

KIC 003455094

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})
003455094-01	OBS	No	499.308565	205.213791	1111.0	6.722	61.2	3.0	2.31	7176	7.83	6.20
003455094-03	OBS	No	264.904106	310.595439	472.3	8.974	47.6	1.4	2.31	7176	5.27	14.42
003455094-04	OBS	No	161.740420	189.057883	1934.7	2.500	41.4	-1.0	2.31	7176	10.29	27.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003455094-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003455094-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003455094-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

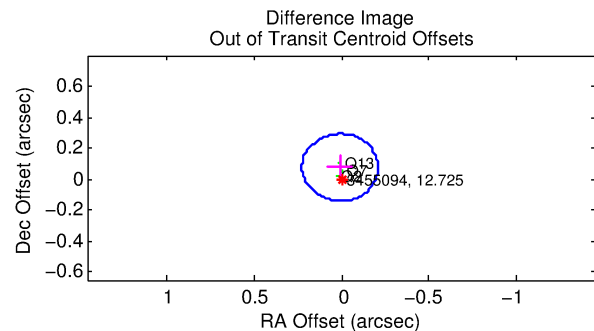
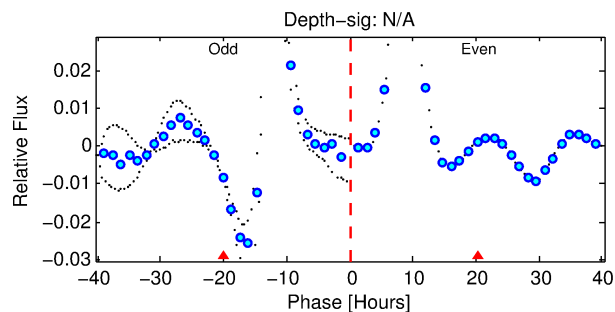
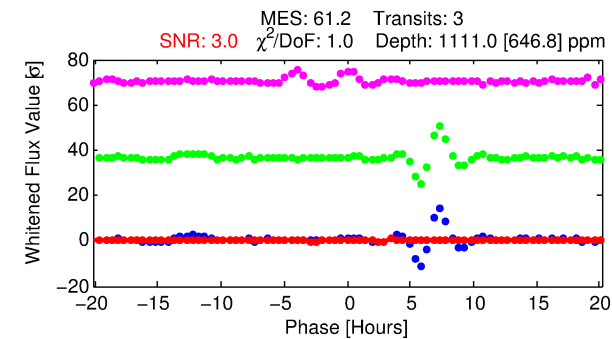
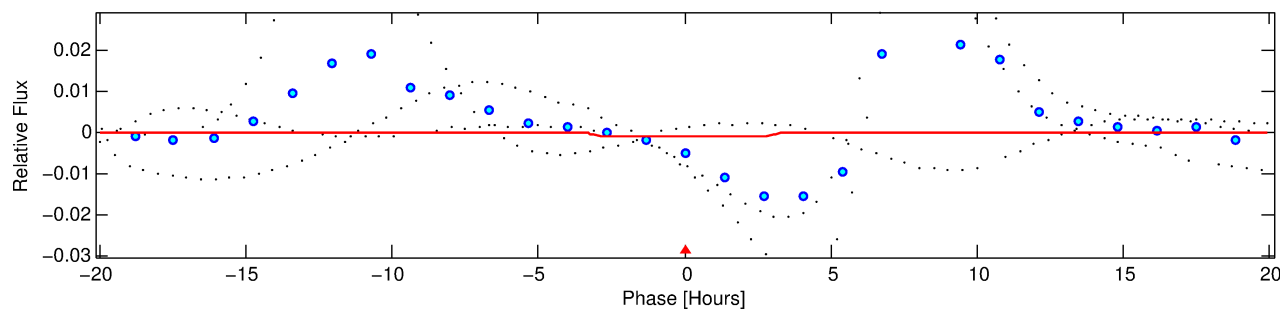
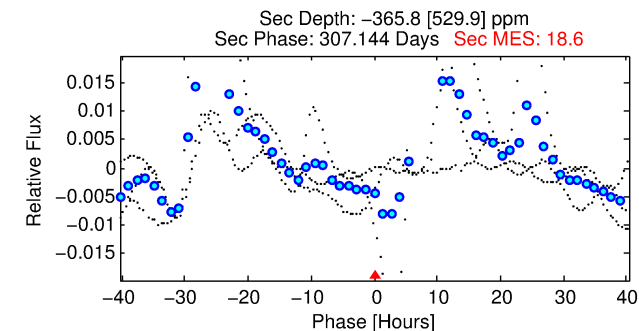
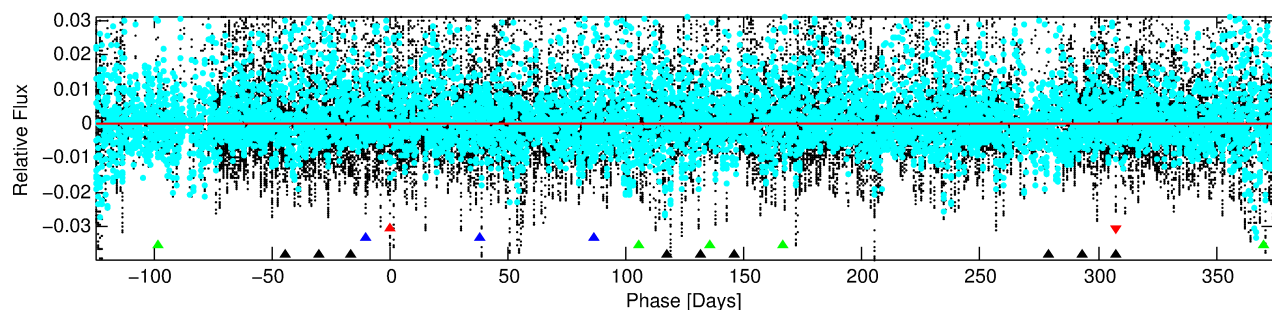
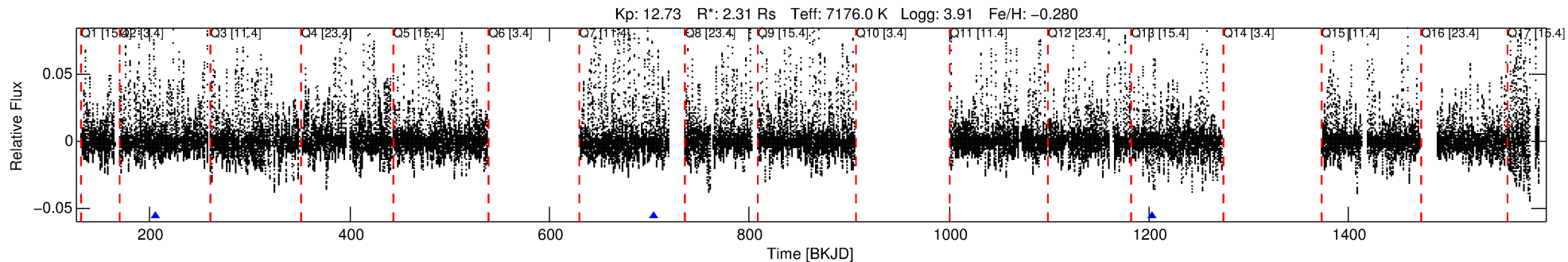
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003455094-01

No Significant Match Found

DV One-Page Summary

KIC: 3455094 Candidate: 1 of 4 Period: 499.309 d



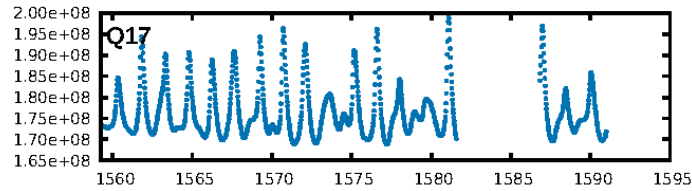
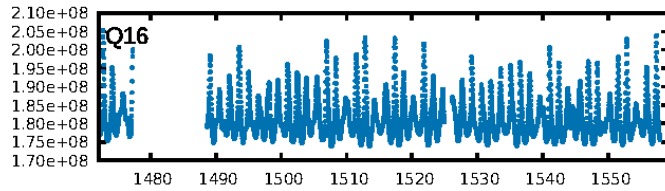
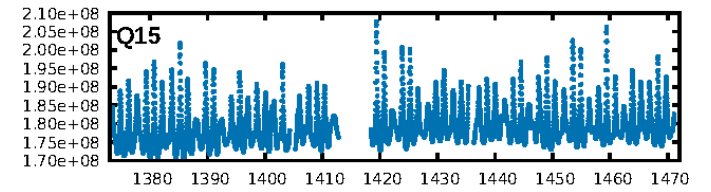
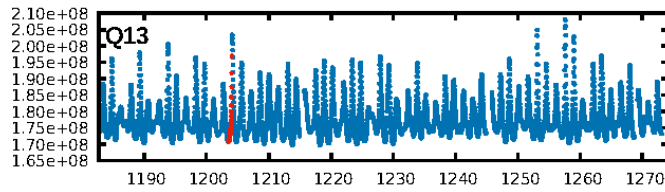
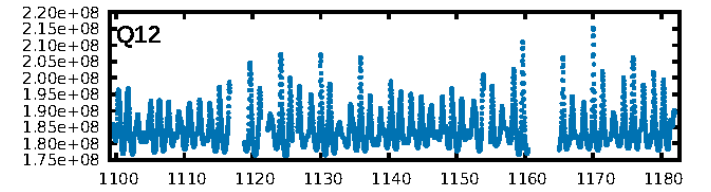
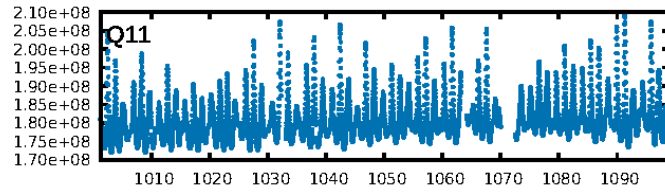
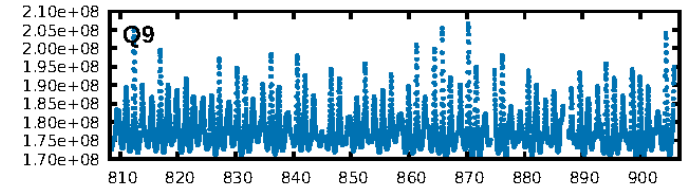
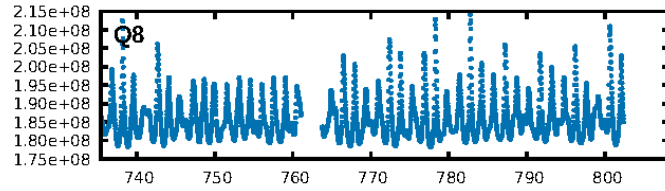
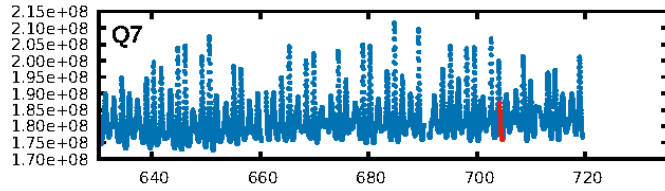
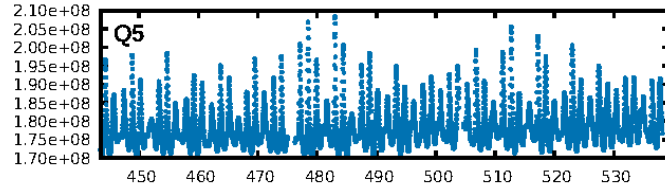
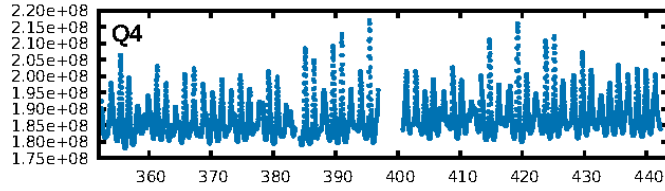
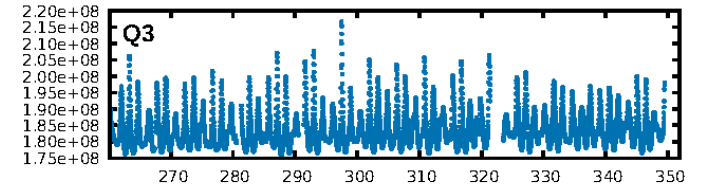
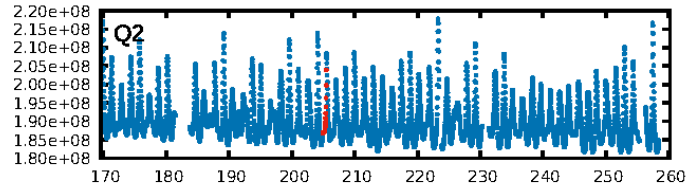
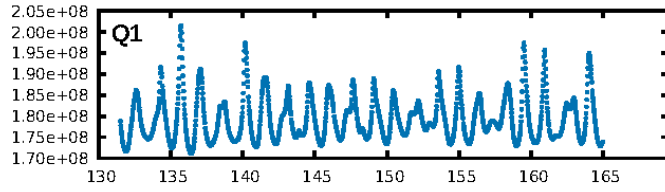
DV Fit Results:

Period = 499.30857 [0.00996] d
Epoch = 205.2138 [0.0122] BKJD
Rp/R* = 0.0310 [0.0447]
a/R* = 566.91 [4480.85]
b = 0.25 [29.08]
Seff = 6.20 [3.63]
Teff = 402 [59] K
Rp = 7.83 [11.72] Re
a = 1.4324 [0.5210] AU
Ag = N/A
Teffp = N/A

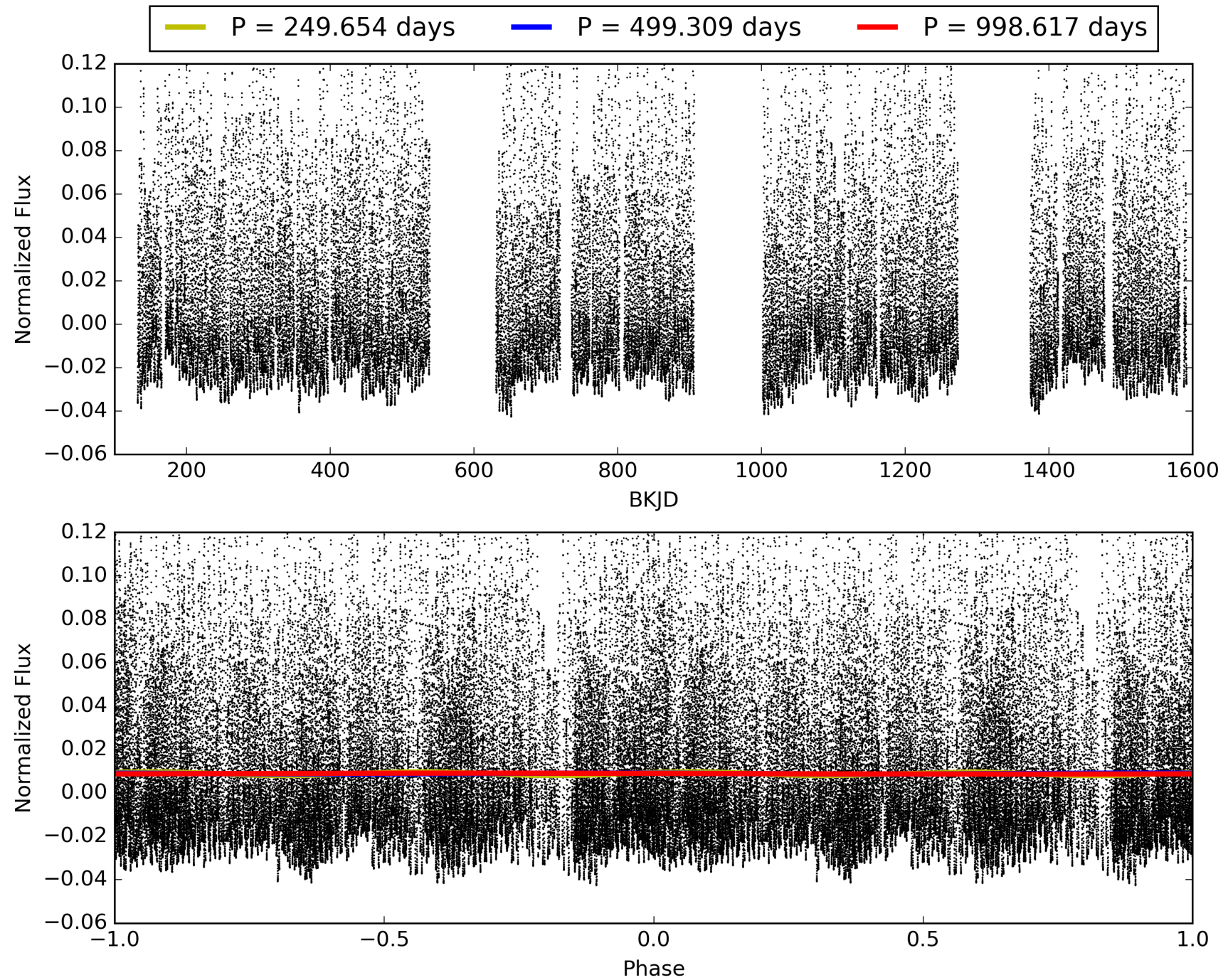
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [149.51σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 97.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2531
Centroid-sig: N/A
Centroid-so: 1.287 arcsec [1.73σ]
OotOffset-rm: 0.077 arcsec [1.06σ]
KicOffset-rm: 0.095 arcsec [1.08σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003455094-01, PDC Light Curves

