

KIC 007339343

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})
007339343-01	OBS	No	549.780387	343.862346	292.3	1.775	17.7	2.9	1.14	5810	1.94	0.79
007339343-02	OBS	No	283.809701	363.994376	658.4	5.006	16.9	4.2	1.14	5810	3.05	1.90
007339343-03	OBS	No	461.550319	530.762357	986.5	3.999	13.8	6.3	1.14	5810	3.59	0.99
007339343-04	OBS	No	205.330487	273.985390	517.8	2.845	15.3	5.5	1.14	5810	2.57	2.93
007339343-05	OBS	No	401.562397	462.653514	2026.5	13.375	16.5	7.4	1.14	5810	5.58	1.20
007339343-06	OBS	No	298.132452	212.574332	224.4	6.000	14.0	-1.0	1.14	5810	1.69	1.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007339343-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

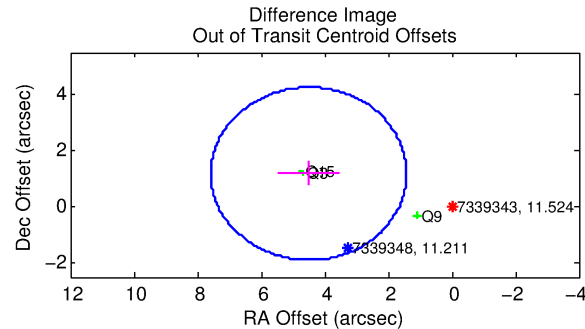
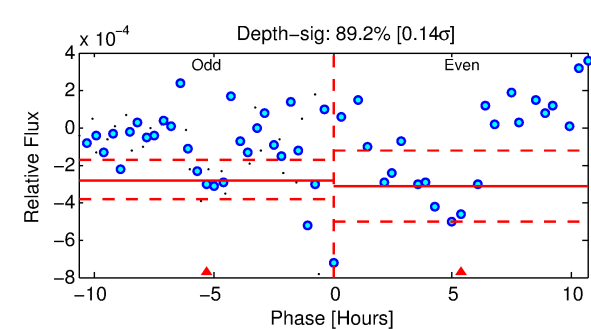
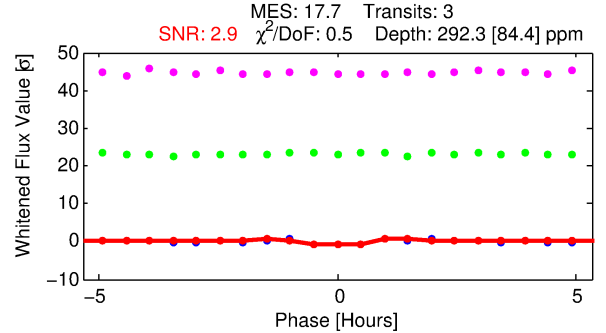
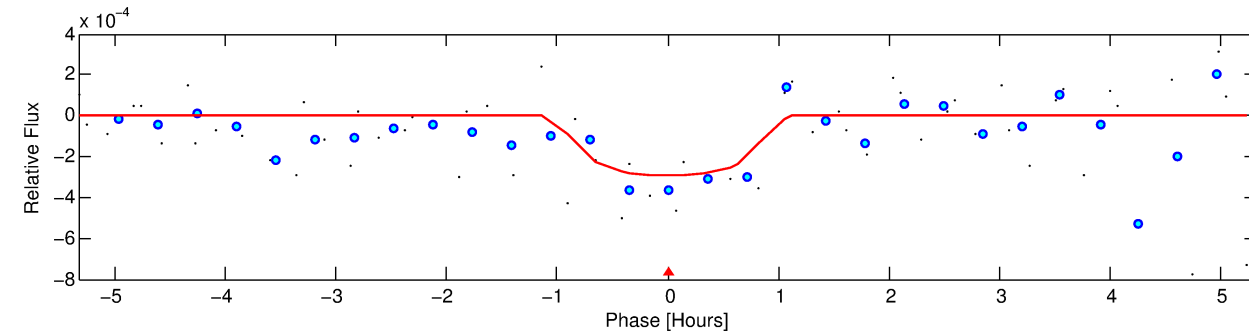
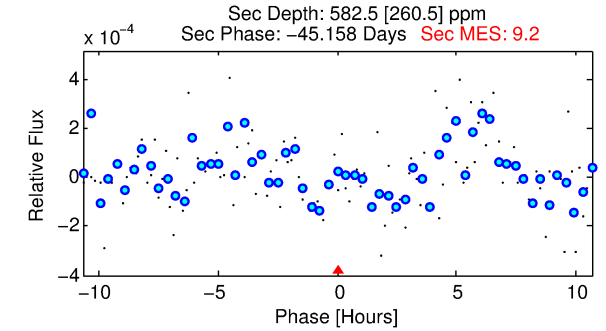
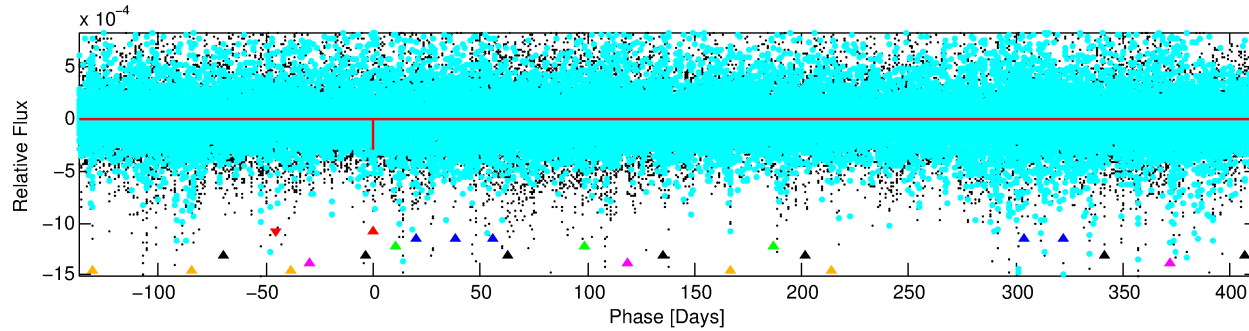
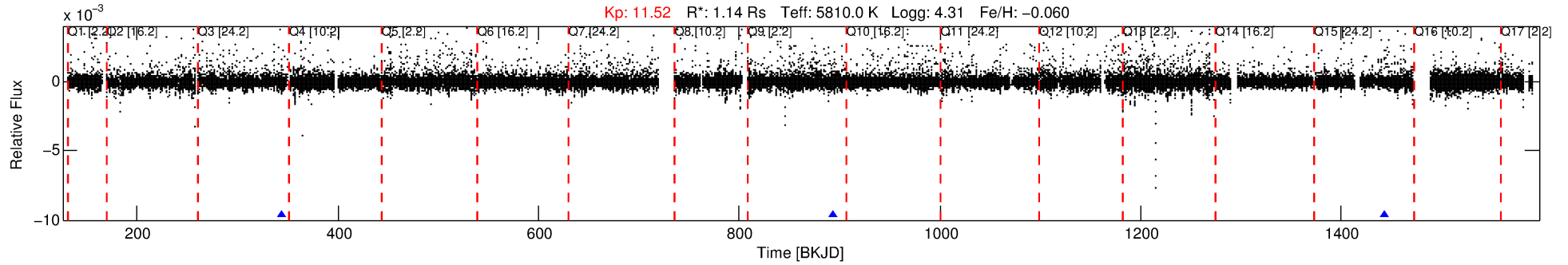
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-01

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 1 of 6 Period: 549.780 d



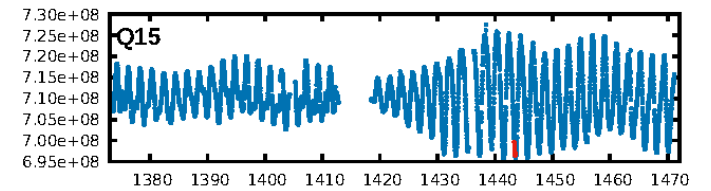
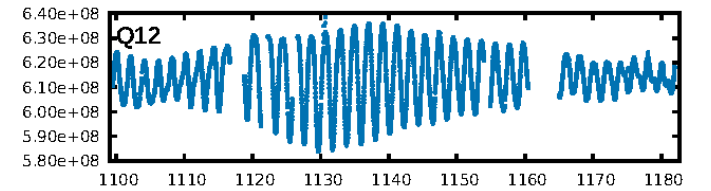
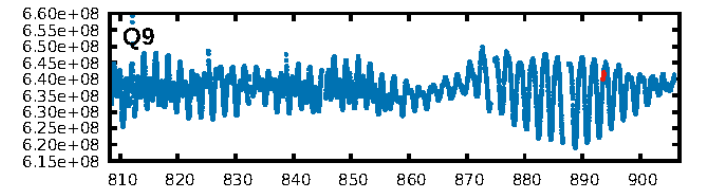
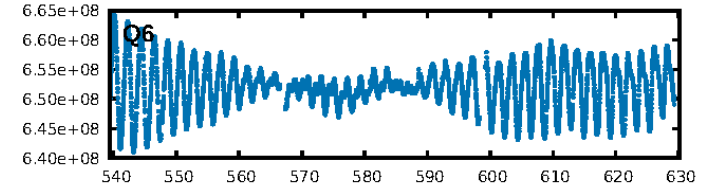
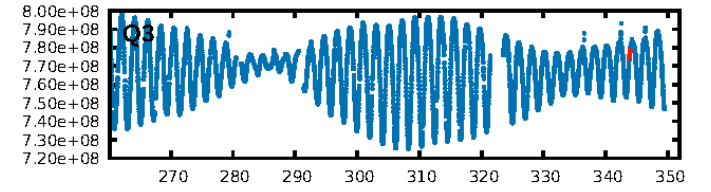
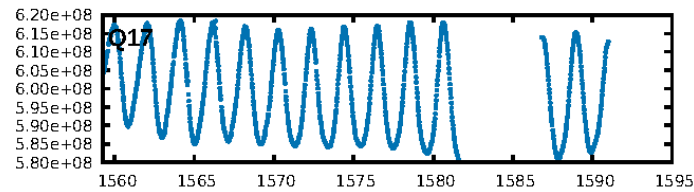
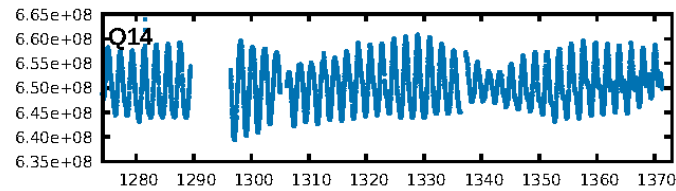
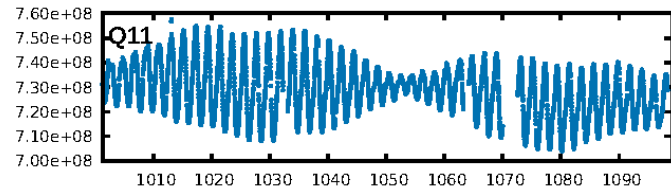
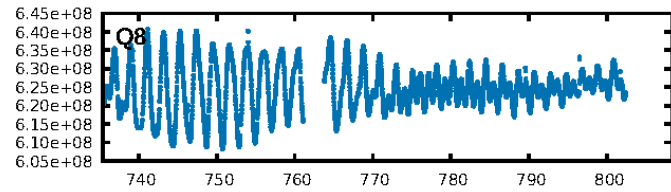
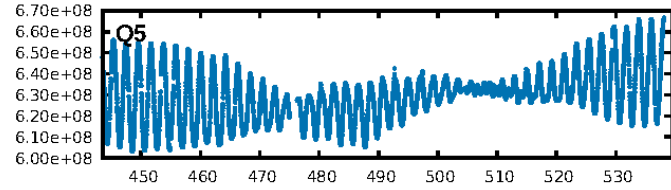
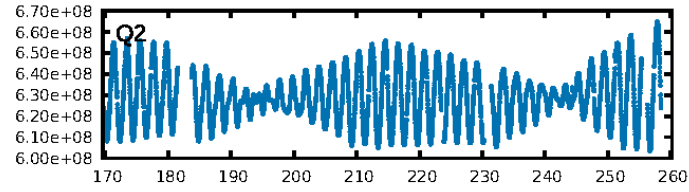
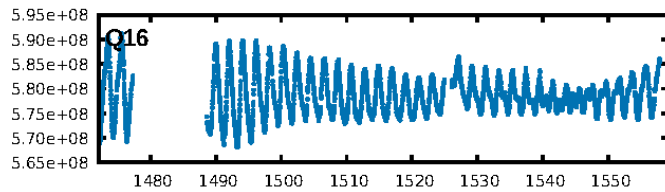
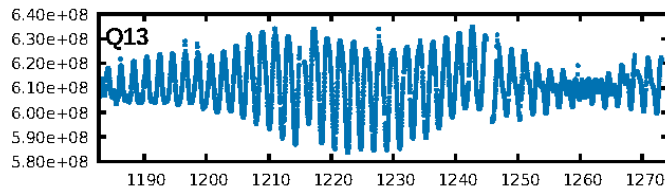
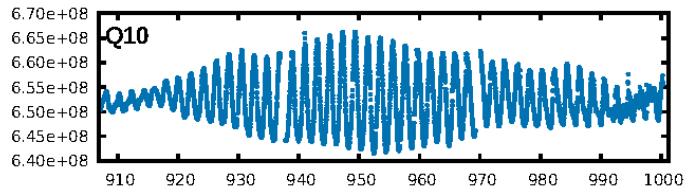
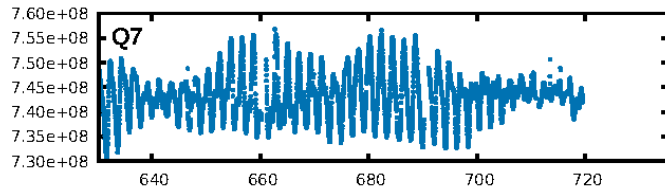
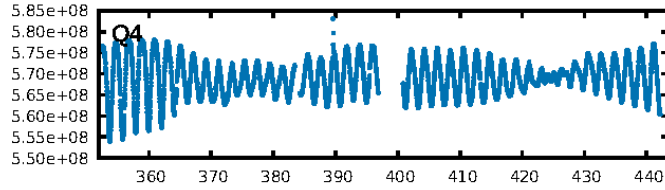
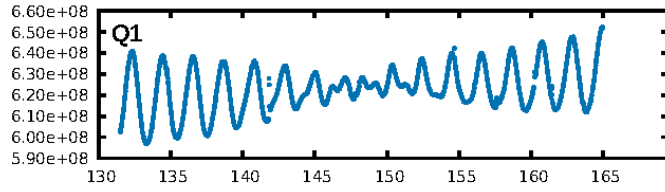
DV Fit Results:

Period = 549.78039 [0.00438] d
Epoch = 343.8623 [0.0055] BKJD
Rp/R* = 0.0156 [0.0391]
a/R* = 2373.90 [26235.88]
b = 0.16 [68.36]
Seff = 0.79 [0.27]
Teq = 240 [21] K
Rp = 1.94 [4.88] Re
a = 1.2934 [0.3011] AU
Ag = 142878.72 [719341.98] [0.20 σ]
Teffp = 7221 [9071] K [0.77 σ]

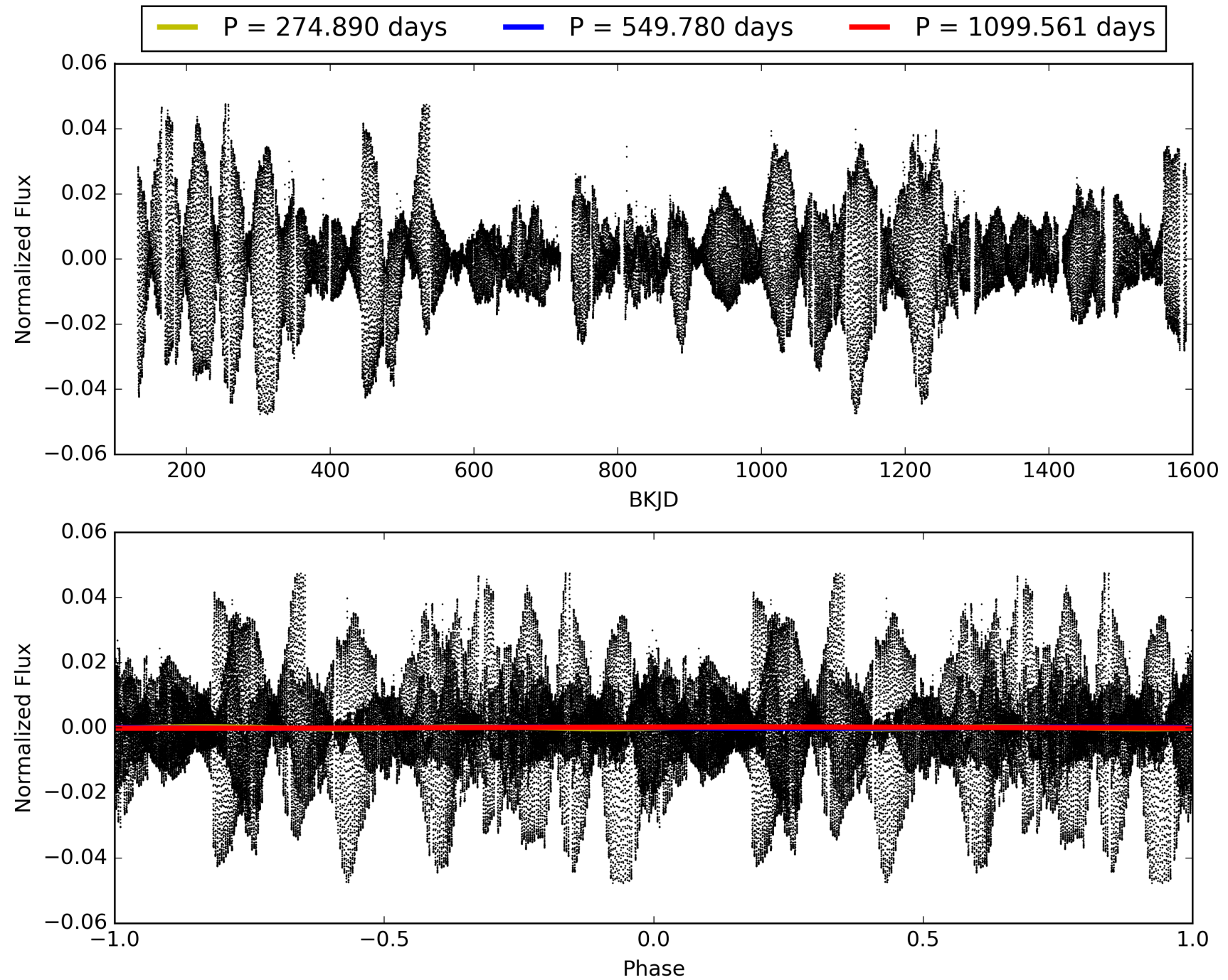
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [483.93 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.4%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 23.7%
Centroid-so: 3.726 arcsec [0.87 σ]
OotOffset-rm: 4.652 arcsec [4.54 σ]
KicOffset-rm: 5.775 arcsec [5.59 σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007339343-01, PDC Light Curves

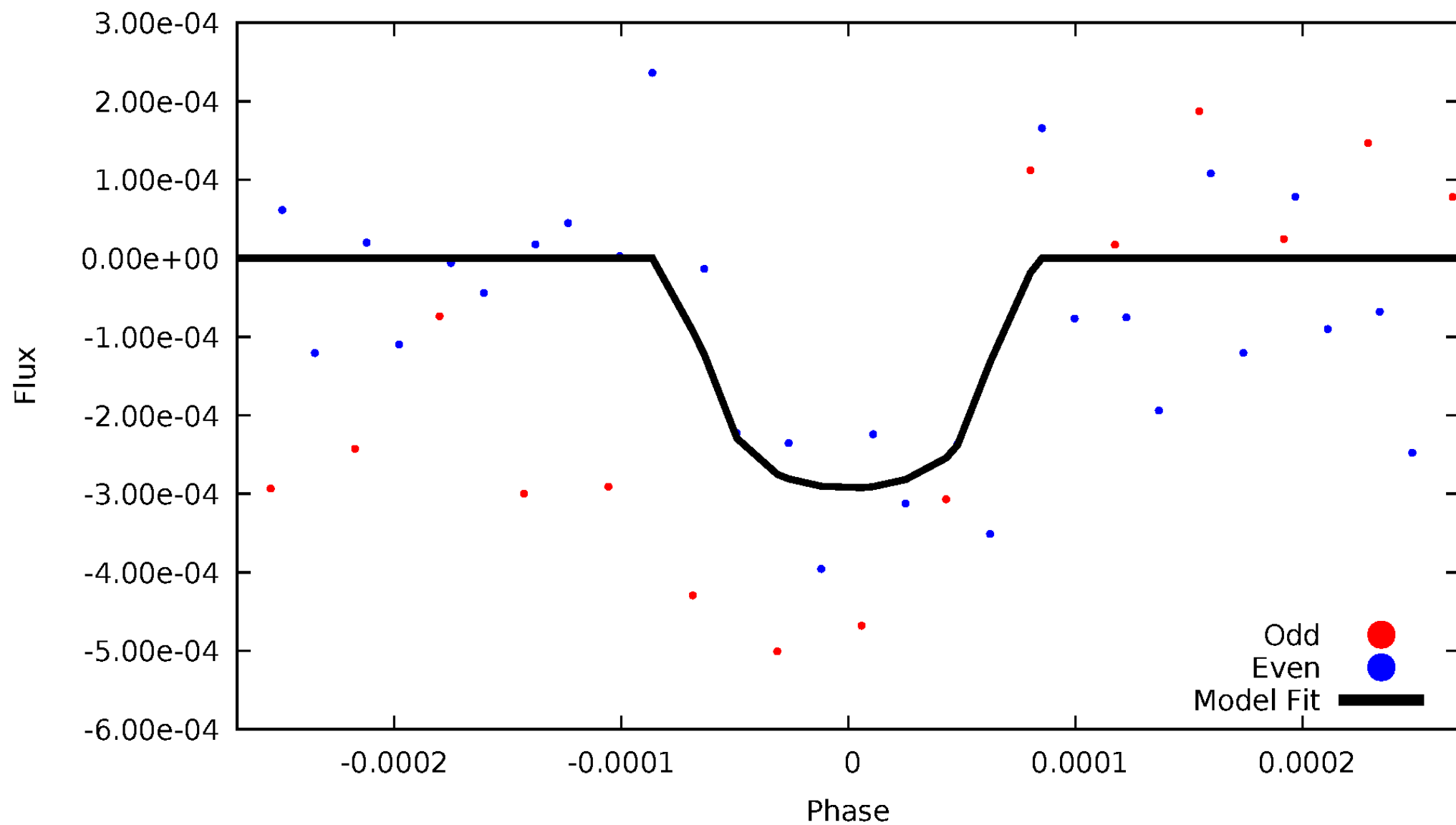


TCE 007339343-01



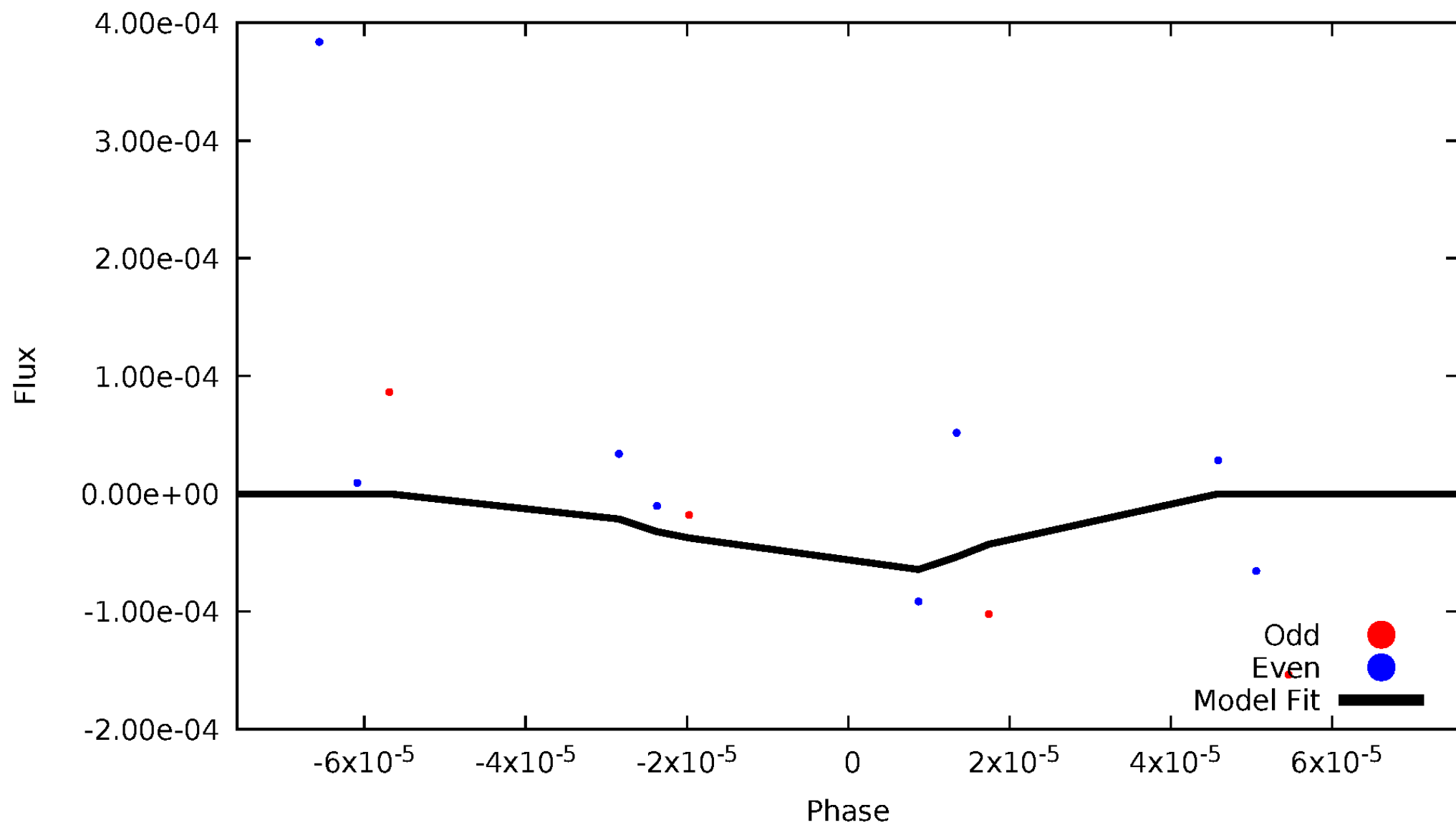
DV Odd/Even

TCE 007339343-01



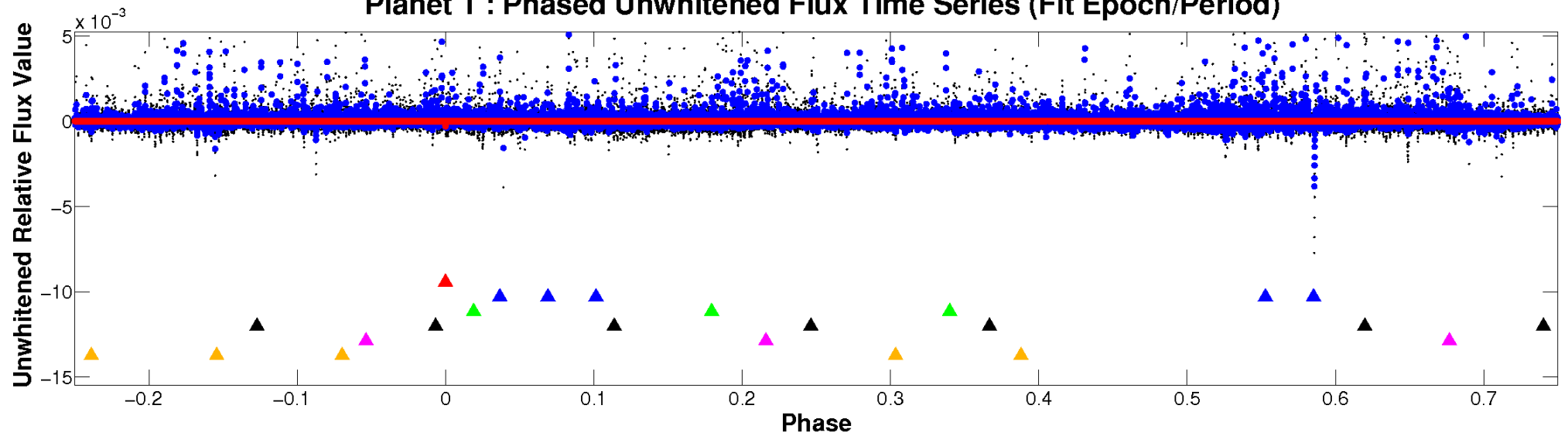
ALT Odd/Even

TCE 007339343-01

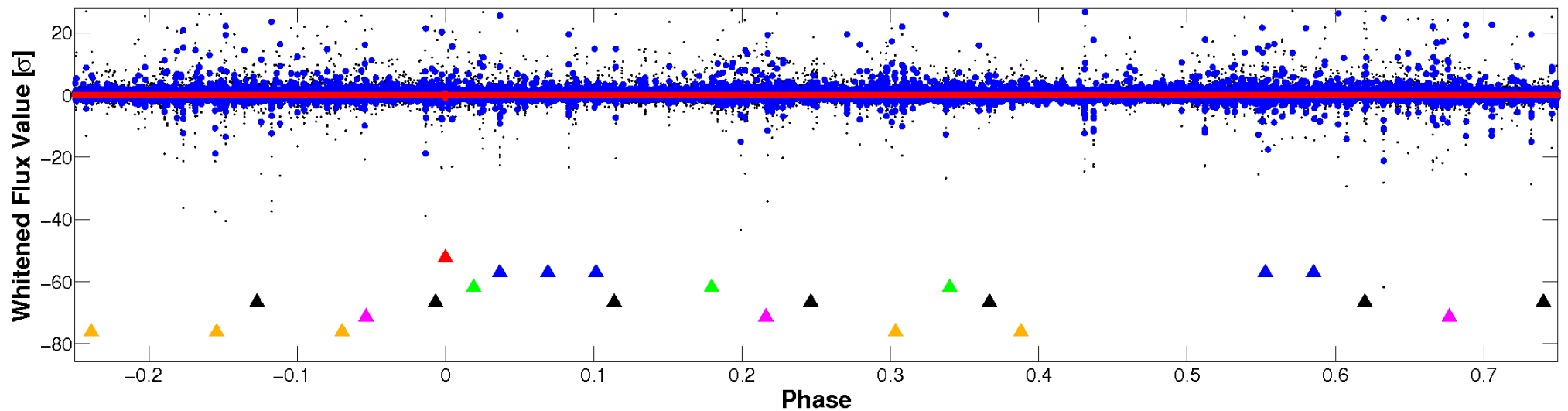


Non-Whitened Vs. Whitened Light Curve

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

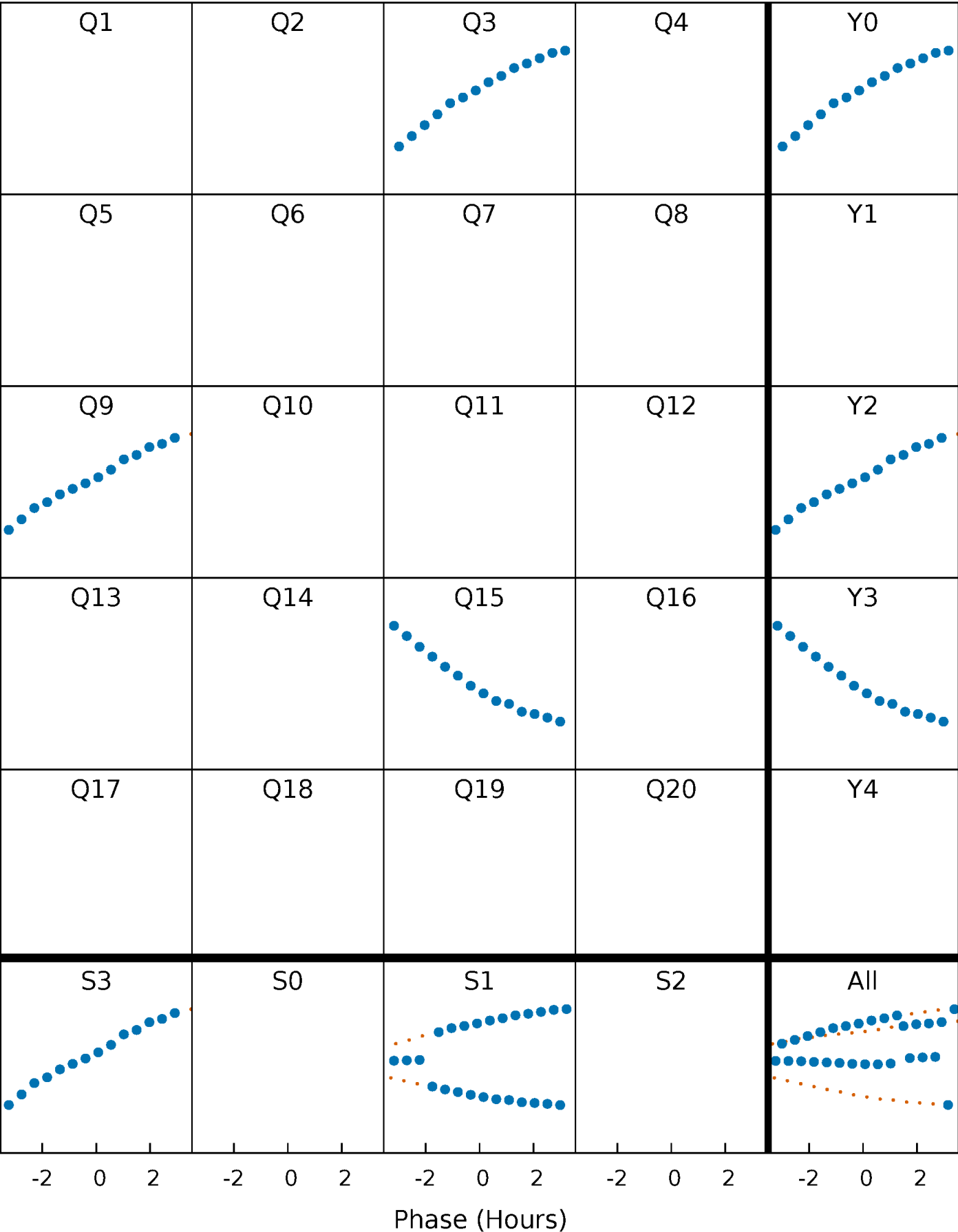


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



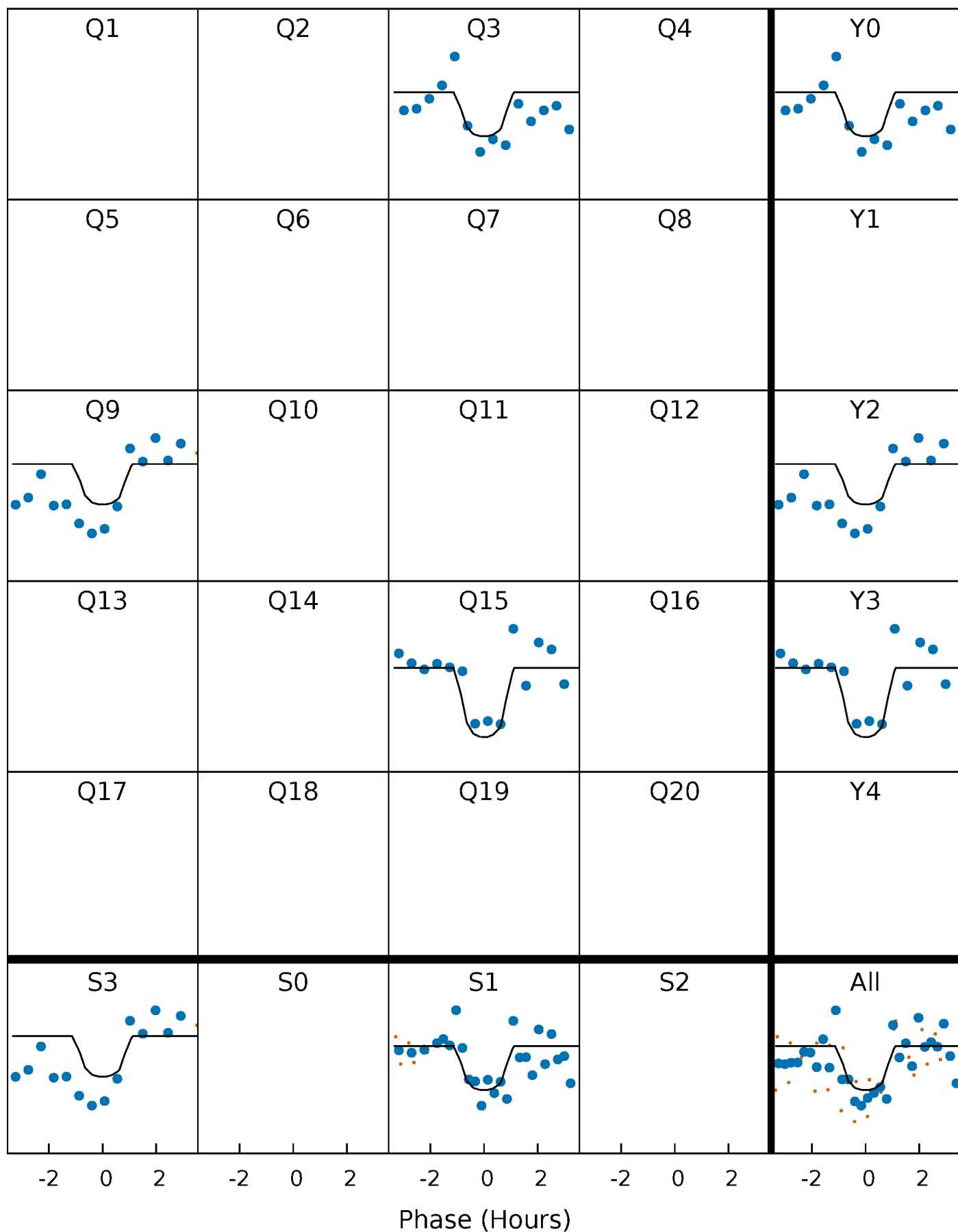
PDC Quarter-Phased Transit Curves

TCE 007339343-01 P=549.780387 Days T₀=343.862346 (BKJD)



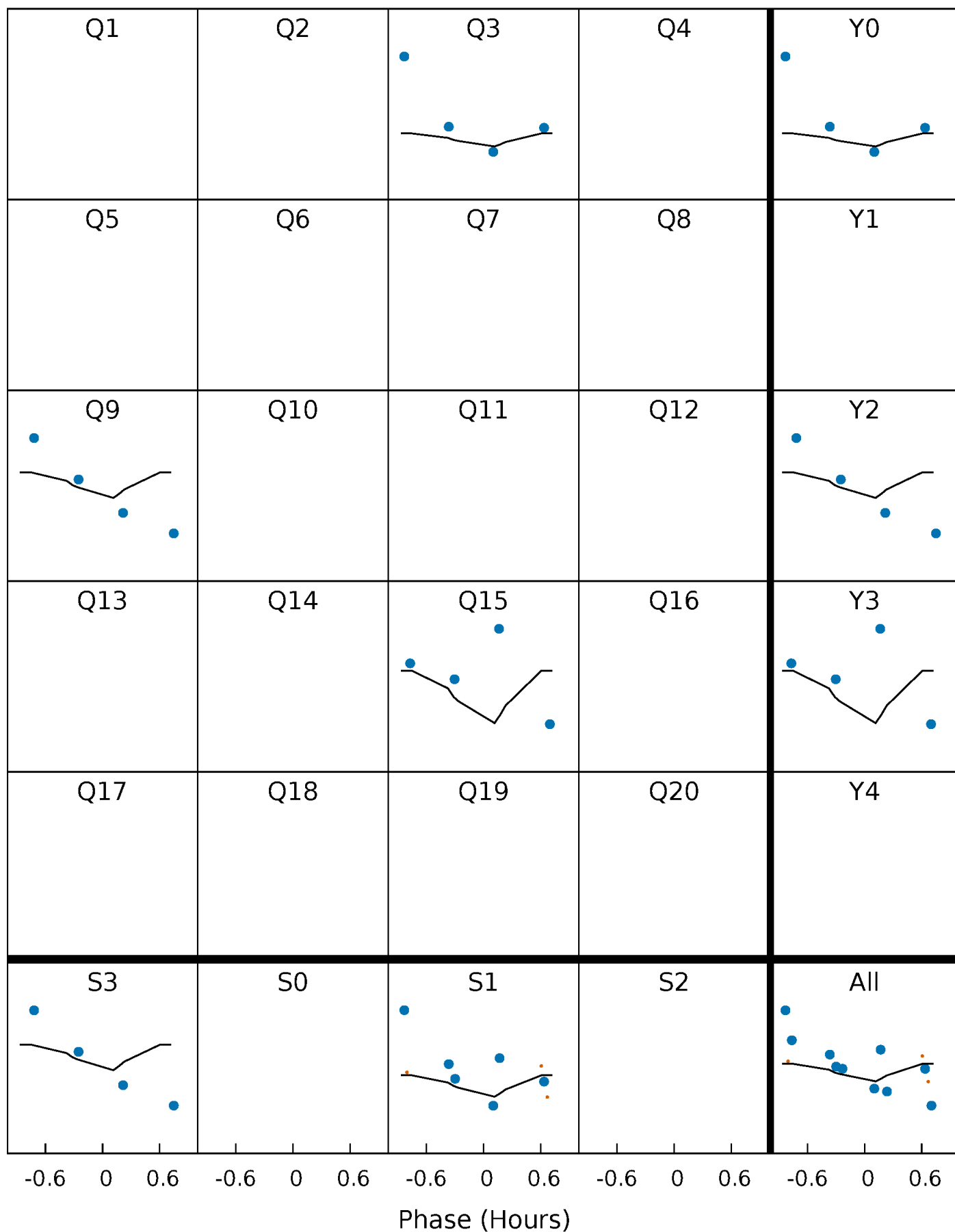
DV Quarter-Phased Transit Curves

TCE 007339343-01 P=549.780387 Days $T_0=343.862346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

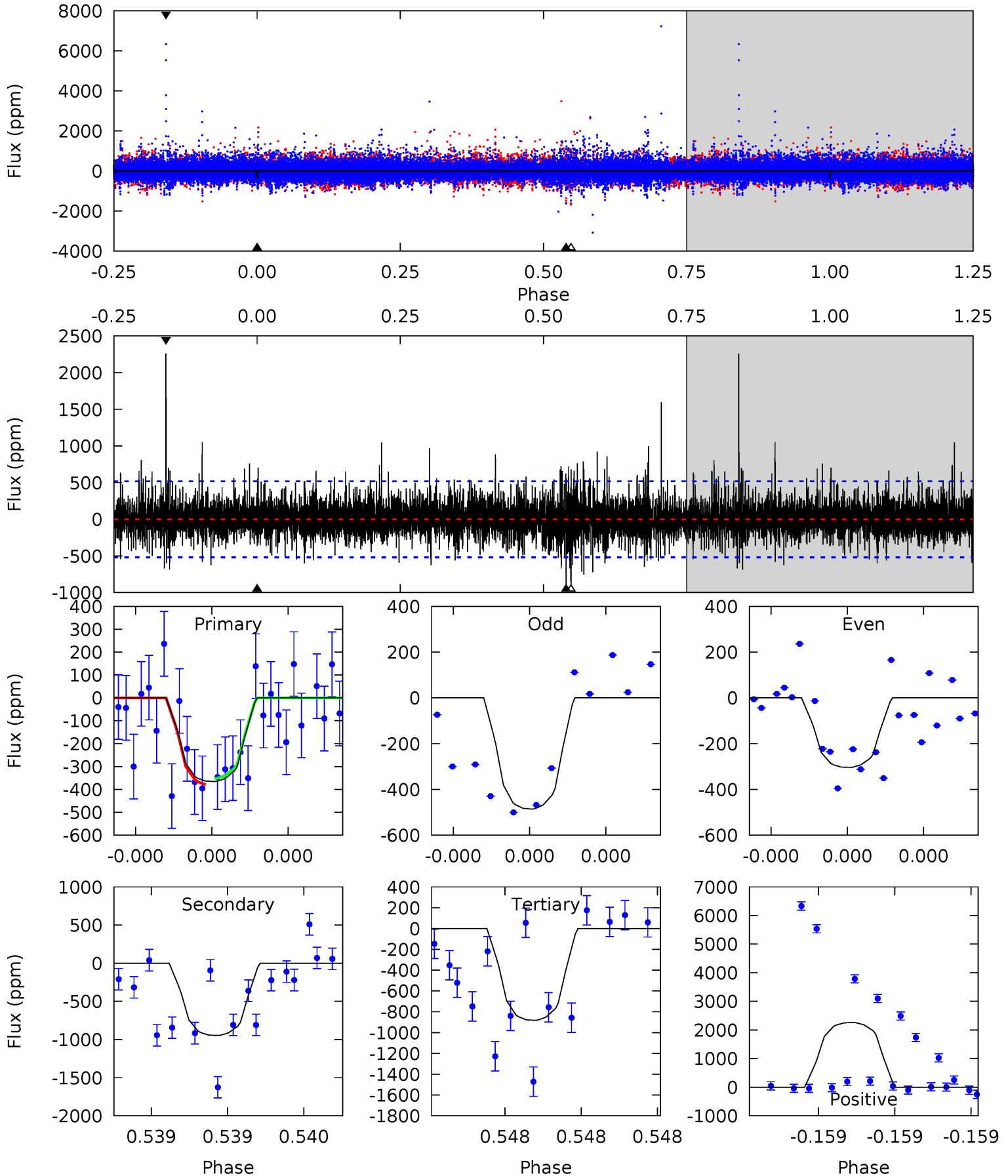
TCE 007339343-01 P=549.764932 Days $T_0=343.851011$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-01, P = 549.780387 Days, E = 343.862346 Days

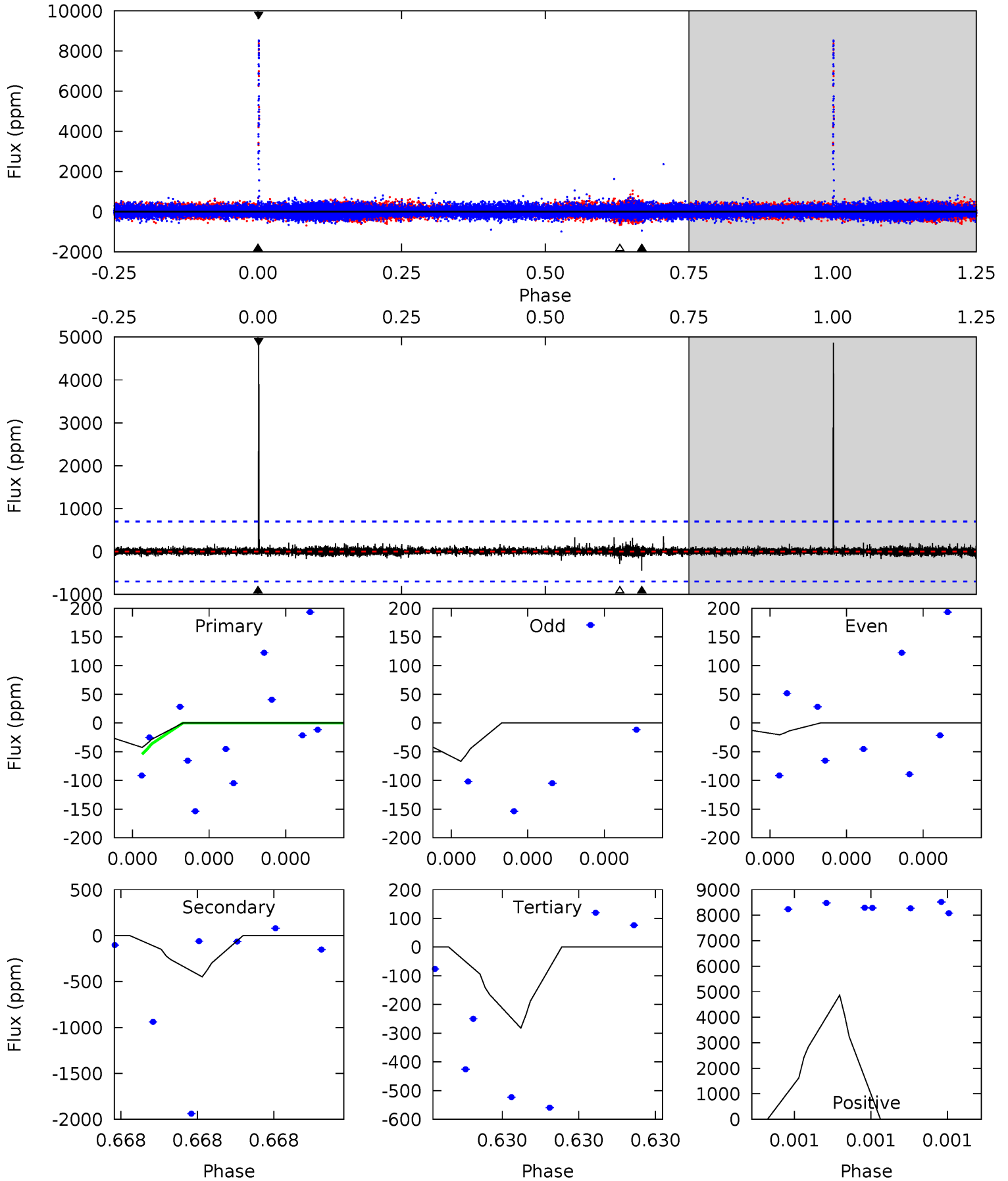
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.08	10.6	9.84	25.2	5.79	3.80	1.83	-5.77	-21.1	0.73	-14.7	0.62	0.97	0.70	0.15



Alt Model-Shift Uniqueness Test

007339343-01, P = 549.764932 Days, E = 343.851011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.36	3.78	2.38	41.0	5.91	3.98	0.99	-2.02	-40.7	1.40	-37.3	0.17	0.61	0.92	0.22



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-948 ± 90	$3.84^{+4.24}_{-2.66}$	336^{+24}_{-22}	5805^{+6190}_{-1529}	$60729^{+545447}_{-46761}$
Alt.	-448 ± 119	$3.66^{+4.28}_{-2.50}$	336^{+24}_{-21}	5013^{+4495}_{-1269}	$30611^{+305592}_{-24129}$

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 $A_{obs} \gg 1.0$

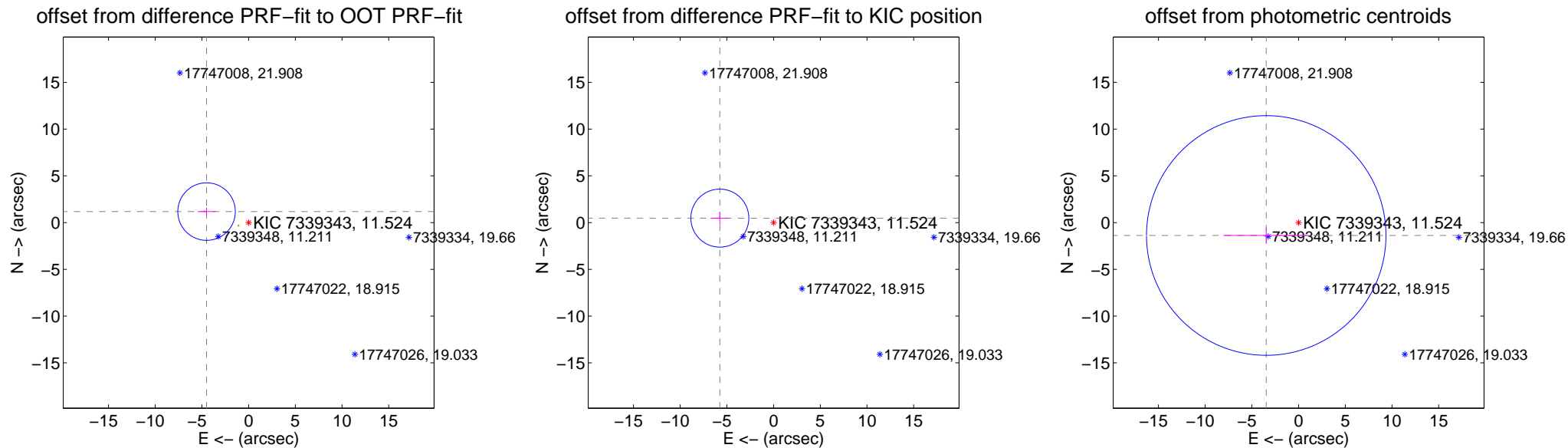
DV Centroid Data

Supplemental centroid analysis for 007339343-01. **Kepler magnitude: 11.52.** Transit SNR 2.94

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.652 ± 1.026	4.54	4.500 ± 0.954	1.178 ± 0.411
PRF-fit source offset from KIC position	5.775 ± 1.034	5.59	5.756 ± 0.982	0.479 ± 0.677
photometric centroid source offset	3.73 ± 4.27	0.87	3.46 ± 4.59	-1.38 ± 0.83



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.

