

KIC 006291154

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})
006291154-01	OBS	No	520.459359	224.229125	752.3	3.217	13.2	6.3	0.80	5456	2.31	0.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006291154-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—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.

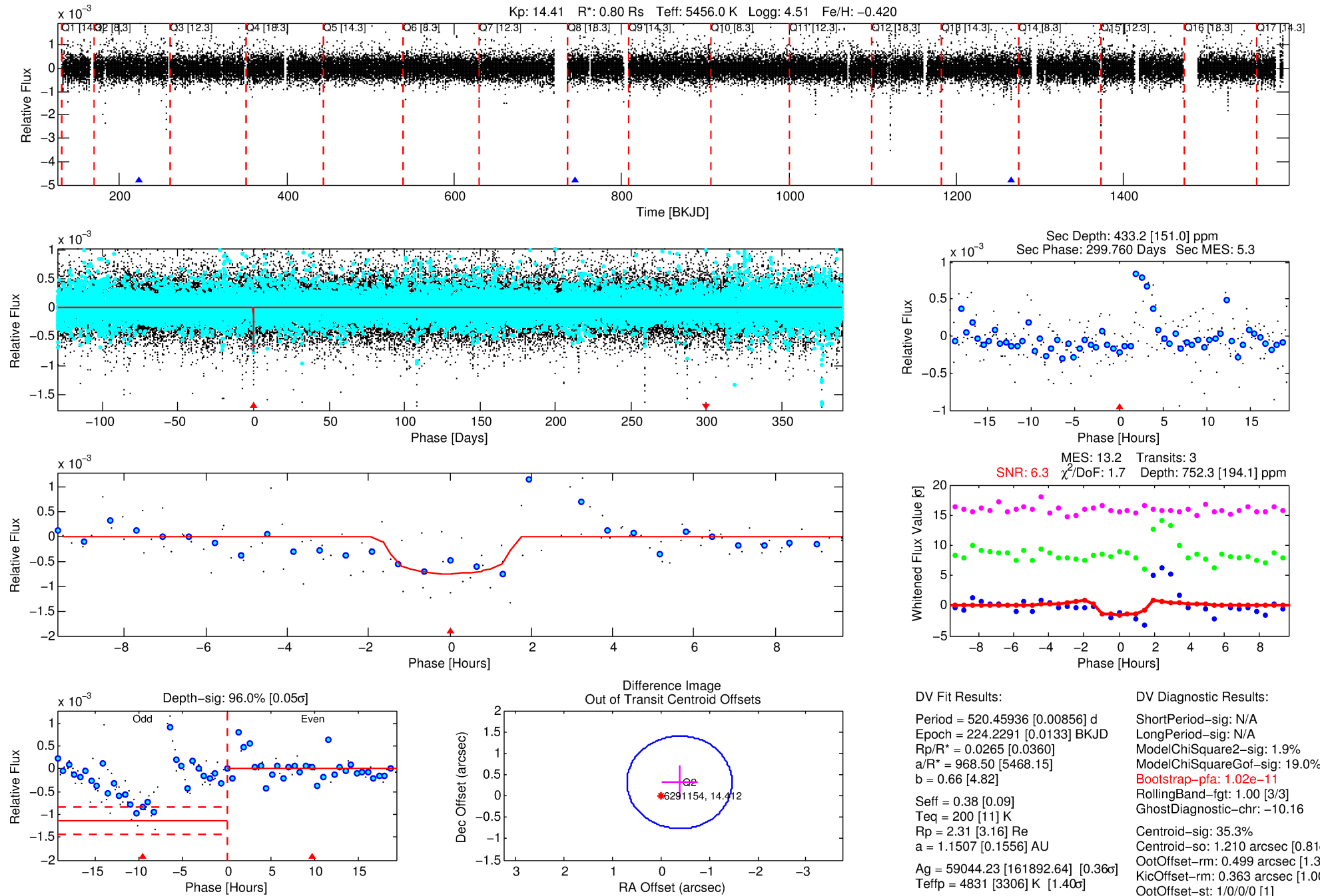
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006291154-01

No Significant Match Found

DV One-Page Summary

KIC: 6291154 Candidate: 1 of 1 Period: 520.459 d



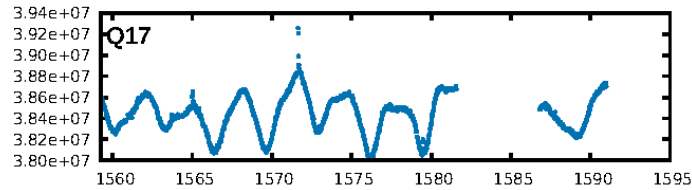
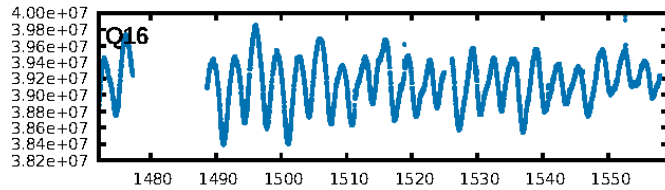
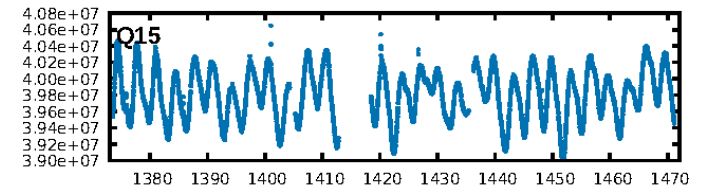
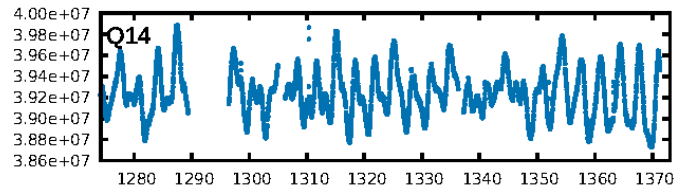
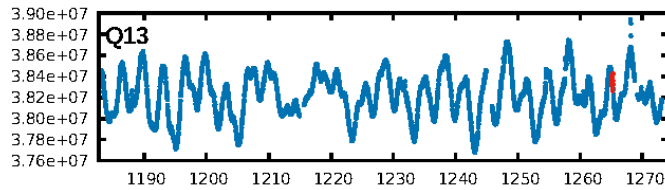
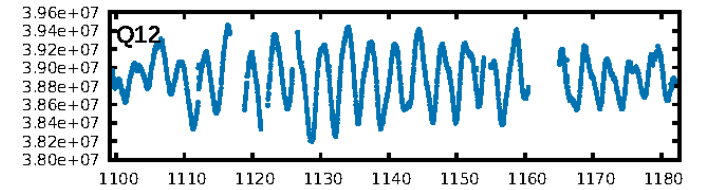
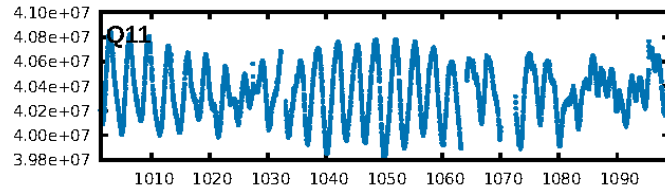
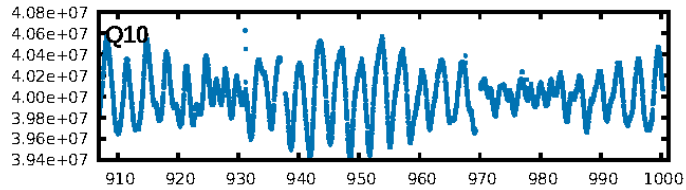
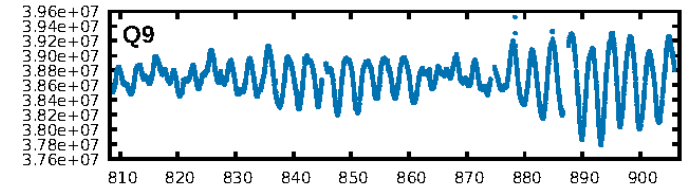
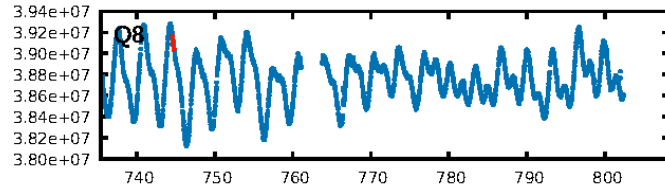
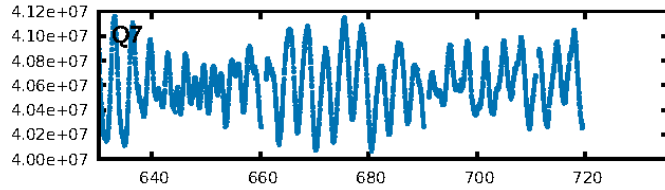
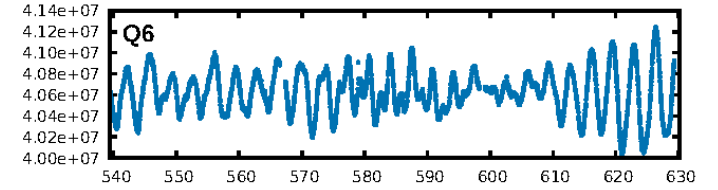
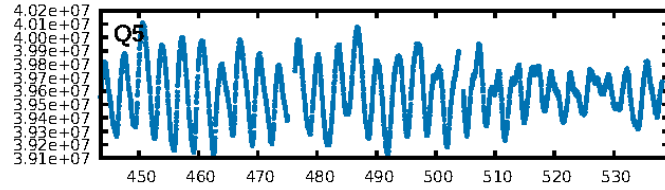
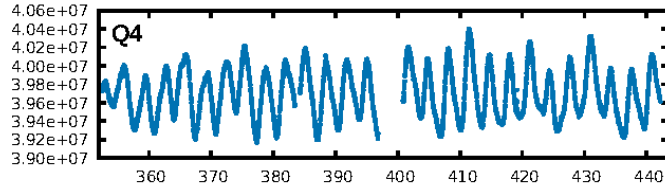
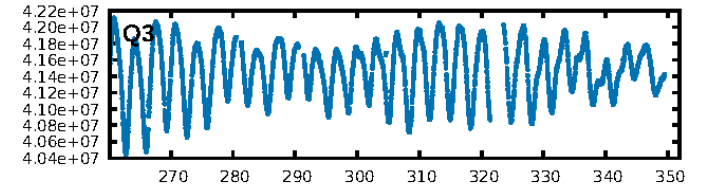
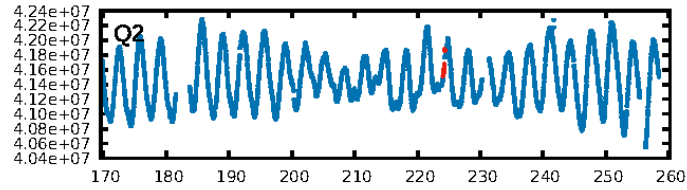
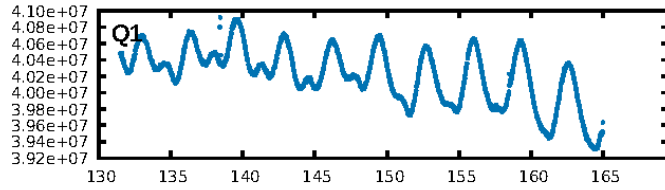
DV Fit Results:

