

KIC 005529552

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005529552-01	OBS	7732.01	0.759681	131.871095	28.9	3.258	9.6	6.8	0.81	5481	0.44	2155.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005529552-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH

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.

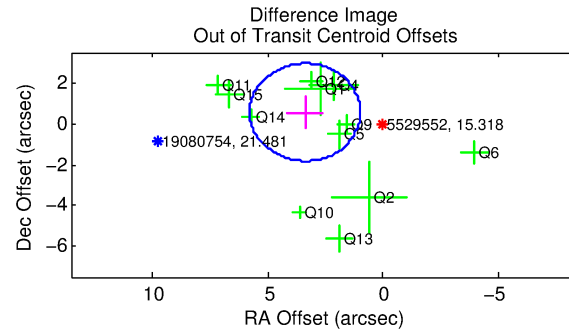
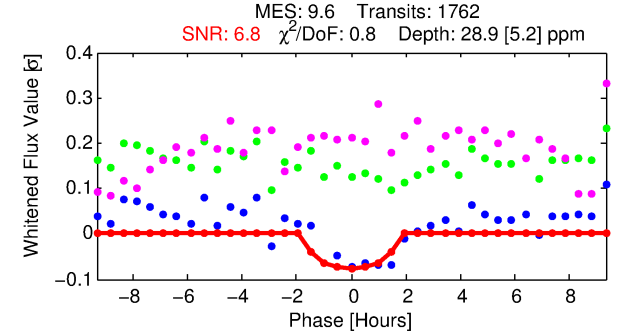
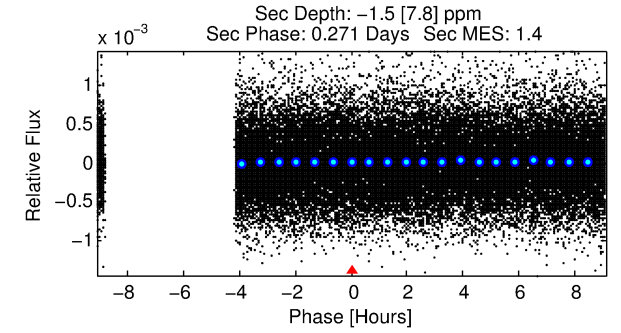
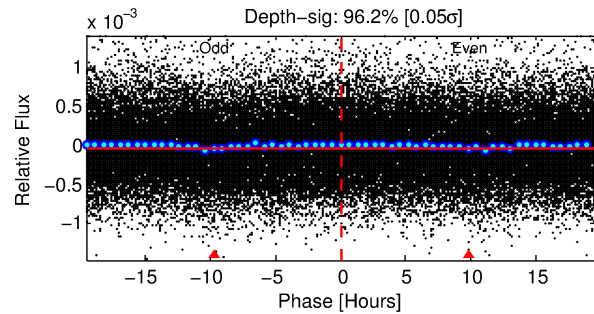
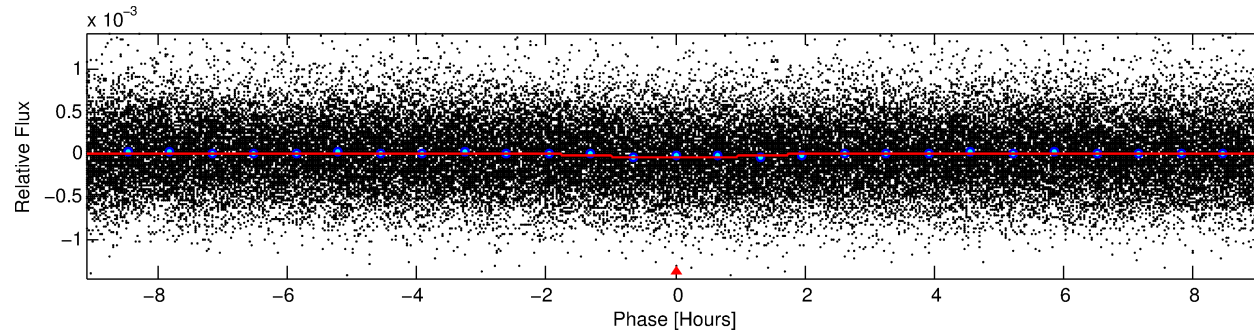
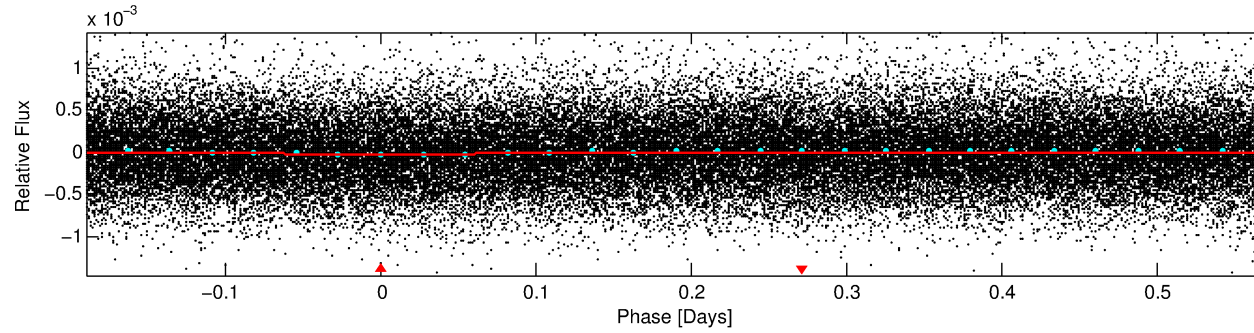
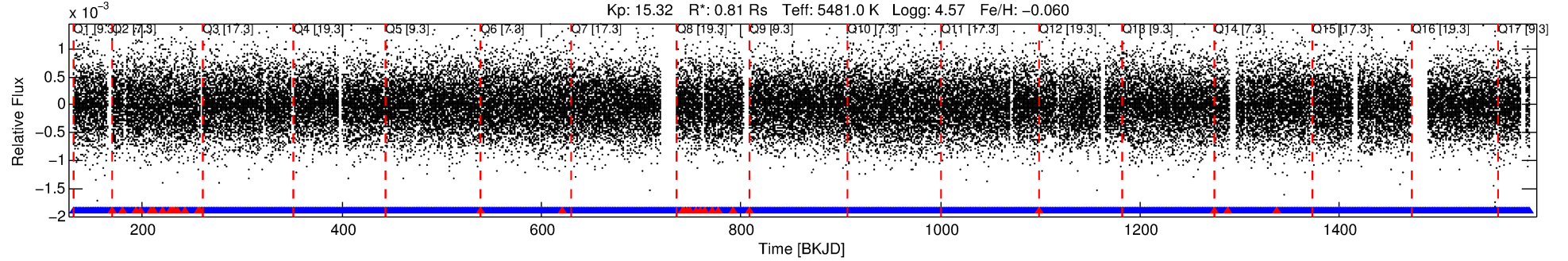
Ephemeris Match Information For 005529552-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
005529552-01	5529552	005529560-01	5529560	1:1	11.9	3	0	15.26	15.32	1.14	Direct-PRF	0	3.16	2.66

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5529552 Candidate: 1 of 1 Period: 0.760 d



DV Fit Results:

Period = 0.75968 [0.00002] d
Epoch = 131.8711 [0.0062] BKJD
Rp/R* = 0.0049 [0.0065]
a/R* = 1.79 [6.56]
b = 0.37 [12.43]
Seff = 2155.74 [623.60]
Teff = 1738 [126] K
Rp = 0.44 [0.59] Re
a = 0.0158 [0.0029] AU
Ag = N/A
Teffp = N/A

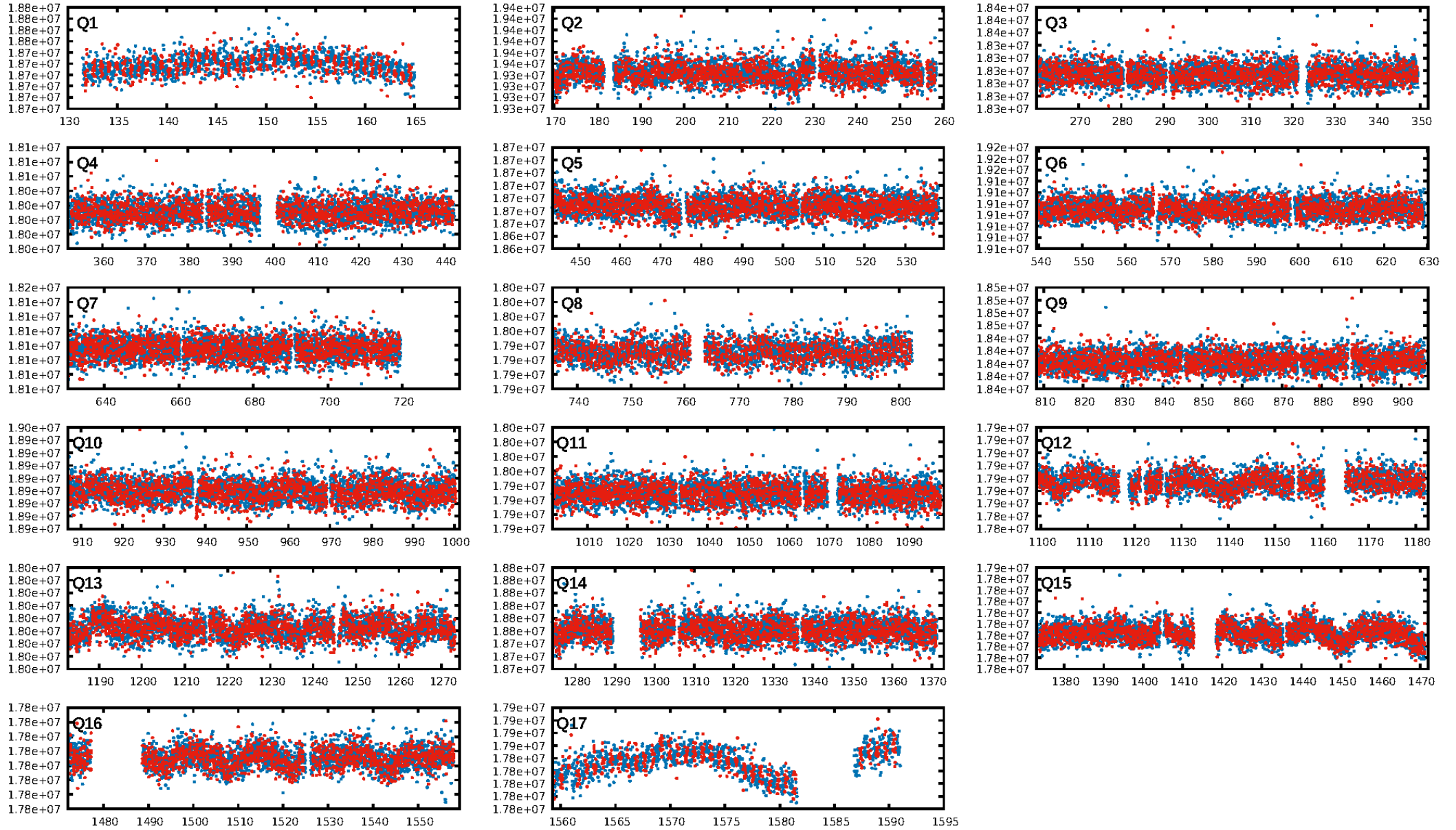
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.44e-20
RollingBand-fgt: 0.98 [1651/1683]
GhostDiagnostic-chr: 0.3015
Centroid-sig: 0.0%
Centroid-so: 5.315 arcsec [2.58 σ]
OotOffset-rm: 3.430 arcsec [4.30 σ]
KicOffset-rm: 3.514 arcsec [4.18 σ]
OotOffset-st: 4/2/2/4 [12]
KicOffset-st: 4/2/2/4 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 1.00 [17/17]

