

KIC 005900700

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})
005900700-01	OBS	No	350.292066	184.571992	211.8	11.107	7.6	8.5	1.01	5854	1.63	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005900700-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

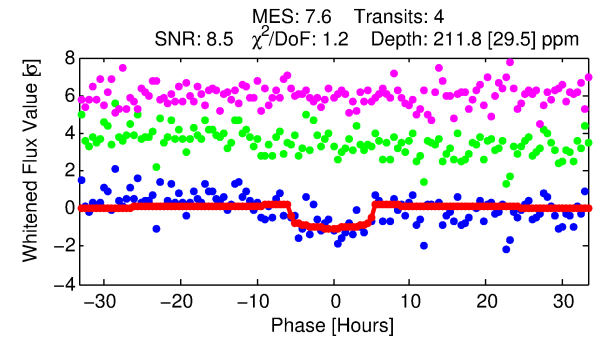
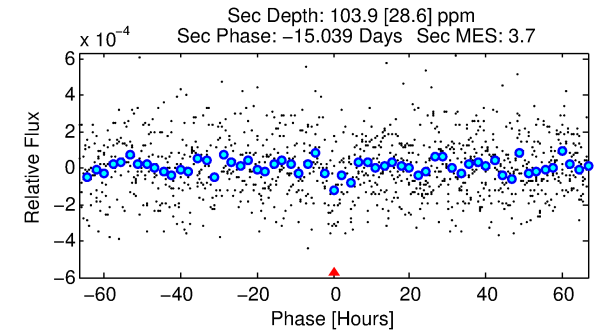
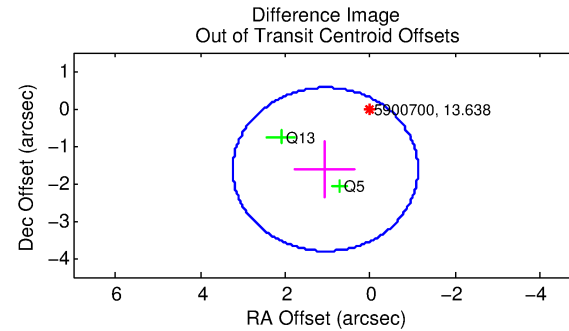
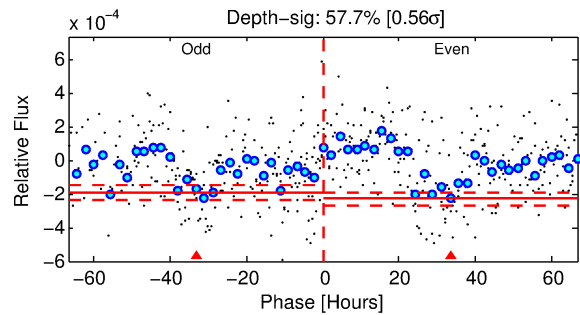
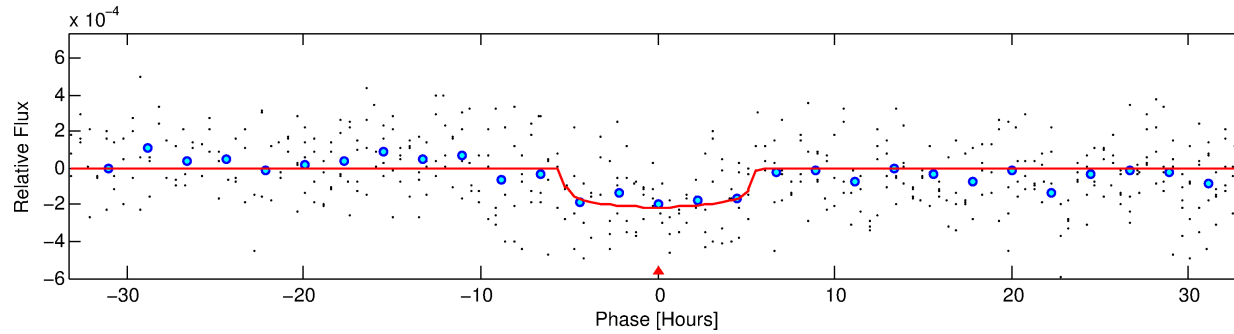
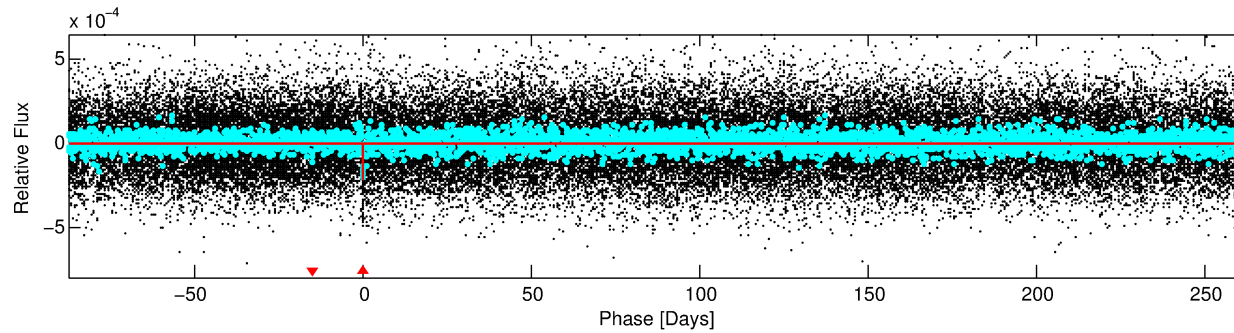
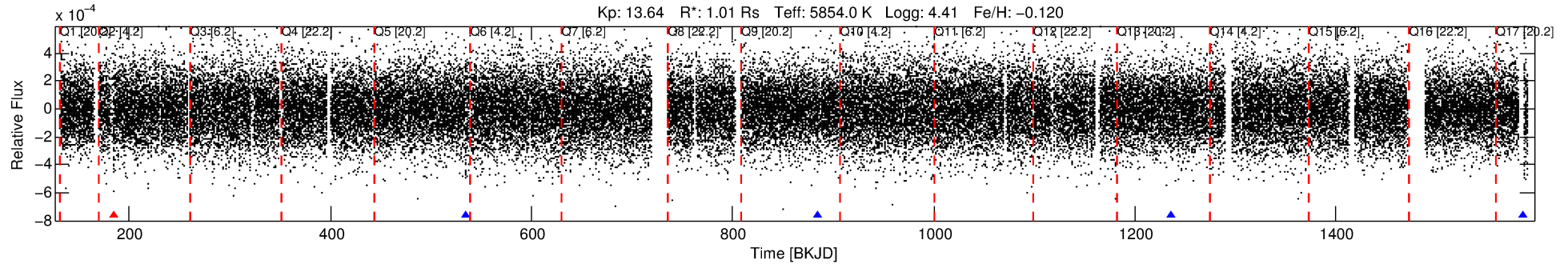
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005900700-01

No Significant Match Found

DV One-Page Summary

KIC: 5900700 Candidate: 1 of 1 Period: 350.292 d



DV Fit Results:

Period = 350.29207 [0.01023] d
Epoch = 184.5720 [0.0197] BKJD
Rp/R* = 0.0148 [0.0057]
a/R* = 151.14 [273.32]
b = 0.80 [0.82]
Seff = 1.18 [0.44]
Teq = 266 [25] K
Rp = 1.63 [0.78] Re
a = 0.9567 [0.2312] AU
Ag = 19654.54 [17564.37] [1.12 σ]
Teffp = 4863 [1008] K [4.56 σ]

