

KIC 005112555

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})
005112555-01	OBS	No	474.006809	139.427575	290.7	10.029	7.5	5.2	0.71	5915	1.30	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005112555-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—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.

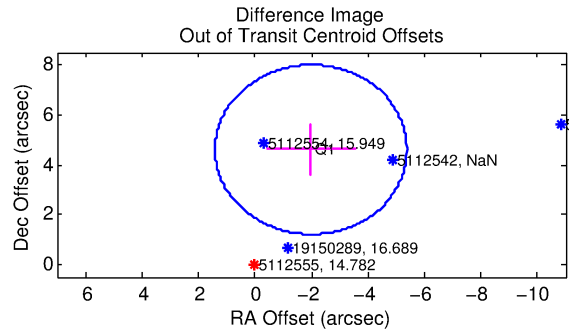
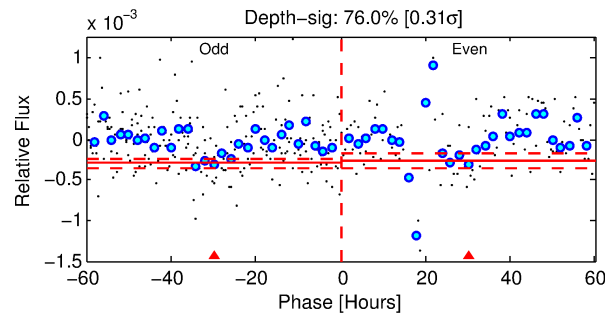
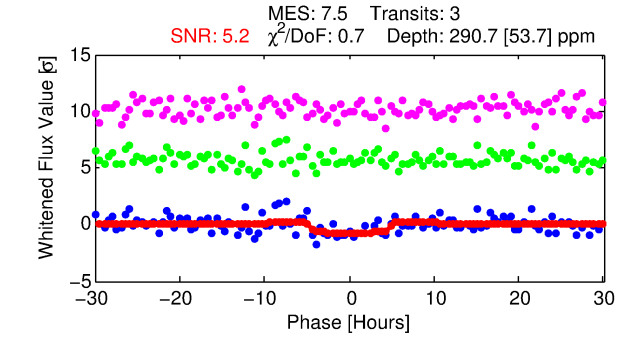
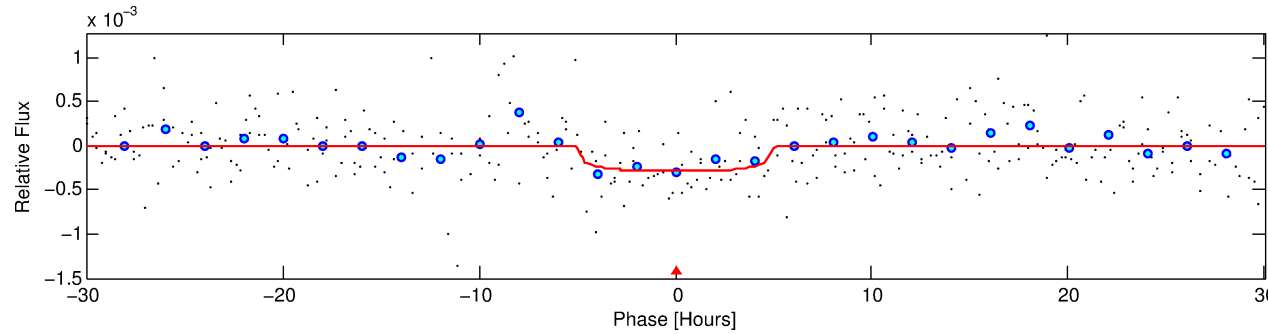
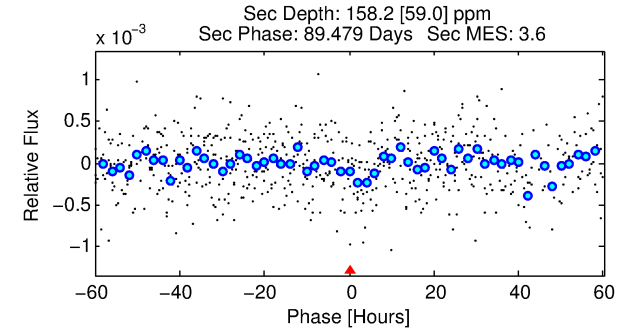
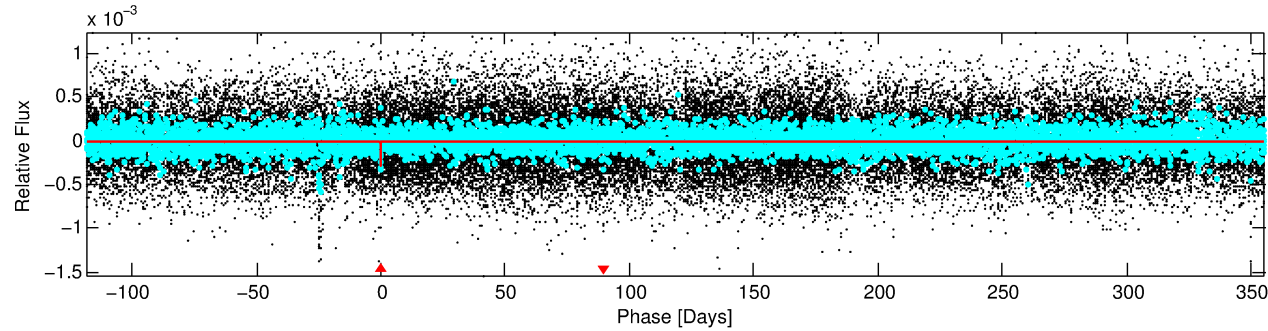
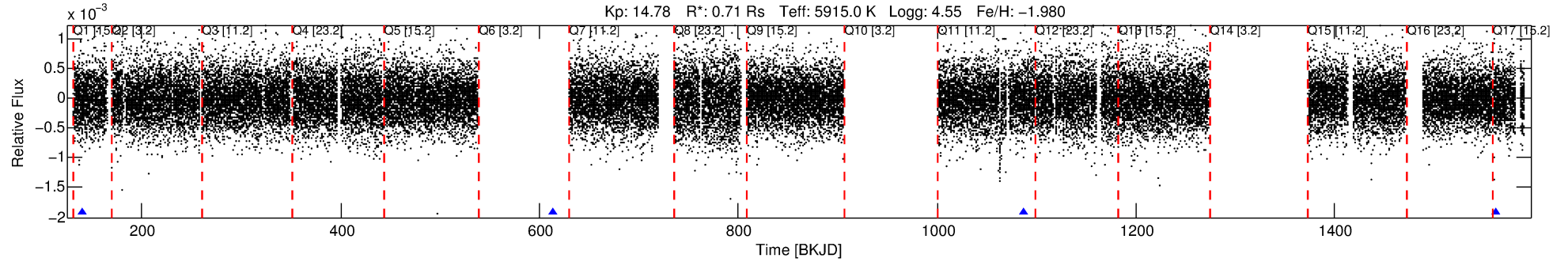
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005112555-01