Period = 520.45936 [0.00856] d
Epoch = 224.2291 [0.0133] BKJD
Rp/R* = 0.0265 [0.0360]
a/R* = 968.50 [5468.15]
b = 0.66 [4.82]
Seff = 0.38 [0.09]
Teq = 200 [11] K
Rp = 2.31 [3.16] Re
a = 1.1507 [0.1556] AU
Ag = 59044.23 [161892.64] [0.36 σ]
Teffp = 4831 [3306] K [1.40 σ]

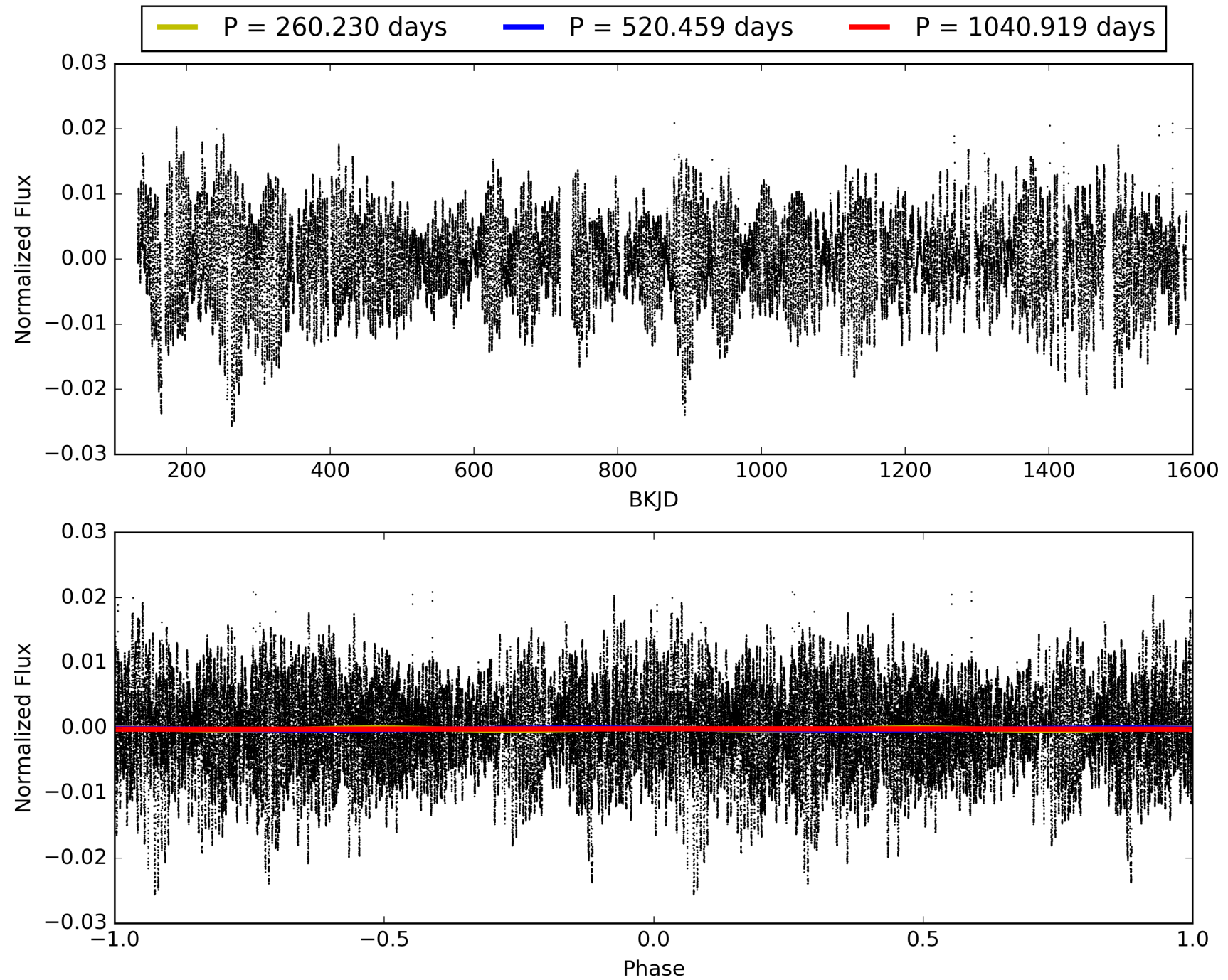
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 19.0%
Bootstrap-pfa: 1.02e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -10.16
Centroid-sig: 35.3%
Centroid-so: 1.210 arcsec [0.81 σ]
OotOffset-rm: 0.499 arcsec [1.38 σ]
KicOffset-rm: 0.363 arcsec [1.00 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 006291154-01, PDC Light Curves

