

KIC 009636563

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})
009636563-01	OBS	2892.01	10.636024	139.806115	264.1	3.723	17.5	18.9	0.81	5546	1.61	66.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009636563-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—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.

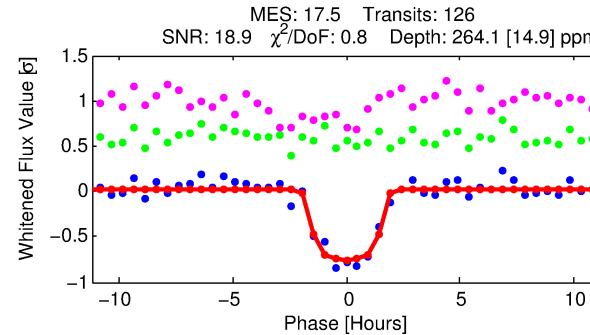
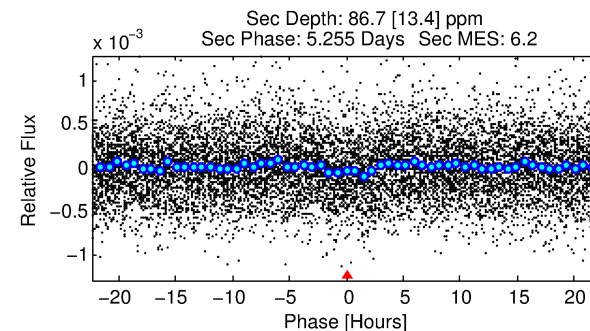
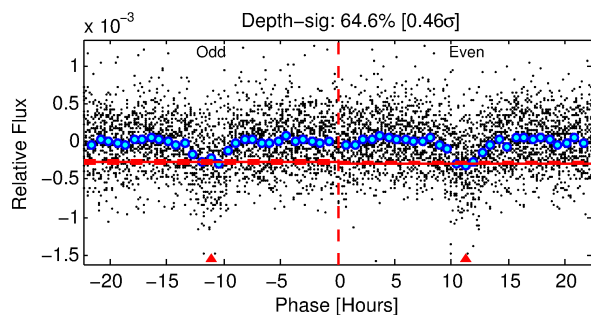
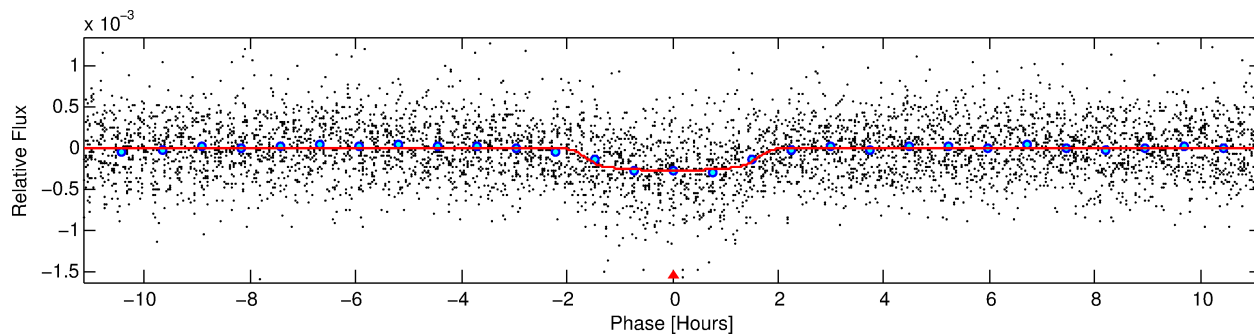
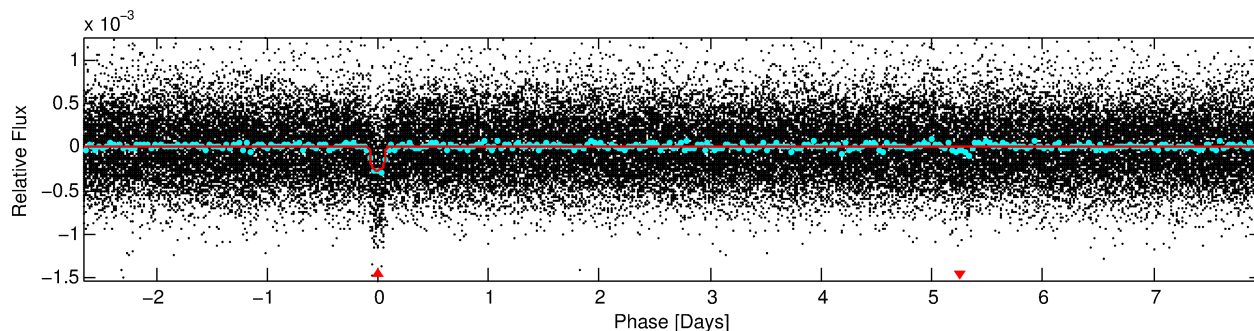
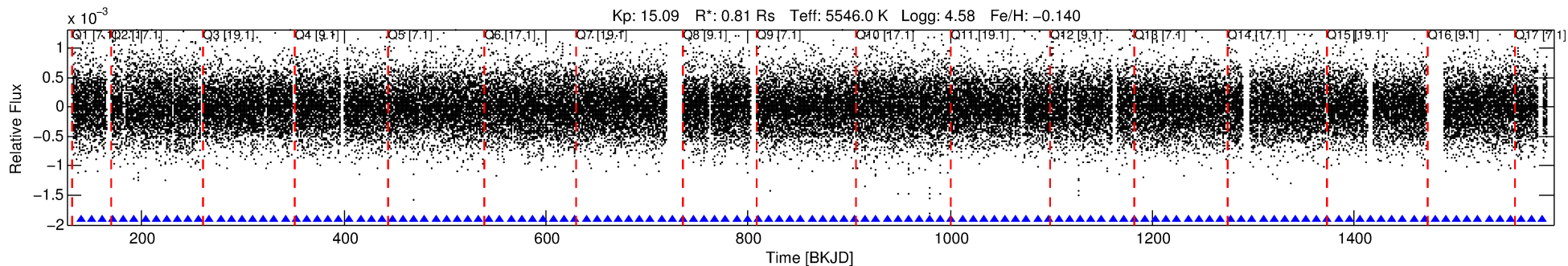
Ephemeris Match Information For 009636563-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009636563-01	9636563	3618.01	9636559	1:1	10.2	-2	-1	17.04	15.10	957.92	Direct-PRF	0	0.98	0.70

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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 $\sigma_P < 5.0$ and $\sigma_T < 5.0$. 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: 9636563 Candidate: 1 of 1 Period: 10.636 d
KOI: K02892.01 Corr: 0.946



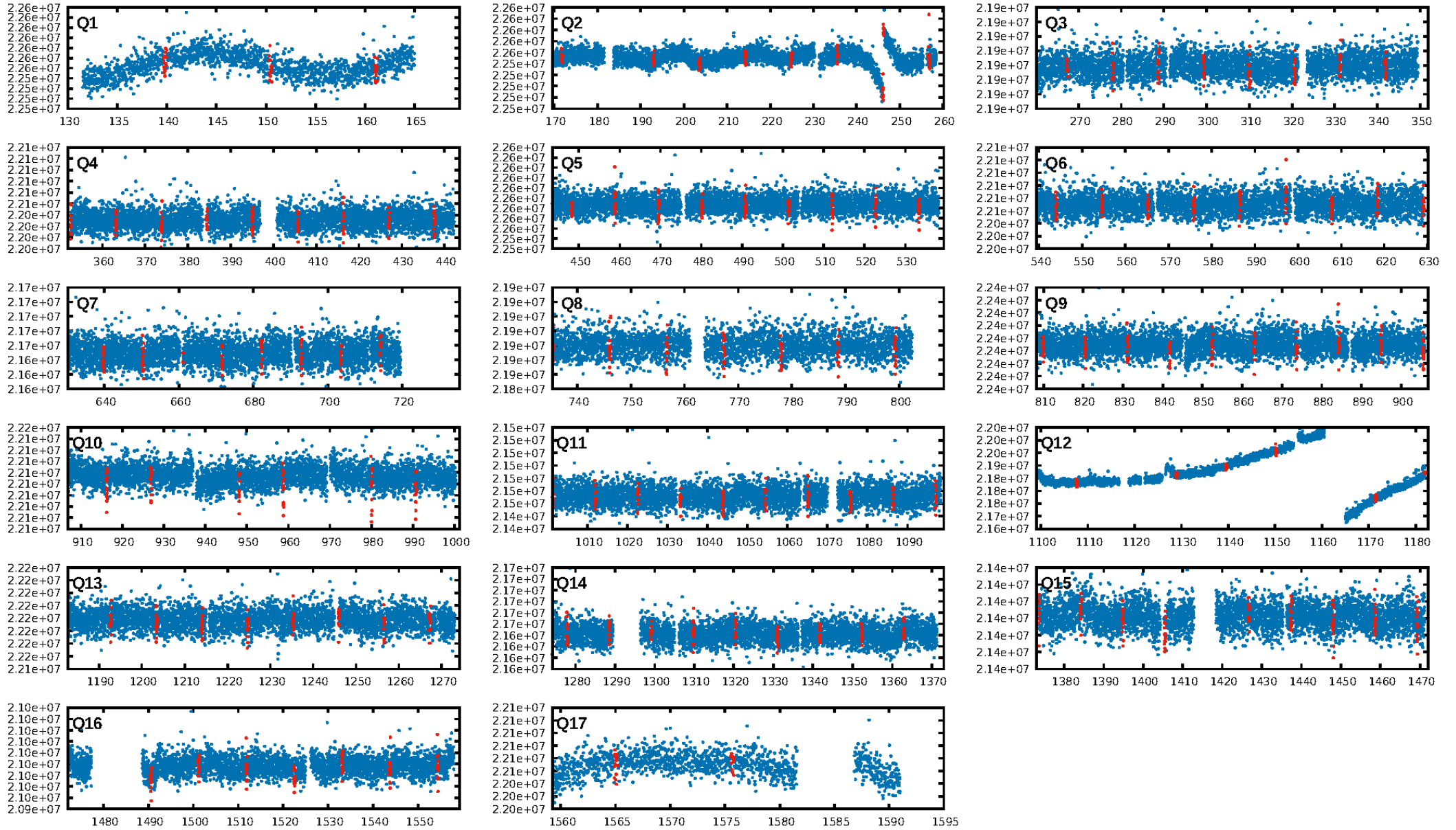
DV Fit Results:

Period = 10.63602 [0.00006] d
Epoch = 139.8061 [0.0044] BKJD
Rp/R* = 0.0182 [0.0030]
a/R* = 9.61 [7.06]
b = 0.92 [0.13]
Seff = 66.59 [18.04]
Teq = 728 [49] K
Rp = 1.61 [0.42] Re
a = 0.0914 [0.0156] AU
Ag = 154.23 [67.45] [2.27 σ]
Teffp = 3969 [373] K [8.62 σ]

