

KIC 006025092

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})
006025092-01	OBS	No	364.031007	359.809719	1711.0	6.167	9.2	7.6	0.95	5601	7.63	0.87
006025092-02	OBS	No	385.069636	346.239744	1499.6	7.812	16.2	8.1	0.95	5601	3.75	0.81
006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

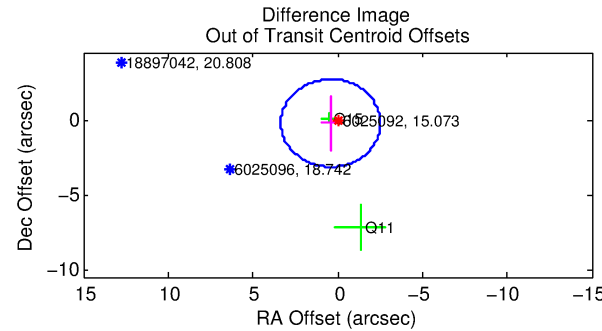
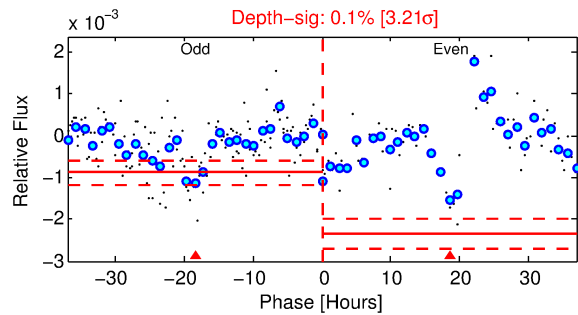
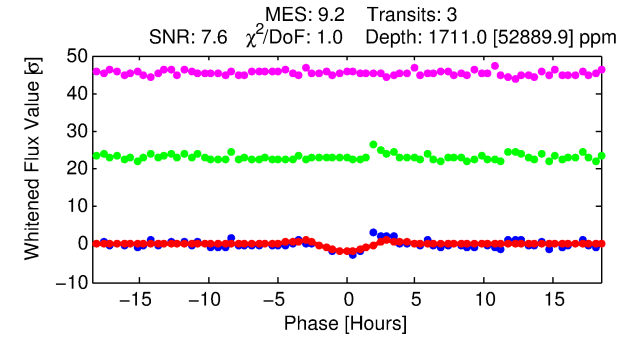
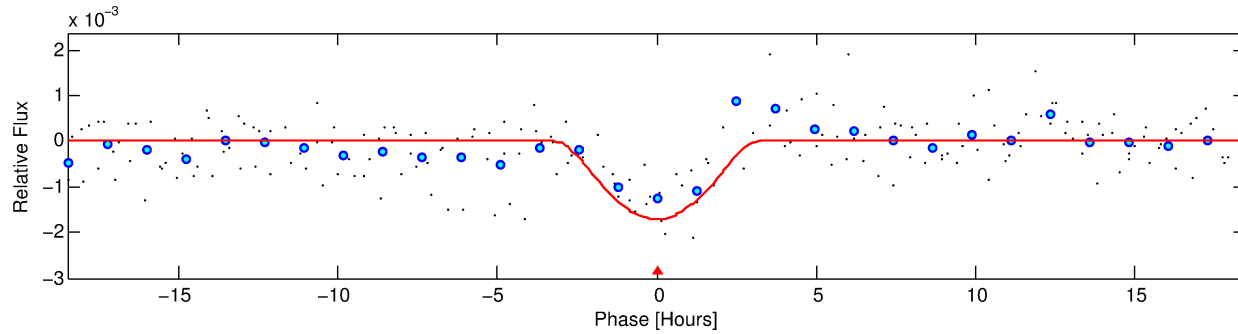
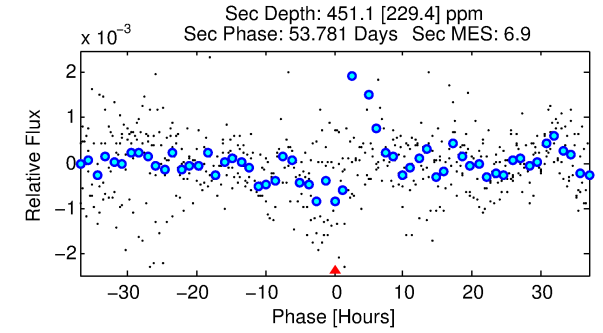
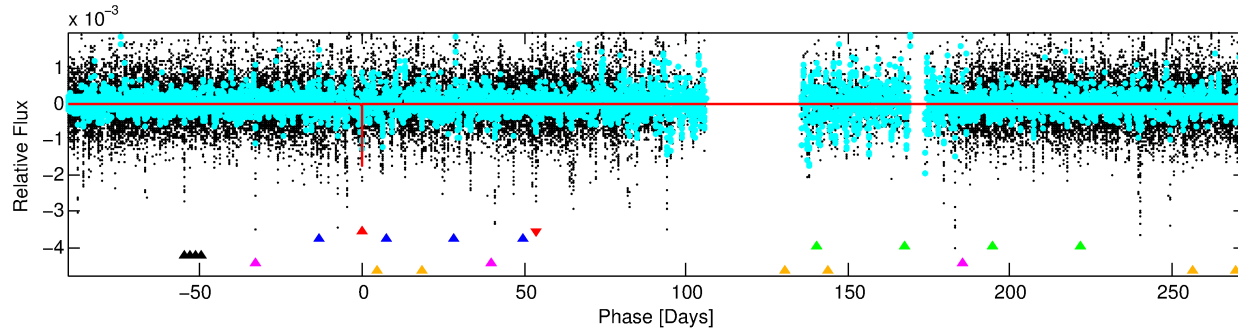
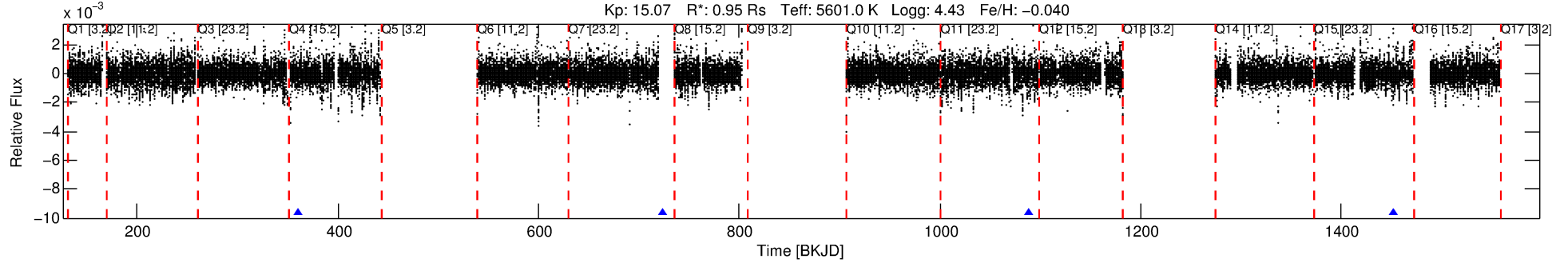
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-01

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 1 of 6 Period: 364.031 d



DV Fit Results:

Period = 364.03101 [0.00537] d
Epoch = 359.8097 [0.0114] BKJD
Rp/R* = 0.0733 [0.2267]
a/R* = 175.78 [119.09]
b = 1.00 [1.18]
Seff = 0.87 [0.29]
Teq = 246 [21] K
Rp = 7.63 [23.68] Re
a = 0.9620 [0.2099] AU
Ag = 3944.74 [24514.07] [0.16 σ]
Teffp = 3015 [4679] K [0.59 σ]

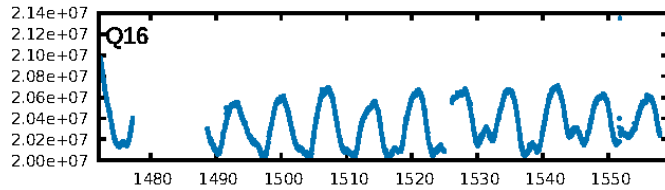
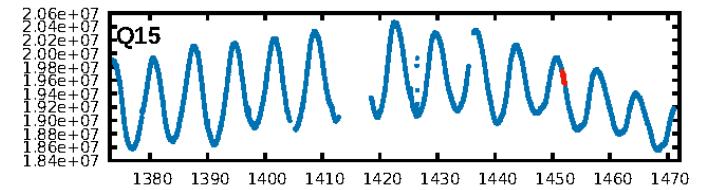
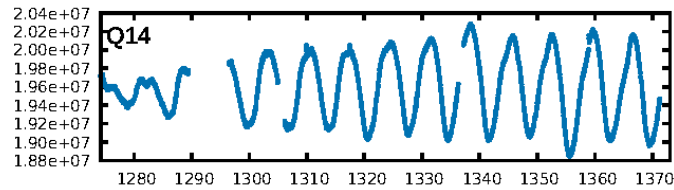
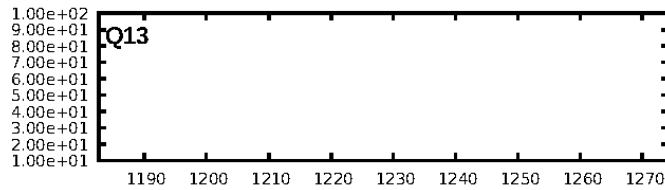
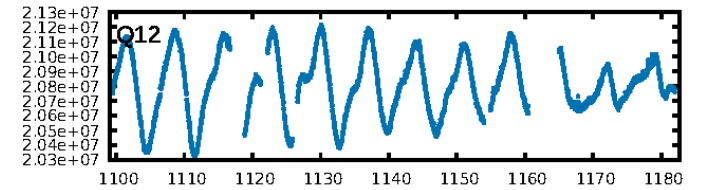
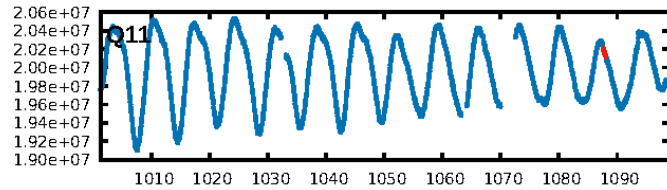
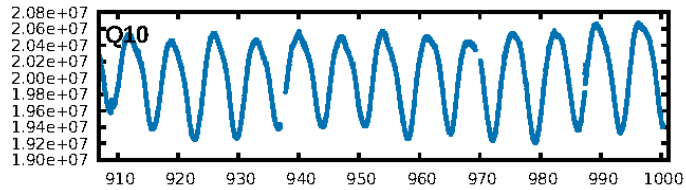
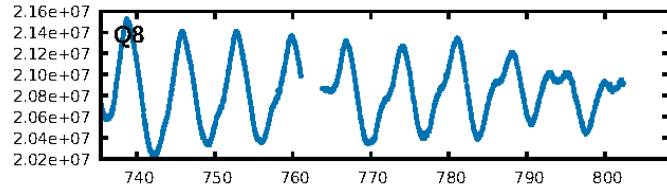
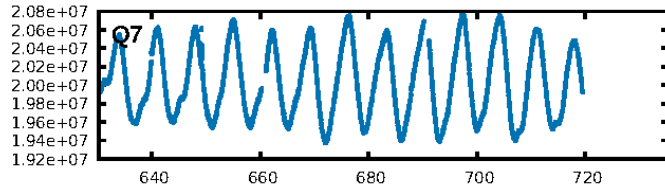
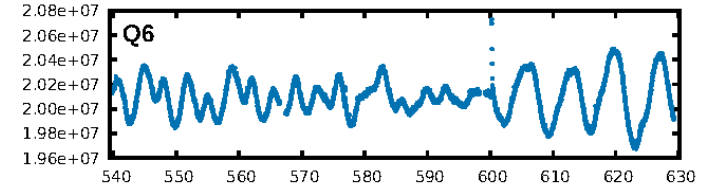
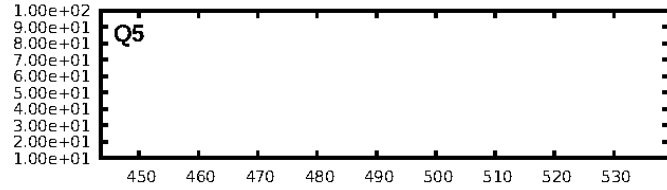
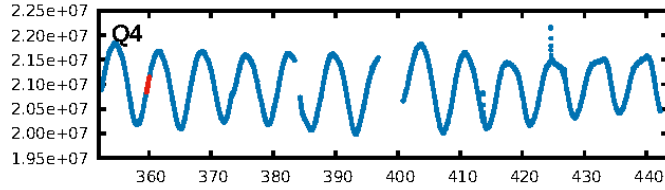
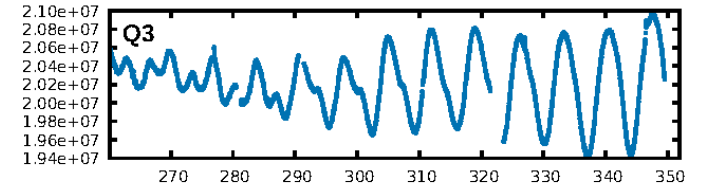
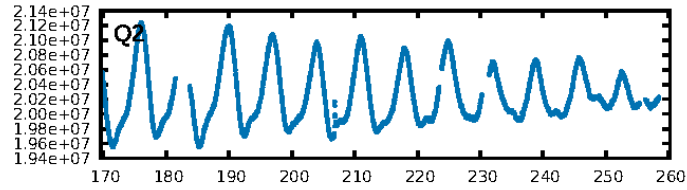
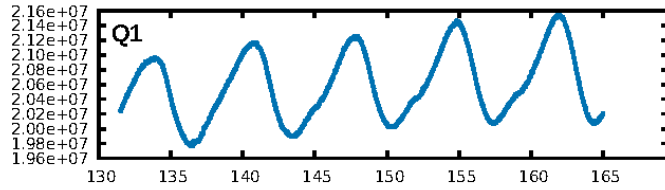
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.97 σ]
LongPeriod-sig: 100.0% [50.73 σ]
ModelChiSquare2-sig: 8.1%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 4.97e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.112
Centroid-sig: 13.4%
Centroid-so: 1.174 arcsec [1.13 σ]
OotOffset-rm: 0.476 arcsec [0.49 σ]
KicOffset-rm: 0.413 arcsec [0.44 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

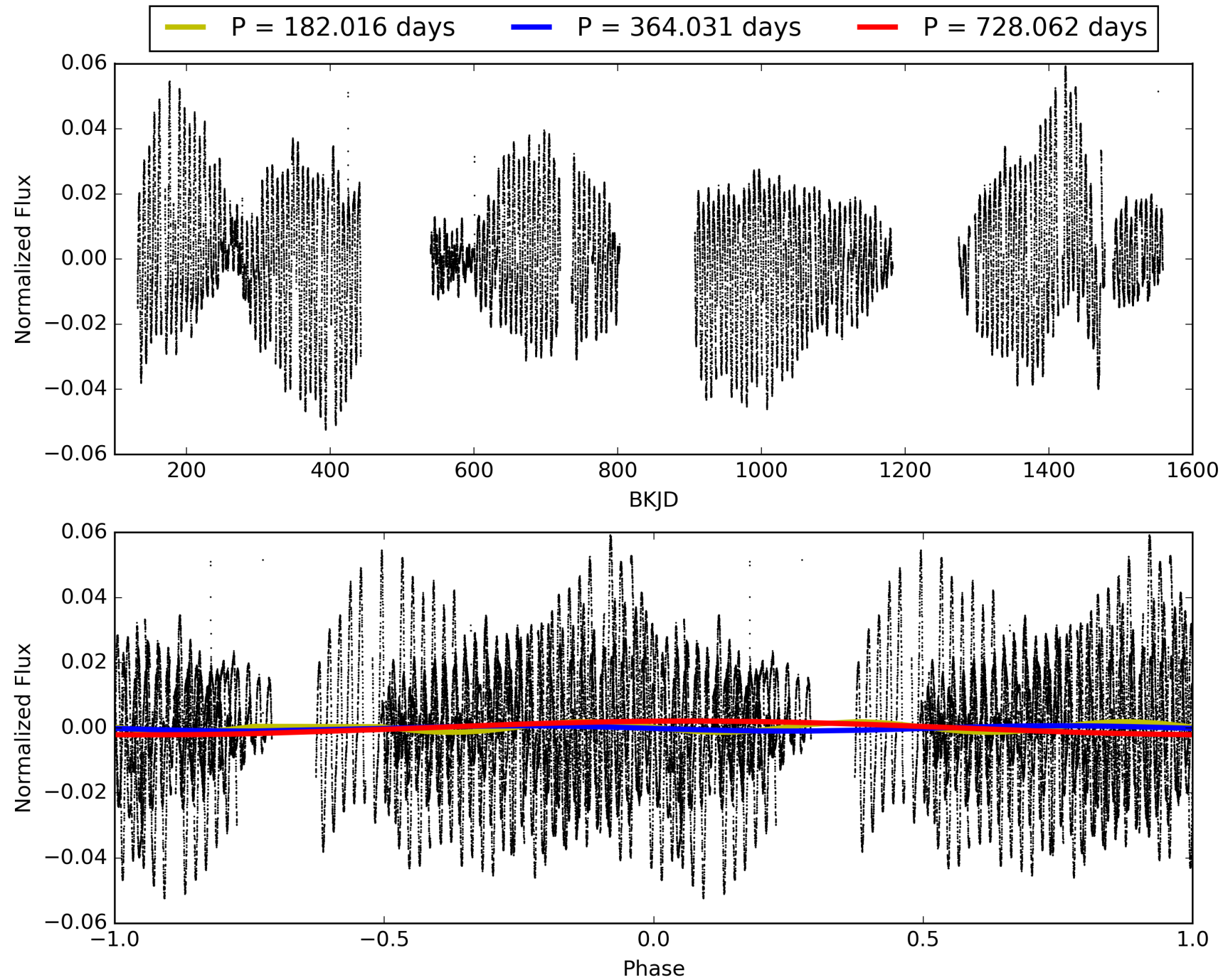
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:06:06 Z

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

TCE 006025092-01, PDC Light Curves

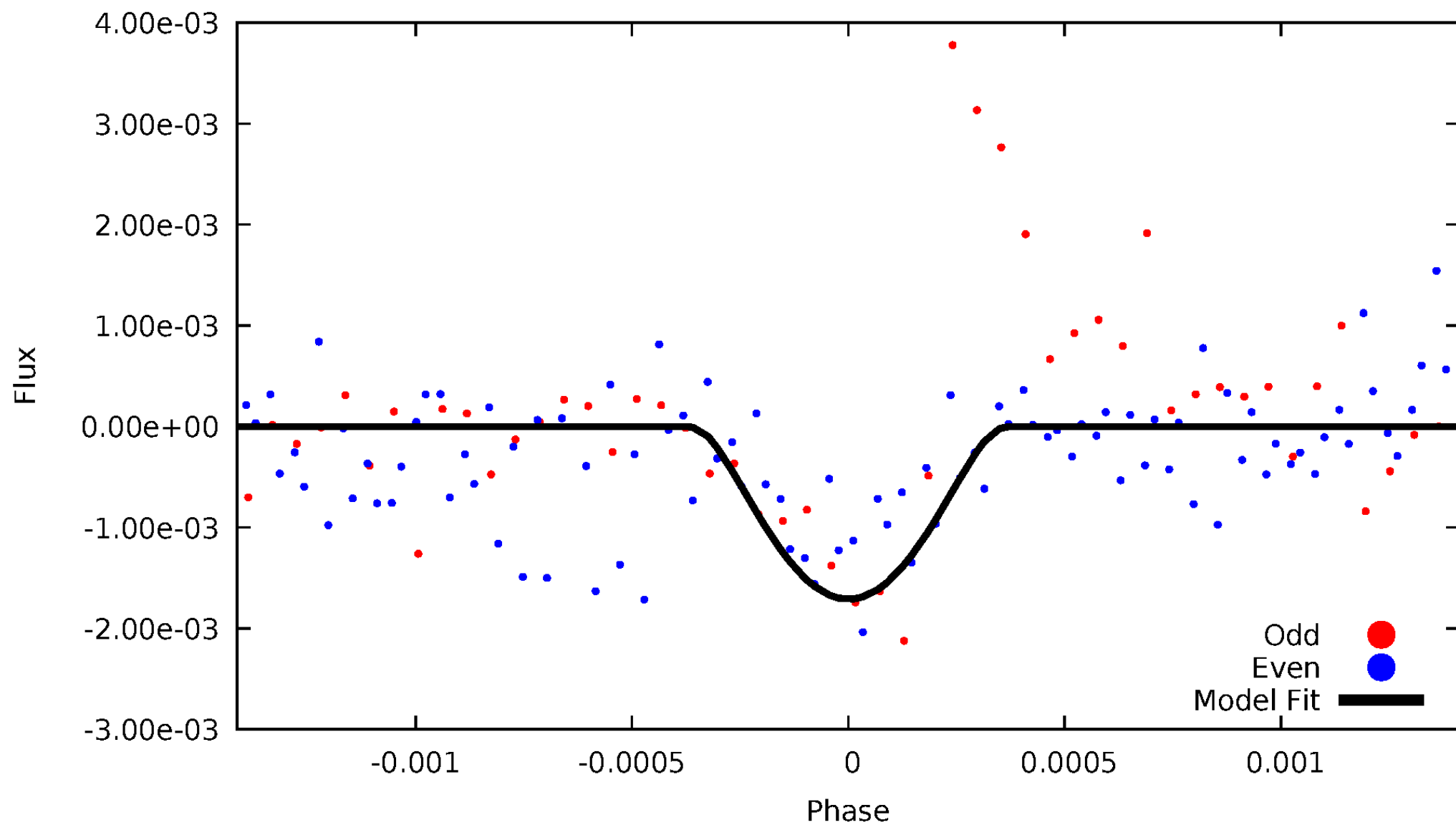


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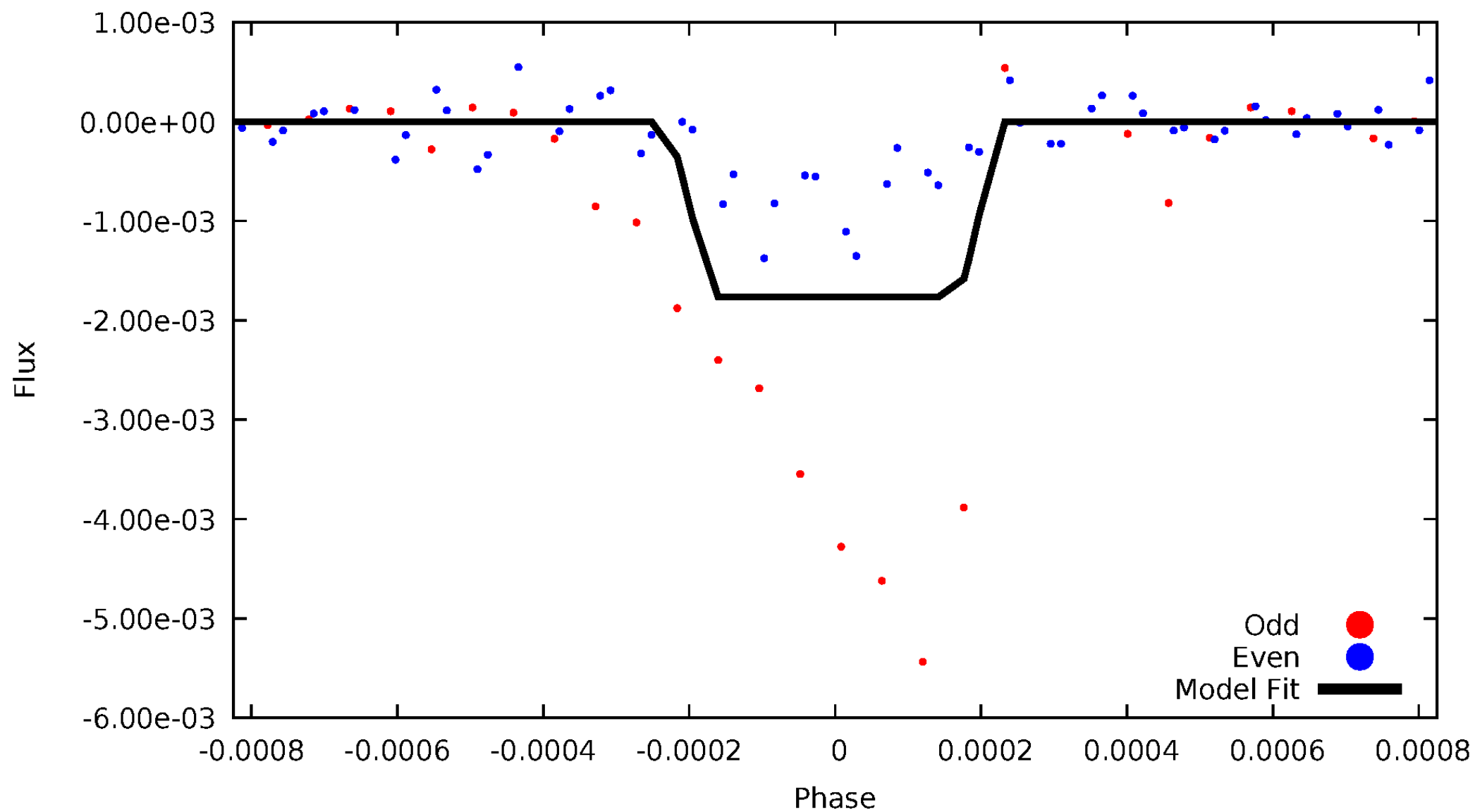
DV Odd/Even

TCE 006025092-01



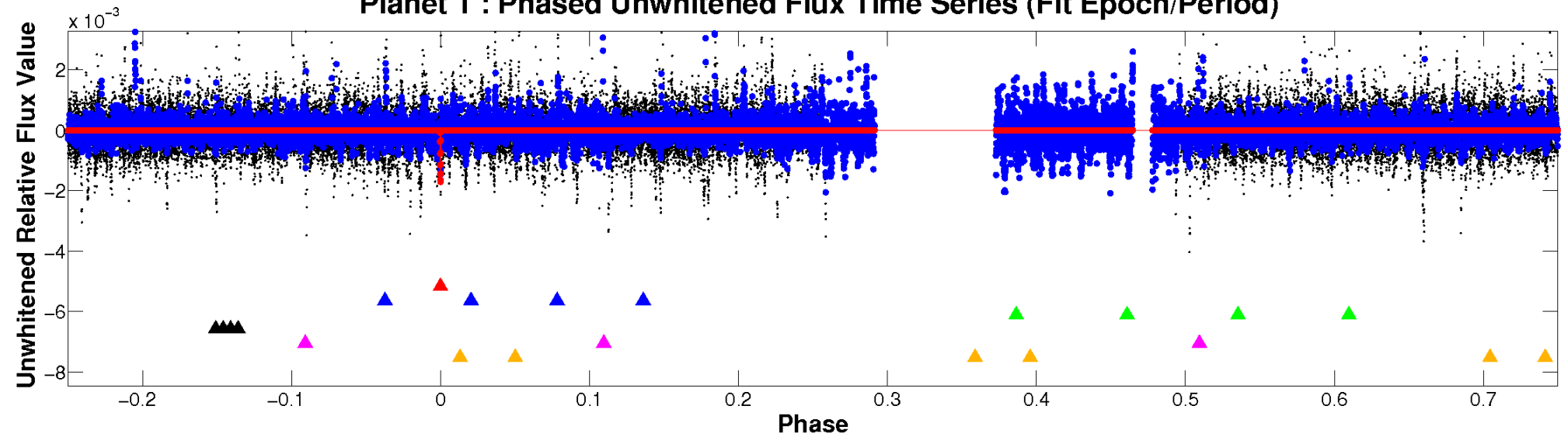
ALT Odd/Even

TCE 006025092-01

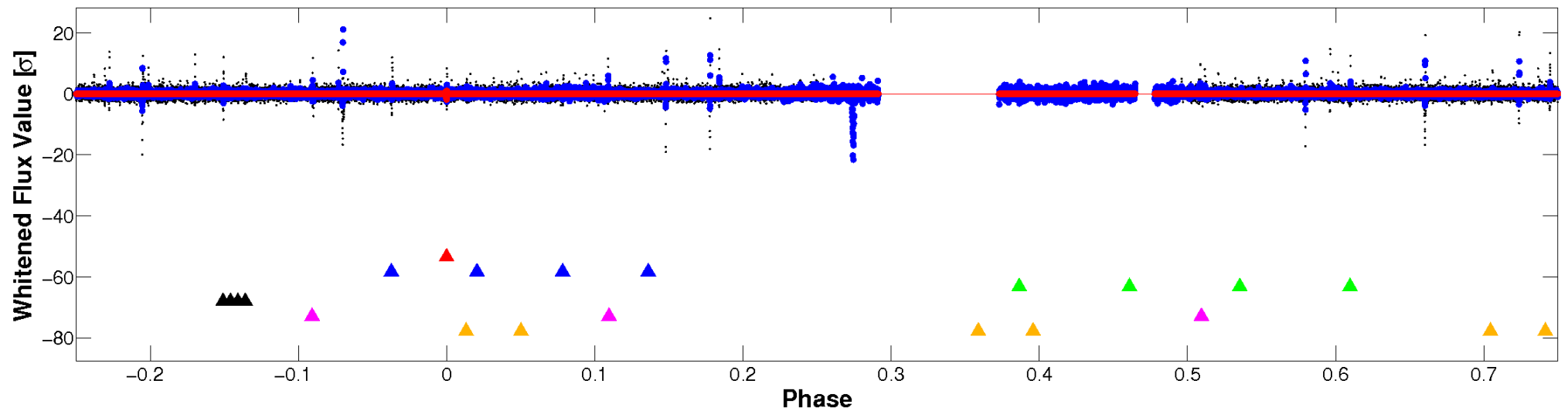


Non-Whitened Vs. Whitened Light Curve

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

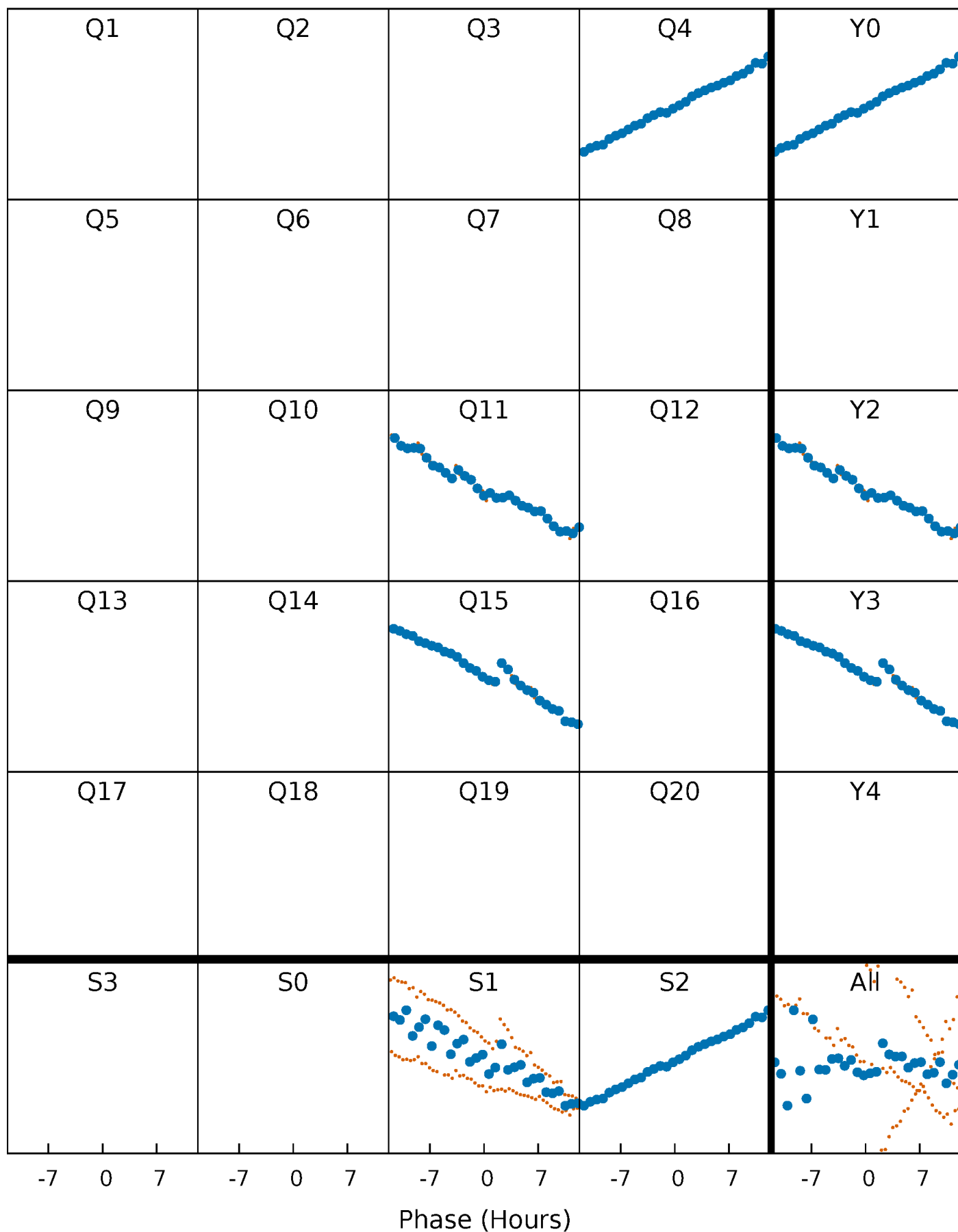


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



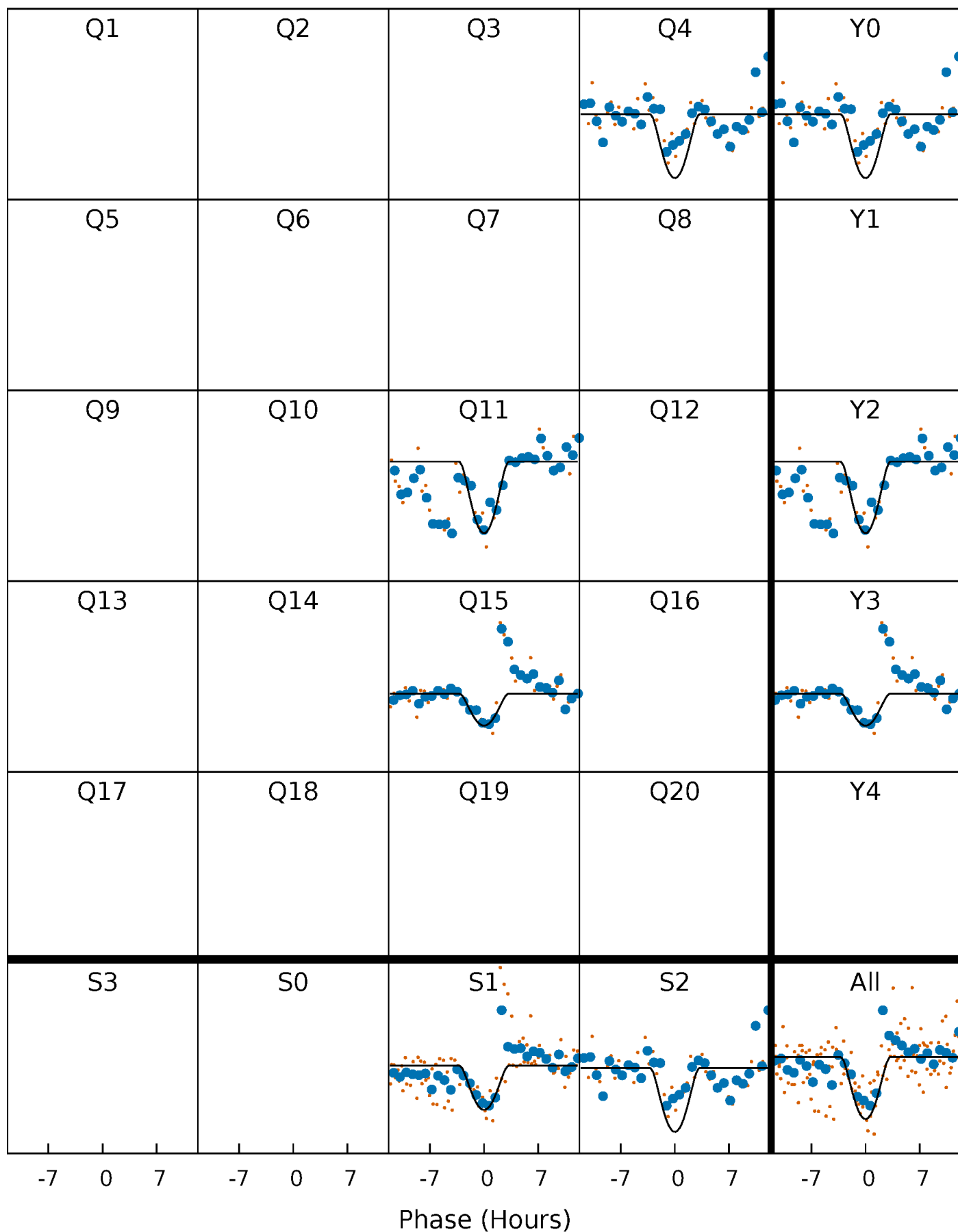
PDC Quarter-Phased Transit Curves

TCE 006025092-01 P=364.031007 Days $T_0=359.809720$ (BKJD)



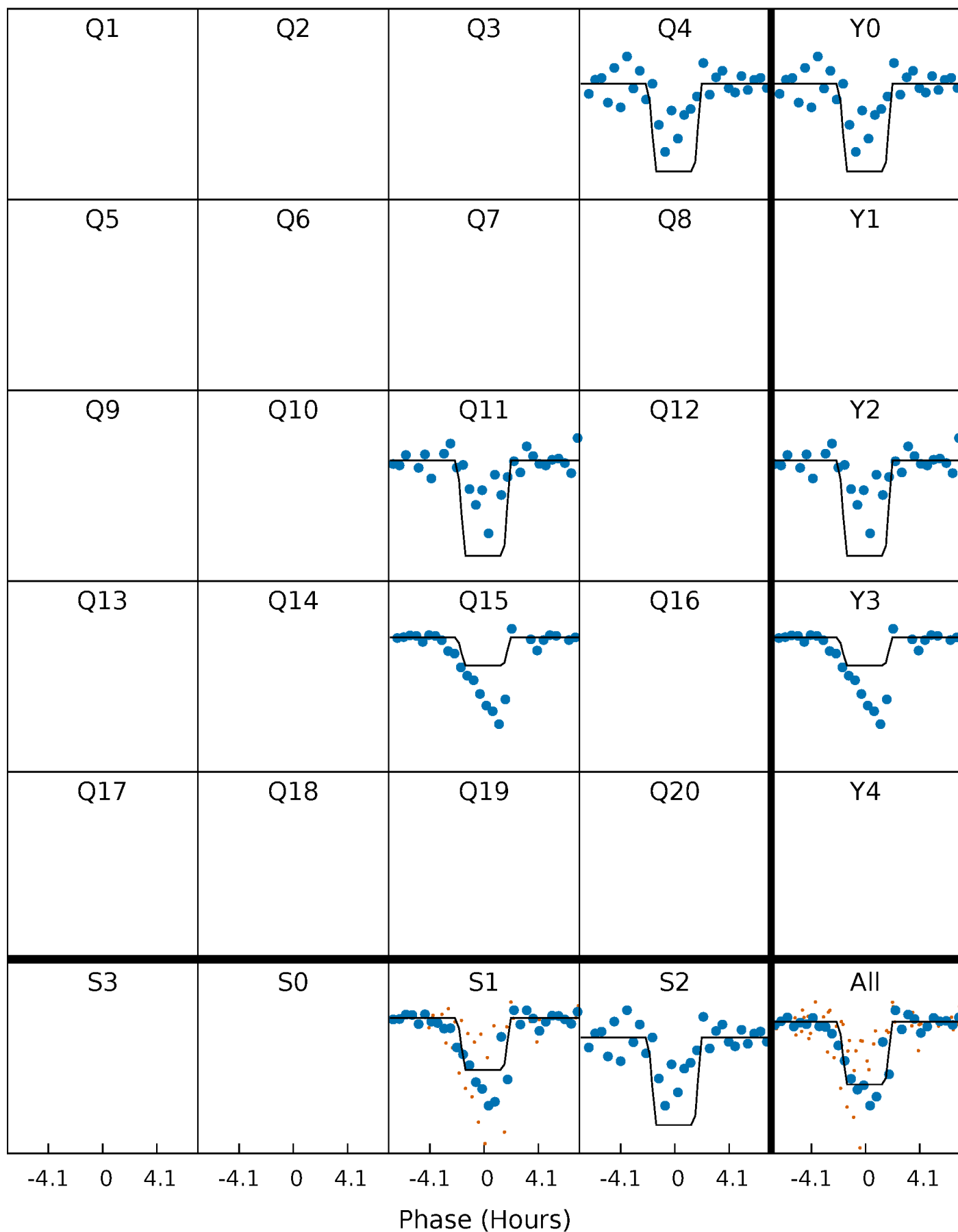
DV Quarter-Phased Transit Curves

TCE 006025092-01 P=364.031007 Days $T_0=359.809720$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

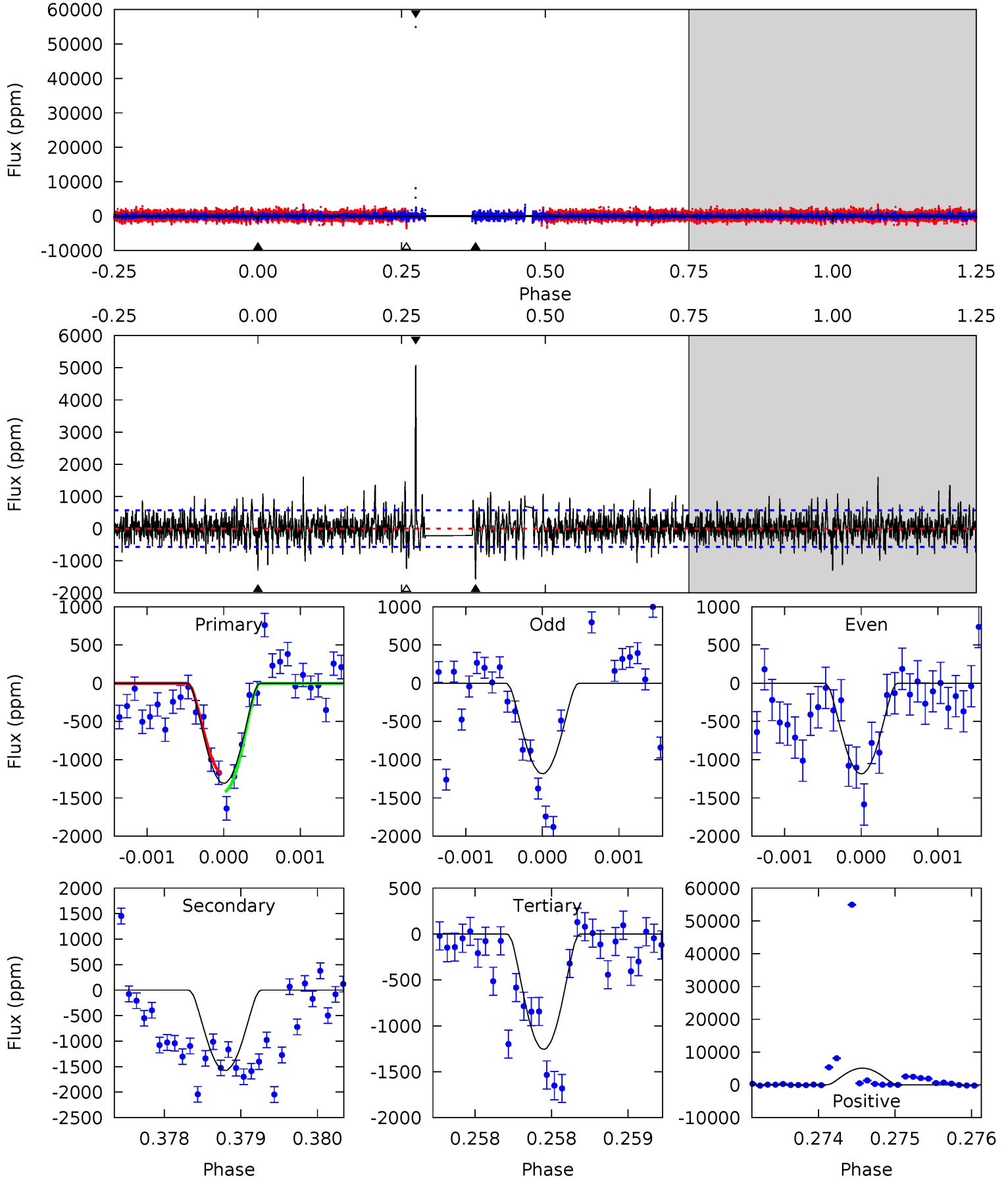
TCE 006025092-01 P=364.032413 Days $T_0=359.808601$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-01, P = 364.031007 Days, E = 359.809720 Days

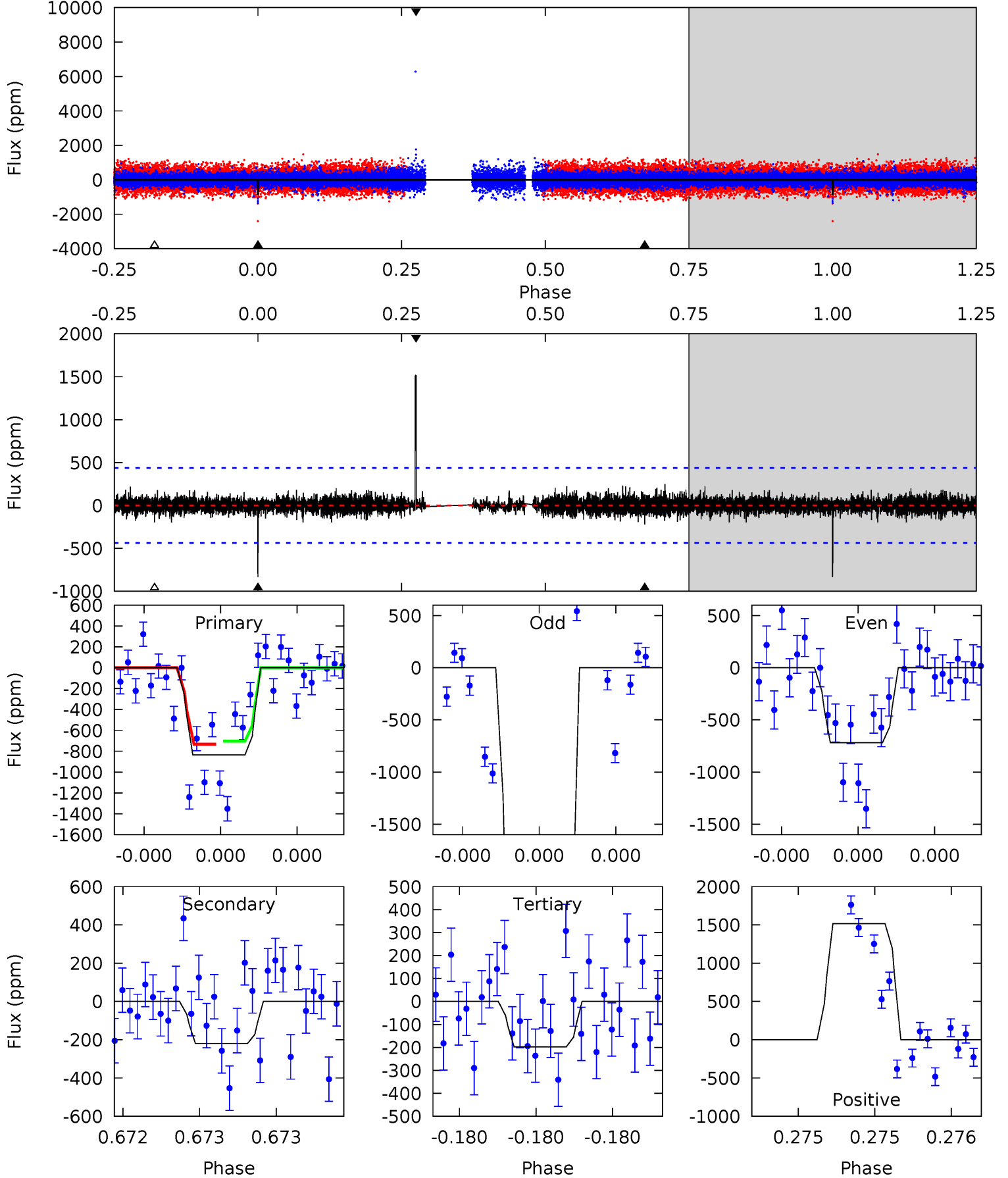
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	15.2	12.1	49.0	5.50	3.36	3.03	0.50	-36.4	3.08	-33.8	0.01	1.00	0.76	1.07



Alt Model-Shift Uniqueness Test

006025092-01, P = 364.032413 Days, E = 359.808601 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	2.80	2.53	19.4	5.59	3.51	0.71	8.15	-8.69	0.27	-16.6	22.2	2.31	0.64	0.18



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1575 ± 104	$19.30^{+19.77}_{-13.45}$	345^{+24}_{-18}	3178^{+1847}_{-538}	2179^{+21599}_{-1670}
Alt.	-219 ± 78	$17.92^{+18.38}_{-12.28}$	347^{+26}_{-19}	2510^{+929}_{-397}	342^{+2803}_{-268}

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 $A_{obs} \gg 1.0$

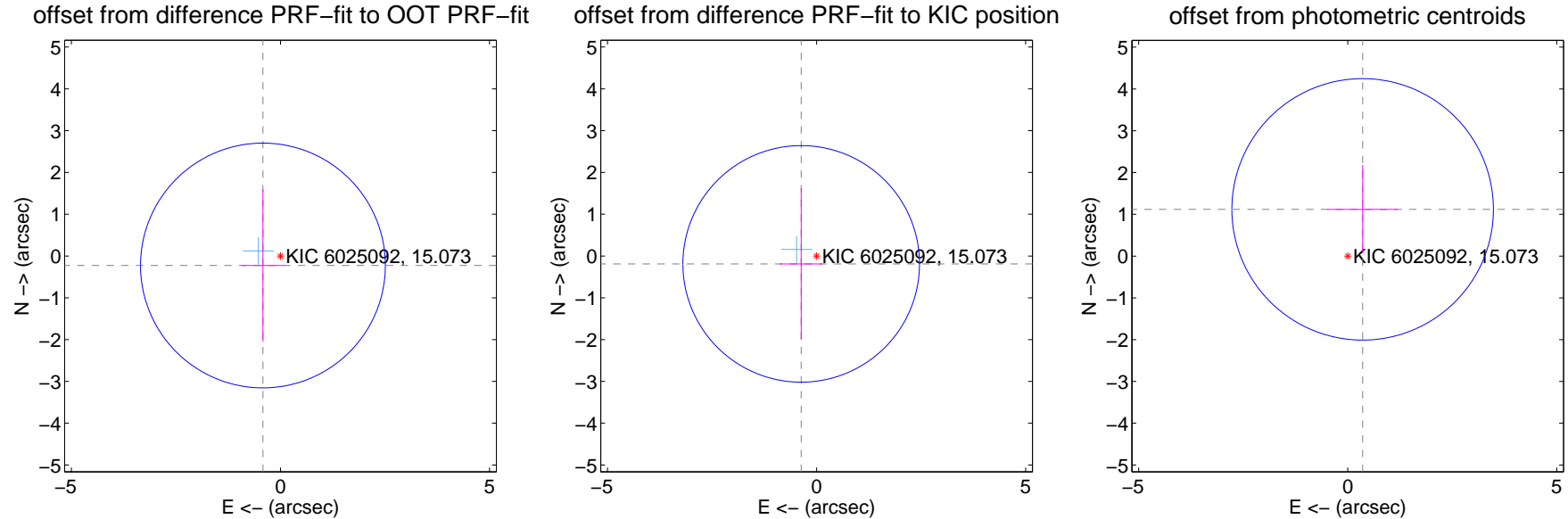
DV Centroid Data

Supplemental centroid analysis for 006025092-01. Kepler magnitude: 15.07. Transit SNR 7.56

There are 1 quarters with good PRF difference image offsets

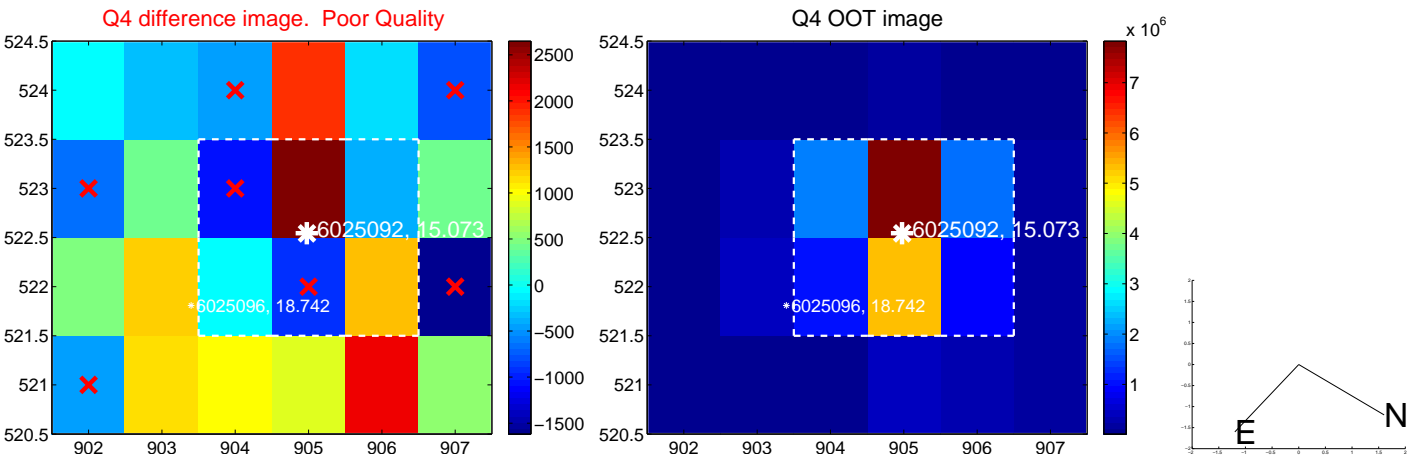
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.476 ± 0.976	0.49	0.419 ± 0.516	-0.226 ± 1.818
PRF-fit source offset from KIC position	0.413 ± 0.943	0.44	0.368 ± 0.515	-0.188 ± 1.809
photometric centroid source offset	1.17 ± 1.04	1.13	-0.36 ± 0.84	1.12 ± 1.06



