

KIC 005305496

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})
005305496-01	OBS	No	515.898527	156.953974	284.7	20.106	7.2	7.3	0.87	5578	1.81	0.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305496-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

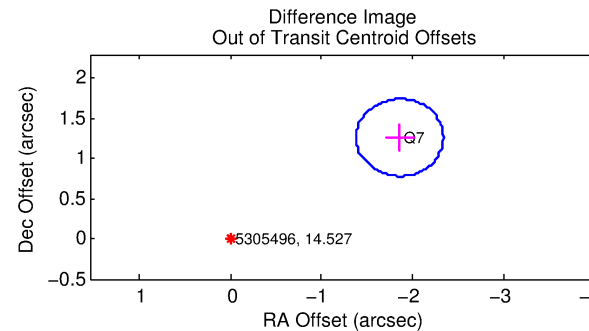
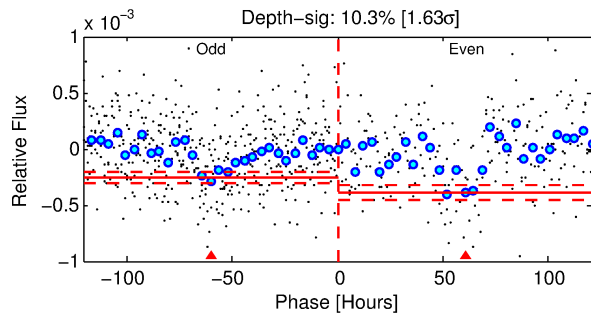
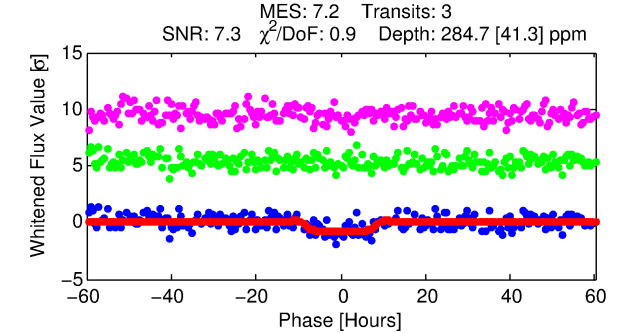
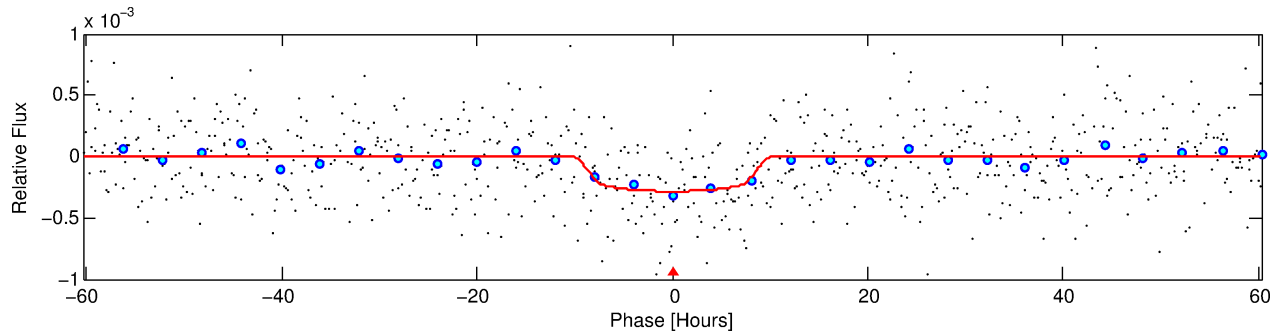
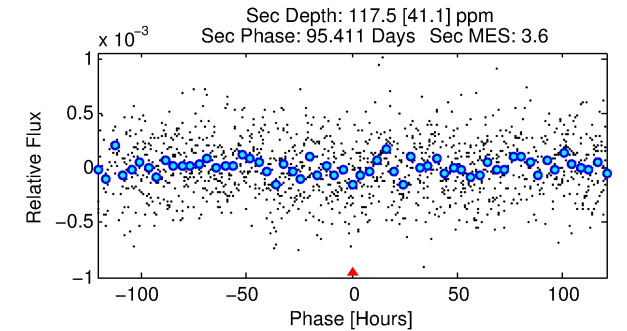
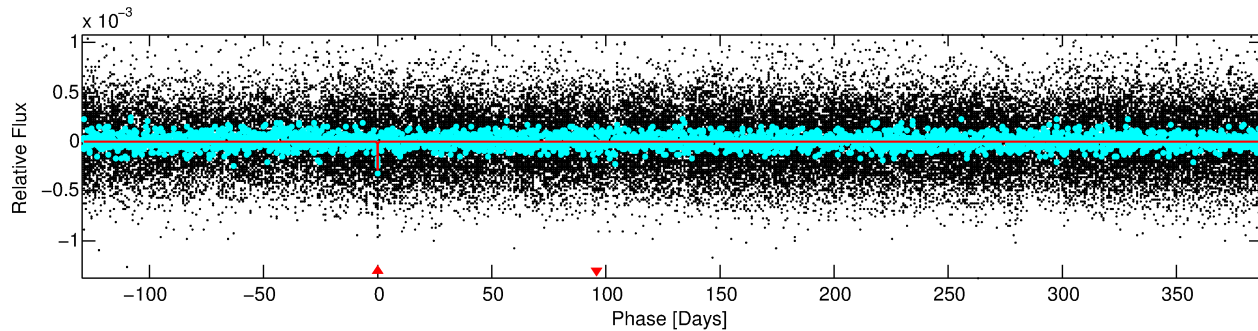
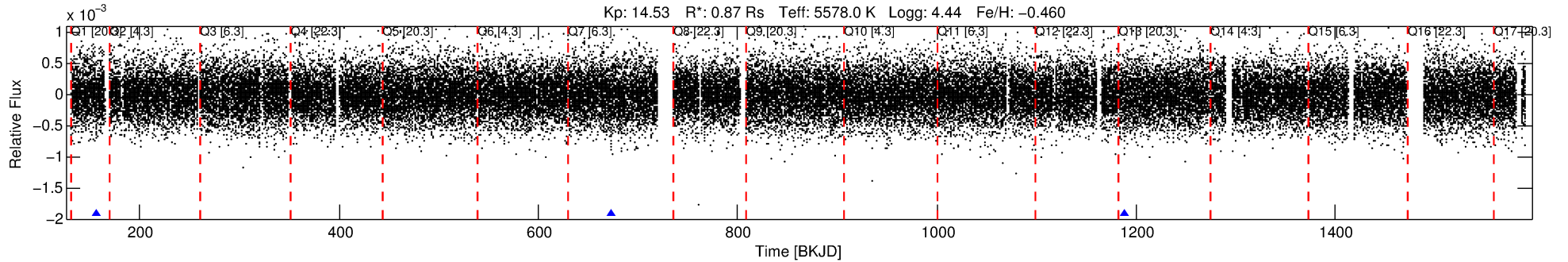
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305496-01

No Significant Match Found

DV One-Page Summary

KIC: 5305496 Candidate: 1 of 1 Period: 515.899 d



DV Fit Results:

Period = 515.89853 [0.03139] d
Epoch = 156.9540 [0.0426] BKJD
Rp/R* = 0.0192 [0.0026]
a/R* = 78.98 [41.87]
b = 0.94 [0.07]
Seff = 0.50 [0.18]
Teq = 214 [19] K
Rp = 1.81 [0.51] Re
a = 1.1457 [0.2480] AU
Ag = 25765.60 [14230.18] [1.81σ]
Teffp = 4196 [485] K [8.20σ]

