

KIC 012553711

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})
012553711-01	OBS	No	55.422762	135.699874	2793.7	4.500	19.8	-1.0	1.61	6722	8.59	49.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012553711-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

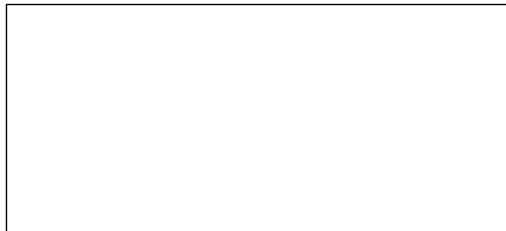
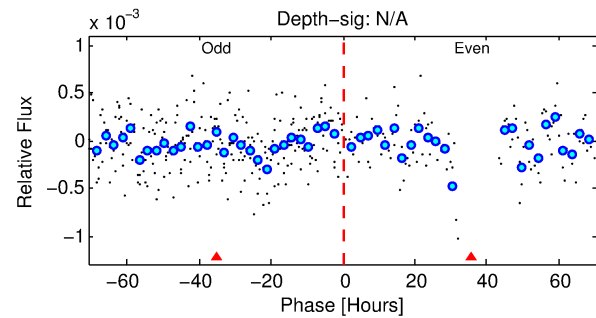
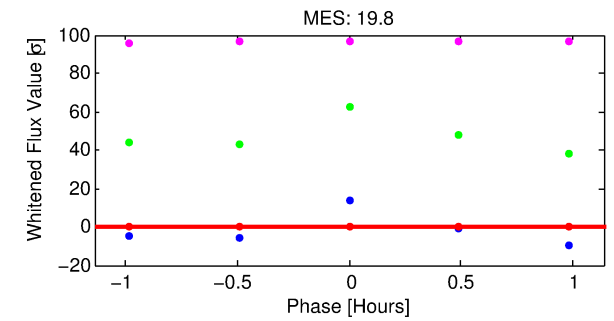
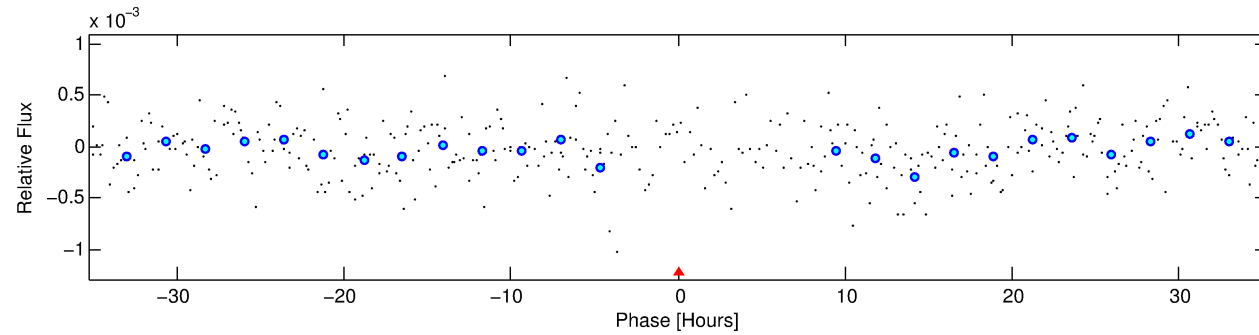
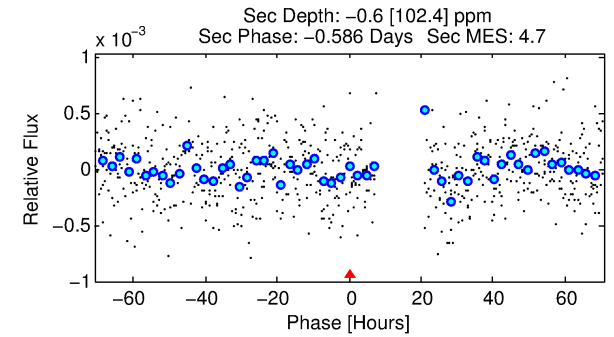
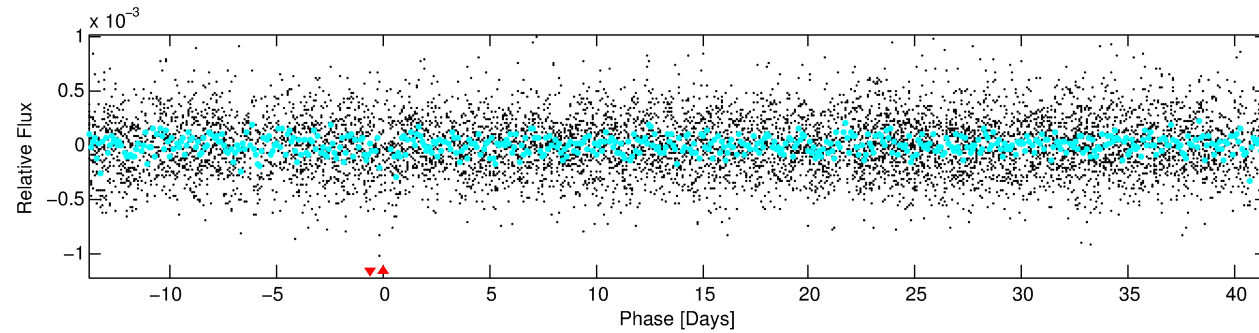
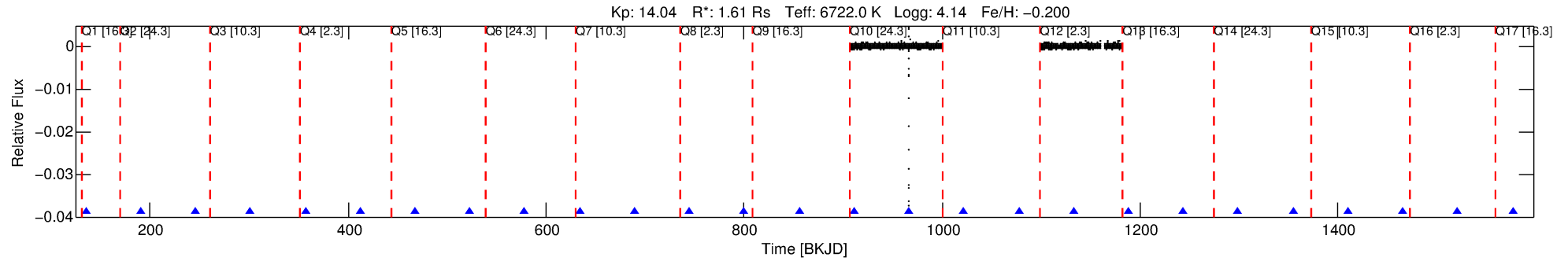
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012553711-01

No Significant Match Found

DV One-Page Summary

KIC: 12553711 Candidate: 1 of 1 Period: 55.423 d



TPS TCE Results:

