

KIC 003557568

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})
003557568-01	OBS	No	520.209824	490.481033	329.7	13.780	7.5	7.8	3.30	5119	6.66	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003557568-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

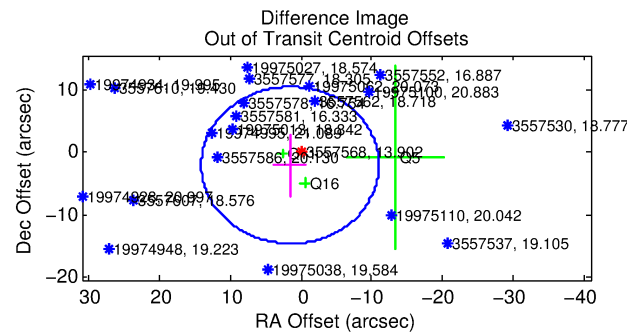
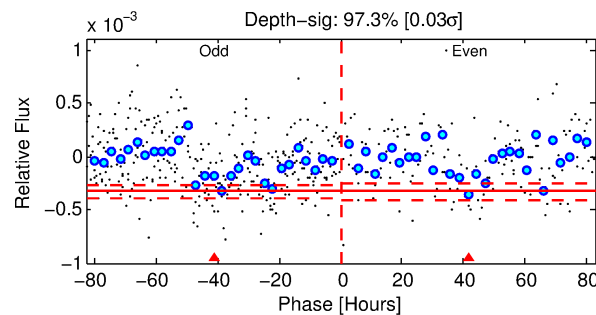
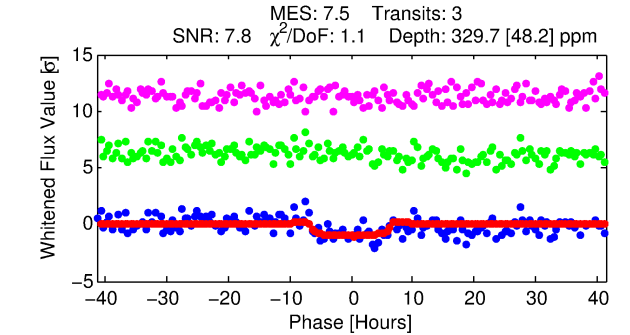
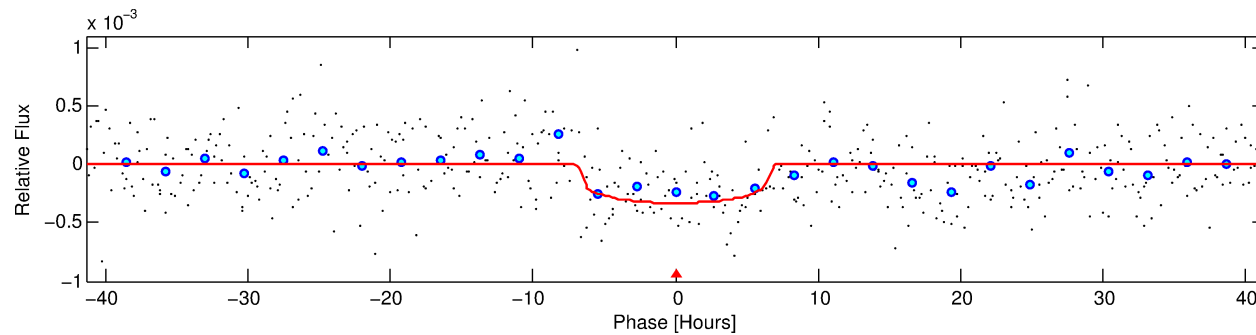
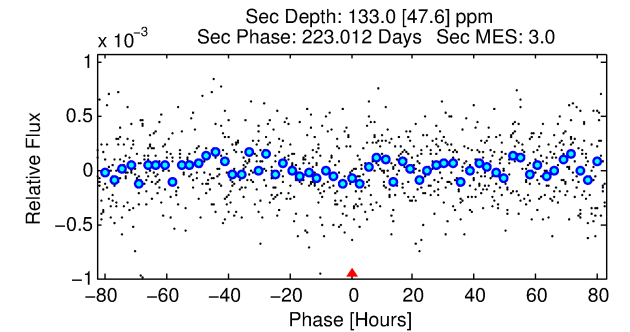
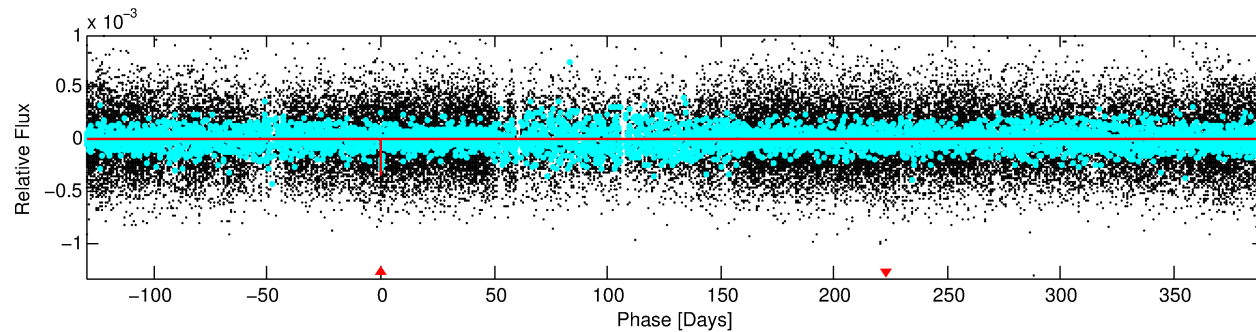
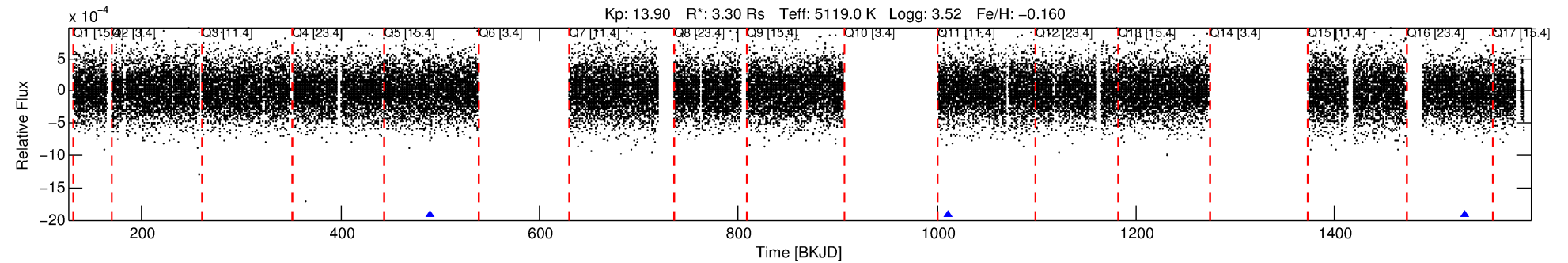
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003557568-01