No Significant Match Found

DV One-Page Summary

KIC: 5112555 Candidate: 1 of 1 Period: 474.007 d



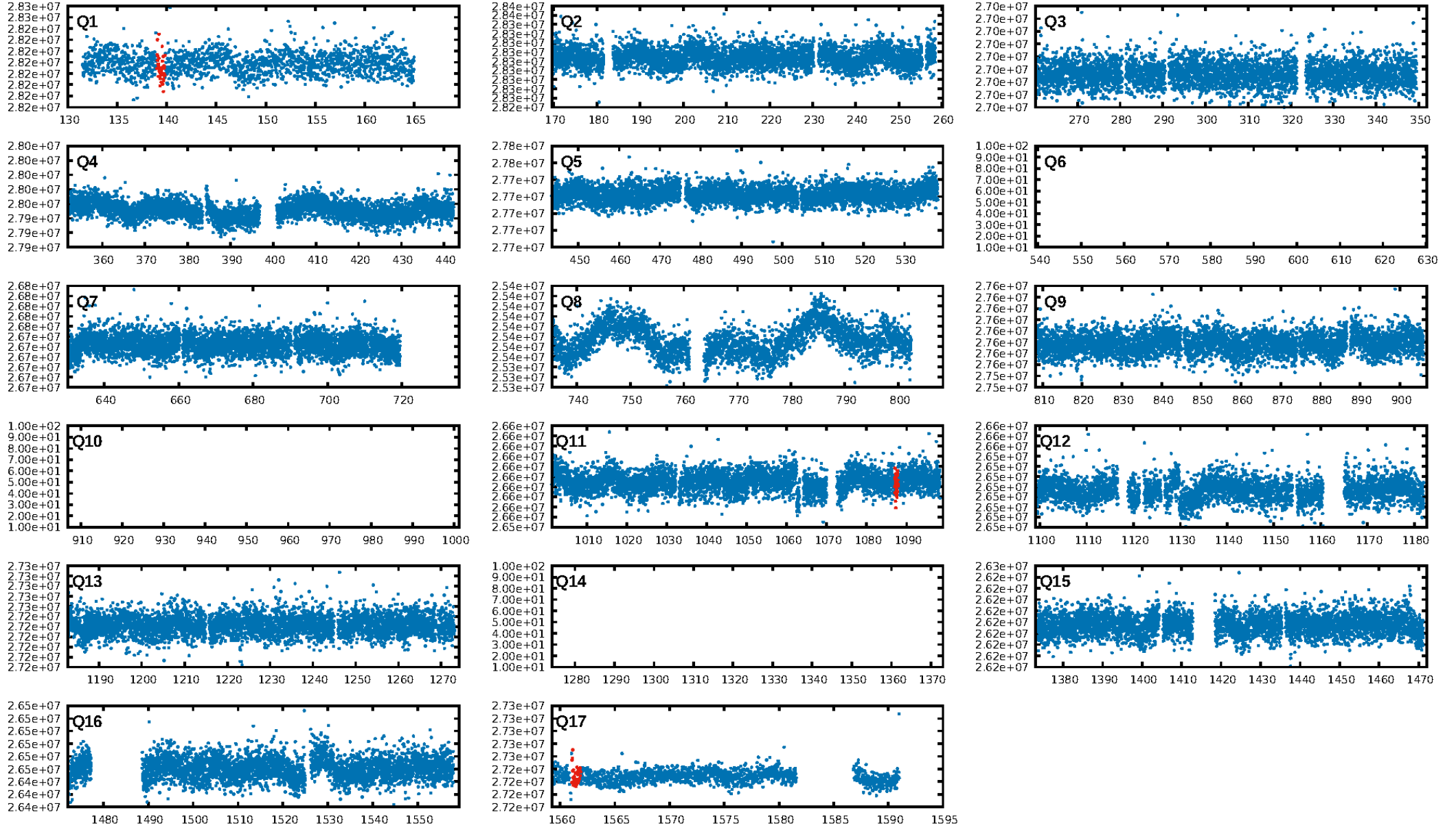
DV Fit Results:

Period = 474.00681 [0.01228] d
Epoch = 139.4276 [0.0254] BKJD
Rp/R* = 0.0167 [0.0116]
a/R* = 265.71 [1032.16]
b = 0.70 [2.83]
Seff = 0.52 [0.12]
Teff = 217 [12] K
Rp = 1.31 [0.92] Re
a = 1.0362 [0.1118] AU
Ag = 54835.16 [79604.71] [0.69 σ]
Teffp = 5129 [1854] K [2.65 σ]

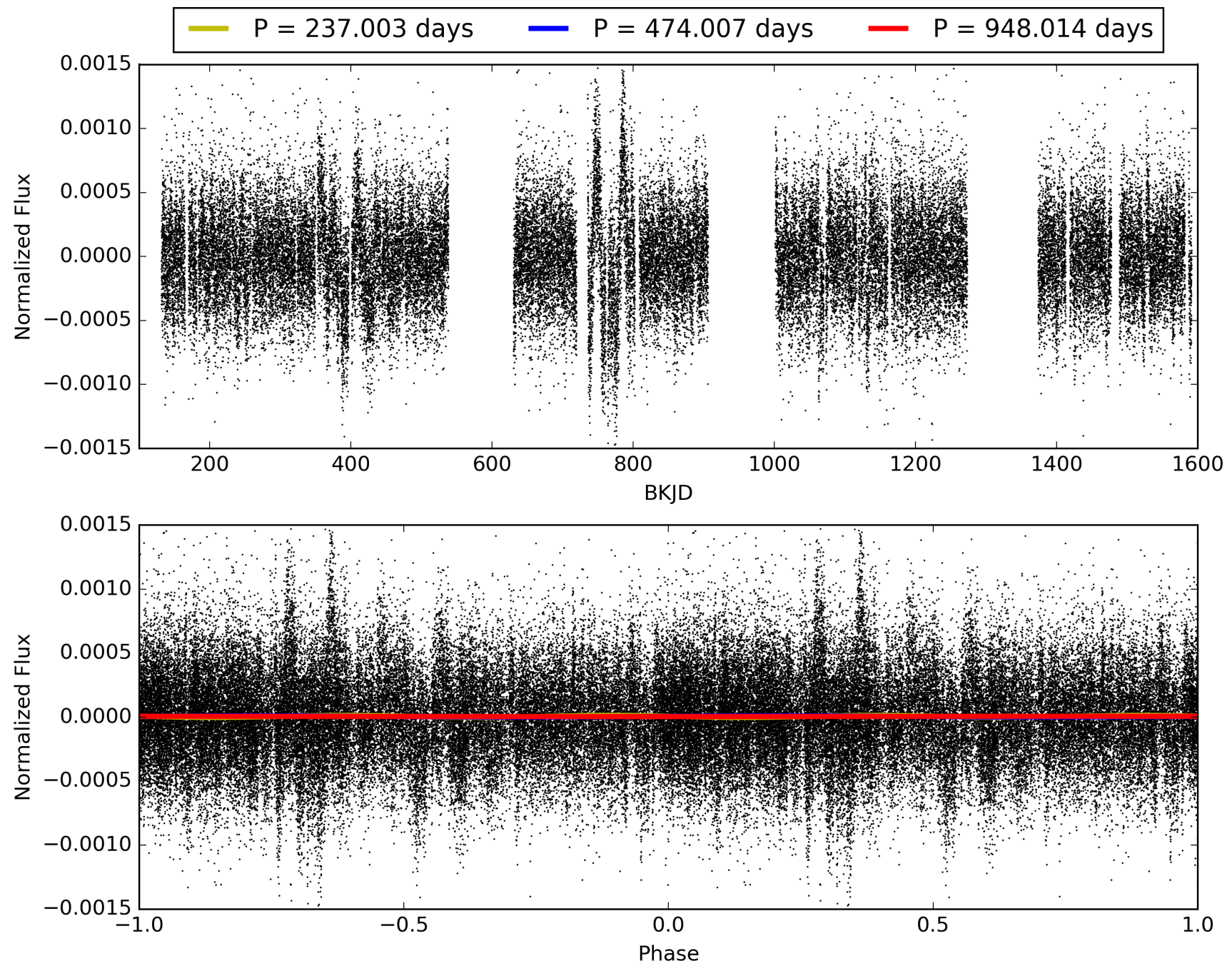
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.21e-13
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: 46.47
Centroid-sig: 98.0%
Centroid-so: 2.821 arcsec [1.64 σ]
OotOffset-rm: 5.013 arcsec [4.43 σ]
KicOffset-rm: 5.669 arcsec [4.96 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 005112555-01, PDC Light Curves

