

KIC 006521174

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})
006521174-01	OBS	6721.01	8.279175	133.821171	172.4	2.545	10.4	11.3	0.85	5631	1.33	104.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521174-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

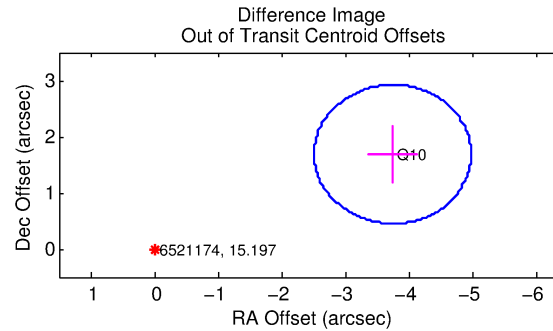
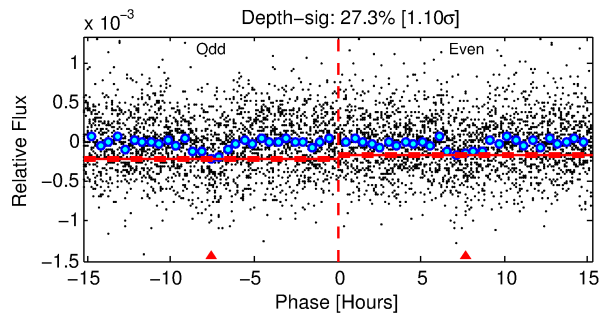
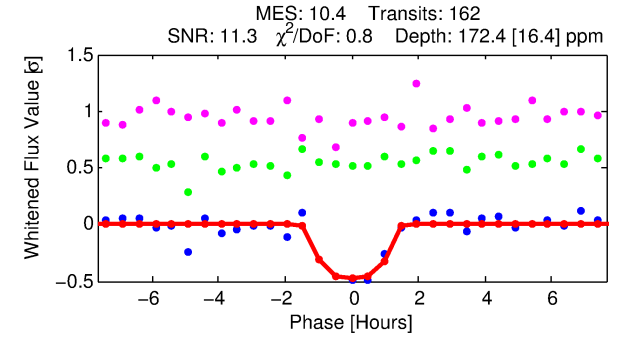
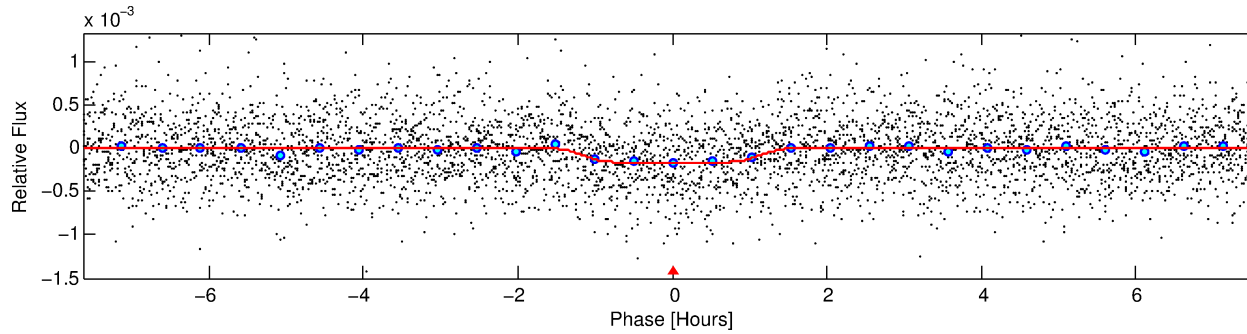
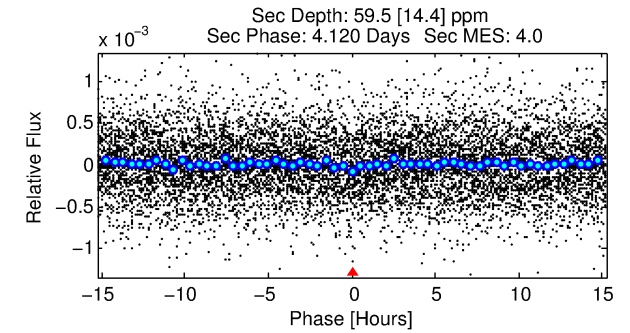
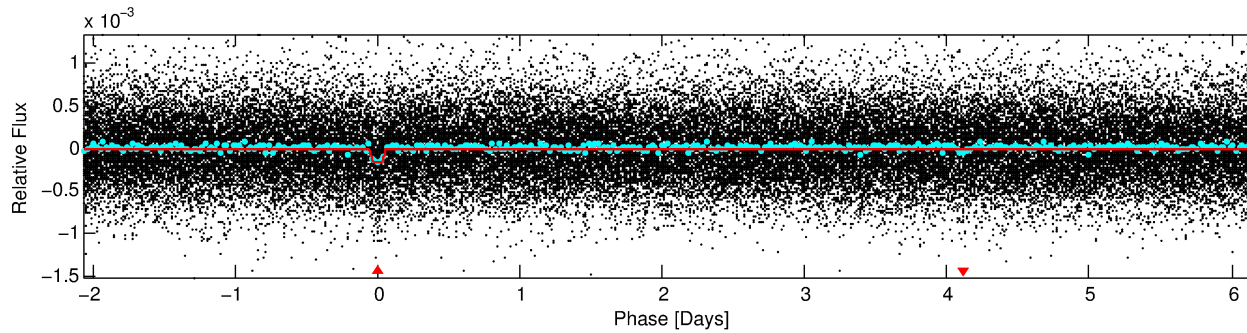
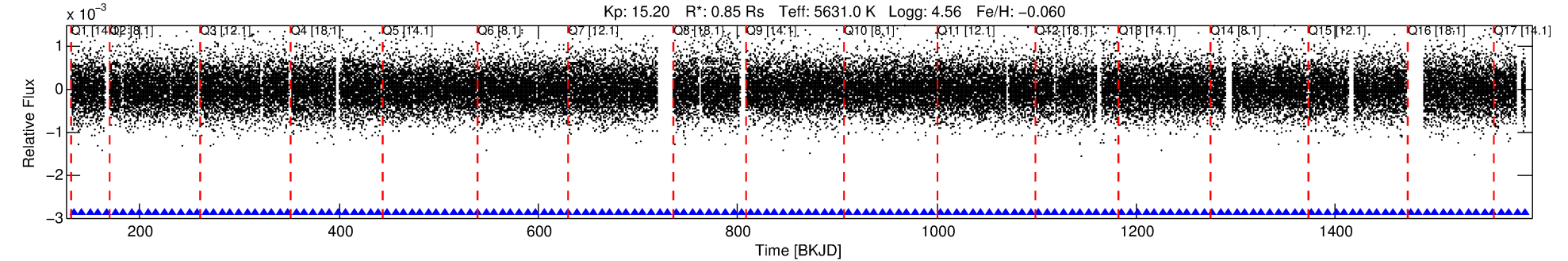
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006521174-01

No Significant Match Found

DV One-Page Summary

KIC: 6521174 Candidate: 1 of 1 Period: 8.279 d
KOI: K06721.01 Corr: 0.897



DV Fit Results:

Period = 8.27918 [0.00005] d
Epoch = 133.8212 [0.0051] BKJD
Rp/R* = 0.0144 [0.0088]
a/R* = 11.71 [33.16]
b = 0.90 [0.62]
Seff = 104.67 [34.90]
Teq = 816 [68] K
Rp = 1.33 [0.89] Re
a = 0.0786 [0.0170] AU
Ag = 114.73 [148.13] [0.77σ]
Teffp = 4127 [1299] K [2.55σ]

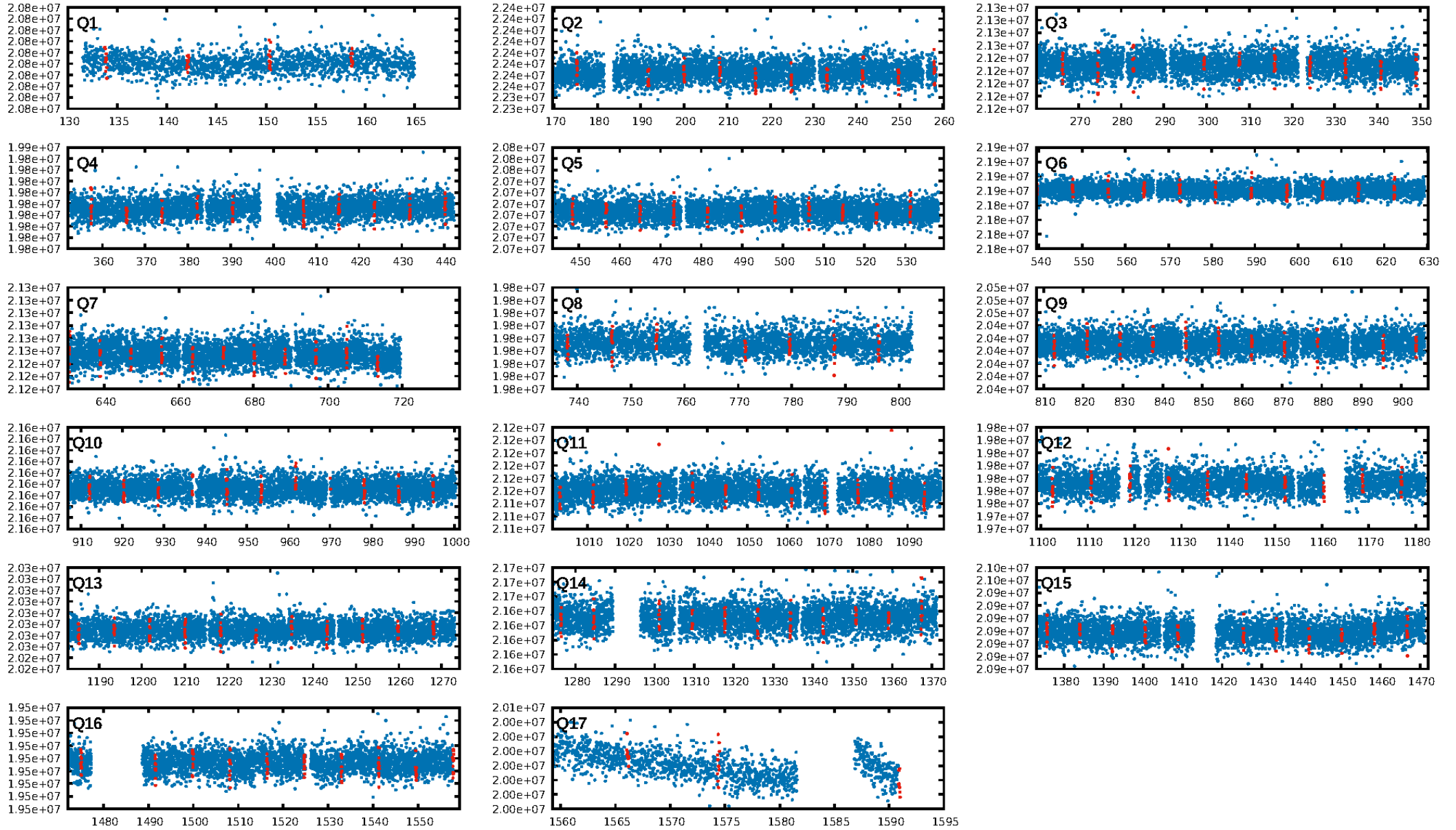
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.42e-25
RollingBand-fgt: 1.00 [155/155]
GhostDiagnostic-chr: -0.7631
Centroid-sig: N/A
Centroid-so: 37.268 arcsec [30.75σ]
OotOffset-rm: 4.110 arcsec [9.98σ]
KicOffset-rm: 4.166 arcsec [10.11σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [17/17]

