

KIC 005376150

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})
005376150-01	OBS	No	542.863414	340.311435	341.5	12.138	9.2	8.8	3.02	5217	5.87	2.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005376150-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

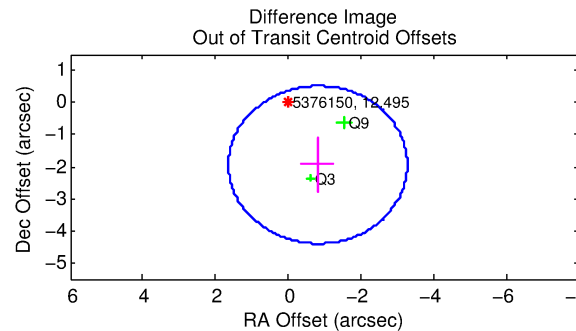
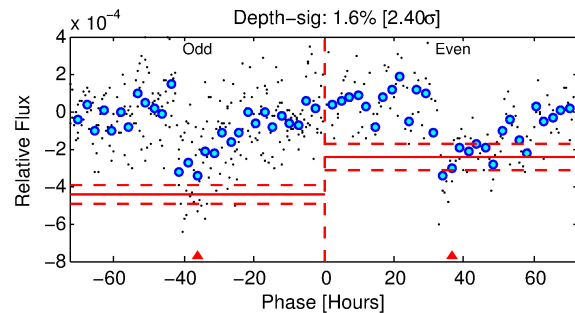
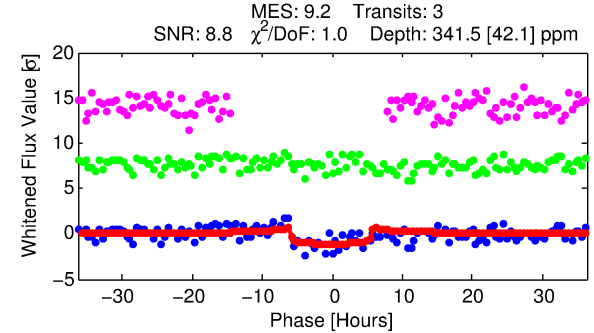
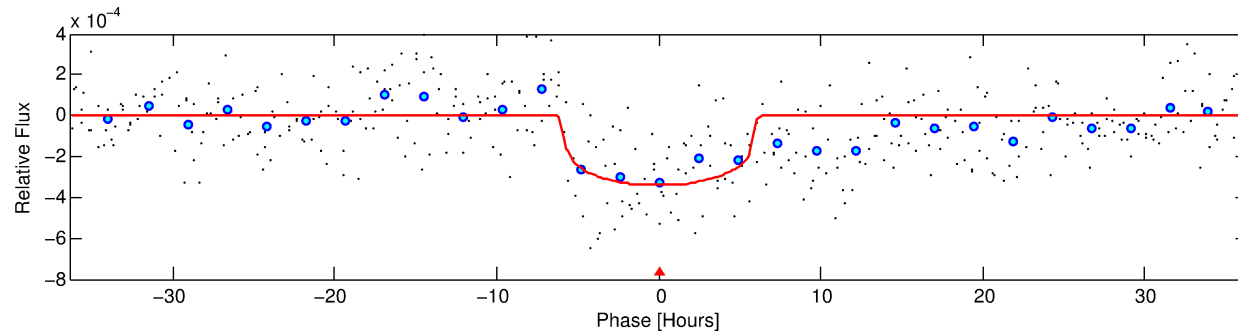
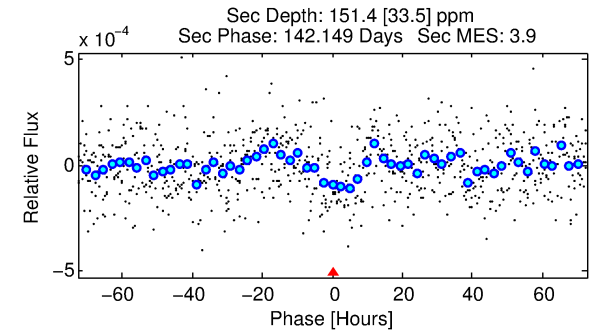
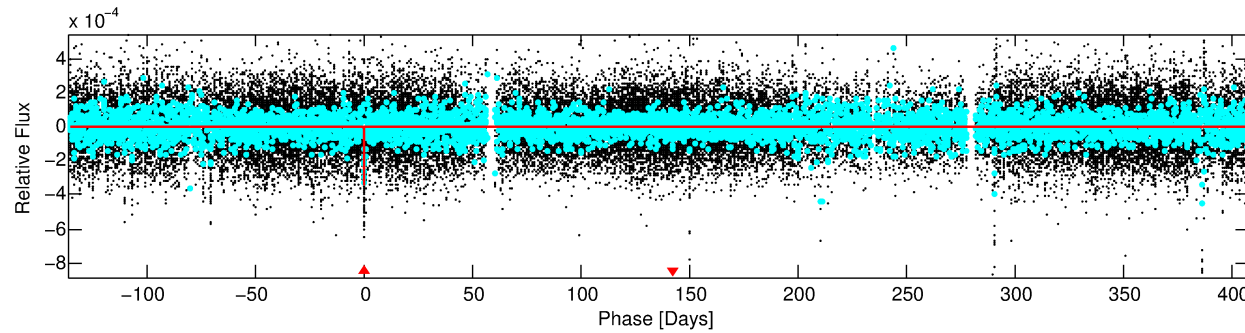
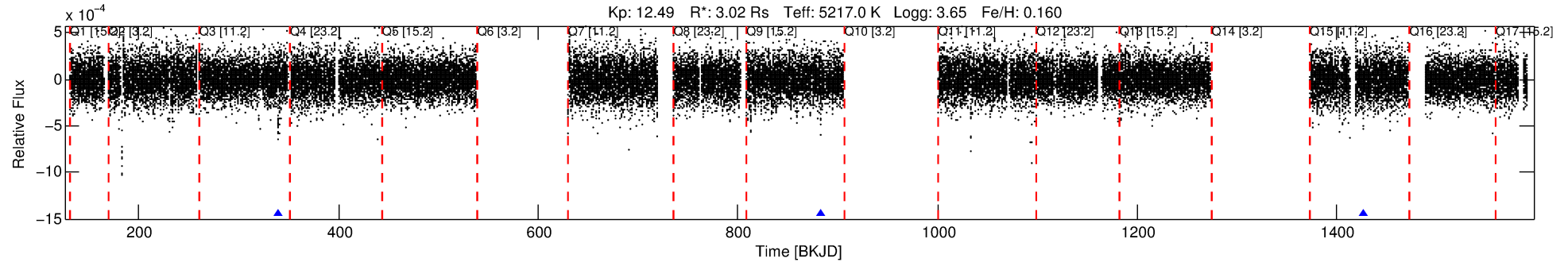
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005376150-01

No Significant Match Found

DV One-Page Summary

KIC: 5376150 Candidate: 1 of 1 Period: 542.863 d



DV Fit Results:

Period = 542.86341 [0.00895] d
Epoch = 340.3114 [0.0125] BKJD
Rp/R* = 0.0178 [0.0074]
a/R* = 265.77 [400.87]
b = 0.66 [1.32]
Seff = 2.74 [0.93]
Teq = 328 [28] K
Rp = 5.87 [2.93] Re
a = 1.4889 [0.3422] AU
Ag = 5360.57 [4942.17] [1.08σ]
Teffp = 4339 [937] K [4.28σ]