No Significant Match Found

DV One-Page Summary

KIC: 3557568 Candidate: 1 of 1 Period: 520.210 d



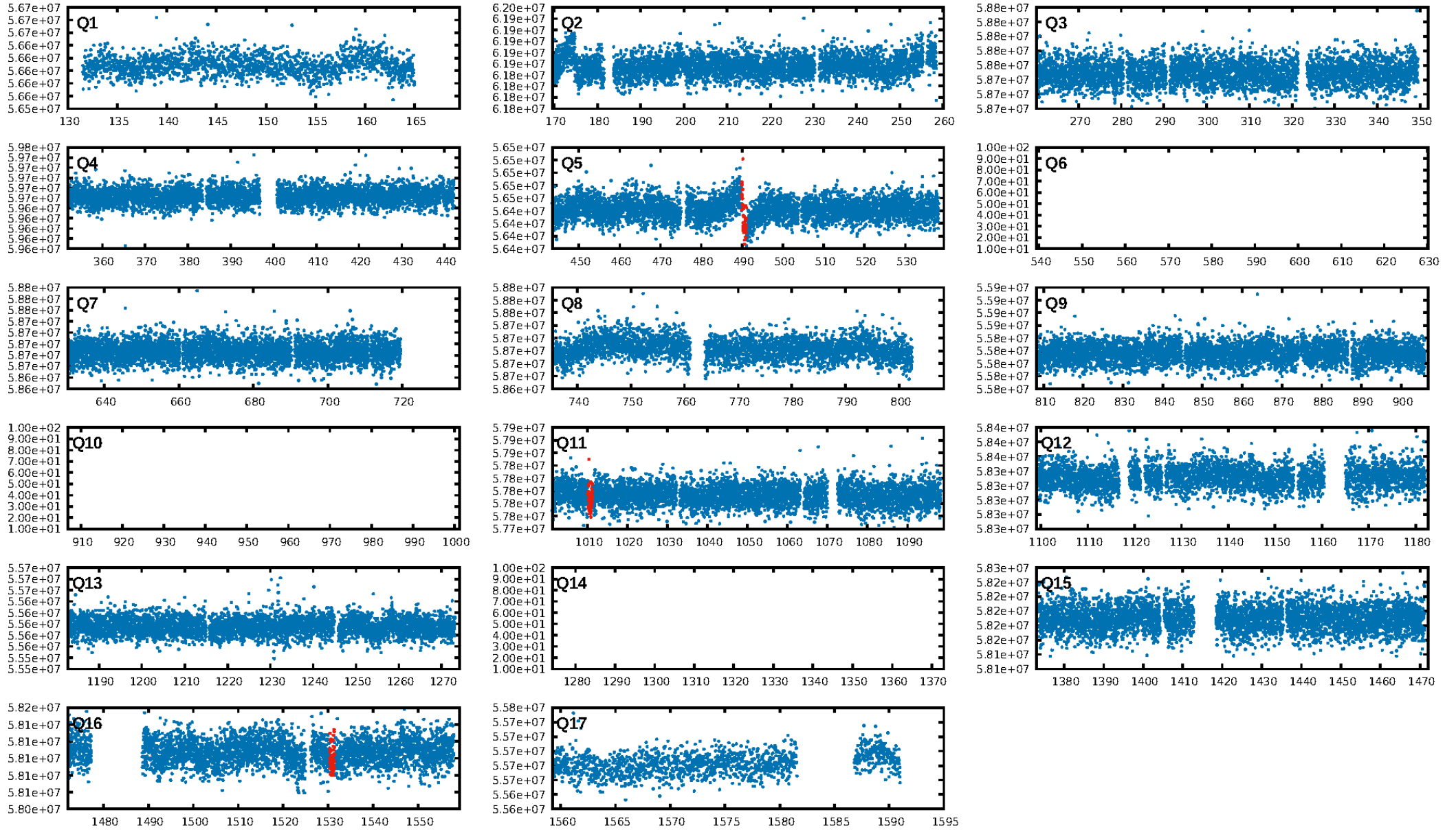
DV Fit Results:

Period = 520.20982 [0.01795] d
Epoch = 490.4810 [0.0233] BKJD
Rp/R* = 0.0185 [0.0071]
a/R* = 185.61 [272.62]
b = 0.79 [0.71]
Seff = 3.49 [0.91]
Teq = 349 [23] K
Rp = 6.66 [2.93] Re
a = 1.3863 [0.2428] AU
Ag = 3174.12 [2813.93] [1.13 σ]
Teffp = 4046 [863] K [4.28 σ]

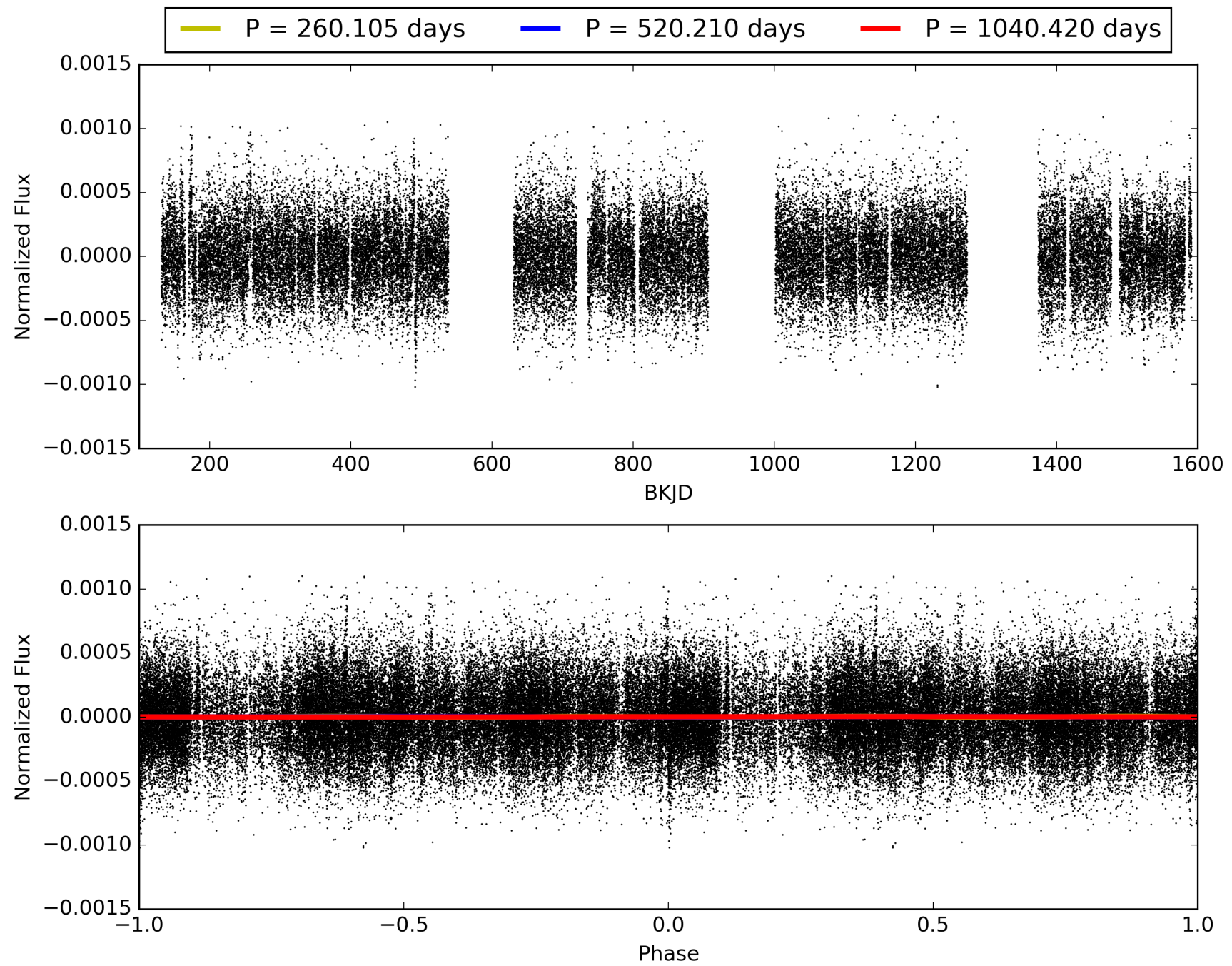
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.69e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.772
Centroid-sig: 6.9%
Centroid-so: 1.678 arcsec [1.14 σ]
OotOffset-rm: 2.623 arcsec [0.63 σ]
KicOffset-rm: 2.589 arcsec [0.64 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003557568-01, PDC Light Curves

