

KIC 005905736

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})
005905736-01	OBS	No	137.308666	166.767500	755.1	2.543	8.2	6.6	8.59	4808	26.90	82.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005905736-01	OBS	FP	0.03	1	0	0	0	MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

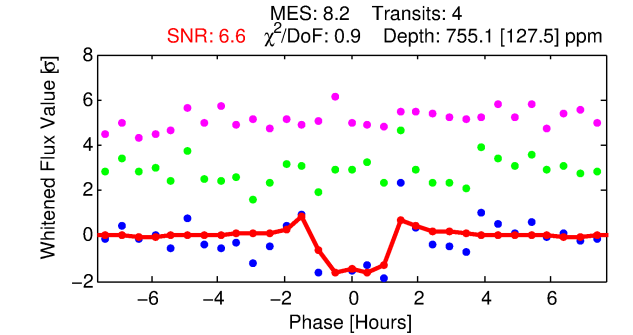
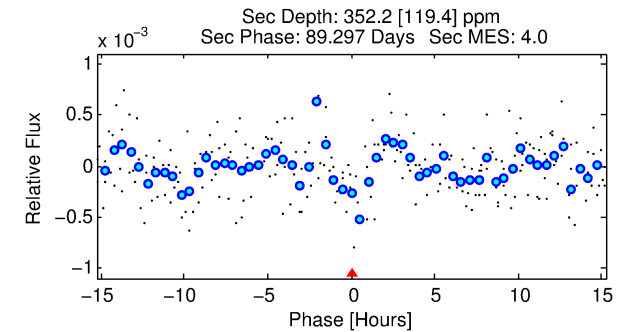
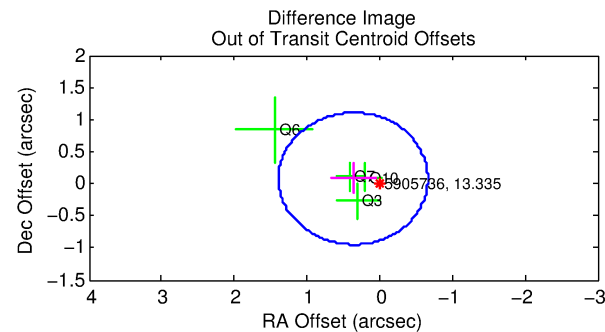
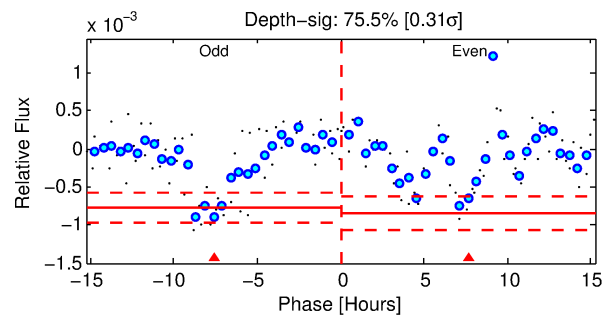
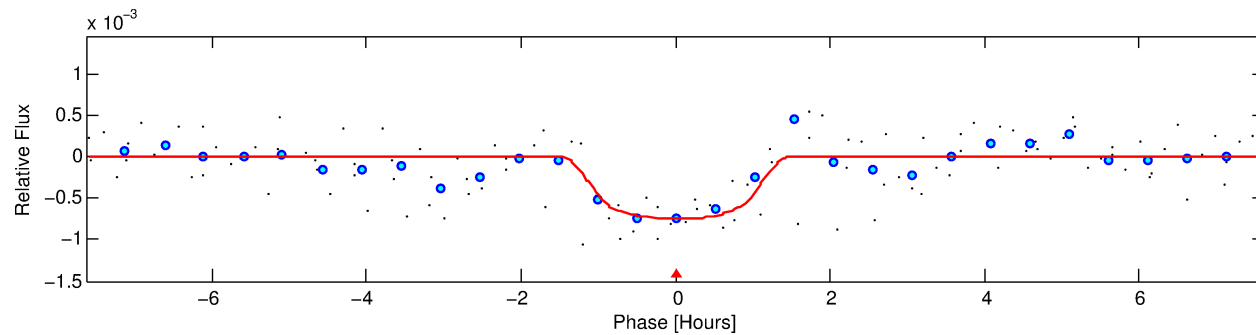
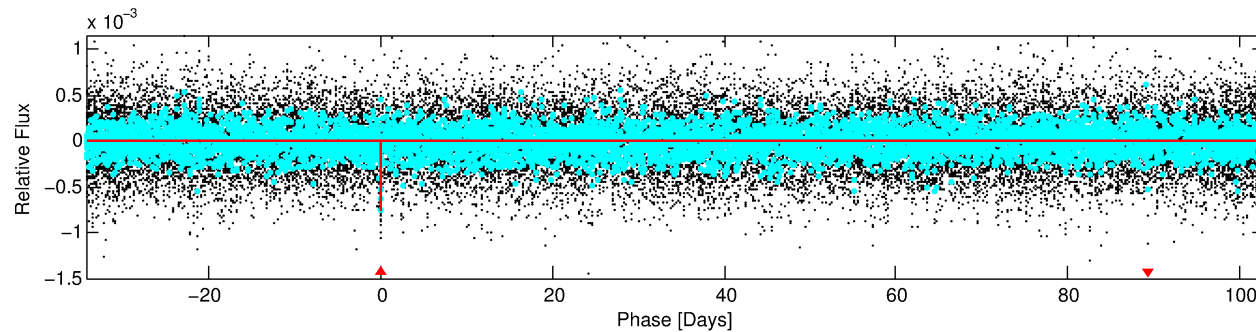
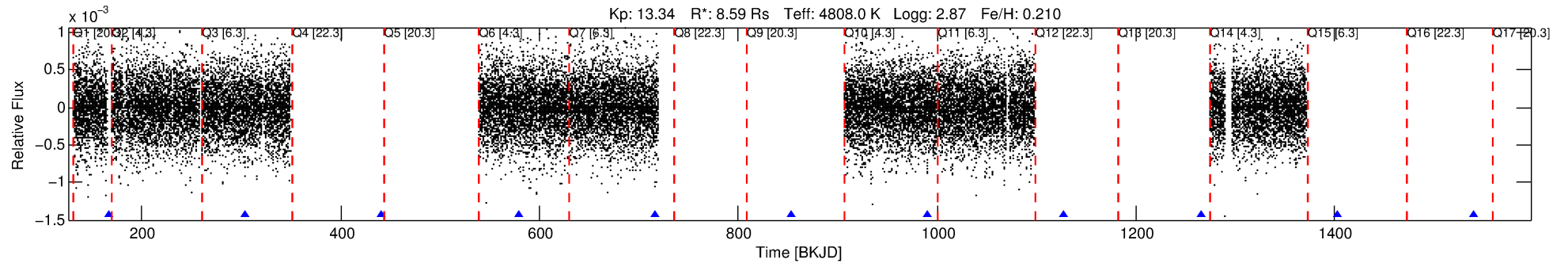
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005905736-01

No Significant Match Found

DV One-Page Summary

KIC: 5905736 Candidate: 1 of 1 Period: 137.309 d



DV Fit Results:

Period = 137.30867 [0.00155] d
Epoch = 166.7675 [0.0063] BKJD
Rp/R* = 0.0287 [0.0232]
a/R* = 256.83 [703.69]
b = 0.82 [1.14]
Seff = 82.13 [13.77]
Teff = 768 [32] K
Rp = 26.90 [22.41] Re
a = 0.6559 [0.0901] AU
Ag = 115.19 [190.86] [0.60 σ]
Teffp = 3888 [1607] K [1.94 σ]