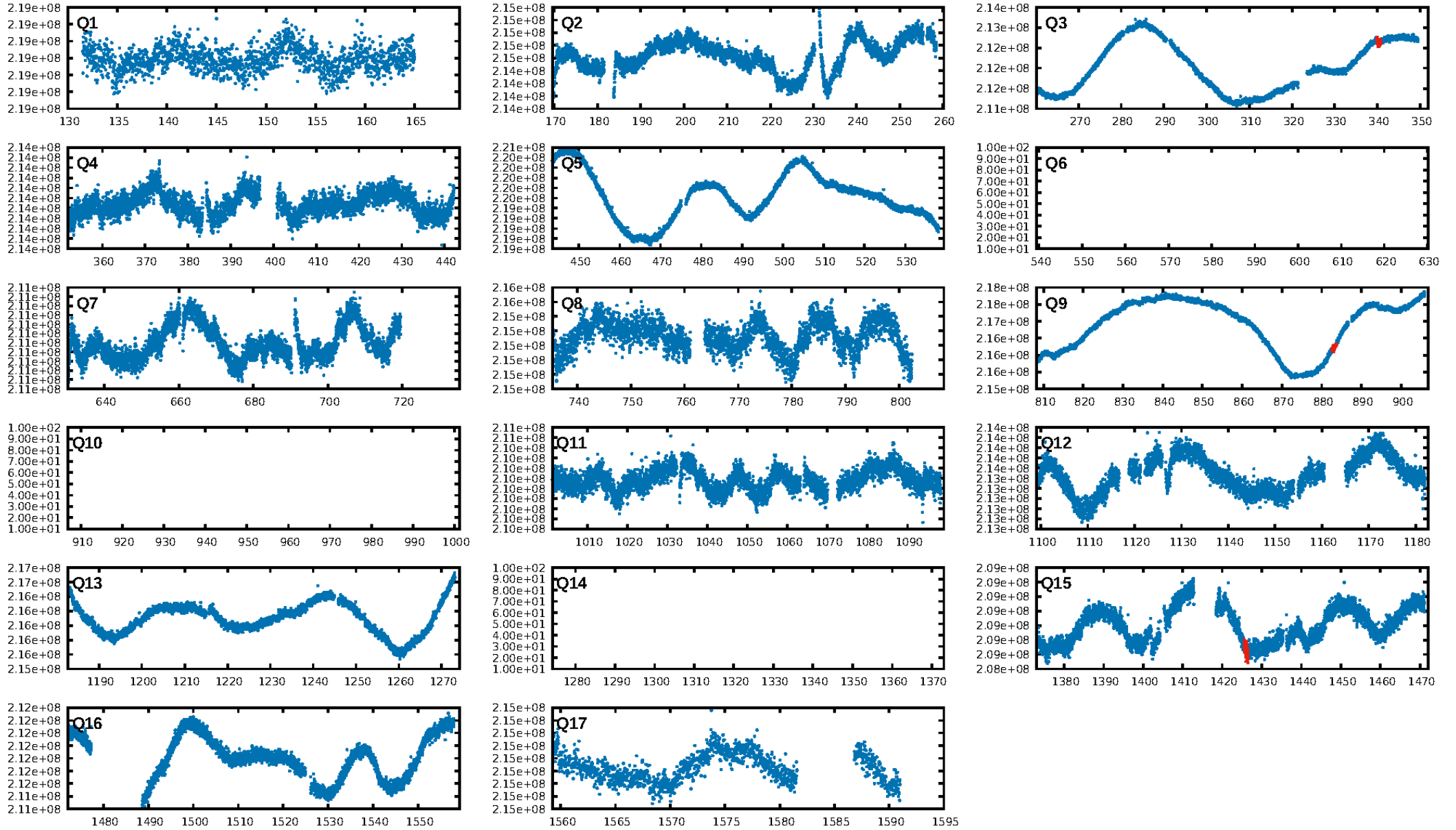
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 91.9%
Bootstrap-pfa: 7.94e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.27
Centroid-sig: 7.8%
Centroid-so: 0.963 arcsec [1.25σ]
OotOffset-rm: 2.106 arcsec [2.57σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 1.997 arcsec [2.54σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

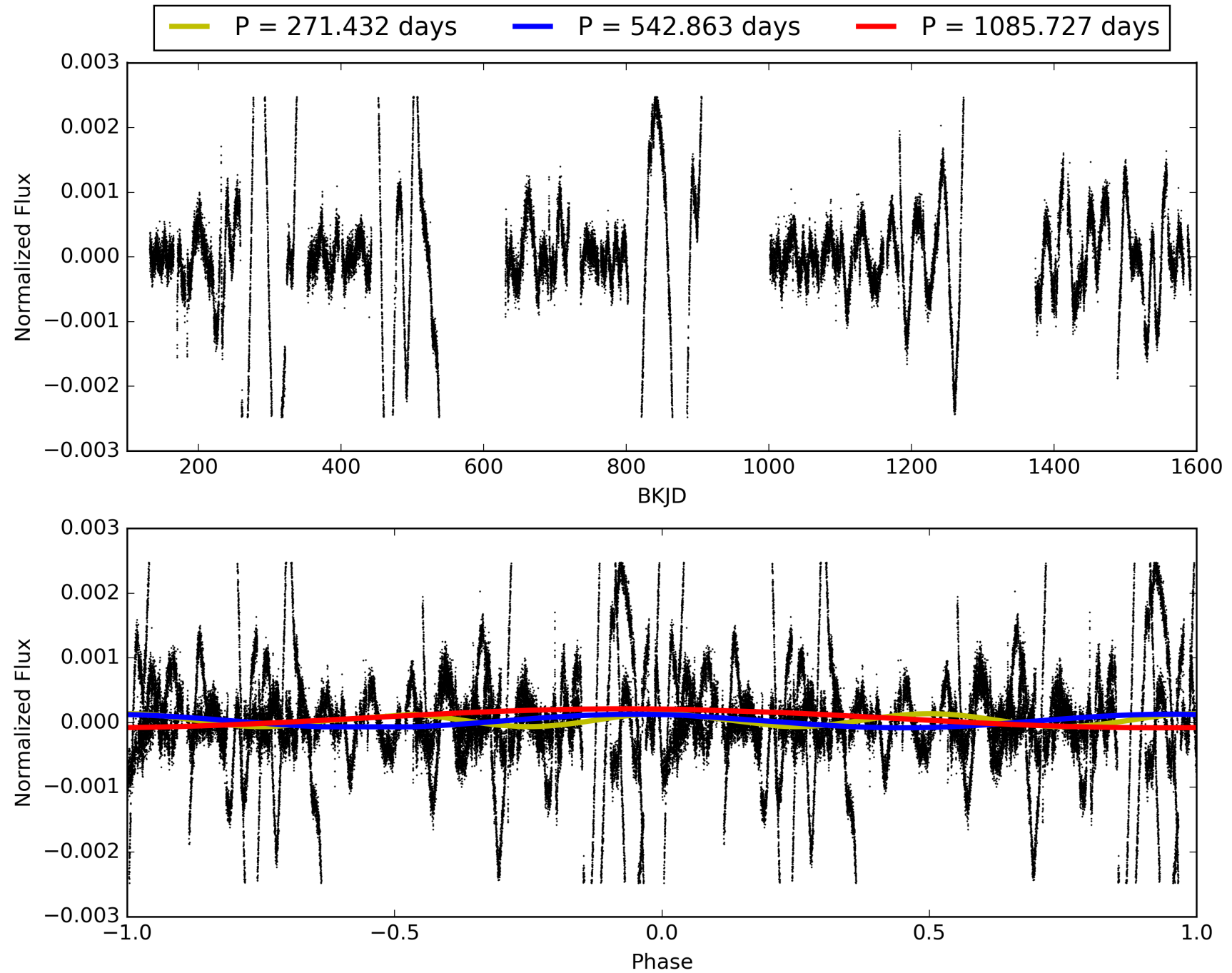
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:08:48 Z

