

KIC 005622031

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})
005622031-01	OBS	No	507.707911	513.861401	3275.6	3.195	11.6	8.0	0.76	5300	4.28	0.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005622031-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_ALT—ALL_TRANS_CHASES—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.

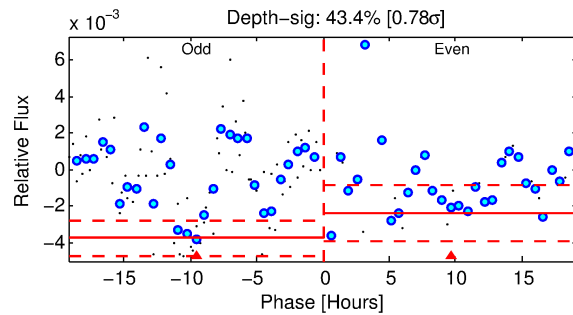
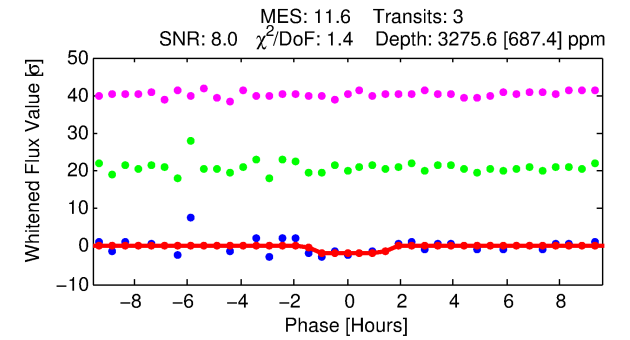
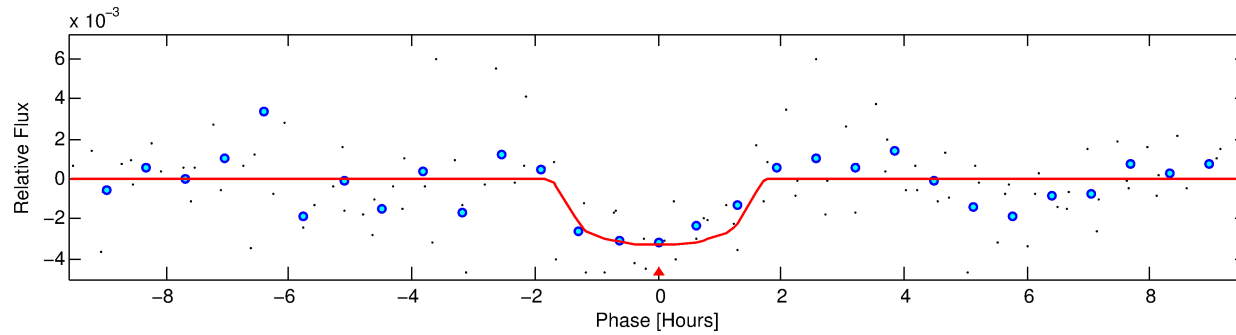
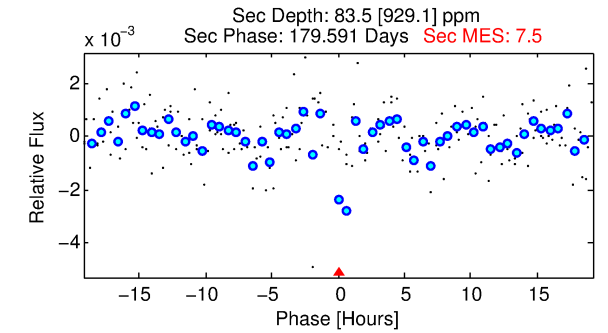
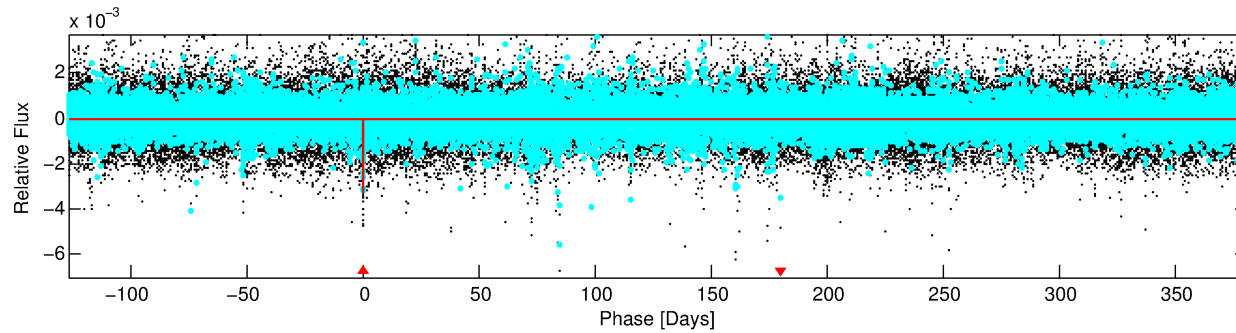
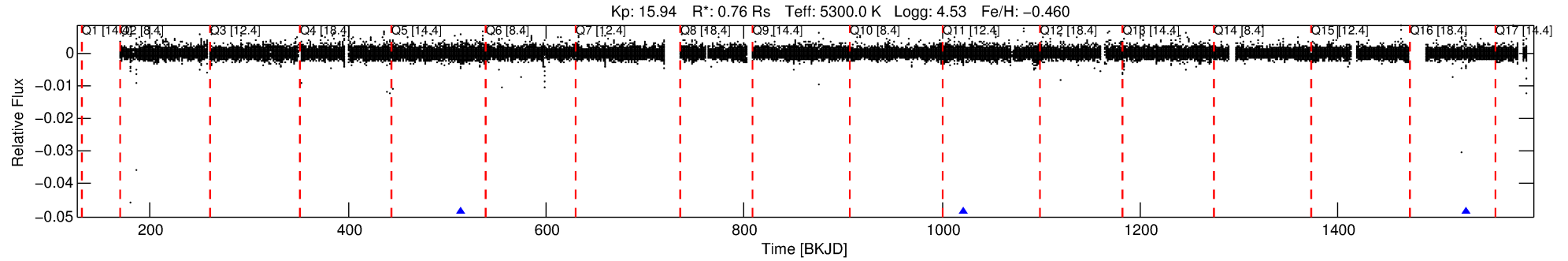
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005622031-01

No Significant Match Found

DV One-Page Summary

KIC: 5622031 Candidate: 1 of 1 Period: 507.708 d



DV Fit Results:

Period = 507.70791 [0.00657] d
Epoch = 513.8614 [0.0084] BKJD
Rp/R* = 0.0519 [0.1009]
a/R* = 1251.13 [9745.23]
b = 0.21 [35.63]
Seff = 0.33 [0.07]
Teq = 193 [10] K
Rp = 4.28 [8.33] Re
a = 1.1111 [0.1194] AU
Ag = 3101.55 [36567.06] [0.08σ]
Teffp = 2224 [6555] K [0.31σ]

