

KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

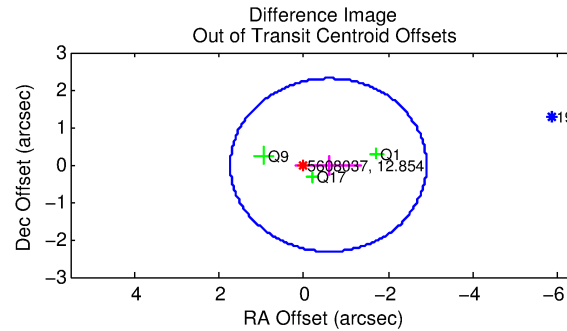
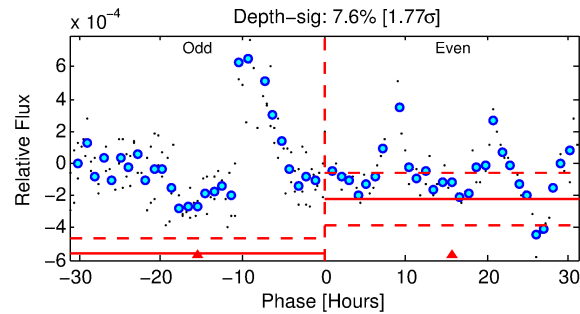
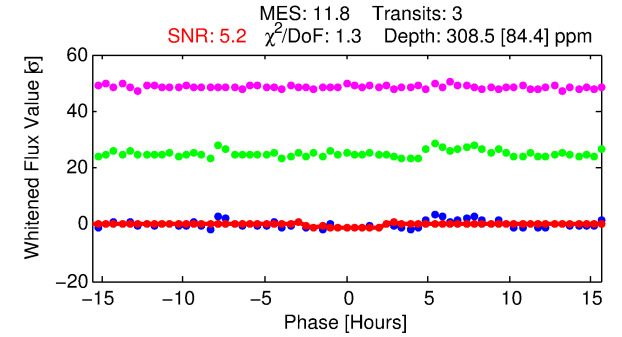
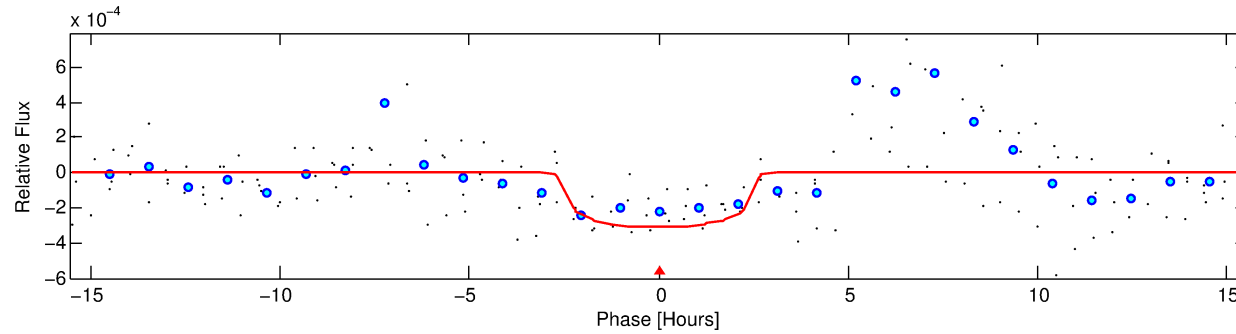
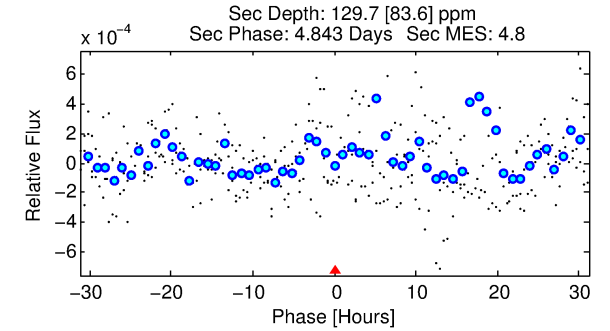
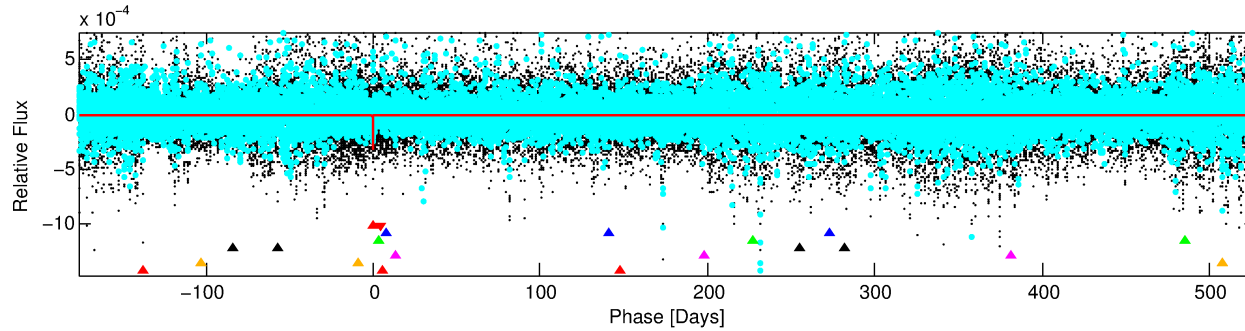
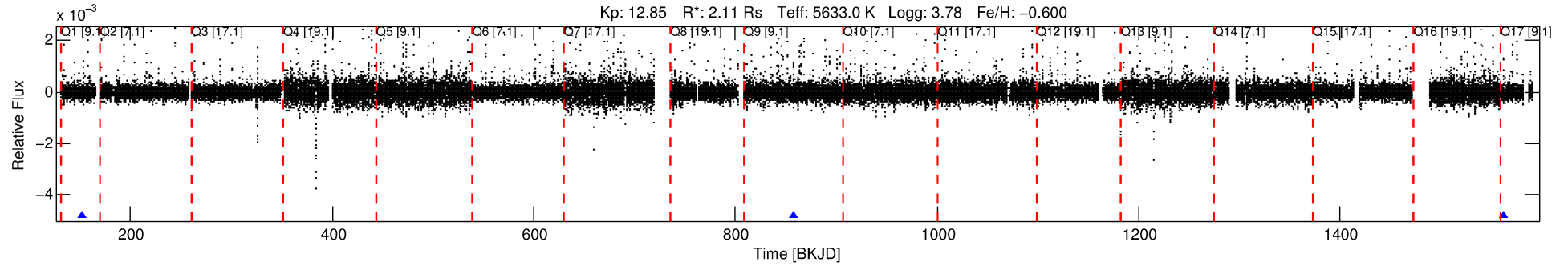
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-01

No Significant Match Found

DV One-Page Summary

KIC: 5608037 Candidate: 1 of 7 Period: 704.792 d



DV Fit Results:

Period = 704.79238 [0.01147] d
Epoch = 152.7159 [0.0142] BKJD
Rp/R* = 0.0179 [0.0101]
a/R* = 646.22 [1599.52]
b = 0.80 [1.10]
Seff = 1.71 [0.72]
Teq = 292 [31] K
Rp = 4.13 [2.59] Re
a = 1.5363 [0.3931] AU
Ag = 9893.62 [13475.92] [0.73 σ]
Teffp = 4495 [1470] K [2.86 σ]

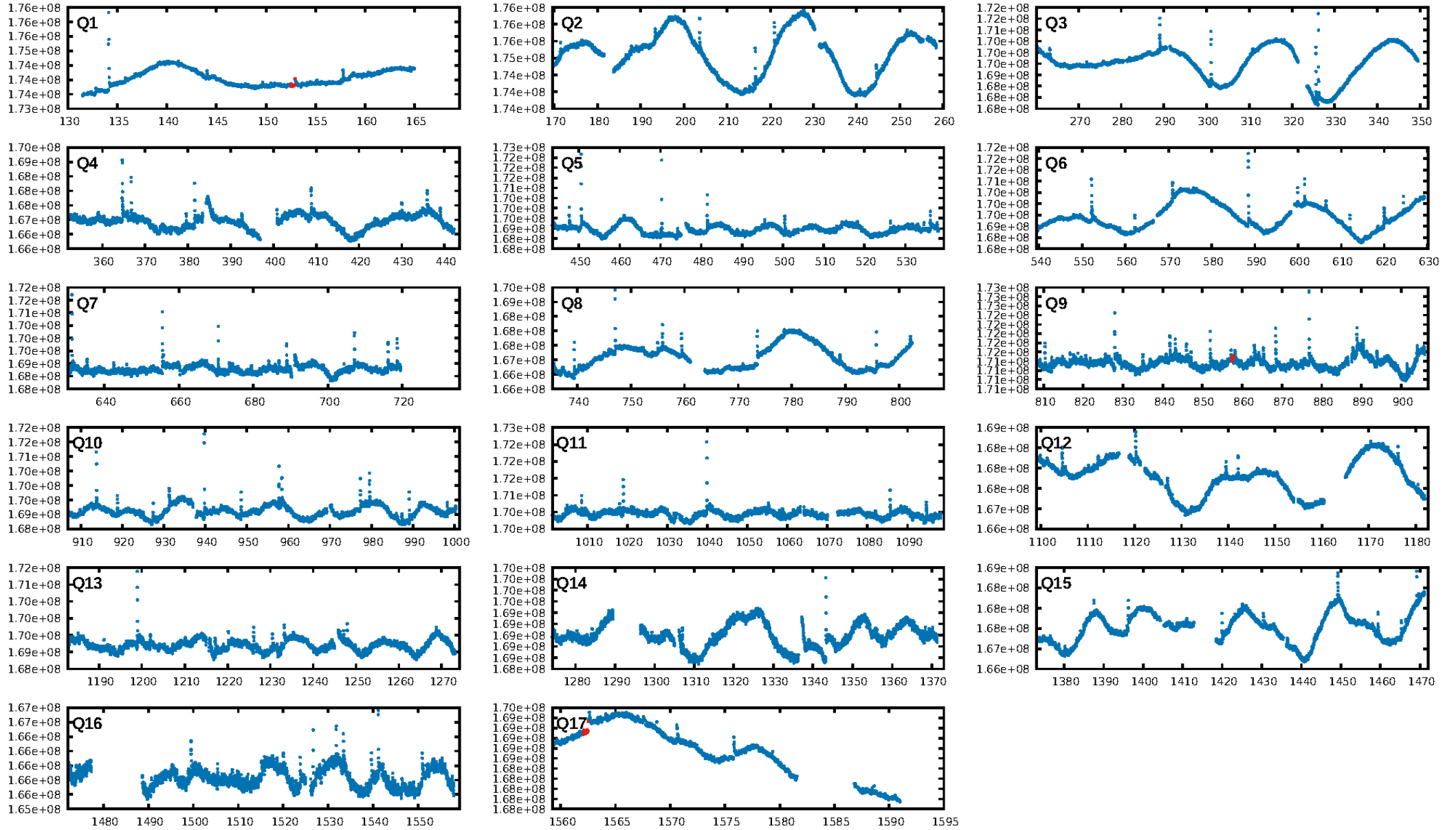
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [303.44 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 68.0%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 3.62e-10
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: 15.61
Centroid-sig: 0.3%
Centroid-so: 1.670 arcsec [2.27 σ]
OotOffset-rm: 0.590 arcsec [0.76 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 0.555 arcsec [0.72 σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

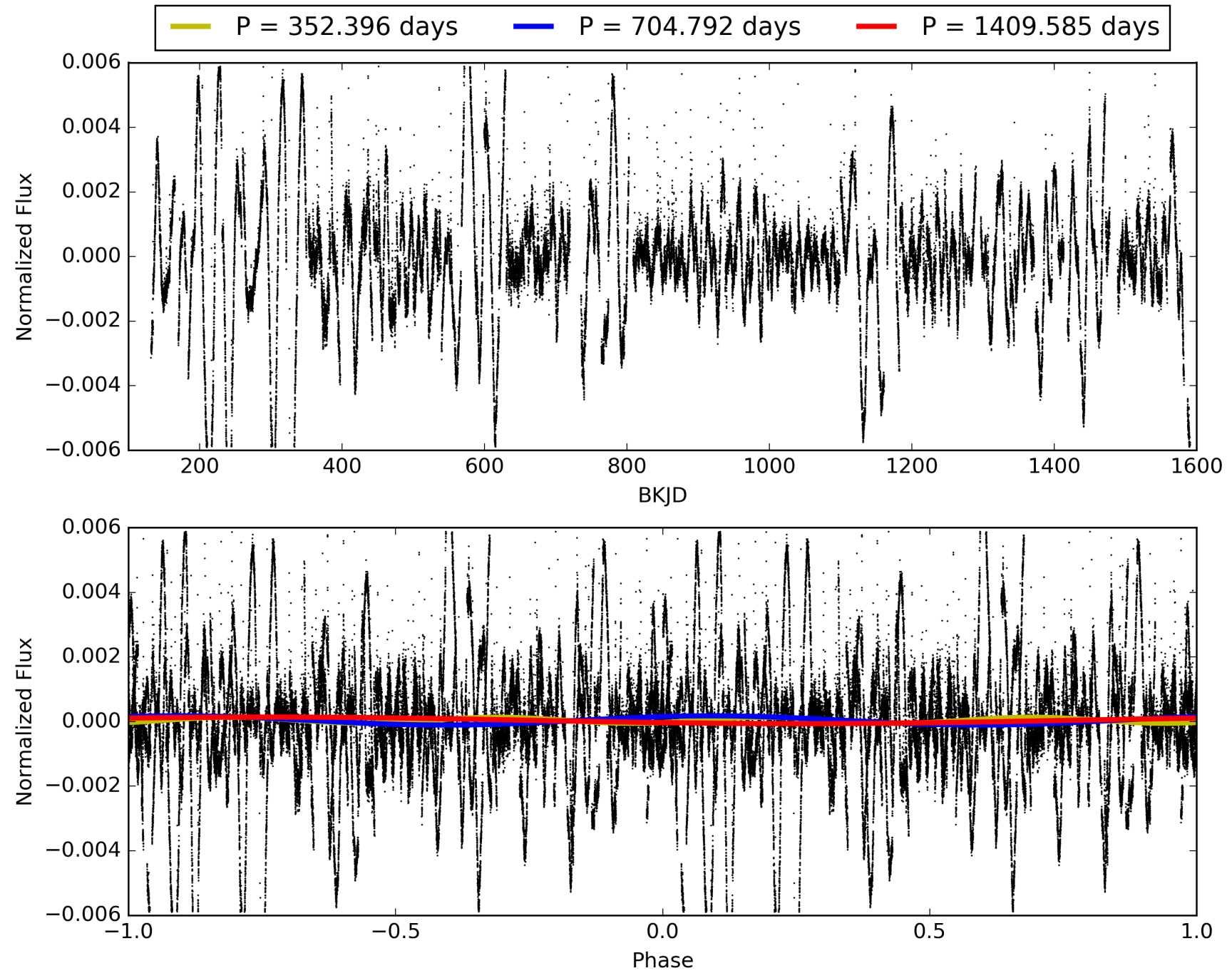
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:40:21 Z

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

TCE 005608037-01, PDC Light Curves

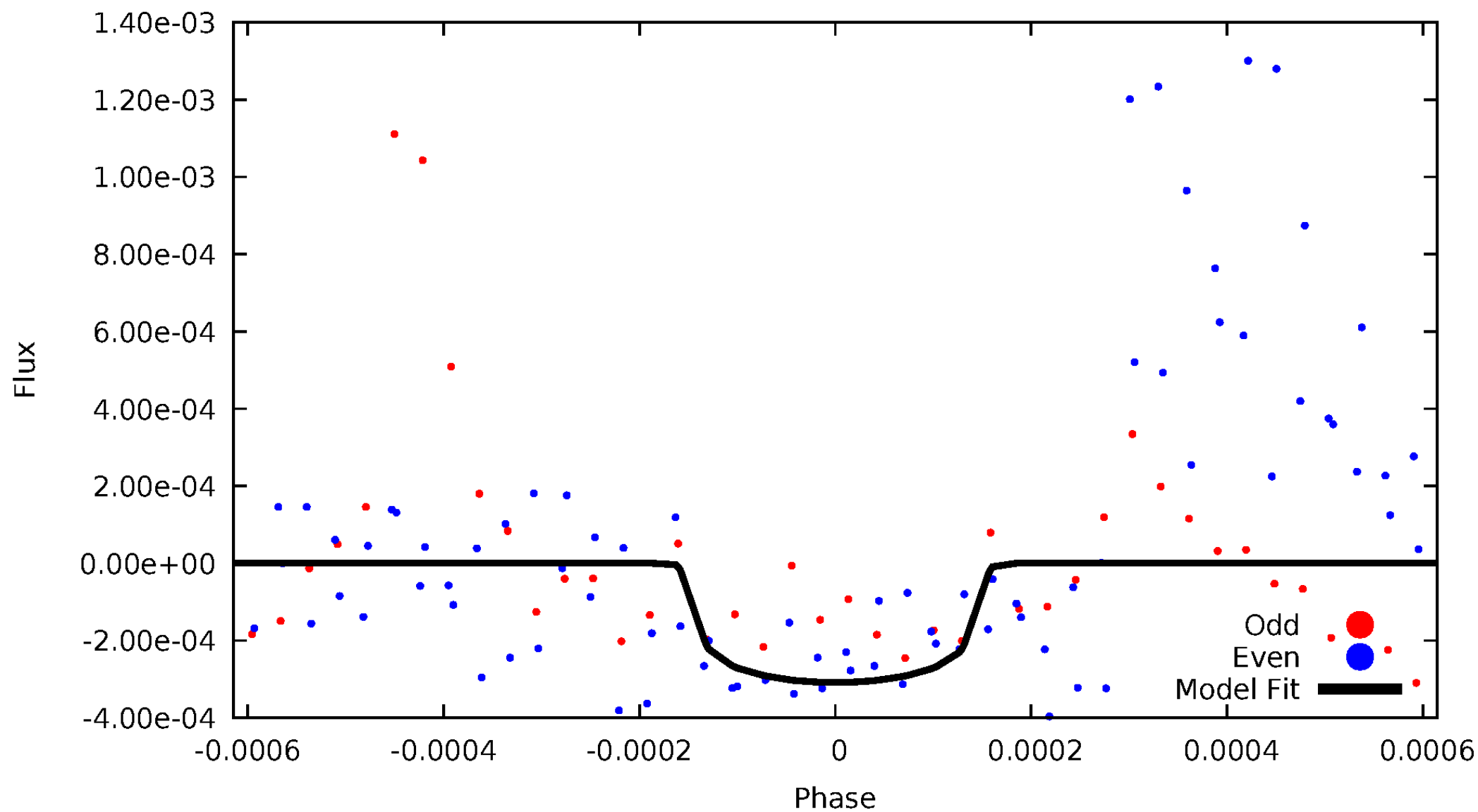


TCE 005608037-01



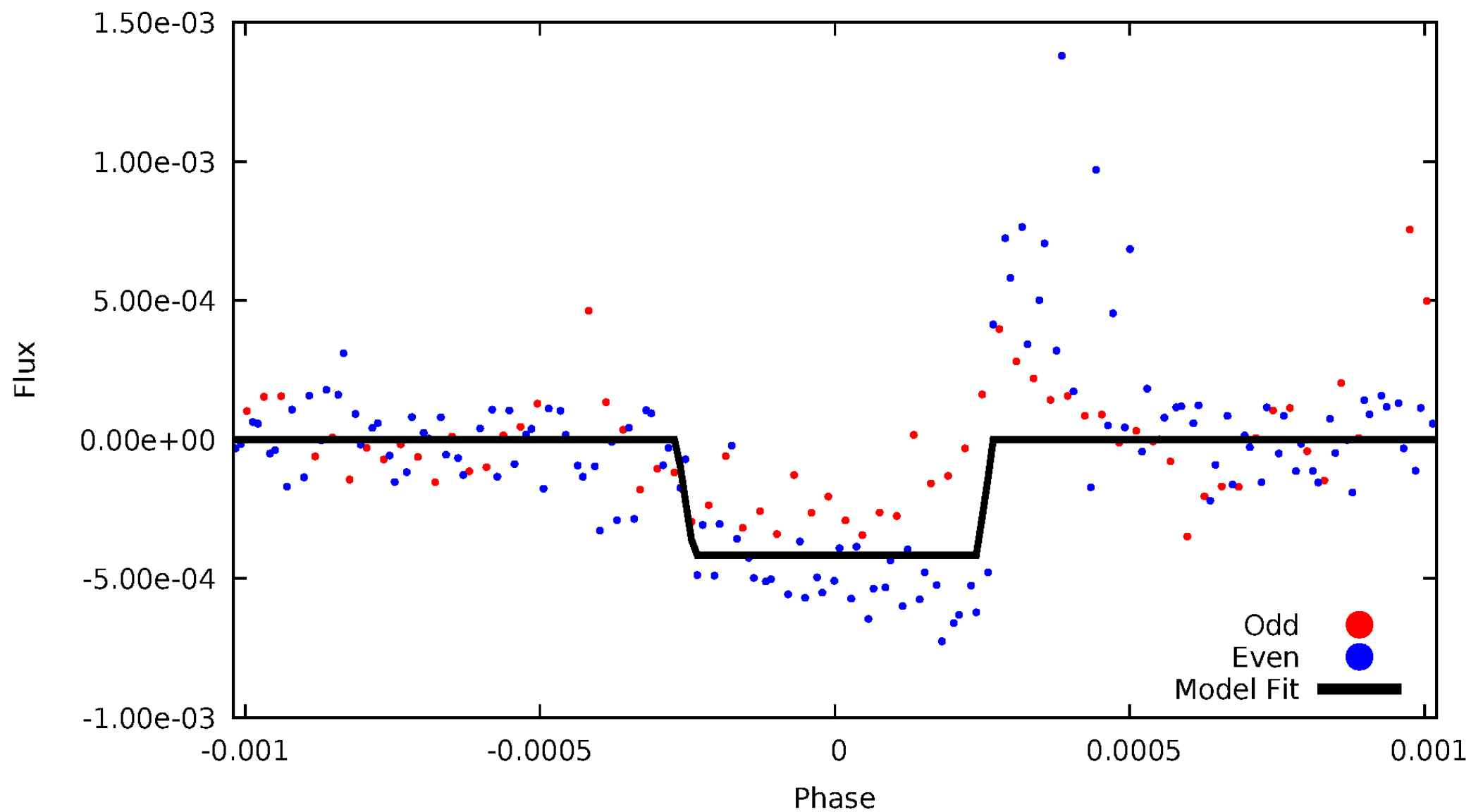
DV Odd/Even

TCE 005608037-01



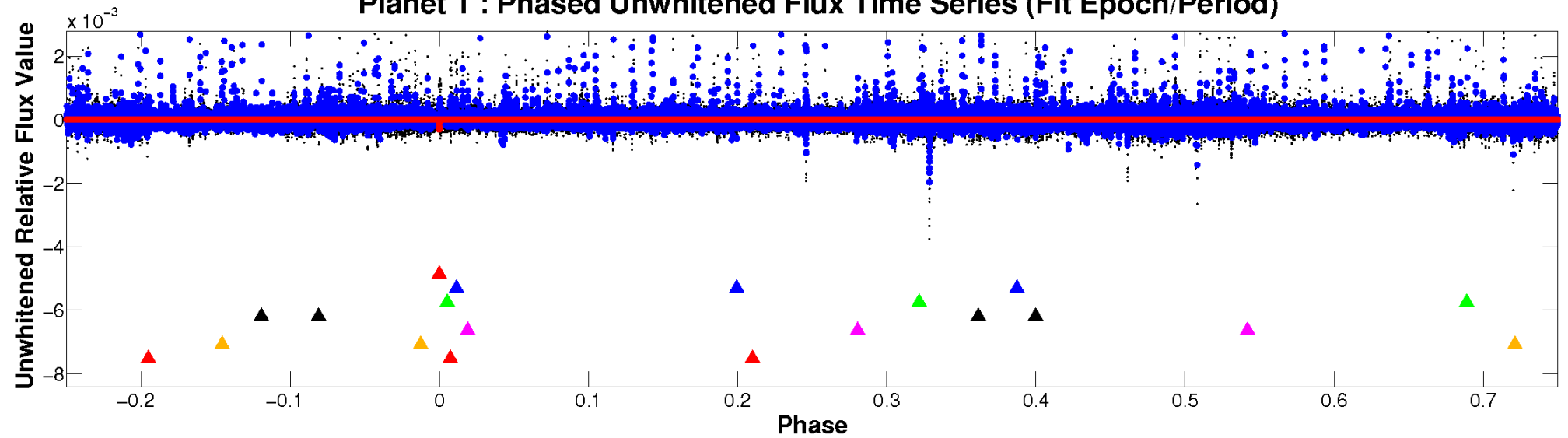
ALT Odd/Even

TCE 005608037-01

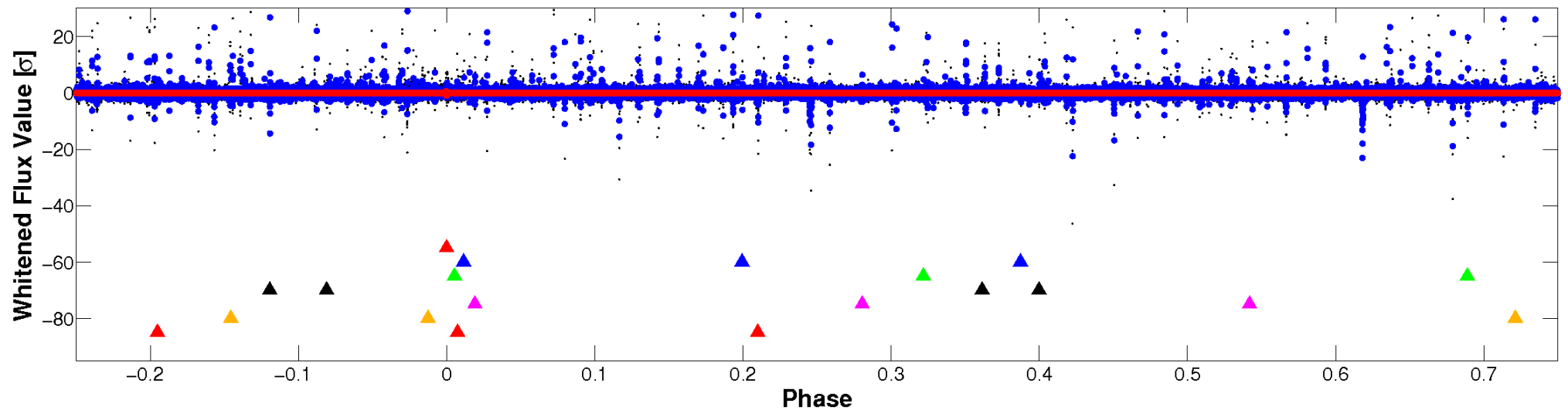


Non-Whitened Vs. Whitened Light Curve

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

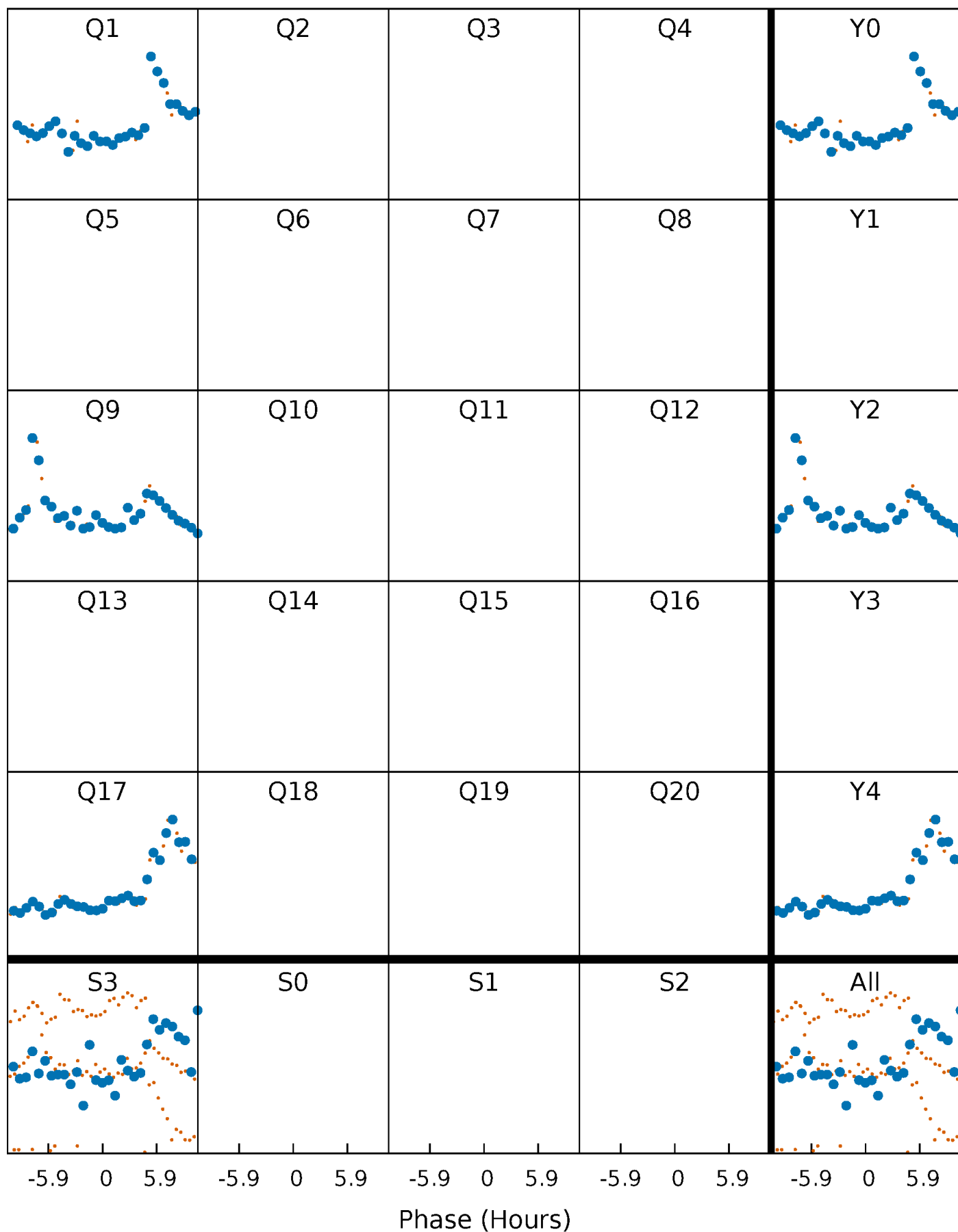


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



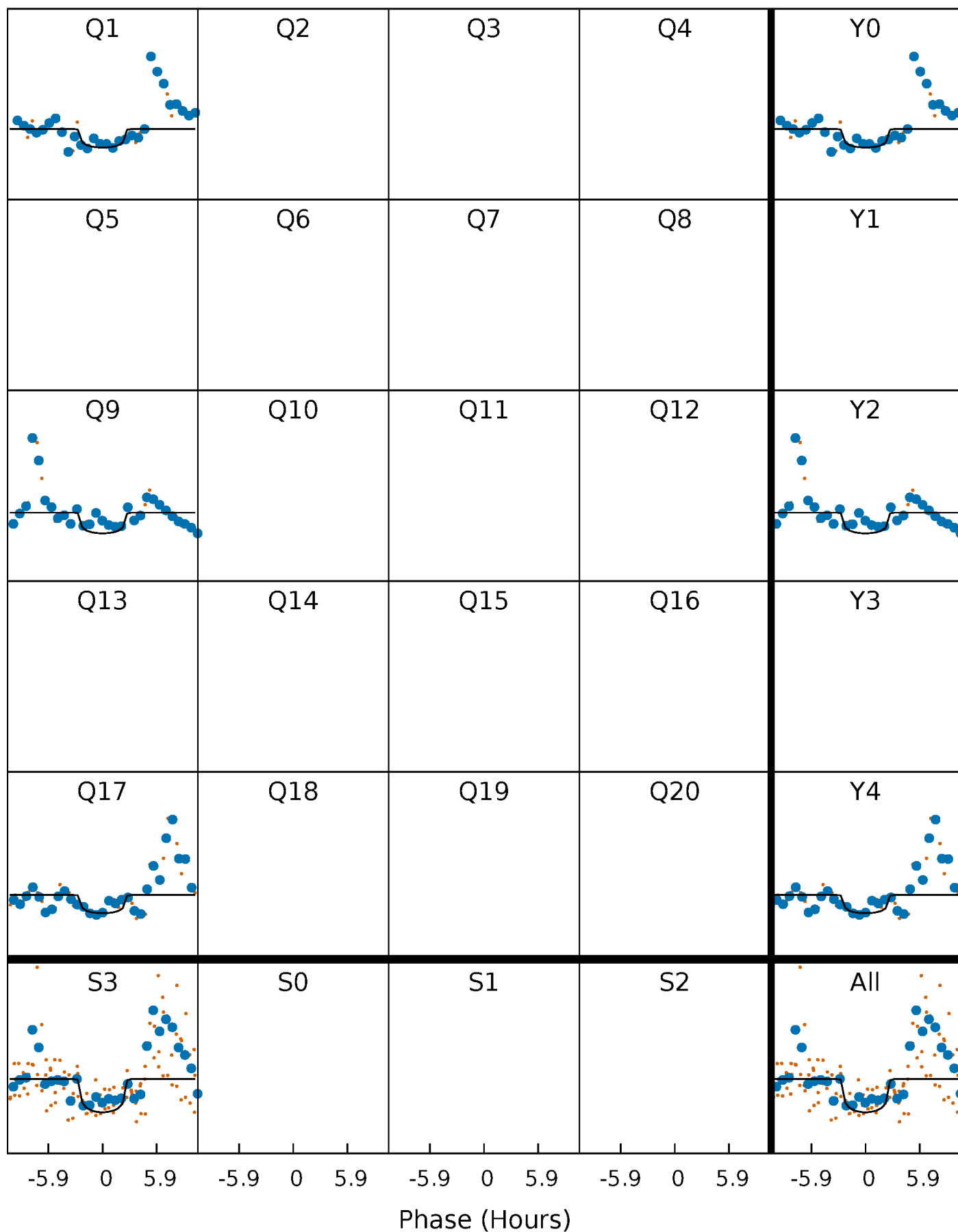
PDC Quarter-Phased Transit Curves

TCE 005608037-01 $P=704.792378$ Days $T_0=152.715876$ (BKJD)



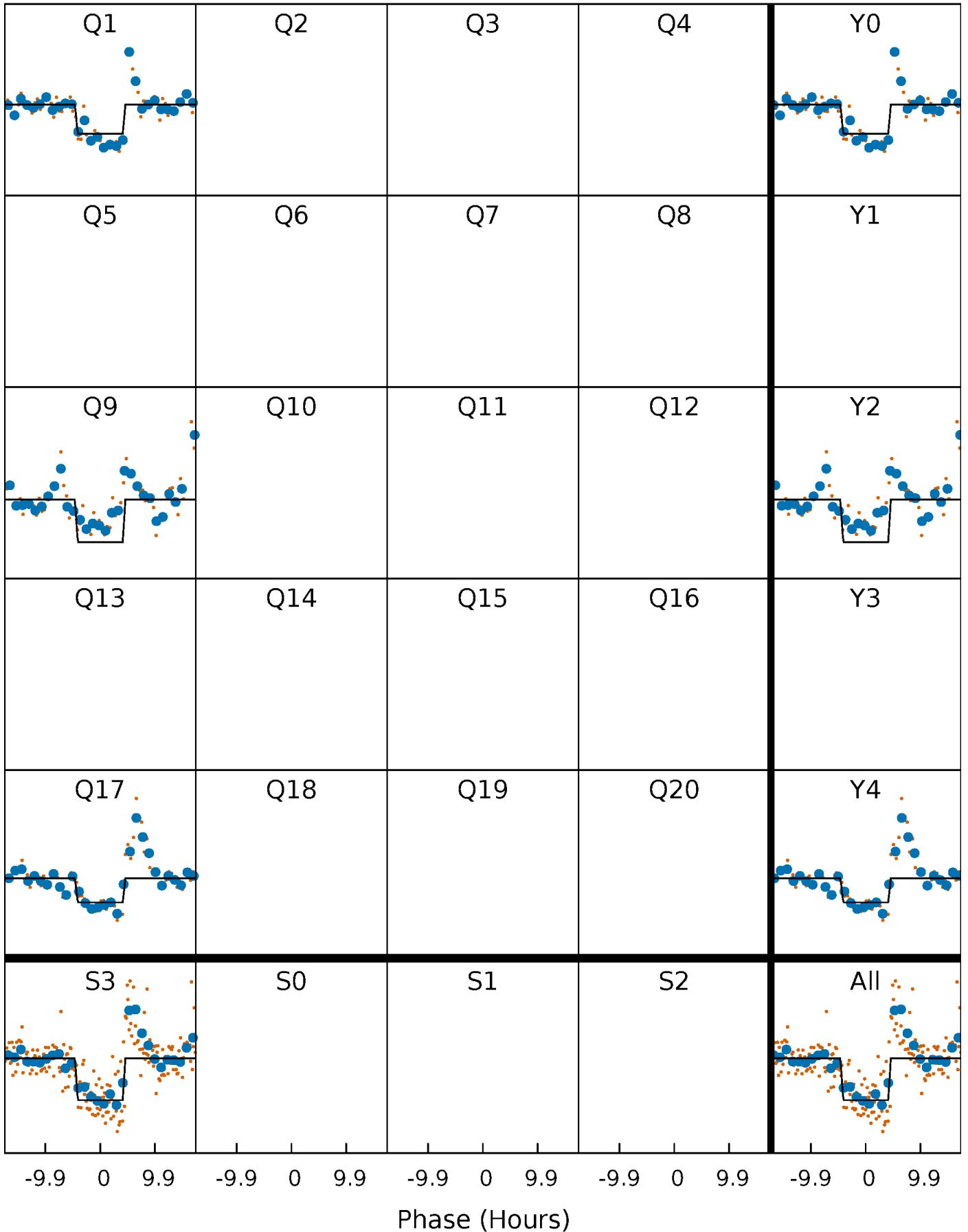
DV Quarter-Phased Transit Curves

TCE 005608037-01 P=704.792378 Days $T_0=152.715876$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

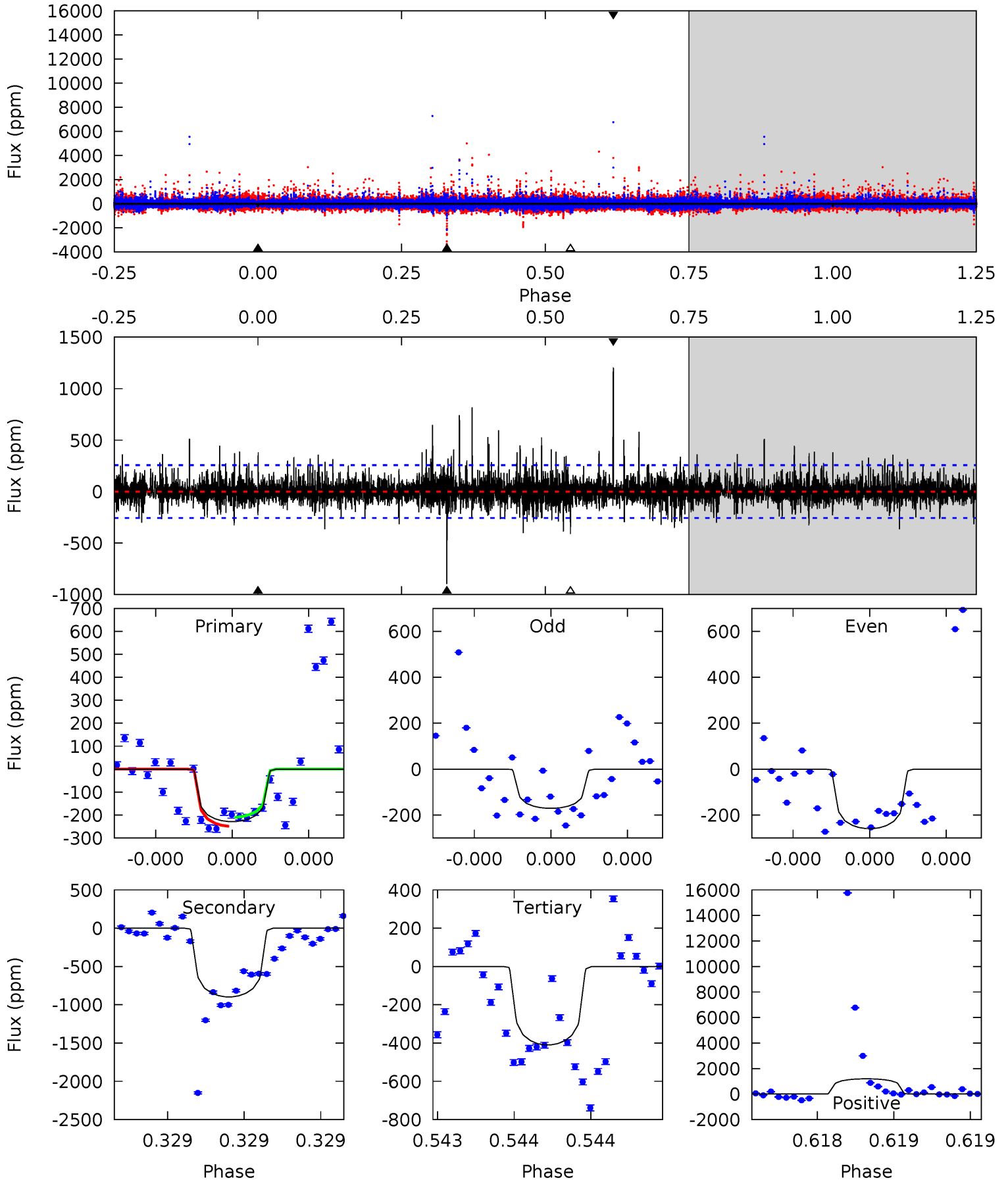
TCE 005608037-01 P=704.801163 Days $T_0=152.724483$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-01, P = 704.792378 Days, E = 152.715876 Days

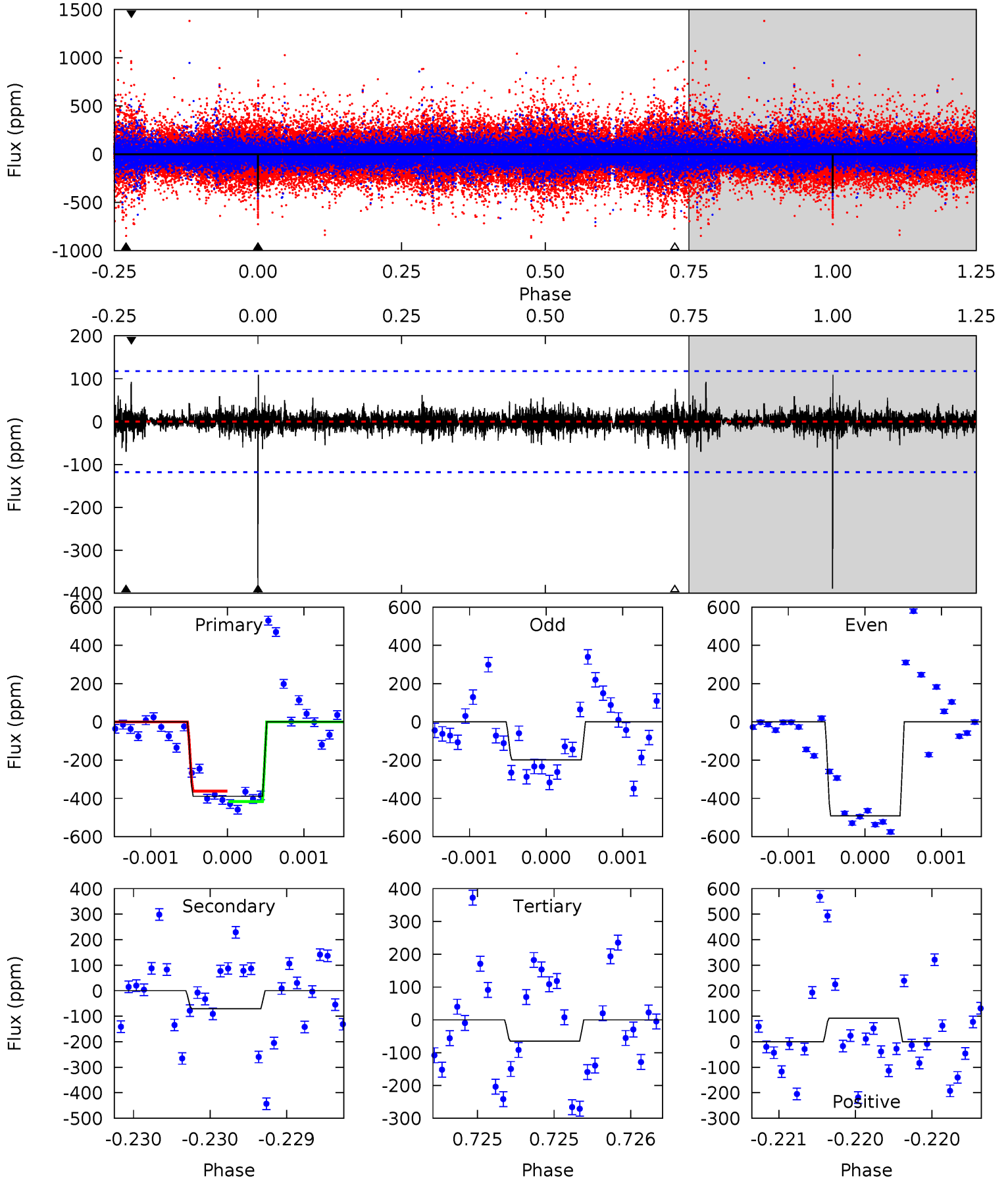
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.04	19.8	9.03	26.4	5.65	3.60	2.10	-3.99	-21.3	10.7	-6.63	0.61	0.92	0.57	0.43



Alt Model-Shift Uniqueness Test

005608037-01, P = 704.801163 Days, E = 152.724483 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	3.32	3.09	4.36	5.57	3.47	0.62	15.3	14.0	0.23	-1.05	6.18	0.82	0.22	1.28



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-897 ± 45	$4.14^{+2.54}_{-2.27}$	405^{+32}_{-31}	7366^{+4970}_{-1556}	$68607^{+261528}_{-41413}$
Alt.	-70 ± 21	$4.59^{+2.61}_{-2.13}$	405^{+31}_{-32}	3937^{+1081}_{-553}	4264^{+11543}_{-2629}

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 $A_{obs} \gg 1.0$

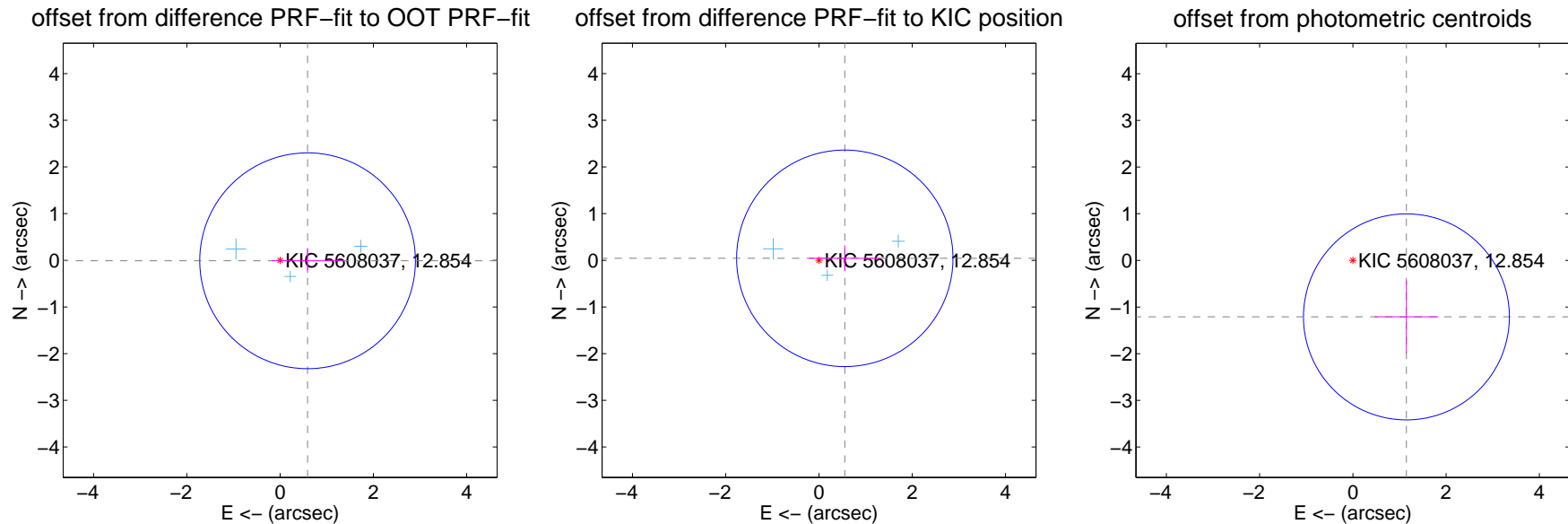
DV Centroid Data

Supplemental centroid analysis for 005608037-01. Kepler magnitude: 12.85. Transit SNR 5.22

There are 3 quarters with good PRF difference image offsets

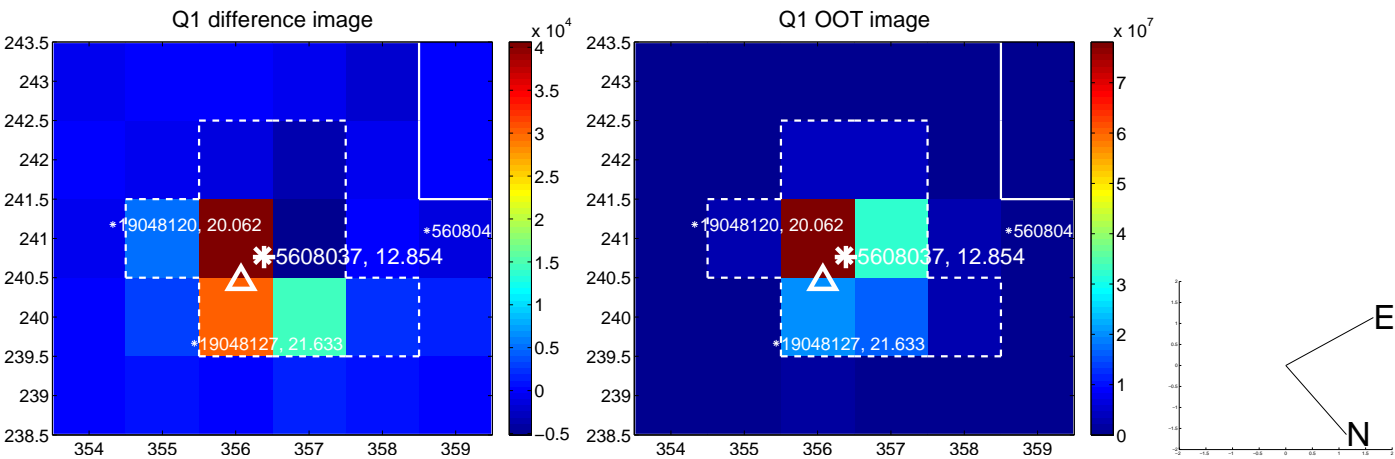
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.590 ± 0.771	0.76	-0.589 ± 0.771	-0.010 ± 0.259
PRF-fit source offset from KIC position	0.555 ± 0.773	0.72	-0.554 ± 0.775	0.042 ± 0.278
photometric centroid source offset	1.67 ± 0.74	2.27	-1.15 ± 0.68	-1.21 ± 0.78



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.