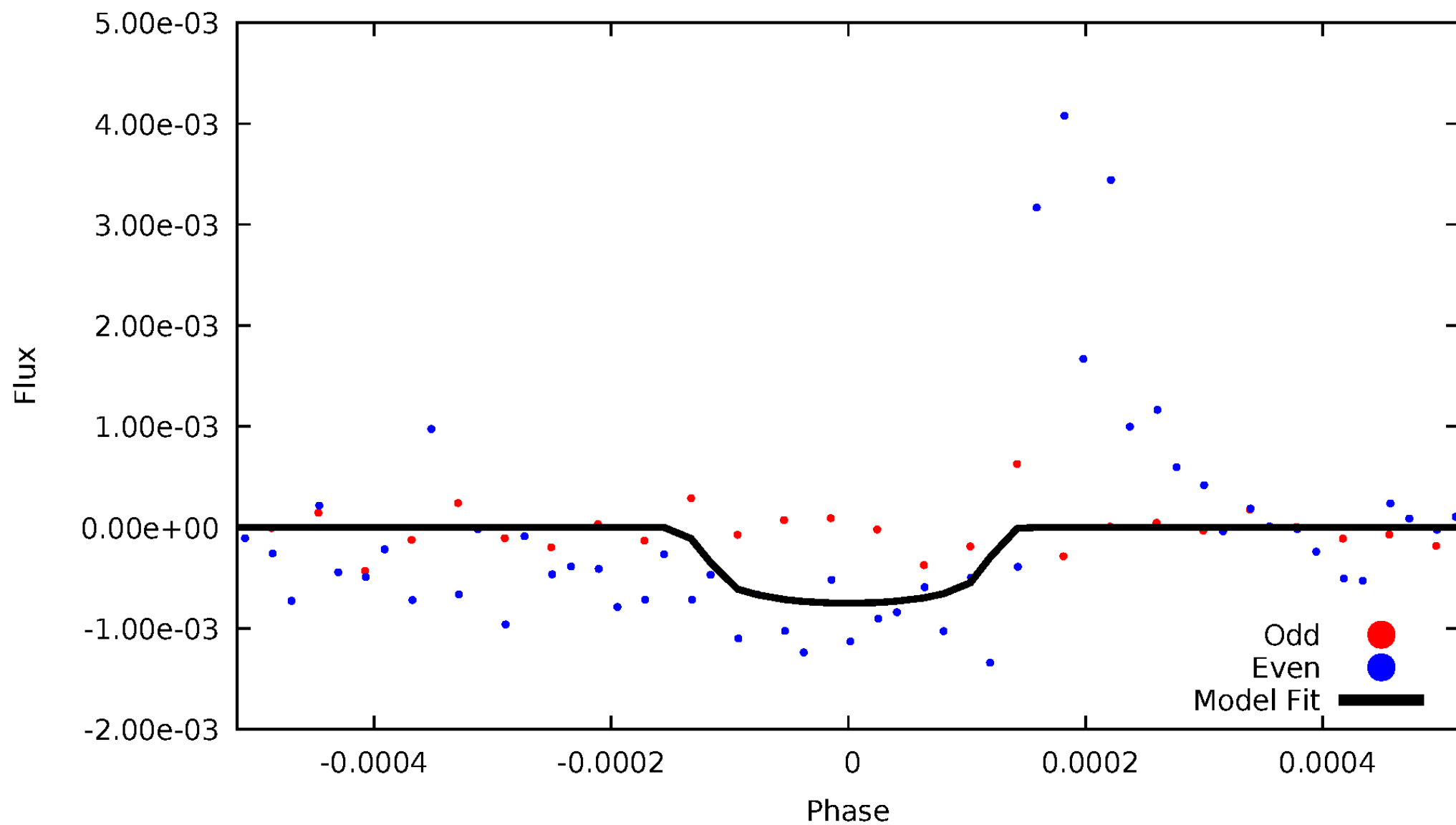


TCE 006291154-01



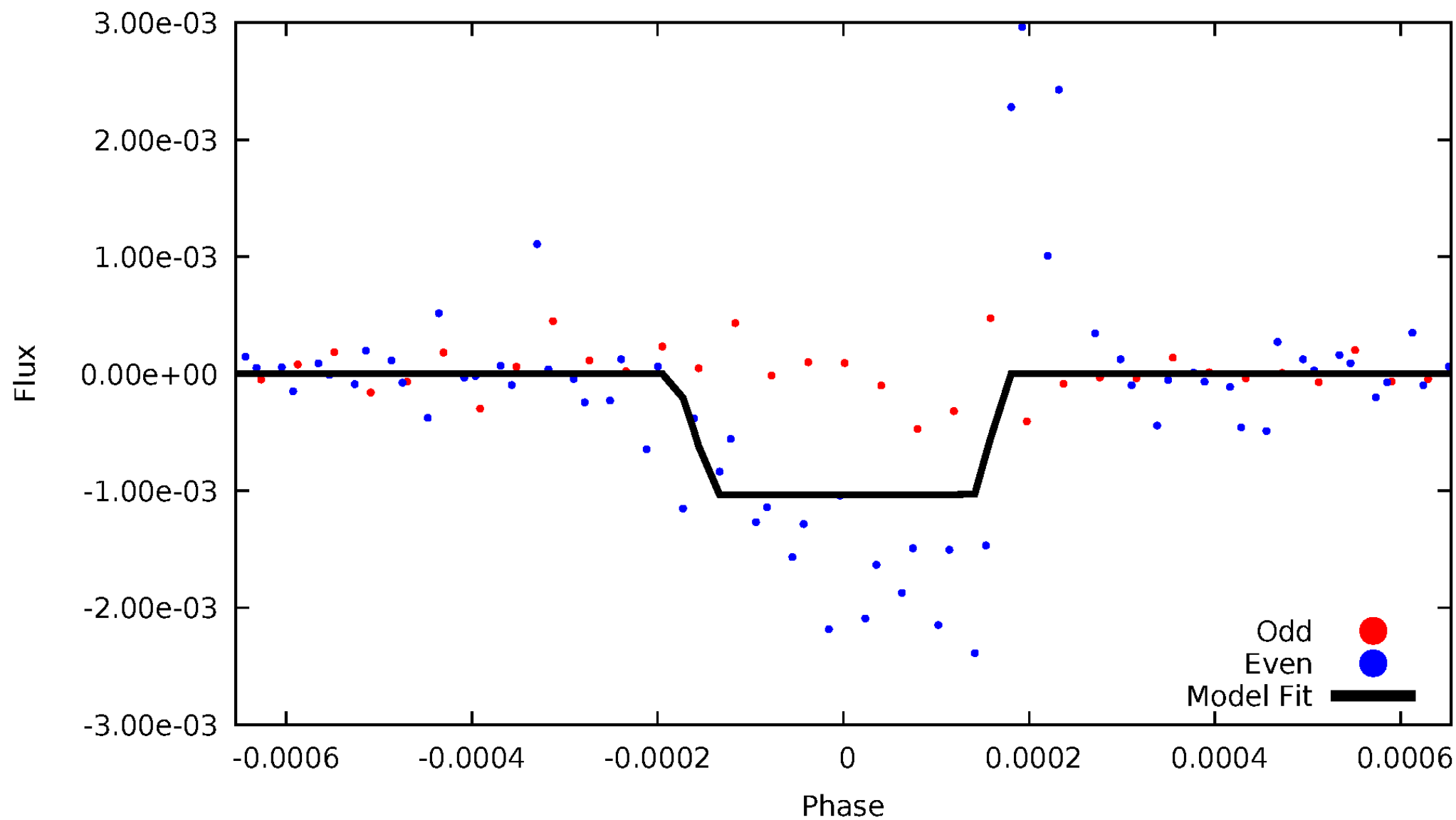
DV Odd/Even

TCE 006291154-01



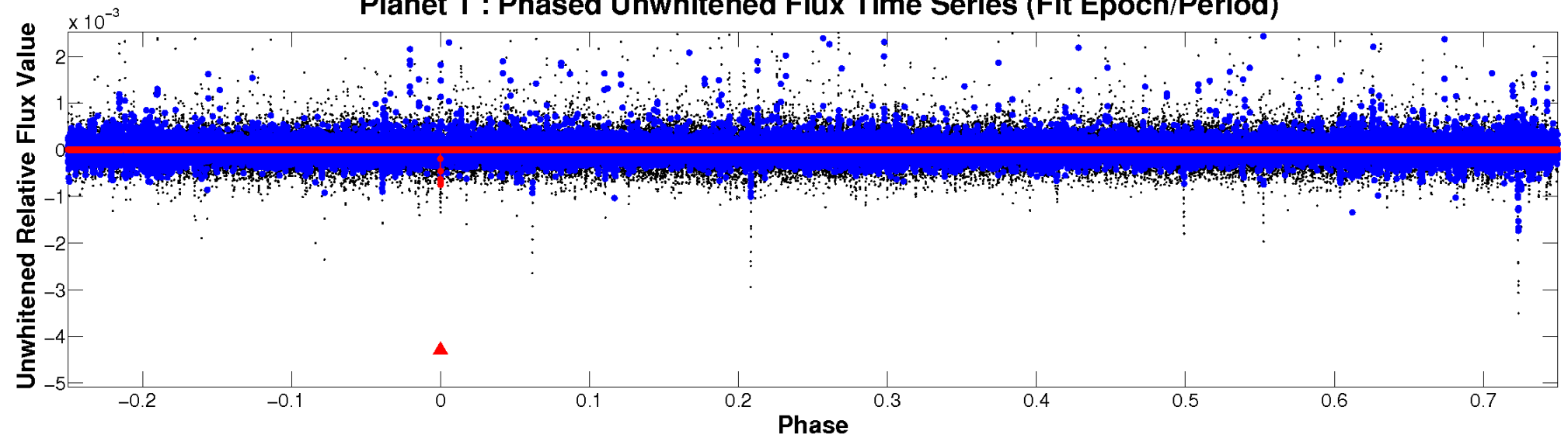
ALT Odd/Even

TCE 006291154-01

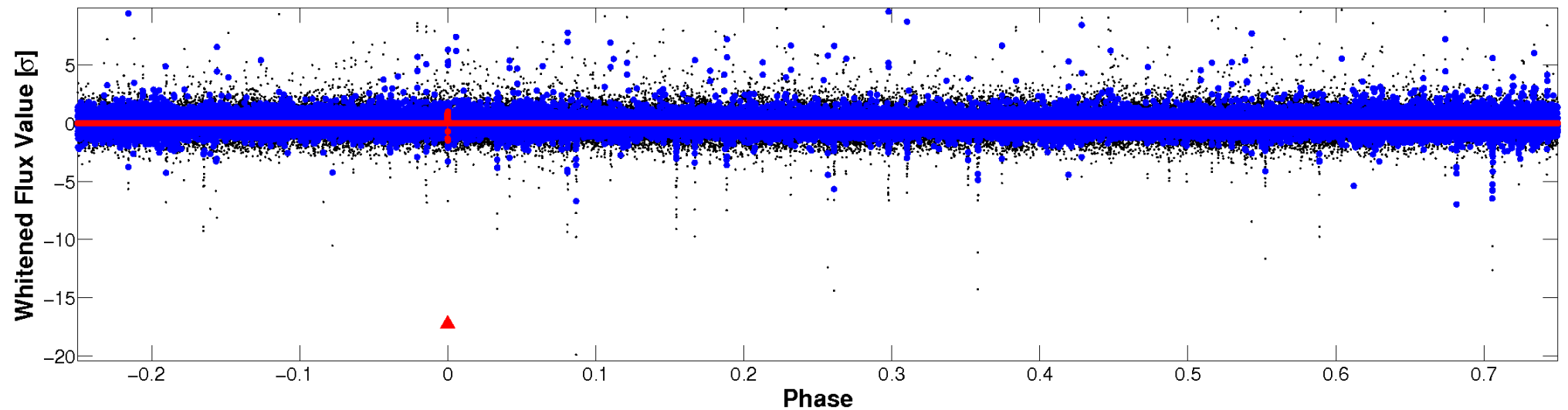


Non-Whitened Vs. Whitened Light Curve

