

KIC 003539632

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})
003539632-01	OBS	No	397.962776	453.351073	1166.5	5.554	21.4	5.0	0.91	5585	3.12	0.76
003539632-02	OBS	No	449.064930	570.834635	605.6	4.832	17.1	3.1	0.91	5585	2.30	0.65
003539632-03	OBS	No	417.294801	482.662898	973.4	2.774	17.4	5.7	0.91	5585	2.82	0.72
003539632-04	OBS	No	372.449201	398.848728	1143.6	2.934	13.3	7.3	0.91	5585	3.24	0.83
003539632-05	OBS	No	319.463176	333.463325	1275.0	3.000	22.4	-1.0	0.91	5585	3.22	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003539632-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003539632-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
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003539632-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

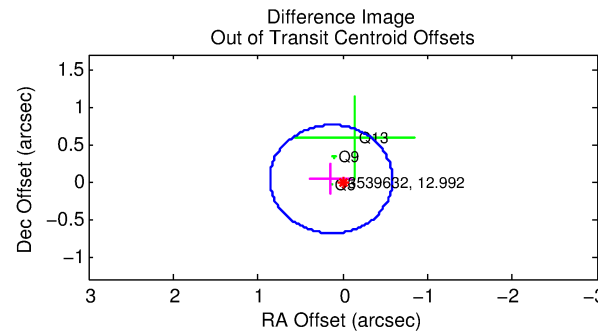
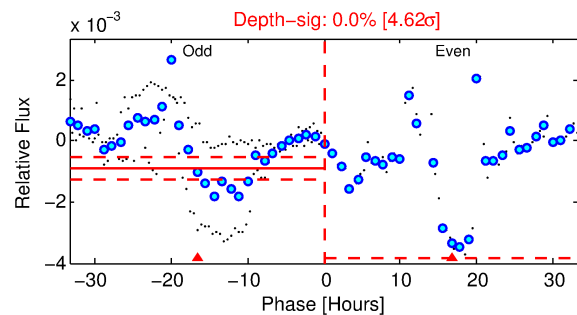
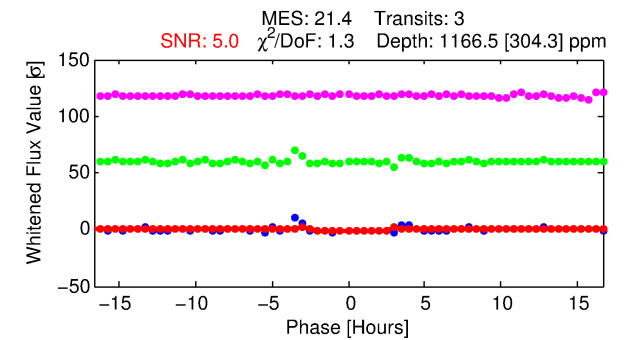
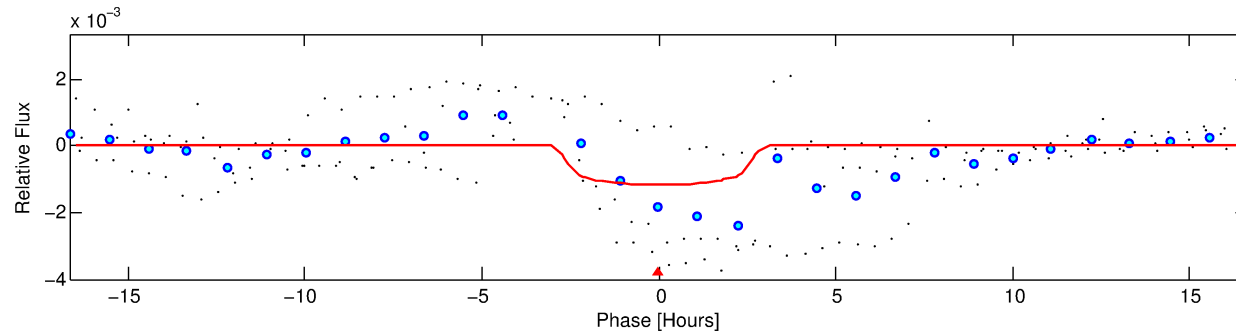
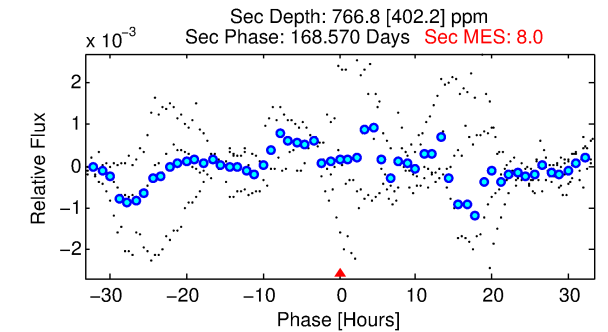
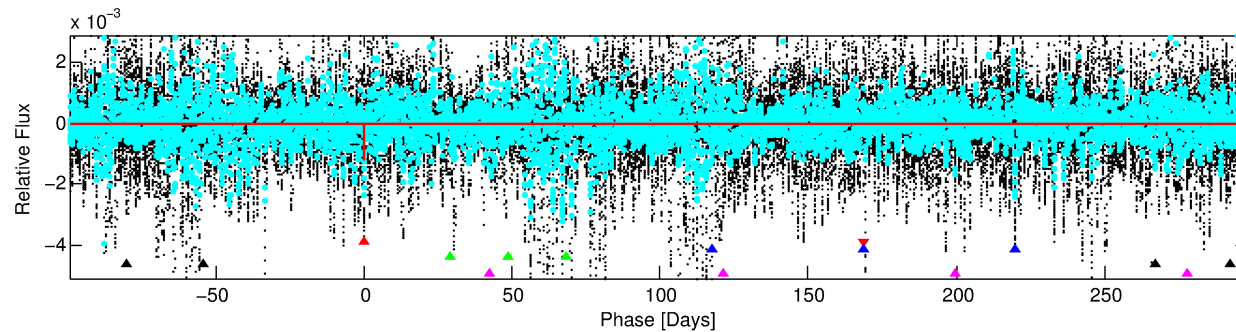
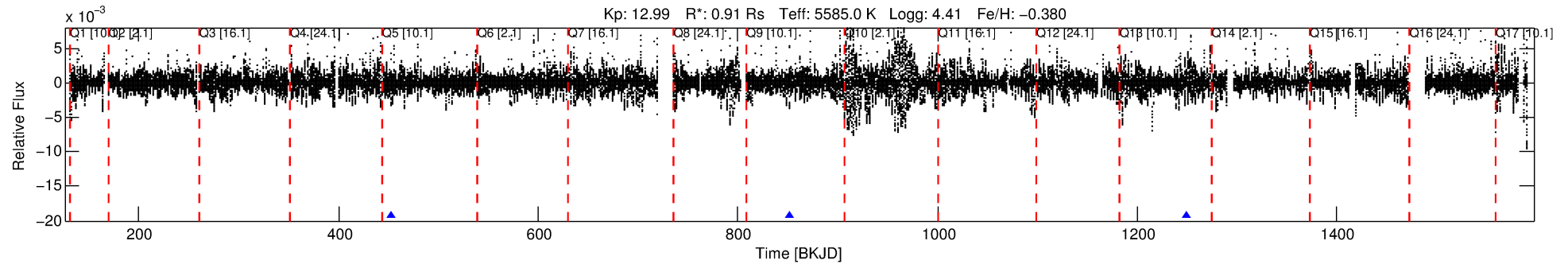
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003539632-01

No Significant Match Found

DV One-Page Summary

KIC: 3539632 Candidate: 1 of 5 Period: 397.963 d



DV Fit Results:

Period = 397.96278 [0.00563] d
Epoch = 453.3511 [0.0069] BKJD
Rp/R* = 0.0314 [0.0913]
a/R* = 532.65 [6890.17]
b = 0.34 [33.67]
Seff = 0.76 [0.29]
Teq = 238 [22] K
Rp = 3.12 [9.10] Re
a = 0.9726 [0.2301] AU
Ag = 41013.81 [239770.52] [0.17 σ]
Teffp = 5244 [7651] K [0.65 σ]

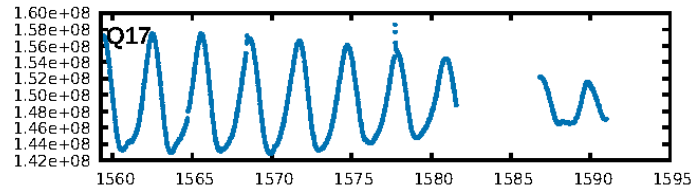
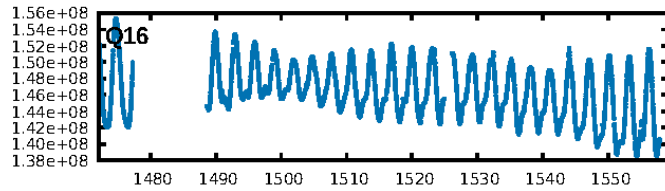
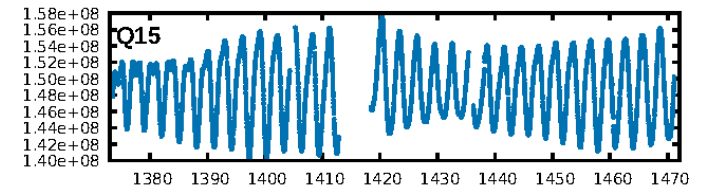
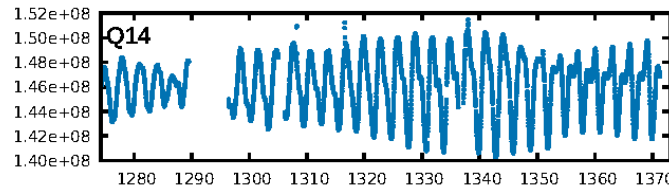
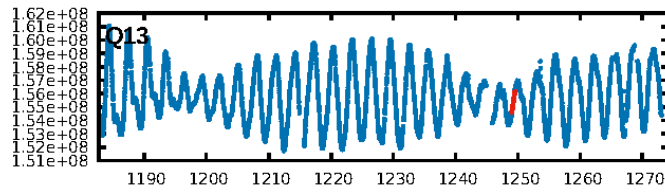
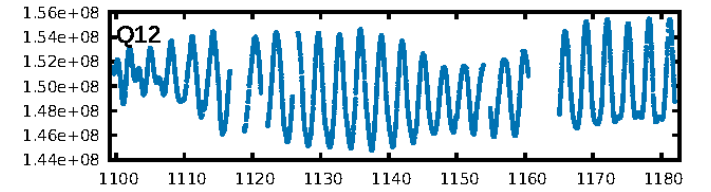
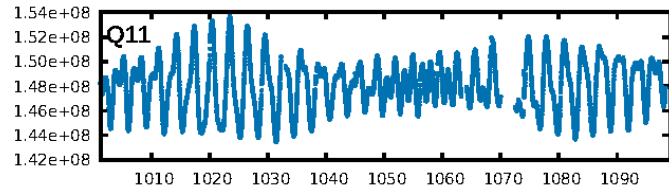
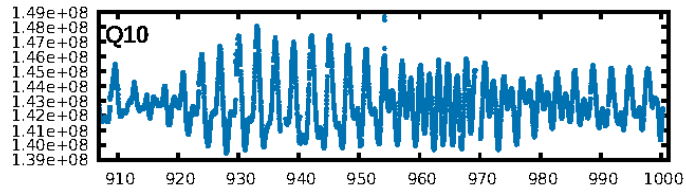
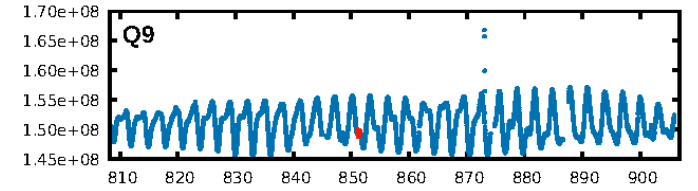
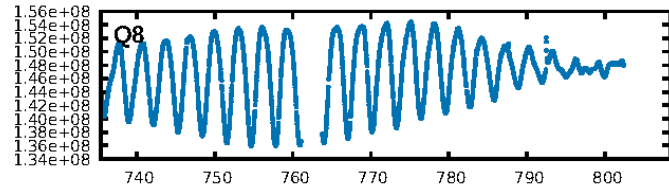
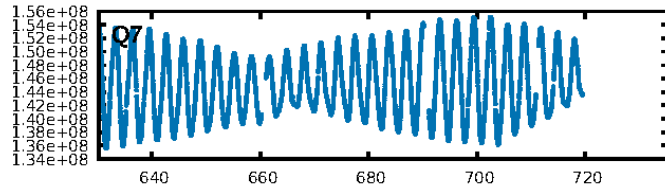
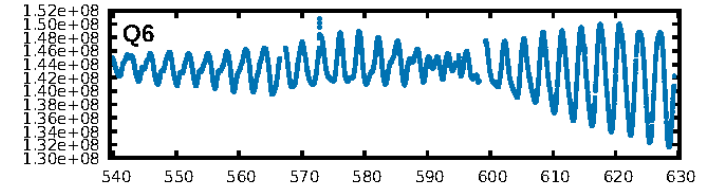
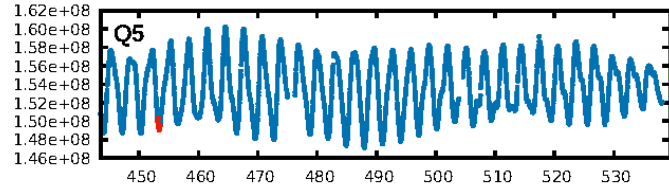
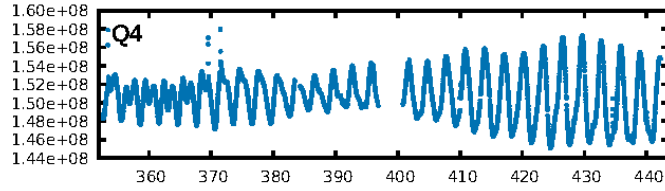
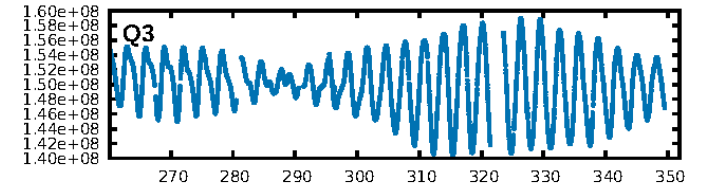
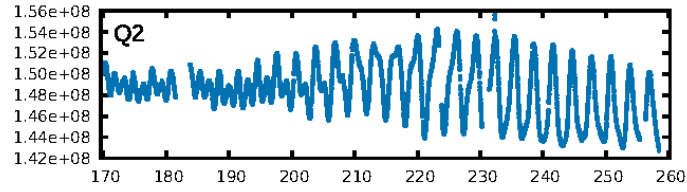
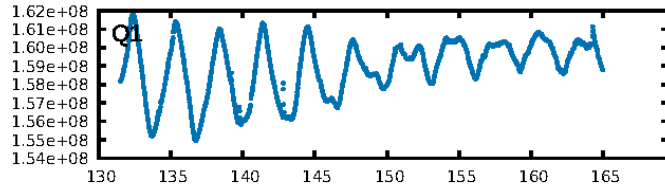
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [97.48 σ]
LongPeriod-sig: 100.0% [74.73 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 29.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.257
Centroid-sig: 5.8%
Centroid-so: 1.039 arcsec [1.62 σ]
OotOffset-rm: 0.138 arcsec [0.57 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 0.179 arcsec [0.74 σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

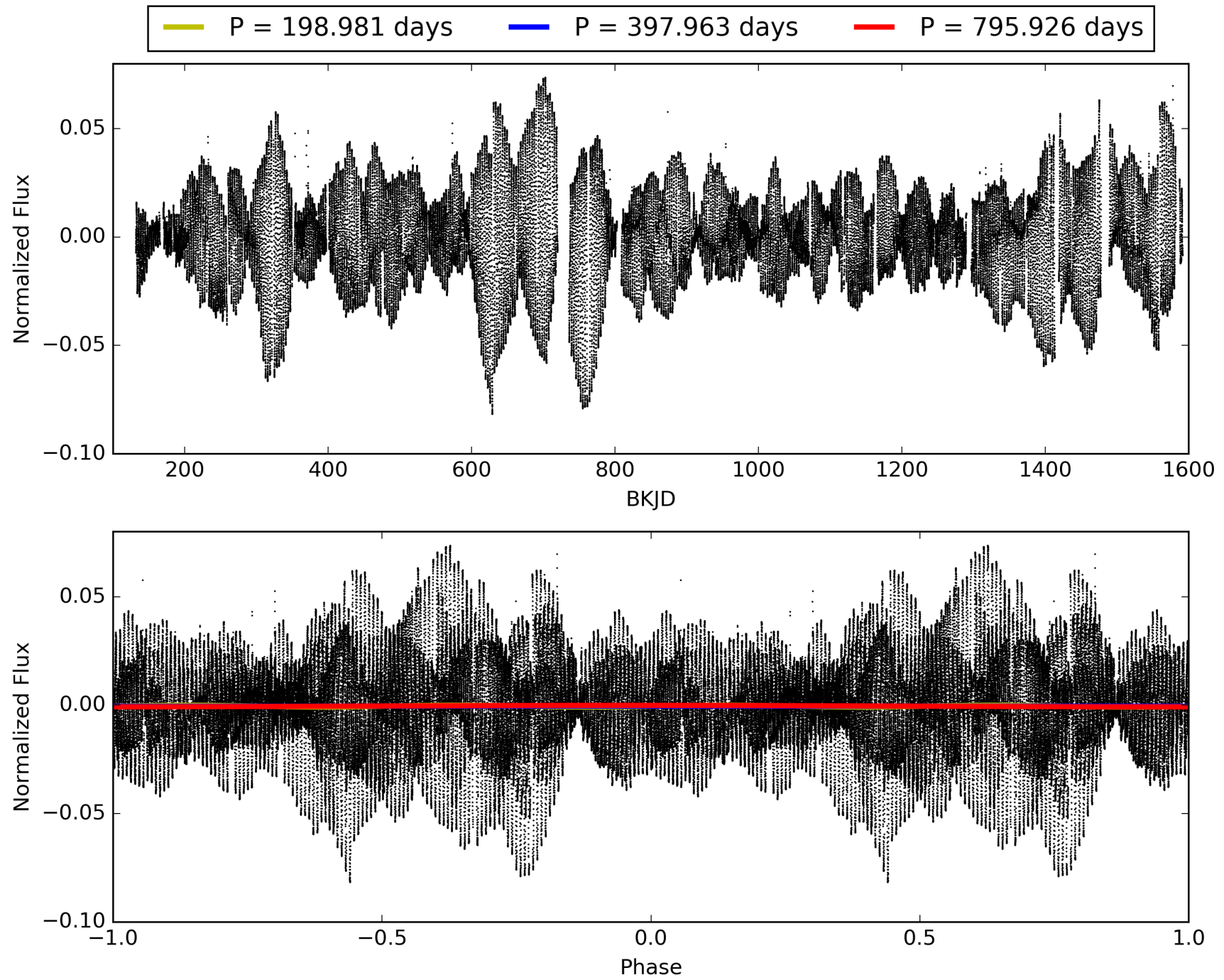
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003539632-01, PDC Light Curves

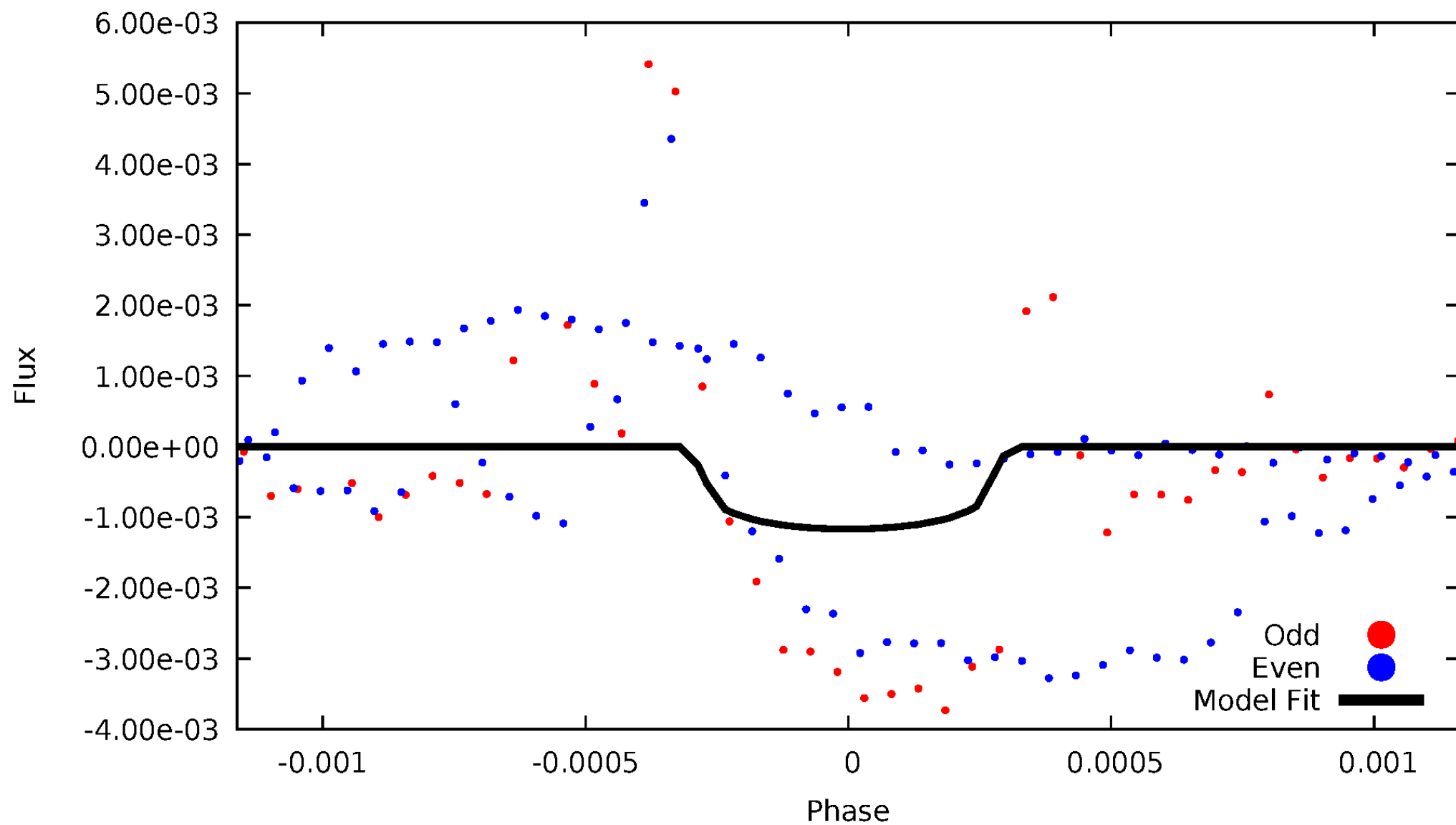


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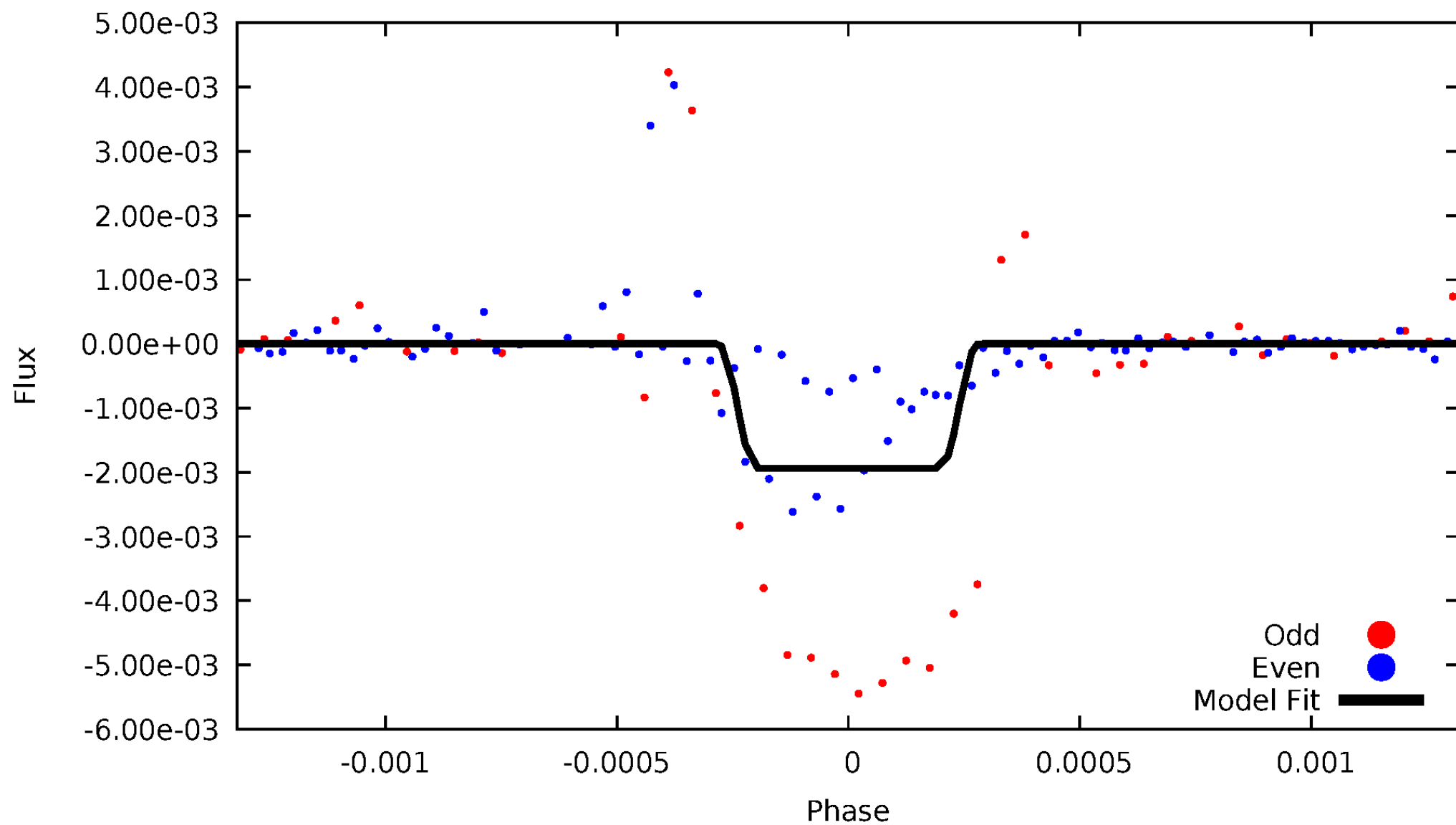
DV Odd/Even

TCE 003539632-01



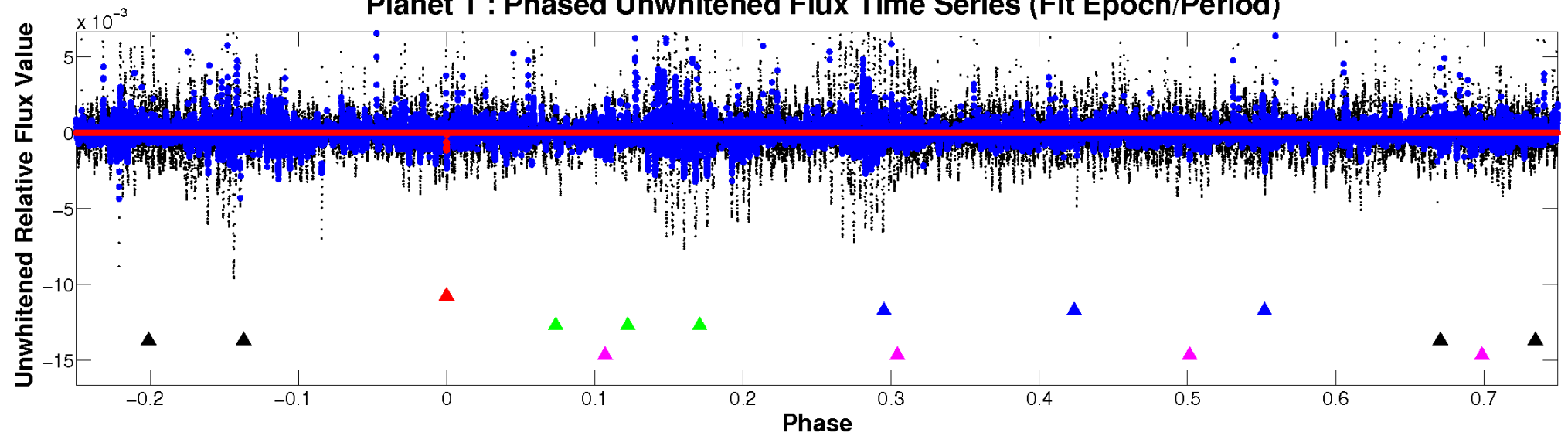
ALT Odd/Even

TCE 003539632-01

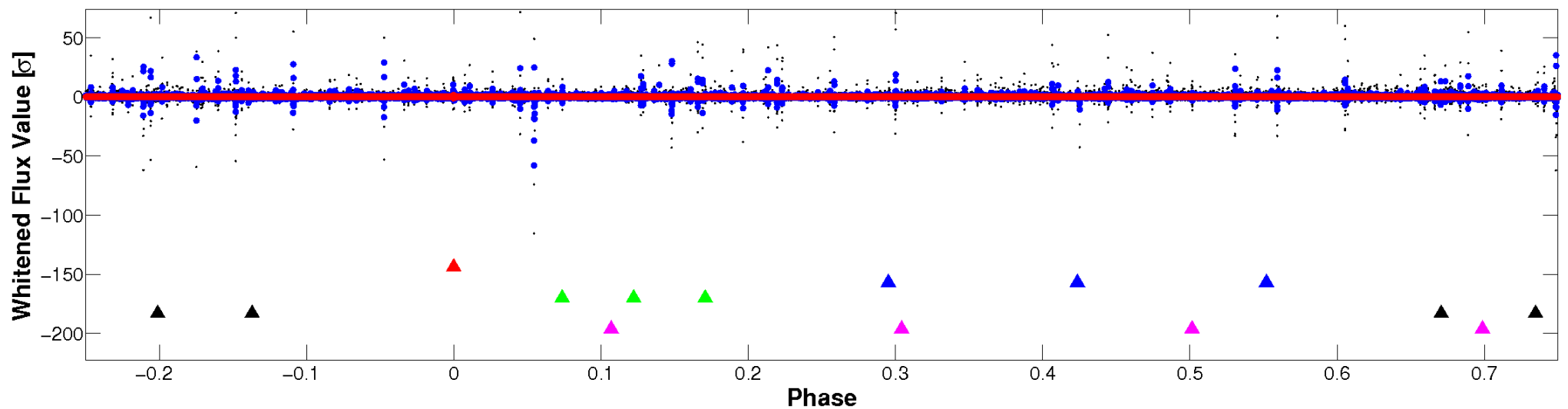


Non-Whitened Vs. Whitened Light Curve

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

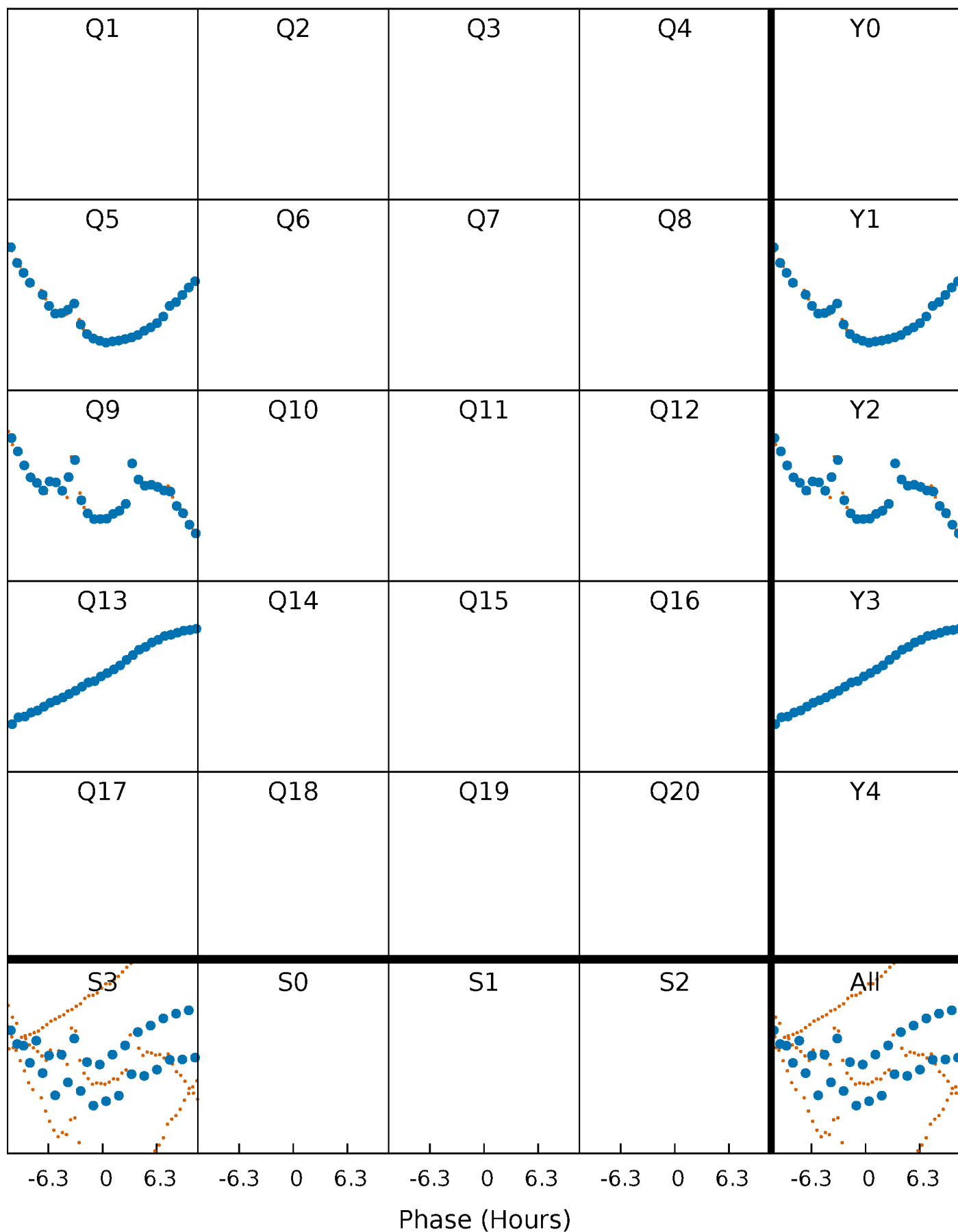


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



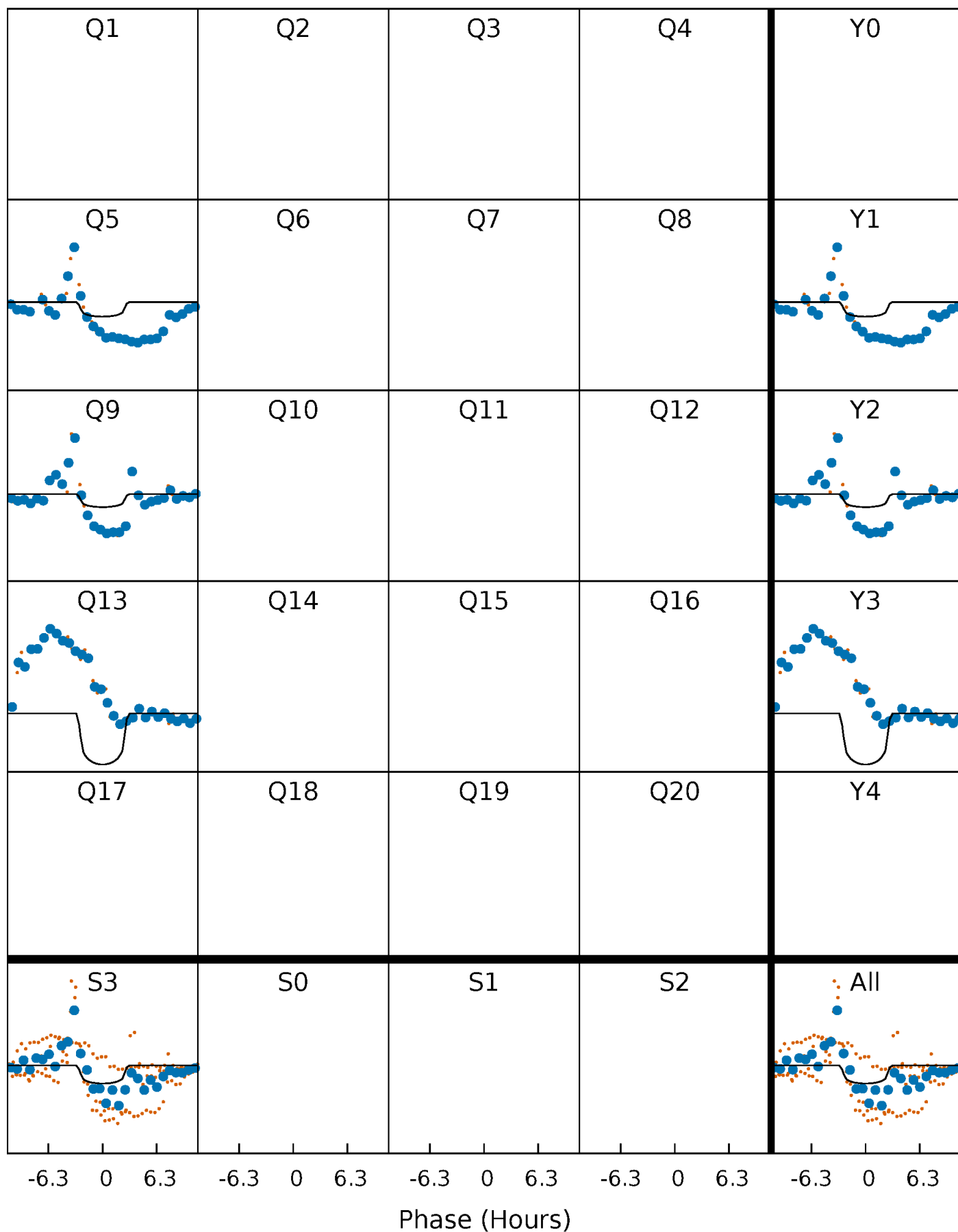
PDC Quarter-Phased Transit Curves

TCE 003539632-01 P=397.962777 Days $T_0=453.351073$ (BKJD)



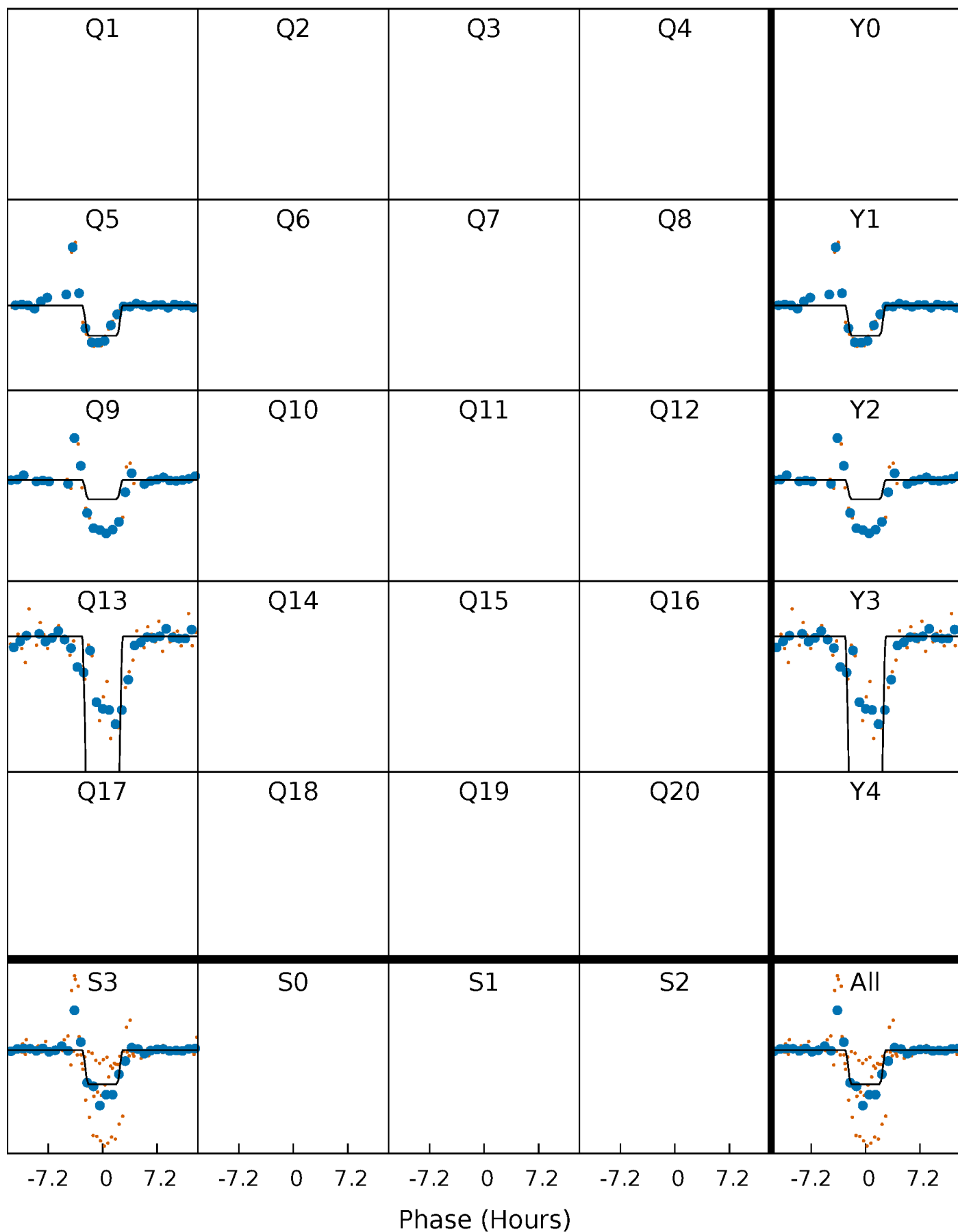
DV Quarter-Phased Transit Curves

TCE 003539632-01 P=397.962777 Days $T_0=453.351073$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

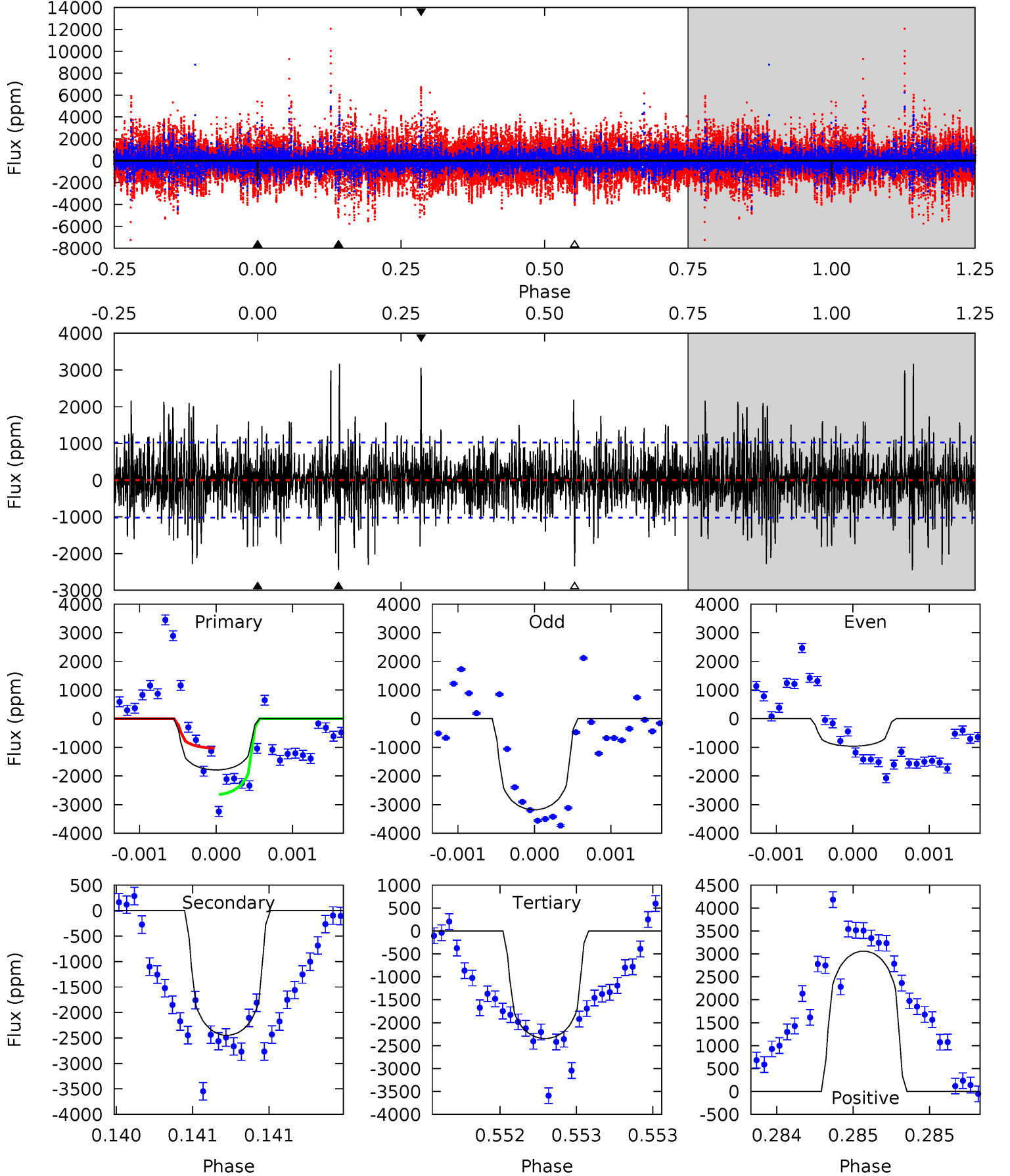
TCE 003539632-01 P=397.950392 Days $T_0=453.366789$ (BKJD)



DV Model-Shift Uniqueness Test

003539632-01, $P = 397.962777$ Days, $E = 55.388296$ Days

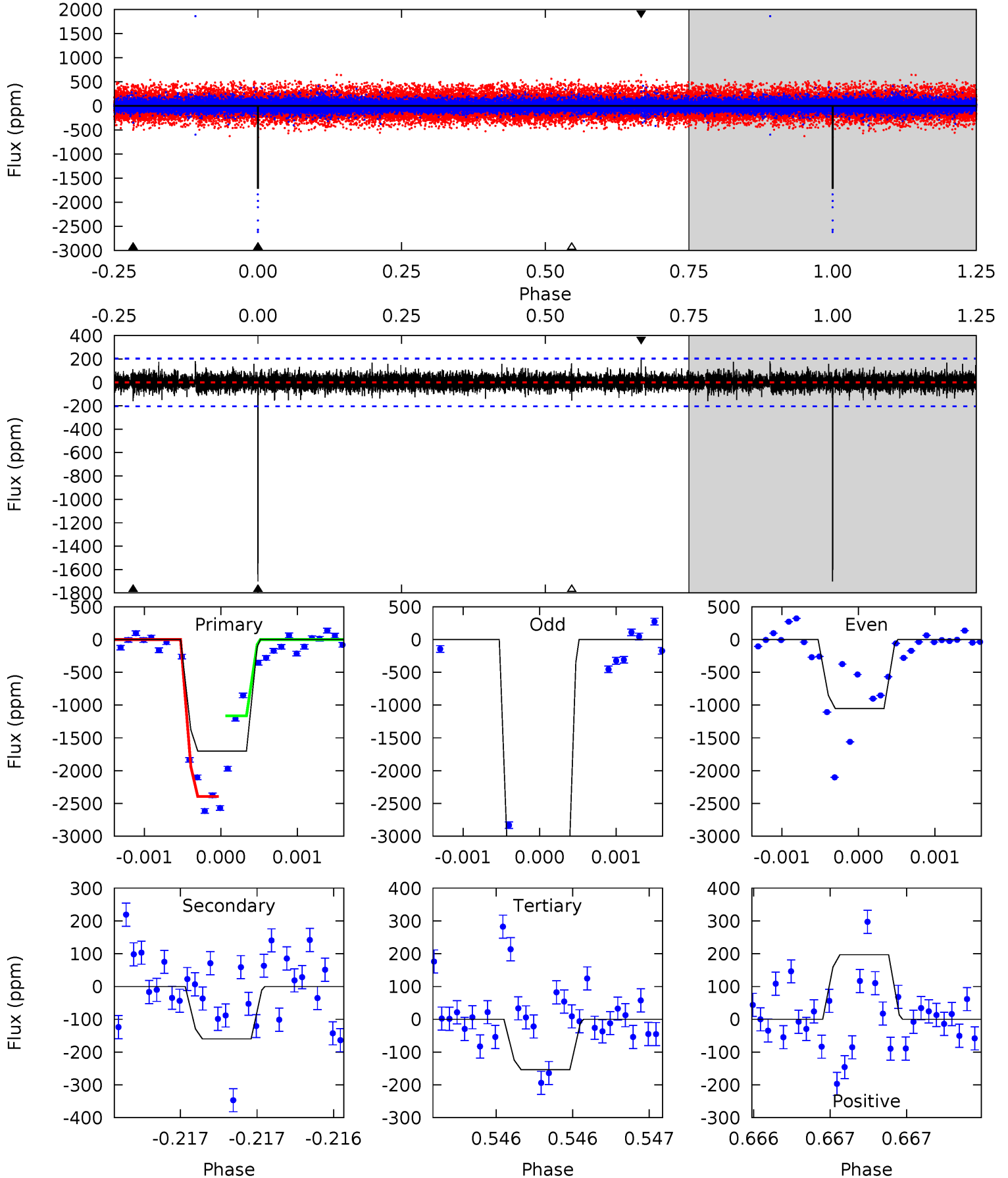
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.69	13.3	12.7	16.6	5.55	3.44	2.93	-3.01	-6.89	0.56	-3.32	4.20	0.69	0.56	4.44