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



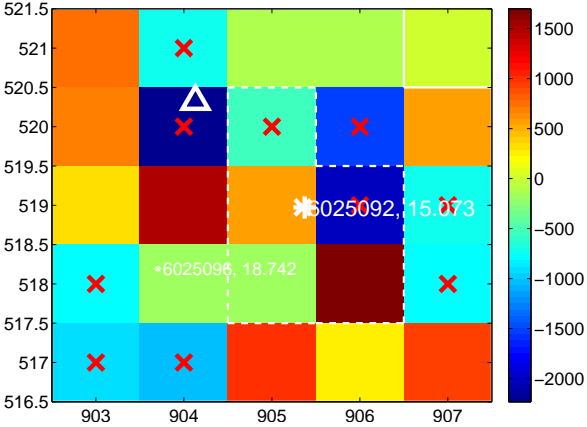
Q10 no difference image



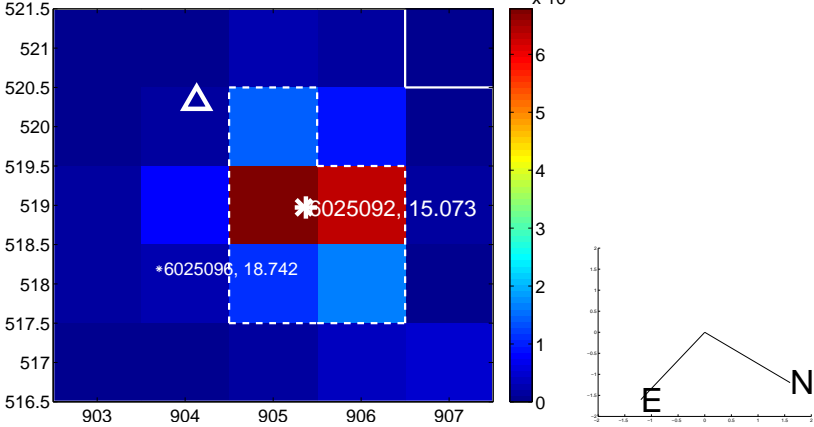
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



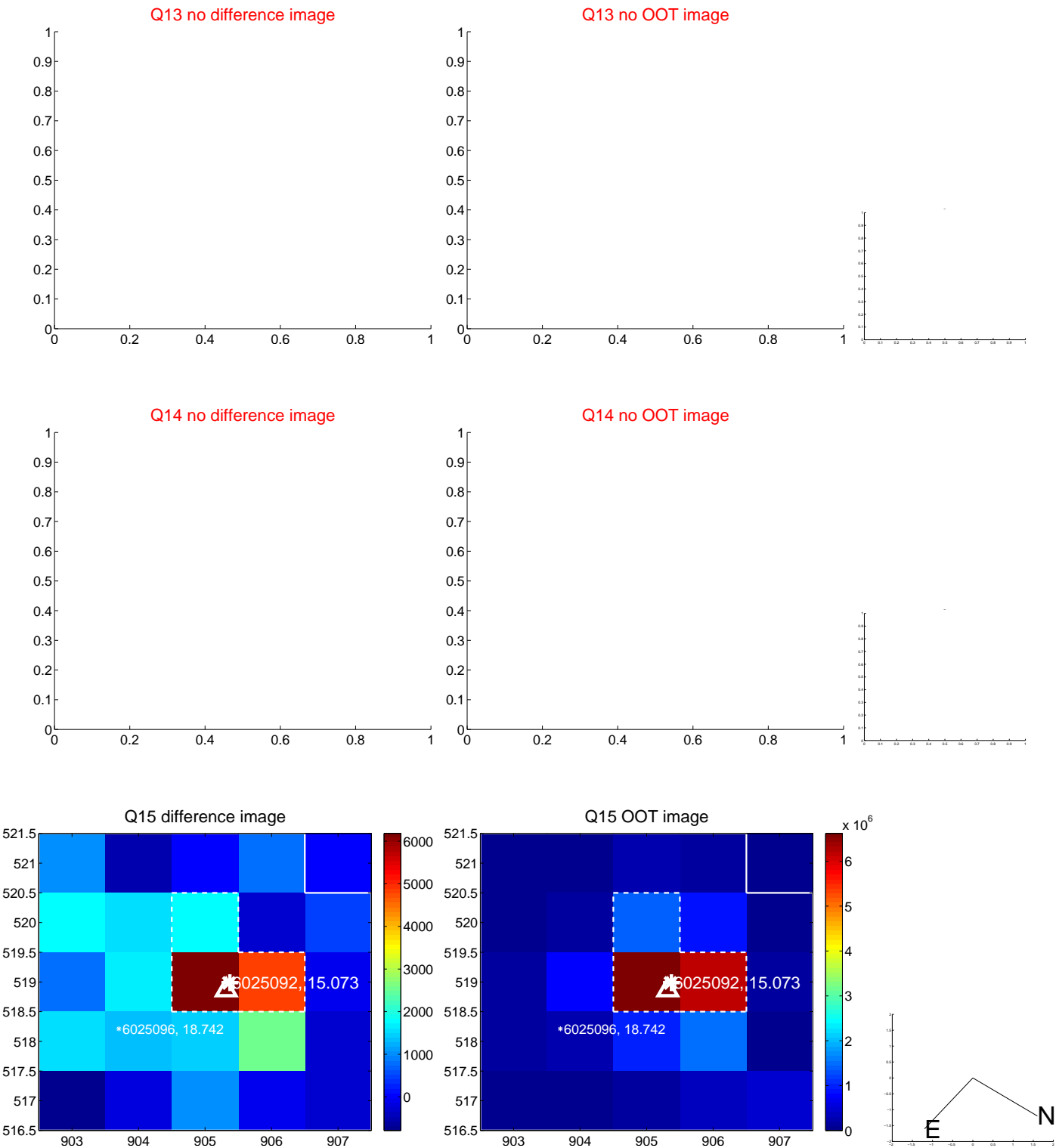
Q12 no difference image



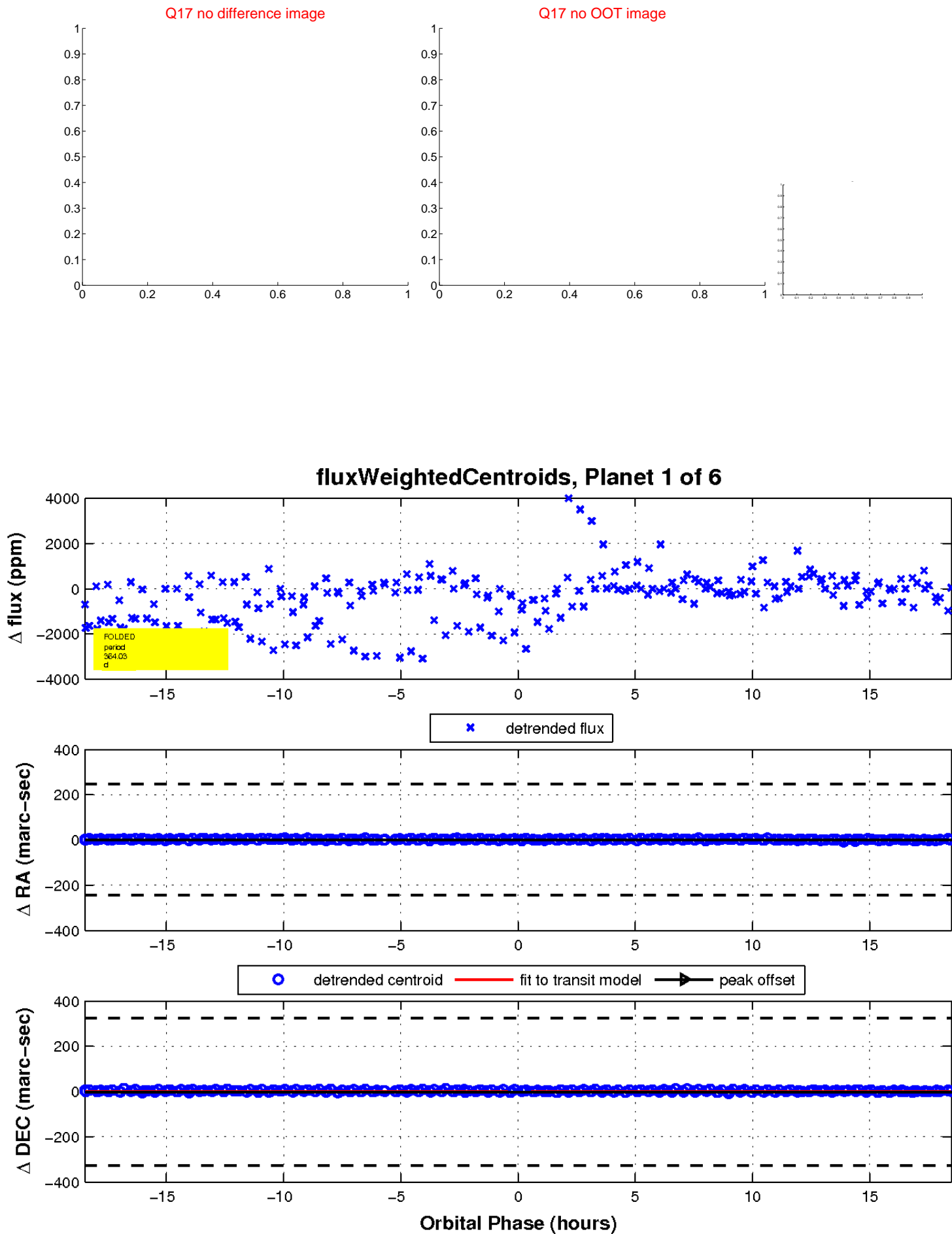
Q12 no OOT image



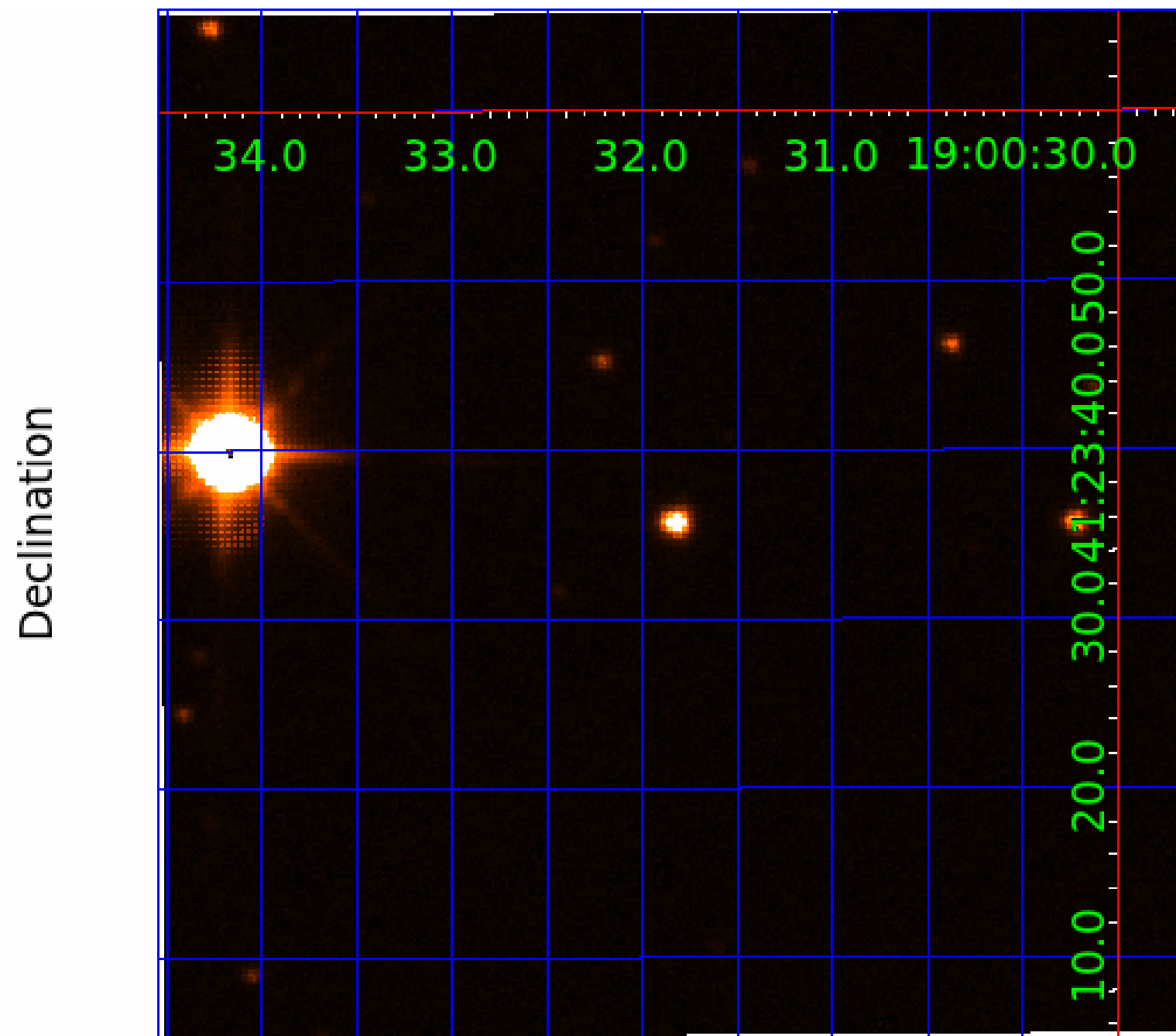
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 006025092

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})
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006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

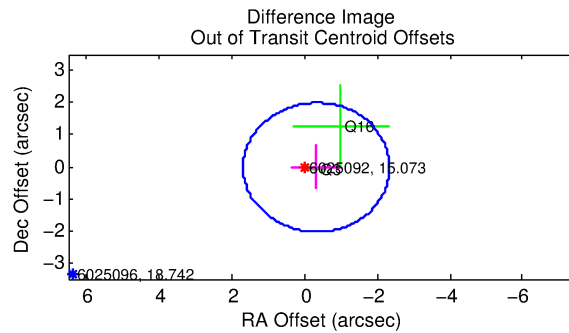
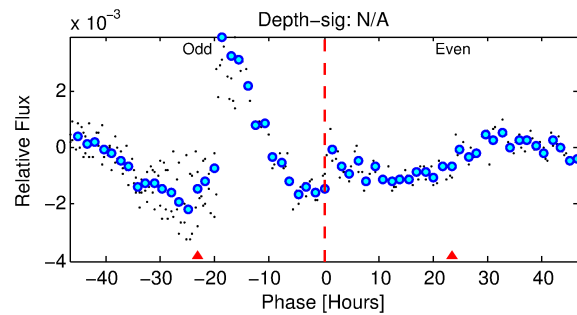
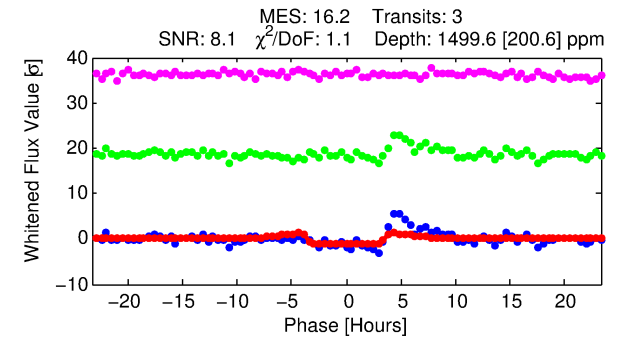
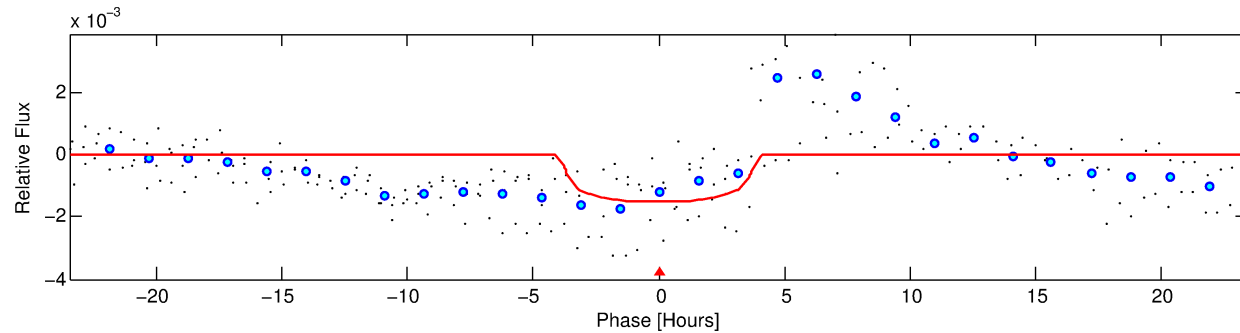
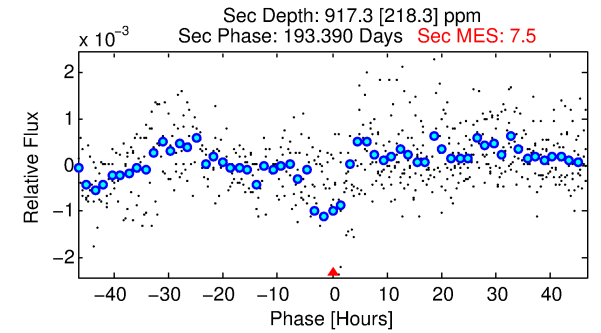
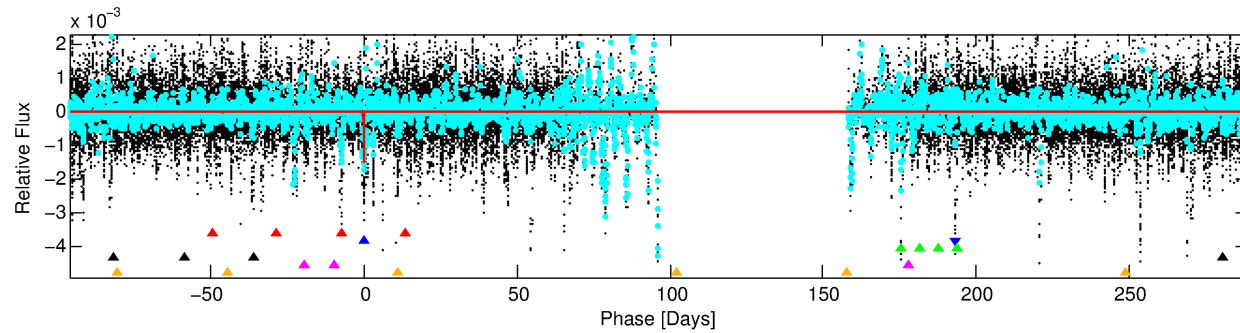
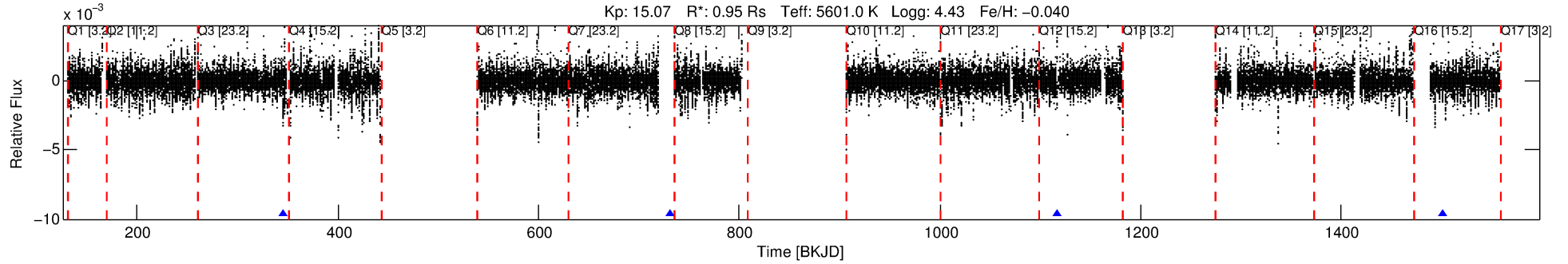
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-02

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 2 of 6 Period: 385.070 d



DV Fit Results:

Period = 385.06964 [0.00400] d
Epoch = 346.2397 [0.0091] BKJD
Rp/R* = 0.0360 [0.0483]
a/R* = 348.97 [1936.63]
b = 0.46 [9.51]
Seff = 0.80 [0.27]
Teq = 242 [21] K
Rp = 3.75 [5.12] Re
a = 0.9987 [0.2179] AU
Ag = 35880.85 [97346.76] [0.37 σ]
Teffp = 5139 [3465] K [1.41 σ]

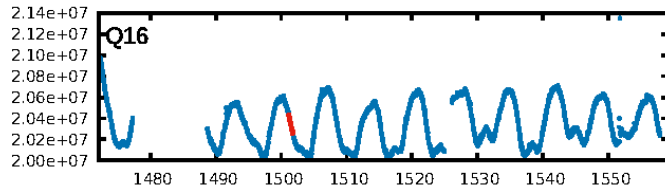
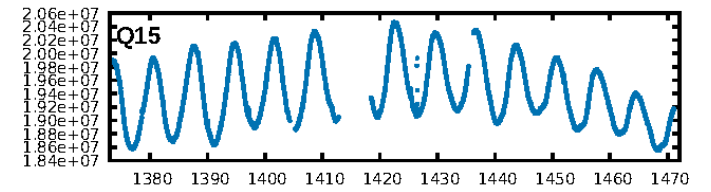
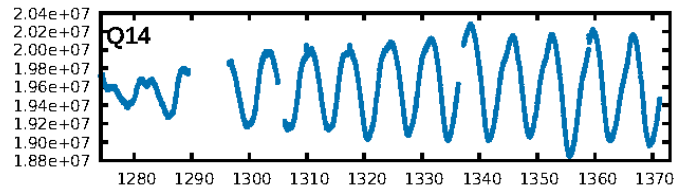
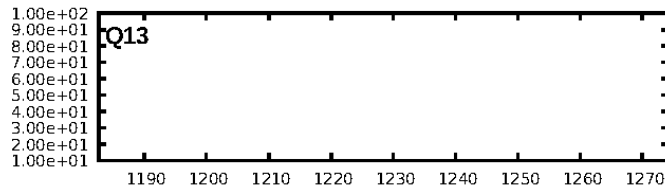
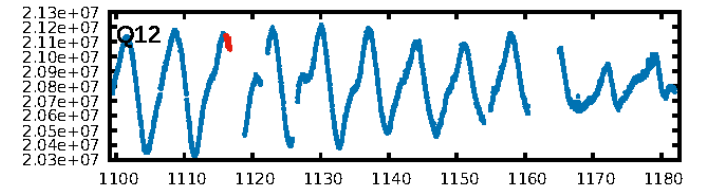
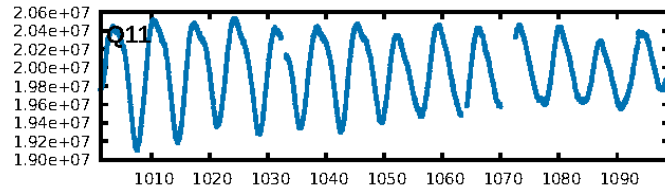
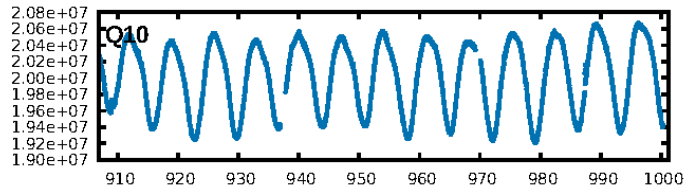
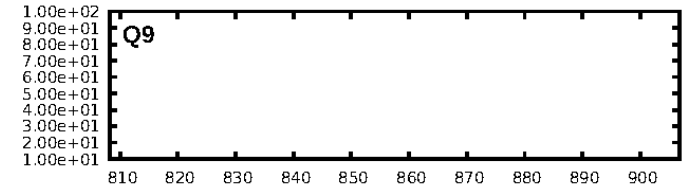
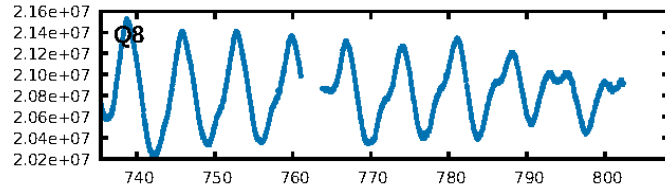
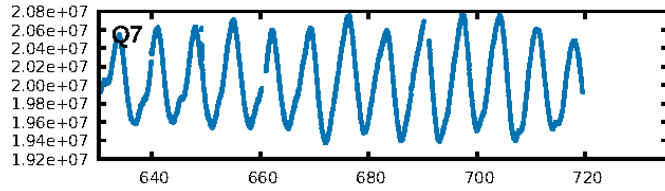
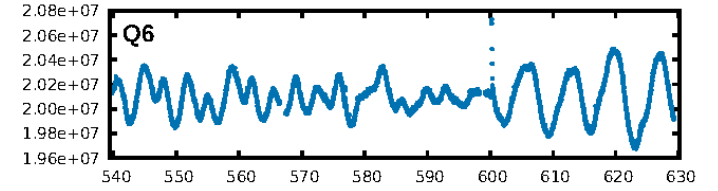
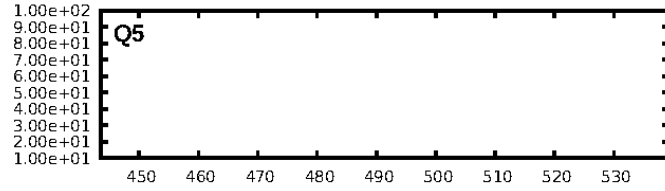
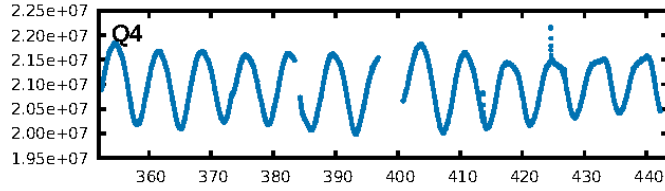
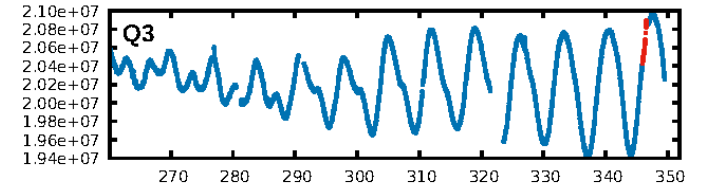
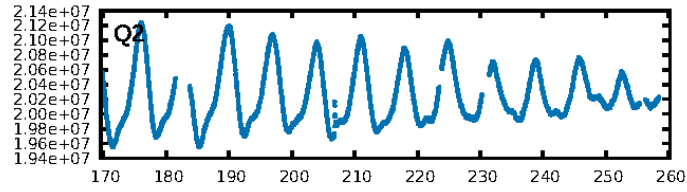
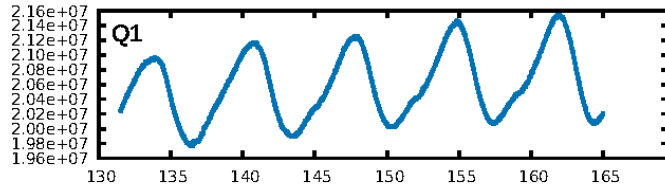
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.73 σ]
LongPeriod-sig: 100.0% [16.69 σ]
ModelChiSquare2-sig: 0.2%
a/R* = 348.97 [1936.63]
Bootstrap-pfa: 3.93e-23
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.05404
Centroid-sig: 2.4%
Centroid-so: 1.175 arcsec [1.68 σ]
OotOffset-rm: 0.328 arcsec [0.49 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.400 arcsec [0.60 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

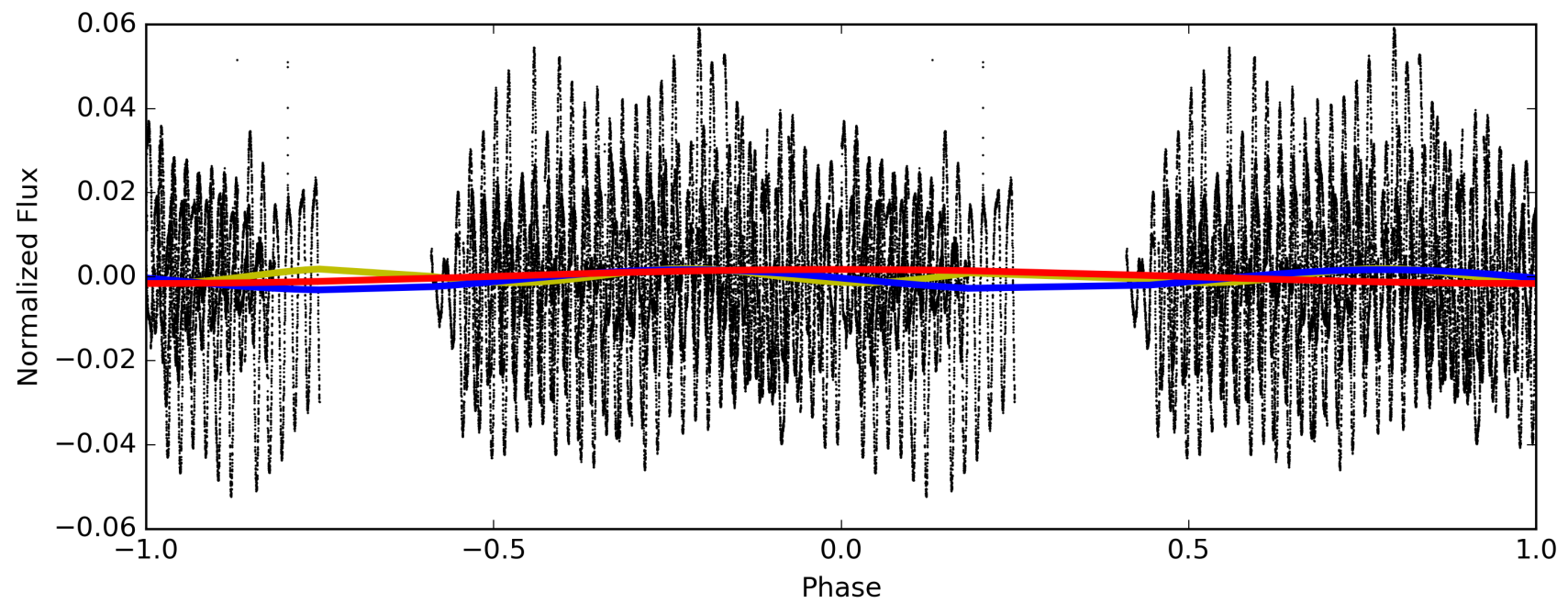
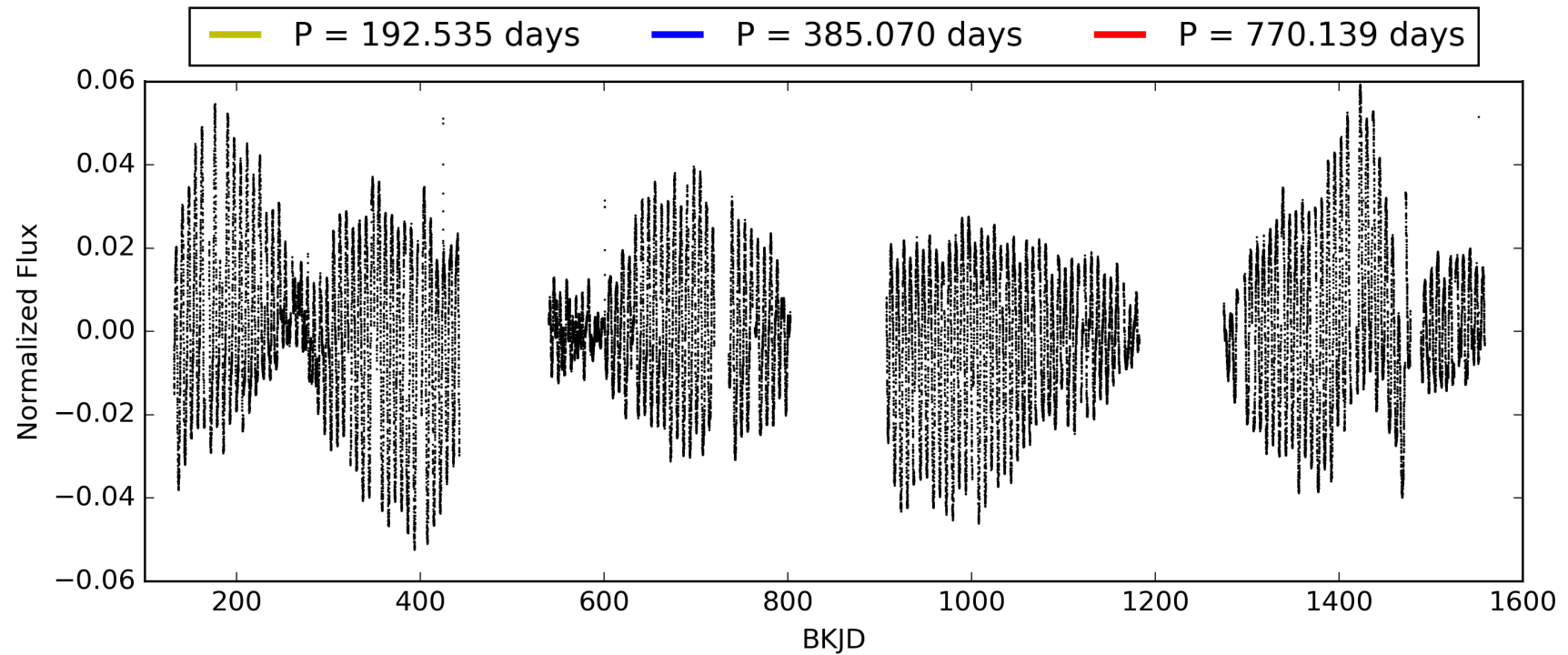
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:06:15 Z

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

TCE 006025092-02, PDC Light Curves

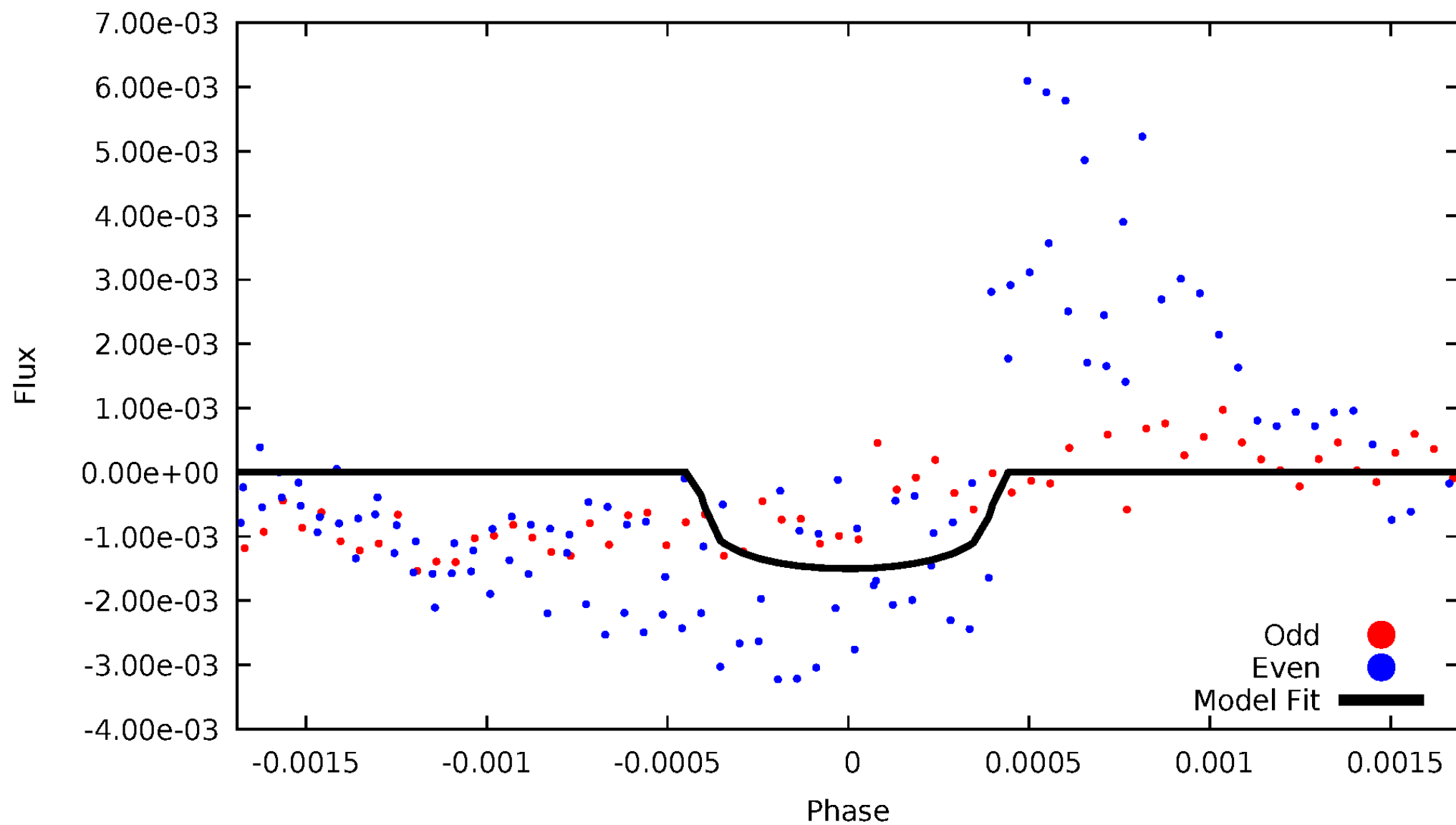


TCE 006025092-02



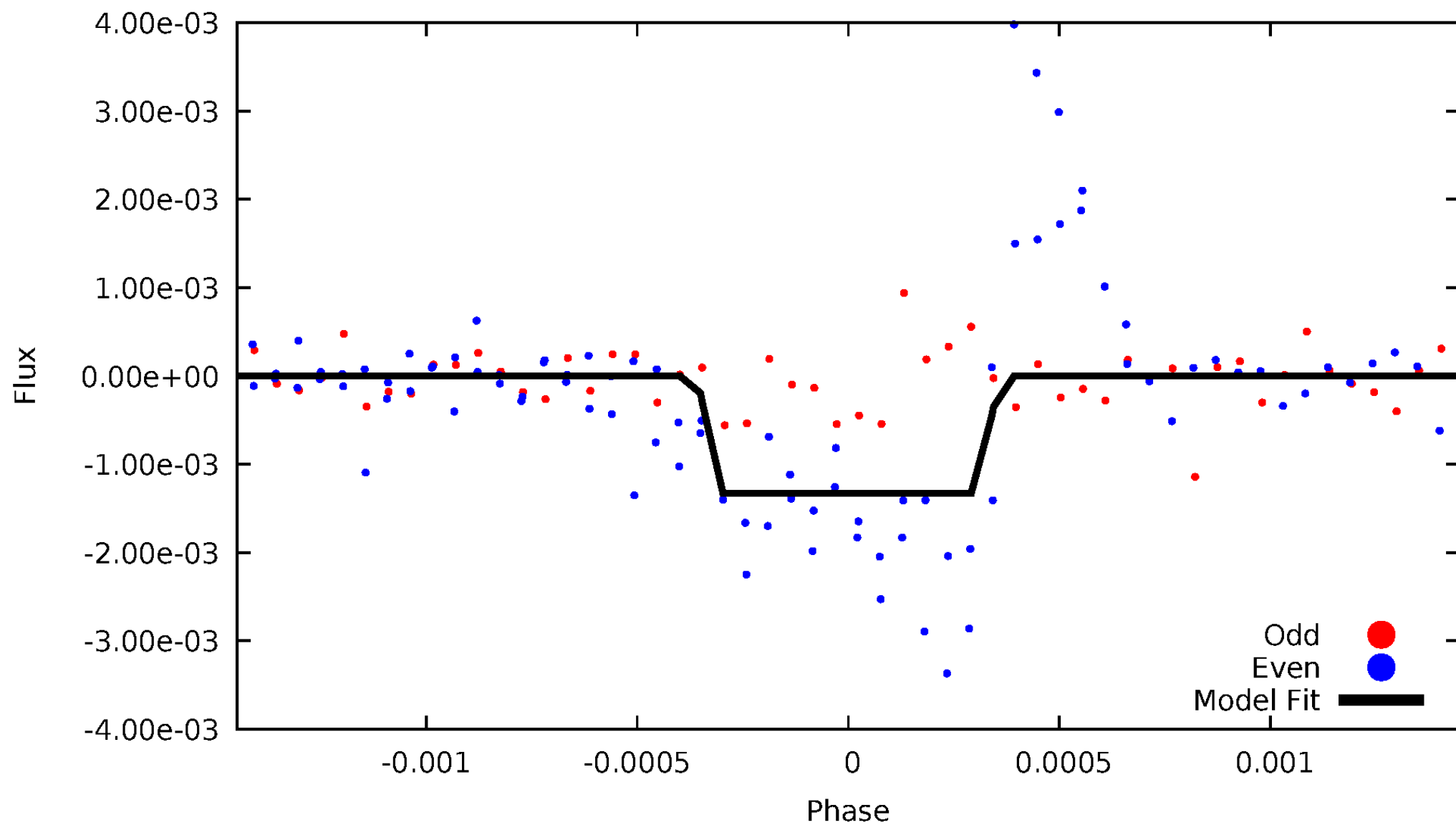
DV Odd/Even

TCE 006025092-02



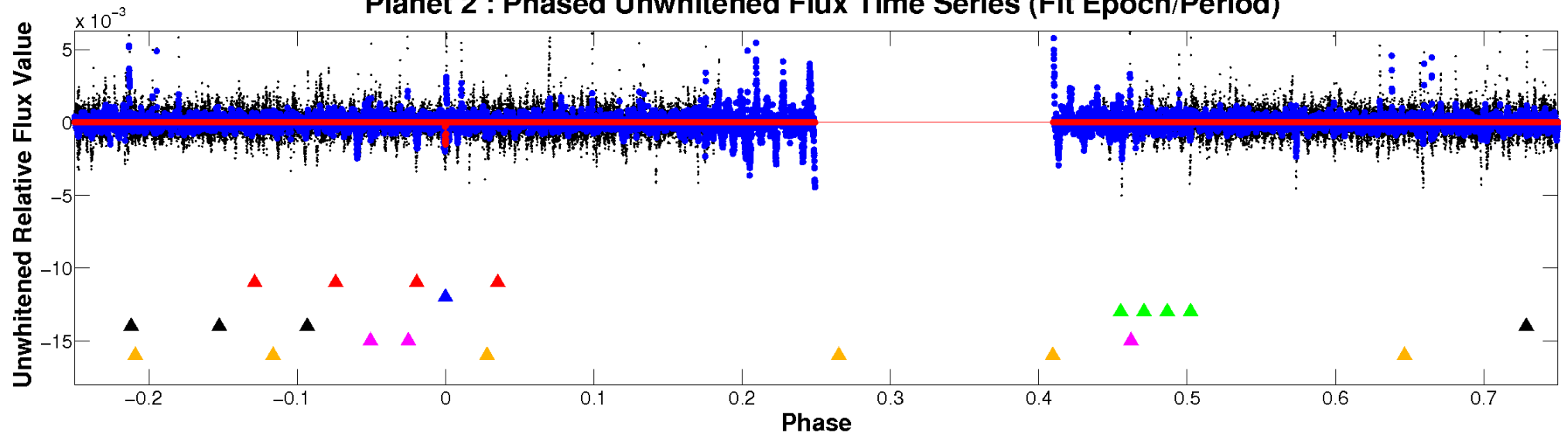
ALT Odd/Even

TCE 006025092-02

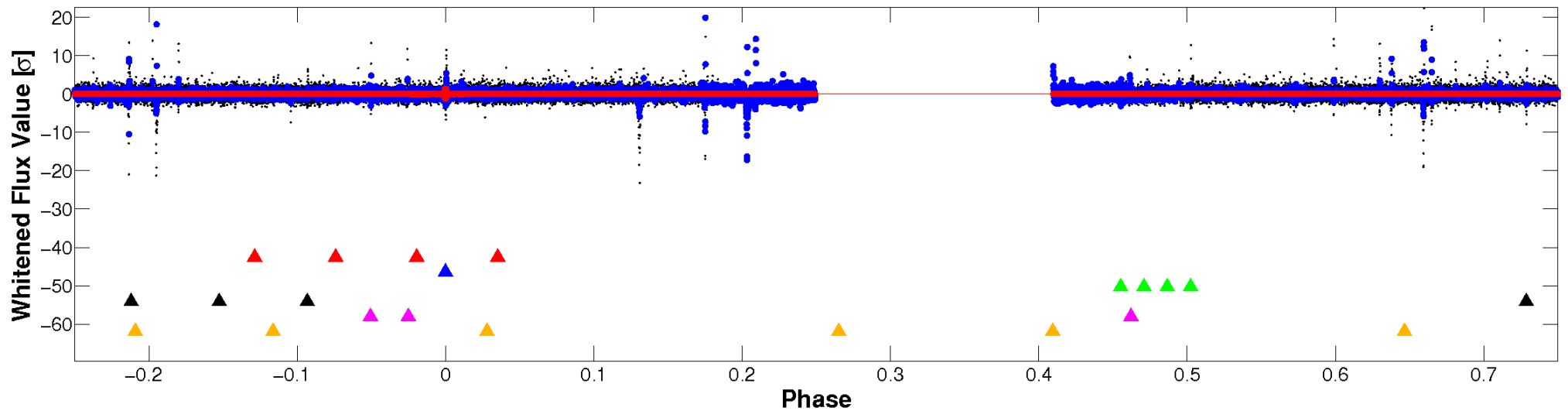


Non-Whitened Vs. Whitened Light Curve

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

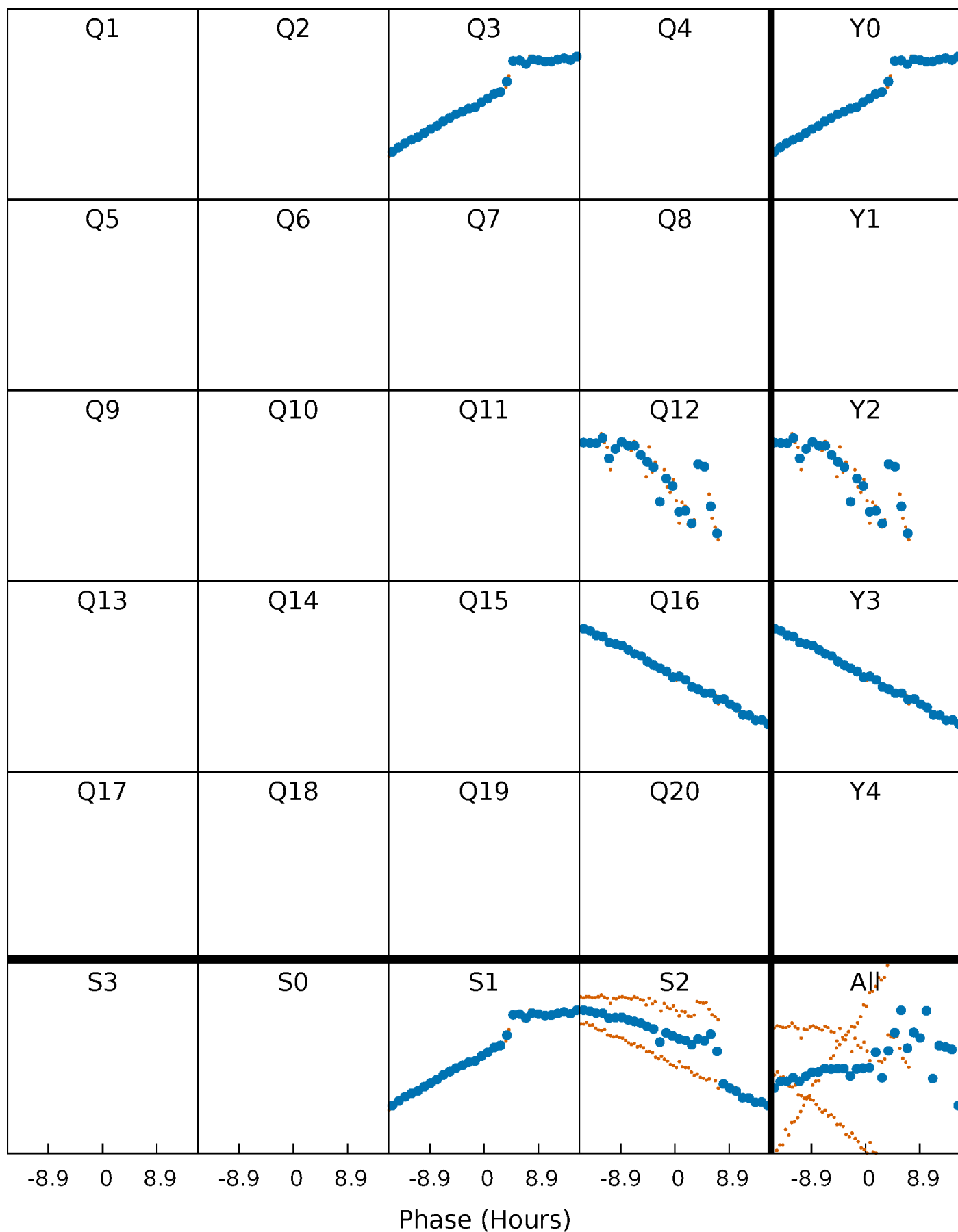


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



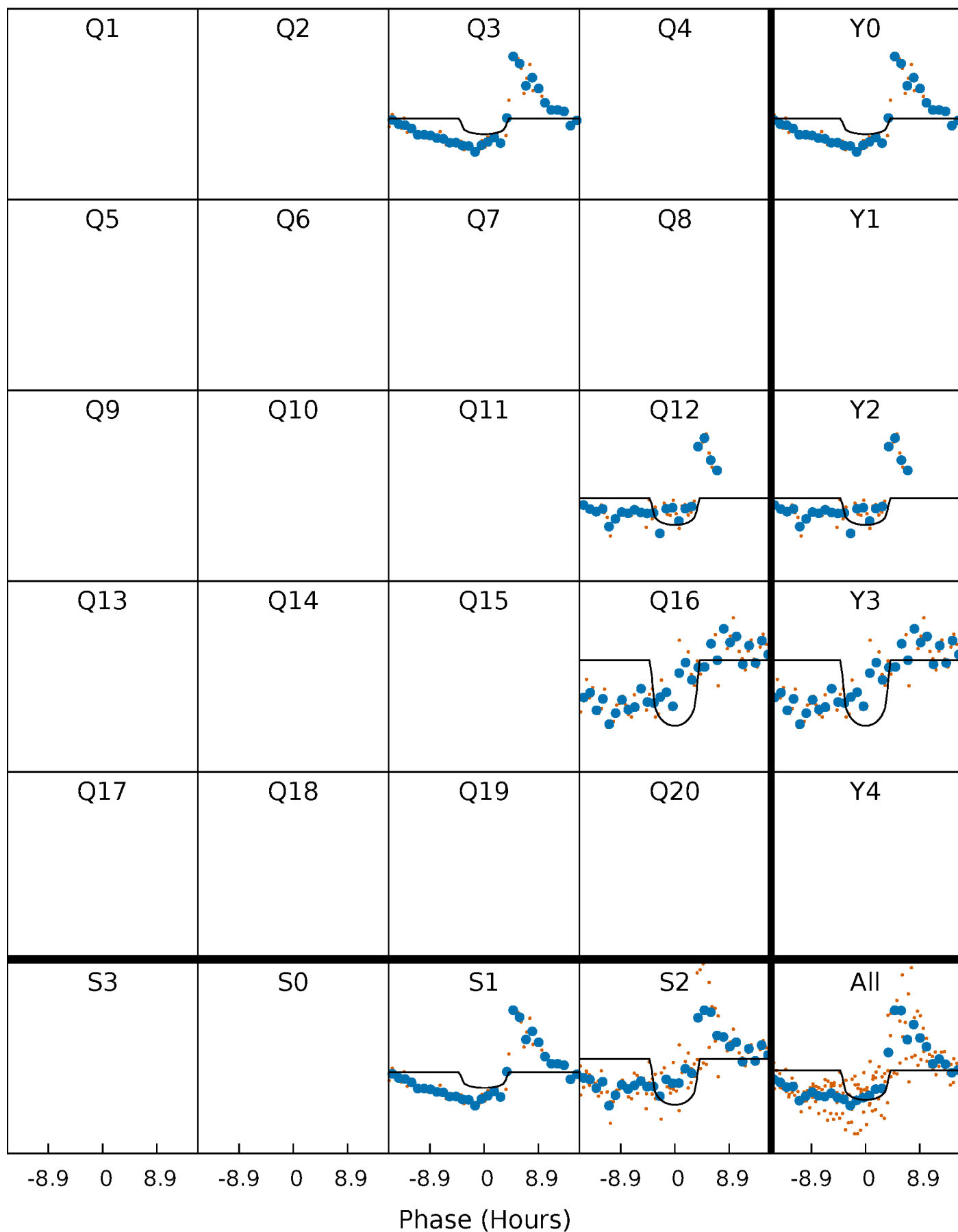
PDC Quarter-Phased Transit Curves

TCE 006025092-02 P=385.069636 Days $T_0=346.239744$ (BKJD)