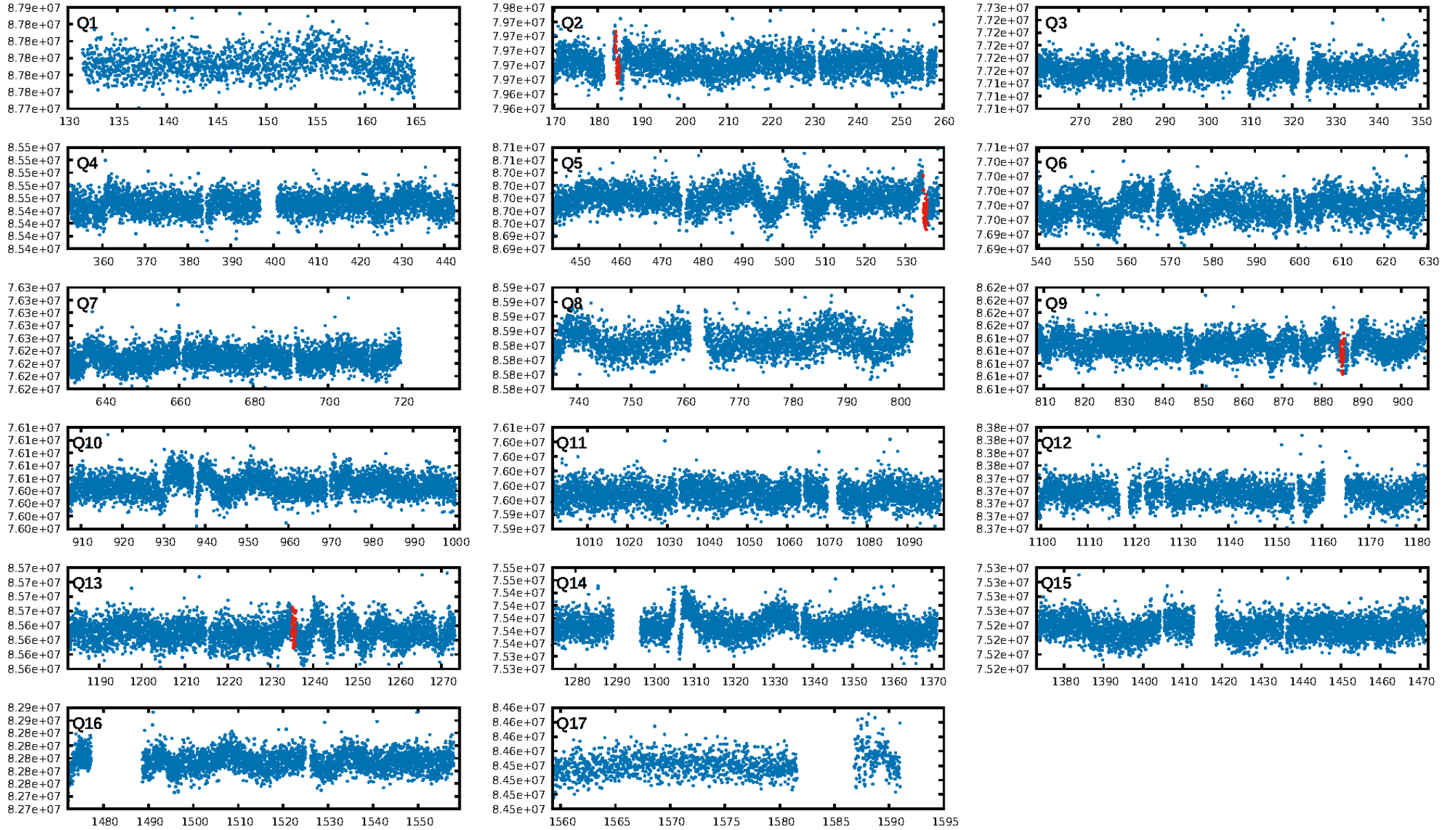
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 3.76e-14
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 3.923
Centroid-sig: 0.0%
Centroid-so: 6.427 arcsec [3.01 σ]
OotOffset-rm: 1.938 arcsec [2.66 σ]
KicOffset-rm: 1.854 arcsec [2.52 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

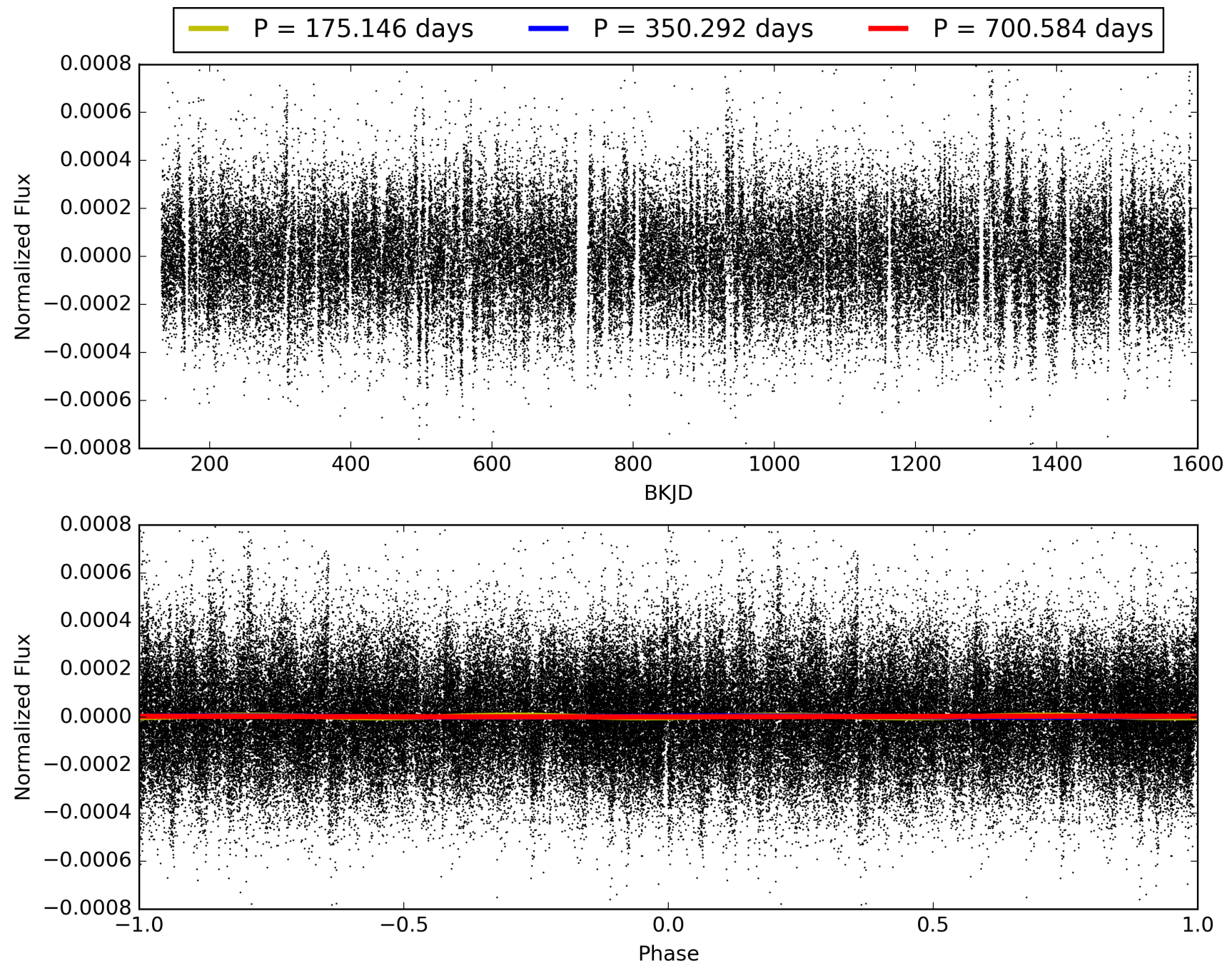
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:37:21 Z