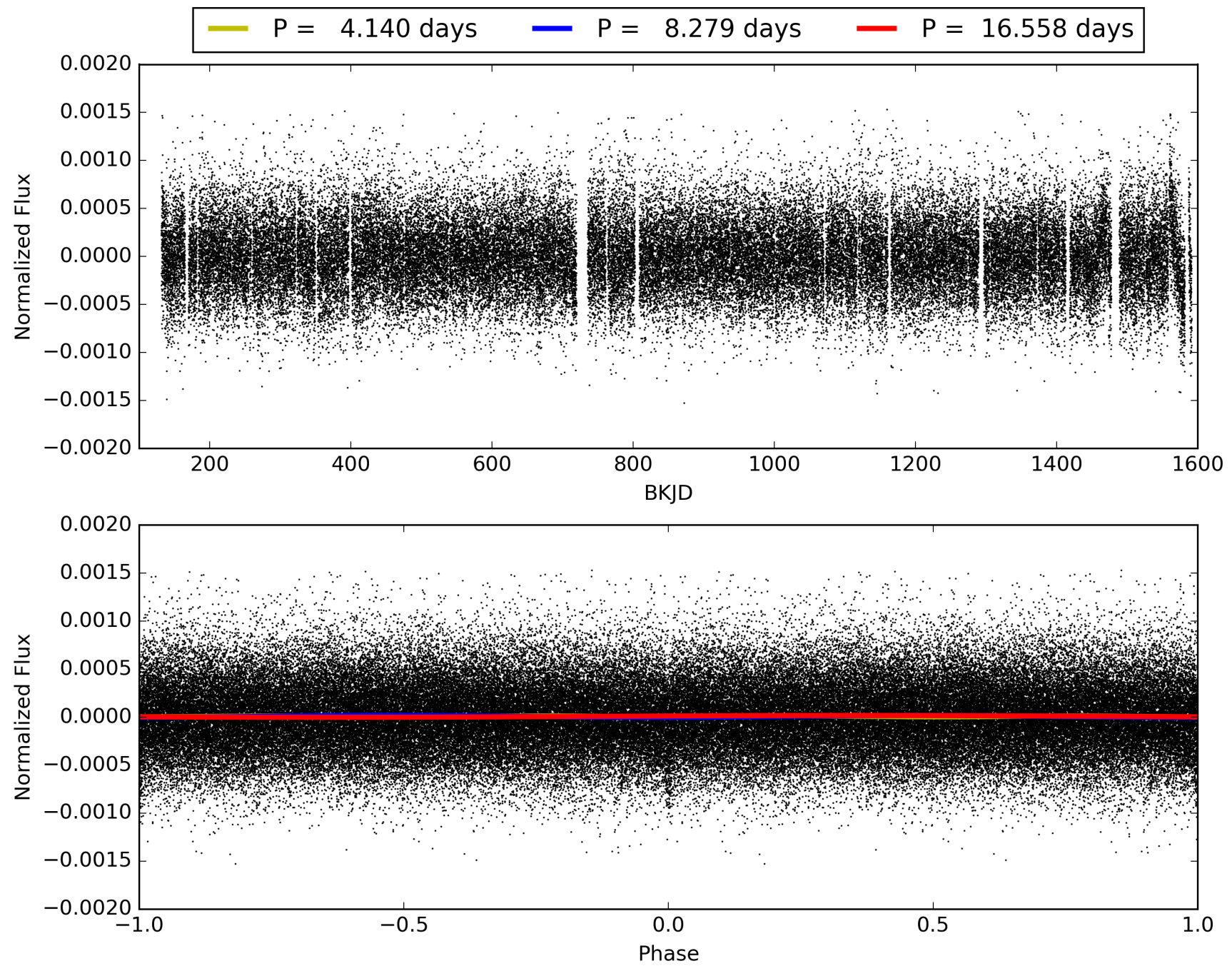
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:07:50 Z