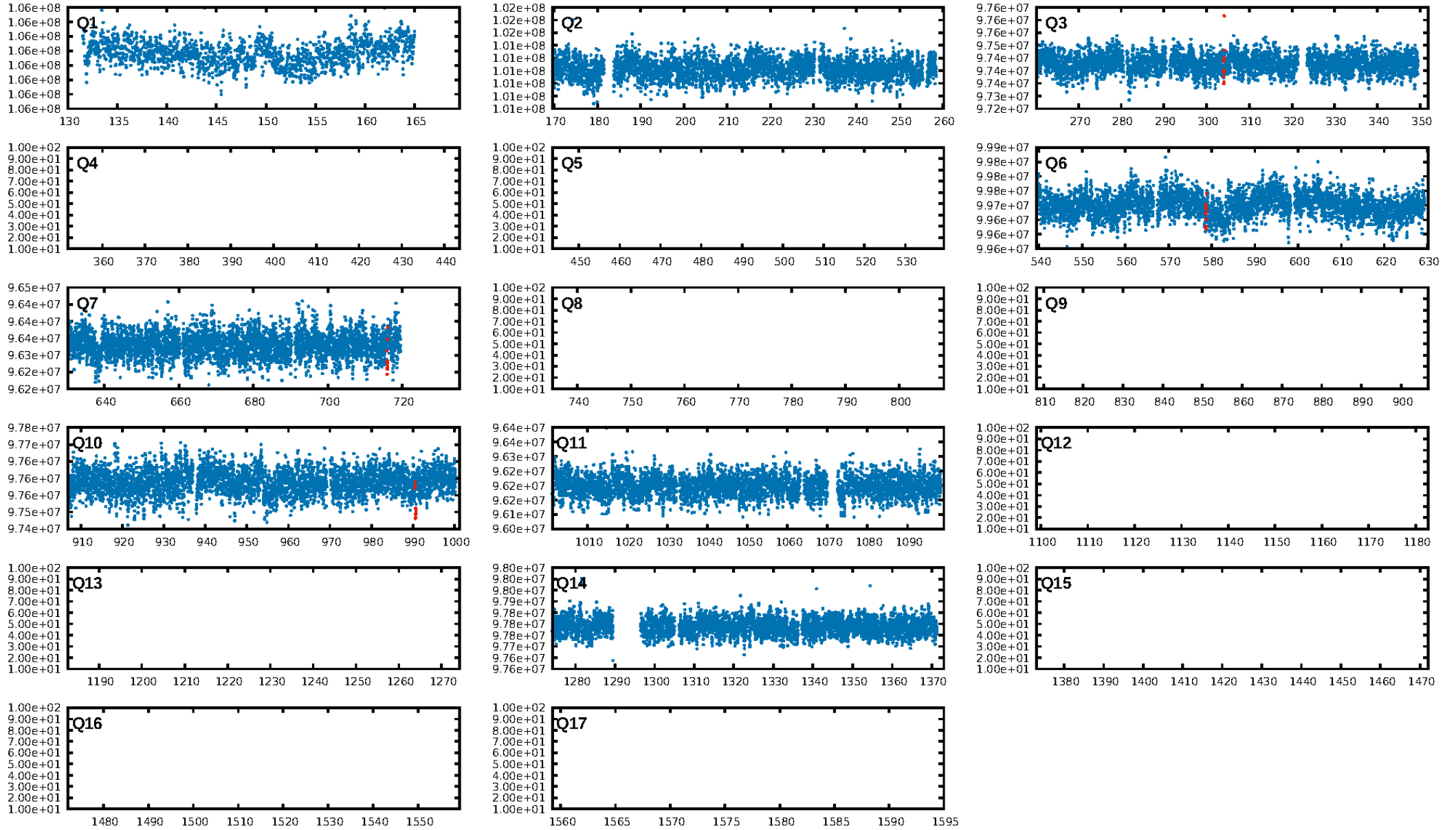
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 72.3%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 2.21e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.263
Centroid-sig: 34.0%
Centroid-so: 0.958 arcsec [1.35 σ]
OotOffset-rm: 0.374 arcsec [1.09 σ]
KicOffset-rm: 0.339 arcsec [1.18 σ]
OotOffset-st: 2/2/0/0 [4]
KicOffset-st: 2/2/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

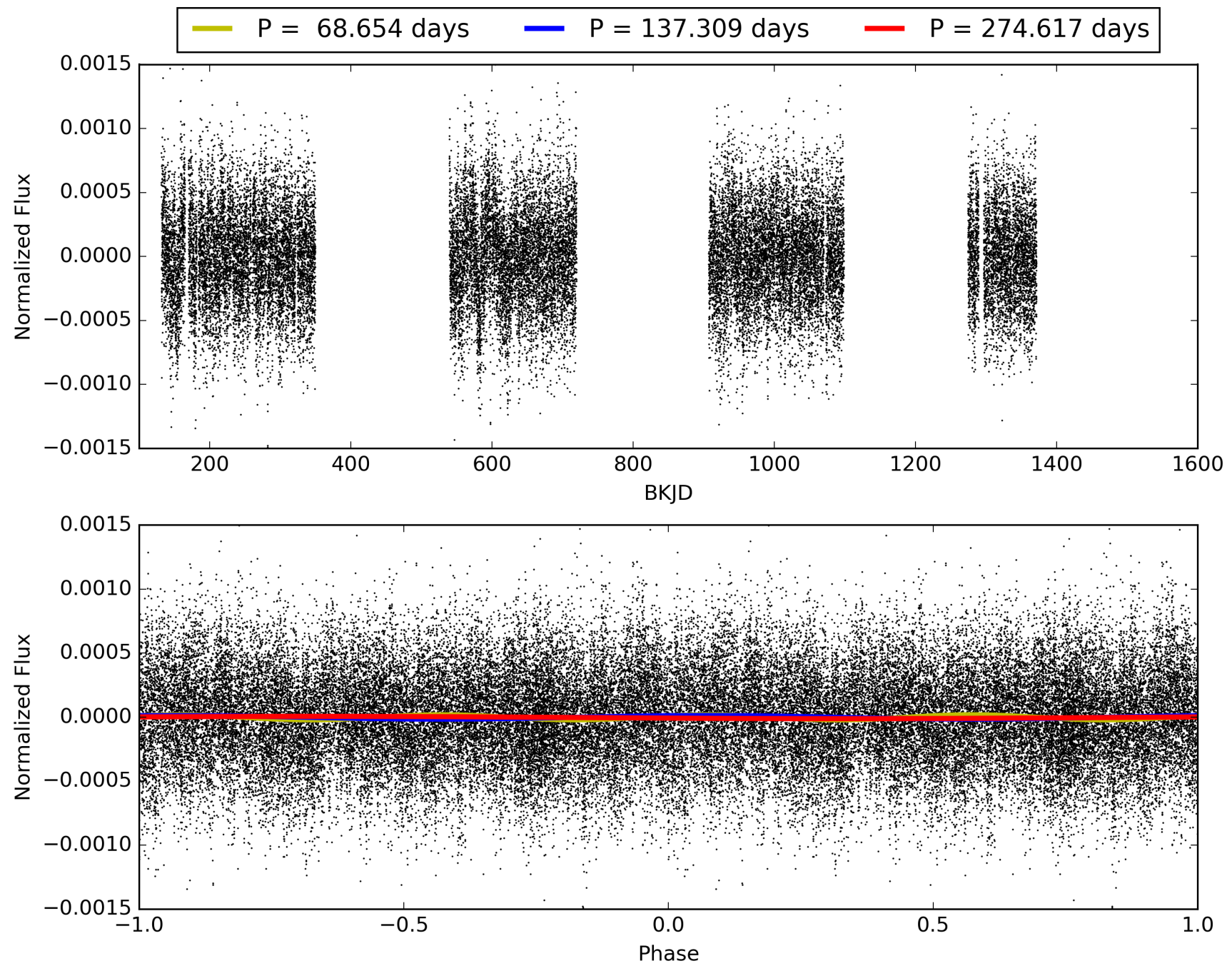
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:24:45 Z