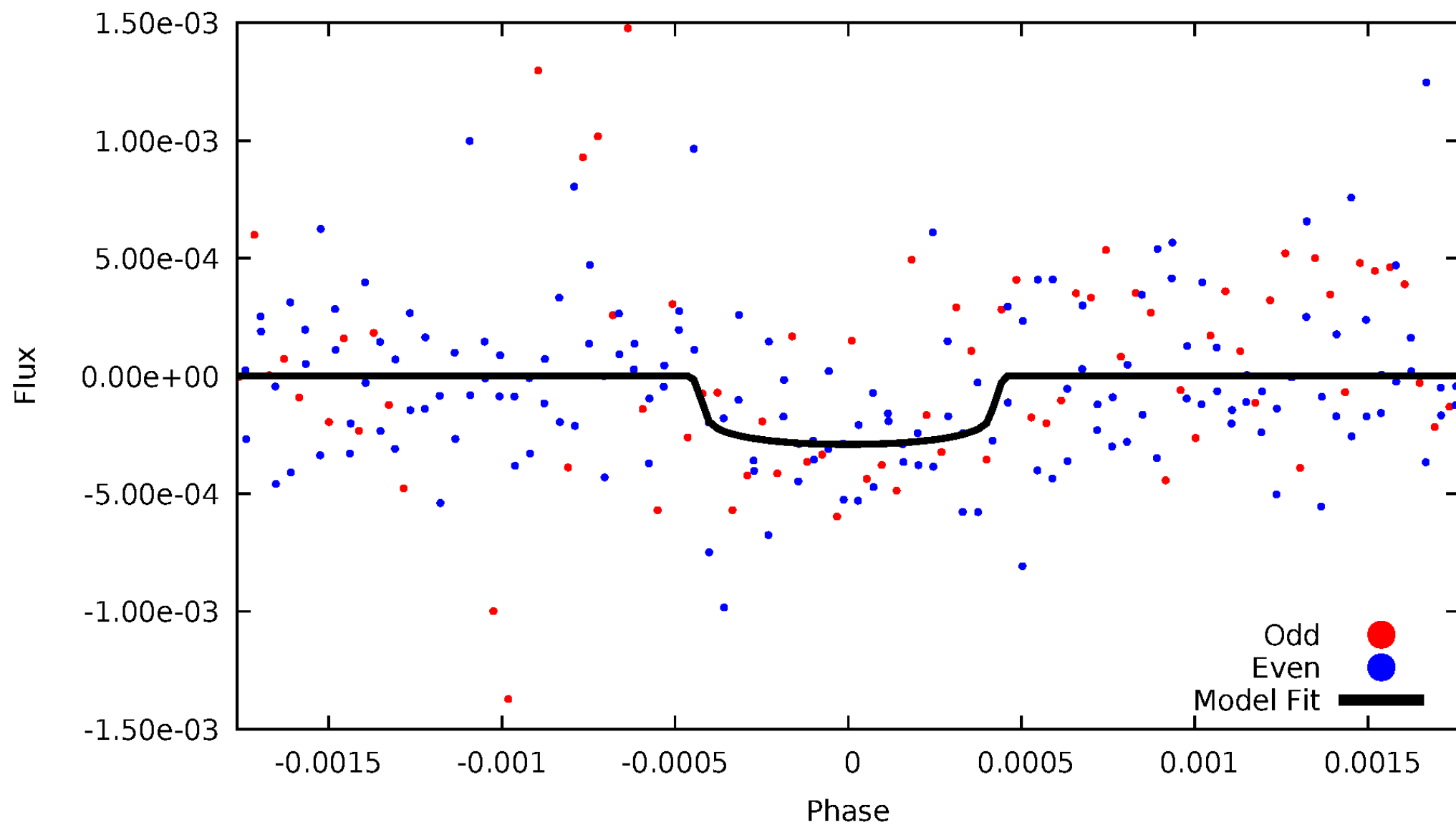


TCE 005112555-01



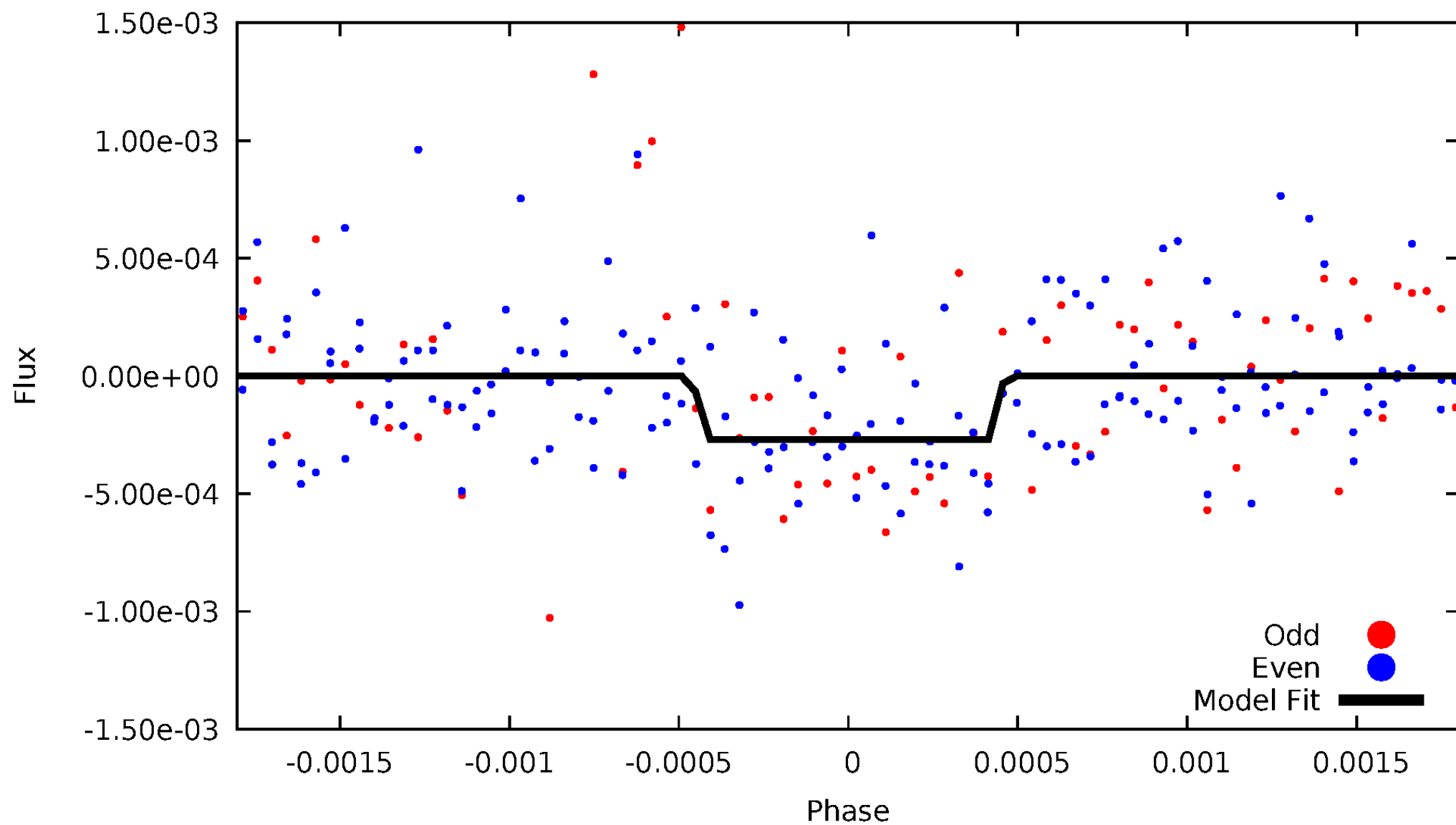
DV Odd/Even

TCE 005112555-01



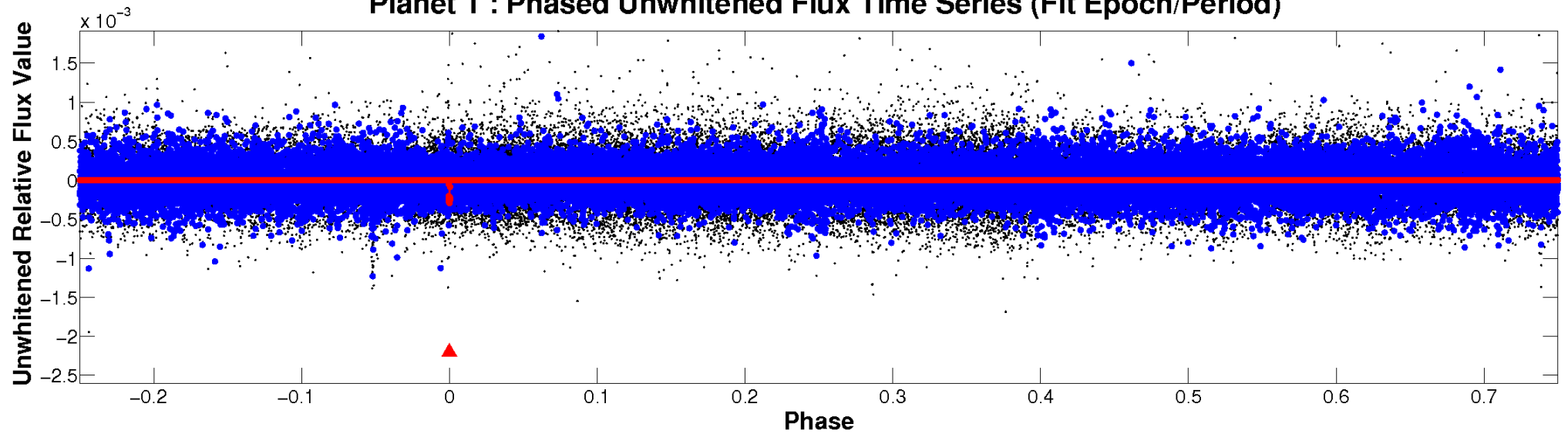
ALT Odd/Even

TCE 005112555-01

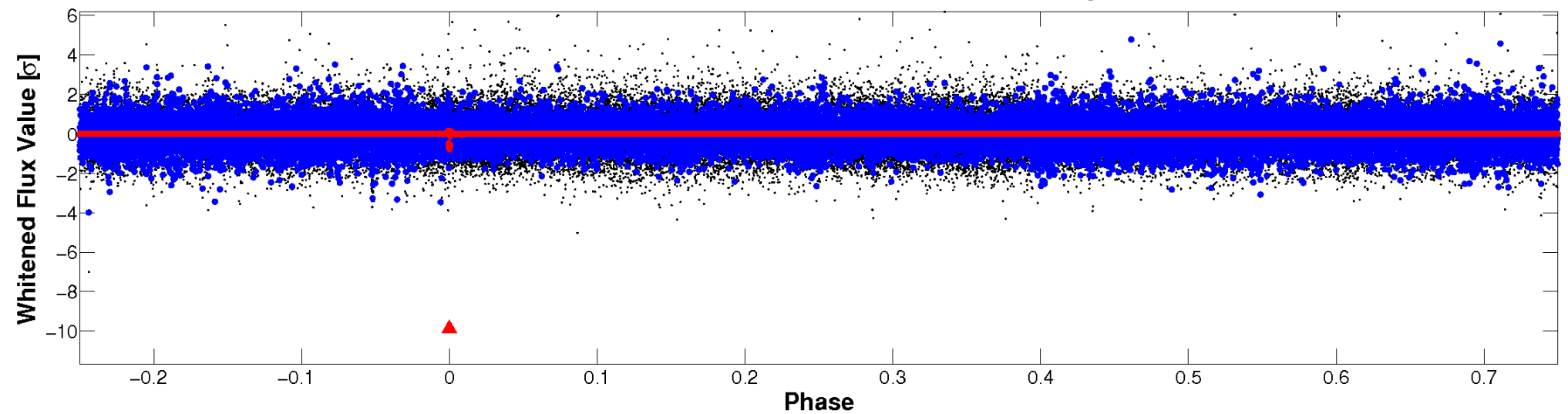