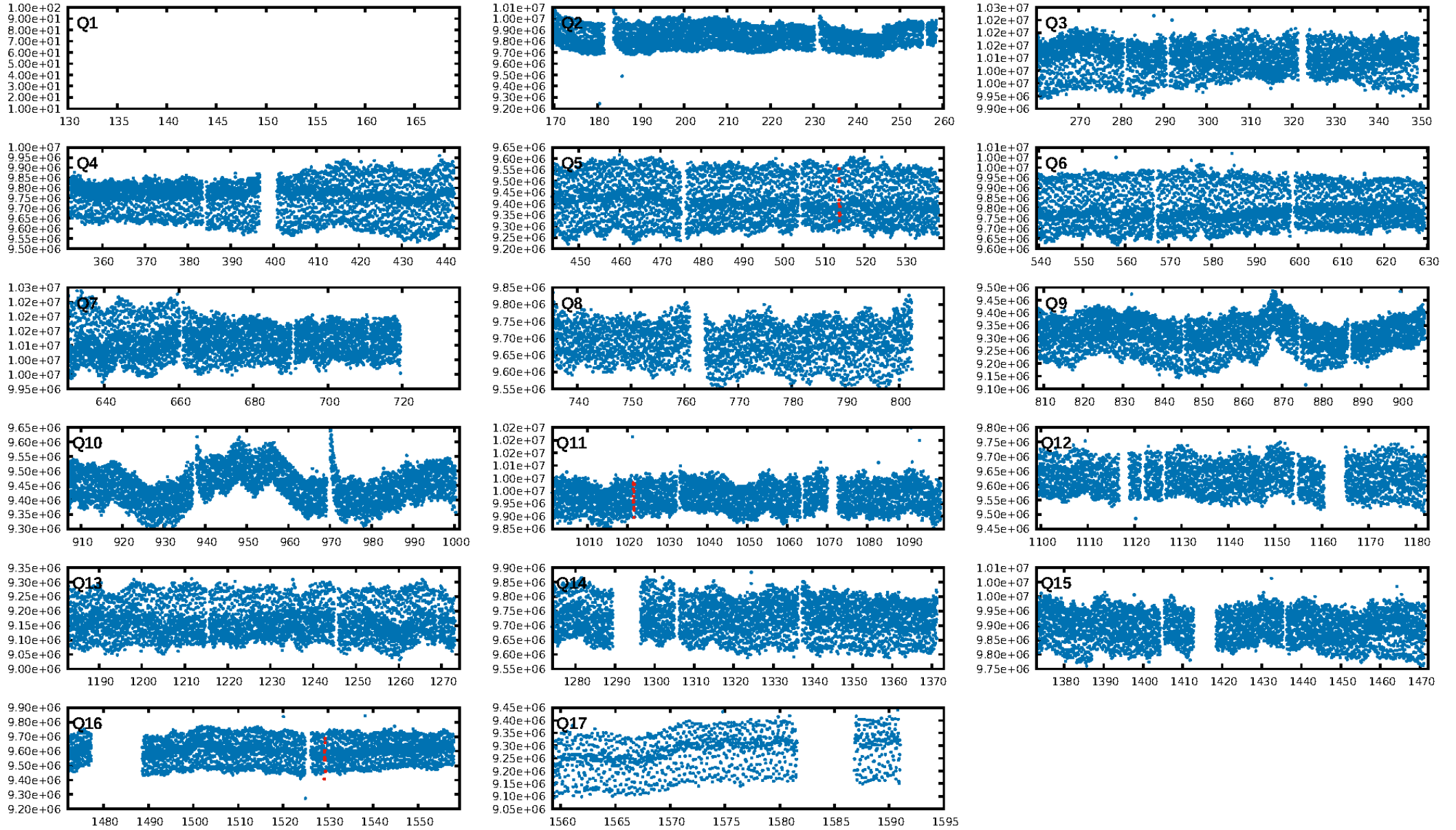
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.1%
ModelChiSquareGof-sig: 73.7%
Bootstrap-pfa: 6.37e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.145
Centroid-sig: 97.3%
Centroid-so: 0.784 arcsec [1.06σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

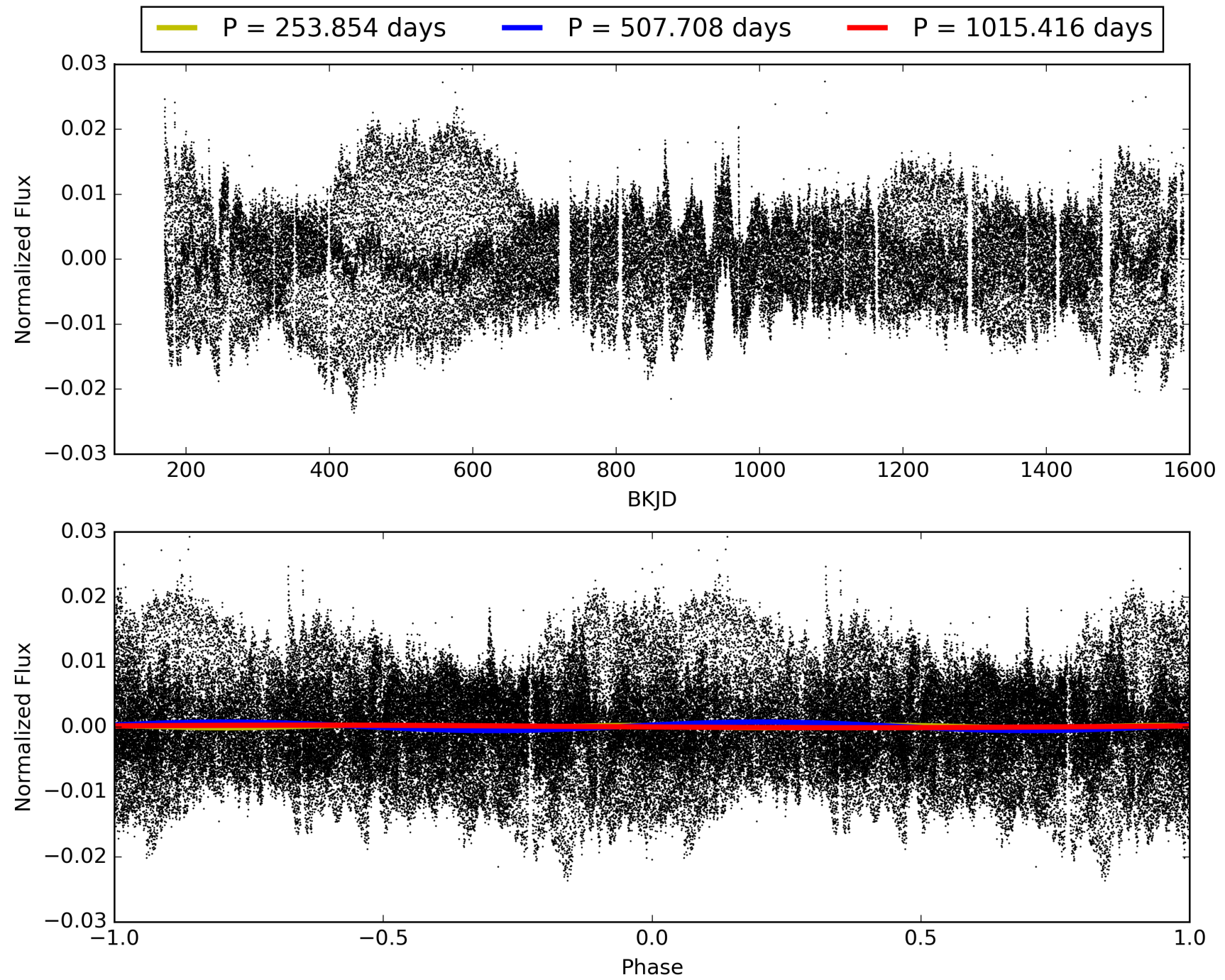
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:04:43 Z