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

TCE 006521174-01, PDC Light Curves

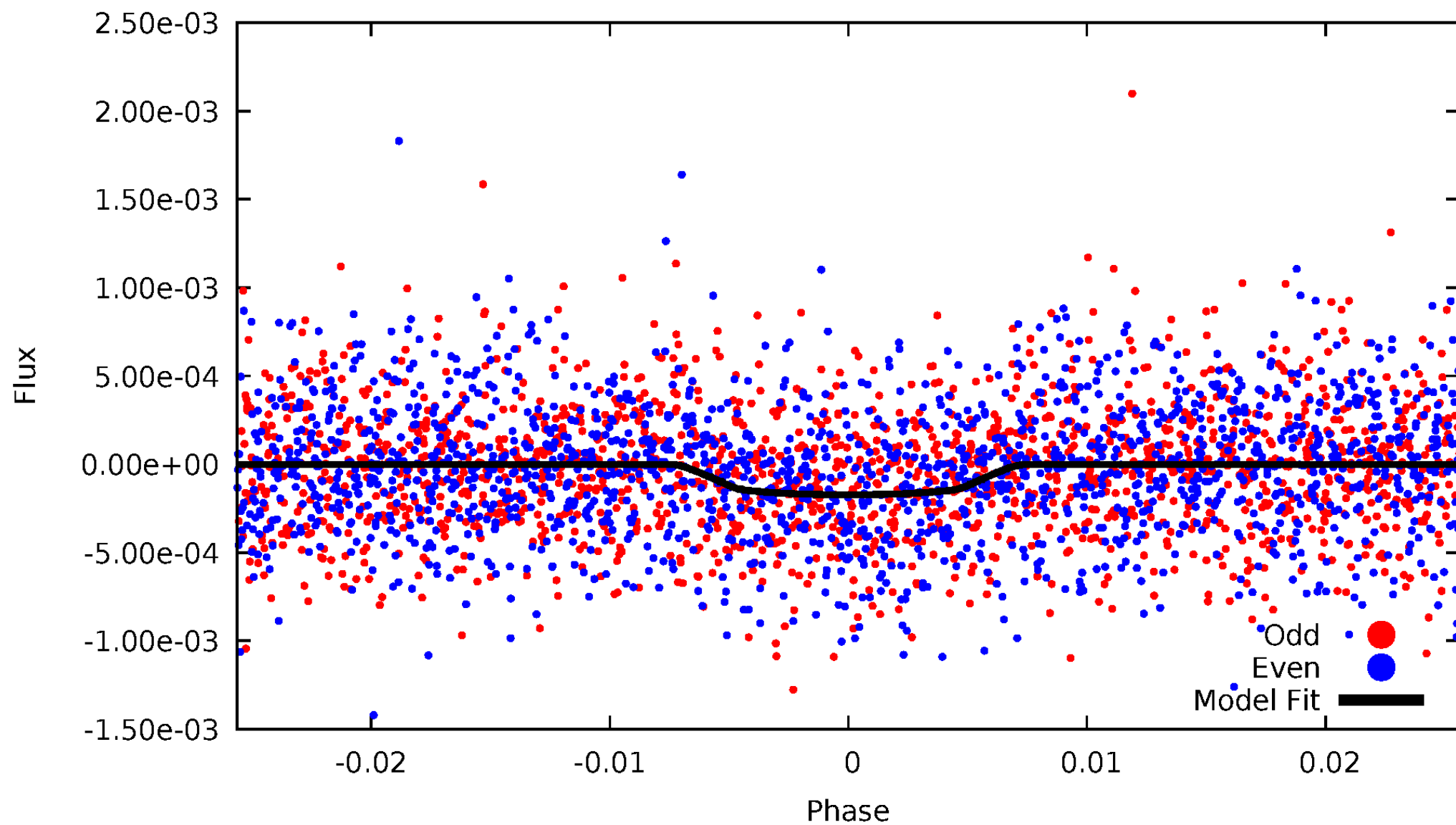


TCE 006521174-01



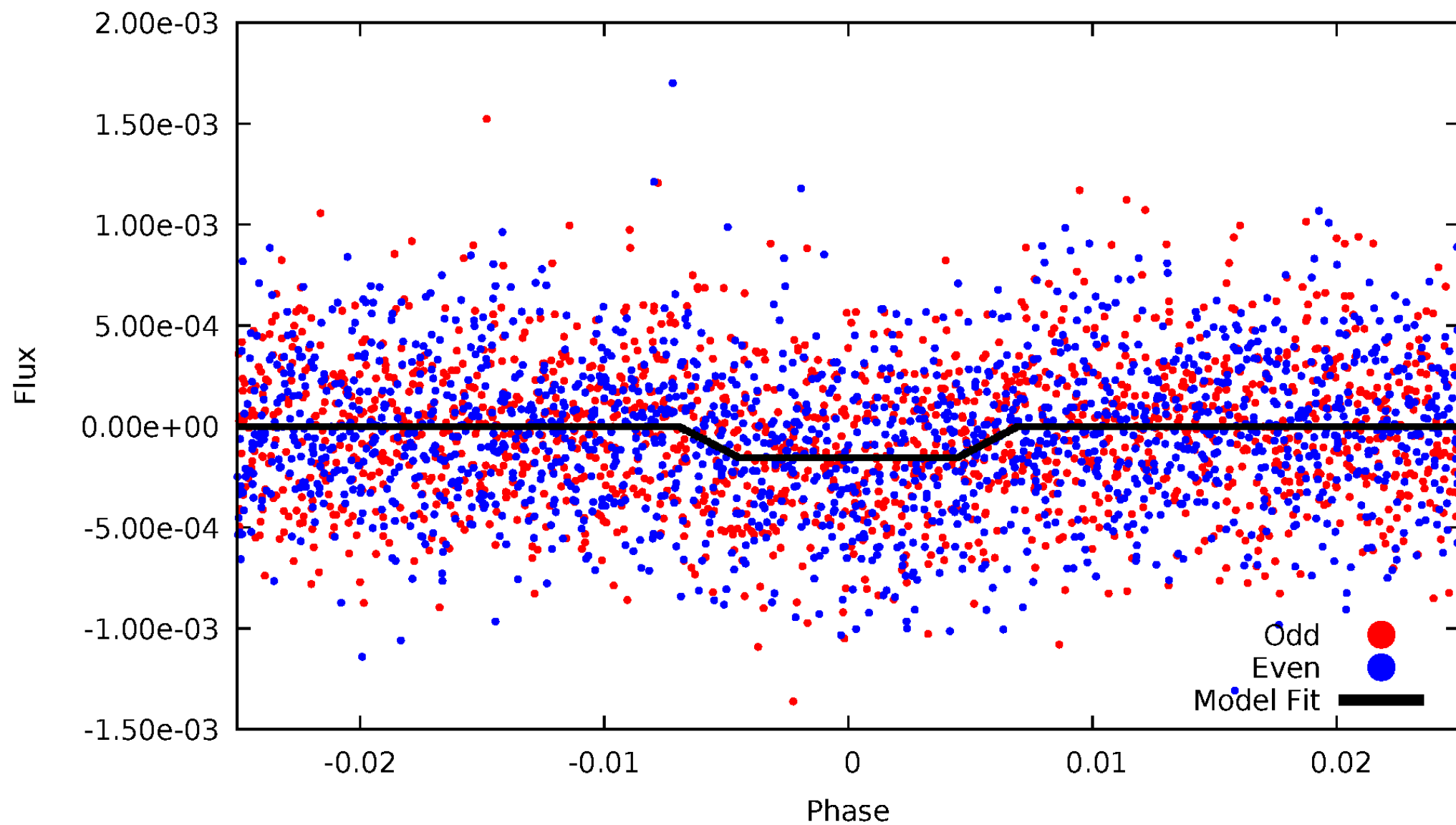
DV Odd/Even

TCE 006521174-01



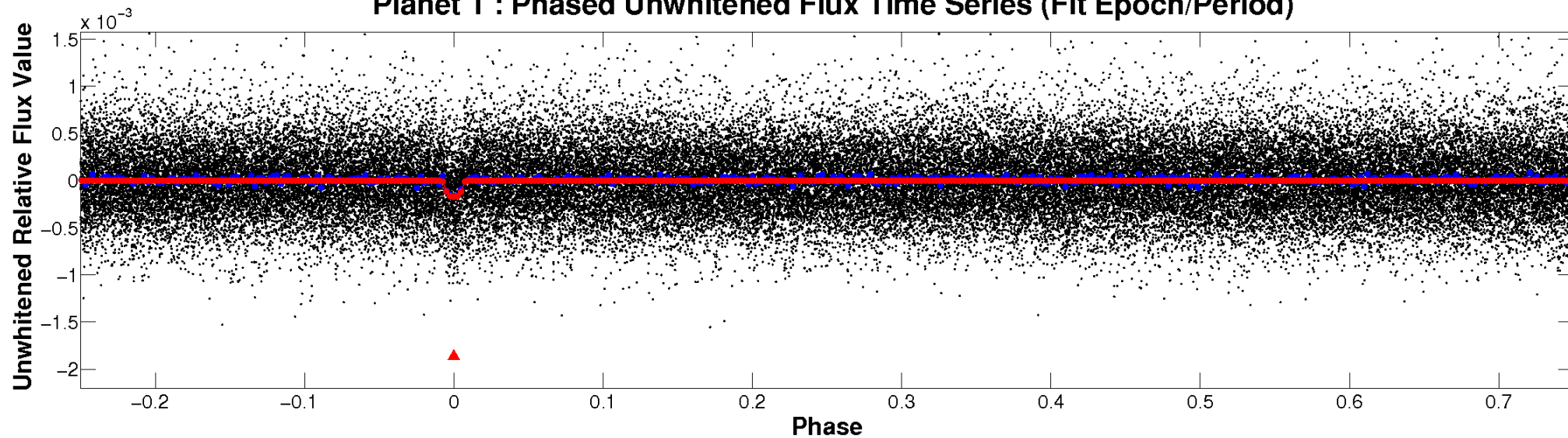
ALT Odd/Even

TCE 006521174-01

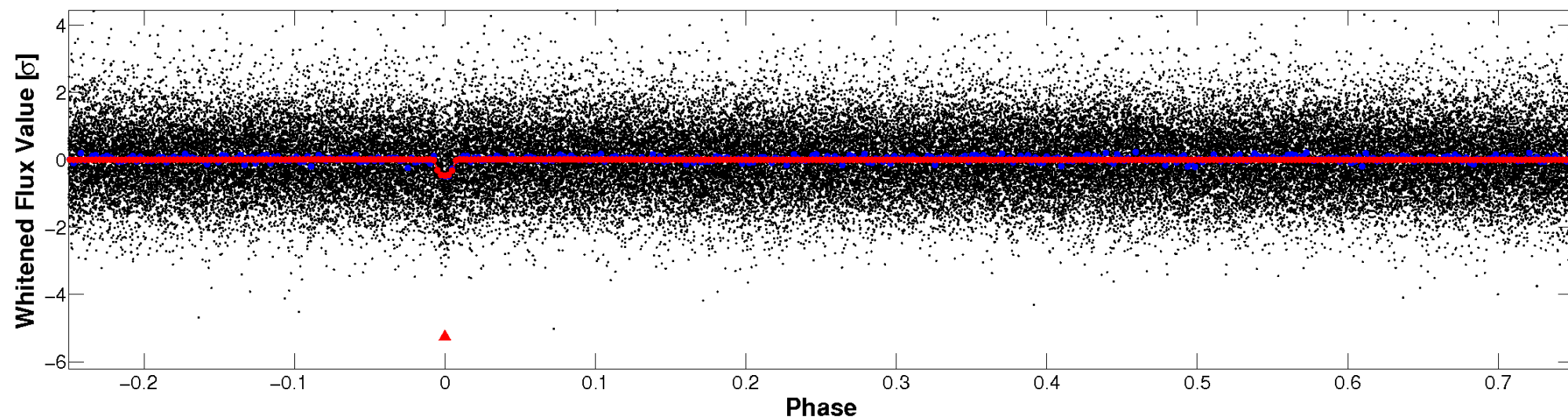


Non-Whitened Vs. Whitened Light Curve

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

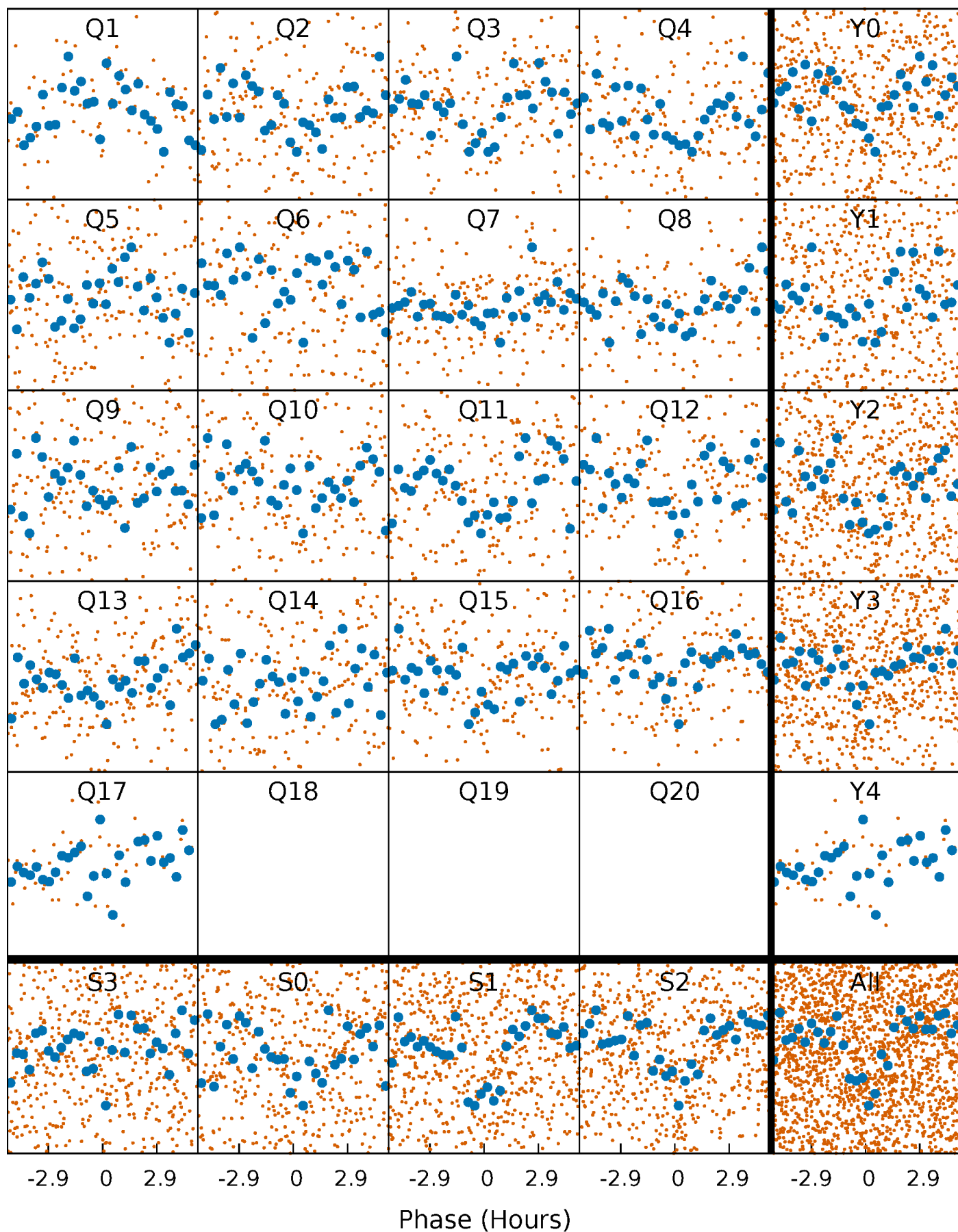


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



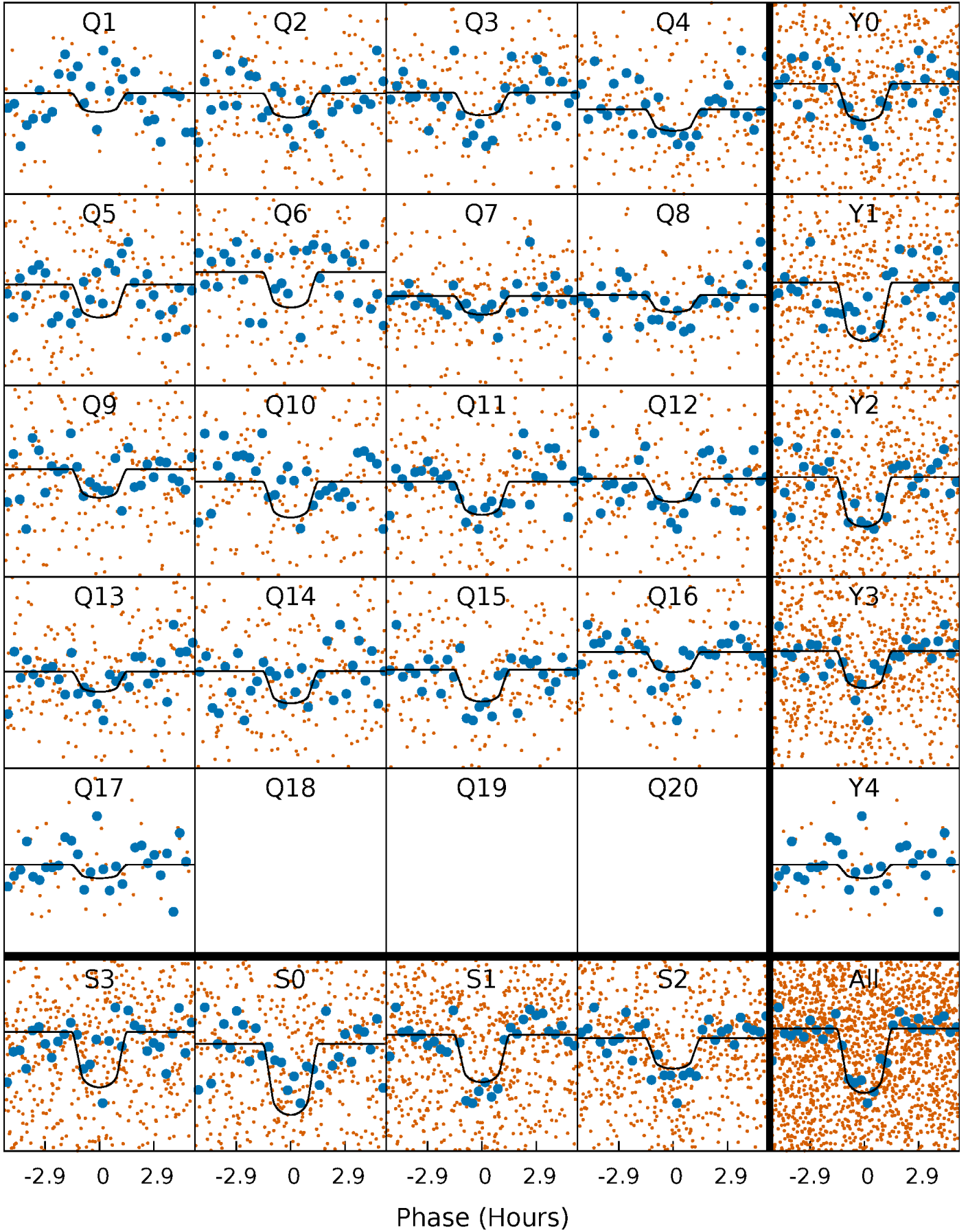
PDC Quarter-Phased Transit Curves

TCE 006521174-01 P= 8.279175 Days $T_0=133.821171$ (BKJD)