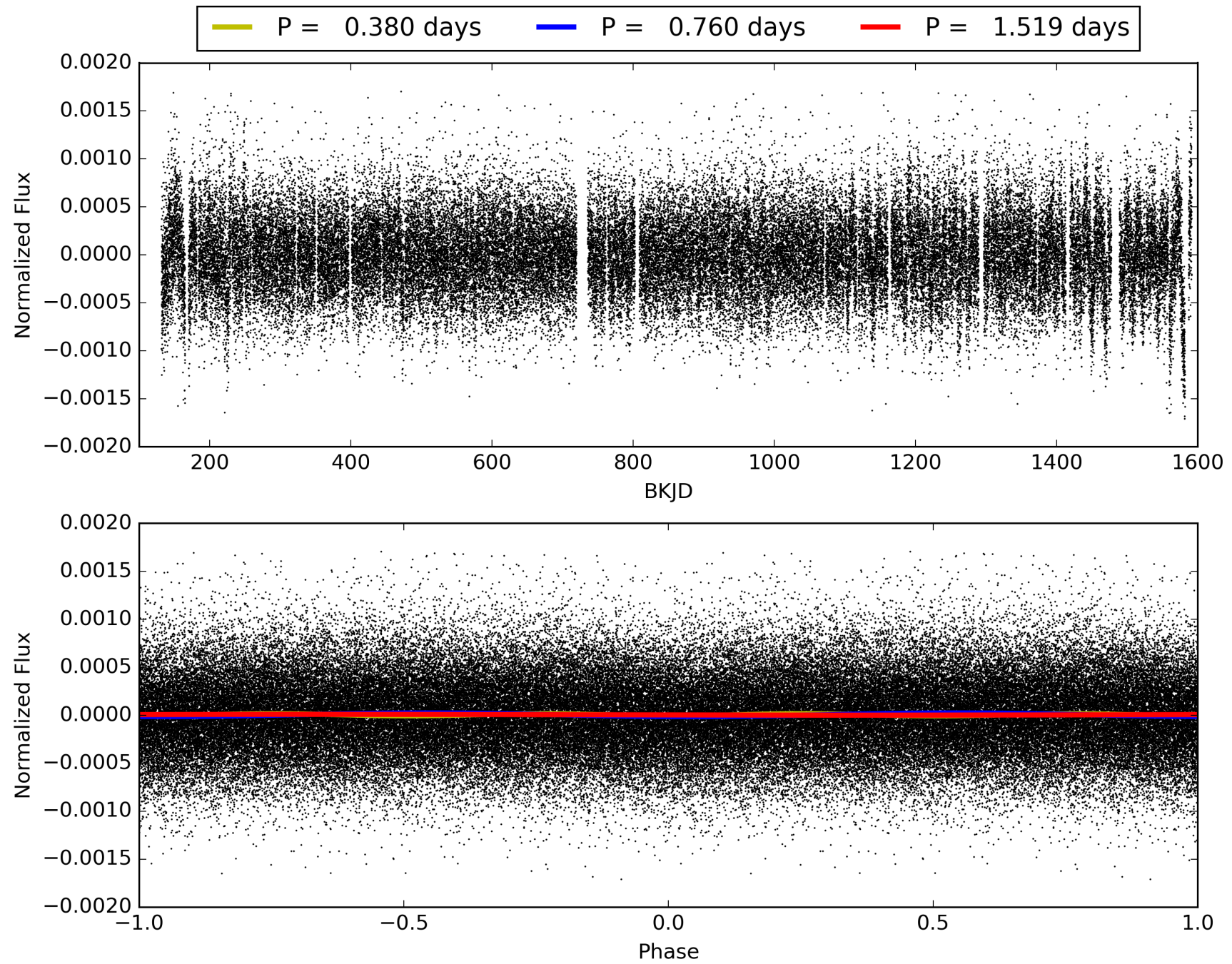
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:45:49 Z

