

KIC 005955427

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})
005955427-01	OBS	8112.01	213.199900	309.944286	785.3	15.714	7.9	7.9	0.75	4594	2.21	0.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005955427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—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.

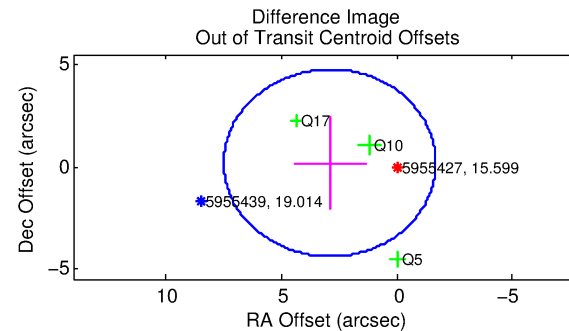
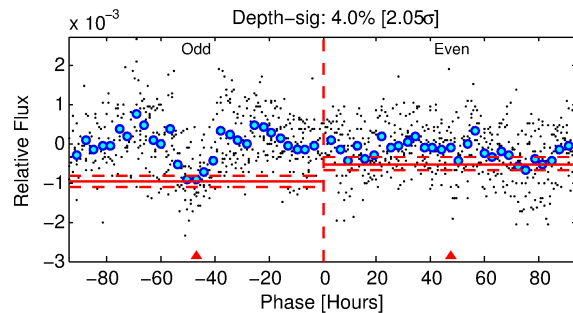
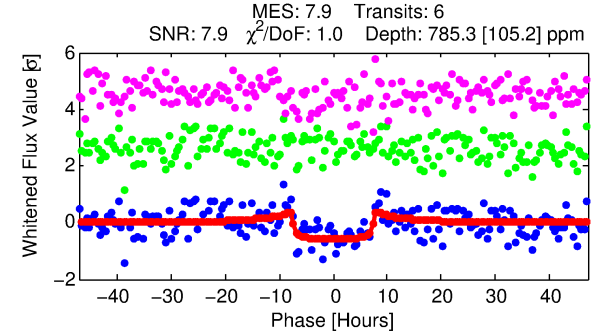
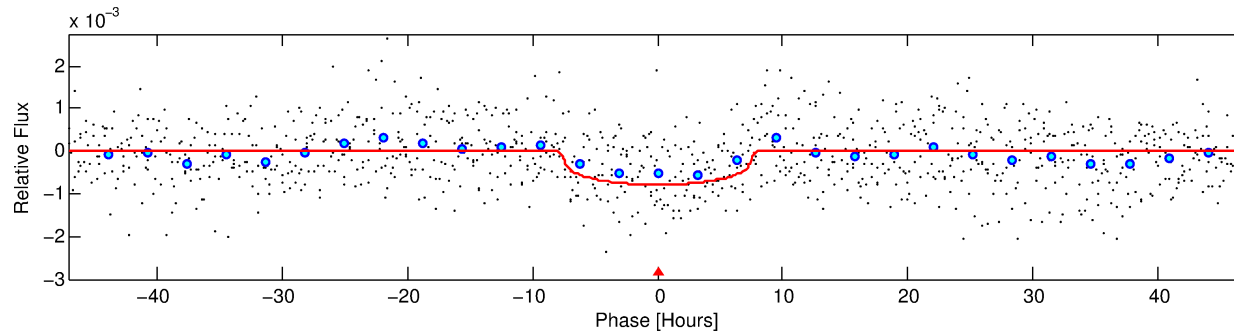
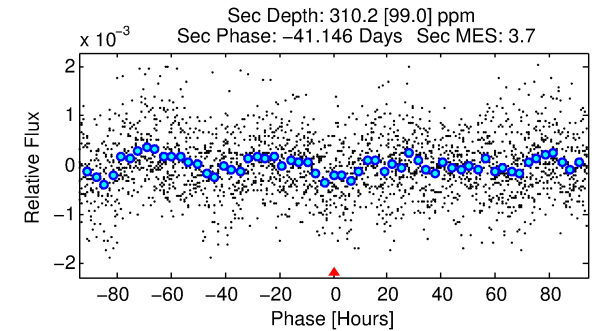
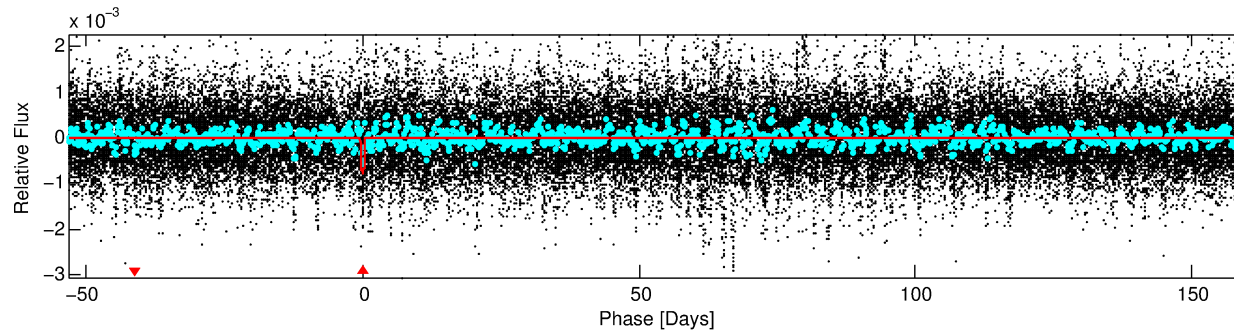
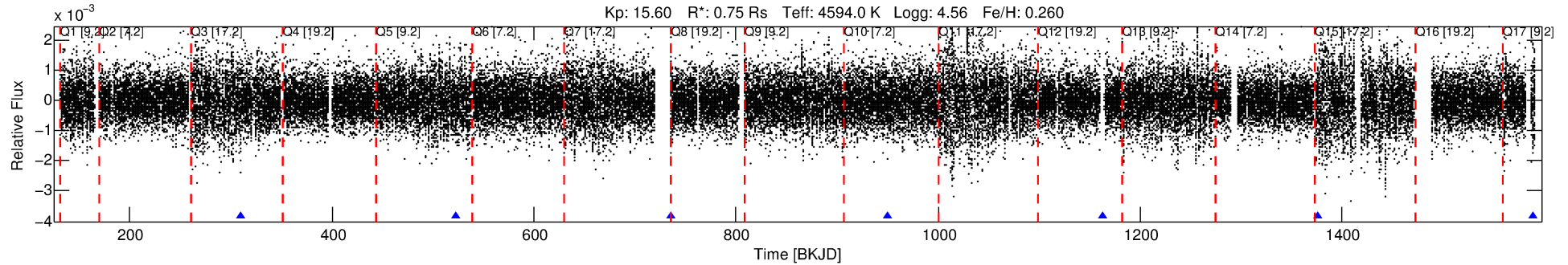
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005955427-01

No Significant Match Found

DV One-Page Summary

KIC: 5955427 Candidate: 1 of 1 Period: 213.200 d



DV Fit Results:

Period = 213.19990 [0.00529] d
Epoch = 309.9443 [0.0188] BKJD
Rp/R* = 0.0269 [0.0096]
a/R* = 81.55 [88.86]
b = 0.66 [0.95]
Seff = 0.56 [0.09]
Teq = 221 [9] K
Rp = 2.21 [0.81] Re
a = 0.6329 [0.0454] AU
Ag = 13986.17 [11067.30] [1.26σ]
Teffp = 3714 [737] K [4.74σ]