Alt Model-Shift Uniqueness Test

003539632-01, P = 397.950392 Days, E = 55.416397 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.4	4.36	4.19	5.37	5.55	3.45	0.91	42.2	41.0	0.16	-1.01	70.1	1.32	0.10	16.7



Stellar Parameters For KIC 003539632

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5585^{+152}_{-152}	$4.409^{+0.148}_{-0.204}$	$-0.380^{+0.350}_{-0.250}$	$0.910^{+0.242}_{-0.141}$	$0.773^{+0.124}_{-0.044}$	$1.447^{+1.002}_{-0.754}$
	+3%/-3%	+3%/-5%	+92%/-66%	+27%/-15%	+16%/-6%	+69%/-52%
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 003539632-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2448 ± 185	$7.25^{+8.13}_{-5.03}$	334^{+25}_{-20}	4751^{+3827}_{-1121}	$24094^{+233185}_{-18667}$
Alt.	-160 ± 37	$8.84^{+8.11}_{-5.93}$	334^{+23}_{-19}	2850^{+1155}_{-423}	1126^{+8873}_{-837}

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 $A_{obs} \gg 1.0$

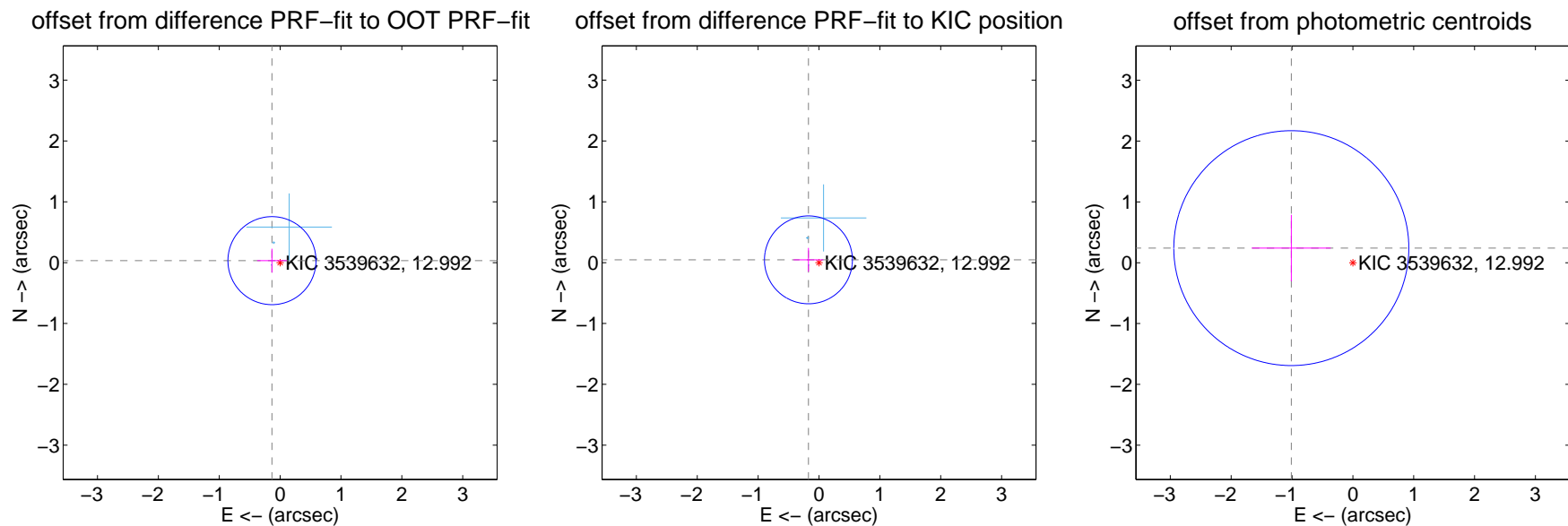
DV Centroid Data

Supplemental centroid analysis for 003539632-01. Kepler magnitude: 12.99. Transit SNR 5.03

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.138 ± 0.241	0.57	0.134 ± 0.244	0.033 ± 0.196
PRF-fit source offset from KIC position	0.179 ± 0.241	0.74	0.173 ± 0.244	0.046 ± 0.196
photometric centroid source offset	1.04 ± 0.64	1.62	1.01 ± 0.65	0.24 ± 0.55

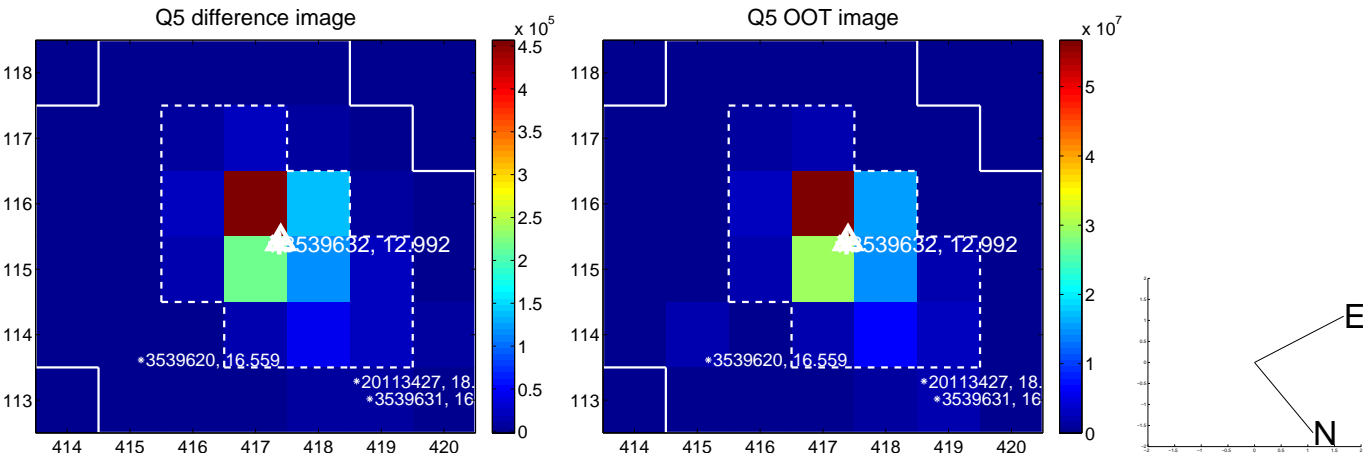


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

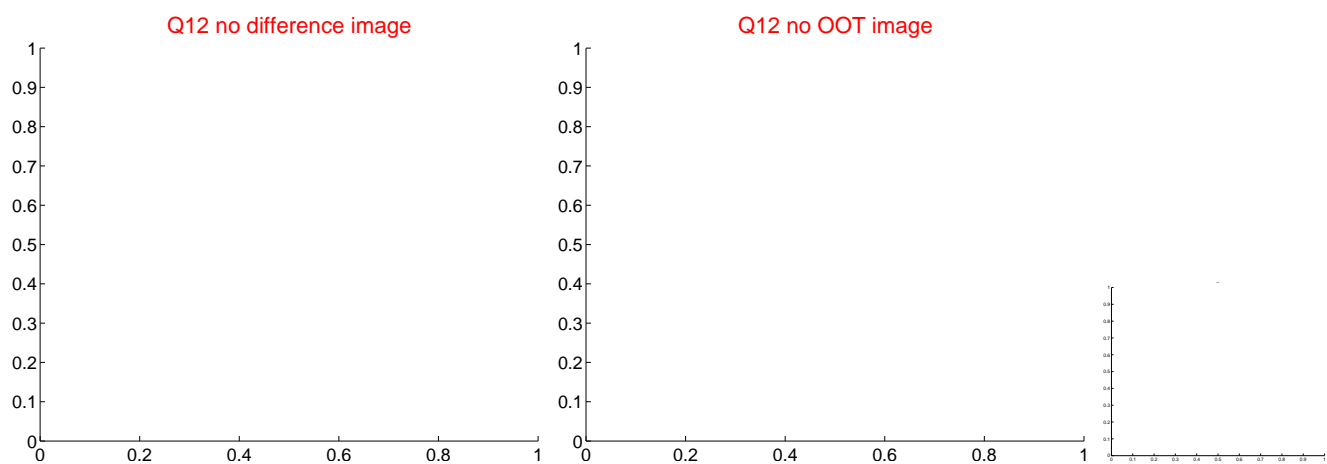
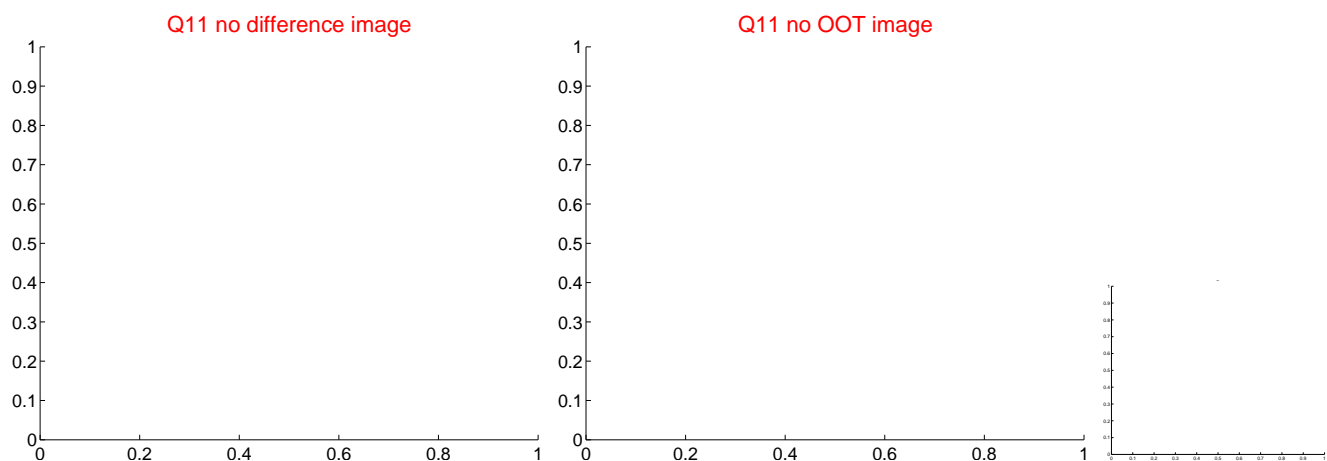
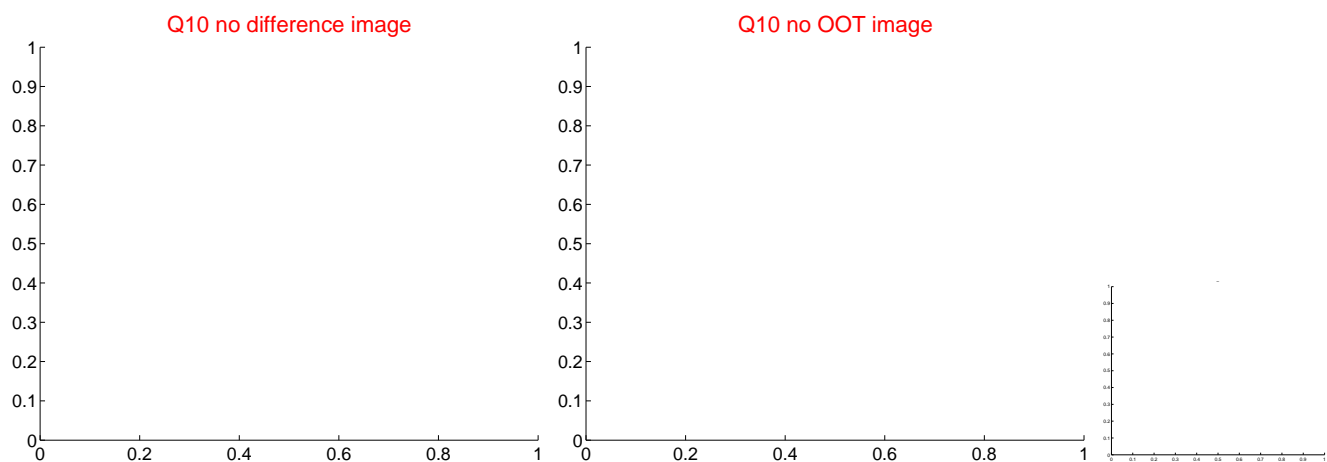
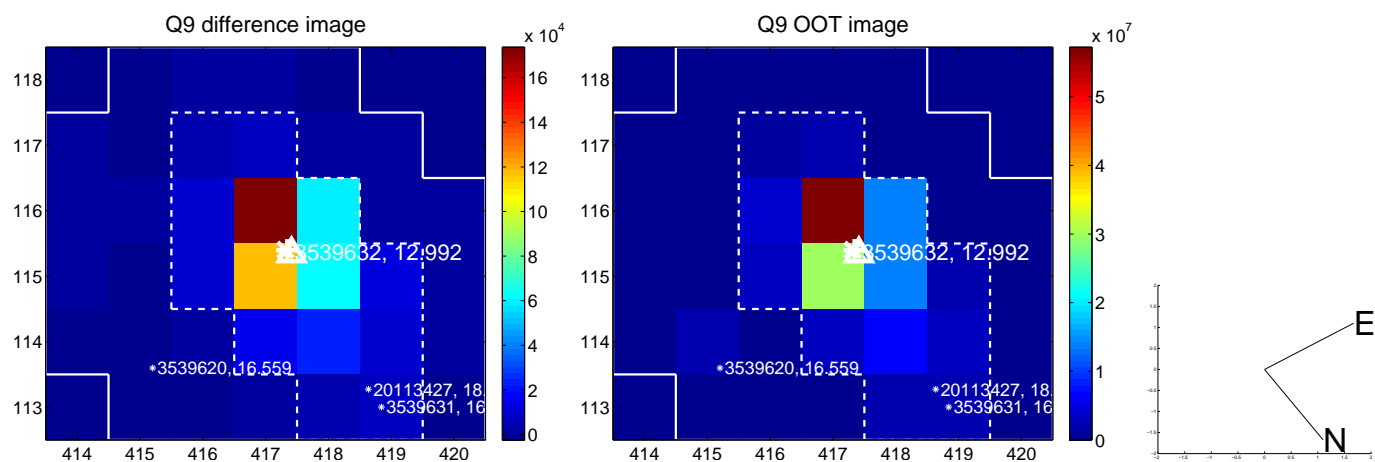
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



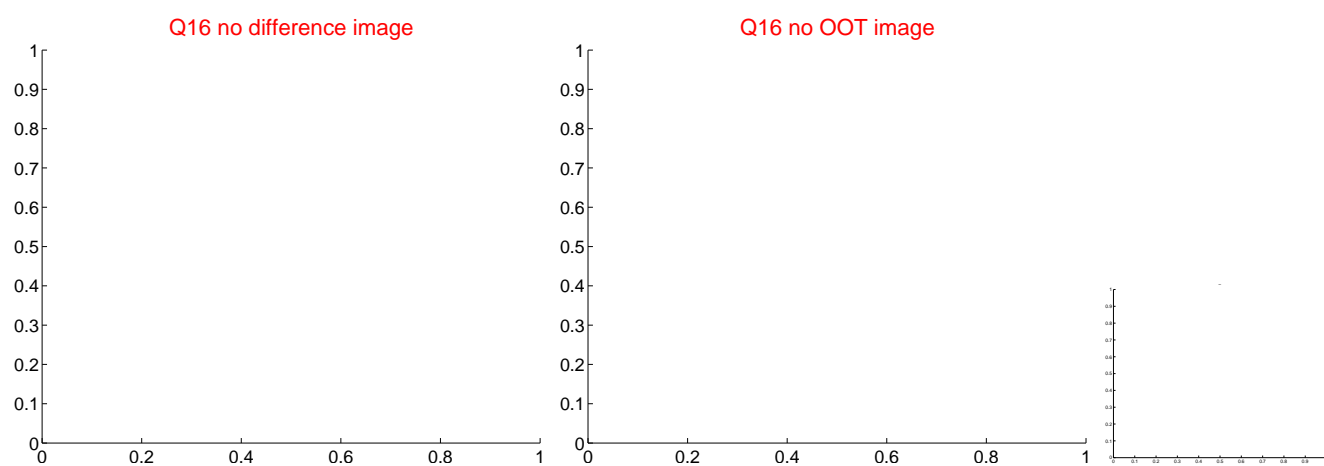
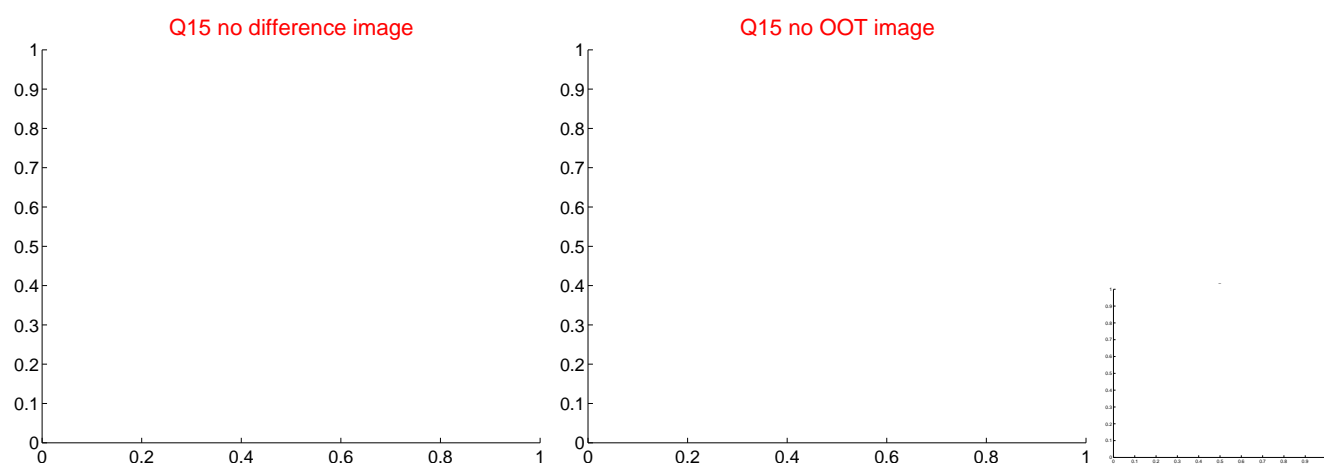
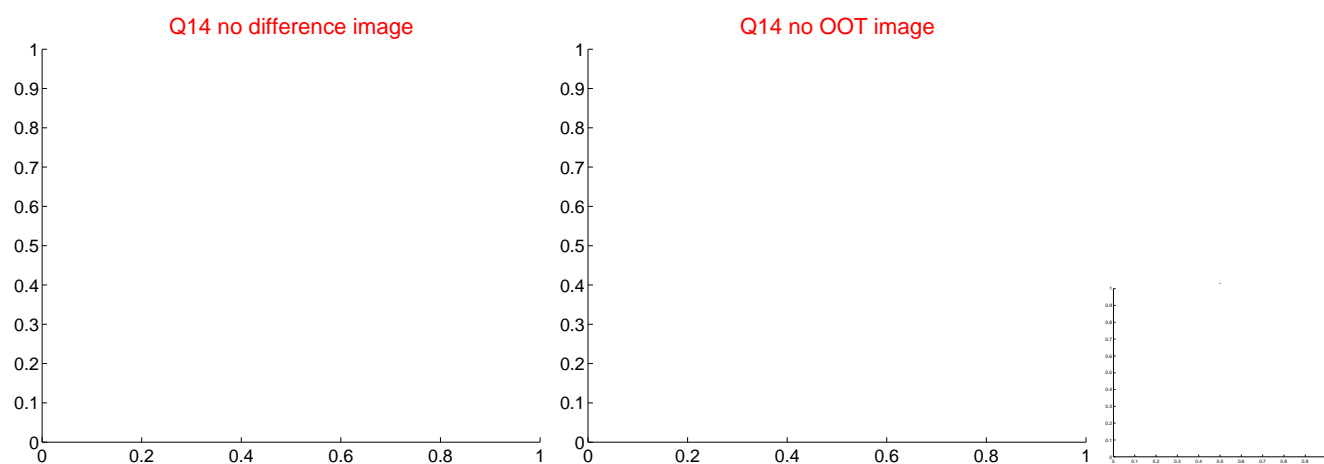
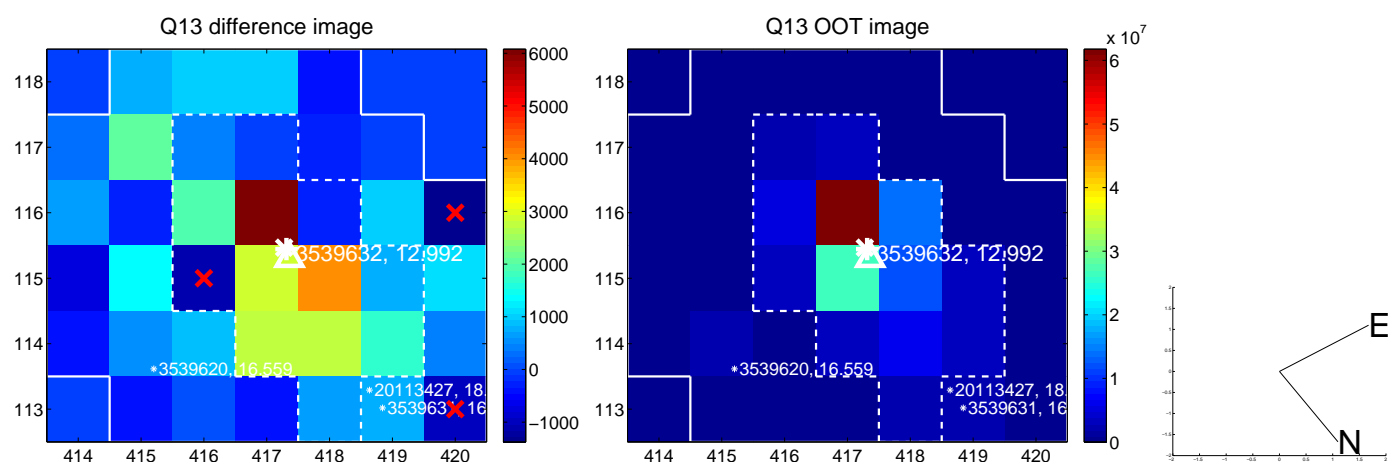
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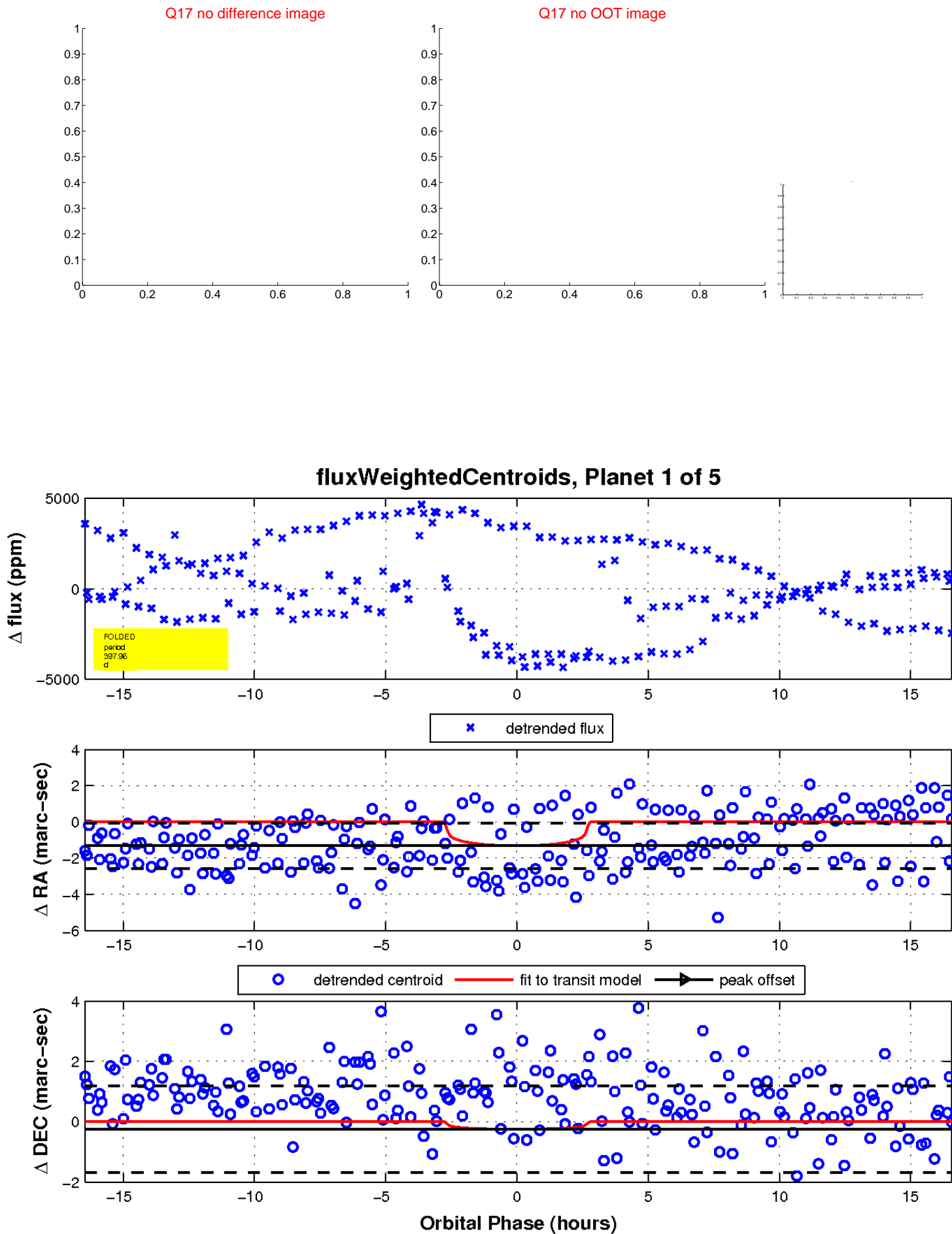
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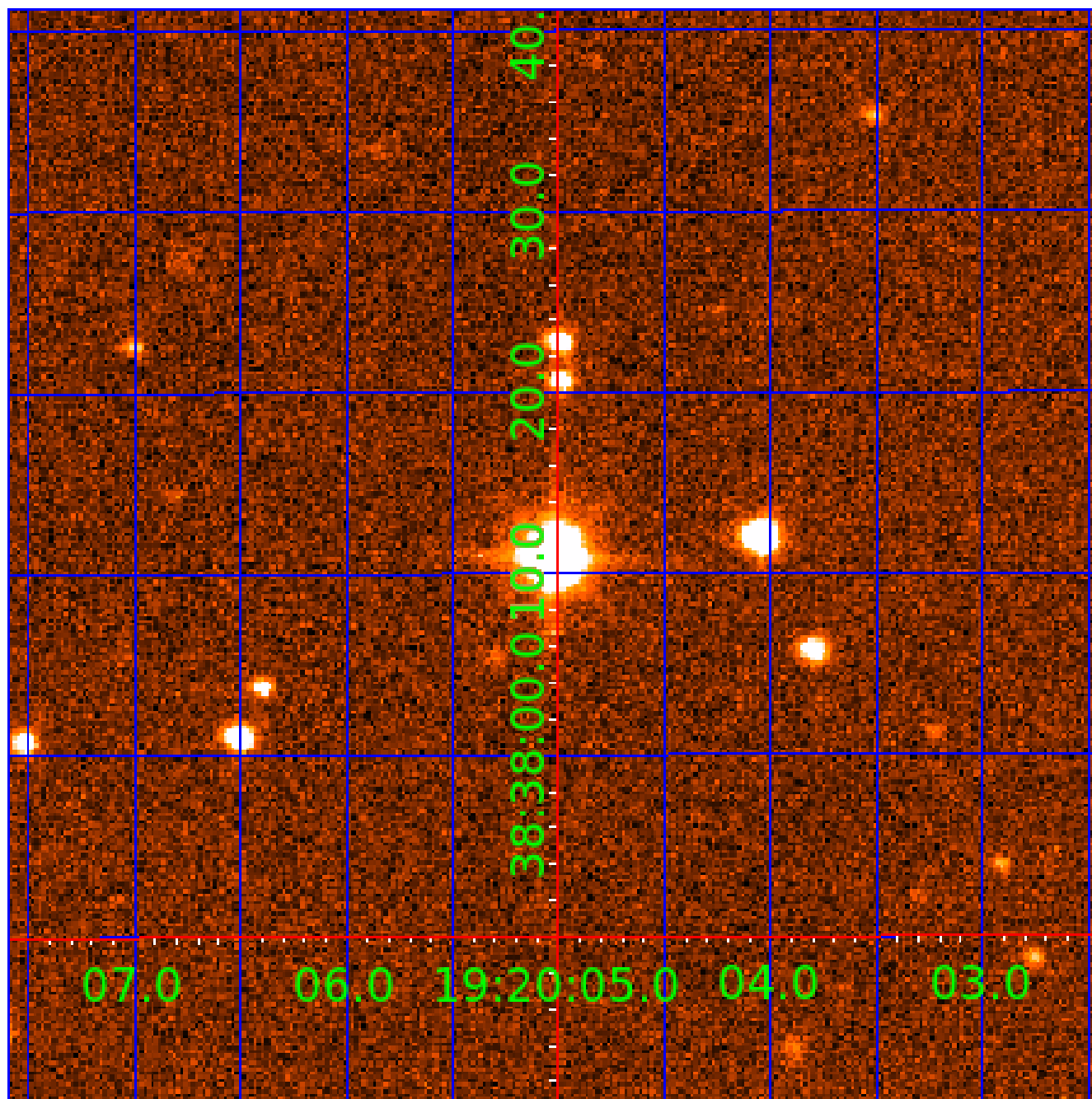


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UKIRT Image

Declination



KIC 003539632

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003539632-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
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N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

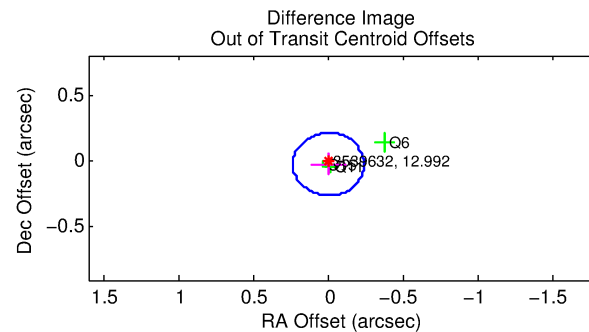
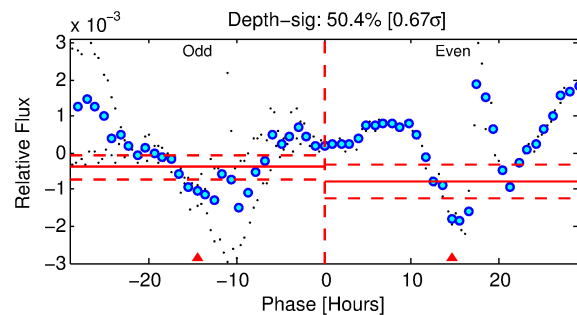
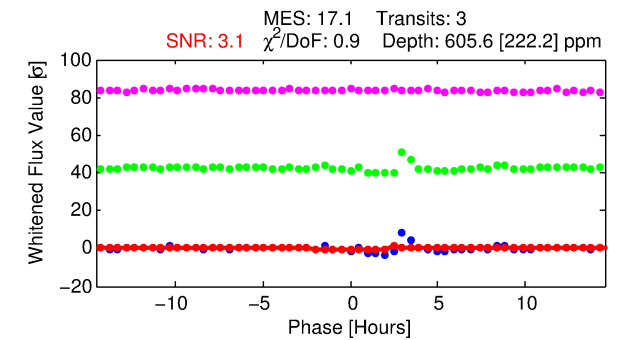
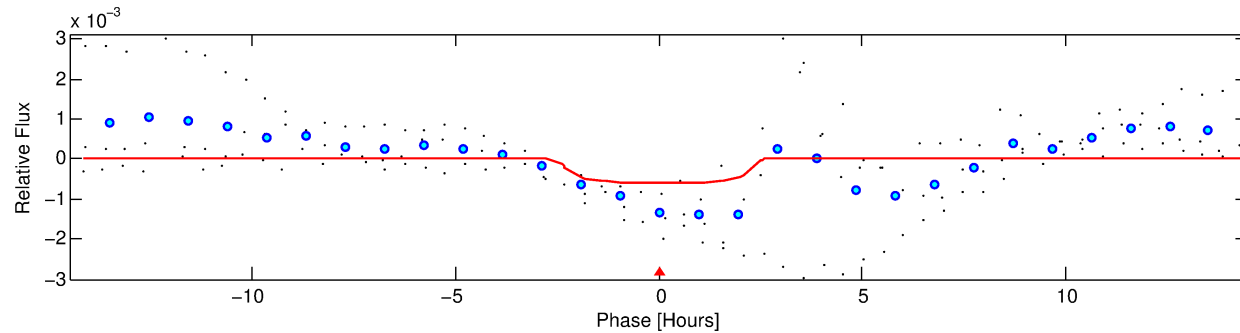
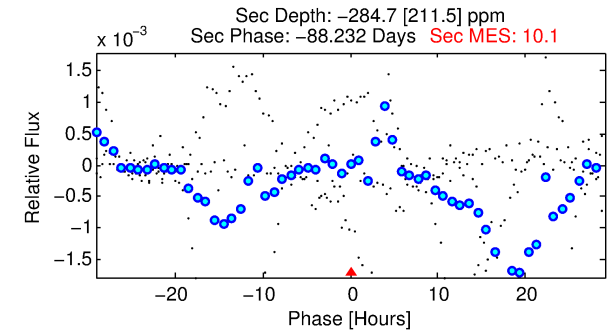
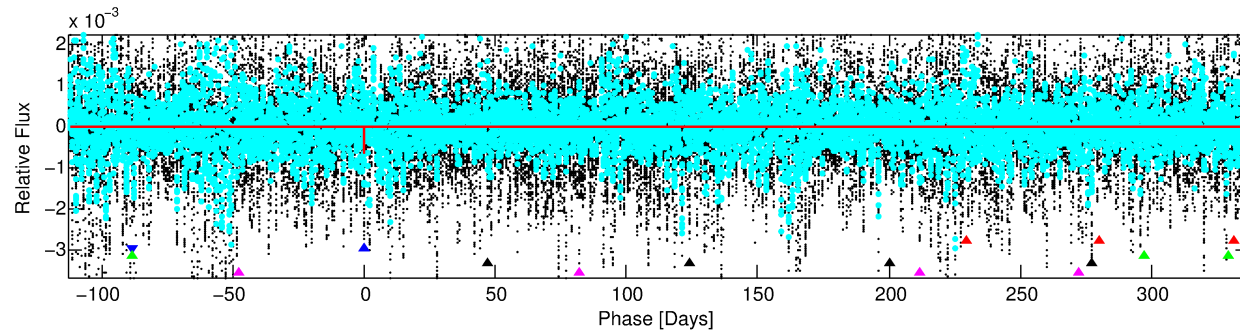
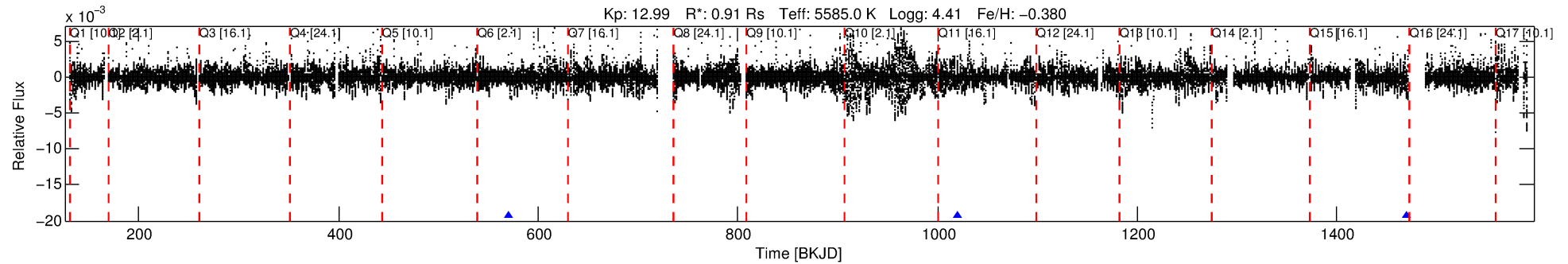
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003539632-02

No Significant Match Found

DV One-Page Summary

KIC: 3539632 Candidate: 2 of 5 Period: 449.065 d



DV Fit Results:

Period = 449.06493 [0.00687] d
Epoch = 570.8346 [0.0098] BKJD
Rp/R* = 0.0232 [0.0301]
a/R* = 617.62 [3399.82]
b = 0.54 [7.30]
Seff = 0.65 [0.24]
Teq = 229 [22] K
Rp = 2.30 [3.06] Re
a = 1.0542 [0.2494] AU
Ag = N/A
Teffp = N/A

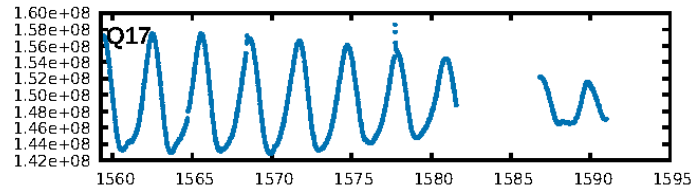
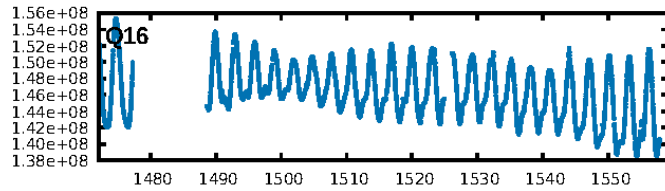
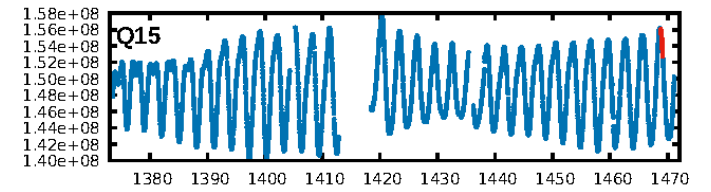
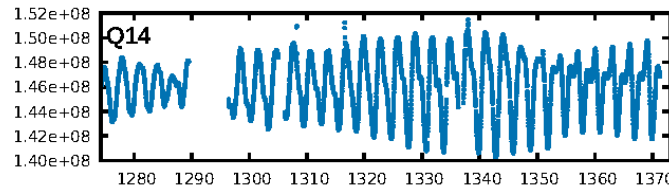
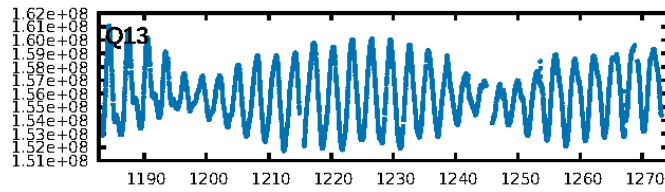
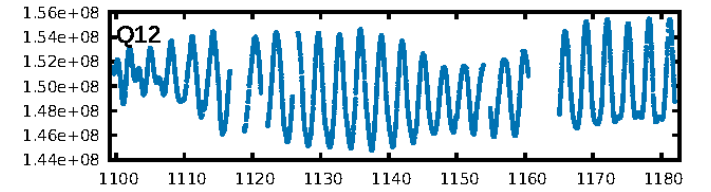
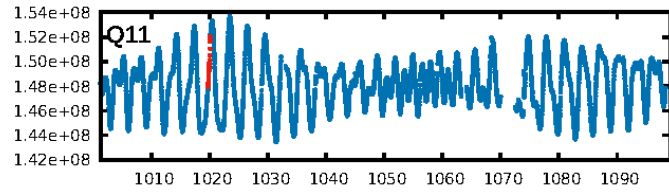
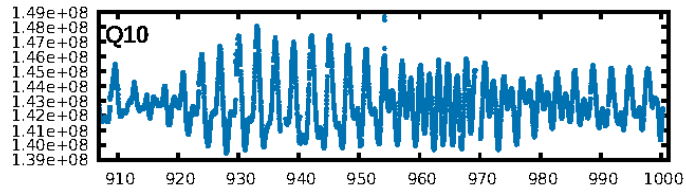
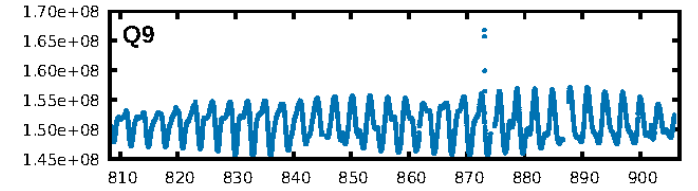
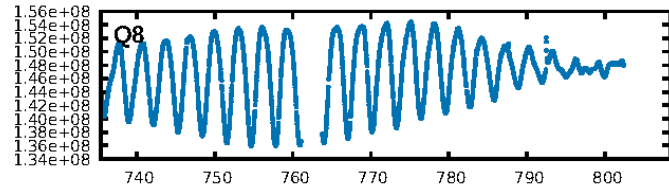
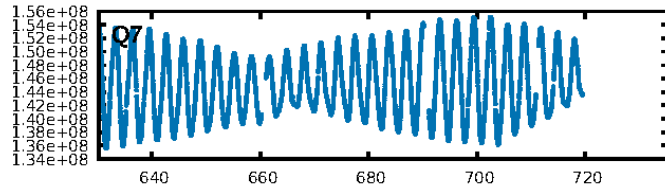
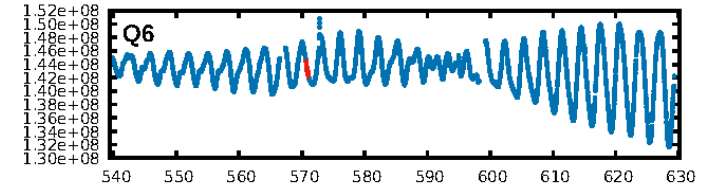
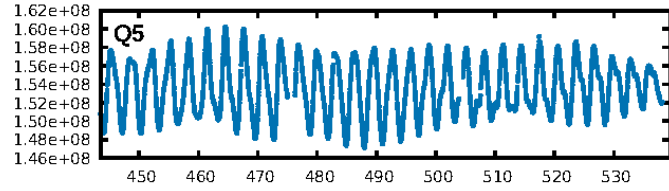
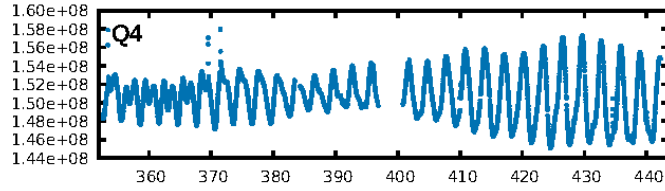
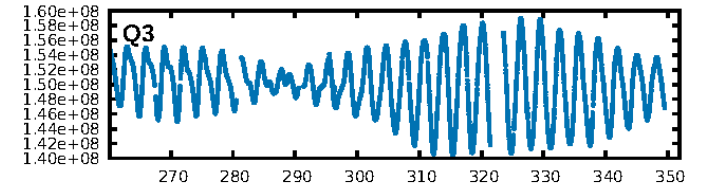
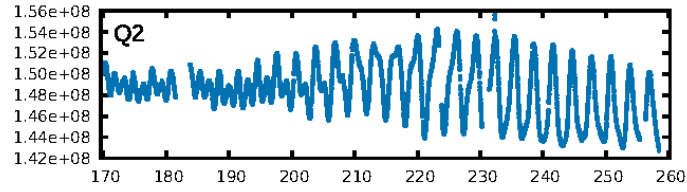
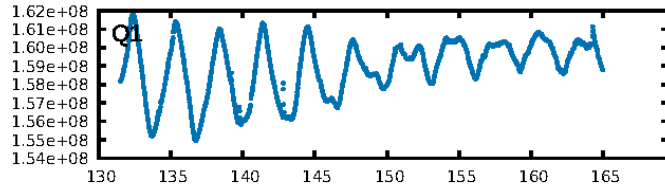
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [136.86 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.7%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.6812
Centroid-sig: 8.3%
Centroid-so: 1.541 arcsec [1.27 σ]
OotOffset-rm: 0.025 arcsec [0.31 σ]
KicOffset-rm: 0.043 arcsec [0.59 σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

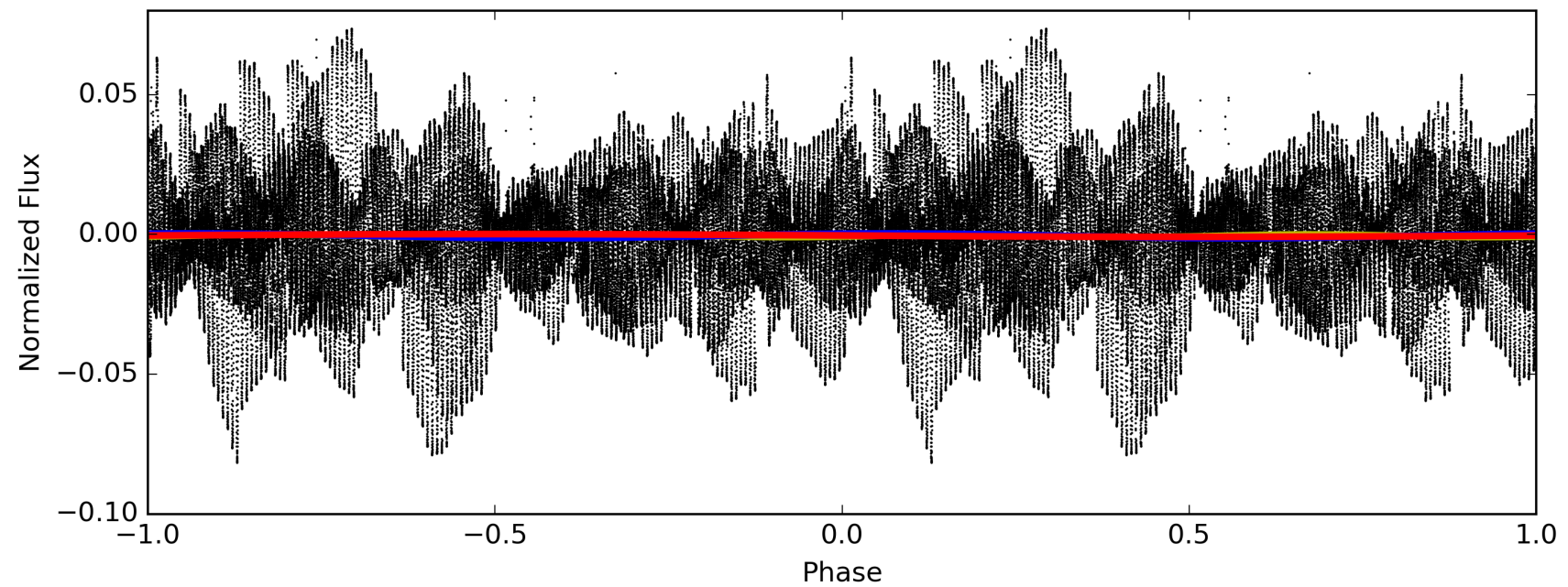
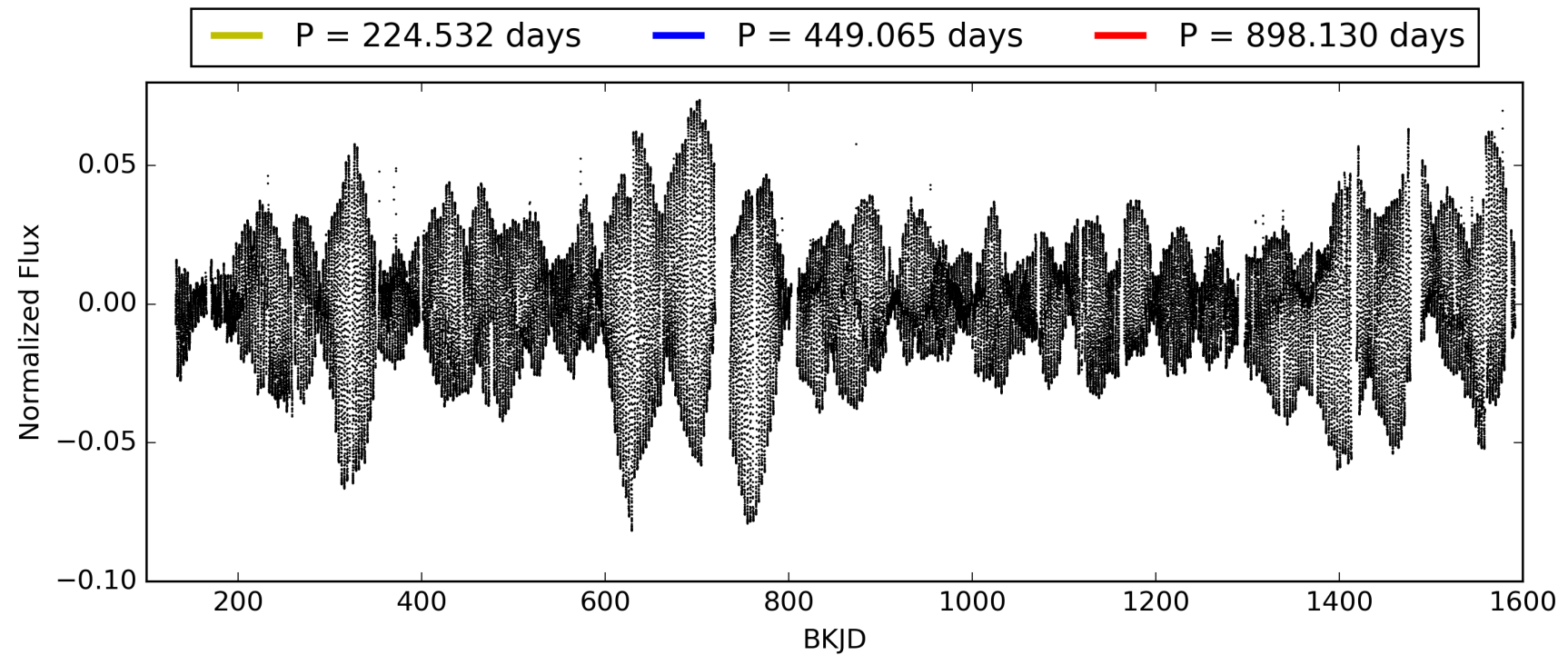
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:11:34 Z

