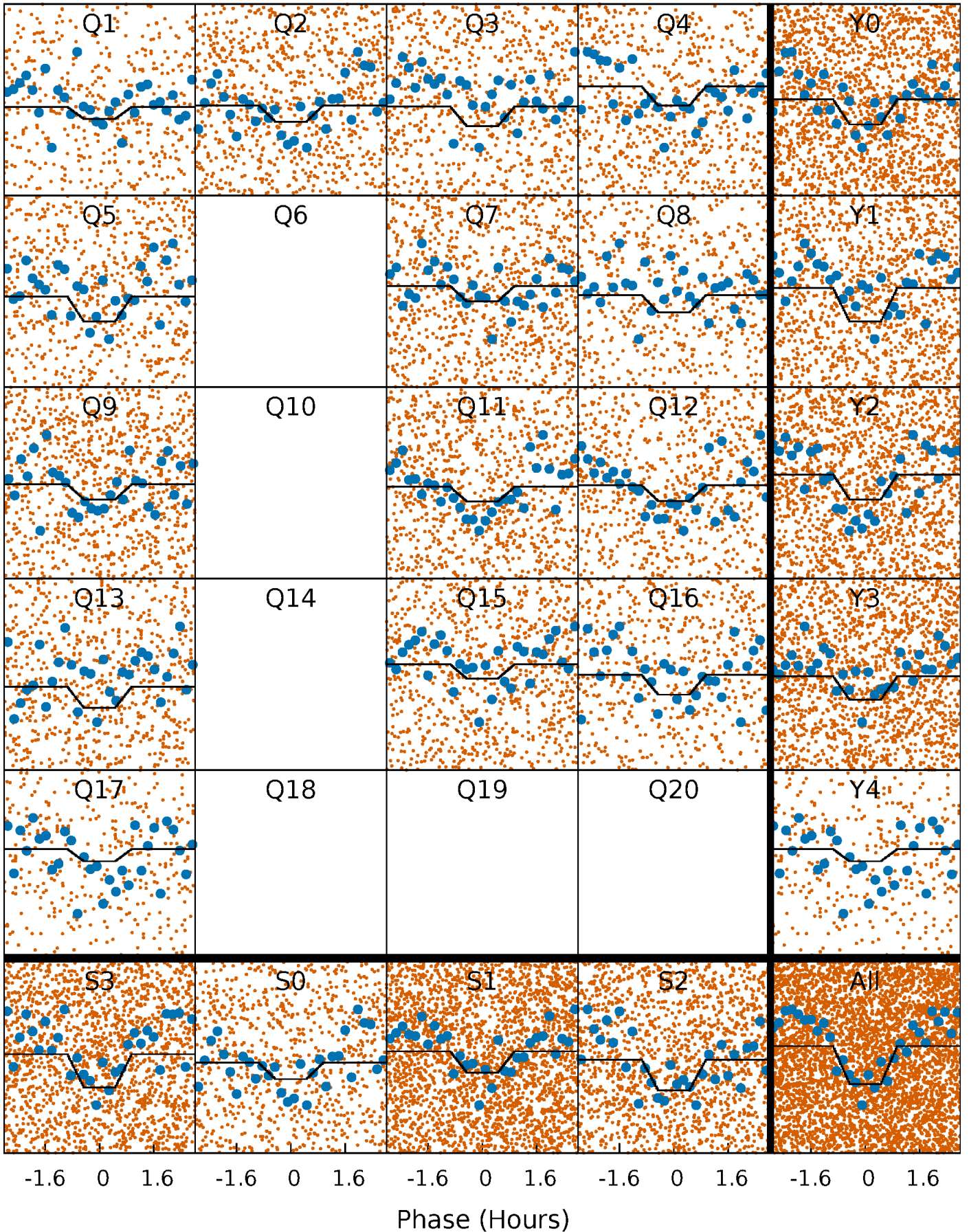
DV Quarter-Phased Transit Curves

TCE 004937512-01 P= 0.534708 Days $T_0=131.925716$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

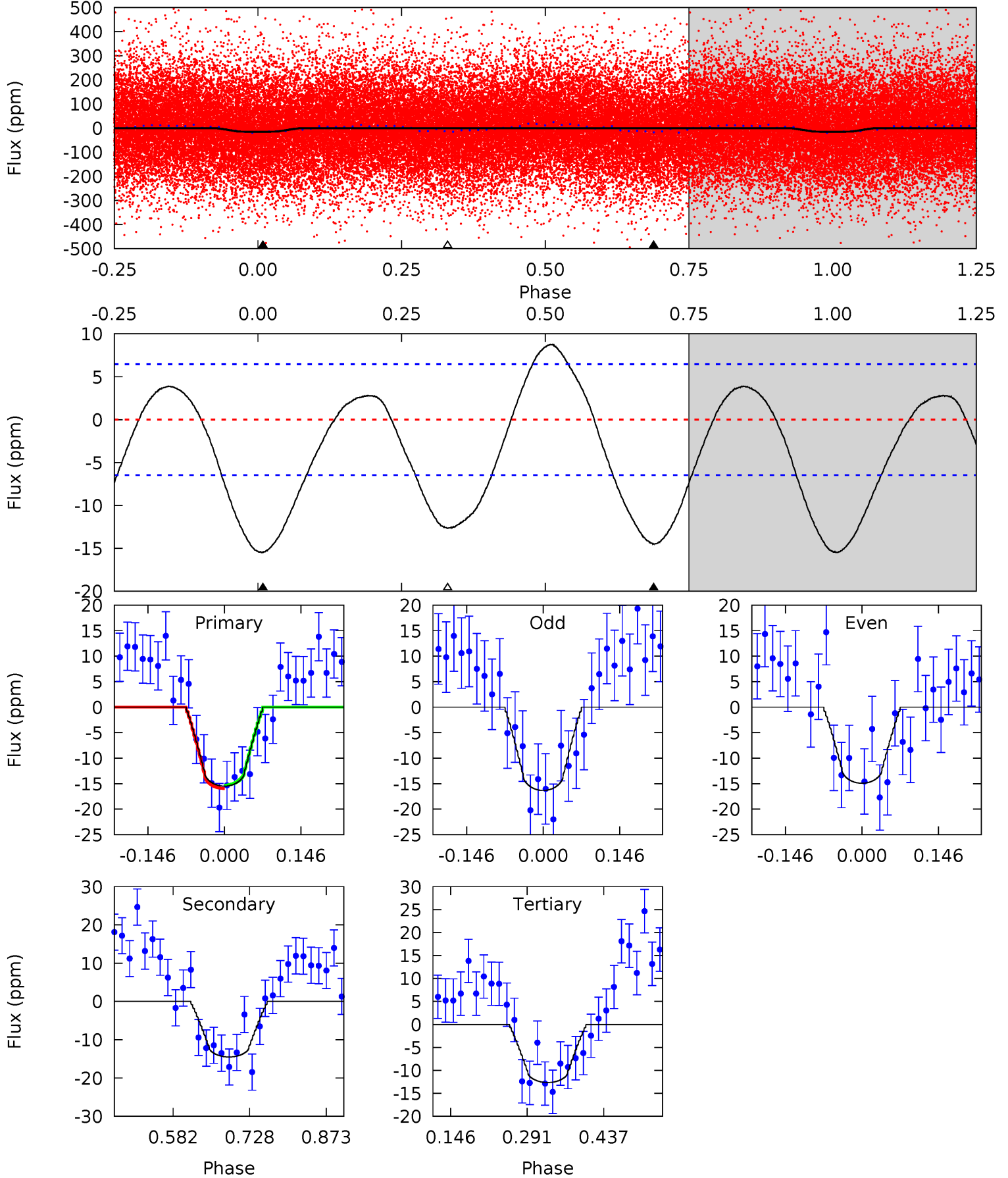
TCE 004937512-01 P= 0.534710 Days $T_0=131.925687$ (BKJD)