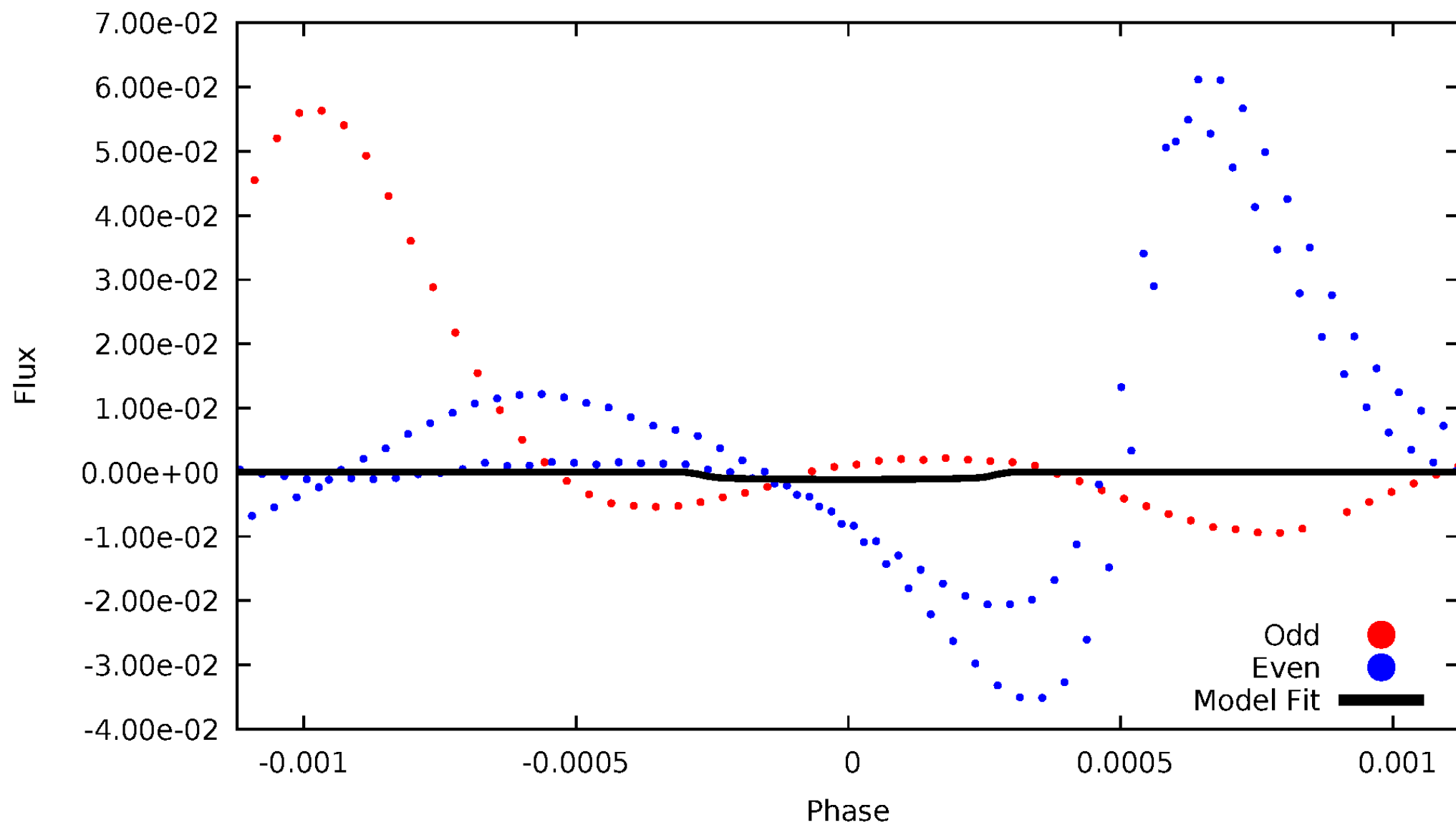


TCE 003455094-01



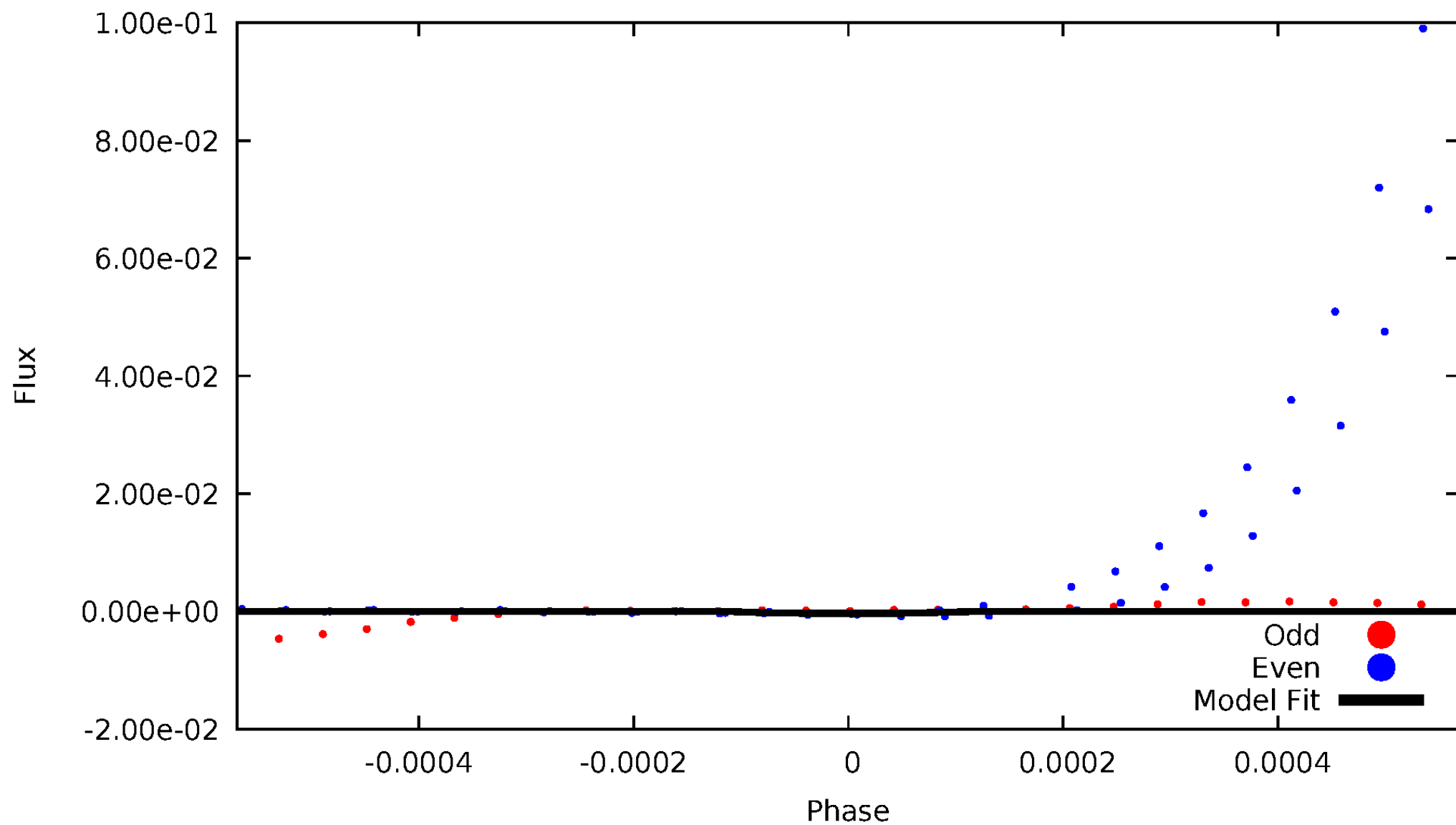
DV Odd/Even

TCE 003455094-01



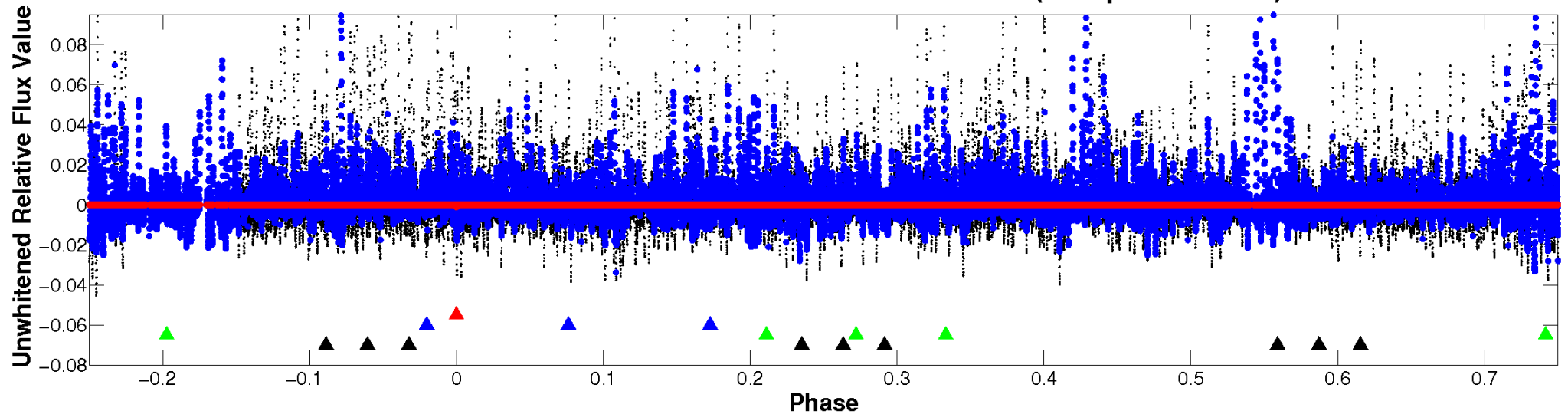
ALT Odd/Even

TCE 003455094-01

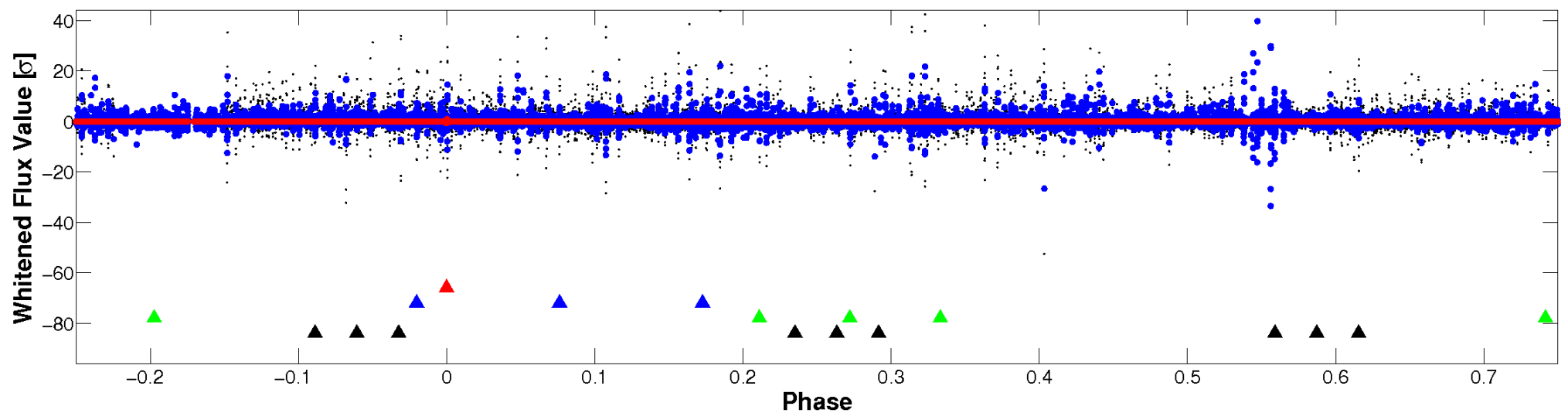


Non-Whitened Vs. Whitened Light Curve

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

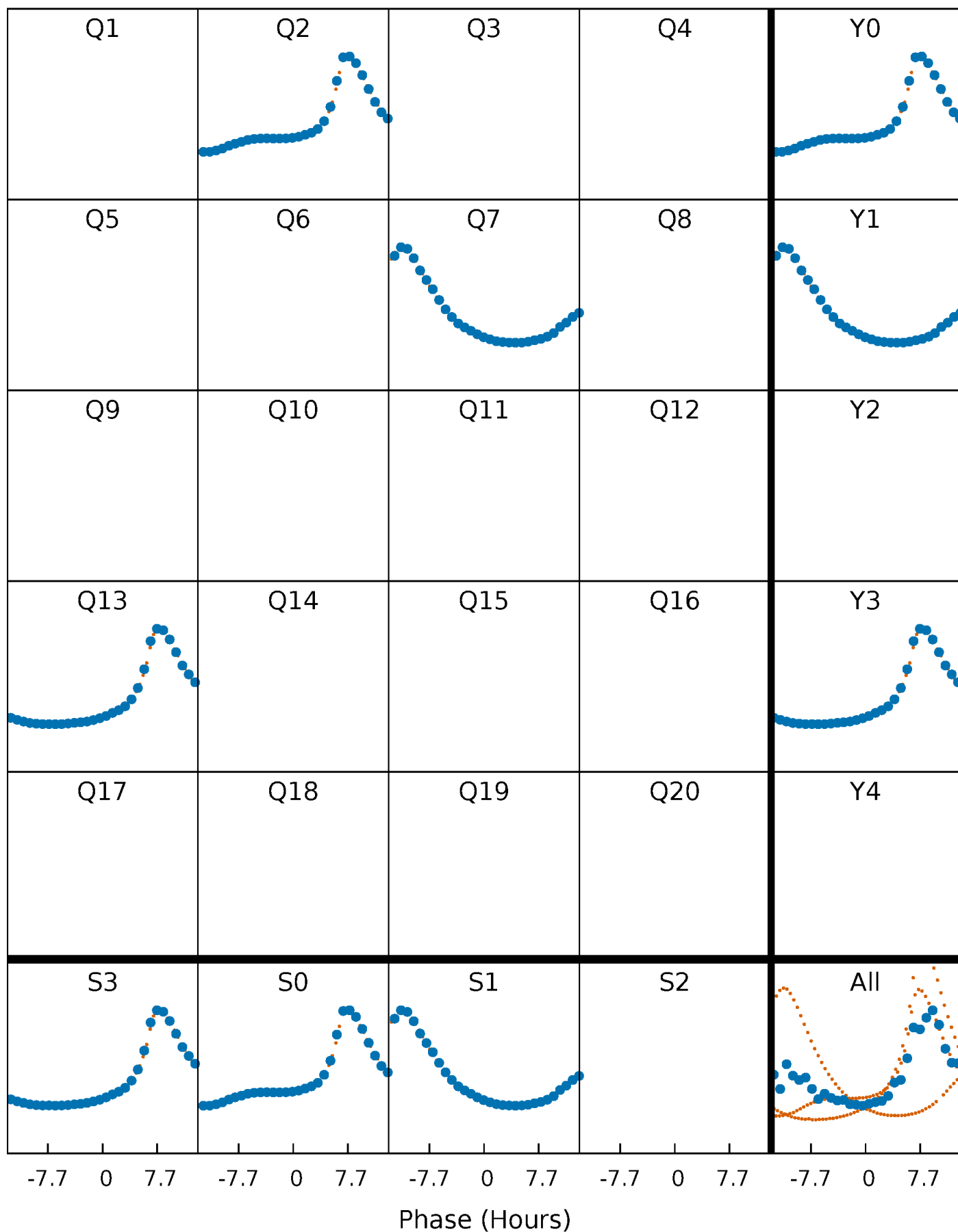


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



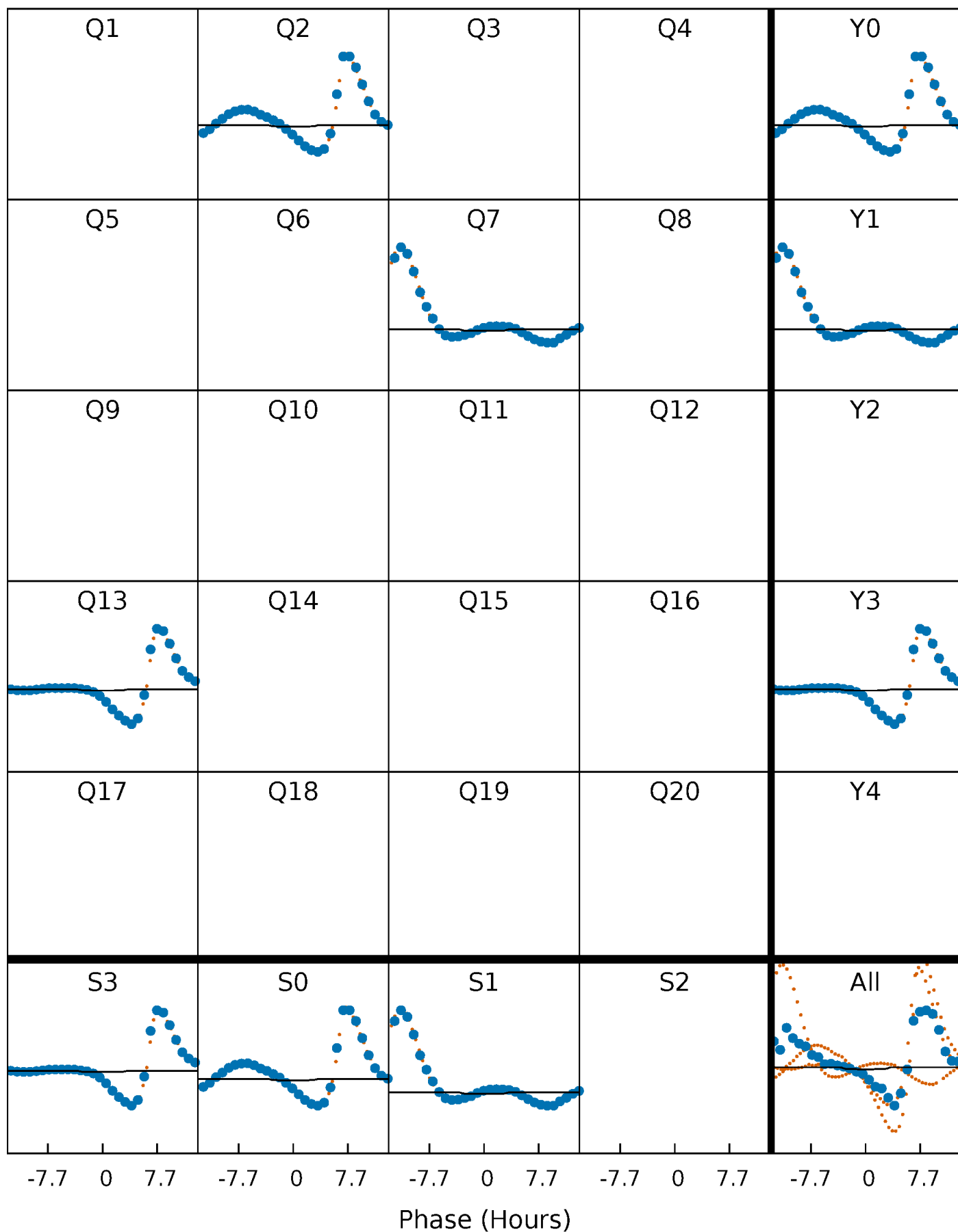
PDC Quarter-Phased Transit Curves

TCE 003455094-01 P=499.308565 Days $T_0=205.213790$ (BKJD)



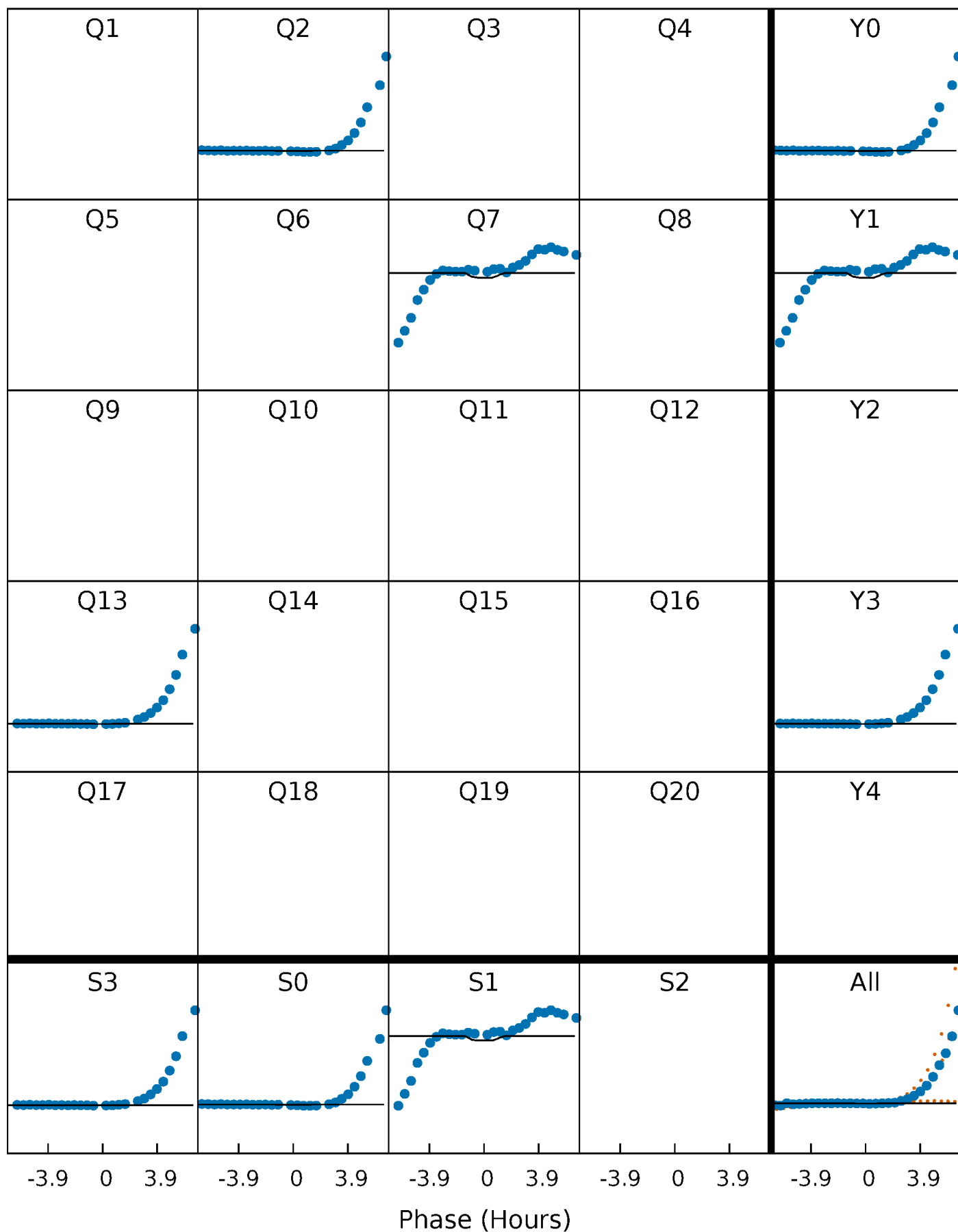
DV Quarter-Phased Transit Curves

TCE 003455094-01 P=499.308565 Days $T_0=205.213790$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

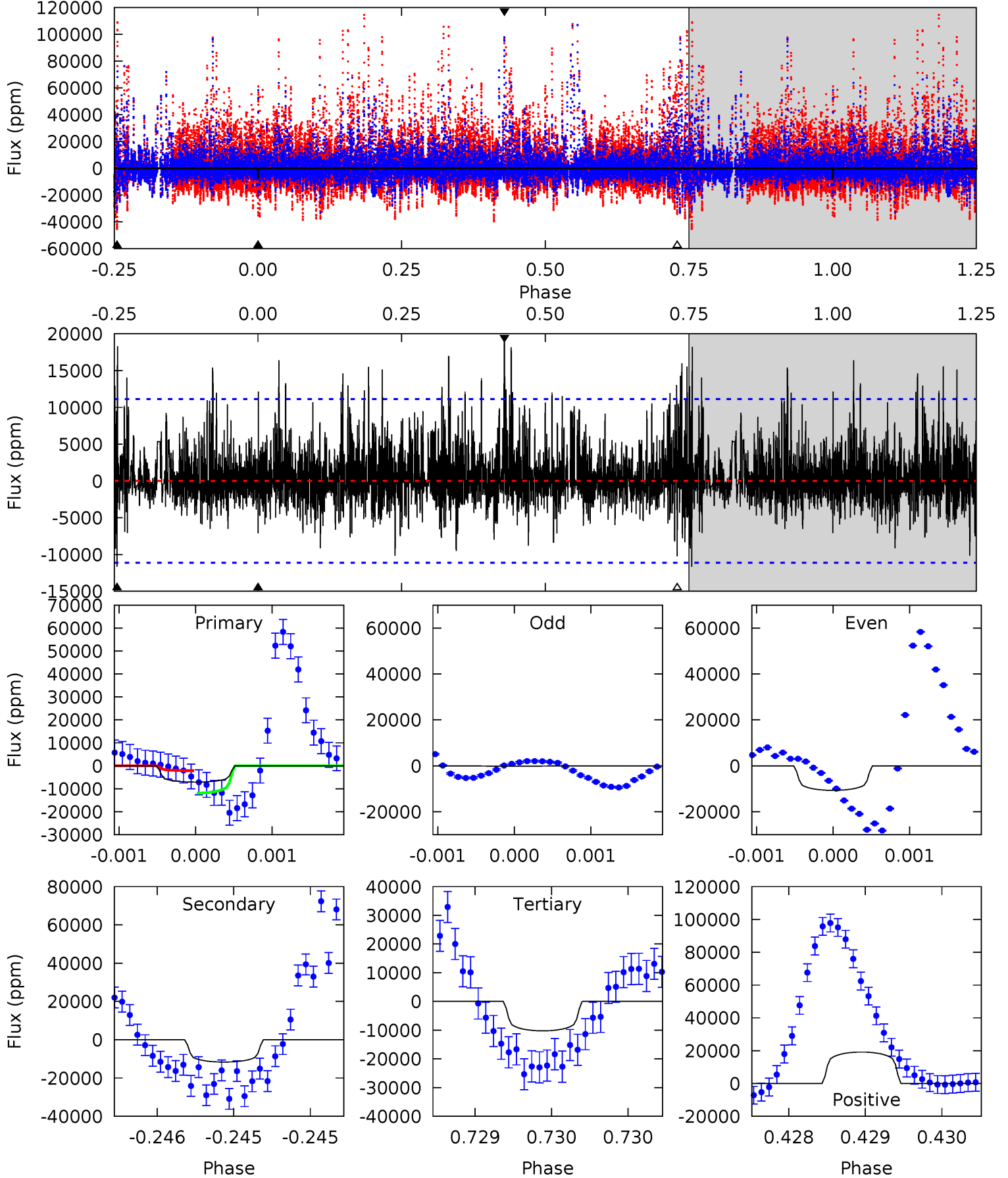
TCE 003455094-01 P=499.314472 Days $T_0=205.214646$ (BKJD)



DV Model-Shift Uniqueness Test

003455094-01, P = 499.308565 Days, E = 205.213790 Days

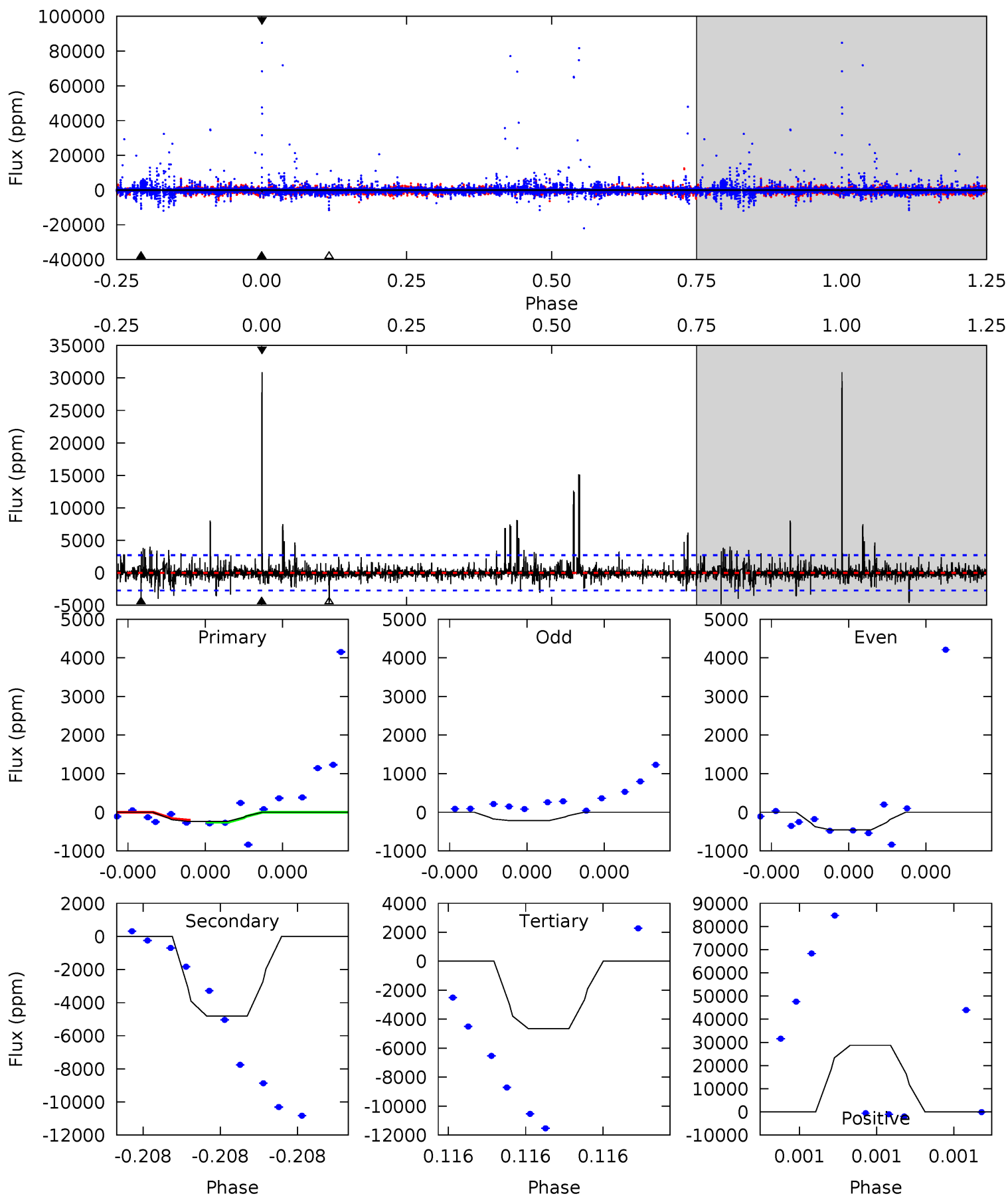
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.53	5.82	5.10	9.56	5.55	3.44	1.73	-1.57	-6.03	0.71	-3.75	2.14	0.80	0.62	2.46



Alt Model-Shift Uniqueness Test

003455094-01, P = 499.314472 Days, E = 205.214646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.50	10.2	9.86	60.8	5.76	3.76	1.72	-9.36	-60.3	0.33	-50.6	0.13	0.64	0.87	0.06



Stellar Parameters For KIC 003455094

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7176^{+224}_{-299}	$3.906^{+0.322}_{-0.138}$	$-0.280^{+0.250}_{-0.350}$	$2.313^{+0.499}_{-0.926}$	$1.568^{+0.217}_{-0.352}$	$0.179^{+0.428}_{-0.073}$
	+3%/-4%	+8%/-4%	+89%/-125%	+22%/-40%	+14%/-22%	+240%/-41%
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 003455094-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11661 ± 2005	$10.75^{+9.84}_{-6.96}$	552^{+42}_{-52}	13361^{+27569}_{-5155}	$110185^{+785945}_{-79904}$
Alt.	-4811 ± 472	$8.71^{+9.90}_{-5.95}$	553^{+40}_{-51}	10879^{+27315}_{-4172}	$69464^{+623690}_{-54089}$