Q1 no difference image



Q1 no OOT image



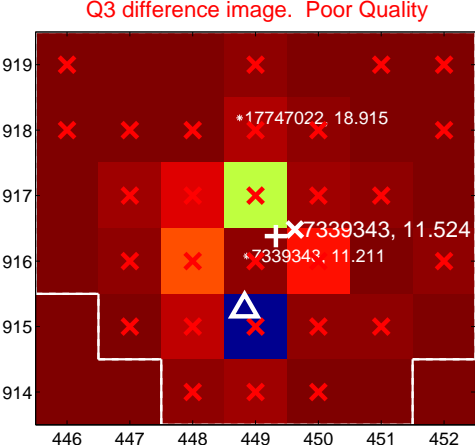
Q2 no difference image



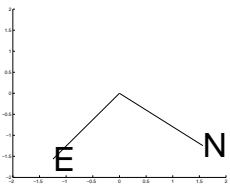
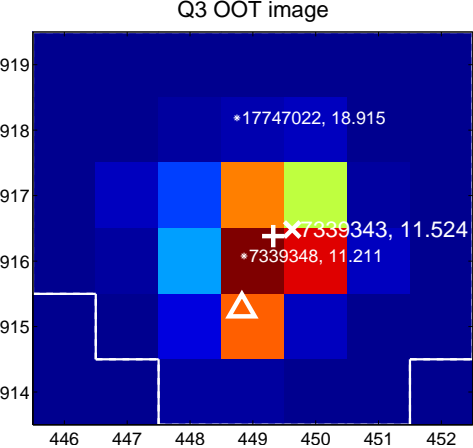
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



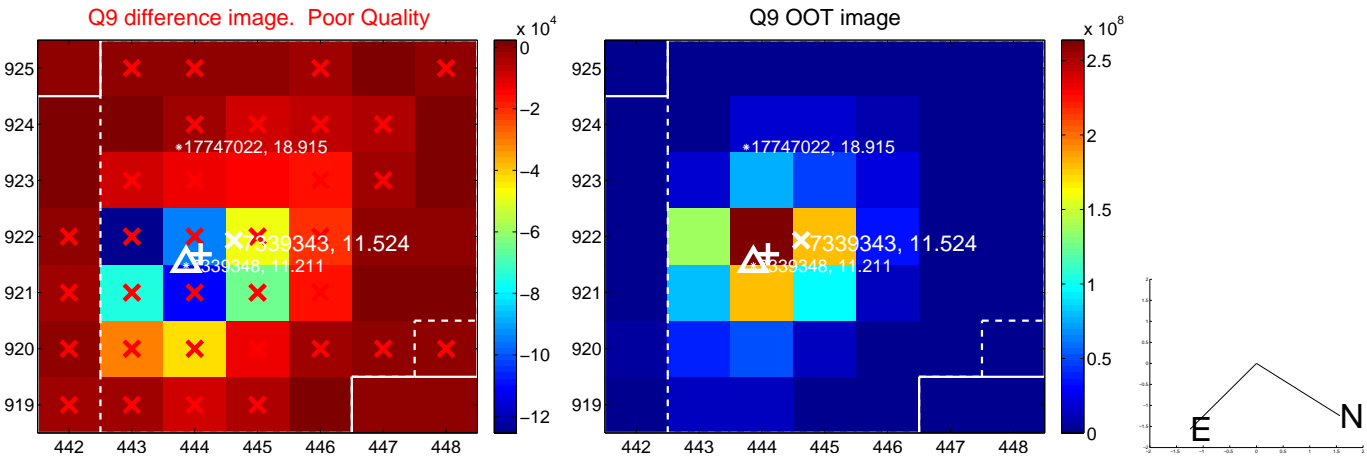
Q4 no OOT image



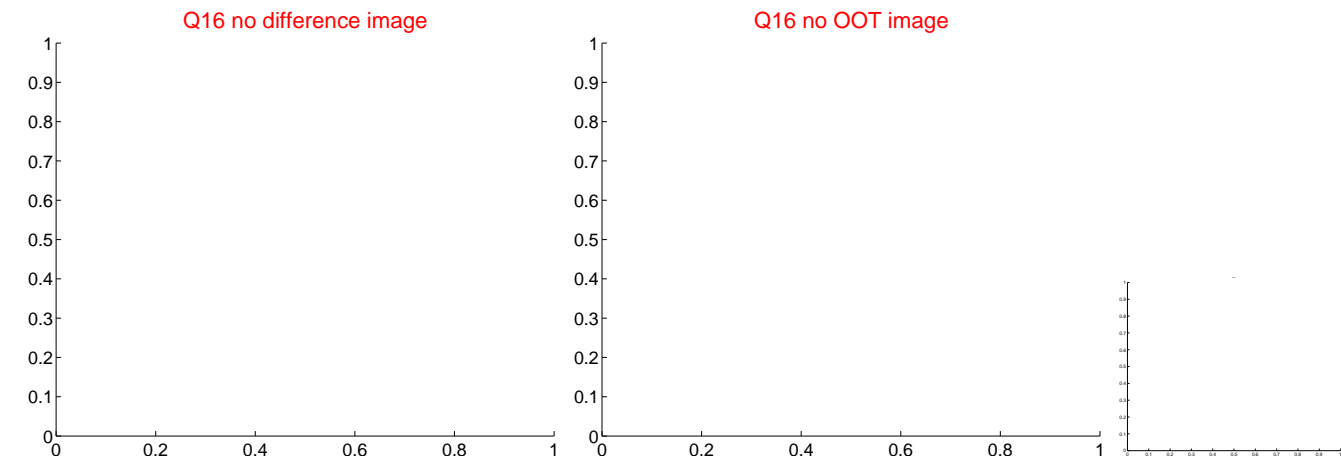
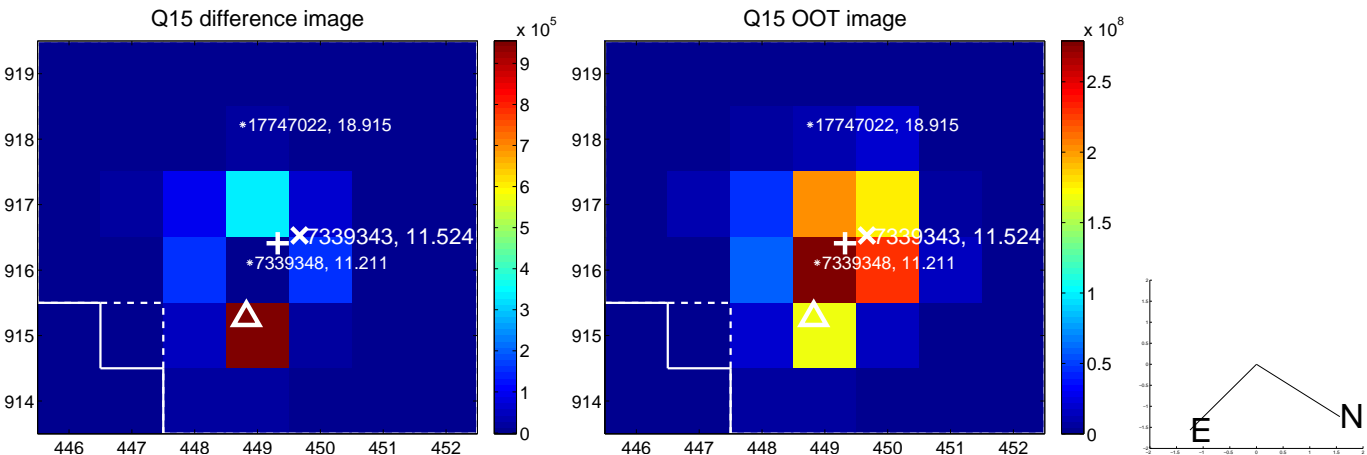
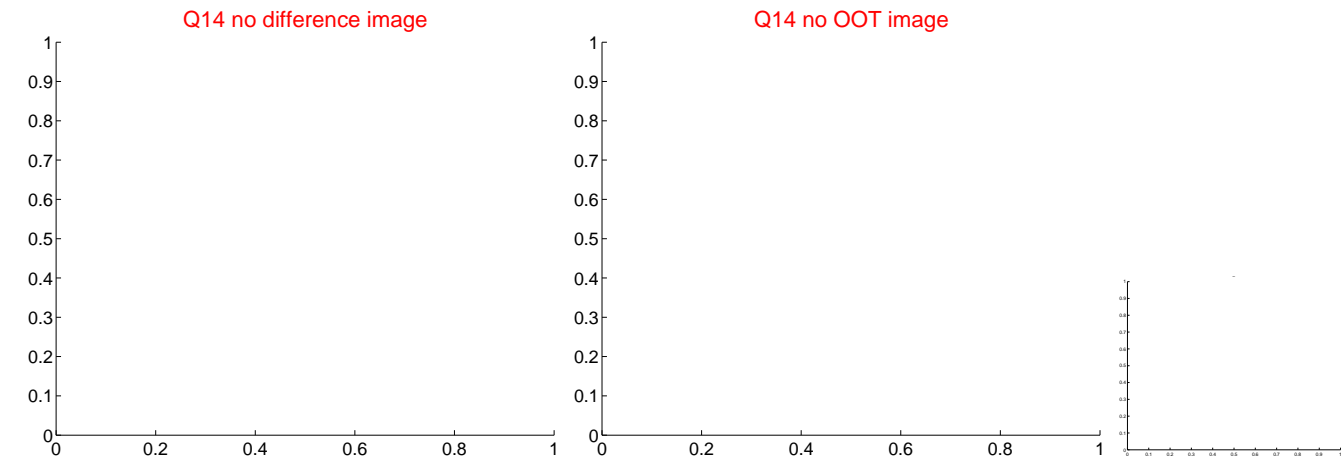
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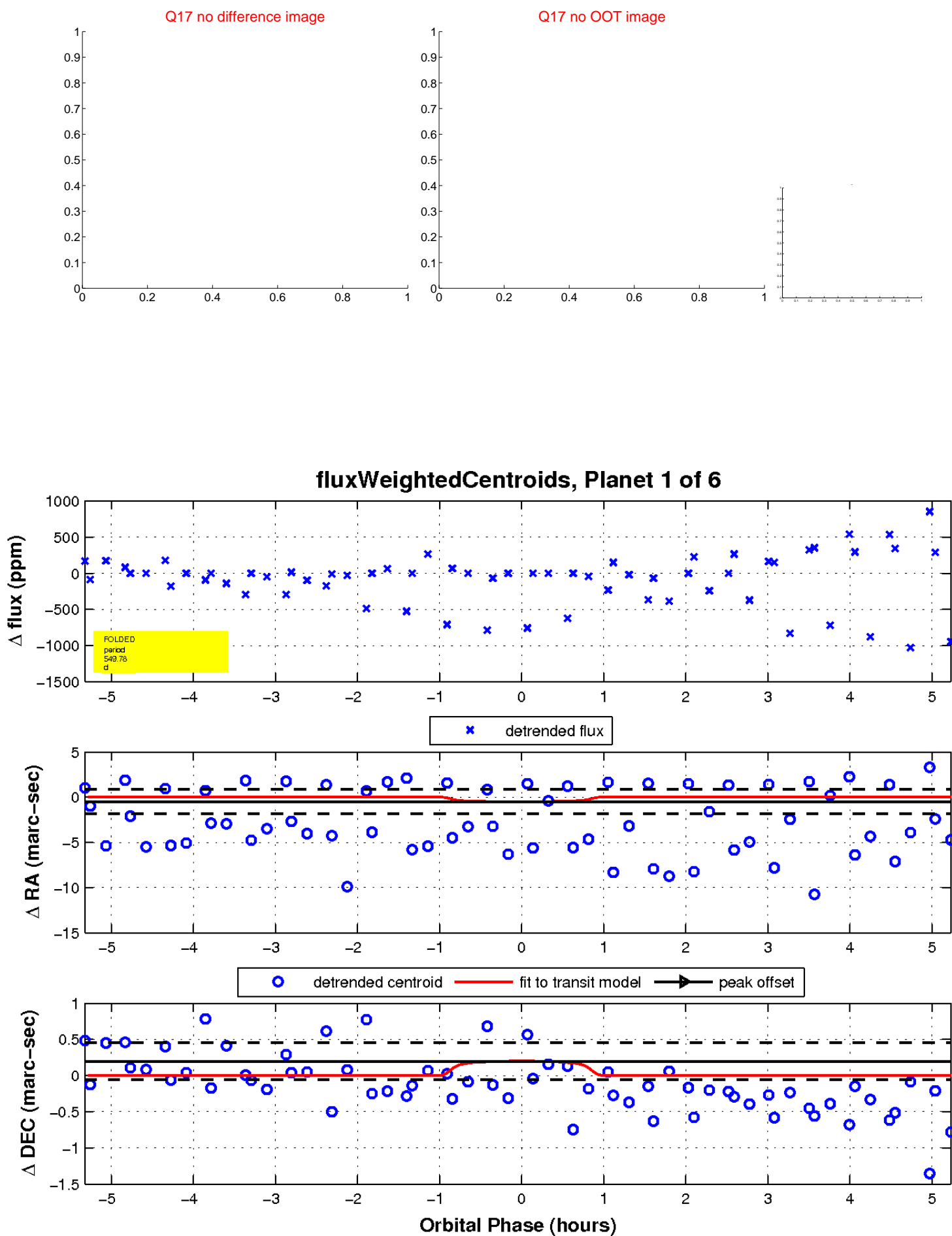
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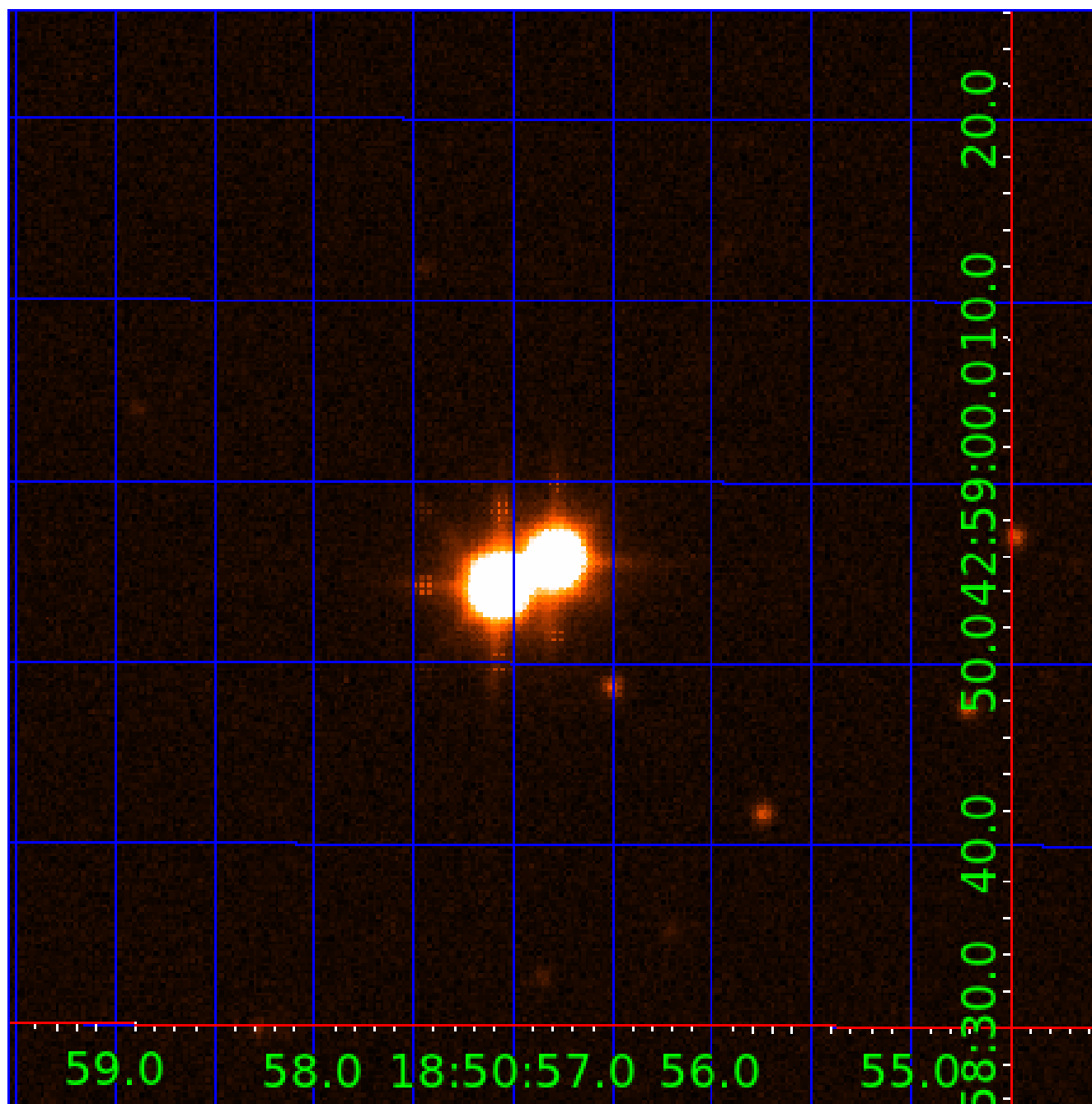


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007339343

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007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

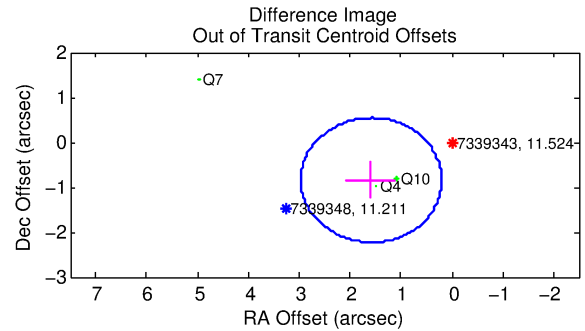
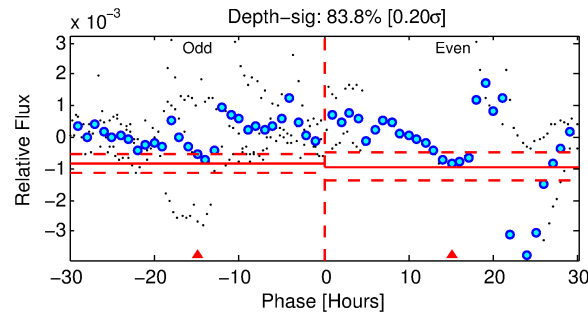
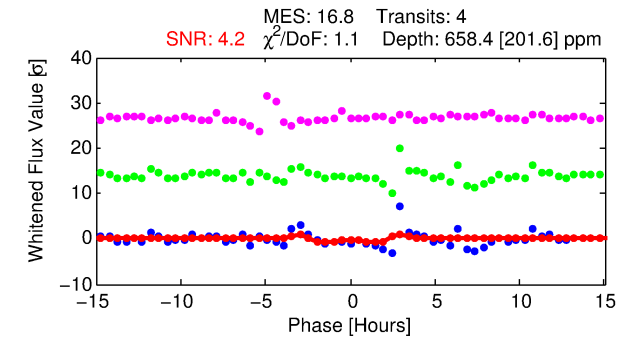
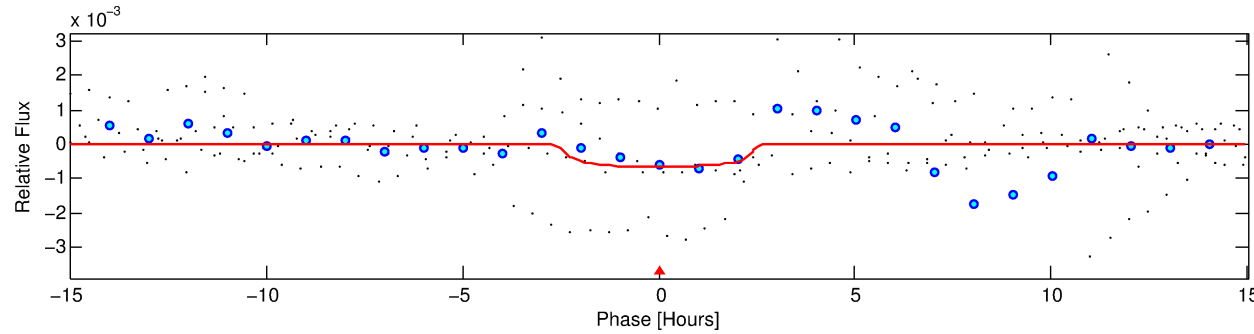
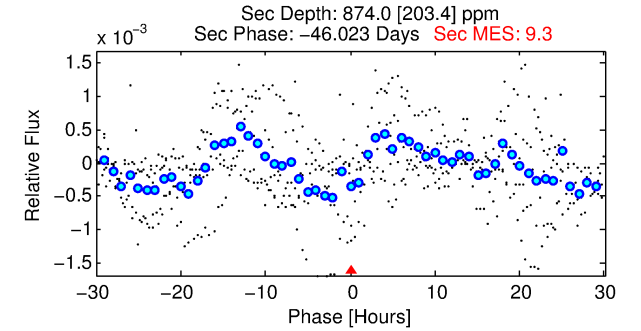
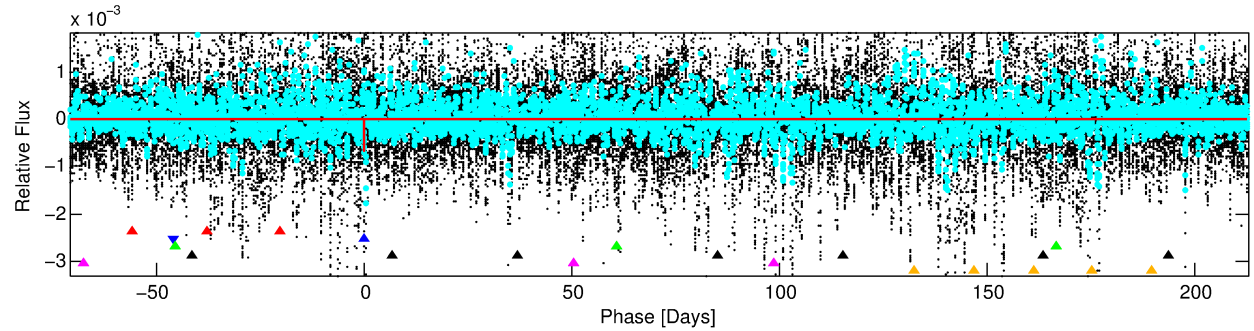
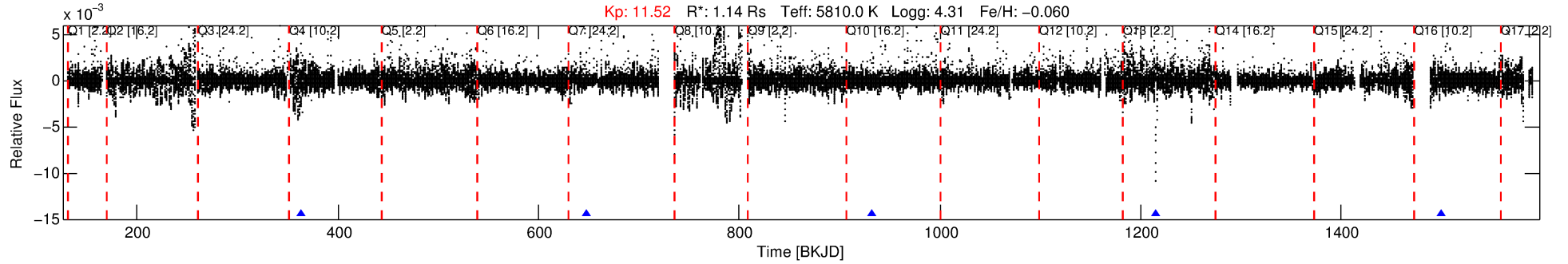
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-02

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 2 of 6 Period: 283.810 d



DV Fit Results:

Period = 283.80970 [0.00504] d
Epoch = 363.9944 [0.0108] BKJD
Rp/R* = 0.0246 [0.0440]
a/R* = 353.50 [2921.79]
b = 0.62 [8.29]
Seff = 1.90 [0.66]
Teq = 299 [26] K
Rp = 3.05 [5.52] Re
a = 0.8323 [0.1938] AU
Ag = 35847.31 [128996.93] [0.28 σ]
Teffp = 6370 [5710] K [1.06 σ]

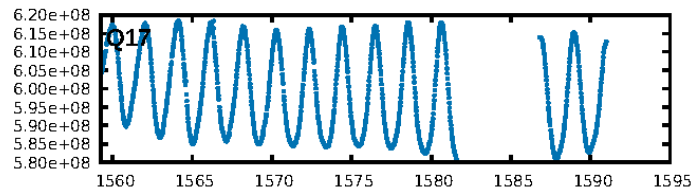
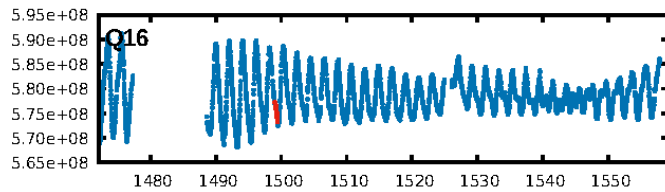
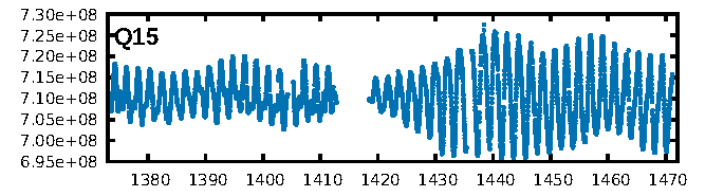
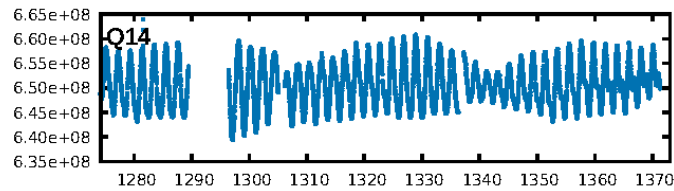
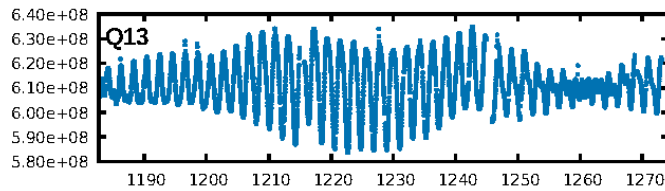
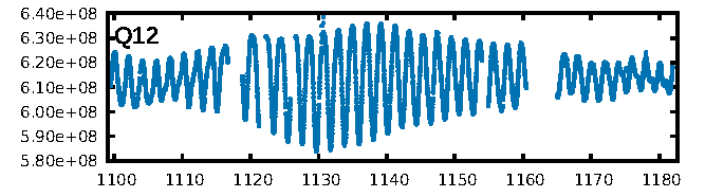
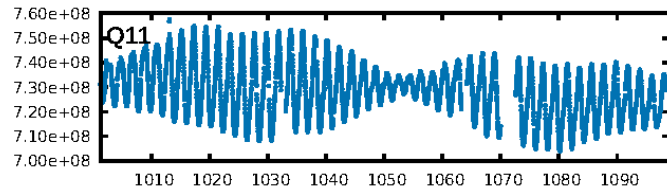
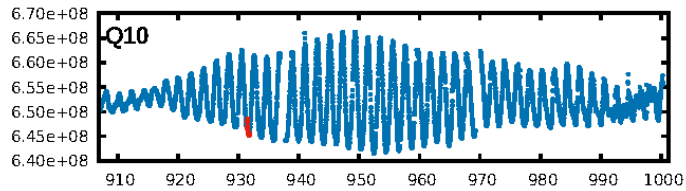
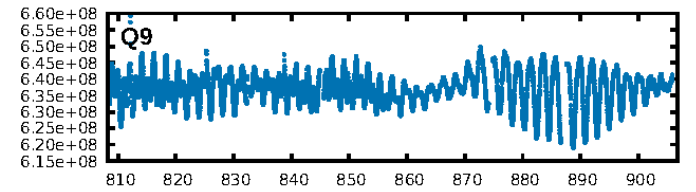
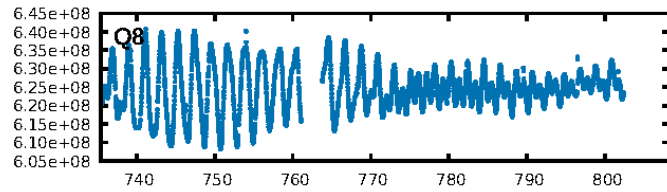
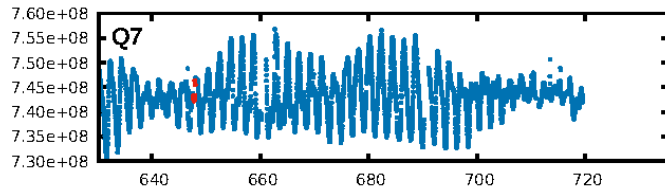
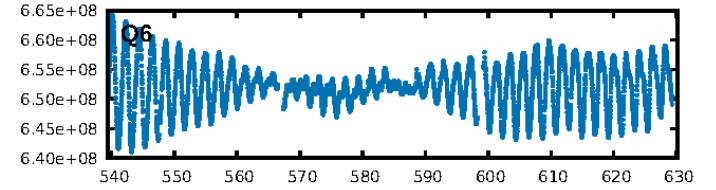
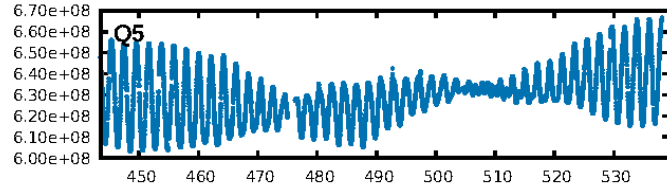
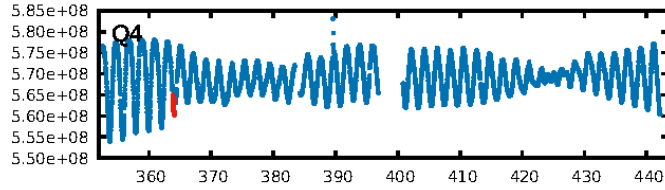
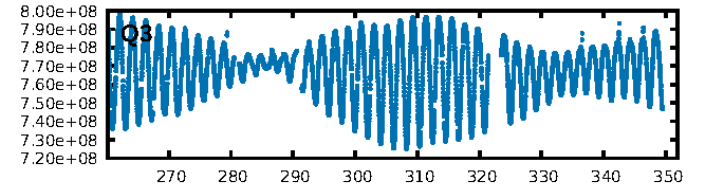
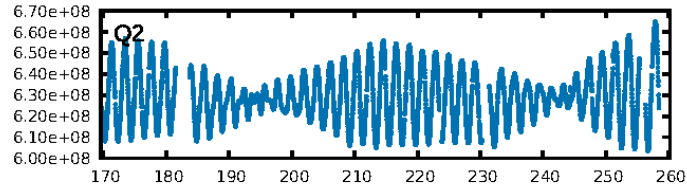
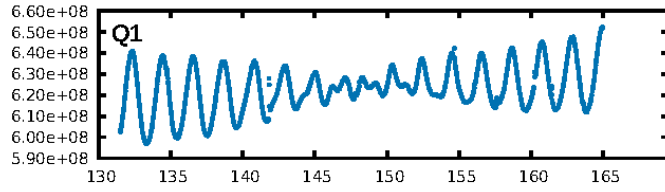
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [327.10 σ]
LongPeriod-sig: 100.0% [43.99 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 92.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 68.4%
Centroid-so: 0.942 arcsec [0.53 σ]
OotOffset-rm: 1.795 arcsec [3.89 σ]
KicOffset-rm: 3.741 arcsec [8.04 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

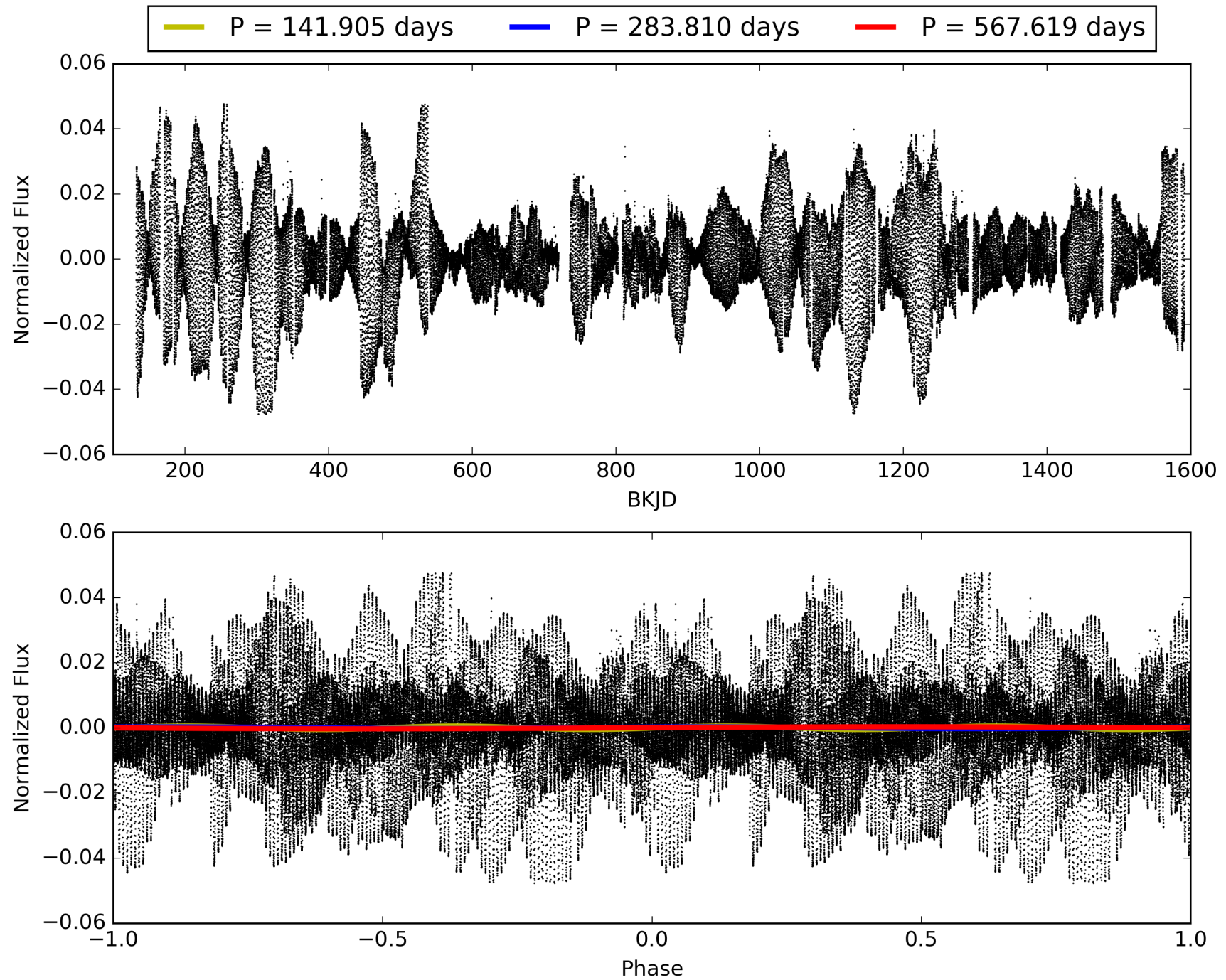
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:54:13 Z

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

TCE 007339343-02, PDC Light Curves

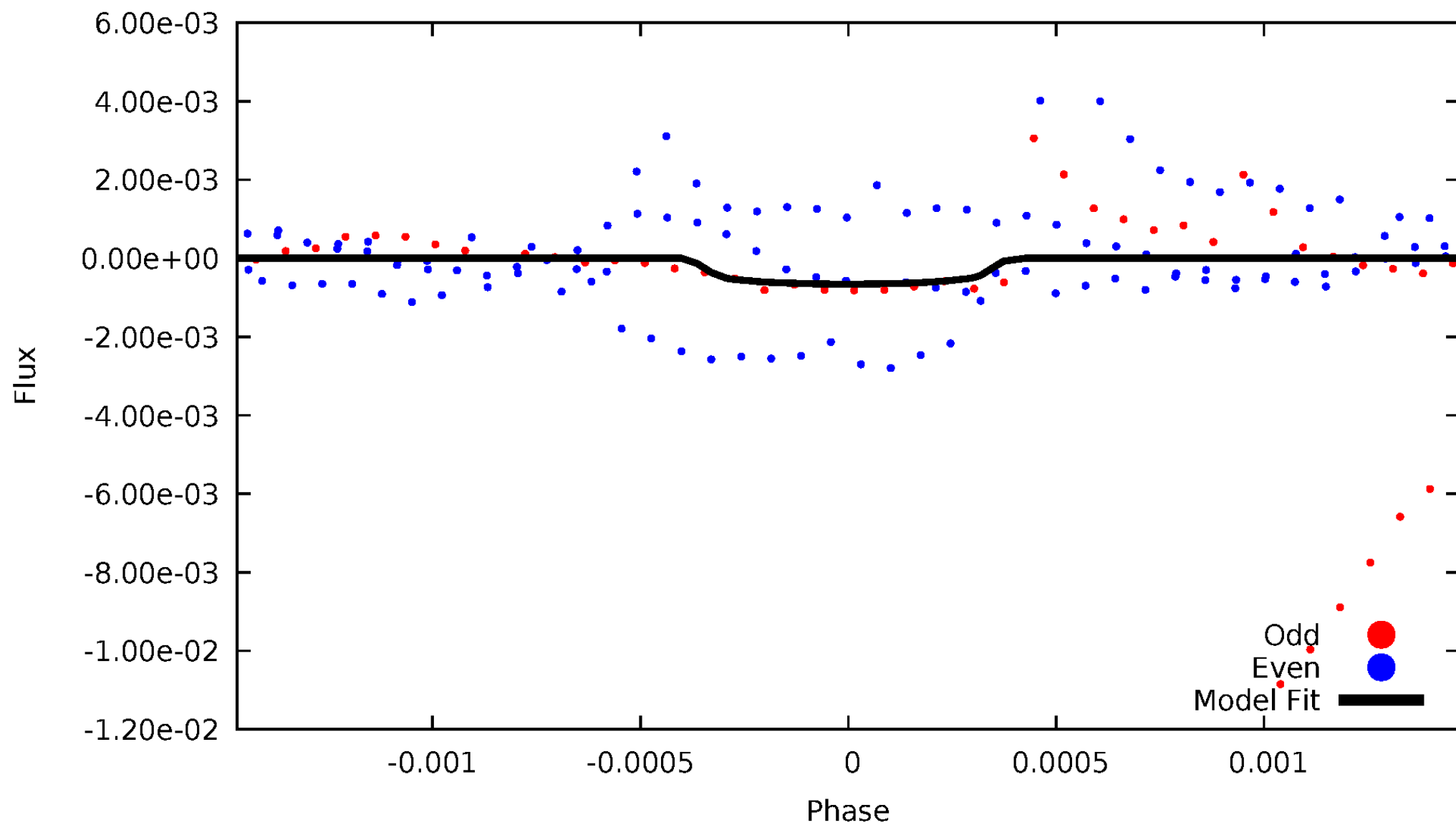


TCE 007339343-02



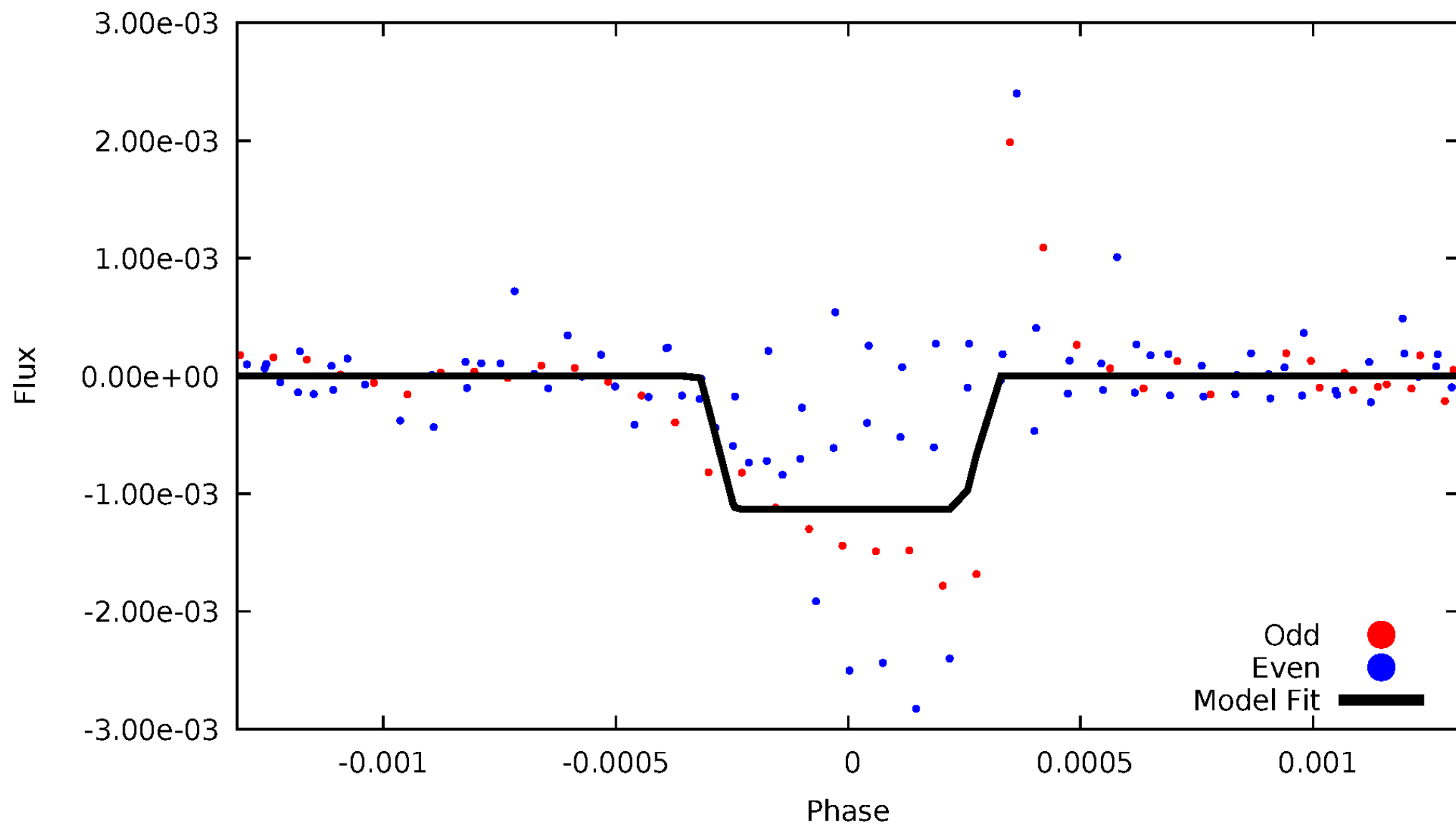
DV Odd/Even

TCE 007339343-02



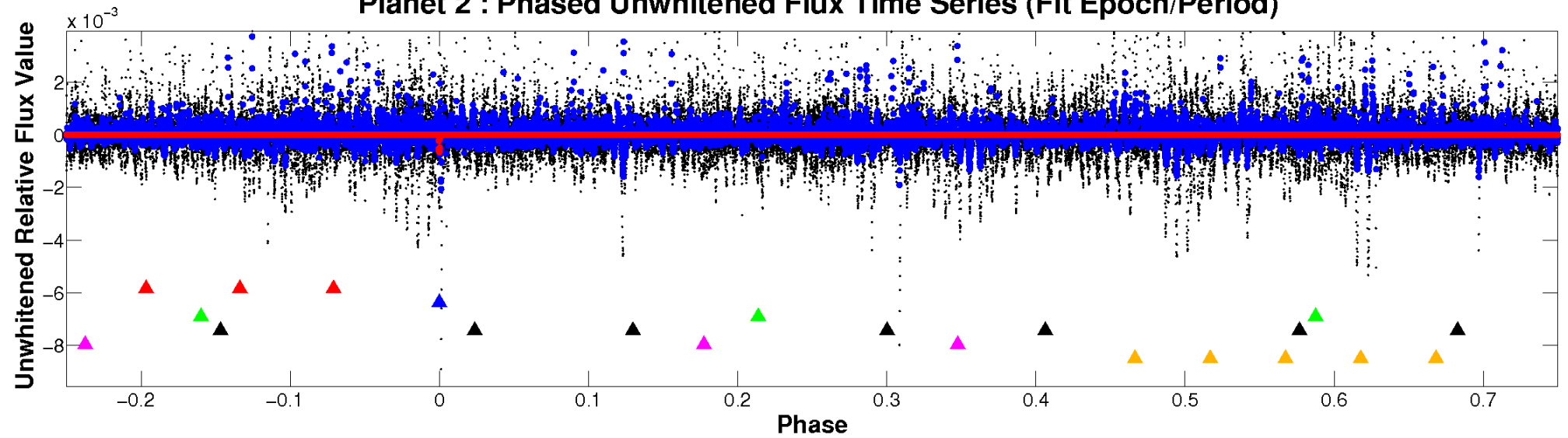
ALT Odd/Even

TCE 007339343-02

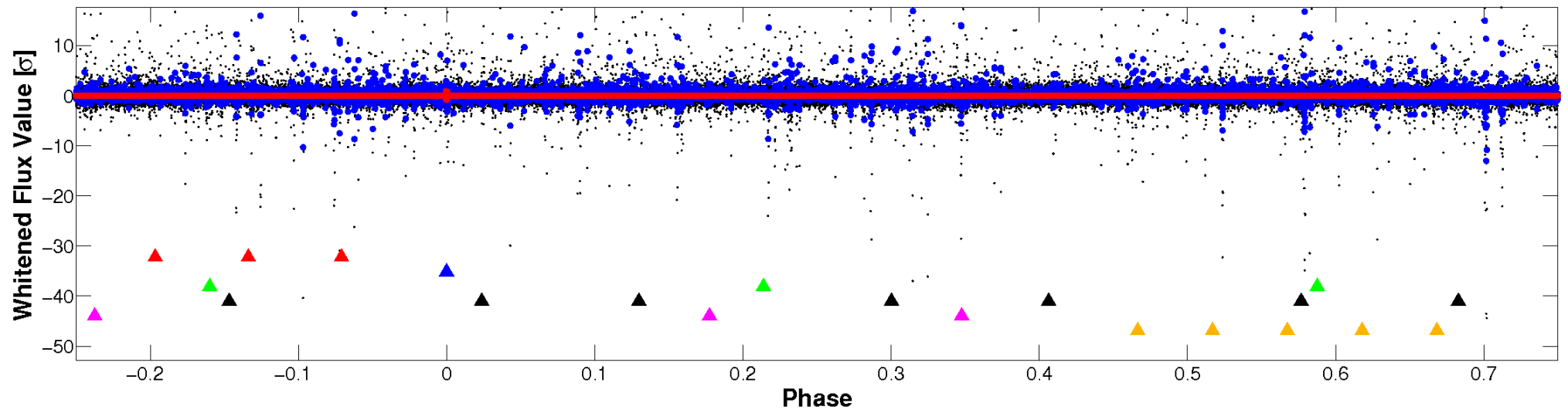


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

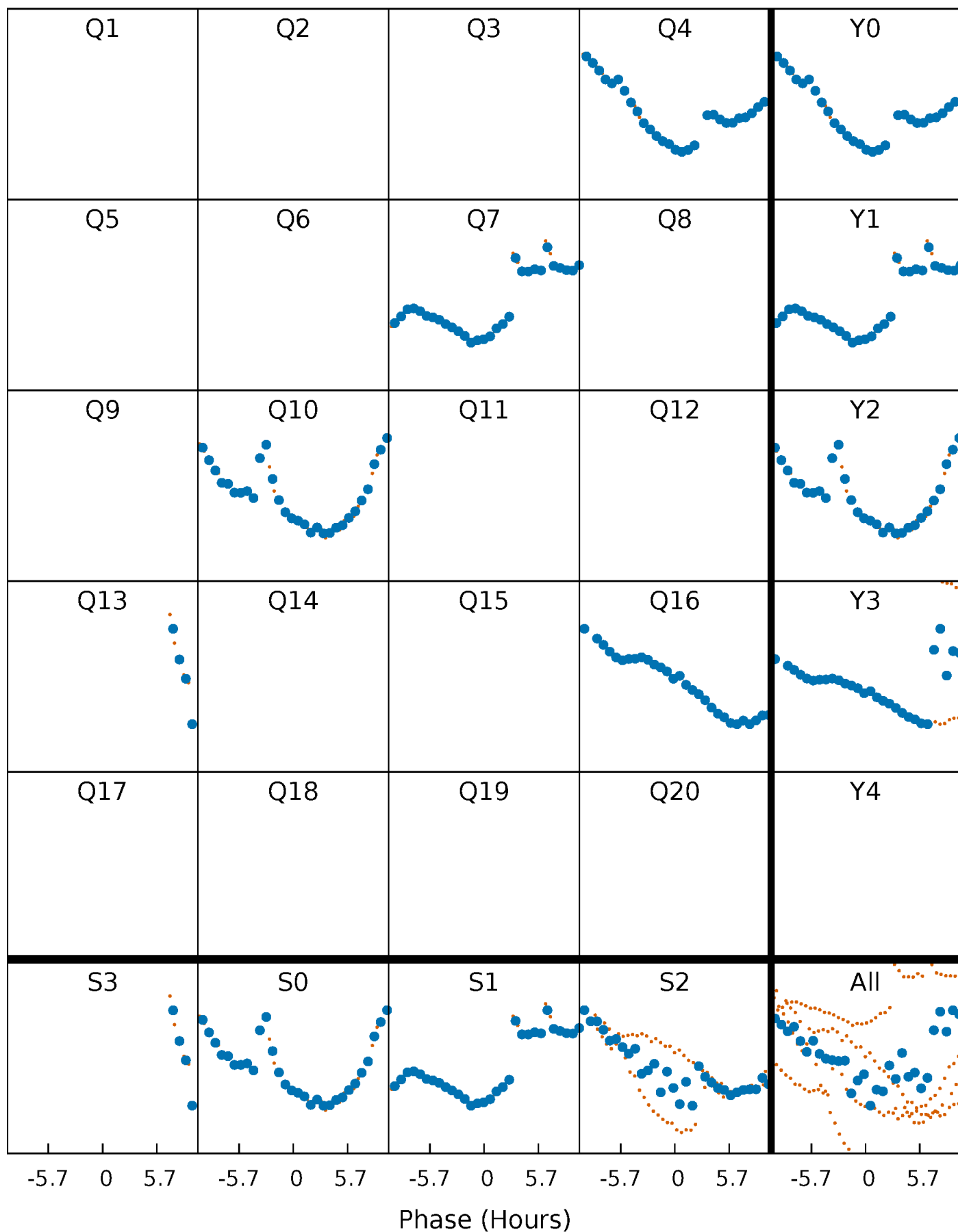


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



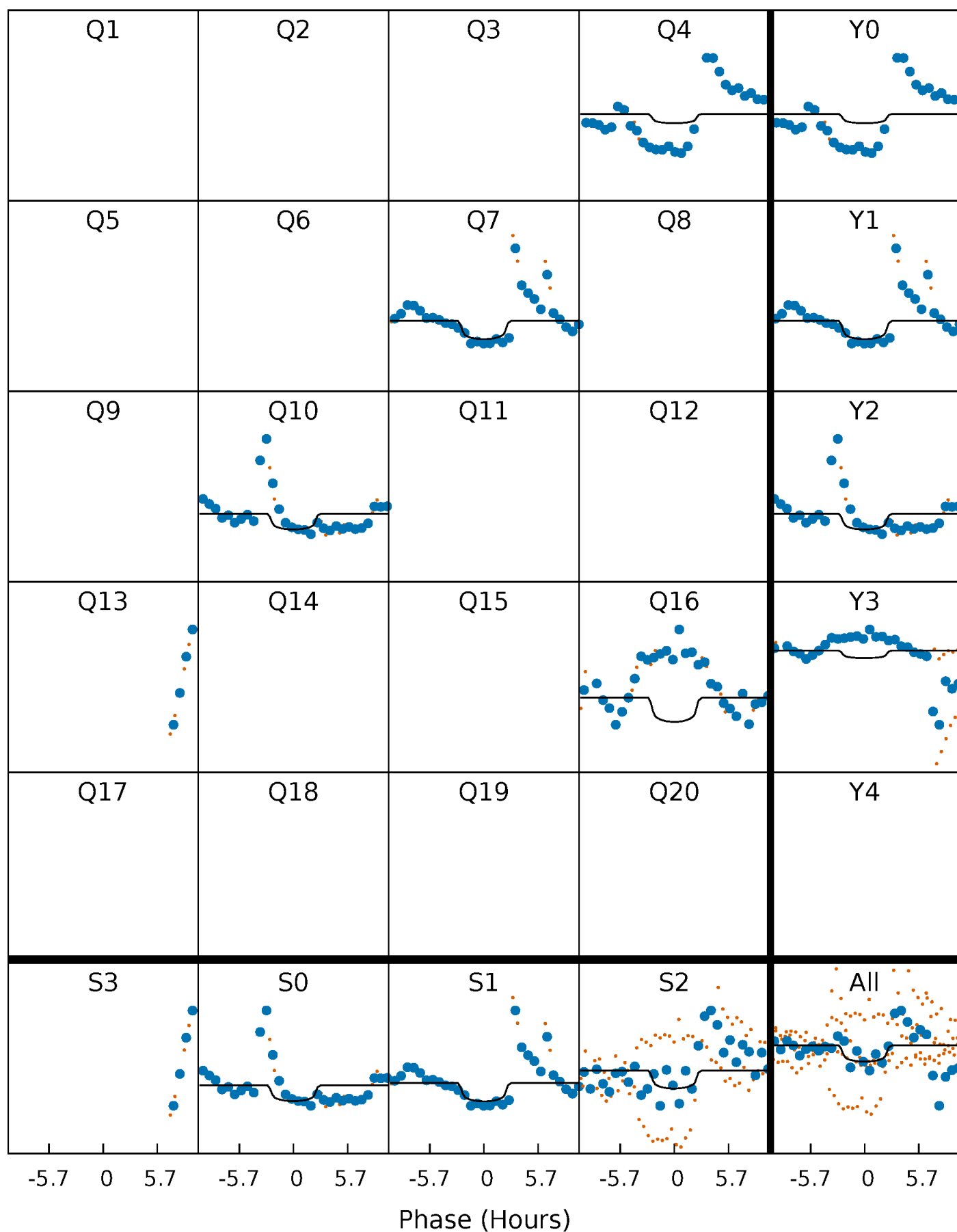
PDC Quarter-Phased Transit Curves

TCE 007339343-02 P=283.809701 Days $T_0=363.994376$ (BKJD)



