

KIC 005388155

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})
005388155-01	OBS	No	598.448925	376.586193	142.7	4.635	7.6	7.8	151.74	3298	194.00	1163.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005388155-01	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

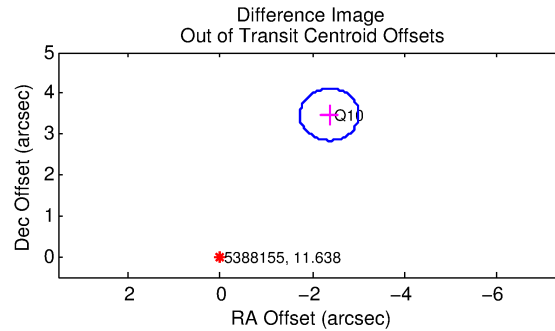
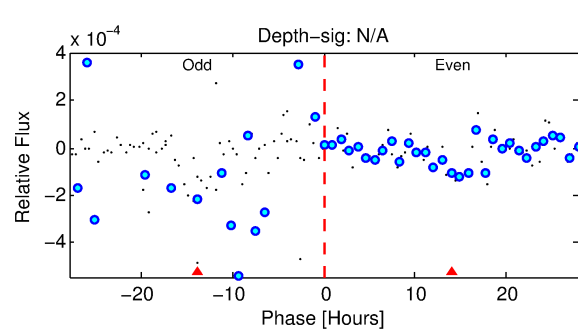
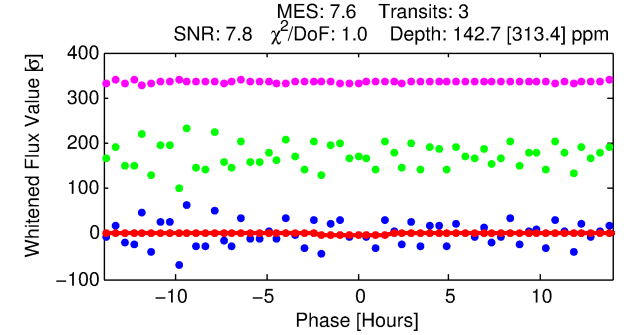
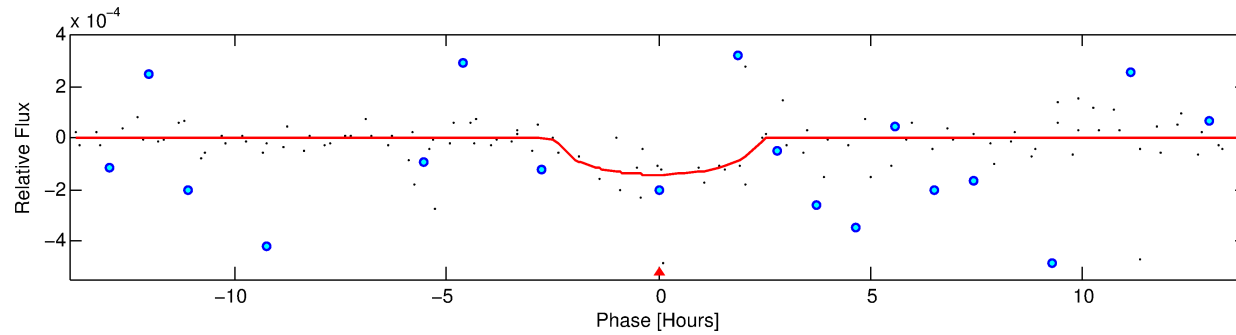
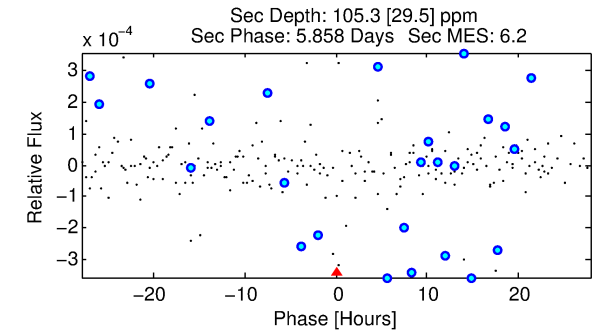
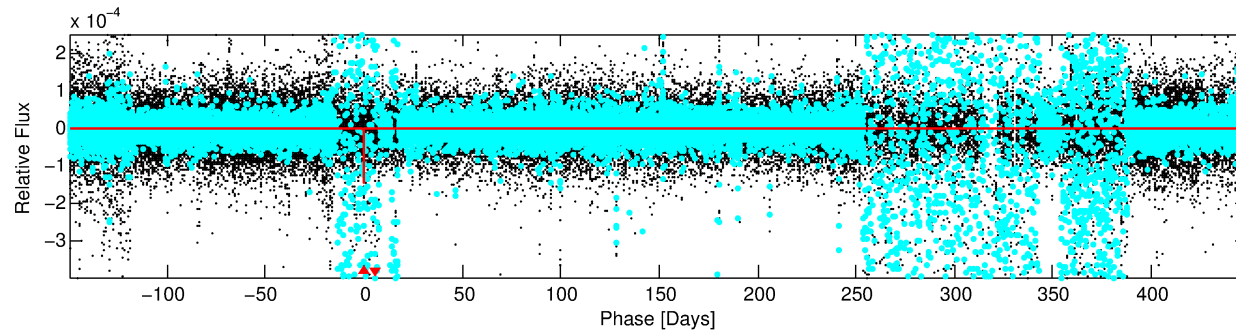
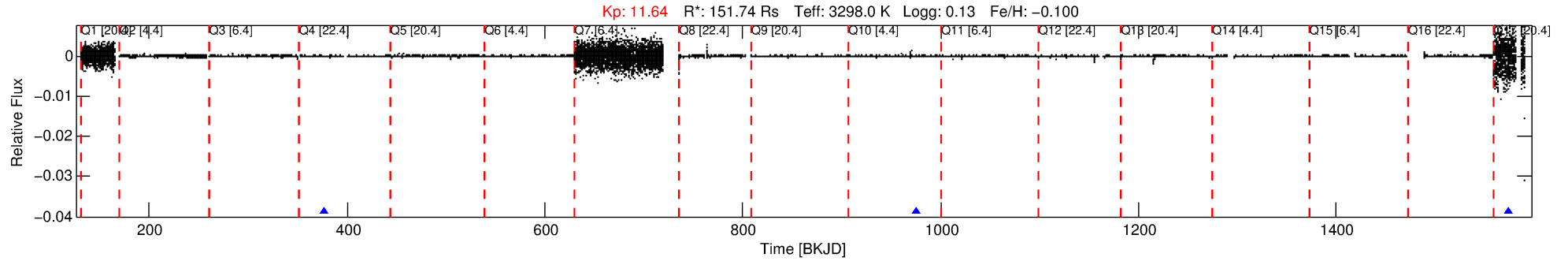
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005388155-01