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

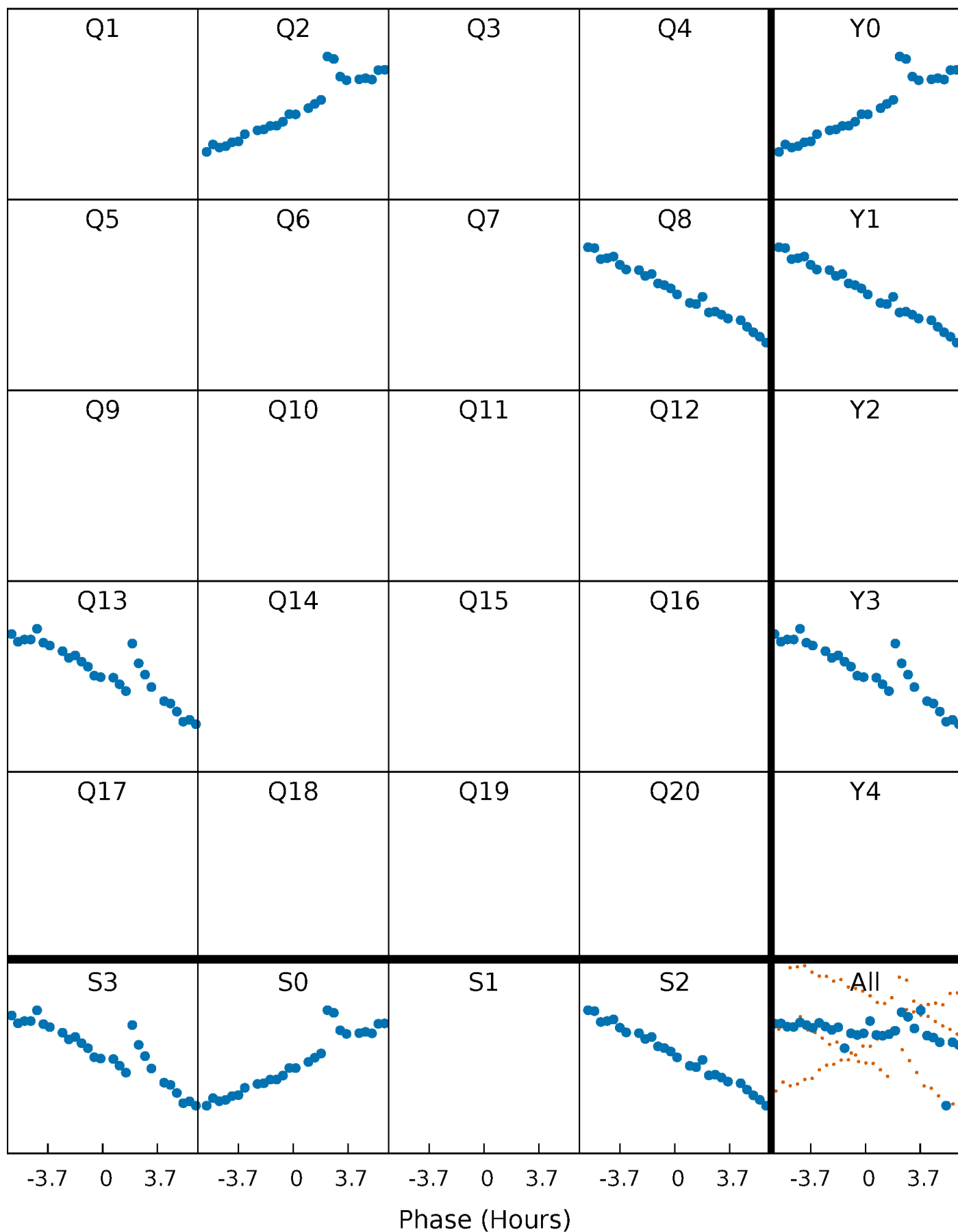


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



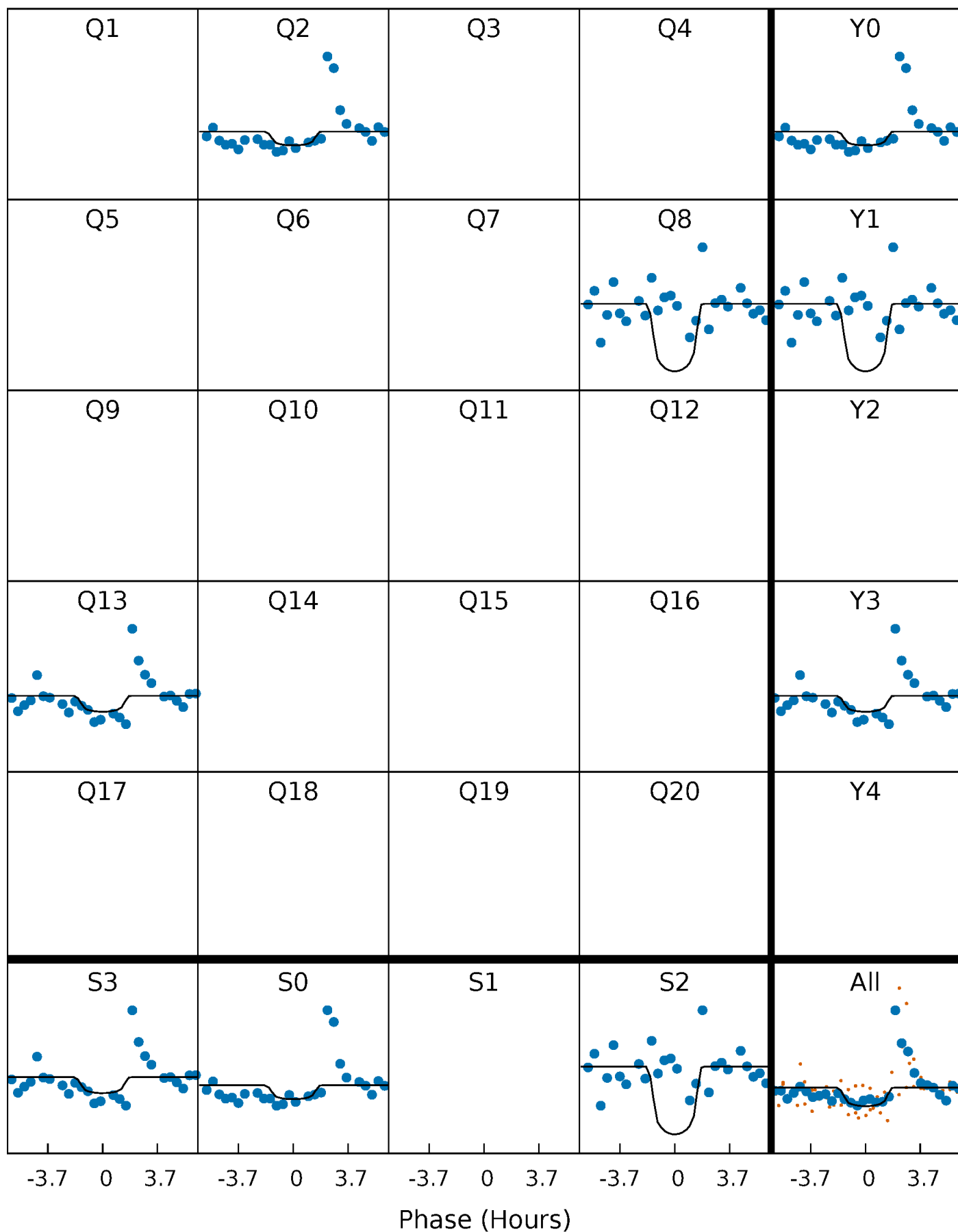
PDC Quarter-Phased Transit Curves

TCE 006291154-01 P=520.459359 Days $T_0=224.229125$ (BKJD)