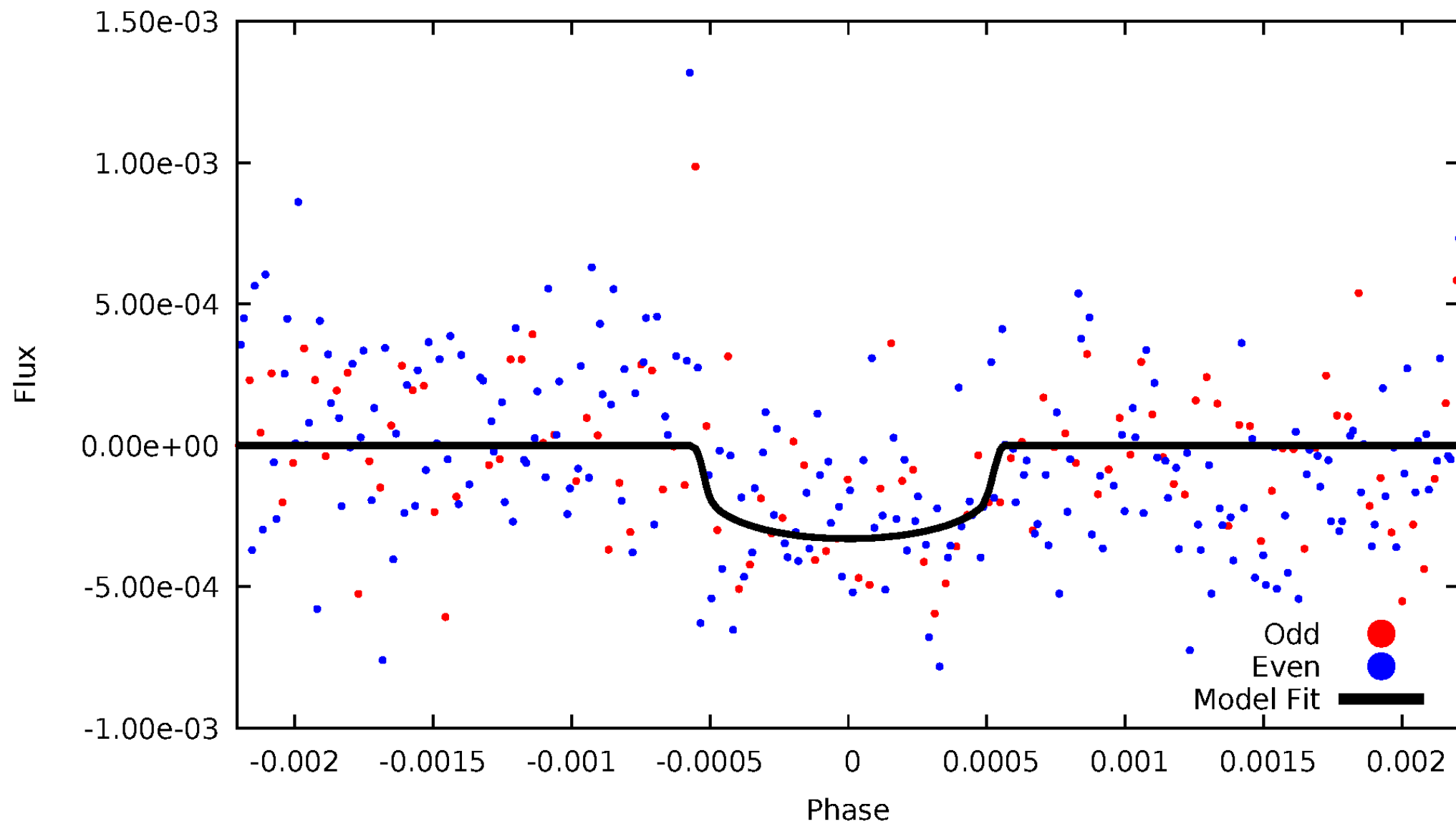


TCE 003557568-01



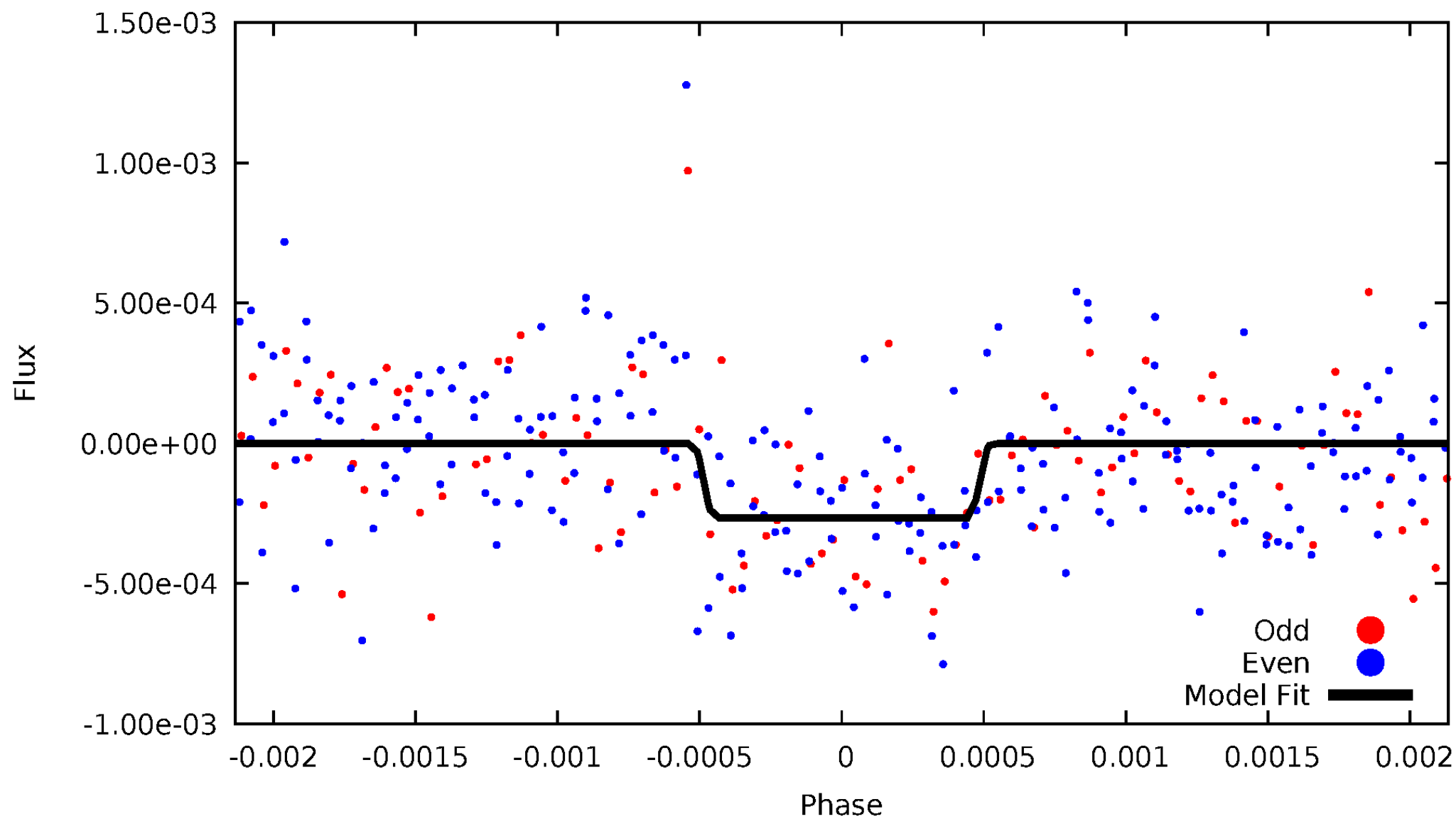
DV Odd/Even

TCE 003557568-01



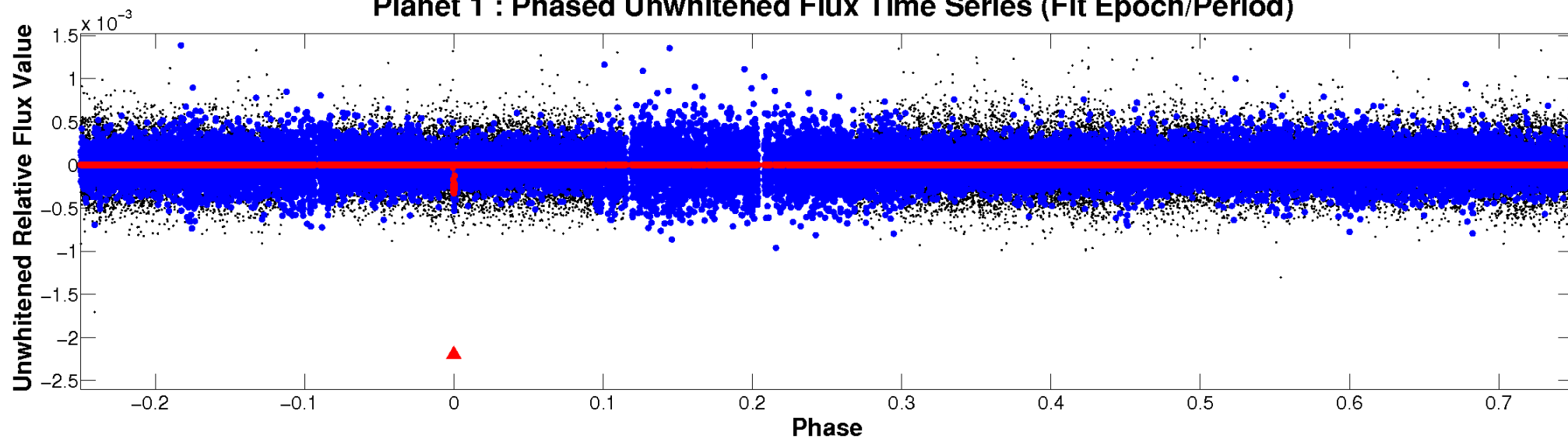
ALT Odd/Even

TCE 003557568-01

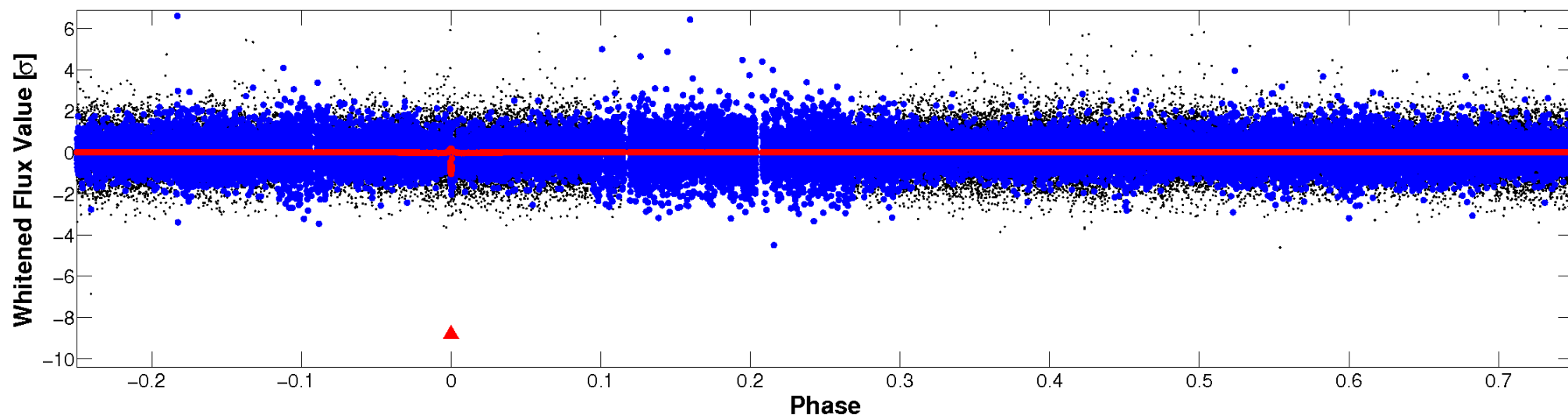