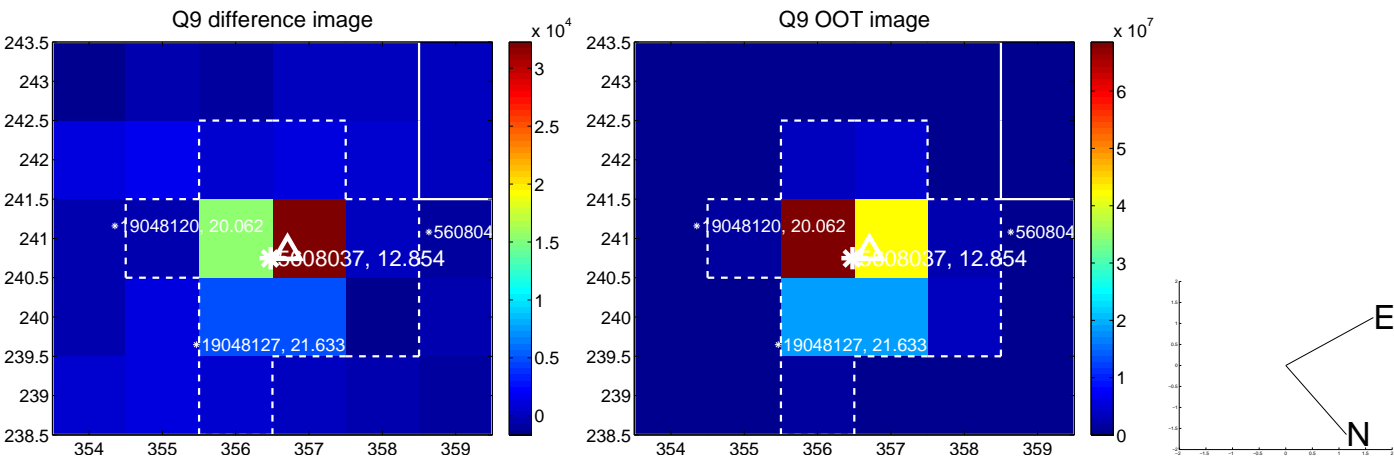
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



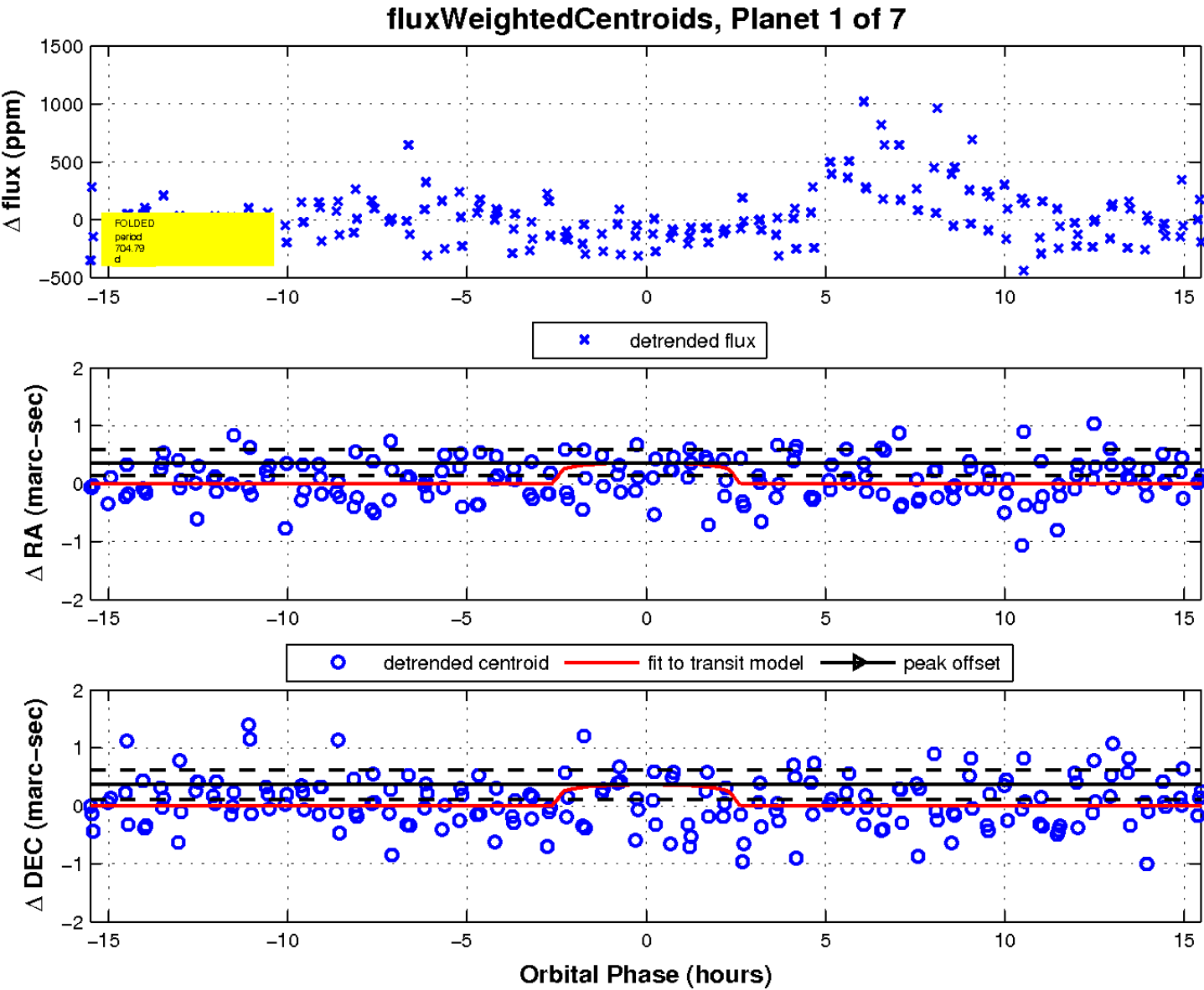
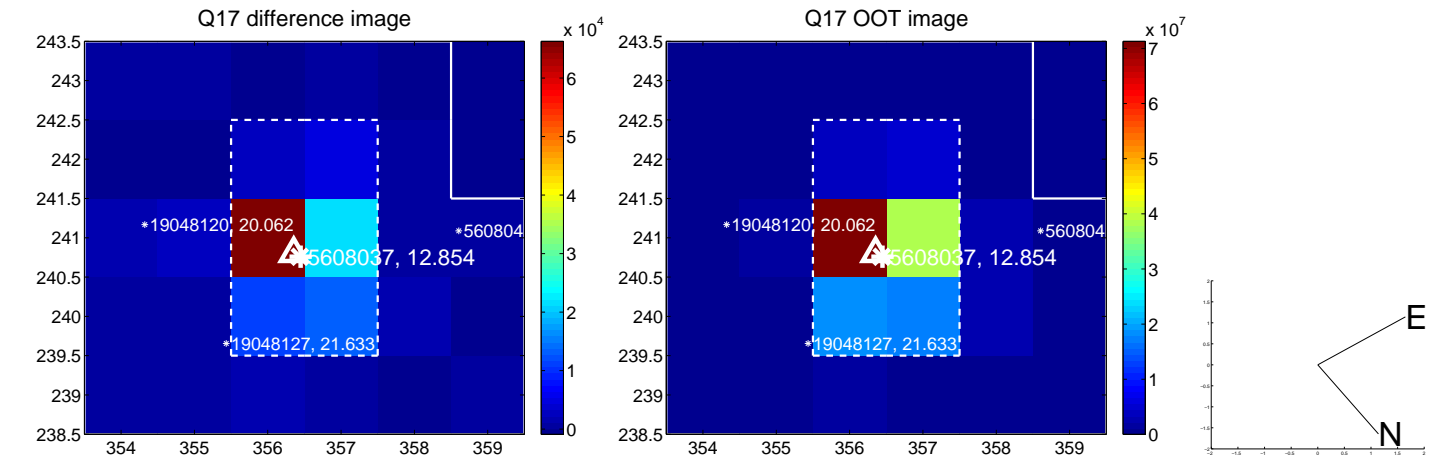
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

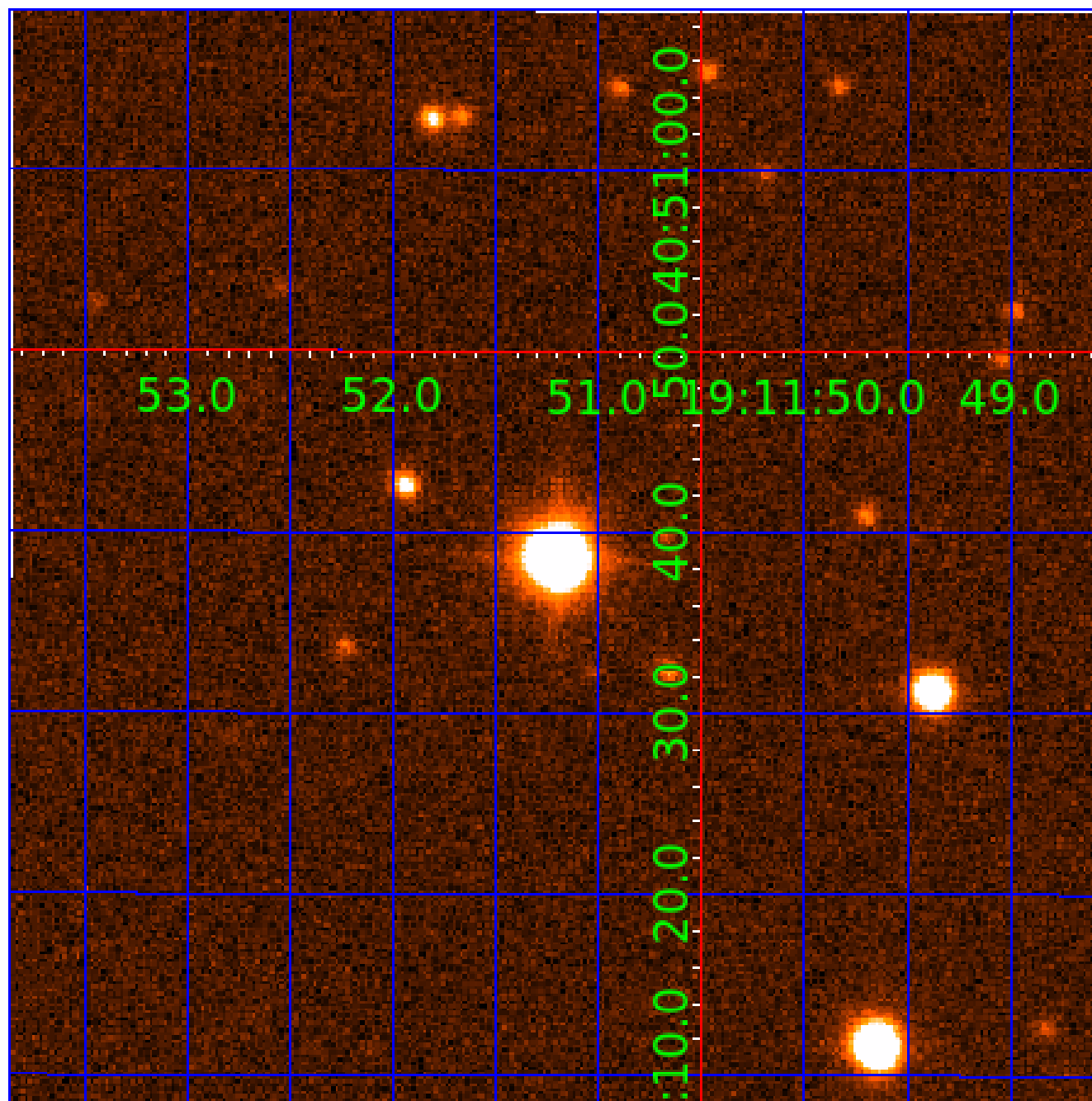


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

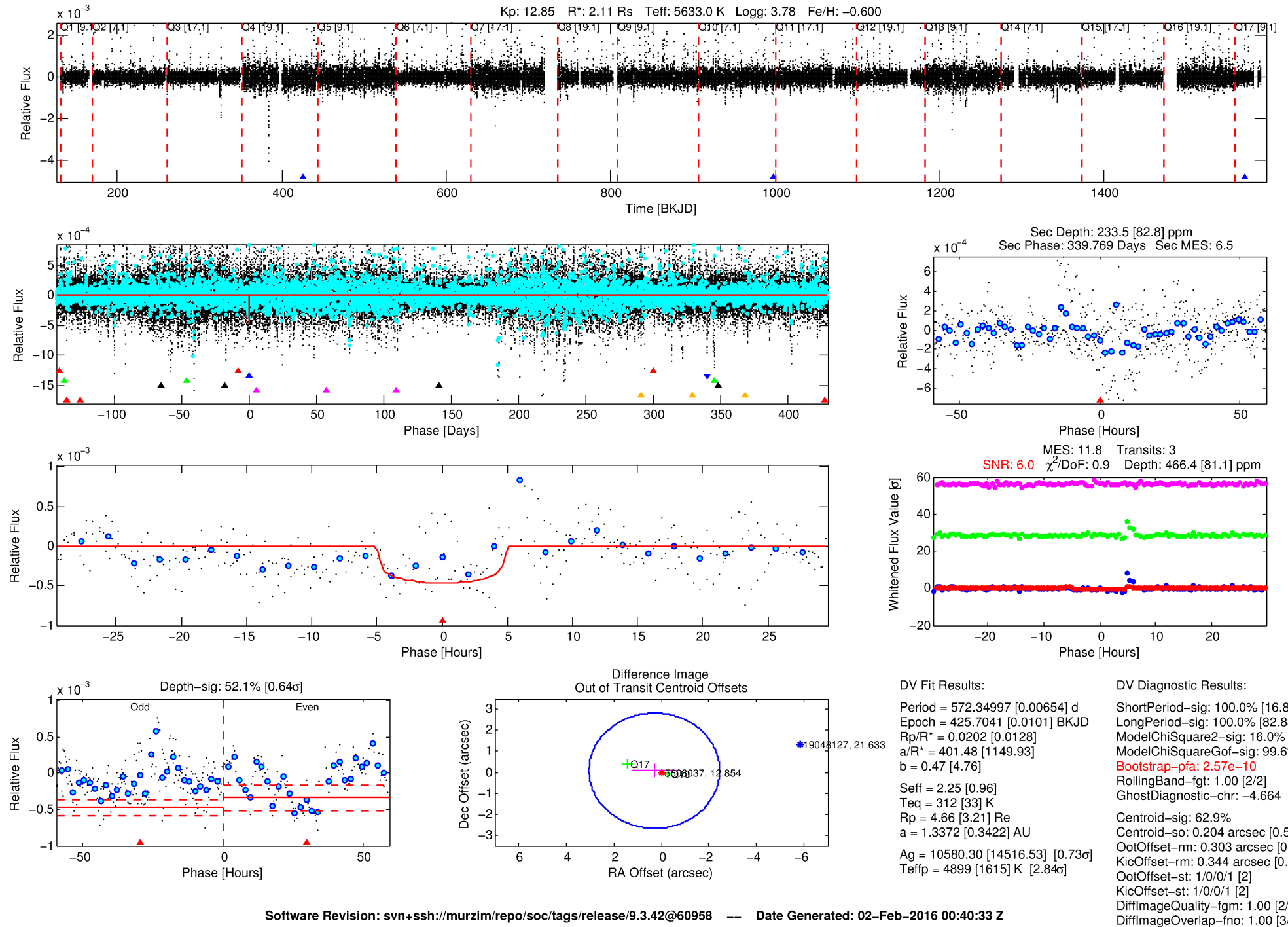
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-02

No Significant Match Found

DV One-Page Summary

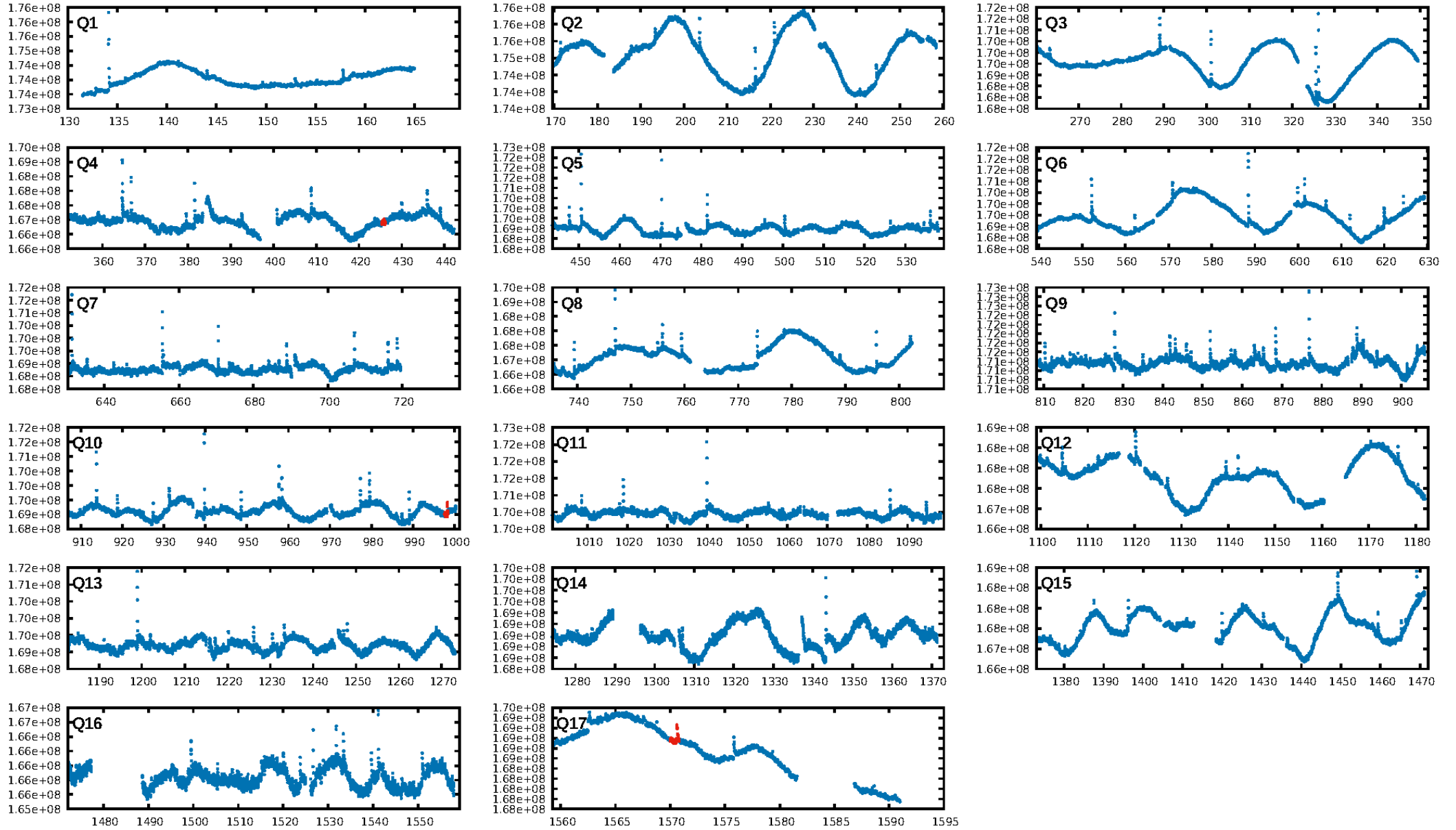
KIC: 5608037 Candidate: 2 of 7 Period: 572.350 d



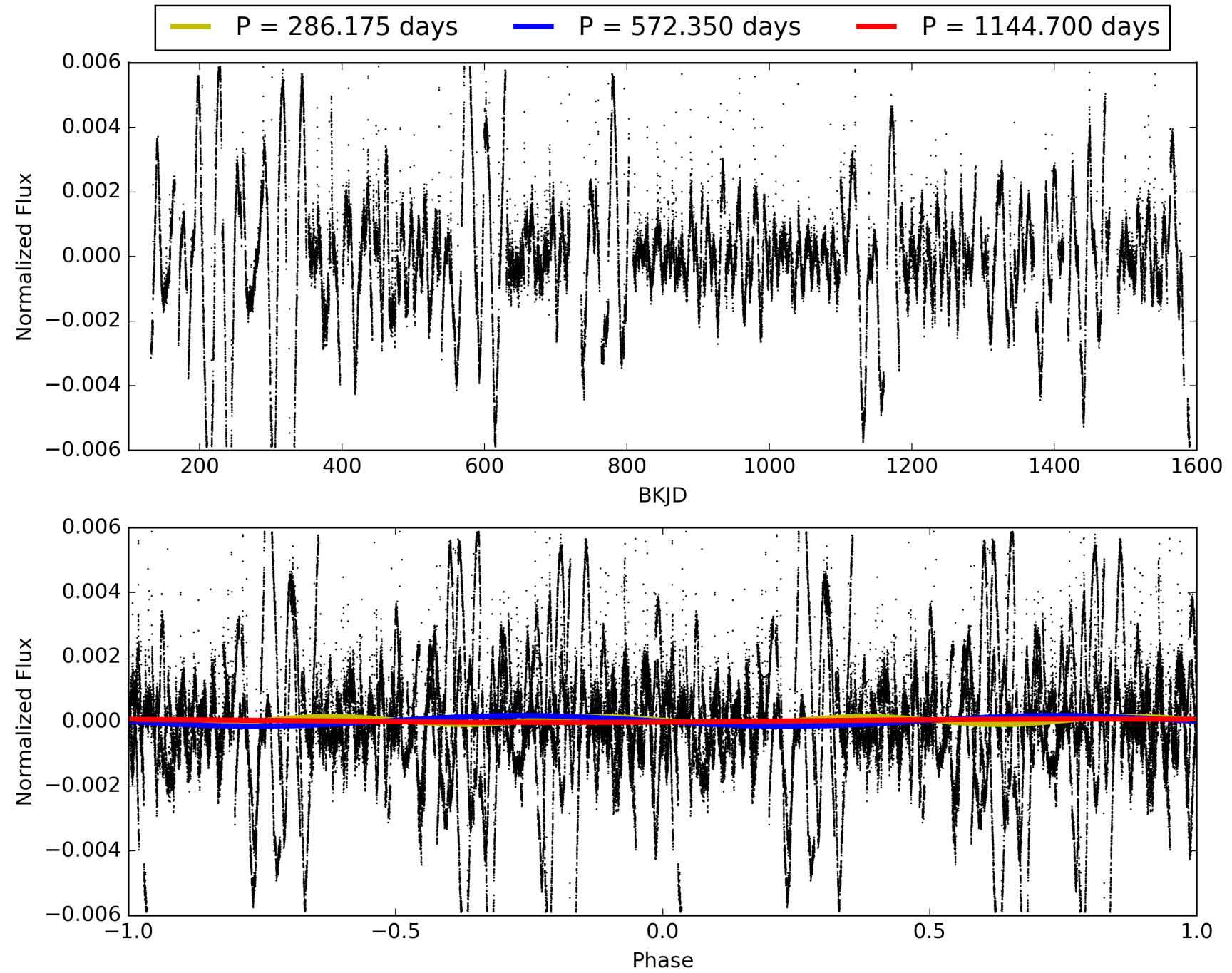
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:40:33 Z

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

TCE 005608037-02, PDC Light Curves

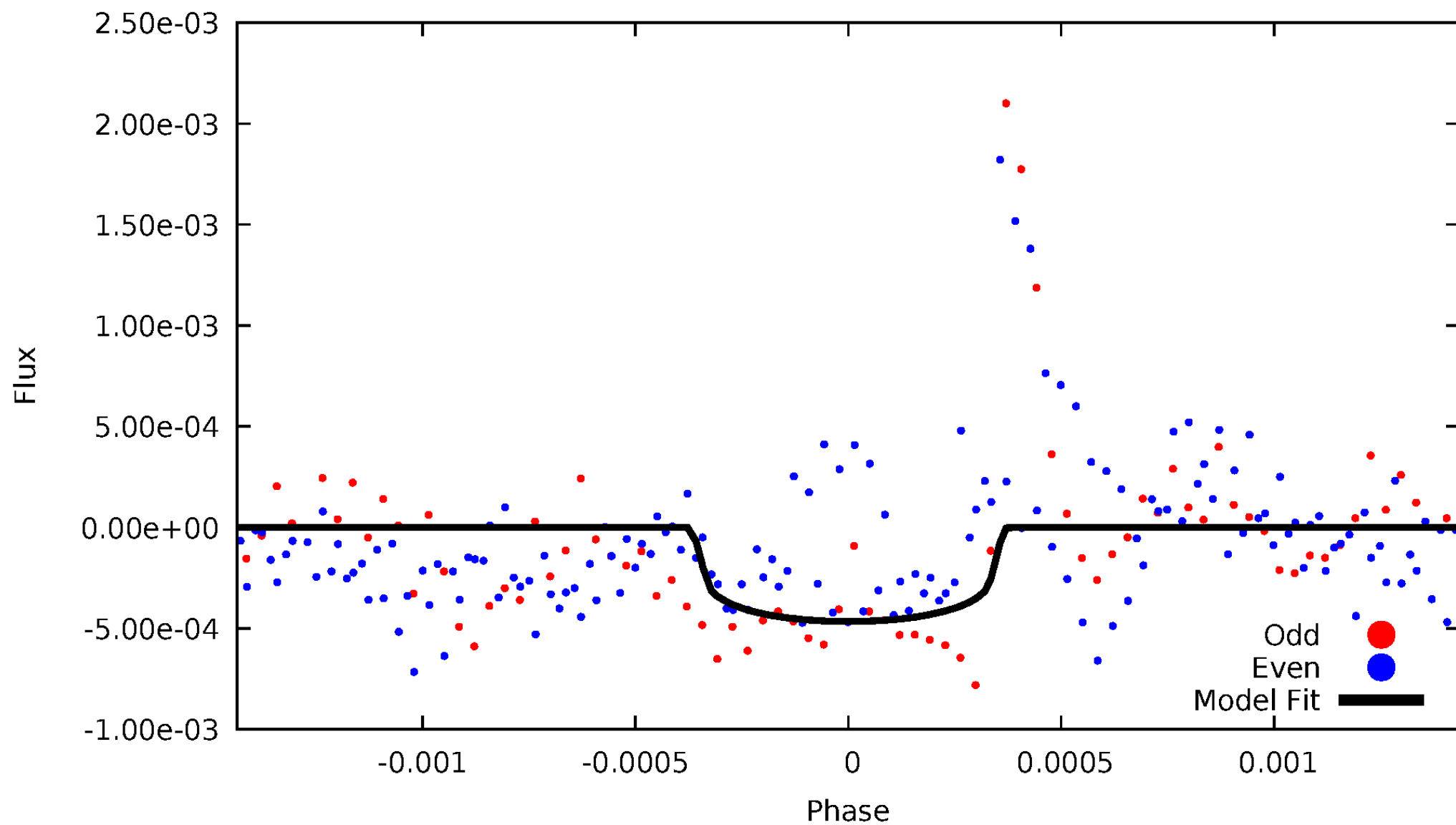


TCE 005608037-02



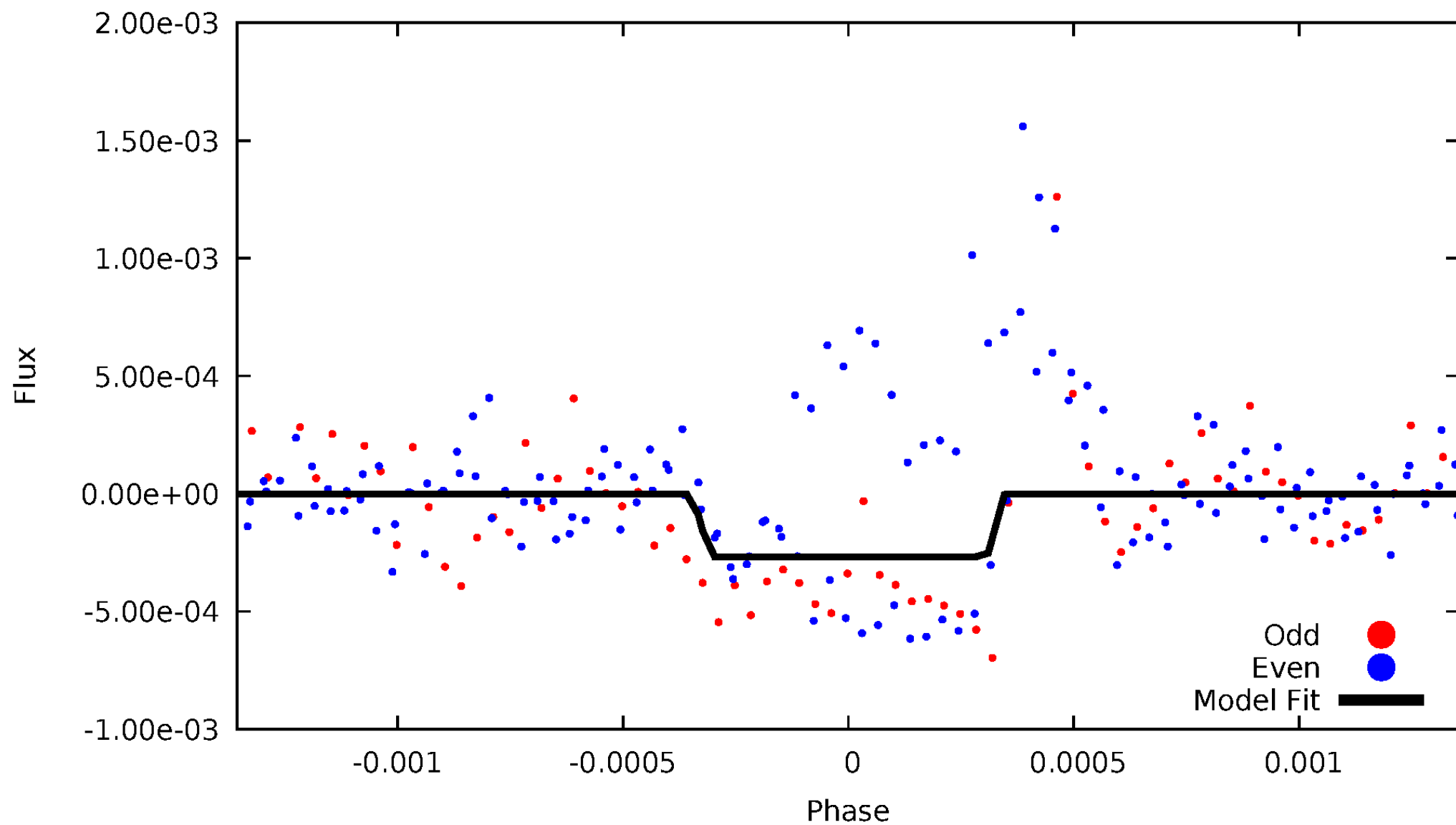
DV Odd/Even

TCE 005608037-02



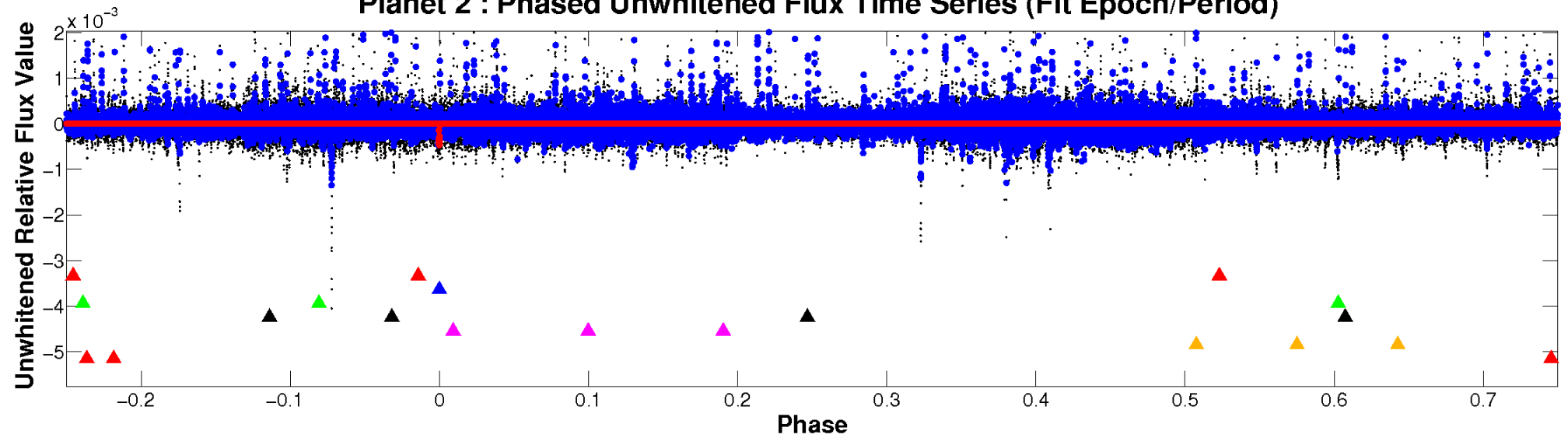
ALT Odd/Even

TCE 005608037-02

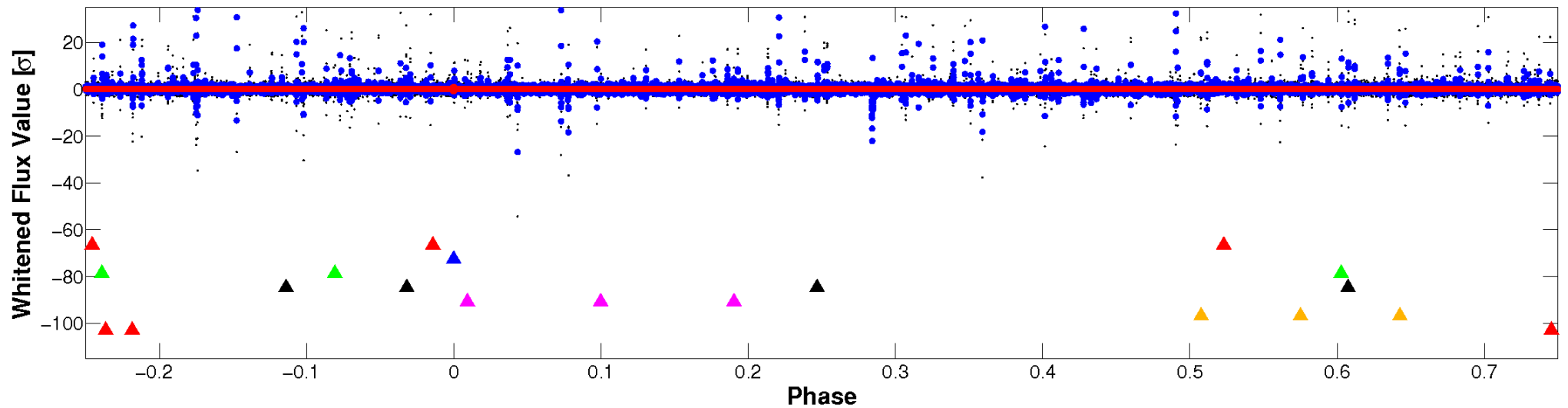


Non-Whitened Vs. Whitened Light Curve

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

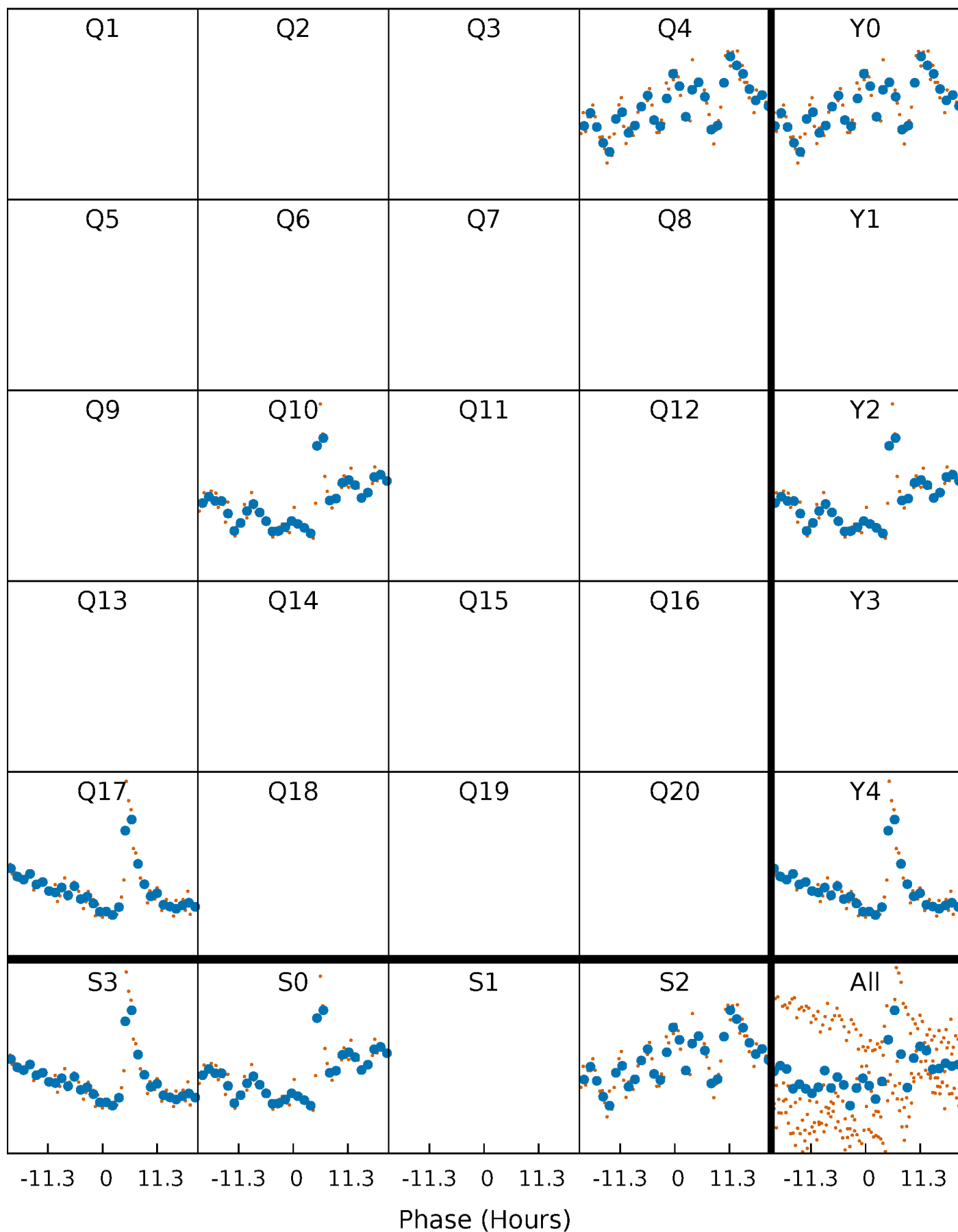


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



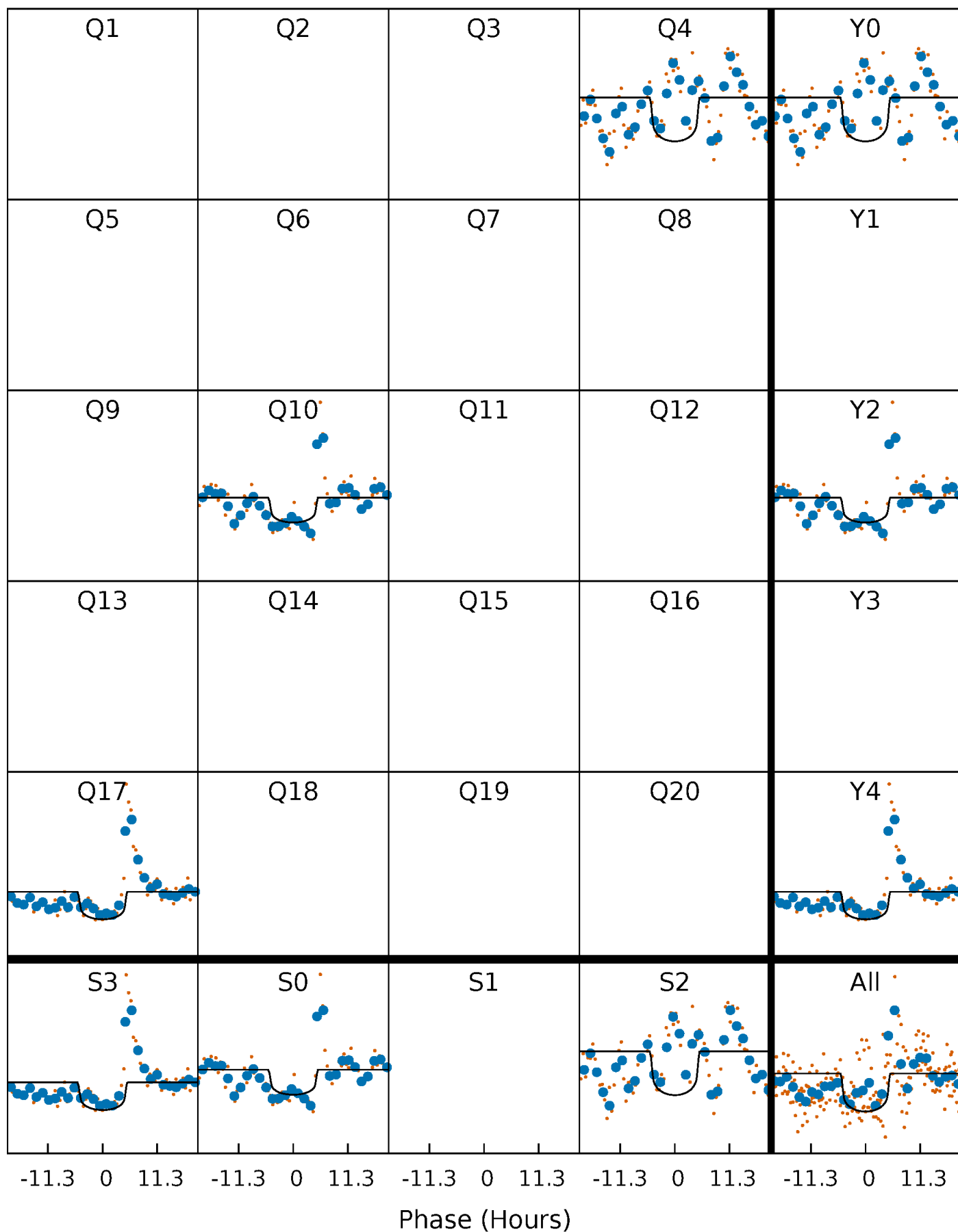
PDC Quarter-Phased Transit Curves

TCE 005608037-02 $P=572.349966$ Days $T_0=425.704111$ (BKJD)



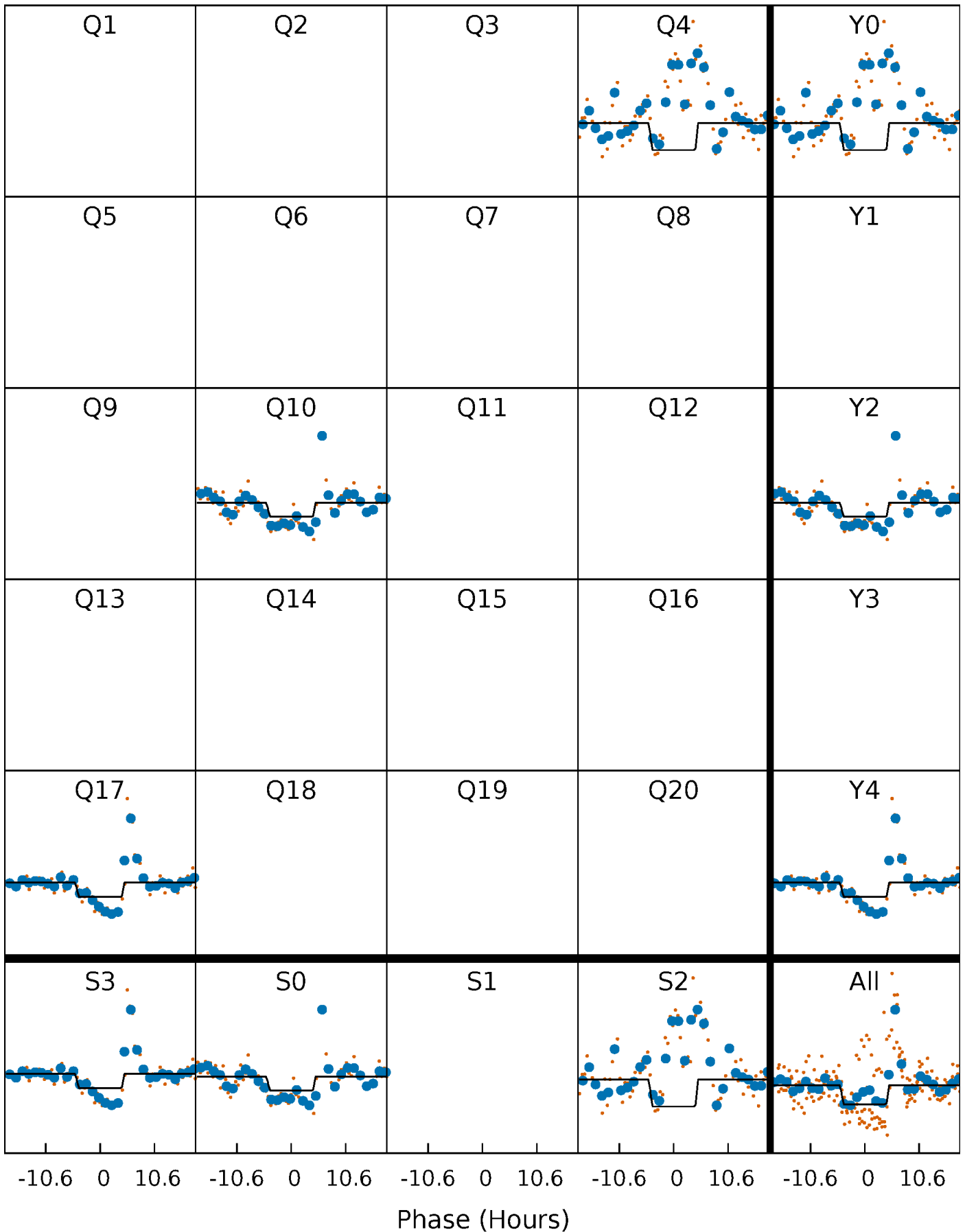
DV Quarter-Phased Transit Curves

TCE 005608037-02 $P=572.349966$ Days $T_0=425.704111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

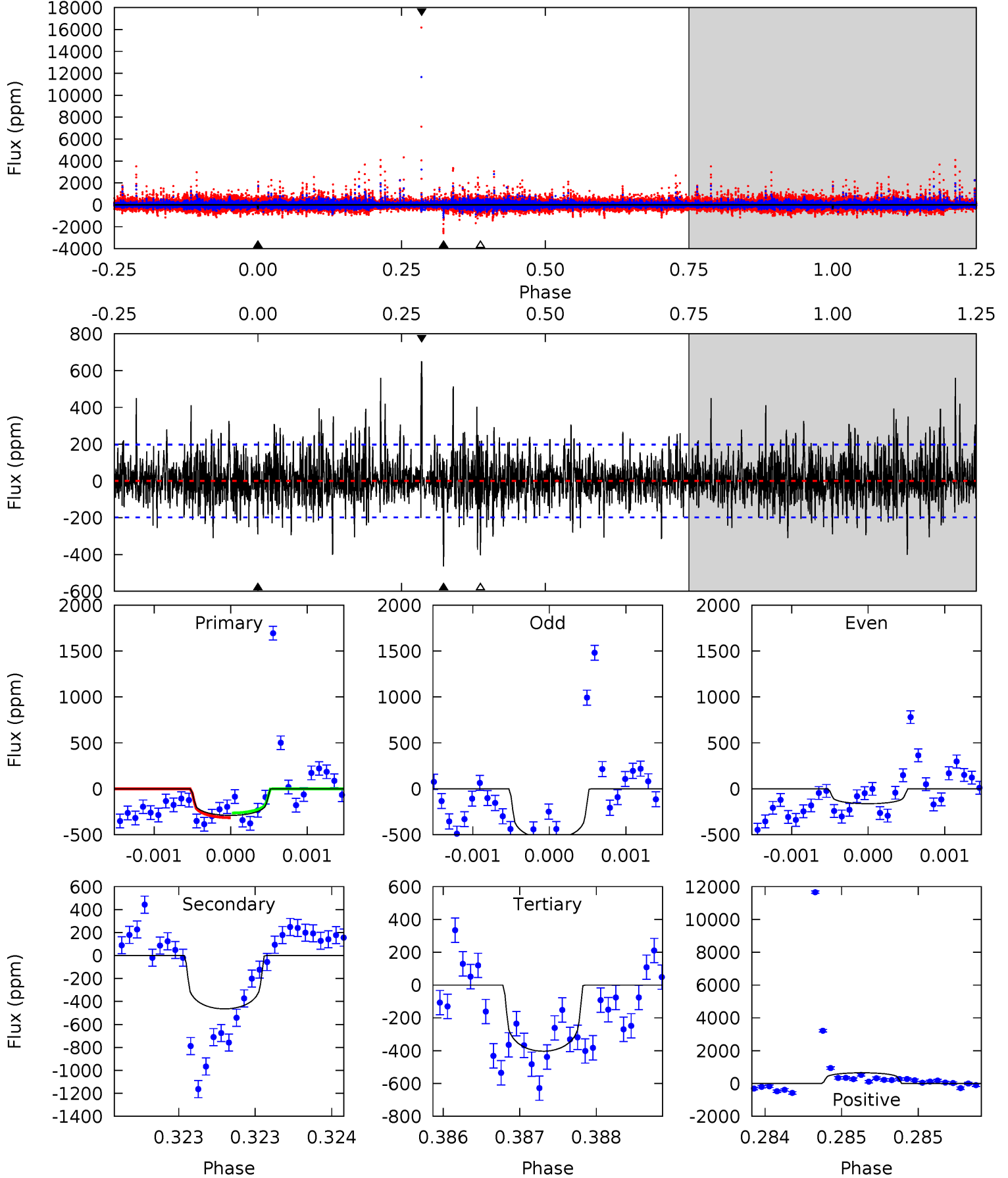
TCE 005608037-02 P=572.344016 Days $T_0=425.698456$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-02, P = 572.349966 Days, E = 425.704111 Days

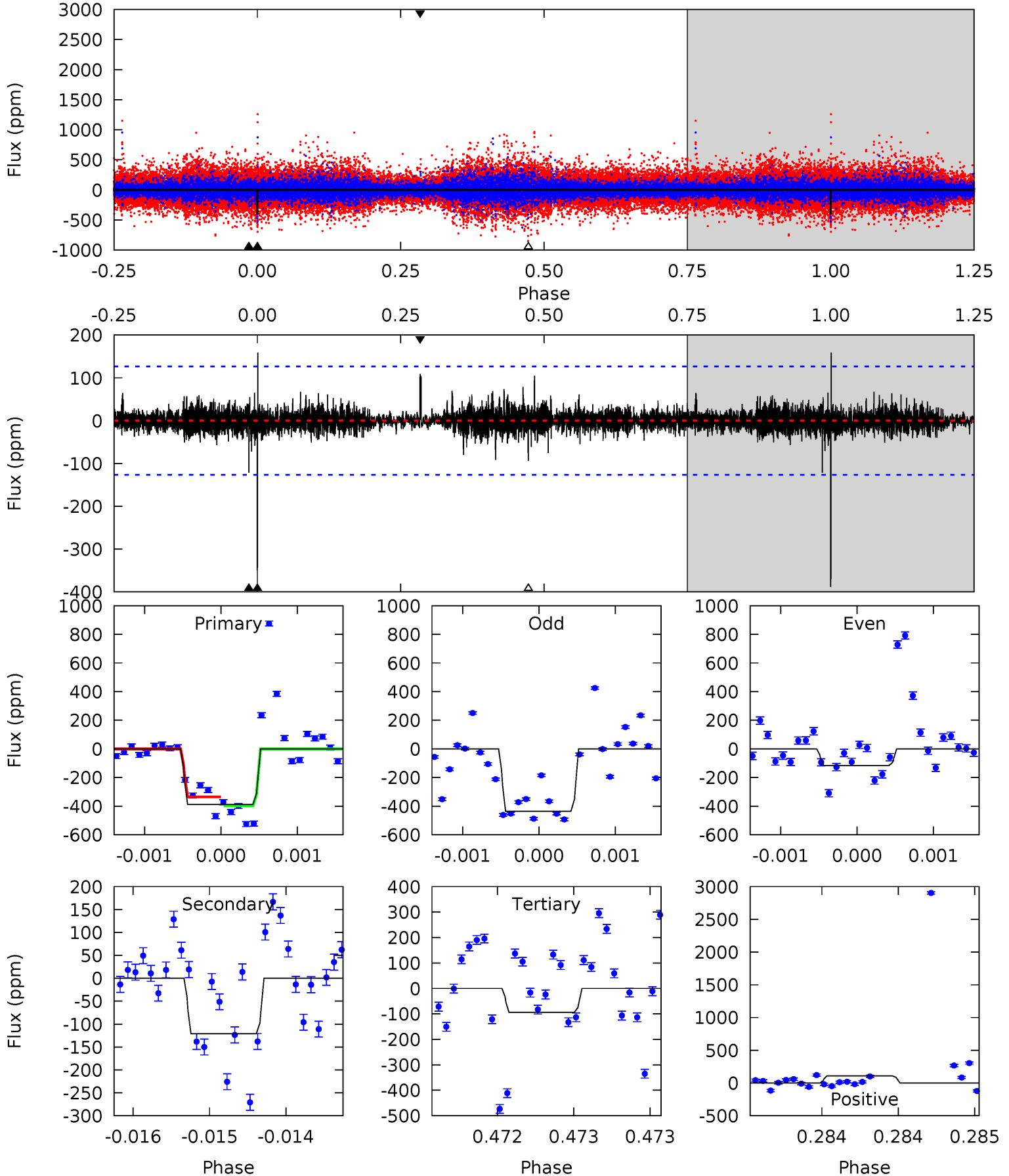
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.06	12.9	11.2	18.1	5.51	3.38	2.64	-3.17	-10.1	1.71	-5.19	3.69	0.93	0.58	0.70



Alt Model-Shift Uniqueness Test

005608037-02, P = 572.344016 Days, E = 425.698456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	5.28	4.09	4.75	5.52	3.40	0.67	12.8	12.2	1.19	0.52	6.99	0.46	0.29	1.35



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-465 ± 36	$4.79^{+3.15}_{-2.54}$	435^{+34}_{-34}	5753^{+2999}_{-1099}	20359^{+72197}_{-12962}
Alt.	-121 ± 23	$3.89^{+2.87}_{-2.28}$	434^{+32}_{-33}	4683^{+2273}_{-887}	7951^{+37309}_{-5371}

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

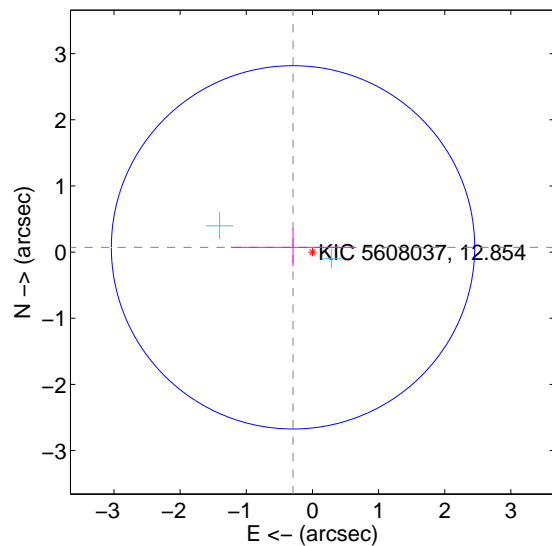
Supplemental centroid analysis for 005608037-02. Kepler magnitude: 12.85. Transit SNR 5.98

There are 2 quarters with good PRF difference image offsets

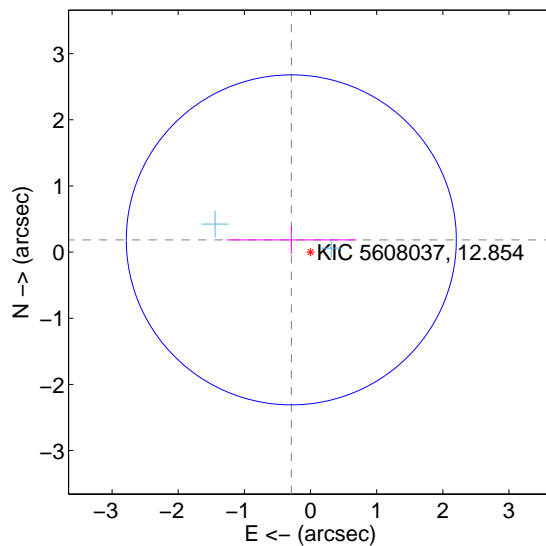
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.303 ± 0.915	0.33	0.294 ± 0.940	0.072 ± 0.284
PRF-fit source offset from KIC position	0.344 ± 0.832	0.41	0.290 ± 0.977	0.185 ± 0.212
photometric centroid source offset	0.20 ± 0.34	0.59	0.18 ± 0.34	0.10 ± 0.36

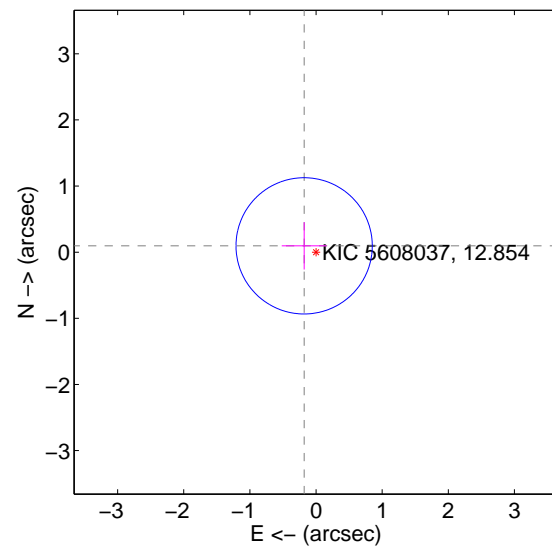
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

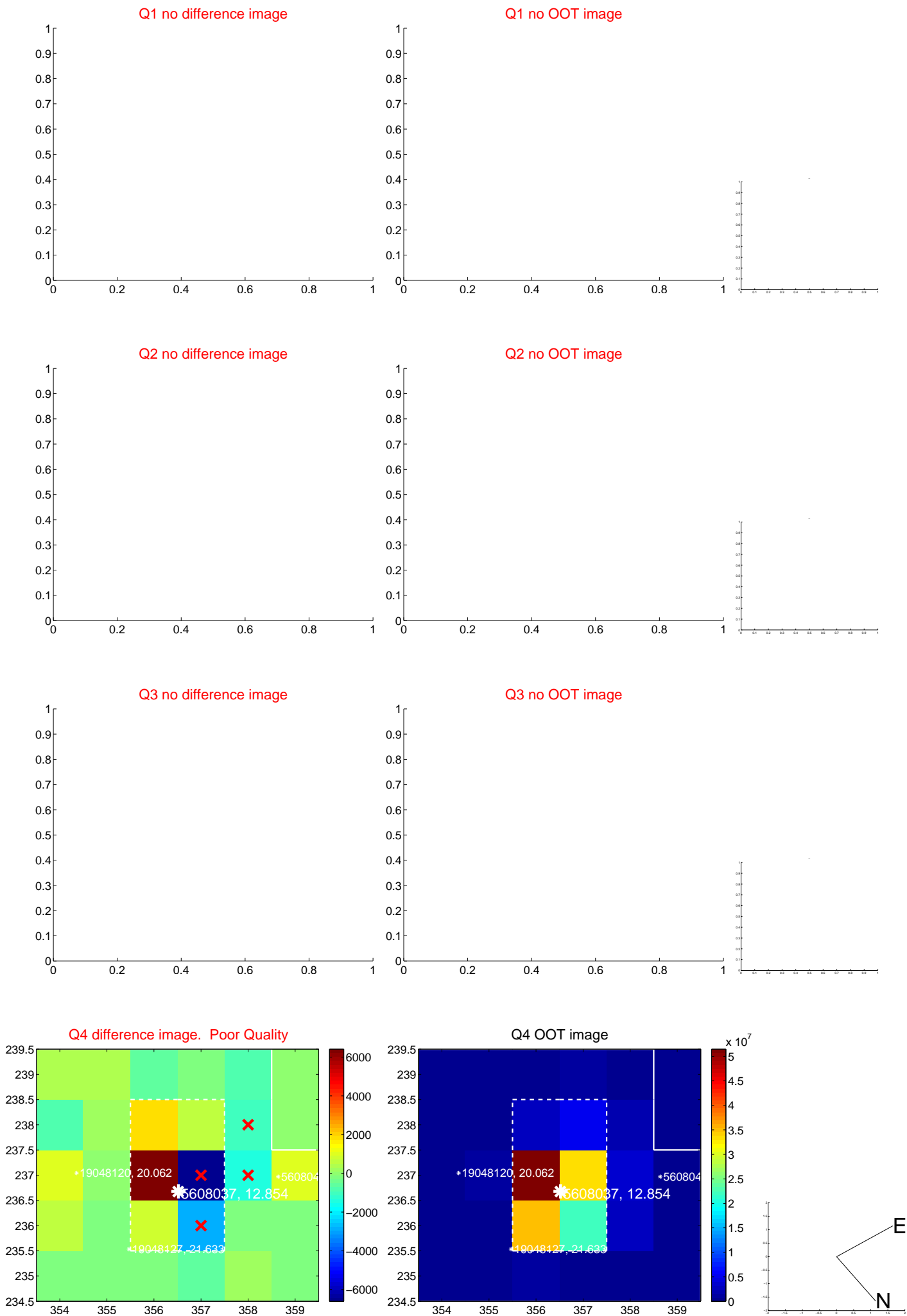


offset from photometric centroids



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.