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

TCE 005905736-01, PDC Light Curves

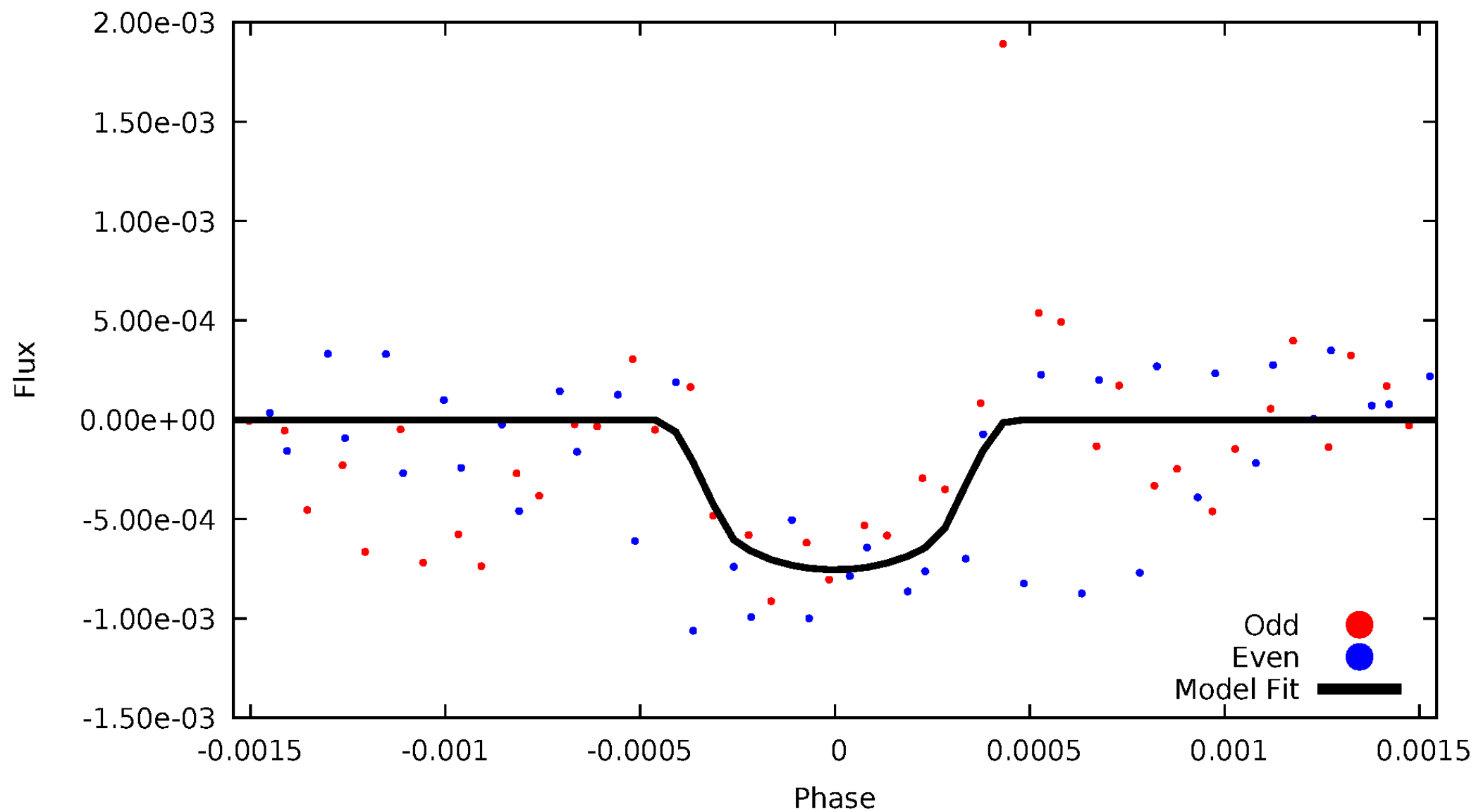


TCE 005905736-01



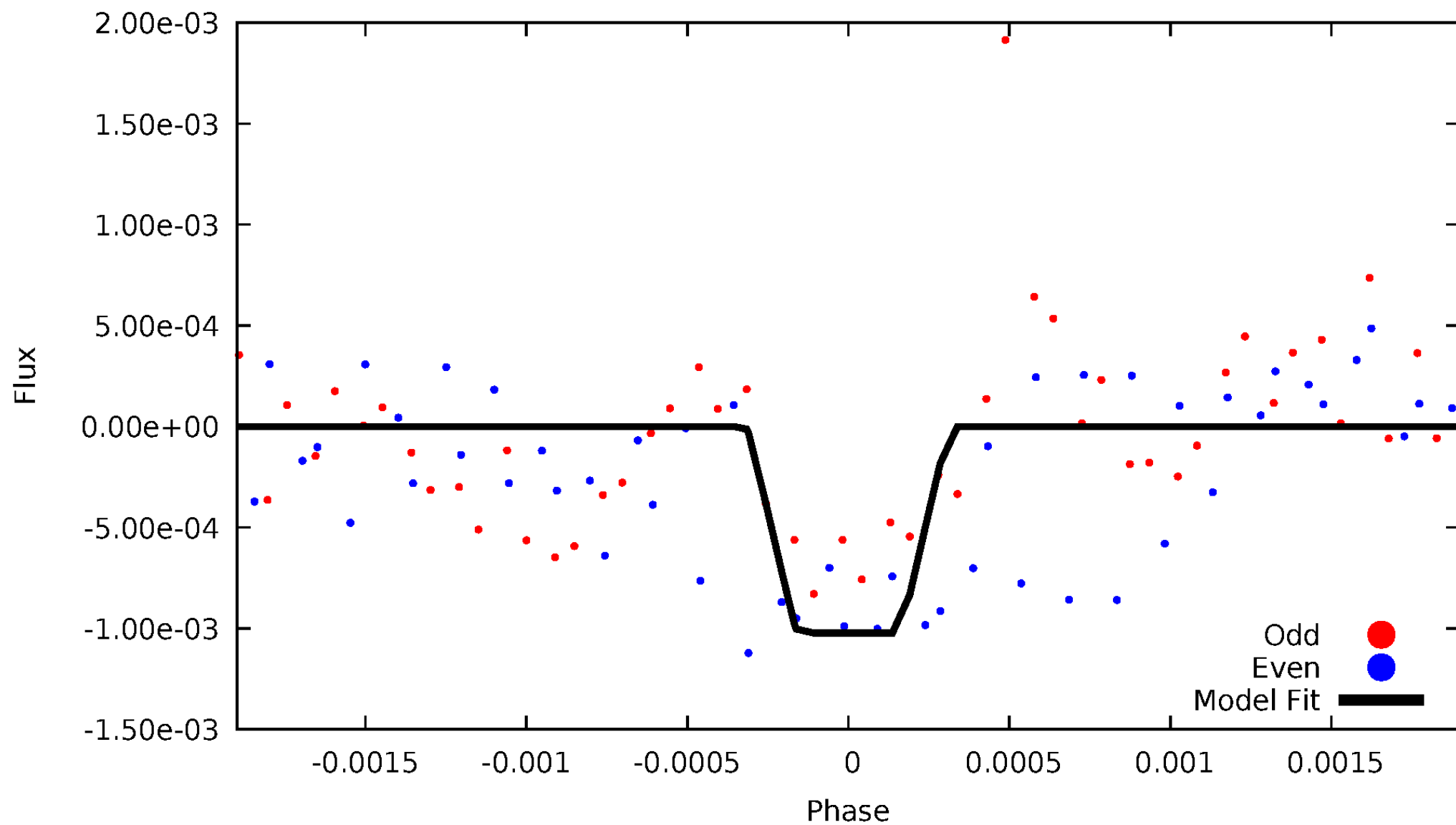
DV Odd/Even

TCE 005905736-01

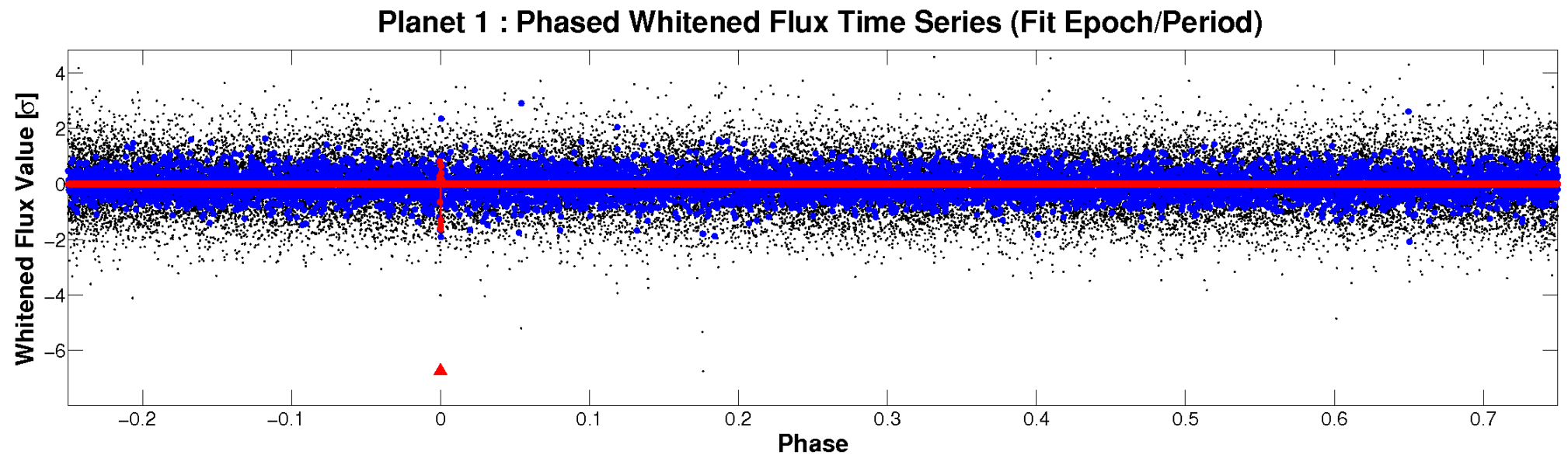
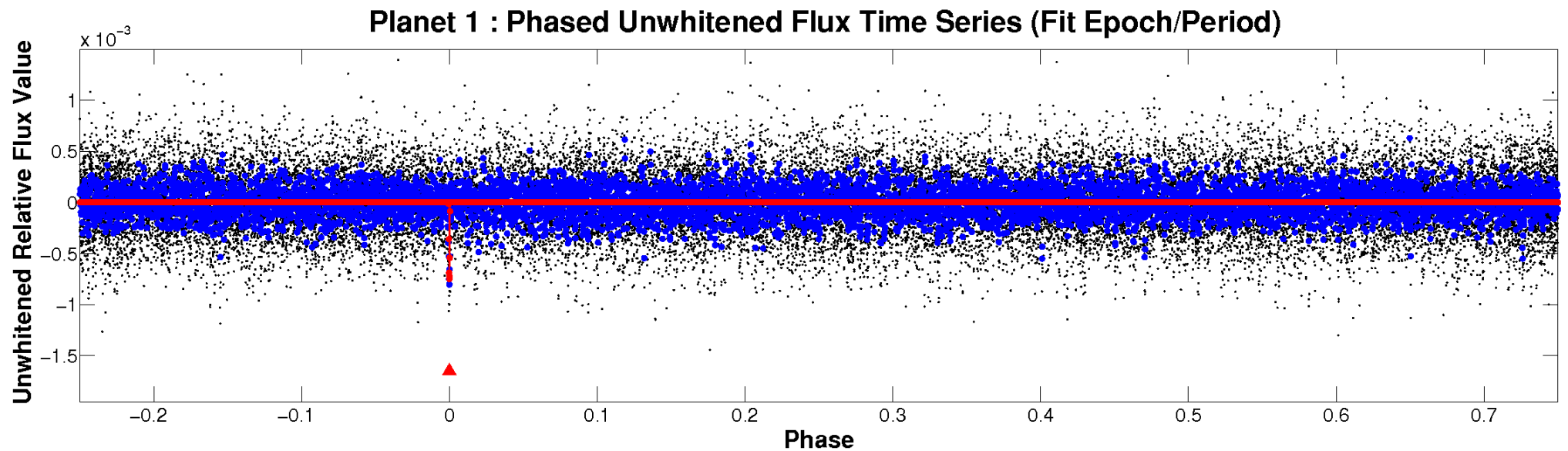