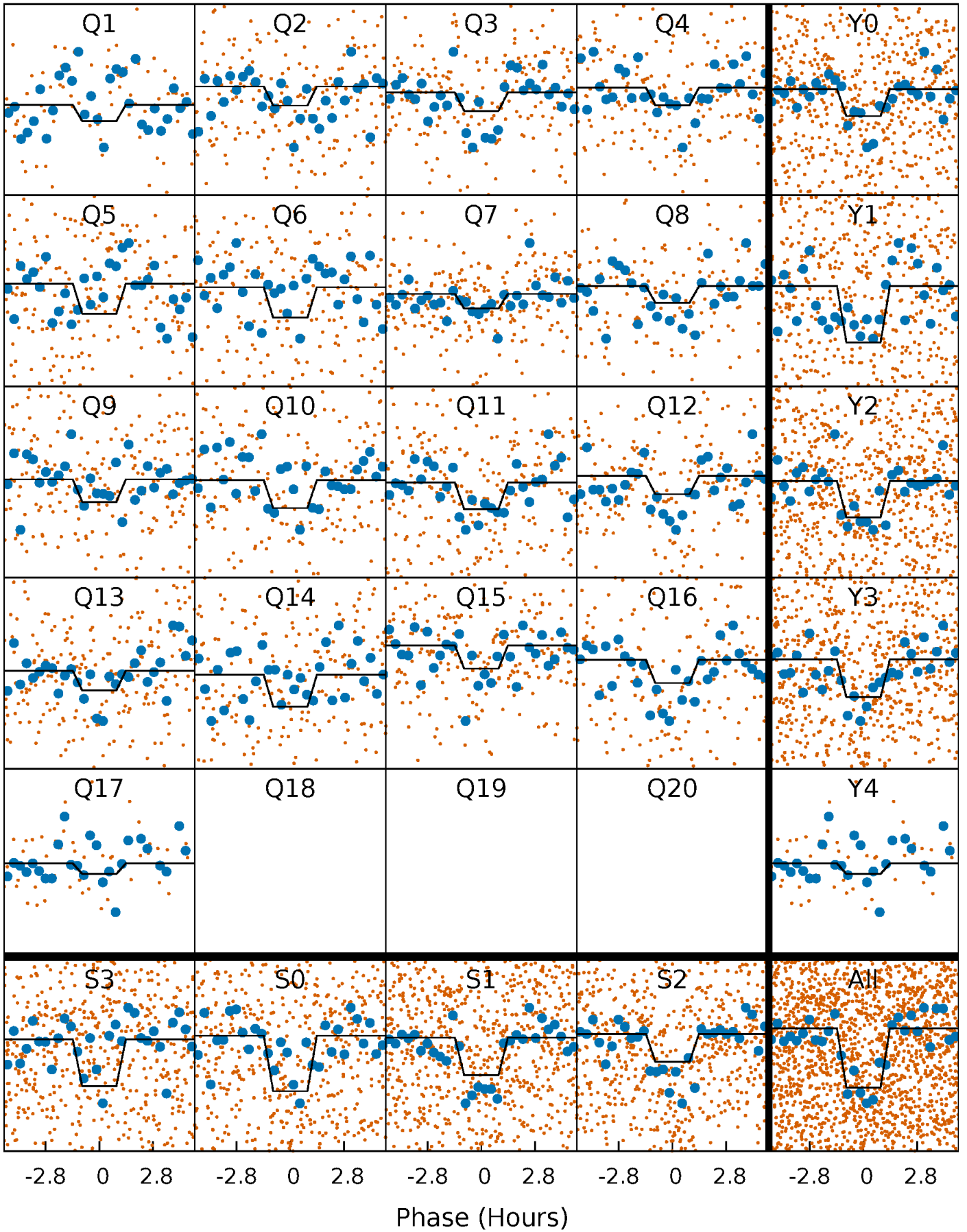
DV Quarter-Phased Transit Curves

TCE 006521174-01 P= 8.279175 Days $T_0=133.821171$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

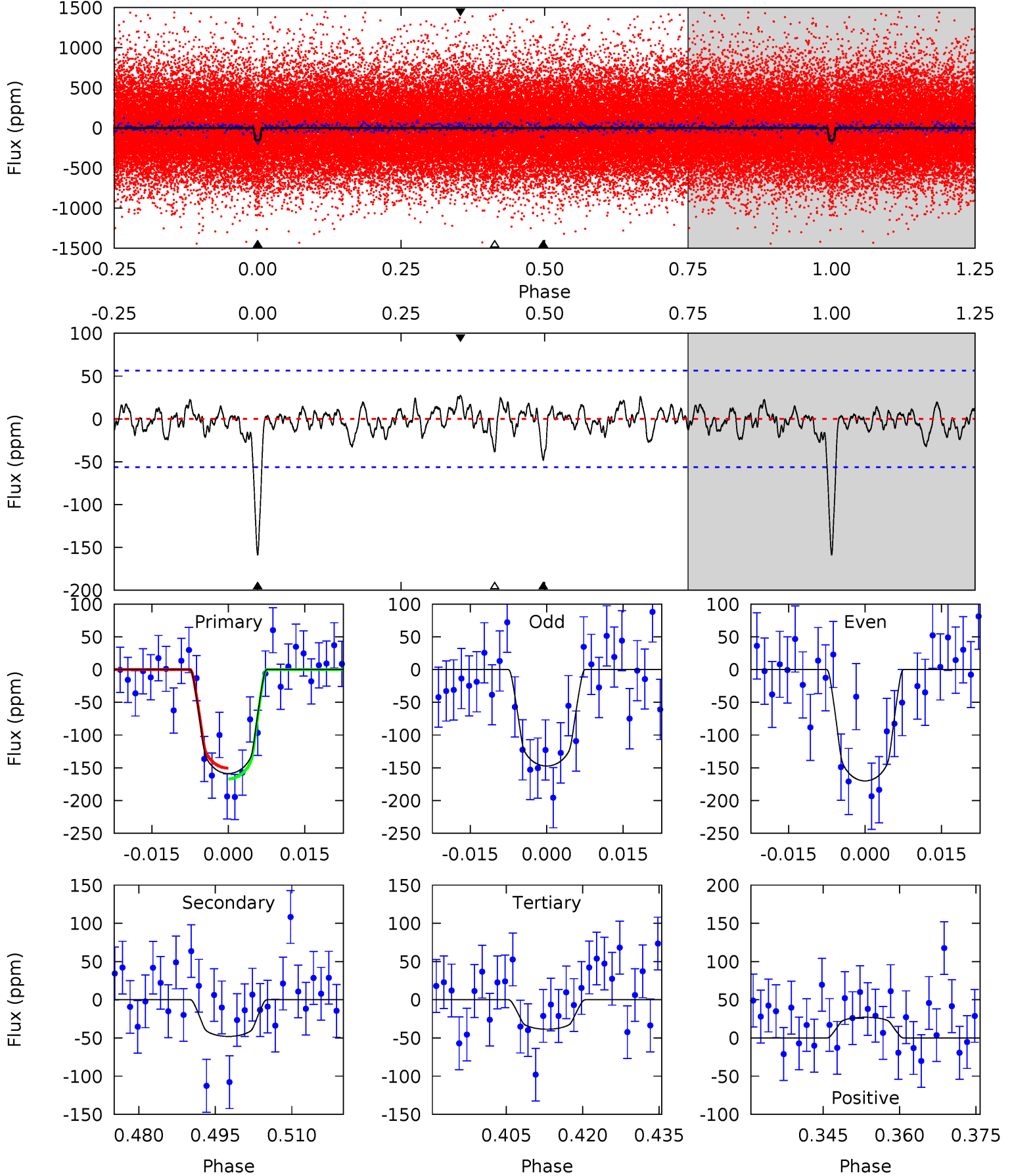
TCE 006521174-01 P= 8.279249 Days $T_0=133.814941$ (BKJD)



DV Model-Shift Uniqueness Test

006521174-01, P = 8.279175 Days, E = 125.541996 Days

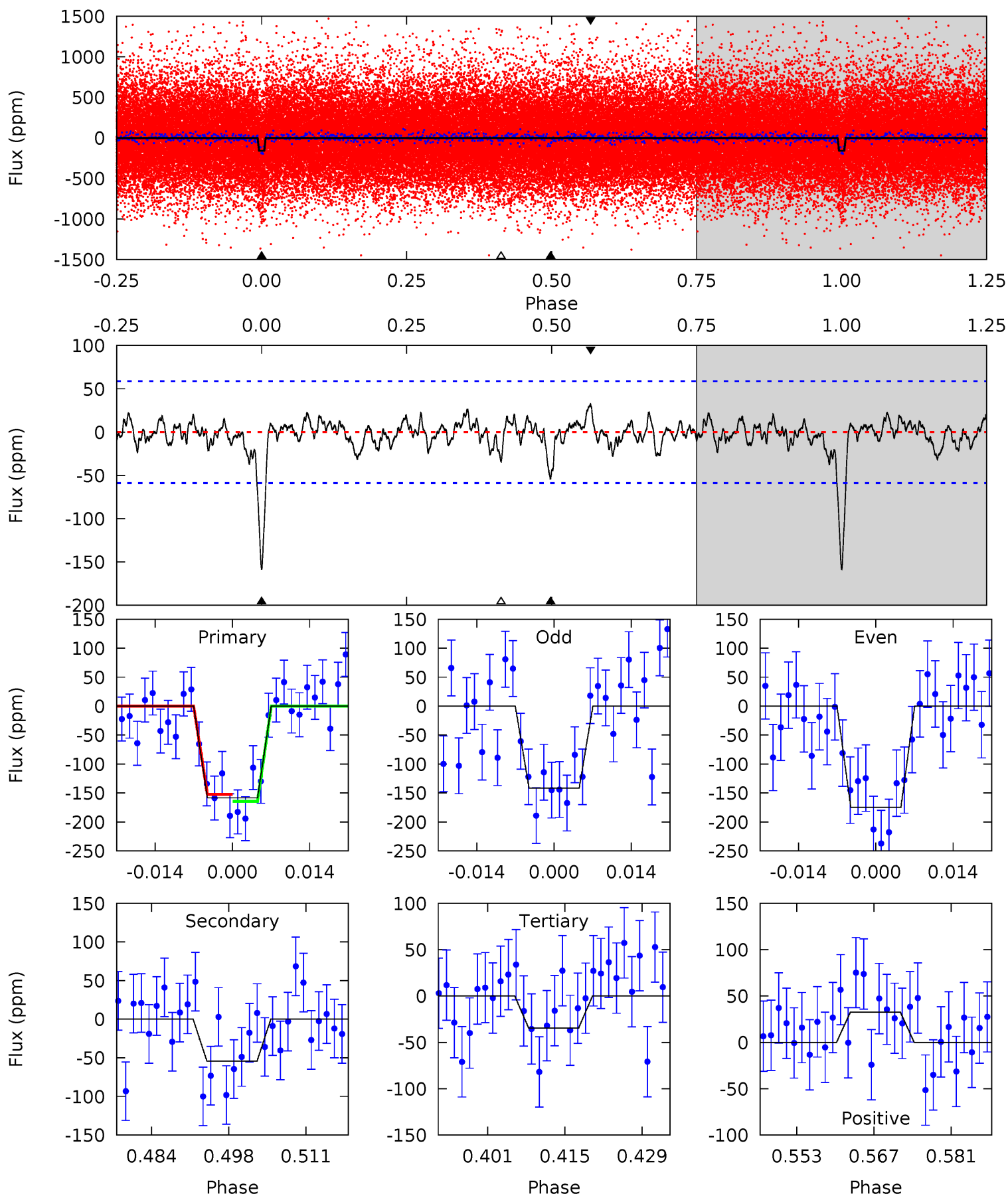
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	4.22	3.39	2.38	4.95	2.43	0.99	10.6	11.6	0.83	1.84	1.00	1.01	0.15	0.73