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

TCE 005529552-01, PDC Light Curves

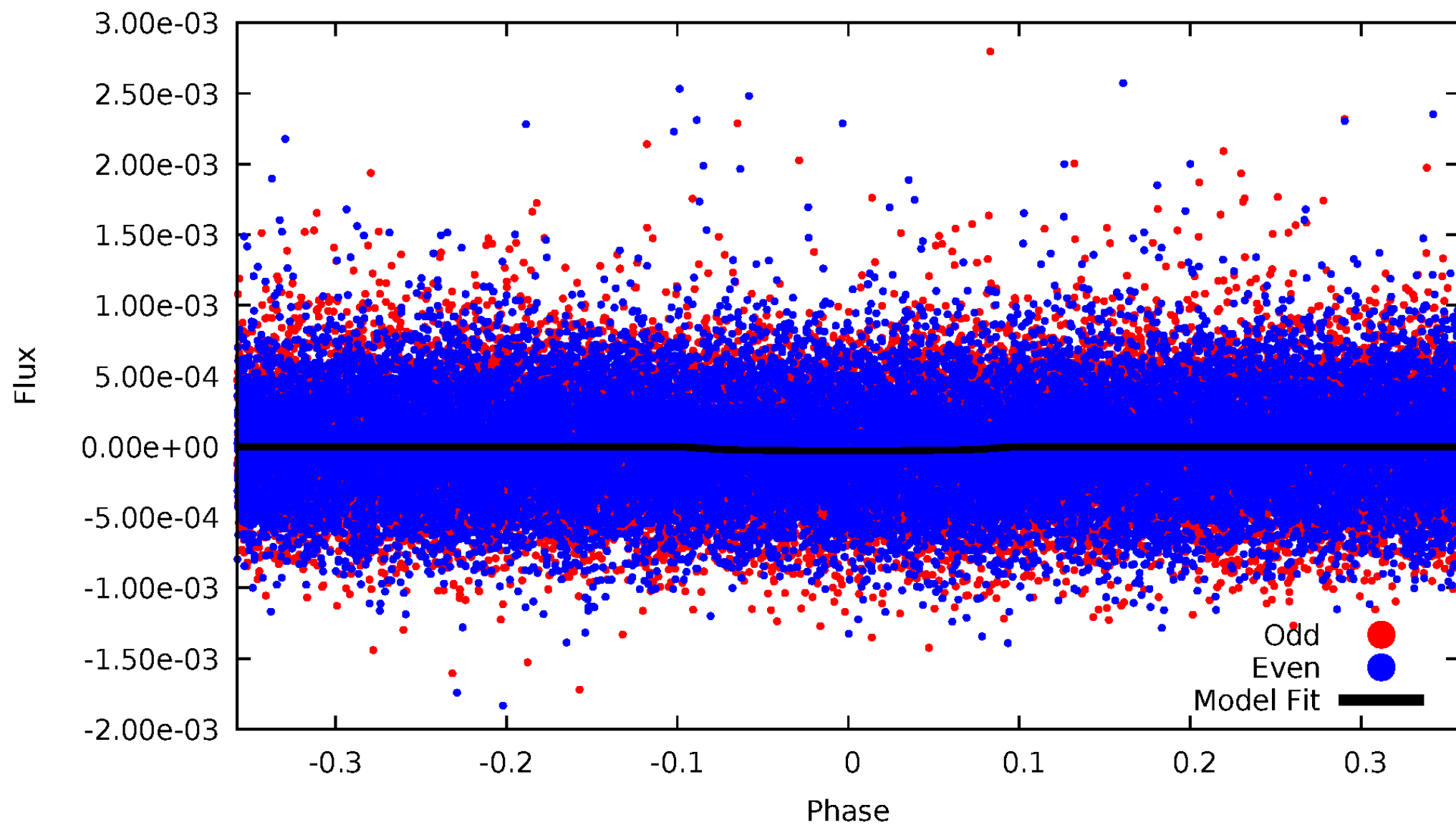


TCE 005529552-01



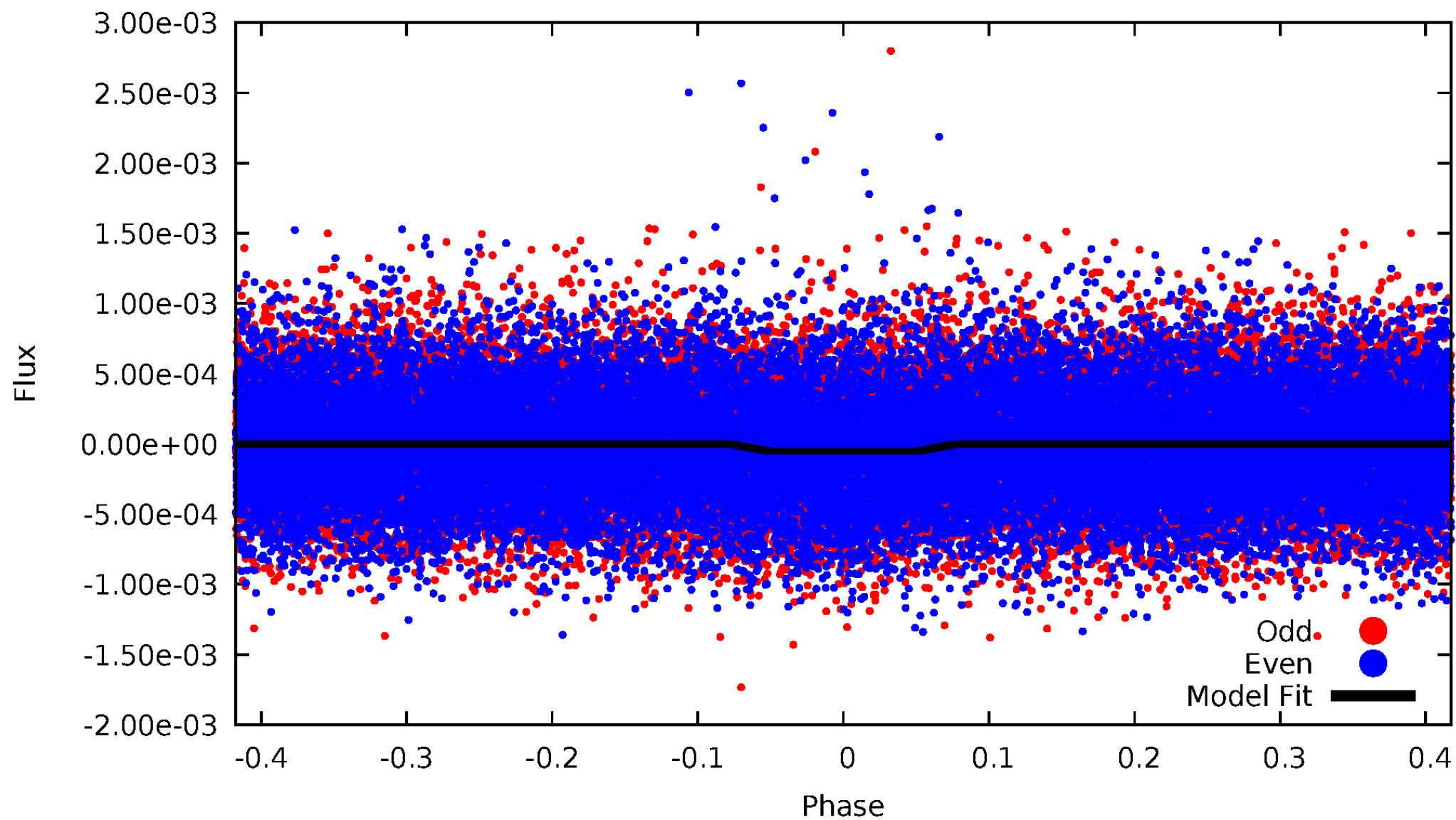
DV Odd/Even

TCE 005529552-01



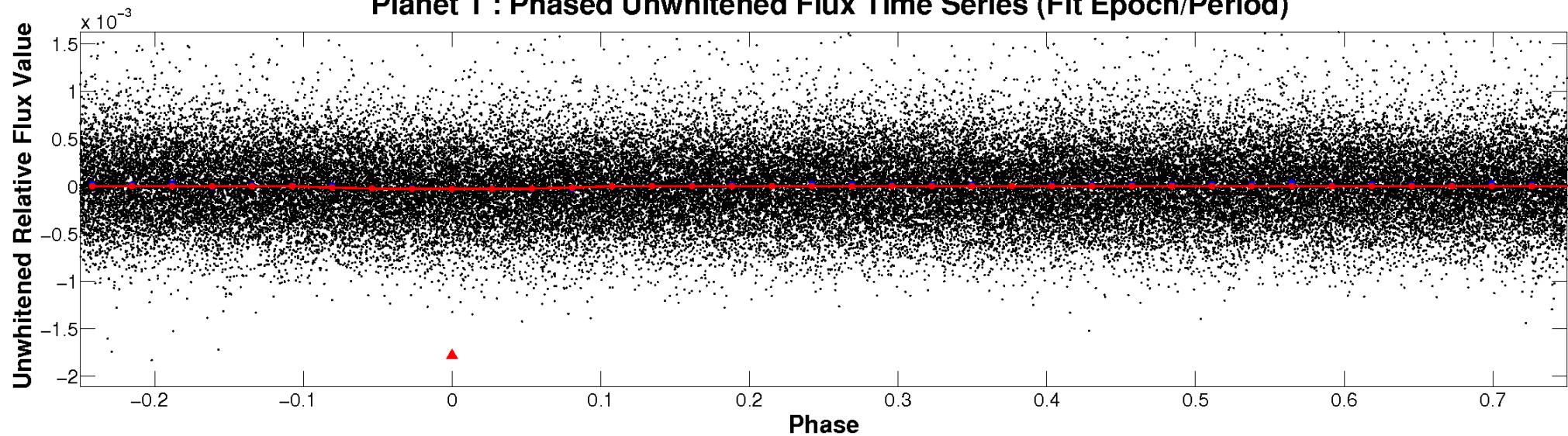
ALT Odd/Even

TCE 005529552-01

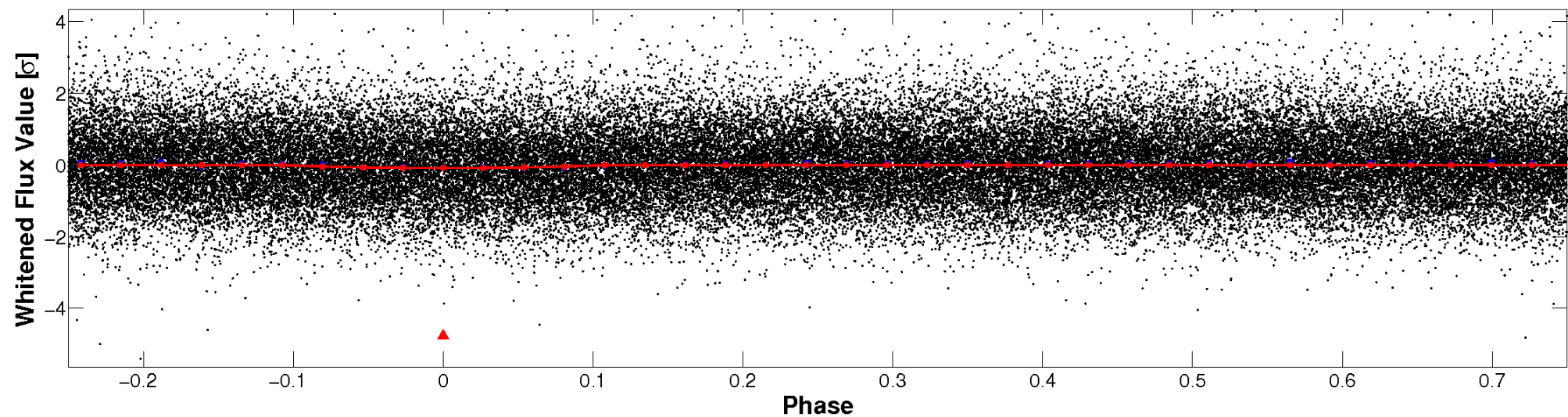


Non-Whitened Vs. Whitened Light Curve

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

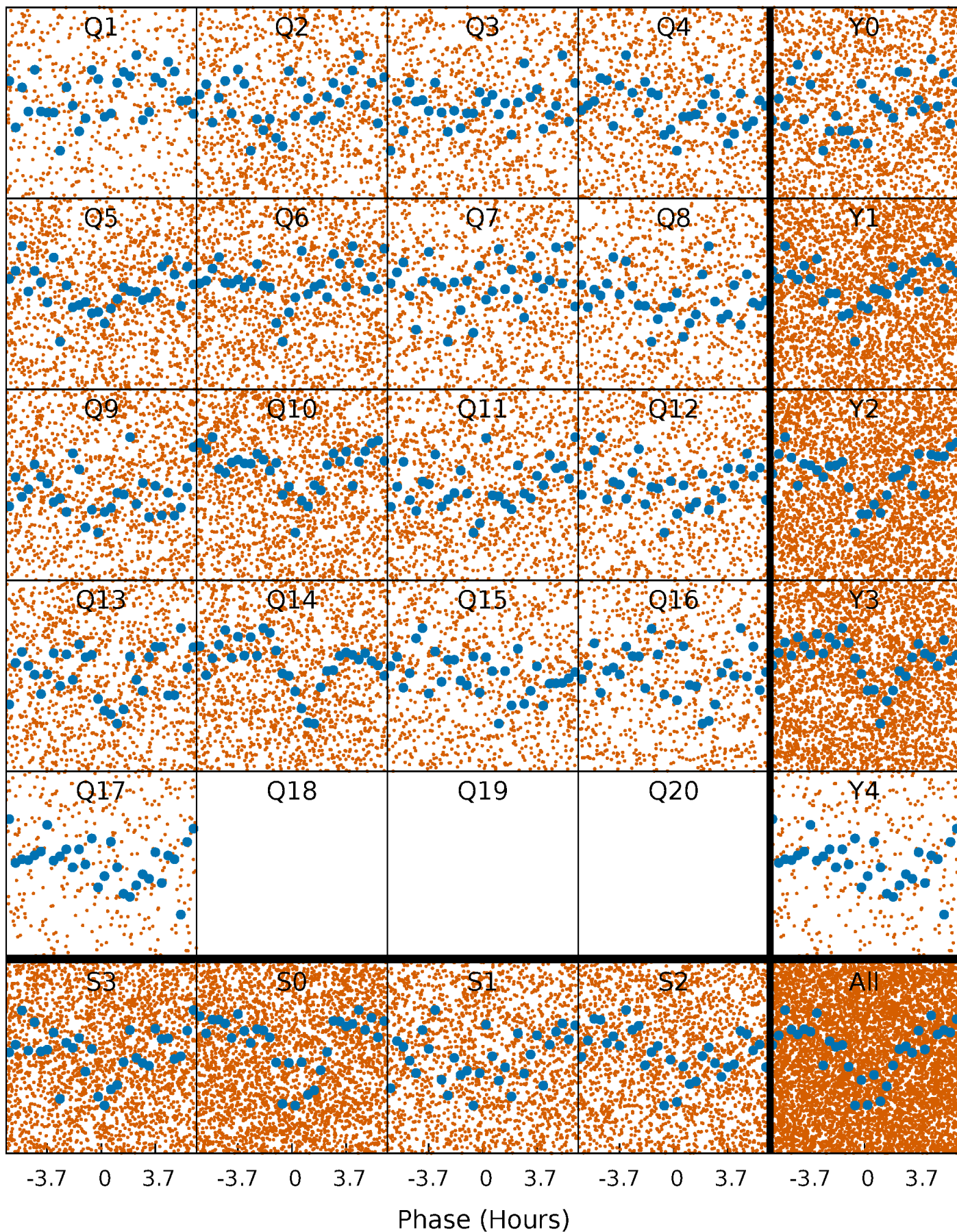


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



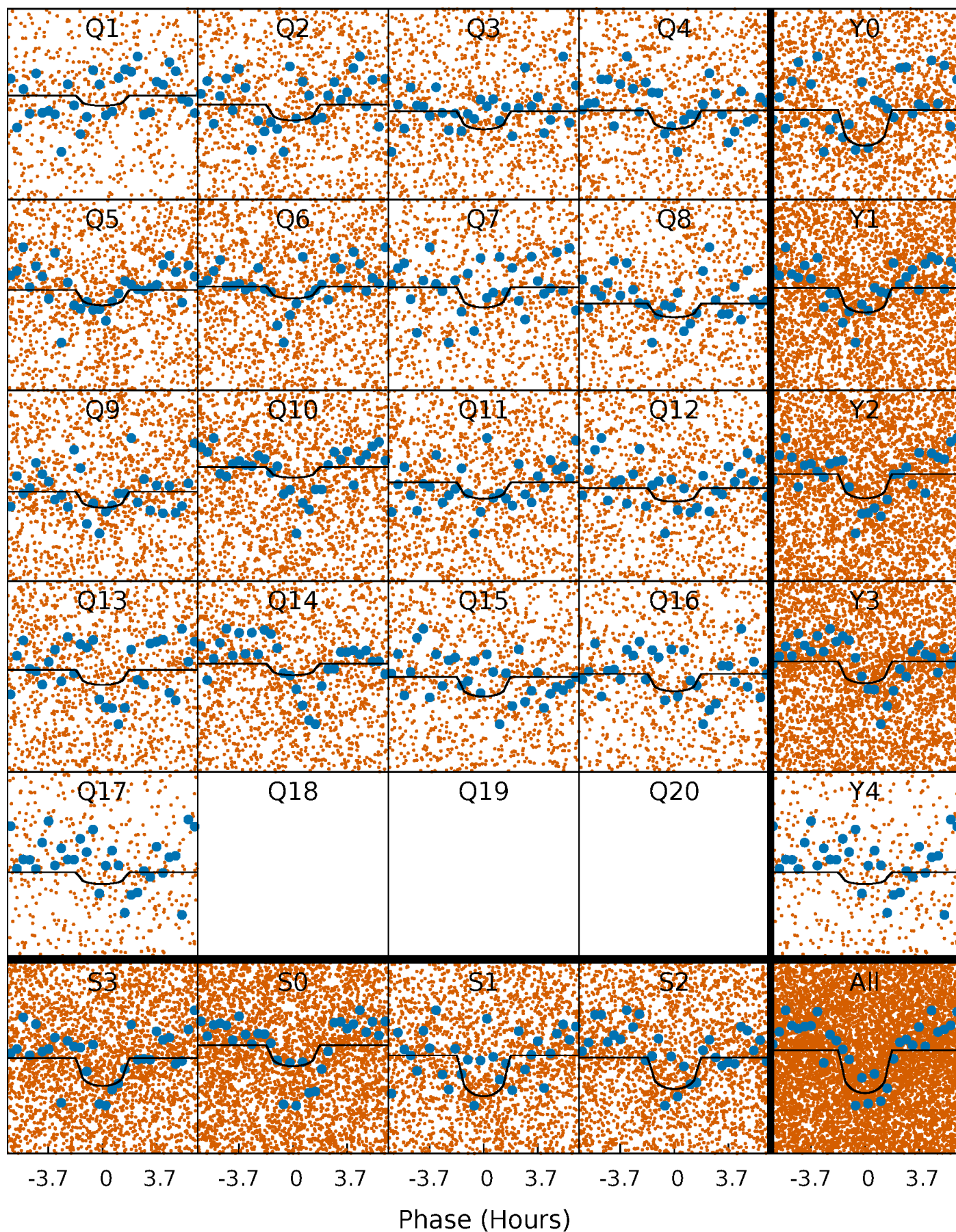
PDC Quarter-Phased Transit Curves

TCE 005529552-01 P= 0.759681 Days $T_0=131.871095$ (BKJD)