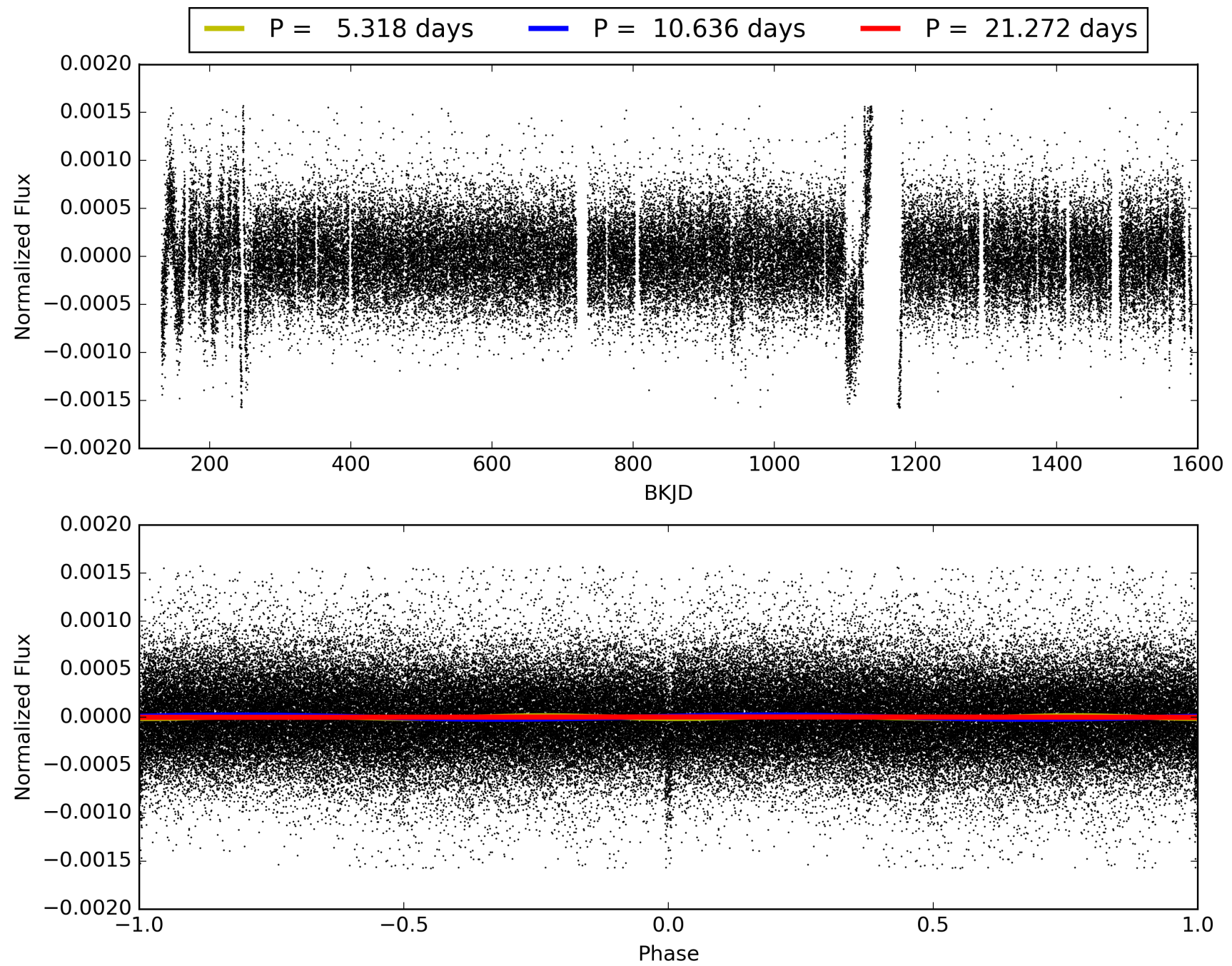
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.30e-67
RollingBand-fgt: 1.00 [121/121]
GhostDiagnostic-chr: -0.5693
Centroid-sig: 0.0%
Centroid-so: 206.499 arcsec [312.47 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009636563-01, PDC Light Curves