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

TCE 003539632-02, PDC Light Curves

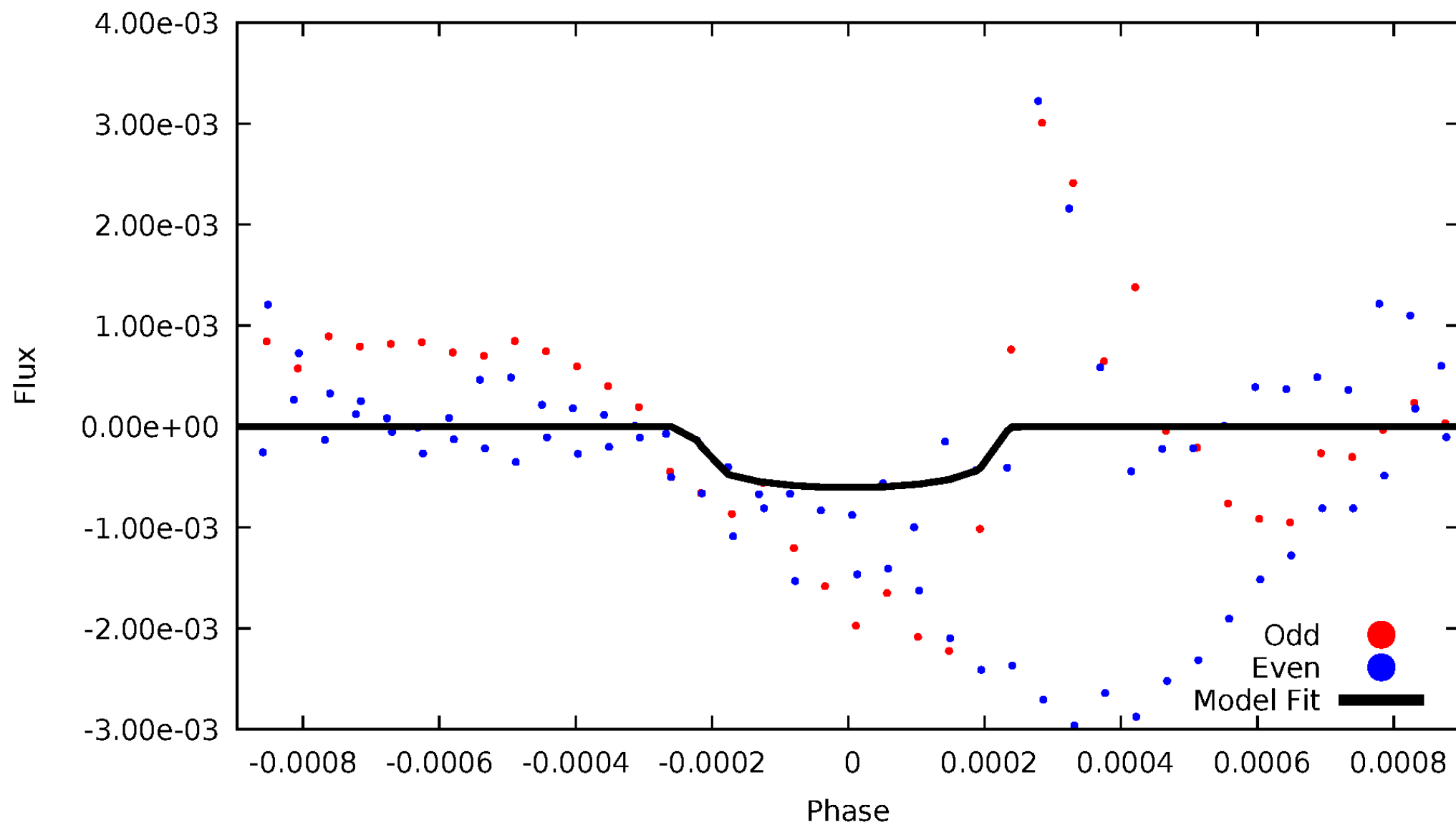


TCE 003539632-02



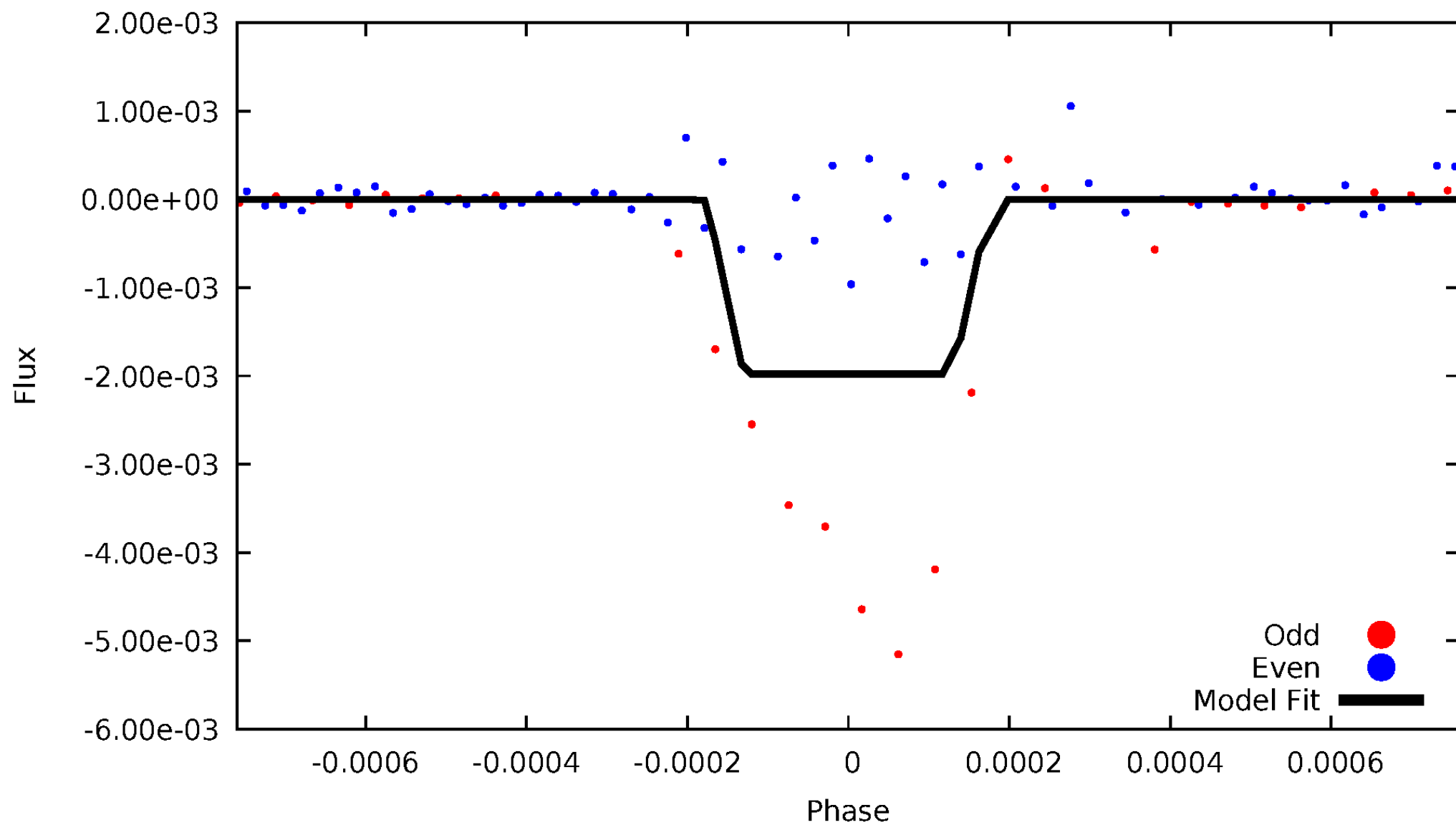
DV Odd/Even

TCE 003539632-02



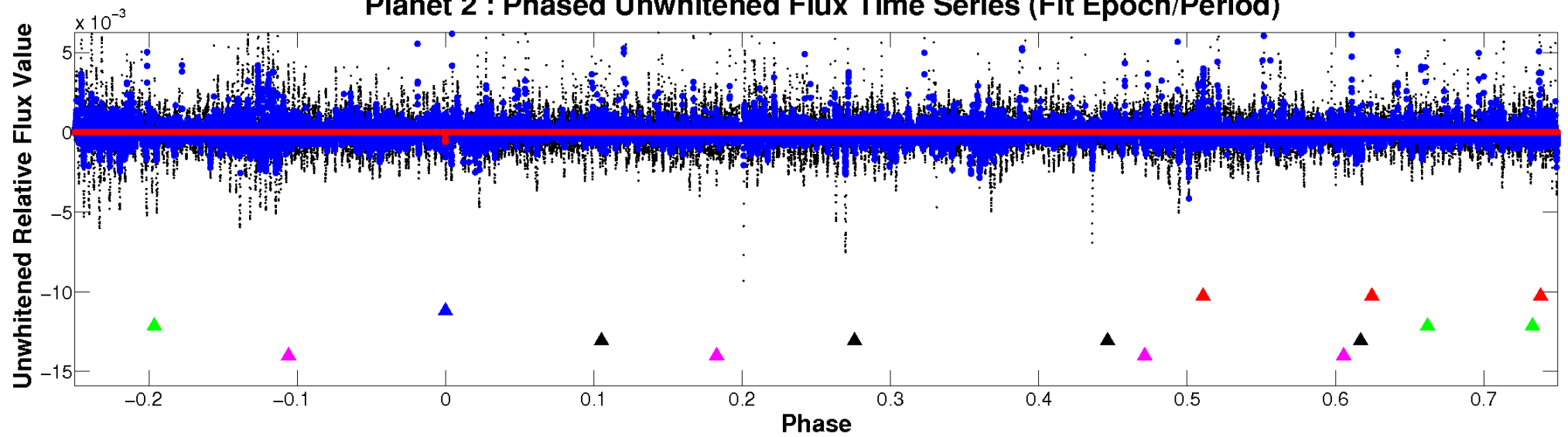
ALT Odd/Even

TCE 003539632-02

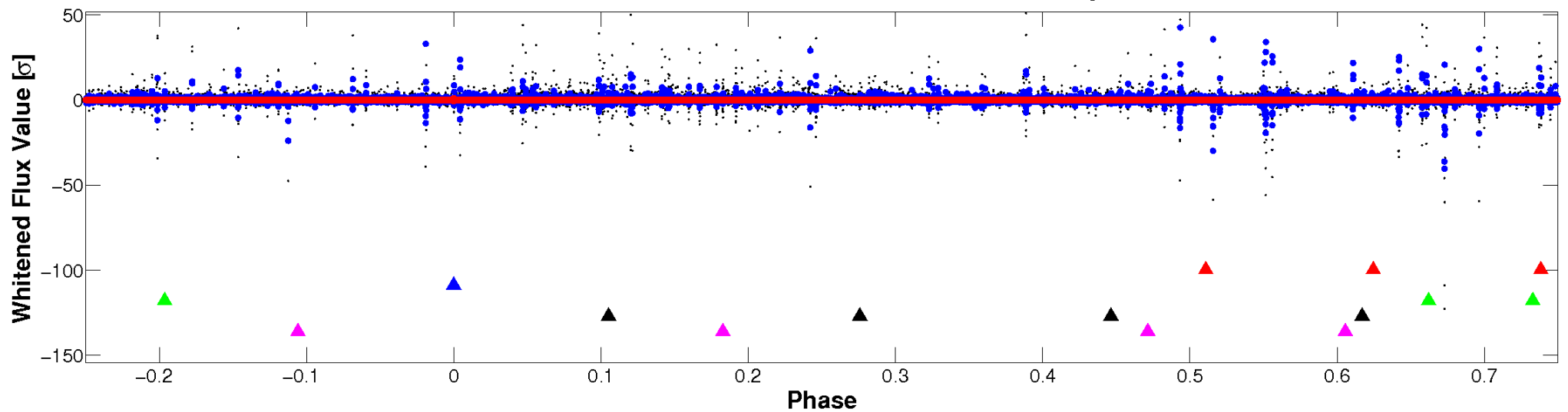


Non-Whitened Vs. Whitened Light Curve

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

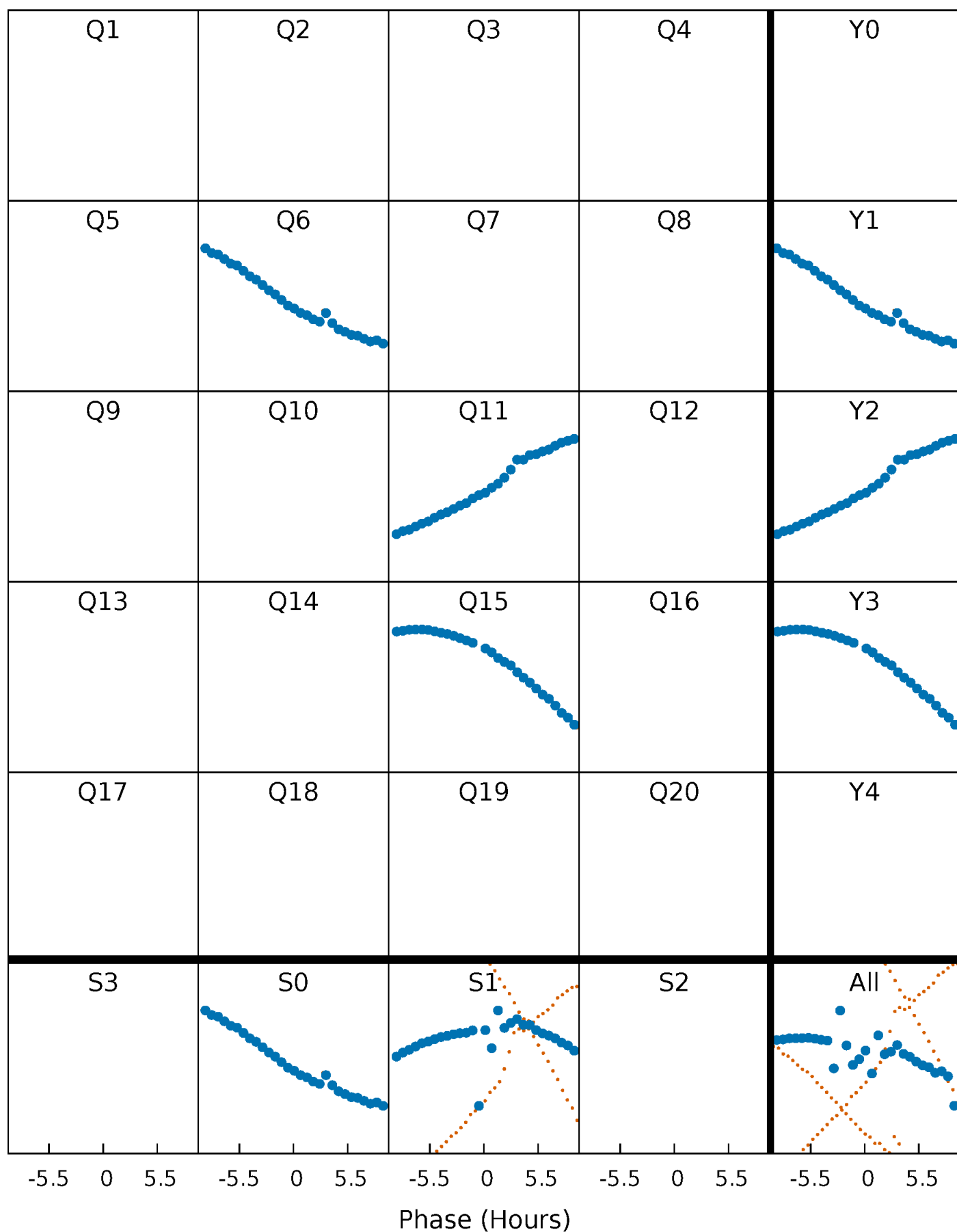


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



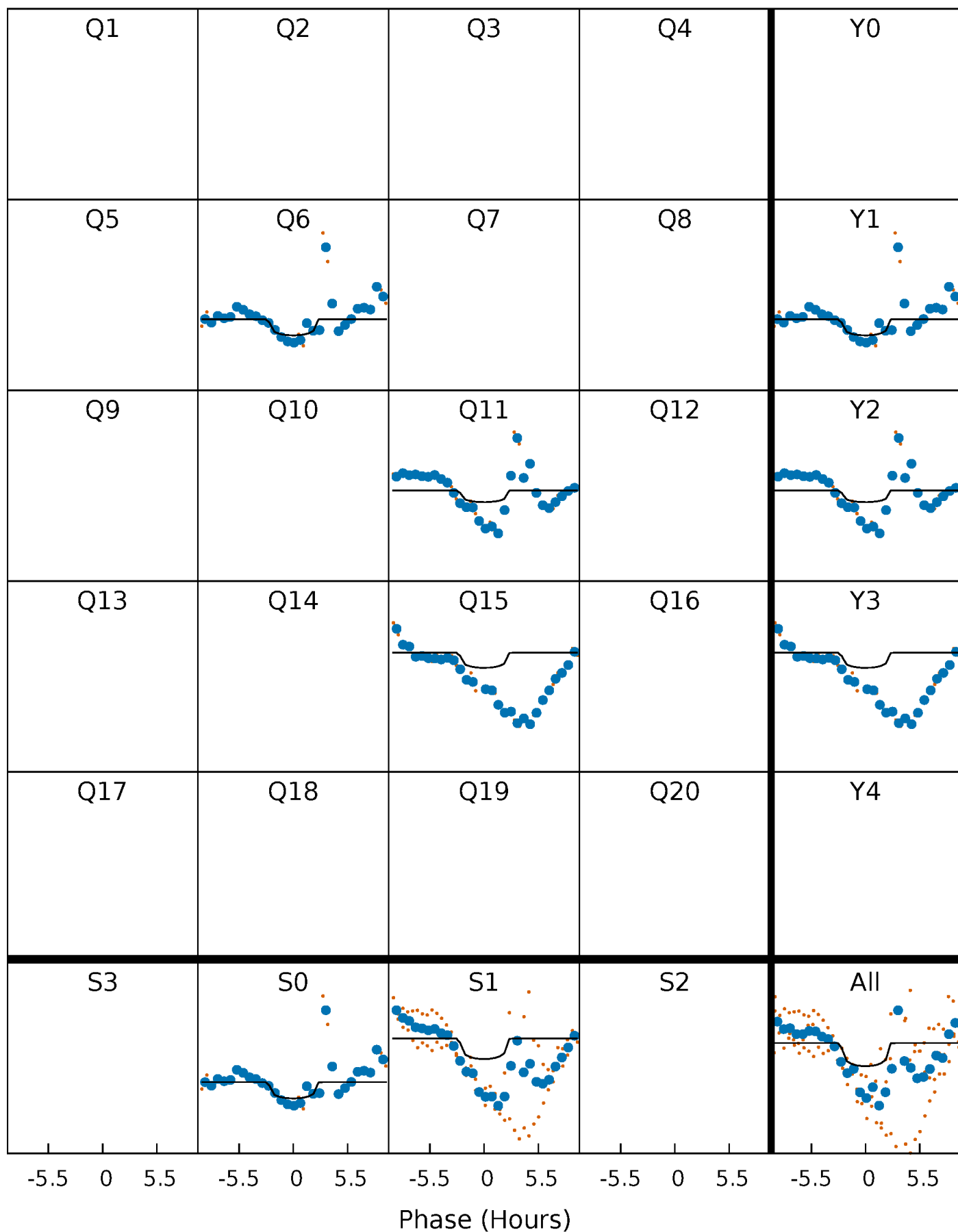
PDC Quarter-Phased Transit Curves

TCE 003539632-02 $P=449.064930$ Days $T_0=570.834635$ (BKJD)



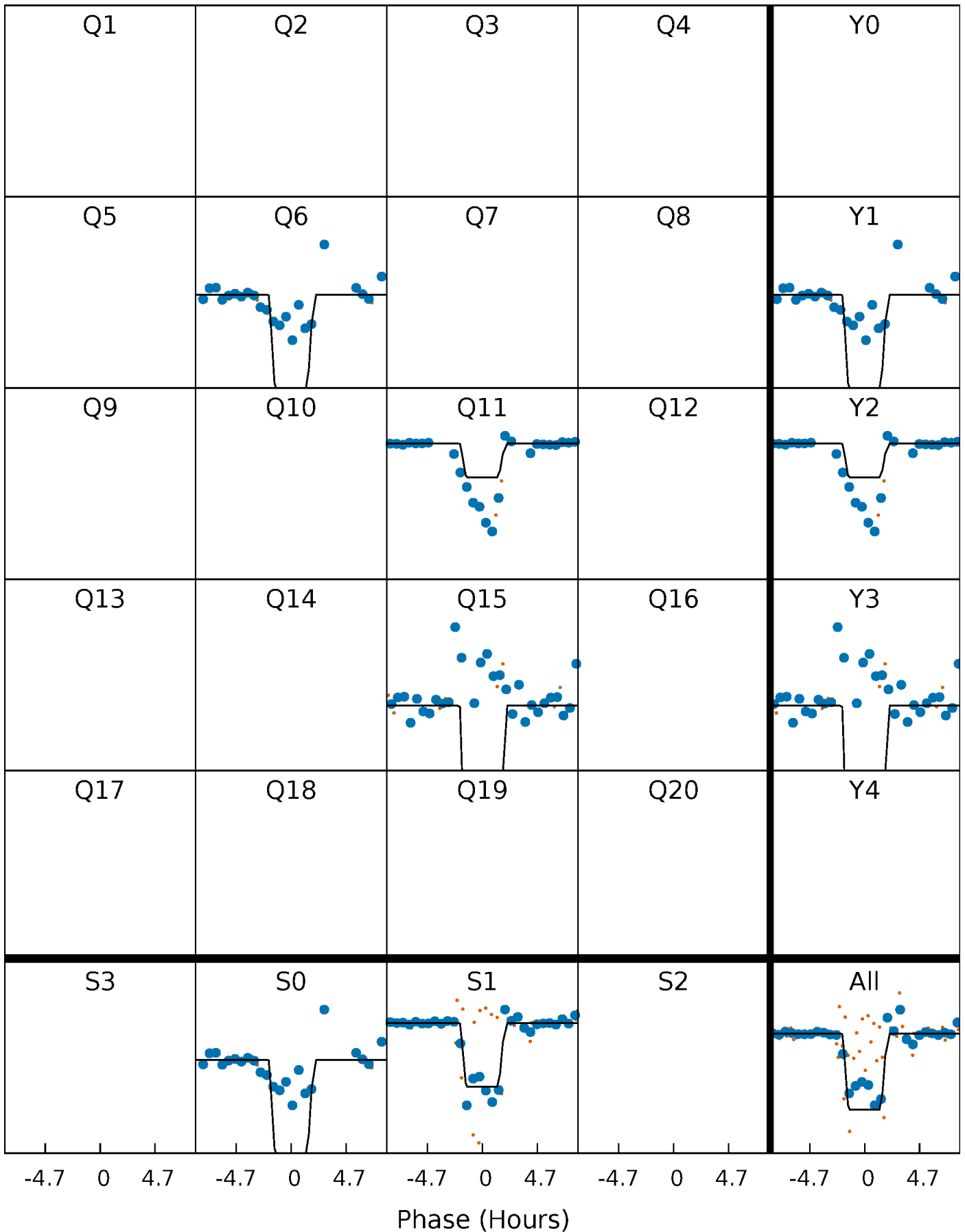
DV Quarter-Phased Transit Curves

TCE 003539632-02 $P=449.064930$ Days $T_0=570.834635$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

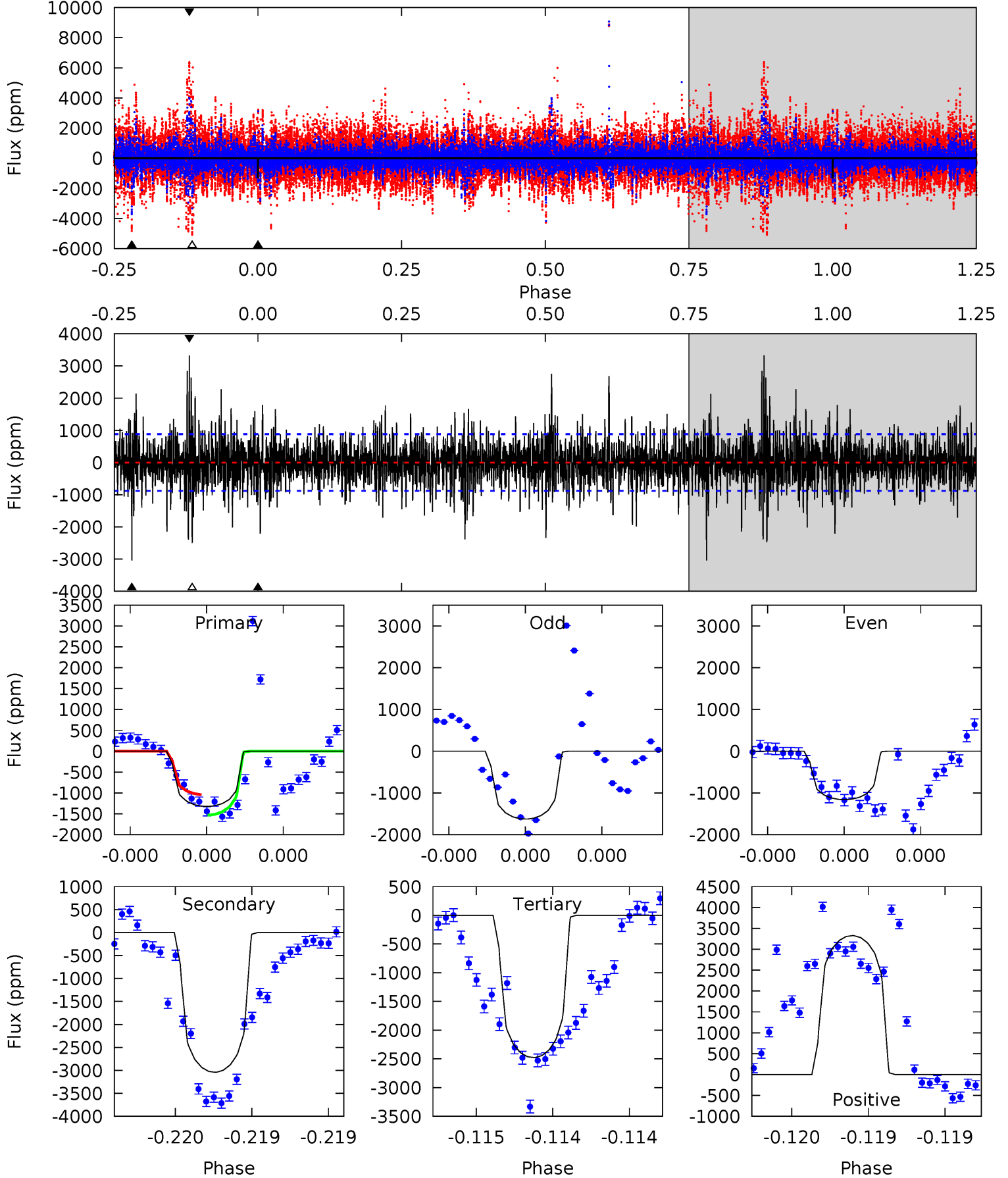
TCE 003539632-02 P=449.061537 Days $T_0=570.876441$ (BKJD)



DV Model-Shift Uniqueness Test

003539632-02, P = 449.064930 Days, E = 121.769705 Days

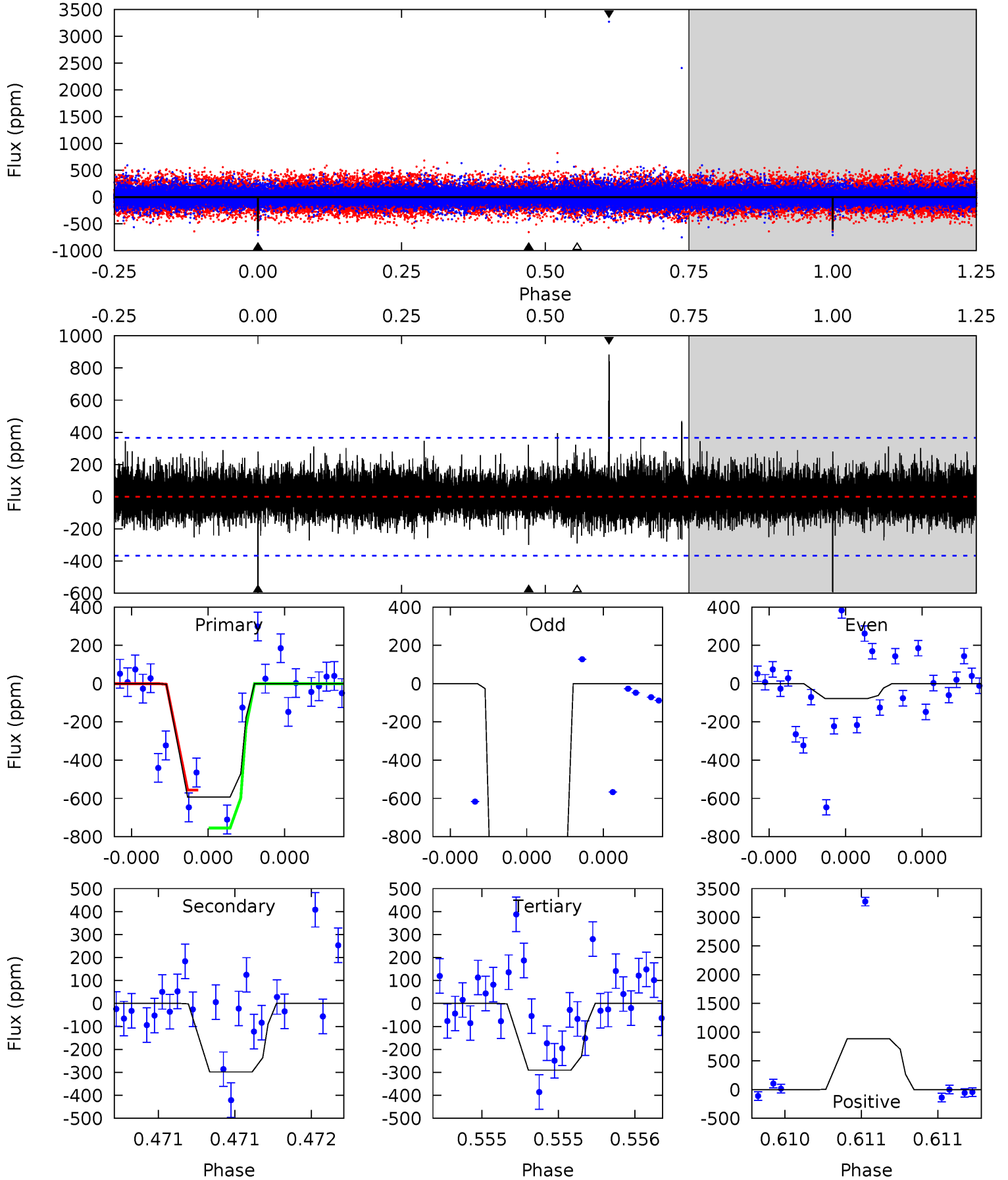
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	19.2	15.7	21.0	5.58	3.48	3.36	-7.30	-12.7	3.57	-1.80	0.97	0.82	0.52	1.50



Alt Model-Shift Uniqueness Test

003539632-02, P = 449.061537 Days, E = 121.814904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.14	4.59	4.48	13.6	5.65	3.59	1.02	4.66	-4.48	0.12	-9.02	52.8	2.33	0.60	0



Stellar Parameters For KIC 003539632

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5585^{+152}_{-152}	$4.409^{+0.148}_{-0.204}$	$-0.380^{+0.350}_{-0.250}$	$0.910^{+0.242}_{-0.141}$	$0.773^{+0.124}_{-0.044}$	$1.447^{+1.002}_{-0.754}$
	+3%/-3%	+3%/-5%	+92%/-66%	+27%/-15%	+16%/-6%	+69%/-52%
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 003539632-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3042 ± 158	$3.16^{+2.74}_{-2.08}$	321^{+24}_{-17}	7483^{+10675}_{-2004}	$193550^{+1424651}_{-138434}$
Alt.	-298 ± 65	$4.53^{+3.21}_{-2.51}$	321^{+24}_{-19}	3785^{+1441}_{-558}	8743^{+37149}_{-5899}

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

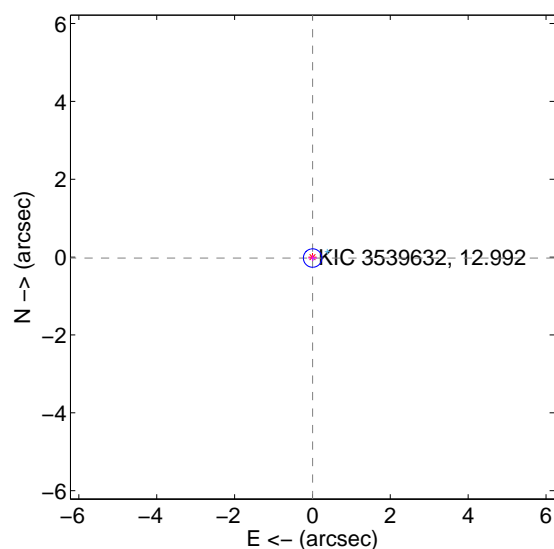
Supplemental centroid analysis for 003539632-02. Kepler magnitude: 12.99. Transit SNR 3.11

There are 2 quarters with good PRF difference image offsets

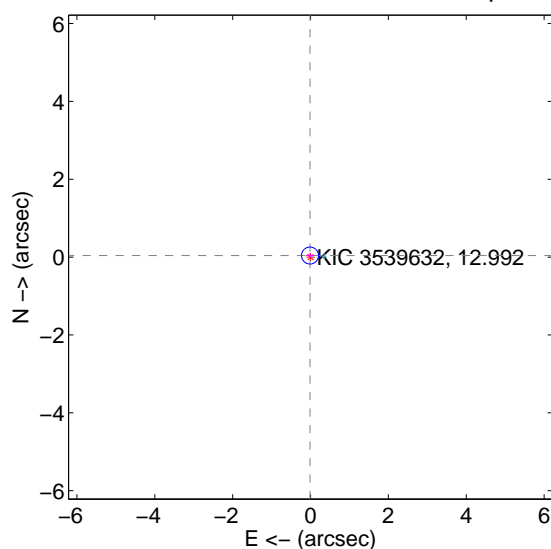
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.025 ± 0.079	0.31	-0.005 ± 0.110	-0.024 ± 0.078
PRF-fit source offset from KIC position	0.043 ± 0.073	0.59	0.014 ± 0.109	0.040 ± 0.067
photometric centroid source offset	1.54 ± 1.21	1.27	1.06 ± 1.25	-1.12 ± 1.18

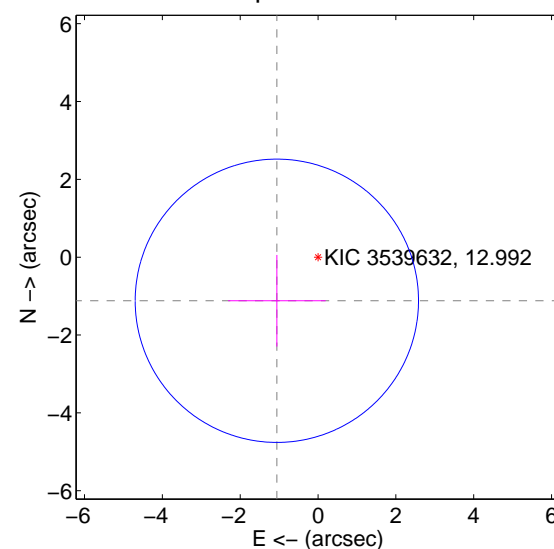
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

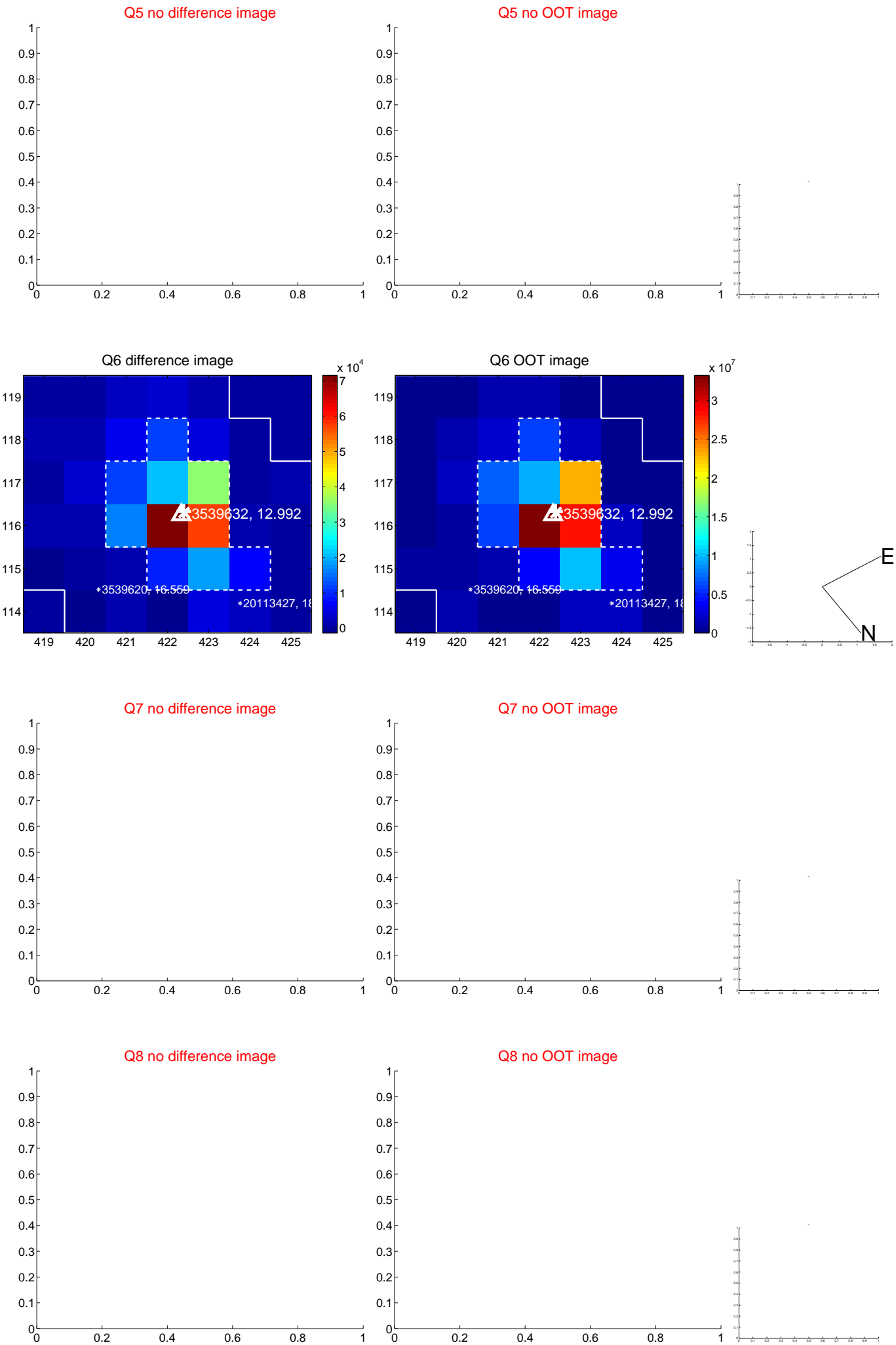


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

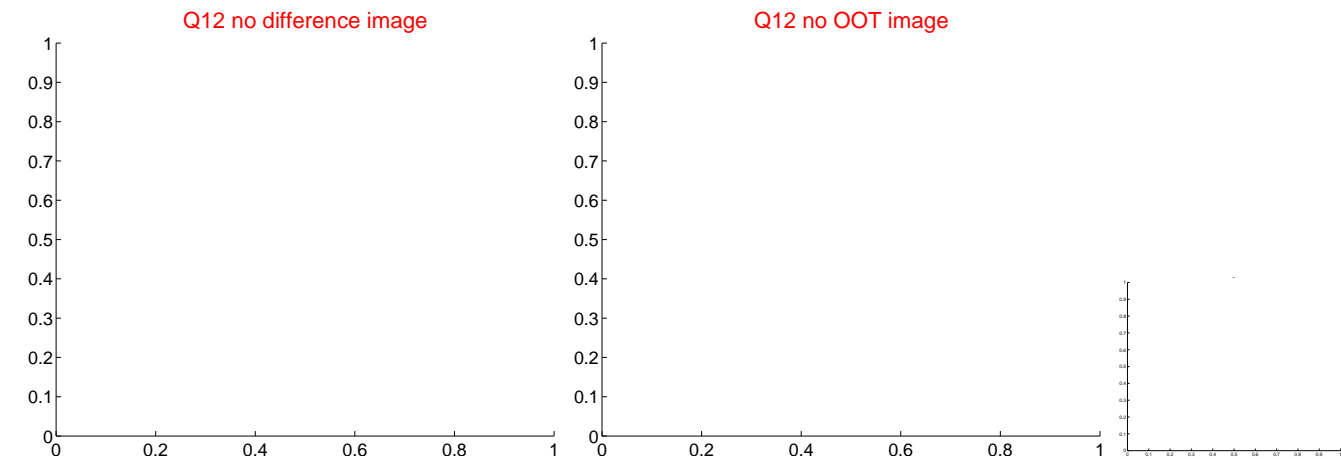
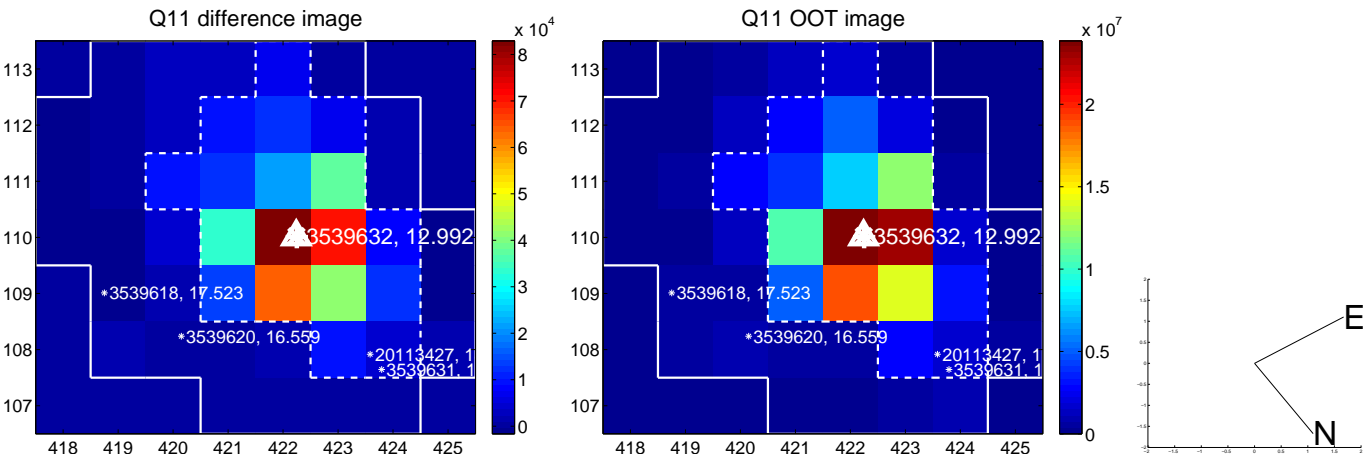
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



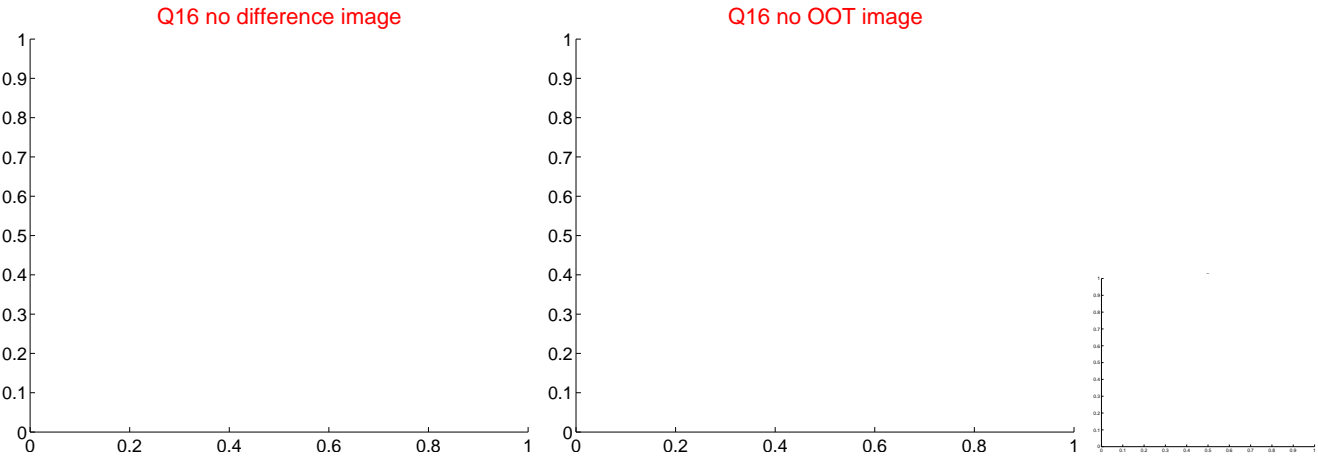
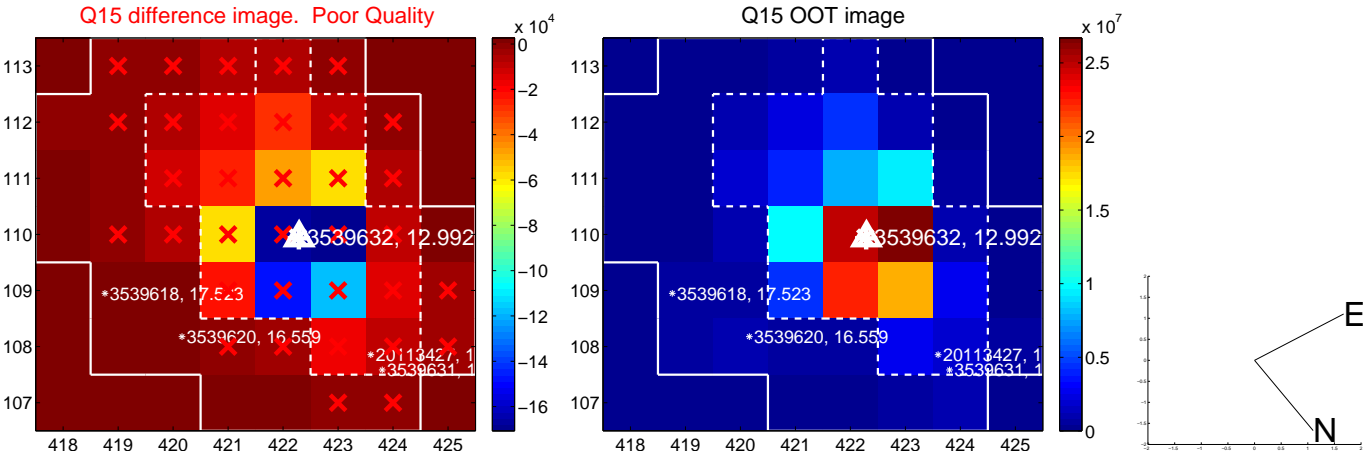
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



