

KIC 004637562

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})
004637562-01	OBS	No	0.632407	131.938421	0.0	4.861	14.0	0.0	0.82	4870	0.00	1879.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004637562-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

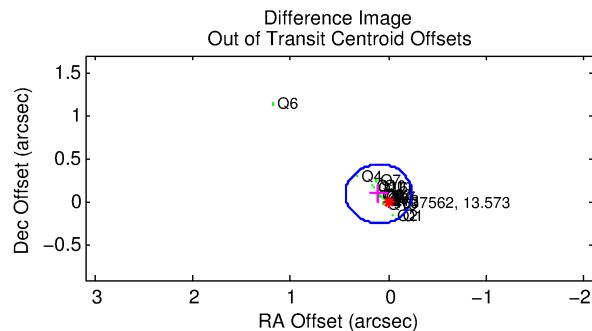
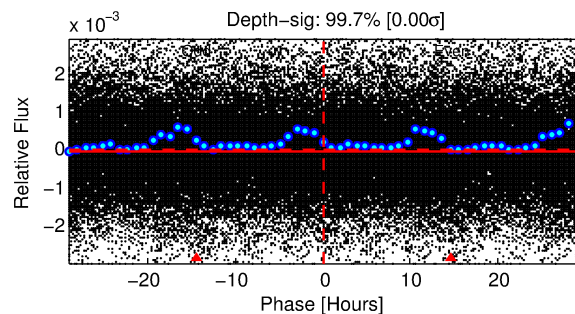
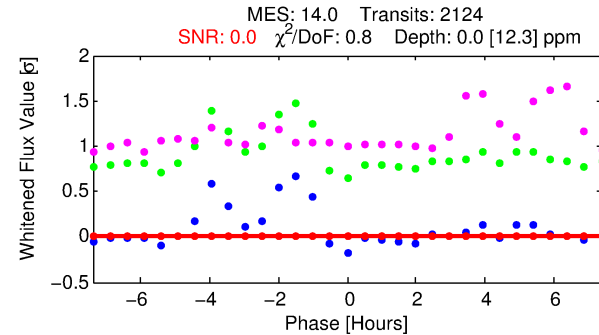
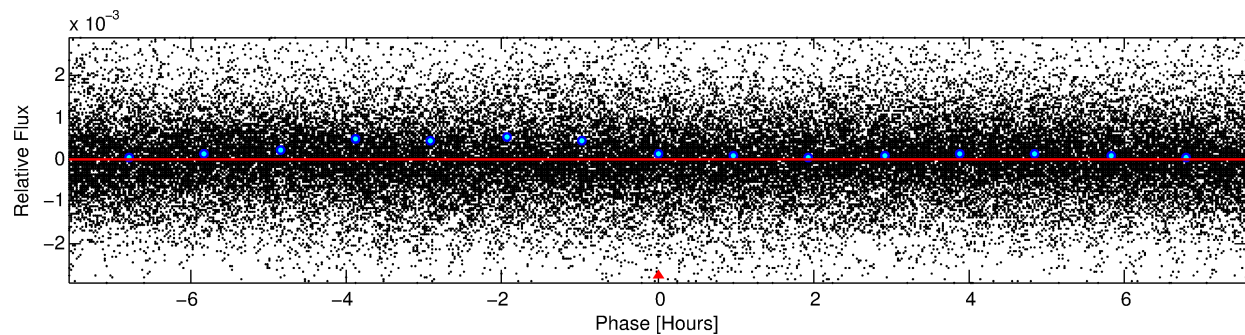
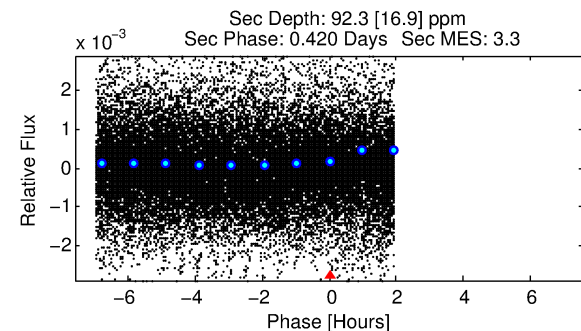
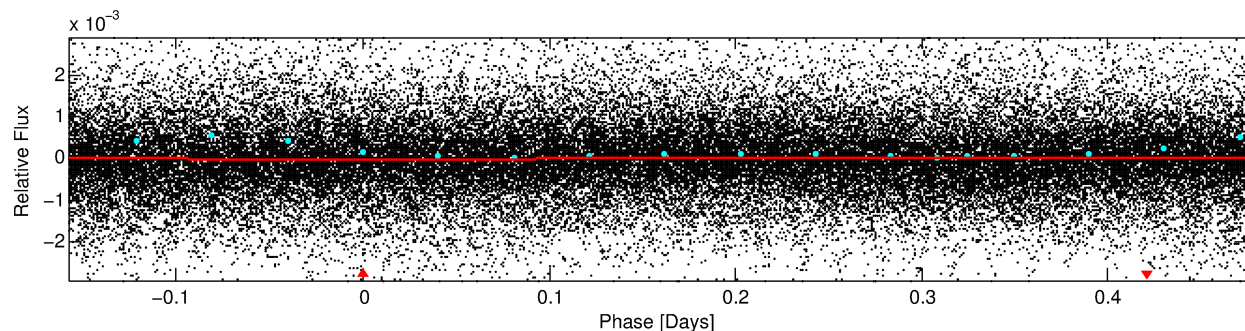
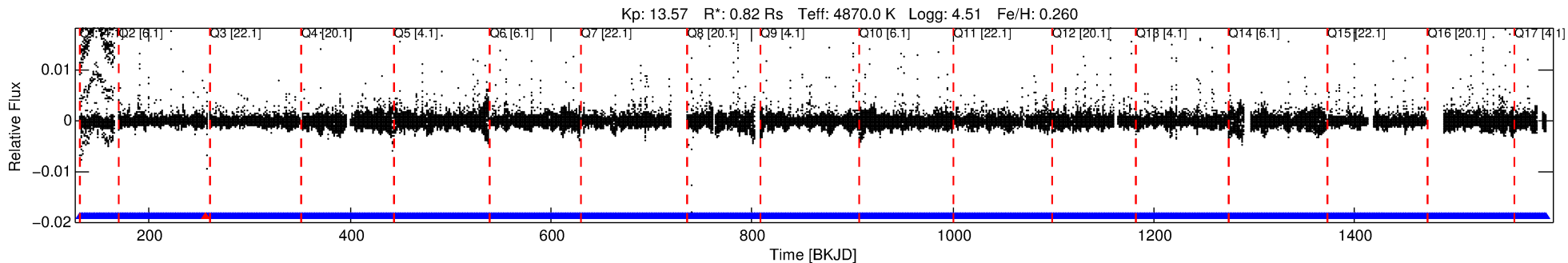
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004637562-01

No Significant Match Found

DV One-Page Summary

KIC: 4637562 Candidate: 1 of 1 Period: 0.632 d



DV Fit Results:

Period = 0.63241 [4.45039] d
Epoch = 131.9384 [705.9317] BKJD
Rp/R* = 0.0000 [0.4270]
a/R* = 1.08 [530.99]
b = 0.75 [2791.44]
Seff = 1879.93 [17643.09]
Teq = 1679 [3939] K
Rp = 0.00 [38.02] Re
a = 0.0134 [0.0627] AU
Ag = 5491258.32 [325049373400.74] [0.00σ]
Teffp = 125667 [1859870638] K [0.00σ]

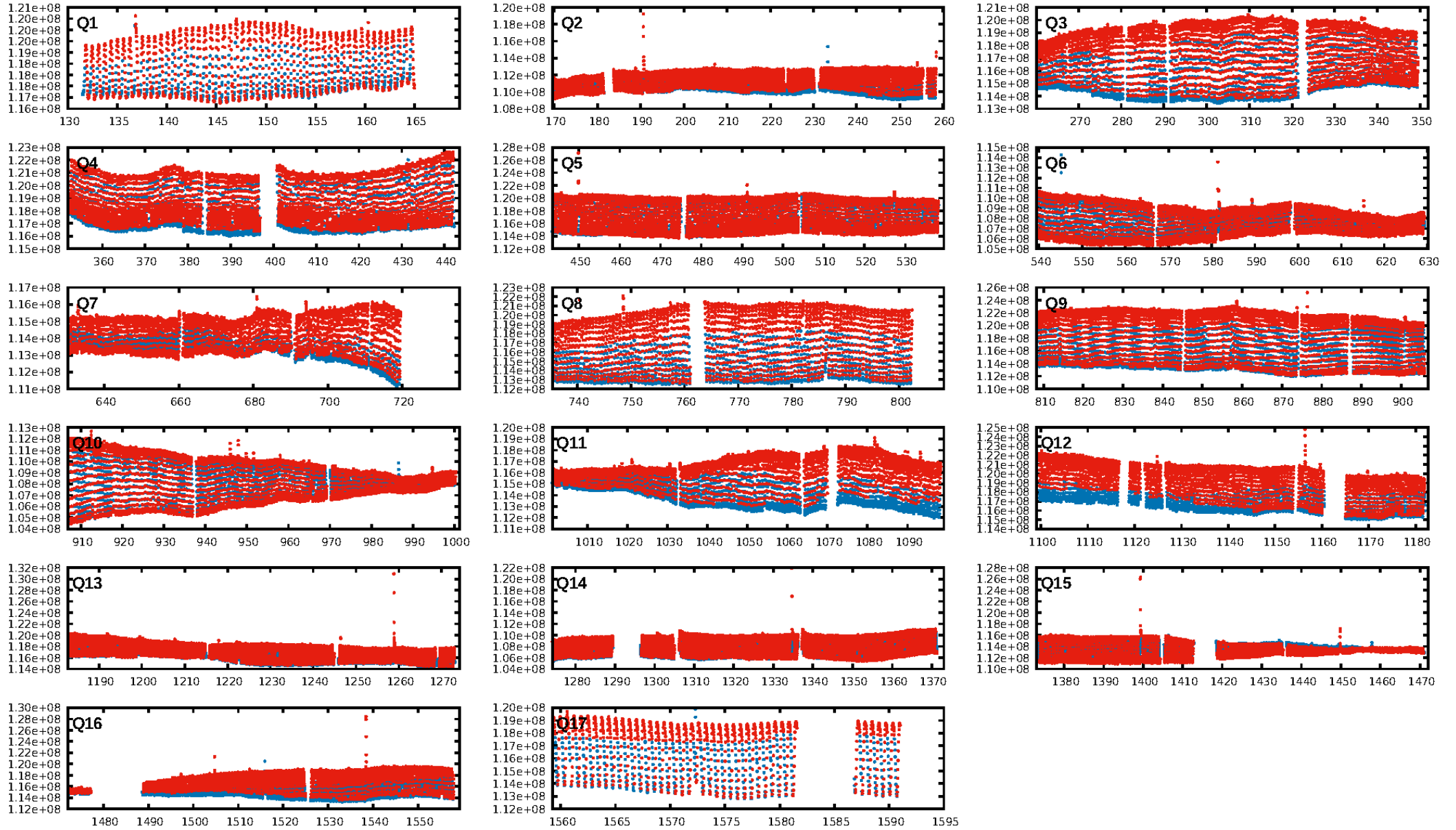
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.03e-28
RollingBand-fgt: 1.00 [2027/2028]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
QotOffset-rm: 0.138 arcsec [1.21σ]
KicOffset-rm: 0.150 arcsec [1.57σ]
QotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