Non-Whitened Vs. Whitened Light Curve

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

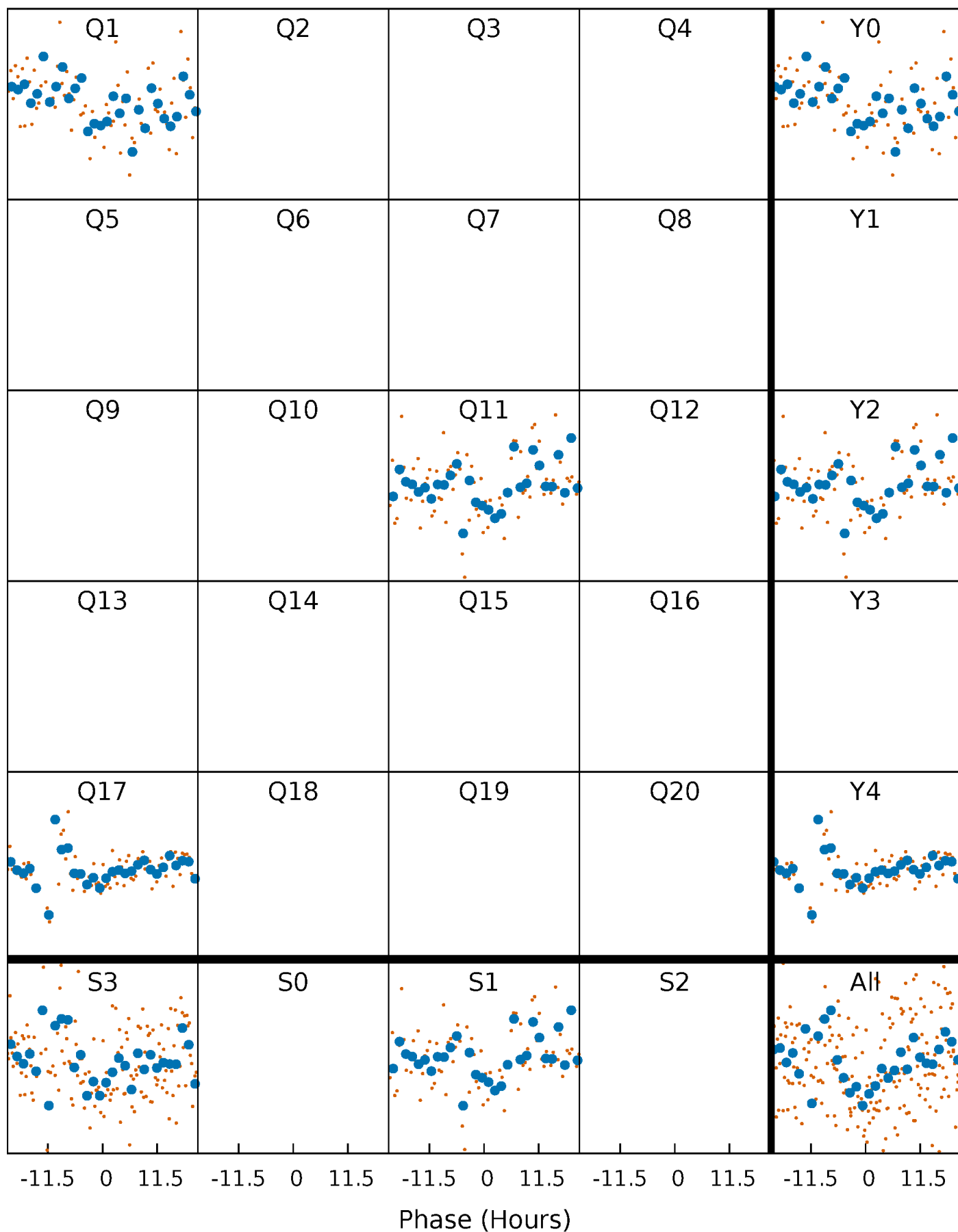


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



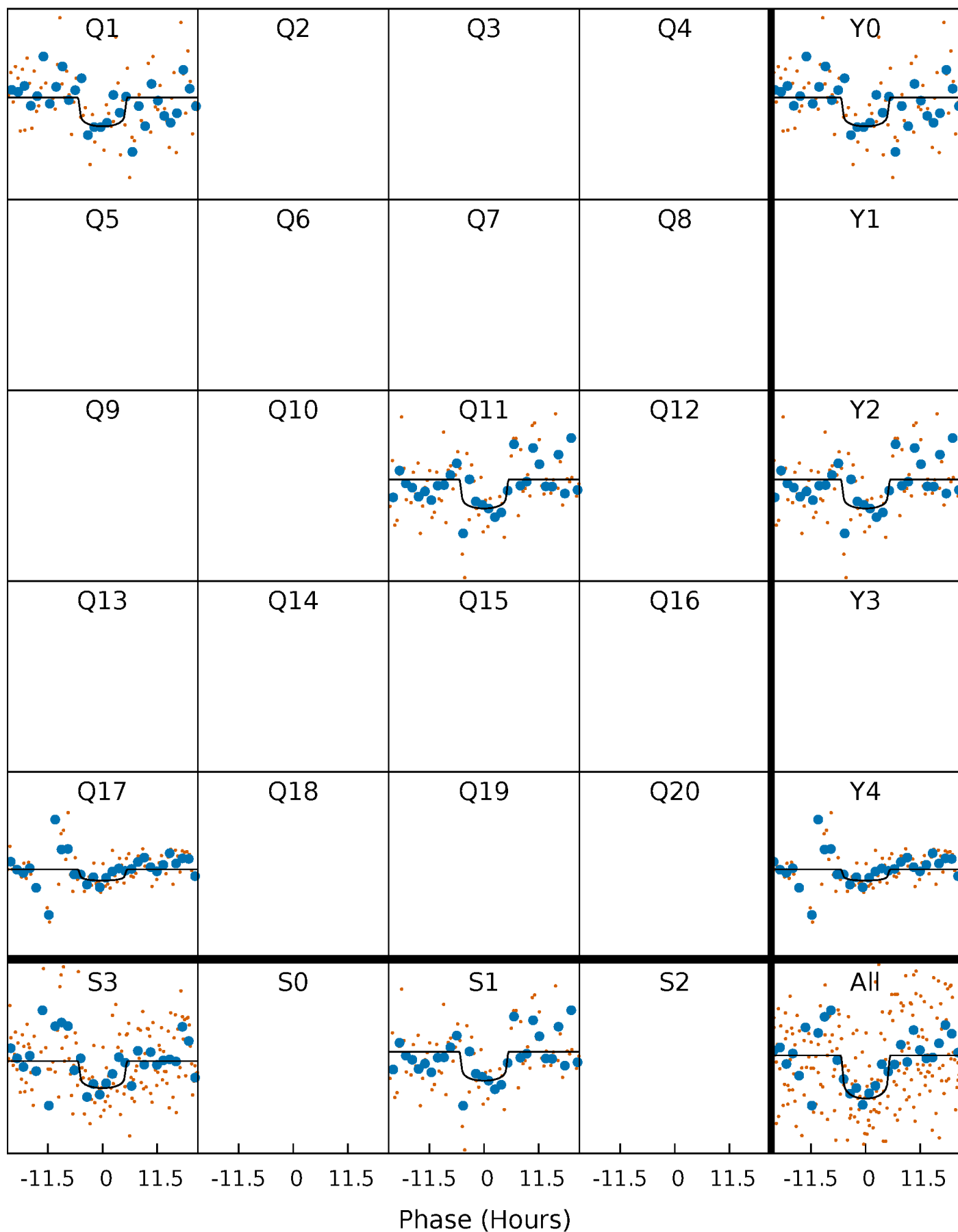
PDC Quarter-Phased Transit Curves