DV Model-Shift Uniqueness Test

004937512-01, P = 0.534708 Days, E = 131.391008 Days

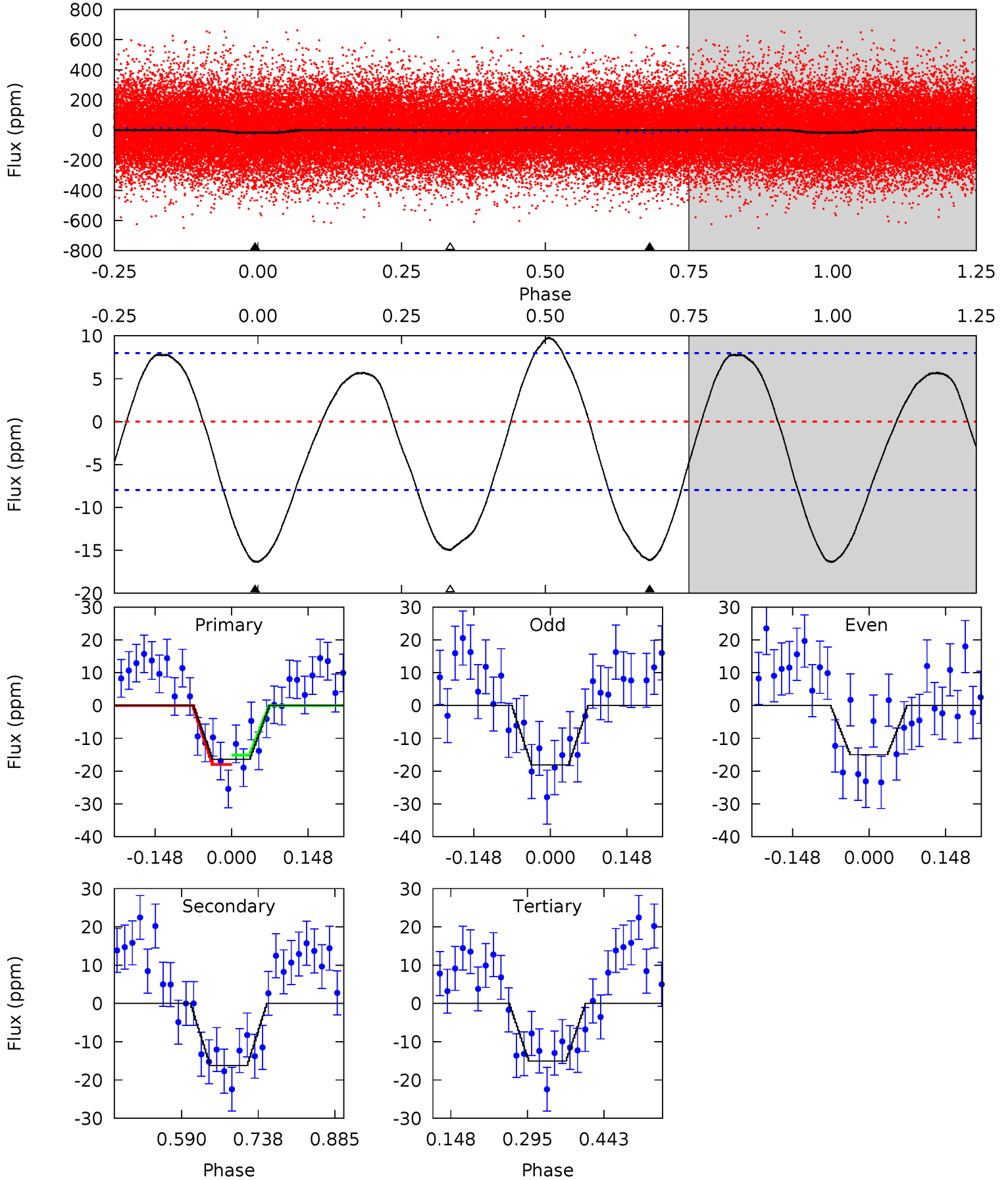
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	10.1	8.79	0	4.49	1.46	4.86	1.96	10.8	1.28	10.1	0.49	0.83	0.36	0.22



Alt Model-Shift Uniqueness Test

004937512-01, P = 0.534710 Days, E = 131.390977 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	9.12	8.47	0	4.48	1.45	4.77	0.75	9.22	0.65	9.12	0.86	0.80	0.37	0.77



Stellar Parameters For KIC 004937512

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6728^{+187}_{-234}	$3.756^{+0.293}_{-0.098}$	$-0.140^{+0.300}_{-0.250}$	$2.776^{+0.439}_{-1.023}$	$1.602^{+0.221}_{-0.332}$	$0.105^{+0.213}_{-0.032}$
	+3%/-3%	+8%/-3%	+214%/-179%	+16%/-37%	+14%/-21%	+202%/-31%
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 004937512-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$1.58^{+1.46}_{-1.10}$	5523^{+336}_{-479}	4964^{+5853}_{-8837}	$0.717^{+7.186}_{-0.526}$
Alt.	-16 ± 2	$1.55^{+1.37}_{-1.03}$	5519^{+345}_{-471}	5192^{+5571}_{-8697}	$0.856^{+6.366}_{-0.623}$