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

TCE 005622031-01, PDC Light Curves

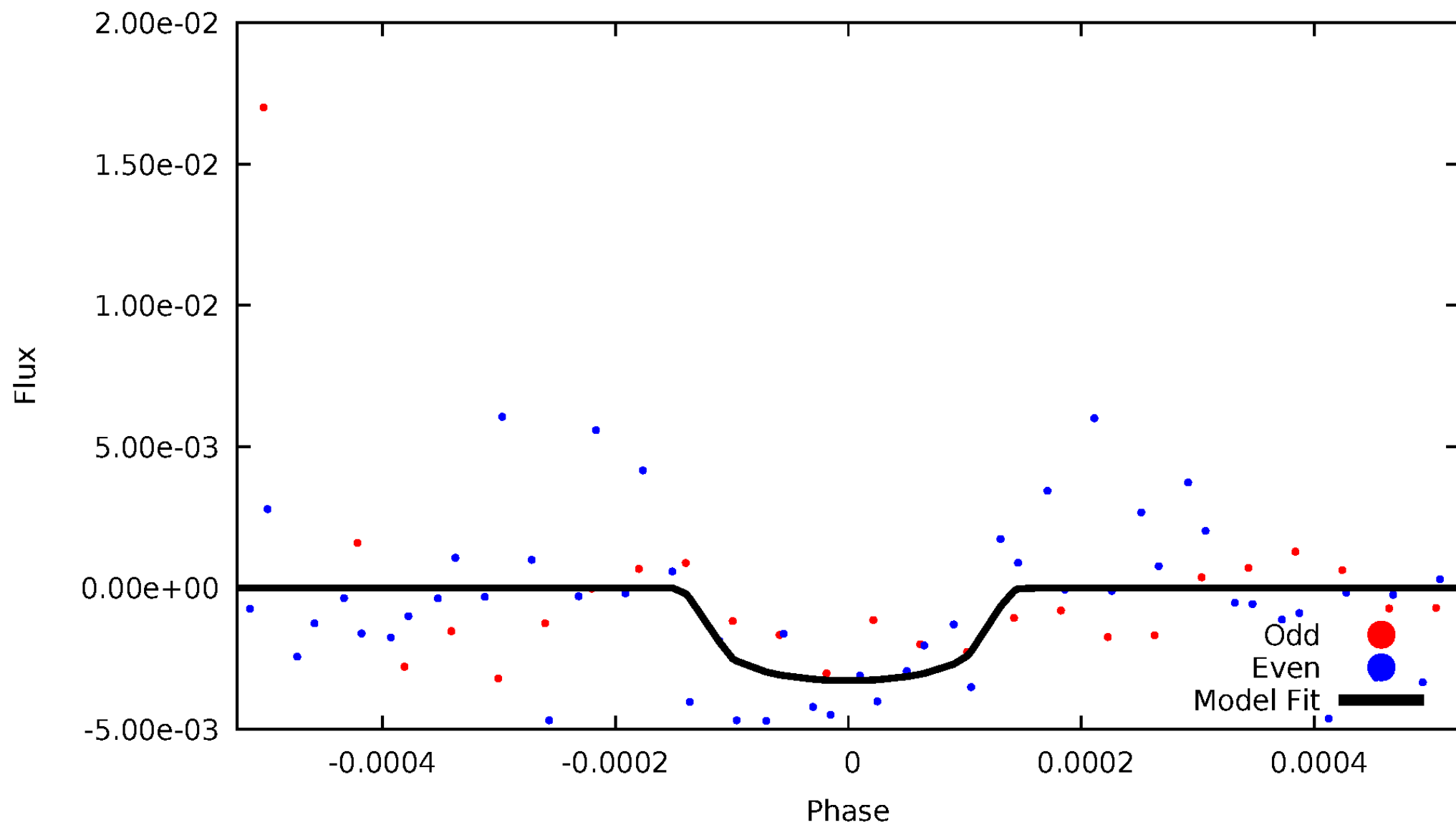


TCE 005622031-01



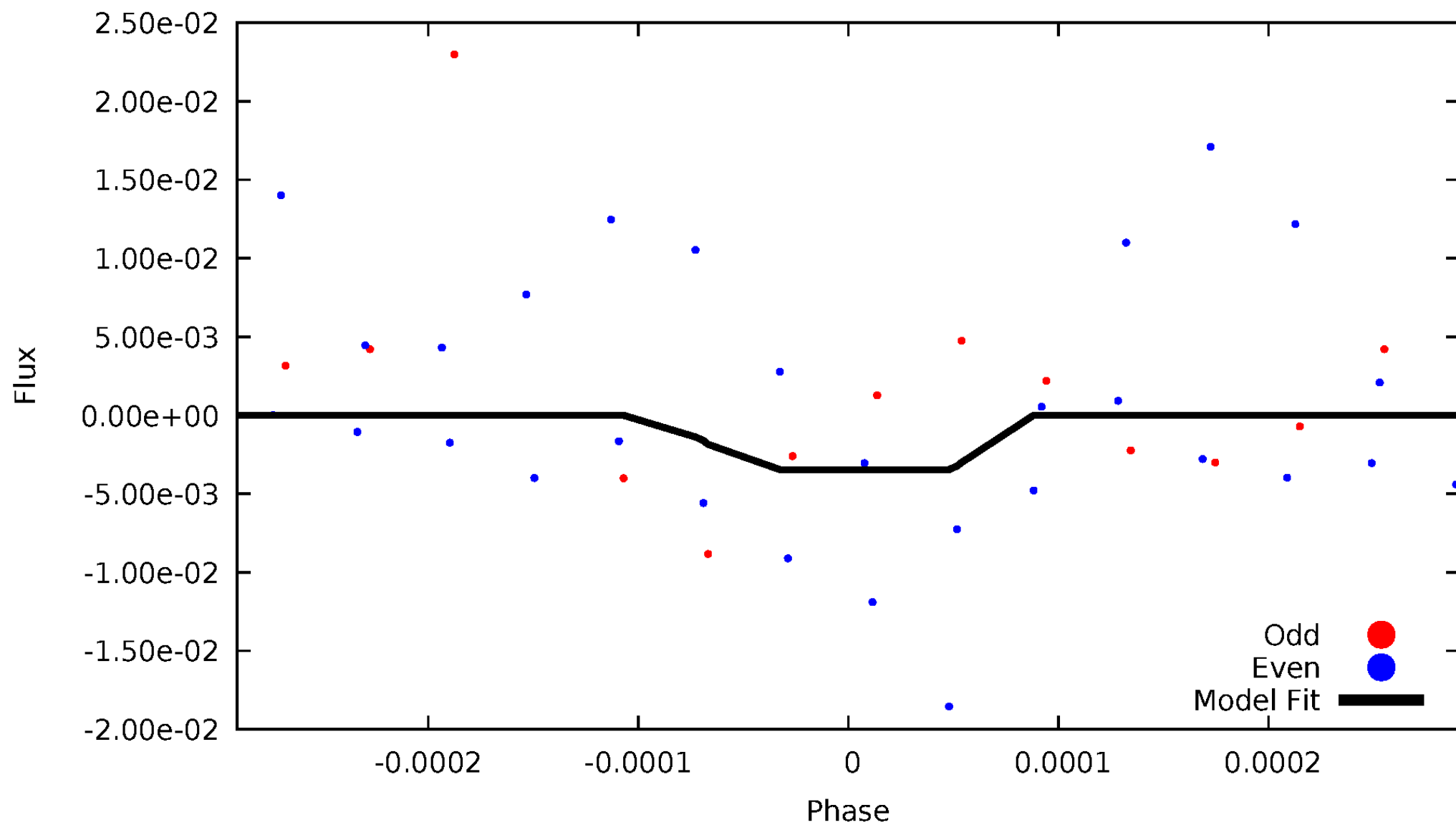
DV Odd/Even

TCE 005622031-01



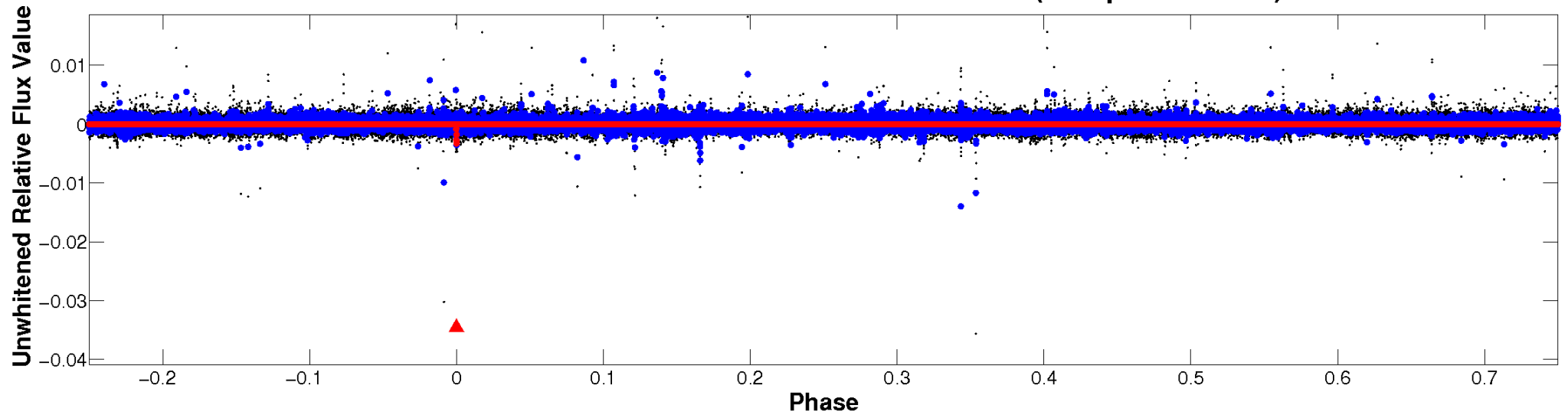
ALT Odd/Even

TCE 005622031-01

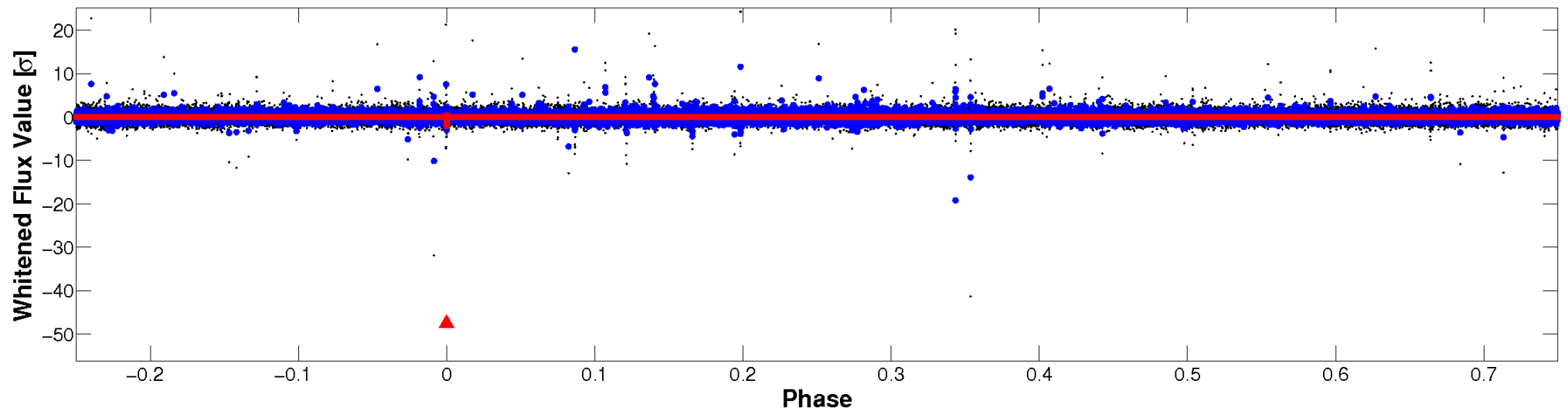