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

TCE 005900700-01, PDC Light Curves

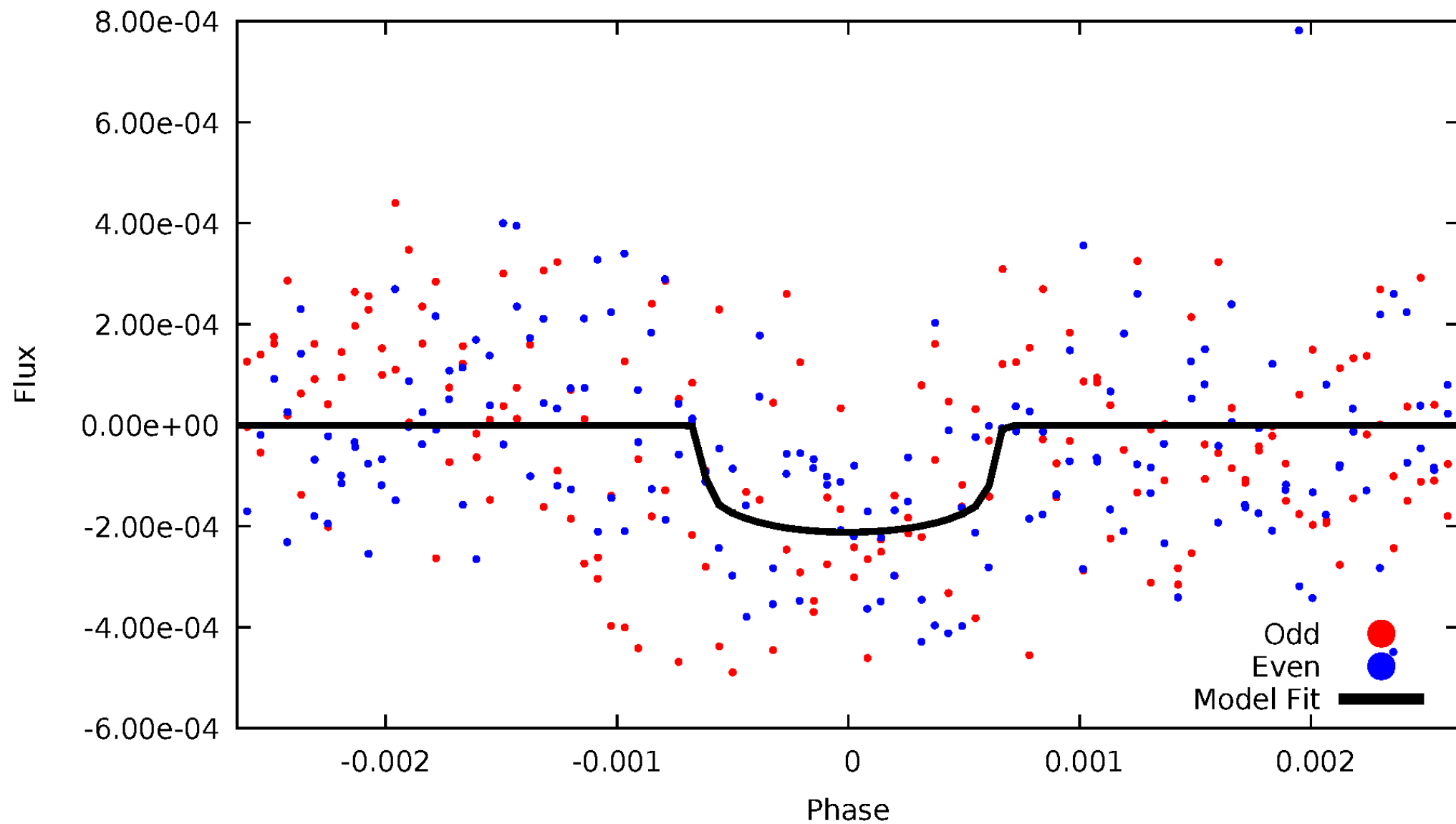


TCE 005900700-01



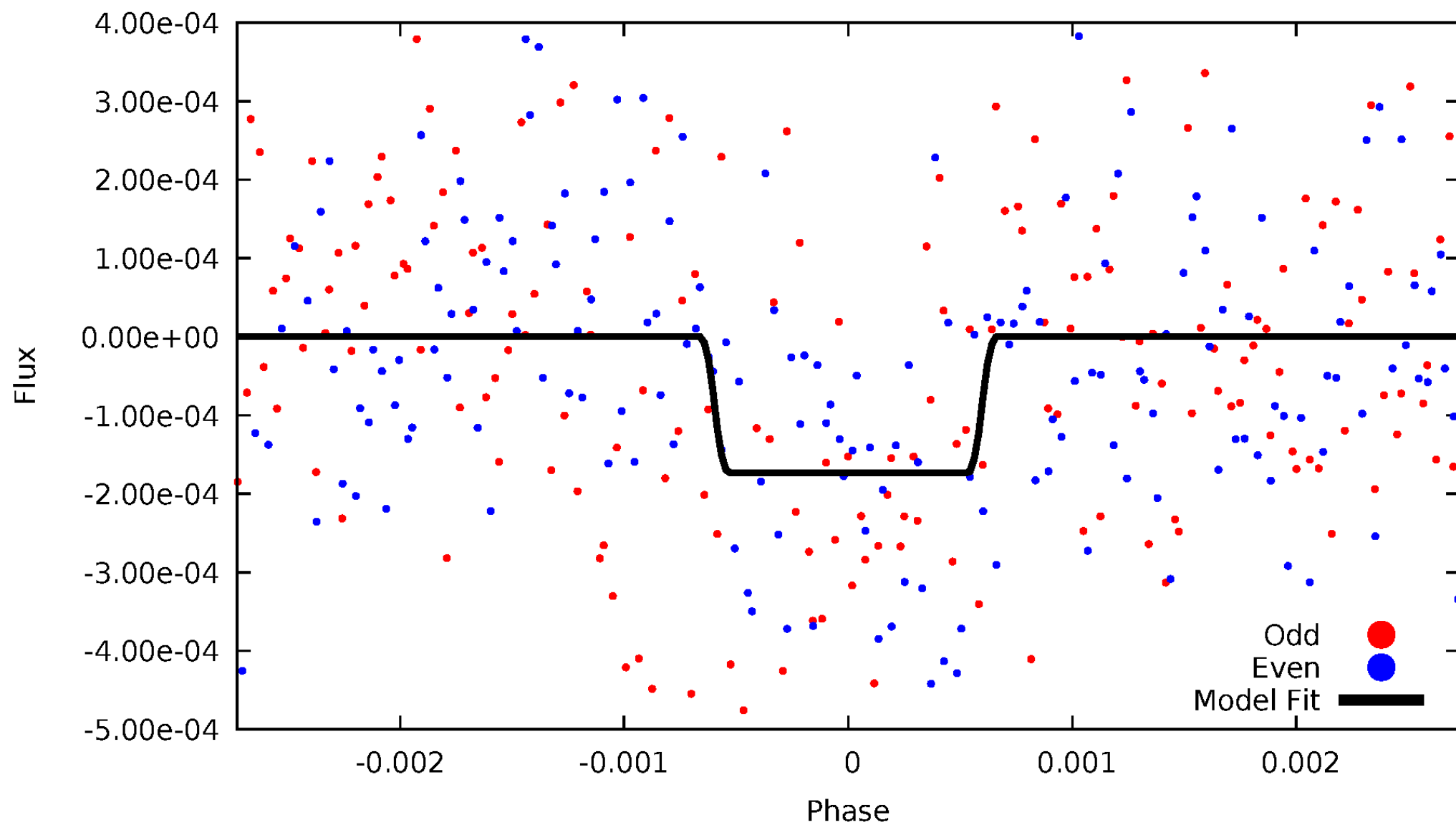
DV Odd/Even

TCE 005900700-01

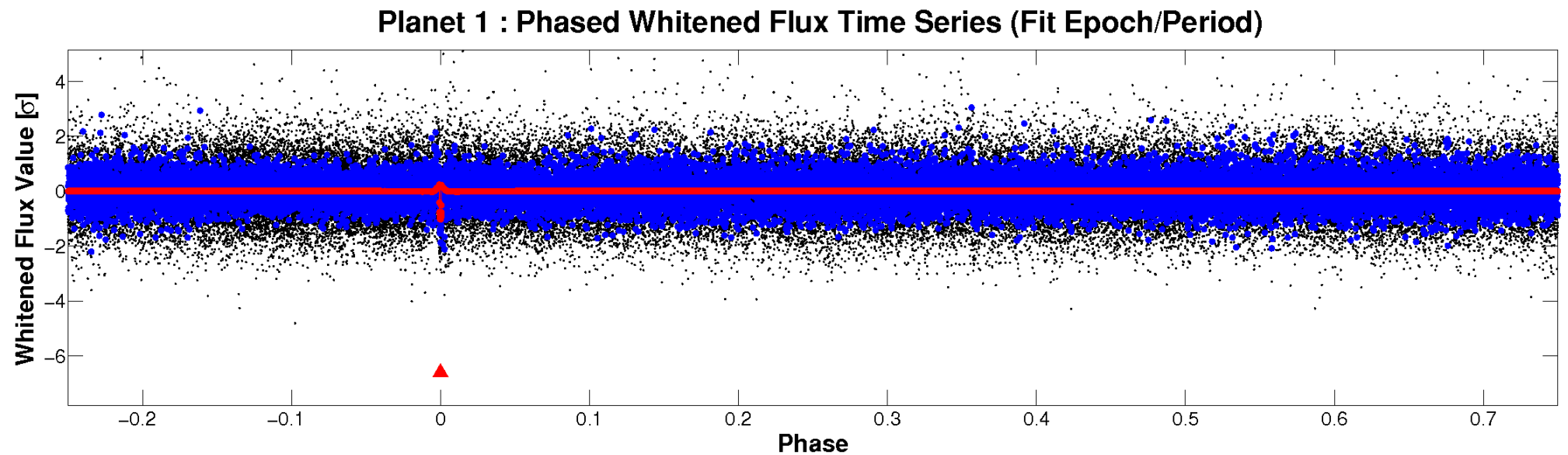
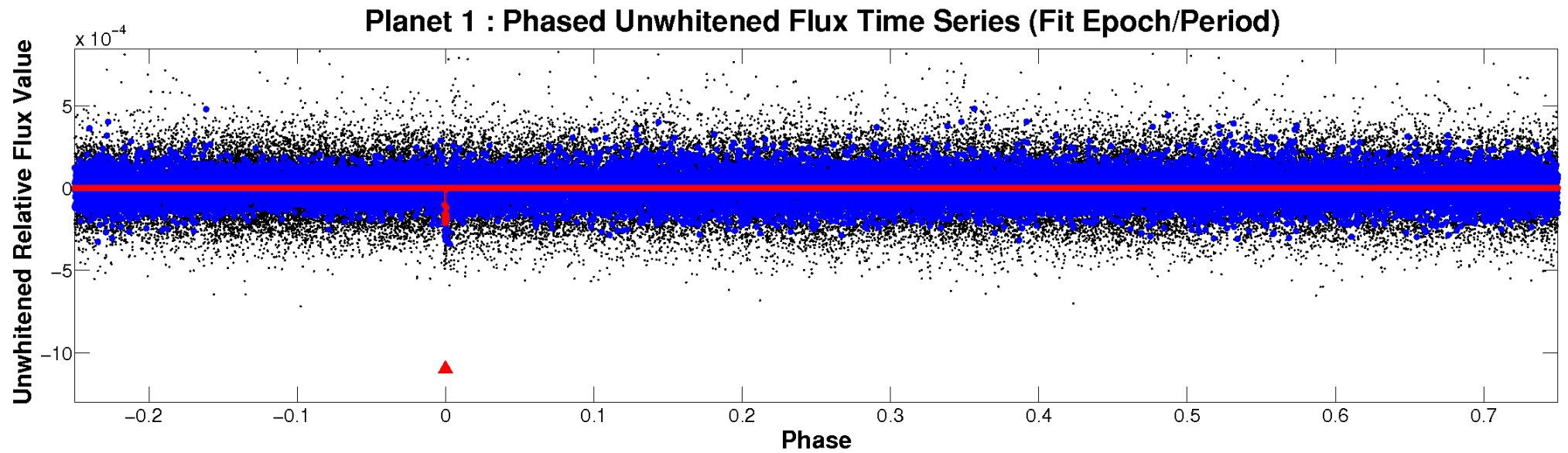