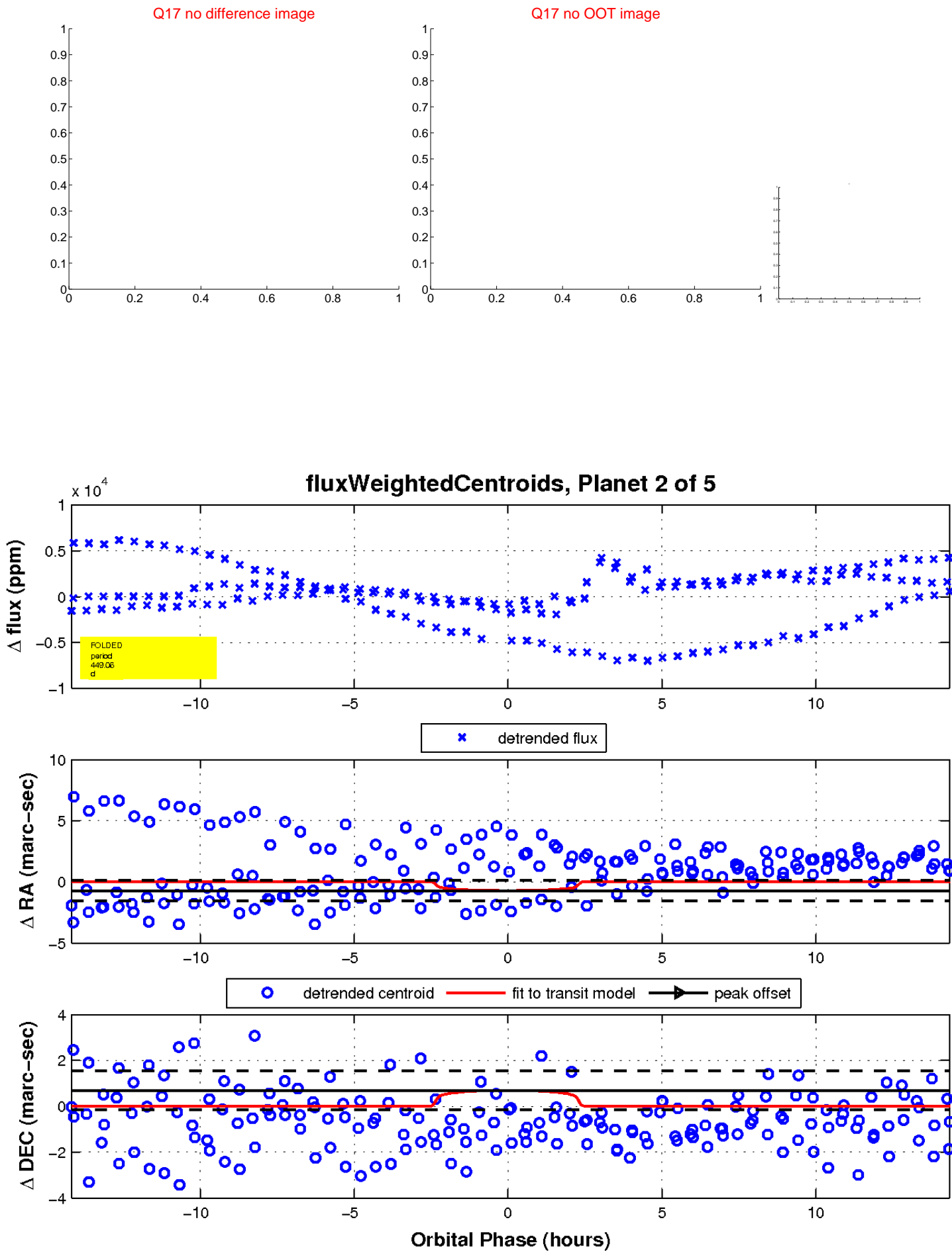
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

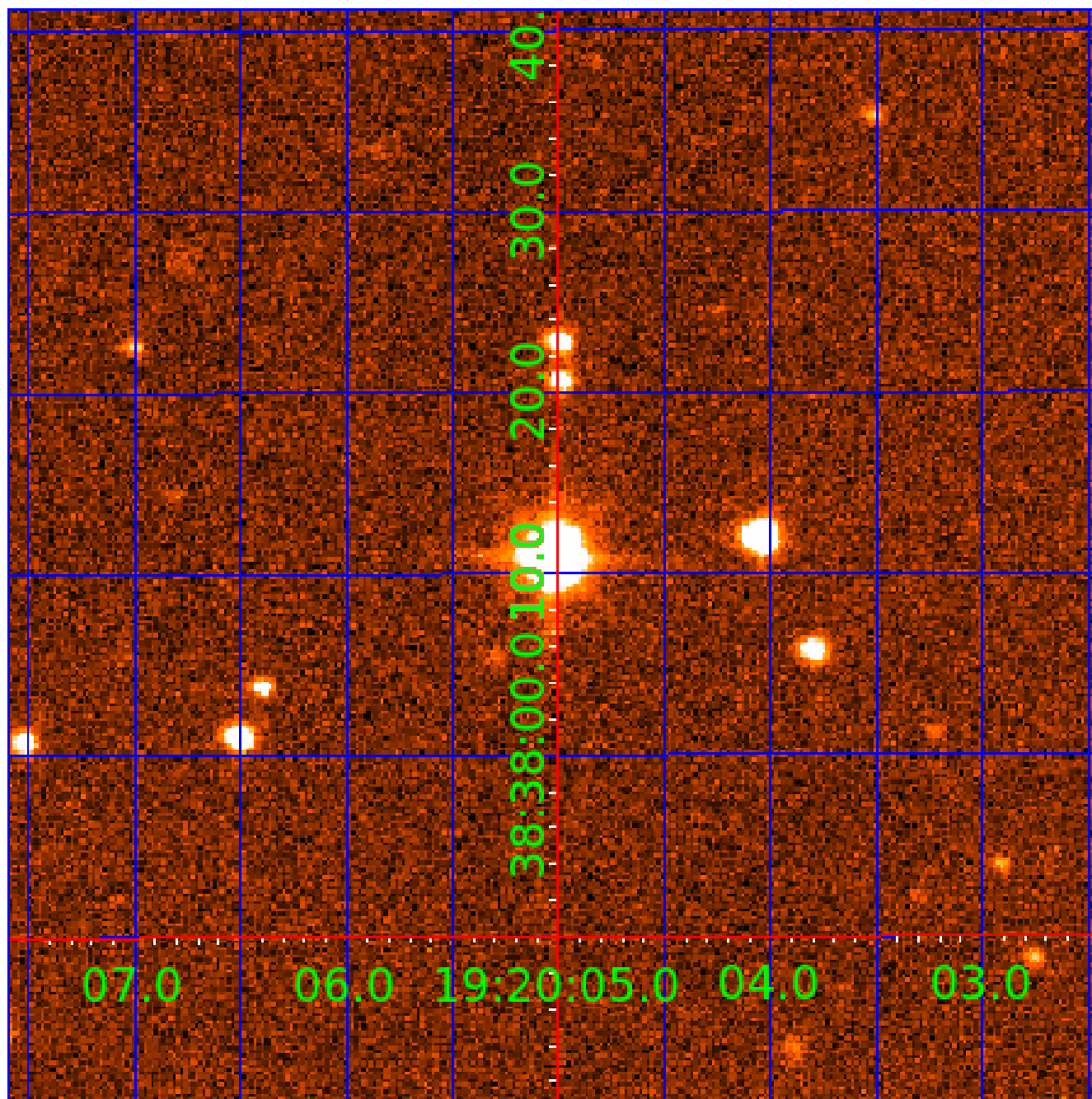


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003539632

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})
003539632-01	OBS	No	397.962776	453.351073	1166.5	5.554	21.4	5.0	0.91	5585	3.12	0.76
003539632-02	OBS	No	449.064930	570.834635	605.6	4.832	17.1	3.1	0.91	5585	2.30	0.65
003539632-03	OBS	No	417.294801	482.662898	973.4	2.774	17.4	5.7	0.91	5585	2.82	0.72
003539632-04	OBS	No	372.449201	398.848728	1143.6	2.934	13.3	7.3	0.91	5585	3.24	0.83
003539632-05	OBS	No	319.463176	333.463325	1275.0	3.000	22.4	-1.0	0.91	5585	3.22	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003539632-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003539632-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

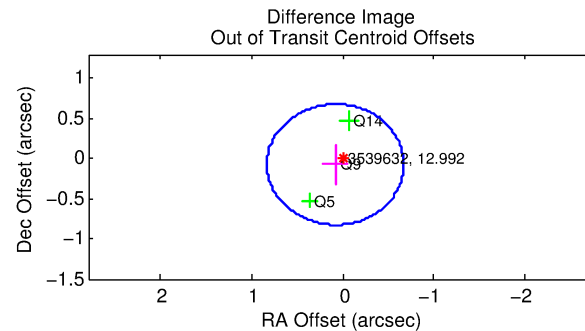
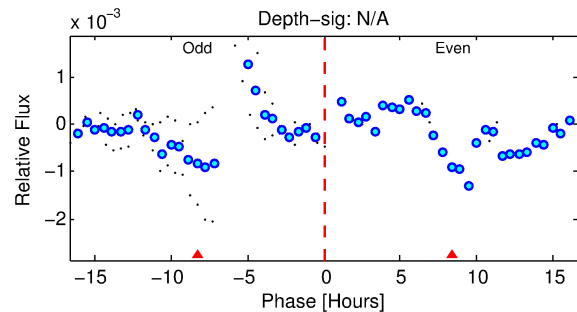
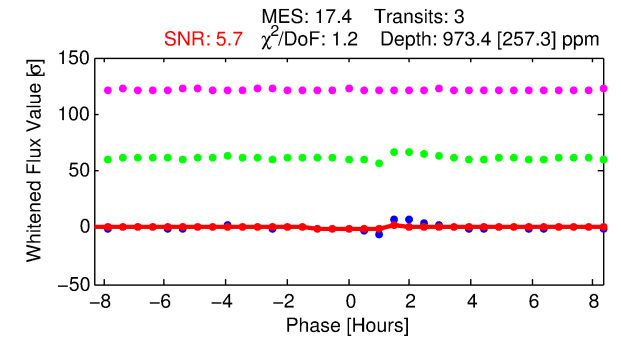
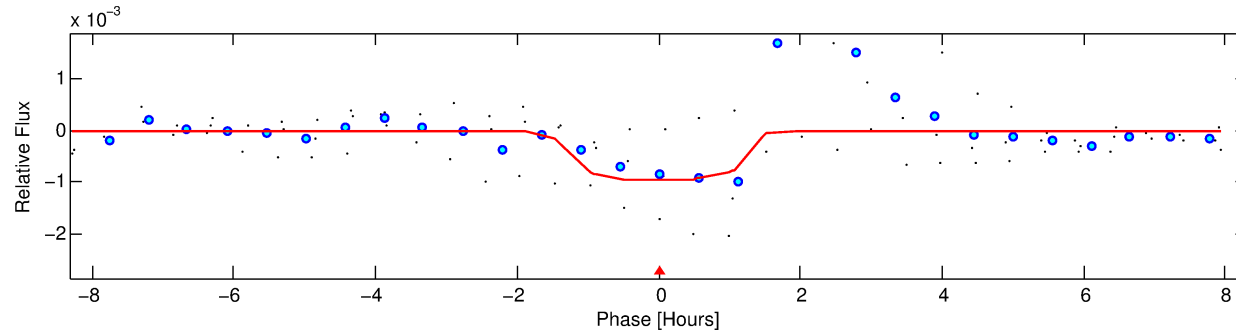
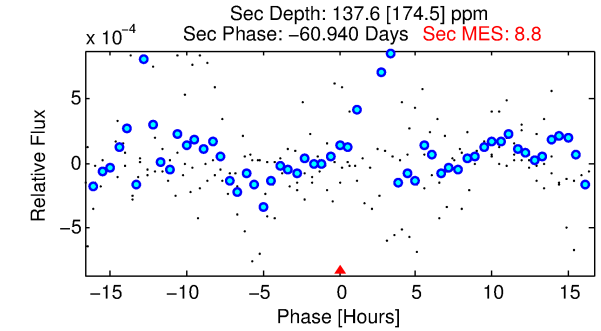
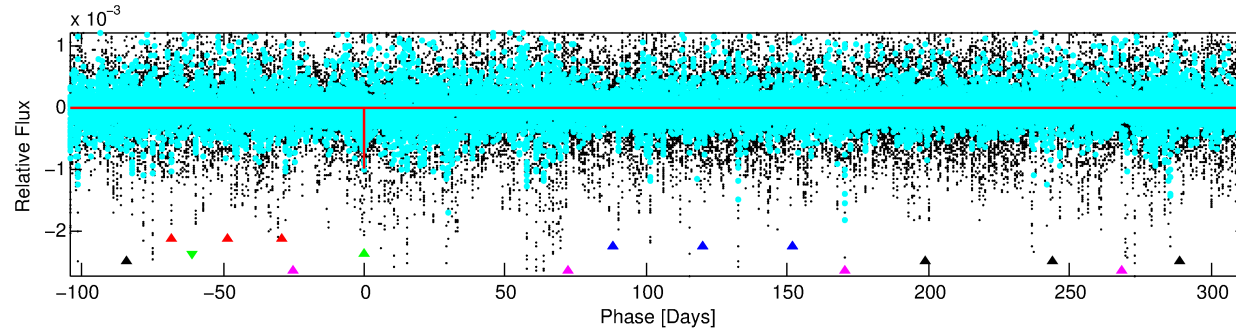
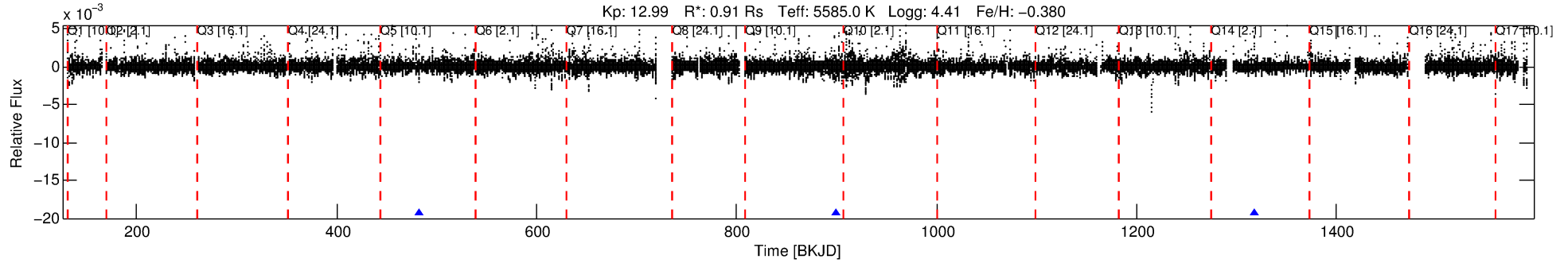
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003539632-03

No Significant Match Found

DV One-Page Summary

KIC: 3539632 Candidate: 3 of 5 Period: 417.295 d



DV Fit Results:

Period = 417.29480 [0.00564] d
Epoch = 482.6629 [0.0075] BKJD
Rp/R* = 0.0284 [0.2074]
a/R* = 1160.03 [37086.08]
b = 0.20 [157.97]
Seff = 0.72 [0.27]
Teq = 235 [22] K
Rp = 2.82 [20.60] Re
a = 1.0039 [0.2375] AU
Ag = 9559.82 [139952.86] [0.07 σ]
Teffp = 3586 [13122] K [0.26 σ]

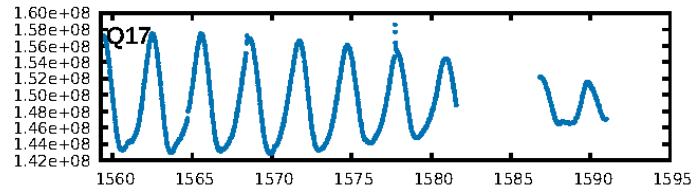
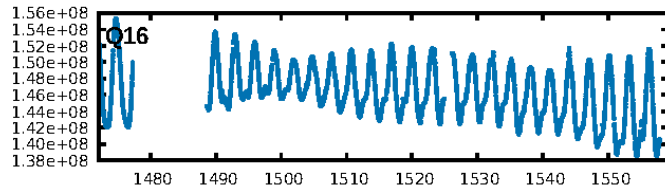
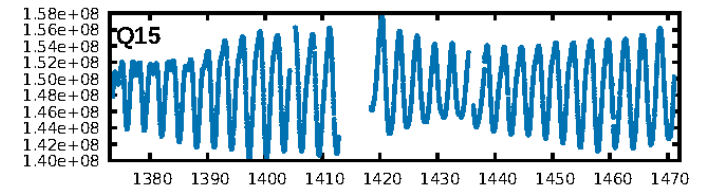
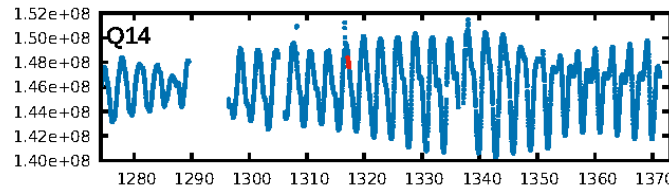
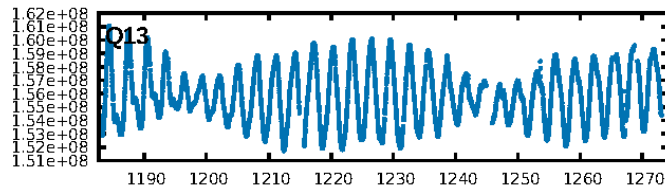
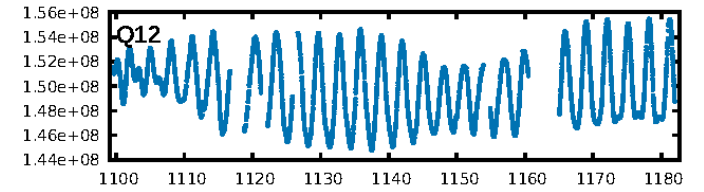
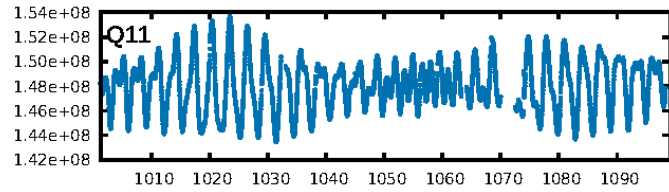
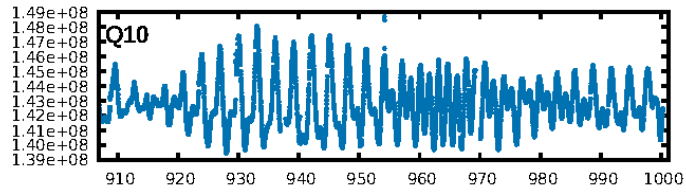
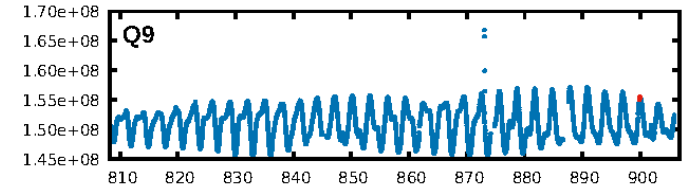
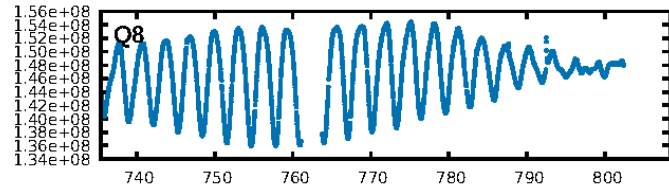
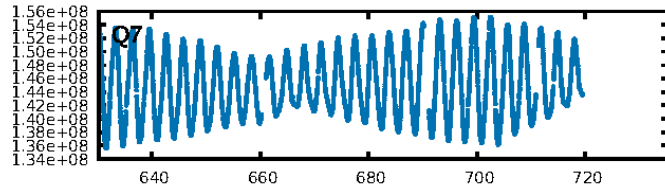
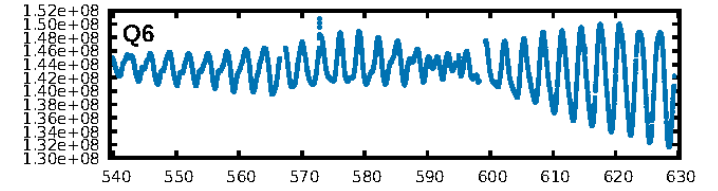
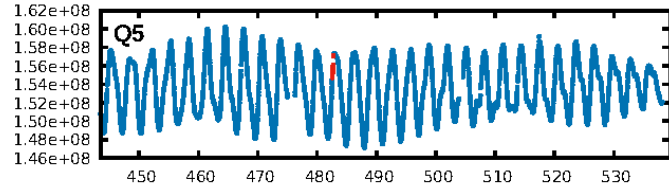
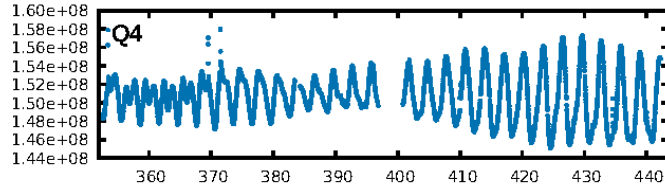
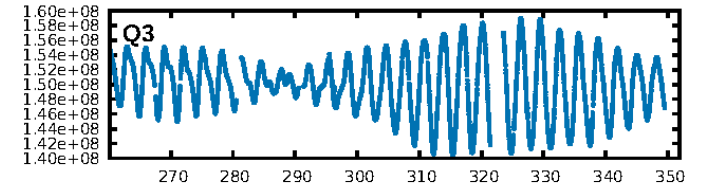
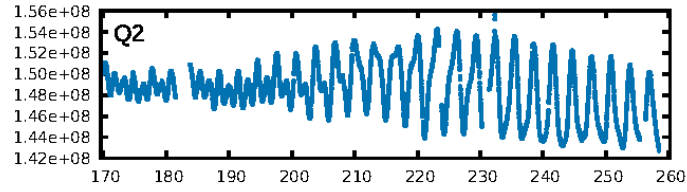
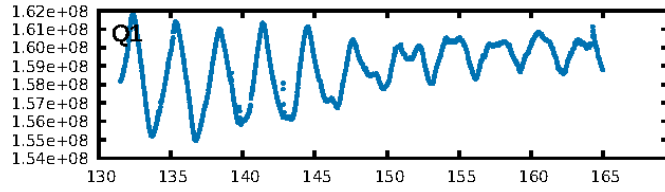
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [74.73 σ]
LongPeriod-sig: 100.0% [136.86 σ]
ModelChiSquare2-sig: 6.9%
ModelChiSquareGof-sig: 65.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.12
Centroid-sig: 97.4%
Centroid-so: 0.136 arcsec [0.17 σ]
OotOffset-rm: 0.109 arcsec [0.43 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 0.187 arcsec [1.70 σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

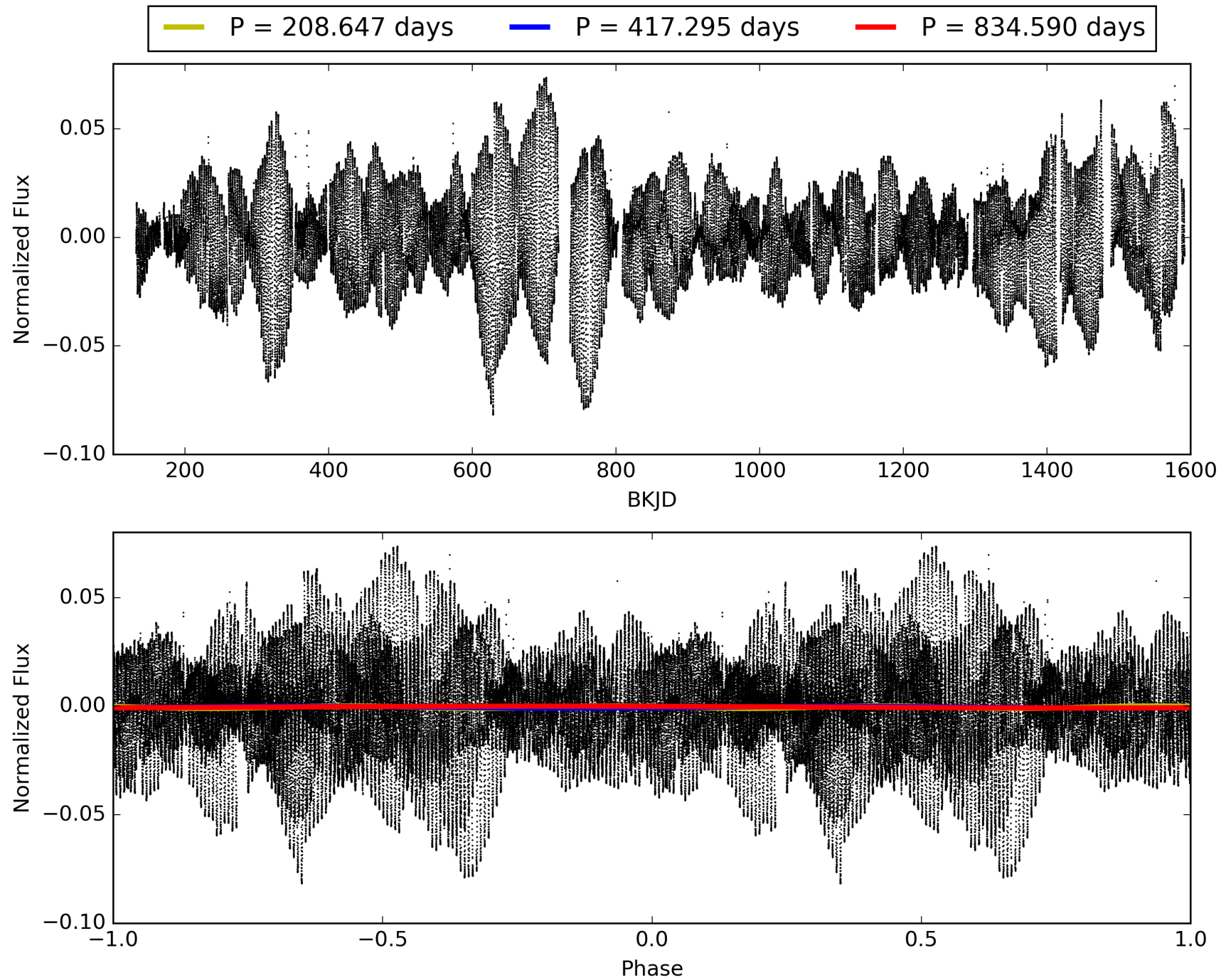
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:11:55 Z

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

TCE 003539632-03, PDC Light Curves

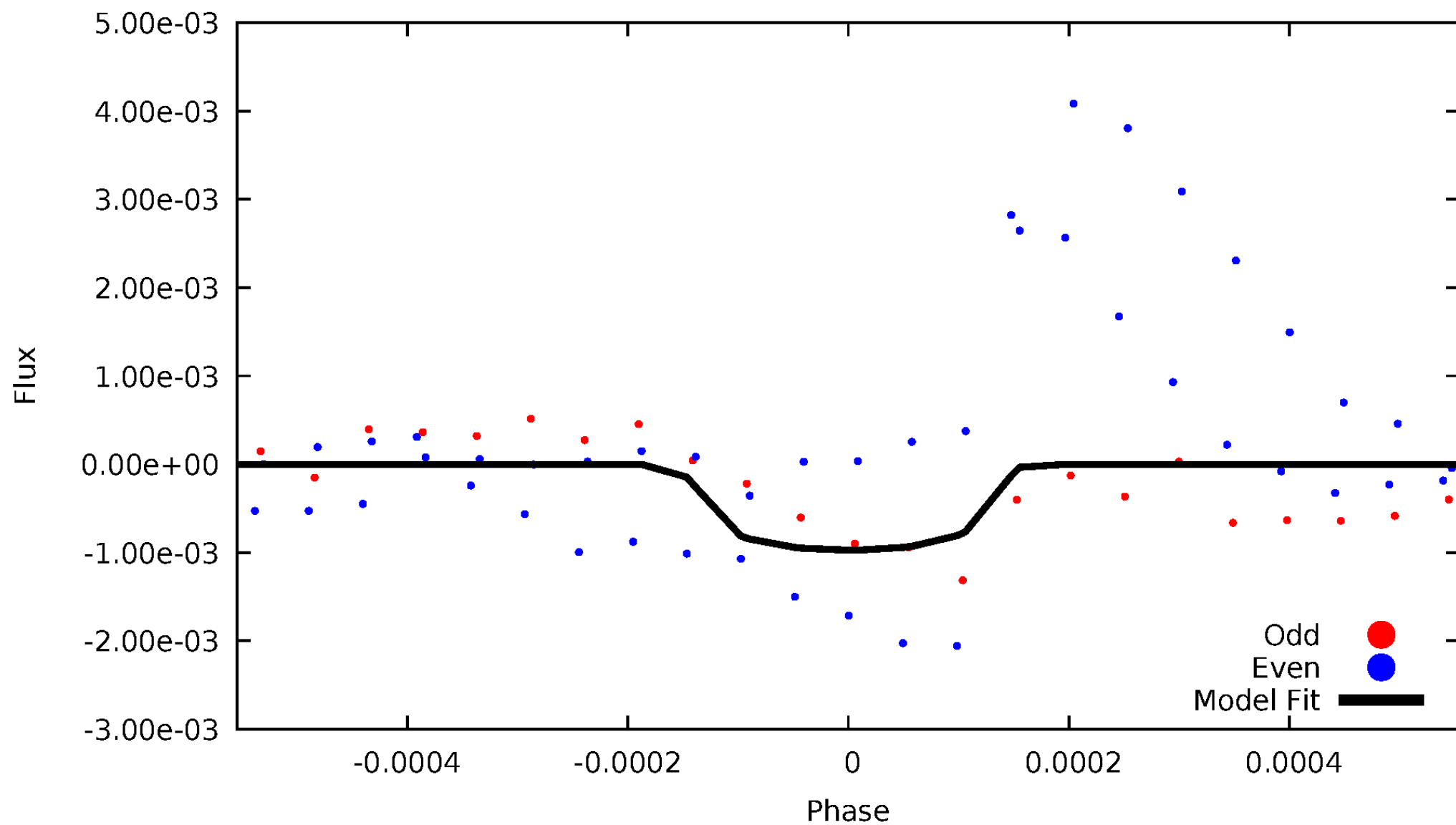


TCE 003539632-03



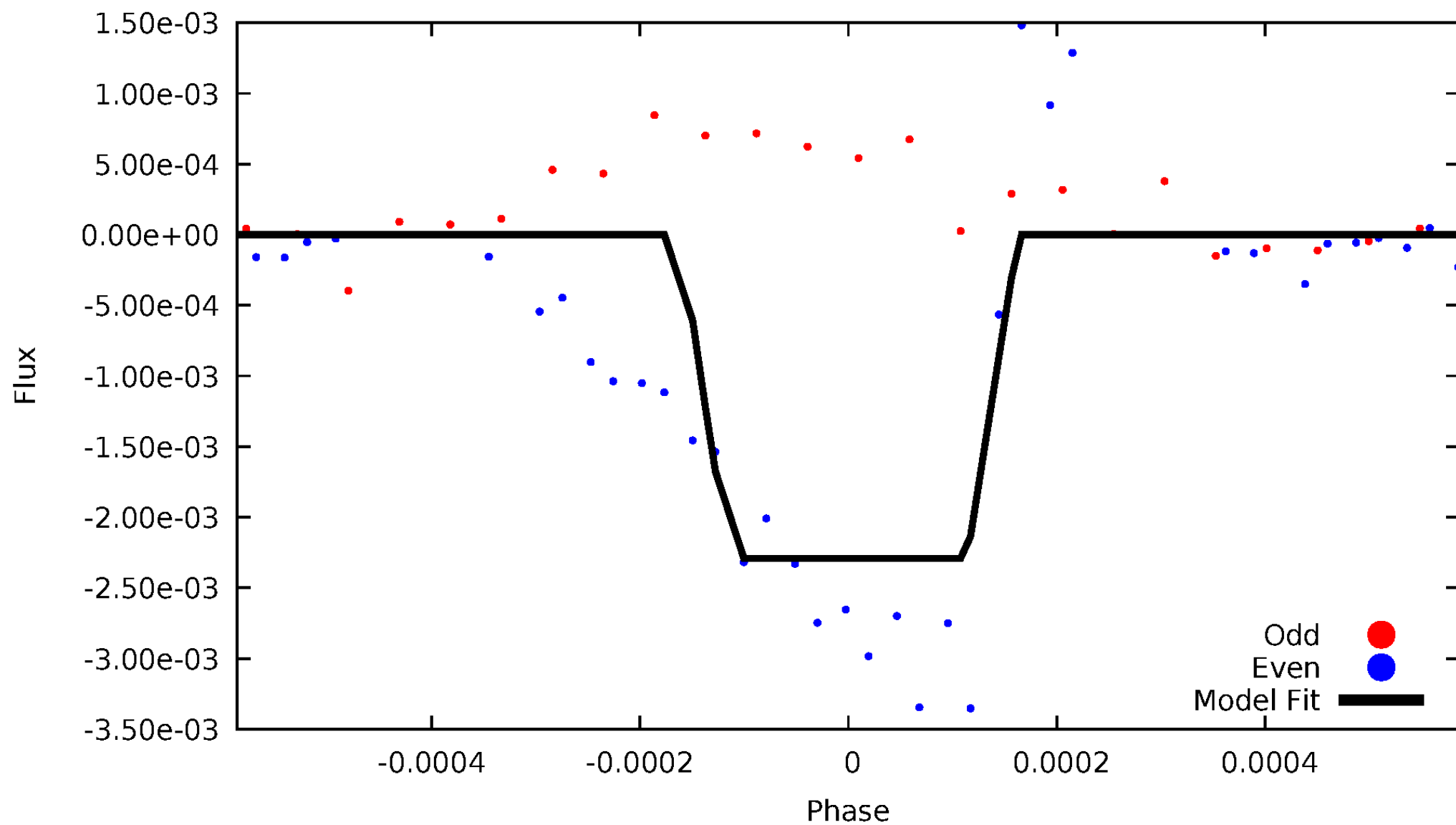
DV Odd/Even

TCE 003539632-03



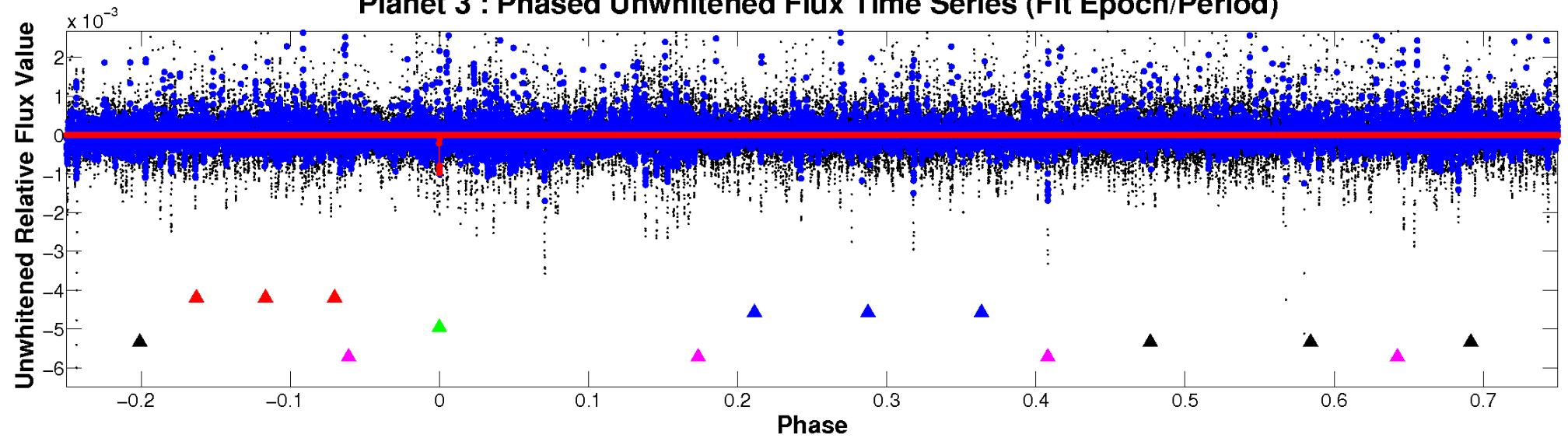
ALT Odd/Even

TCE 003539632-03

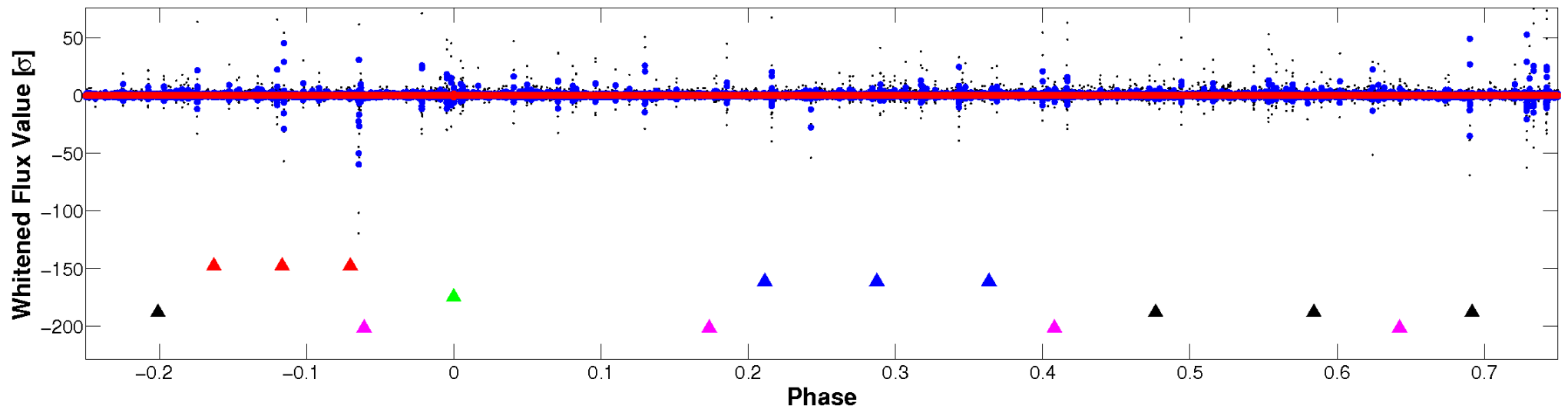


Non-Whitened Vs. Whitened Light Curve

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

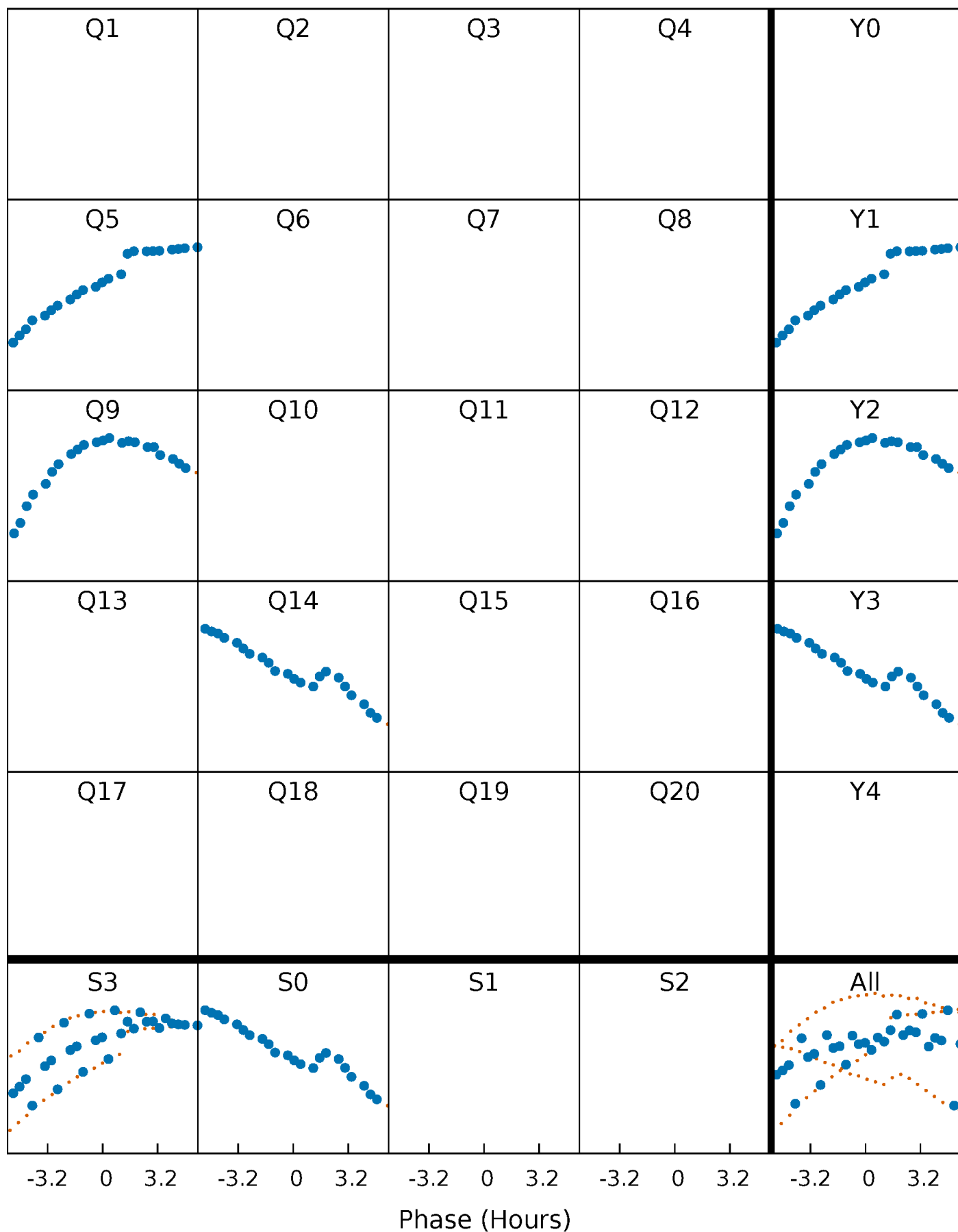


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



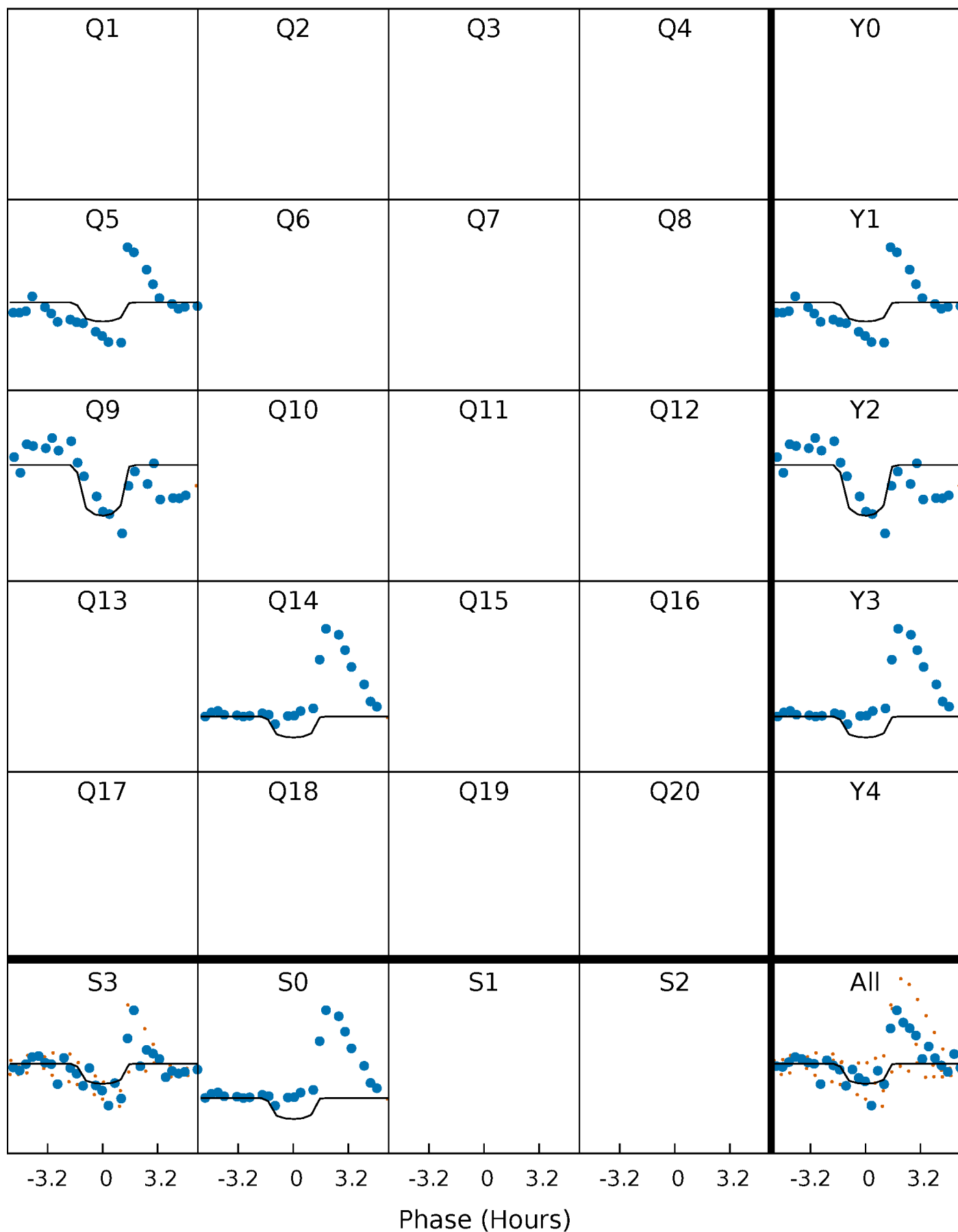
PDC Quarter-Phased Transit Curves

TCE 003539632-03 P=417.294801 Days $T_0=482.662898$ (BKJD)