Period = 55.42276 d
Epoch = 135.6999 BKJD

DV fit results are unavailable

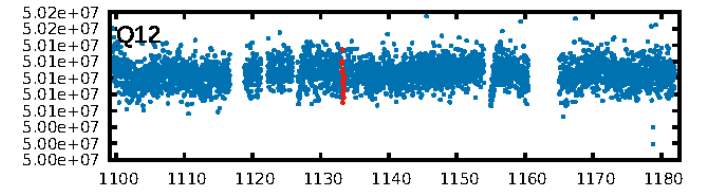
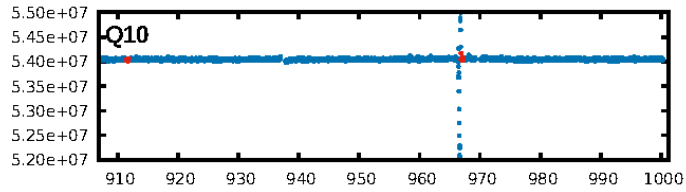
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.55e-80
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.287
Centroid-sig: 81.3%
Centroid-so: 1.718 arcsec [0.70σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

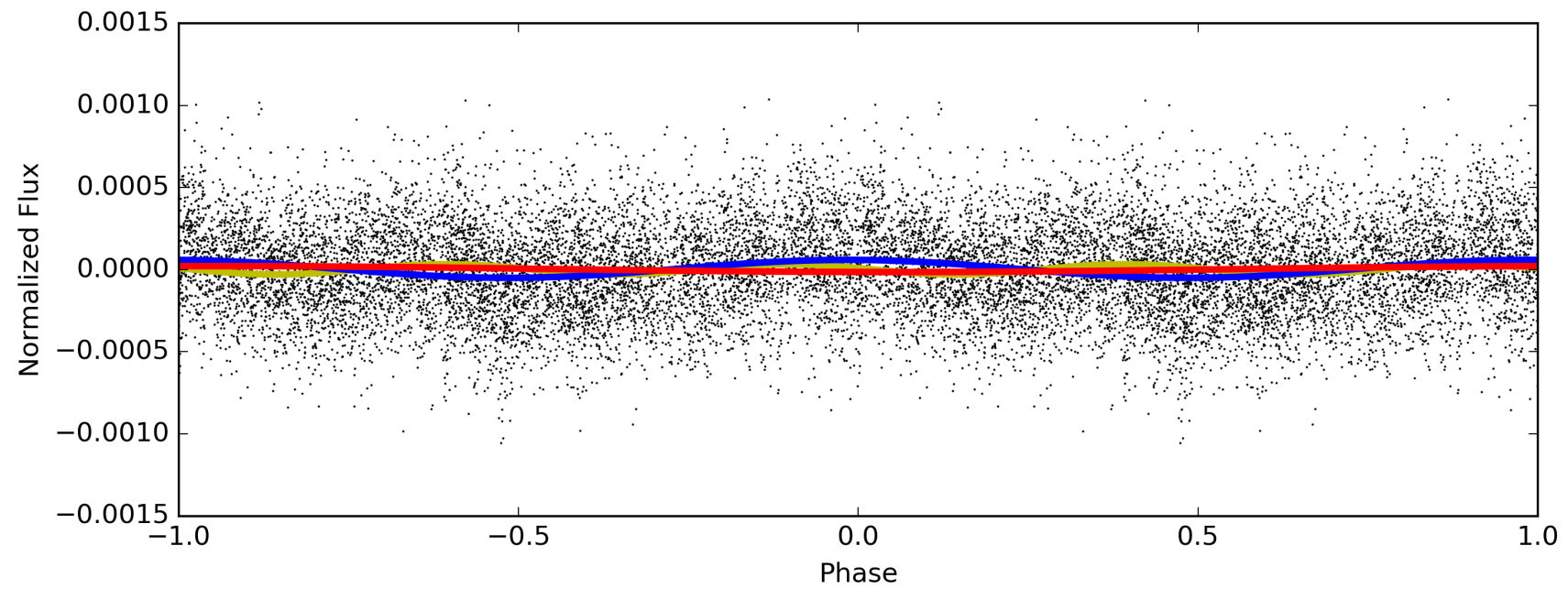
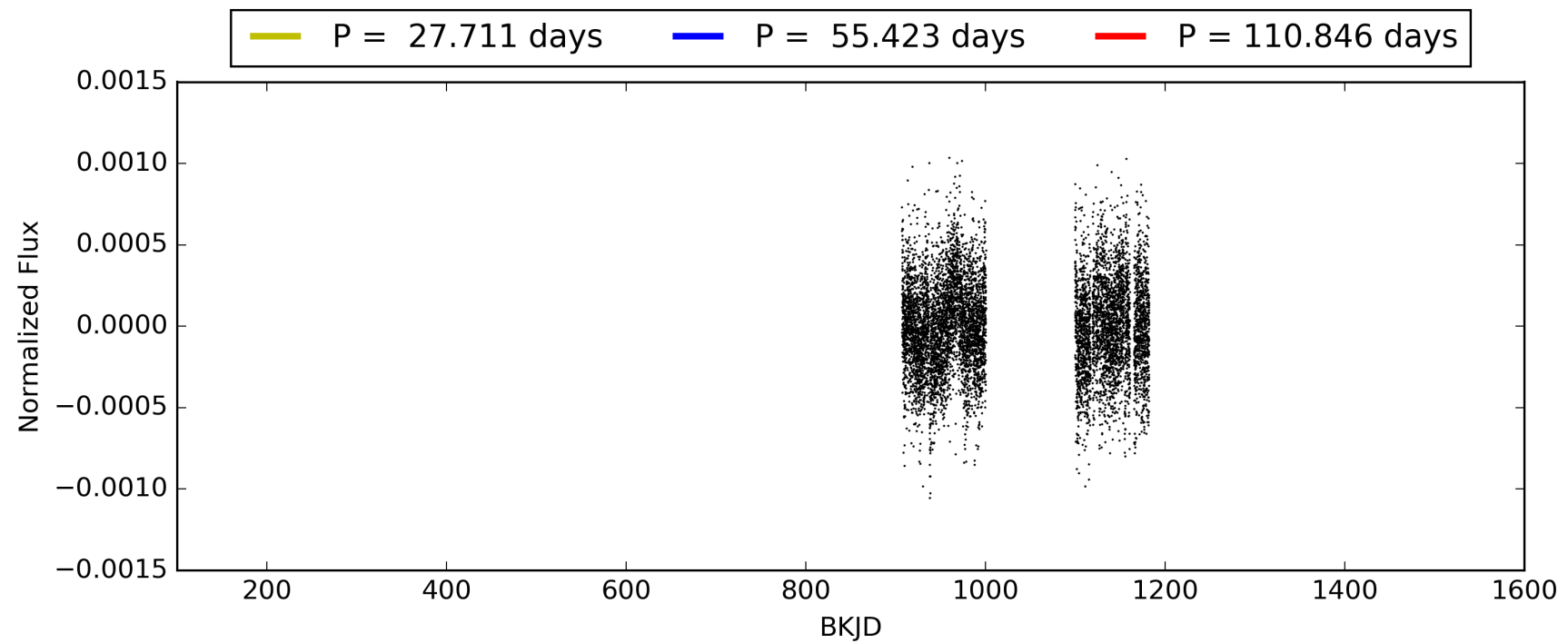
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:47:49 Z