ALT Odd/Even

TCE 005900700-01

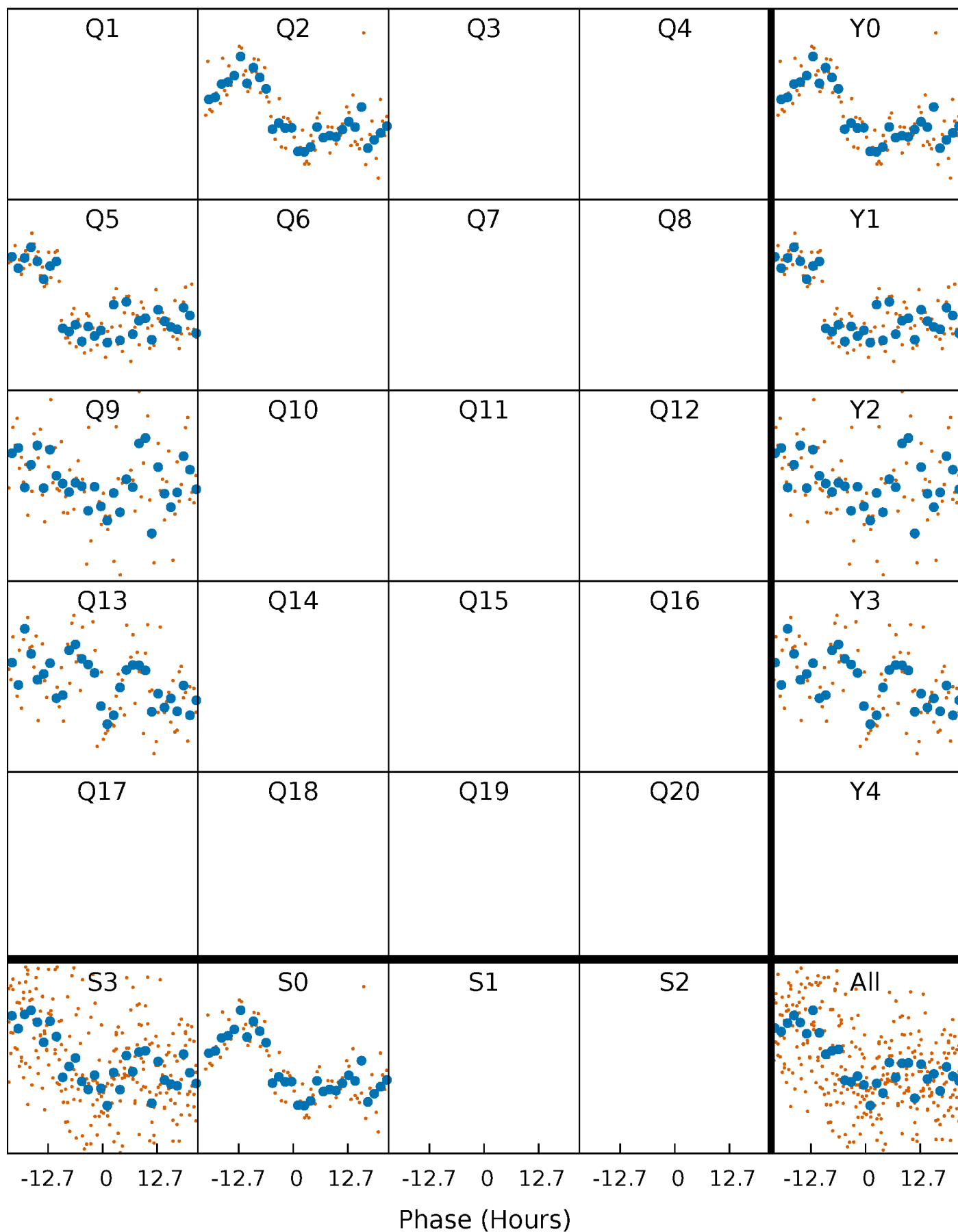


Non-Whitened Vs. Whitened Light Curve



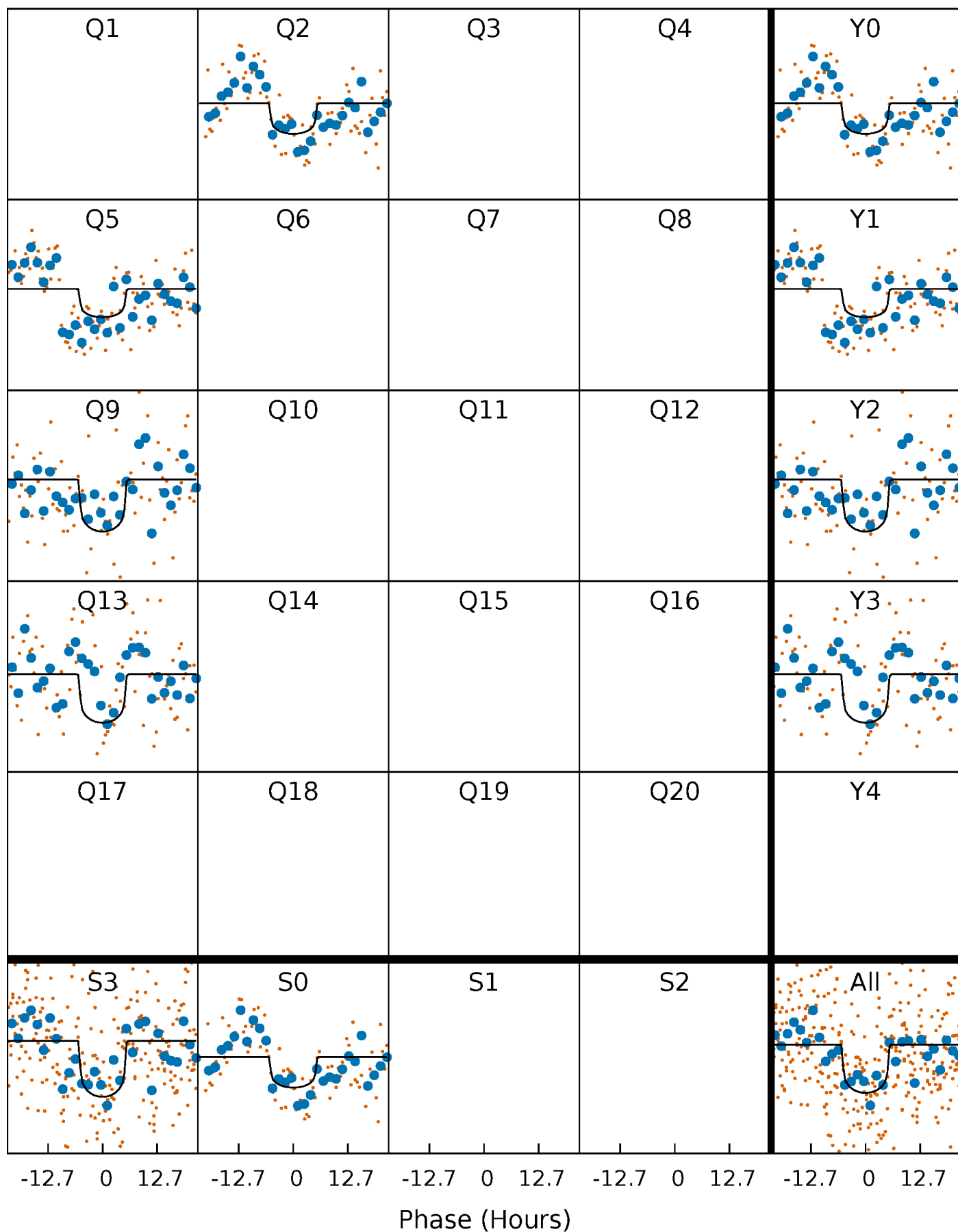
PDC Quarter-Phased Transit Curves

TCE 005900700-01 $P=350.292066$ Days $T_0=184.571992$ (BKJD)