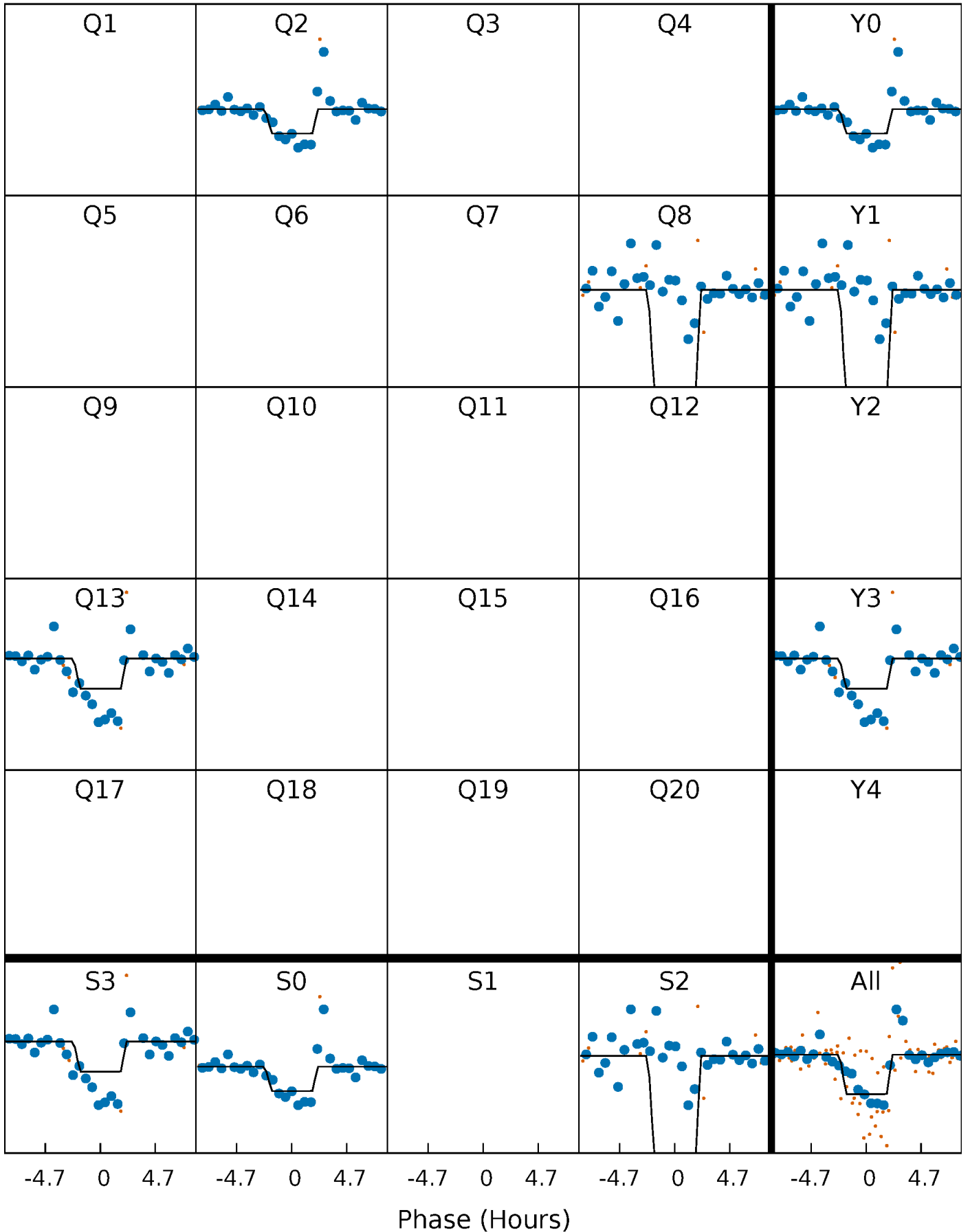
DV Quarter-Phased Transit Curves

TCE 006291154-01 P=520.459359 Days $T_0=224.229125$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

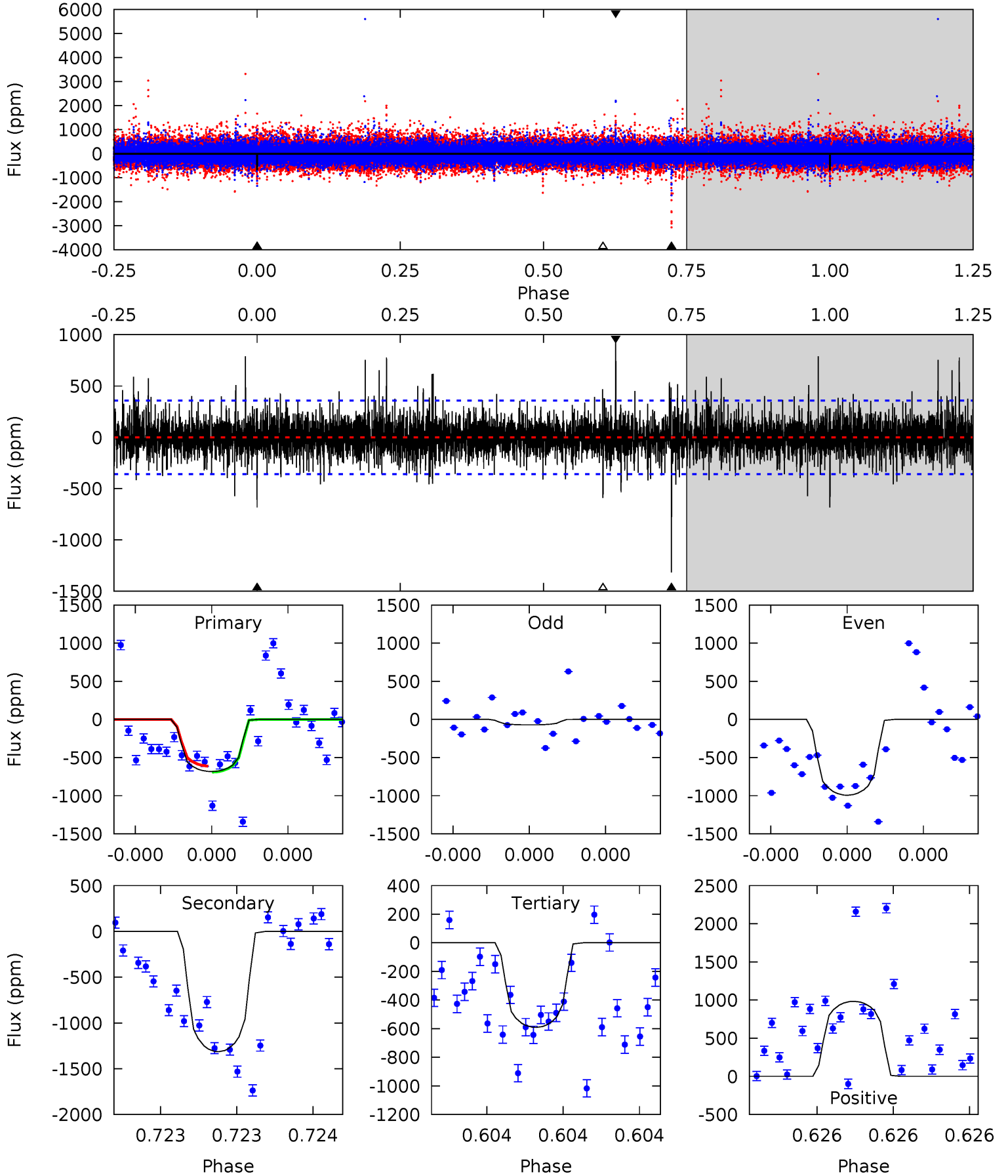
TCE 006291154-01 P=520.456396 Days $T_0=224.223618$ (BKJD)