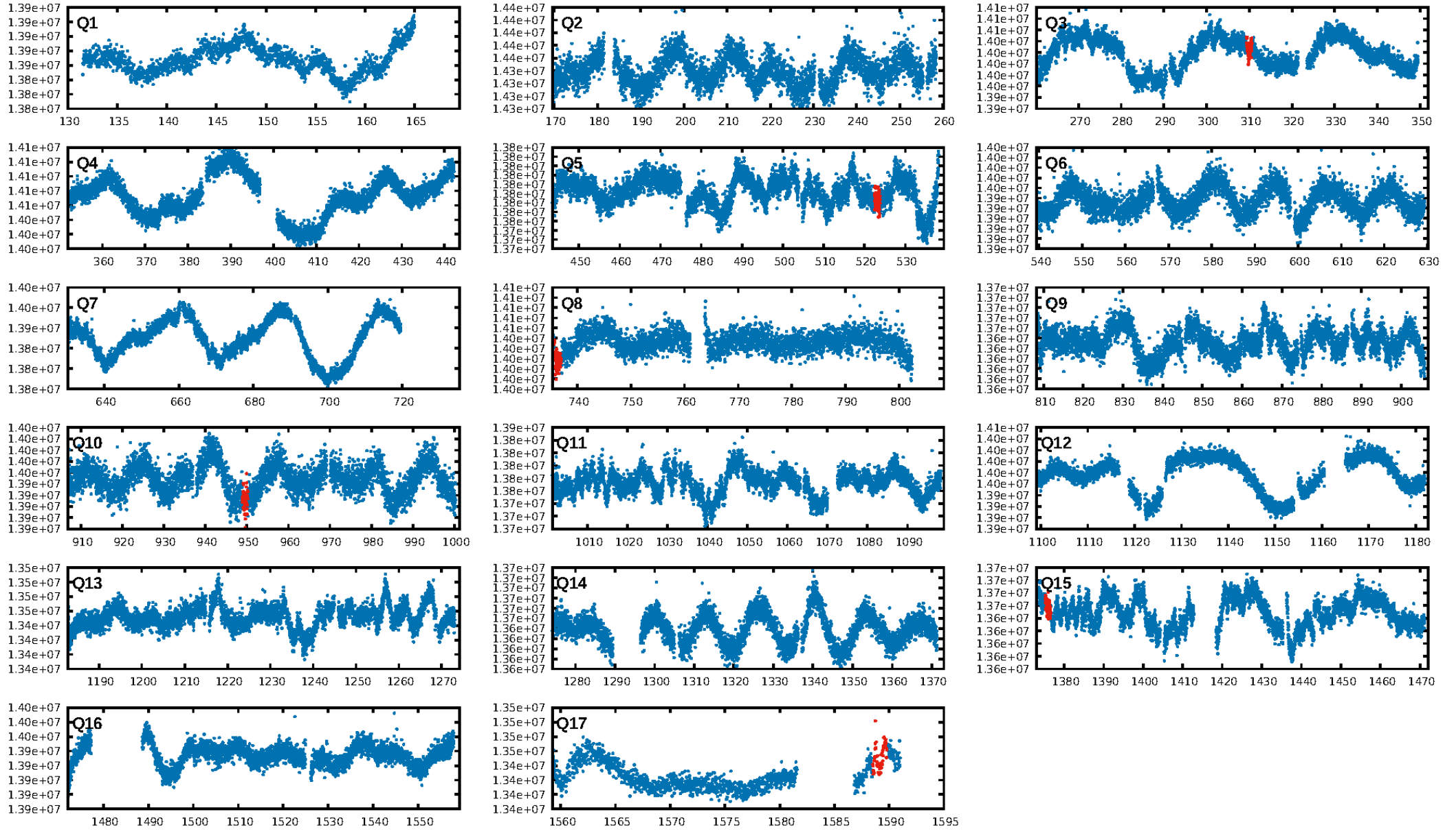
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.45e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -2.474
Centroid-sig: 0.0%
Centroid-so: 2.236 arcsec [1.74σ]
OotOffset-rm: 2.907 arcsec [1.90σ]
KicOffset-rm: 3.002 arcsec [1.97σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [5/5]

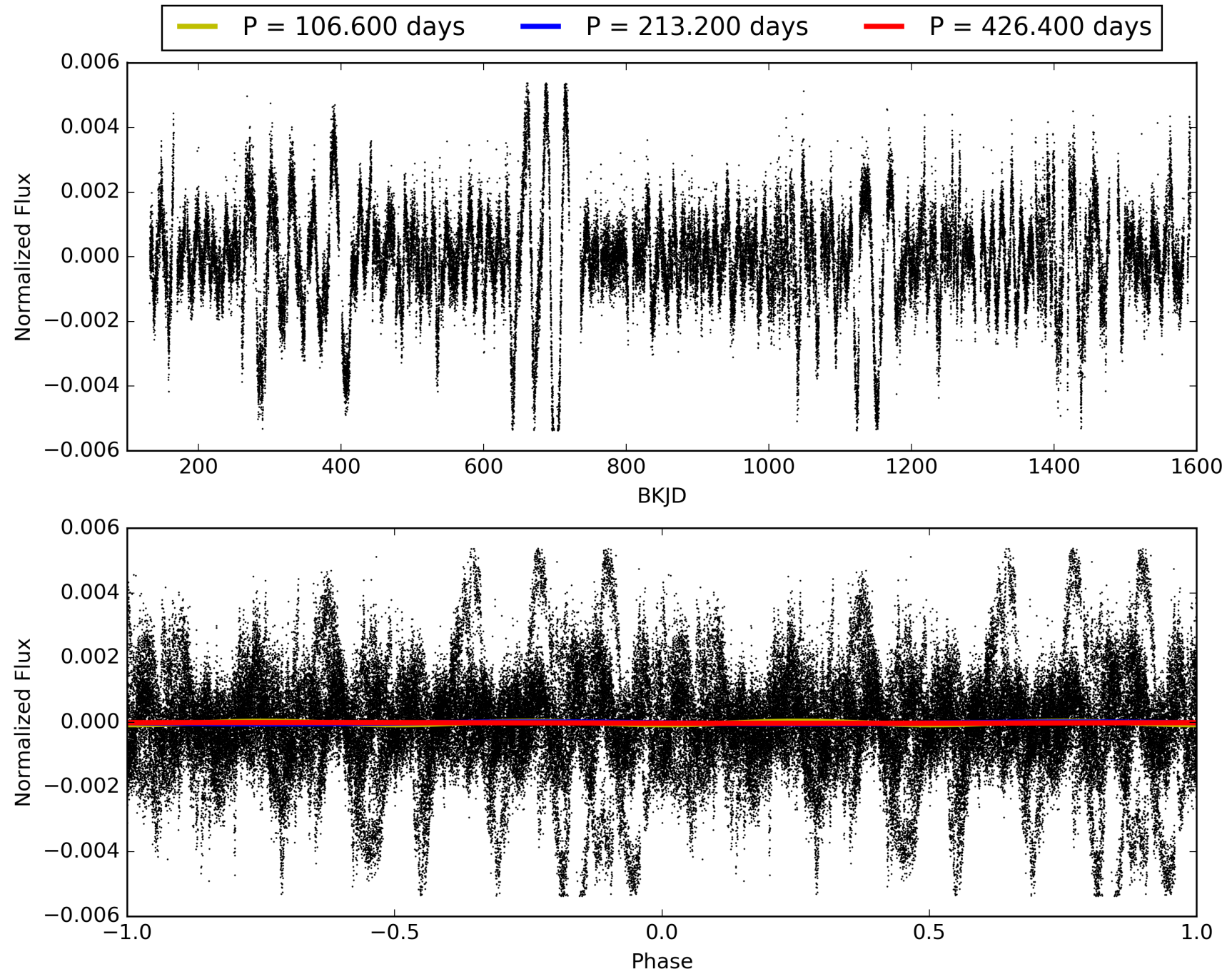
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:30:51 Z