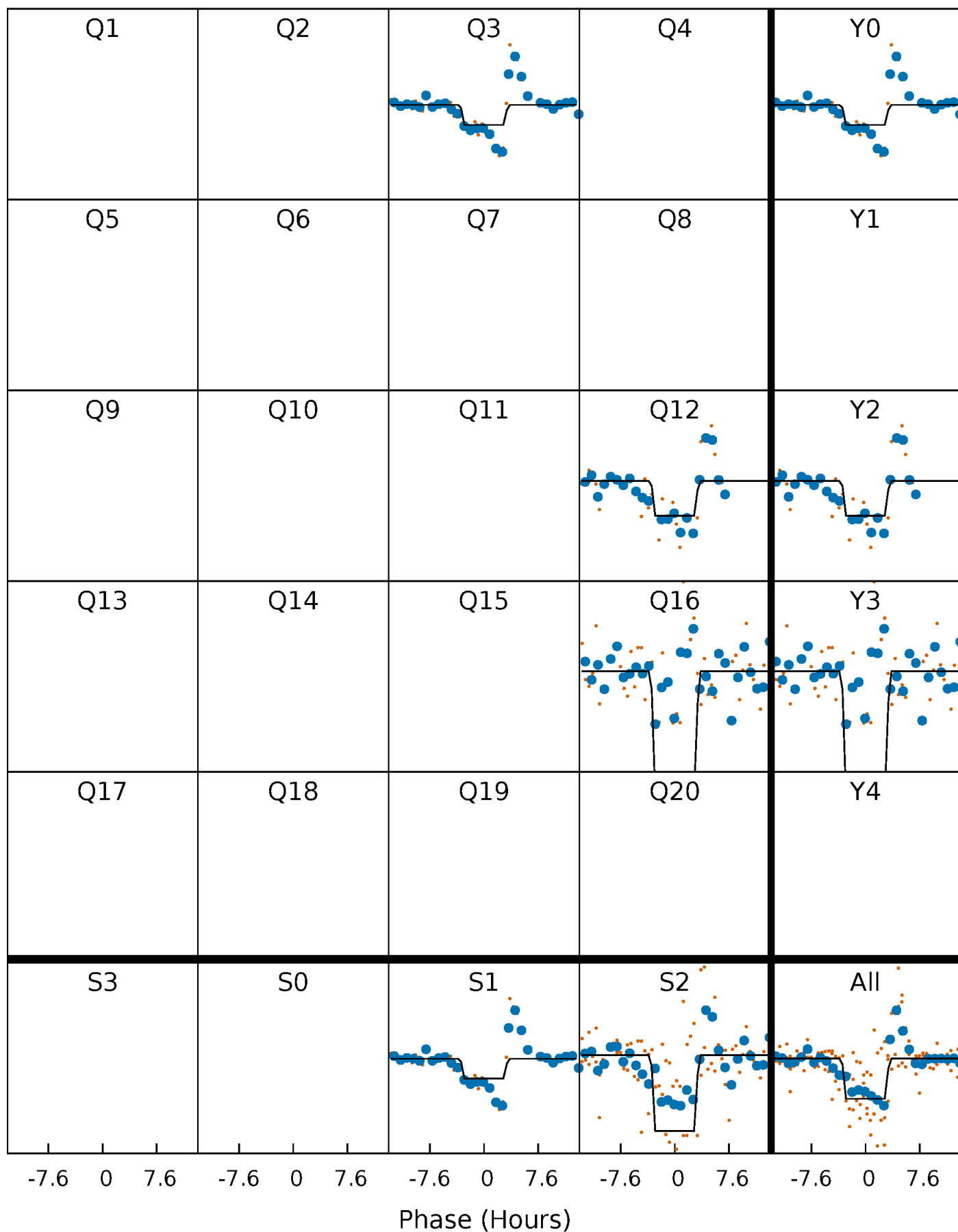
DV Quarter-Phased Transit Curves

TCE 006025092-02 $P=385.069636$ Days $T_0=346.239744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

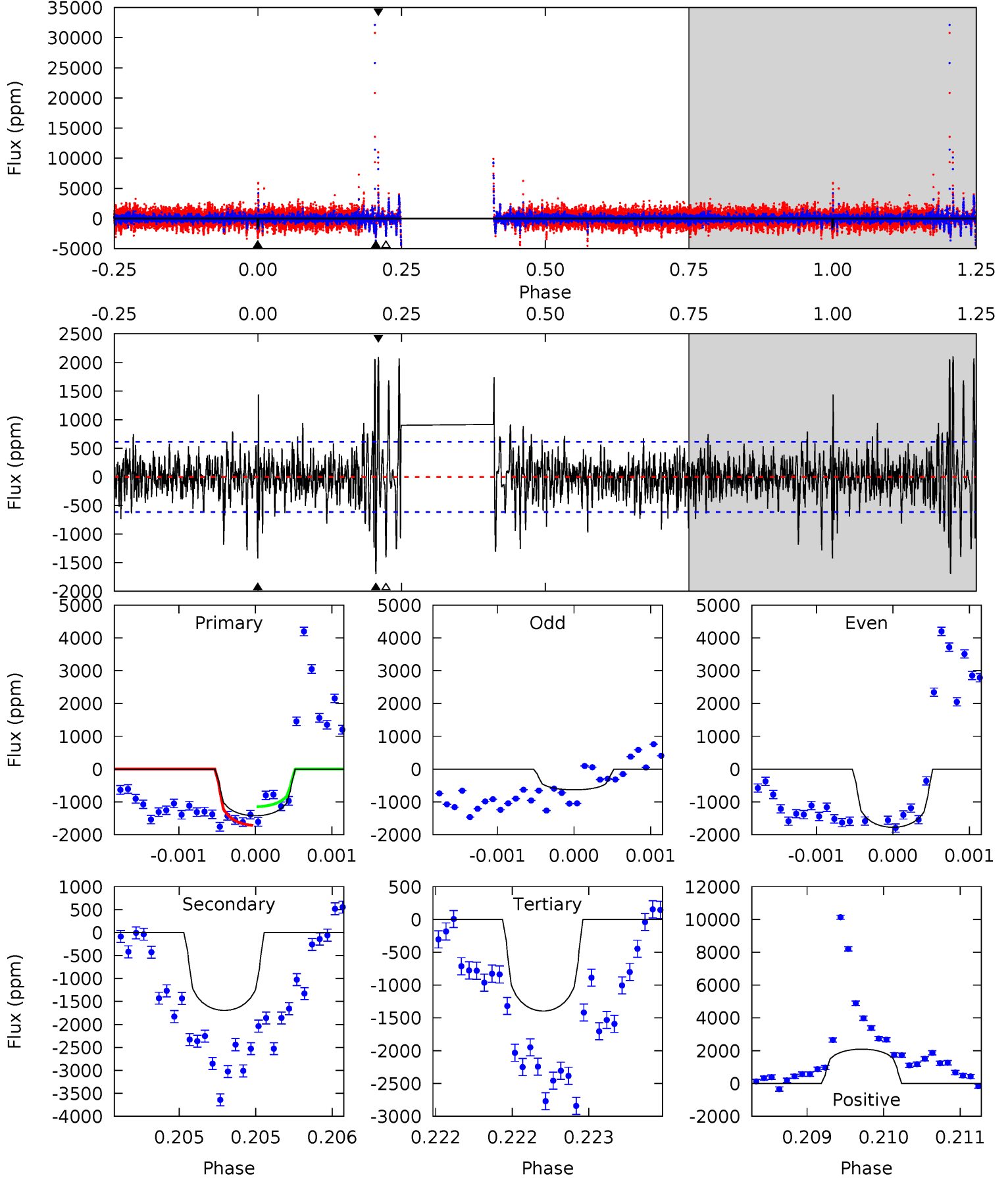
TCE 006025092-02 P=385.050005 Days $T_0=346.279086$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-02, P = 385.069636 Days, E = 346.239744 Days

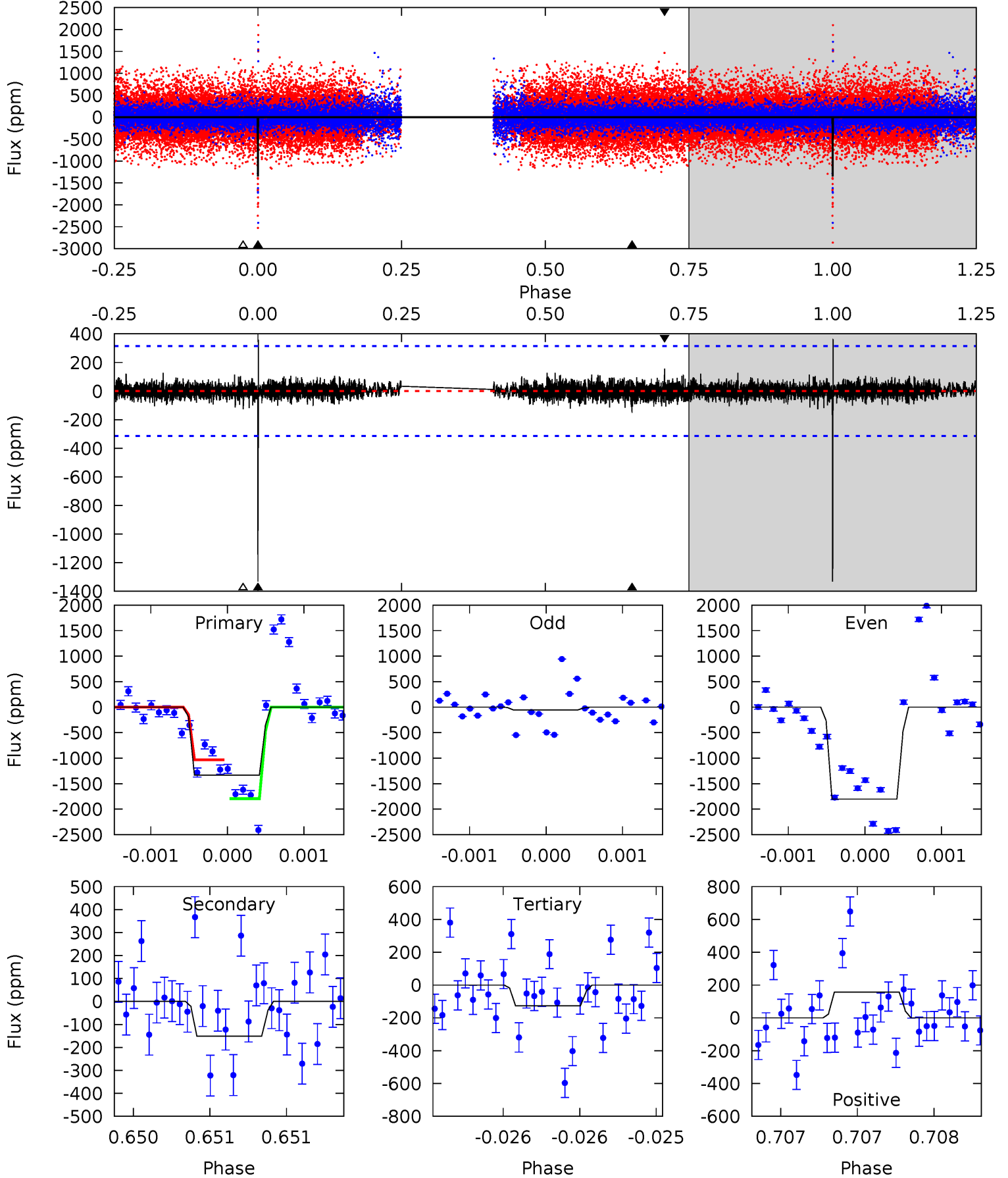
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	15.1	12.5	18.7	5.48	3.34	2.55	0.24	-5.99	2.66	-3.56	4.69	1.80	0.55	2.42



Alt Model-Shift Uniqueness Test

006025092-02, P = 385.050005 Days, E = 346.279086 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	2.65	2.23	2.76	5.52	3.39	0.54	21.2	20.7	0.42	-0.10	16.3	0.75	0.21	6.59



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1694 ± 112	$5.55^{+4.44}_{-3.50}$	341^{+24}_{-18}	5049^{+3613}_{-1015}	$29899^{+192846}_{-20427}$
Alt.	-151 ± 57	$5.70^{+4.50}_{-3.49}$	340^{+23}_{-19}	3263^{+1239}_{-541}	2584^{+14946}_{-1848}

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 $A_{obs} \gg 1.0$

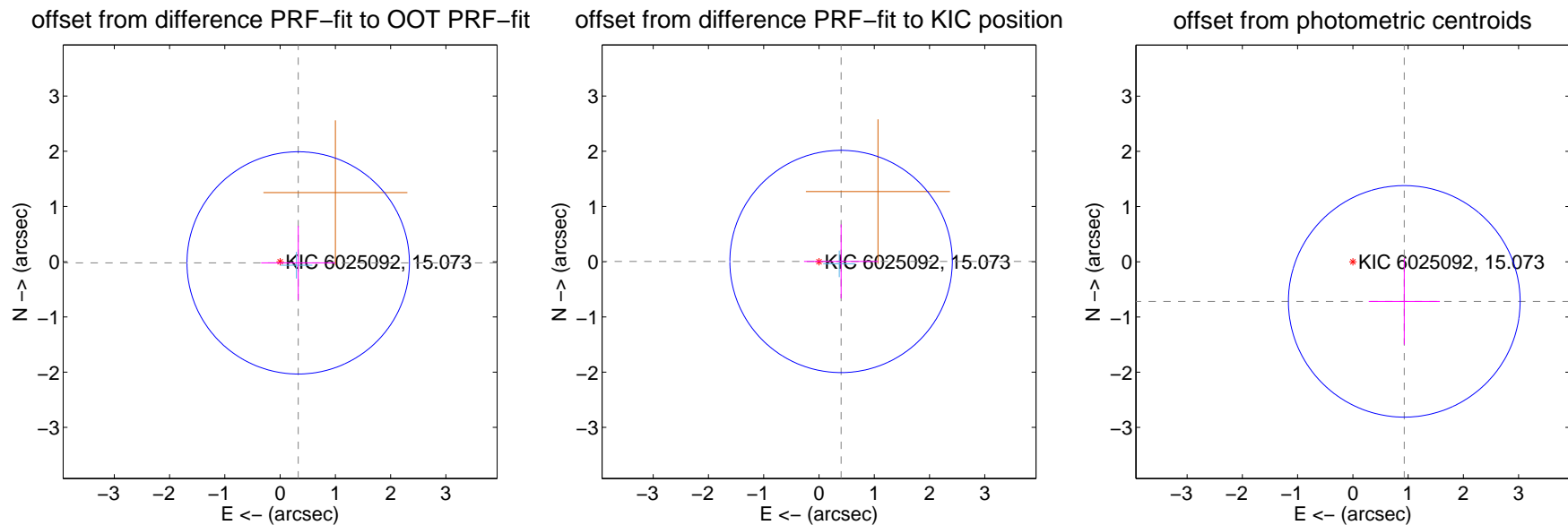
DV Centroid Data

Supplemental centroid analysis for 006025092-02. Kepler magnitude: 15.07. Transit SNR 8.15

There are 1 quarters with good PRF difference image offsets

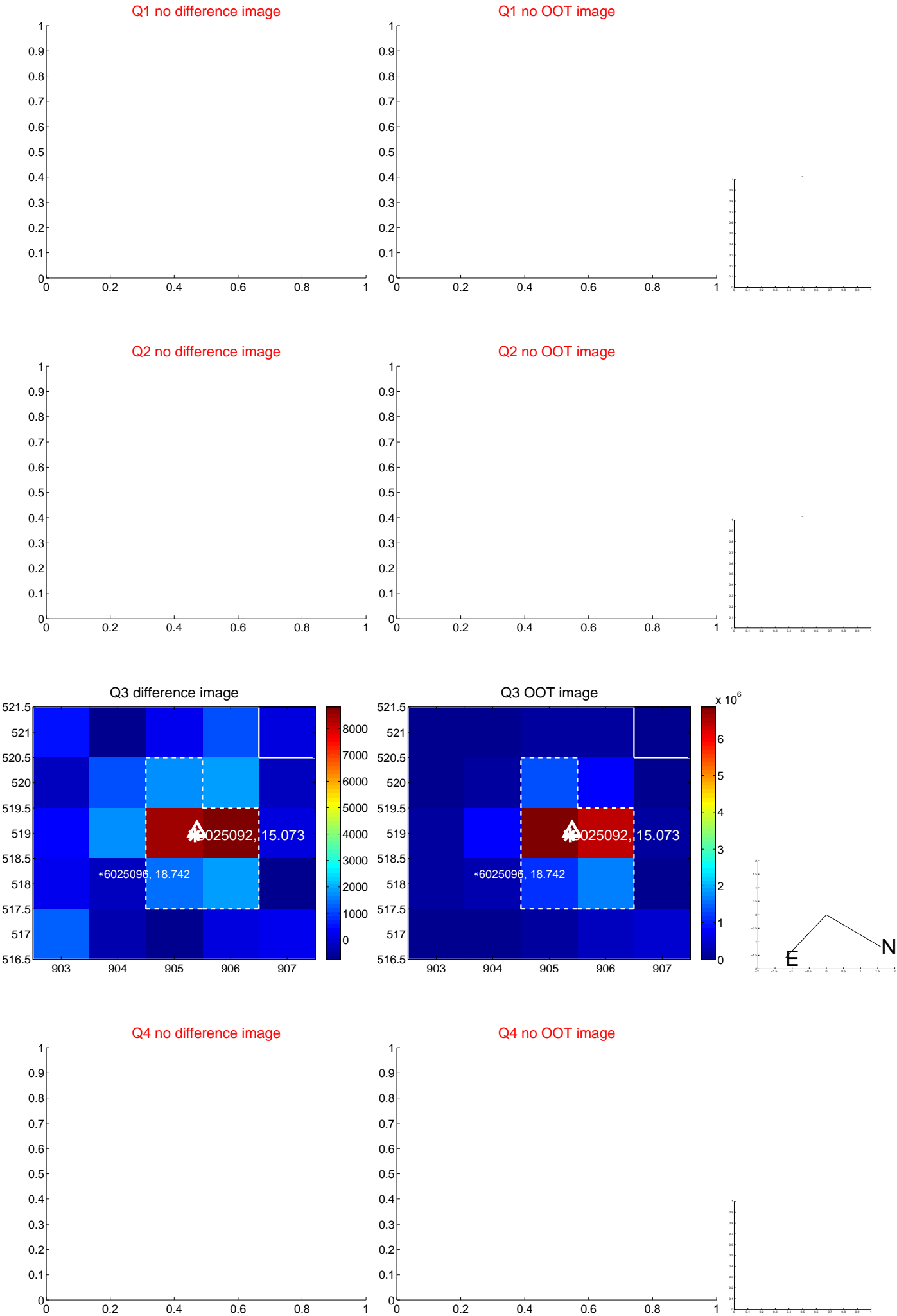
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.328 ± 0.671	0.49	-0.327 ± 0.671	-0.022 ± 0.669
PRF-fit source offset from KIC position	0.400 ± 0.671	0.60	-0.400 ± 0.671	0.004 ± 0.669
photometric centroid source offset	1.17 ± 0.70	1.68	-0.93 ± 0.64	-0.72 ± 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.

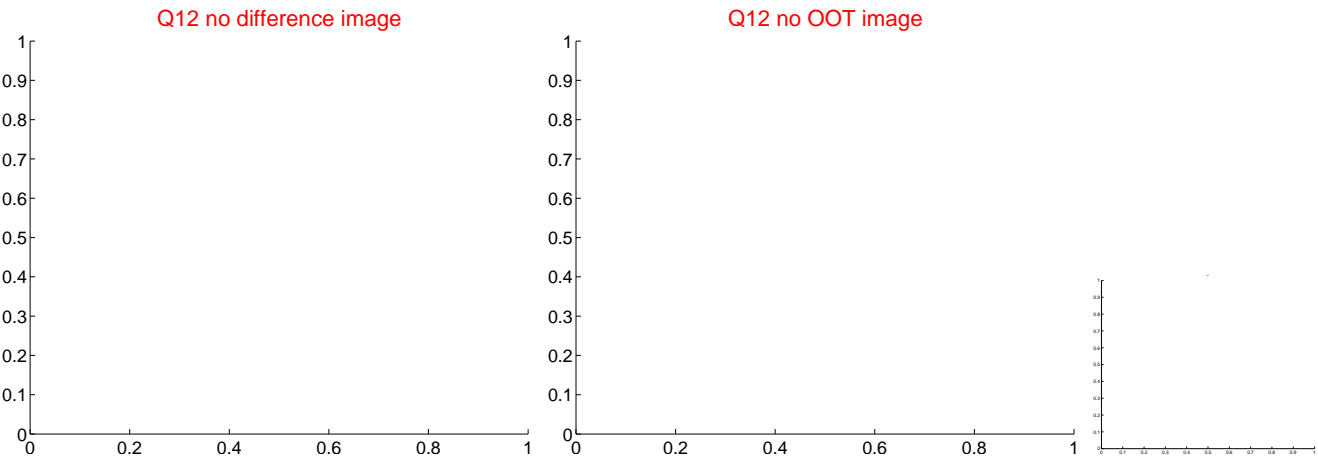
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



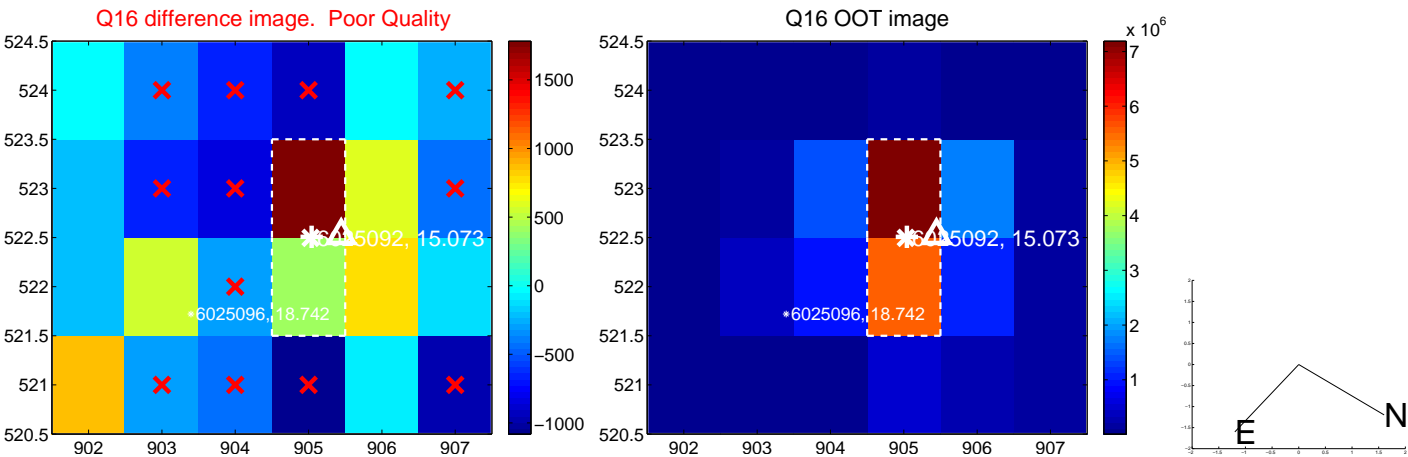
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



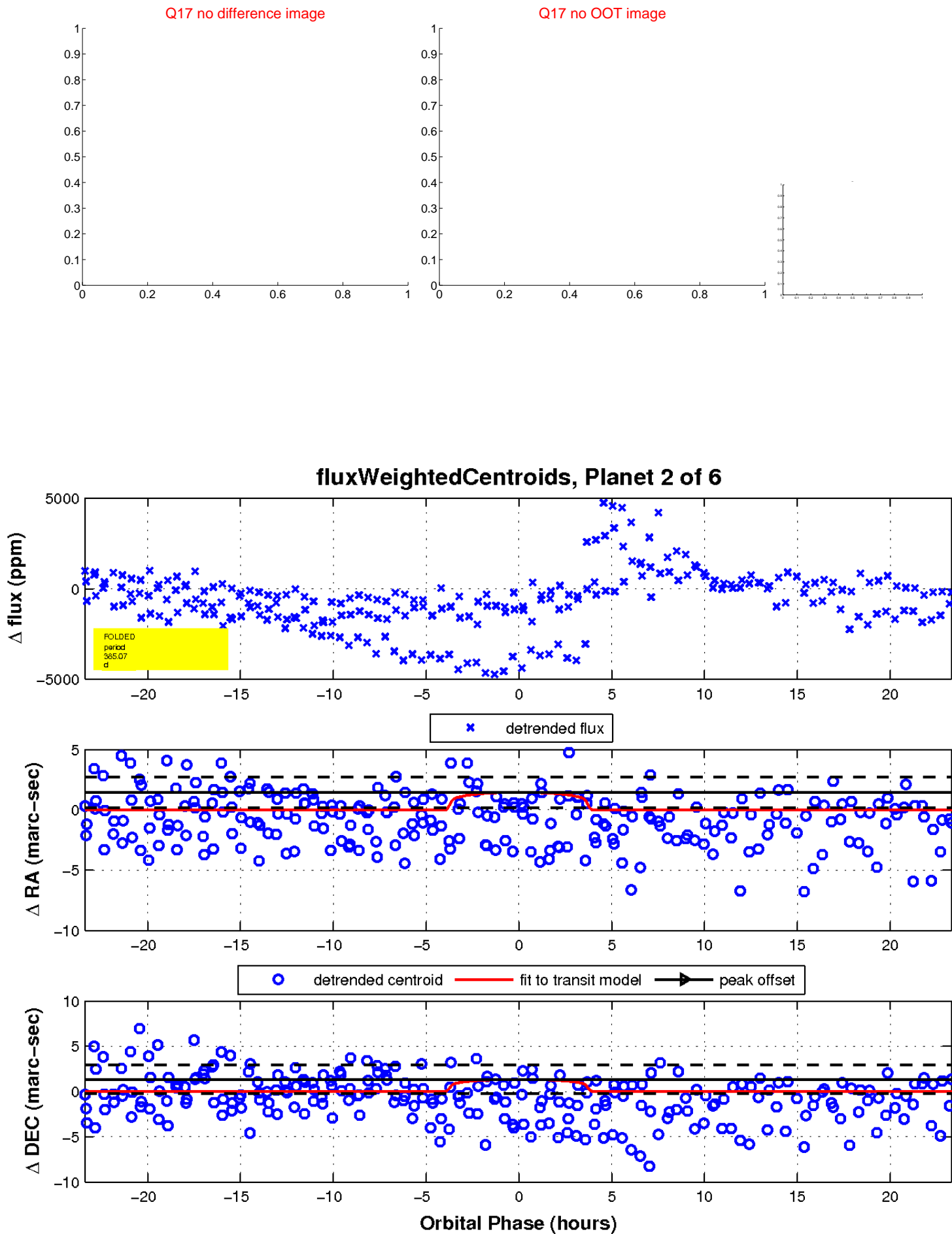
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



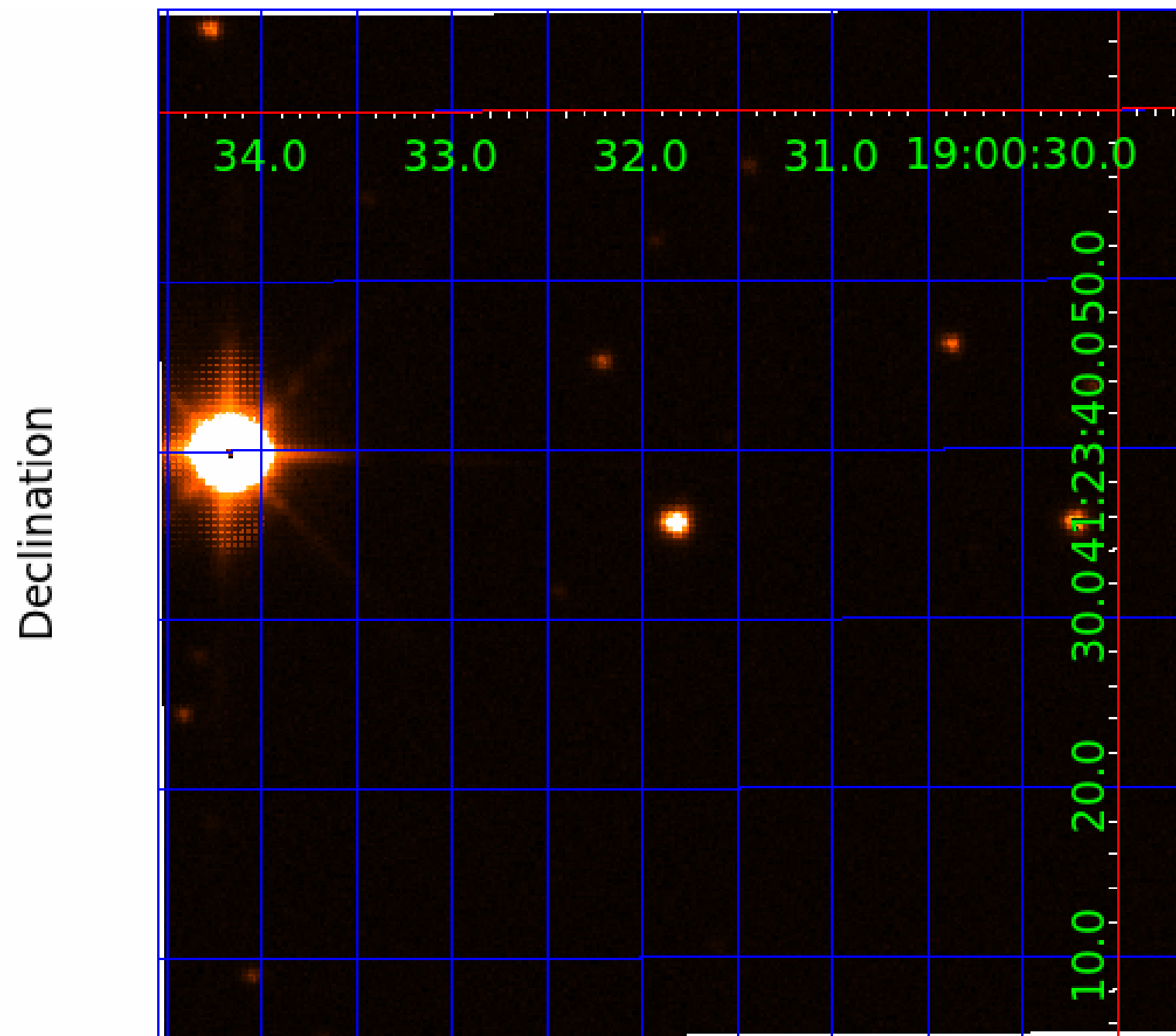
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 006025092

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})
006025092-01	OBS	No	364.031007	359.809719	1711.0	6.167	9.2	7.6	0.95	5601	7.63	0.87
006025092-02	OBS	No	385.069636	346.239744	1499.6	7.812	16.2	8.1	0.95	5601	3.75	0.81
006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

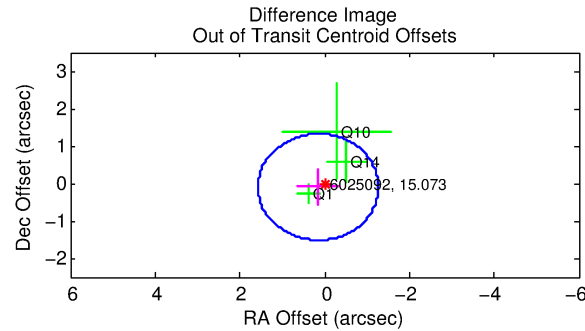
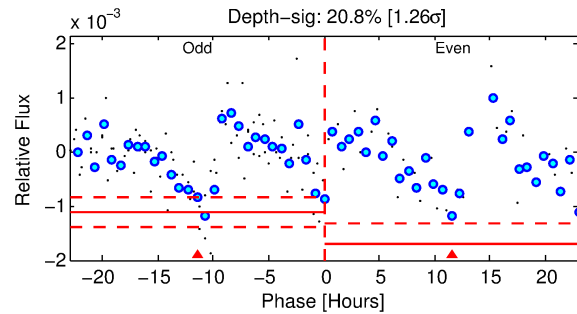
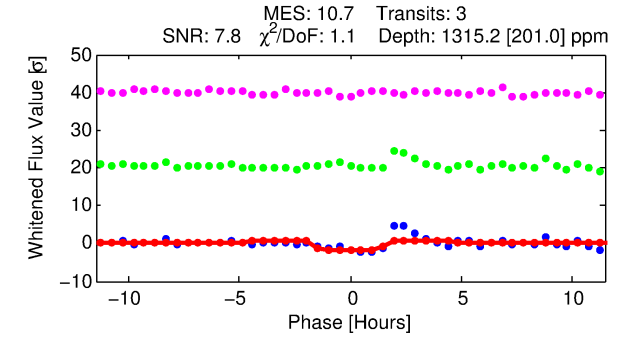
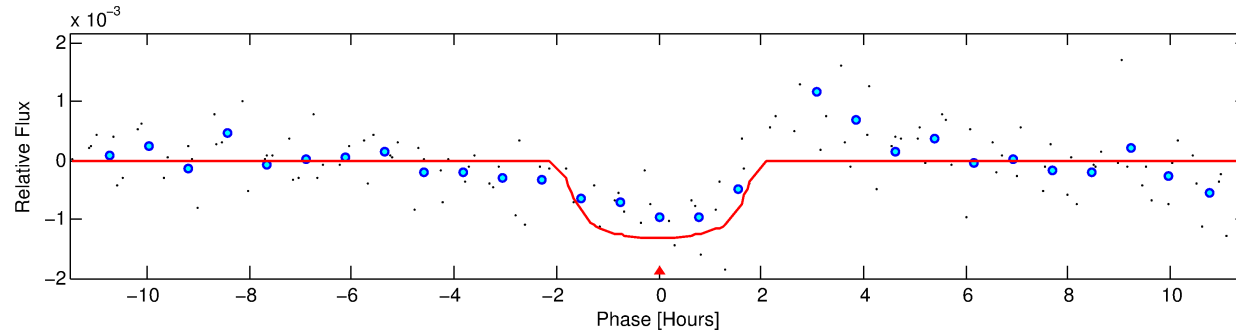
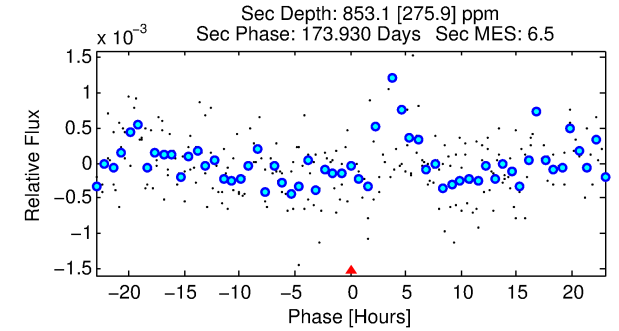
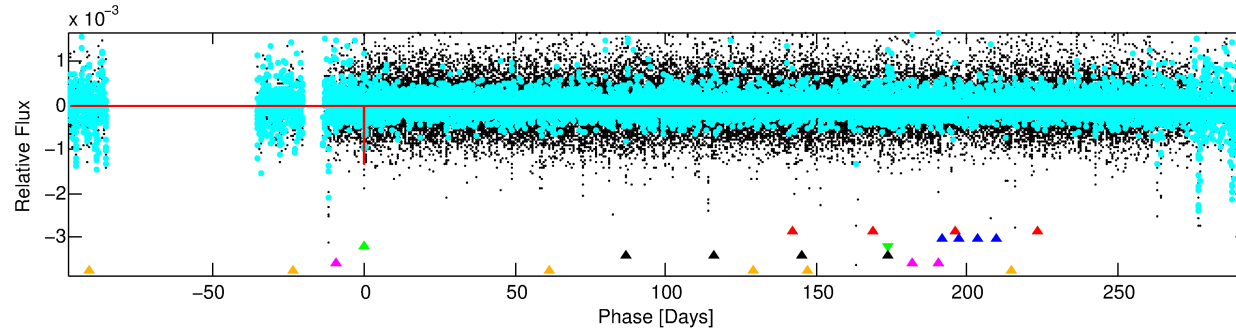
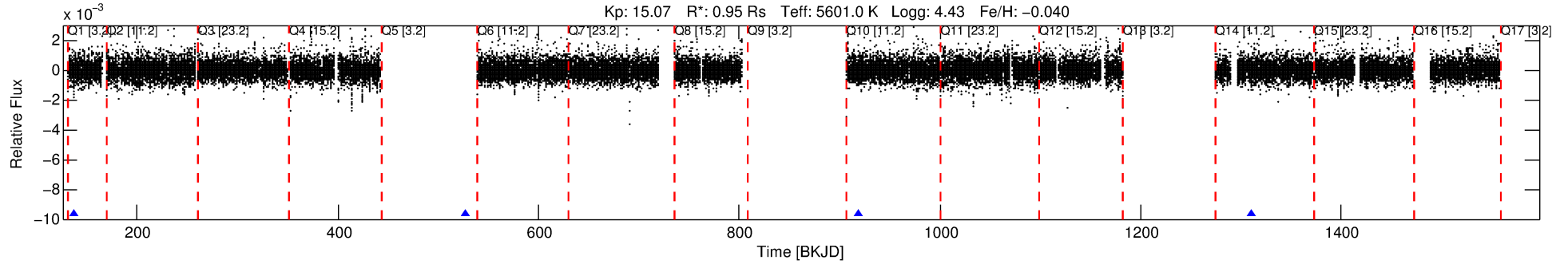
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-03

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 3 of 6 Period: 391.122 d



DV Fit Results:

Period = 391.12240 [0.00363] d
Epoch = 136.4653 [0.0073] BKJD
Rp/R* = 0.0367 [0.0672]
a/R* = 530.45 [4119.93]
b = 0.78 [3.93]
Seff = 0.79 [0.27]
Teq = 240 [20] K
Rp = 3.82 [7.06] Re
a = 1.0091 [0.2202] AU
Ag = 32797.50 [121085.30] [0.27 σ]
Teffp = 4999 [4599] K [1.03 σ]

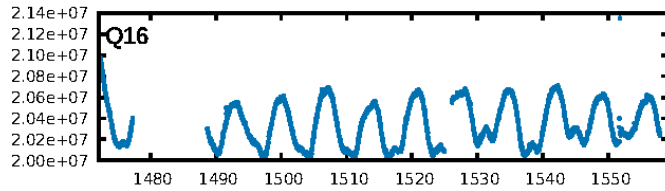
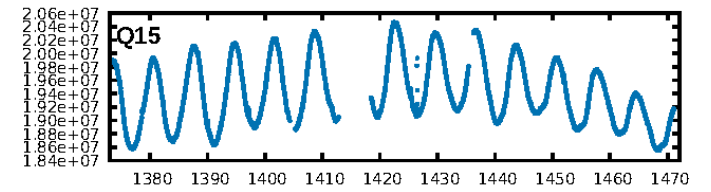
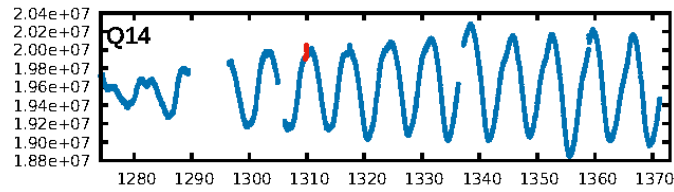
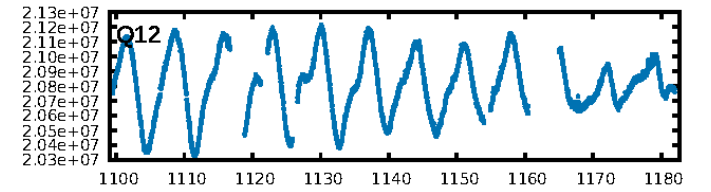
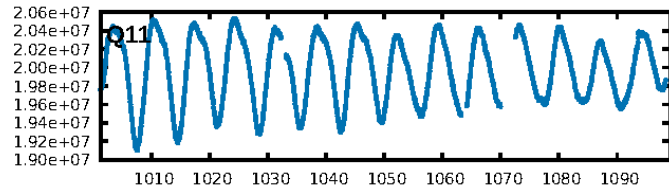
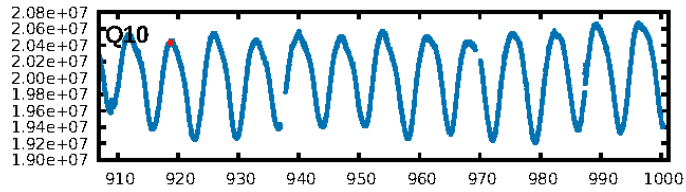
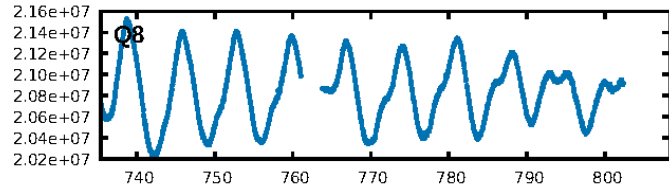
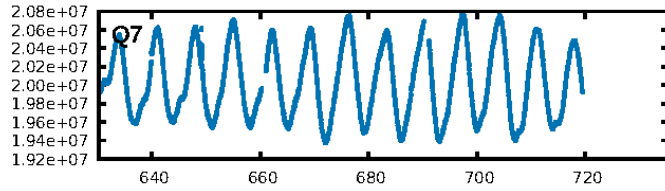
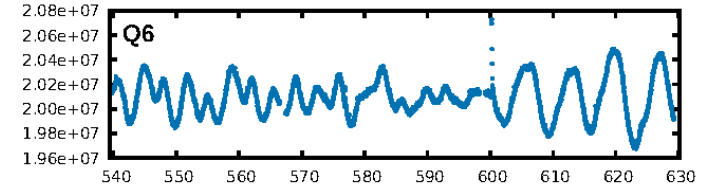
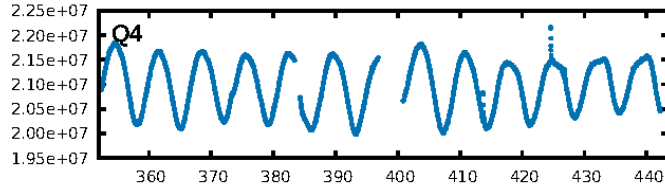
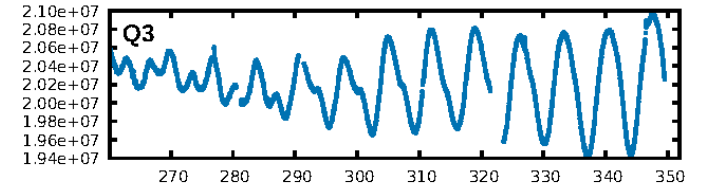
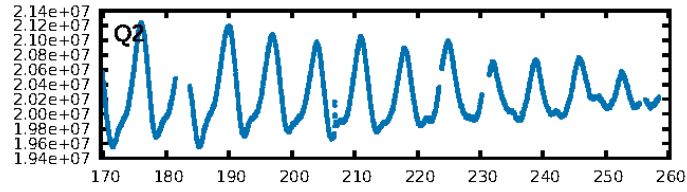
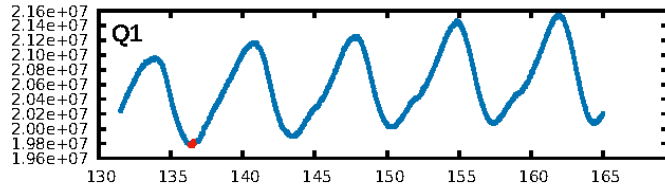
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.69 σ]
LongPeriod-sig: 100.0% [548.32 σ]
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 90.4%
Bootstrap-pfa: 2.35e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.1199
Centroid-sig: 0.5%
Centroid-so: 2.279 arcsec [1.77 σ]
OotOffset-rm: 0.183 arcsec [0.39 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.226 arcsec [0.48 σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

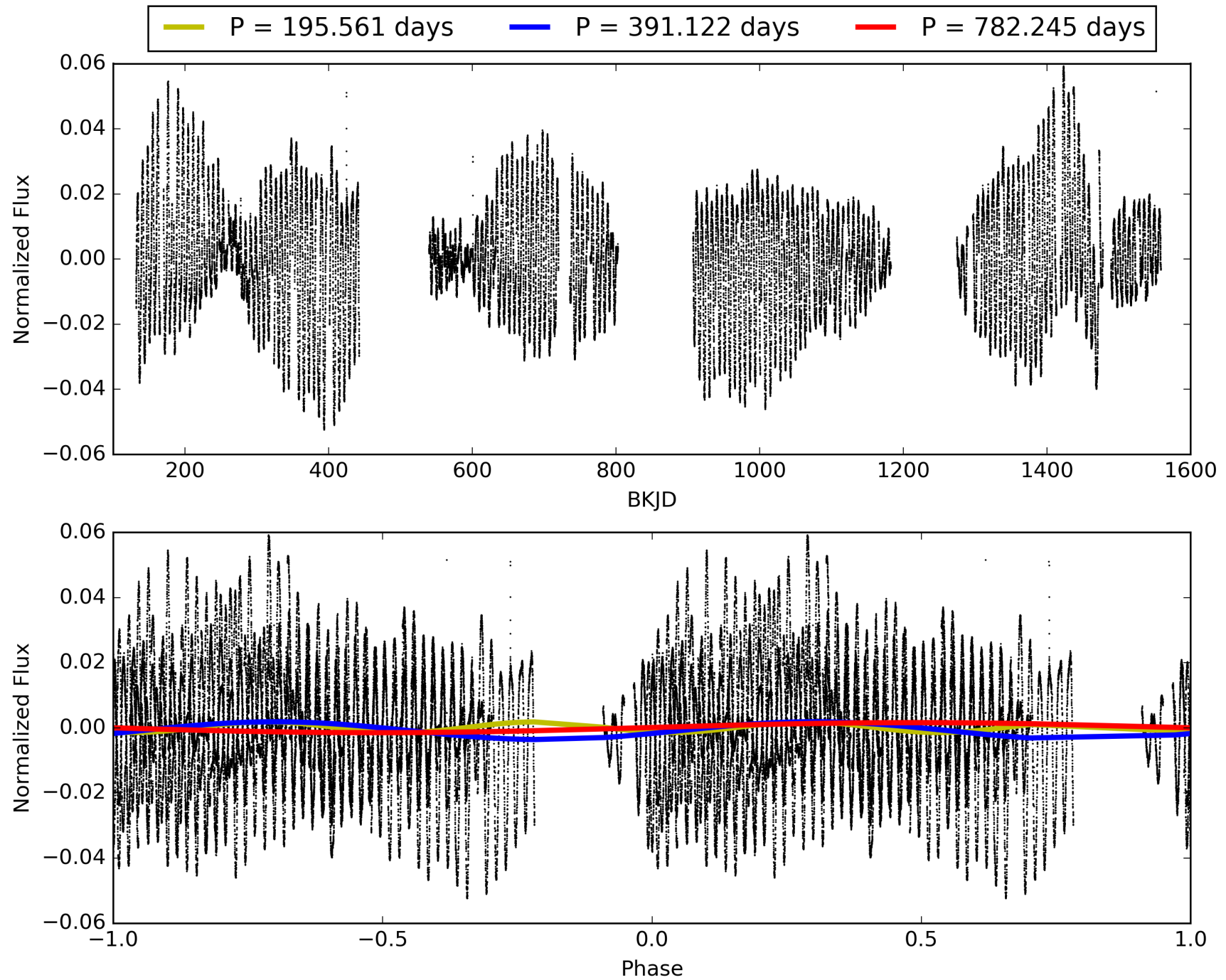
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:06:28 Z