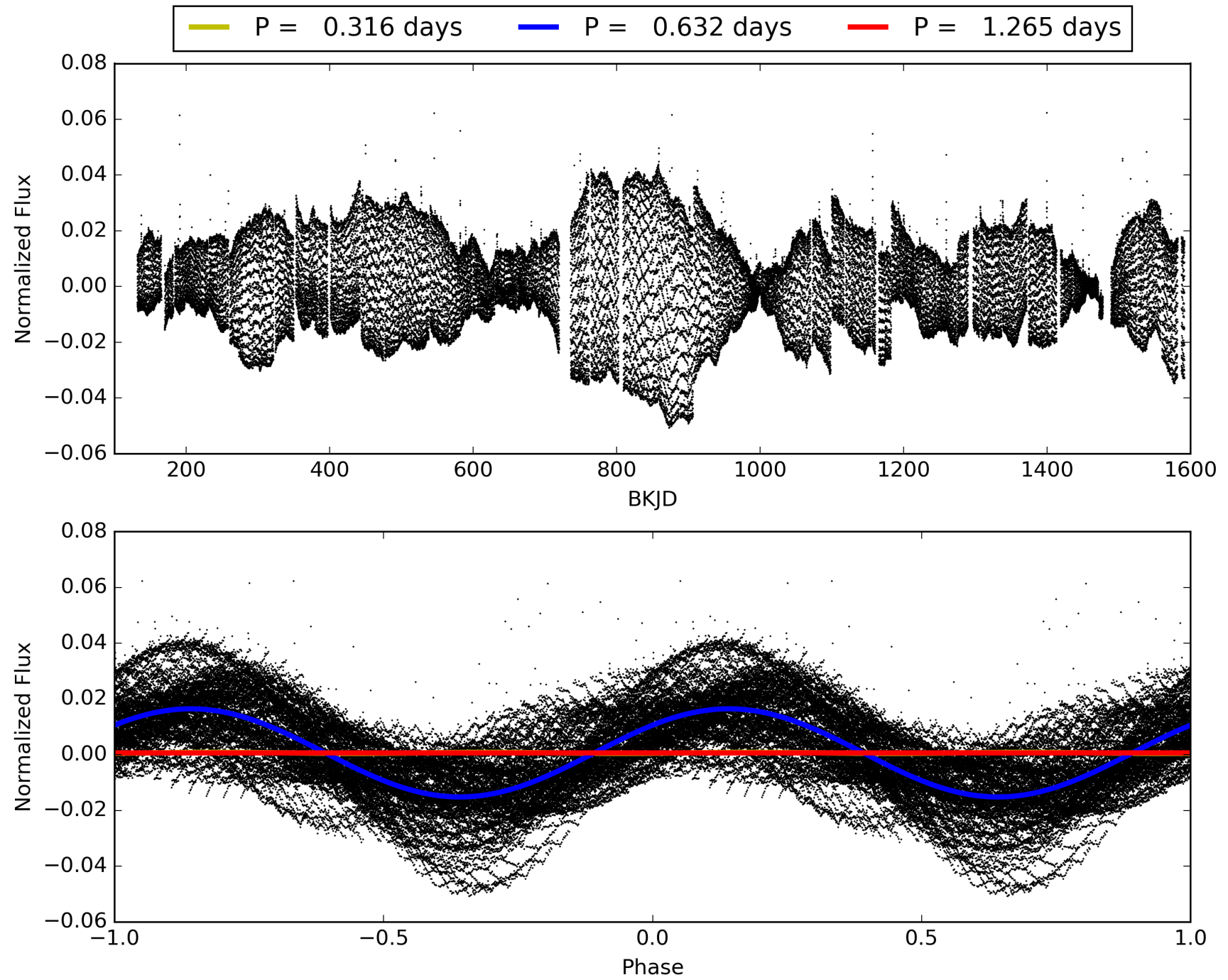
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:32:49 Z