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

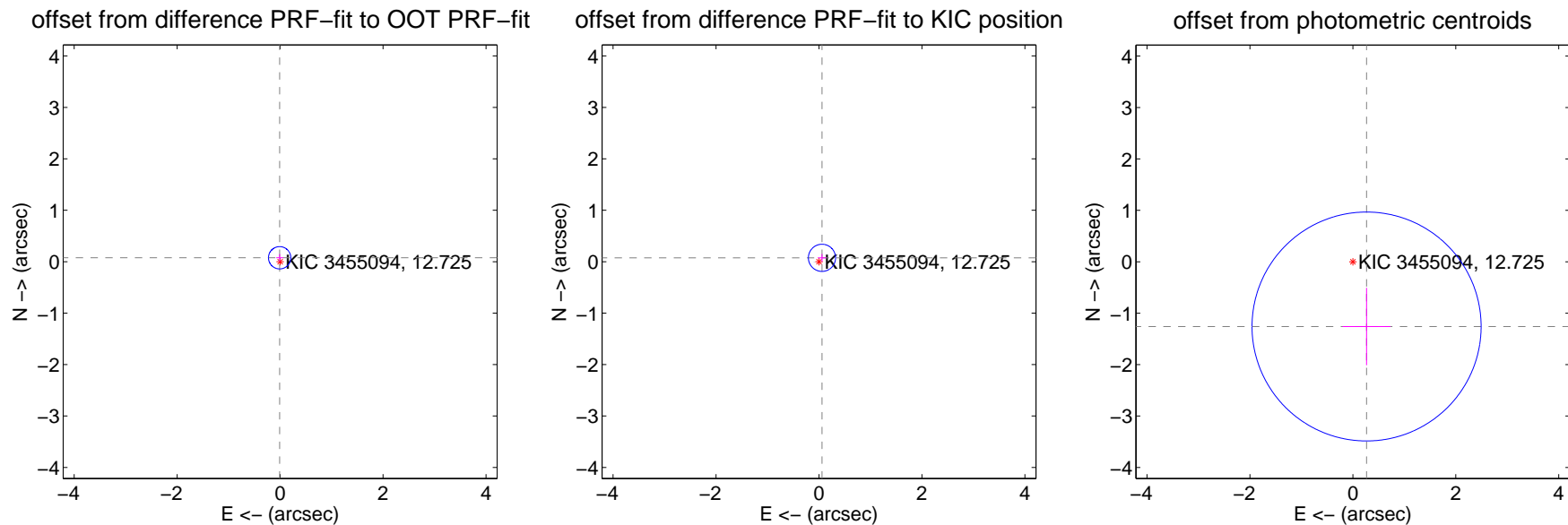
DV Centroid Data

Supplemental centroid analysis for 003455094-01. Kepler magnitude: 12.72. Transit SNR 2.96

There are 3 quarters with good PRF difference image offsets

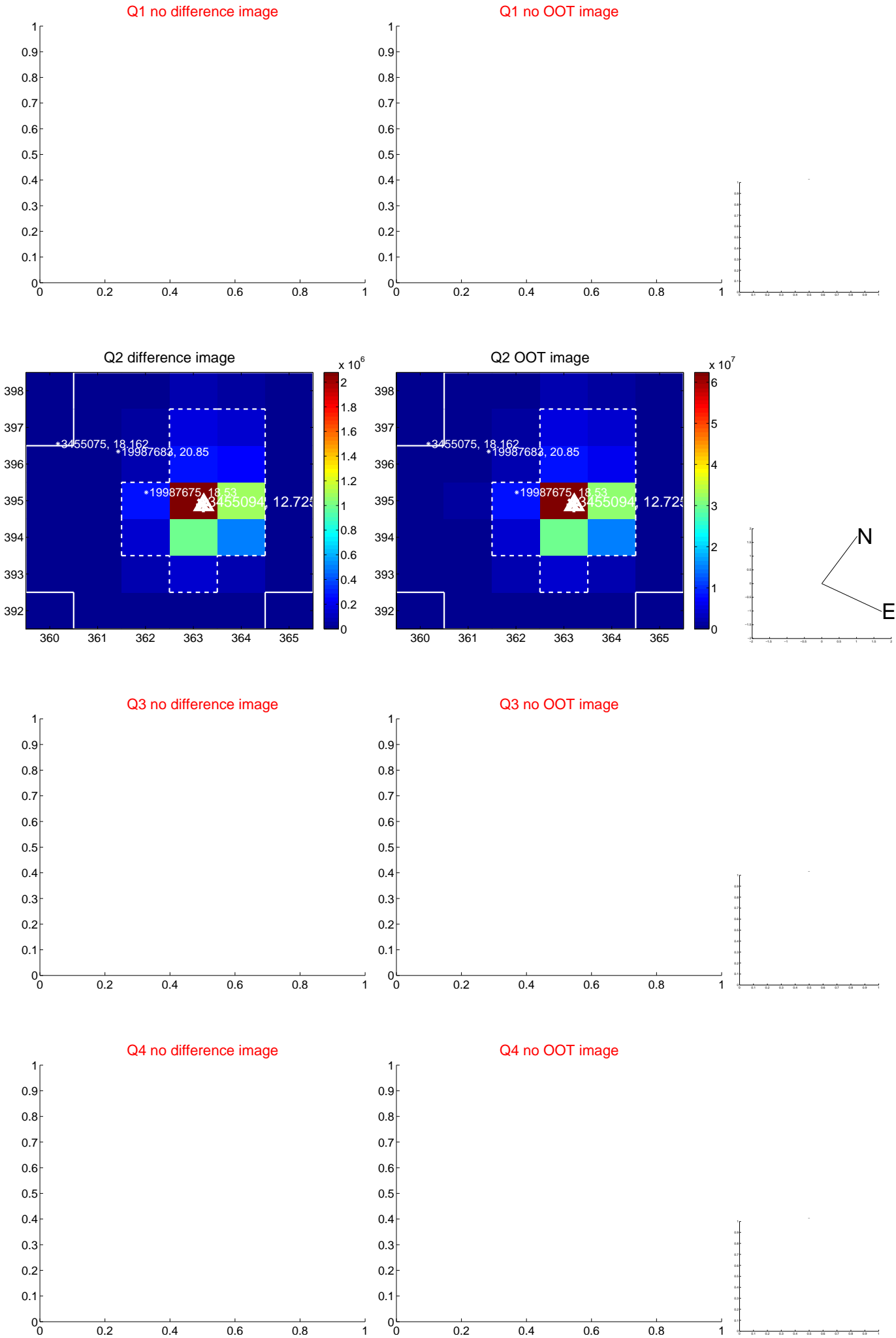
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.072	1.06	0.009 ± 0.067	0.076 ± 0.072
PRF-fit source offset from KIC position	0.095 ± 0.088	1.08	-0.058 ± 0.084	0.075 ± 0.075
photometric centroid source offset	1.29 ± 0.74	1.73	-0.27 ± 0.46	-1.26 ± 0.75

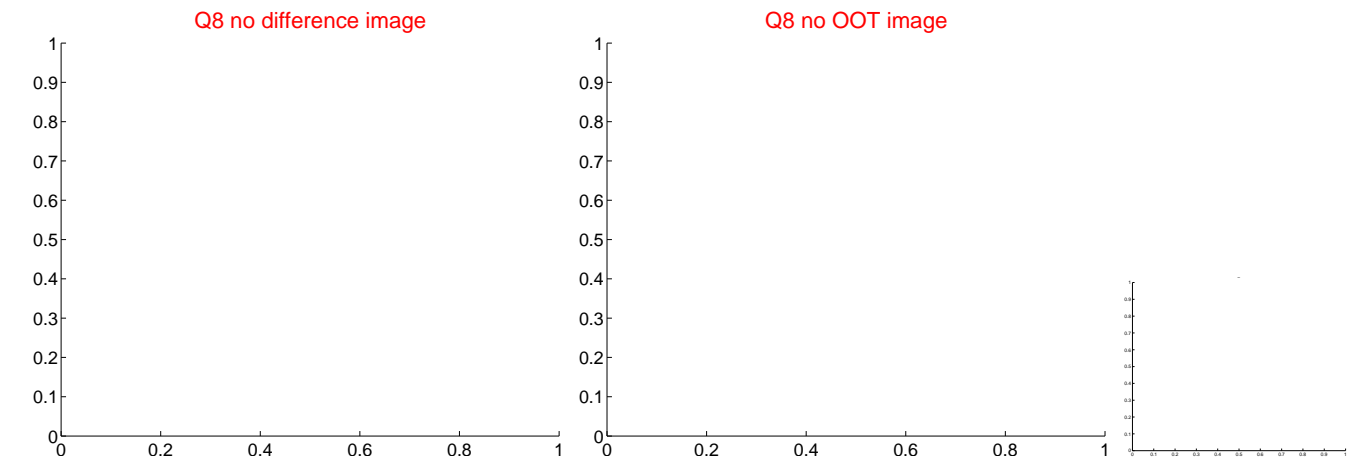
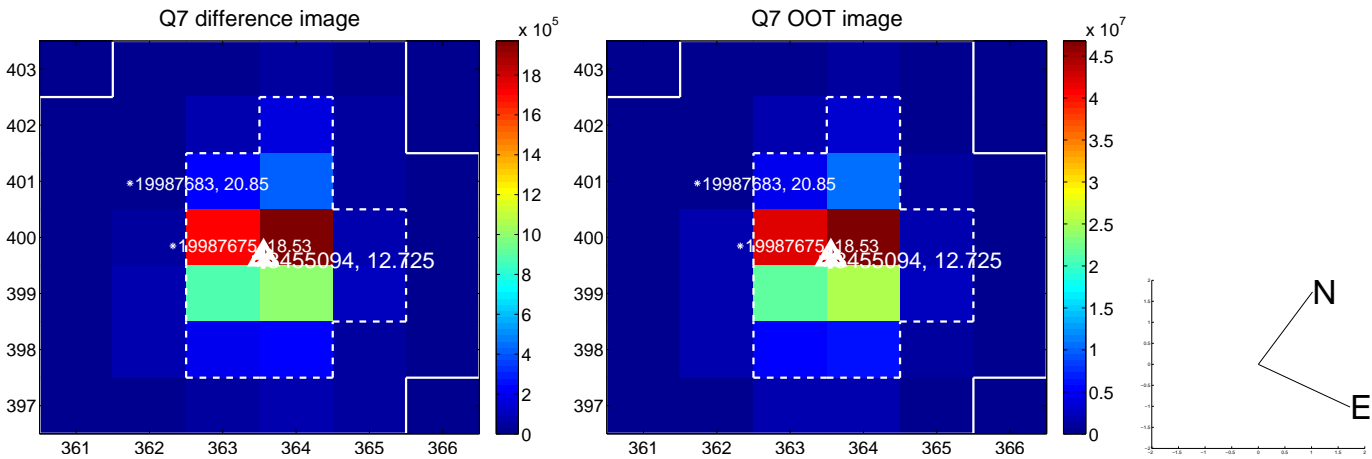
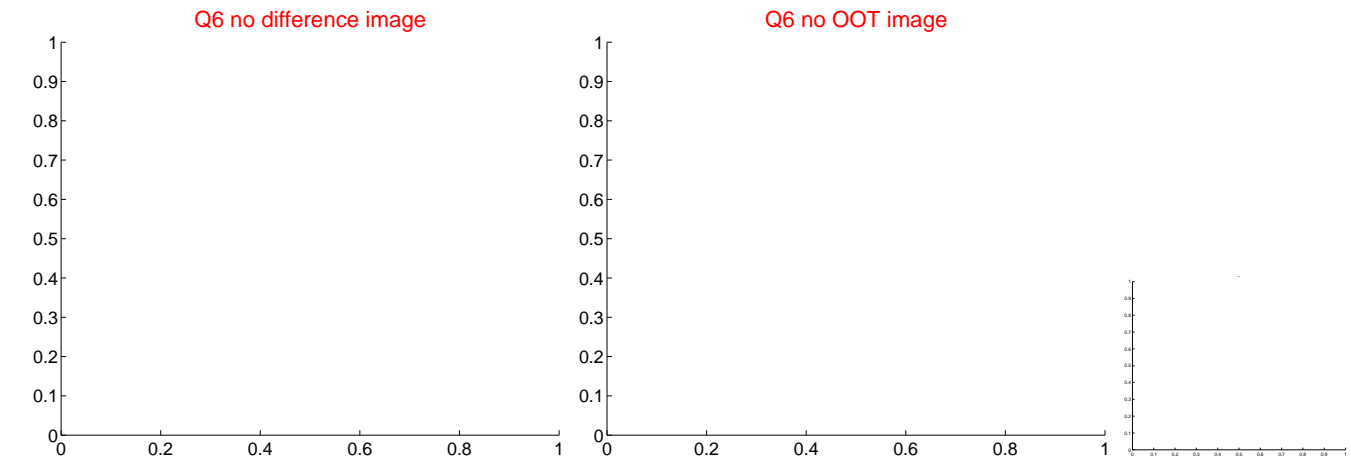
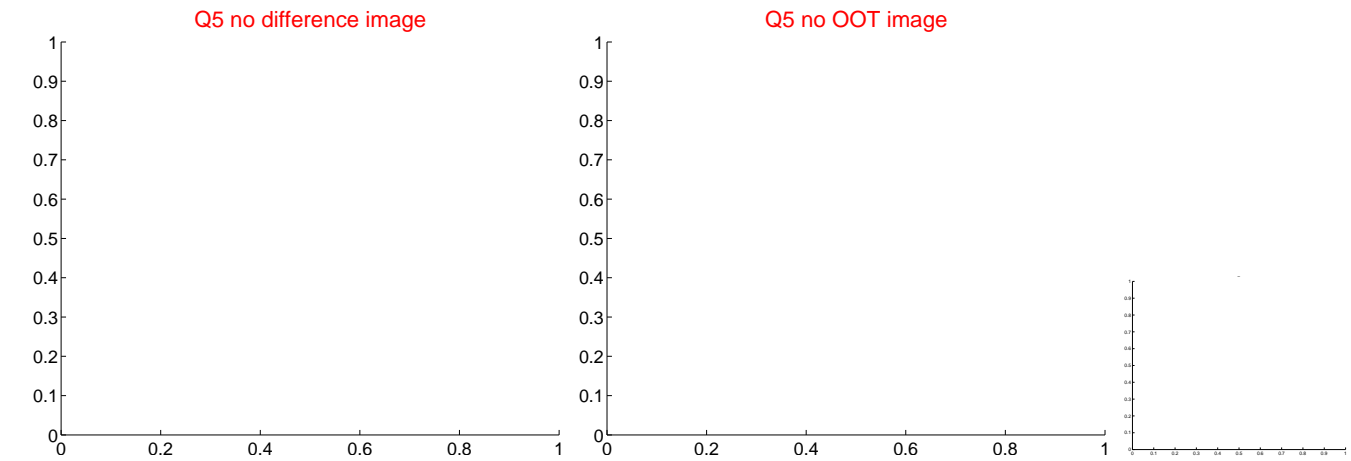


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



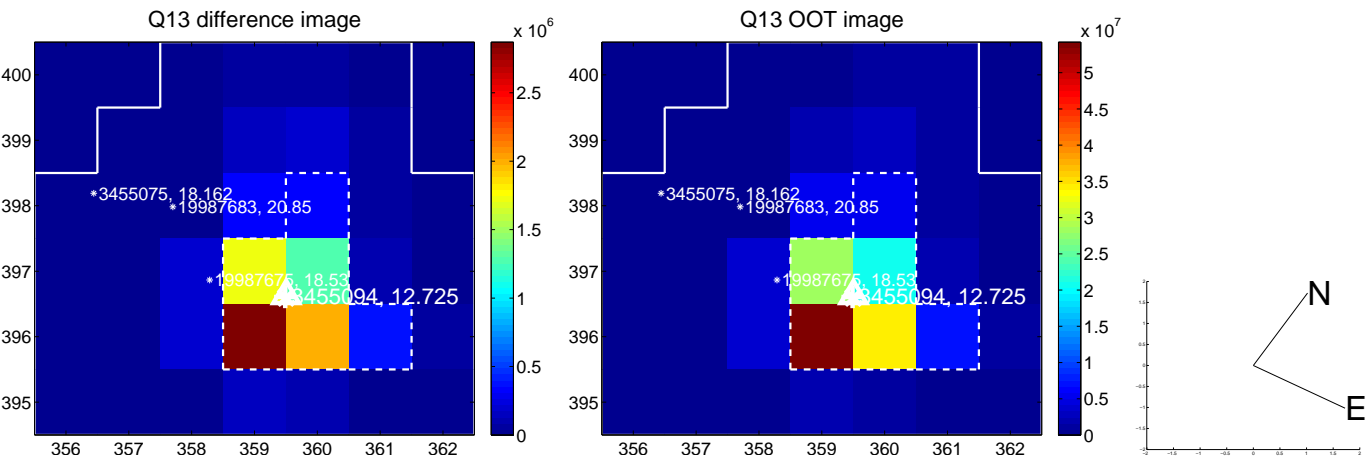
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



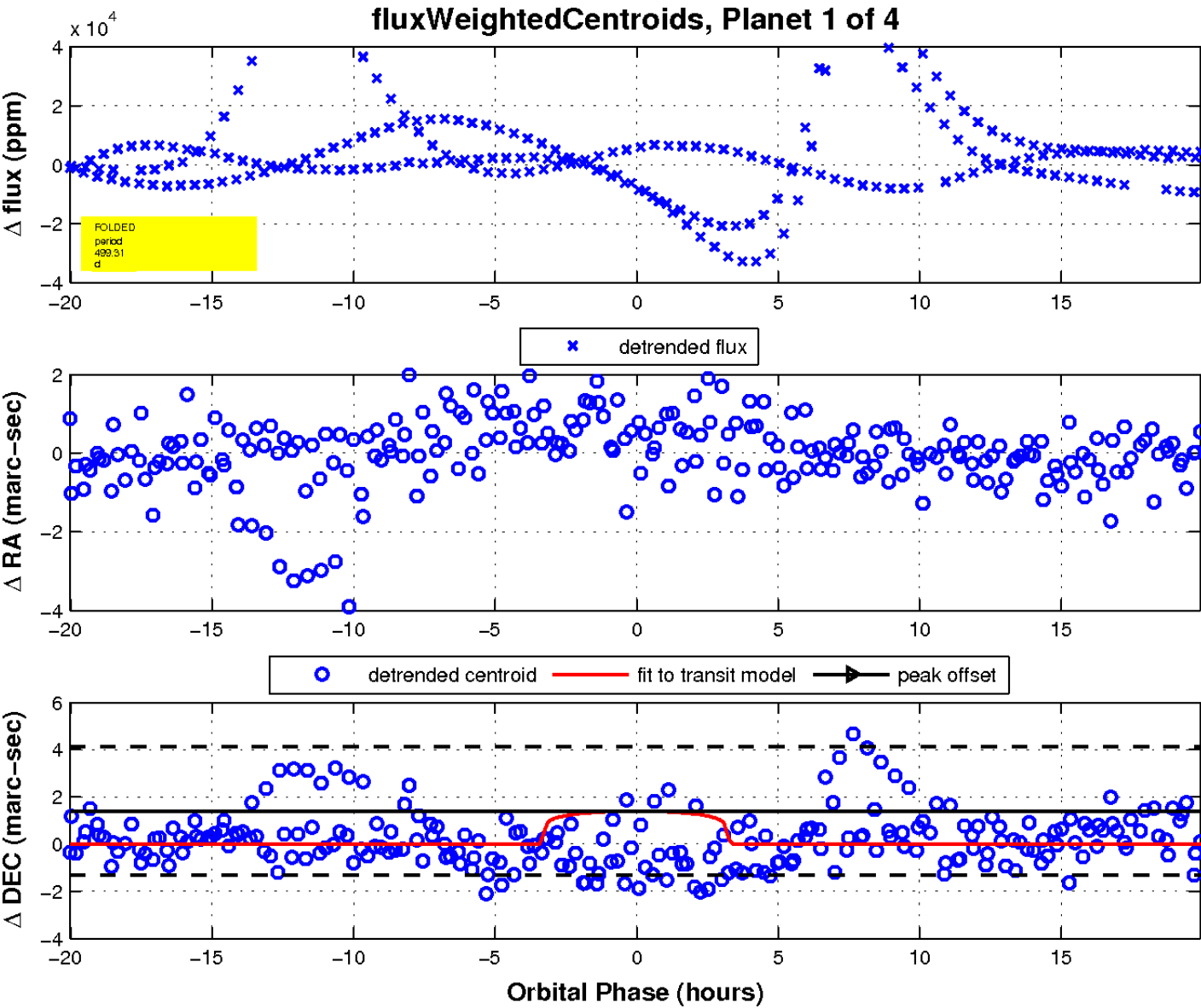
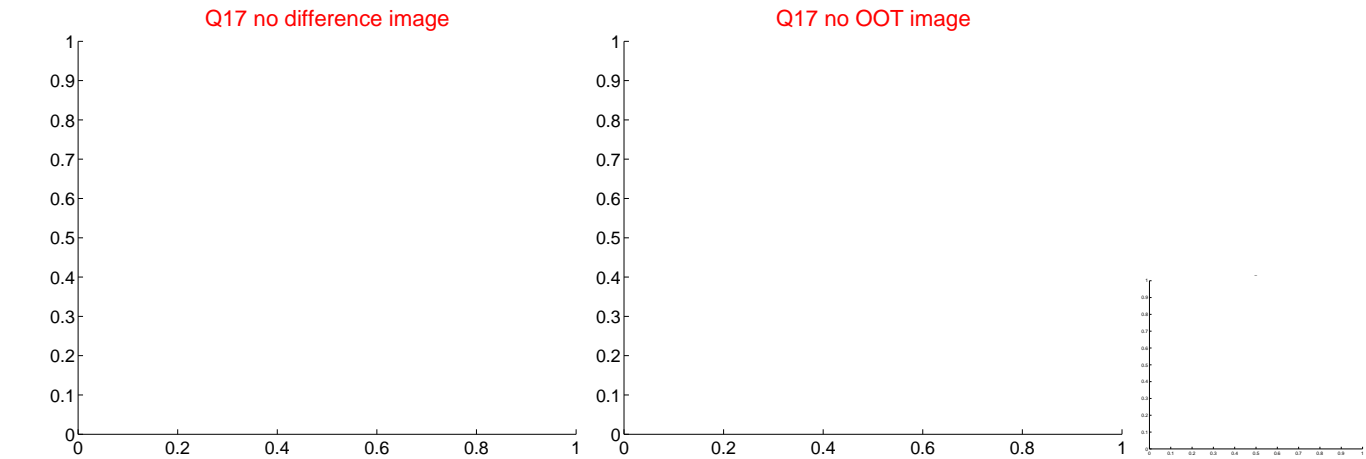
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

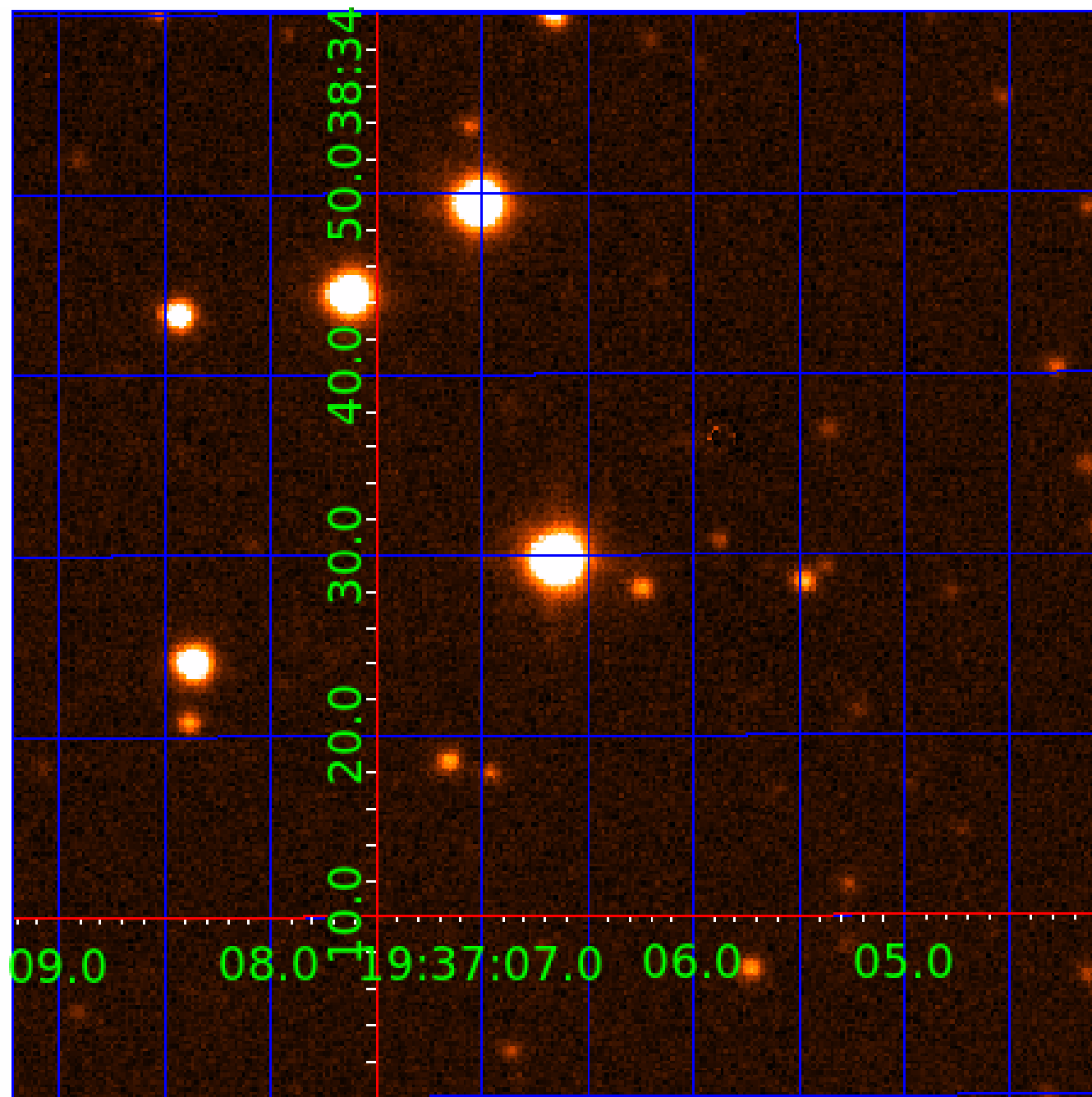


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UKIRT Image

Declination



KIC 003455094

Q1-17 DR25 TCE Parameters

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003455094-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003455094-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