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

TCE 005376150-01, PDC Light Curves

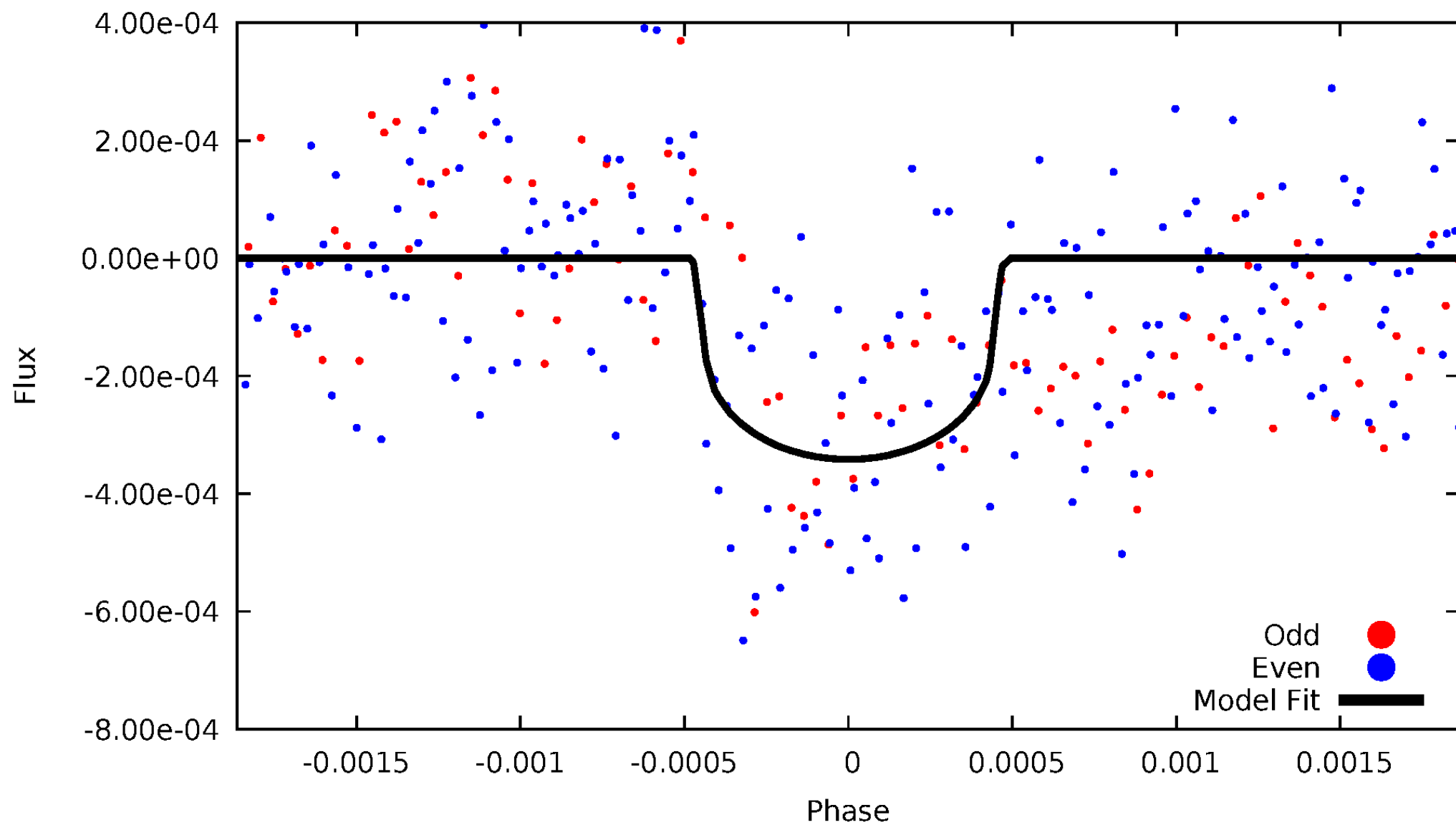


TCE 005376150-01



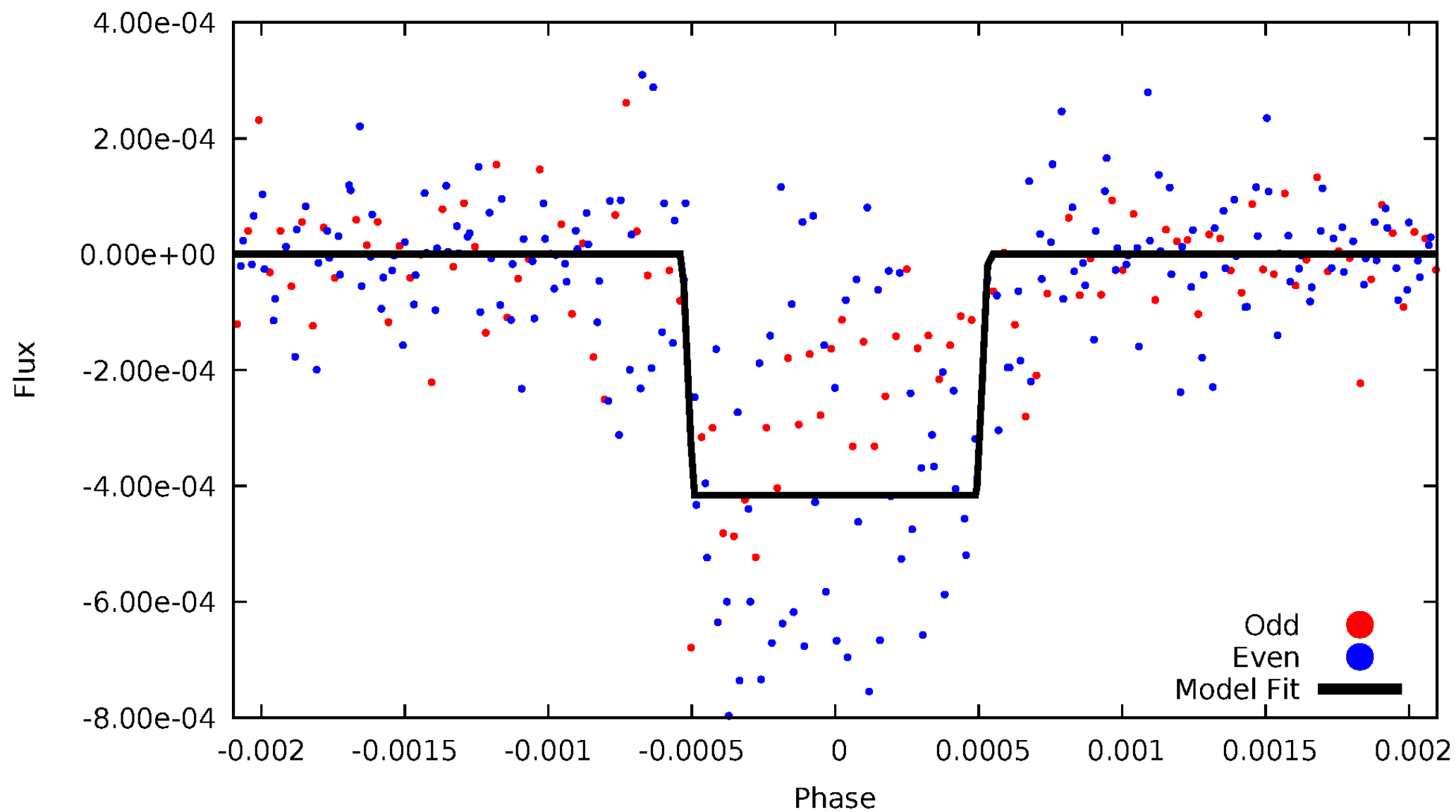
DV Odd/Even

TCE 005376150-01



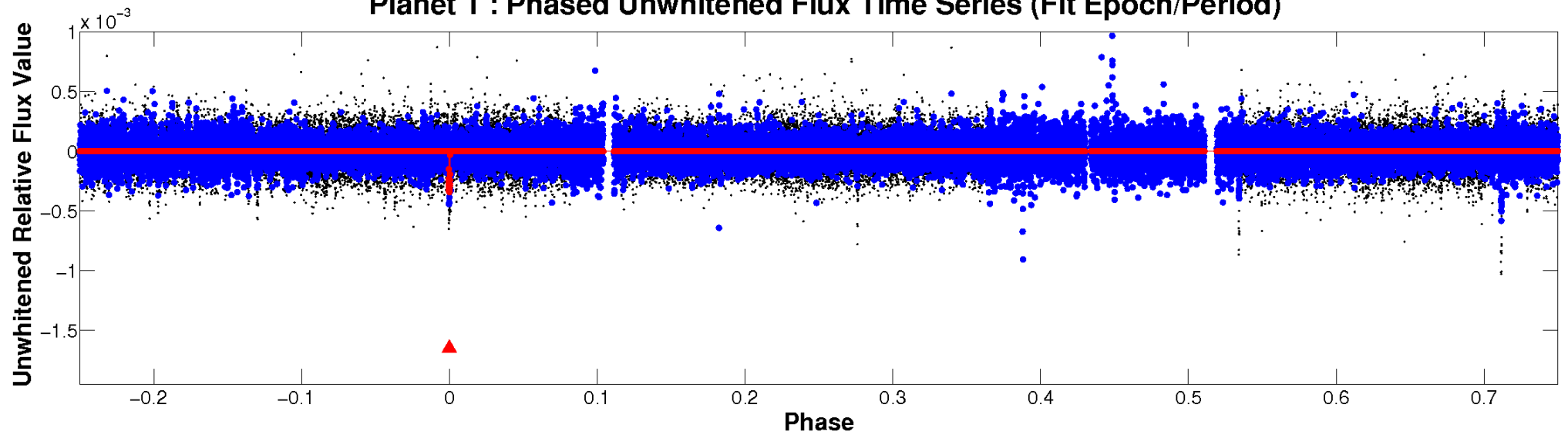
ALT Odd/Even

TCE 005376150-01

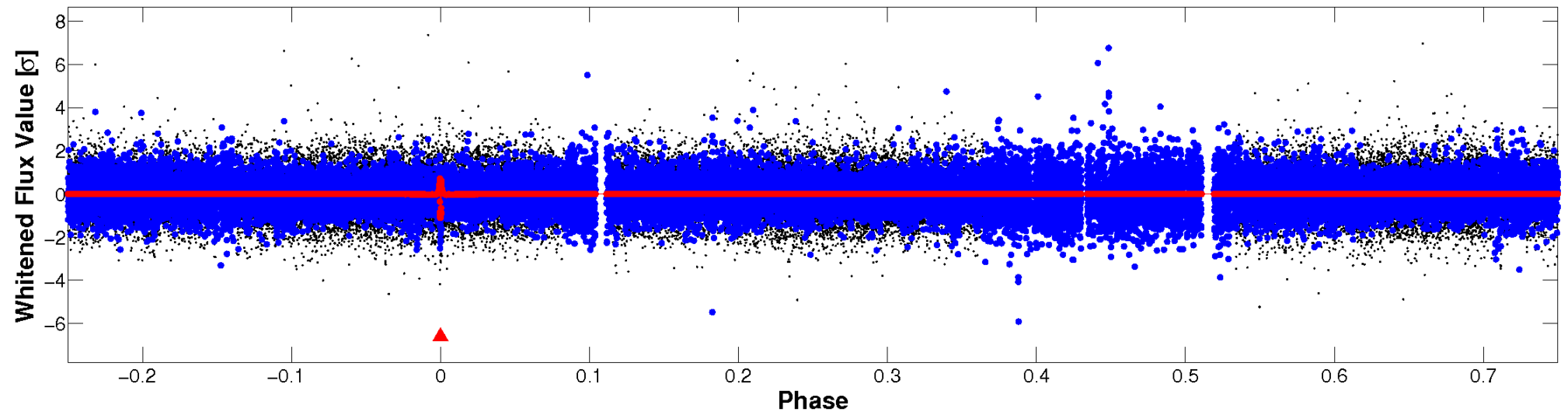