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

TCE 004637562-01, PDC Light Curves

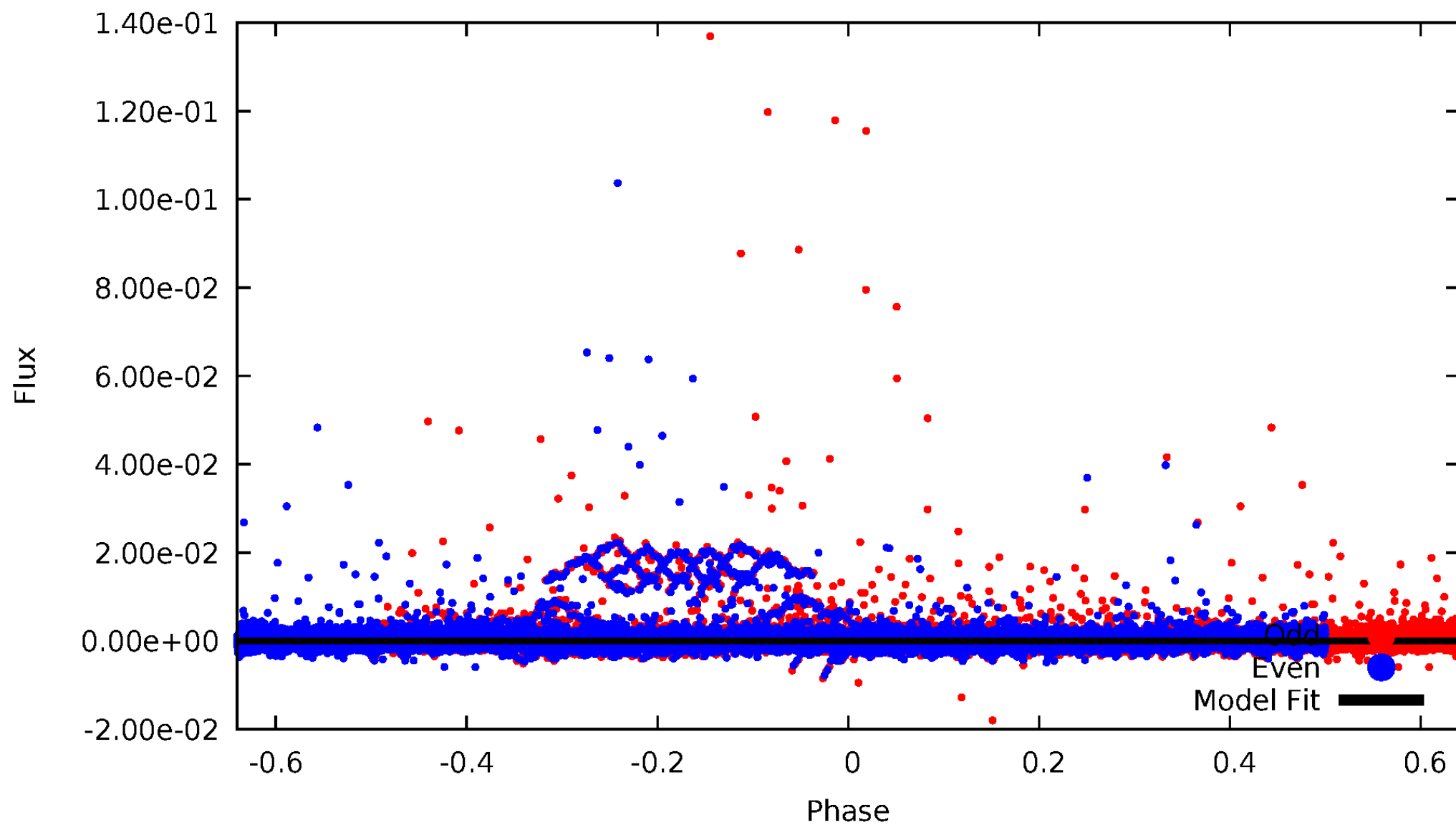


TCE 004637562-01



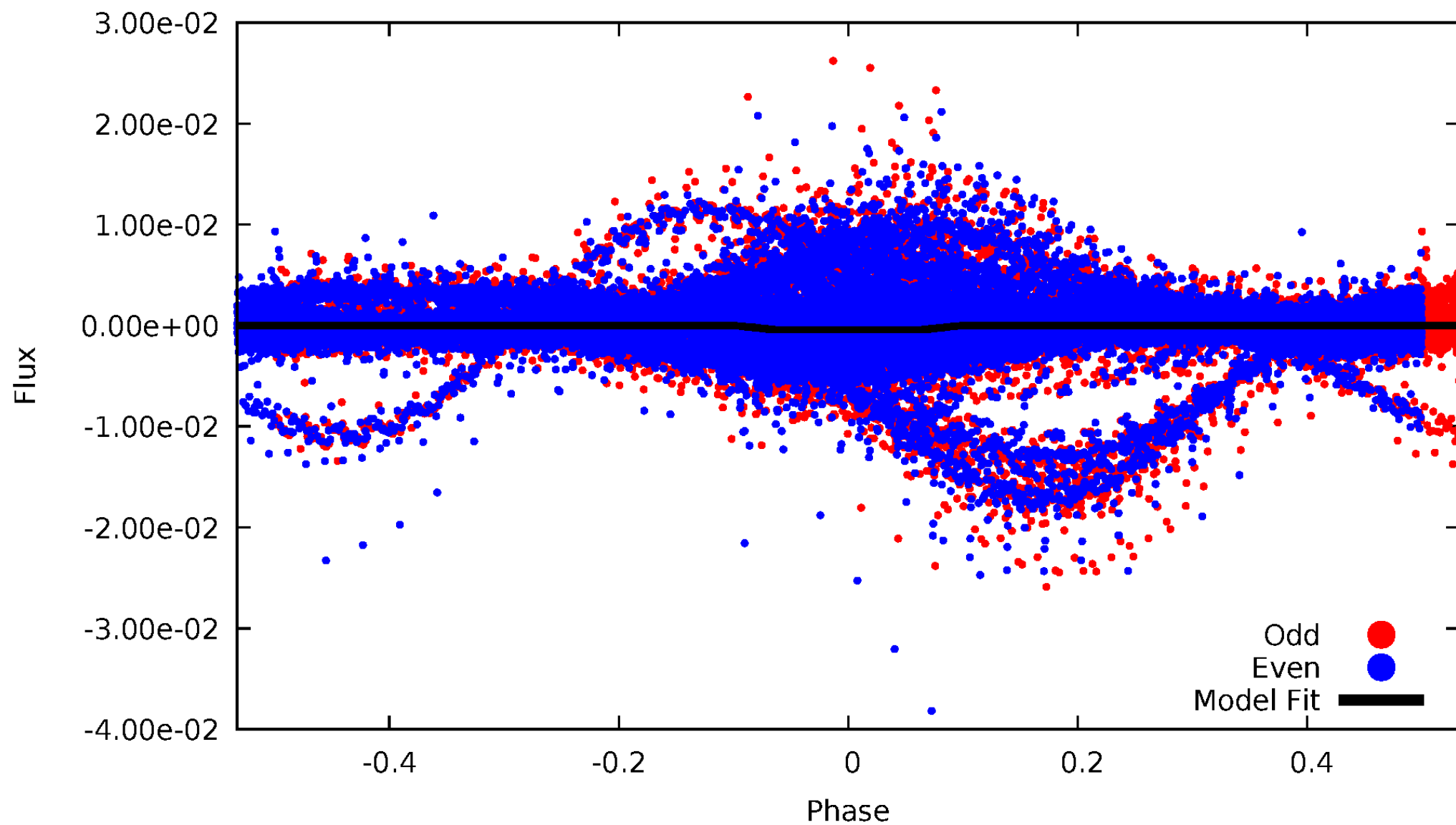
DV Odd/Even

TCE 004637562-01



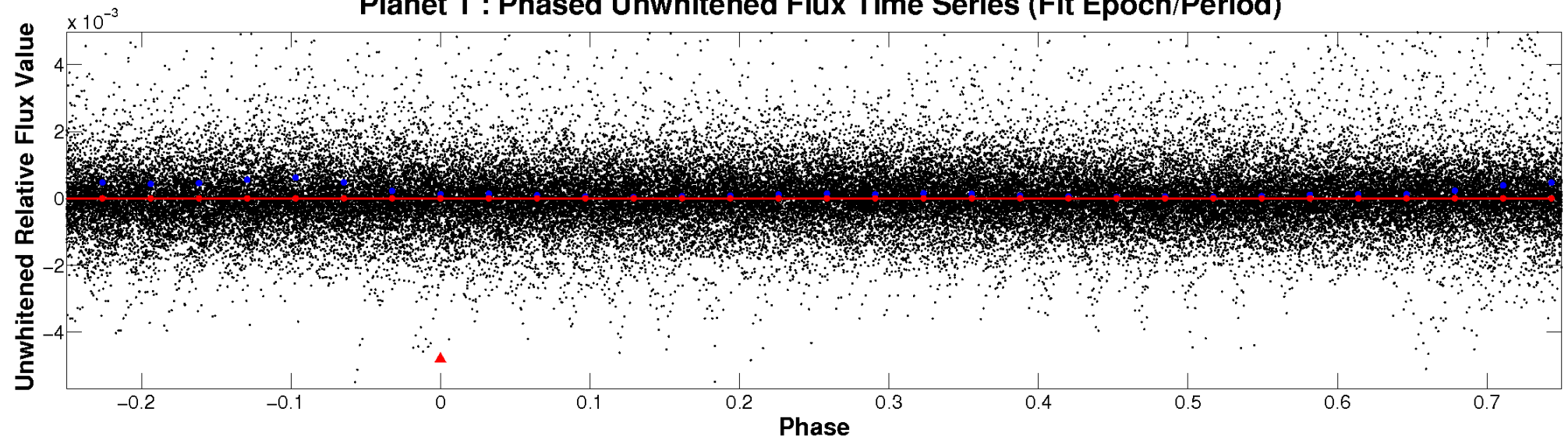
ALT Odd/Even

TCE 004637562-01

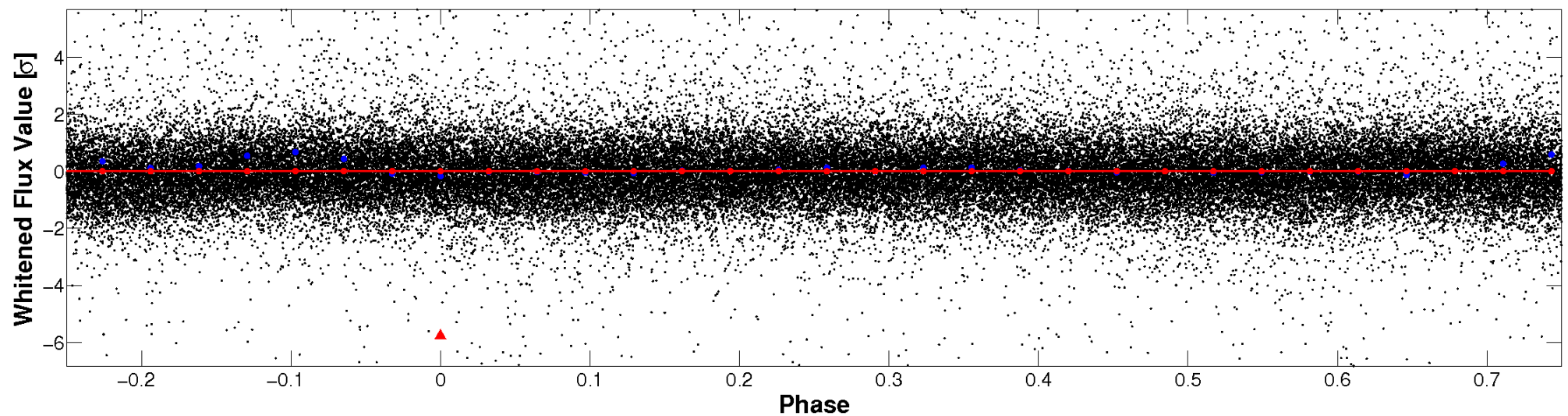


Non-Whitened Vs. Whitened Light Curve

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

