

KIC 005098444

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})
005098444-01	OBS	0637.01	26.949214	151.020075	19775.8	10.383	739.1	575.8	0.51	4723	7.18	5.79
005098444-02	OBS	No	26.949201	141.289647	4188.4	20.125	112.8	167.7	0.51	4723	3.54	5.79
005098444-03	OBS	No	375.949749	231.106094	625.5	6.042	14.1	9.4	0.51	4723	1.34	0.17
005098444-04	OBS	No	220.069768	294.902266	378.2	6.461	12.3	6.0	0.51	4723	1.11	0.35
005098444-05	OBS	No	453.083916	374.988898	568.6	3.580	10.4	7.6	0.51	4723	1.28	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005098444-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE
005098444-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005098444-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005098444-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS
005098444-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

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

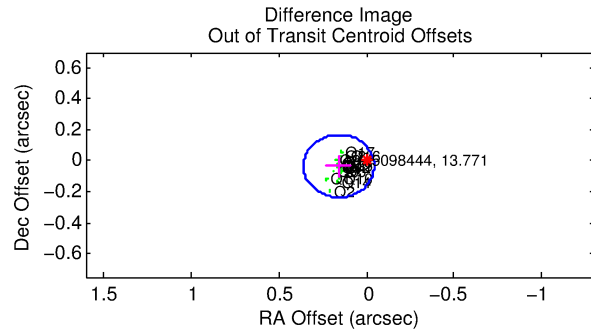
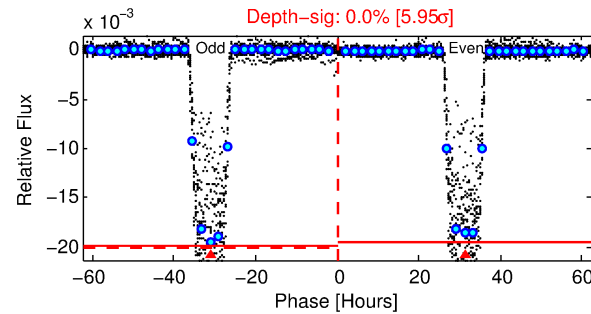
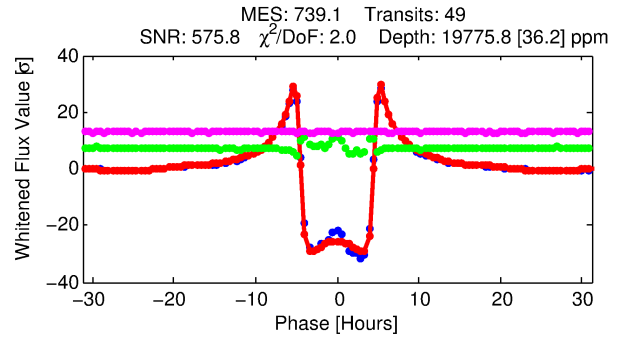
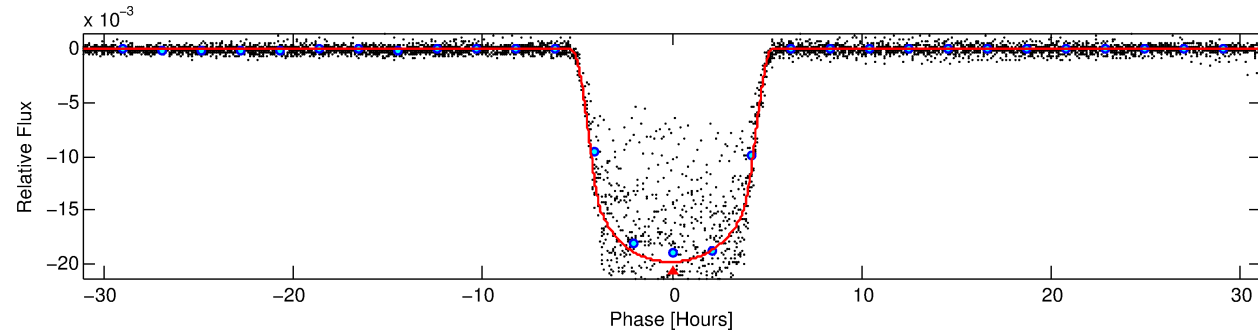
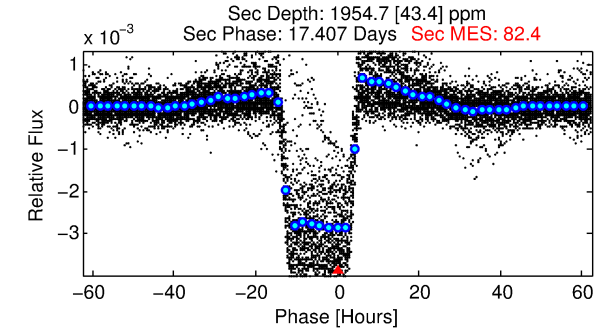
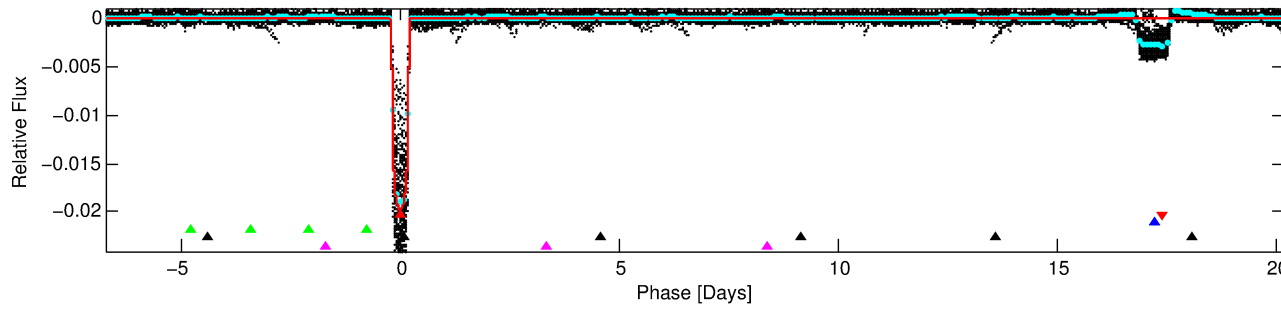
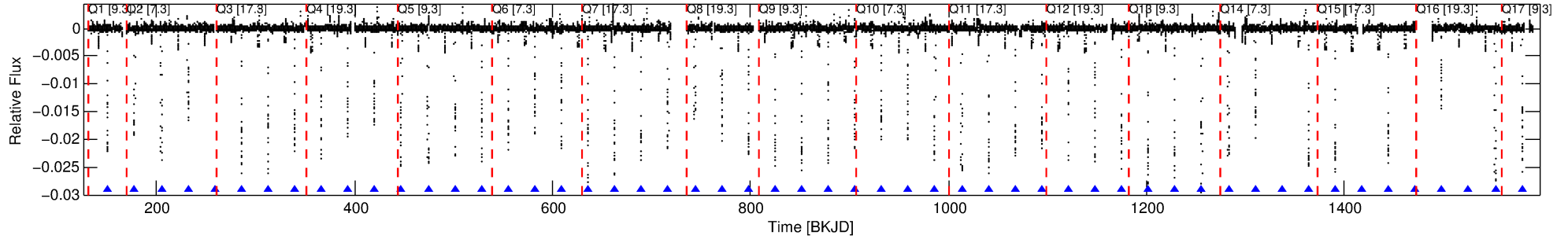
Ephemeris Match Information For 005098444-01

No Significant Match Found

DV One-Page Summary

KIC: 5098444 Candidate: 1 of 5 Period: 26.949 d
KOI: K00637.01 Corr: 0.909

Kp: 13.77 R*: 0.51 Rs Teff: 4723.0 K Logg: 4.74 Fe/H: -1.580



DV Fit Results:

Period = 26.94921 [0.00001] d
Epoch = 151.0201 [0.0002] BKJD
Rp/R* = 0.1286 [0.0002]
a/R* = 21.79 [0.08]
b = 0.26 [0.01]
Seff = 5.79 [0.92]
Teq = 396 [16] K
Rp = 7.19 [0.45] Re
a = 0.1421 [0.0077] AU
Ag = 420.56 [35.21] [11.92σ]
Teffp = 2769 [96] K [24.34σ]

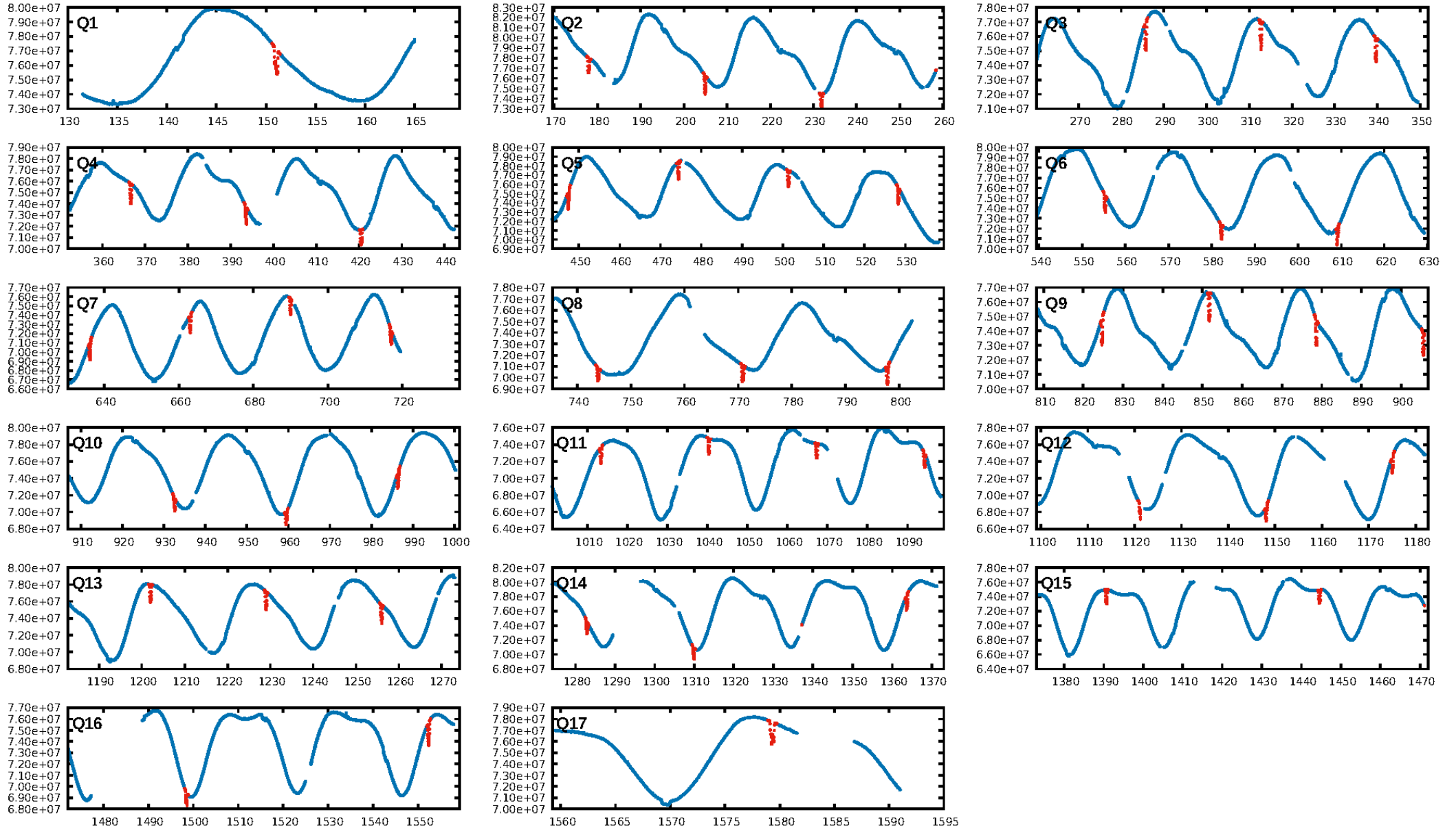
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [378.99σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: 1.3
Centroid-sig: 0.0%
Centroid-so: 0.088 arcsec [12.46σ]
OotOffset-rm: 0.162 arcsec [2.41σ]
KicOffset-rm: 0.107 arcsec [1.54σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

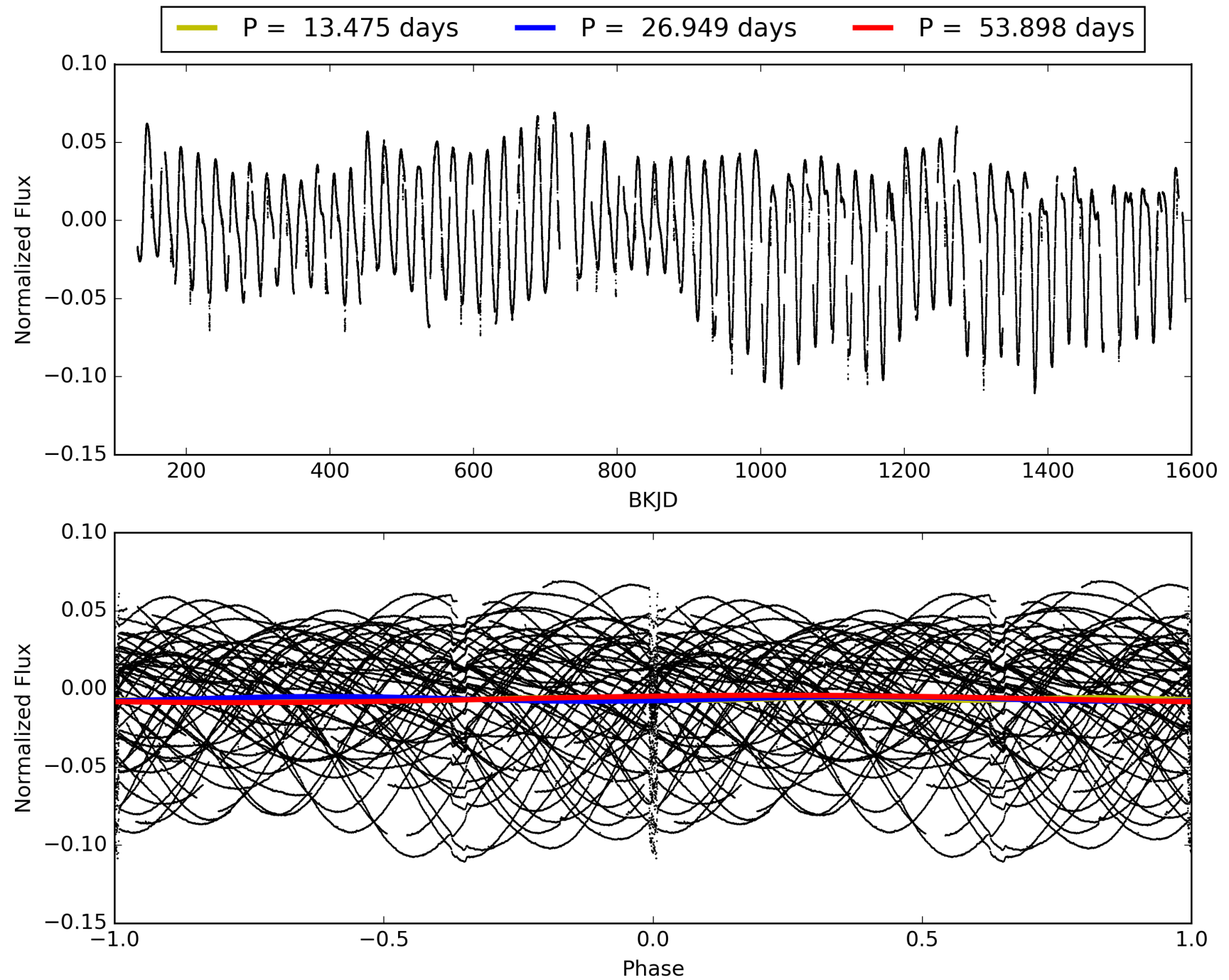
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005098444-01, PDC Light Curves

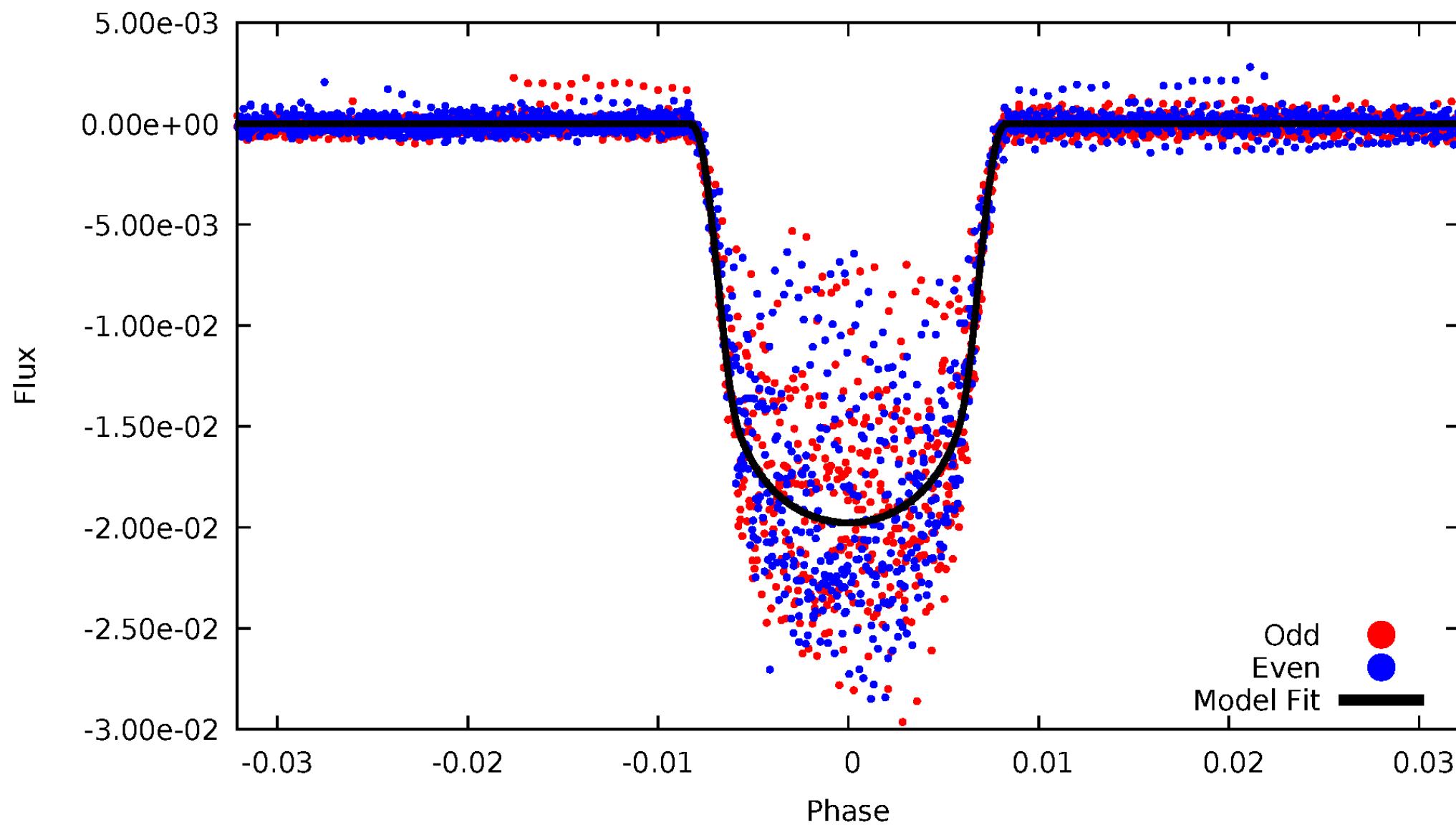


TCE 005098444-01



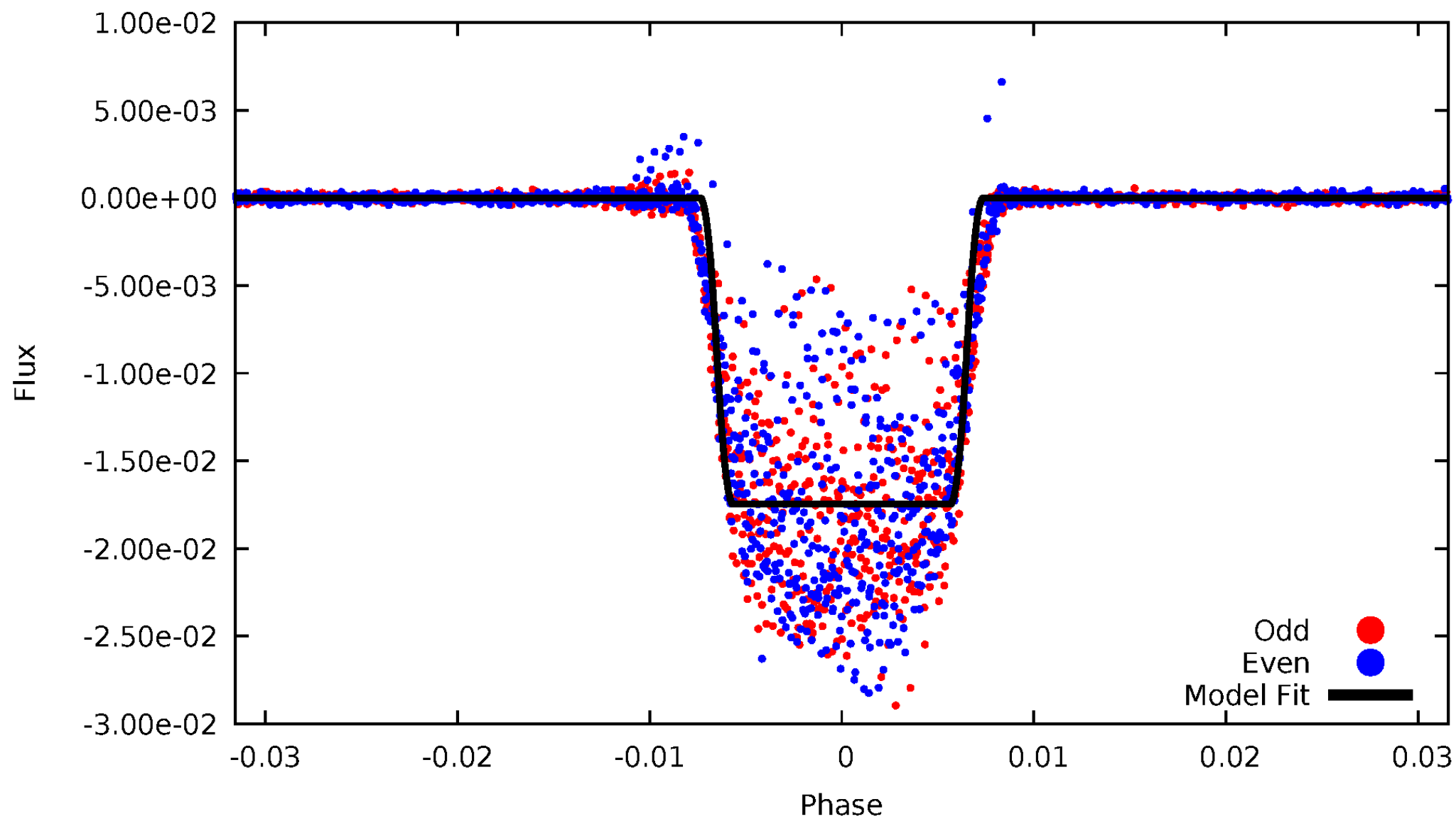
DV Odd/Even

TCE 005098444-01



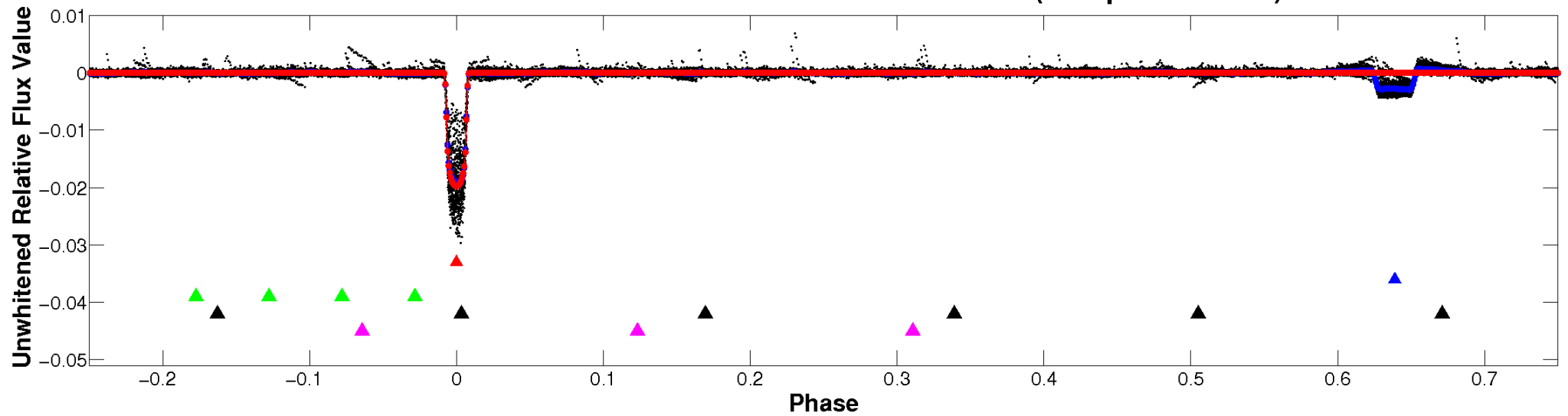
ALT Odd/Even

TCE 005098444-01

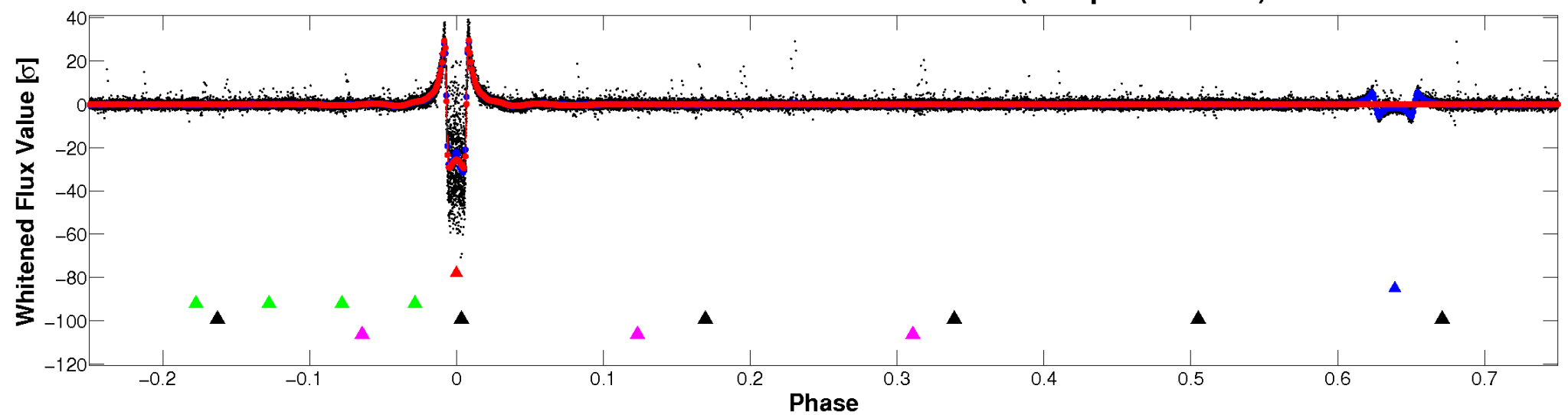


Non-Whitened Vs. Whitened Light Curve

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

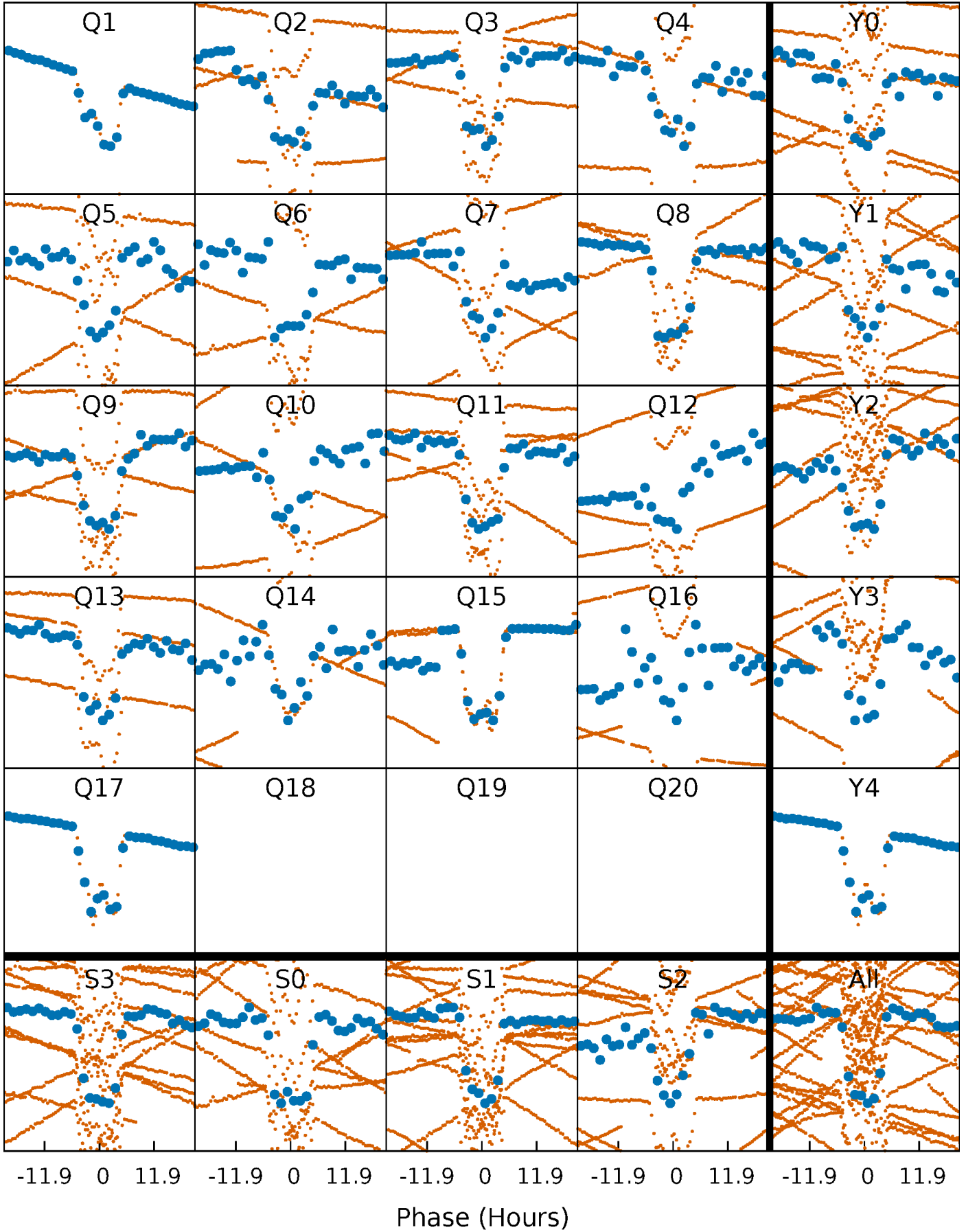


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



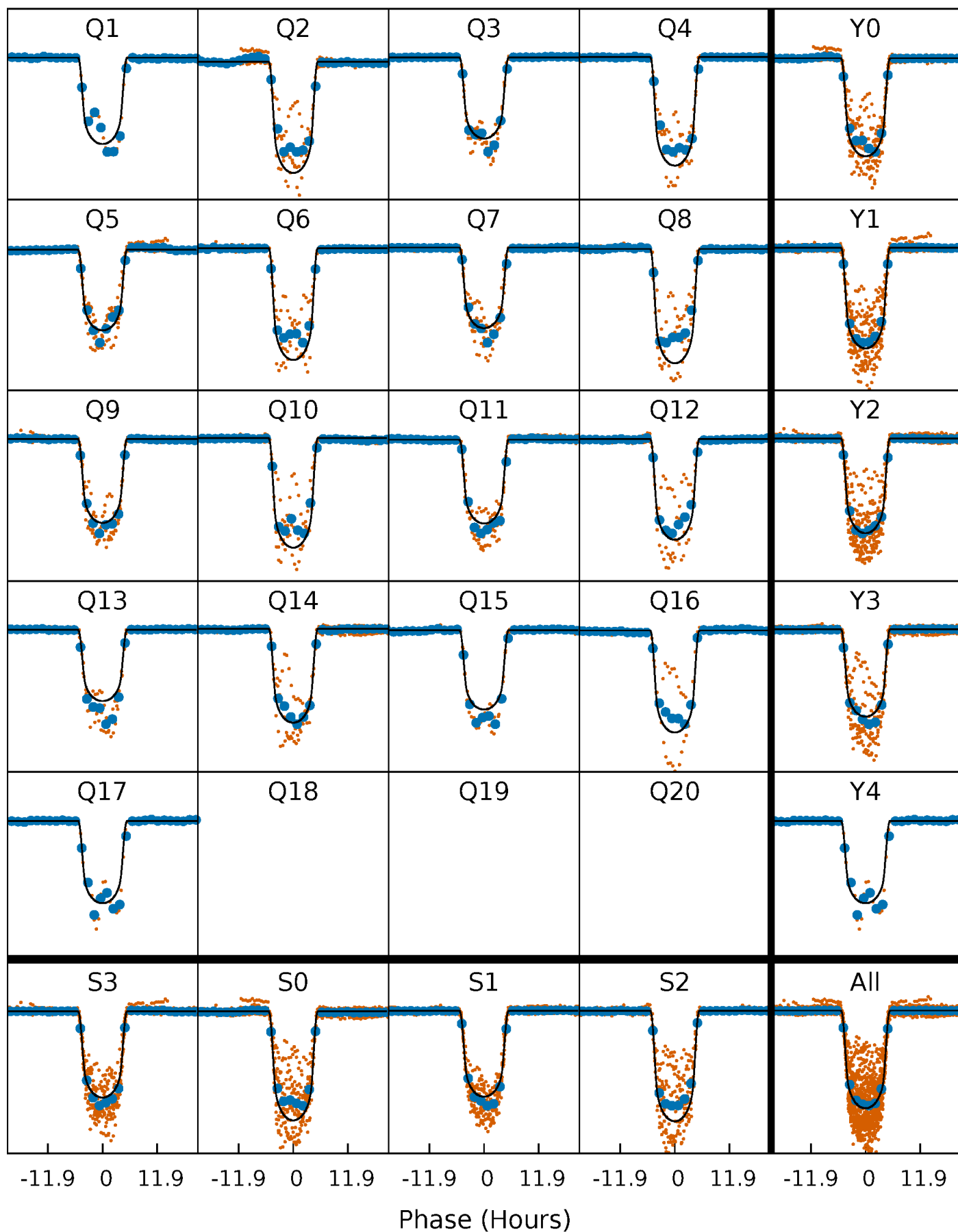
PDC Quarter-Phased Transit Curves

TCE 005098444-01 P= 26.949214 Days $T_0=151.020075$ (BKJD)



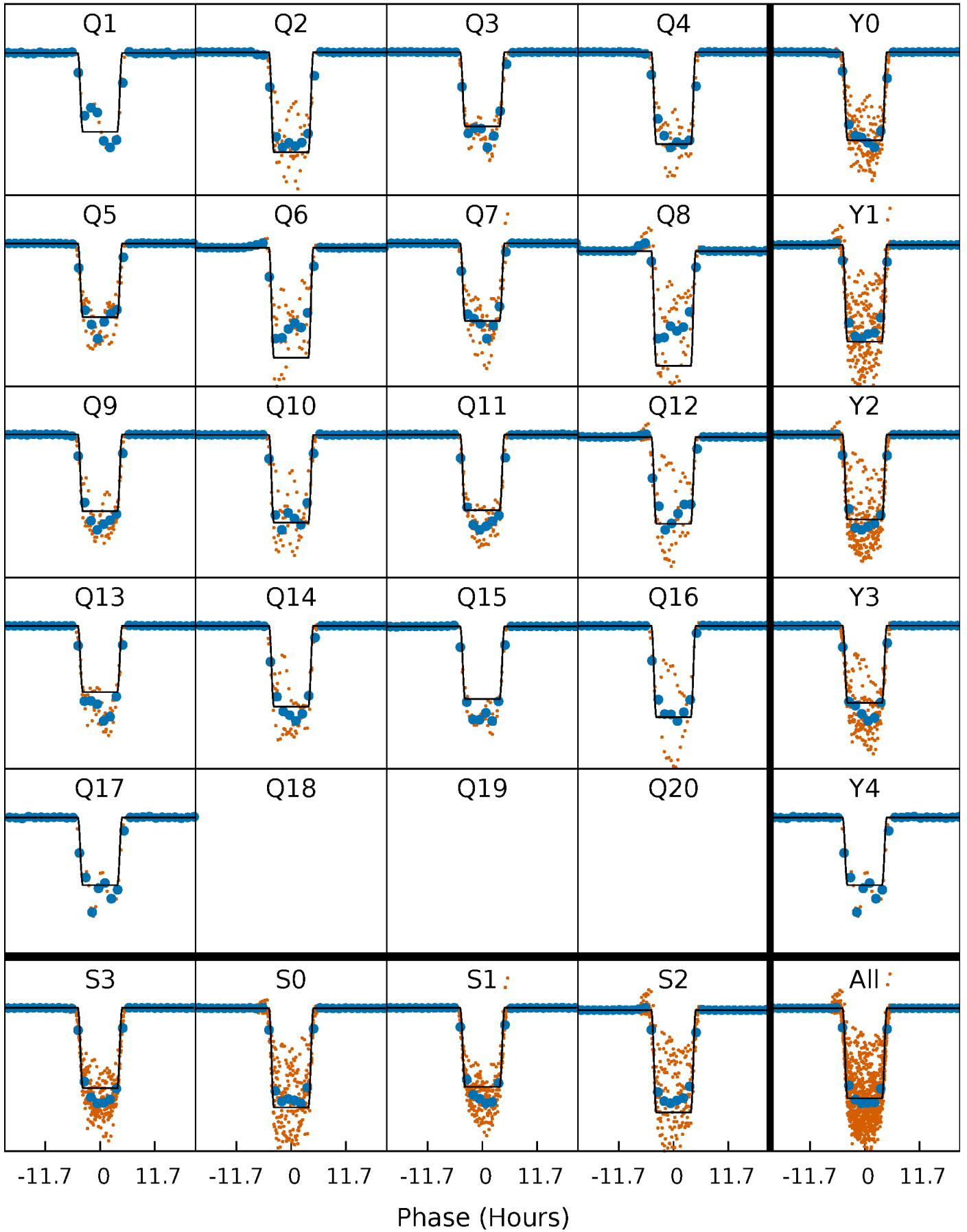
DV Quarter-Phased Transit Curves

TCE 005098444-01 P= 26.949214 Days $T_0=151.020075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

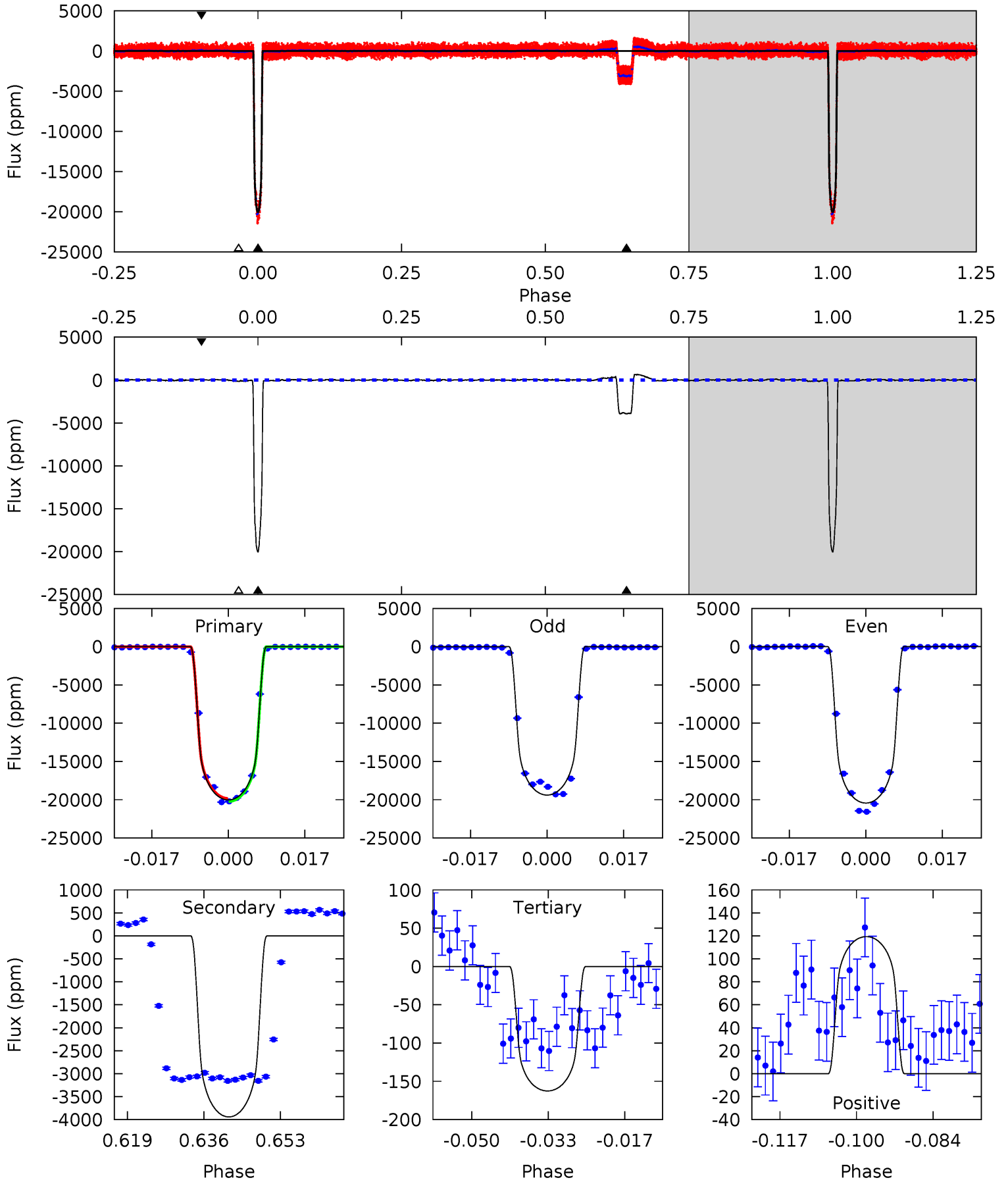
TCE 005098444-01 P= 26.949356 Days $T_0=151.015208$ (BKJD)



DV Model-Shift Uniqueness Test

005098444-01, P = 26.949214 Days, E = 124.070861 Days

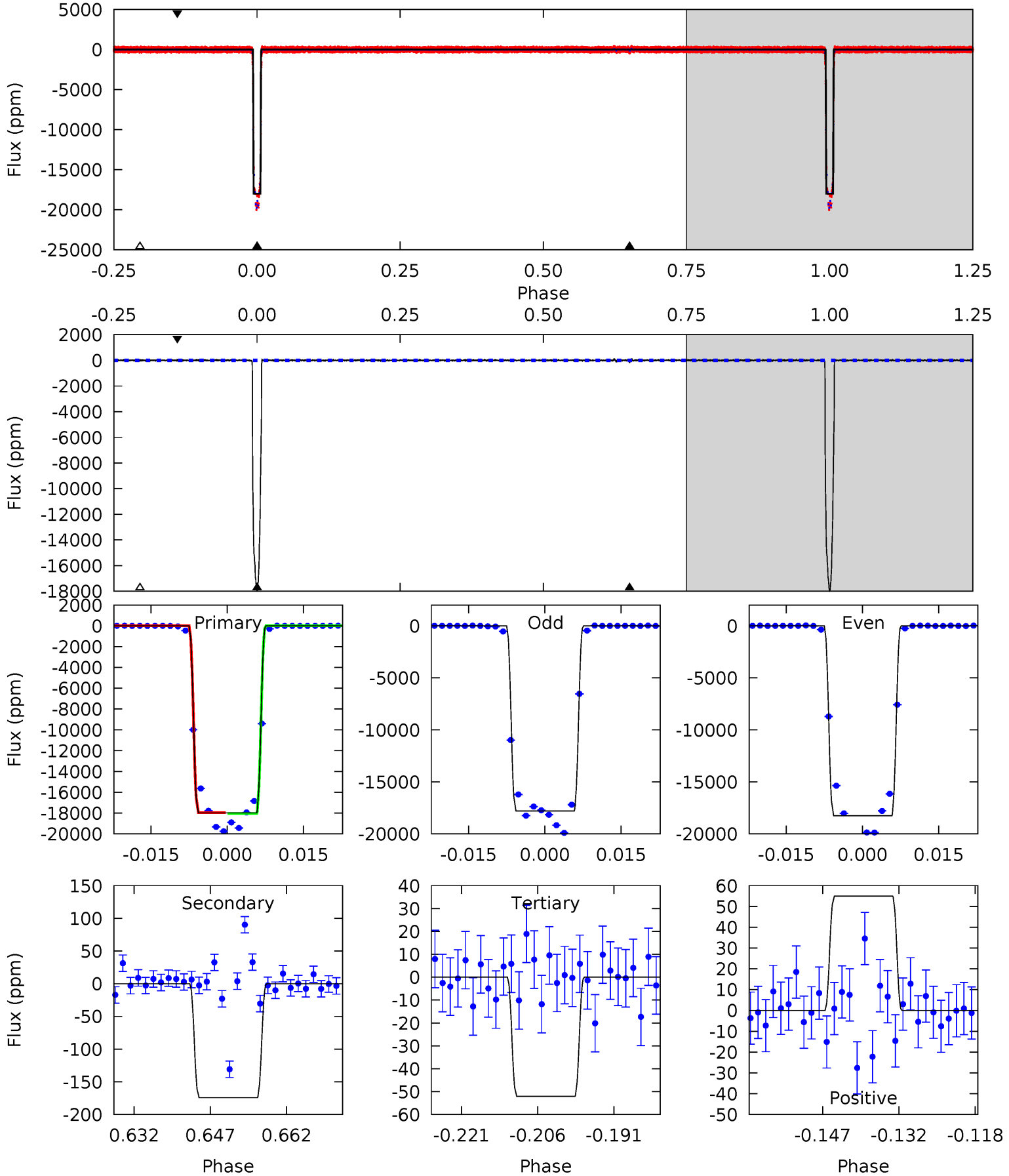
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1278	251.5	10.4	7.62	4.93	2.39	6.20	1268	1271	241.2	243.9	29.7	0.97	0.03	0



Alt Model-Shift Uniqueness Test

005098444-01, P = 26.949356 Days, E = 124.065852 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1343	13.0	3.89	4.10	4.95	2.44	1.21	1339	1339	9.13	8.91	18.7	0.95	0.01	0



Stellar Parameters For KIC 005098444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4723^{+145}_{-162}	$4.741^{+0.045}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.512^{+0.025}_{-0.032}$	$0.526^{+0.032}_{-0.021}$	$5.515^{+0.991}_{-0.533}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+6%/-4%	+18%/-10%
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 005098444-01 / KOI 0637.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3941 ± 16	$7.18^{+0.21}_{-0.27}$	550^{+20}_{-18}	3648^{+88}_{-102}	860^{+53}_{-38}
Alt.	-174 ± 13	$7.38^{+0.20}_{-0.23}$	551^{+17}_{-21}	2352^{+47}_{-55}	36^{+3}_{-3}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