ALT Odd/Even

TCE 005905736-01

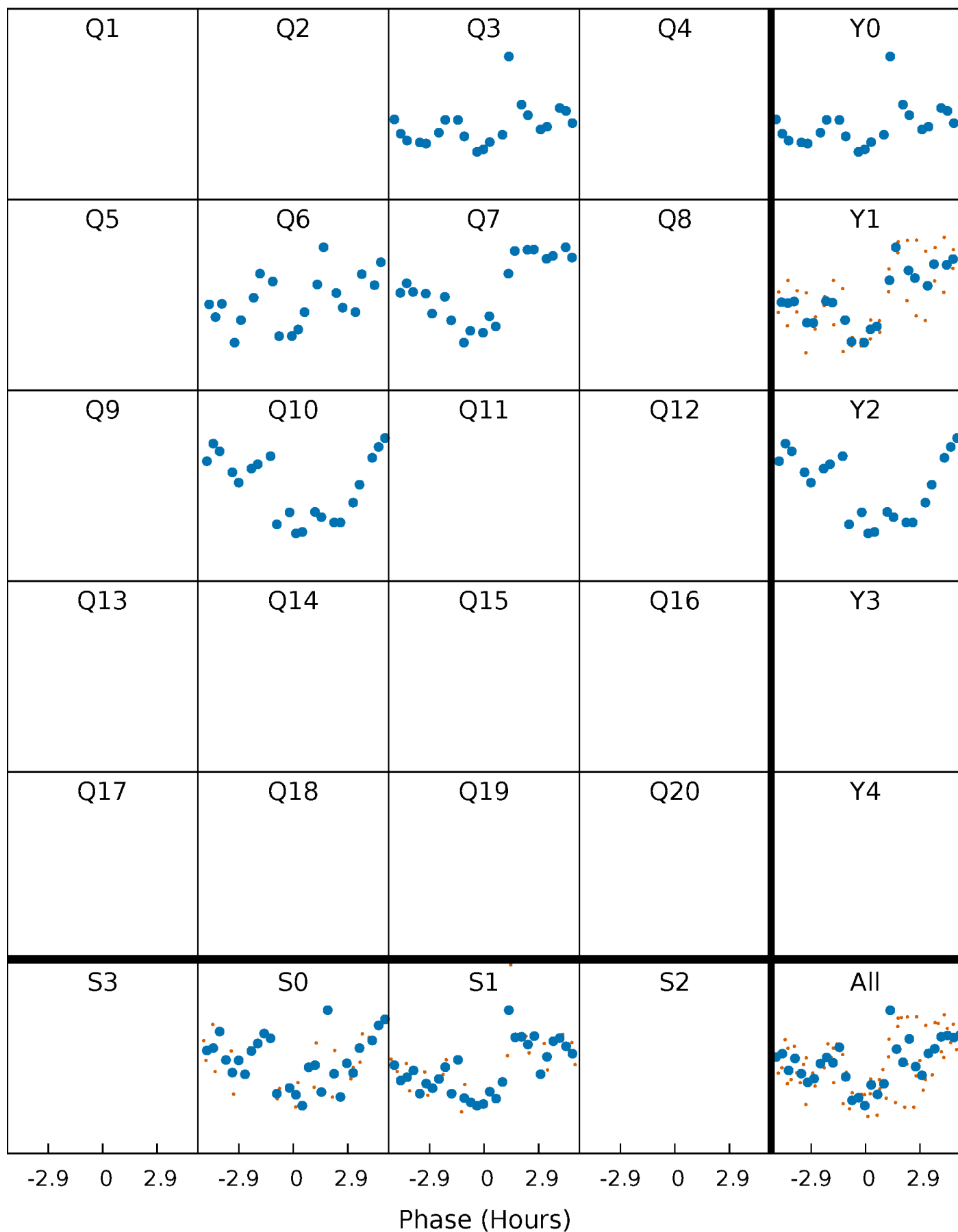


Non-Whitened Vs. Whitened Light Curve



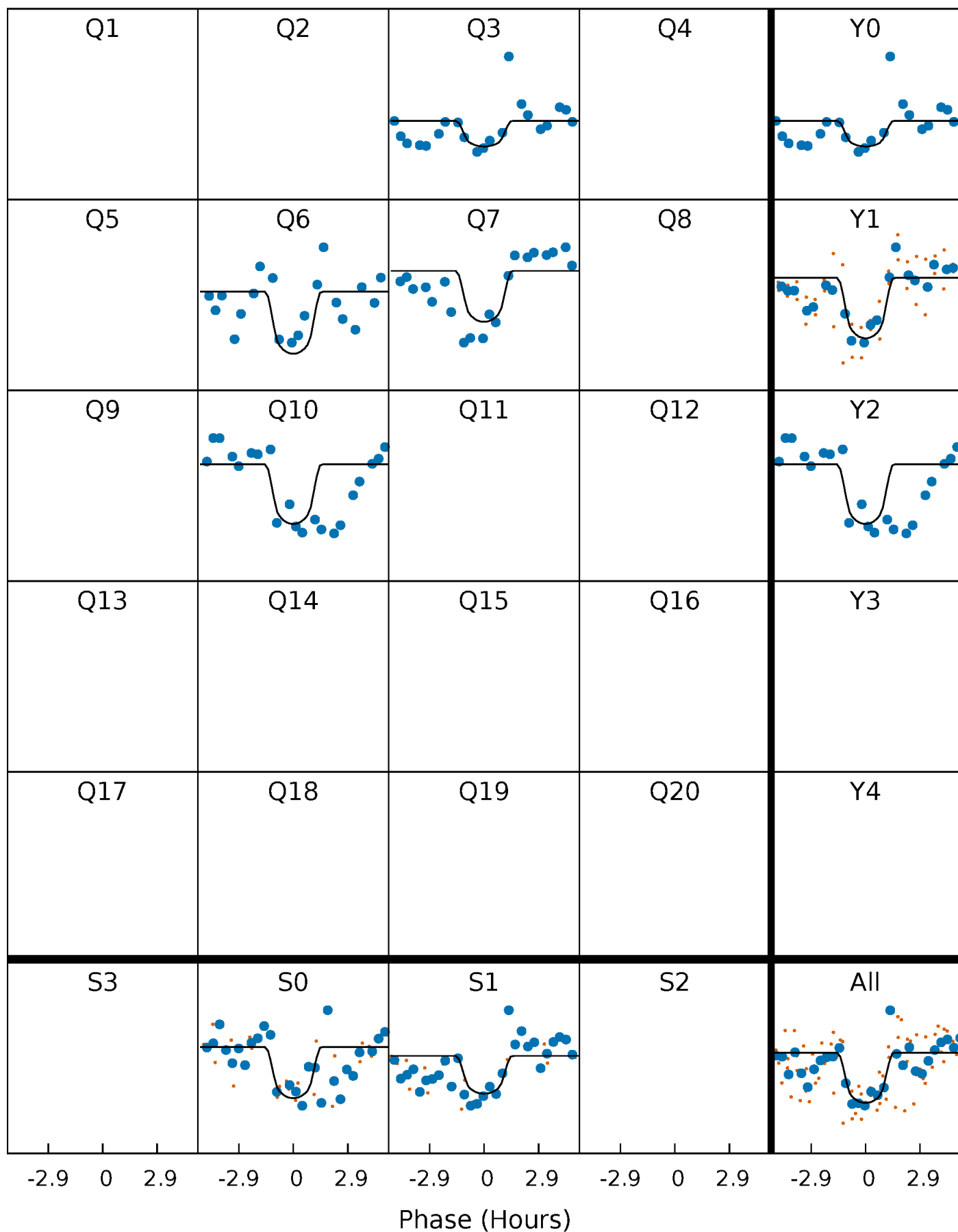
PDC Quarter-Phased Transit Curves

TCE 005905736-01 P=137.308666 Days $T_0=166.767500$ (BKJD)



