

KIC 005112754

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})
005112754-01	OBS	No	21.284467	133.455268	114.6	33.381	7.7	11.2	0.79	6103	0.90	43.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005112754-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

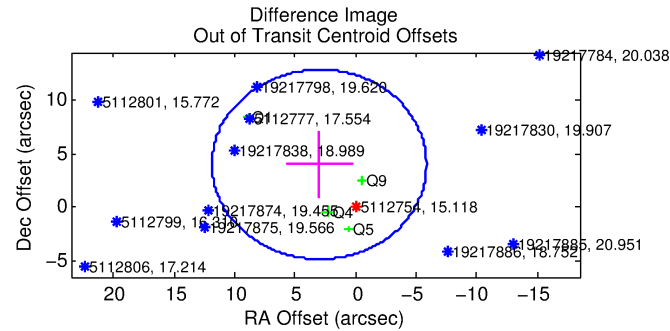
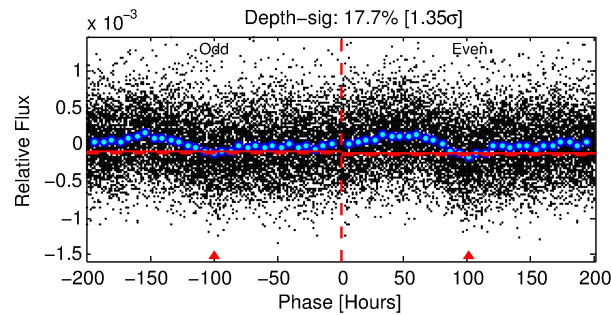
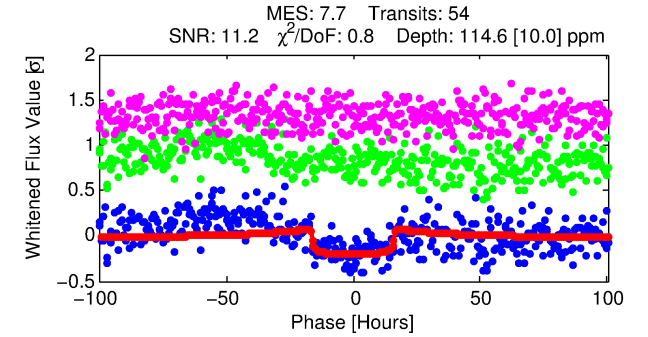
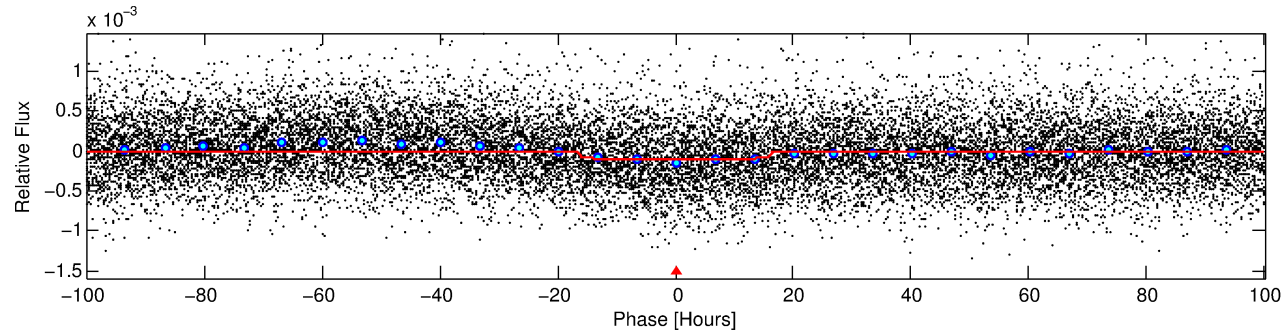
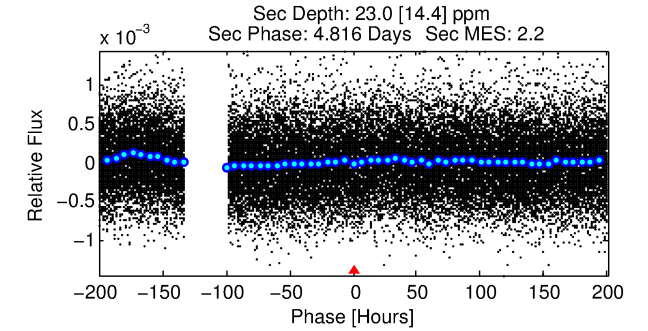
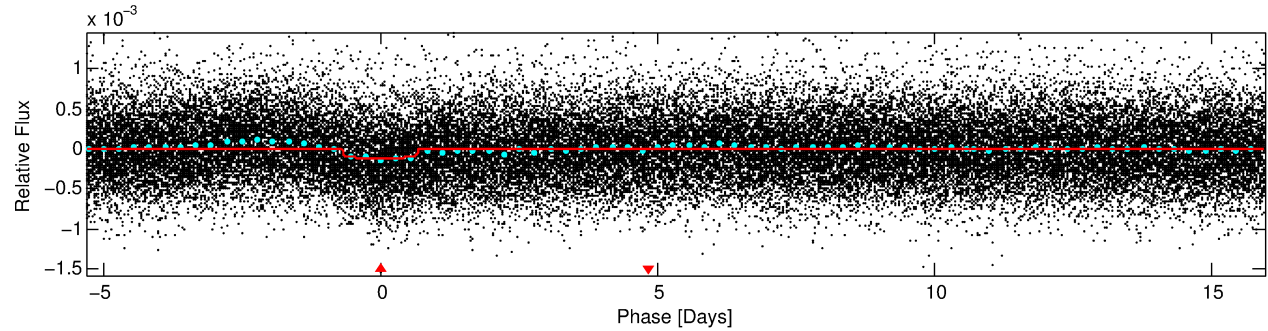
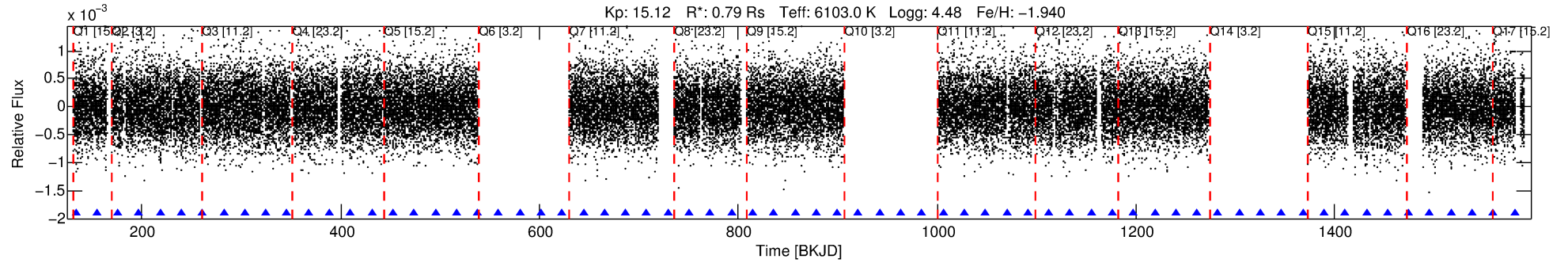
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005112754-01

No Significant Match Found

DV One-Page Summary

KIC: 5112754 Candidate: 1 of 1 Period: 21.284 d



DV Fit Results:

Period = 21.28447 [0.00066] d
Epoch = 133.4553 [0.0249] BKJD
Rp/R* = 0.0105 [0.0016]
a/R* = 3.69 [2.73]
b = 0.69 [0.61]
Seff = 43.99 [12.43]
Teq = 657 [46] K
Rp = 0.90 [0.18] Re
a = 0.1325 [0.0190] AU
Ag = 273.67 [201.70] [1.35σ]
Teffp = 4130 [732] K [4.74σ]

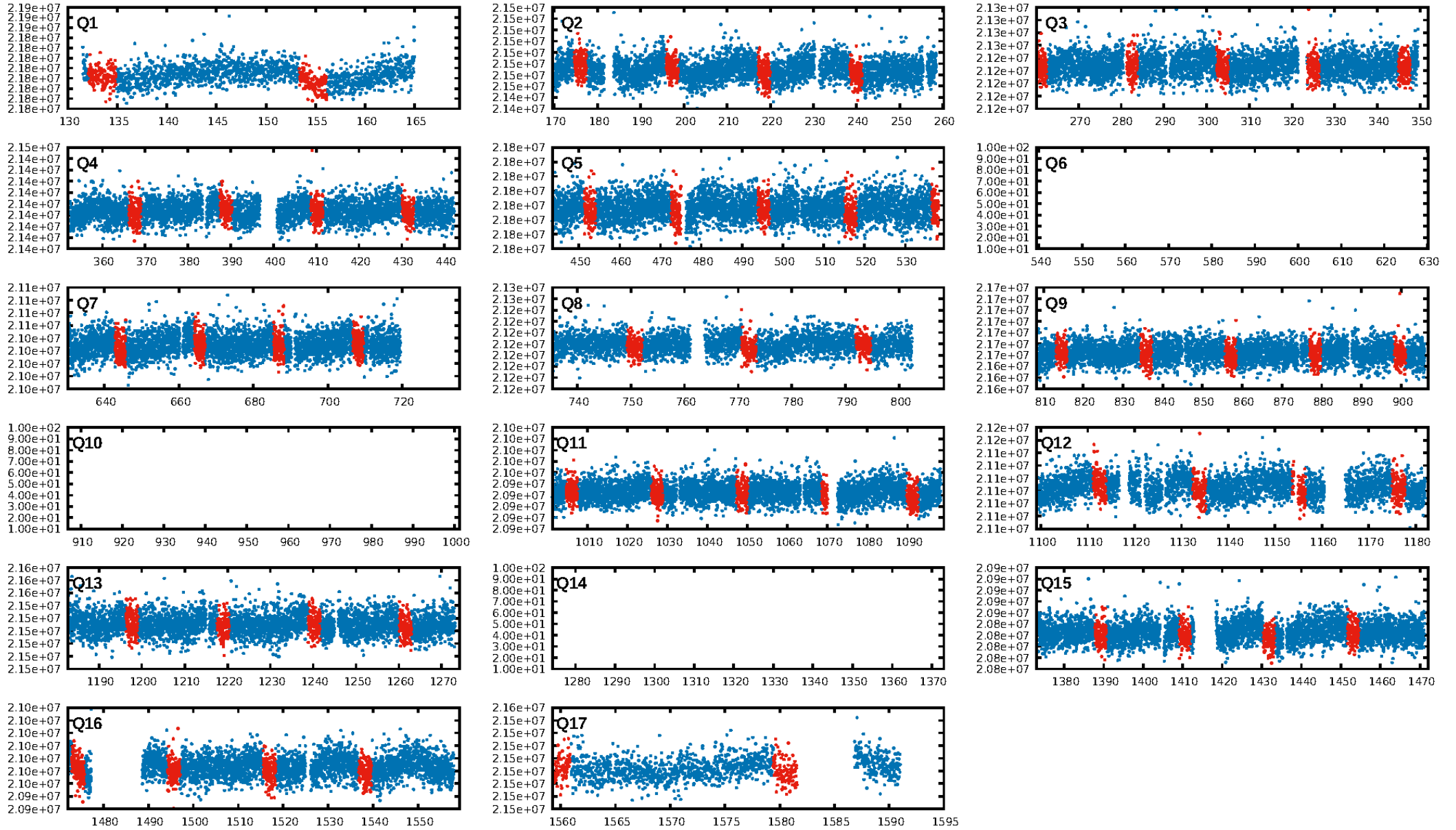
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.15e-14
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 11.18
Centroid-sig: 48.3%
Centroid-so: 0.654 arcsec [0.63σ]
OotOffset-rm: 5.018 arcsec [1.70σ]
KicOffset-rm: 4.979 arcsec [1.70σ]
OotOffset-st: 0/0/1/3 [4]
KicOffset-st: 0/0/1/3 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [12/12]