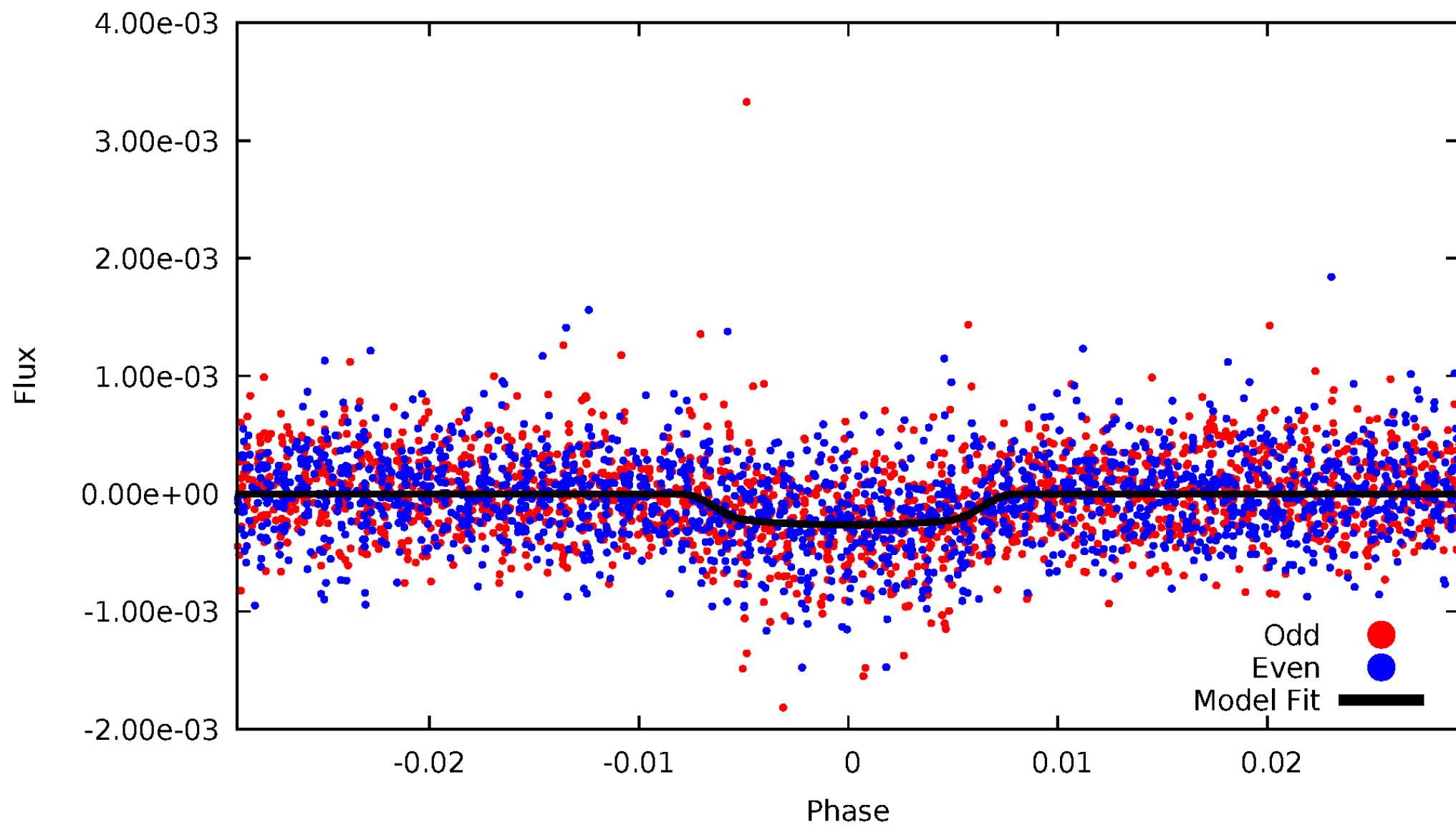


TCE 009636563-01



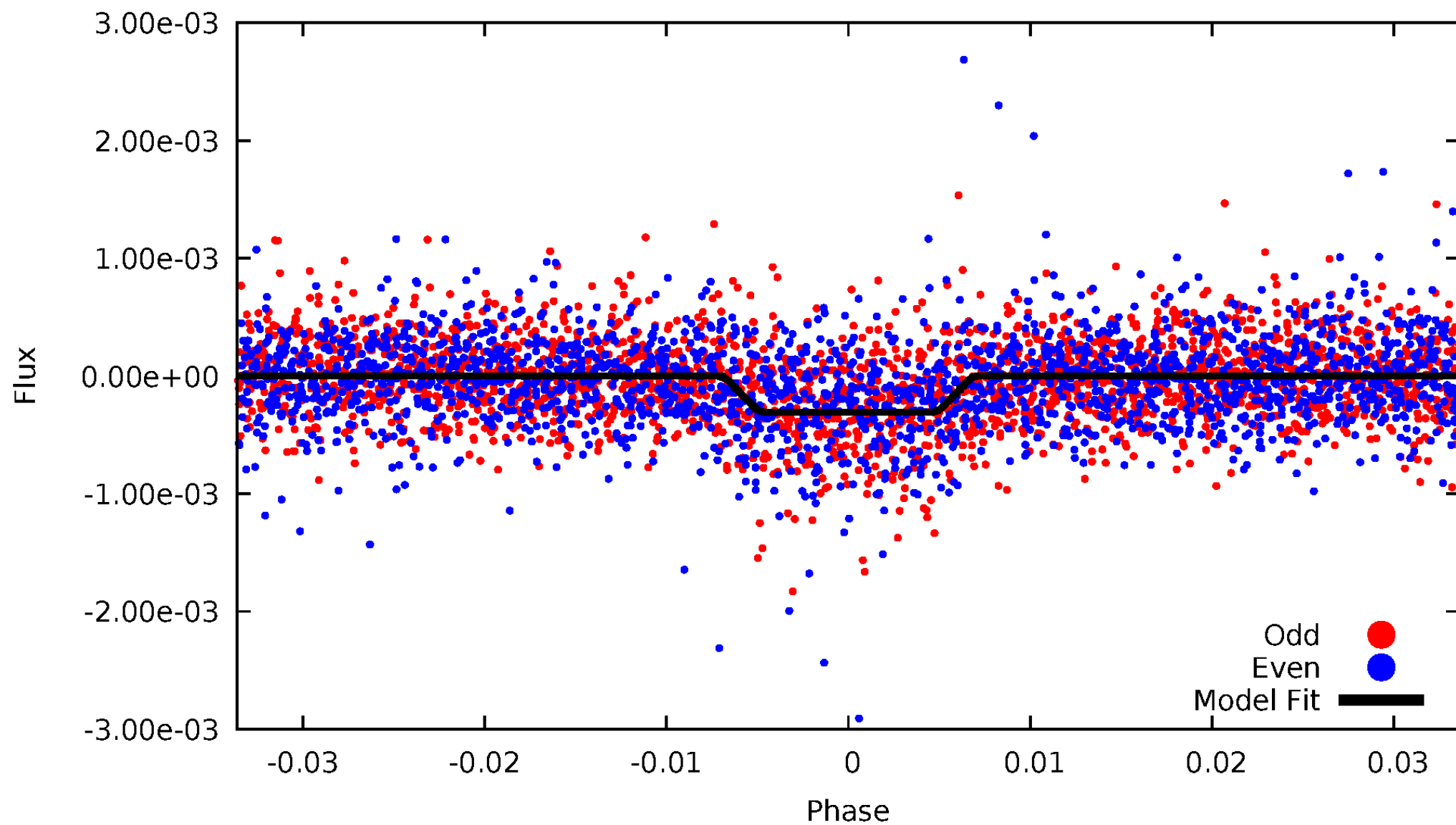
DV Odd/Even

TCE 009636563-01



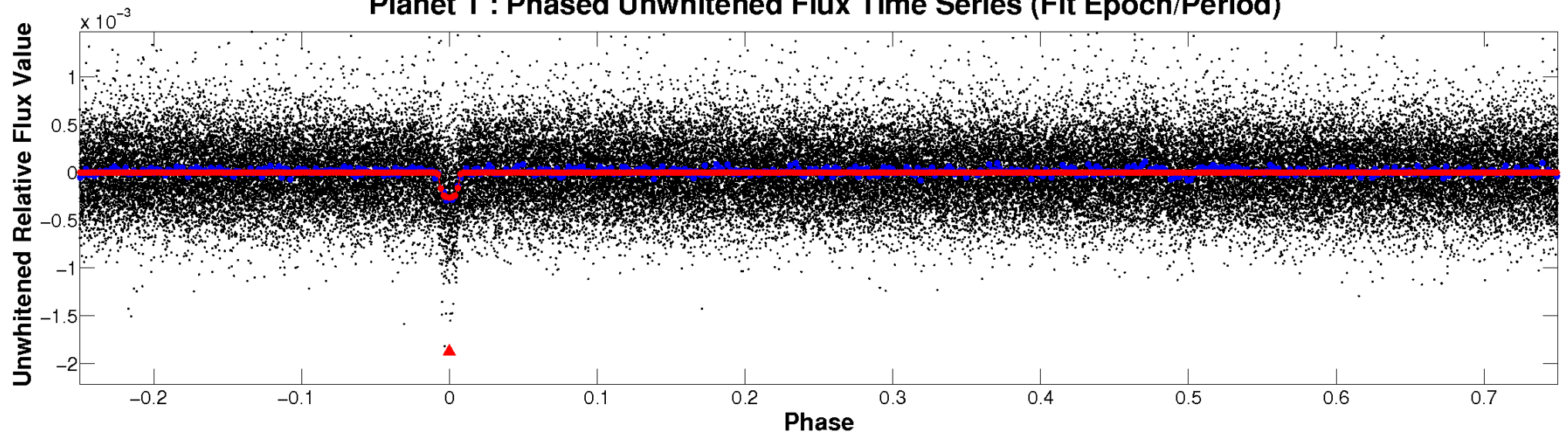
ALT Odd/Even

TCE 009636563-01

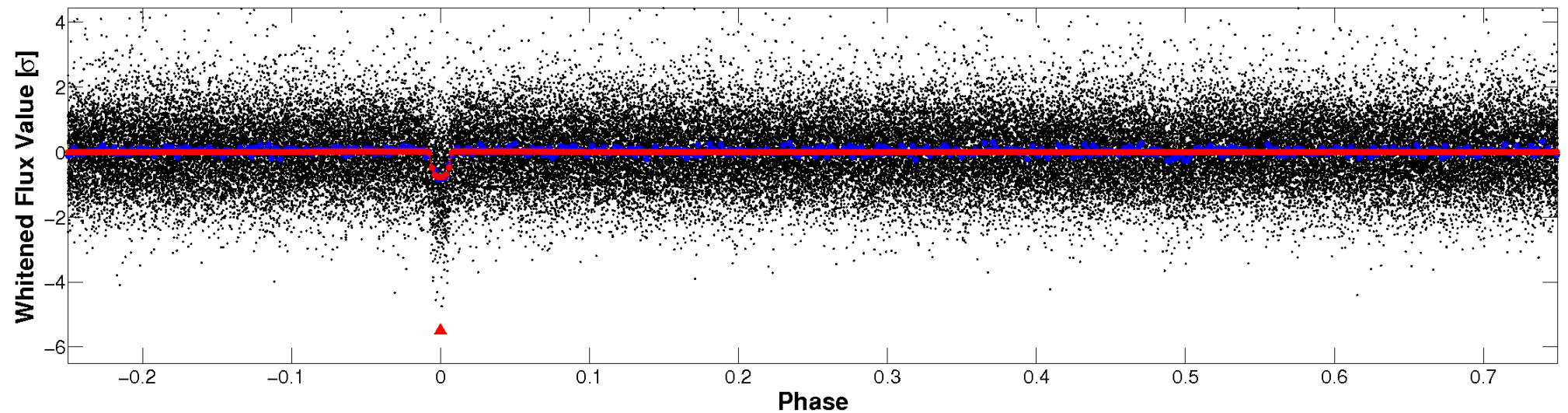


Non-Whitened Vs. Whitened Light Curve

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

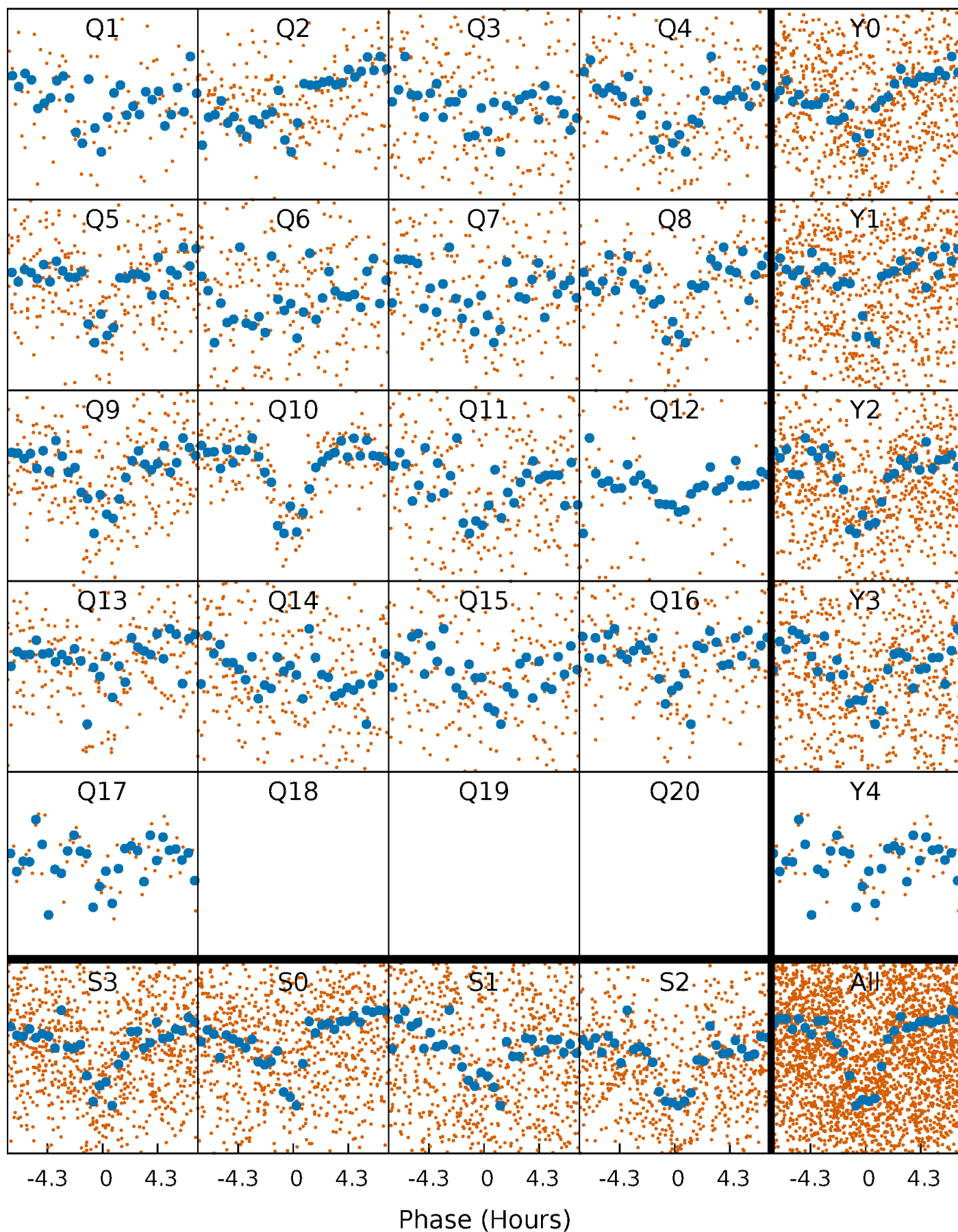


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



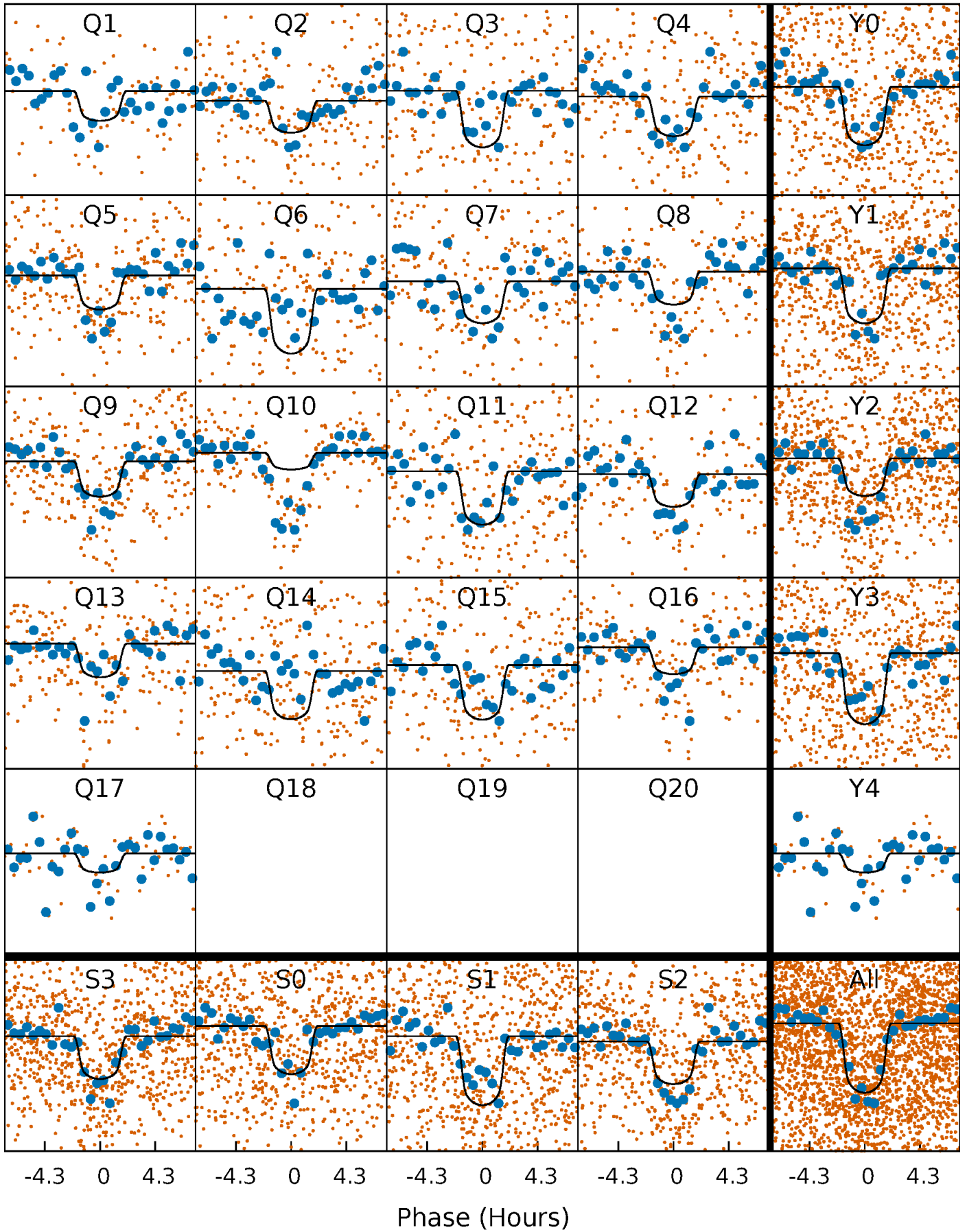
PDC Quarter-Phased Transit Curves

TCE 009636563-01 P= 10.636024 Days $T_0=139.806115$ (BKJD)