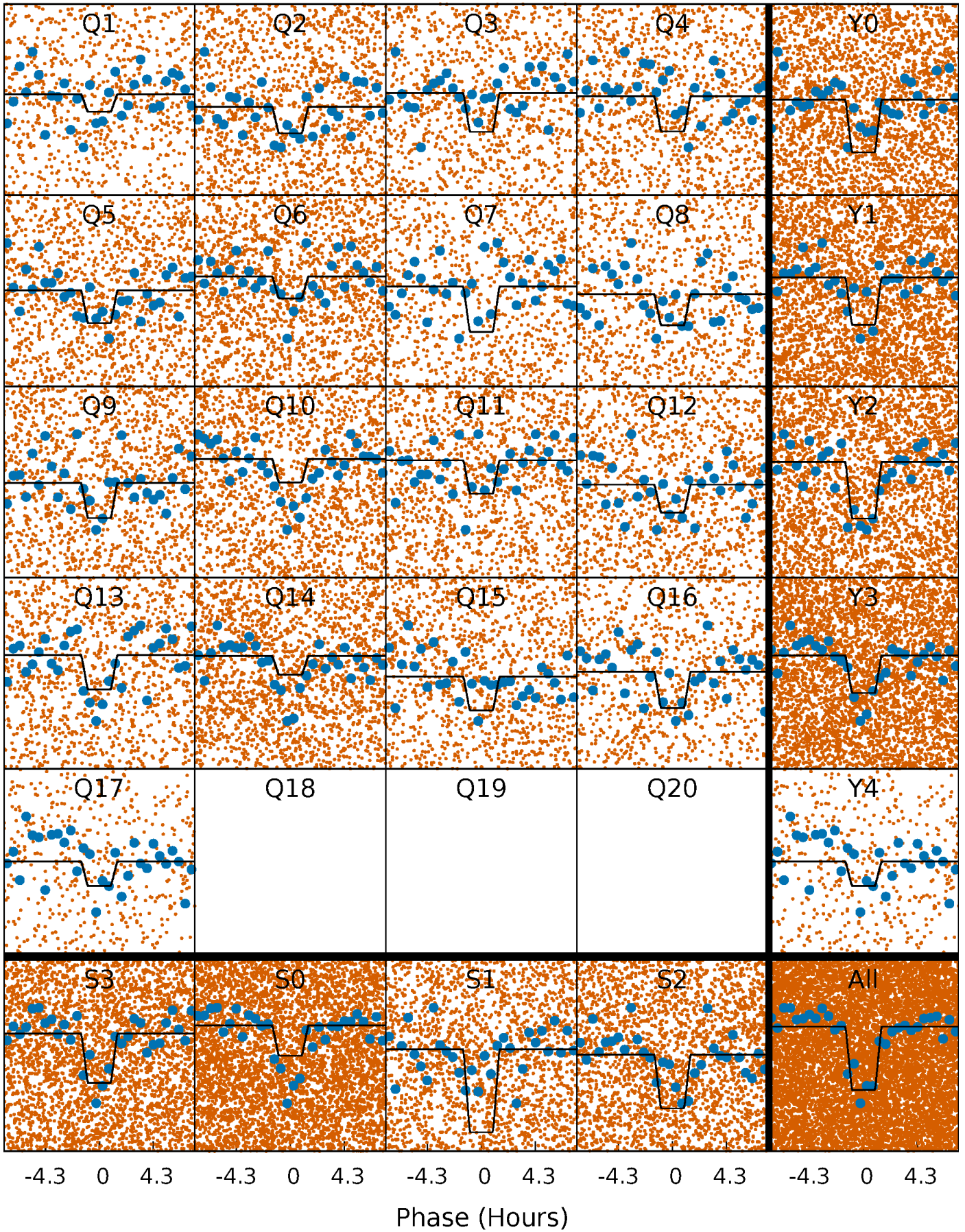
DV Quarter-Phased Transit Curves

TCE 005529552-01 P= 0.759681 Days $T_0=131.871095$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

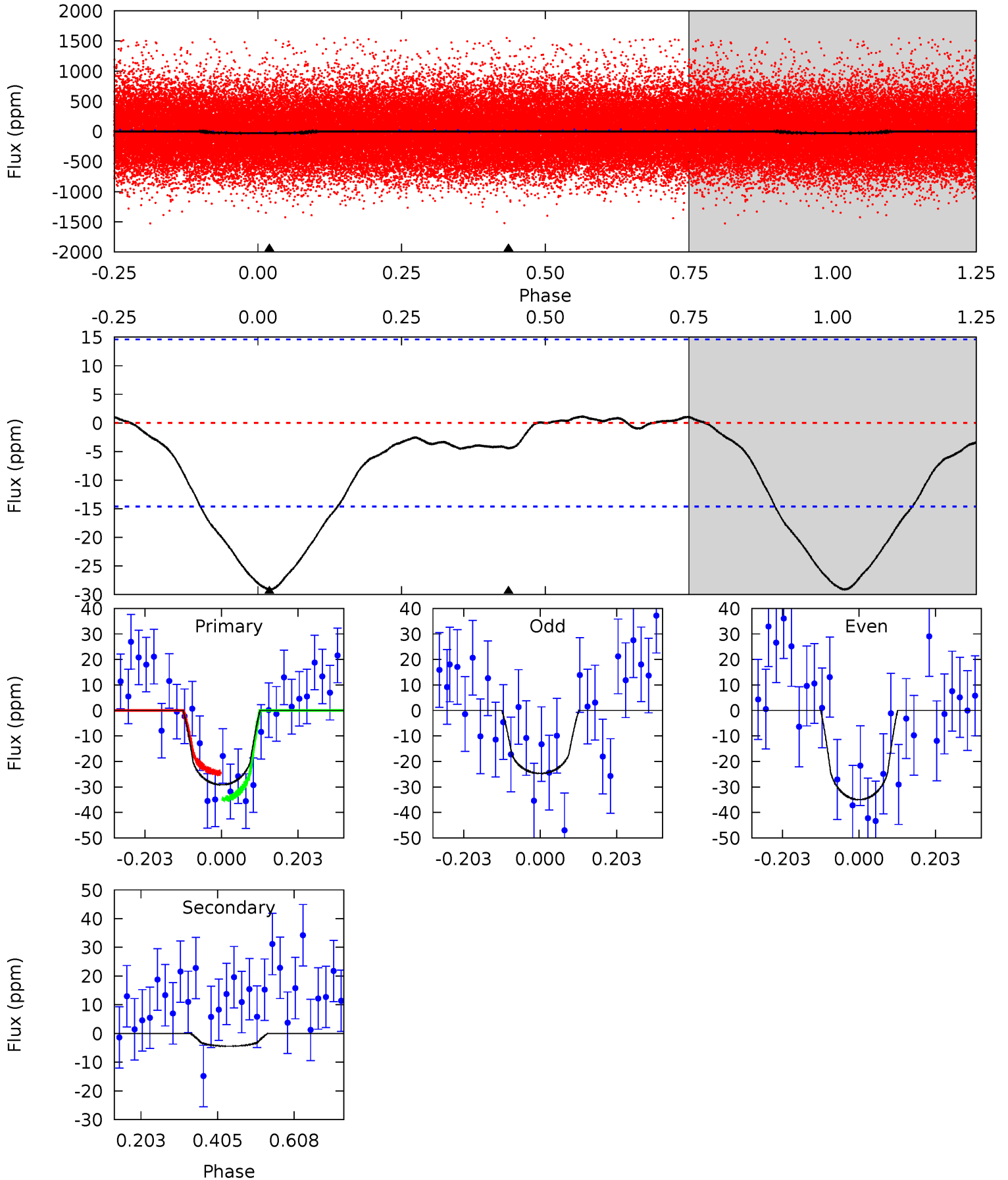
TCE 005529552-01 P= 0.759756 Days $T_0=131.802834$ (BKJD)



DV Model-Shift Uniqueness Test

005529552-01, P = 0.759681 Days, E = 131.111414 Days

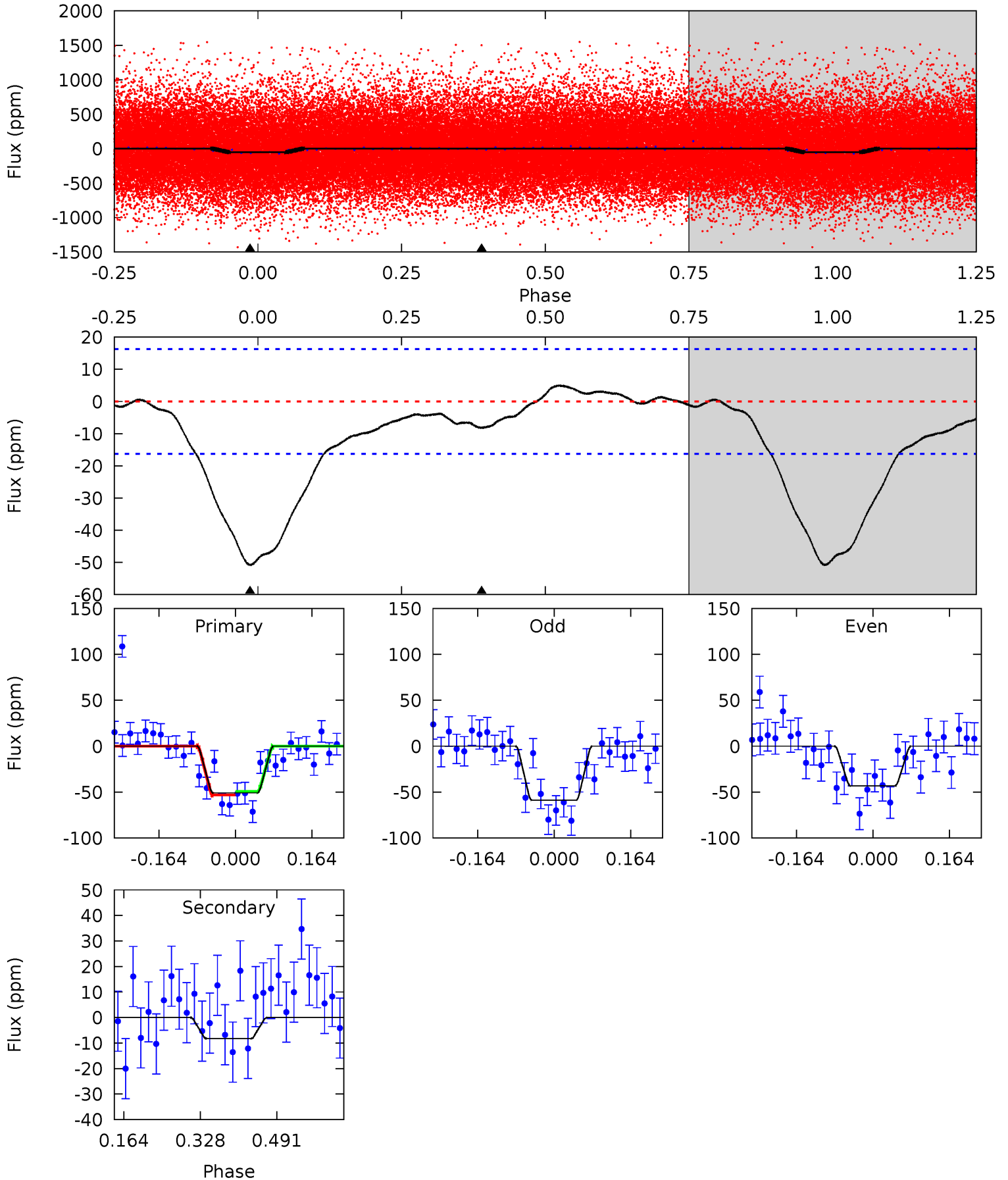
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.80	1.34	0	0	4.41	1.27	0.40	8.80	8.80	1.34	1.34	1.56	0.94	0.04	1.56