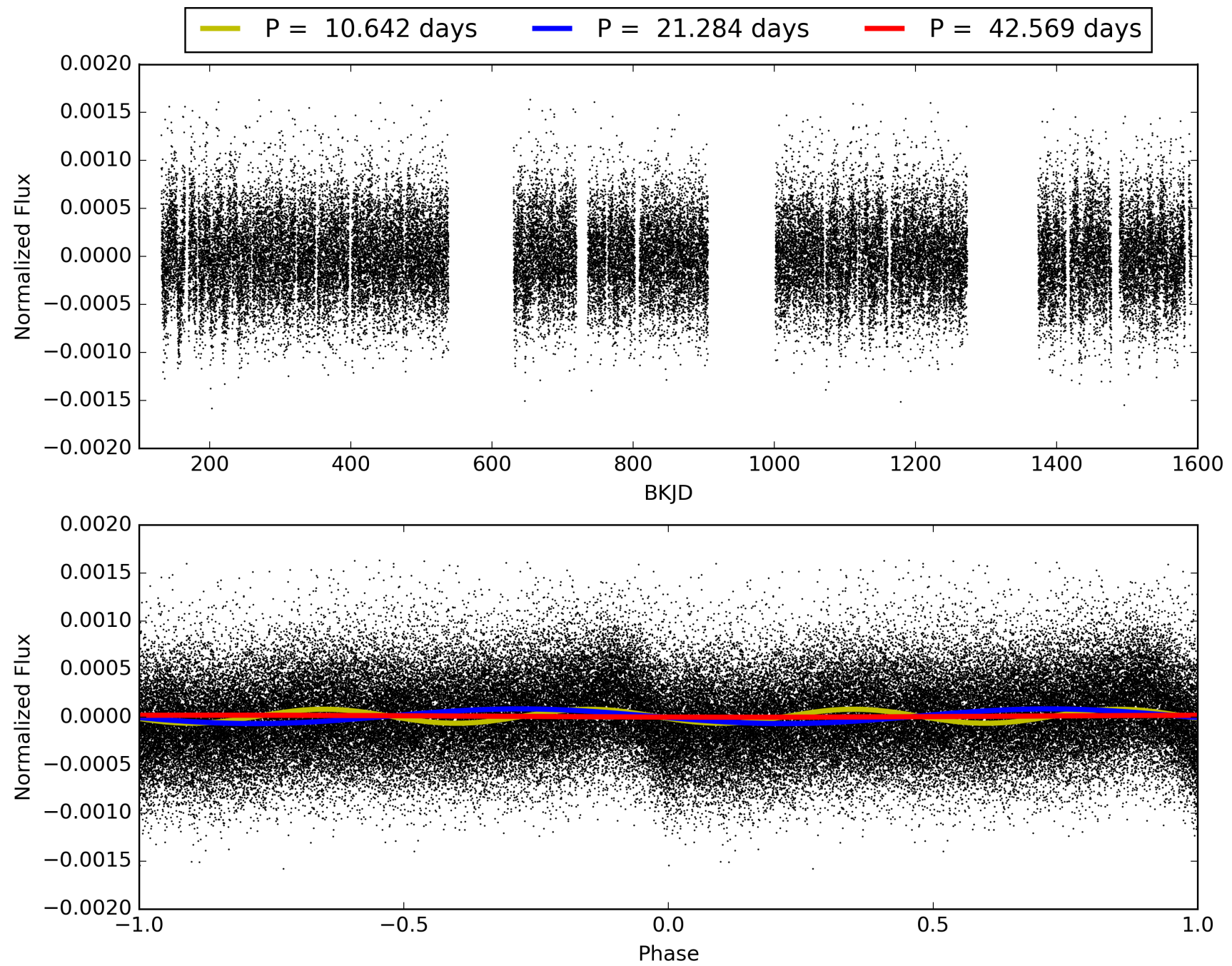
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:09:06 Z