No Significant Match Found

DV One-Page Summary

KIC: 5388155 Candidate: 1 of 1 Period: 598.449 d



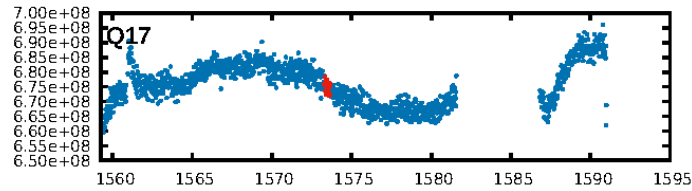
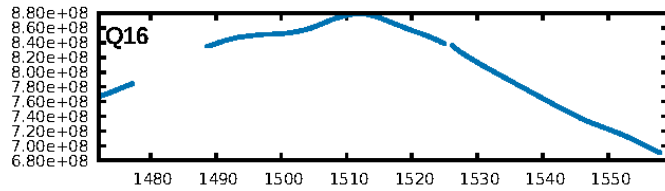
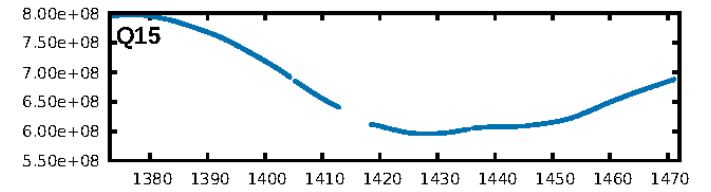
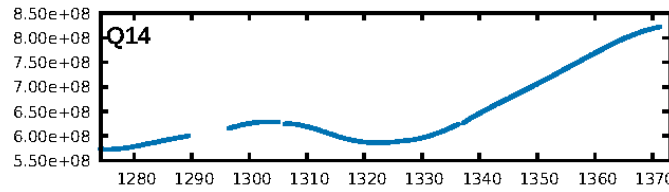
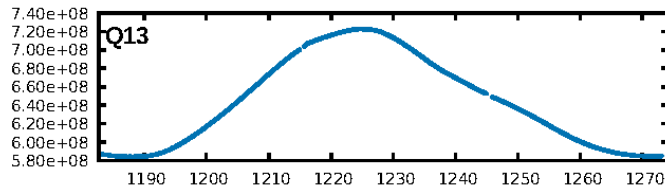
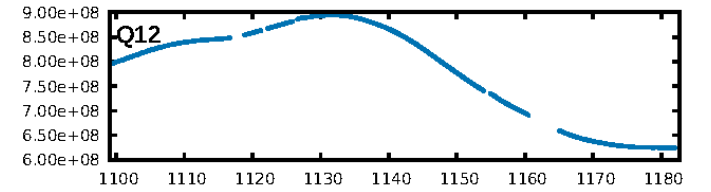
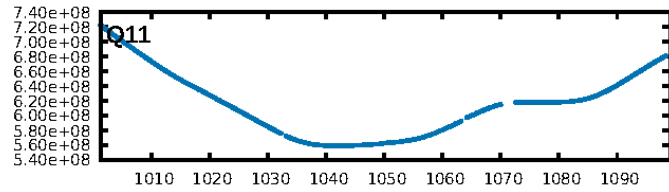
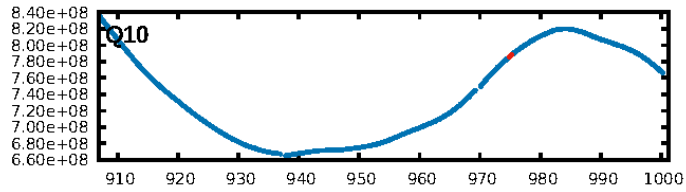
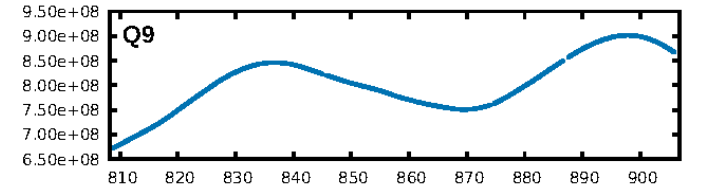
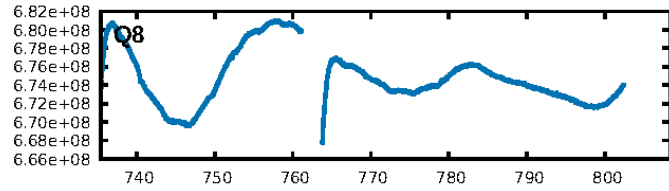
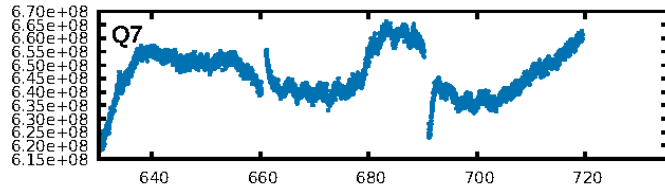
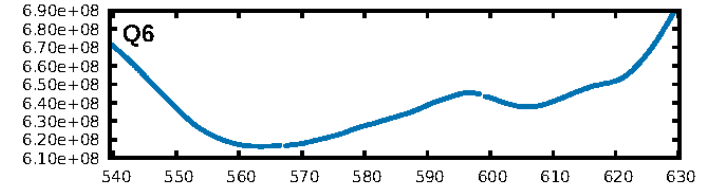
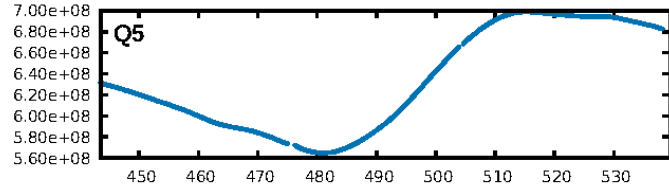
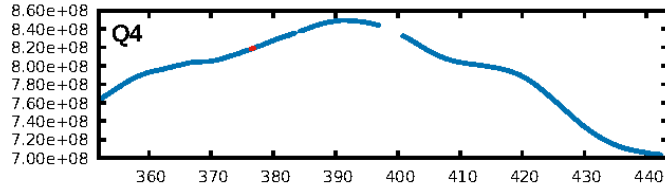
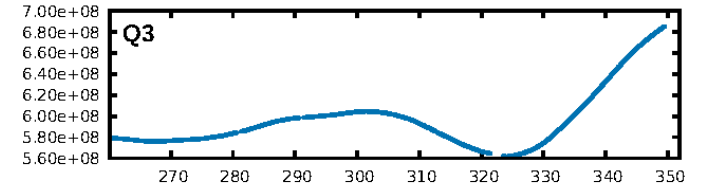
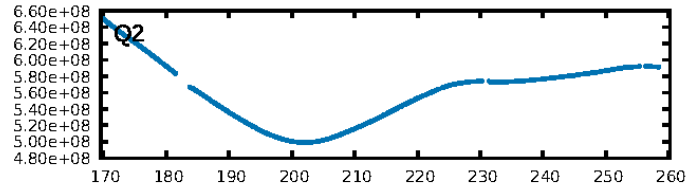
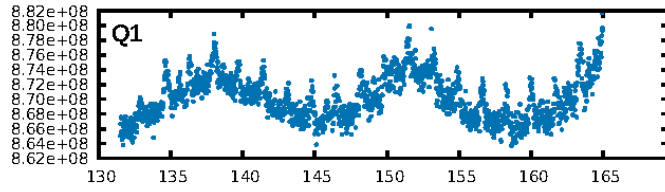
DV Fit Results:

Period = 598.44892 [0.07790] d
Epoch = 376.5862 [0.1109] BKJD
Rp/R* = 0.0117 [0.1082]
a/R* = 720.50 [15836.94]
b = 0.70 [16.69]
Seff = 1163.94 [439.75]
Teq = 1489 [141] K
Rp = 194.00 [1791.36] Re
a = 1.4481 [0.3009] AU
Ag = 3.23 [59.58] [0.04σ]
Teffp = 3086 [14247] K [0.11σ]

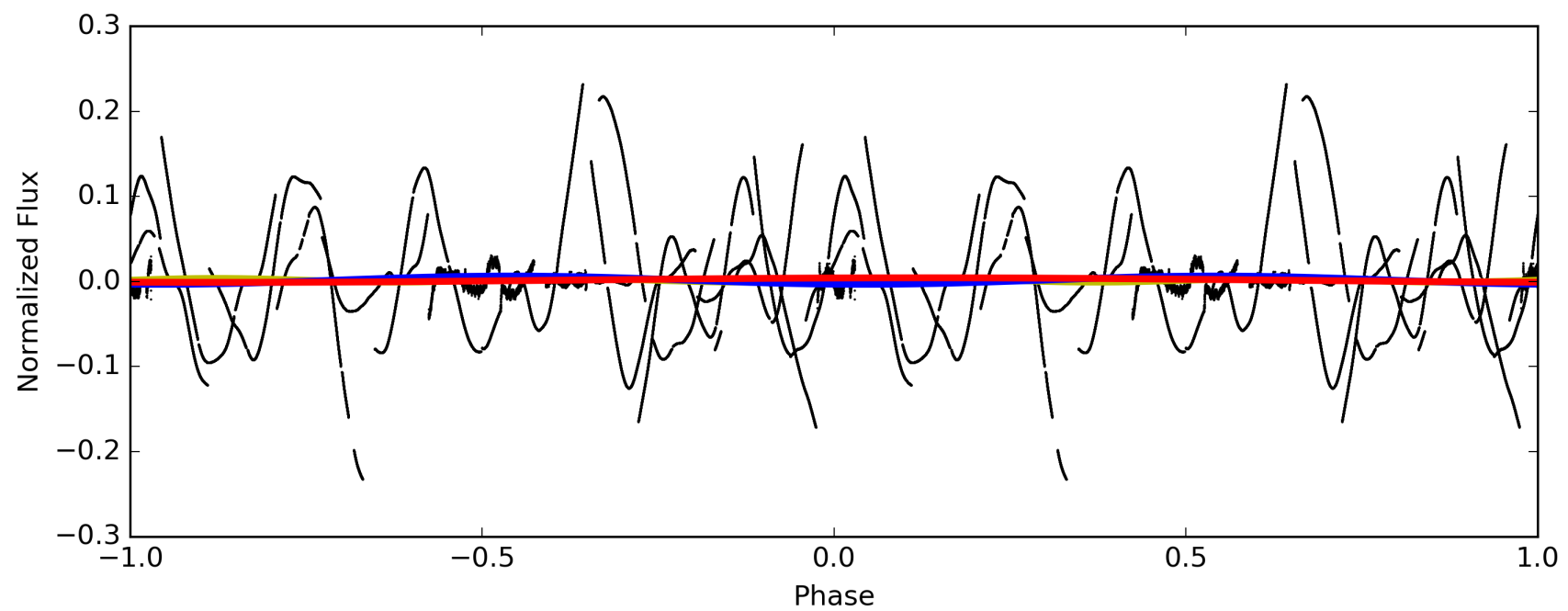
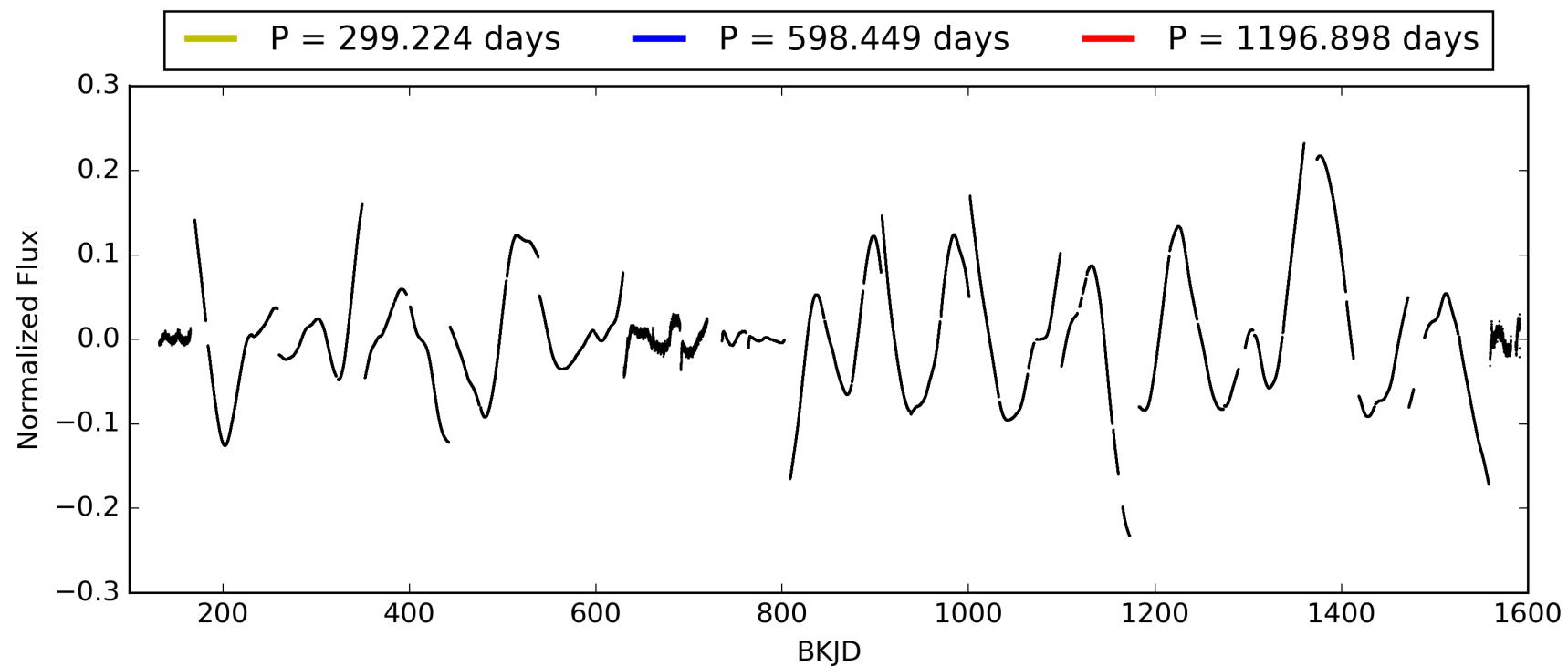
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 8.28e-03
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -3.184
Centroid-sig: 58.6%
Centroid-so: 1.102 arcsec [0.83σ]
OotOffset-rm: 4.207 arcsec [19.84σ]
KicOffset-rm: 3.513 arcsec [16.46σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005388155-01, PDC Light Curves