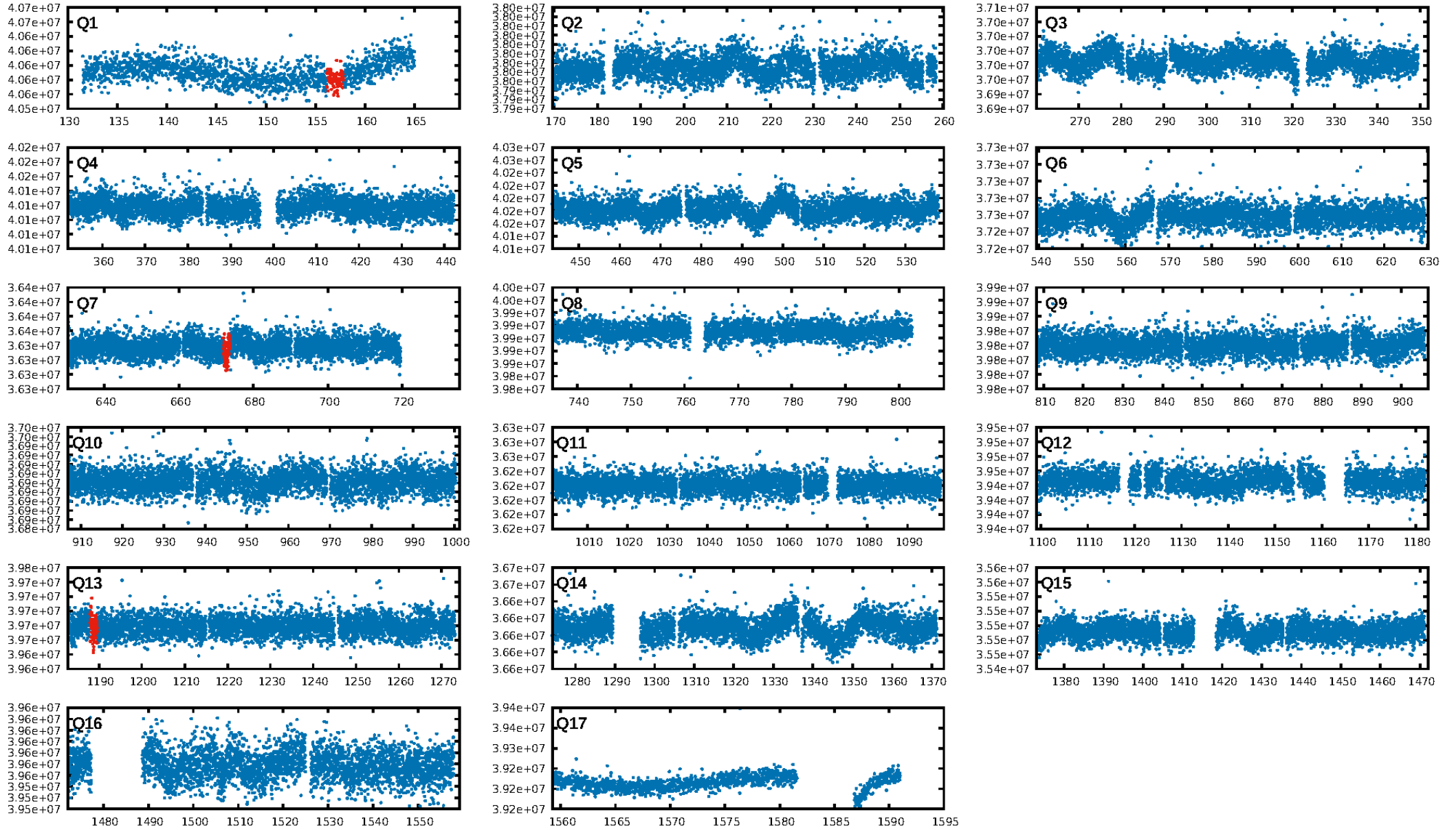
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.12e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.873
Centroid-sig: 0.0%
Centroid-so: 5.429 arcsec [2.95σ]
OotOffset-rm: 2.249 arcsec [14.03σ]
KicOffset-rm: 2.750 arcsec [17.05σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

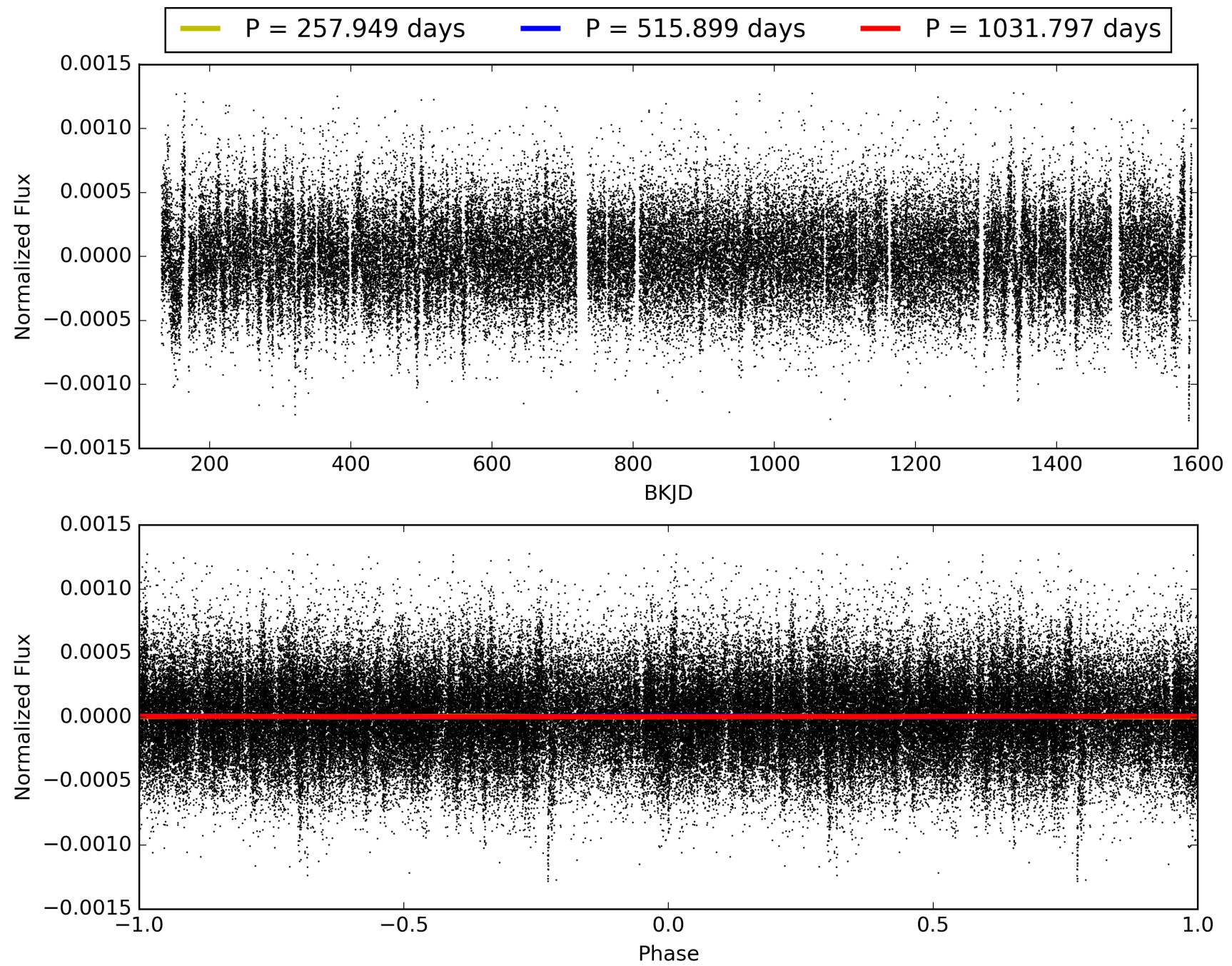
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:32:01 Z