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

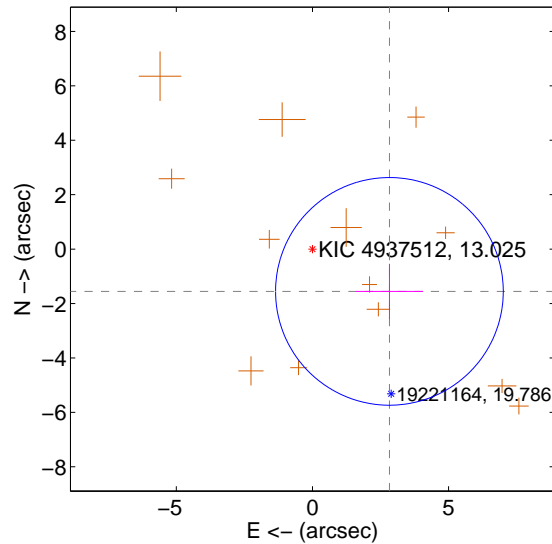
Supplemental centroid analysis for 004937512-01. Kepler magnitude: 13.03. Transit SNR 7.80

There are 0 quarters with good PRF difference image offsets

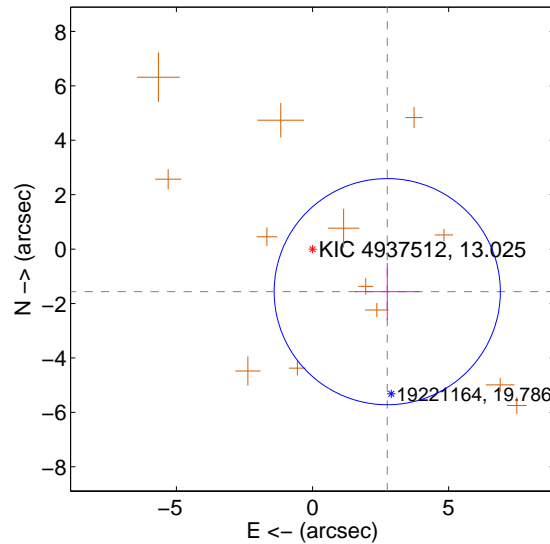
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.227 ± 1.394	2.31	-2.828 ± 1.233	-1.554 ± 1.012
PRF-fit source offset from KIC position	3.160 ± 1.385	2.28	-2.746 ± 1.185	-1.564 ± 1.052
photometric centroid source offset	3.28 ± 1.17	2.81	-3.28 ± 1.17	-0.22 ± 1.19

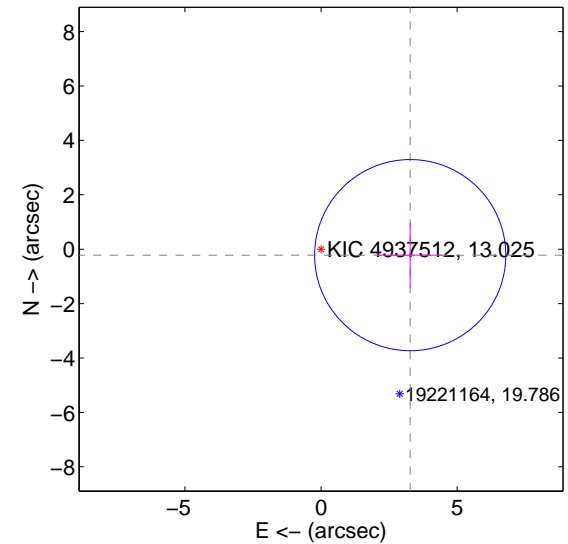
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