Non-Whitened Vs. Whitened Light Curve

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

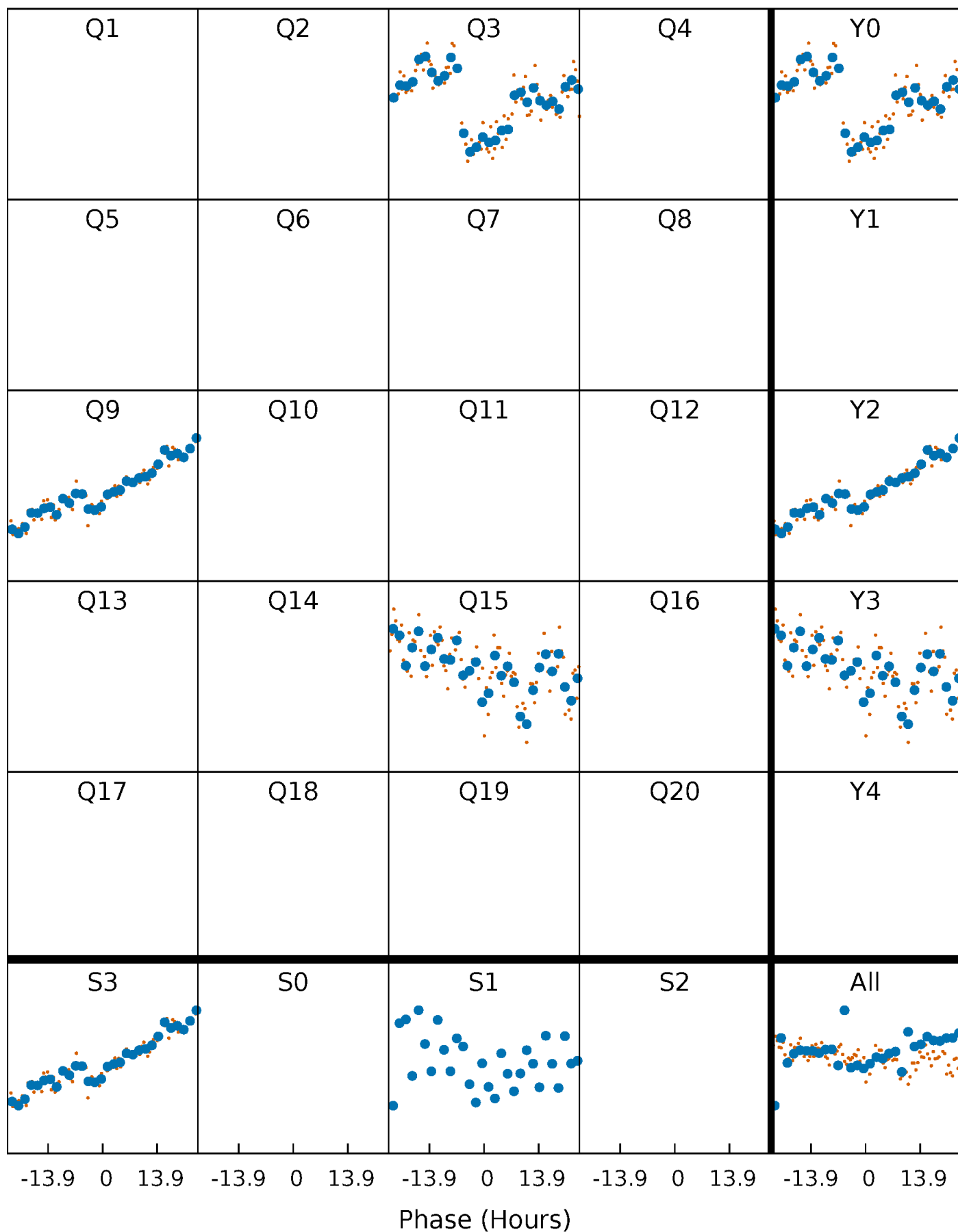


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



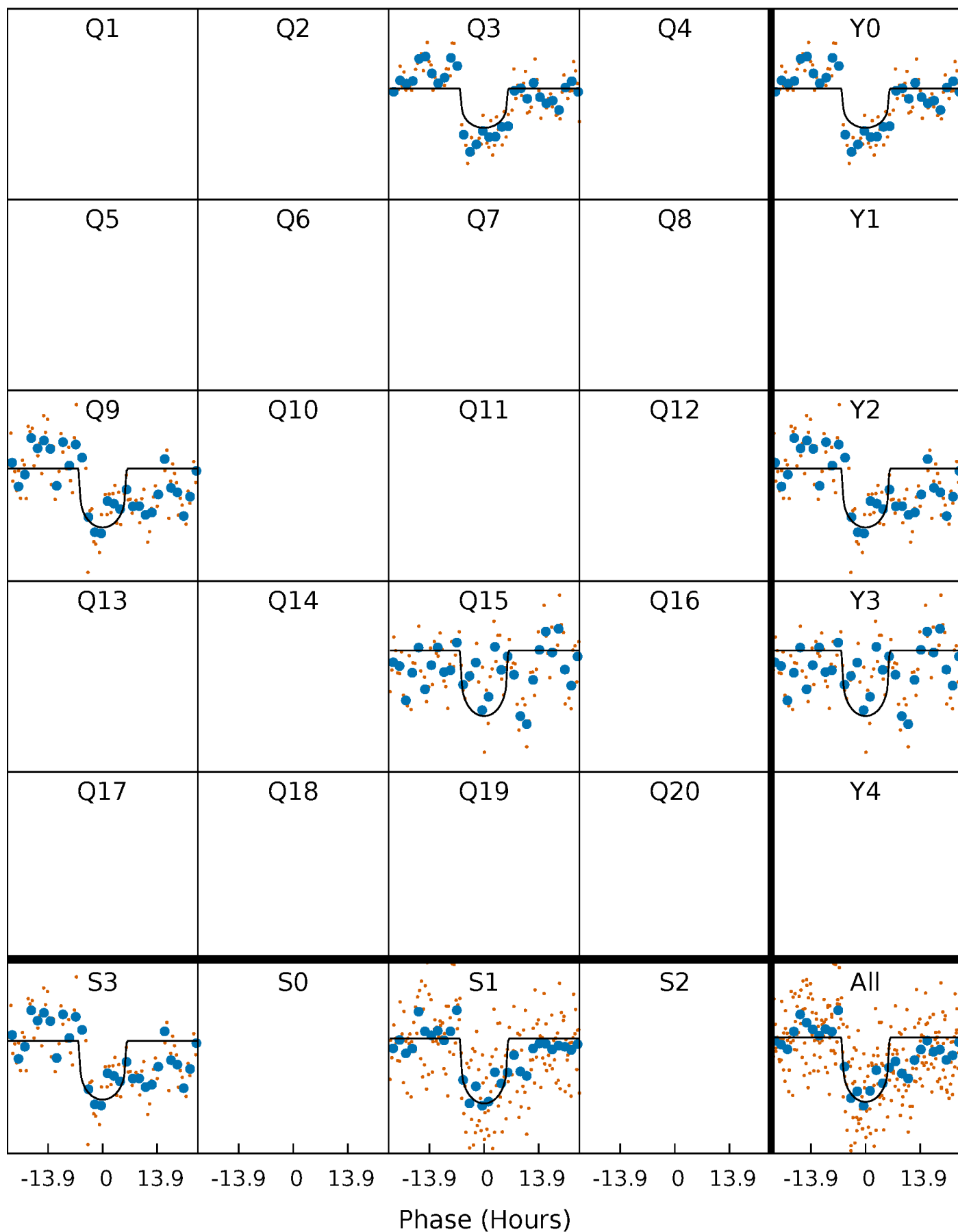
PDC Quarter-Phased Transit Curves

TCE 005376150-01 P=542.863413 Days $T_0=340.311435$ (BKJD)