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

TCE 005955427-01, PDC Light Curves

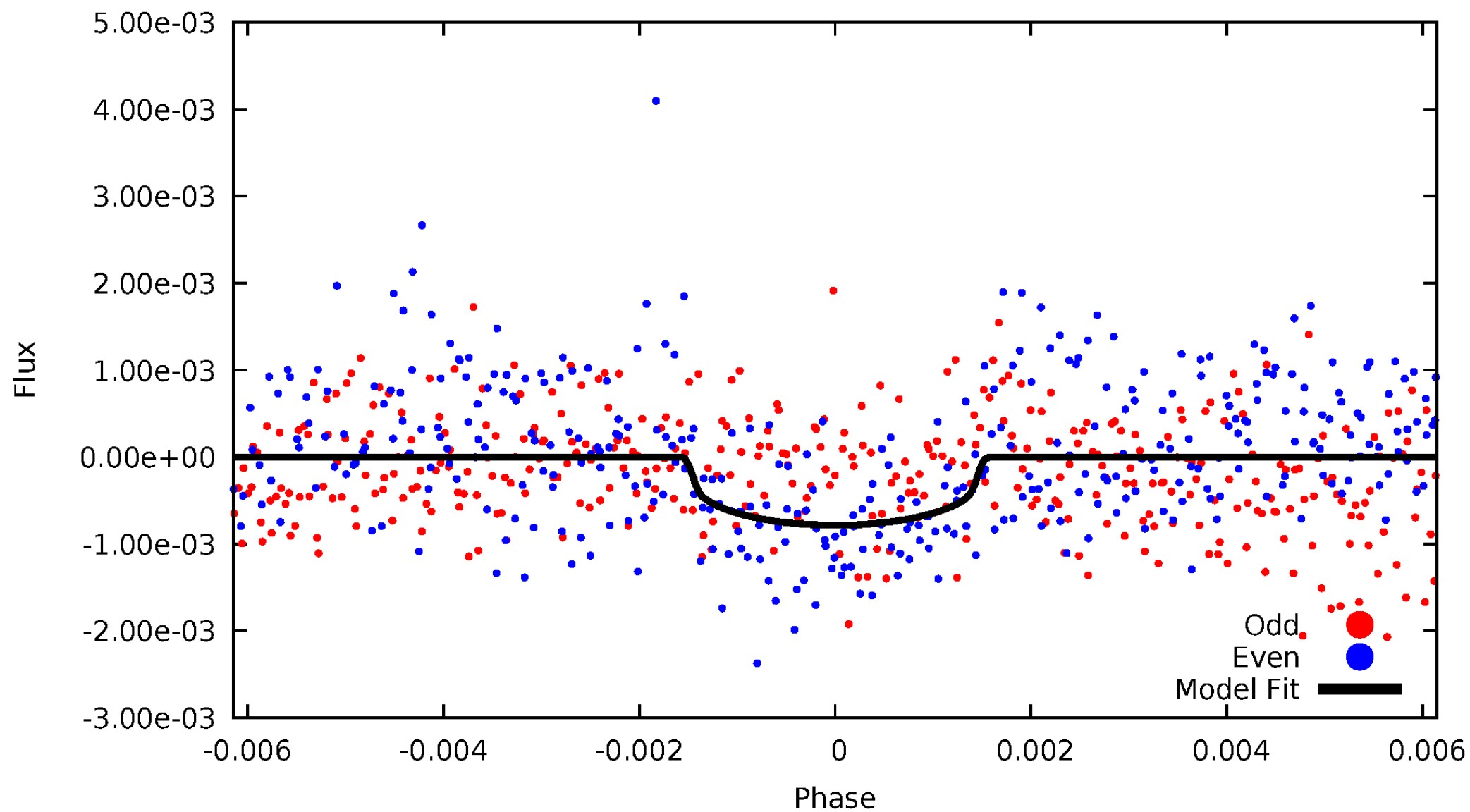


TCE 005955427-01



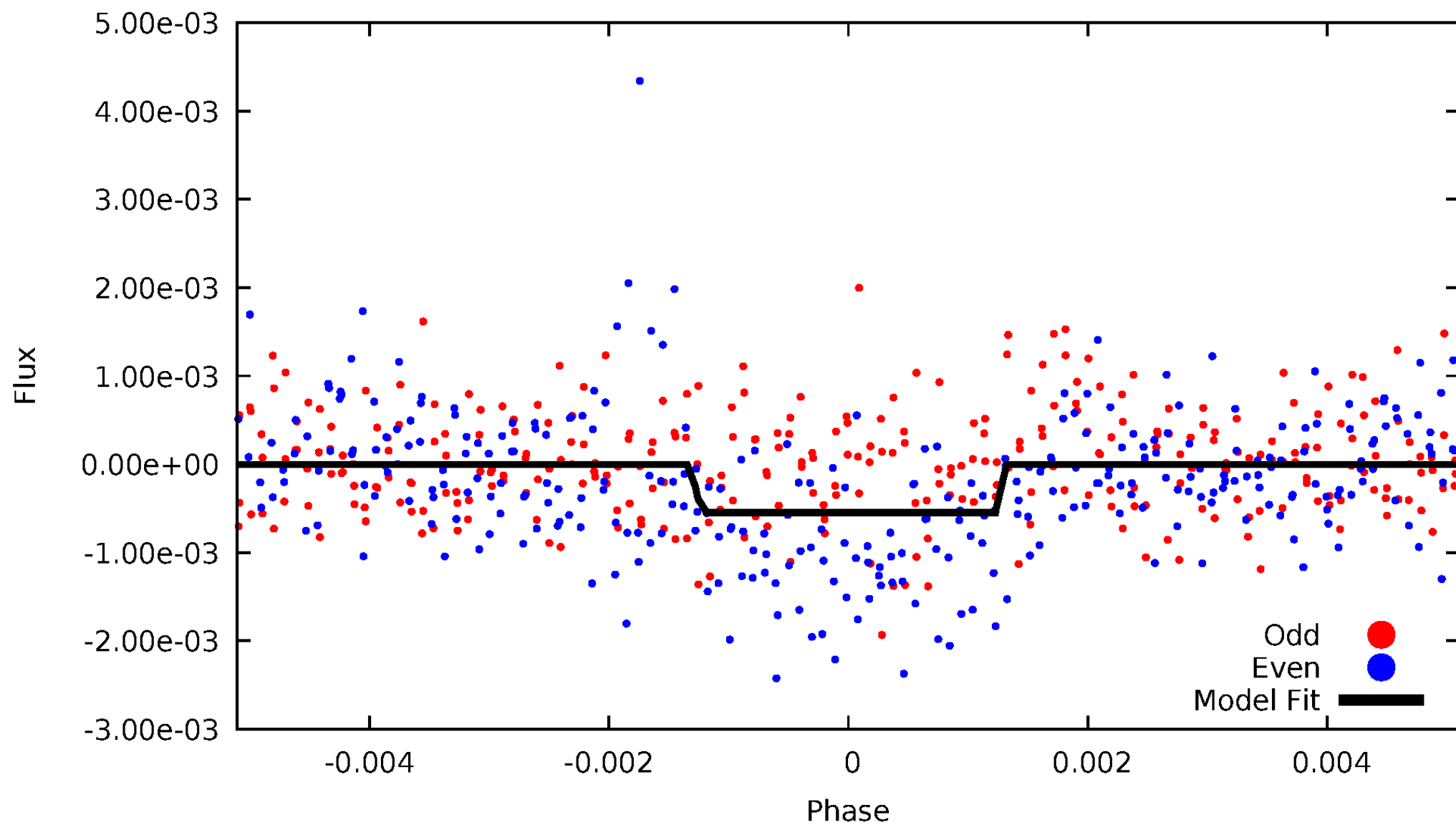
DV Odd/Even

TCE 005955427-01



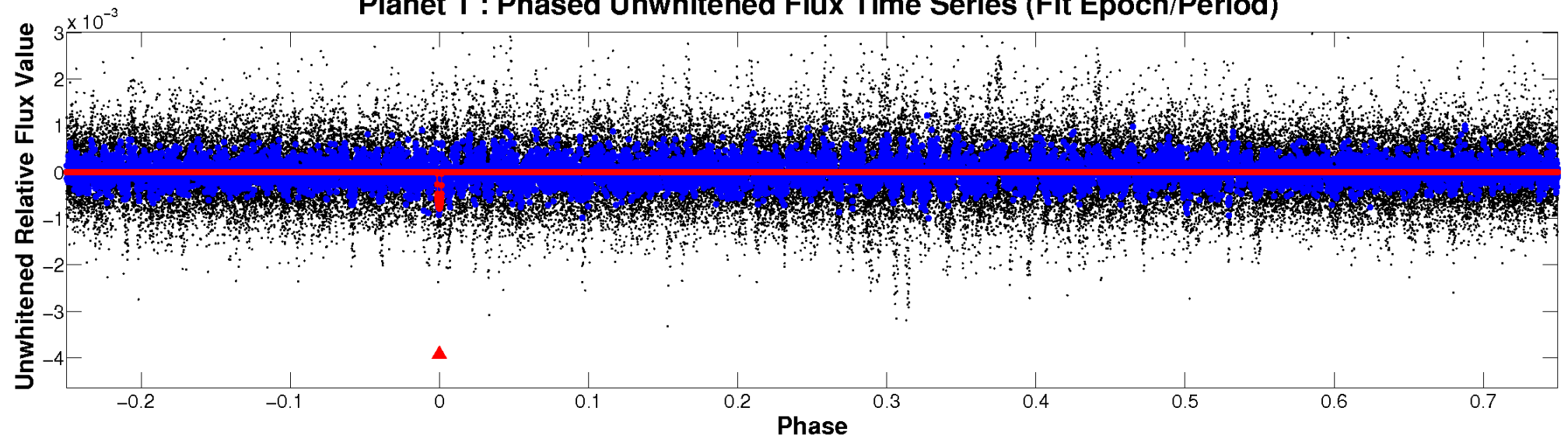
ALT Odd/Even

TCE 005955427-01

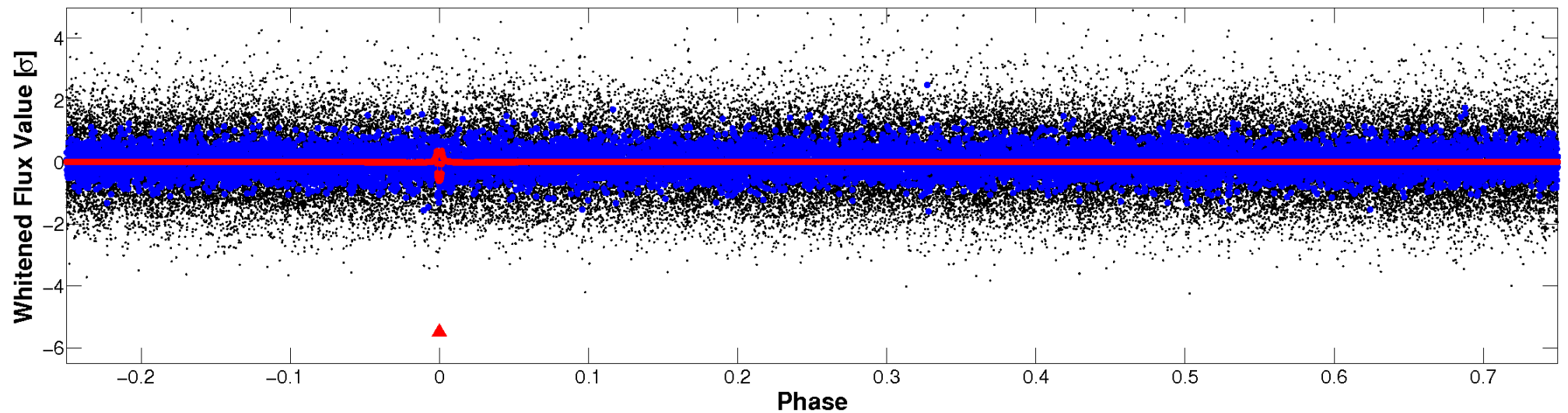