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

TCE 012553711-01, PDC Light Curves

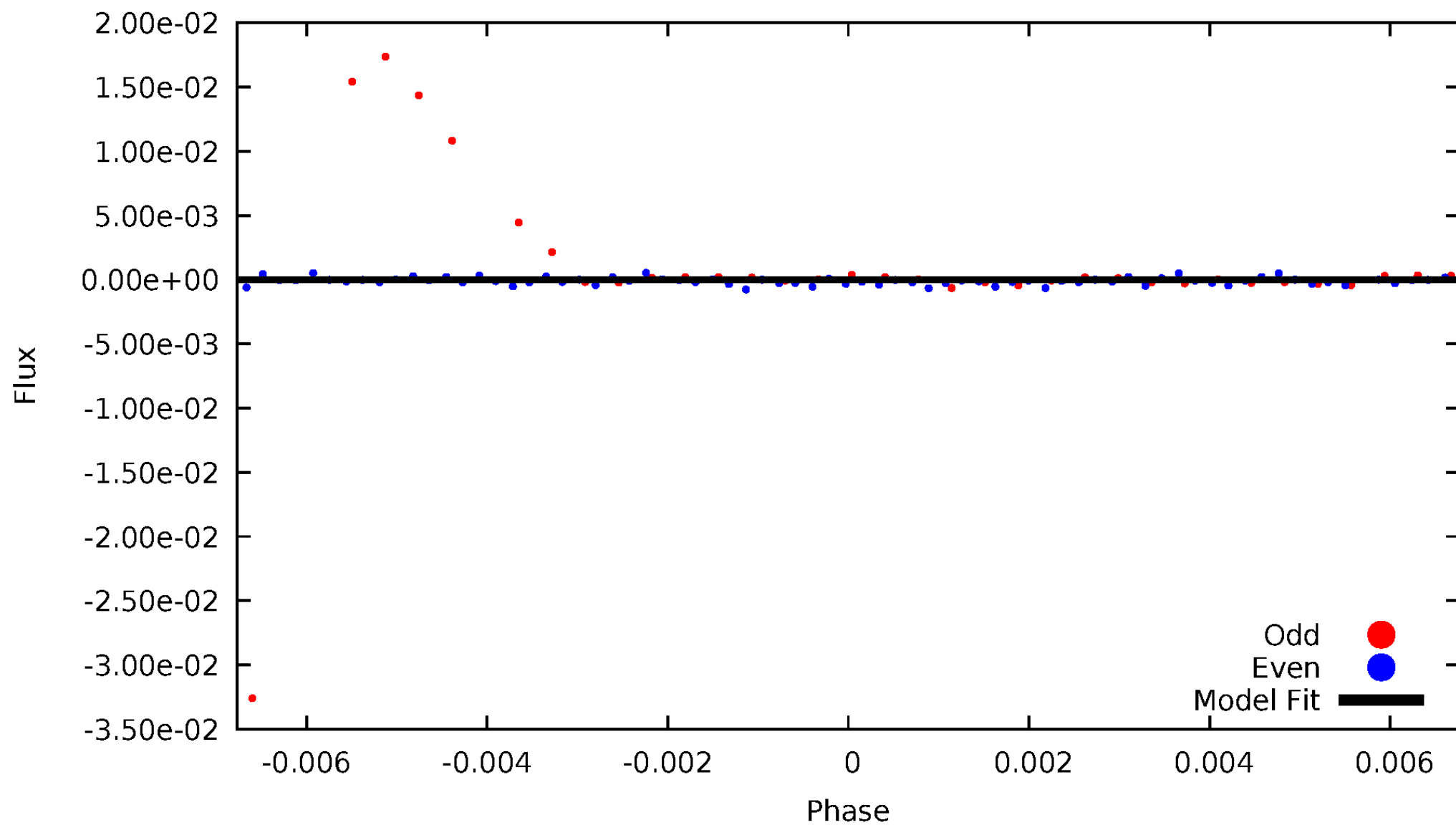


TCE 012553711-01



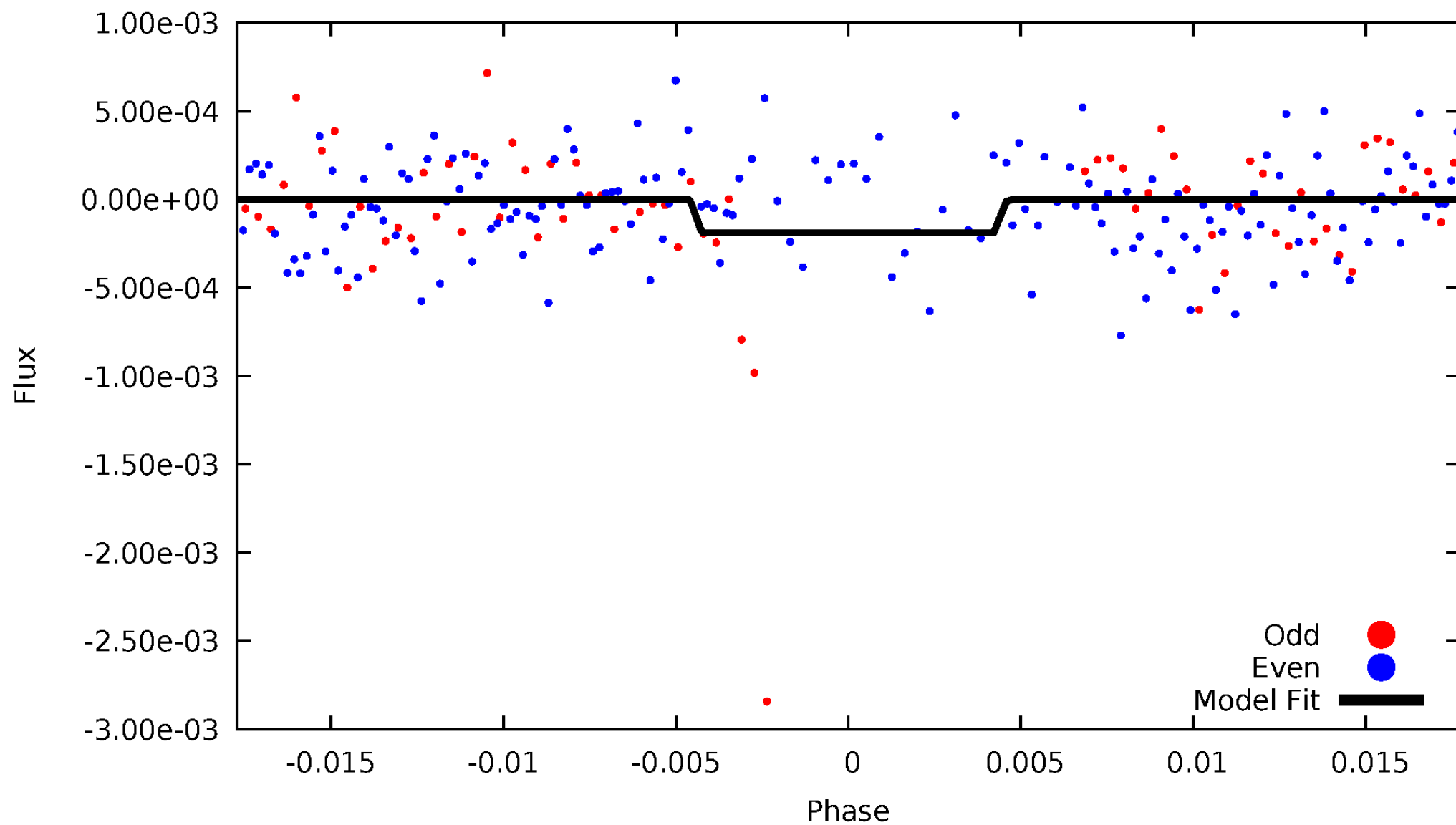
DV Odd/Even

TCE 012553711-01



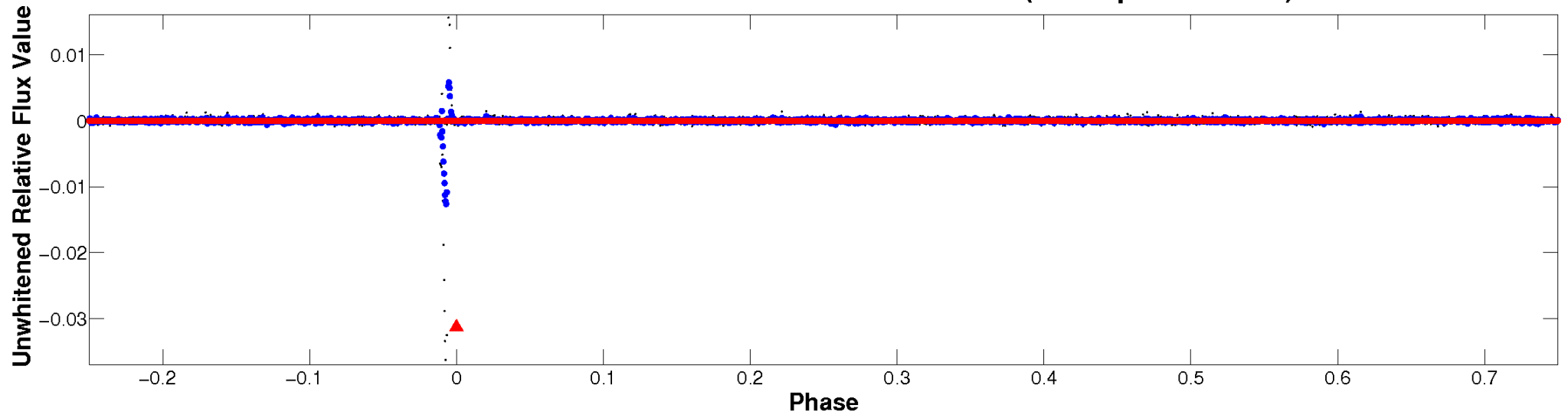