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

TCE 006025092-03, PDC Light Curves

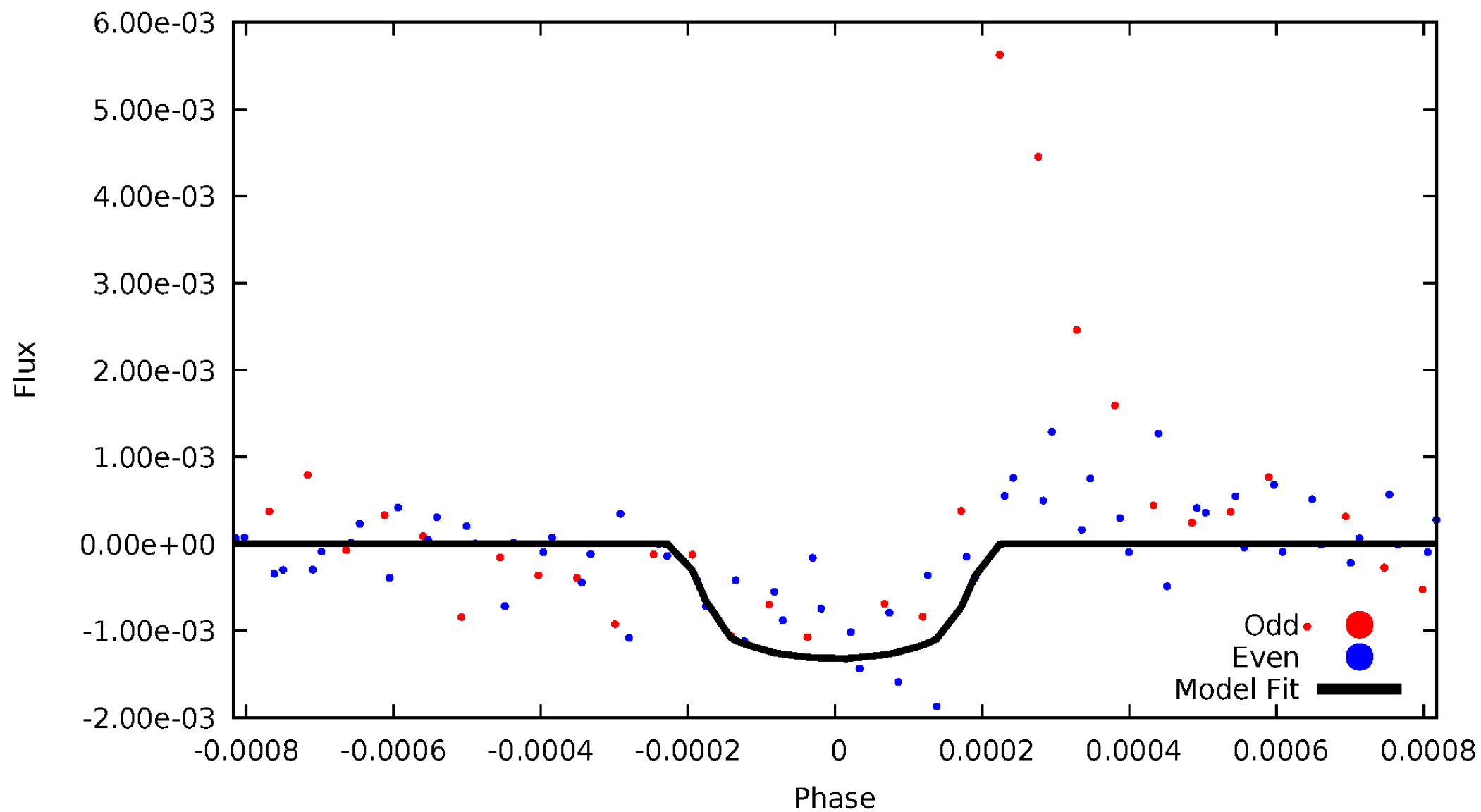


TCE 006025092-03



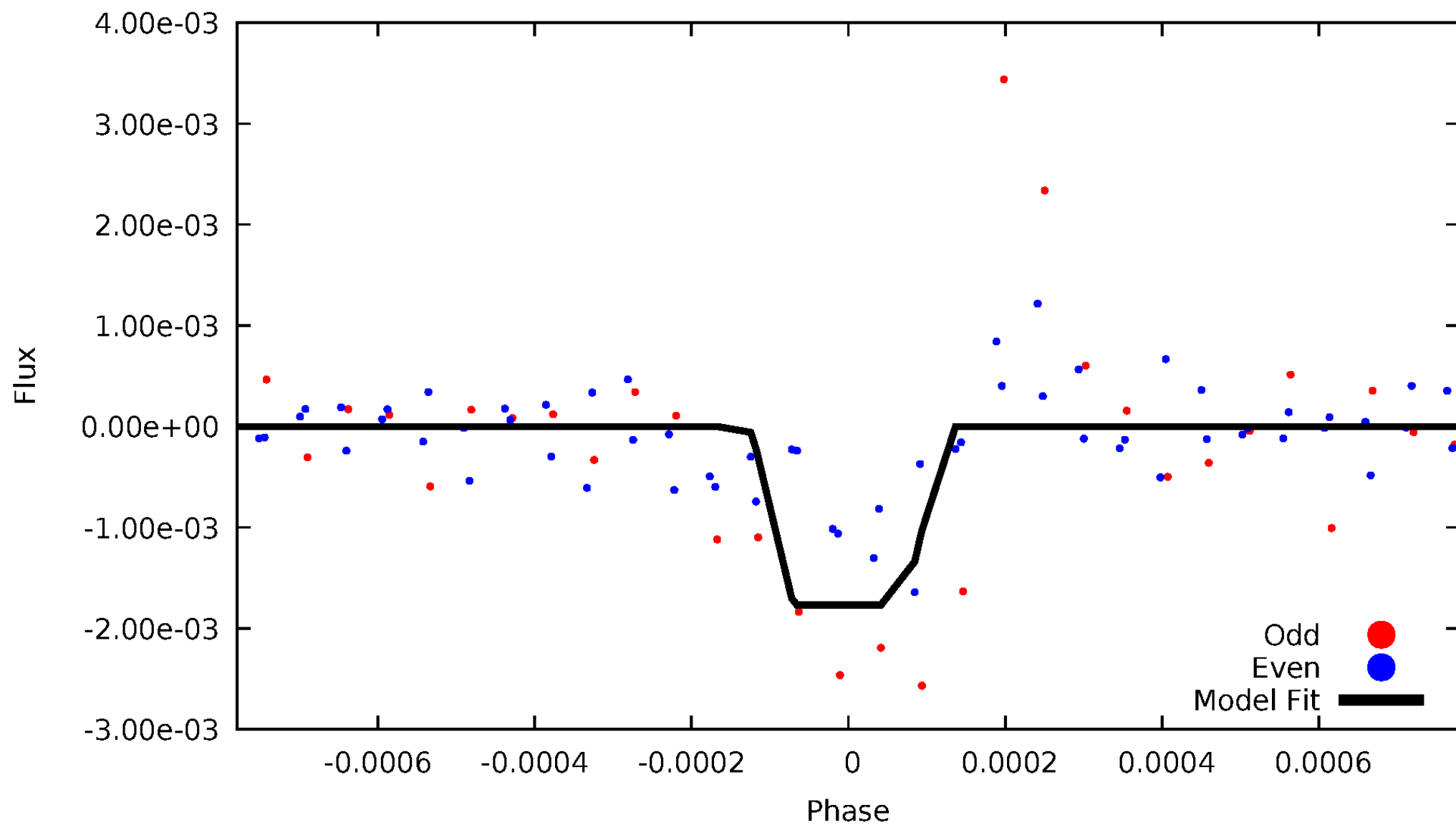
DV Odd/Even

TCE 006025092-03

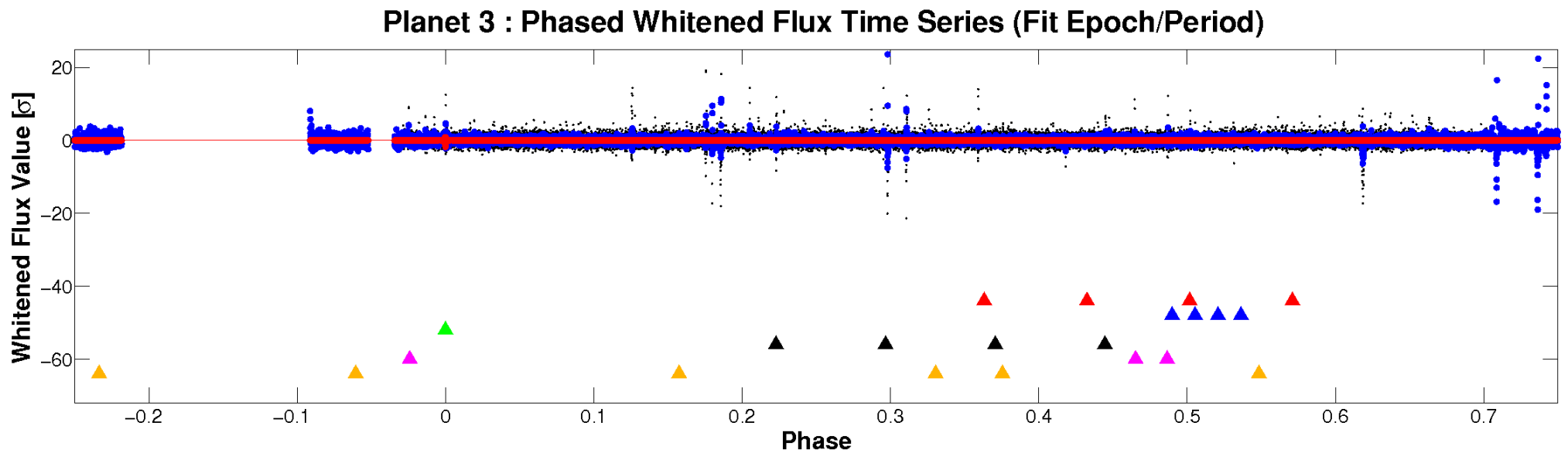
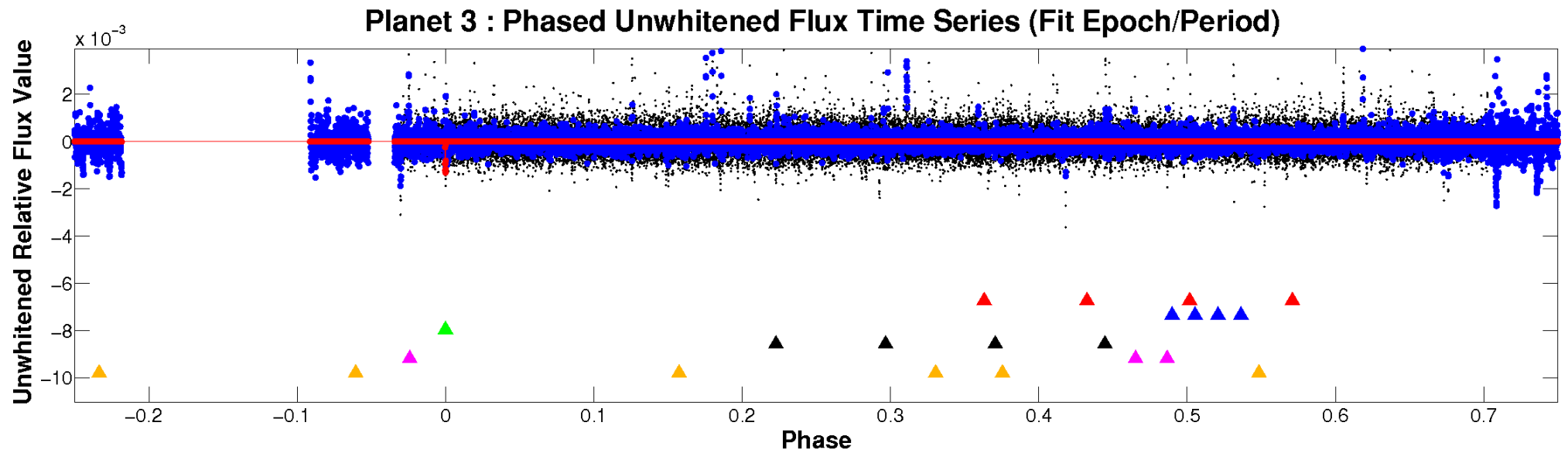


ALT Odd/Even

TCE 006025092-03

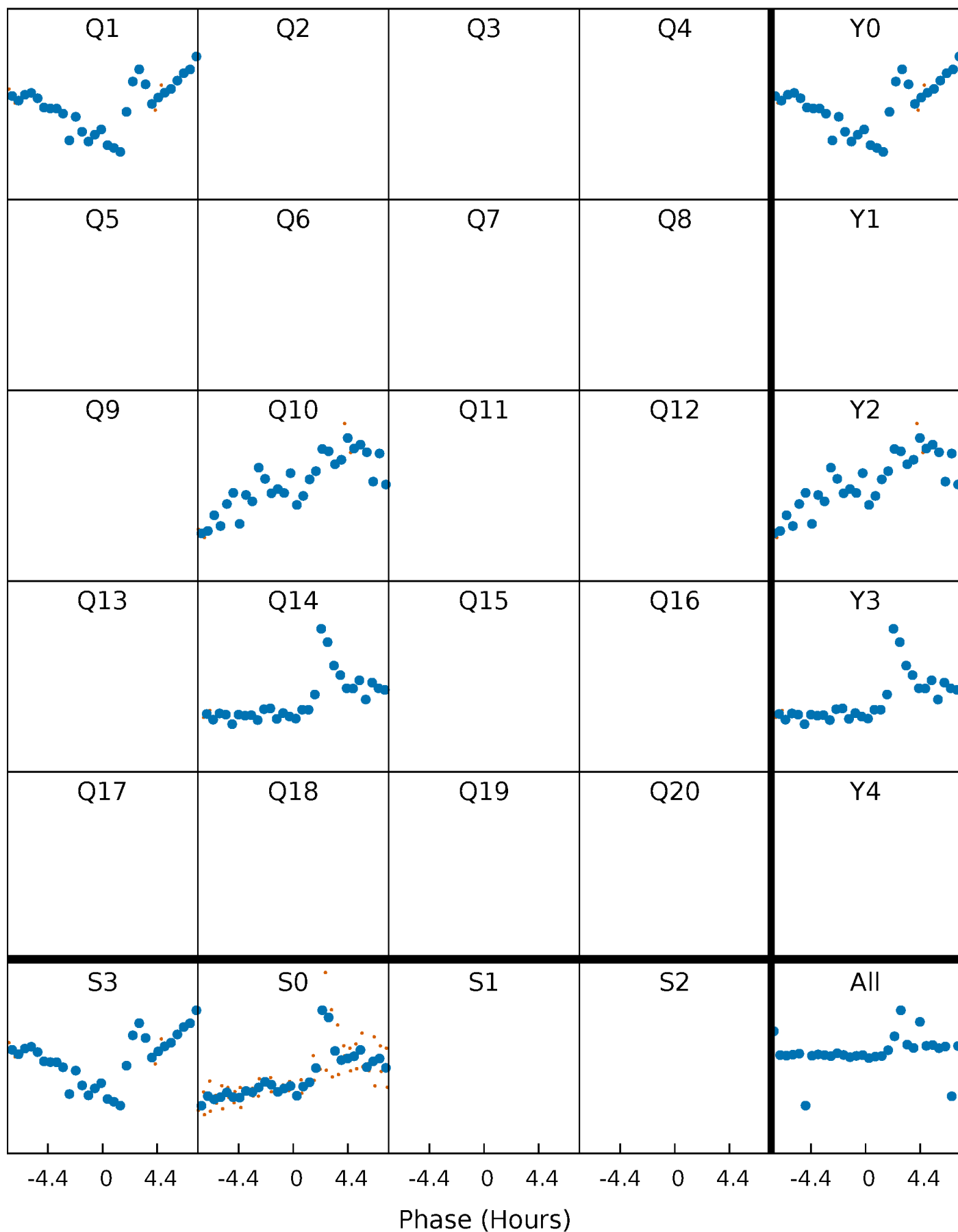


Non-Whitened Vs. Whitened Light Curve



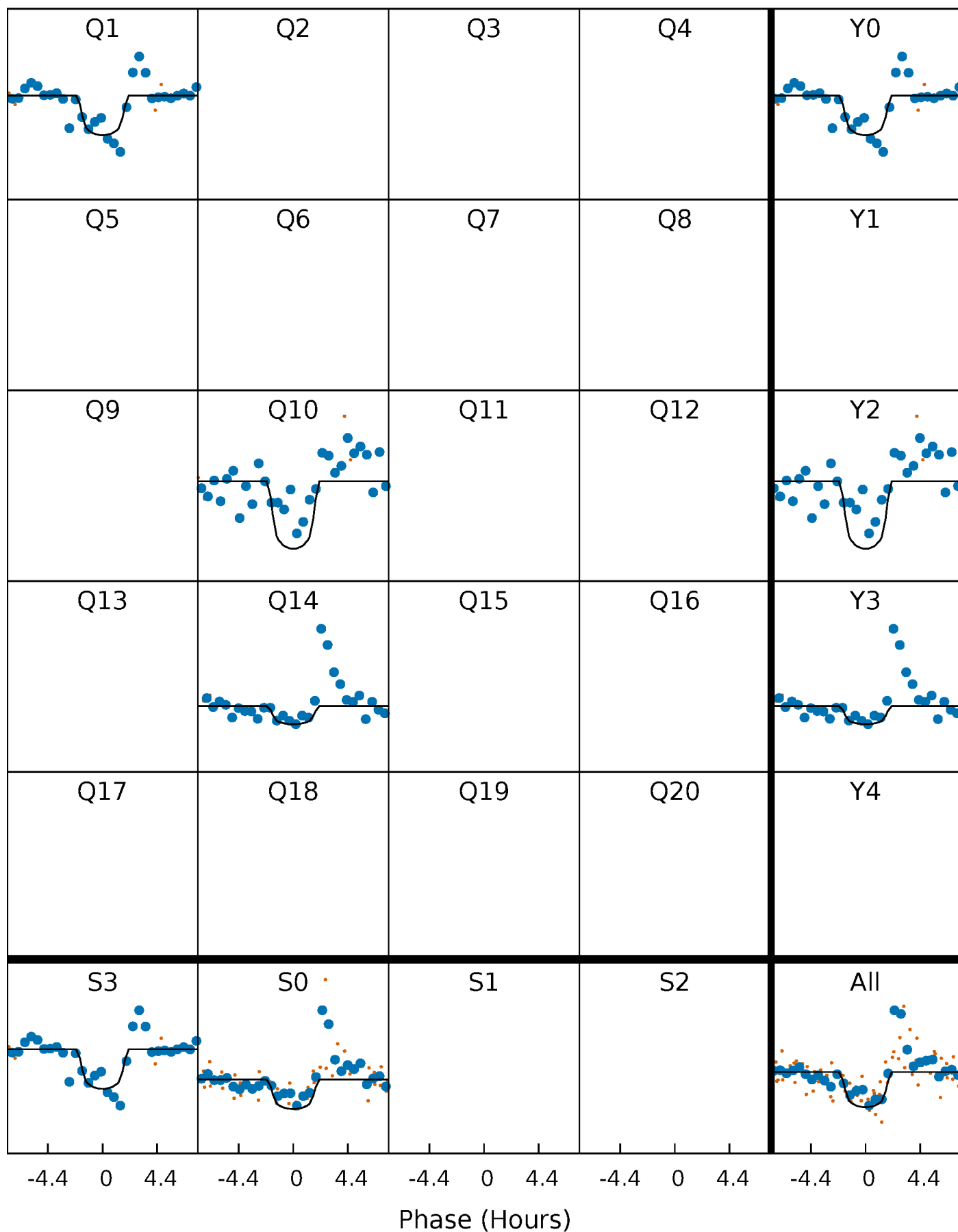
PDC Quarter-Phased Transit Curves

TCE 006025092-03 P=391.122403 Days $T_0=136.465295$ (BKJD)



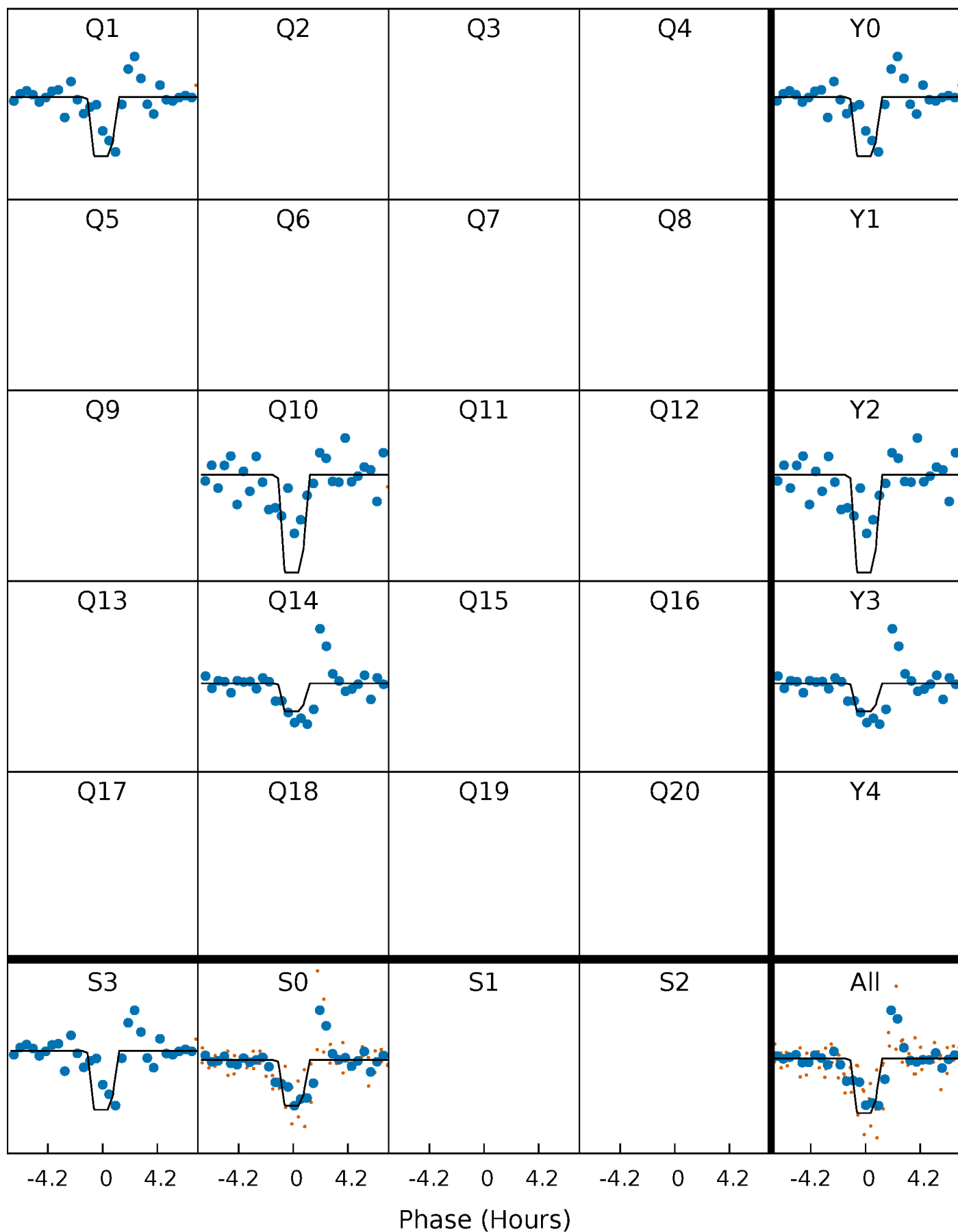
DV Quarter-Phased Transit Curves

TCE 006025092-03 $P=391.122403$ Days $T_0=136.465295$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

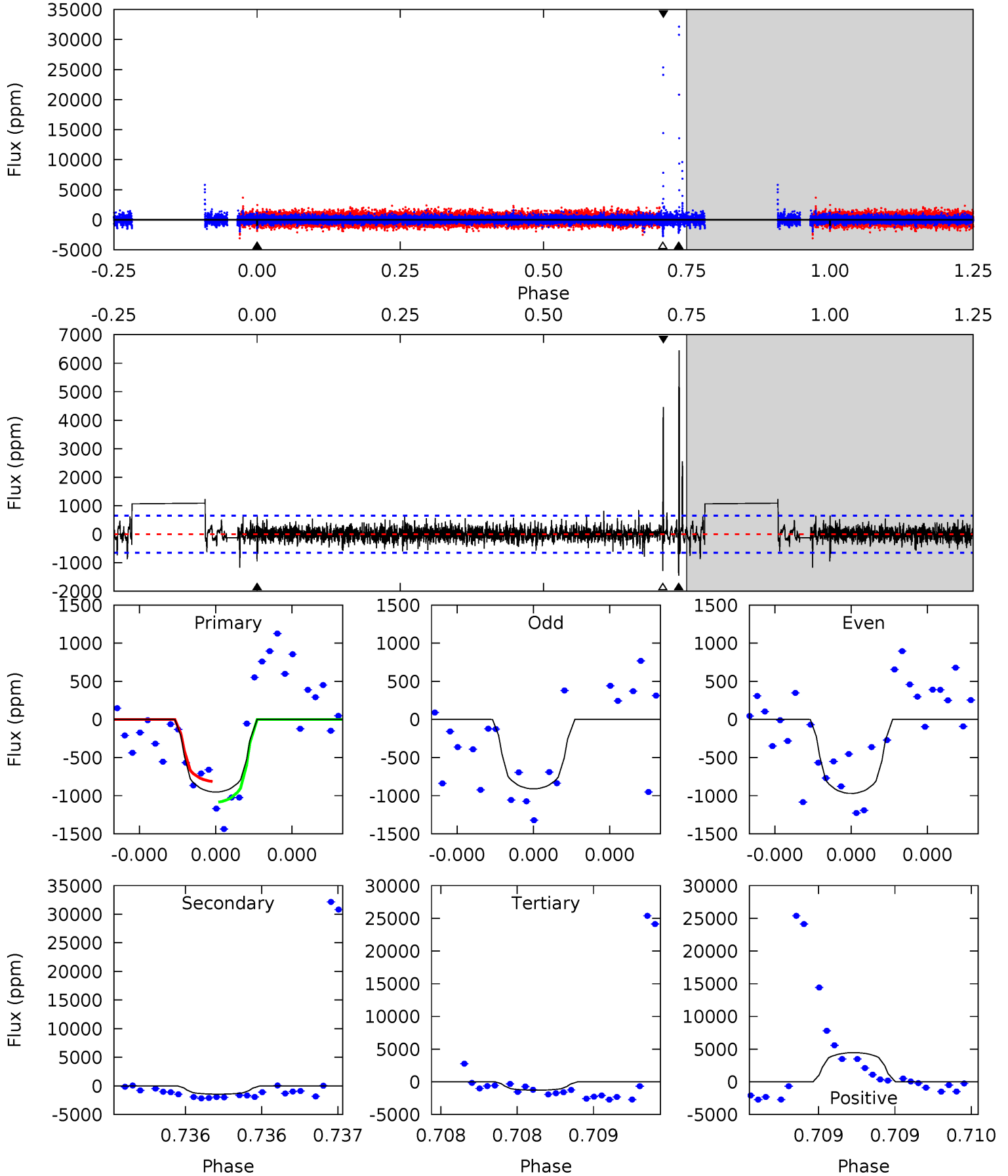
TCE 006025092-03 P=391.118772 Days $T_0=136.486187$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-03, P = 391.122403 Days, E = 136.465295 Days

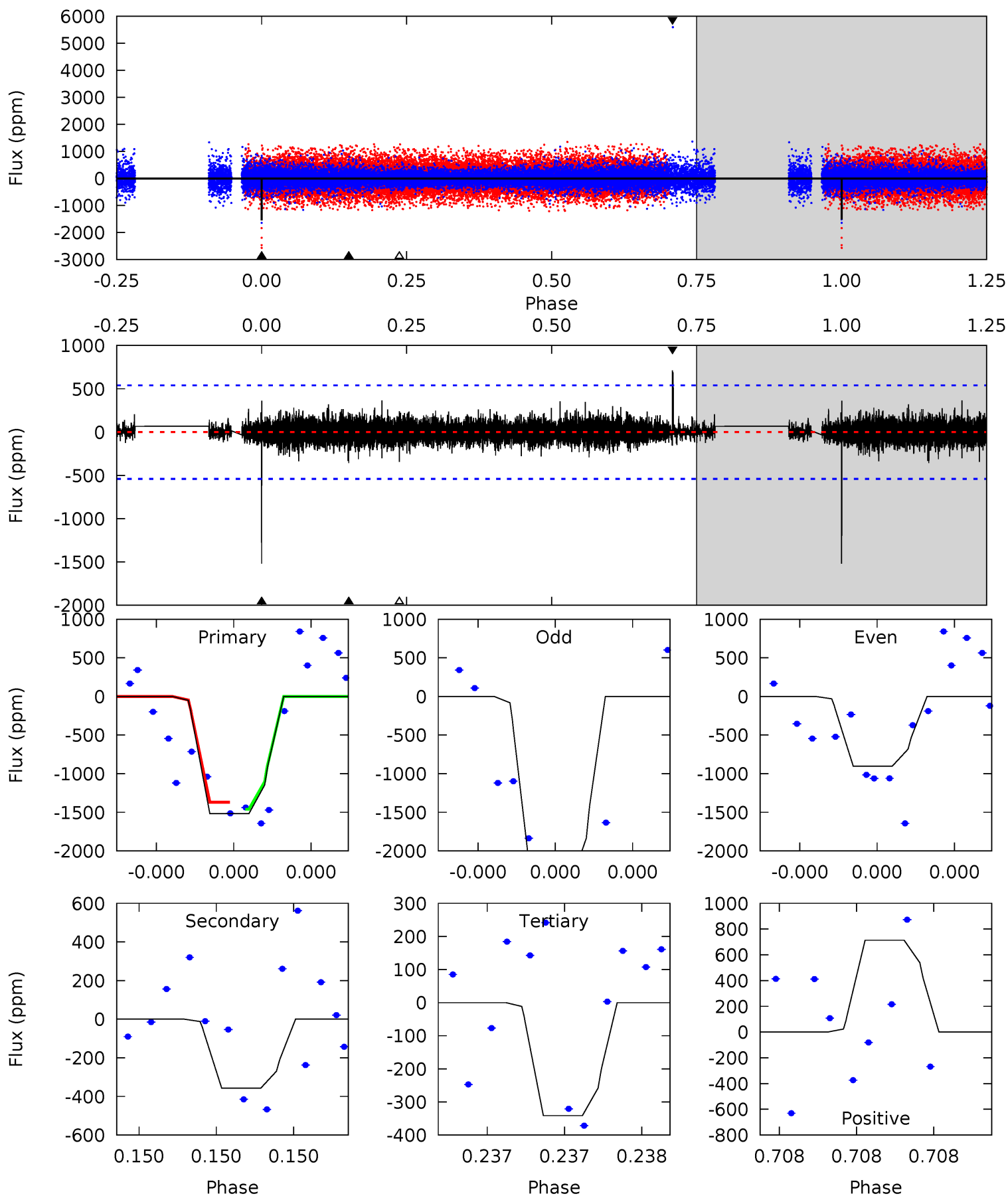
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	12.4	11.0	38.4	5.60	3.52	1.86	-2.85	-30.2	1.41	-25.9	0.23	1.04	0.82	1.14



Alt Model-Shift Uniqueness Test

006025092-03, P = 391.118772 Days, E = 136.486187 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	3.79	3.62	7.57	5.72	3.70	0.78	12.5	8.54	0.17	-3.78	8.11	1.30	0.32	0.48



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1445 ± 116	$6.61^{+6.31}_{-4.49}$	338^{+23}_{-17}	4565^{+3283}_{-987}	$18497^{+164704}_{-13526}$
Alt.	-357 ± 94	$6.85^{+6.45}_{-4.60}$	340^{+22}_{-18}	3544^{+1657}_{-652}	4409^{+33036}_{-3312}

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 $A_{obs} \gg 1.0$

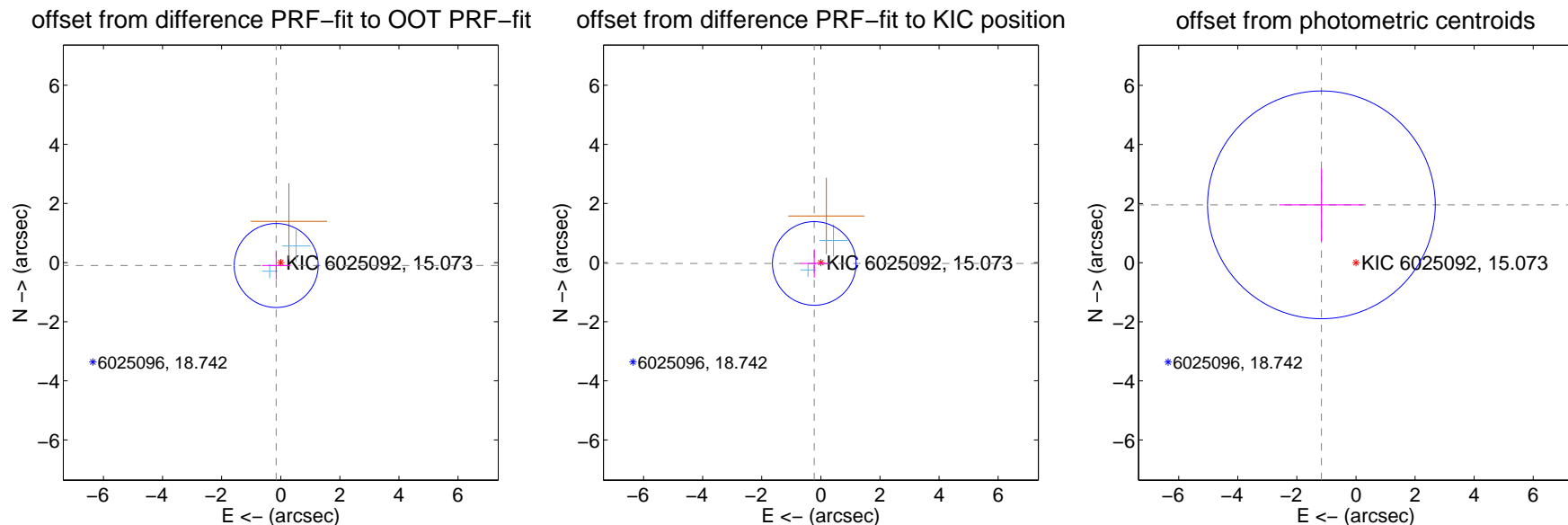
DV Centroid Data

Supplemental centroid analysis for 006025092-03. Kepler magnitude: 15.07. Transit SNR 7.78

There are 2 quarters with good PRF difference image offsets

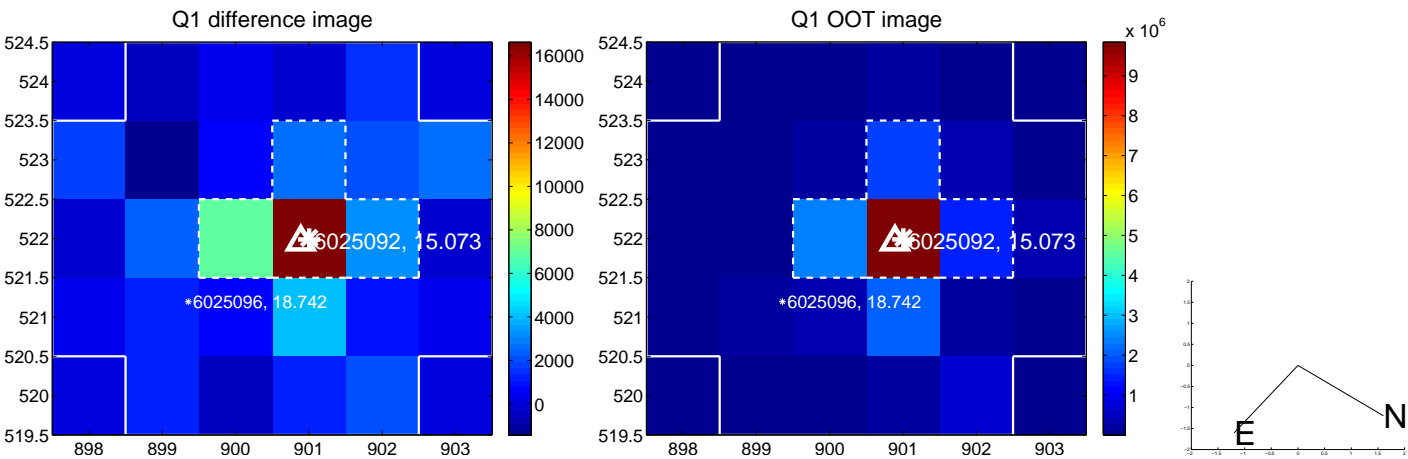
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.183 ± 0.474	0.39	0.154 ± 0.471	-0.098 ± 0.479
PRF-fit source offset from KIC position	0.226 ± 0.472	0.48	0.224 ± 0.471	-0.029 ± 0.479
photometric centroid source offset	2.28 ± 1.28	1.77	1.17 ± 1.43	1.96 ± 1.23



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.

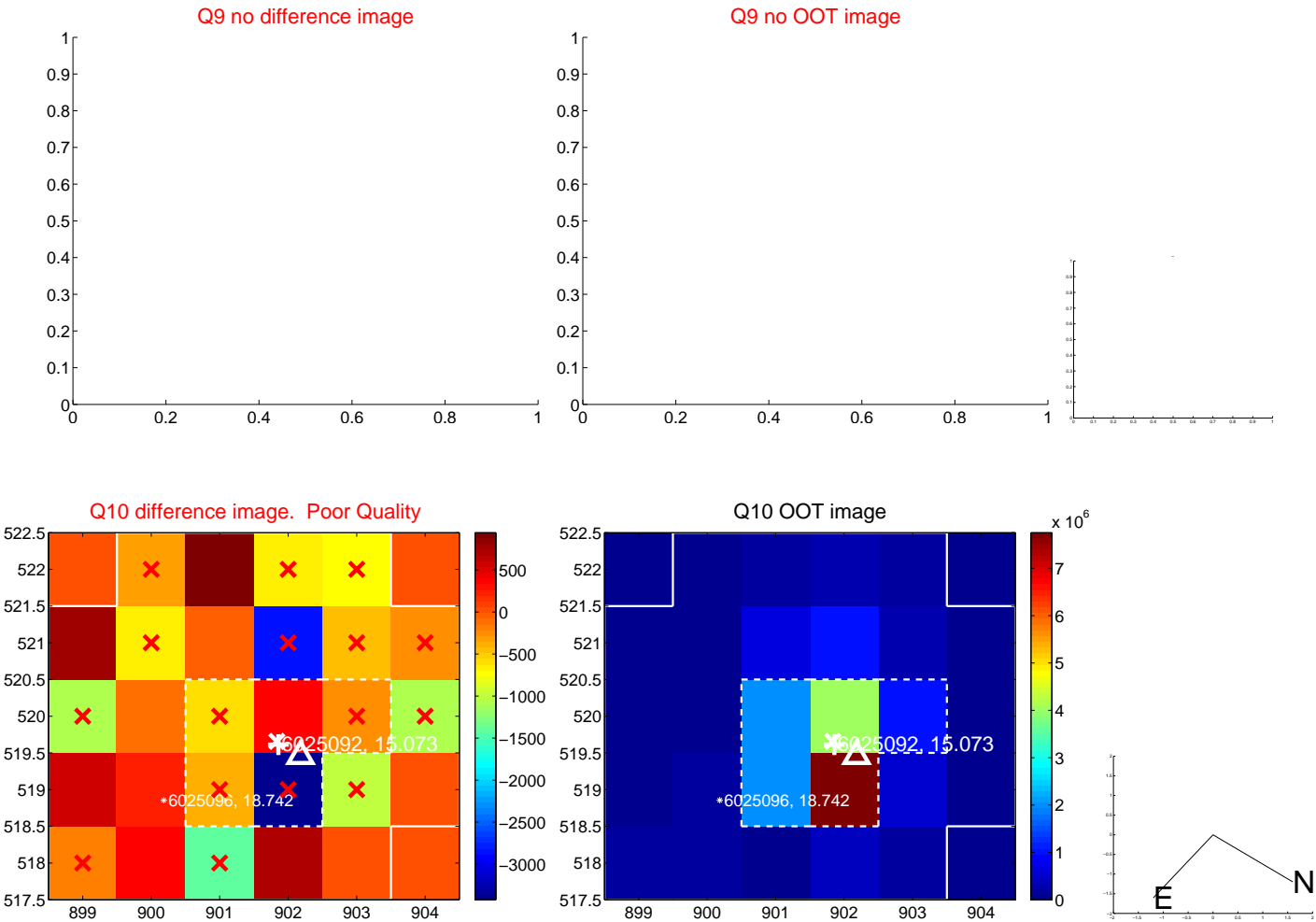
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

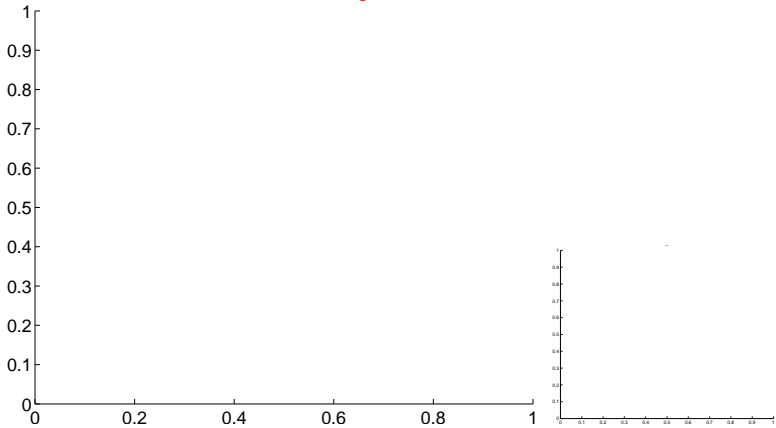


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

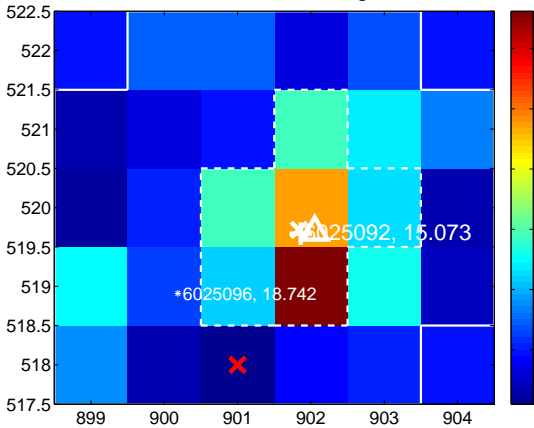
Q13 no difference image



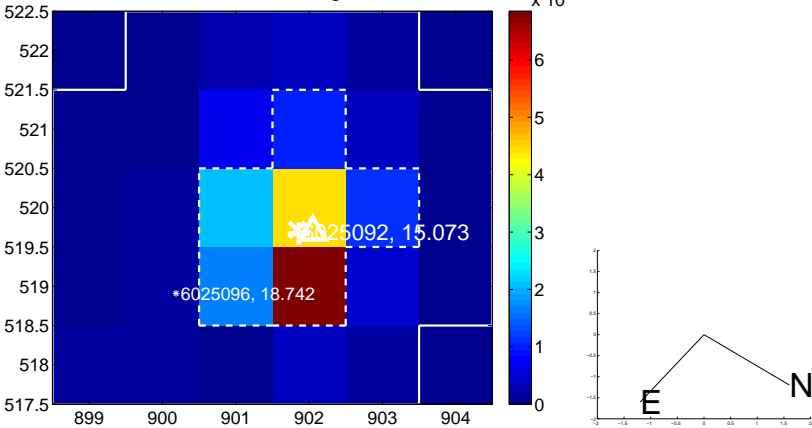
Q13 no OOT image



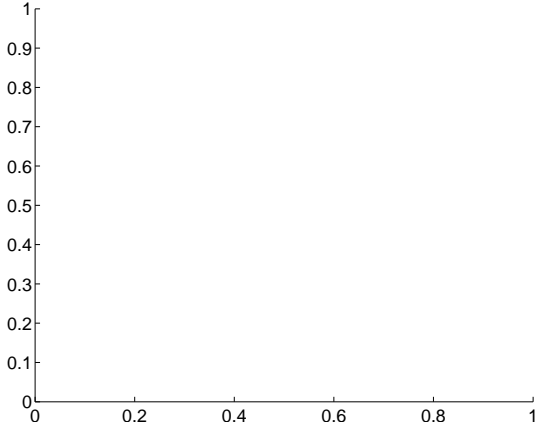
Q14 difference image



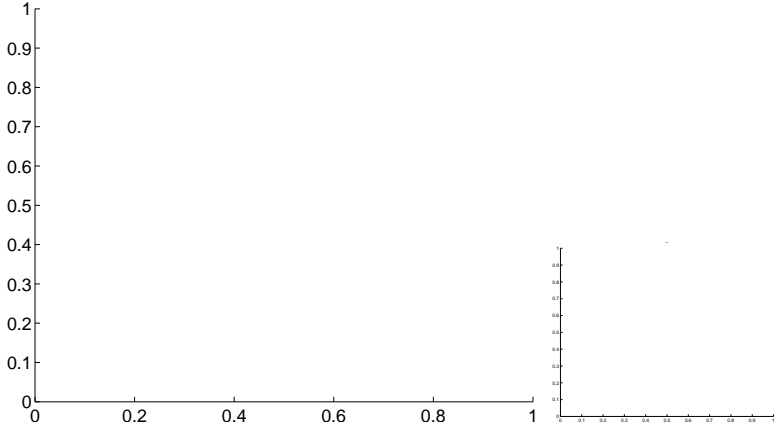
Q14 OOT image



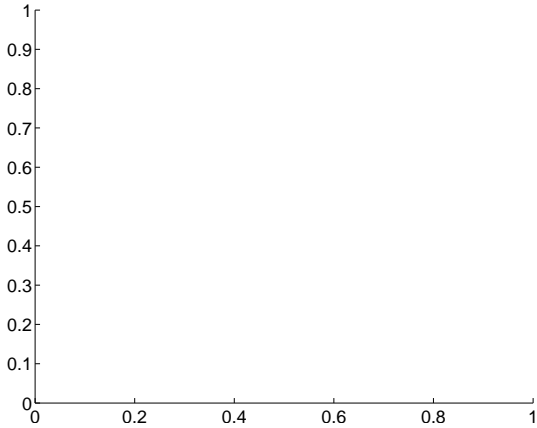
Q15 no difference image



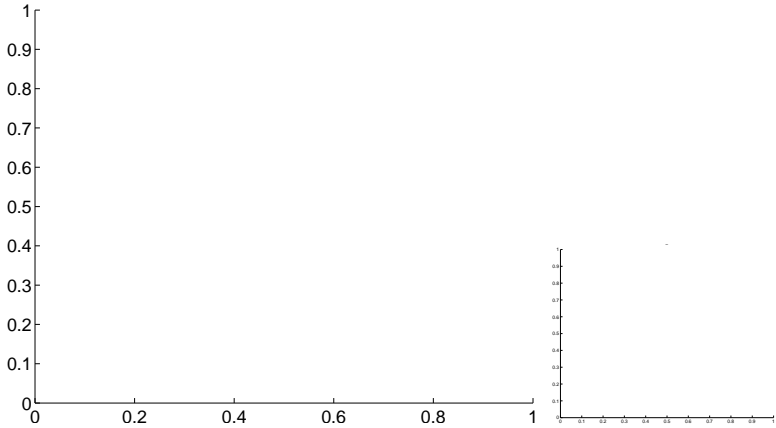
Q15 no OOT image



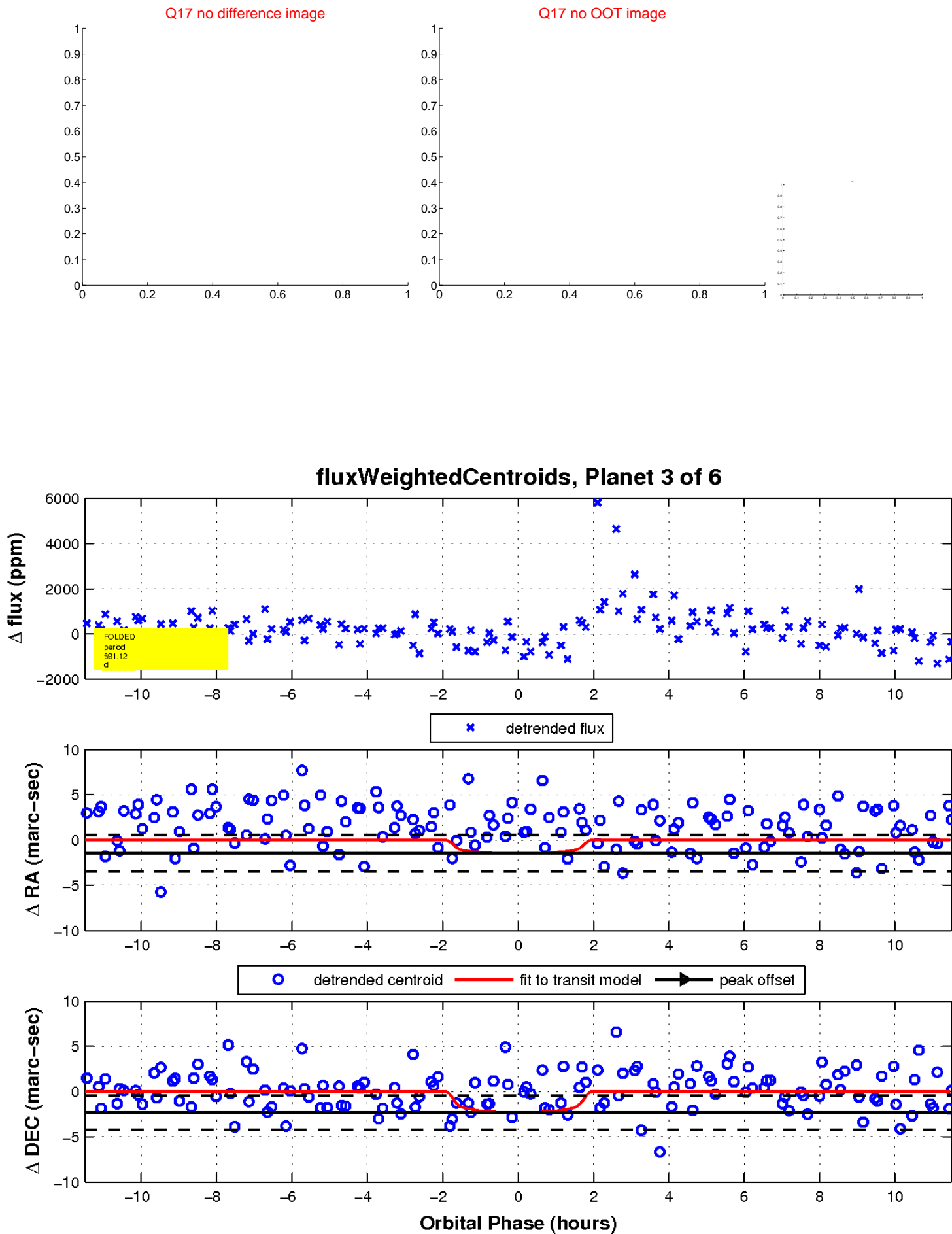
Q16 no difference image



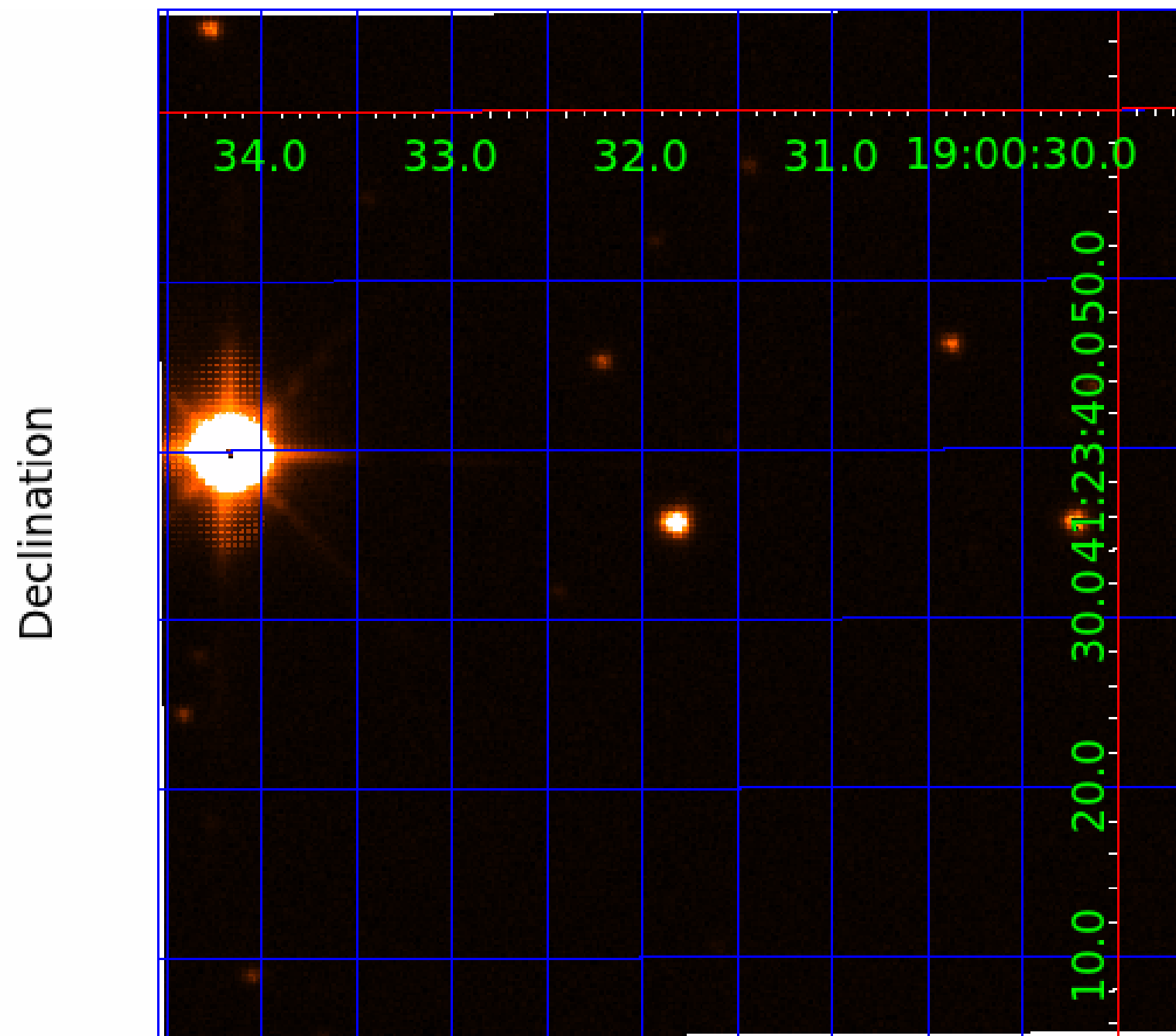
Q16 no OOT image



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



UKIRT Image



KIC 006025092

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})
006025092-01	OBS	No	364.031007	359.809719	1711.0	6.167	9.2	7.6	0.95	5601	7.63	0.87
006025092-02	OBS	No	385.069636	346.239744	1499.6	7.812	16.2	8.1	0.95	5601	3.75	0.81
006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

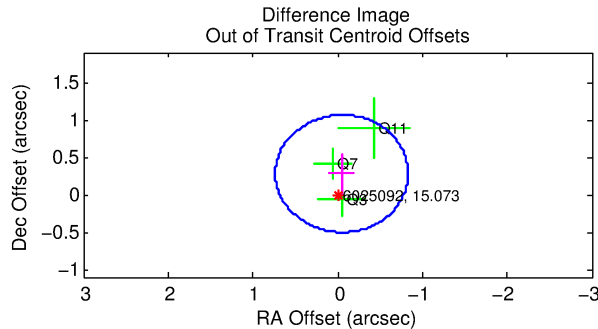
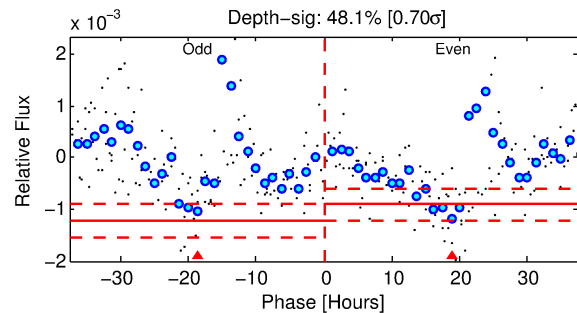
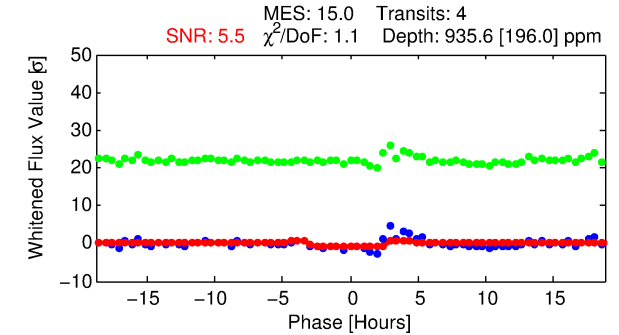
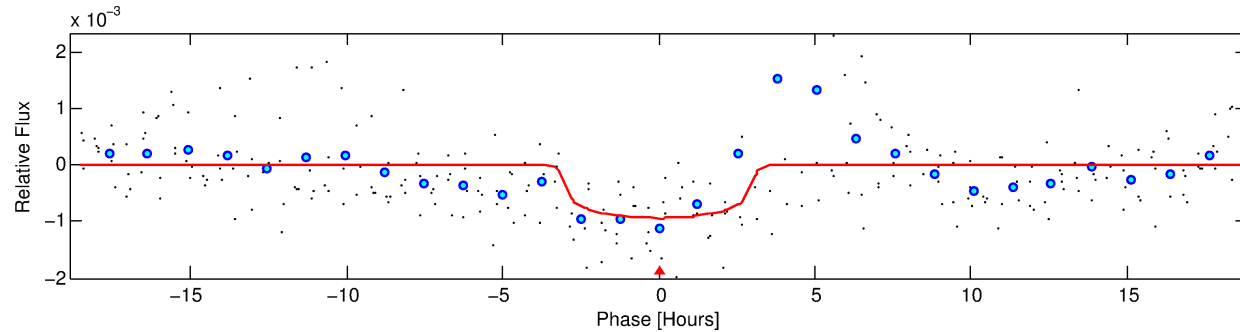
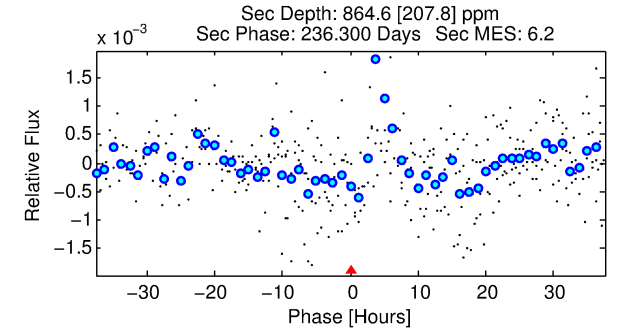
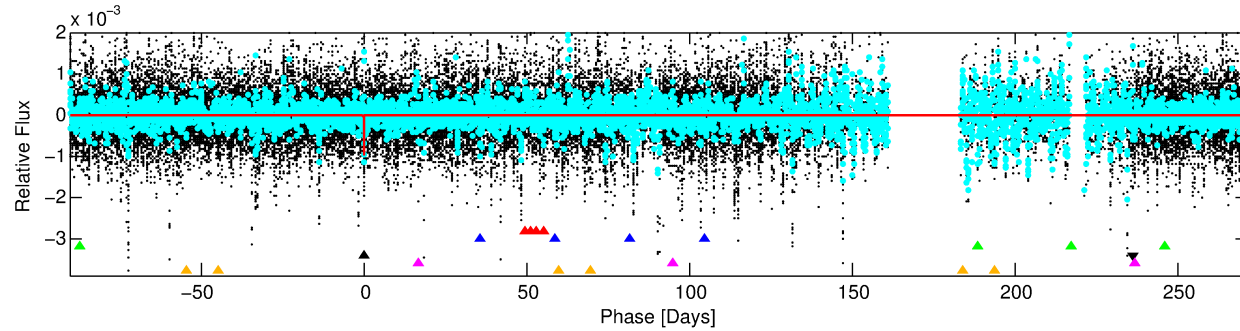
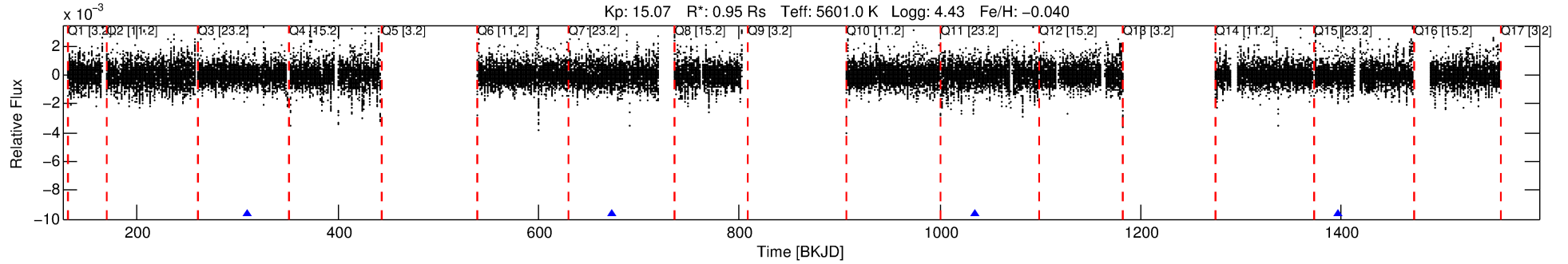
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-04