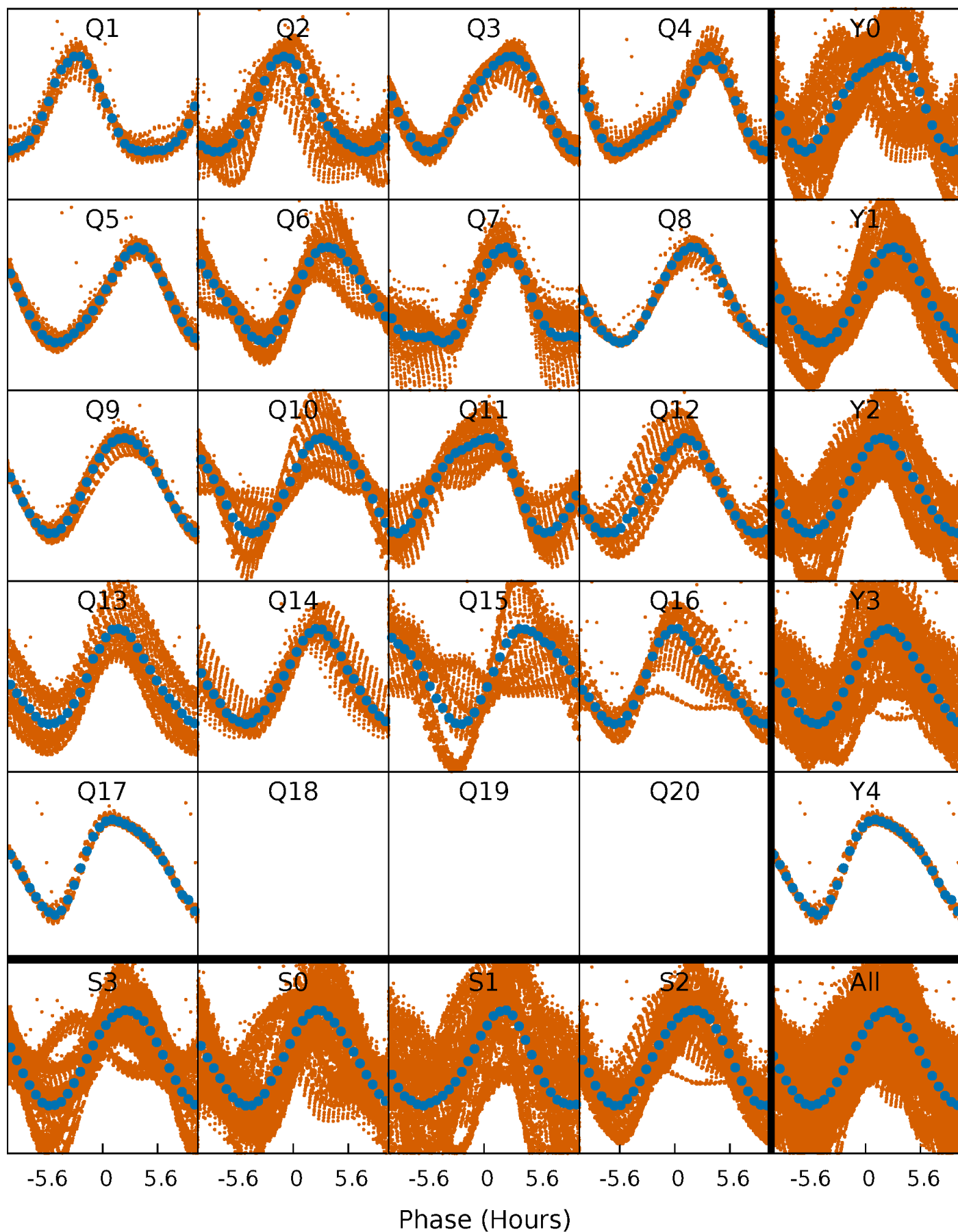


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



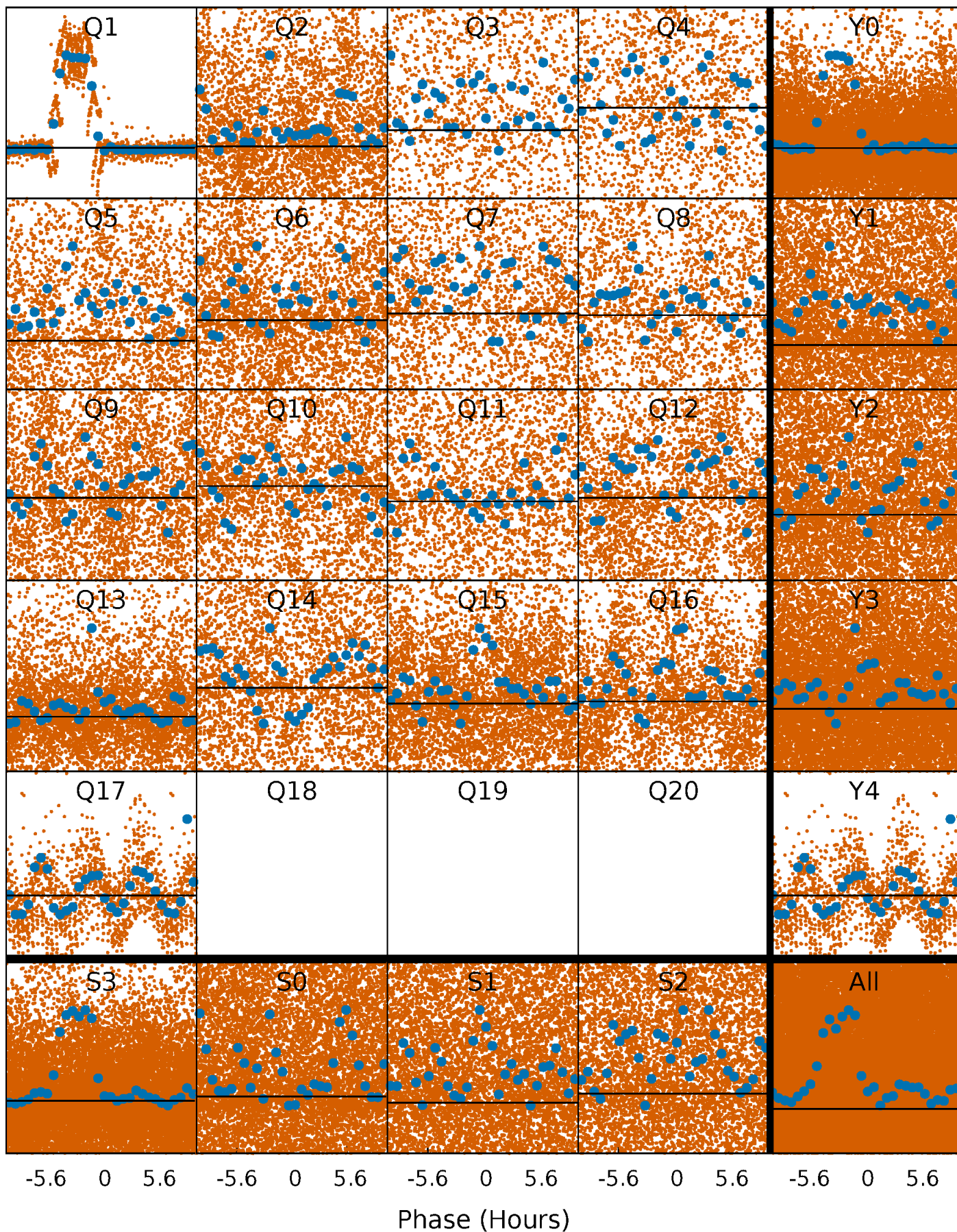
PDC Quarter-Phased Transit Curves

TCE 004637562-01 P= 0.632407 Days $T_0=131.938421$ (BKJD)



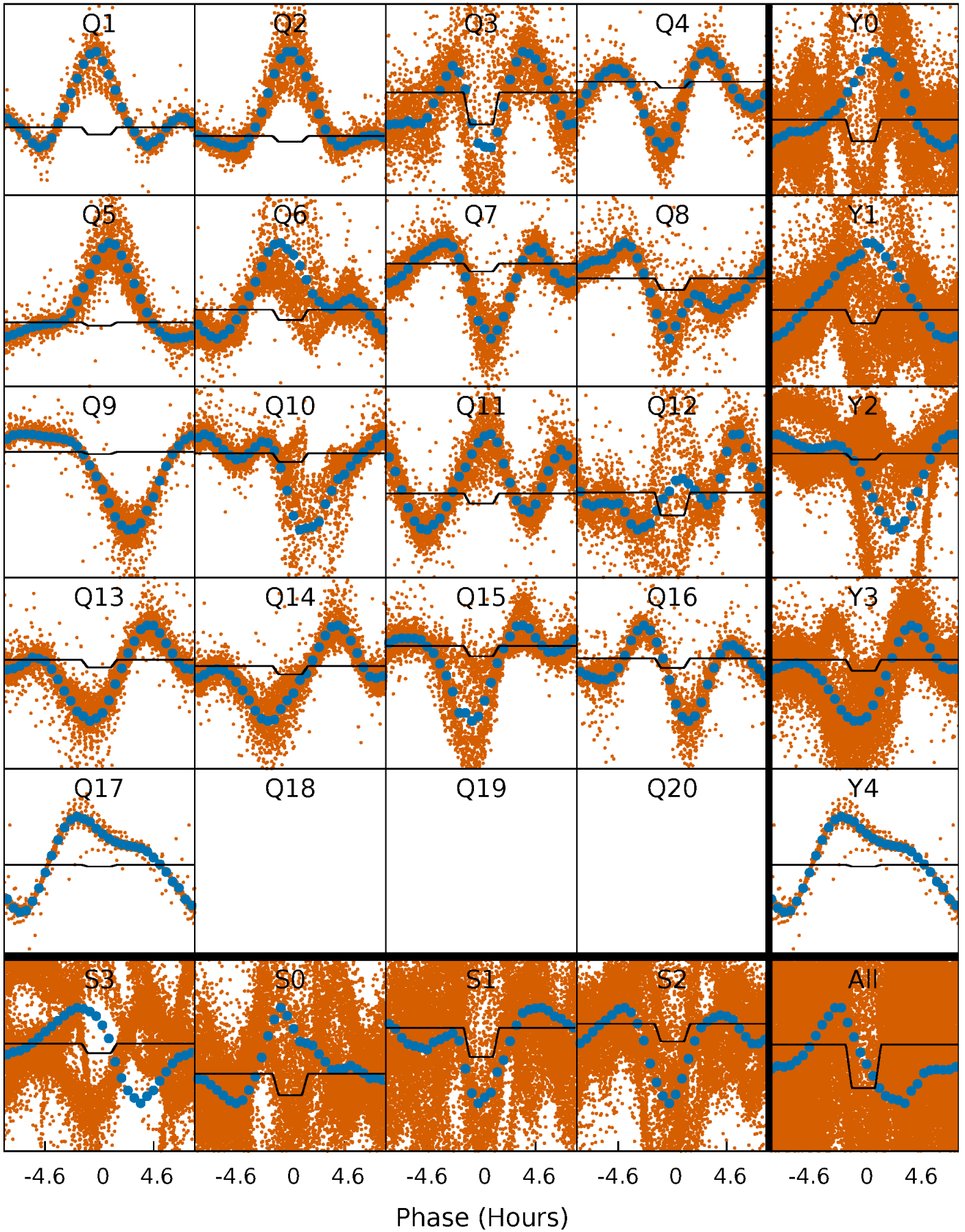
DV Quarter-Phased Transit Curves

TCE 004637562-01 P= 0.632407 Days $T_0=131.938421$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