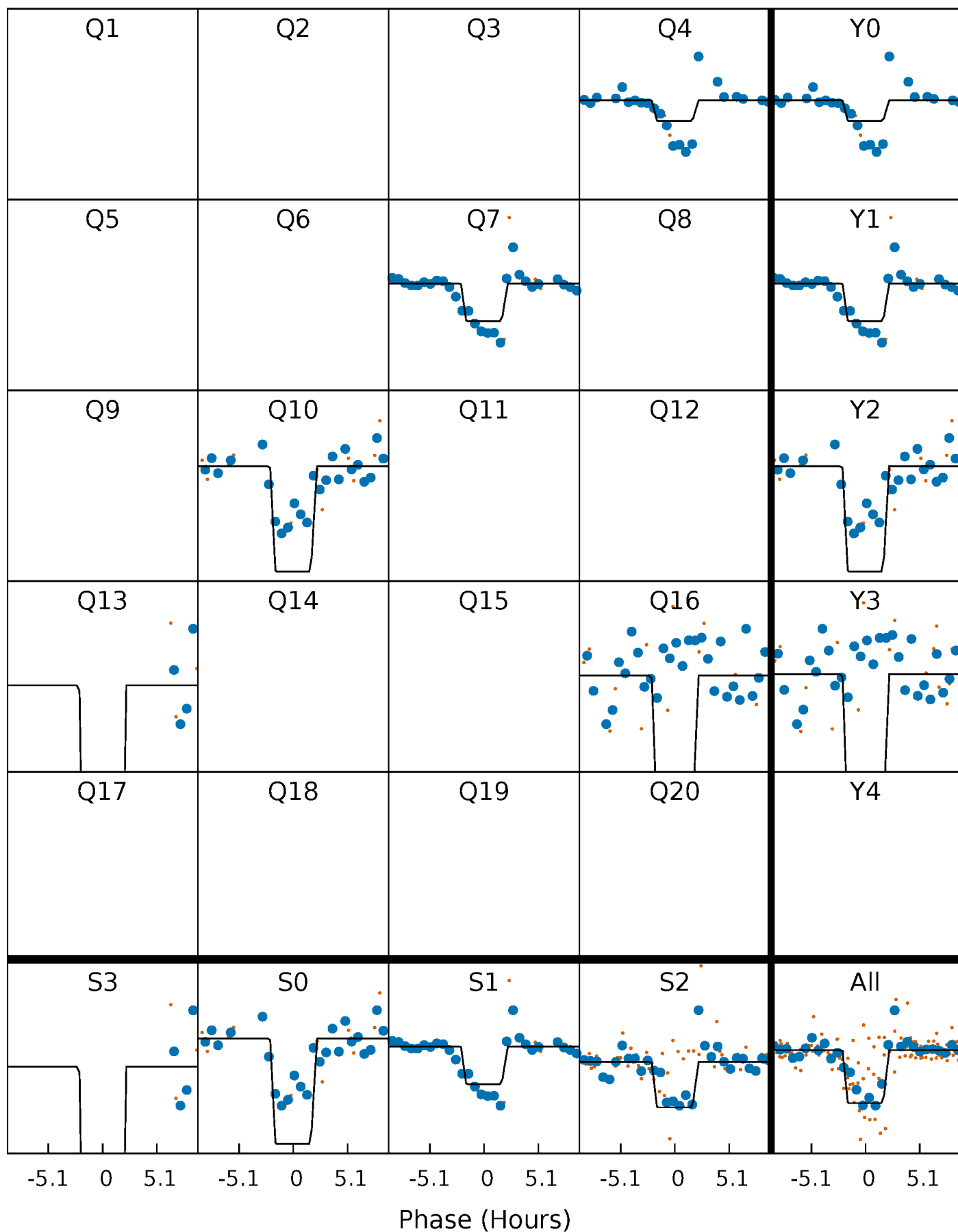
DV Quarter-Phased Transit Curves

TCE 007339343-02 $P=283.809701$ Days $T_0=363.994376$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

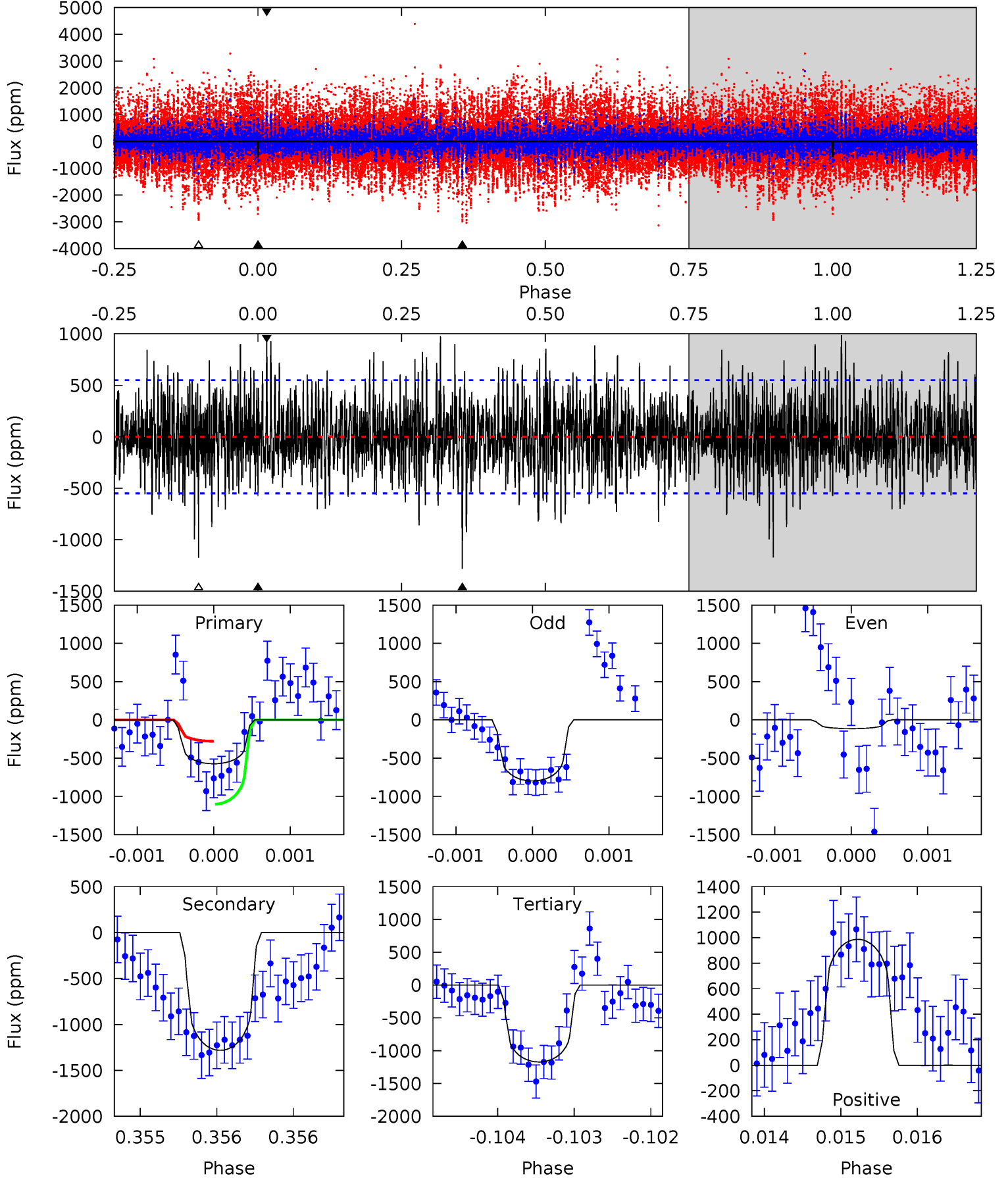
TCE 007339343-02 $P=283.809478$ Days $T_0=364.022715$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-02, P = 283.809701 Days, E = 80.184675 Days

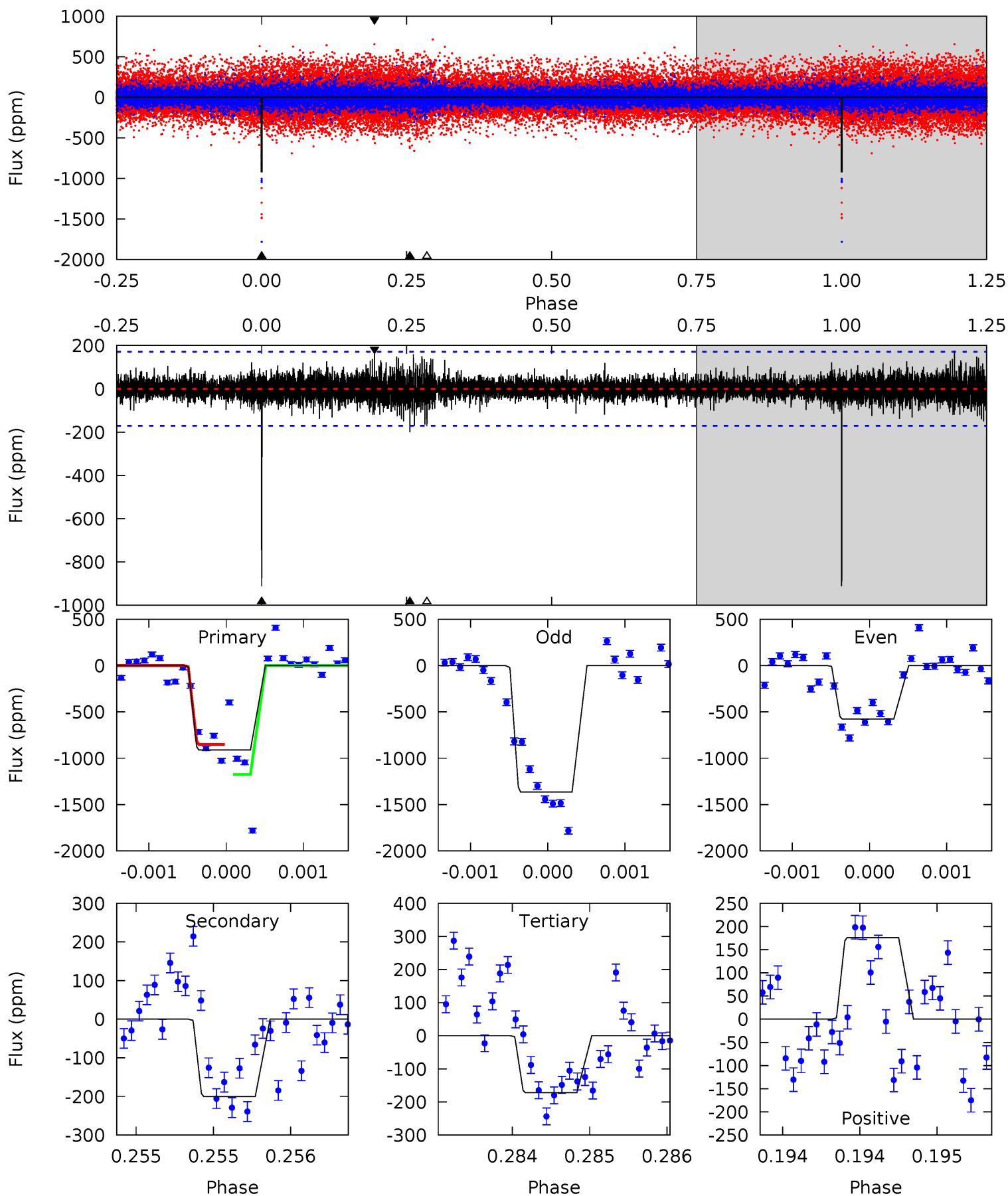
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.73	12.8	11.7	9.87	5.49	3.36	2.68	-5.98	-4.13	1.10	2.94	2.76	1.01	0.44	3.88



Alt Model-Shift Uniqueness Test

007339343-02, P = 283.809478 Days, E = 80.213237 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.5	6.47	5.56	5.69	5.53	3.41	1.00	23.9	23.8	0.91	0.78	12.9	0.95	0.16	4.30



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1282±100	$5.05^{+4.44}_{-3.51}$	416^{+30}_{-25}	5418^{+5709}_{-1207}	$19242^{+186130}_{-13720}$
Alt.	-200±31	$5.71^{+4.67}_{-3.61}$	418^{+29}_{-27}	3636^{+1611}_{-578}	2288^{+13945}_{-1591}

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 $A_{obs} \gg 1.0$

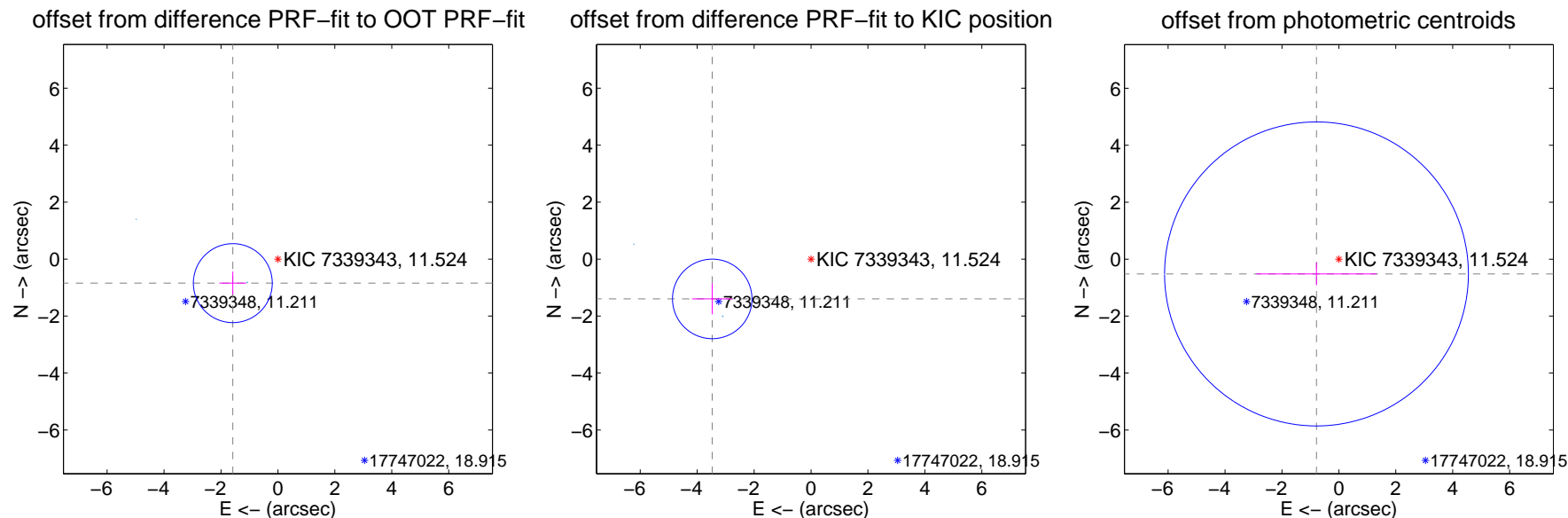
DV Centroid Data

Supplemental centroid analysis for 007339343-02. **Kepler magnitude: 11.52.** Transit SNR 4.20

There are 3 quarters with good PRF difference image offsets

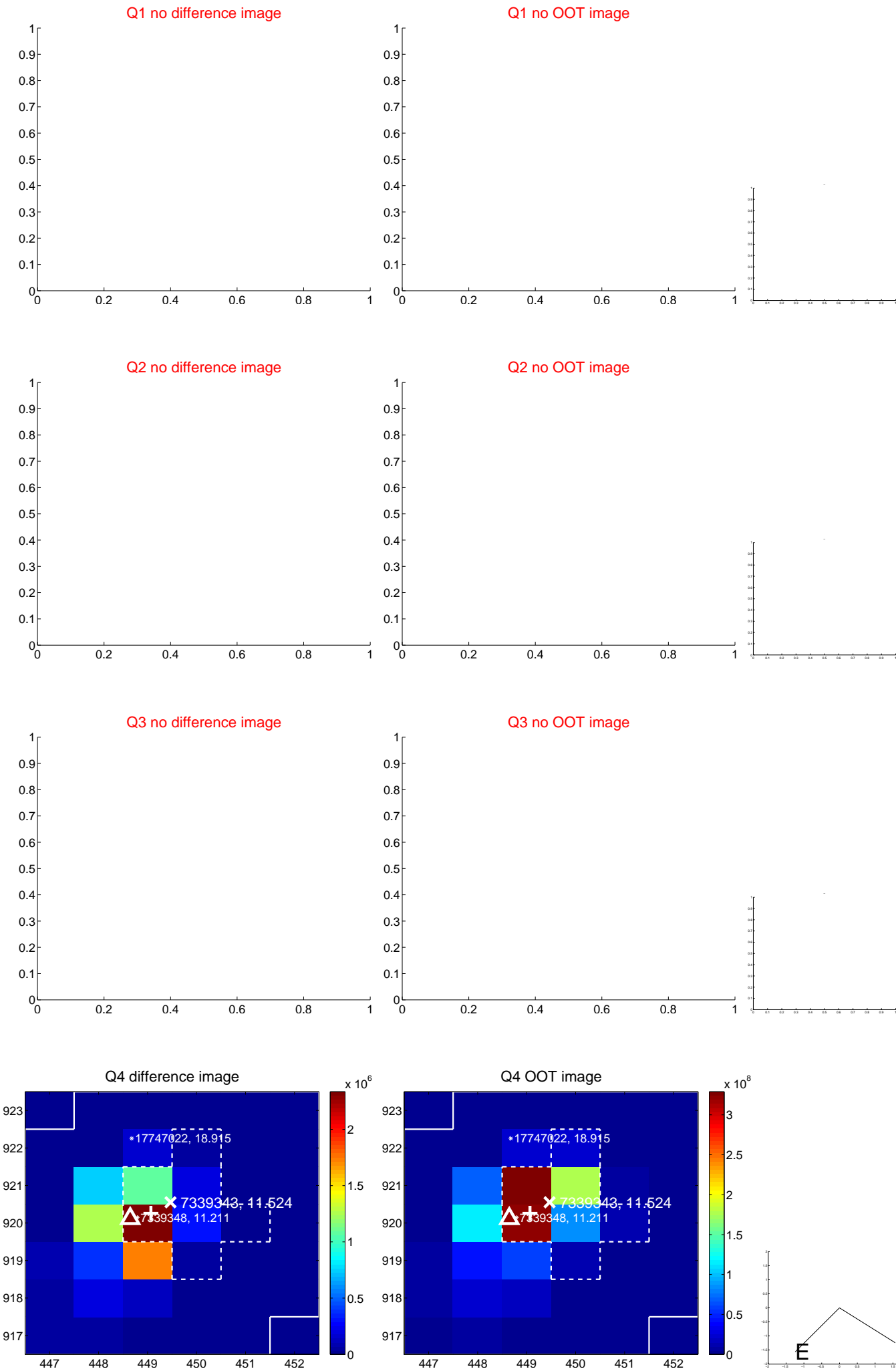
The OOT PRF centroid is offset from the target star catalog position by about 2.35 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.795 ± 0.462	3.89	1.584 ± 0.477	-0.844 ± 0.406
PRF-fit source offset from KIC position	3.741 ± 0.465	8.04	3.470 ± 0.712	-1.398 ± 0.540
photometric centroid source offset	0.94 ± 1.78	0.53	0.79 ± 2.12	-0.52 ± 0.40

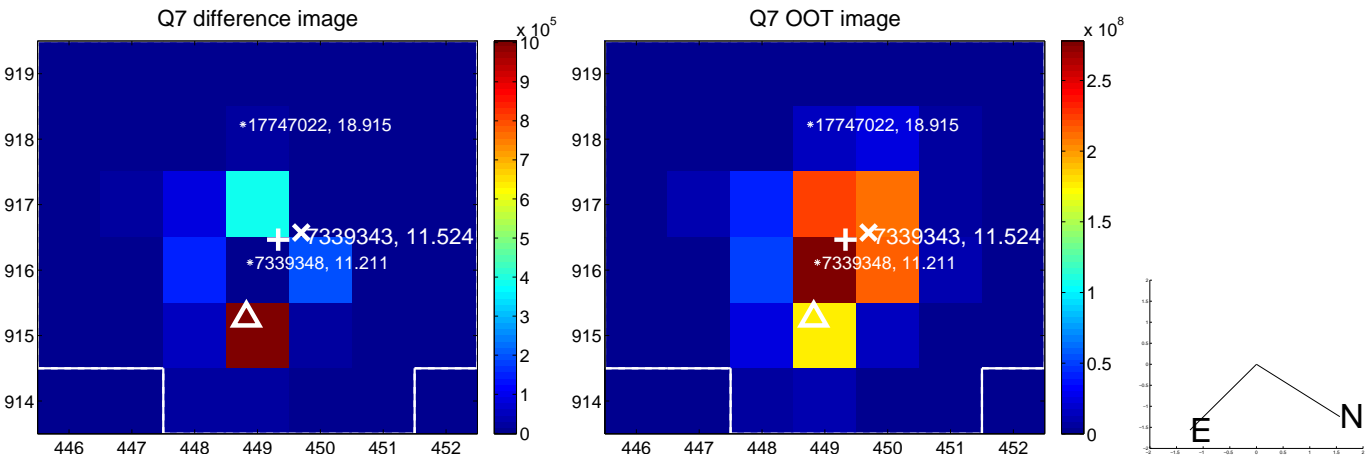


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

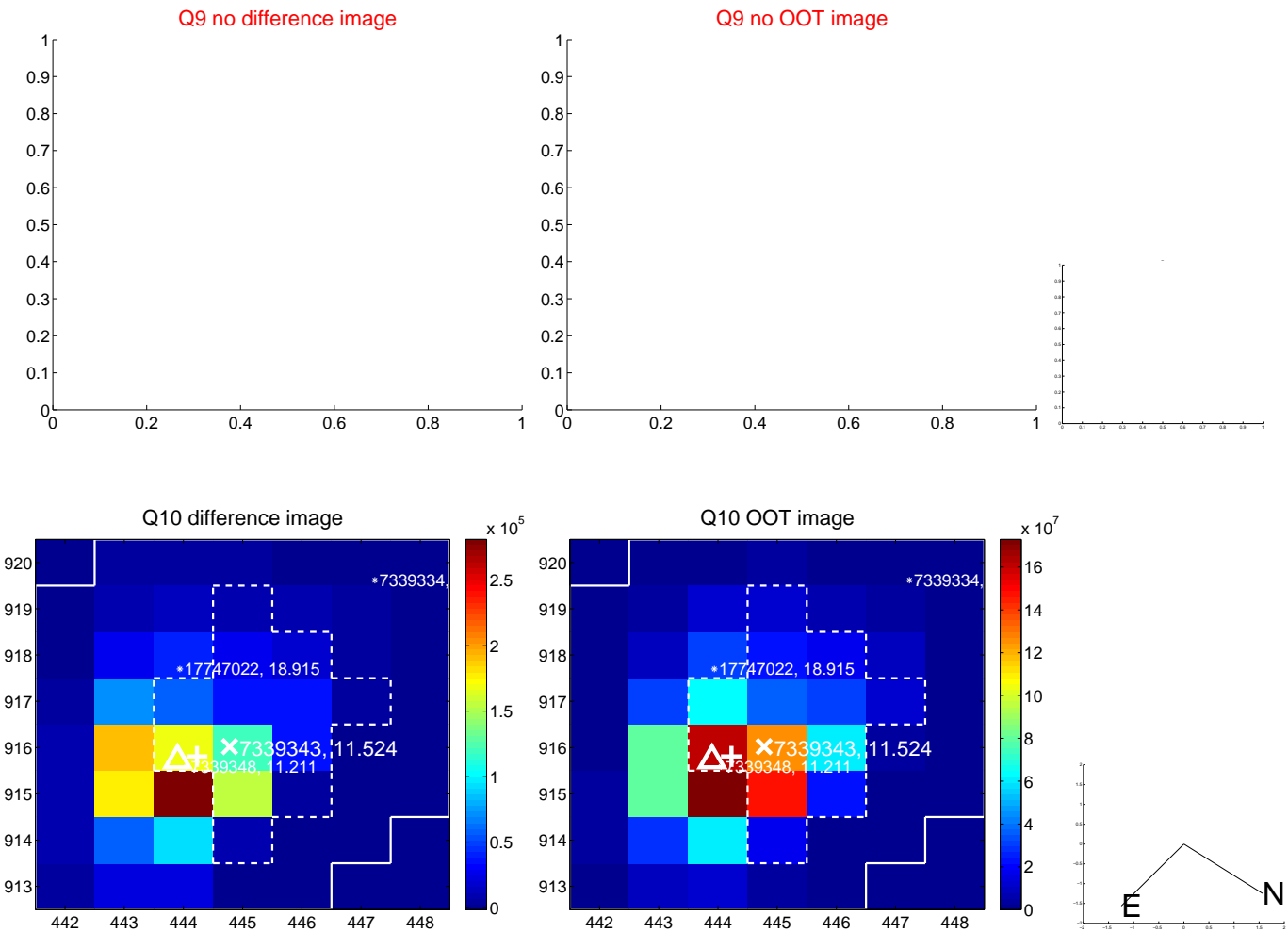
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



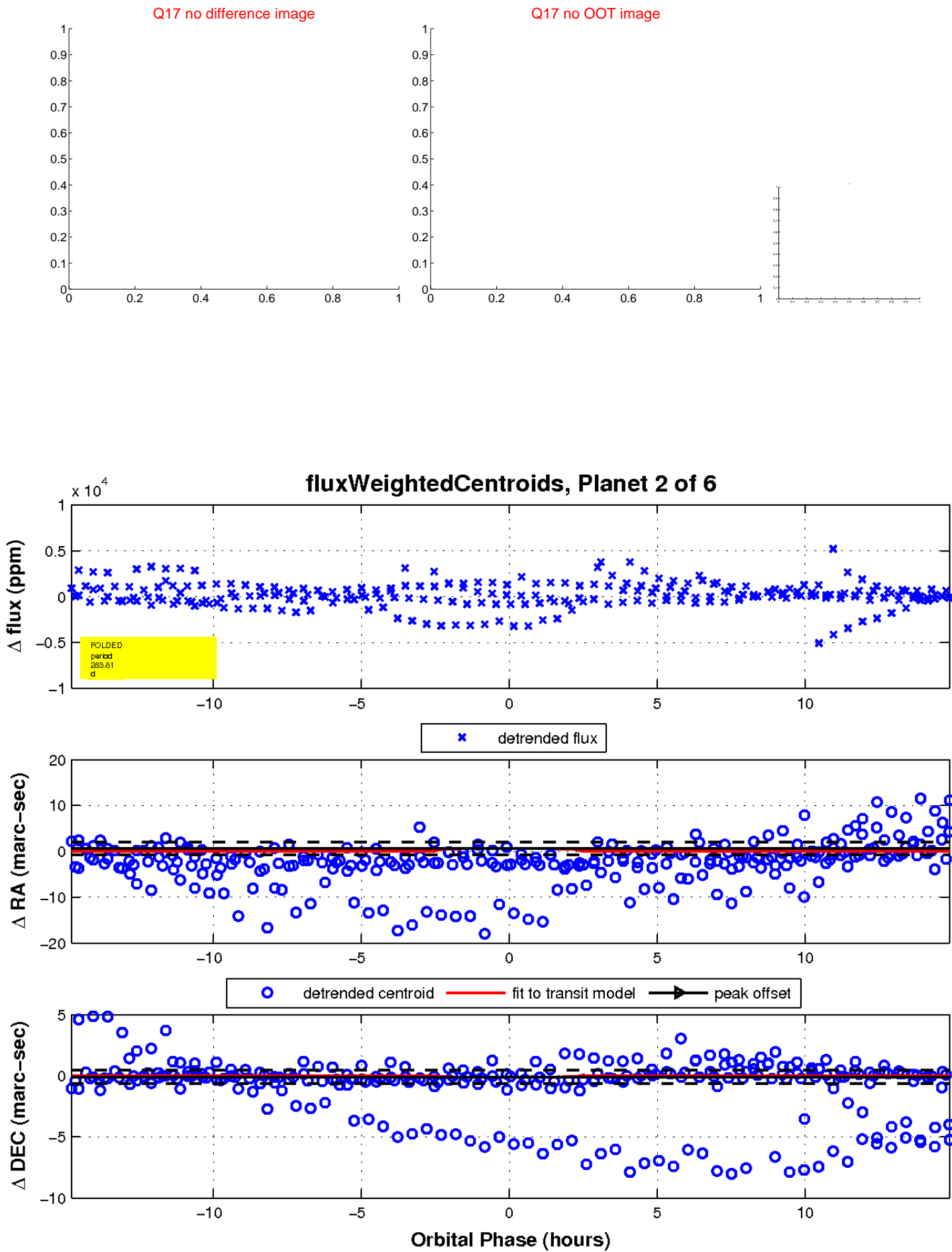
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

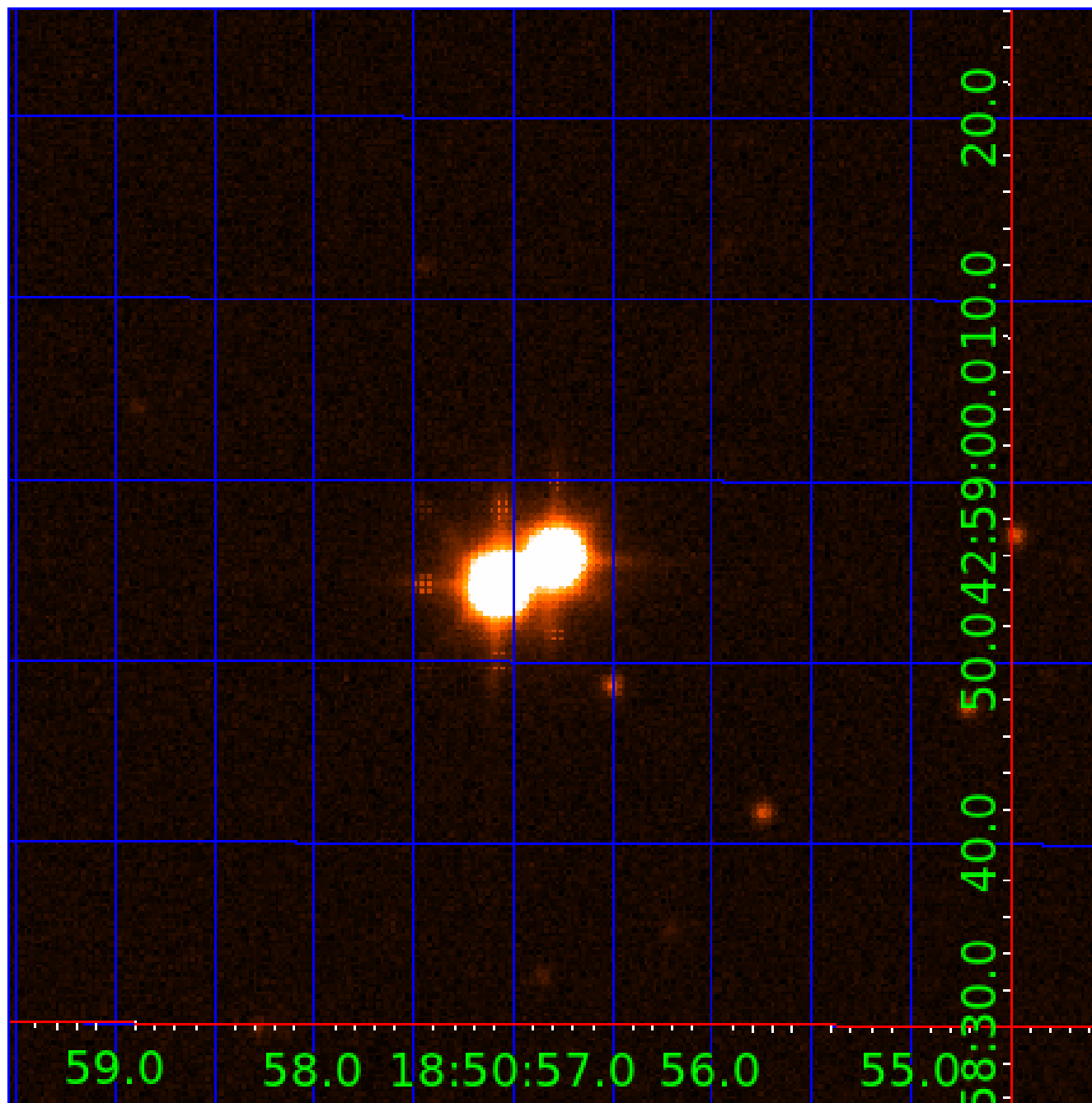


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007339343

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})
007339343-01	OBS	No	549.780387	343.862346	292.3	1.775	17.7	2.9	1.14	5810	1.94	0.79
007339343-02	OBS	No	283.809701	363.994376	658.4	5.006	16.9	4.2	1.14	5810	3.05	1.90
007339343-03	OBS	No	461.550319	530.762357	986.5	3.999	13.8	6.3	1.14	5810	3.59	0.99
007339343-04	OBS	No	205.330487	273.985390	517.8	2.845	15.3	5.5	1.14	5810	2.57	2.93
007339343-05	OBS	No	401.562397	462.653514	2026.5	13.375	16.5	7.4	1.14	5810	5.58	1.20
007339343-06	OBS	No	298.132452	212.574332	224.4	6.000	14.0	-1.0	1.14	5810	1.69	1.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007339343-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

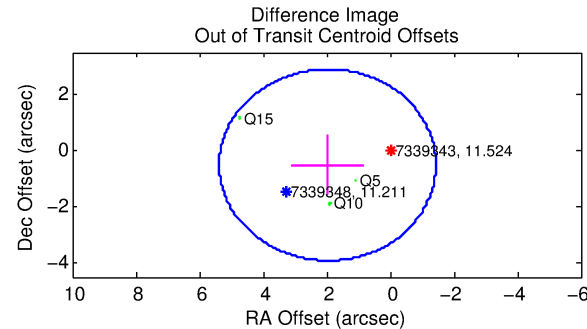
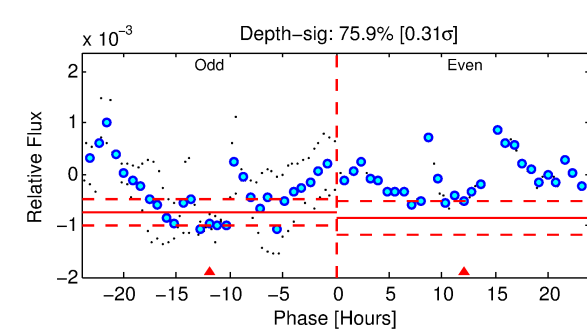
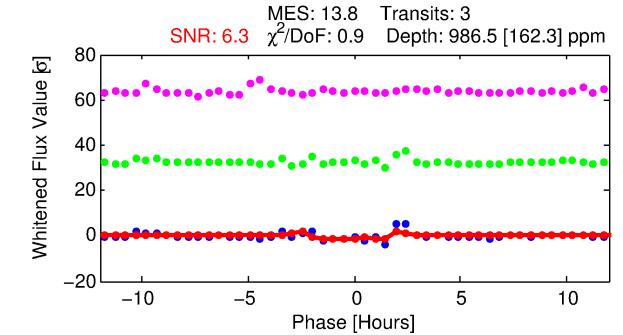
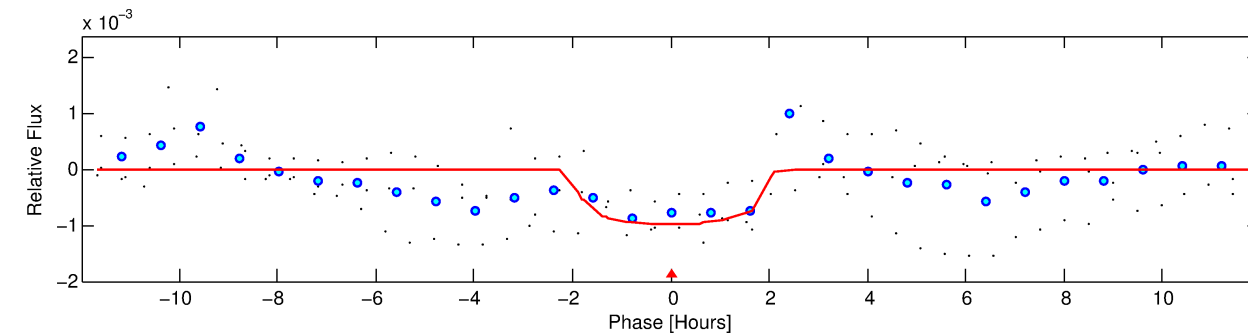
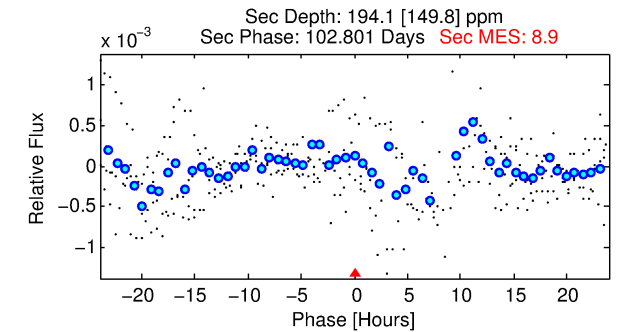
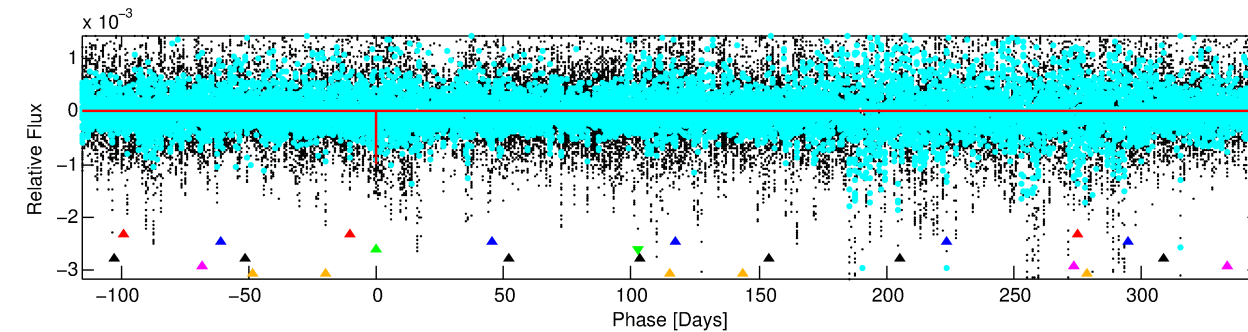
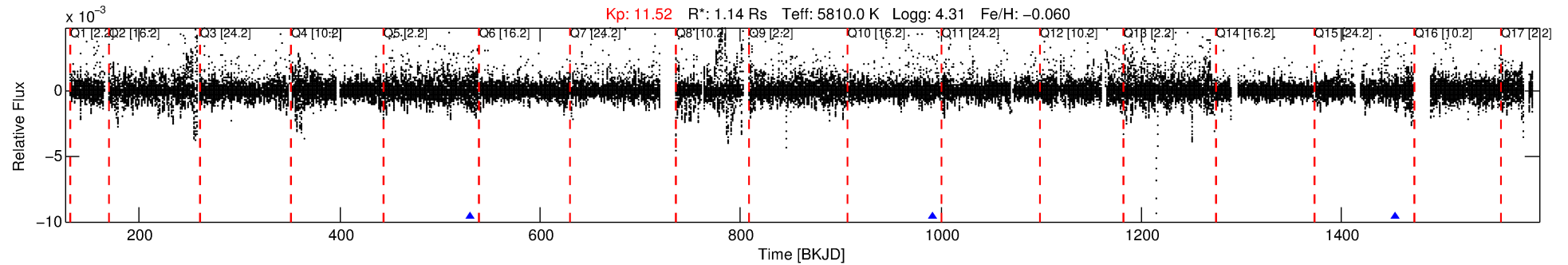
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-03

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 3 of 6 Period: 461.550 d



DV Fit Results:

Period = 461.55032 [0.00309] d
Epoch = 530.7624 [0.0046] BKJD
Rp/R* = 0.0290 [0.0896]
a/R* = 850.42 [11769.97]
b = 0.36 [33.97]
Seff = 0.99 [0.34]
Teq = 255 [22] K
Rp = 3.59 [11.16] Re
a = 1.1511 [0.2680] AU
Ag = 10966.54 [68476.02] [0.16 σ]
Teffp = 4029 [6281] K [0.60 σ]

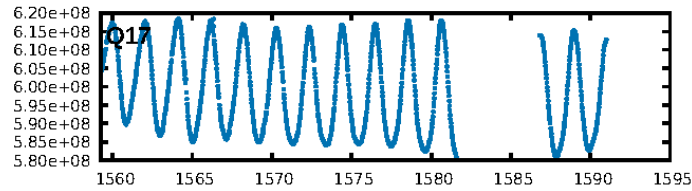
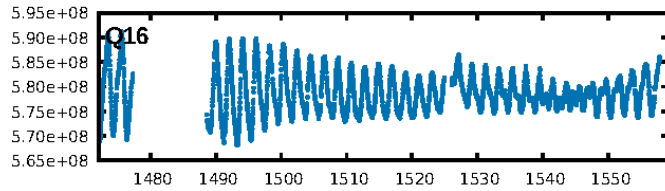
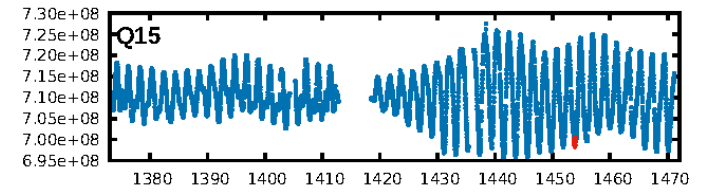
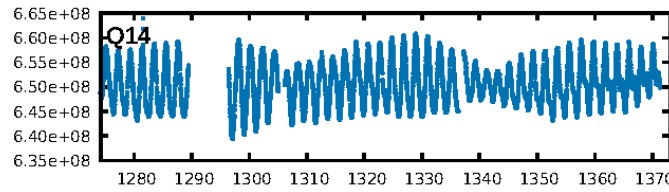
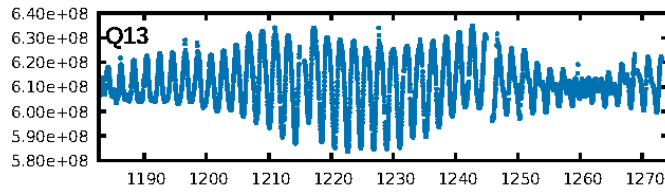
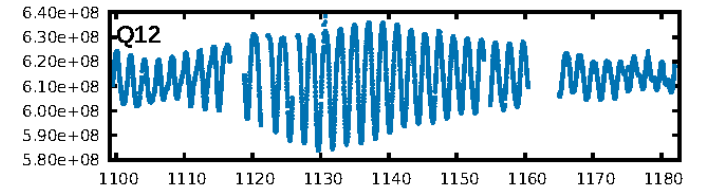
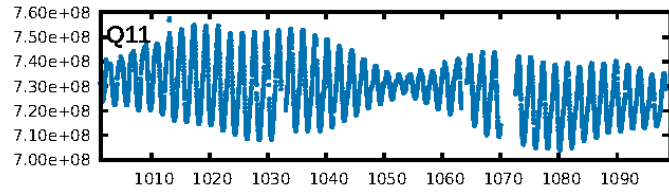
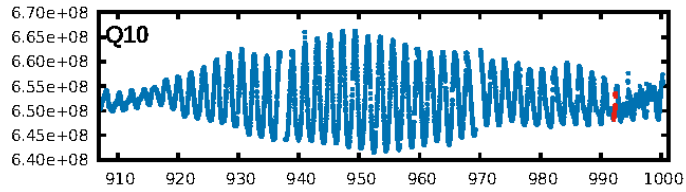
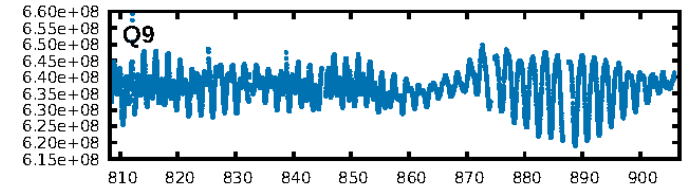
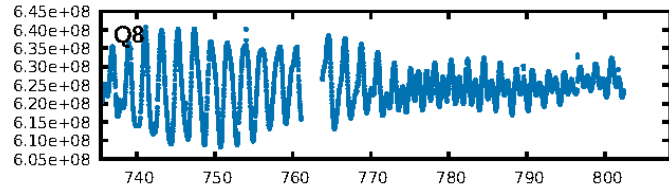
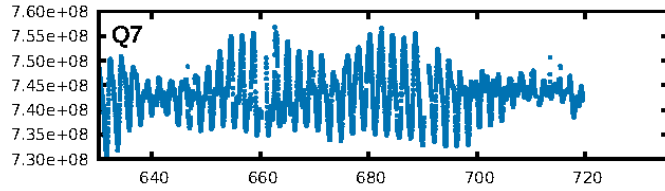
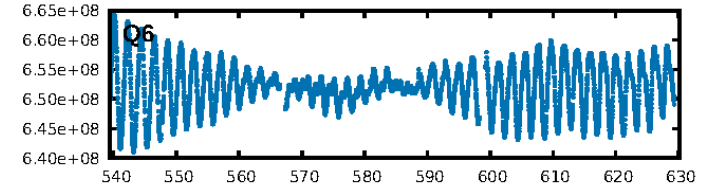
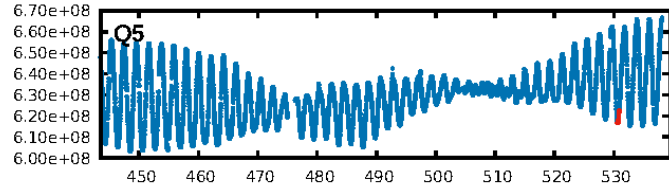
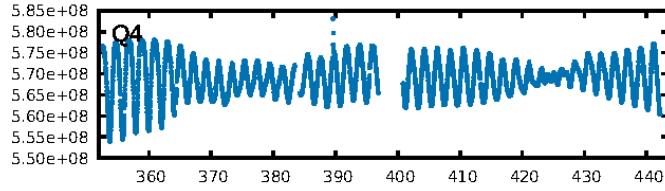
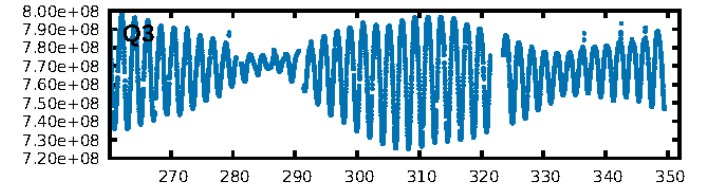
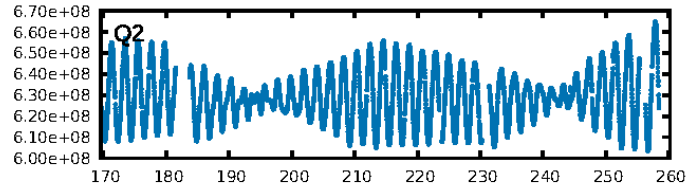
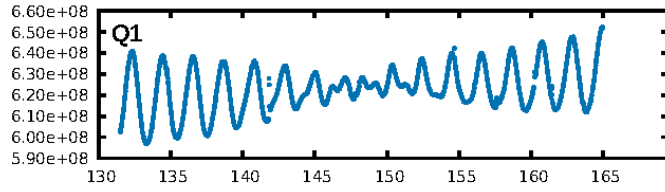
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [103.13 σ]
LongPeriod-sig: 100.0% [483.93 σ]
ModelChiSquare2-sig: 51.7%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.4%
Centroid-so: 1.535 arcsec [1.19 σ]
OotOffset-rm: 2.032 arcsec [1.79 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 4.001 arcsec [4.53 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