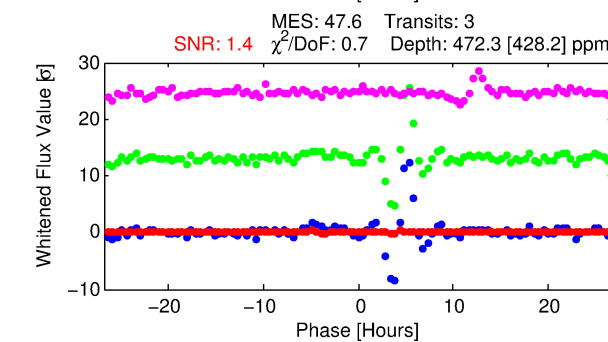
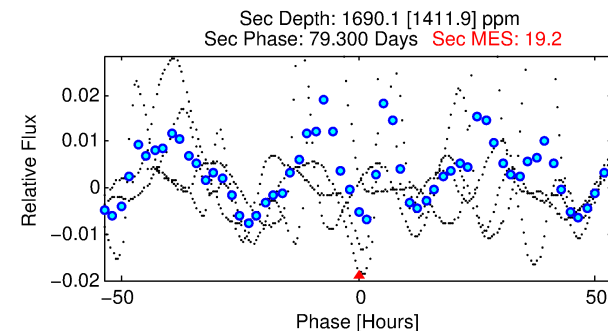
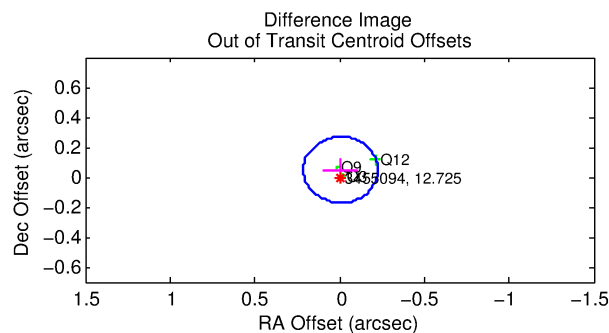
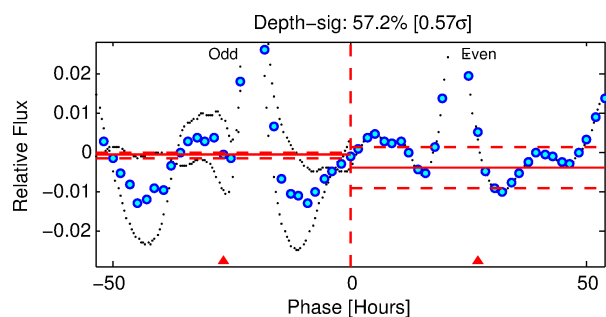
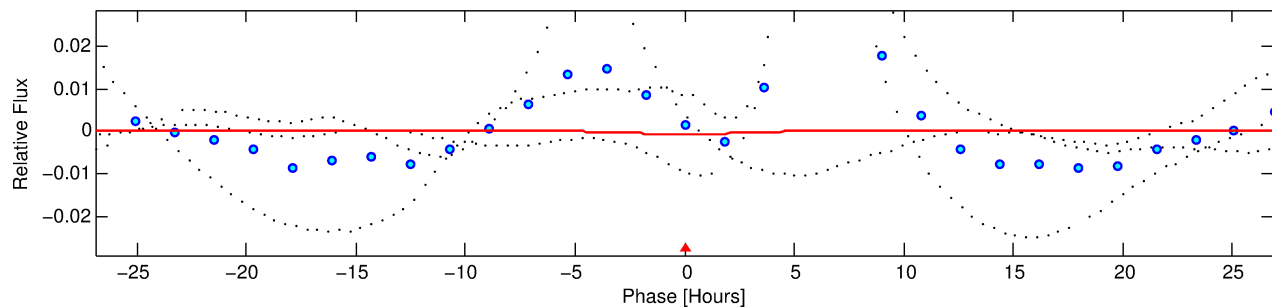
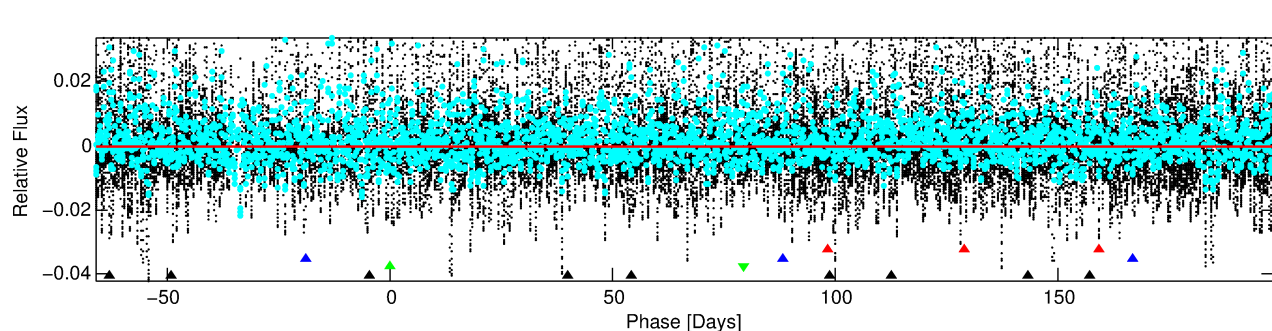
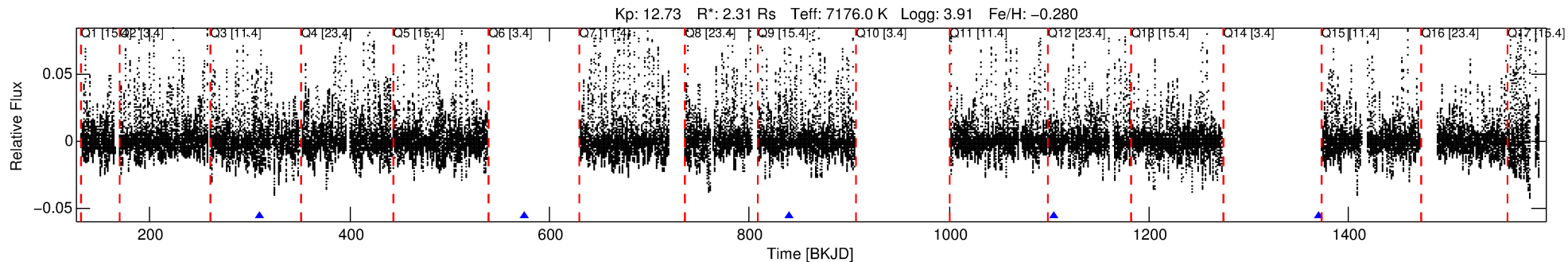
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003455094-03

No Significant Match Found

DV One-Page Summary

KIC: 3455094 Candidate: 3 of 4 Period: 264.904 d



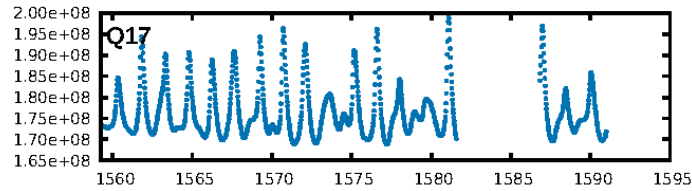
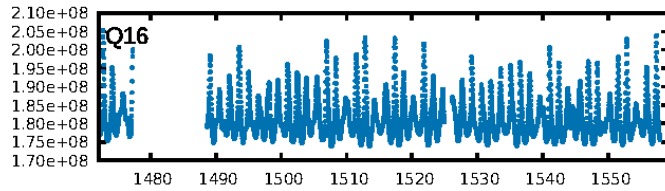
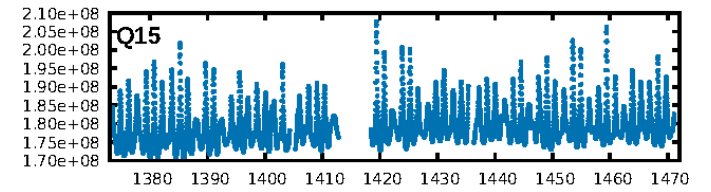
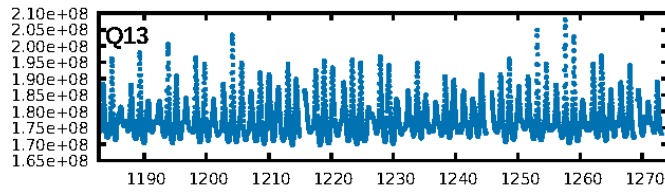
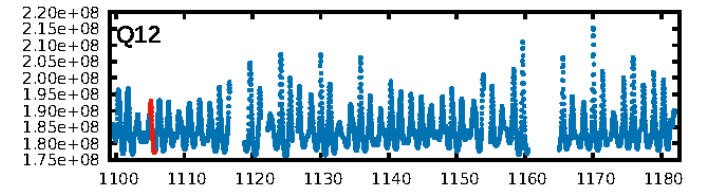
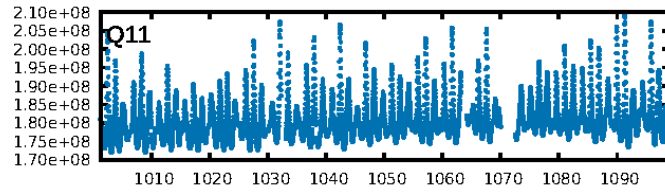
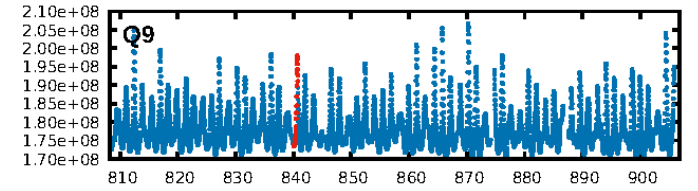
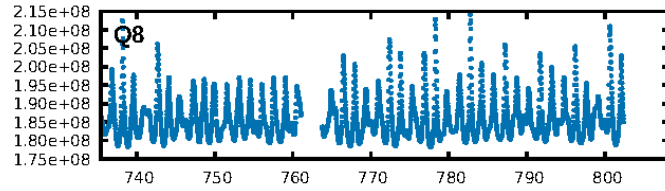
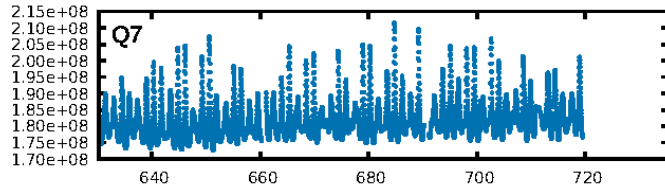
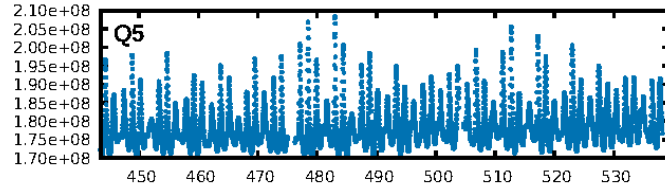
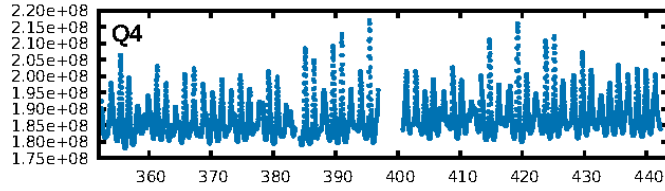
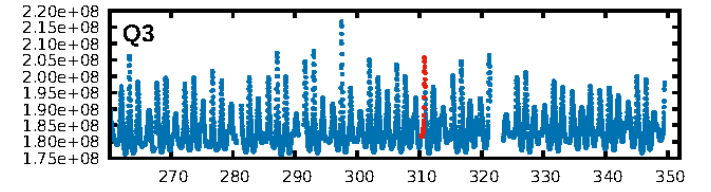
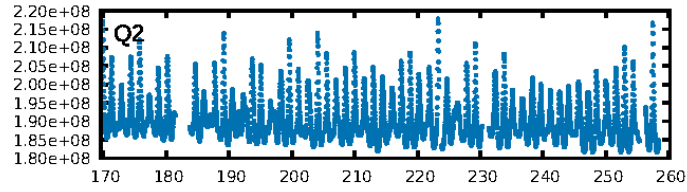
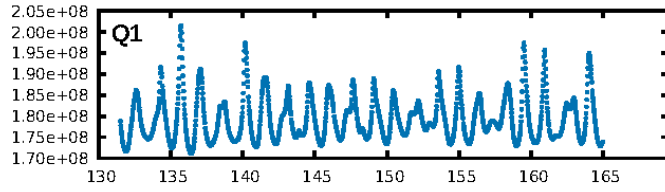
DV Fit Results:

Period = 264.90411 [0.00873] d
Epoch = 310.5954 [0.0151] BKJD
Rp/R* = 0.0209 [0.0205]
a/R* = 187.00 [699.42]
b = 0.60 [4.05]
Seff = 14.42 [8.45]
Teq = 497 [73] K
Rp = 5.27 [5.58] Re
a = 0.9387 [0.3415] AU
Ag = 29451.24 [64895.65] [0.45 σ]
Teffp = 10065 [5378] K [1.78 σ]

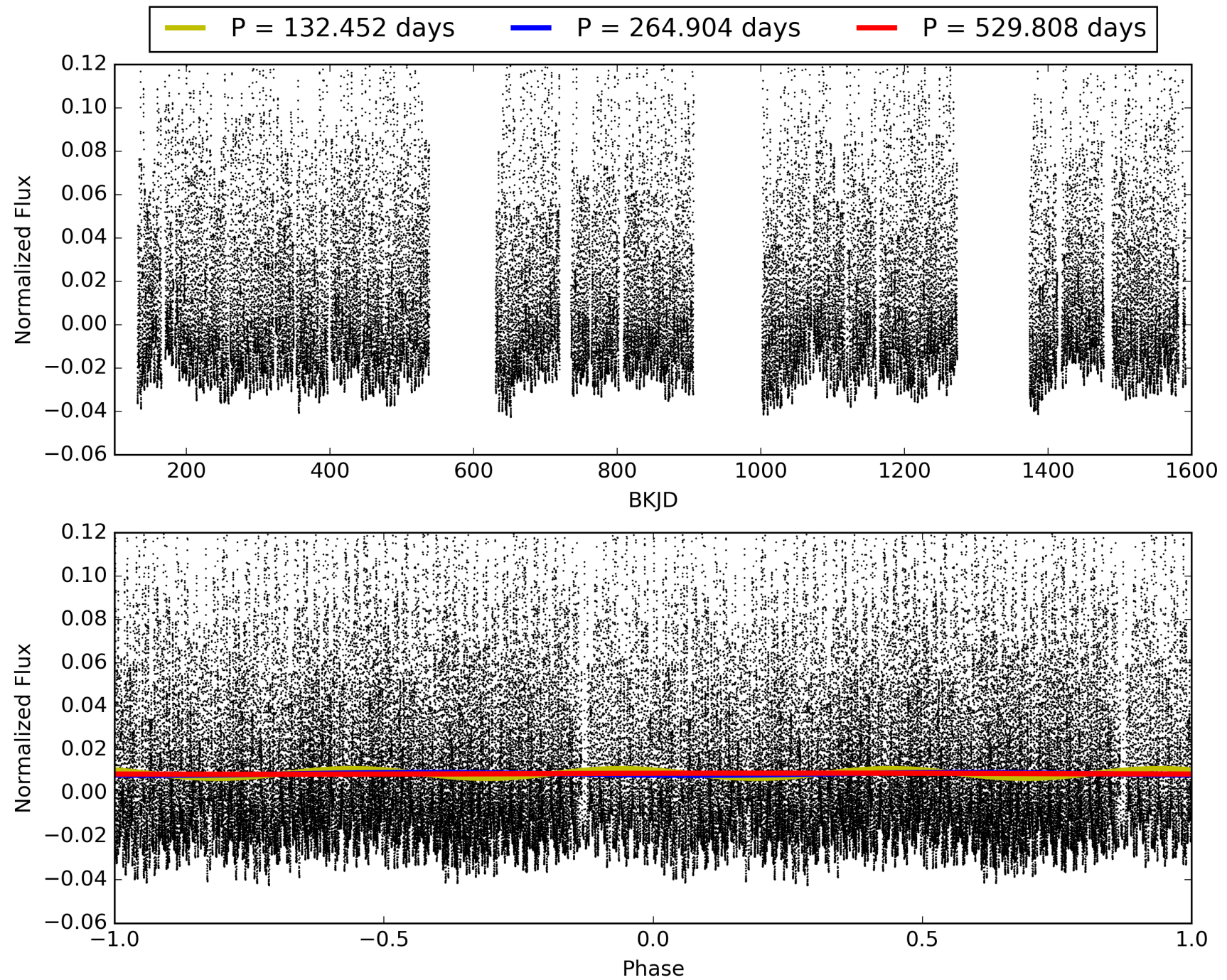
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [265.77 σ]
LongPeriod-sig: 100.0% [458.17 σ]
ModelChiSquare2-sig: 84.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.672
Centroid-sig: N/A
Centroid-so: 1.187 arcsec [0.77 σ]
OotOffset-rm: 0.049 arcsec [0.67 σ]
KicOffset-rm: 0.079 arcsec [0.95 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003455094-03, PDC Light Curves