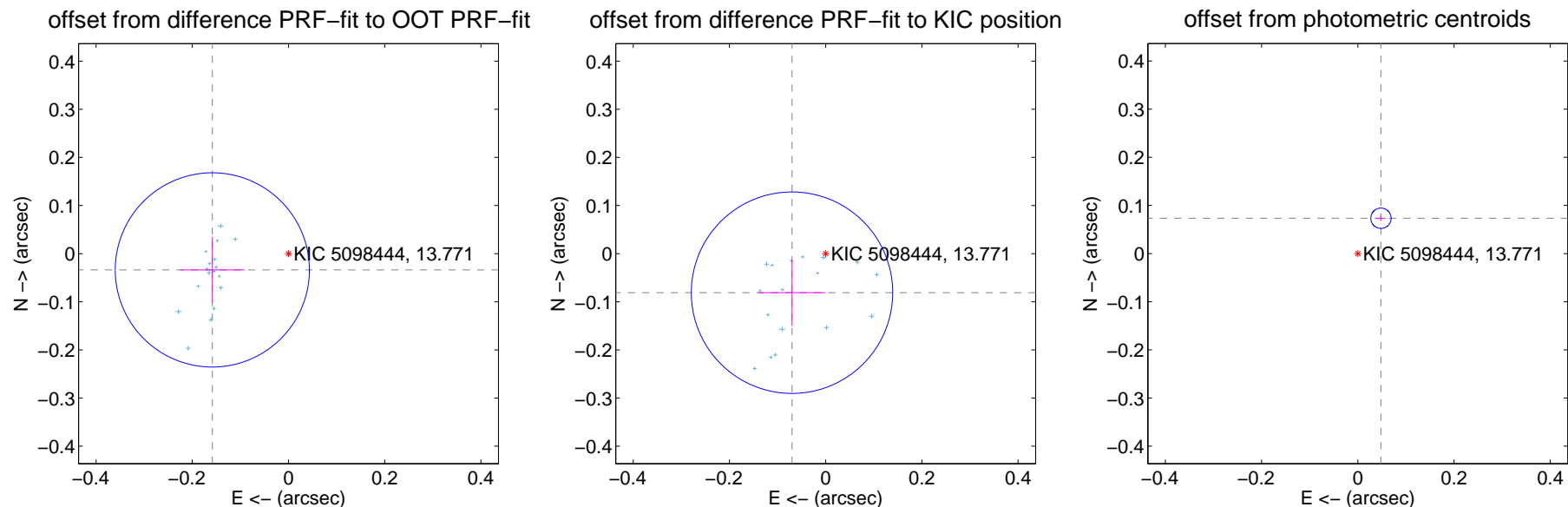
DV Centroid Data

Supplemental centroid analysis for 005098444-01. Kepler magnitude: 13.77. Transit SNR 575.83

There are 17 quarters with good PRF difference image offsets

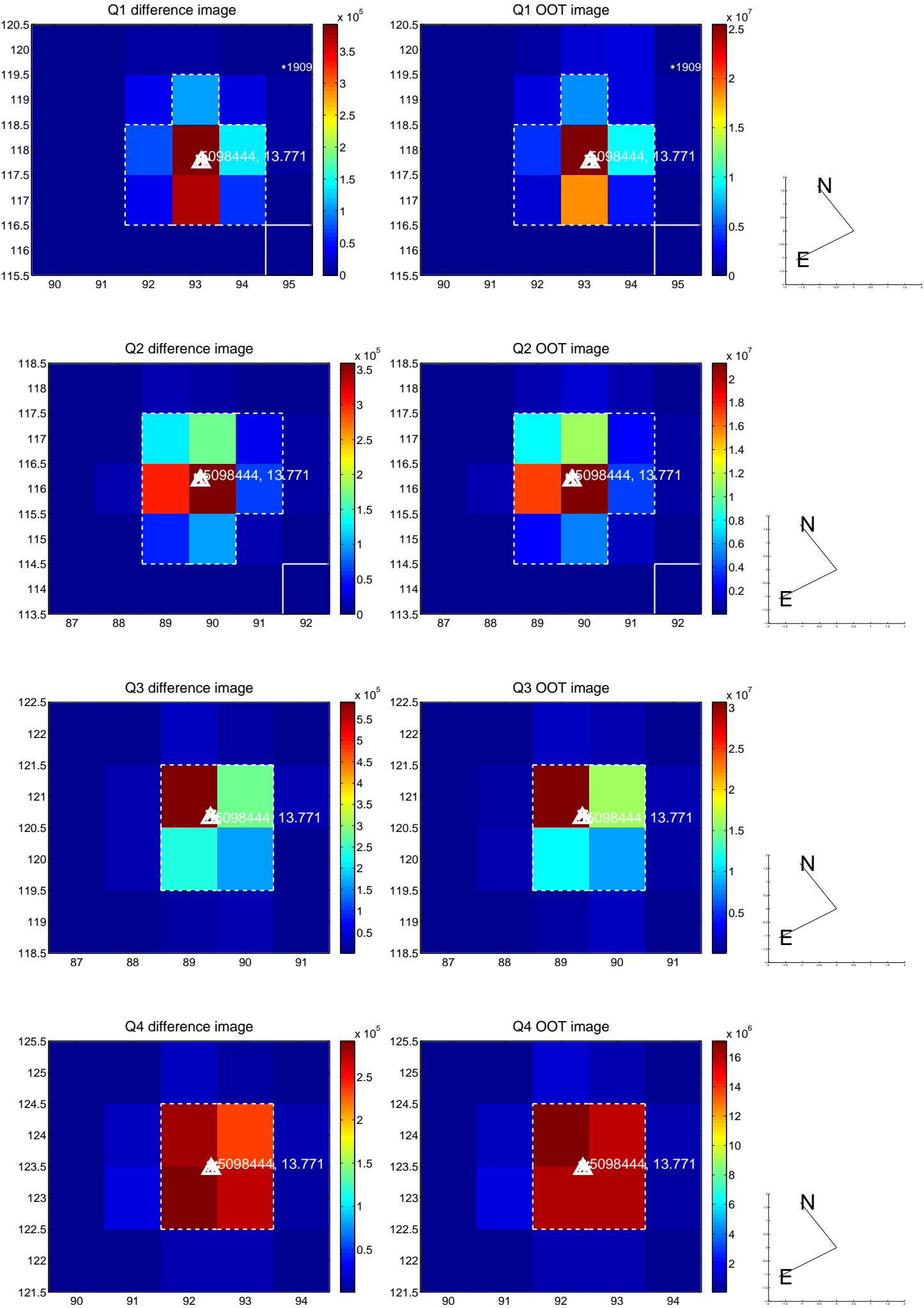
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.162 ± 0.067	2.41	0.158 ± 0.067	-0.034 ± 0.069
PRF-fit source offset from KIC position	0.107 ± 0.070	1.54	0.070 ± 0.069	-0.081 ± 0.069
photometric centroid source offset	0.09 ± 0.01	12.46	-0.05 ± 0.01	0.07 ± 0.01

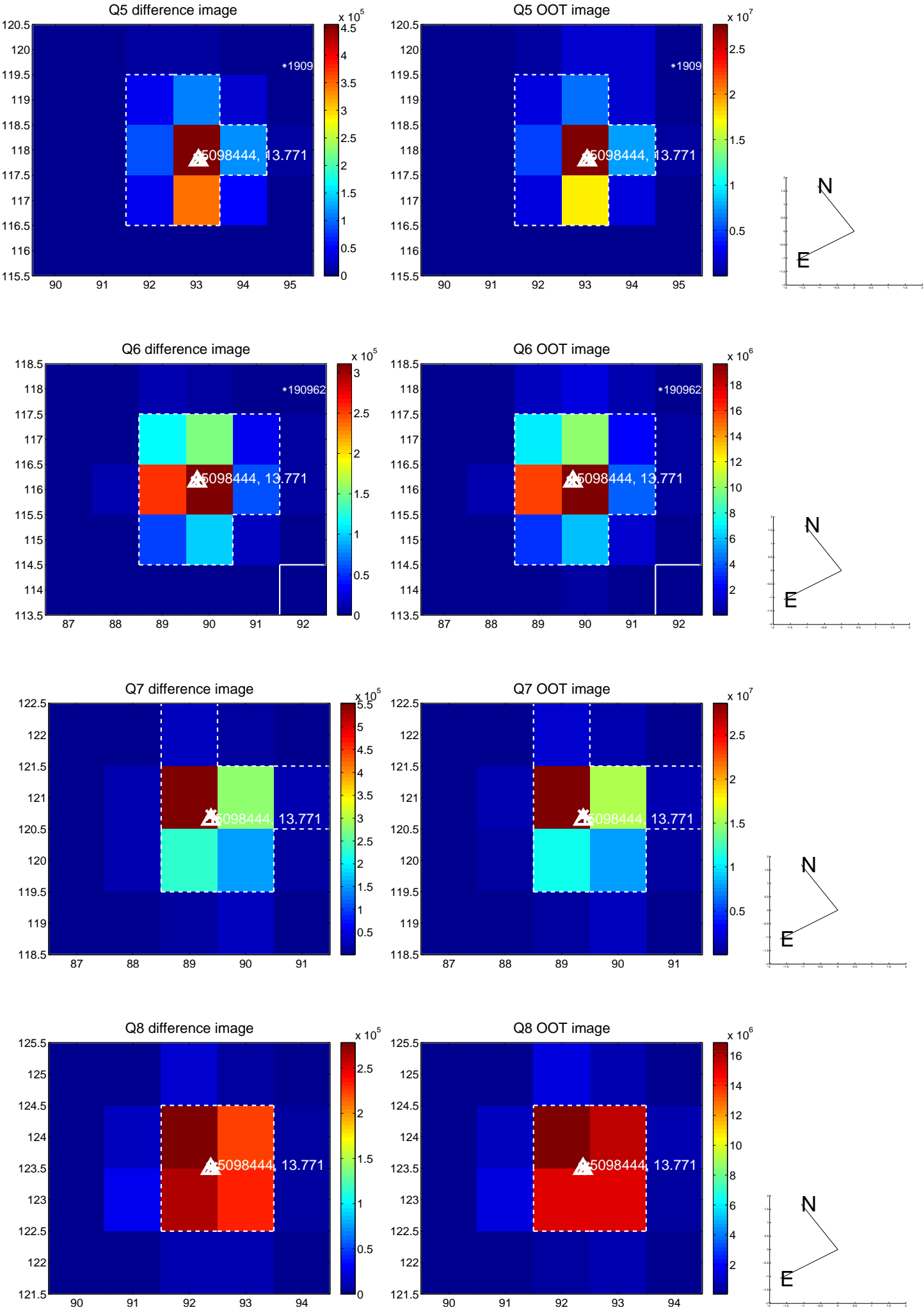


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

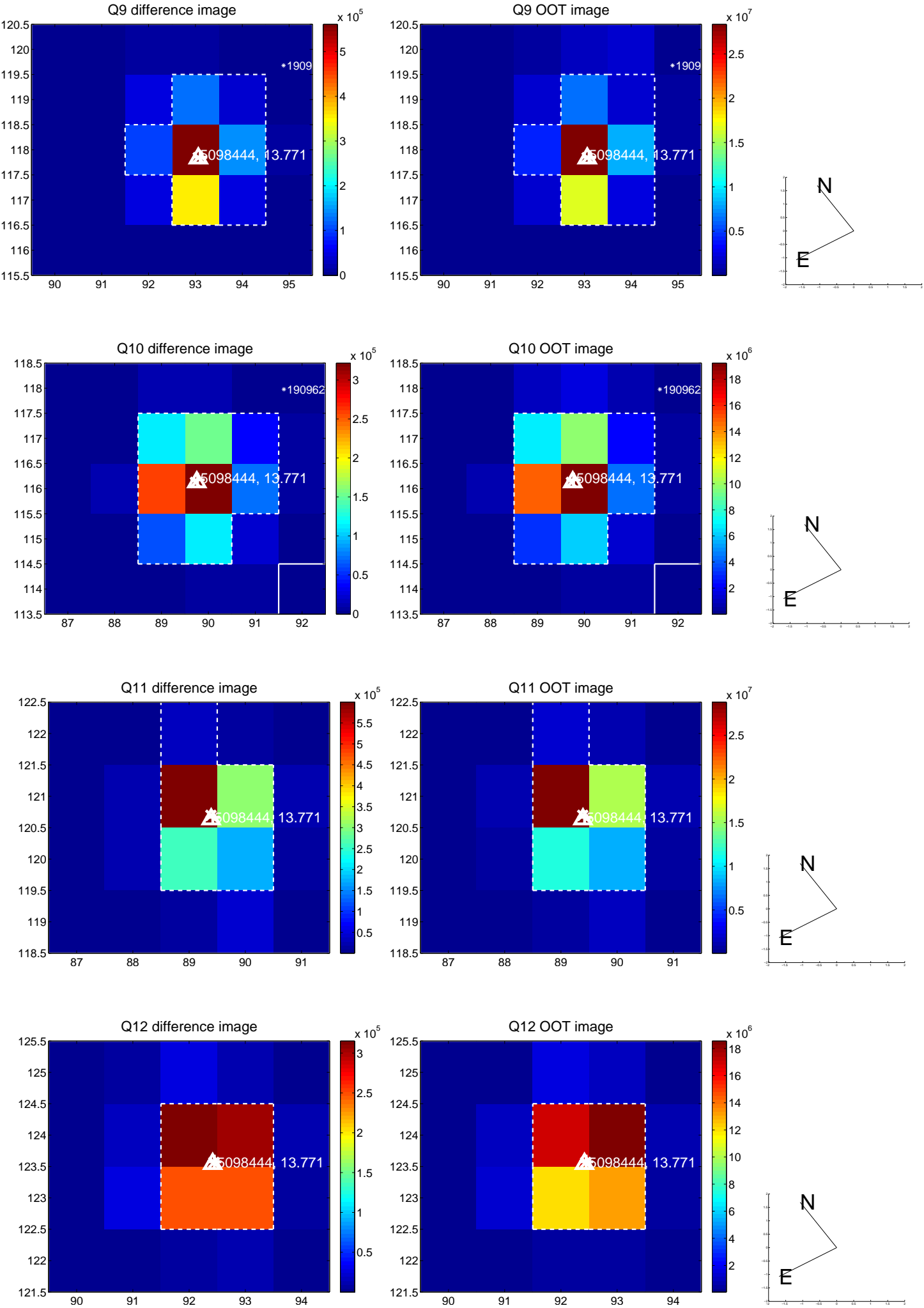
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



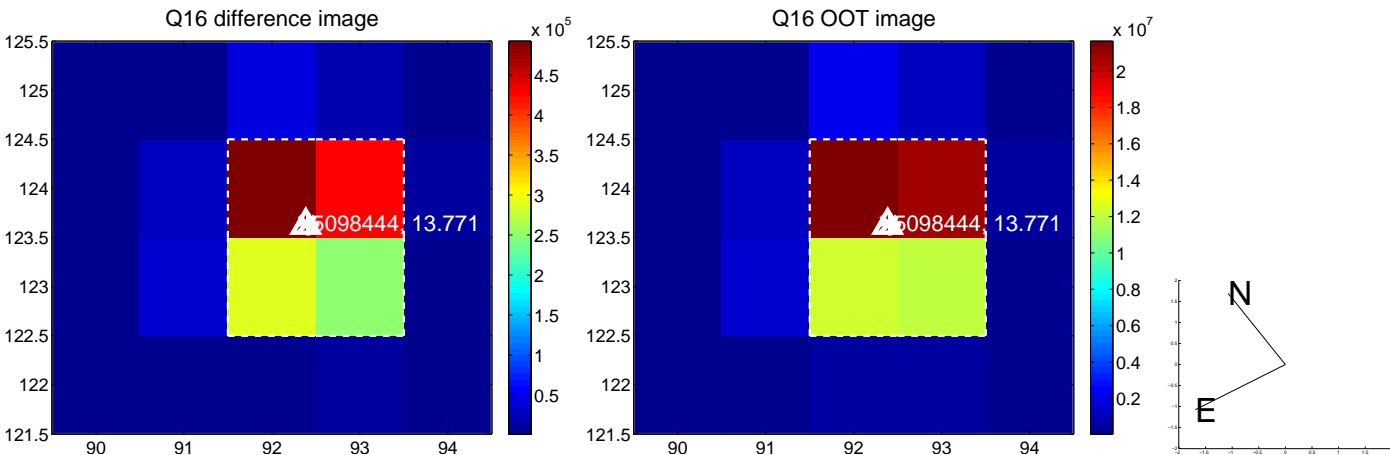
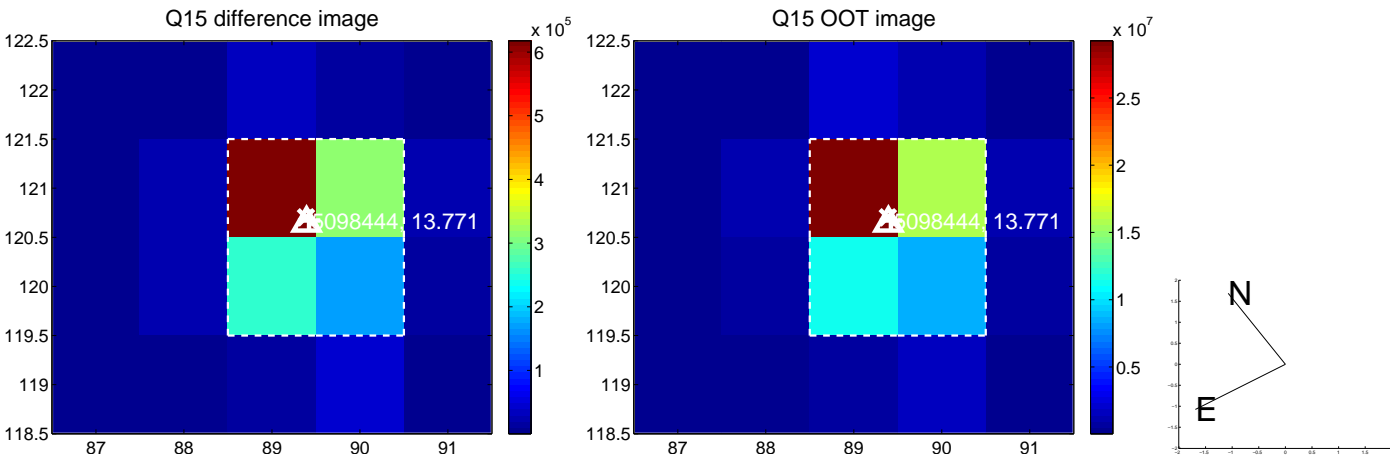
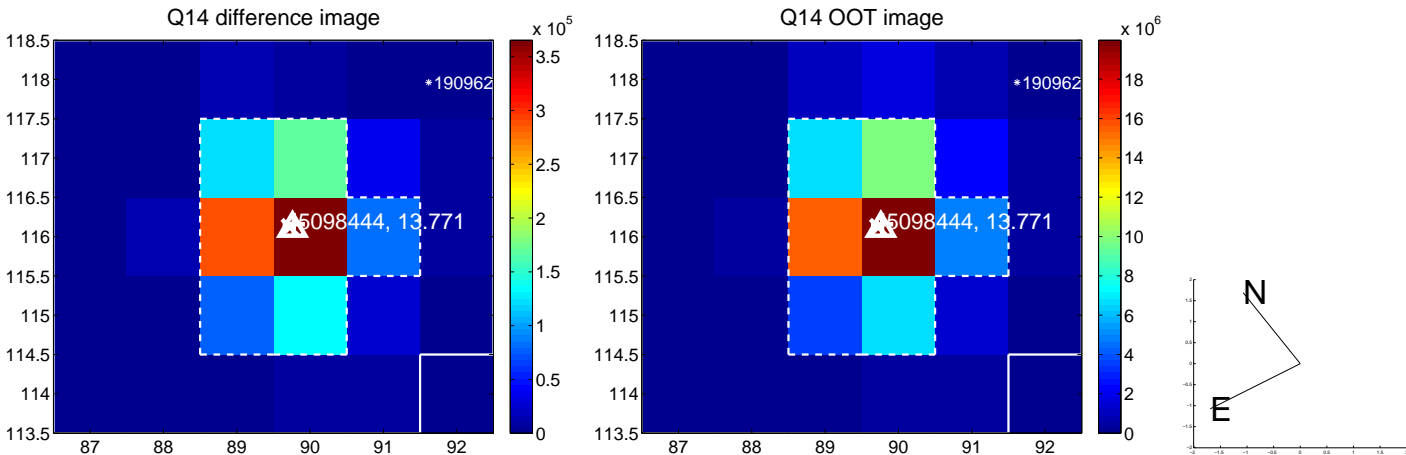
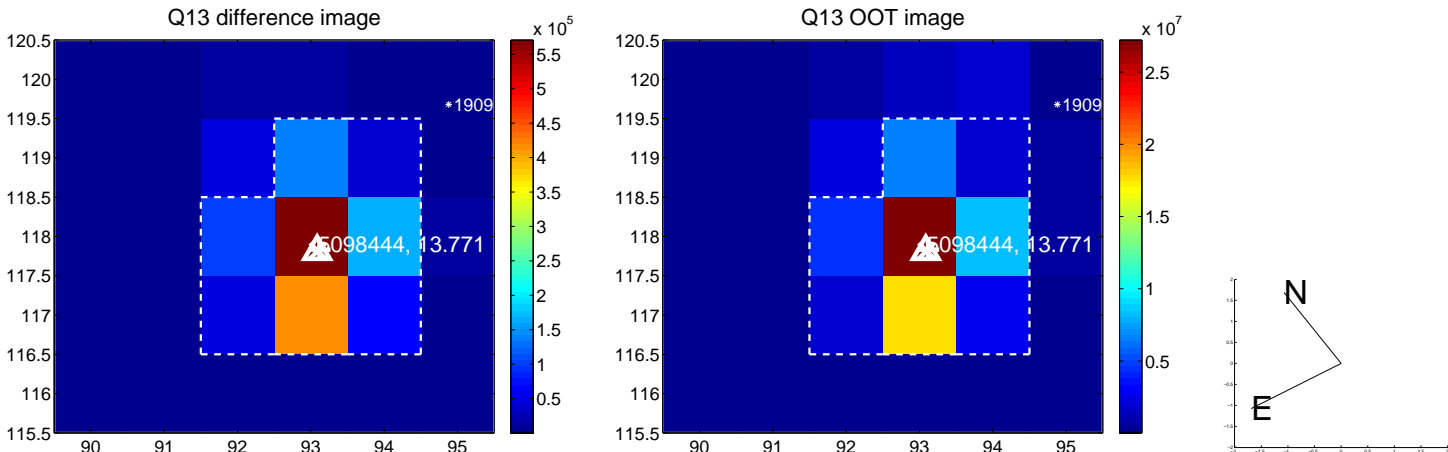
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



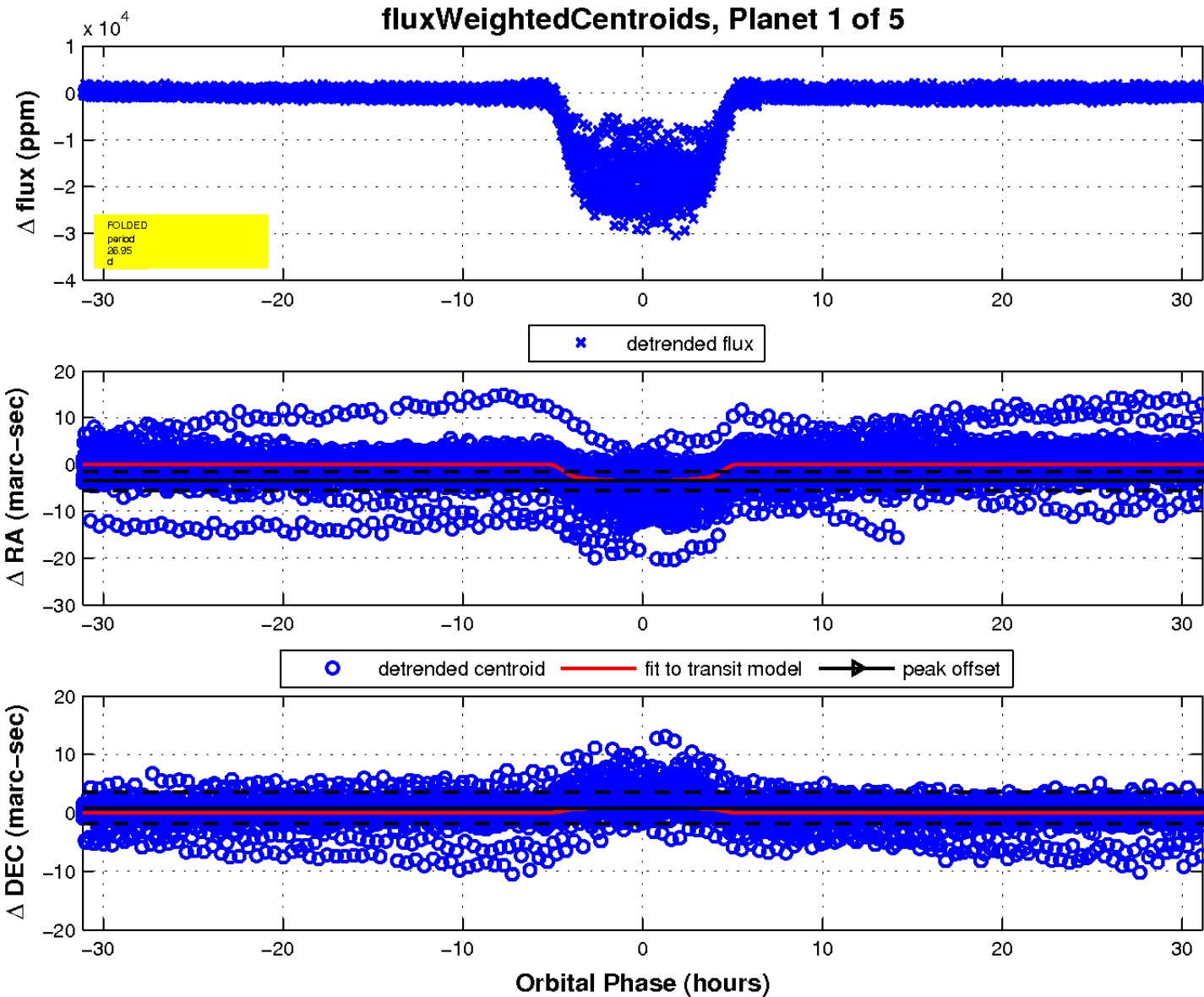
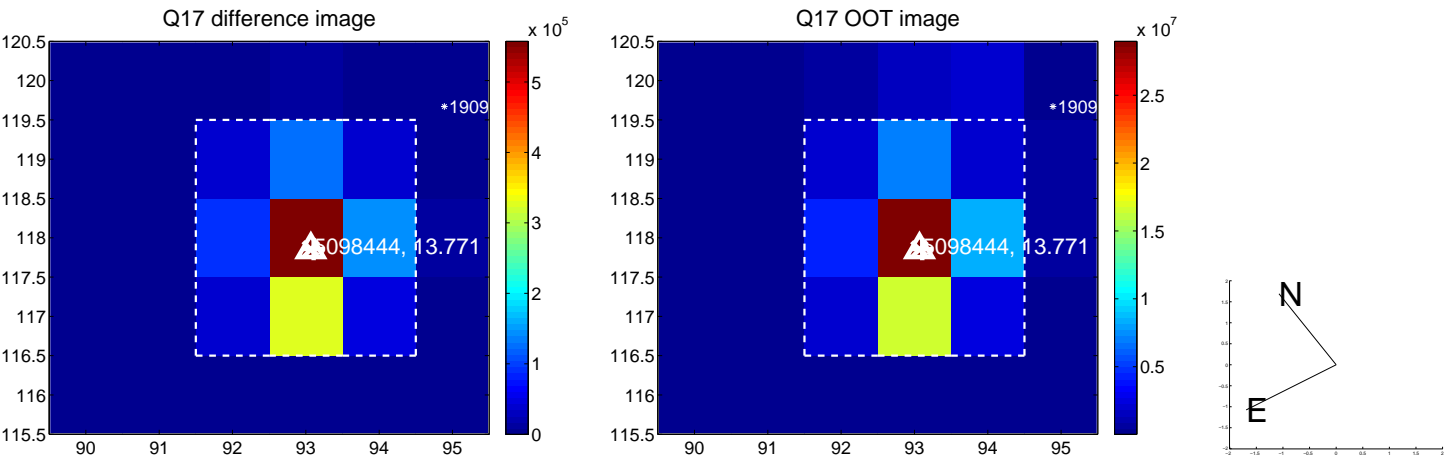
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value

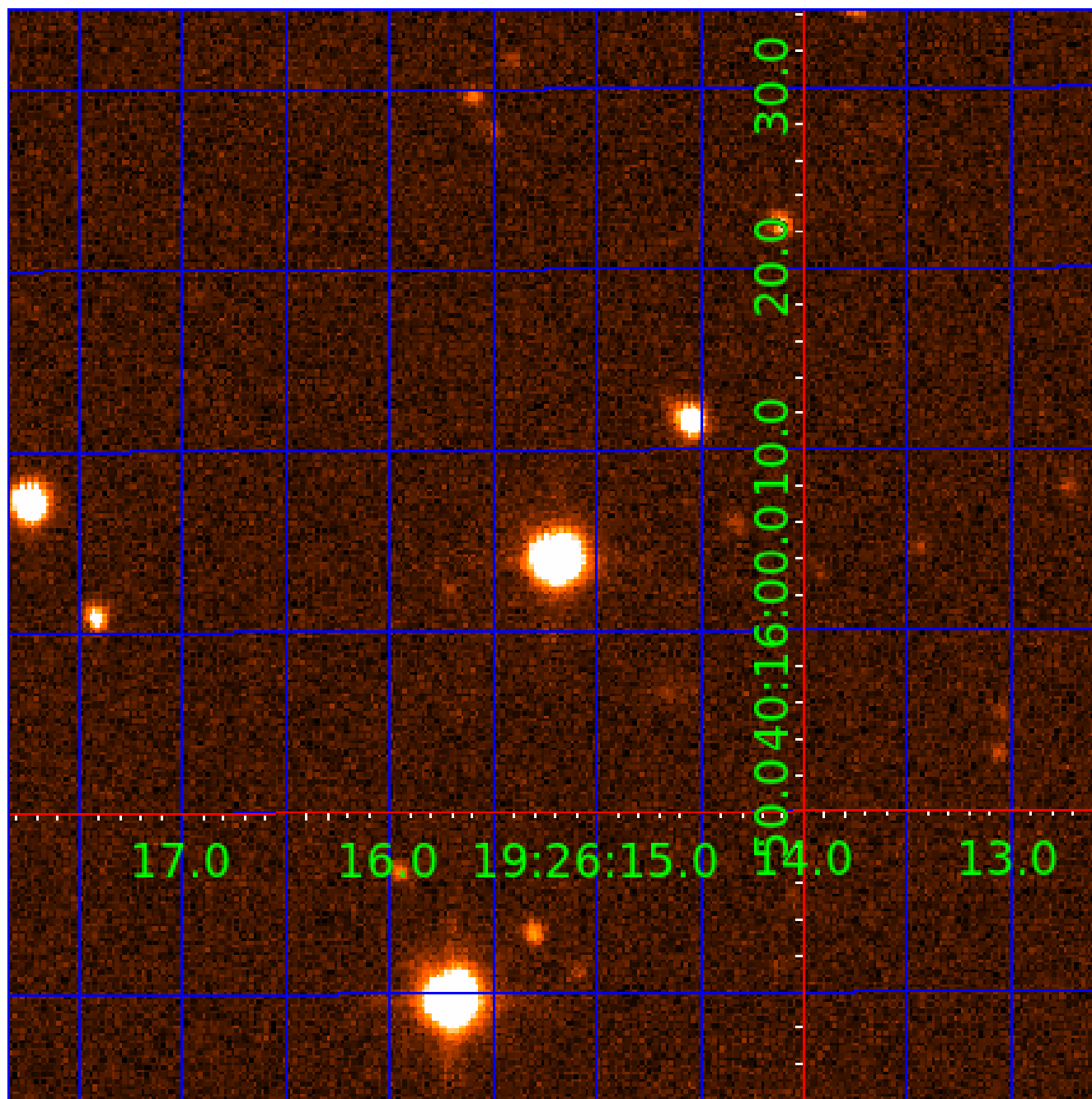


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005098444

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})
005098444-01	OBS	0637.01	26.949214	151.020075	19775.8	10.383	739.1	575.8	0.51	4723	7.18	5.79
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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005098444-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005098444-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005098444-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS
005098444-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

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

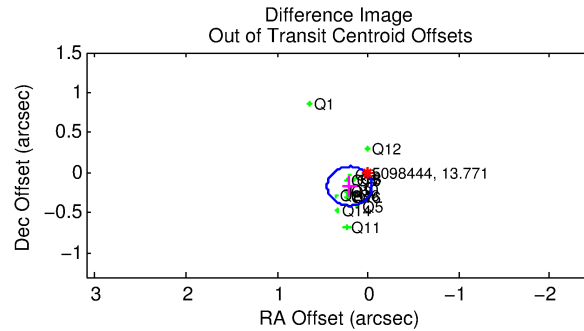
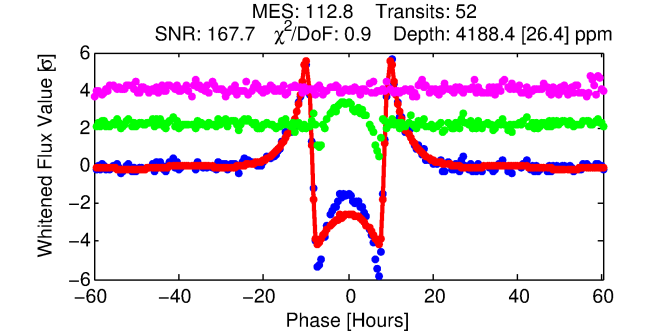
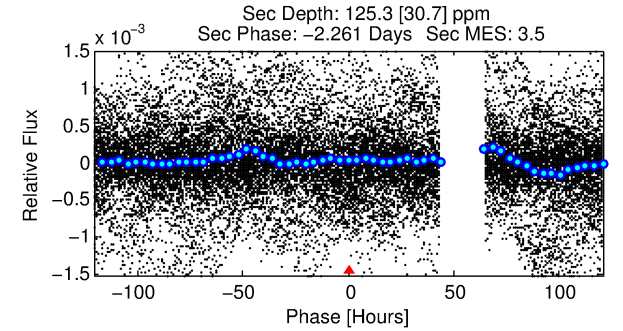
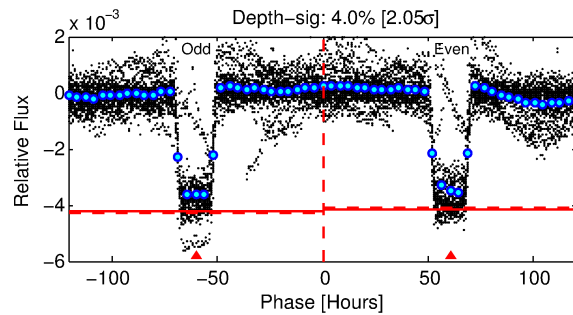
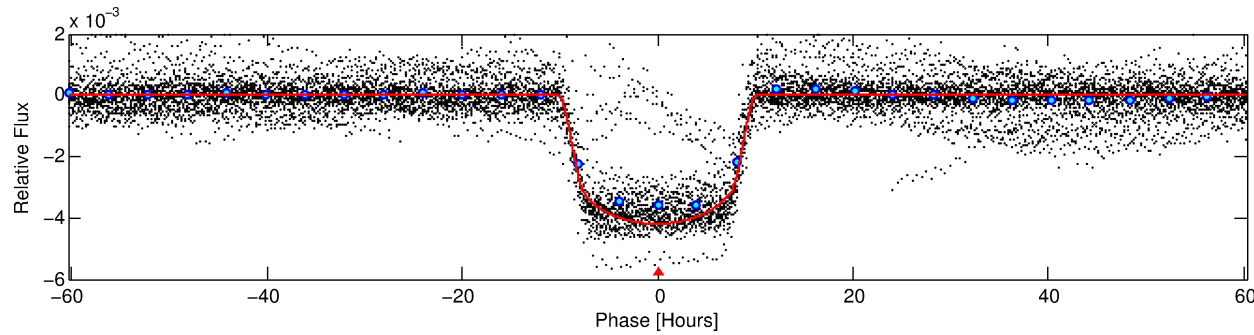
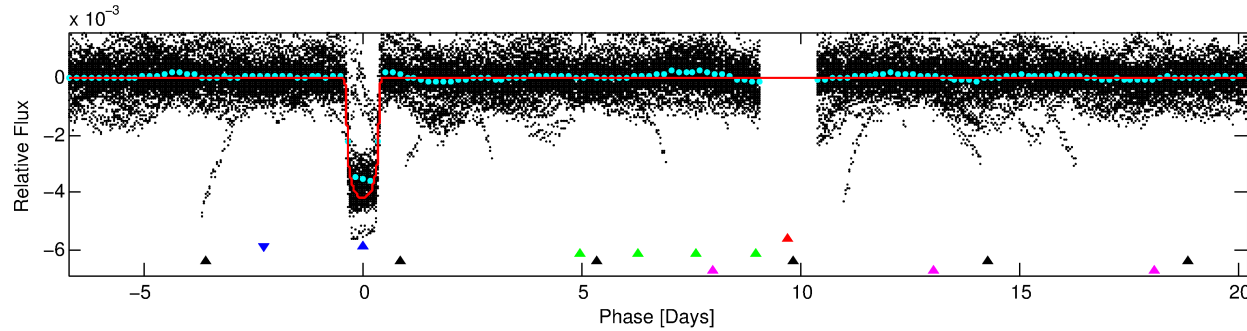
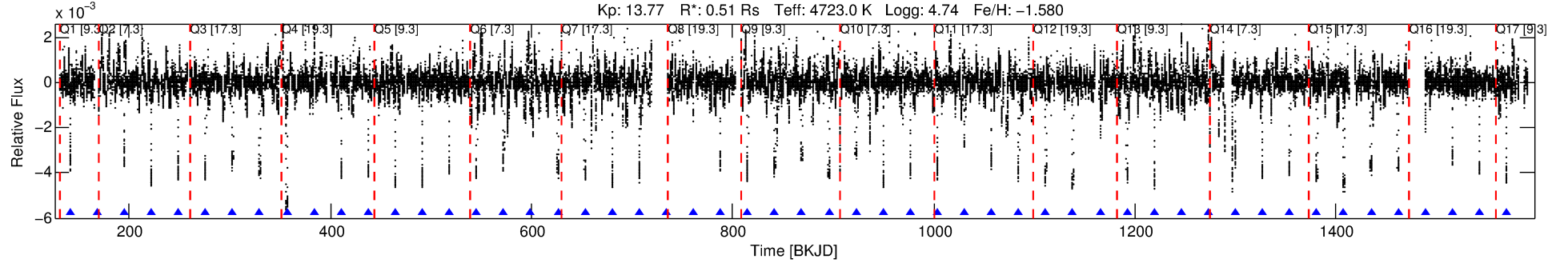
Ephemeris Match Information For 005098444-02

No Significant Match Found

DV One-Page Summary

KIC: 5098444 Candidate: 2 of 5 Period: 26.949 d
KOI: K00637 Corr: No Ephemeris Match

Kp: 13.77 R*: 0.51 Rs Teff: 4723.0 K Logg: 4.74 Fe/H: -1.580



DV Fit Results:

Period = 26.94920 [0.00003] d
Epoch = 141.2896 [0.0009] BKJD
Rp/R* = 0.0634 [0.0003]
a/R* = 8.19 [0.07]
b = 0.70 [0.01]
Seff = 5.79 [0.92]
Teq = 396 [16] K
Rp = 3.54 [0.22] Re
a = 0.1421 [0.0077] AU
Ag = 111.03 [28.68] [3.84σ]
Teff = 1985 [140] K [11.32σ]

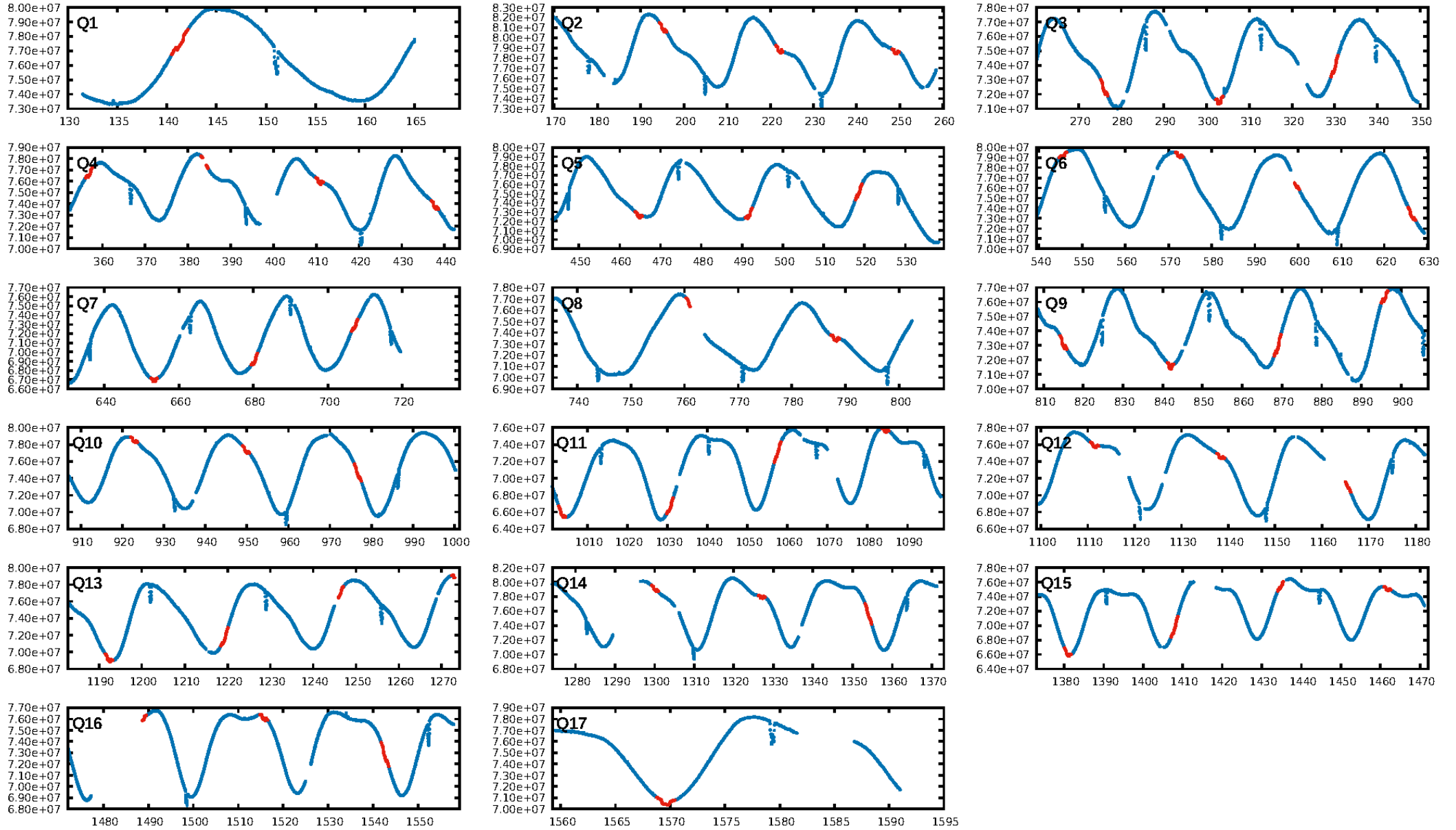
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 0.8636
Centroid-sig: 0.0%
Centroid-so: 0.035 arcsec [0.93σ]
OotOffset-rm: 0.263 arcsec [3.21σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.266 arcsec [2.60σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
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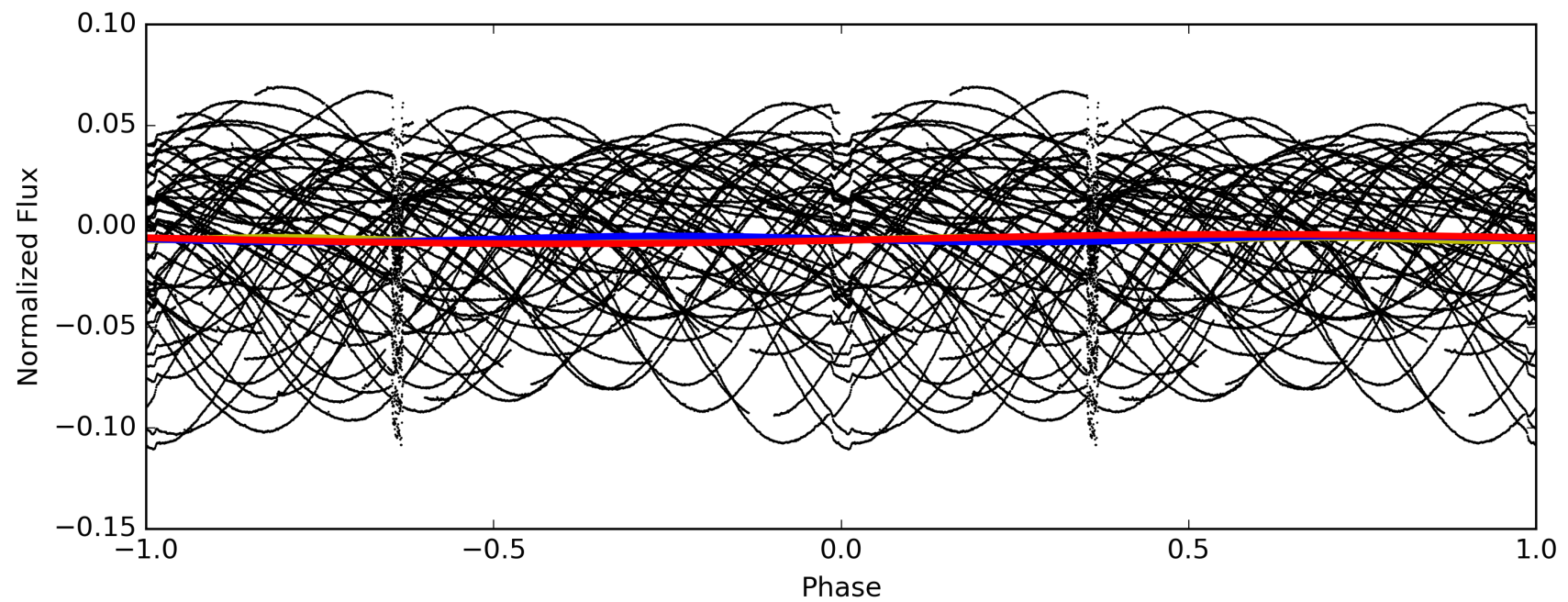
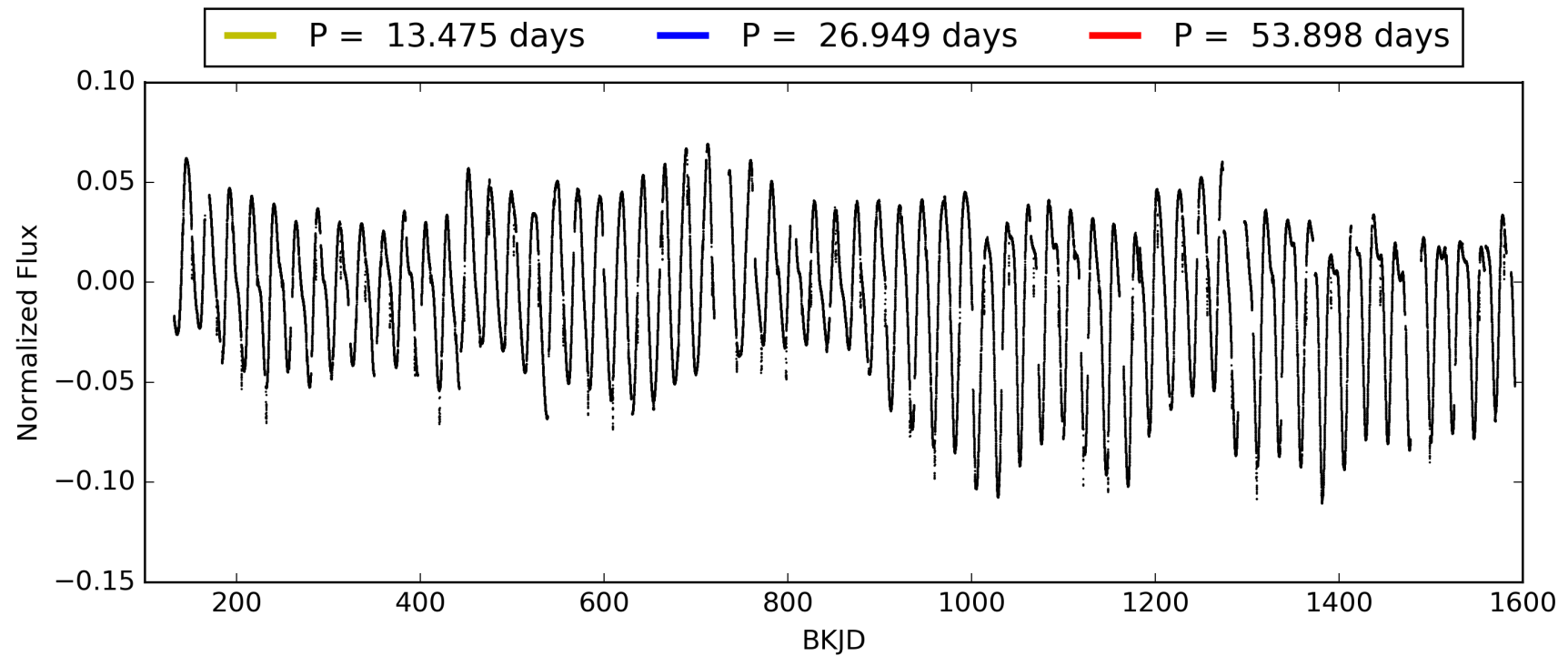
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005098444-02, PDC Light Curves