Non-Whitened Vs. Whitened Light Curve

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

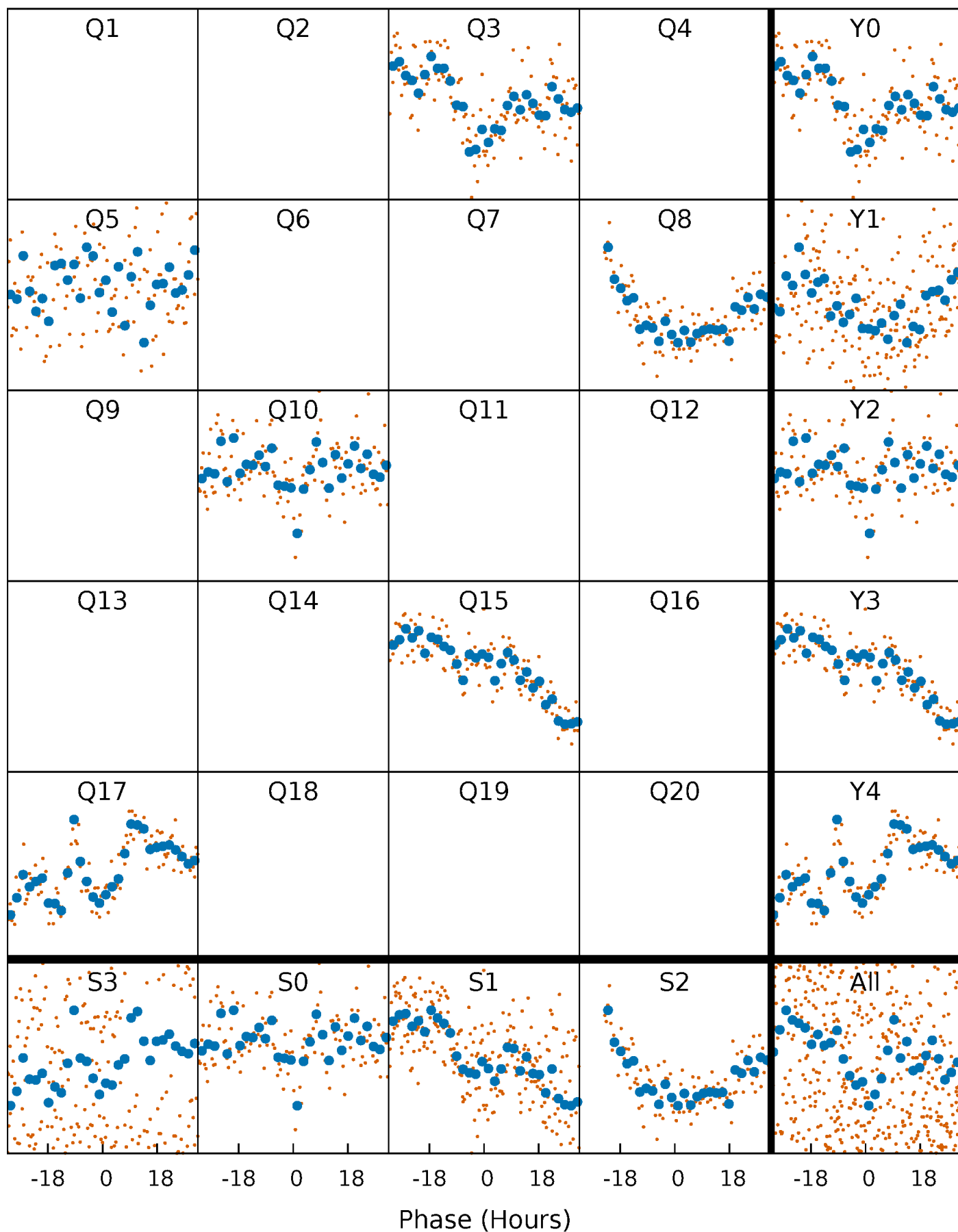


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



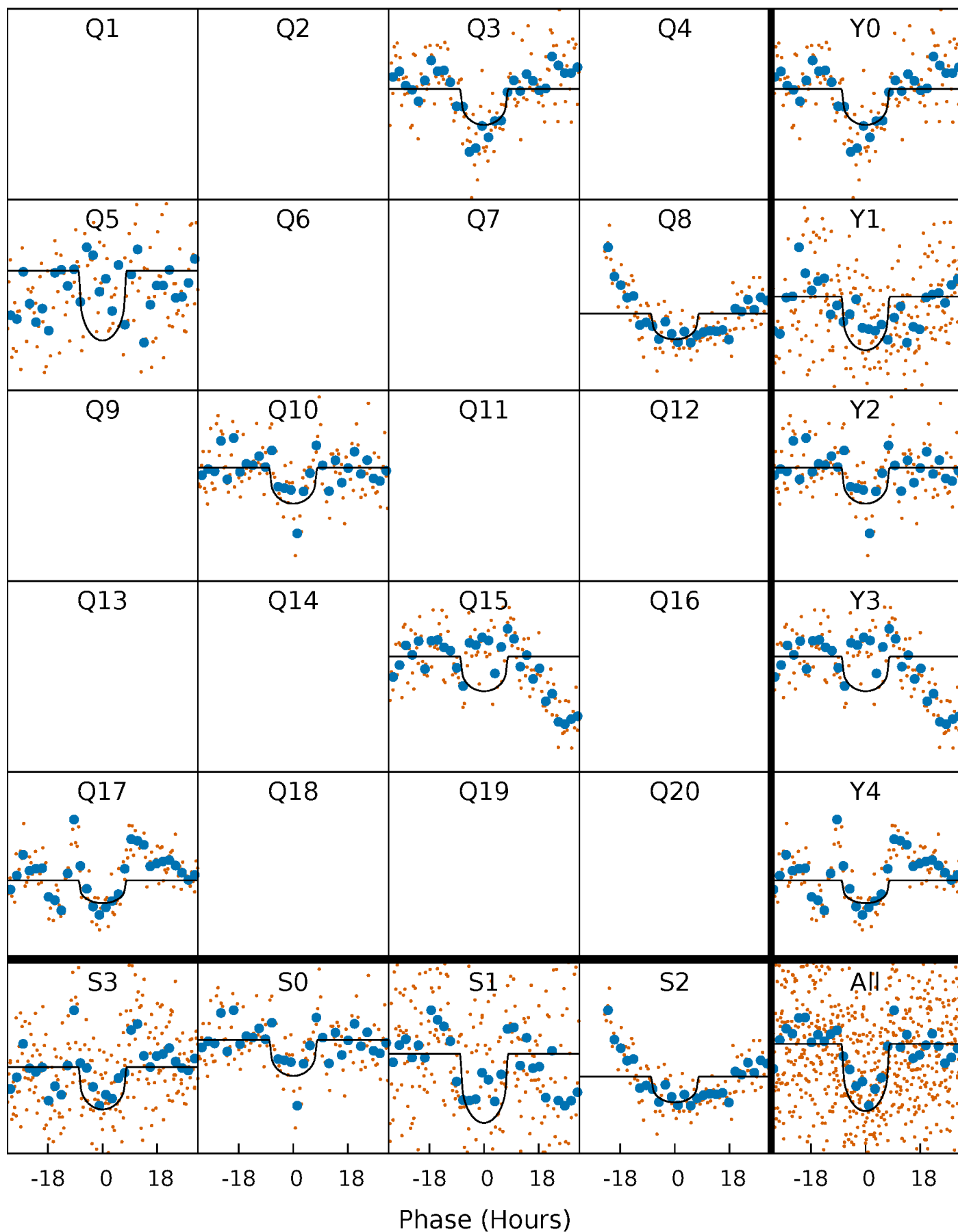
PDC Quarter-Phased Transit Curves

TCE 005955427-01 P=213.199900 Days $T_0=309.944286$ (BKJD)