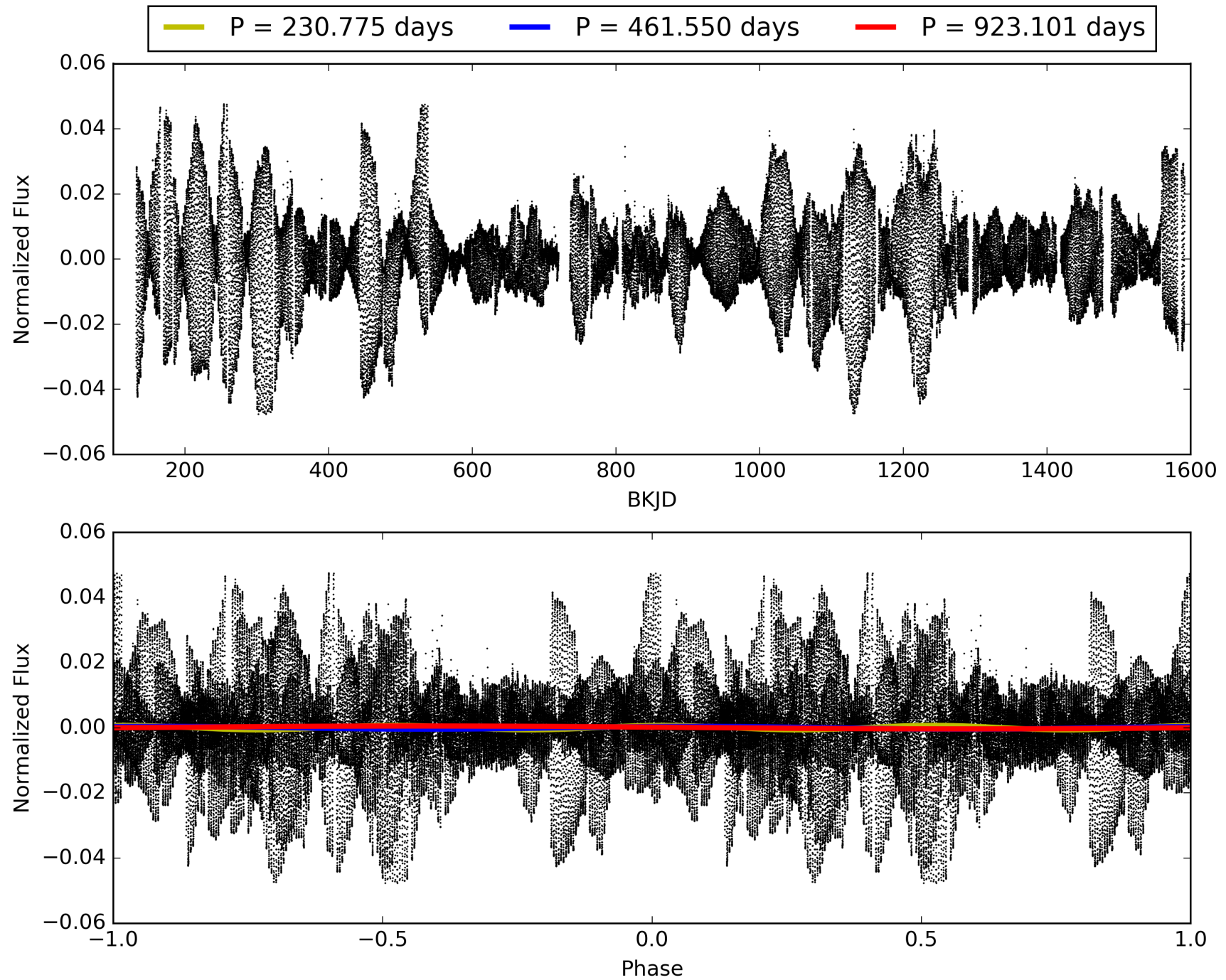
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:54:30 Z

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

TCE 007339343-03, PDC Light Curves

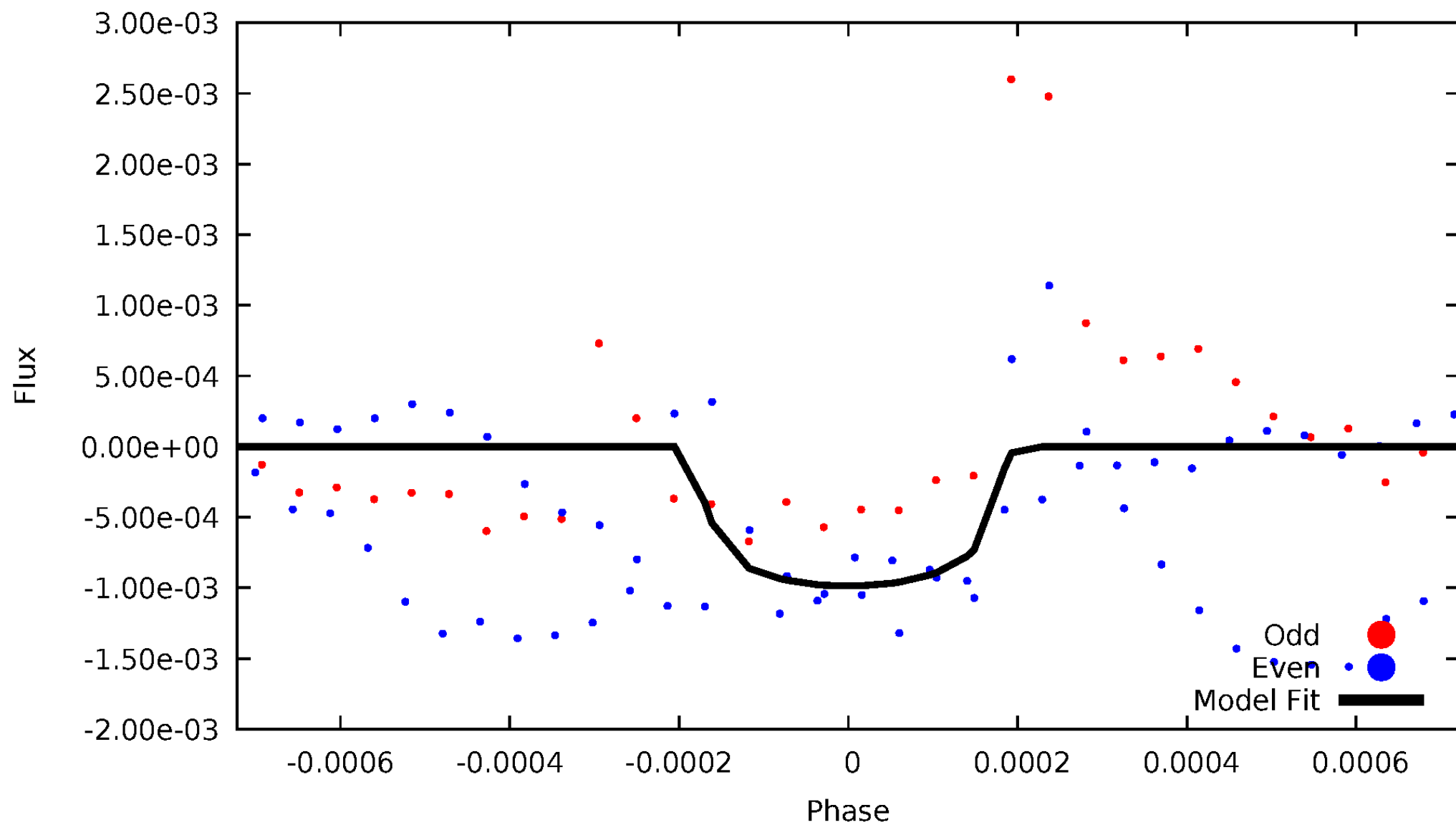


TCE 007339343-03



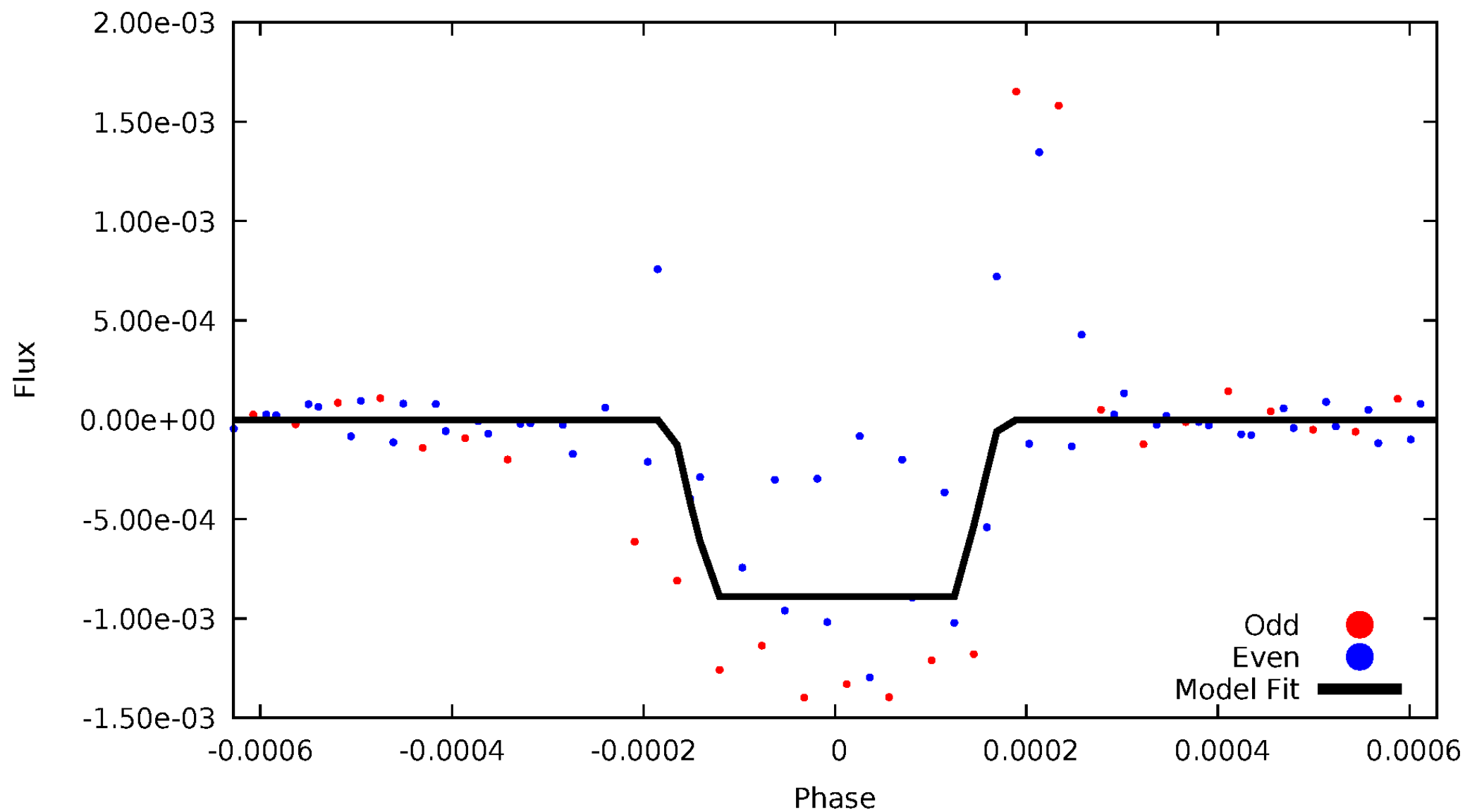
DV Odd/Even

TCE 007339343-03



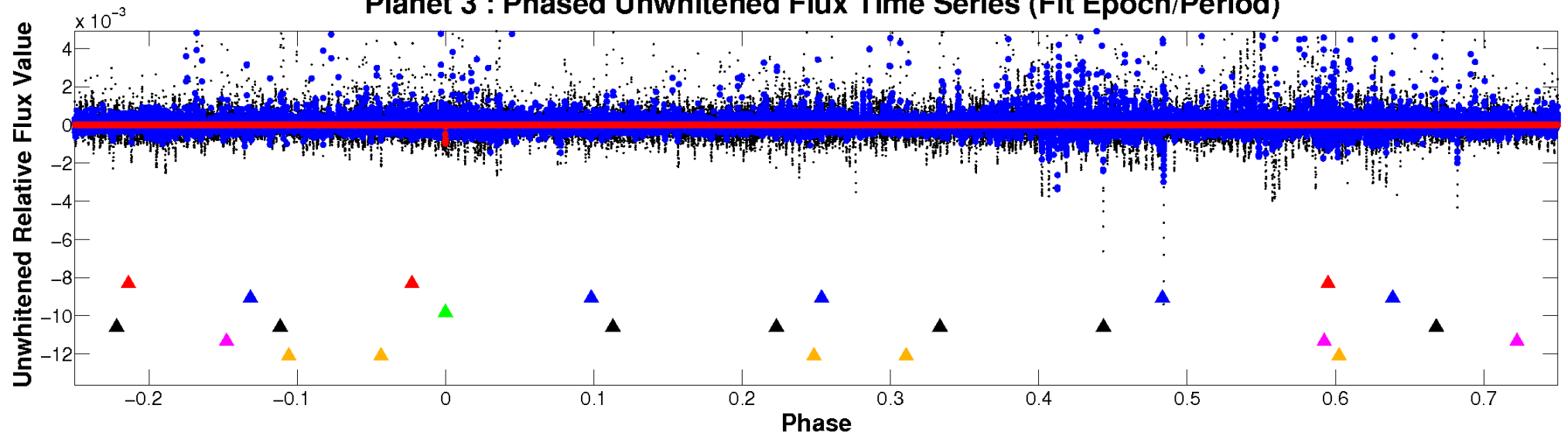
ALT Odd/Even

TCE 007339343-03

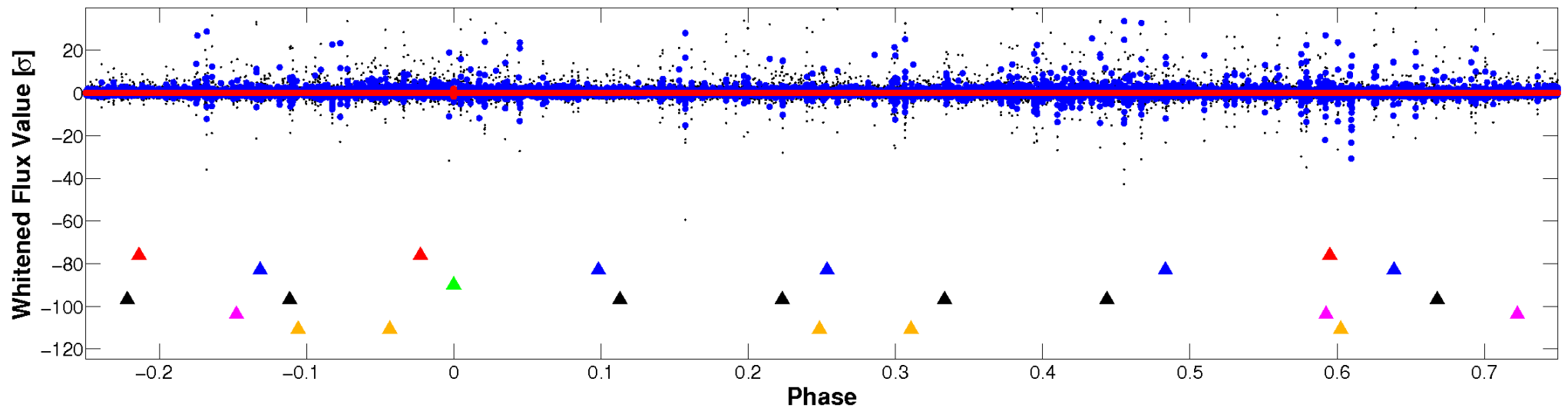


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

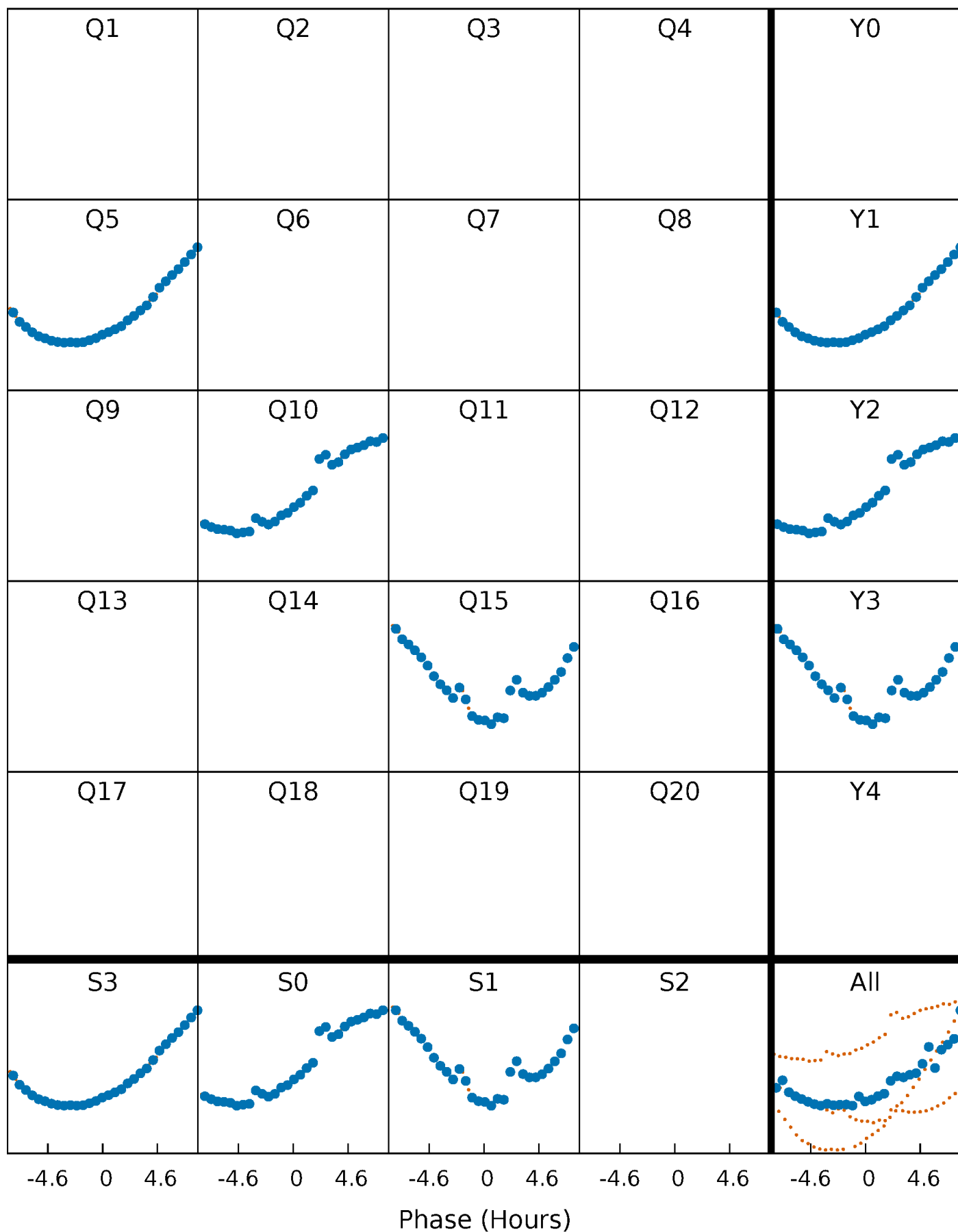


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



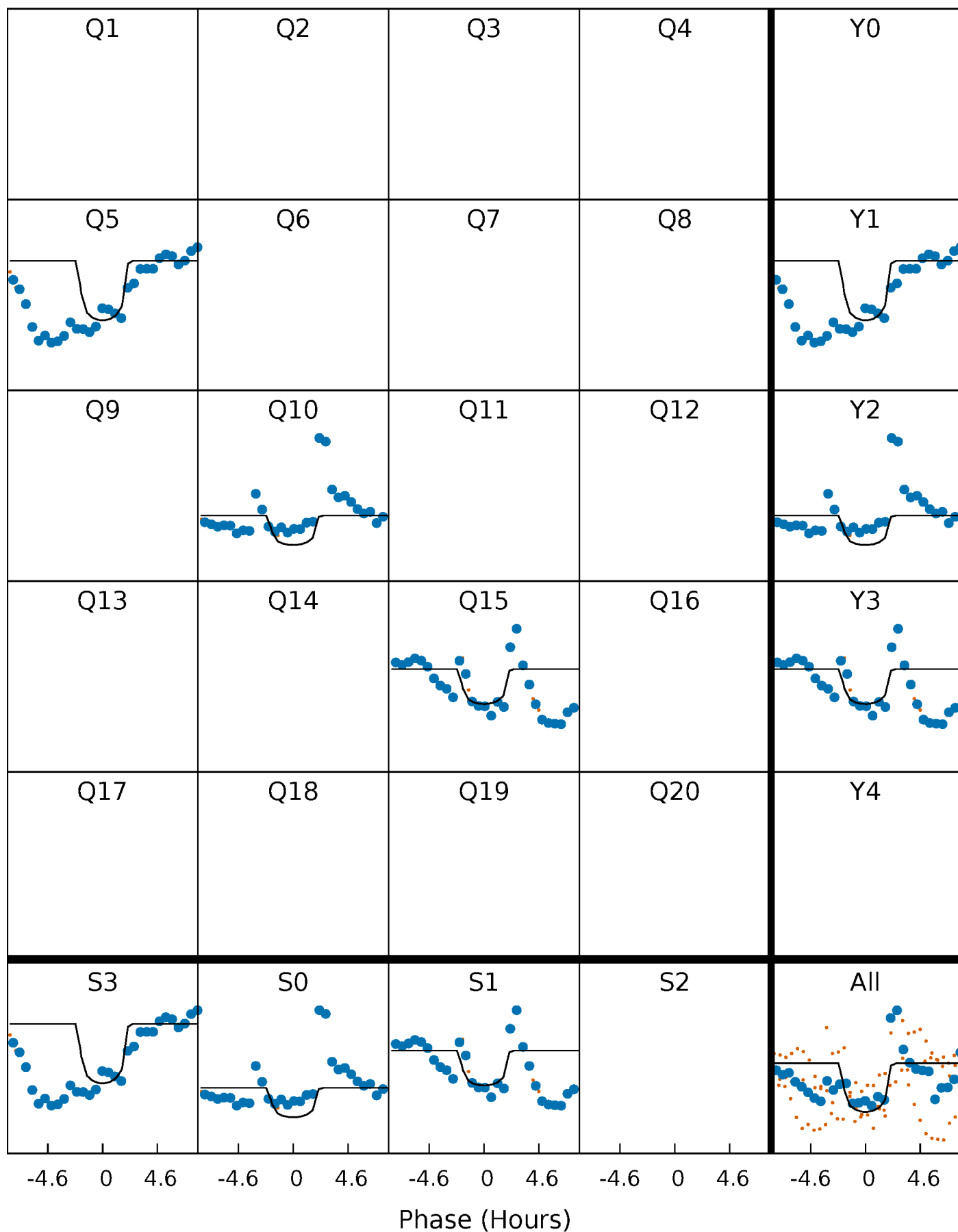
PDC Quarter-Phased Transit Curves

TCE 007339343-03 P=461.550319 Days $T_0=530.762357$ (BKJD)



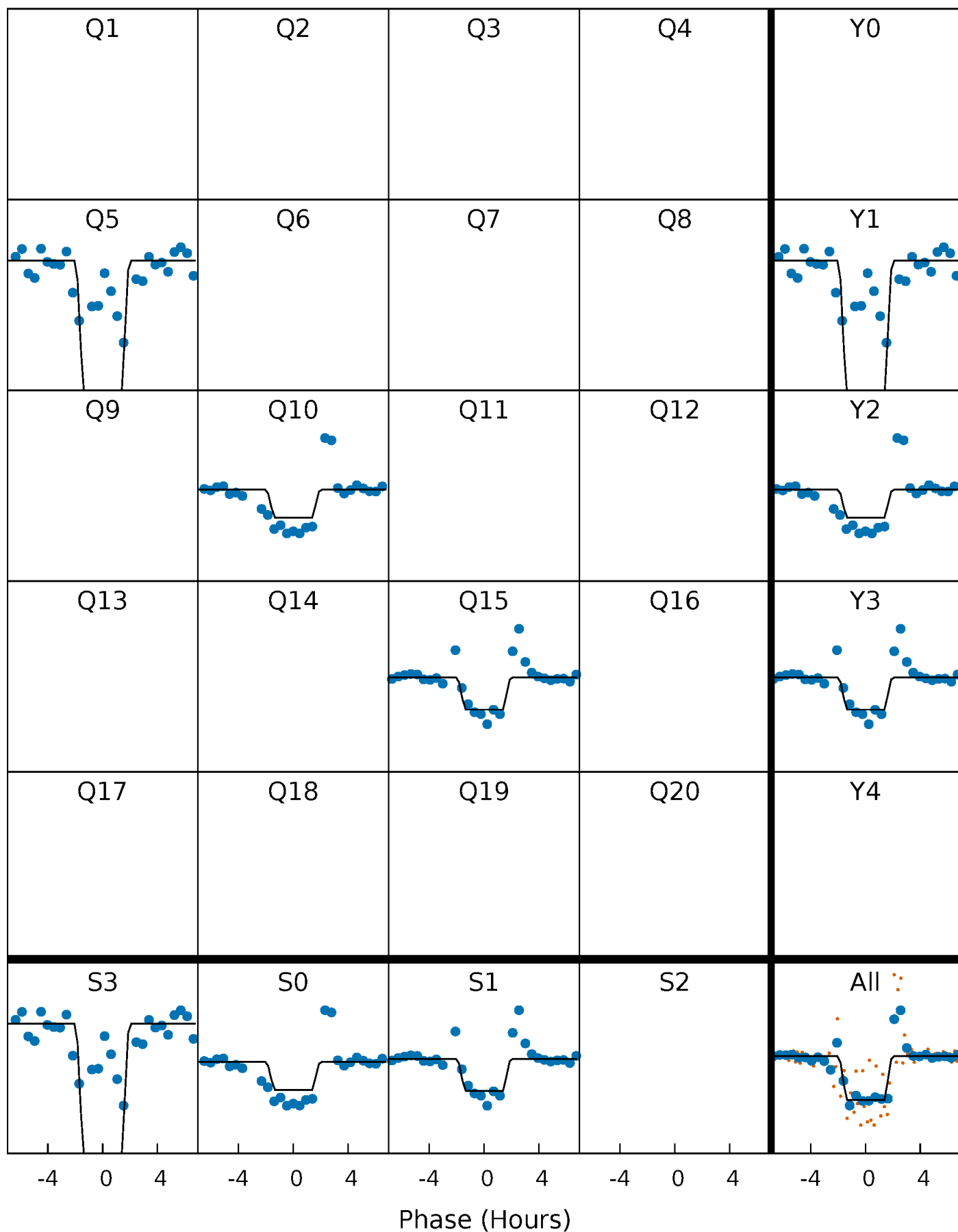
DV Quarter-Phased Transit Curves

TCE 007339343-03 P=461.550319 Days $T_0=530.762357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

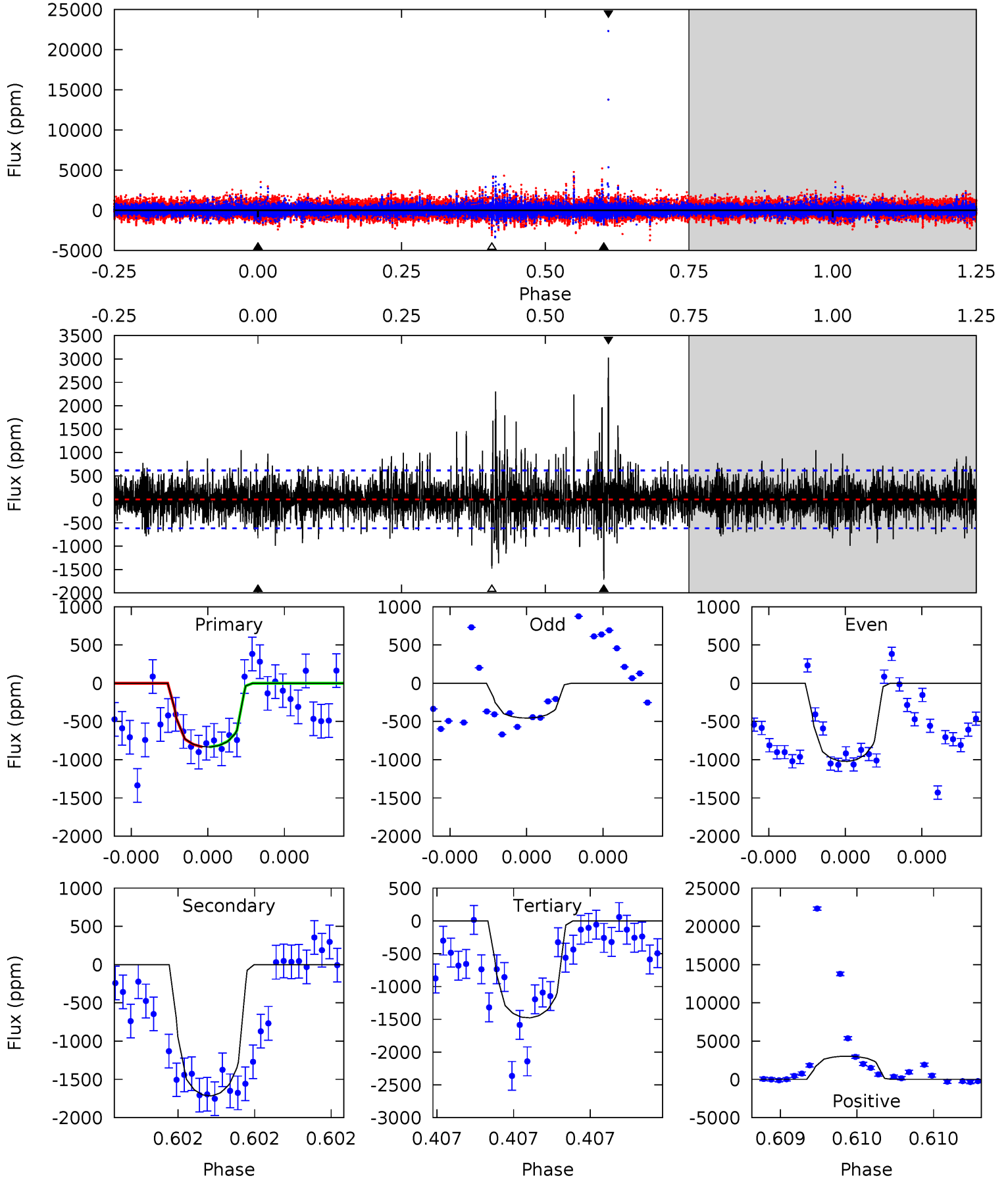
TCE 007339343-03 P=461.560064 Days $T_0=530.754022$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-03, P = 461.550319 Days, E = 69.212038 Days

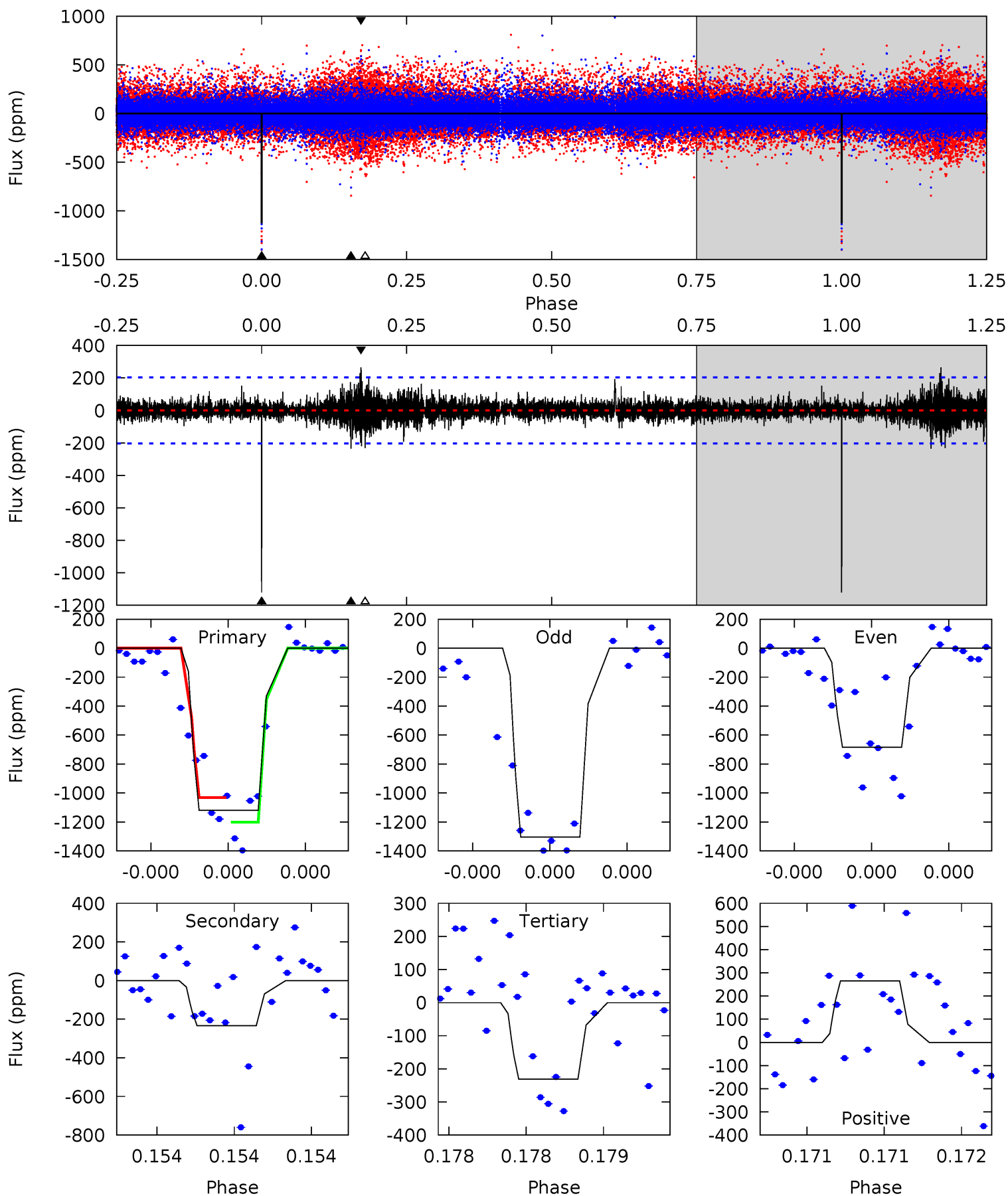
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.57	15.6	13.4	27.5	5.62	3.55	2.70	-5.85	-19.9	2.15	-11.9	2.00	0.85	0.64	0.00



Alt Model-Shift Uniqueness Test

007339343-03, P = 461.560064 Days, E = 69.193958 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	6.49	6.41	7.35	5.65	3.60	0.95	24.6	23.7	0.08	-0.86	8.74	0.92	0.19	2.37



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1715 ± 110	$8.96^{+8.64}_{-6.28}$	356^{+22}_{-23}	4566^{+3675}_{-980}	$15648^{+161266}_{-11588}$
Alt.	-234 ± 36	$9.37^{+8.39}_{-6.42}$	354^{+25}_{-21}	3207^{+1514}_{-522}	1916^{+18092}_{-1393}

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

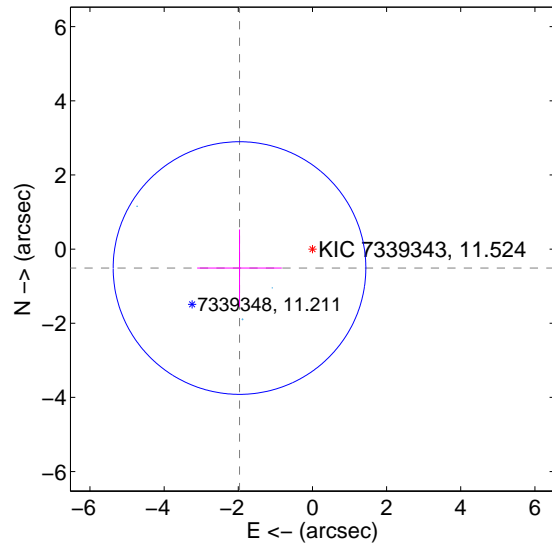
Supplemental centroid analysis for 007339343-03. **Kepler magnitude: 11.52.** Transit SNR 6.30

There are 3 quarters with good PRF difference image offsets

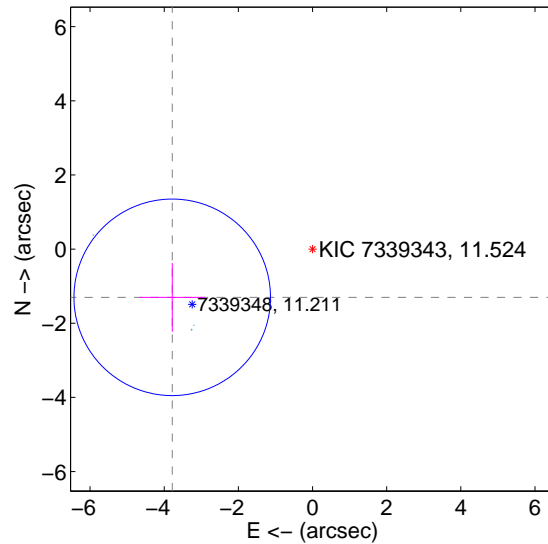
The direct PRF centroid is offset from the target star catalog position by about 1.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.032 ± 1.136	1.79	1.967 ± 1.142	-0.511 ± 1.041
PRF-fit source offset from KIC position	4.001 ± 0.883	4.53	3.784 ± 0.878	-1.301 ± 0.927
photometric centroid source offset	1.53 ± 1.29	1.19	-0.98 ± 1.99	-1.18 ± 0.28

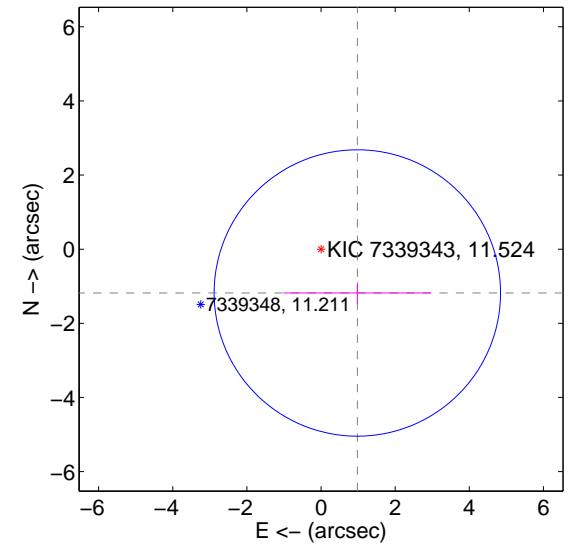
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

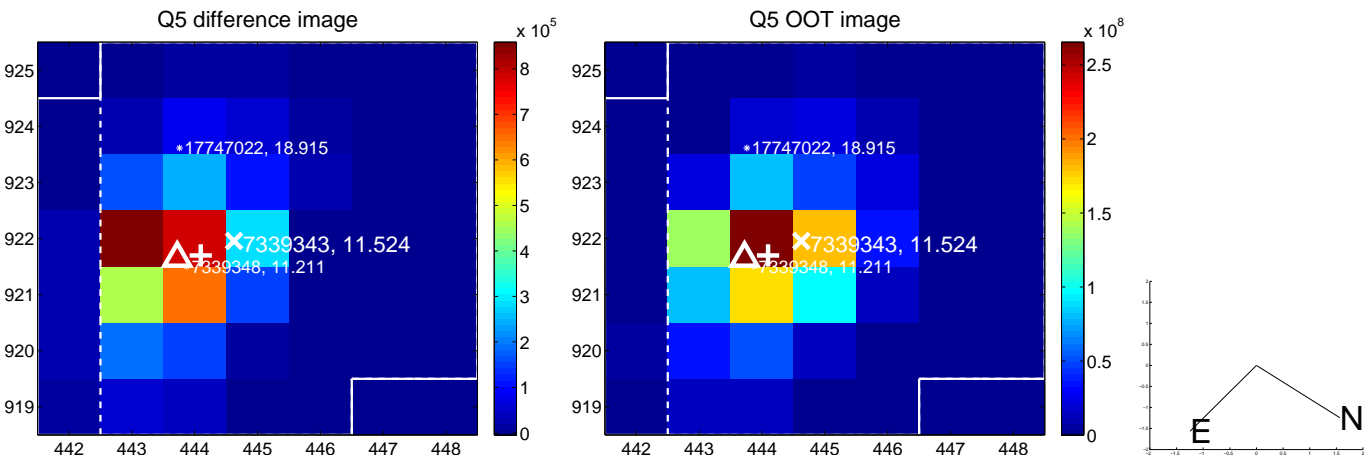


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

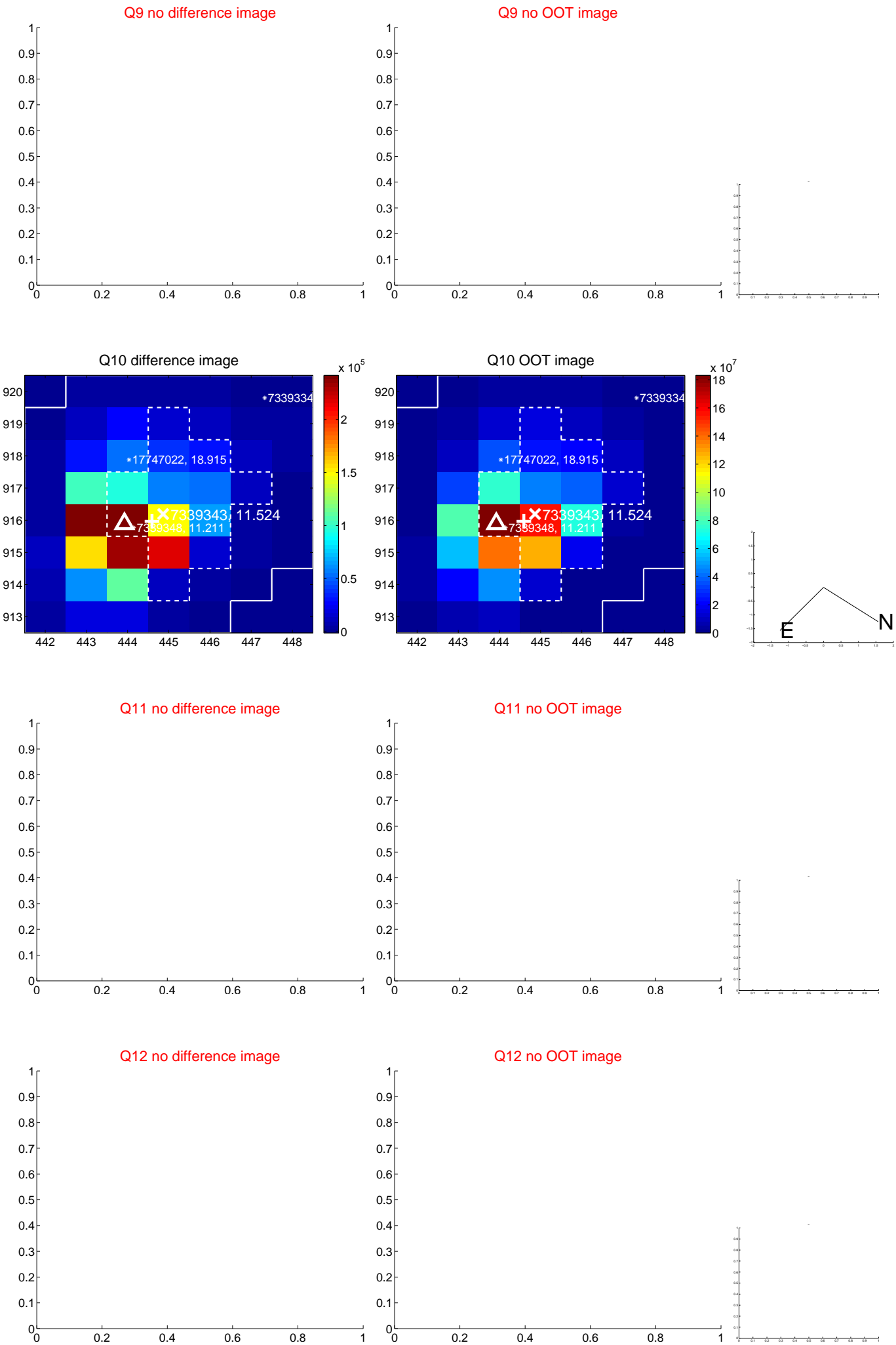
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



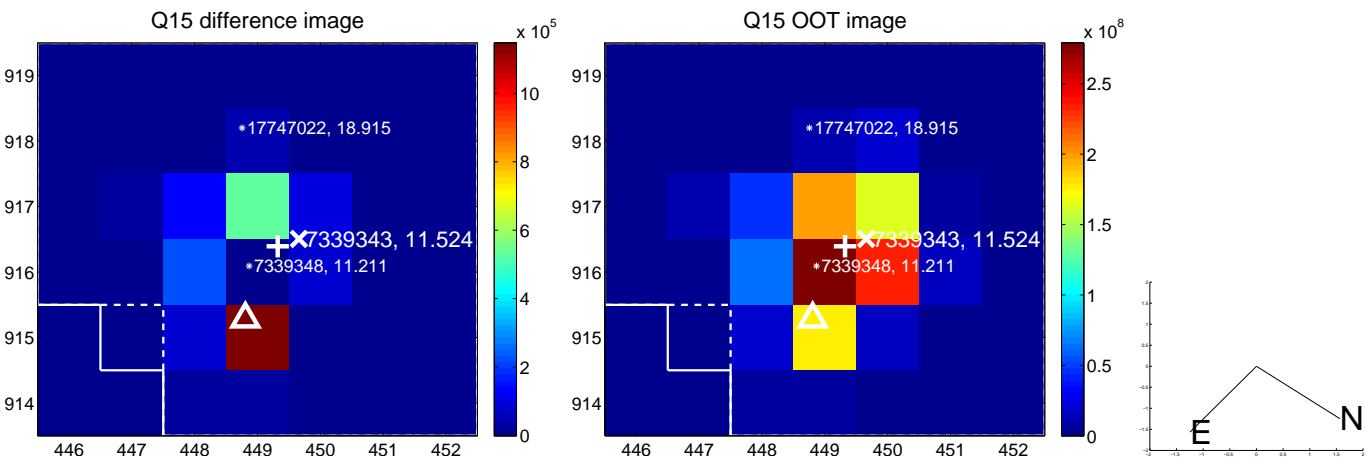
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



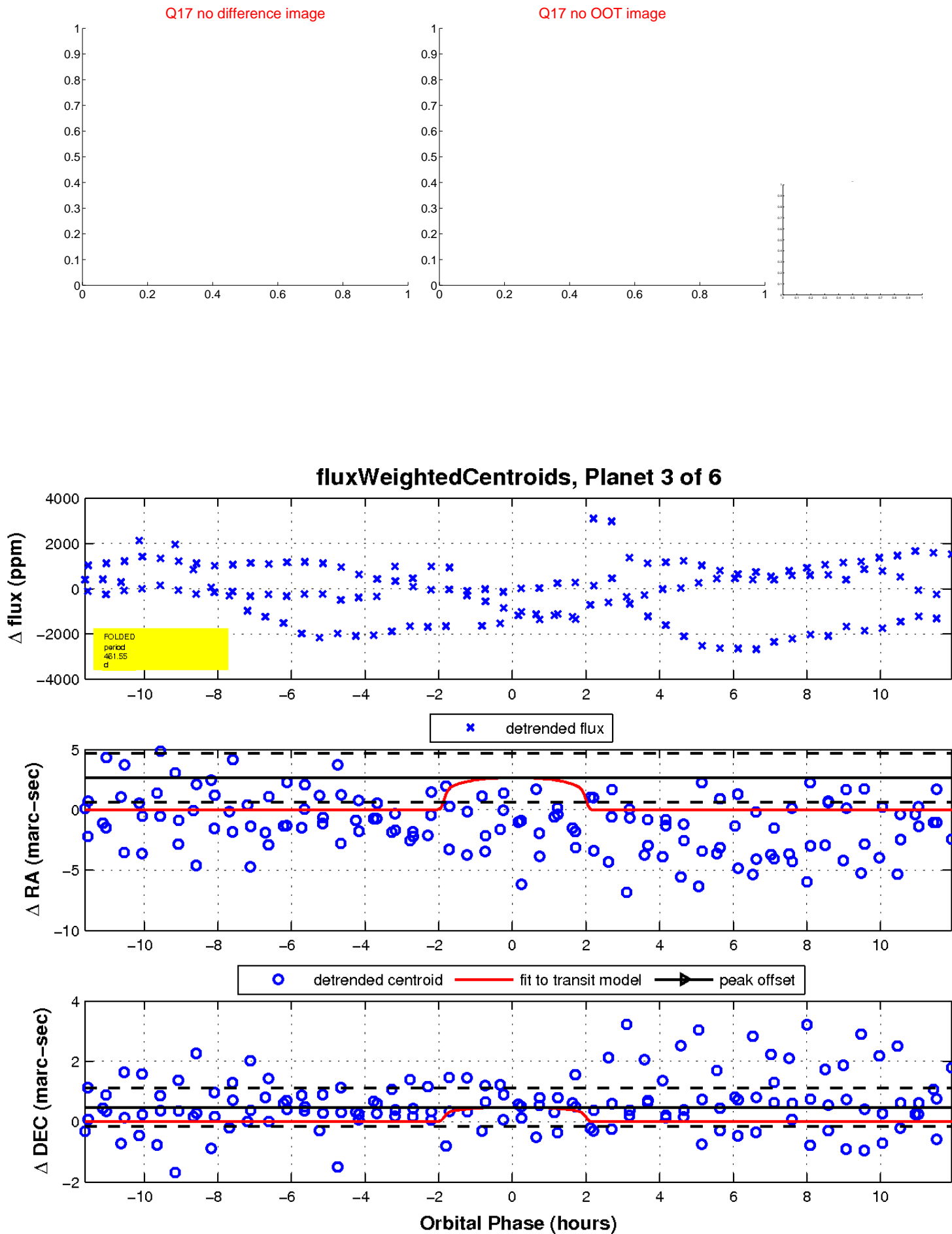
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