Non-Whitened Vs. Whitened Light Curve

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

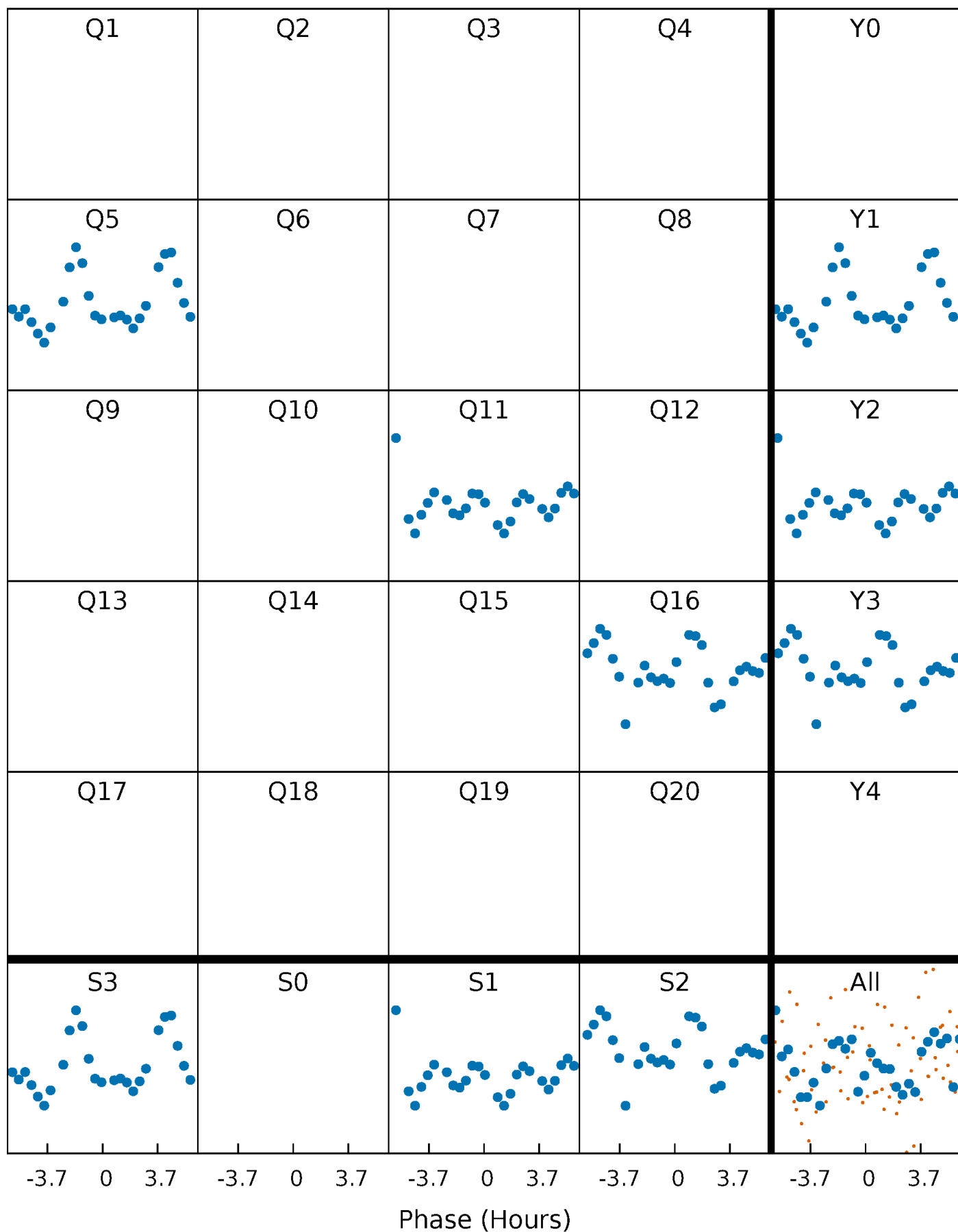


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



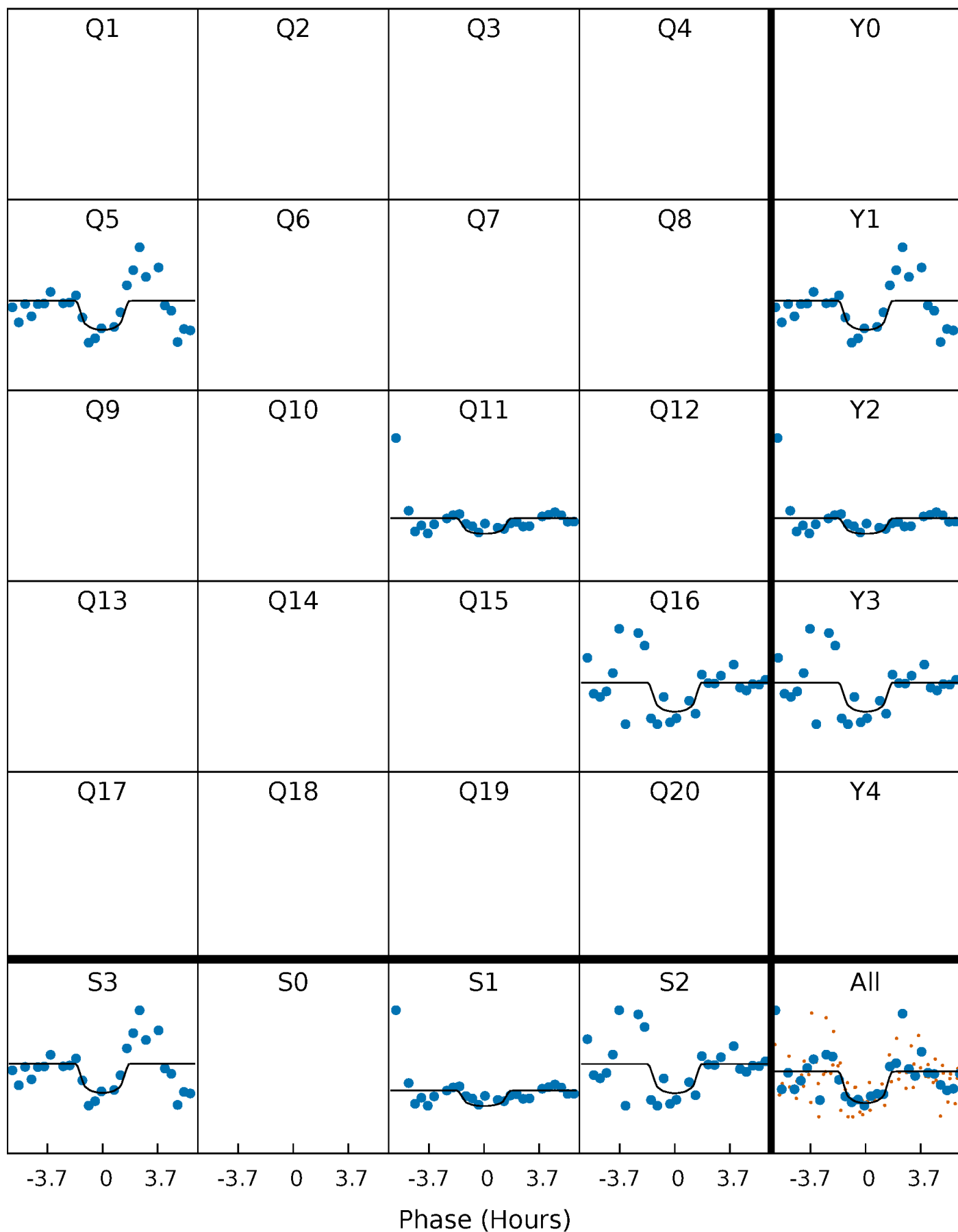
PDC Quarter-Phased Transit Curves

TCE 005622031-01 P=507.707911 Days $T_0=513.861401$ (BKJD)