Alt Model-Shift Uniqueness Test

006521174-01, P = 8.279249 Days, E = 125.535692 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	4.59	2.91	2.74	4.96	2.46	0.97	10.5	10.6	1.68	1.84	1.40	0.98	0.17	0.50



Stellar Parameters For KIC 006521174

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5631^{+152}_{-169}	$4.557^{+0.032}_{-0.168}$	$-0.060^{+0.300}_{-0.300}$	$0.847^{+0.221}_{-0.069}$	$0.946^{+0.094}_{-0.115}$	$2.191^{+0.378}_{-1.038}$
	+3%/-3%	+1%/-4%	+500%/-500%	+26%/-8%	+10%/-12%	+17%/-47%
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 006521174-01 / KOI 6721.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-48 ± 11	$1.41^{+0.89}_{-0.75}$	1166^{+68}_{-53}	4134^{+1566}_{-647}	78^{+285}_{-50}
Alt.	-54 ± 12	$1.22^{+0.89}_{-0.70}$	1165^{+68}_{-49}	4451^{+2247}_{-760}	122^{+577}_{-81}

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 $A_{obs} \gg 1.0$

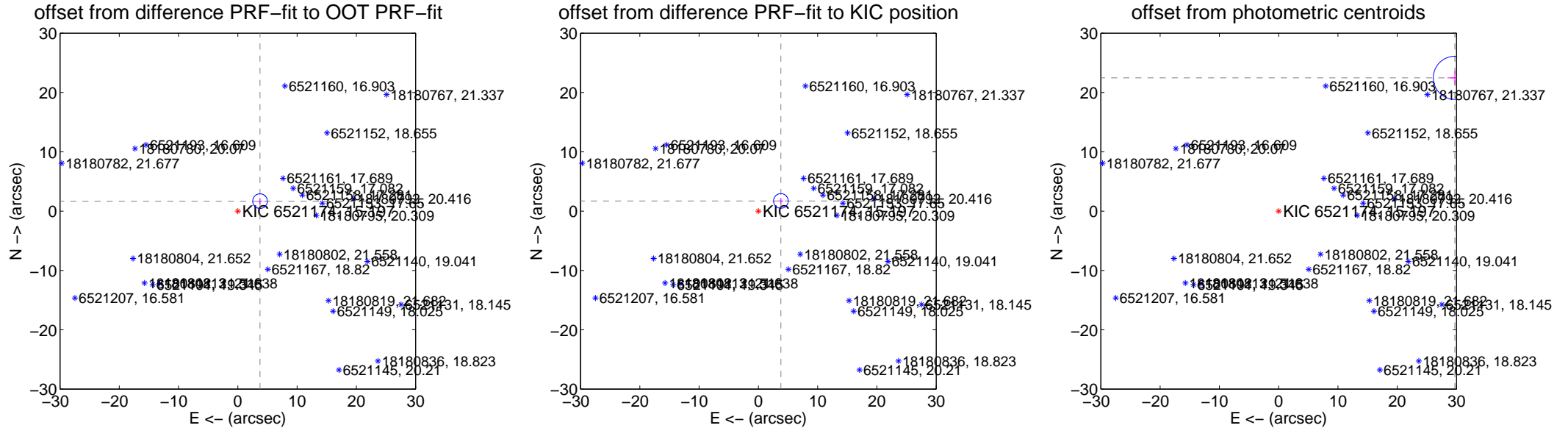
DV Centroid Data

Supplemental centroid analysis for 006521174-01. Kepler magnitude: 15.20. Transit SNR 11.32

There are 1 quarters with good PRF difference image offsets

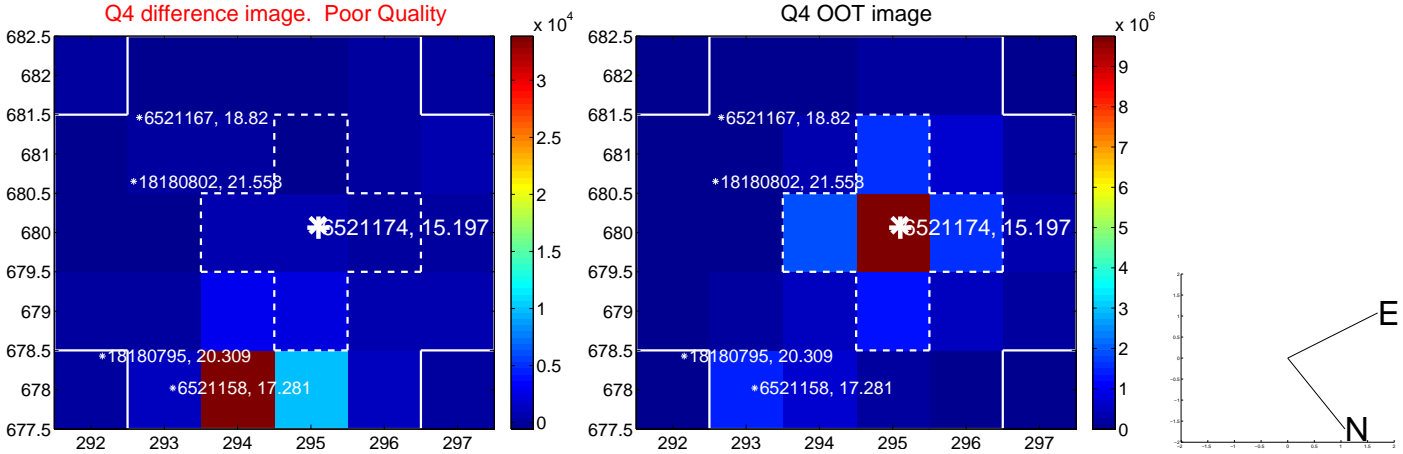
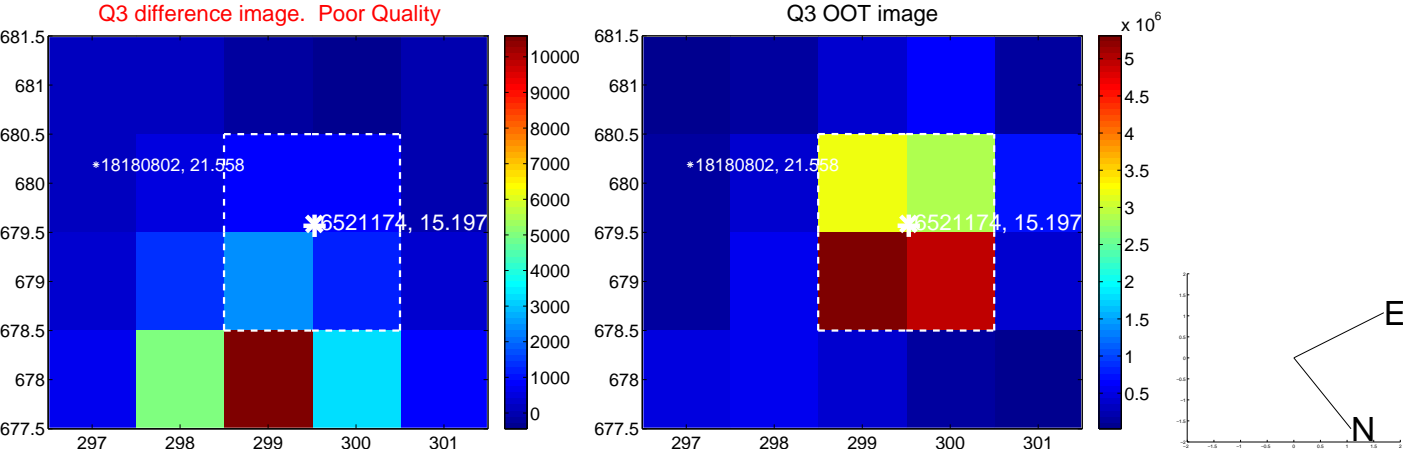
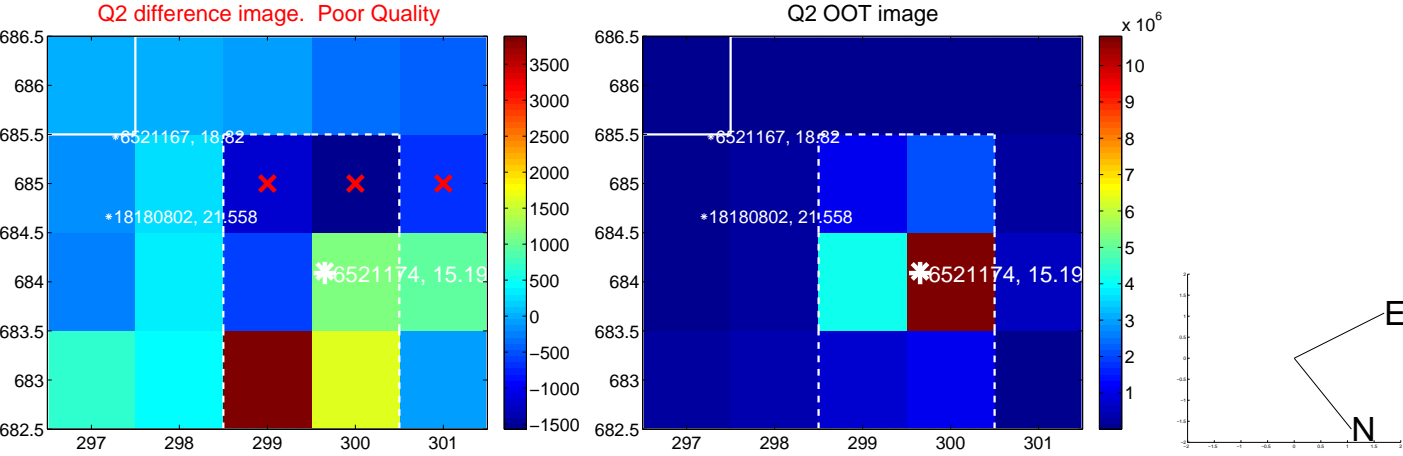
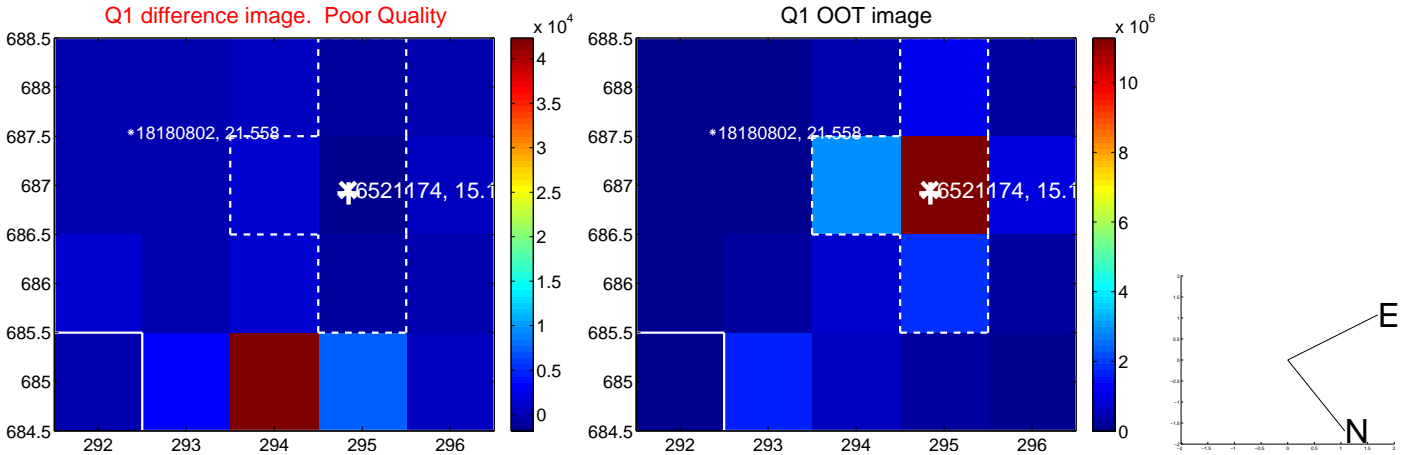
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.110 \pm 0.412	9.98	-3.748 \pm 0.391	1.686 \pm 0.502
PRF-fit source offset from KIC position	4.166 \pm 0.412	10.11	-3.796 \pm 0.391	1.717 \pm 0.502
photometric centroid source offset	37.27 \pm 1.21	30.75	-29.73 \pm 1.25	22.47 \pm 1.15