ALT Odd/Even

TCE 012553711-01



Non-Whitened Vs. Whitened Light Curve

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

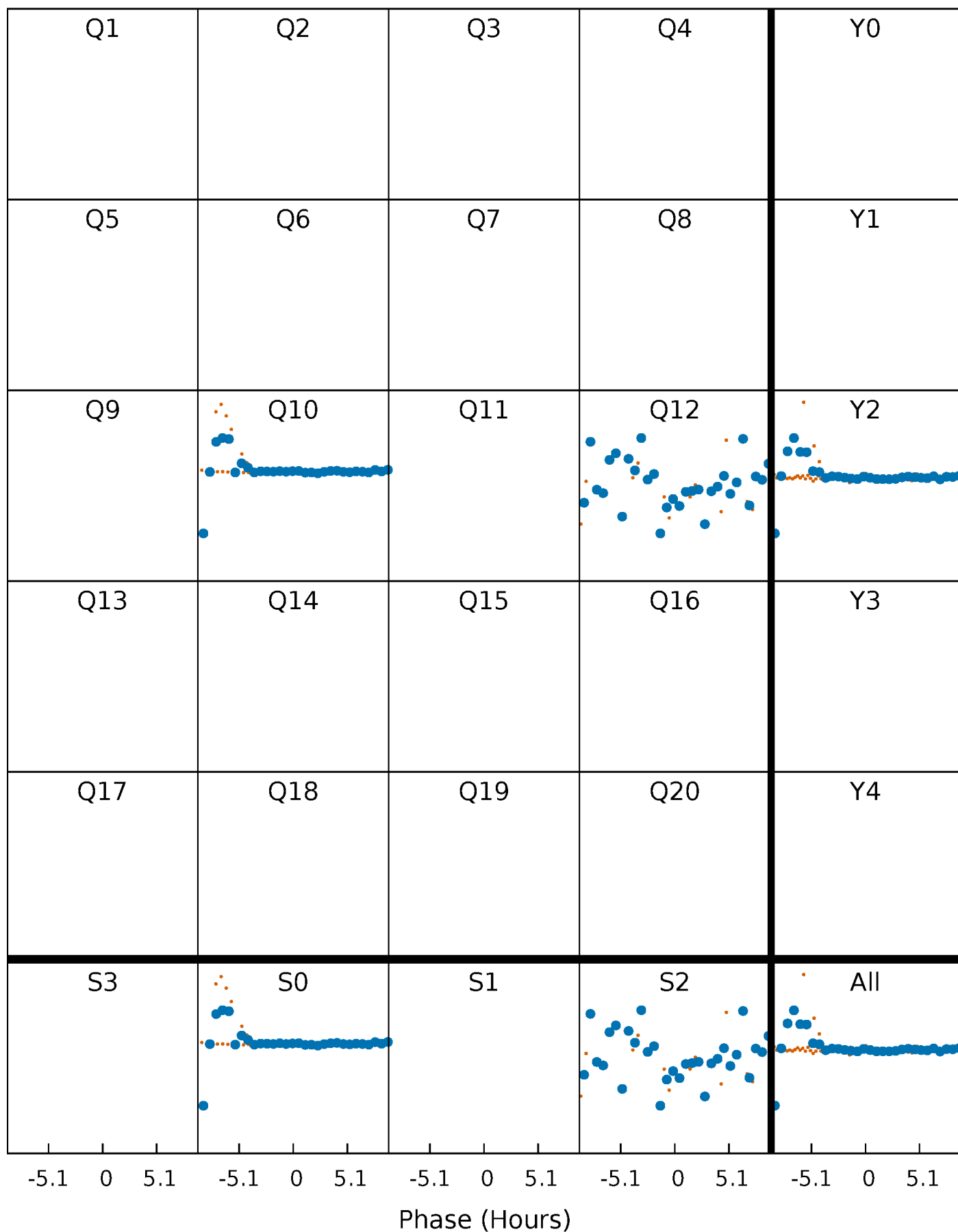


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



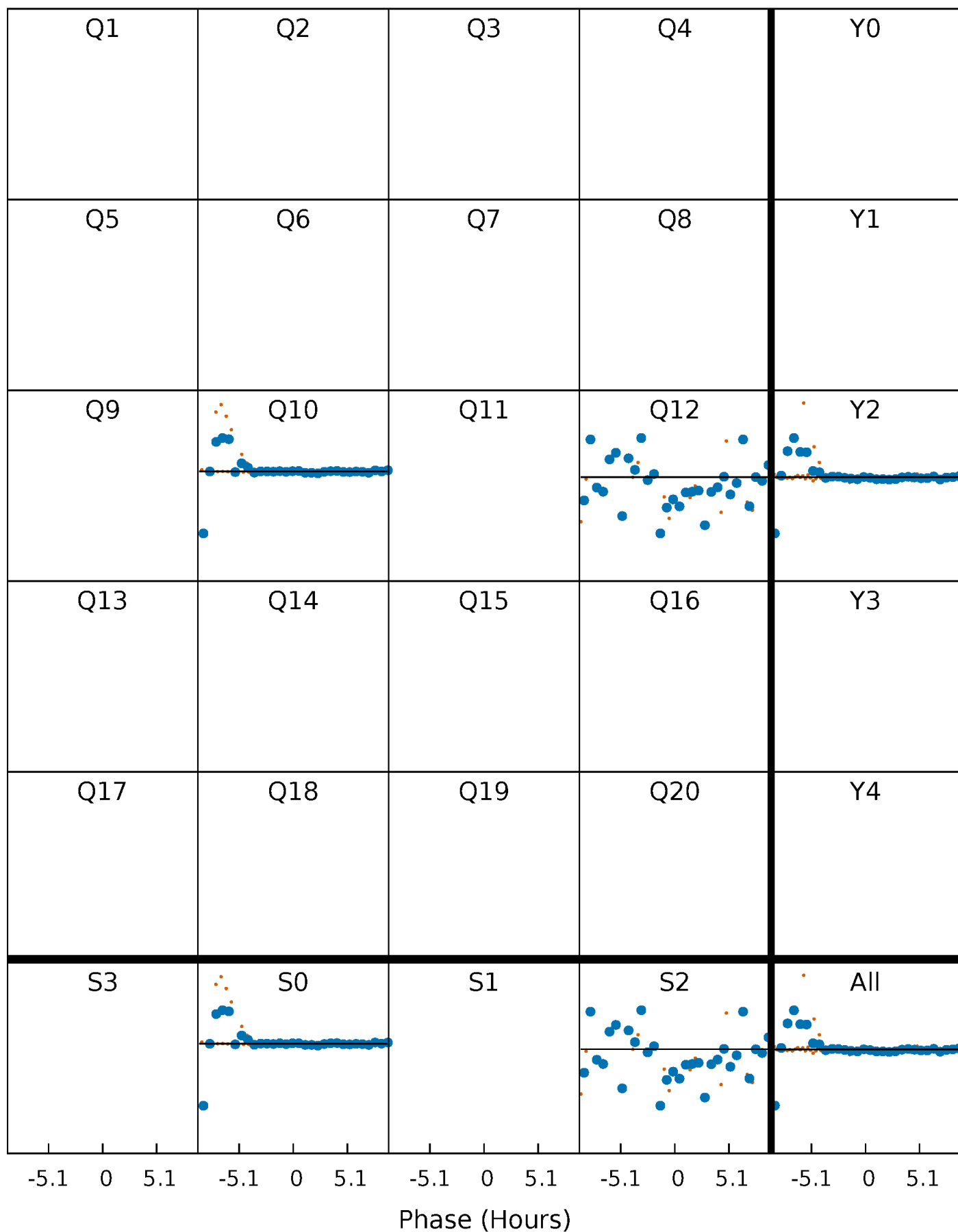