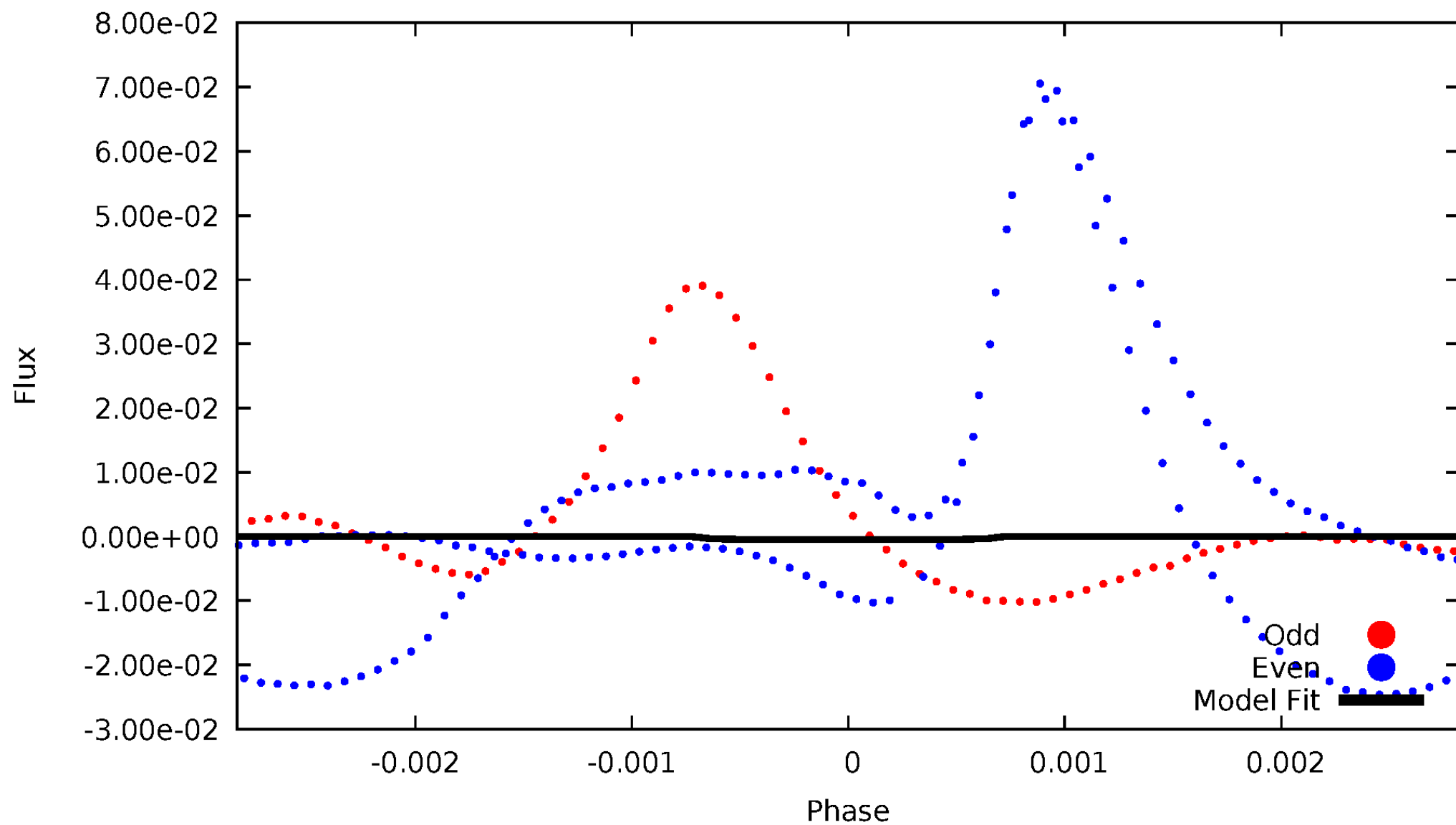


TCE 003455094-03



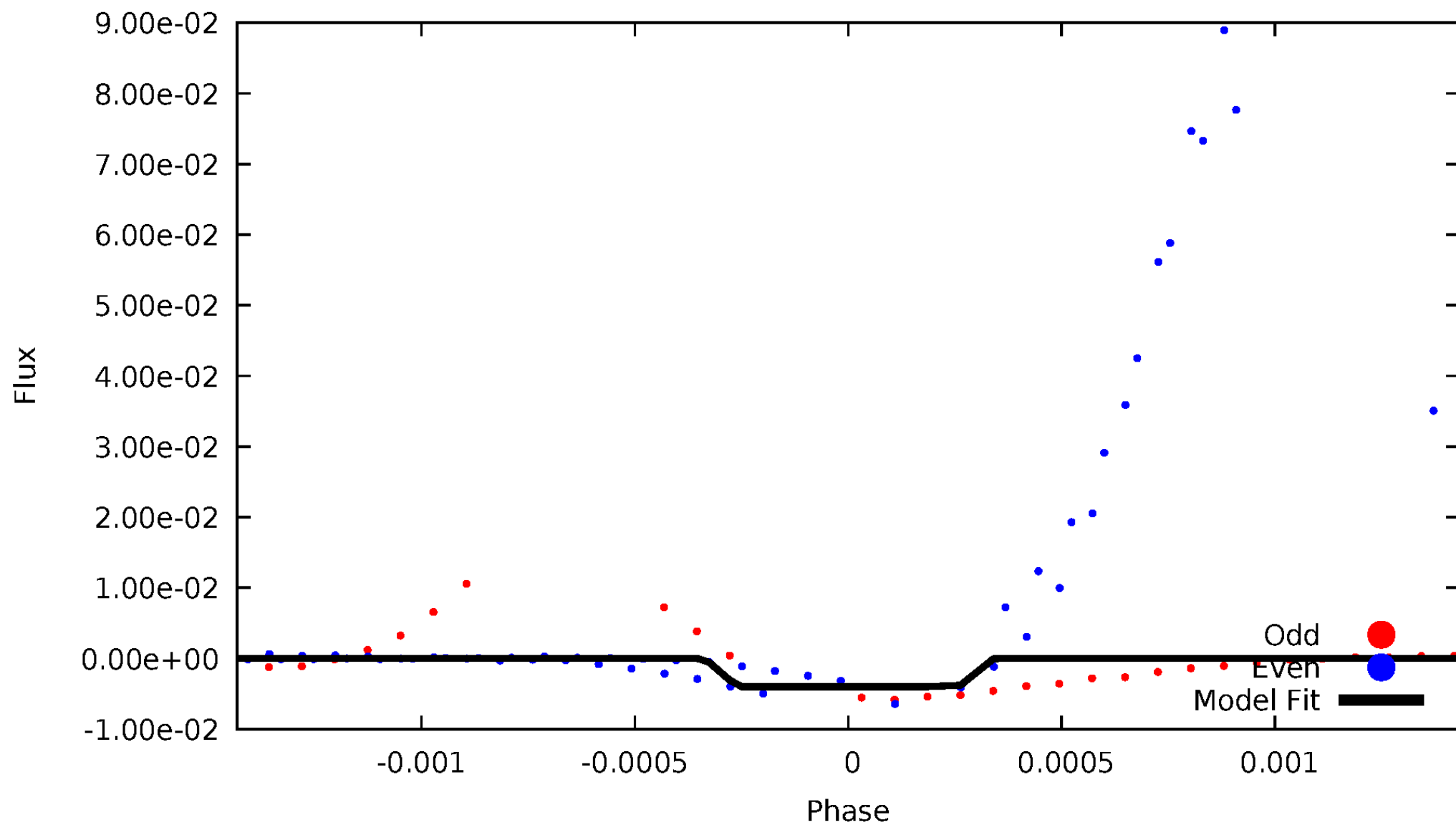
DV Odd/Even

TCE 003455094-03



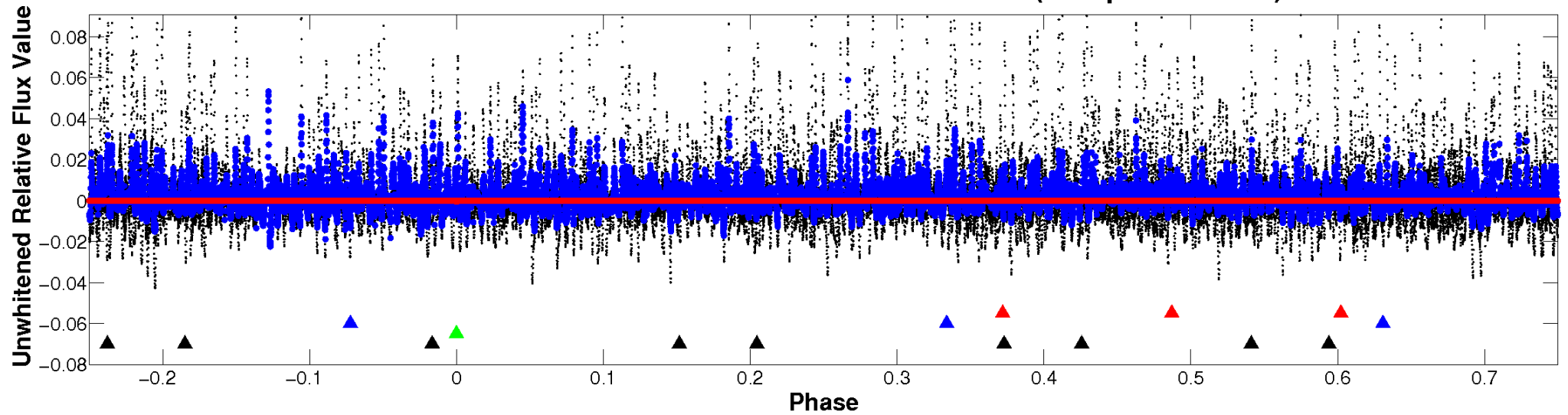
ALT Odd/Even

TCE 003455094-03

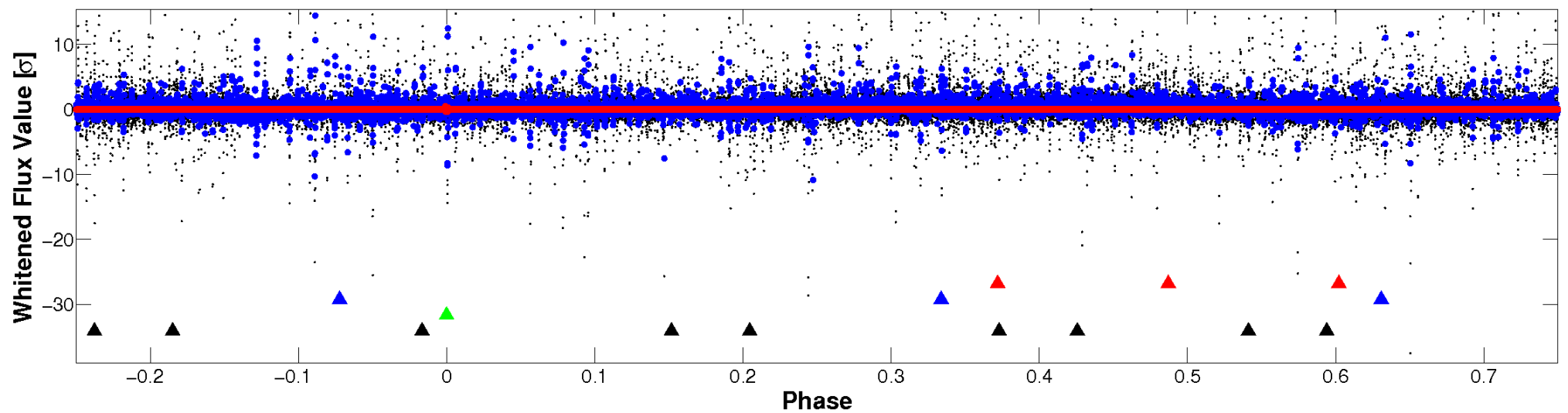


Non-Whitened Vs. Whitened Light Curve

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

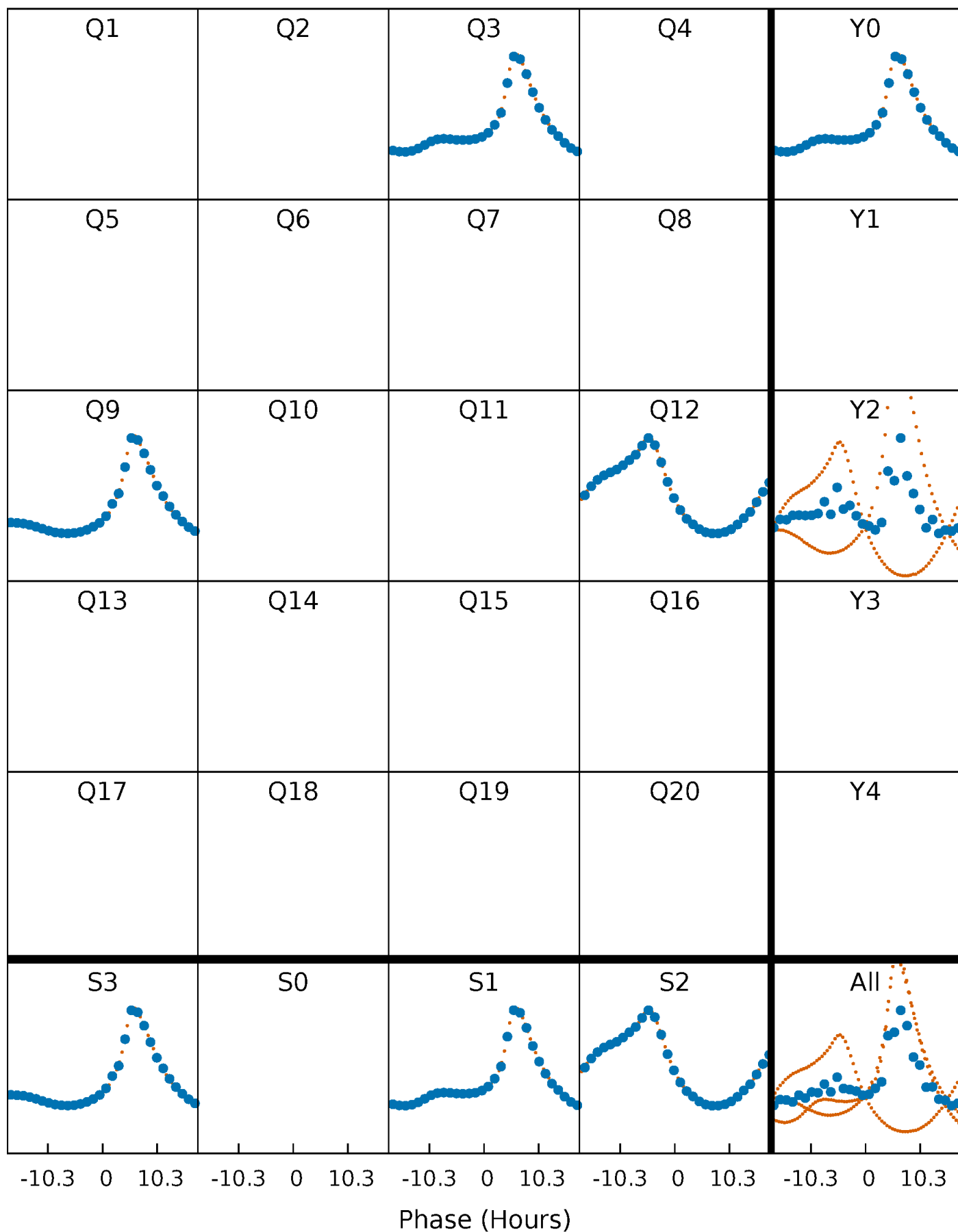


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



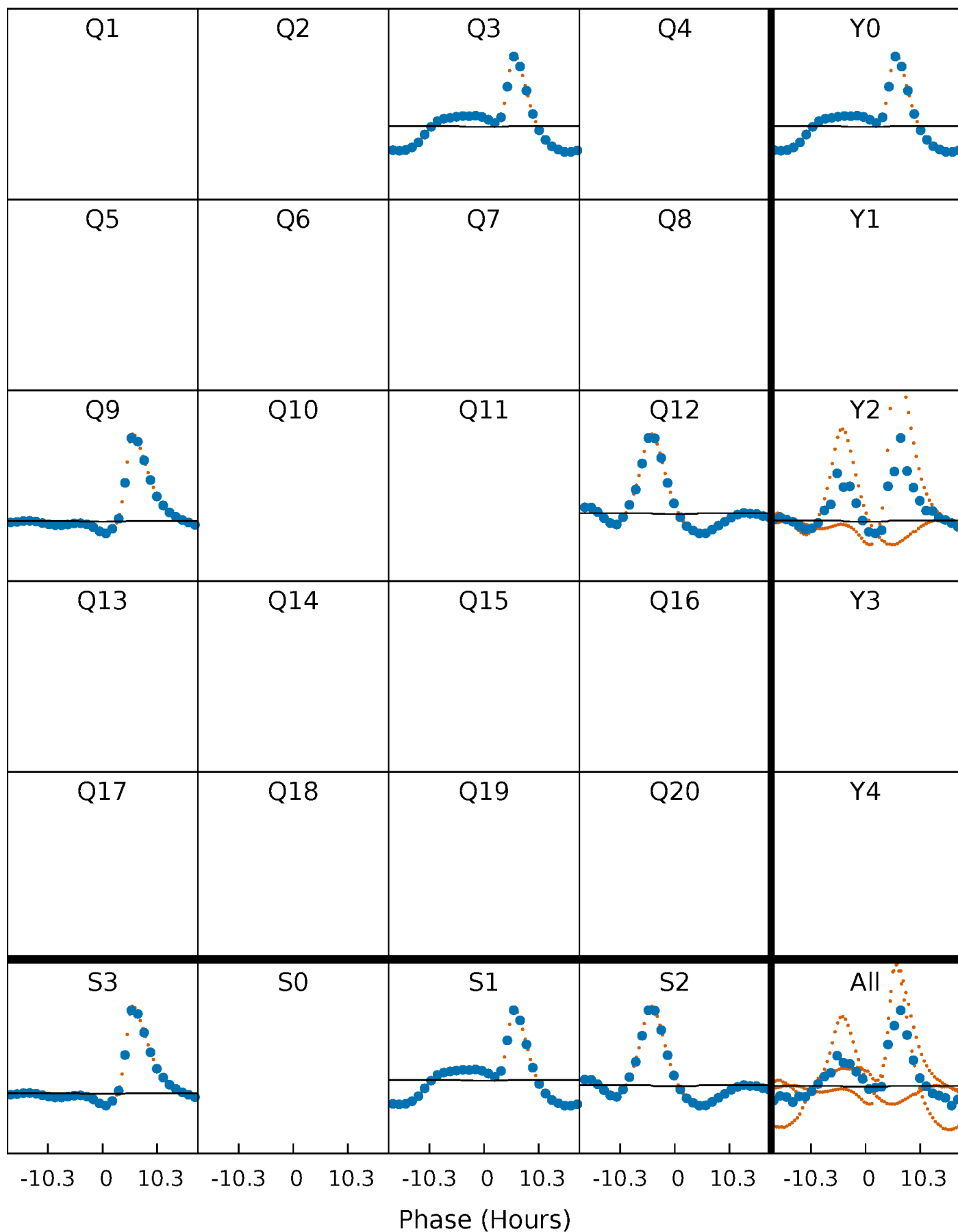
PDC Quarter-Phased Transit Curves

TCE 003455094-03 $P=264.904106$ Days $T_0=310.595439$ (BKJD)



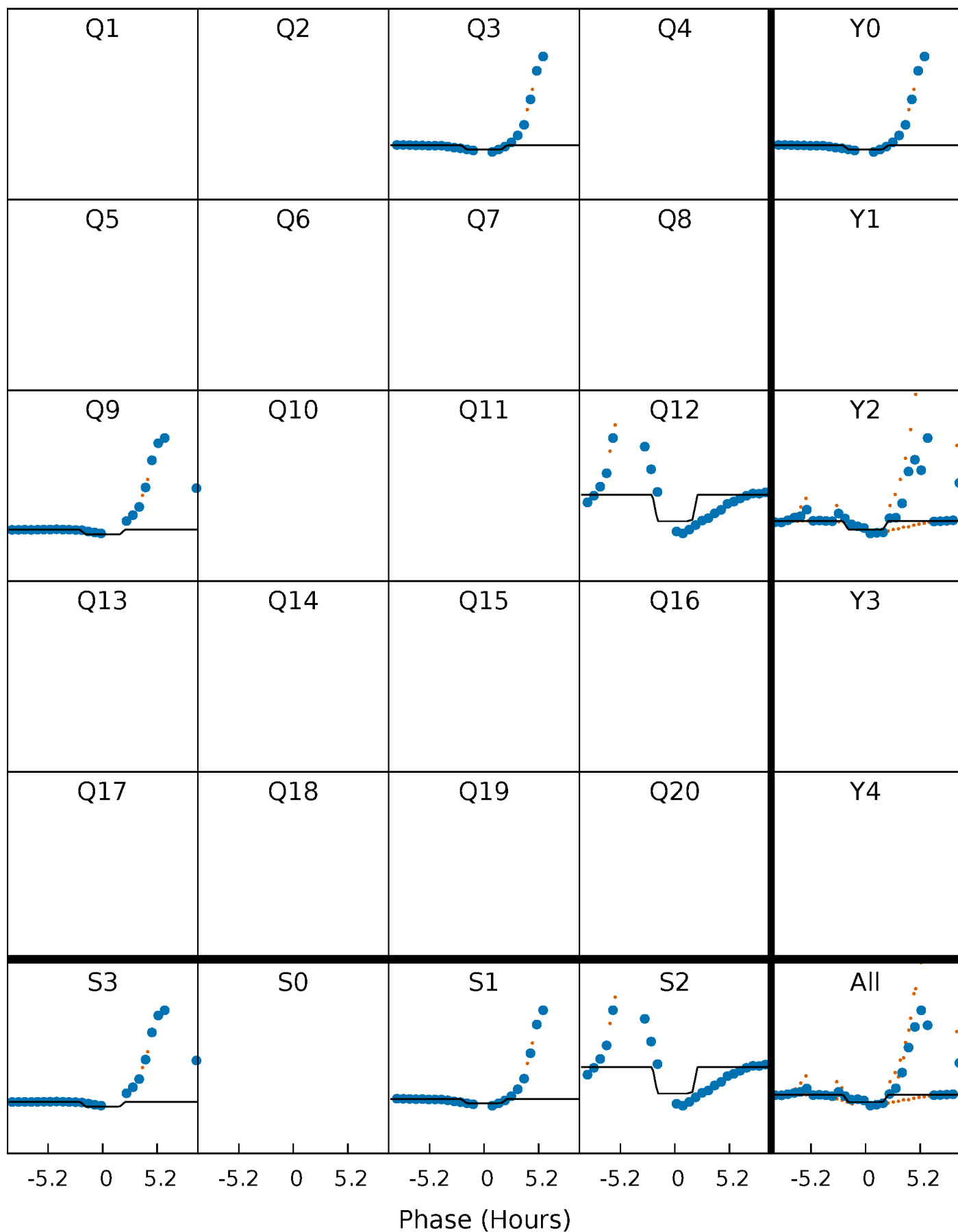
DV Quarter-Phased Transit Curves

TCE 003455094-03 $P=264.904106$ Days $T_0=310.595439$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

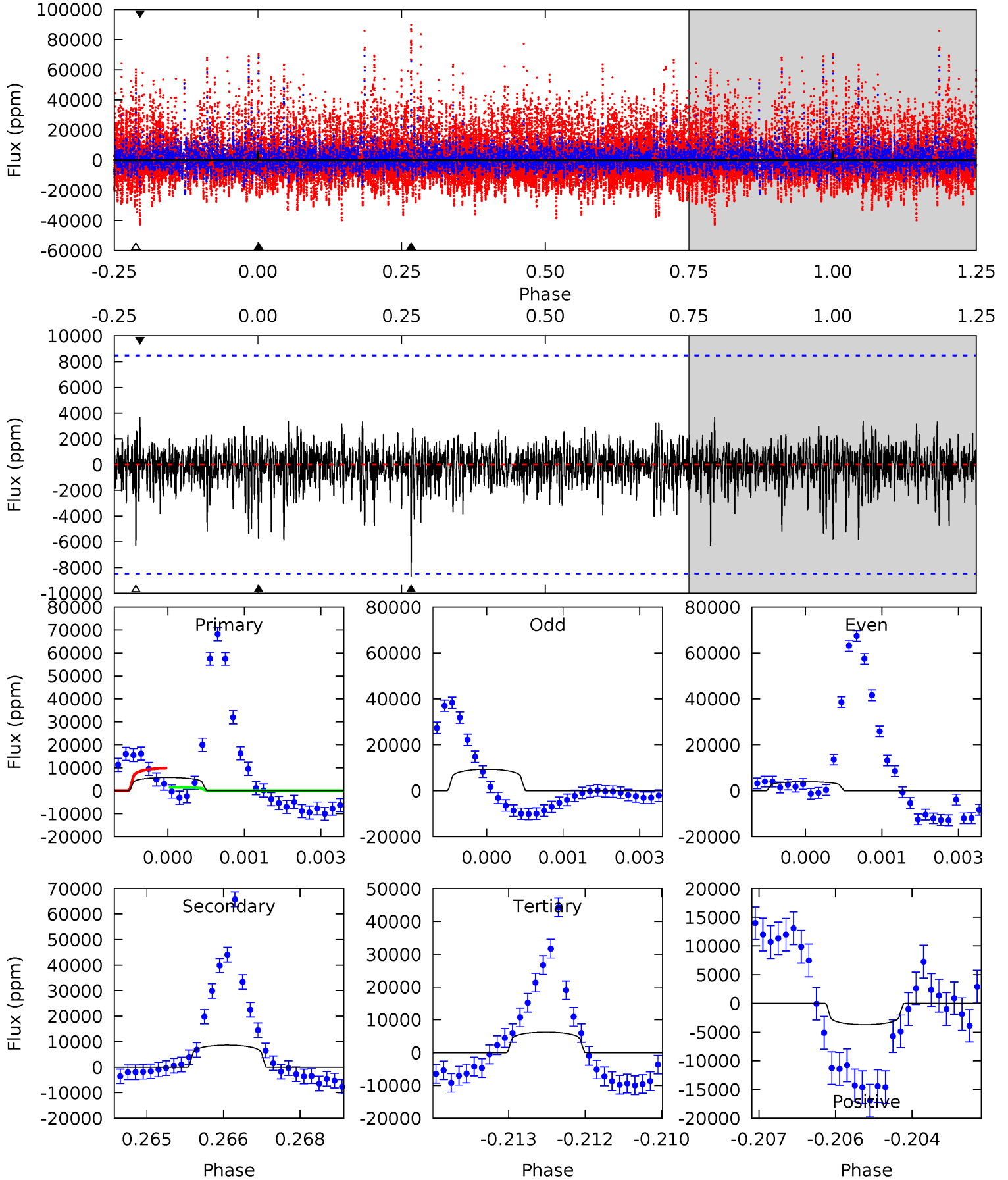
TCE 003455094-03 $P=264.907330$ Days $T_0=310.583148$ (BKJD)



DV Model-Shift Uniqueness Test

003455094-03, P = 264.904106 Days, E = 45.691333 Days

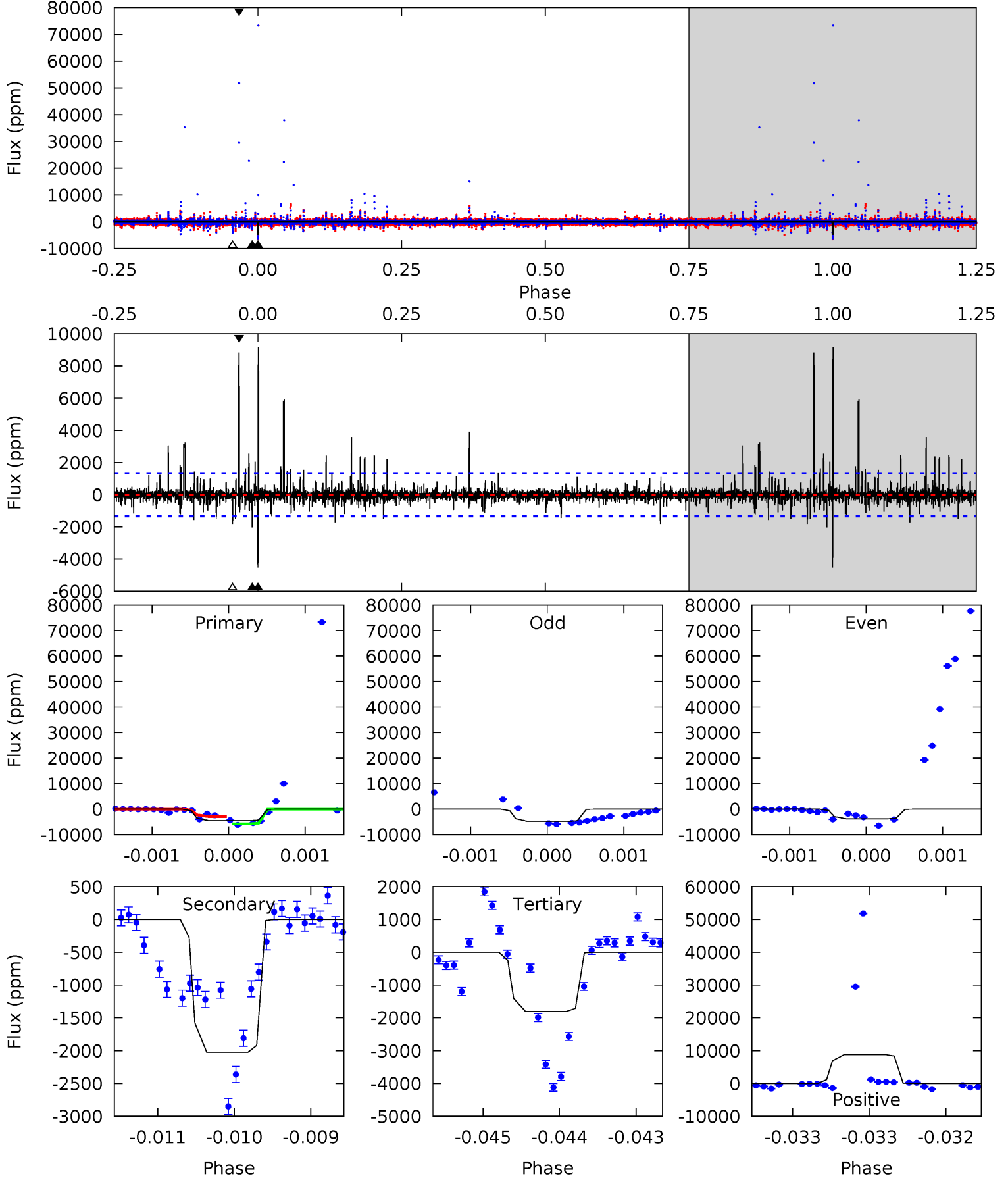
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.67	5.51	3.99	2.35	5.39	3.19	0.79	-0.32	1.32	1.52	3.16	1.45	0.60	0.30	2.69



Alt Model-Shift Uniqueness Test

003455094-03, P = 264.907330 Days, E = 45.675818 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	8.32	7.41	36.3	5.52	3.40	1.33	11.1	-17.7	0.91	-28.0	0.79	0.85	0.67	5.60



Stellar Parameters For KIC 003455094

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7176^{+224}_{-299}	$3.906^{+0.322}_{-0.138}$	$-0.280^{+0.250}_{-0.350}$	$2.313^{+0.499}_{-0.926}$	$1.568^{+0.217}_{-0.352}$	$0.179^{+0.428}_{-0.073}$
	+3%/-4%	+8%/-4%	+89%/-125%	+22%/-40%	+14%/-22%	+240%/-41%
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 003455094-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8664 ± 1572	$5.85^{+5.13}_{-3.54}$	684^{+49}_{-67}	20567^{+55512}_{-8793}	$119753^{+661558}_{-84122}$
Alt.	-2026 ± 243	$14.76^{+6.91}_{-5.39}$	681^{+49}_{-65}	5954^{+1677}_{-768}	4361^{+6434}_{-2264}

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

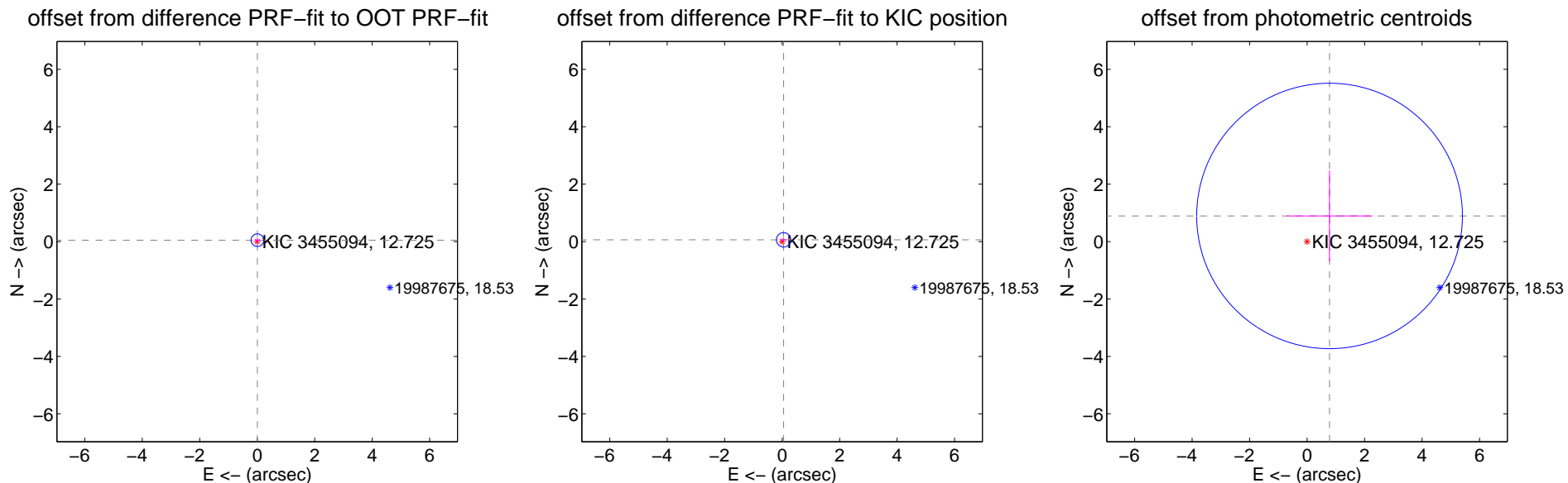
DV Centroid Data

Supplemental centroid analysis for 003455094-03. Kepler magnitude: 12.72. Transit SNR 1.42