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

TCE 005305496-01, PDC Light Curves

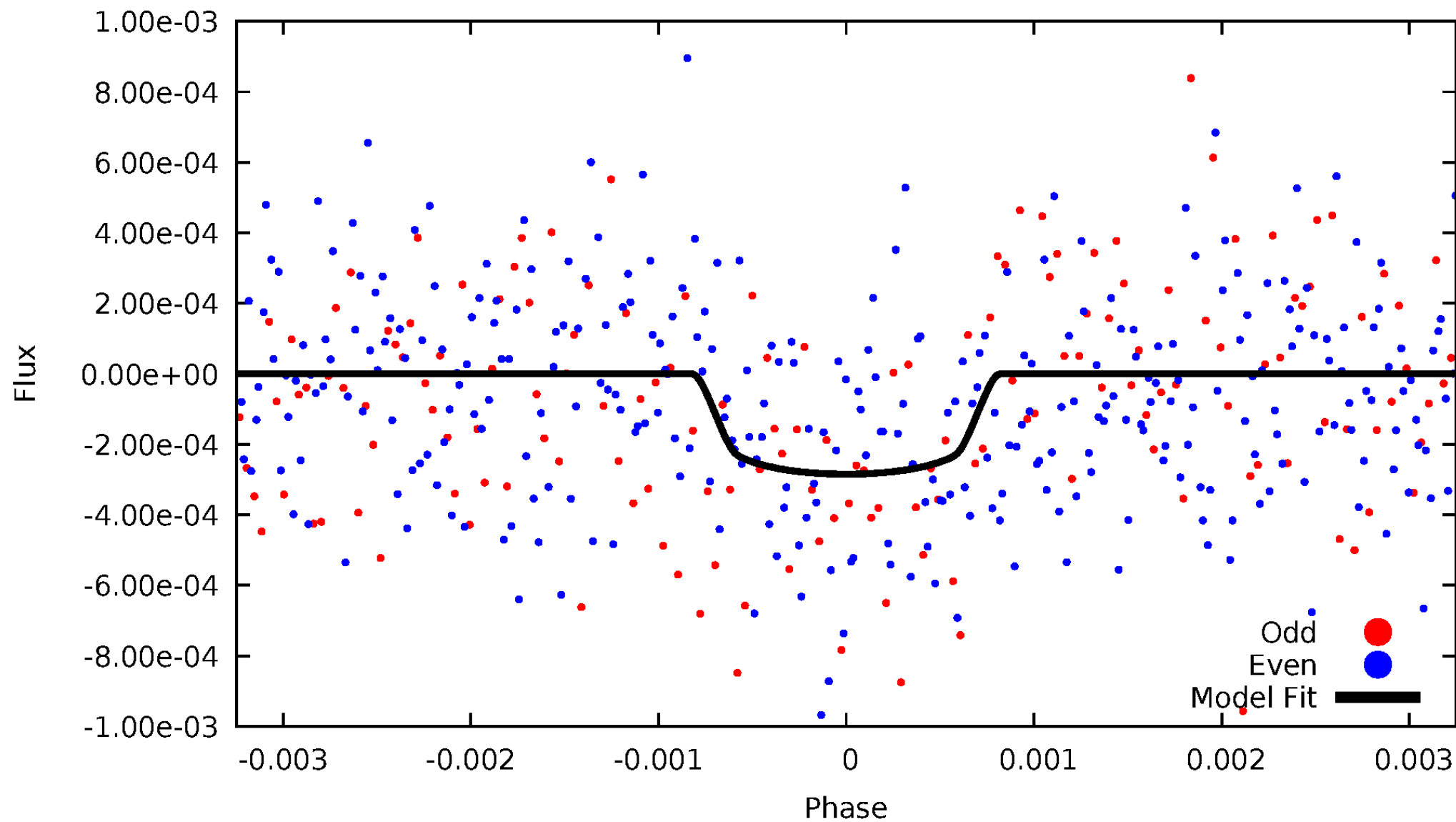


TCE 005305496-01



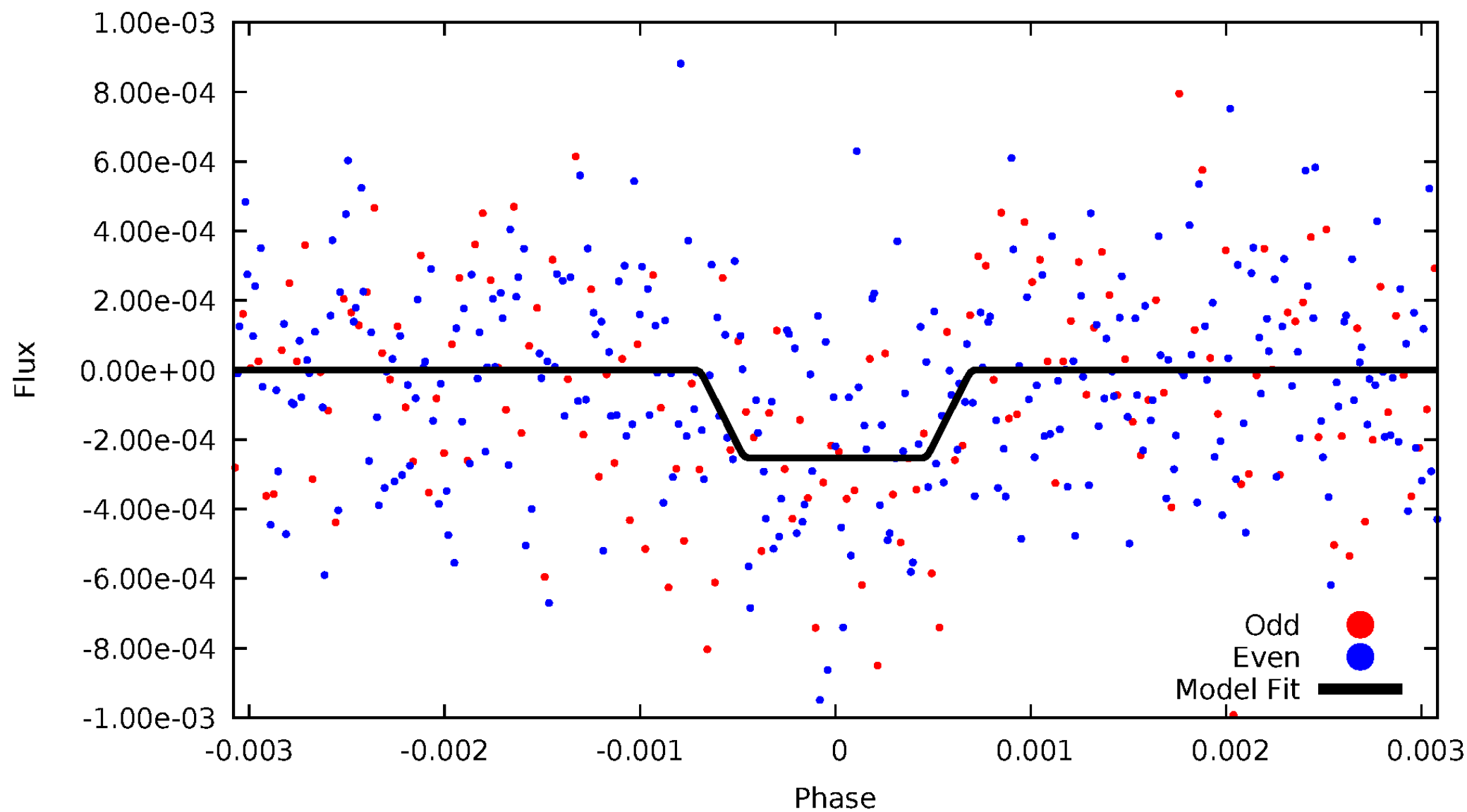
DV Odd/Even

TCE 005305496-01



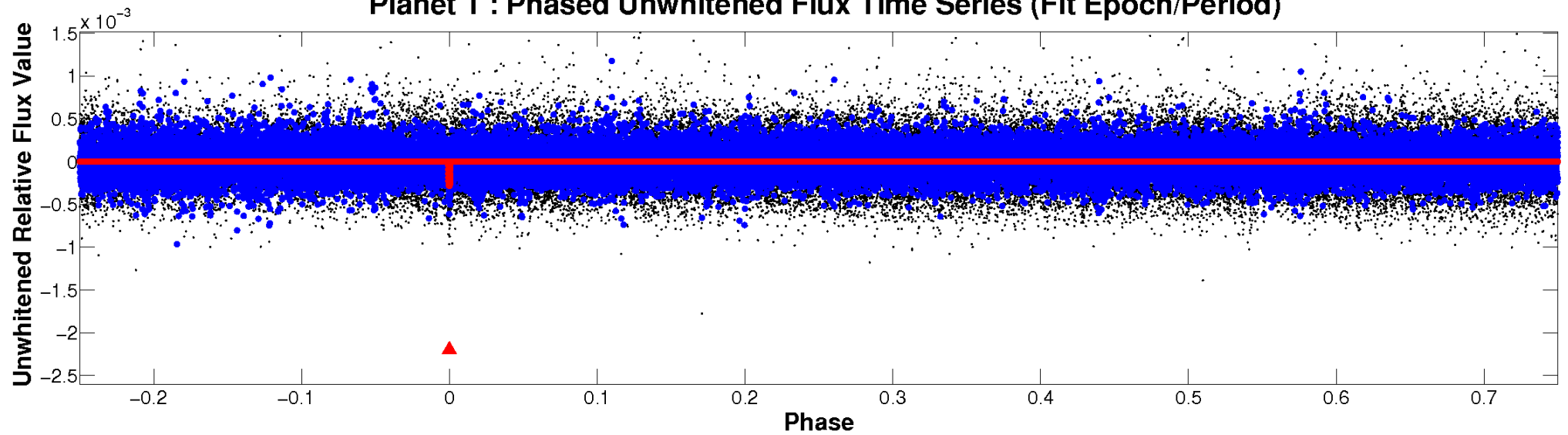
ALT Odd/Even

TCE 005305496-01

