

KIC 005437762

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})
005437762-01	OBS	4907.01	4.044883	133.596568	37.7	1.772	7.3	7.0	1.14	6358	0.82	730.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005437762-01	OBS	PC	0.96	0	0	0	0	CENT_KIC_POS

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

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

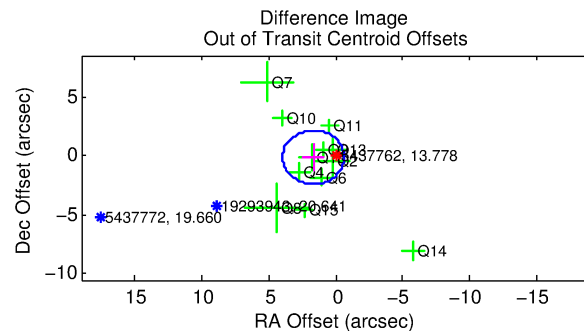
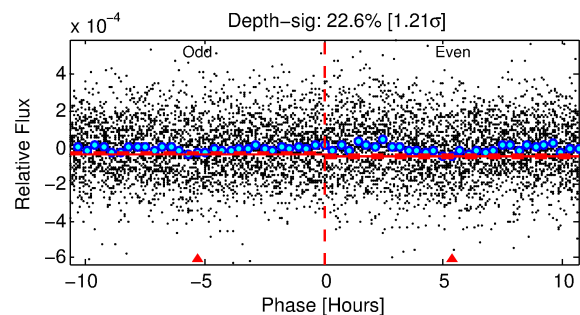
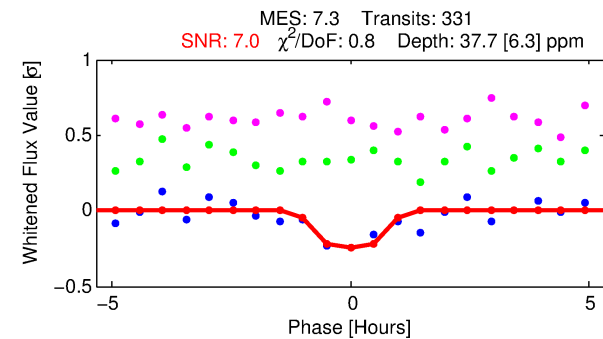
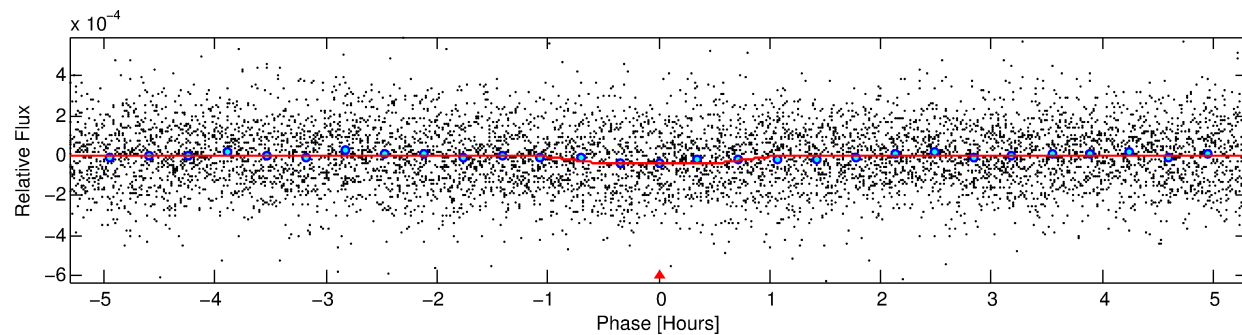
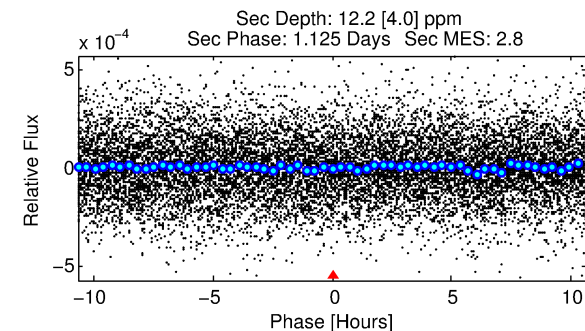
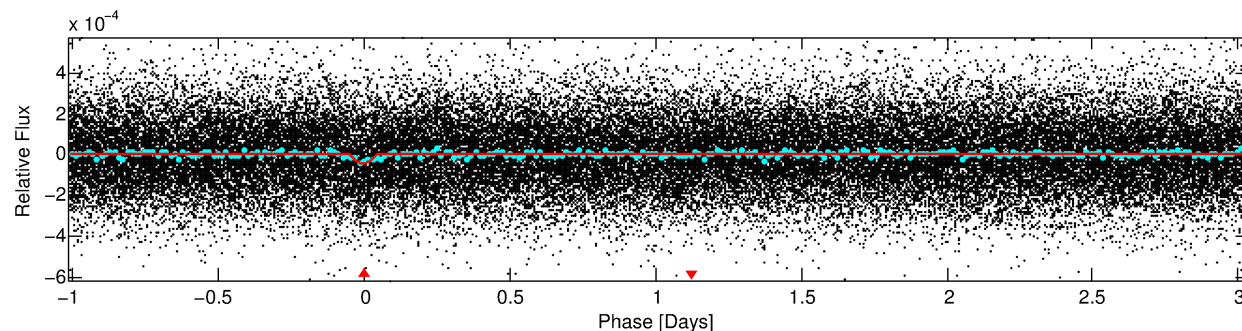
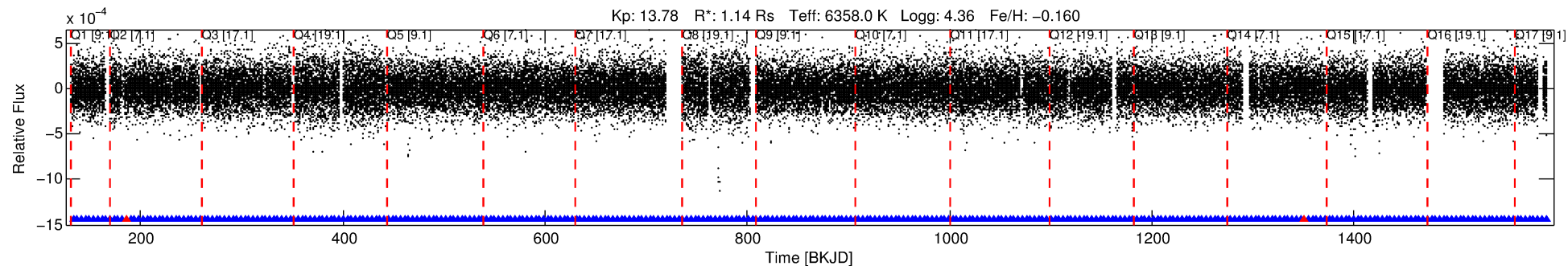
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005437762-01

No Significant Match Found

DV One-Page Summary

KIC: 5437762 Candidate: 1 of 1 Period: 4.045 d
KOI: K04907 Corr: No Ephemeris Match



DV Fit Results:

Period = 4.04488 [0.00003] d
Epoch = 133.5966 [0.0051] BKJD
Rp/R* = 0.0066 [0.0047]
a/R* = 7.88 [31.27]
b = 0.90 [0.85]
Seff = 730.85 [291.62]
Teq = 1326 [132] K
Rp = 0.82 [0.65] Re
a = 0.0511 [0.0134] AU
Ag = 25.77 [39.21] [0.63σ]
Teffp = 4618 [1709] K [1.92σ]

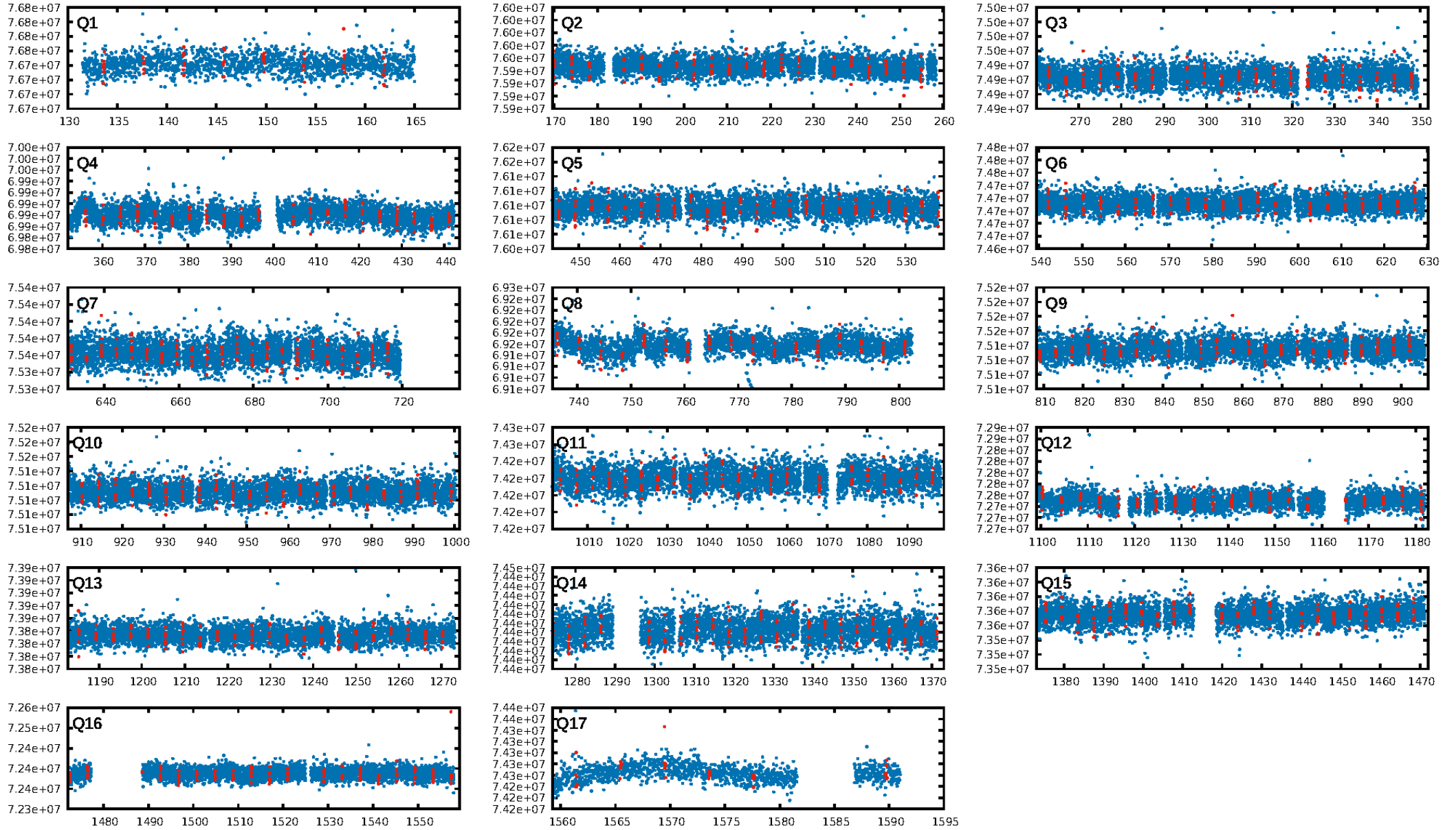
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.12e-13
RollingBand-fgt: 0.99 [315/317]
GhostDiagnostic-chr: 0.6433
Centroid-sig: 19.4%
Centroid-so: 1.883 arcsec [1.20σ]
OotOffset-rm: 1.678 arcsec [2.20σ]
KicOffset-rm: 1.616 arcsec [1.75σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