Non-Whitened Vs. Whitened Light Curve

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

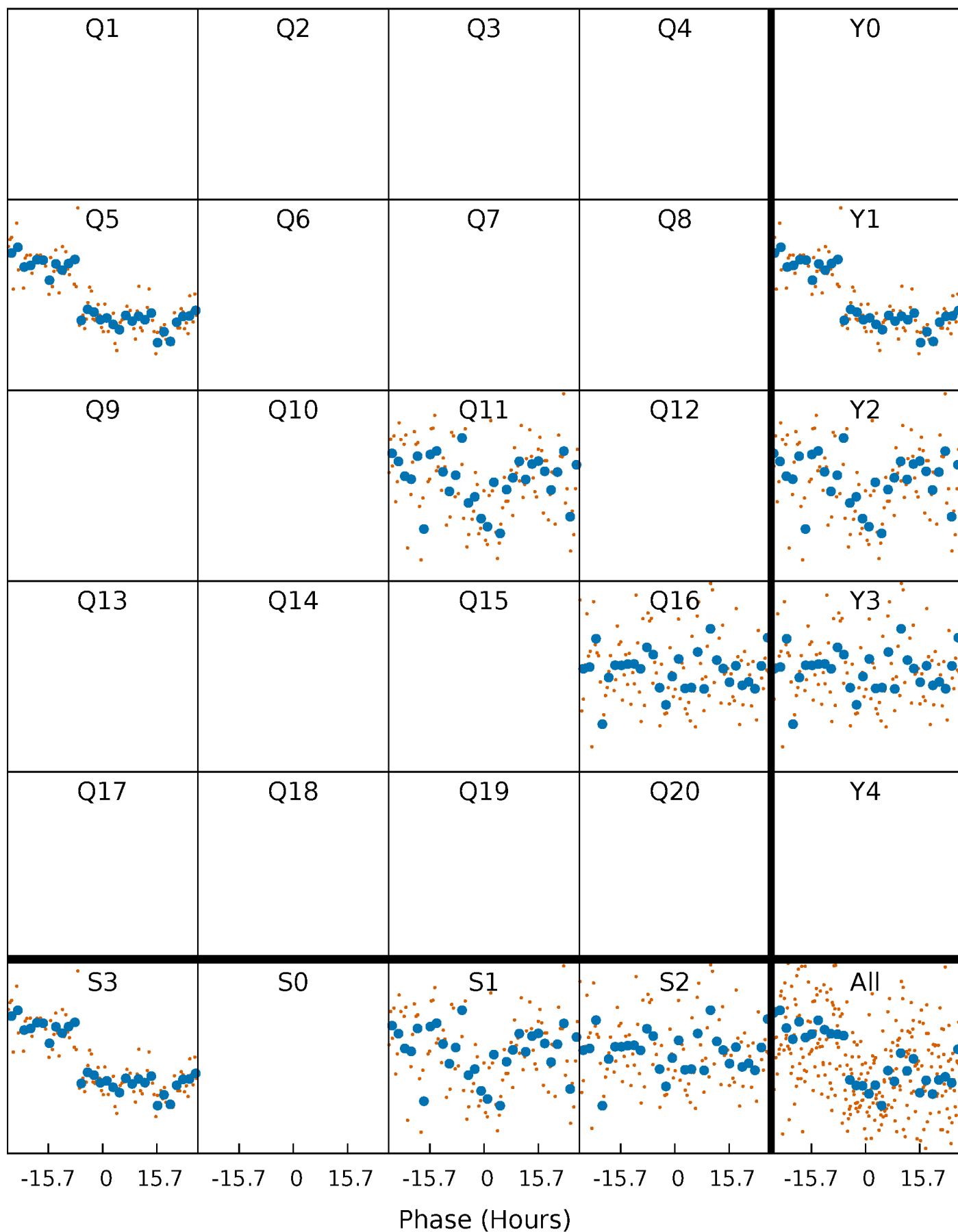


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



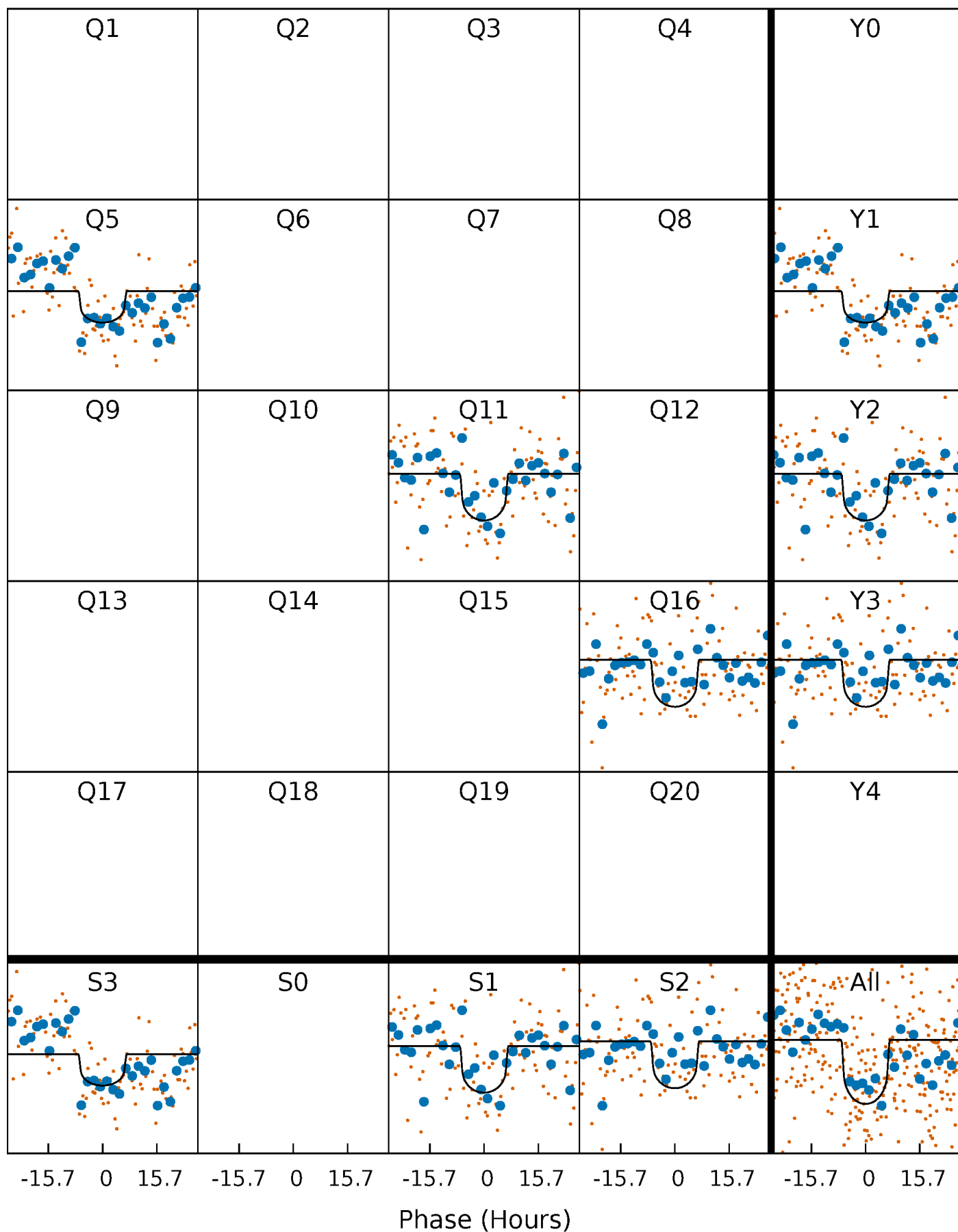
PDC Quarter-Phased Transit Curves