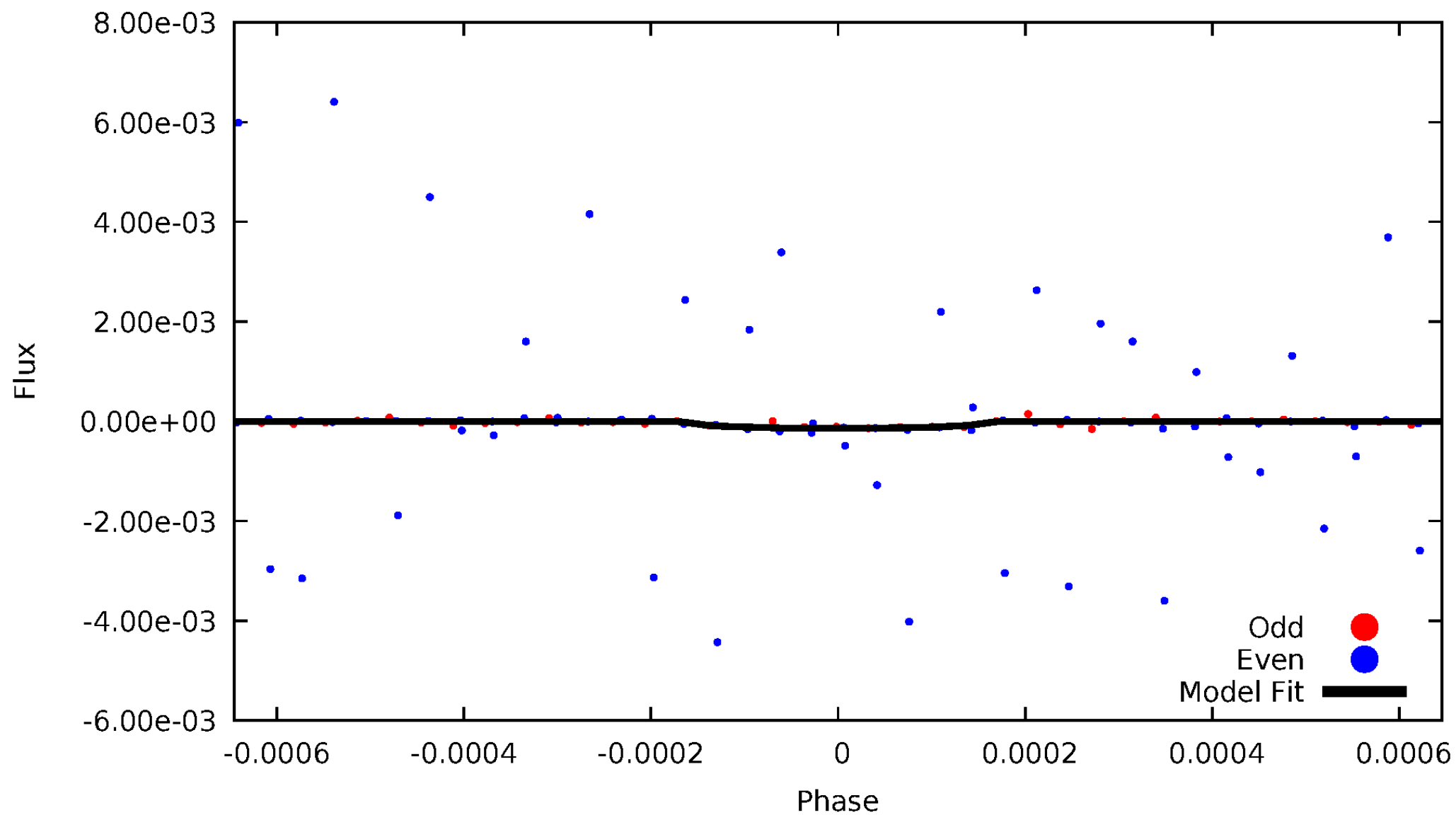


TCE 005388155-01



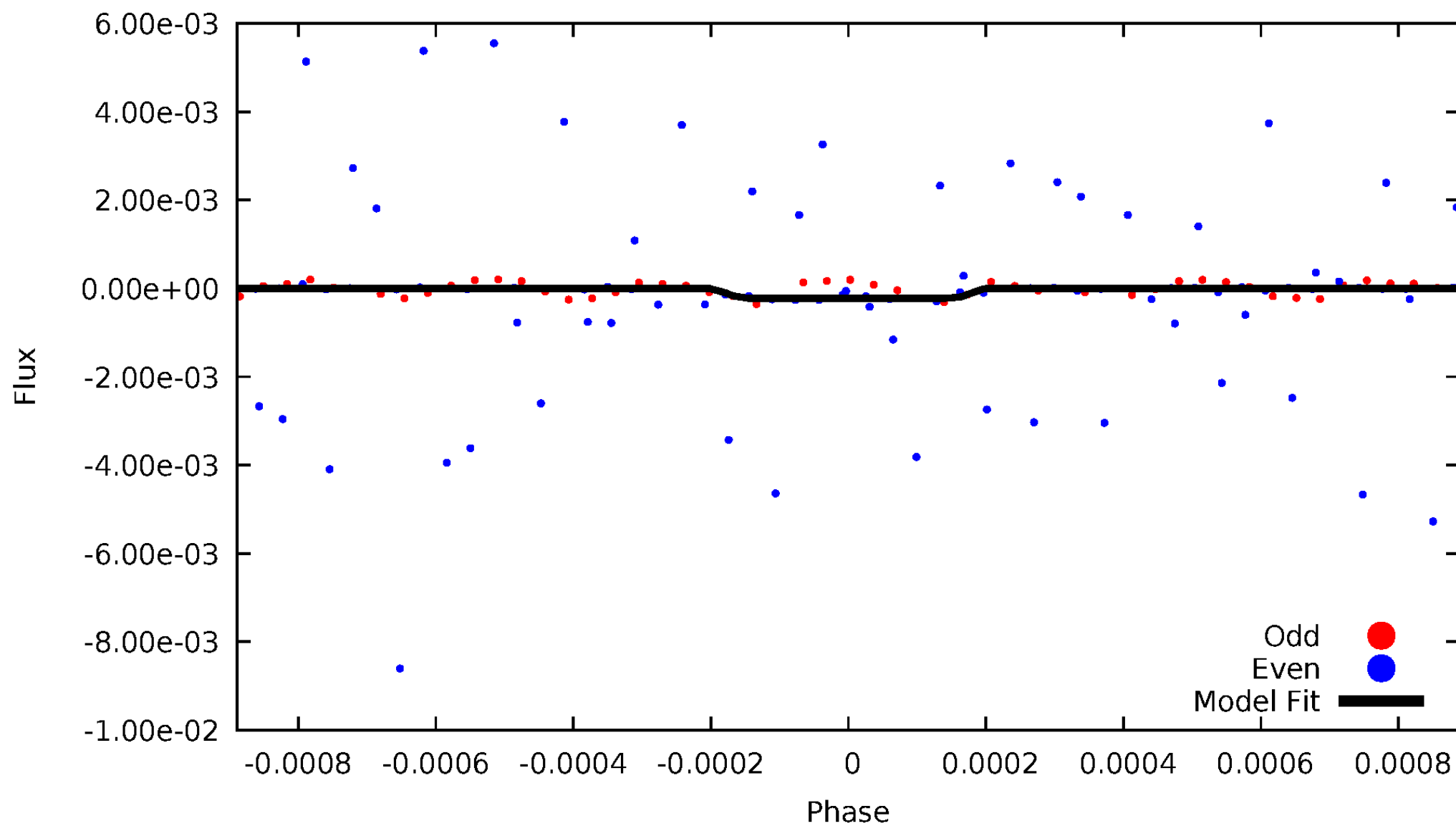
DV Odd/Even

TCE 005388155-01



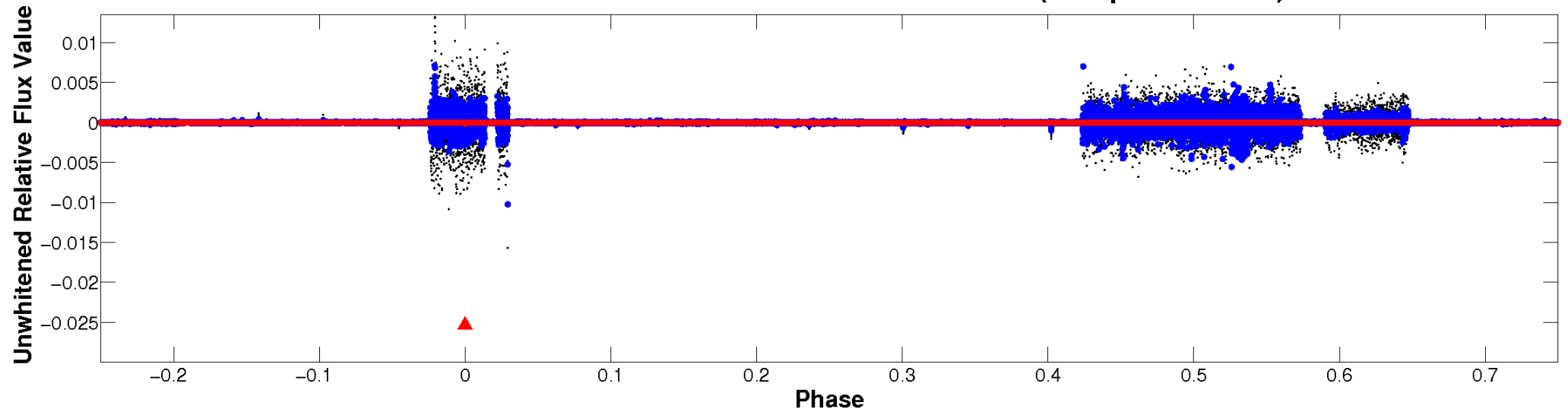
ALT Odd/Even

TCE 005388155-01

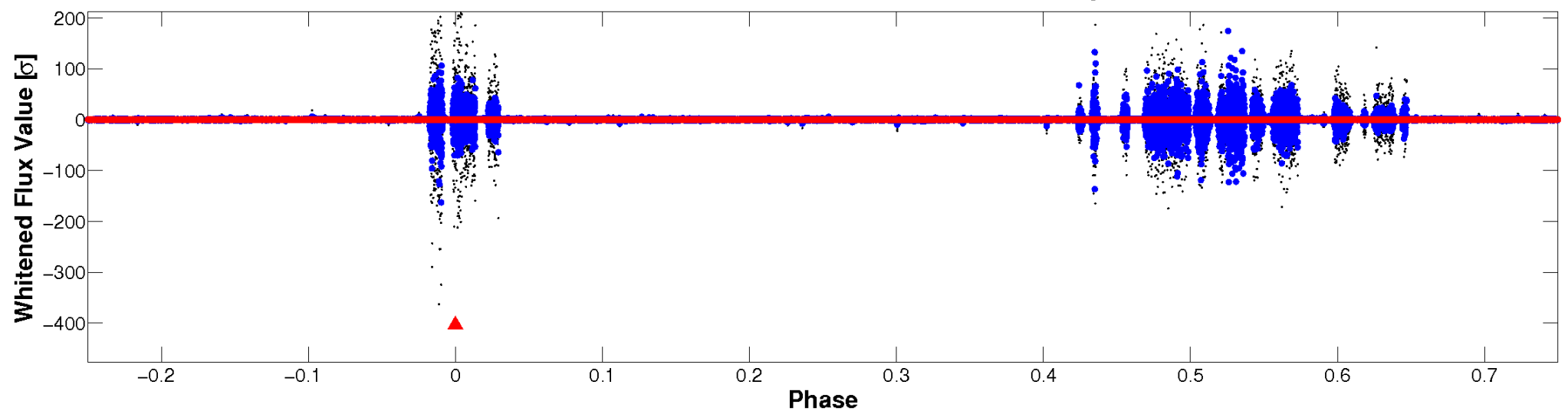


Non-Whitened Vs. Whitened Light Curve