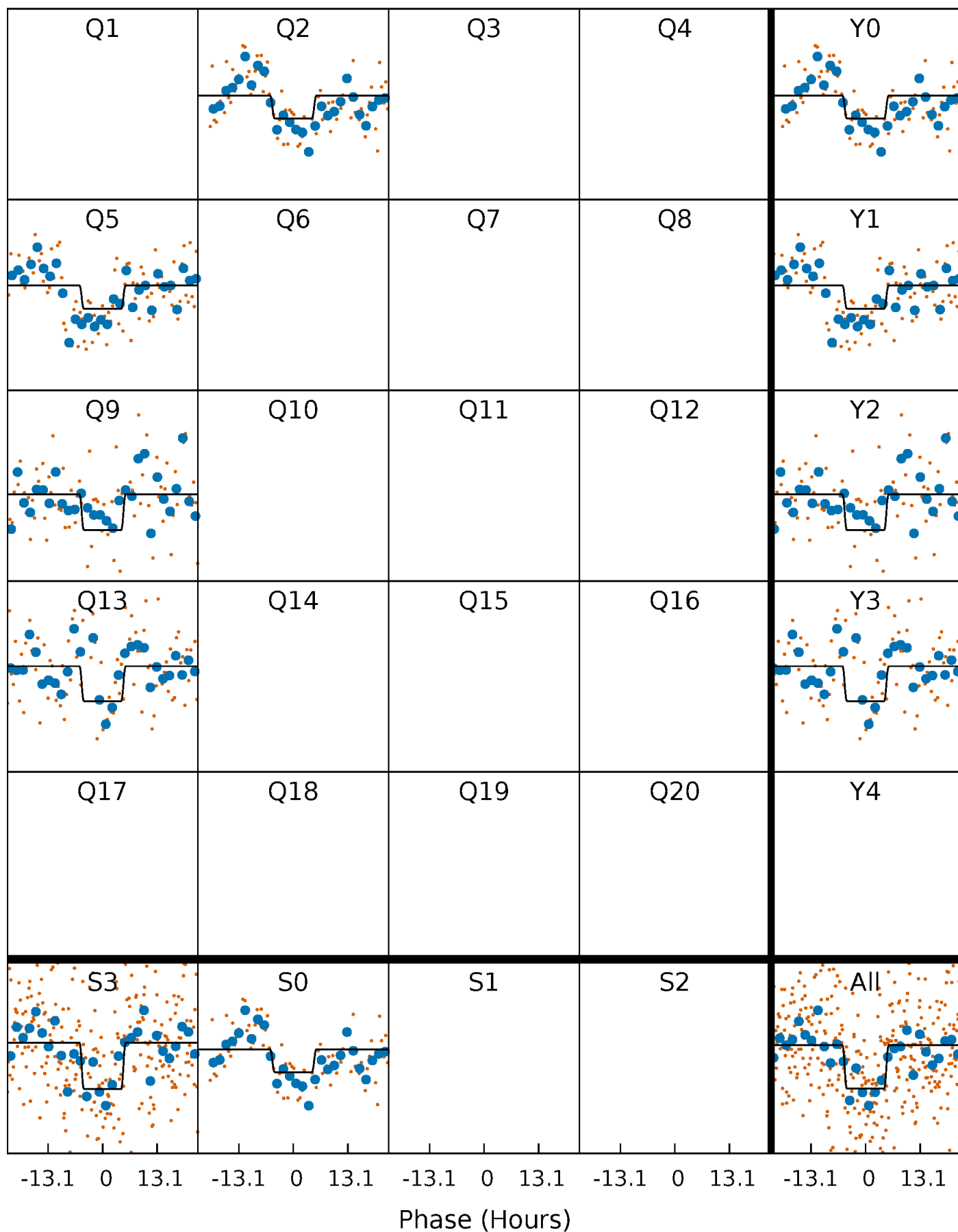
DV Quarter-Phased Transit Curves

TCE 005900700-01 P=350.292066 Days $T_0=184.571992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

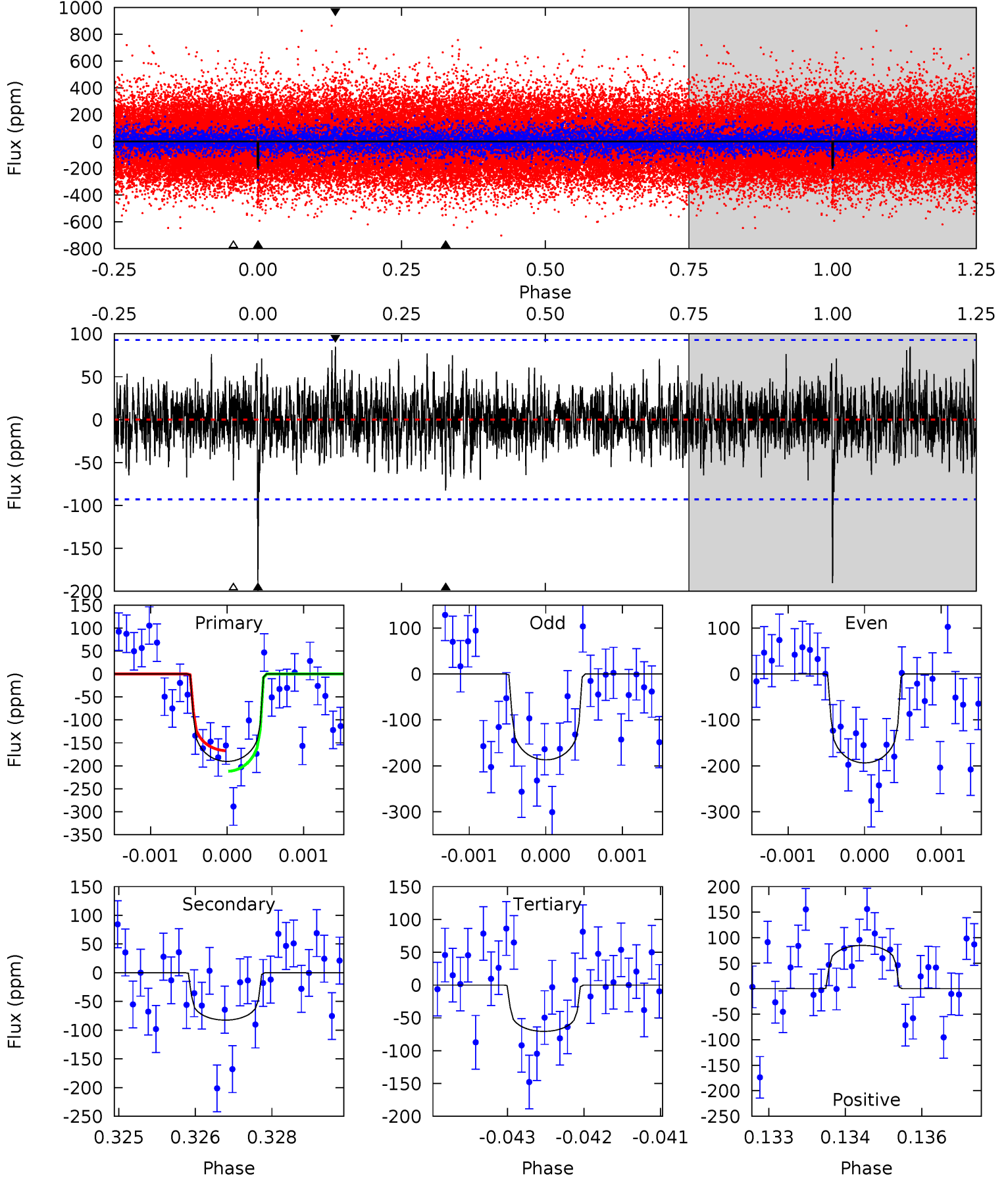
TCE 005900700-01 P=350.299330 Days $T_0=184.553251$ (BKJD)