Alt Model-Shift Uniqueness Test

005529552-01, P = 0.759756 Days, E = 131.043078 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	2.26	0	0	4.46	1.39	1.24	13.9	13.9	2.26	2.26	2.12	0.98	0.09	0.52



Stellar Parameters For KIC 005529552

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5481^{+164}_{-164}	$4.574^{+0.027}_{-0.144}$	$-0.060^{+0.300}_{-0.300}$	$0.815^{+0.175}_{-0.063}$	$0.914^{+0.074}_{-0.107}$	$2.376^{+0.449}_{-0.962}$
	+3%/-3%	+1%/-3%	+500%/-500%	+21%/-8%	+8%/-12%	+19%/-40%
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 005529552-01 / KOI 7732.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 3	$0.64^{+0.51}_{-0.42}$	2476^{+127}_{-95}	3249^{+1750}_{-5680}	$1.200^{+9.236}_{-1.011}$
Alt.	-8 ± 4	$0.78^{+0.57}_{-0.46}$	2476^{+140}_{-94}	3486^{+1476}_{-878}	$1.660^{+8.155}_{-1.174}$

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

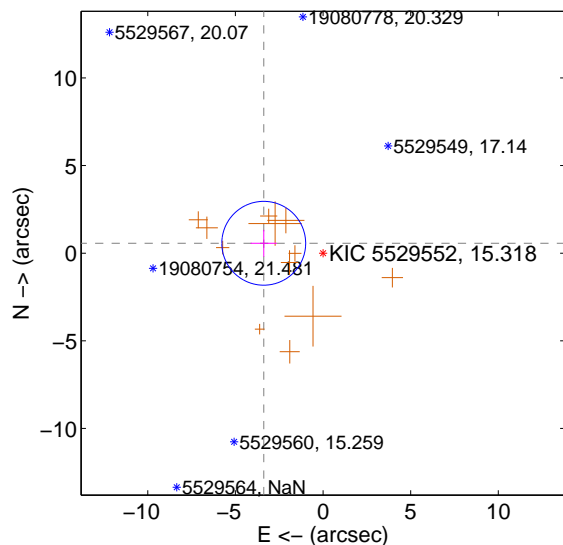
Supplemental centroid analysis for 005529552-01. Kepler magnitude: 15.32. Transit SNR 6.83

There are 0 quarters with good PRF difference image offsets

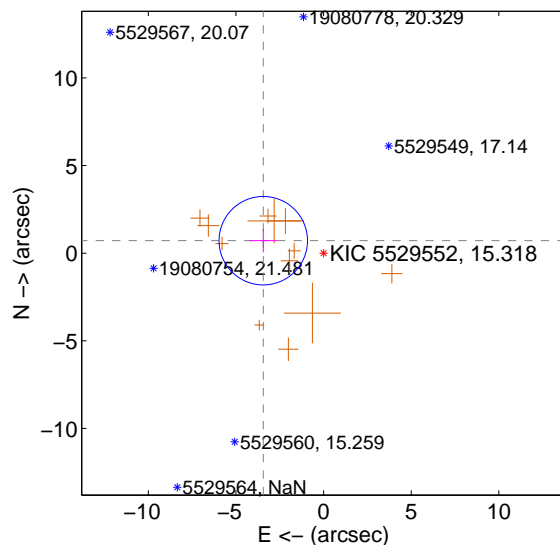
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.430 ± 0.797	4.30	3.384 ± 0.747	0.565 ± 0.768
PRF-fit source offset from KIC position	3.514 ± 0.841	4.18	3.441 ± 0.794	0.712 ± 0.665
photometric centroid source offset	5.32 ± 2.06	2.58	-0.53 ± 2.10	-5.29 ± 2.06

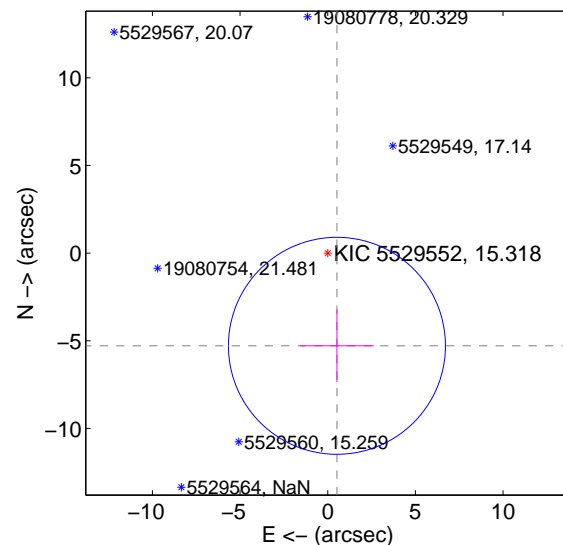
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

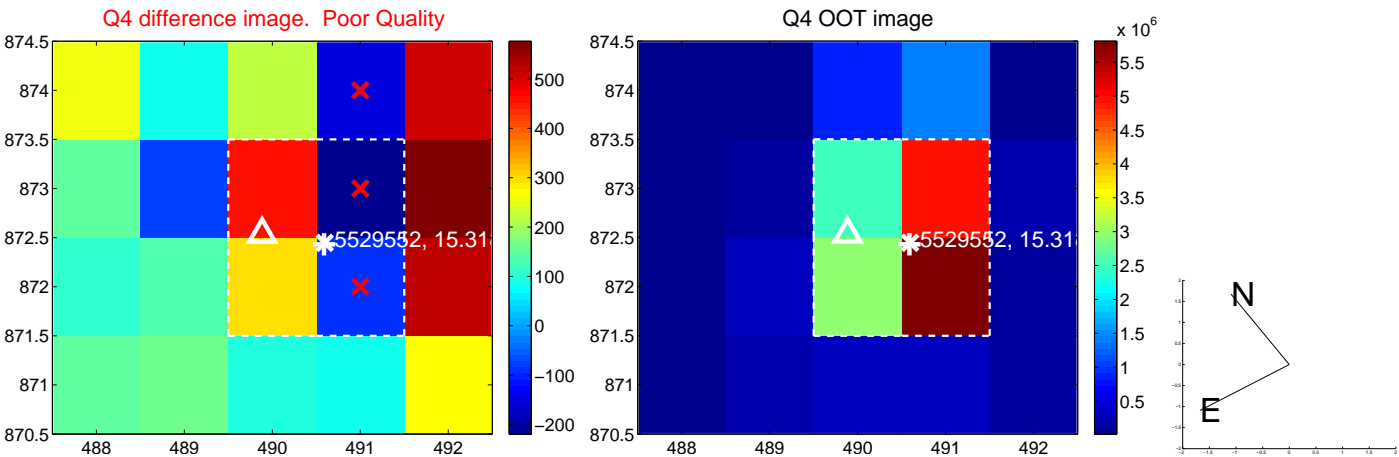
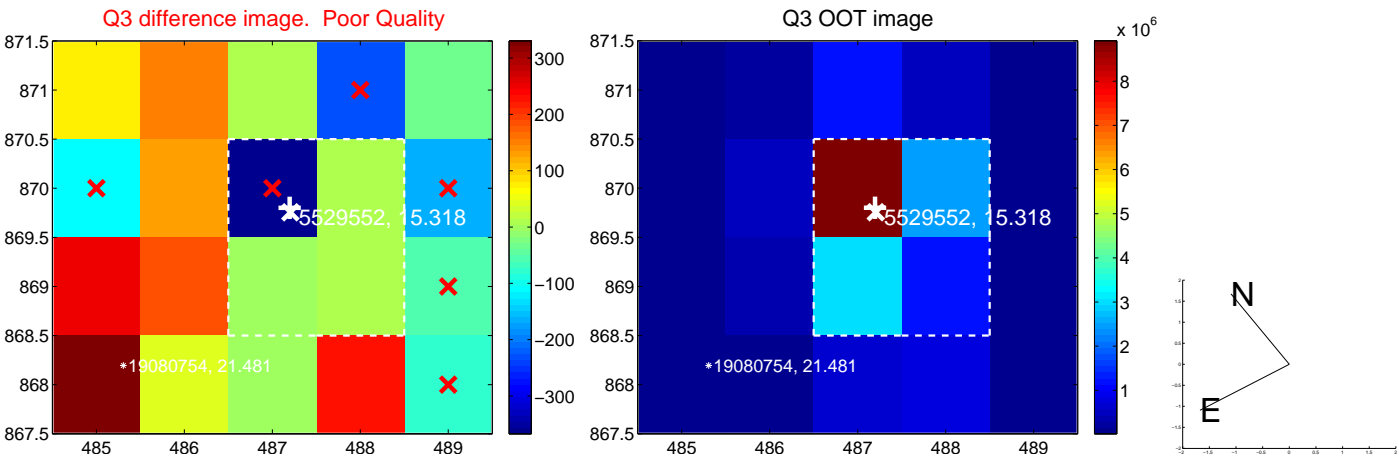
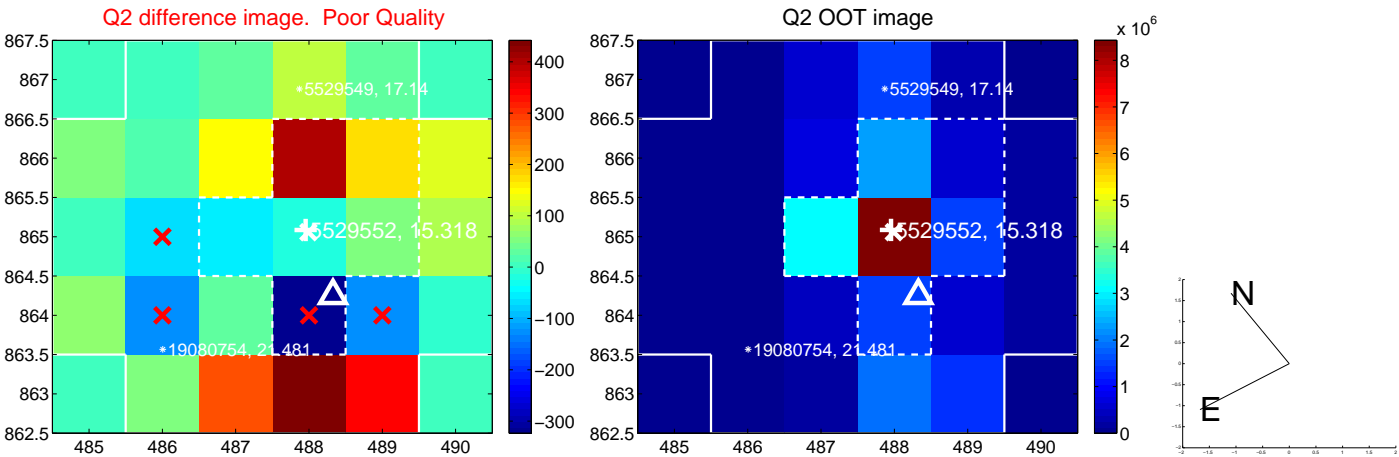
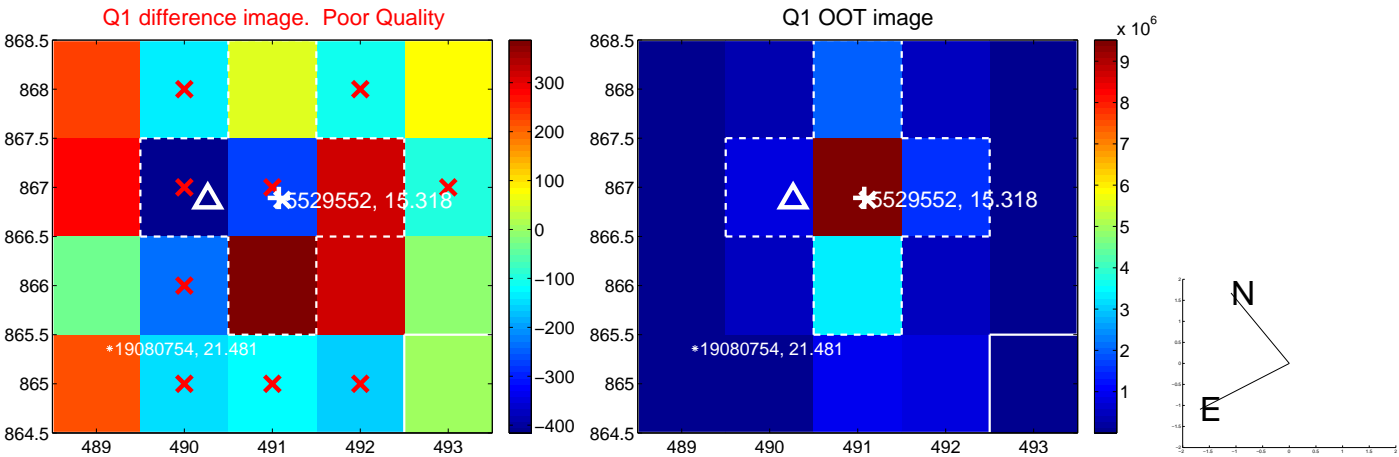