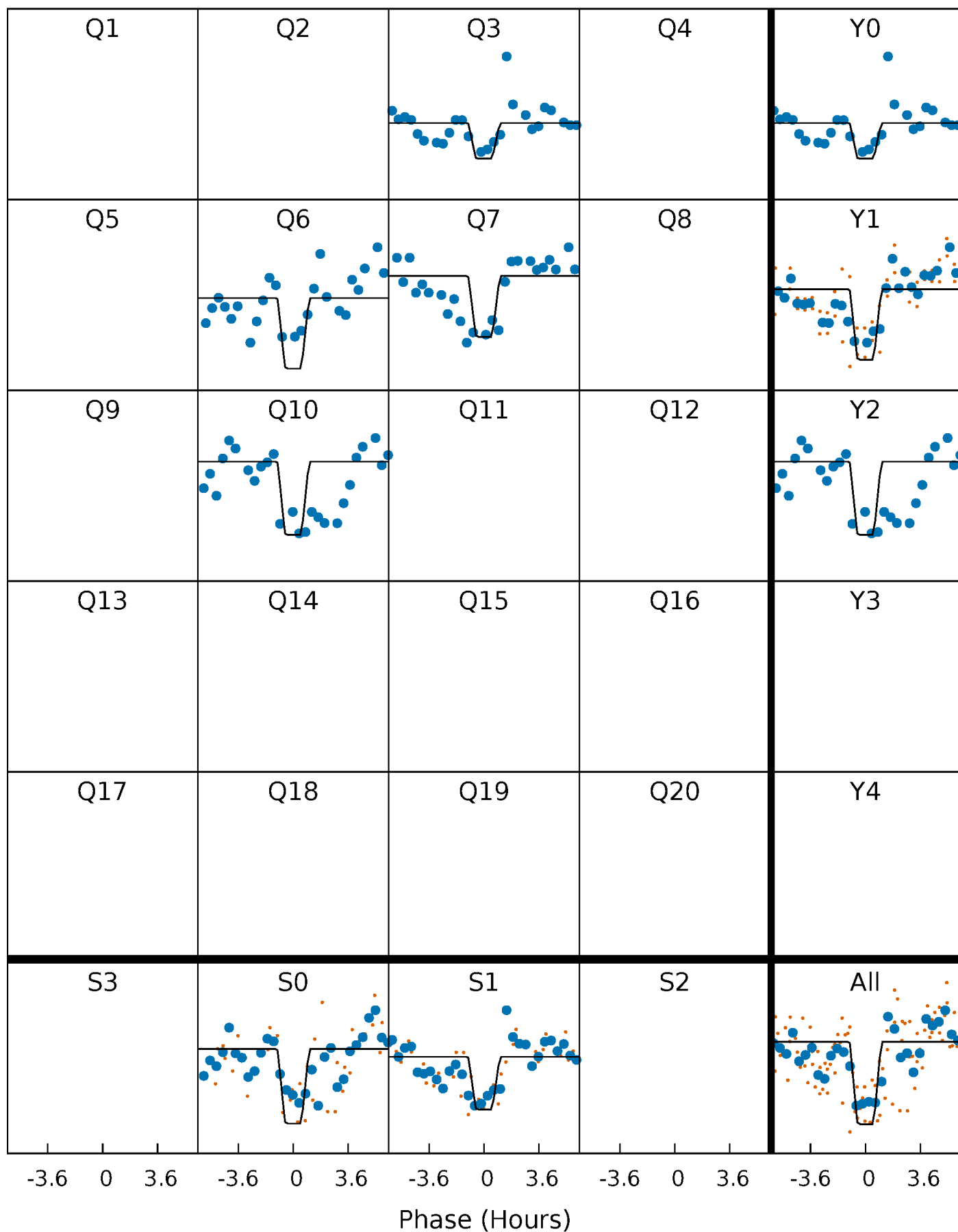
DV Quarter-Phased Transit Curves

TCE 005905736-01 P=137.308666 Days $T_0=166.767500$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

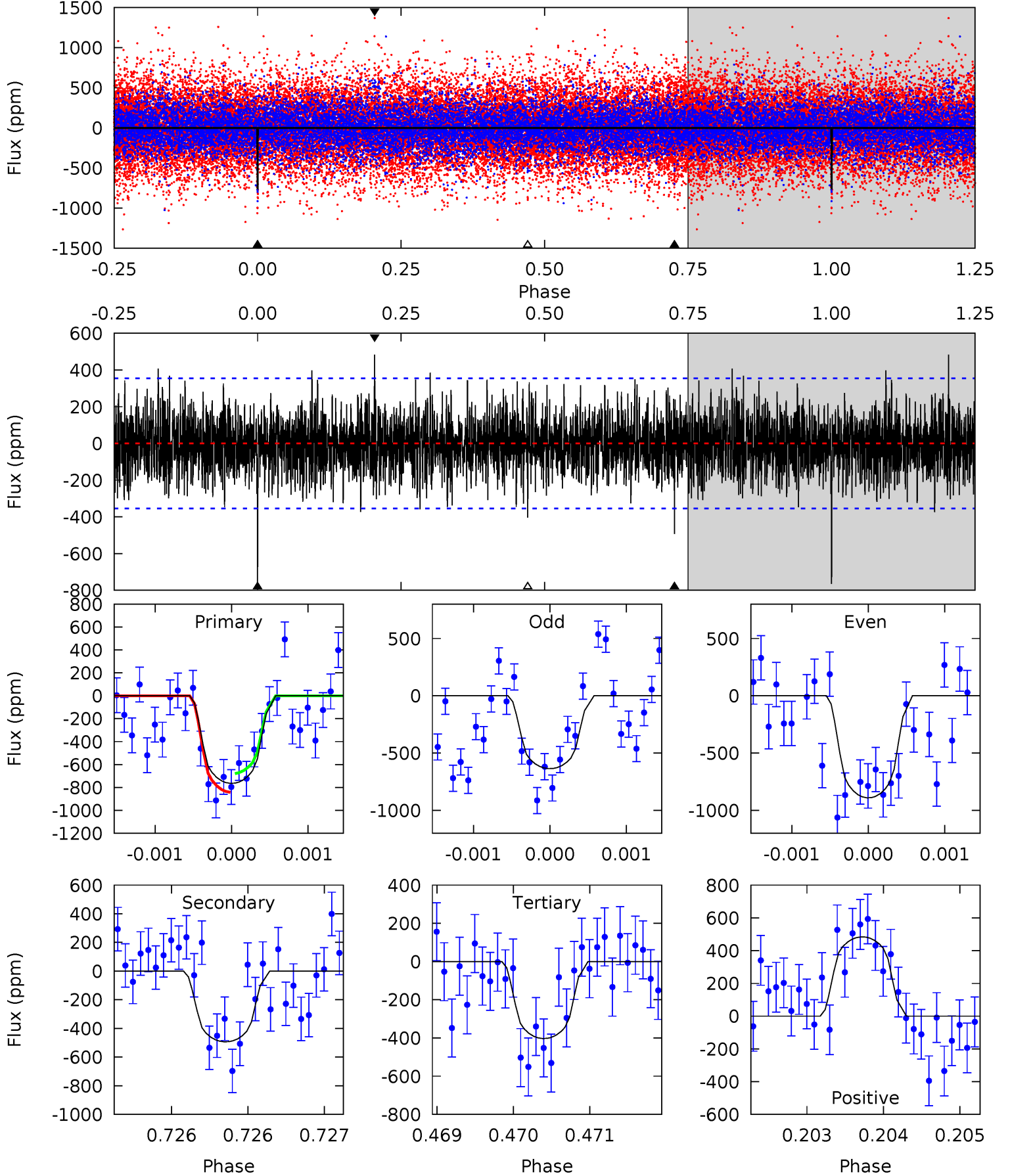
TCE 005905736-01 P=137.308785 Days $T_0=166.759629$ (BKJD)