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

TCE 005112754-01, PDC Light Curves

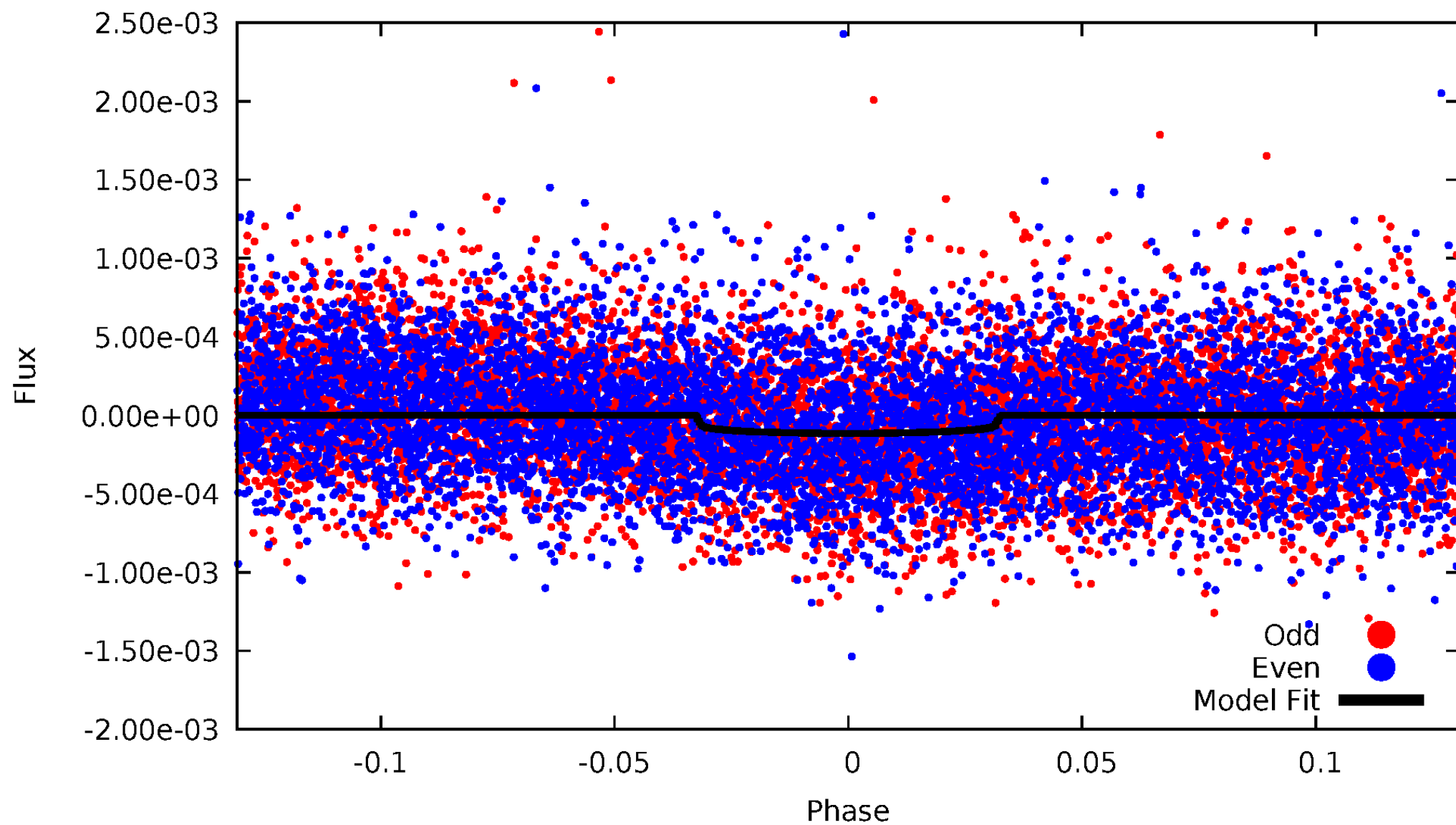


TCE 005112754-01



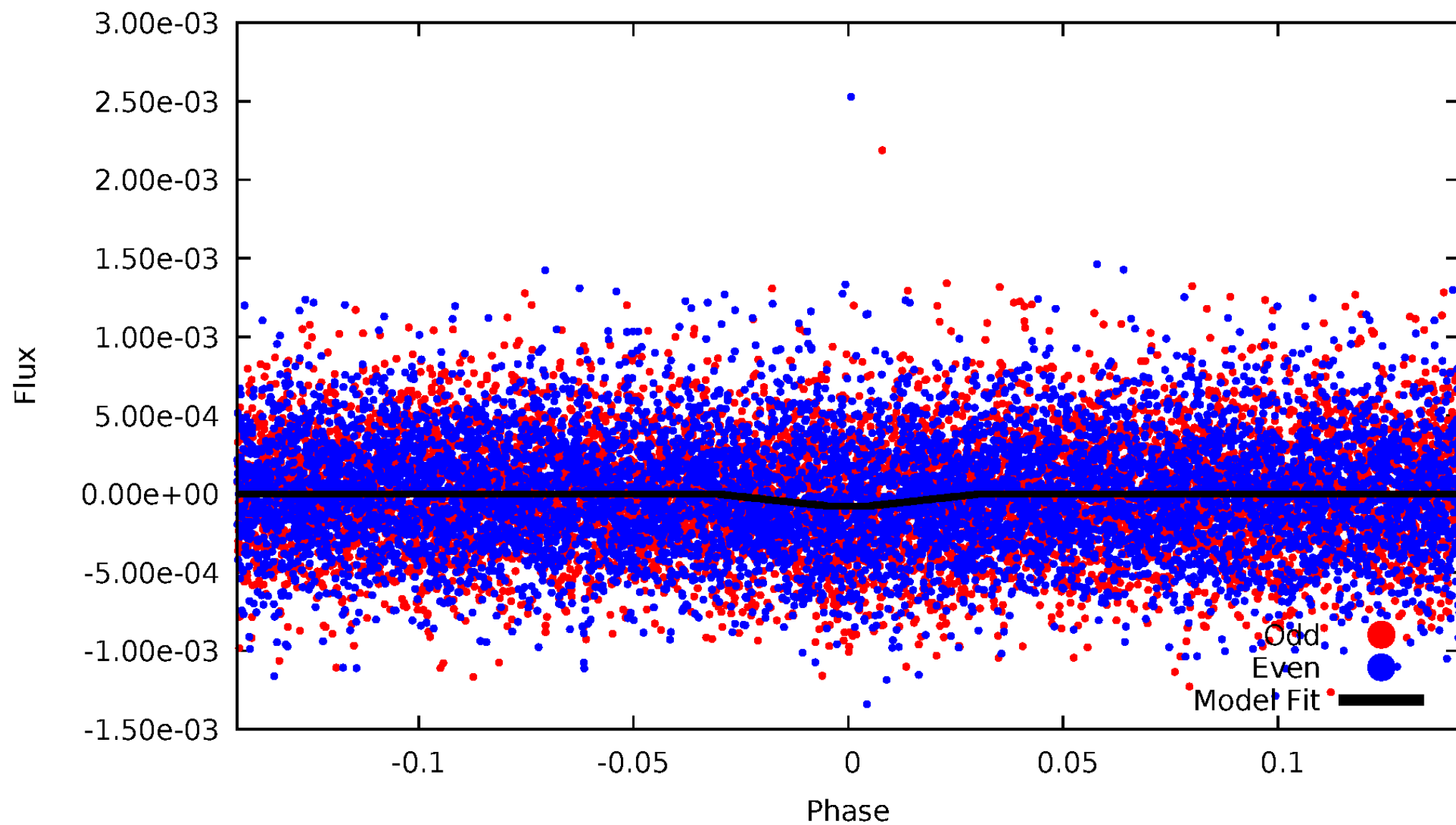
DV Odd/Even

TCE 005112754-01



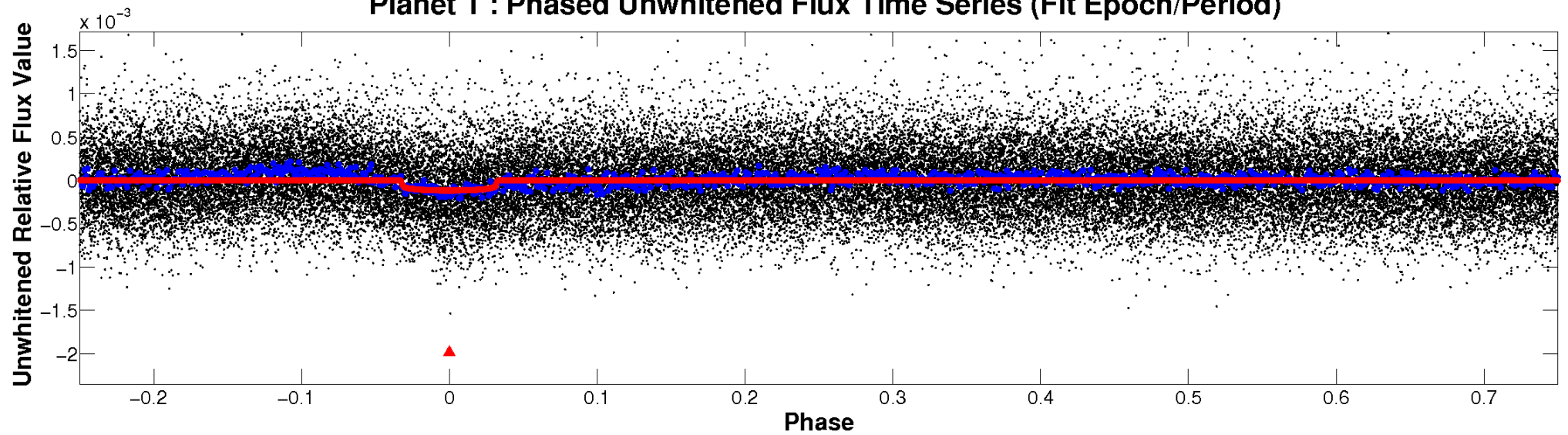
ALT Odd/Even

TCE 005112754-01

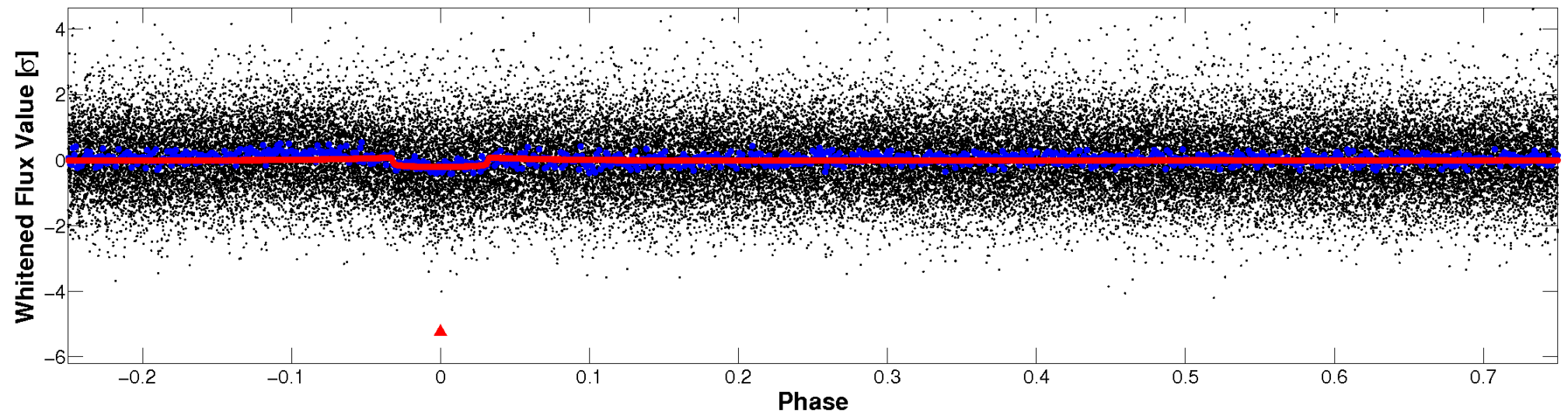


Non-Whitened Vs. Whitened Light Curve

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

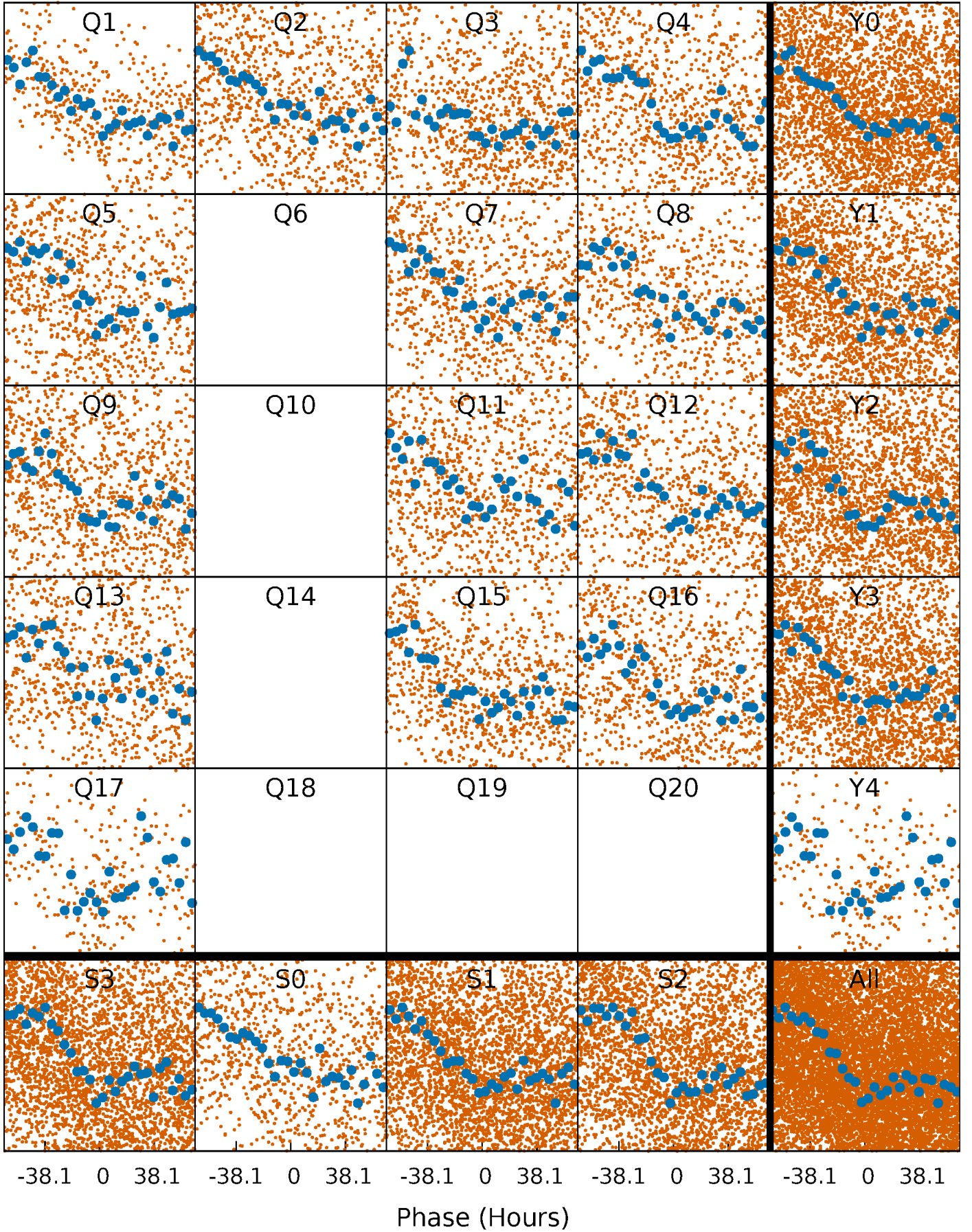