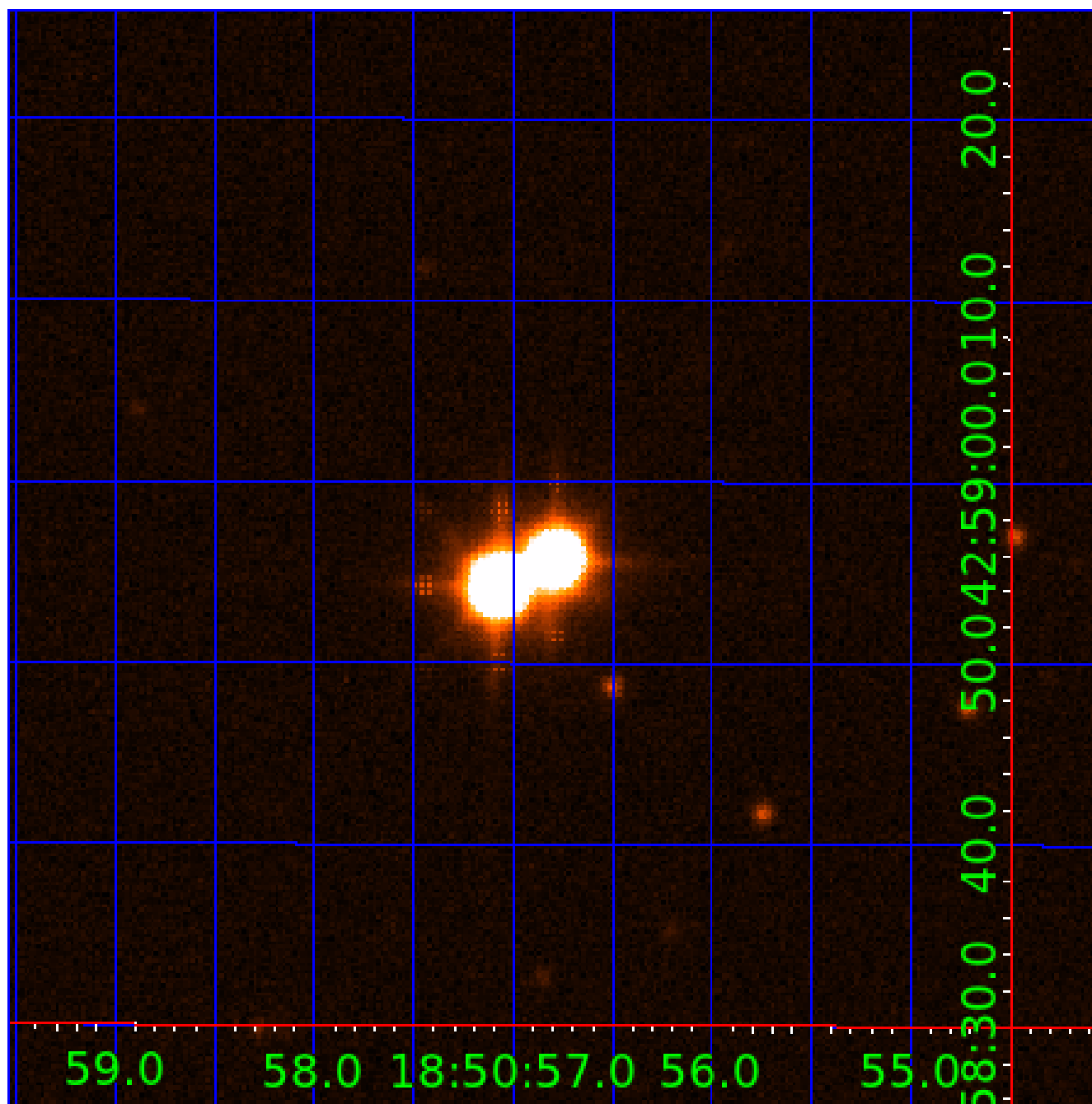


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007339343

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})
007339343-01	OBS	No	549.780387	343.862346	292.3	1.775	17.7	2.9	1.14	5810	1.94	0.79
007339343-02	OBS	No	283.809701	363.994376	658.4	5.006	16.9	4.2	1.14	5810	3.05	1.90
007339343-03	OBS	No	461.550319	530.762357	986.5	3.999	13.8	6.3	1.14	5810	3.59	0.99
007339343-04	OBS	No	205.330487	273.985390	517.8	2.845	15.3	5.5	1.14	5810	2.57	2.93
007339343-05	OBS	No	401.562397	462.653514	2026.5	13.375	16.5	7.4	1.14	5810	5.58	1.20
007339343-06	OBS	No	298.132452	212.574332	224.4	6.000	14.0	-1.0	1.14	5810	1.69	1.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007339343-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

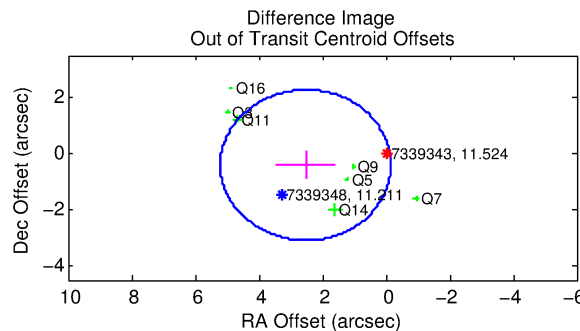
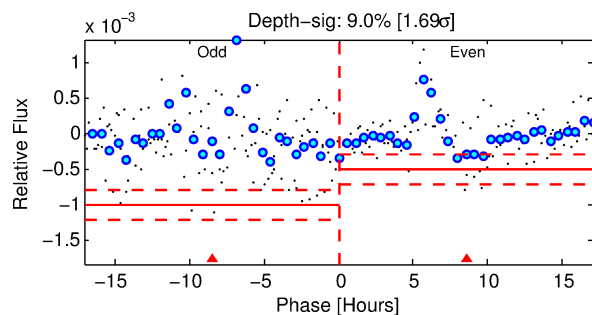
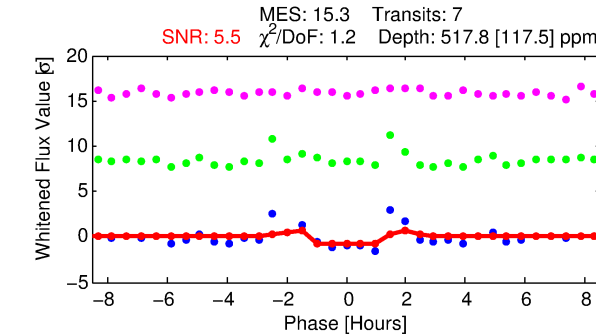
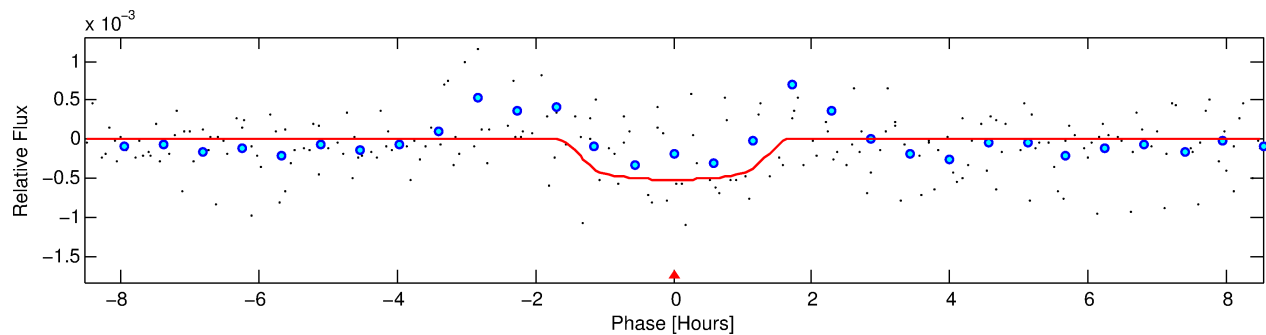
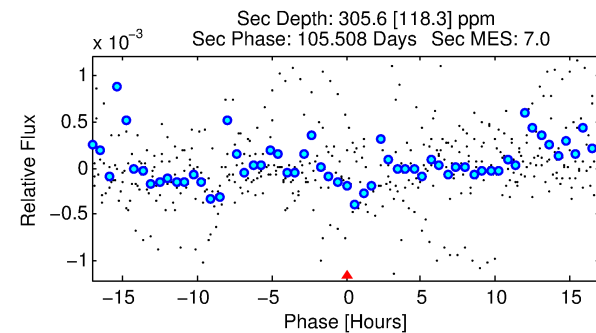
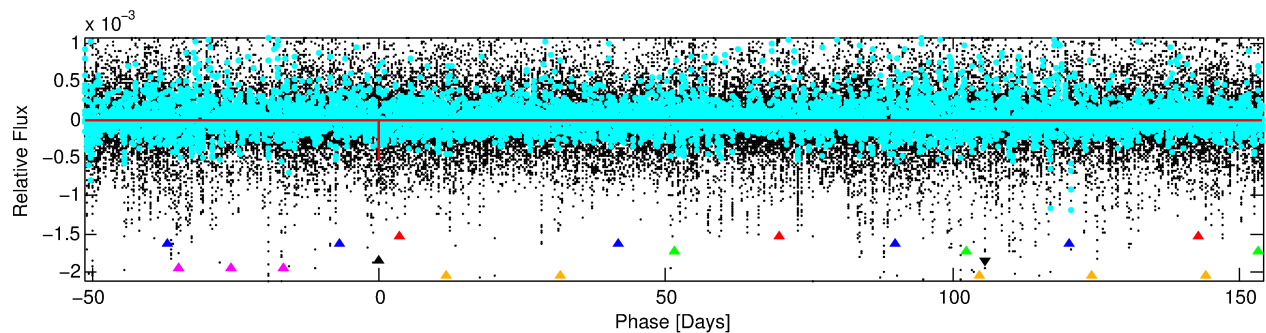
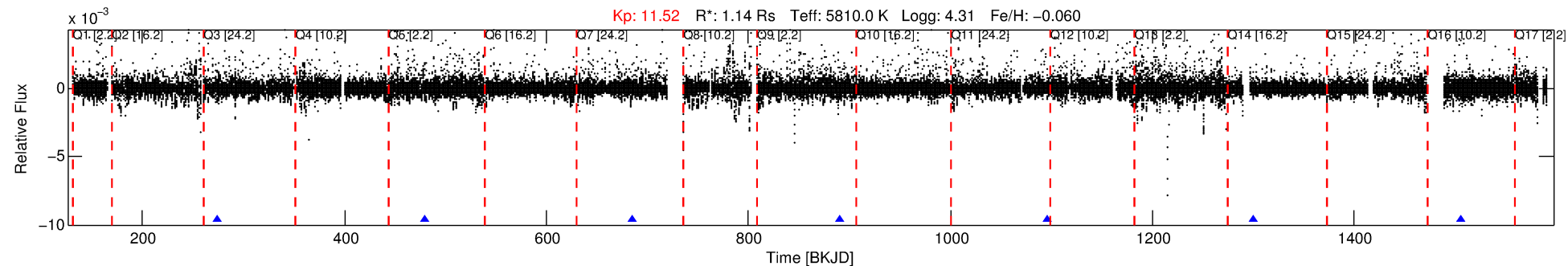
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-04

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 4 of 6 Period: 205.330 d



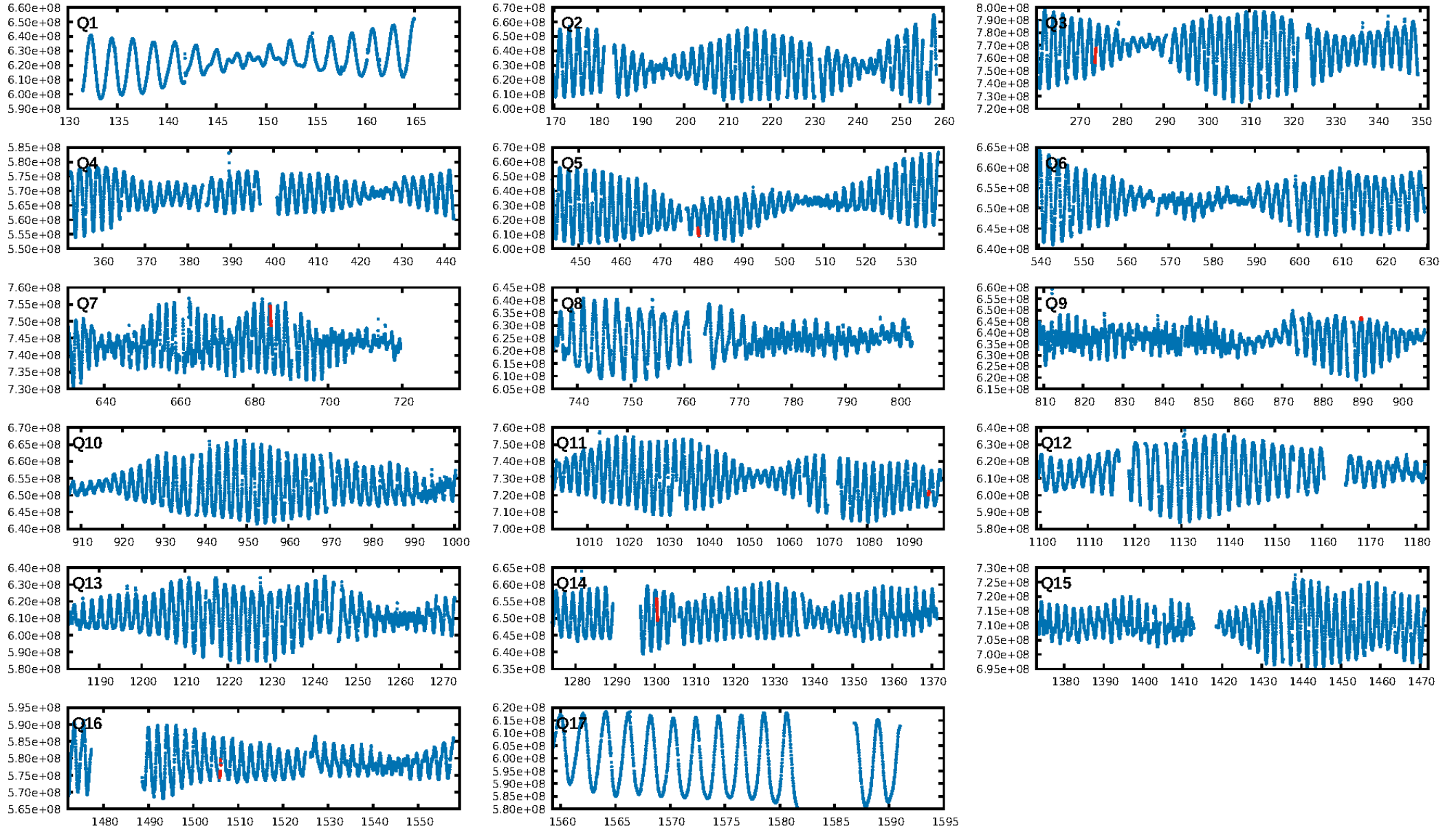
DV Fit Results:

Period = 205.33049 [0.00197] d
Epoch = 273.9854 [0.0061] BKJD
Rp/R* = 0.0207 [0.0579]
a/R* = 555.80 [6974.29]
b = 0.16 [76.37]
Seff = 2.93 [1.01]
Teq = 334 [29] K
Rp = 2.57 [7.22] Re
a = 0.6708 [0.1562] AU
Ag = 11437.47 [64120.06] [0.18σ]
Teffp = 5333 [7463] K [0.67σ]

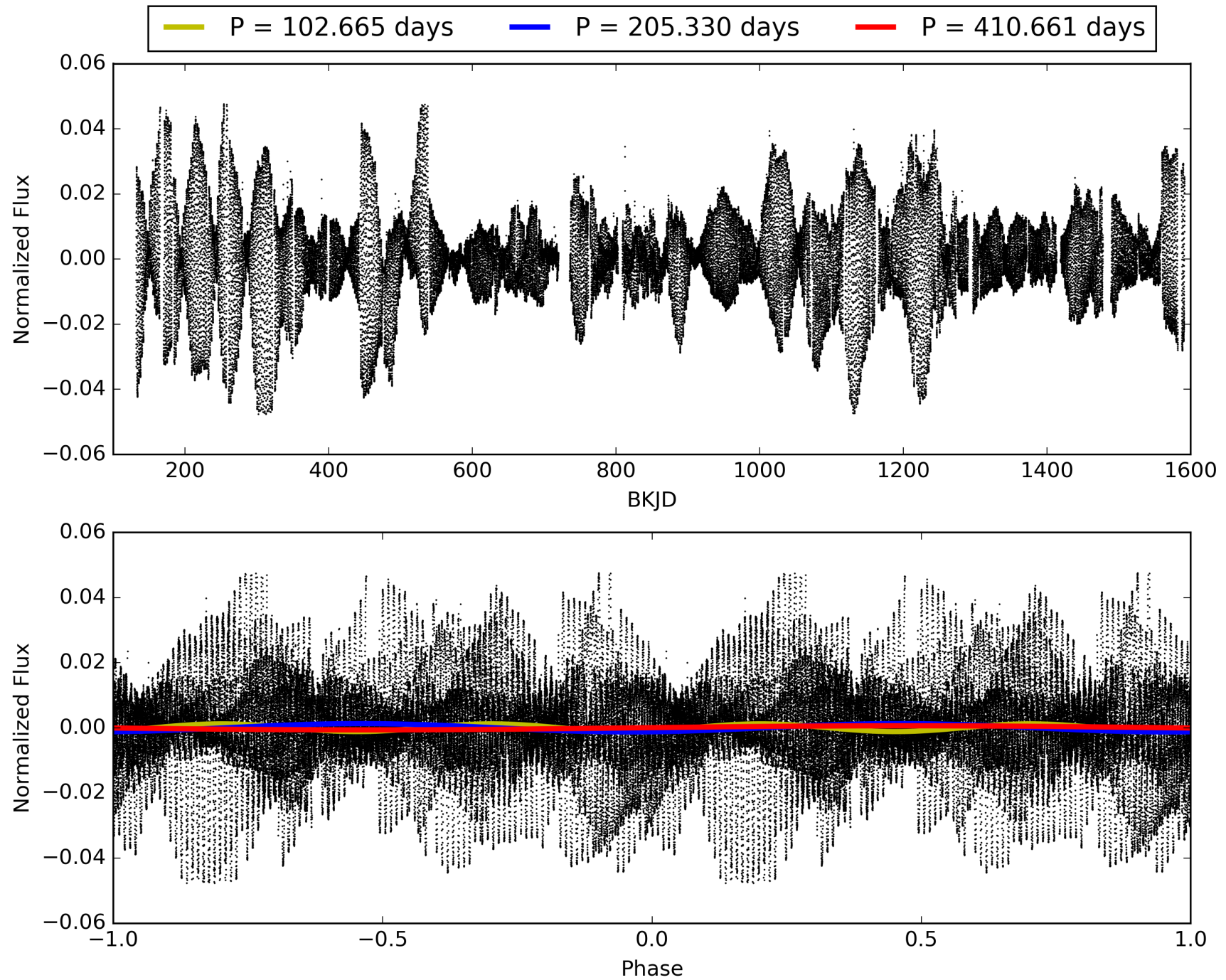
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [327.10σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 87.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: N/A
Centroid-sig: 9.7%
Centroid-so: 3.403 arcsec [1.92σ]
OotOffset-rm: 2.561 arcsec [2.87σ]
OotOffset-st: 1/3/1/2 [7]
KicOffset-rm: 4.542 arcsec [5.86σ]
KicOffset-st: 1/3/1/2 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [7/7]

TCE 007339343-04, PDC Light Curves

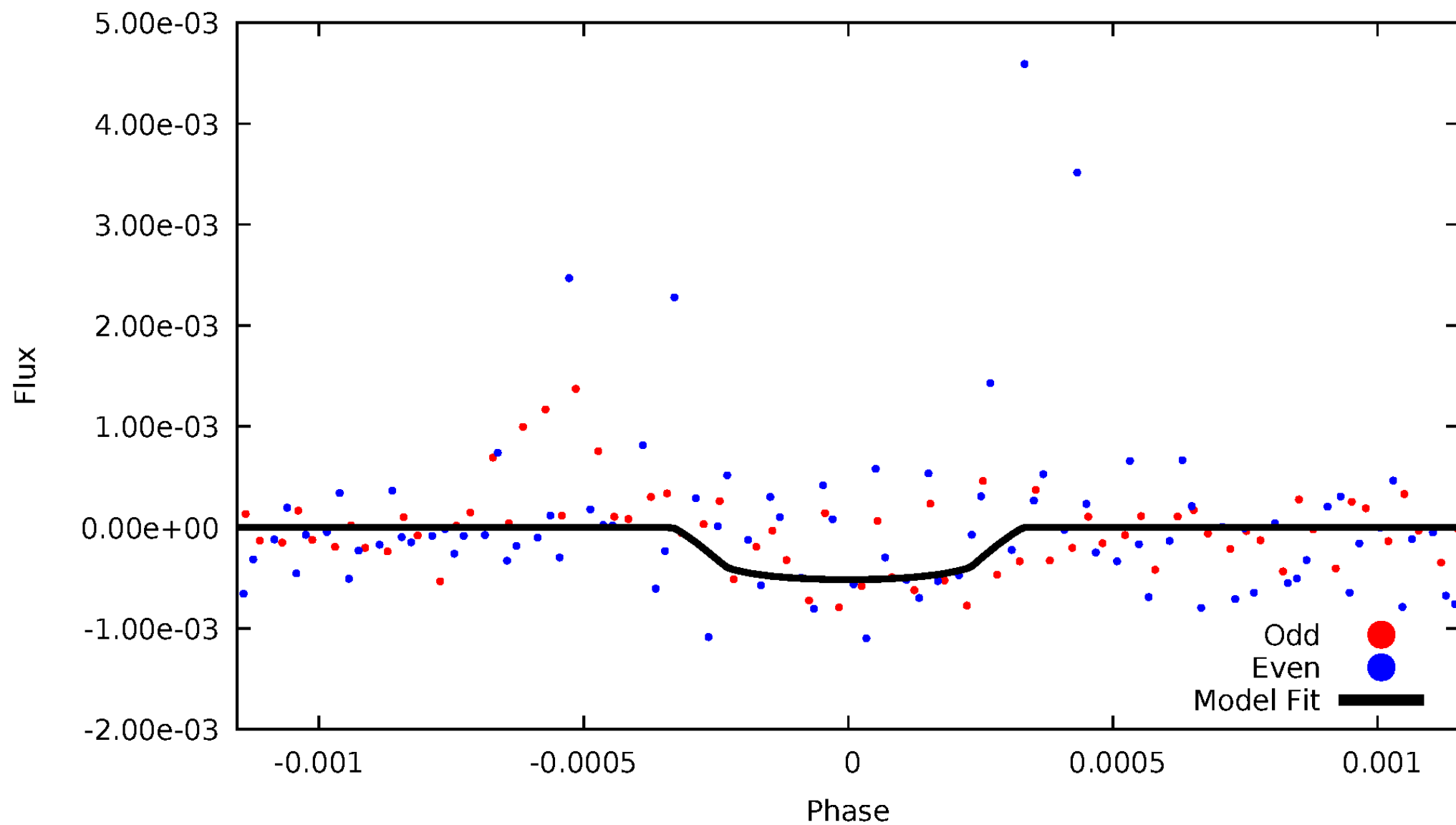


TCE 007339343-04



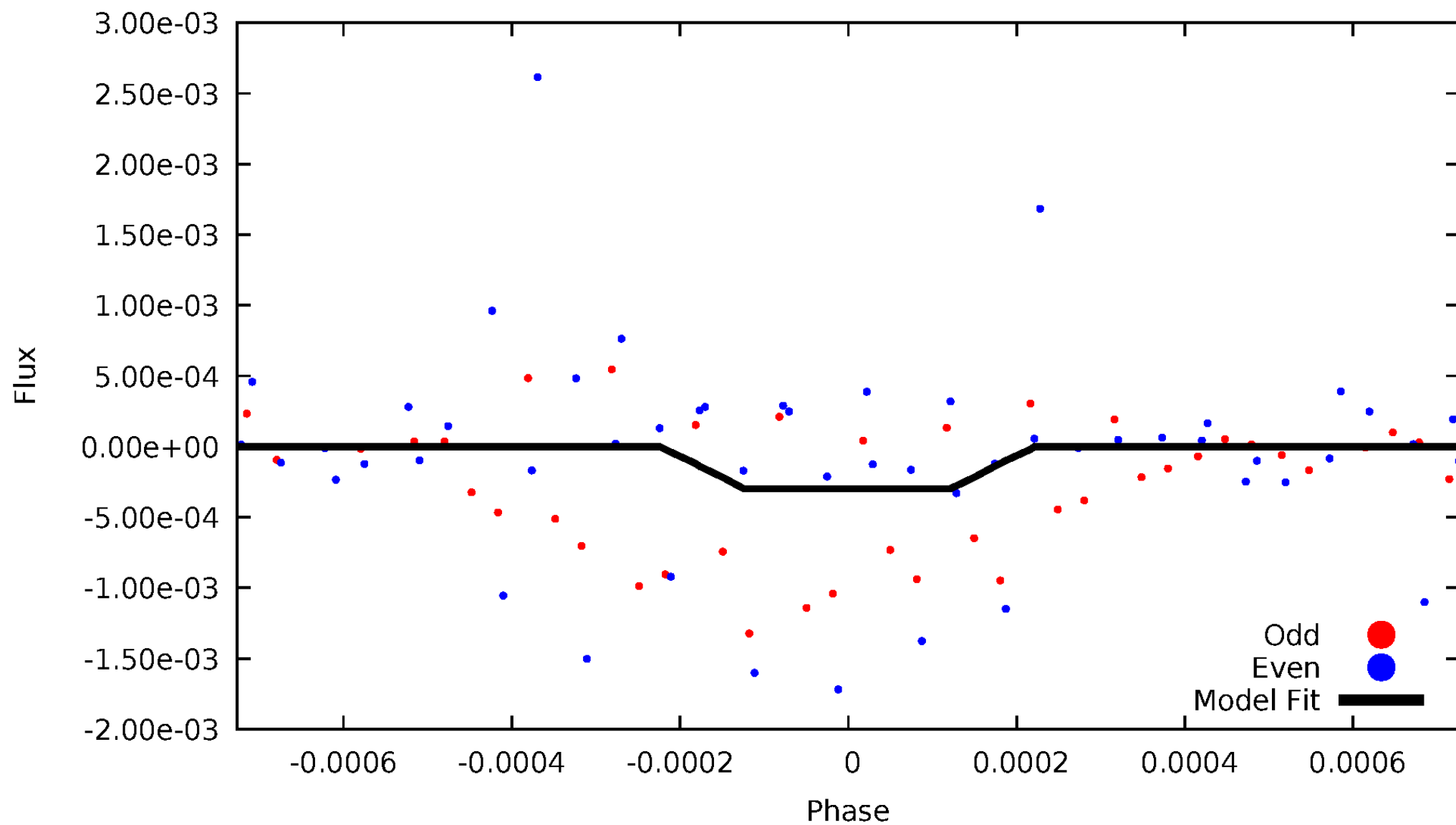
DV Odd/Even

TCE 007339343-04



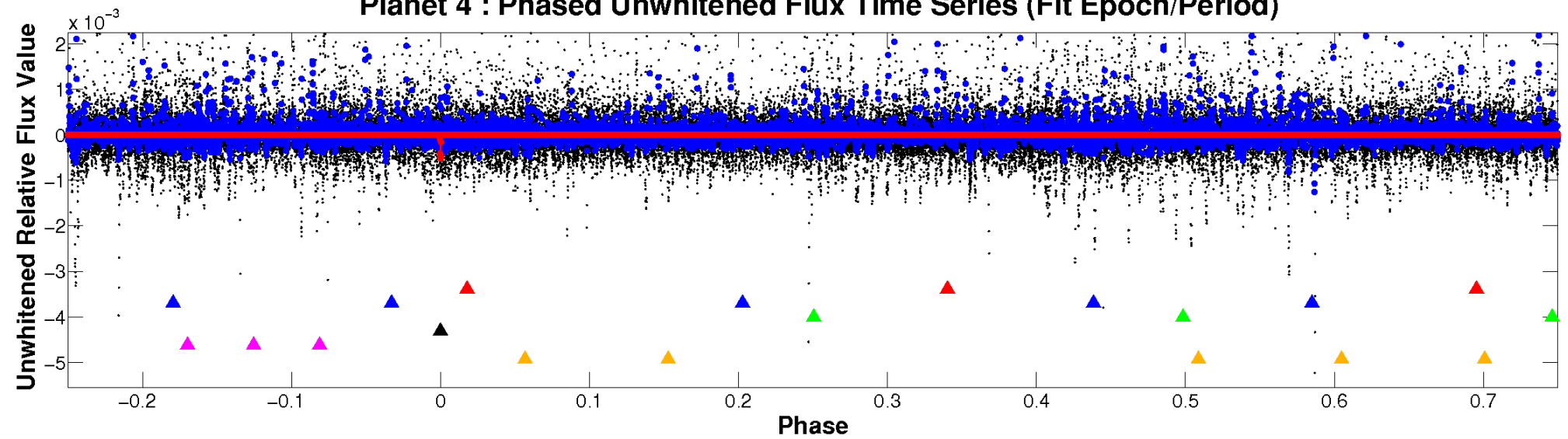
ALT Odd/Even

TCE 007339343-04

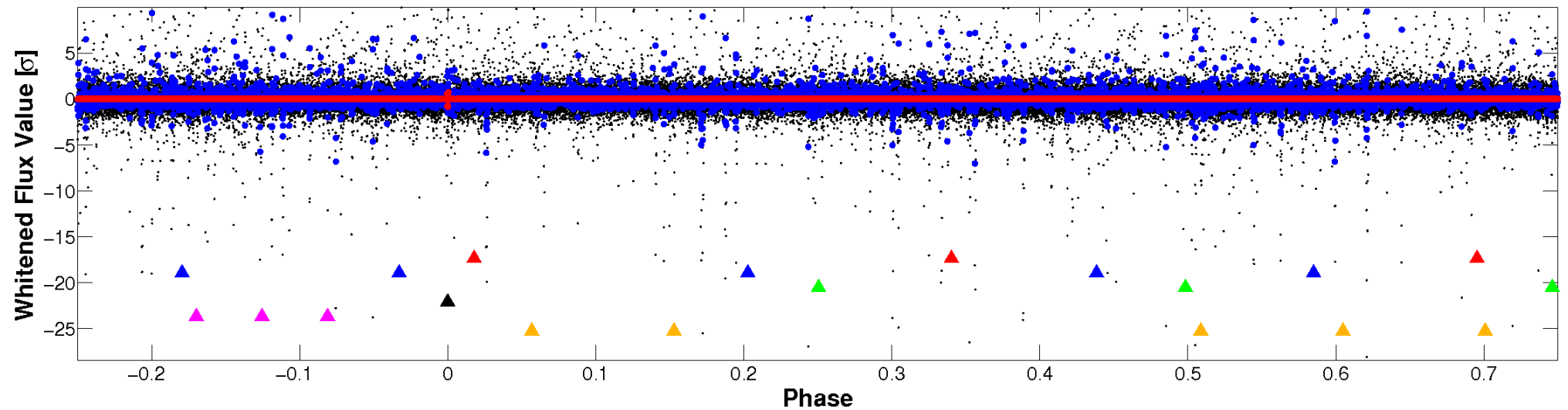


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

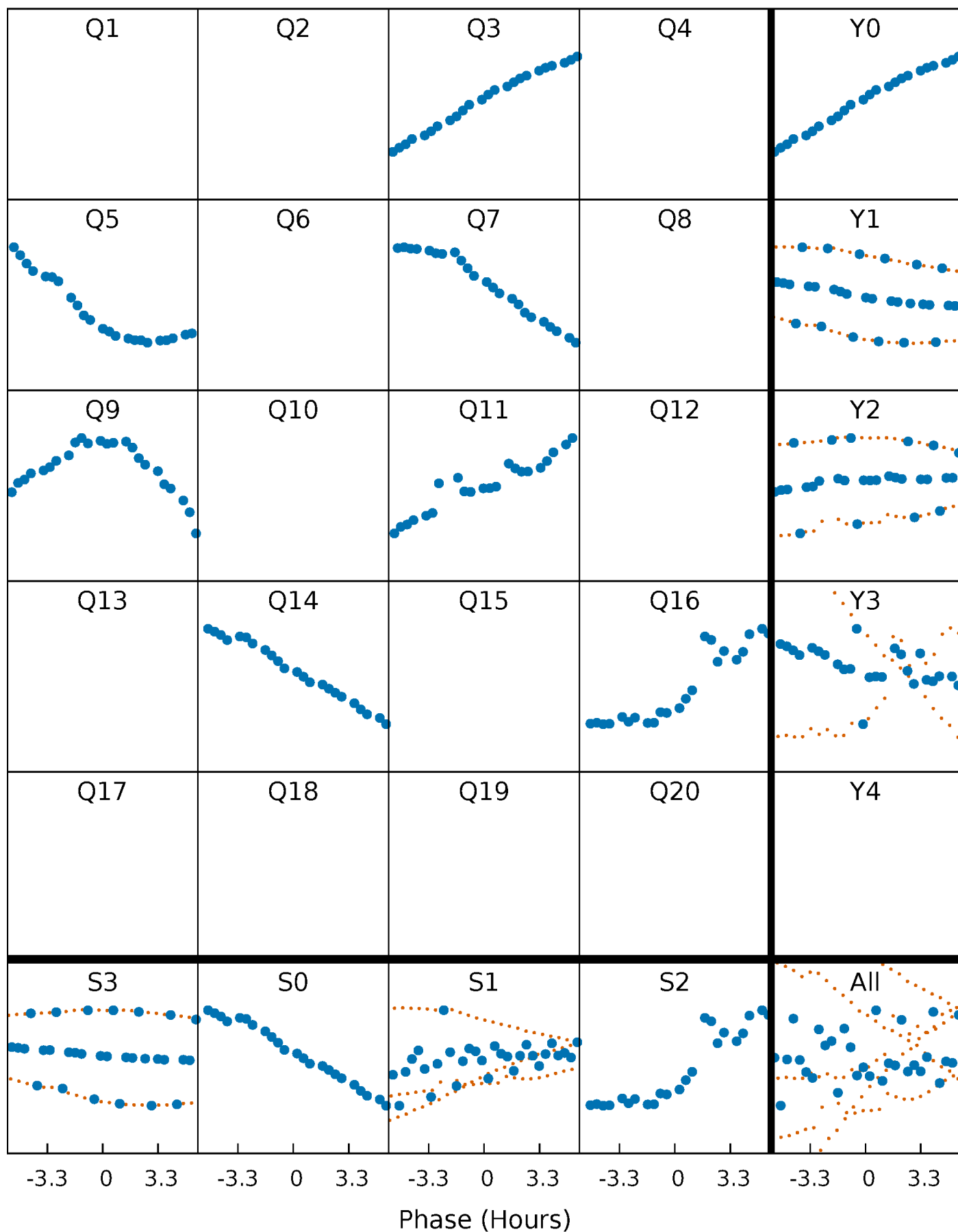


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



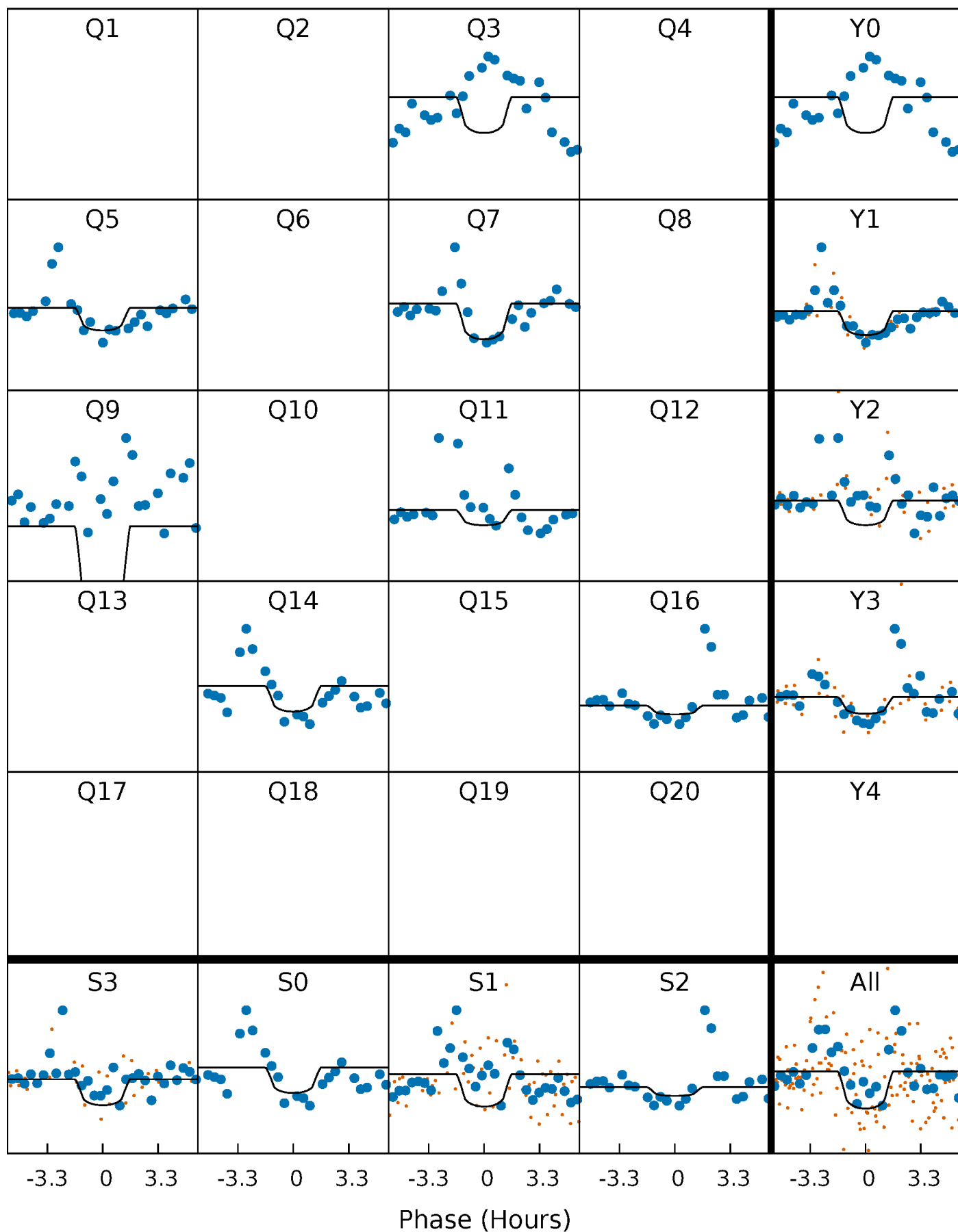
PDC Quarter-Phased Transit Curves

TCE 007339343-04 P=205.330487 Days $T_0=273.985390$ (BKJD)



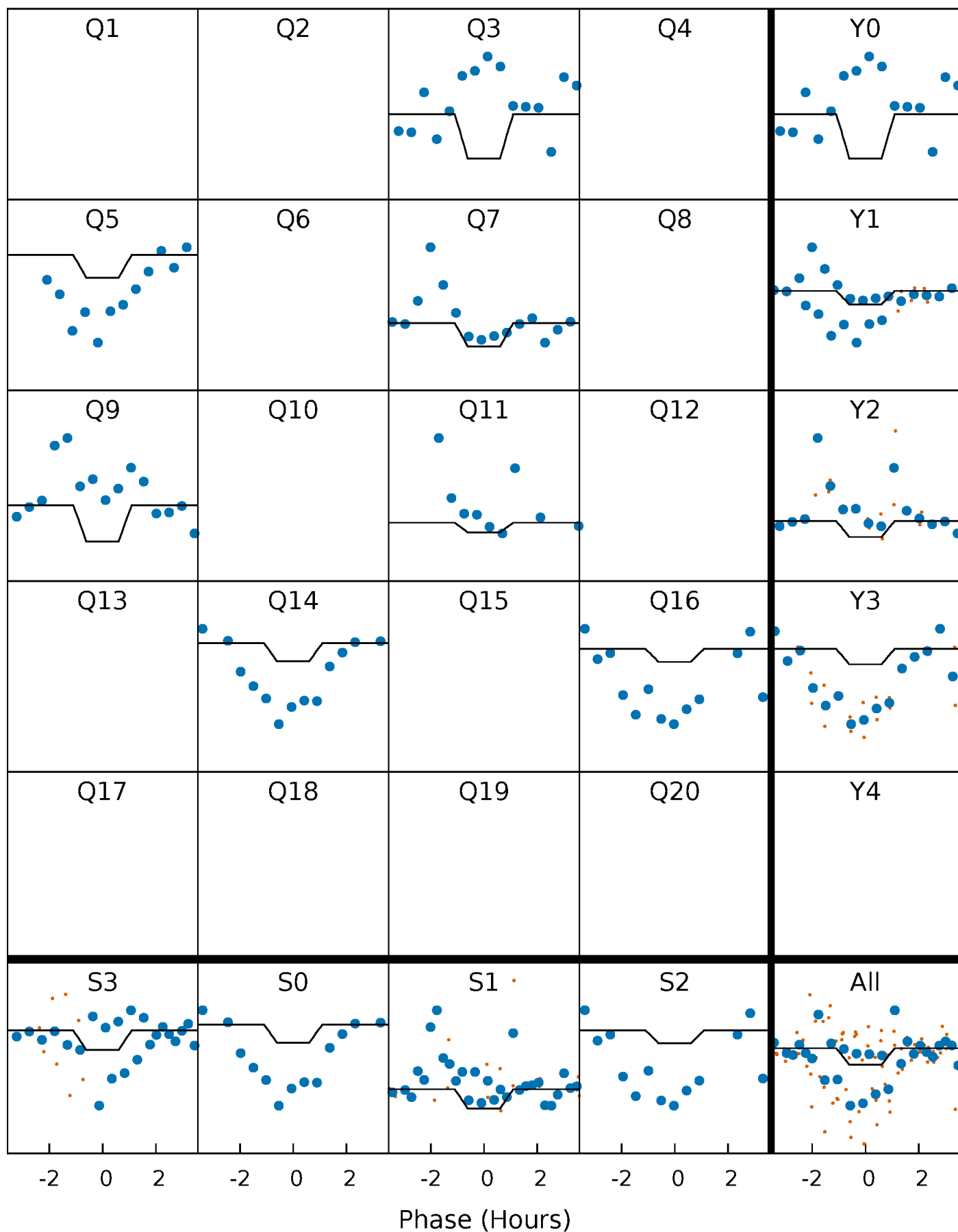
DV Quarter-Phased Transit Curves

TCE 007339343-04 $P=205.330487$ Days $T_0=273.985390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

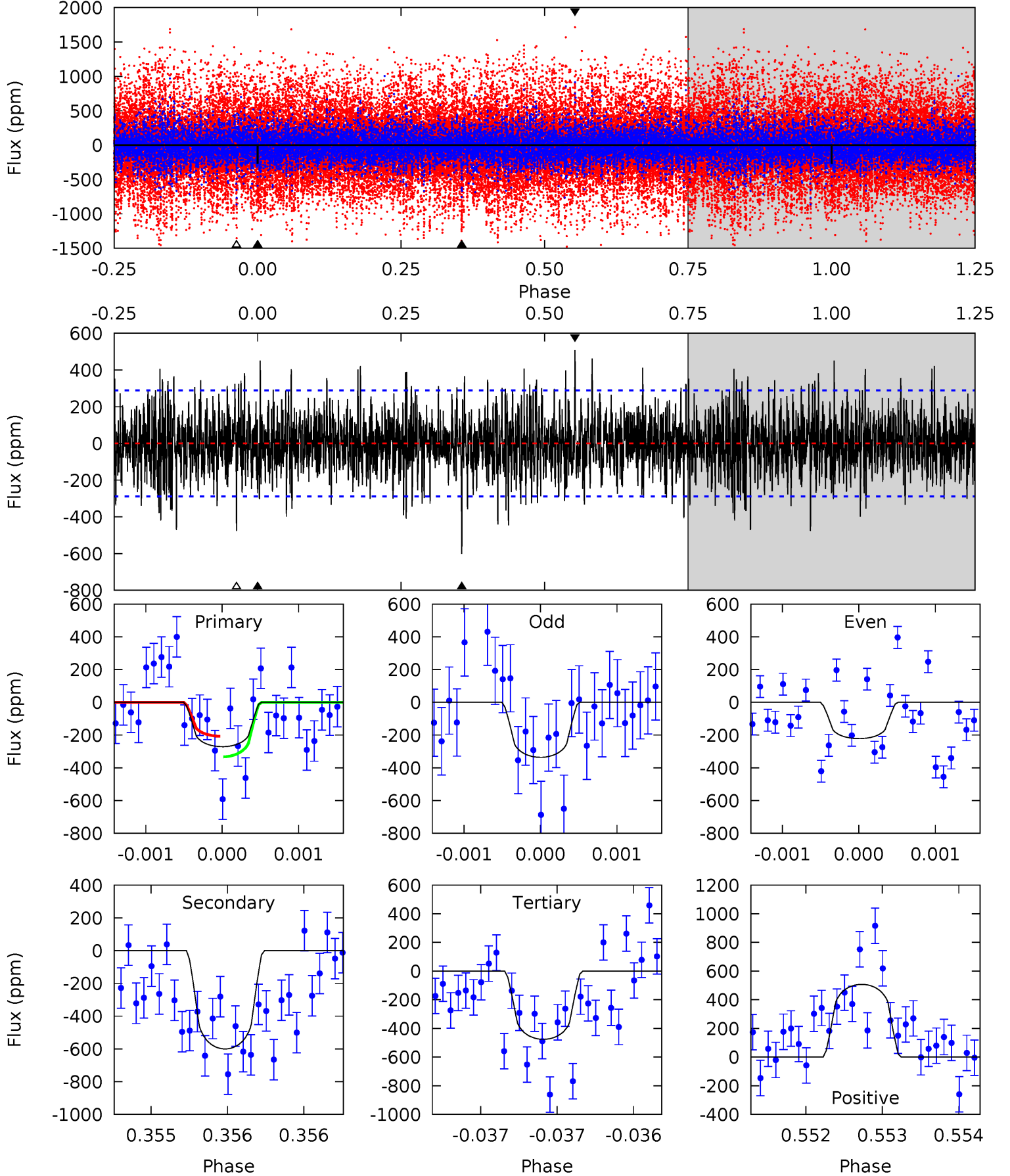
TCE 007339343-04 P=205.331055 Days $T_0=273.991473$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-04, P = 205.330487 Days, E = 68.654903 Days

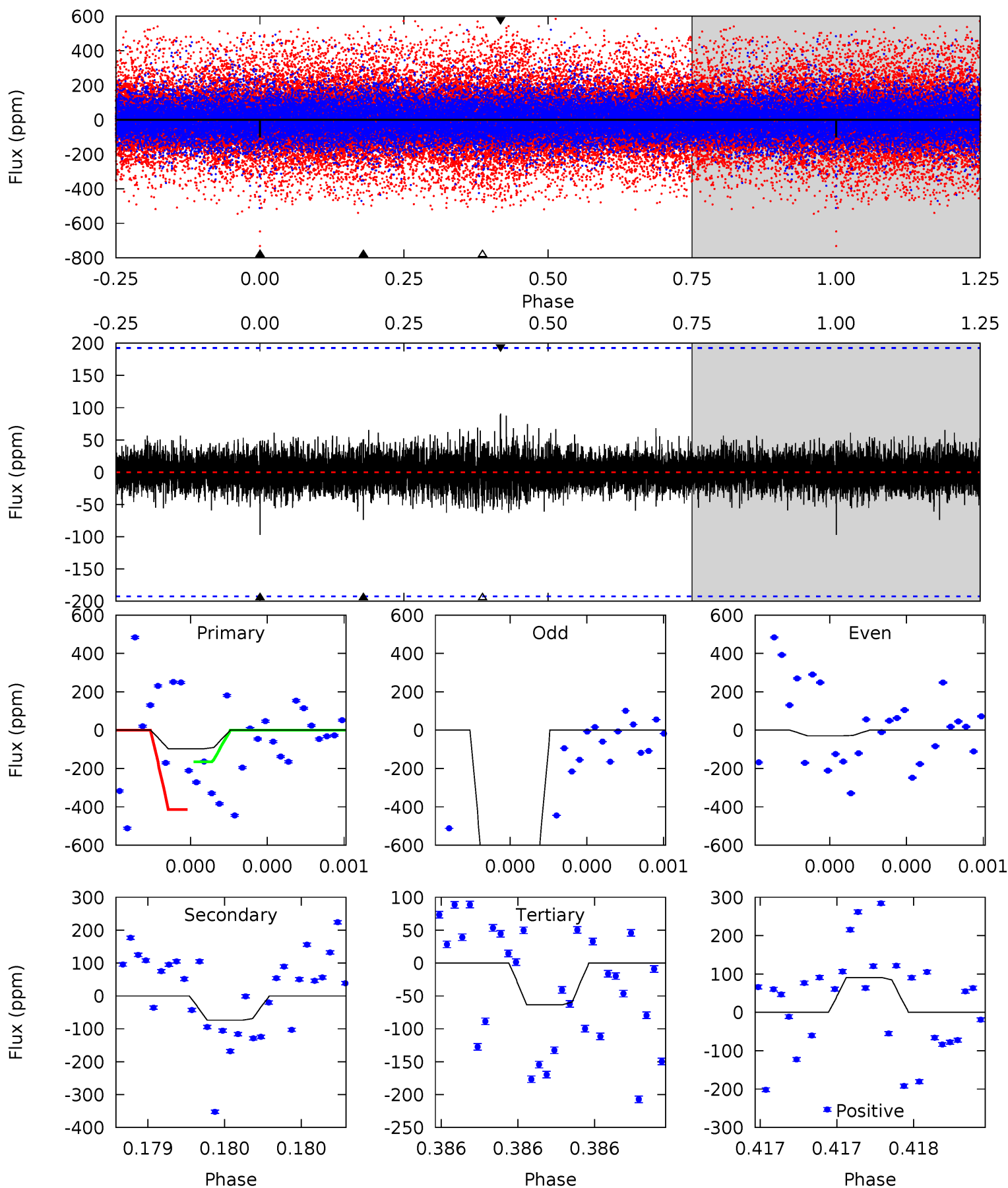
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	11.5	9.09	9.69	5.52	3.40	2.43	-3.91	-4.51	2.37	1.78	1.06	0.55	0.46	1.21



Alt Model-Shift Uniqueness Test

007339343-04, P = 205.331055 Days, E = 68.660418 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.83	2.15	1.85	2.64	5.60	3.52	0.51	0.98	0.19	0.30	-0.50	16.3	2.66	0.48	0



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-600 ± 52	$5.84^{+6.33}_{-4.03}$	465^{+33}_{-28}	4414^{+3299}_{-999}	4307^{+41215}_{-3327}
Alt.	-74 ± 34	$5.82^{+5.42}_{-3.99}$	464^{+35}_{-27}	3075^{+1484}_{-556}	498^{+4630}_{-389}

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

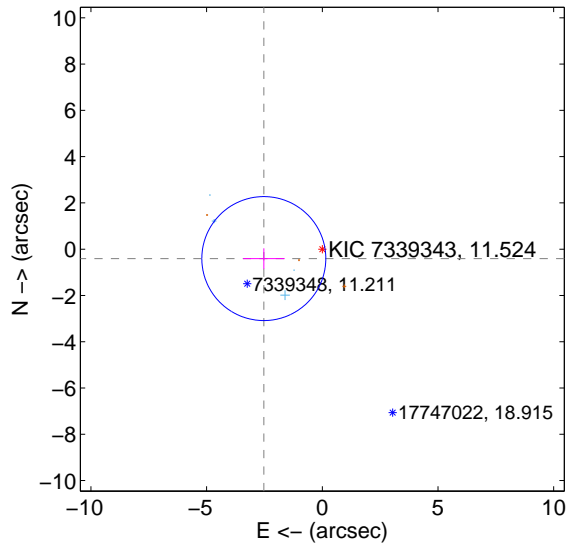
Supplemental centroid analysis for 007339343-04. **Kepler magnitude: 11.52.** Transit SNR 5.50

There are 4 quarters with good PRF difference image offsets

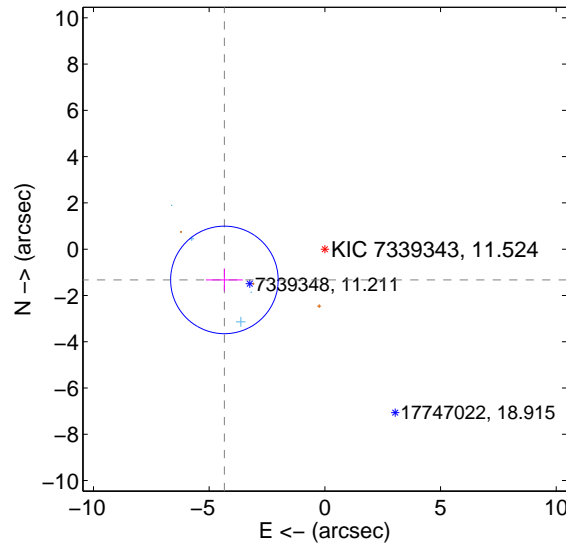
The direct PRF centroid is offset from the target star catalog position by about 1.82 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.561 ± 0.893	2.87	2.528 ± 0.902	-0.407 ± 0.446
PRF-fit source offset from KIC position	4.542 ± 0.775	5.86	4.343 ± 0.796	-1.329 ± 0.487
photometric centroid source offset	3.40 ± 1.77	1.92	3.38 ± 1.78	-0.35 ± 0.34