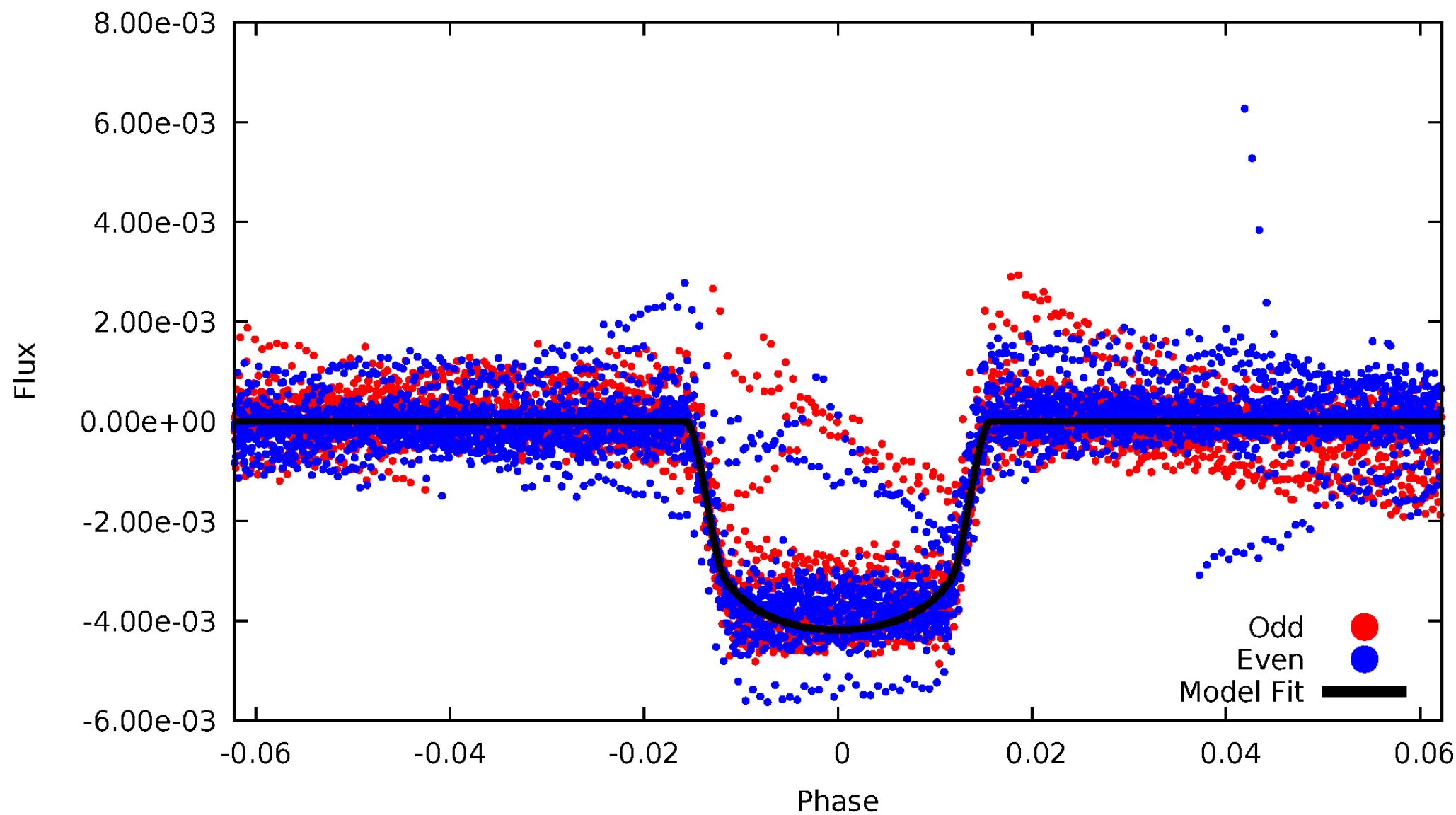


TCE 005098444-02



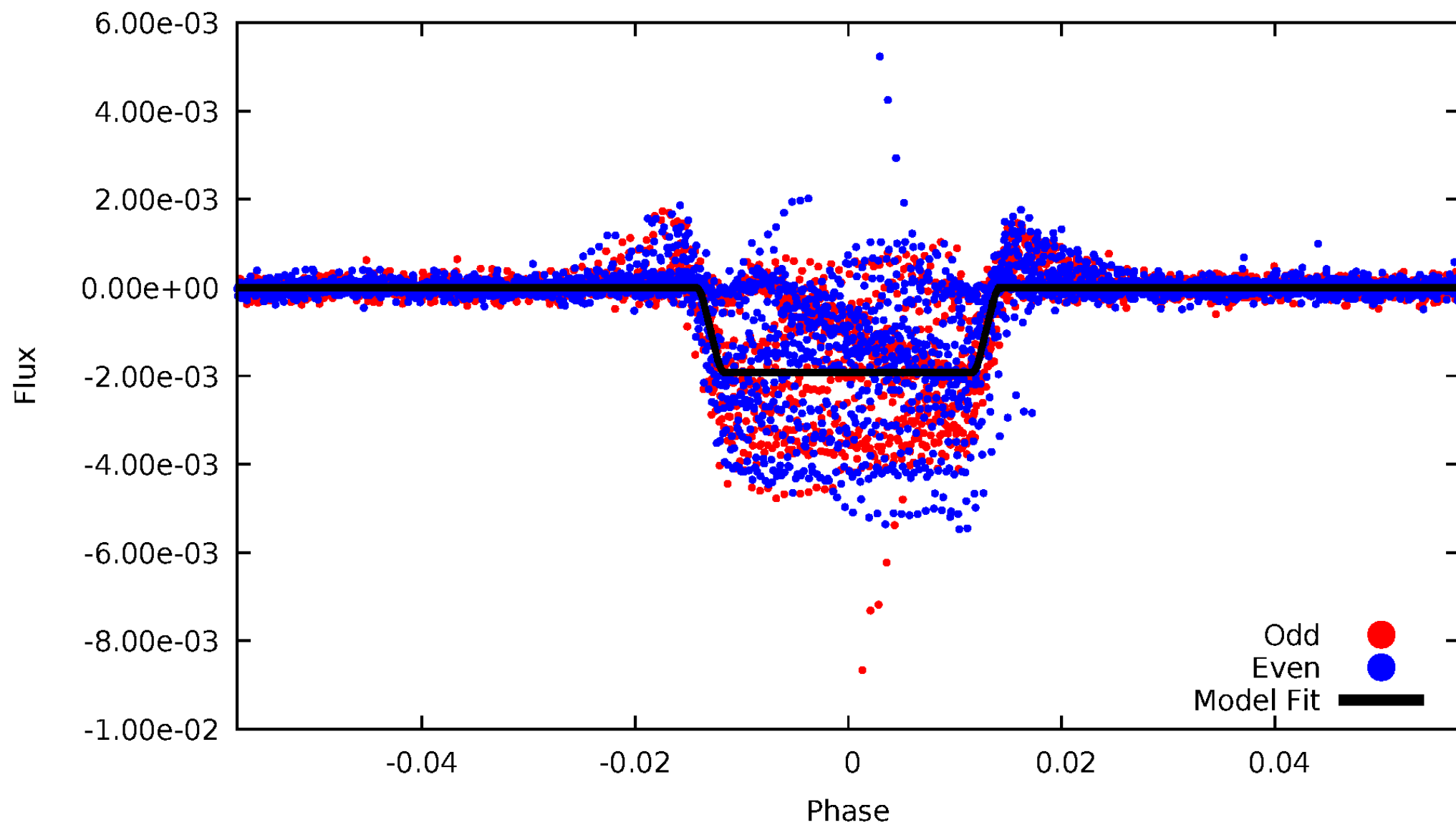
DV Odd/Even

TCE 005098444-02



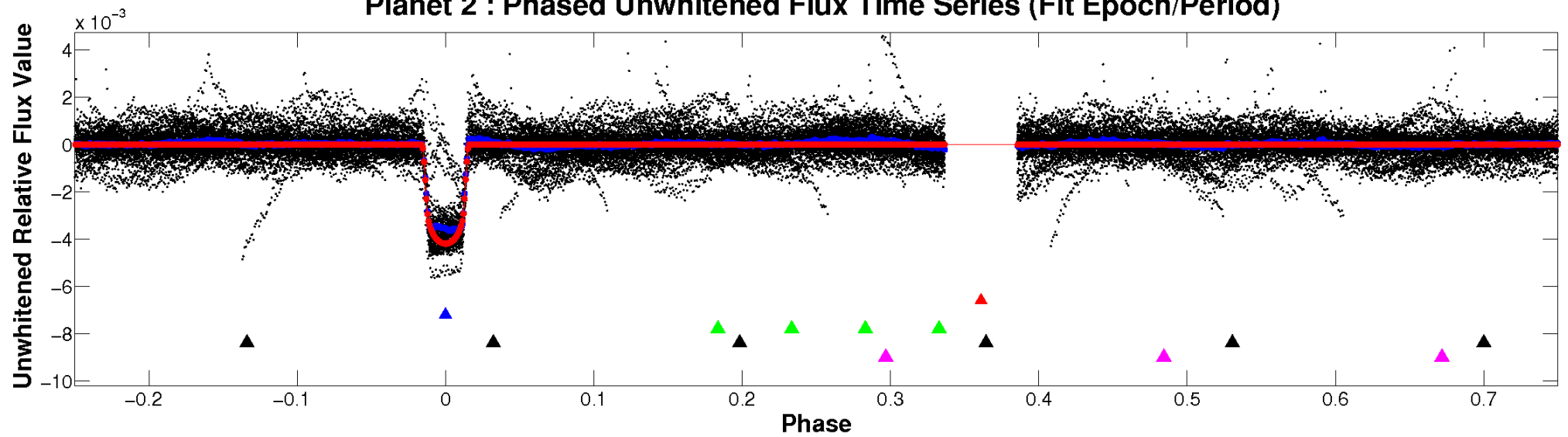
ALT Odd/Even

TCE 005098444-02

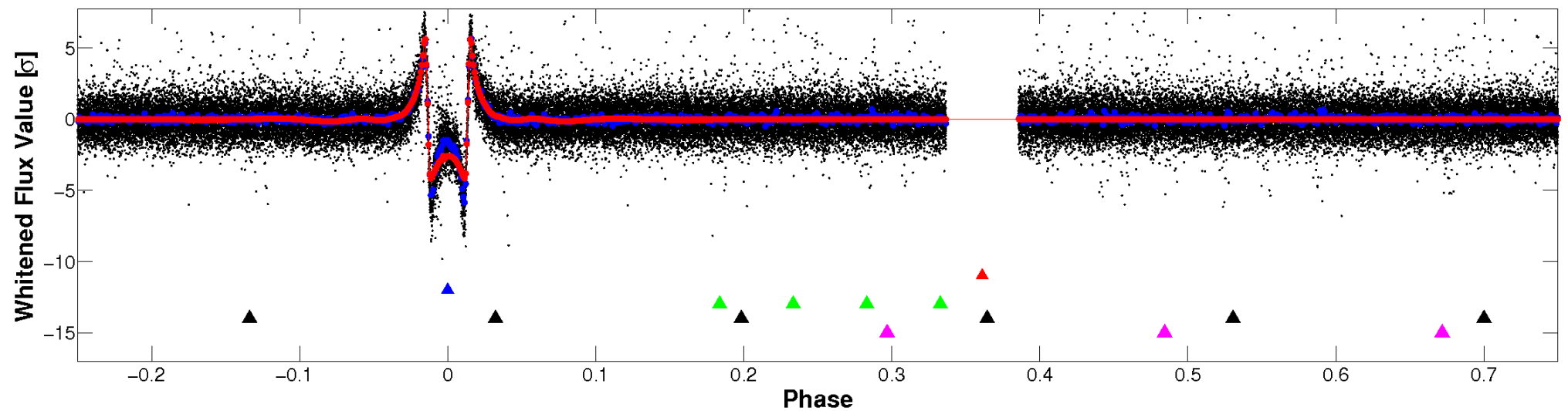


Non-Whitened Vs. Whitened Light Curve

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

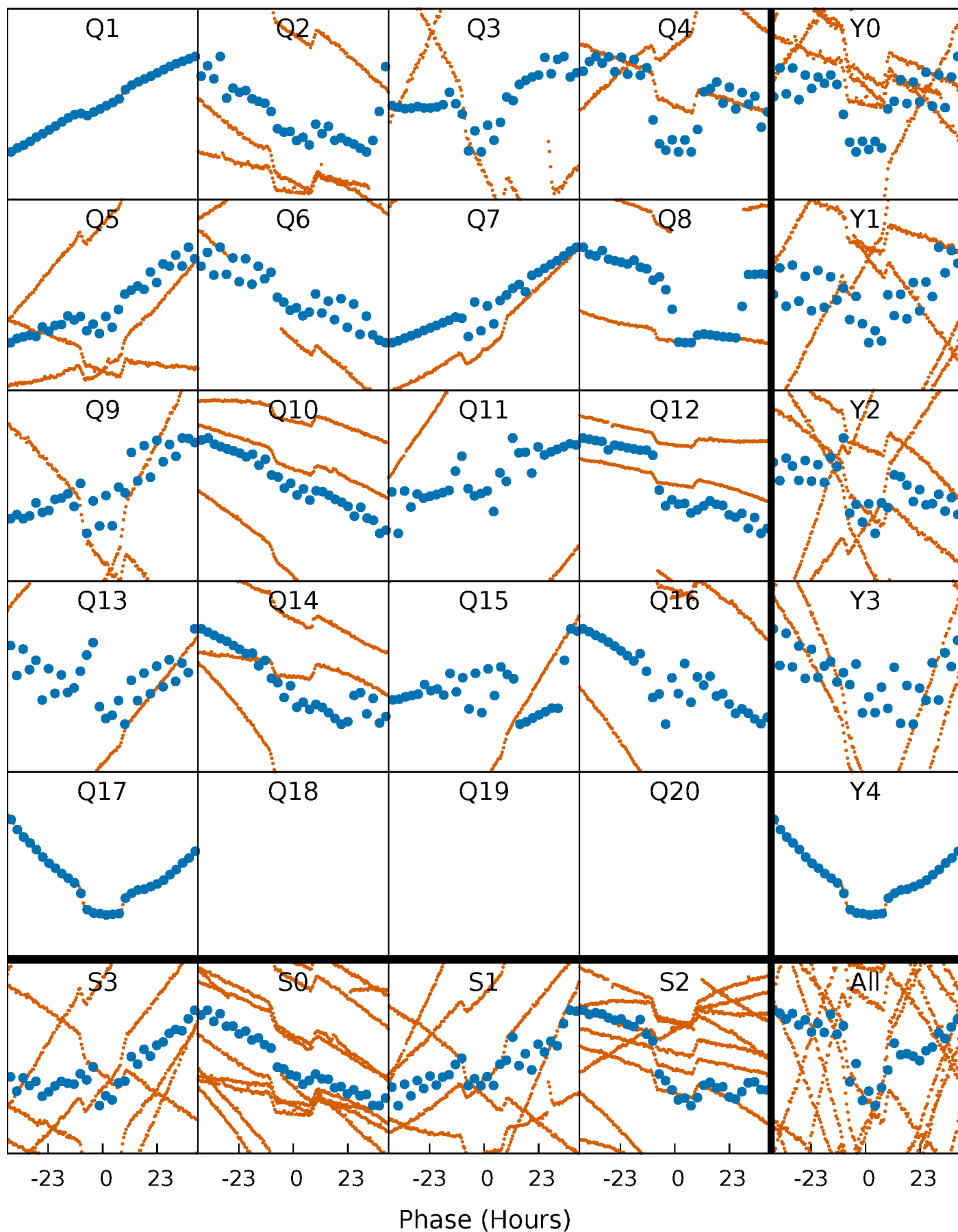


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



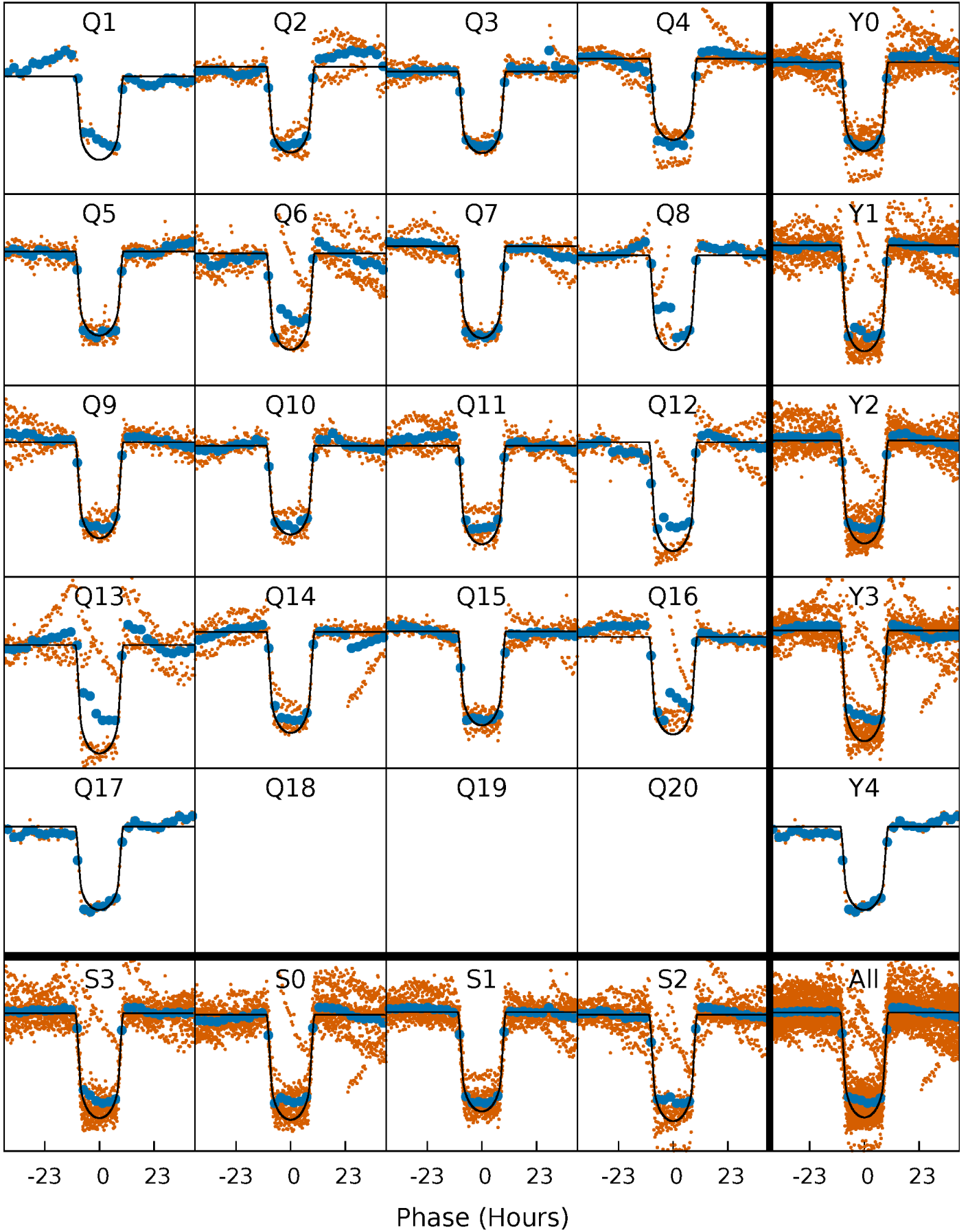
PDC Quarter-Phased Transit Curves

TCE 005098444-02 P= 26.949201 Days $T_0=141.289647$ (BKJD)



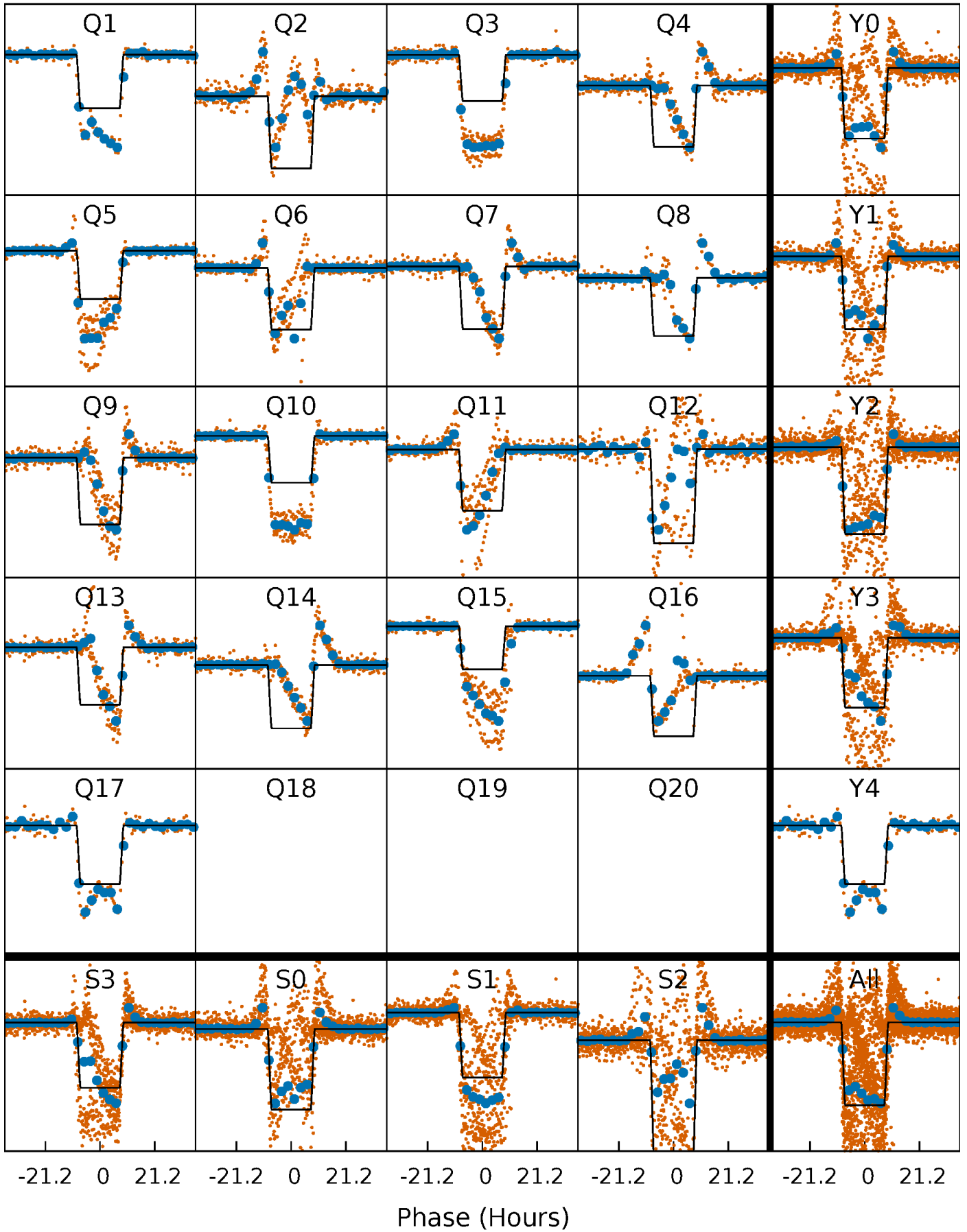
DV Quarter-Phased Transit Curves

TCE 005098444-02 P= 26.949201 Days $T_0=141.289647$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

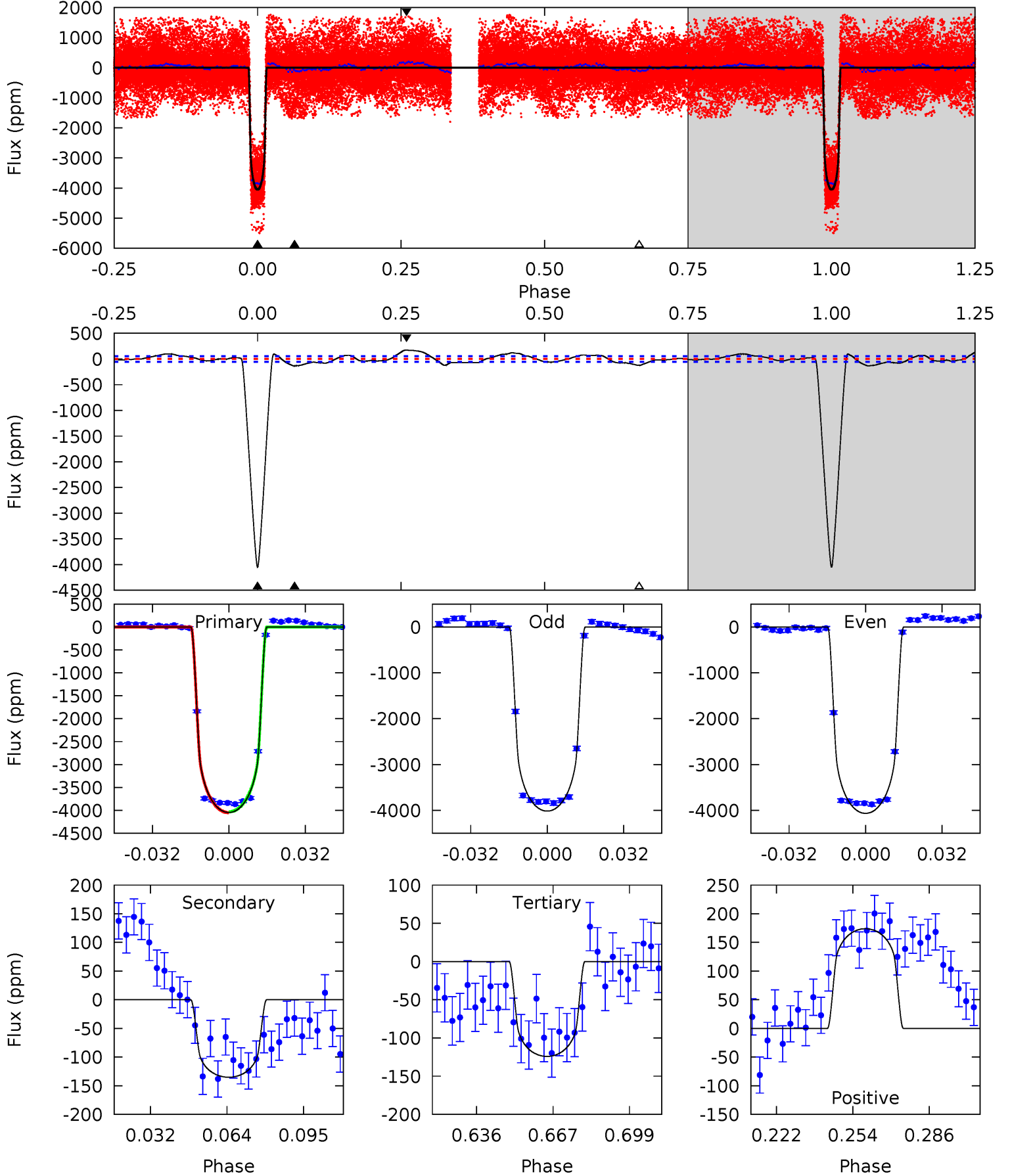
TCE 005098444-02 P= 26.949171 Days $T_0=141.293027$ (BKJD)



DV Model-Shift Uniqueness Test

005098444-02, P = 26.949201 Days, E = 114.340446 Days

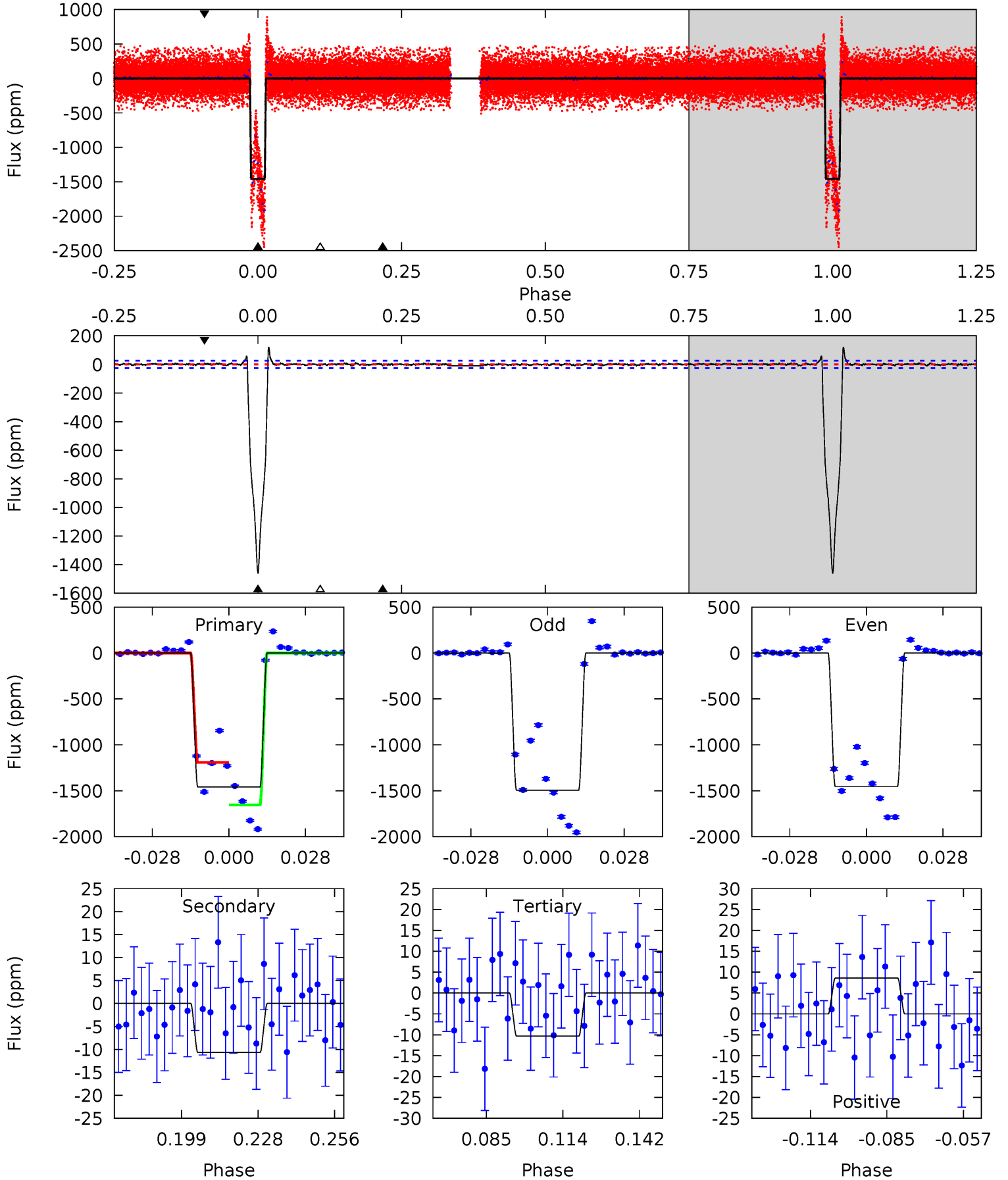
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
354.3	11.8	10.9	15.2	4.80	2.15	5.74	343.4	339.0	0.96	-3.39	2.17	0.90	0.04	0



Alt Model-Shift Uniqueness Test

005098444-02, P = 26.949171 Days, E = 114.343856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
268.8	1.97	1.90	1.58	4.82	2.19	0.62	266.9	267.2	0.07	0.38	3.72	1.35	0.08	42.2



Stellar Parameters For KIC 005098444

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4723^{+145}_{-162}	$4.741^{+0.045}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.512^{+0.025}_{-0.032}$	$0.526^{+0.032}_{-0.021}$	$5.515^{+0.991}_{-0.533}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+6%/-4%	+18%/-10%
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 005098444-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-135 ± 11	$3.53^{+0.11}_{-0.12}$	550^{+20}_{-21}	2734^{+64}_{-67}	121^{+13}_{-11}
Alt.	-11 ± 5	$2.44^{+0.08}_{-0.08}$	551^{+17}_{-20}	2194^{+114}_{-165}	20^{+11}_{-10}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

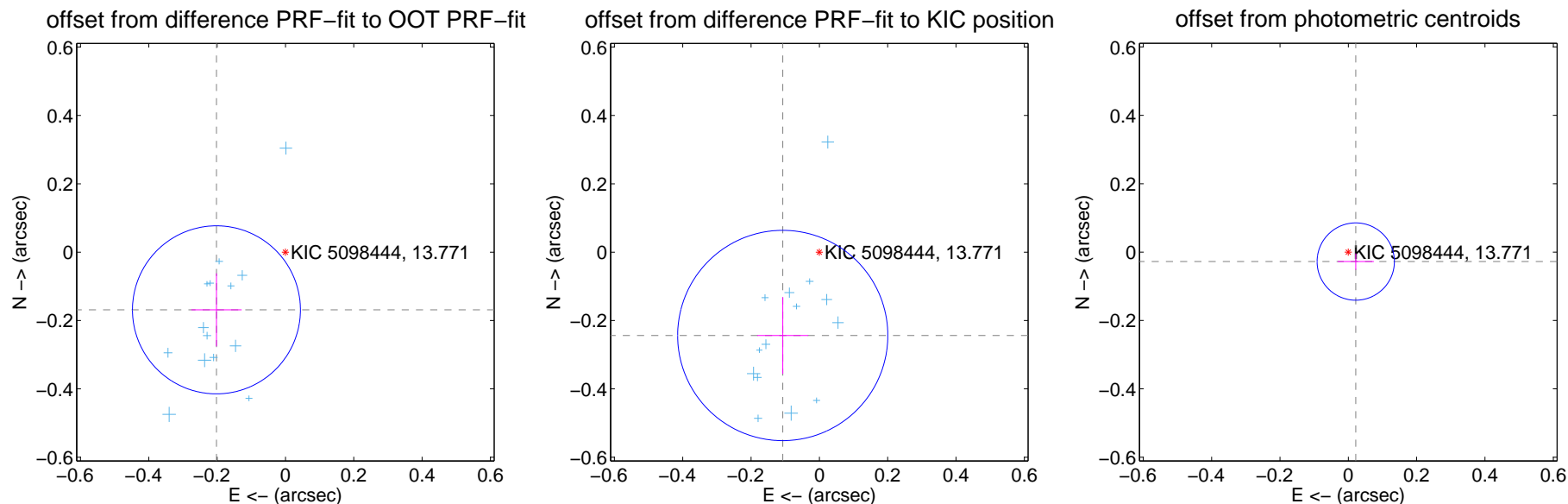
DV Centroid Data

Supplemental centroid analysis for 005098444-02. Kepler magnitude: 13.77. Transit SNR 167.70

There are 16 quarters with good PRF difference image offsets

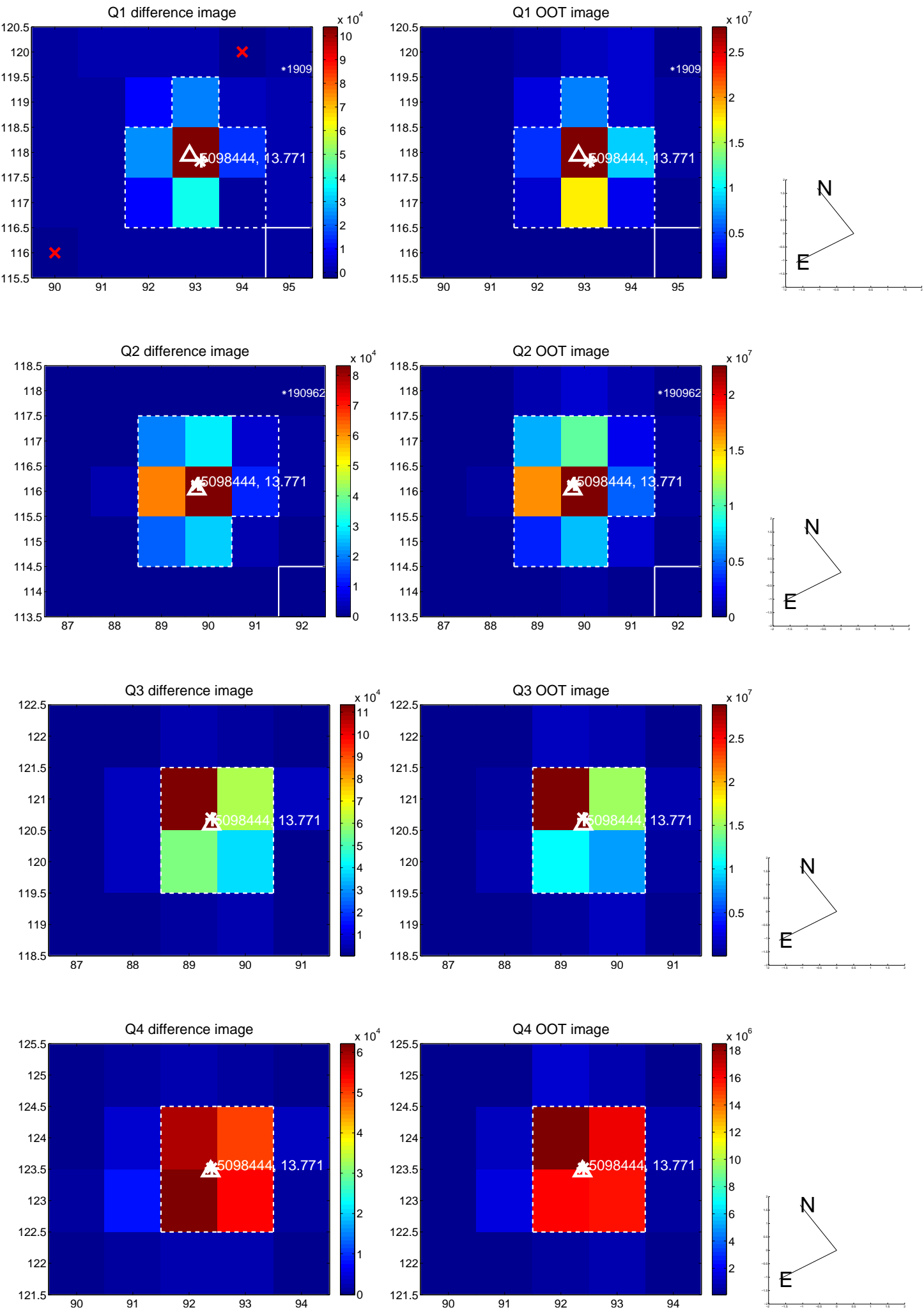
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.263 ± 0.082	3.21	0.202 ± 0.074	-0.169 ± 0.107
PRF-fit source offset from KIC position	0.266 ± 0.103	2.60	0.107 ± 0.075	-0.244 ± 0.112
photometric centroid source offset	0.04 ± 0.04	0.93	-0.02 ± 0.05	-0.03 ± 0.02

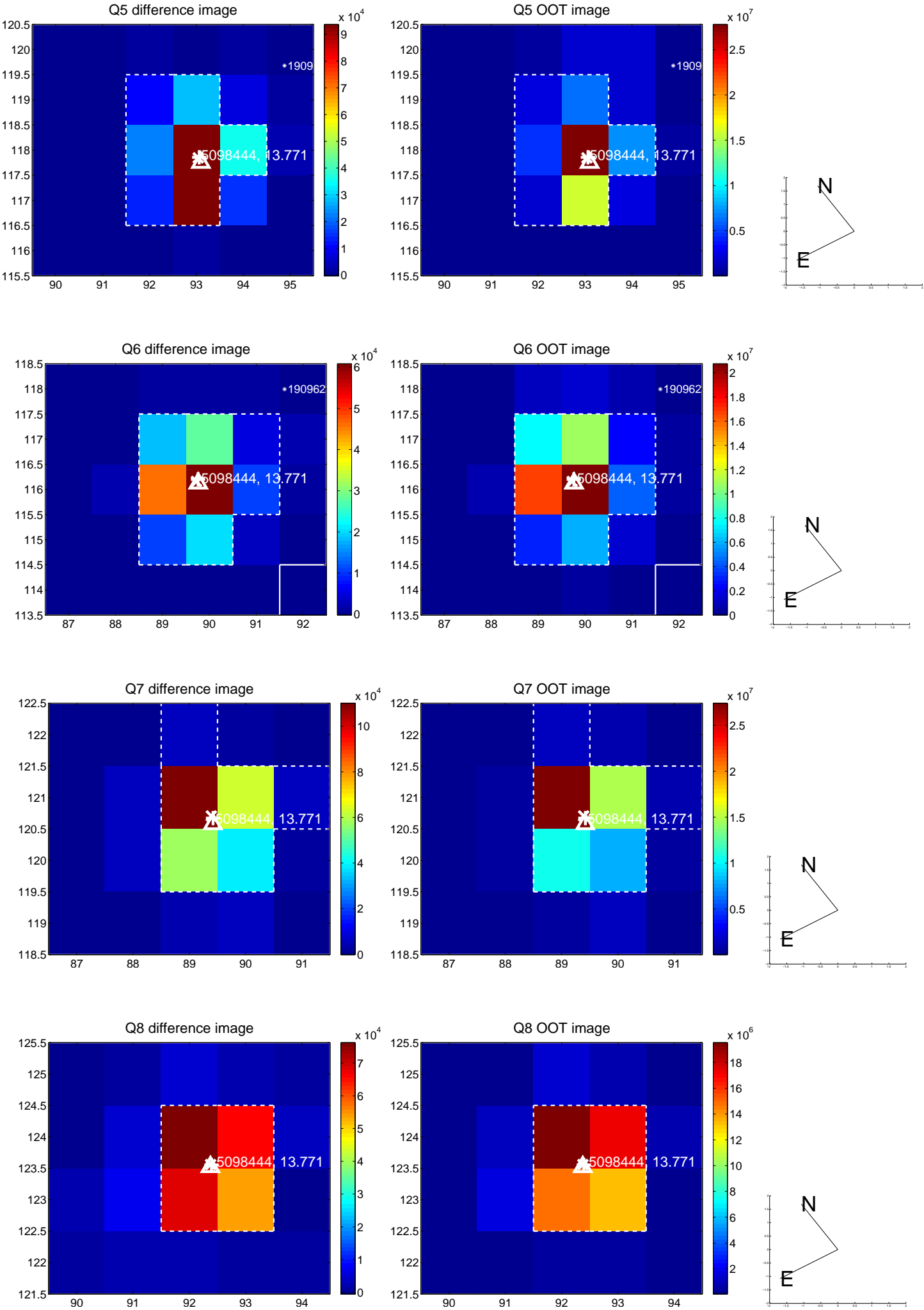


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

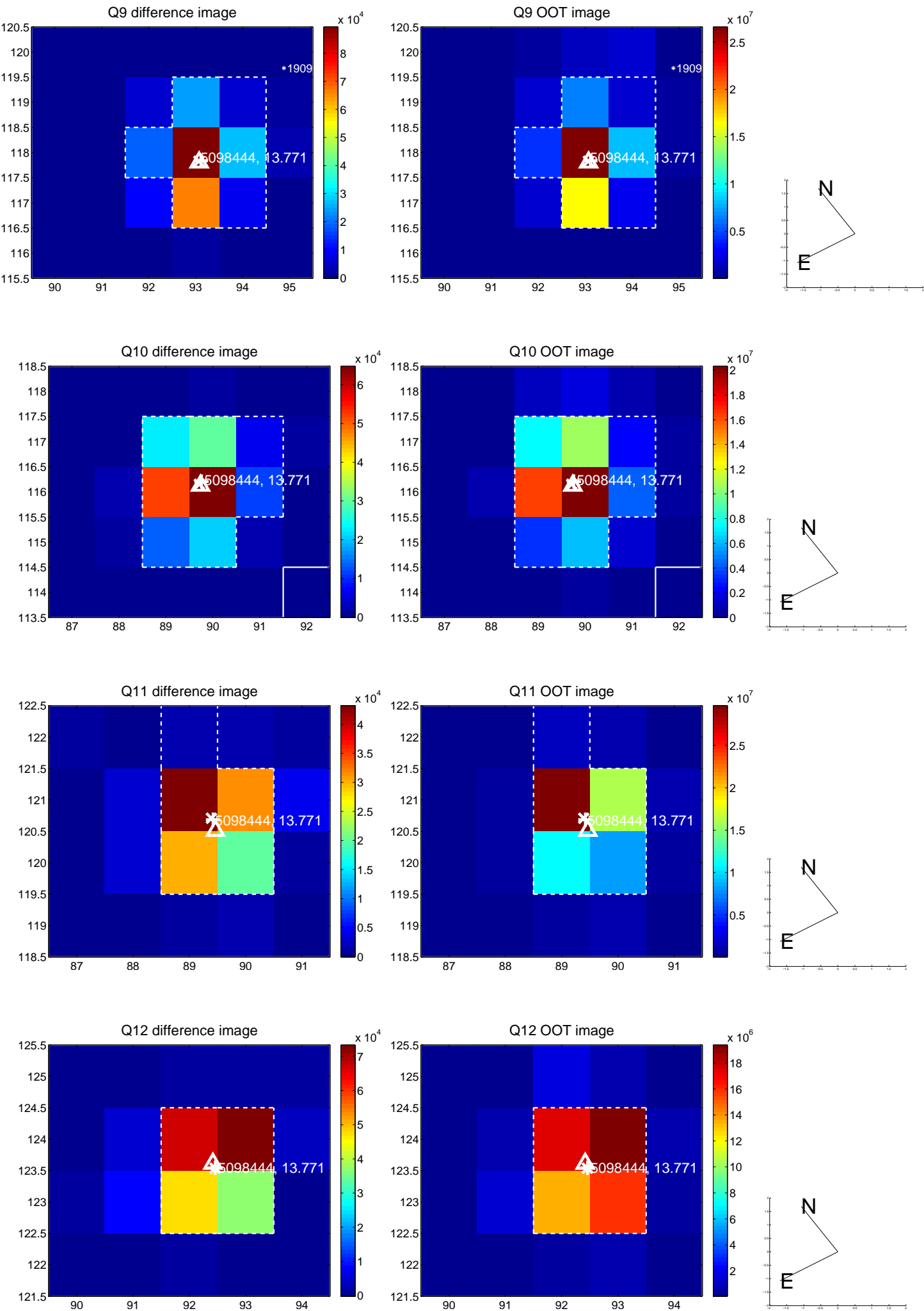
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