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



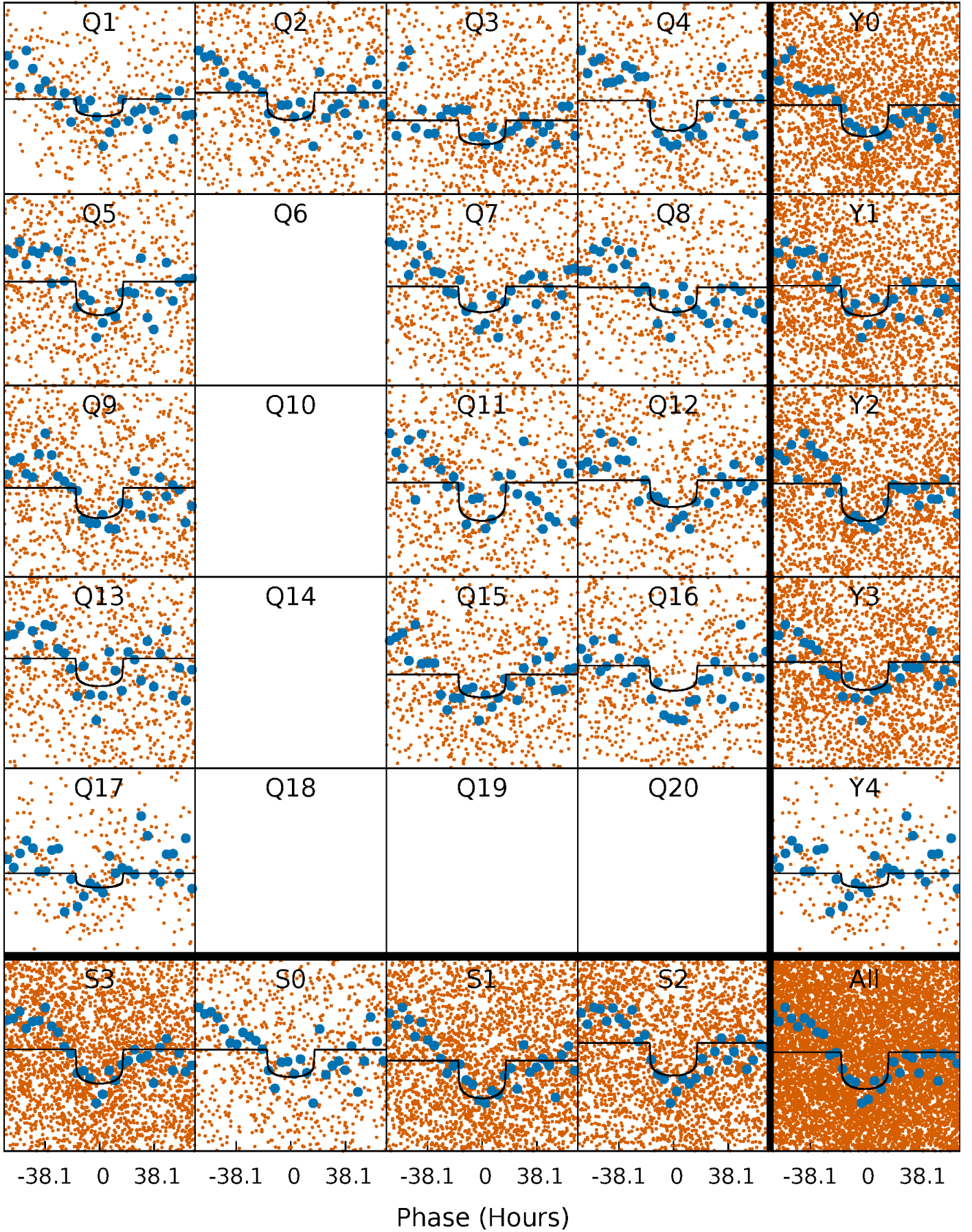
PDC Quarter-Phased Transit Curves

TCE 005112754-01 P= 21.284467 Days $T_0=133.455268$ (BKJD)



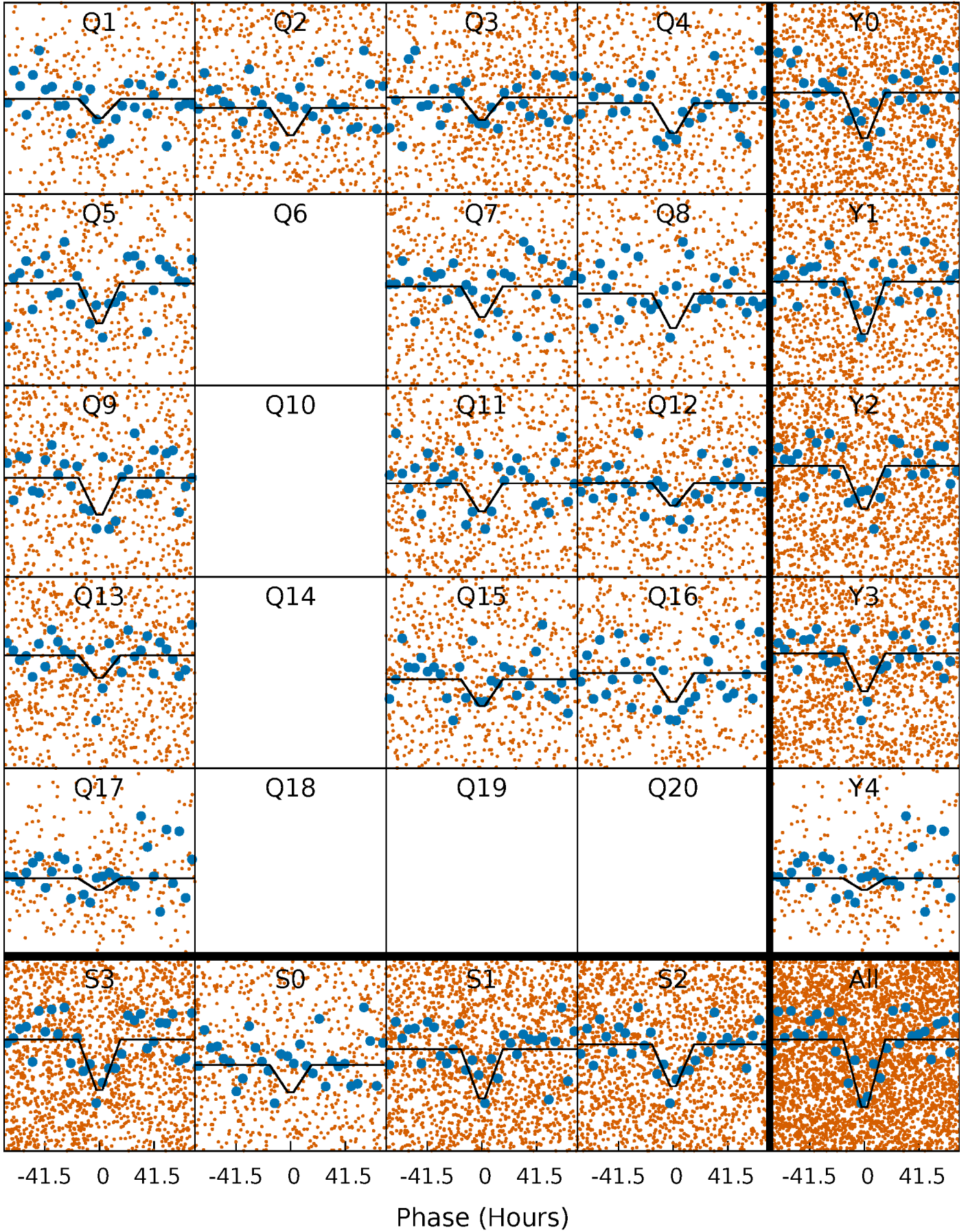
DV Quarter-Phased Transit Curves

TCE 005112754-01 P= 21.284467 Days $T_0=133.455268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

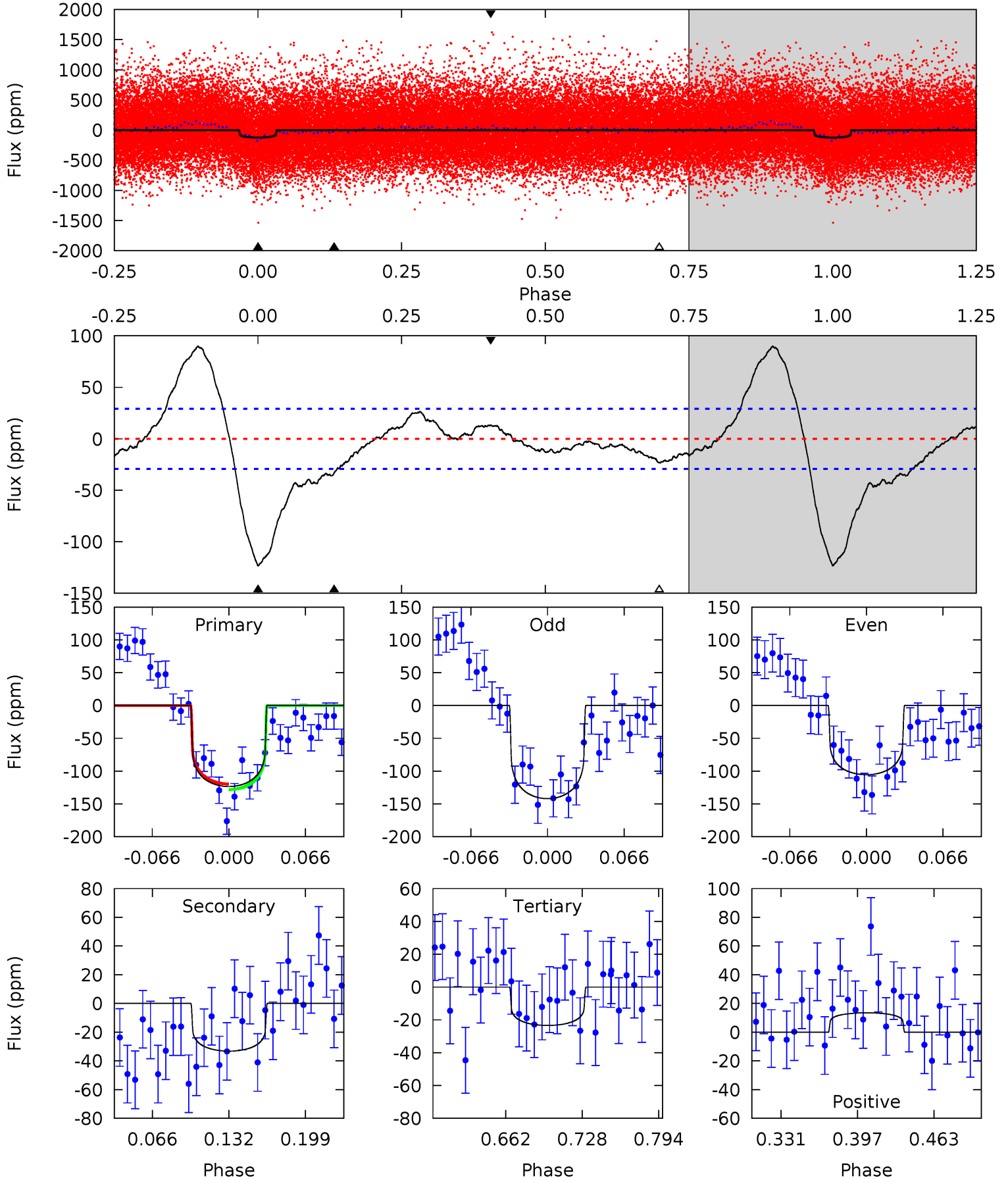
TCE 005112754-01 P= 21.282988 Days $T_0=133.472253$ (BKJD)