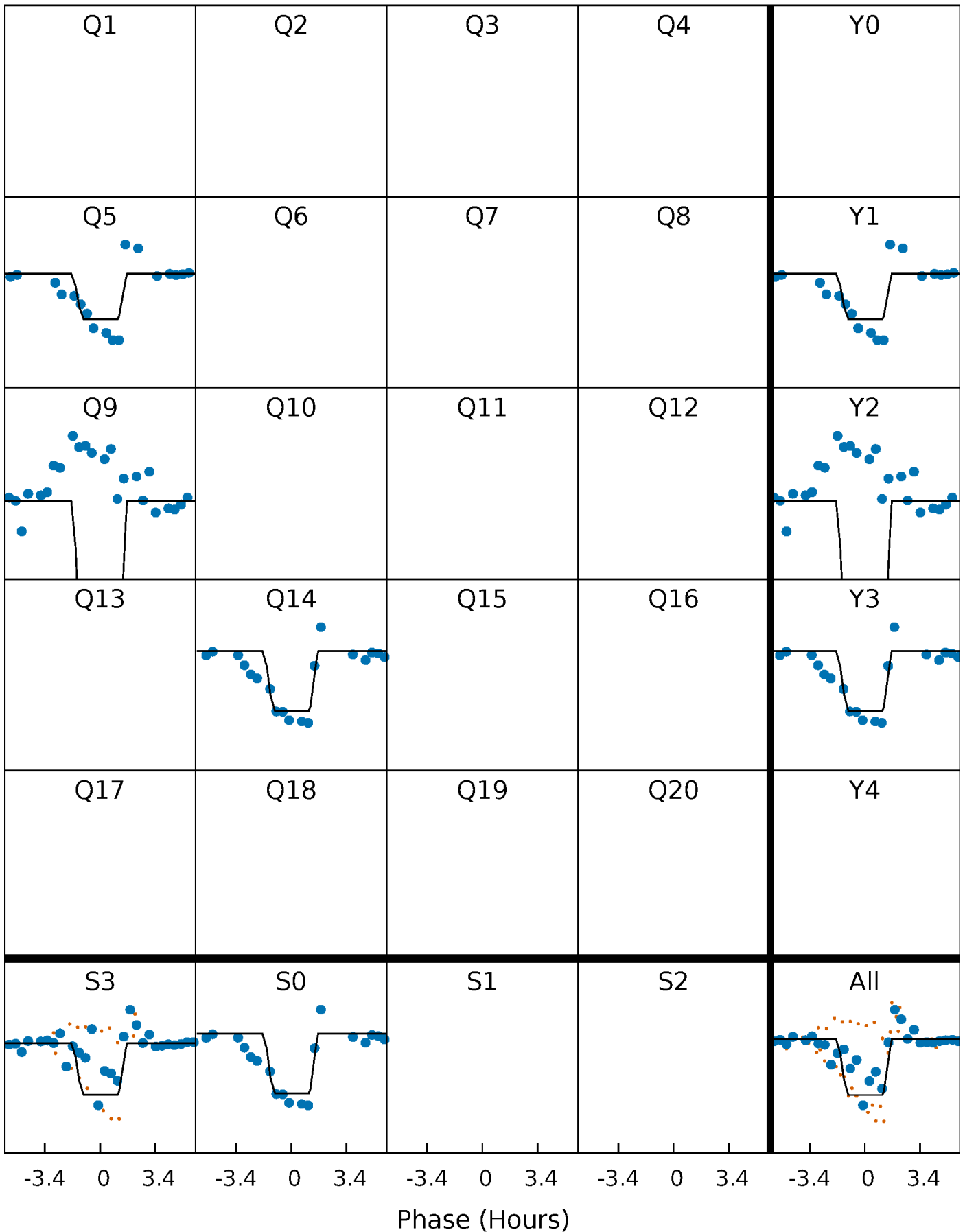
DV Quarter-Phased Transit Curves

TCE 003539632-03 $P=417.294801$ Days $T_0=482.662898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

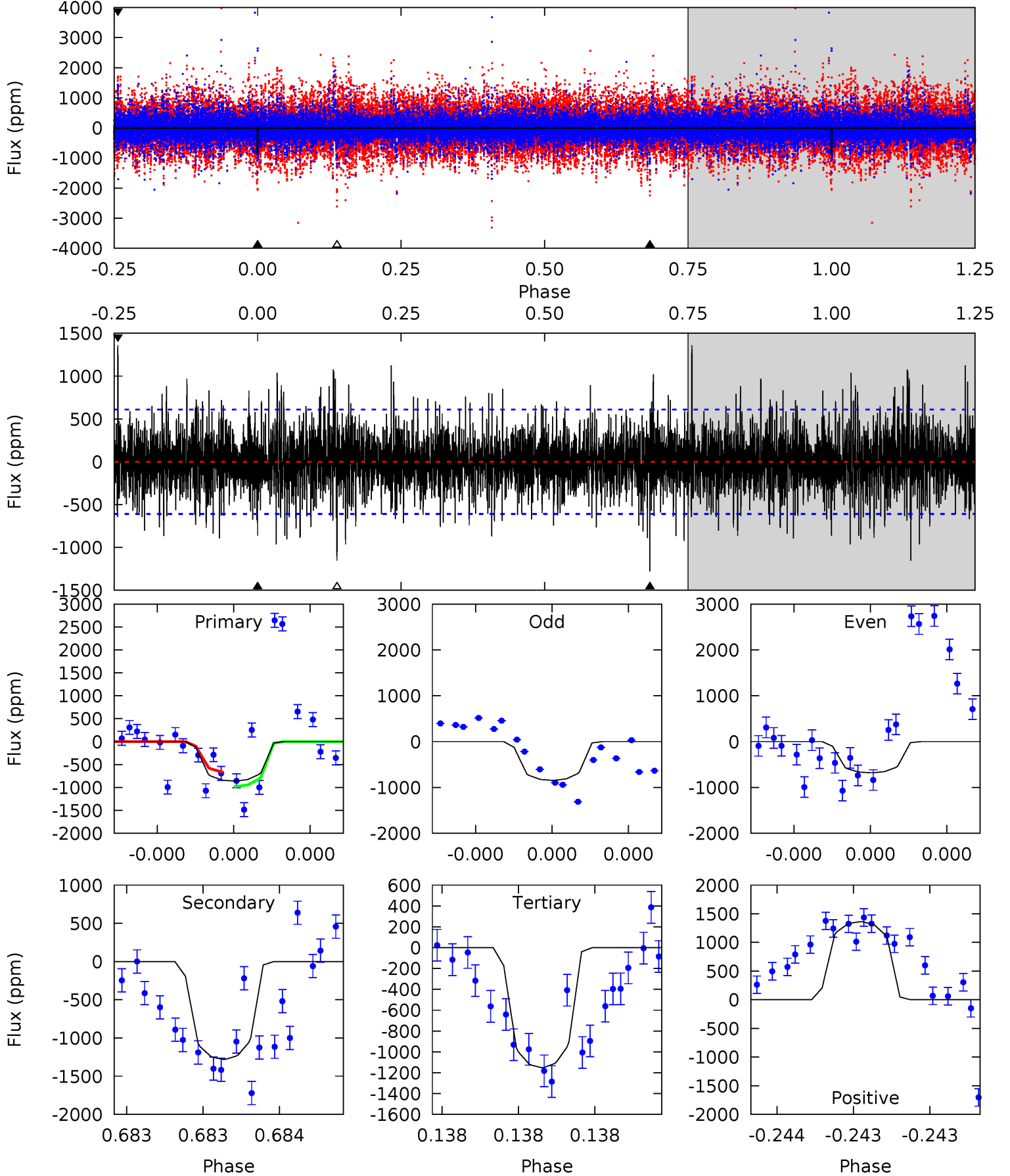
TCE 003539632-03 P=417.300973 Days $T_0=482.655091$ (BKJD)



DV Model-Shift Uniqueness Test

003539632-03, P = 417.294801 Days, E = 65.368097 Days

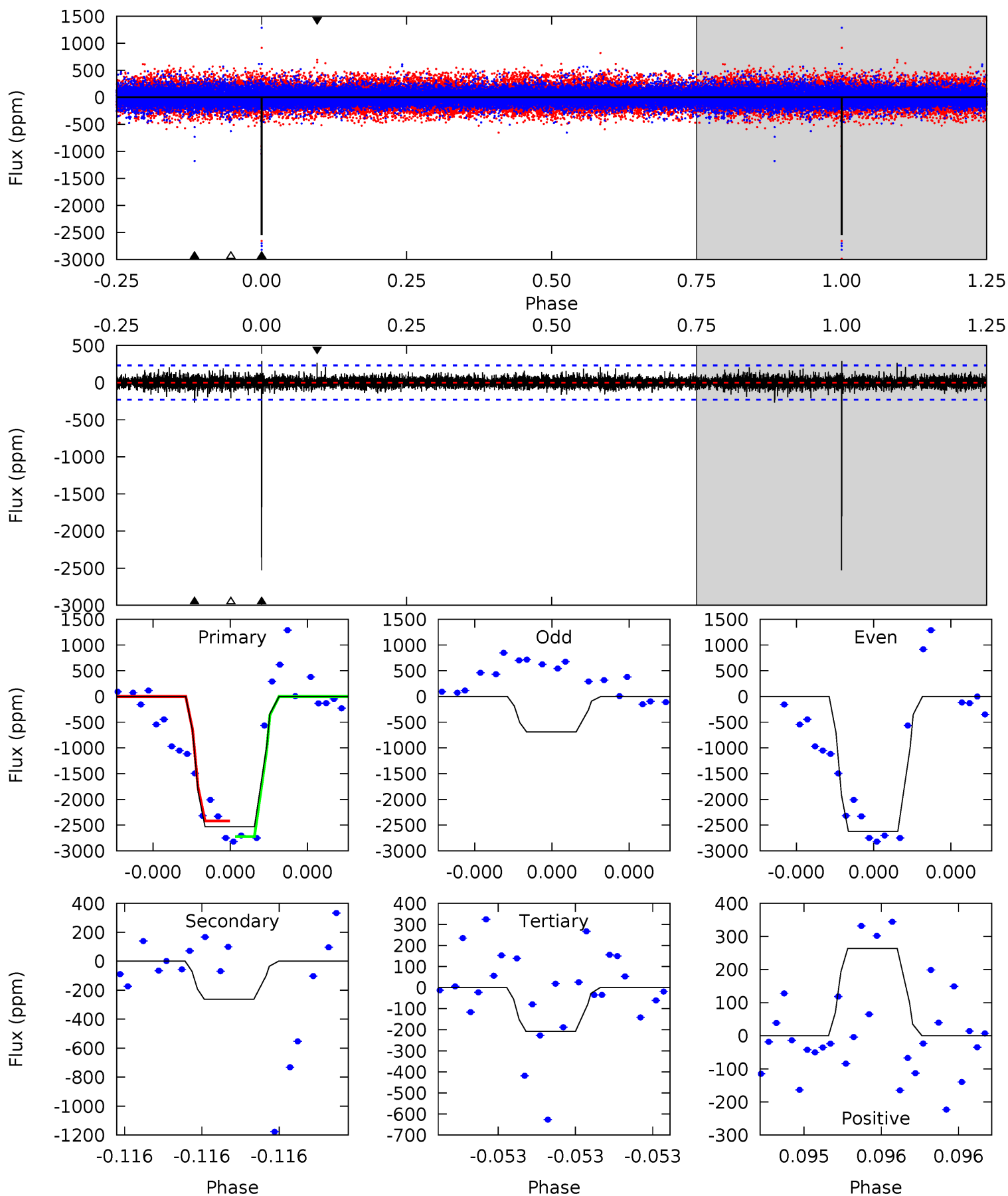
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.99	11.9	10.7	12.6	5.66	3.62	2.17	-2.70	-4.66	1.20	-0.76	0.37	0.98	0.52	1.47



Alt Model-Shift Uniqueness Test

003539632-03, P = 417.300973 Days, E = 65.354118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.9	6.44	5.09	6.46	5.66	3.61	0.96	56.8	55.5	1.36	-0.01	24.7	0.63	0.10	3.67



Stellar Parameters For KIC 003539632

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5585^{+152}_{-152}	$4.409^{+0.148}_{-0.204}$	$-0.380^{+0.350}_{-0.250}$	$0.910^{+0.242}_{-0.141}$	$0.773^{+0.124}_{-0.044}$	$1.447^{+1.002}_{-0.754}$
	+3%/-3%	+3%/-5%	+92%/-66%	+27%/-15%	+16%/-6%	+69%/-52%
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 003539632-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1281 ± 108	$15.86^{+15.71}_{-11.14}$	330^{+25}_{-19}	3269^{+1676}_{-598}	2926^{+29699}_{-2210}
Alt.	-263 ± 41	$16.43^{+16.87}_{-10.65}$	330^{+24}_{-20}	2581^{+947}_{-389}	561^{+3897}_{-434}

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

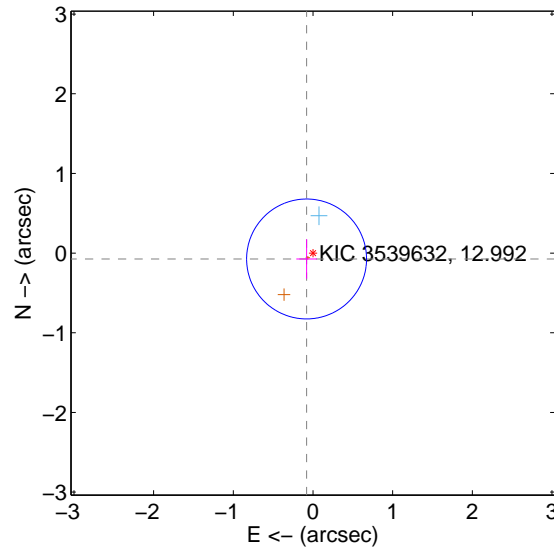
Supplemental centroid analysis for 003539632-03. Kepler magnitude: 12.99. Transit SNR 5.66

There are 1 quarters with good PRF difference image offsets

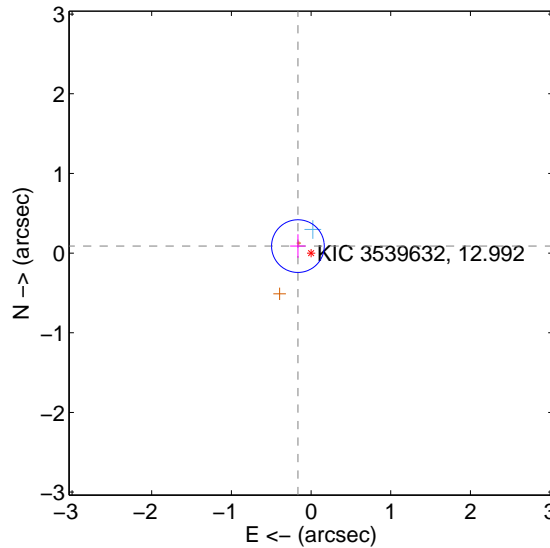
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.109 ± 0.251	0.43	0.080 ± 0.129	-0.074 ± 0.248
PRF-fit source offset from KIC position	0.187 ± 0.110	1.70	0.165 ± 0.097	0.088 ± 0.148
photometric centroid source offset	0.14 ± 0.80	0.17	-0.12 ± 0.81	-0.07 ± 0.76

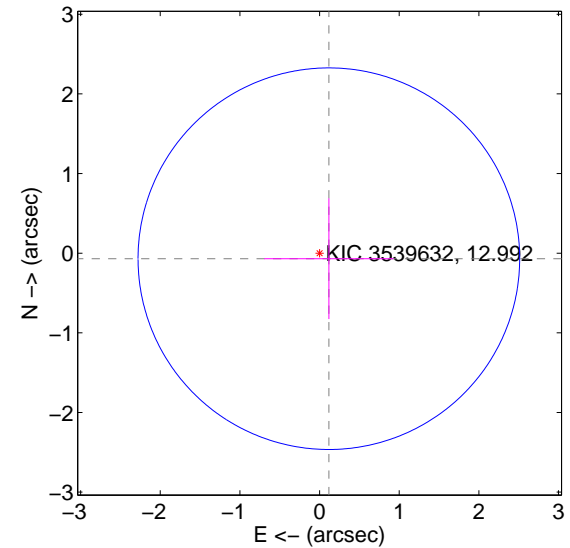
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

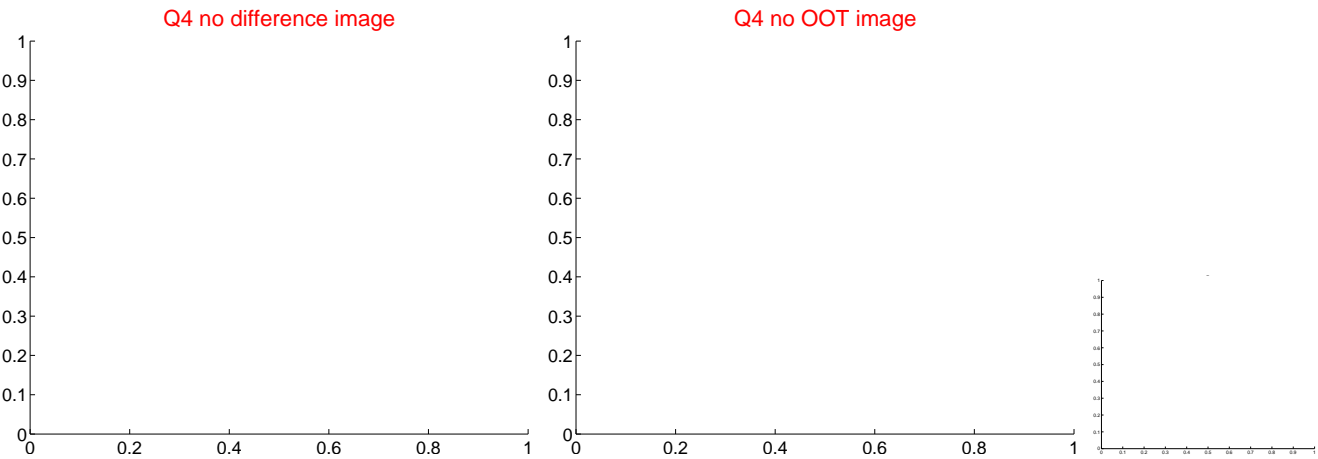
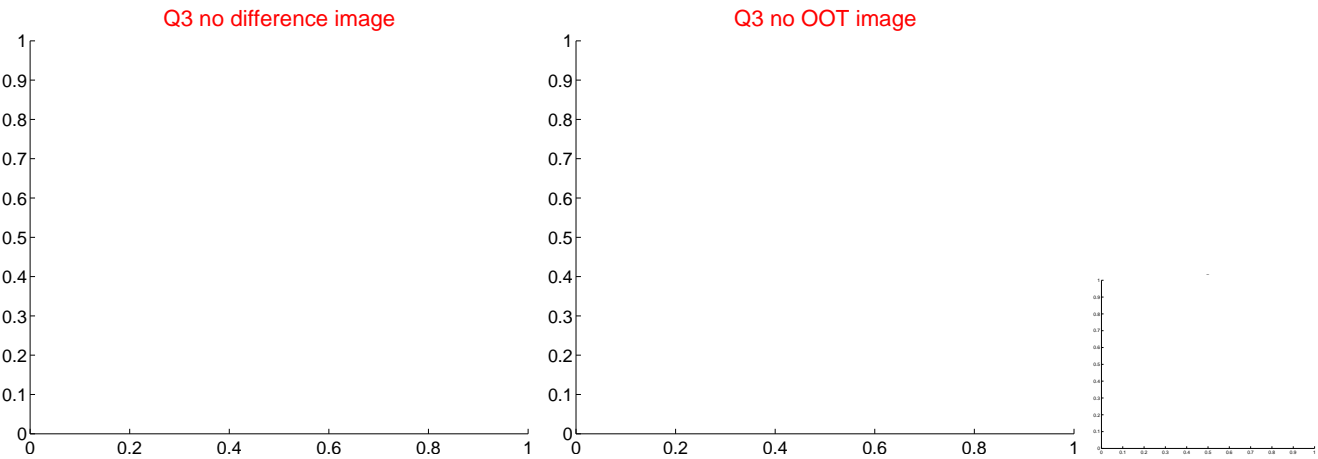
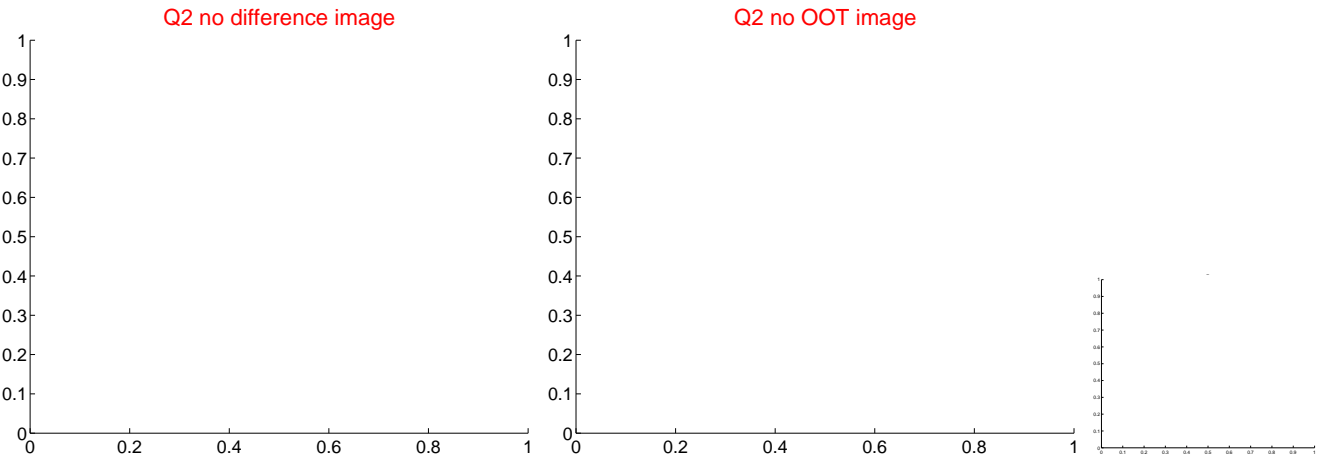
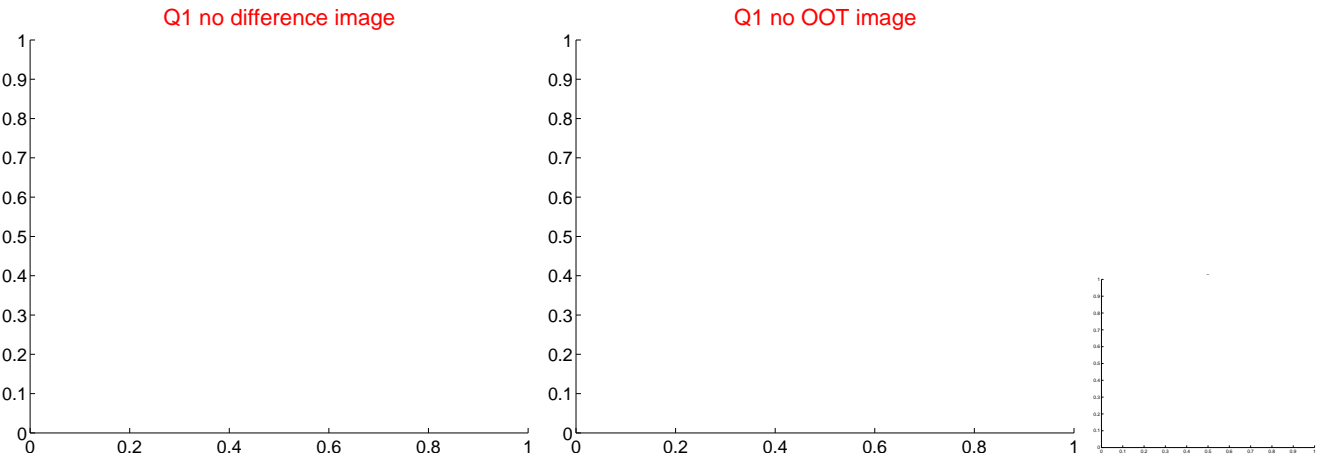


offset from photometric centroids

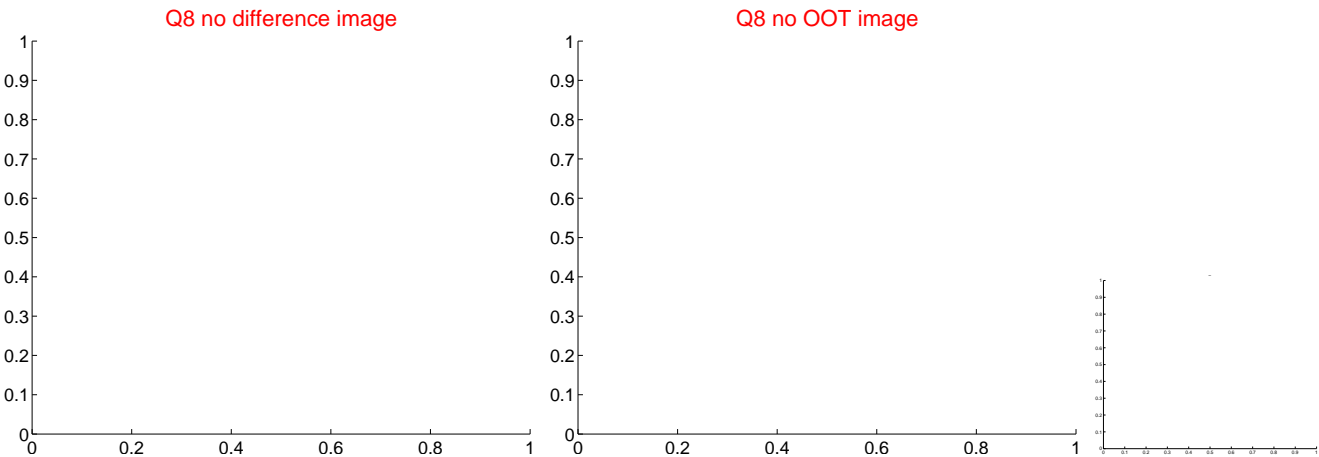
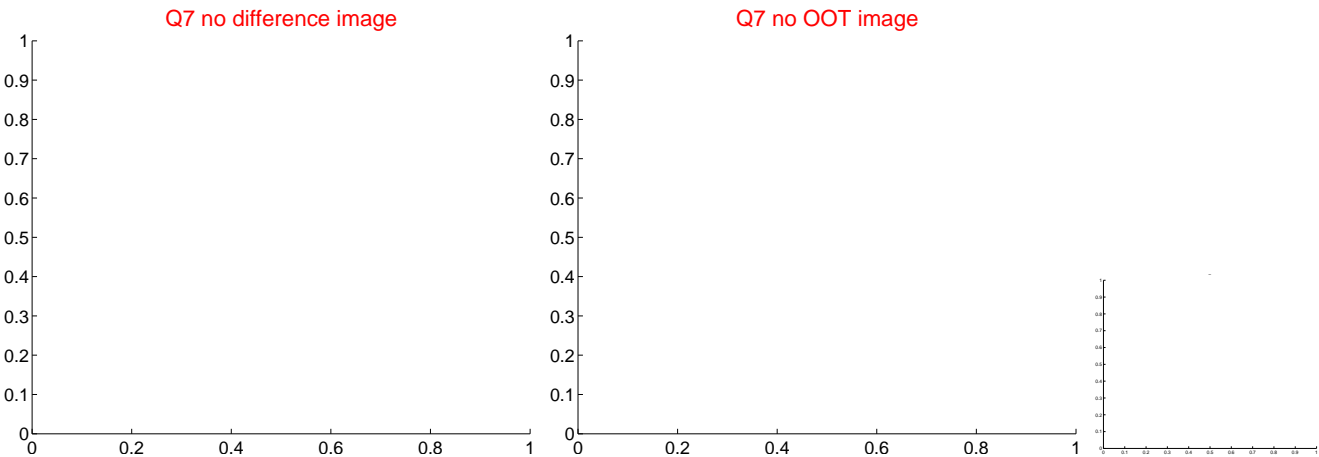
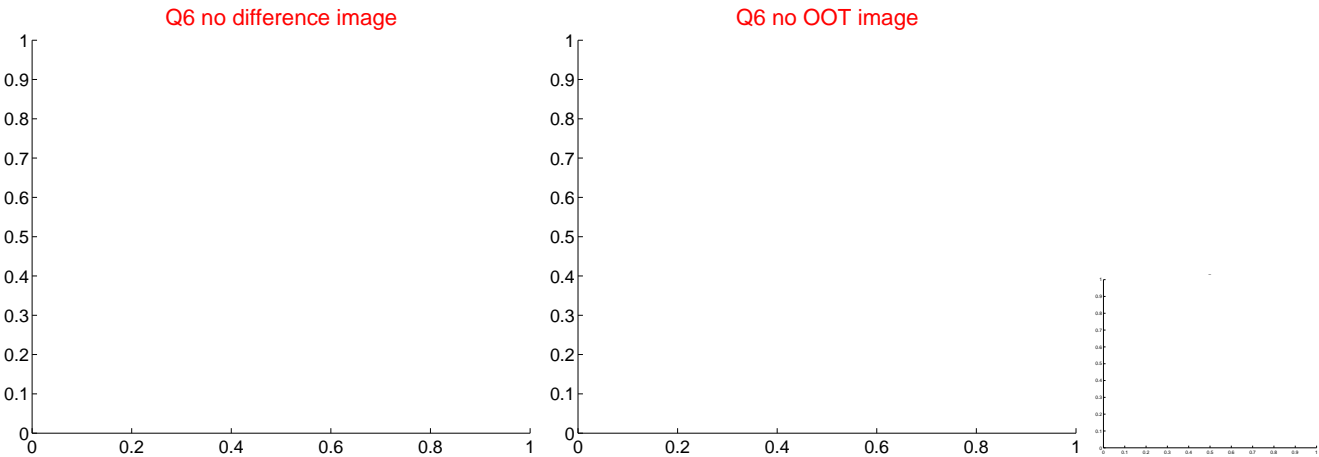
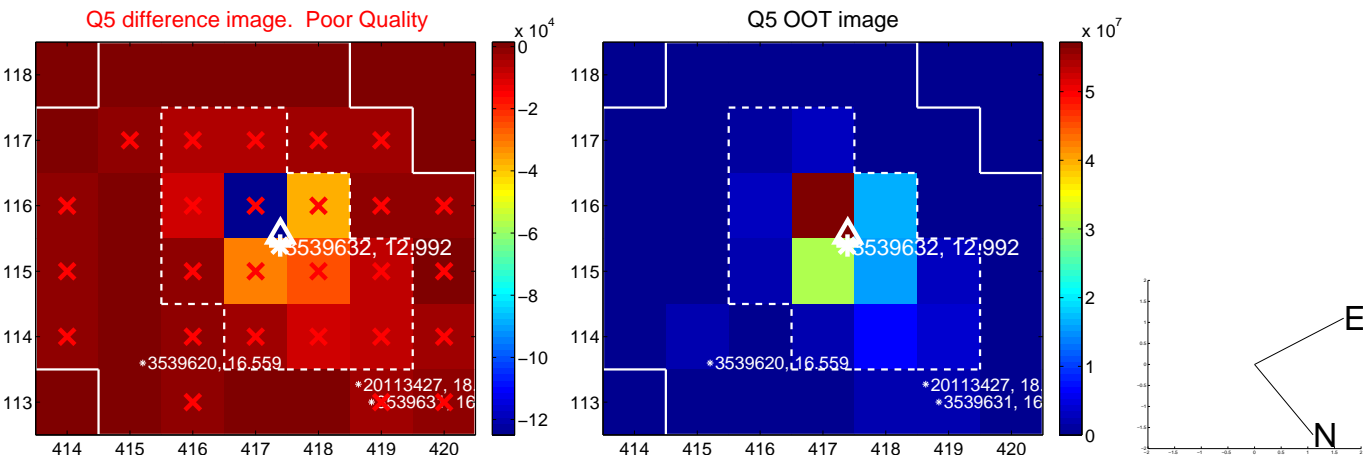


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

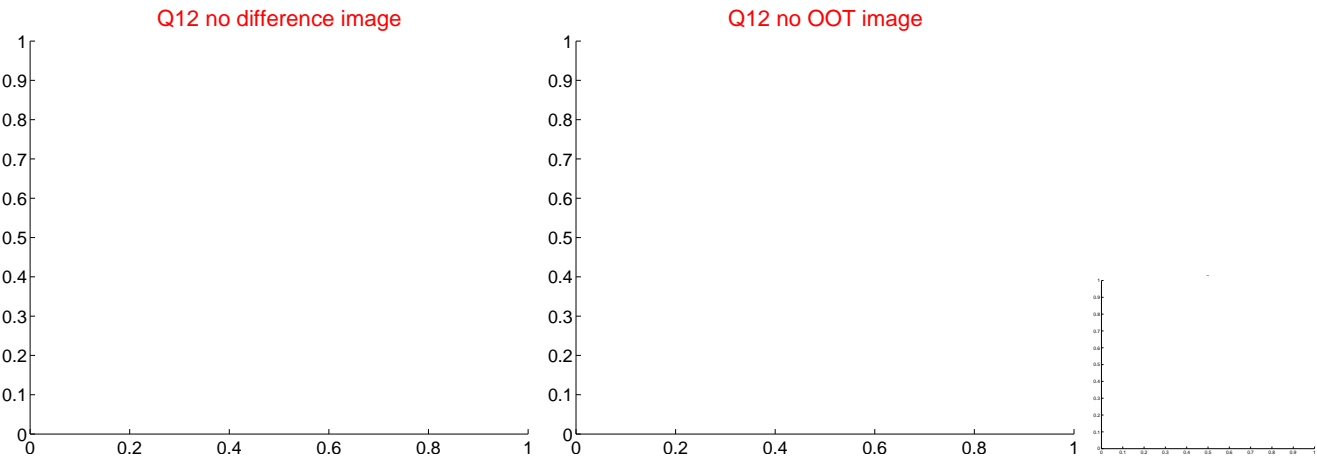
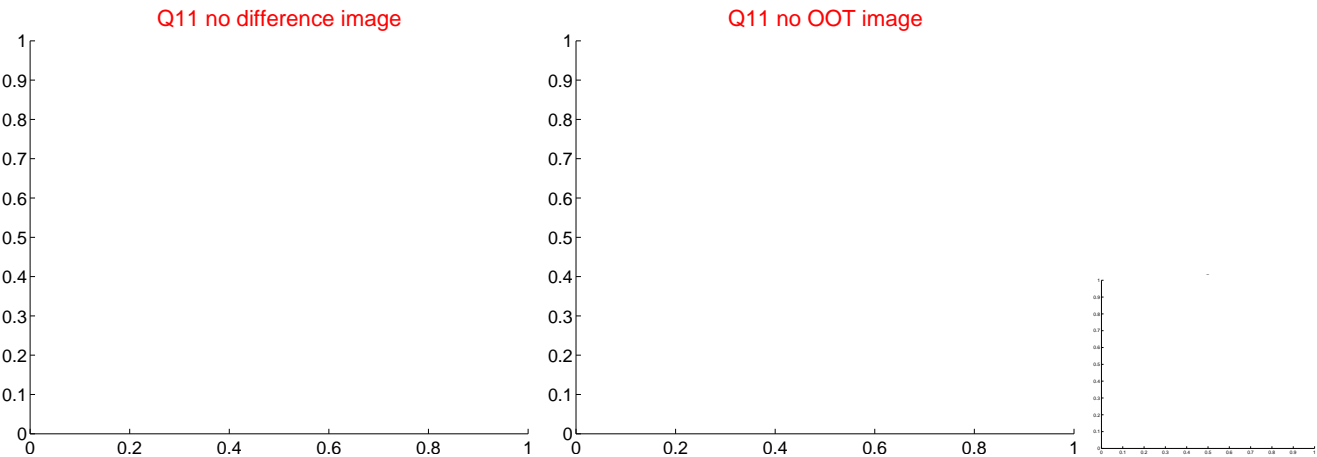
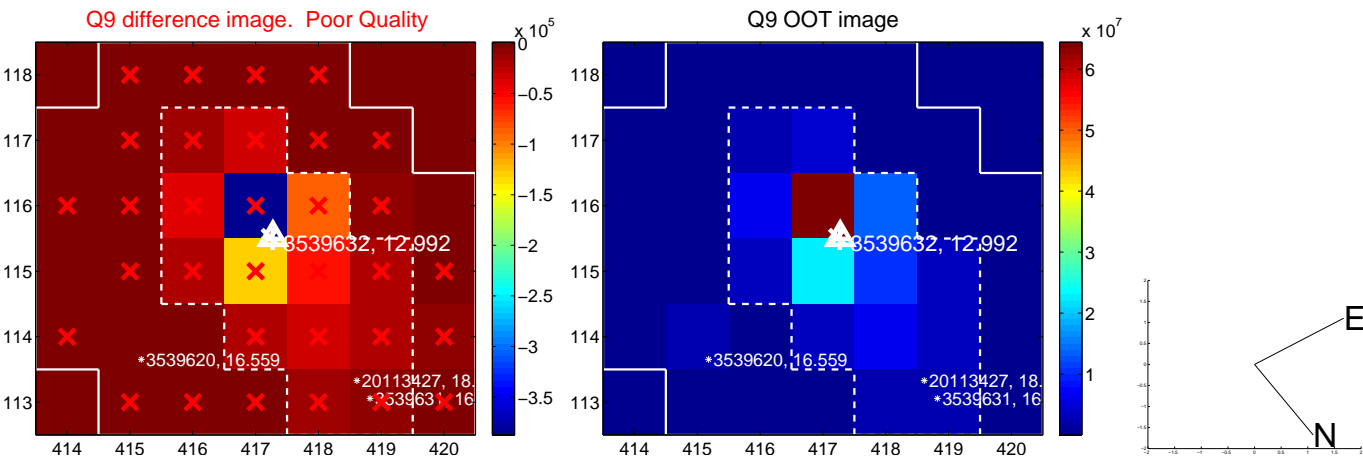
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



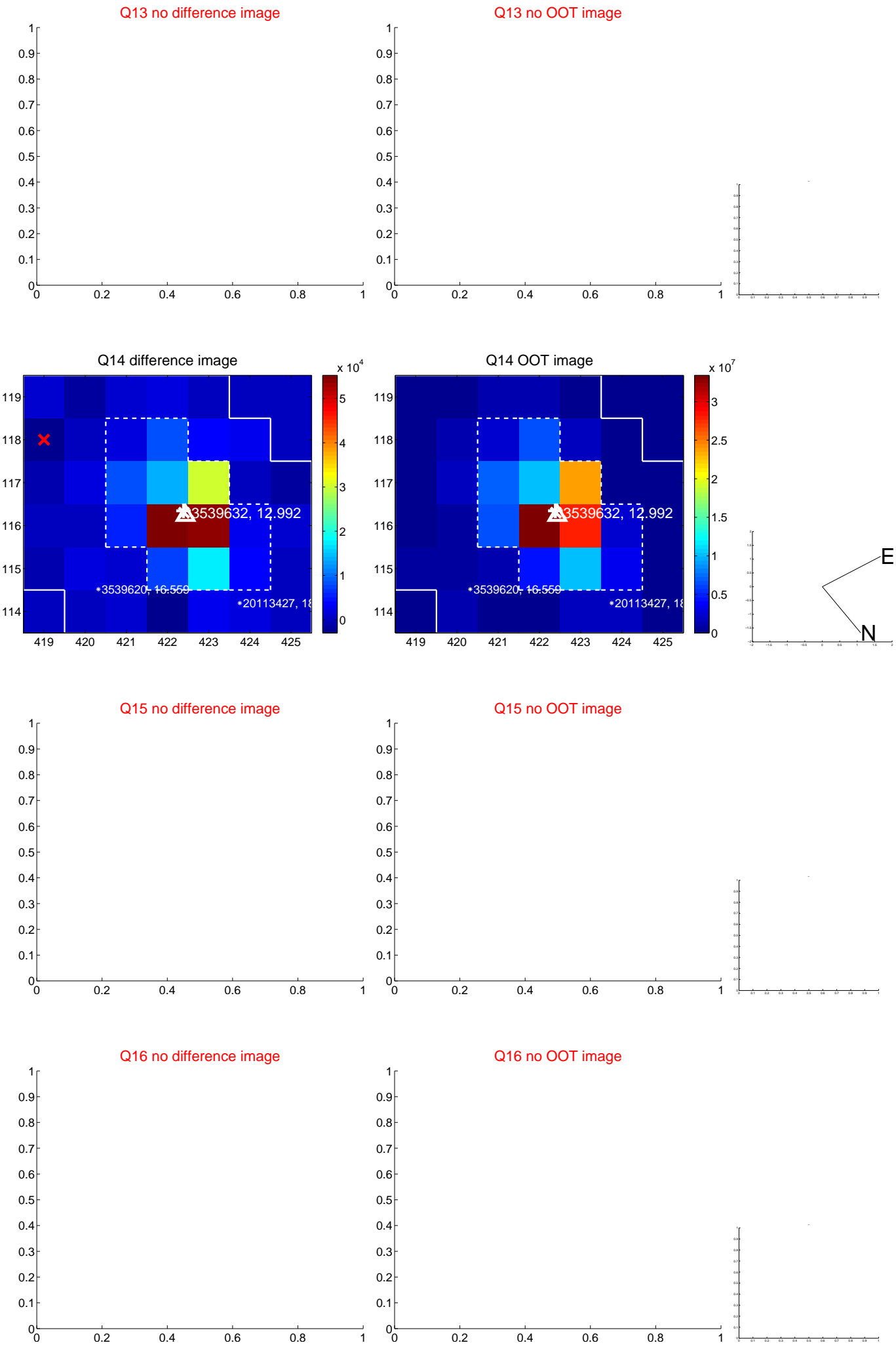
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



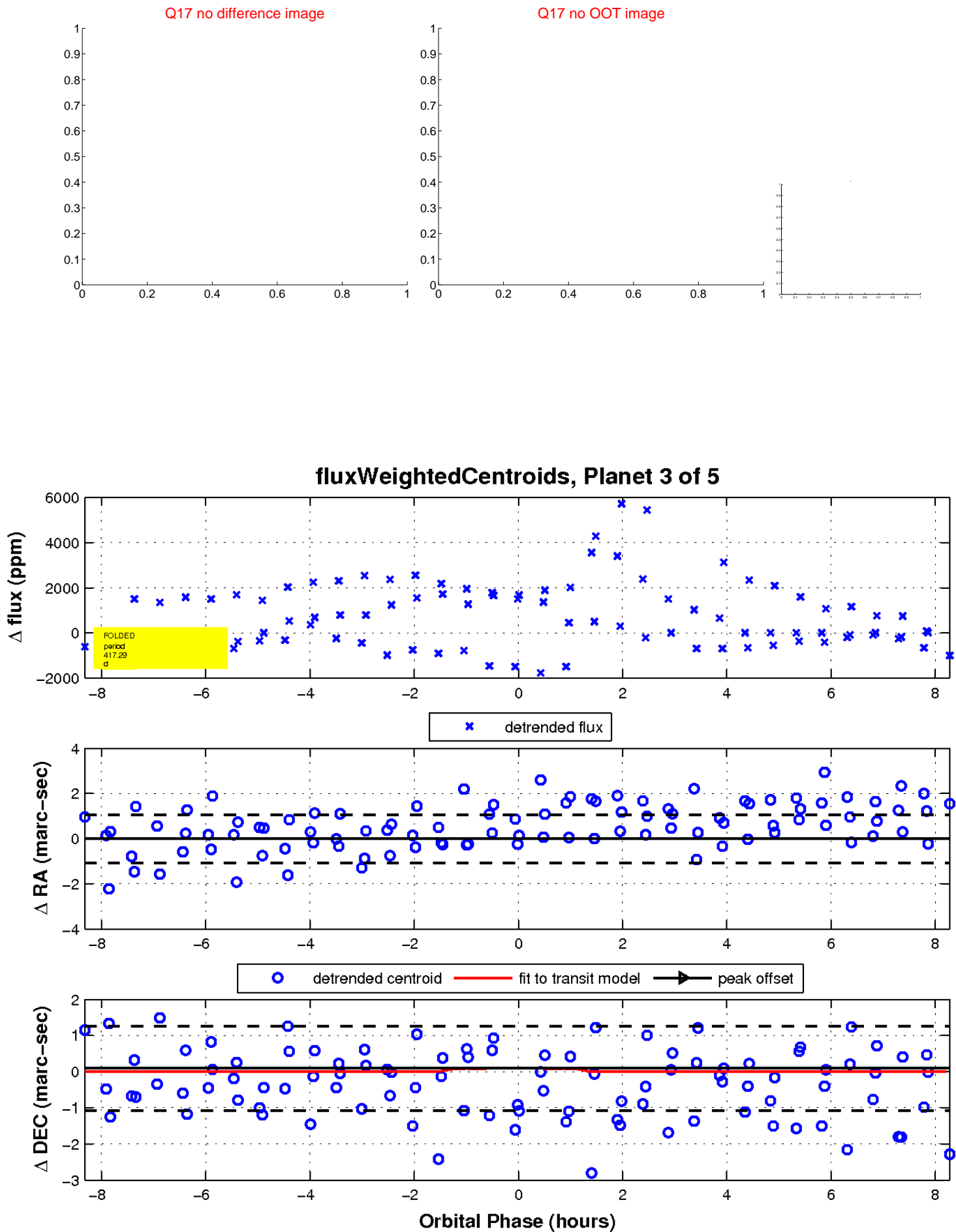
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

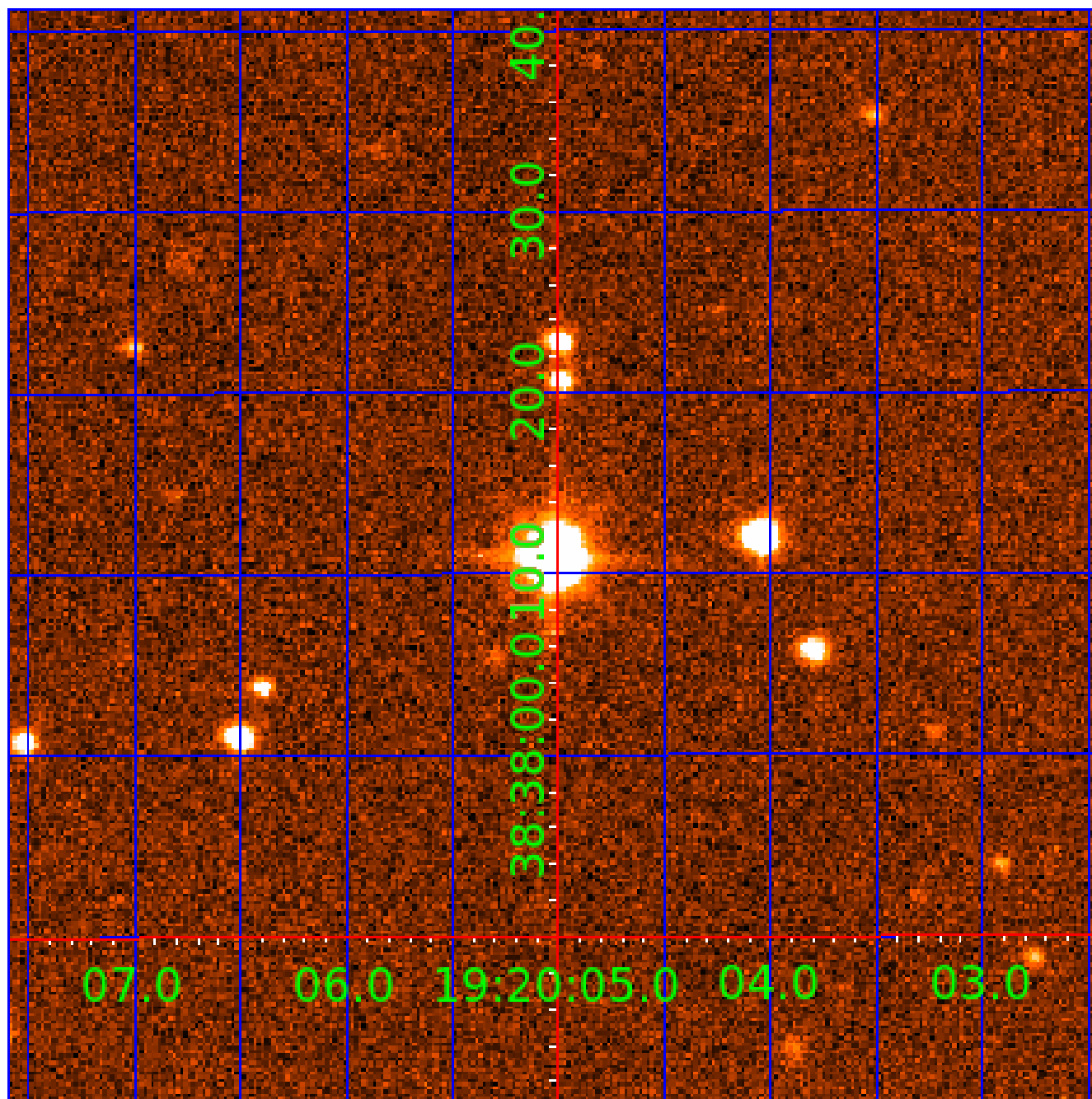


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003539632

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})
003539632-01	OBS	No	397.962776	453.351073	1166.5	5.554	21.4	5.0	0.91	5585	3.12	0.76
003539632-02	OBS	No	449.064930	570.834635	605.6	4.832	17.1	3.1	0.91	5585	2.30	0.65
003539632-03	OBS	No	417.294801	482.662898	973.4	2.774	17.4	5.7	0.91	5585	2.82	0.72
003539632-04	OBS	No	372.449201	398.848728	1143.6	2.934	13.3	7.3	0.91	5585	3.24	0.83
003539632-05	OBS	No	319.463176	333.463325	1275.0	3.000	22.4	-1.0	0.91	5585	3.22	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003539632-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003539632-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