TCE 003557568-01 P=520.209824 Days $T_0=490.481033$ (BKJD)



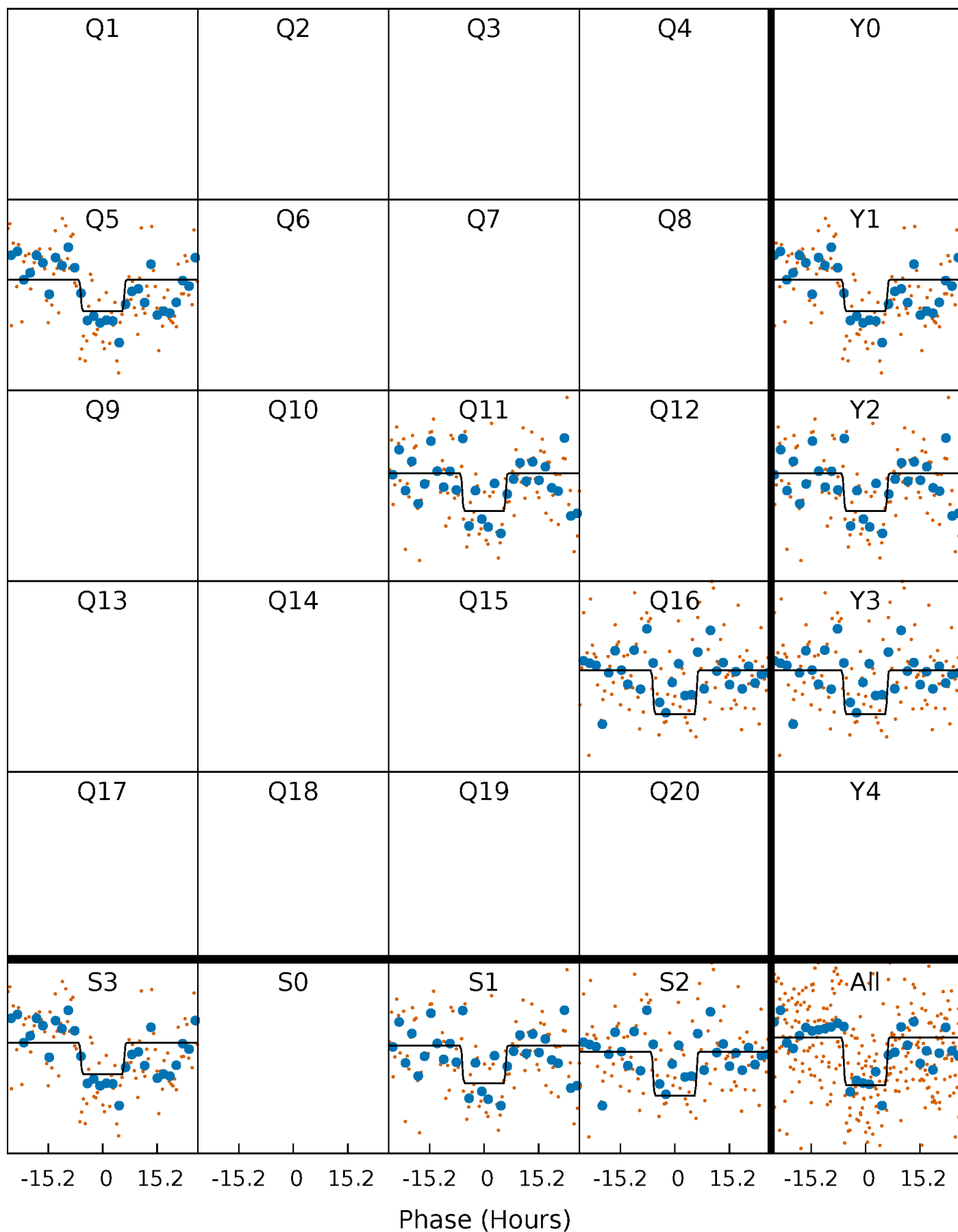
DV Quarter-Phased Transit Curves

TCE 003557568-01 P=520.209824 Days $T_0=490.481033$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