DV Model-Shift Uniqueness Test

005900700-01, P = 350.292066 Days, E = 184.571992 Days

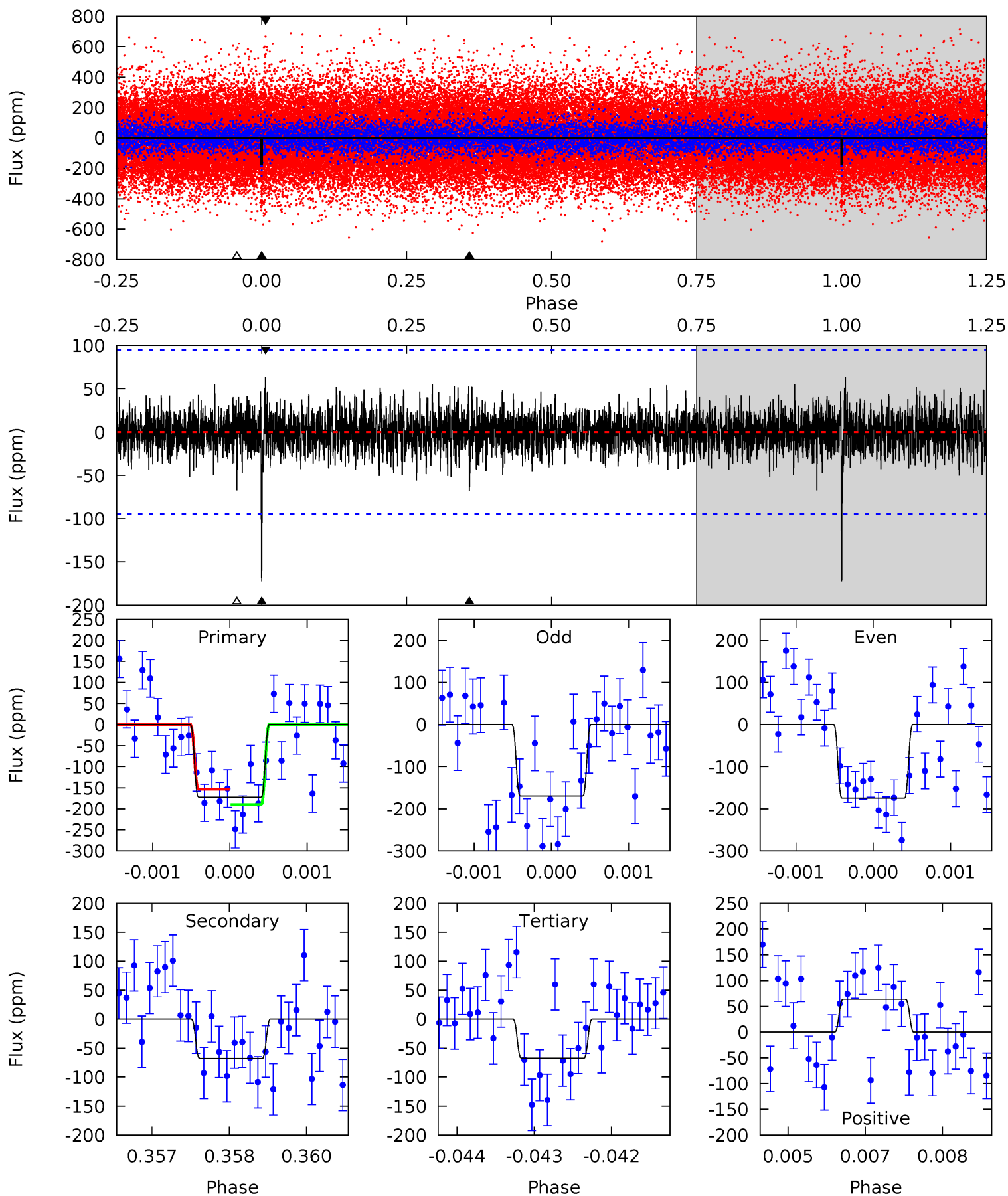
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	4.79	4.10	4.92	5.39	3.19	1.28	6.95	6.13	0.69	-0.14	0.19	0.97	0.31	1.30



Alt Model-Shift Uniqueness Test

005900700-01, P = 350.299330 Days, E = 184.553251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.81	3.85	3.83	3.62	5.40	3.22	0.94	5.99	6.20	0.02	0.24	0.14	1.03	0.27	1.03



Stellar Parameters For KIC 005900700

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5854^{+146}_{-175}	$4.406^{+0.105}_{-0.195}$	$-0.120^{+0.300}_{-0.300}$	$1.012^{+0.288}_{-0.133}$	$0.951^{+0.127}_{-0.104}$	$1.294^{+0.601}_{-0.659}$
	+2%/-3%	+2%/-4%	+250%/-250%	+28%/-13%	+13%/-11%	+46%/-51%
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 005900700-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 17	$1.64^{+0.72}_{-0.63}$	373^{+27}_{-18}	4772^{+1090}_{-636}	15732^{+24523}_{-8433}
Alt.	-68 ± 18	$1.49^{+0.73}_{-0.61}$	374^{+25}_{-20}	4732^{+1263}_{-637}	14892^{+28507}_{-8400}

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

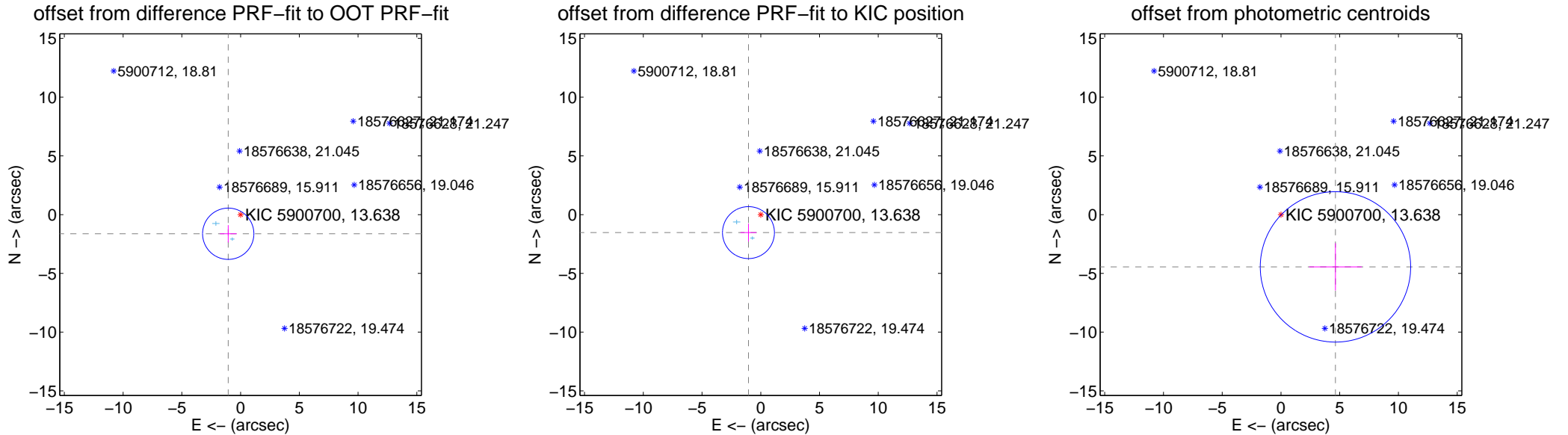
DV Centroid Data

Supplemental centroid analysis for 005900700-01. Kepler magnitude: 13.64. Transit SNR 8.51

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.938 ± 0.728	2.66	1.053 ± 0.710	-1.627 ± 0.735
PRF-fit source offset from KIC position	1.854 ± 0.737	2.52	1.048 ± 0.681	-1.530 ± 0.762
photometric centroid source offset	6.43 ± 2.13	3.01	-4.64 ± 2.24	-4.45 ± 2.01

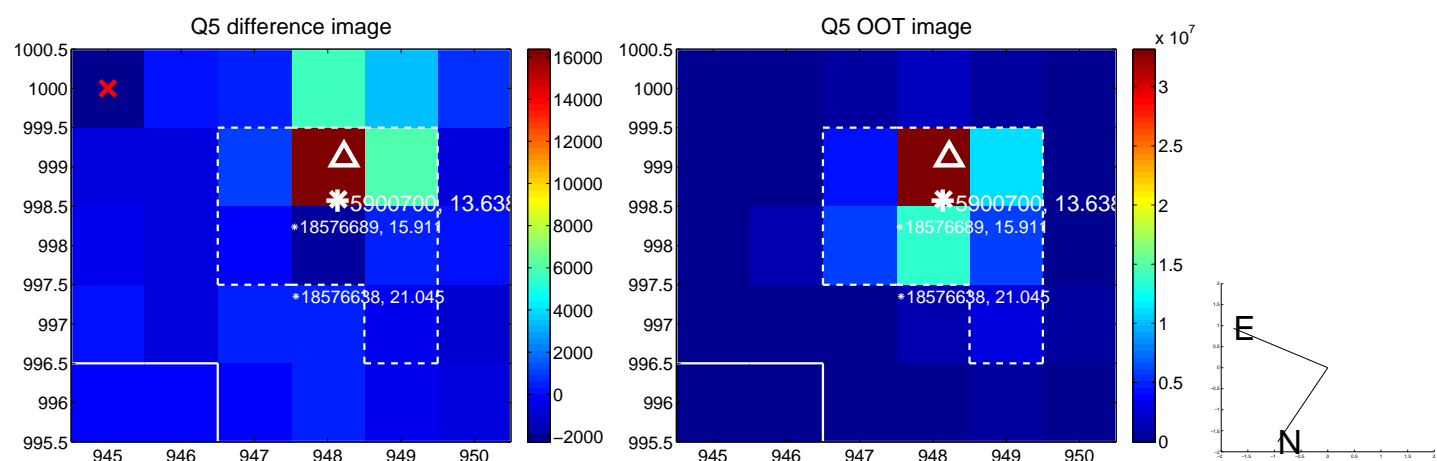


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

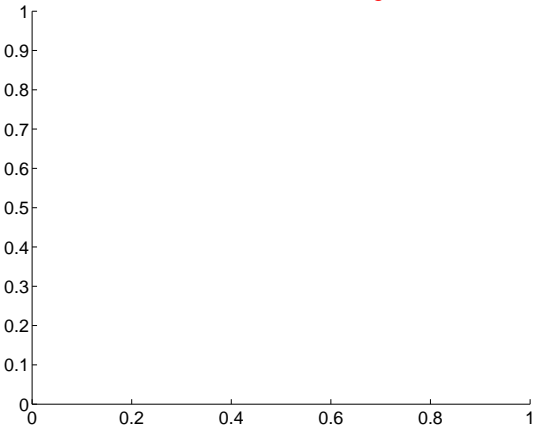
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