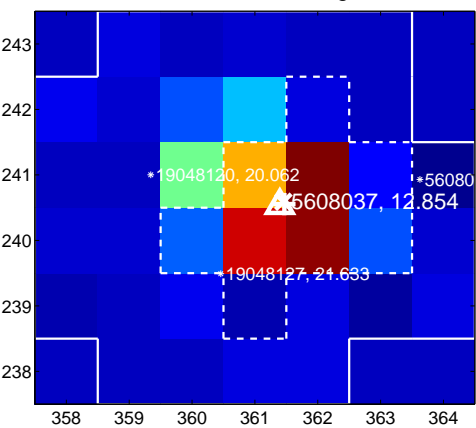
Q9 no difference image



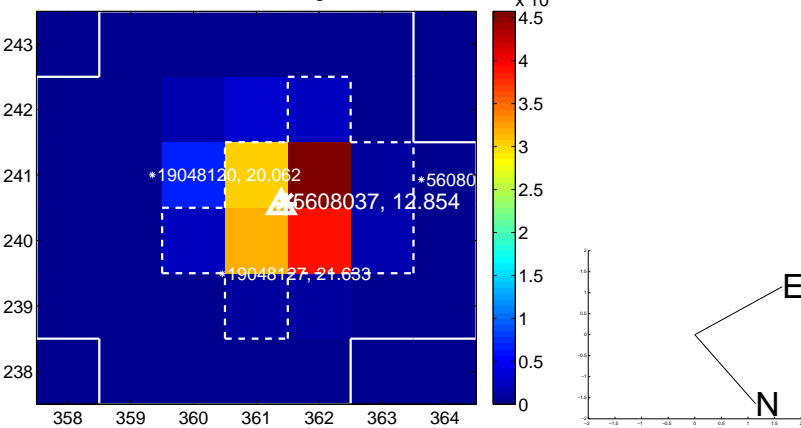
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



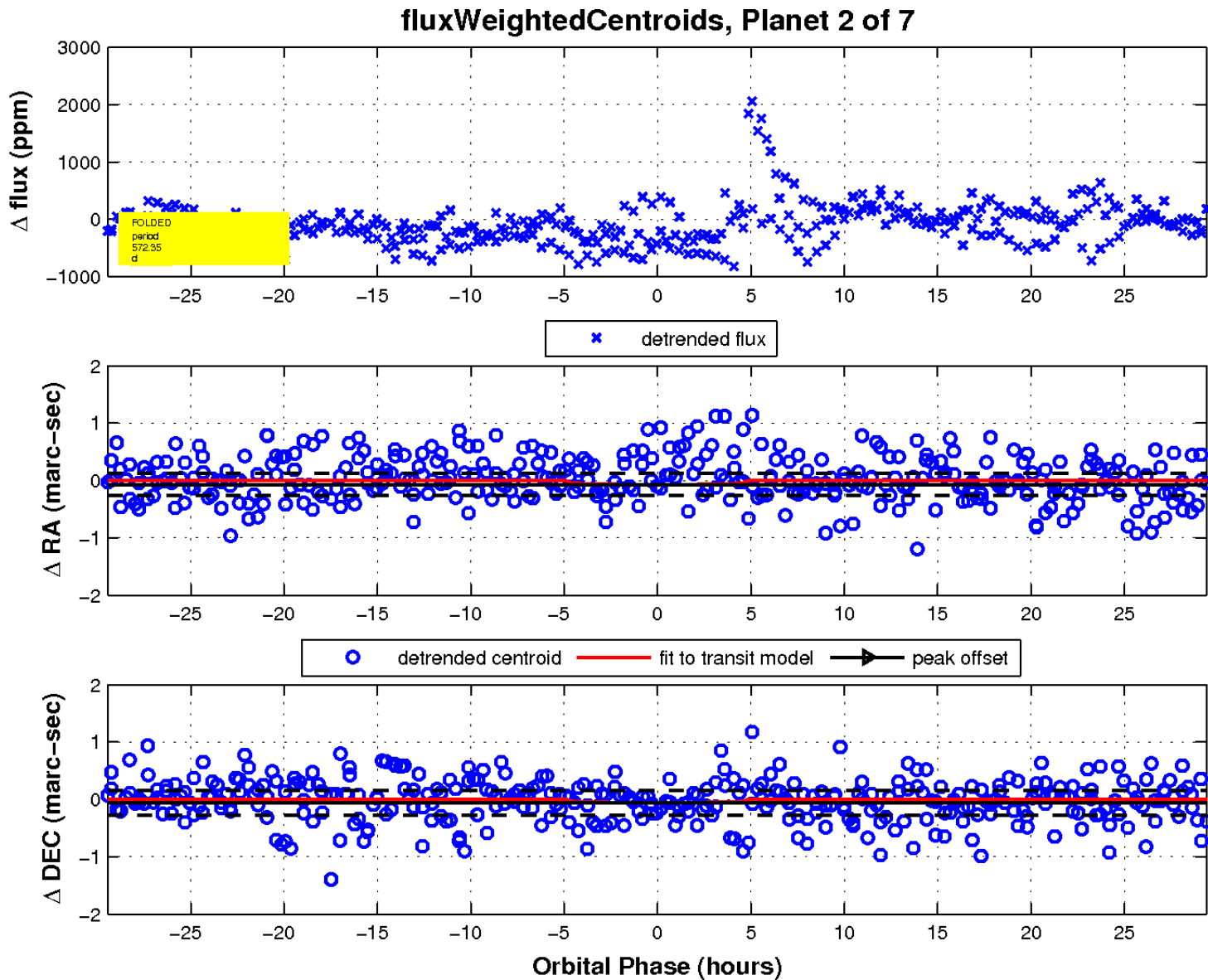
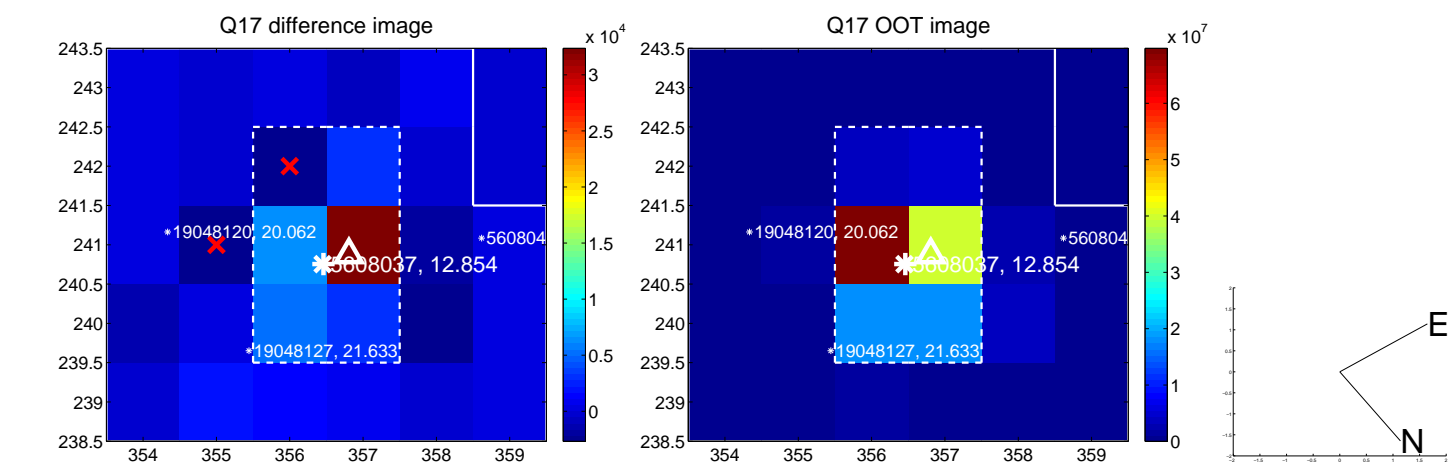
Q12 no OOT image



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

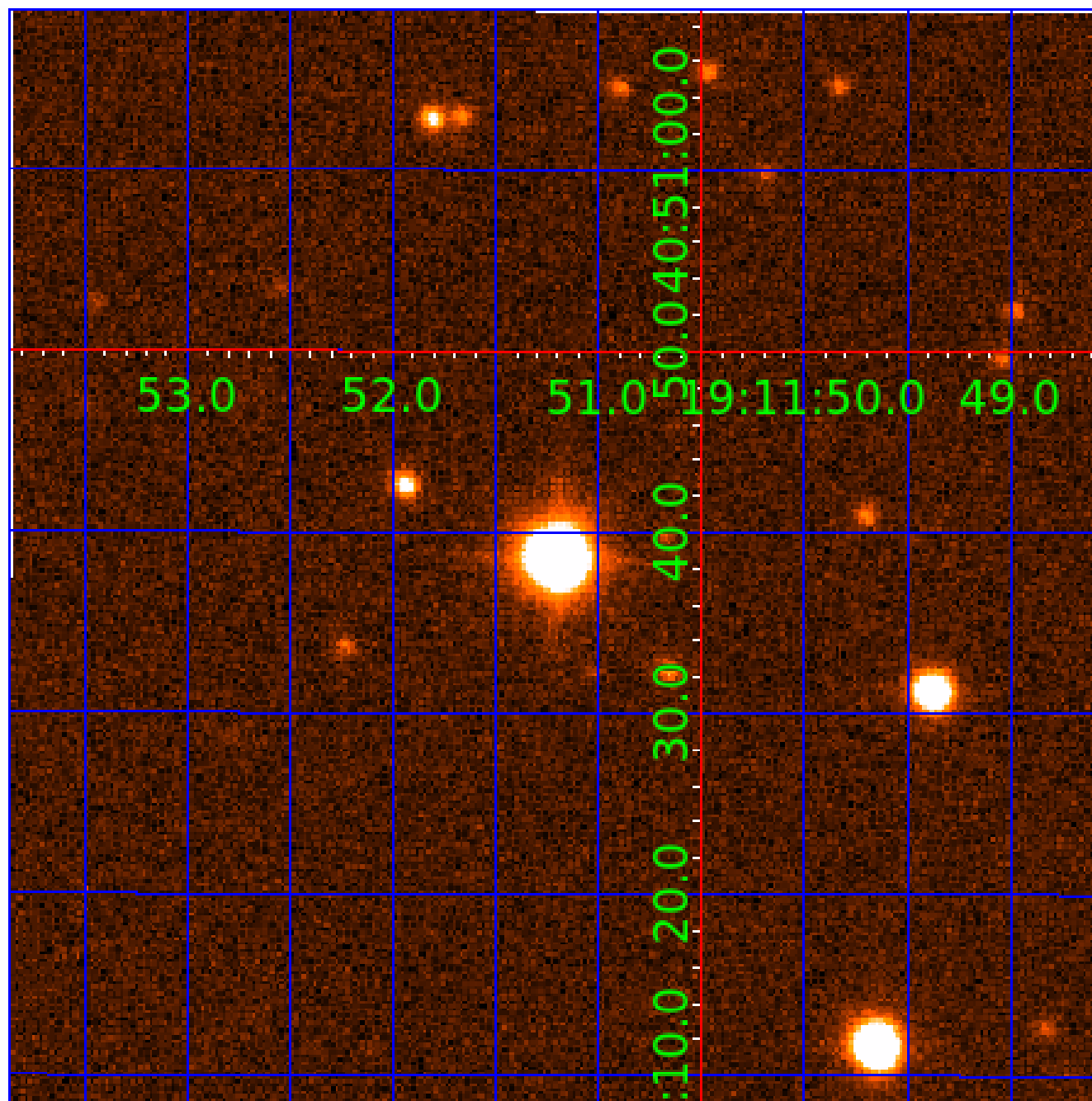


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

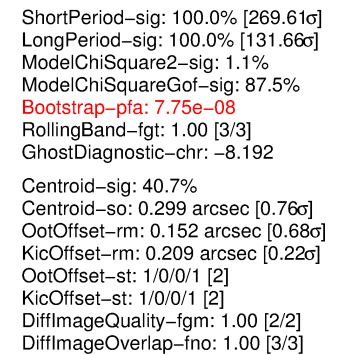
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

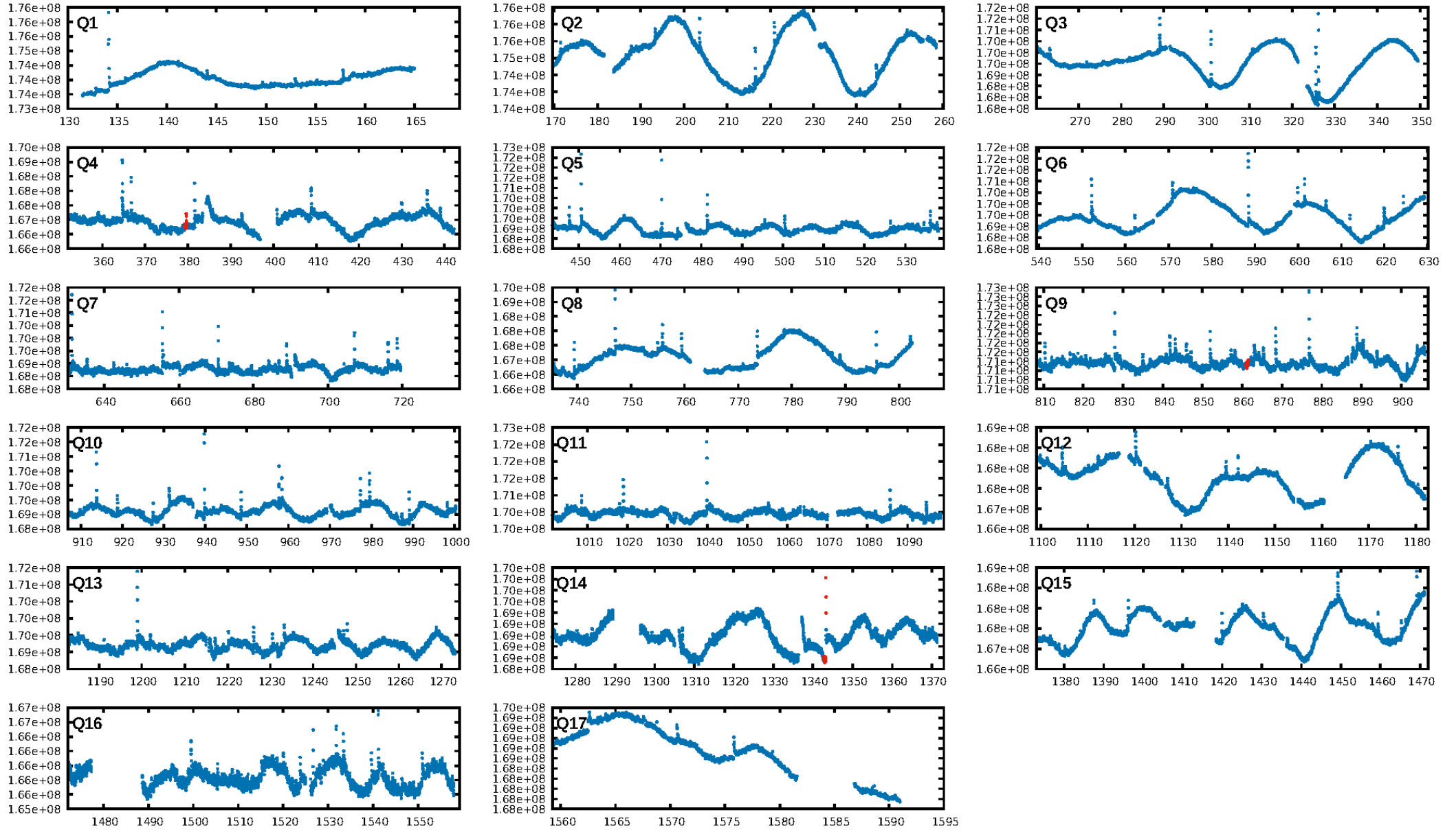
Ephemeris Match Information For 005608037-03

No Significant Match Found

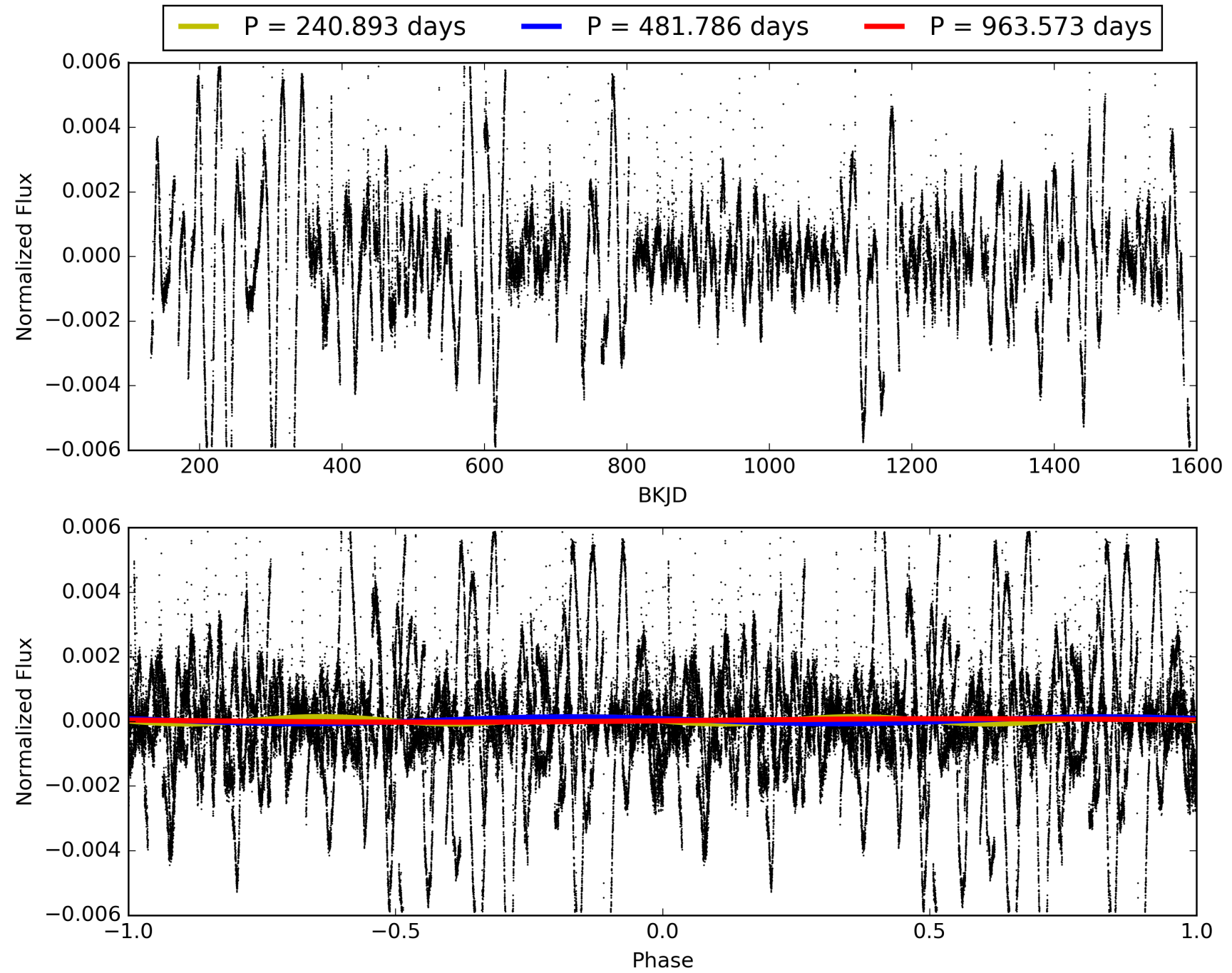
KIC: 5608037 Candidate: 3 of 7 Period: 481.786 d



TCE 005608037-03, PDC Light Curves

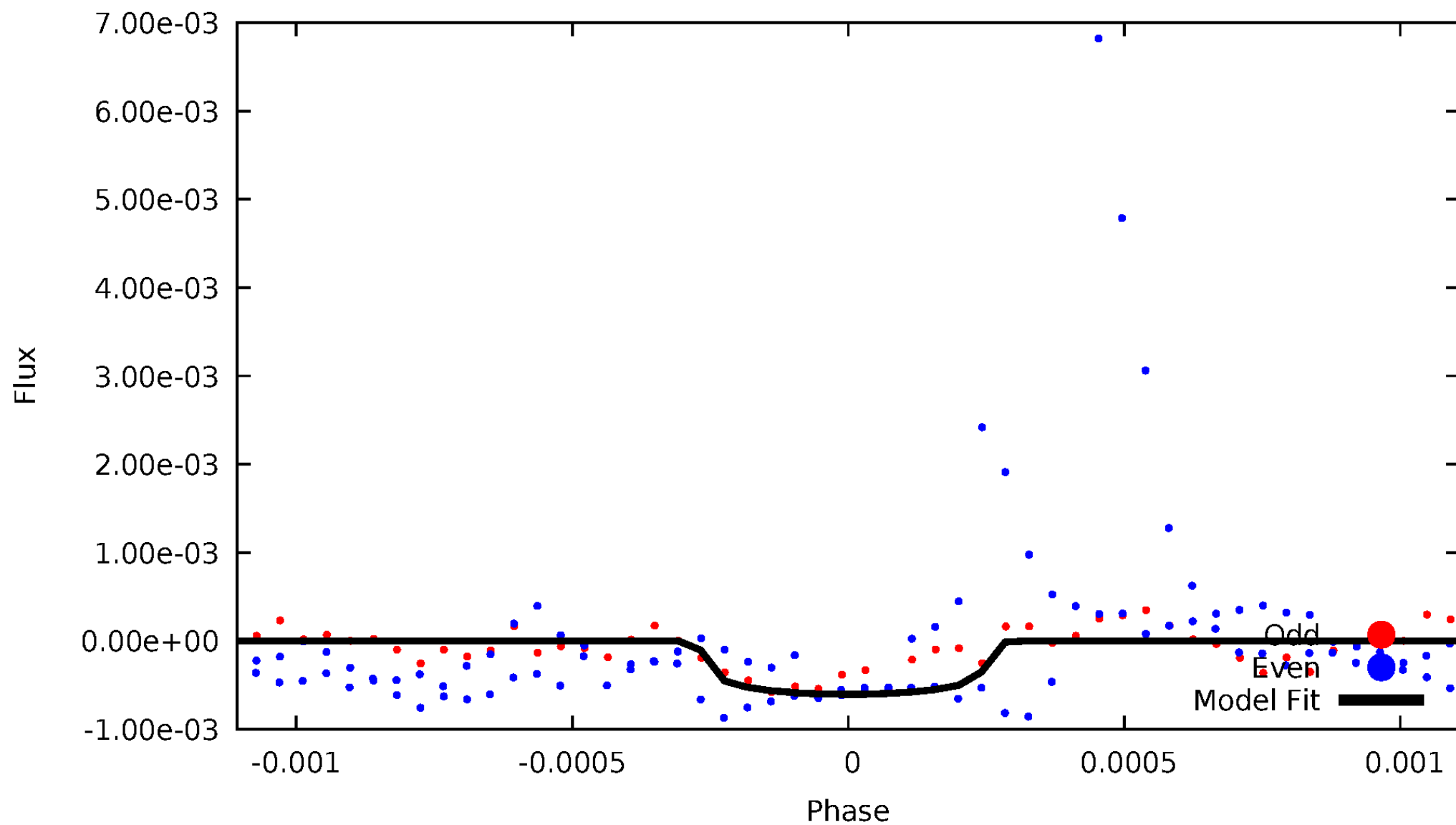


TCE 005608037-03



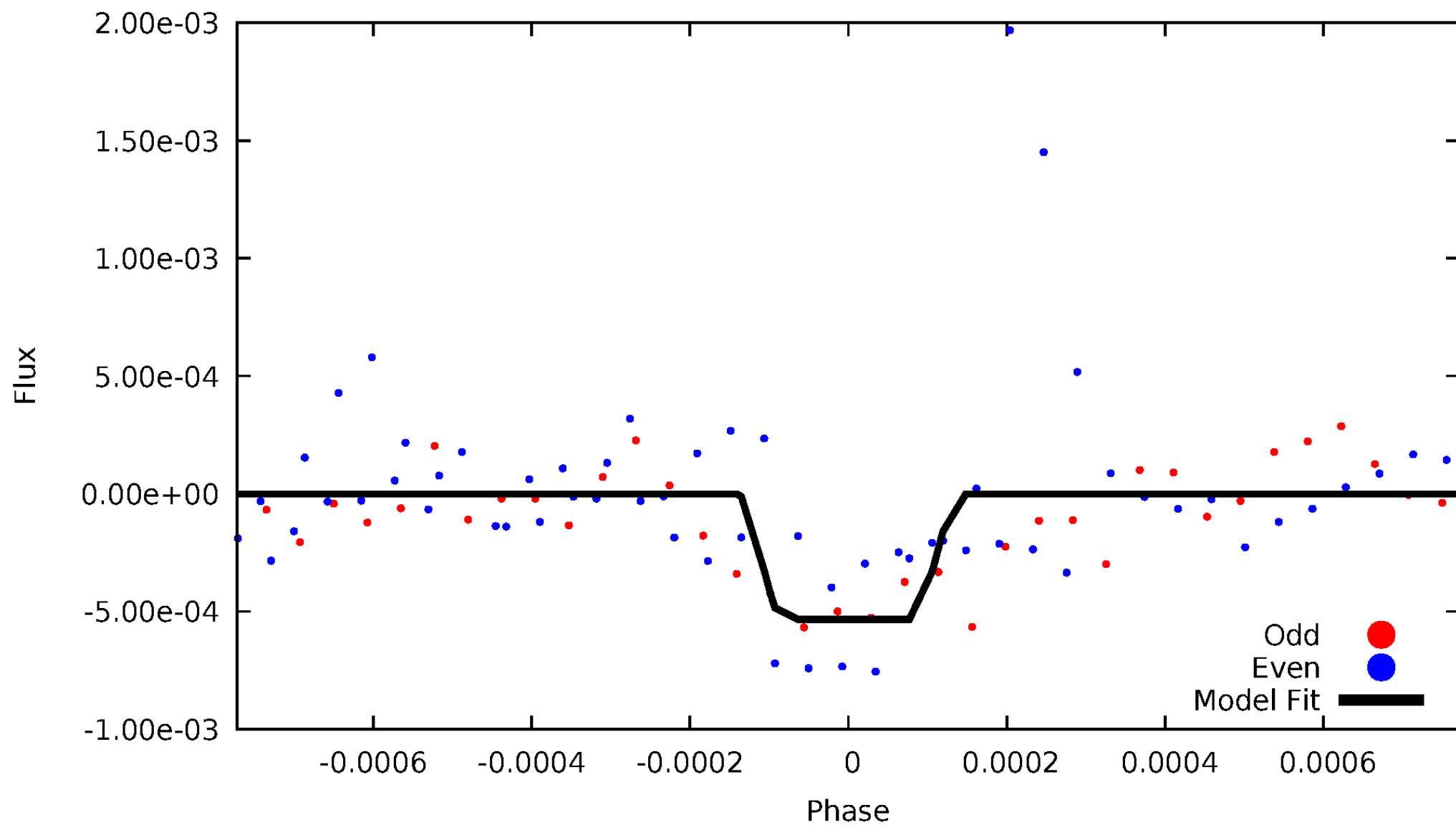
DV Odd/Even

TCE 005608037-03



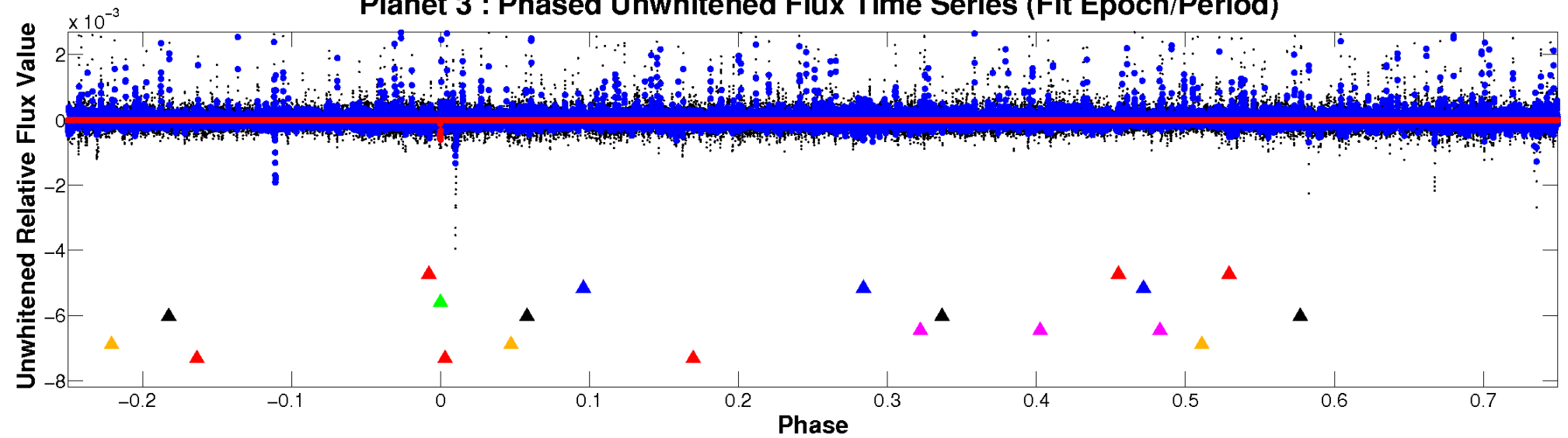
ALT Odd/Even

TCE 005608037-03

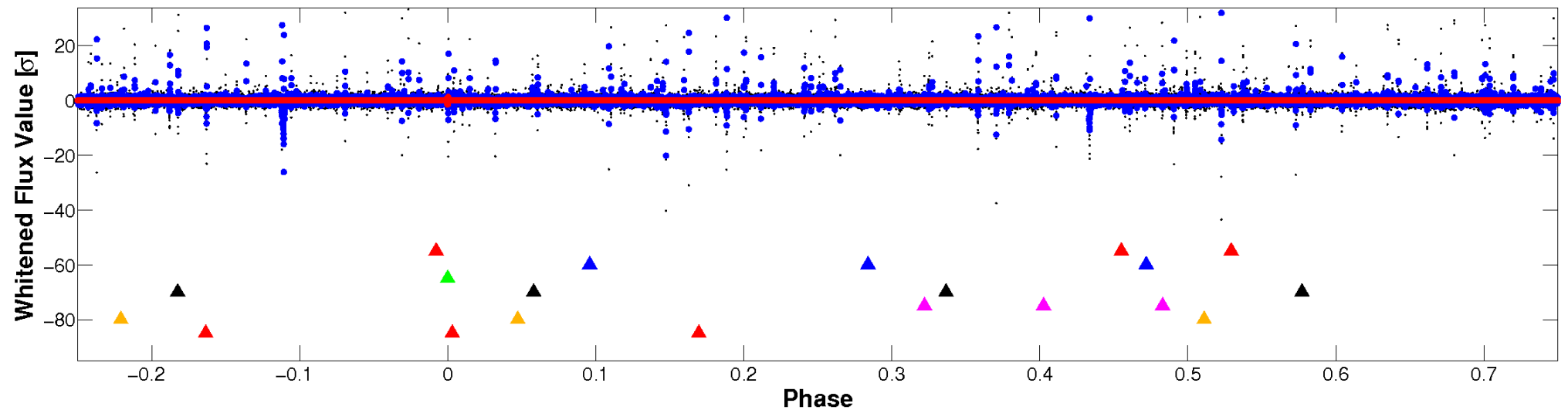


Non-Whitened Vs. Whitened Light Curve

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

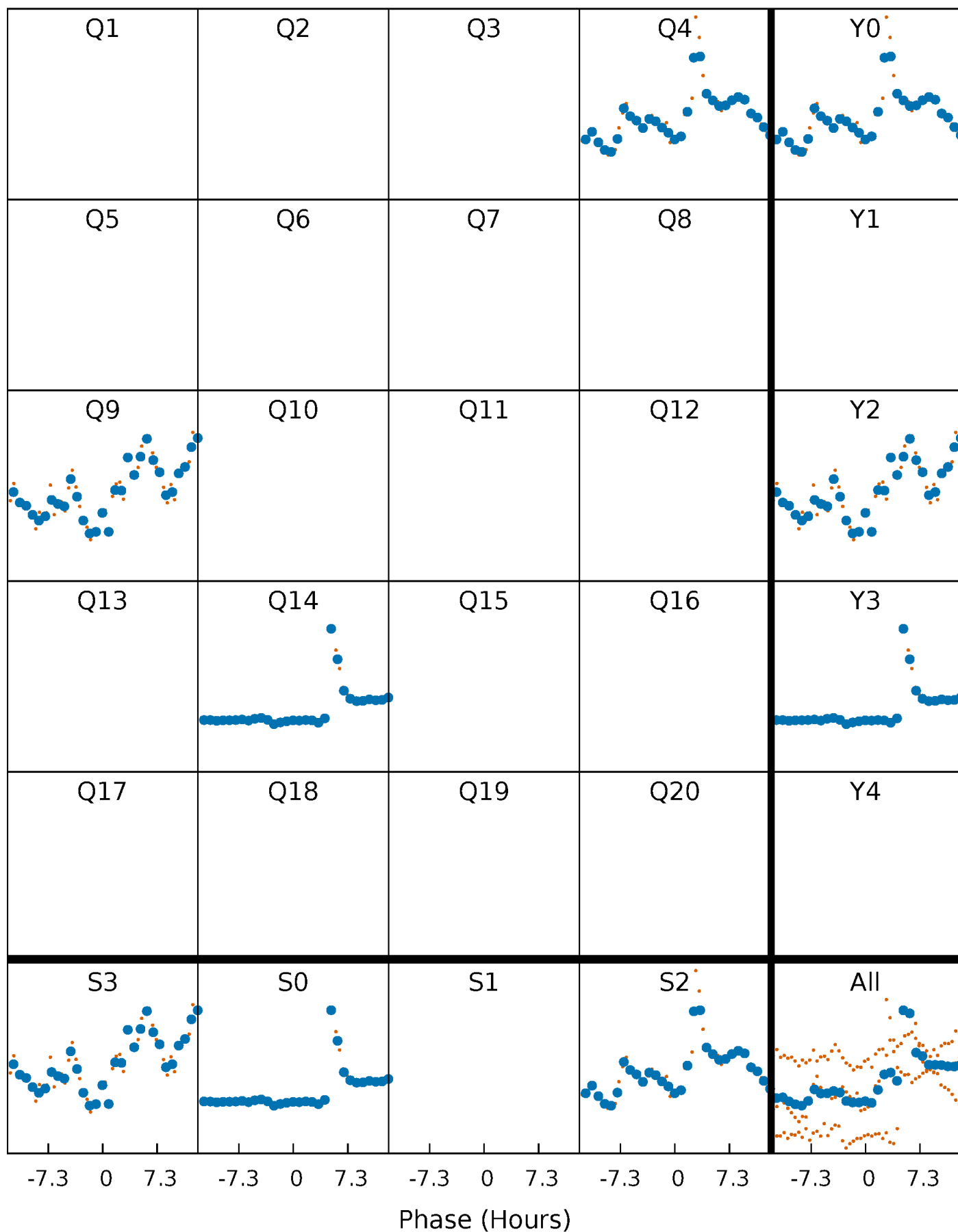


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



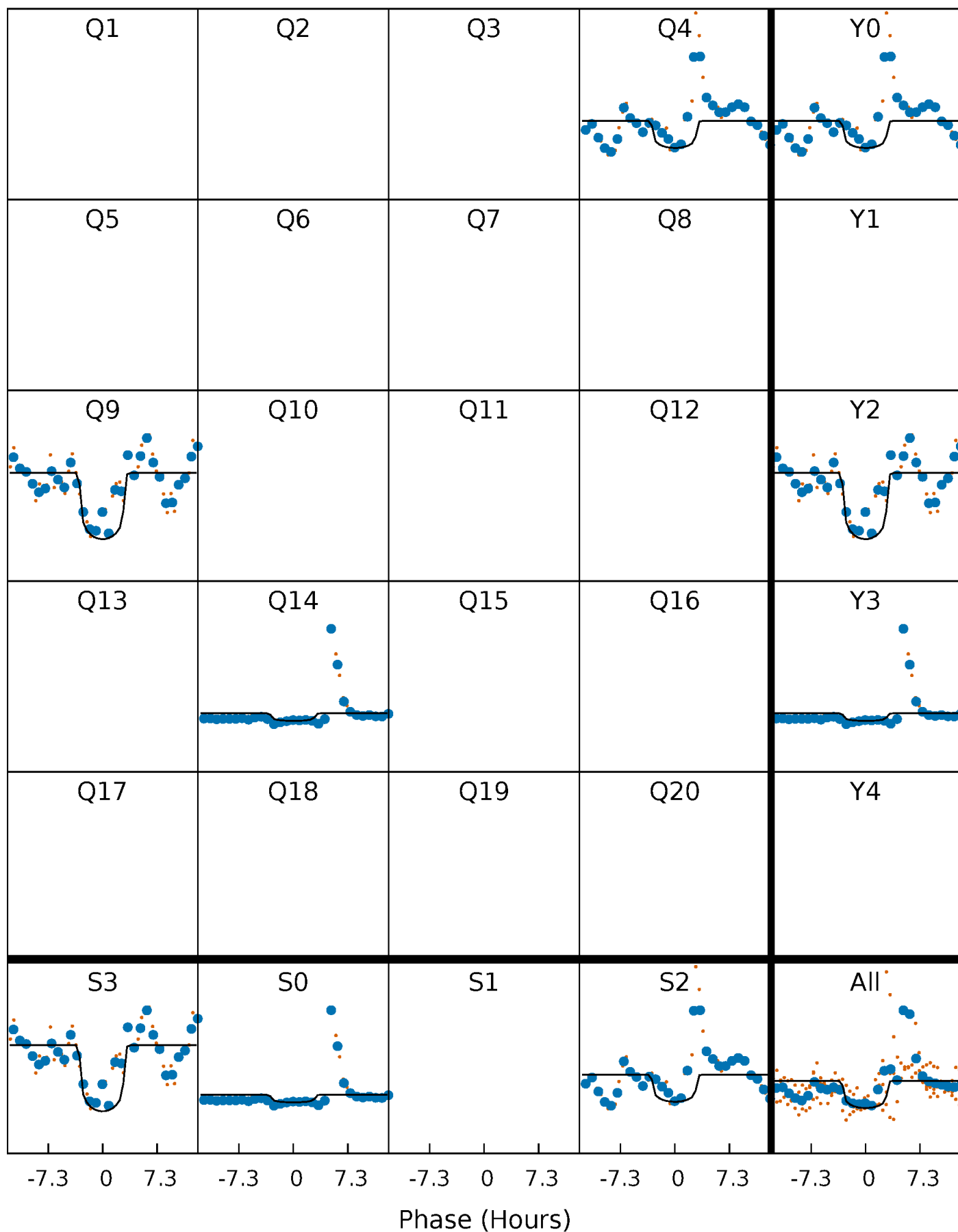
PDC Quarter-Phased Transit Curves

TCE 005608037-03 $P=481.786278$ Days $T_0=379.476659$ (BKJD)



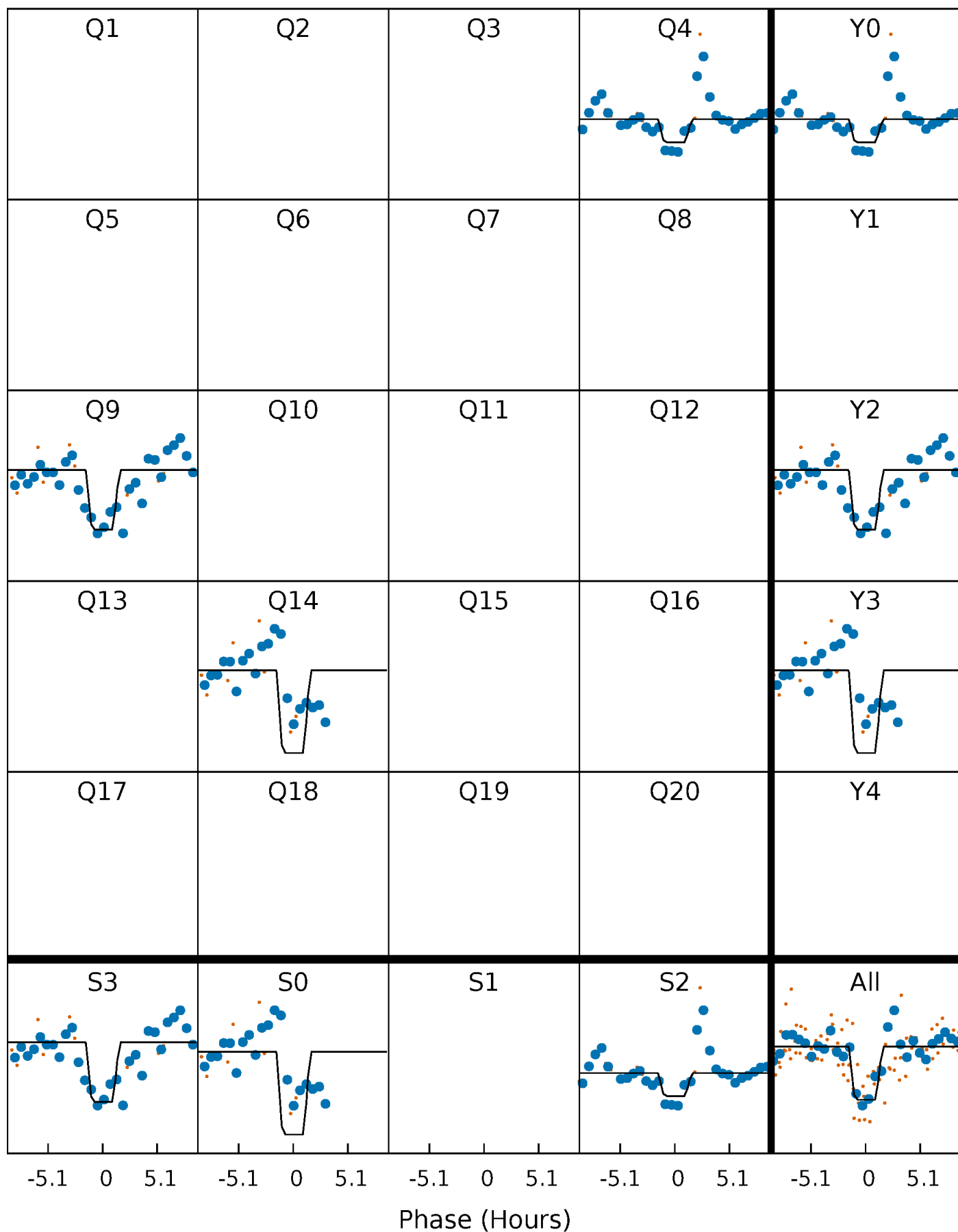
DV Quarter-Phased Transit Curves

TCE 005608037-03 $P=481.786278$ Days $T_0=379.476659$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

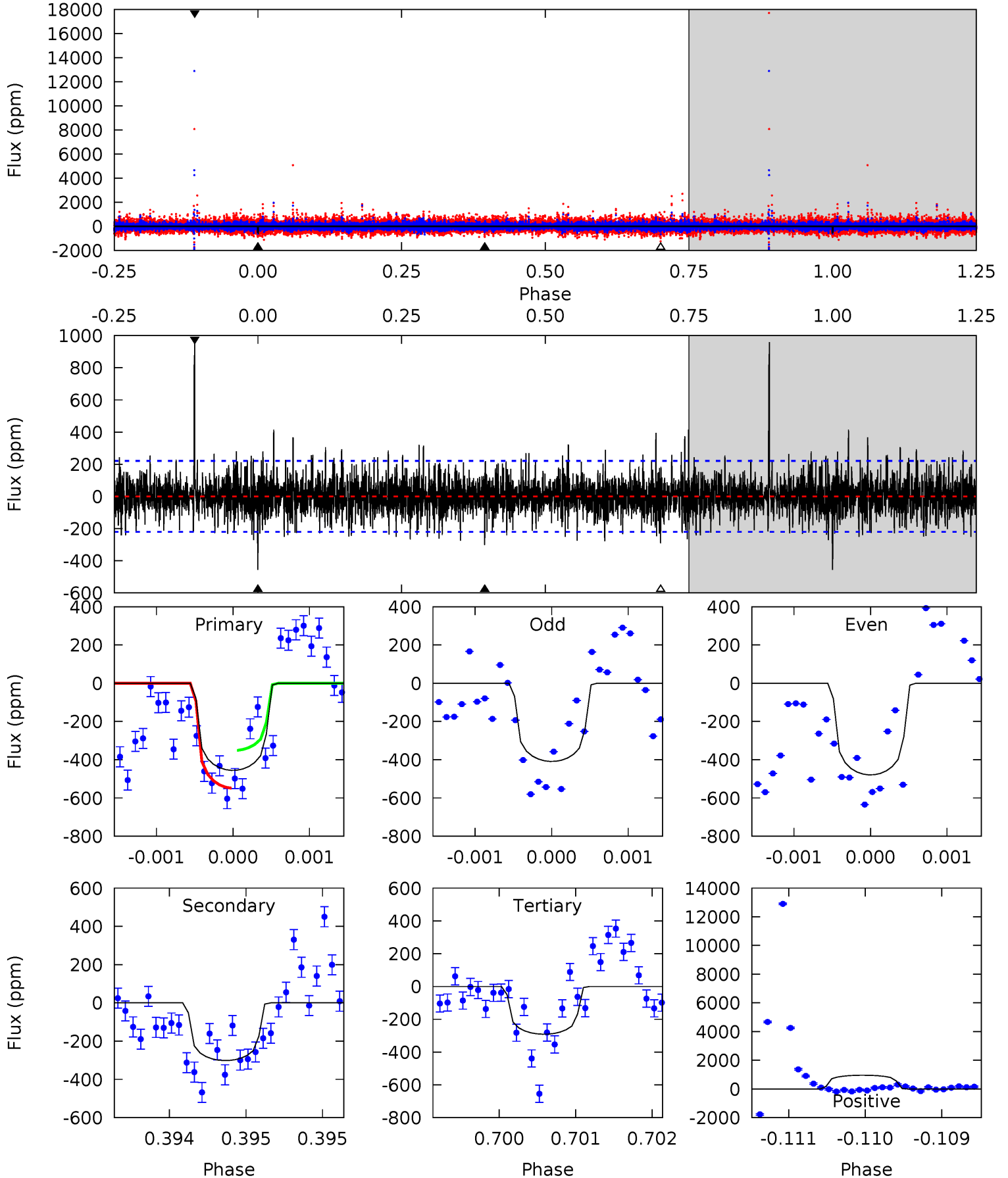
TCE 005608037-03 P=481.727988 Days $T_0=379.495011$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-03, P = 481.786278 Days, E = 379.476659 Days

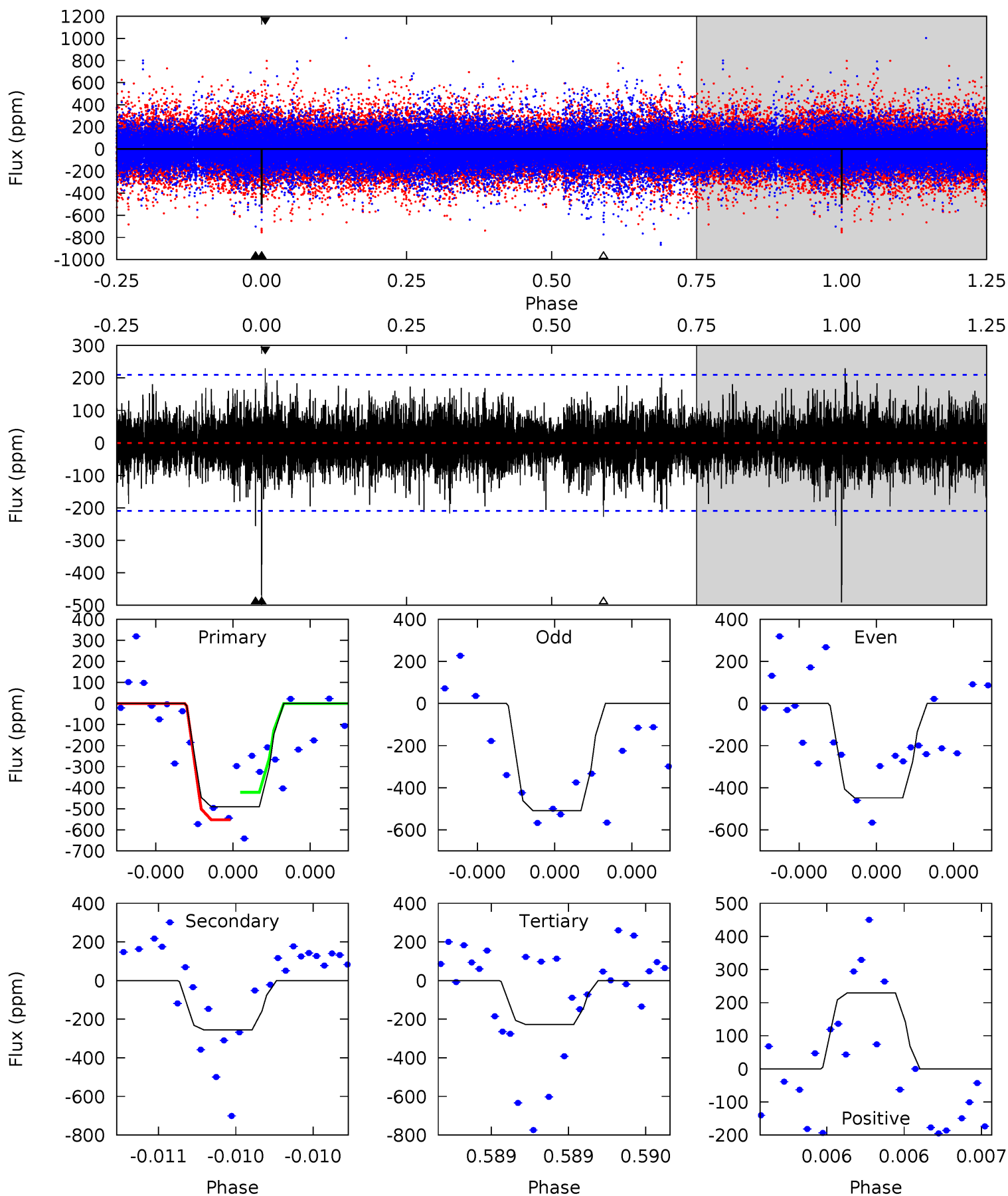
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	7.60	7.34	24.2	5.56	3.45	2.15	4.15	-12.7	0.26	-16.6	0.57	0.98	0.68	2.65



Alt Model-Shift Uniqueness Test

005608037-03, P = 481.727988 Days, E = 379.495011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	6.96	6.19	6.25	5.71	3.69	1.30	7.18	7.11	0.77	0.70	0.72	0.92	0.32	1.78



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-302 ± 40	$5.71^{+2.58}_{-2.21}$	460^{+35}_{-35}	4808^{+1032}_{-644}	7256^{+12557}_{-3785}
Alt.	-255 ± 37	$5.22^{+2.63}_{-2.25}$	457^{+35}_{-32}	4773^{+1346}_{-626}	7477^{+14849}_{-4113}

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 $A_{obs} \gg 1.0$

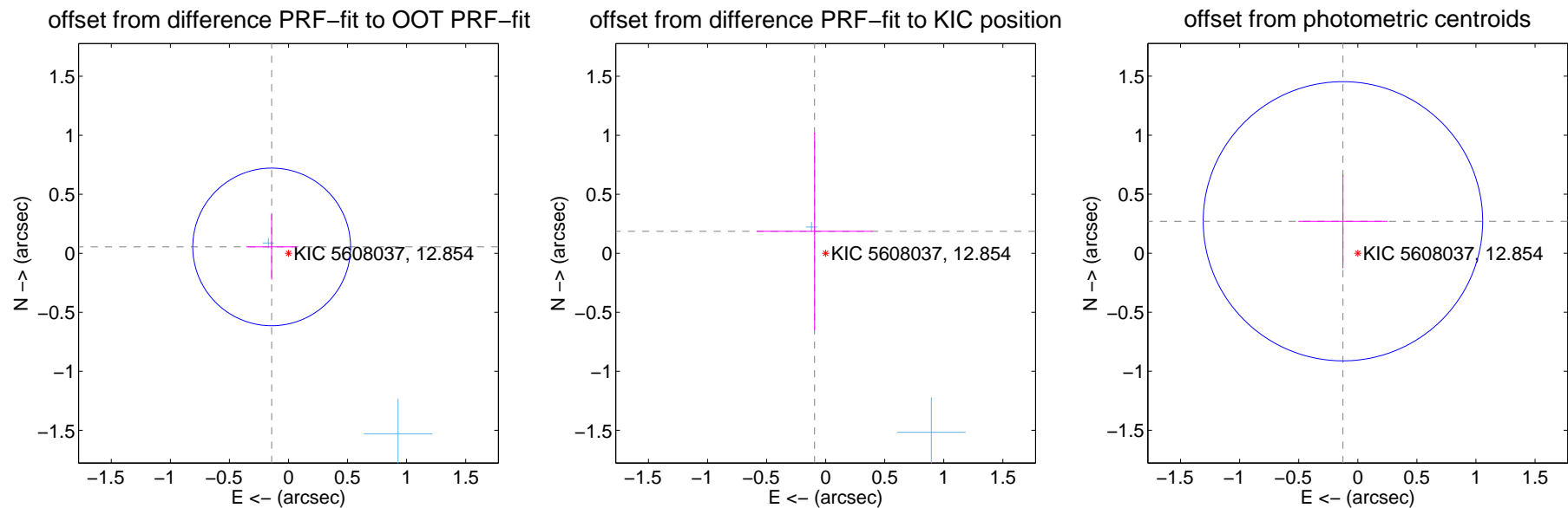
DV Centroid Data

Supplemental centroid analysis for 005608037-03. Kepler magnitude: 12.85. Transit SNR 7.06

There are 2 quarters with good PRF difference image offsets

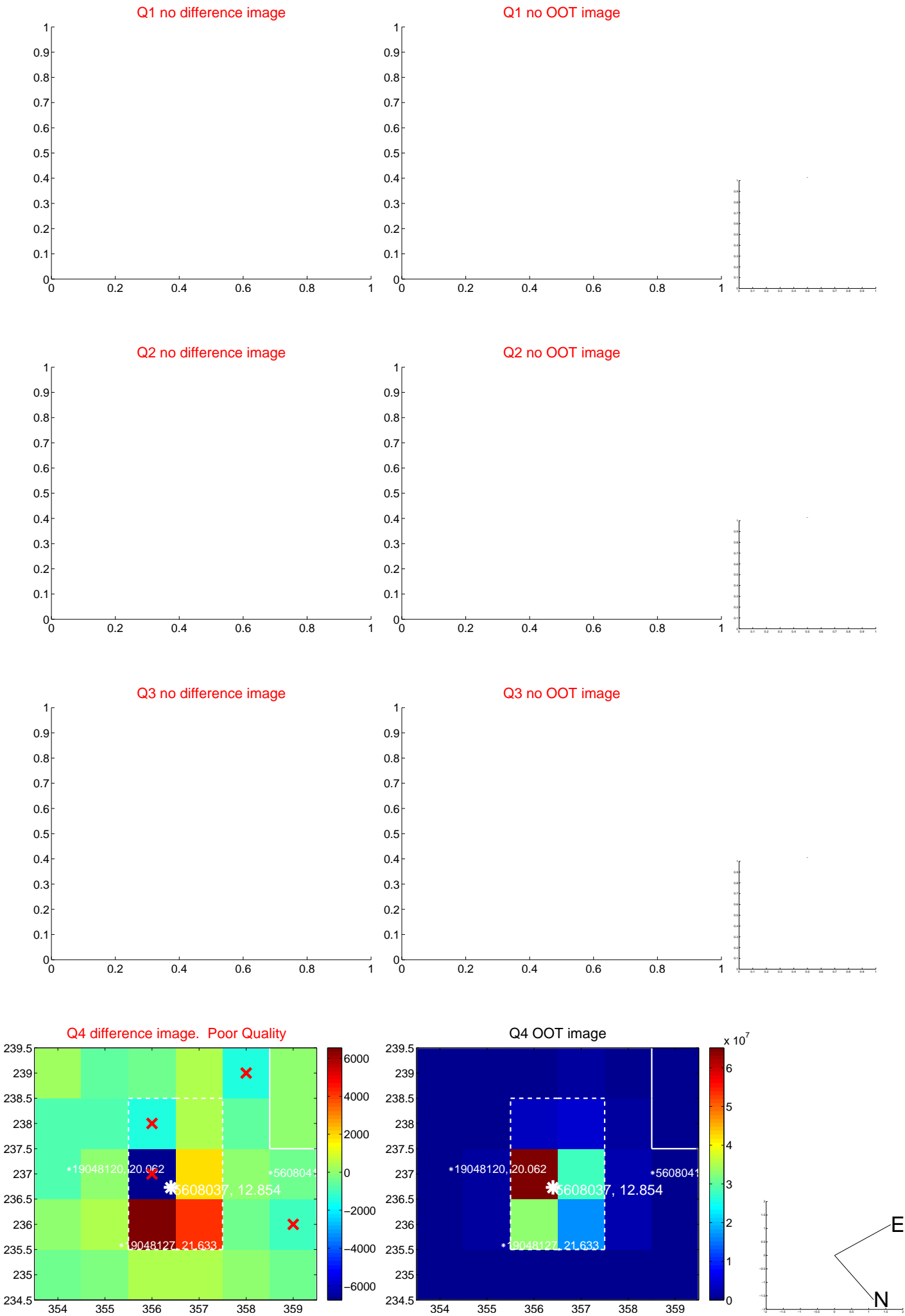
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.223	0.68	0.142 ± 0.214	0.054 ± 0.276
PRF-fit source offset from KIC position	0.209 ± 0.965	0.22	0.094 ± 0.490	0.186 ± 0.835
photometric centroid source offset	0.30 ± 0.39	0.76	0.13 ± 0.38	0.27 ± 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.