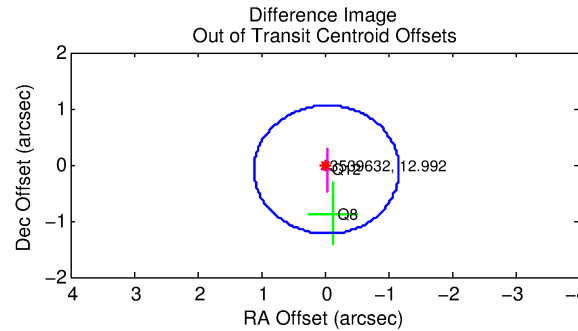
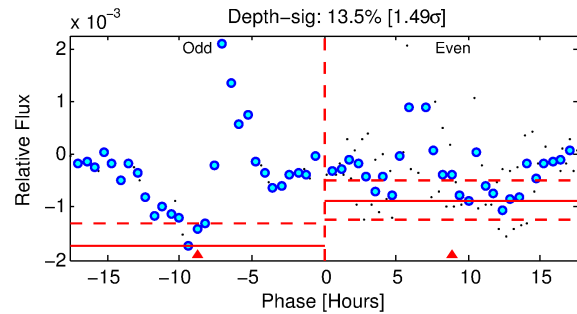
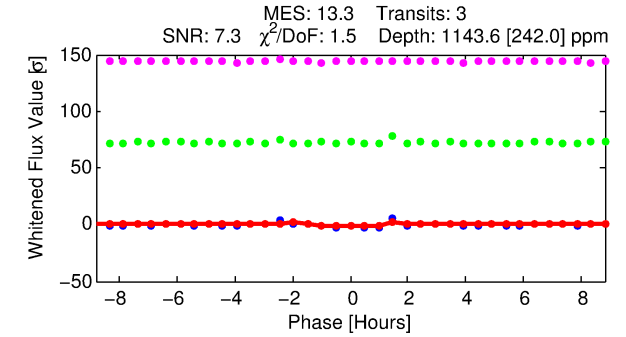
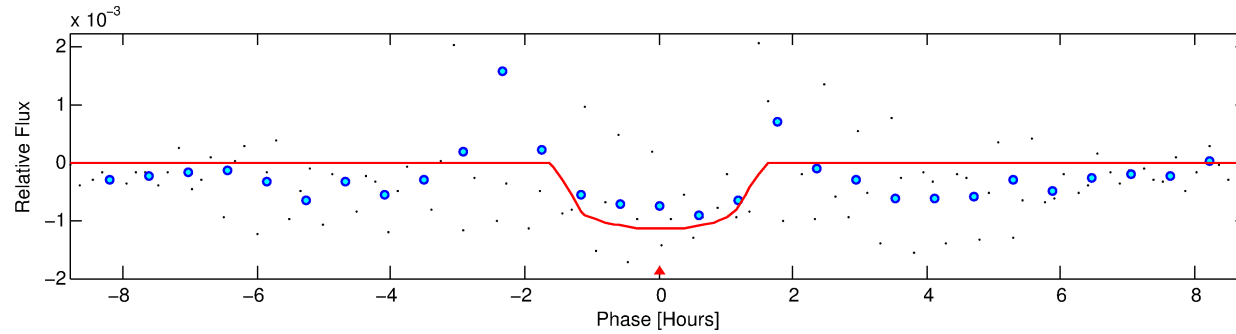
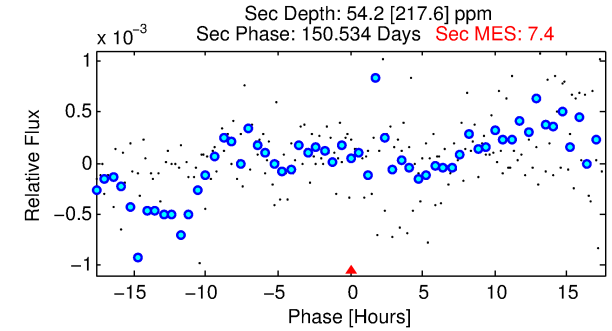
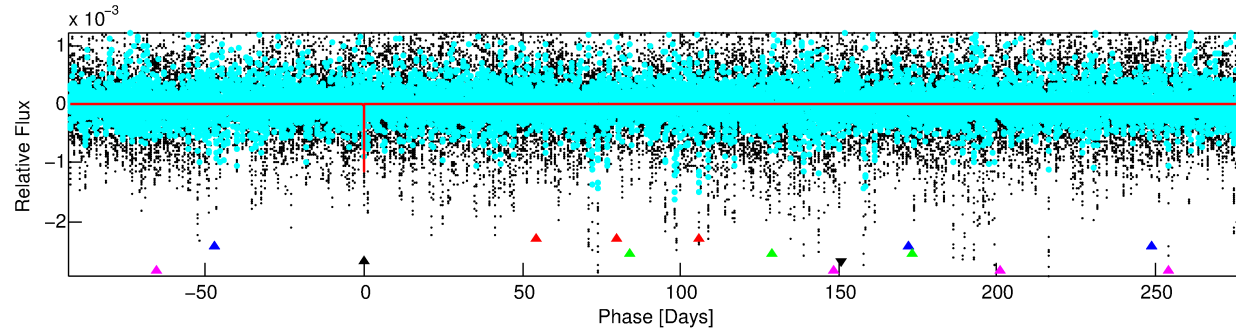
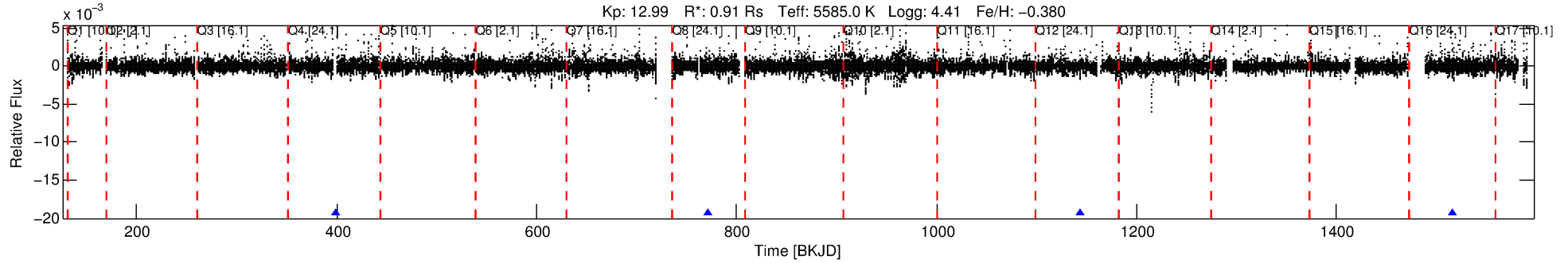
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003539632-04

No Significant Match Found

DV One-Page Summary

KIC: 3539632 Candidate: 4 of 5 Period: 372.449 d



DV Fit Results:

Period = 372.44920 [0.00507] d
Epoch = 398.8487 [0.0103] BKJD
Rp/R* = 0.0326 [0.0422]
a/R* = 781.56 [4366.40]
b = 0.65 [5.12]
Seff = 0.83 [0.31]
Teq = 244 [23] K
Rp = 3.24 [4.28] Re
a = 0.9306 [0.2201] AU
Ag = 2459.73 [11787.88] [0.21 σ]
Teffp = 2653 [3170] K [0.76 σ]

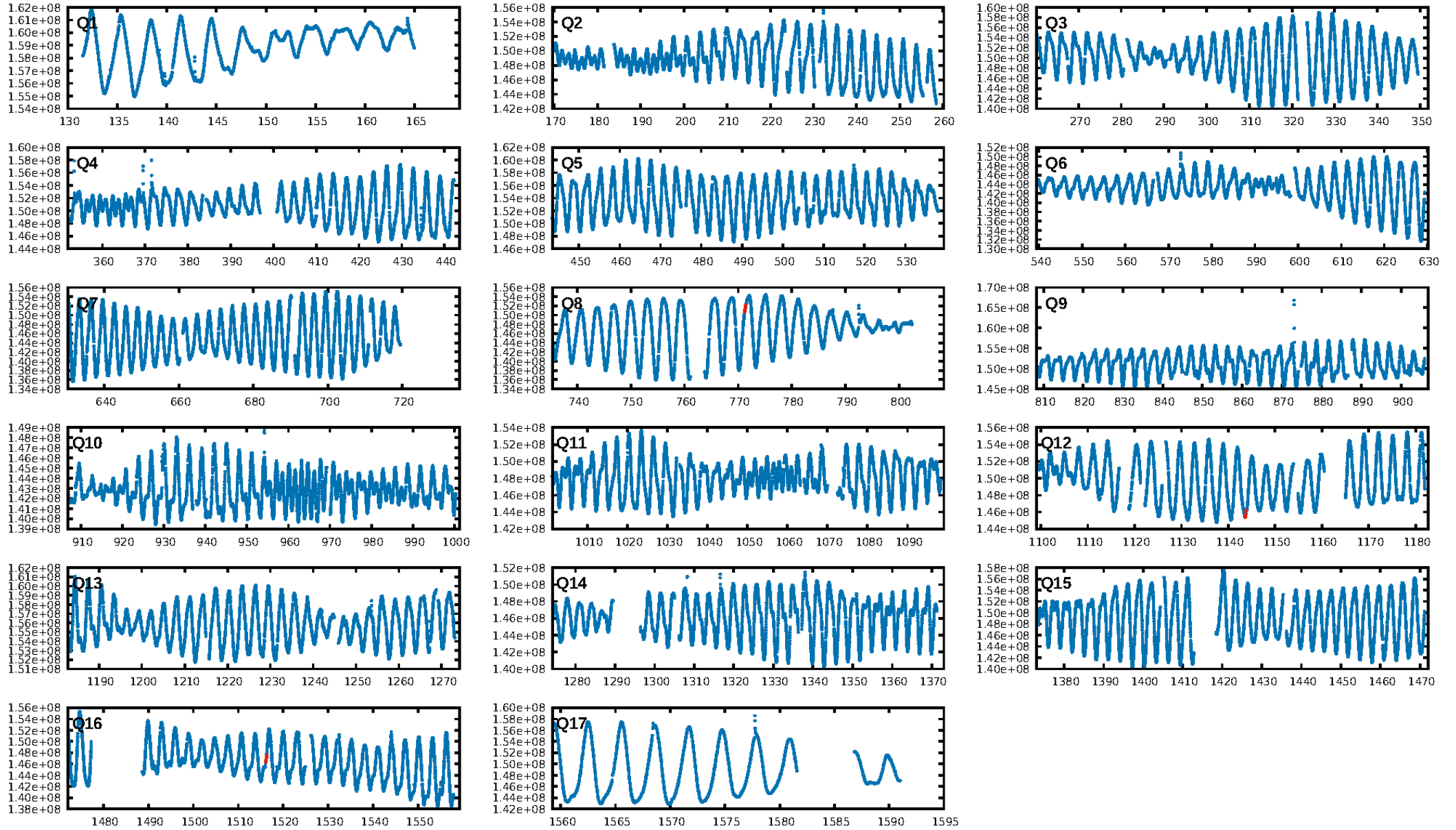
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [303.03 σ]
LongPeriod-sig: 100.0% [97.48 σ]
ModelChiSquare2-sig: 36.5%
ModelChiSquareGof-sig: 93.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.499
Centroid-sig: 2.6%
Centroid-so: 0.634 arcsec [1.33 σ]
OotOffset-rm: 0.095 arcsec [0.25 σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-rm: 0.059 arcsec [0.28 σ]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

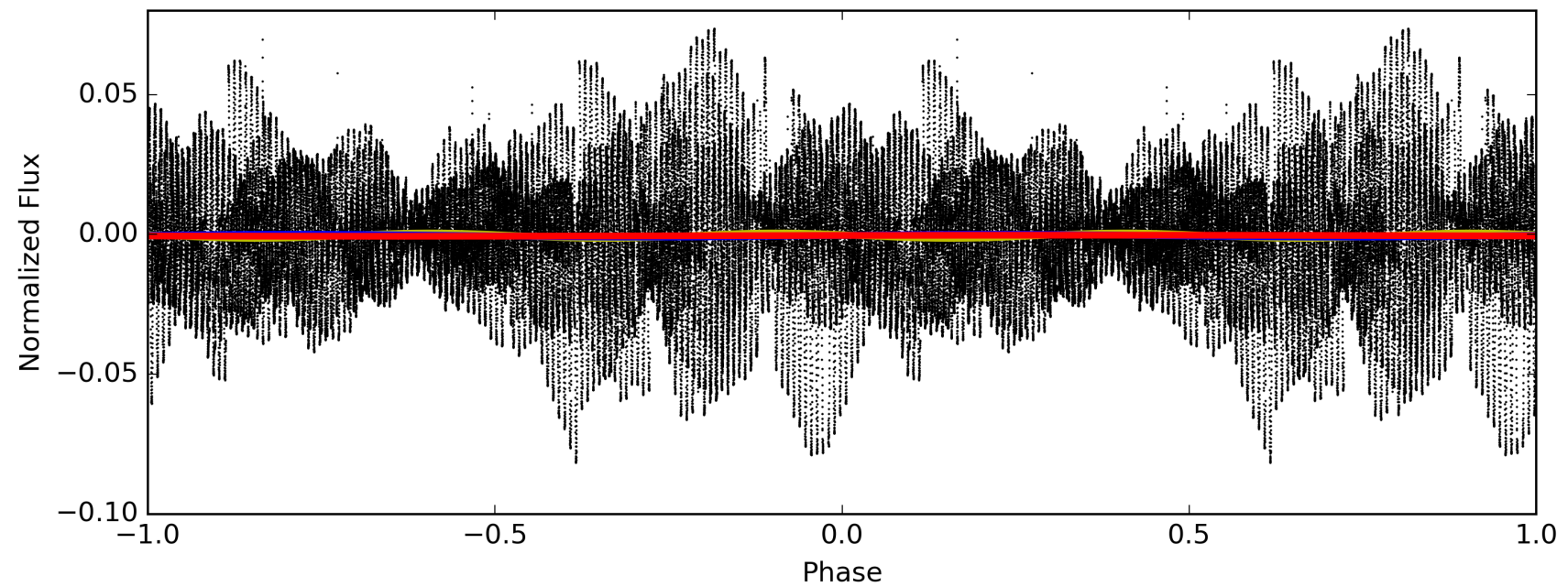
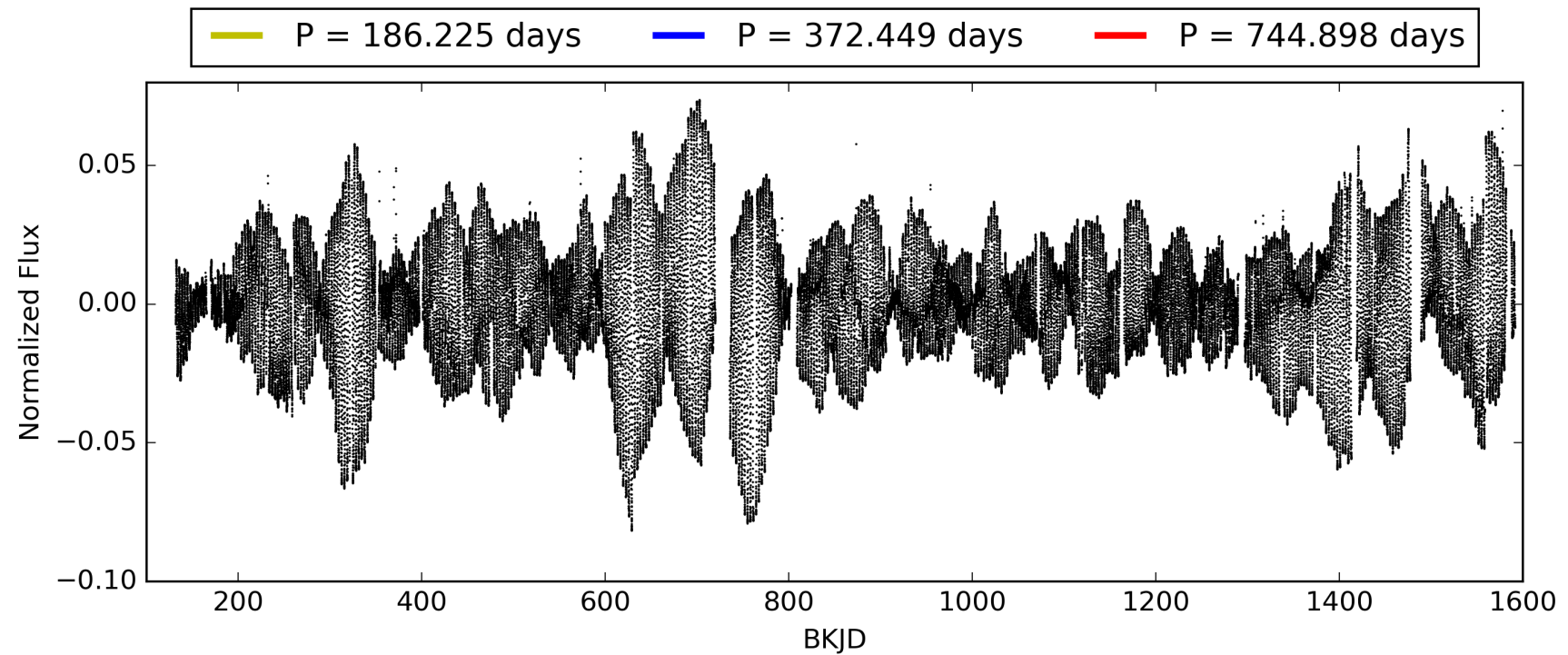
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:12:13 Z

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

TCE 003539632-04, PDC Light Curves

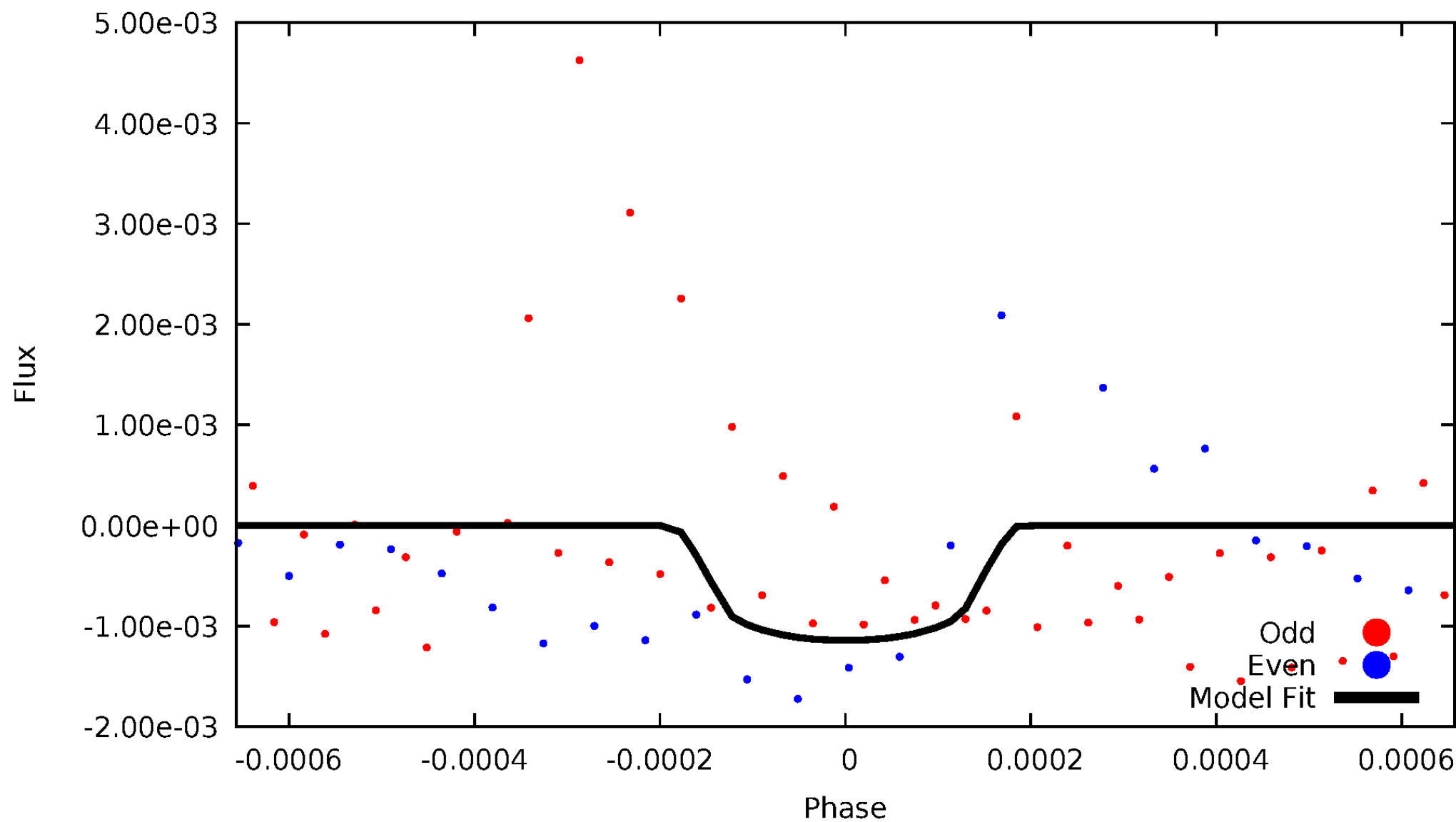


TCE 003539632-04



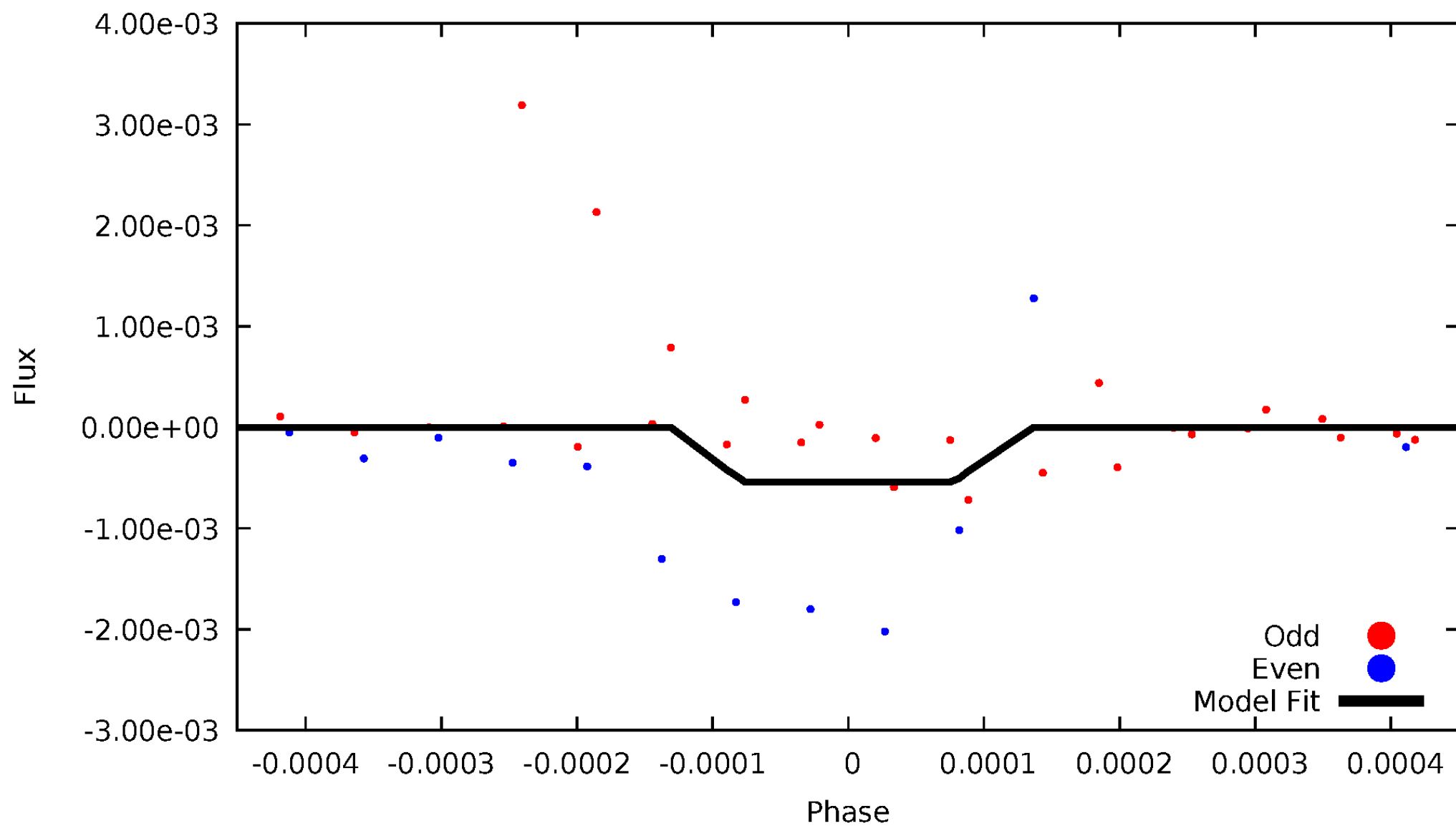
DV Odd/Even

TCE 003539632-04



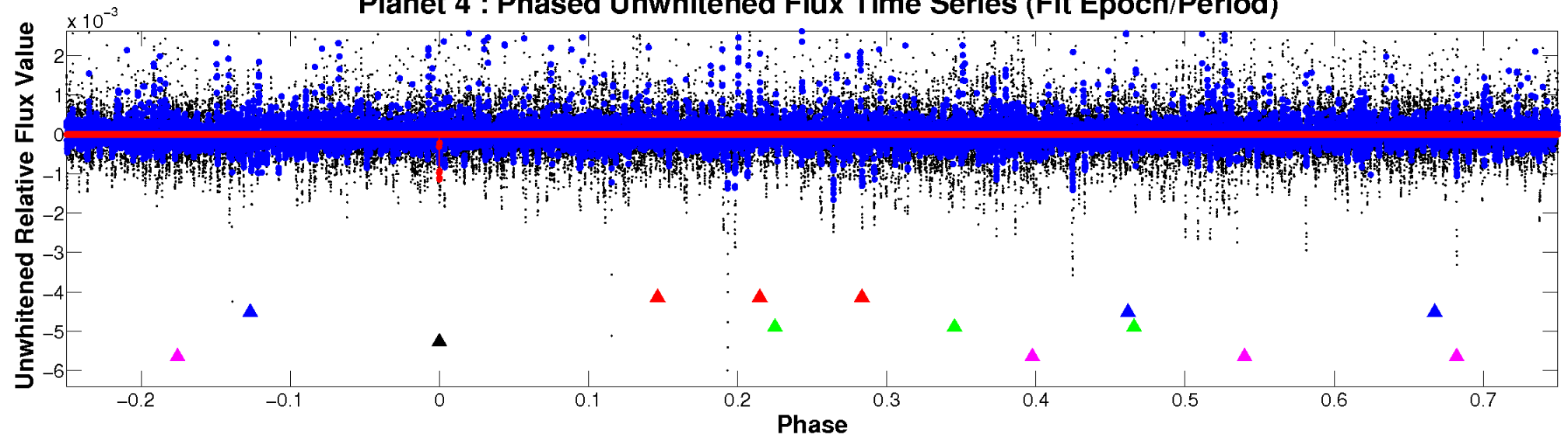
ALT Odd/Even

TCE 003539632-04

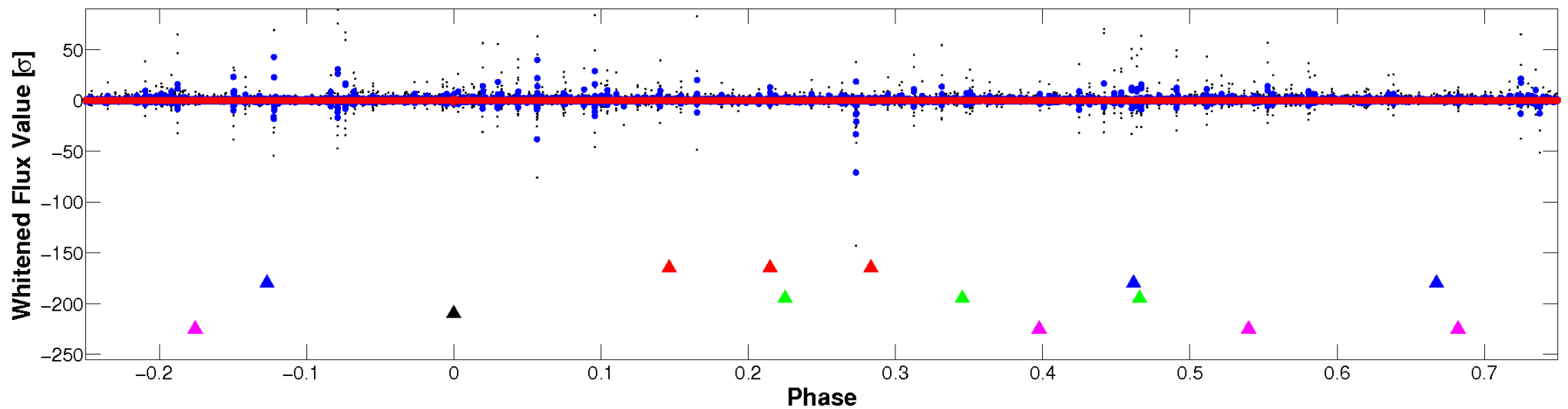


Non-Whitened Vs. Whitened Light Curve

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

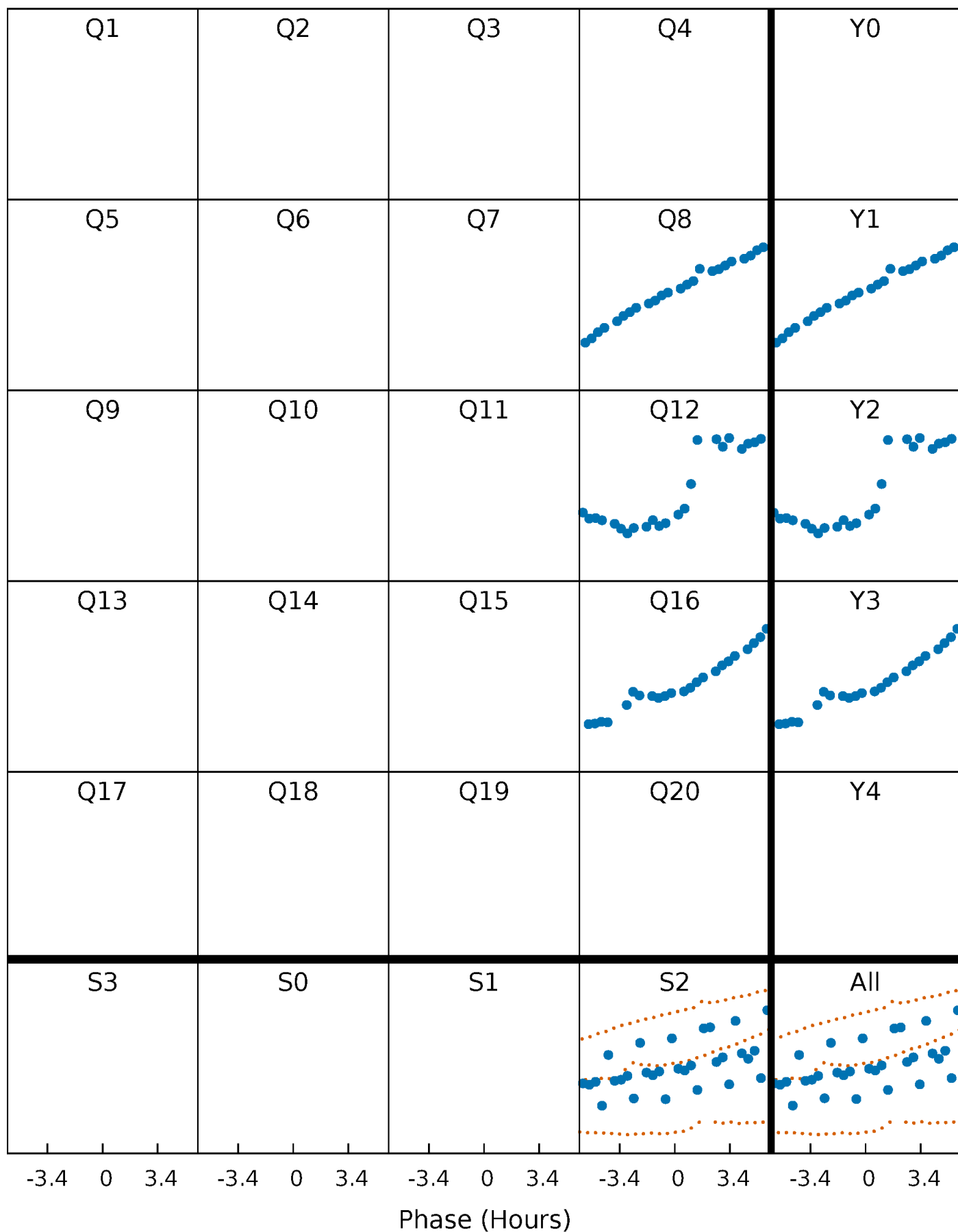


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



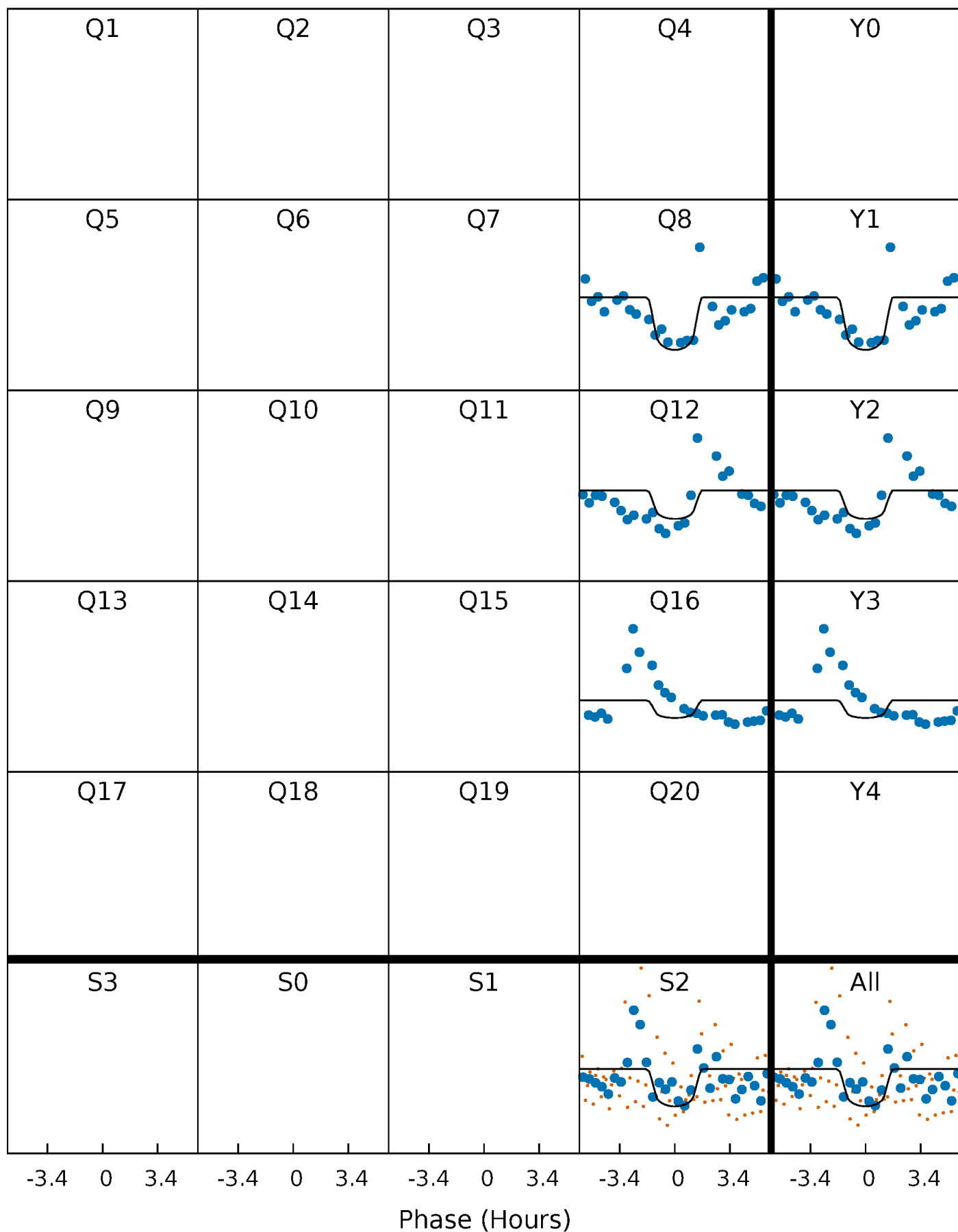
PDC Quarter-Phased Transit Curves

TCE 003539632-04 P=372.449201 Days $T_0=398.848728$ (BKJD)



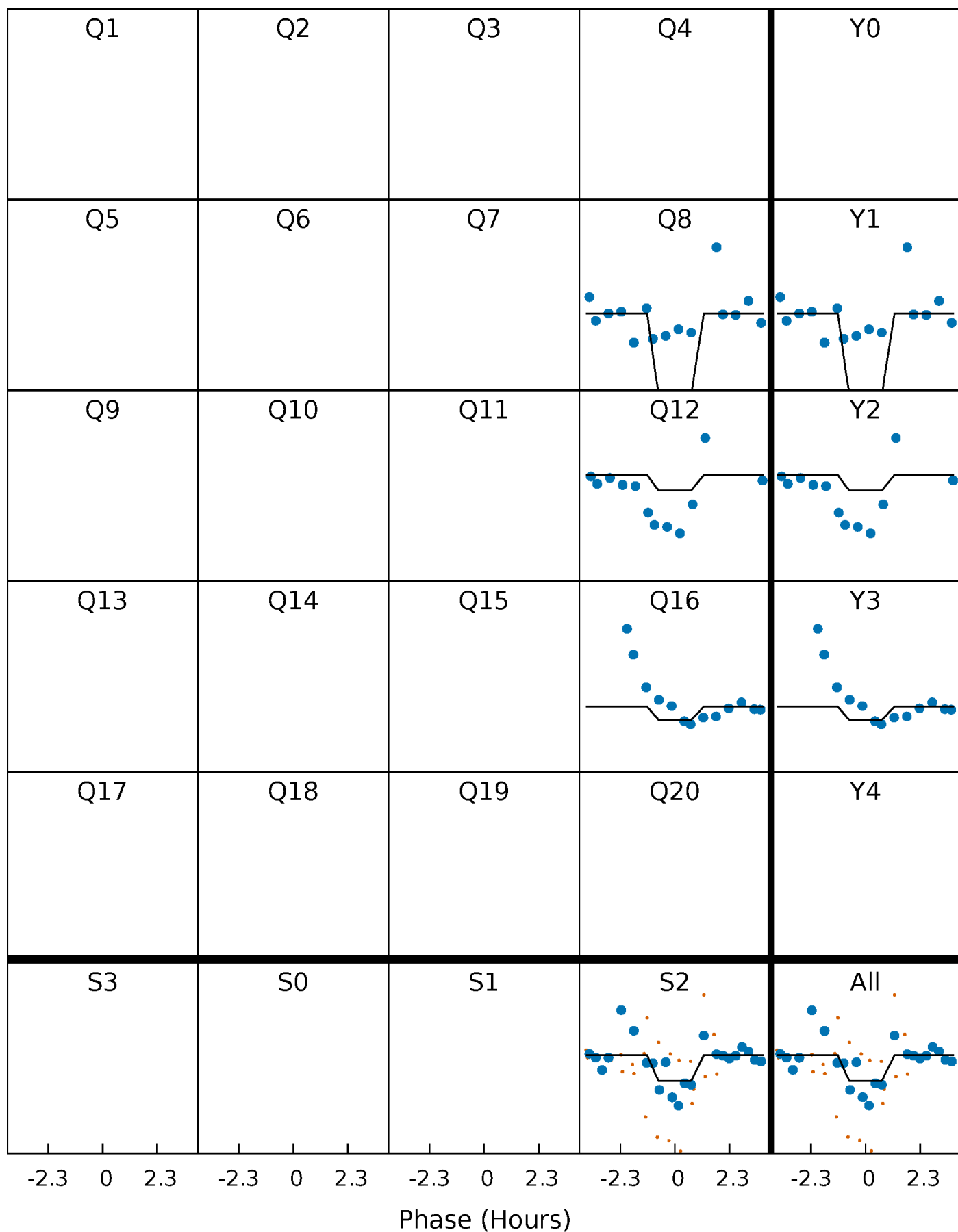
DV Quarter-Phased Transit Curves

TCE 003539632-04 P=372.449201 Days $T_0=398.848728$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

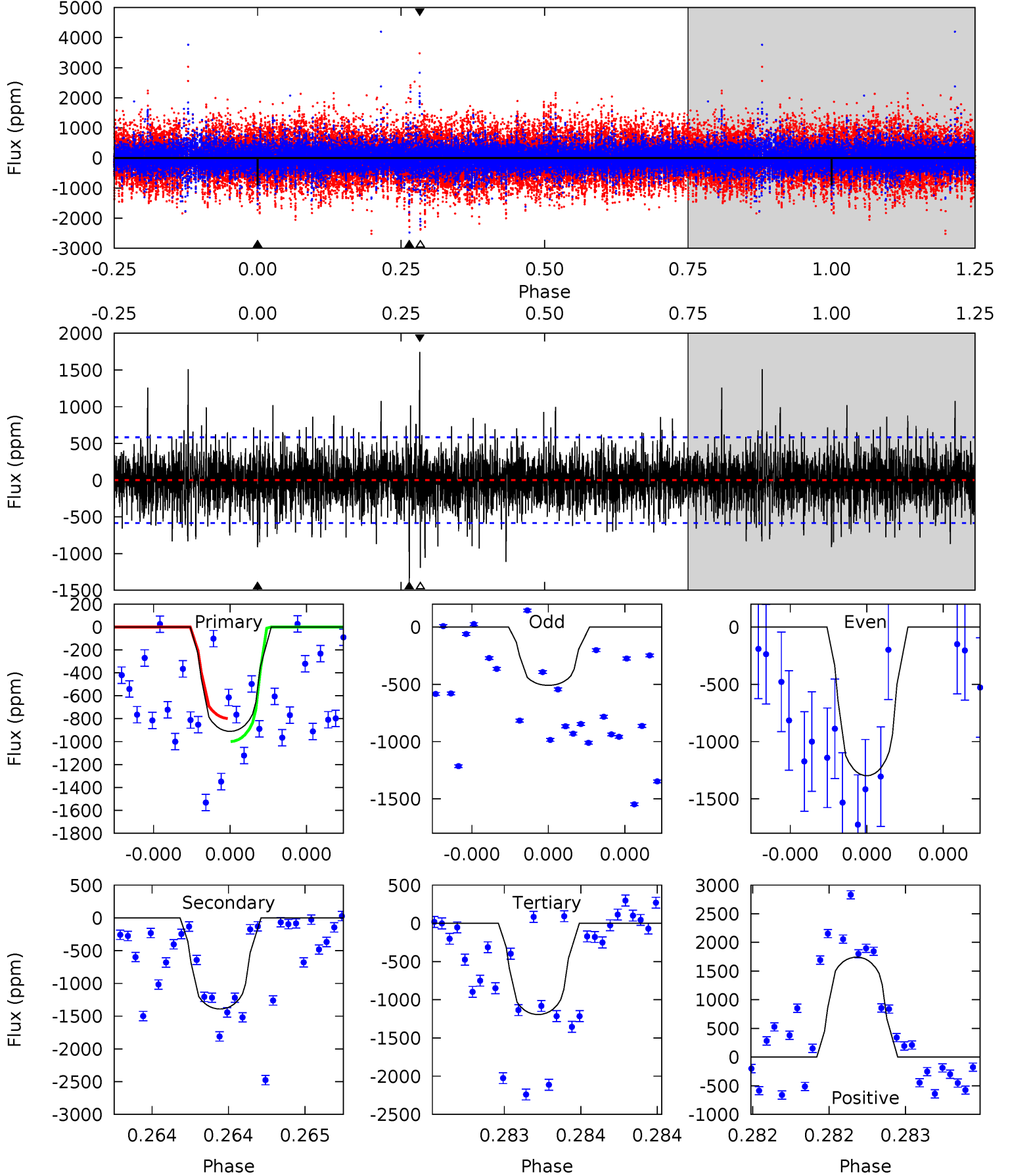
TCE 003539632-04 P=372.440689 Days $T_0=398.877496$ (BKJD)



DV Model-Shift Uniqueness Test

003539632-04, P = 372.449201 Days, E = 26.399527 Days

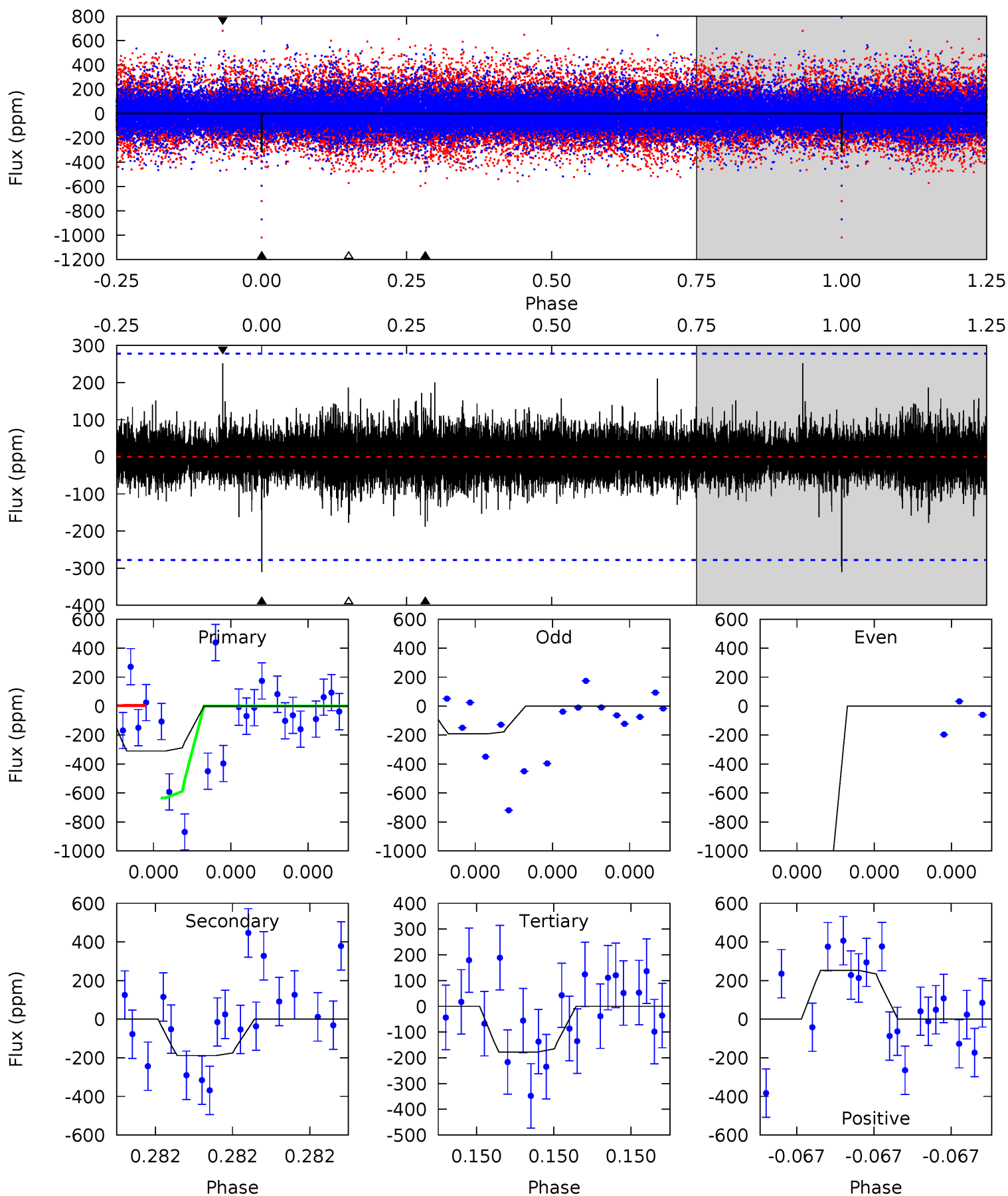
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.76	13.4	11.5	16.8	5.62	3.55	2.20	-2.73	-8.02	1.89	-3.40	2.48	0.76	0.56	1.00



Alt Model-Shift Uniqueness Test

003539632-04, P = 372.440689 Days, E = 26.436807 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.38	3.87	3.65	5.18	5.71	3.70	0.74	2.73	1.20	0.22	-1.31	18.8	2.94	0.45	6.49



Stellar Parameters For KIC 003539632

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5585^{+152}_{-152}	$4.409^{+0.148}_{-0.204}$	$-0.380^{+0.350}_{-0.250}$	$0.910^{+0.242}_{-0.141}$	$0.773^{+0.124}_{-0.044}$	$1.447^{+1.002}_{-0.754}$
	+3%/-3%	+3%/-5%	+92%/-66%	+27%/-15%	+16%/-6%	+69%/-52%
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 003539632-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1391 ± 104	$4.58^{+3.84}_{-2.96}$	342^{+27}_{-20}	5217^{+3506}_{-1169}	$32416^{+222573}_{-22920}$
Alt.	-188 ± 49	$3.94^{+3.83}_{-2.71}$	341^{+23}_{-18}	3741^{+2047}_{-710}	5990^{+48172}_{-4506}