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

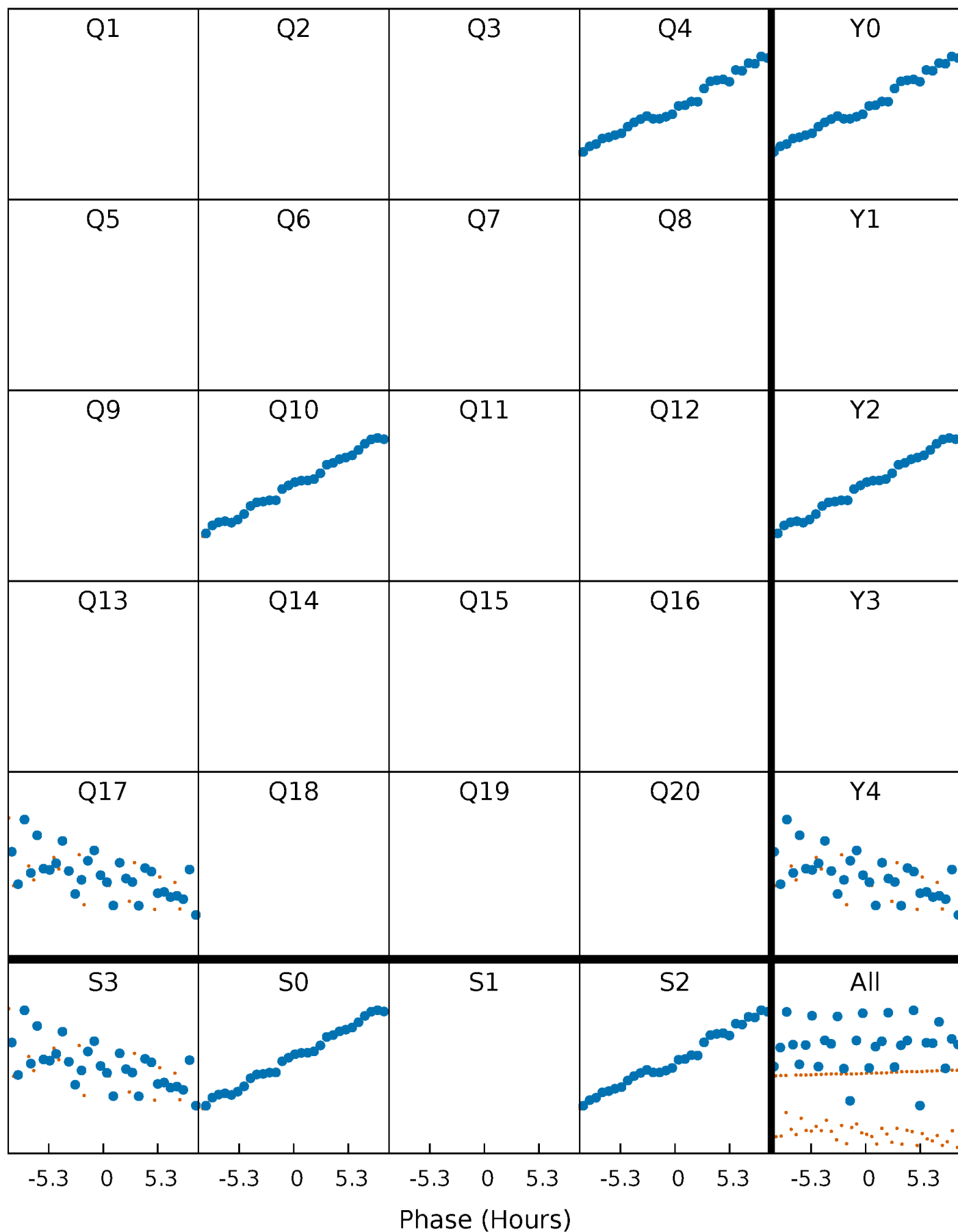


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



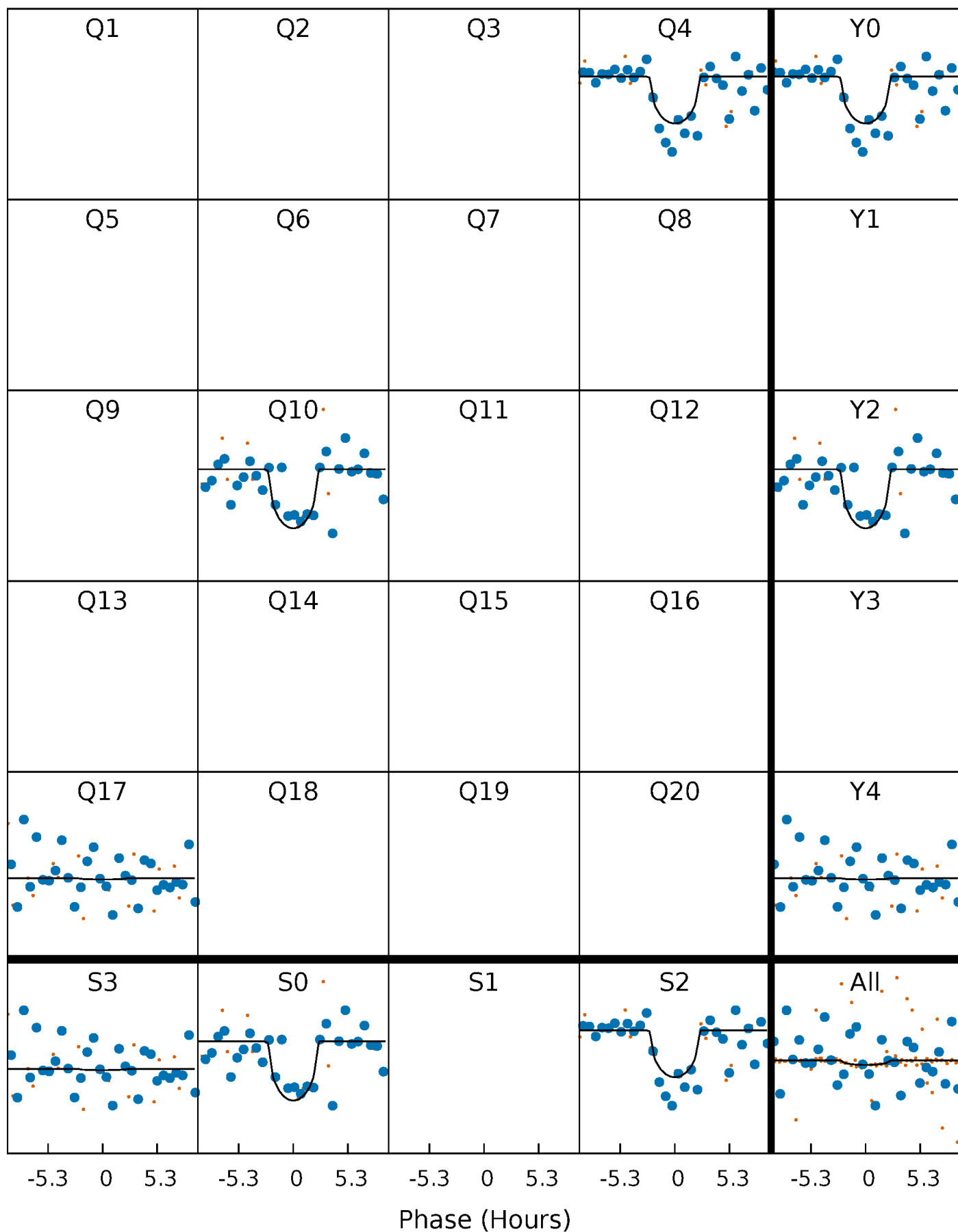
PDC Quarter-Phased Transit Curves

TCE 005388155-01 P=598.448925 Days $T_0=376.586193$ (BKJD)