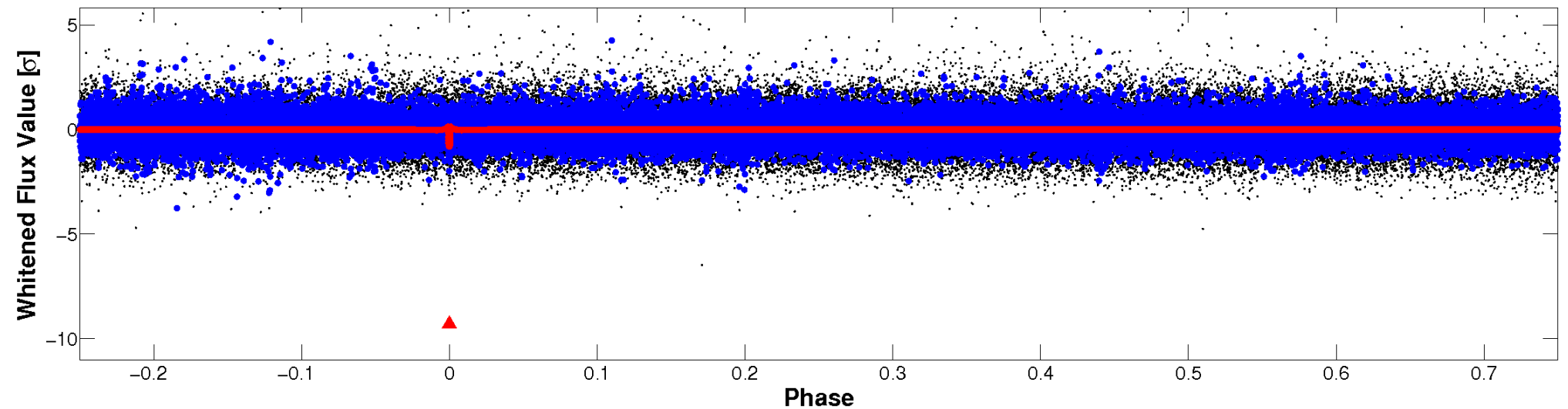


Non-Whitened Vs. Whitened Light Curve

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

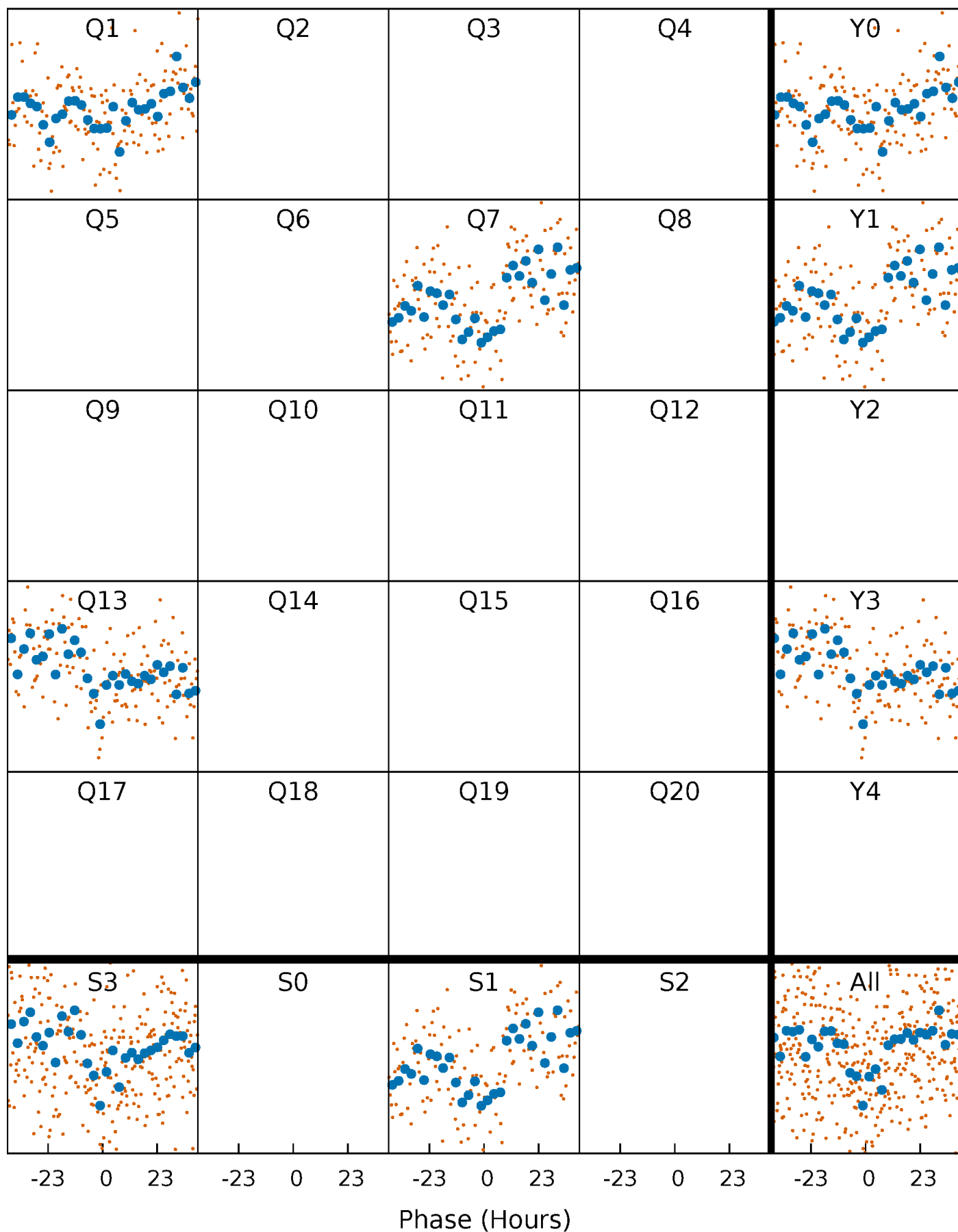


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



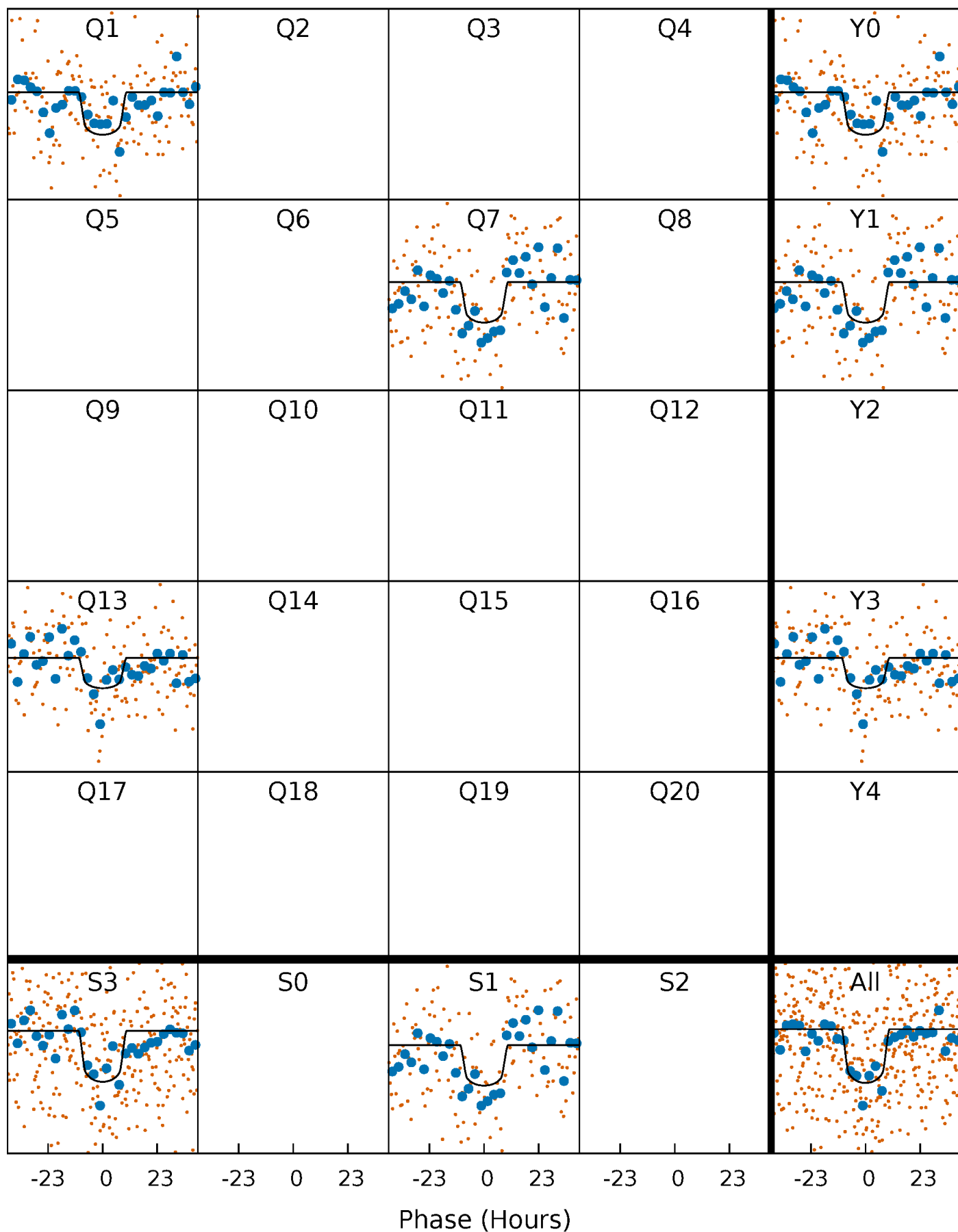
PDC Quarter-Phased Transit Curves