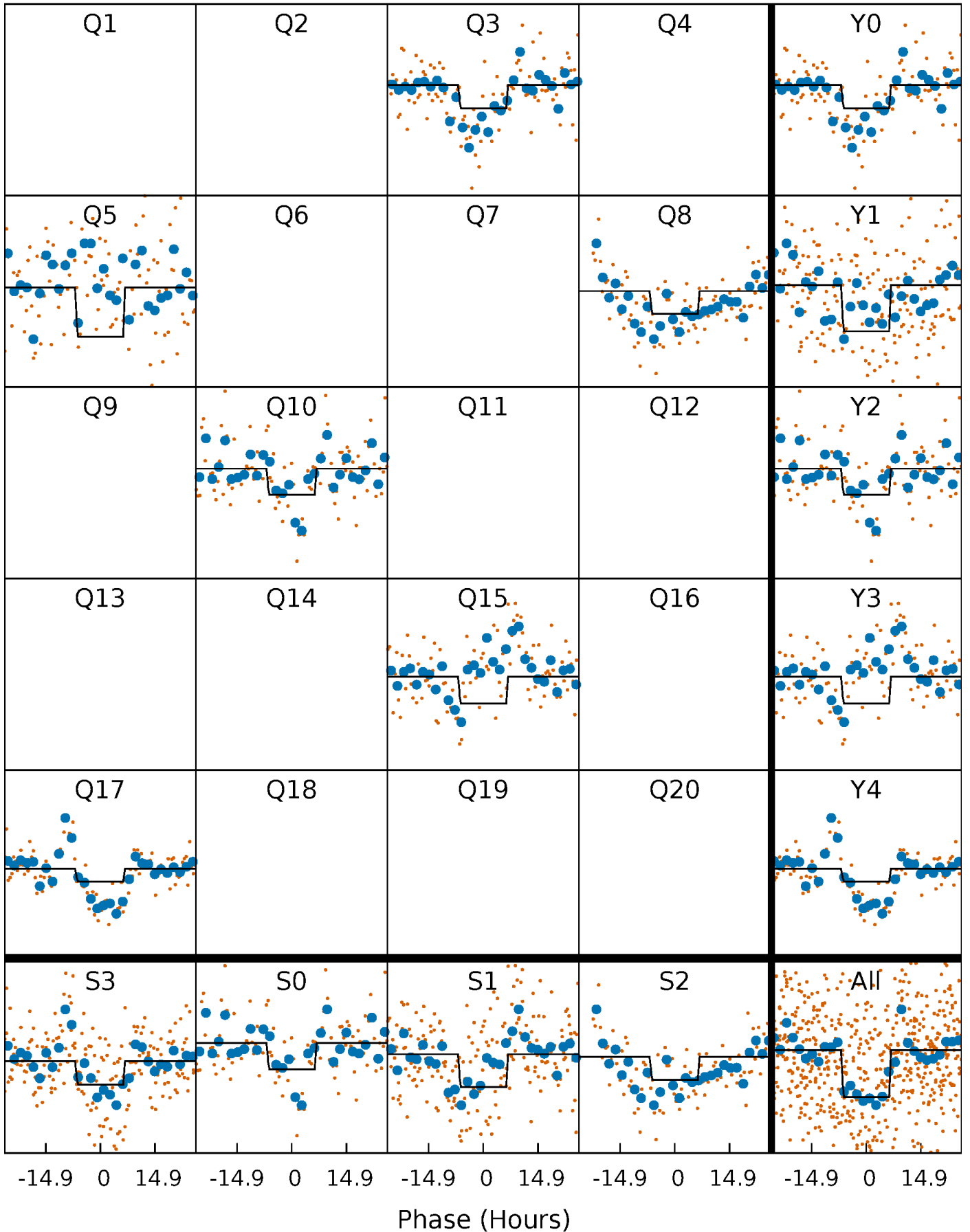
DV Quarter-Phased Transit Curves

TCE 005955427-01 $P=213.199900$ Days $T_0=309.944286$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

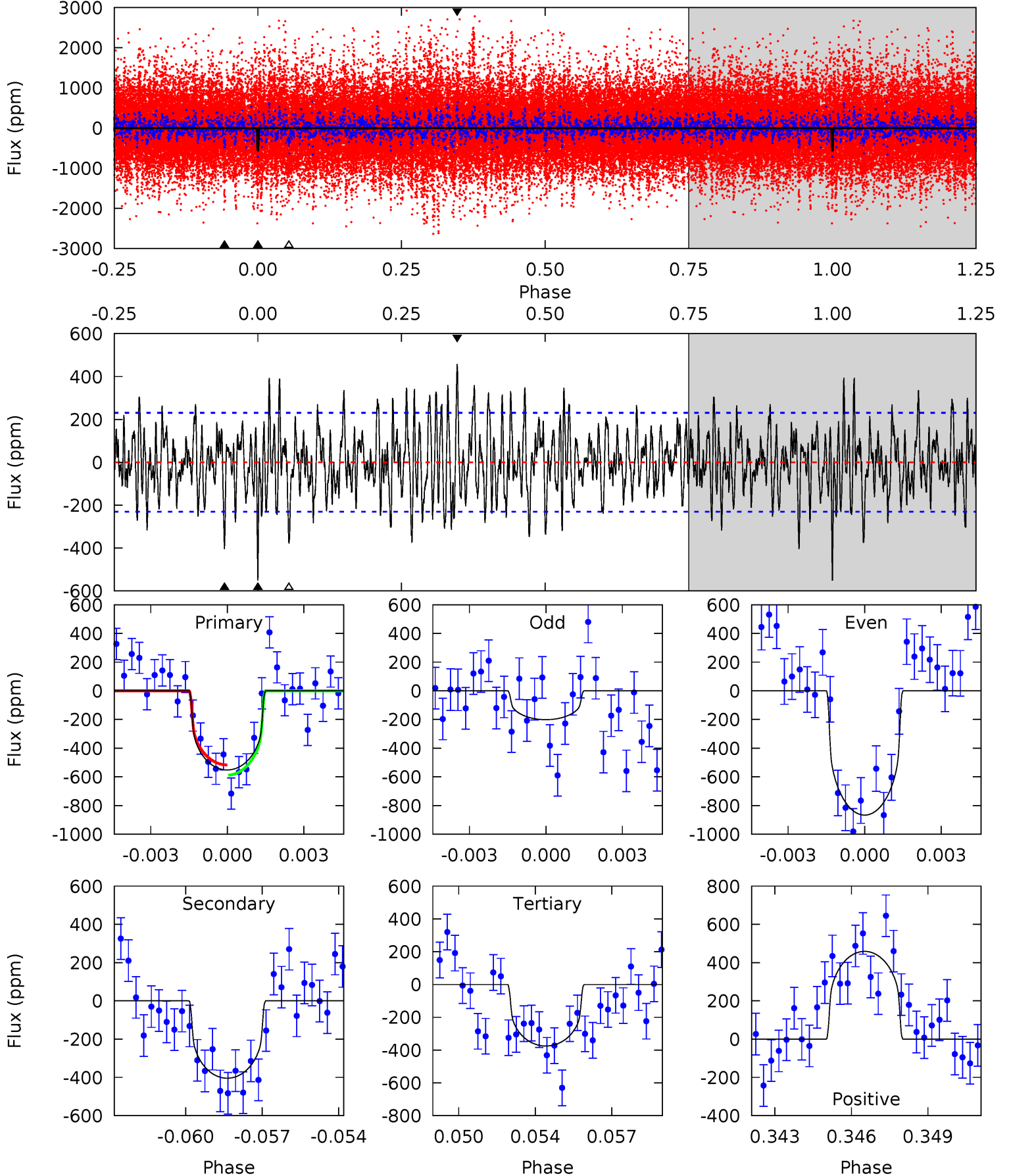
TCE 005955427-01 P=213.203765 Days $T_0=309.902305$ (BKJD)



DV Model-Shift Uniqueness Test

005955427-01, P = 213.199900 Days, E = 96.744386 Days

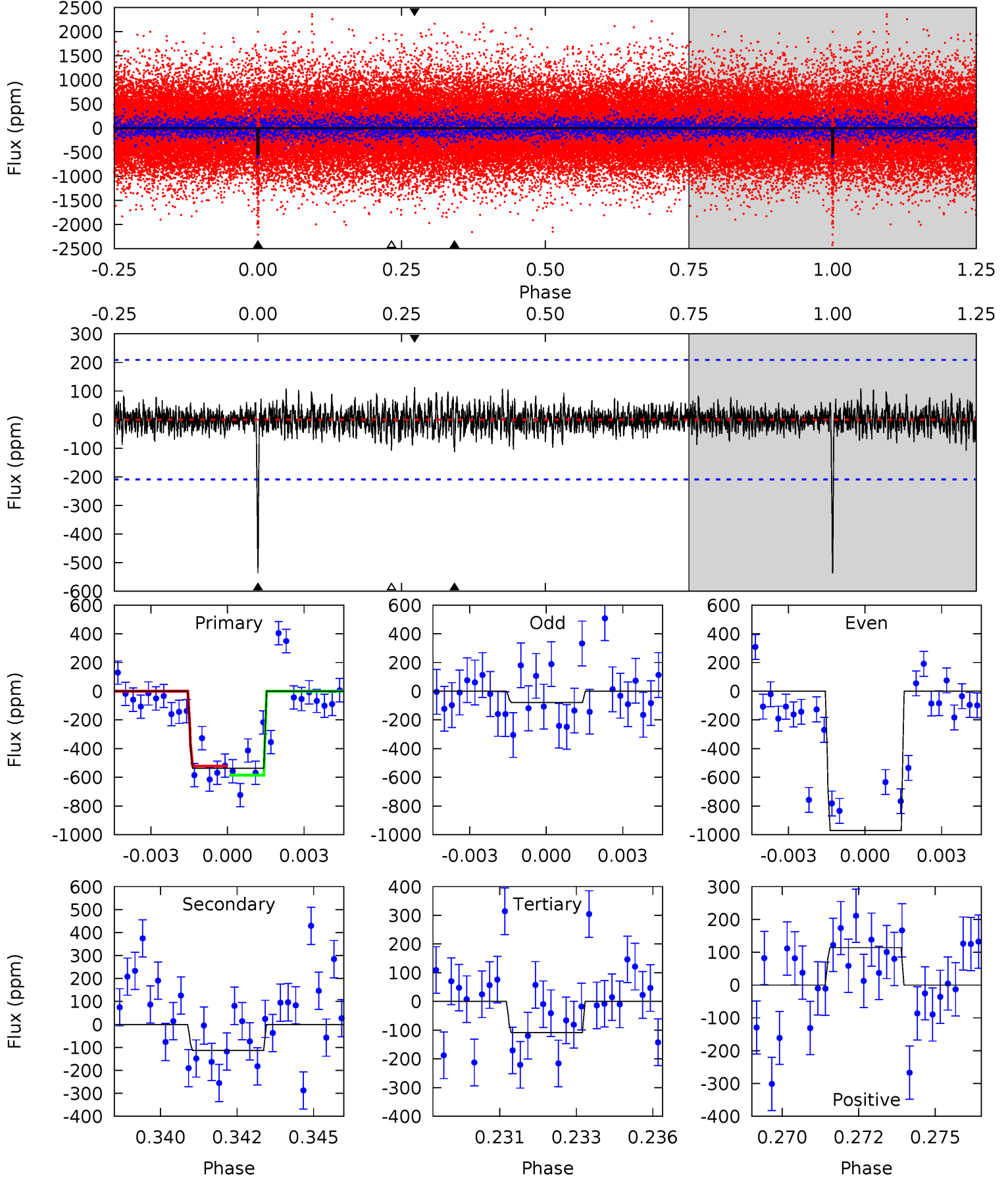
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	9.21	8.55	10.4	5.24	2.95	3.04	4.02	2.12	0.66	-1.24	7.61	0.81	0.45	0.81