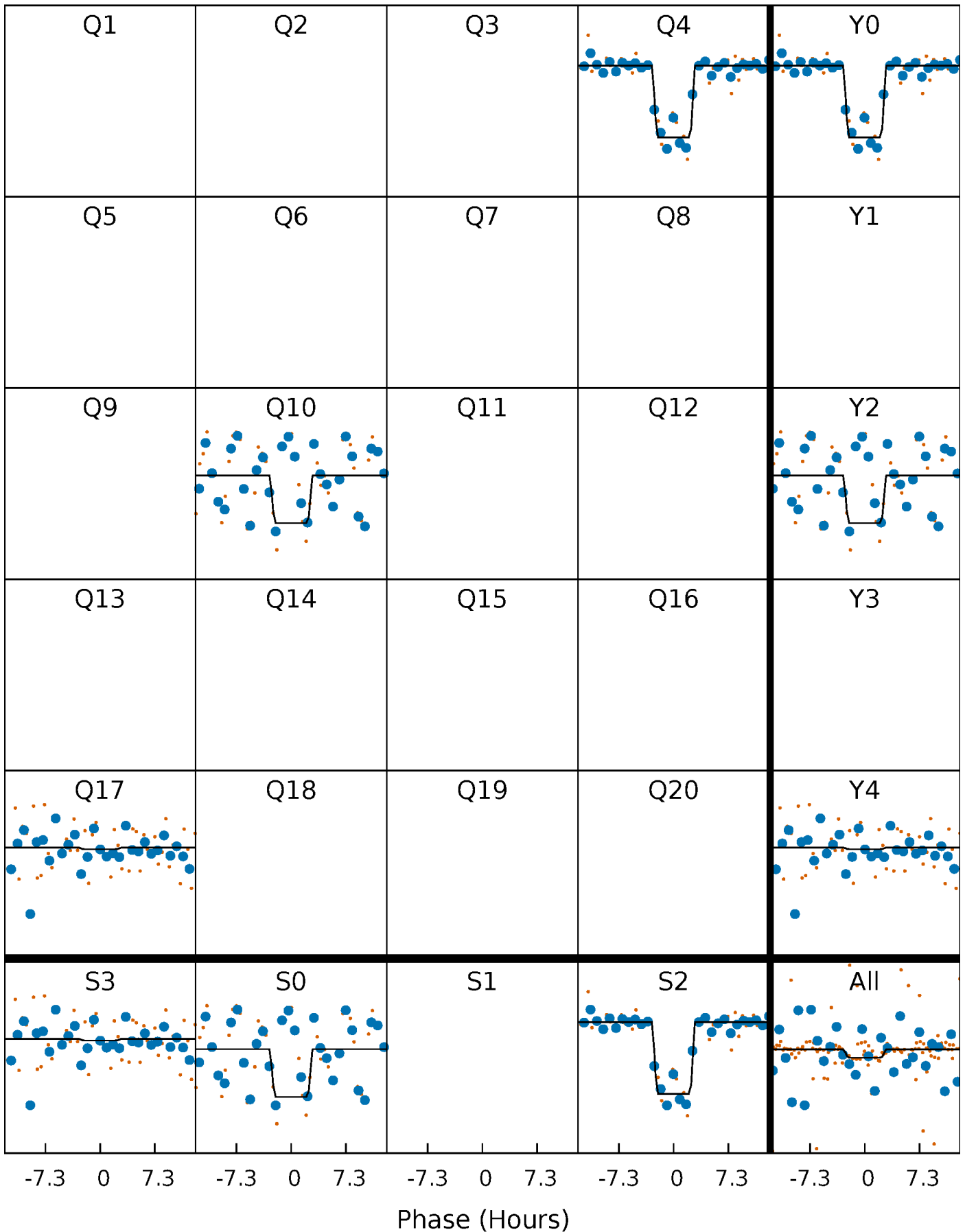
DV Quarter-Phased Transit Curves

TCE 005388155-01 P=598.448925 Days $T_0=376.586193$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

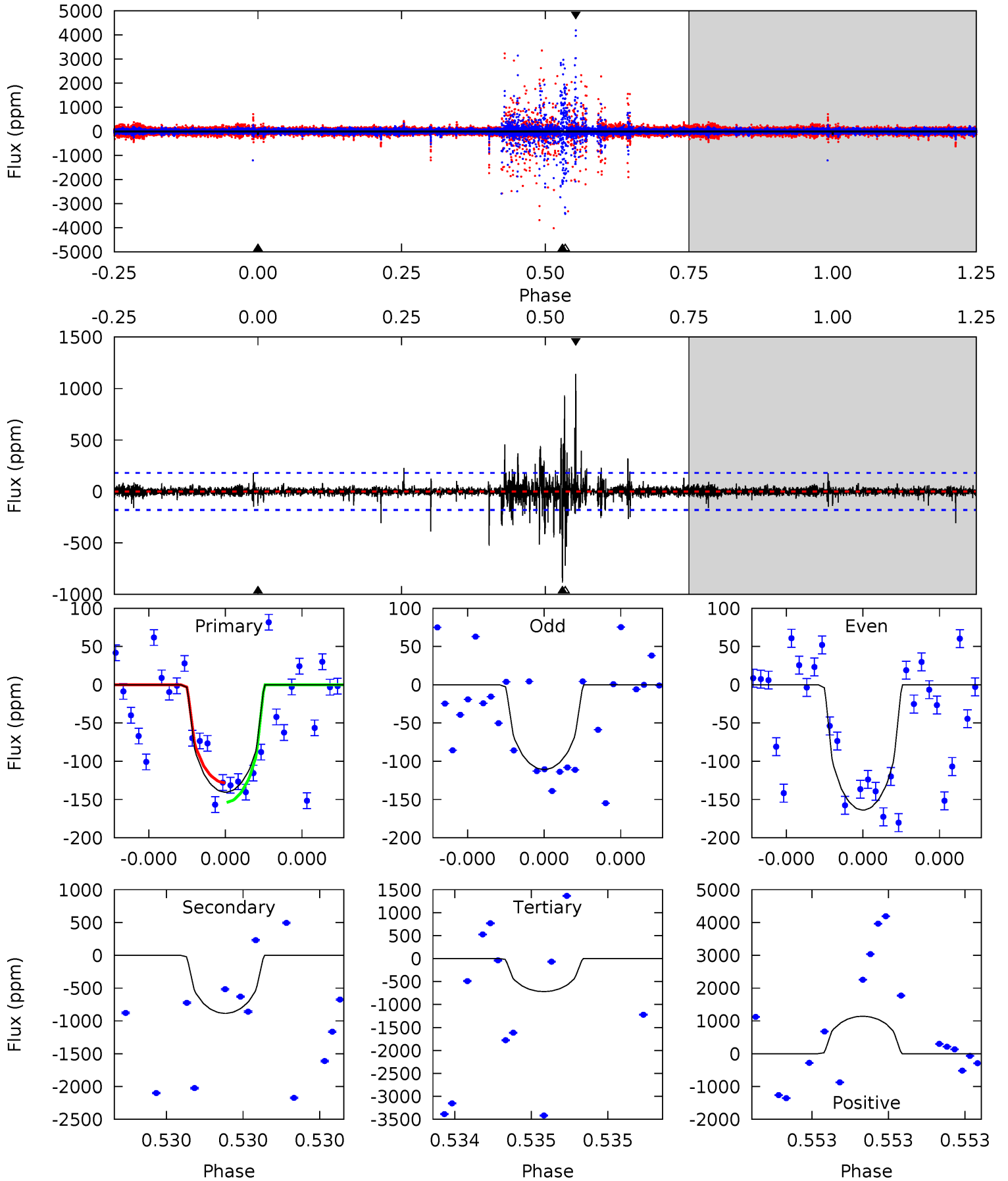
TCE 005388155-01 P=598.437672 Days $T_0=376.594721$ (BKJD)