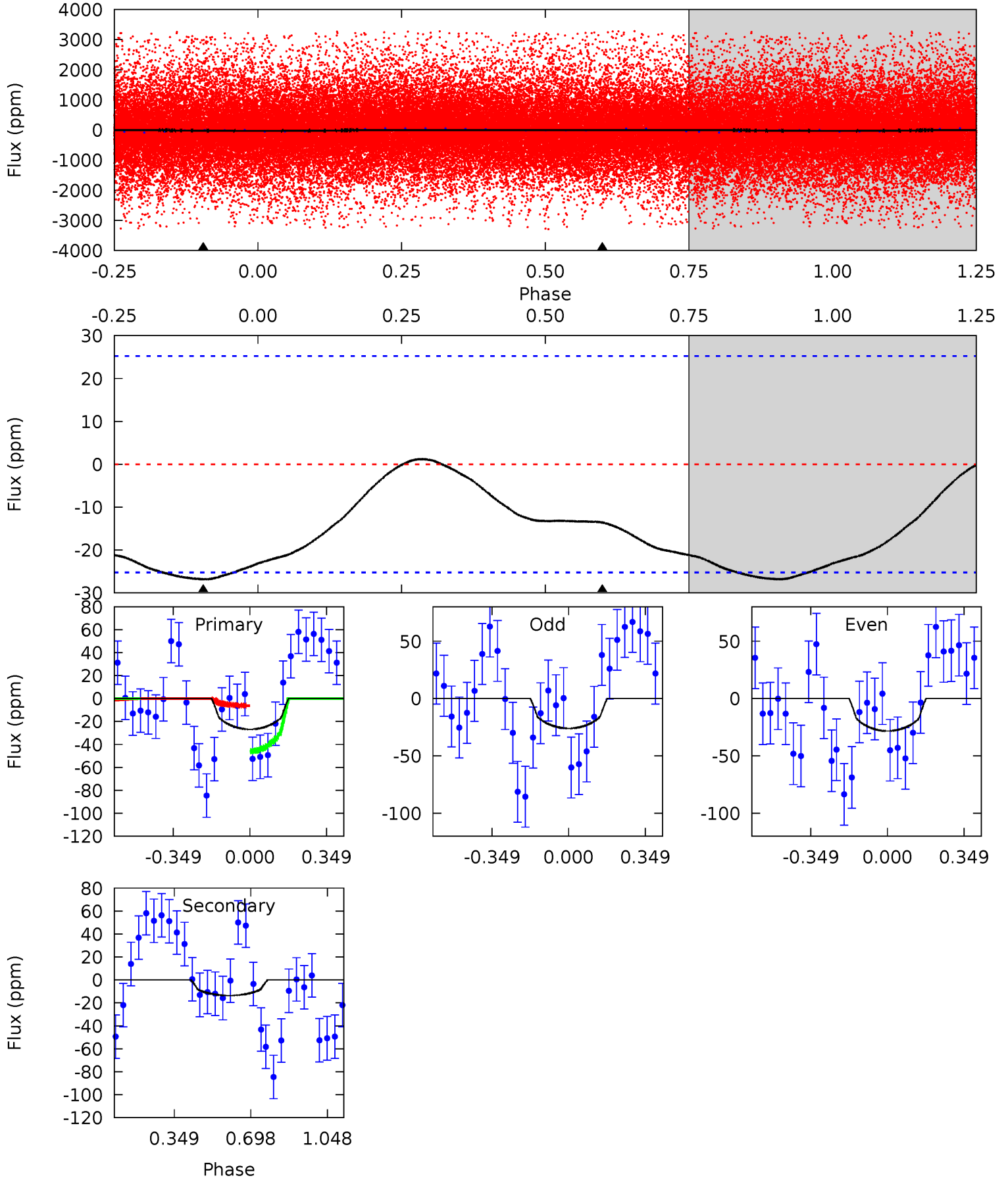
TCE 004637562-01 P= 0.632760 Days $T_0=131.846682$ (BKJD)



DV Model-Shift Uniqueness Test

004637562-01, P = 0.632407 Days, E = 131.306014 Days

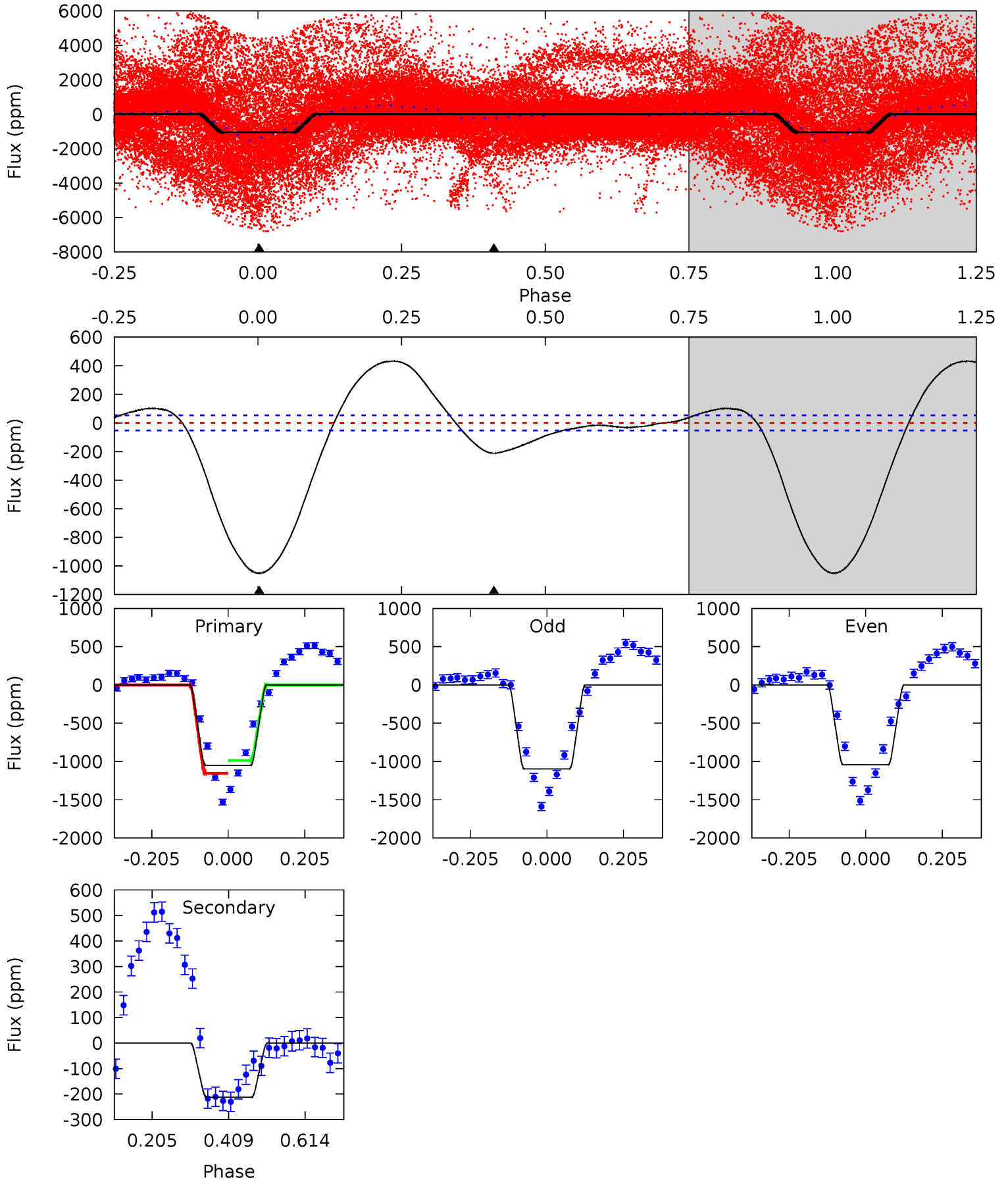
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.57	2.32	0	0	4.30	0.94	0.33	4.57	4.57	2.32	2.32	0.20	14.8	0.04	3.32



Alt Model-Shift Uniqueness Test

004637562-01, P = 0.632760 Days, E = 131.213922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.8	17.5	0	0	4.41	1.27	3.24	86.8	86.8	17.5	17.5	2.34	0.12	0.29	0



Stellar Parameters For KIC 004637562

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4870^{+168}_{-168}	$4.515^{+0.078}_{-0.045}$	$0.260^{+0.150}_{-0.300}$	$0.816^{+0.056}_{-0.083}$	$0.795^{+0.062}_{-0.056}$	$2.057^{+0.652}_{-0.345}$
	+3%/-3%	+2%/-1%	+58%/-115%	+7%/-10%	+8%/-7%	+32%/-17%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004637562-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 6	$23.80^{+30.52}_{-16.23}$	1330^{+638}_{-267}	-2006^{+359}_{-412}	$0.018^{+0.219}_{-0.016}$
Alt.	-212 ± 12	$26.61^{+27.02}_{-17.96}$	1365^{+619}_{-308}	-1695^{+4271}_{-624}	$0.240^{+2.292}_{-0.209}$