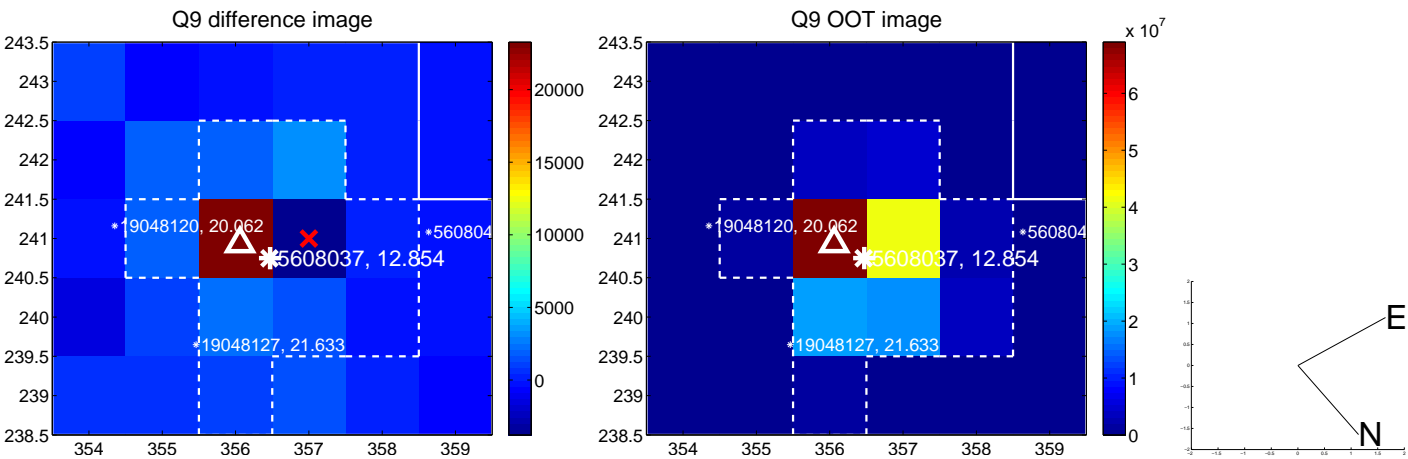
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

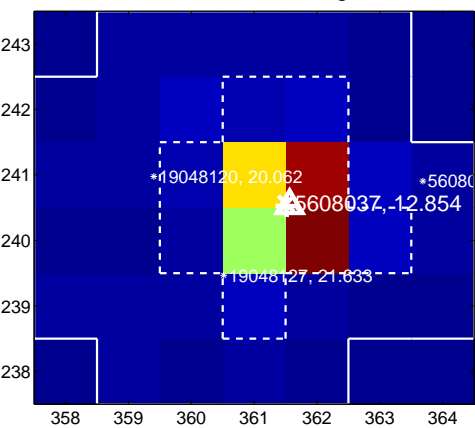
Q13 no difference image



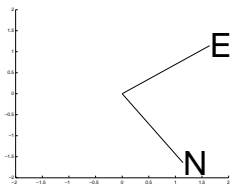
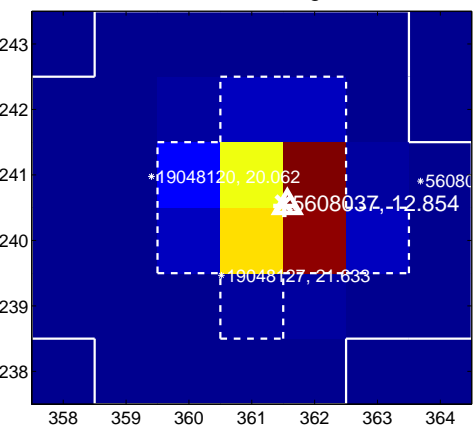
Q13 no OOT image



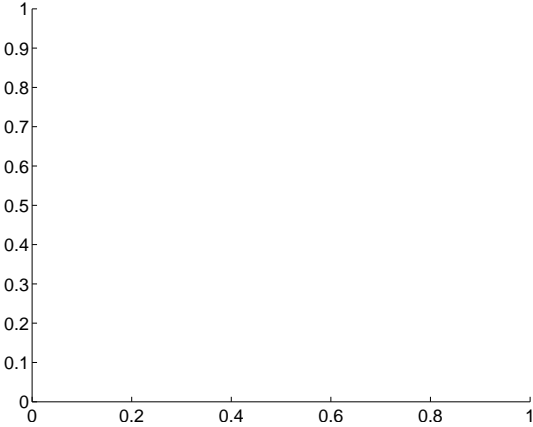
Q14 difference image



Q14 OOT image



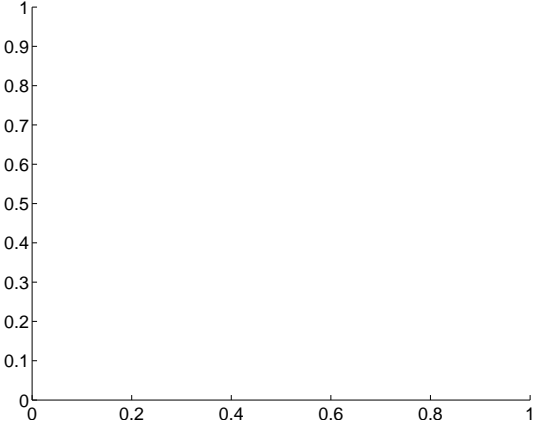
Q15 no difference image



Q15 no OOT image



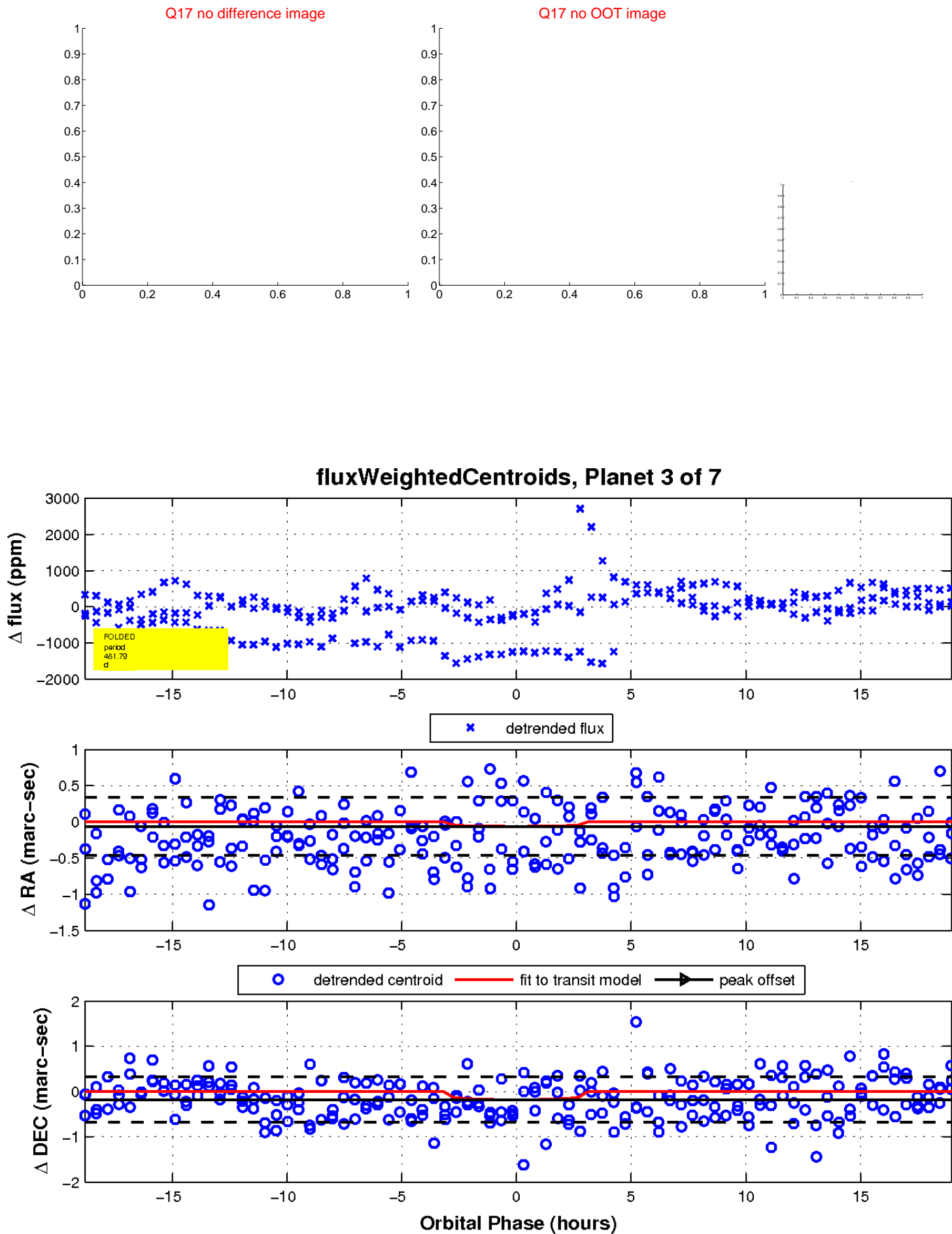
Q16 no difference image



Q16 no OOT image

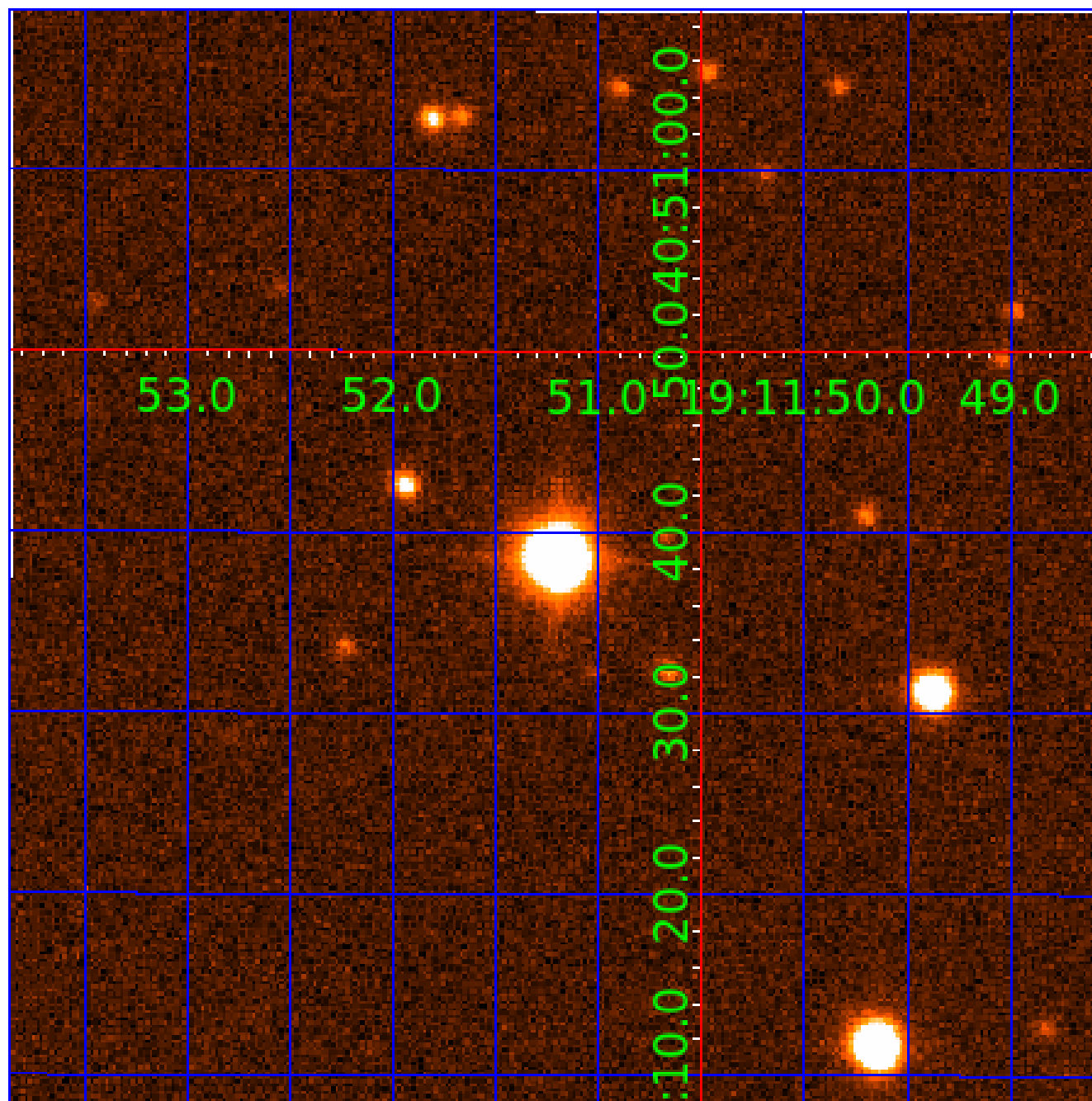


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

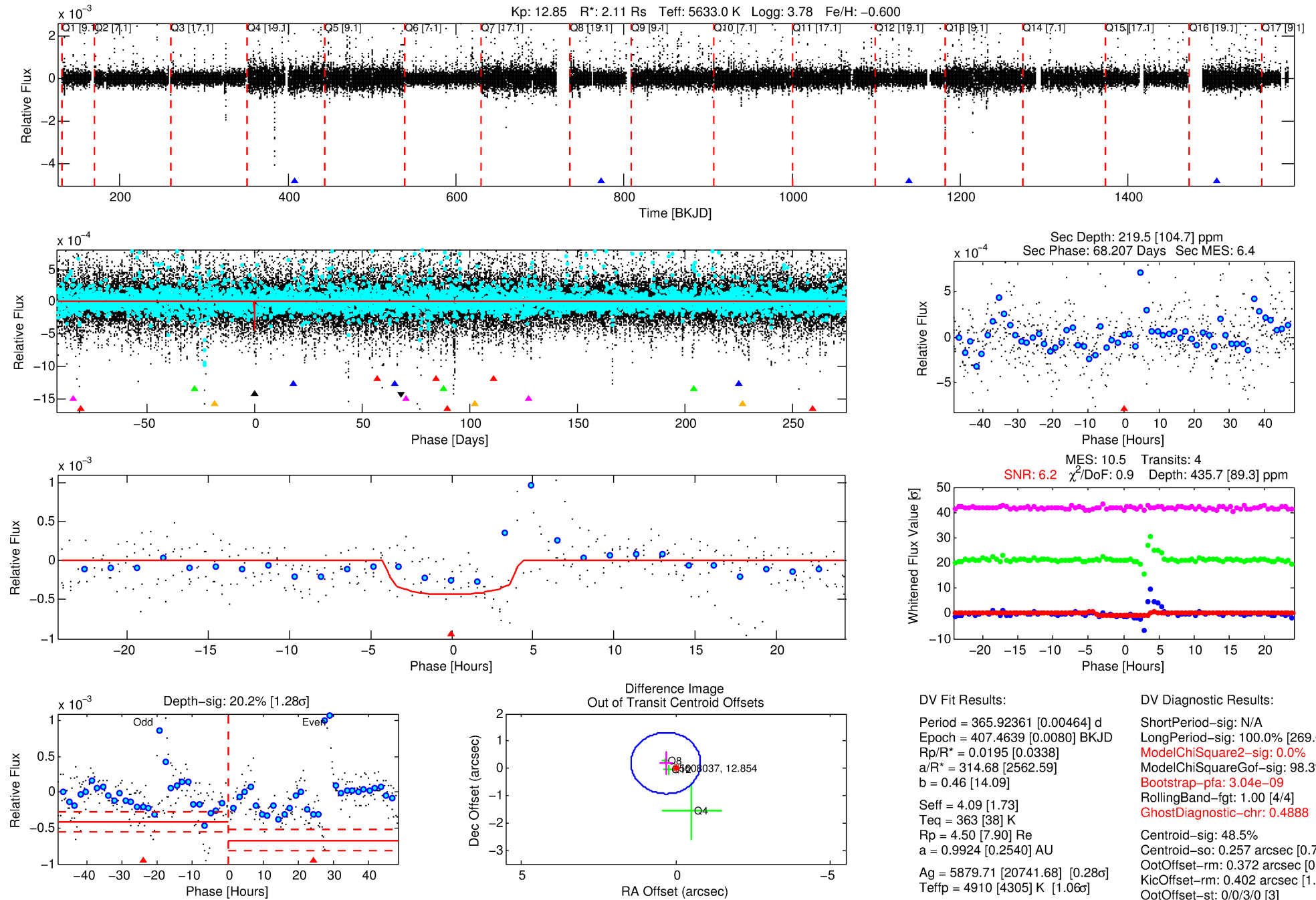
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-04

No Significant Match Found

DV One-Page Summary

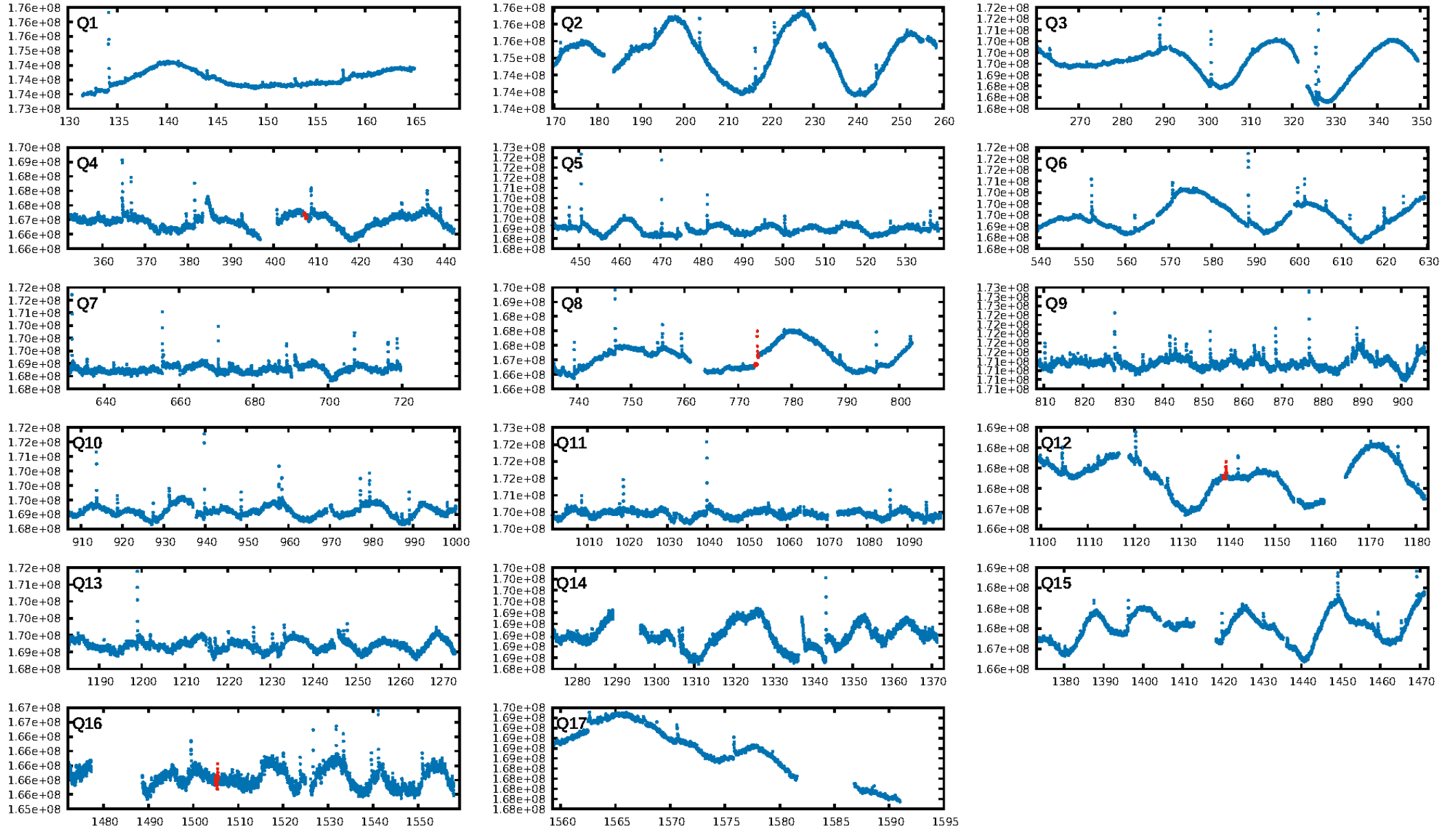
KIC: 5608037 Candidate: 4 of 7 Period: 365.924 d



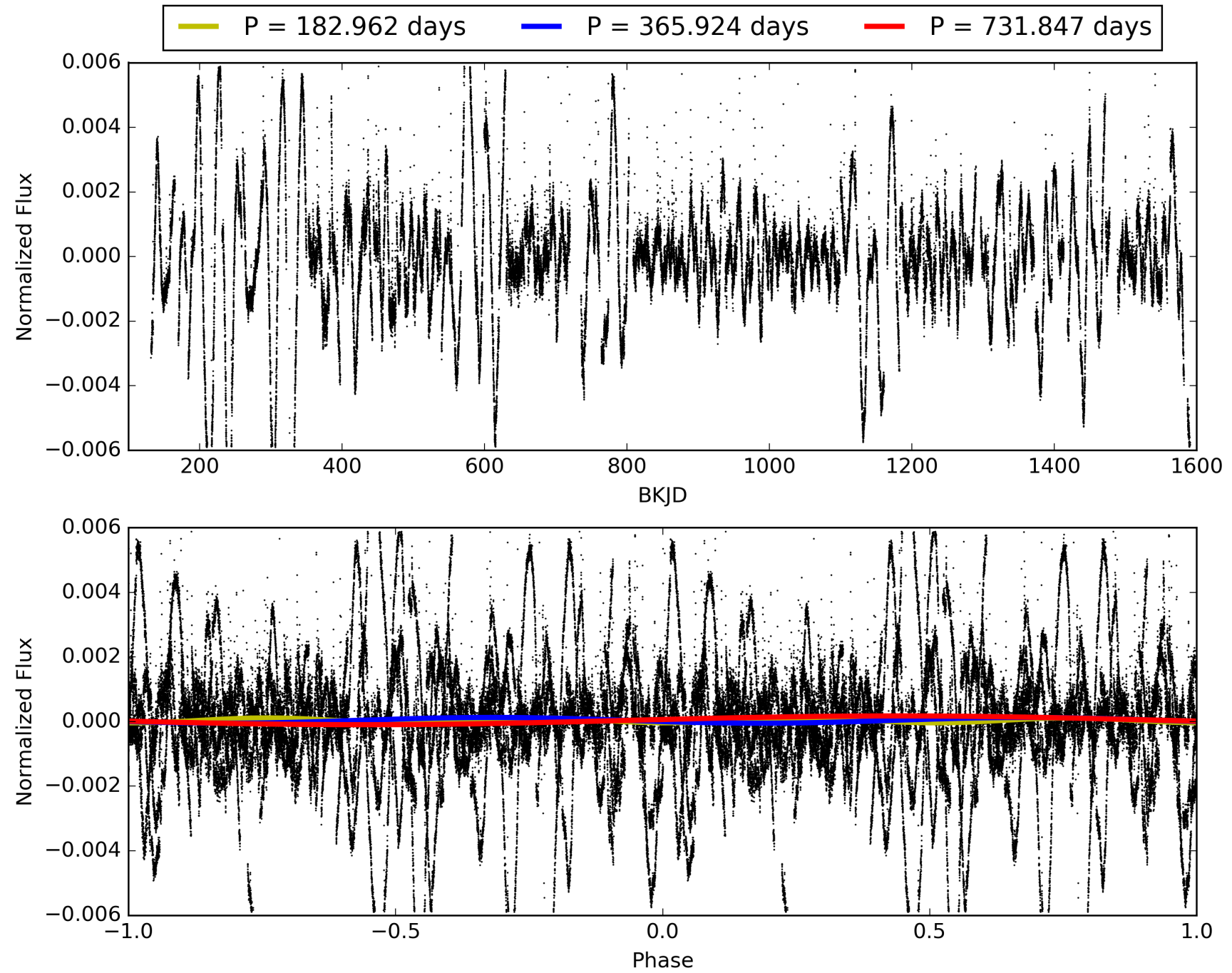
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:40:56 Z

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

TCE 005608037-04, PDC Light Curves

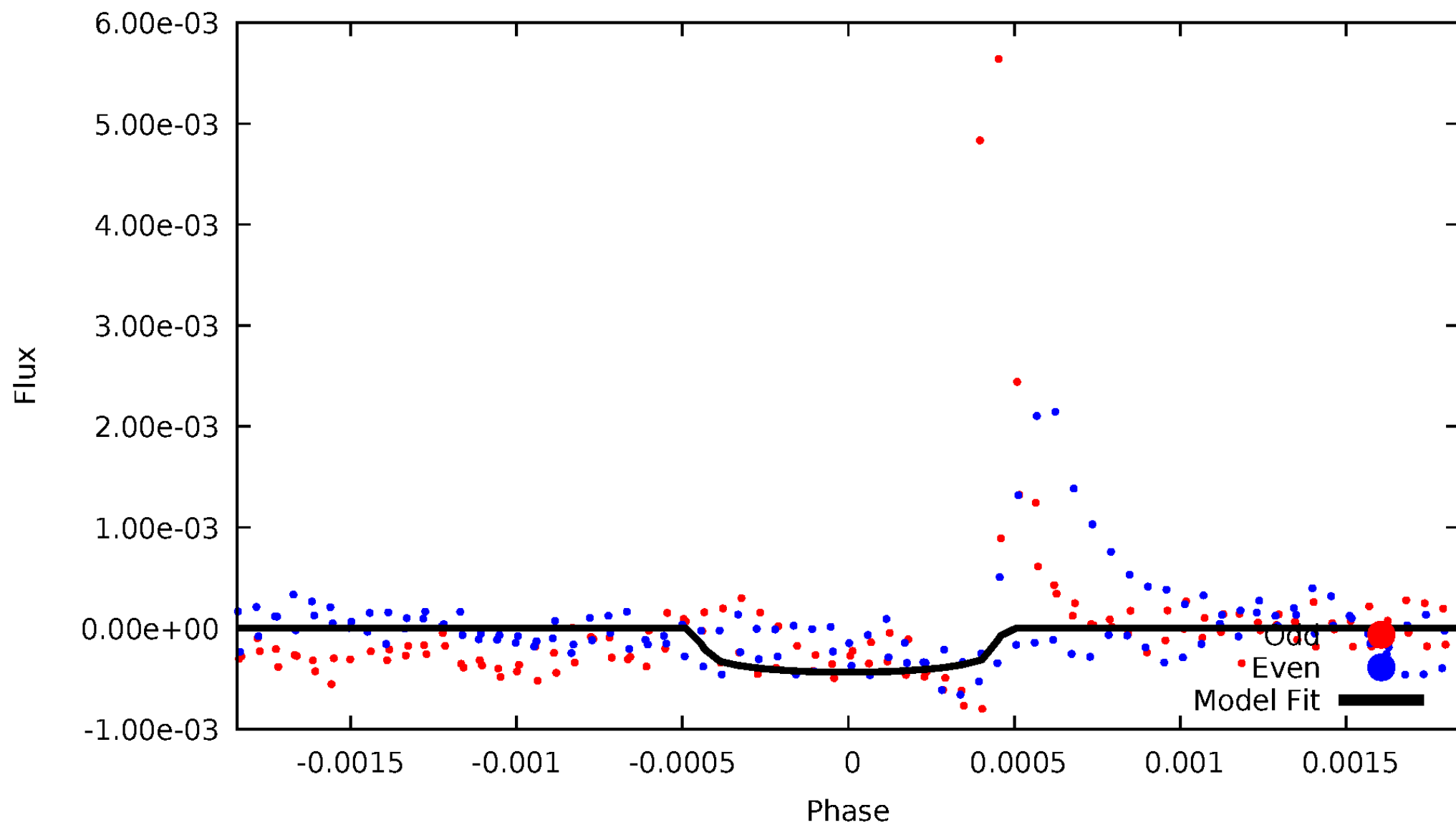


TCE 005608037-04



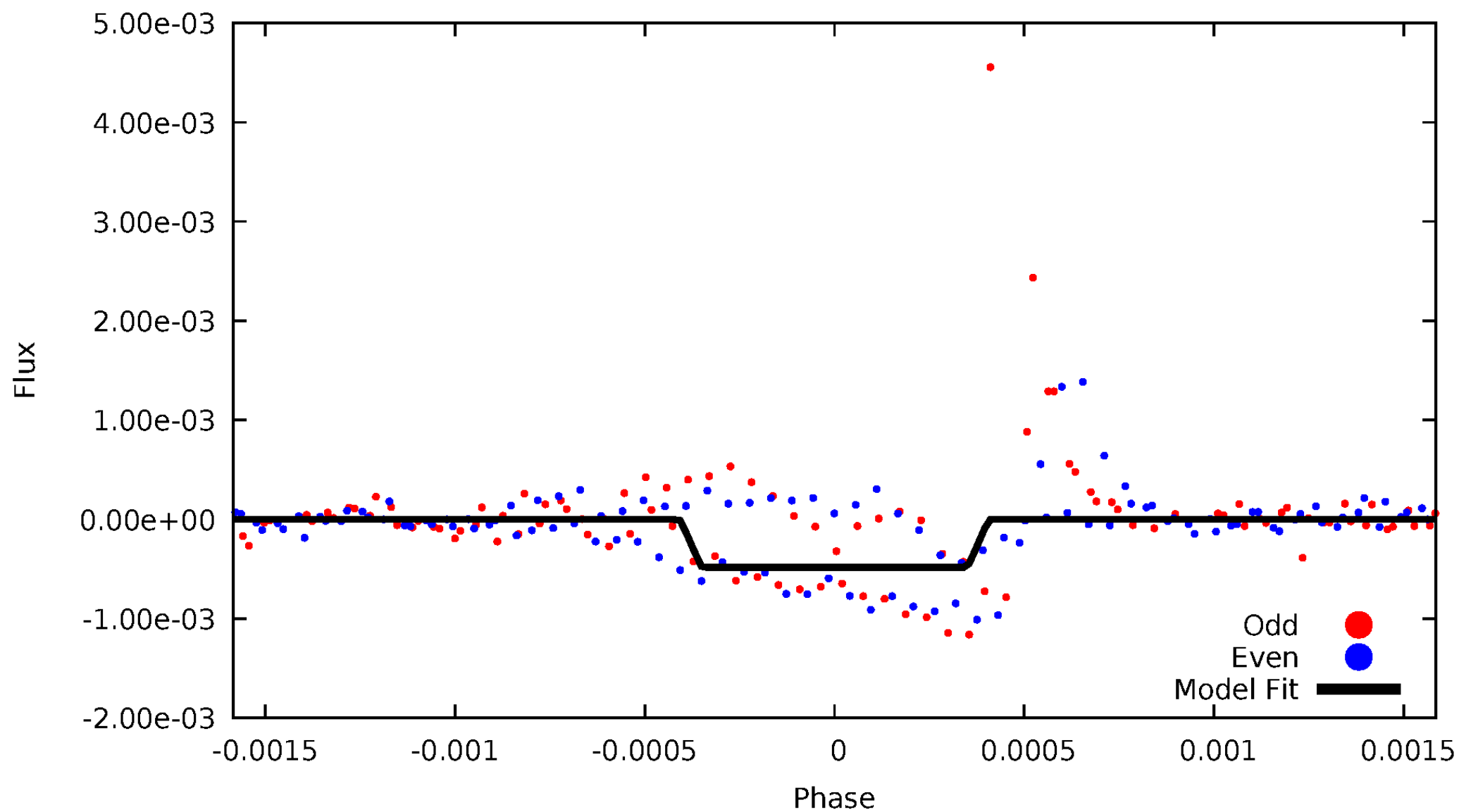
DV Odd/Even

TCE 005608037-04



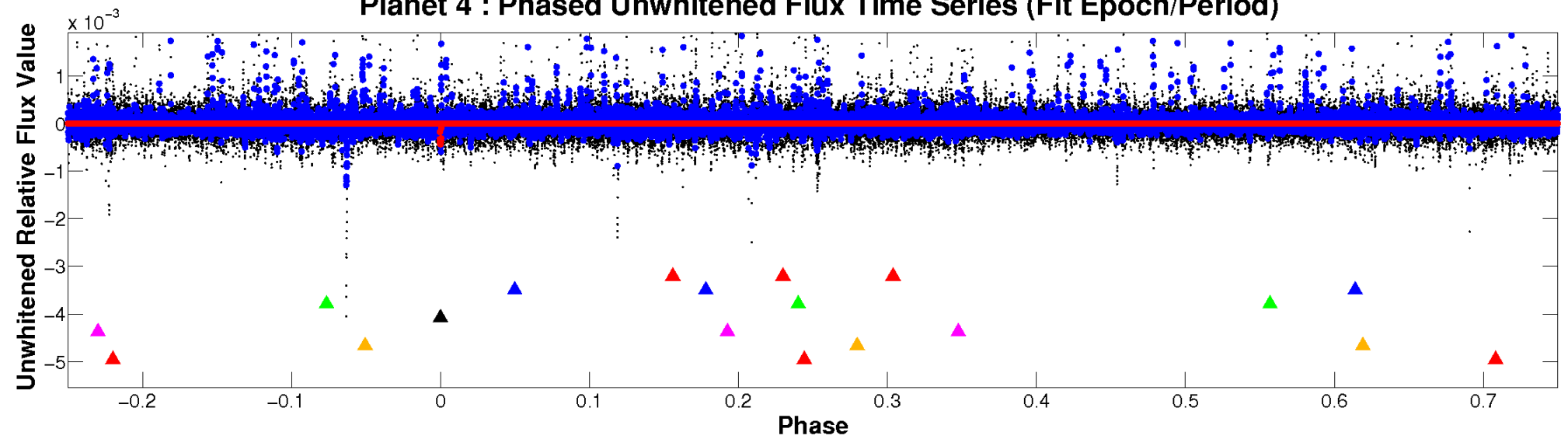
ALT Odd/Even

TCE 005608037-04

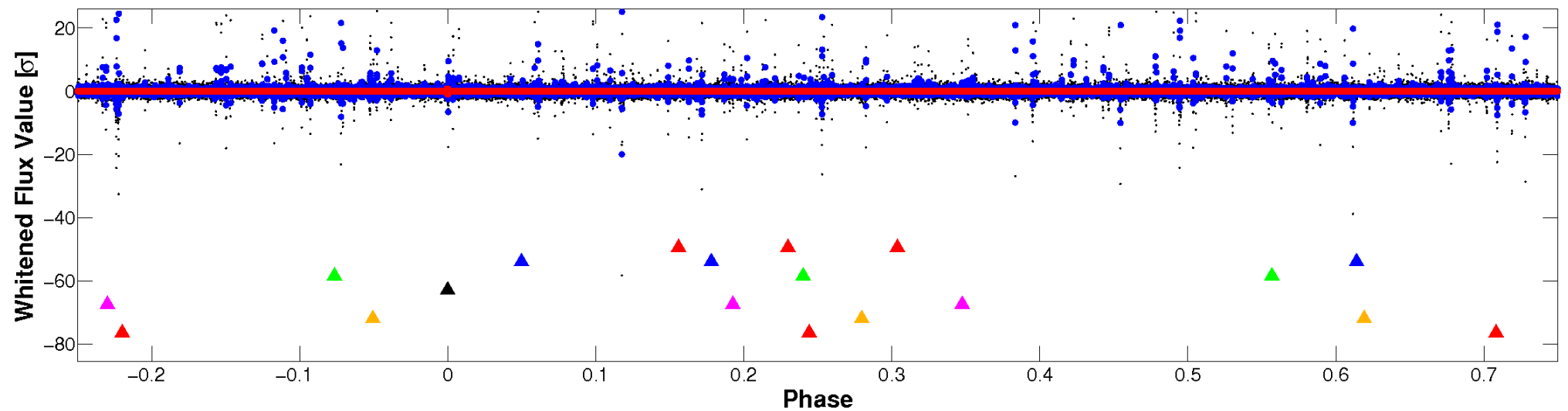


Non-Whitened Vs. Whitened Light Curve

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

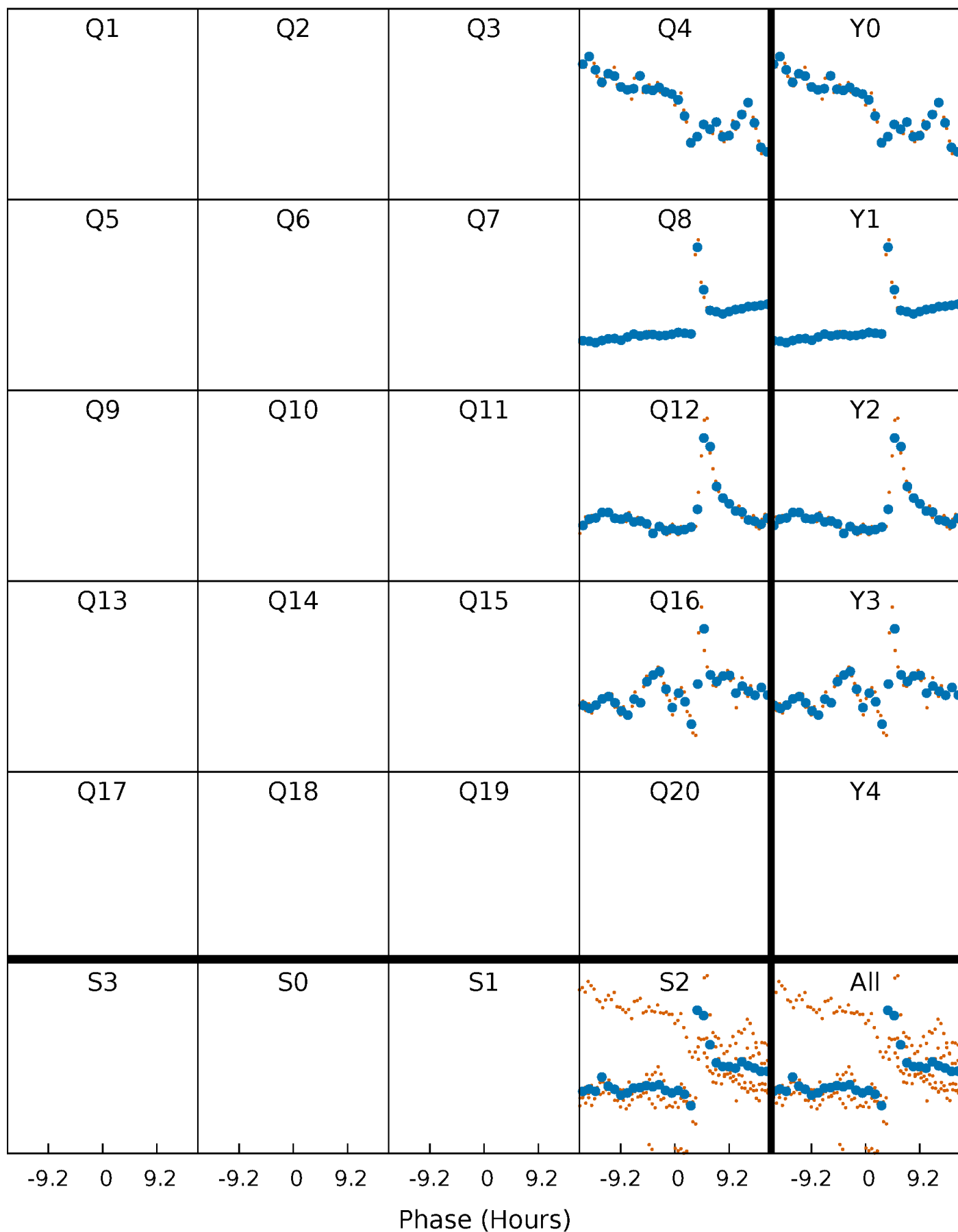


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



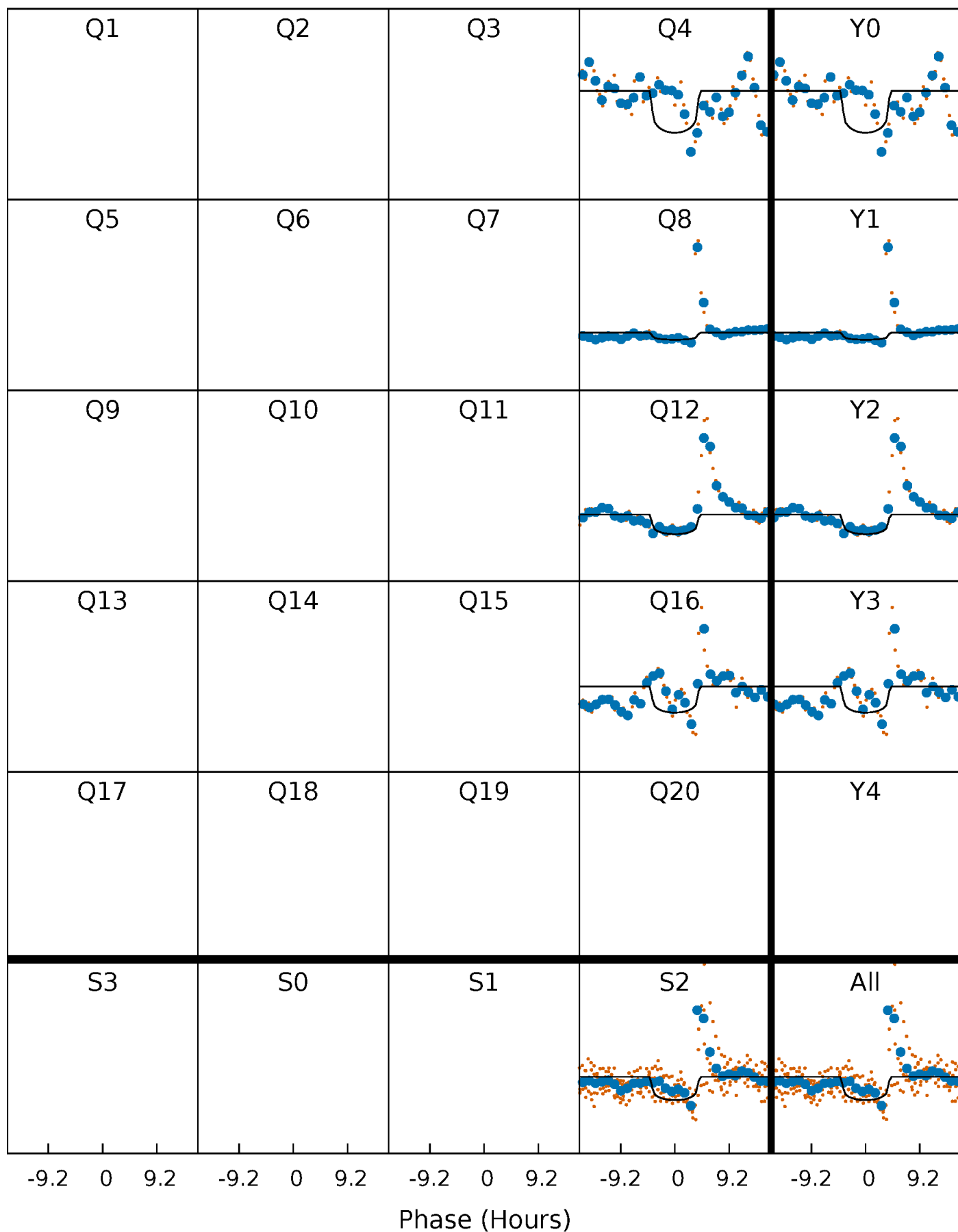
PDC Quarter-Phased Transit Curves

TCE 005608037-04 P=365.923607 Days $T_0=407.463903$ (BKJD)



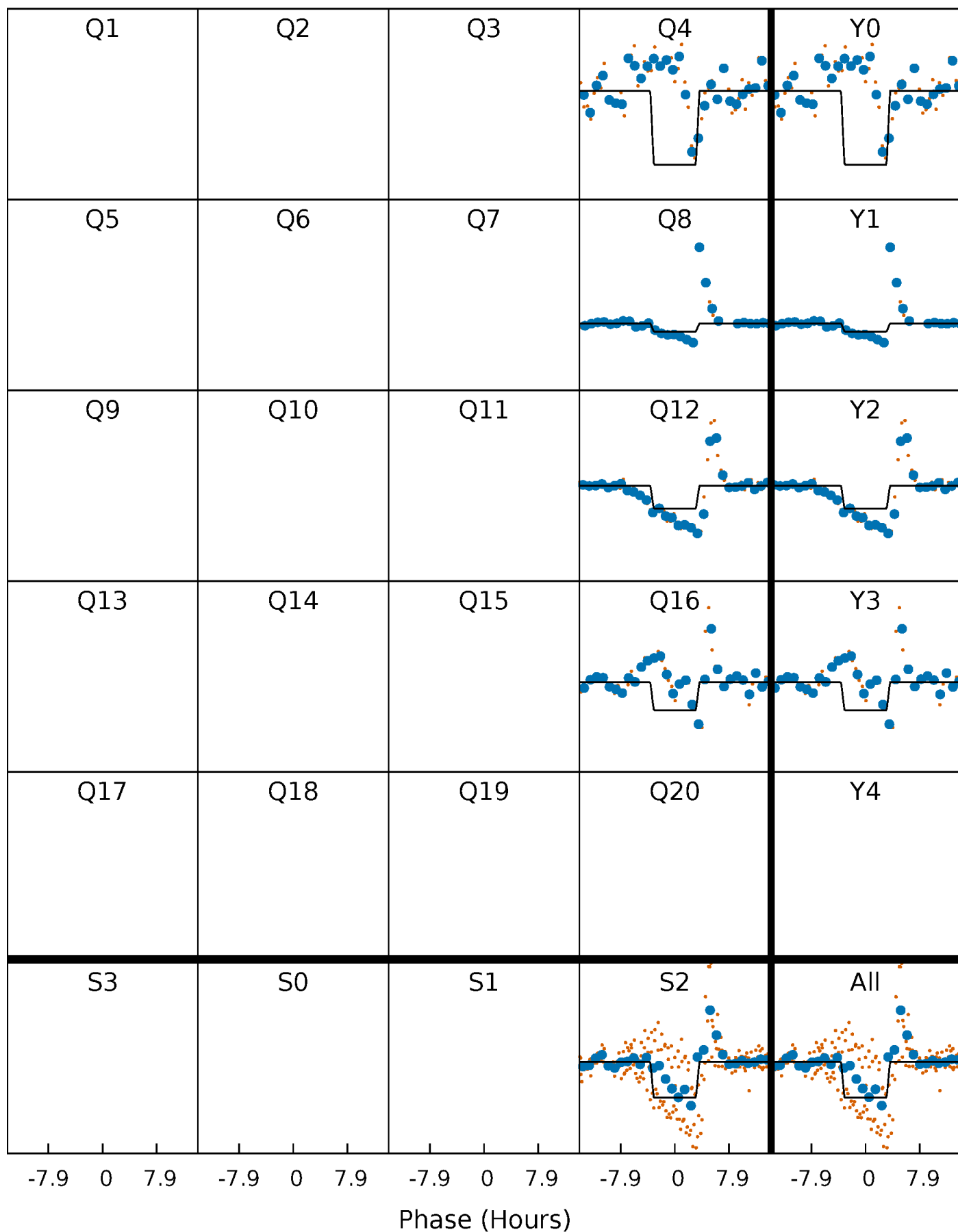
DV Quarter-Phased Transit Curves

TCE 005608037-04 $P=365.923607$ Days $T_0=407.463903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