TCE 005305496-01 P=515.898527 Days $T_0=156.953974$ (BKJD)



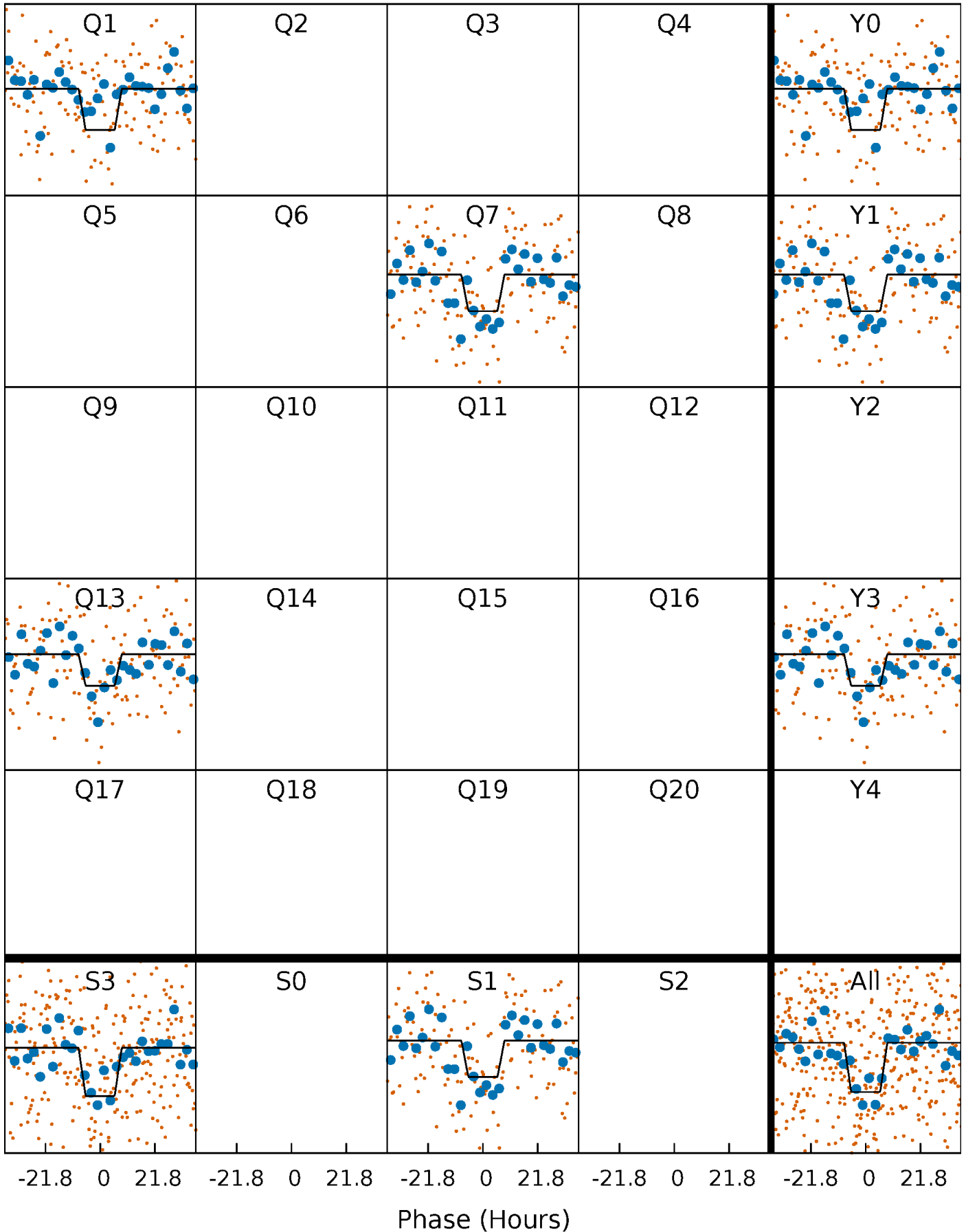
DV Quarter-Phased Transit Curves

TCE 005305496-01 P=515.898527 Days $T_0=156.953974$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

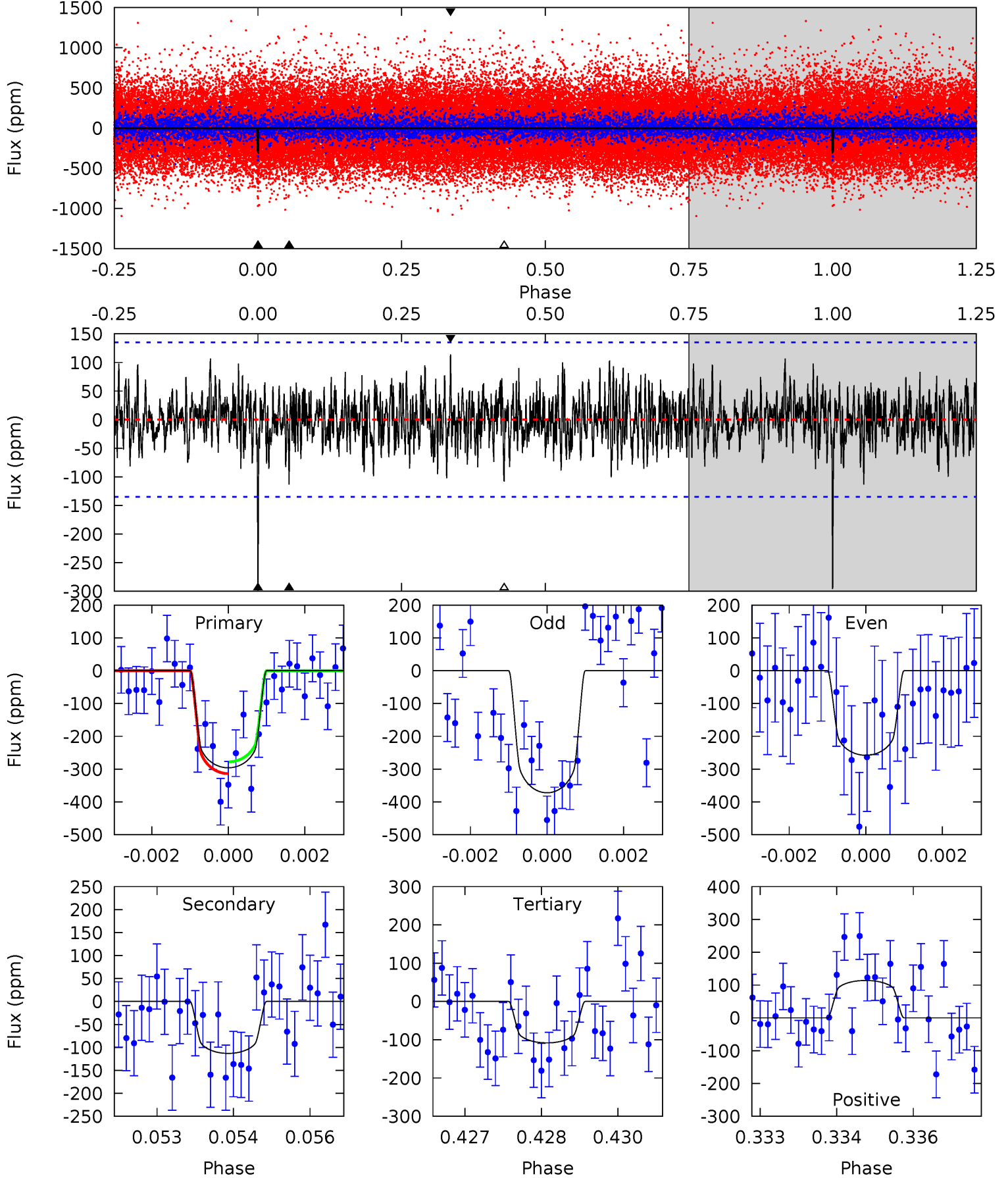
TCE 005305496-01 P=515.831600 Days $T_0=157.060249$ (BKJD)