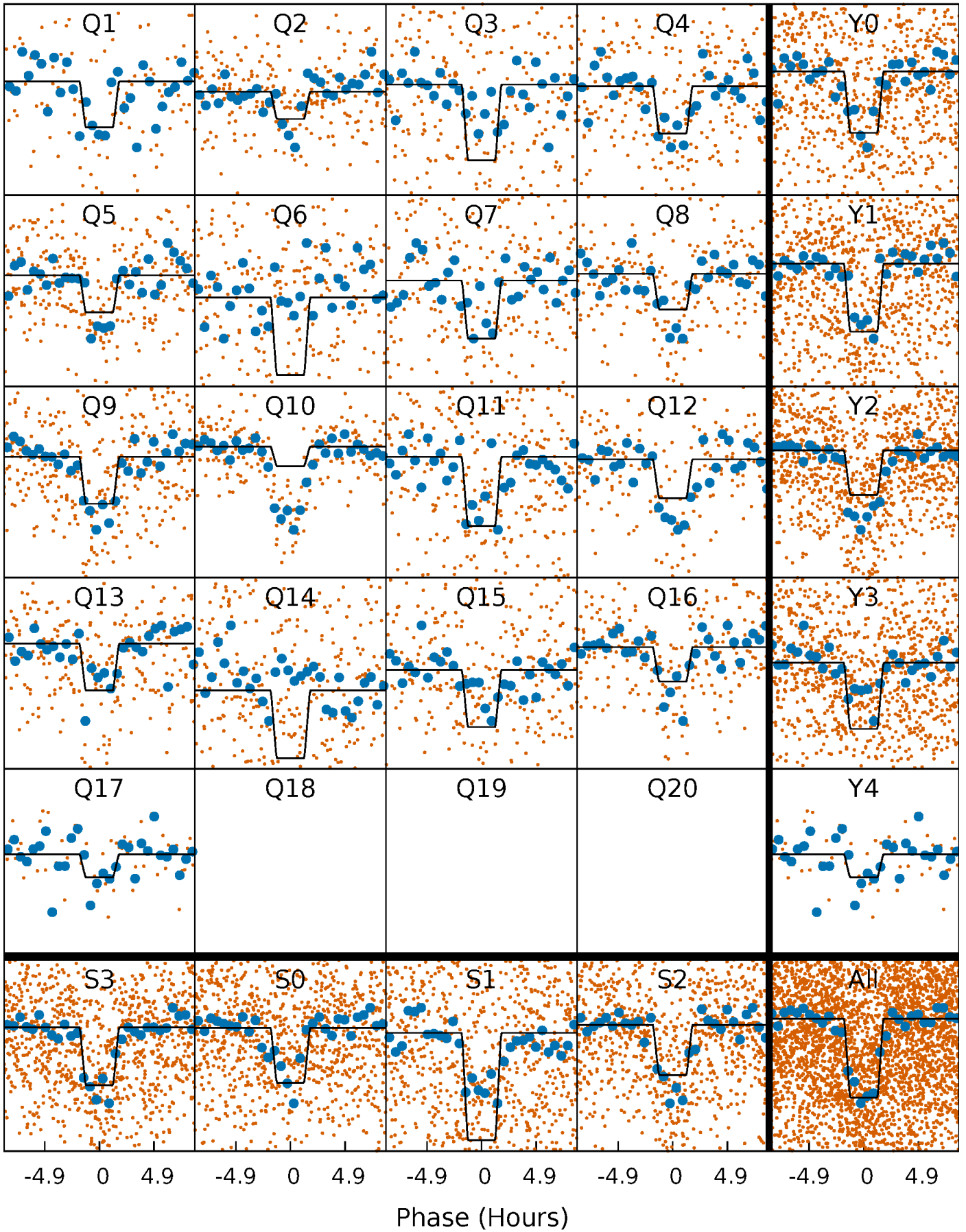
DV Quarter-Phased Transit Curves

TCE 009636563-01 P= 10.636024 Days $T_0=139.806115$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

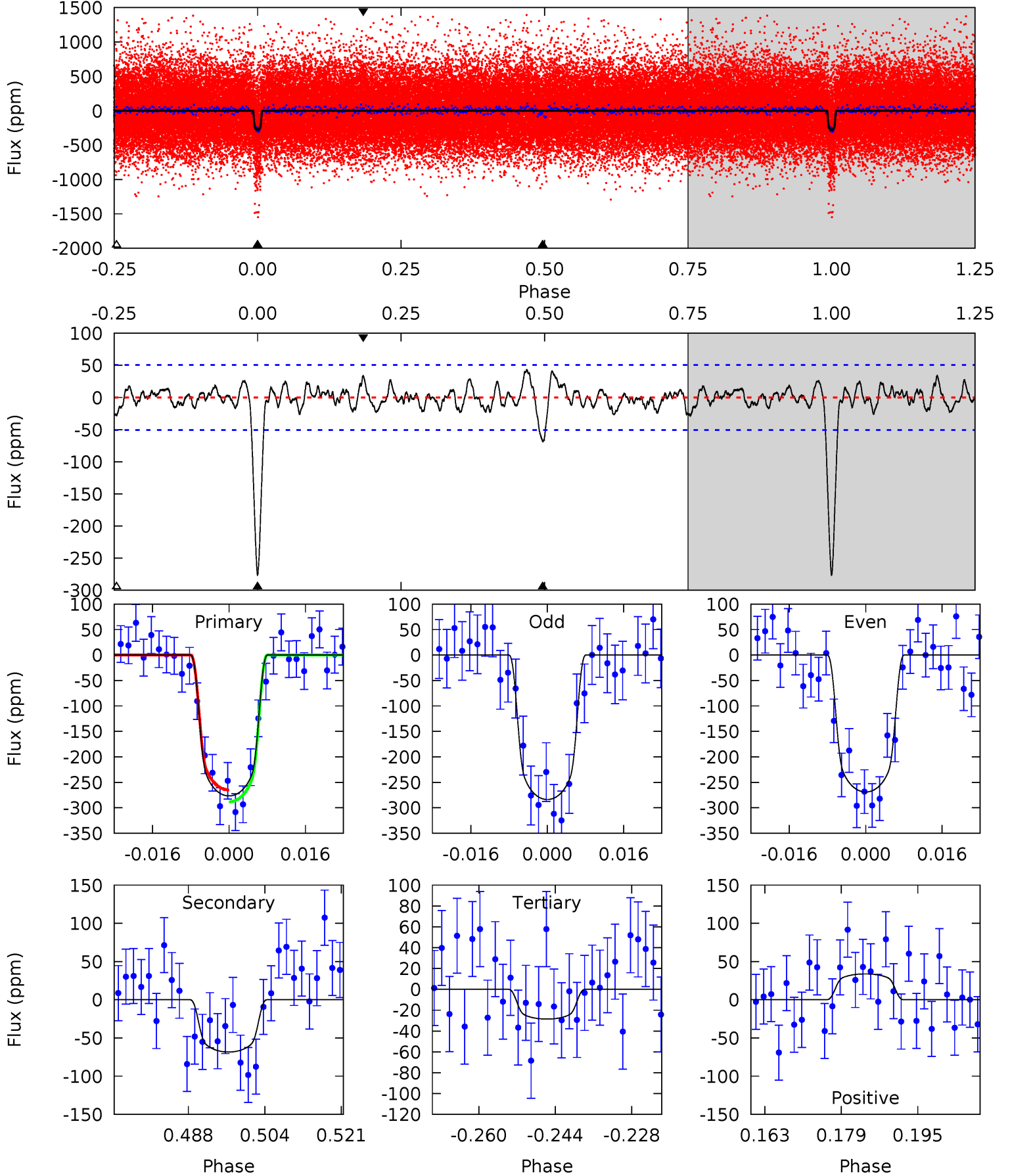
TCE 009636563-01 P= 10.636104 Days $T_0=139.799099$ (BKJD)



DV Model-Shift Uniqueness Test

009636563-01, P = 10.636024 Days, E = 129.170091 Days

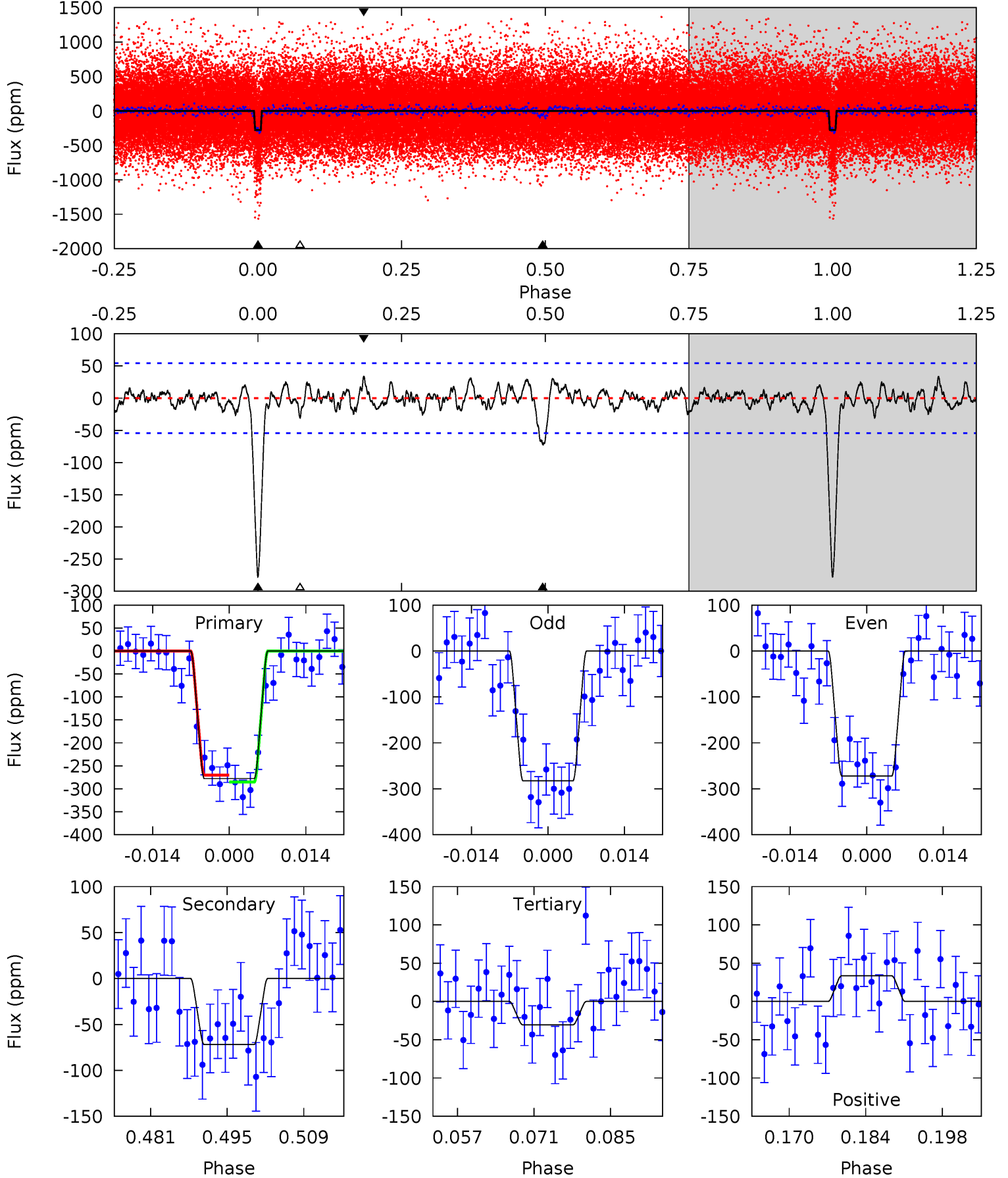
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	6.66	2.78	3.30	4.93	2.40	1.26	24.2	23.7	3.88	3.37	0.72	1.10	0.14	1.14