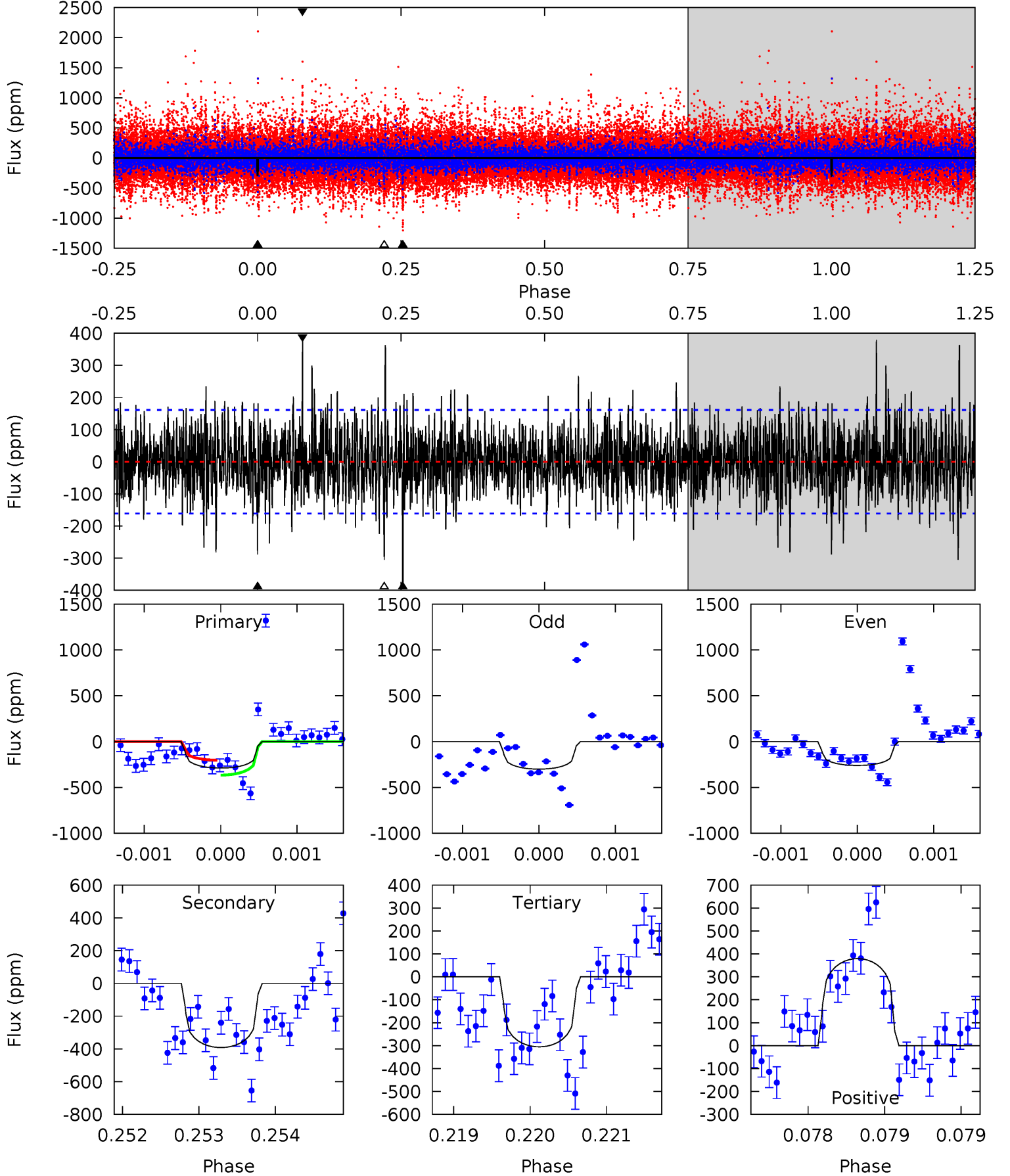
TCE 005608037-04 $P=365.917381$ Days $T_0=407.465067$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-04, P = 365.923607 Days, E = 41.540296 Days

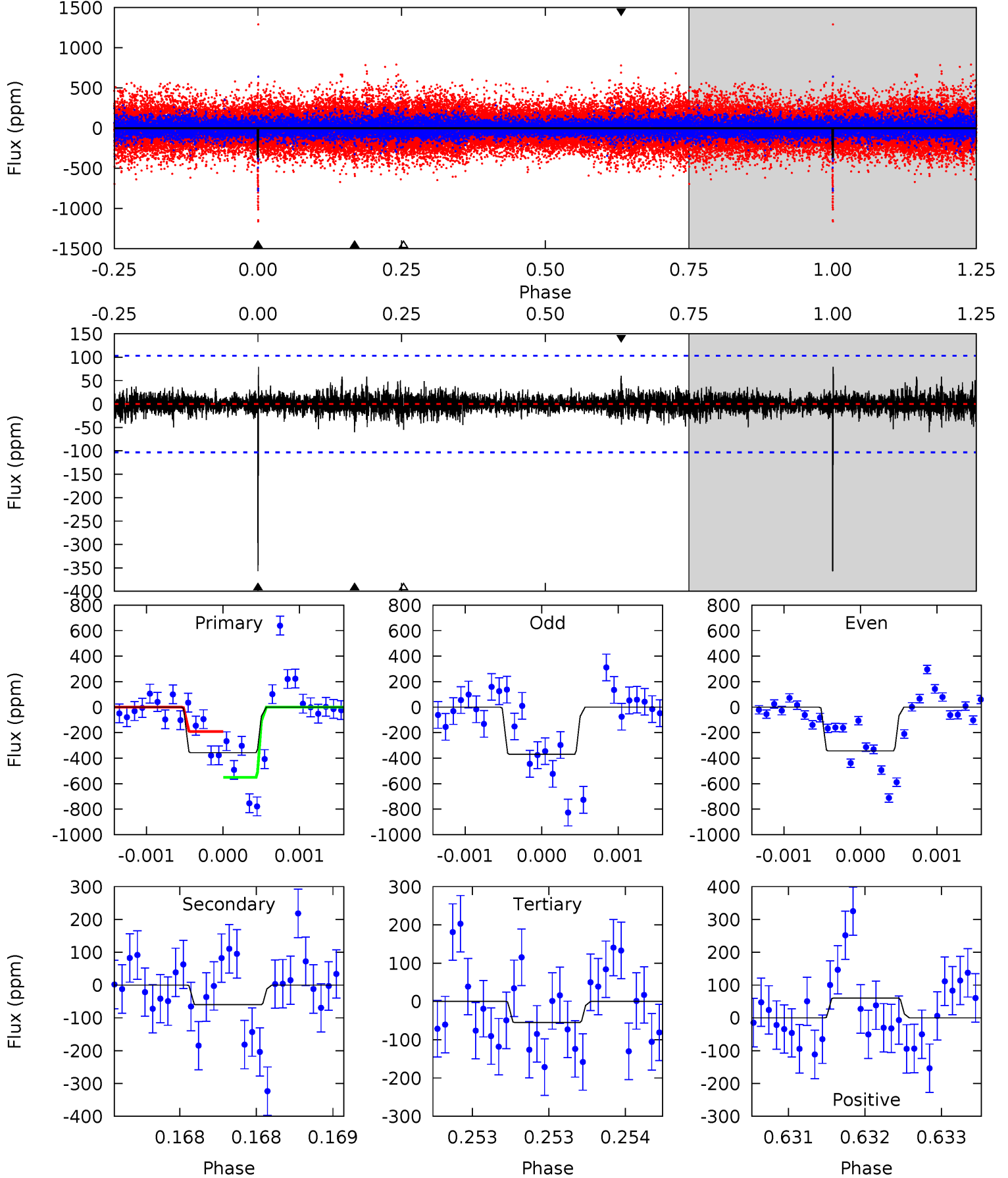
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	13.3	10.4	12.9	5.46	3.31	2.55	-0.58	-3.09	2.93	0.42	0.55	1.04	0.49	2.77



Alt Model-Shift Uniqueness Test

005608037-04, $P = 365.917381$ Days, $E = 41.547686$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	3.19	2.92	3.21	5.49	3.36	0.64	16.1	15.8	0.27	-0.01	0.67	1.00	0.18	9.53



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-392 ± 29	$6.83^{+7.21}_{-4.38}$	504^{+38}_{-38}	4691^{+3182}_{-1070}	4496^{+31497}_{-3382}
Alt.	-60 ± 19	$7.35^{+6.98}_{-4.86}$	503^{+41}_{-36}	3306^{+1539}_{-570}	606^{+4313}_{-451}

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

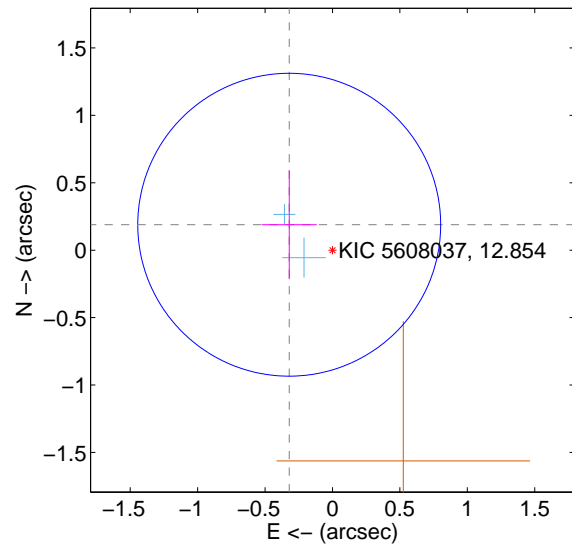
Supplemental centroid analysis for 005608037-04. Kepler magnitude: 12.85. Transit SNR 6.17

There are 2 quarters with good PRF difference image offsets

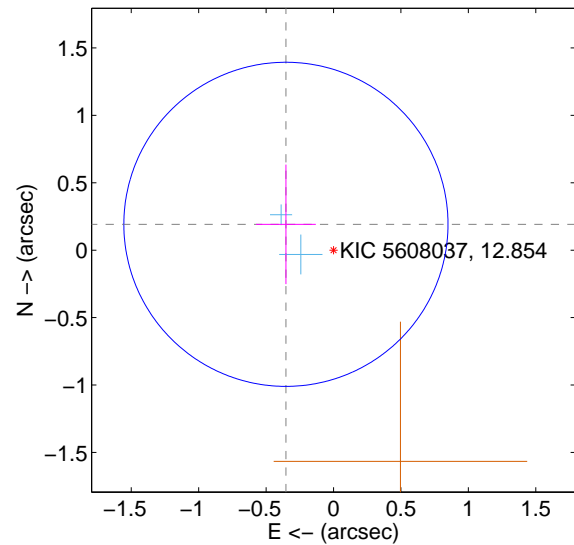
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.372 ± 0.374	0.99	0.321 ± 0.204	0.189 ± 0.404
PRF-fit source offset from KIC position	0.402 ± 0.401	1.00	0.353 ± 0.222	0.192 ± 0.443
photometric centroid source offset	0.26 ± 0.34	0.76	-0.25 ± 0.34	-0.08 ± 0.33

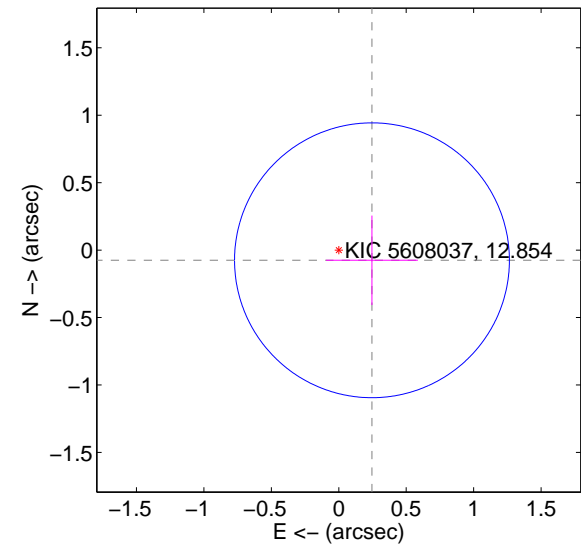
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

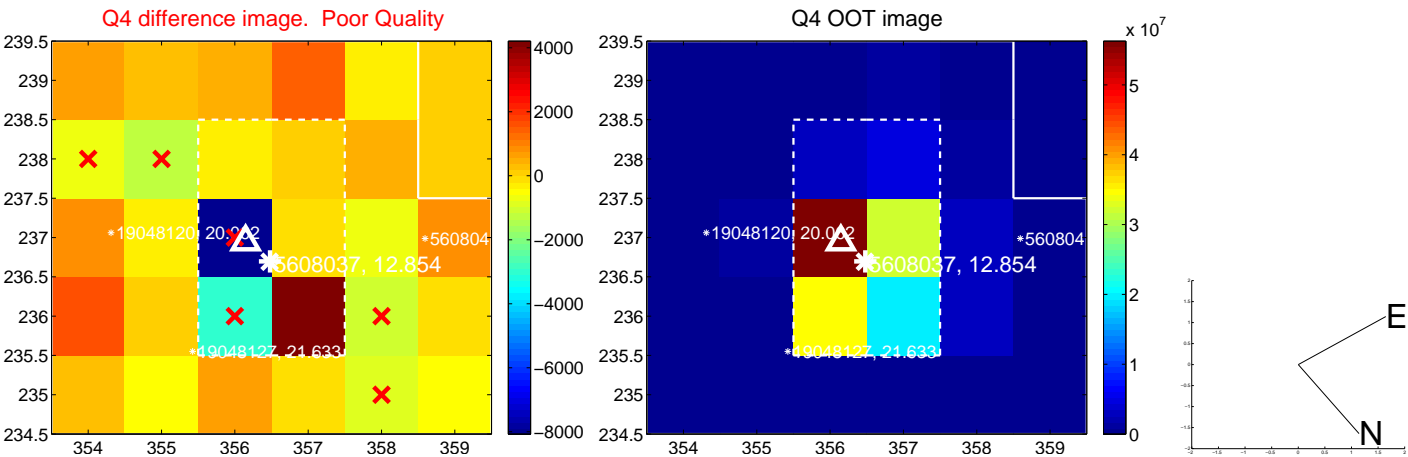


offset from photometric centroids

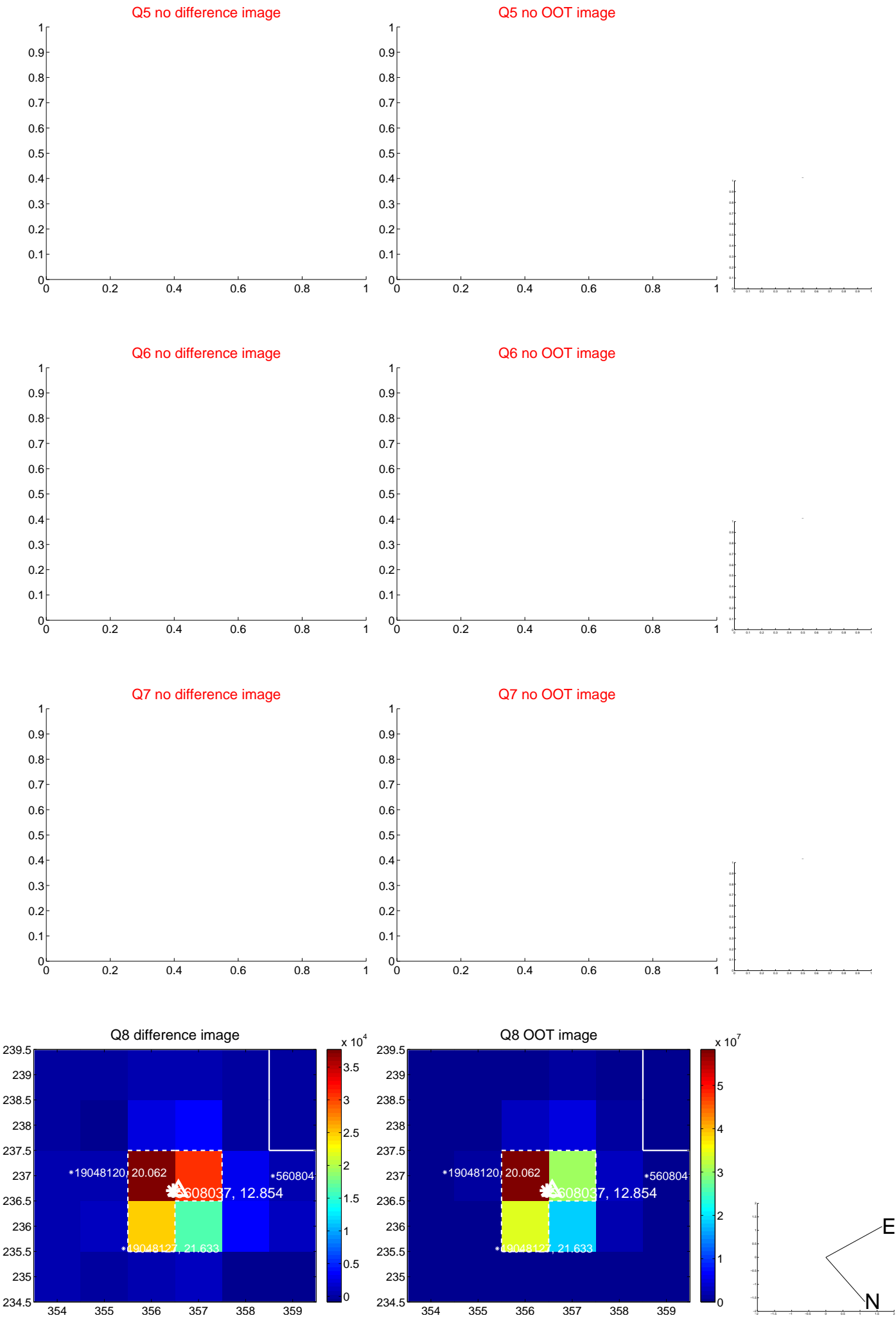


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

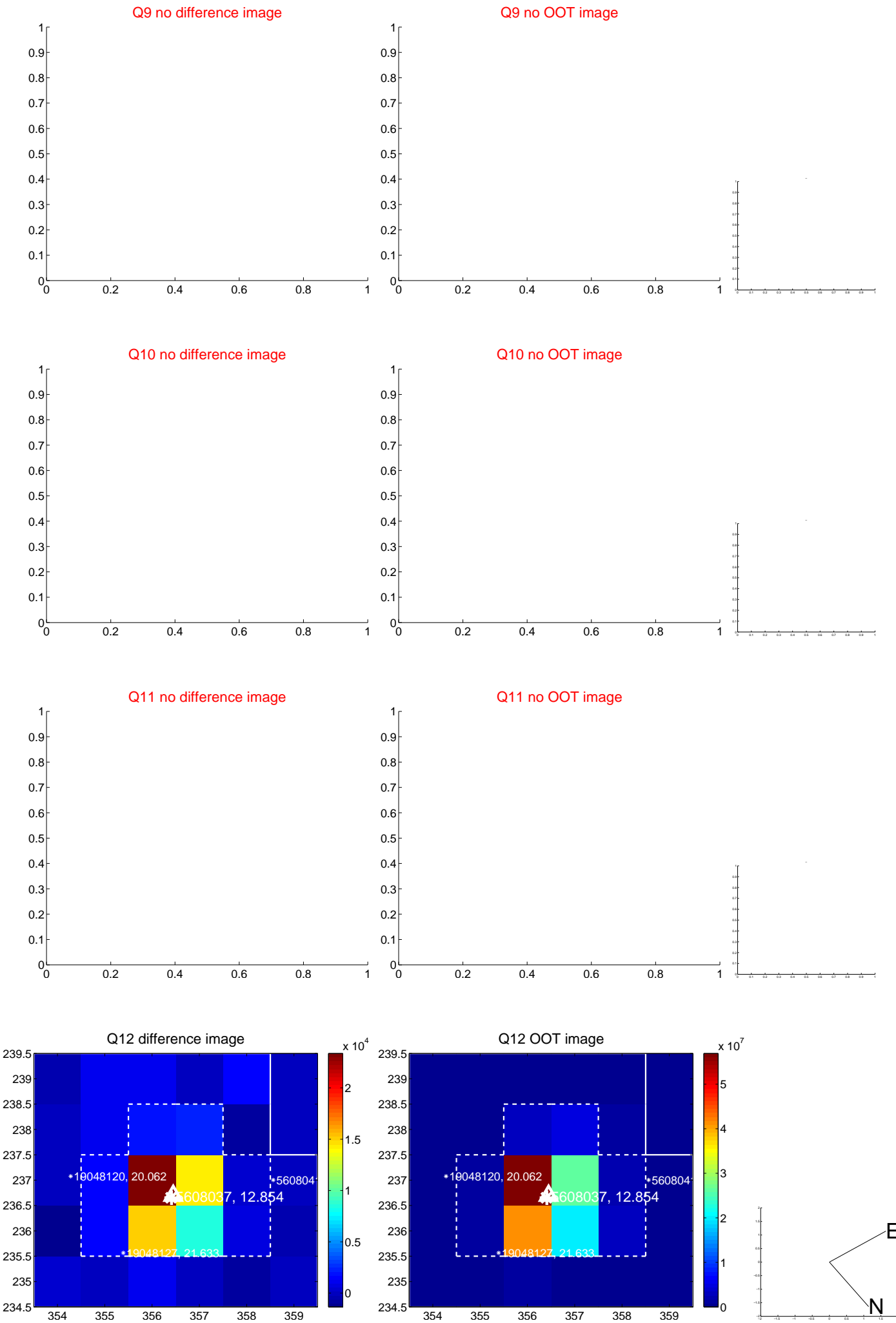
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



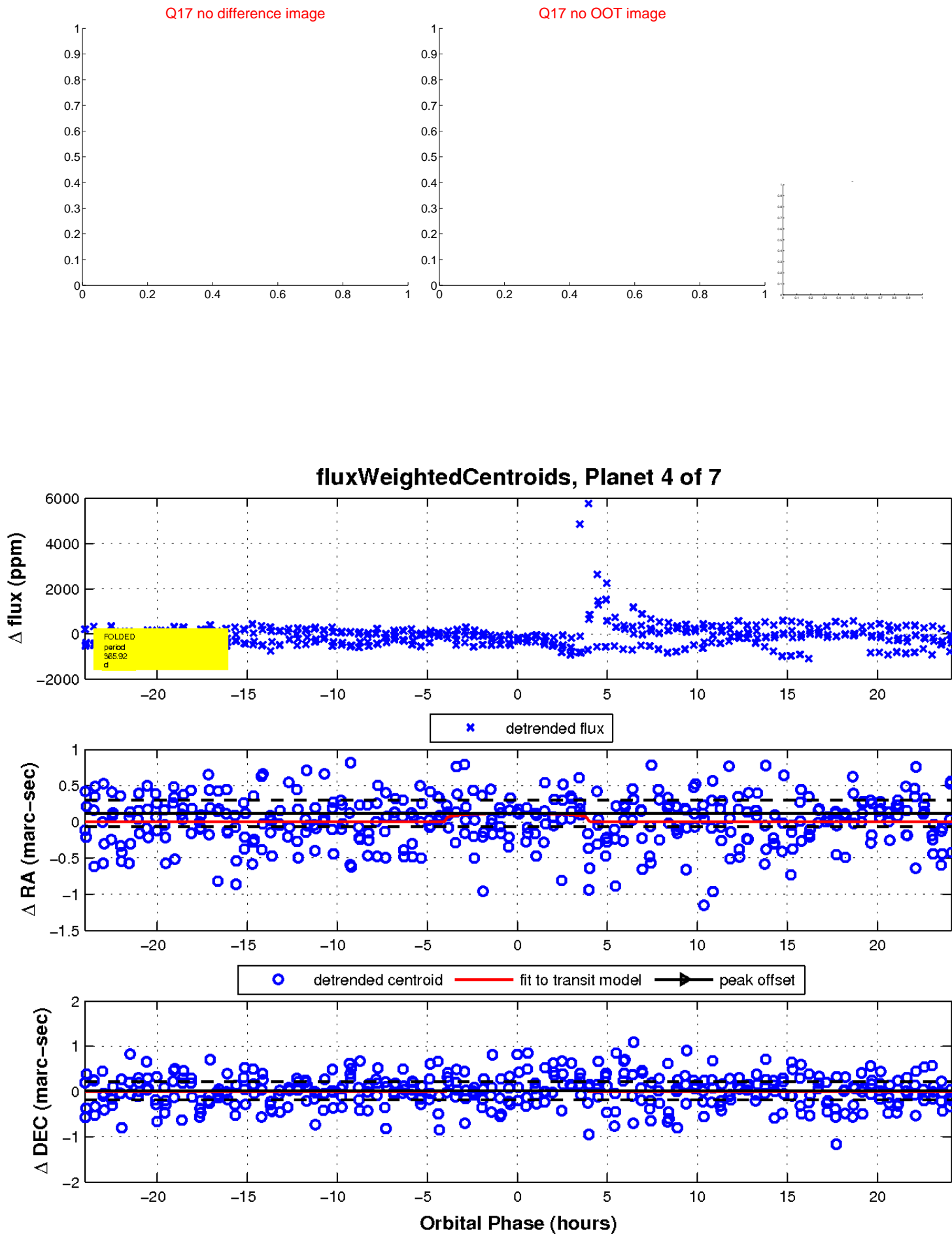
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

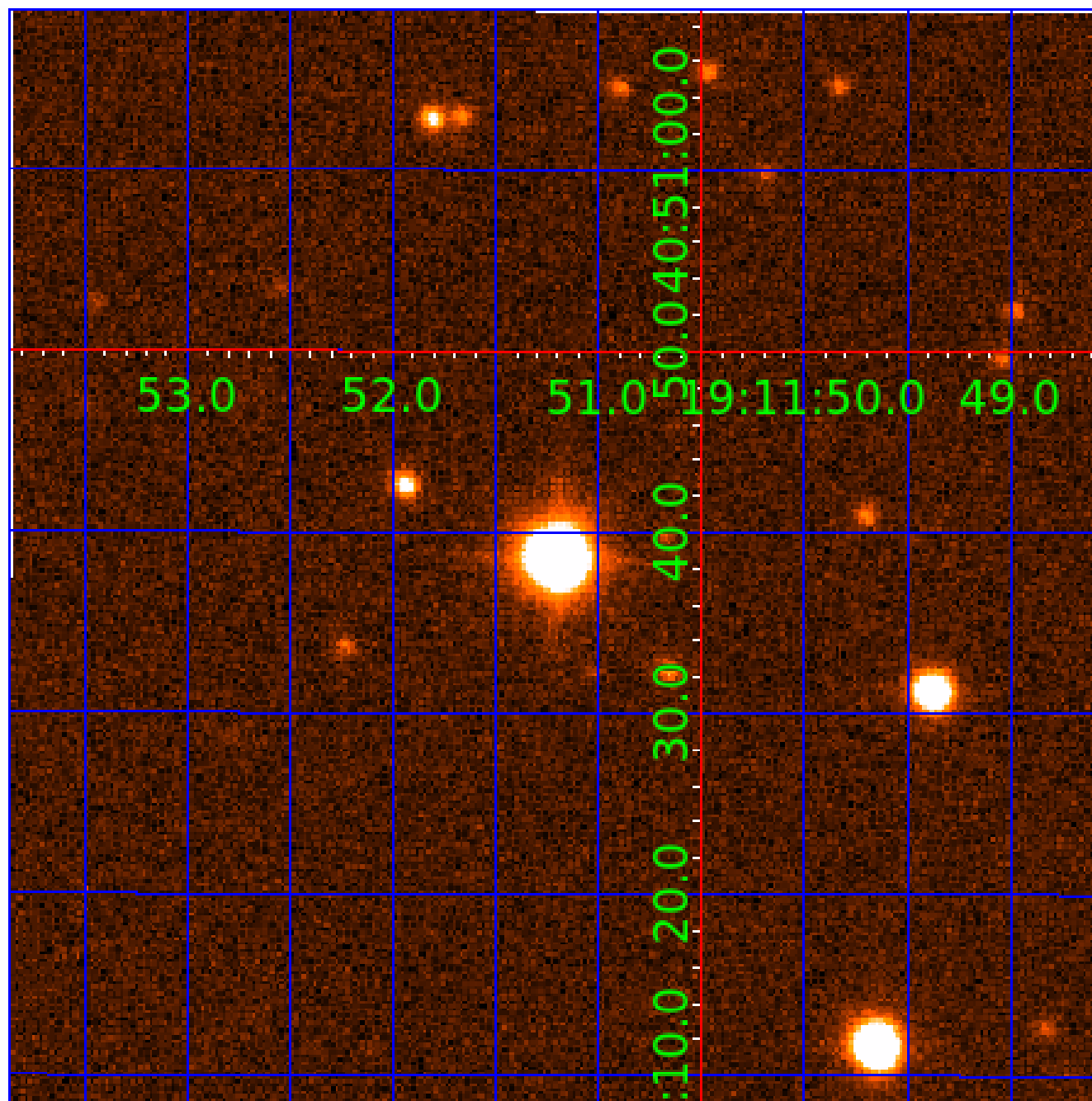


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

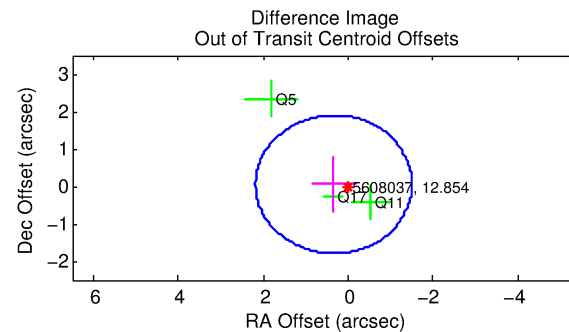
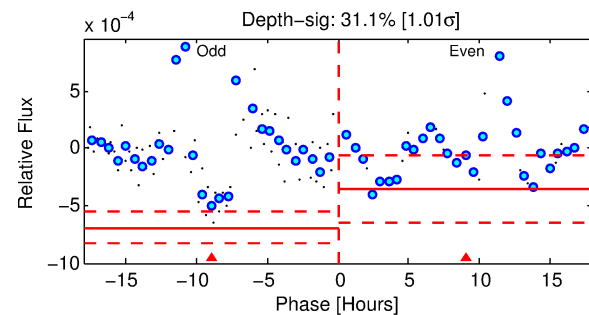
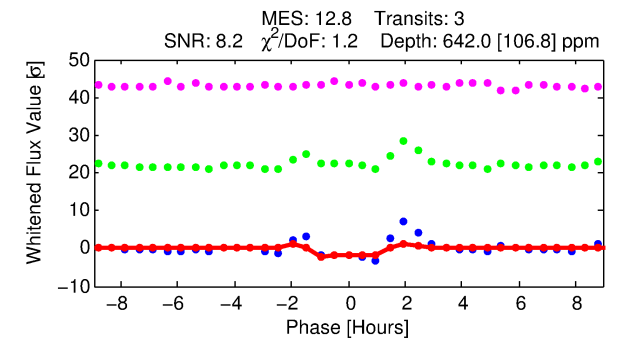
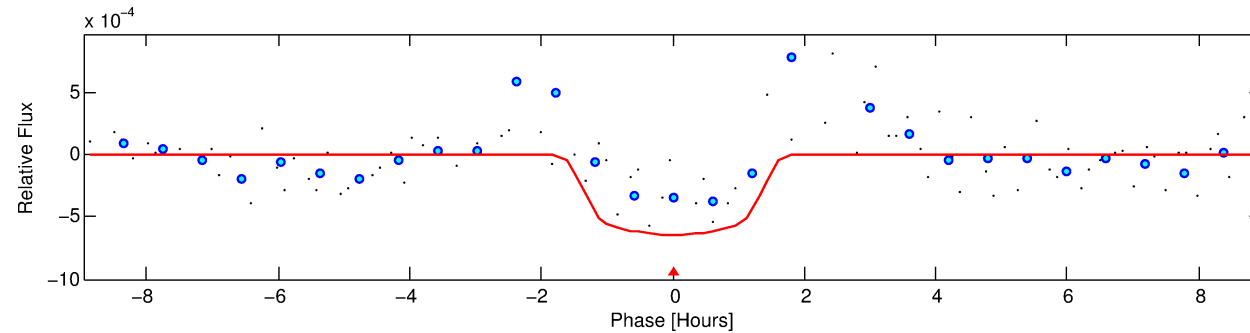
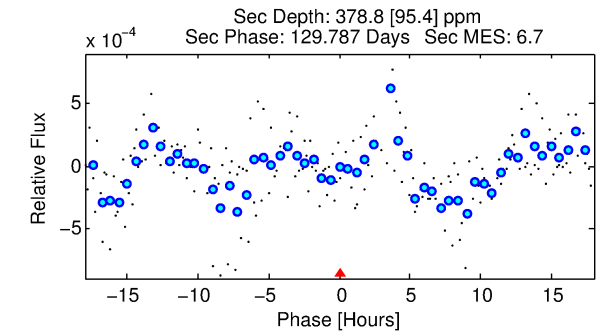
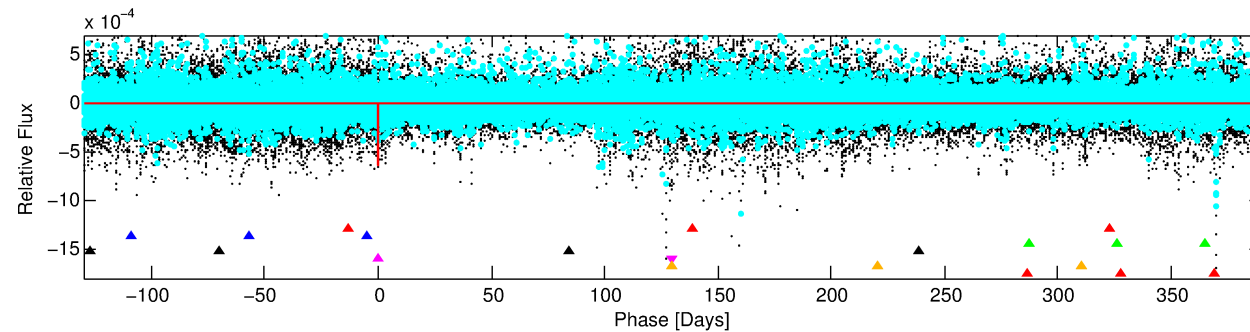
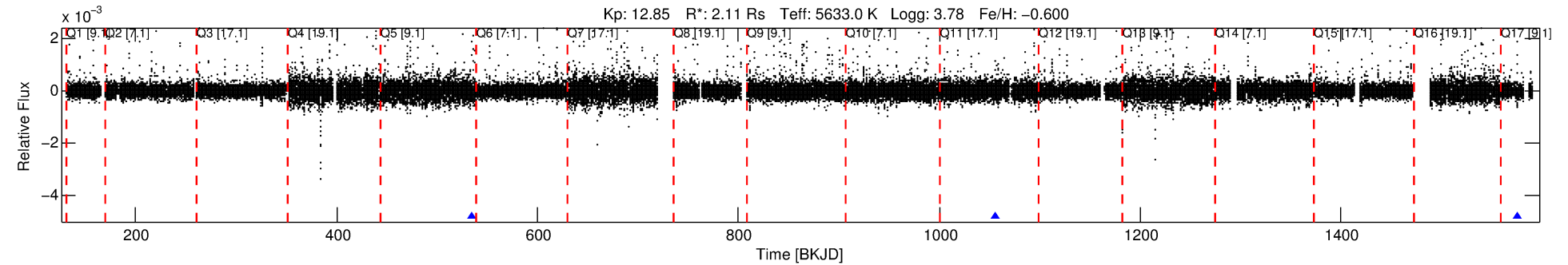
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-05

No Significant Match Found

DV One-Page Summary

KIC: 5608037 Candidate: 5 of 7 Period: 520.539 d



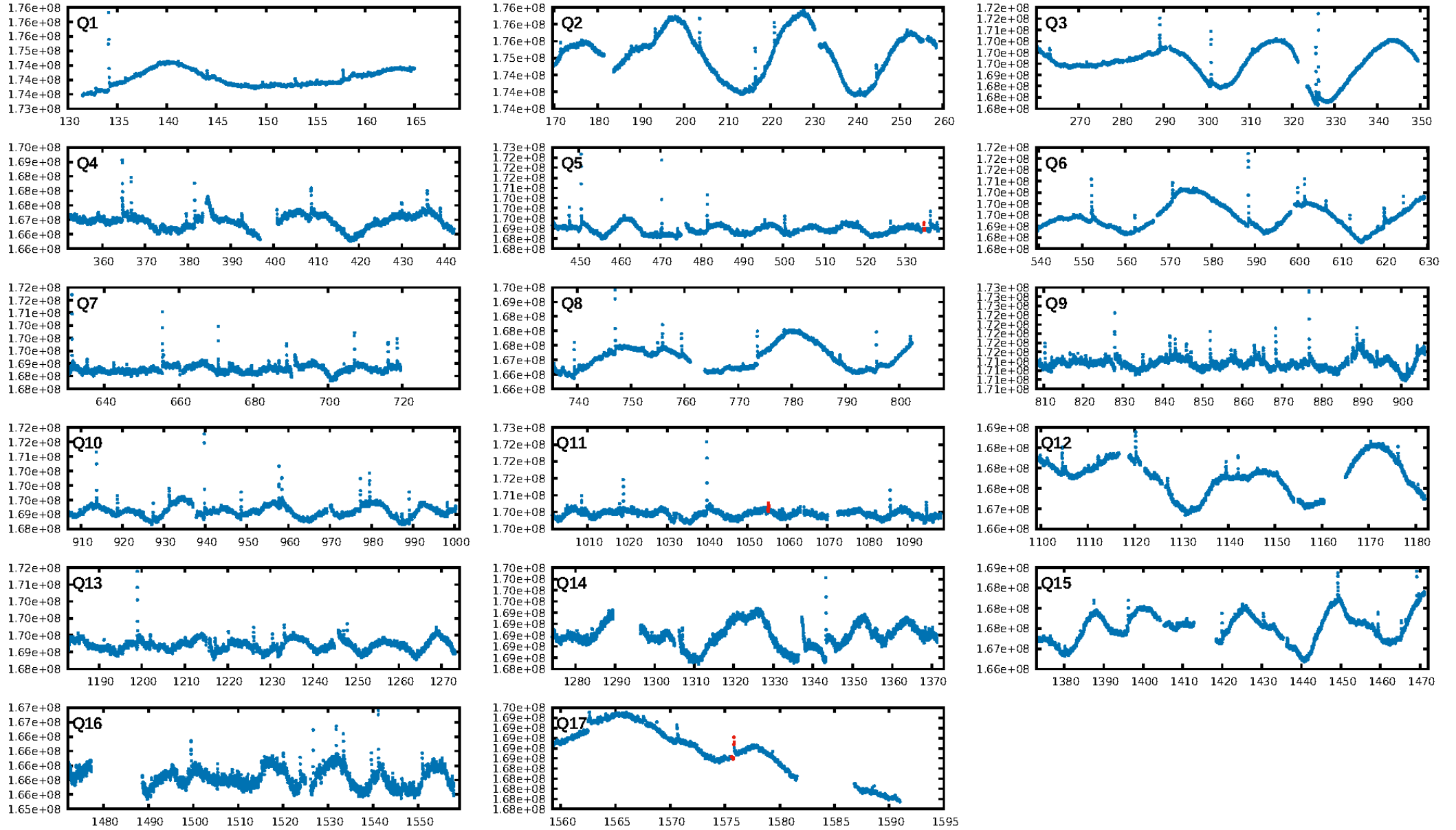
DV Fit Results:

Period = 520.53851 [0.00466] d
Epoch = 534.6545 [0.0069] BKJD
Rp/R* = 0.0246 [0.0476]
a/R* = 1035.29 [9401.38]
b = 0.67 [7.64]
Seff = 2.56 [1.08]
Teq = 322 [34] K
Rp = 5.68 [11.08] Re
a = 1.2553 [0.3212] AU
Ag = 10193.54 [39709.58] [0.26 σ]
Teffp = 5010 [4856] K [0.97 σ]

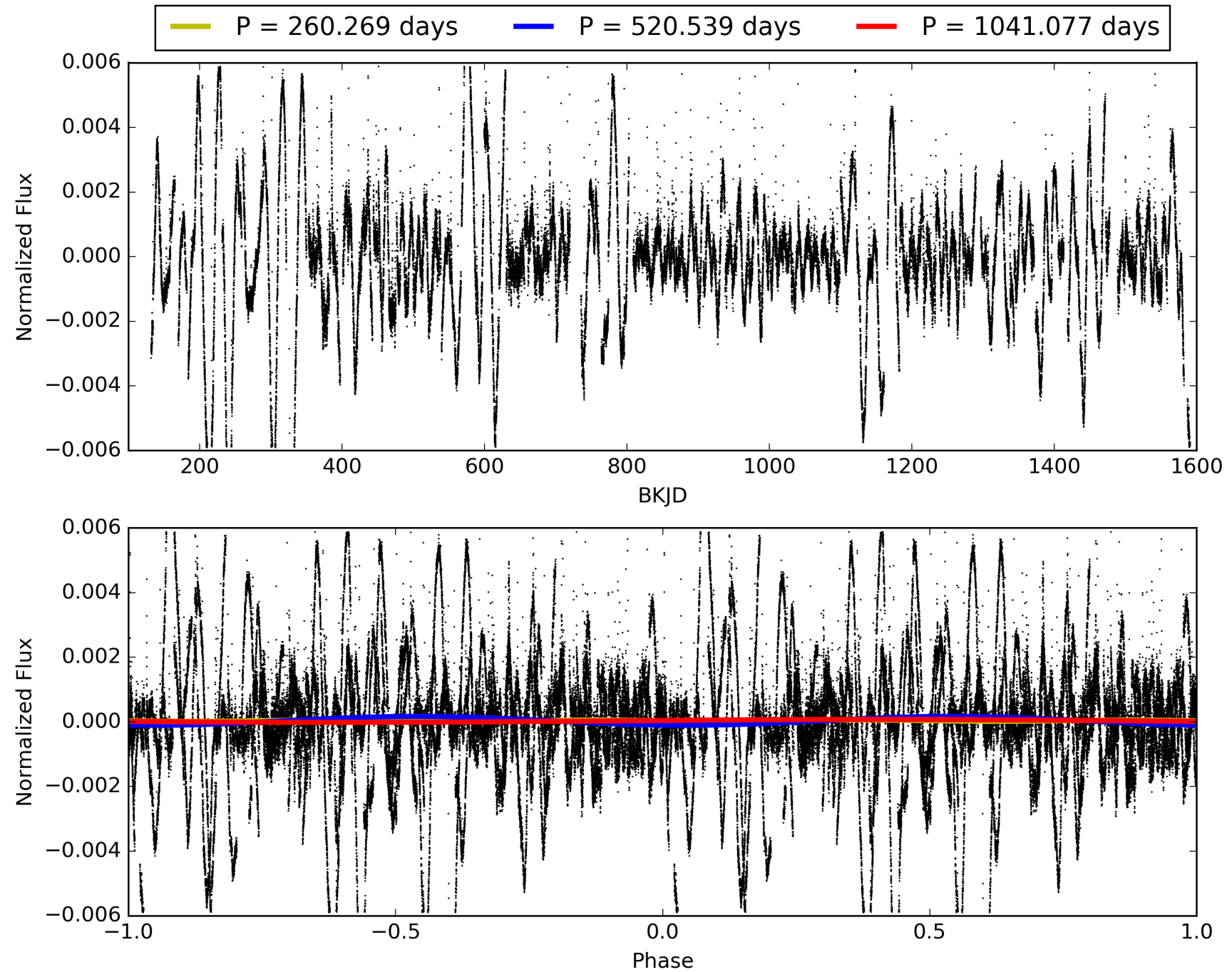
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [131.66 σ]
LongPeriod-sig: 100.0% [87.97 σ]
ModelChiSquare2-sig: 10.2%
ModelChiSquareGof-sig: 66.4%
Bootstrap-pfa: 1.12e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 5.754
Centroid-sig: 3.3%
Centroid-so: 0.808 arcsec [1.70 σ]
OotOffset-rm: 0.339 arcsec [0.55 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 0.380 arcsec [0.53 σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005608037-05, PDC Light Curves