PDC Quarter-Phased Transit Curves

TCE 012553711-01 P= 55.422762 Days $T_0=135.699874$ (BKJD)



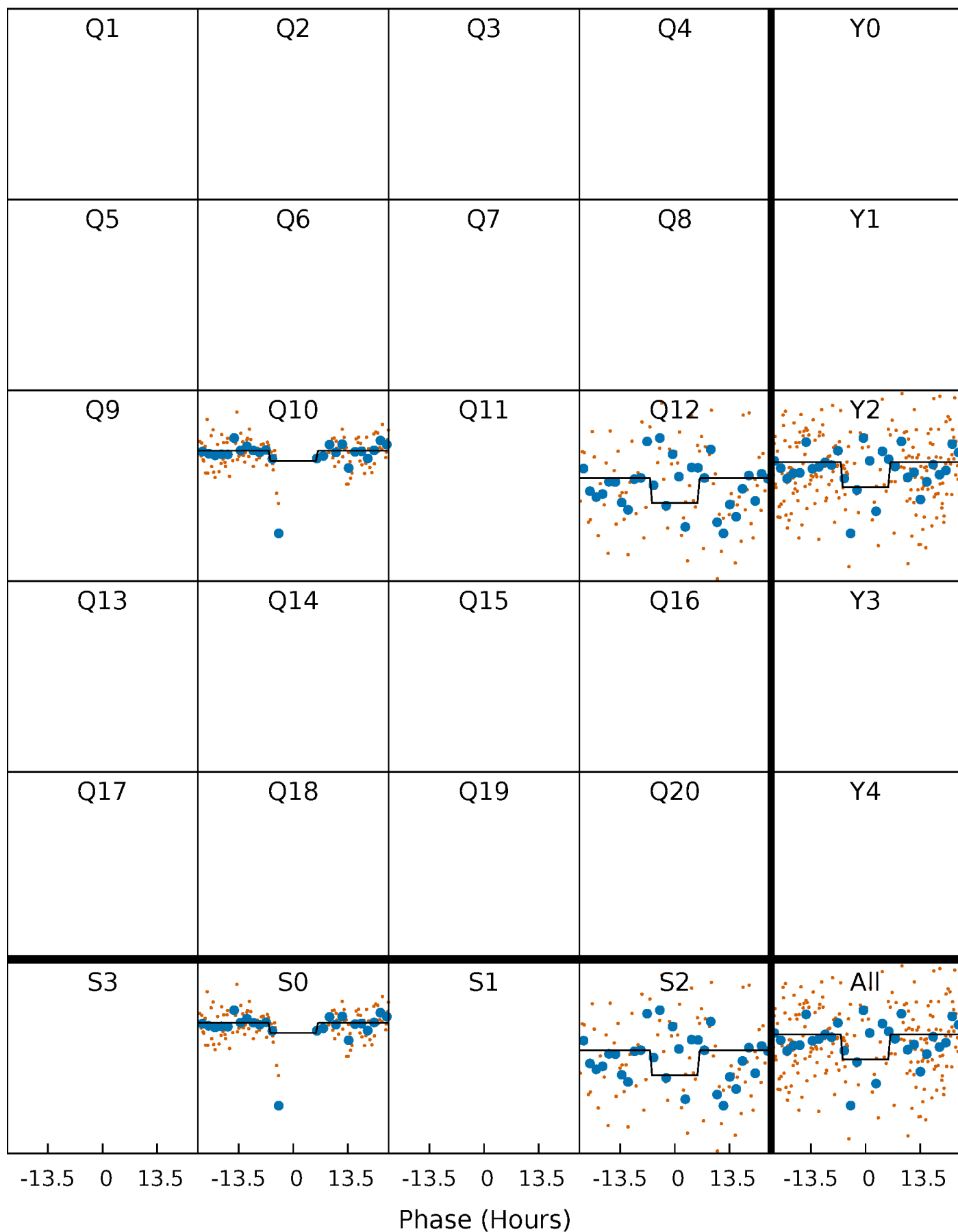
DV Quarter-Phased Transit Curves

TCE 012553711-01 P= 55.422762 Days $T_0=135.699874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