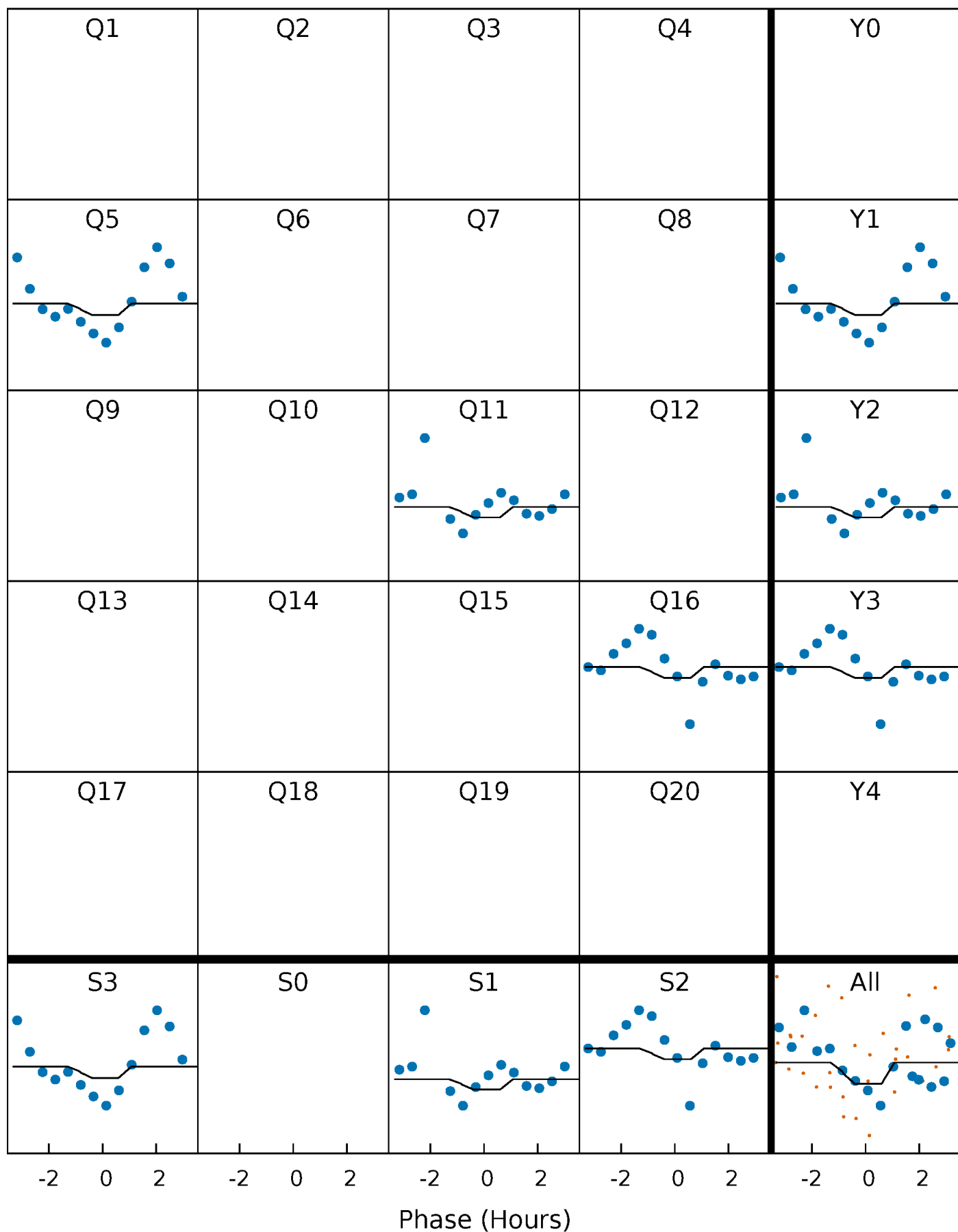
DV Quarter-Phased Transit Curves

TCE 005622031-01 P=507.707911 Days $T_0=513.861401$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

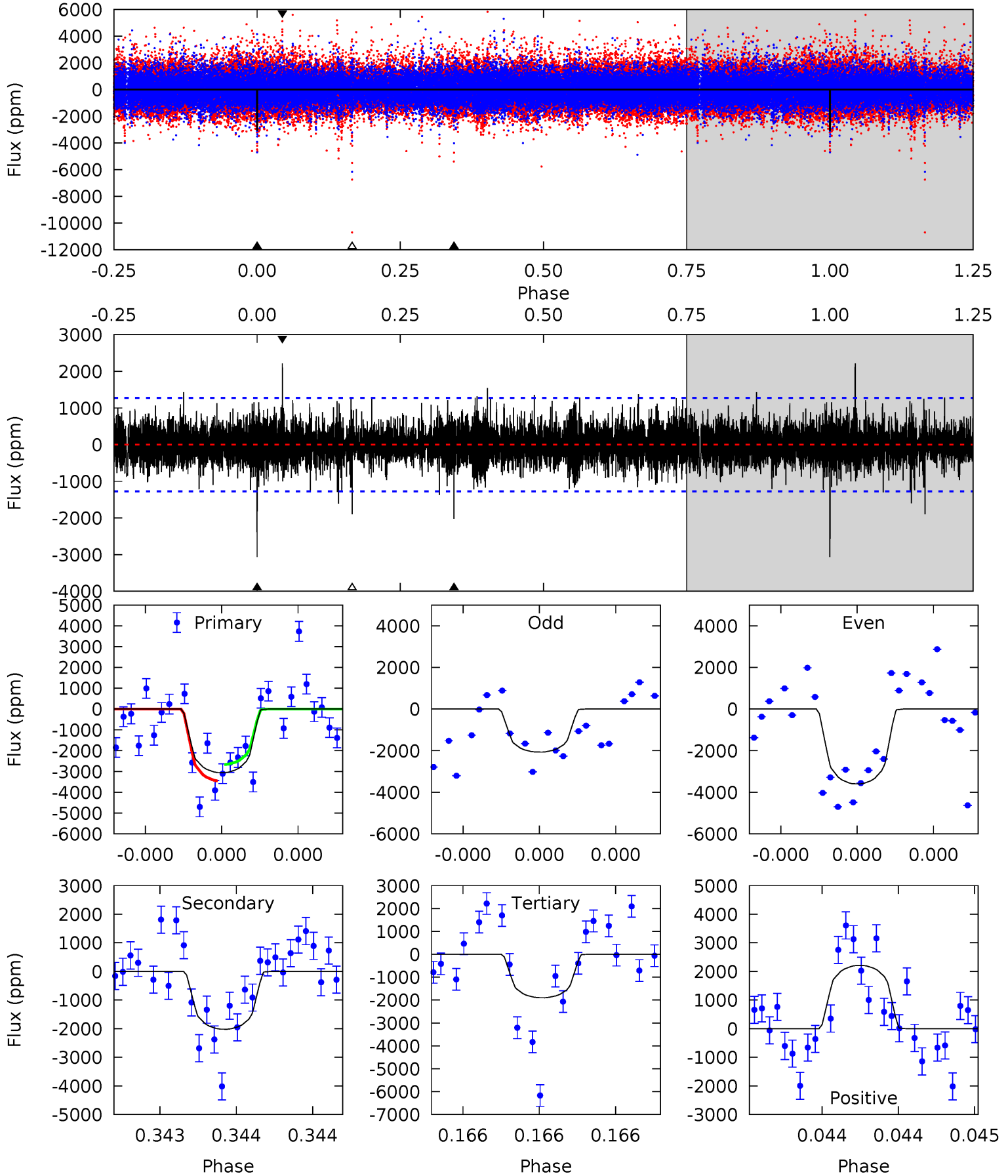
TCE 005622031-01 P=507.712665 Days $T_0=513.697119$ (BKJD)



DV Model-Shift Uniqueness Test

005622031-01, P = 507.707911 Days, E = 6.153490 Days

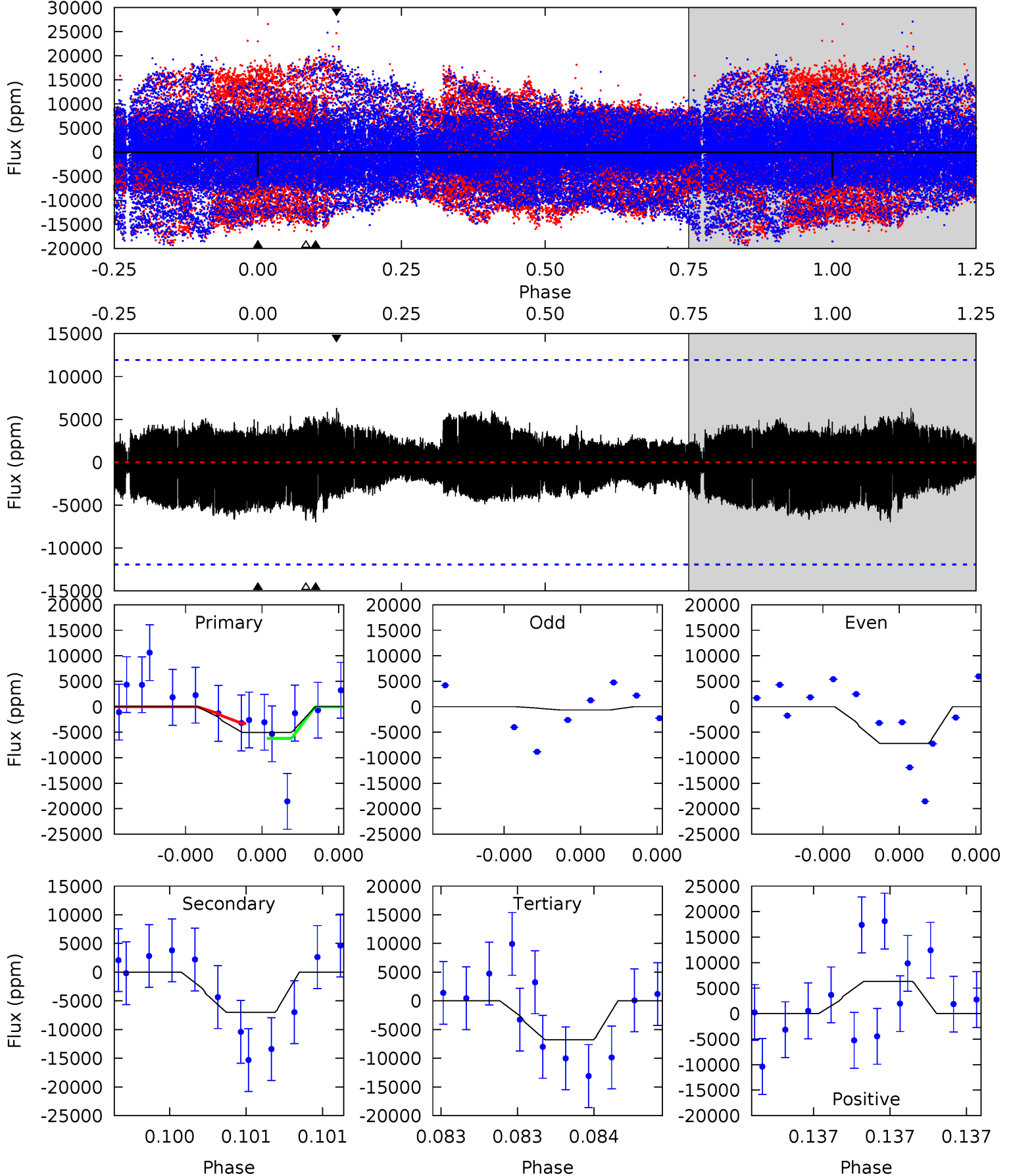
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	8.99	8.45	9.84	5.67	3.63	1.57	5.17	3.79	0.54	-0.85	3.22	0.91	0.42	1.75