offset from photometric centroids

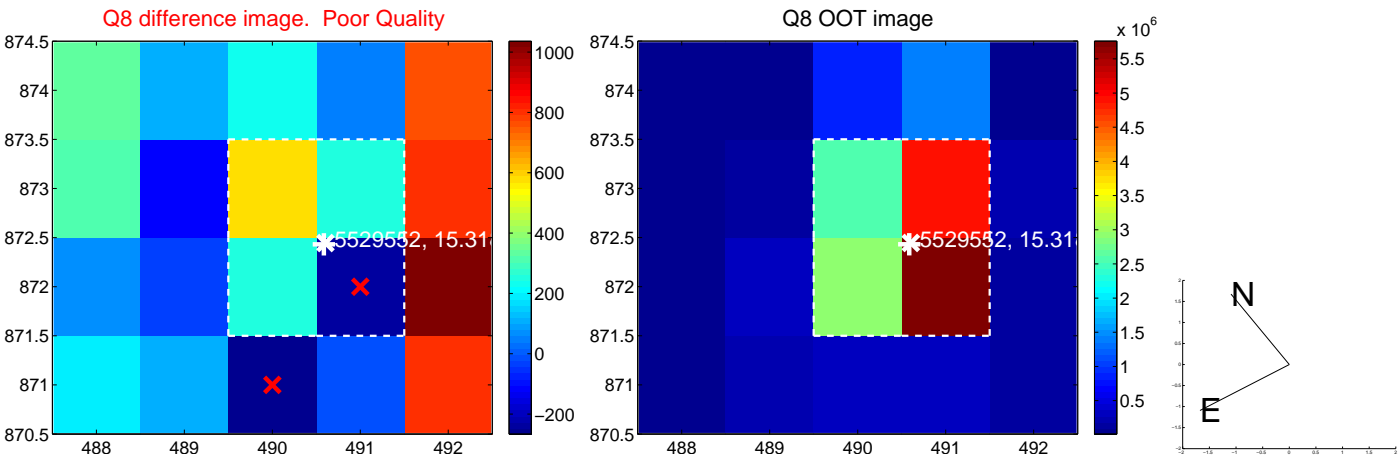
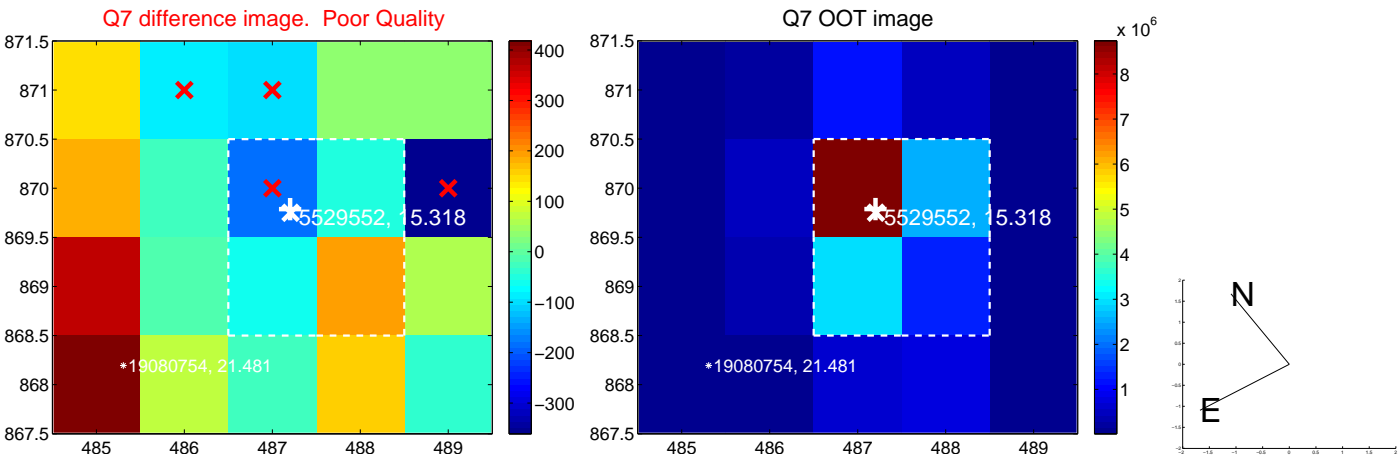
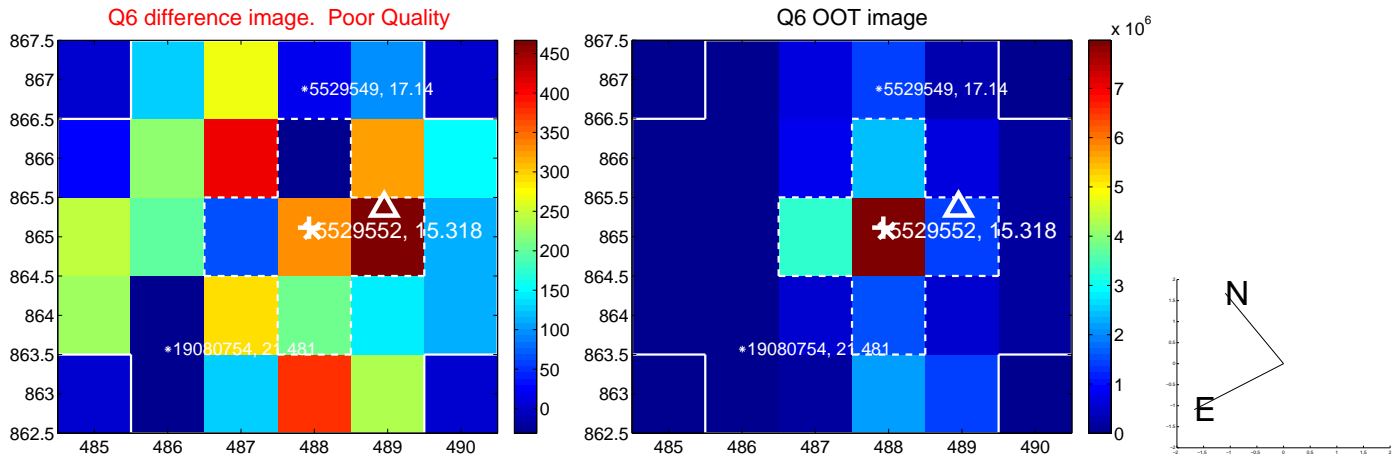
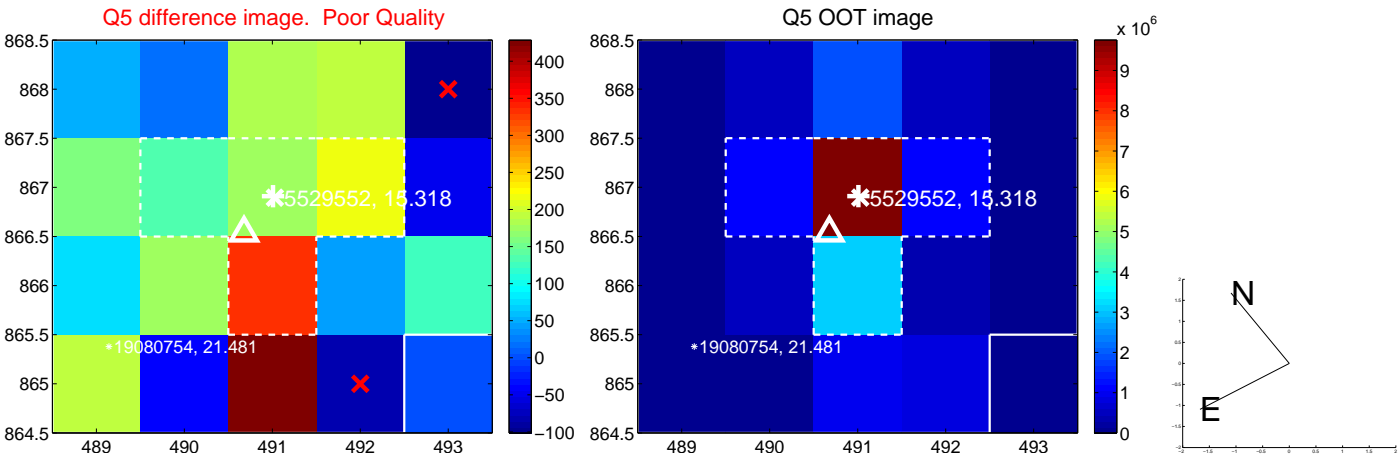