There are 2 quarters with good PRF difference image offsets

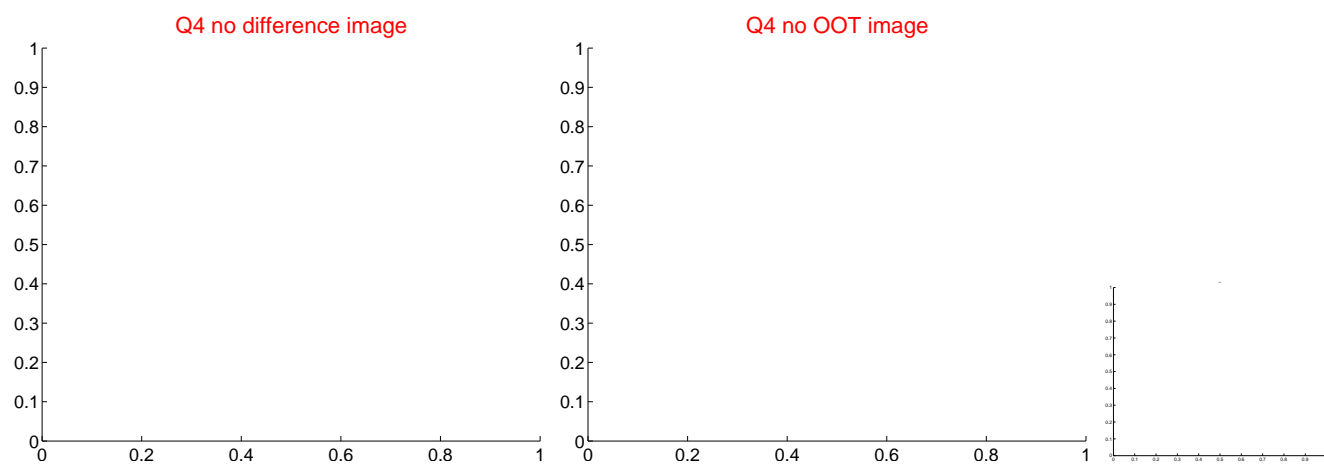
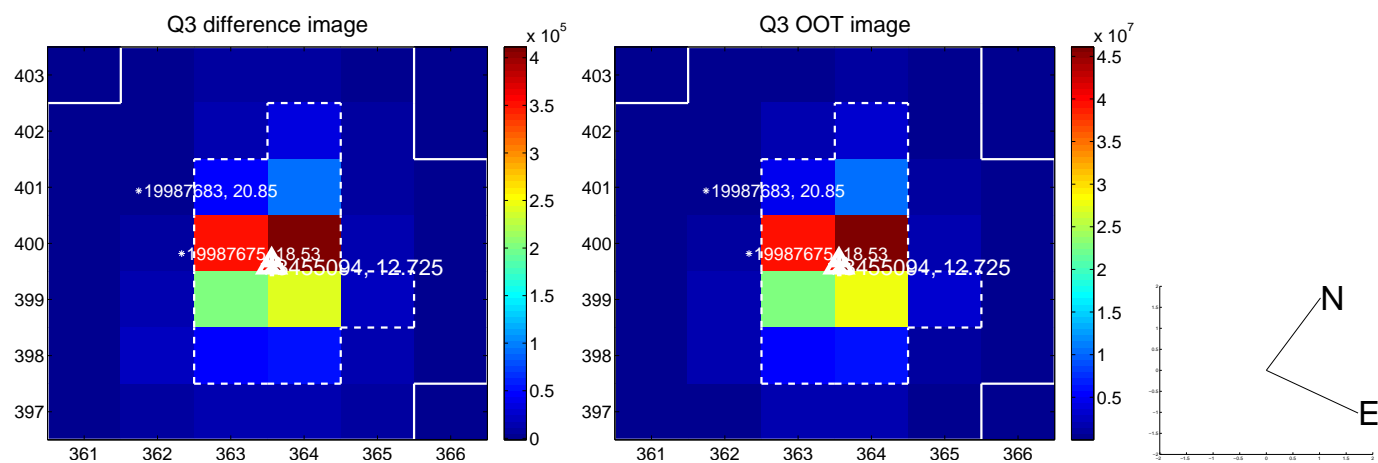
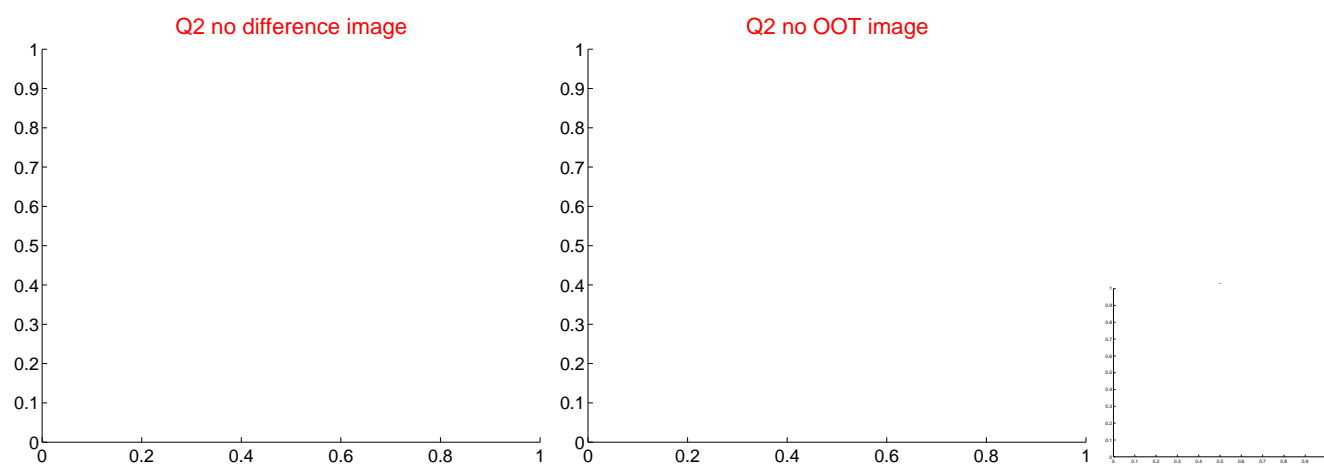
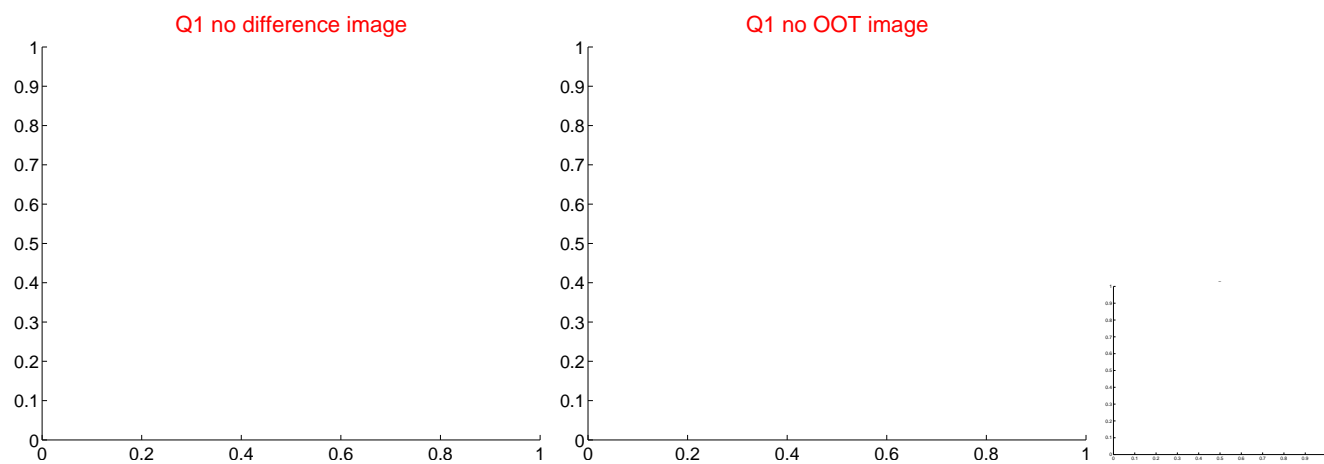
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.073	0.67	-0.006 ± 0.094	0.049 ± 0.071
PRF-fit source offset from KIC position	0.079 ± 0.084	0.95	-0.051 ± 0.096	0.061 ± 0.068
photometric centroid source offset	1.19 ± 1.54	0.77	-0.78 ± 1.48	0.89 ± 1.58



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.

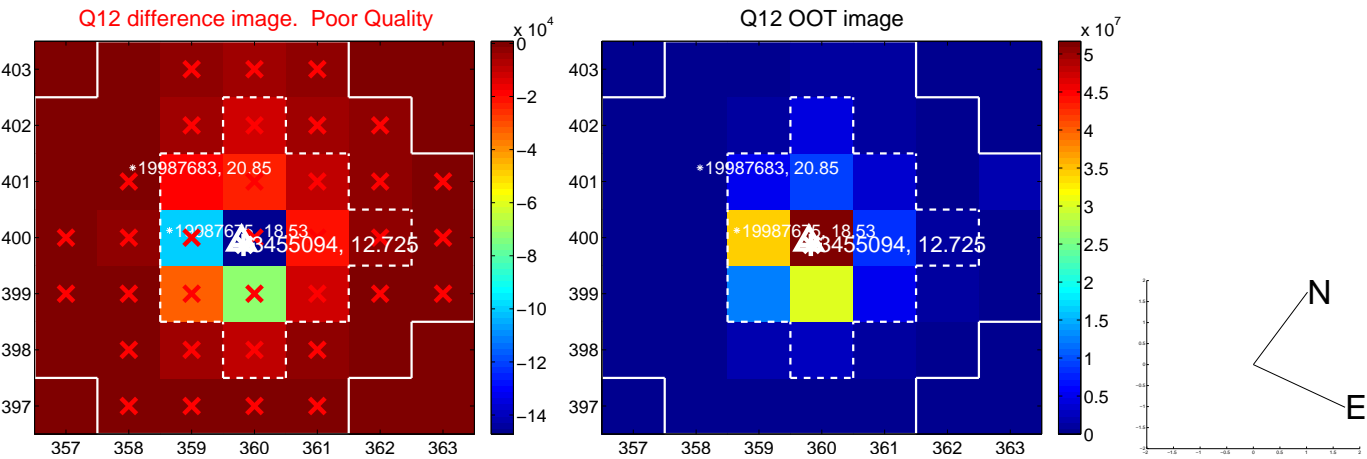
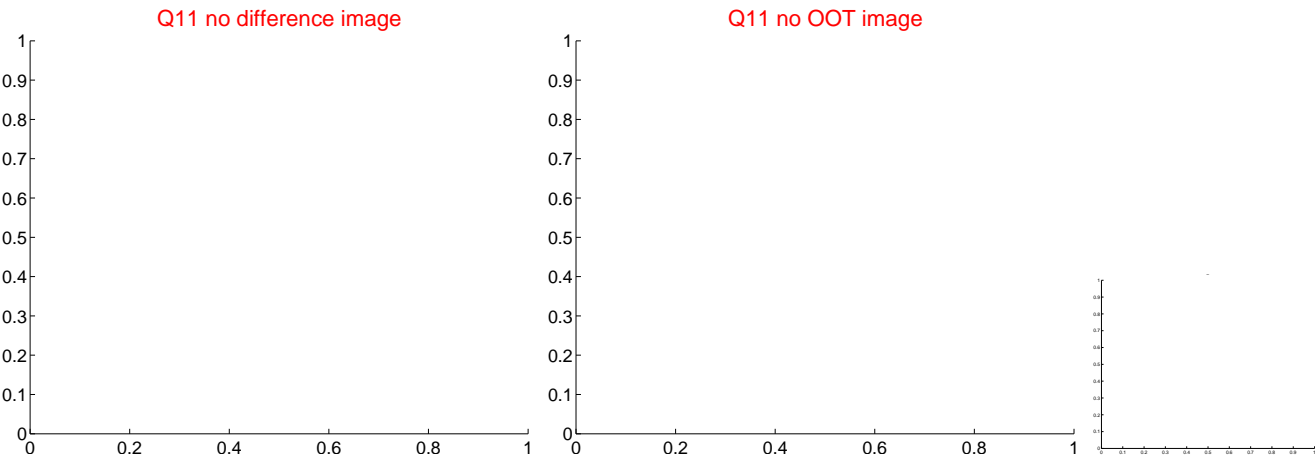
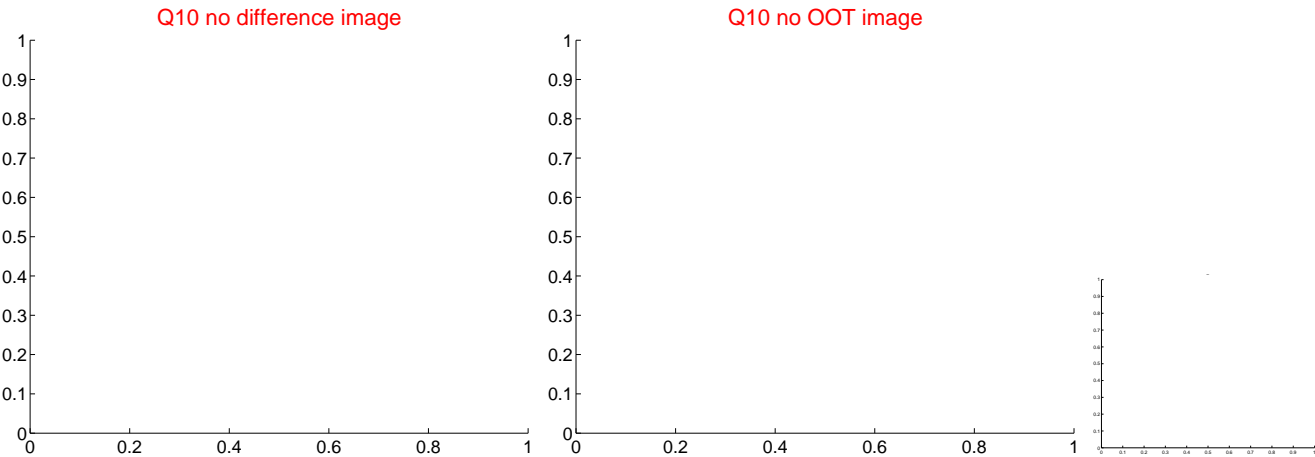
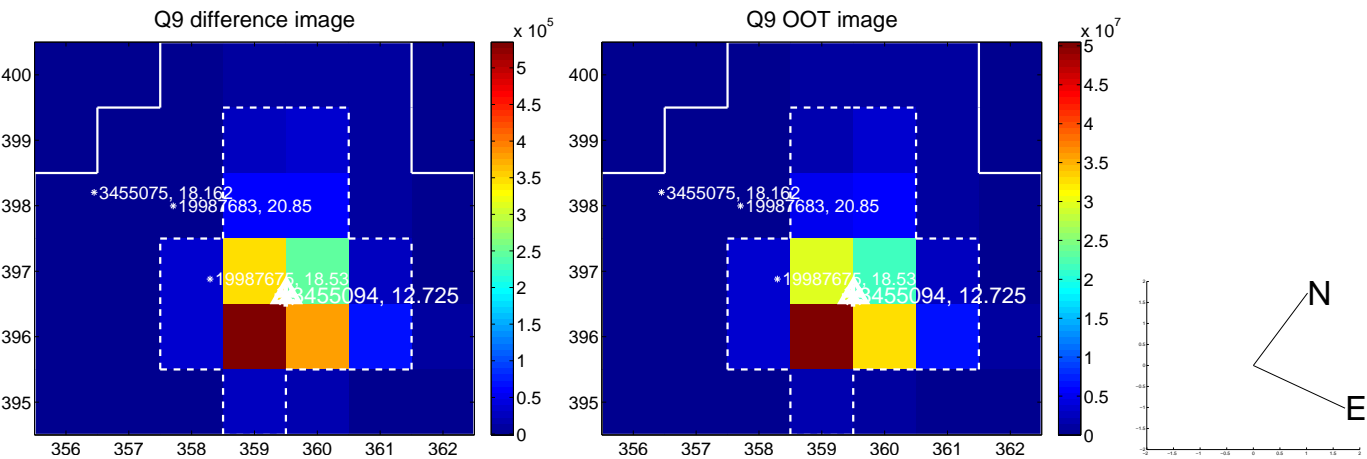
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



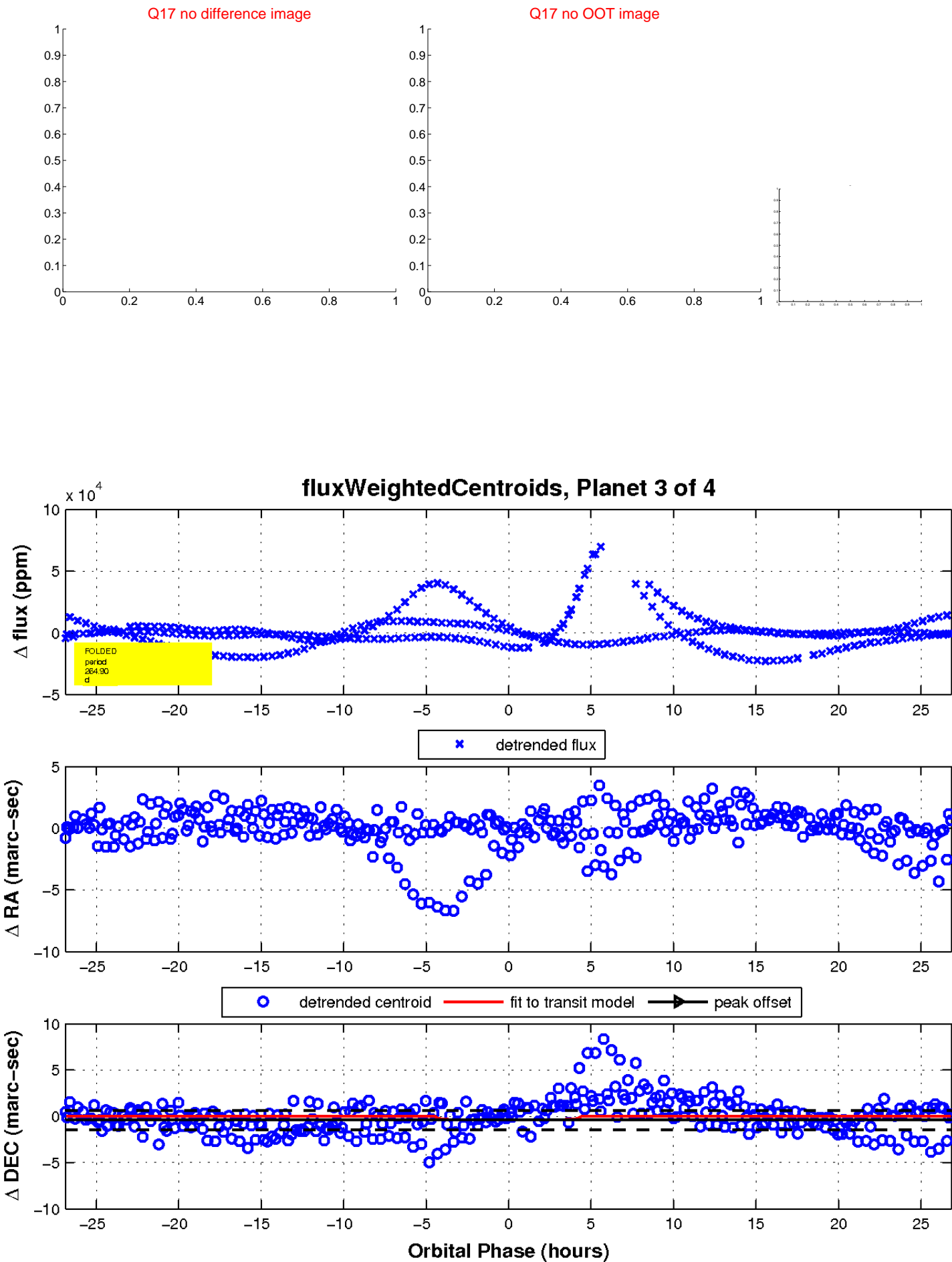
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

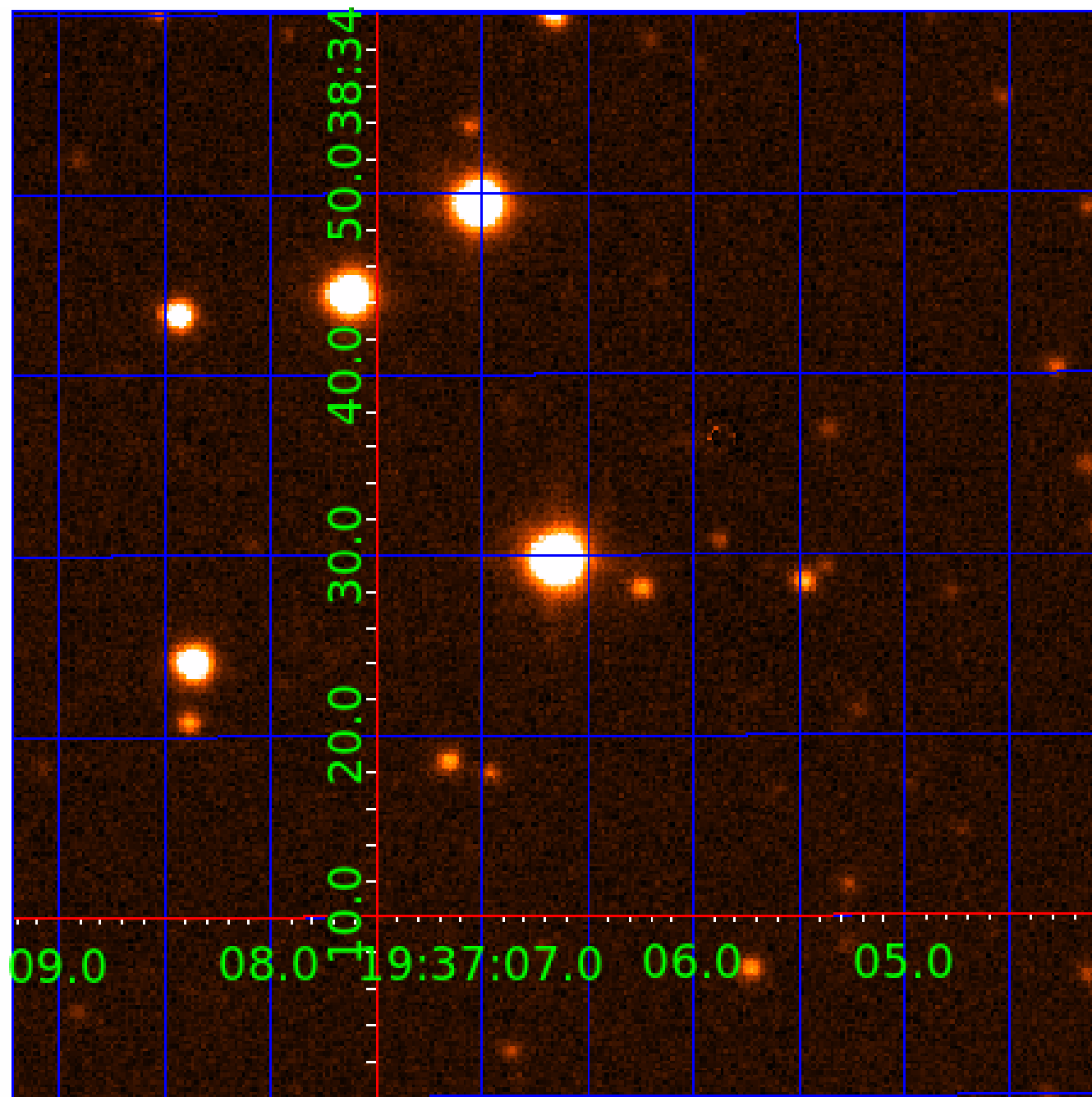


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003455094

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})
003455094-01	OBS	No	499.308565	205.213791	1111.0	6.722	61.2	3.0	2.31	7176	7.83	6.20
003455094-03	OBS	No	264.904106	310.595439	472.3	8.974	47.6	1.4	2.31	7176	5.27	14.42
003455094-04	OBS	No	161.740420	189.057883	1934.7	2.500	41.4	-1.0	2.31	7176	10.29	27.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003455094-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003455094-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003455094-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