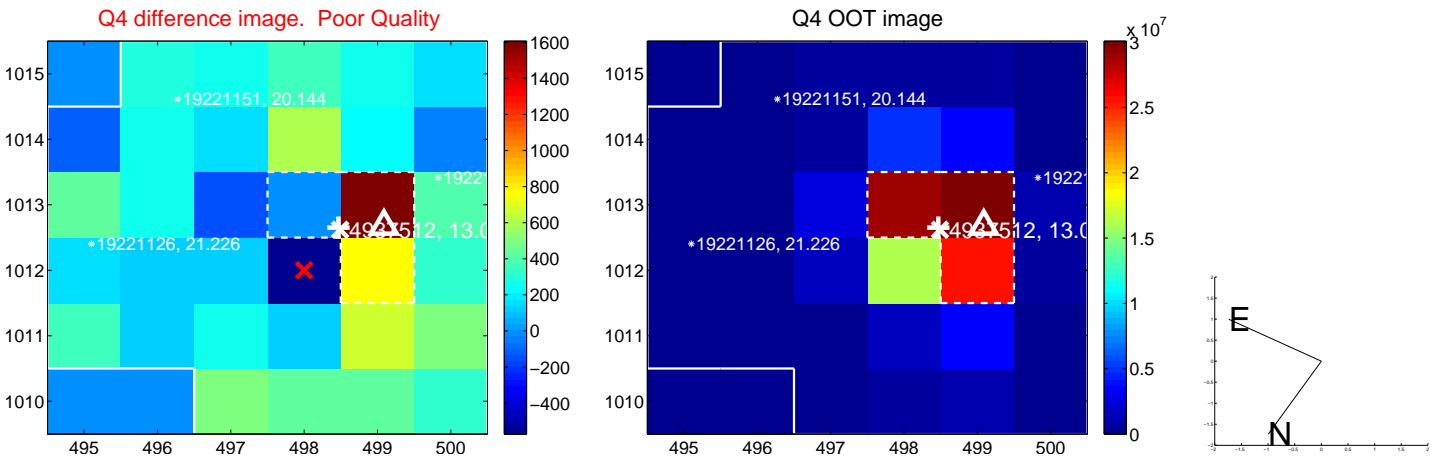
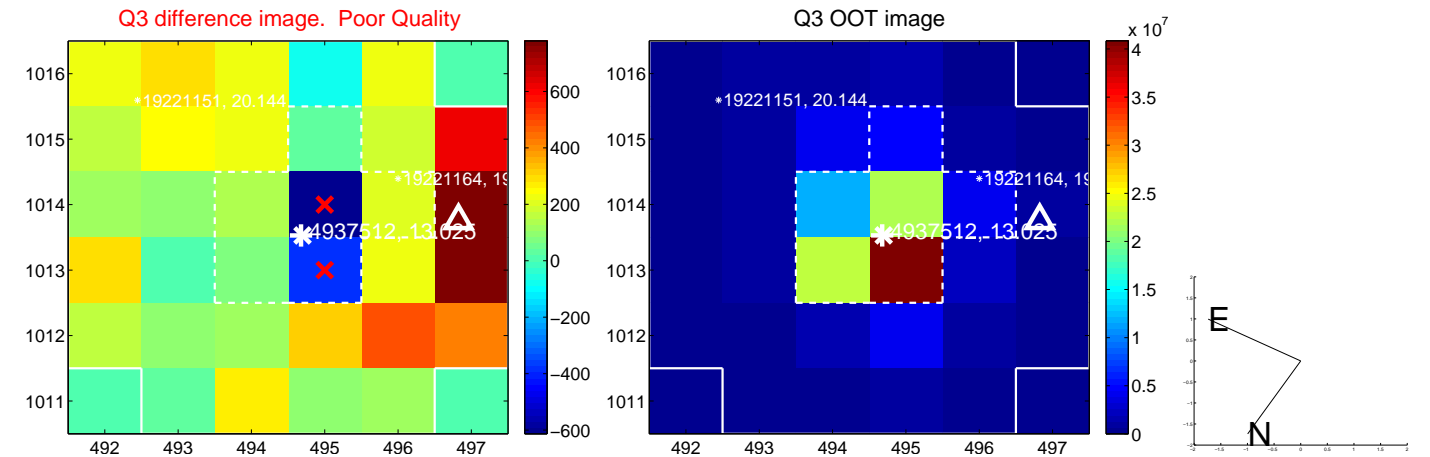
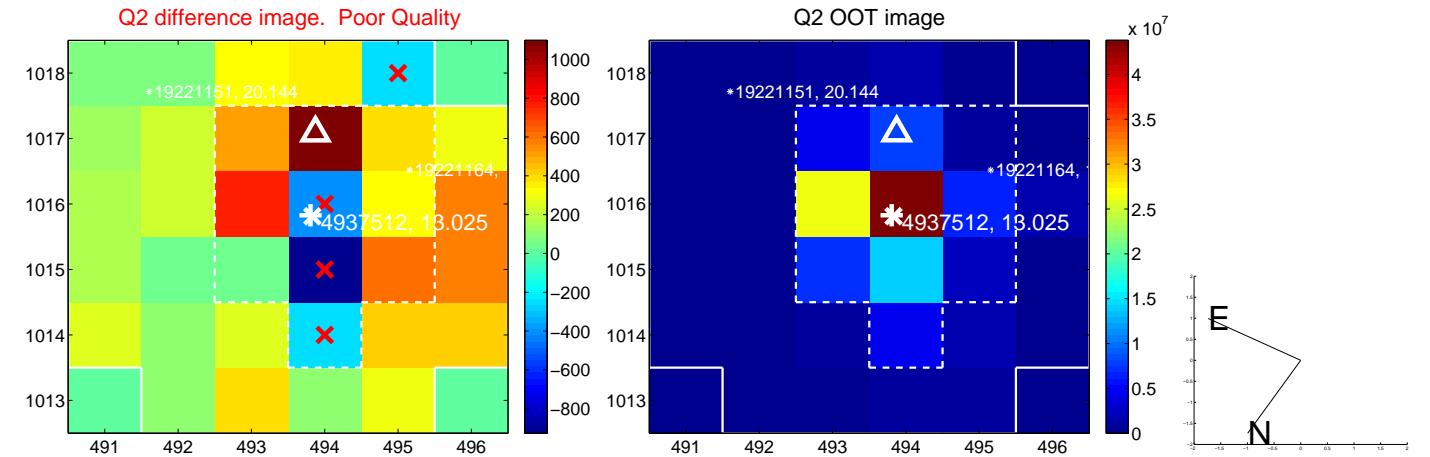
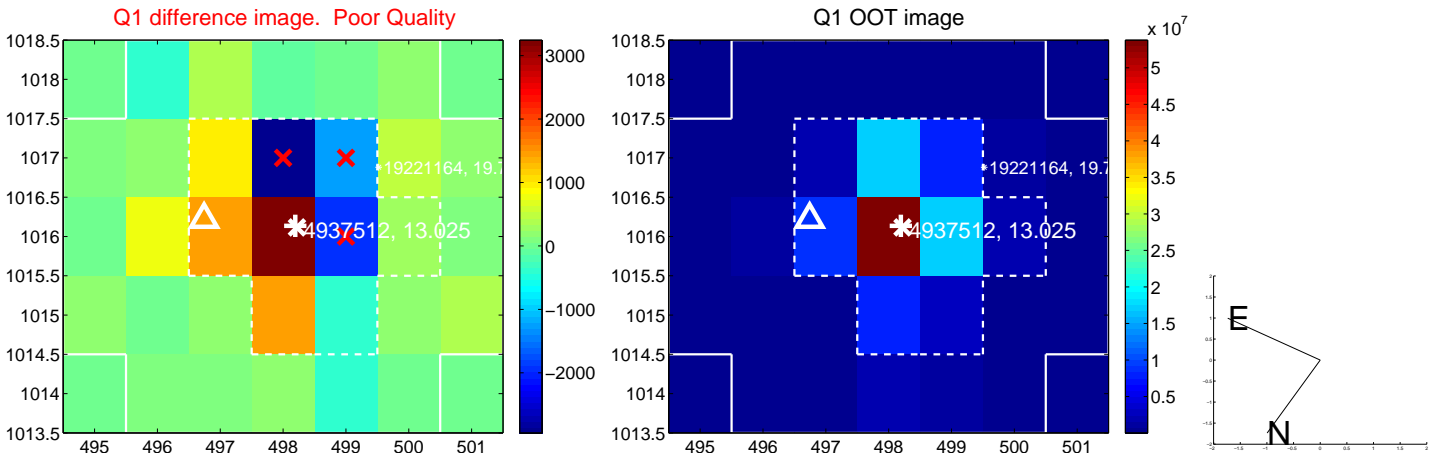