Alt Model-Shift Uniqueness Test

009636563-01, P = 10.636104 Days, E = 129.162995 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	6.57	2.80	3.06	4.96	2.45	1.04	22.6	22.3	3.78	3.51	0.48	1.11	0.11	0.69



Stellar Parameters For KIC 009636563

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5546^{+149}_{-149}	$4.575^{+0.034}_{-0.136}$	$-0.140^{+0.300}_{-0.300}$	$0.810^{+0.164}_{-0.070}$	$0.907^{+0.074}_{-0.111}$	$2.404^{+0.424}_{-0.929}$
	+3%/-3%	+1%/-3%	+214%/-214%	+20%/-9%	+8%/-12%	+18%/-39%
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 009636563-01 / KOI 2892.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-68 ± 10	$1.67^{+0.31}_{-0.27}$	1035^{+50}_{-40}	4017^{+304}_{-252}	111^{+51}_{-35}
Alt.	-72 ± 11	$1.59^{+0.31}_{-0.29}$	1034^{+51}_{-38}	4105^{+328}_{-251}	126^{+62}_{-40}

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

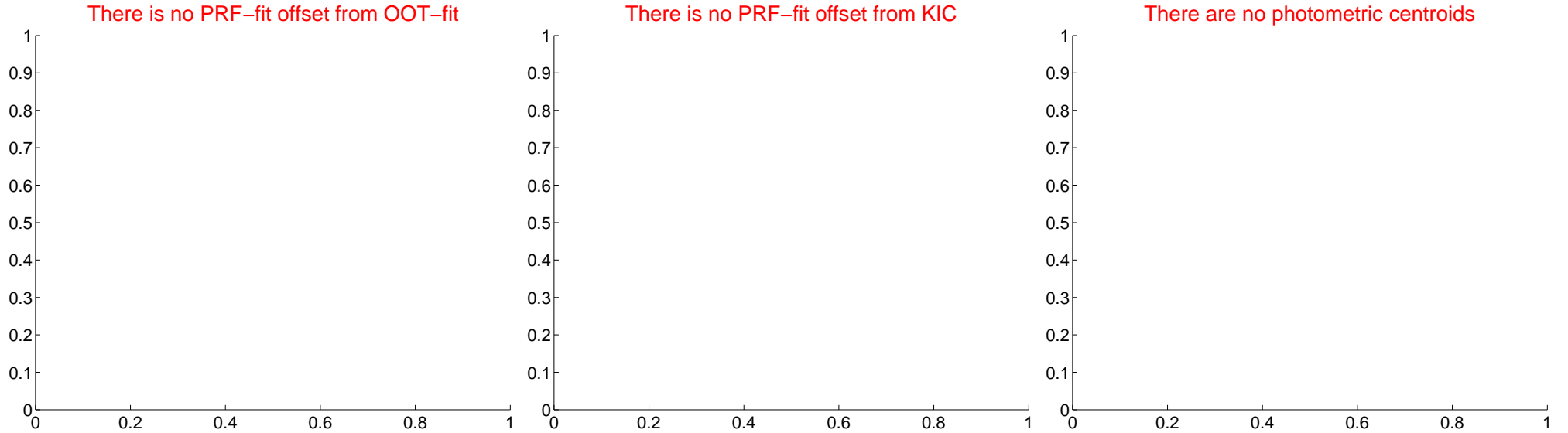
DV Centroid Data

Supplemental centroid analysis for 009636563-01. Kepler magnitude: 15.09. Transit SNR 18.91

There are 0 quarters with good PRF difference image offsets

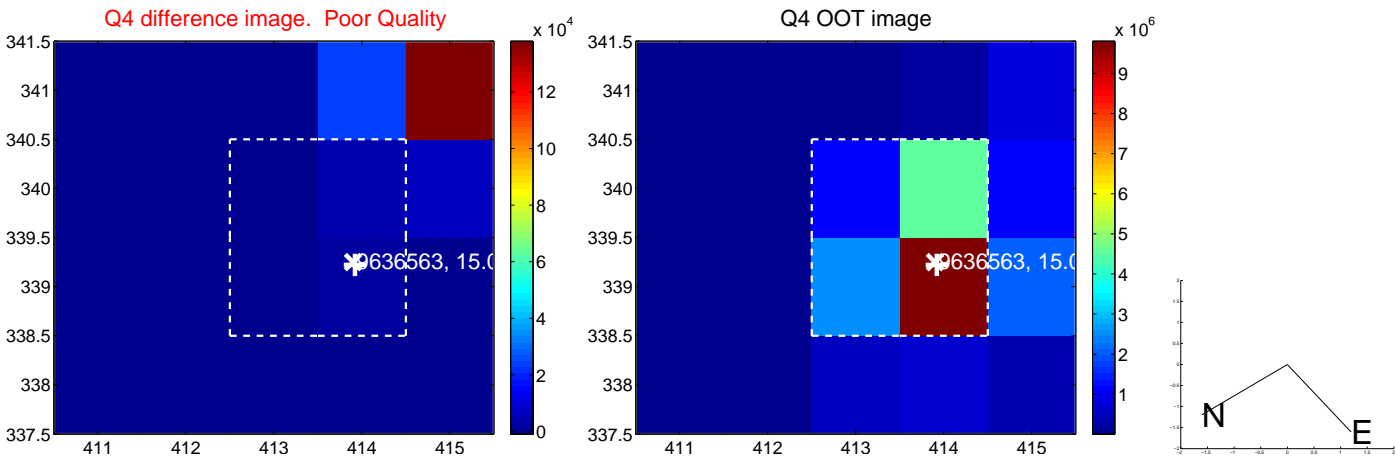
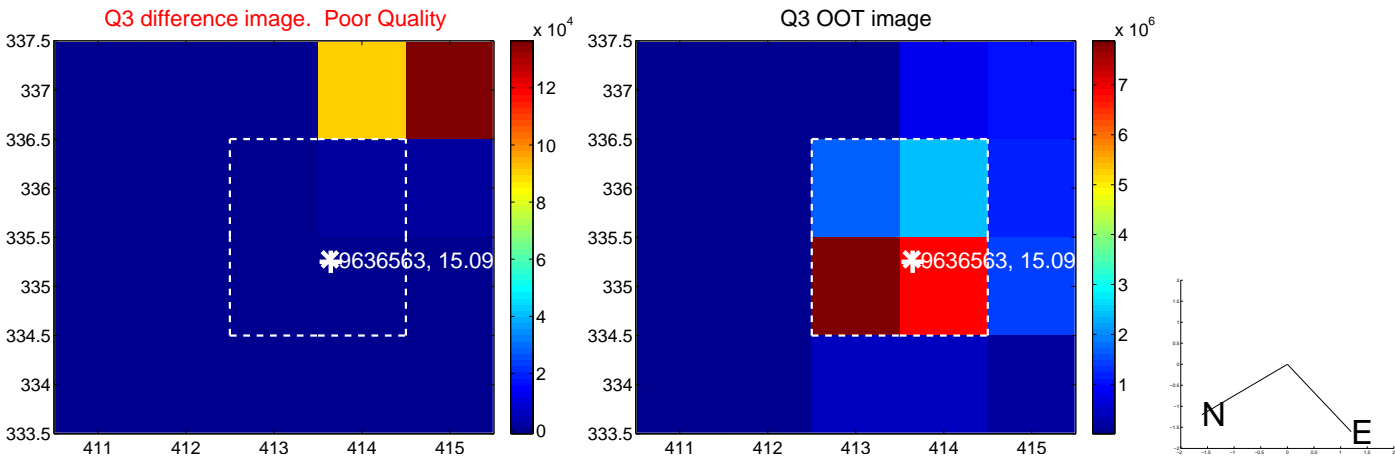
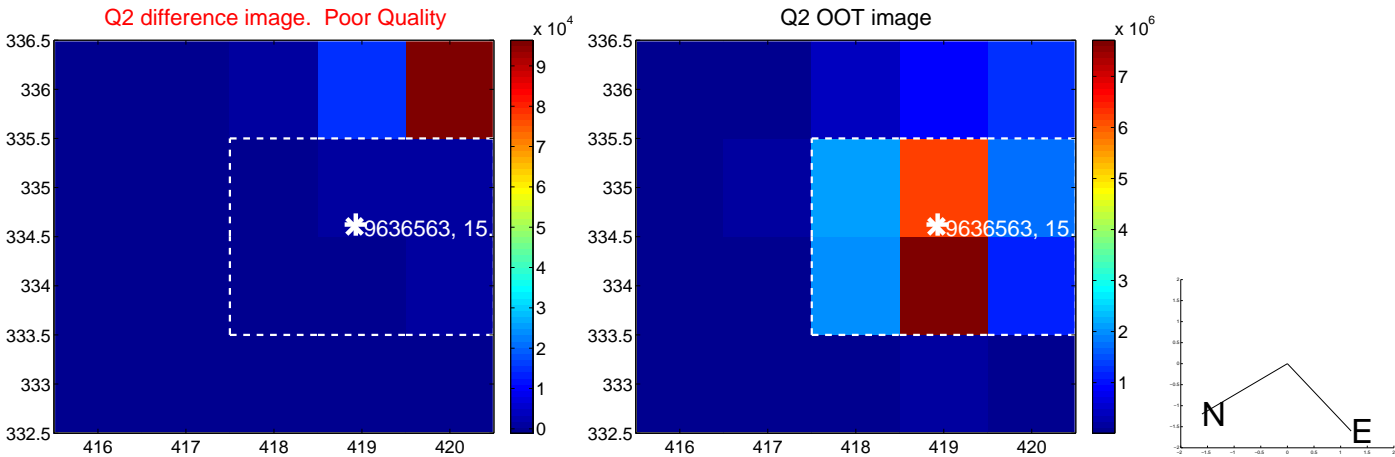
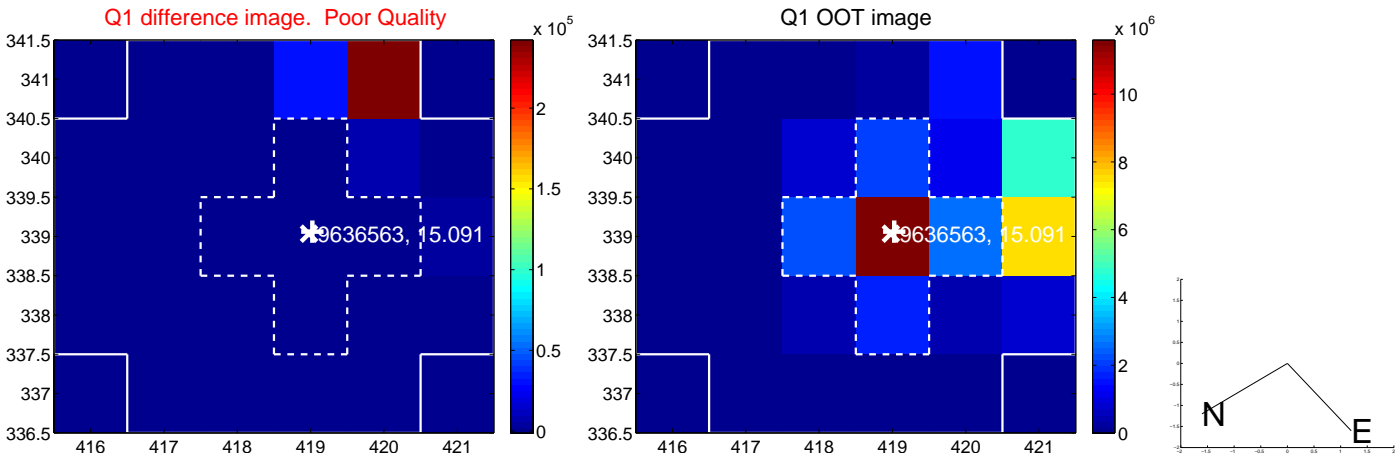
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