DV Model-Shift Uniqueness Test

006291154-01, P = 520.459359 Days, E = 224.229125 Days

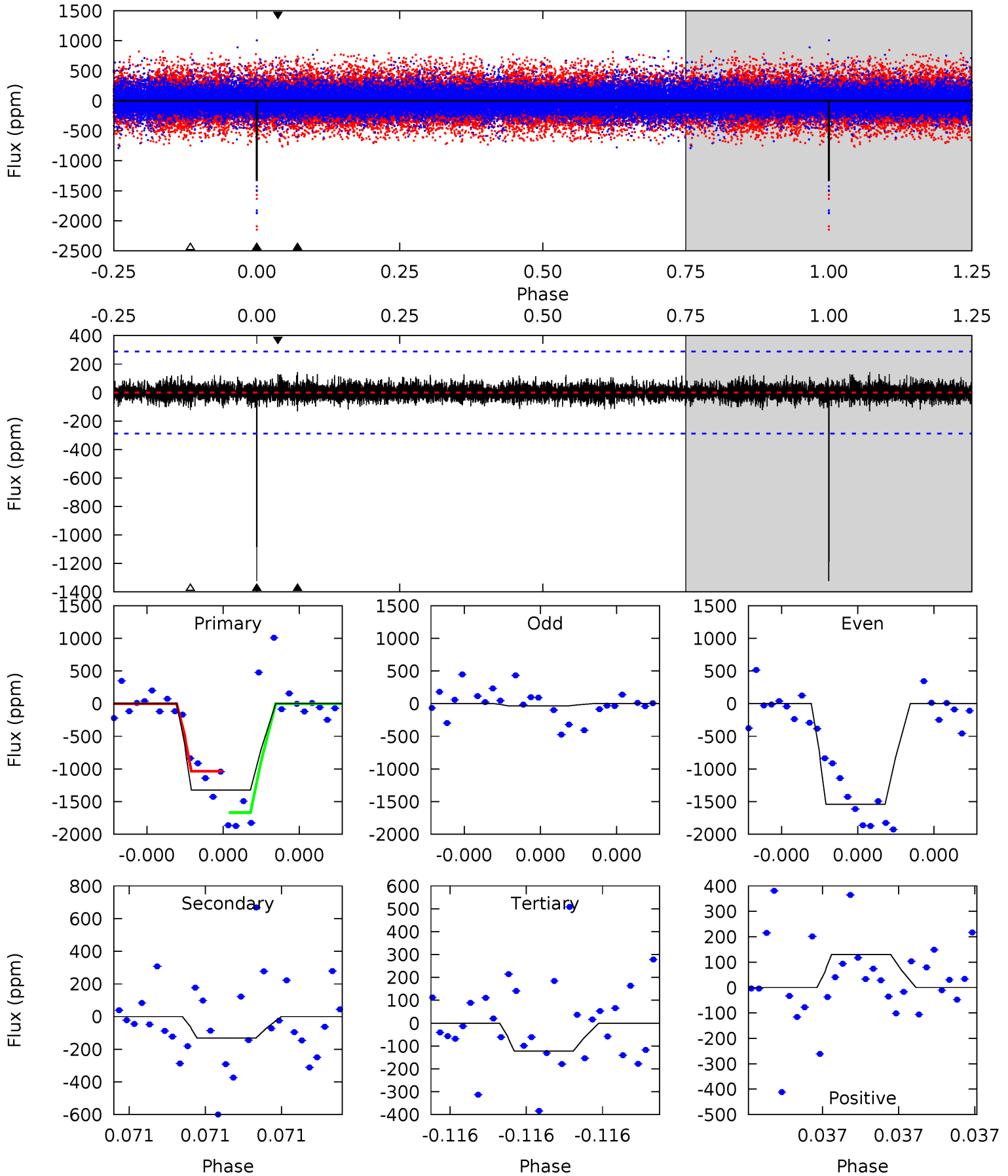
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	20.8	9.36	15.6	5.67	3.62	1.99	1.46	-4.75	11.4	5.24	6.22	0.79	0.43	0.61



Alt Model-Shift Uniqueness Test

006291154-01, P = 520.456396 Days, E = 224.223618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	2.56	2.39	2.55	5.65	3.60	0.57	23.5	23.4	0.17	0.01	18.2	0.81	0.10	6.17



Stellar Parameters For KIC 006291154

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5456^{+162}_{-162}	$4.509^{+0.094}_{-0.105}$	$-0.420^{+0.350}_{-0.300}$	$0.798^{+0.130}_{-0.097}$	$0.750^{+0.106}_{-0.053}$	$2.078^{+0.811}_{-0.636}$
	+3%/-3%	+2%/-2%	+83%/-71%	+16%/-12%	+14%/-7%	+39%/-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 006291154-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1314 ± 63	$3.36^{+2.74}_{-2.27}$	280^{+13}_{-13}	5422^{+4514}_{-1207}	$90223^{+726090}_{-63819}$
Alt.	-131 ± 51	$3.82^{+2.84}_{-2.49}$	281^{+13}_{-12}	3318^{+1400}_{-533}	6191^{+44471}_{-4280}

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 $A_{obs} \gg 1.0$

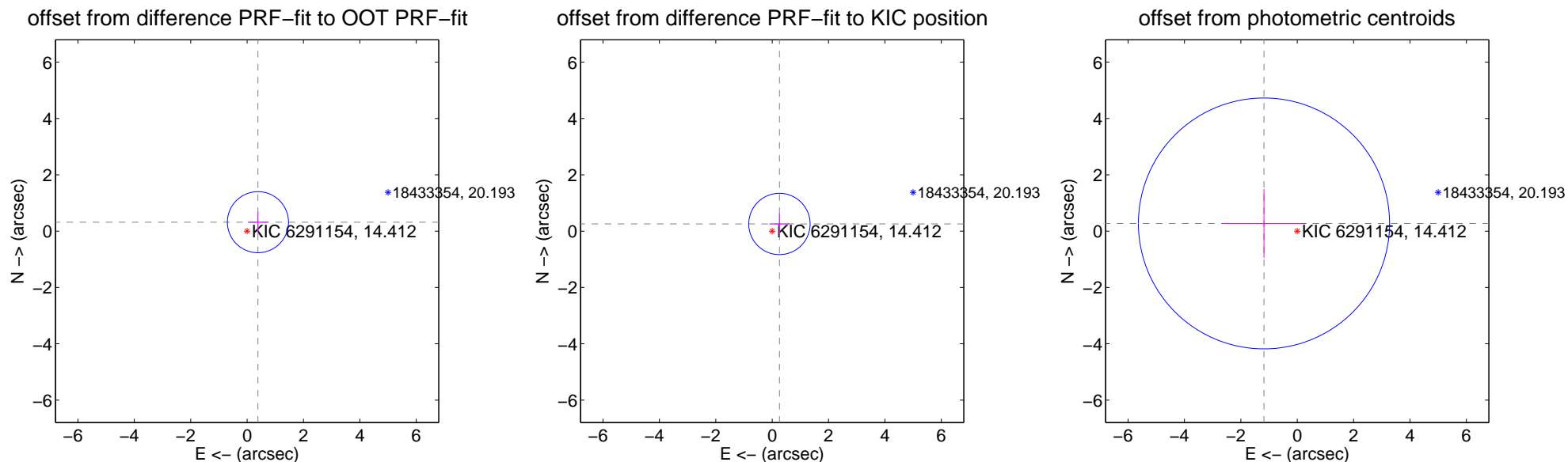
DV Centroid Data

Supplemental centroid analysis for 006291154-01. Kepler magnitude: 14.41. Transit SNR 6.28