offset from photometric centroids

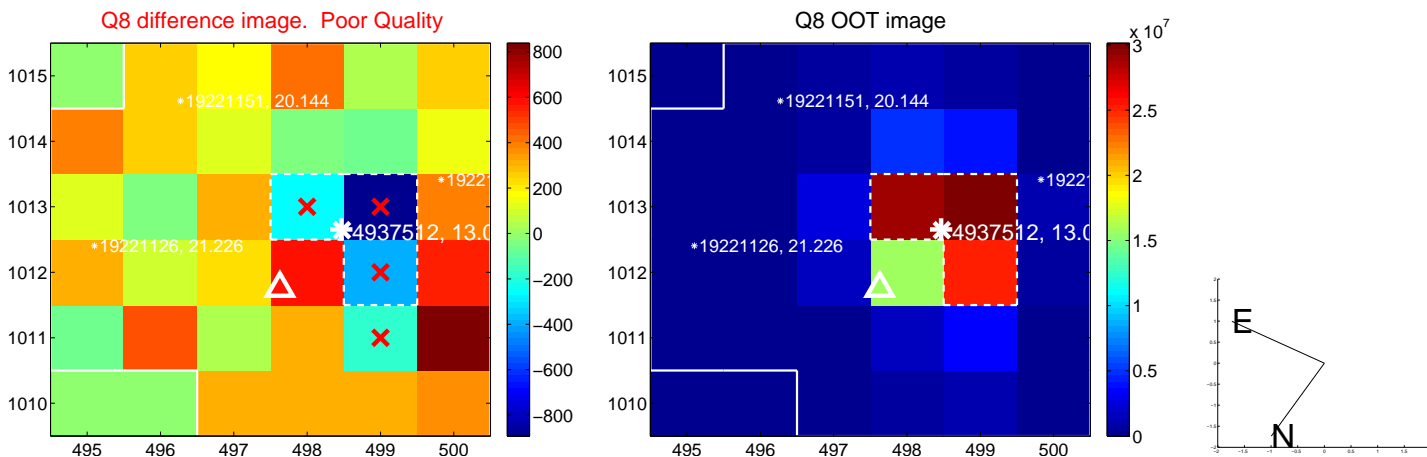
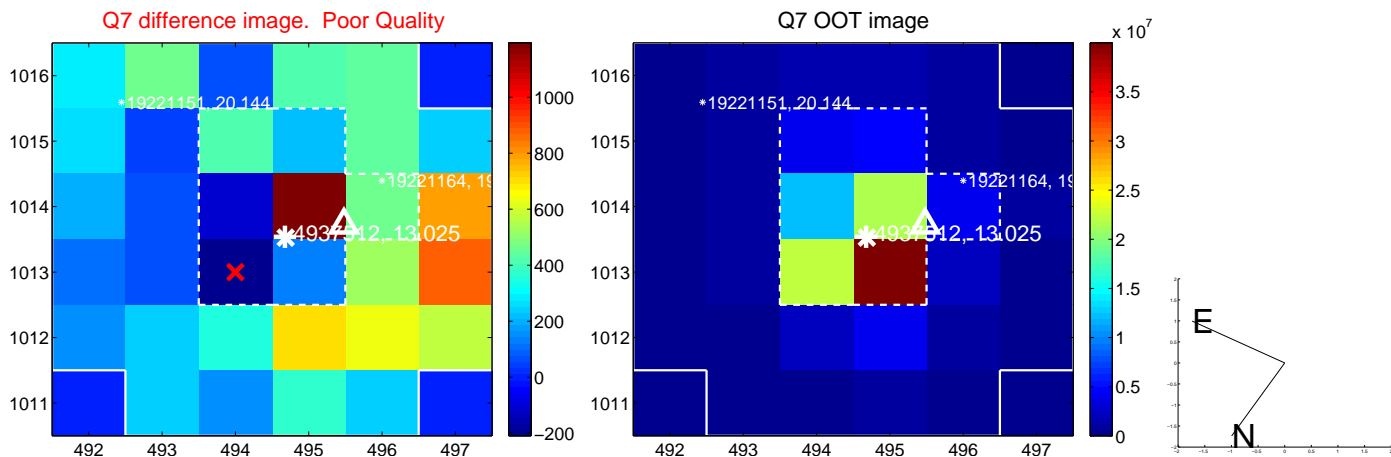
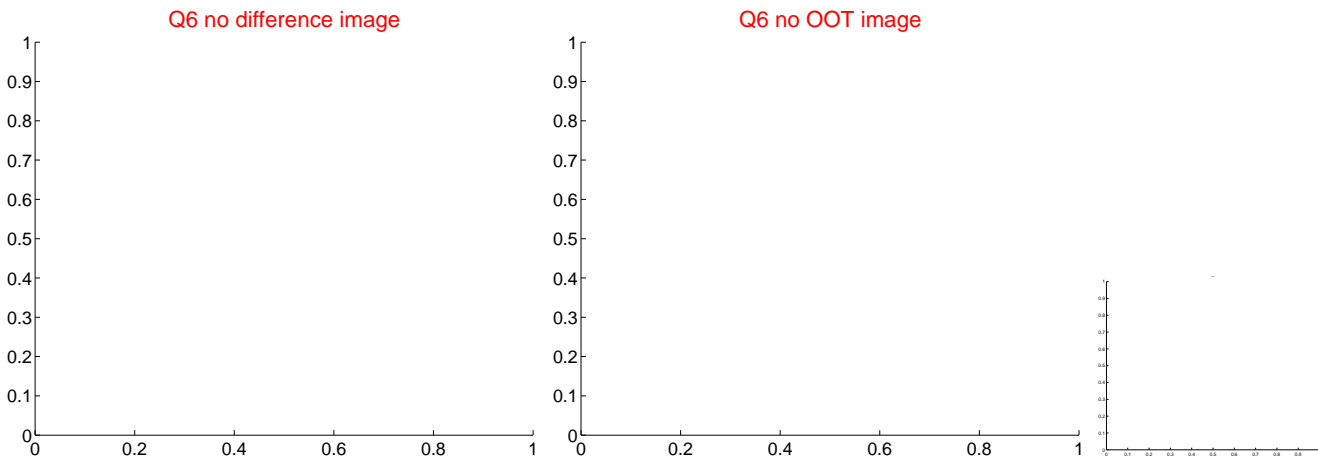
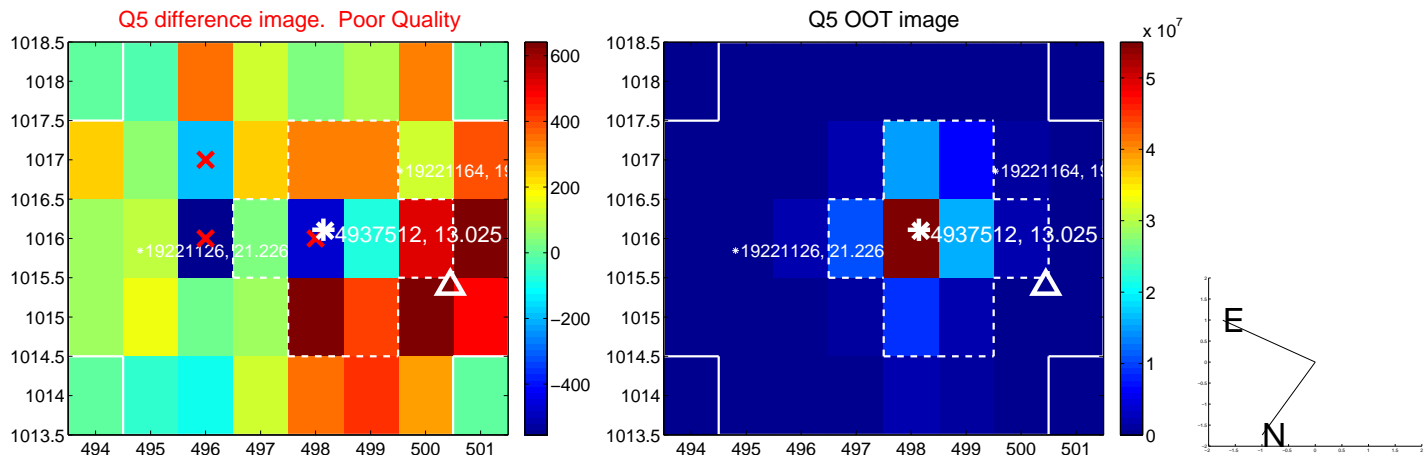