Alt Model-Shift Uniqueness Test

005622031-01, P = 507.712665 Days, E = 5.984454 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.46	3.41	3.31	3.08	5.81	3.83	1.12	-0.84	-0.61	0.11	0.33	1.56	1.09	0.47	0.71



Stellar Parameters For KIC 005622031

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5300^{+158}_{-158}	$4.533^{+0.093}_{-0.068}$	$-0.460^{+0.300}_{-0.300}$	$0.755^{+0.091}_{-0.091}$	$0.709^{+0.103}_{-0.044}$	$2.320^{+0.947}_{-0.567}$
	+3%/-3%	+2%/-2%	+65%/-65%	+12%/-12%	+15%/-6%	+41%/-24%
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 005622031-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2020 ± 225	$7.27^{+7.67}_{-4.97}$	269^{+11}_{-12}	4028^{+2683}_{-799}	$26028^{+235614}_{-19790}$
Alt.	-7003 ± 2053	$7.98^{+7.33}_{-5.37}$	268^{+12}_{-11}	5005^{+3713}_{-1148}	$76960^{+603160}_{-57218}$

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

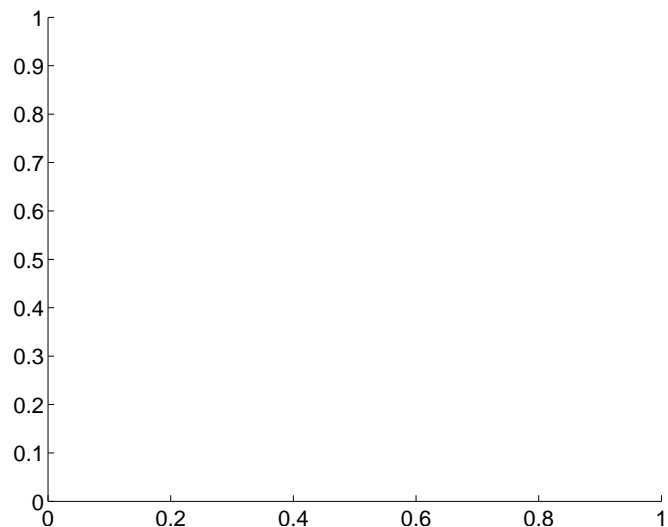
Supplemental centroid analysis for 005622031-01. Kepler magnitude: 15.94. Transit SNR 7.96

There are 0 quarters with good PRF difference image offsets

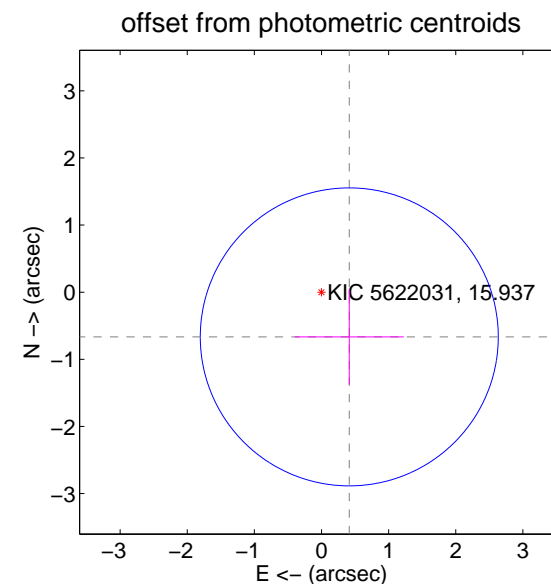
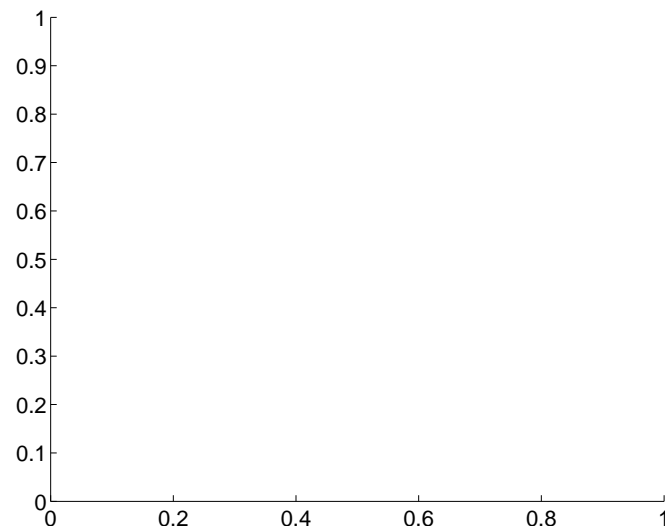
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	0.78 ± 0.74	1.06	-0.41 ± 0.81	-0.67 ± 0.71