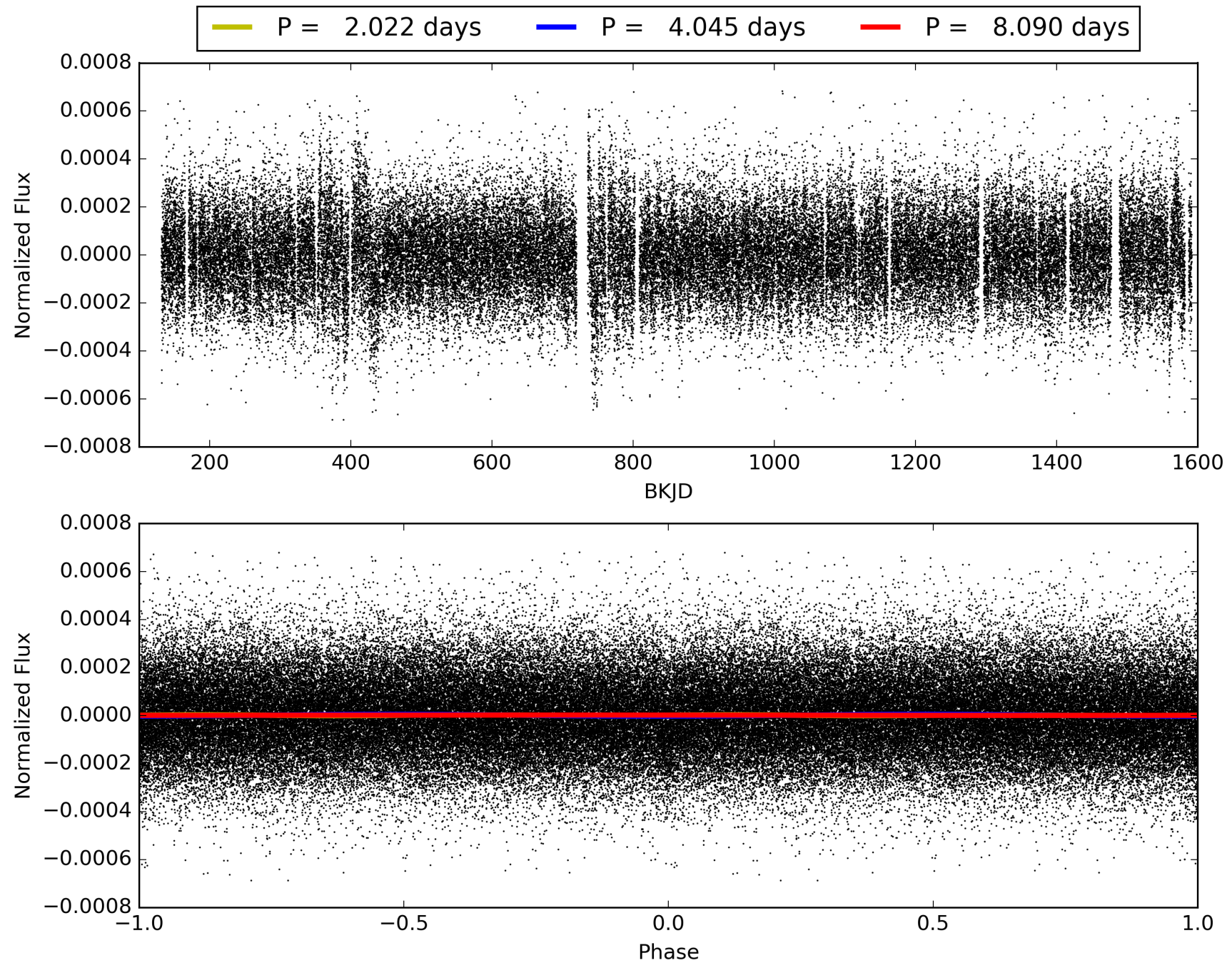
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:18:51 Z