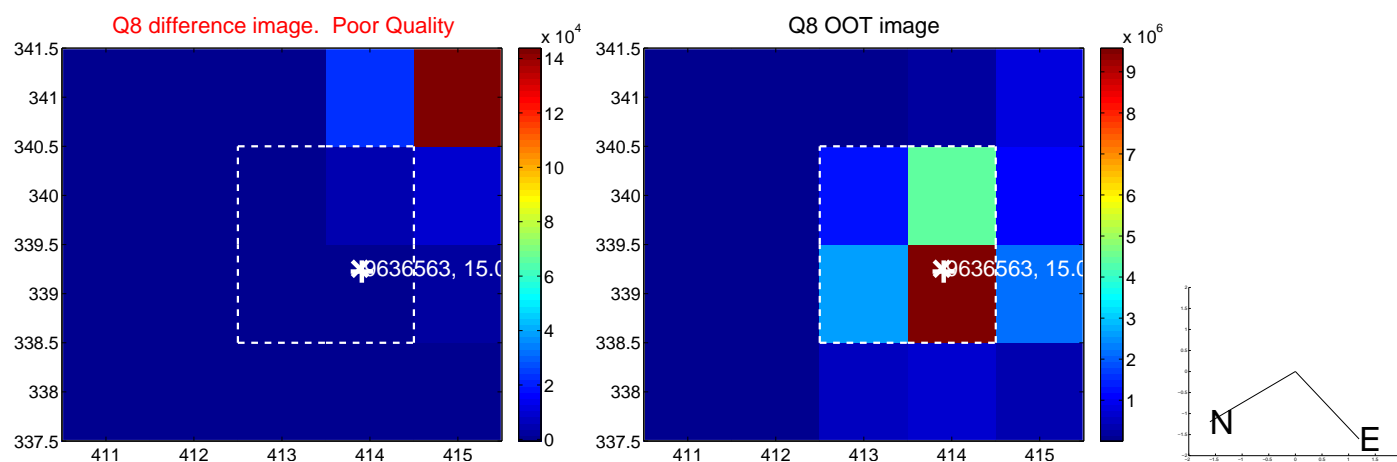
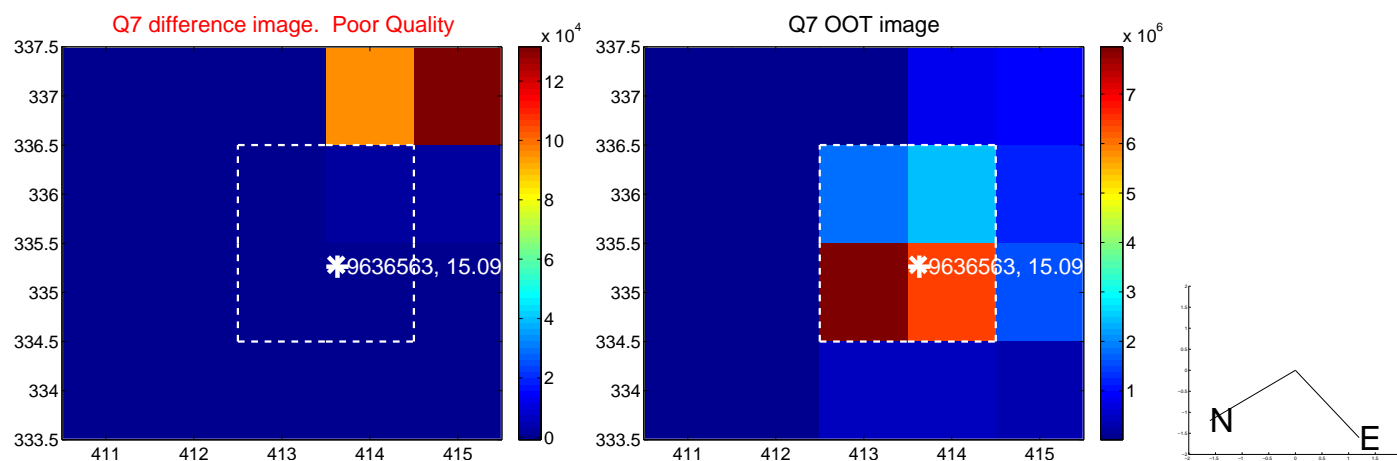
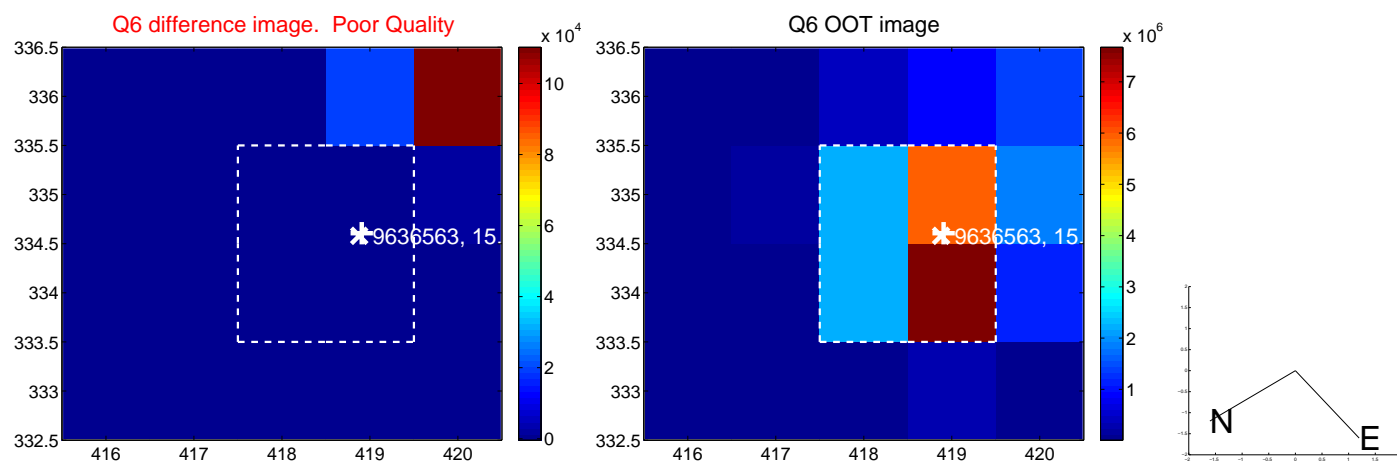
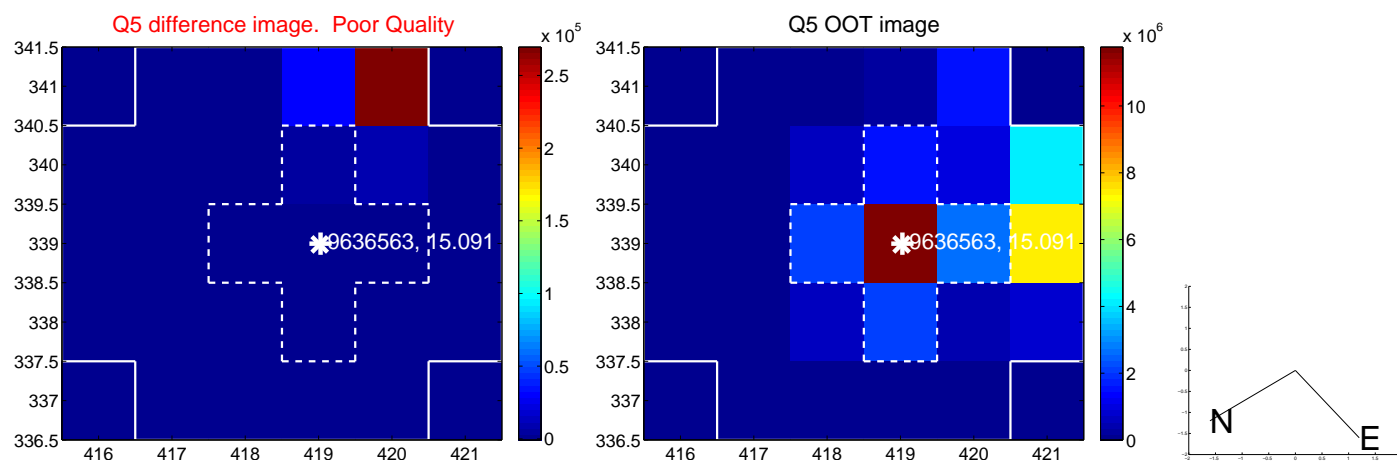