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

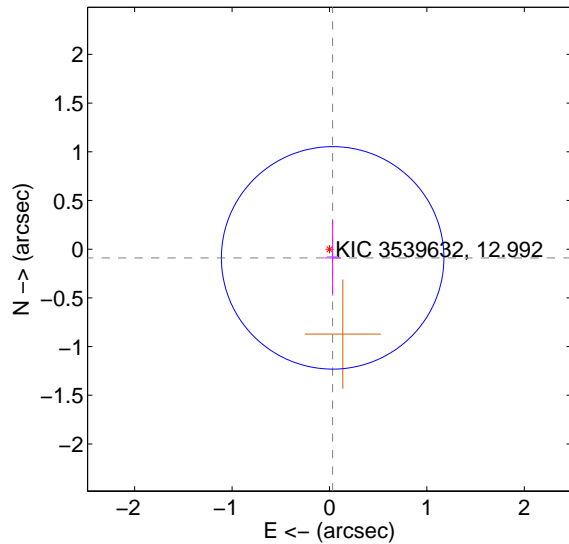
Supplemental centroid analysis for 003539632-04. Kepler magnitude: 12.99. Transit SNR 7.34

There are 1 quarters with good PRF difference image offsets

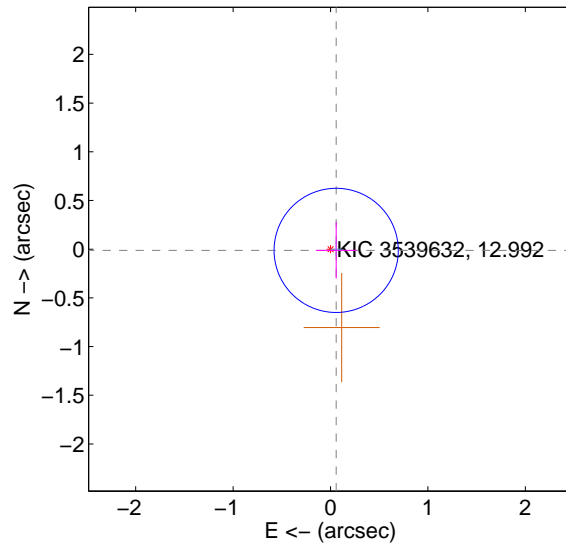
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.381	0.25	-0.033 ± 0.084	-0.089 ± 0.386
PRF-fit source offset from KIC position	0.059 ± 0.213	0.28	-0.058 ± 0.208	-0.012 ± 0.290
photometric centroid source offset	0.63 ± 0.48	1.33	0.26 ± 0.62	0.58 ± 0.45

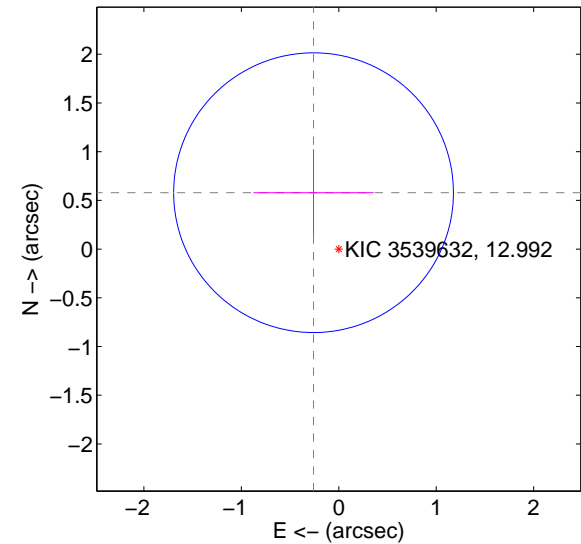
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

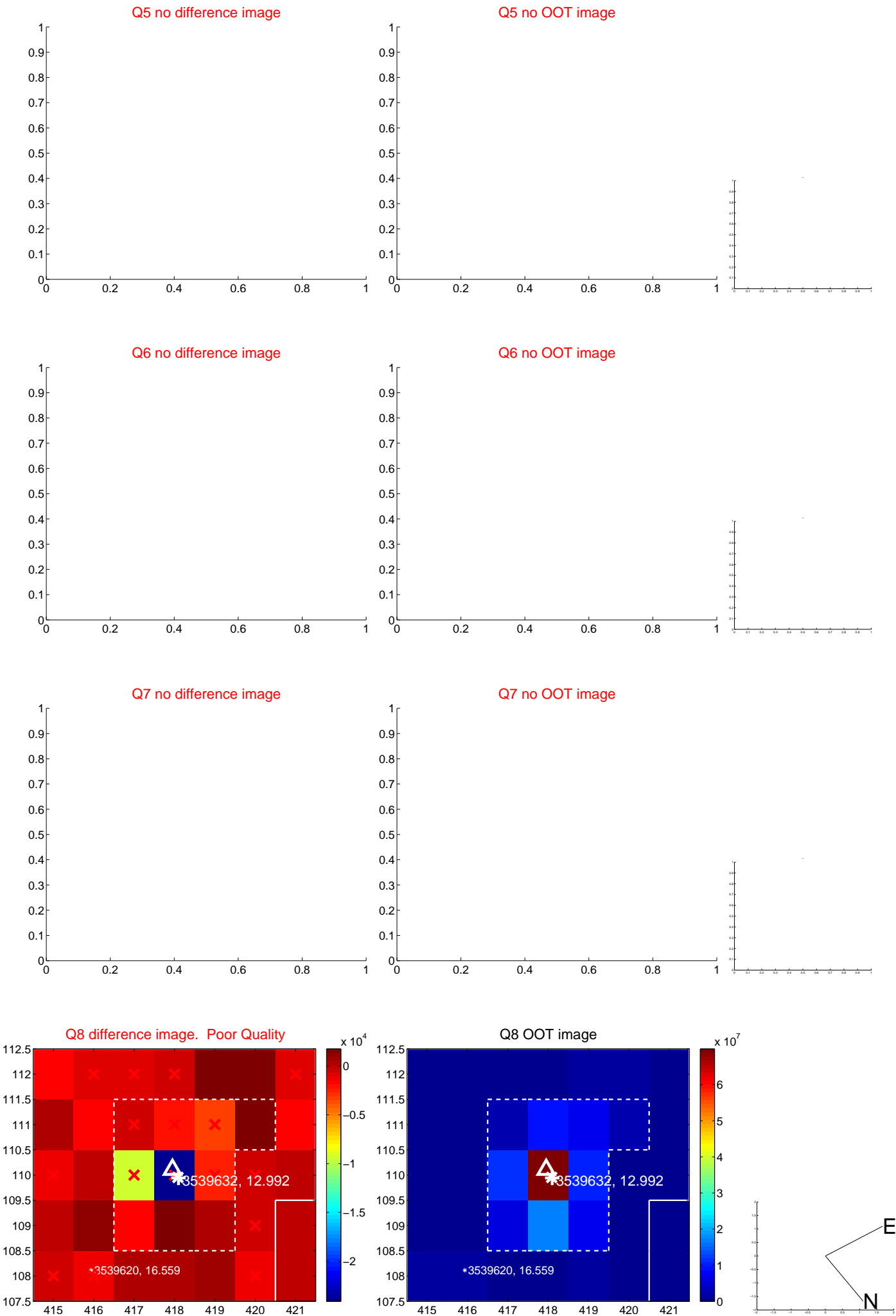


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

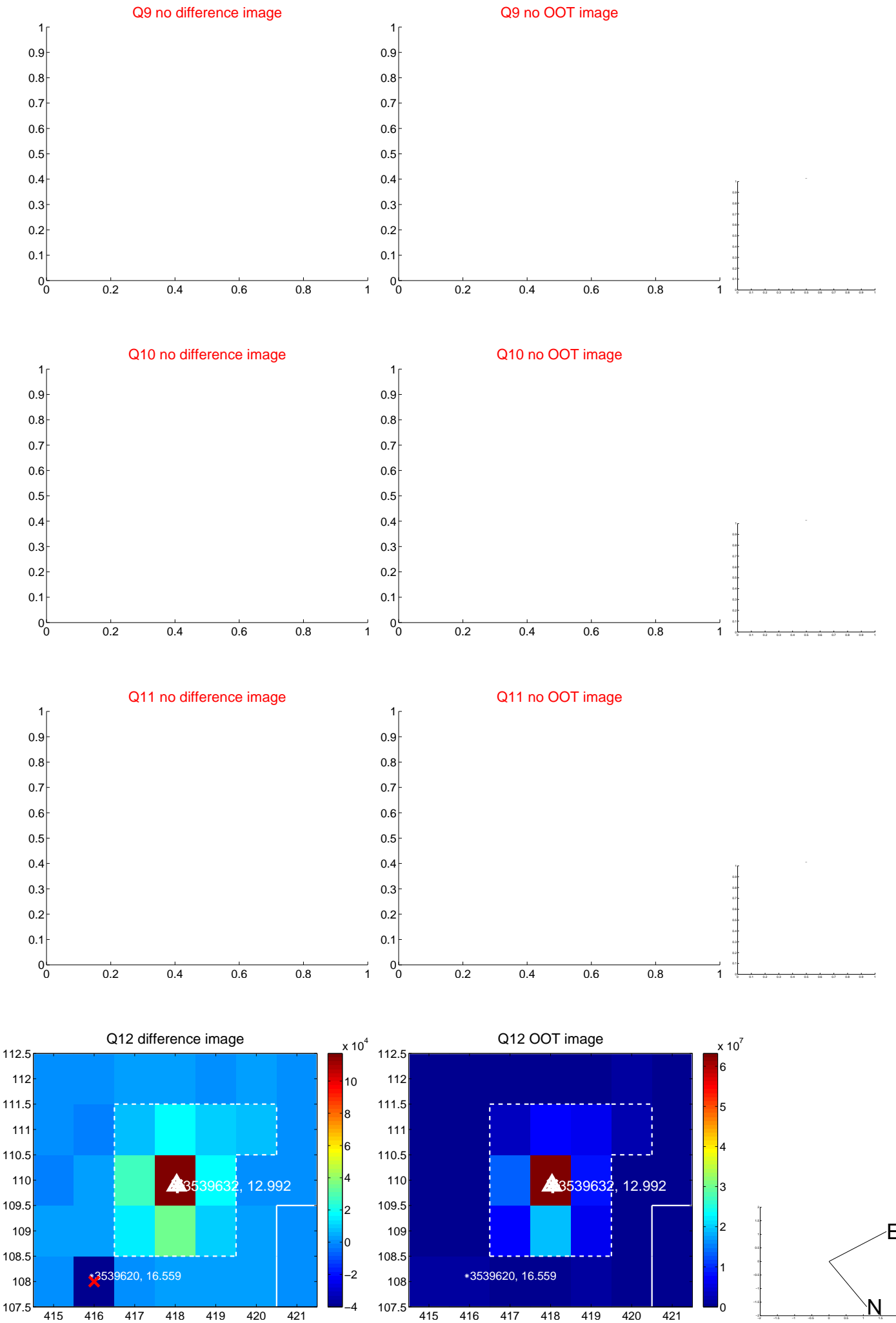
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



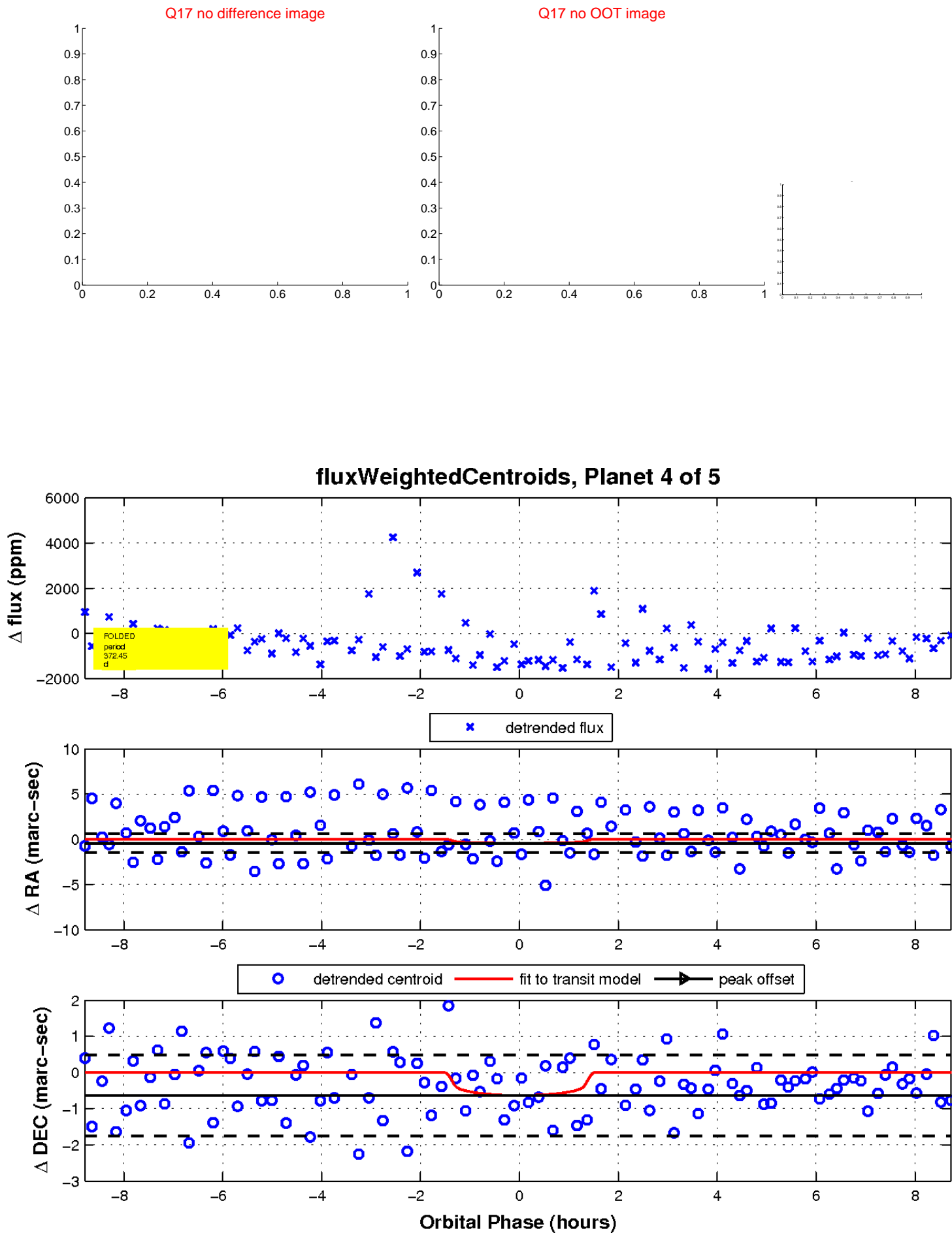
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

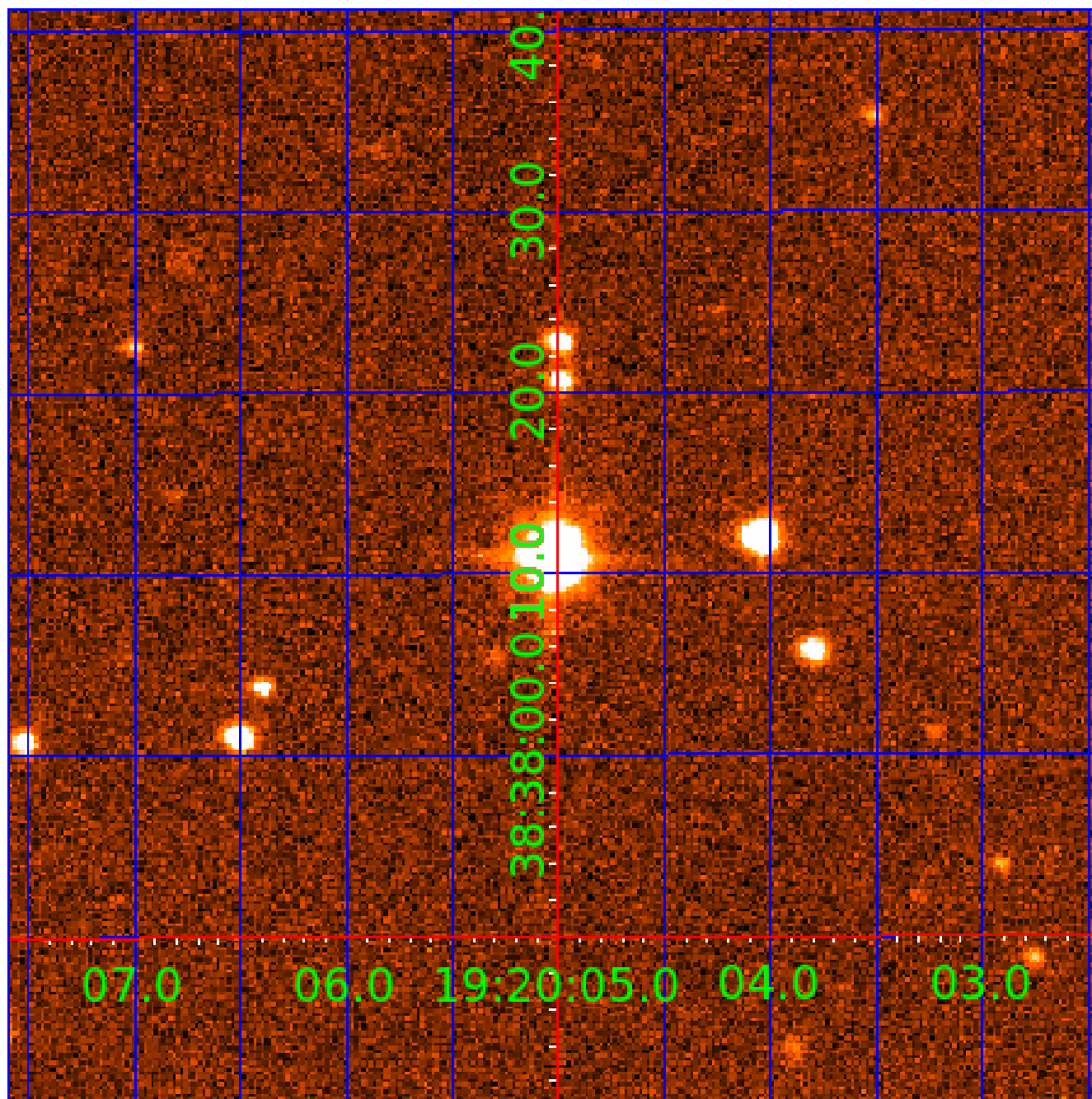


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003539632

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})
003539632-01	OBS	No	397.962776	453.351073	1166.5	5.554	21.4	5.0	0.91	5585	3.12	0.76
003539632-02	OBS	No	449.064930	570.834635	605.6	4.832	17.1	3.1	0.91	5585	2.30	0.65
003539632-03	OBS	No	417.294801	482.662898	973.4	2.774	17.4	5.7	0.91	5585	2.82	0.72
003539632-04	OBS	No	372.449201	398.848728	1143.6	2.934	13.3	7.3	0.91	5585	3.24	0.83
003539632-05	OBS	No	319.463176	333.463325	1275.0	3.000	22.4	-1.0	0.91	5585	3.22	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003539632-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003539632-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003539632-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

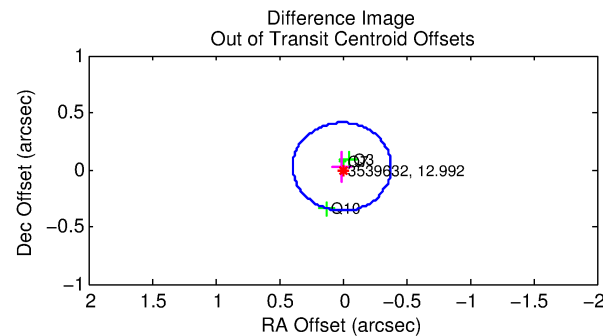
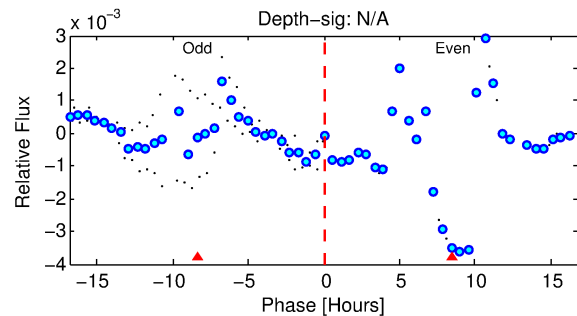
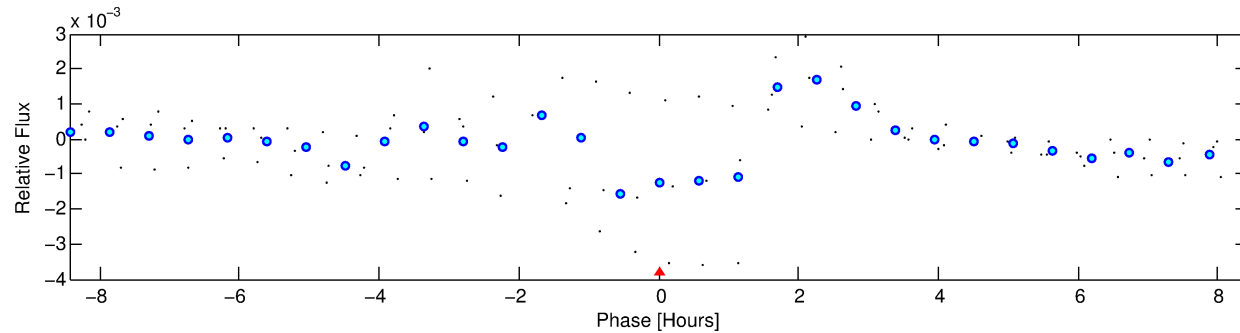
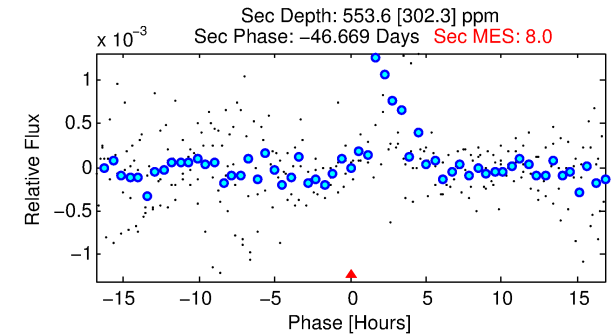
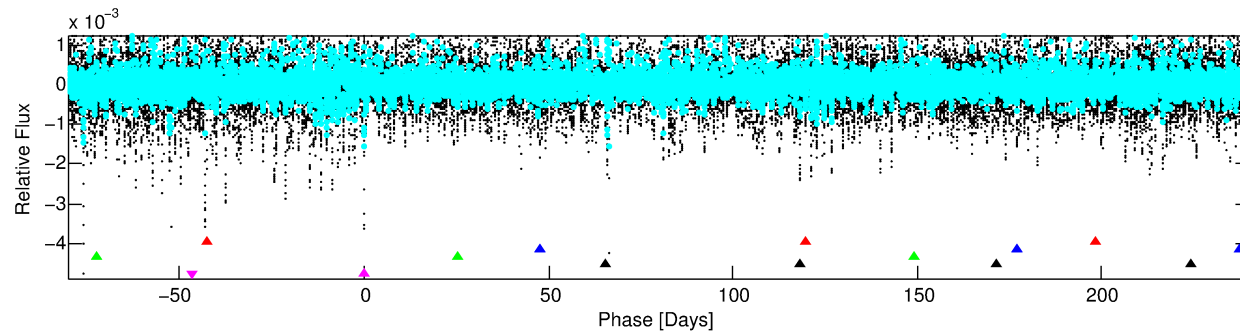
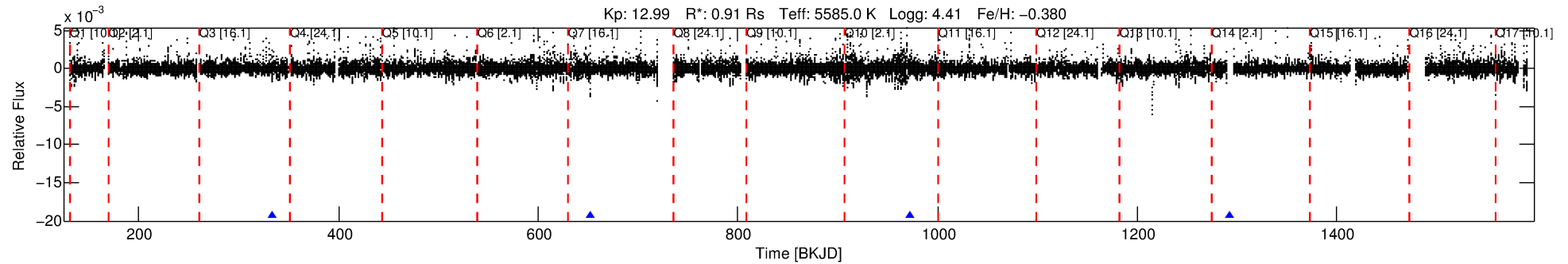
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003539632-05

No Significant Match Found

DV One-Page Summary

KIC: 3539632 Candidate: 5 of 5 Period: 319.463 d



TPS TCE Results:

Period = 319.46318 d
Epoch = 333.4633 BKJD

DV fit results are unavailable

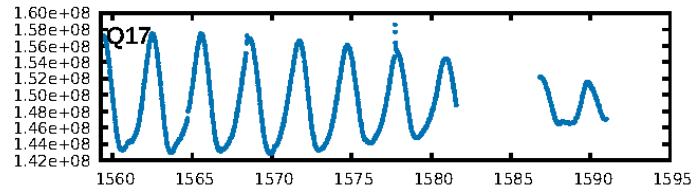
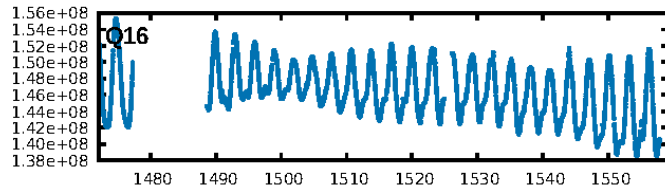
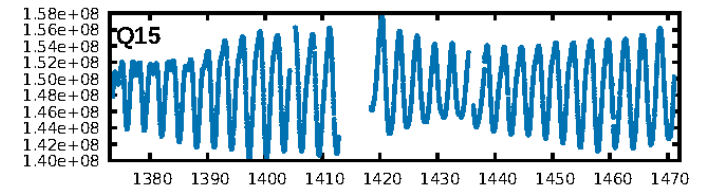
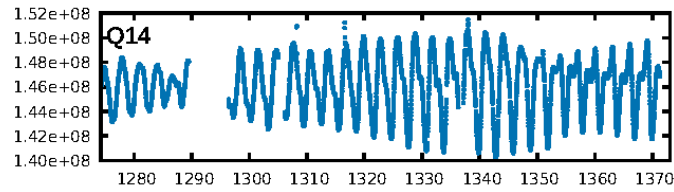
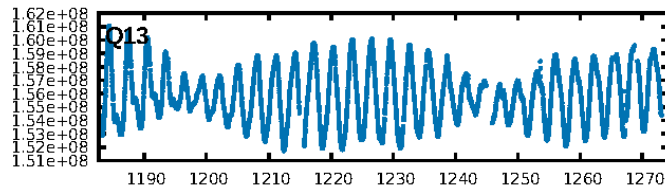
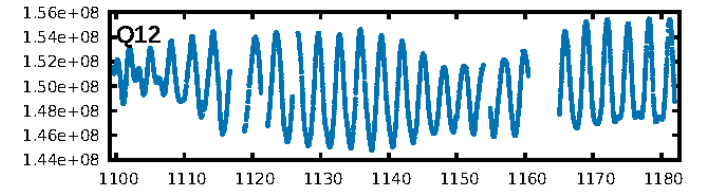
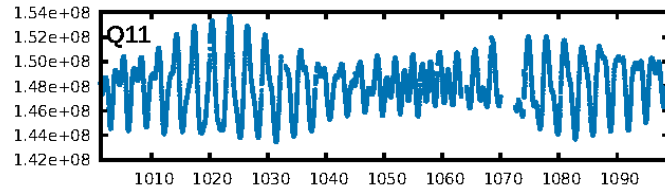
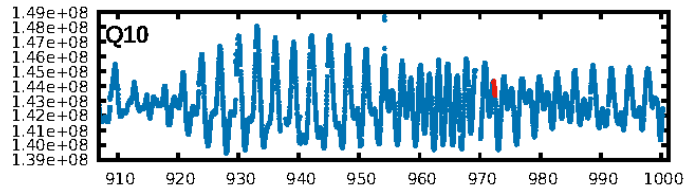
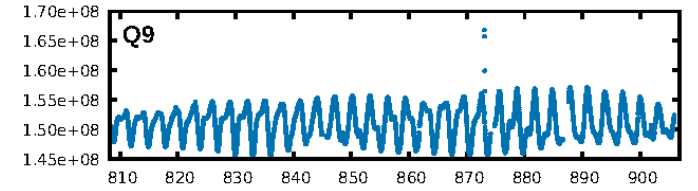
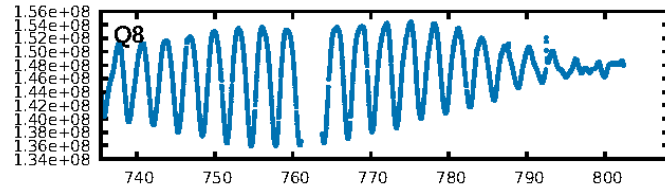
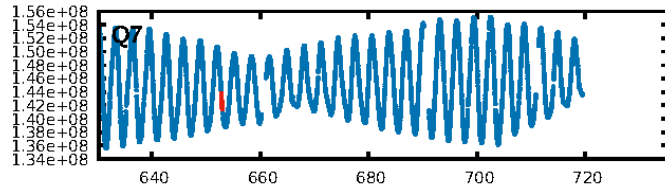
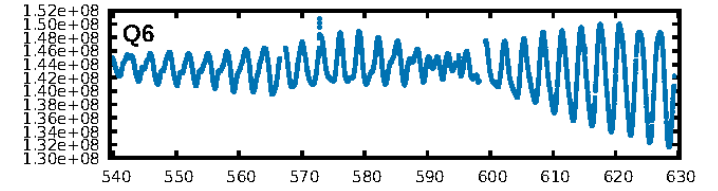
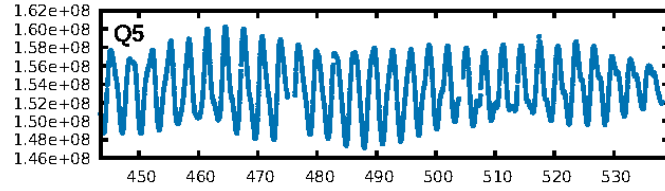
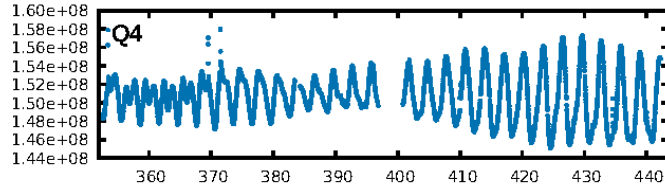
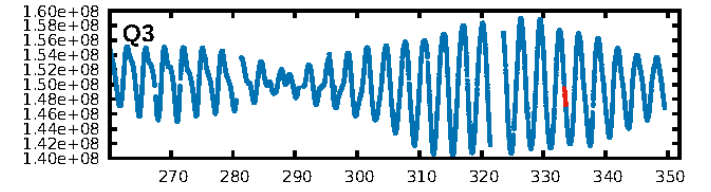
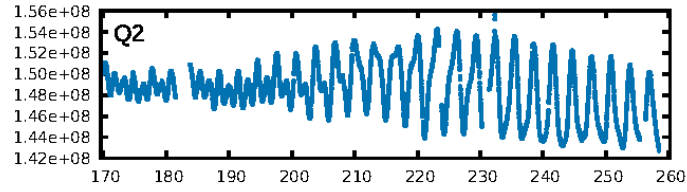
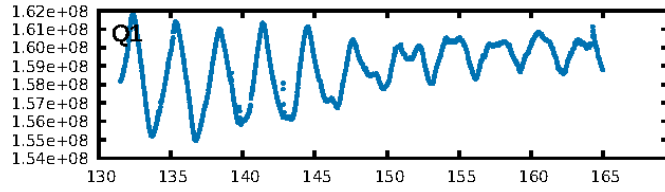
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [303.03σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.182
Centroid-sig: 19.5%
Centroid-so: 0.195 arcsec [0.71σ]
OotOffset-rm: 0.027 arcsec [0.21σ]
KicOffset-rm: 0.084 arcsec [0.42σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

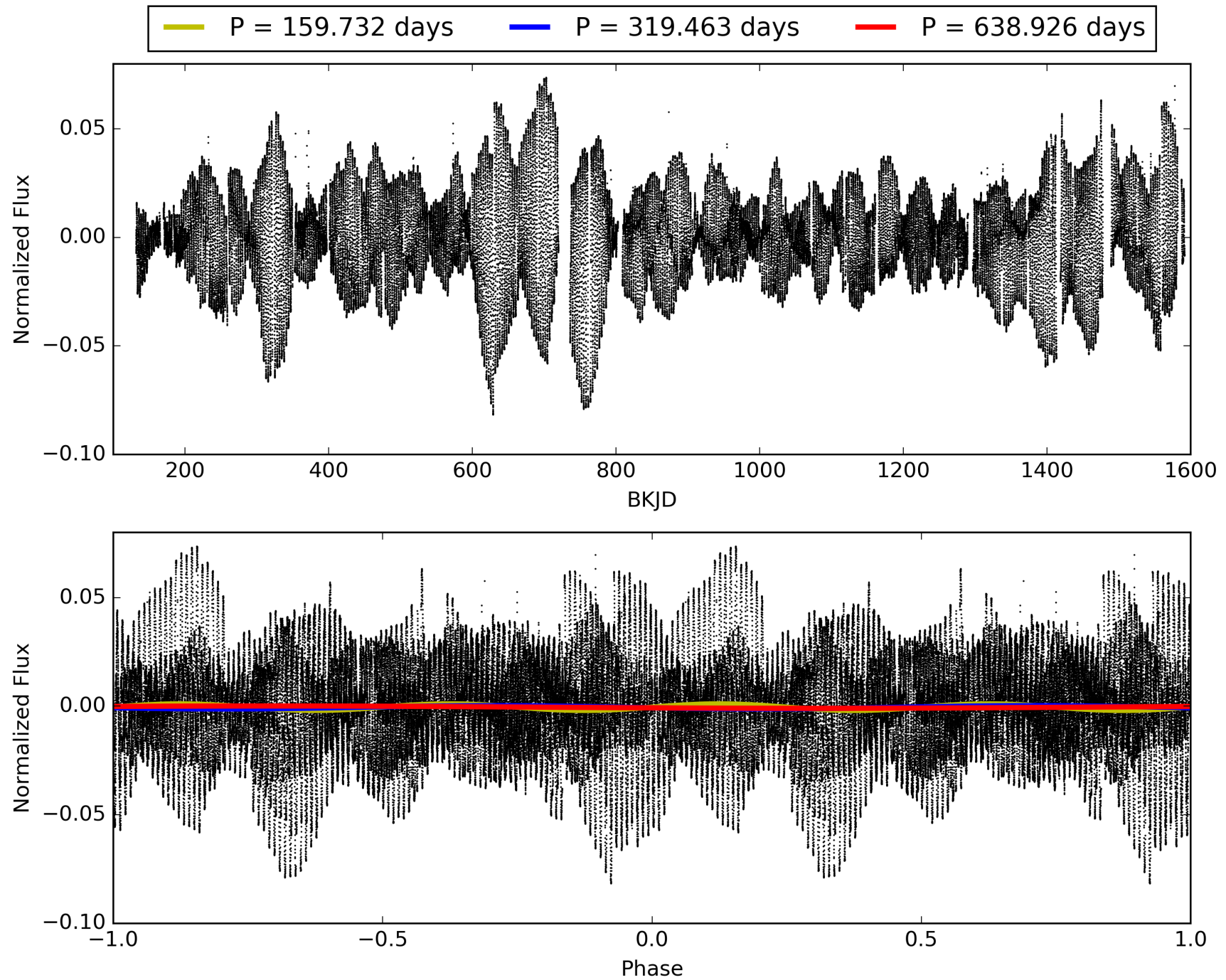
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:12:30 Z

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

TCE 003539632-05, PDC Light Curves

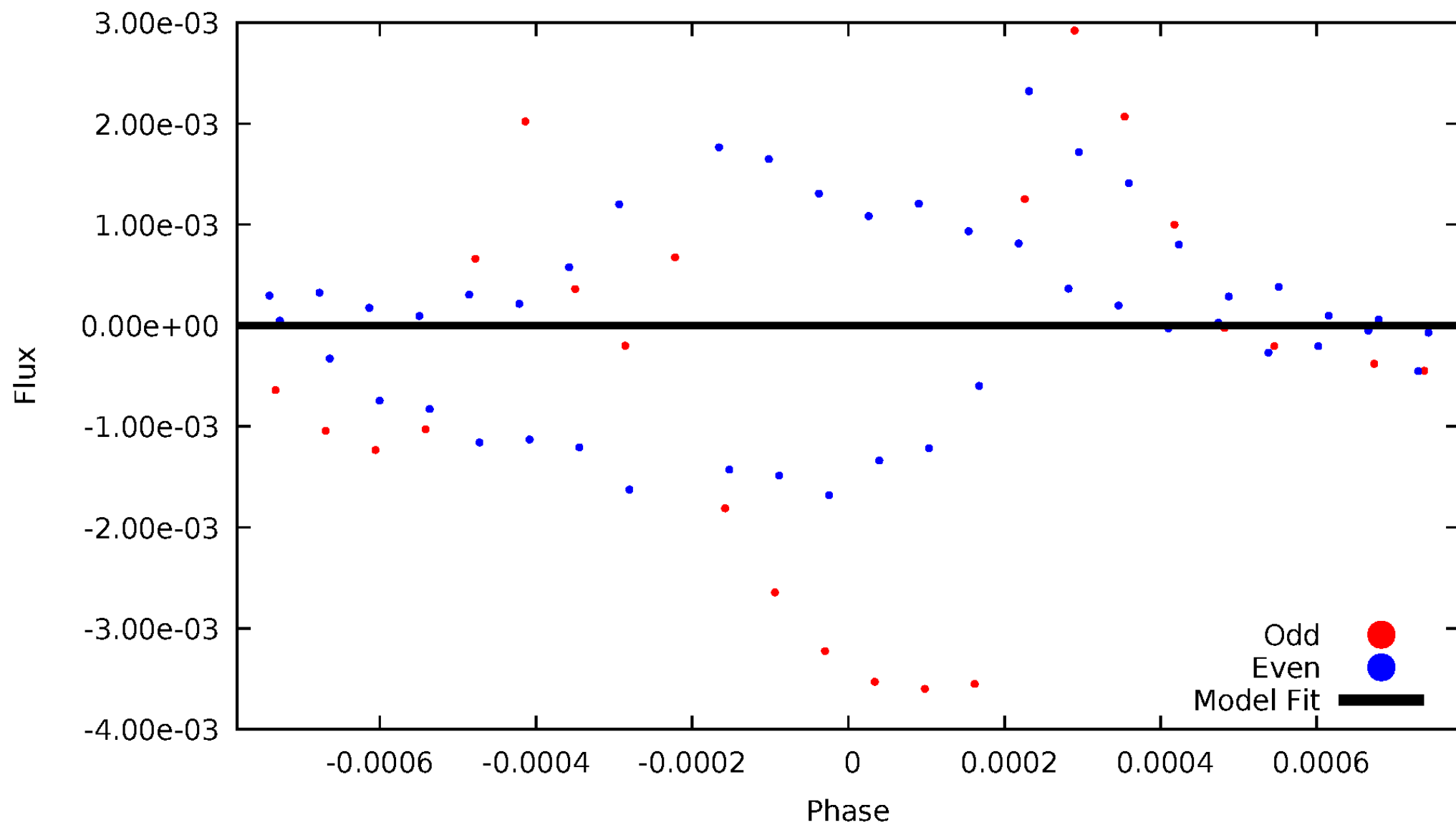


TCE 003539632-05



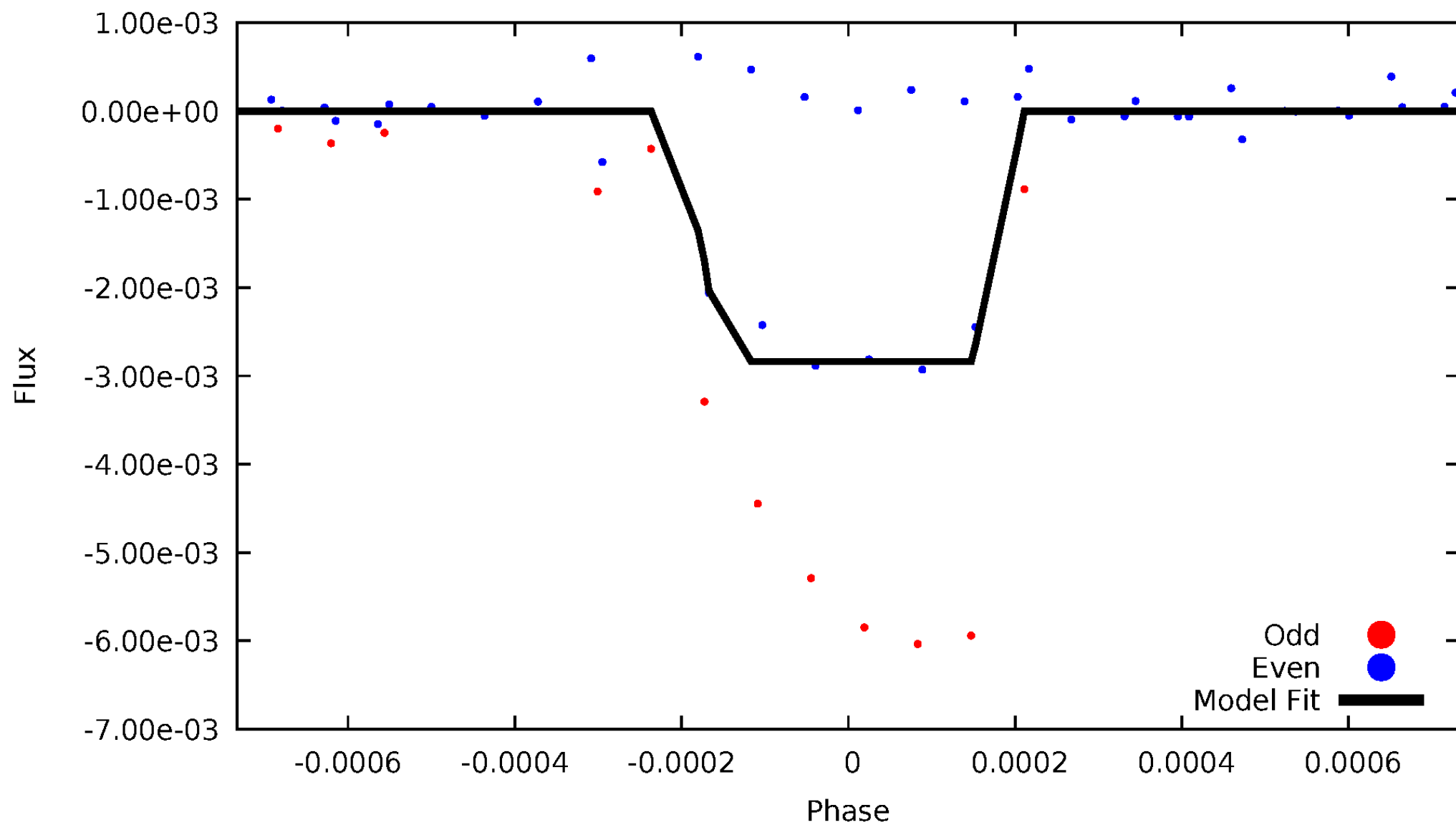
DV Odd/Even

TCE 003539632-05

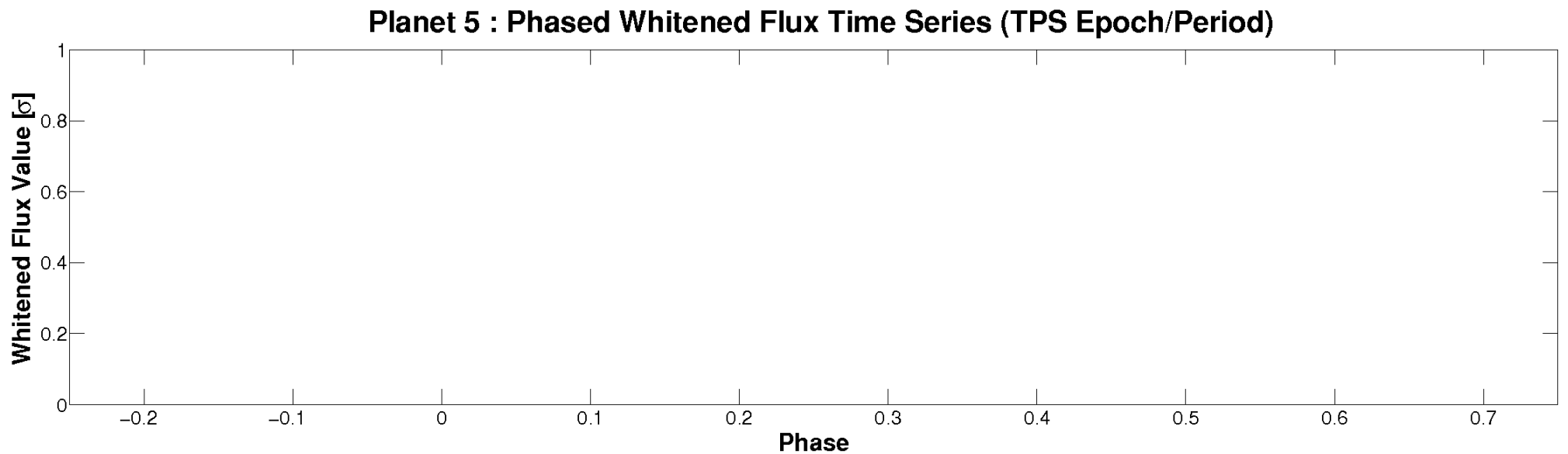
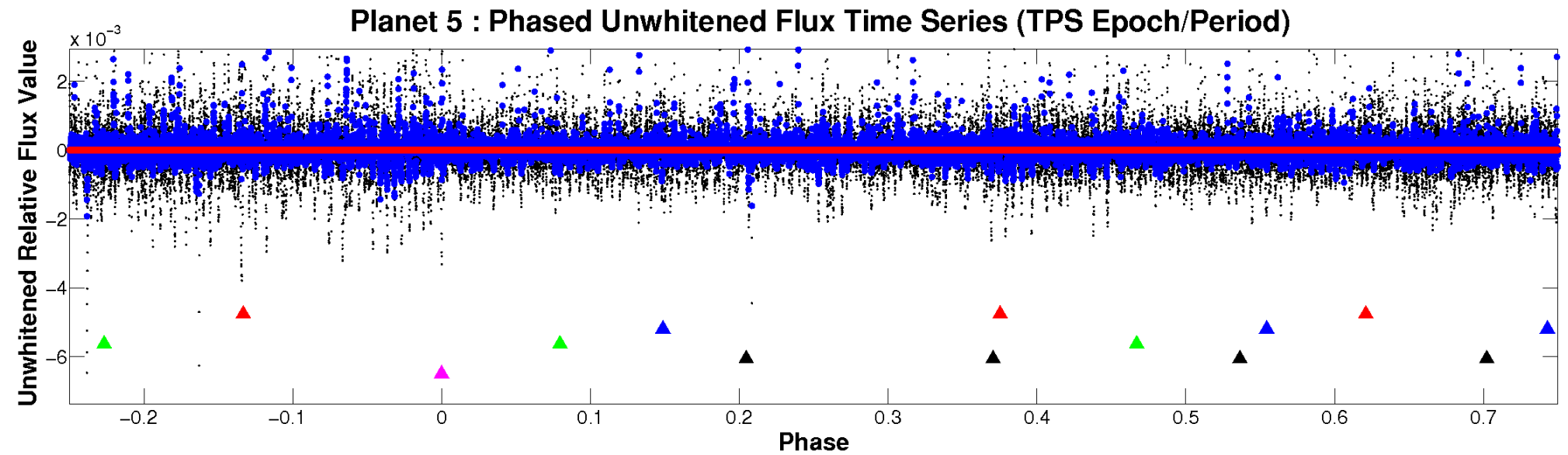