TCE 005112555-01 P=474.006809 Days $T_0=139.427575$ (BKJD)



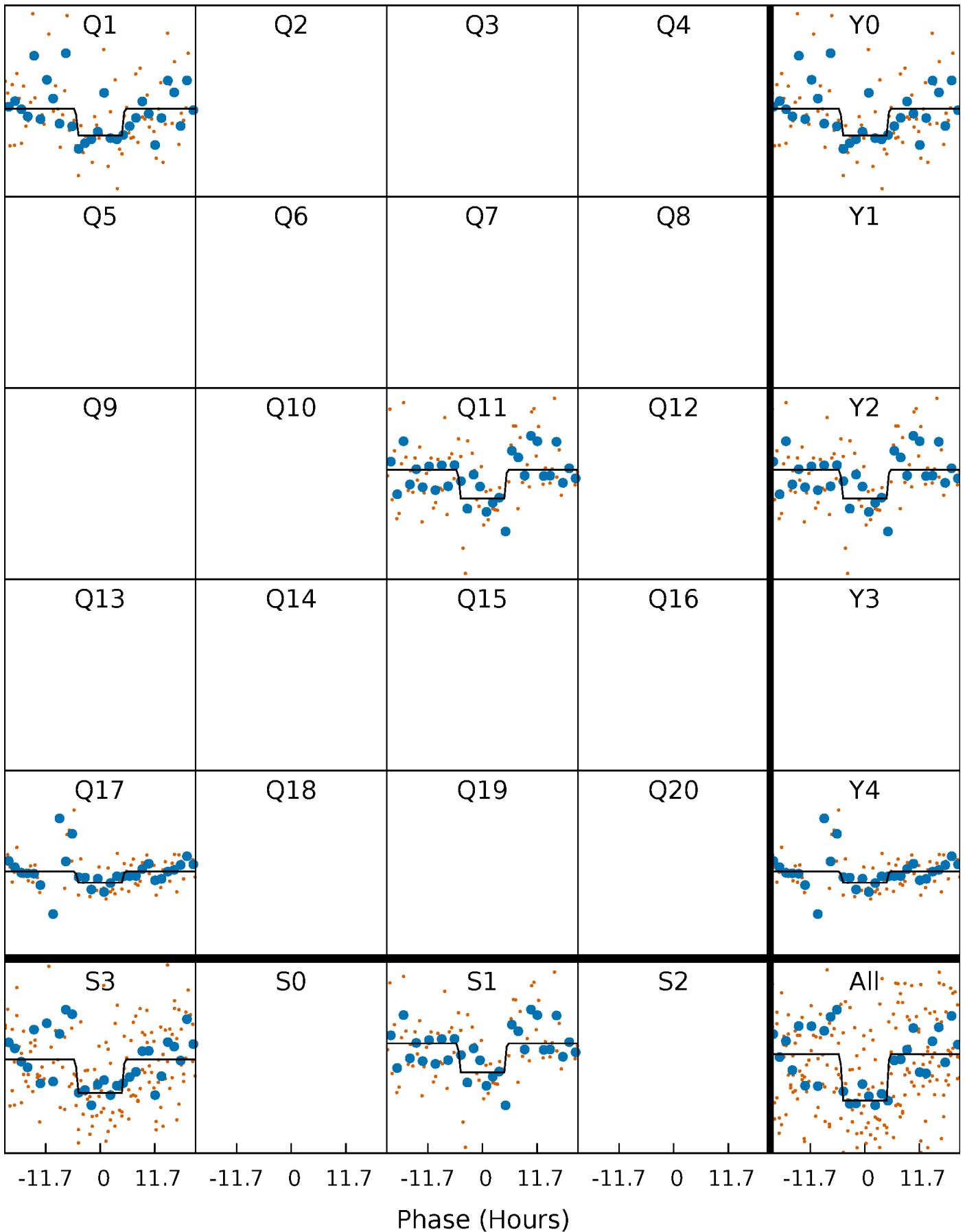
DV Quarter-Phased Transit Curves

TCE 005112555-01 P=474.006809 Days $T_0=139.427575$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