DV Model-Shift Uniqueness Test

005112754-01, P = 21.284467 Days, E = 112.170801 Days

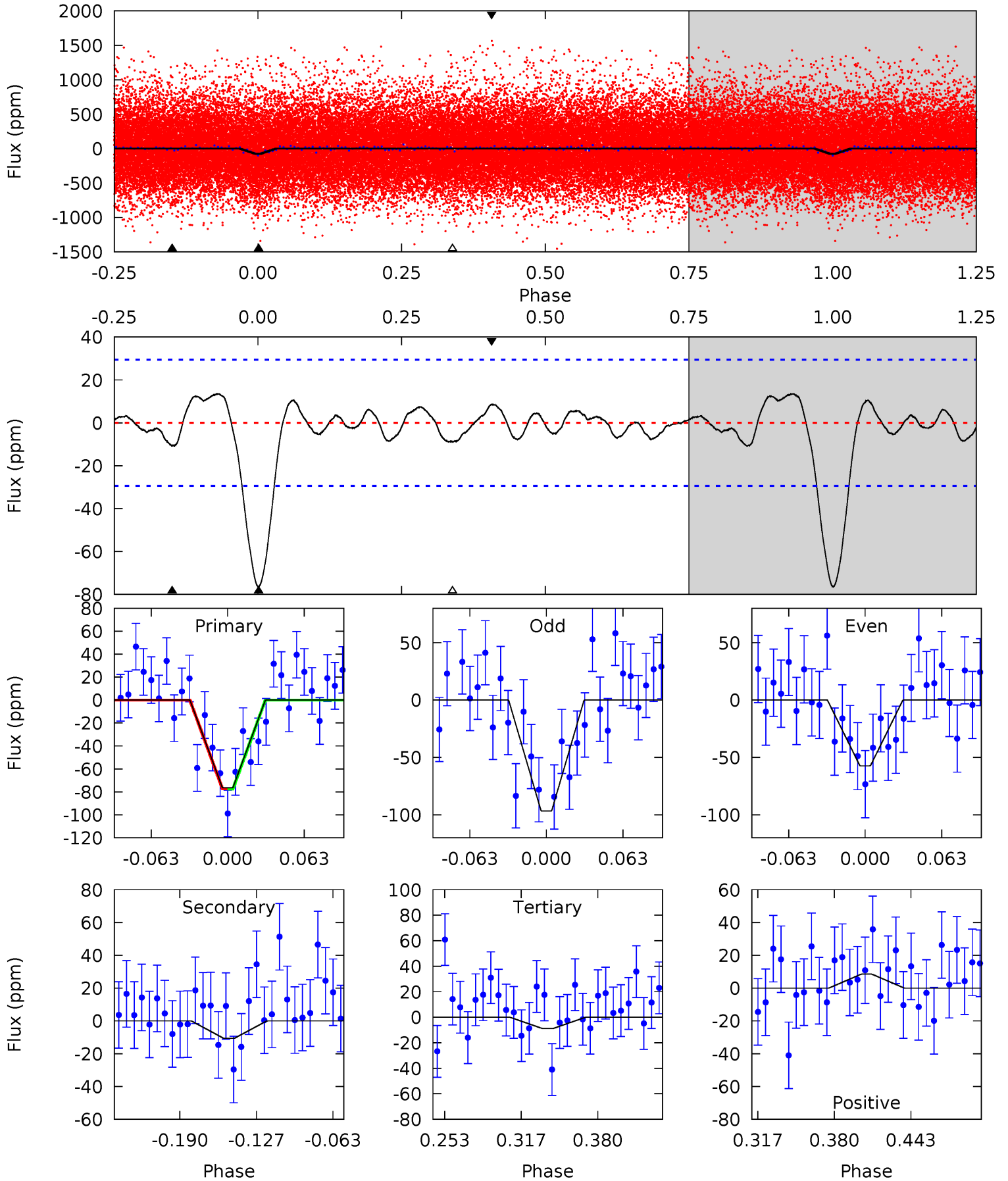
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	5.29	3.73	2.14	4.65	1.84	4.23	15.9	17.5	1.56	3.15	2.91	0.98	0.42	0.69



Alt Model-Shift Uniqueness Test

005112754-01, P = 21.282988 Days, E = 112.189265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	1.69	1.40	1.35	4.66	1.86	0.80	10.7	10.8	0.29	0.34	3.13	1.13	0.15	0.02



Stellar Parameters For KIC 005112754

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6103^{+213}_{-192}	$4.480^{+0.150}_{-0.100}$	$-1.940^{+0.300}_{-0.050}$	$0.788^{+0.101}_{-0.101}$	$0.684^{+0.073}_{-0.021}$	$1.971^{+1.148}_{-0.619}$
	+3%/-3%	+3%/-2%	+15%/-3%	+13%/-13%	+11%/-3%	+58%/-31%
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 005112754-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-33 ± 6	$0.91^{+0.16}_{-0.15}$	913^{+46}_{-50}	4645^{+386}_{-323}	388^{+211}_{-121}
Alt.	-11 ± 6	$0.77^{+0.14}_{-0.14}$	910^{+48}_{-43}	3972^{+510}_{-581}	170^{+155}_{-105}

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 $A_{obs} \gg 1.0$

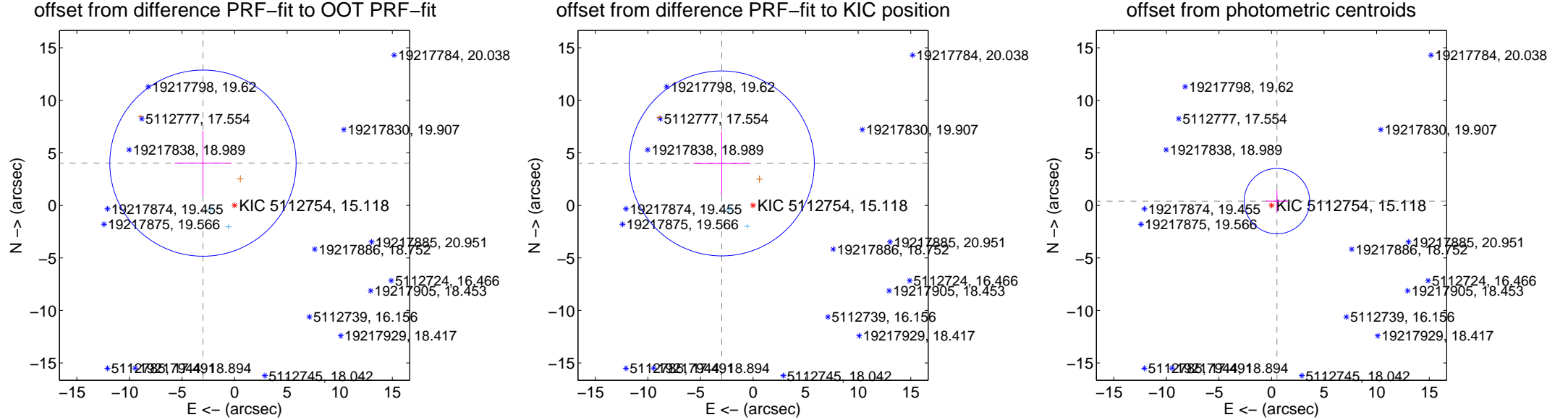
DV Centroid Data

Supplemental centroid analysis for 005112754-01. Kepler magnitude: 15.12. Transit SNR 11.16