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

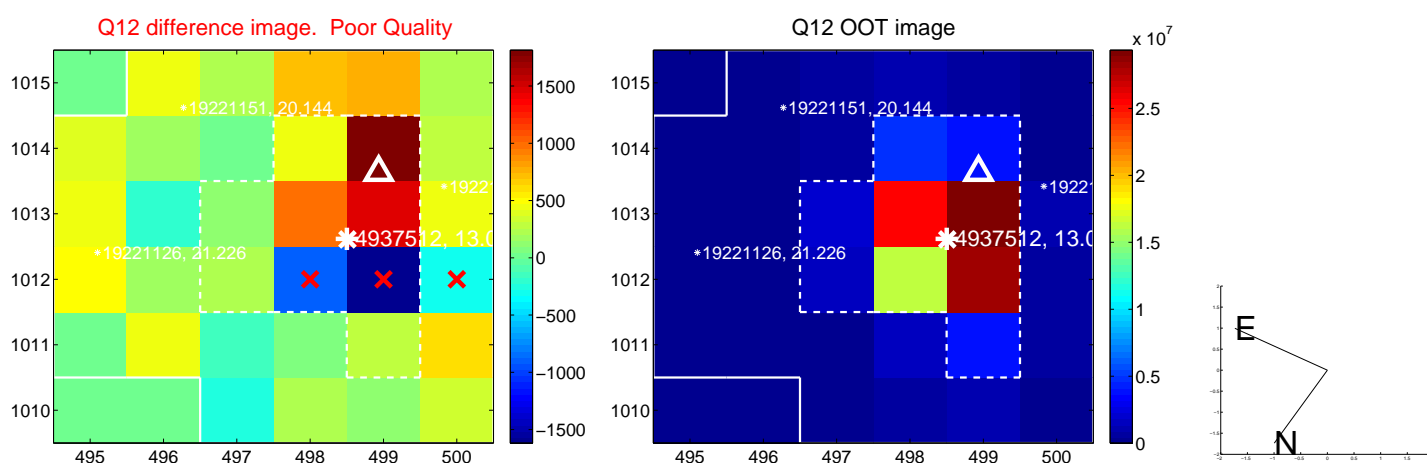
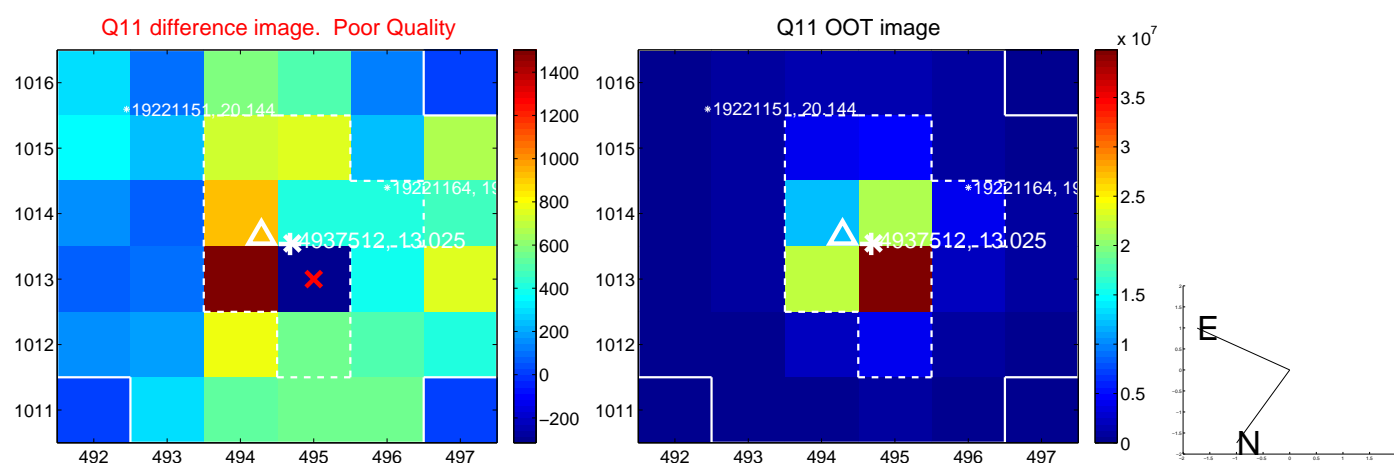
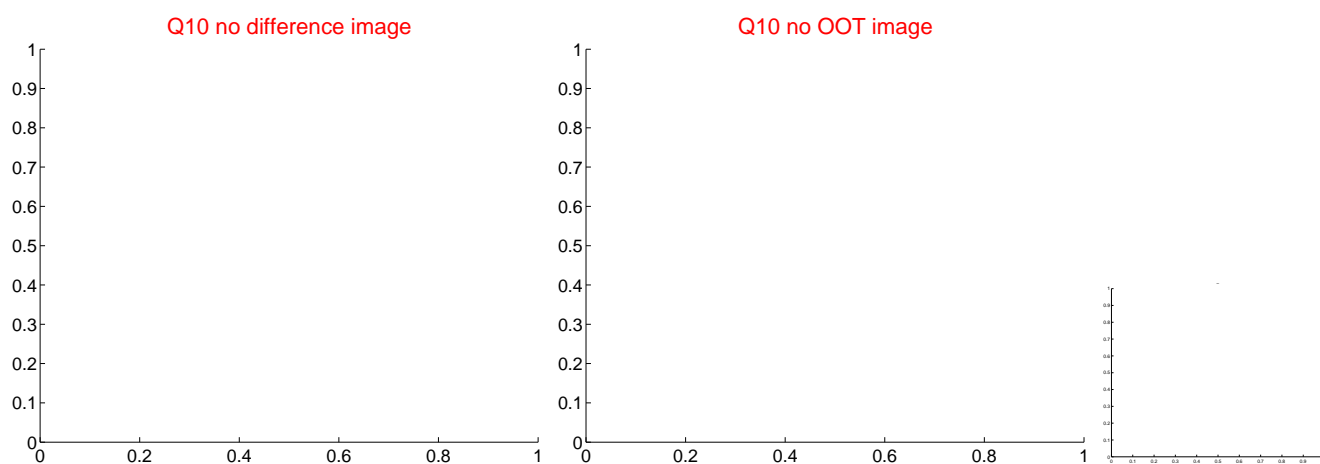