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 4 of 6 Period: 362.208 d



DV Fit Results:

Period = 362.20817 [0.00598] d
Epoch = 310.3567 [0.0122] BKJD
Rp/R* = 0.0285 [0.0403]
a/R* = 399.47 [2315.61]
b = 0.48 [9.29]
Seff = 0.87 [0.30]
Teq = 246 [21] K
Rp = 2.97 [4.26] Re
a = 0.9587 [0.2092] AU
Ag = 49674.63 [141834.24] [0.35 σ]
Teffp = 5689 [4040] K [1.35 σ]

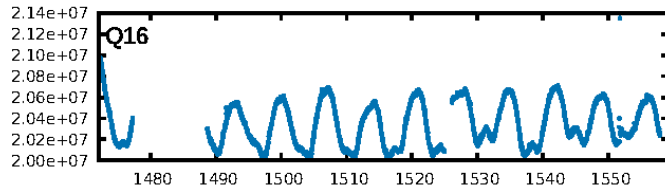
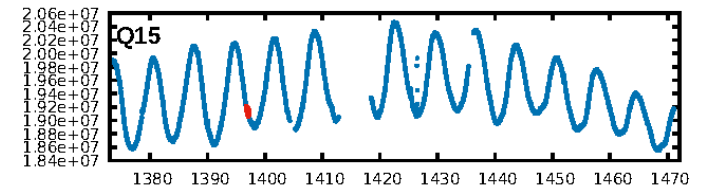
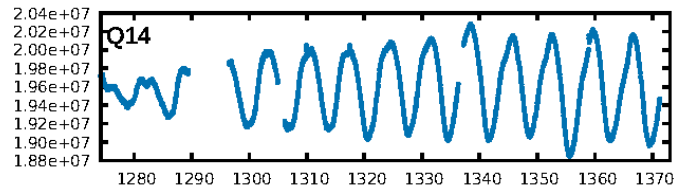
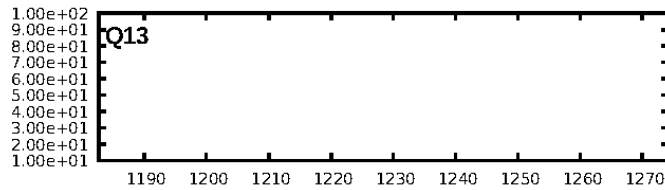
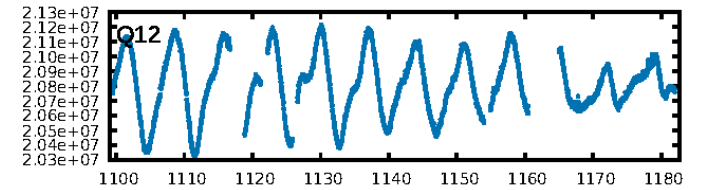
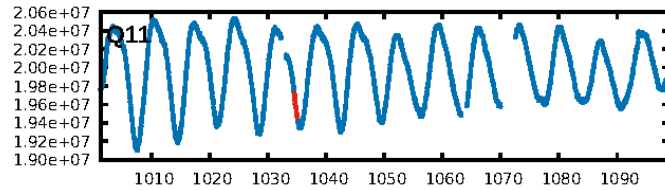
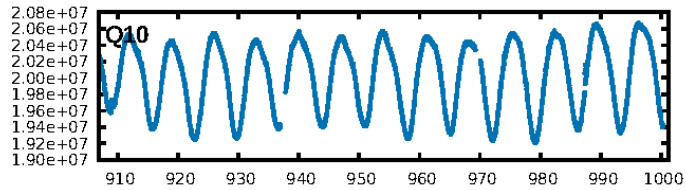
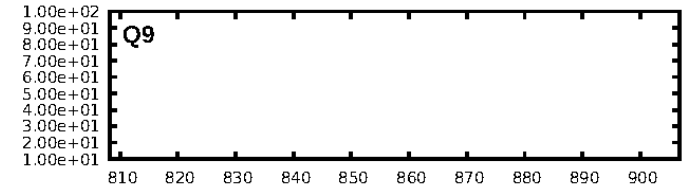
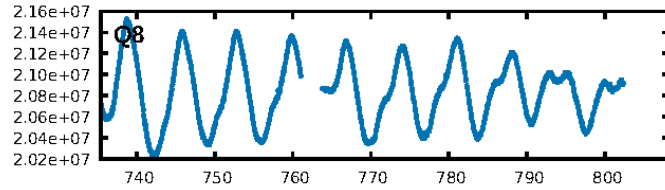
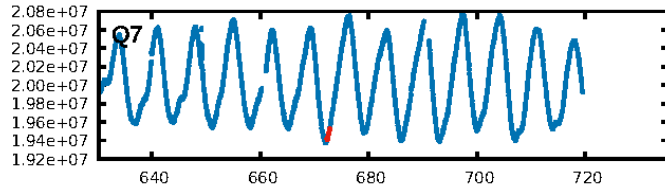
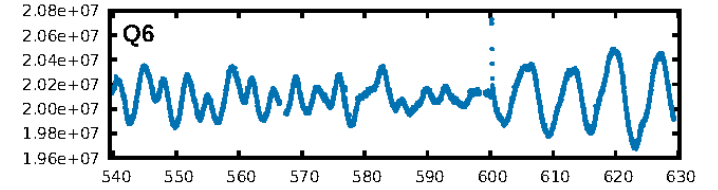
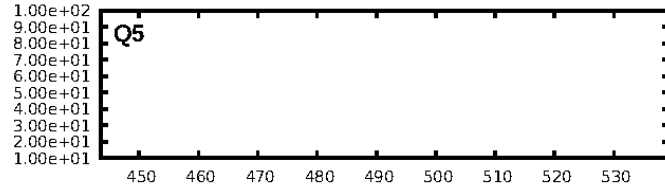
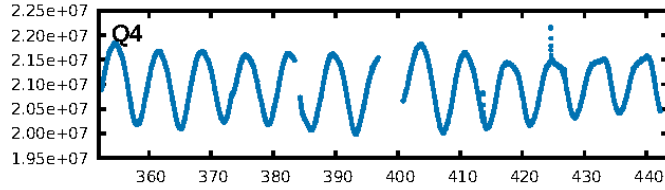
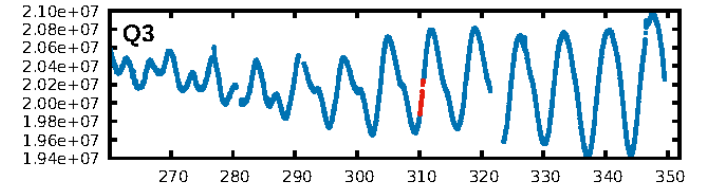
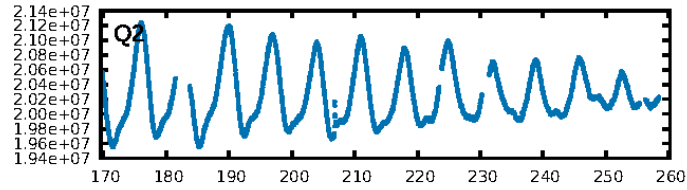
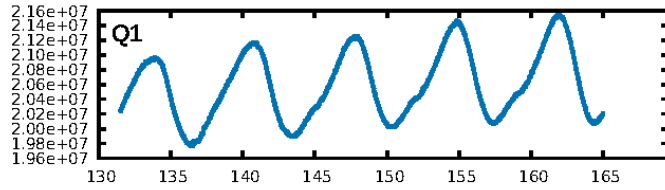
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [375.34 σ]
LongPeriod-sig: 100.0% [4.97 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 91.8%
Bootstrap-pfa: 4.90e-21
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.4574
Centroid-sig: 2.6%
Centroid-so: 2.446 arcsec [2.06 σ]
OotOffset-rm: 0.284 arcsec [1.09 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 0.309 arcsec [1.21 σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

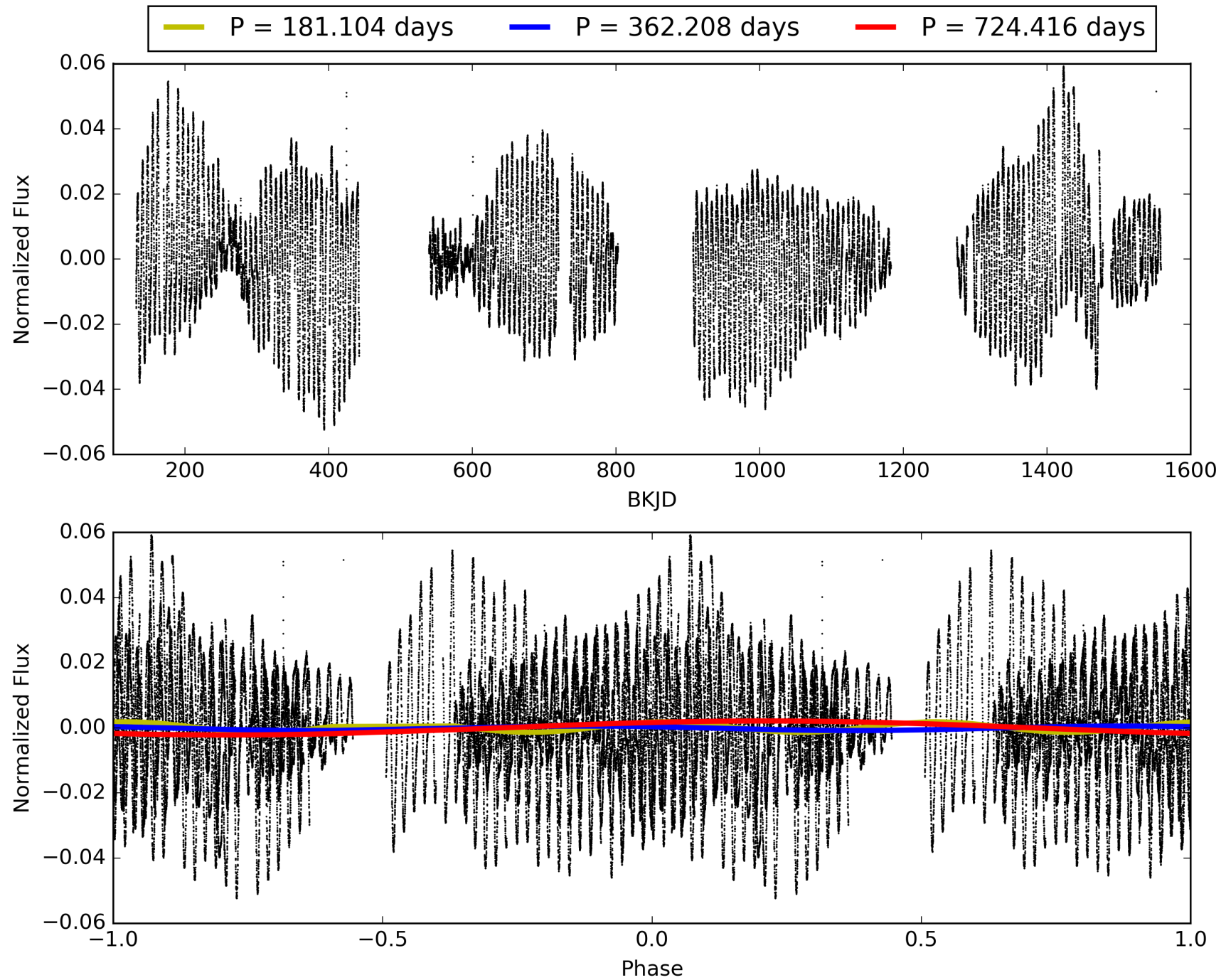
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:06:38 Z

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

TCE 006025092-04, PDC Light Curves

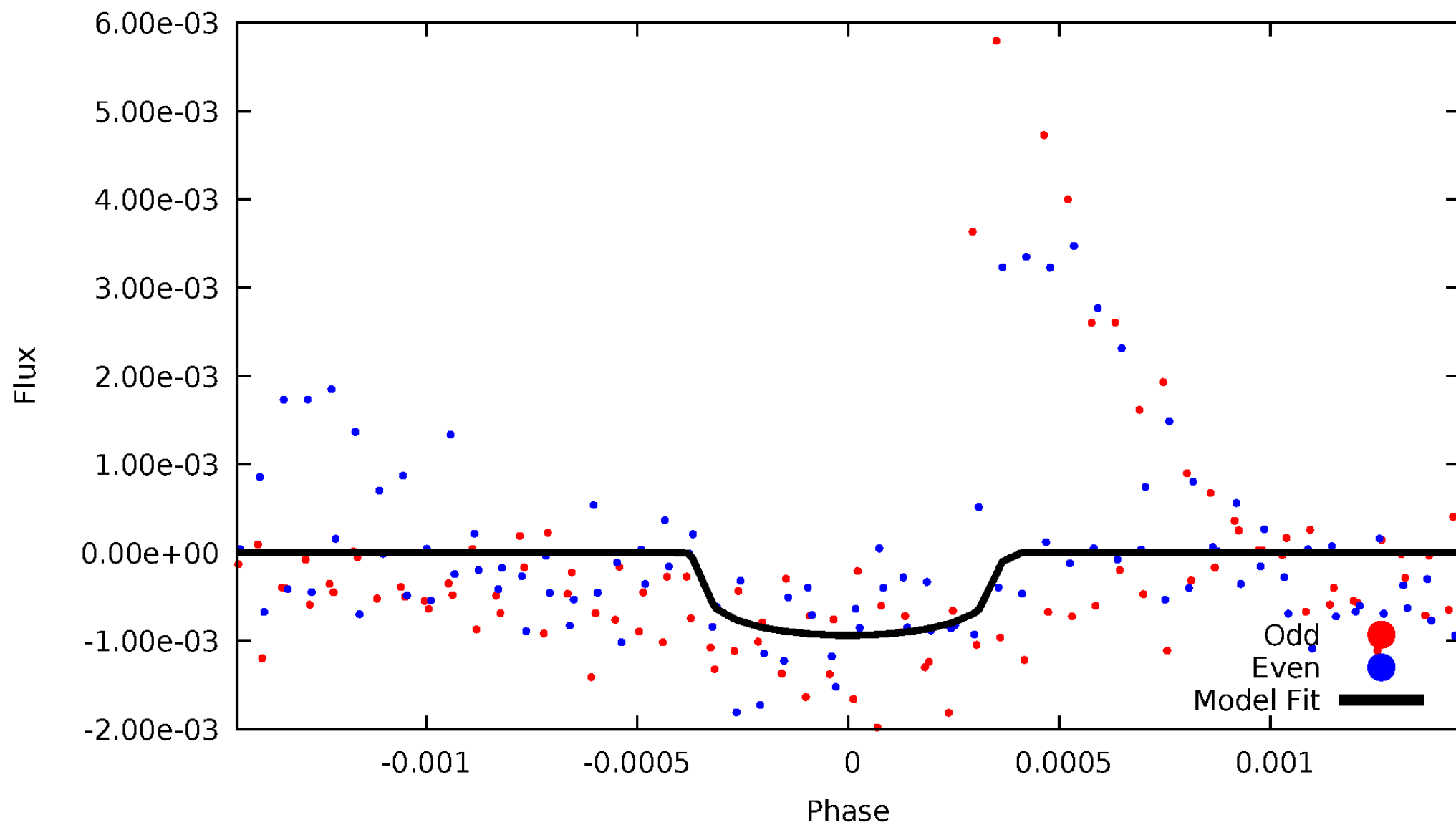


TCE 006025092-04



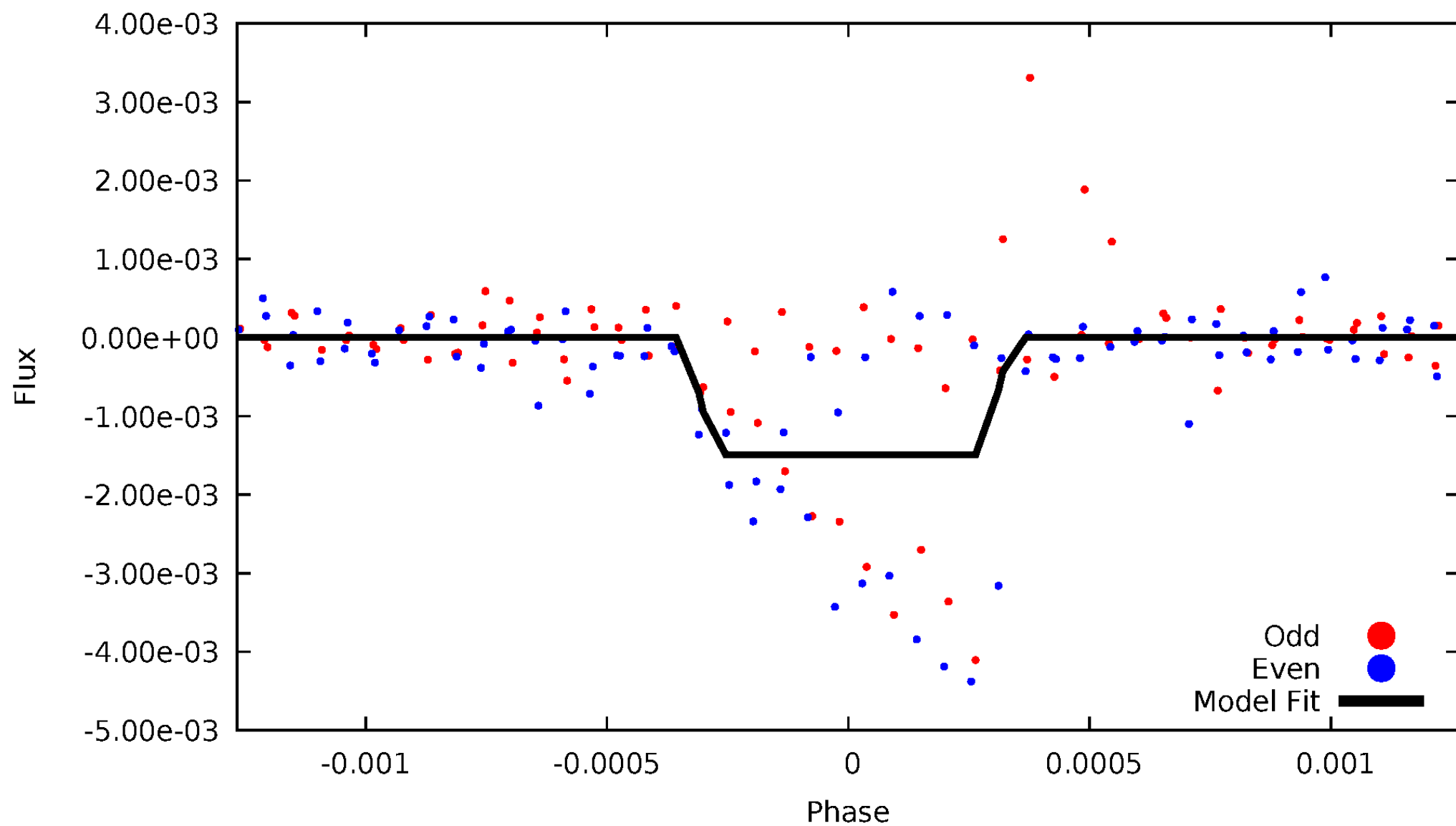
DV Odd/Even

TCE 006025092-04



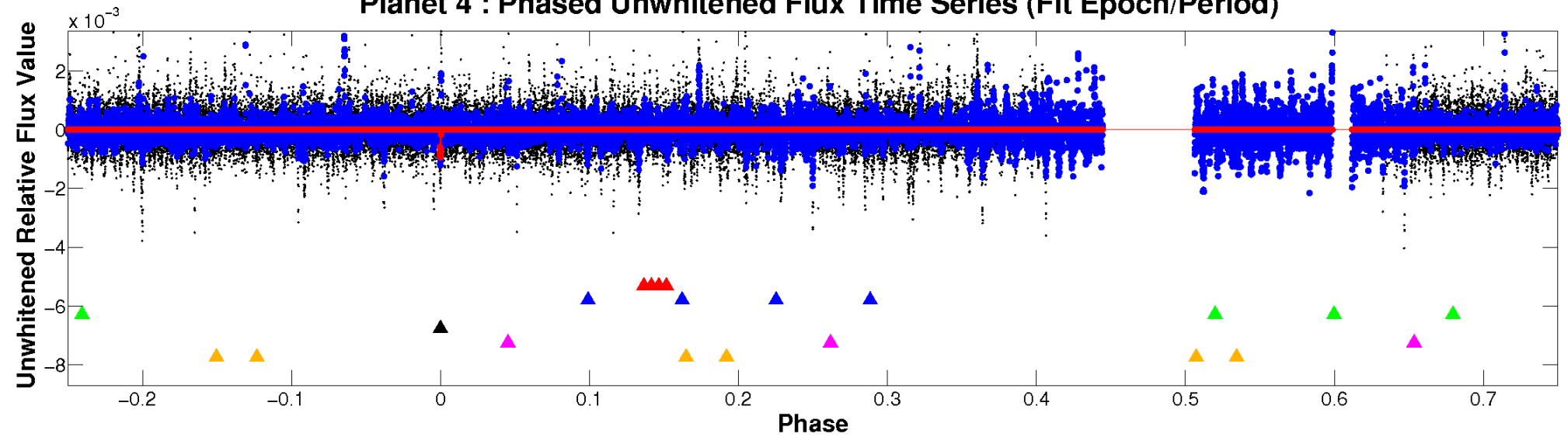
ALT Odd/Even

TCE 006025092-04

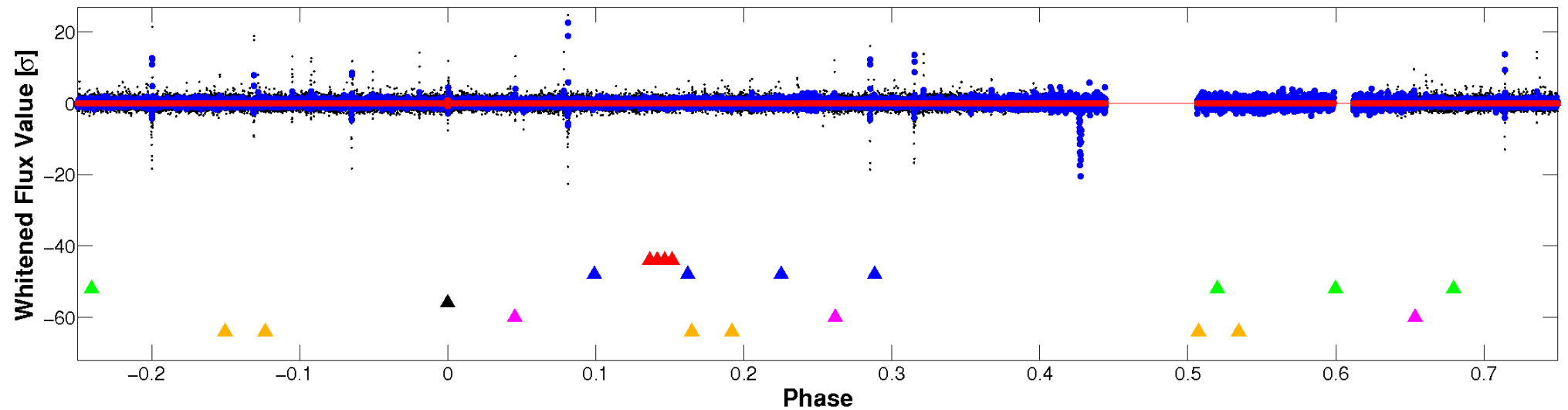


Non-Whitened Vs. Whitened Light Curve

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

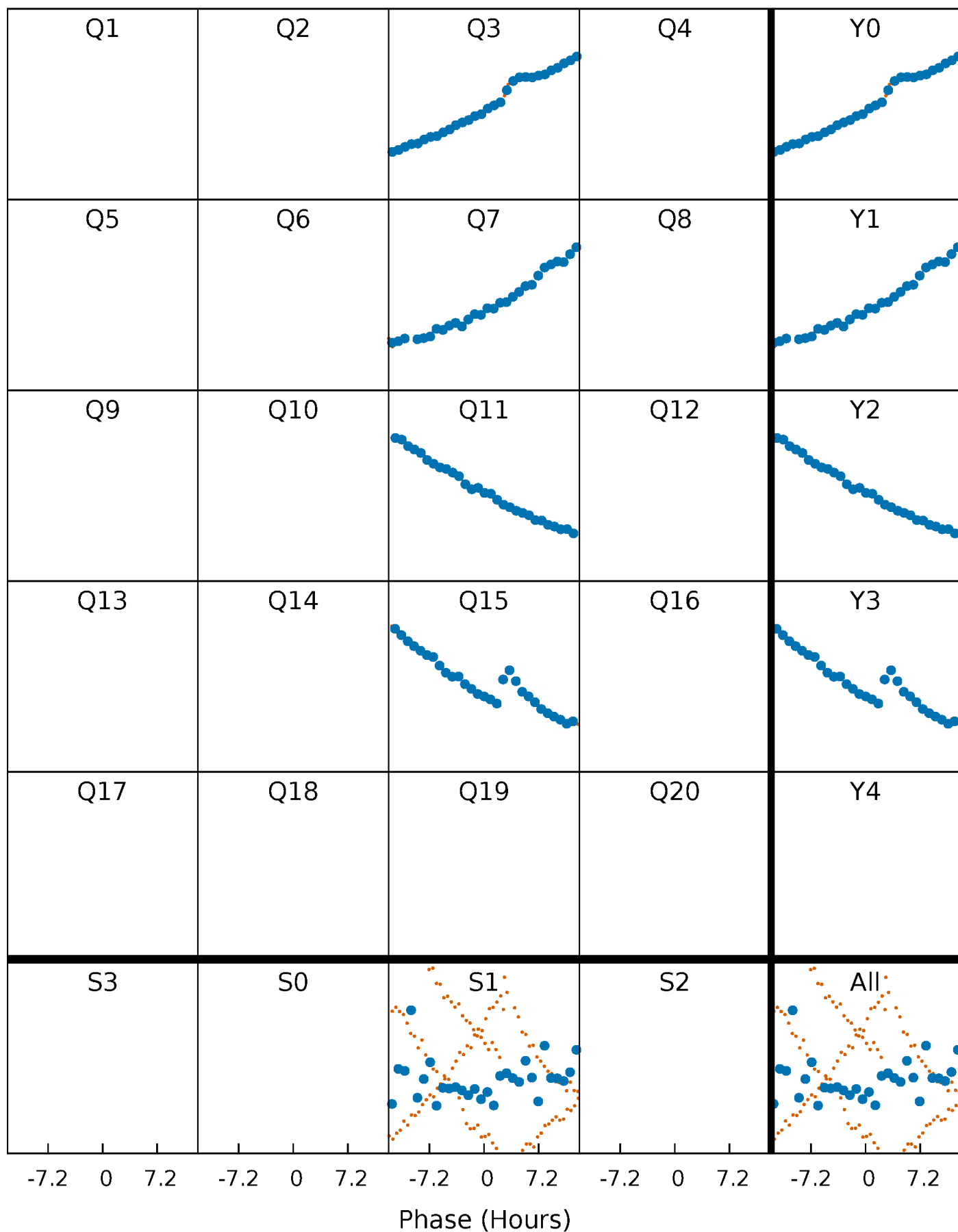


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



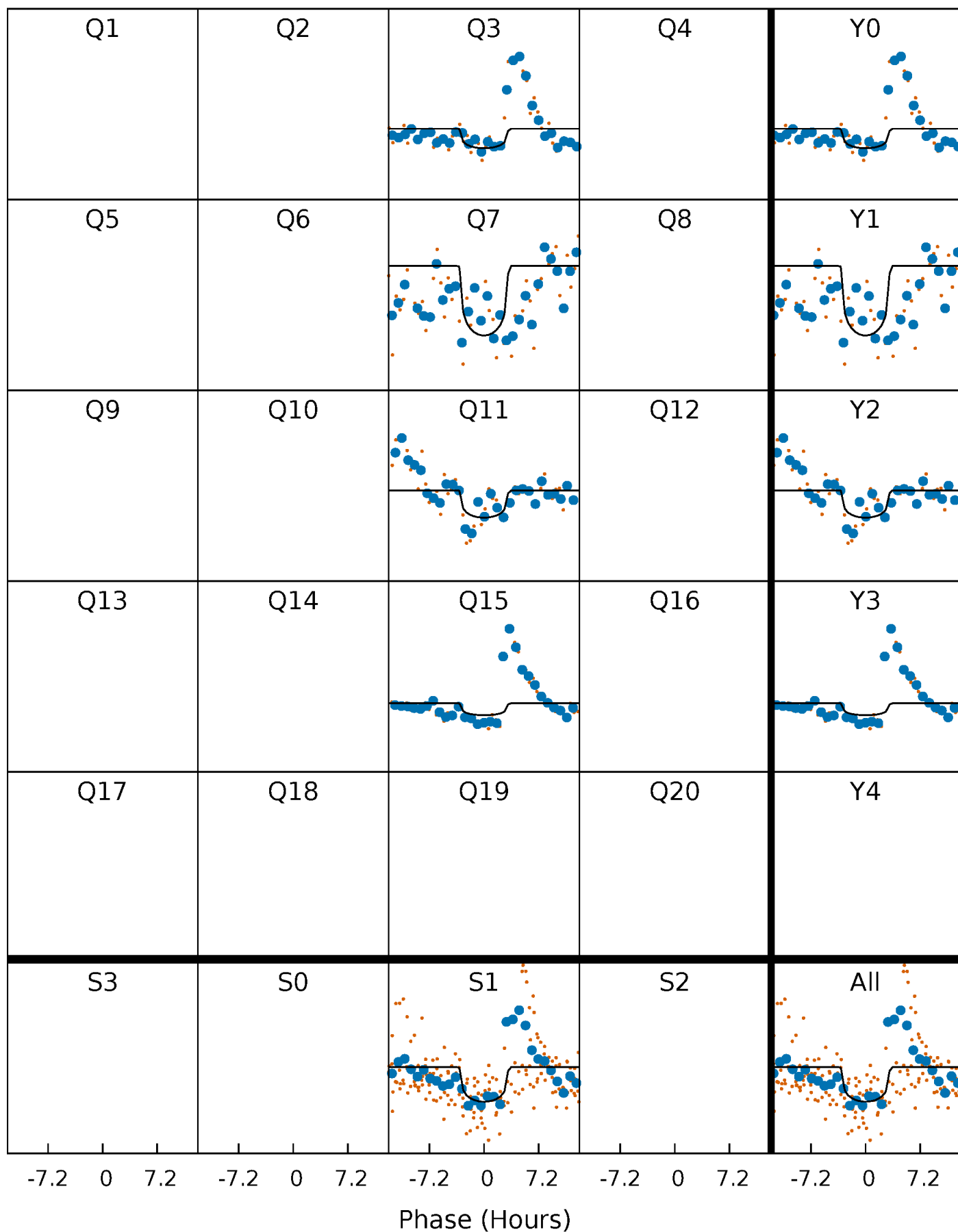
PDC Quarter-Phased Transit Curves

TCE 006025092-04 P=362.208166 Days $T_0=310.356744$ (BKJD)



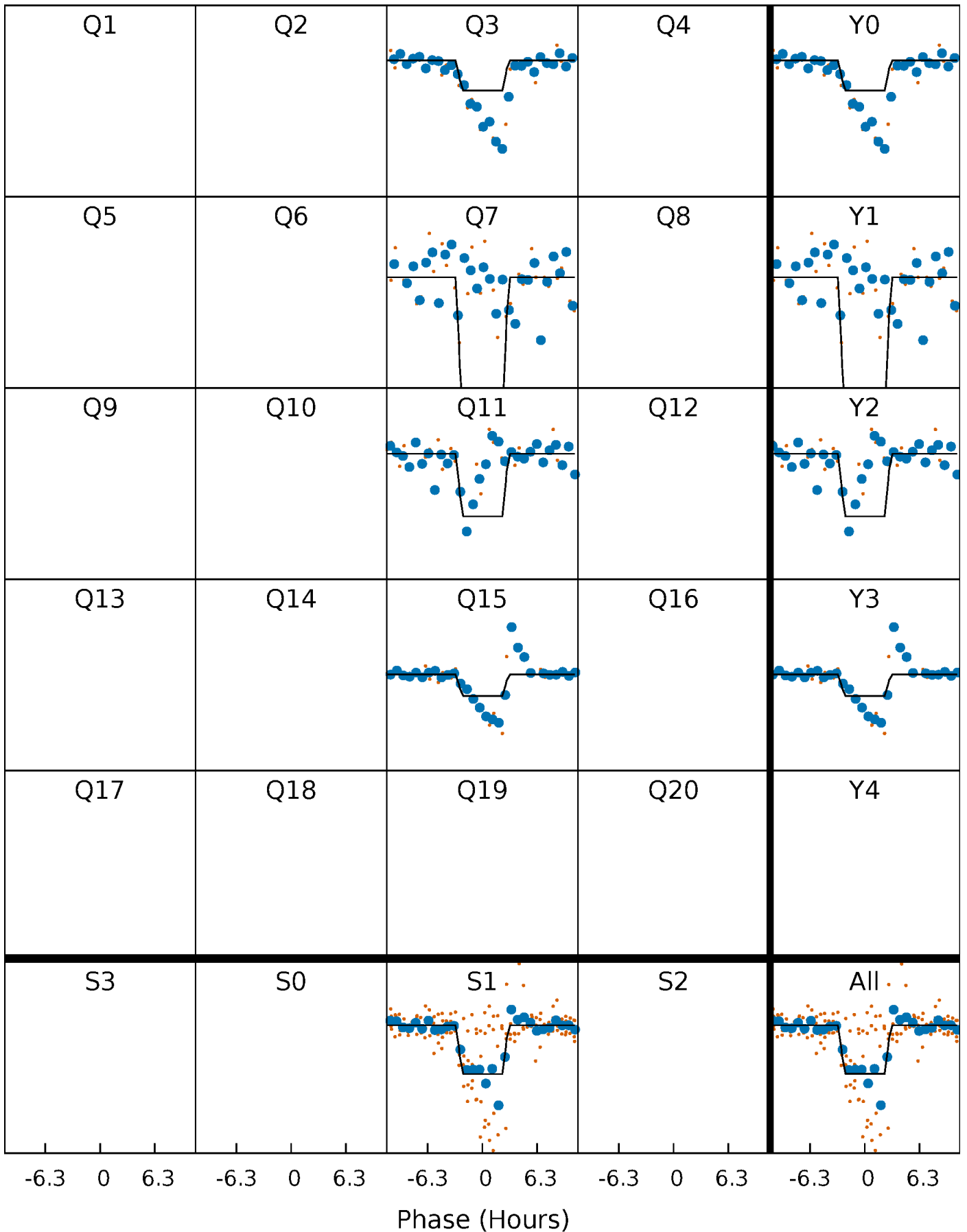
DV Quarter-Phased Transit Curves

TCE 006025092-04 $P=362.208166$ Days $T_0=310.356744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

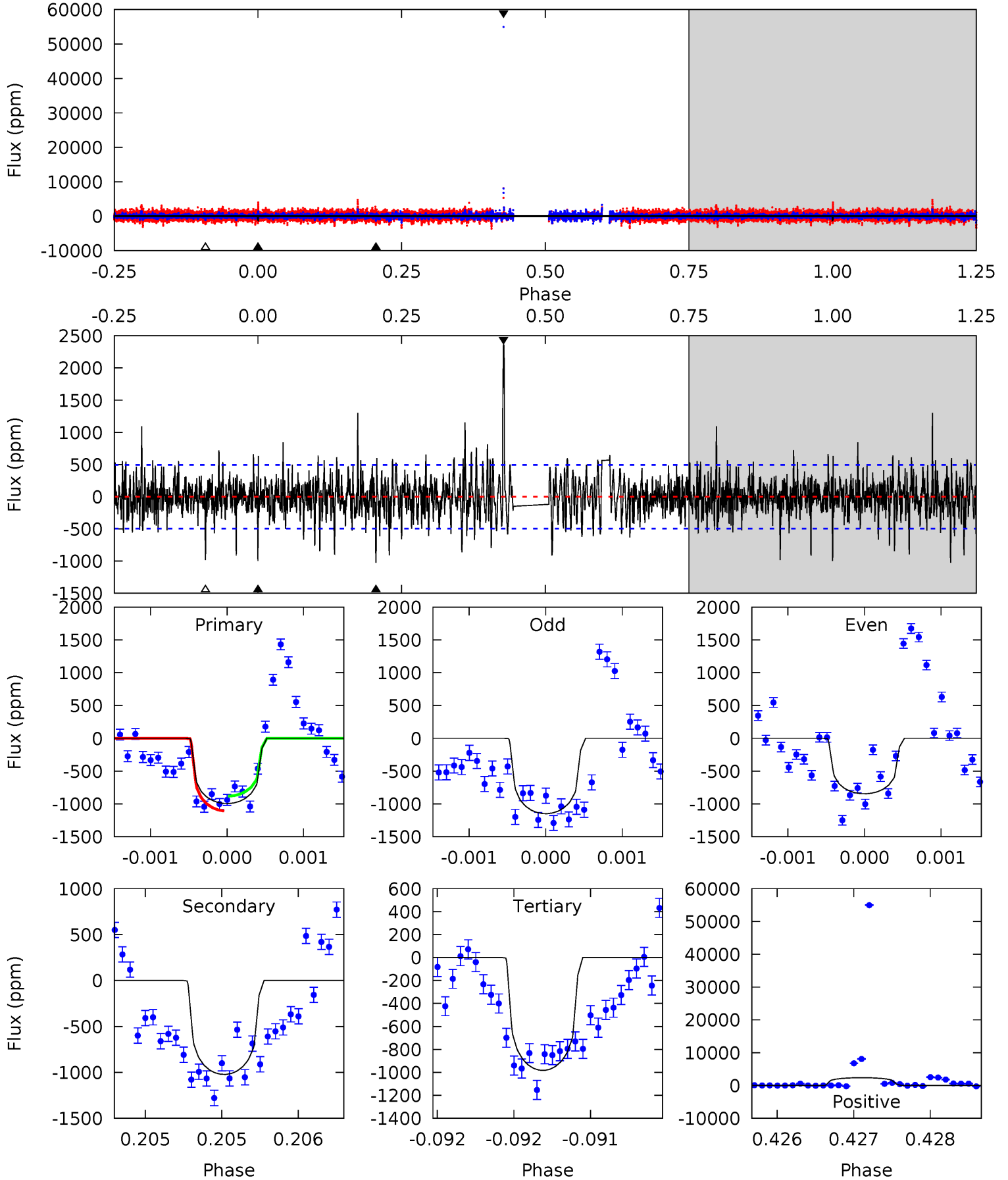
TCE 006025092-04 $P=362.205285$ Days $T_0=310.355998$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-04, P = 362.208166 Days, E = 310.356744 Days

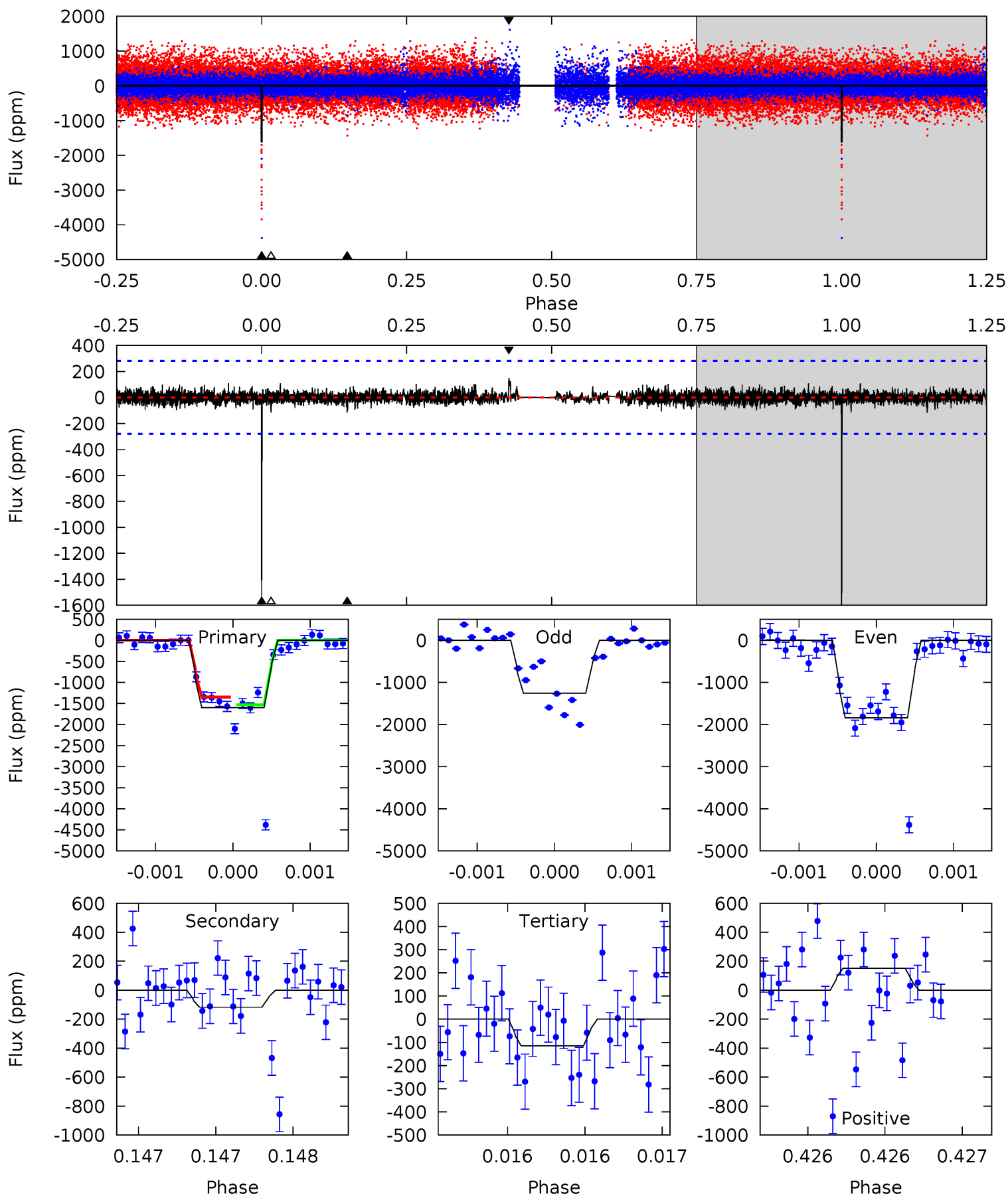
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	11.3	10.9	26.4	5.49	3.36	2.67	0.14	-15.3	0.44	-15.0	1.63	1.01	0.70	1.25



Alt Model-Shift Uniqueness Test

006025092-04, P = 362.205285 Days, E = 310.355998 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.4	2.31	2.26	2.97	5.53	3.42	0.50	29.2	28.5	0.05	-0.66	6.05	1.03	0.09	1.71



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1022 ± 90	$4.12^{+3.66}_{-2.67}$	347^{+25}_{-18}	5131^{+3922}_{-1096}	$29483^{+217100}_{-20913}$
Alt.	-117 ± 51	$4.82^{+3.72}_{-2.99}$	347^{+25}_{-20}	3249^{+1379}_{-534}	2373^{+16333}_{-1761}

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 $A_{obs} \gg 1.0$

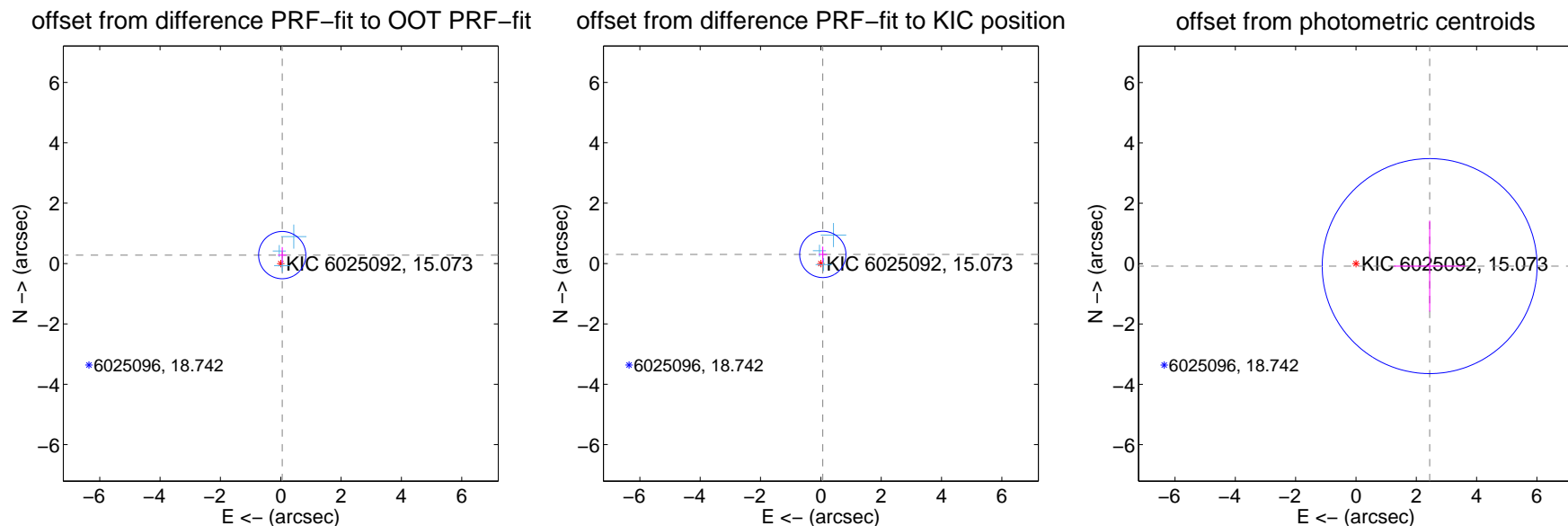
DV Centroid Data

Supplemental centroid analysis for 006025092-04. Kepler magnitude: 15.07. Transit SNR 5.49

There are 3 quarters with good PRF difference image offsets

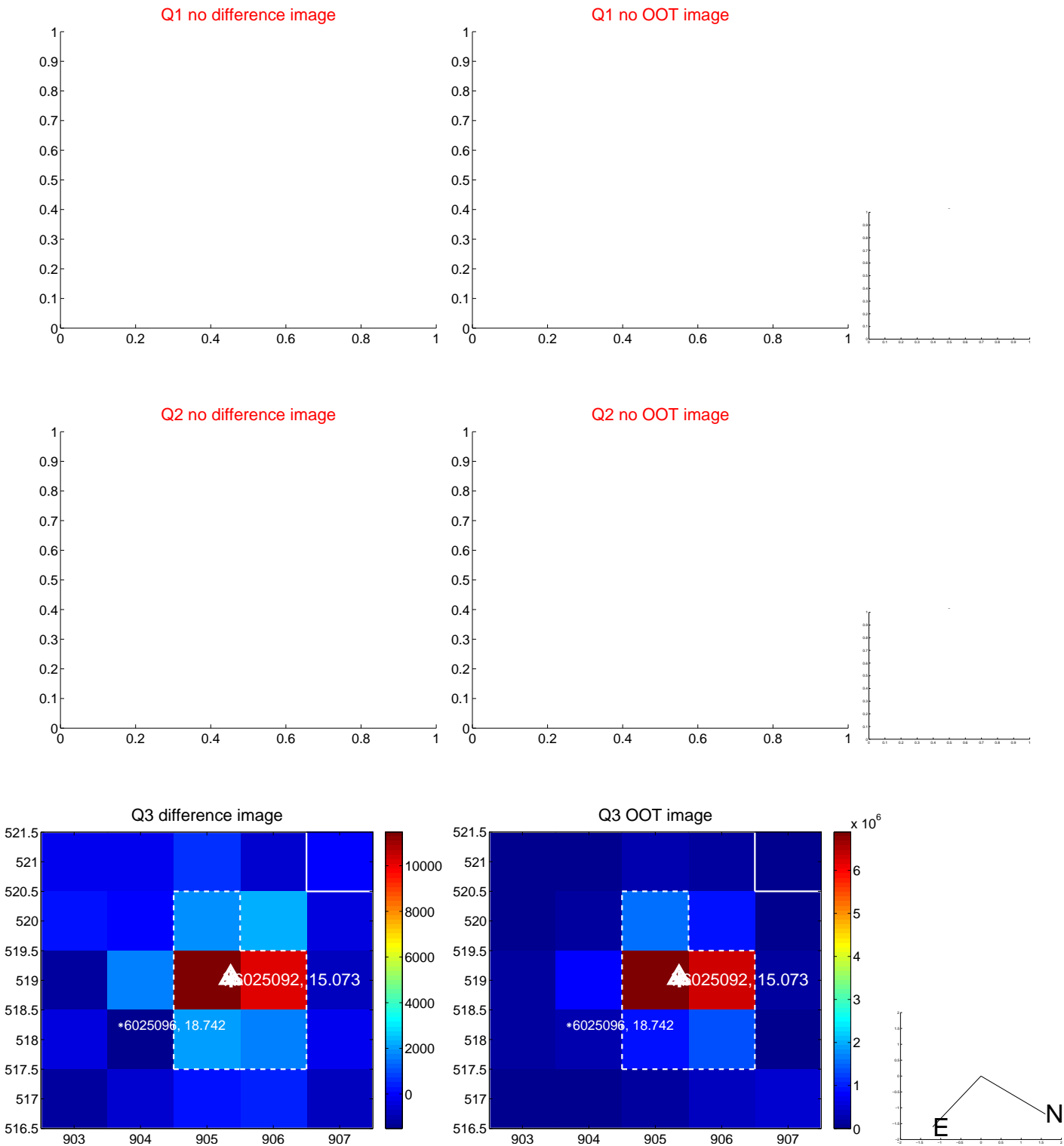
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.284 ± 0.261	1.09	-0.048 ± 0.141	0.280 ± 0.264
PRF-fit source offset from KIC position	0.309 ± 0.256	1.21	-0.064 ± 0.138	0.303 ± 0.260
photometric centroid source offset	2.45 ± 1.19	2.06	-2.44 ± 1.19	-0.08 ± 1.51