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

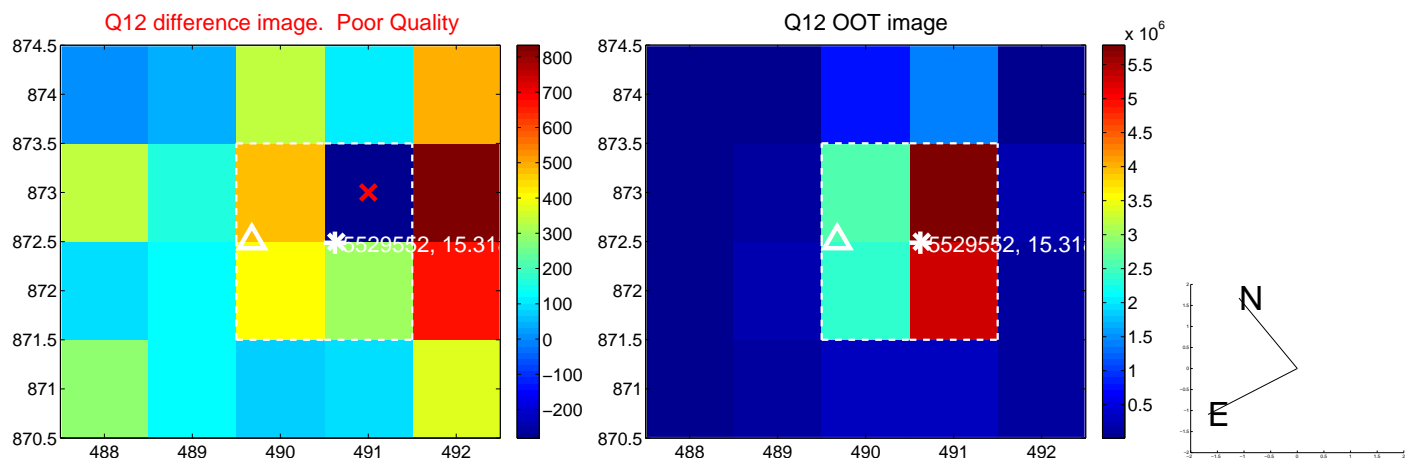
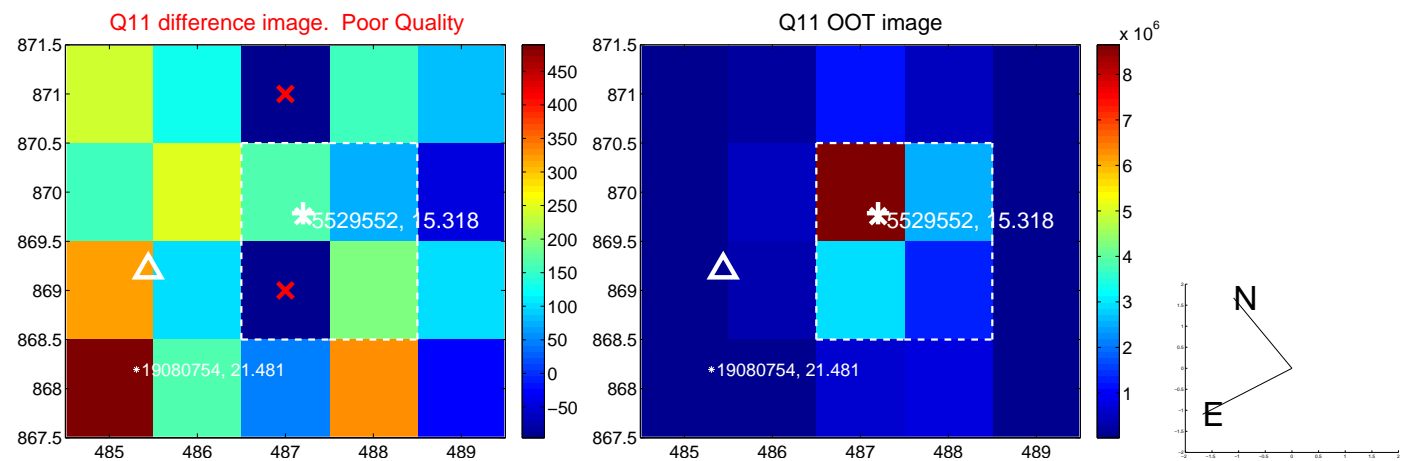
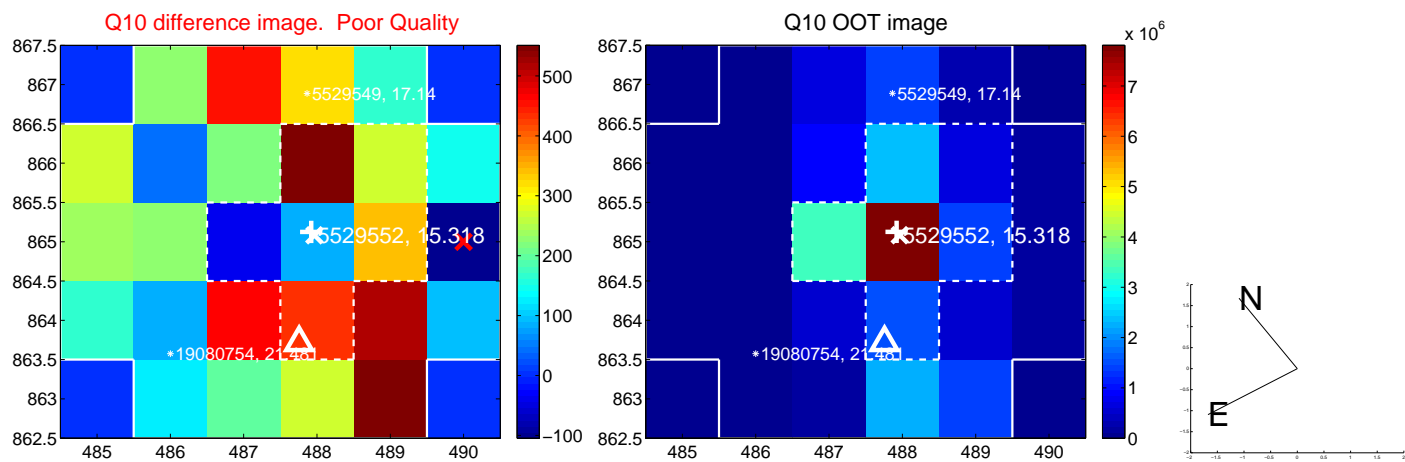
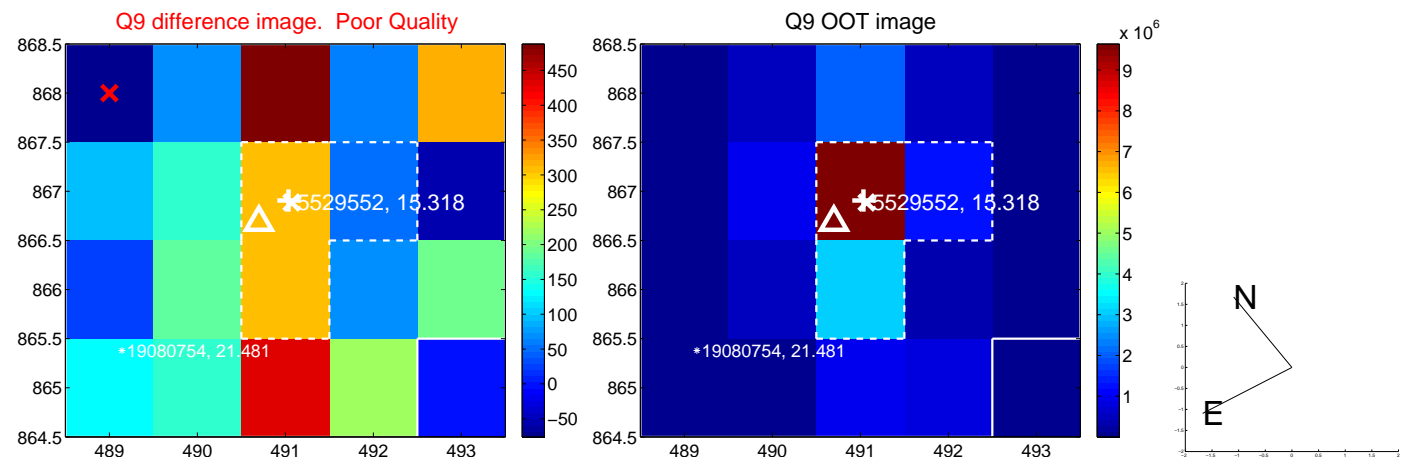
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