DV Model-Shift Uniqueness Test

005905736-01, $P = 137.308666$ Days, $E = 29.458834$ Days

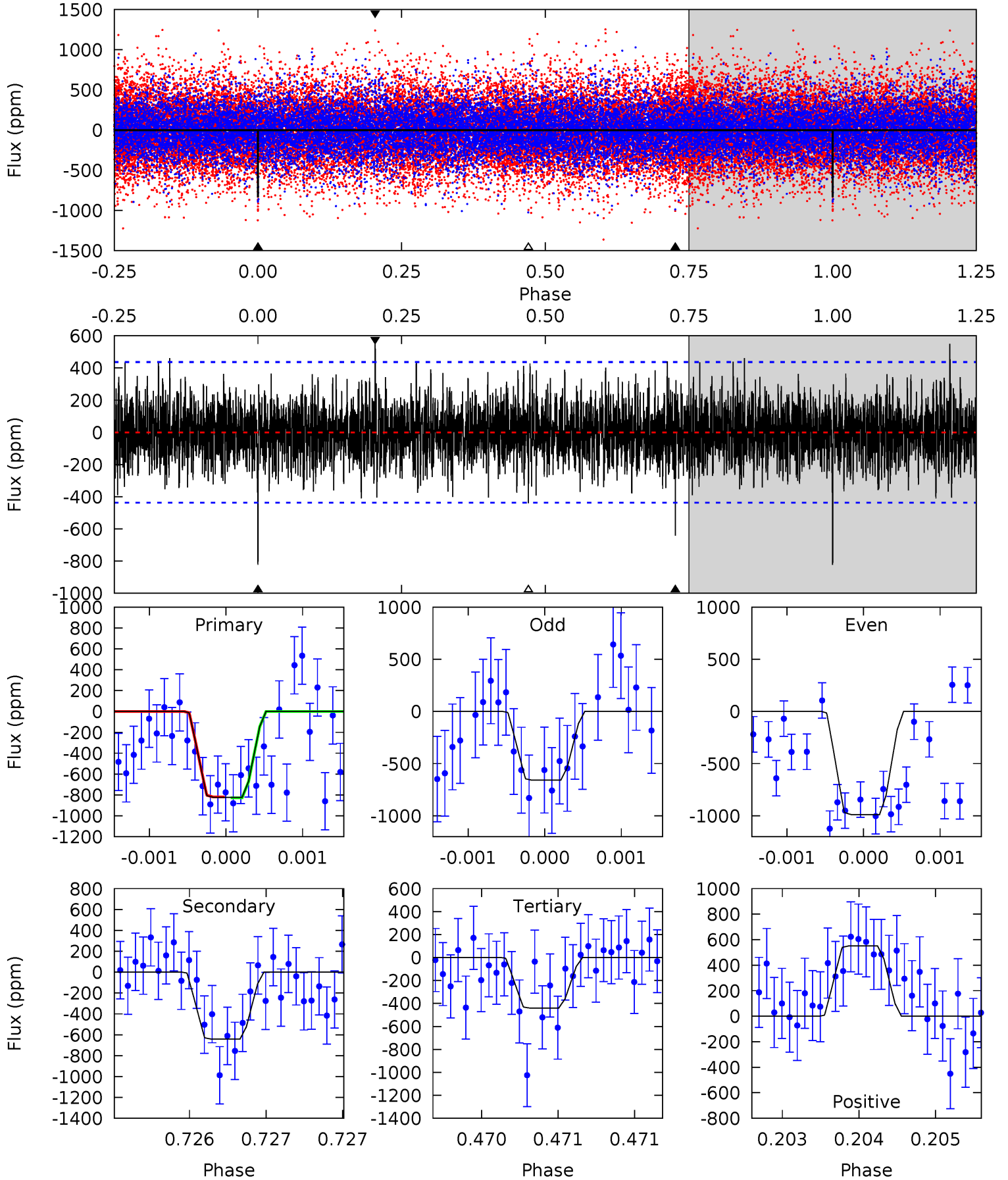
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	7.63	6.23	7.48	5.48	3.34	1.81	5.59	4.34	1.40	0.15	1.97	0.97	0.39	1.26



Alt Model-Shift Uniqueness Test

005905736-01, $P = 137.308785$ Days, $E = 29.450844$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	8.12	5.57	6.97	5.53	3.41	1.65	4.84	3.44	2.55	1.15	2.09	0.95	0.40	0.05



Stellar Parameters For KIC 005905736

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4808^{+47}_{-105}	$2.870^{+0.030}_{-0.030}$	$0.210^{+0.100}_{-0.200}$	$8.591^{+0.582}_{-1.745}$	$1.996^{+0.234}_{-0.701}$	$0.004^{+0.001}_{-0.000}$
	+1%/-2%	+1%/-1%	+48%/-95%	+7%/-20%	+12%/-35%	+27%/-11%
Source	SPE74	AST9	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005905736-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-494 ± 65	$30.76^{+20.67}_{-16.93}$	1070^{+22}_{-29}	4112^{+1660}_{-665}	123^{+499}_{-79}
Alt.	-641 ± 79	$31.75^{+21.23}_{-18.29}$	1072^{+20}_{-30}	4273^{+1905}_{-700}	152^{+706}_{-100}

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

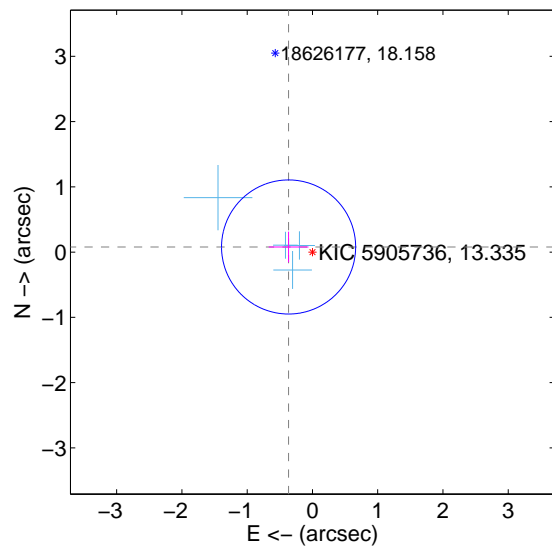
Supplemental centroid analysis for 005905736-01. Kepler magnitude: 13.34. Transit SNR 6.55

There are 4 quarters with good PRF difference image offsets

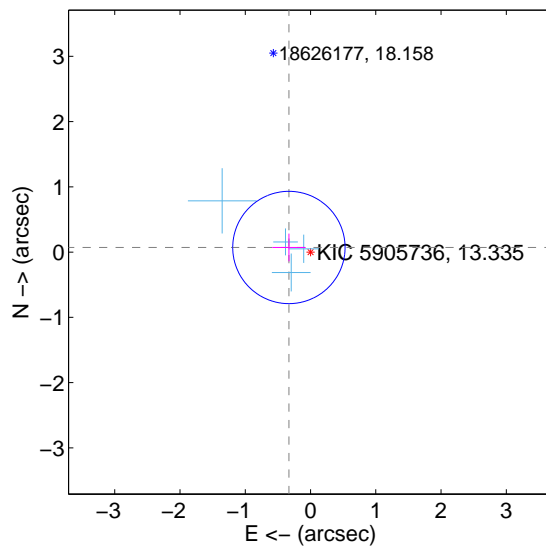
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.374 ± 0.342	1.09	0.365 ± 0.305	0.078 ± 0.234
PRF-fit source offset from KIC position	0.339 ± 0.287	1.18	0.331 ± 0.256	0.071 ± 0.212
photometric centroid source offset	0.96 ± 0.71	1.35	0.88 ± 0.72	-0.37 ± 0.67

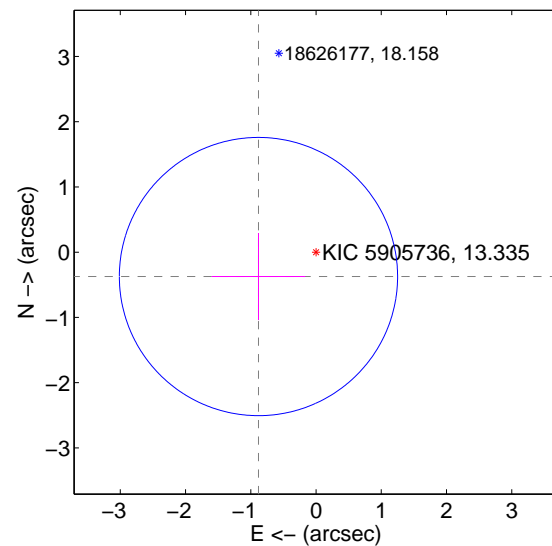
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