DV Model-Shift Uniqueness Test

005305496-01, P = 515.898527 Days, E = 156.953974 Days

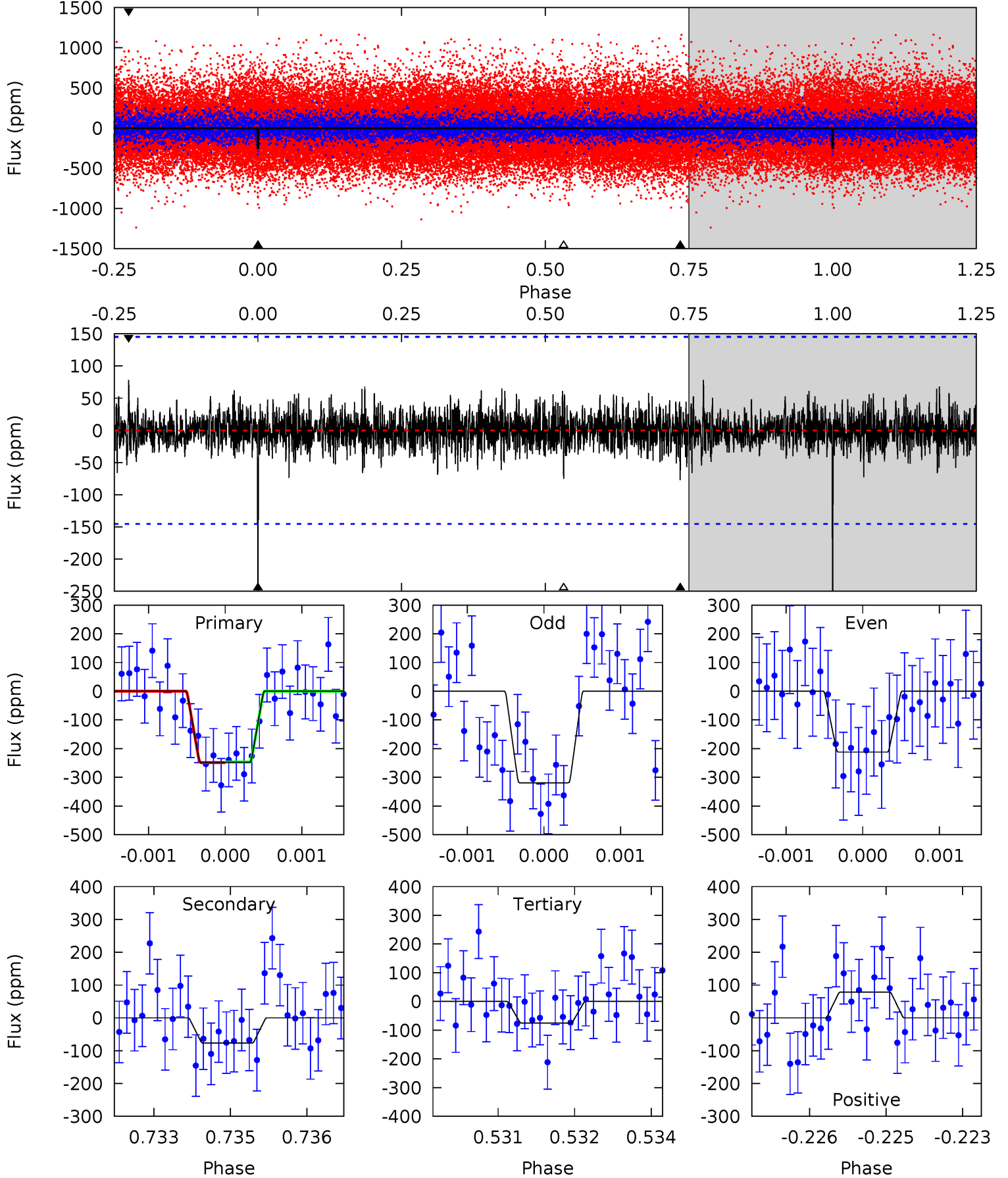
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	4.49	4.30	4.53	5.36	3.15	1.36	7.46	7.23	0.19	-0.04	2.14	1.01	0.28	0.71



Alt Model-Shift Uniqueness Test

005305496-01, P = 515.831600 Days, E = 157.060249 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	2.85	2.79	2.91	5.39	3.20	0.76	6.40	6.29	0.06	-0.05	1.87	0.85	0.24	0.04



Stellar Parameters For KIC 005305496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5578^{+184}_{-167}	$4.438^{+0.153}_{-0.187}$	$-0.460^{+0.300}_{-0.300}$	$0.868^{+0.211}_{-0.141}$	$0.752^{+0.122}_{-0.044}$	$1.620^{+1.099}_{-0.759}$
	+3%/-3%	+3%/-4%	+65%/-65%	+24%/-16%	+16%/-6%	+68%/-47%
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 005305496-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-113 ± 25	$1.87^{+0.35}_{-0.32}$	302^{+22}_{-19}	4342^{+387}_{-298}	23092^{+13127}_{-7770}
Alt.	-77 ± 27	$1.55^{+0.31}_{-0.30}$	302^{+23}_{-19}	4355^{+404}_{-396}	23142^{+15203}_{-9414}

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

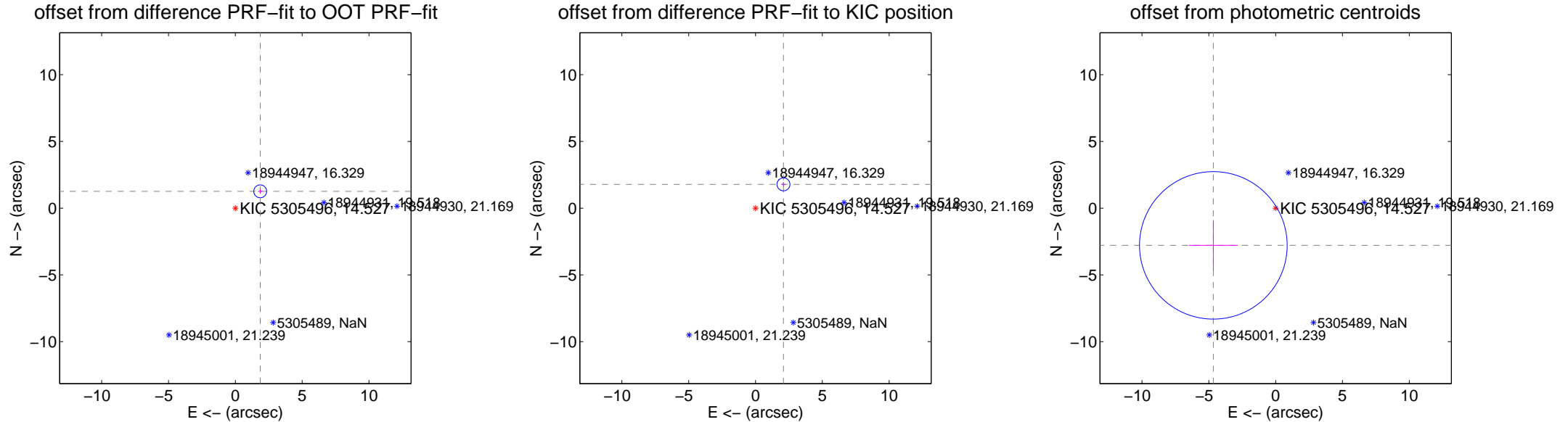
DV Centroid Data

Supplemental centroid analysis for 005305496-01. Kepler magnitude: 14.53. Transit SNR 7.30