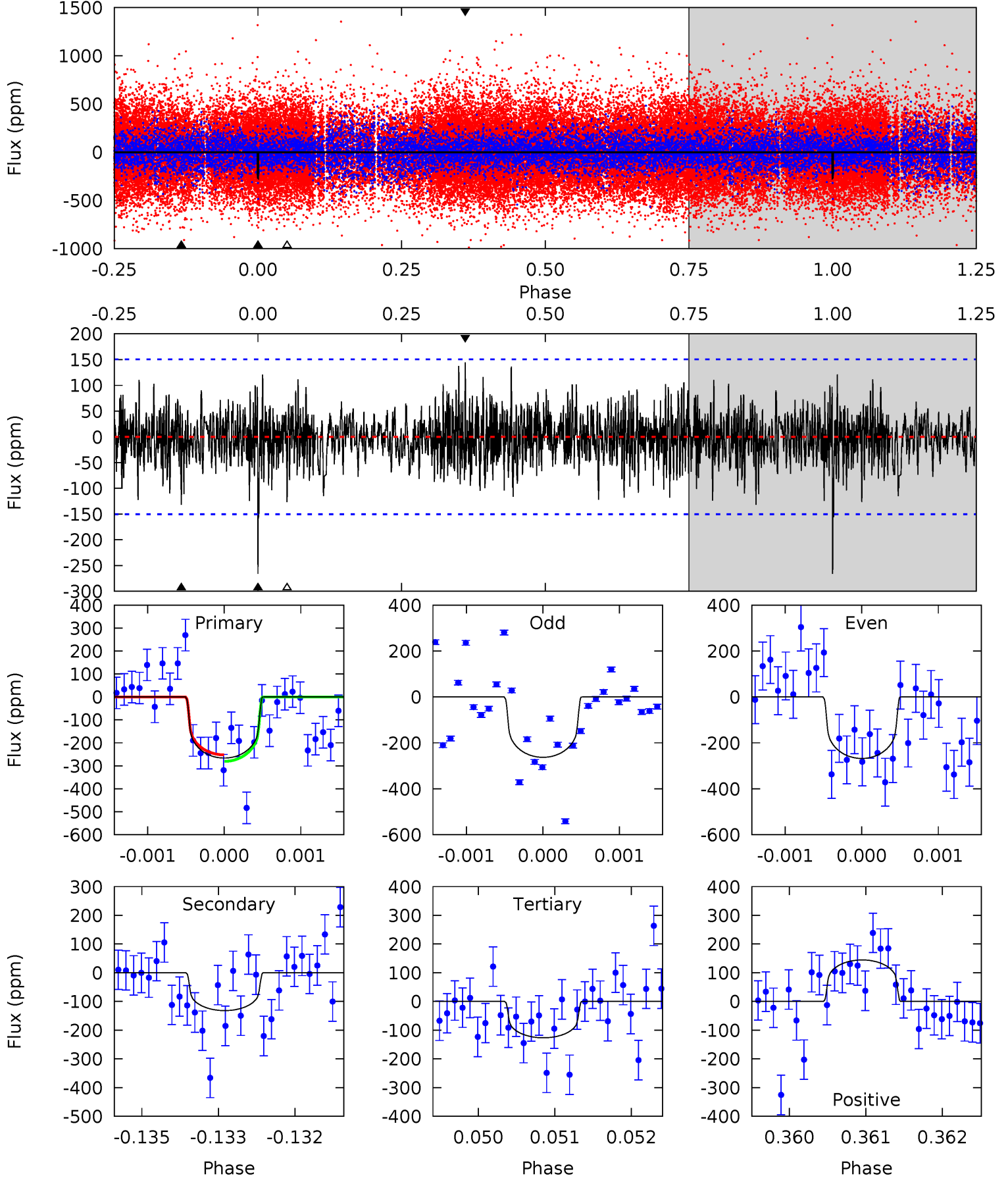
TCE 003557568-01 P=520.218004 Days $T_0=490.467132$ (BKJD)



DV Model-Shift Uniqueness Test

003557568-01, P = 520.209824 Days, E = 490.481033 Days

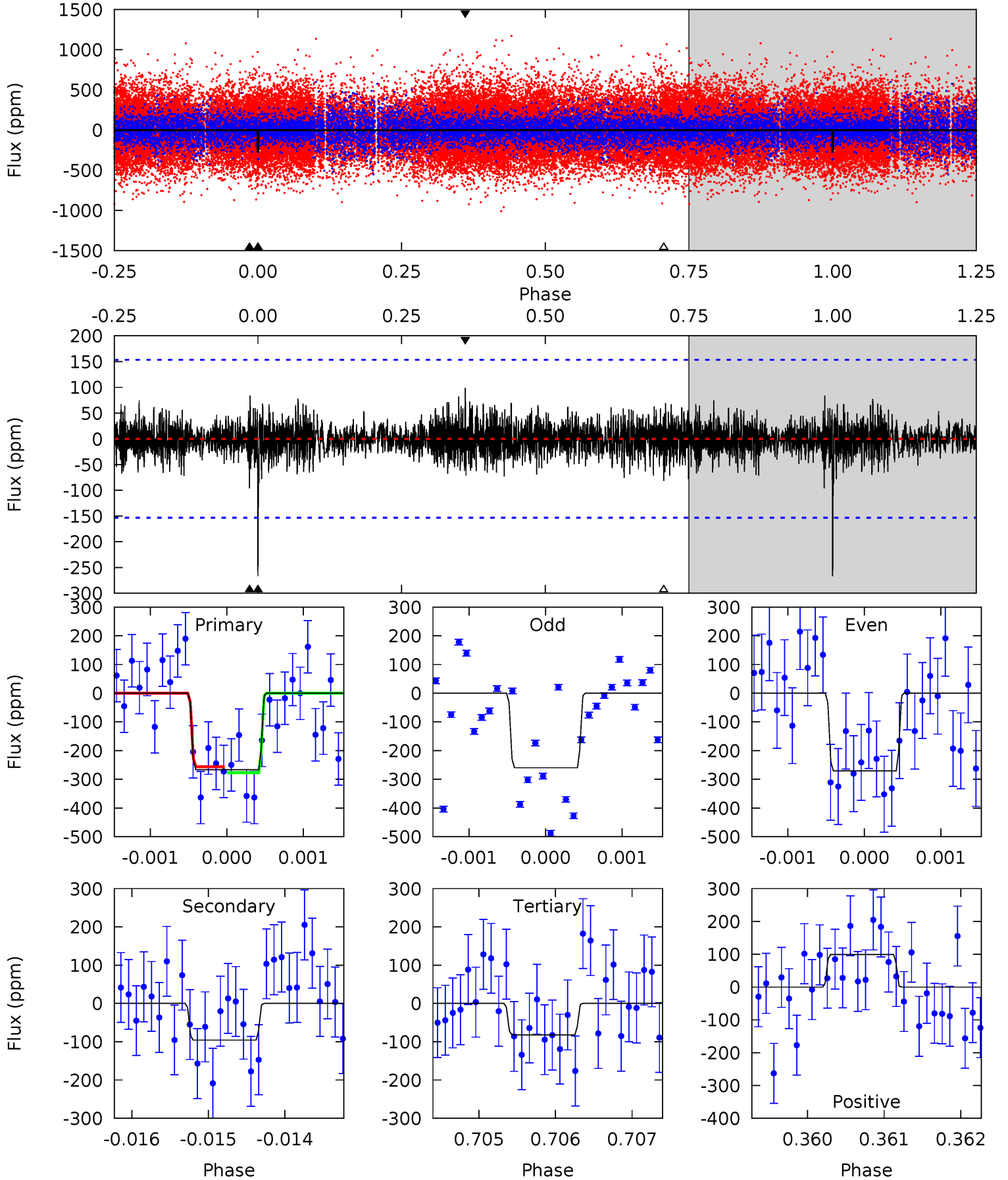
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	4.76	4.56	5.22	5.43	3.26	1.40	5.04	4.39	0.19	-0.46	0.08	1.01	0.35	0.51



Alt Model-Shift Uniqueness Test

003557568-01, P = 520.218004 Days, E = 490.467132 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.47	3.40	2.91	3.51	5.44	3.27	0.83	6.57	5.96	0.49	-0.11	0.18	1.02	0.27	0.37



Stellar Parameters For KIC 003557568

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5119^{+53}_{-91}	$3.518^{+0.135}_{-0.122}$	$-0.160^{+0.150}_{-0.150}$	$3.304^{+0.525}_{-0.700}$	$1.313^{+0.124}_{-0.288}$	$0.051^{+0.038}_{-0.017}$
	+1%/-2%	+4%/-3%	+94%/-94%	+16%/-21%	+9%/-22%	+75%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003557568-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-132 ± 28	$6.59^{+2.88}_{-2.63}$	487^{+23}_{-24}	4215^{+997}_{-495}	3105^{+5720}_{-1636}
Alt.	-96 ± 28	$5.67^{+2.73}_{-2.36}$	486^{+23}_{-25}	4167^{+975}_{-548}	2876^{+5830}_{-1587}