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

TCE 005437762-01, PDC Light Curves

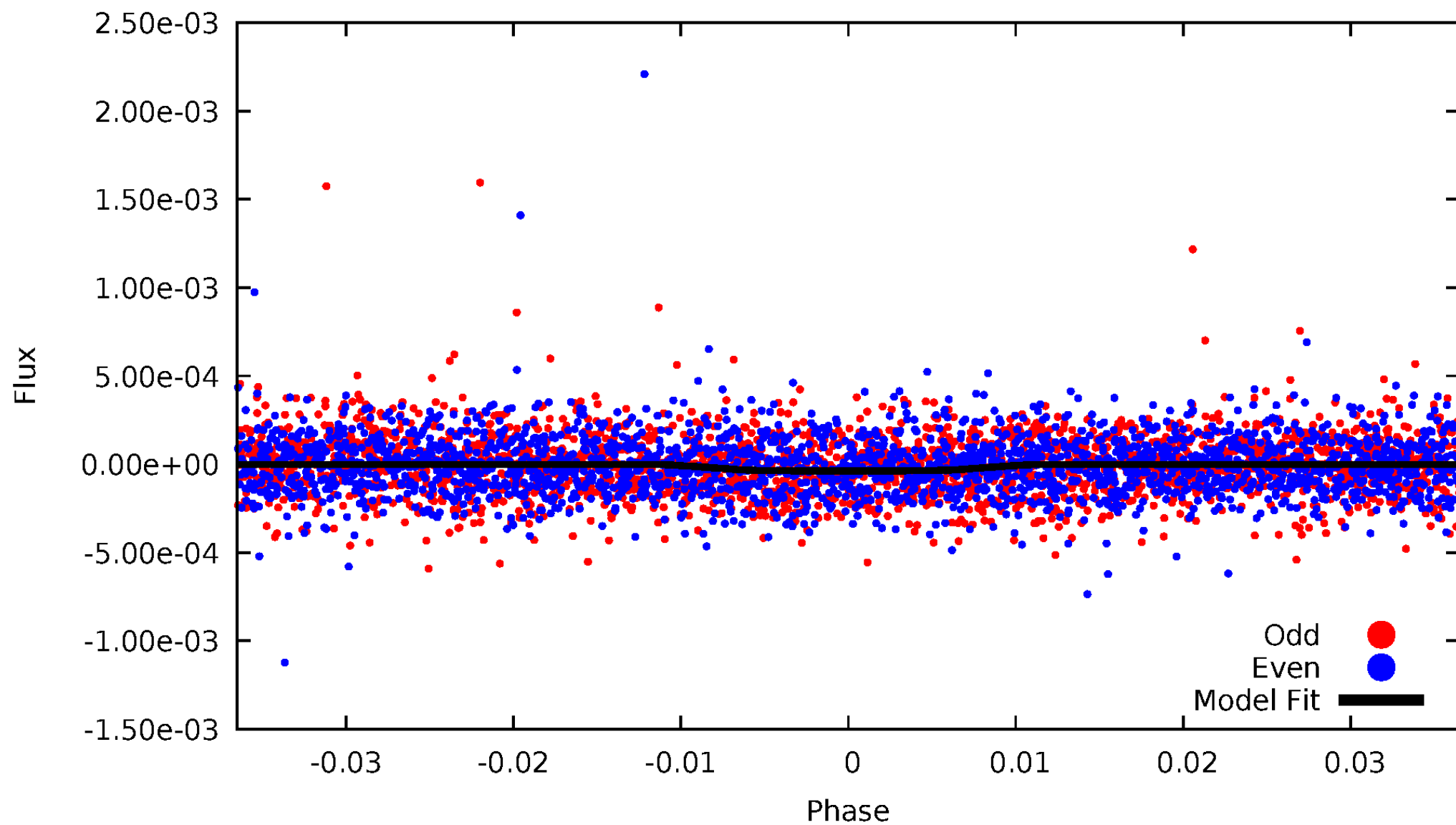


TCE 005437762-01



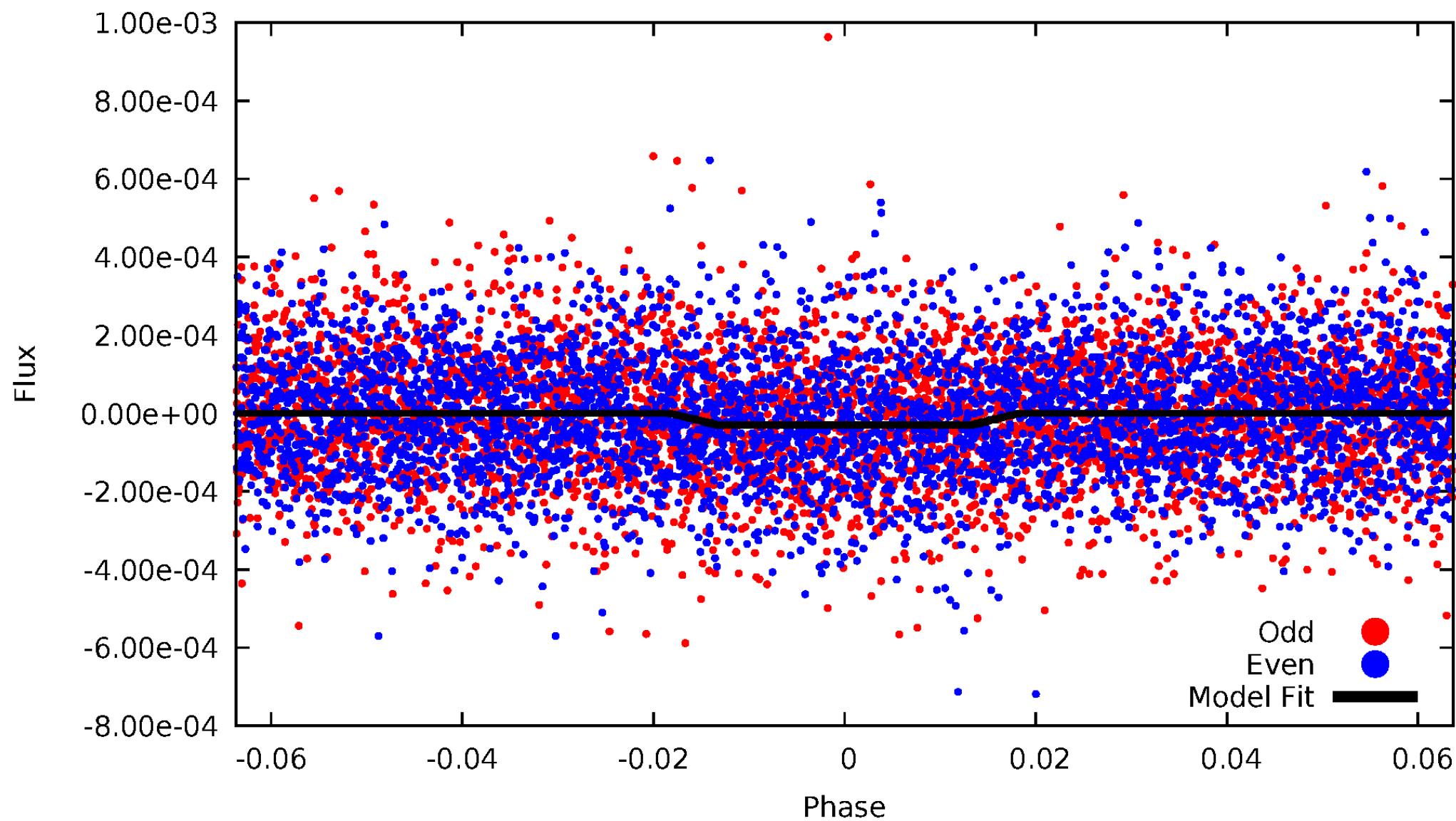
DV Odd/Even

TCE 005437762-01



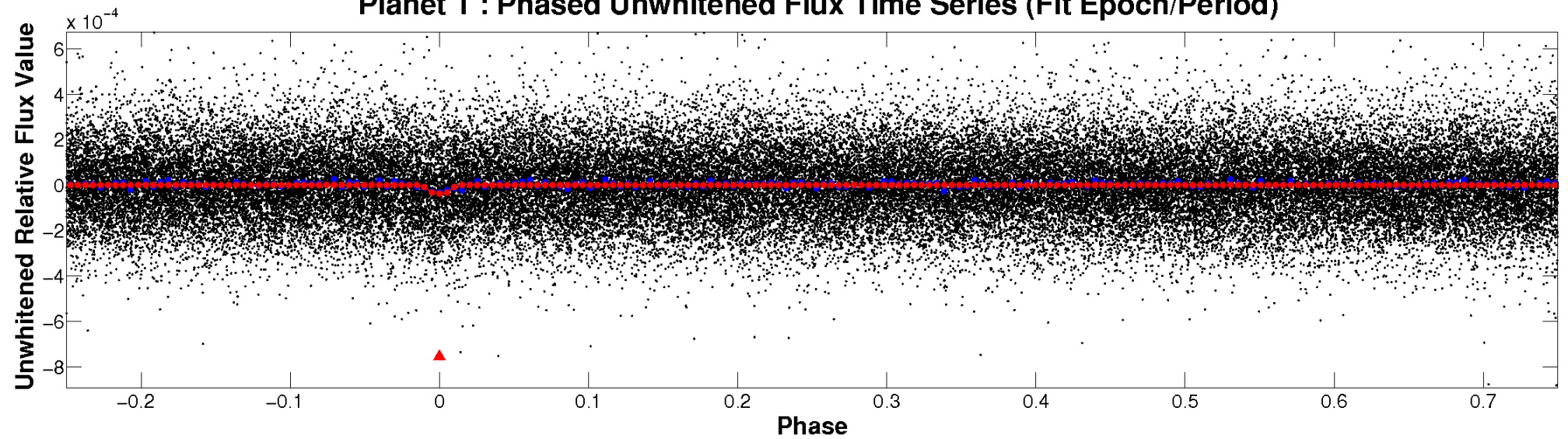
ALT Odd/Even

TCE 005437762-01

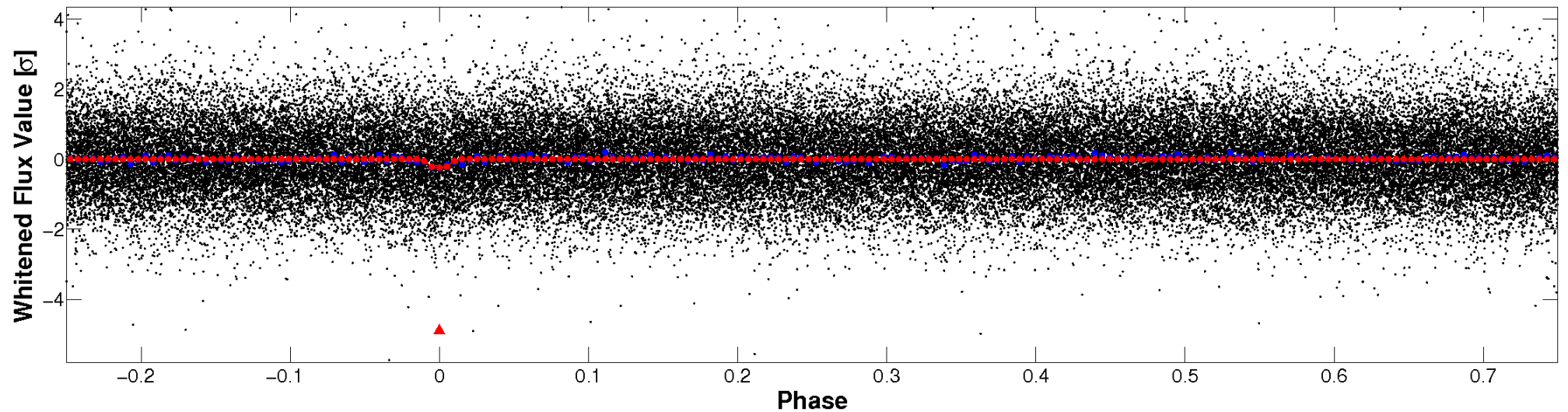


Non-Whitened Vs. Whitened Light Curve

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

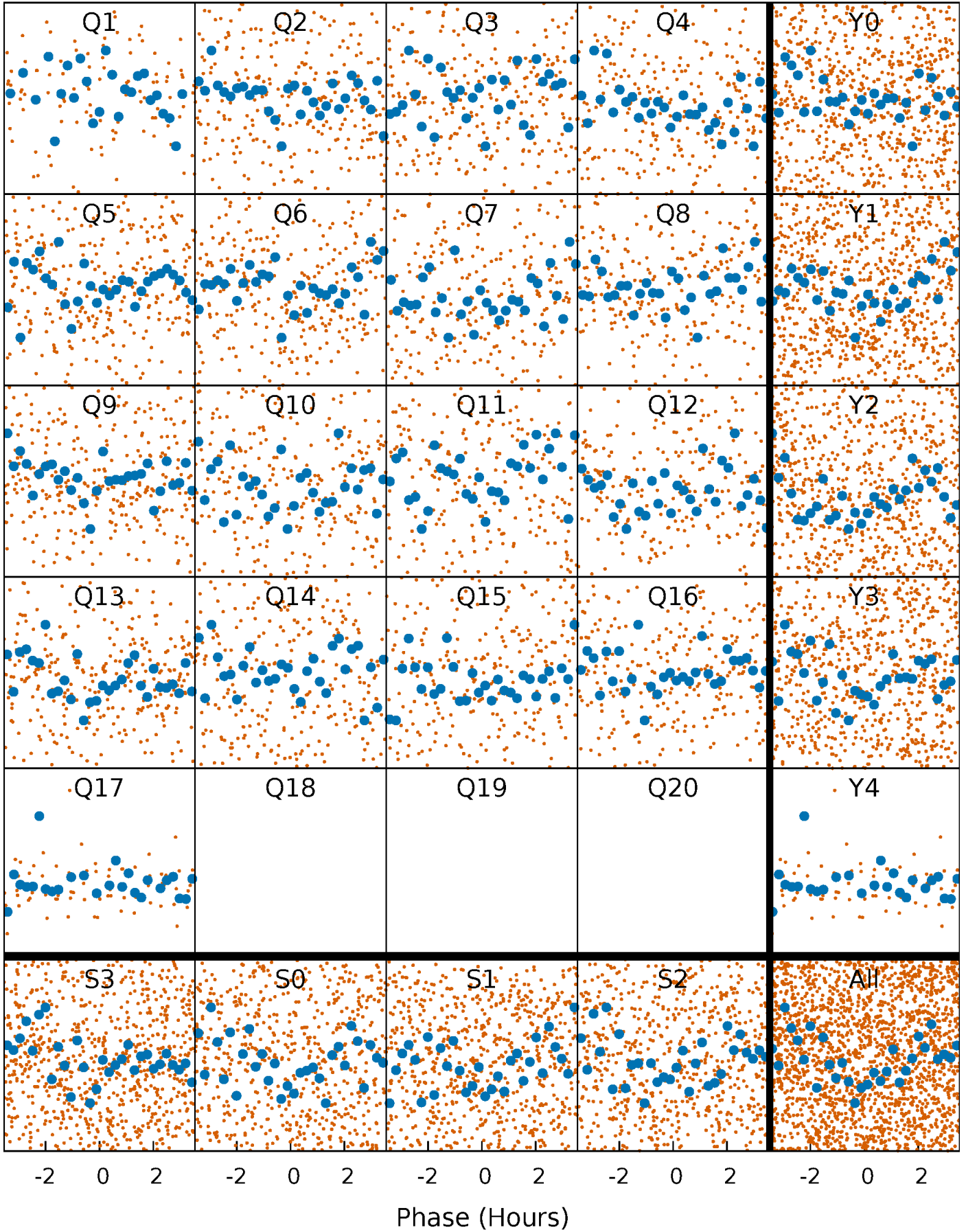


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



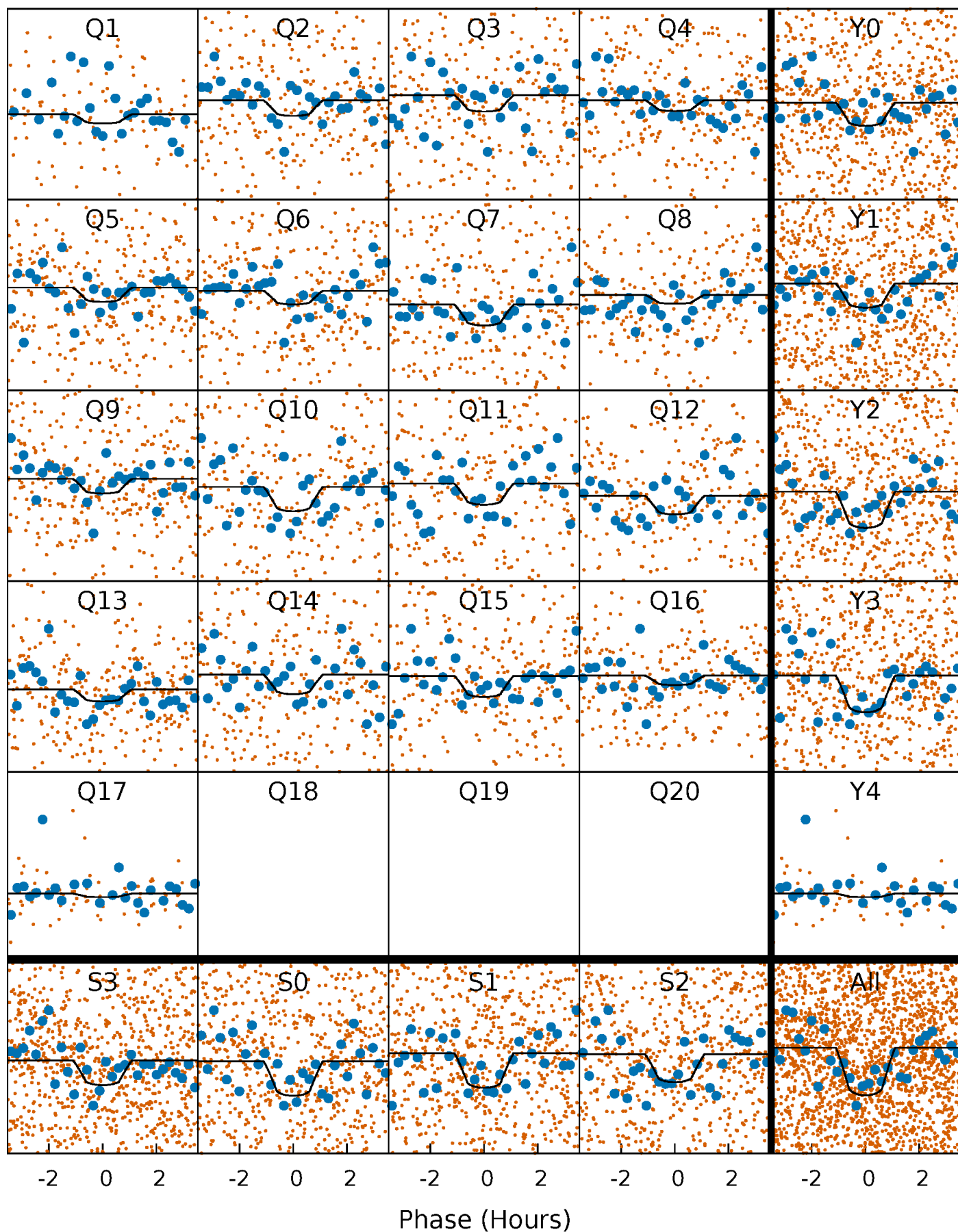
PDC Quarter-Phased Transit Curves

TCE 005437762-01 P= 4.044883 Days $T_0=133.596568$ (BKJD)