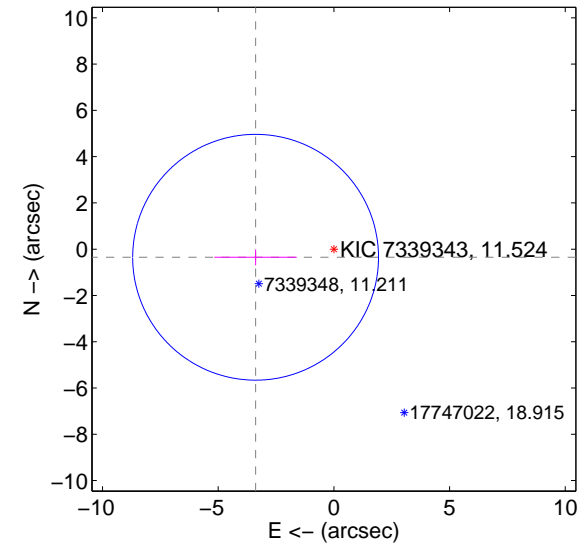
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

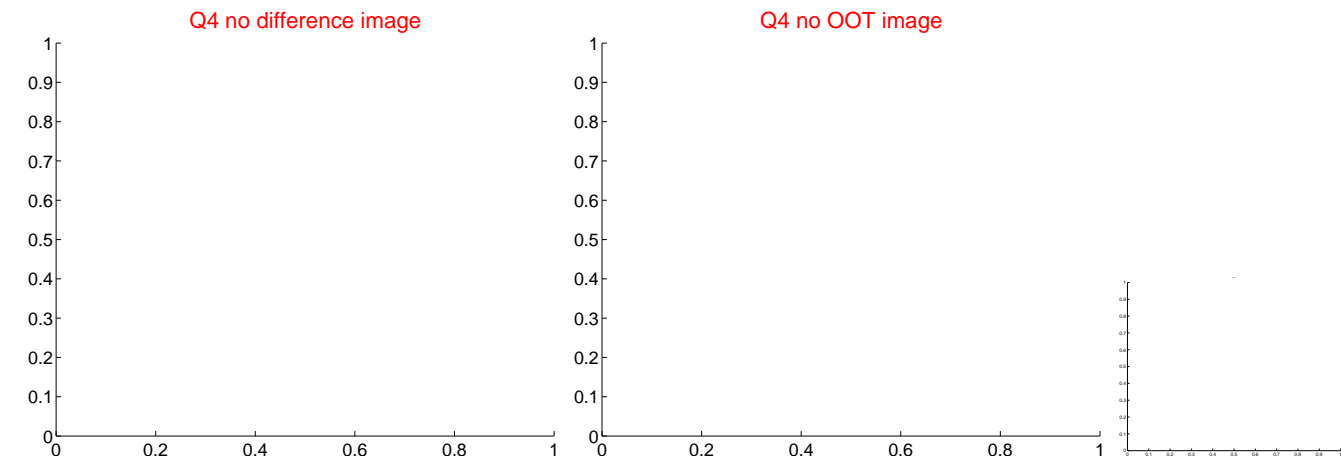
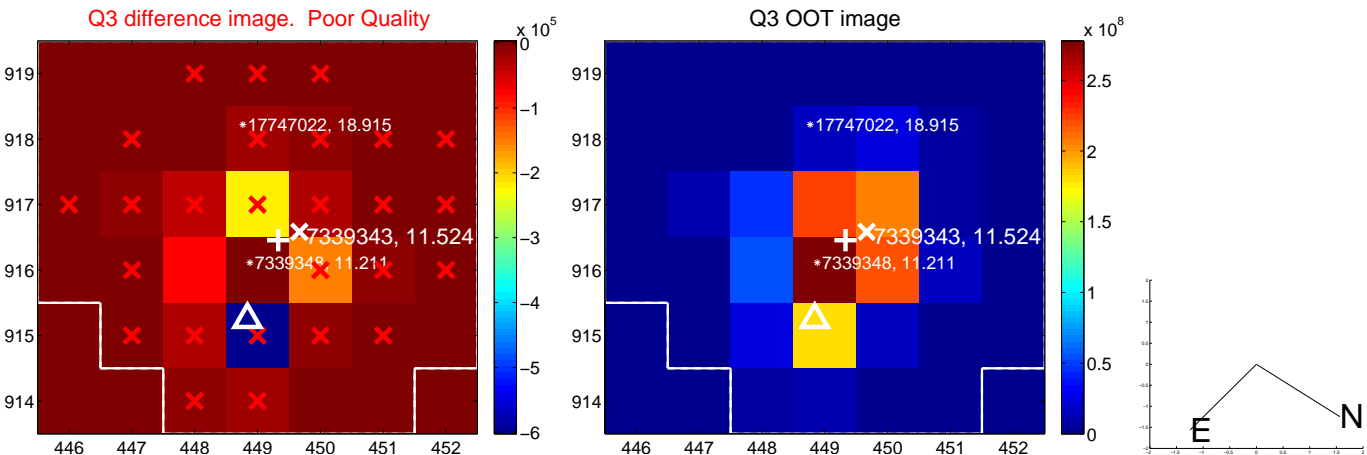


offset from photometric centroids

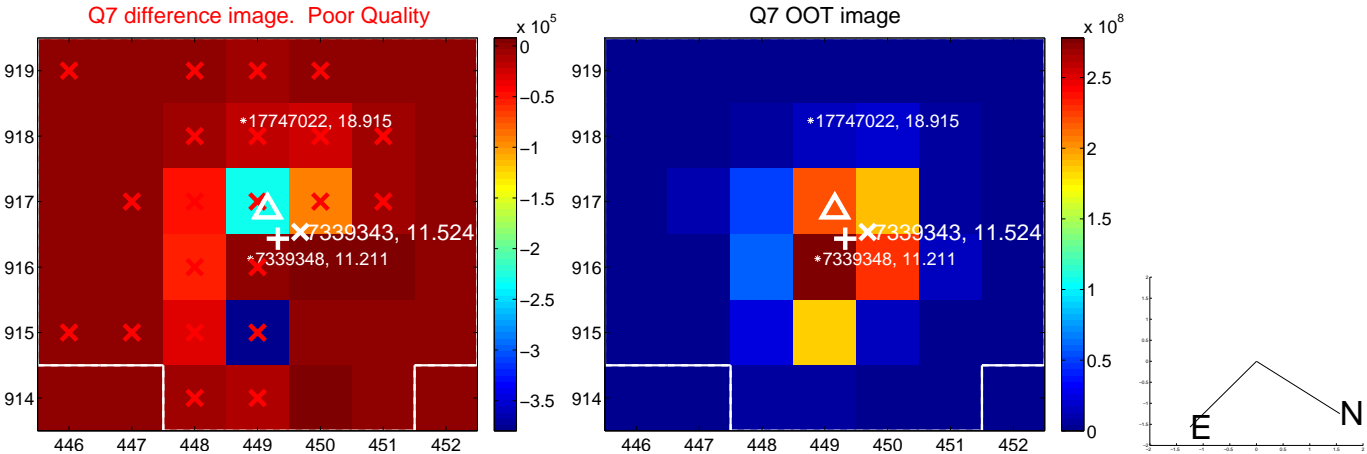
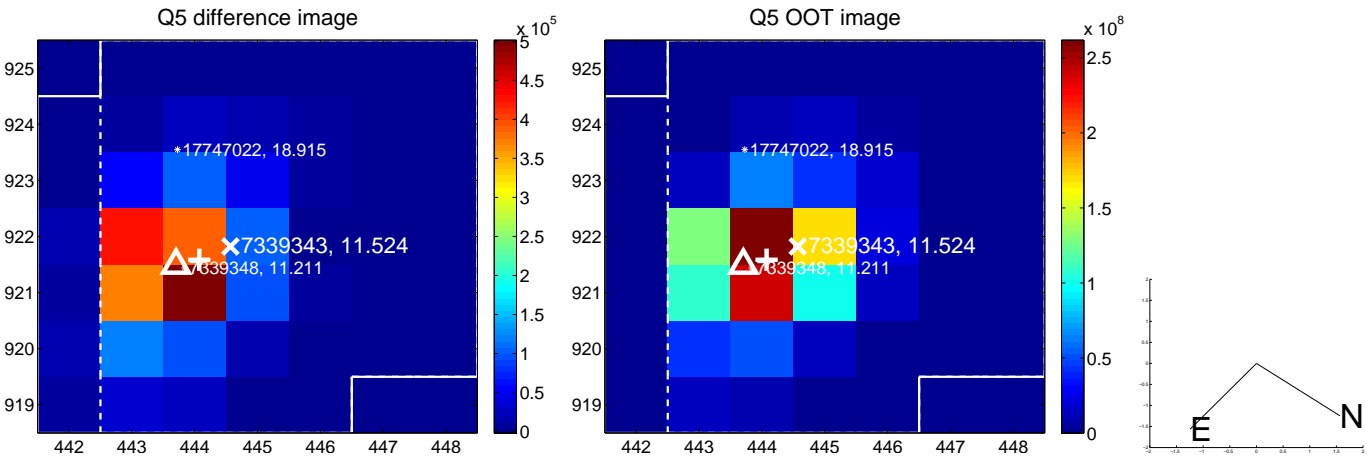


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

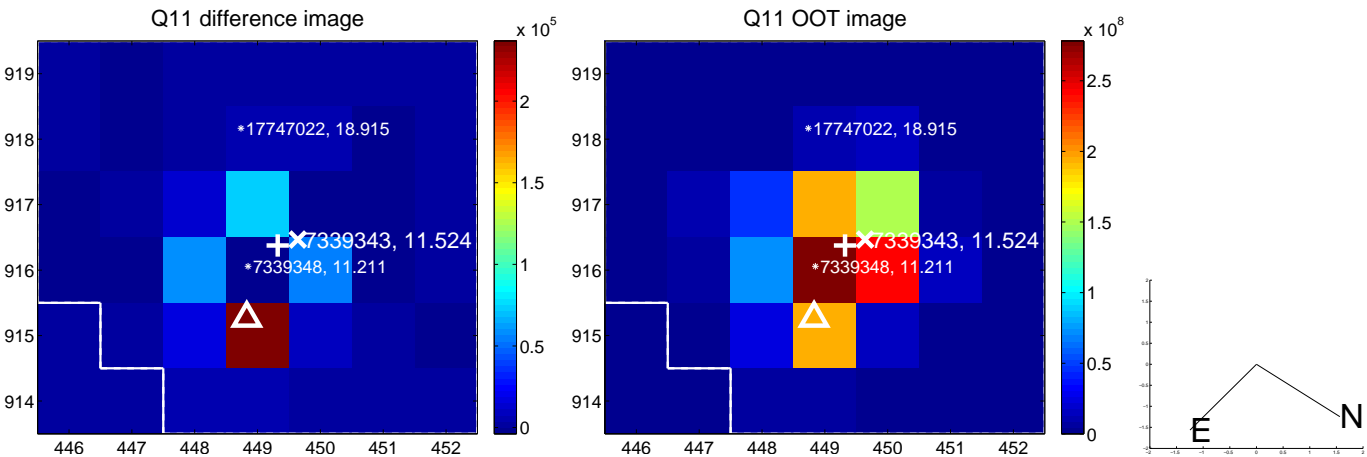
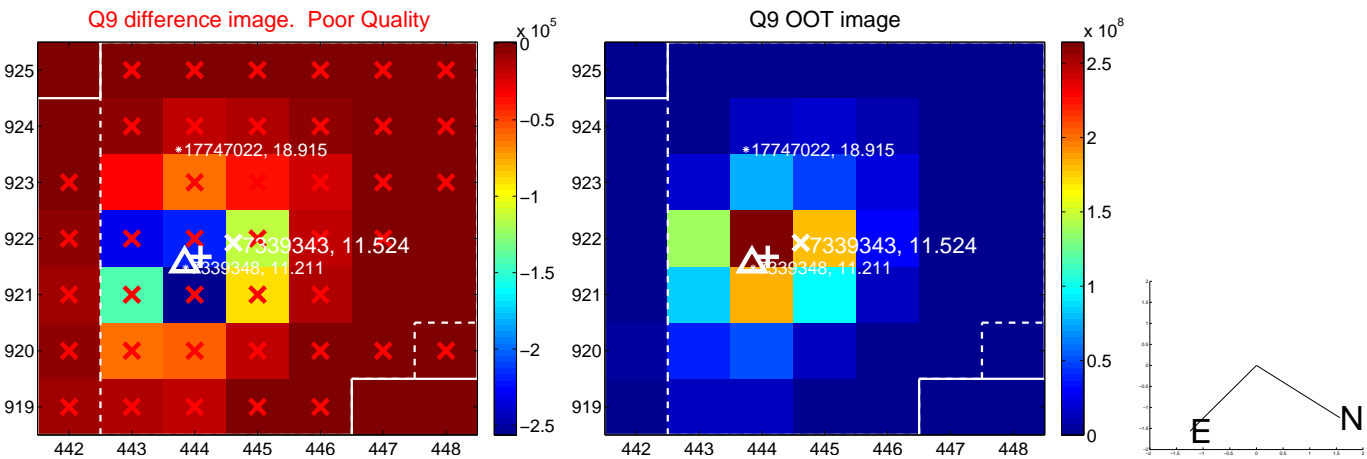
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



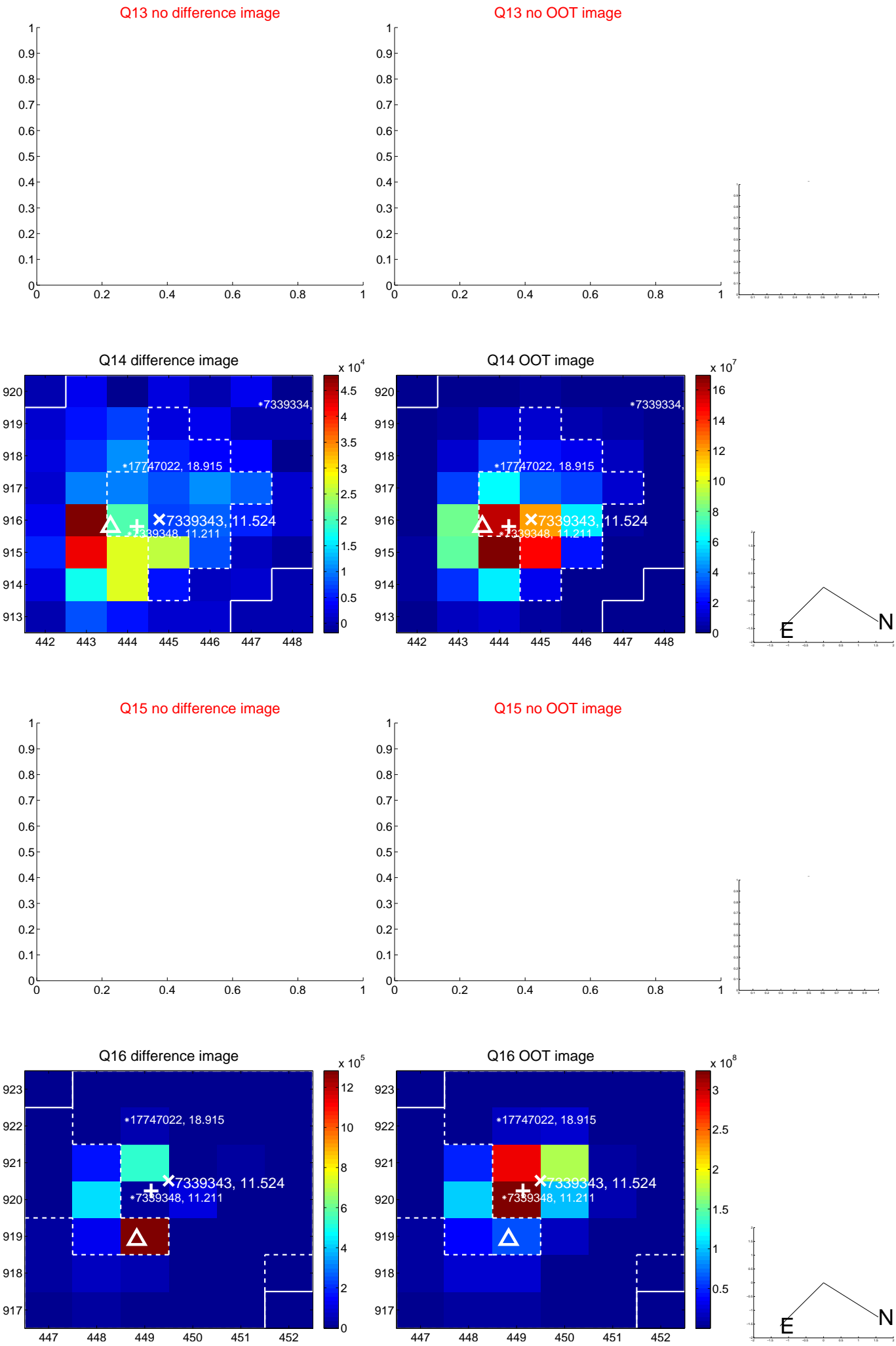
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



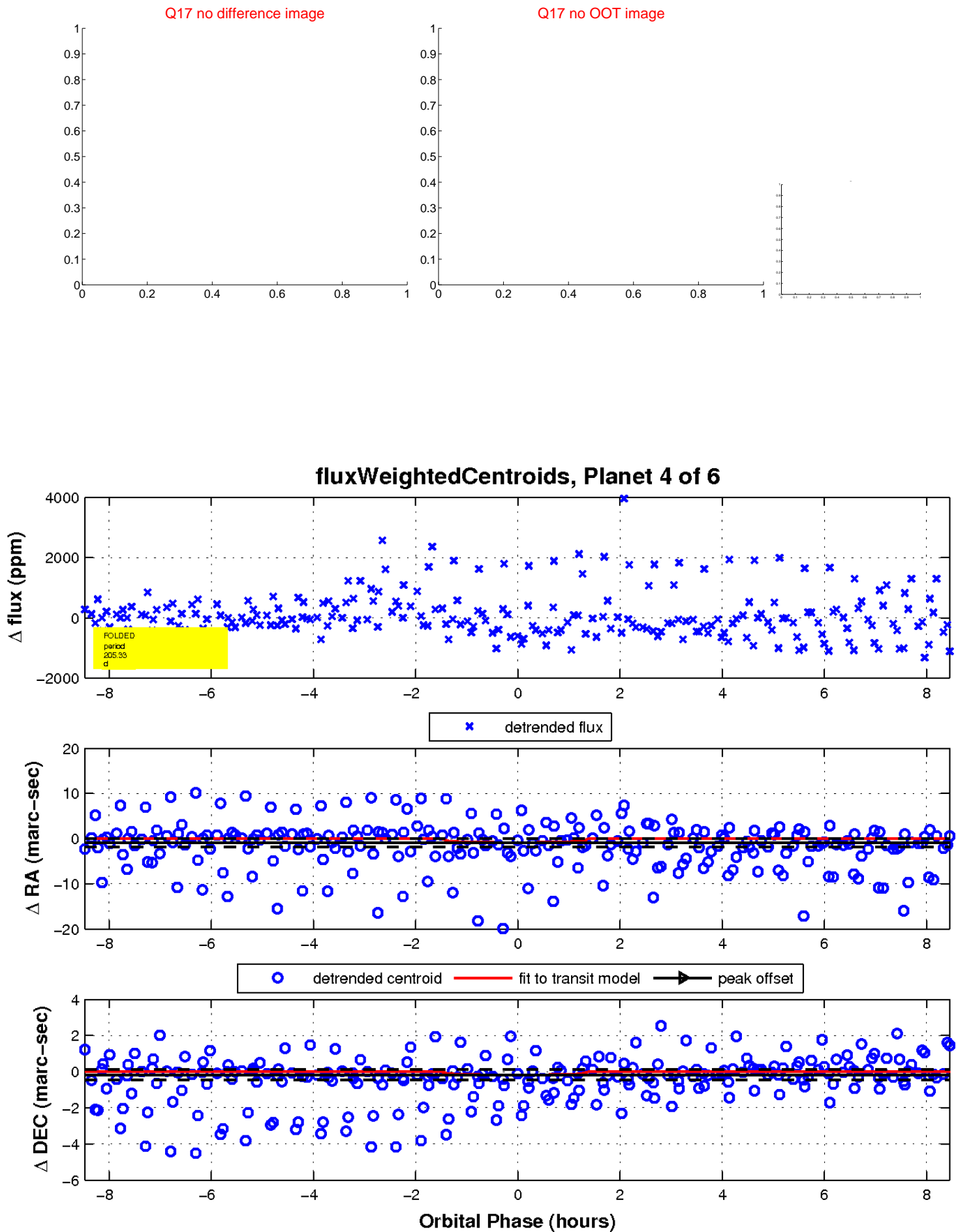
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

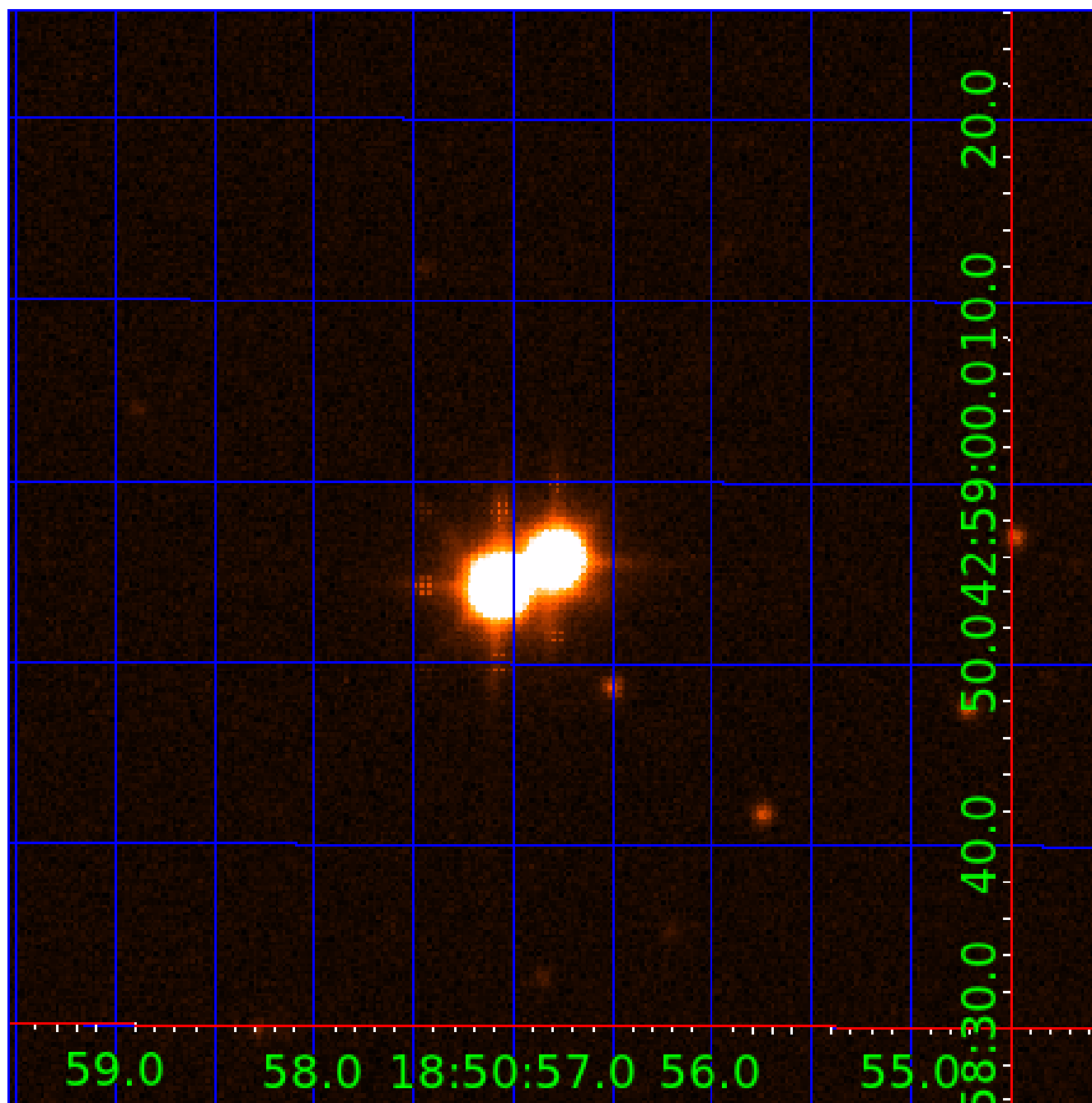


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007339343

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})
007339343-01	OBS	No	549.780387	343.862346	292.3	1.775	17.7	2.9	1.14	5810	1.94	0.79
007339343-02	OBS	No	283.809701	363.994376	658.4	5.006	16.9	4.2	1.14	5810	3.05	1.90
007339343-03	OBS	No	461.550319	530.762357	986.5	3.999	13.8	6.3	1.14	5810	3.59	0.99
007339343-04	OBS	No	205.330487	273.985390	517.8	2.845	15.3	5.5	1.14	5810	2.57	2.93
007339343-05	OBS	No	401.562397	462.653514	2026.5	13.375	16.5	7.4	1.14	5810	5.58	1.20
007339343-06	OBS	No	298.132452	212.574332	224.4	6.000	14.0	-1.0	1.14	5810	1.69	1.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007339343-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

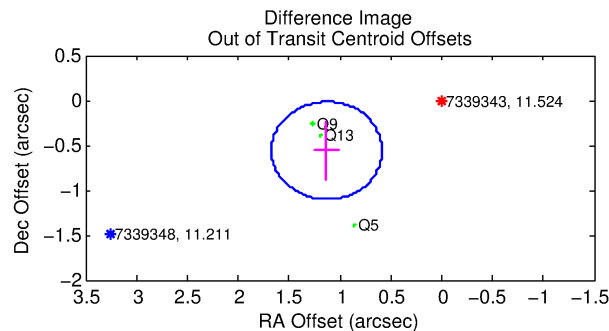
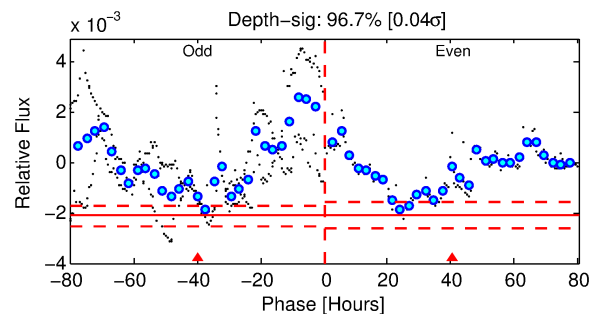
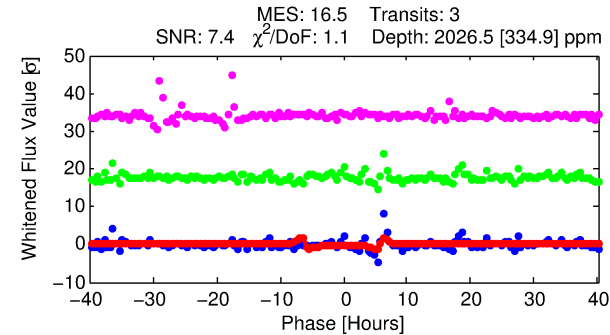
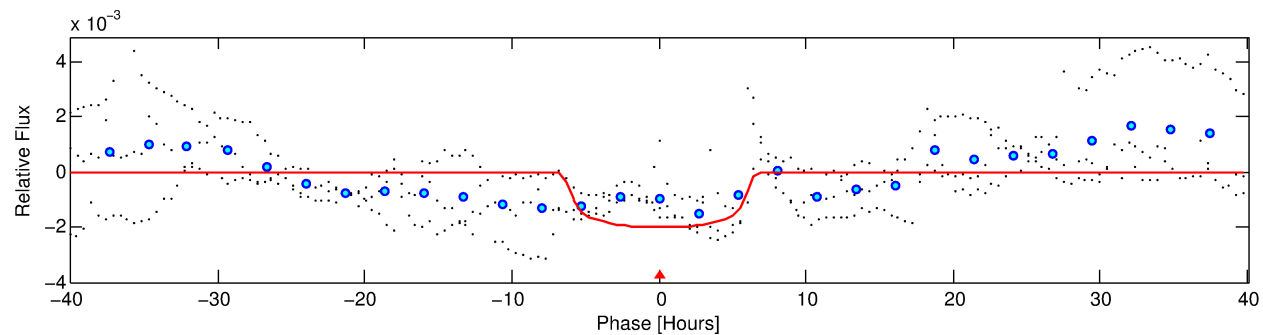
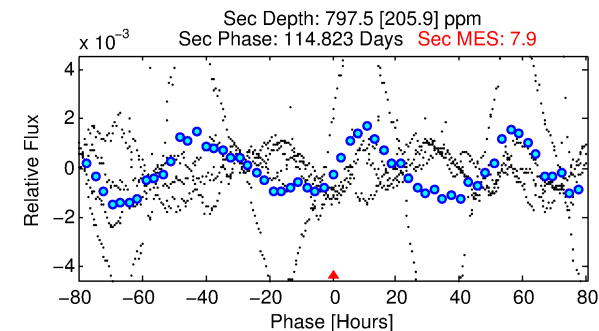
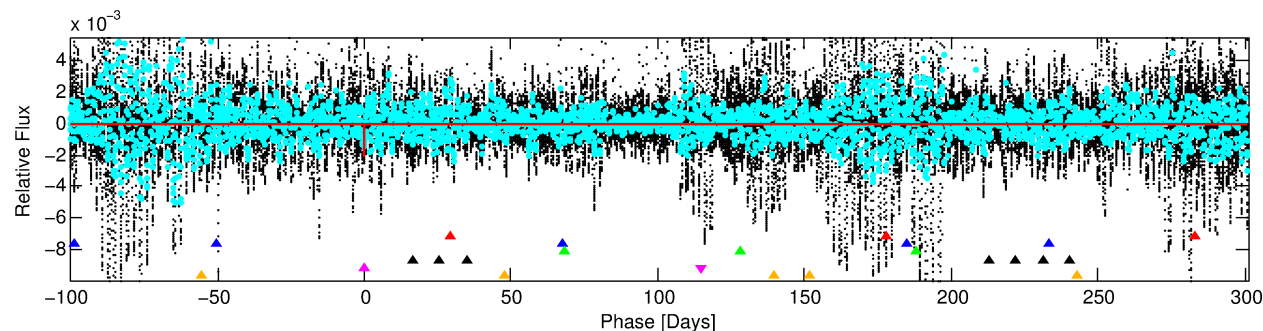
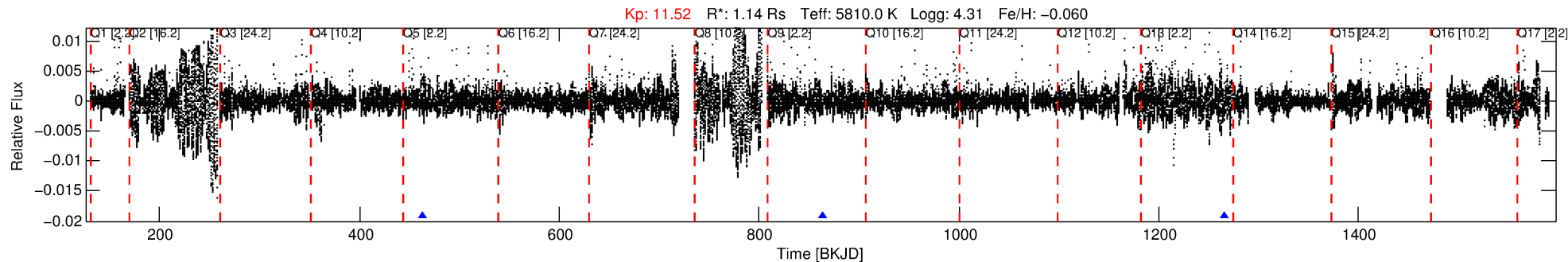
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-05

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 5 of 6 Period: 401.562 d



DV Fit Results:

Period = 401.56240 [0.00549] d
Epoch = 462.6535 [0.0054] BKJD
Rp/R* = 0.0450 [0.0041]
a/R* = 164.26 [19.13]
b = 0.76 [0.06]
Seff = 1.20 [0.41]
Teq = 267 [23] K
Rp = 5.58 [1.67] Re
a = 1.0490 [0.2442] AU
Ag = 15514.24 [7088.23] [2.19σ]
Teffp = 4603 [385] K [11.23σ]

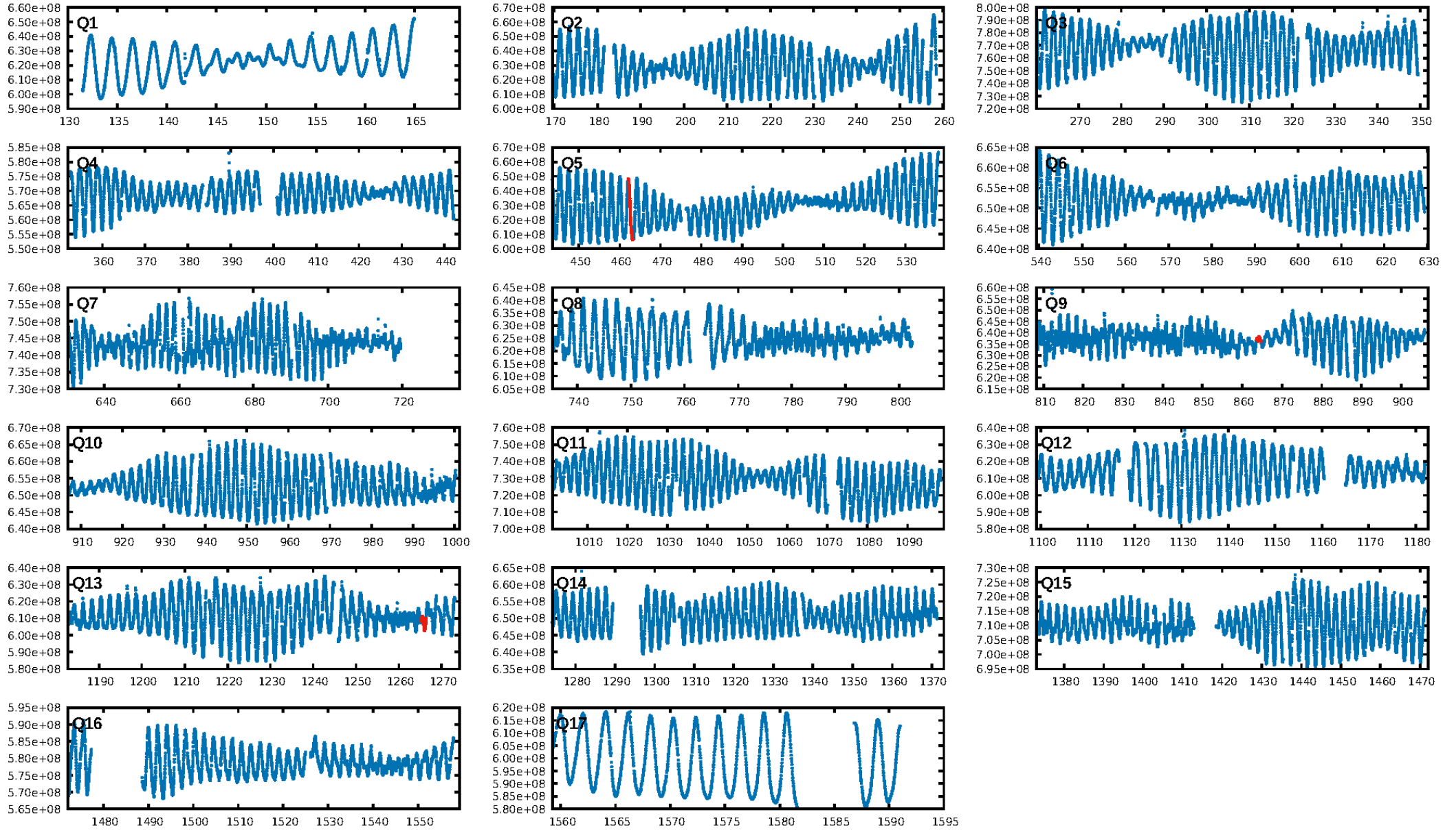
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [169.33σ]
LongPeriod-sig: 100.0% [103.13σ]
ModelChiSquare2-sig: 52.5%
ModelChiSquareGof-sig: 97.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 20.5%
Centroid-so: 2.250 arcsec [3.64σ]
OotOffset-rm: 1.260 arcsec [6.95σ]
KicOffset-rm: 3.535 arcsec [17.66σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

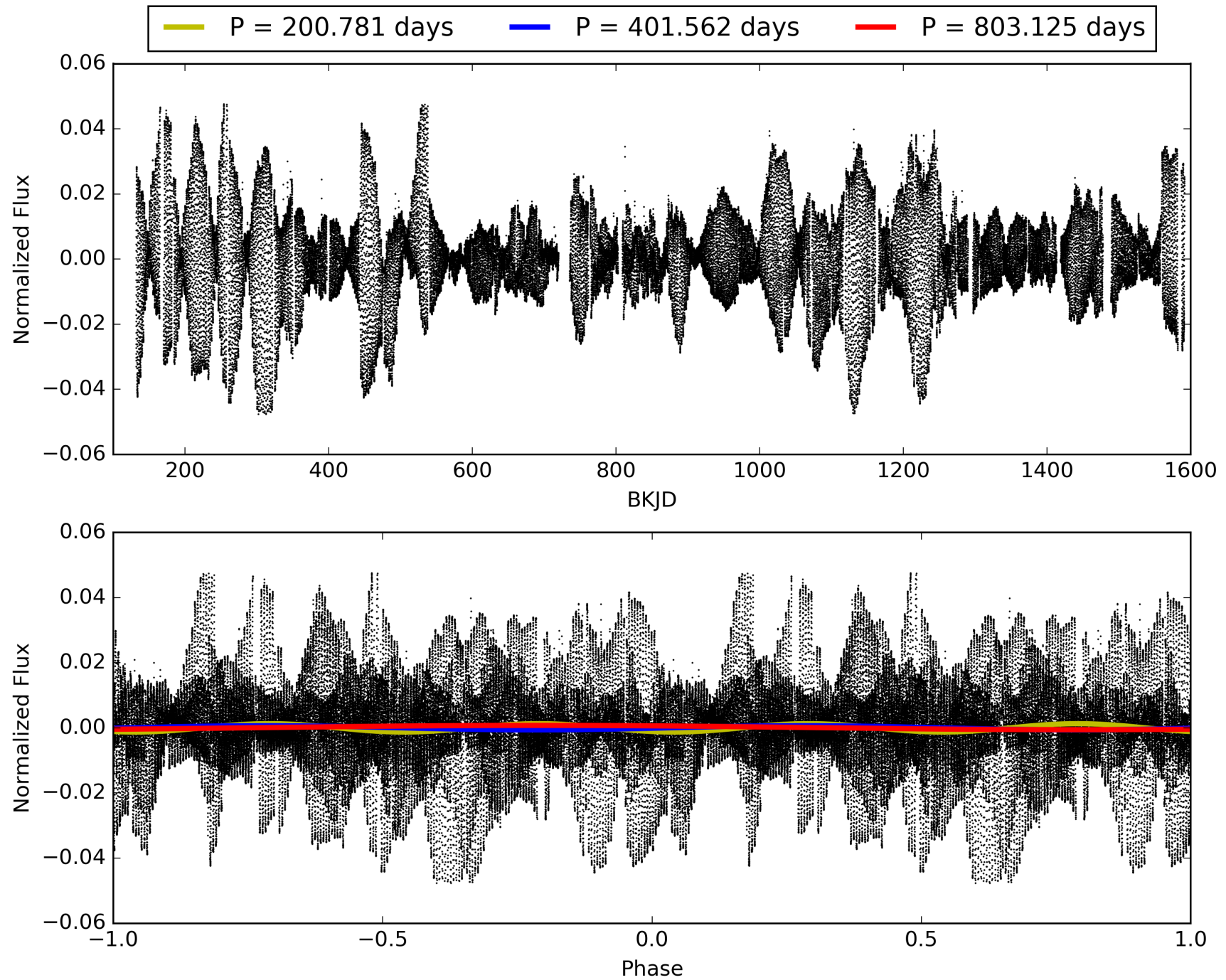
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:54:52 Z

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

TCE 007339343-05, PDC Light Curves

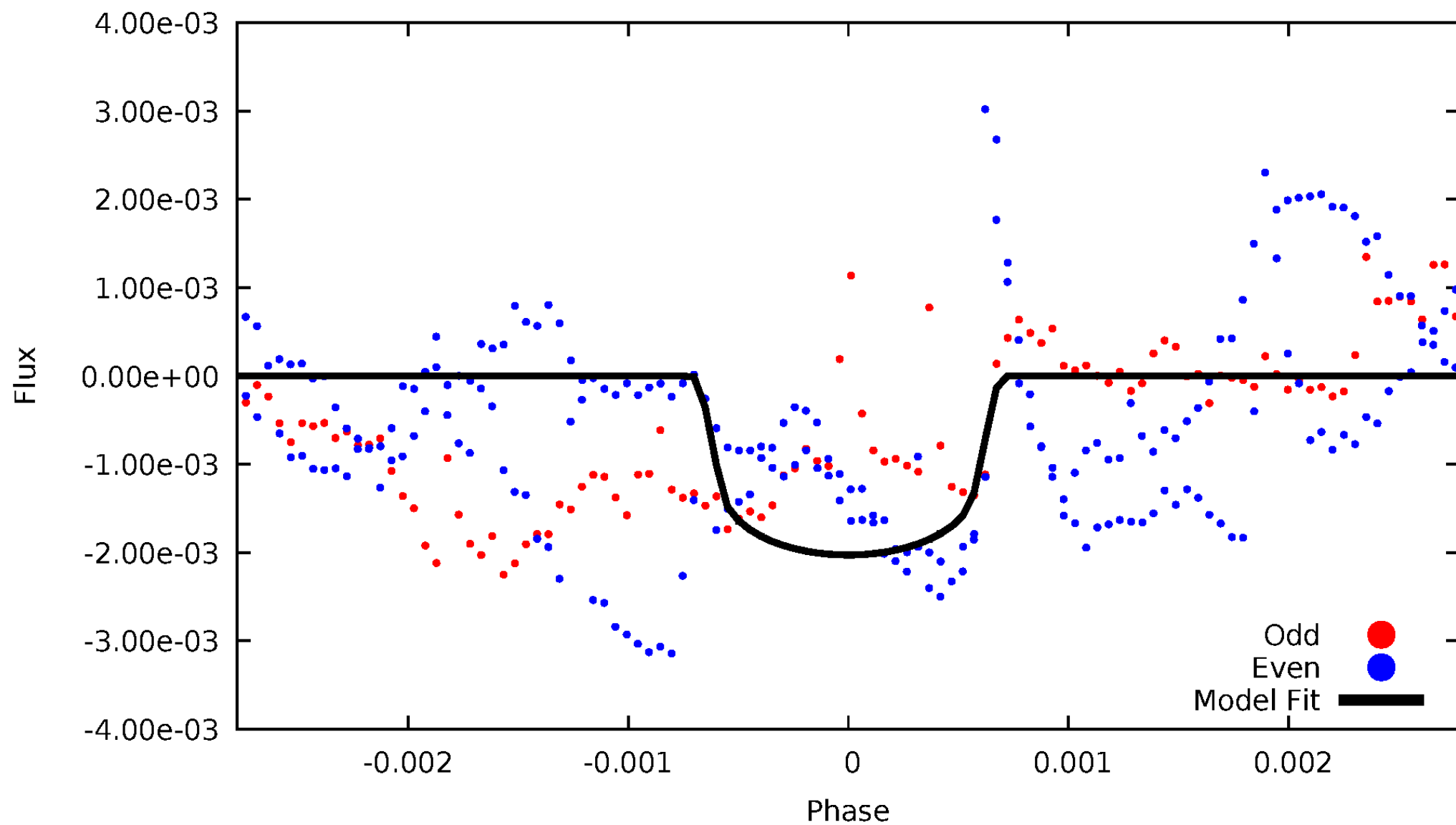


TCE 007339343-05



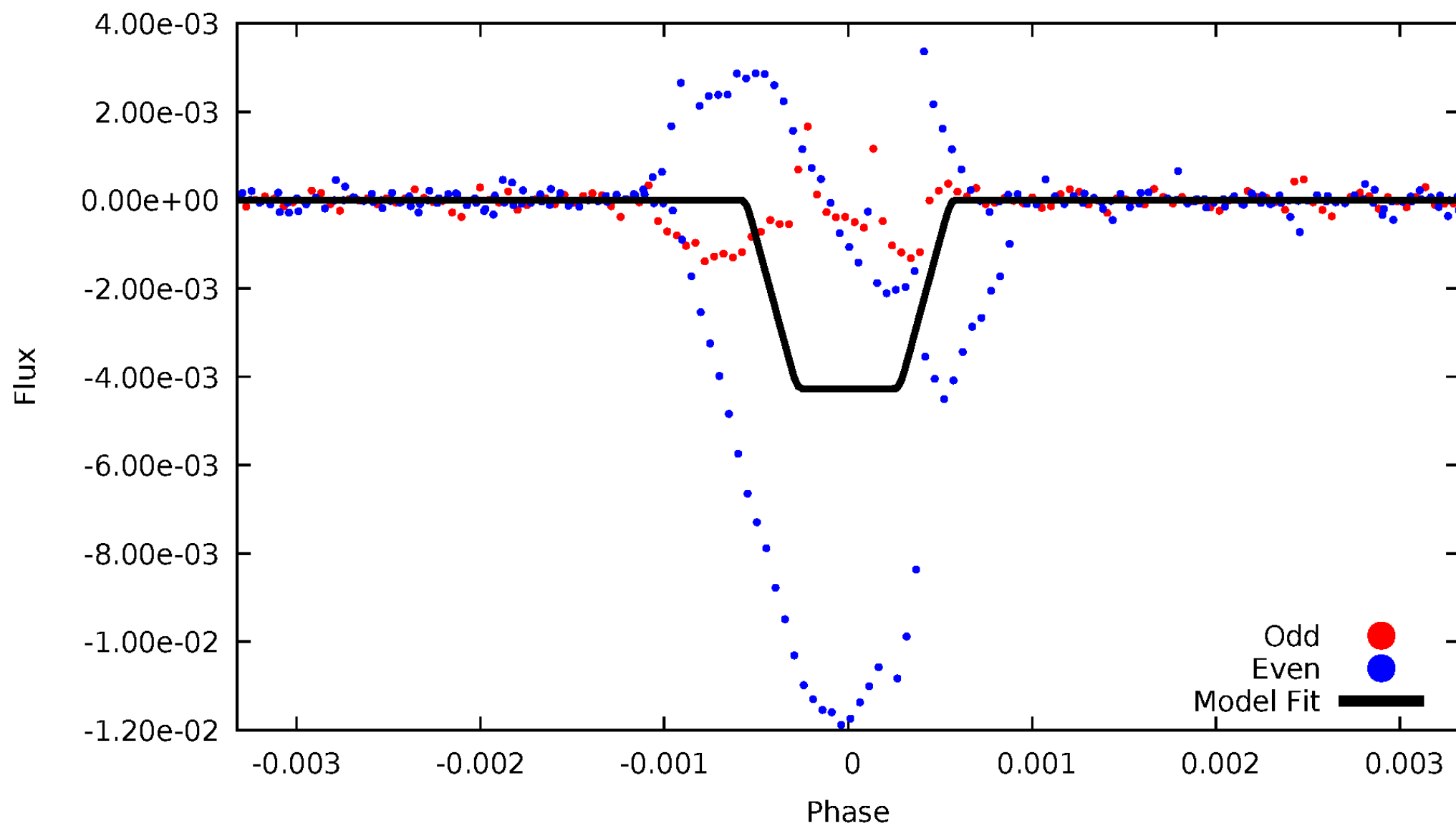
DV Odd/Even

TCE 007339343-05



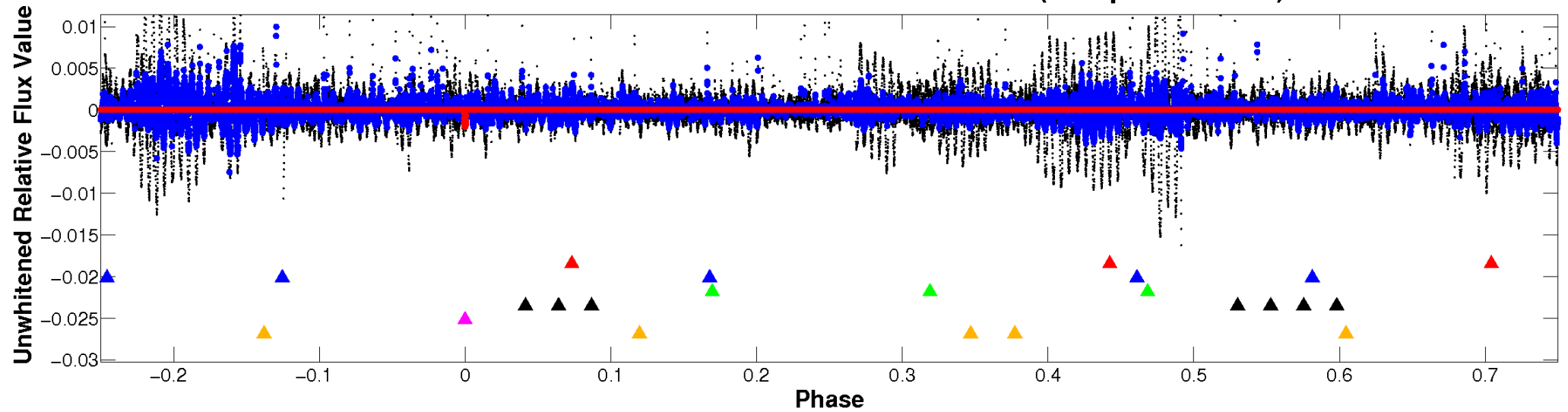
ALT Odd/Even

TCE 007339343-05

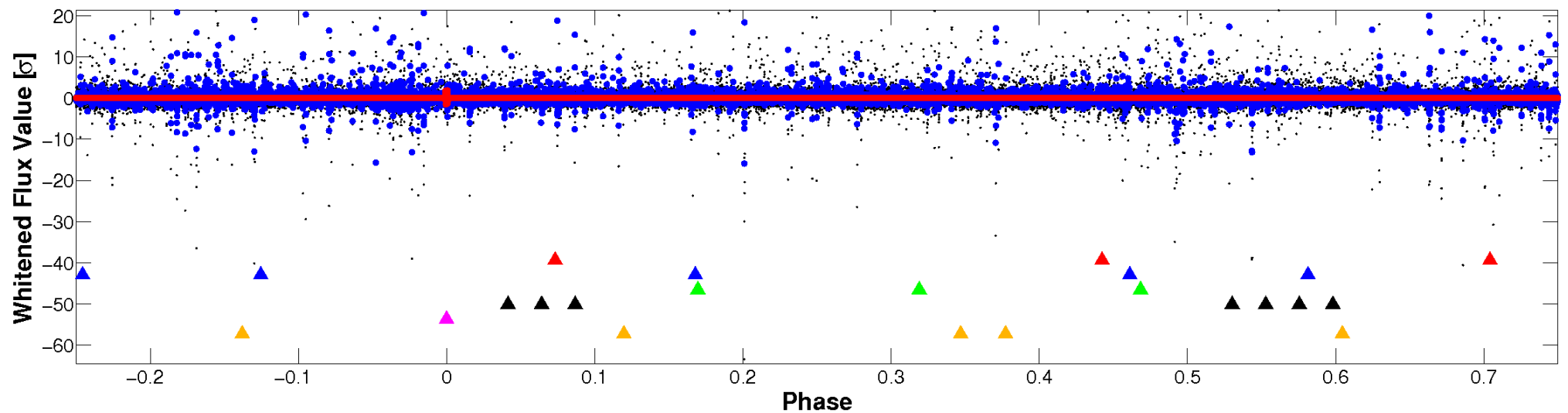


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

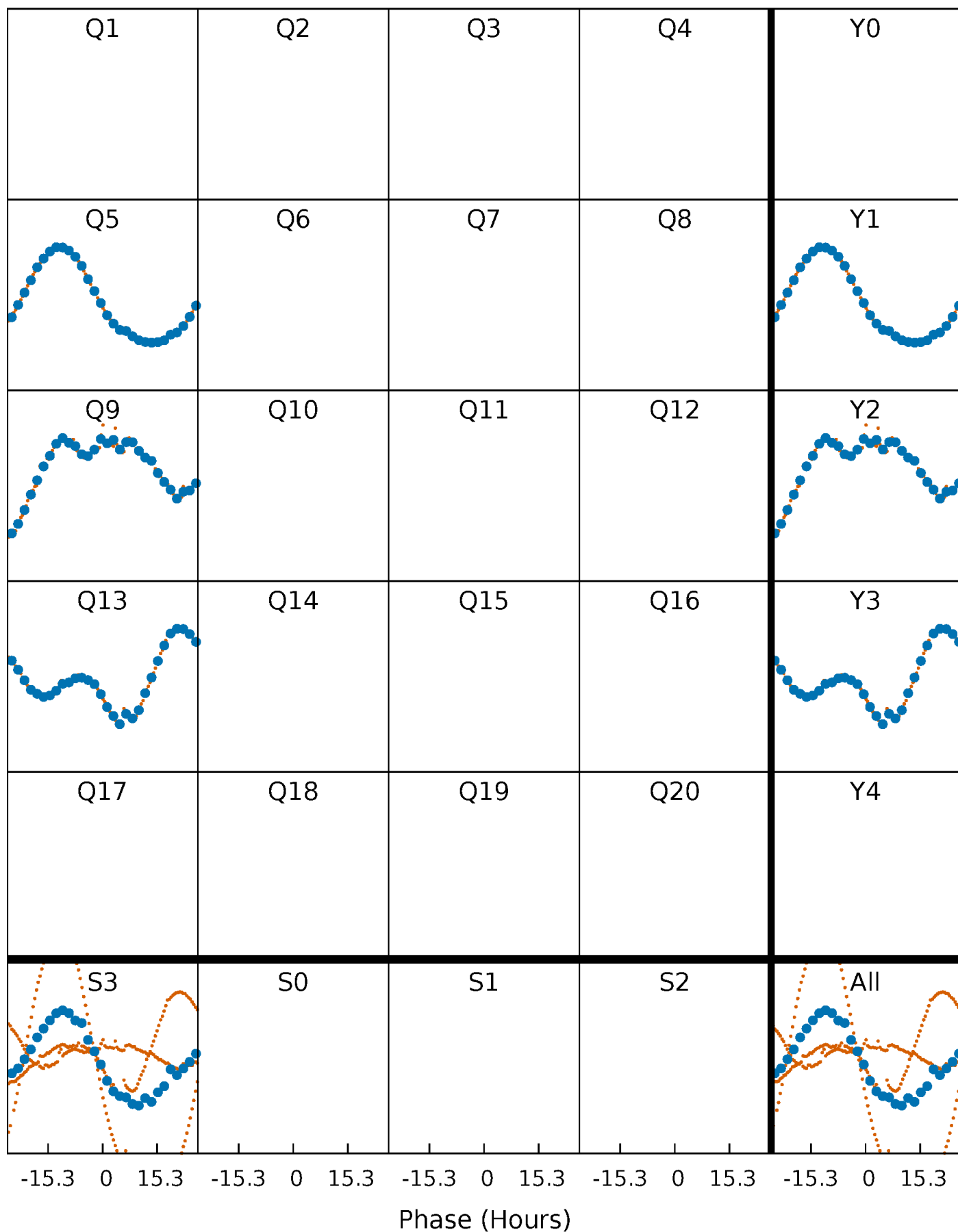


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



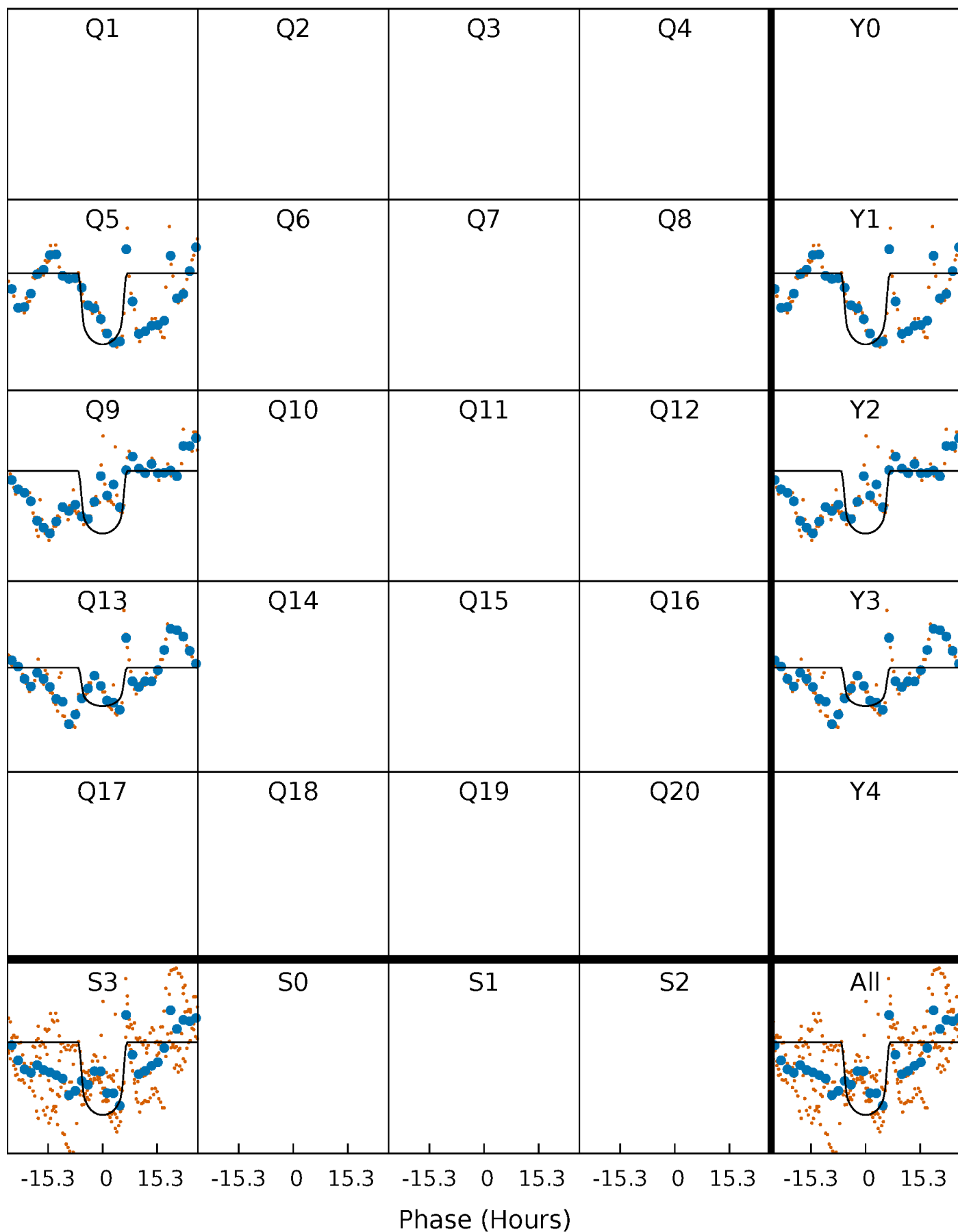
PDC Quarter-Phased Transit Curves

TCE 007339343-05 $P=401.562397$ Days $T_0=462.653514$ (BKJD)