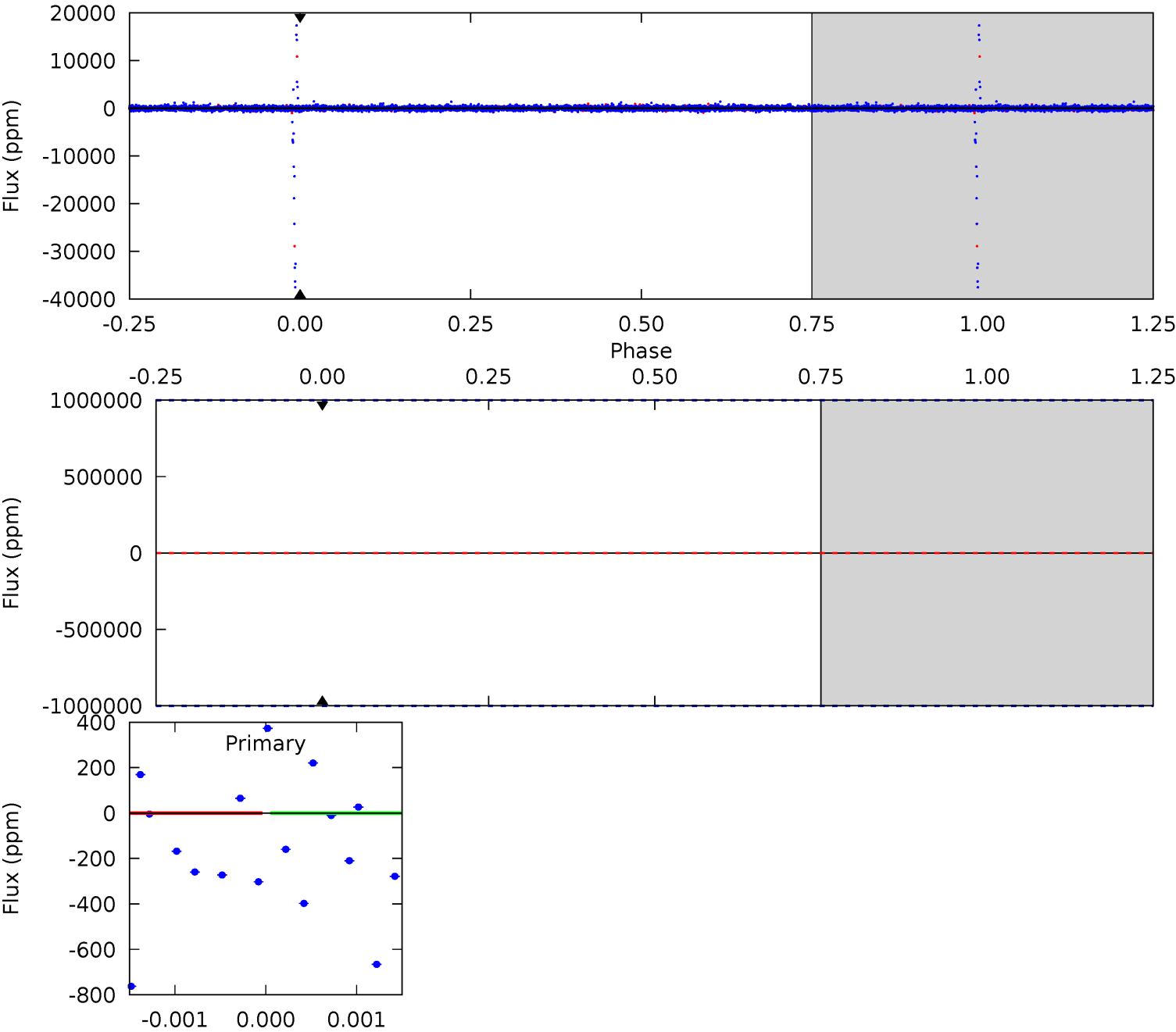
TCE 012553711-01 P= 55.422762 Days $T_0=135.199284$ (BKJD)



DV Model-Shift Uniqueness Test

012553711-01, P = 55.422762 Days, E = 135.699874 Days

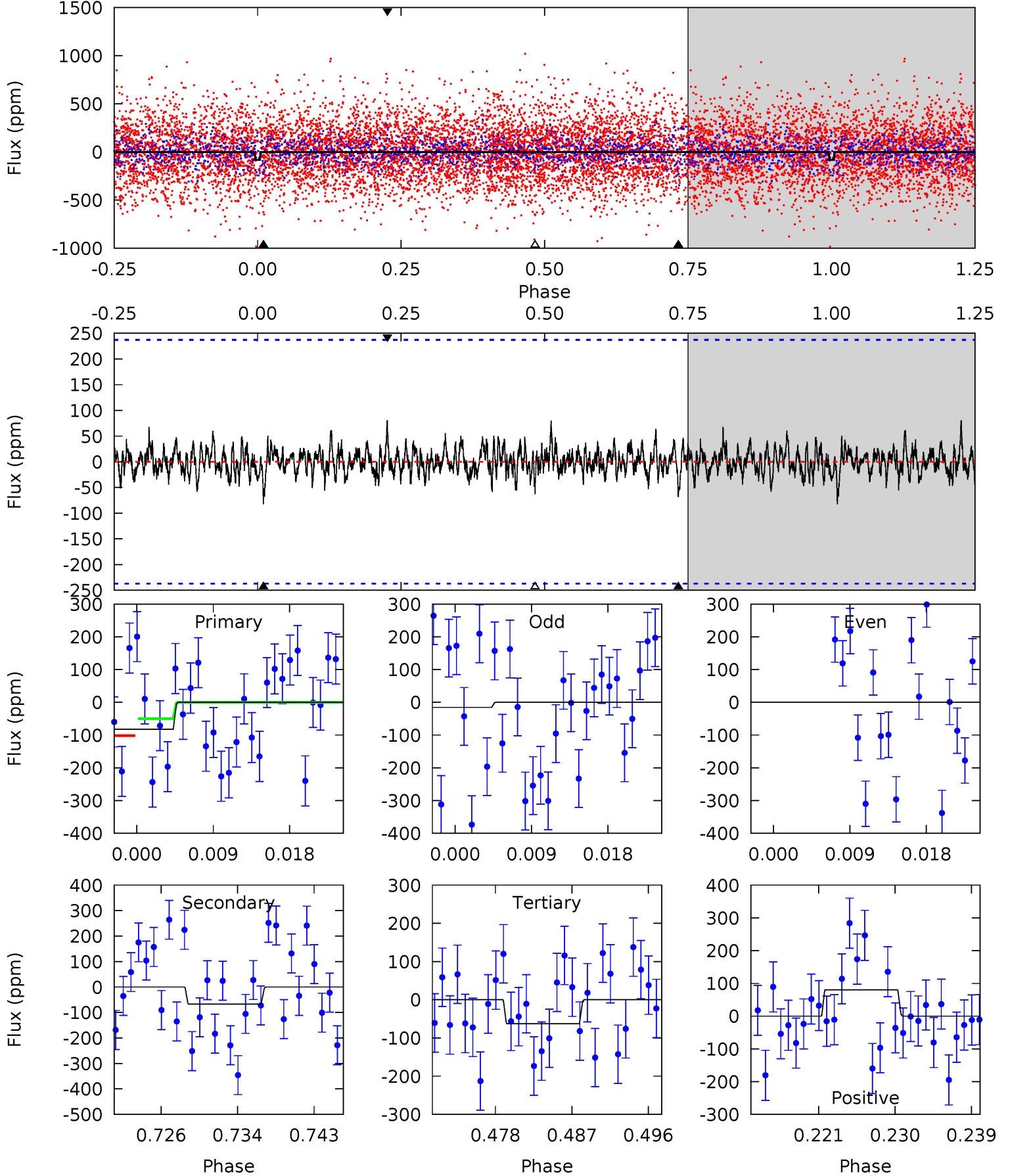
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012553711-01, P = 55.422762 Days, E = 135.199284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	1.43	1.34	1.71	5.05	2.62	0.44	0.42	0.04	0.10	-0.28	0	2.09	0.49	0.55