There are 1 quarters with good PRF difference image offsets

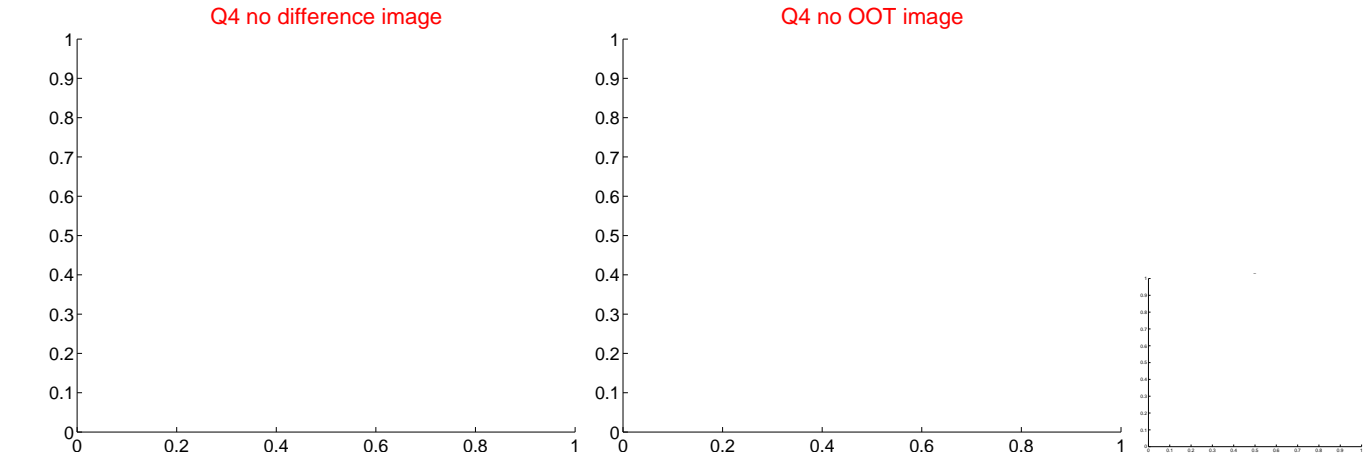
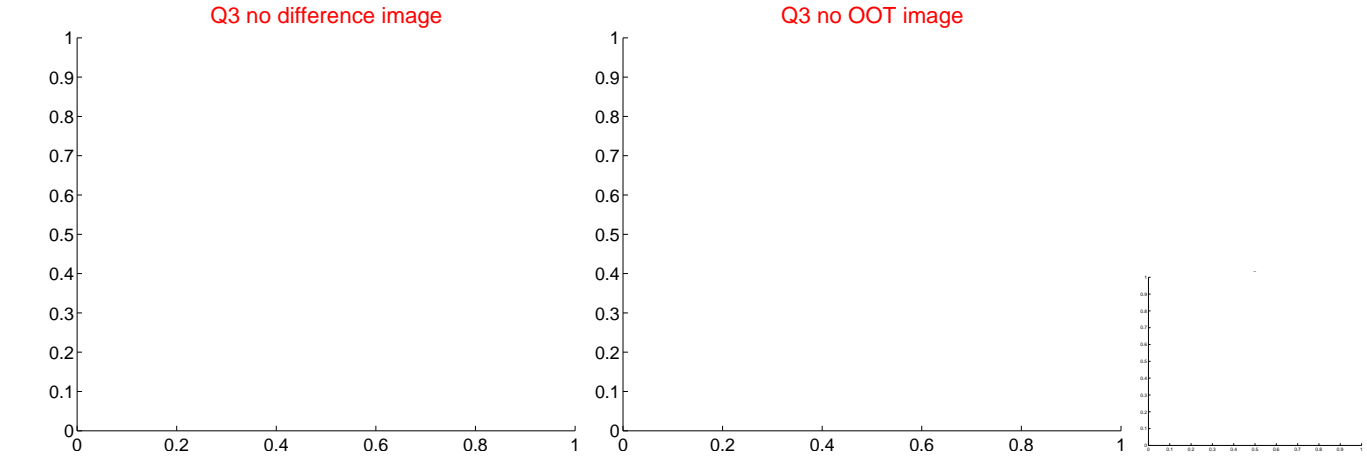
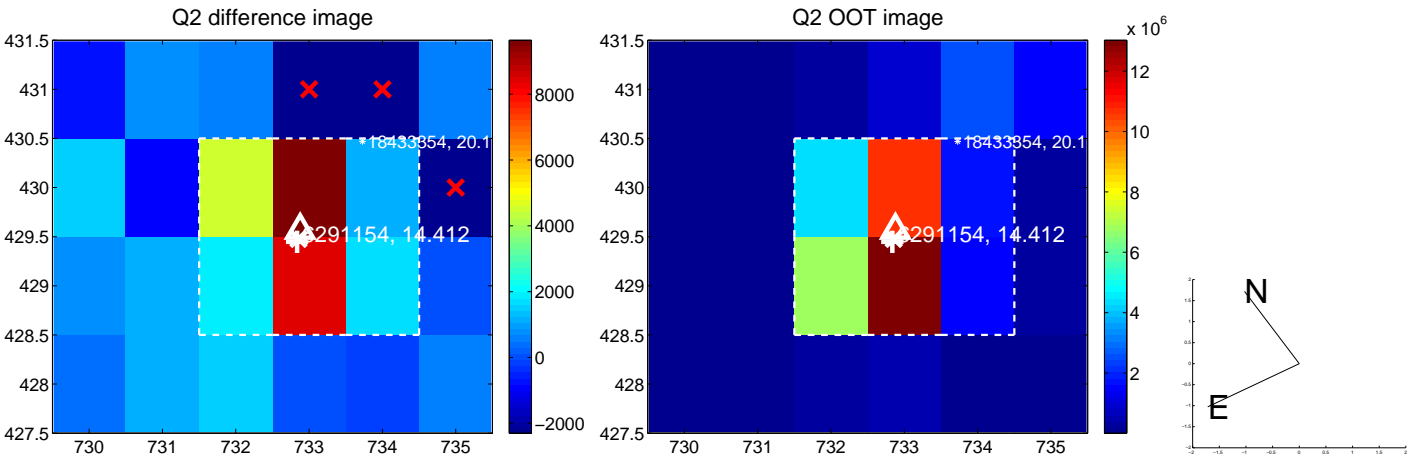
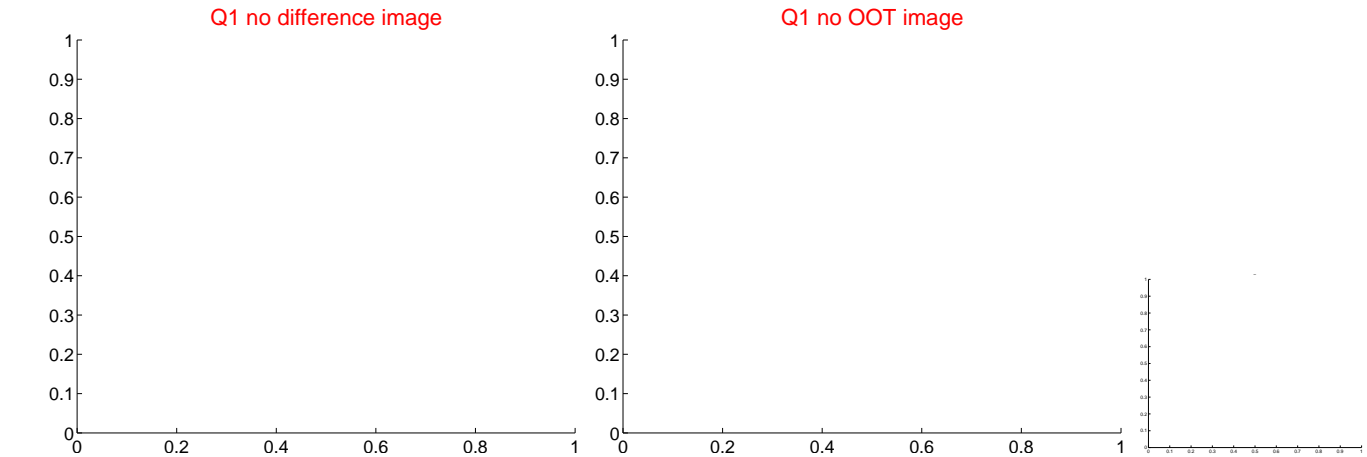
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.499 ± 0.361	1.38	-0.385 ± 0.354	0.317 ± 0.371
PRF-fit source offset from KIC position	0.363 ± 0.363	1.00	-0.258 ± 0.354	0.254 ± 0.371
photometric centroid source offset	1.21 ± 1.48	0.81	1.18 ± 1.50	0.27 ± 1.22