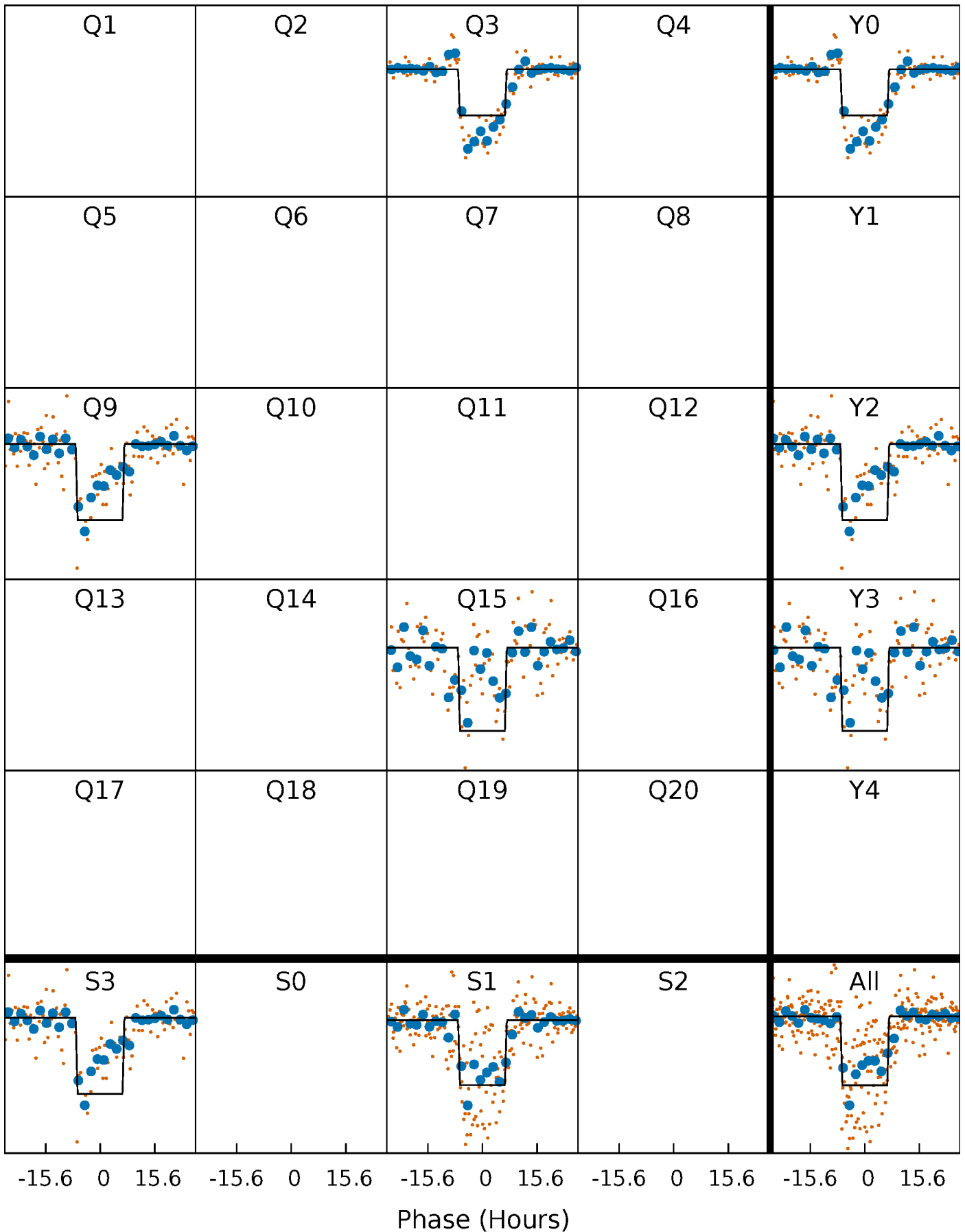
DV Quarter-Phased Transit Curves

TCE 005376150-01 P=542.863413 Days $T_0=340.311435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

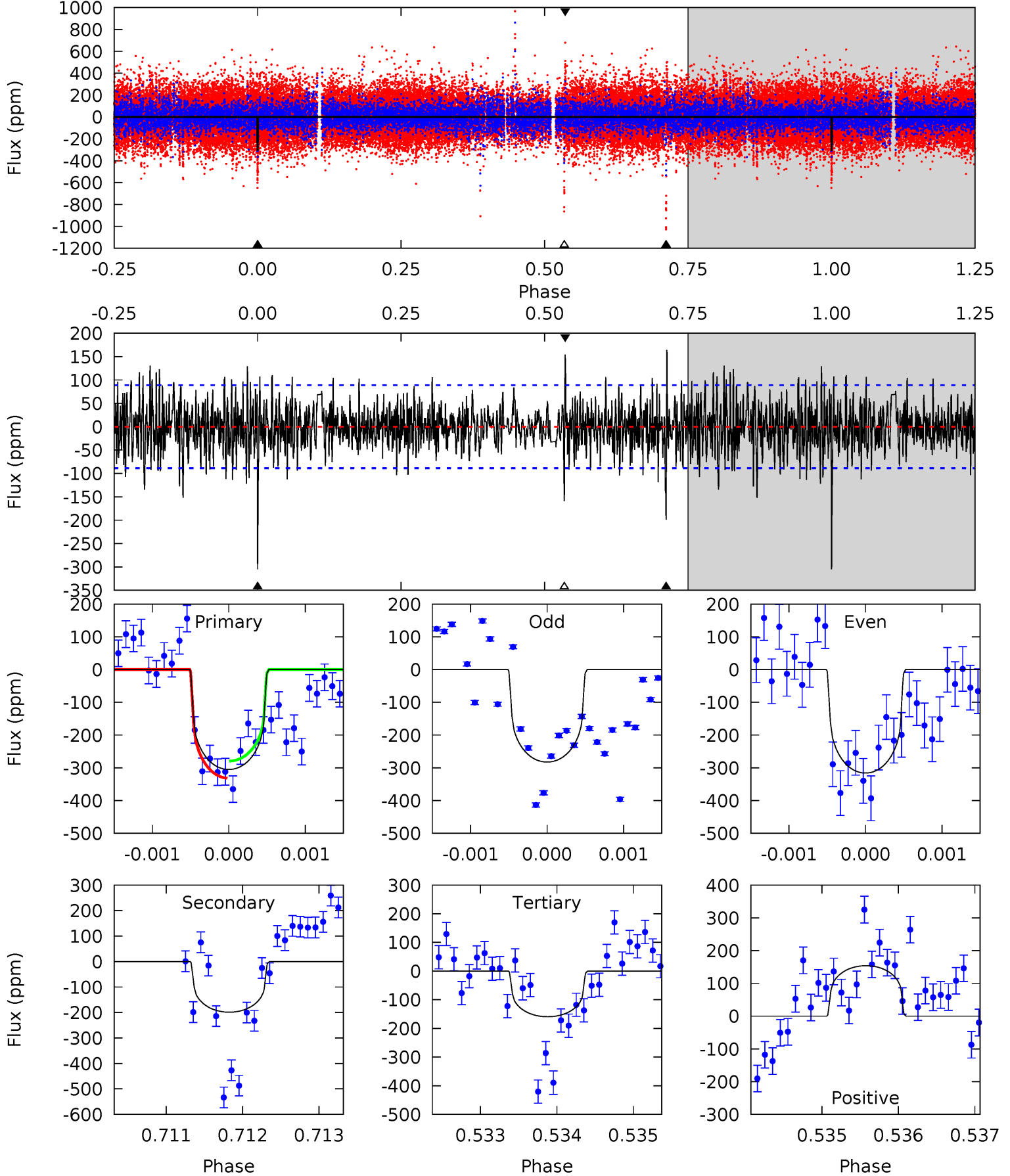
TCE 005376150-01 P=542.953745 Days $T_0=340.338928$ (BKJD)