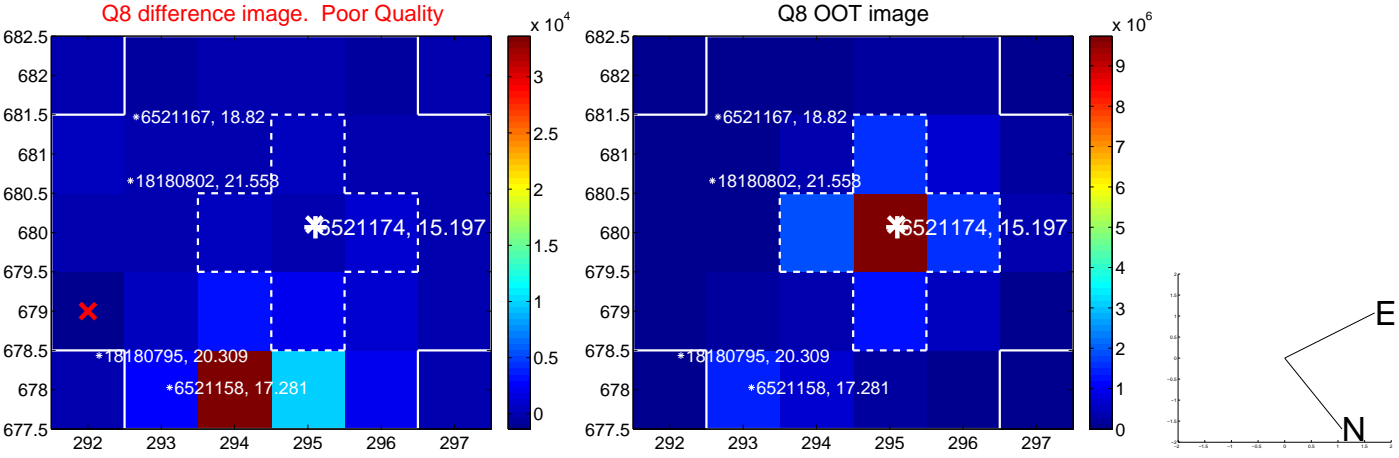
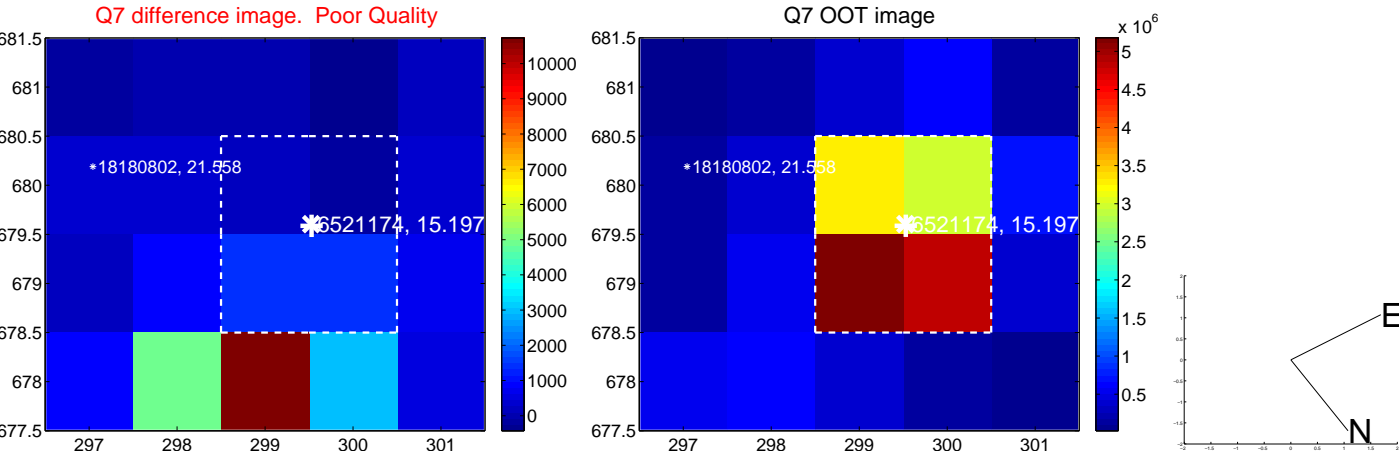
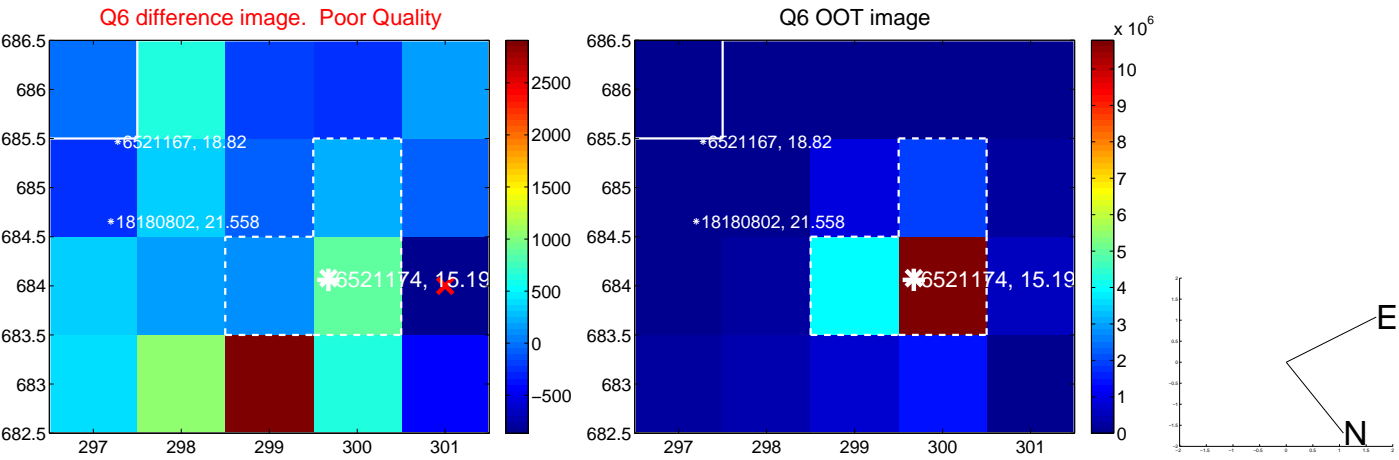
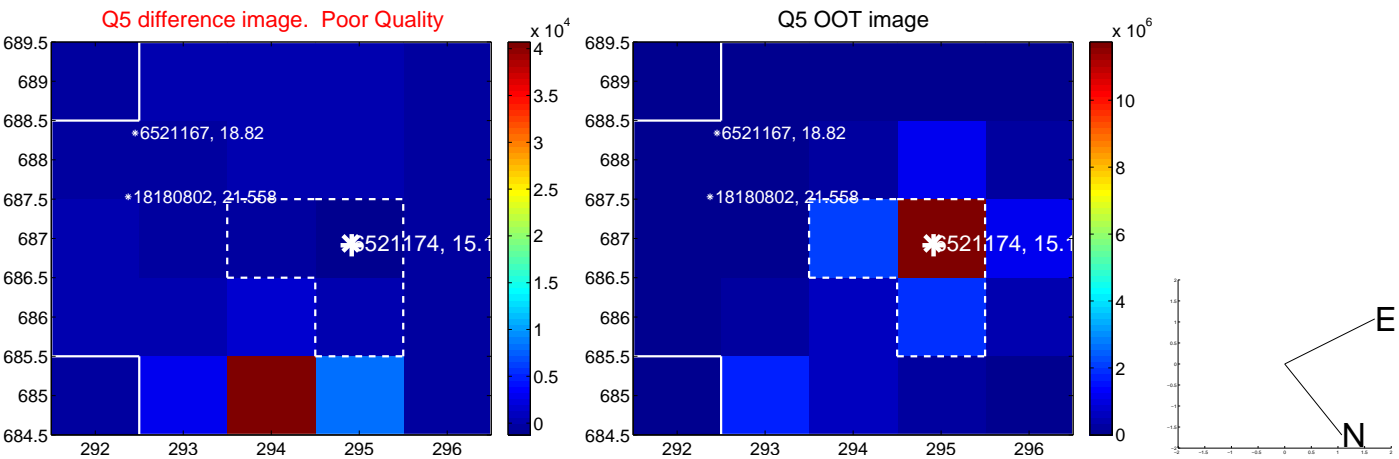