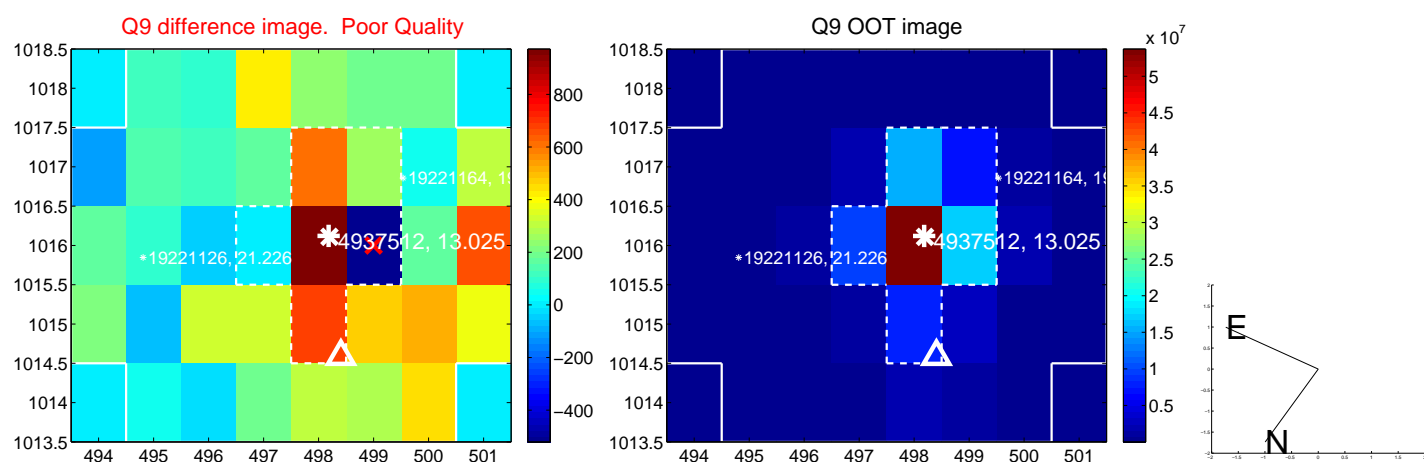
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



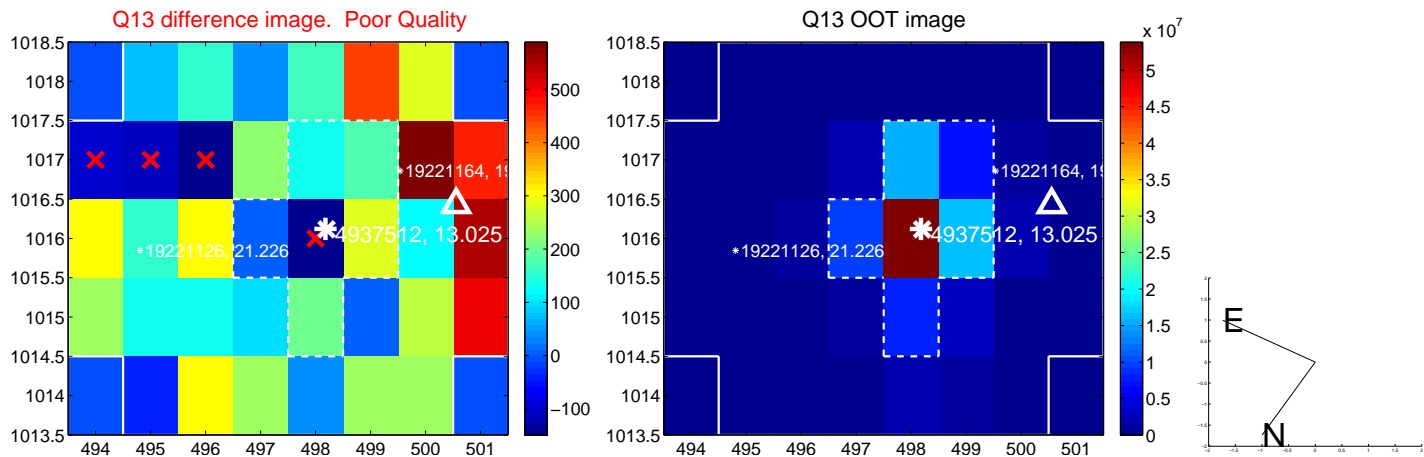
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