DV Model-Shift Uniqueness Test

005376150-01, P = 542.863413 Days, E = 340.311435 Days

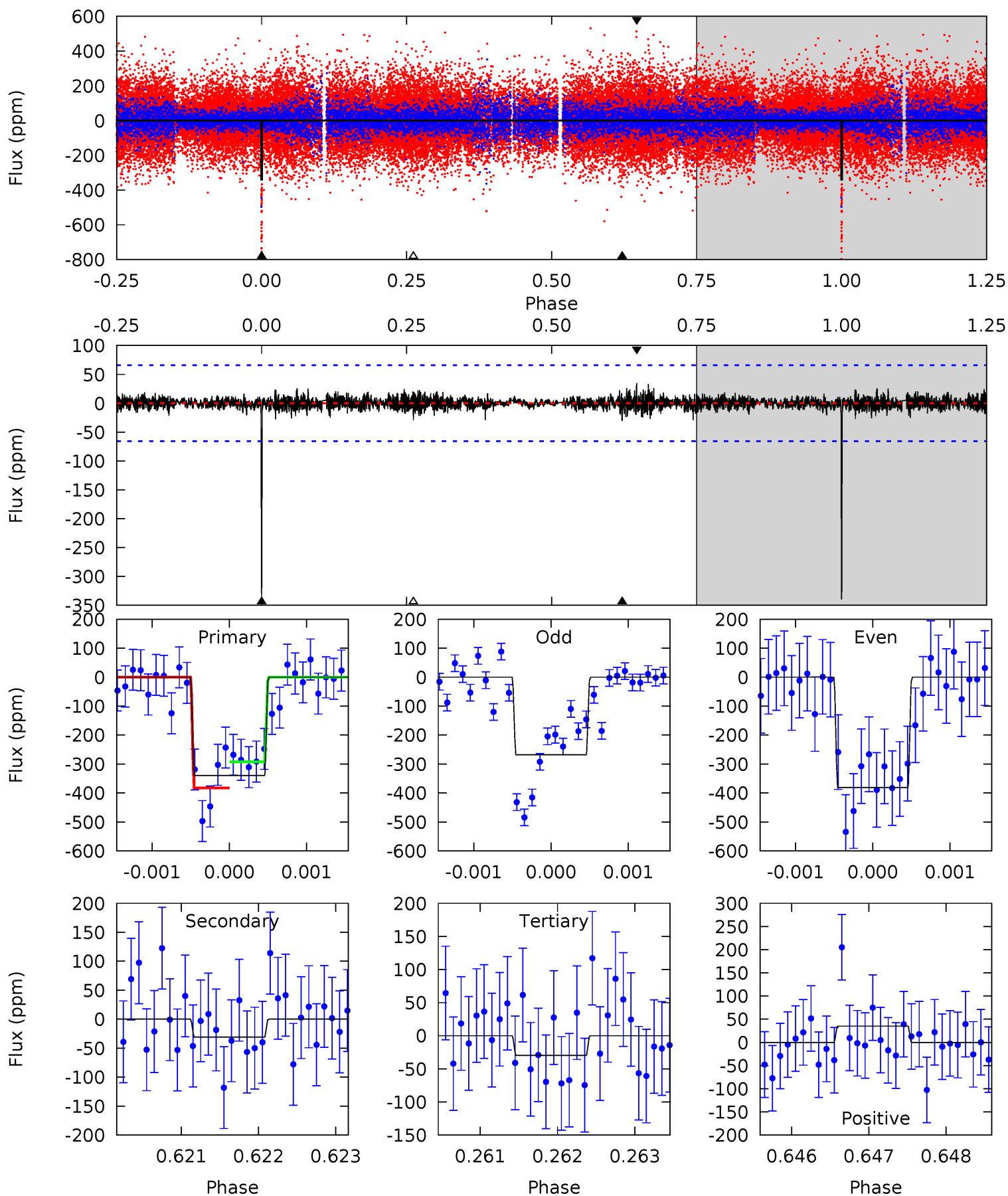
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	12.2	9.79	9.47	5.46	3.31	2.39	8.97	9.29	2.44	2.76	0.95	1.08	0.35	1.61



Alt Model-Shift Uniqueness Test

005376150-01, P = 542.953745 Days, E = 340.338928 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	2.54	2.45	2.89	5.44	3.27	0.53	25.6	25.2	0.09	-0.35	4.35	1.28	0.09	3.73



Stellar Parameters For KIC 005376150

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5217^{+72}_{-103}	$3.651^{+0.180}_{-0.105}$	$0.160^{+0.150}_{-0.200}$	$3.024^{+0.486}_{-0.833}$	$1.491^{+0.154}_{-0.386}$	$0.076^{+0.085}_{-0.025}$
	+1%/-2%	+5%/-3%	+94%/-125%	+16%/-28%	+10%/-26%	+112%/-33%
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 005376150-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-199 ± 16	$5.60^{+2.58}_{-2.21}$	456^{+20}_{-31}	4715^{+1102}_{-569}	7604^{+12420}_{-4045}
Alt.	-31 ± 12	$6.49^{+2.51}_{-2.36}$	456^{+21}_{-27}	3259^{+516}_{-340}	896^{+1383}_{-523}

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

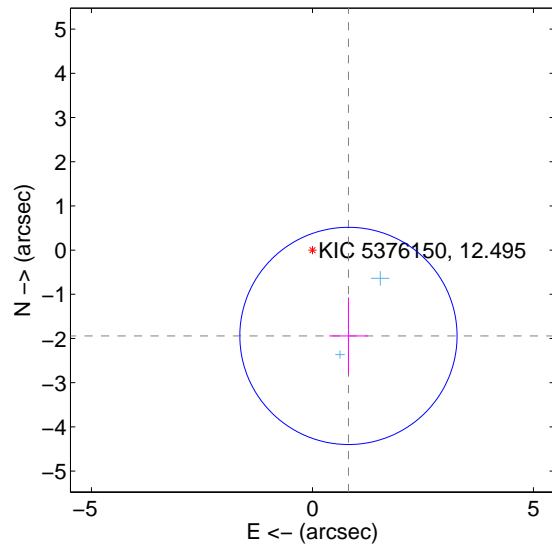
Supplemental centroid analysis for 005376150-01. Kepler magnitude: 12.49. Transit SNR 8.76

There are 2 quarters with good PRF difference image offsets

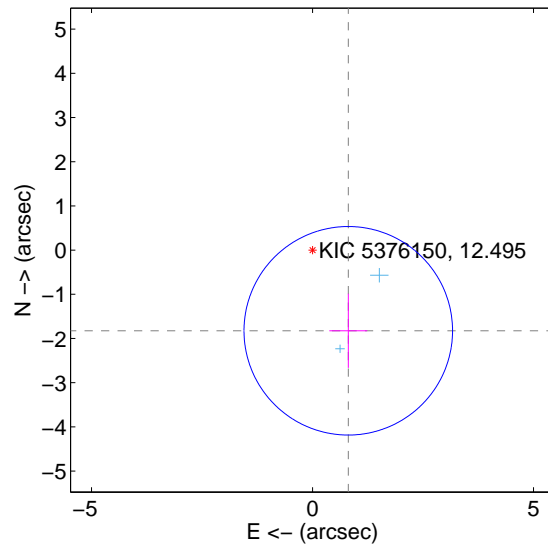
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.106 ± 0.819	2.57	-0.815 ± 0.439	-1.942 ± 0.869
PRF-fit source offset from KIC position	1.997 ± 0.786	2.54	-0.809 ± 0.428	-1.825 ± 0.839
photometric centroid source offset	0.96 ± 0.77	1.25	0.45 ± 0.72	-0.85 ± 0.78

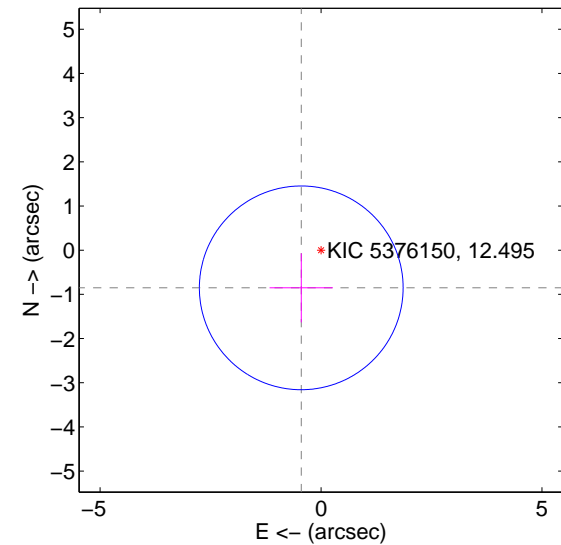
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