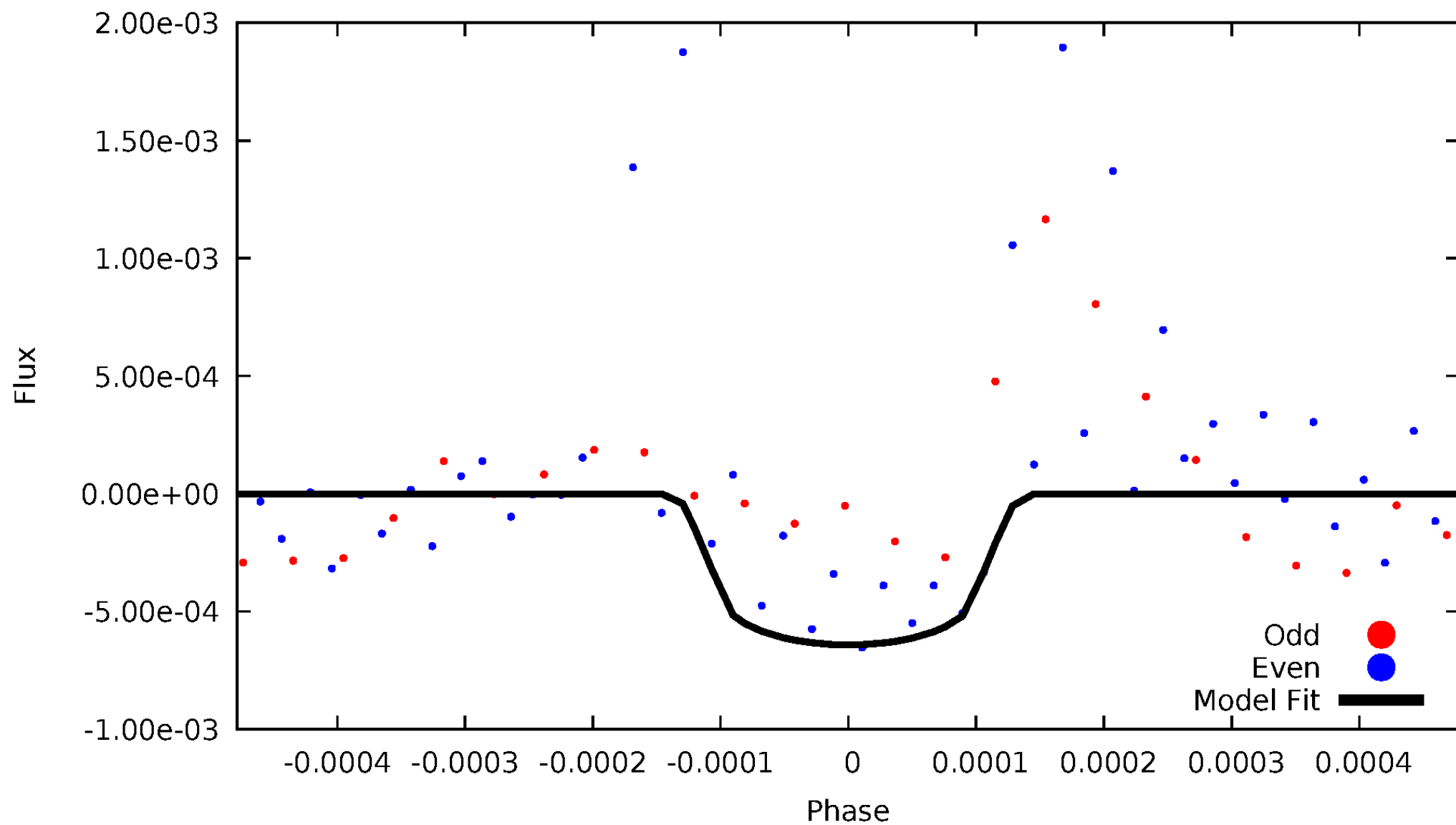


TCE 005608037-05



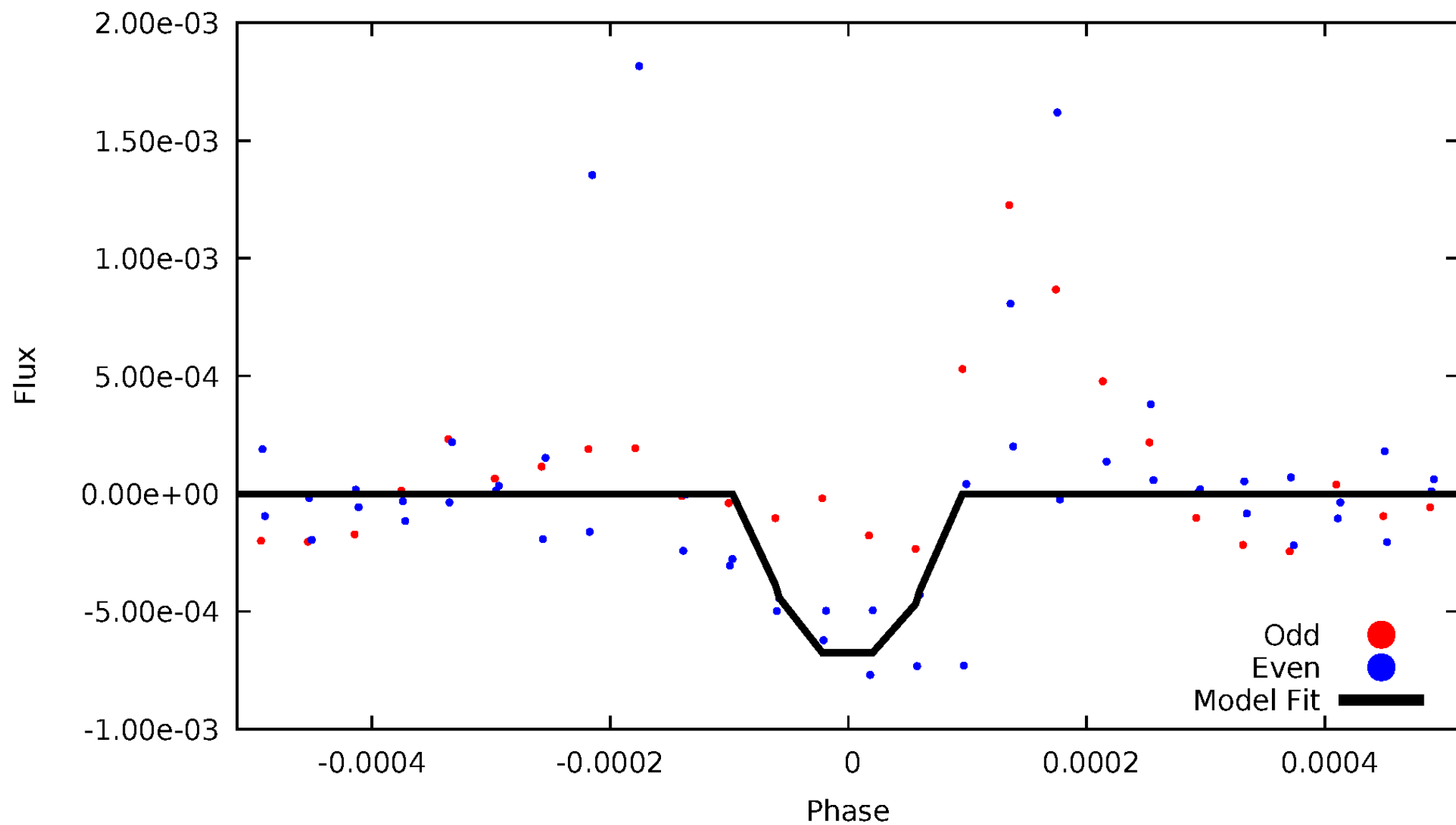
DV Odd/Even

TCE 005608037-05



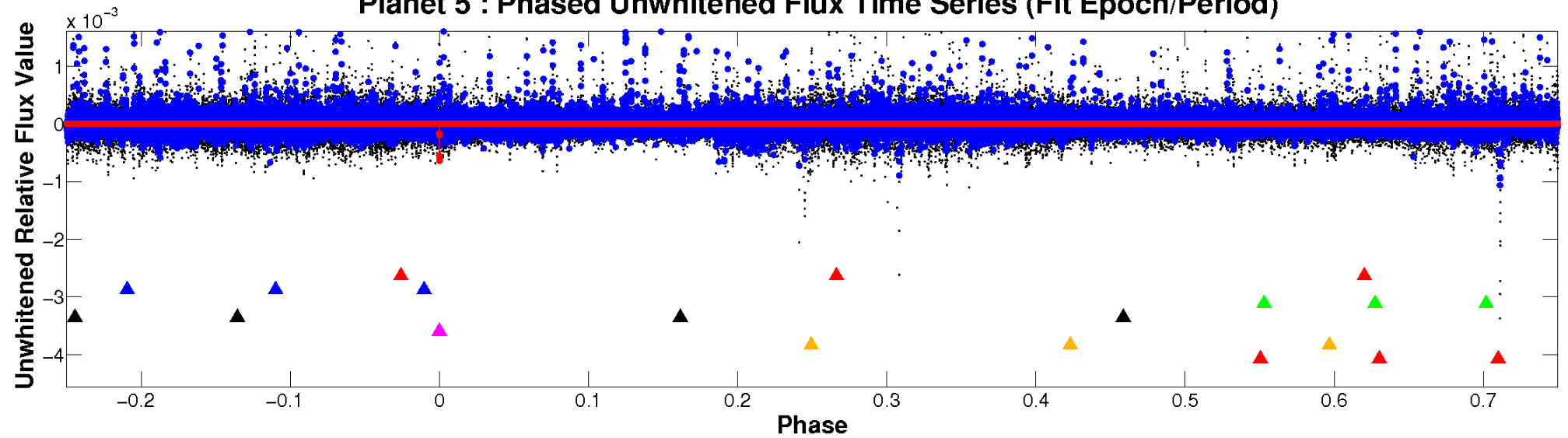
ALT Odd/Even

TCE 005608037-05

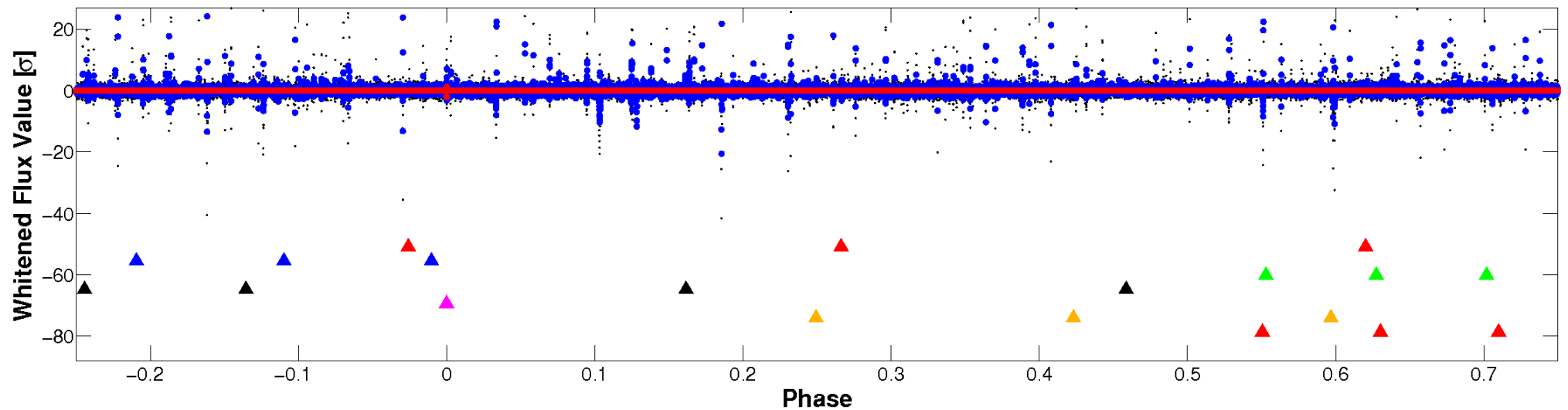


Non-Whitened Vs. Whitened Light Curve

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

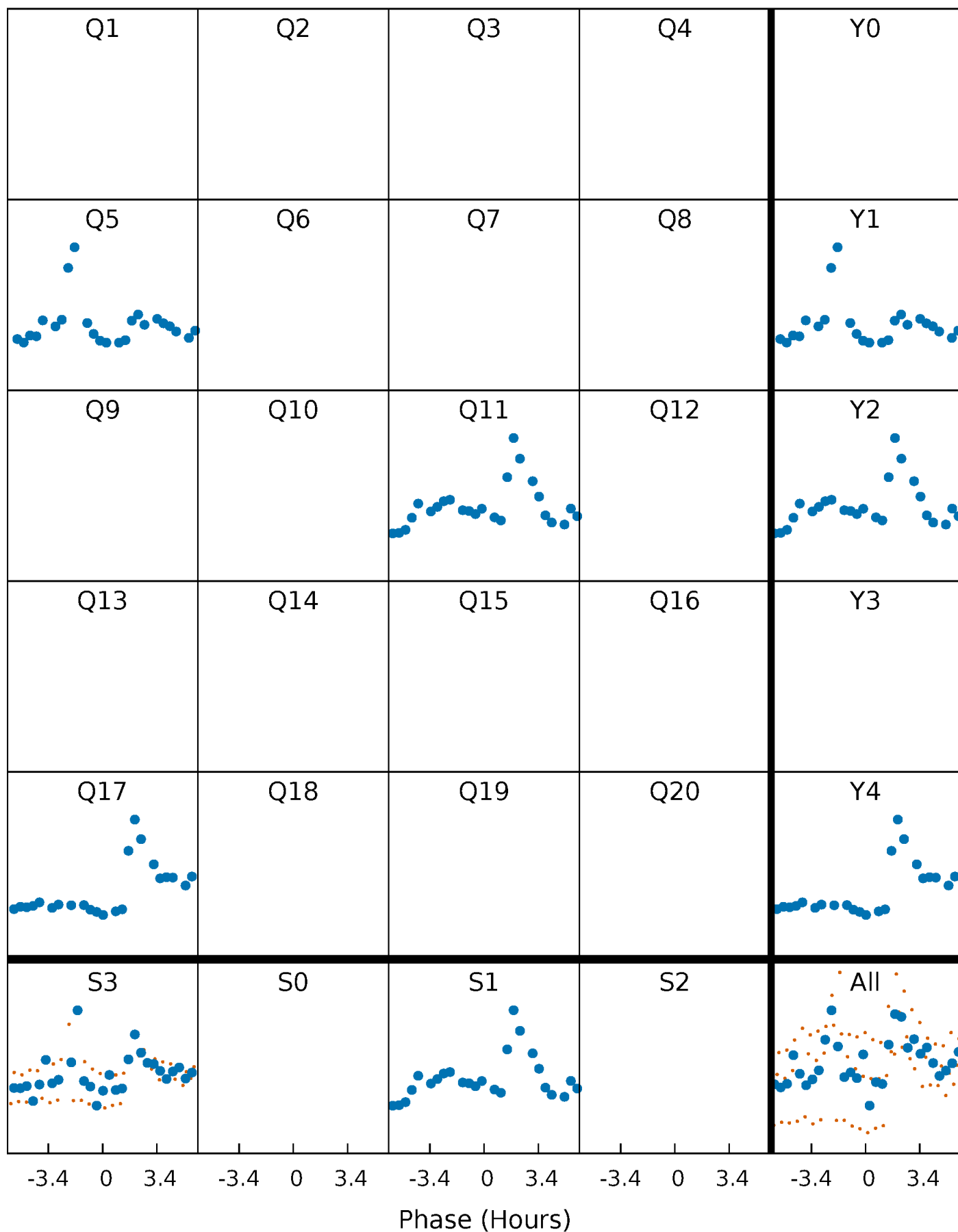


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



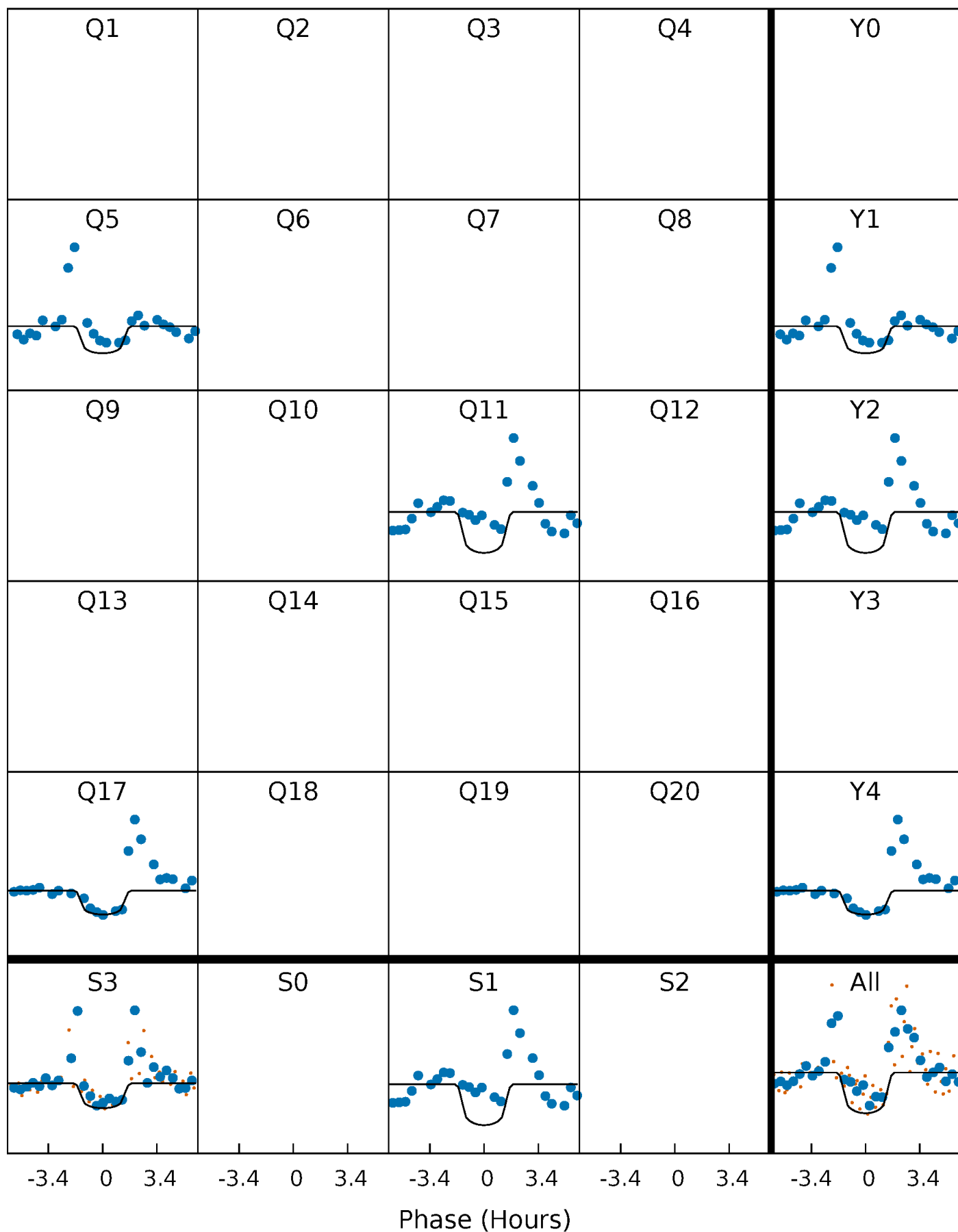
PDC Quarter-Phased Transit Curves

TCE 005608037-05 $P=520.538507$ Days $T_0=534.654484$ (BKJD)



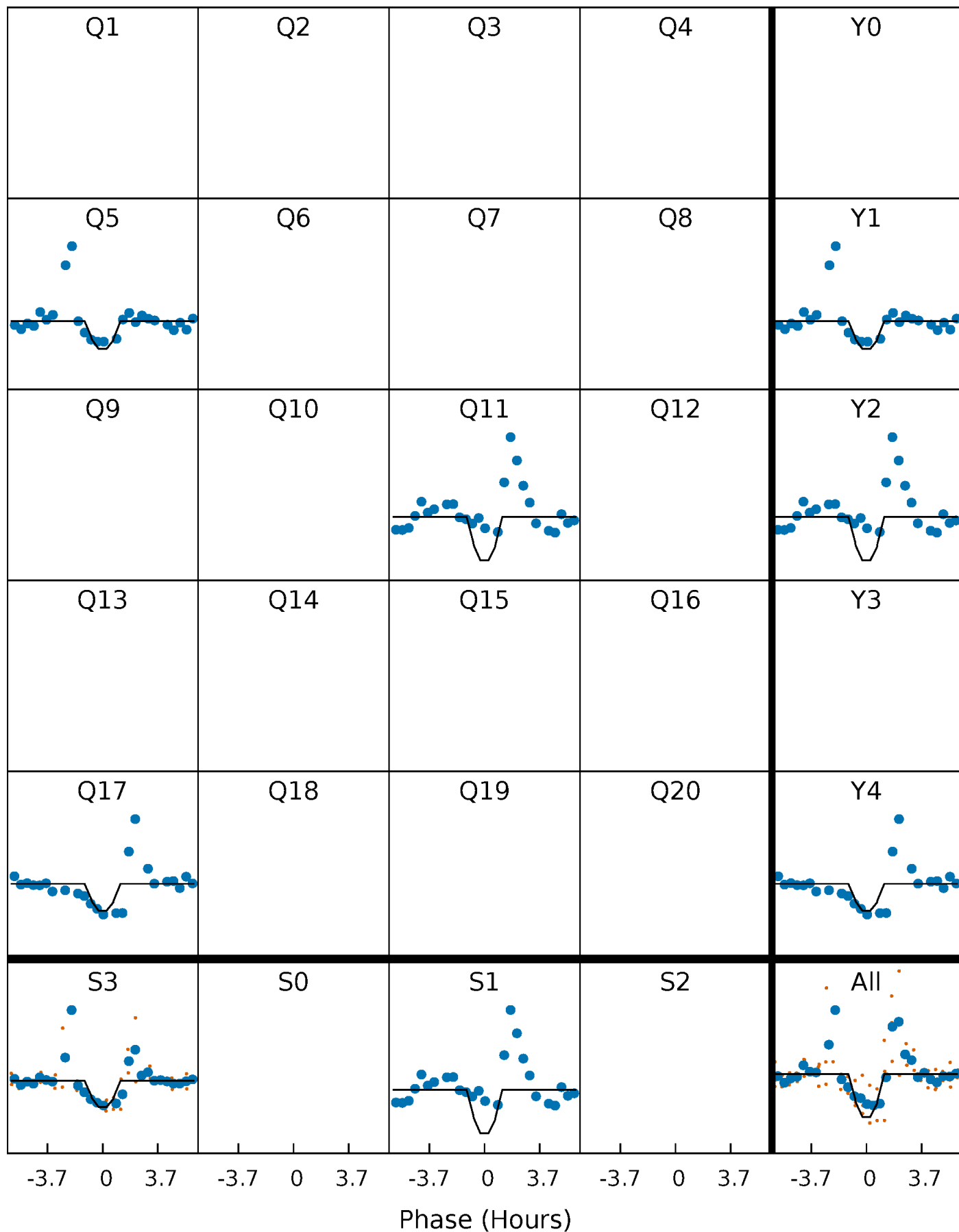
DV Quarter-Phased Transit Curves

TCE 005608037-05 $P=520.538507$ Days $T_0=534.654484$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

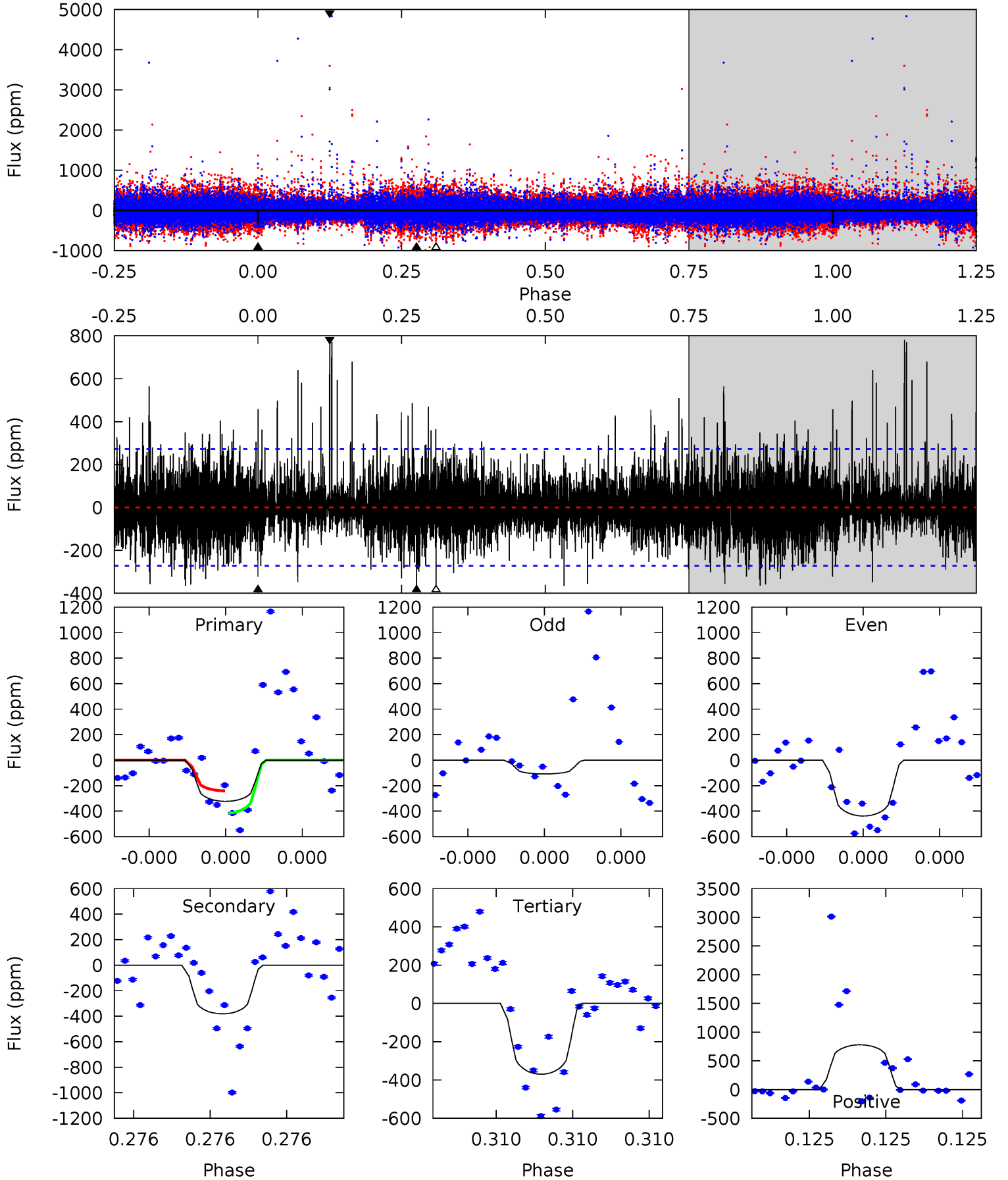
TCE 005608037-05 $P=520.524507$ Days $T_0=534.678544$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-05, P = 520.538507 Days, E = 14.115977 Days

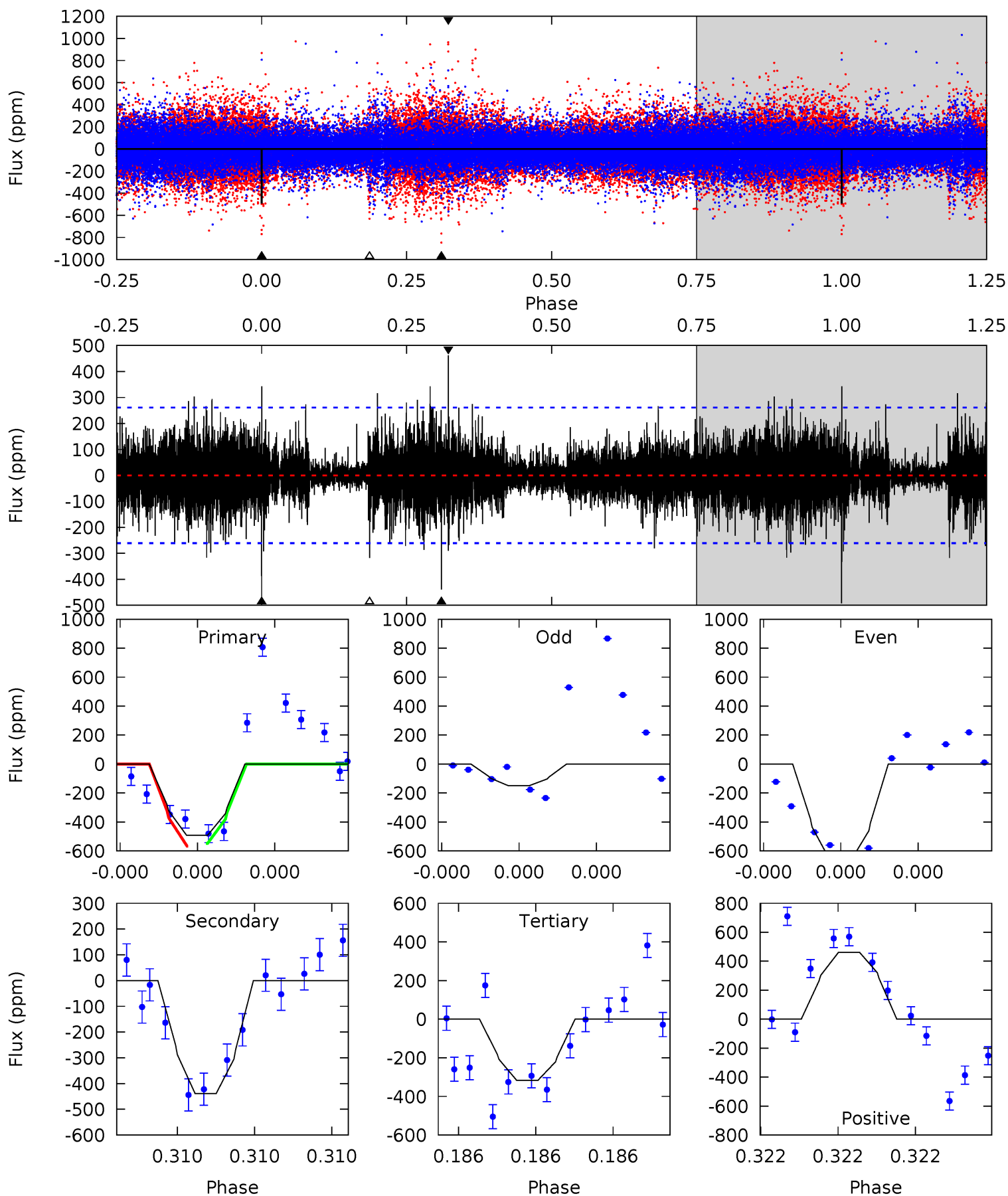
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.75	7.97	7.73	16.3	5.68	3.64	2.03	-0.98	-9.55	0.24	-8.34	2.34	1.17	0.67	1.83



Alt Model-Shift Uniqueness Test

005608037-05, P = 520.524507 Days, E = 14.154037 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	9.70	7.02	10.2	5.77	3.78	1.38	3.87	0.68	2.69	-0.51	4.96	0.89	0.48	0.19



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-381 ± 48	$9.20^{+9.51}_{-6.23}$	446^{+34}_{-33}	4142^{+2719}_{-833}	3916^{+32053}_{-2967}
Alt.	-439 ± 45	$10.04^{+9.48}_{-6.77}$	448^{+31}_{-32}	4163^{+2681}_{-829}	3825^{+32922}_{-2801}

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

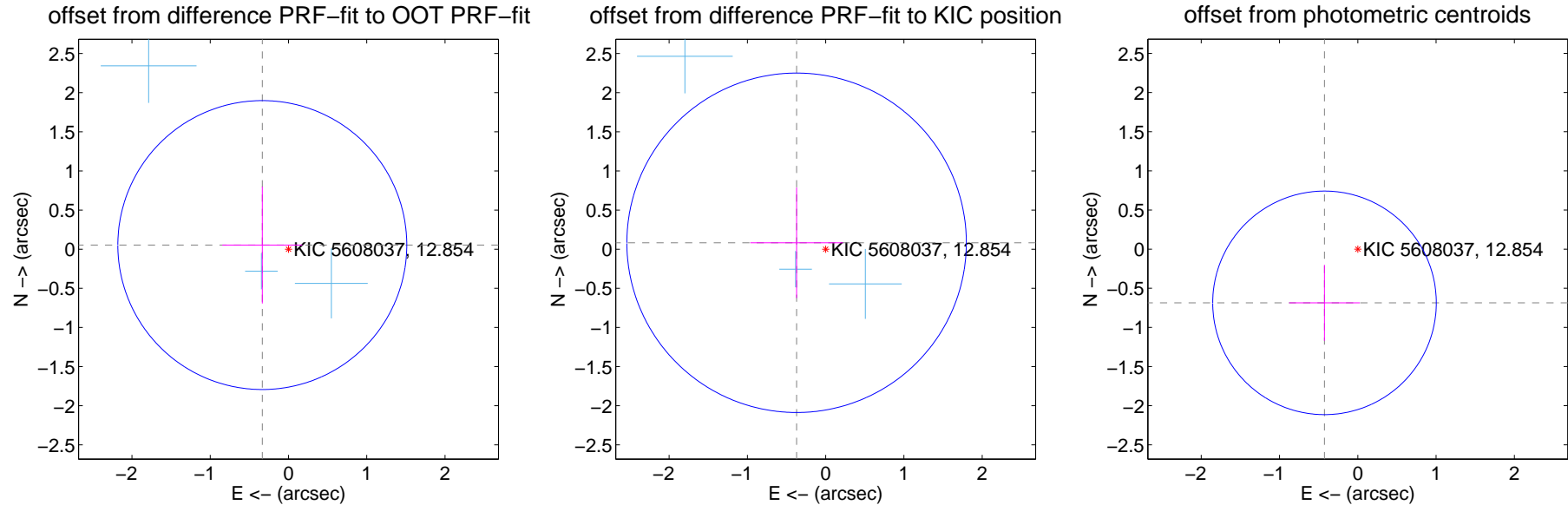
DV Centroid Data

Supplemental centroid analysis for 005608037-05. Kepler magnitude: 12.85. Transit SNR 8.21

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.339 ± 0.615	0.55	0.335 ± 0.510	0.053 ± 0.746
PRF-fit source offset from KIC position	0.380 ± 0.723	0.53	0.371 ± 0.592	0.082 ± 0.706
photometric centroid source offset	0.81 ± 0.48	1.70	0.43 ± 0.45	-0.69 ± 0.49

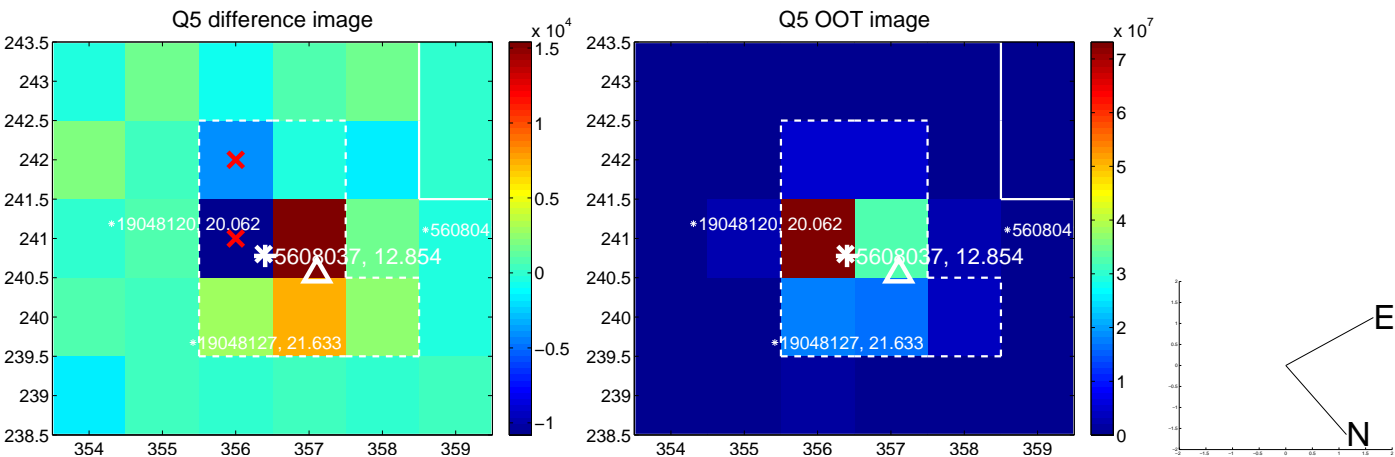


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

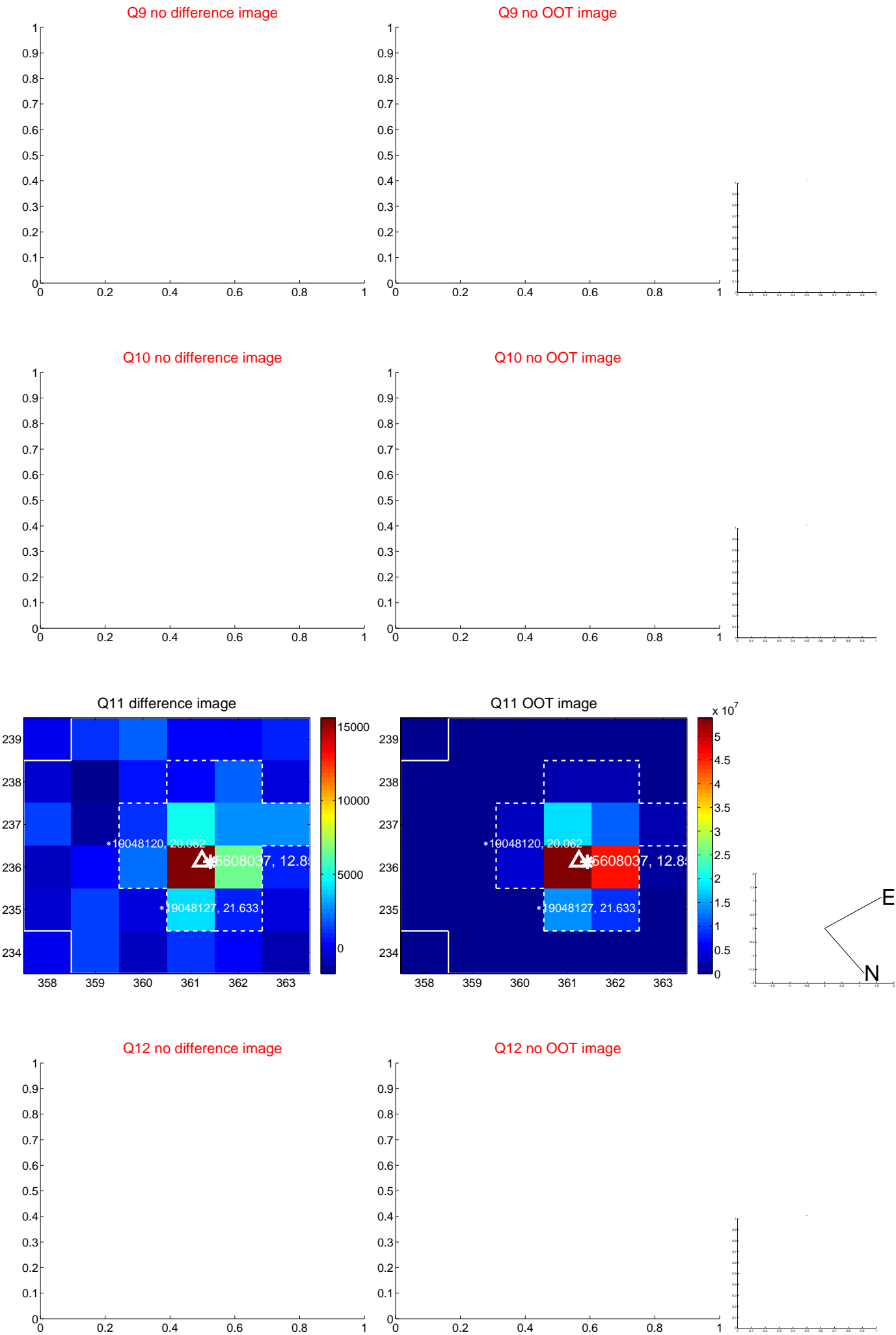
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



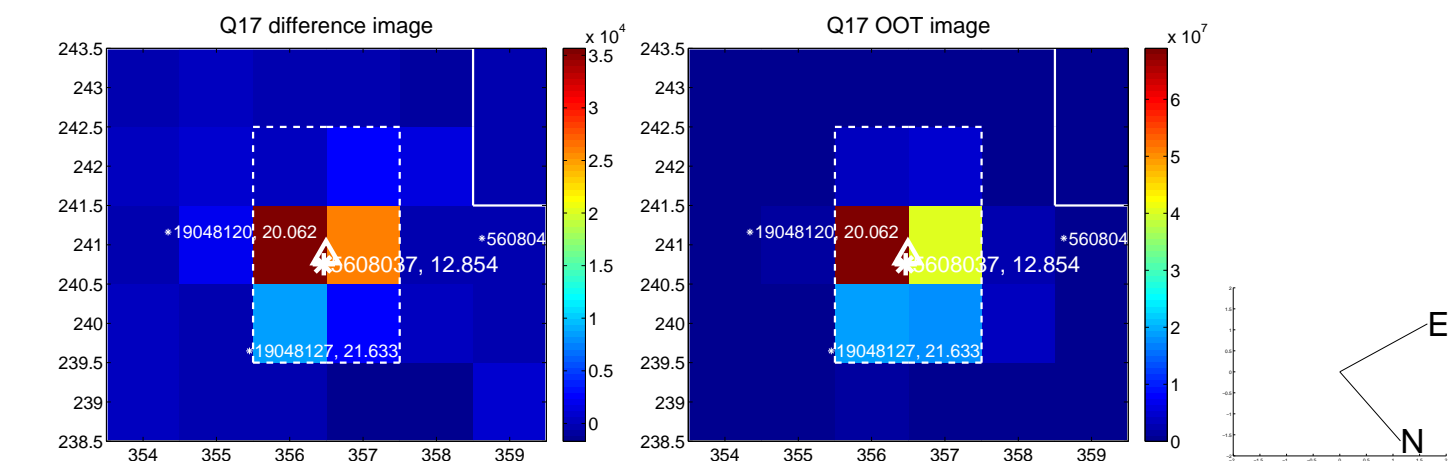
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



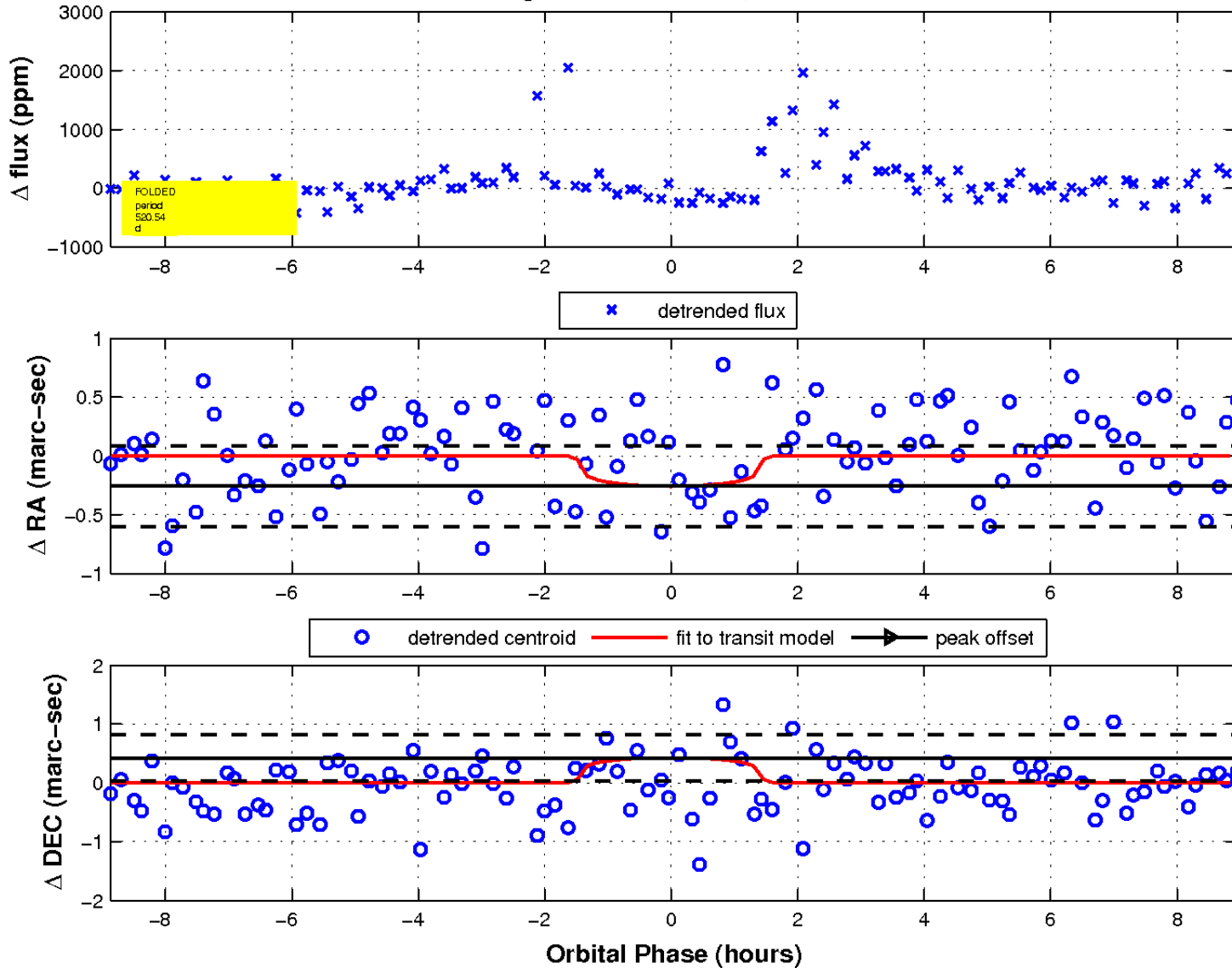
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

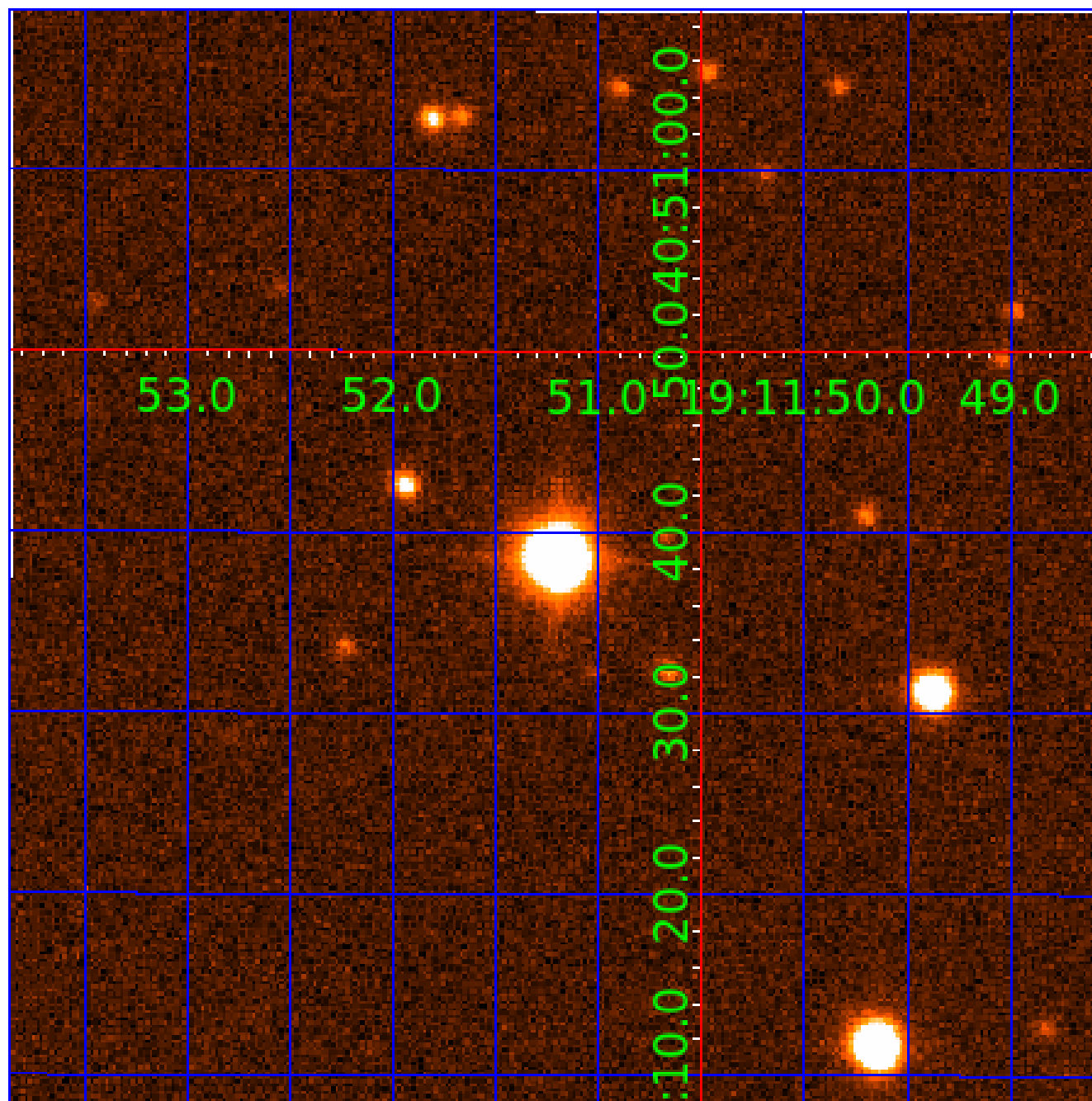


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

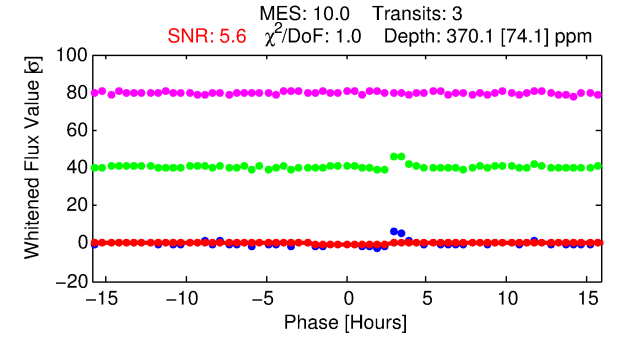
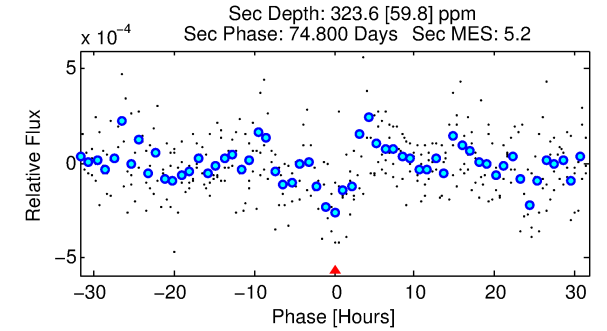
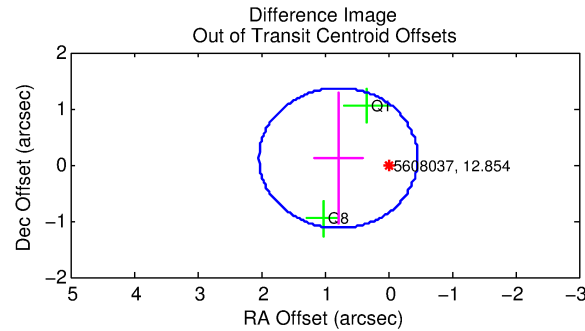
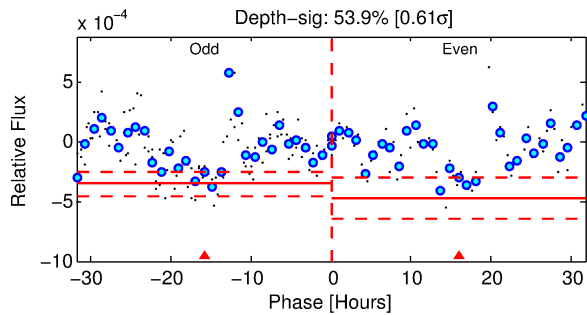
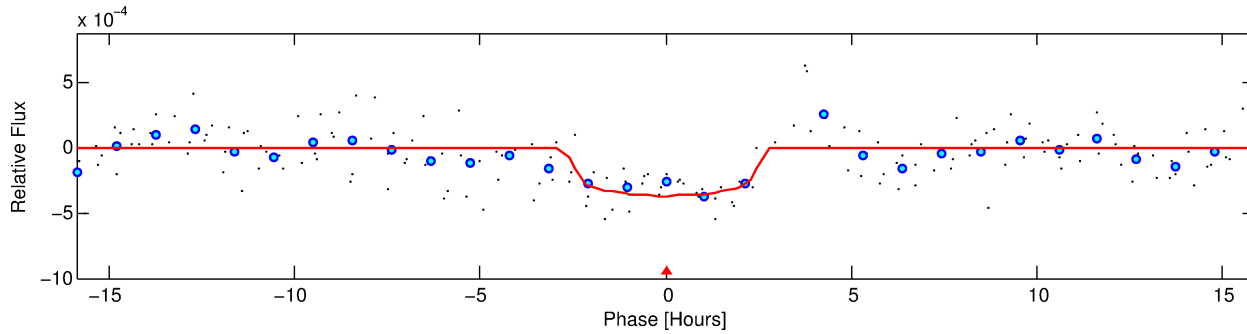
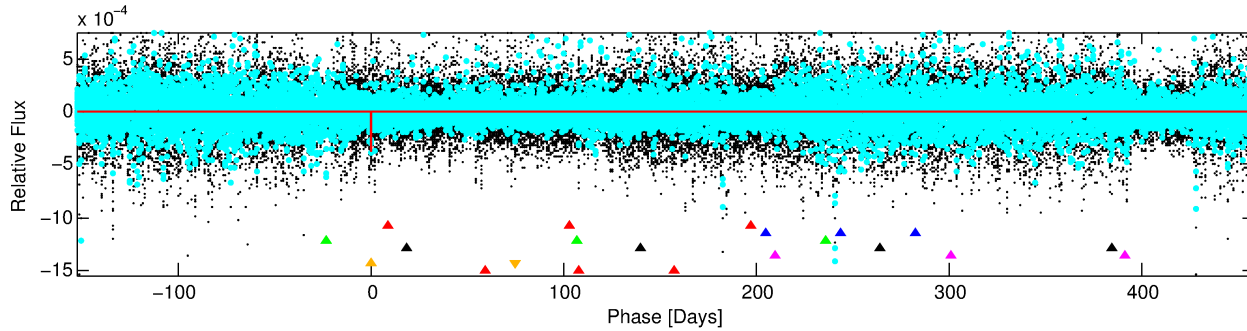
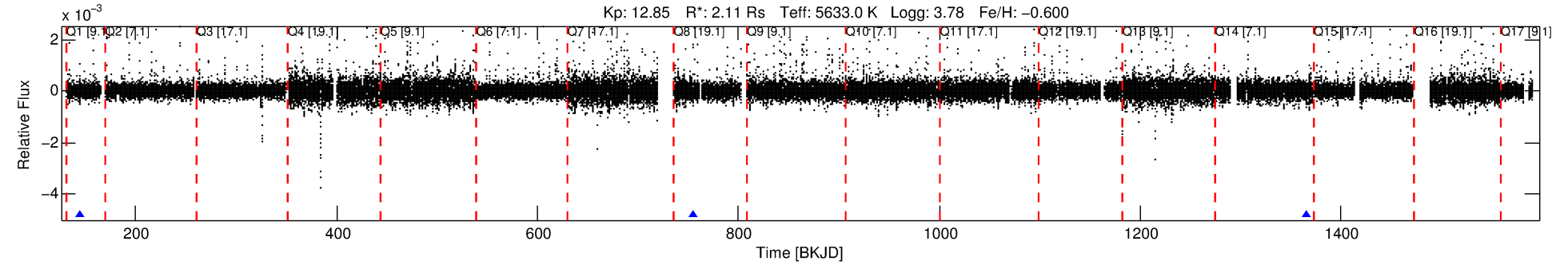
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-06

No Significant Match Found

DV One-Page Summary

KIC: 5608037 Candidate: 6 of 7 Period: 610.983 d



DV Fit Results:

Period = 610.98288 [0.00684] d
Epoch = 143.9006 [0.0099] BKJD
Rp/R* = 0.0192 [0.0171]
a/R* = 597.96 [2519.45]
b = 0.76 [2.34]
Seff = 2.07 [0.88]
Teq = 306 [32] K
Rp = 4.43 [4.13] Re
a = 1.3968 [0.3574] AU
Ag = 17669.75 [32448.26] [0.54 σ]
Teffp = 5450 [2448] K [2.10 σ]

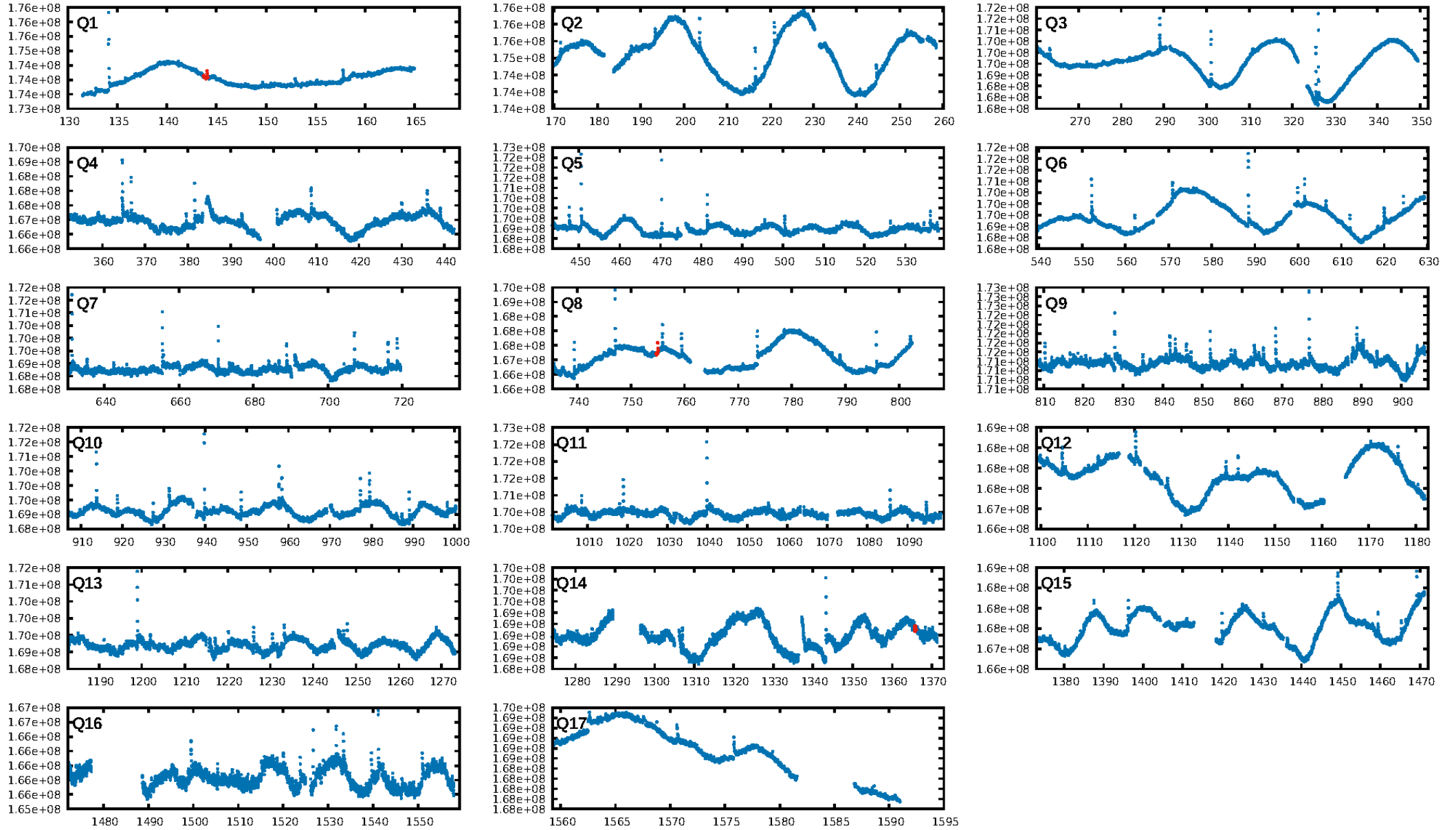
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [82.83 σ]
LongPeriod-sig: 100.0% [303.44 σ]
ModelChiSquare2-sig: 39.0%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 3.85e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 11.1
Centroid-sig: 4.6%
Centroid-so: 1.066 arcsec [1.81 σ]
OotOffset-rm: 0.793 arcsec [1.91 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 0.825 arcsec [1.87 σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

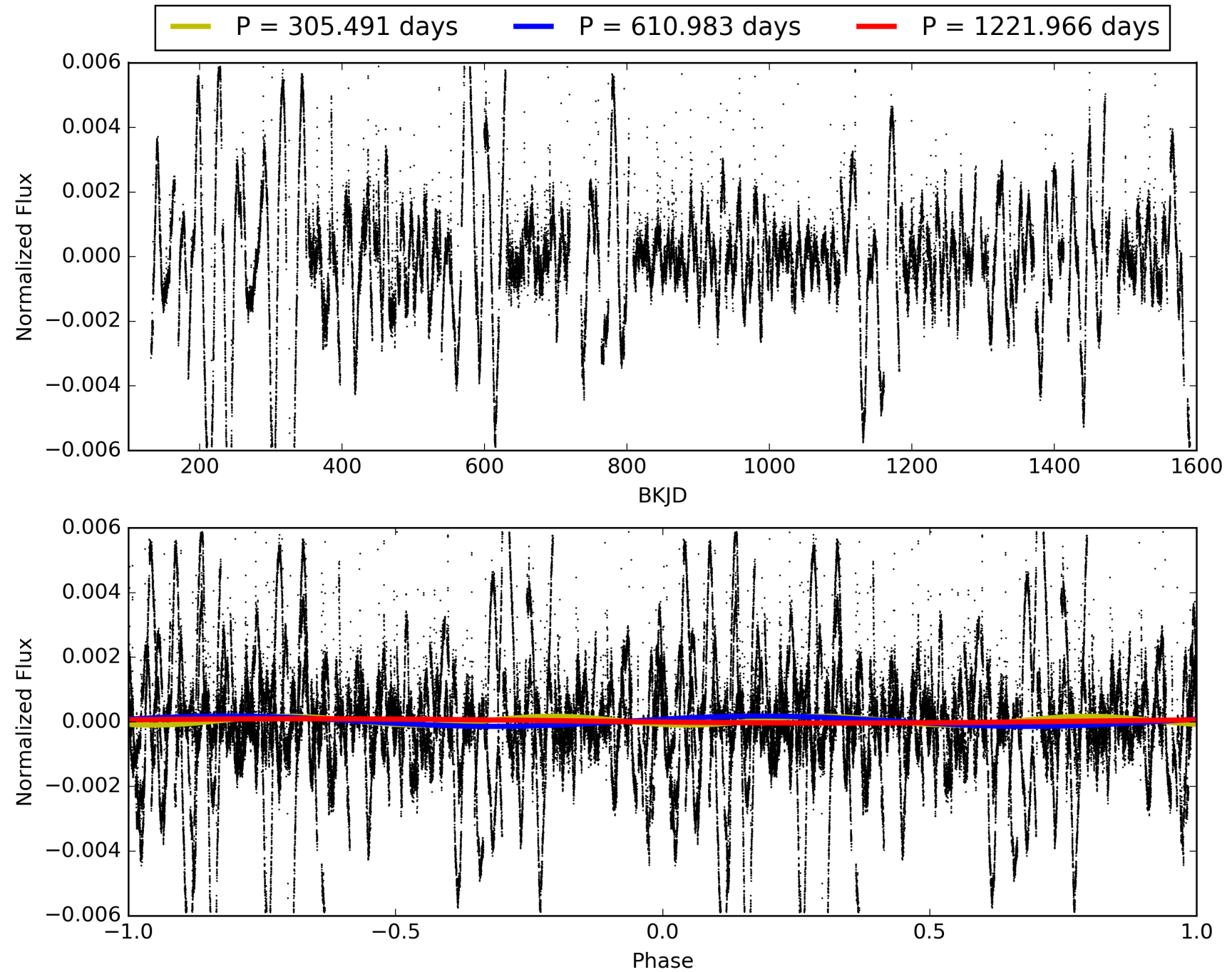
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:41:37 Z