There are 1 quarters with good PRF difference image offsets

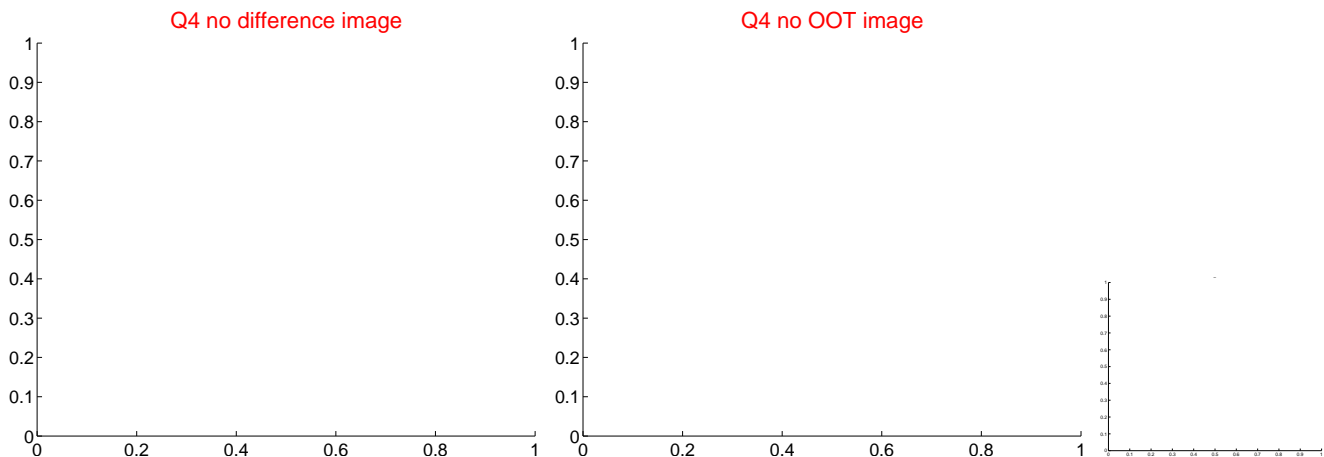
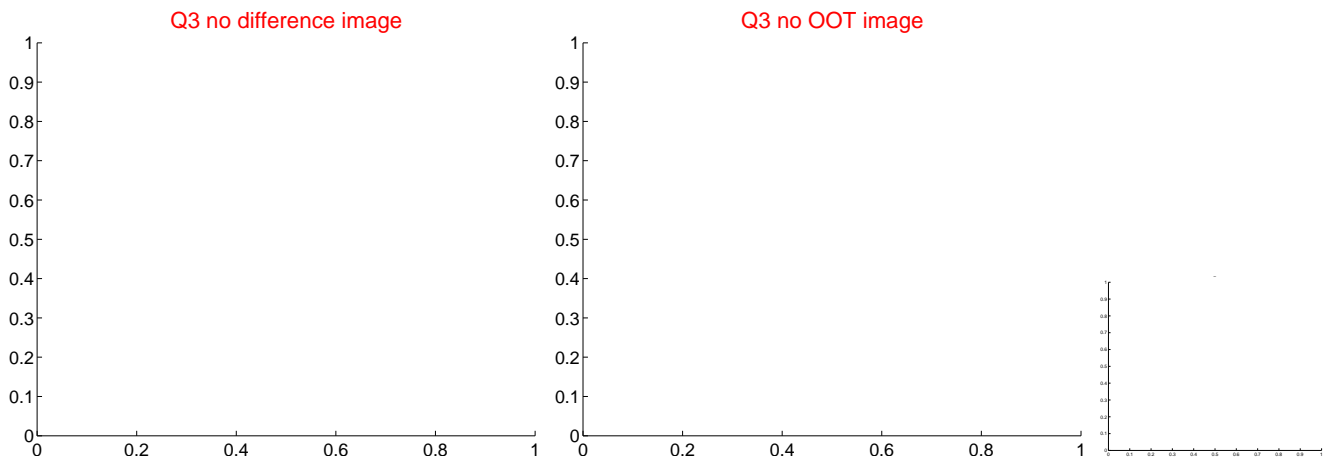
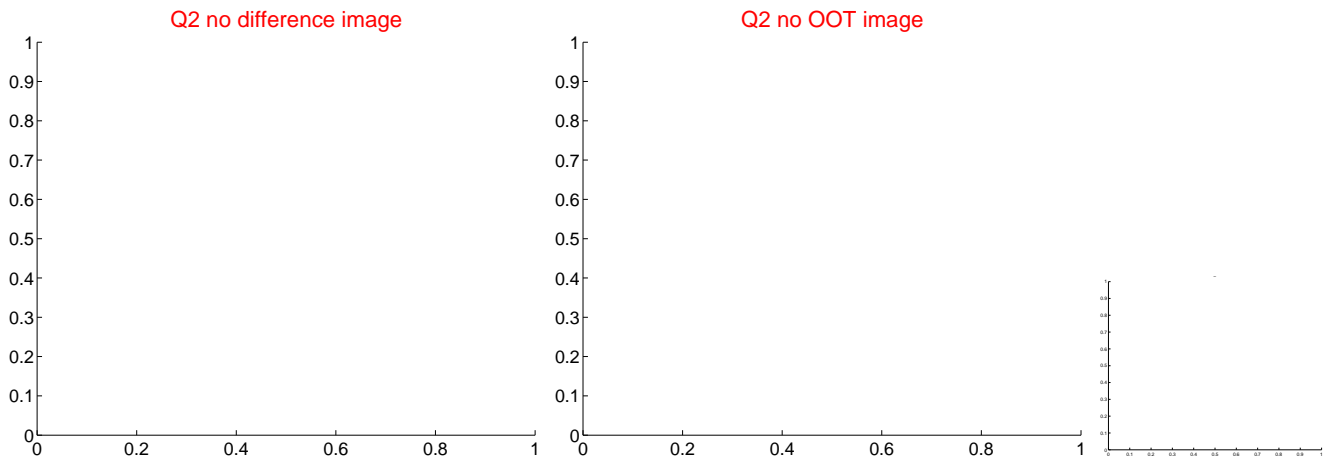
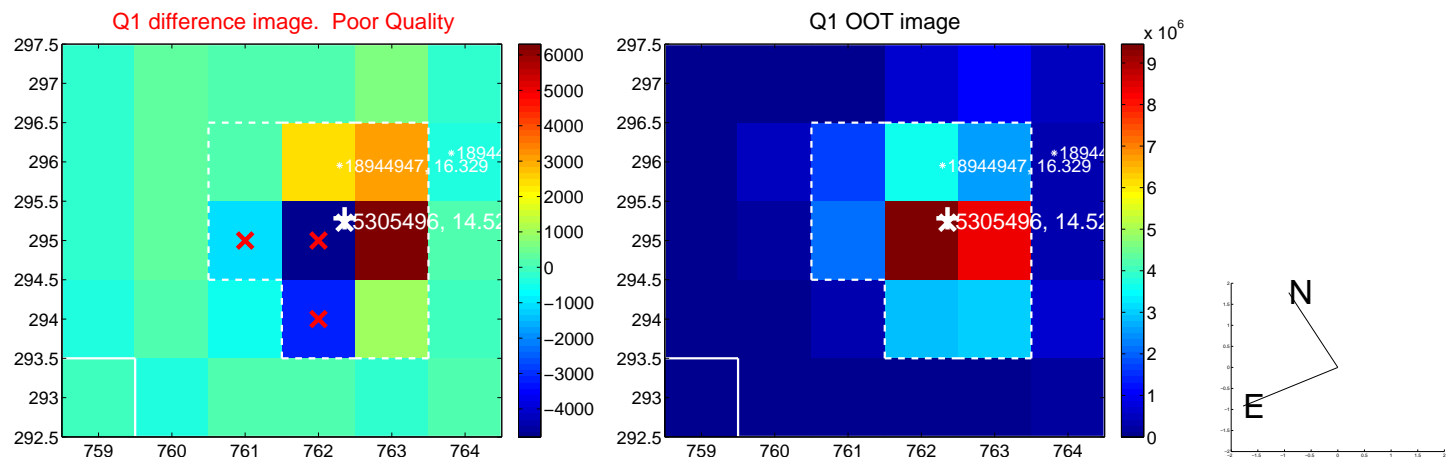
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.249 ± 0.160	14.03	-1.861 ± 0.157	1.262 ± 0.167
PRF-fit source offset from KIC position	2.750 ± 0.161	17.05	-2.094 ± 0.157	1.783 ± 0.167
photometric centroid source offset	5.43 ± 1.84	2.95	4.66 ± 1.82	-2.79 ± 1.89