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

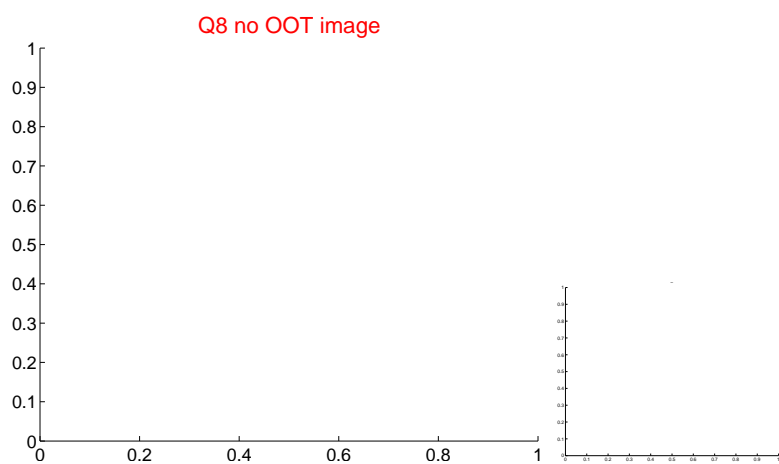
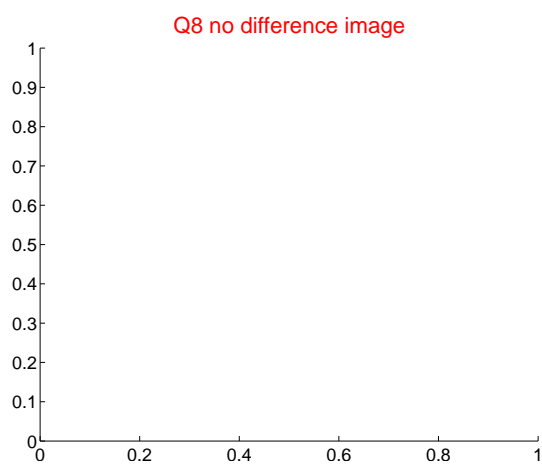
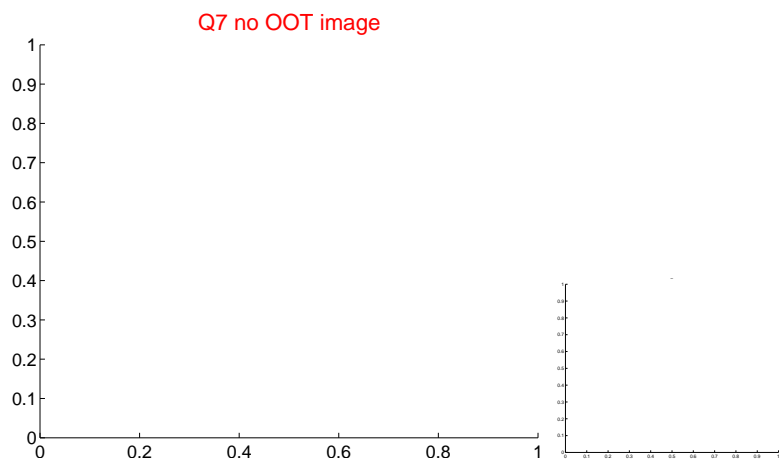
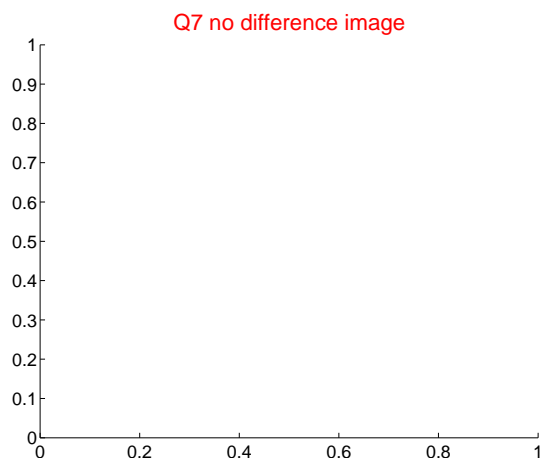
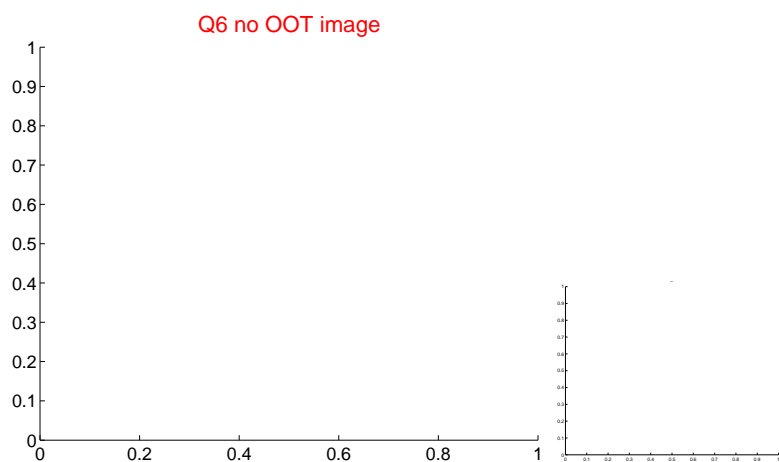
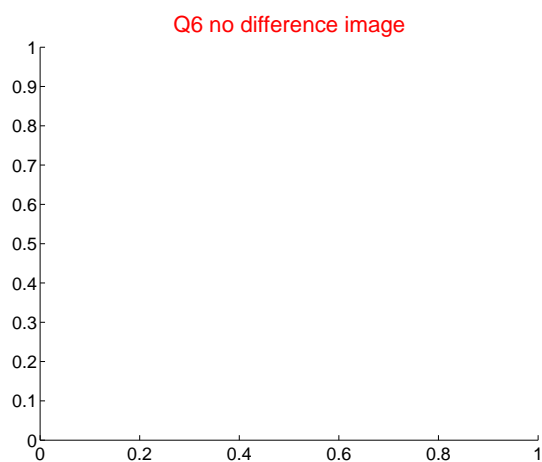
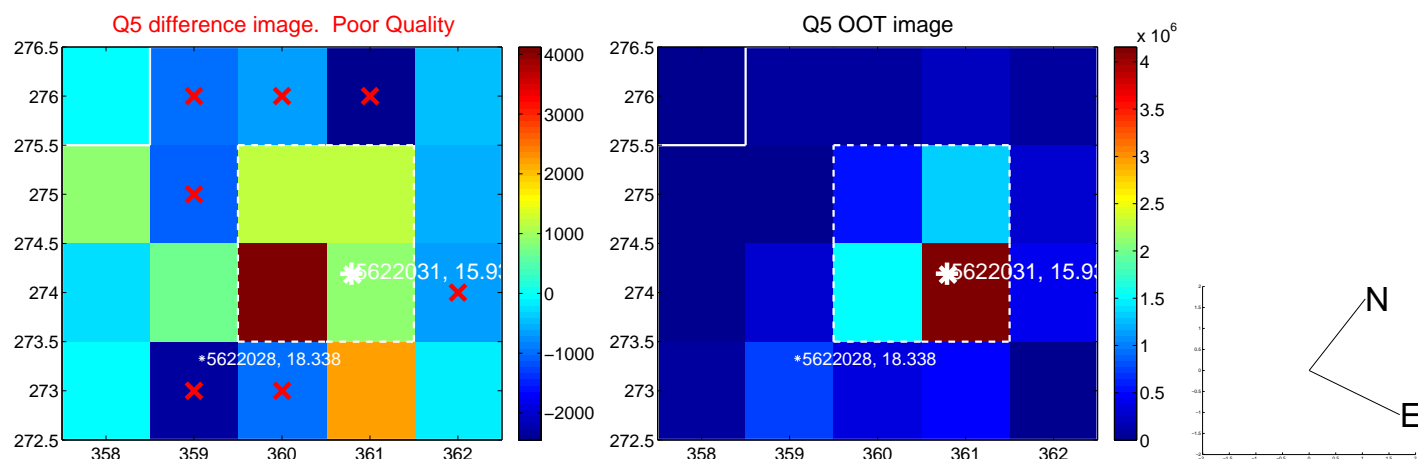