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 $A_{obs} \gg 1.0$

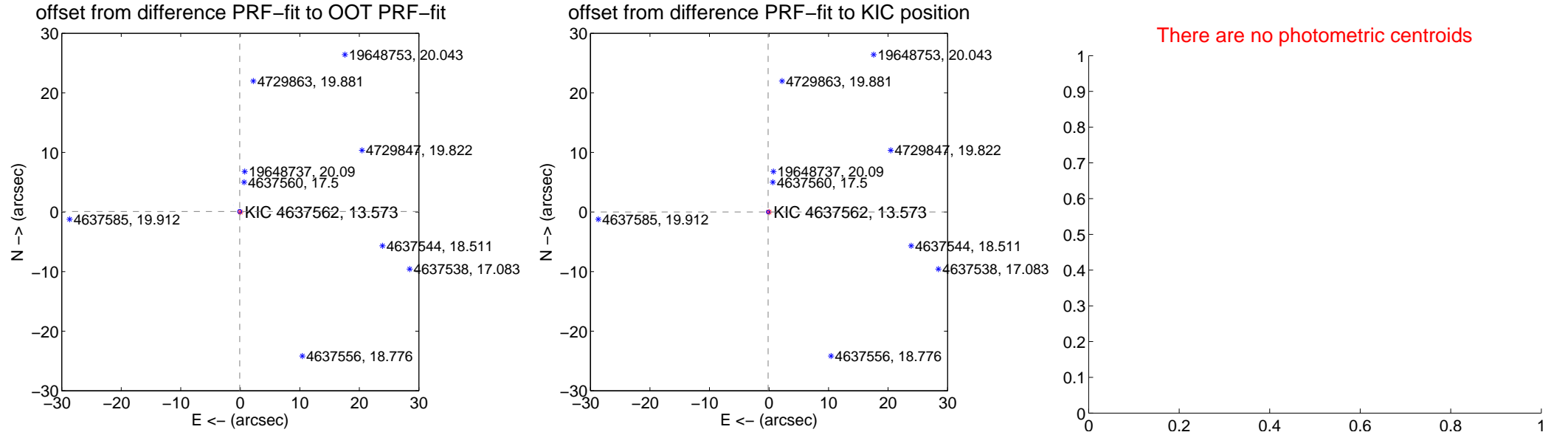
DV Centroid Data

Supplemental centroid analysis for 004637562-01. Kepler magnitude: 13.57. Transit SNR 0.00

There are 2 quarters with good PRF difference image offsets

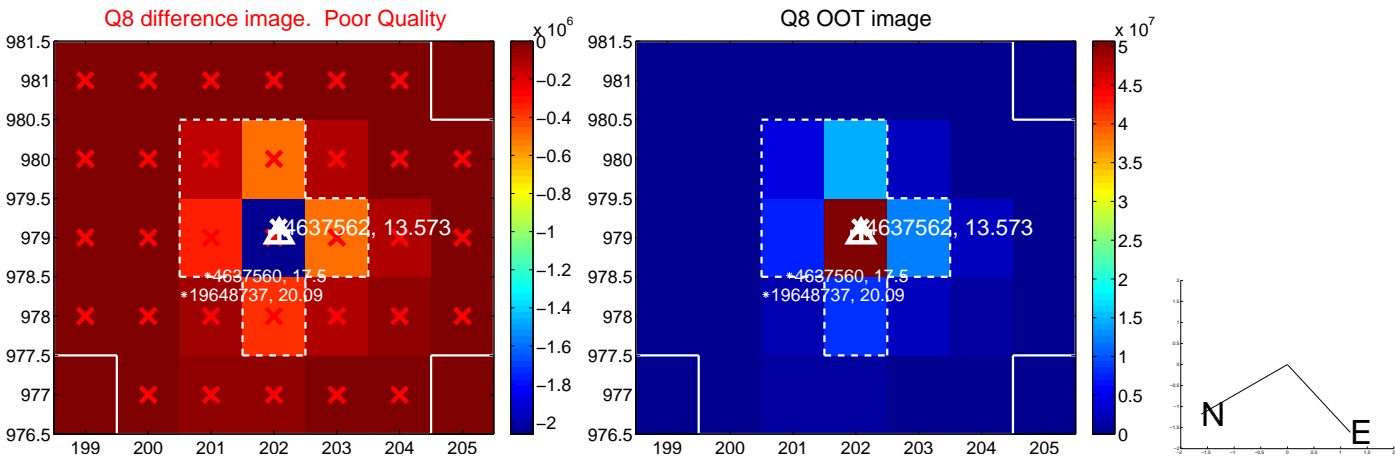
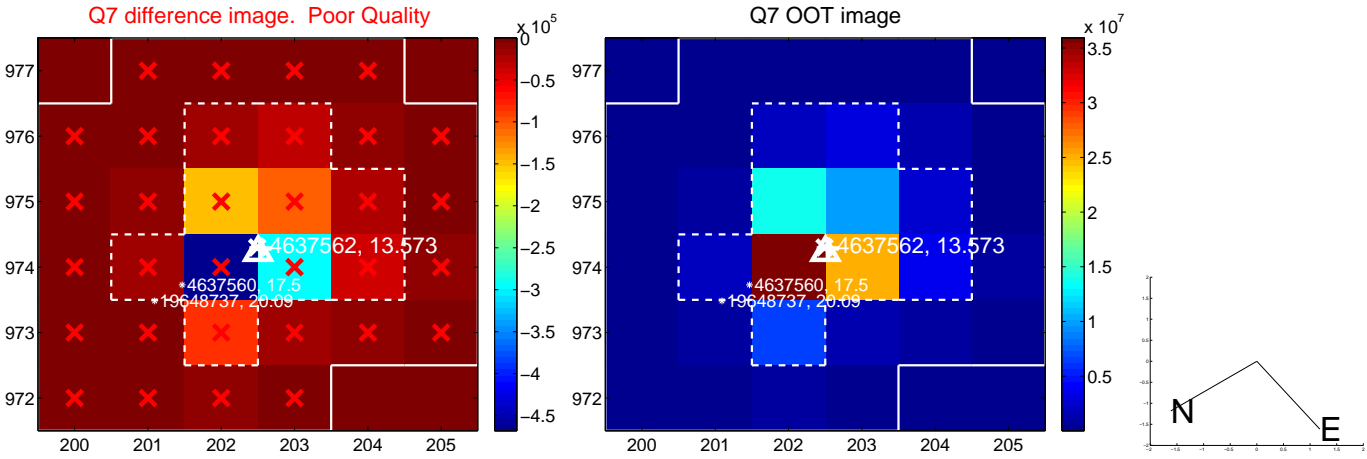
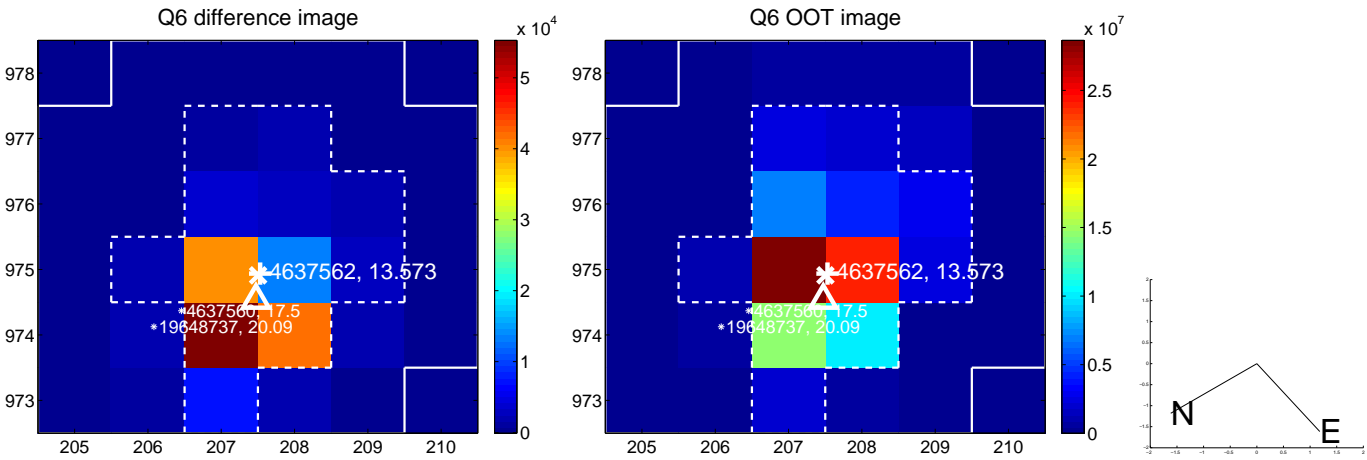
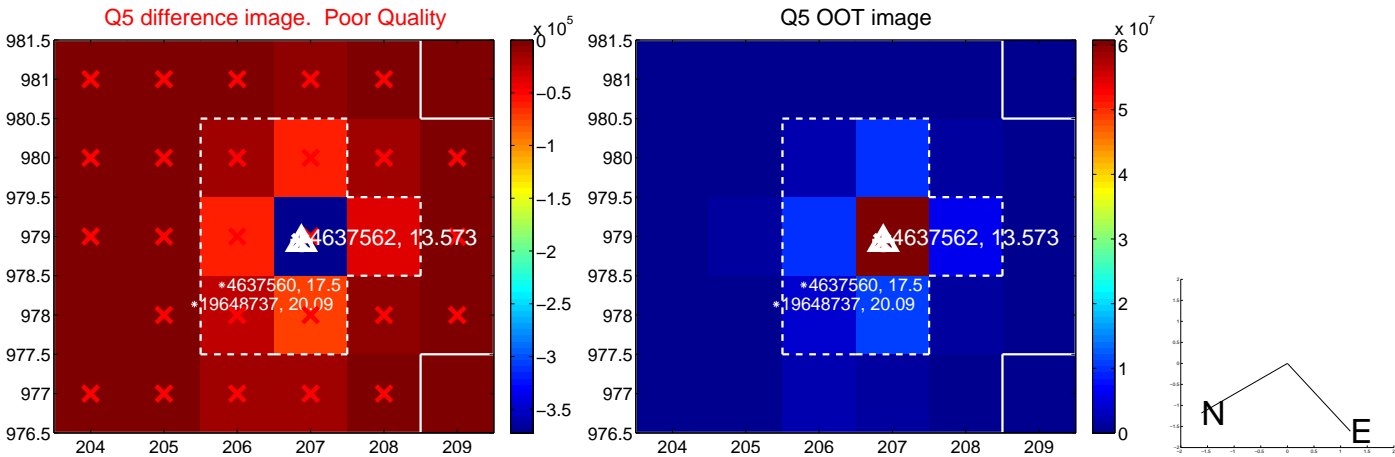
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.138 ± 0.114	1.21	0.099 ± 0.093	0.097 ± 0.094
PRF-fit source offset from KIC position	0.150 ± 0.096	1.57	0.150 ± 0.094	0.007 ± 0.094
photometric centroid source offset	—	—	—	—