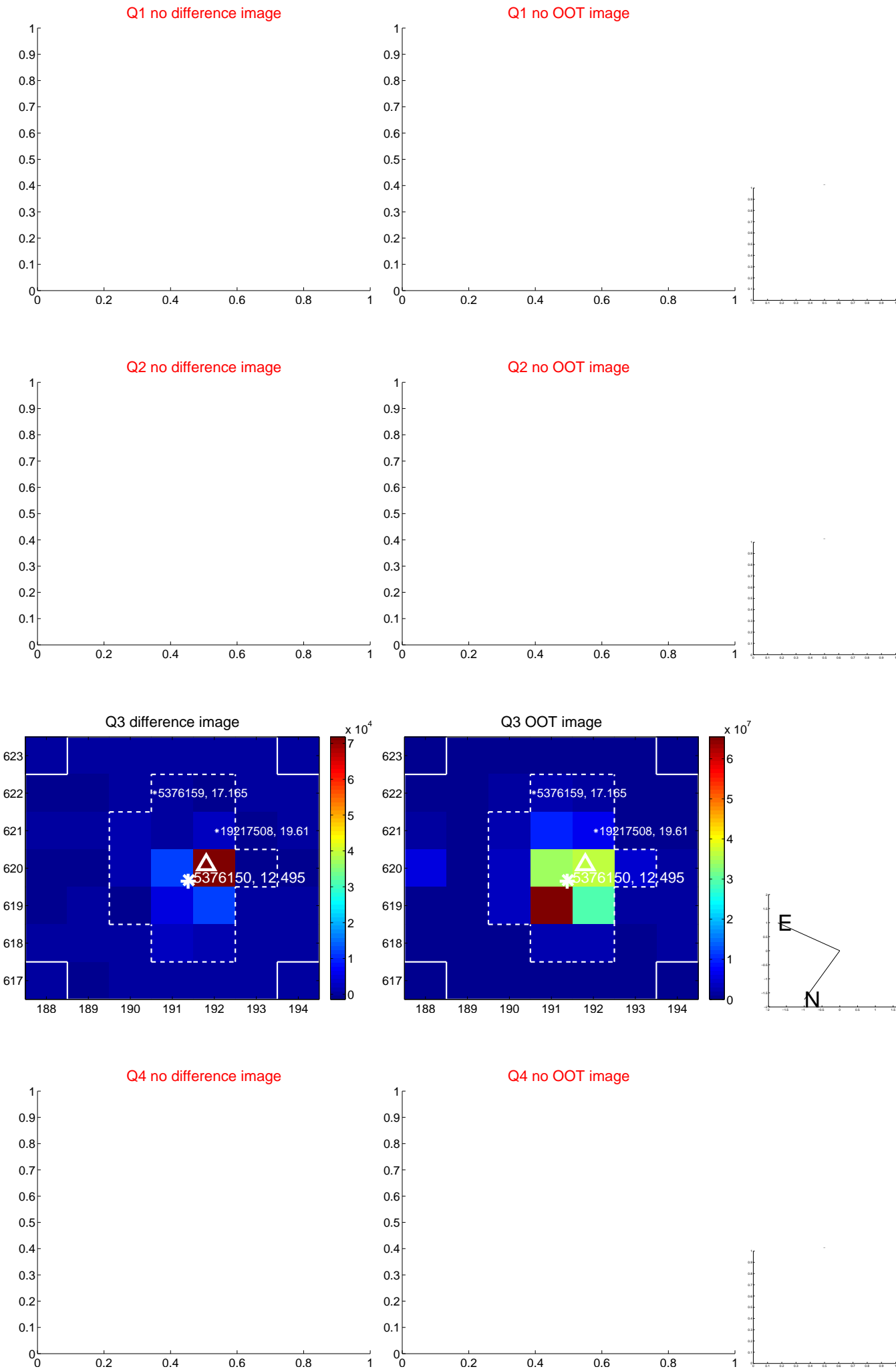


offset from photometric centroids



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.

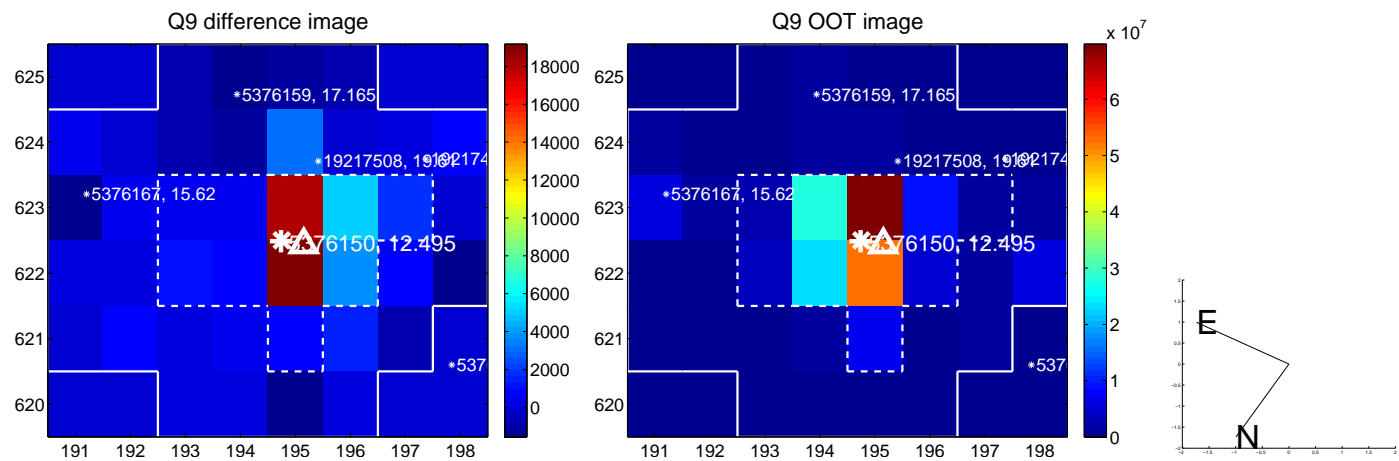
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