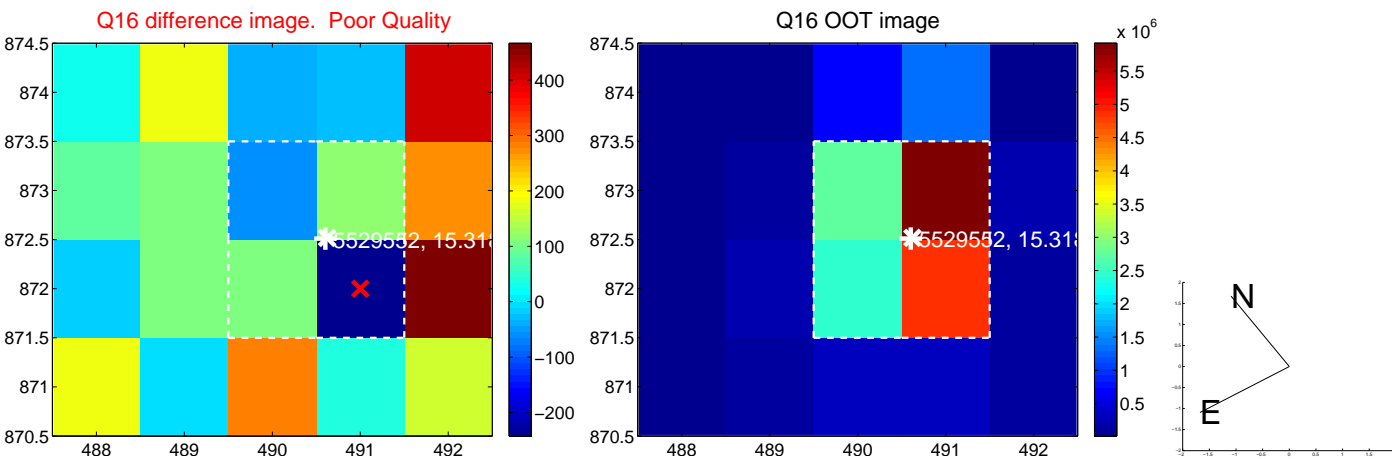
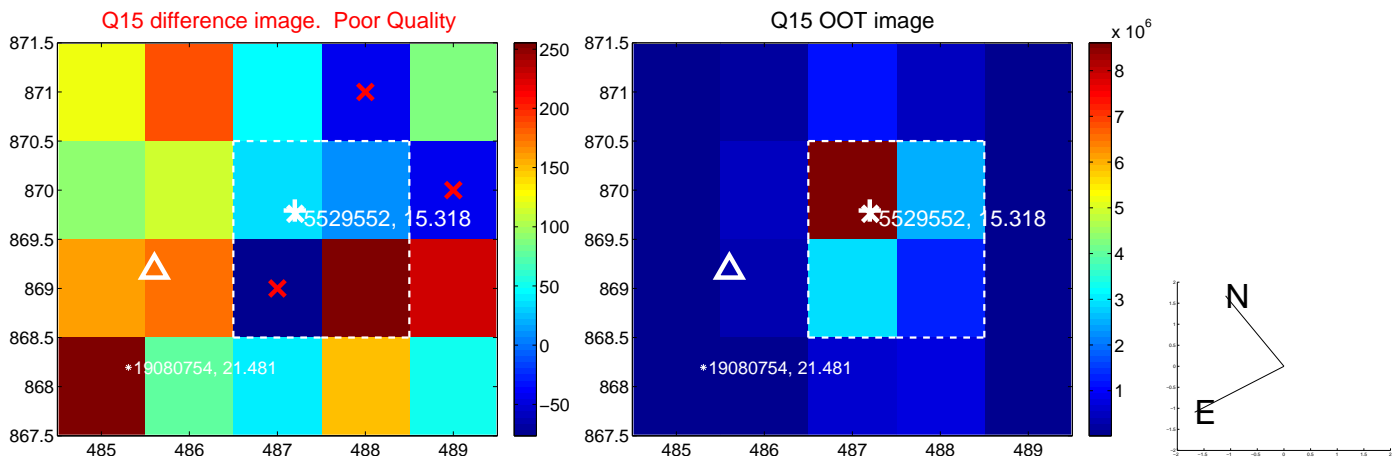
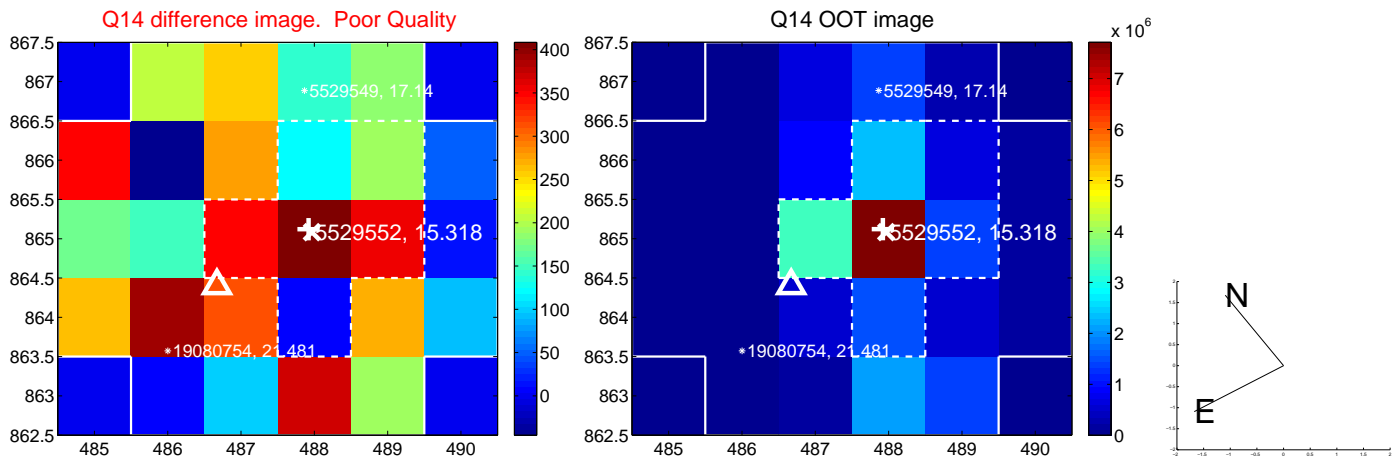
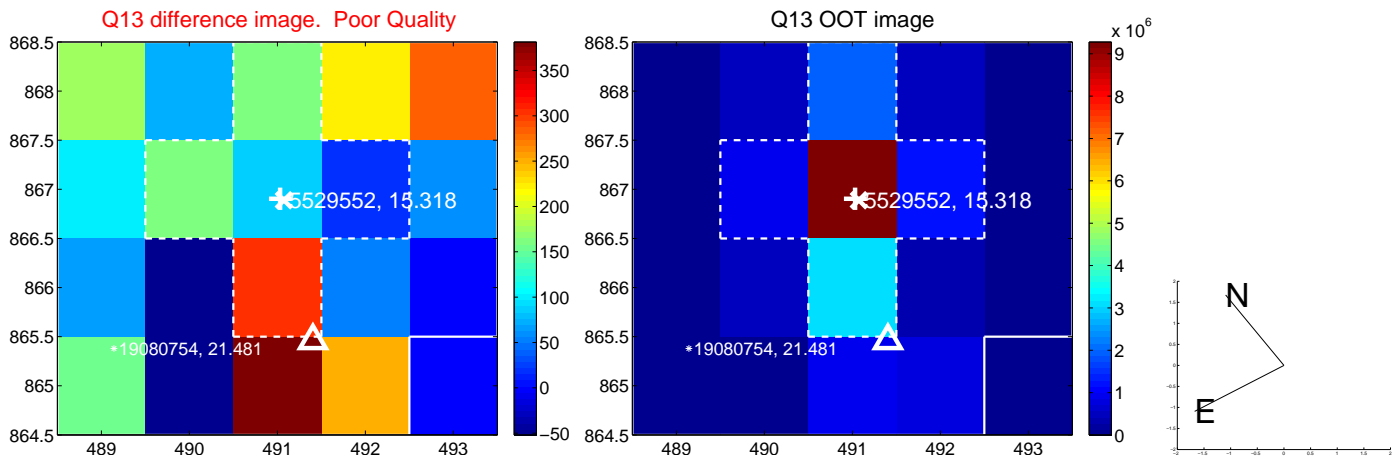
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



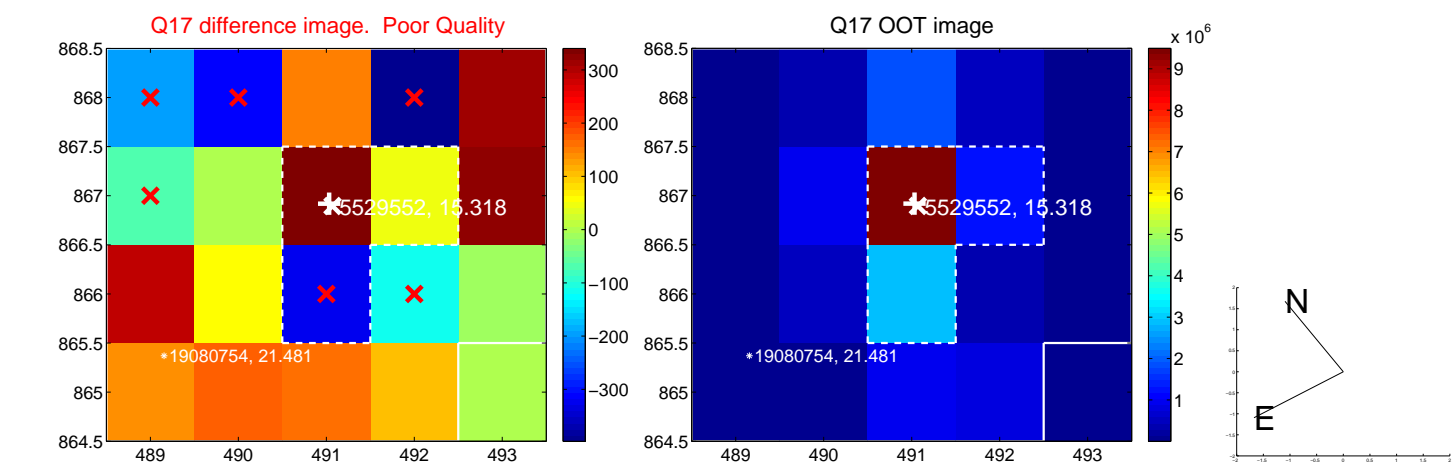
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



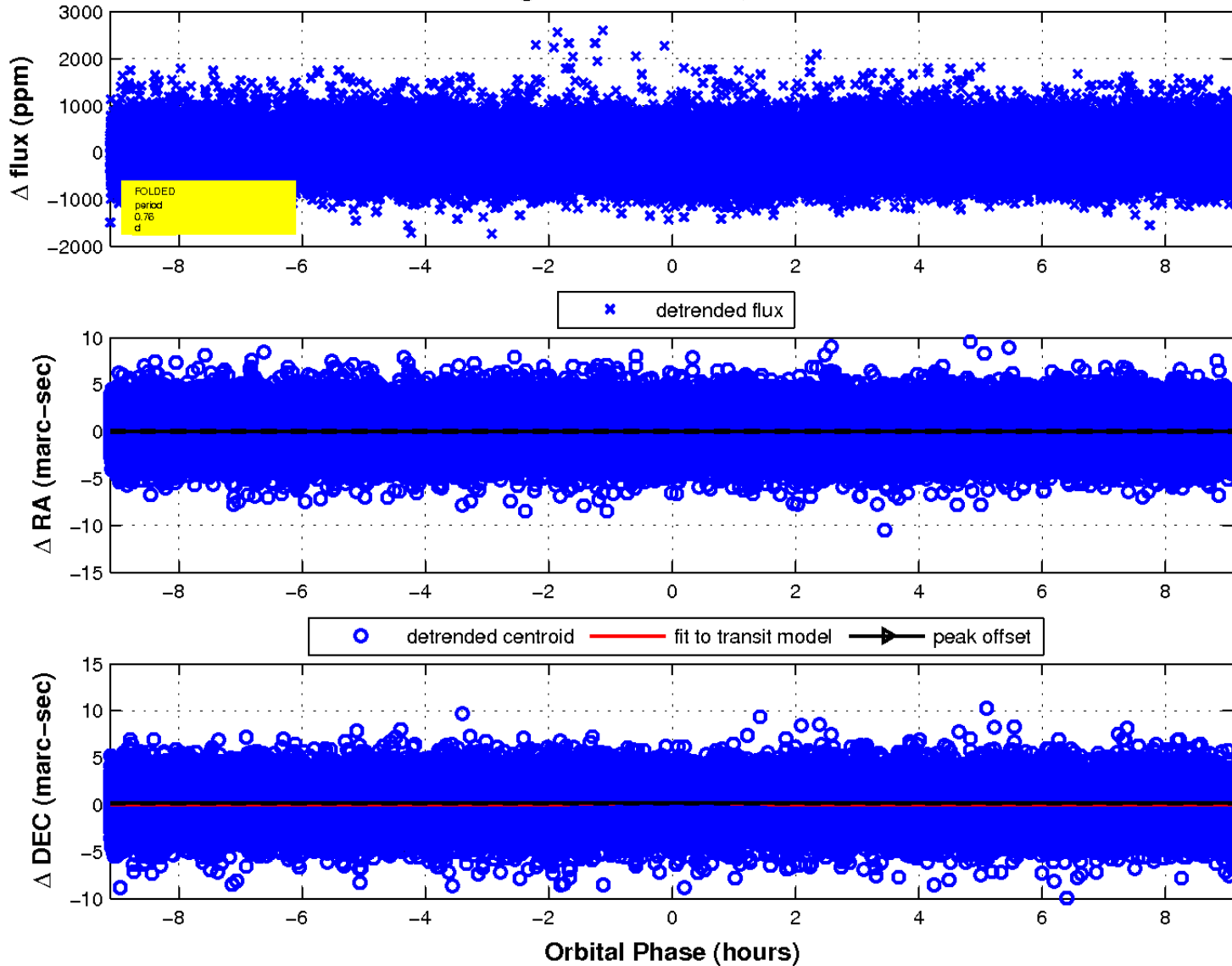
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