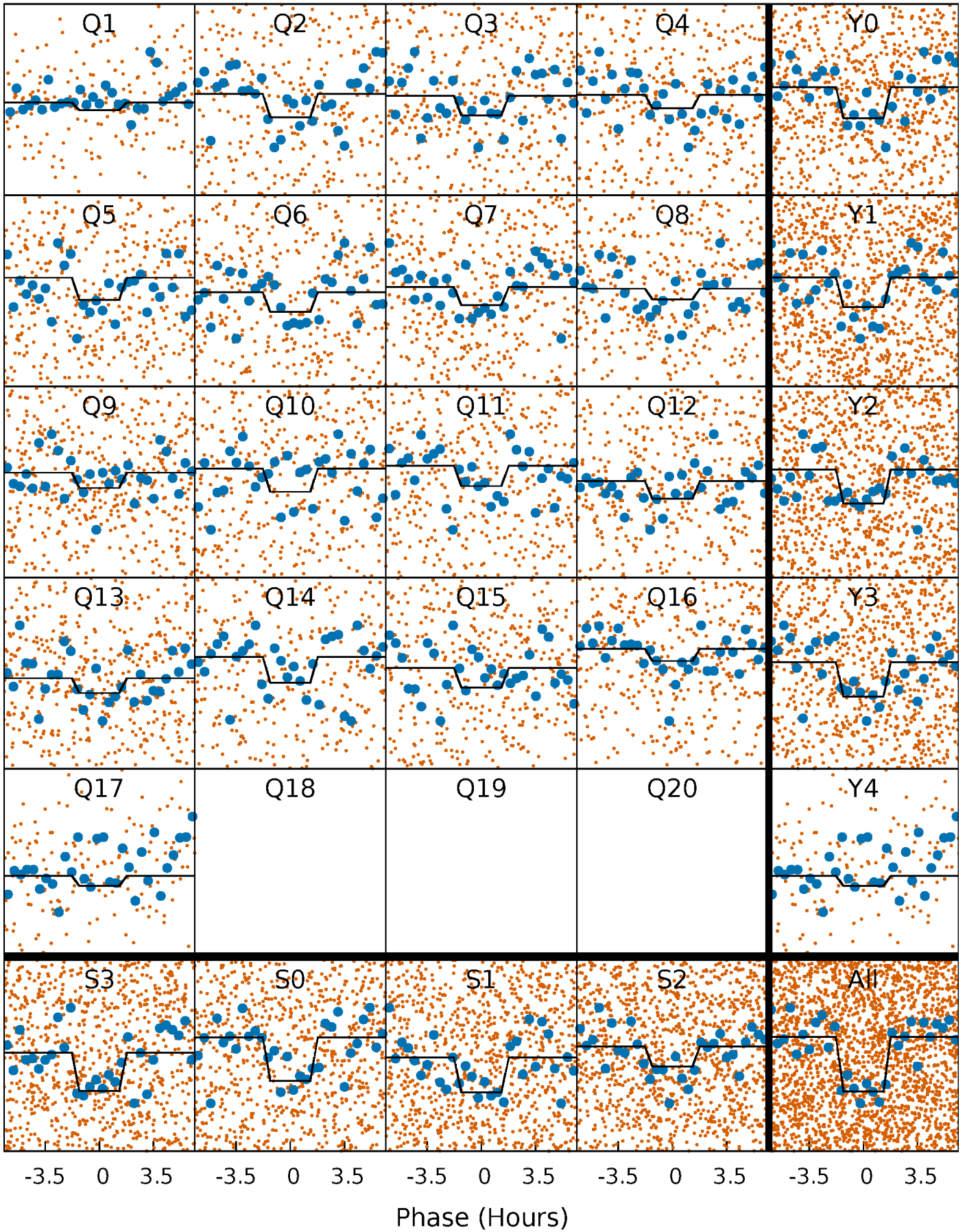
DV Quarter-Phased Transit Curves

TCE 005437762-01 P= 4.044883 Days $T_0=133.596568$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

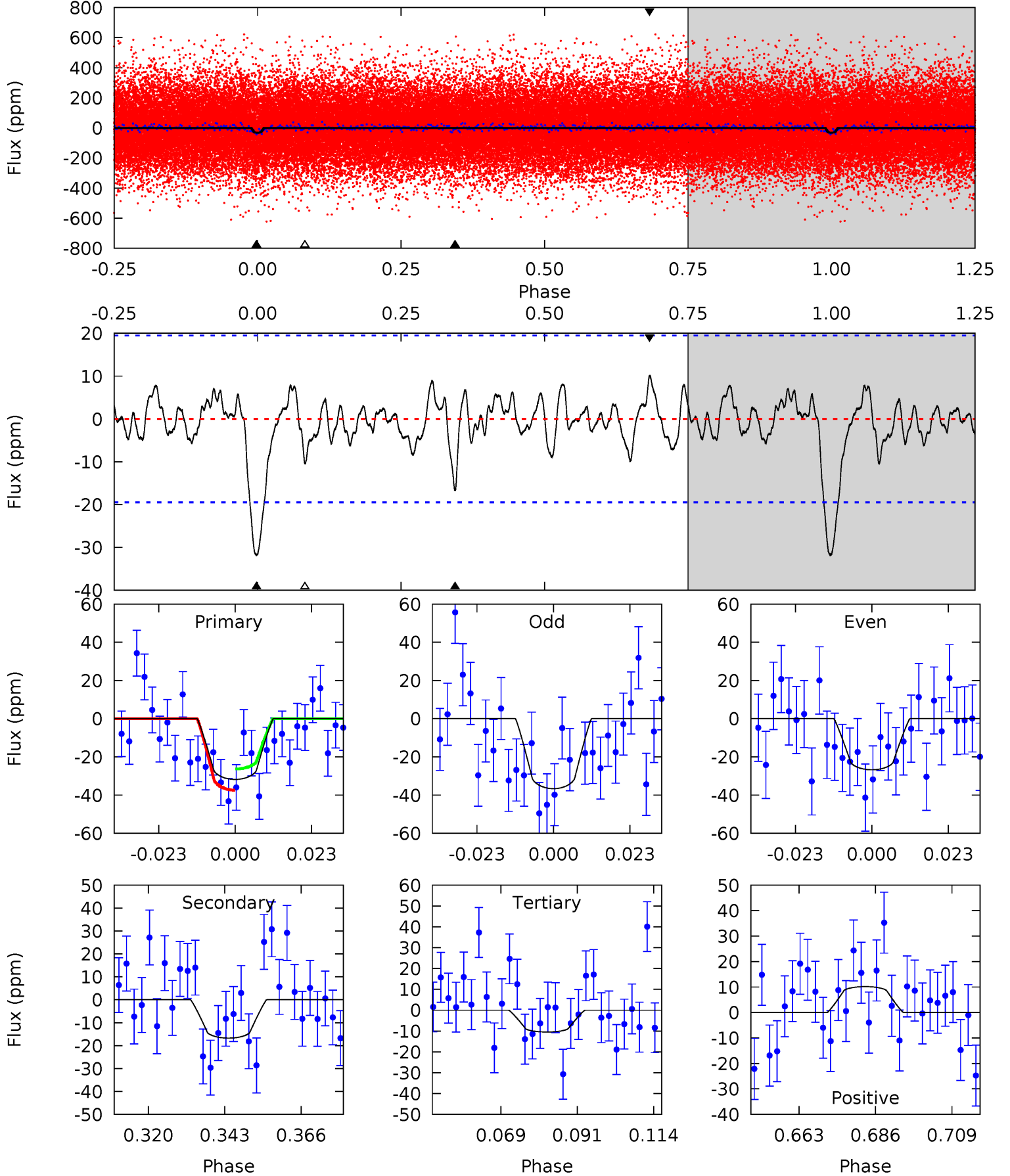
TCE 005437762-01 P= 4.044705 Days $T_0=133.620982$ (BKJD)



DV Model-Shift Uniqueness Test

005437762-01, P = 4.044883 Days, E = 129.551685 Days

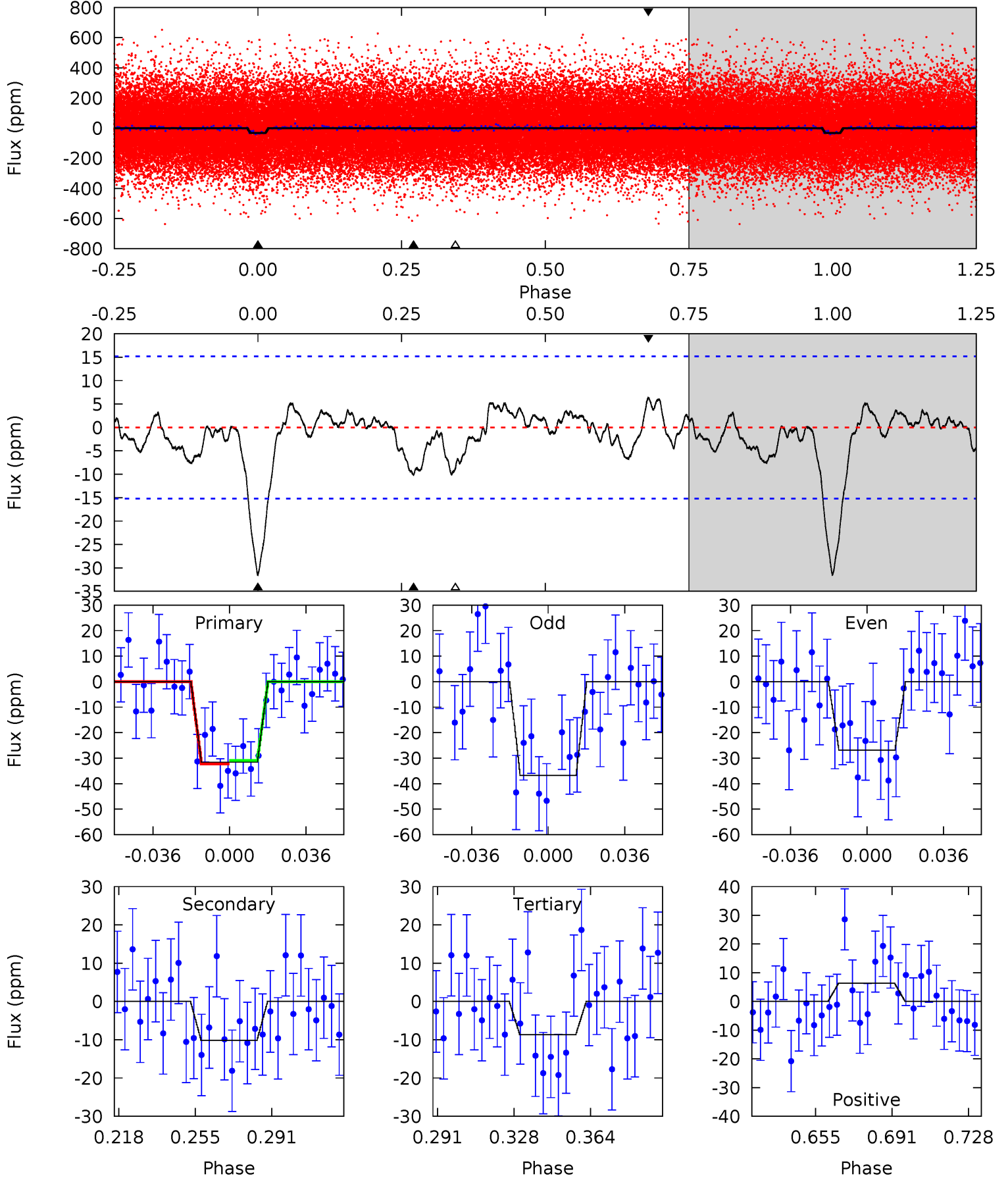
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	4.18	2.61	2.54	4.87	2.28	1.00	5.33	5.41	1.56	1.64	1.24	0.92	0.24	1.39