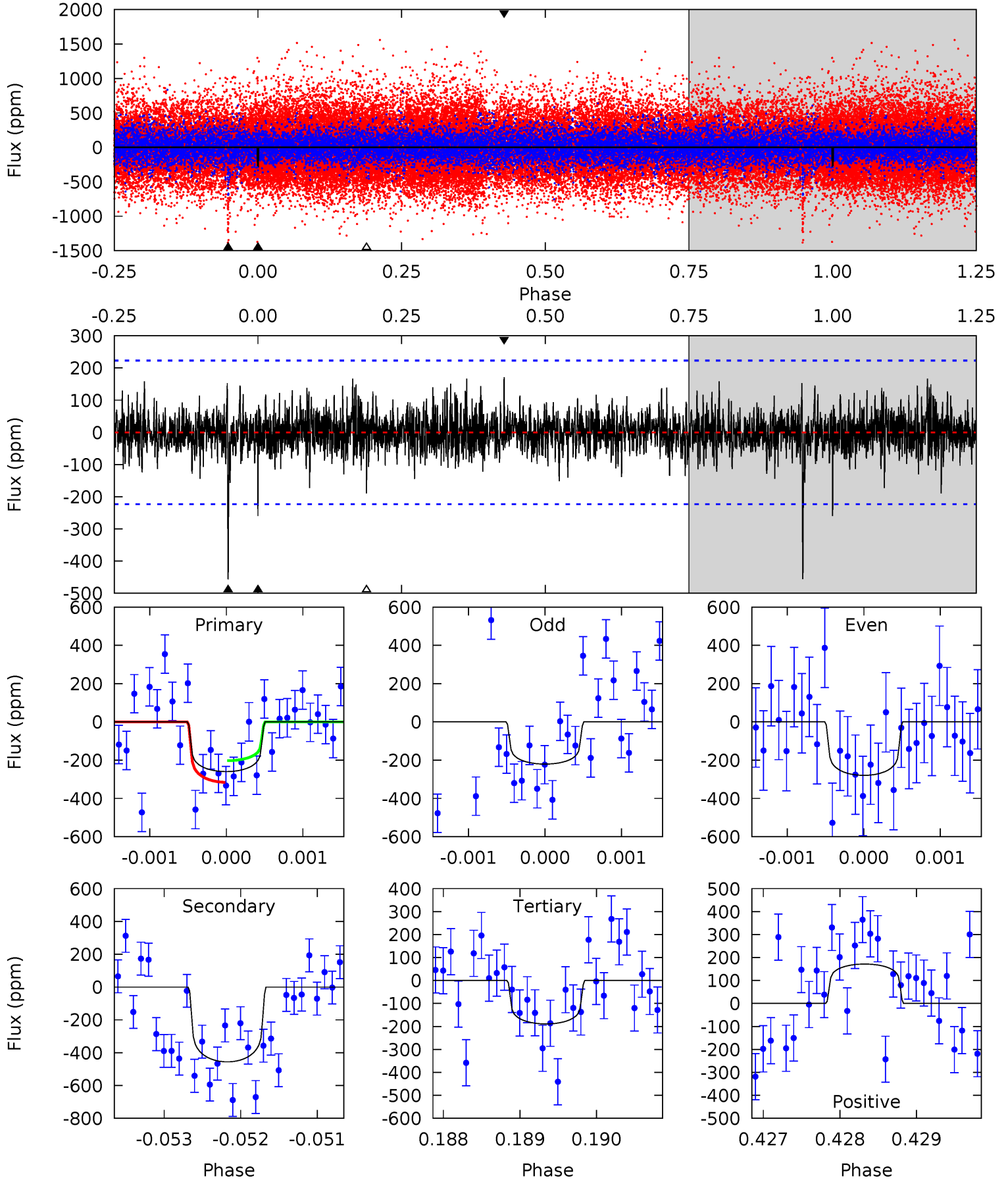
TCE 005112555-01 P=473.956424 Days $T_0=139.510783$ (BKJD)



DV Model-Shift Uniqueness Test

005112555-01, P = 474.006809 Days, E = 139.427575 Days

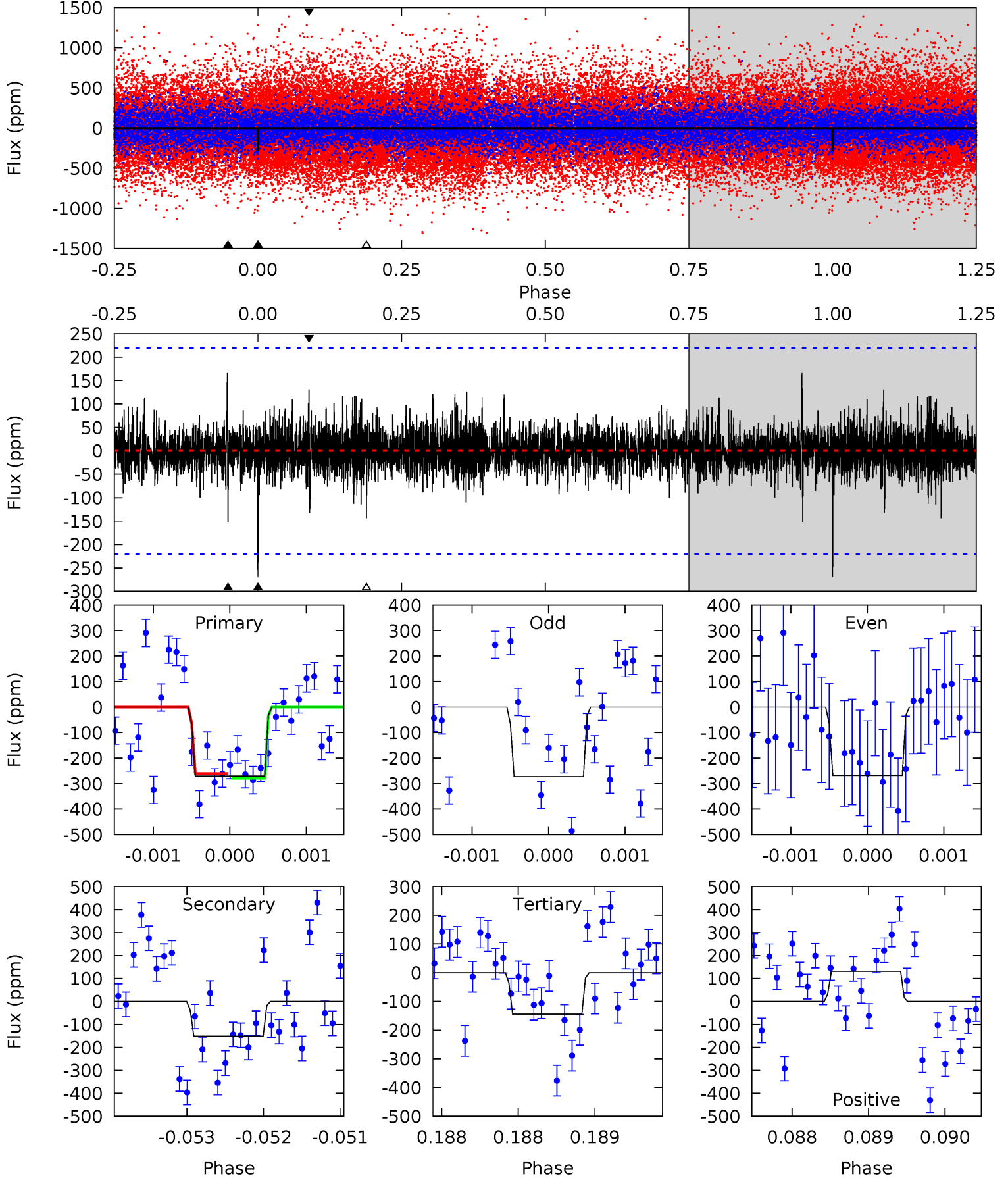
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.37	11.2	4.64	4.21	5.47	3.32	1.10	1.73	2.17	6.55	6.98	0.69	1.08	0.27	1.39



Alt Model-Shift Uniqueness Test

005112555-01, P = 473.956424 Days, E = 139.510783 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.70	3.75	3.57	3.25	5.47	3.32	0.79	3.13	3.45	0.18	0.51	0.05	0.99	0.38	0.22



Stellar Parameters For KIC 005112555

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5915^{+195}_{-177}	$4.549^{+0.111}_{-0.060}$	$-1.980^{+0.250}_{-0.050}$	$0.715^{+0.053}_{-0.071}$	$0.660^{+0.064}_{-0.017}$	$2.544^{+1.049}_{-0.464}$
	+3%/-3%	+2%/-1%	+13%/-3%	+7%/-10%	+10%/-3%	+41%/-18%
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 005112555-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-456 ± 41	$1.39^{+0.88}_{-0.79}$	301^{+12}_{-12}	6516^{+4601}_{-1432}	$146694^{+638264}_{-93755}$
Alt.	-151 ± 40	$1.40^{+0.91}_{-0.80}$	302^{+12}_{-13}	5015^{+2878}_{-923}	$45804^{+224385}_{-29179}$