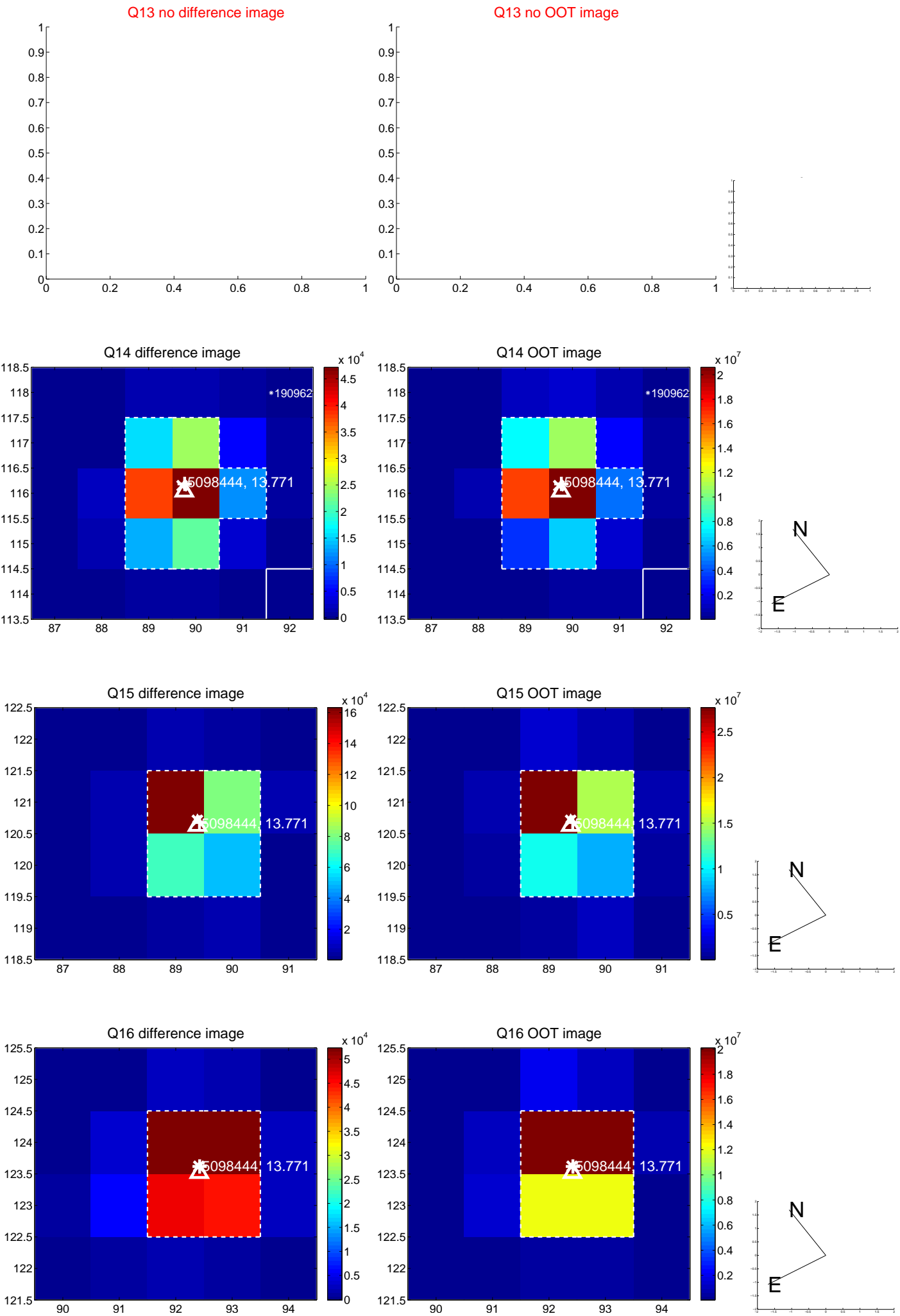
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



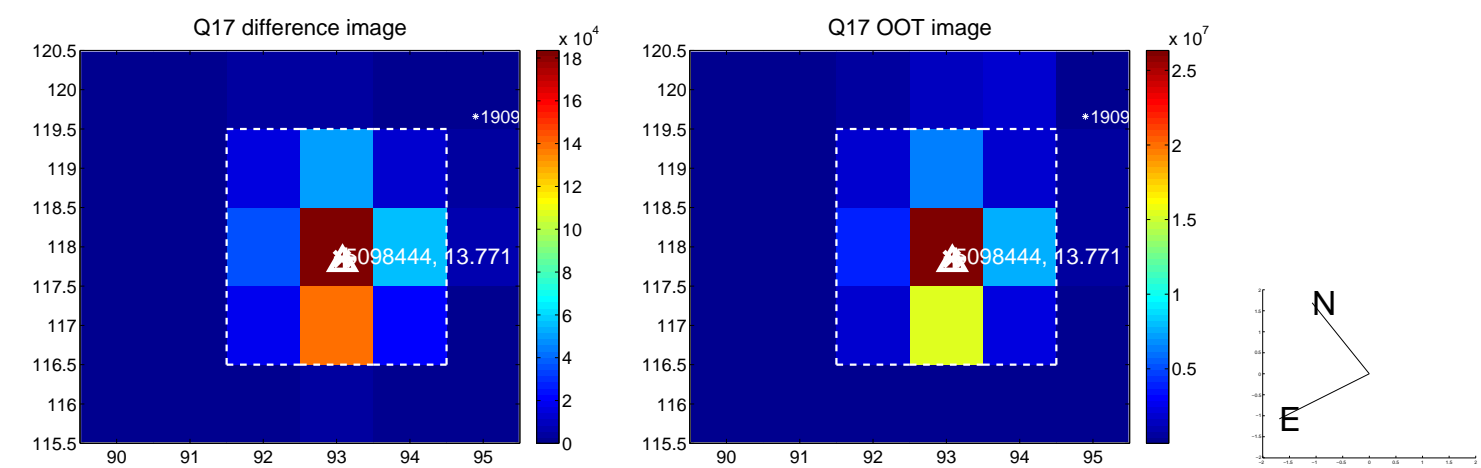
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



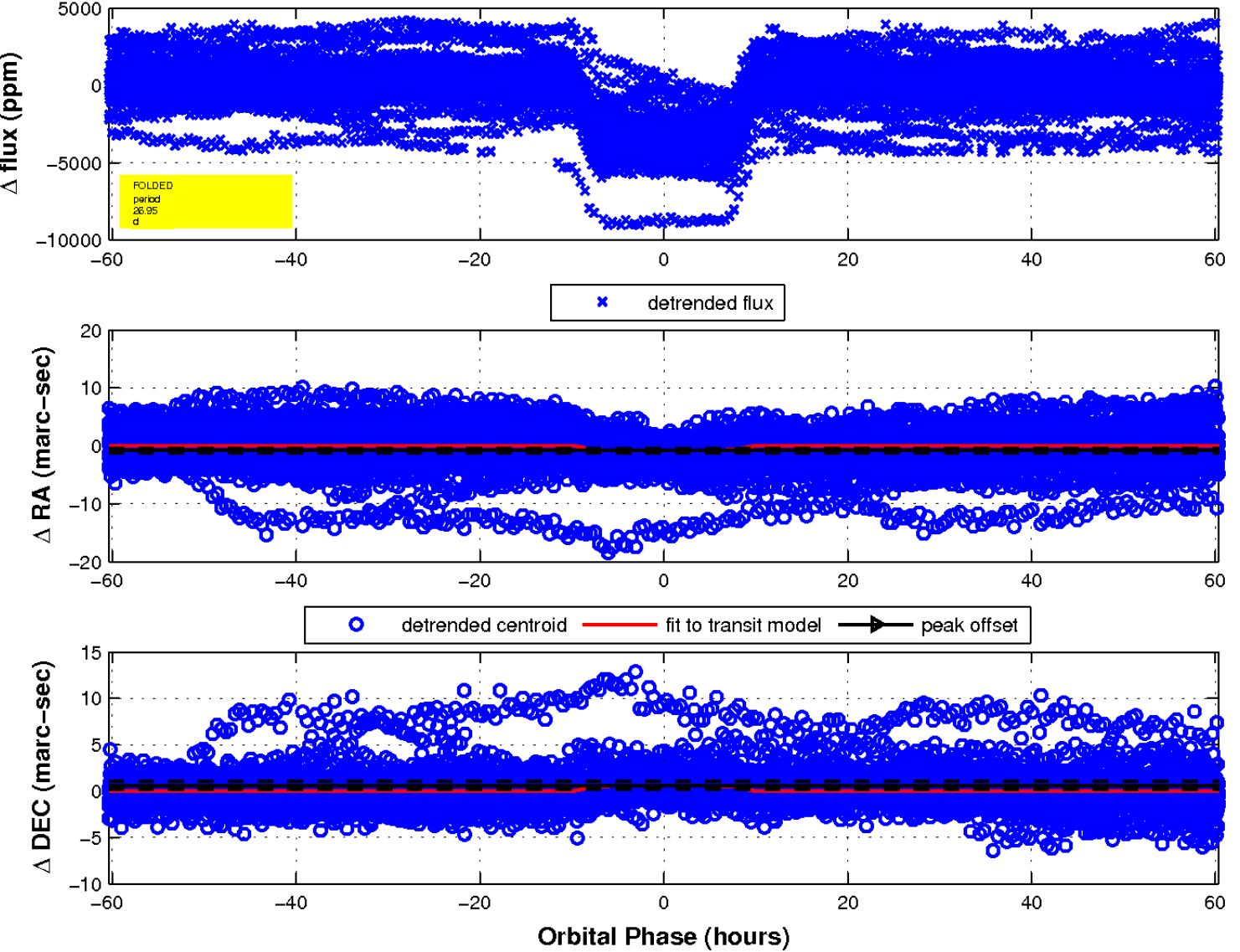
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

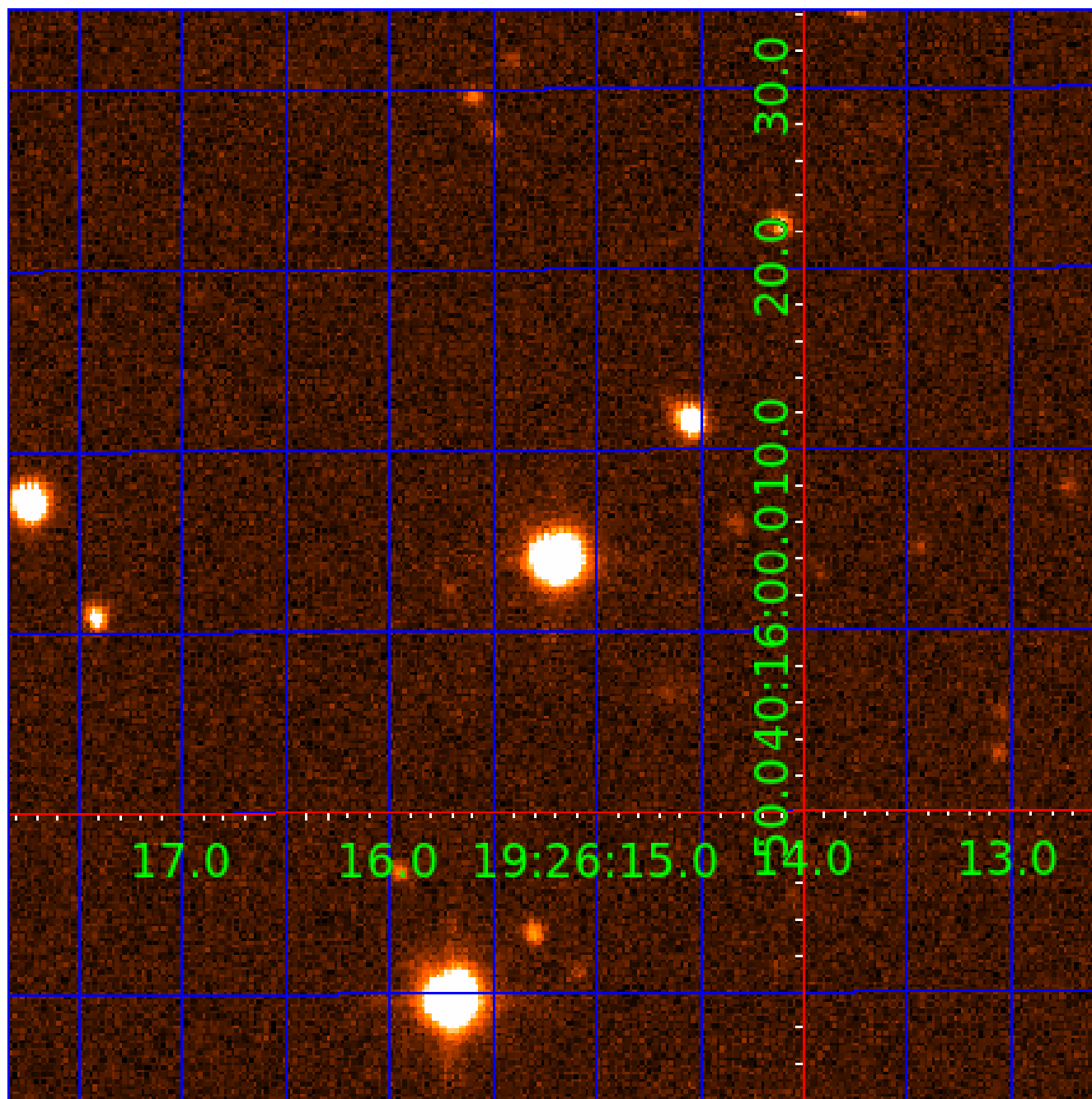


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 005098444

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})
005098444-01	OBS	0637.01	26.949214	151.020075	19775.8	10.383	739.1	575.8	0.51	4723	7.18	5.79
005098444-02	OBS	No	26.949201	141.289647	4188.4	20.125	112.8	167.7	0.51	4723	3.54	5.79
005098444-03	OBS	No	375.949749	231.106094	625.5	6.042	14.1	9.4	0.51	4723	1.34	0.17
005098444-04	OBS	No	220.069768	294.902266	378.2	6.461	12.3	6.0	0.51	4723	1.11	0.35
005098444-05	OBS	No	453.083916	374.988898	568.6	3.580	10.4	7.6	0.51	4723	1.28	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005098444-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE
005098444-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005098444-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005098444-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS
005098444-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

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

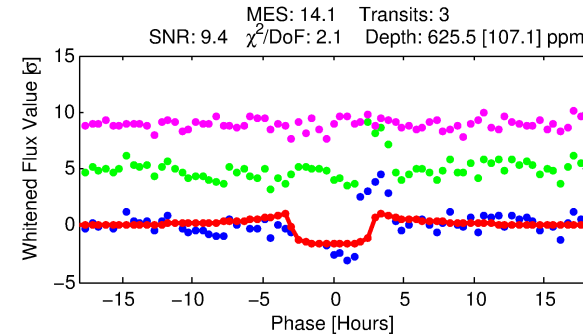
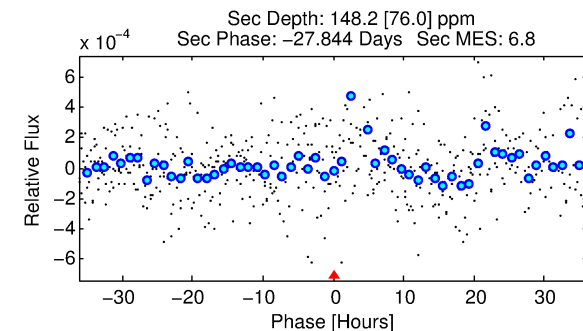
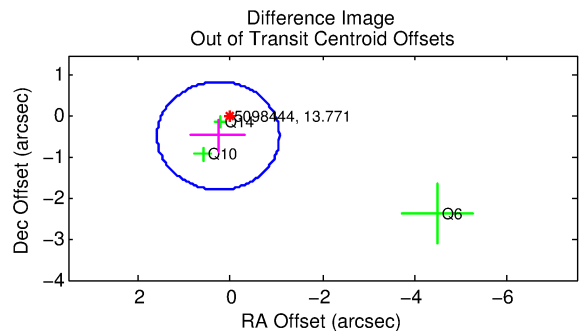
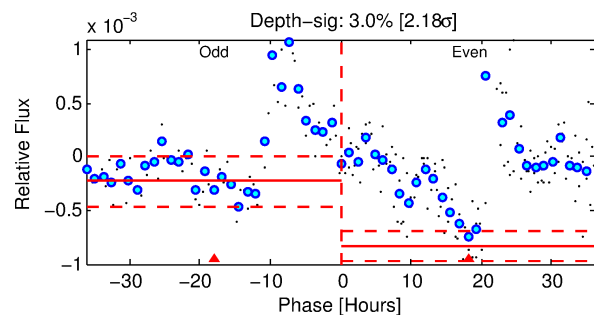
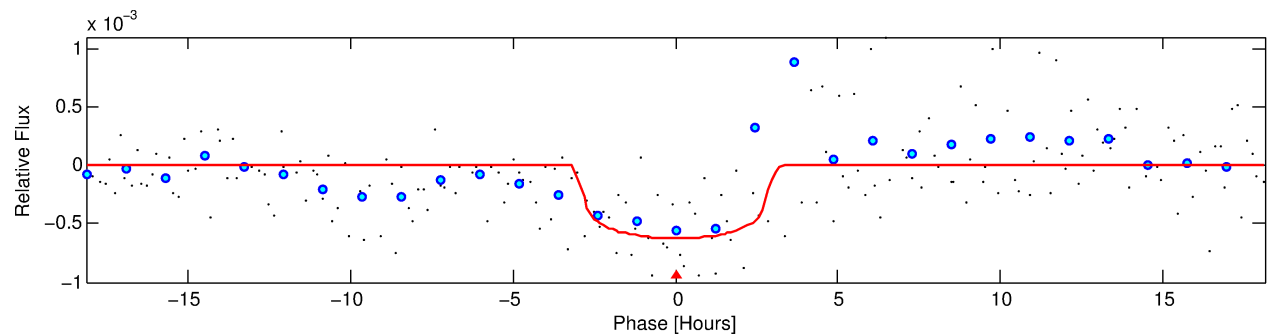
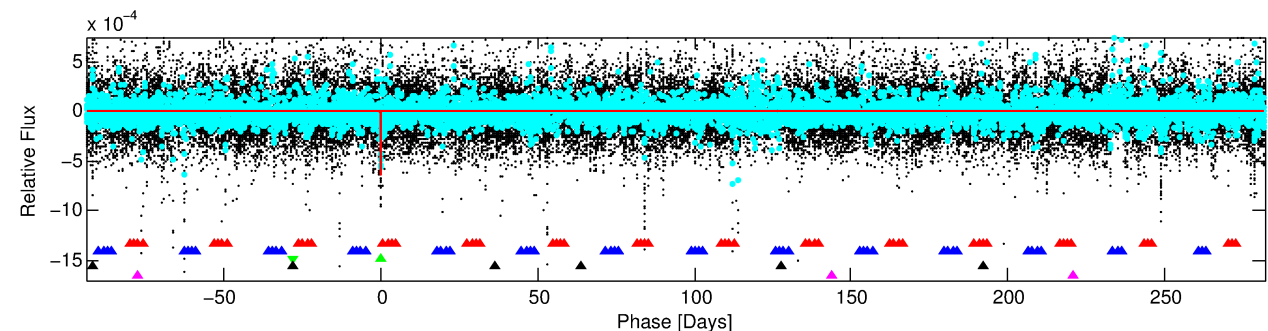
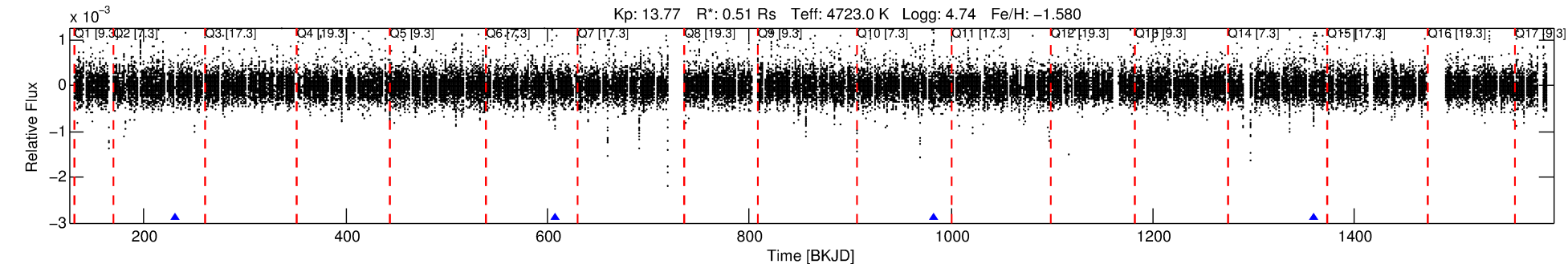
Ephemeris Match Information For 005098444-03

No Significant Match Found

DV One-Page Summary

KIC: 5098444 Candidate: 3 of 5 Period: 375.950 d
KOI: K00637 Corr: No Ephemeris Match

Kp: 13.77 R*: 0.51 Rs Teff: 4723.0 K Logg: 4.74 Fe/H: -1.580



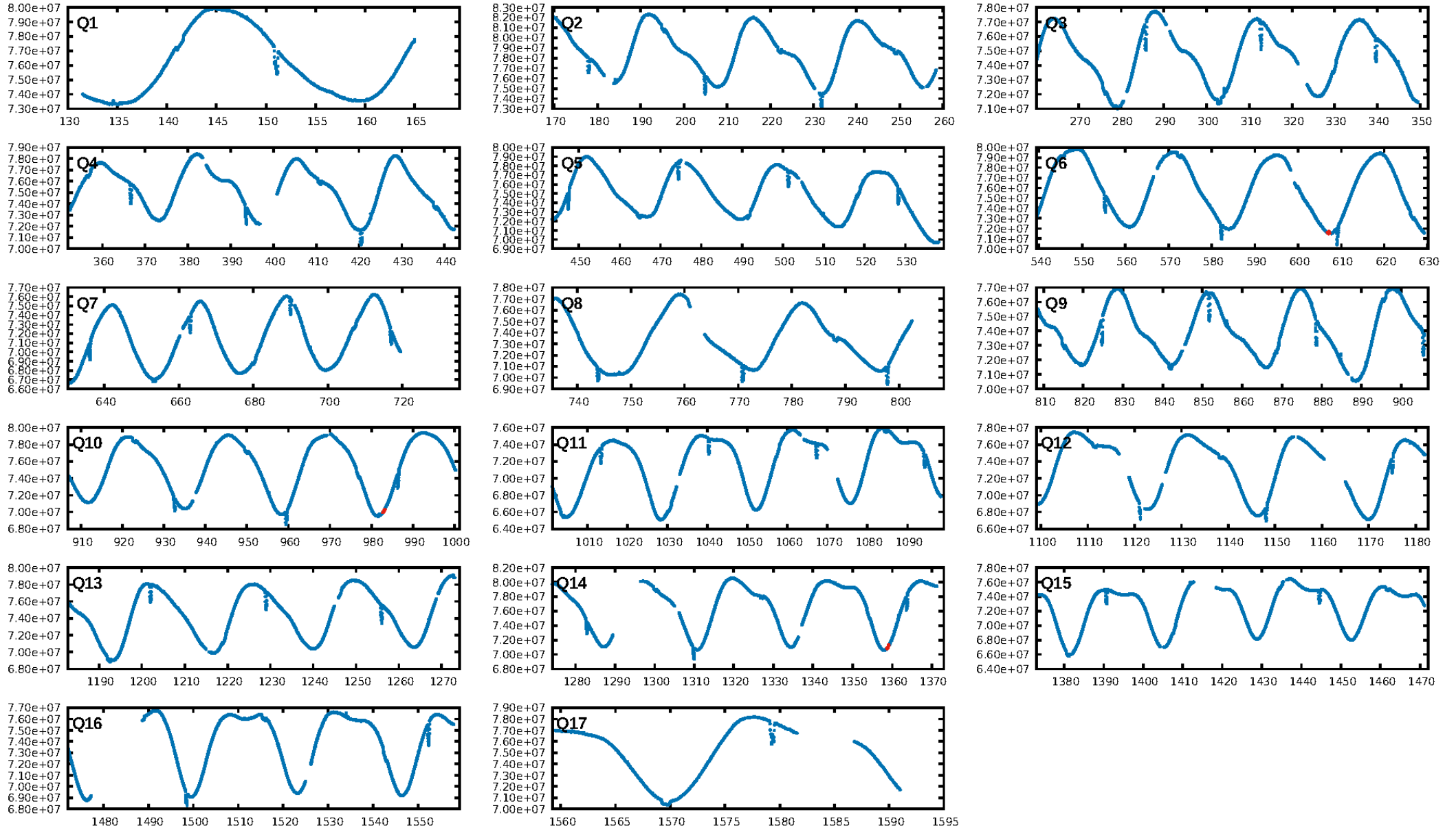
DV Fit Results:

Period = 375.94975 [0.00853] d
Epoch = 231.1061 [0.0188] BKJD
Rp/R* = 0.0239 [0.0270]
a/R* = 389.30 [1932.98]
b = 0.61 [5.05]
Seff = 0.17 [0.03]
Teq = 164 [7] K
Rp = 1.34 [1.51] Re
a = 0.8234 [0.0446] AU
Ag = 30989.13 [71715.56] [0.43σ]
Teffp = 3370 [1952] K [1.64σ]

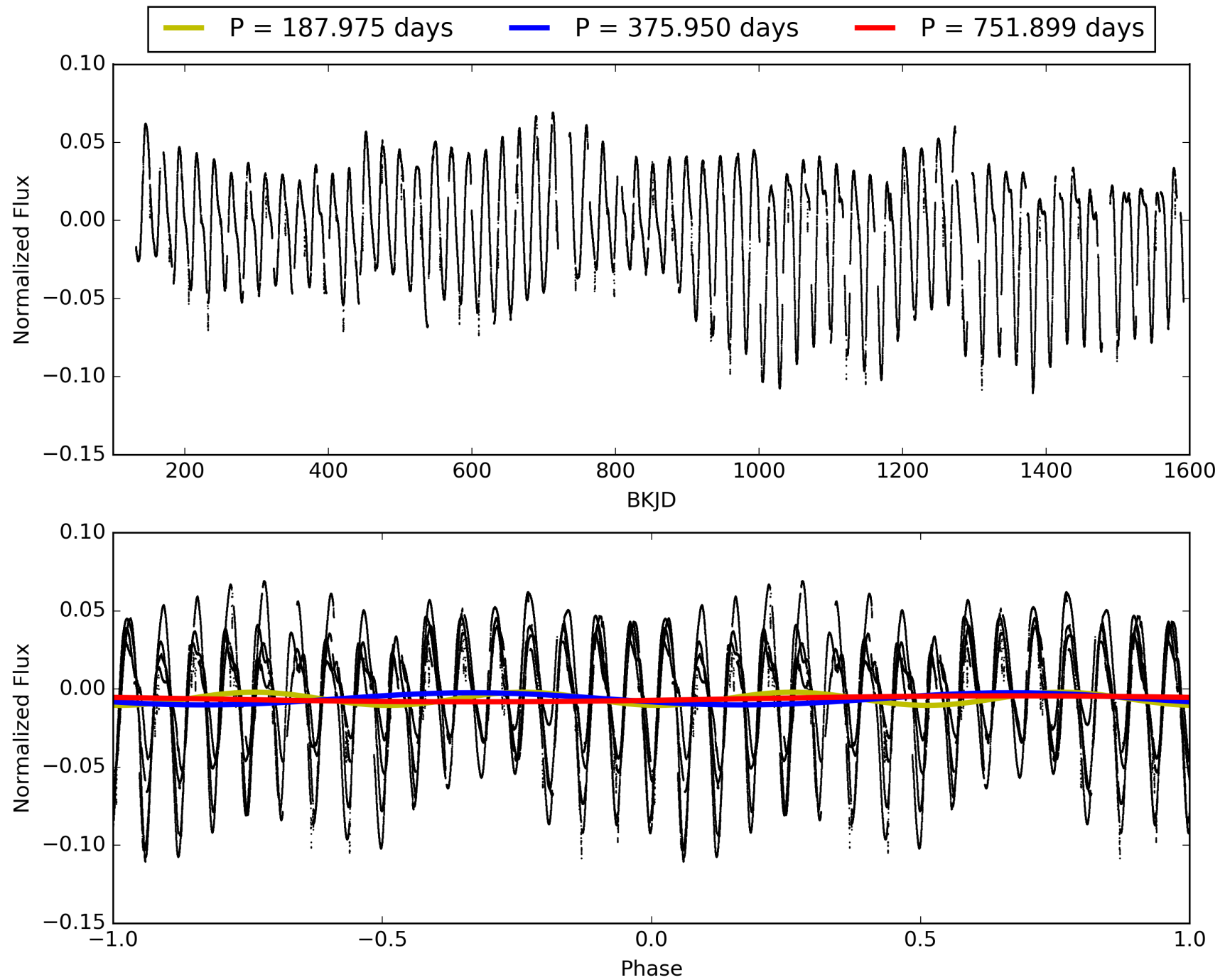
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [422.91σ]
LongPeriod-sig: 100.0% [263.59σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 5.8%
Bootstrap-pfa: 2.77e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.222
Centroid-sig: 31.8%
Centroid-so: 1.110 arcsec [0.87σ]
OotOffset-rm: 0.533 arcsec [1.21σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 0.432 arcsec [0.65σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005098444-03, PDC Light Curves

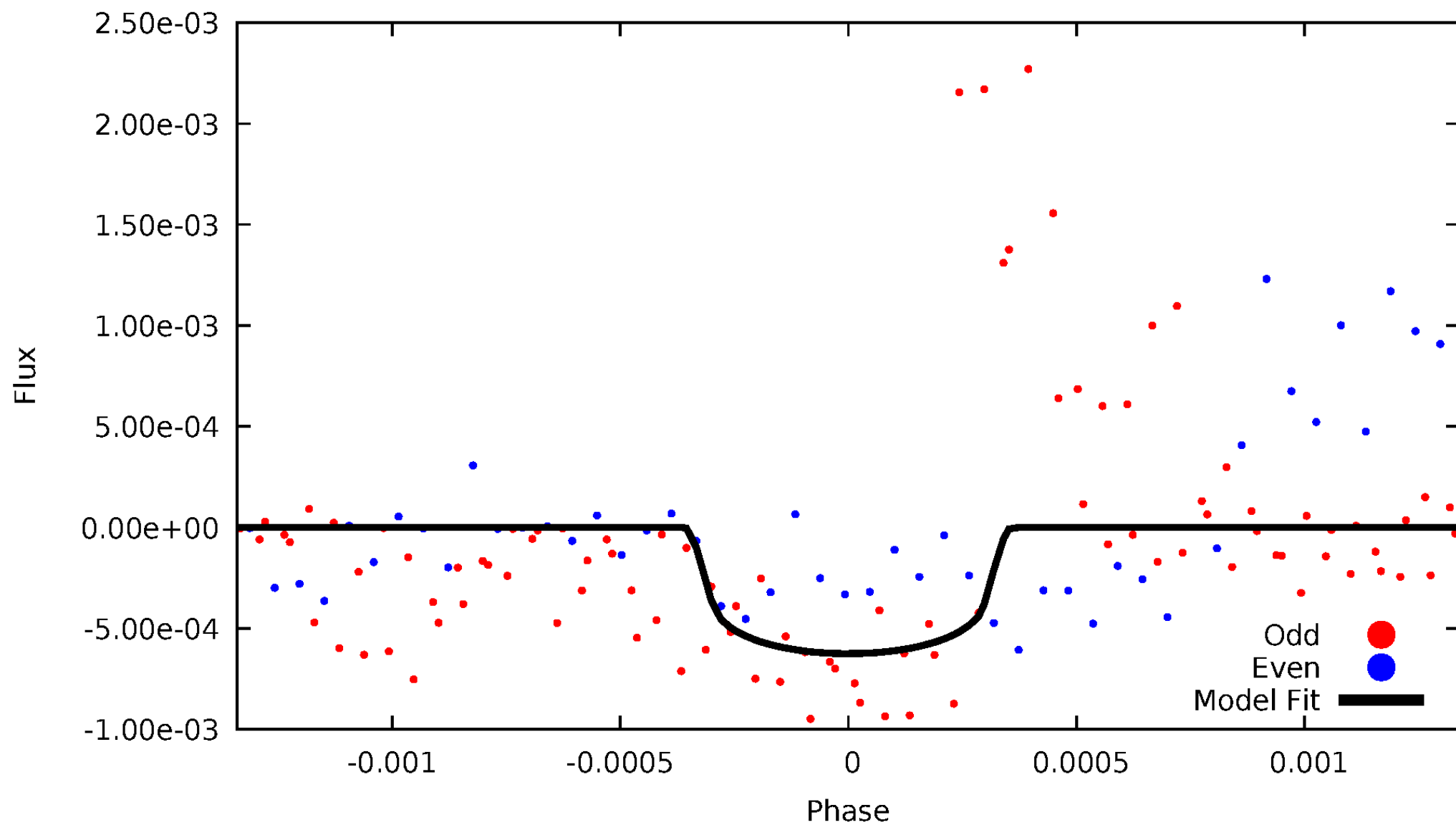


TCE 005098444-03



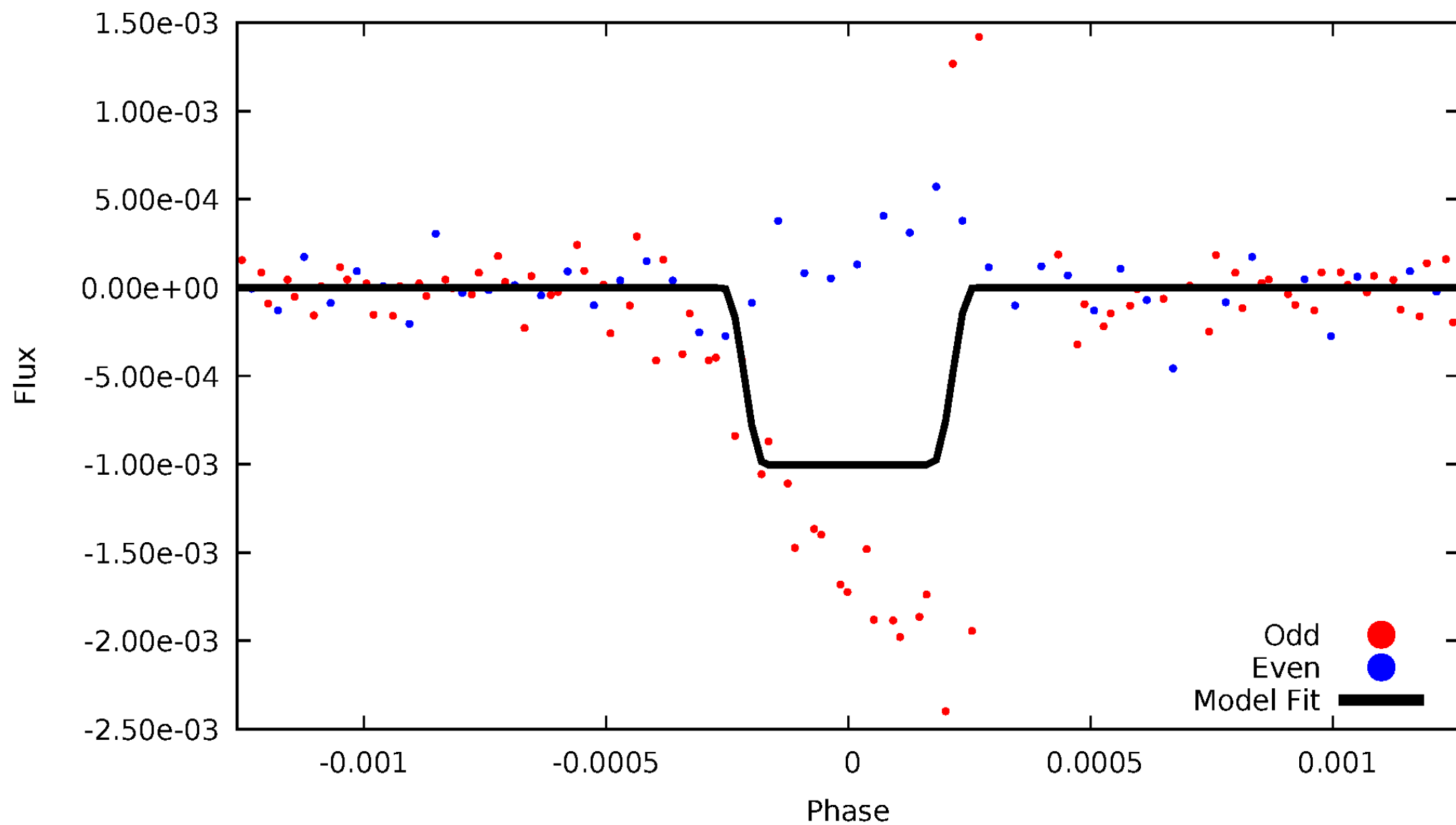
DV Odd/Even

TCE 005098444-03



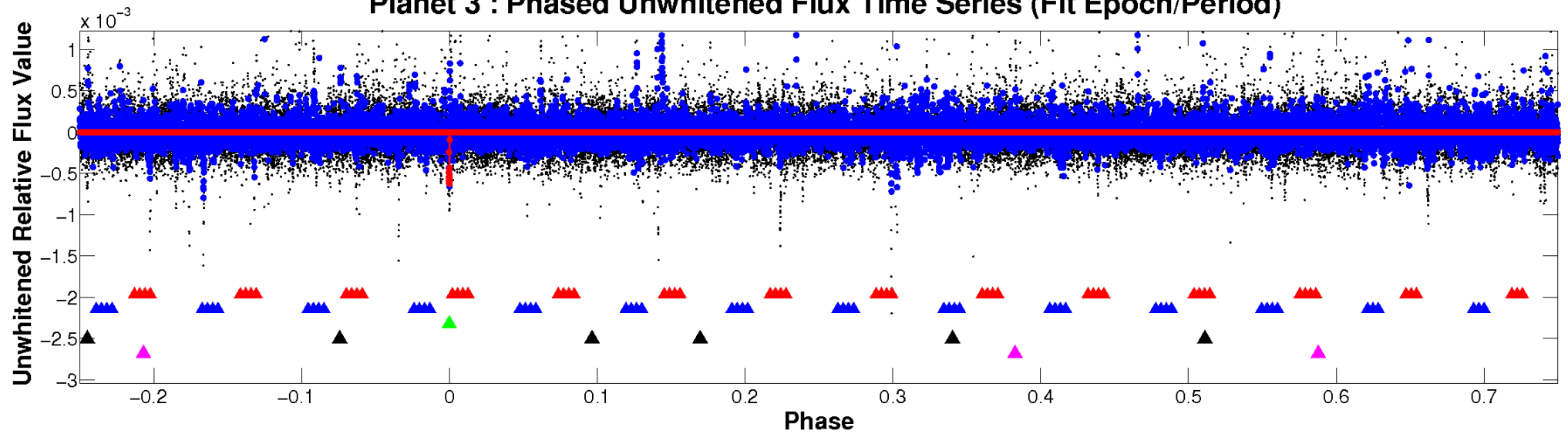
ALT Odd/Even

TCE 005098444-03

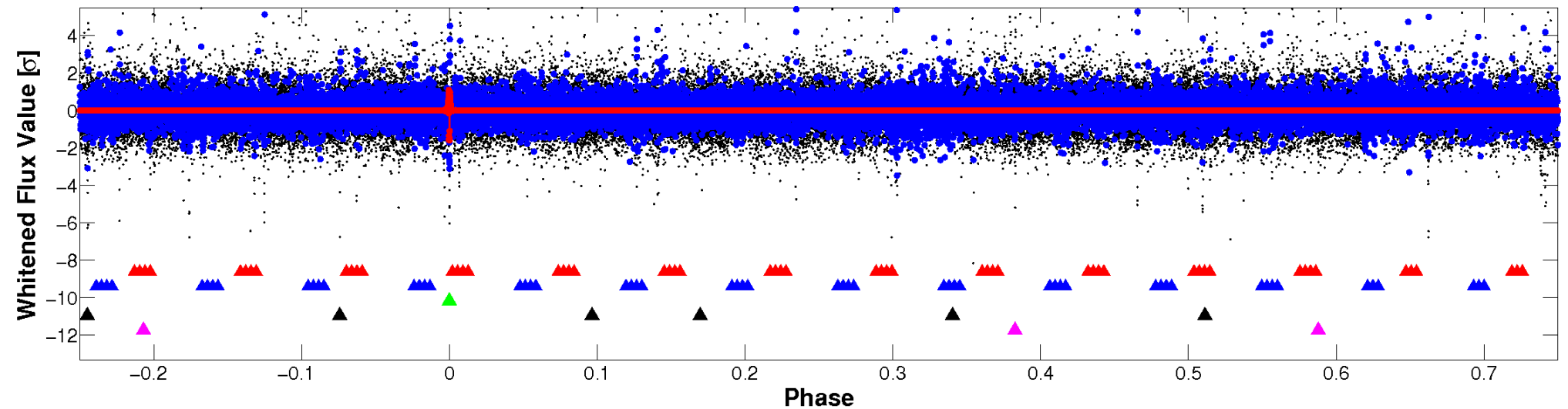


Non-Whitened Vs. Whitened Light Curve

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

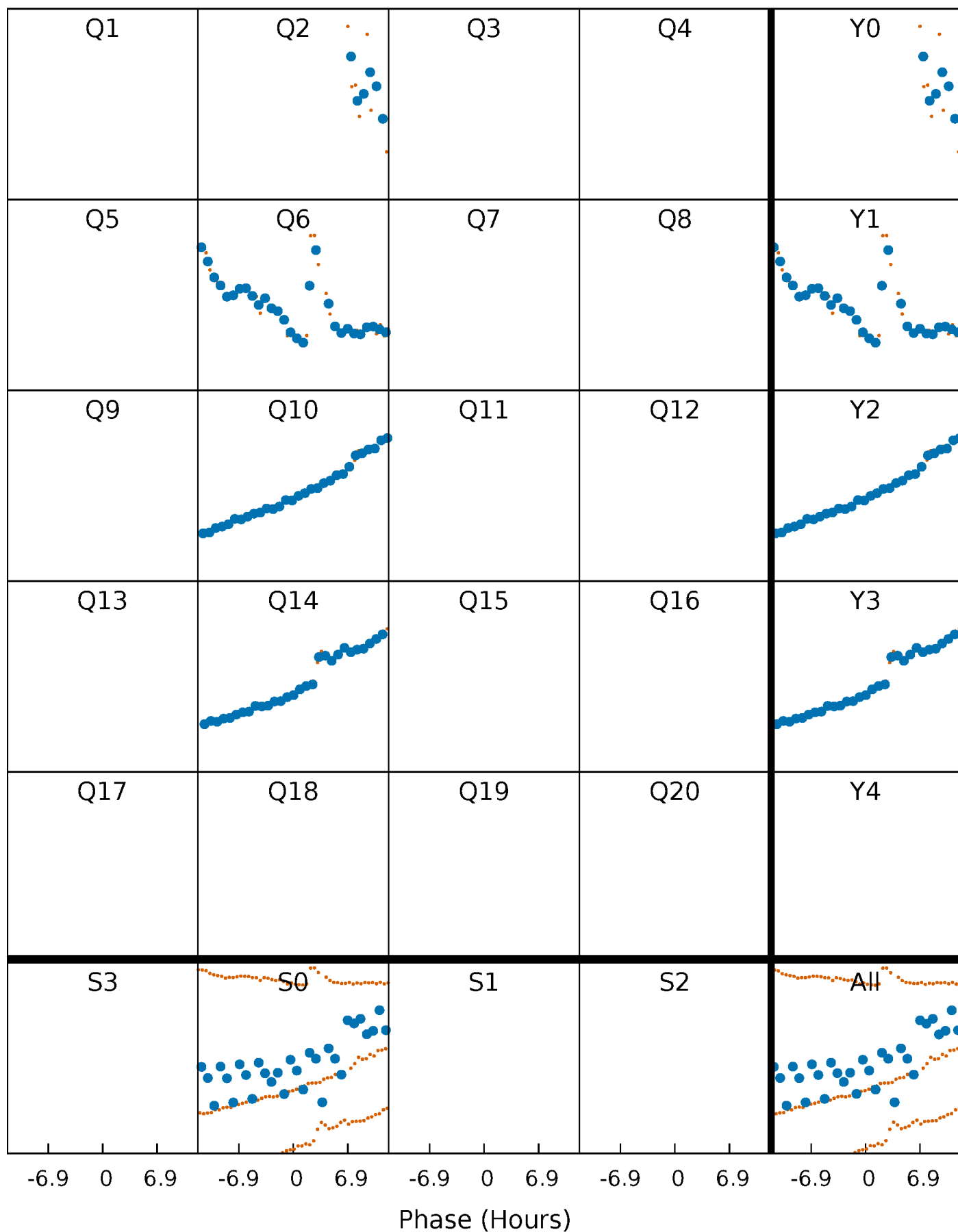


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



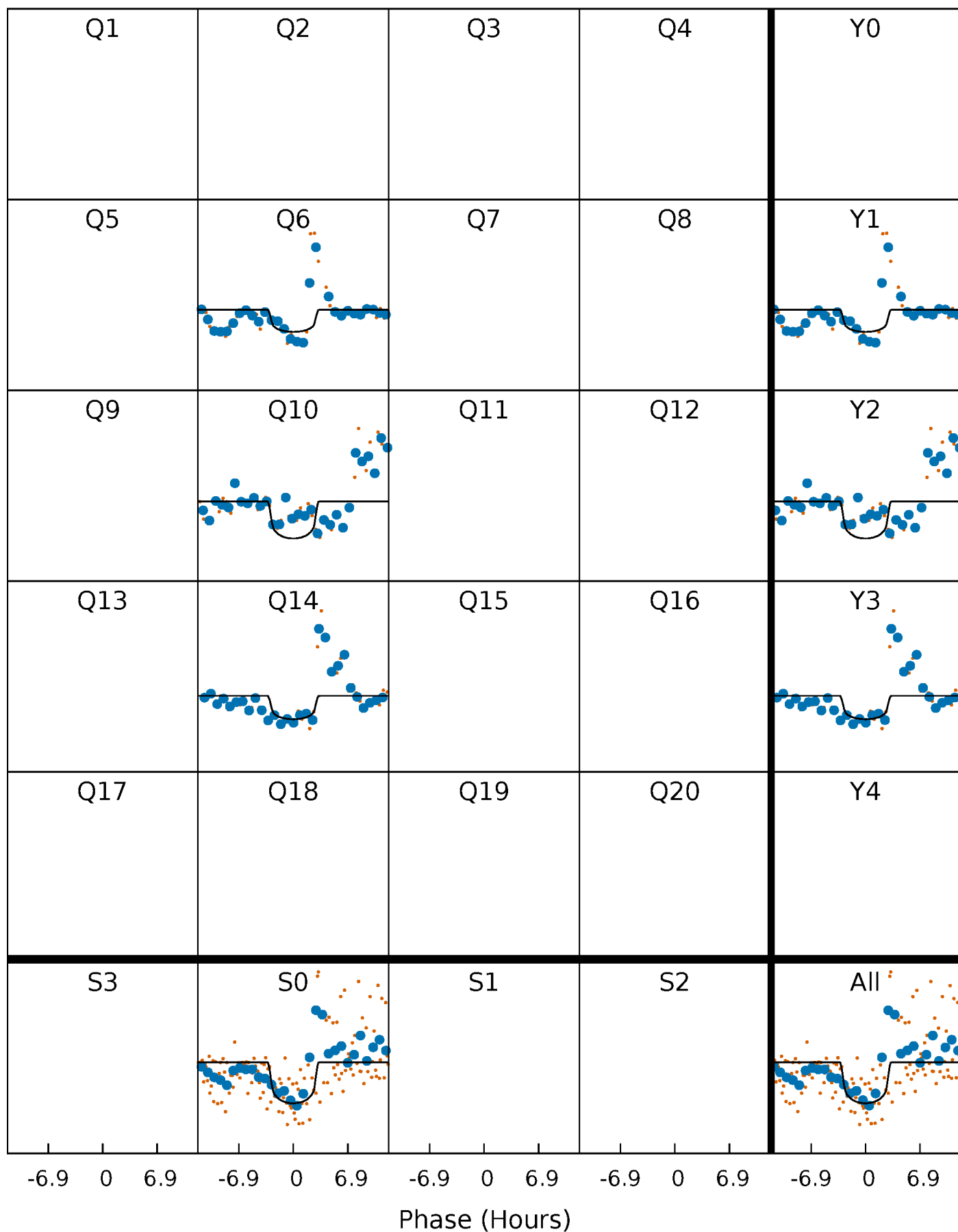
PDC Quarter-Phased Transit Curves

TCE 005098444-03 P=375.949749 Days $T_0=231.106094$ (BKJD)