There are 2 quarters with good PRF difference image offsets

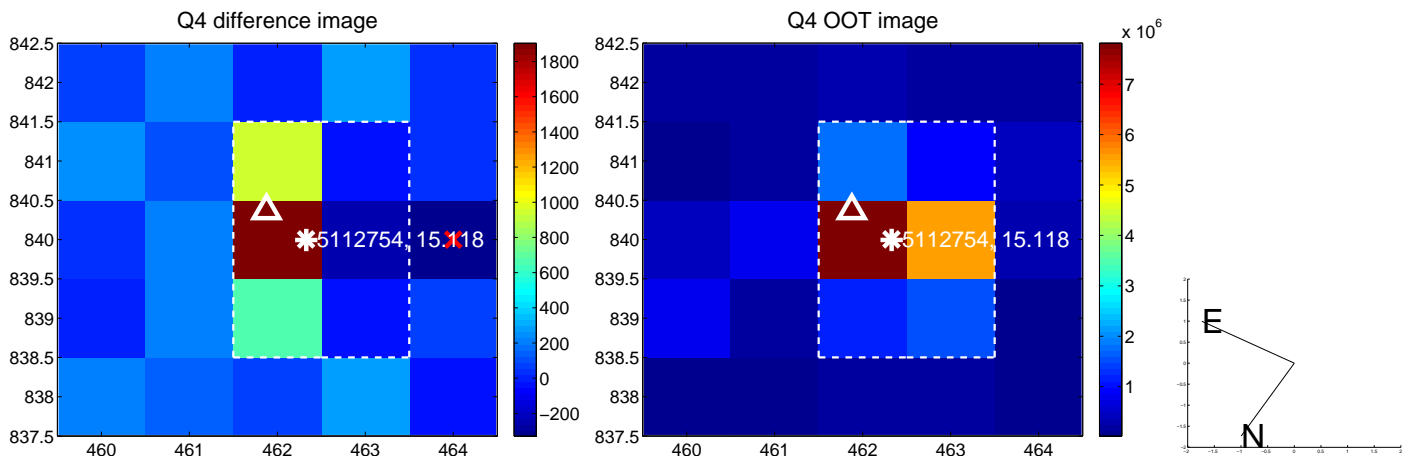
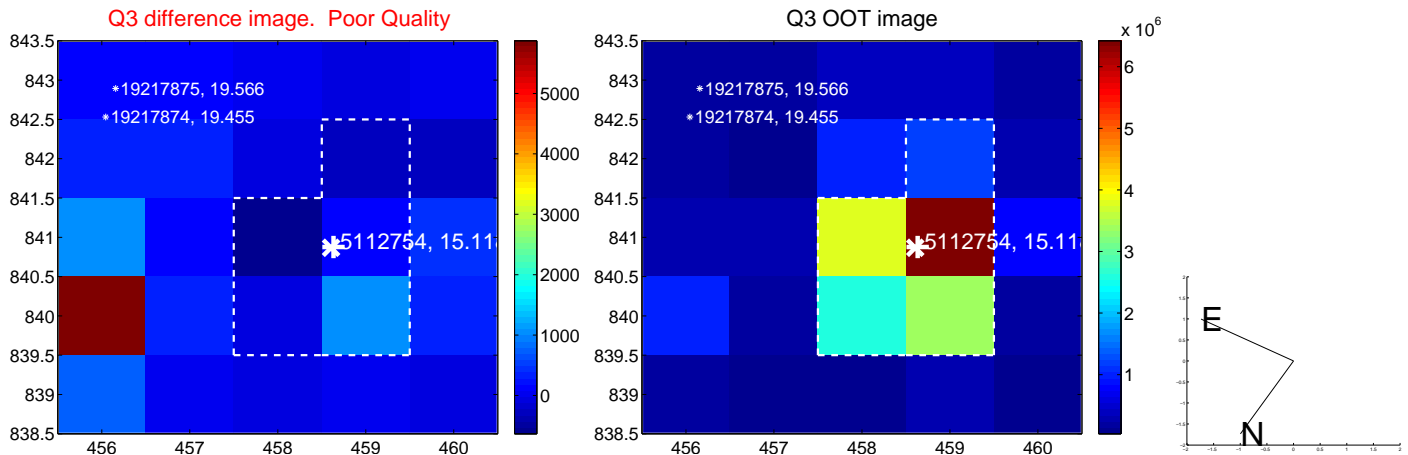
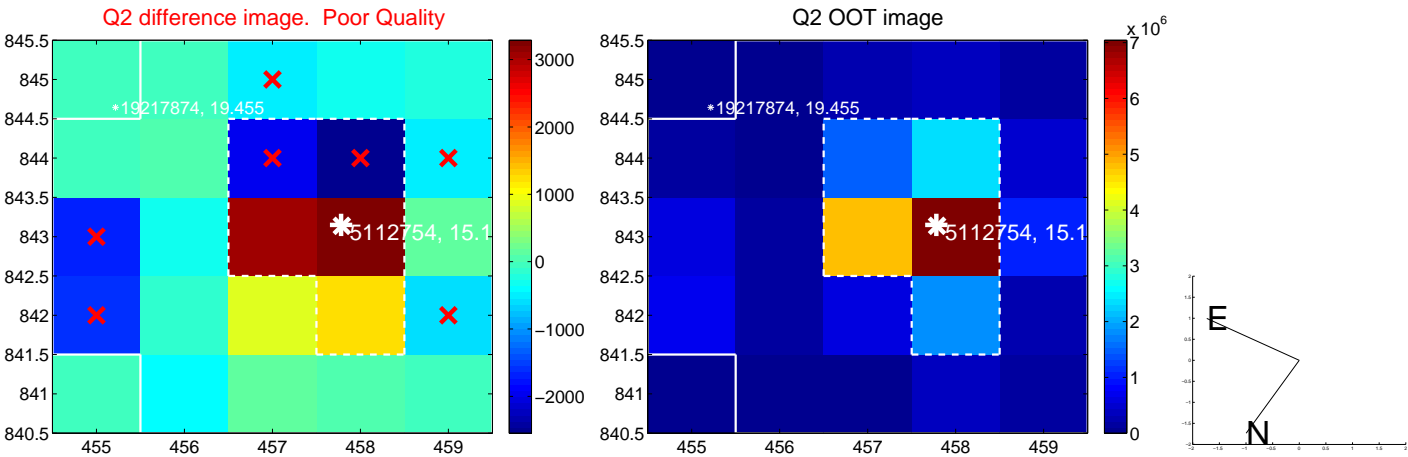
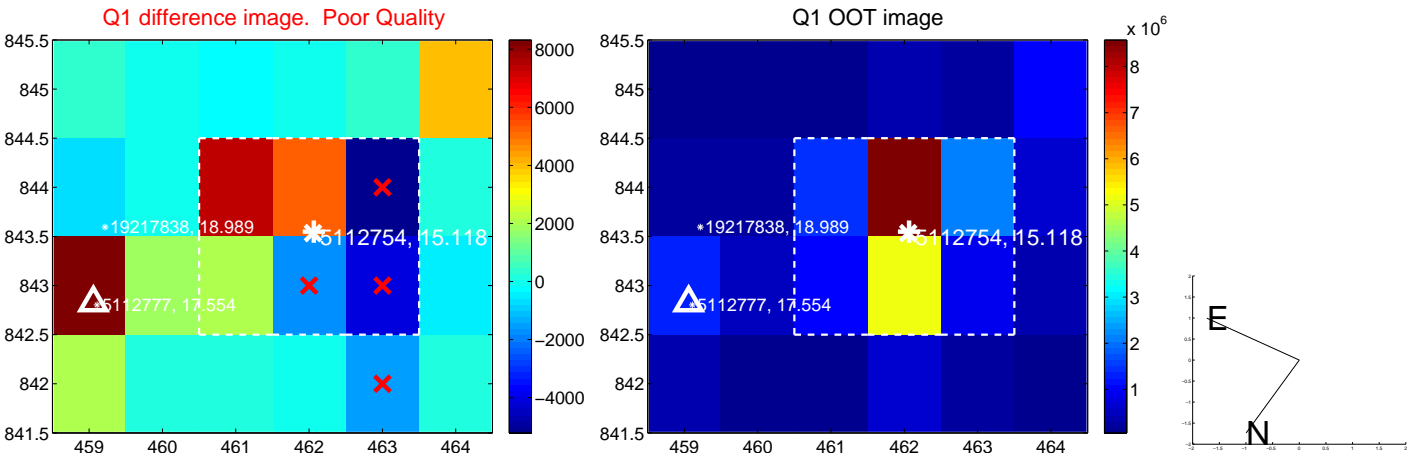
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.018 ± 2.953	1.70	3.005 ± 2.703	4.019 ± 3.083
PRF-fit source offset from KIC position	4.979 ± 2.934	1.70	2.977 ± 2.715	3.992 ± 3.050
photometric centroid source offset	0.65 ± 1.04	0.63	-0.51 ± 1.03	0.40 ± 1.06

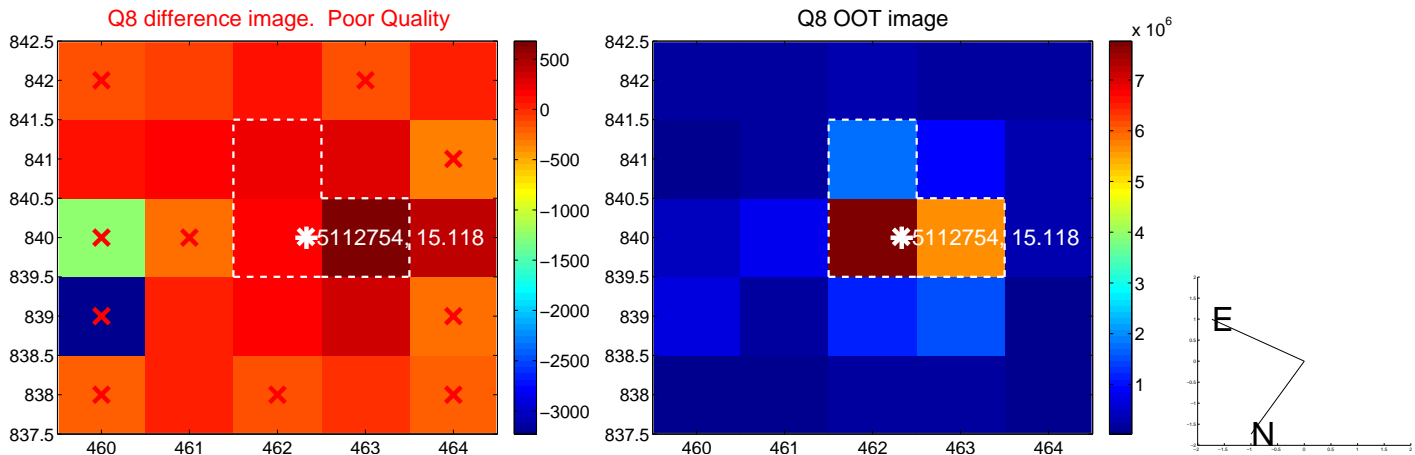
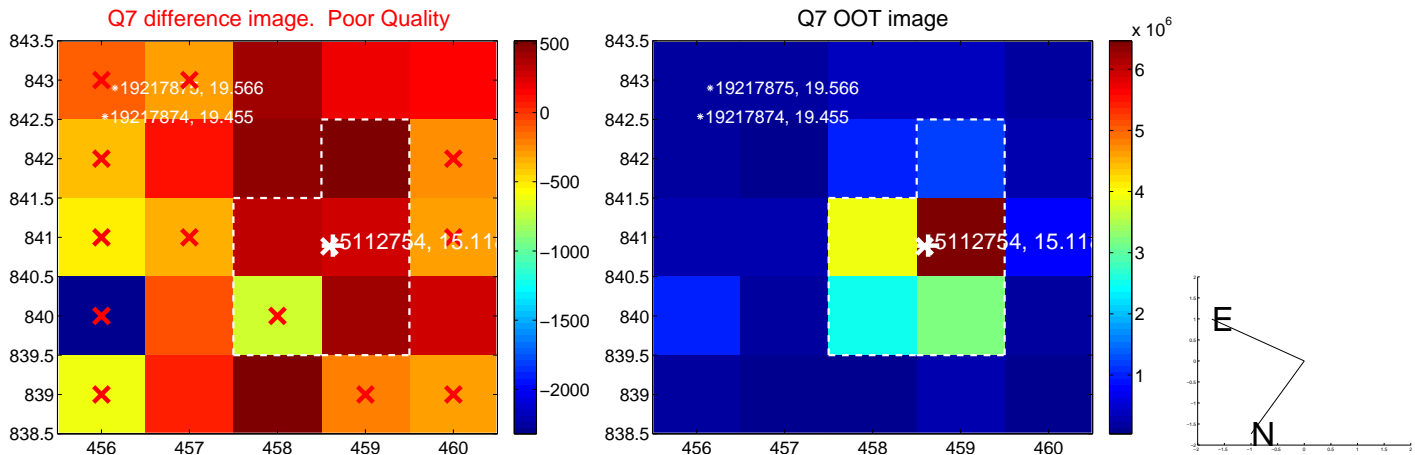
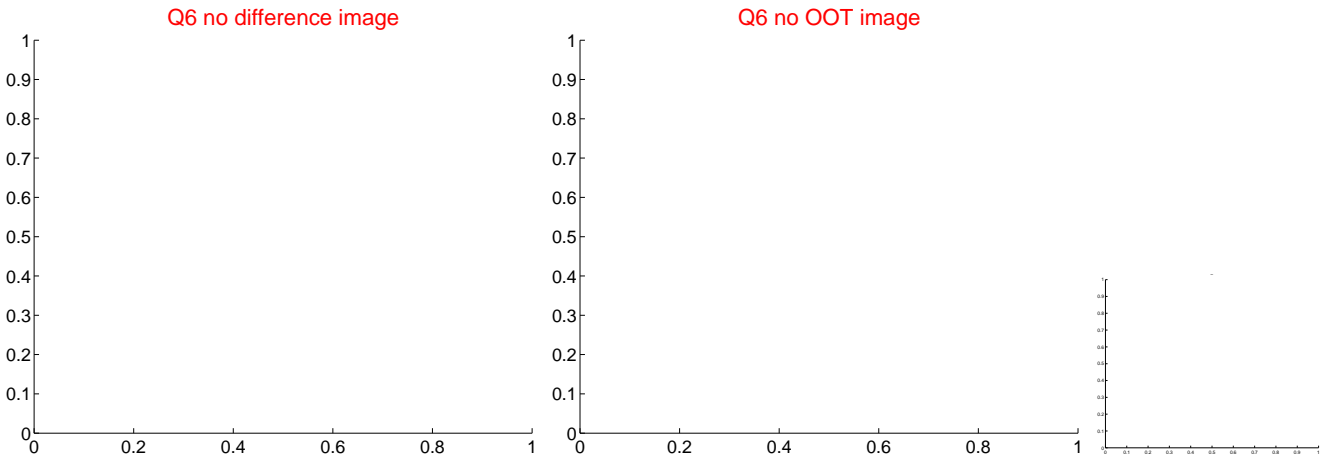
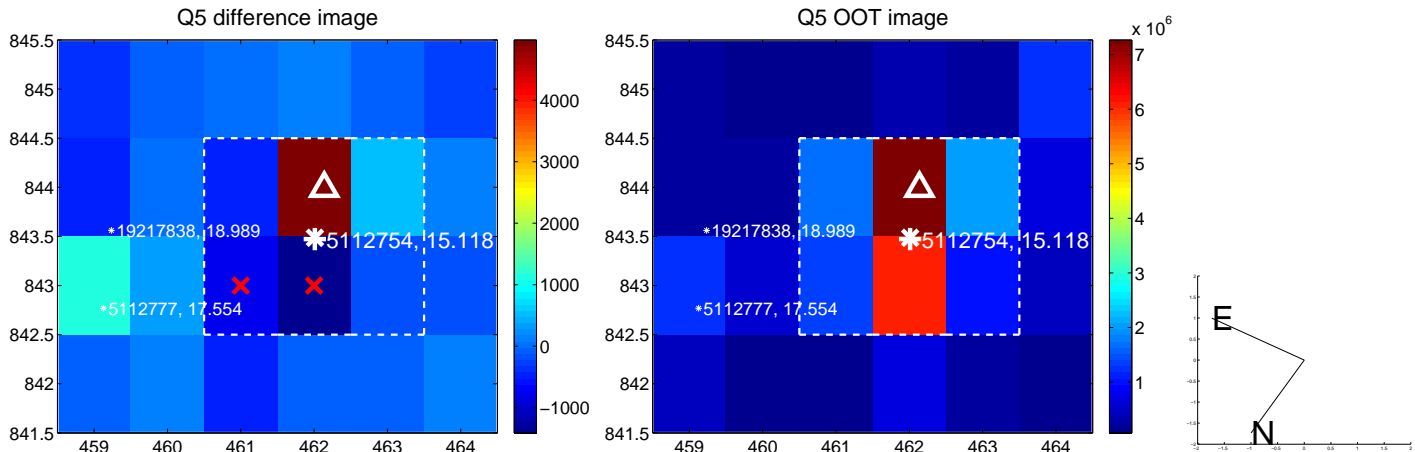