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

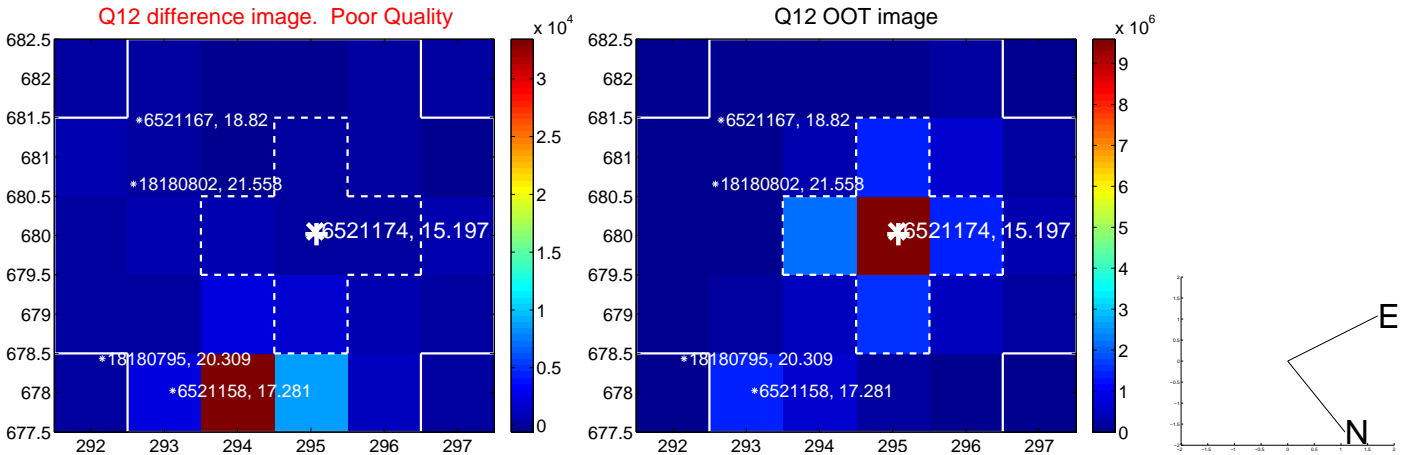
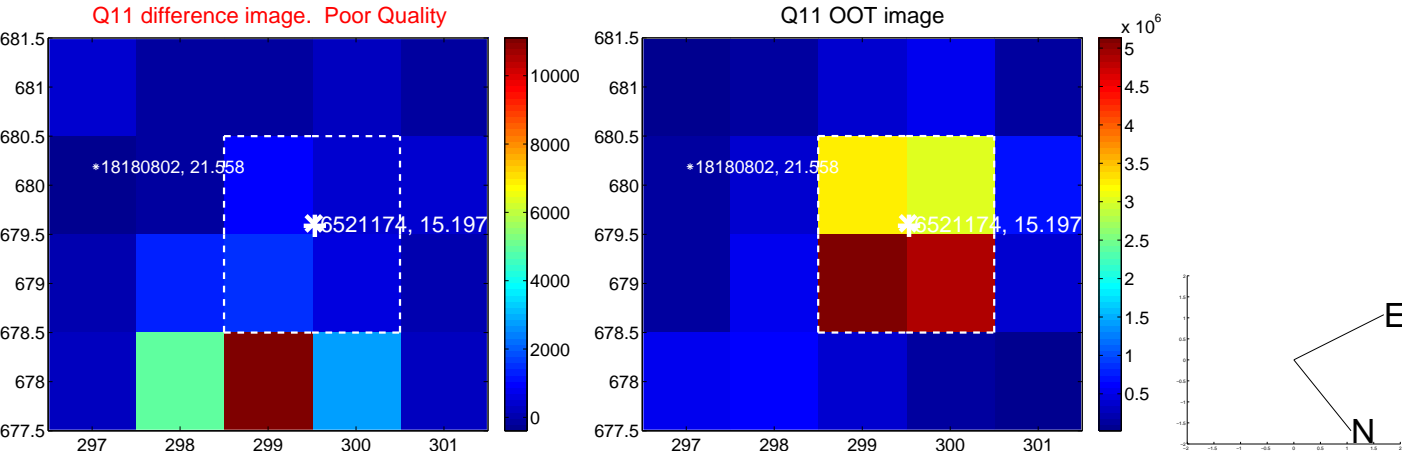
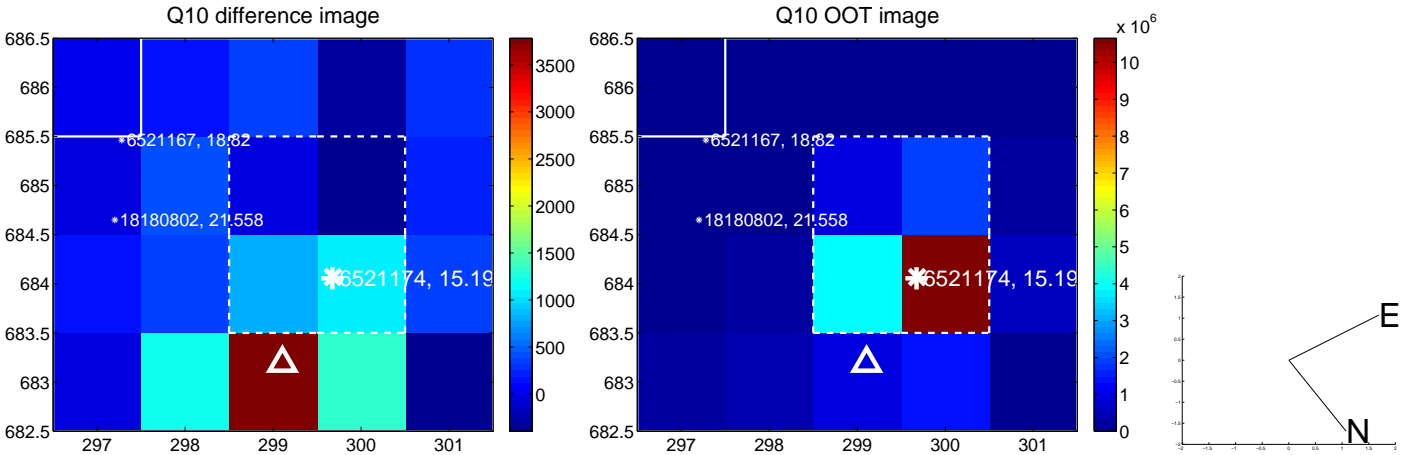
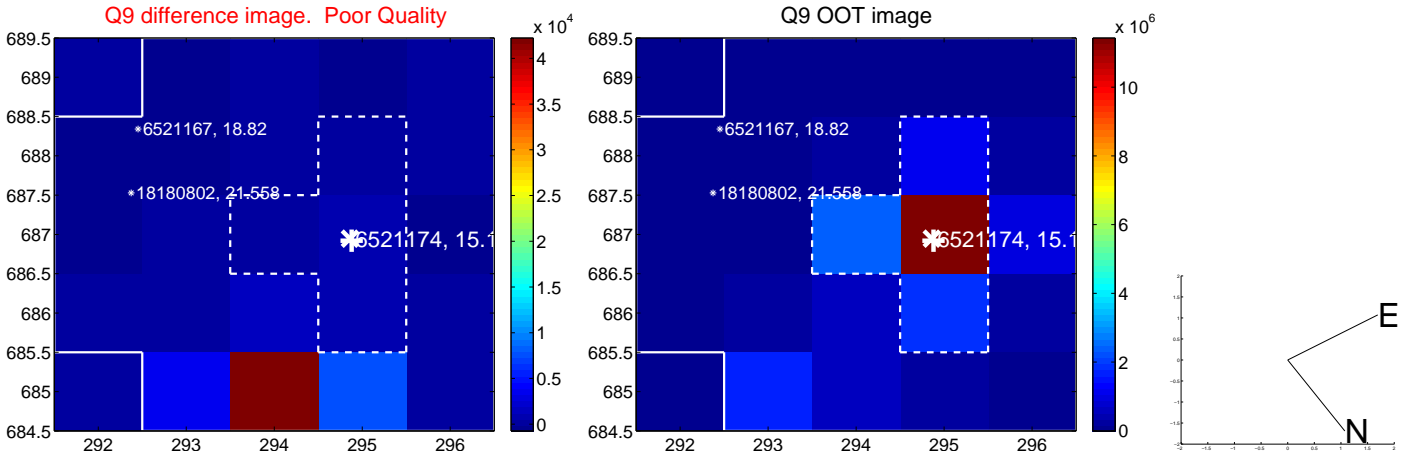
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