Alt Model-Shift Uniqueness Test

005955427-01, $P = 213.203765$ Days, $E = 96.698540$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	2.86	2.73	2.88	5.28	3.01	0.73	10.8	10.7	0.13	-0.02	11.2	0.84	0.18	0.79



Stellar Parameters For KIC 005955427

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4594^{+138}_{-138}	$4.557^{+0.060}_{-0.020}$	$0.260^{+0.150}_{-0.300}$	$0.752^{+0.031}_{-0.062}$	$0.744^{+0.049}_{-0.049}$	$2.466^{+0.621}_{-0.190}$
	+3%/-3%	+1%/-0%	+58%/-115%	+4%/-8%	+7%/-7%	+25%/-8%
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 005955427-01 / KOI 8112.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-404 ± 44	$2.19^{+0.78}_{-0.79}$	307^{+11}_{-10}	4121^{+771}_{-422}	18704^{+26974}_{-8694}
Alt.	-113 ± 40	$1.91^{+0.83}_{-0.77}$	307^{+10}_{-10}	3452^{+707}_{-390}	6515^{+13044}_{-3651}

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

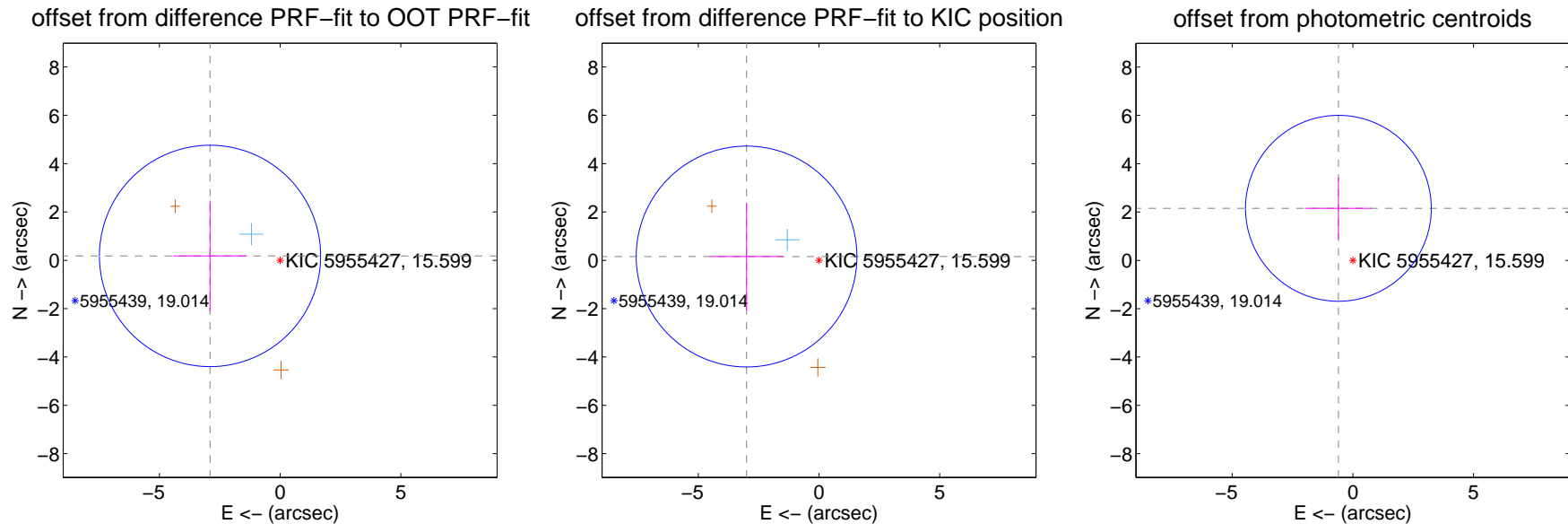
DV Centroid Data

Supplemental centroid analysis for 005955427-01. Kepler magnitude: 15.60. Transit SNR 7.94

There are 1 quarters with good PRF difference image offsets

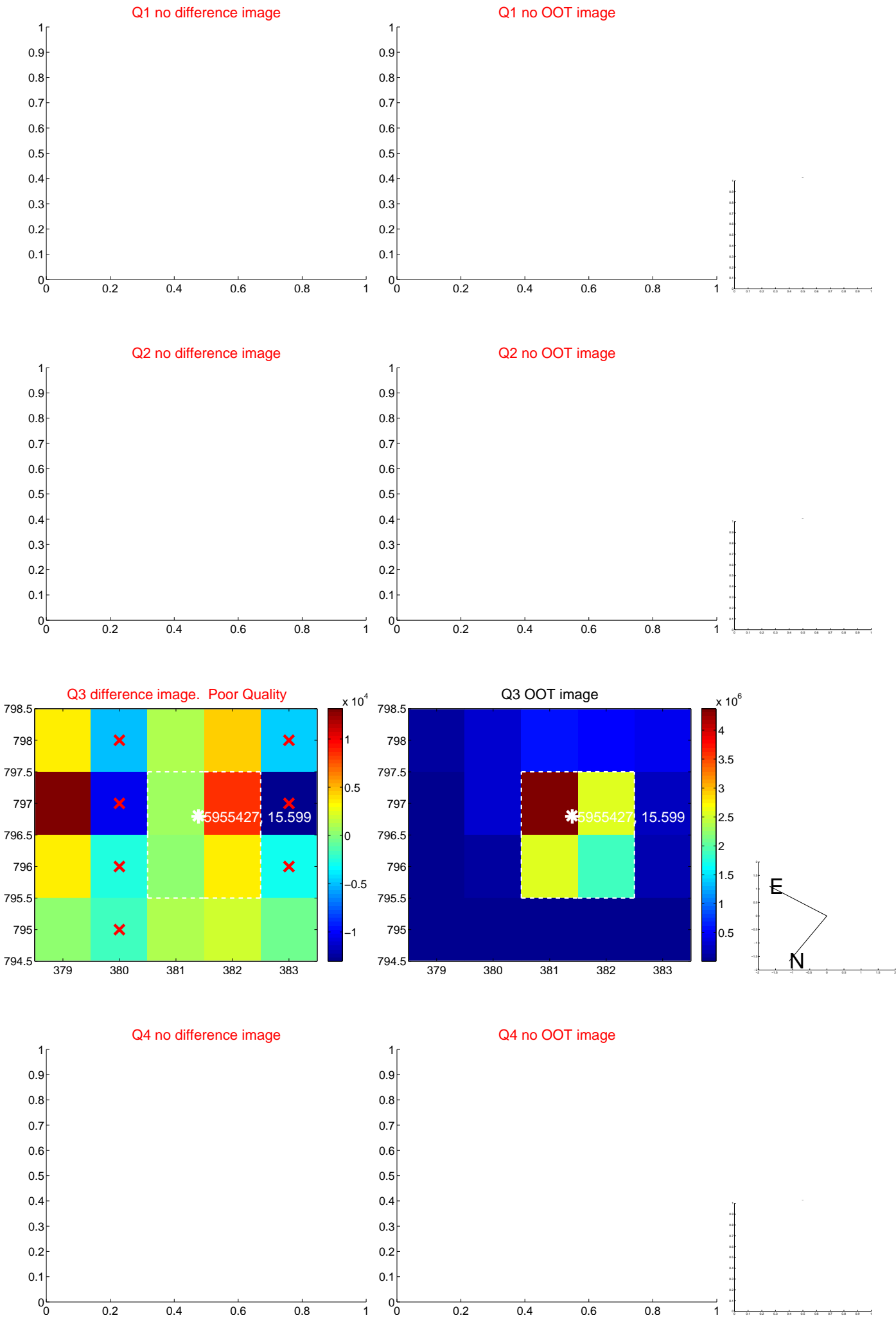
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.907 ± 1.527	1.90	2.901 ± 1.523	0.180 ± 2.287
PRF-fit source offset from KIC position	3.002 ± 1.523	1.97	2.998 ± 1.521	0.156 ± 2.230
photometric centroid source offset	2.24 ± 1.28	1.74	0.60 ± 1.38	2.15 ± 1.27