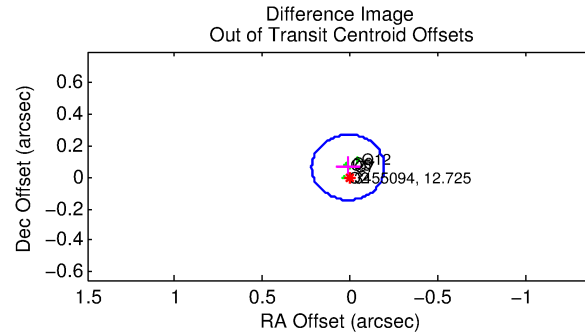
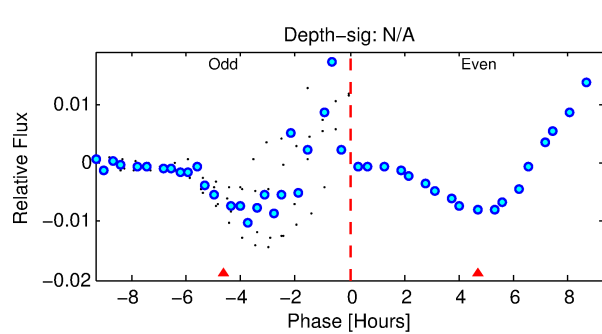
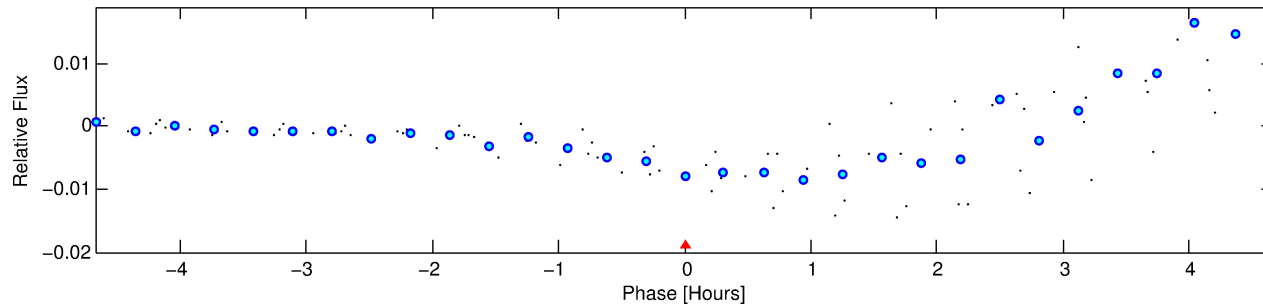
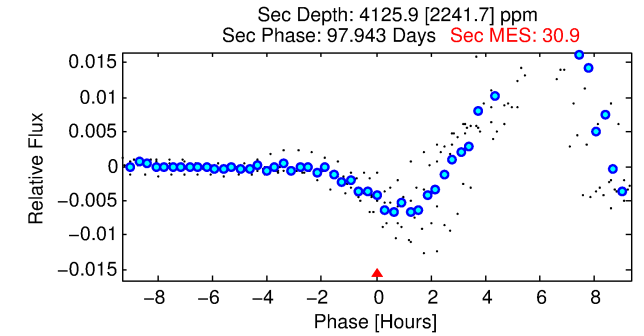
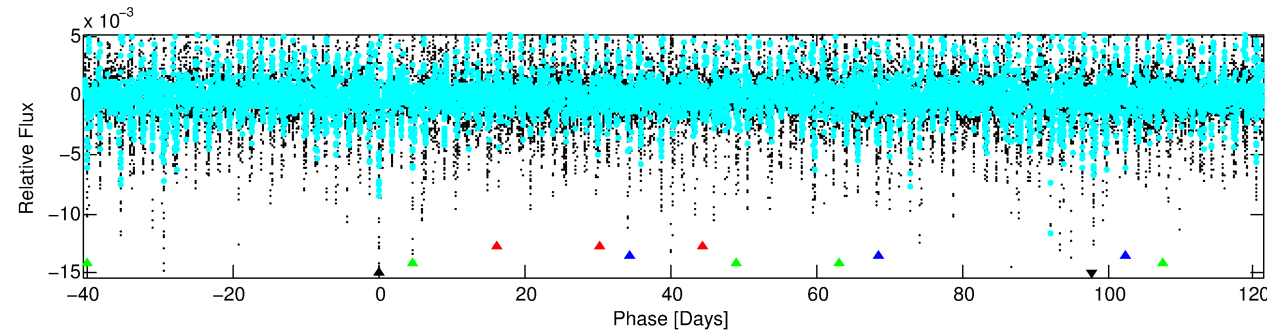
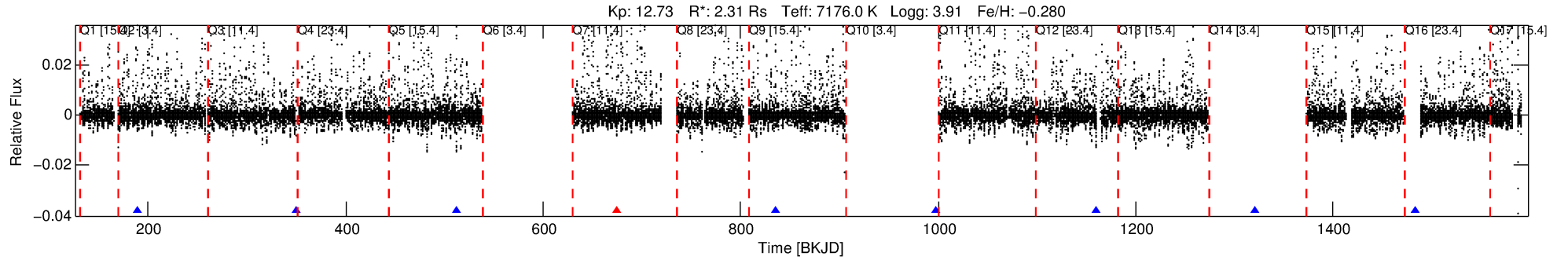
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003455094-04

No Significant Match Found

DV One-Page Summary

KIC: 3455094 Candidate: 4 of 4 Period: 161.740 d



TPS TCE Results:

Period = 161.74042 d
Epoch = 189.0579 BKJD

DV fit results are unavailable

DV Diagnostic Results:

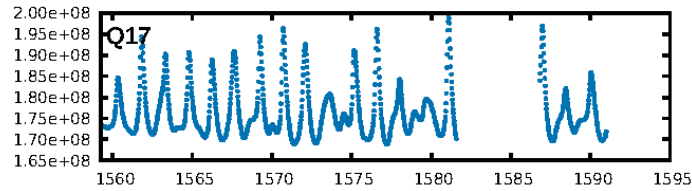
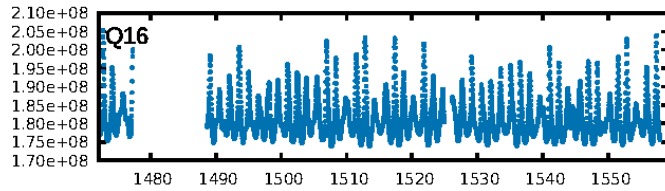
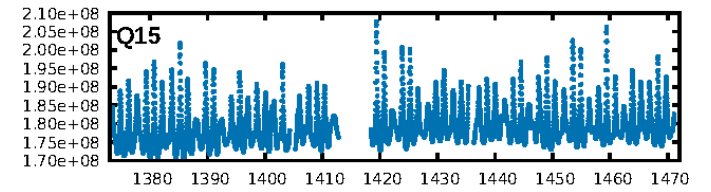
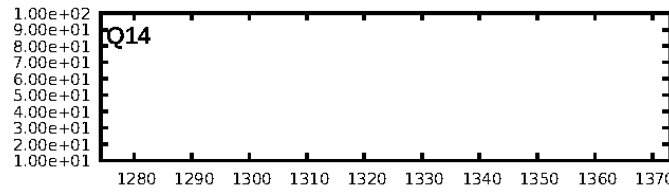
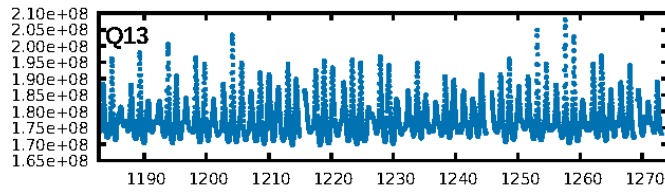
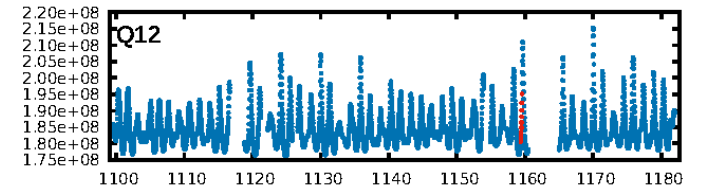
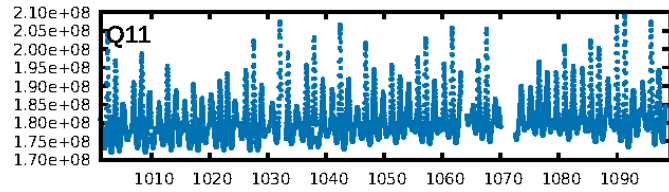
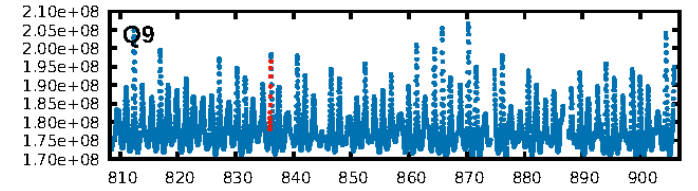
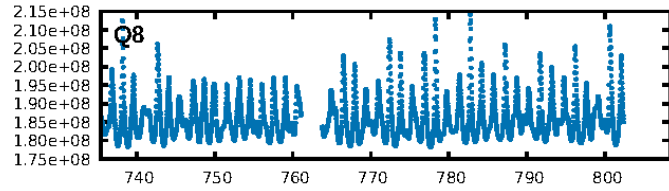
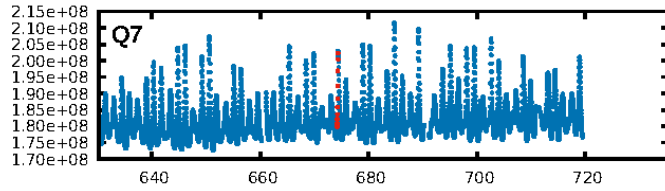
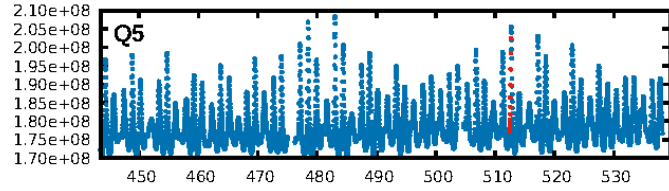
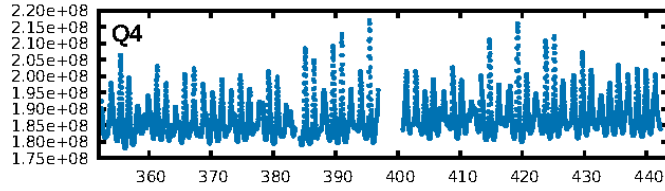
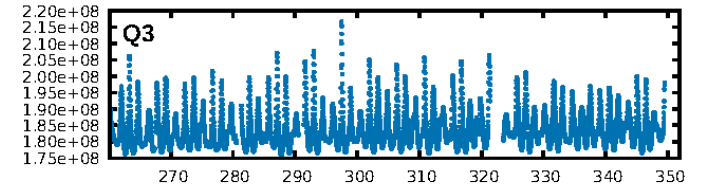
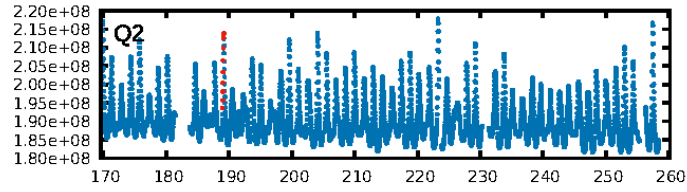
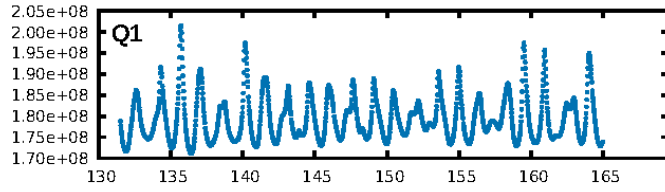
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [265.77σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 1.938

Centroid-sig: N/A
Centroid-so: 0.156 arcsec [2.10σ]
OotOffset-rm: 0.066 arcsec [0.96σ]
KicOffset-rm: 0.065 arcsec [0.86σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [5/5]

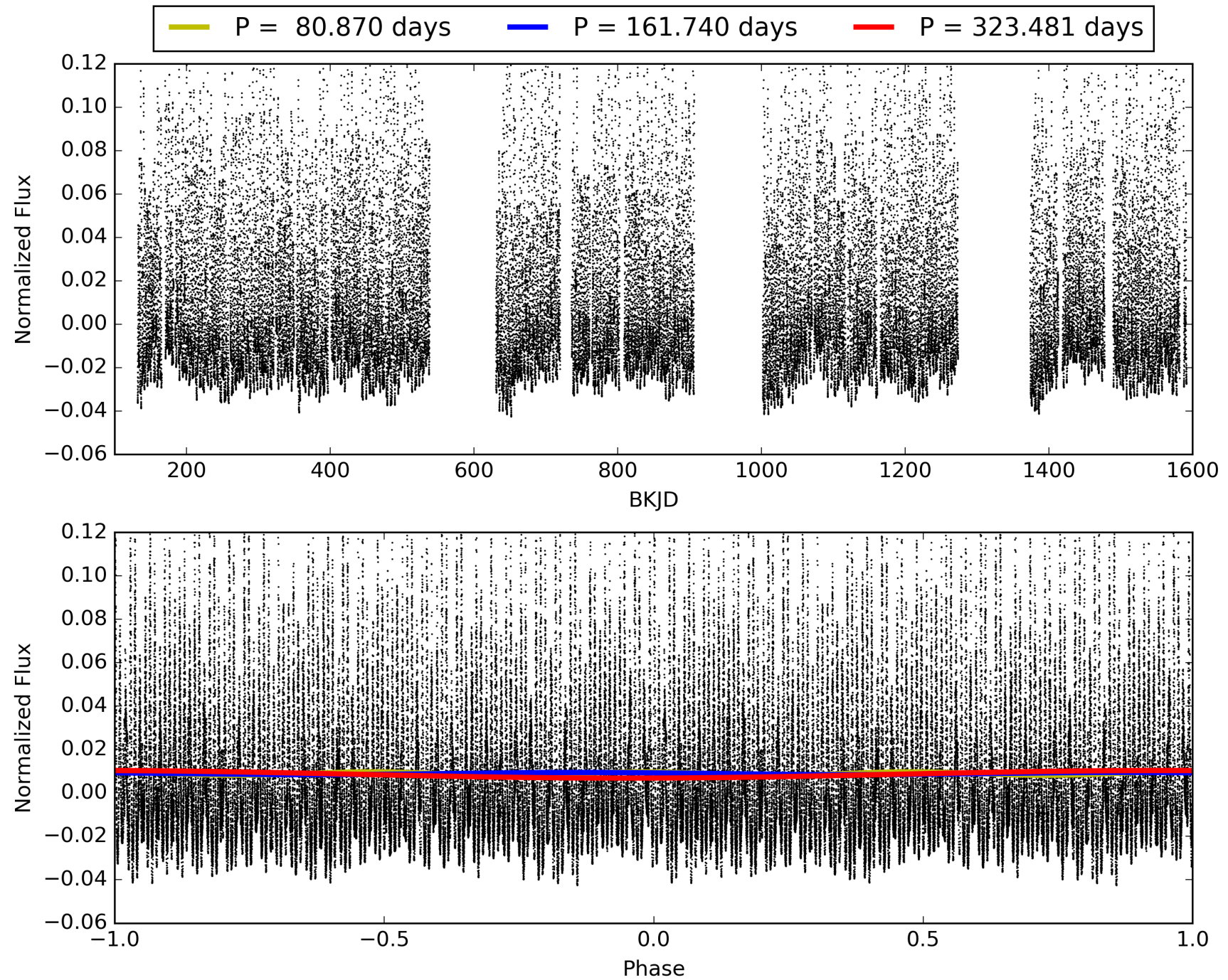
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:29:36 Z