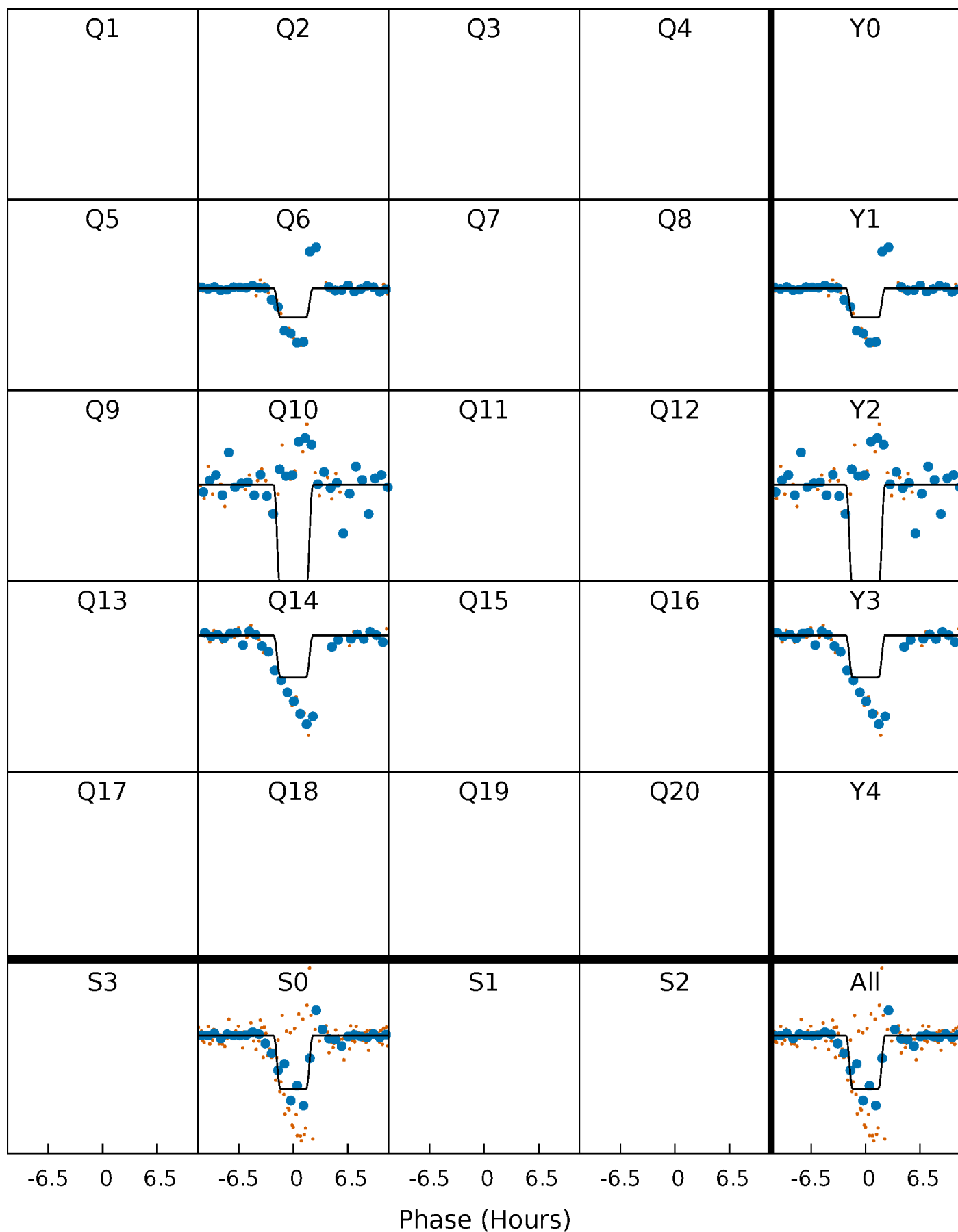
DV Quarter-Phased Transit Curves

TCE 005098444-03 P=375.949749 Days $T_0=231.106094$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

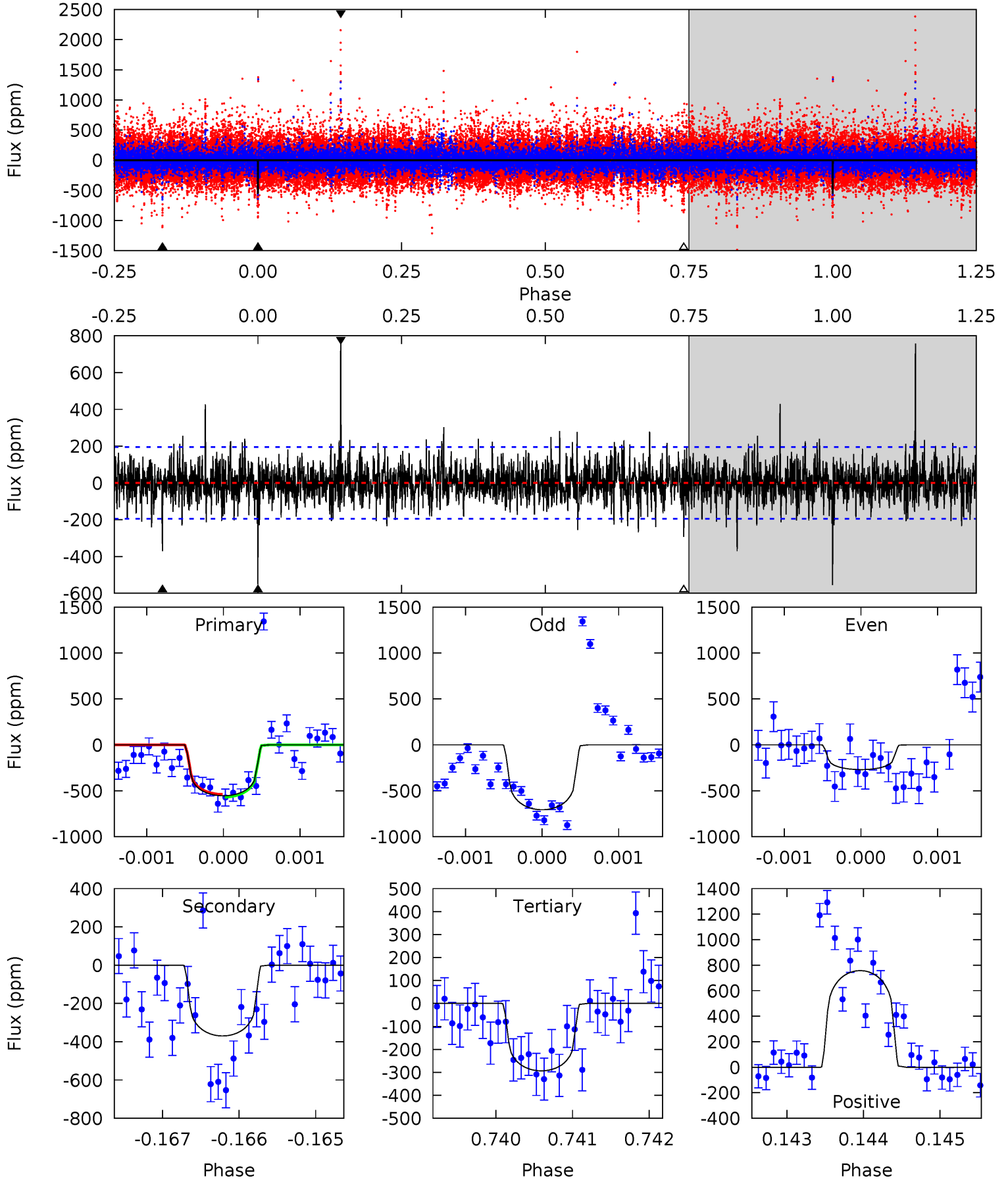
TCE 005098444-03 $P=375.950259$ Days $T_0=231.115938$ (BKJD)



DV Model-Shift Uniqueness Test

005098444-03, P = 375.949749 Days, E = 231.106094 Days

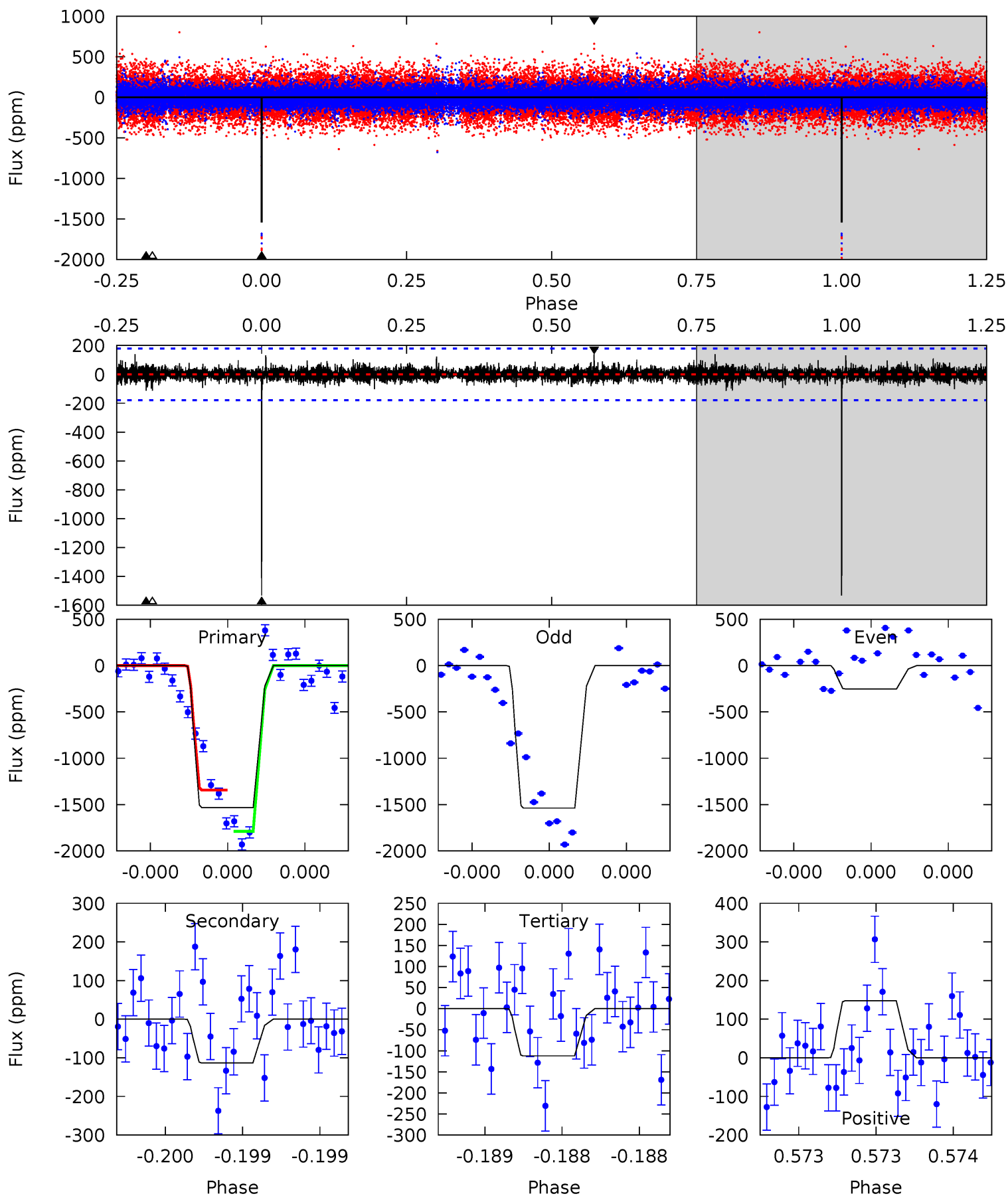
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	10.5	8.31	21.4	5.51	3.39	2.09	7.39	-5.75	2.16	-11.0	5.59	1.34	0.58	0.41



Alt Model-Shift Uniqueness Test

005098444-03, P = 375.950259 Days, E = 231.115938 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.7	3.52	3.49	4.59	5.58	3.49	0.69	44.2	43.1	0.03	-1.07	23.5	0.66	0.09	6.94



Stellar Parameters For KIC 005098444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4723^{+145}_{-162}	$4.741^{+0.045}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.512^{+0.025}_{-0.032}$	$0.526^{+0.032}_{-0.021}$	$5.515^{+0.991}_{-0.533}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+6%/-4%	+18%/-10%
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 005098444-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-370 ± 35	$1.67^{+1.43}_{-1.02}$	228^{+7}_{-8}	3971^{+1855}_{-702}	$48055^{+275335}_{-33620}$
Alt.	-113 ± 32	$1.95^{+1.46}_{-1.17}$	229^{+7}_{-8}	3131^{+1097}_{-477}	10900^{+55606}_{-7506}

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 $A_{obs} \gg 1.0$

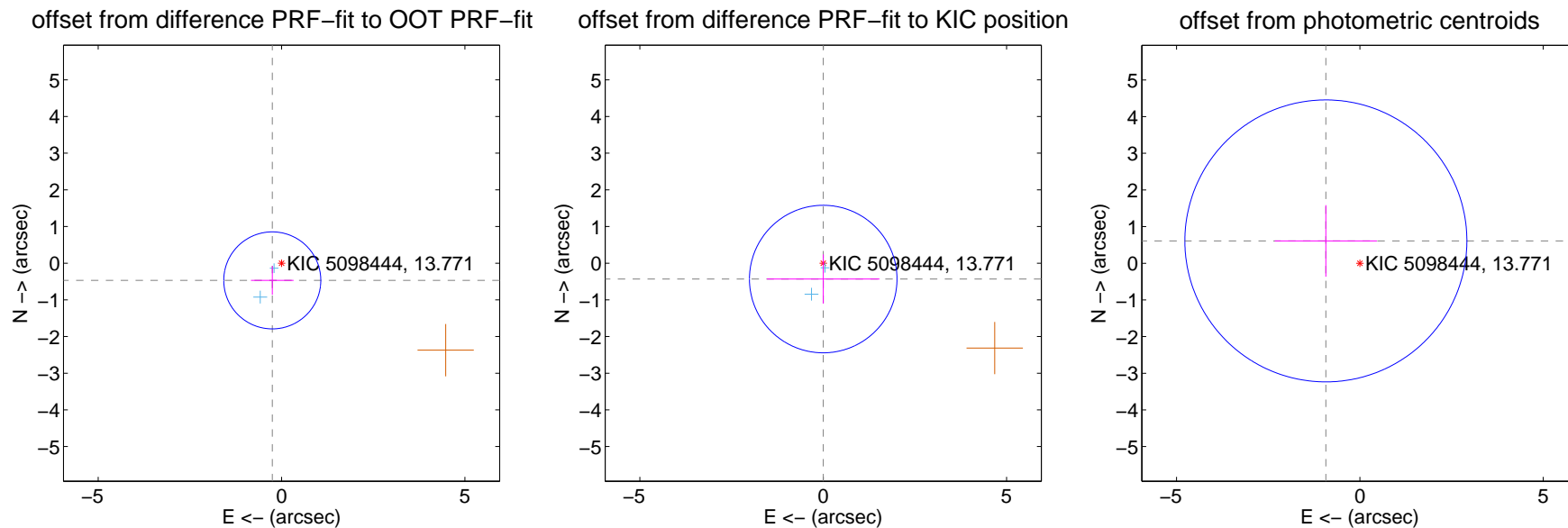
DV Centroid Data

Supplemental centroid analysis for 005098444-03. Kepler magnitude: 13.77. Transit SNR 9.35

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.533 ± 0.441	1.21	0.253 ± 0.581	-0.469 ± 0.391
PRF-fit source offset from KIC position	0.432 ± 0.670	0.65	-0.000 ± 1.534	-0.432 ± 0.670
photometric centroid source offset	1.11 ± 1.28	0.87	0.93 ± 1.39	0.61 ± 0.98

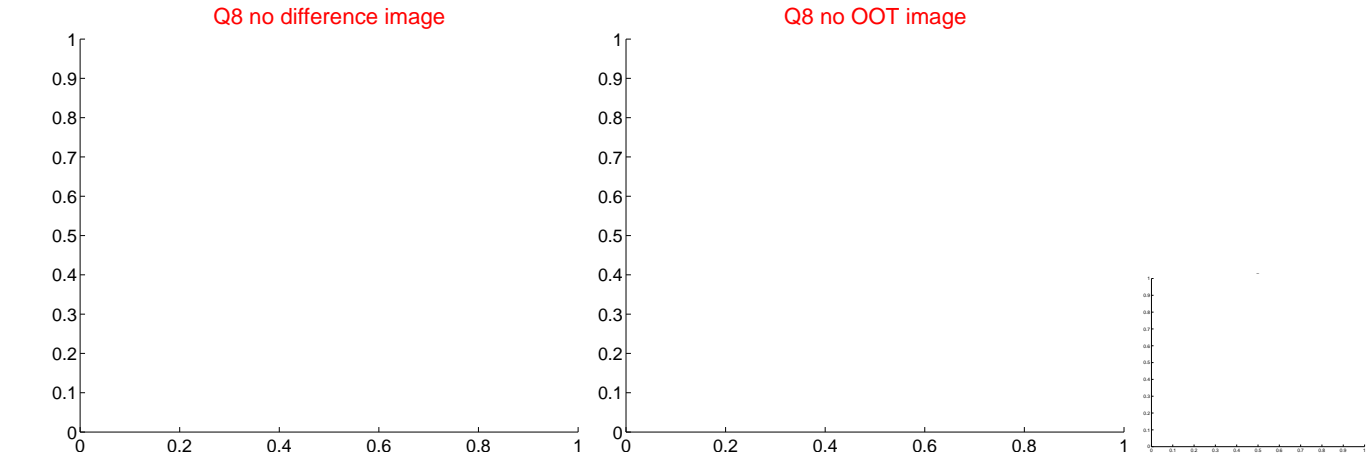
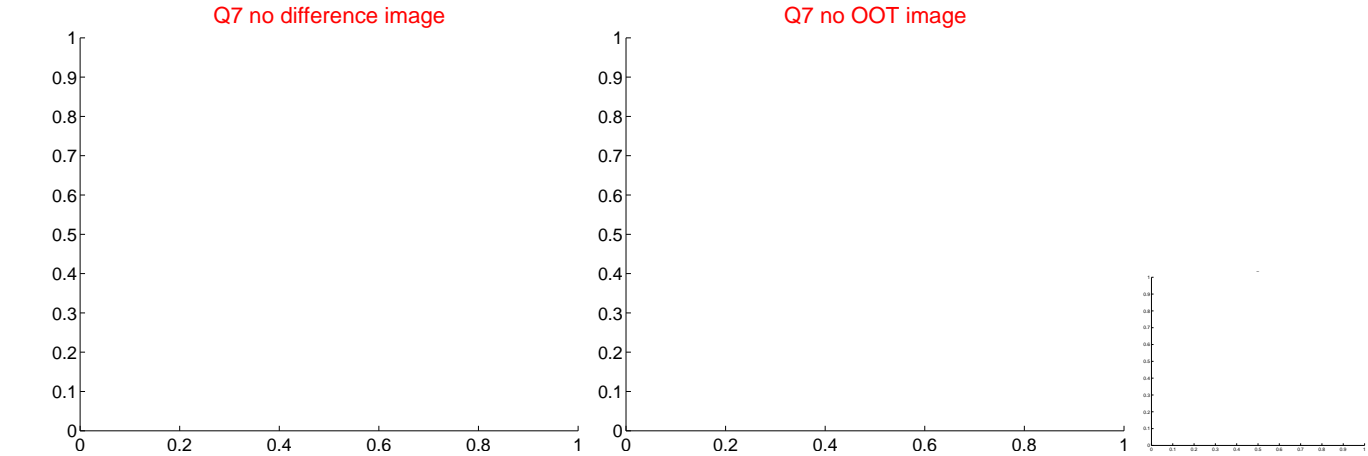
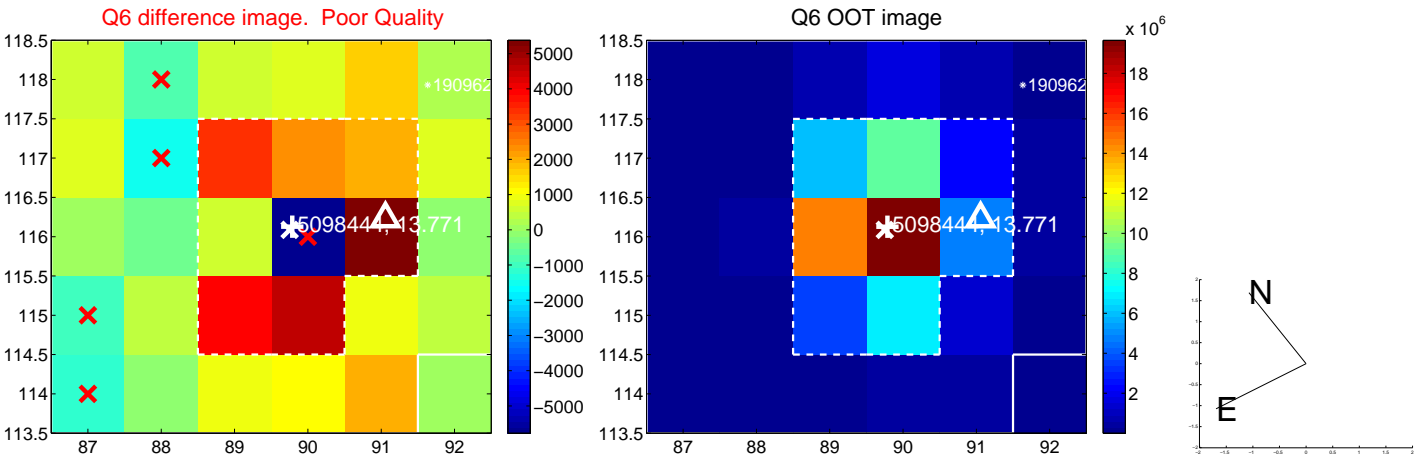
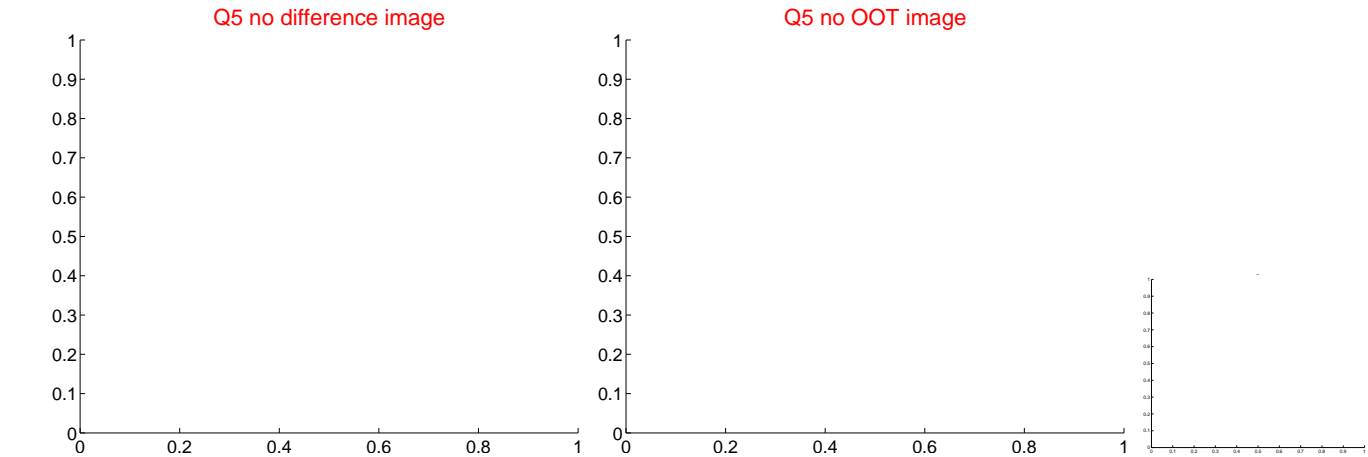


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

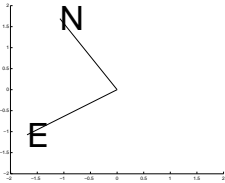
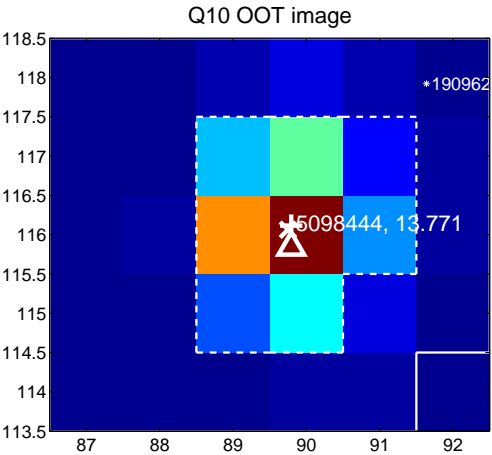
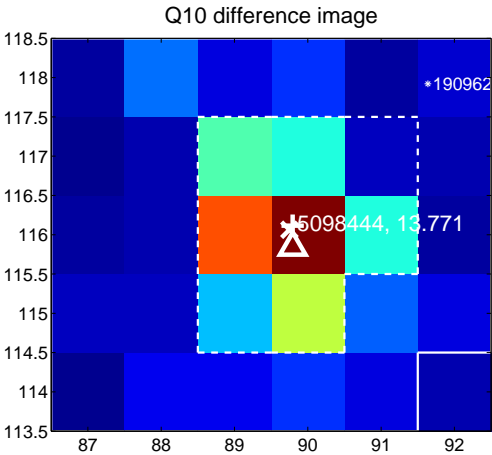


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

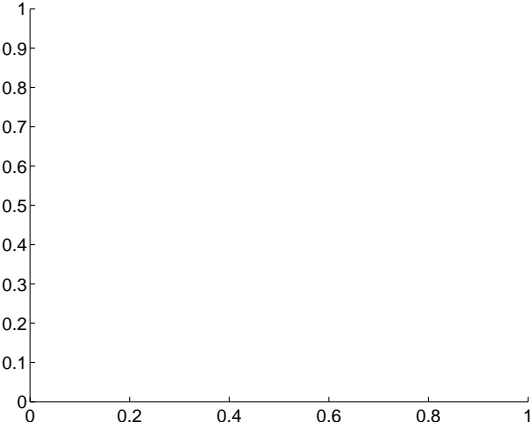
Q9 no difference image



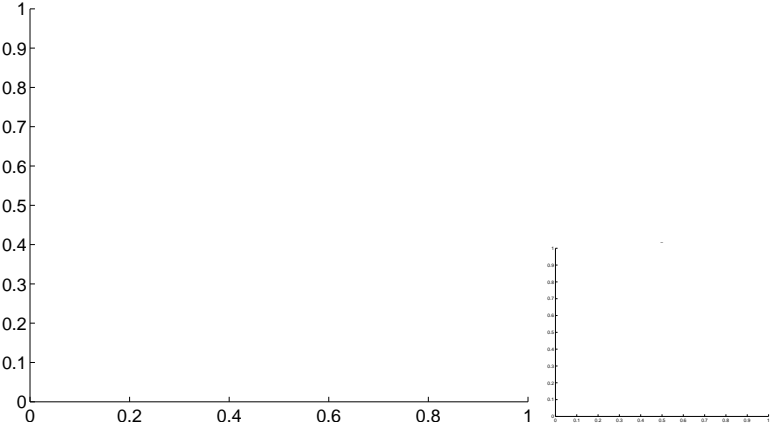
Q9 no OOT image



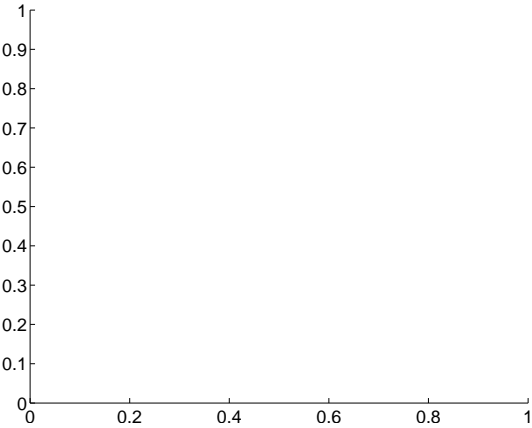
Q11 no difference image



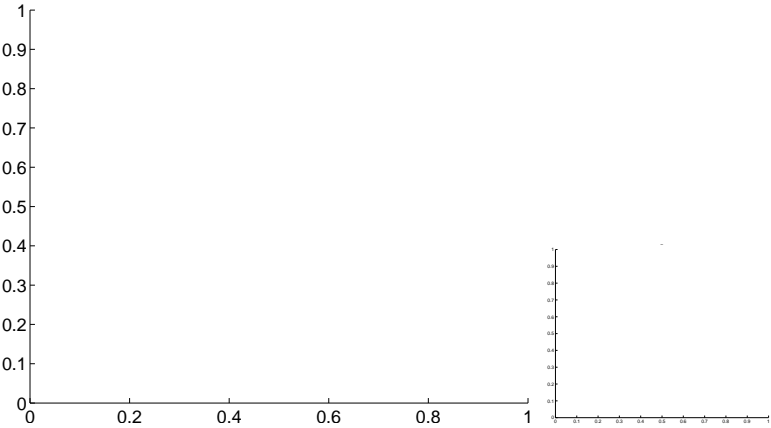
Q11 no OOT image



Q12 no difference image

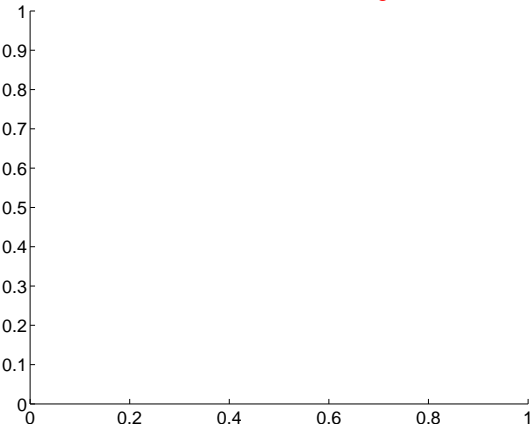


Q12 no OOT image

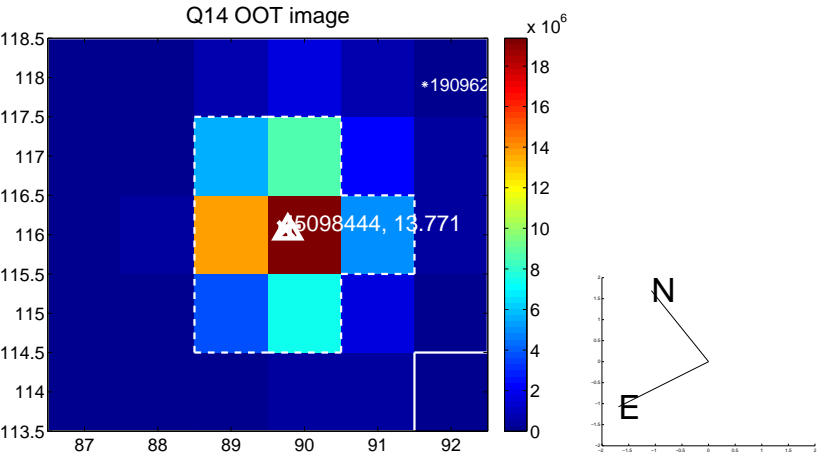
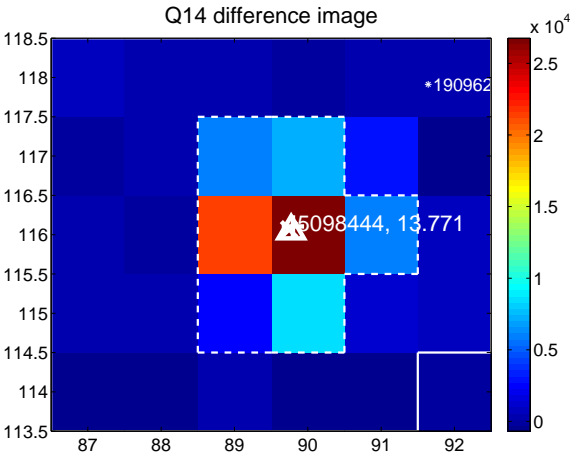
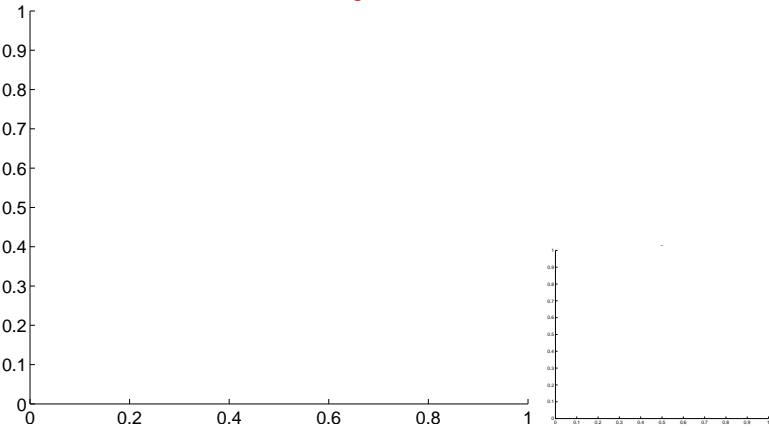


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

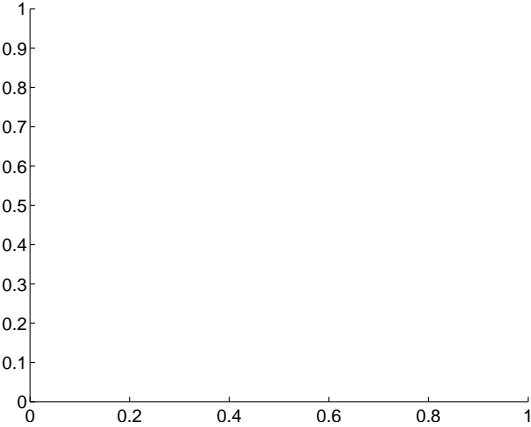
Q13 no difference image



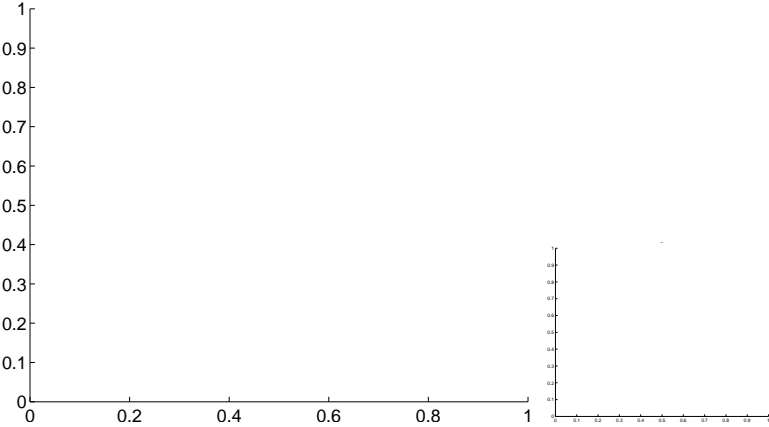
Q13 no OOT image



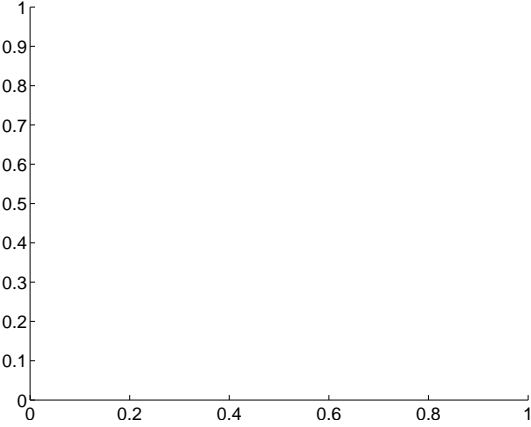
Q15 no difference image



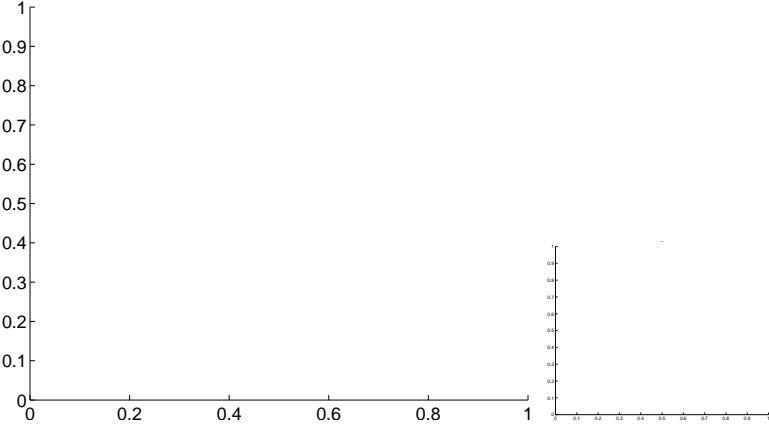
Q15 no OOT image



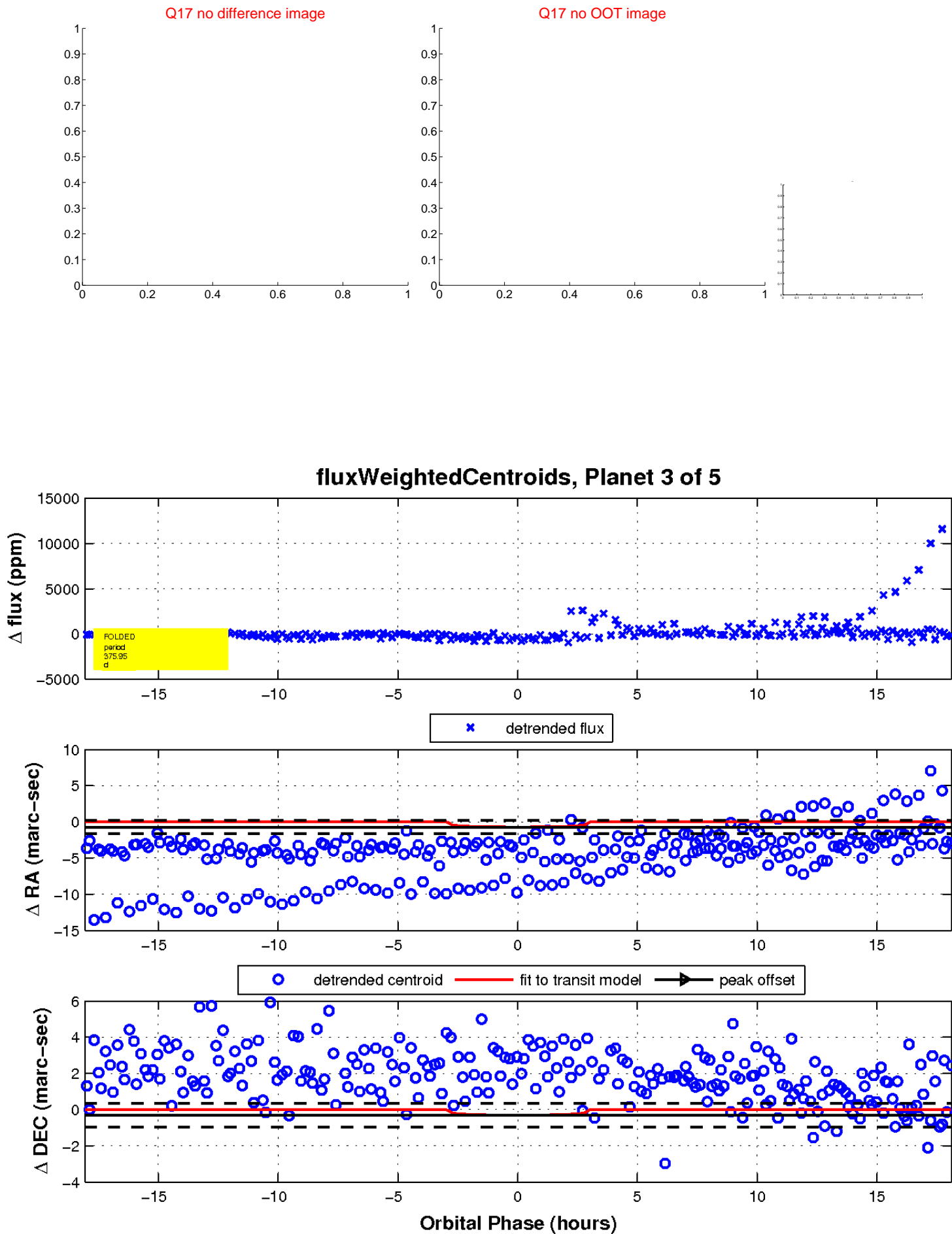
Q16 no difference image



Q16 no OOT image

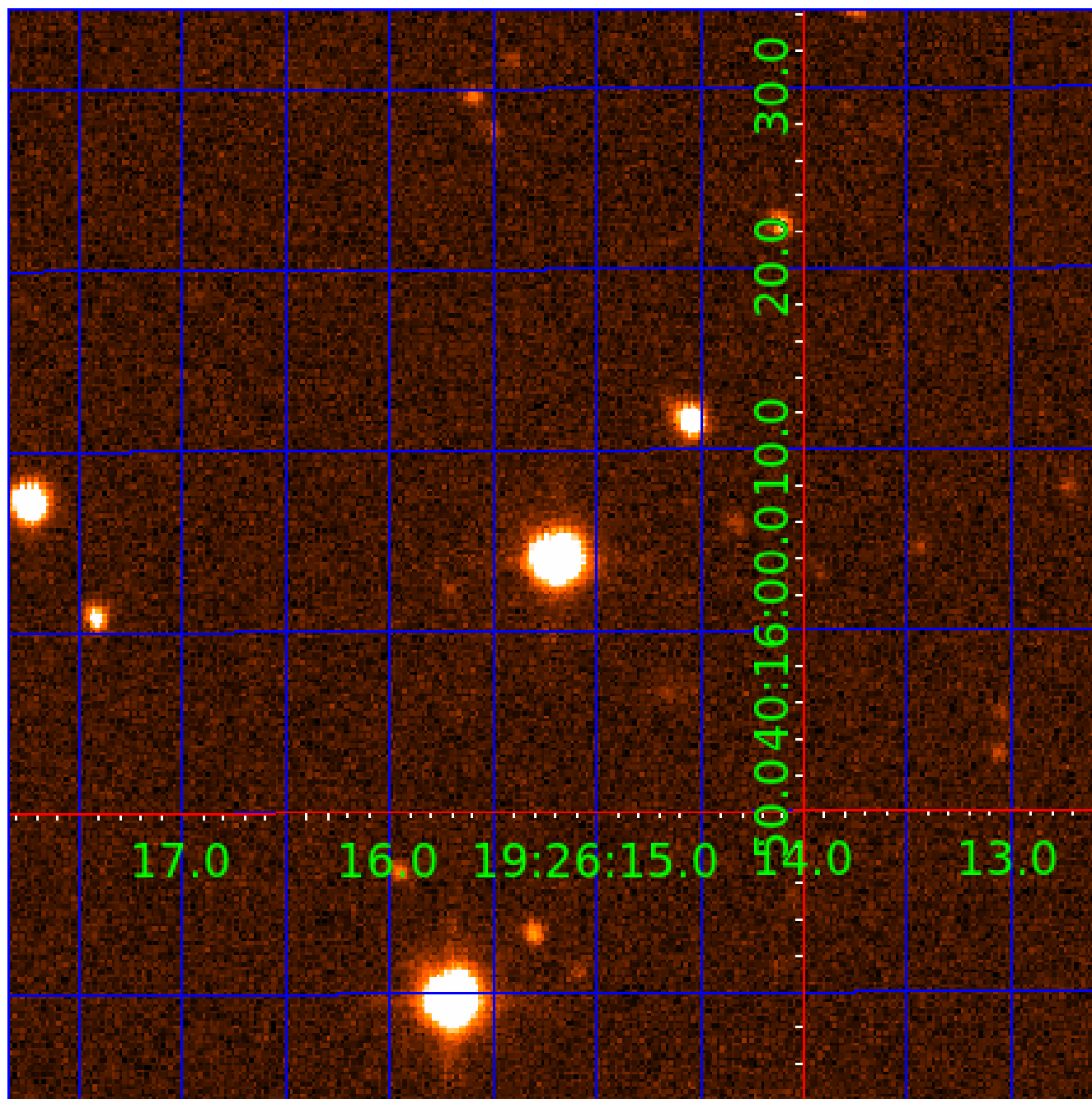


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005098444

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})
005098444-01	OBS	0637.01	26.949214	151.020075	19775.8	10.383	739.1	575.8	0.51	4723	7.18	5.79
005098444-02	OBS	No	26.949201	141.289647	4188.4	20.125	112.8	167.7	0.51	4723	3.54	5.79
005098444-03	OBS	No	375.949749	231.106094	625.5	6.042	14.1	9.4	0.51	4723	1.34	0.17
005098444-04	OBS	No	220.069768	294.902266	378.2	6.461	12.3	6.0	0.51	4723	1.11	0.35
005098444-05	OBS	No	453.083916	374.988898	568.6	3.580	10.4	7.6	0.51	4723	1.28	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005098444-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE
005098444-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005098444-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005098444-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS
005098444-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