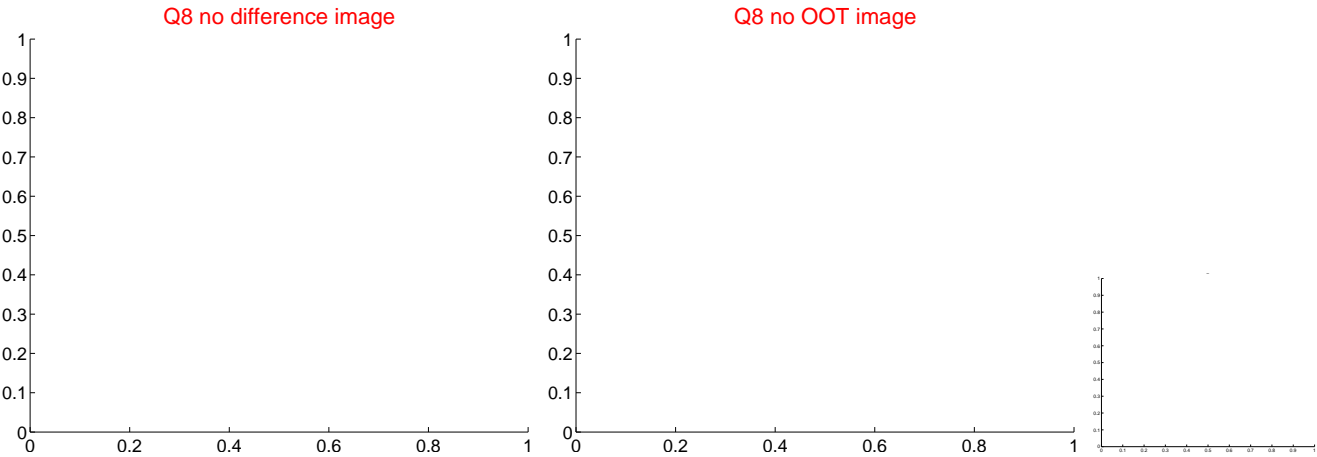
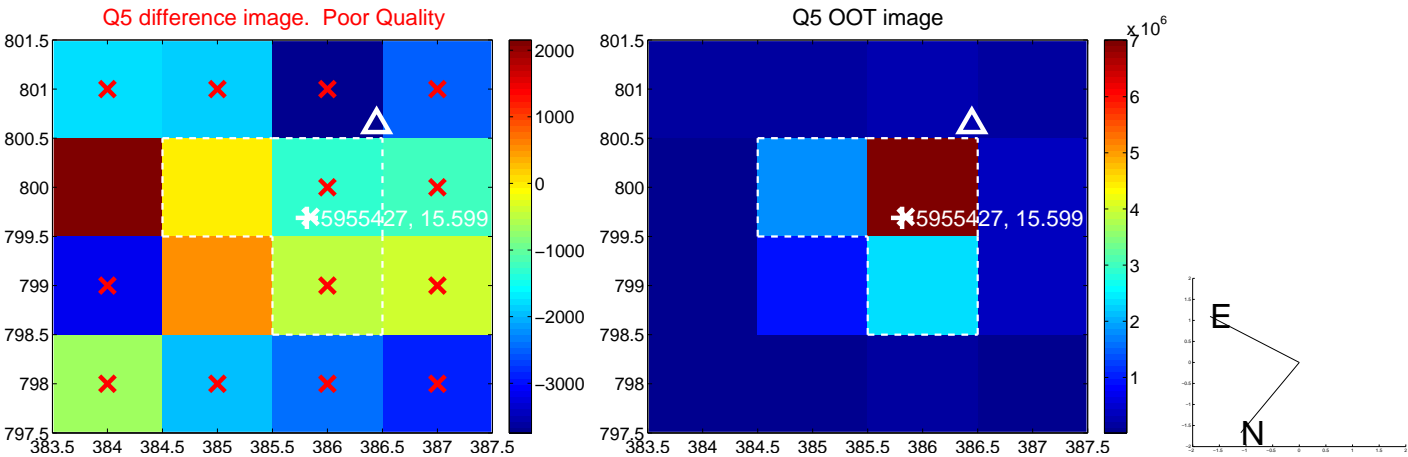


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

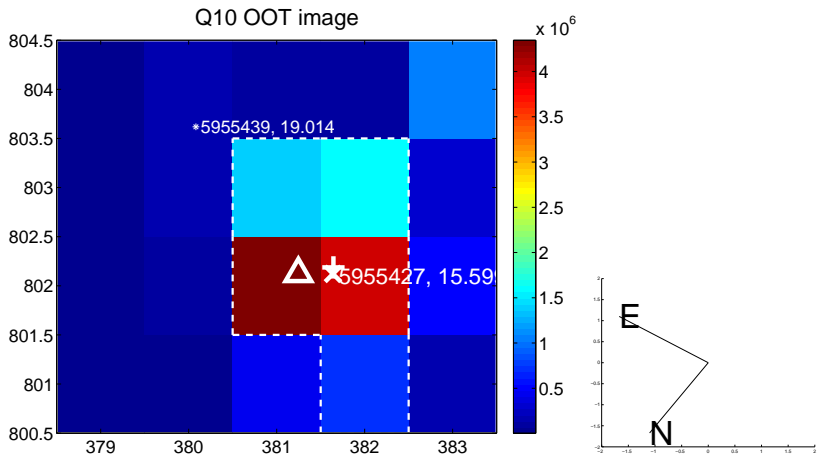
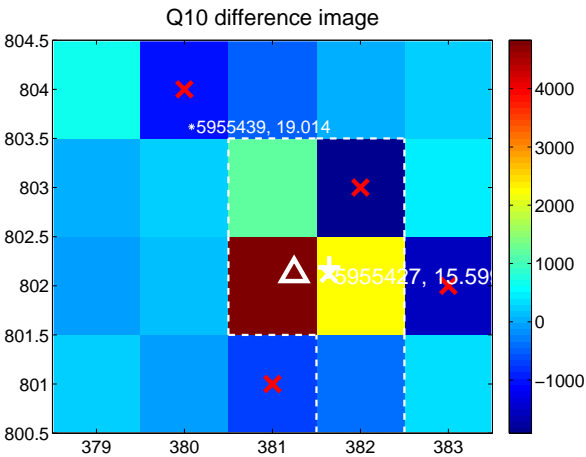