ALT Odd/Even

TCE 003539632-05

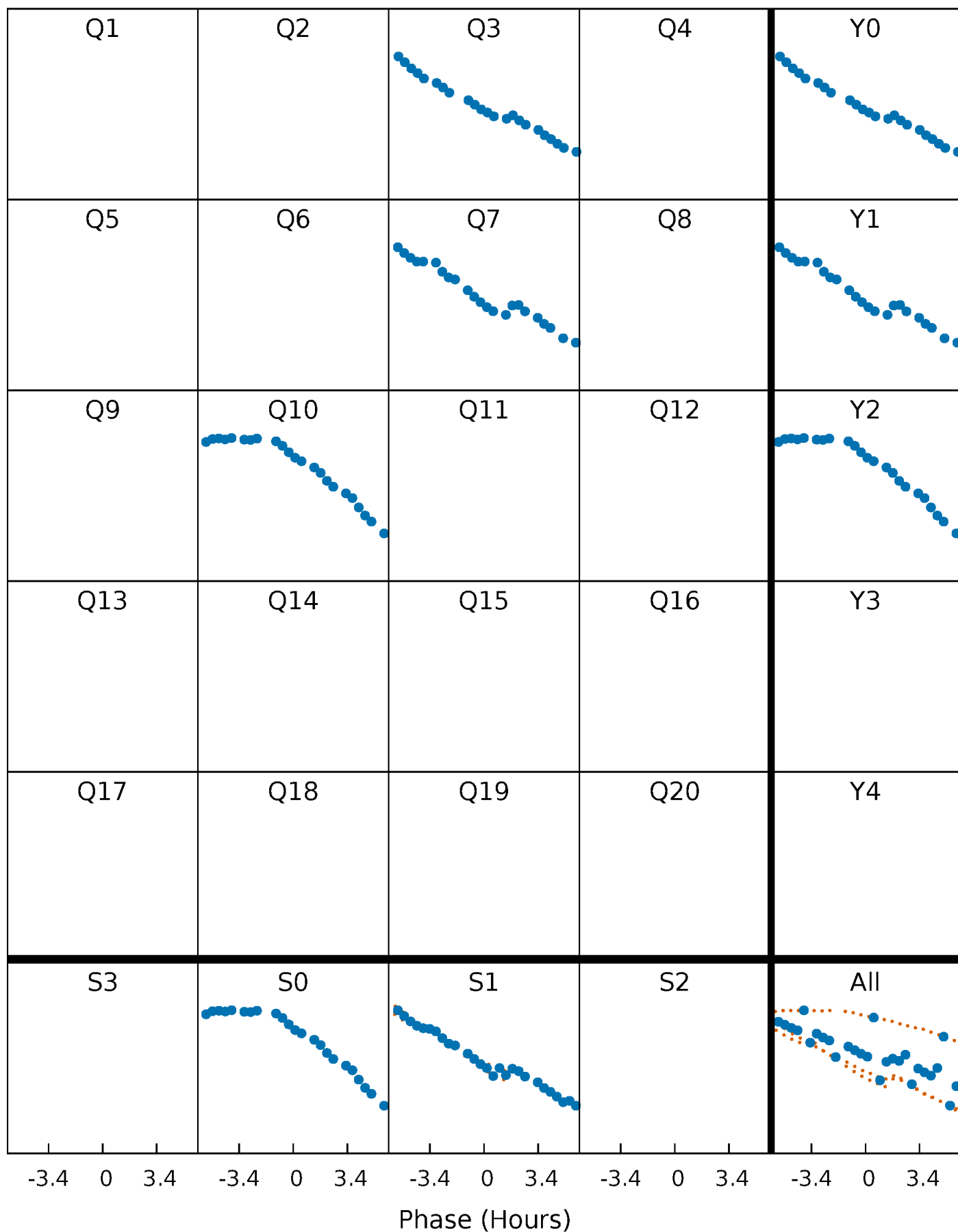


Non-Whitened Vs. Whitened Light Curve



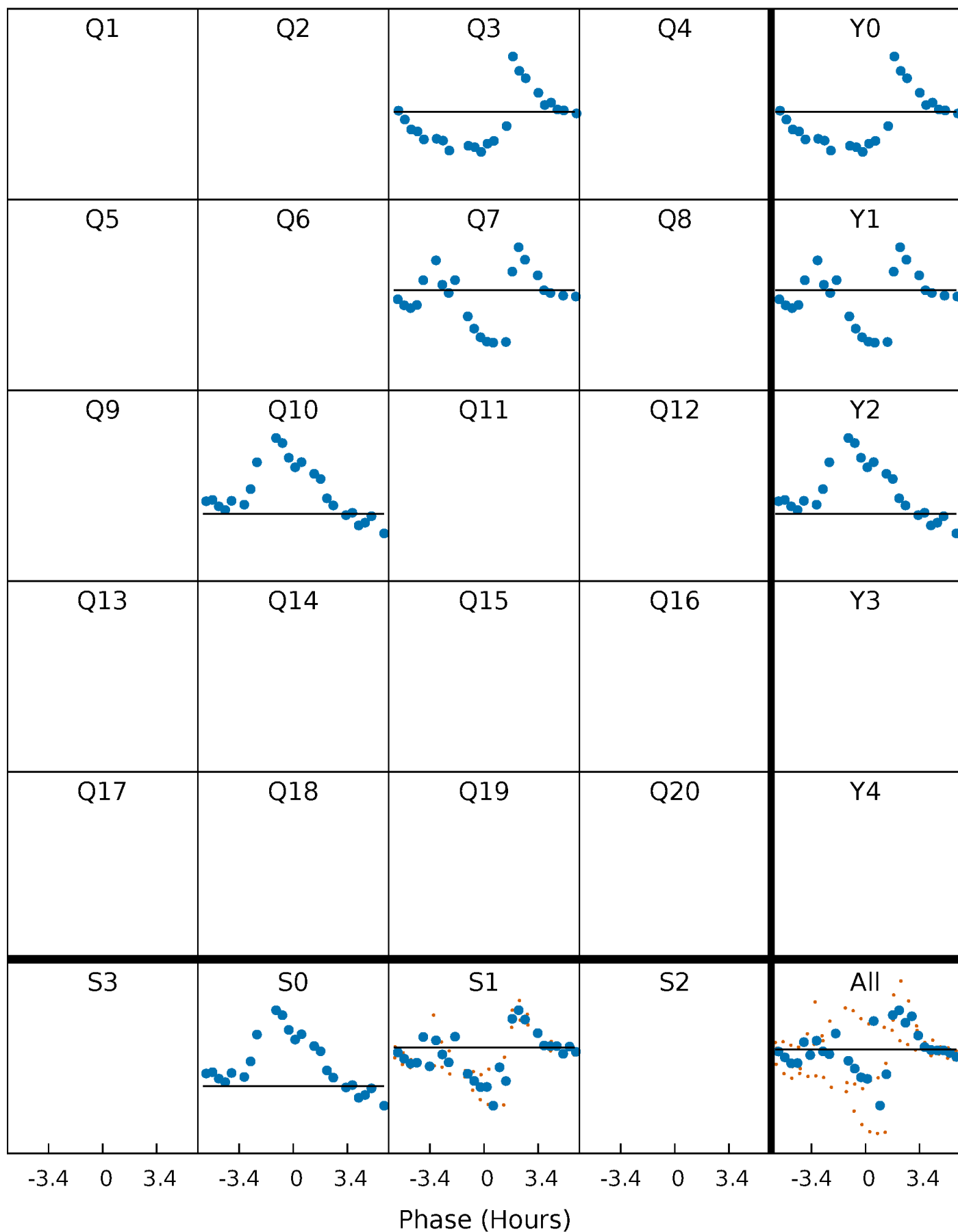
PDC Quarter-Phased Transit Curves

TCE 003539632-05 $P=319.463176$ Days $T_0=333.463325$ (BKJD)



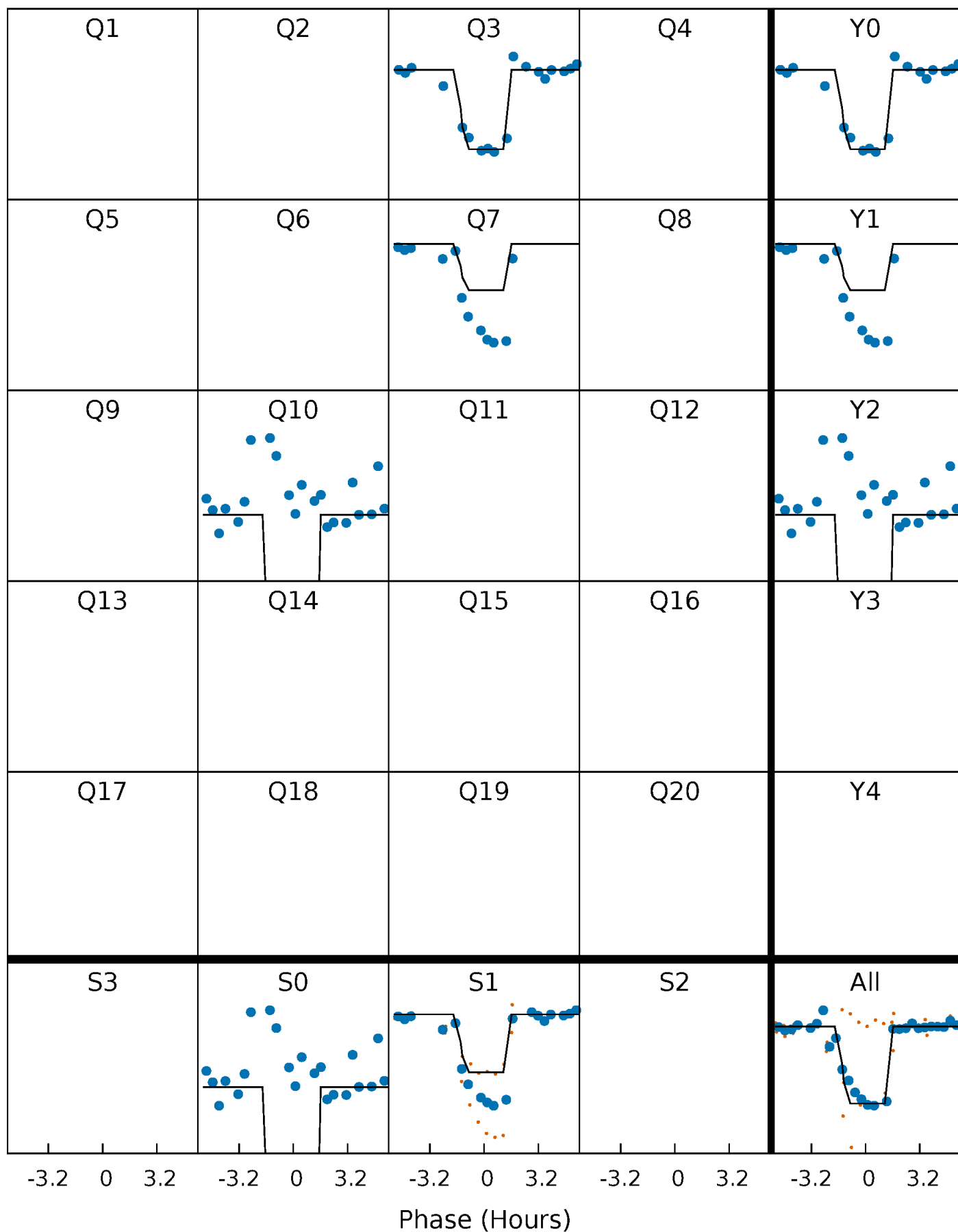
DV Quarter-Phased Transit Curves

TCE 003539632-05 $P=319.463176$ Days $T_0=333.463325$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

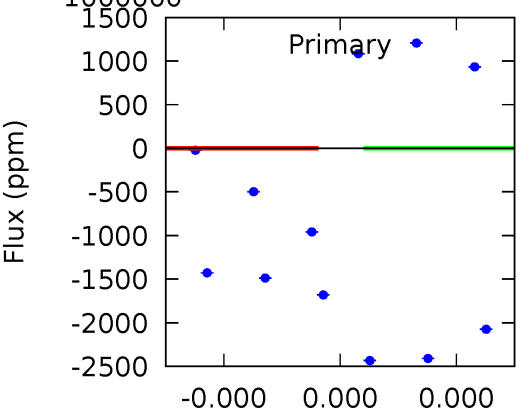
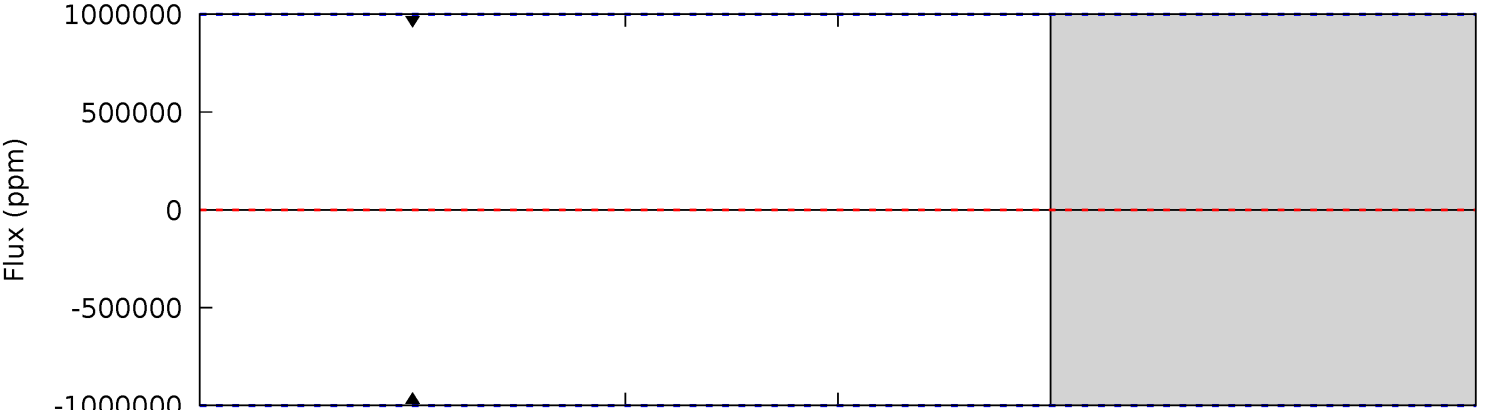
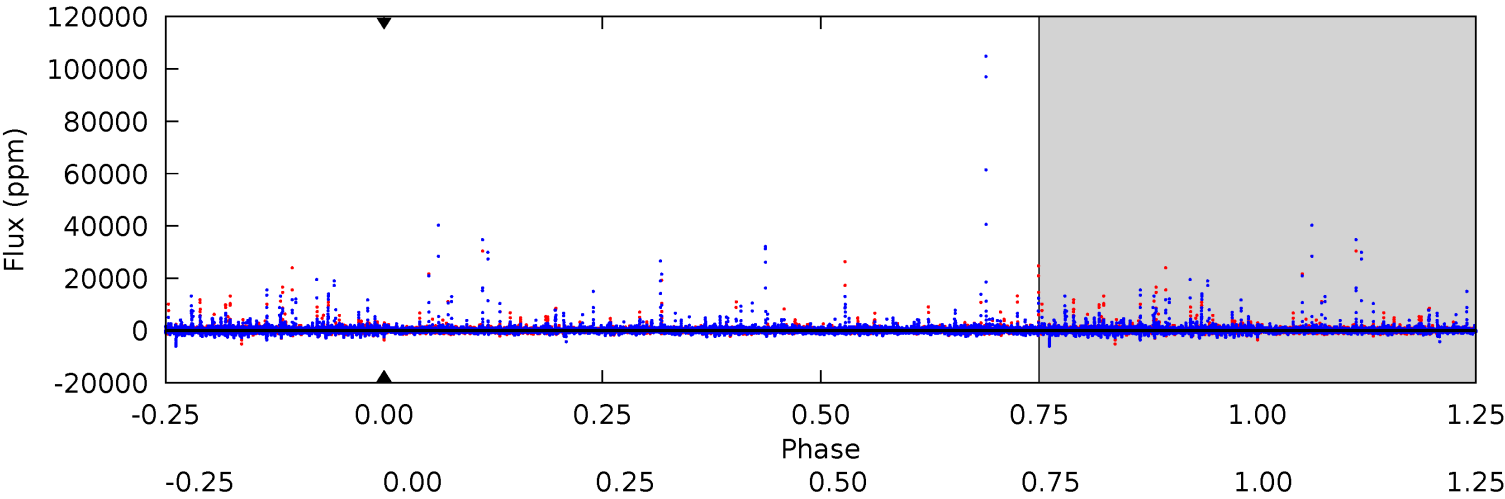
TCE 003539632-05 $P=319.463176$ Days $T_0=333.468030$ (BKJD)



DV Model-Shift Uniqueness Test

003539632-05, P = 319.463176 Days, E = 14.000149 Days

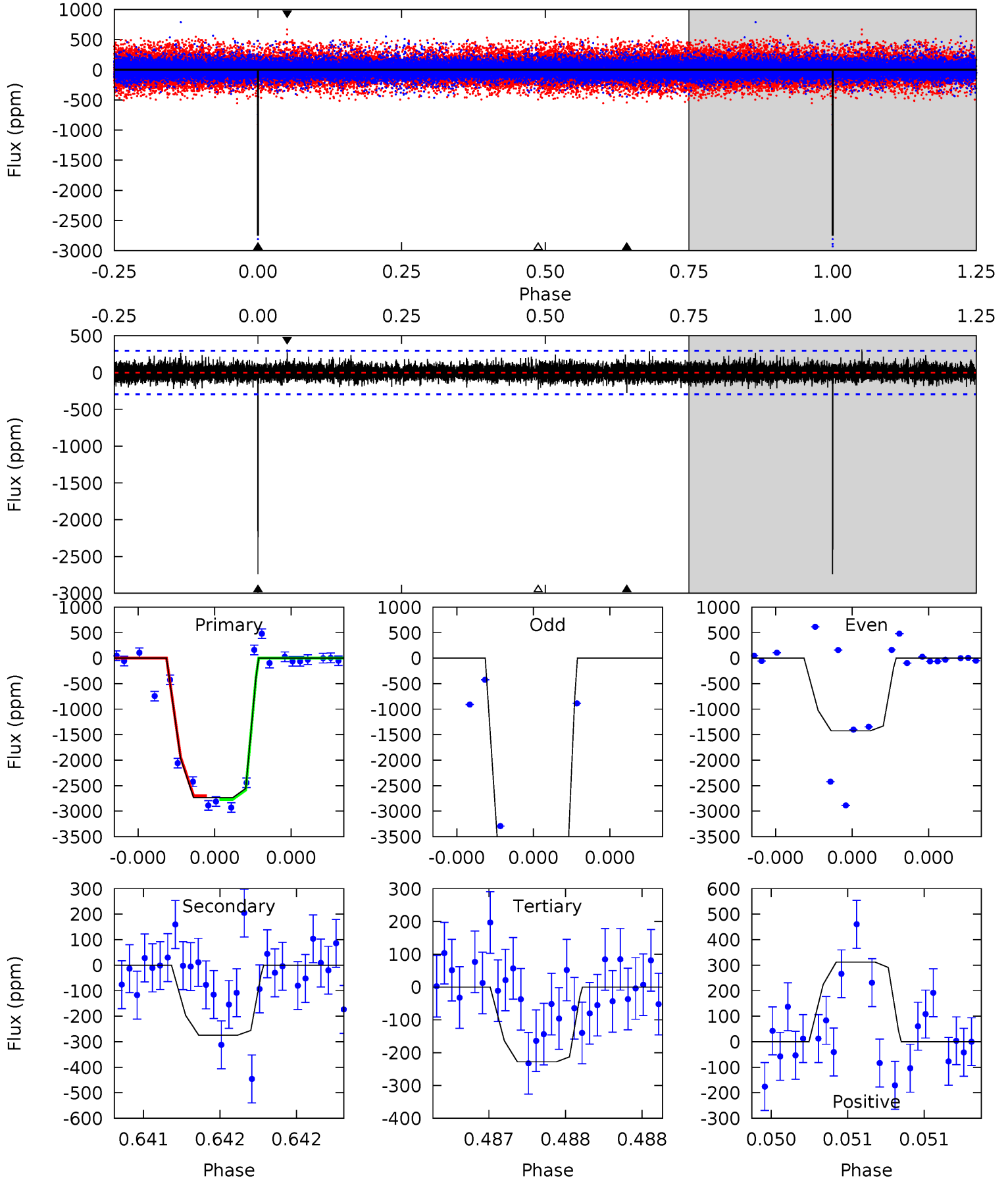
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003539632-05, P = 319.463176 Days, E = 14.004854 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.1	5.22	4.34	5.94	5.62	3.56	1.03	47.8	46.2	0.88	-0.72	53.7	0.97	0.10	0.68



Stellar Parameters For KIC 003539632

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5585^{+152}_{-152}	$4.409^{+0.148}_{-0.204}$	$-0.380^{+0.350}_{-0.250}$	$0.910^{+0.242}_{-0.141}$	$0.773^{+0.124}_{-0.044}$	$1.447^{+1.002}_{-0.754}$
	+3%/-3%	+3%/-5%	+92%/-66%	+27%/-15%	+16%/-6%	+69%/-52%
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 003539632-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$8.05^{+8.20}_{-5.62}$	360^{+28}_{-20}	-4227^{+23516}_{-14924}	$-11420.505^{+1202593.304}_{-1223210.576}$
Alt.	-274 ± 52	$9.20^{+8.30}_{-6.15}$	360^{+28}_{-19}	3017^{+1311}_{-452}	1281^{+9690}_{-932}

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 $A_{obs} \gg 1.0$

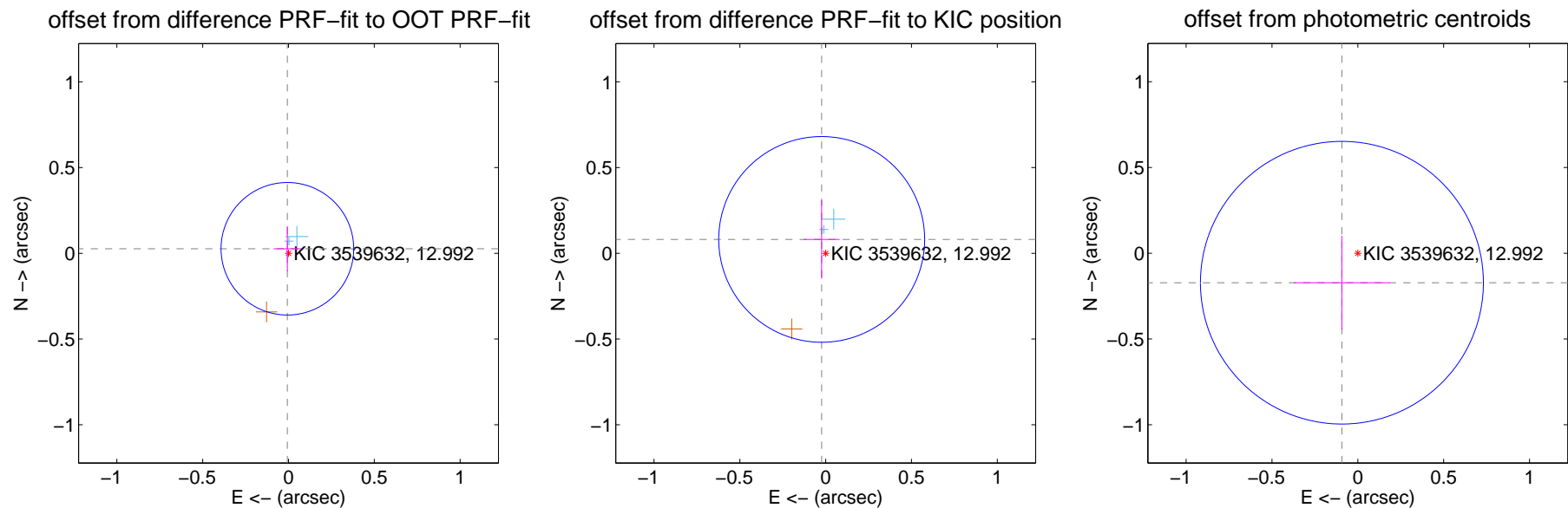
DV Centroid Data

Supplemental centroid analysis for 003539632-05. Kepler magnitude: 12.99. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

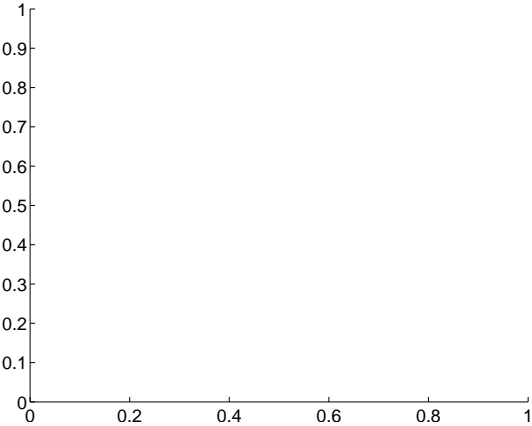
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.027 ± 0.129	0.21	0.007 ± 0.080	0.026 ± 0.131
PRF-fit source offset from KIC position	0.084 ± 0.200	0.42	0.023 ± 0.105	0.081 ± 0.229
photometric centroid source offset	0.20 ± 0.27	0.71	0.09 ± 0.28	-0.17 ± 0.27



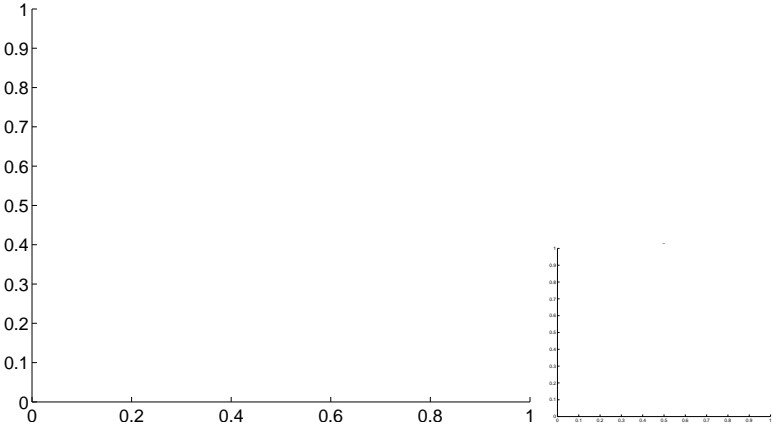
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

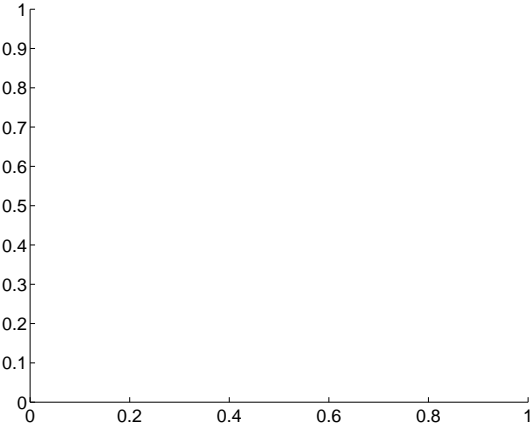
Q1 no difference image



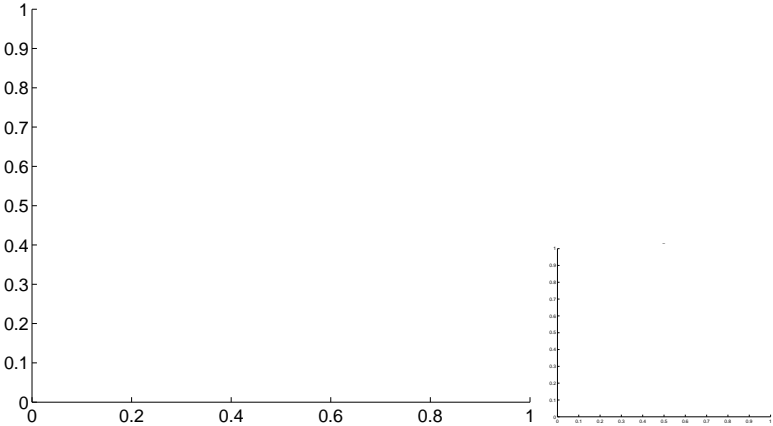
Q1 no OOT image



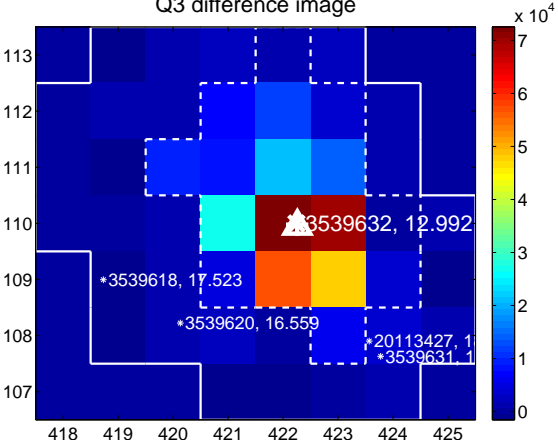
Q2 no difference image



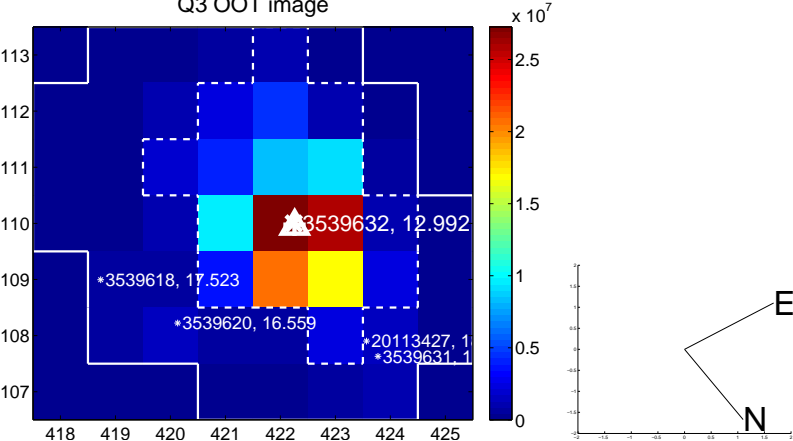
Q2 no OOT image



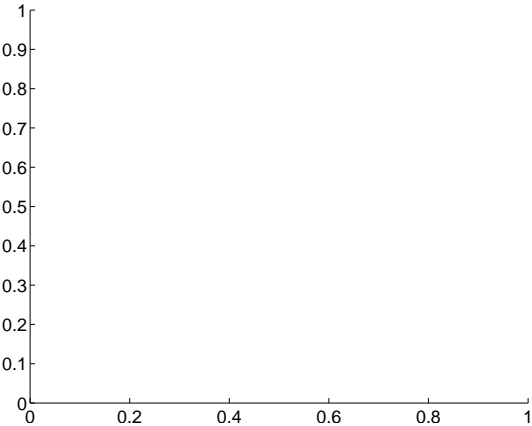
Q3 difference image



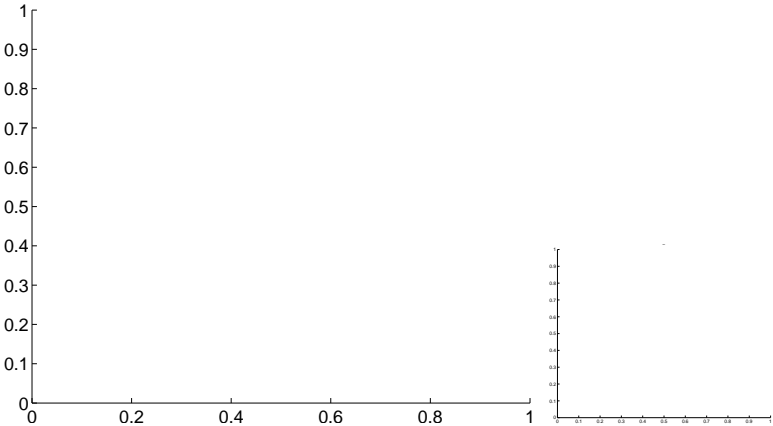
Q3 OOT image



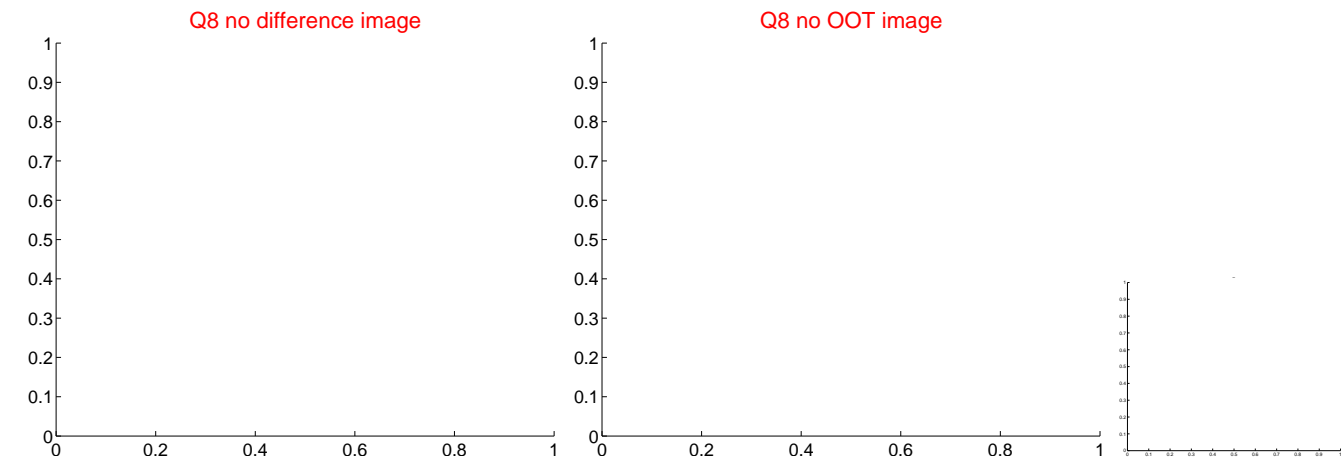
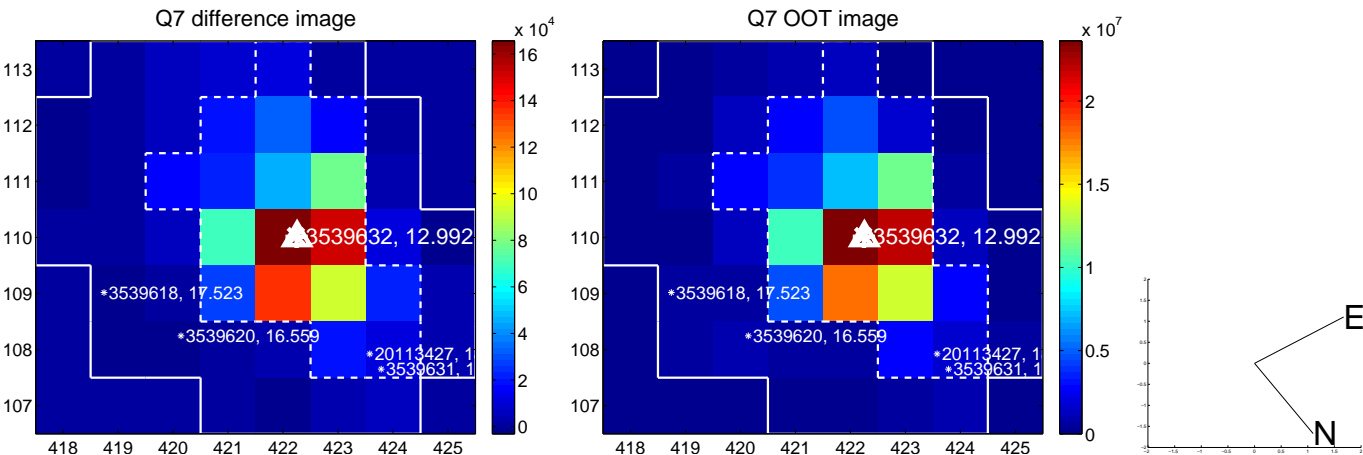
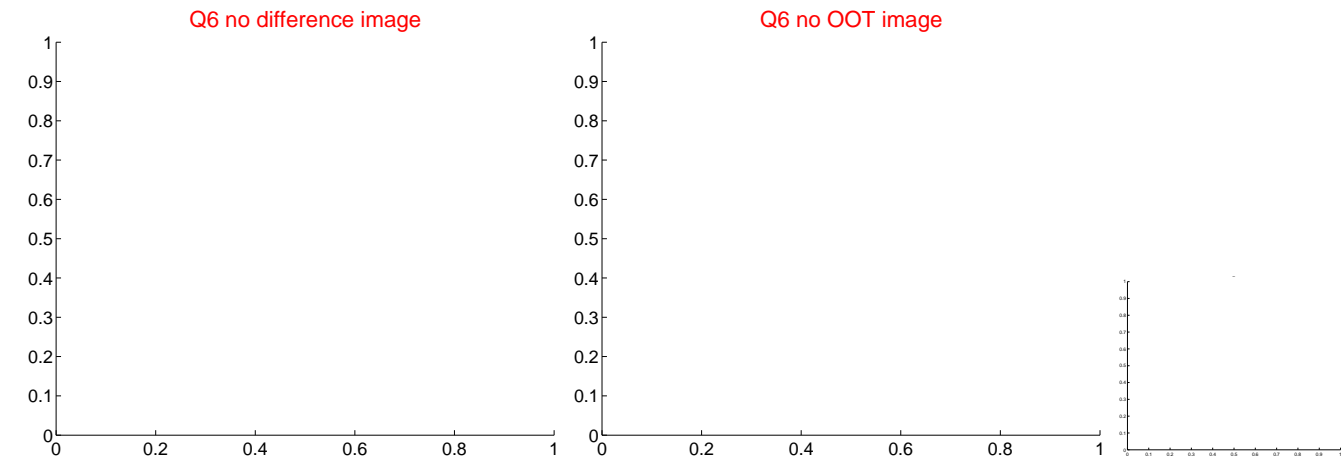
Q4 no difference image



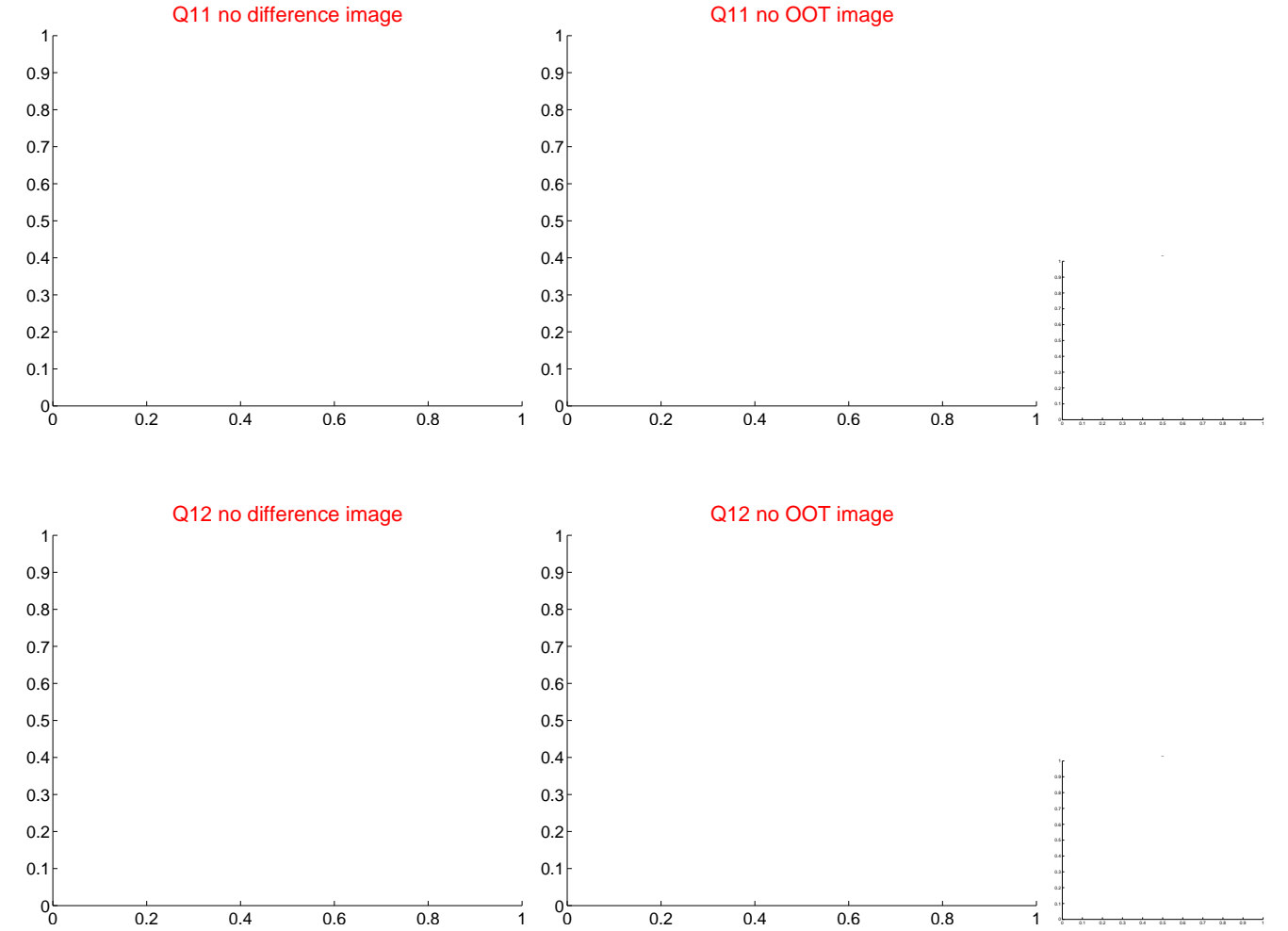
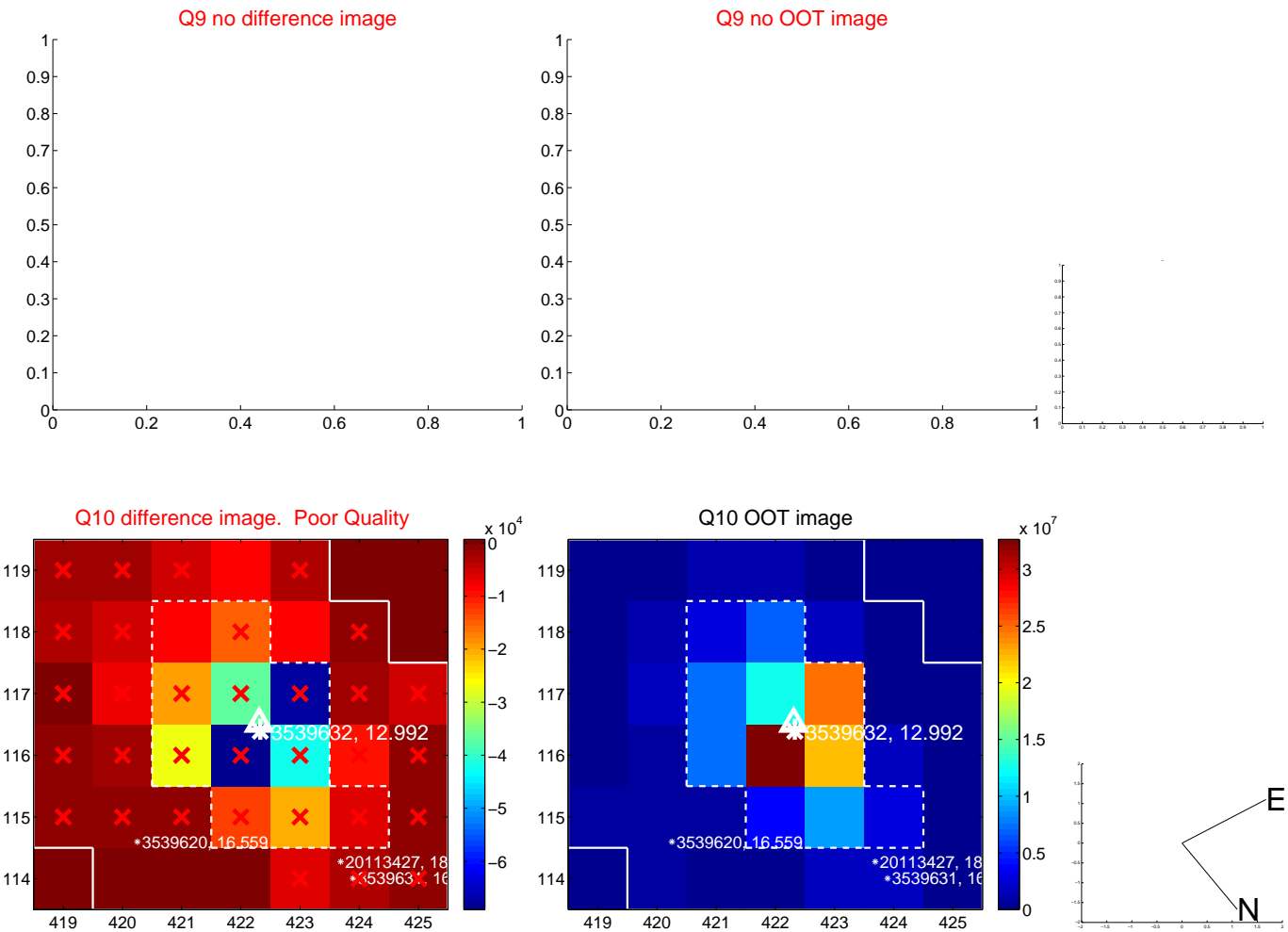
Q4 no OOT image



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



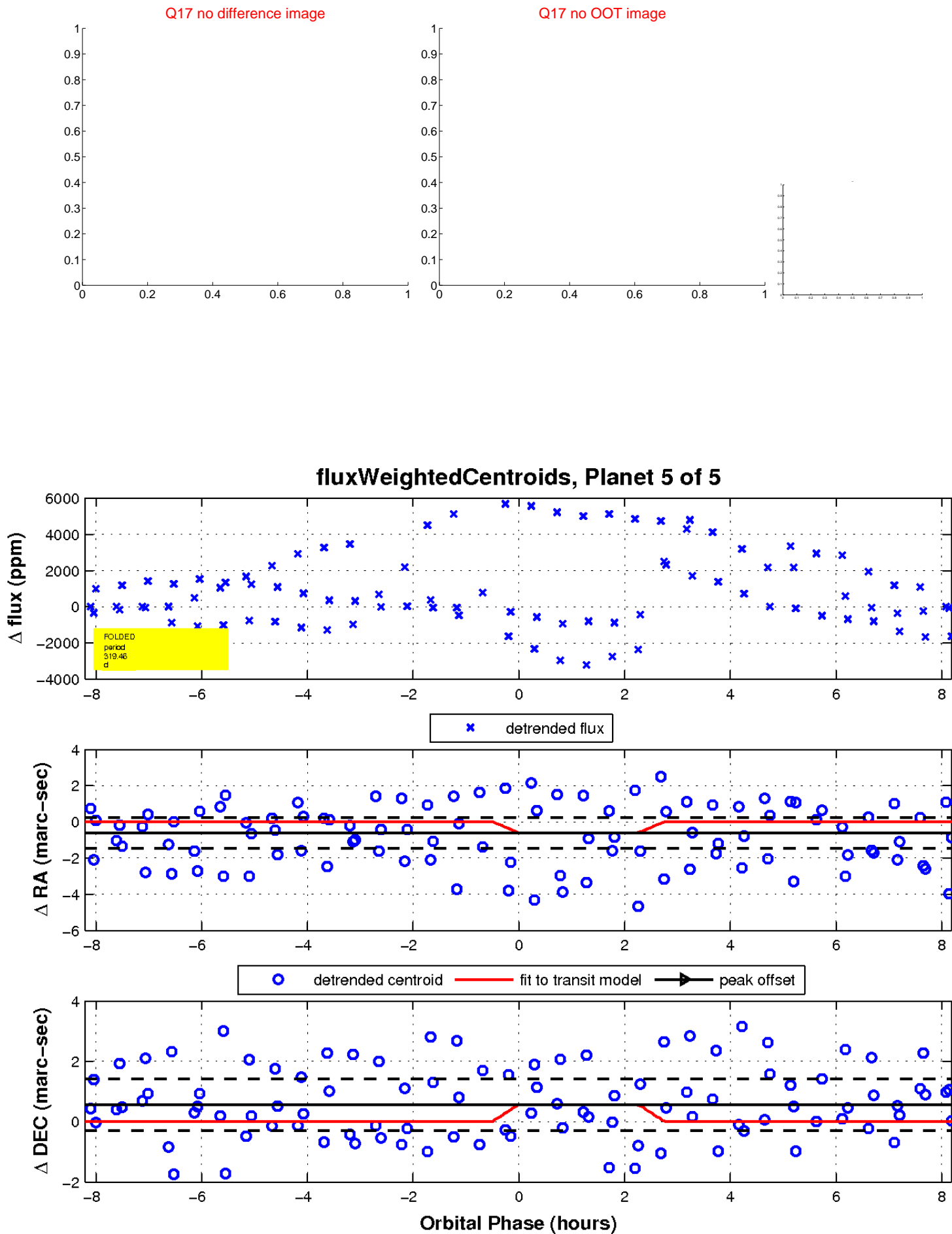
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