Alt Model-Shift Uniqueness Test

005437762-01, P = 4.044705 Days, E = 129.576277 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	3.19	2.73	2.00	4.77	2.09	1.03	7.18	7.92	0.46	1.19	1.56	1.22	0.17	0.21



Stellar Parameters For KIC 005437762

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6358^{+160}_{-208}	$4.359^{+0.087}_{-0.203}$	$-0.160^{+0.250}_{-0.300}$	$1.141^{+0.363}_{-0.156}$	$1.082^{+0.180}_{-0.120}$	$1.027^{+0.399}_{-0.552}$
	+3%/-3%	+2%/-5%	+156%/-188%	+32%/-14%	+17%/-11%	+39%/-54%
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 005437762-01 / KOI 4907.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 4	$0.95^{+0.57}_{-0.57}$	1877^{+148}_{-98}	4883^{+2808}_{-888}	27^{+144}_{-17}
Alt.	-10 ± 3	$0.80^{+0.59}_{-0.47}$	1878^{+134}_{-105}	4716^{+2469}_{-926}	22^{+111}_{-15}

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 $A_{\text{obs}} \gg 1.0$

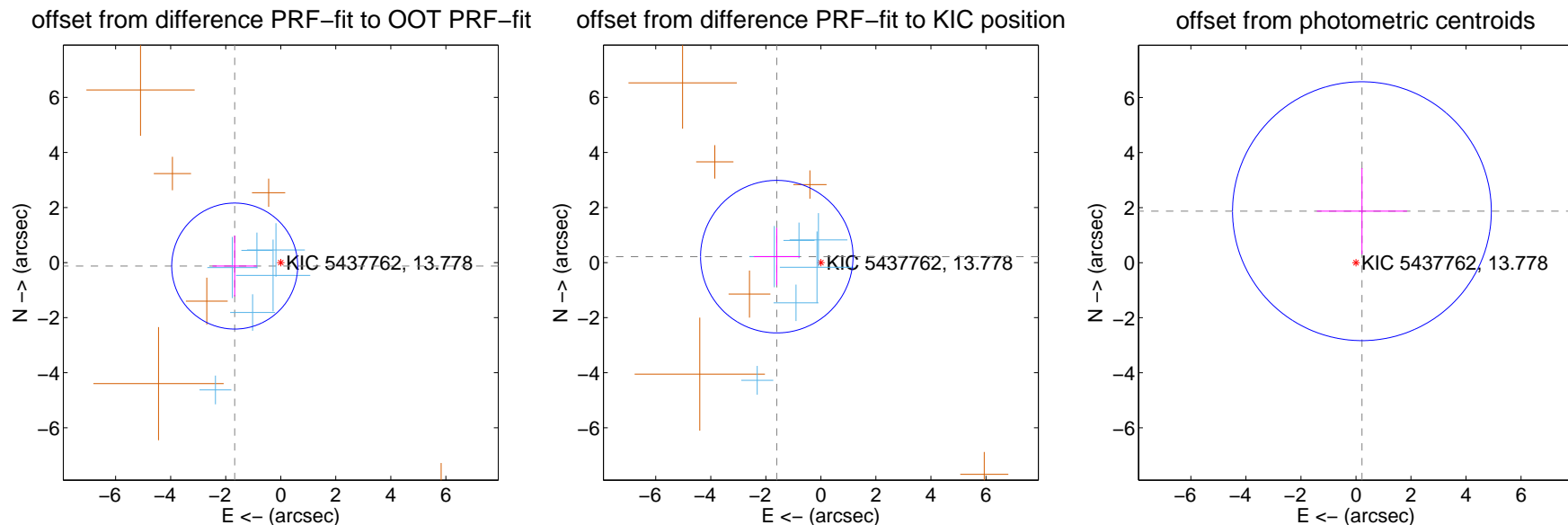
DV Centroid Data

Supplemental centroid analysis for 005437762-01. Kepler magnitude: 13.78. Transit SNR 7.01

There are 6 quarters with good PRF difference image offsets

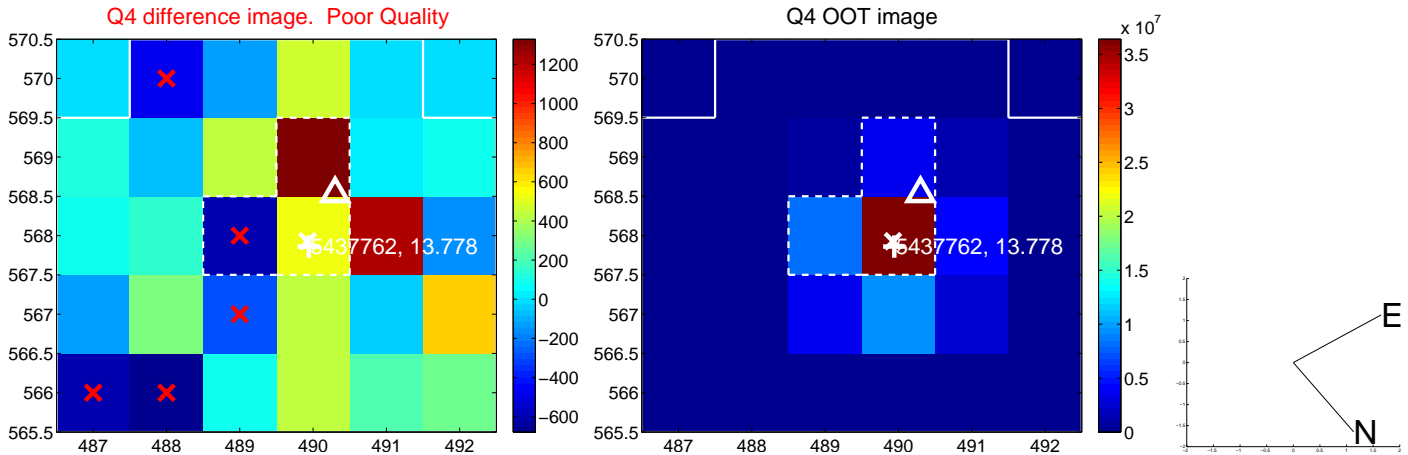
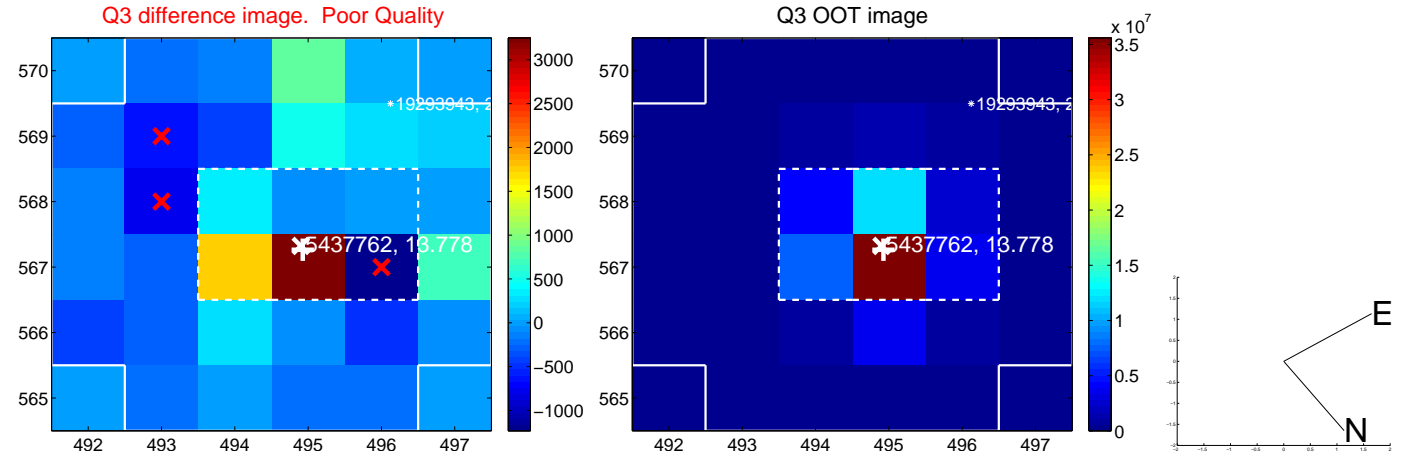
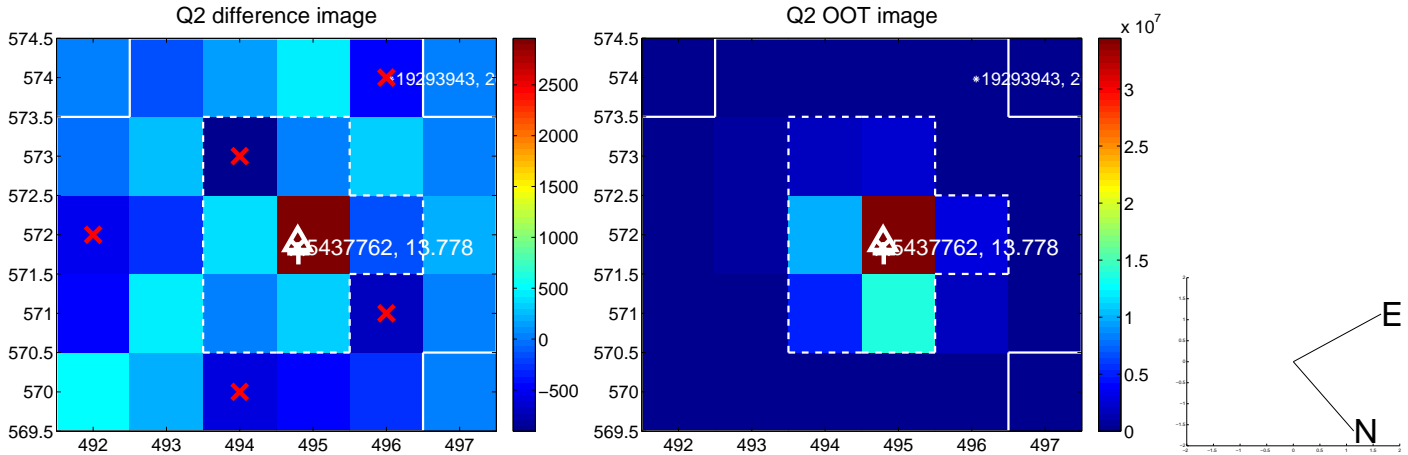
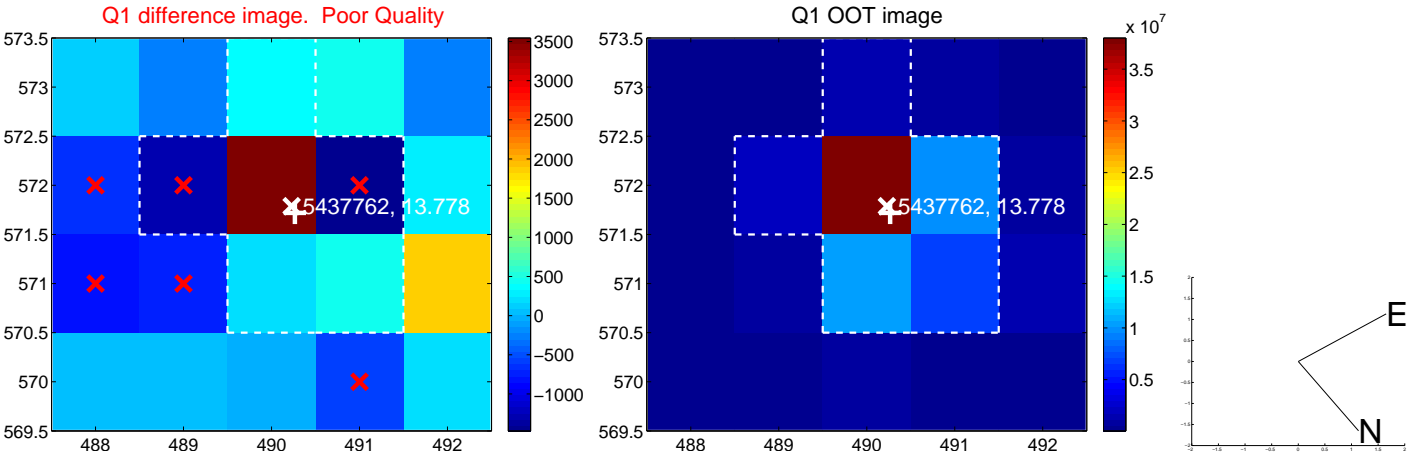
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.678 ± 0.763	2.20	1.673 ± 0.809	-0.126 ± 1.106
PRF-fit source offset from KIC position	1.616 ± 0.924	1.75	1.601 ± 0.834	0.216 ± 1.041
photometric centroid source offset	1.88 ± 1.57	1.20	-0.22 ± 1.64	1.87 ± 1.57