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



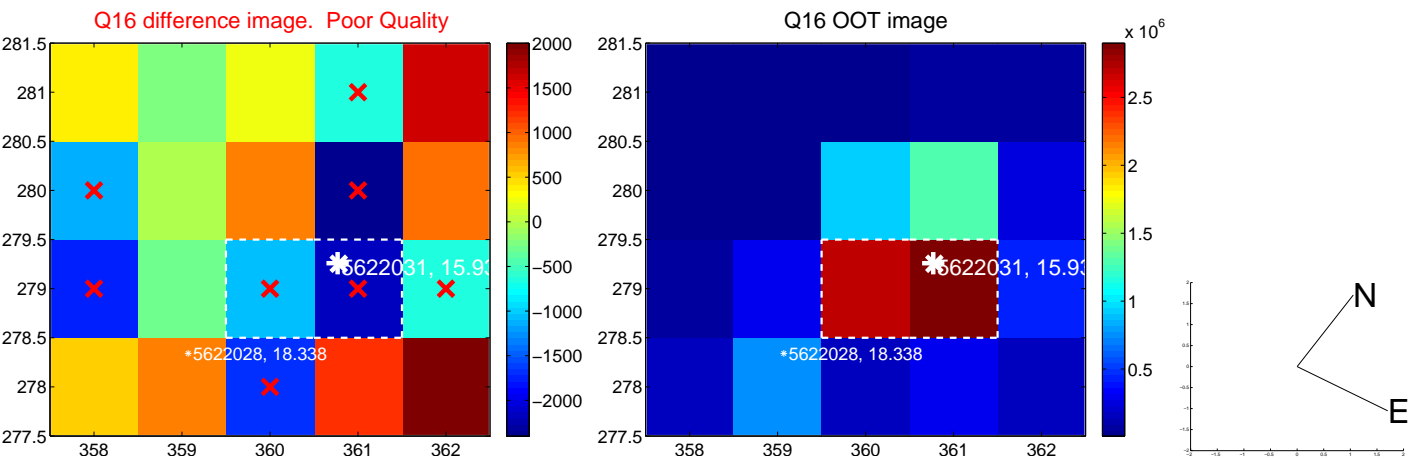
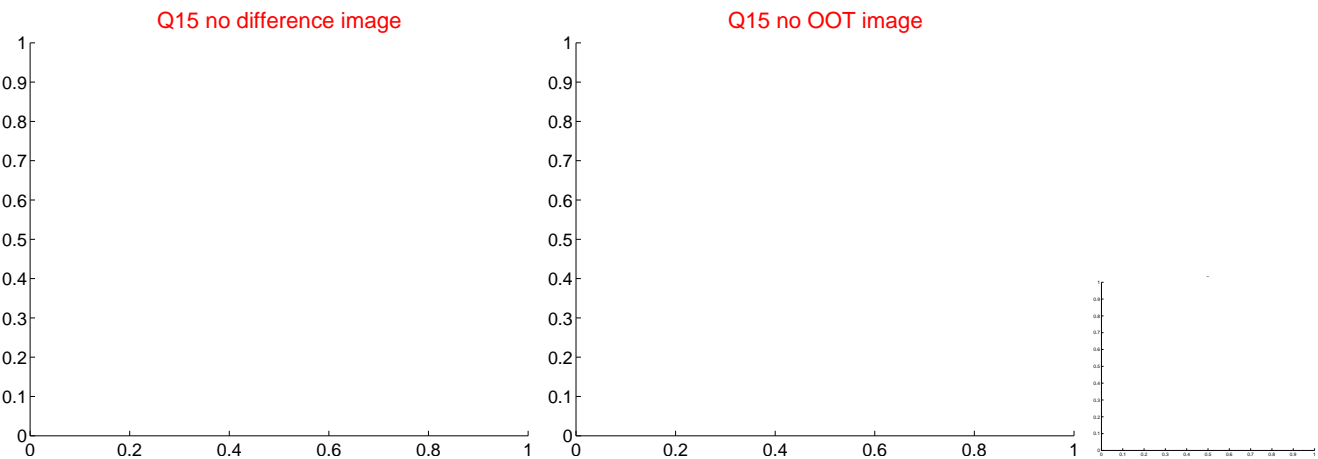
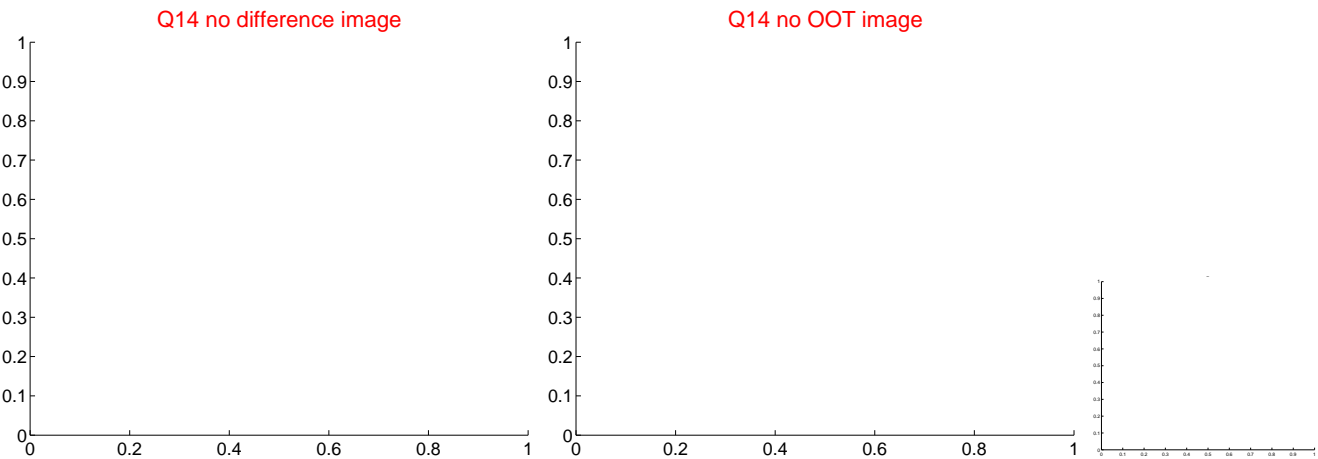
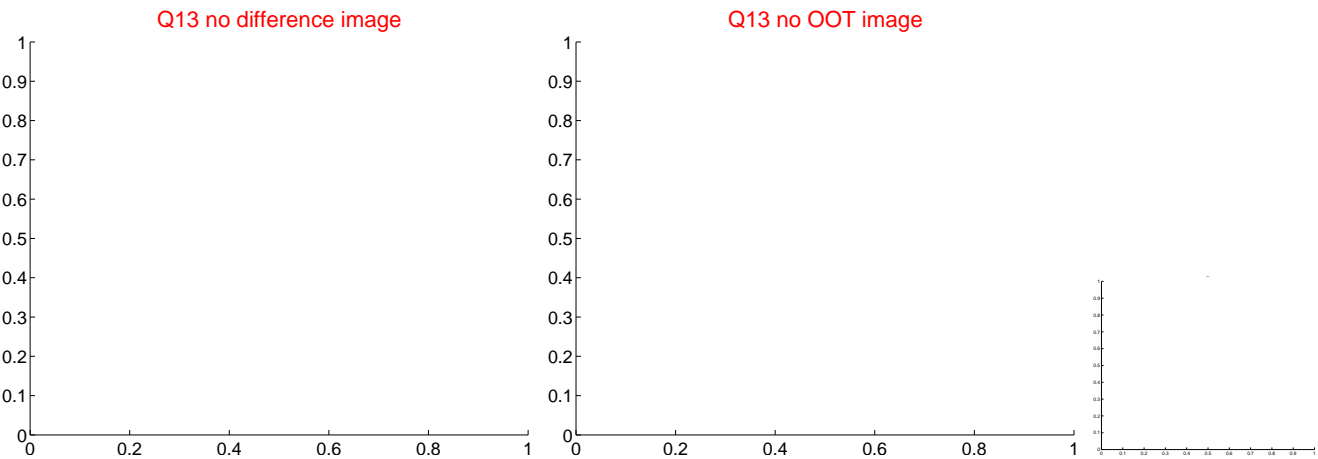
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



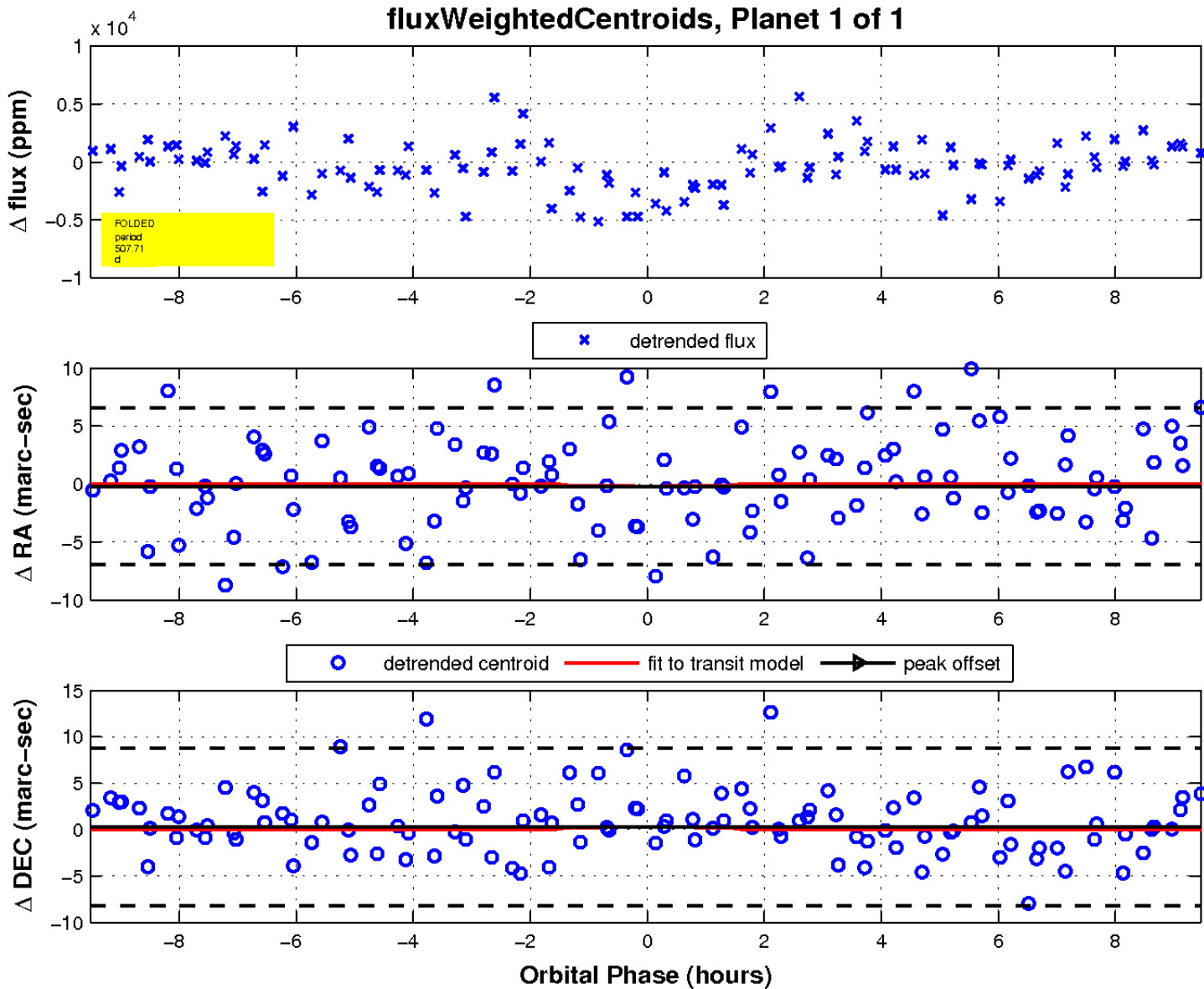
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination