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 $A_{obs} \gg 1.0$

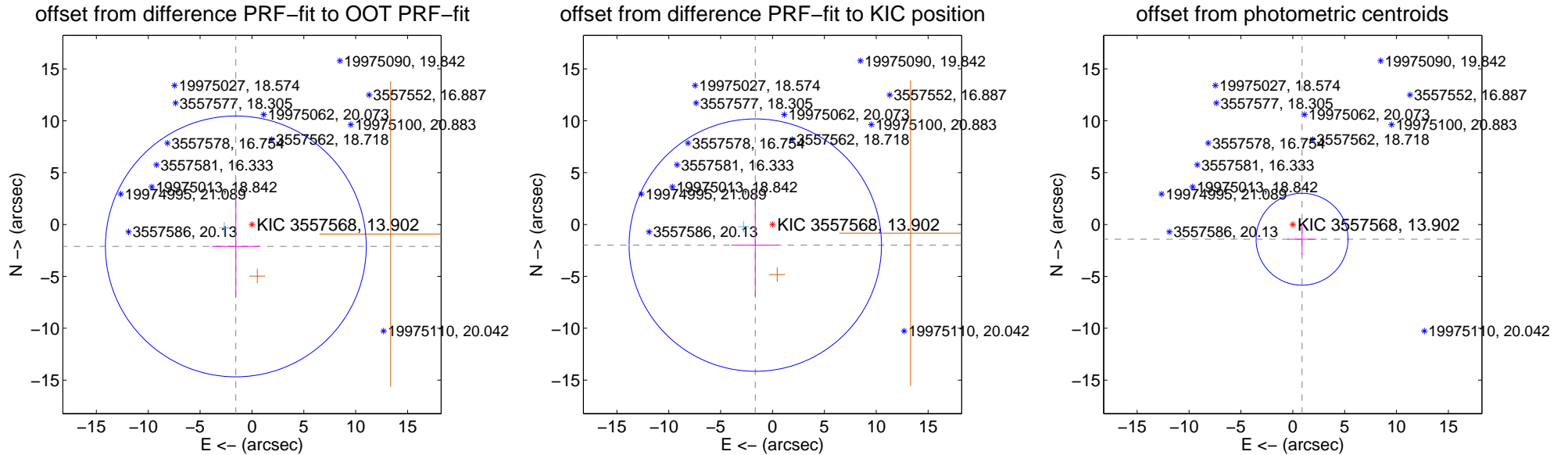
DV Centroid Data

Supplemental centroid analysis for 003557568-01. Kepler magnitude: 13.90. Transit SNR 7.80

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.623 ± 4.191	0.63	1.555 ± 2.309	-2.113 ± 4.919
PRF-fit source offset from KIC position	2.589 ± 4.055	0.64	1.659 ± 2.309	-1.987 ± 4.919
photometric centroid source offset	1.68 ± 1.48	1.14	-0.89 ± 1.41	-1.42 ± 1.50