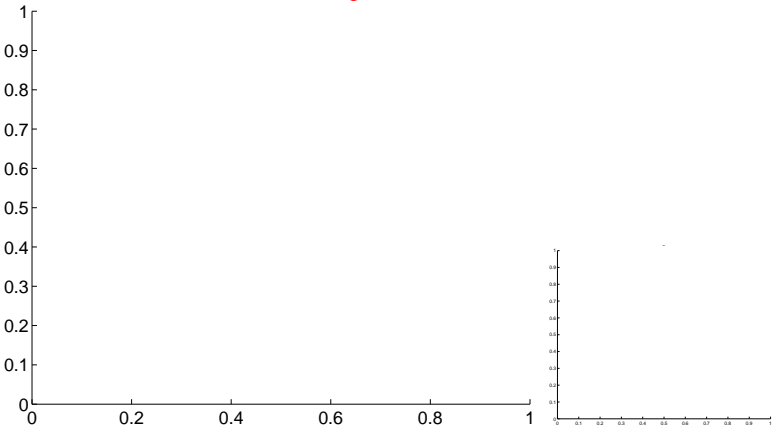
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



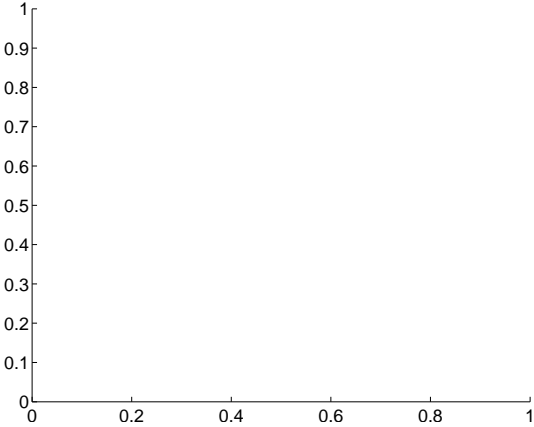
Q6 no difference image



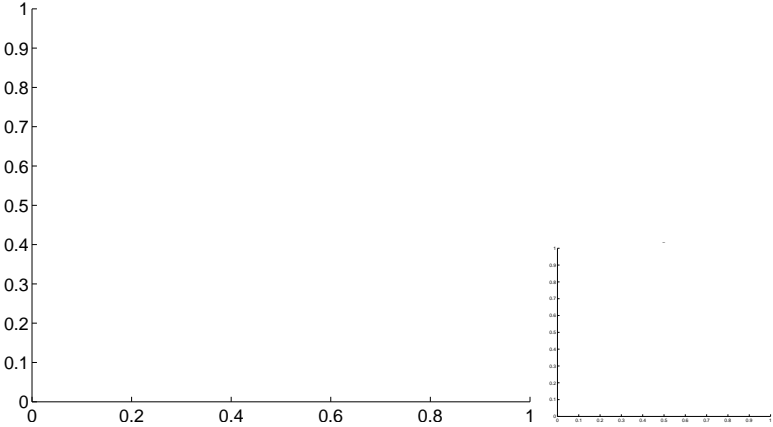
Q6 no OOT image



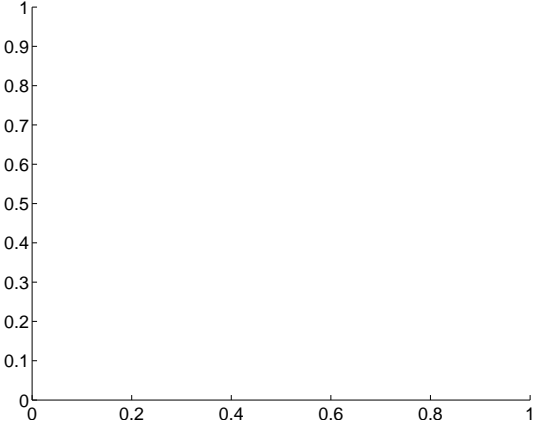
Q7 no difference image



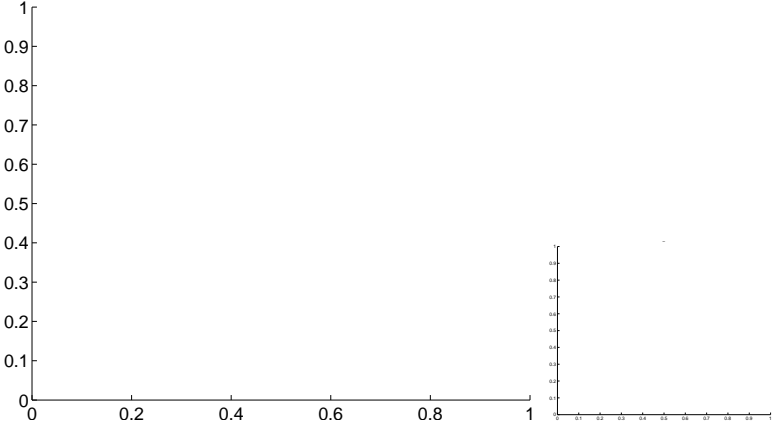
Q7 no OOT image



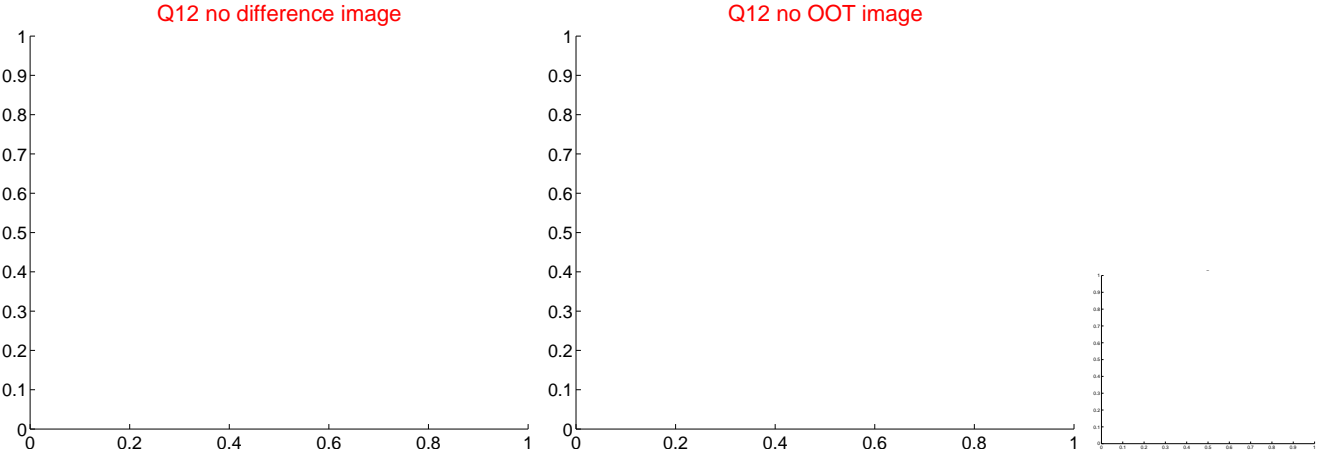
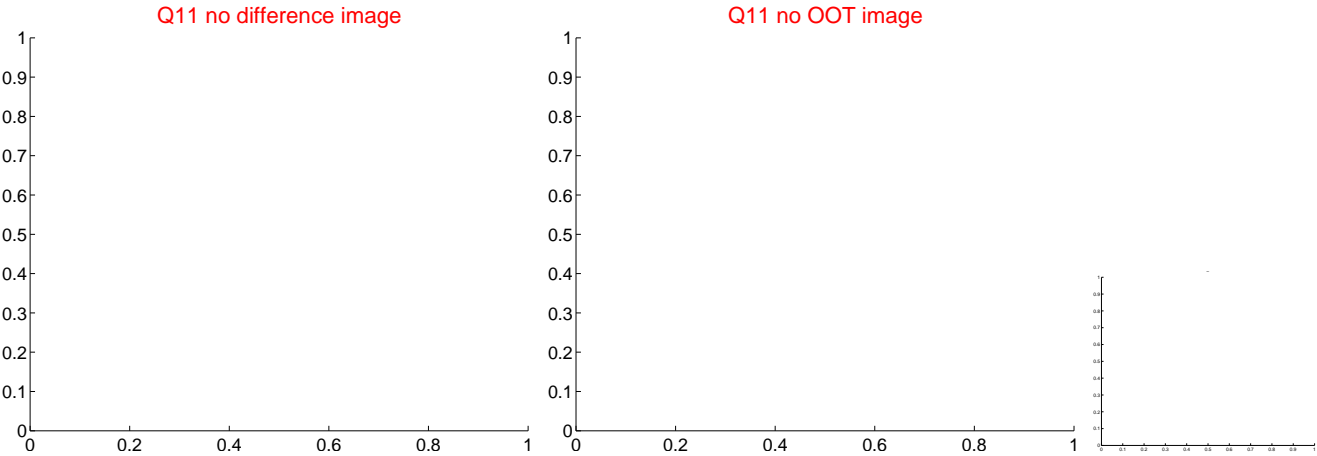
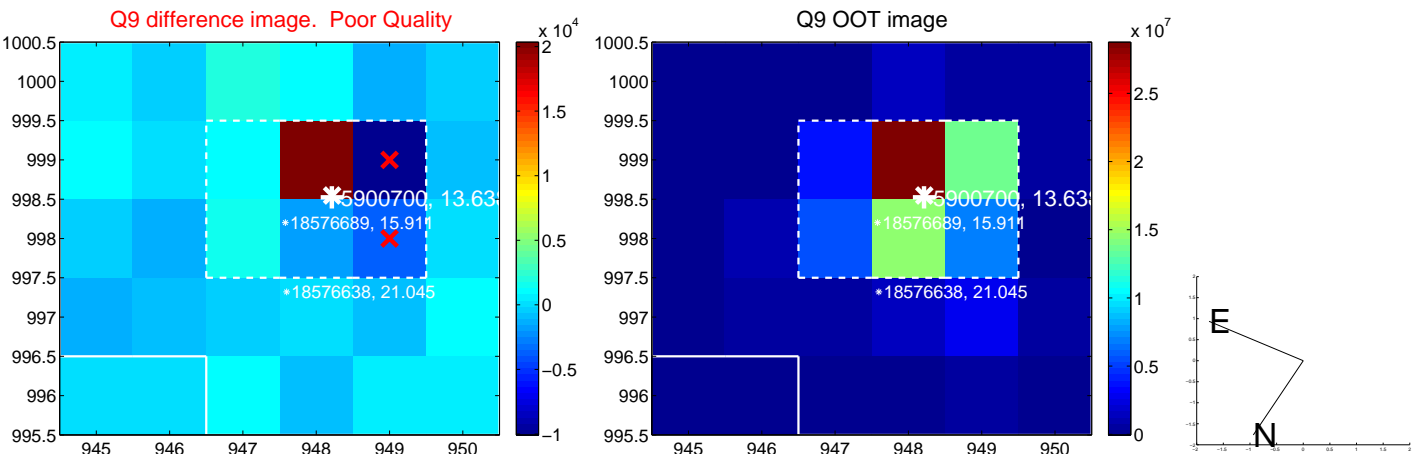
Q8 no difference image