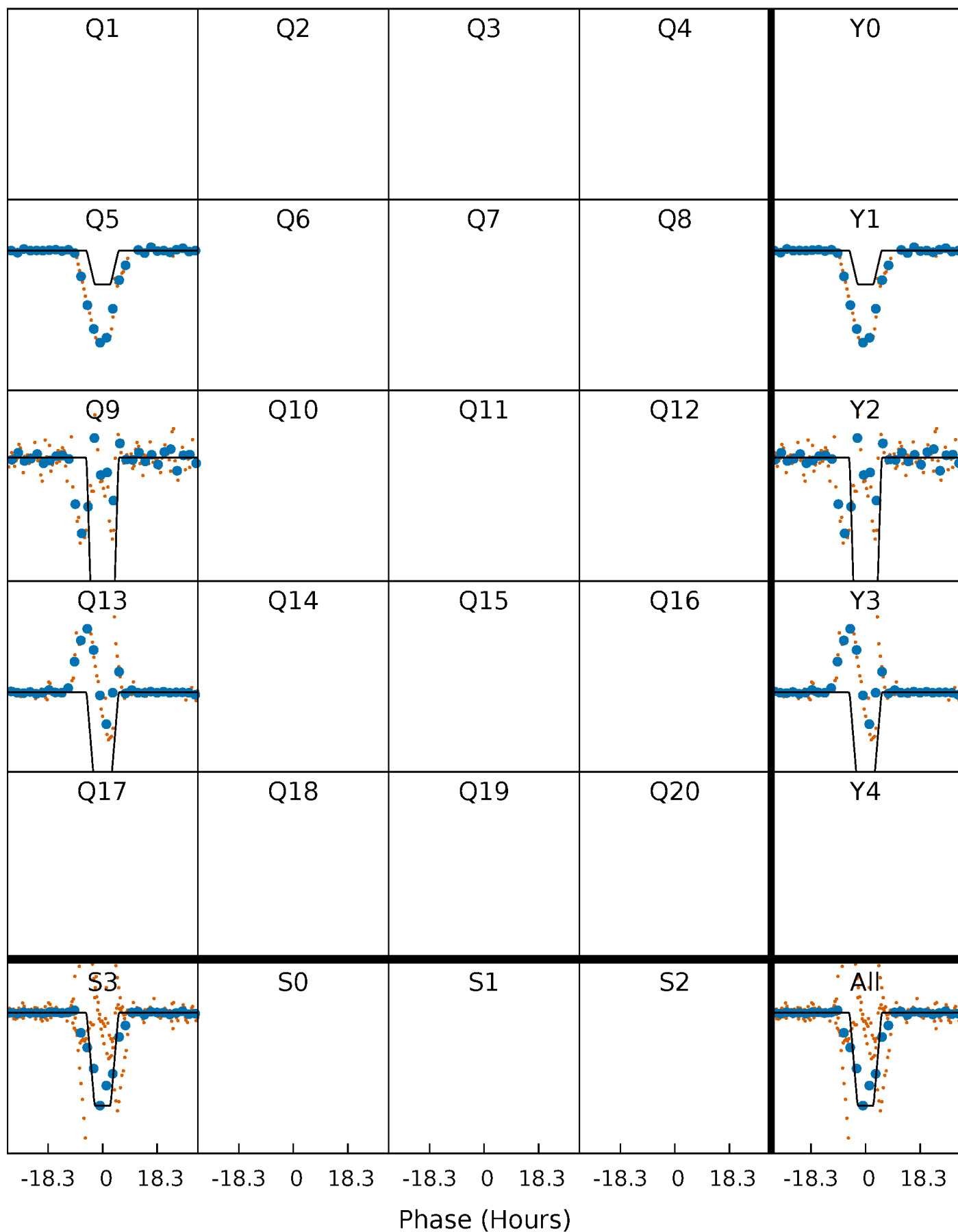
DV Quarter-Phased Transit Curves

TCE 007339343-05 $P=401.562397$ Days $T_0=462.653514$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

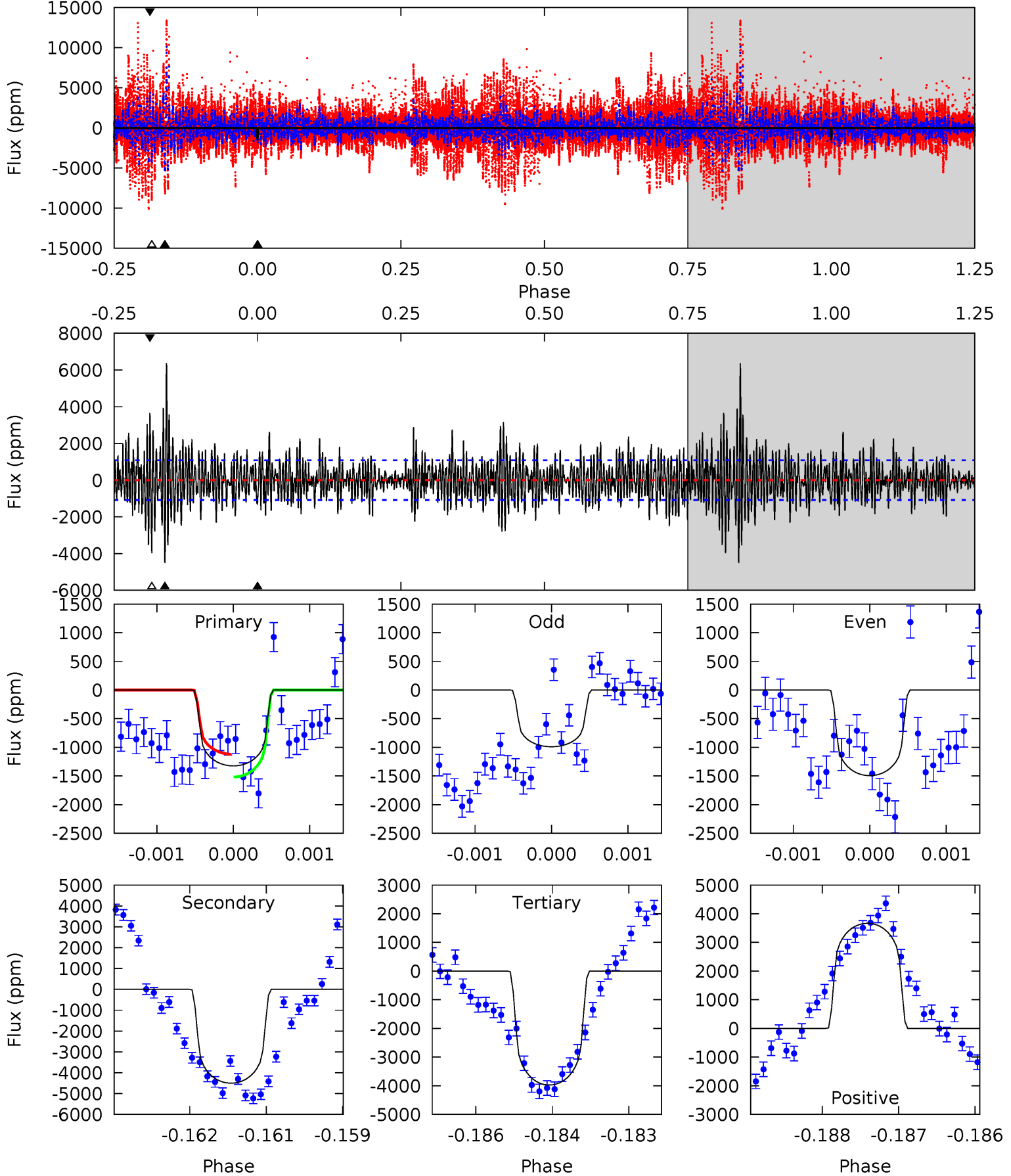
TCE 007339343-05 $P=401.553510$ Days $T_0=462.755671$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-05, P = 401.562397 Days, E = 61.091117 Days

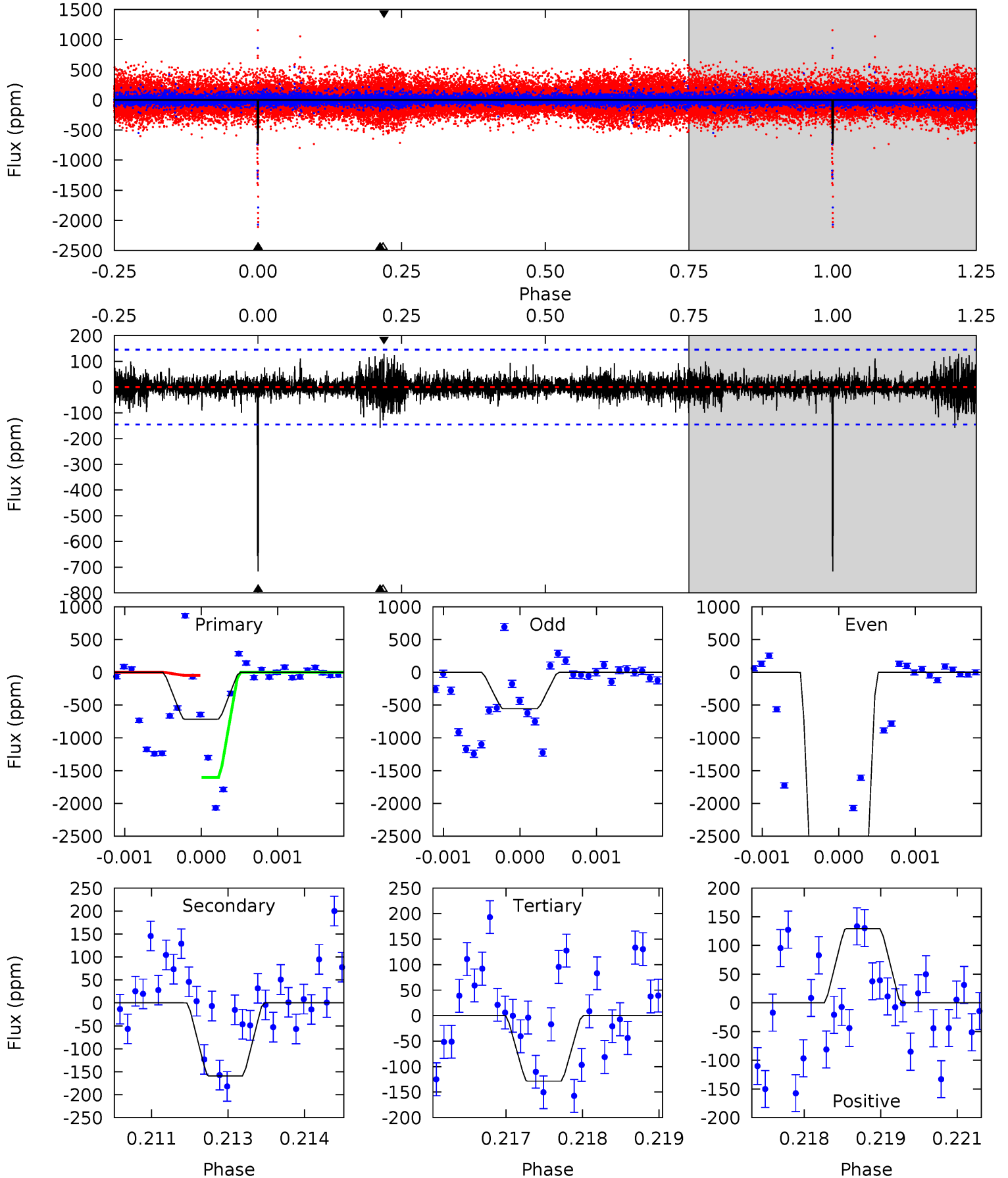
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.61	22.5	19.9	18.3	5.39	3.20	4.83	-13.2	-11.7	2.63	4.16	0.88	0.91	0.59	1.00



Alt Model-Shift Uniqueness Test

007339343-05, P = 401.553510 Days, E = 61.202161 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	5.94	4.79	4.82	5.43	3.25	0.92	21.9	21.9	1.14	1.11	130.8	14.0	0.15	29.3



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4501 ± 200	$5.59^{+1.01}_{-0.78}$	373^{+26}_{-24}	7137^{+496}_{-402}	87341^{+32416}_{-23136}
Alt.	-159 ± 27	$8.02^{+1.42}_{-1.09}$	371^{+27}_{-24}	3160^{+110}_{-108}	1505^{+578}_{-438}

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 $A_{obs} \gg 1.0$

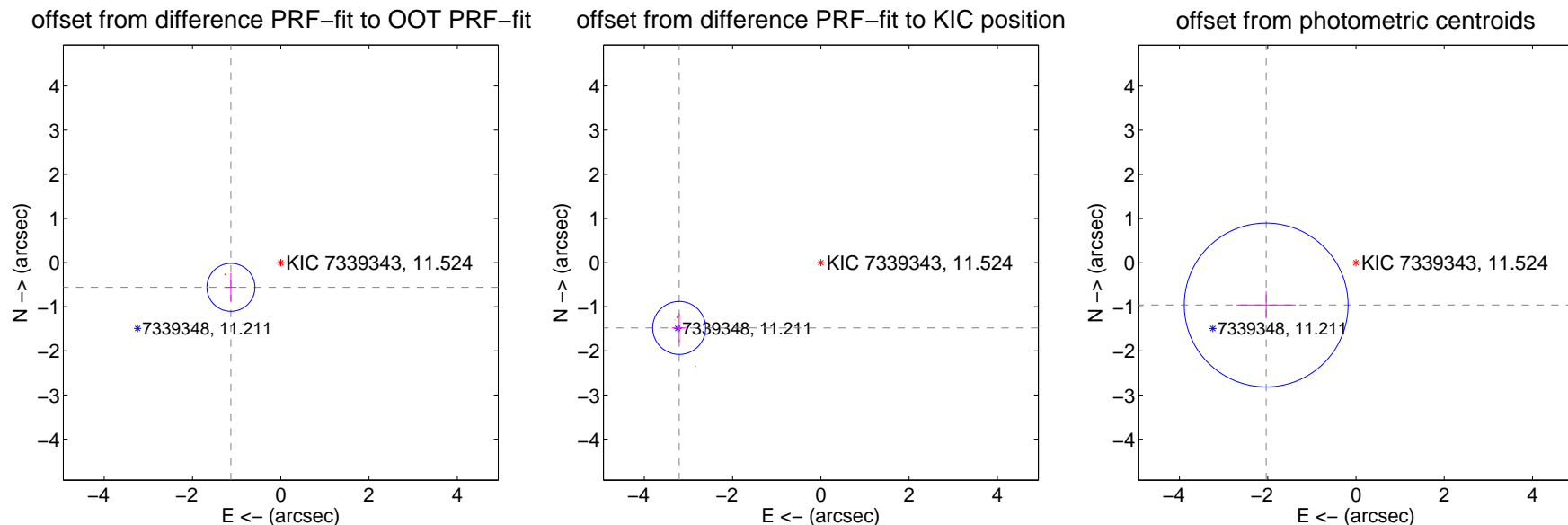
DV Centroid Data

Supplemental centroid analysis for 007339343-05. **Kepler magnitude: 11.52.** Transit SNR 7.45

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.31 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.260 ± 0.181	6.95	1.129 ± 0.127	-0.560 ± 0.318
PRF-fit source offset from KIC position	3.535 ± 0.200	17.66	3.210 ± 0.159	-1.479 ± 0.330
photometric centroid source offset	2.25 ± 0.62	3.64	2.04 ± 0.67	-0.96 ± 0.31

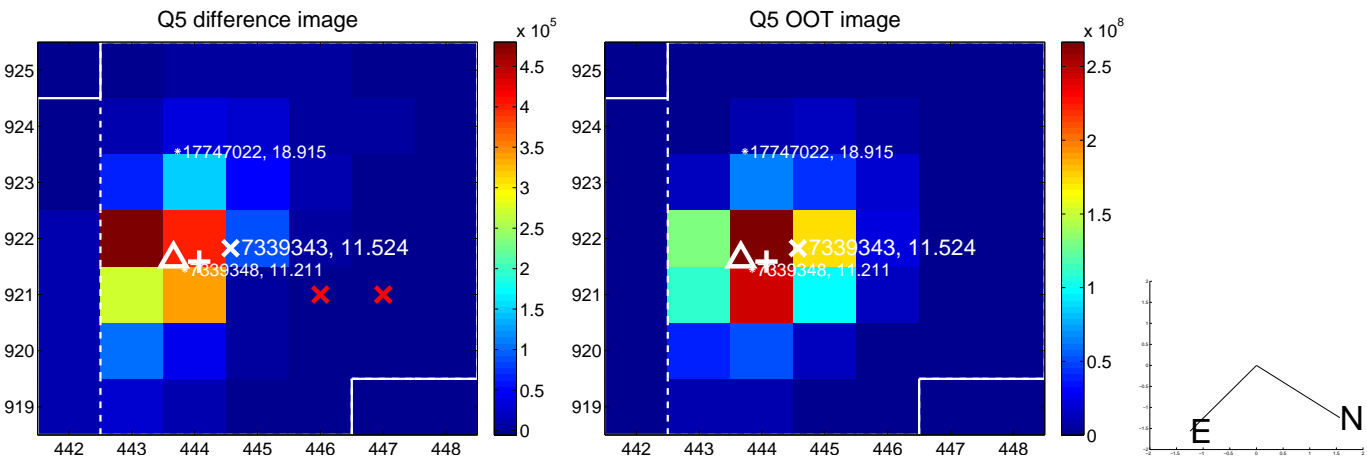


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

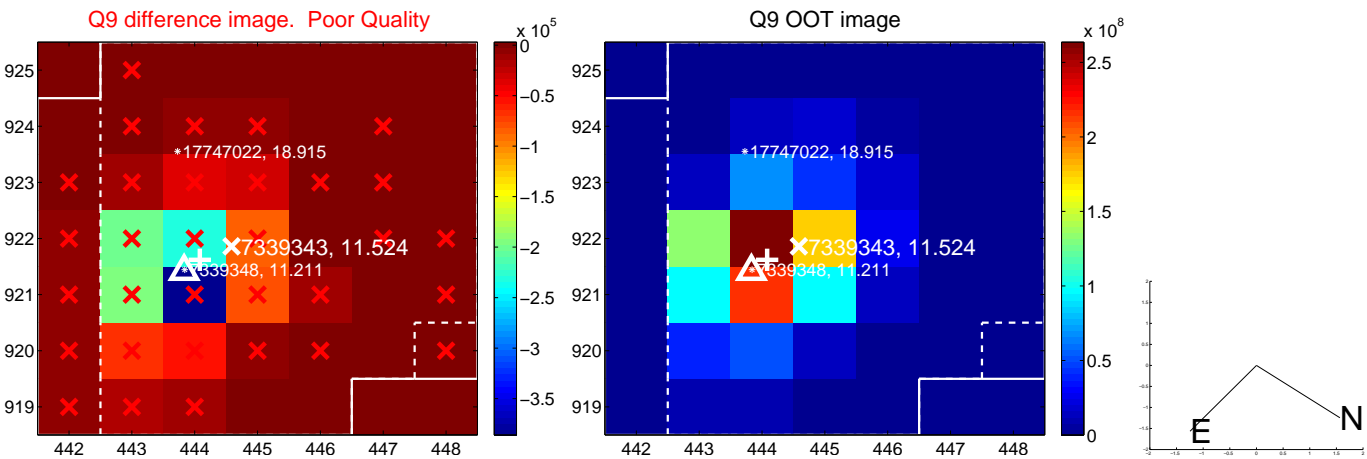
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



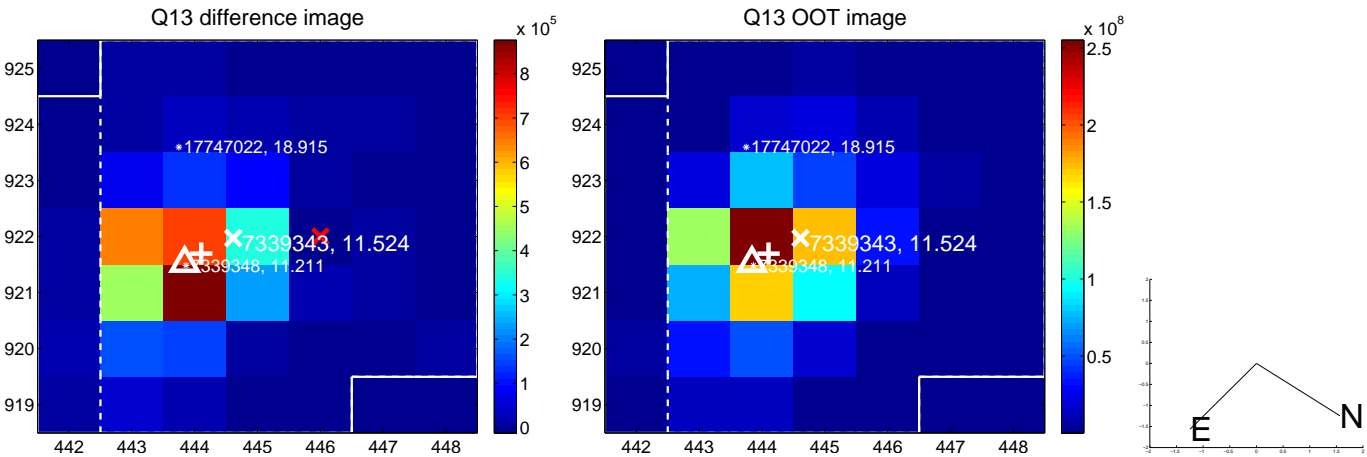
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



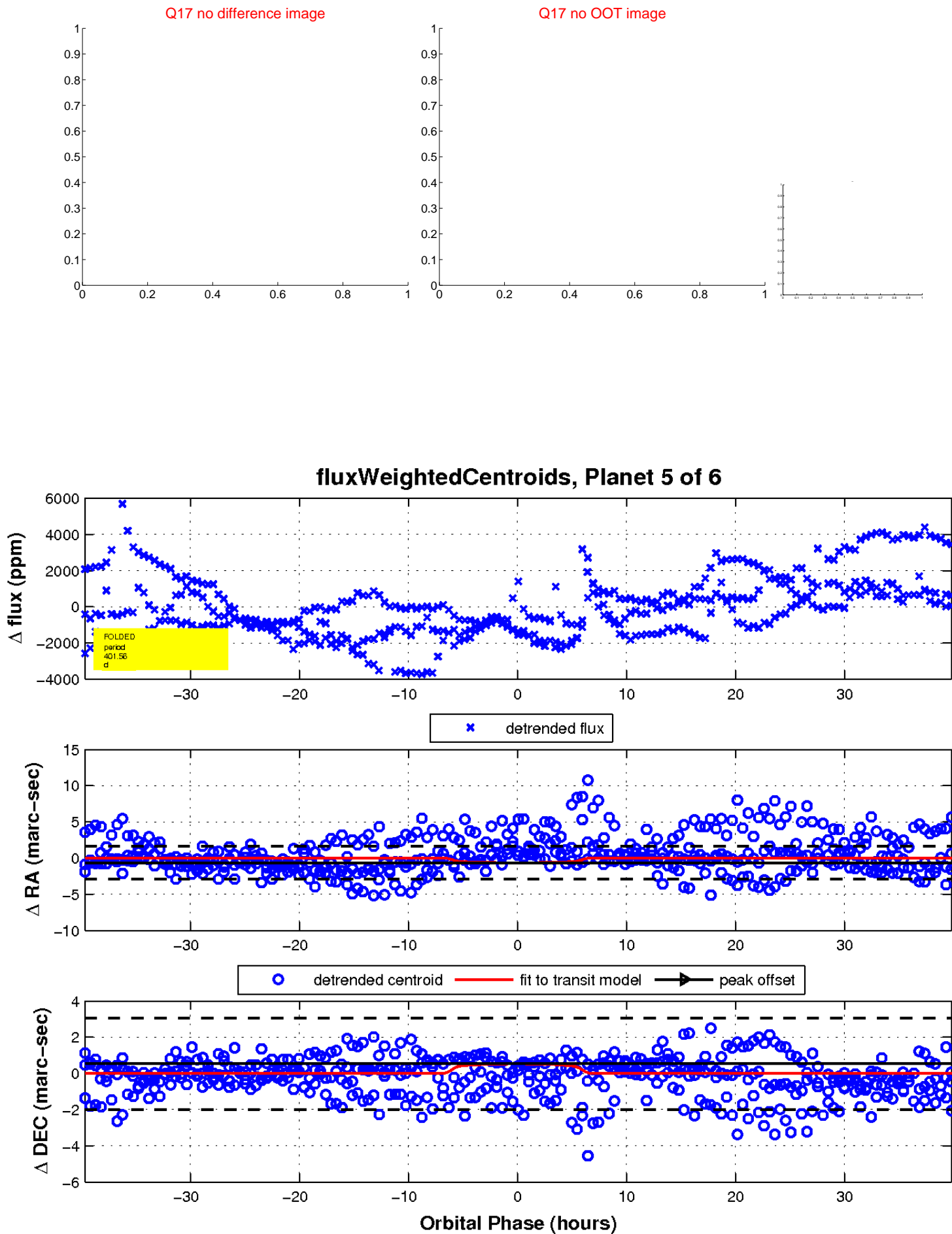
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

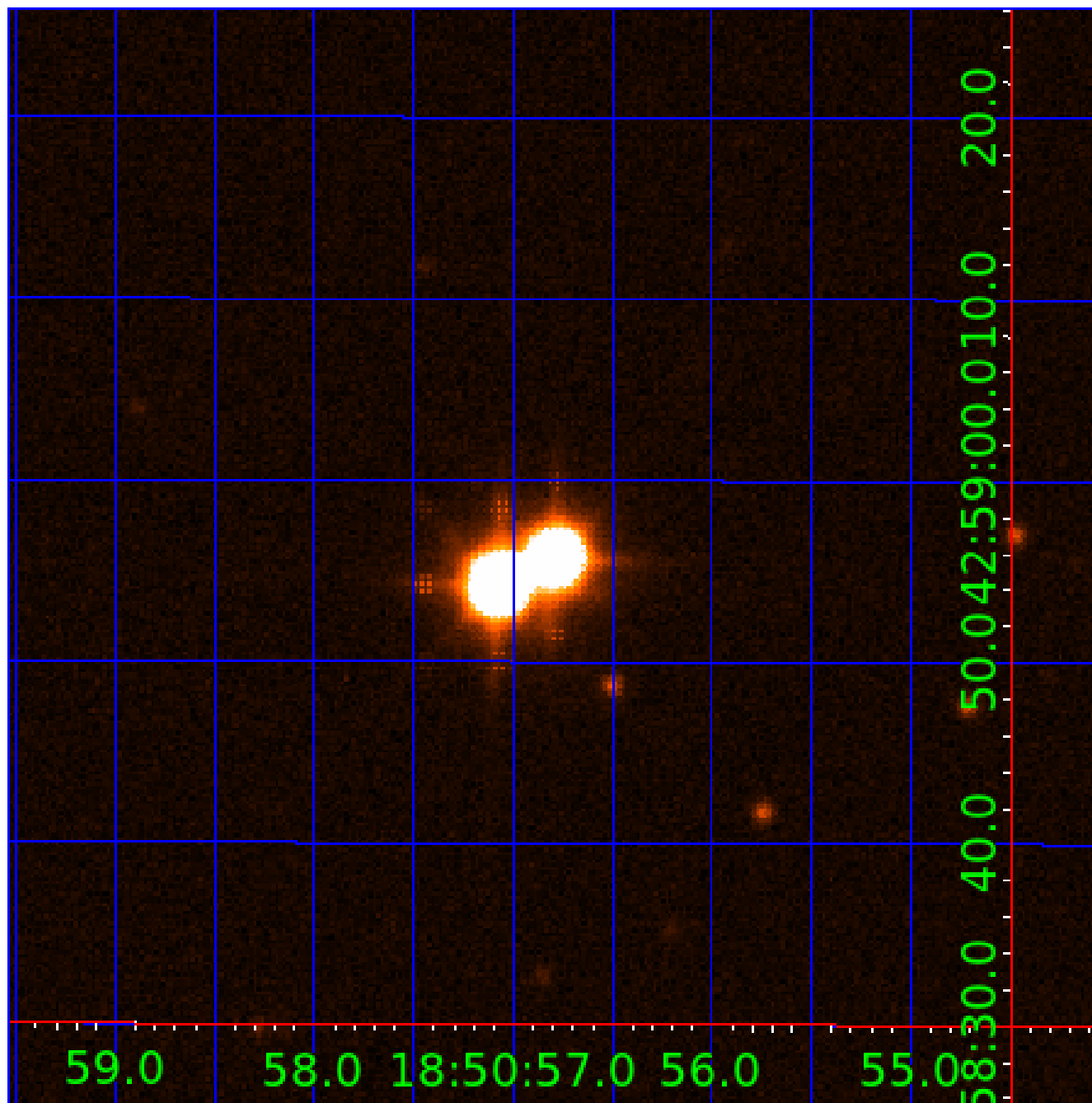


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007339343

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})
007339343-01	OBS	No	549.780387	343.862346	292.3	1.775	17.7	2.9	1.14	5810	1.94	0.79
007339343-02	OBS	No	283.809701	363.994376	658.4	5.006	16.9	4.2	1.14	5810	3.05	1.90
007339343-03	OBS	No	461.550319	530.762357	986.5	3.999	13.8	6.3	1.14	5810	3.59	0.99
007339343-04	OBS	No	205.330487	273.985390	517.8	2.845	15.3	5.5	1.14	5810	2.57	2.93
007339343-05	OBS	No	401.562397	462.653514	2026.5	13.375	16.5	7.4	1.14	5810	5.58	1.20
007339343-06	OBS	No	298.132452	212.574332	224.4	6.000	14.0	-1.0	1.14	5810	1.69	1.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007339343-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007339343-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-04	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
007339343-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007339343-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

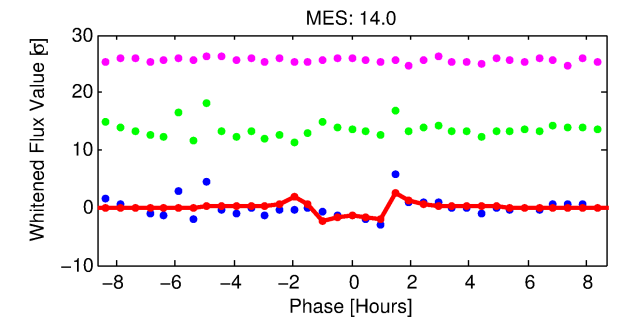
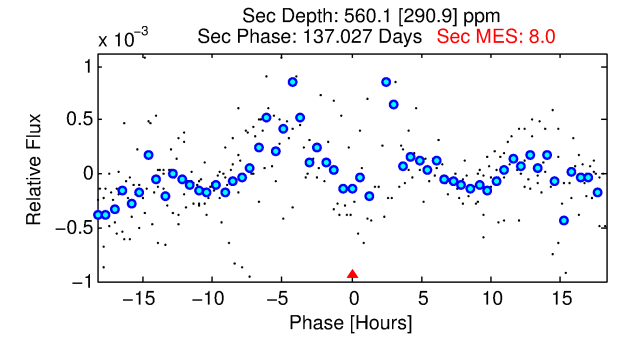
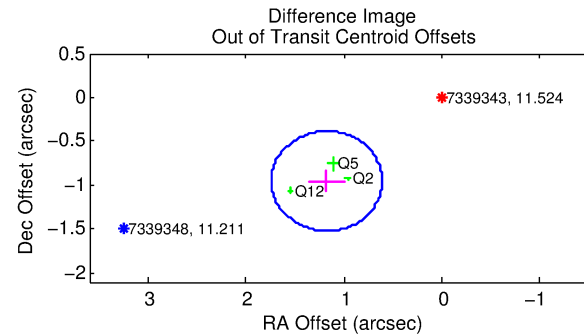
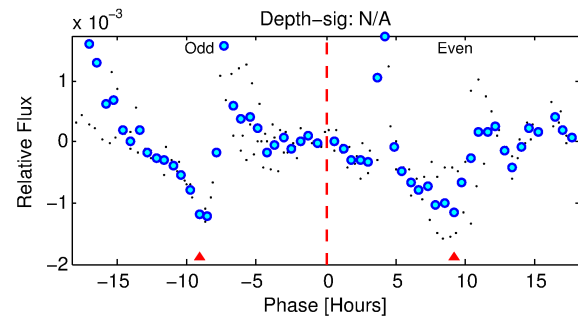
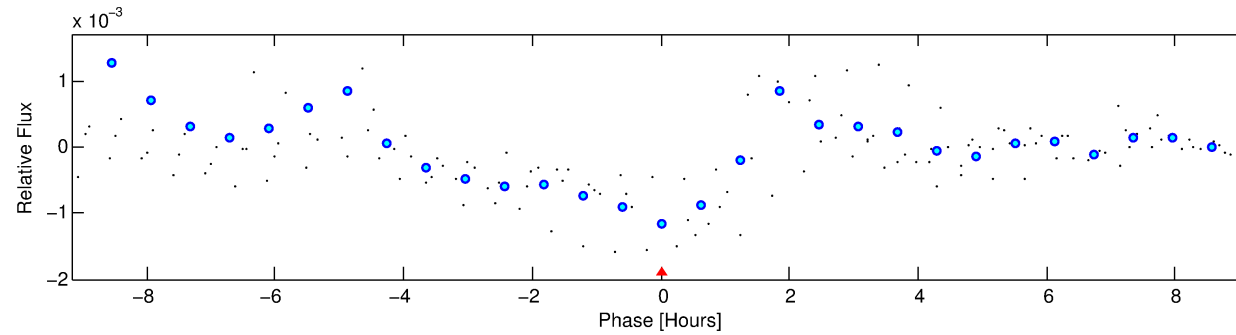
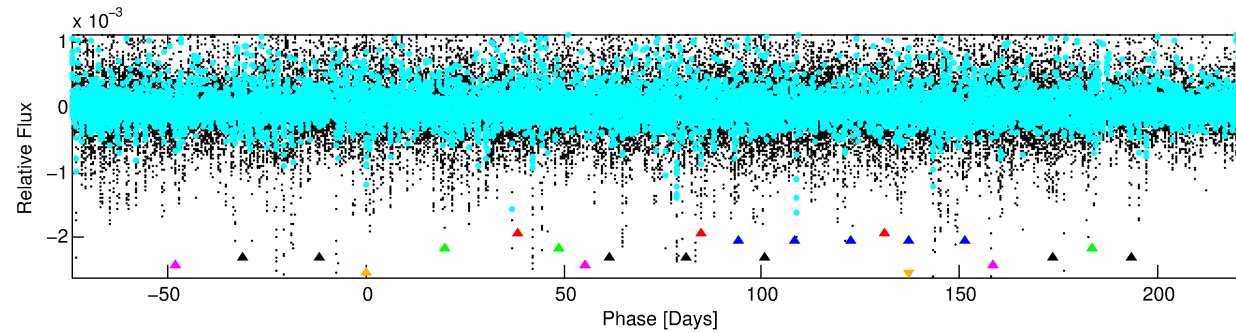
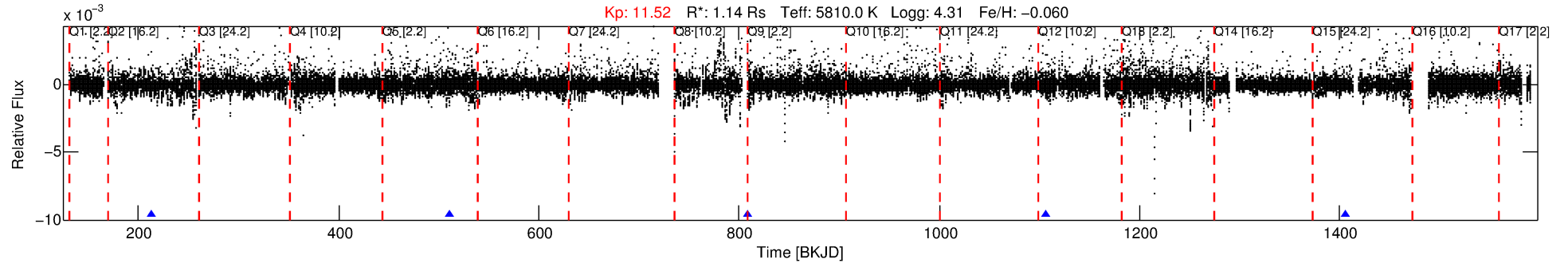
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007339343-06

No Significant Match Found

DV One-Page Summary

KIC: 7339343 Candidate: 6 of 6 Period: 298.132 d



TPS TCE Results:

Period = 298.13245 d
Epoch = 212.5743 BKJD

DV fit results are unavailable

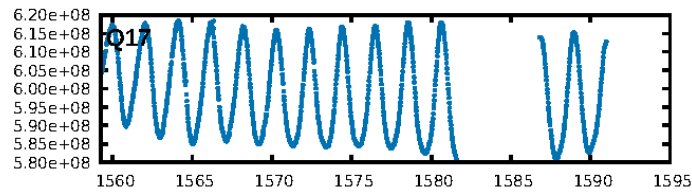
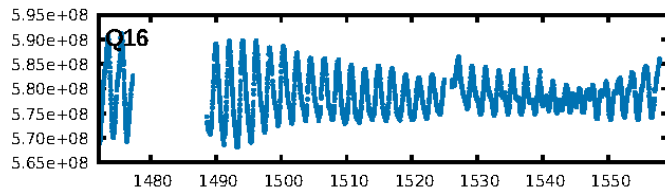
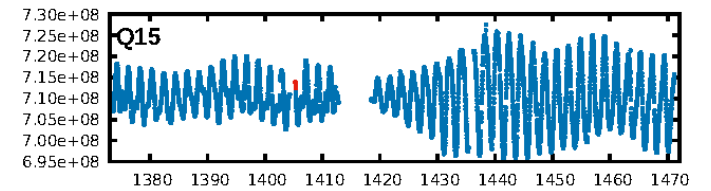
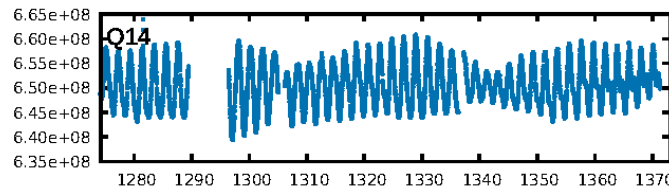
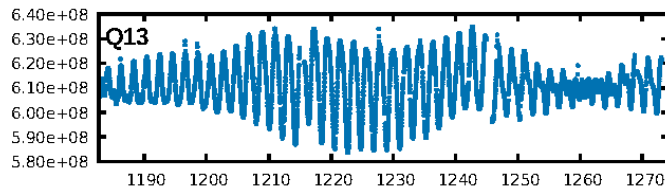
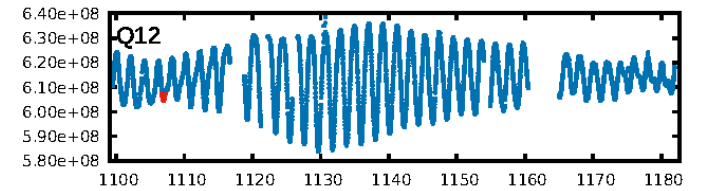
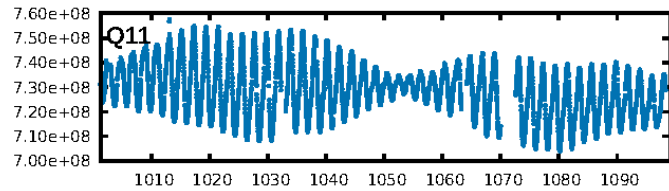
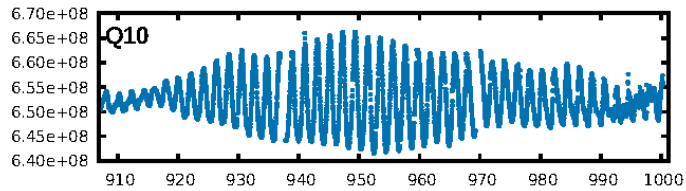
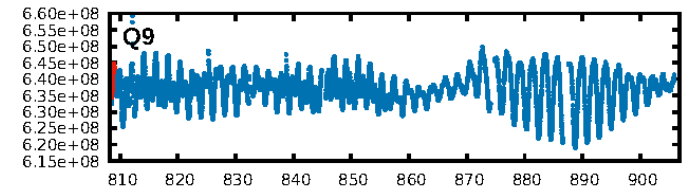
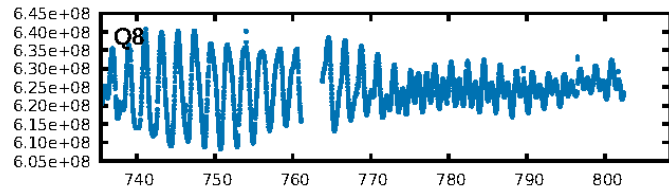
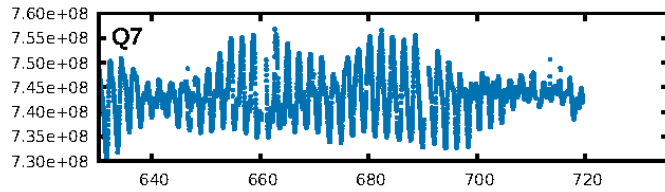
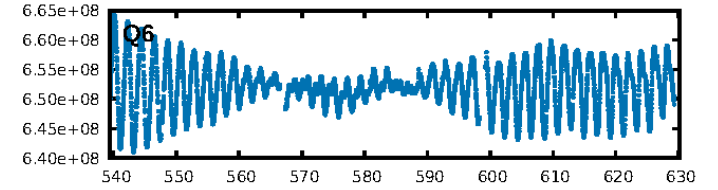
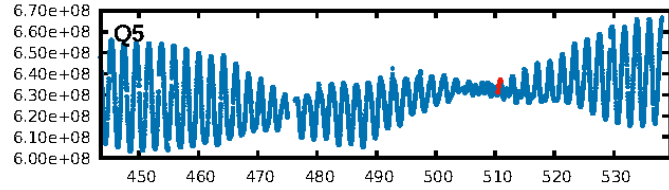
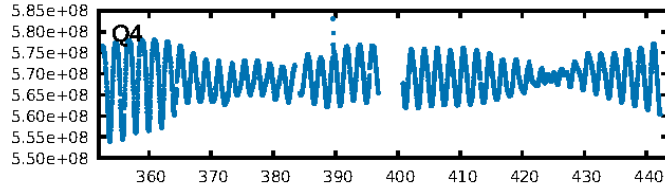
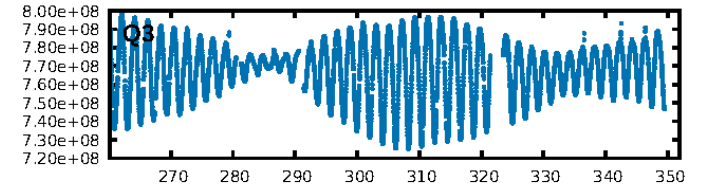
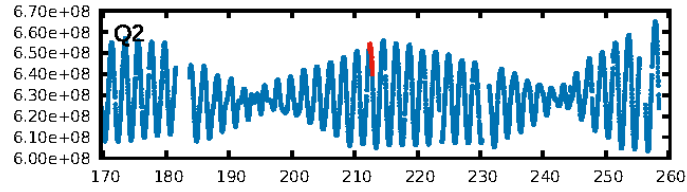
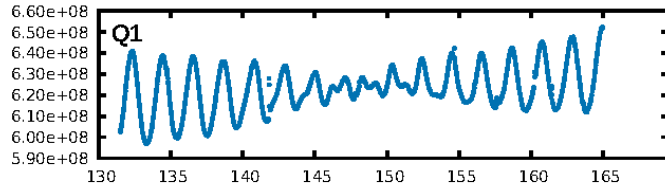
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [43.99 σ]
LongPeriod-sig: 100.0% [169.33 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 75.8%
Centroid-so: 1.383 arcsec [1.21 σ]
OotOffset-rm: 1.512 arcsec [7.98 σ]
KicOffset-rm: 3.770 arcsec [27.69 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