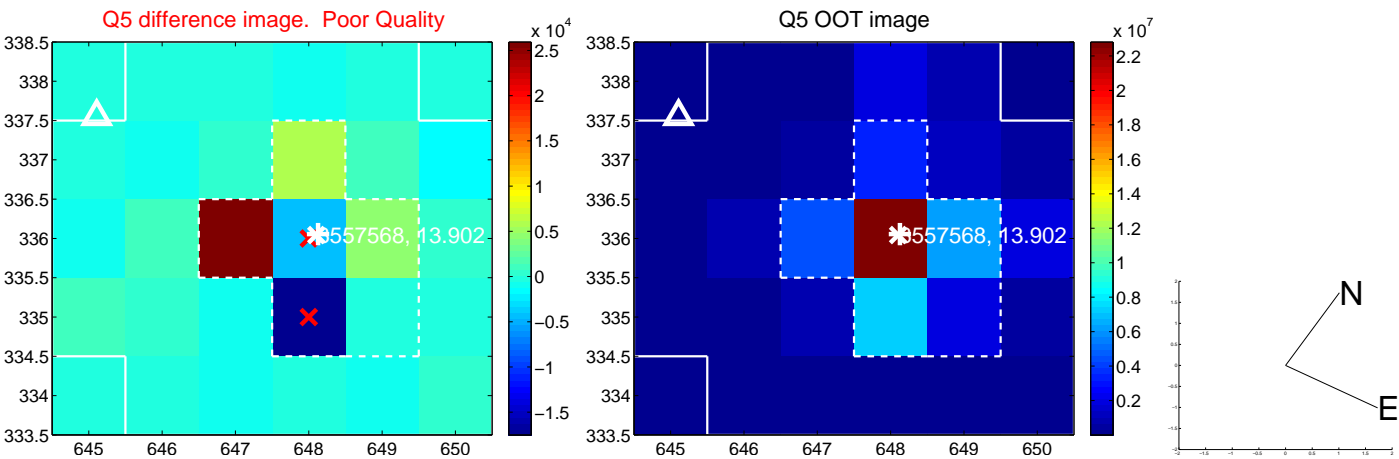


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



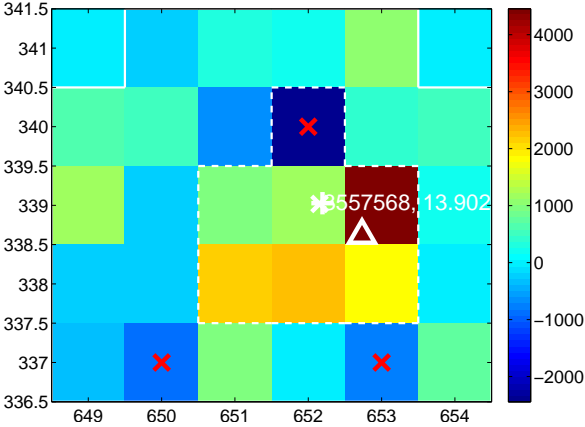
Q10 no difference image



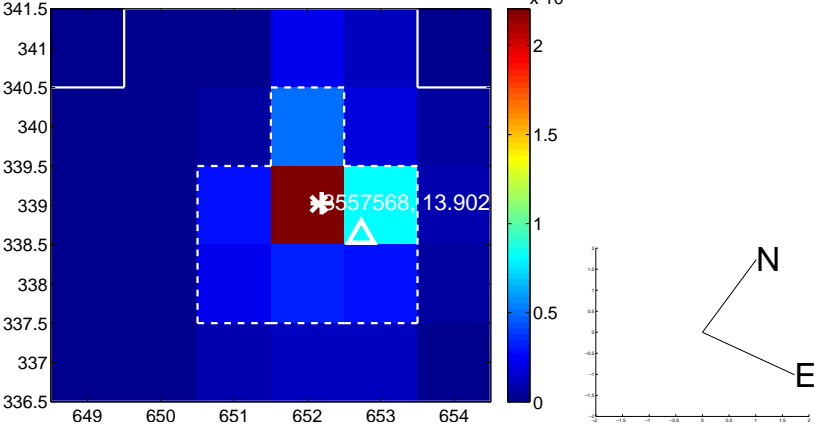
Q10 no OOT image



Q11 difference image



Q11 OOT image



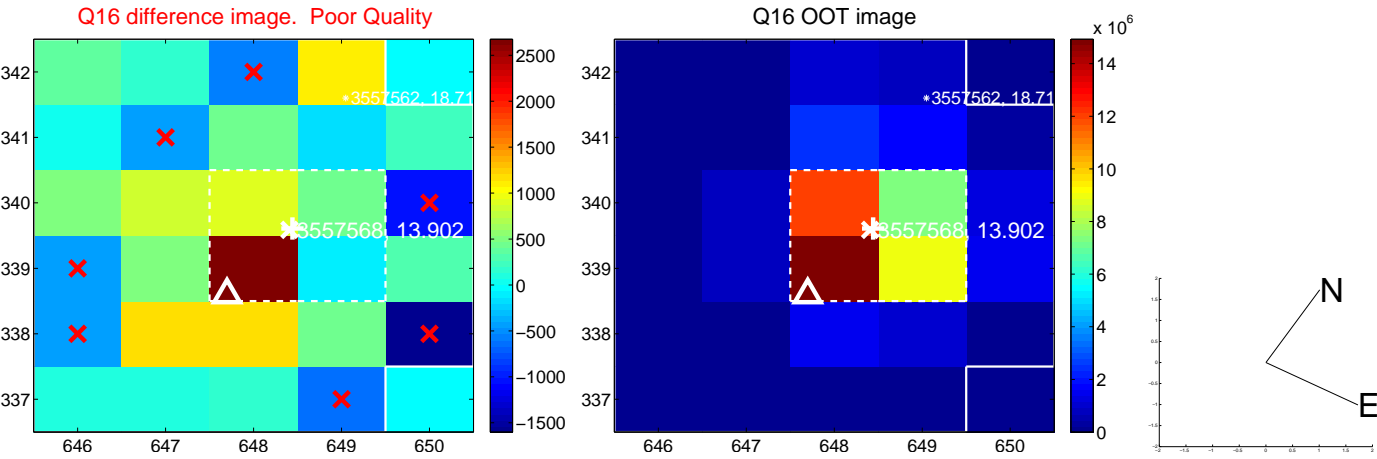
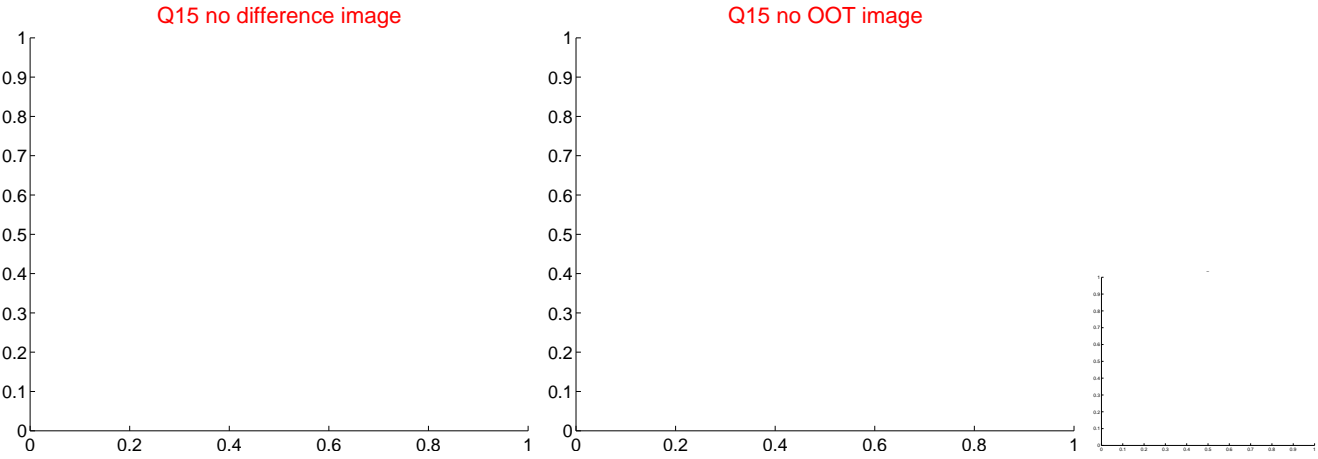
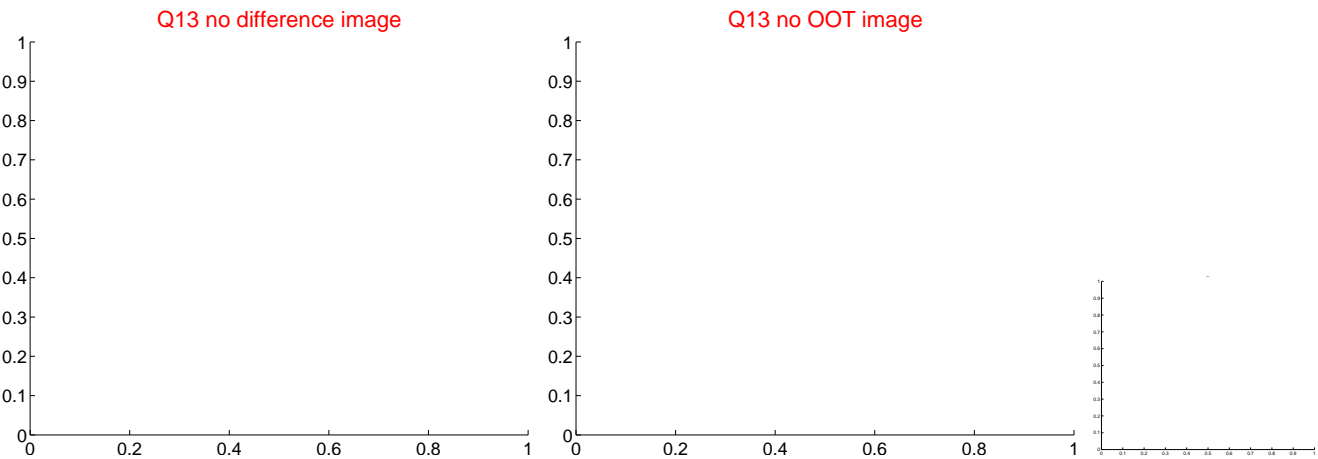
Q12 no difference image



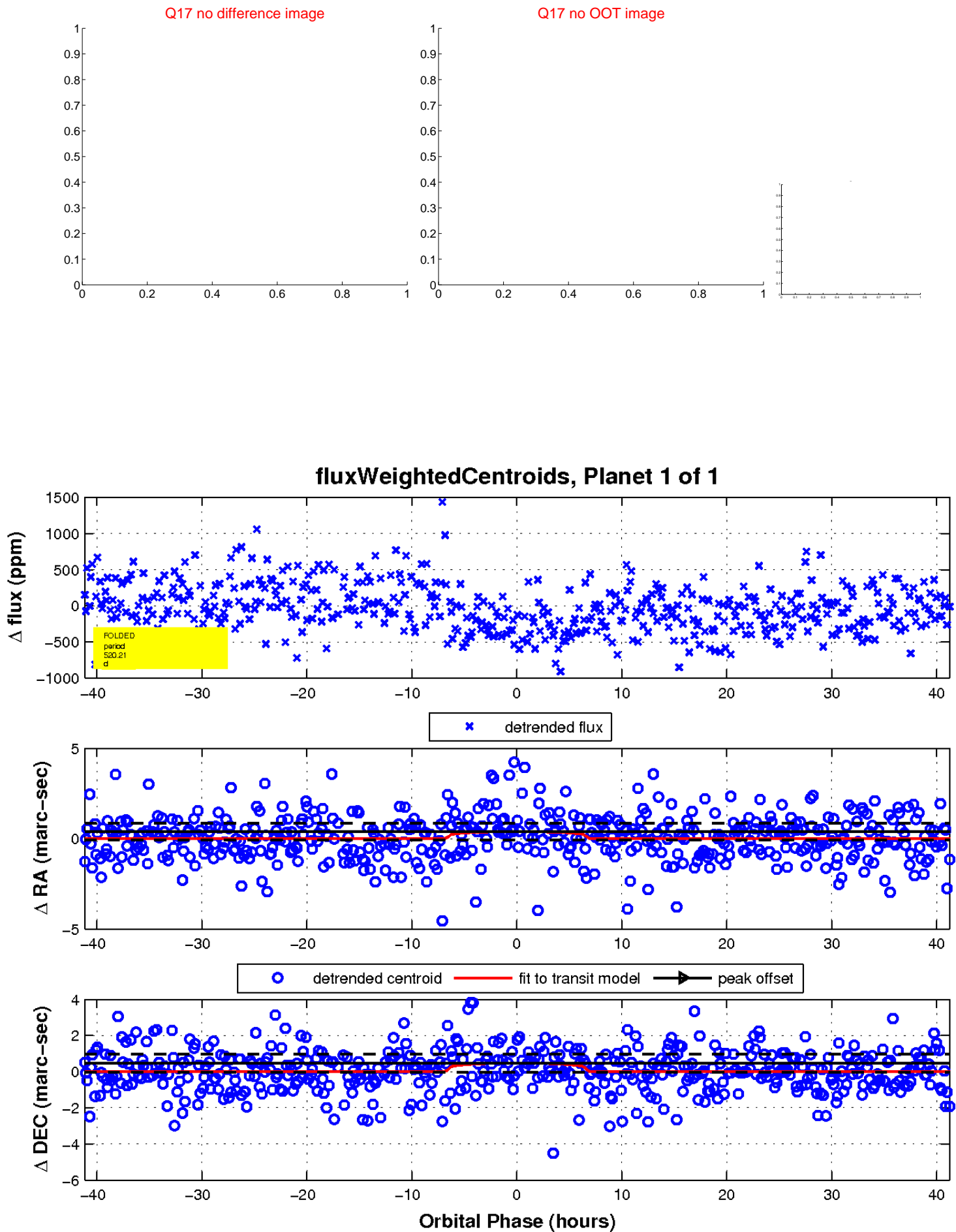
Q12 no OOT image



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