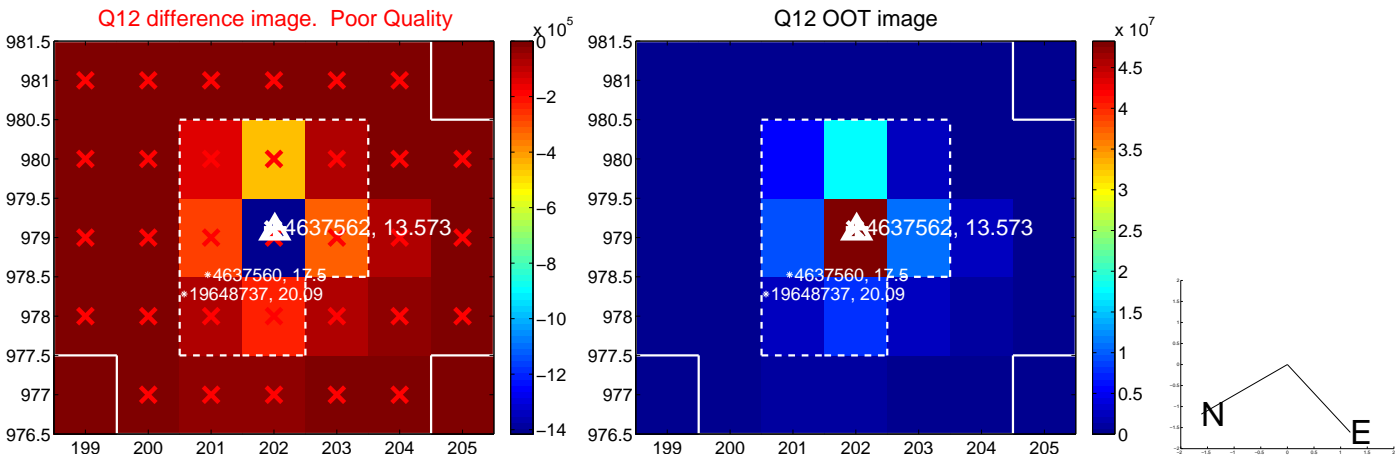
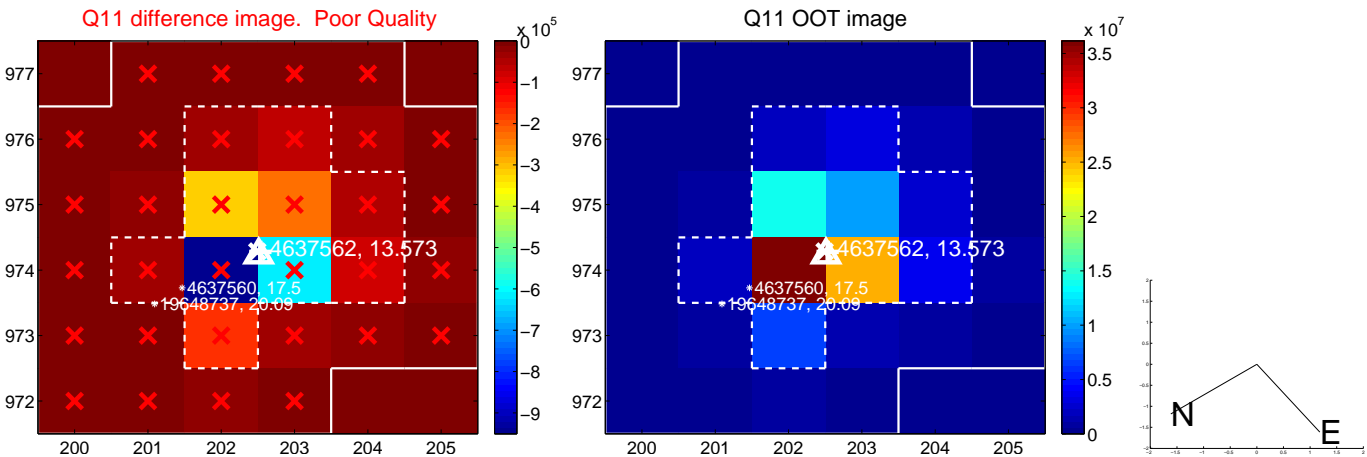
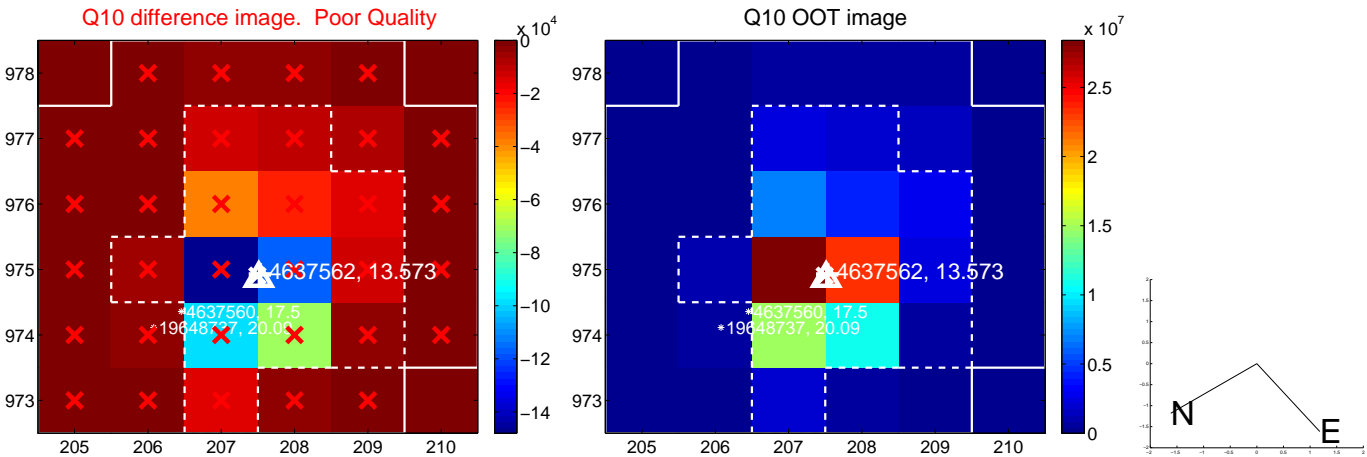
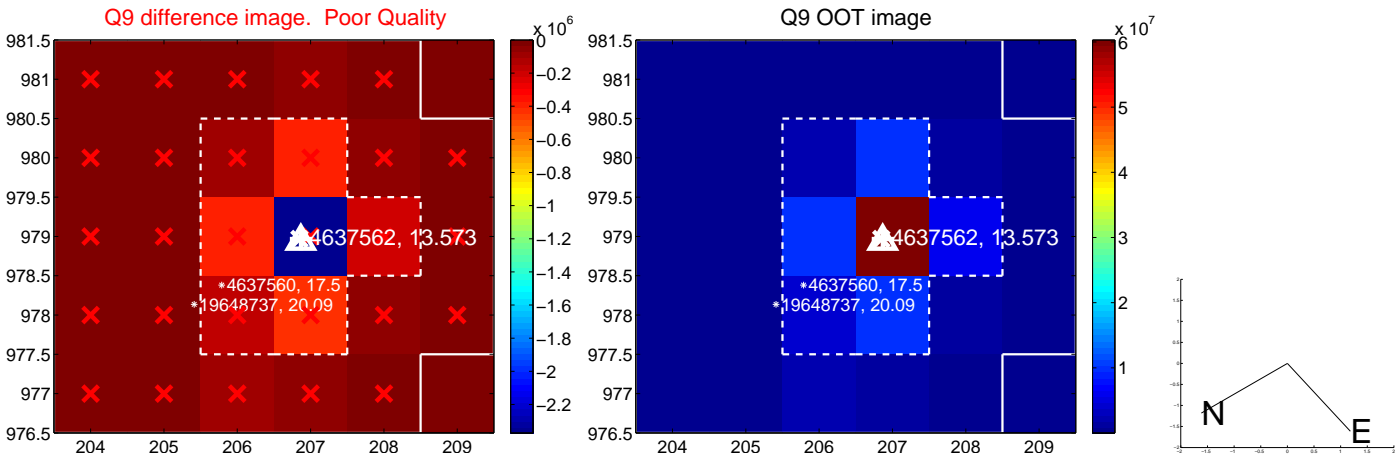