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

Ephemeris Match Information For 005098444-04

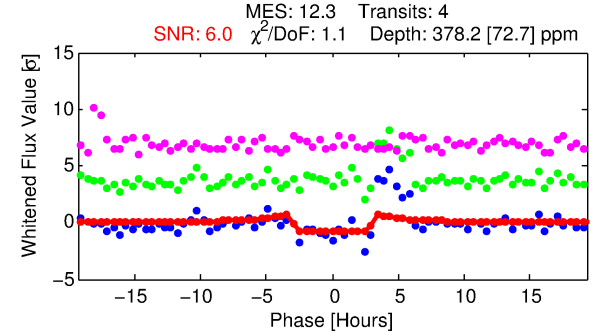
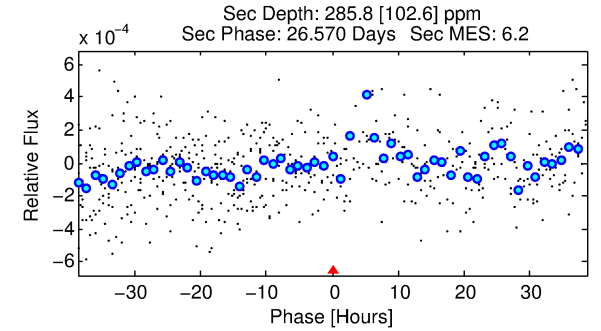
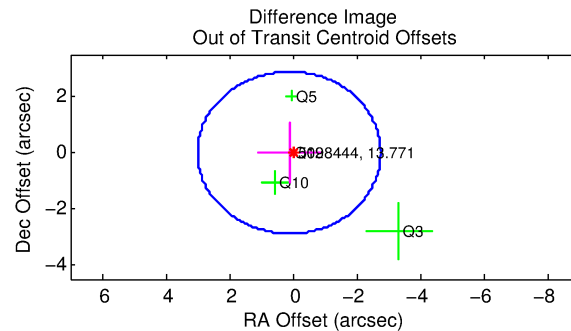
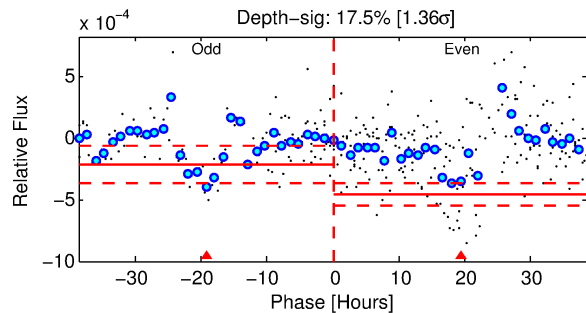
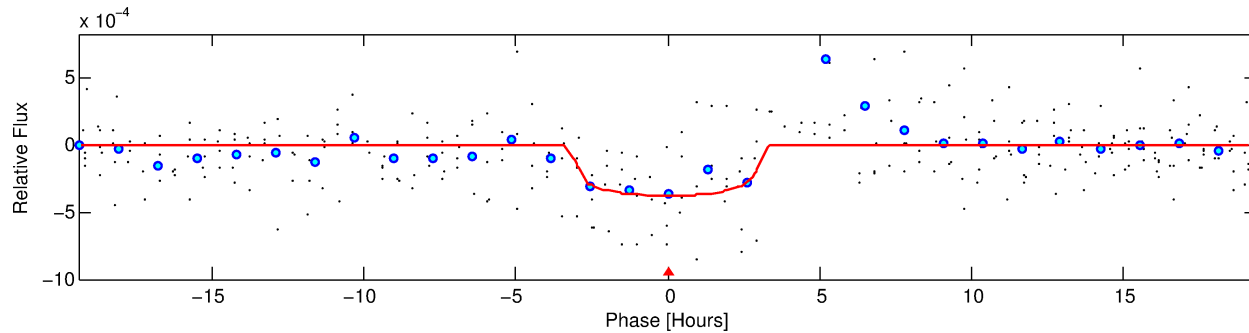
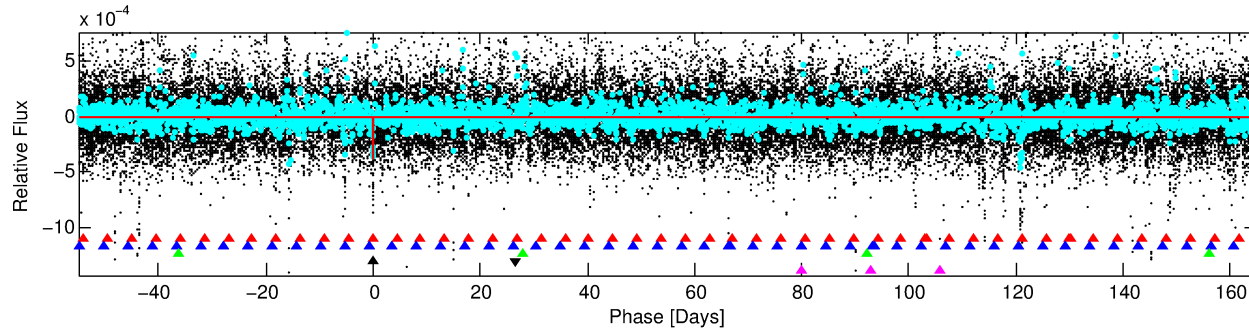
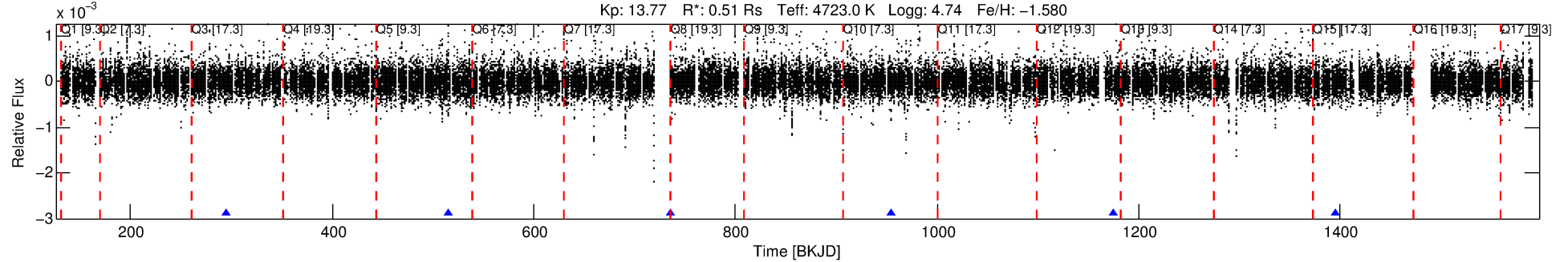
No Significant Match Found

DV One-Page Summary

KIC: 5098444 Candidate: 4 of 5 Period: 220.070 d

KOI: K00637 Corr: No Ephemeris Match

Kp: 13.77 R*: 0.51 Rs Teff: 4723.0 K Logg: 4.74 Fe/H: -1.580



DV Fit Results:

Period = 220.06977 [0.00292] d
Epoch = 294.9023 [0.0101] BKJD
Rp/R* = 0.0199 [0.0108]
a/R* = 160.01 [376.02]
b = 0.81 [0.98]
Seff = 0.35 [0.06]
Teq = 196 [8] K
Rp = 1.11 [0.60] Re
a = 0.5762 [0.0312] AU
Ag = 42279.31 [48281.60] [0.88σ]
Teffp = 4354 [1249] K [3.33σ]

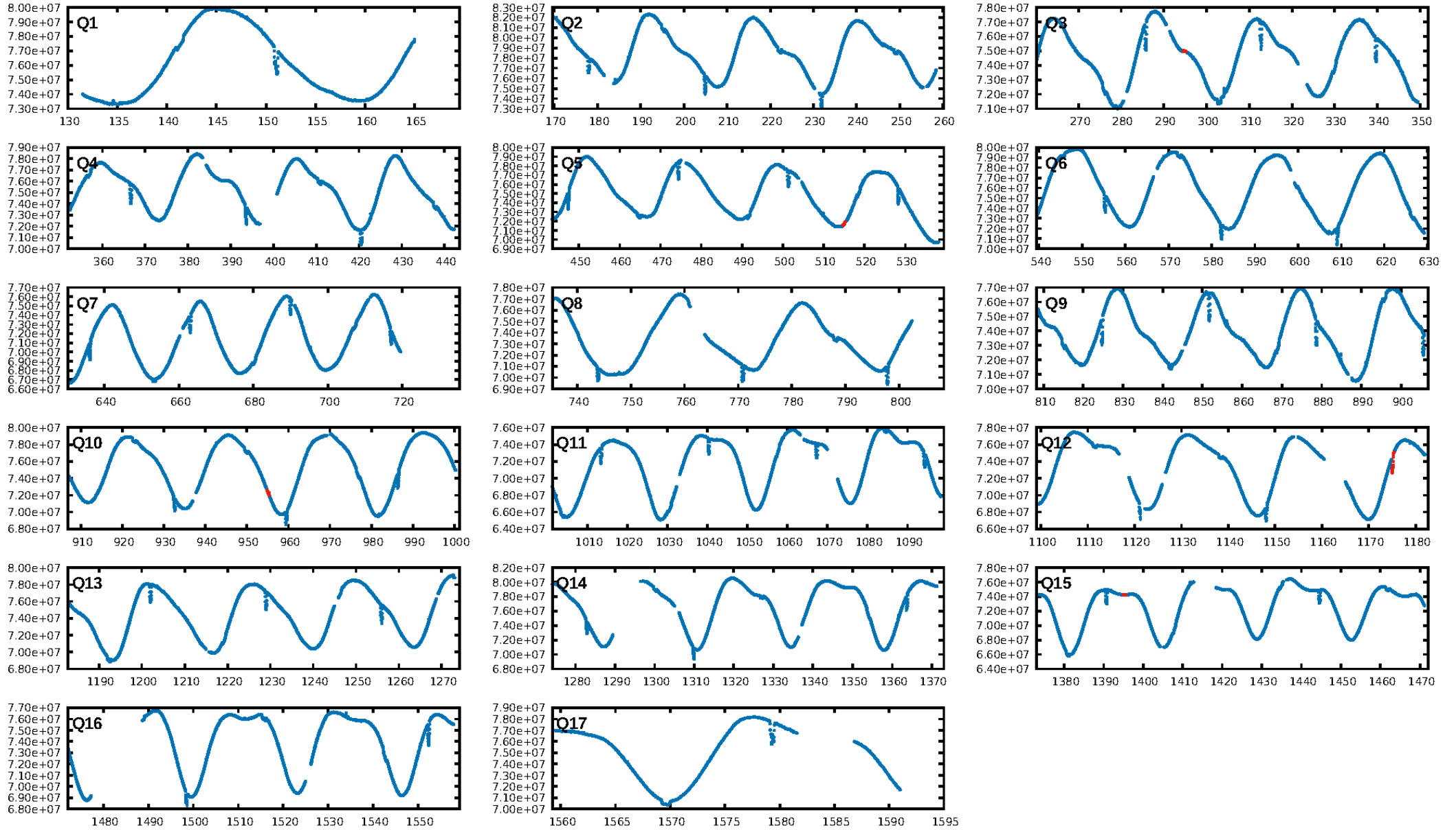
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [378.99σ]
LongPeriod-sig: 100.0% [422.91σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 62.4%
Bootstrap-pfa: 1.95e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.4963
Centroid-sig: 11.7%
Centroid-so: 1.406 arcsec [1.20σ]
OotOffset-rm: 0.115 arcsec [0.12σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-rm: 0.076 arcsec [0.09σ]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.80 [4/5]

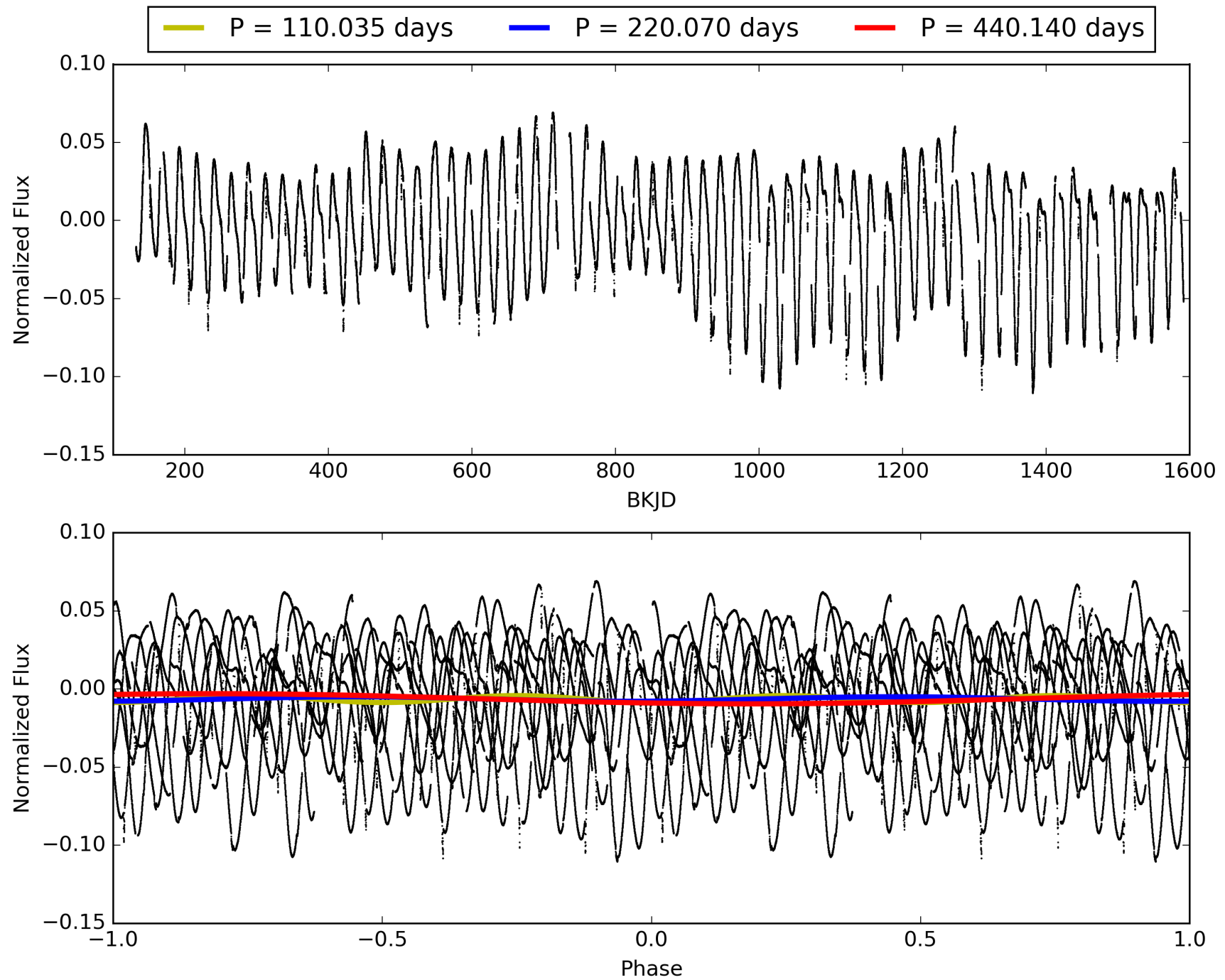
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:55:18 Z

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

TCE 005098444-04, PDC Light Curves

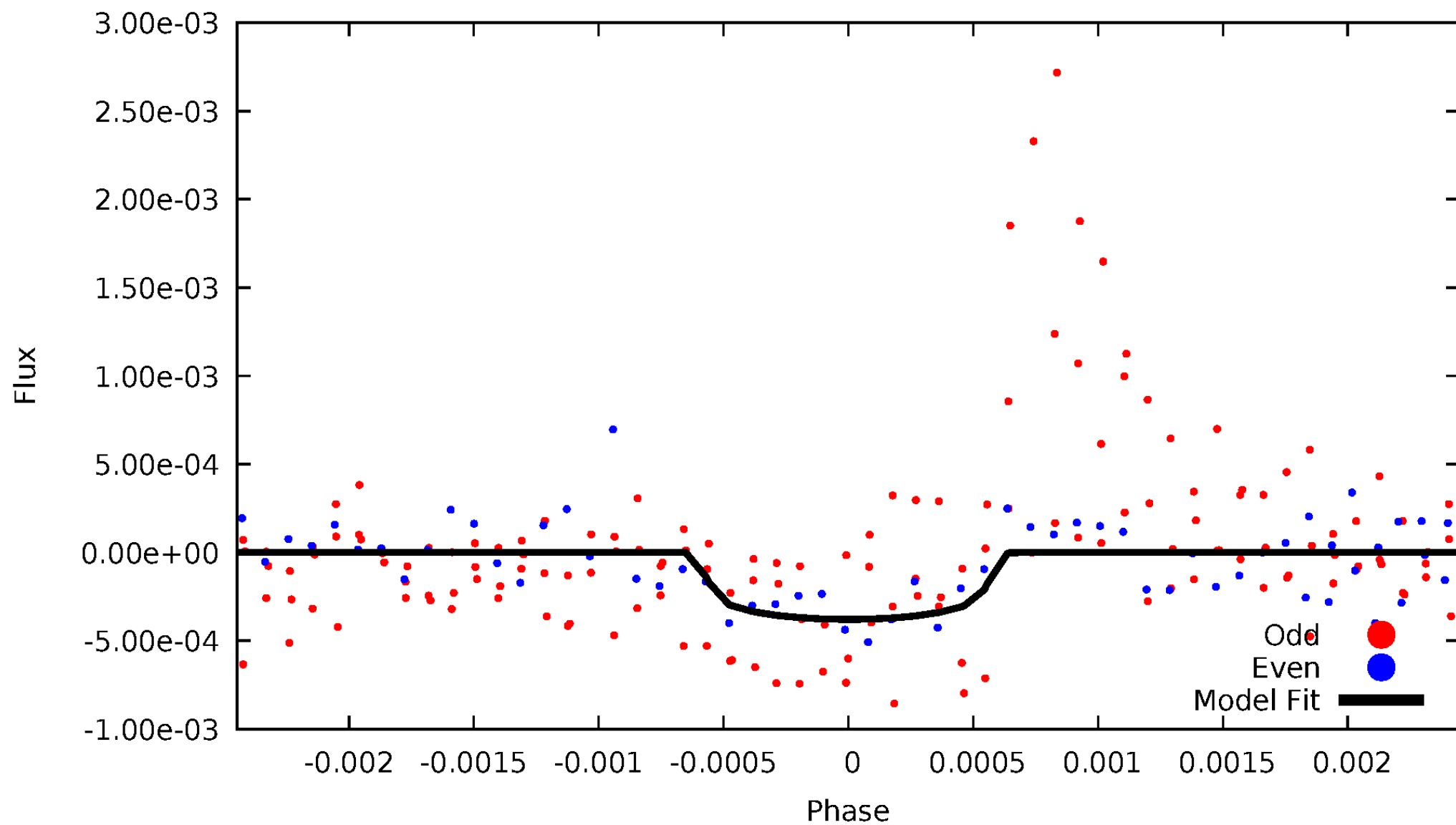


TCE 005098444-04



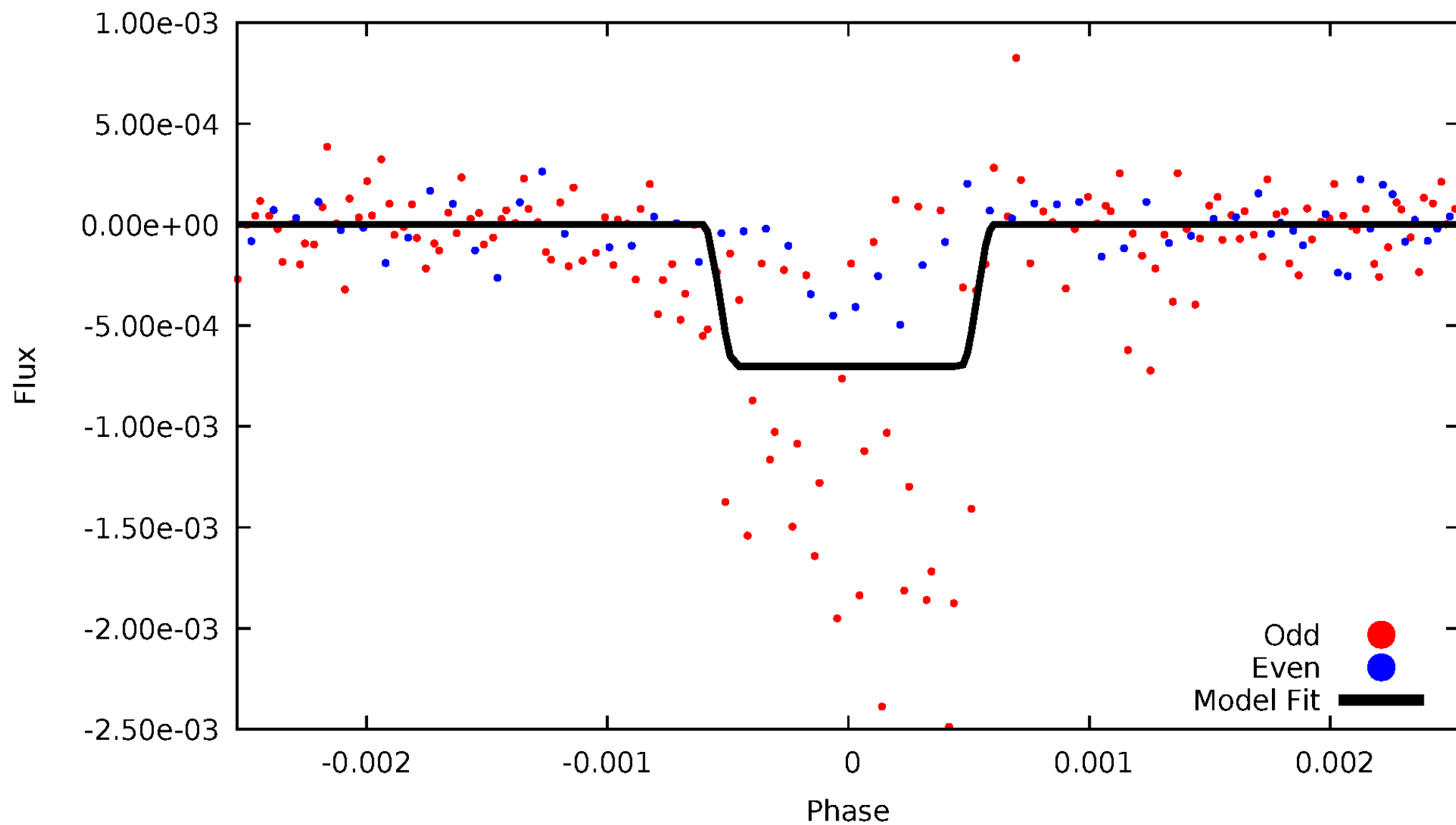
DV Odd/Even

TCE 005098444-04



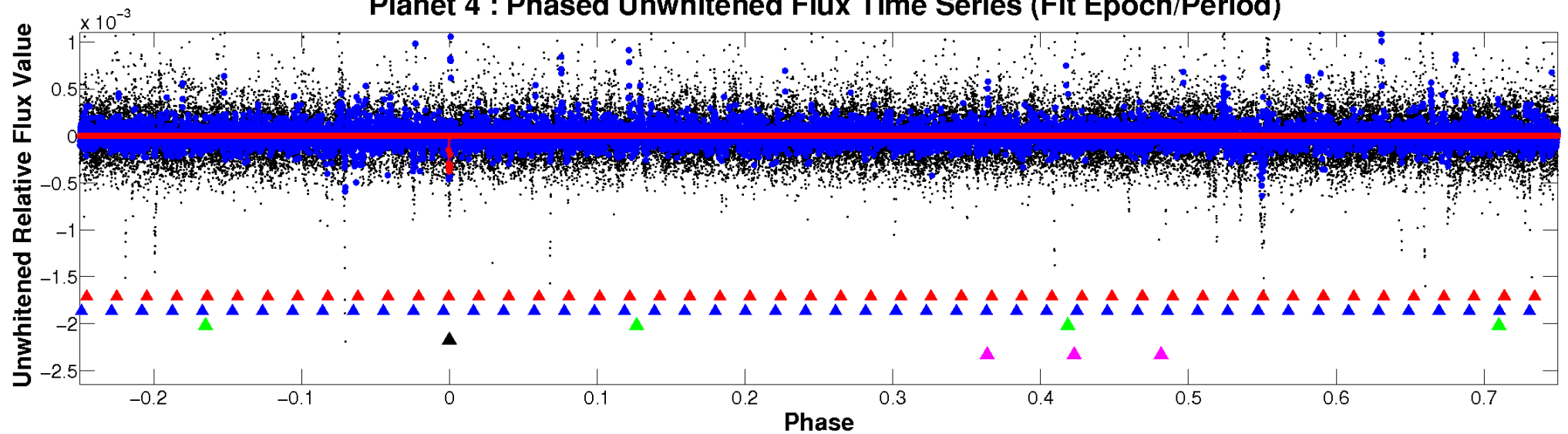
ALT Odd/Even

TCE 005098444-04

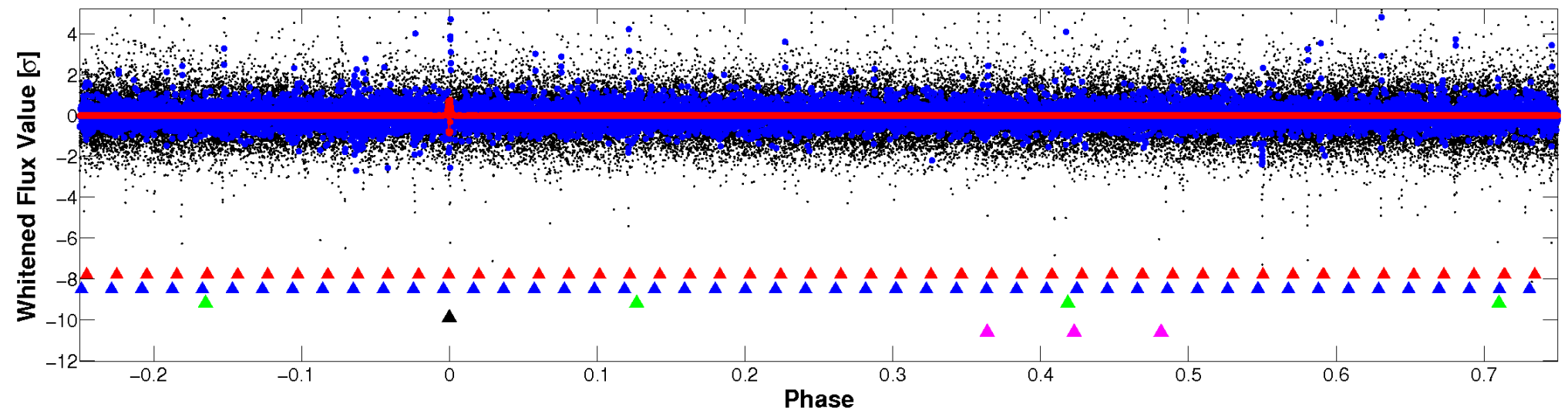


Non-Whitened Vs. Whitened Light Curve

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

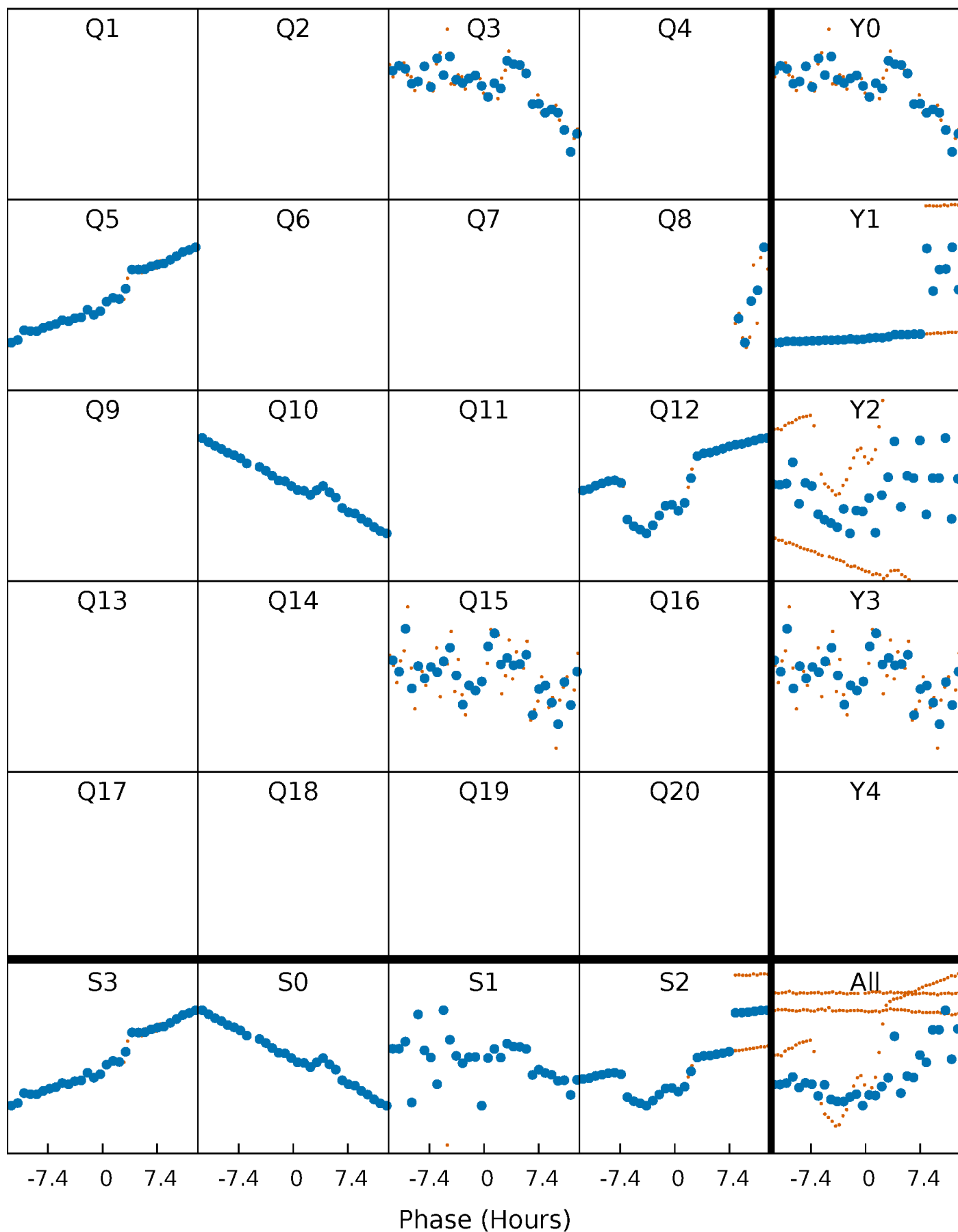


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



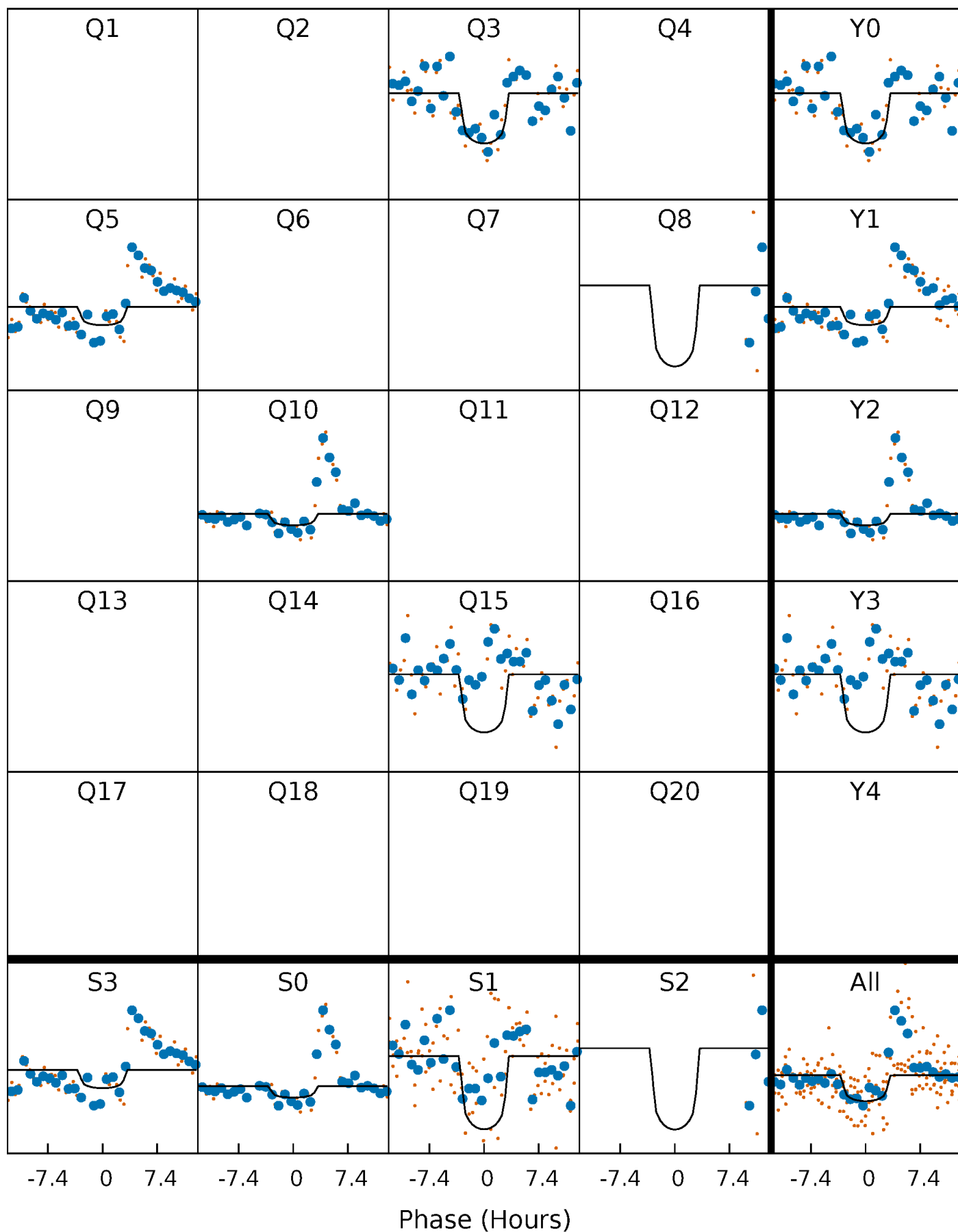
PDC Quarter-Phased Transit Curves

TCE 005098444-04 $P=220.069768$ Days $T_0=294.902266$ (BKJD)



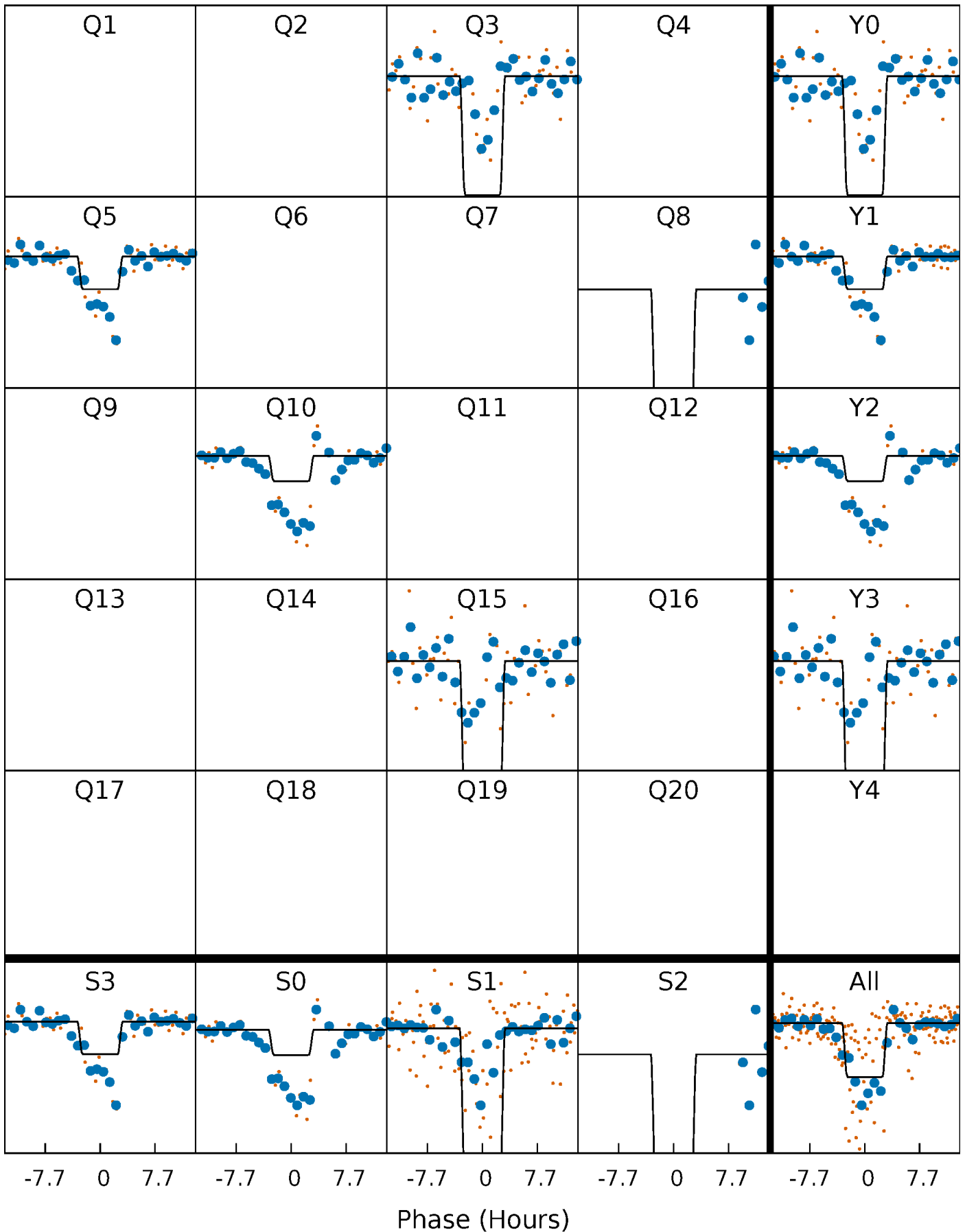
DV Quarter-Phased Transit Curves

TCE 005098444-04 $P=220.069768$ Days $T_0=294.902266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

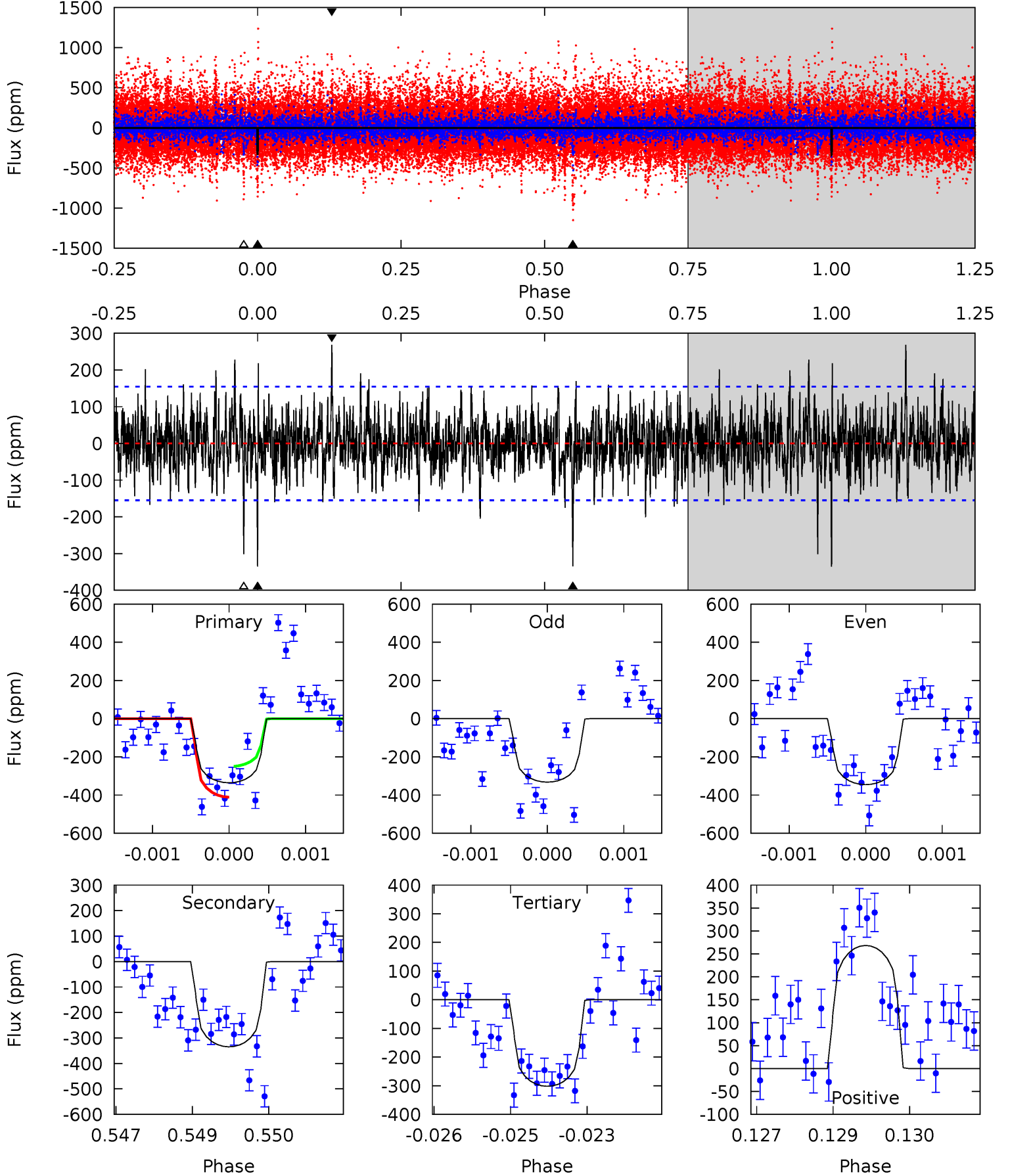
TCE 005098444-04 P=220.062630 Days $T_0=294.933619$ (BKJD)



DV Model-Shift Uniqueness Test

005098444-04, P = 220.069768 Days, E = 74.832498 Days

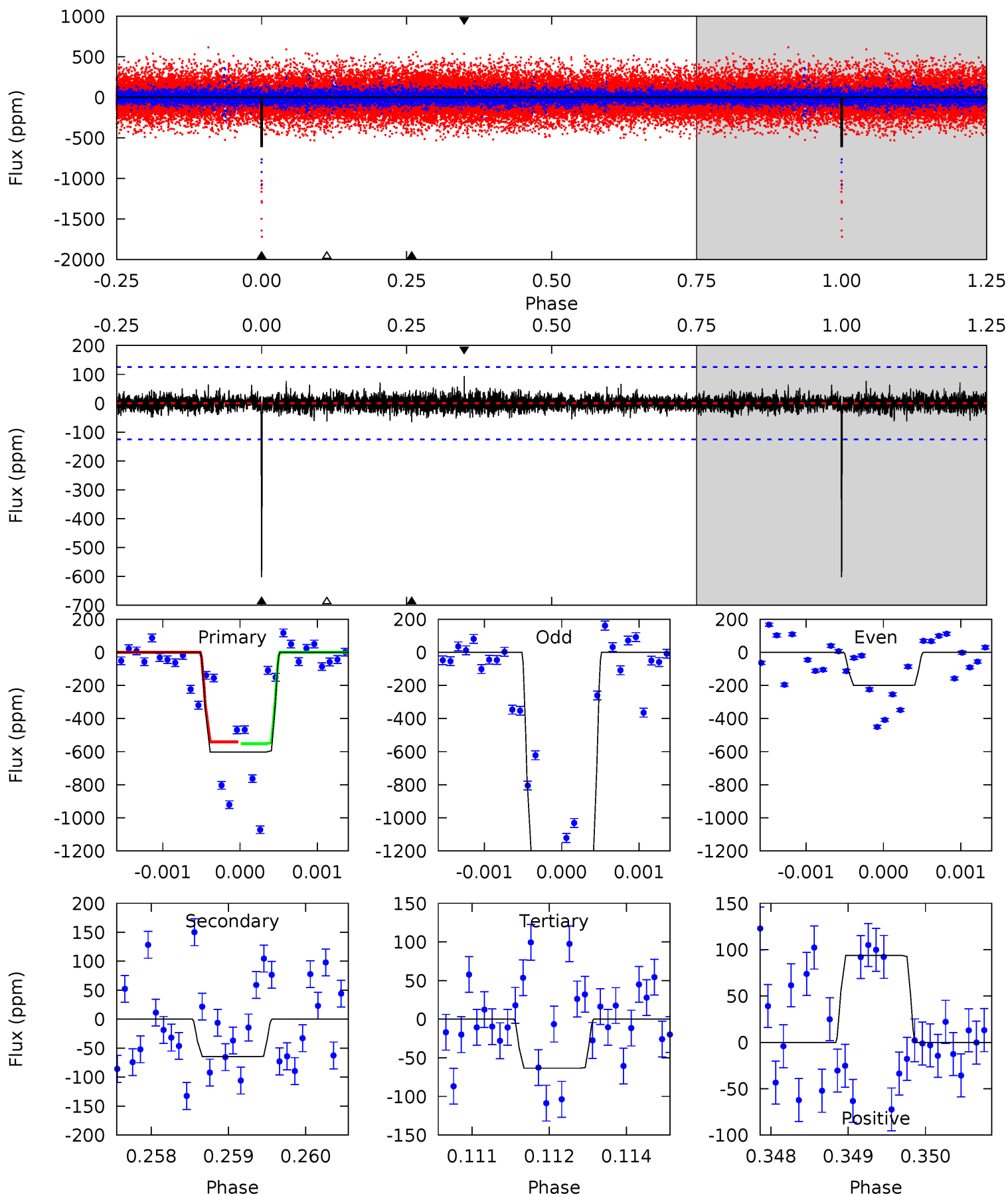
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	11.7	10.5	9.37	5.40	3.22	2.02	1.18	2.35	1.15	2.32	0.20	0.79	0.44	2.82



Alt Model-Shift Uniqueness Test

005098444-04, P = 220.062630 Days, E = 74.870989 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	2.80	2.74	4.05	5.42	3.25	0.65	23.3	22.0	0.06	-1.25	22.3	1.25	0.13	0.22



Stellar Parameters For KIC 005098444

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4723^{+145}_{-162}	$4.741^{+0.045}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.512^{+0.025}_{-0.032}$	$0.526^{+0.032}_{-0.021}$	$5.515^{+0.991}_{-0.533}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+6%/-4%	+18%/-10%
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 005098444-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-335 ± 29	$1.09^{+0.56}_{-0.57}$	273^{+9}_{-10}	4586^{+1678}_{-698}	$51888^{+156951}_{-29053}$
Alt.	-65 ± 23	$1.48^{+0.54}_{-0.58}$	273^{+10}_{-10}	3122^{+606}_{-332}	5291^{+10083}_{-2820}

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 $A_{obs} \gg 1.0$

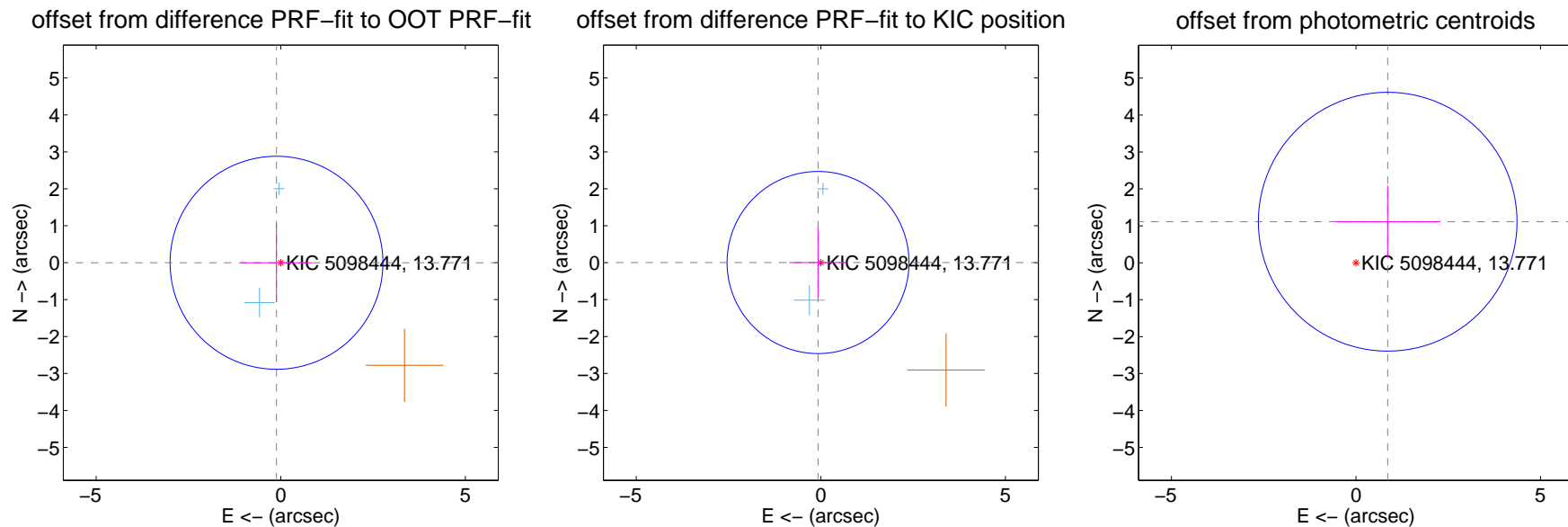
DV Centroid Data

Supplemental centroid analysis for 005098444-04. Kepler magnitude: 13.77. Transit SNR 5.98