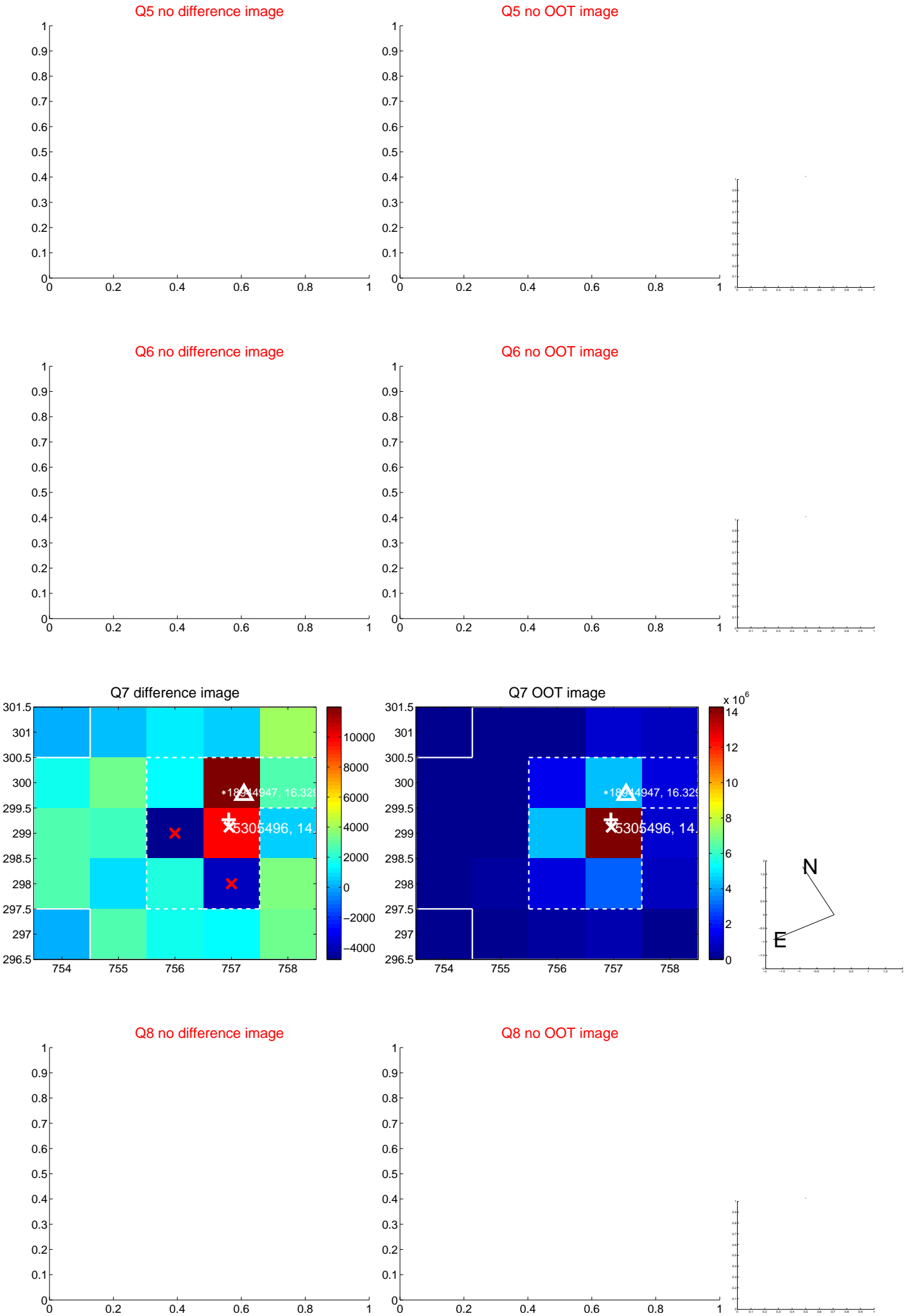


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



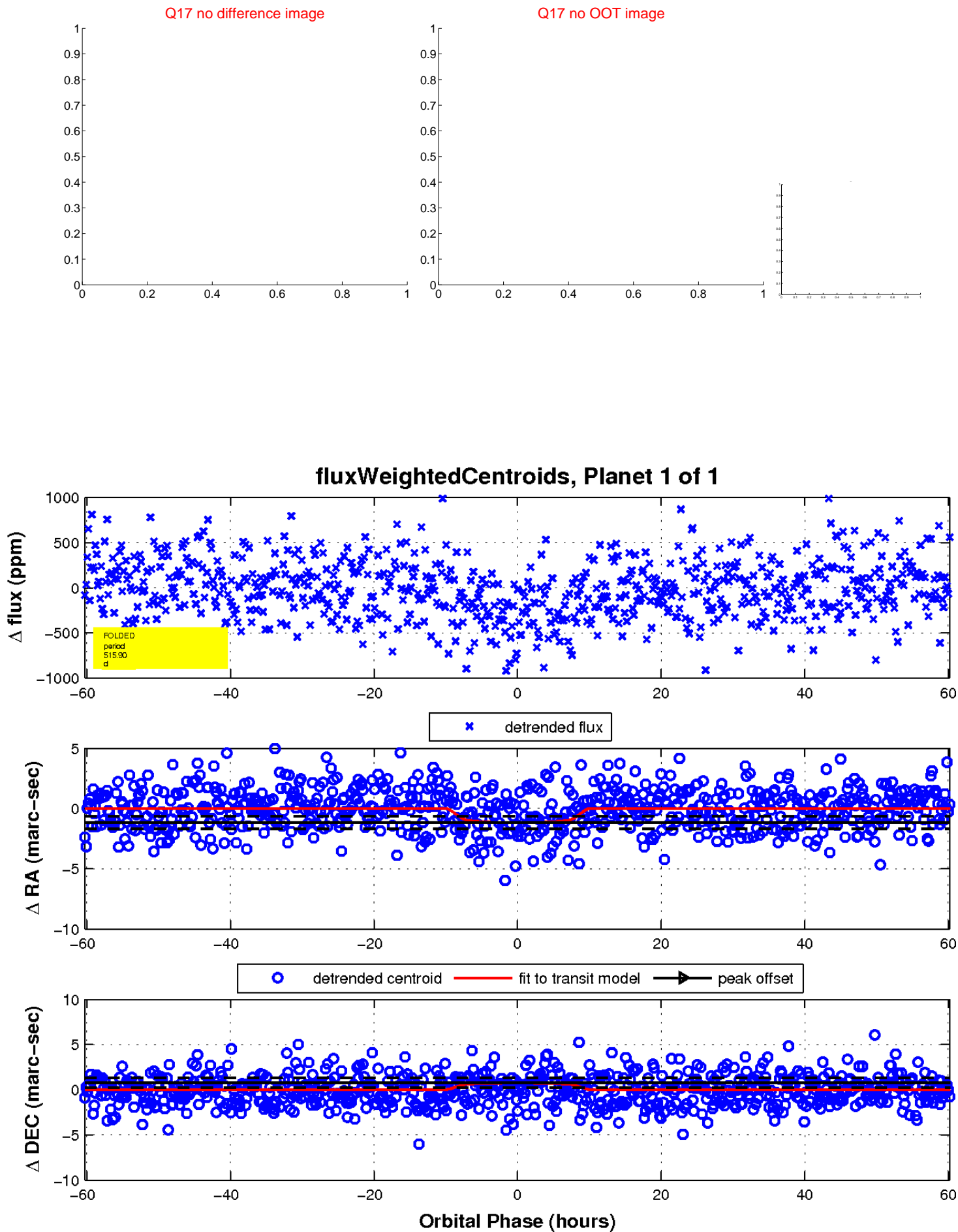
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