Stellar Parameters For KIC 012553711

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6722^{+189}_{-284}	$4.141^{+0.204}_{-0.185}$	$-0.200^{+0.250}_{-0.300}$	$1.612^{+0.492}_{-0.447}$	$1.320^{+0.194}_{-0.237}$	$0.444^{+0.516}_{-0.207}$
	+3%/-4%	+5%/-4%	+125%/-150%	+31%/-28%	+15%/-18%	+116%/-47%
Source	KIC0	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 012553711-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$15.76^{+15.34}_{-10.75}$	937^{+77}_{-71}	-3555^{+26037}_{-17862}	$-104.654^{+39347.344}_{-29899.607}$
Alt.	-67 ± 47	$12.93^{+14.03}_{-8.88}$	938^{+77}_{-81}	2791^{+1307}_{-619}	17^{+174}_{-14}

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

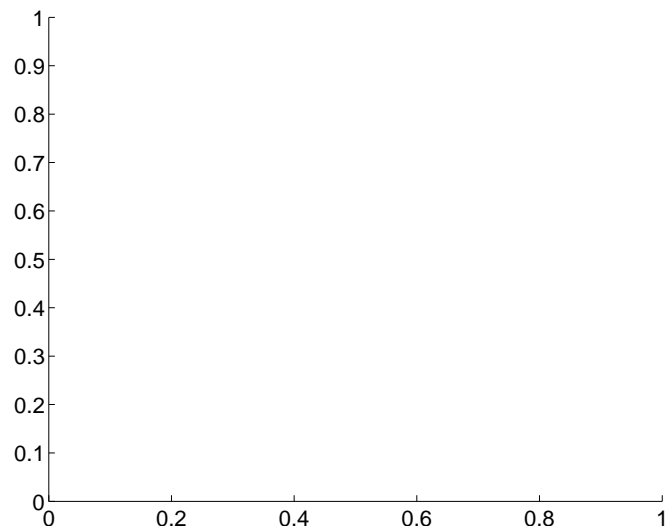
Supplemental centroid analysis for 012553711-01. Kepler magnitude: 14.04. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

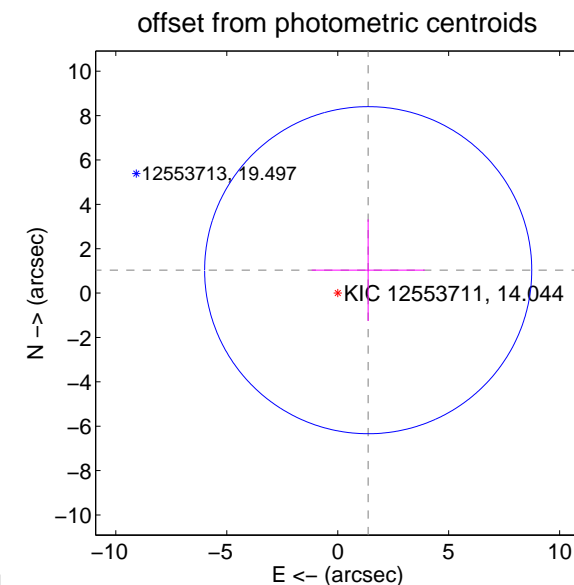
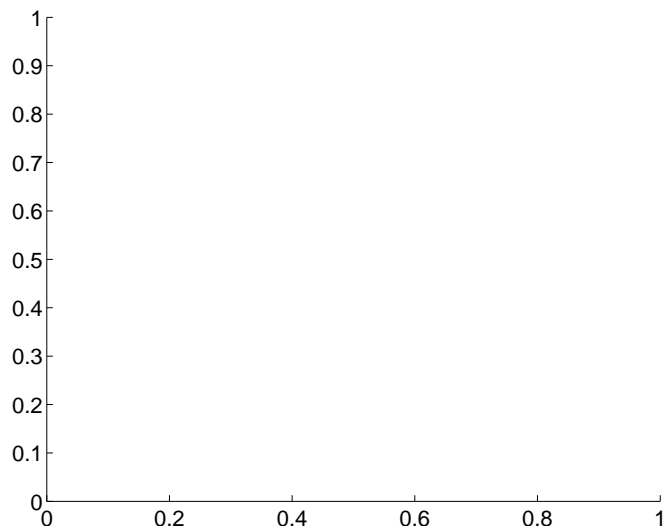
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.72 ± 2.46	0.70	-1.37 ± 2.55	1.03 ± 2.29

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.