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

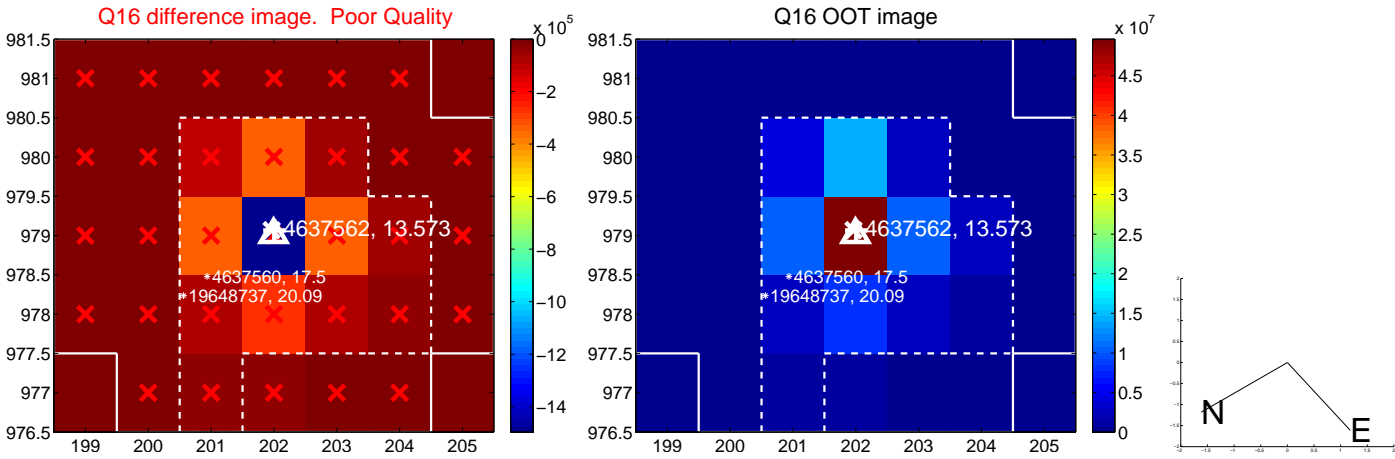
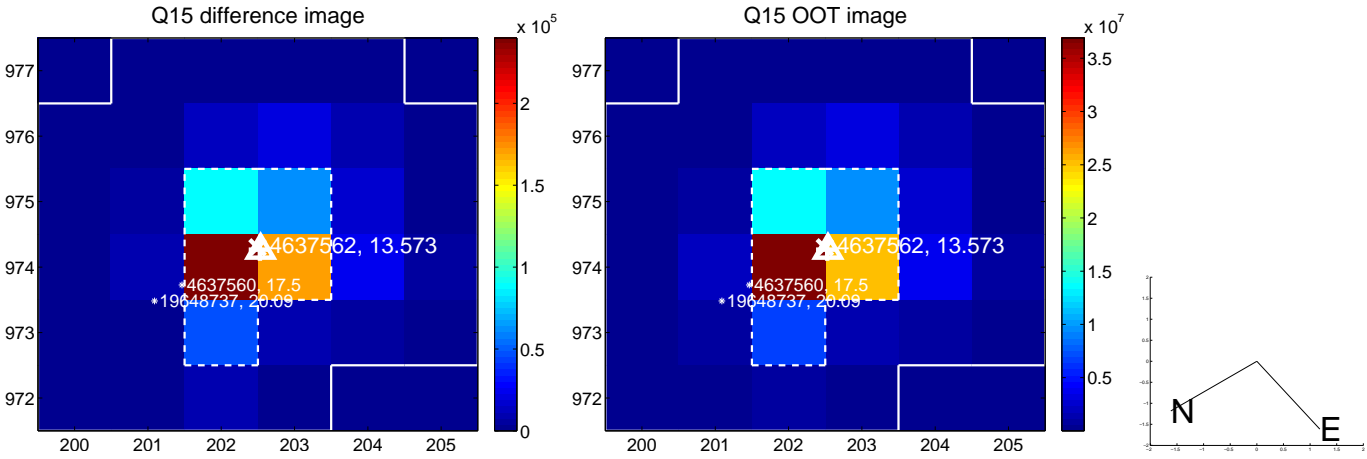
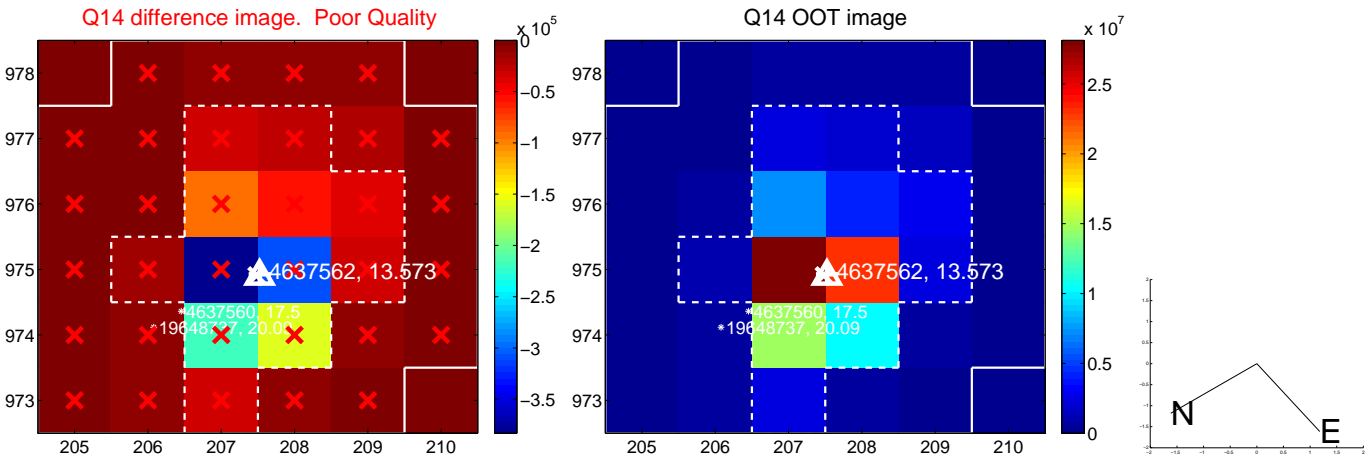
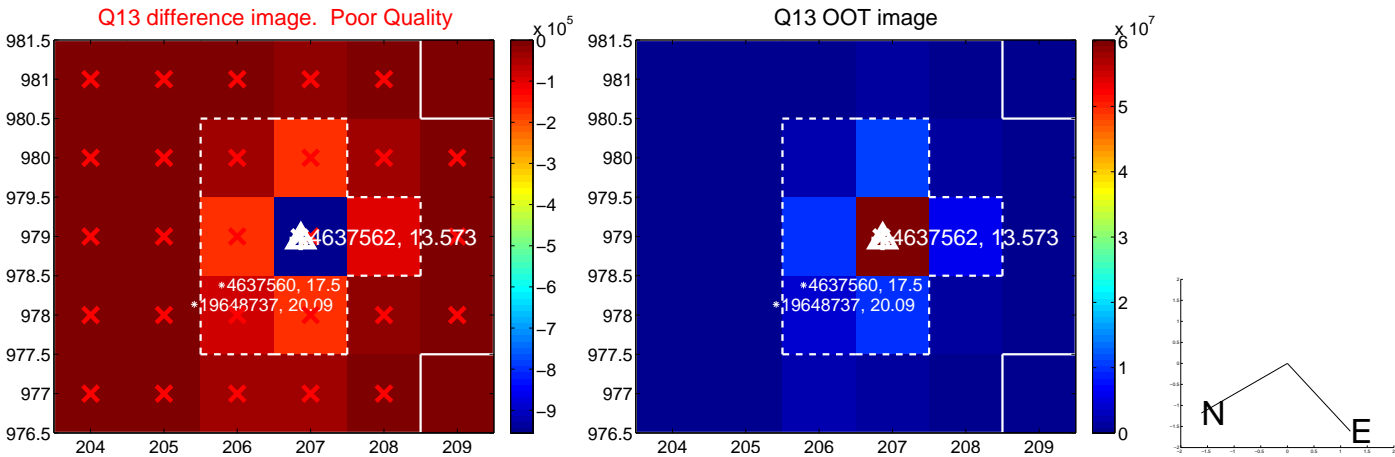
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



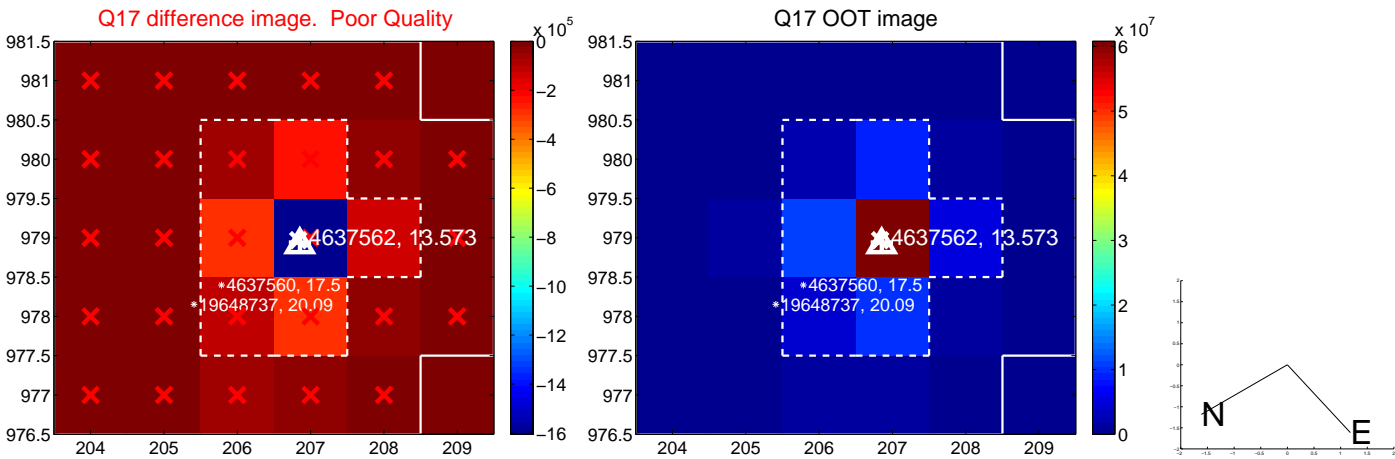
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