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

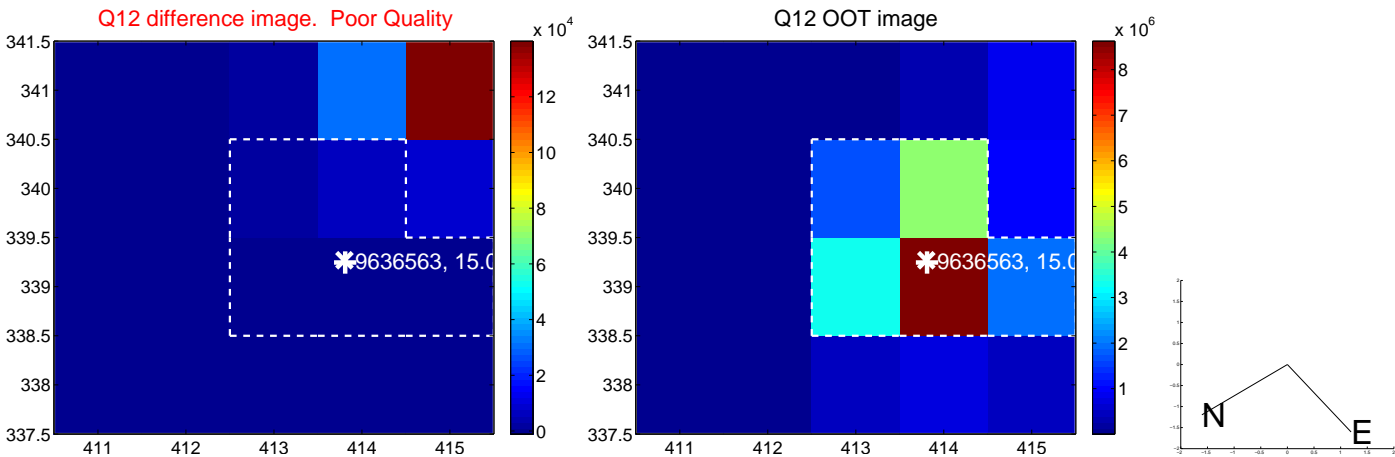
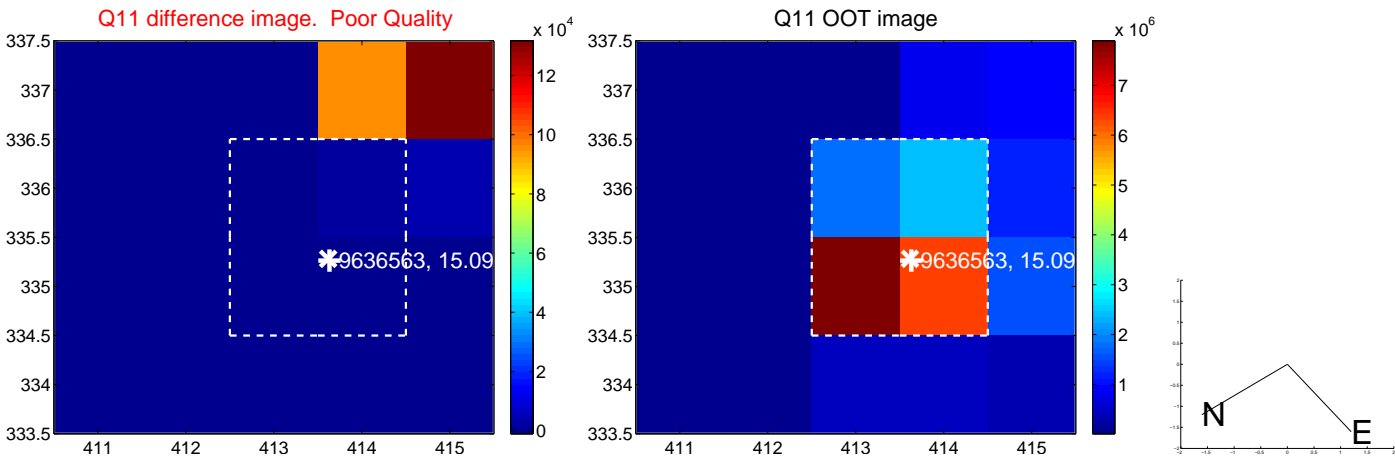
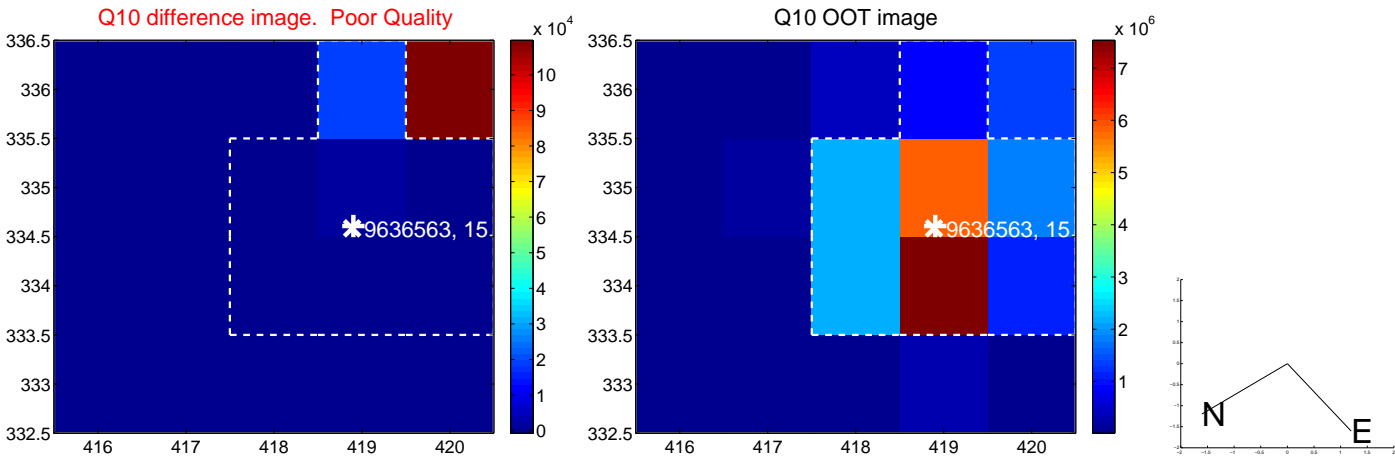
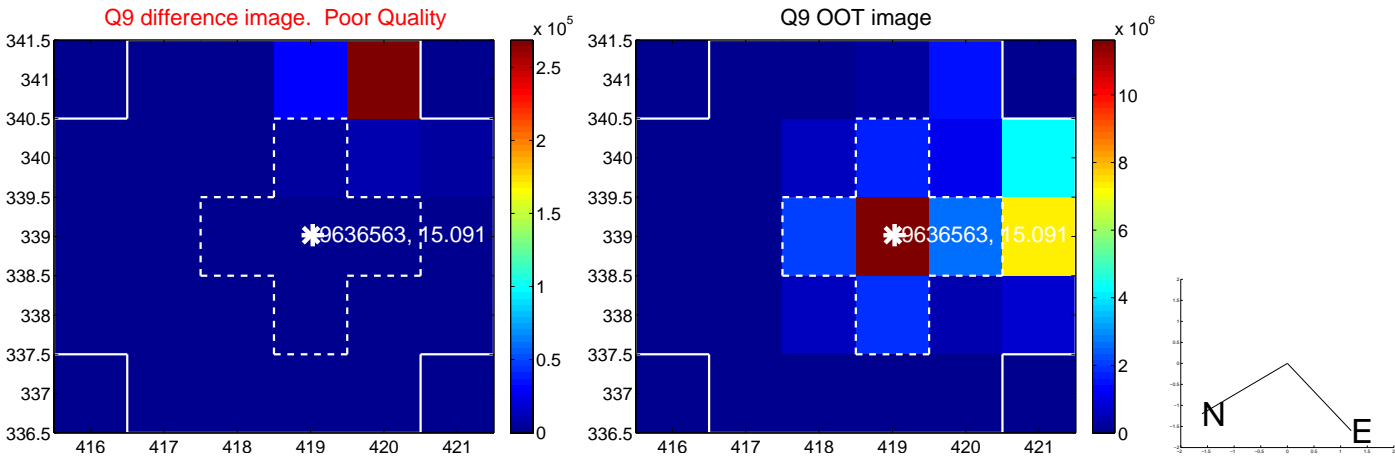
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