There are 3 quarters with good PRF difference image offsets

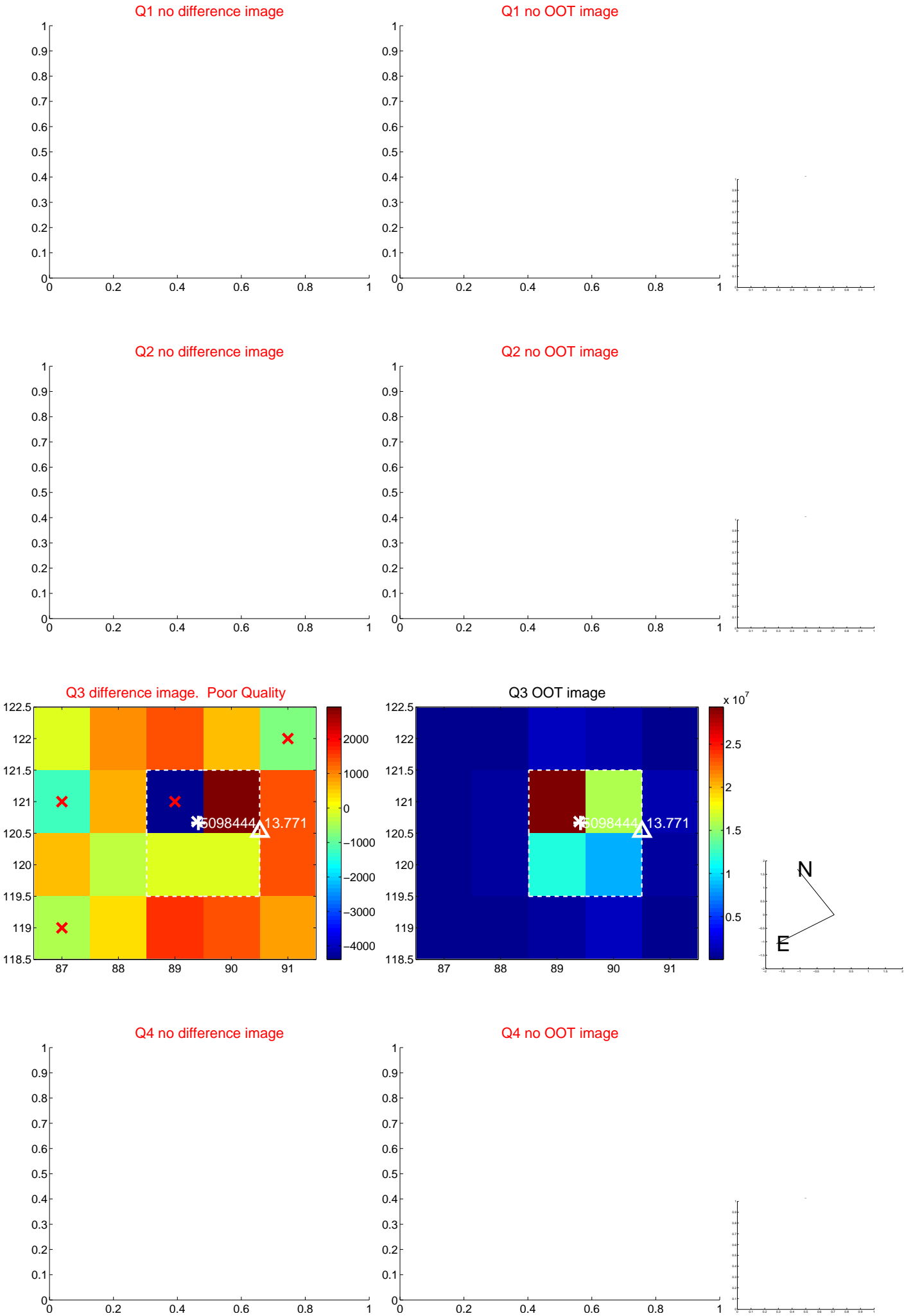
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.115 ± 0.961	0.12	0.115 ± 0.978	-0.002 ± 1.060
PRF-fit source offset from KIC position	0.076 ± 0.822	0.09	0.076 ± 0.785	0.005 ± 0.943
photometric centroid source offset	1.41 ± 1.17	1.20	-0.86 ± 1.43	1.11 ± 0.98

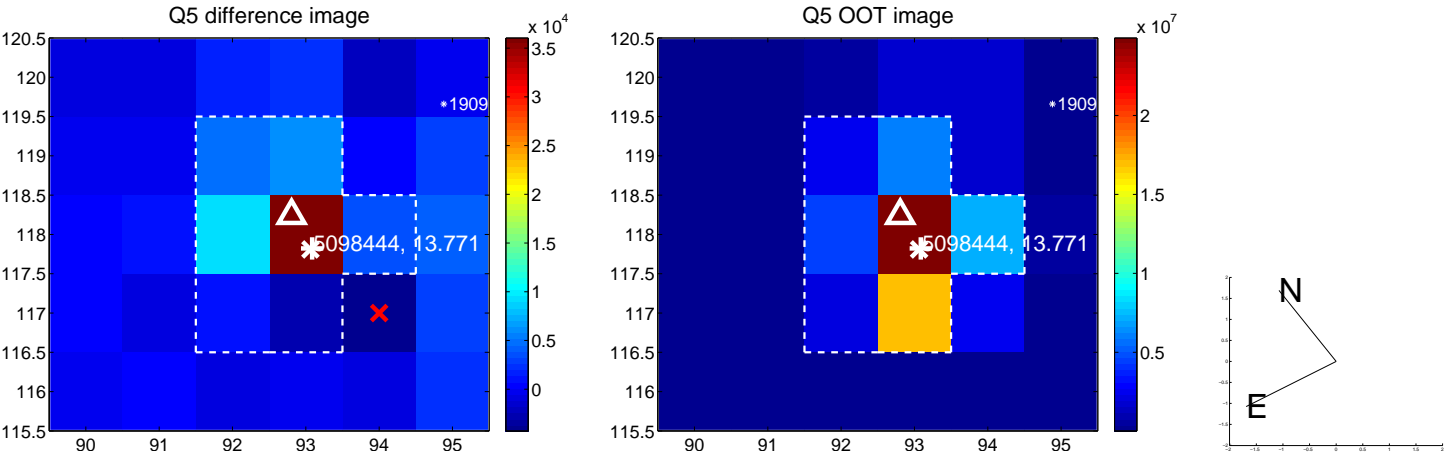


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

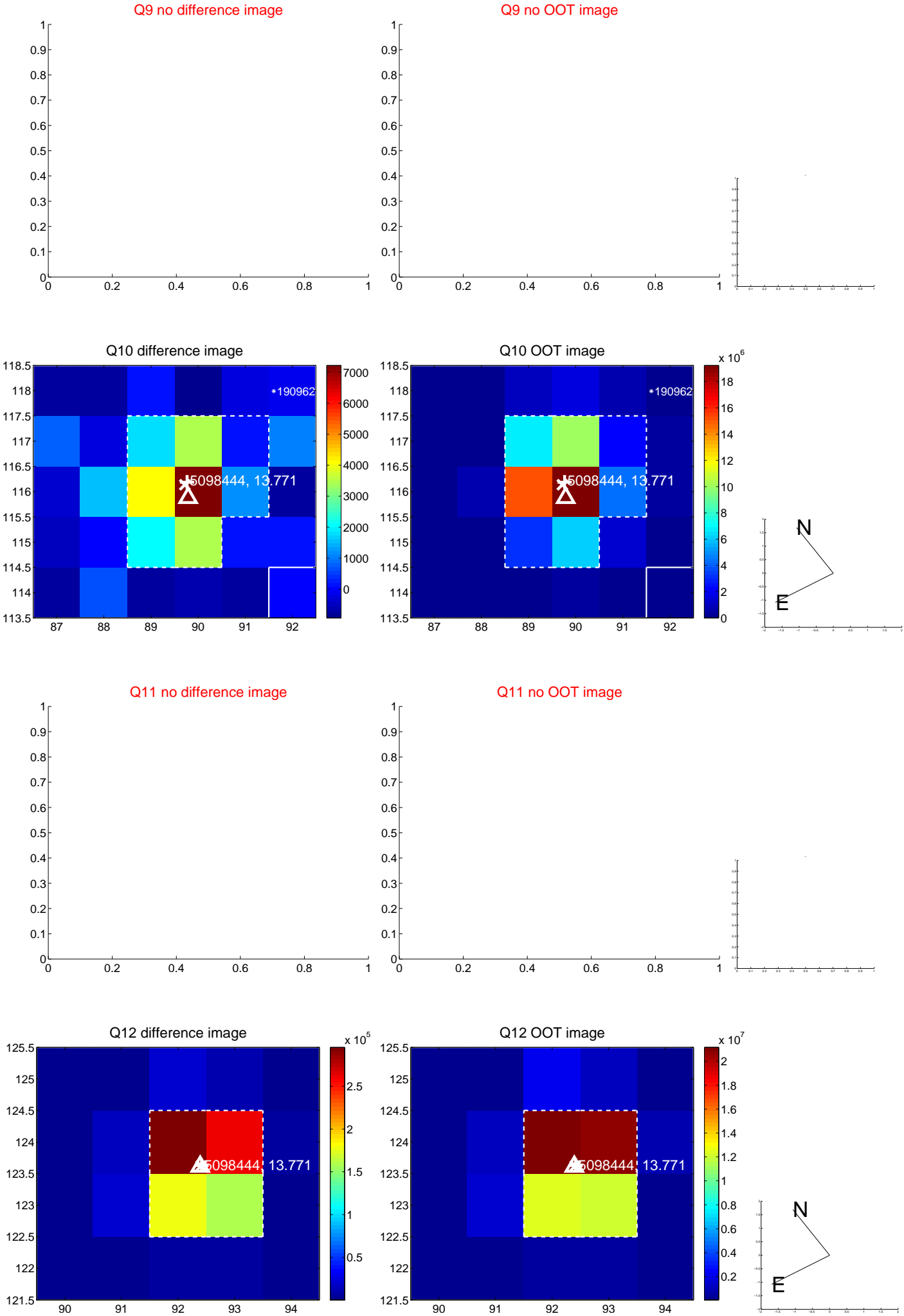
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



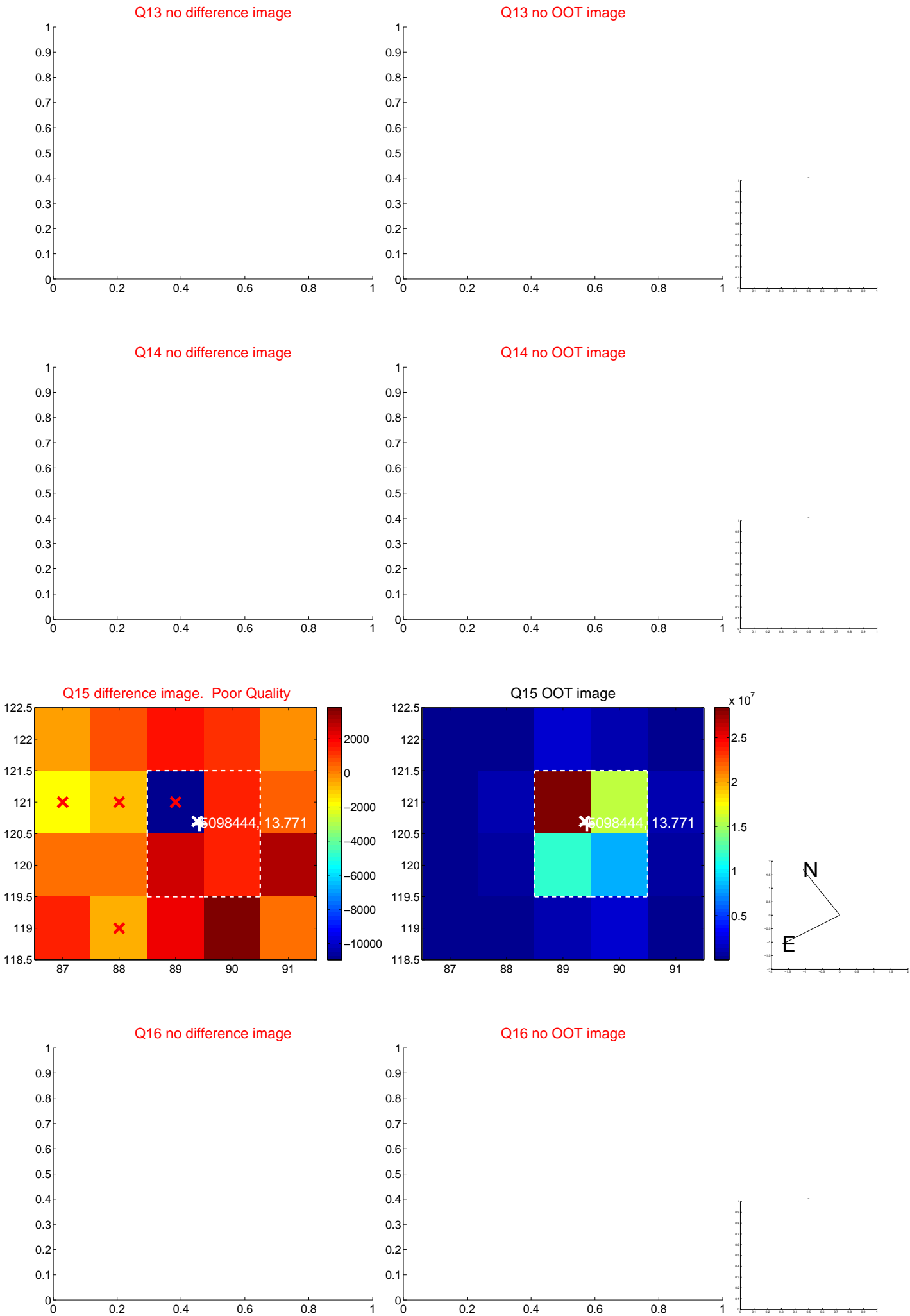
white \times : KIC target position; +: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



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



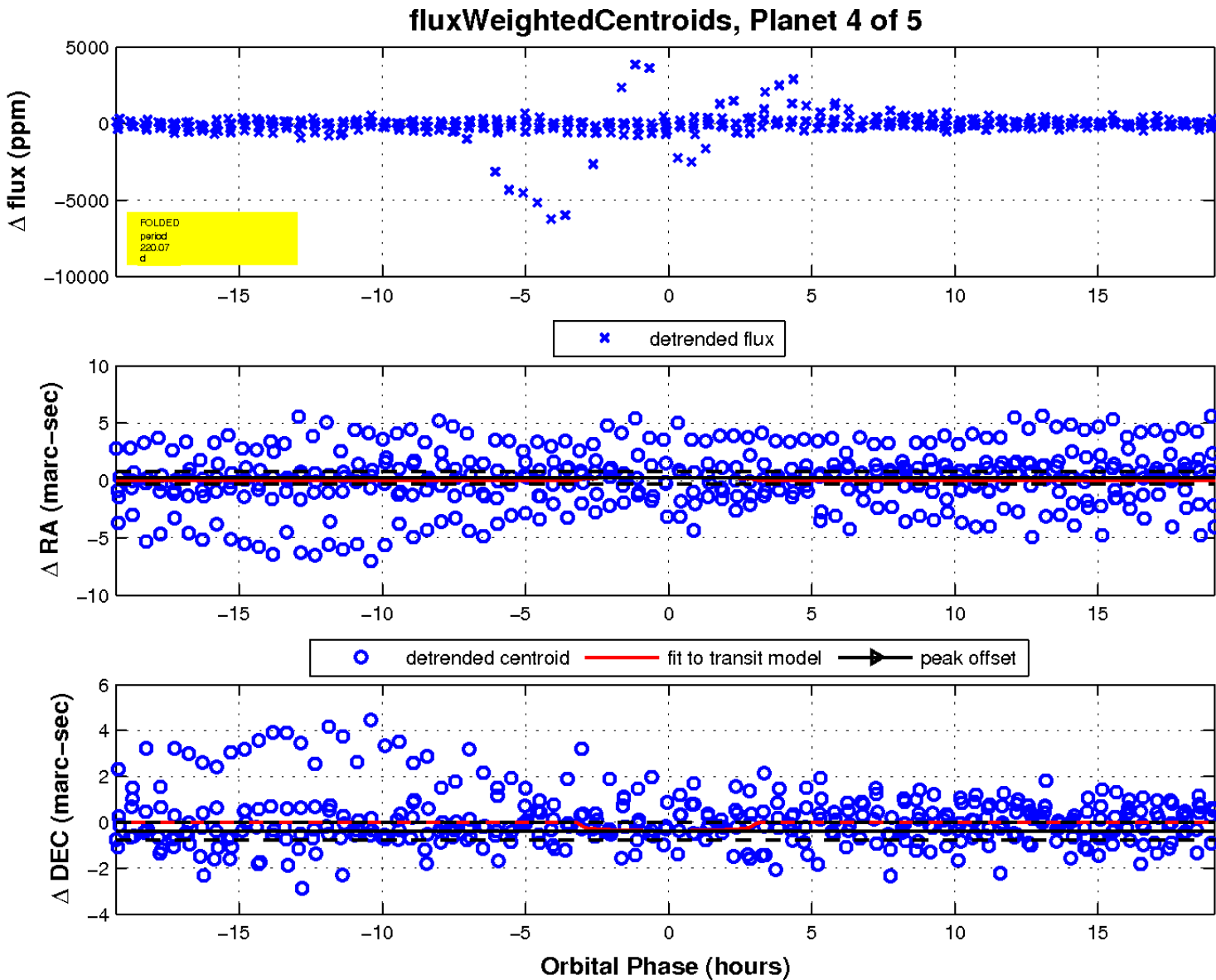
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

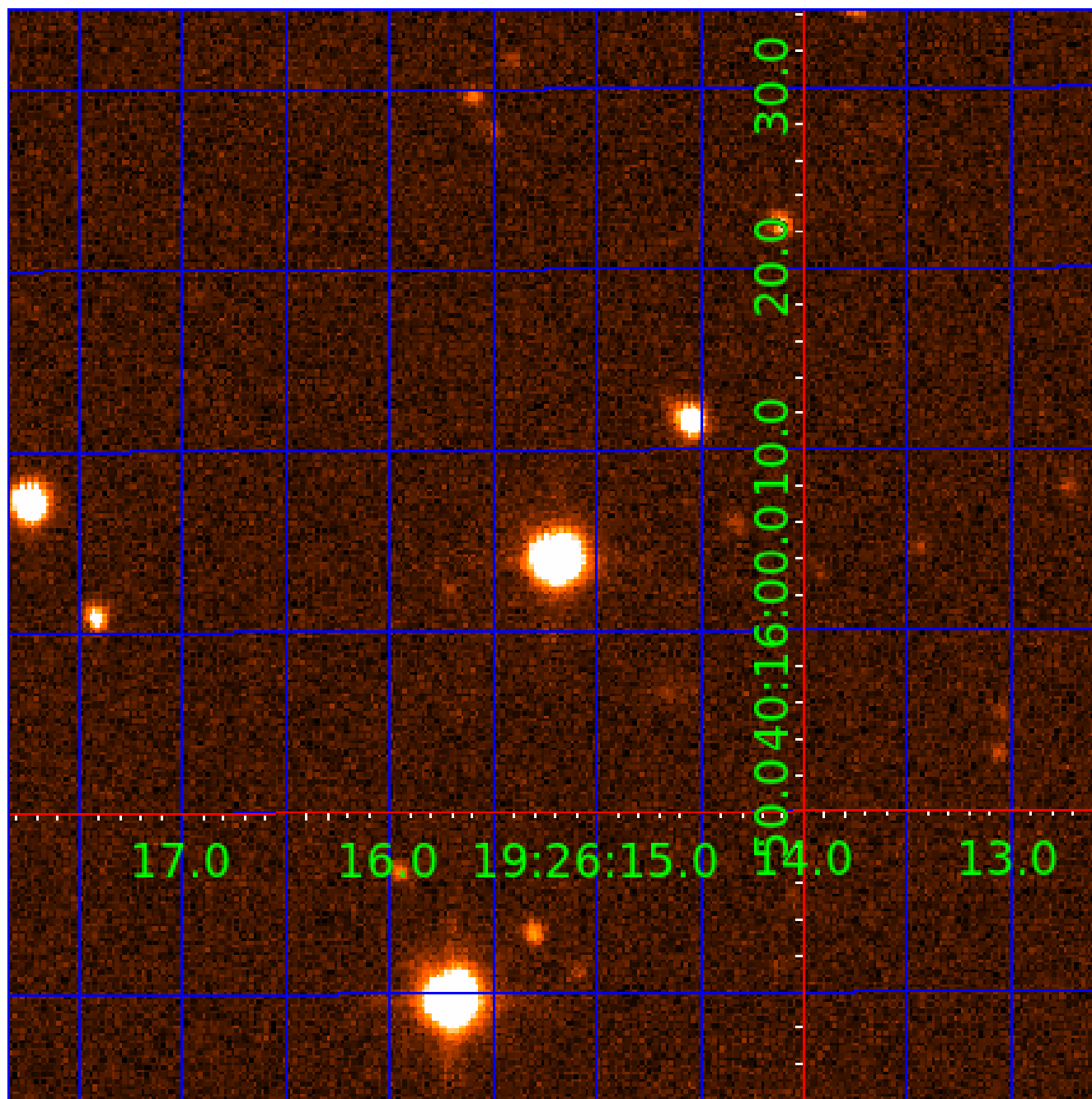
Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination



KIC 005098444

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})
005098444-01	OBS	0637.01	26.949214	151.020075	19775.8	10.383	739.1	575.8	0.51	4723	7.18	5.79
005098444-02	OBS	No	26.949201	141.289647	4188.4	20.125	112.8	167.7	0.51	4723	3.54	5.79
005098444-03	OBS	No	375.949749	231.106094	625.5	6.042	14.1	9.4	0.51	4723	1.34	0.17
005098444-04	OBS	No	220.069768	294.902266	378.2	6.461	12.3	6.0	0.51	4723	1.11	0.35
005098444-05	OBS	No	453.083916	374.988898	568.6	3.580	10.4	7.6	0.51	4723	1.28	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005098444-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE
005098444-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005098444-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005098444-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS
005098444-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

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

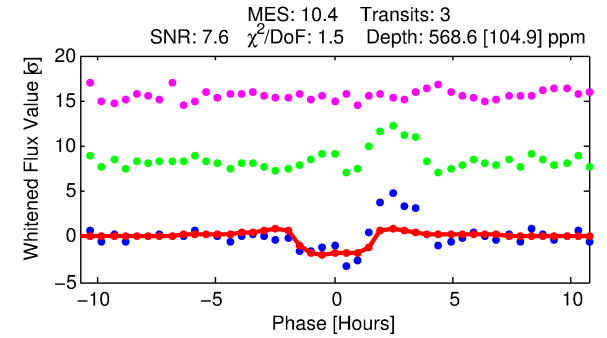
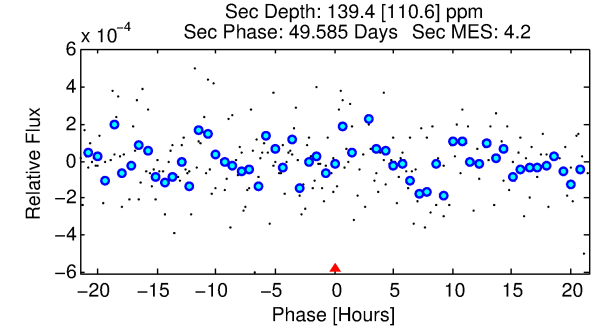
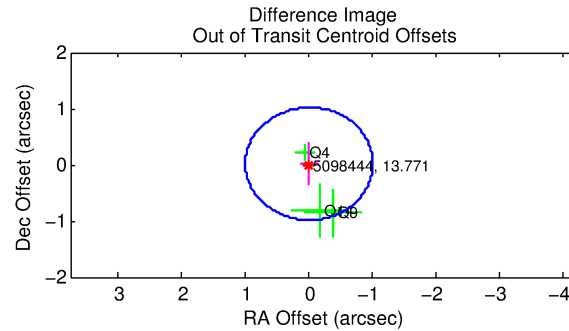
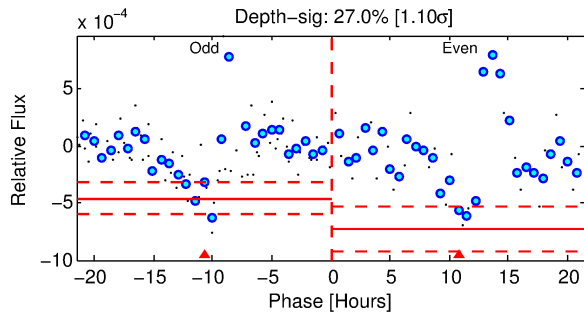
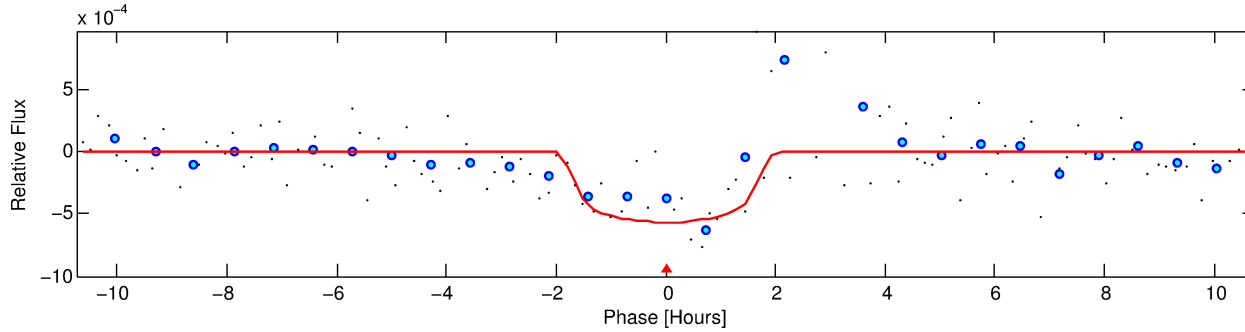
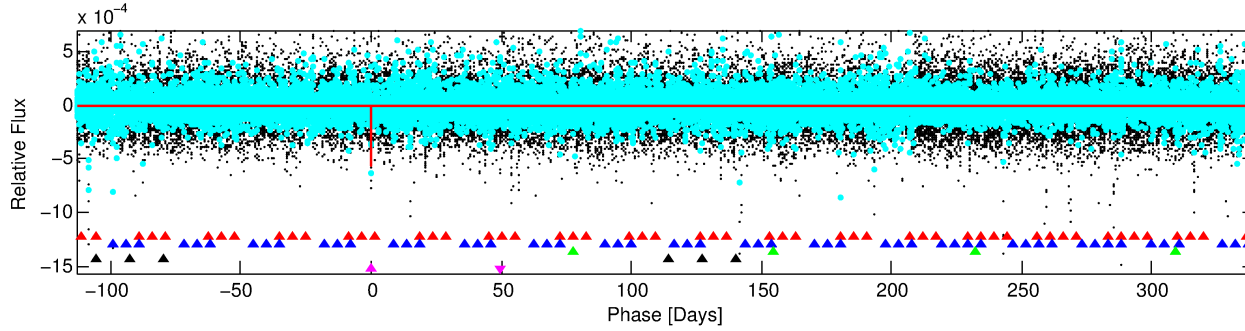
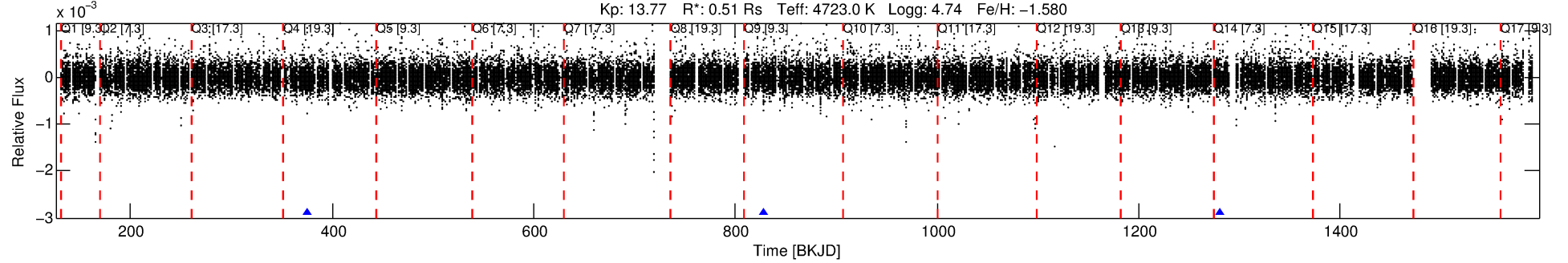
Ephemeris Match Information For 005098444-05

No Significant Match Found

DV One-Page Summary

KIC: 5098444 Candidate: 5 of 5 Period: 453.084 d
KOI: K00637 Corr: No Ephemeris Match

Kp: 13.77 R*: 0.51 Rs Teff: 4723.0 K Logg: 4.74 Fe/H: -1.580



DV Fit Results:

Period = 453.08392 [0.00599] d
Epoch = 374.9889 [0.0083] BKJD
Rp/R* = 0.0230 [0.0515]
a/R* = 762.67 [7552.22]
b = 0.65 [8.84]
Seff = 0.13 [0.02]
Teq = 154 [6] K
Rp = 1.29 [2.88] Re
a = 0.9325 [0.0505] AU
Ag = 40392.98 [183774.94] [0.22σ]
Teffp = 3384 [3850] K [0.84σ]

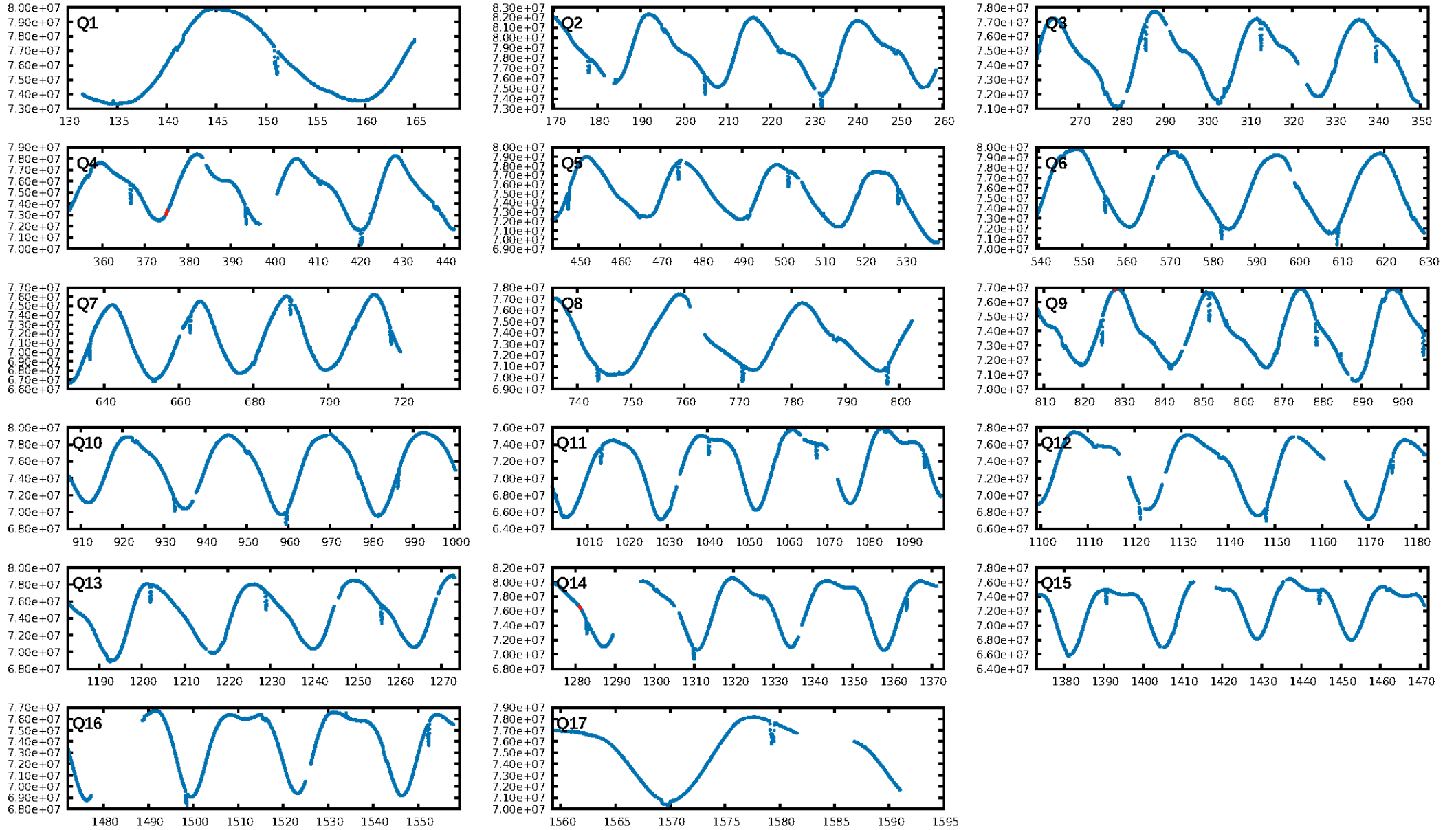
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [263.59σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 65.6%
Bootstrap-pfa: 1.42e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4707
Centroid-sig: 9.7%
Centroid-so: 1.328 arcsec [1.07σ]
OotOffset-rm: 0.015 arcsec [0.04σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.058 arcsec [0.26σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

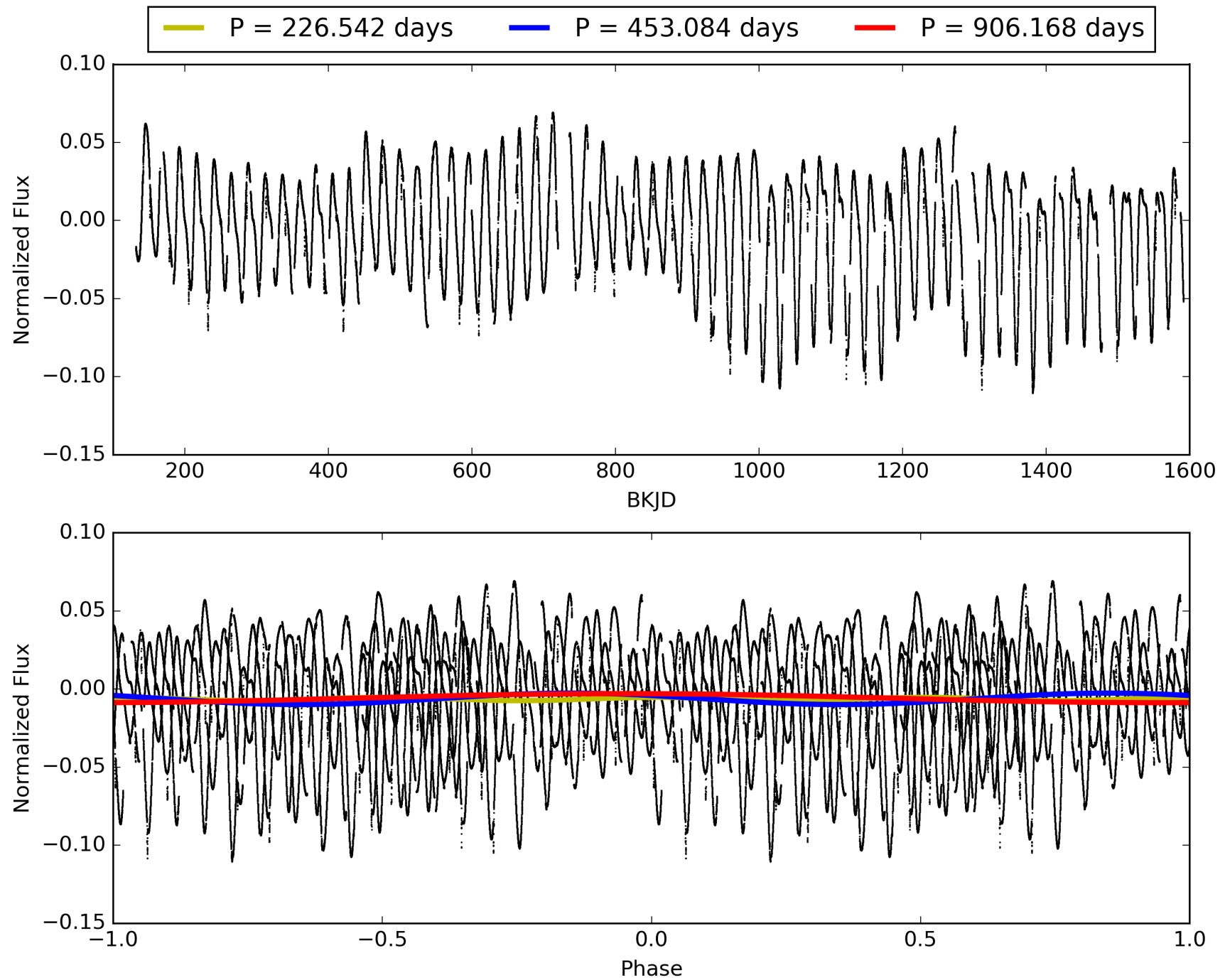
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:55:34 Z