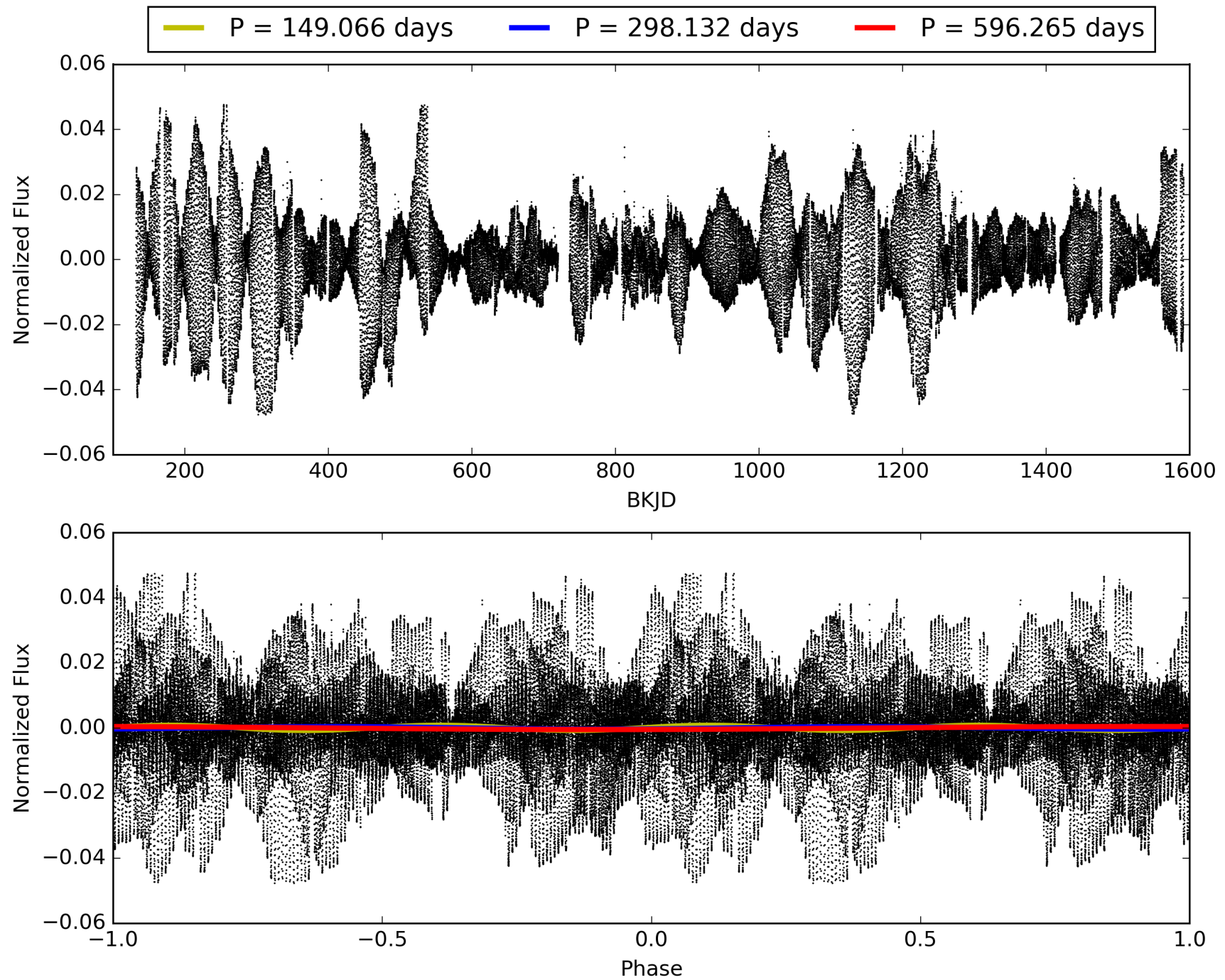
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:55:06 Z

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

TCE 007339343-06, PDC Light Curves

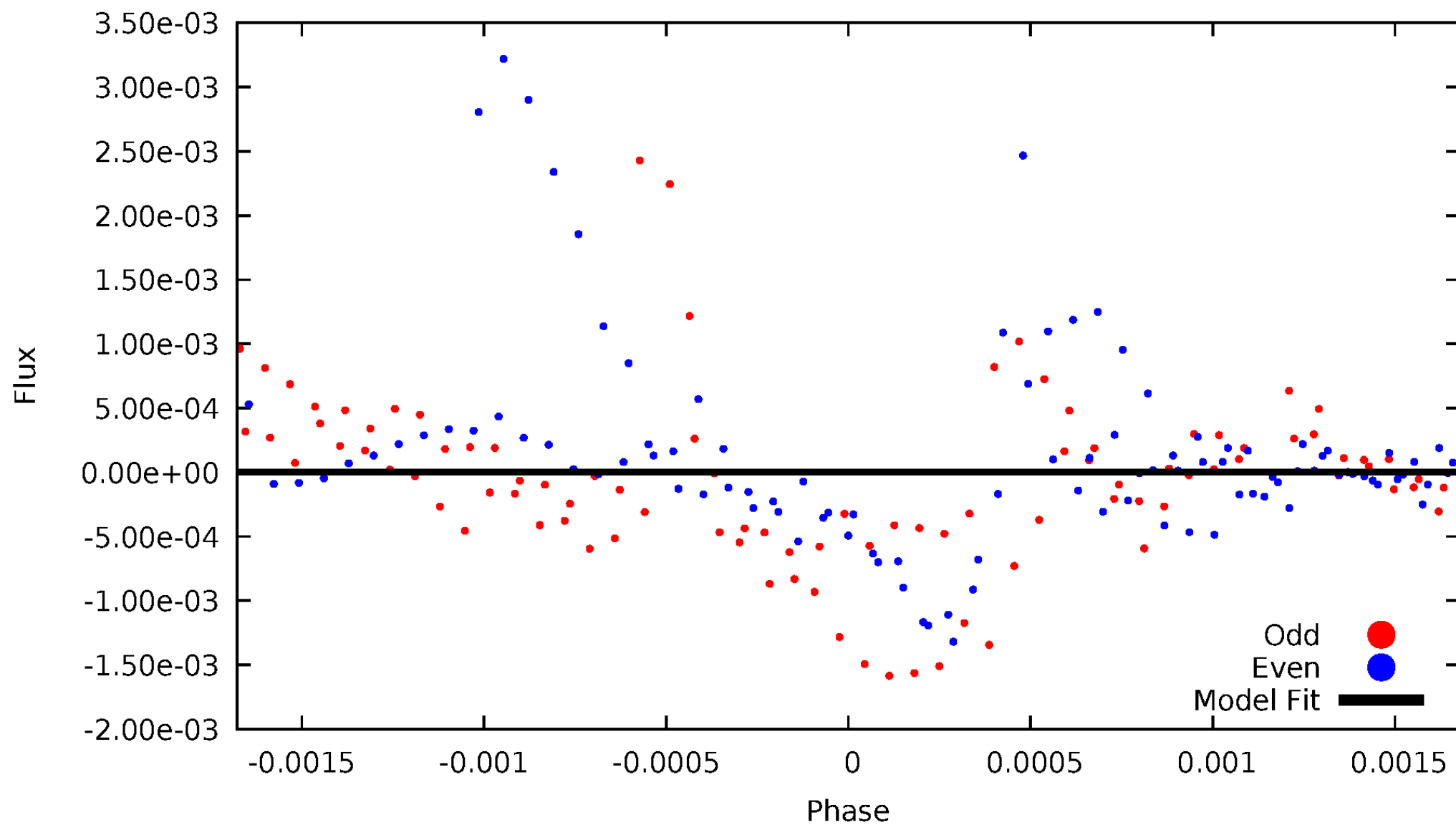


TCE 007339343-06



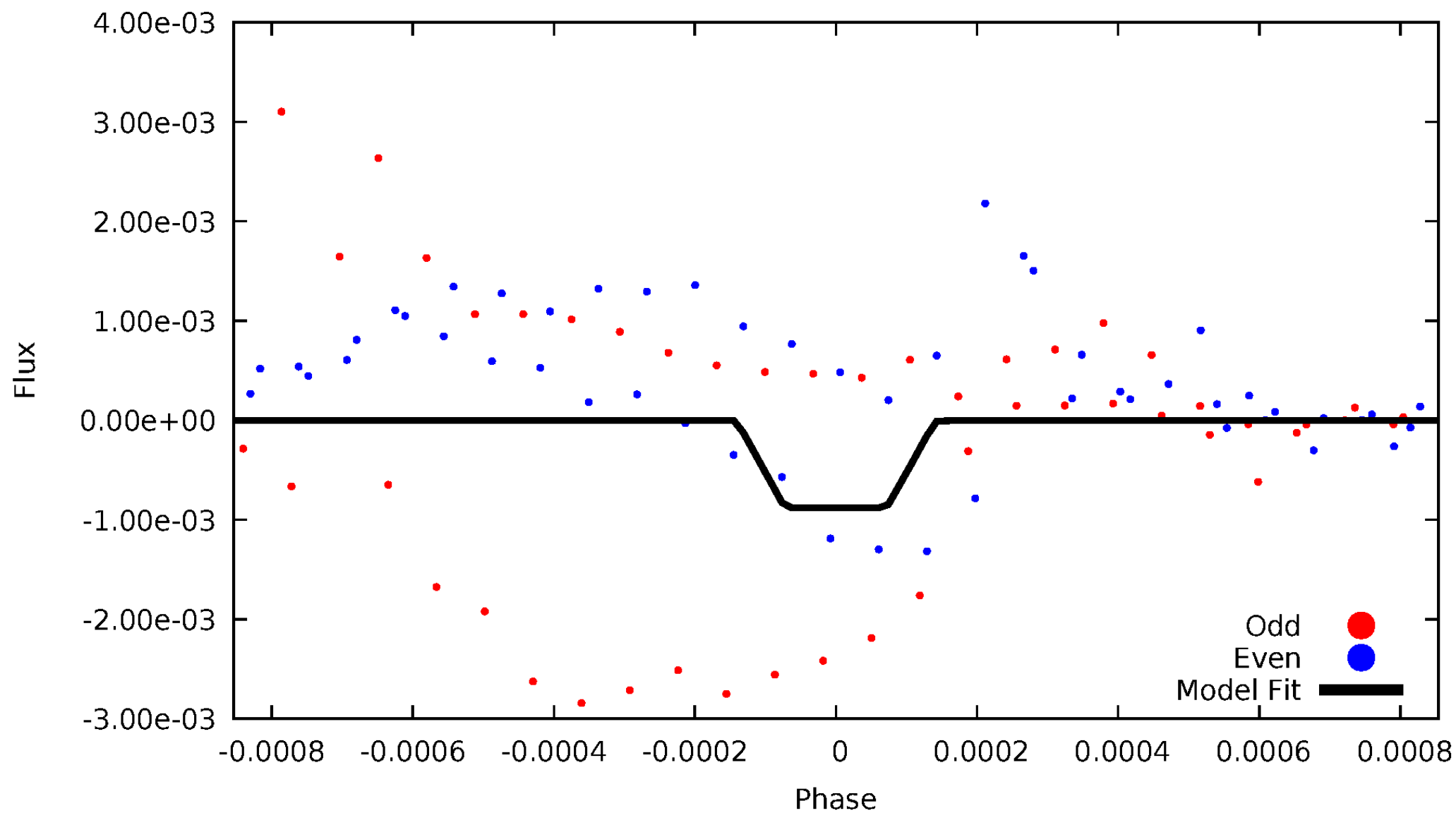
DV Odd/Even

TCE 007339343-06



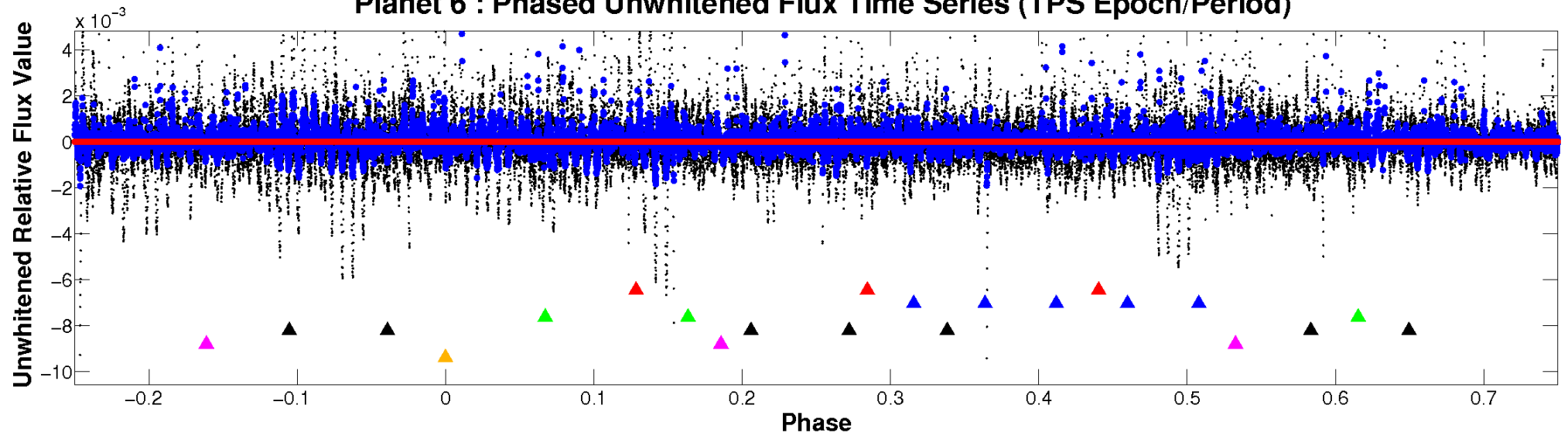
ALT Odd/Even

TCE 007339343-06



Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

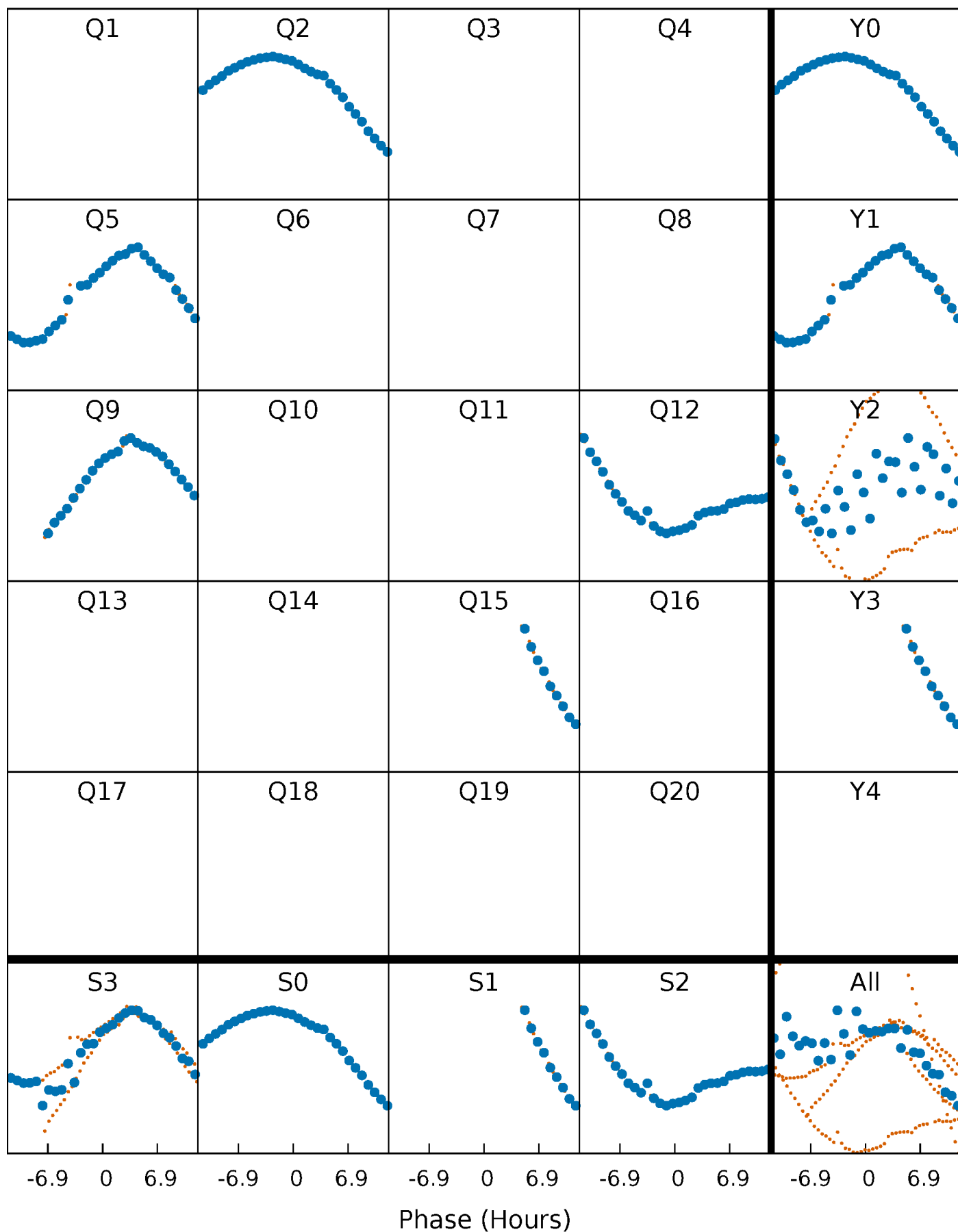


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



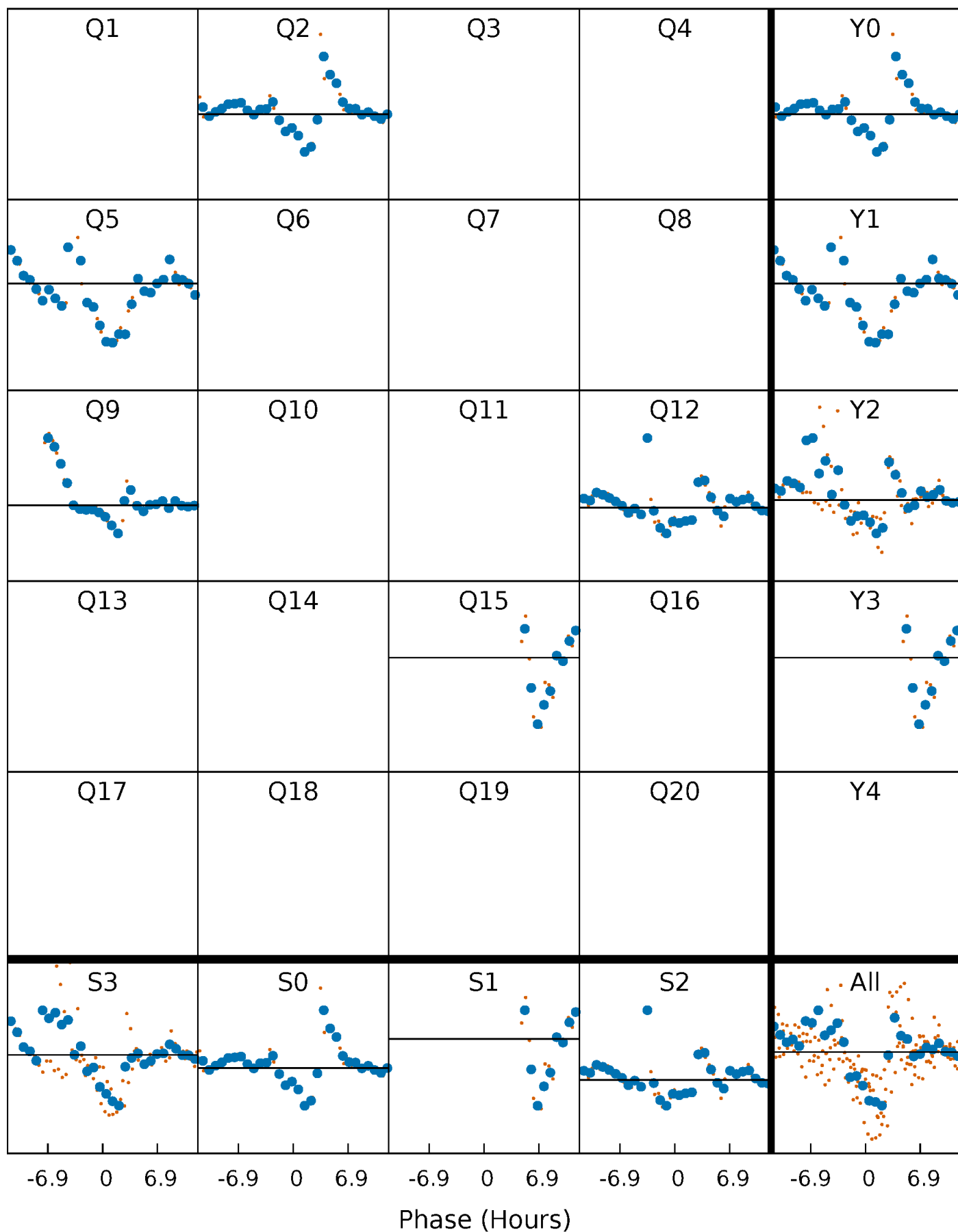
PDC Quarter-Phased Transit Curves

TCE 007339343-06 P=298.132452 Days $T_0=212.574332$ (BKJD)



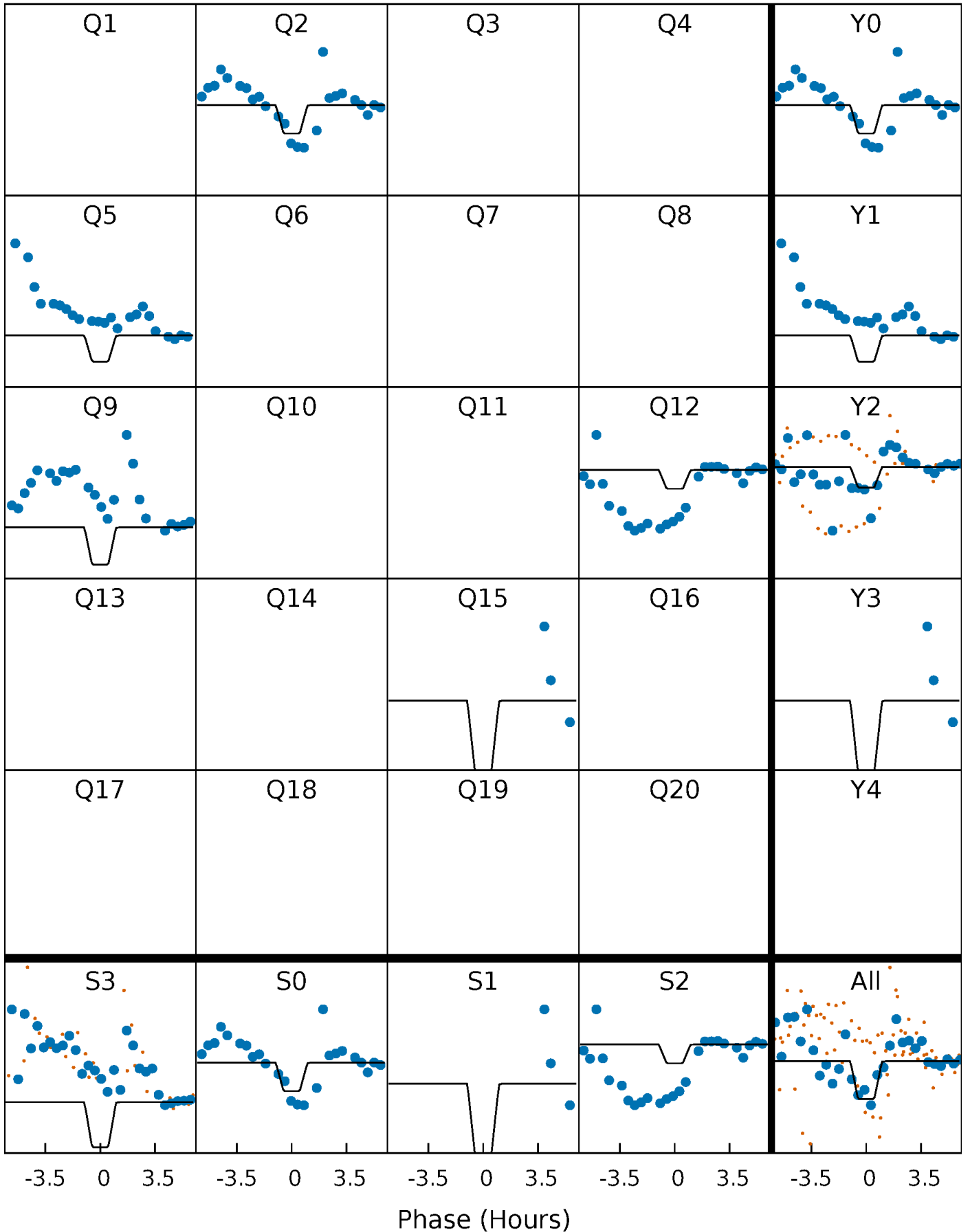
DV Quarter-Phased Transit Curves

TCE 007339343-06 $P=298.132452$ Days $T_0=212.574332$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

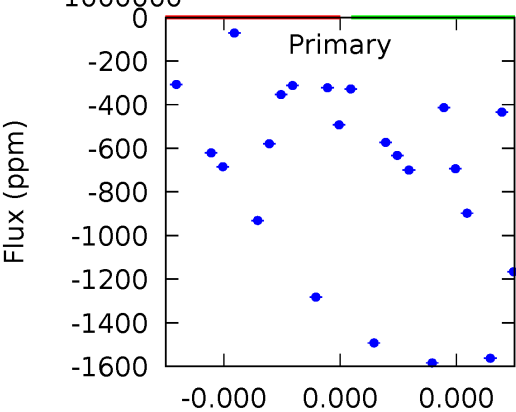
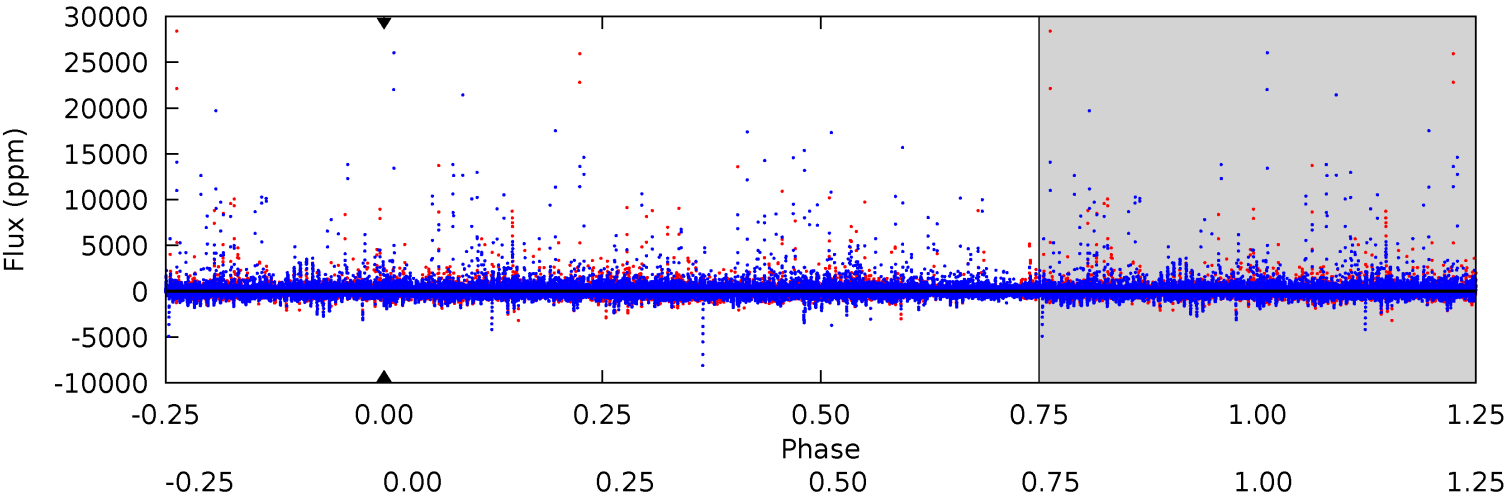
TCE 007339343-06 $P=298.132452$ Days $T_0=212.637970$ (BKJD)



DV Model-Shift Uniqueness Test

007339343-06, P = 298.132452 Days, E = 212.574332 Days

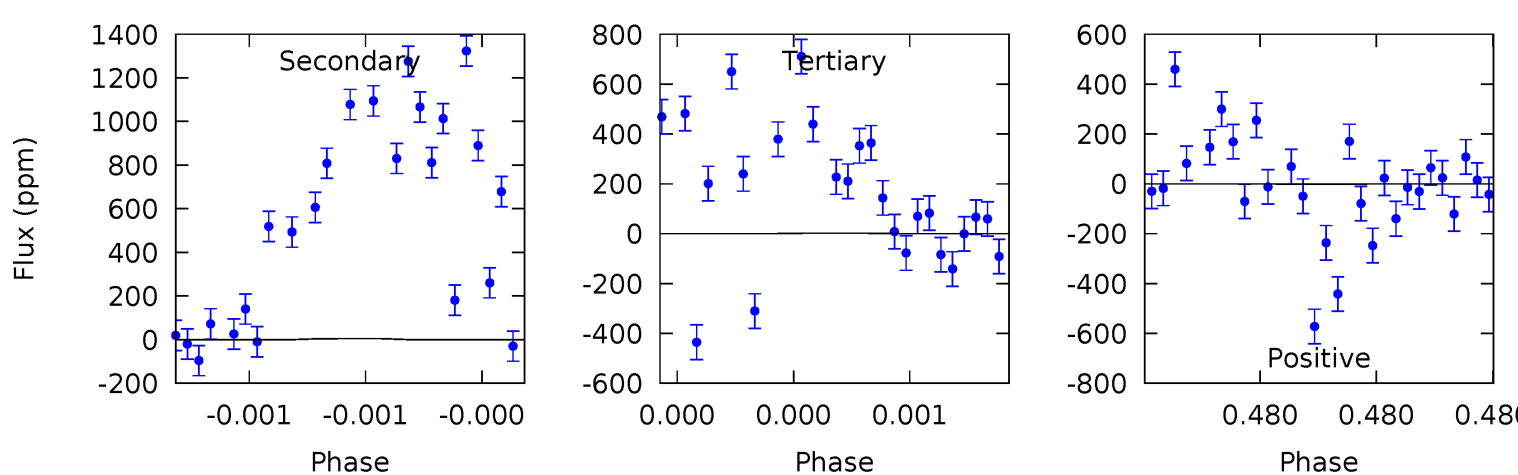
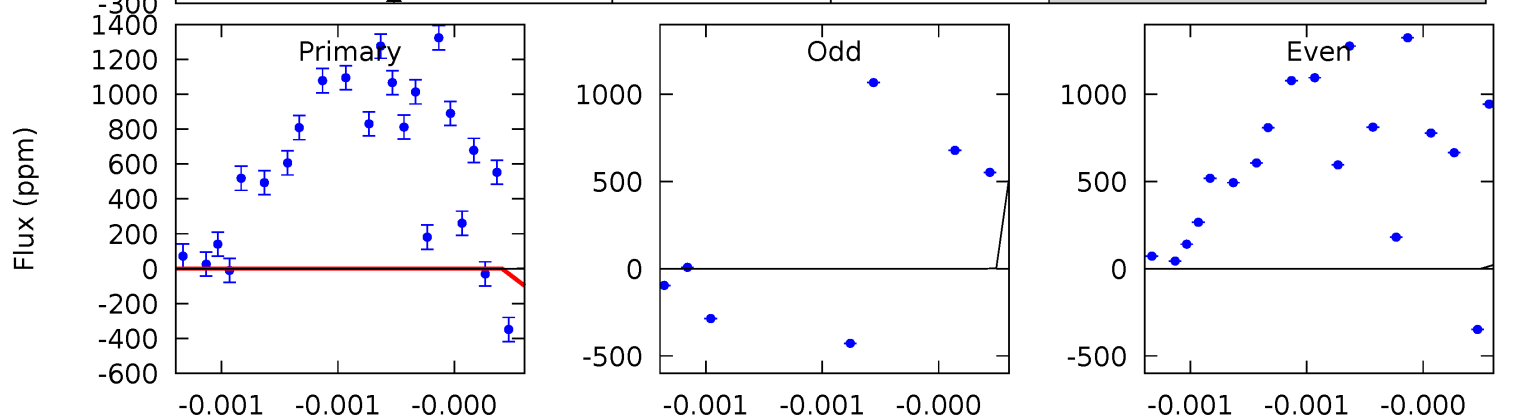
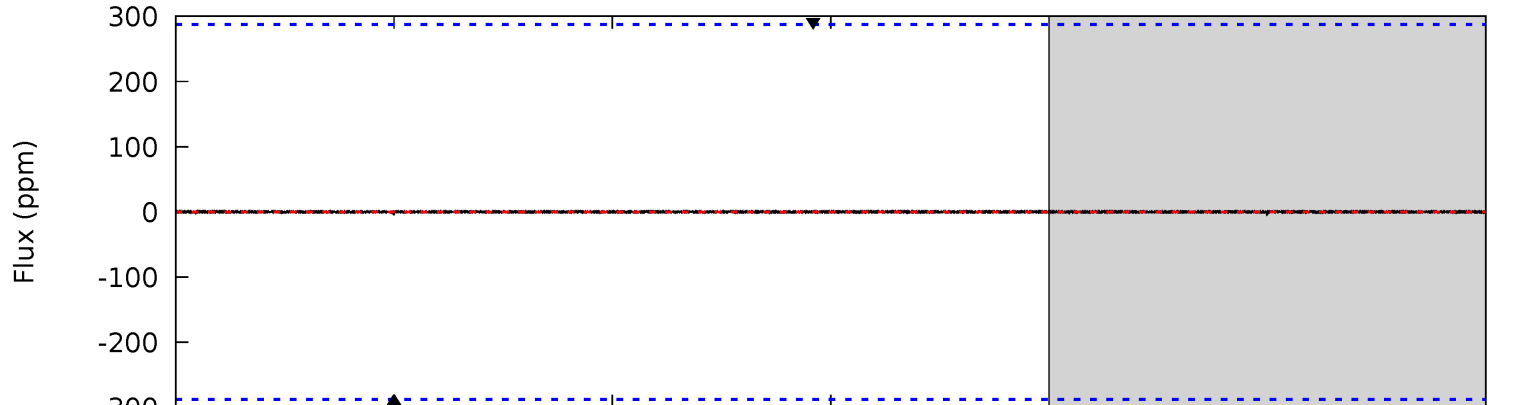
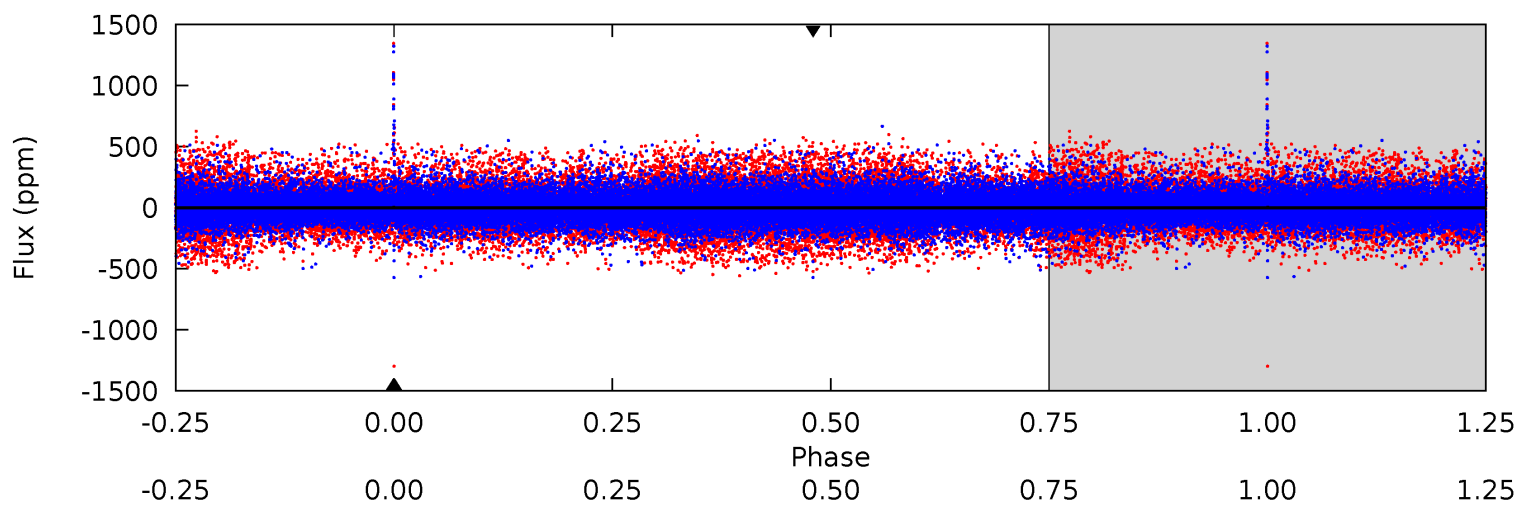
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007339343-06, P = 298.132452 Days, E = 212.637970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.09	0.09	0.03	0.02	5.67	3.63	0.00	0.06	0.07	0.05	0.06	14.5	2.28	0.20	0



Stellar Parameters For KIC 007339343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5810^{+140}_{-157}	$4.307^{+0.175}_{-0.175}$	$-0.060^{+0.300}_{-0.300}$	$1.136^{+0.324}_{-0.216}$	$0.955^{+0.139}_{-0.104}$	$0.917^{+0.806}_{-0.423}$
	+2%/-3%	+4%/-4%	+500%/-500%	+29%/-19%	+15%/-11%	+88%/-46%
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 007339343-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$8.94^{+9.76}_{-6.16}$	411^{+29}_{-27}	-5130^{+28181}_{-14656}	$-15837.424^{+1028526.564}_{-777529.519}$
Alt.	-4 ± 51	$10.03^{+9.68}_{-7.01}$	411^{+30}_{-26}	1856^{+957}_{-4498}	11^{+421}_{-299}

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 $A_{obs} \gg 1.0$

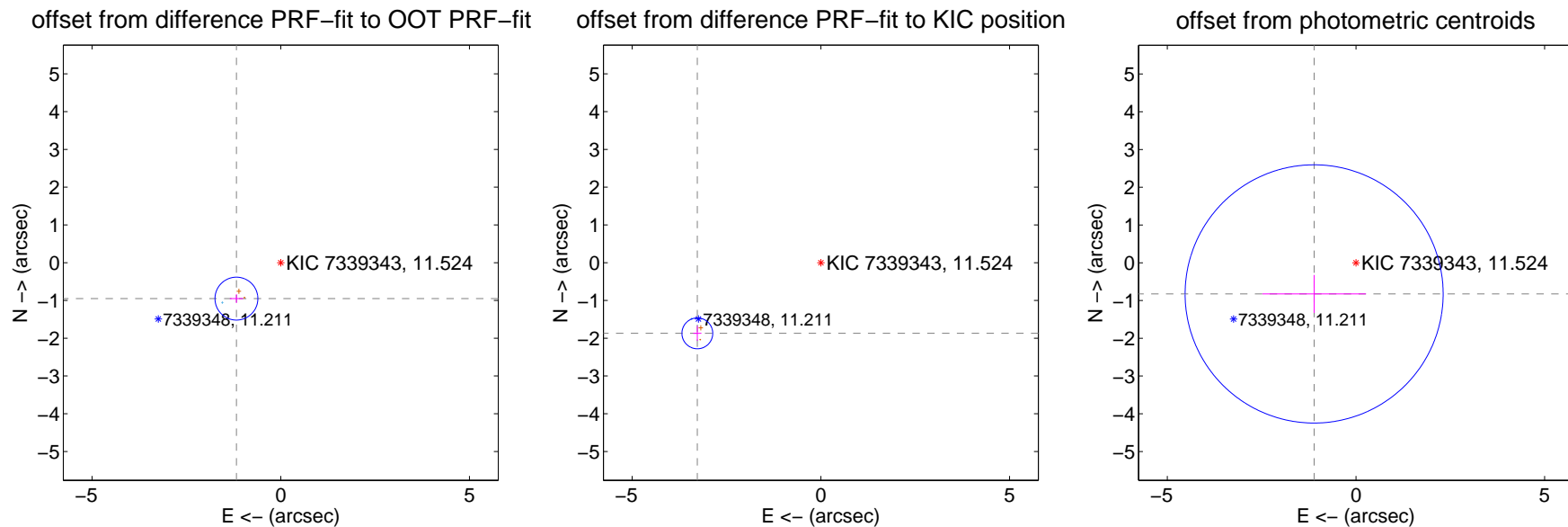
DV Centroid Data

Supplemental centroid analysis for 007339343-06. **Kepler magnitude: 11.52.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

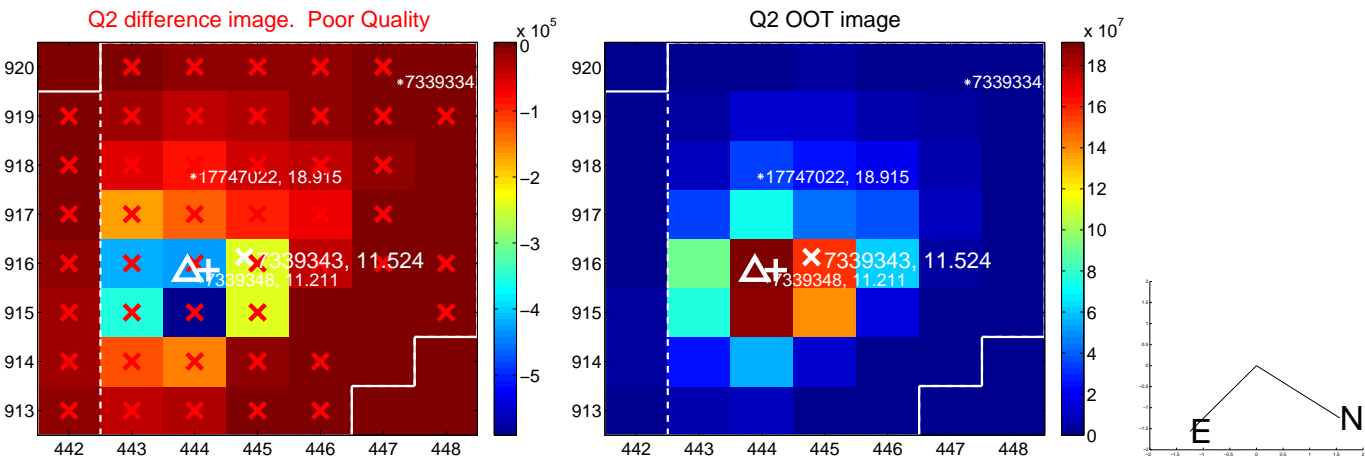
The direct PRF centroid is offset from the target star catalog position by about 1.93 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.512 \pm 0.189	7.98	1.175 \pm 0.175	-0.952 \pm 0.115
PRF-fit source offset from KIC position	3.770 \pm 0.136	27.69	3.273 \pm 0.108	-1.871 \pm 0.199
photometric centroid source offset	1.38 \pm 1.14	1.21	1.11 \pm 1.37	-0.83 \pm 0.50

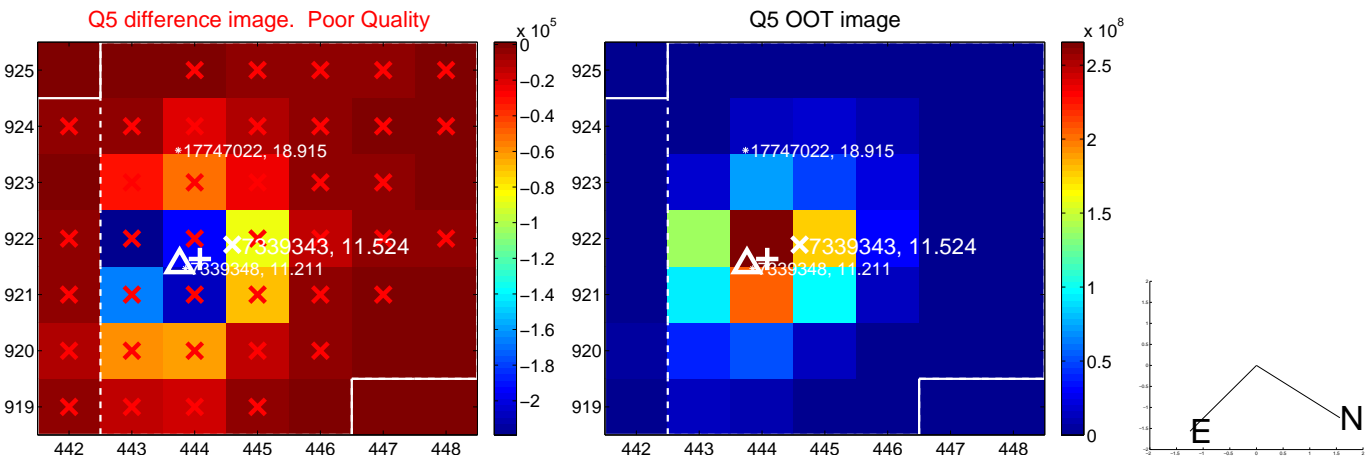


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

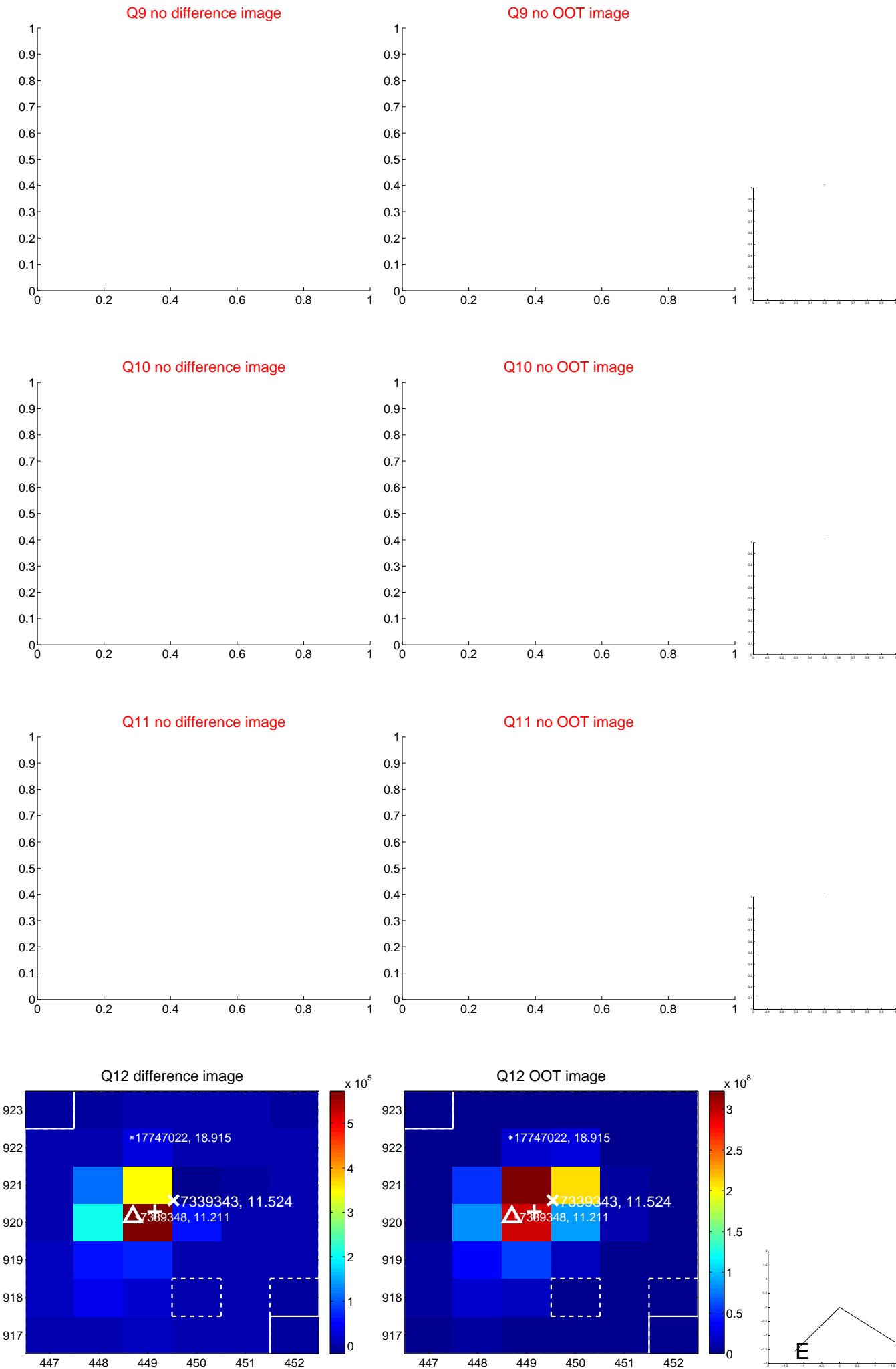
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



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



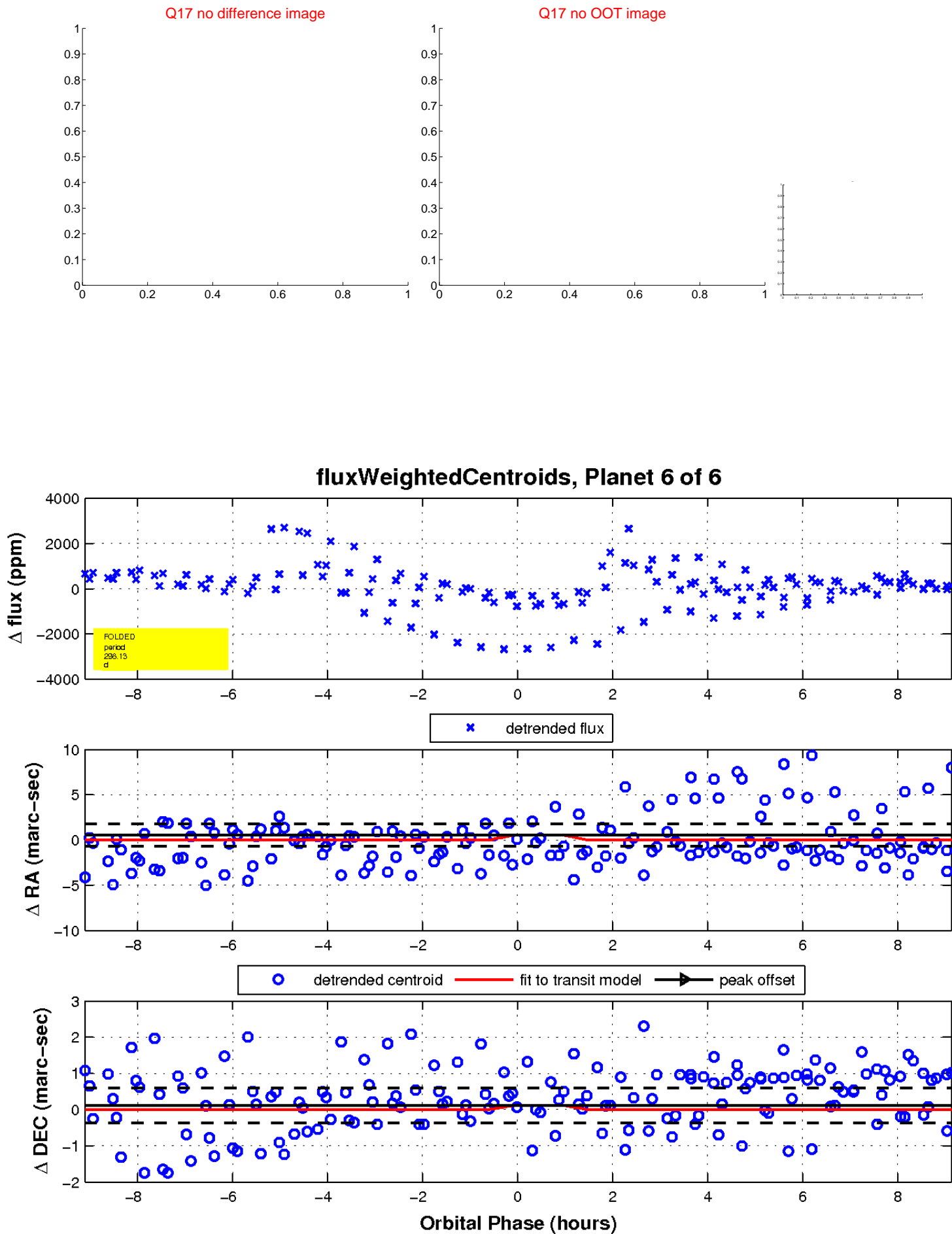
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