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

TCE 005608037-06, PDC Light Curves

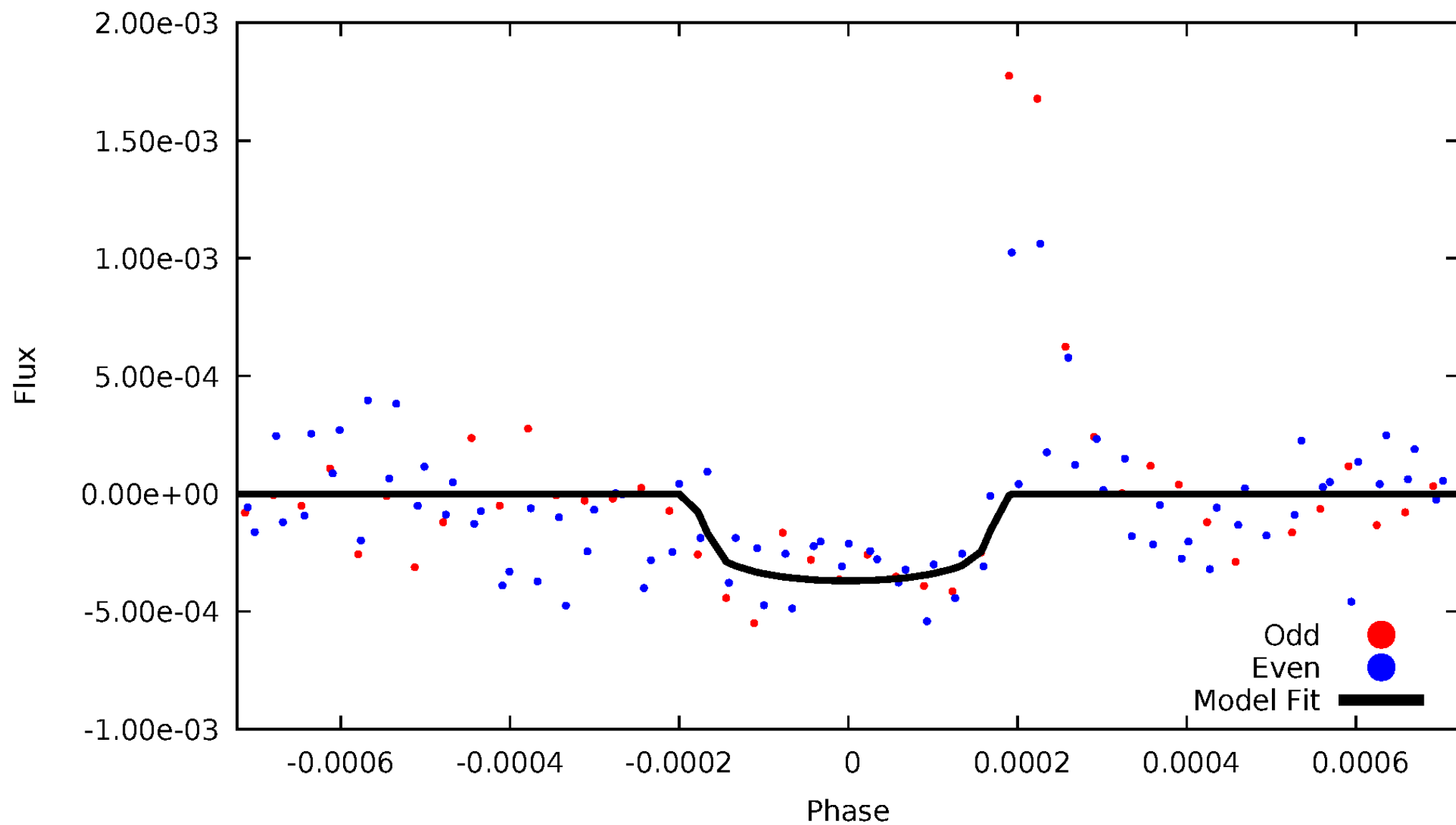


TCE 005608037-06



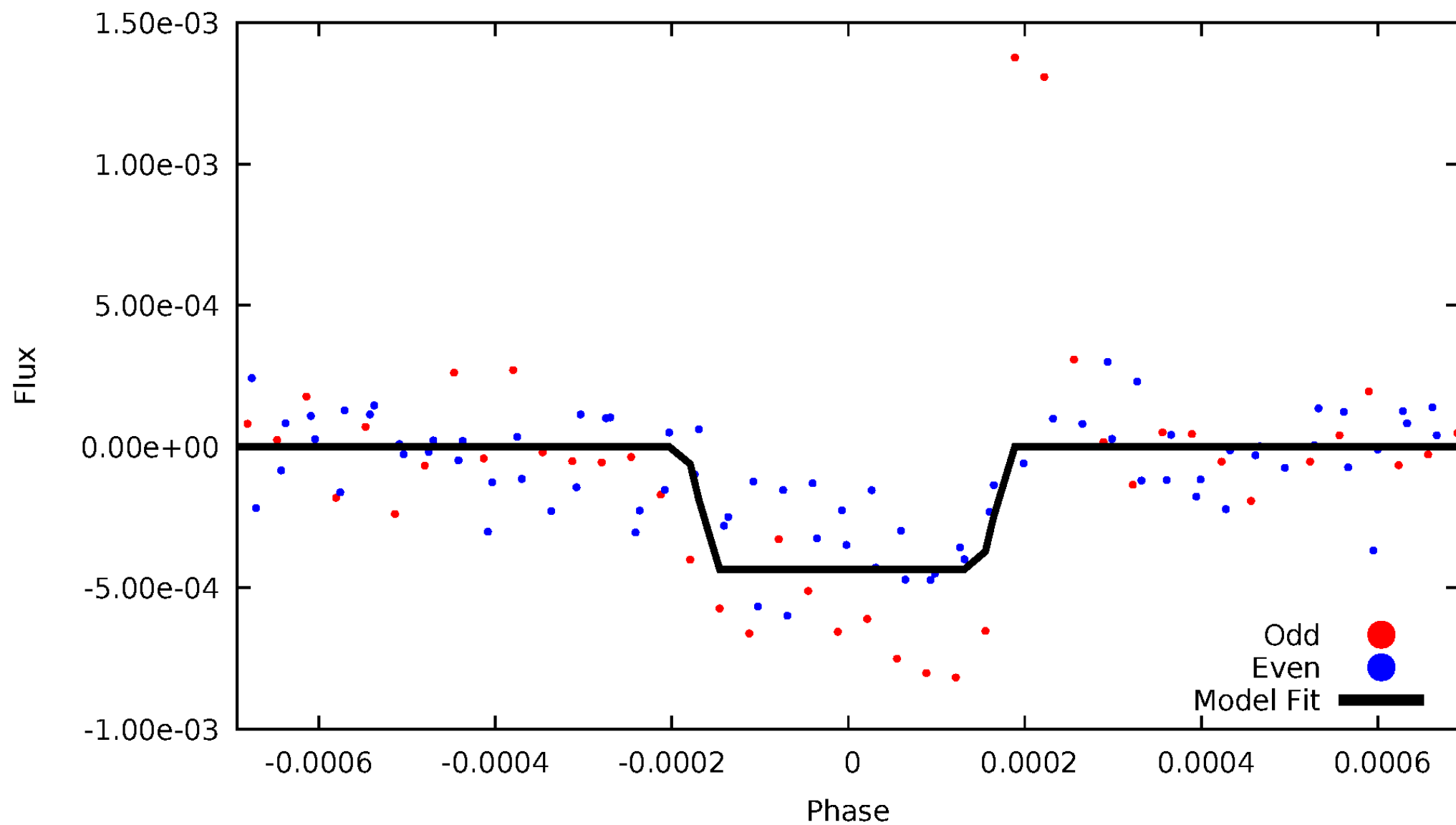
DV Odd/Even

TCE 005608037-06



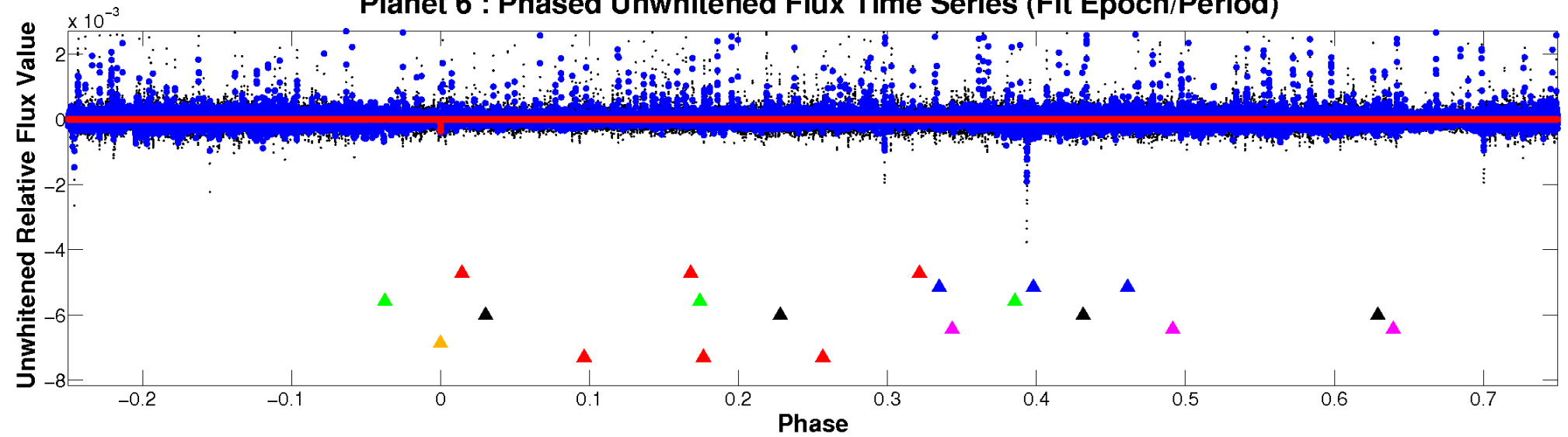
ALT Odd/Even

TCE 005608037-06

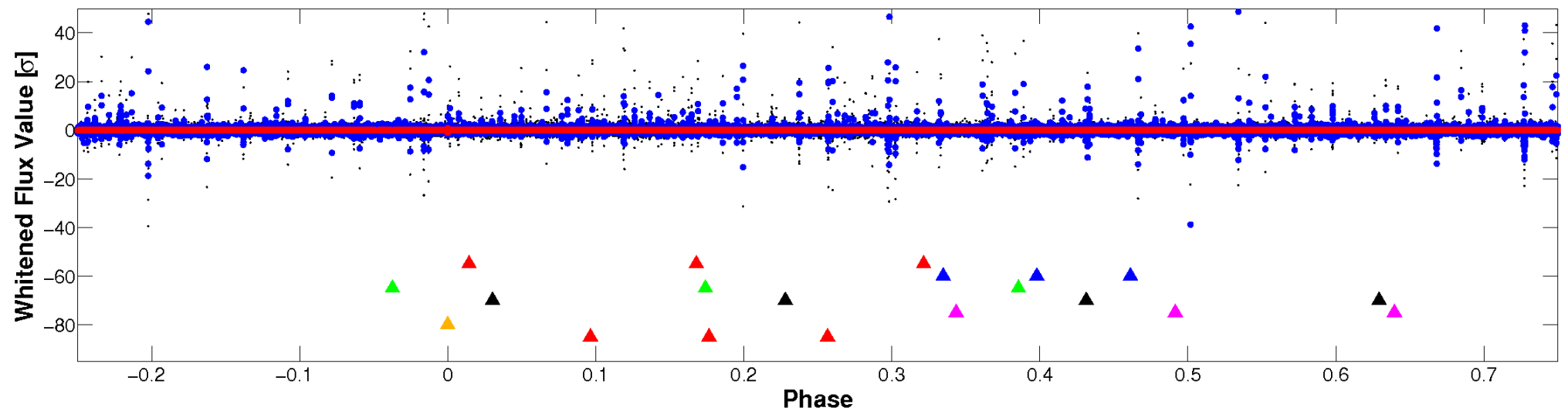


Non-Whitened Vs. Whitened Light Curve

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



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



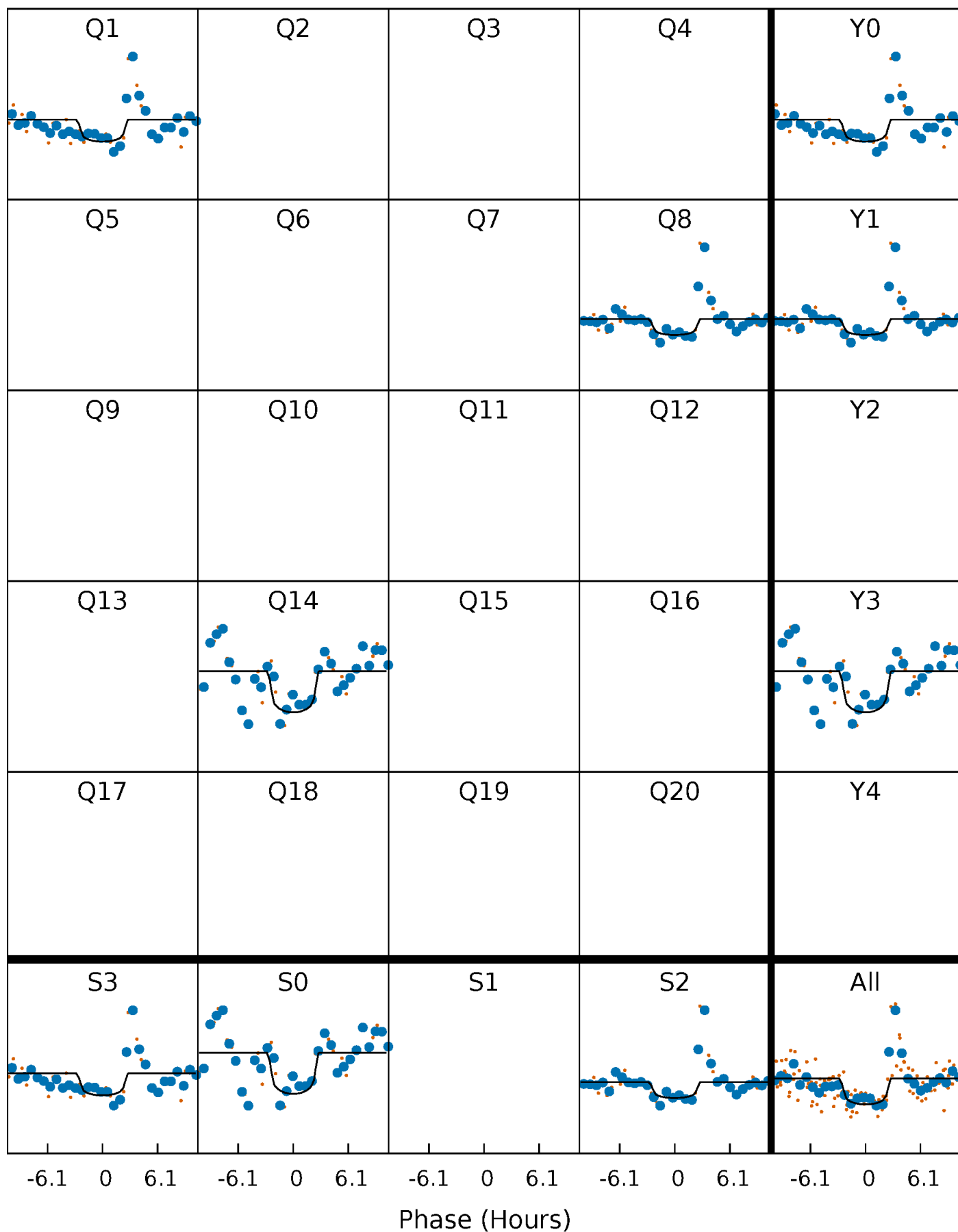
PDC Quarter-Phased Transit Curves

TCE 005608037-06 P=610.982878 Days $T_0=143.900557$ (BKJD)



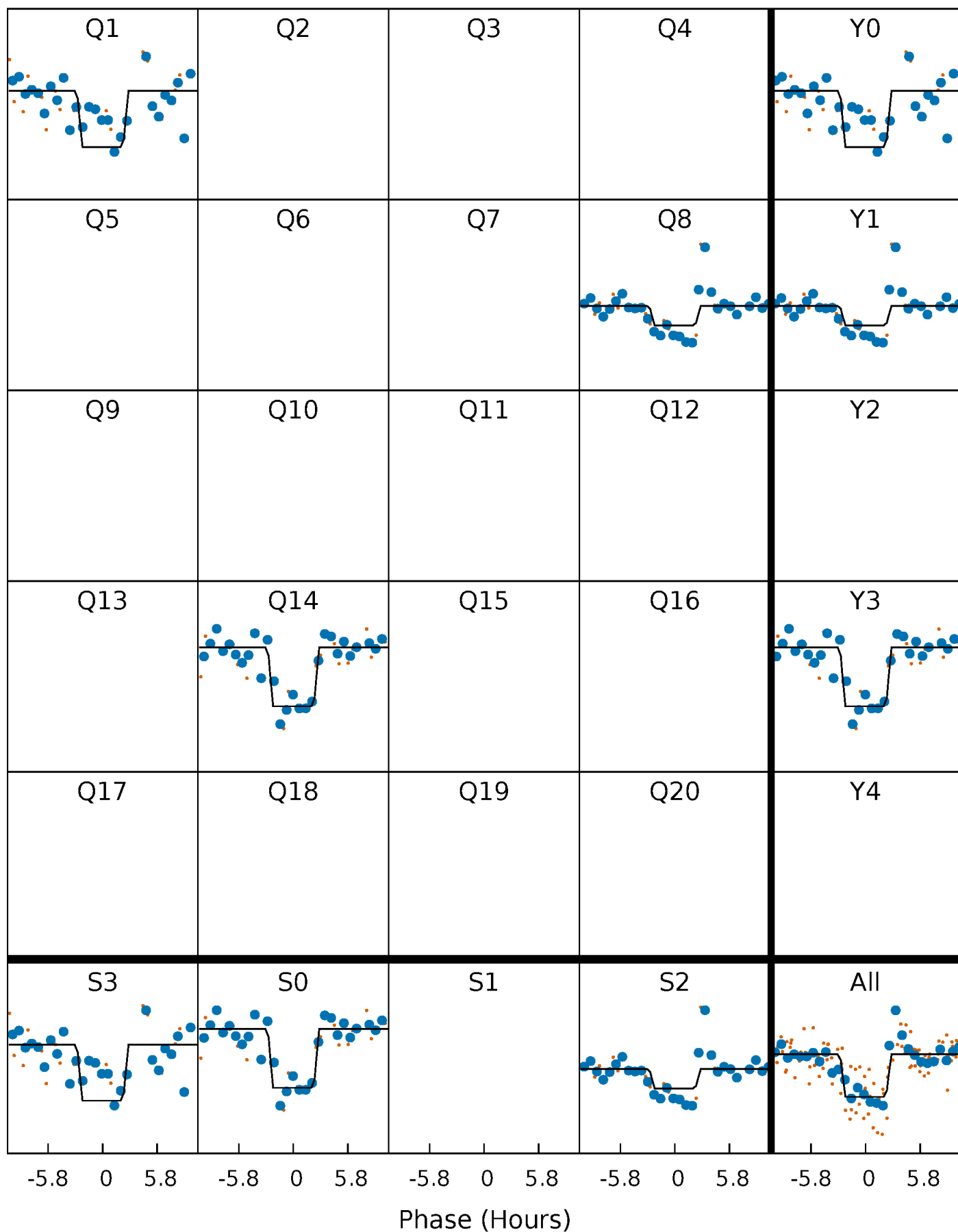
DV Quarter-Phased Transit Curves

TCE 005608037-06 P=610.982878 Days $T_0=143.900557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

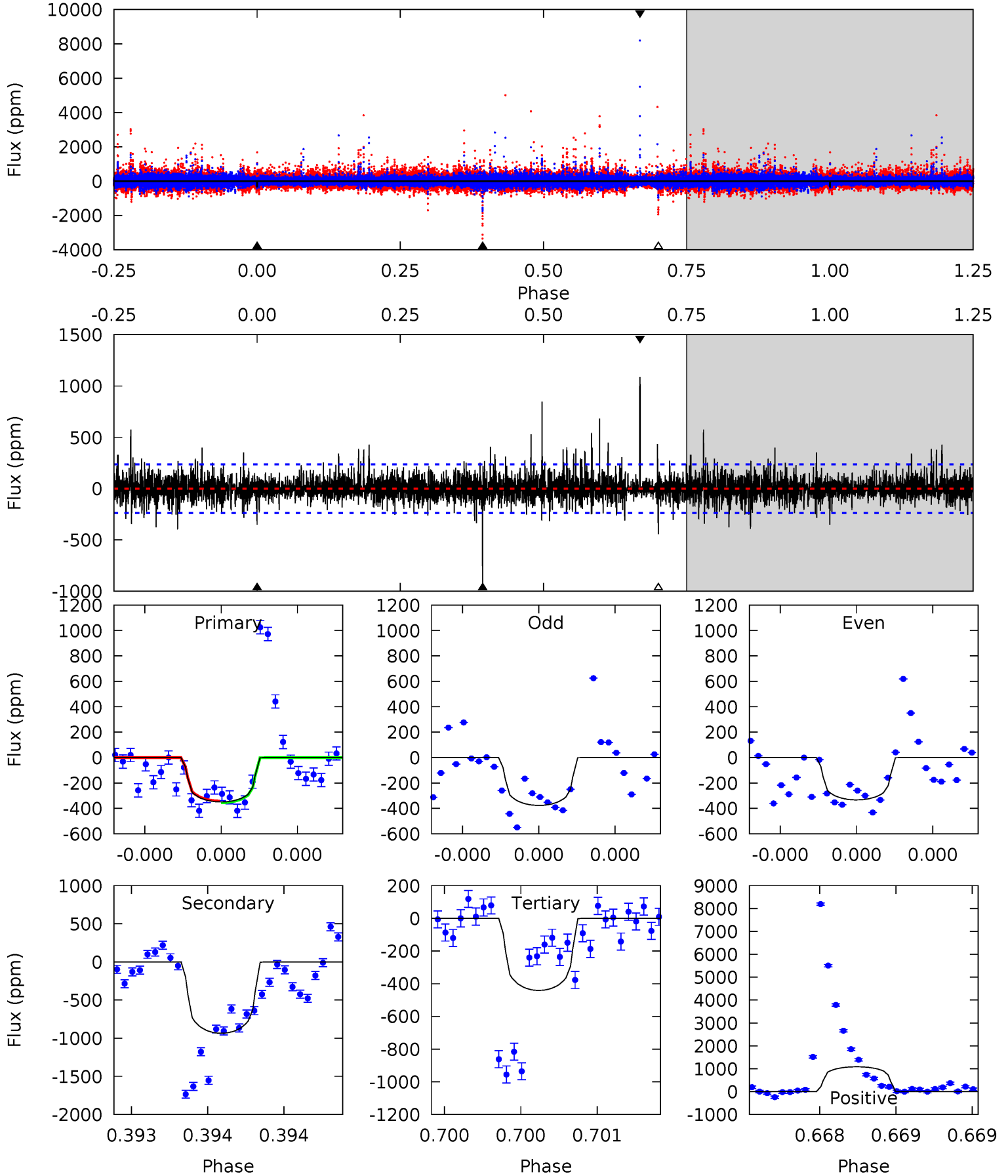
TCE 005608037-06 P=610.983877 Days $T_0=143.900295$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-06, P = 610.982878 Days, E = 143.900557 Days

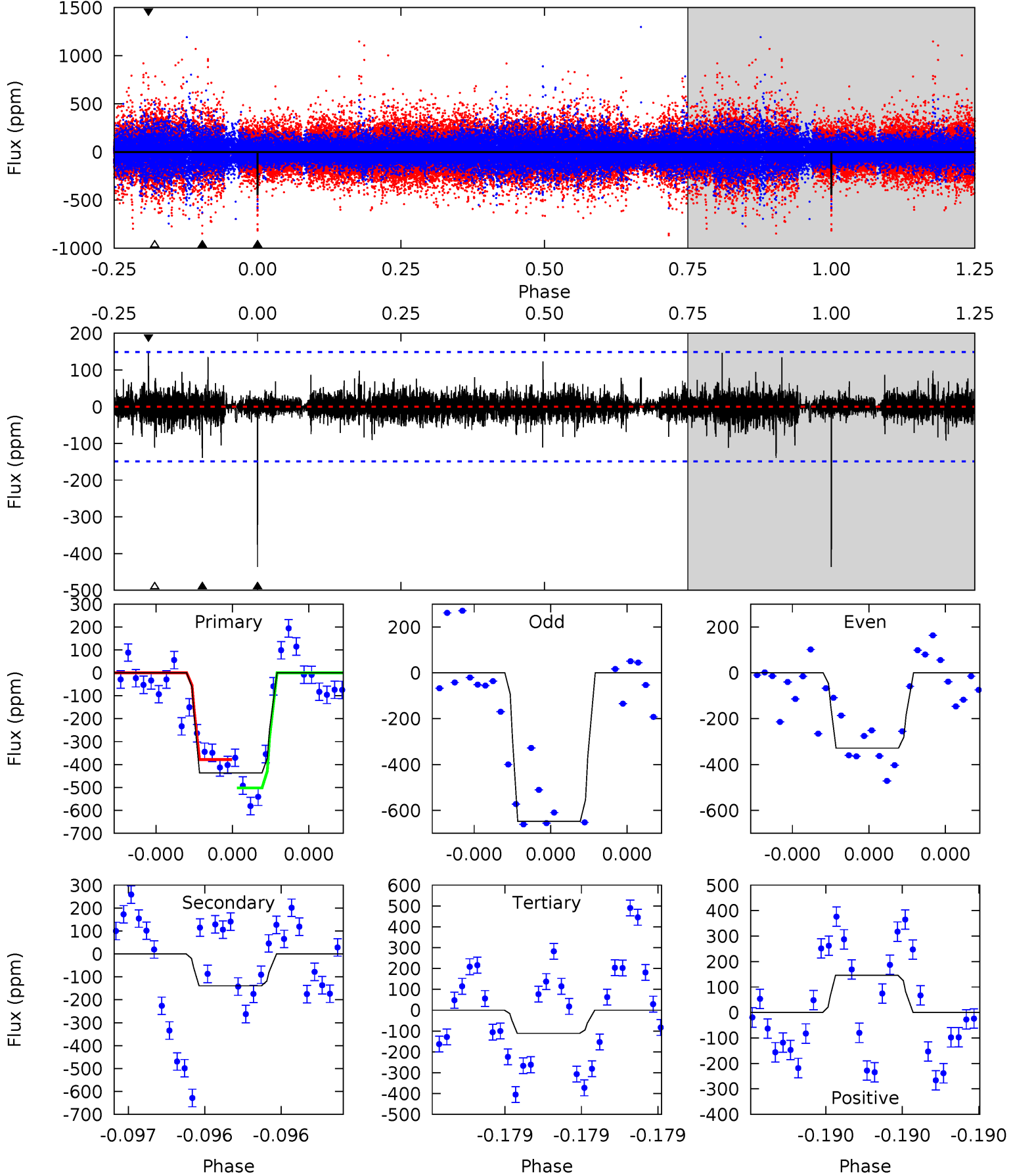
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	22.2	10.5	25.7	5.62	3.55	2.14	-2.19	-17.5	11.7	-3.56	0.30	0.96	0.54	0.16



Alt Model-Shift Uniqueness Test

005608037-06, P = 610.983877 Days, E = 143.900295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	5.26	4.21	5.54	5.64	3.58	0.73	12.3	11.0	1.05	-0.28	5.10	1.07	0.25	2.33



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-936 ± 42	$4.89^{+4.08}_{-3.12}$	425^{+30}_{-32}	6703^{+6699}_{-1626}	$42459^{+278030}_{-29600}$
Alt.	-139 ± 26	$5.17^{+4.08}_{-2.94}$	426^{+30}_{-34}	4246^{+1962}_{-716}	5592^{+25797}_{-3854}

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 $A_{obs} \gg 1.0$

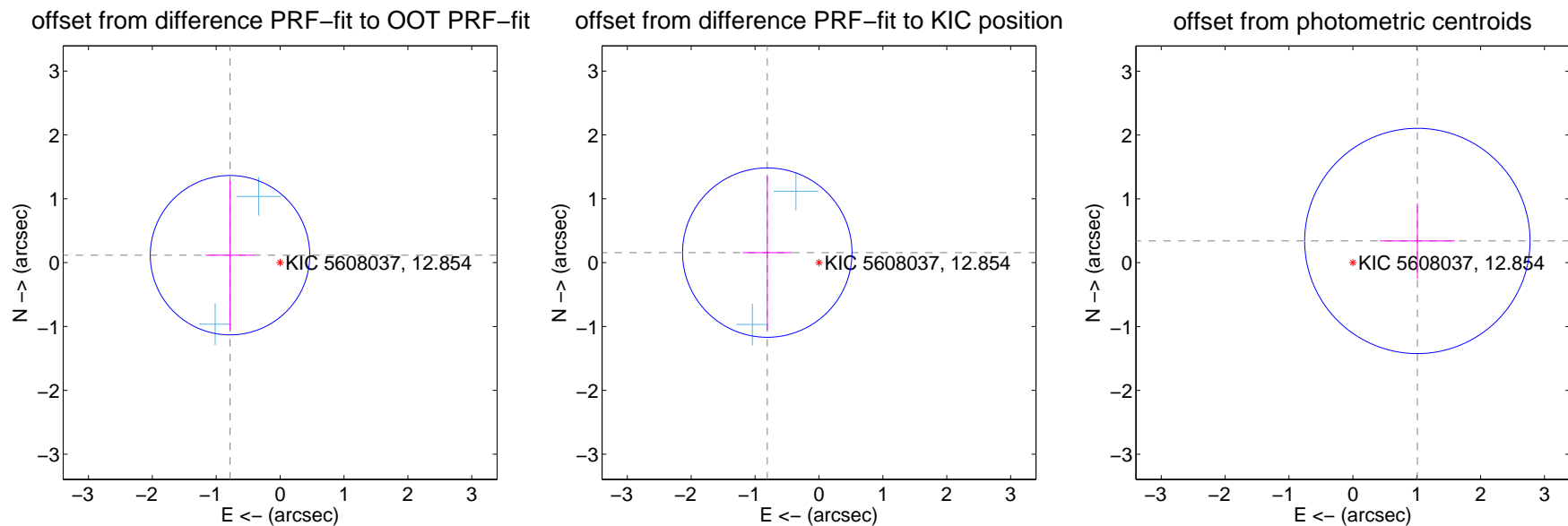
DV Centroid Data

Supplemental centroid analysis for 005608037-06. Kepler magnitude: 12.85. Transit SNR 5.59

There are 2 quarters with good PRF difference image offsets

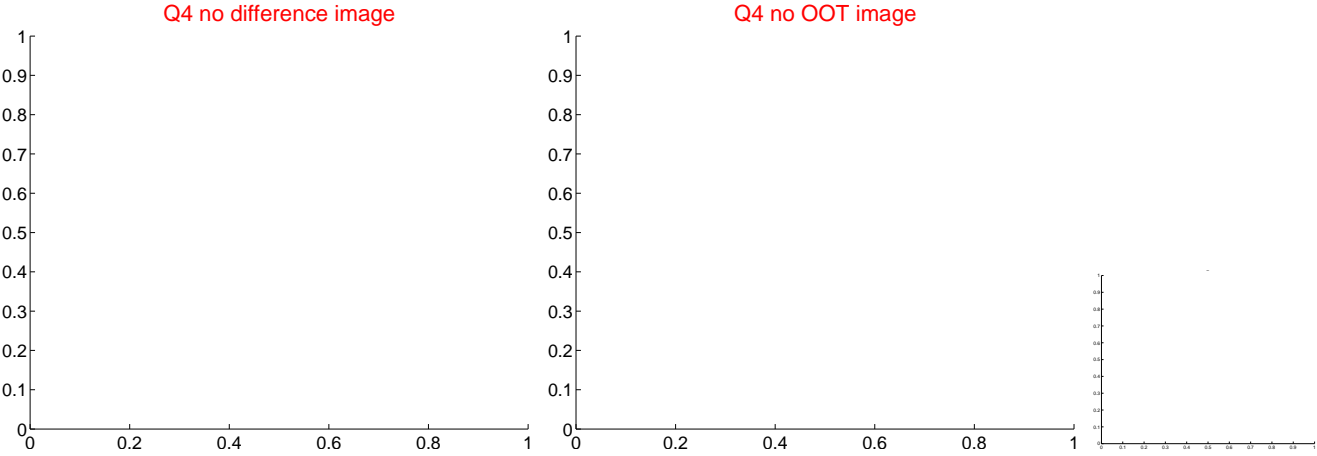
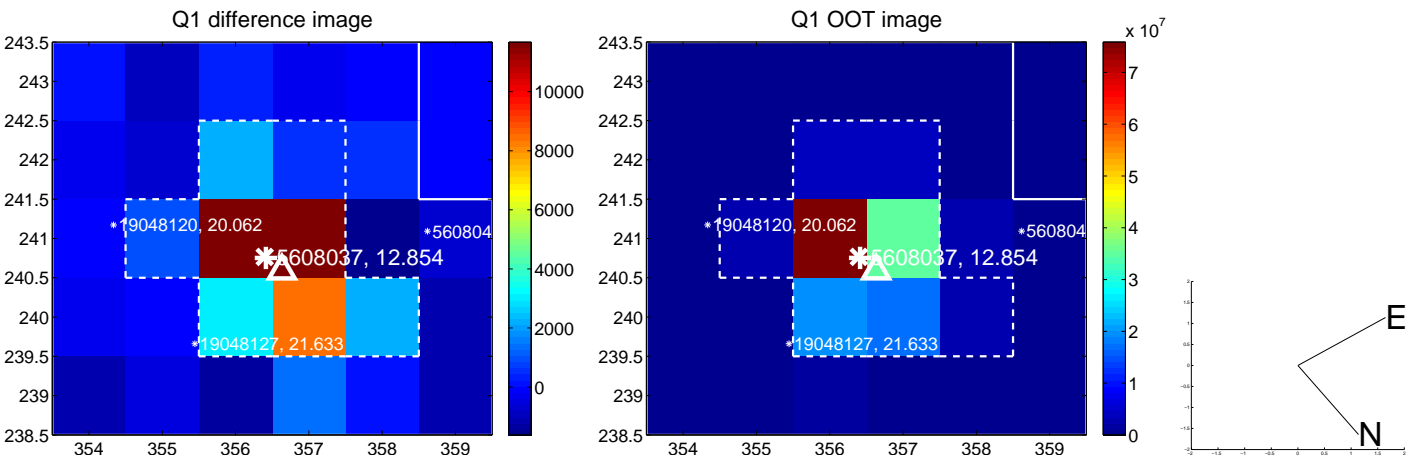
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.793 ± 0.416	1.91	0.784 ± 0.383	0.117 ± 1.168
PRF-fit source offset from KIC position	0.825 ± 0.442	1.87	0.810 ± 0.383	0.157 ± 1.218
photometric centroid source offset	1.07 ± 0.59	1.81	-1.01 ± 0.59	0.34 ± 0.59

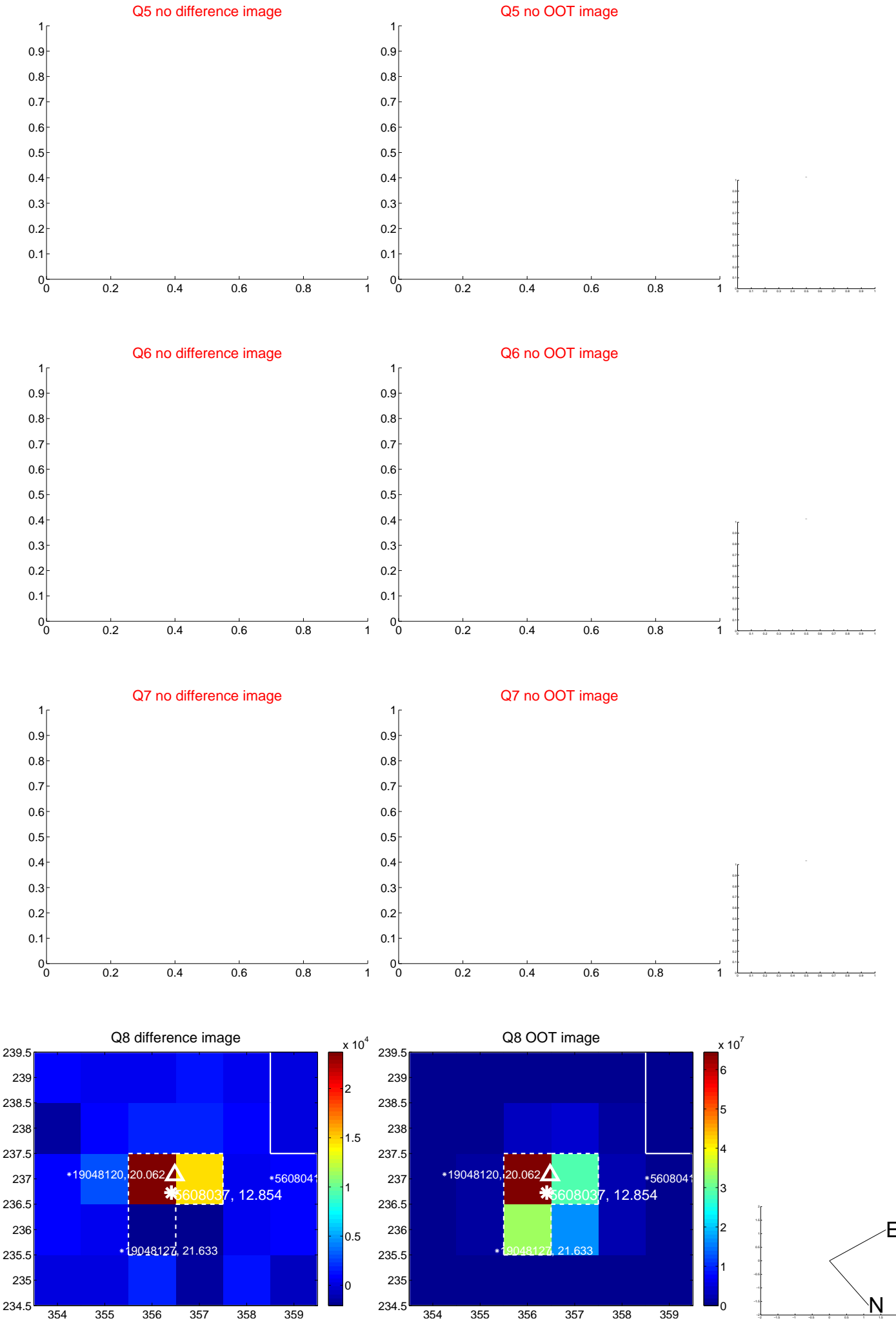


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



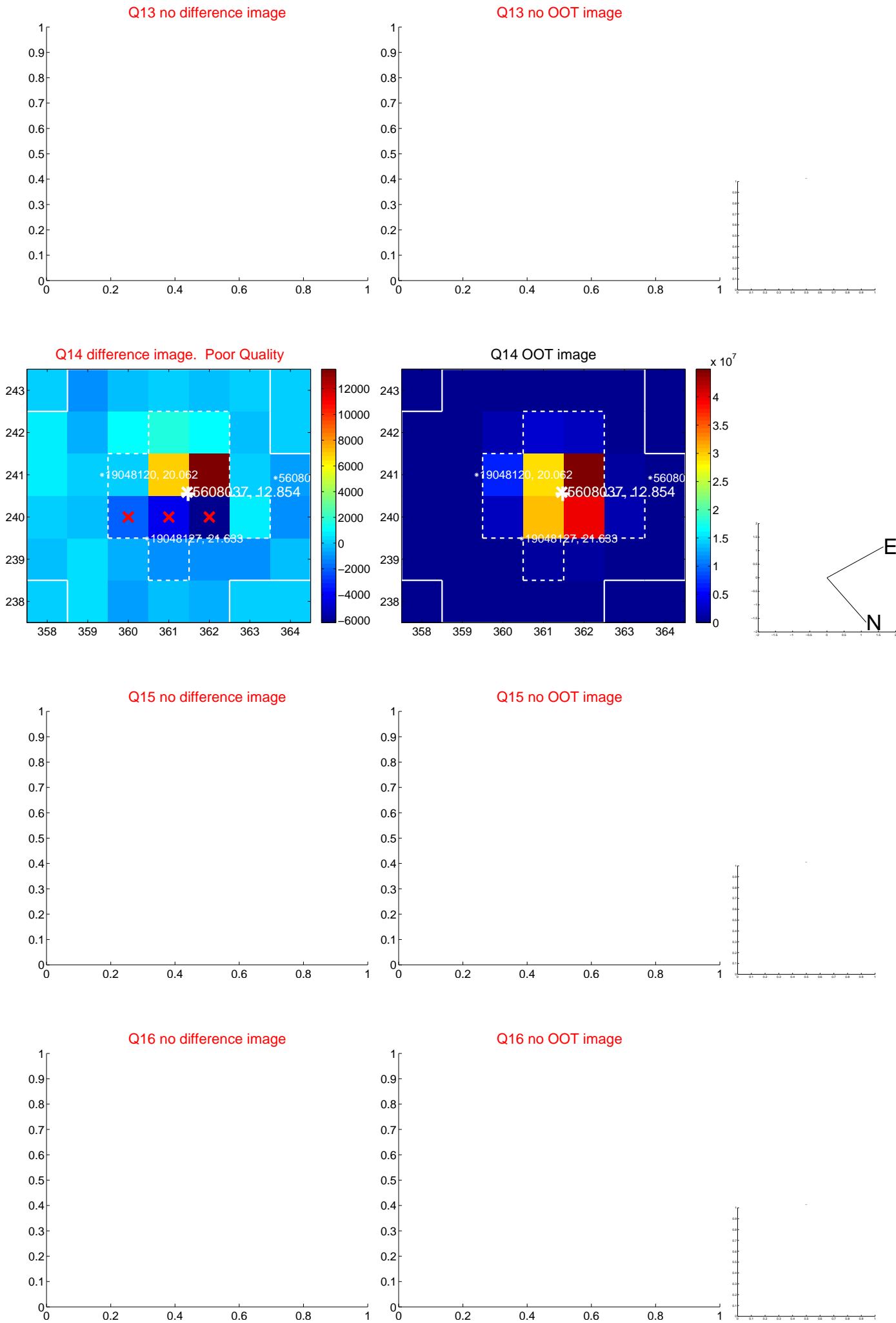
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



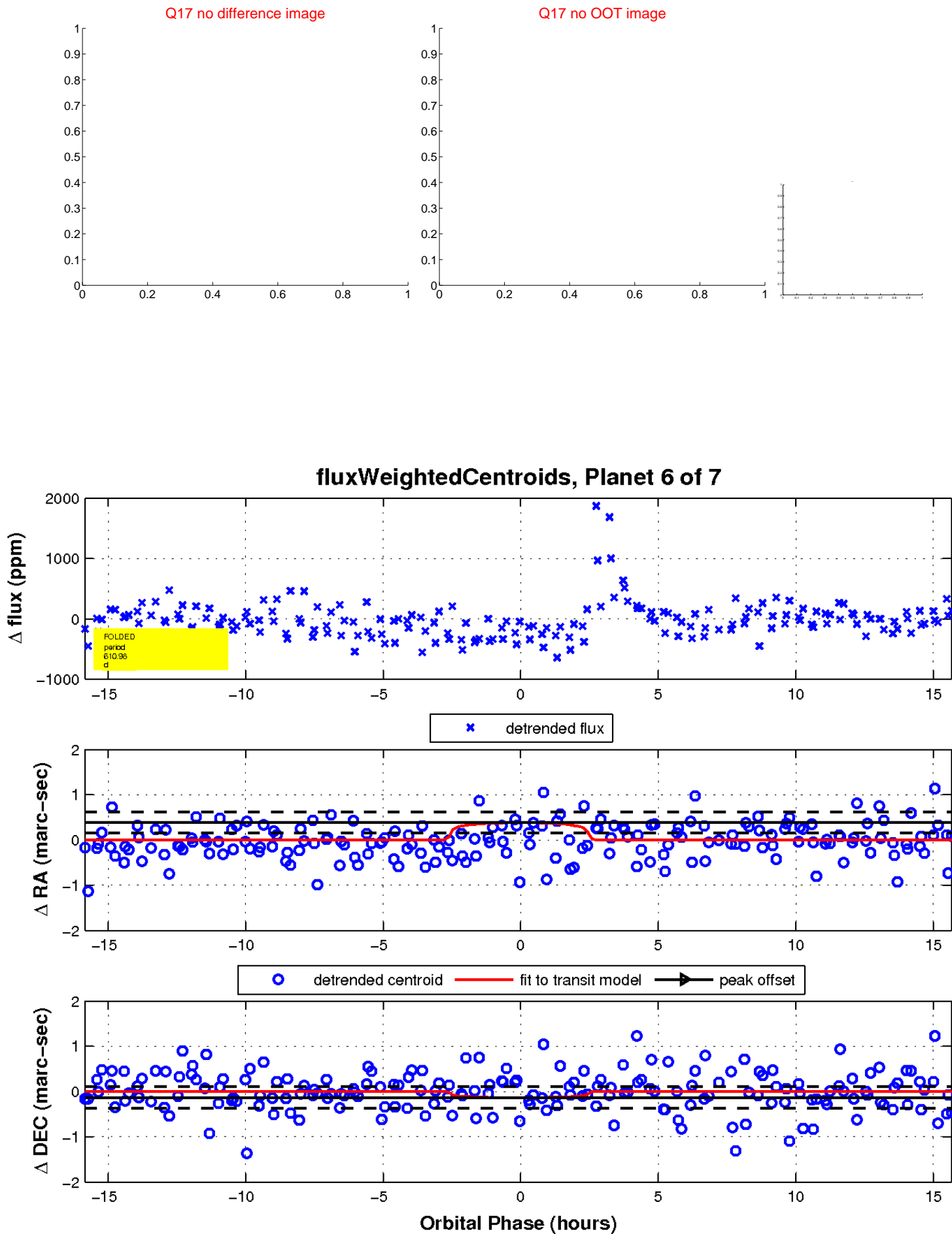
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

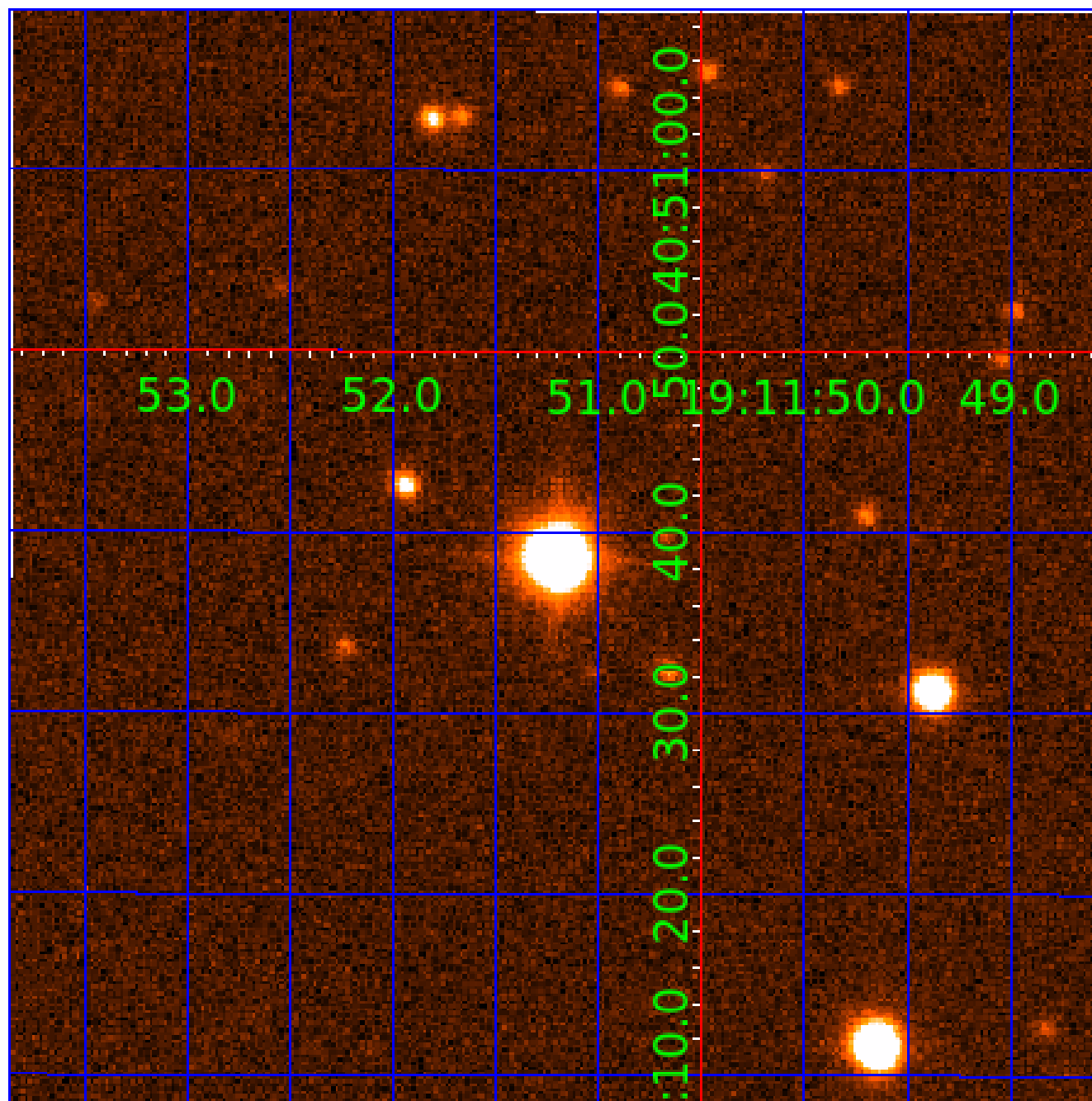


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005608037

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})
005608037-01	OBS	No	704.792378	152.715876	308.5	5.197	11.8	5.2	2.11	5633	4.13	1.71
005608037-02	OBS	No	572.349966	425.704111	466.4	9.863	11.8	6.0	2.11	5633	4.66	2.25
005608037-03	OBS	No	481.786278	379.476659	605.2	6.401	8.6	7.1	2.11	5633	5.80	2.84
005608037-04	OBS	No	365.923607	407.463903	435.7	8.087	10.5	6.2	2.11	5633	4.50	4.09
005608037-05	OBS	No	520.538507	534.654484	642.0	2.988	12.8	8.2	2.11	5633	5.68	2.56
005608037-06	OBS	No	610.982878	143.900557	370.1	5.296	10.0	5.6	2.11	5633	4.43	2.07
005608037-07	OBS	No	562.035806	300.713266	708.2	10.920	10.0	10.9	2.11	5633	6.10	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005608037-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005608037-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005608037-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
005608037-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

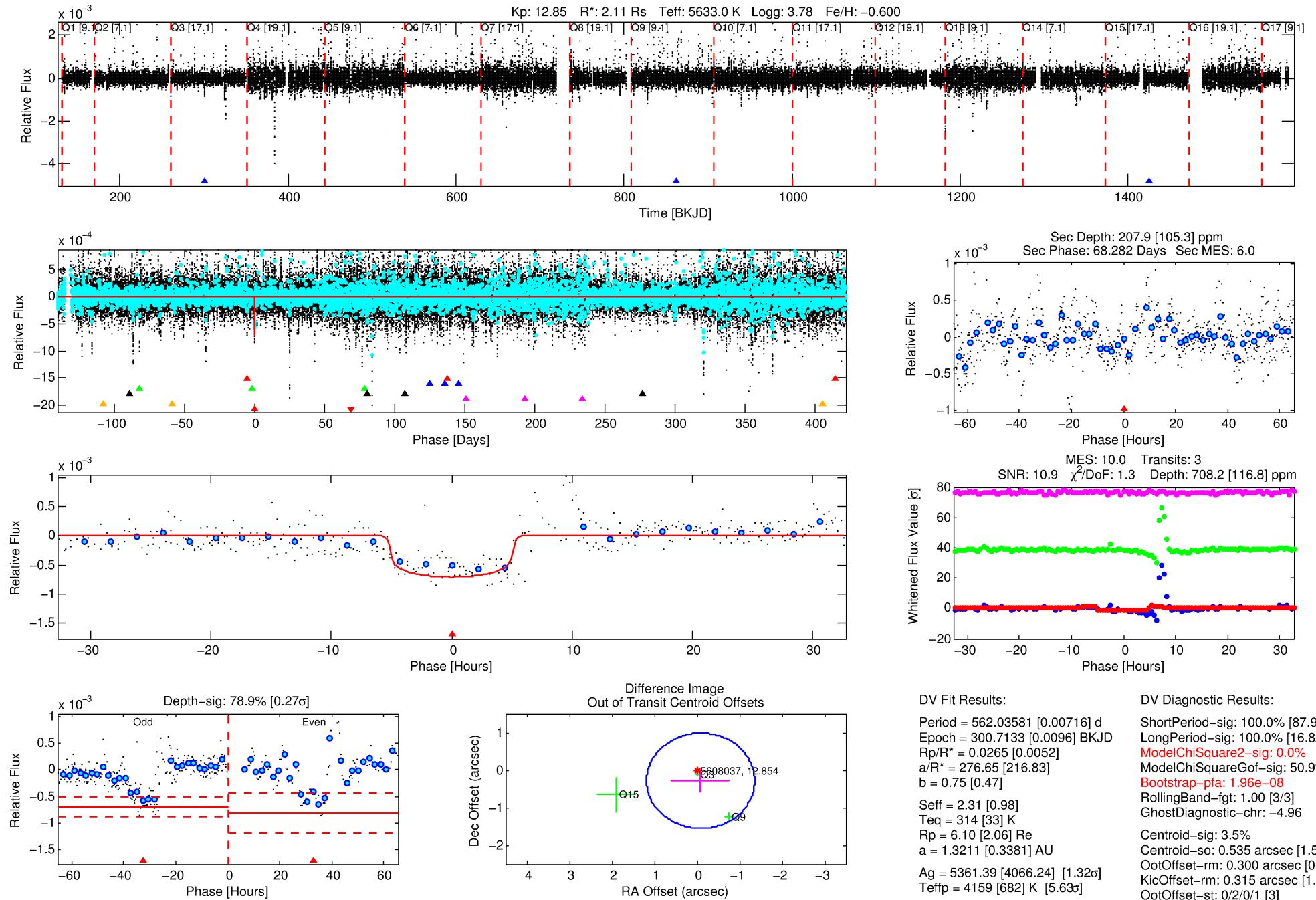
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005608037-07