DV Model-Shift Uniqueness Test

005388155-01, P = 598.448925 Days, E = 376.586193 Days

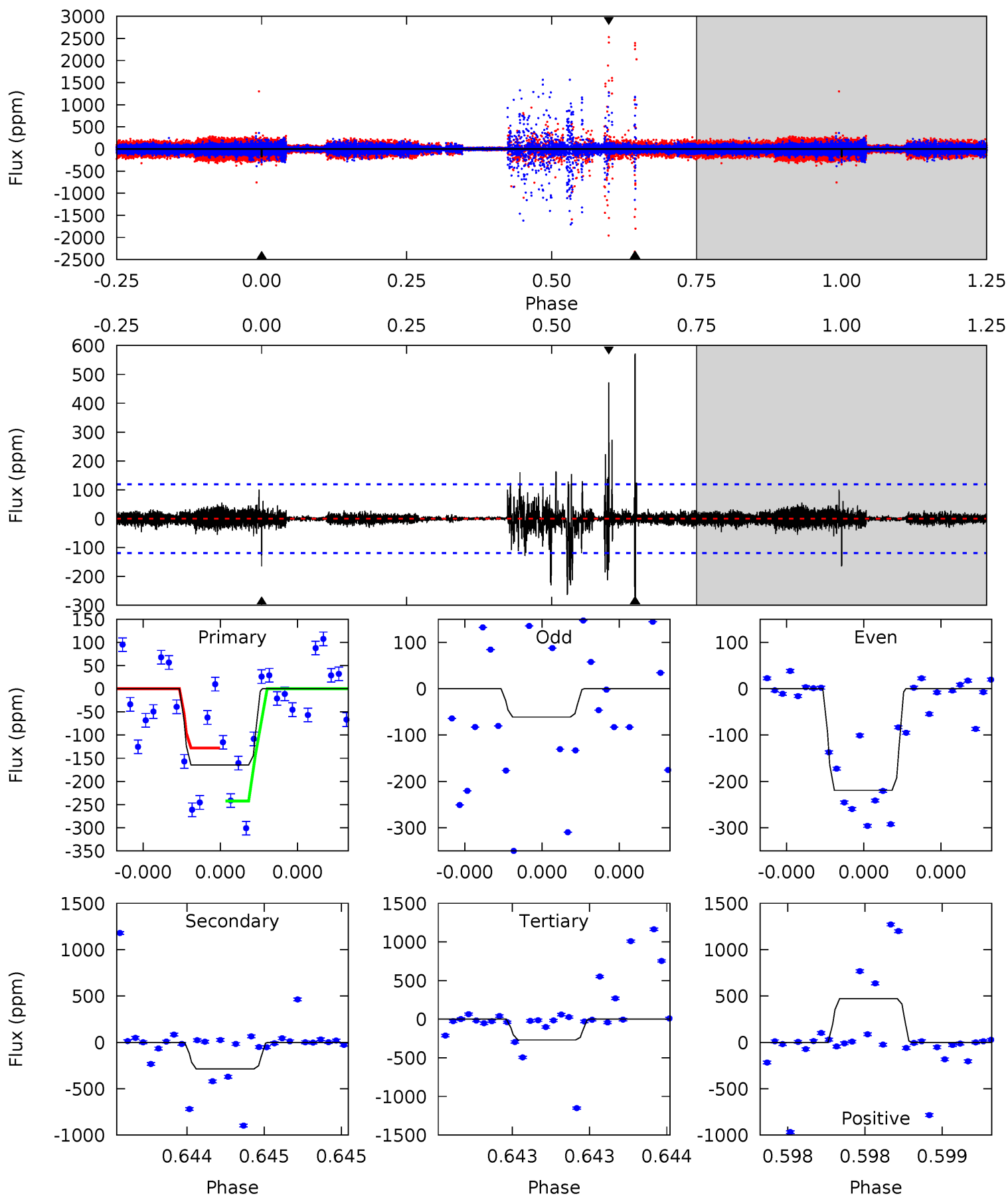
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.39	27.7	22.5	35.7	5.64	3.58	1.52	-18.1	-31.3	5.20	-8.01	0.46	0.93	0.56	0.41



Alt Model-Shift Uniqueness Test

005388155-01, P = 598.437672 Days, E = 376.594721 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.77	13.6	12.7	22.3	5.62	3.55	1.00	-4.94	-14.5	0.85	-8.69	2.46	0.80	0.67	2.64



Stellar Parameters For KIC 005388155

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3298^{+117}_{-78}	$0.129^{+0.212}_{-0.050}$	$-0.100^{+0.250}_{-0.150}$	$151.742^{+9.192}_{-29.414}$	$1.130^{+0.206}_{-0.137}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+164%/-39%	+250%/-150%	+6%/-19%	+18%/-12%	+99%/-11%
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 005388155-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-886 ± 32	$1248.78^{+1383.90}_{-866.28}$	2060^{+88}_{-114}	2369^{+1177}_{-4509}	$0.691^{+6.623}_{-0.539}$
Alt.	-287 ± 21	$1220.16^{+1452.96}_{-846.08}$	2048^{+90}_{-105}	-1956^{+4891}_{-324}	$0.233^{+2.269}_{-0.185}$

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 $A_{obs} \gg 1.0$

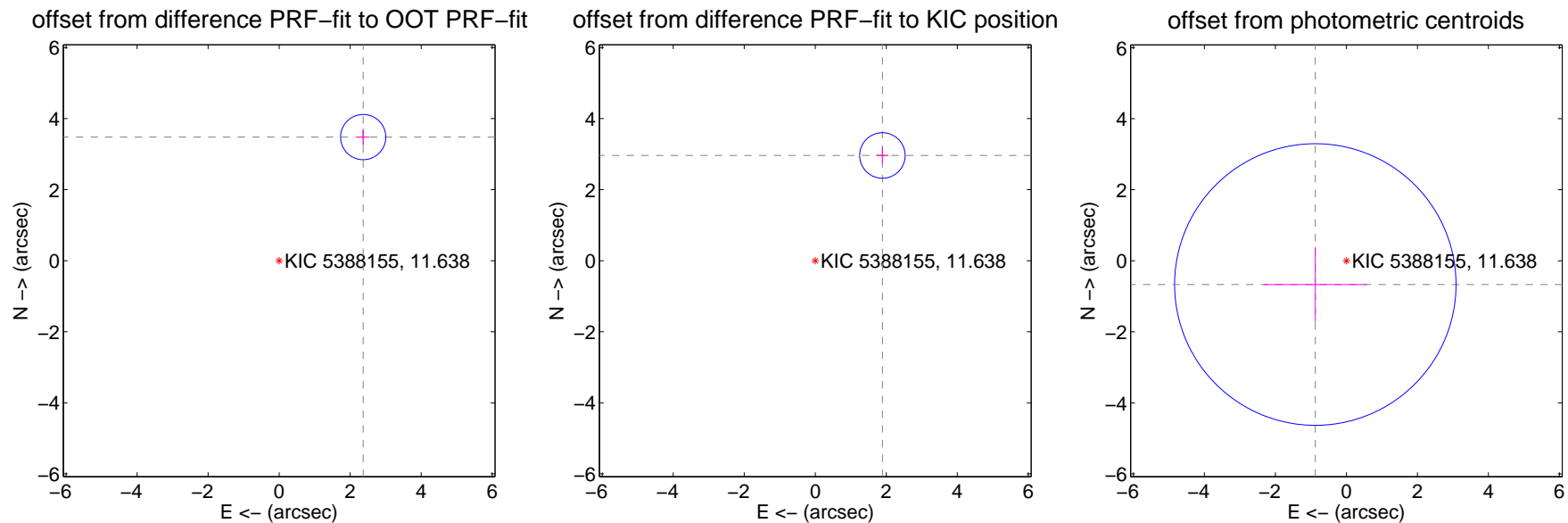
DV Centroid Data

Supplemental centroid analysis for 005388155-01. **Kepler magnitude: 11.64.** Transit SNR 7.76