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

TCE 005098444-05, PDC Light Curves

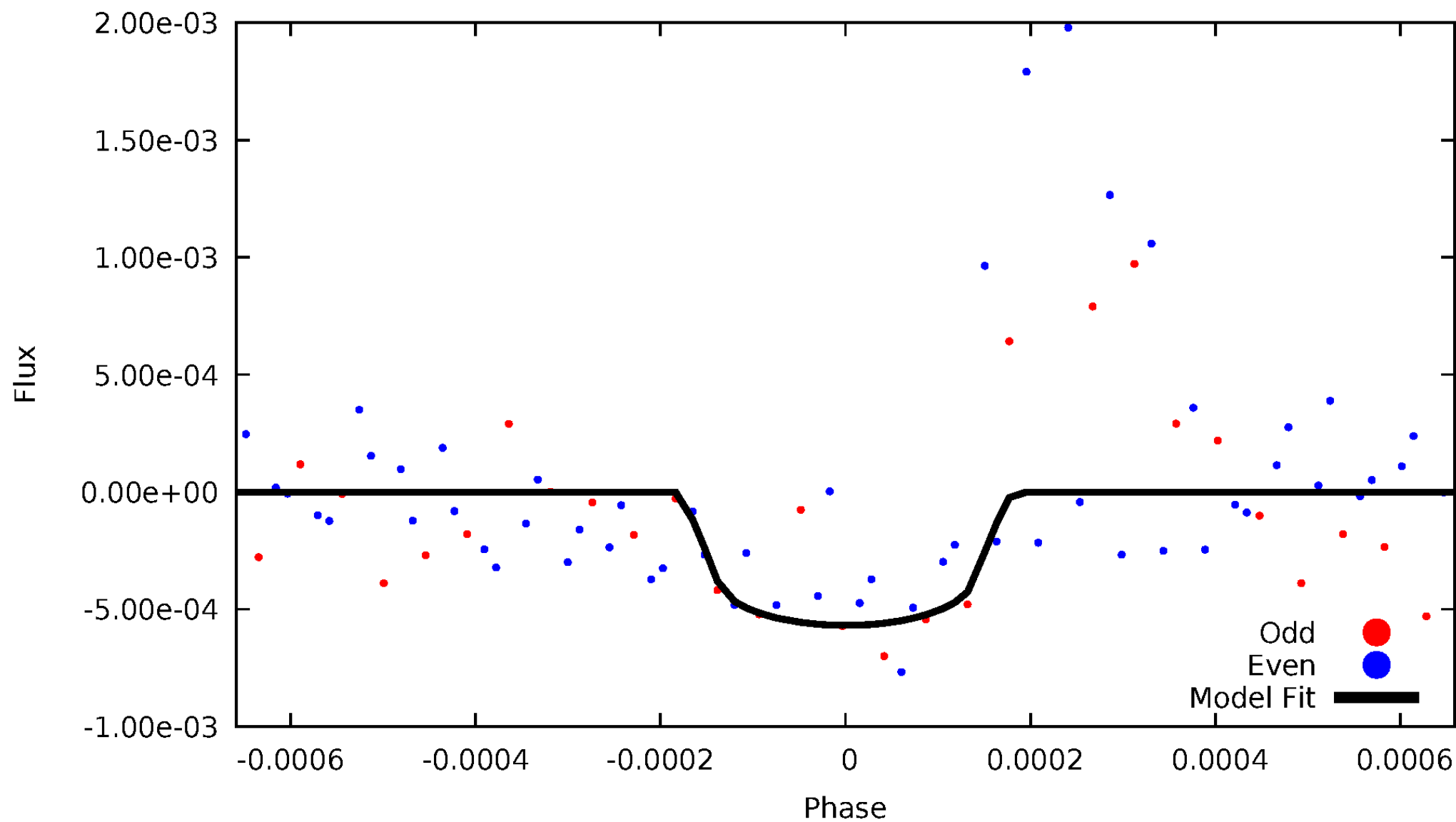


TCE 005098444-05



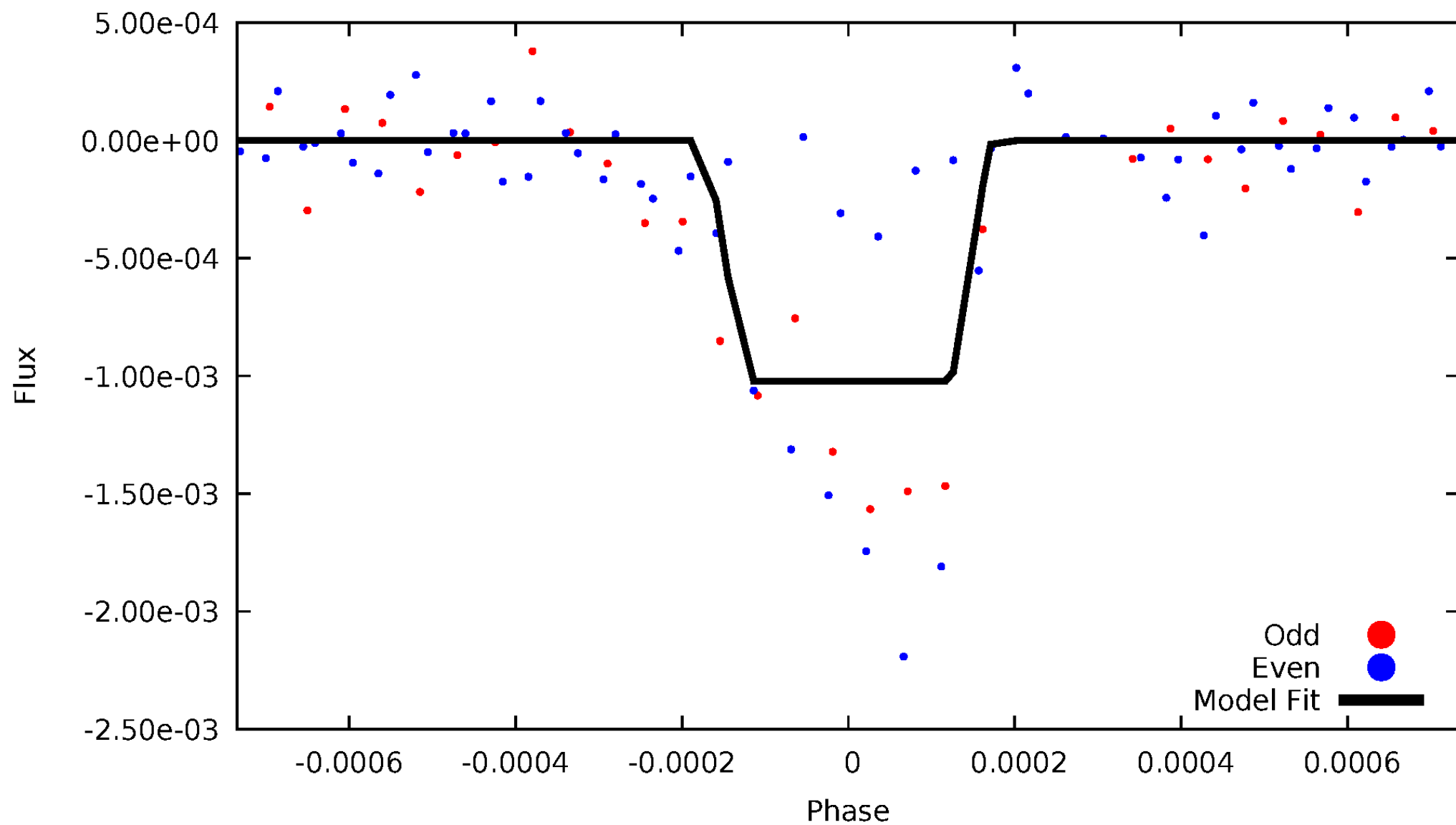
DV Odd/Even

TCE 005098444-05



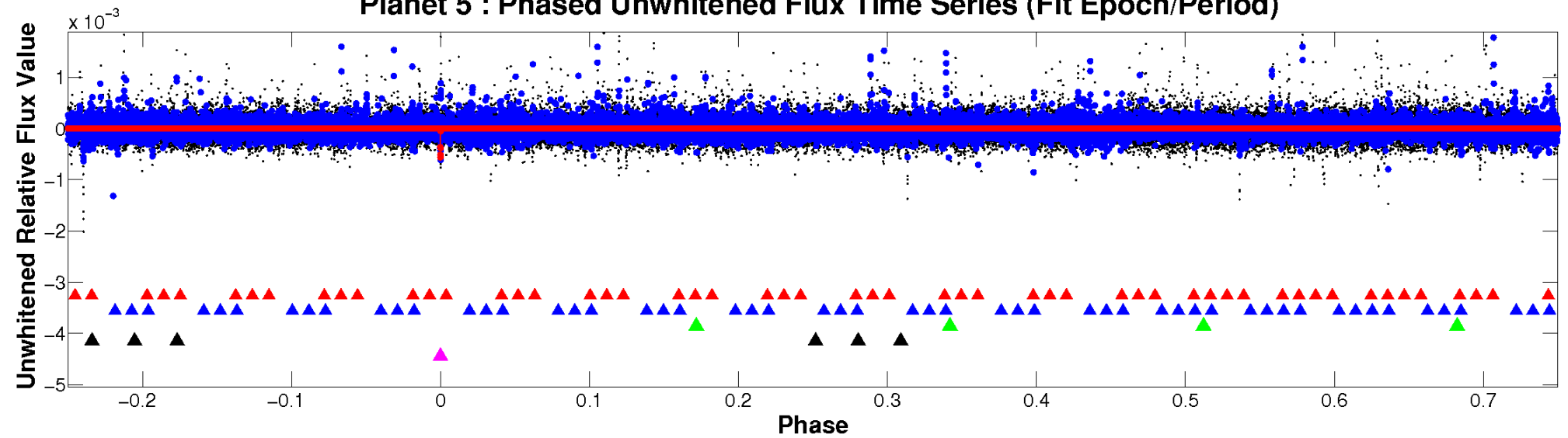
ALT Odd/Even

TCE 005098444-05

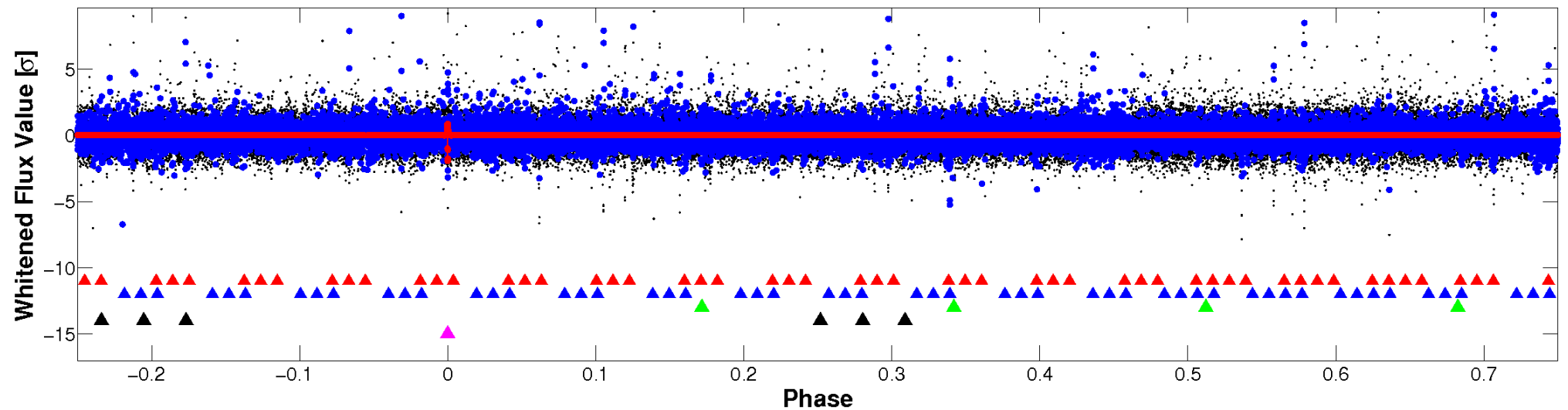


Non-Whitened Vs. Whitened Light Curve

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

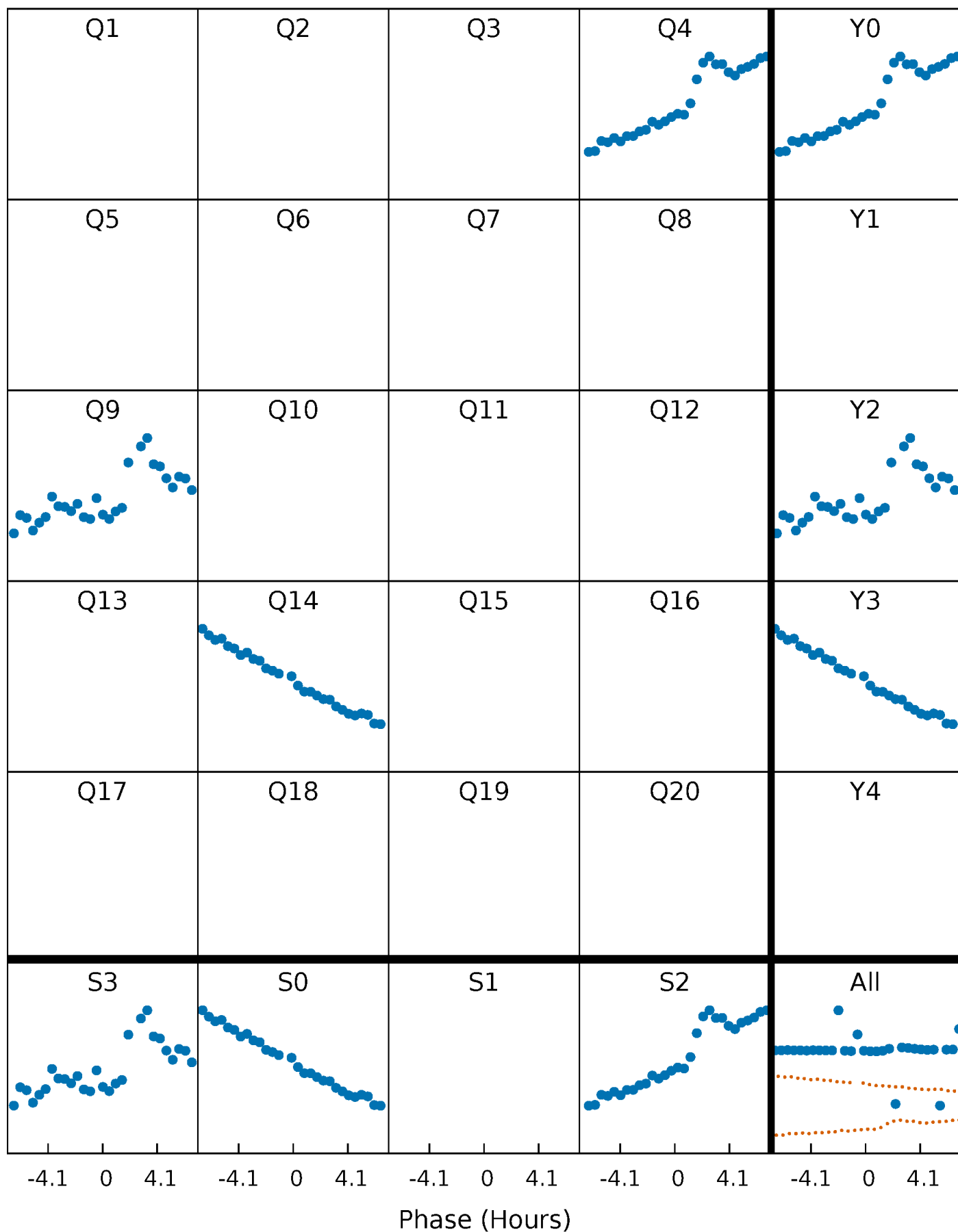


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



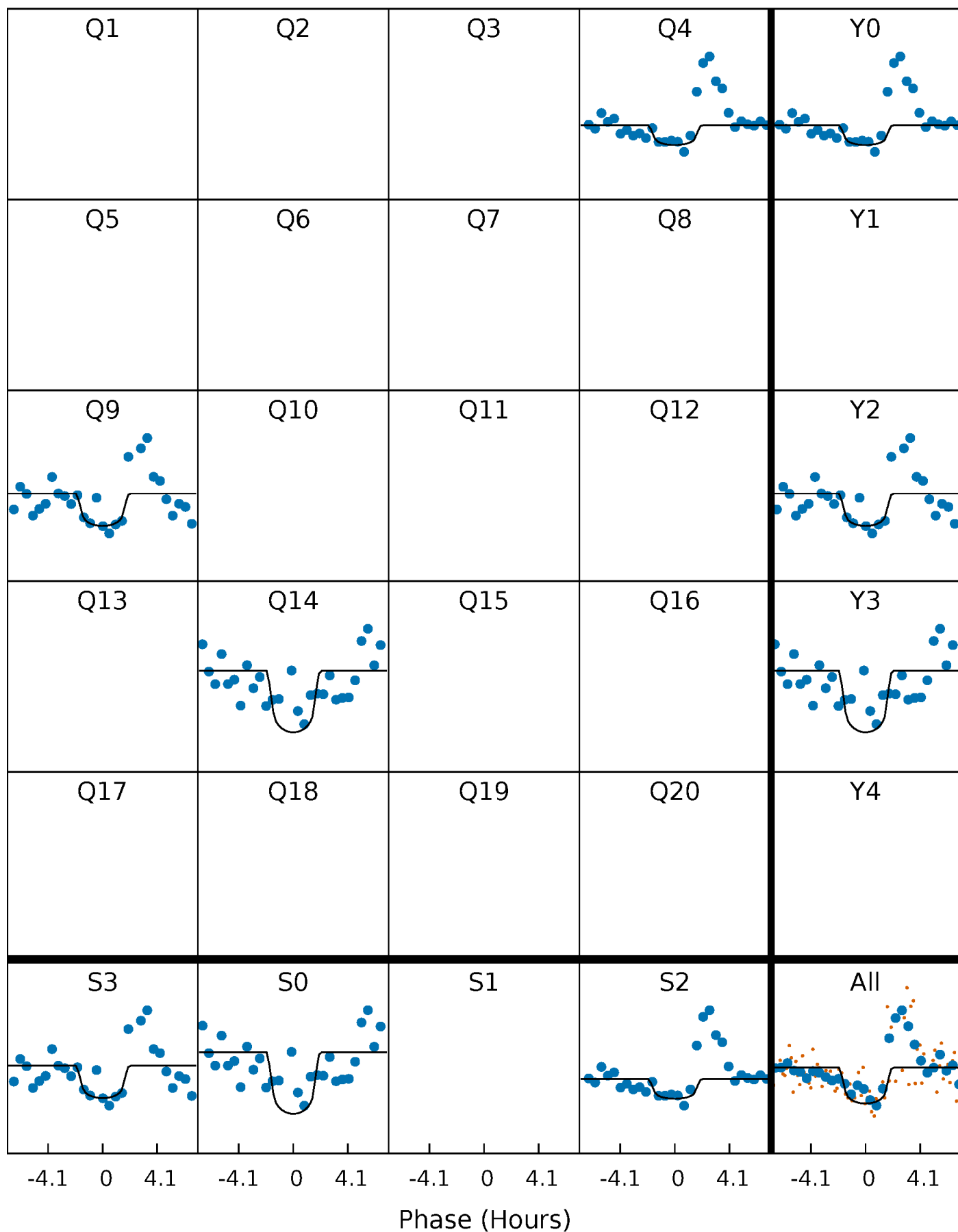
PDC Quarter-Phased Transit Curves

TCE 005098444-05 $P=453.083916$ Days $T_0=374.988898$ (BKJD)



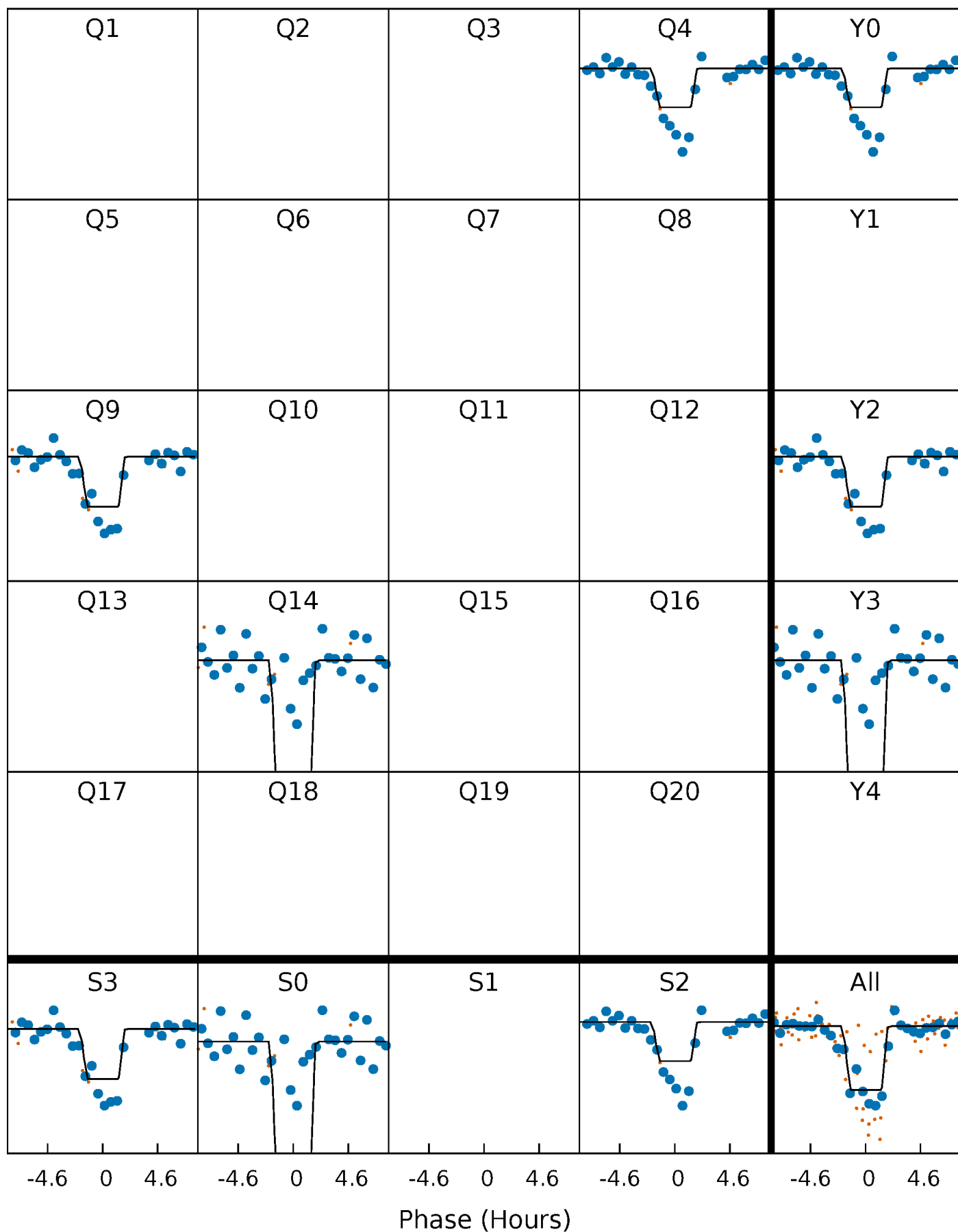
DV Quarter-Phased Transit Curves

TCE 005098444-05 $P=453.083916$ Days $T_0=374.988898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

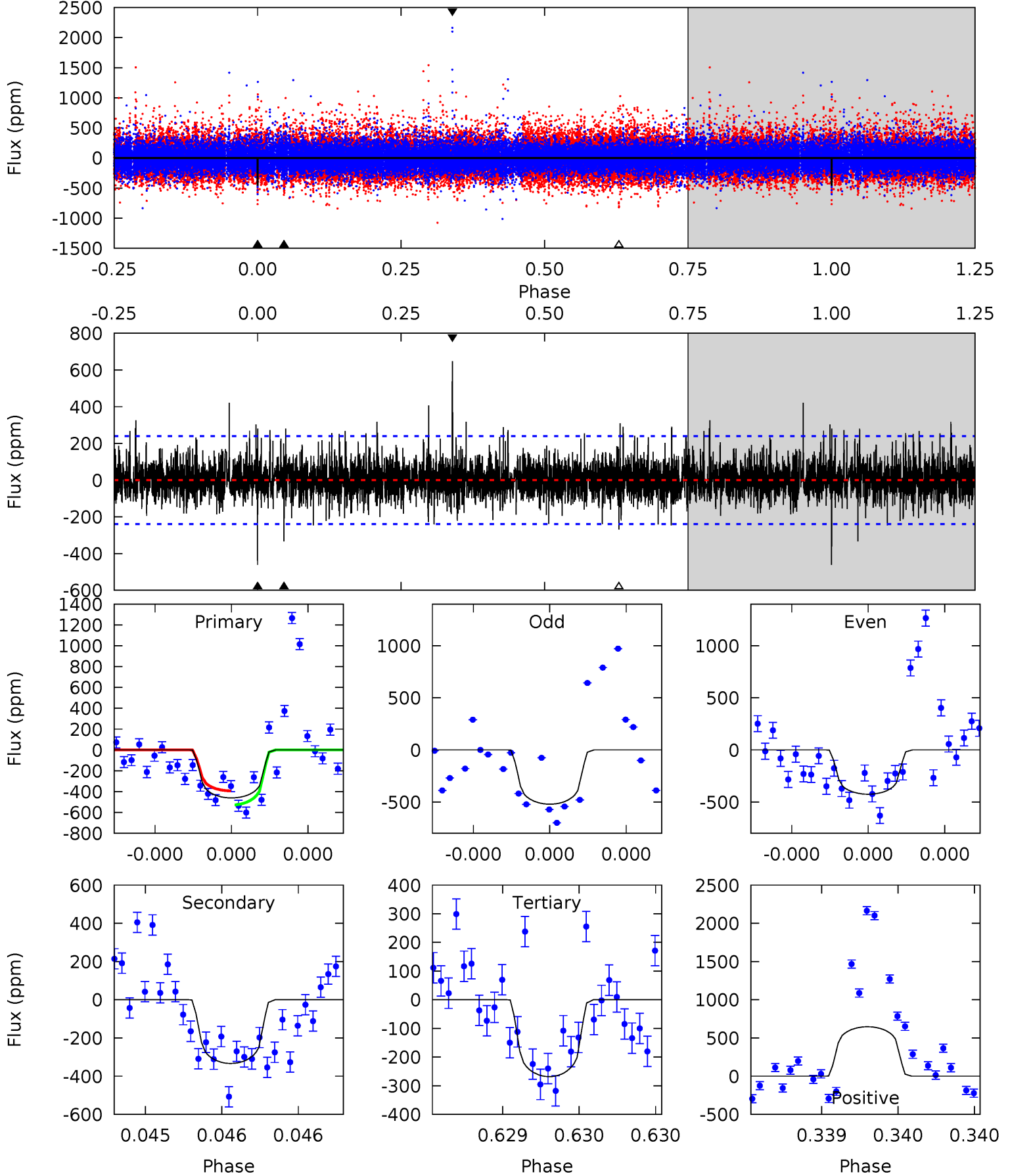
TCE 005098444-05 P=453.093759 Days $T_0=374.986129$ (BKJD)



DV Model-Shift Uniqueness Test

005098444-05, P = 453.083916 Days, E = 374.988898 Days

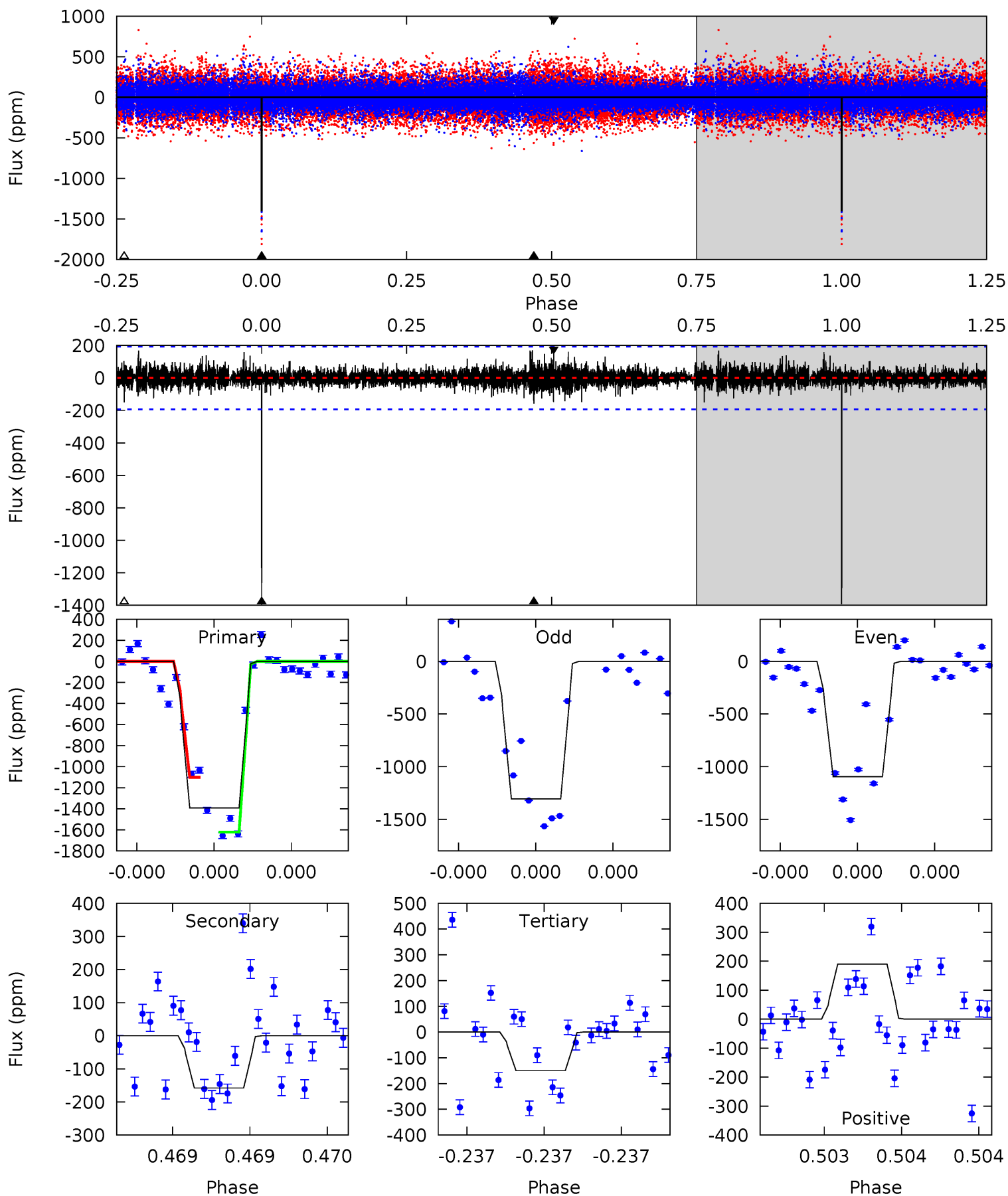
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	7.84	6.31	15.2	5.63	3.57	1.61	4.52	-4.38	1.53	-7.38	0.96	0.98	0.58	1.58



Alt Model-Shift Uniqueness Test

005098444-05, P = 453.093759 Days, E = 374.986129 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.5	4.59	4.35	5.52	5.63	3.57	0.81	36.1	35.0	0.23	-0.93	3.19	0.79	0.12	0



Stellar Parameters For KIC 005098444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4723^{+145}_{-162}	$4.741^{+0.045}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.512^{+0.025}_{-0.032}$	$0.526^{+0.032}_{-0.021}$	$5.515^{+0.991}_{-0.533}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+6%/-4%	+18%/-10%
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 005098444-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-333 ± 43	$2.46^{+2.27}_{-1.76}$	215^{+8}_{-7}	3461^{+2100}_{-612}	$27106^{+309374}_{-20135}$
Alt.	-158 ± 34	$2.65^{+2.31}_{-1.81}$	214^{+8}_{-8}	3009^{+1309}_{-477}	10372^{+90113}_{-7324}

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 $A_{obs} \gg 1.0$

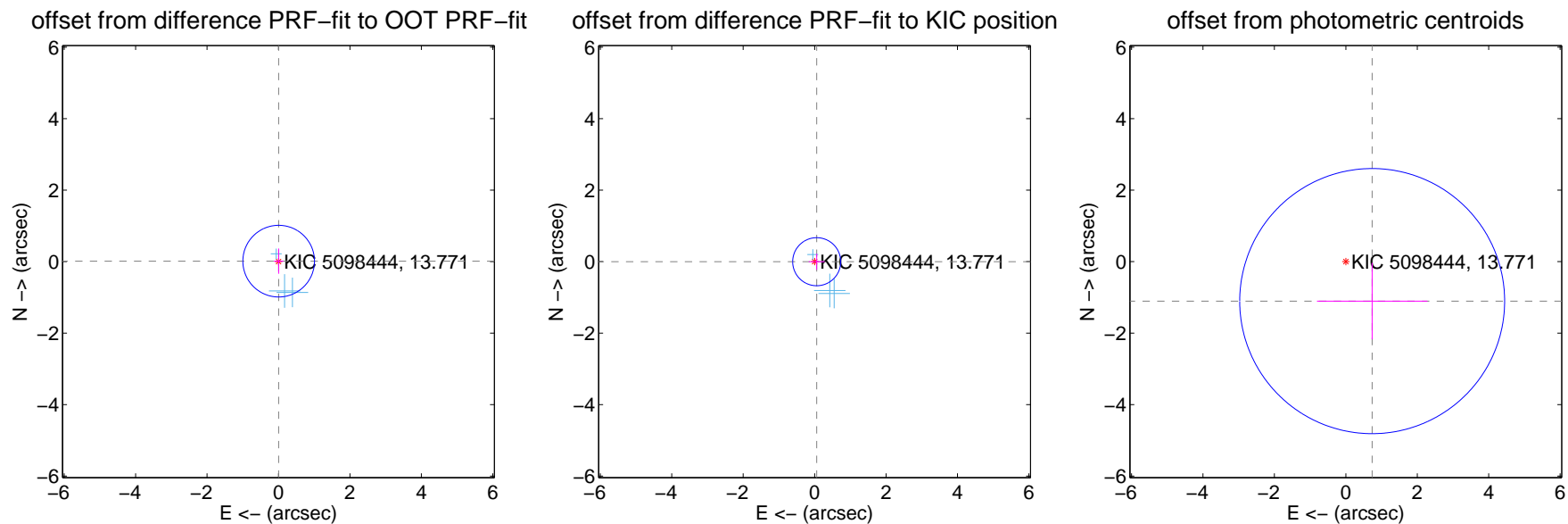
DV Centroid Data

Supplemental centroid analysis for 005098444-05. Kepler magnitude: 13.77. Transit SNR 7.62

There are 3 quarters with good PRF difference image offsets

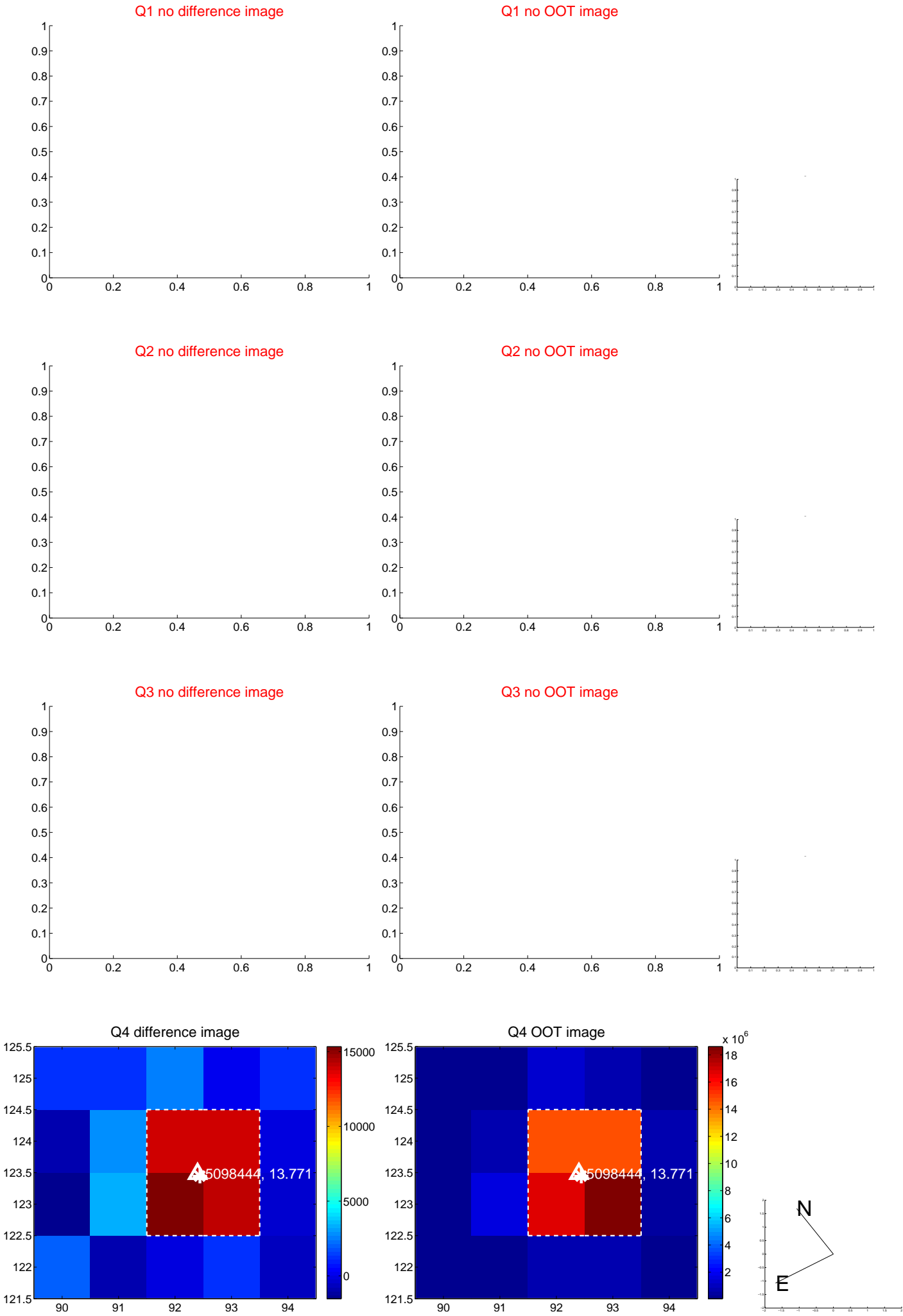
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.334	0.04	-0.005 ± 0.131	0.014 ± 0.353
PRF-fit source offset from KIC position	0.058 ± 0.224	0.26	-0.058 ± 0.224	-0.002 ± 0.225
photometric centroid source offset	1.33 ± 1.24	1.07	-0.74 ± 1.55	-1.10 ± 1.07



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.

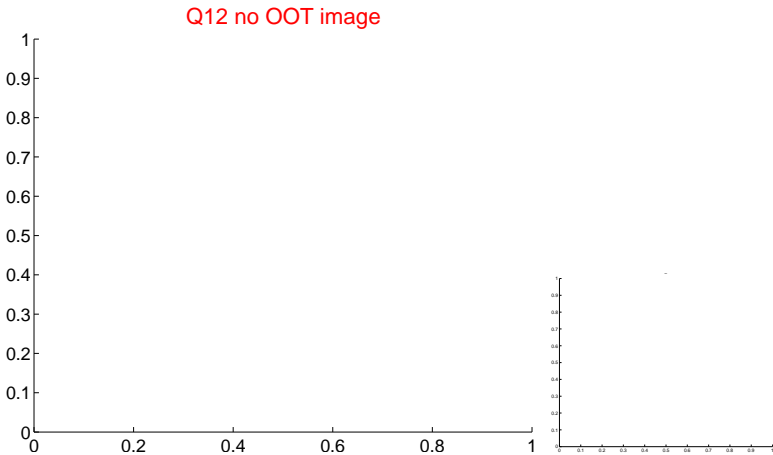
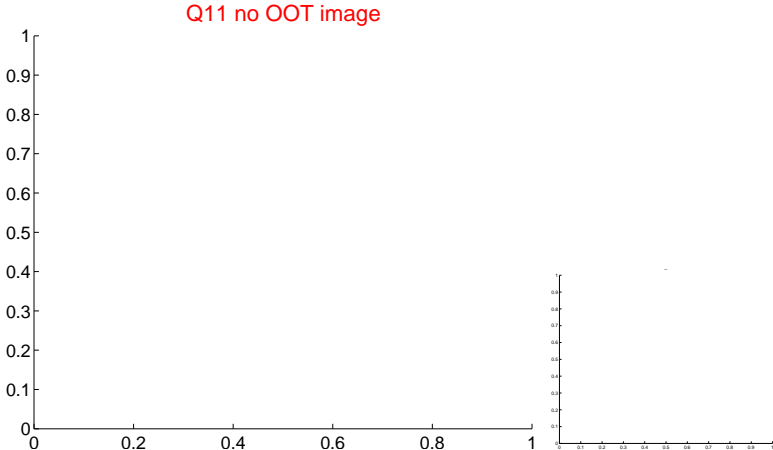
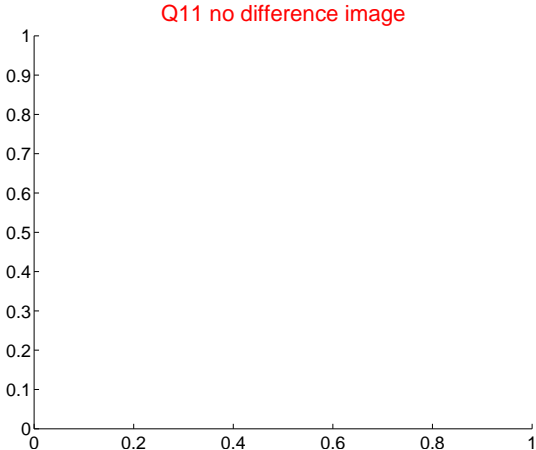
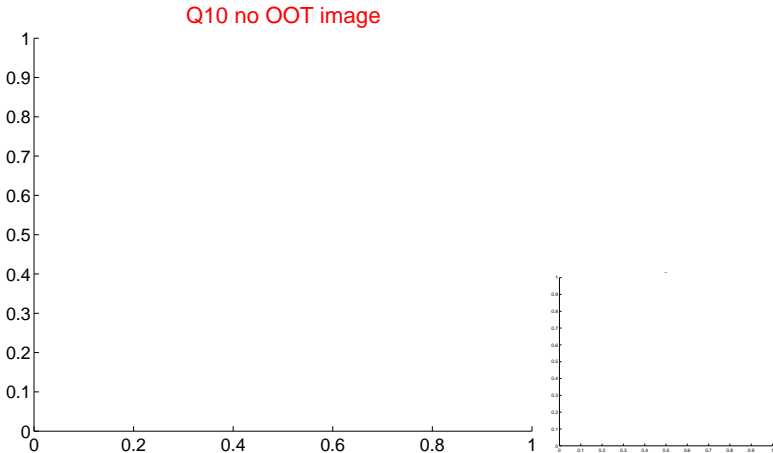
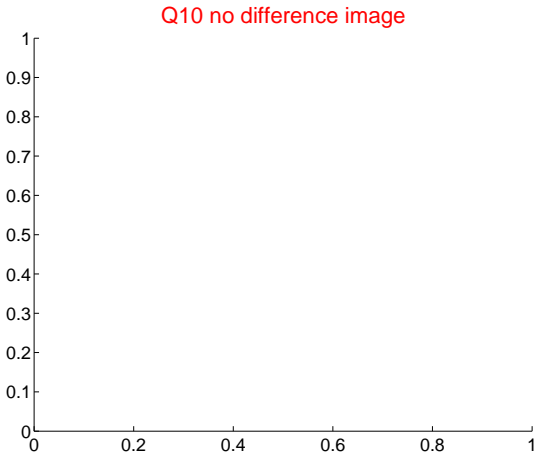
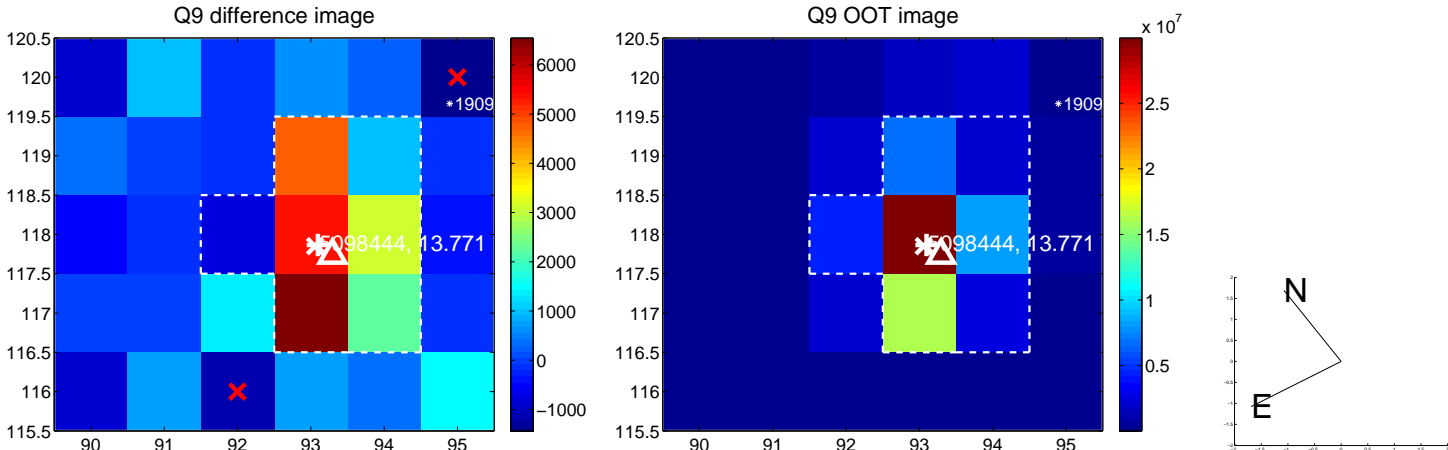
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



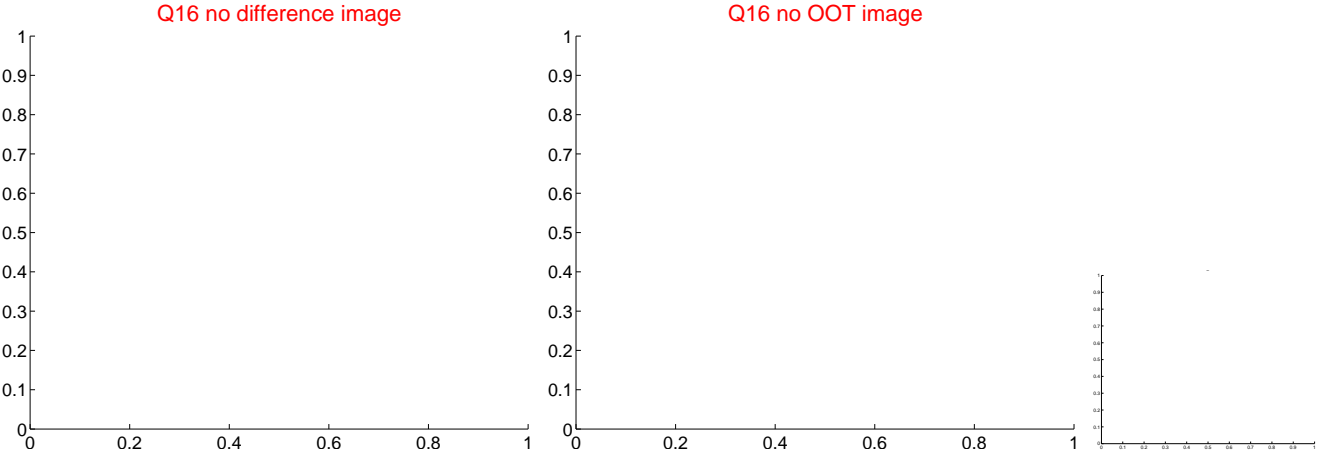
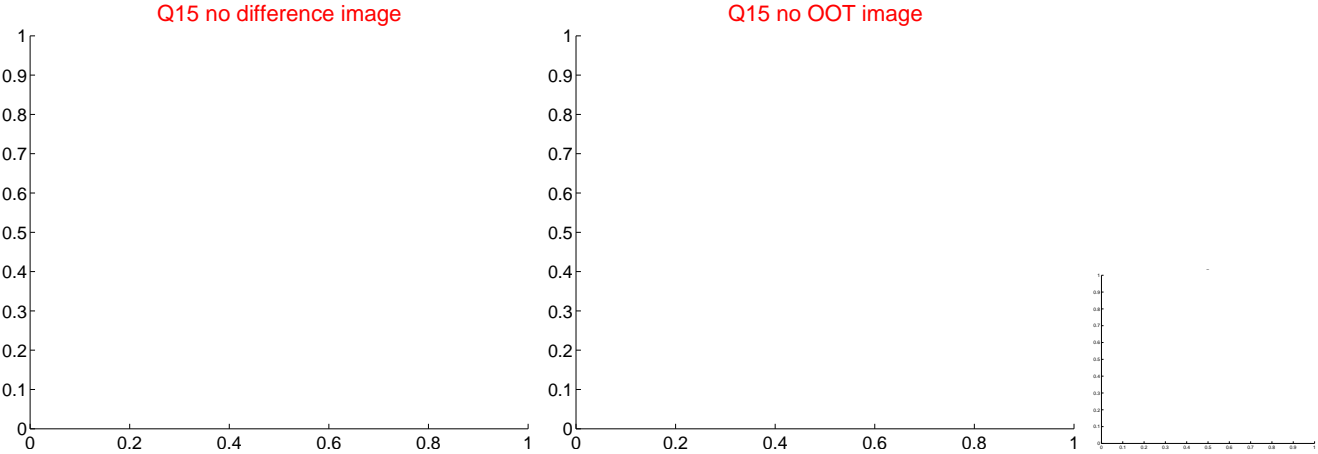
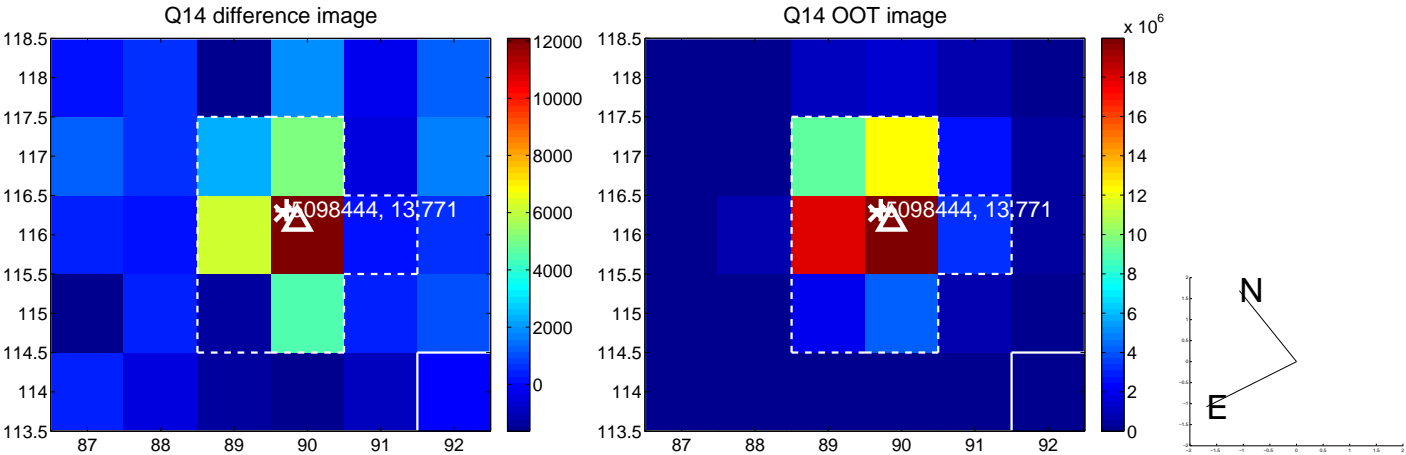
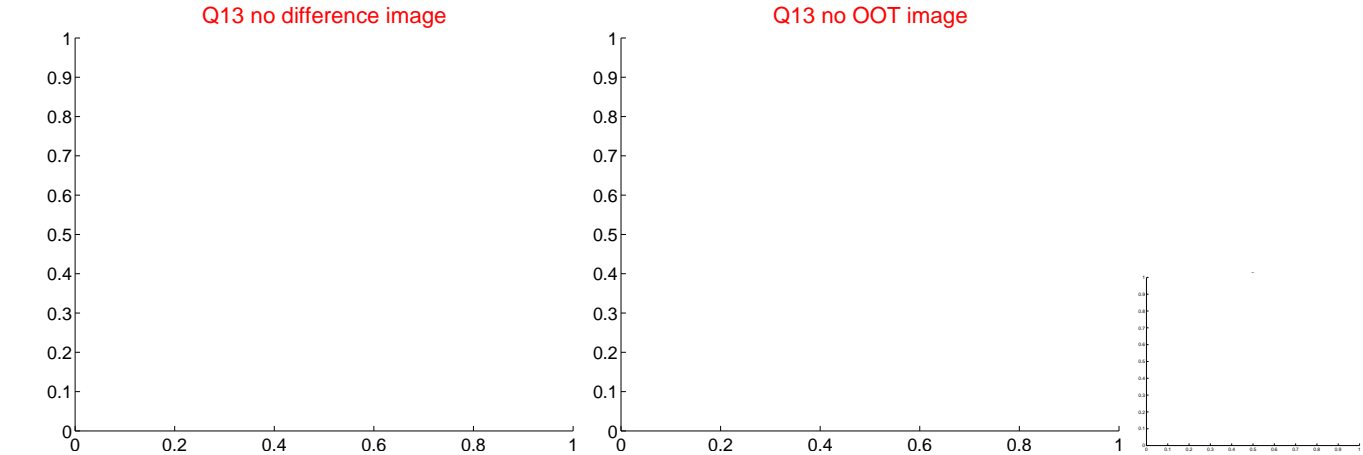
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



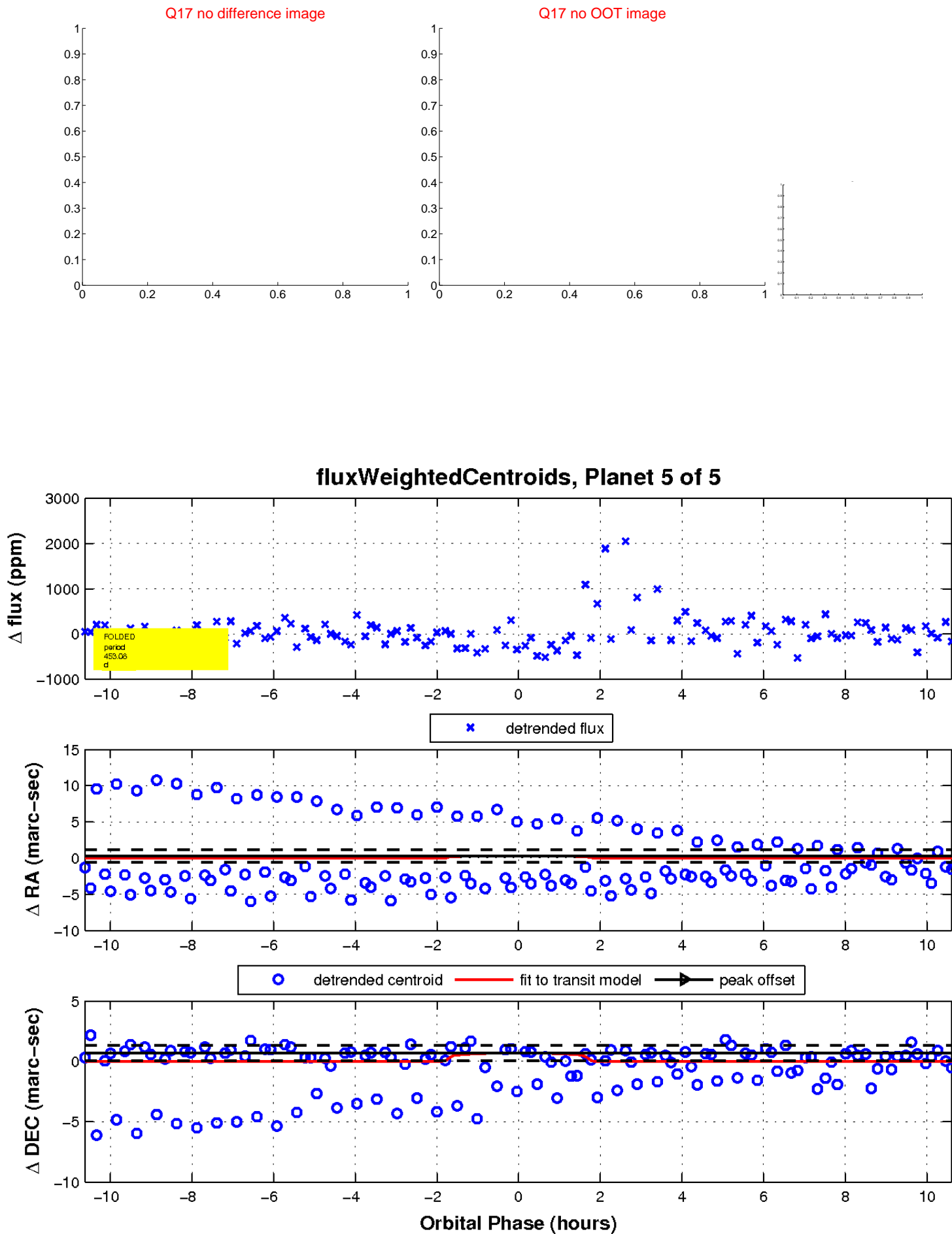
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

Declination