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

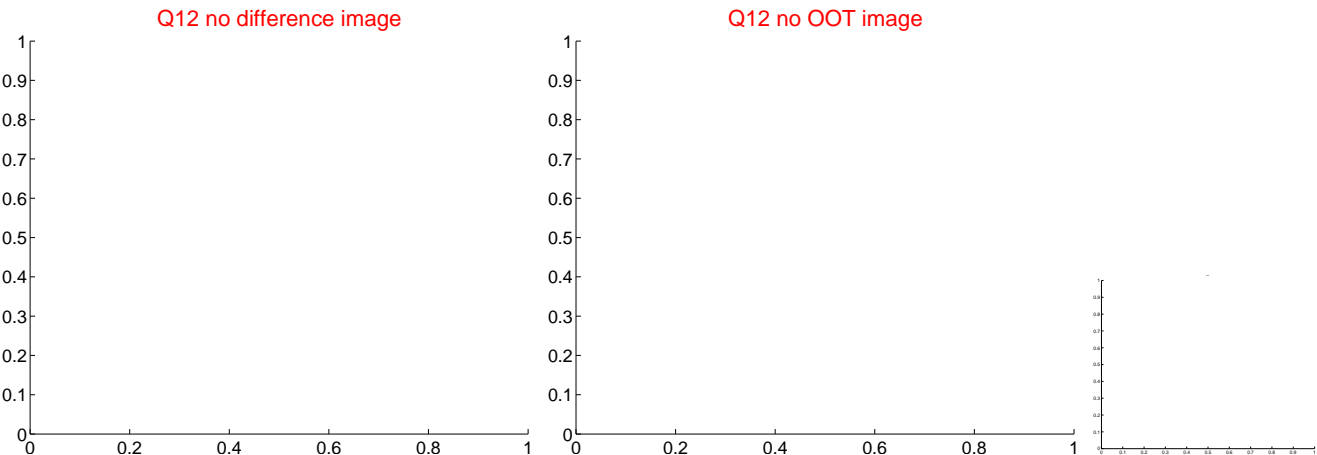
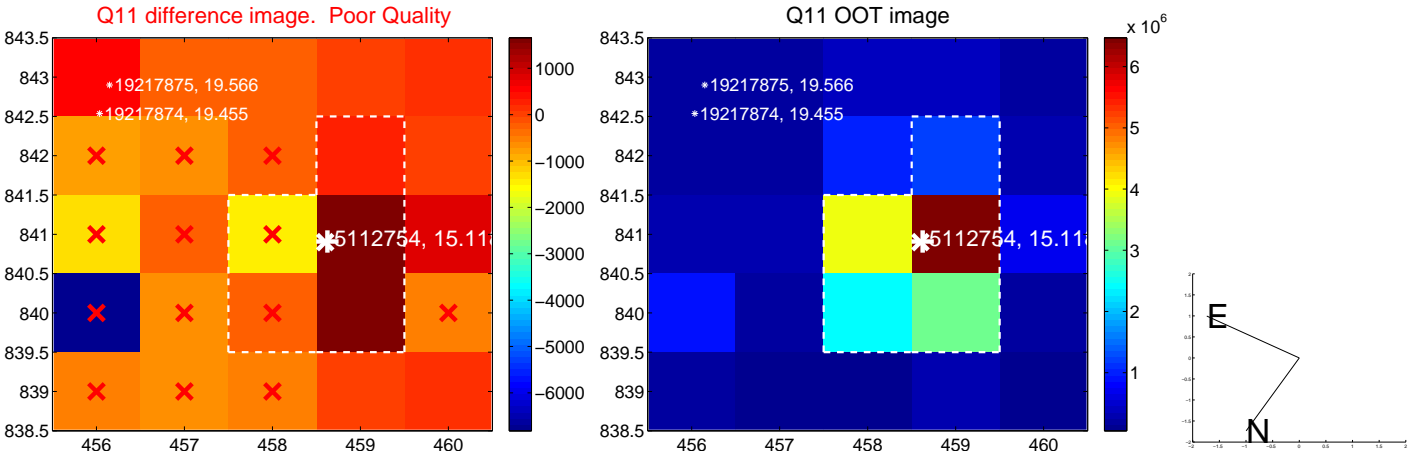
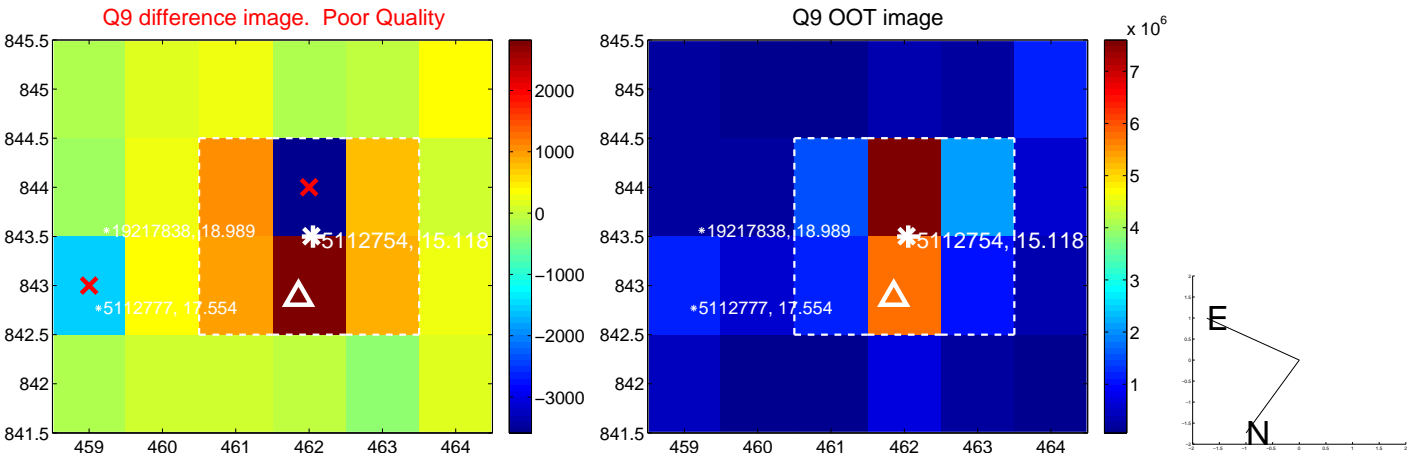
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