There are 0 quarters with good PRF difference image offsets

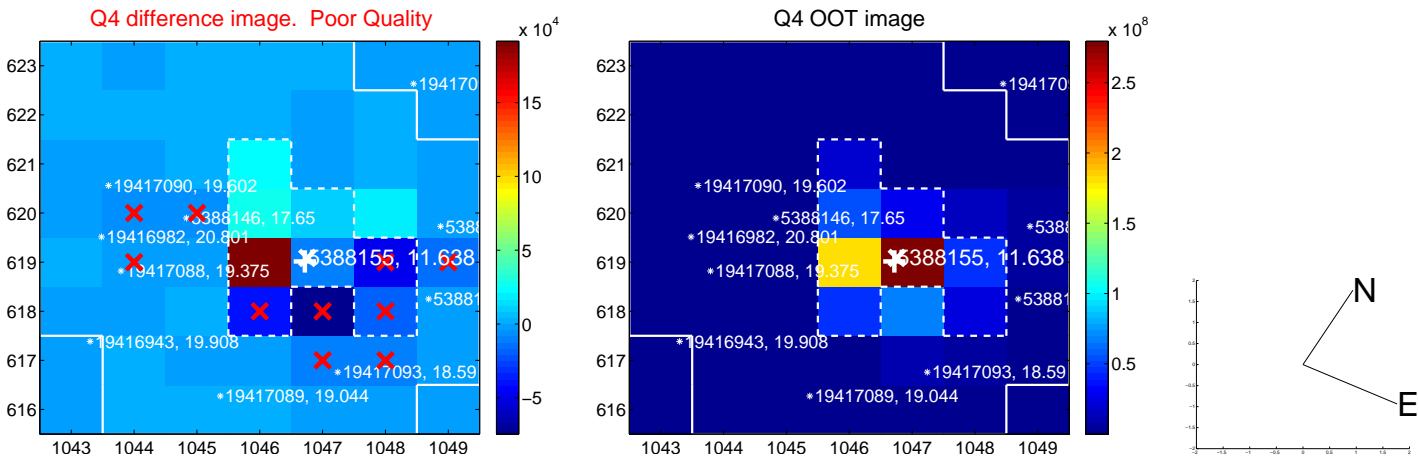
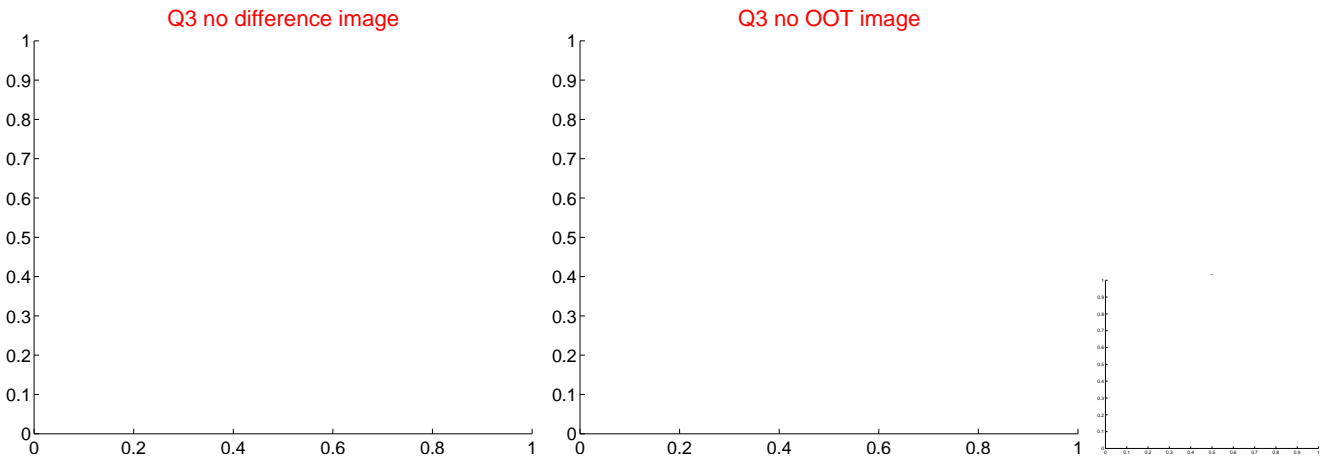
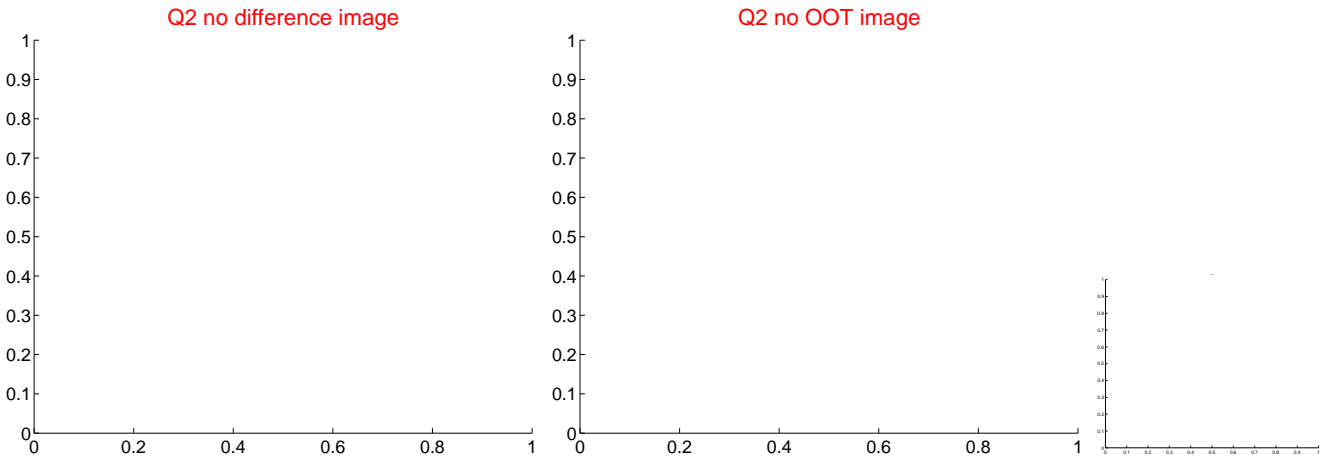
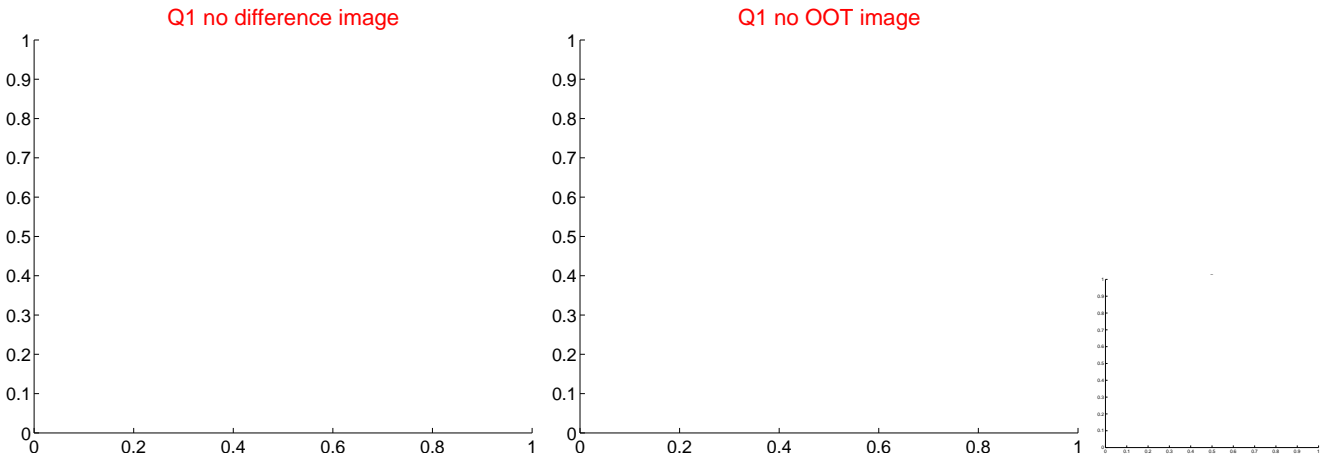
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.207 \pm 0.212	19.84	-2.367 \pm 0.175	3.478 \pm 0.227
PRF-fit source offset from KIC position	3.513 \pm 0.213	16.46	-1.891 \pm 0.175	2.961 \pm 0.227
photometric centroid source offset	1.10 \pm 1.32	0.83	0.88 \pm 1.46	-0.67 \pm 1.05



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.