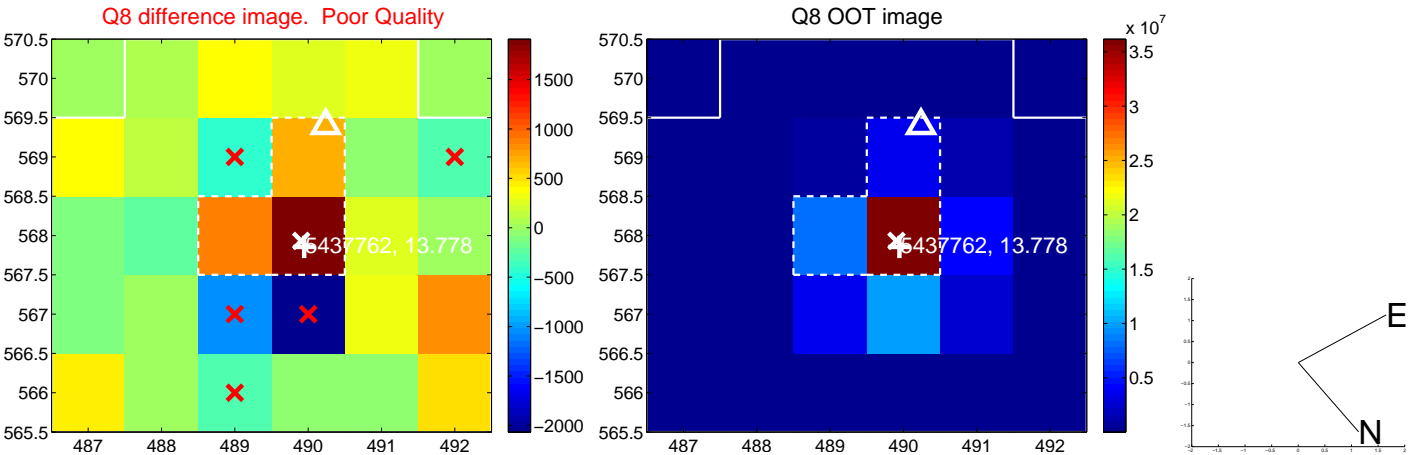
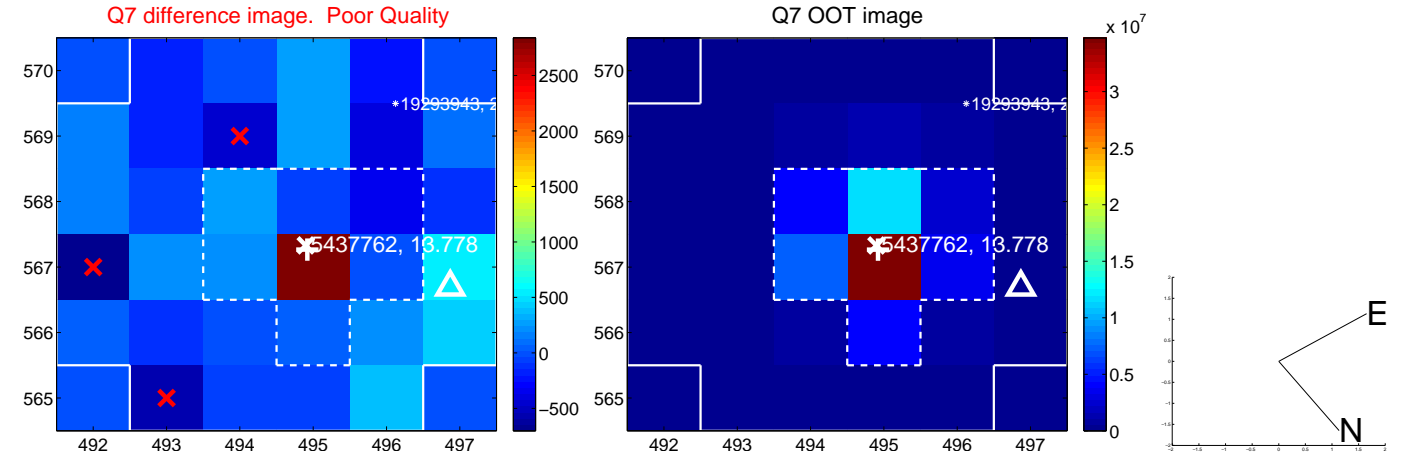
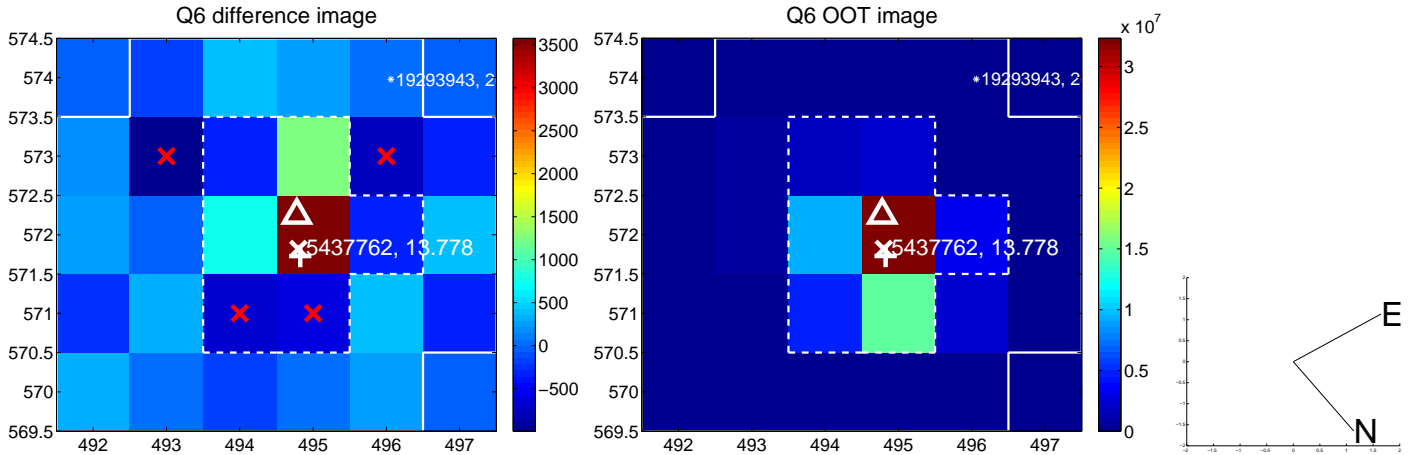
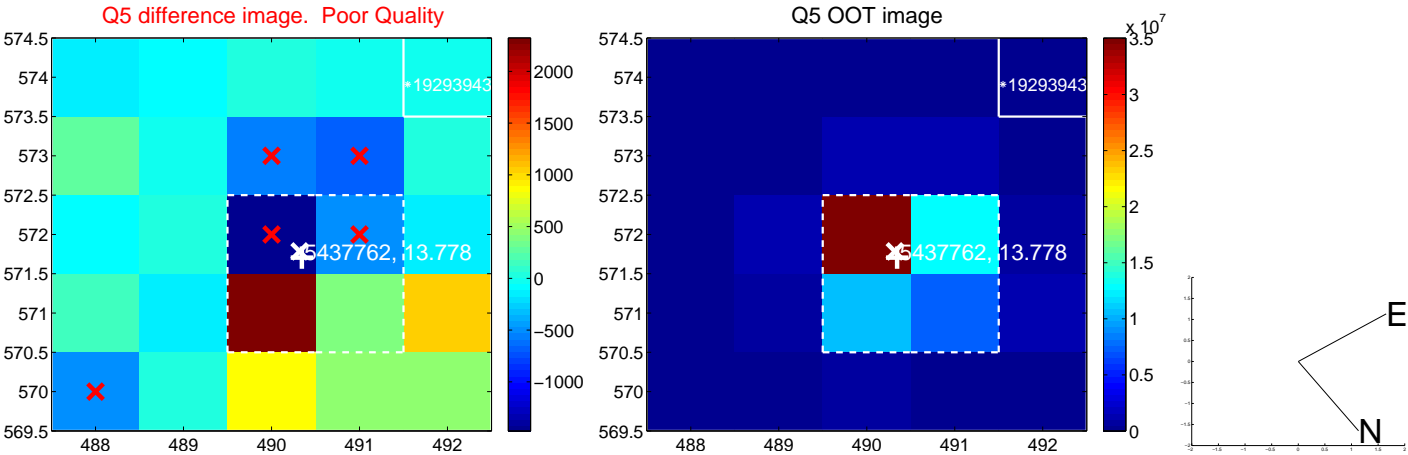