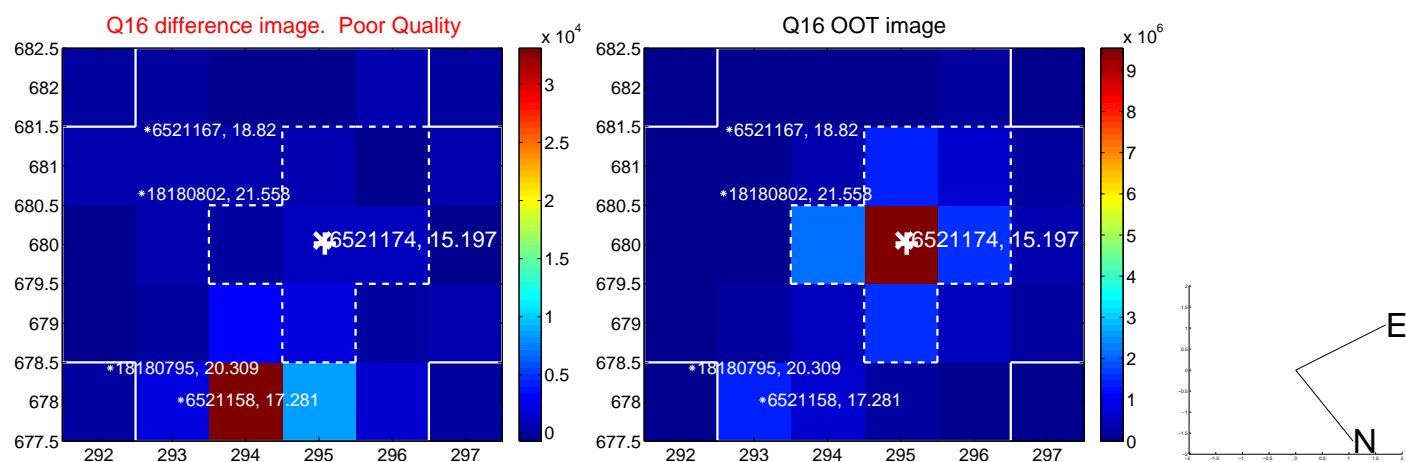
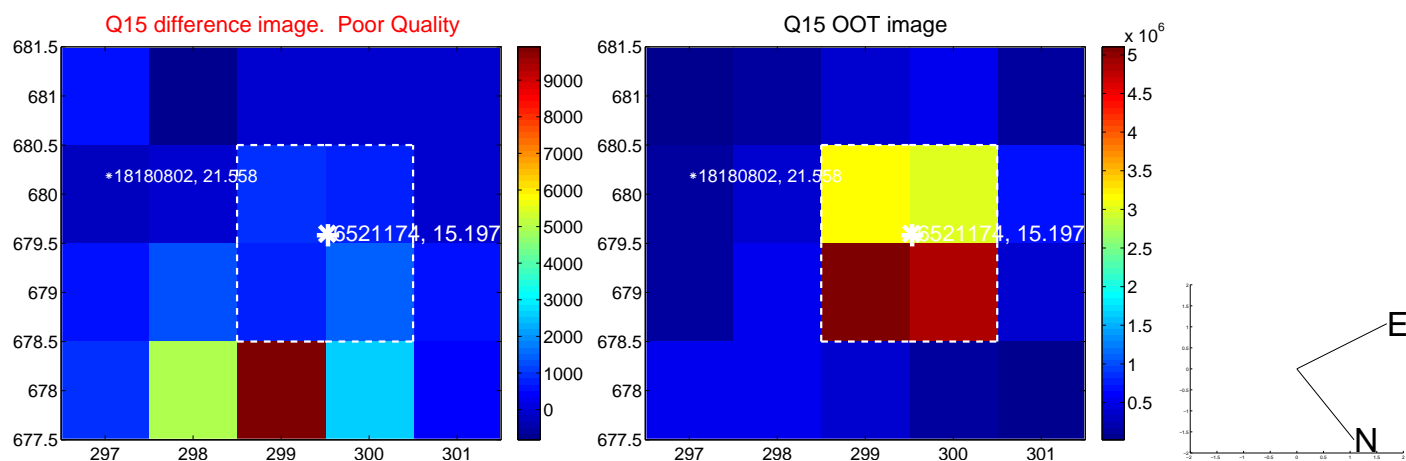
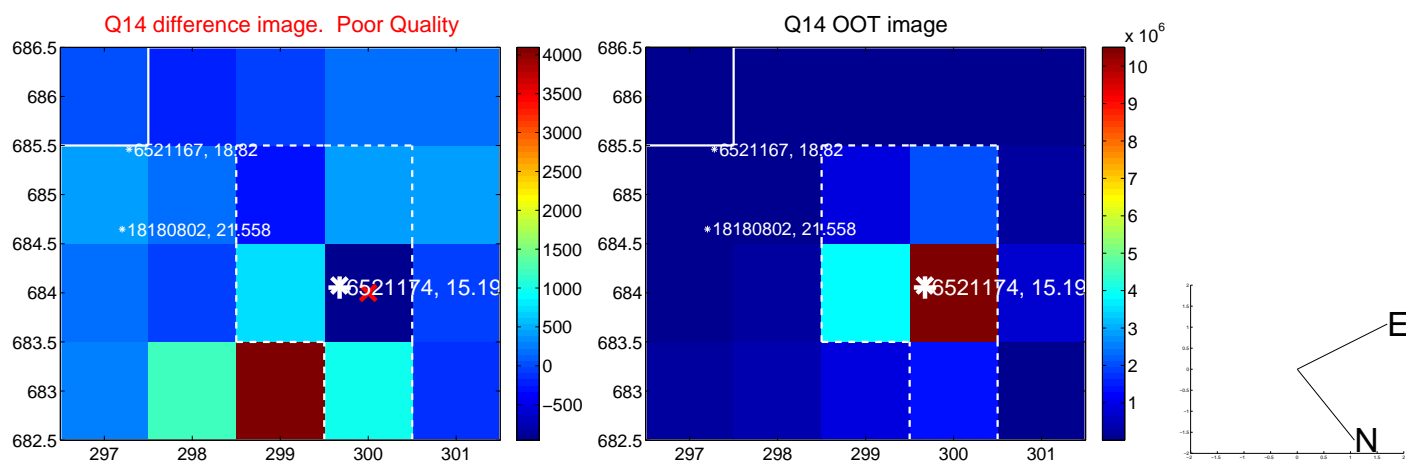
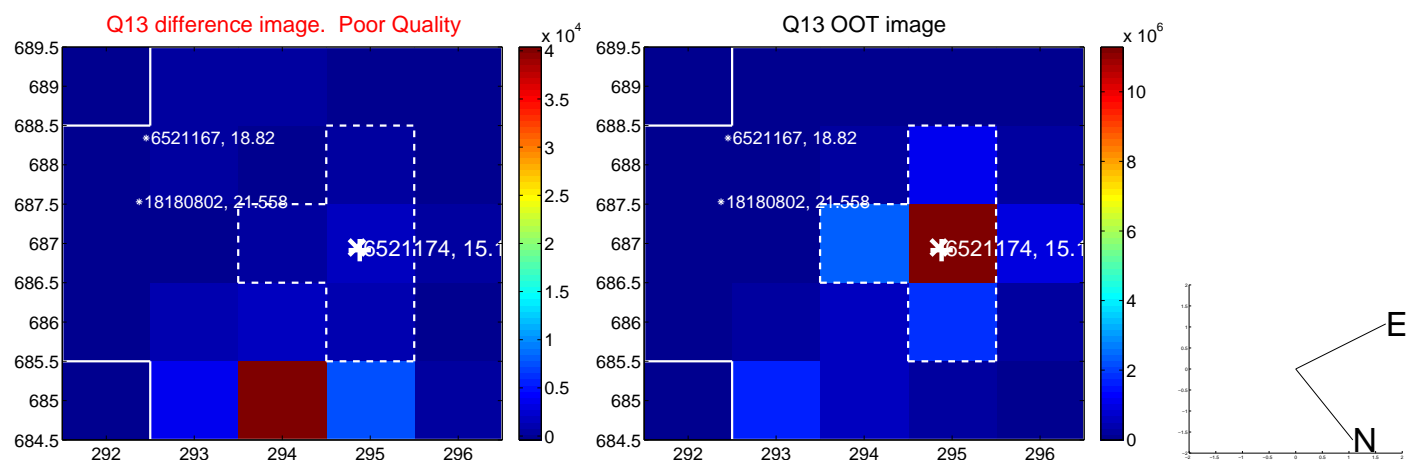
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



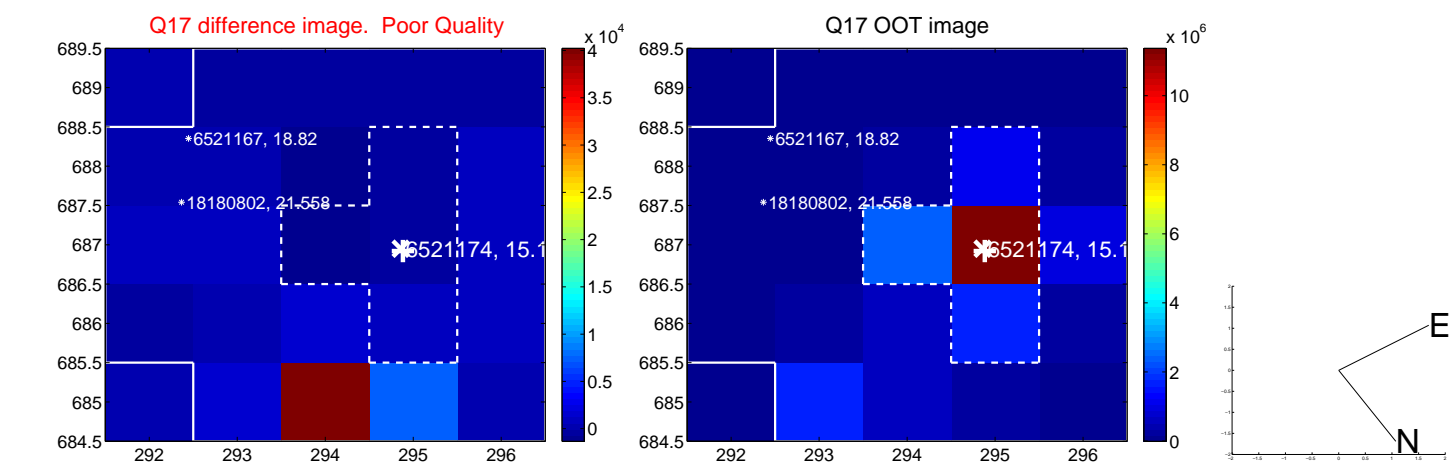
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



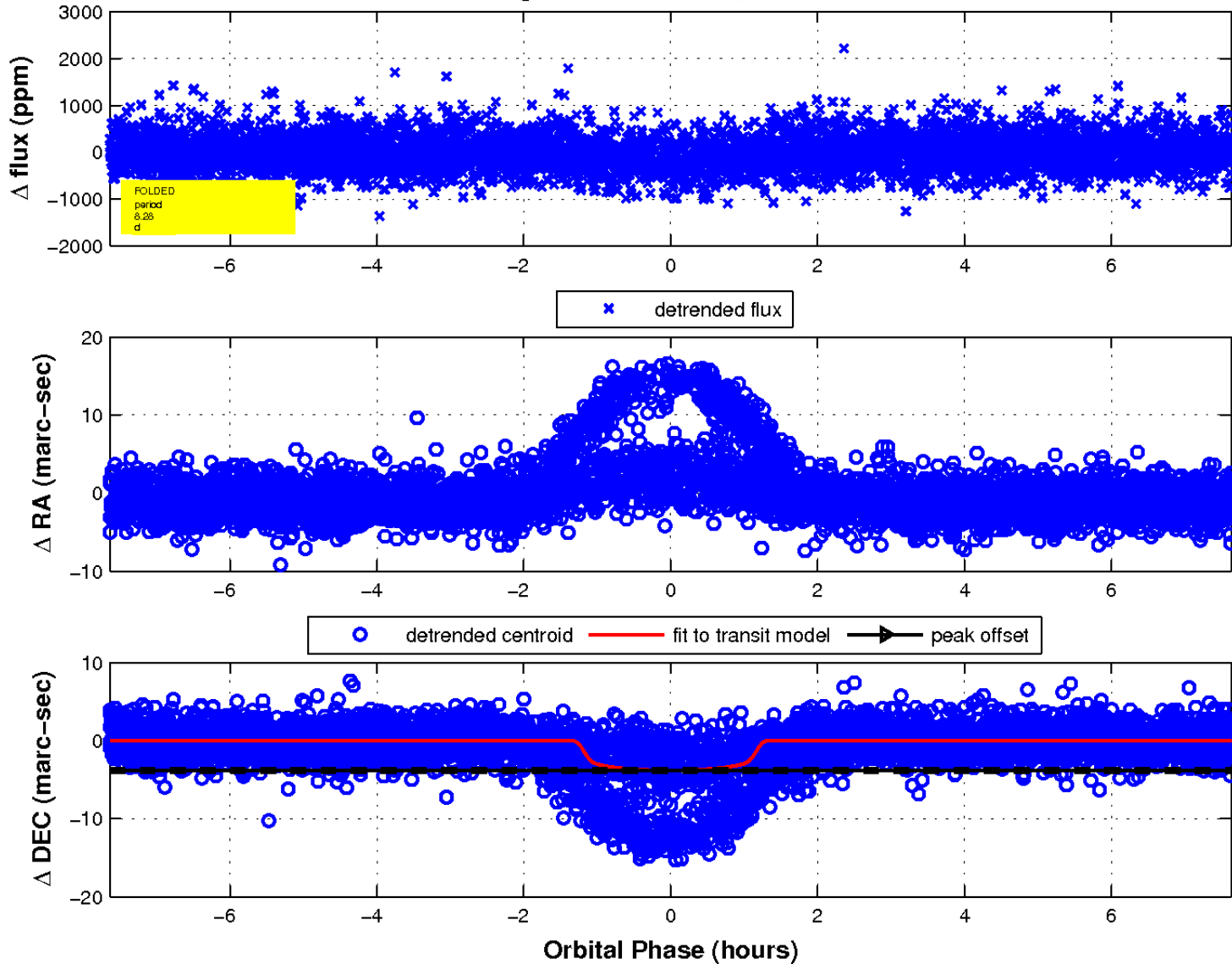
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