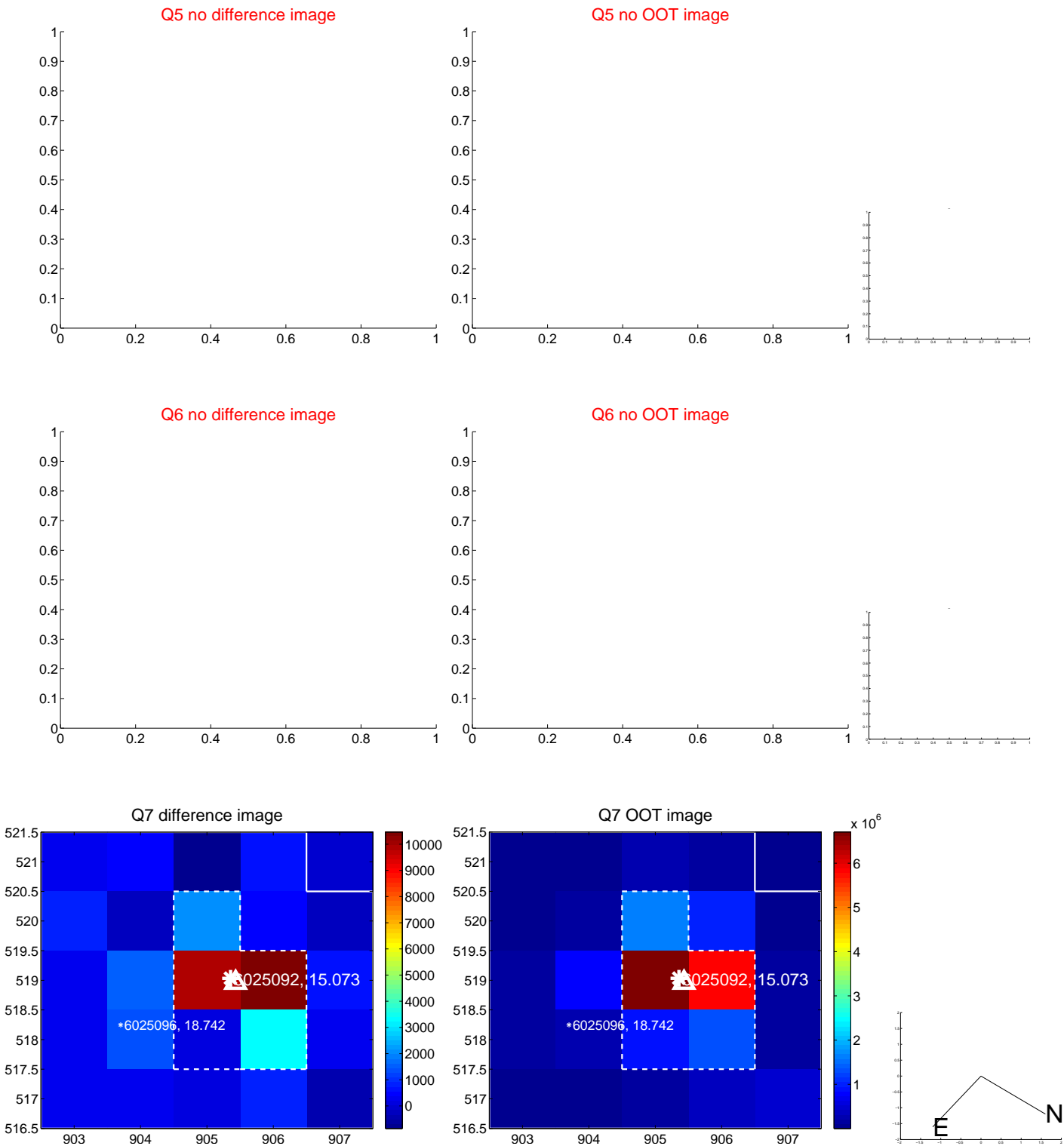


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



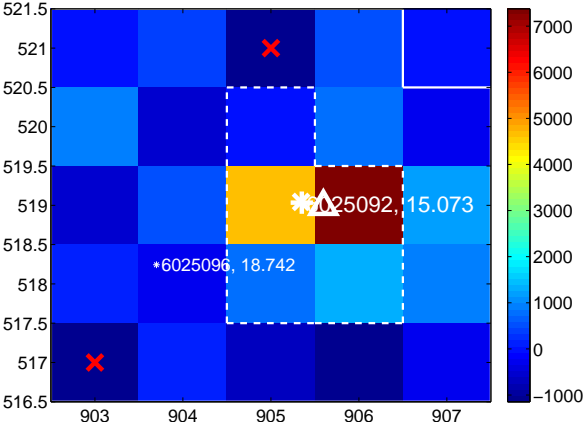
Q10 no difference image



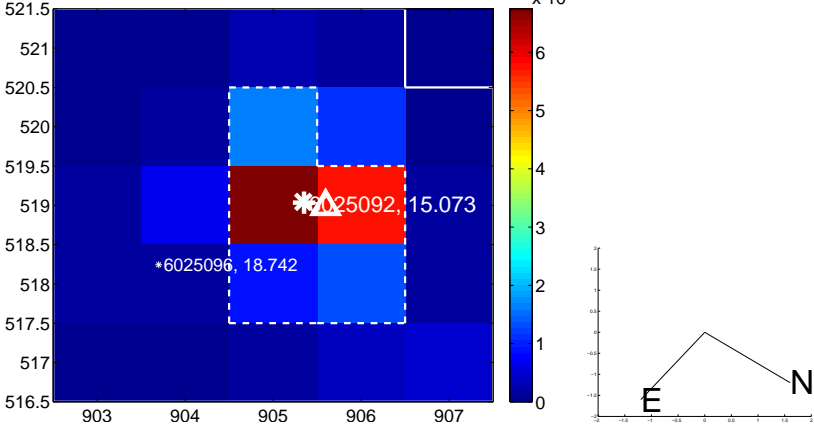
Q10 no OOT image



Q11 difference image



Q11 OOT image



Q12 no difference image



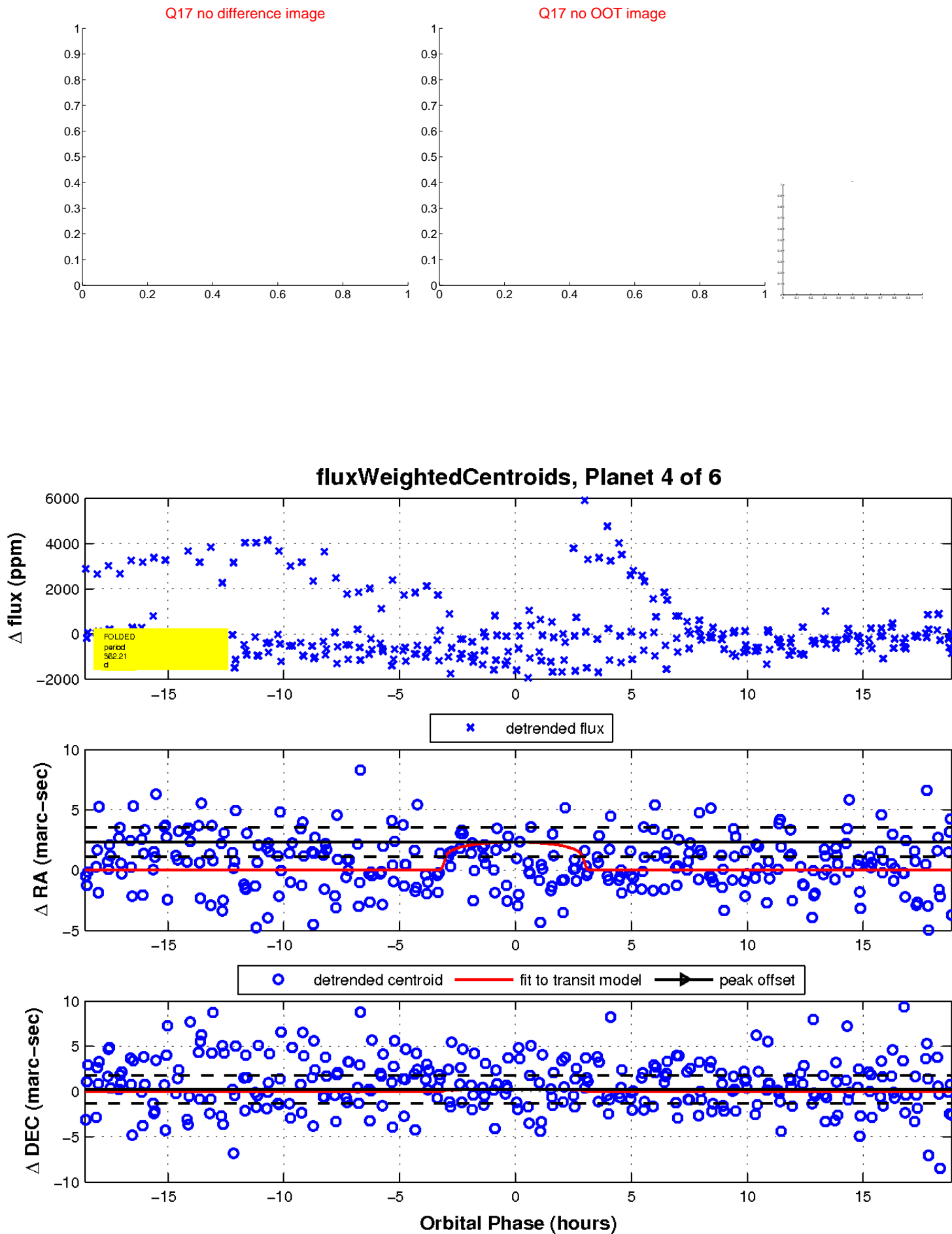
Q12 no OOT image



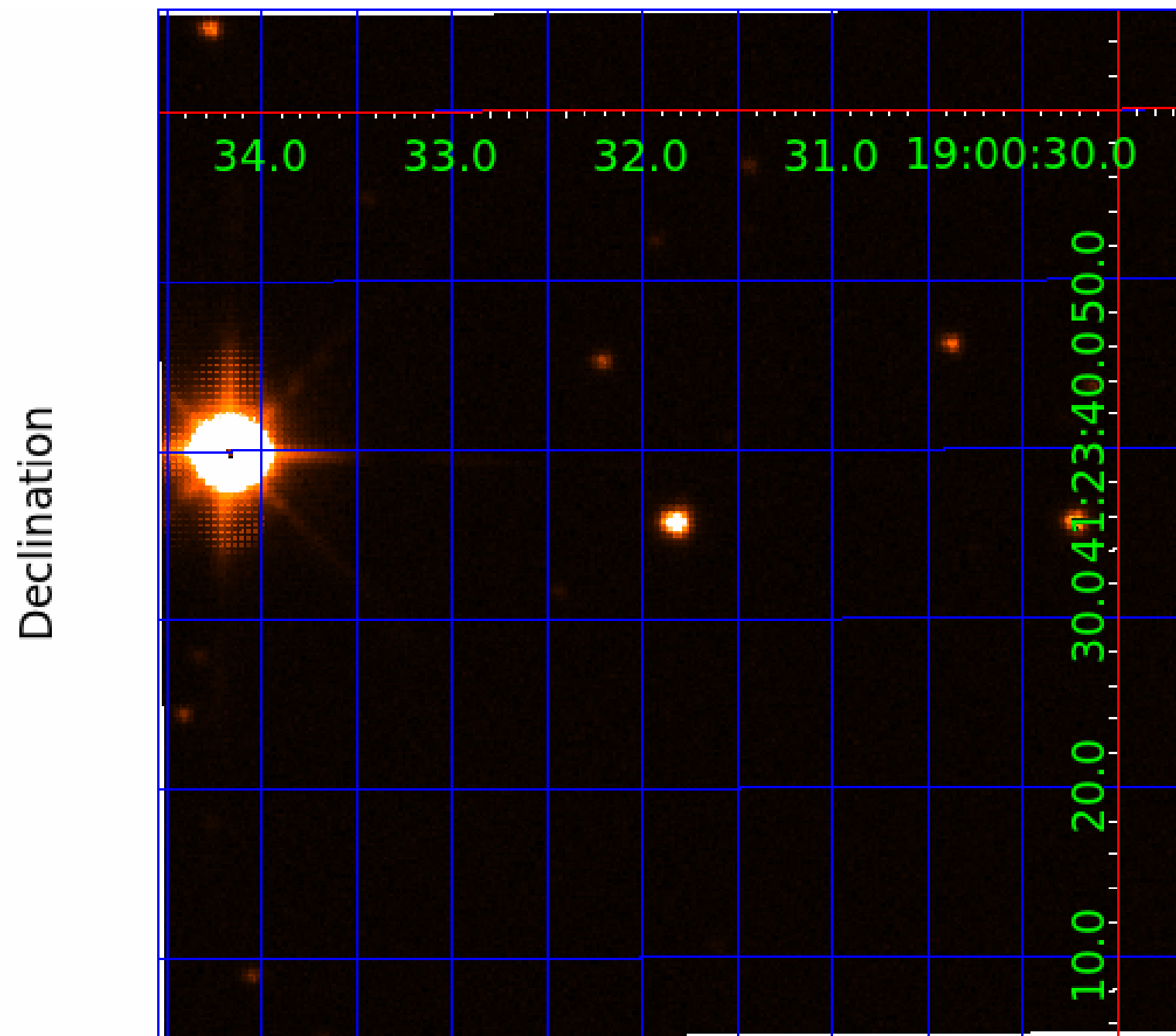
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006025092

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})
006025092-01	OBS	No	364.031007	359.809719	1711.0	6.167	9.2	7.6	0.95	5601	7.63	0.87
006025092-02	OBS	No	385.069636	346.239744	1499.6	7.812	16.2	8.1	0.95	5601	3.75	0.81
006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

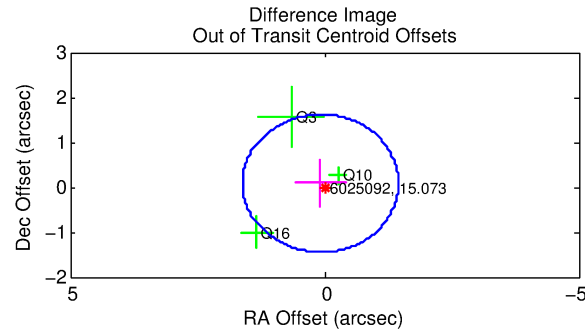
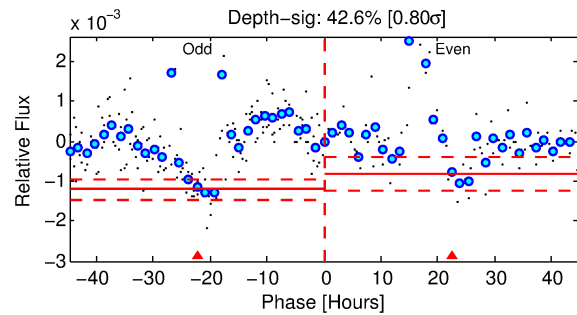
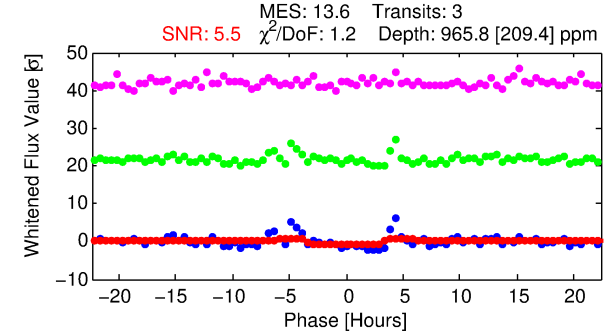
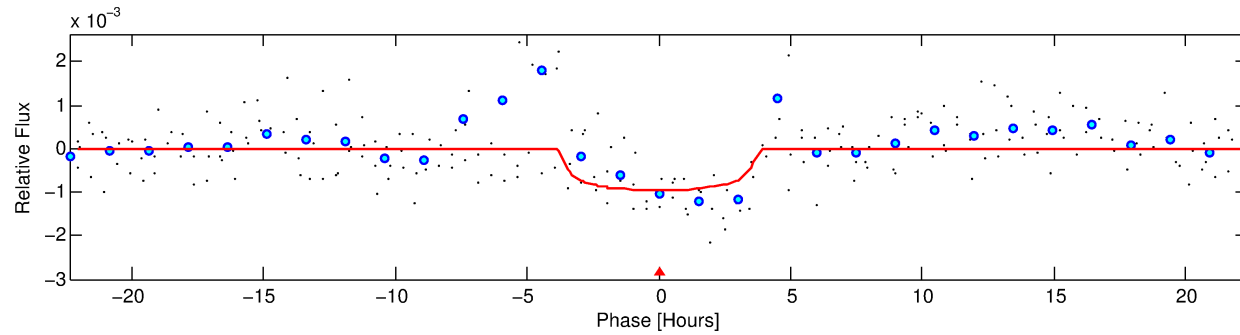
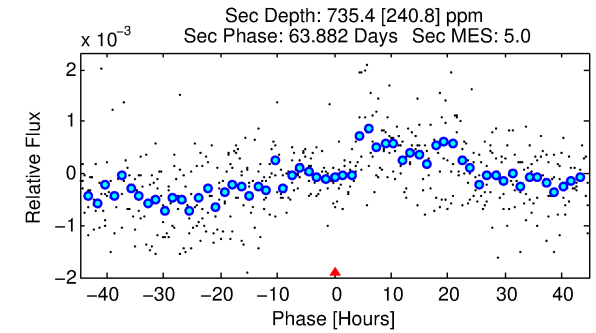
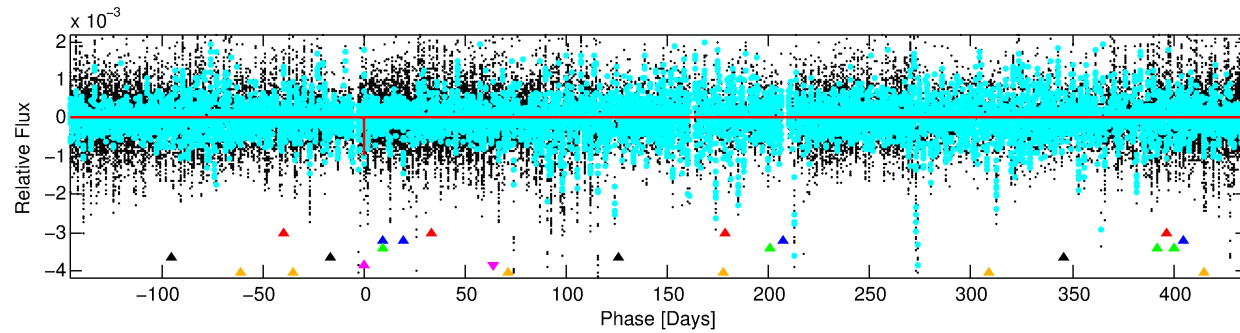
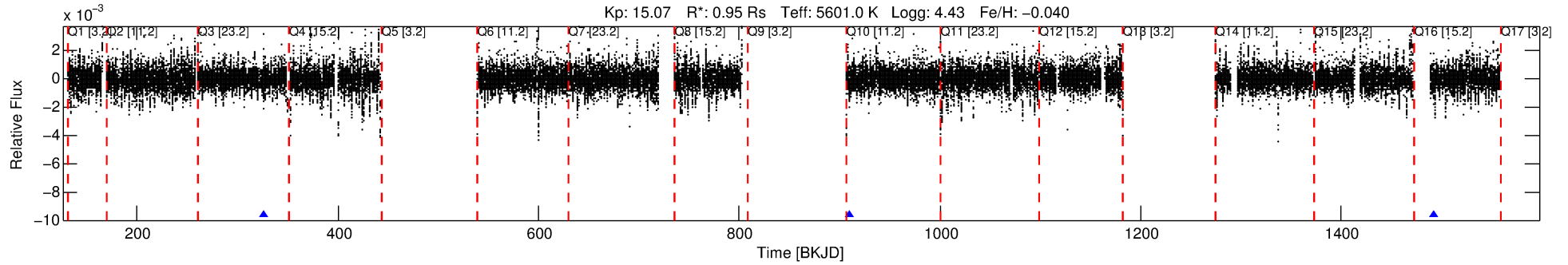
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-05

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 5 of 6 Period: 582.520 d



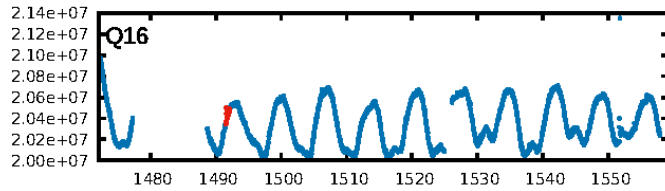
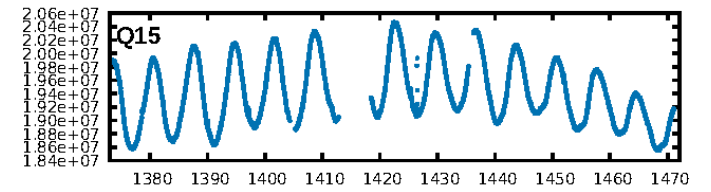
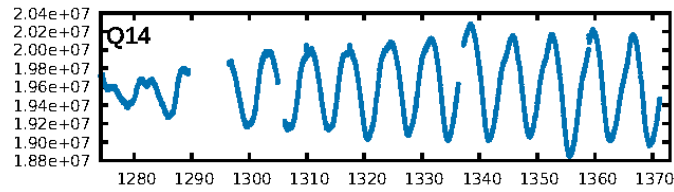
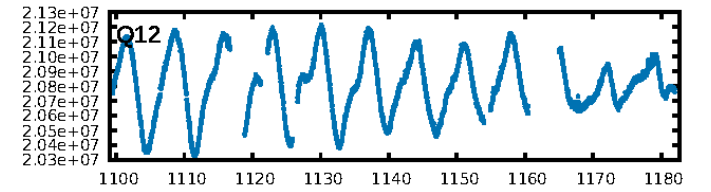
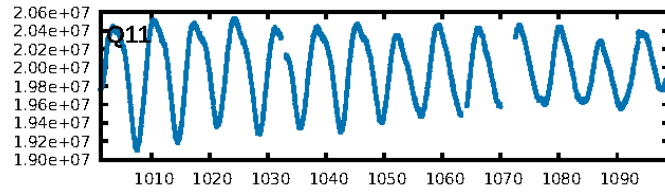
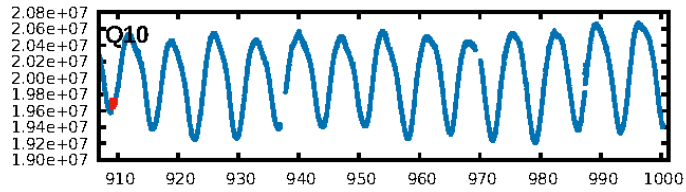
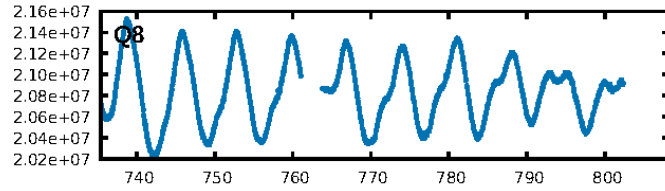
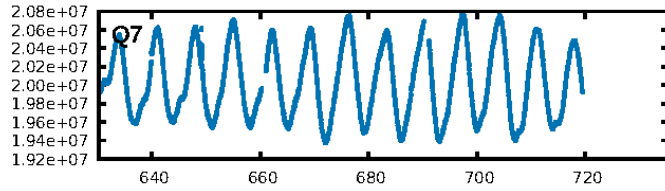
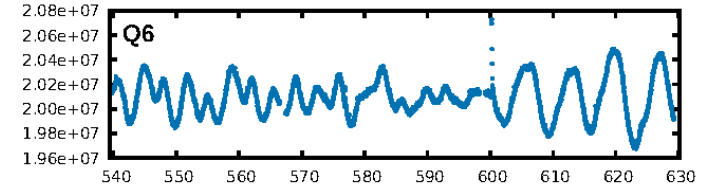
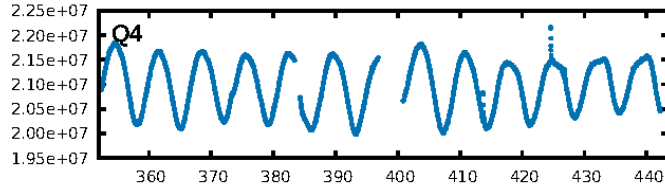
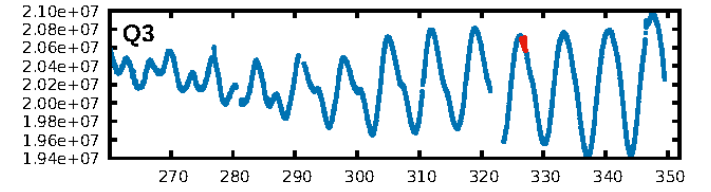
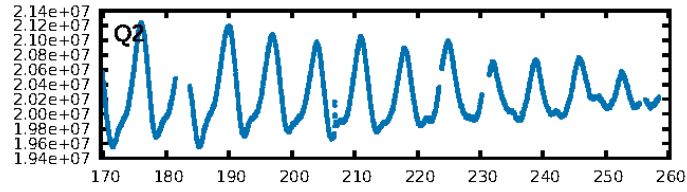
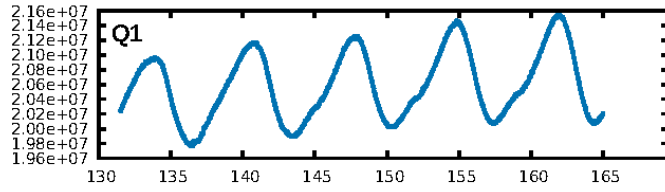
DV Fit Results:

Period = 582.51968 [0.00879] d
Epoch = 326.7735 [0.0110] BKJD
Rp/R* = 0.0287 [0.0384]
a/R* = 562.08 [3071.69]
b = 0.42 [10.92]
Seff = 0.46 [0.16]
Teq = 210 [18] K
Rp = 2.99 [4.07] Re
a = 1.3160 [0.2872] AU
Ag = 78542.55 [213072.77] [0.37 σ]
Teffp = 5445 [3671] K [1.43 σ]

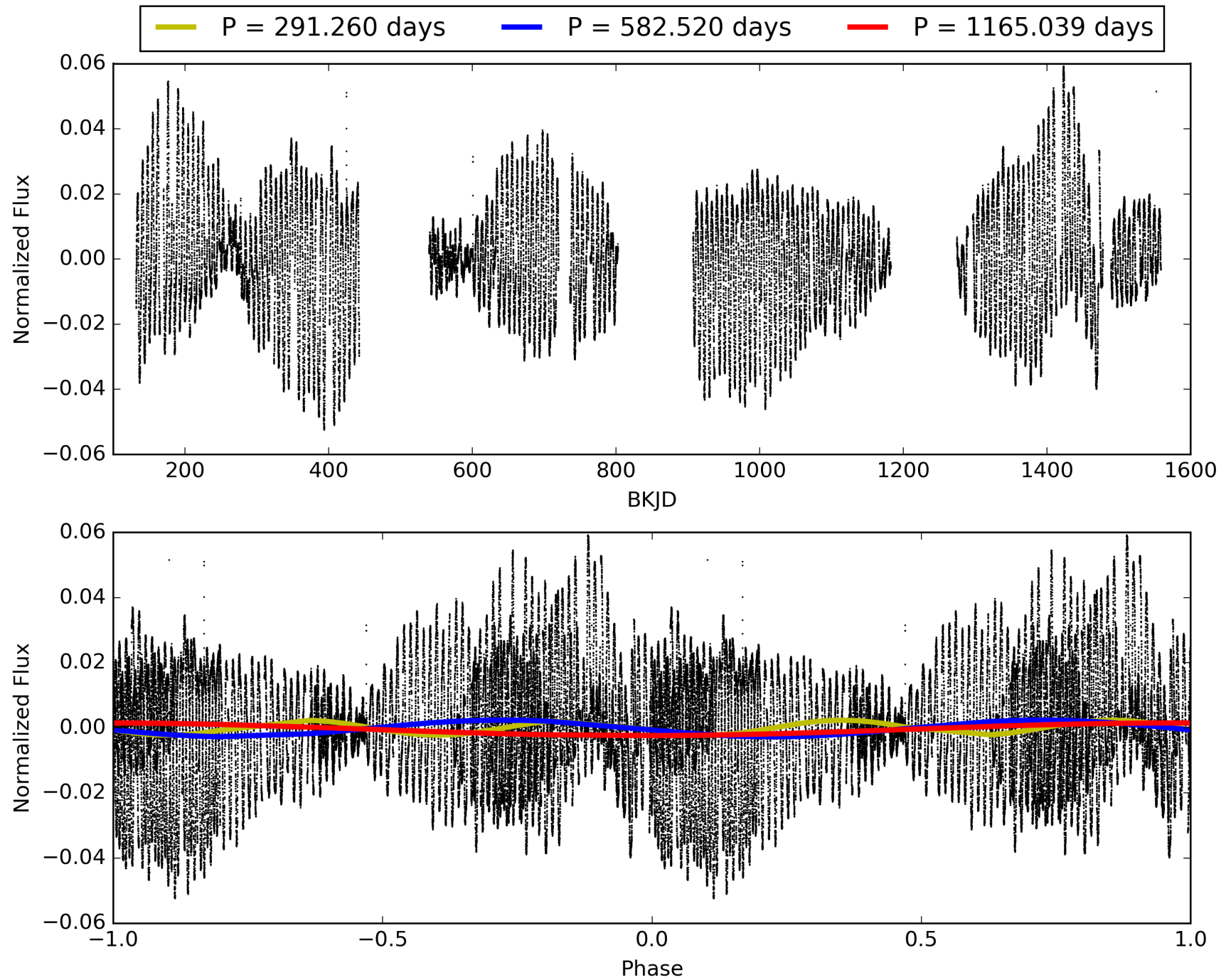
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [548.32 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.7%
ModelChiSquareGof-sig: 80.0%
Bootstrap-pfa: 1.12e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.254
Centroid-sig: 34.5%
Centroid-so: 1.026 arcsec [0.89 σ]
OotOffset-rm: 0.117 arcsec [0.23 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.270 arcsec [0.48 σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 006025092-05, PDC Light Curves

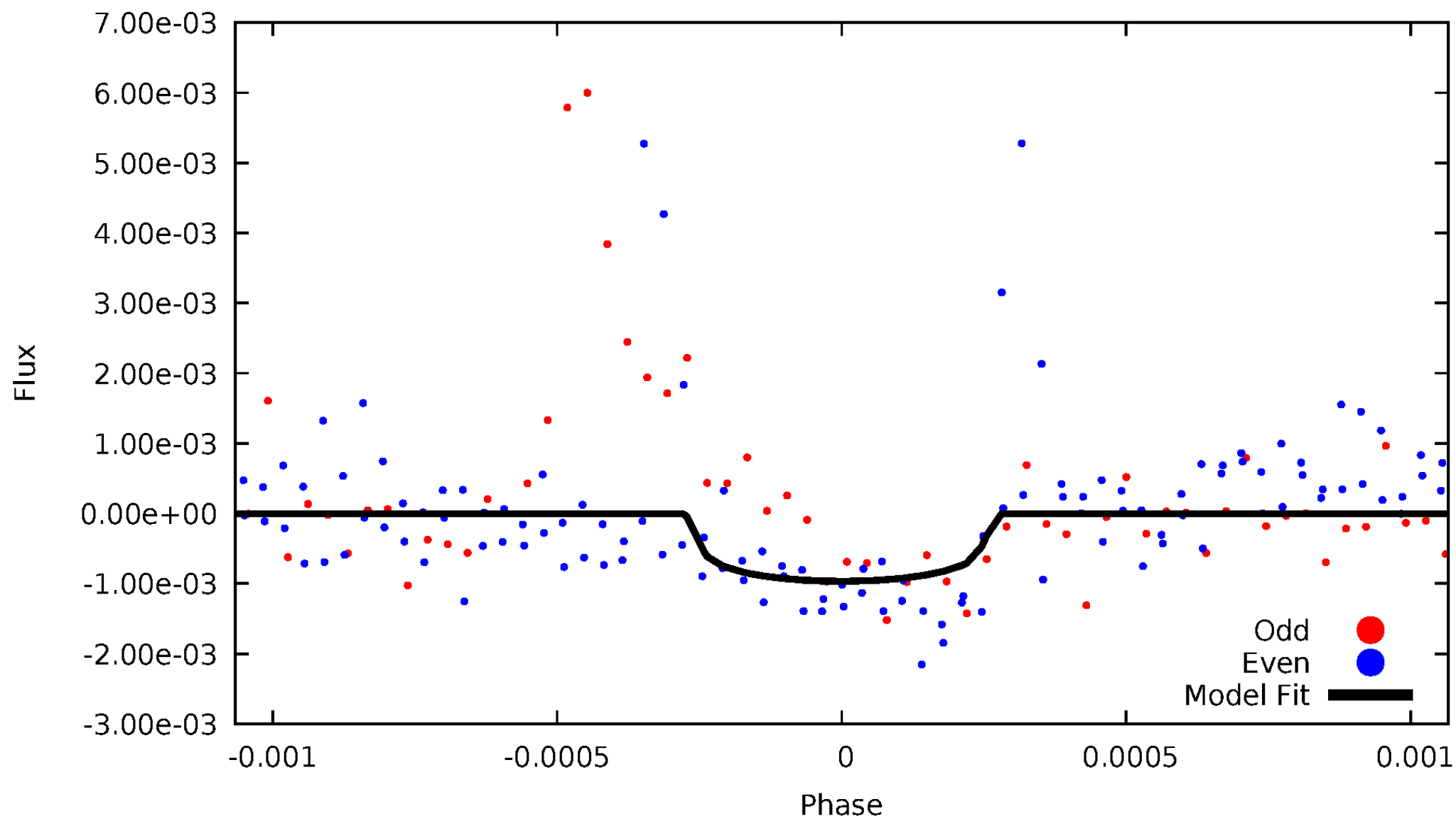


TCE 006025092-05



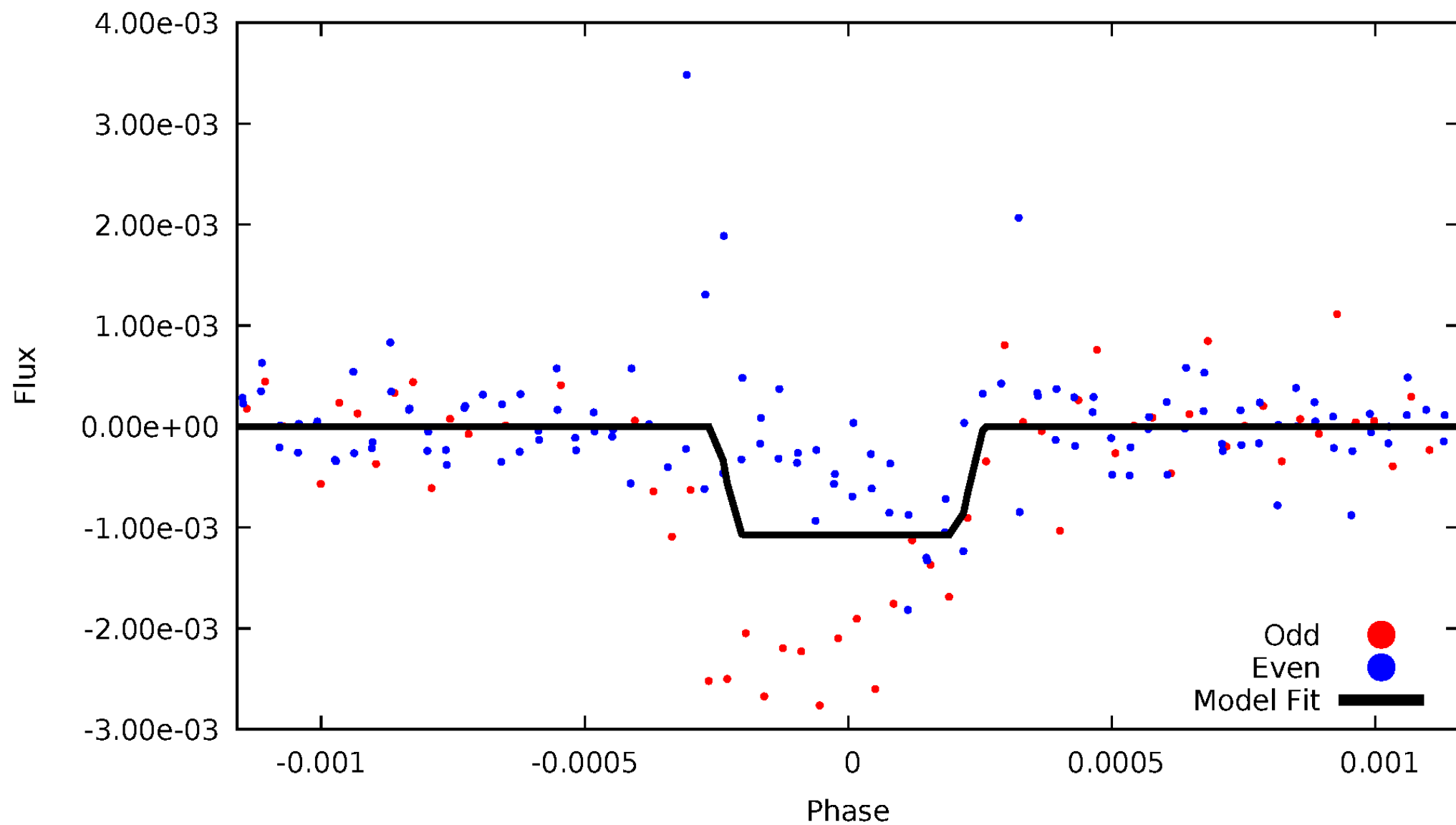
DV Odd/Even

TCE 006025092-05



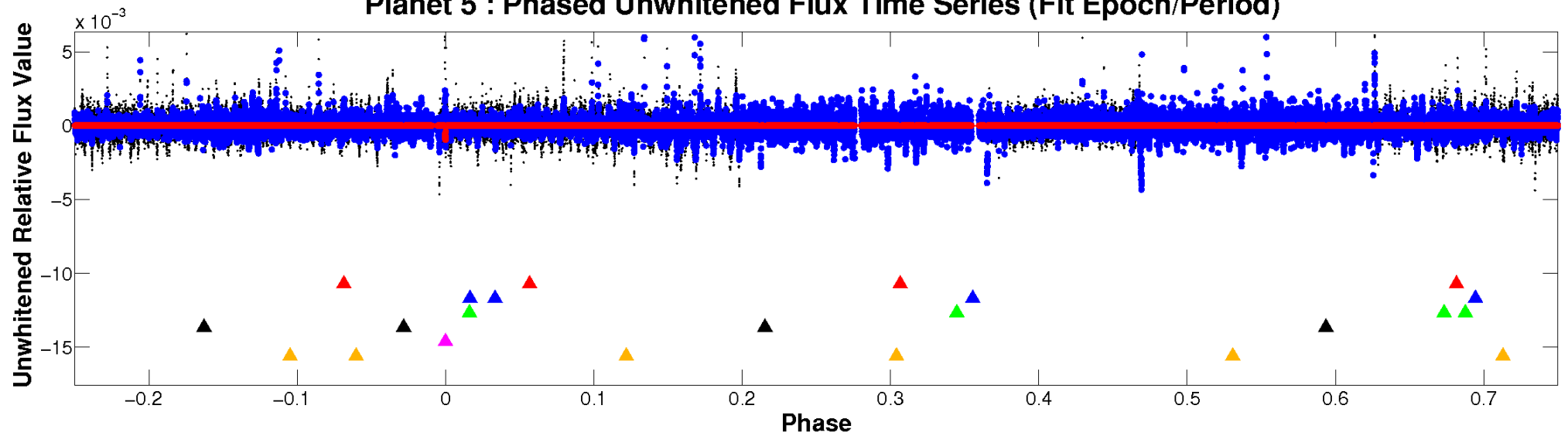
ALT Odd/Even

TCE 006025092-05

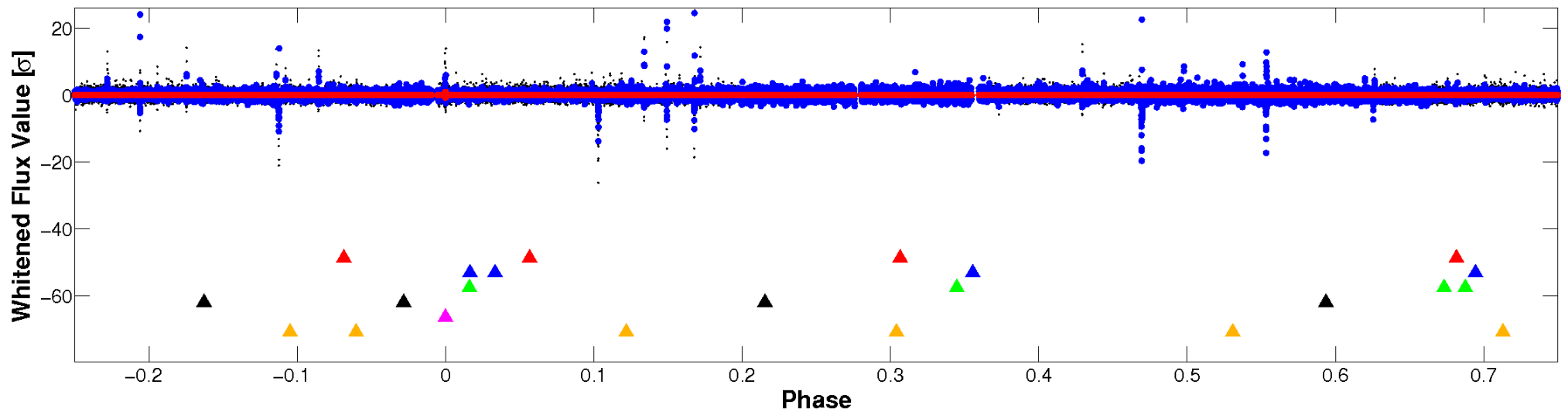


Non-Whitened Vs. Whitened Light Curve

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

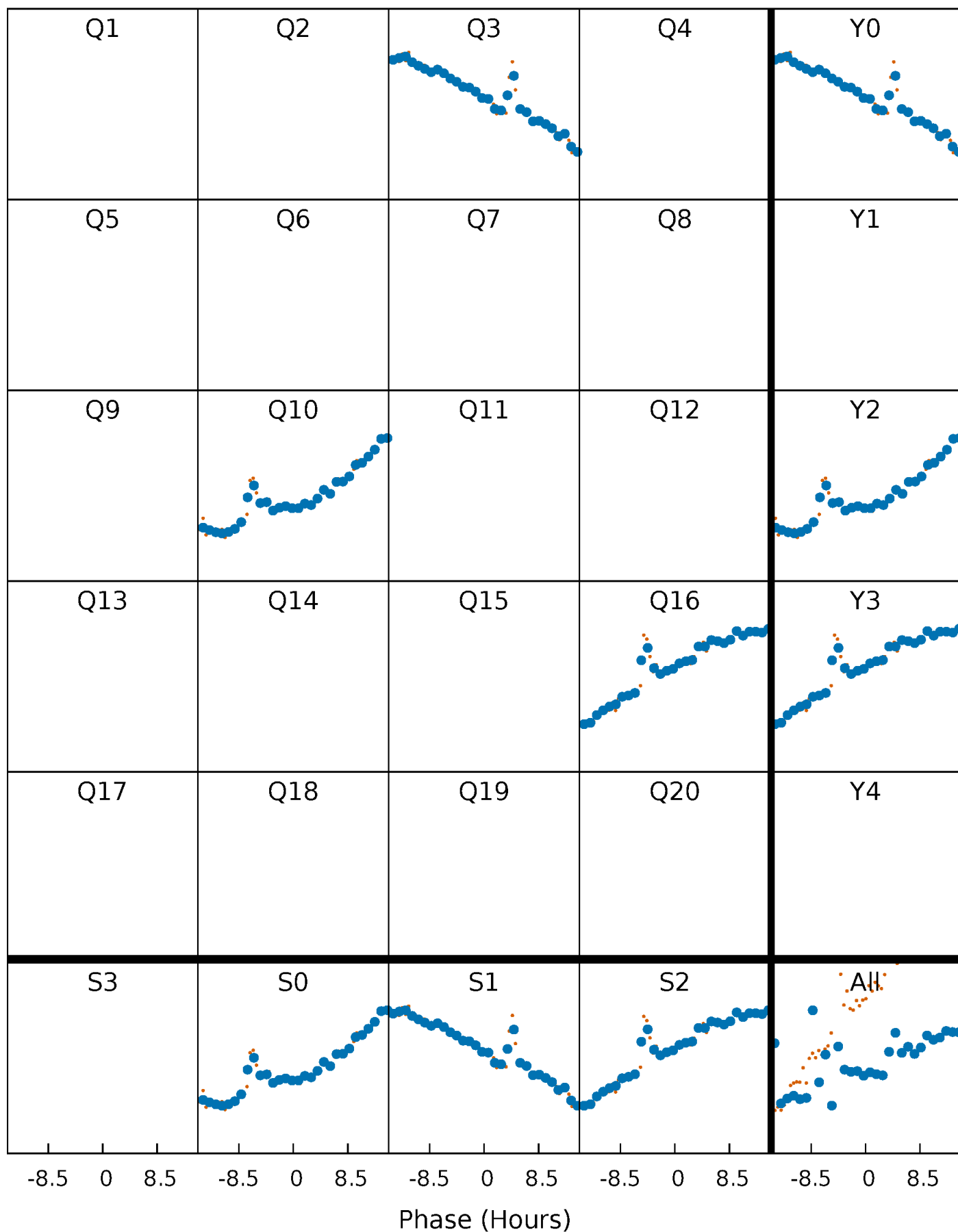


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



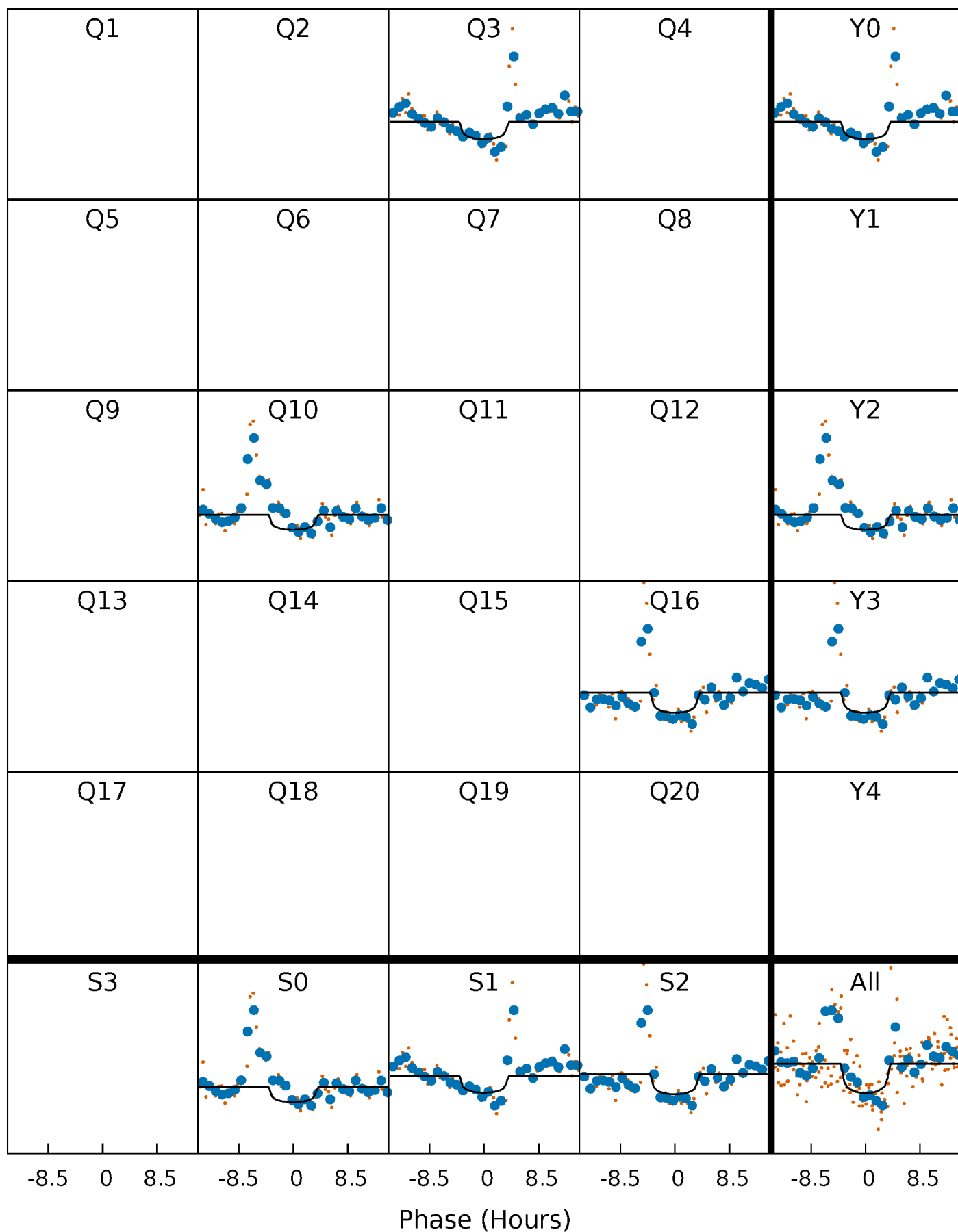
PDC Quarter-Phased Transit Curves

TCE 006025092-05 $P=582.519679$ Days $T_0=326.773518$ (BKJD)



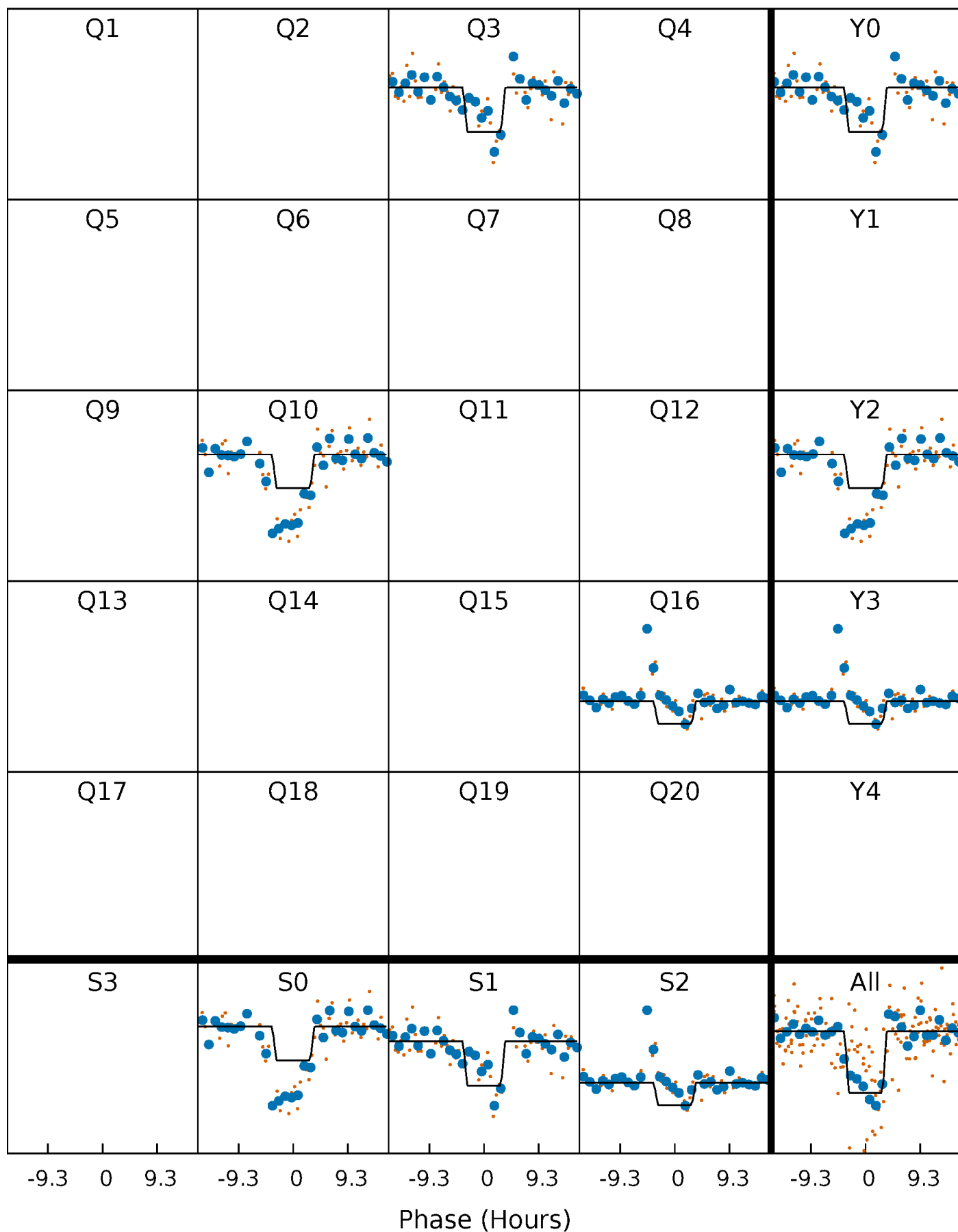
DV Quarter-Phased Transit Curves

TCE 006025092-05 $P=582.519679$ Days $T_0=326.773518$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