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

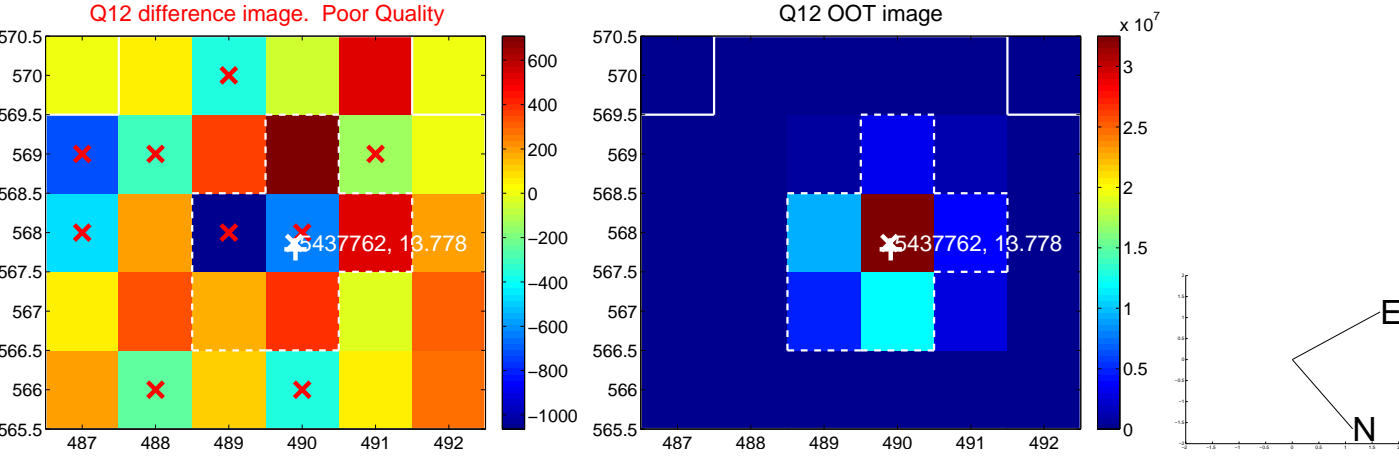
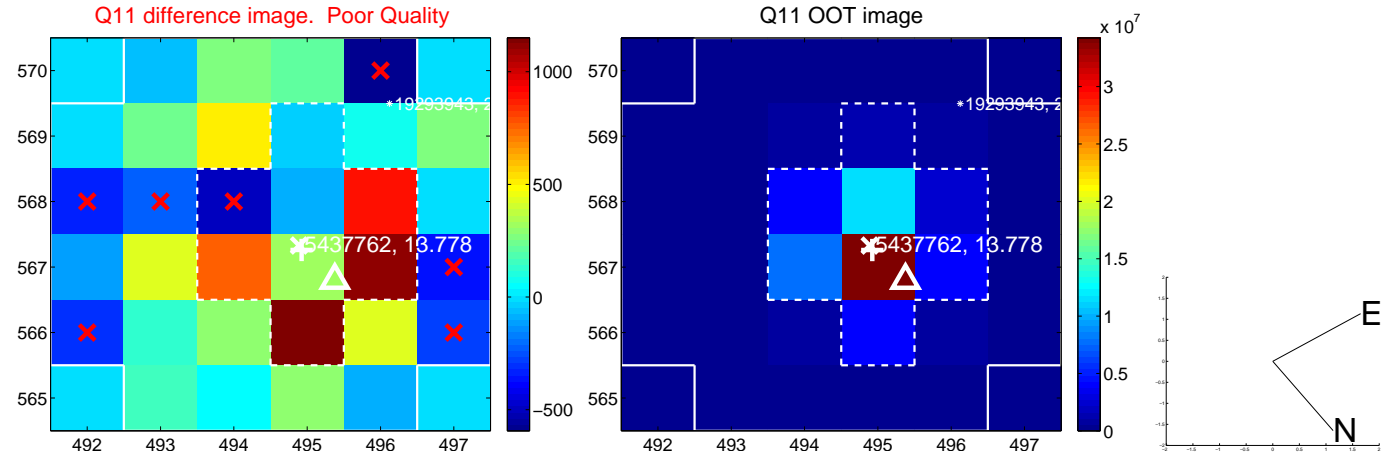
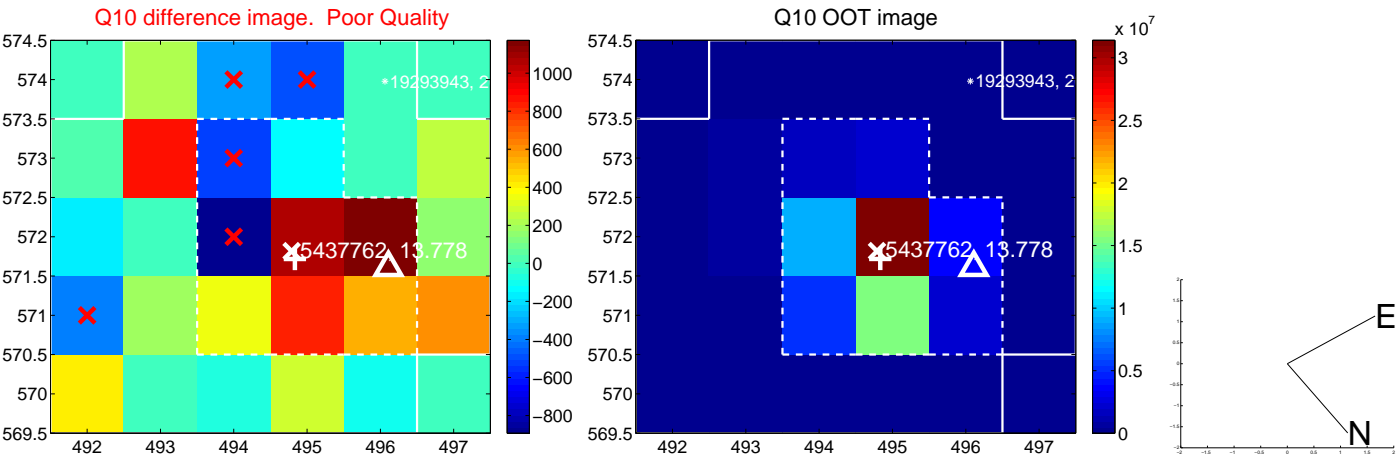
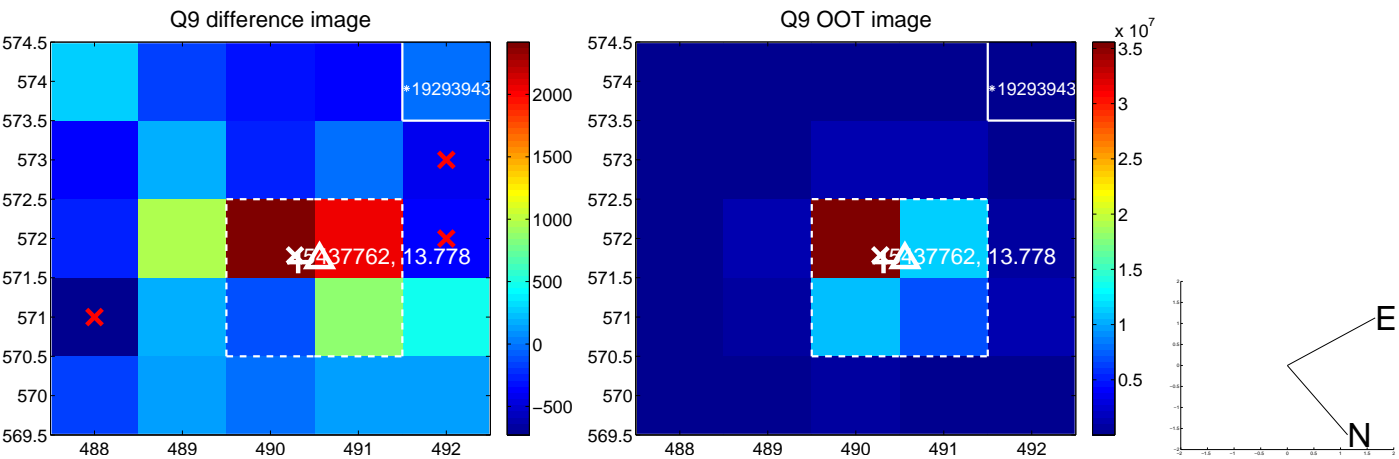
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