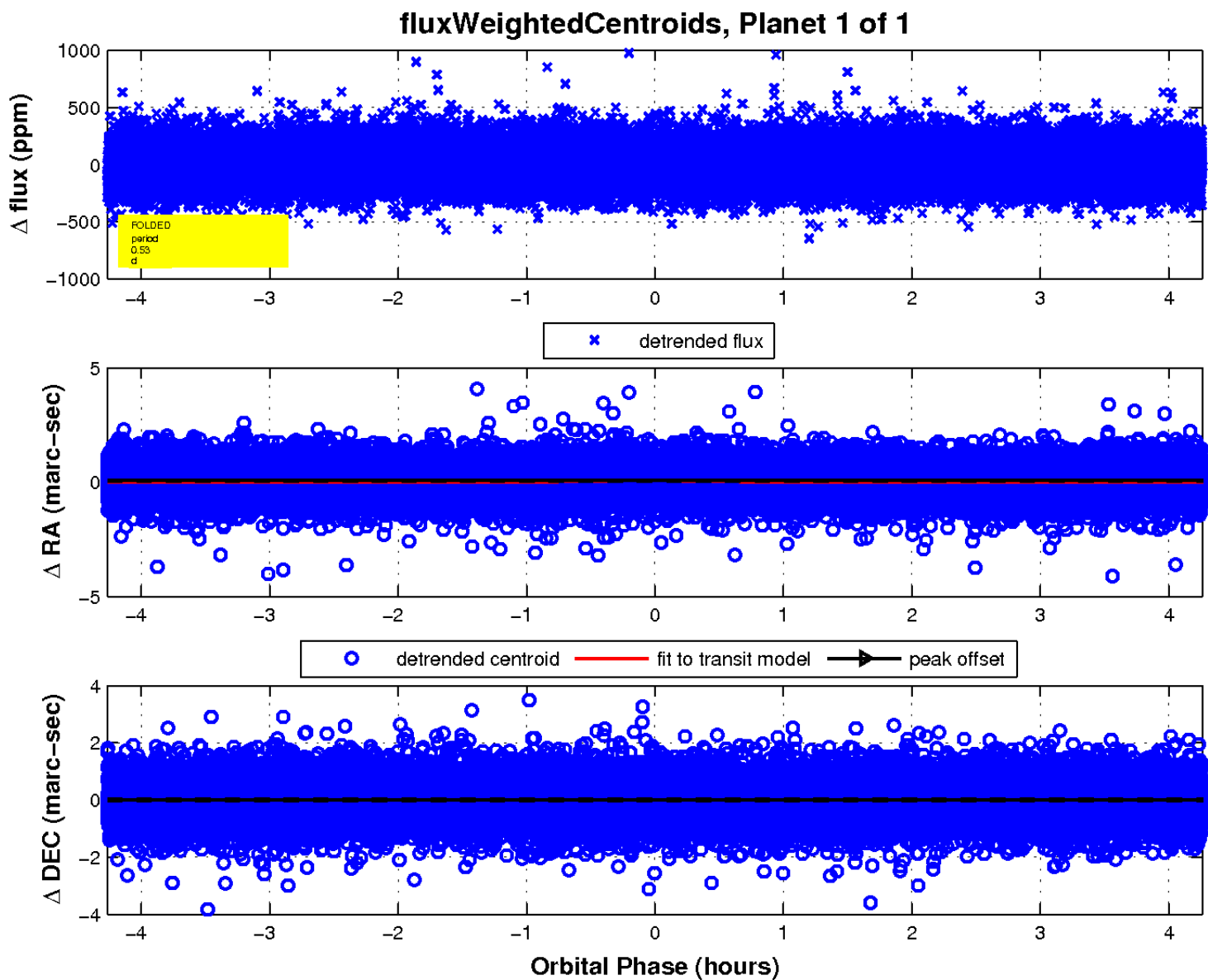
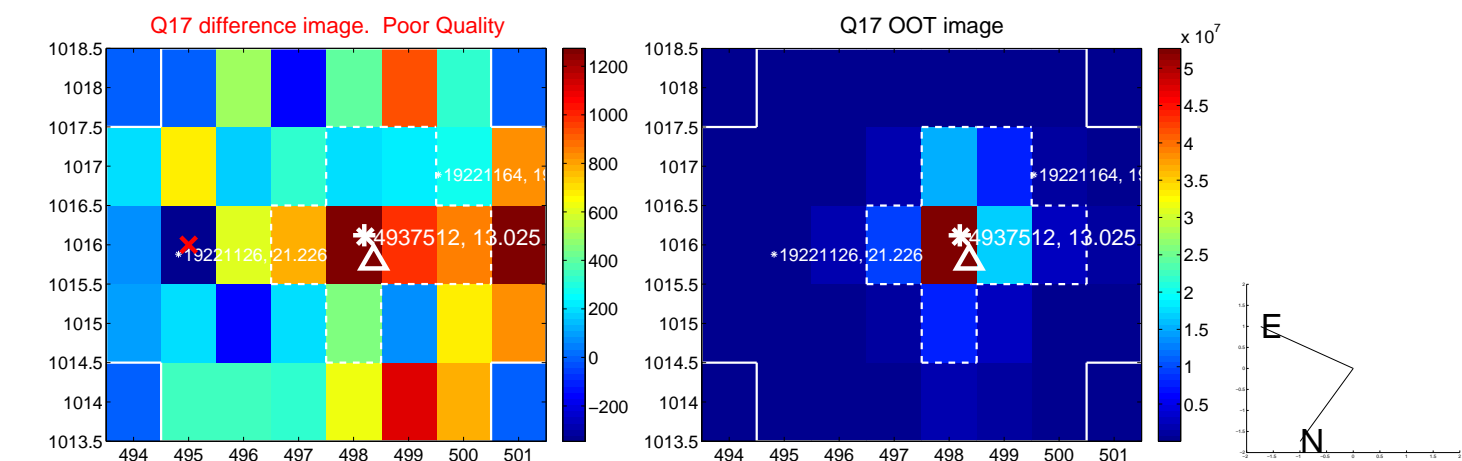
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