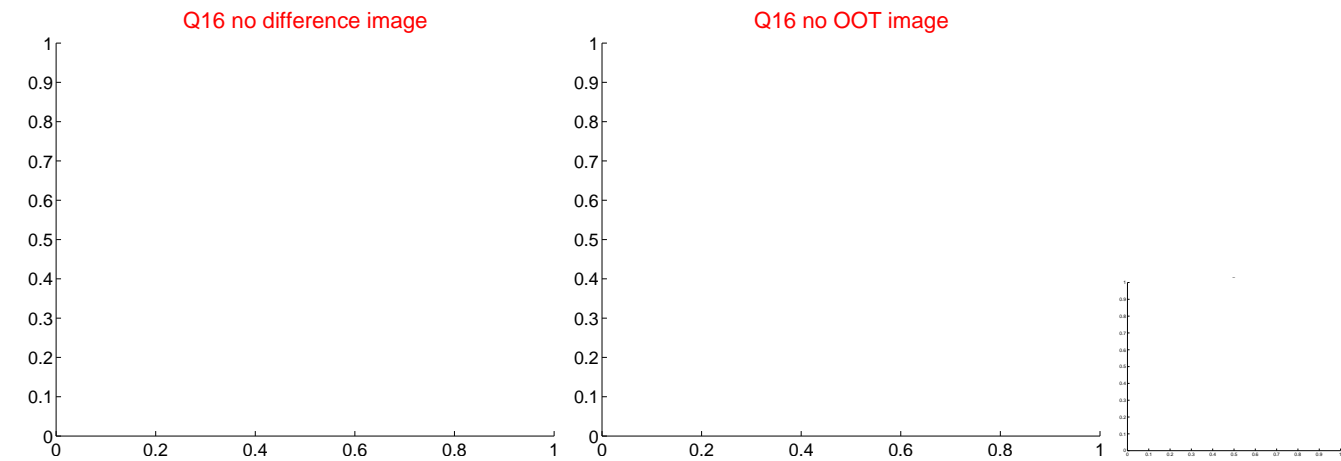
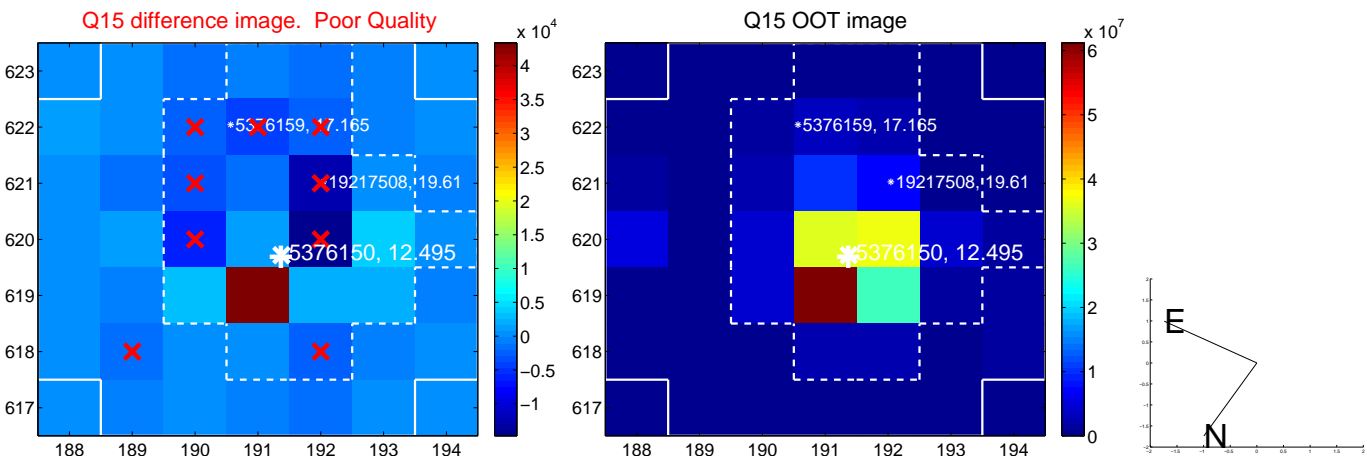
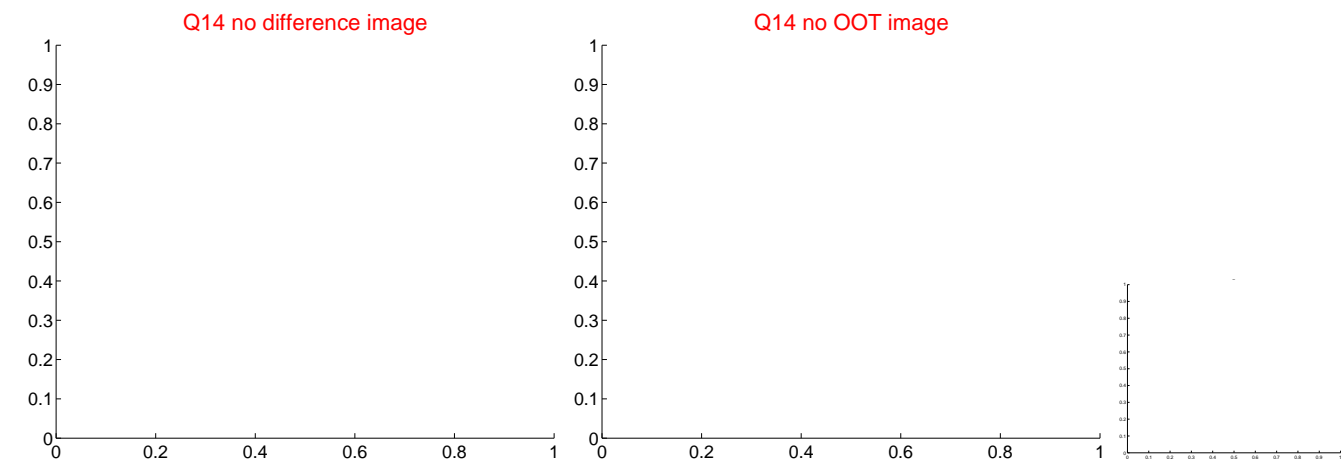
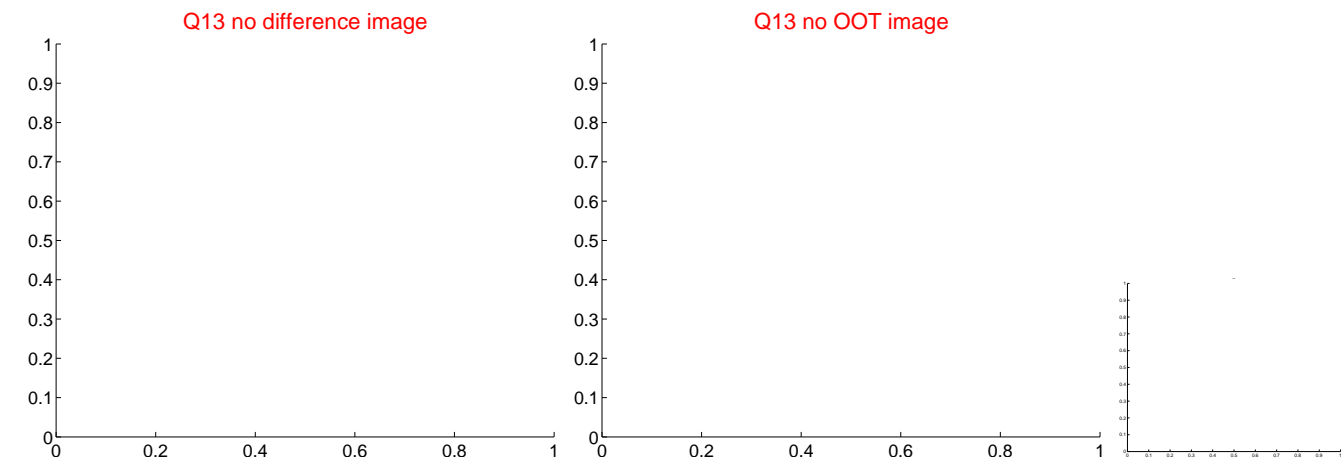
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



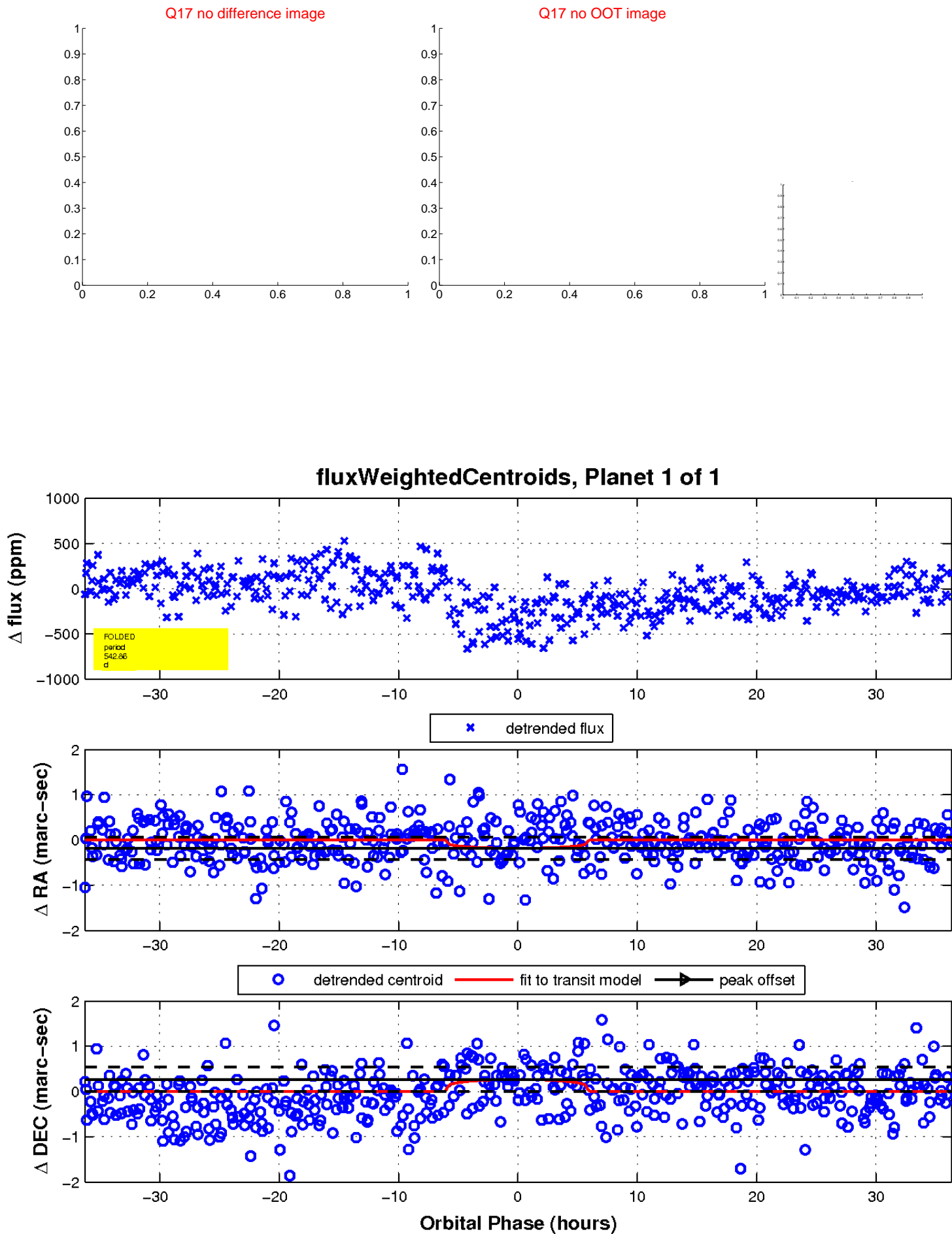
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