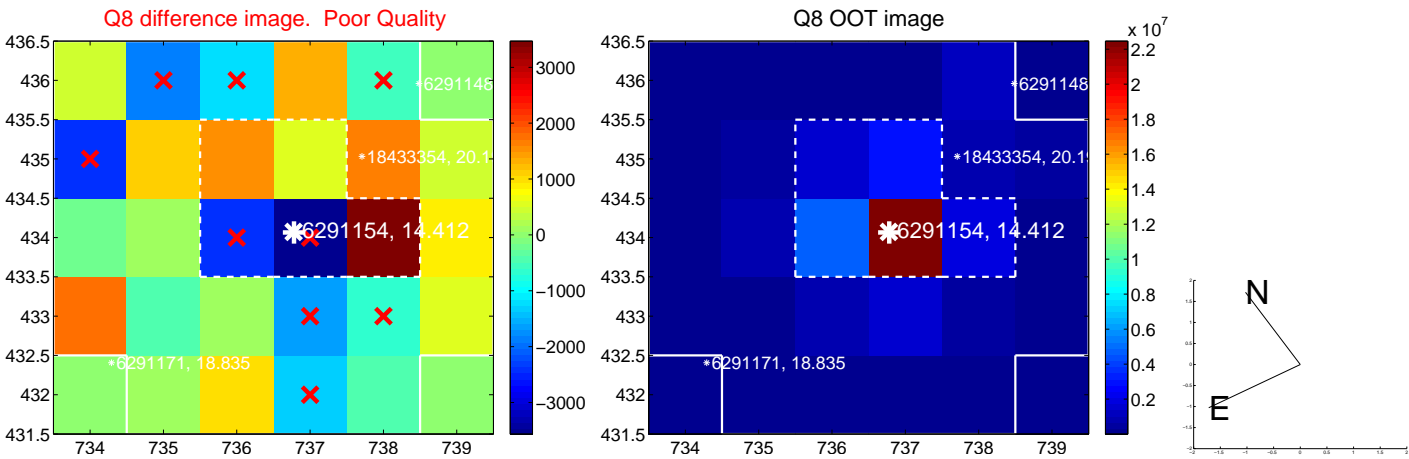


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



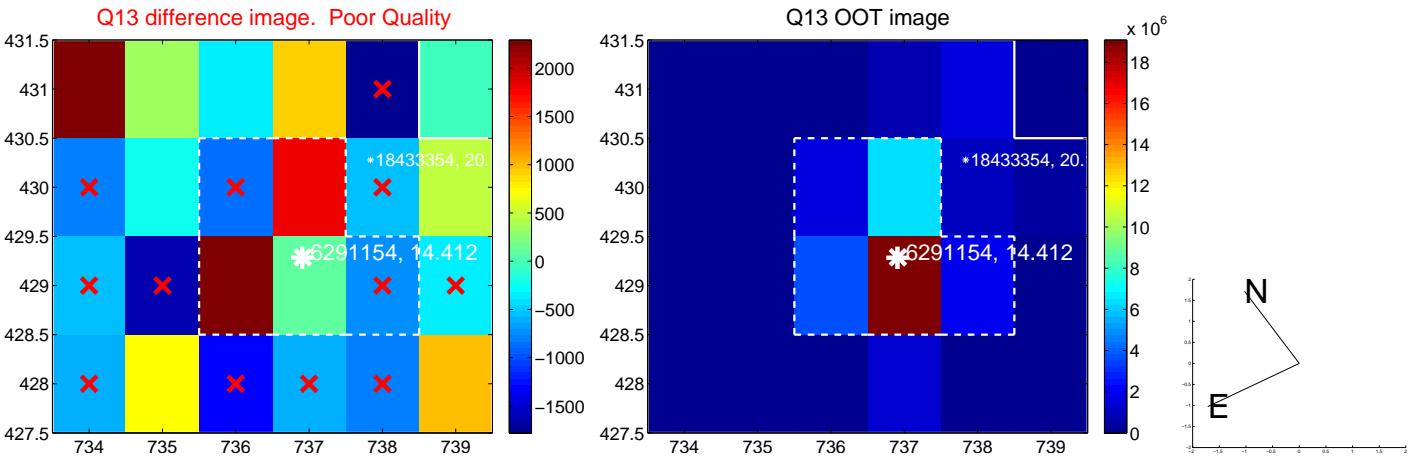
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



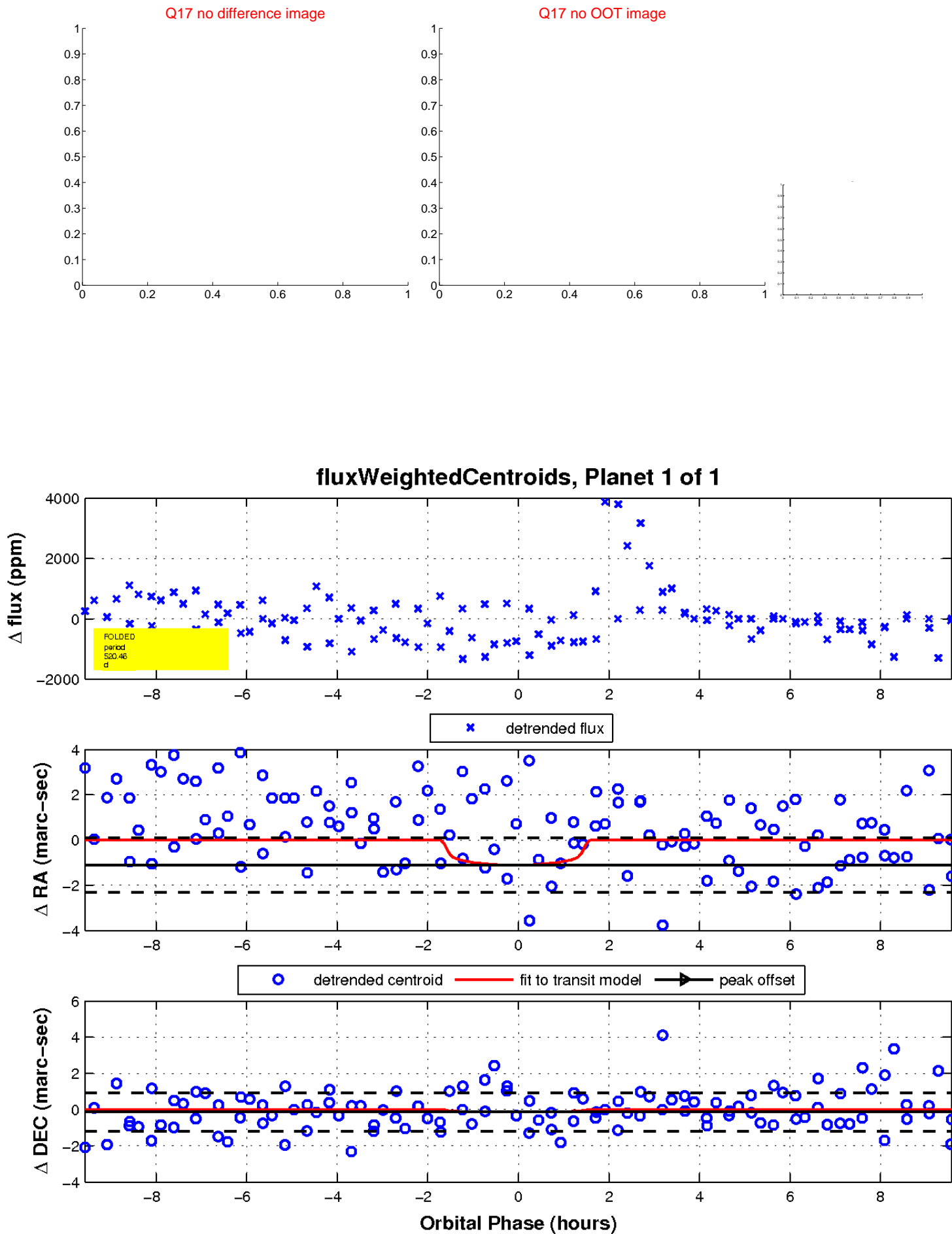
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