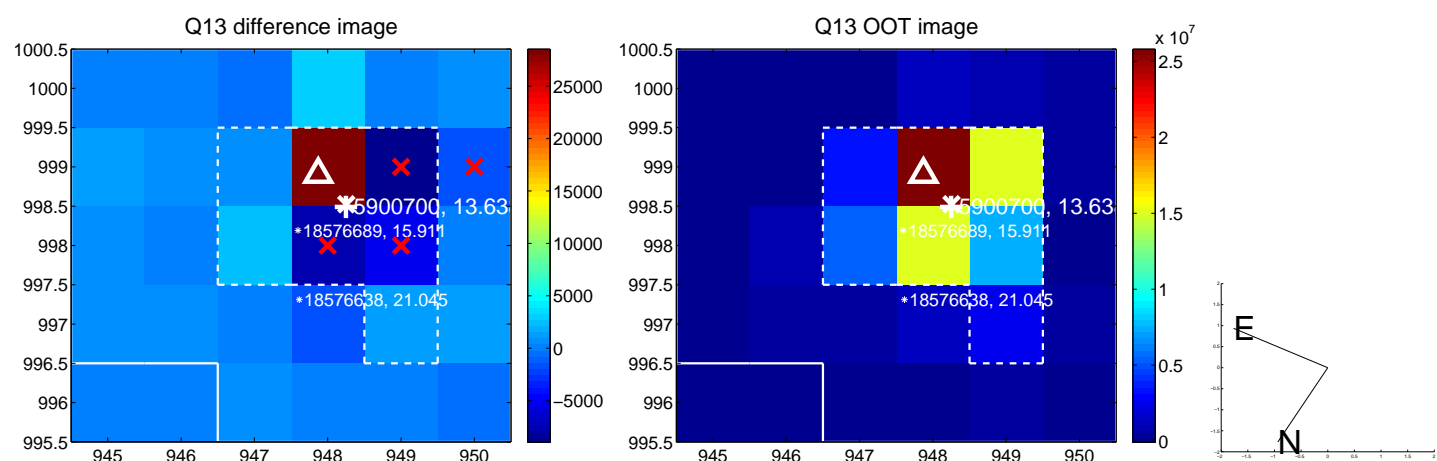
Q8 no OOT image



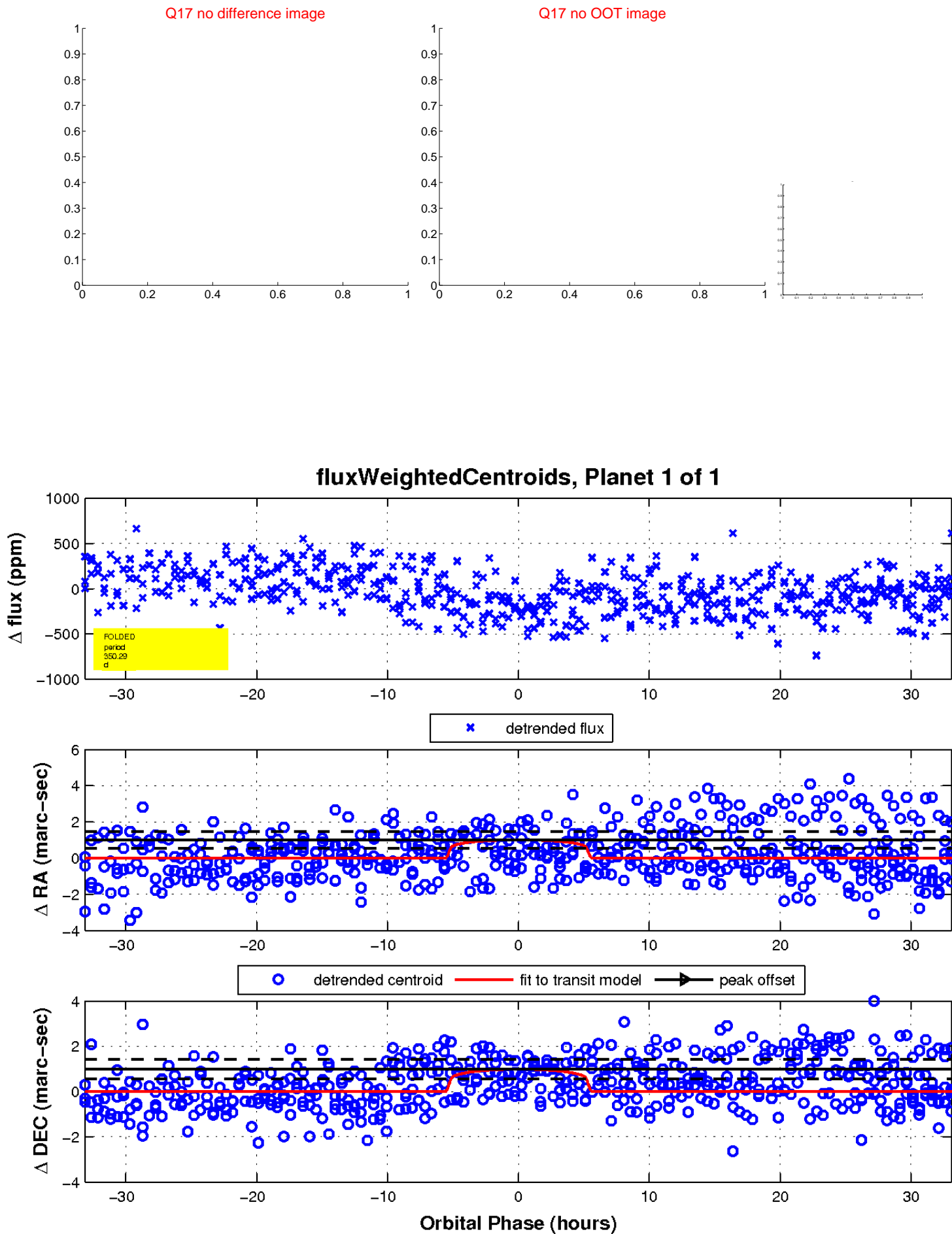
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