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

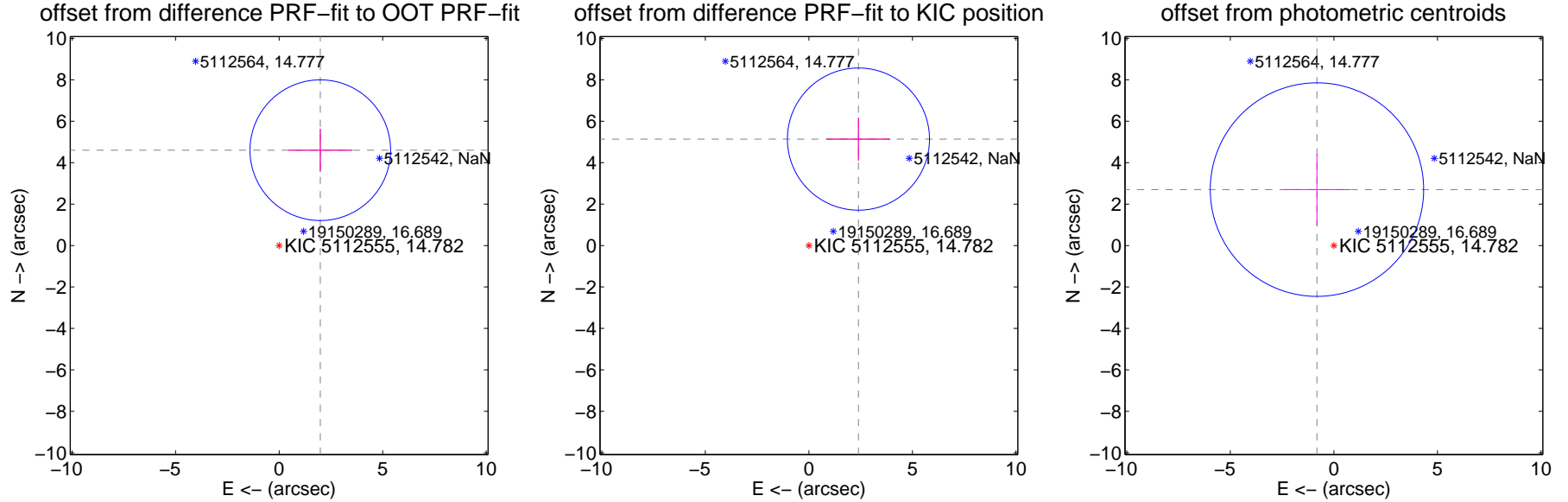
DV Centroid Data

Supplemental centroid analysis for 005112555-01. Kepler magnitude: 14.78. Transit SNR 5.22

There are 0 quarters with good PRF difference image offsets

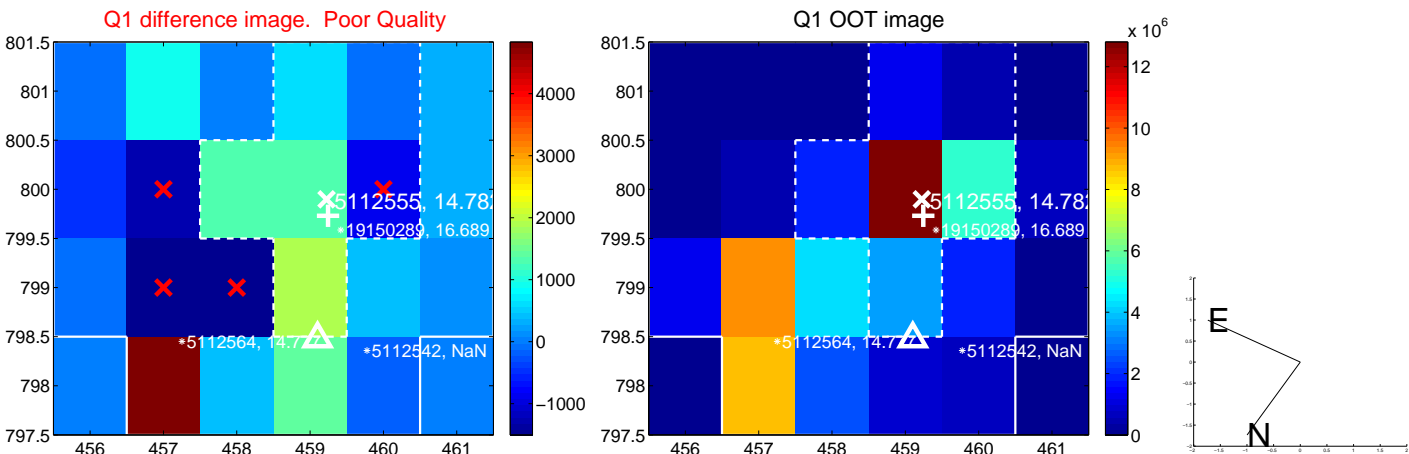
The direct PRF centroid is offset from the target star catalog position by about 0.67 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.013 ± 1.132	4.43	-1.988 ± 1.539	4.602 ± 1.038
PRF-fit source offset from KIC position	5.669 ± 1.144	4.96	-2.394 ± 1.539	5.138 ± 1.038
photometric centroid source offset	2.82 ± 1.72	1.64	0.82 ± 1.60	2.70 ± 1.73



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.