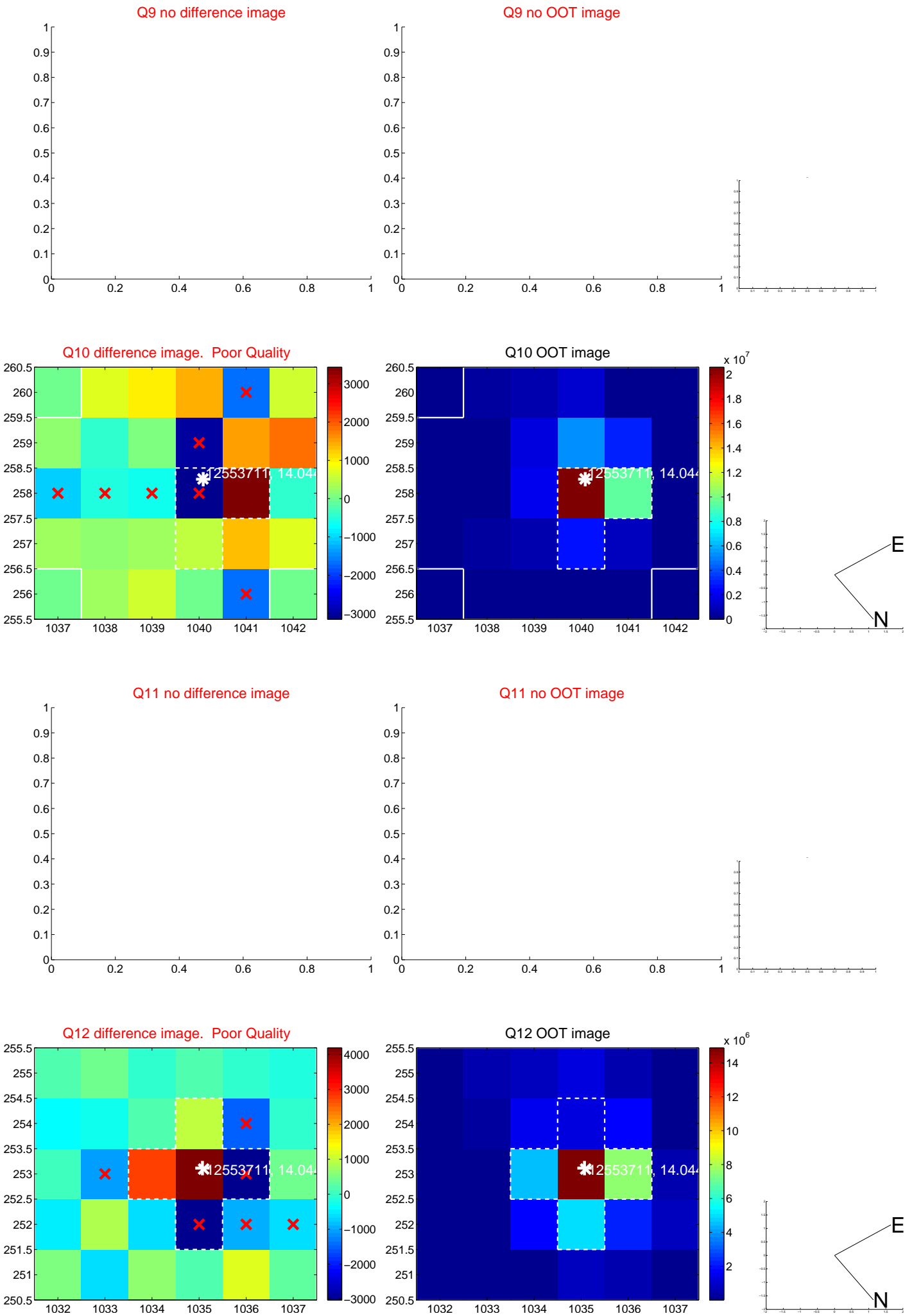
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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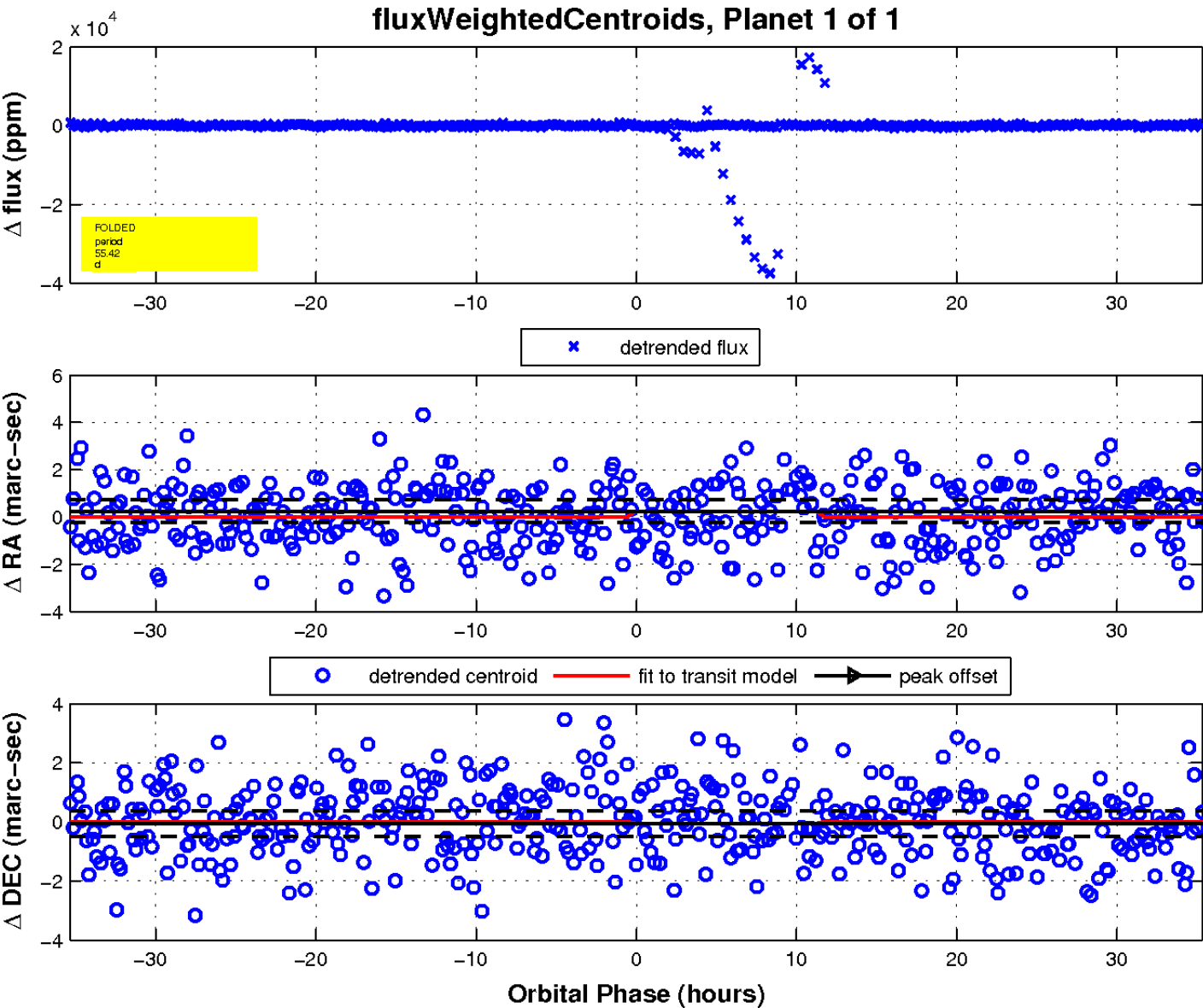
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