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

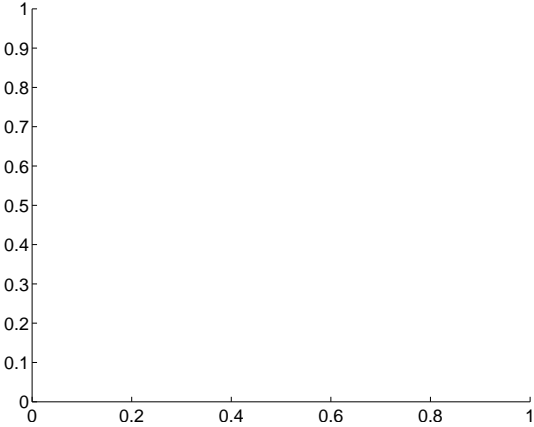
Q9 no difference image



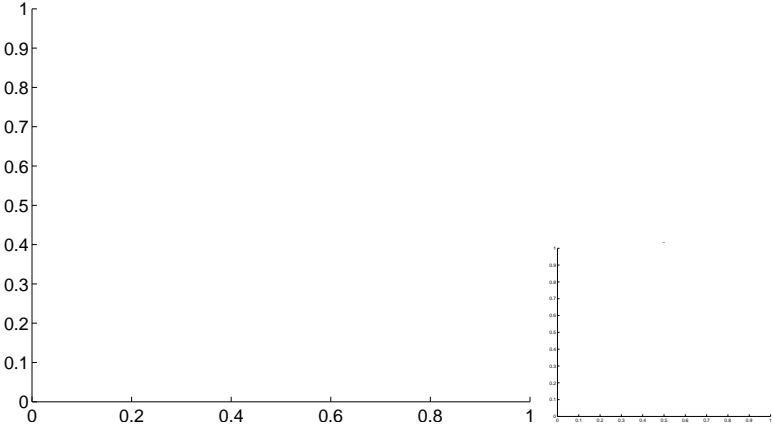
Q9 no OOT image



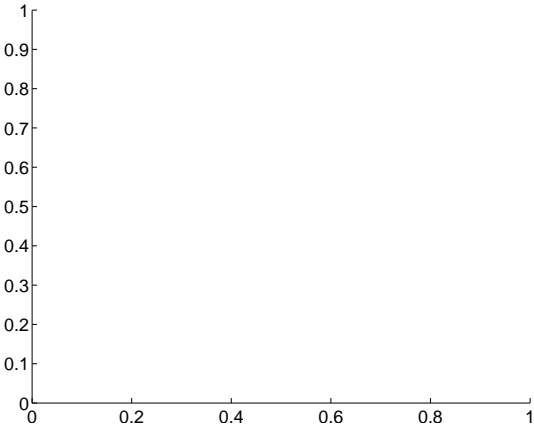
Q11 no difference image



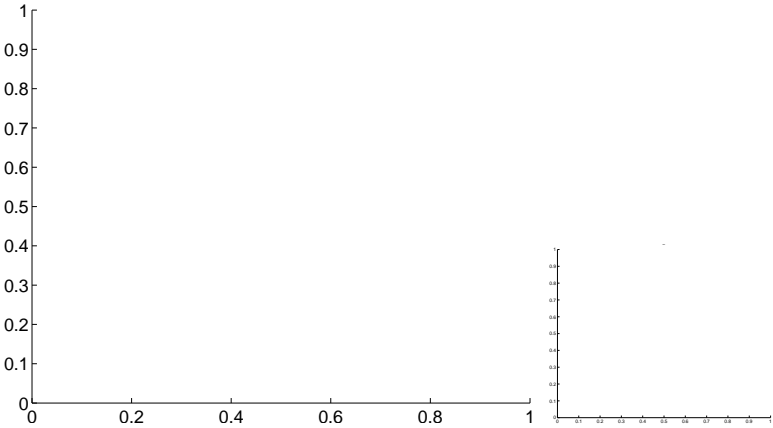
Q11 no OOT image



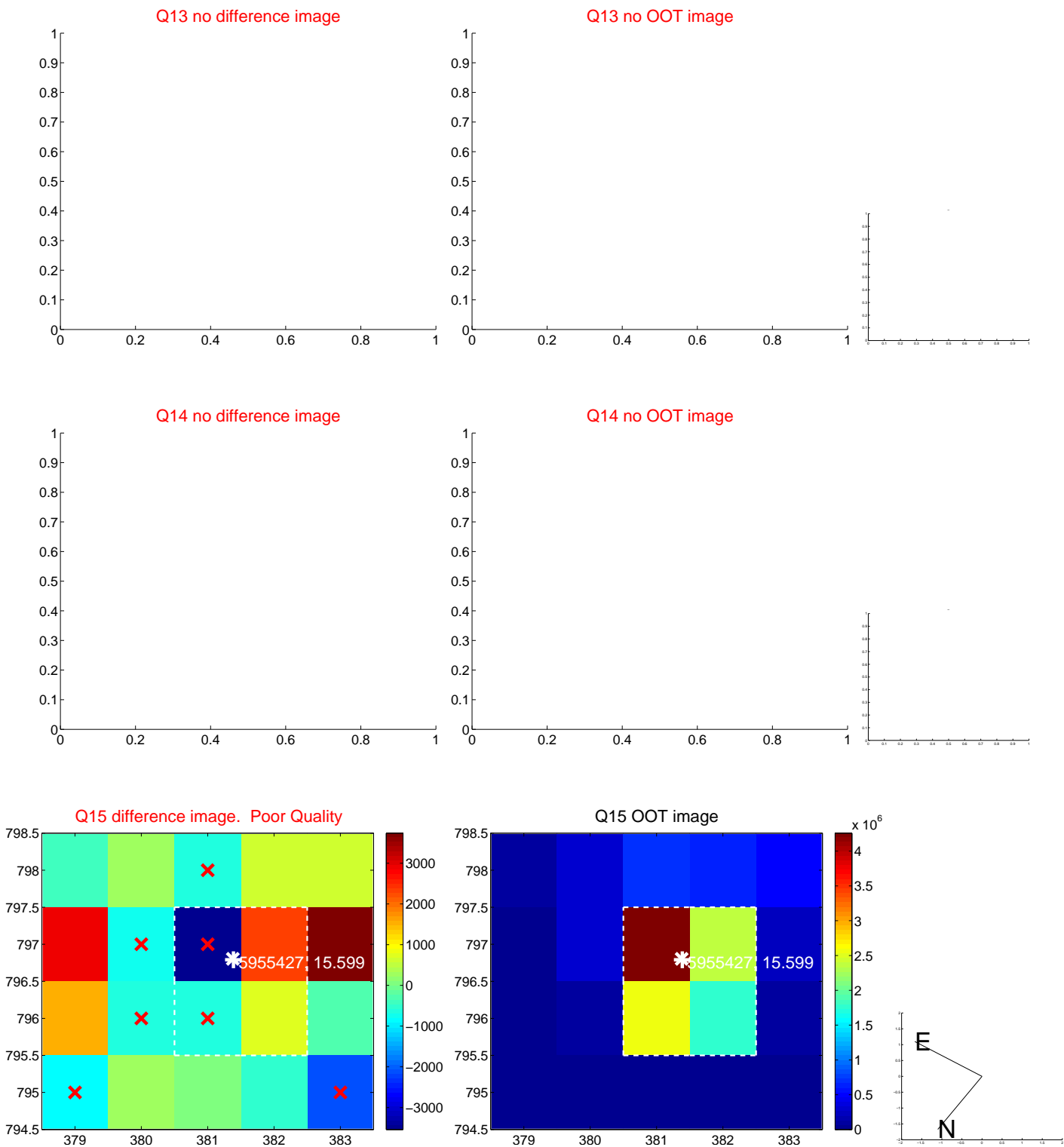
Q12 no difference image



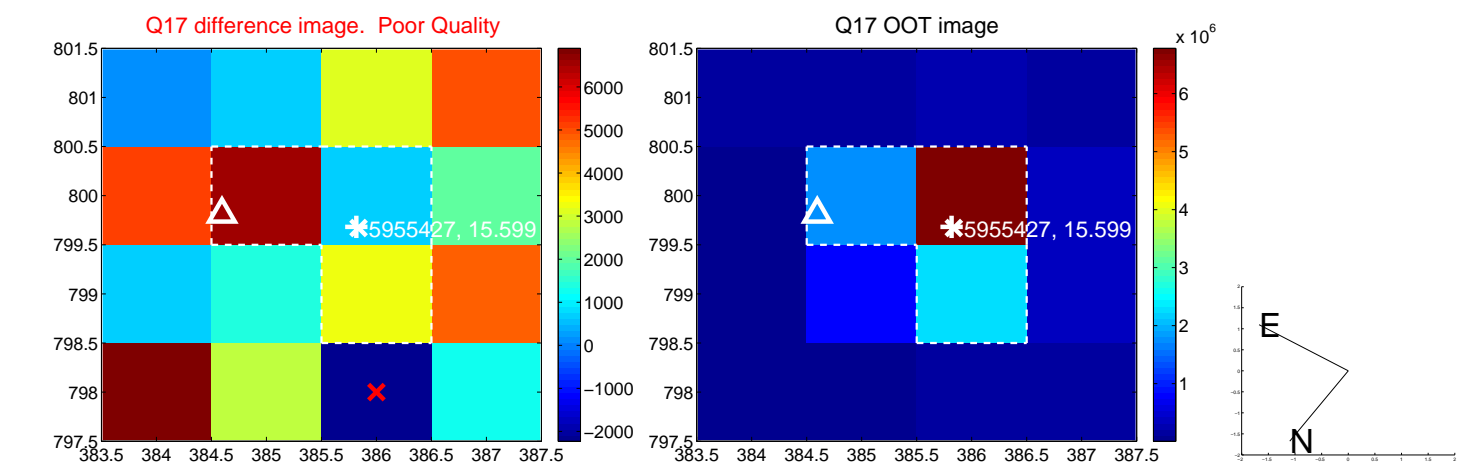
Q12 no OOT image



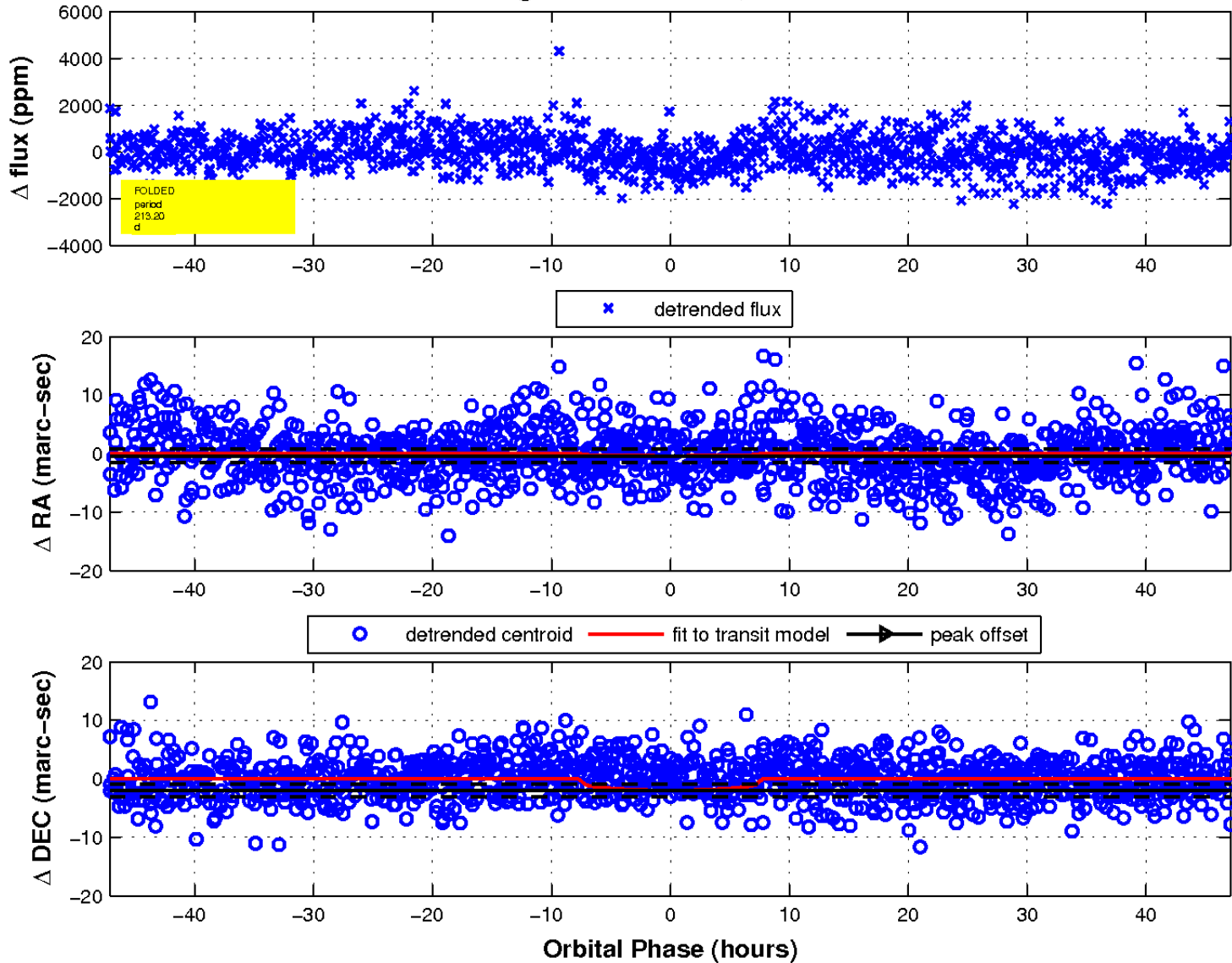
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