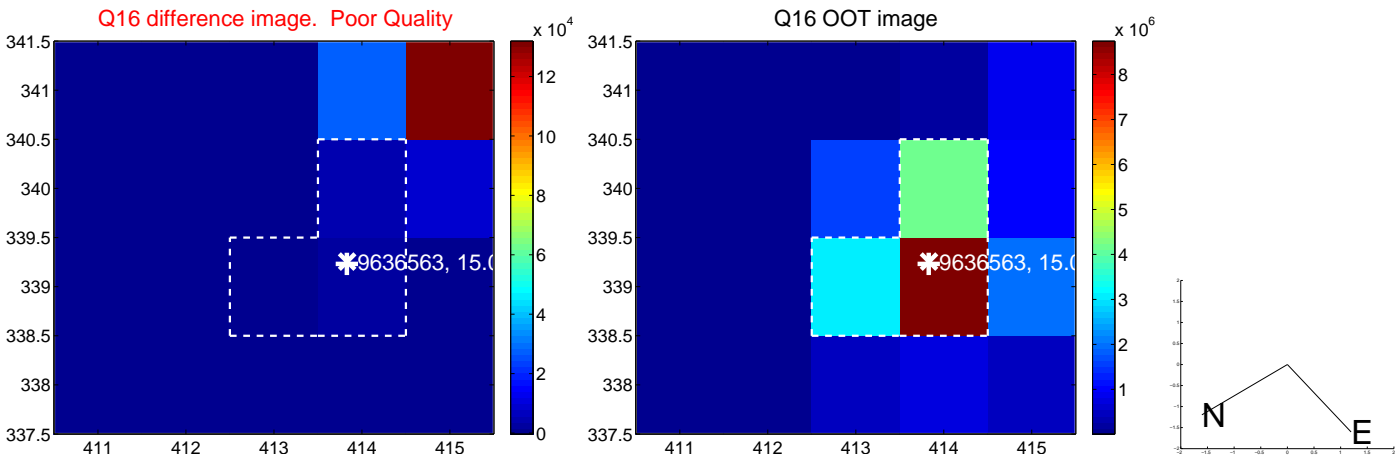
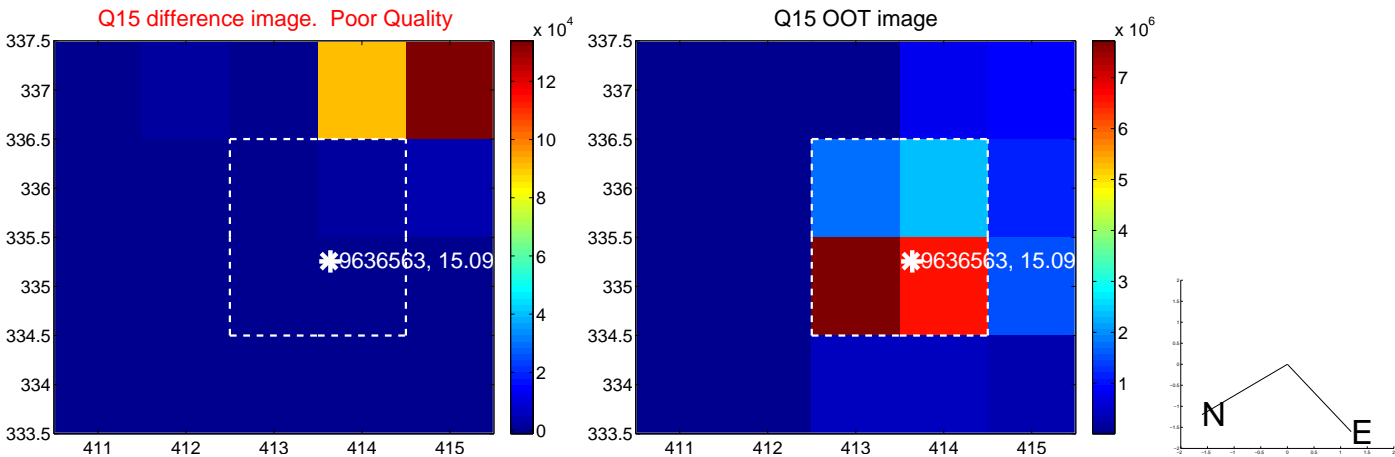
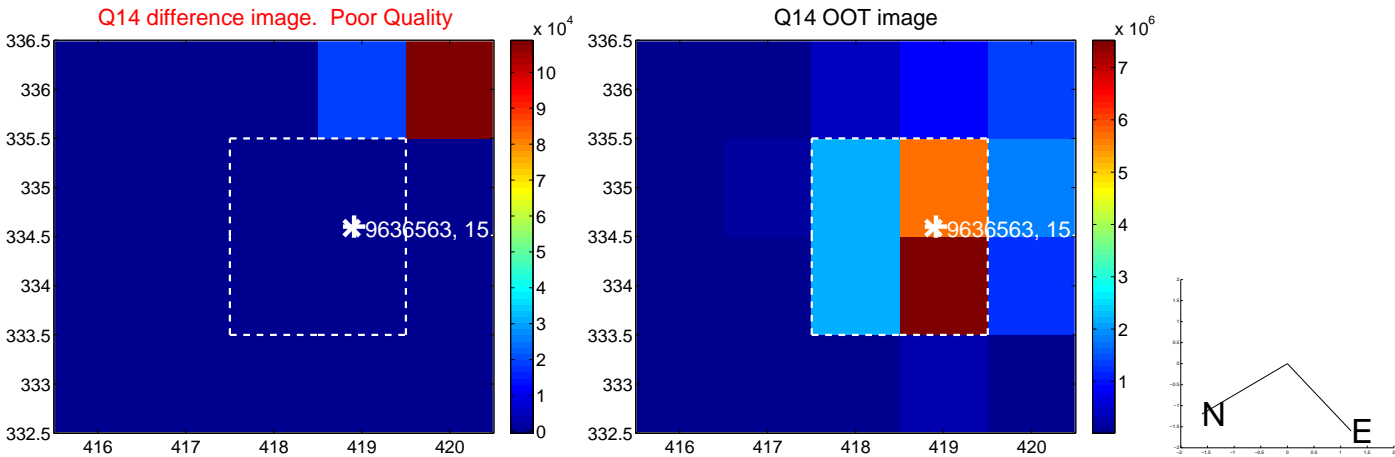
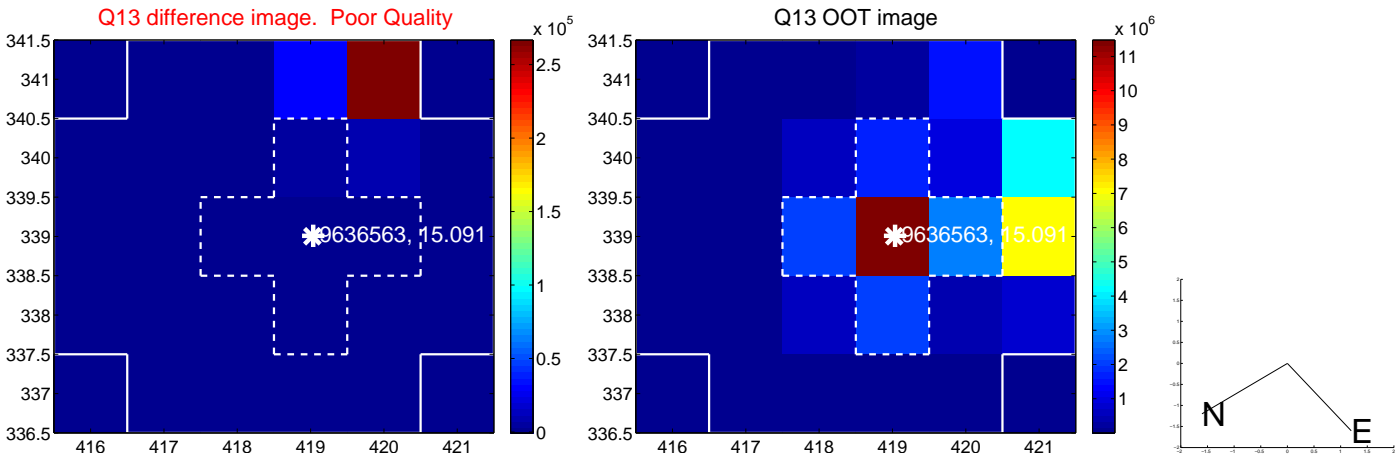
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



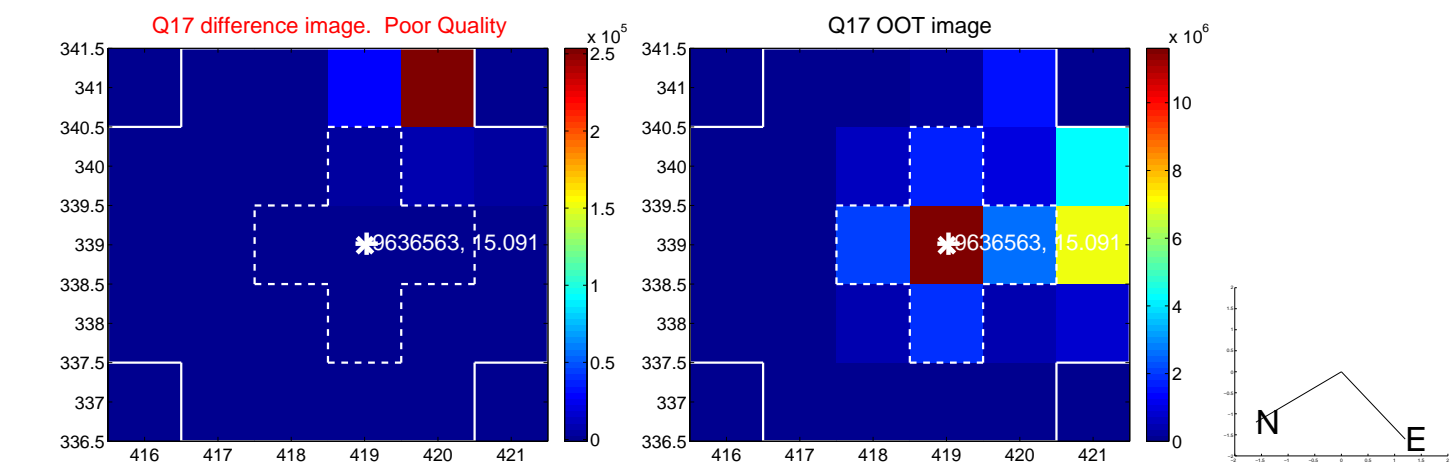
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



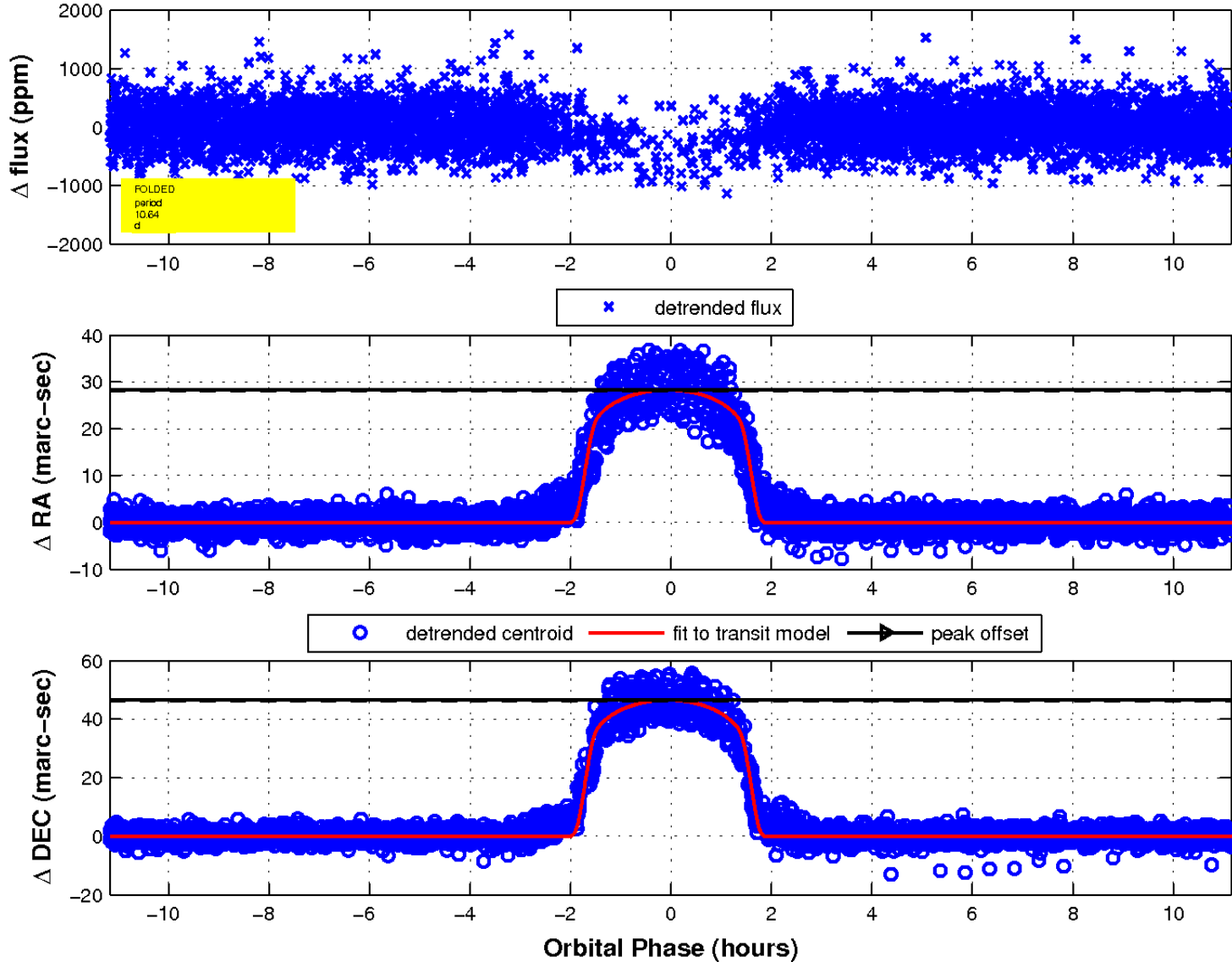
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