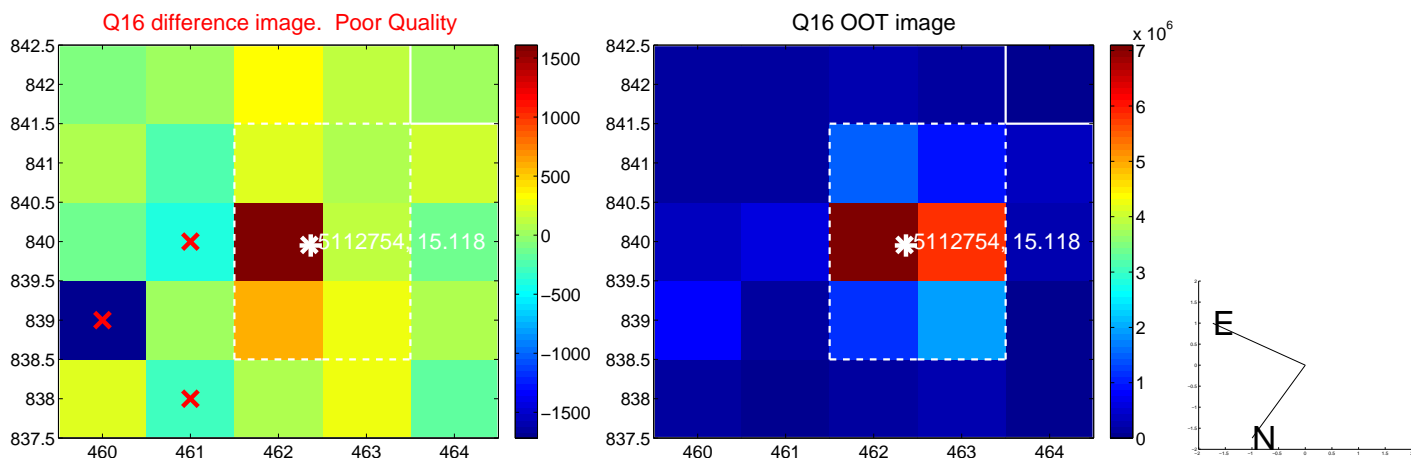
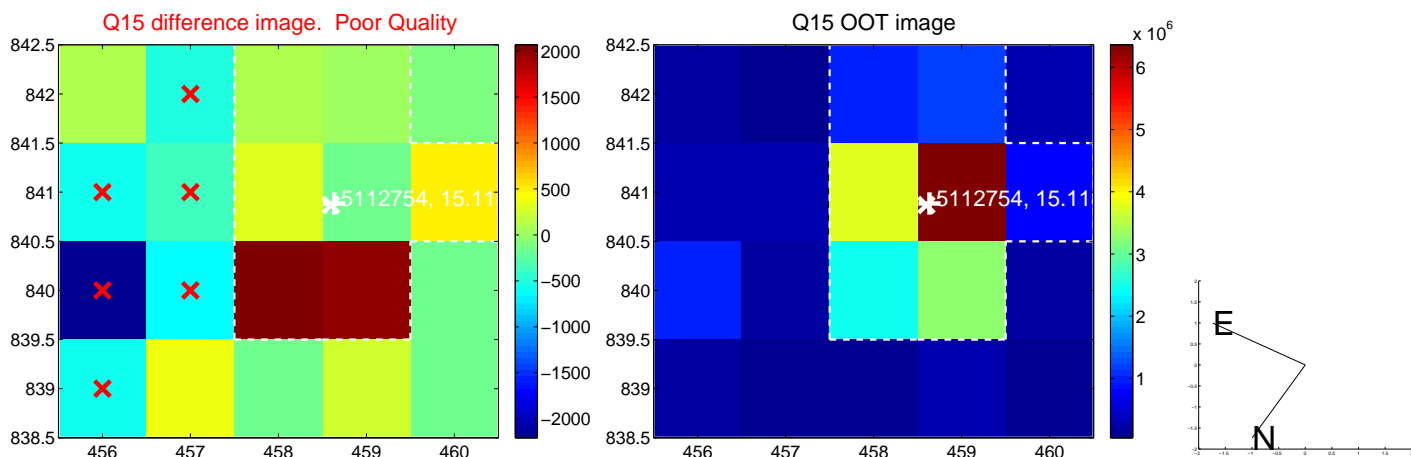
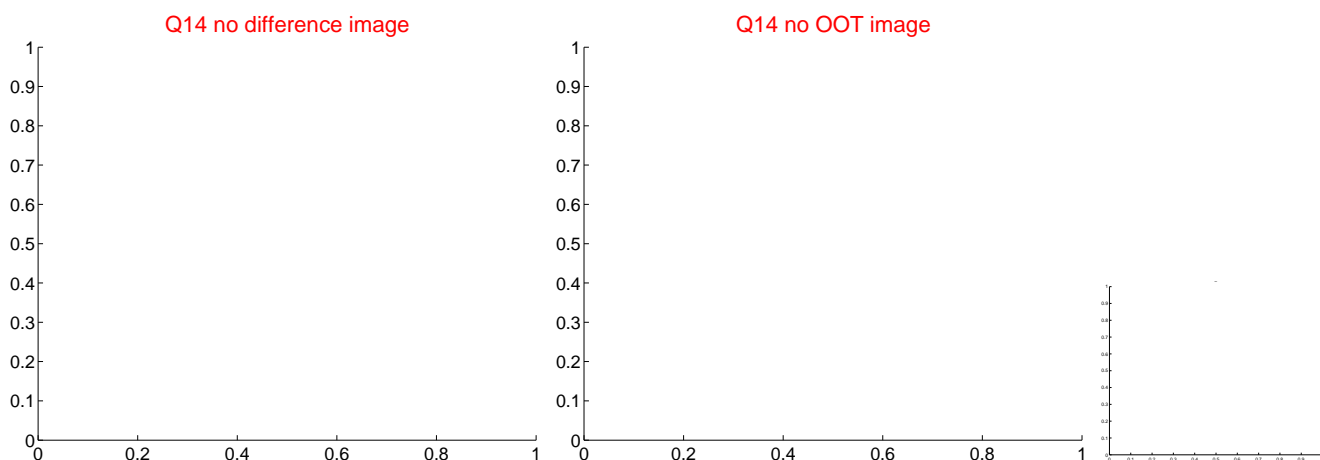
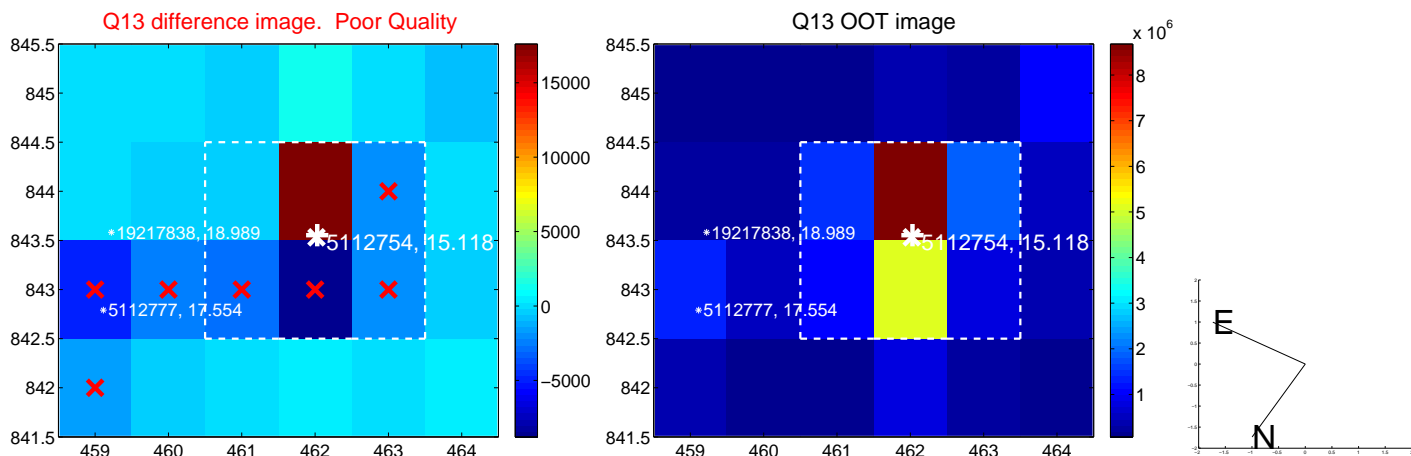
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



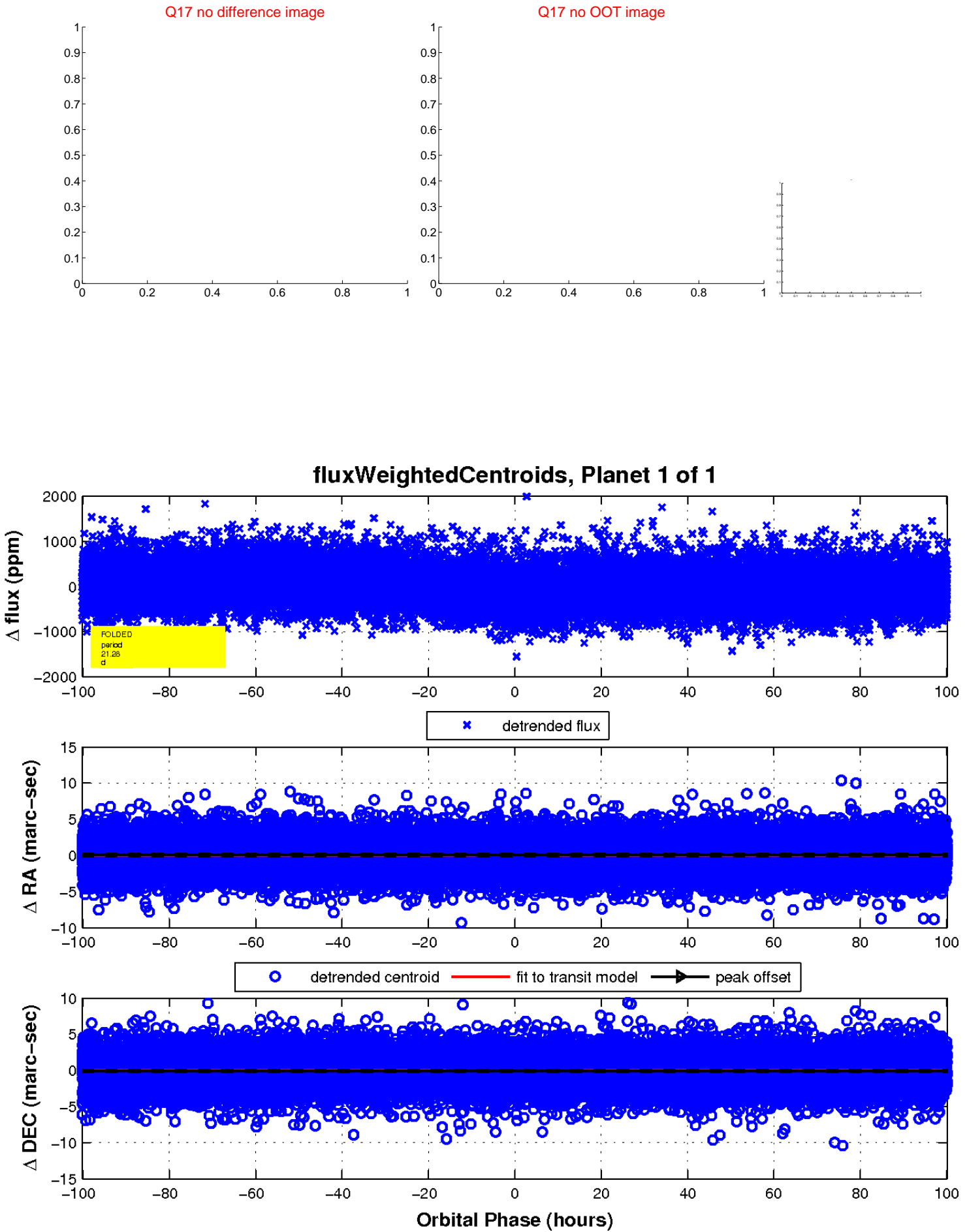
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