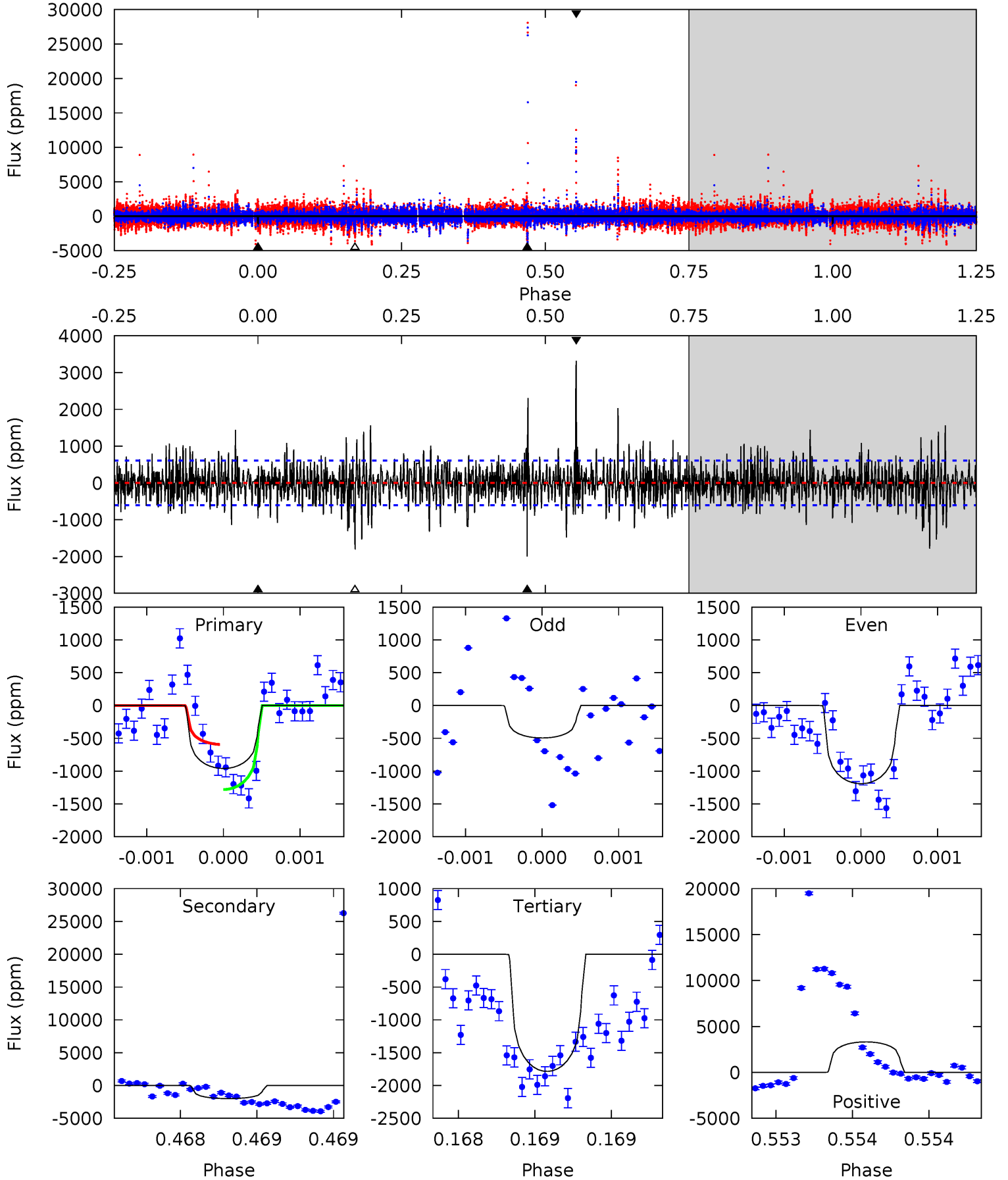
TCE 006025092-05 $P=582.519928$ Days $T_0=326.789813$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-05, P = 582.519679 Days, E = 326.773518 Days

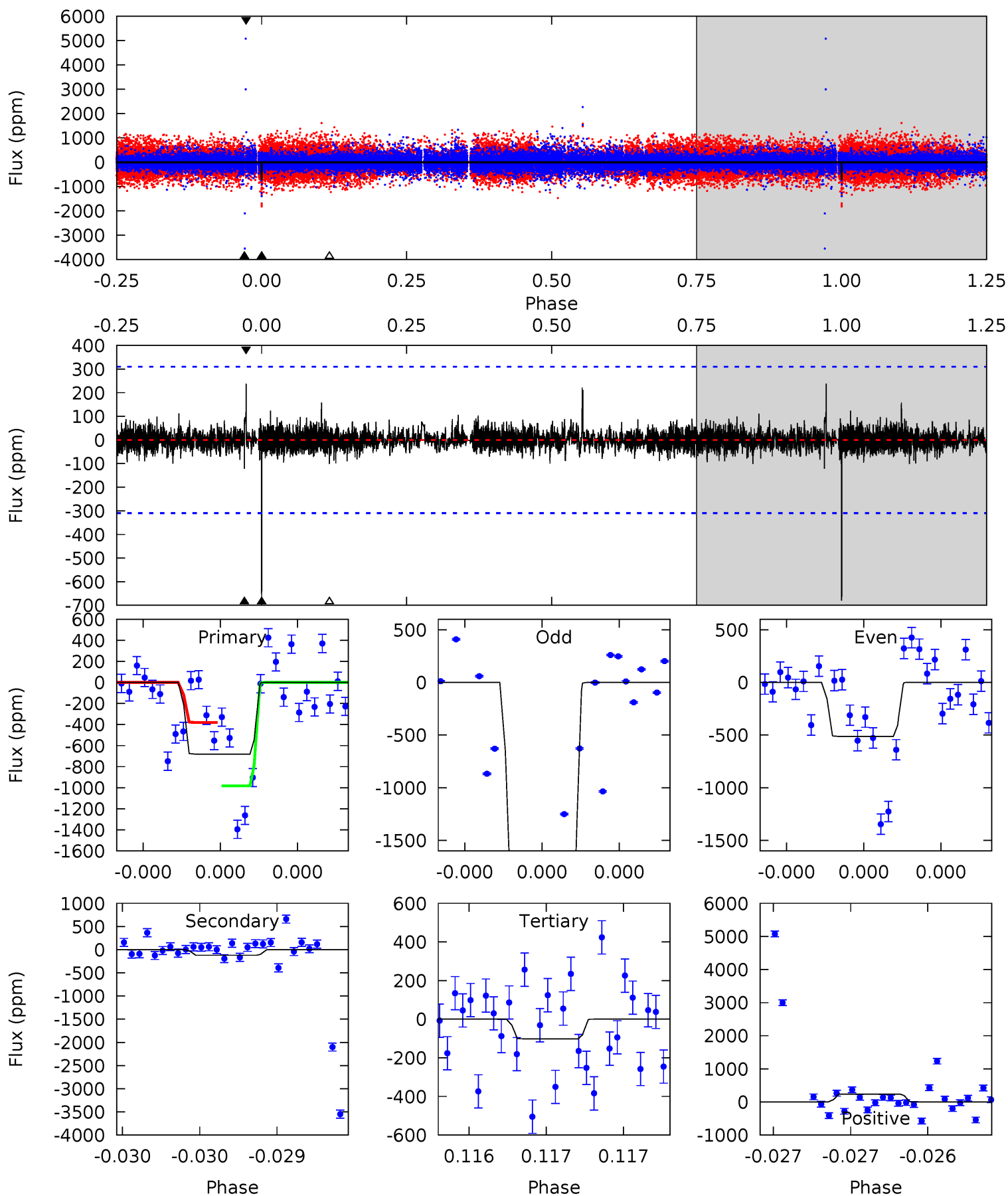
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.77	18.3	16.3	30.3	5.55	3.45	3.41	-7.53	-21.5	1.98	-12.0	2.86	0.82	0.62	3.14



Alt Model-Shift Uniqueness Test

006025092-05, P = 582.519928 Days, E = 326.789813 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	2.18	1.83	4.28	5.57	3.48	0.47	10.4	7.95	0.36	-2.10	15.4	1.34	0.26	5.45



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2002 ± 110	$4.43^{+3.47}_{-2.92}$	297^{+20}_{-15}	5791^{+5904}_{-1264}	$94916^{+770078}_{-64596}$
Alt.	-121 ± 56	$4.42^{+3.52}_{-2.84}$	297^{+19}_{-16}	3374^{+1607}_{-596}	5515^{+39875}_{-4052}

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 $A_{obs} \gg 1.0$

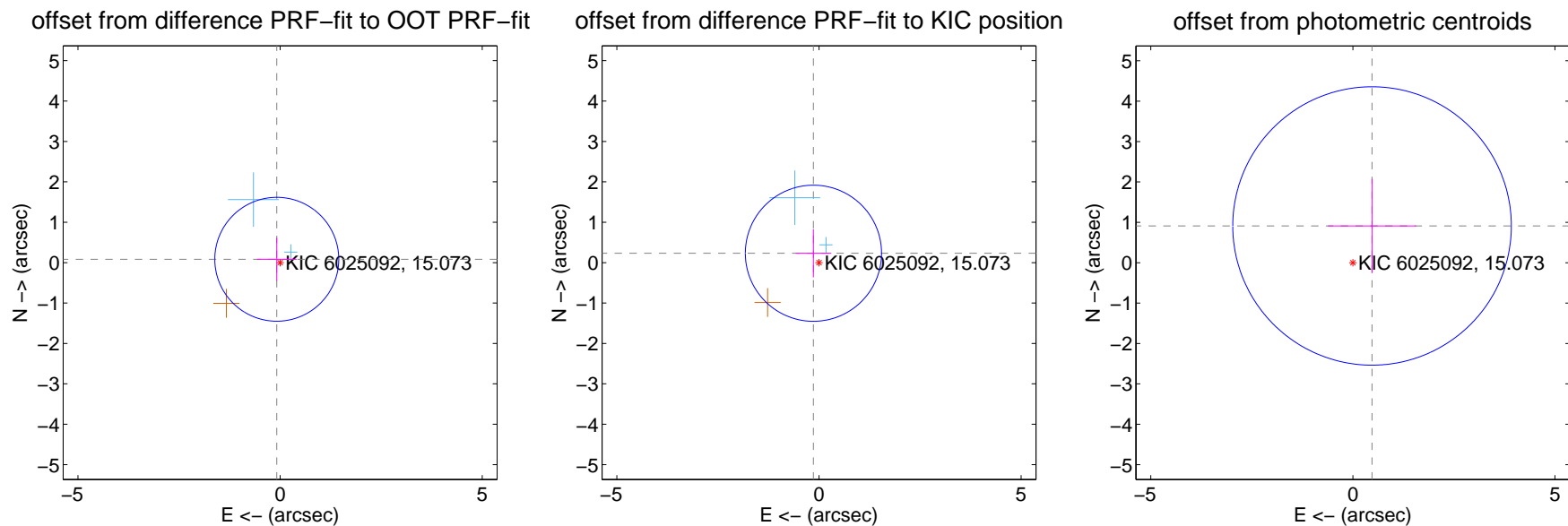
DV Centroid Data

Supplemental centroid analysis for 006025092-05. Kepler magnitude: 15.07. Transit SNR 5.51

There are 2 quarters with good PRF difference image offsets

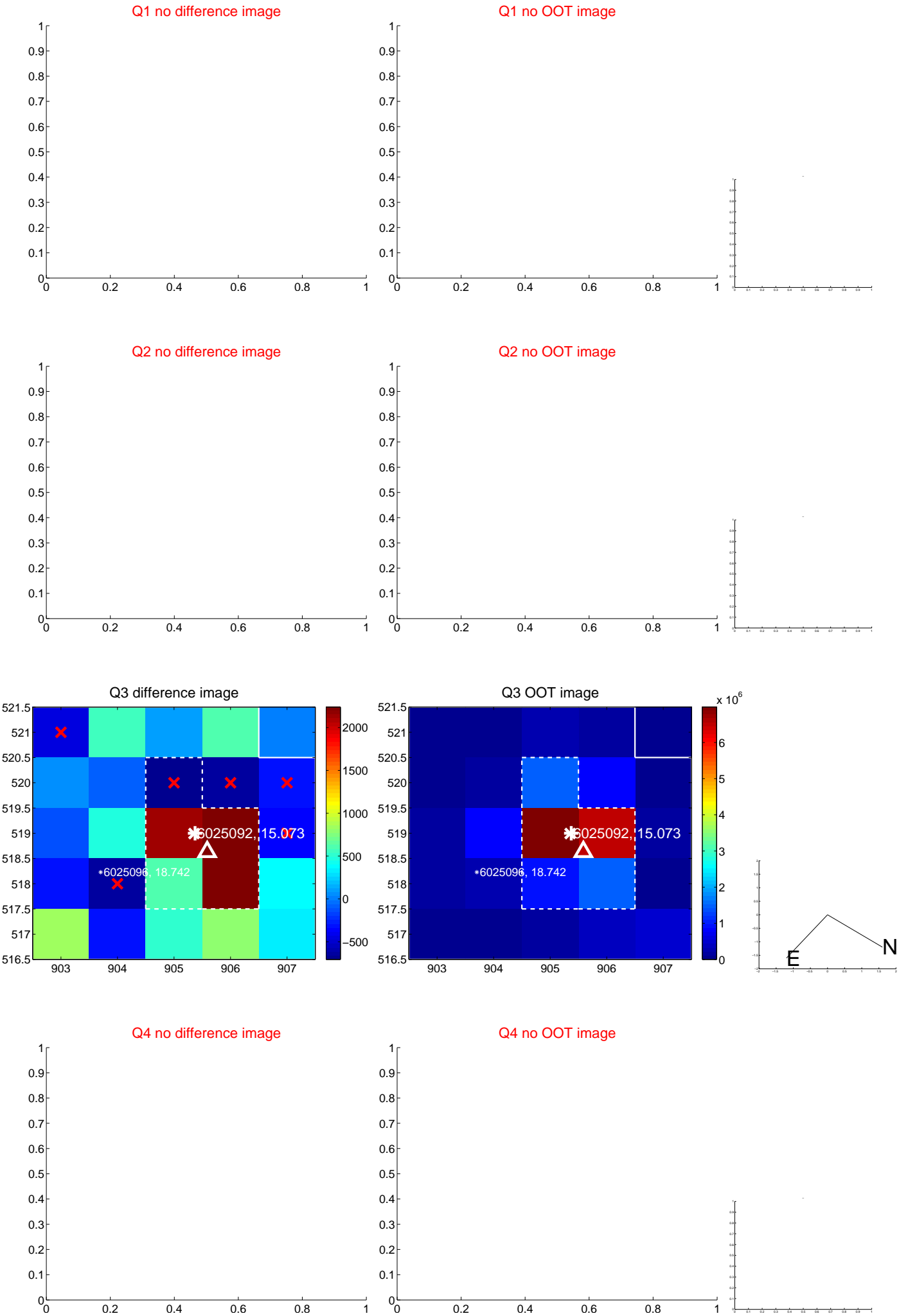
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.117 ± 0.511	0.23	0.082 ± 0.489	0.084 ± 0.532
PRF-fit source offset from KIC position	0.270 ± 0.562	0.48	0.137 ± 0.441	0.233 ± 0.598
photometric centroid source offset	1.03 ± 1.15	0.89	-0.47 ± 1.09	0.91 ± 1.16



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 ×: 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.

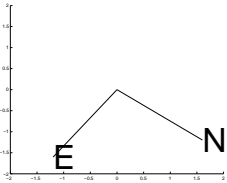
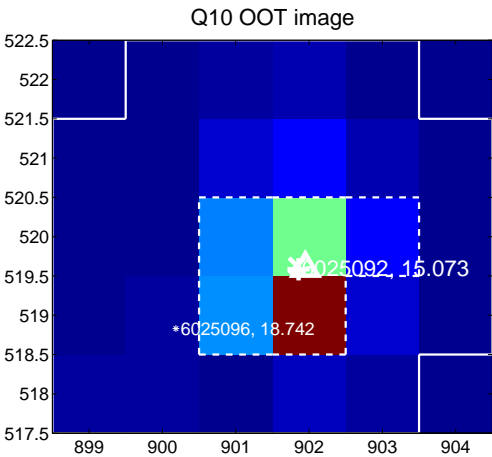
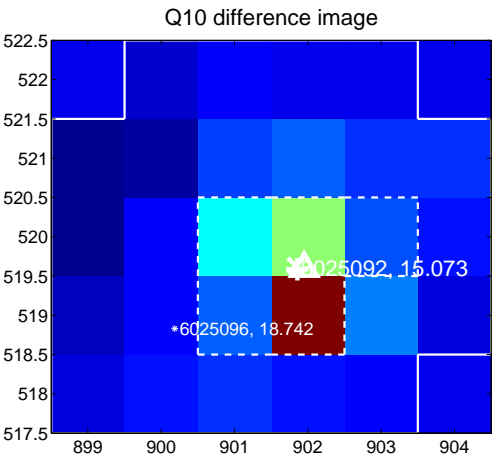


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

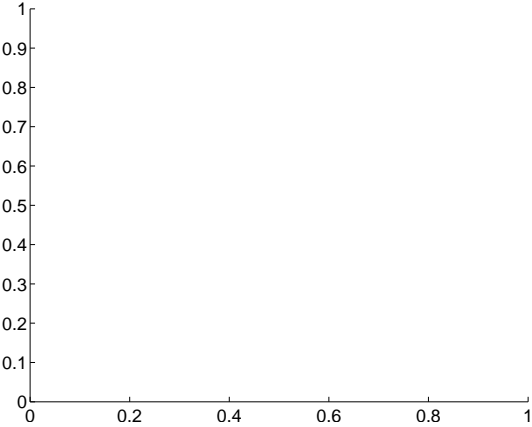
Q9 no difference image



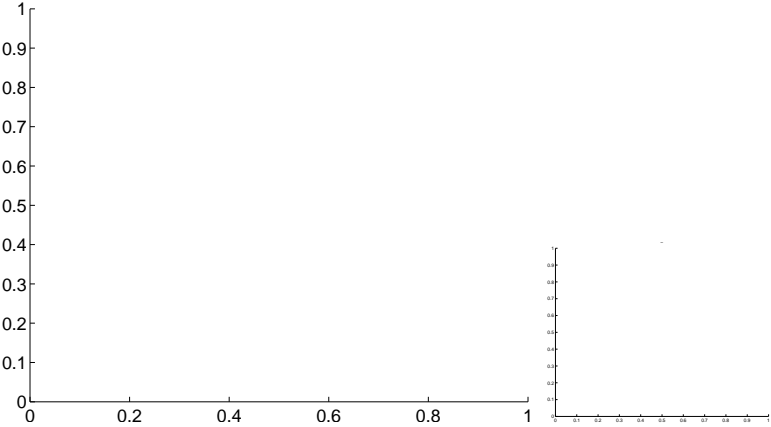
Q9 no OOT image



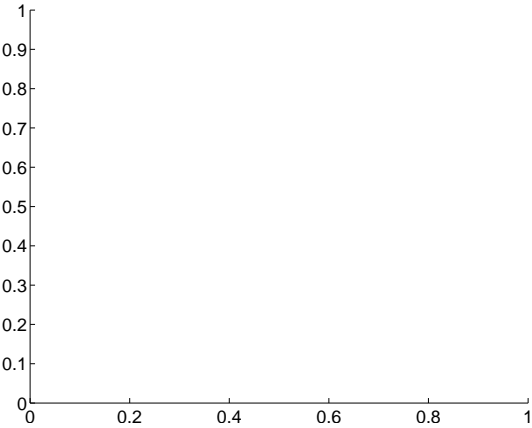
Q11 no difference image



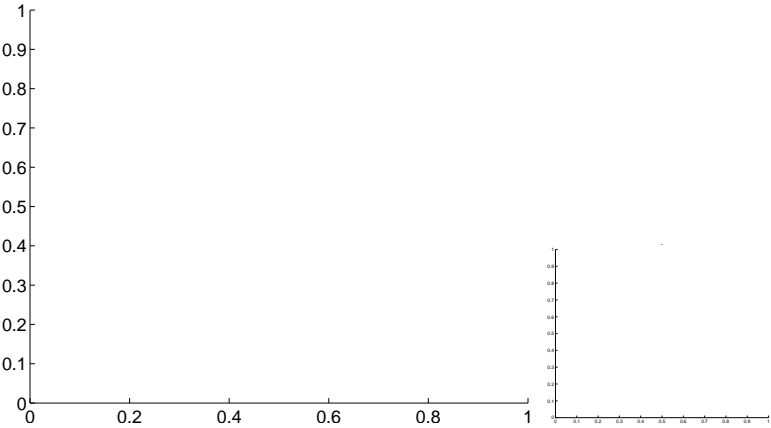
Q11 no OOT image



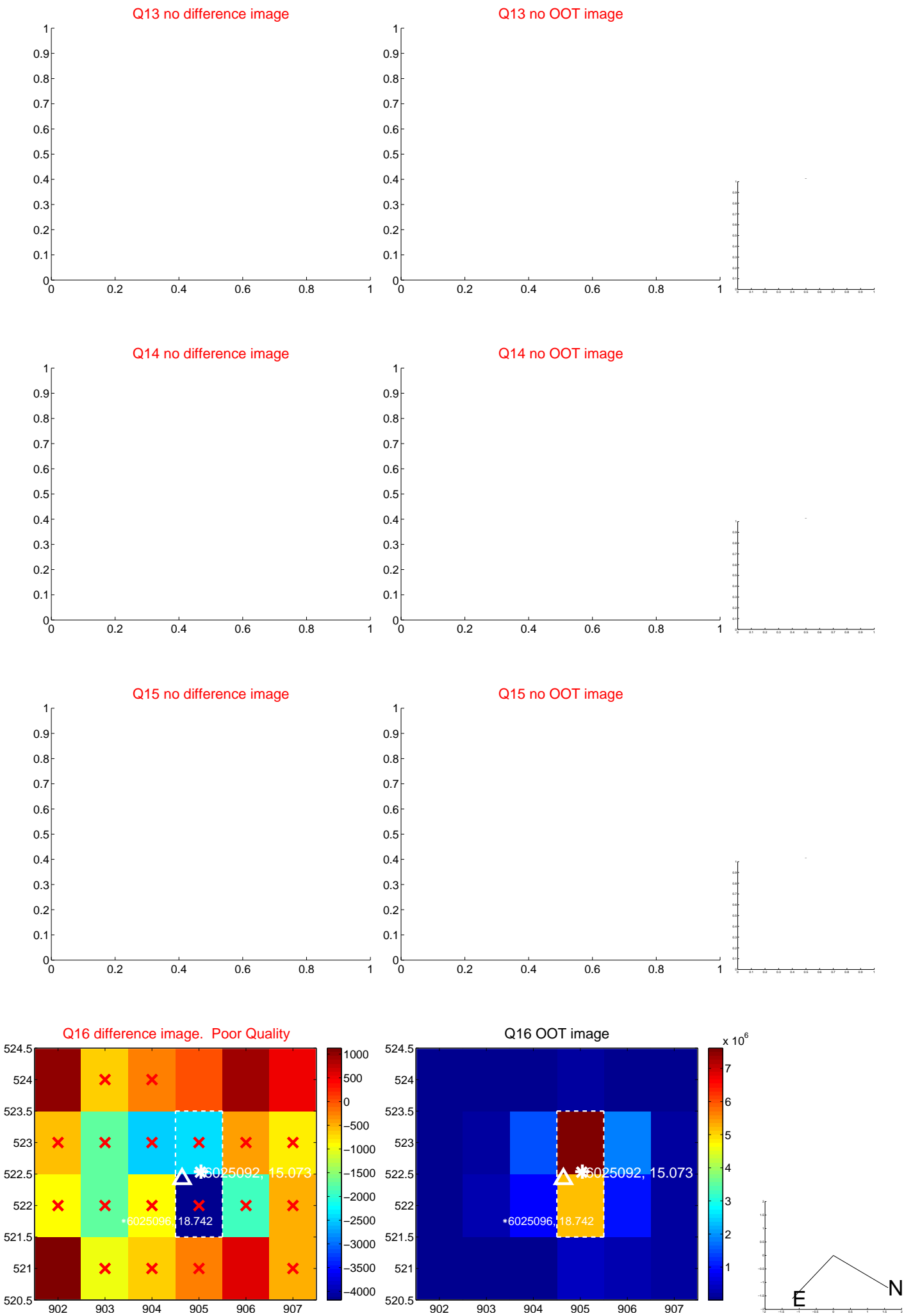
Q12 no difference image



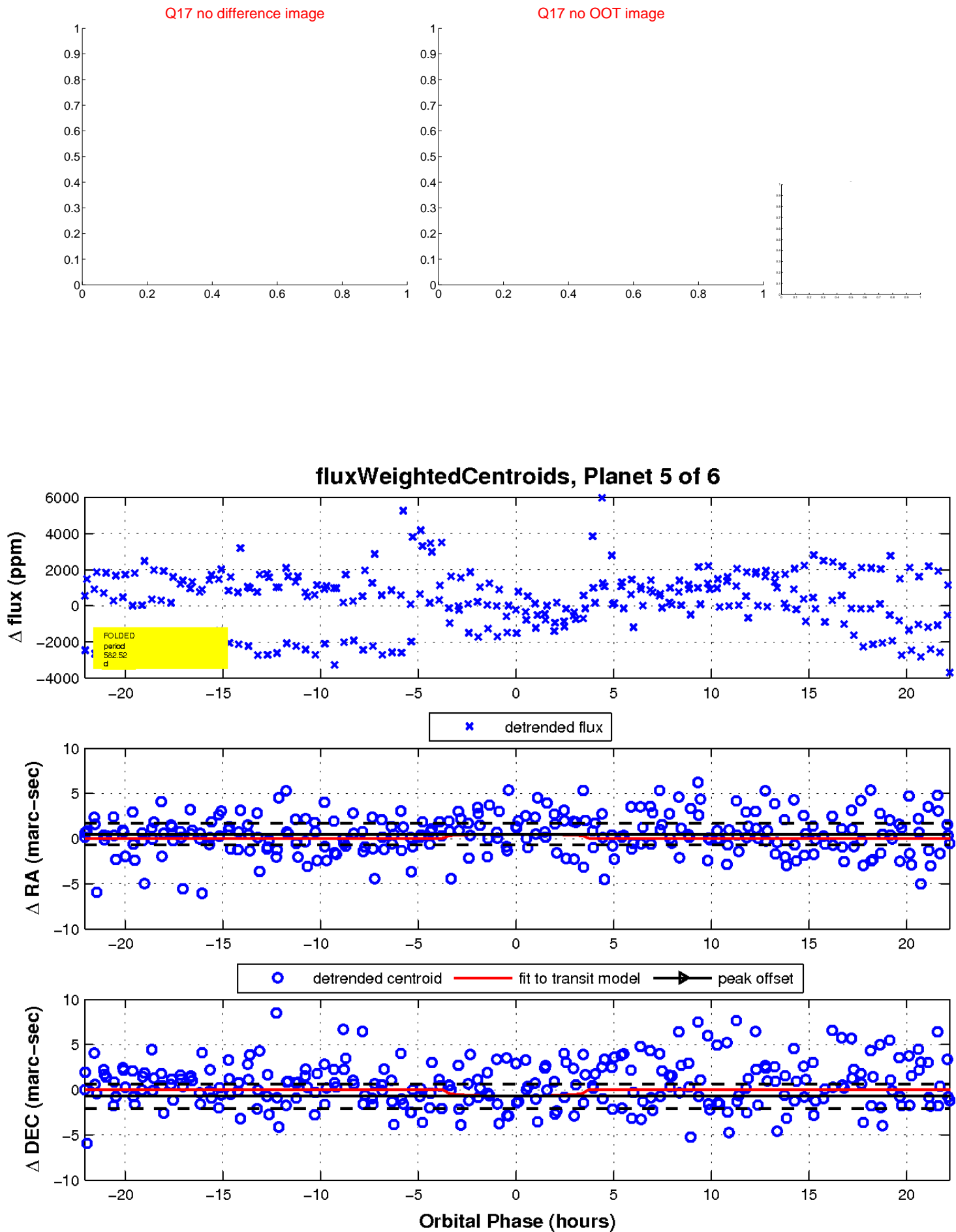
Q12 no OOT image



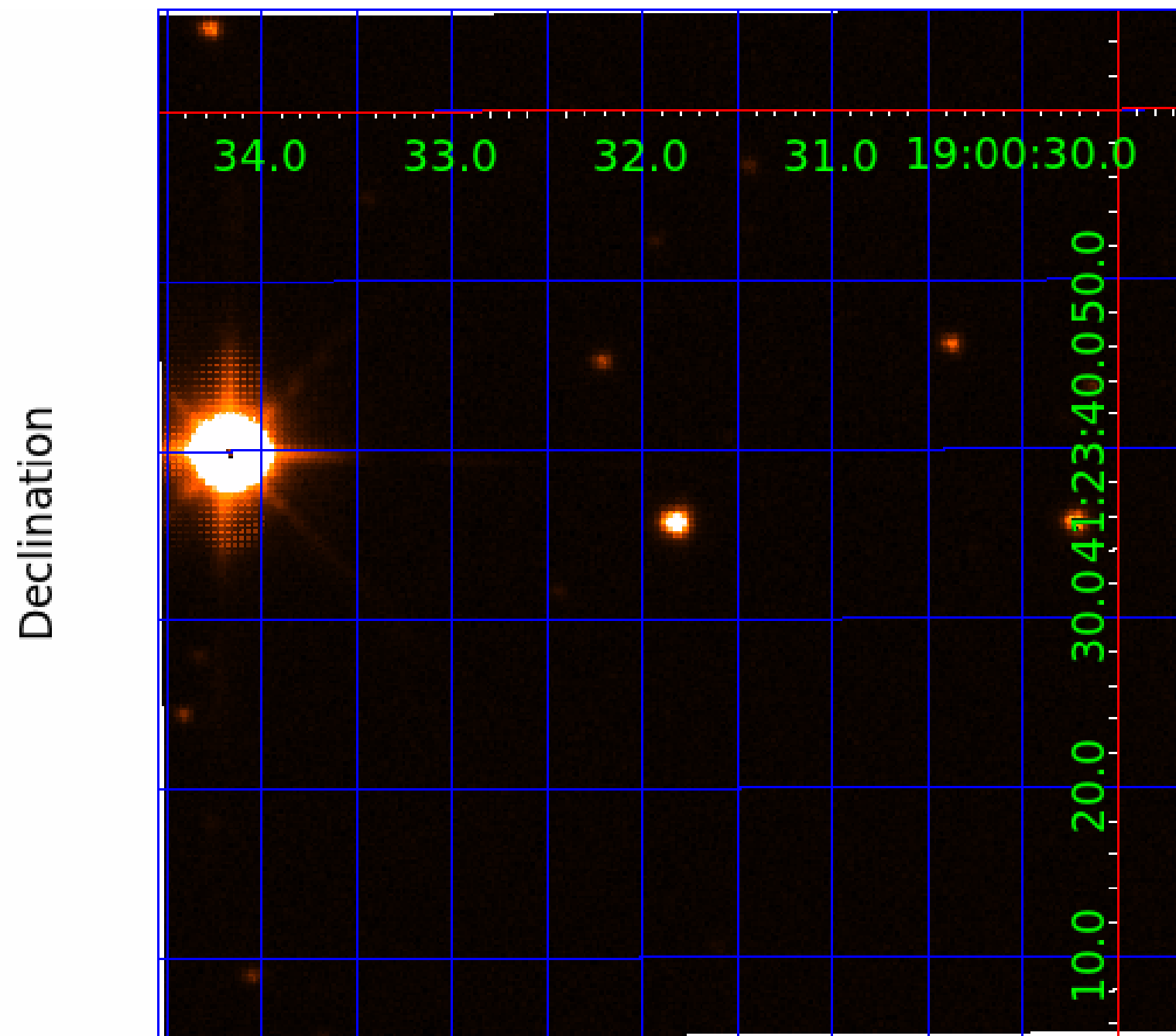
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image



KIC 006025092

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})
006025092-01	OBS	No	364.031007	359.809719	1711.0	6.167	9.2	7.6	0.95	5601	7.63	0.87
006025092-02	OBS	No	385.069636	346.239744	1499.6	7.812	16.2	8.1	0.95	5601	3.75	0.81
006025092-03	OBS	No	391.122403	136.465295	1315.2	3.836	10.7	7.8	0.95	5601	3.82	0.79
006025092-04	OBS	No	362.208166	310.356744	935.6	6.290	15.0	5.5	0.95	5601	2.97	0.87
006025092-05	OBS	No	582.519679	326.773517	965.8	7.448	13.6	5.5	0.95	5601	2.99	0.46
006025092-06	OBS	No	238.196898	265.714456	993.3	4.828	7.6	7.4	0.95	5601	3.16	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006025092-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006025092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006025092-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006025092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

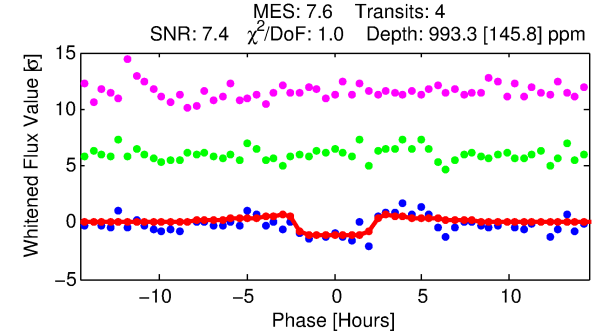
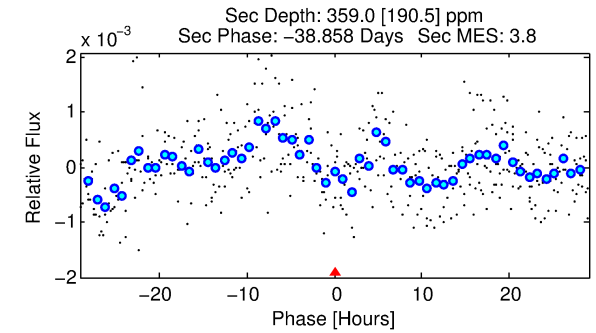
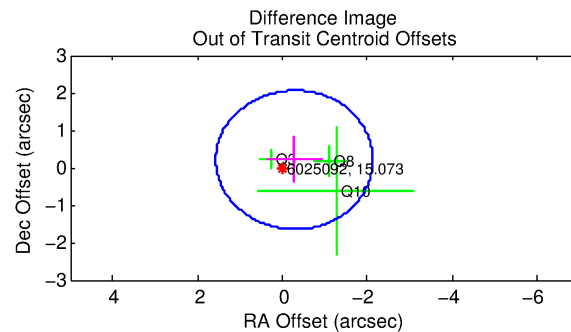
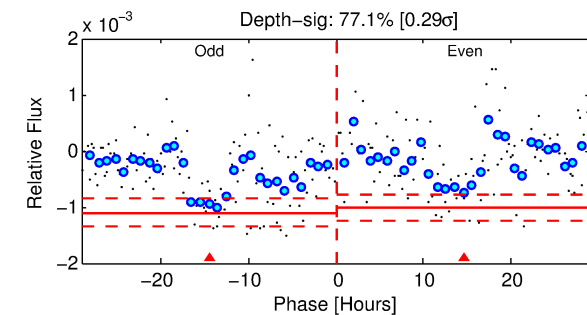
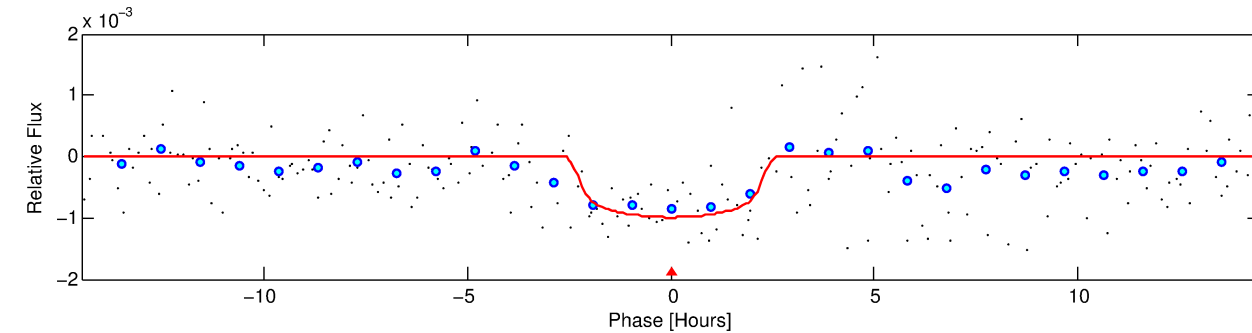
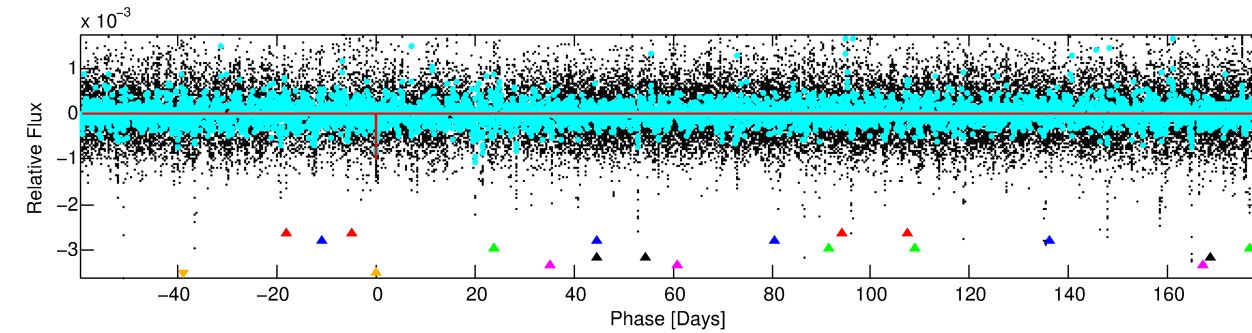
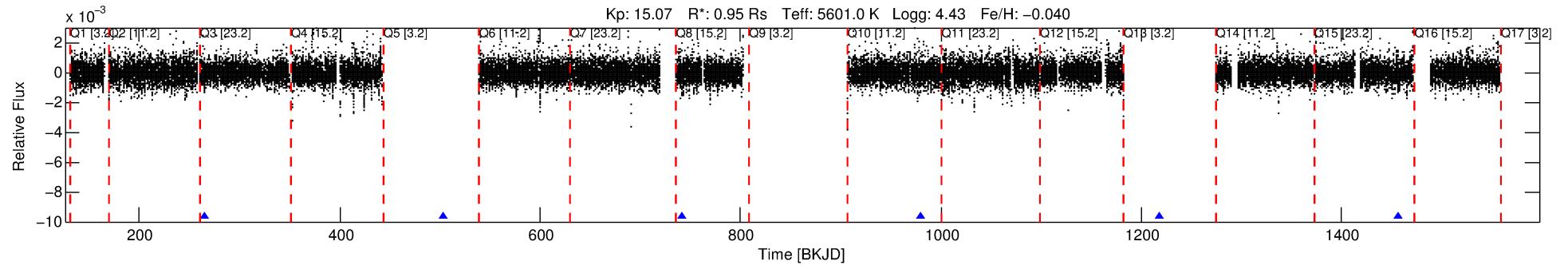
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025092-06

No Significant Match Found

DV One-Page Summary

KIC: 6025092 Candidate: 6 of 6 Period: 238.197 d



DV Fit Results:

Period = 238.19690 [0.00274] d
Epoch = 265.7145 [0.0088] BKJD
Rp/R* = 0.0303 [0.0327]
a/R* = 303.10 [1347.04]
b = 0.64 [4.10]
Seff = 1.53 [0.52]
Teq = 283 [24] K
Rp = 3.16 [3.50] Re
a = 0.7250 [0.1582] AU
Ag = 10412.91 [23376.23] [0.45 σ]
Teffp = 4427 [2463] K [1.68 σ]

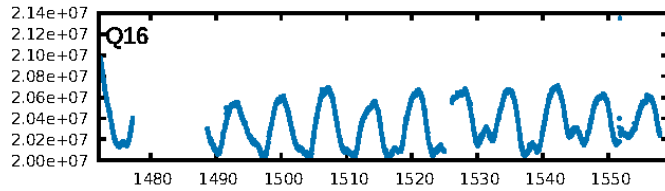
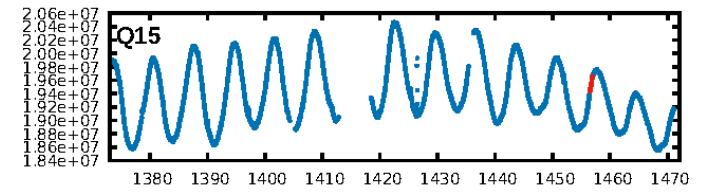
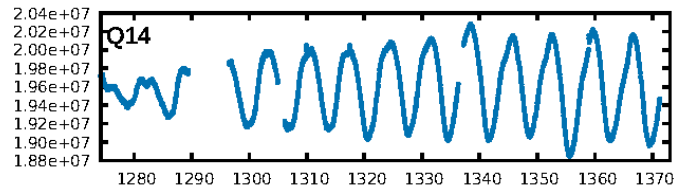
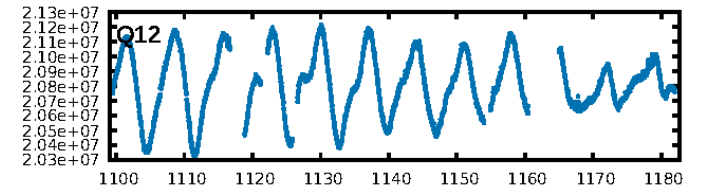
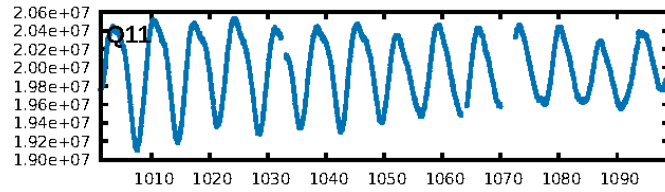
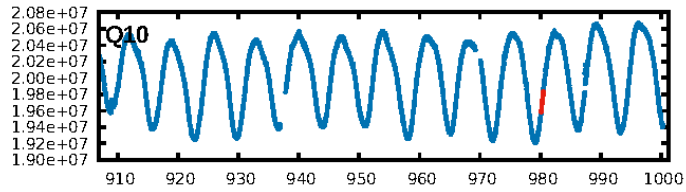
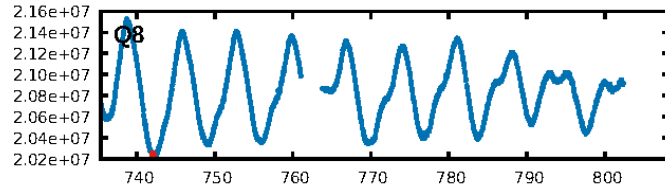
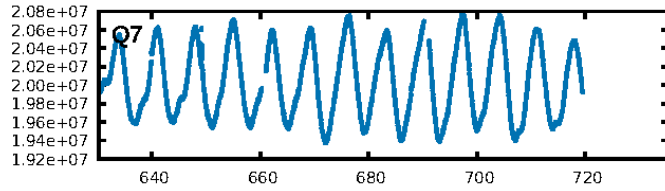
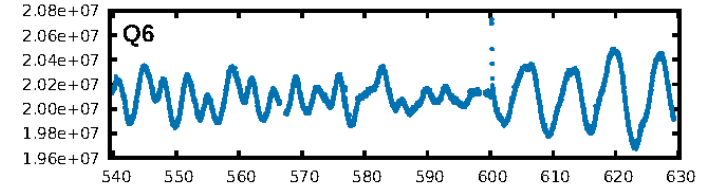
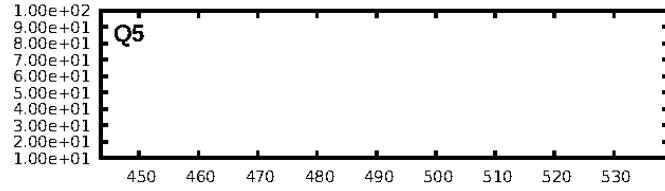
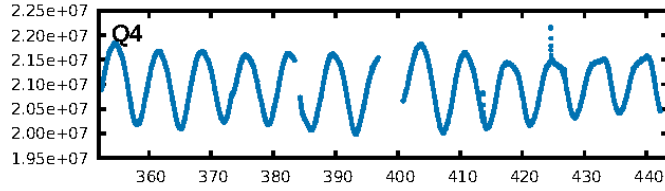
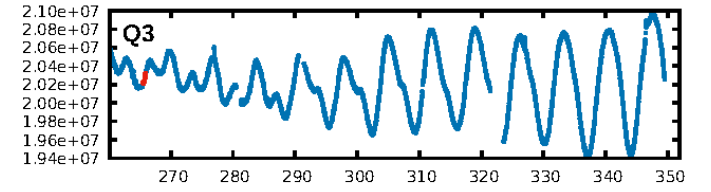
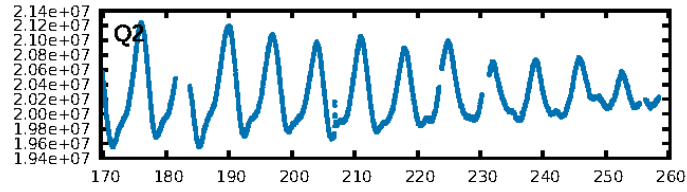
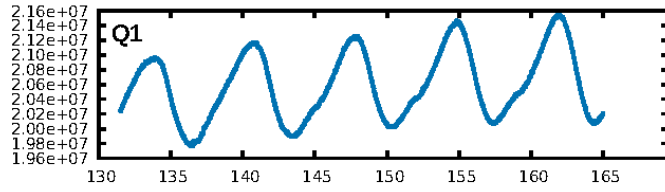
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [375.34 σ]
ModelChiSquare2-sig: 17.3%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.98e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.7091
Centroid-sig: 53.8%
Centroid-so: 0.485 arcsec [0.37 σ]
OotOffset-rm: 0.352 arcsec [0.57 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.384 arcsec [0.62 σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [4/4]

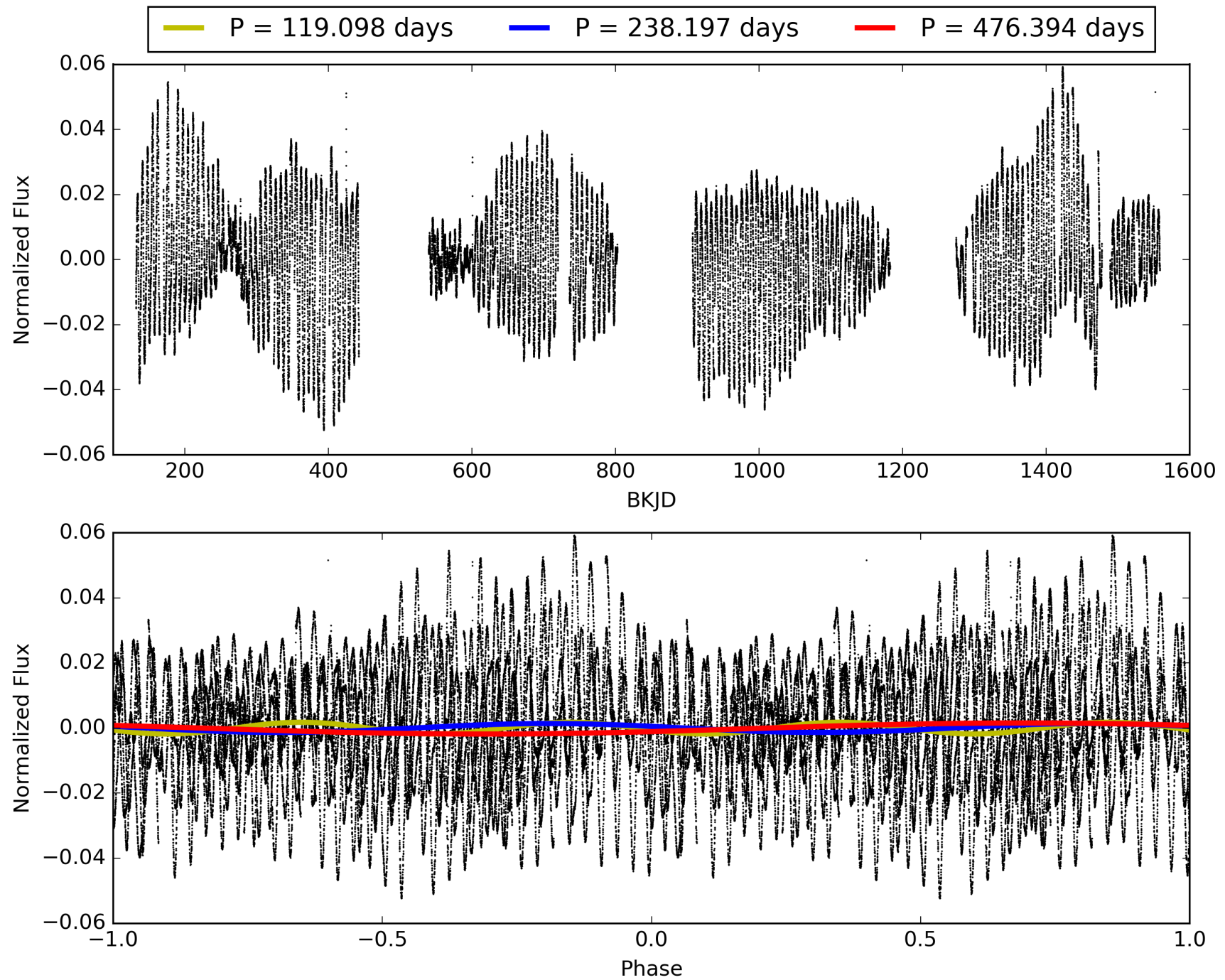
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:06:58 Z