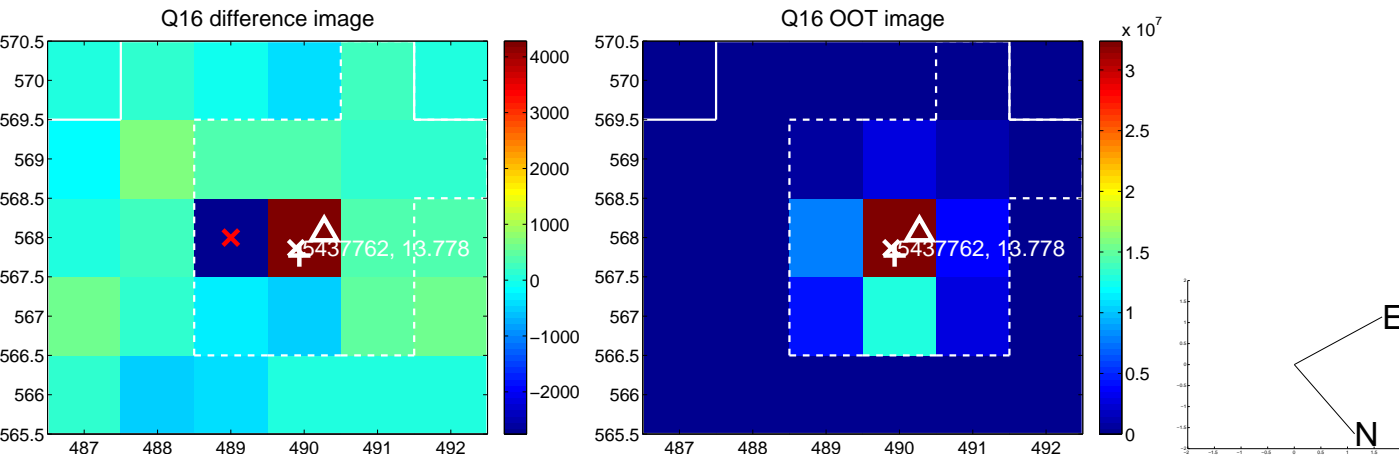
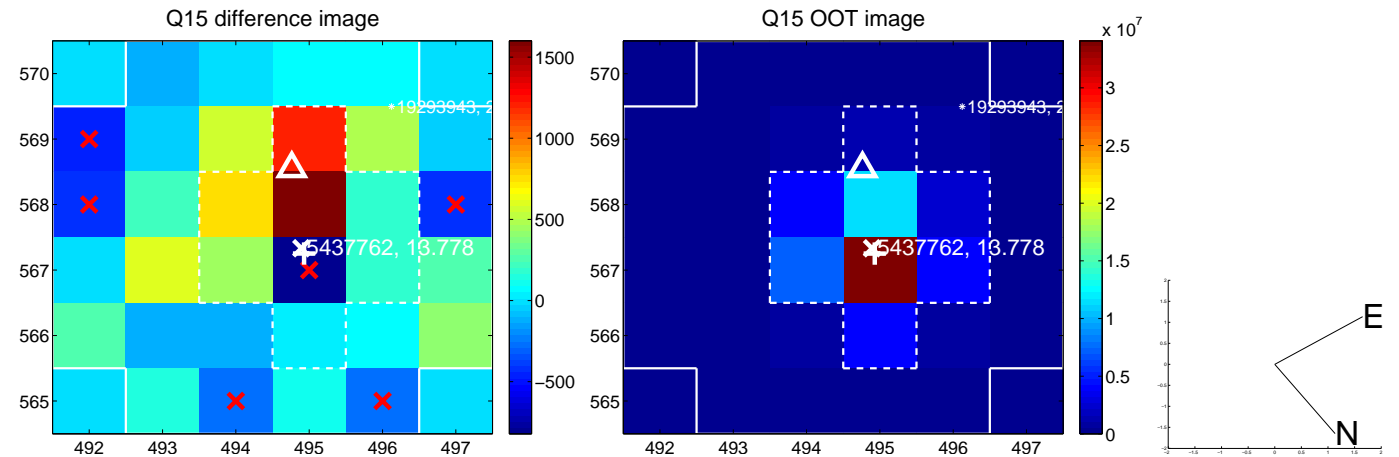
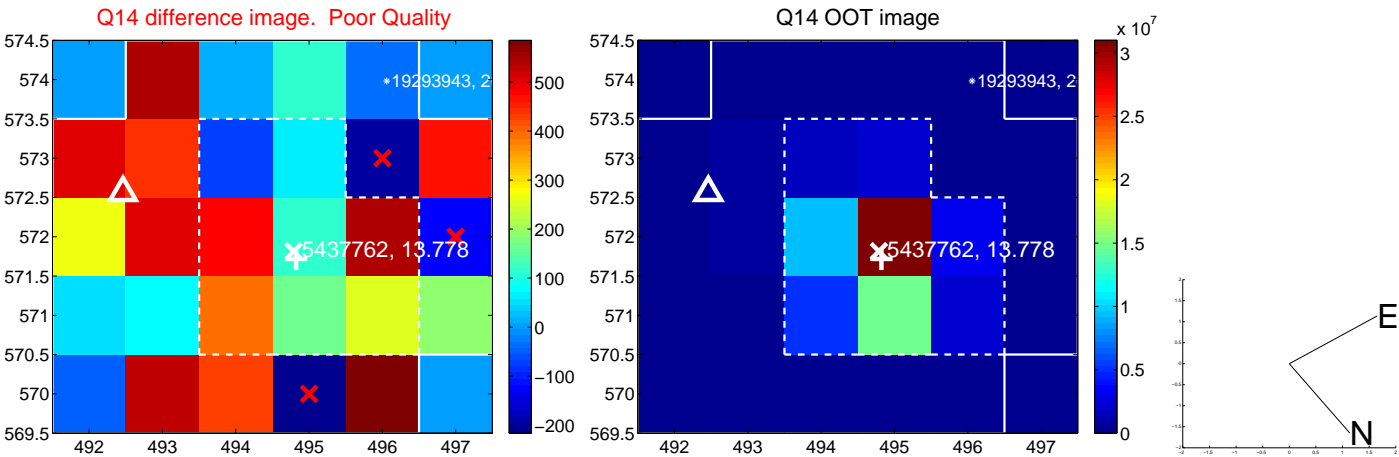
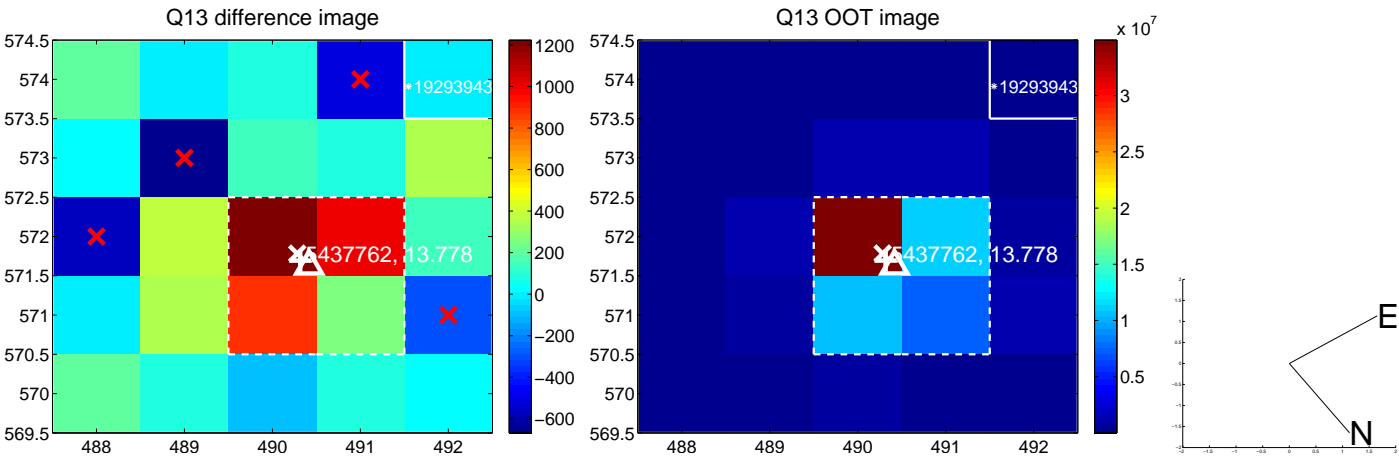
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



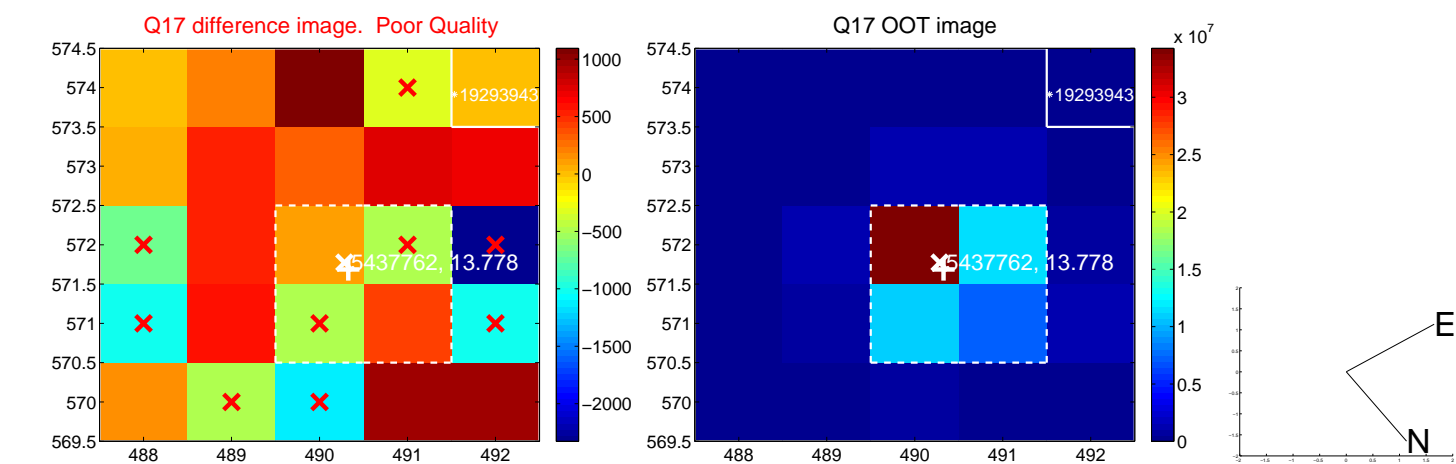
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



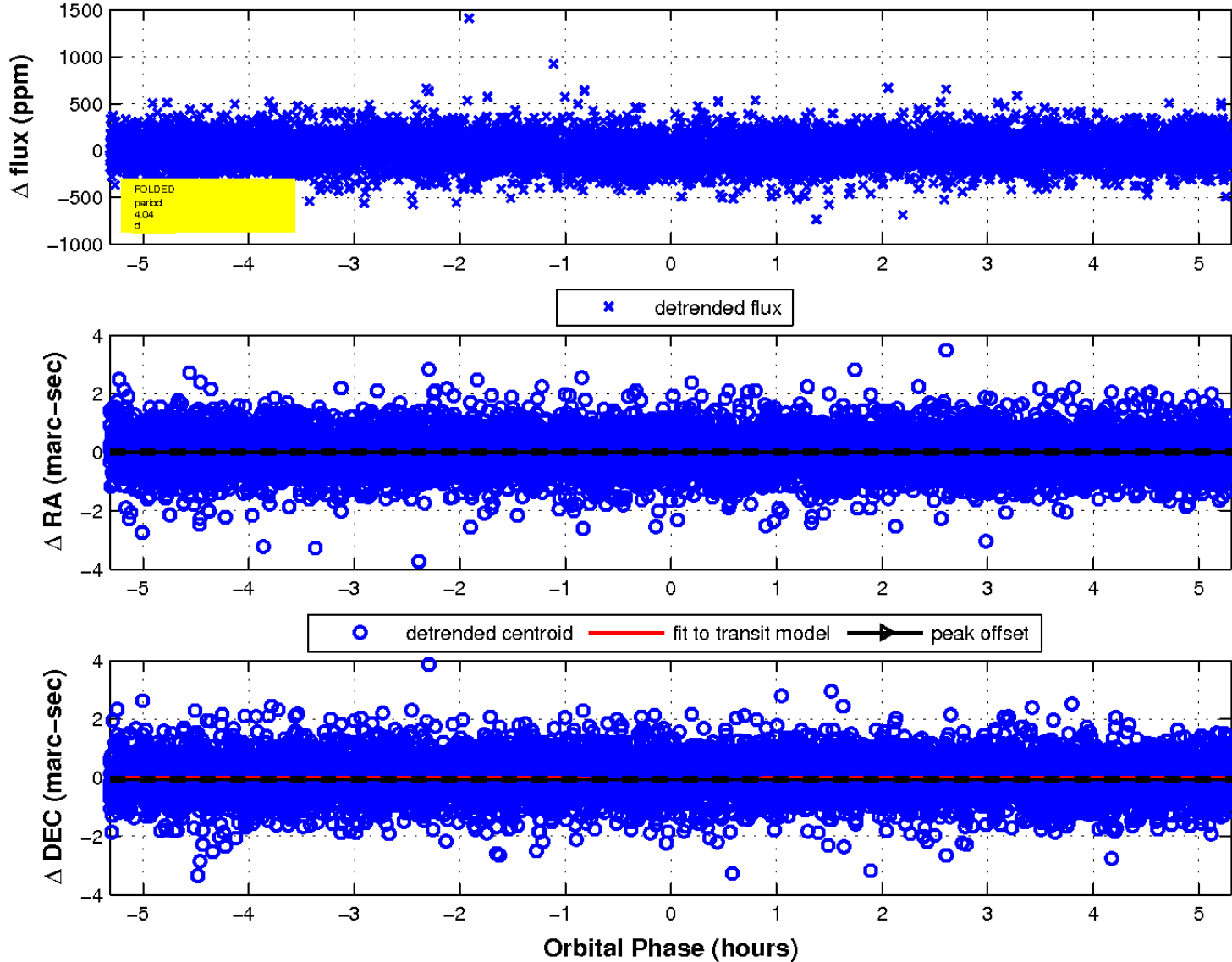
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