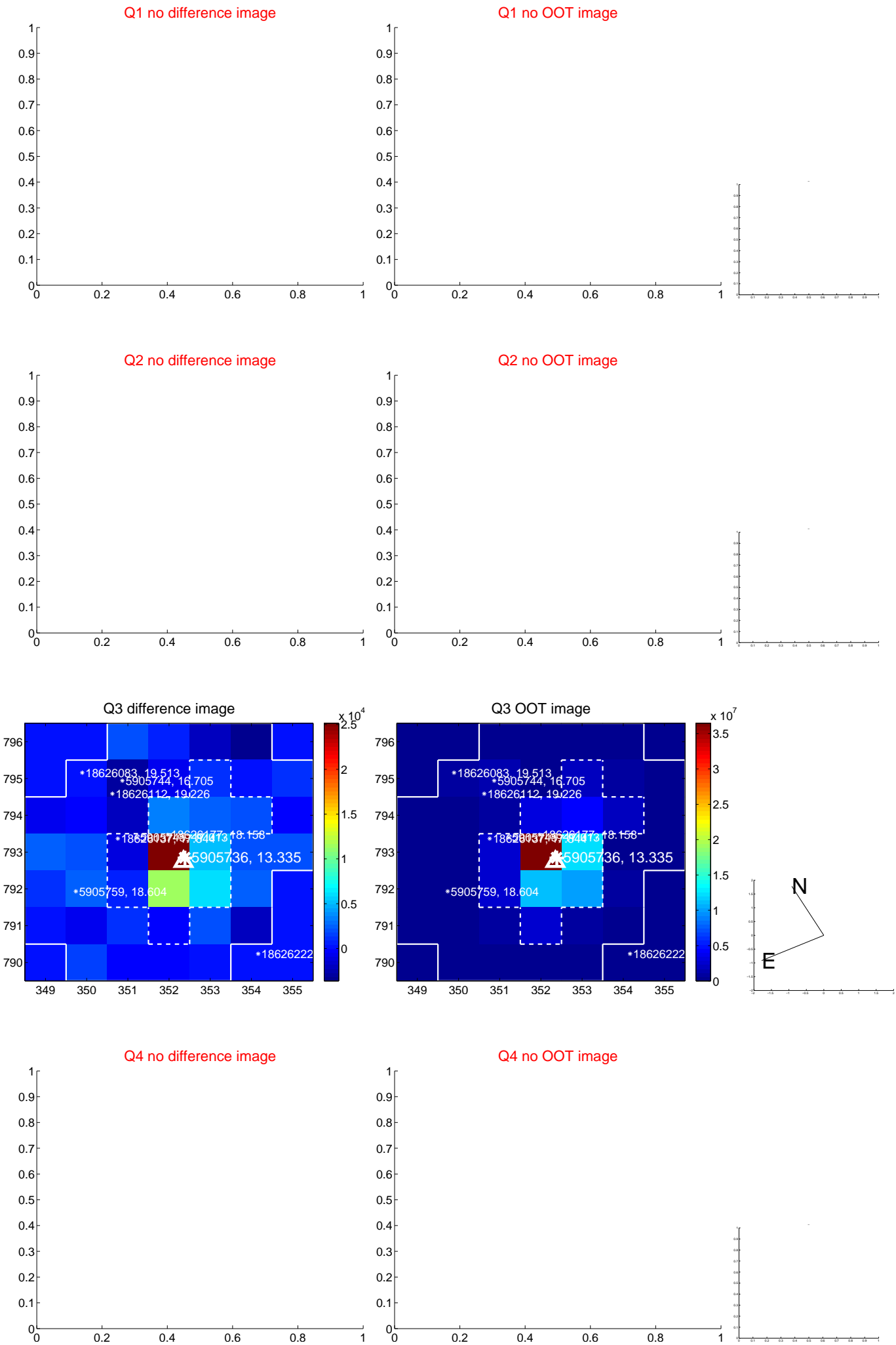


offset from photometric centroids



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.