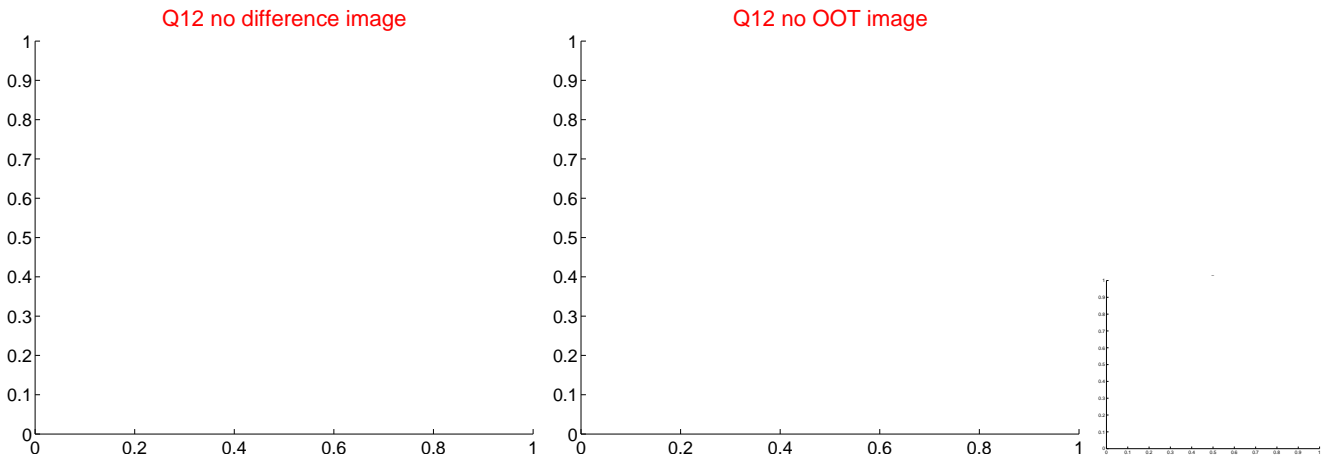
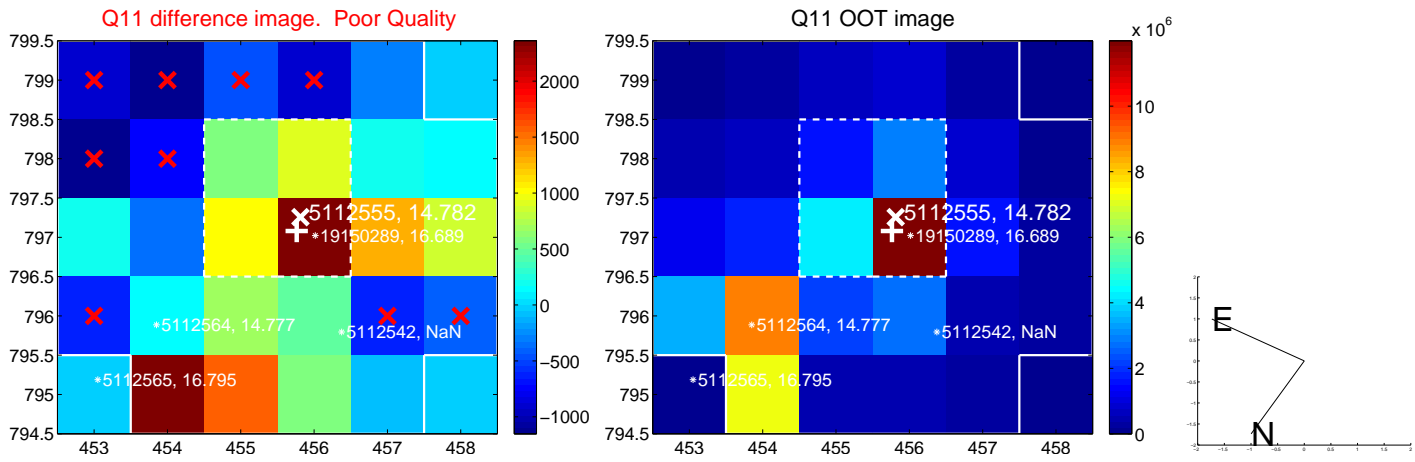
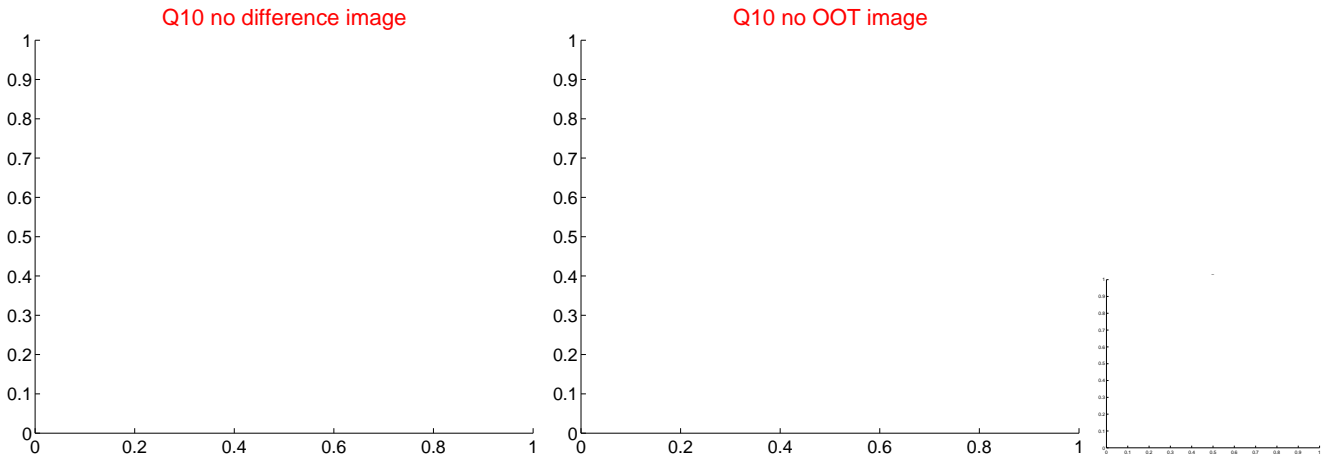
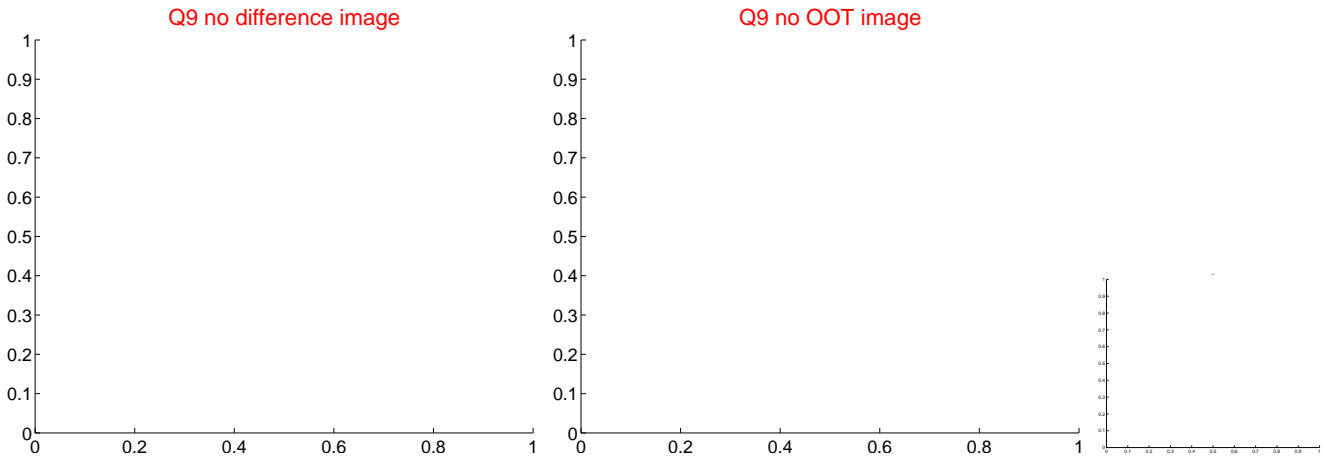
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



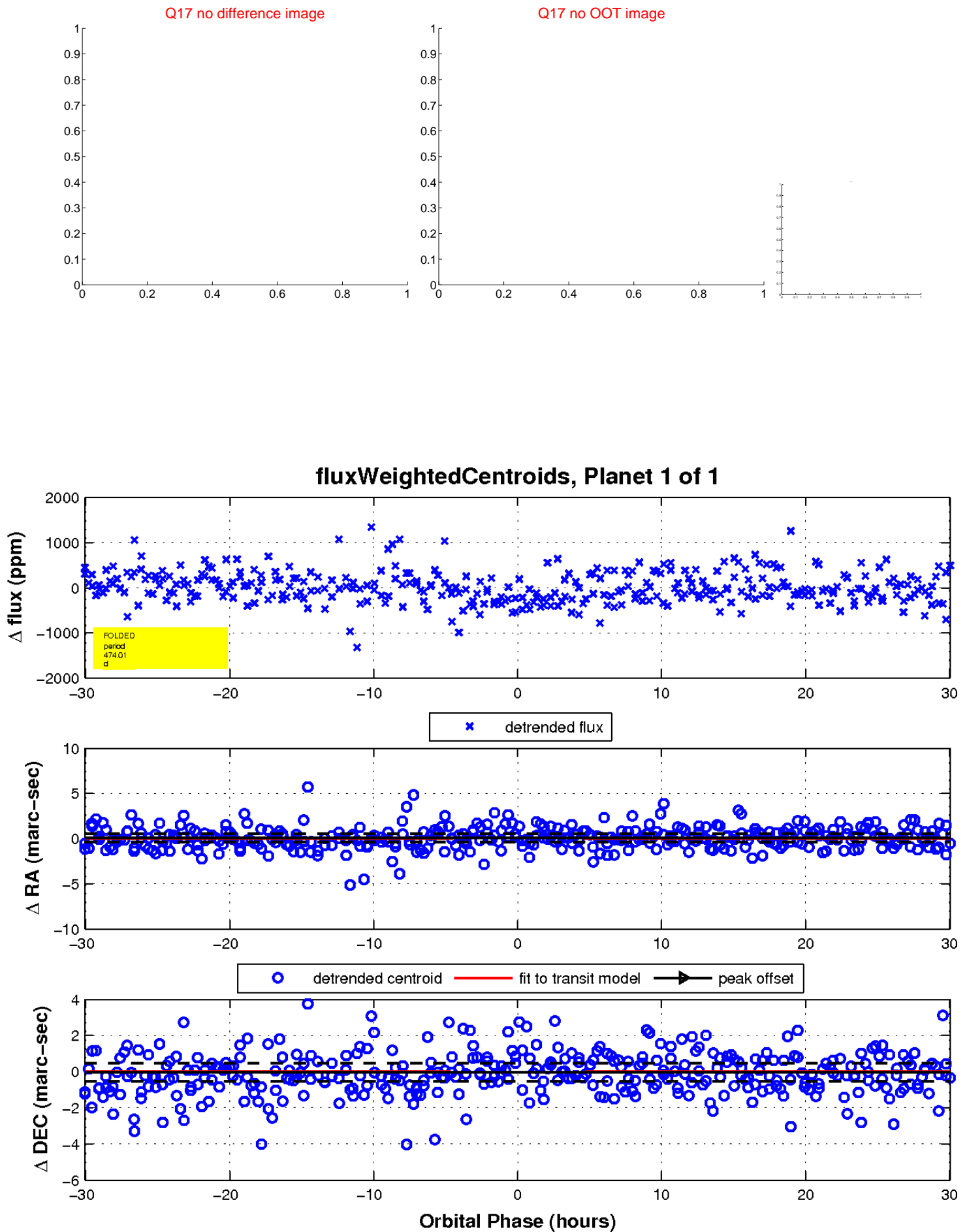
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