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

TCE 006025092-06, PDC Light Curves

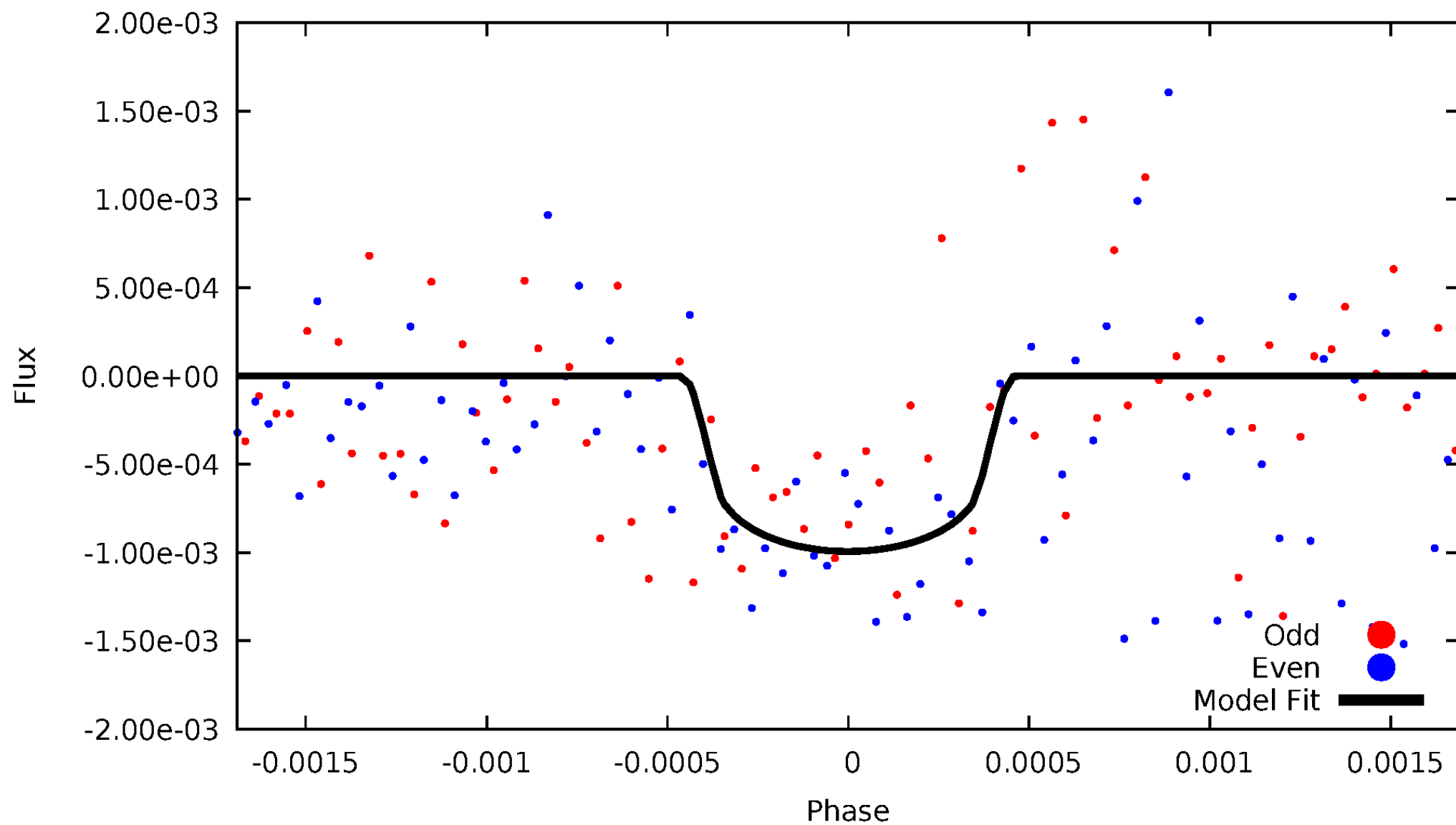


TCE 006025092-06



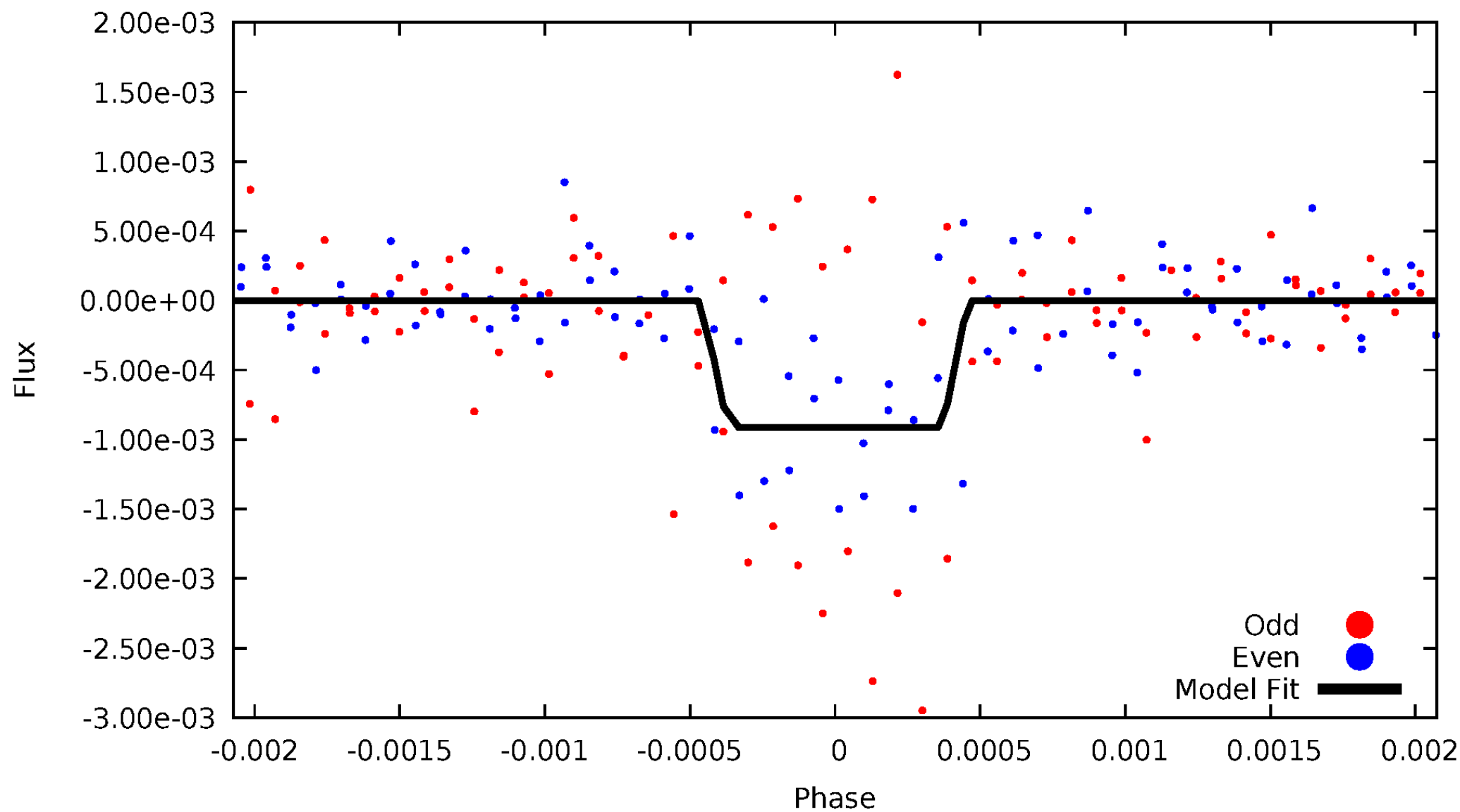
DV Odd/Even

TCE 006025092-06



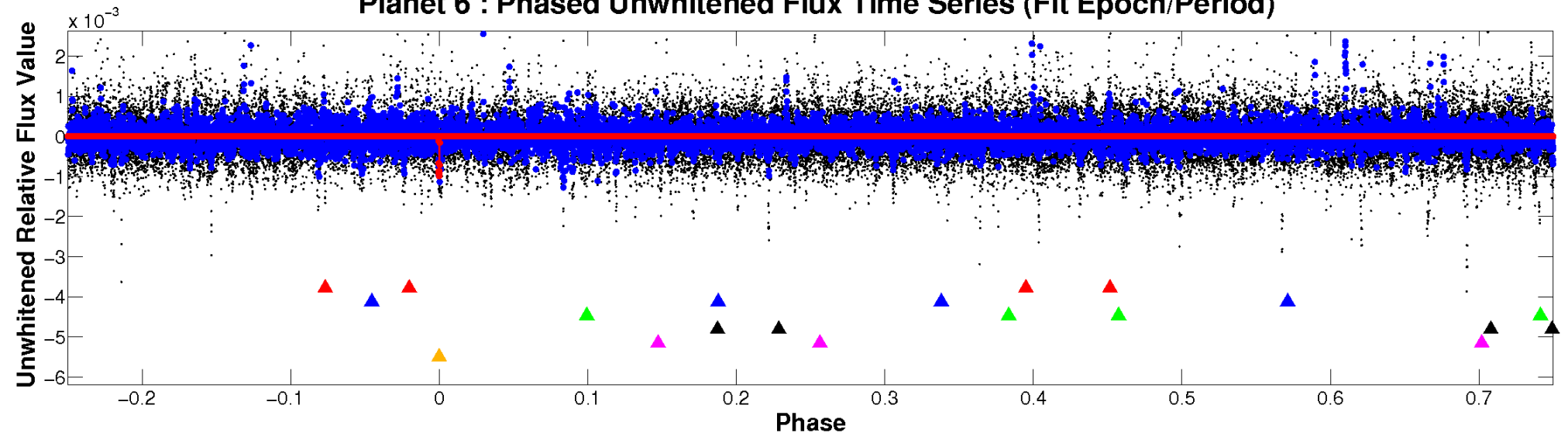
ALT Odd/Even

TCE 006025092-06

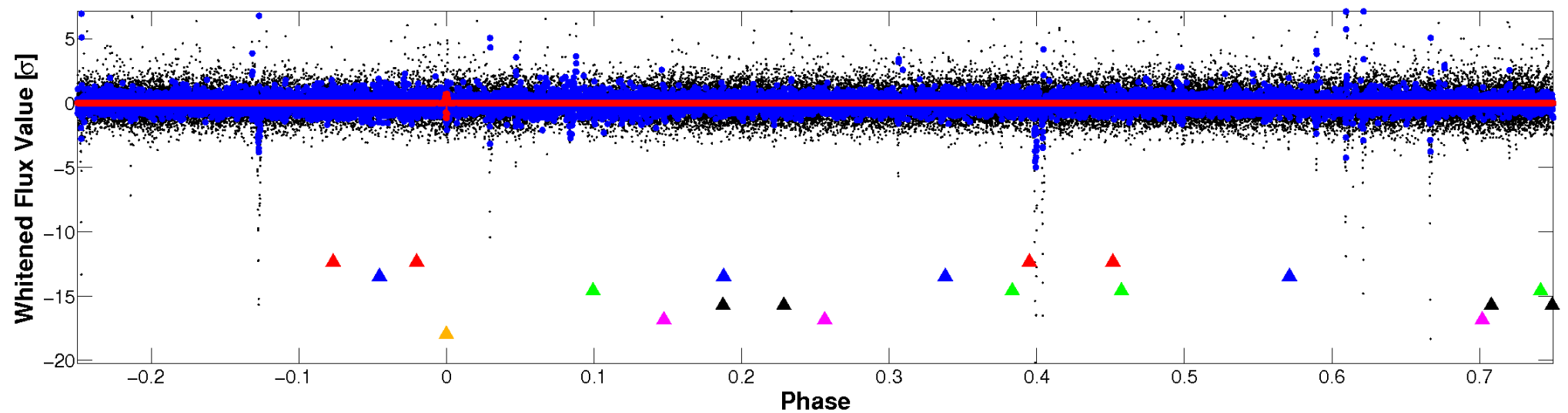


Non-Whitened Vs. Whitened Light Curve

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

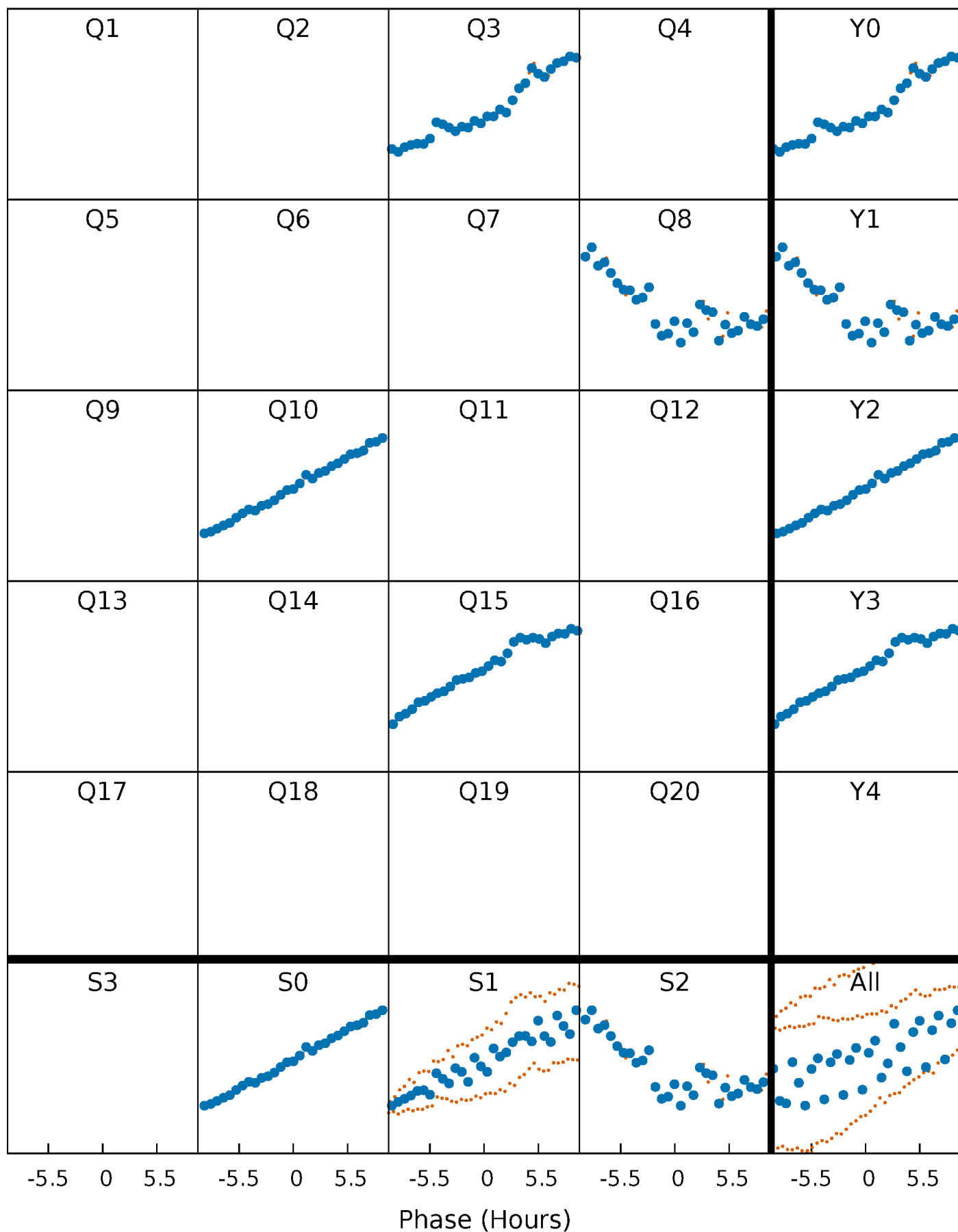


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 006025092-06 P=238.196898 Days $T_0=265.714456$ (BKJD)



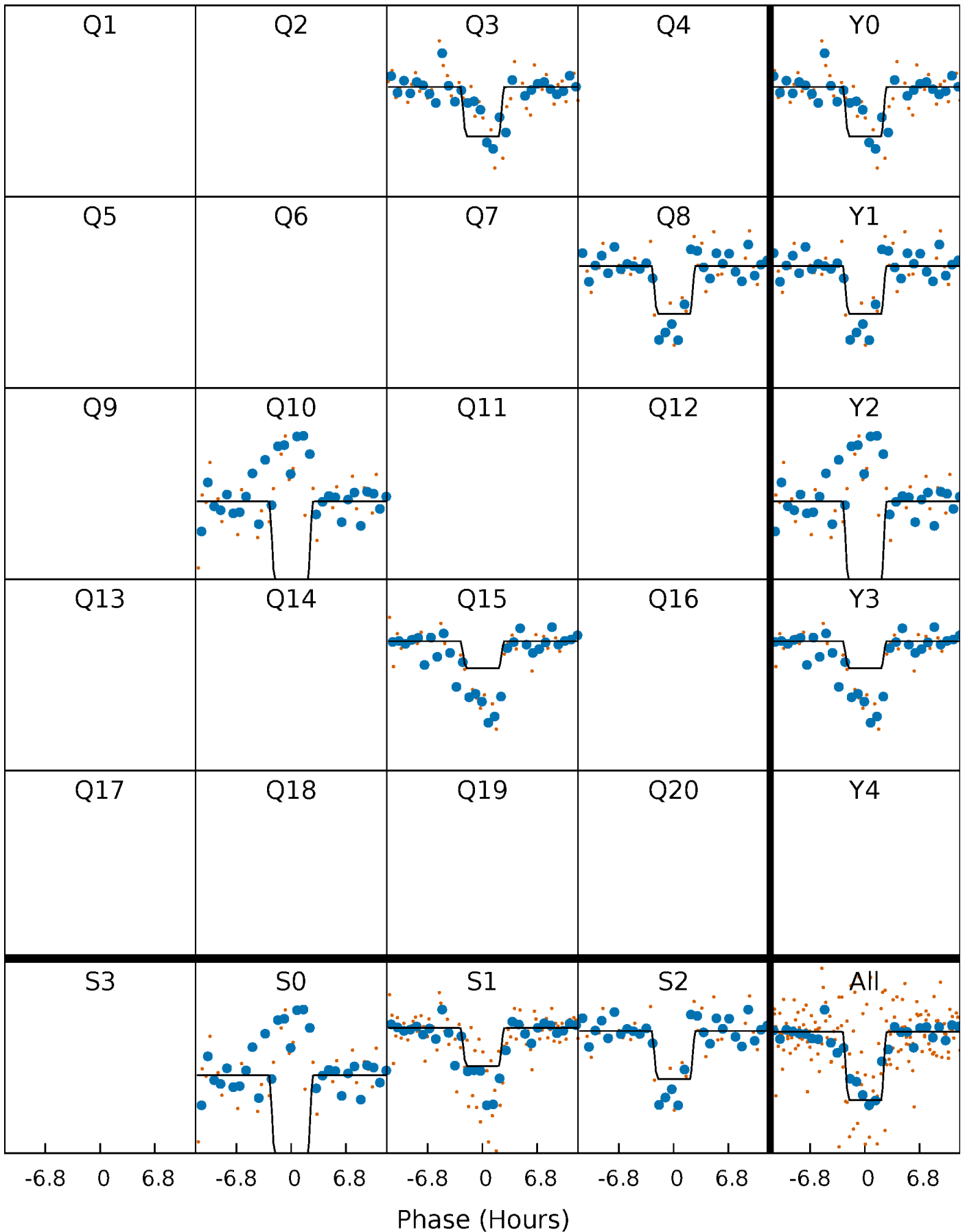
DV Quarter-Phased Transit Curves

TCE 006025092-06 $P=238.196898$ Days $T_0=265.714456$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

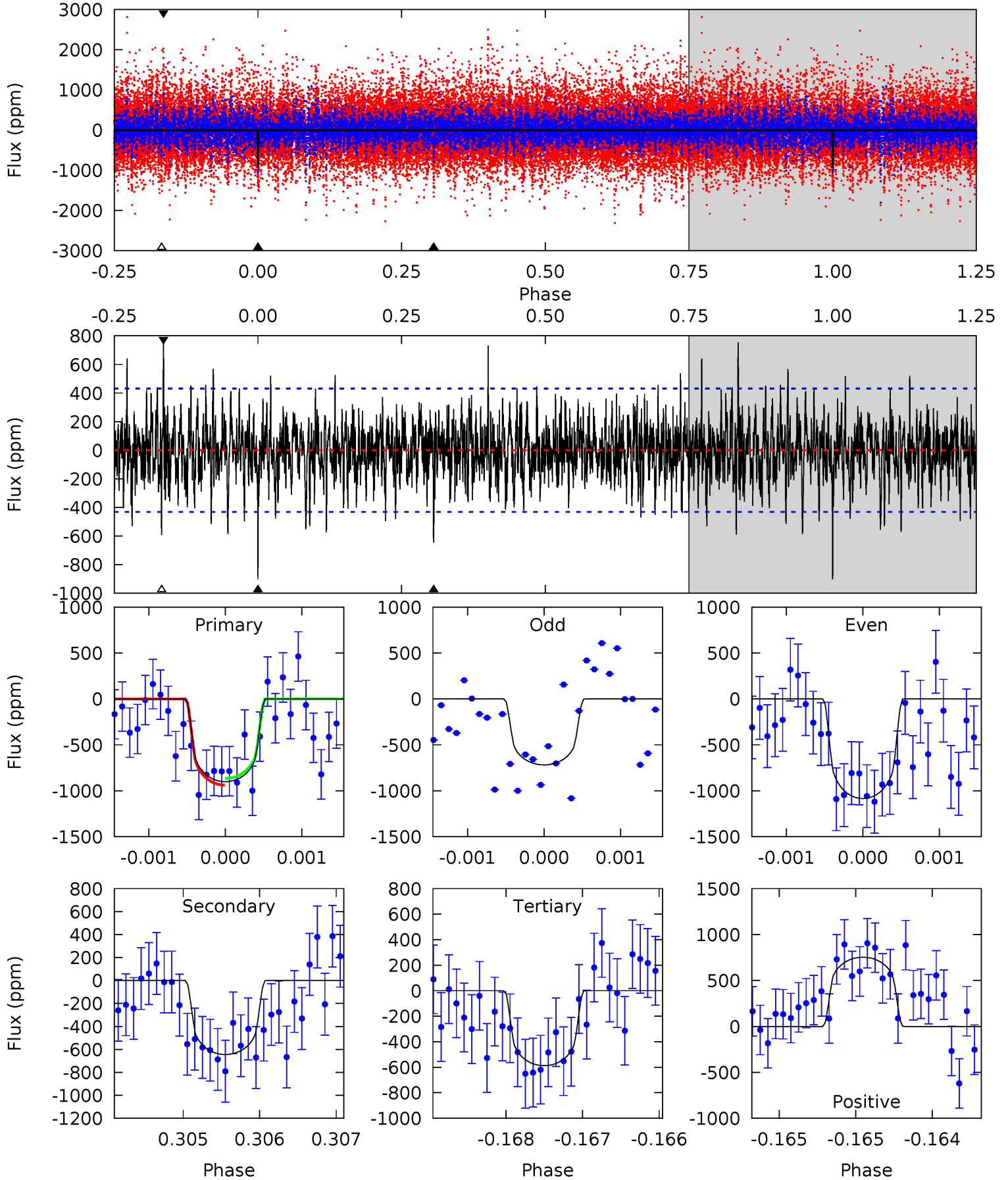
TCE 006025092-06 $P=238.192293$ Days $T_0=265.738611$ (BKJD)



DV Model-Shift Uniqueness Test

006025092-06, $P = 238.196898$ Days, $E = 27.517558$ Days

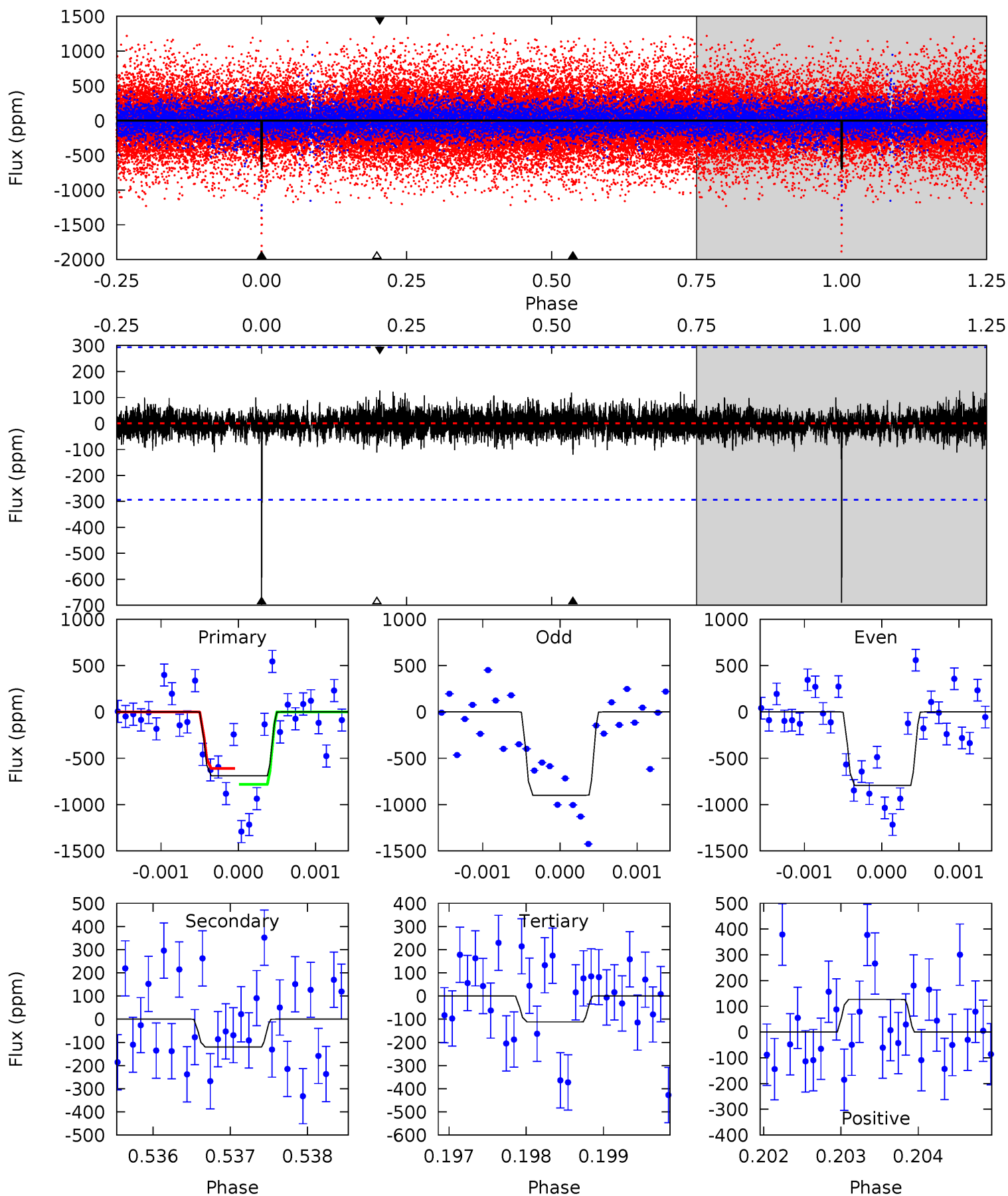
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	8.18	7.46	9.56	5.47	3.32	2.08	3.98	1.88	0.72	-1.38	2.27	0.93	0.46	0.47



Alt Model-Shift Uniqueness Test

006025092-06, $P = 238.192293$ Days, $E = 27.546318$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	2.24	2.08	2.36	5.46	3.31	0.55	10.7	10.5	0.16	-0.12	1.11	0.97	0.16	0



Stellar Parameters For KIC 006025092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5601^{+169}_{-169}	$4.431^{+0.101}_{-0.174}$	$-0.040^{+0.300}_{-0.300}$	$0.954^{+0.247}_{-0.133}$	$0.897^{+0.114}_{-0.085}$	$1.455^{+0.649}_{-0.728}$
	+3%/-3%	+2%/-4%	+750%/-750%	+26%/-14%	+13%/-9%	+45%/-50%
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 006025092-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-645 ± 79	$3.95^{+3.25}_{-2.53}$	399^{+27}_{-21}	4747^{+3011}_{-959}	11820^{+78512}_{-8298}
Alt.	-120 ± 54	$3.92^{+2.92}_{-2.62}$	399^{+26}_{-20}	3464^{+1771}_{-658}	1981^{+18760}_{-1489}

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

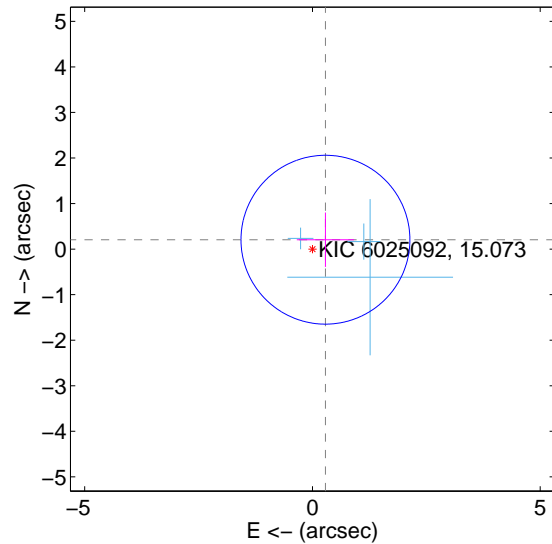
Supplemental centroid analysis for 006025092-06. Kepler magnitude: 15.07. Transit SNR 7.38

There are 3 quarters with good PRF difference image offsets

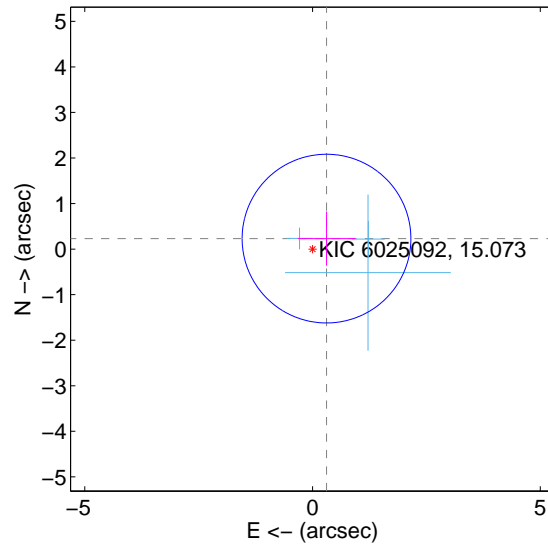
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.352 ± 0.618	0.57	-0.285 ± 0.629	0.206 ± 0.596
PRF-fit source offset from KIC position	0.384 ± 0.617	0.62	-0.307 ± 0.629	0.230 ± 0.596
photometric centroid source offset	0.49 ± 1.31	0.37	0.05 ± 1.13	-0.48 ± 1.32

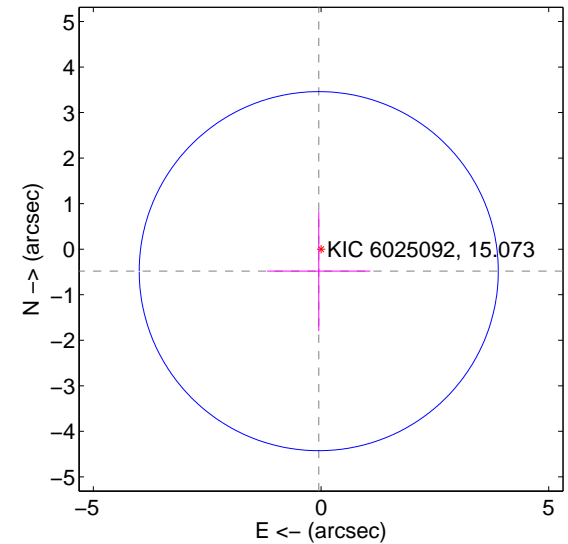
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

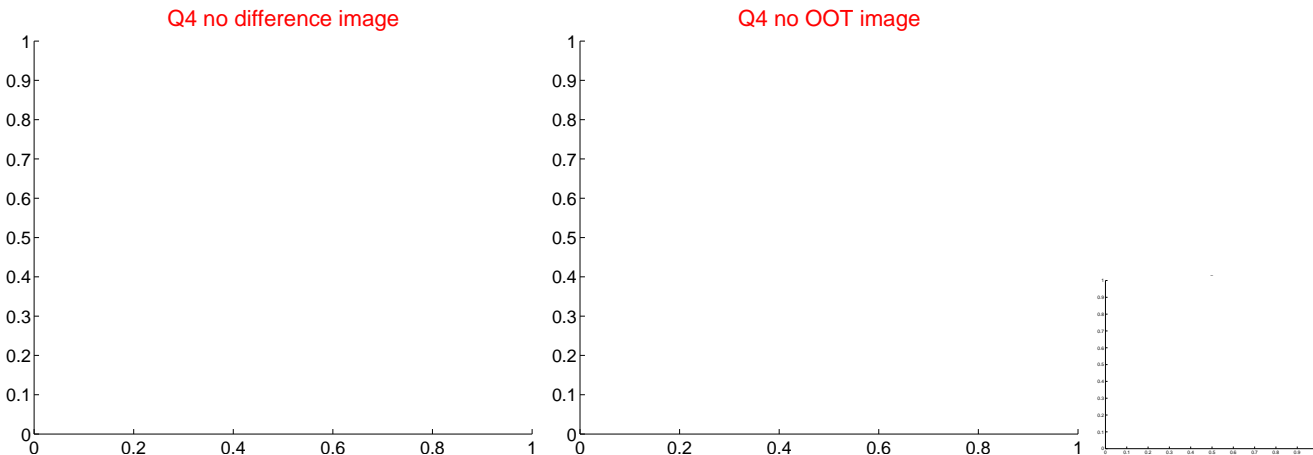
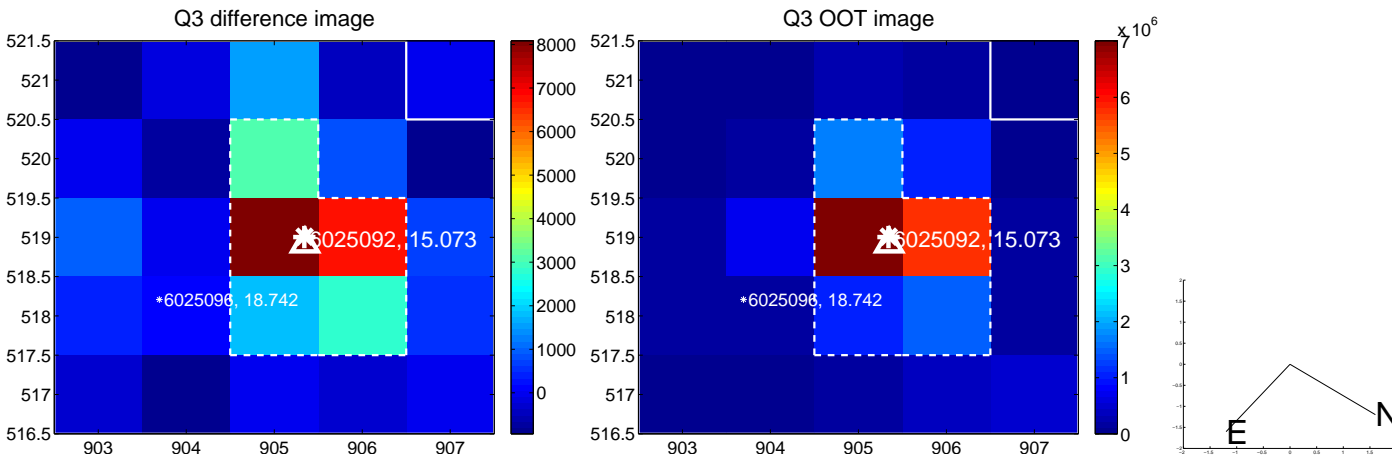
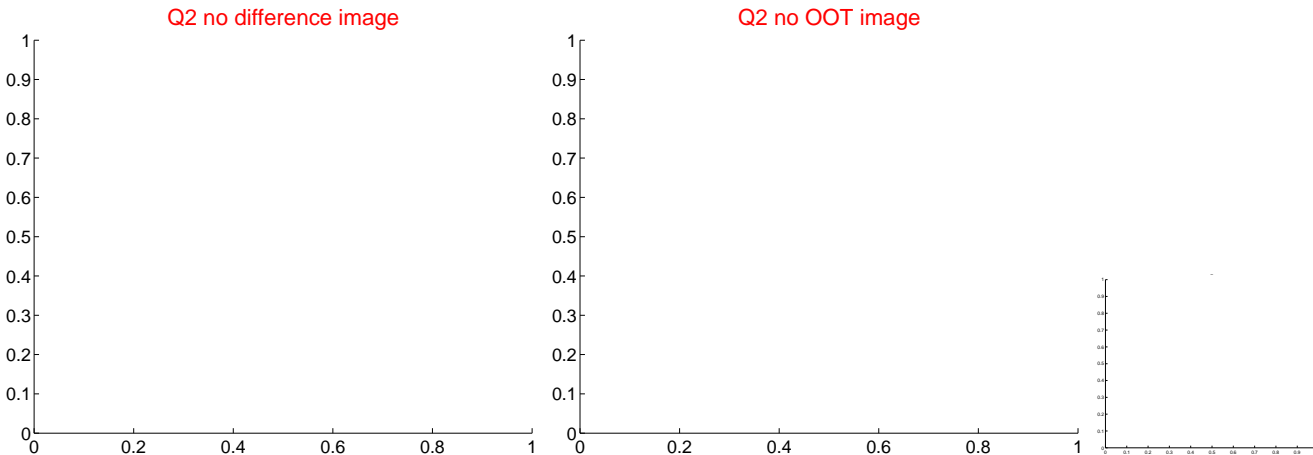
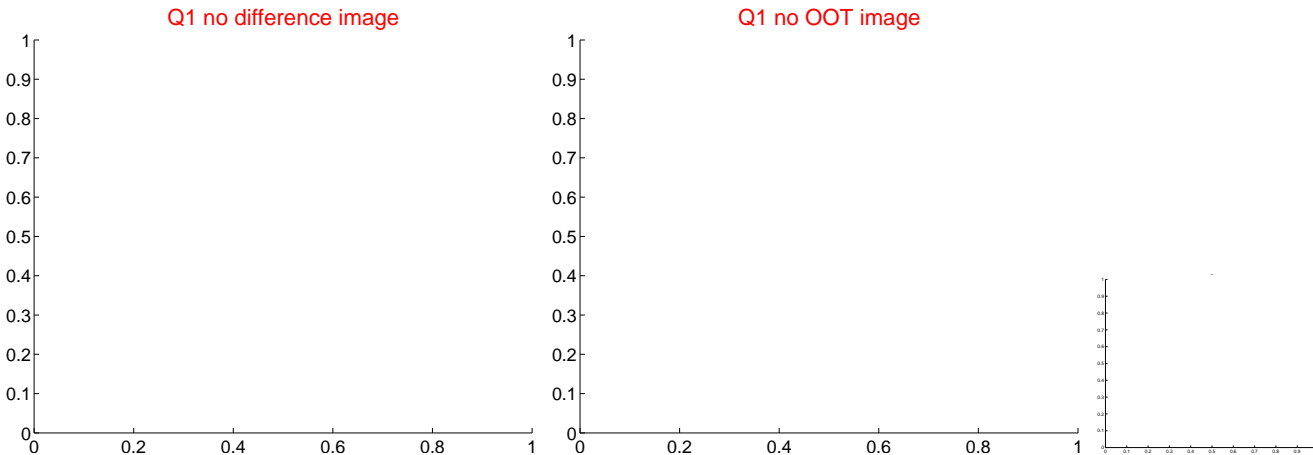


offset from photometric centroids

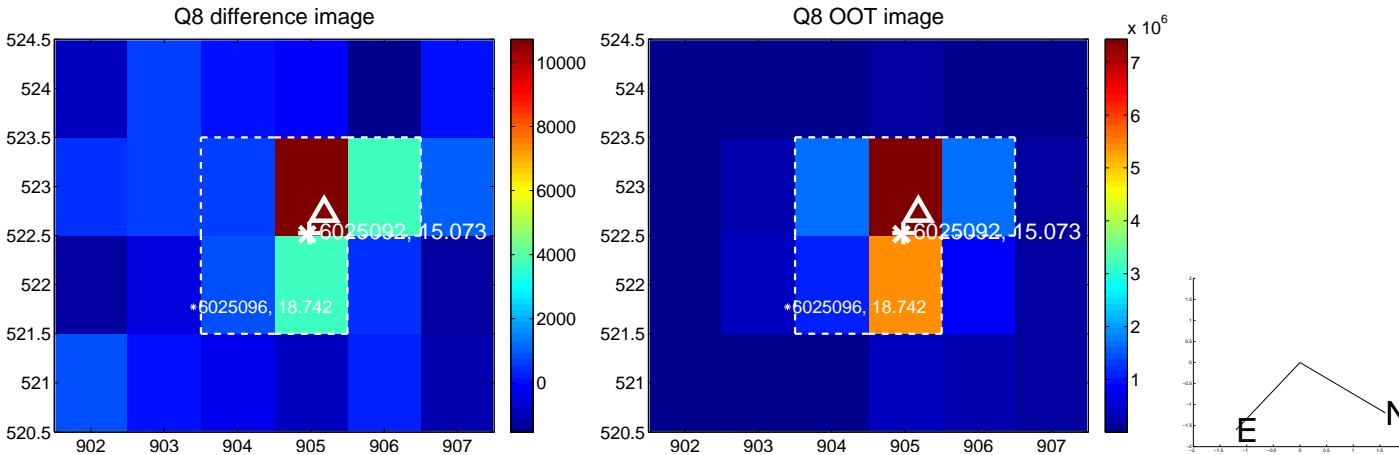
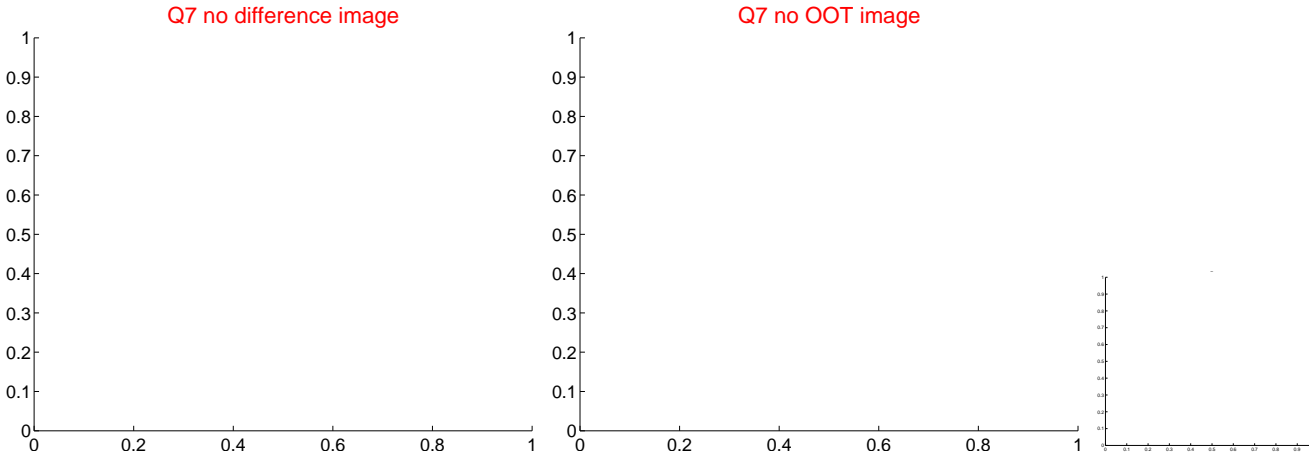
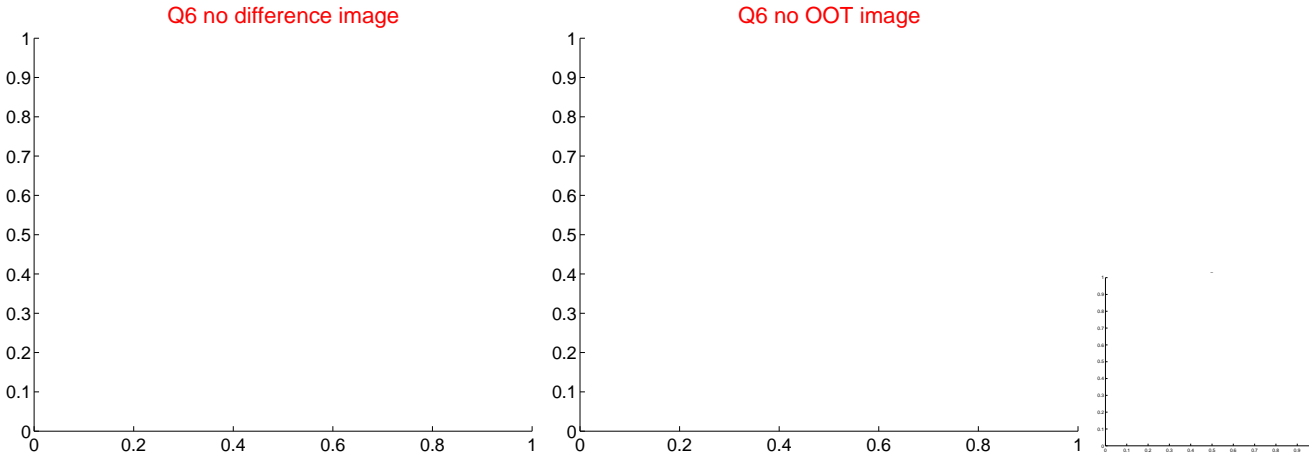
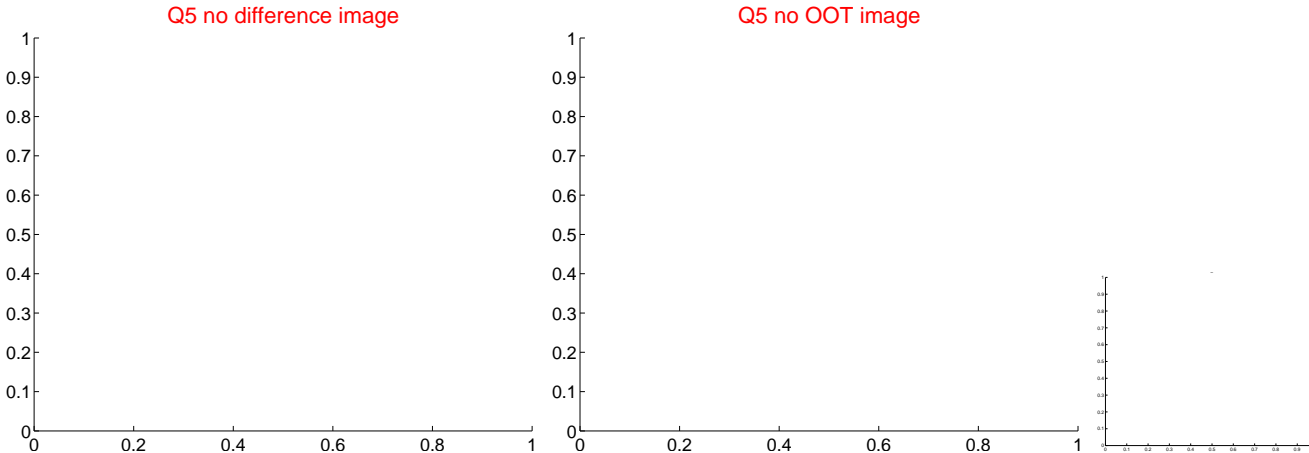


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

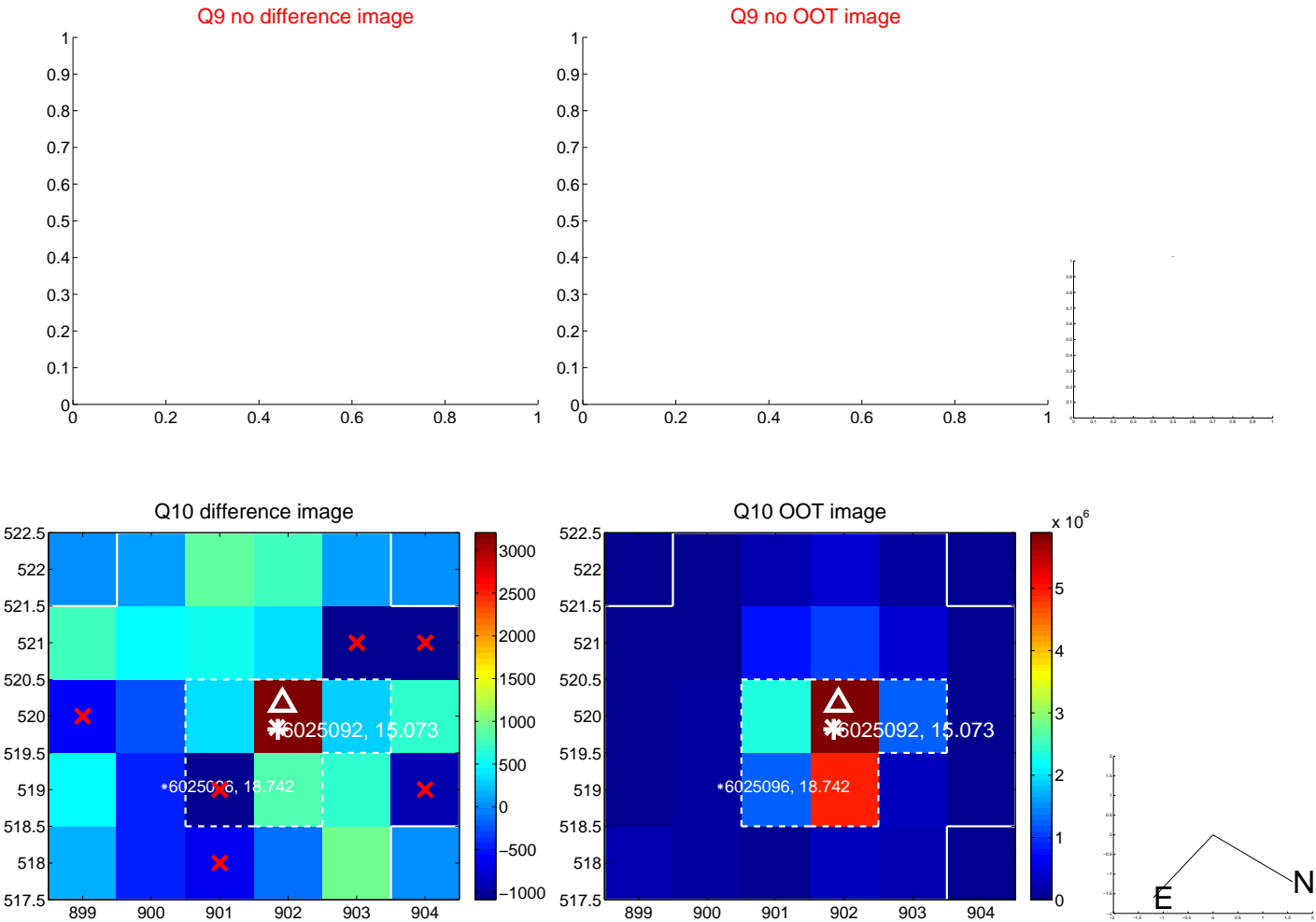
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



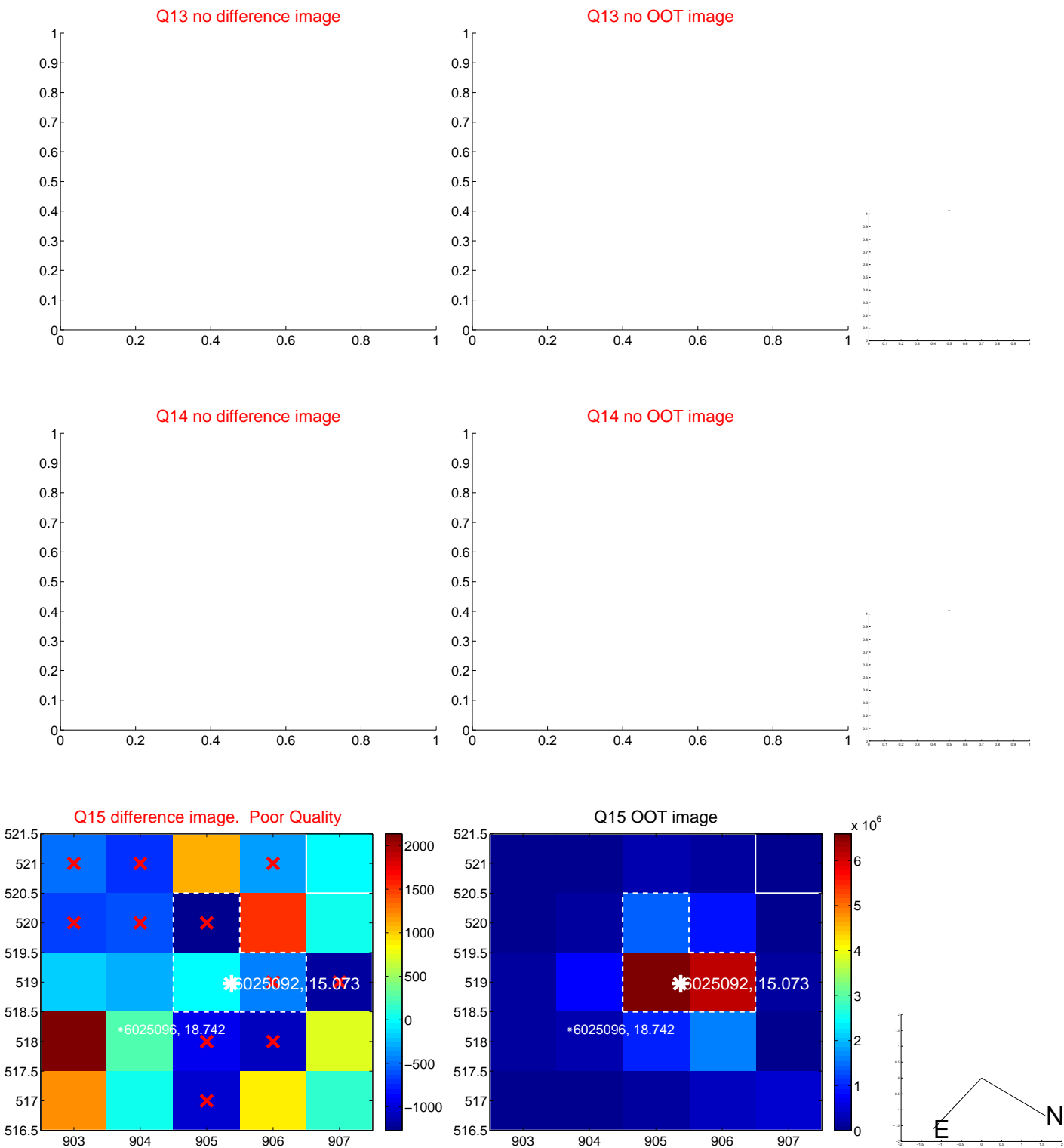
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



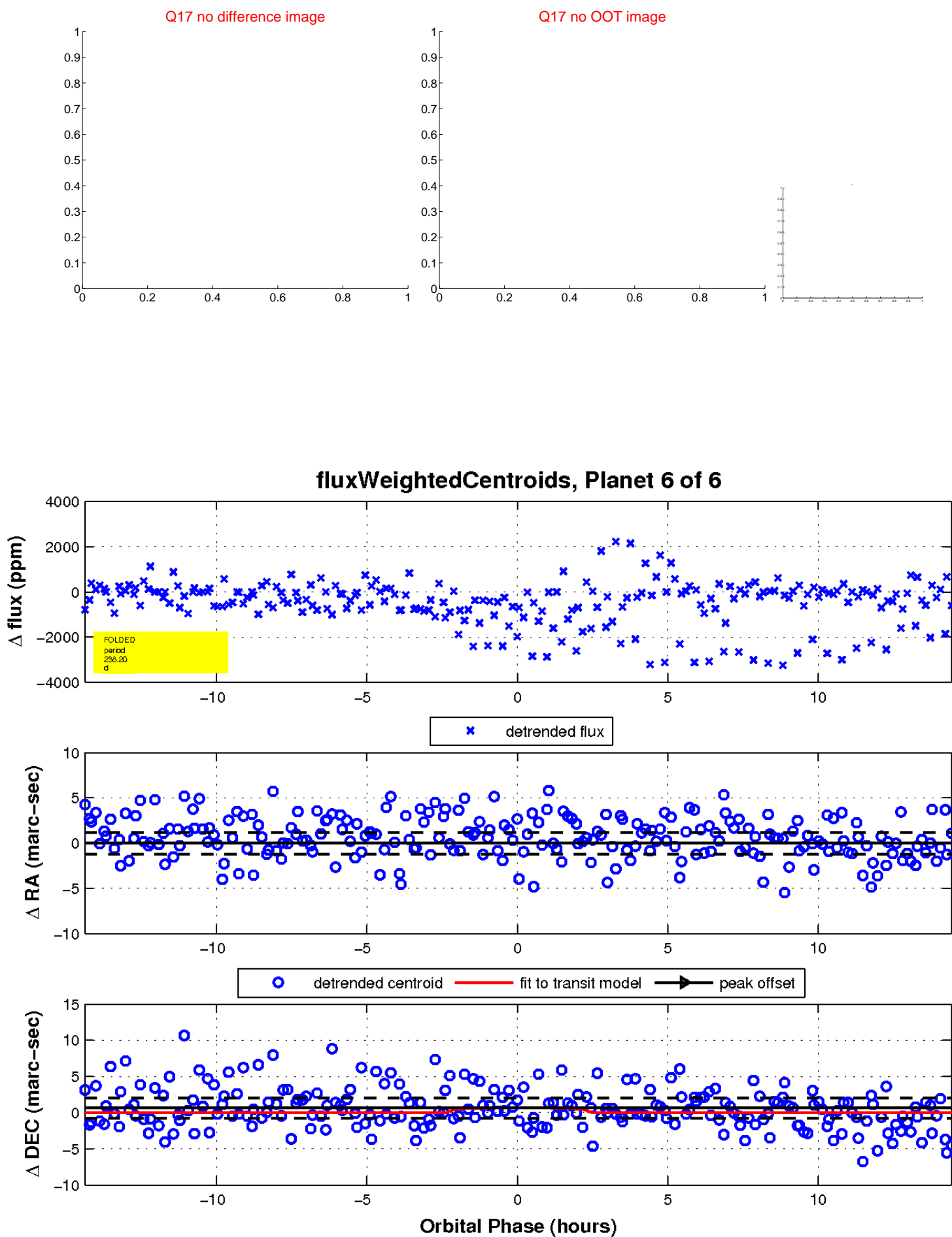
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