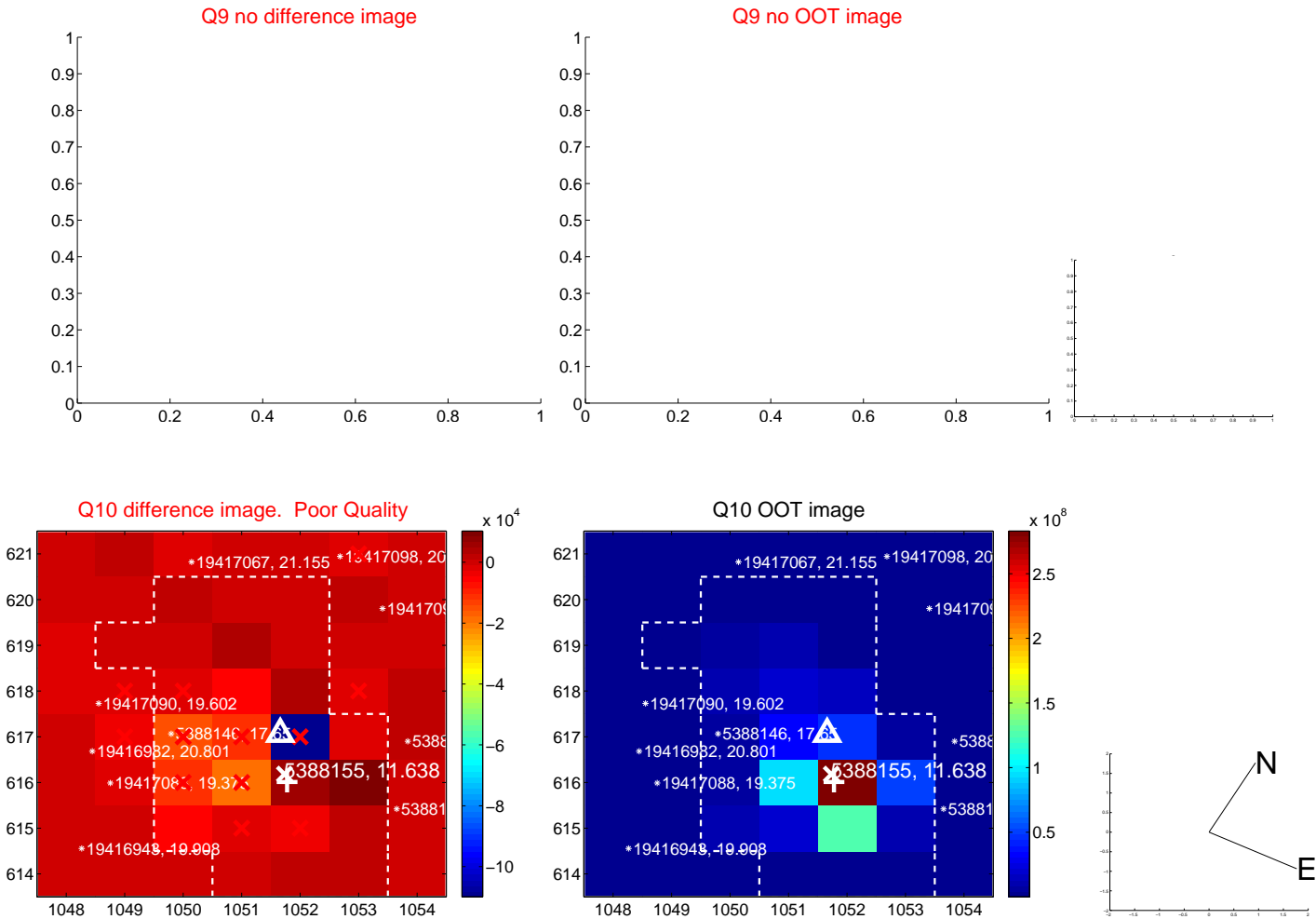
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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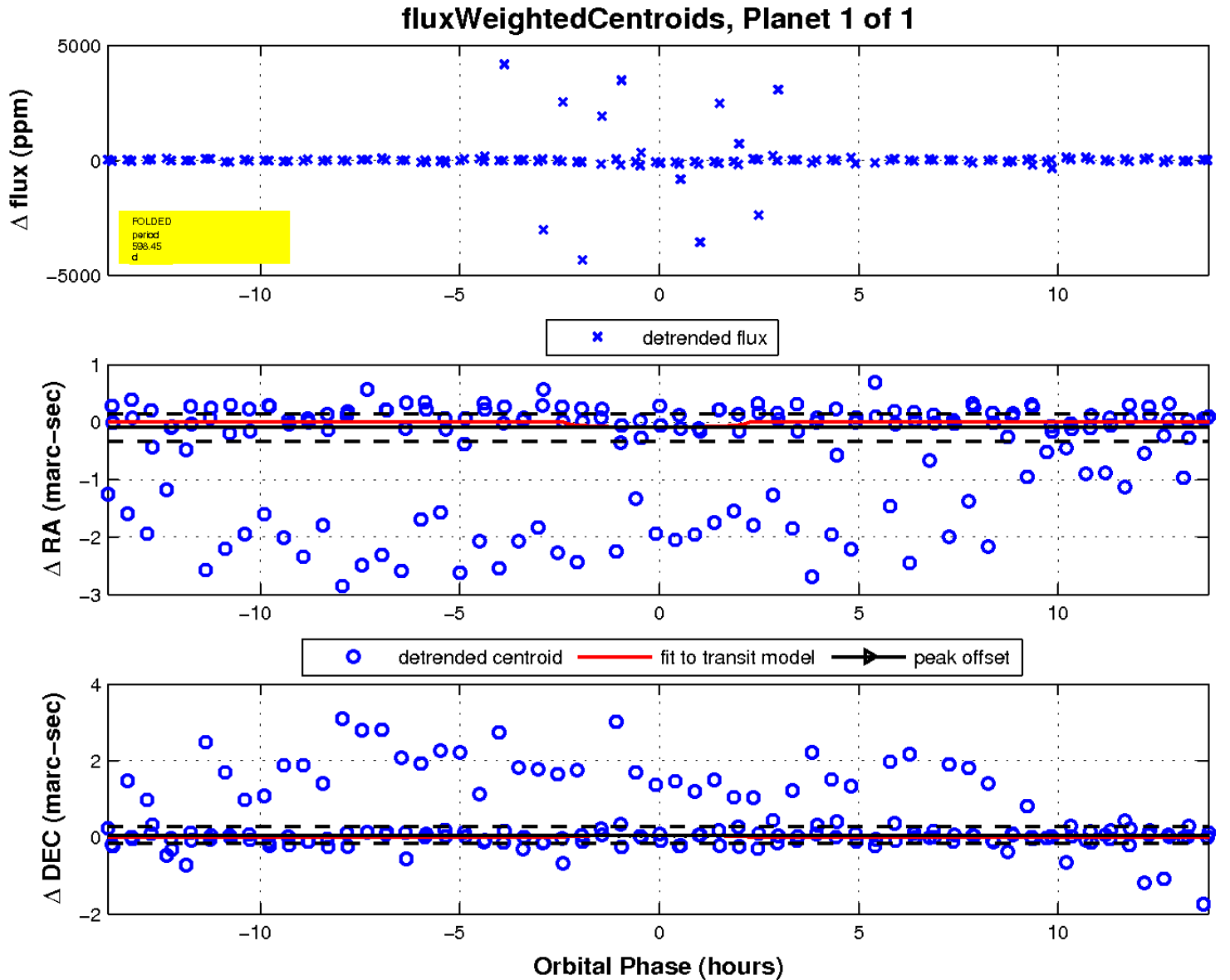
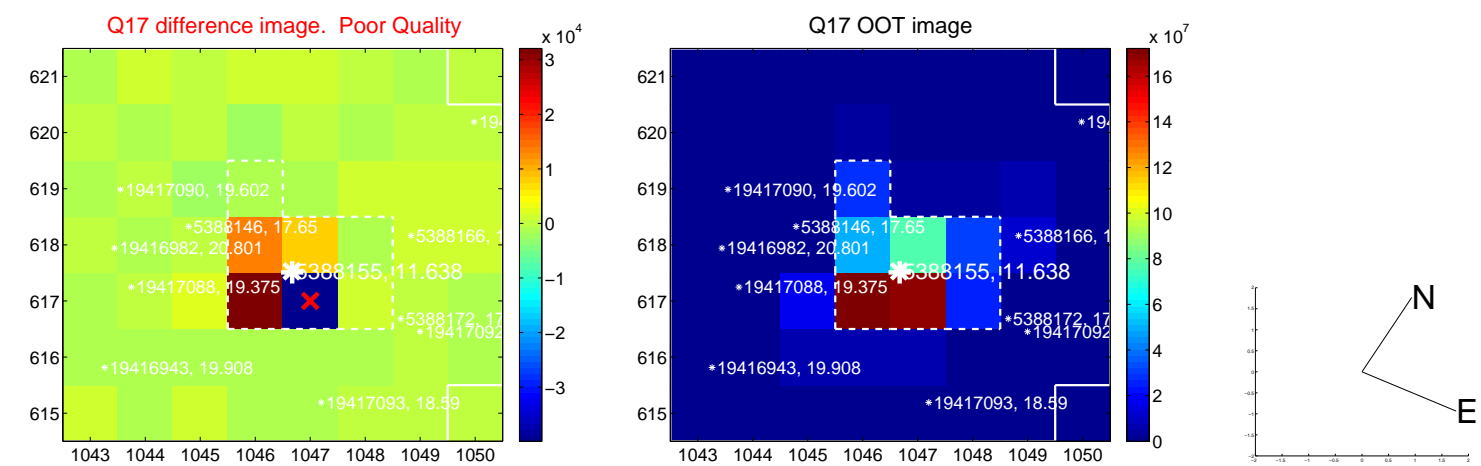
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