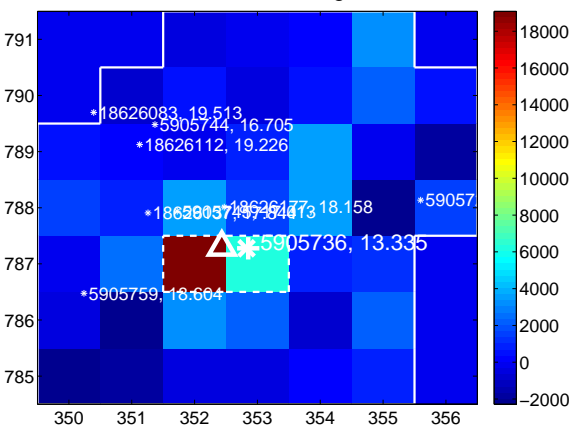
Q5 no difference image



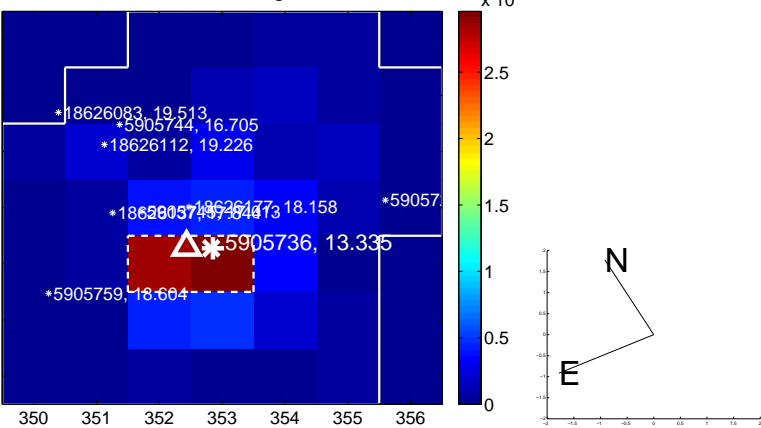
Q5 no OOT image



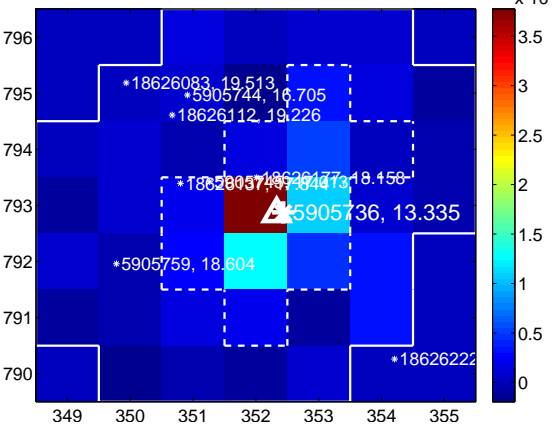
Q6 difference image



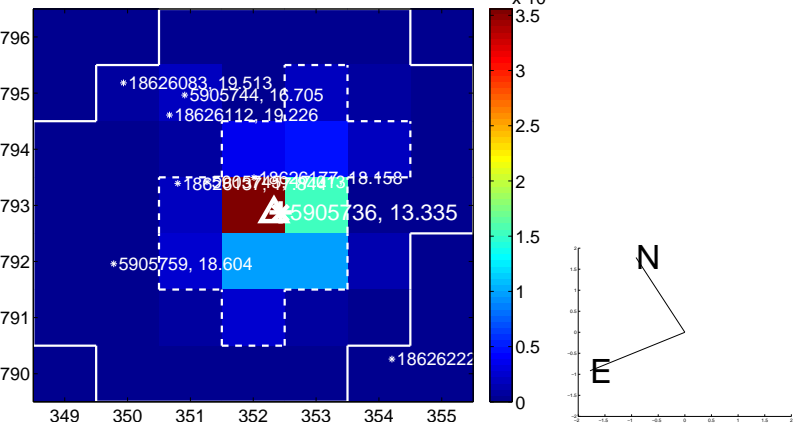
Q6 OOT image



Q7 difference image



Q7 OOT image



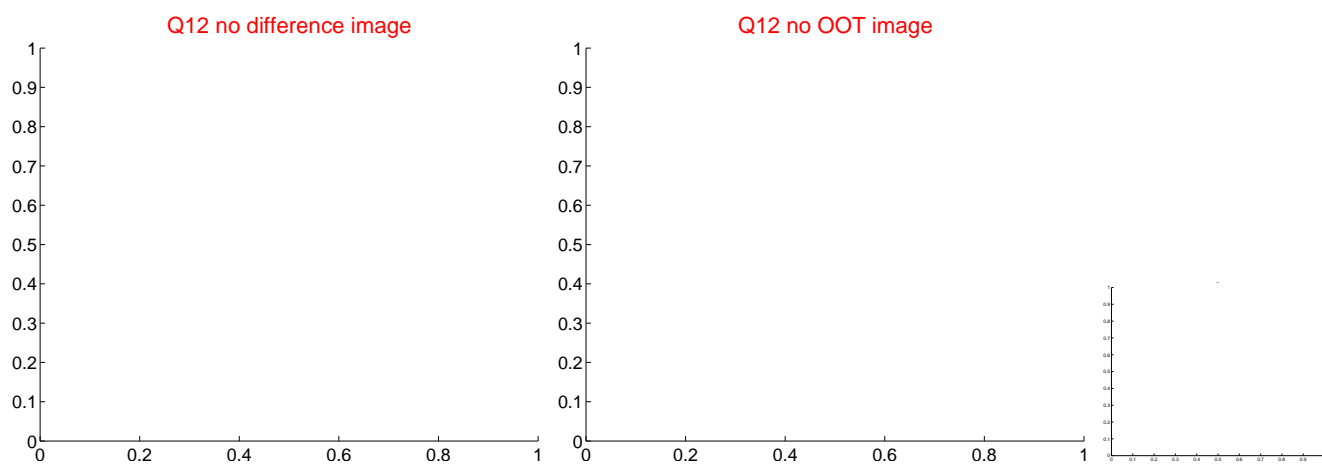
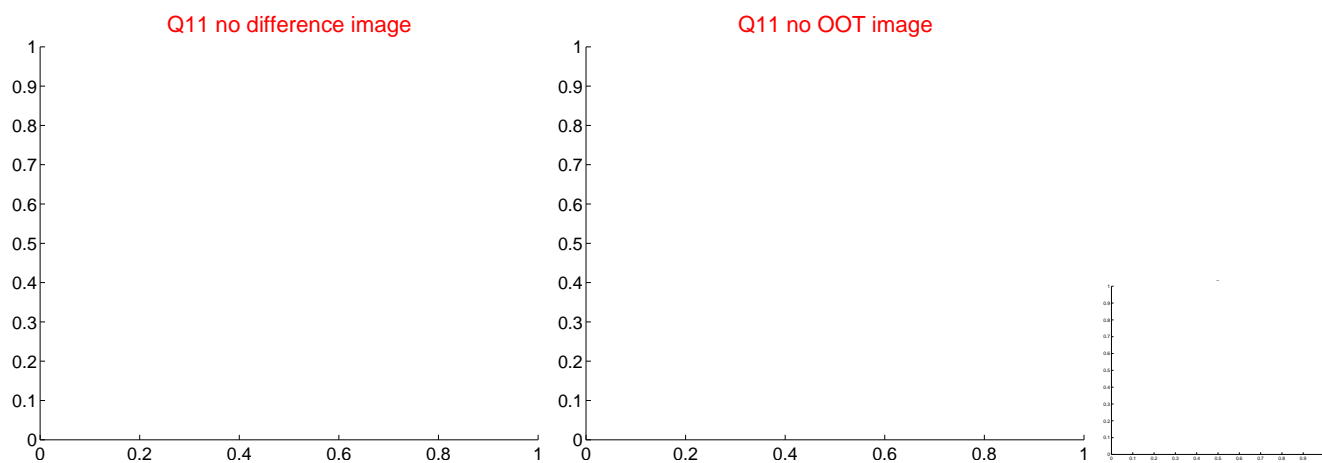
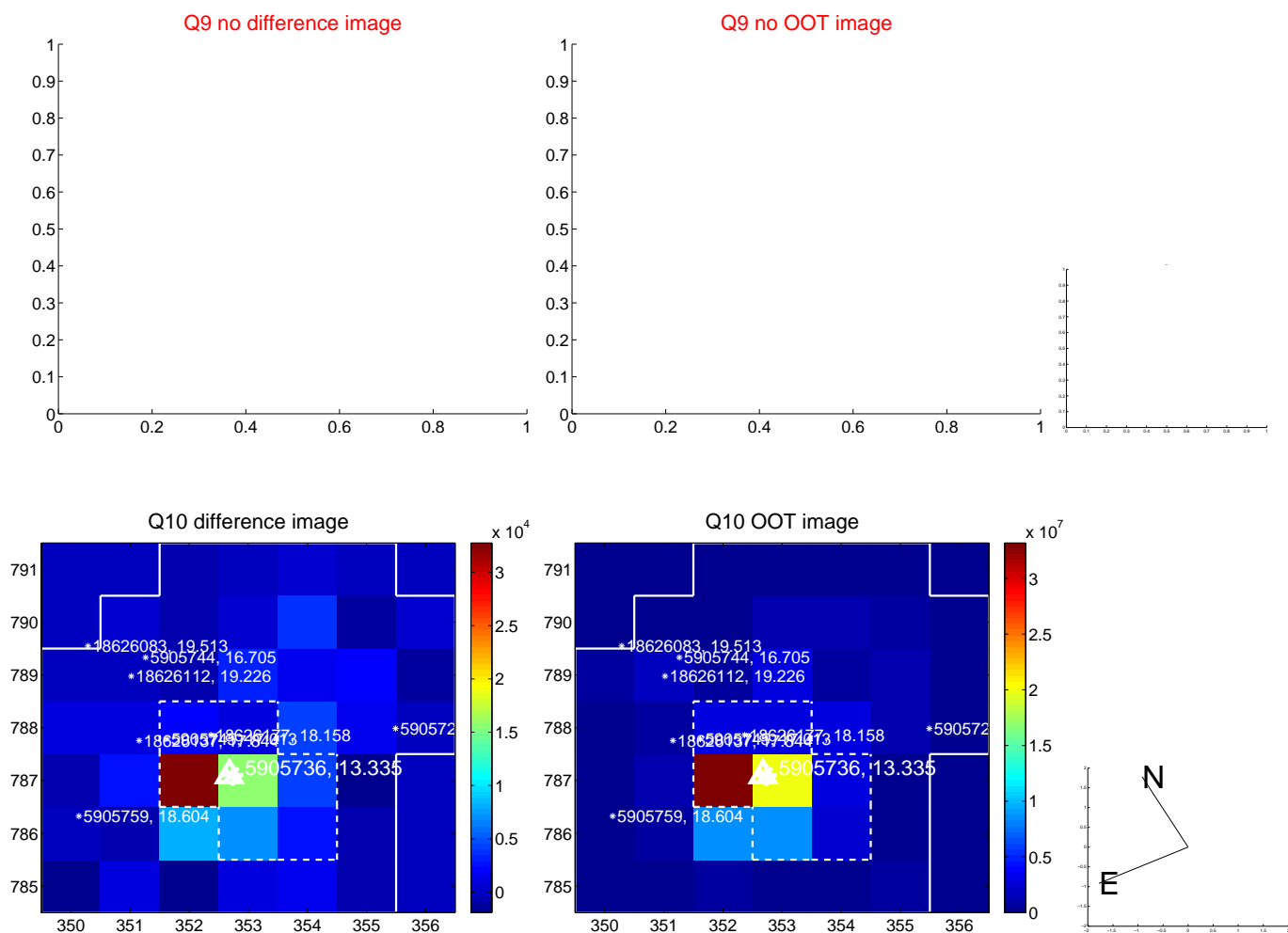
Q8 no difference image



Q8 no OOT image



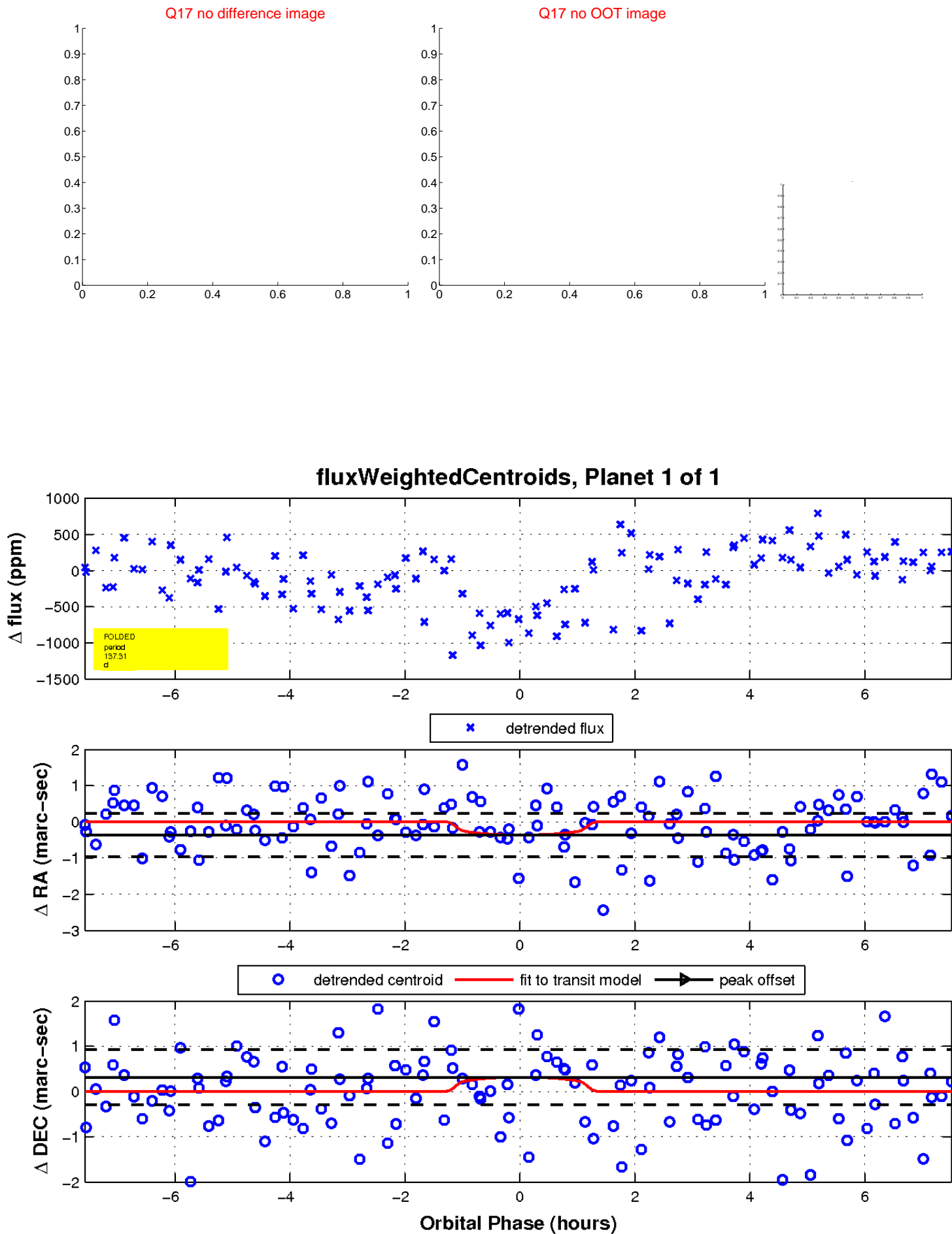
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