No Significant Match Found

DV One-Page Summary

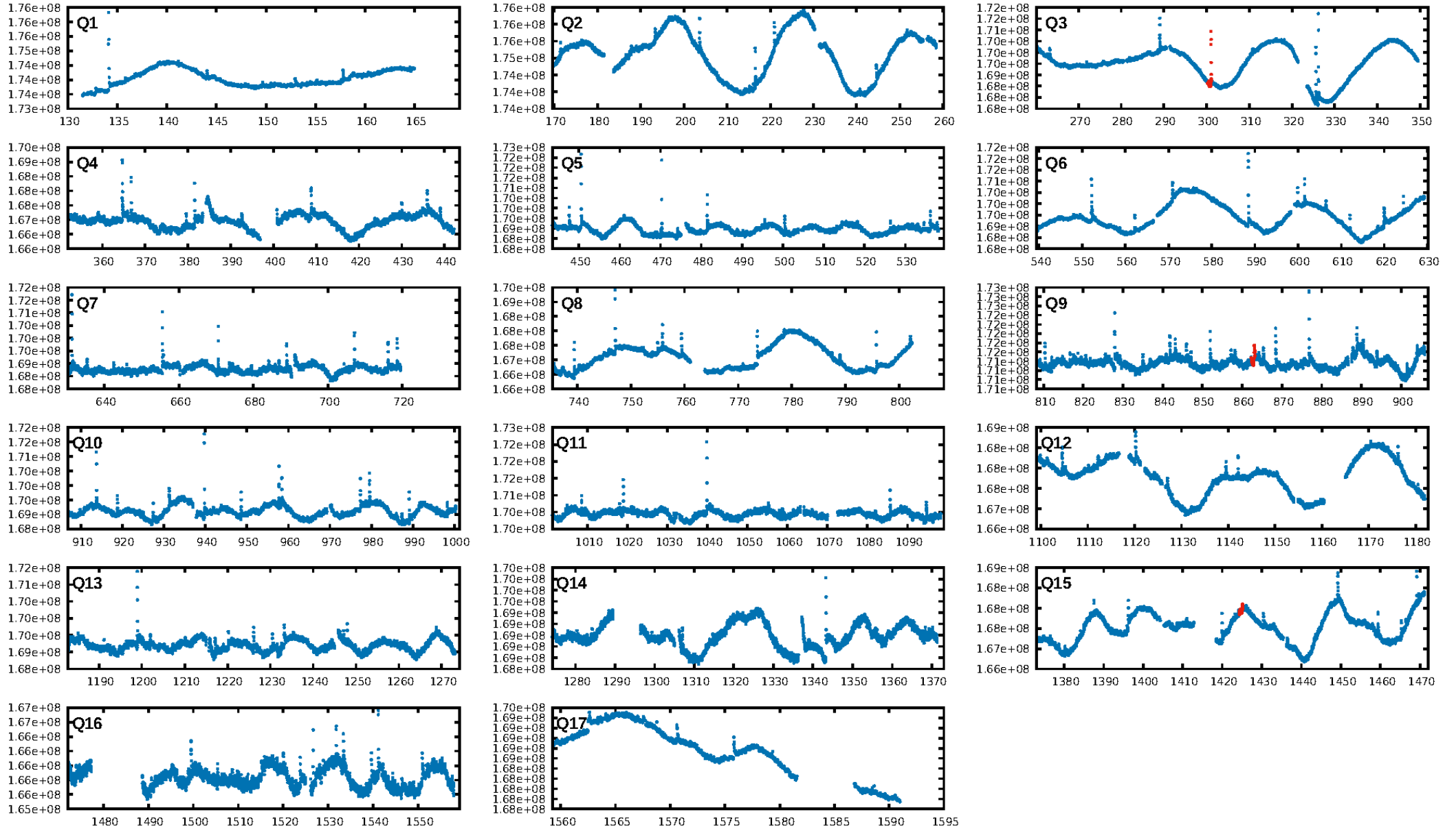
KIC: 5608037 Candidate: 7 of 7 Period: 562.036 d



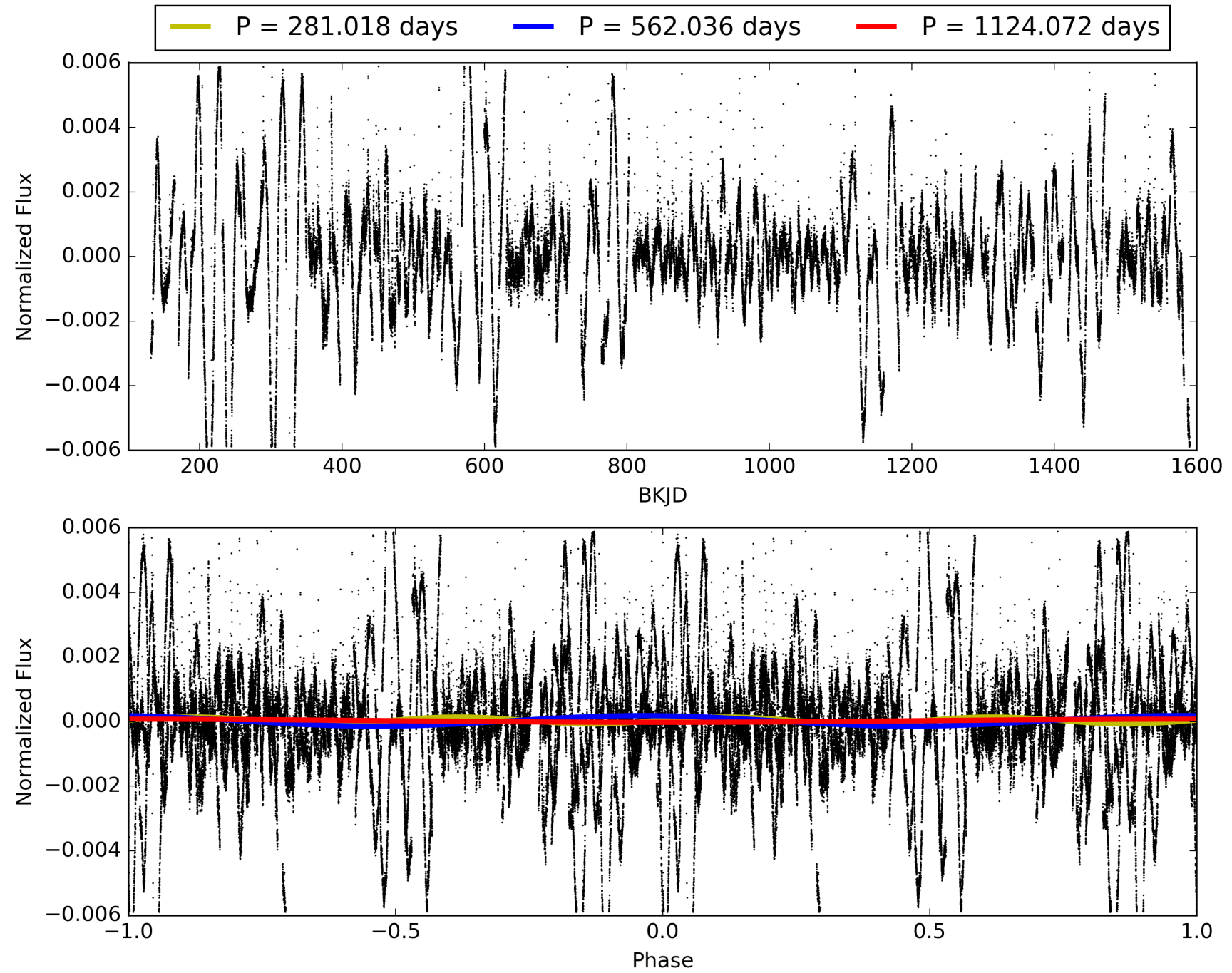
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:41:48 Z

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

TCE 005608037-07, PDC Light Curves

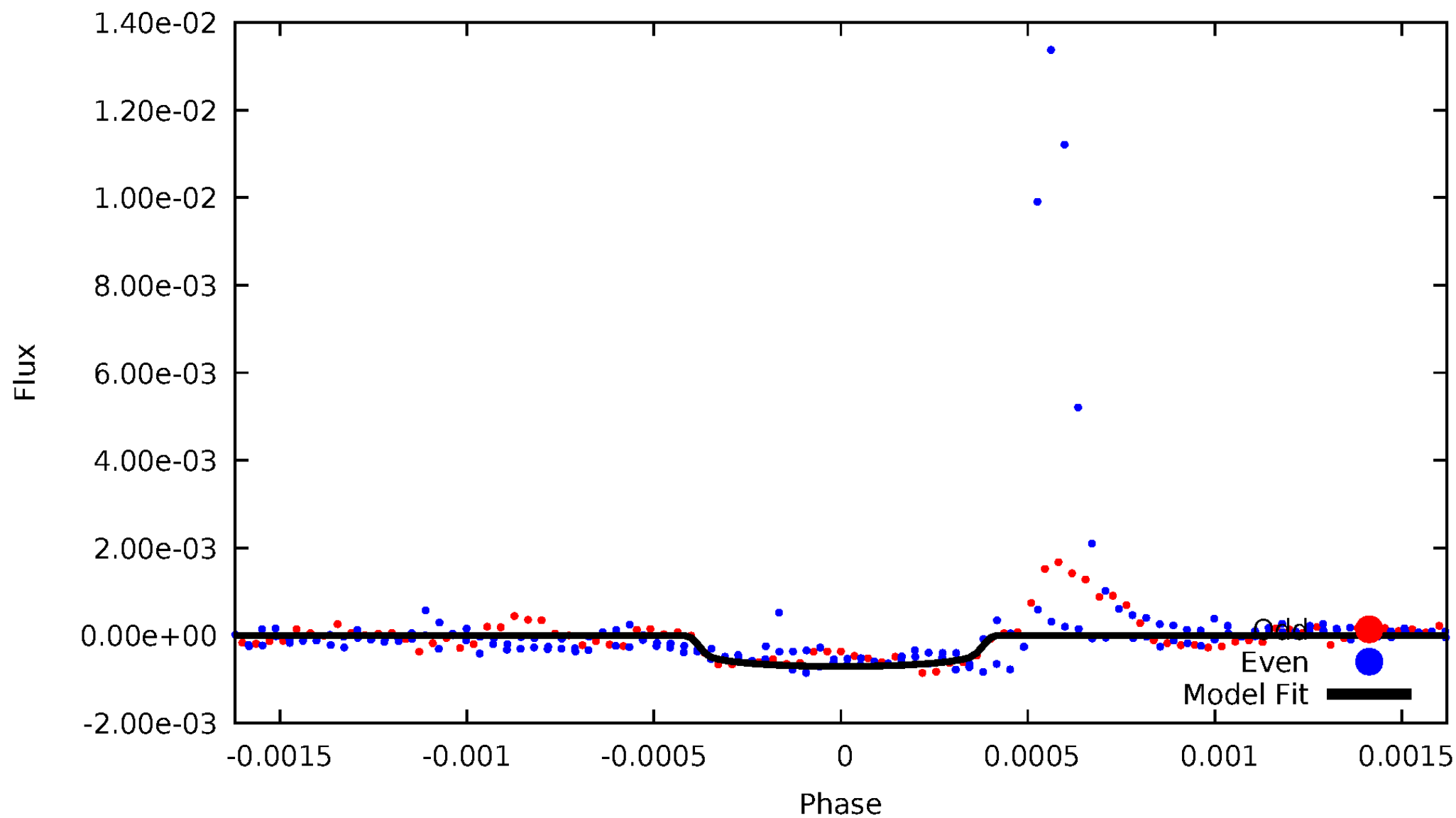


TCE 005608037-07



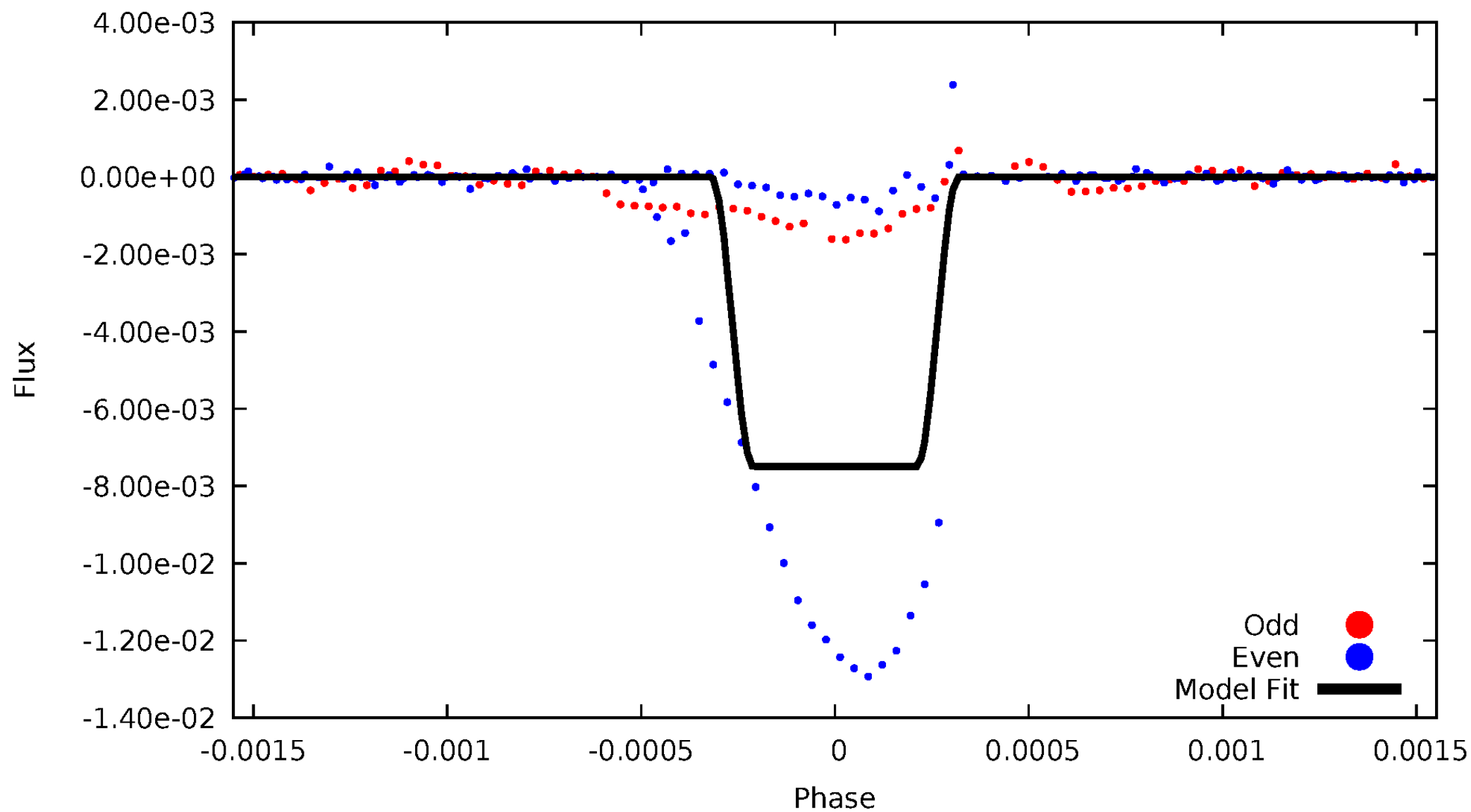
DV Odd/Even

TCE 005608037-07



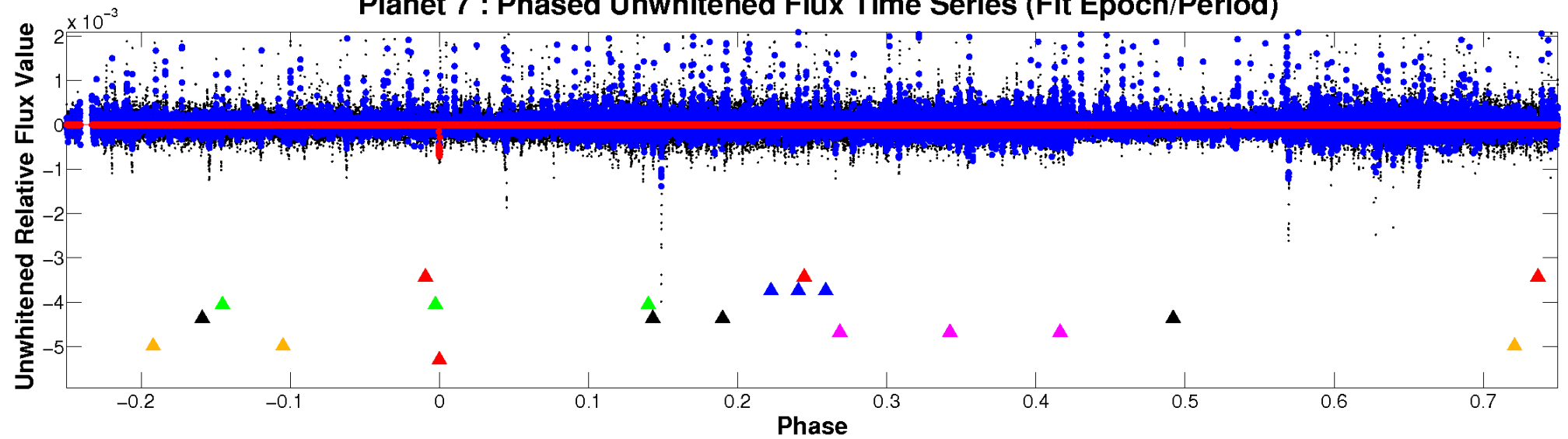
ALT Odd/Even

TCE 005608037-07

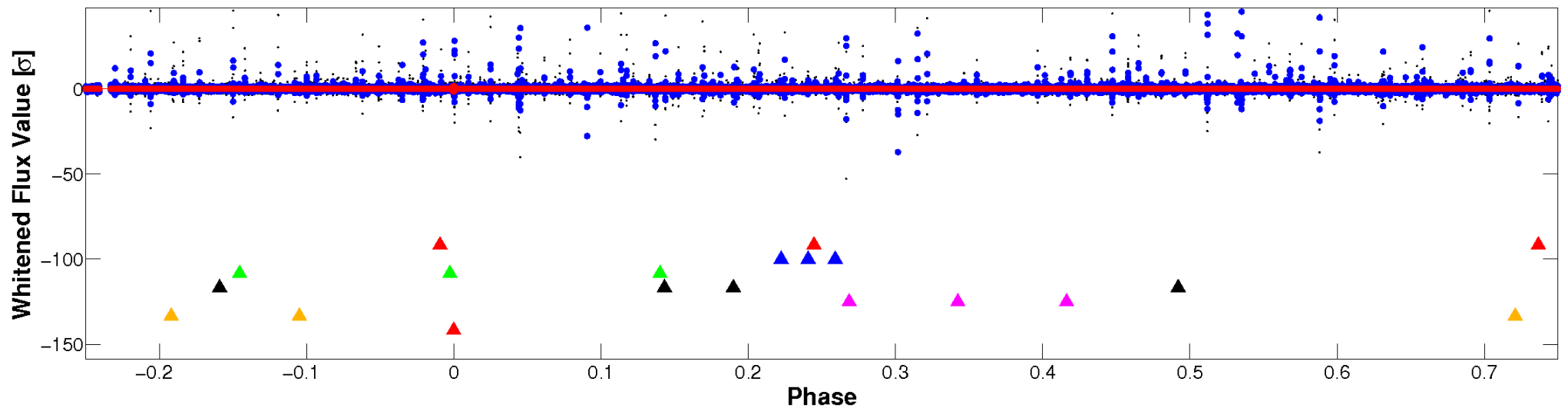


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

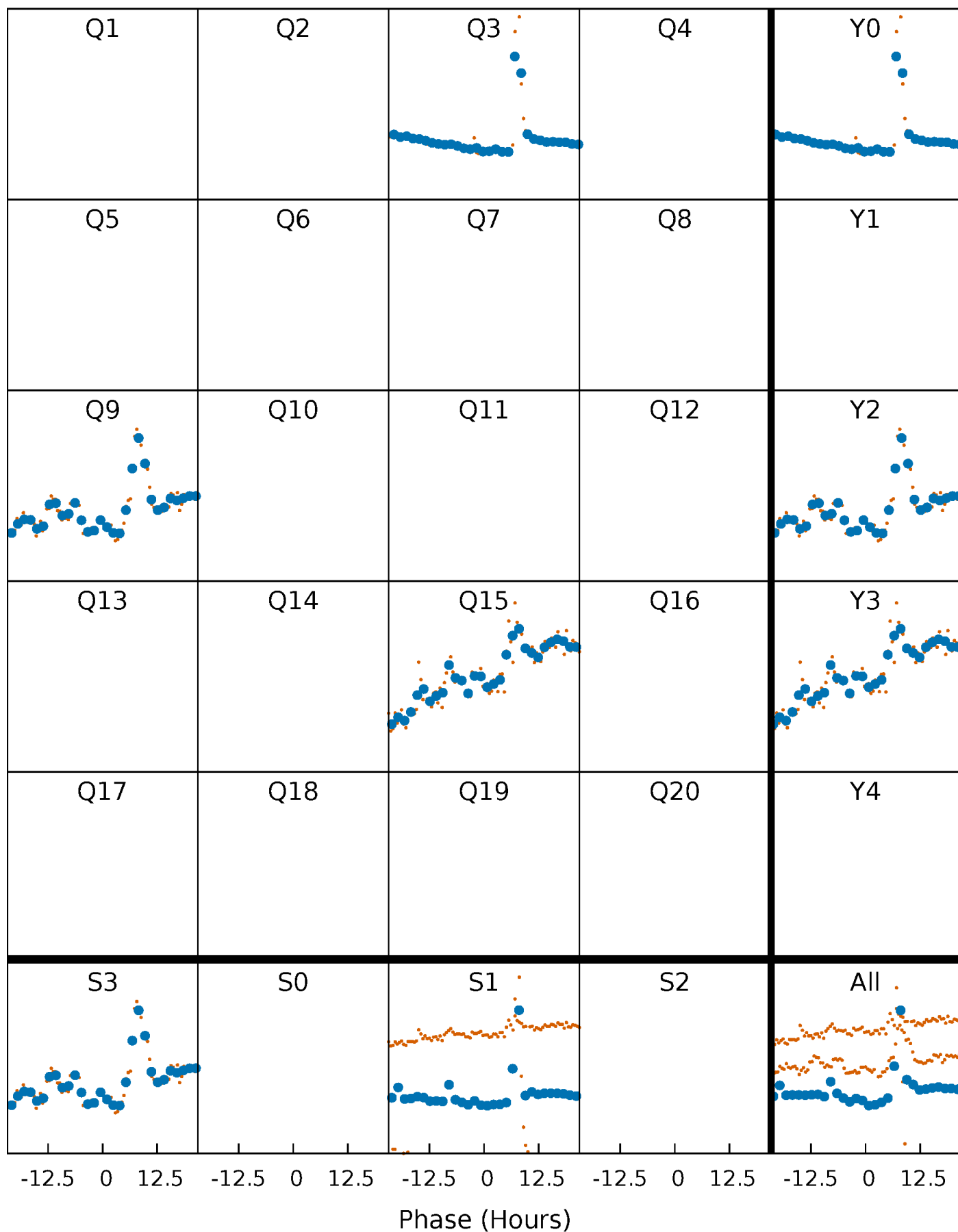


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



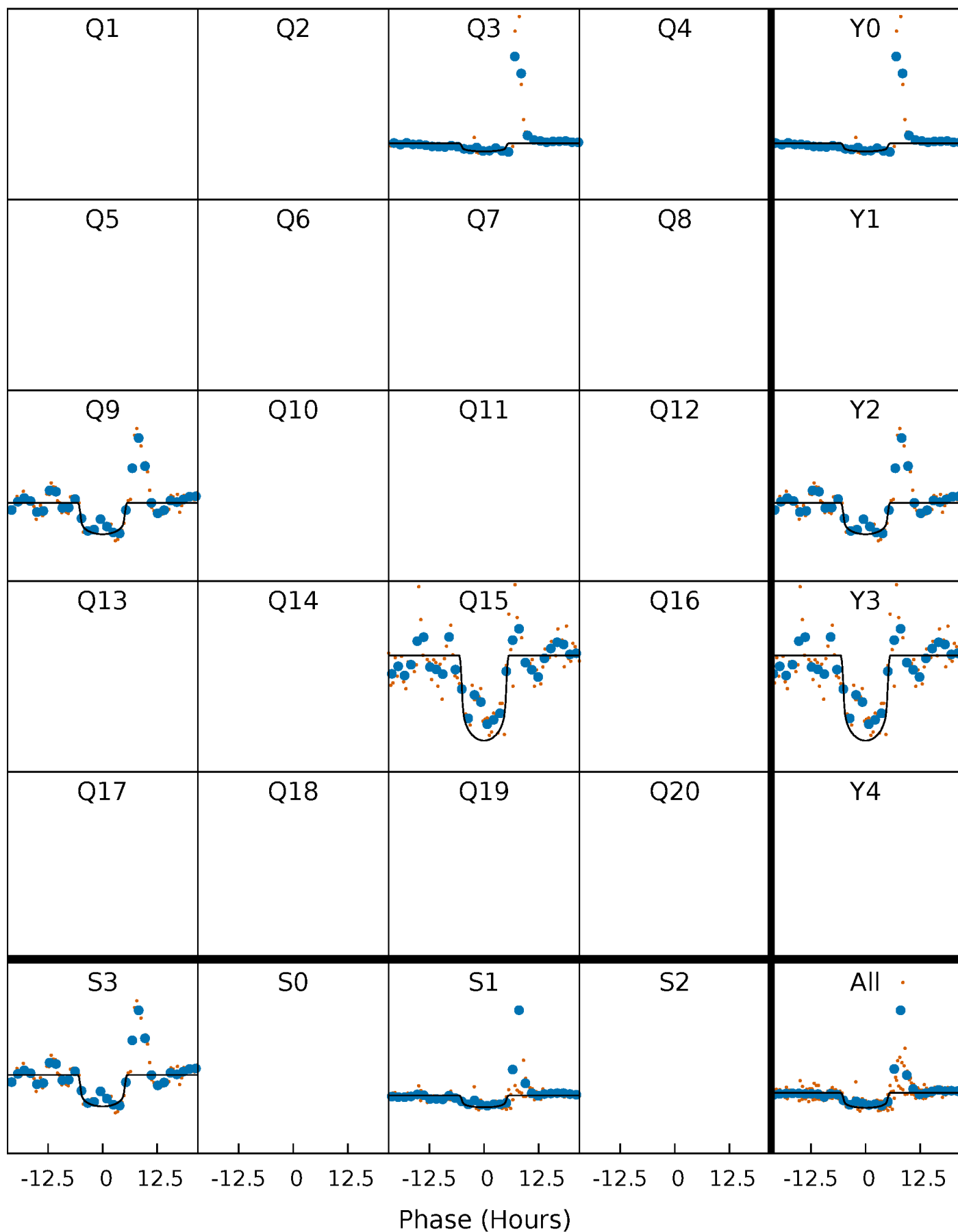
PDC Quarter-Phased Transit Curves

TCE 005608037-07 $P=562.035806$ Days $T_0=300.713266$ (BKJD)



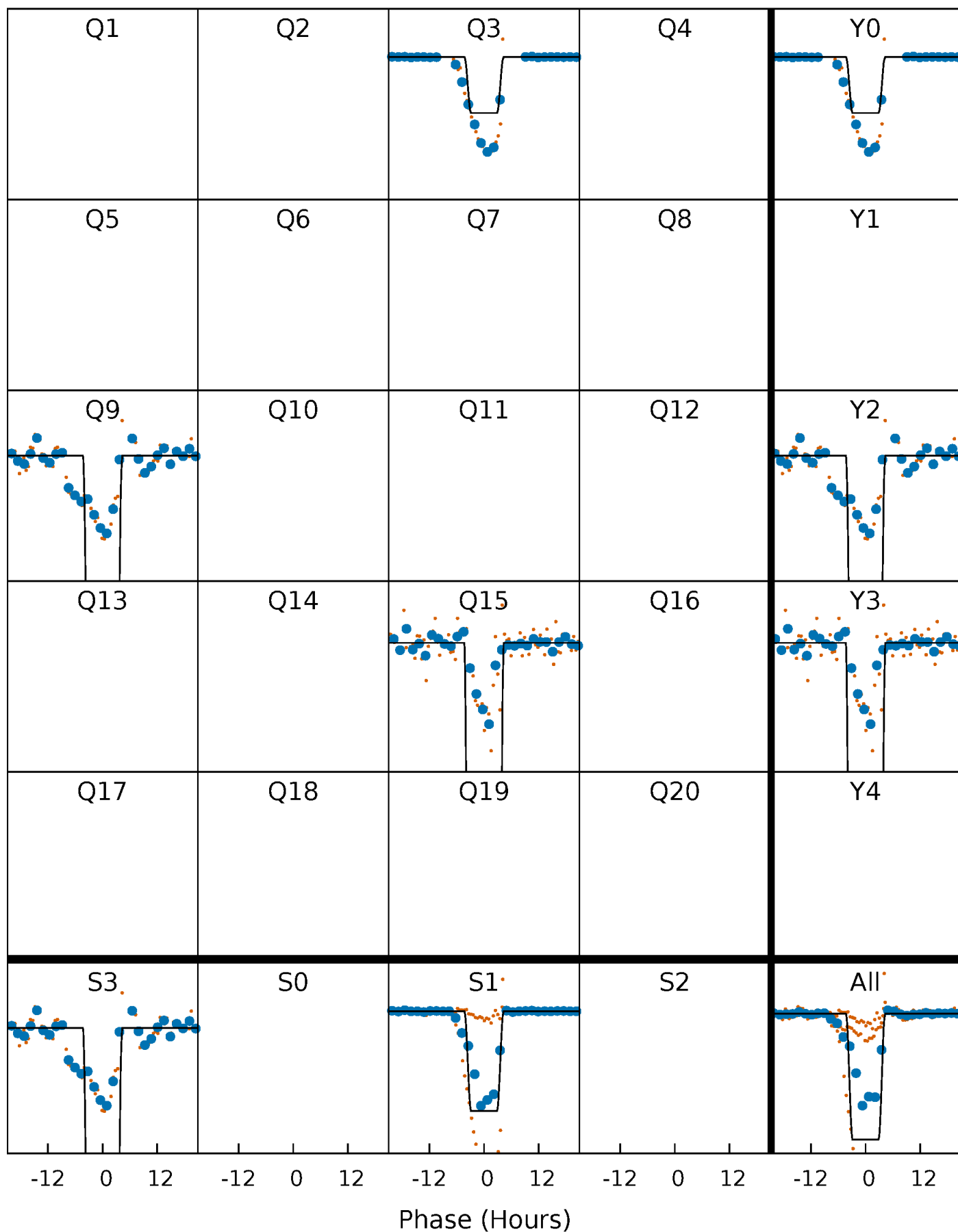
DV Quarter-Phased Transit Curves

TCE 005608037-07 $P=562.035806$ Days $T_0=300.713266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

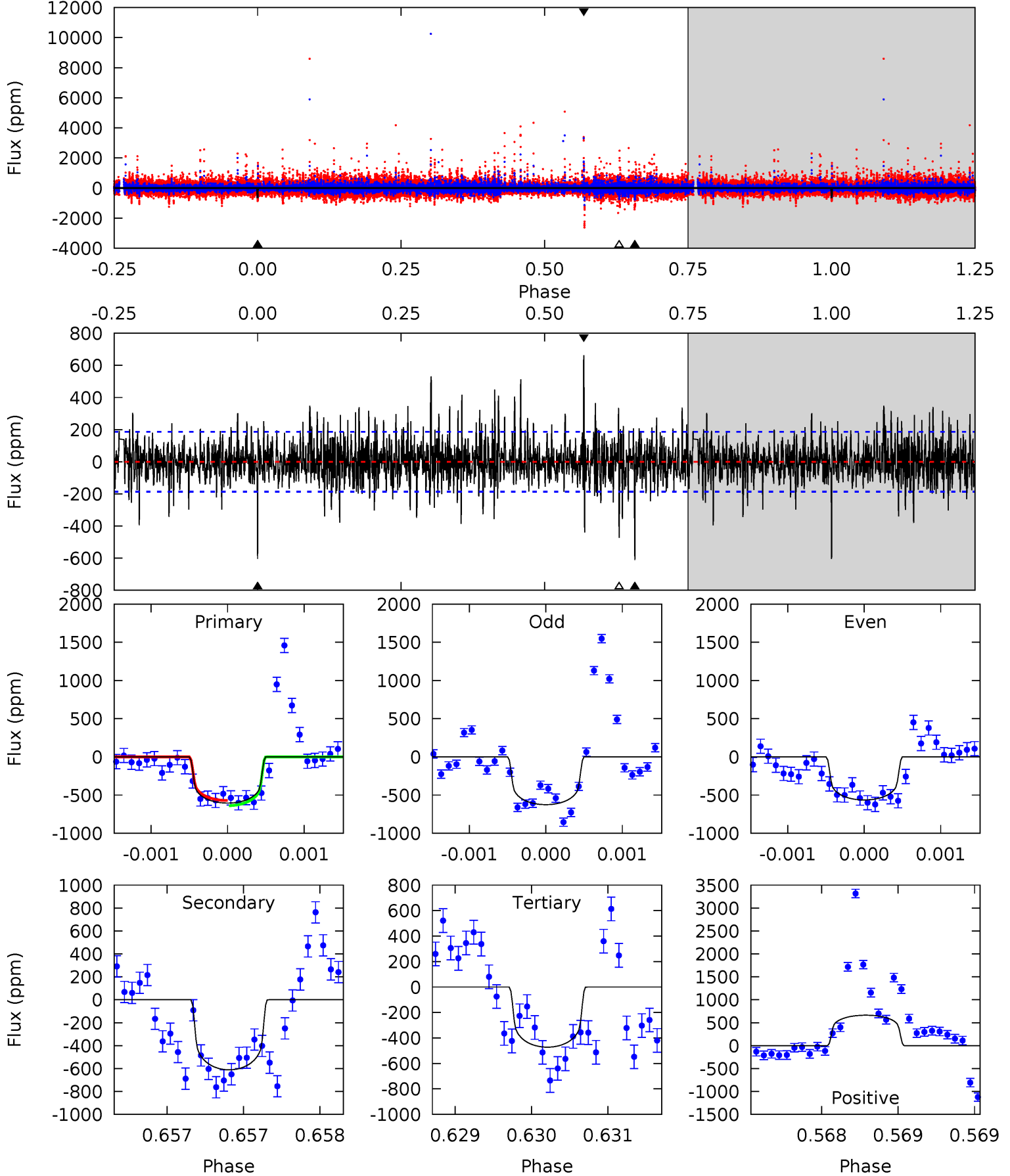
TCE 005608037-07 P=562.038690 Days $T_0=300.837391$ (BKJD)



DV Model-Shift Uniqueness Test

005608037-07, P = 562.035806 Days, E = 300.713266 Days

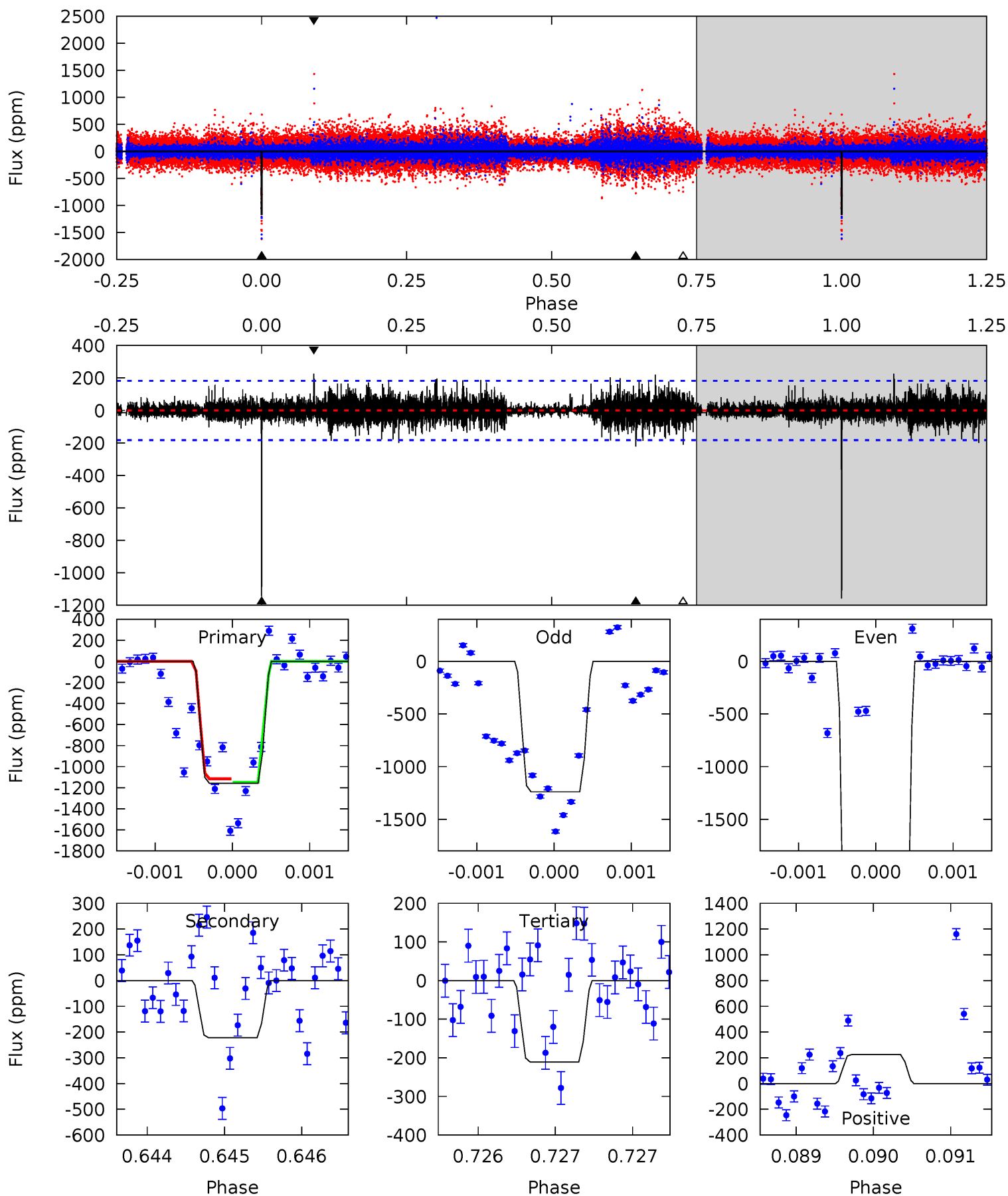
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	18.0	13.9	19.5	5.48	3.34	3.00	3.90	-1.73	4.09	-1.55	0.61	0.95	0.52	0.99



Alt Model-Shift Uniqueness Test

005608037-07, P = 562.038690 Days, E = 300.837391 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.0	6.71	6.37	6.82	5.53	3.42	1.20	28.7	28.2	0.34	-0.11	78.7	3.51	0.16	0.51



Stellar Parameters For KIC 005608037

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5633^{+185}_{-168}	$3.776^{+0.234}_{-0.156}$	$-0.600^{+0.350}_{-0.250}$	$2.114^{+0.578}_{-0.578}$	$0.972^{+0.179}_{-0.120}$	$0.145^{+0.194}_{-0.062}$
	+3%/-3%	+6%/-4%	+58%/-42%	+27%/-27%	+18%/-12%	+134%/-43%
Source	PHO1	FLK73	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 005608037-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-611 ± 34	$5.96^{+1.72}_{-1.38}$	437^{+34}_{-33}	5460^{+628}_{-399}	16622^{+11555}_{-6283}
Alt.	-222 ± 33	$19.77^{+3.58}_{-3.22}$	435^{+34}_{-33}	3002^{+93}_{-99}	555^{+230}_{-160}

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

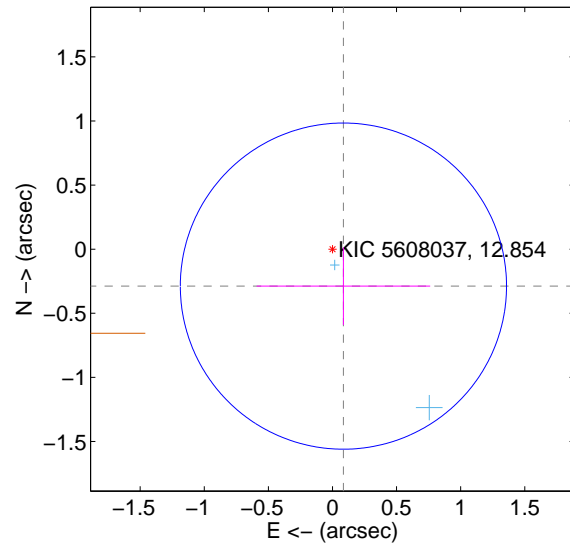
Supplemental centroid analysis for 005608037-07. Kepler magnitude: 12.85. Transit SNR 10.93

There are 2 quarters with good PRF difference image offsets

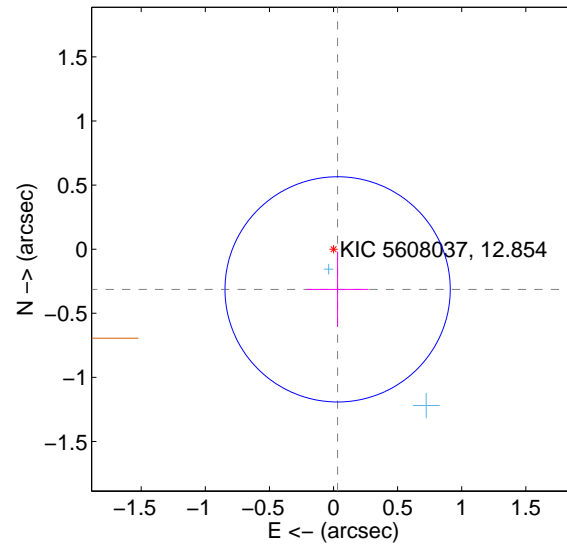
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.300 ± 0.424	0.71	-0.085 ± 0.677	-0.288 ± 0.302
PRF-fit source offset from KIC position	0.315 ± 0.293	1.08	-0.032 ± 0.242	-0.313 ± 0.293
photometric centroid source offset	0.53 ± 0.34	1.55	-0.19 ± 0.28	-0.50 ± 0.35

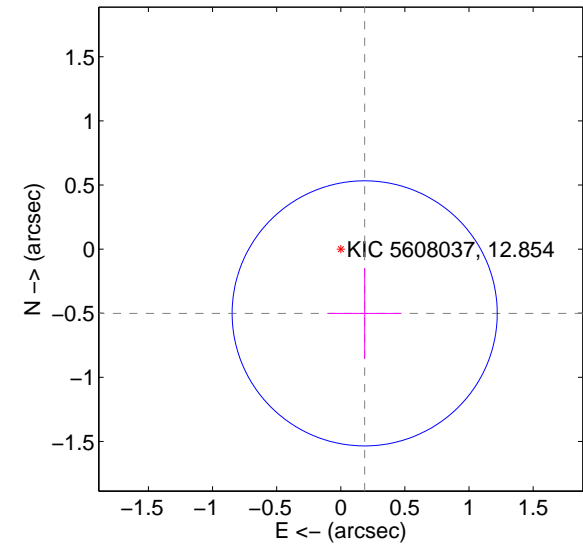
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

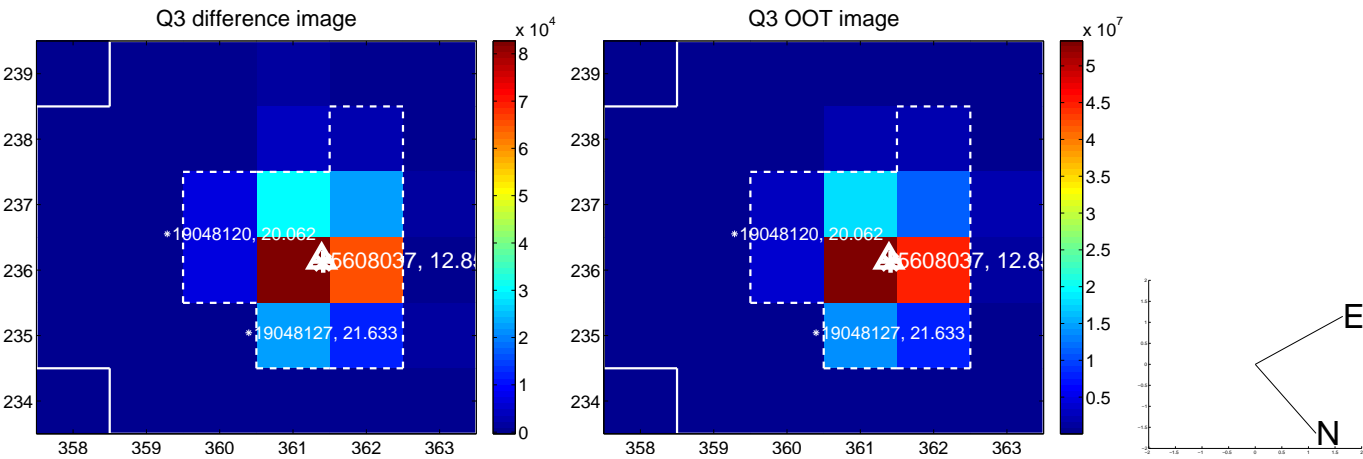


offset from photometric centroids



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.

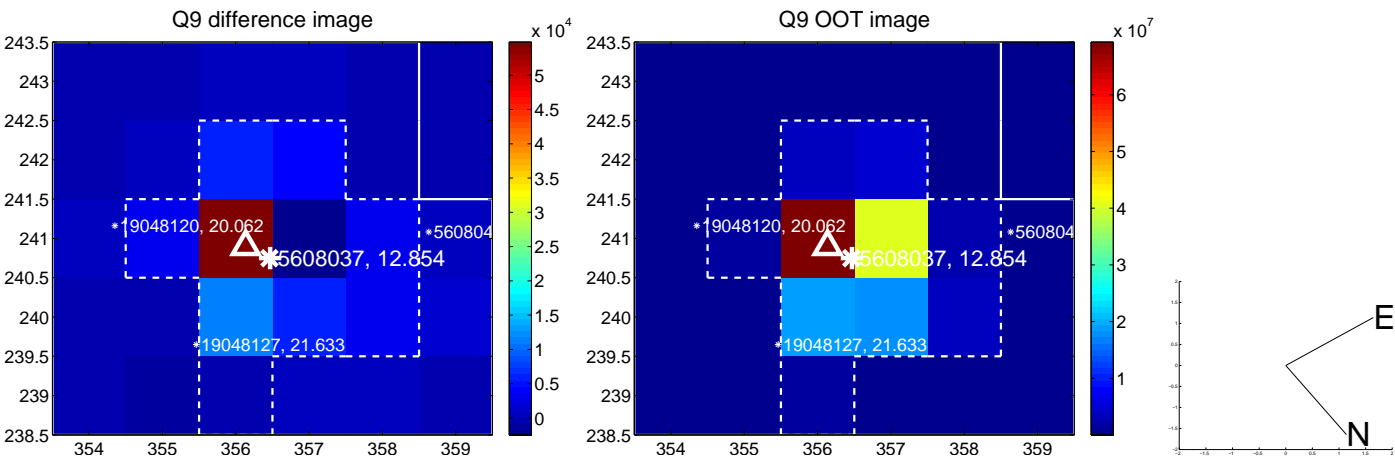
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



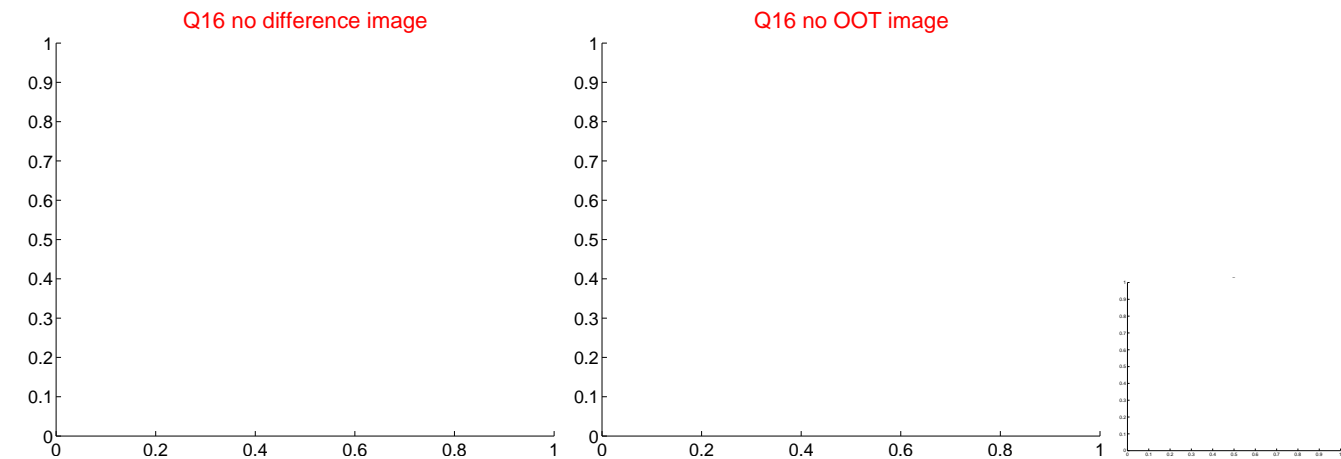
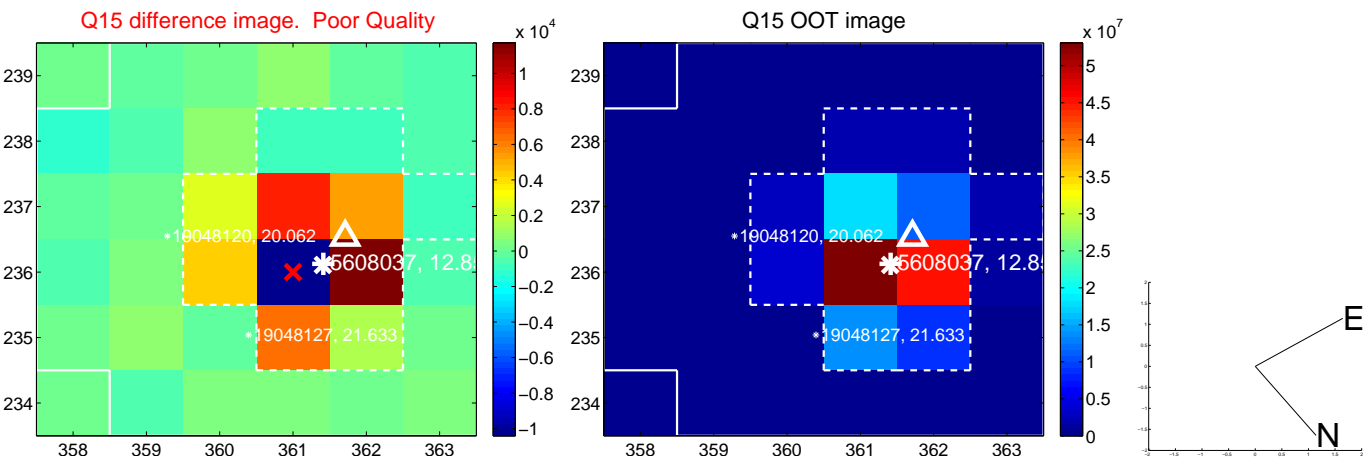
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



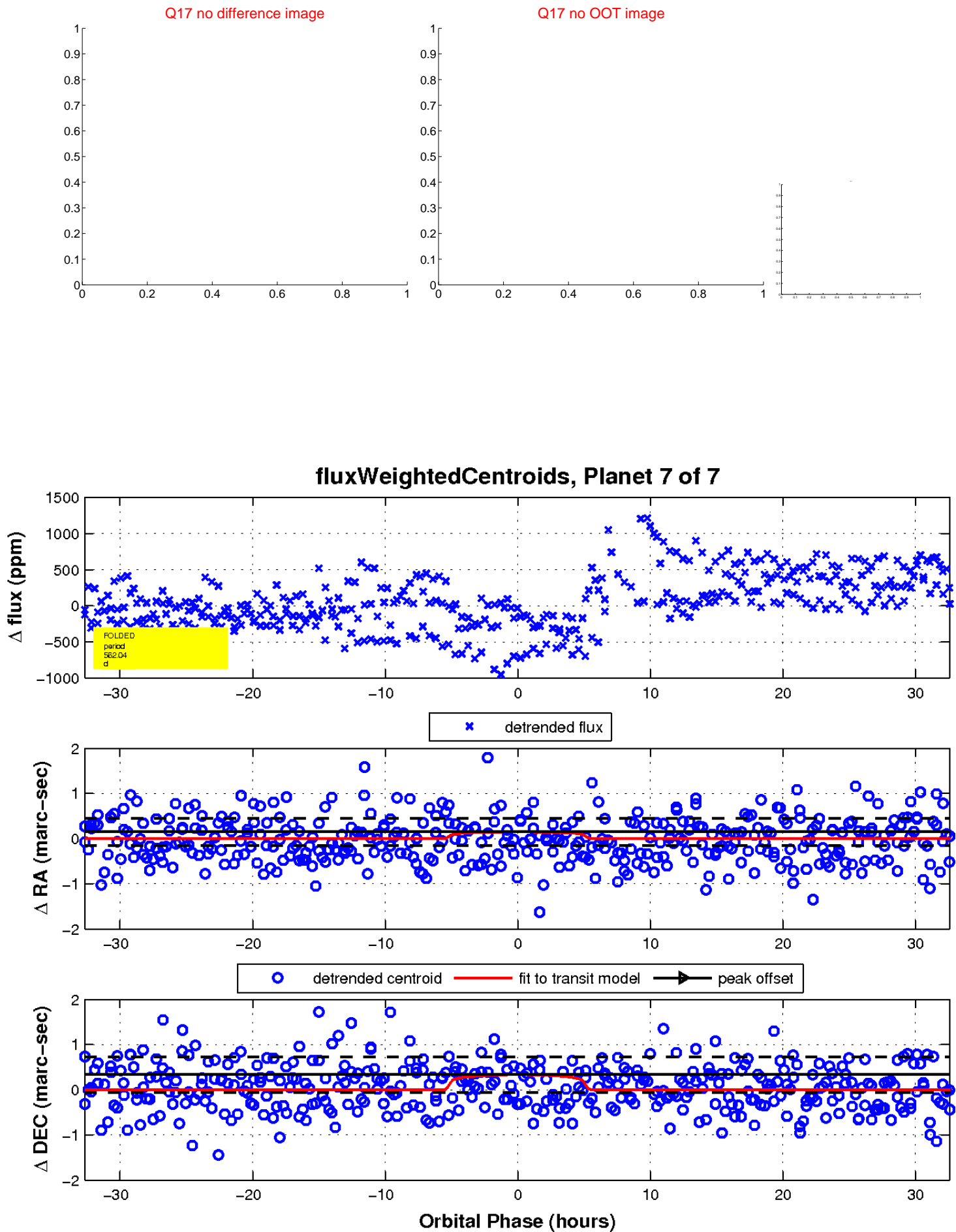
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