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

TCE 003455094-04, PDC Light Curves

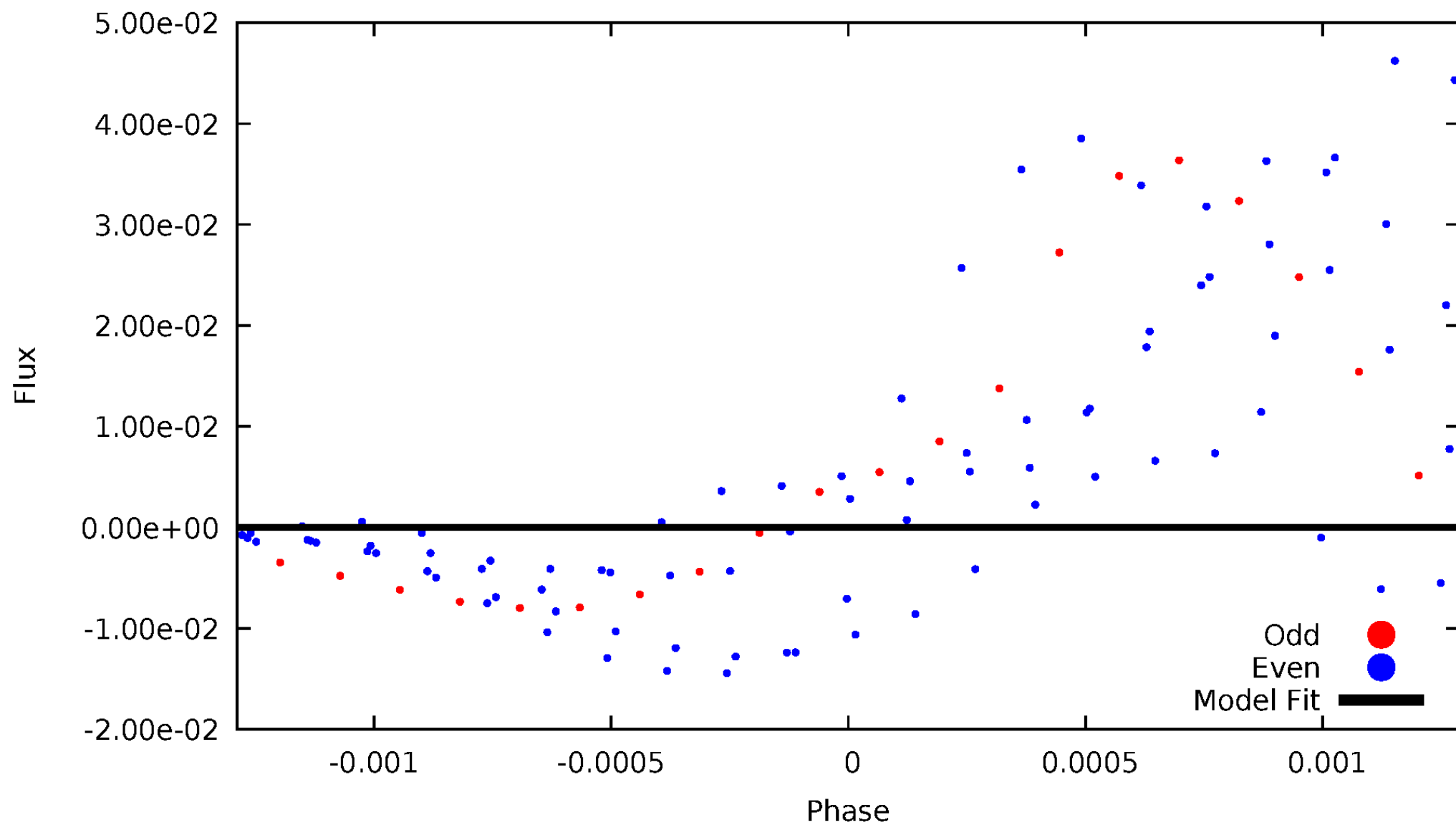


TCE 003455094-04



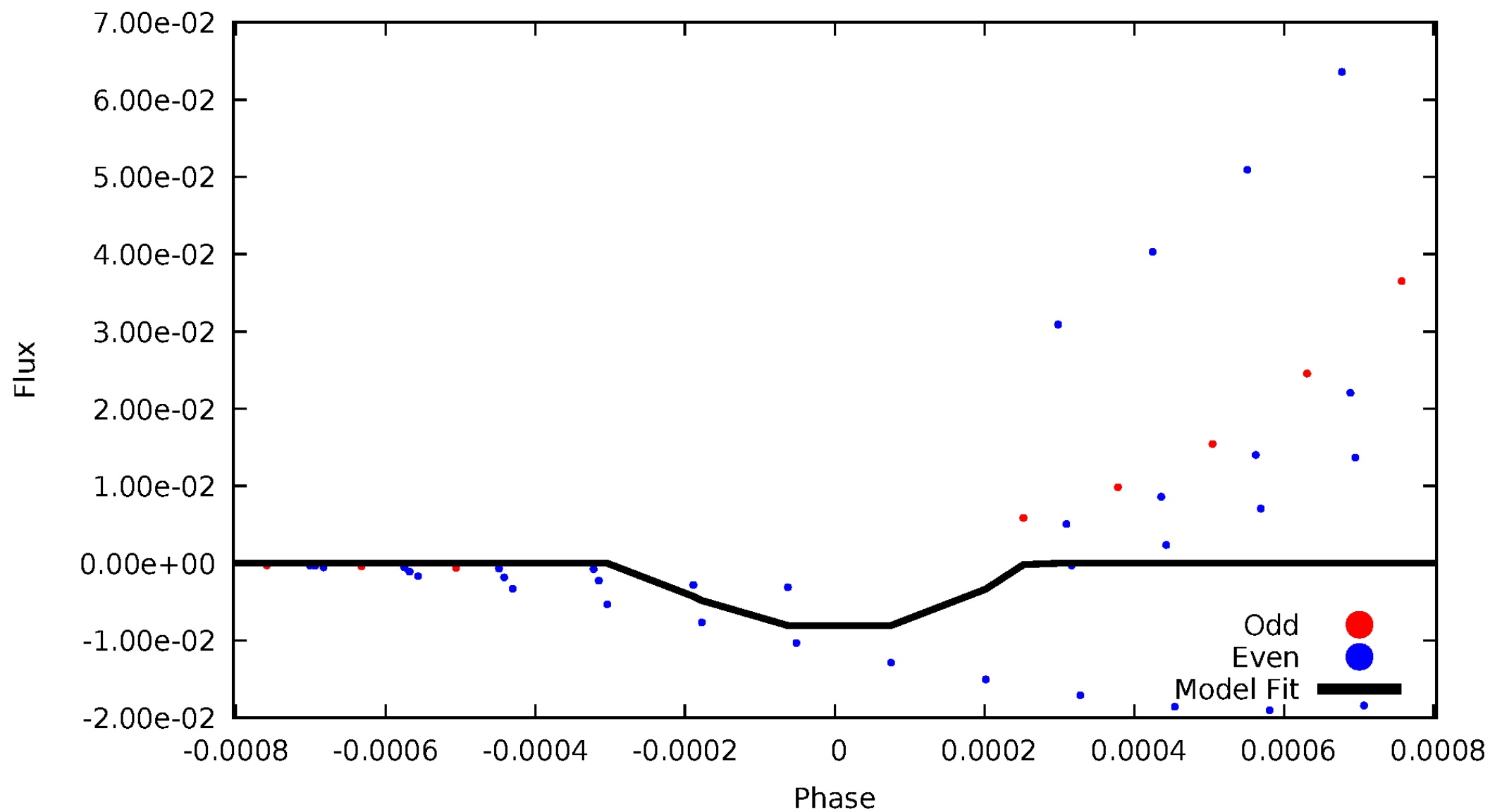
DV Odd/Even

TCE 003455094-04



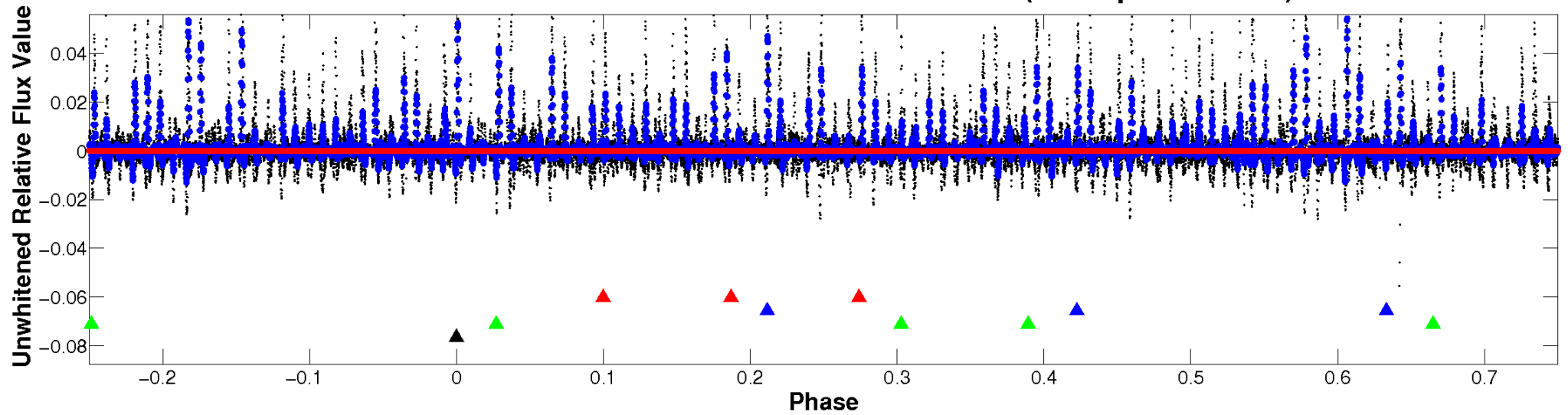
ALT Odd/Even

TCE 003455094-04

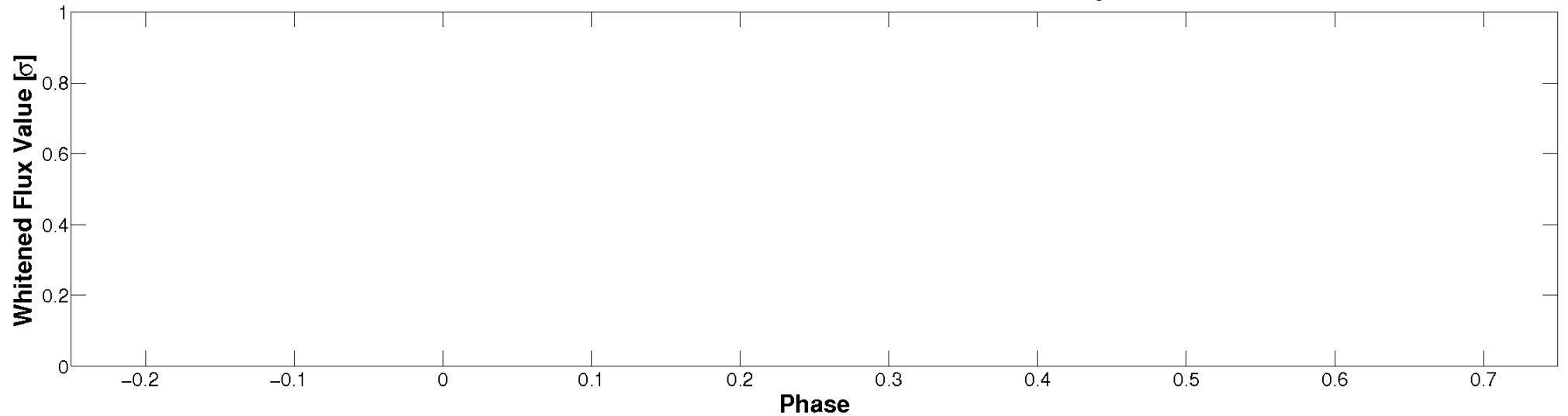


Non-Whitened Vs. Whitened Light Curve

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

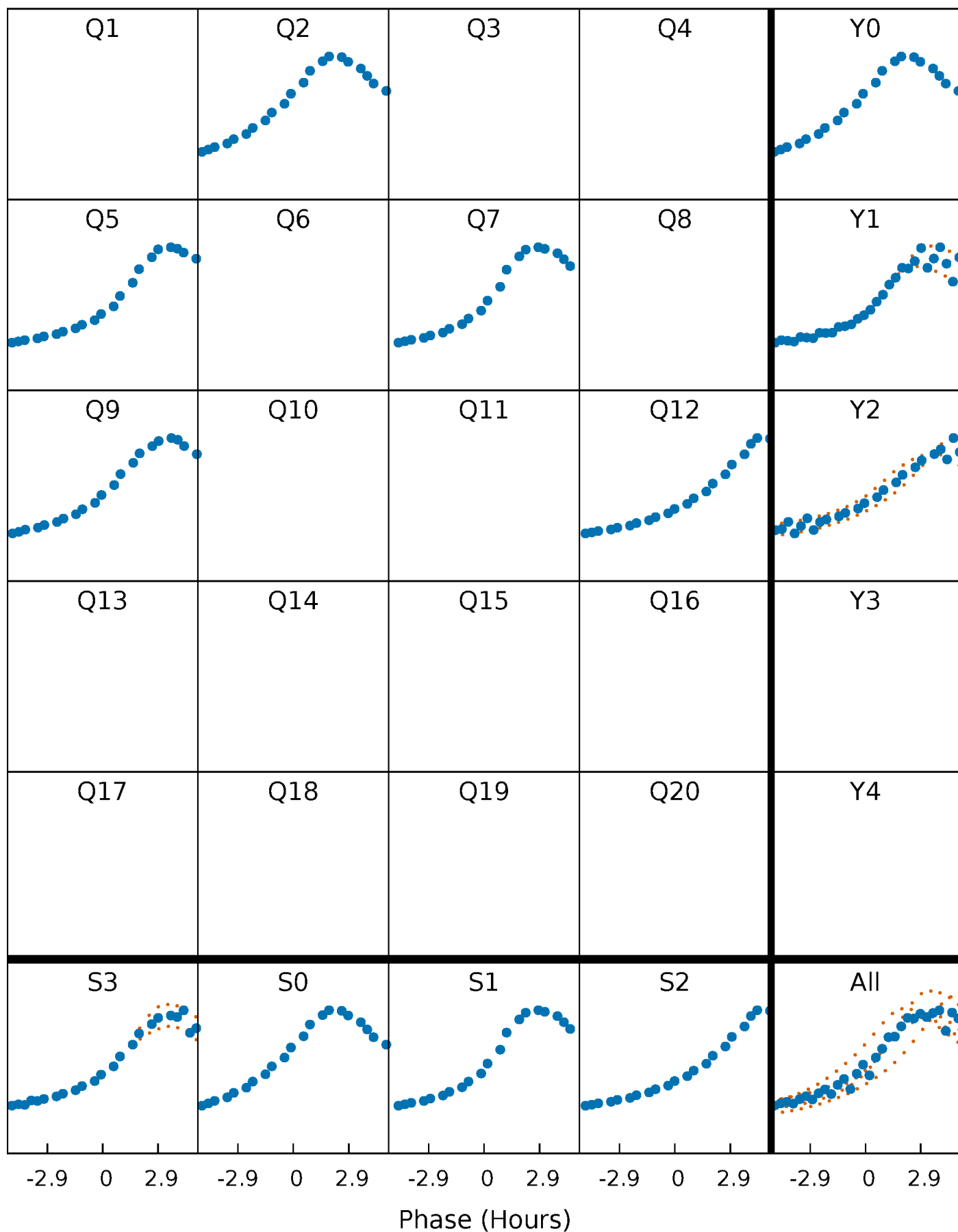


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



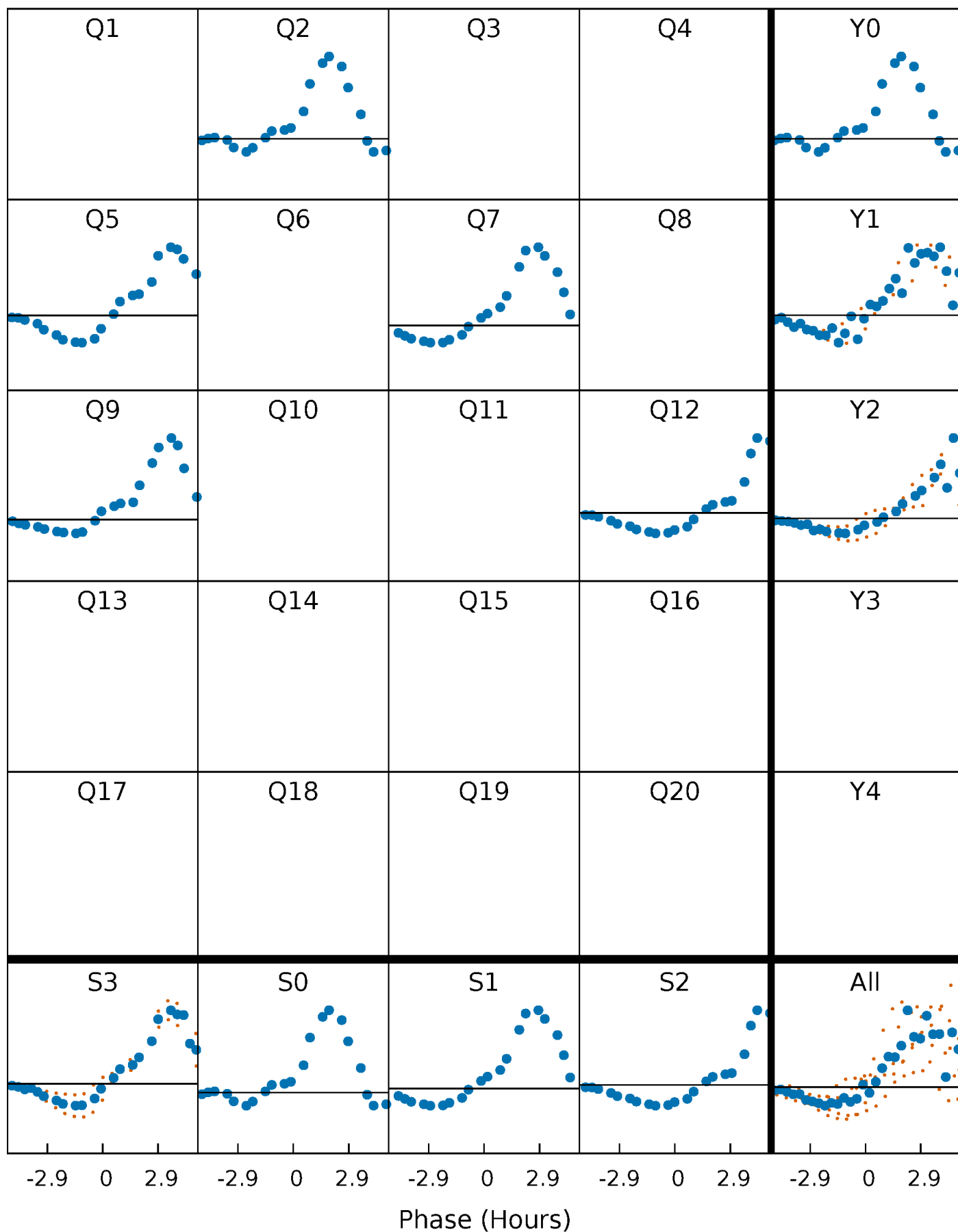
PDC Quarter-Phased Transit Curves

TCE 003455094-04 P=161.740420 Days $T_0=189.057883$ (BKJD)



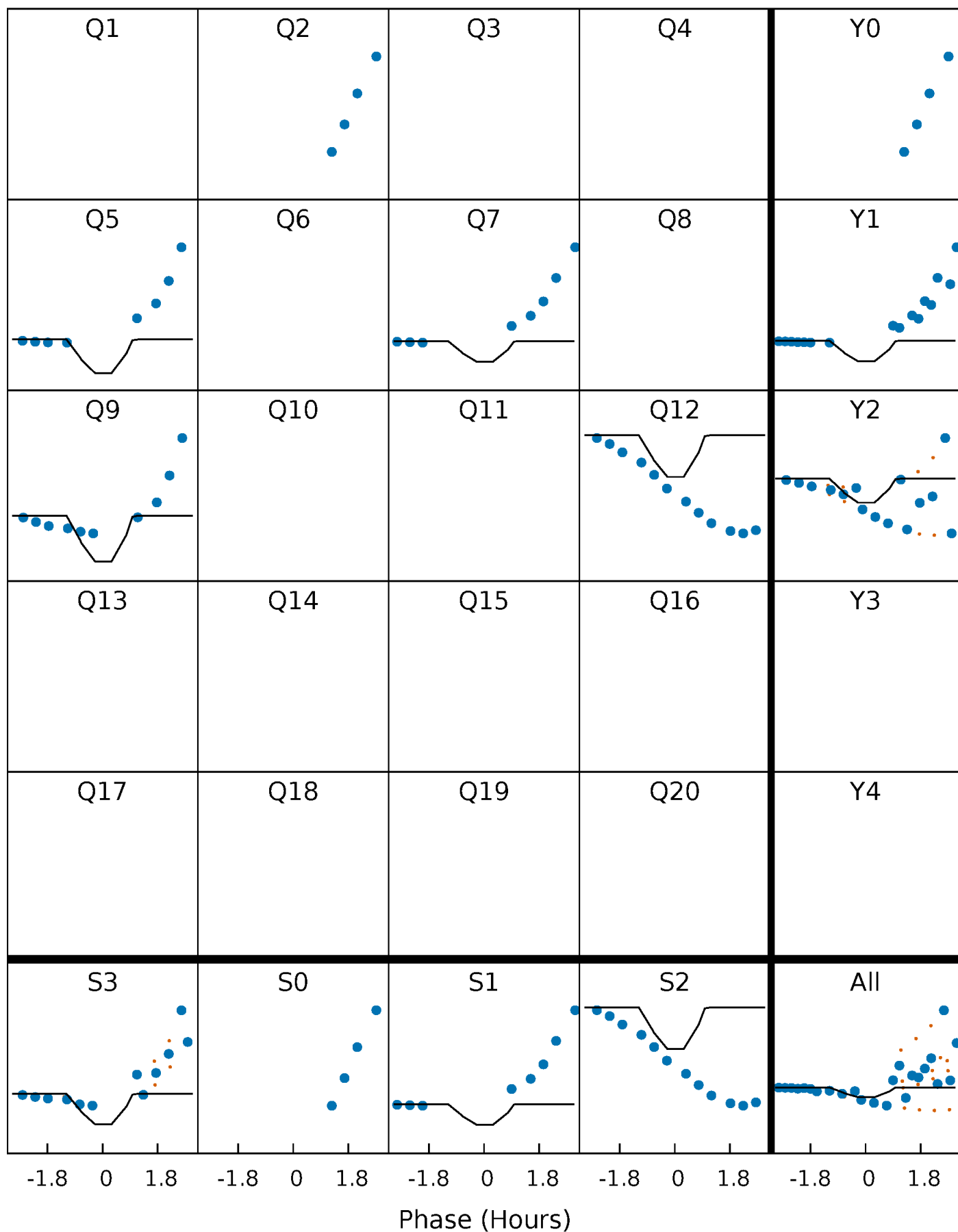
DV Quarter-Phased Transit Curves

TCE 003455094-04 P=161.740420 Days $T_0=189.057883$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

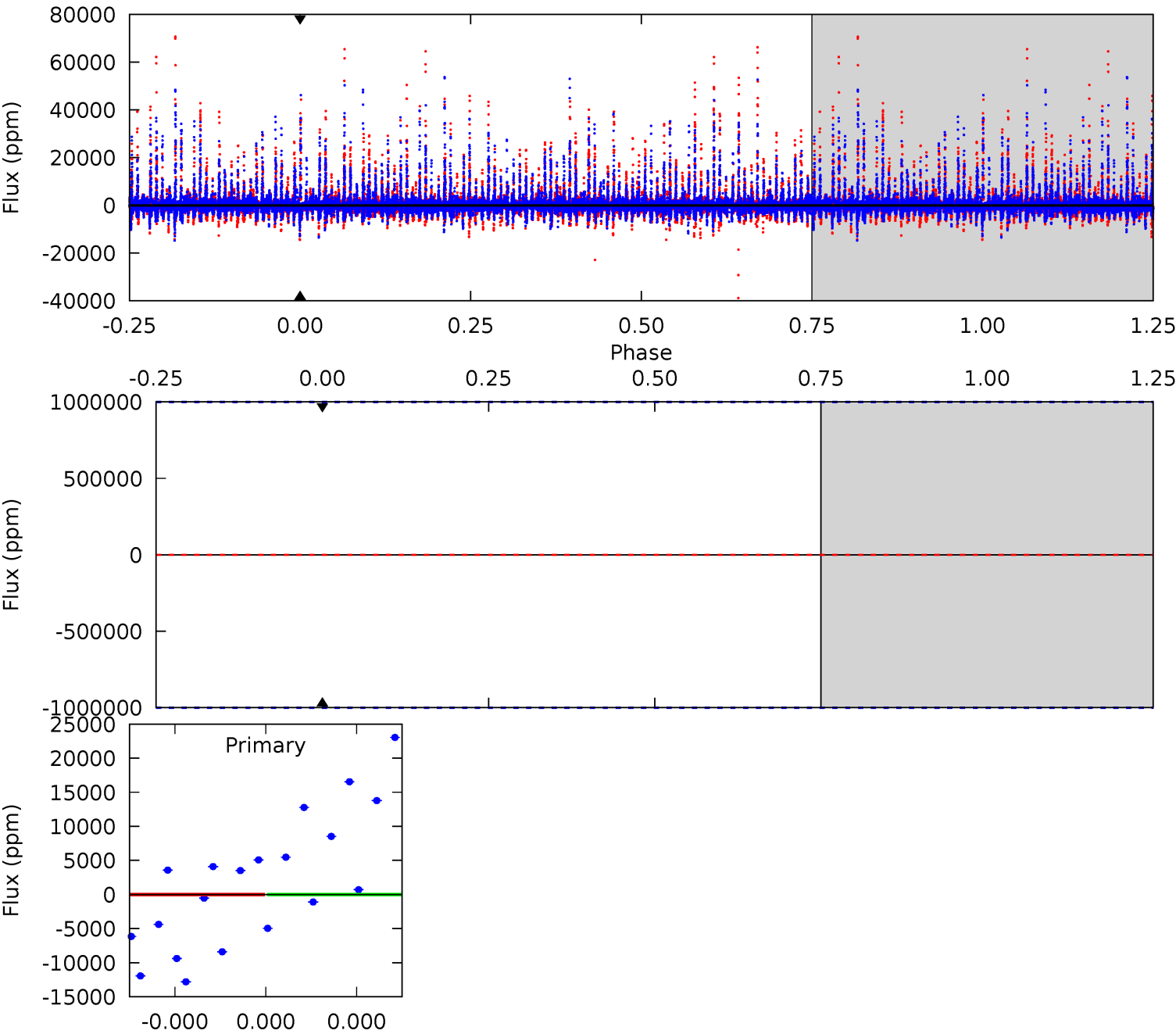
TCE 003455094-04 P=161.740420 Days $T_0=188.946021$ (BKJD)



DV Model-Shift Uniqueness Test

003455094-04, P = 161.740420 Days, E = 27.317463 Days

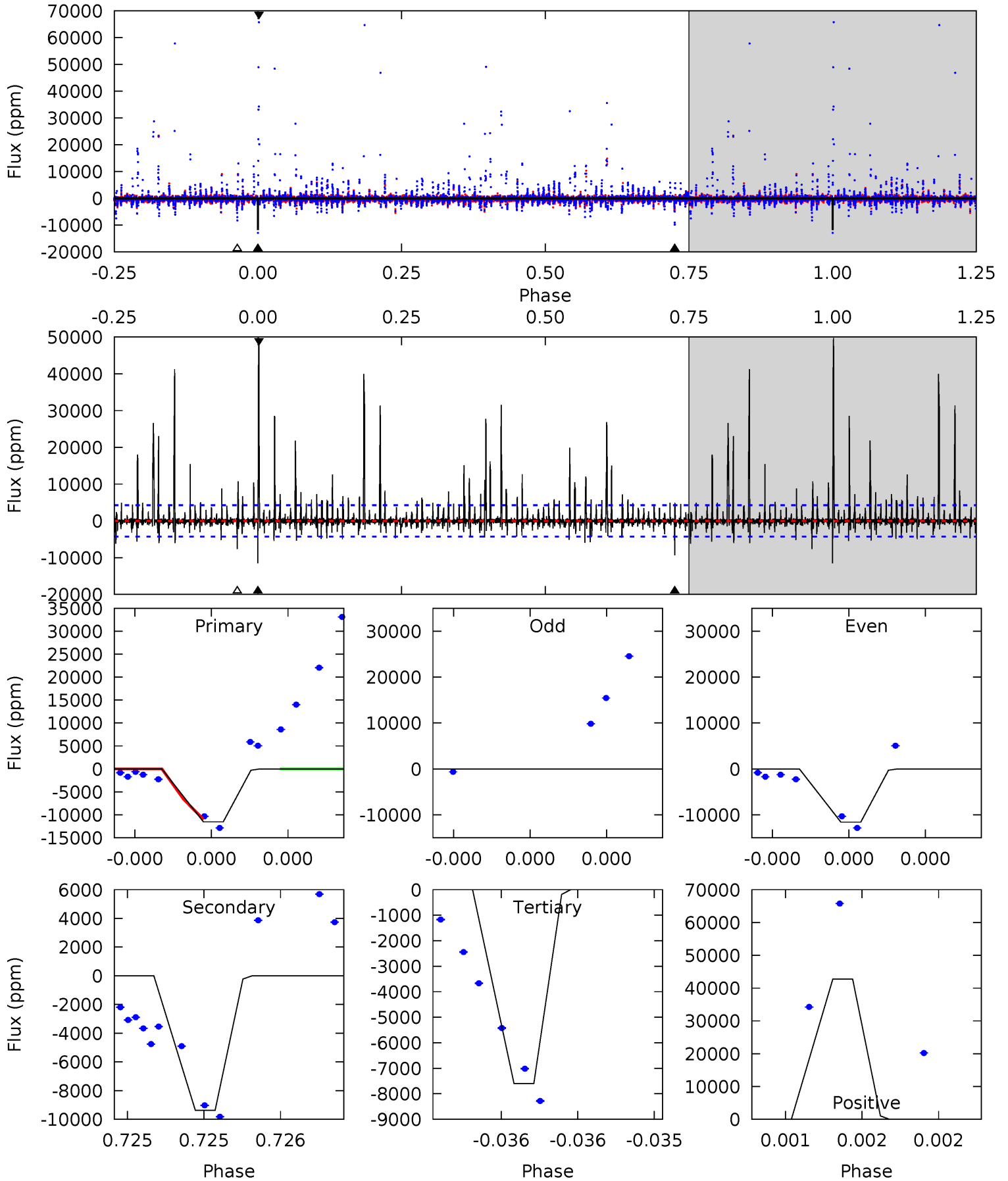
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003455094-04, P = 161.740420 Days, E = 27.205601 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	12.2	9.89	55.6	5.58	3.49	1.50	5.10	-40.6	2.30	-43.4	0	1.00	0.81	0



Stellar Parameters For KIC 003455094

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7176^{+224}_{-299}	$3.906^{+0.322}_{-0.138}$	$-0.280^{+0.250}_{-0.350}$	$2.313^{+0.499}_{-0.926}$	$1.568^{+0.217}_{-0.352}$	$0.179^{+0.428}_{-0.073}$
	+3%/-4%	+8%/-4%	+89%/-125%	+22%/-40%	+14%/-22%	+240%/-41%
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 003455094-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$21.27^{+19.54}_{-13.84}$	809^{+62}_{-82}	-4739^{+35498}_{-18223}	$-889.915^{+110927.169}_{-76536.904}$
Alt.	-9364 ± 768	$26.63^{+20.70}_{-16.98}$	809^{+60}_{-78}	6706^{+5835}_{-1607}	3260^{+21935}_{-2230}

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

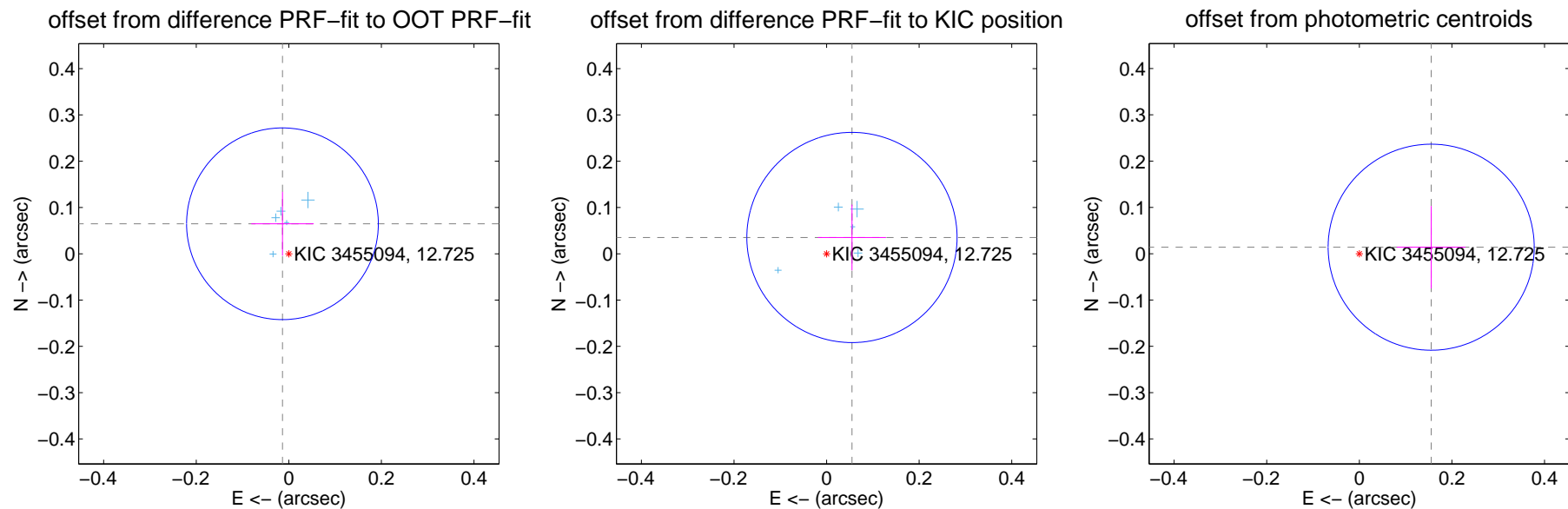
DV Centroid Data

Supplemental centroid analysis for 003455094-04. Kepler magnitude: 12.72. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

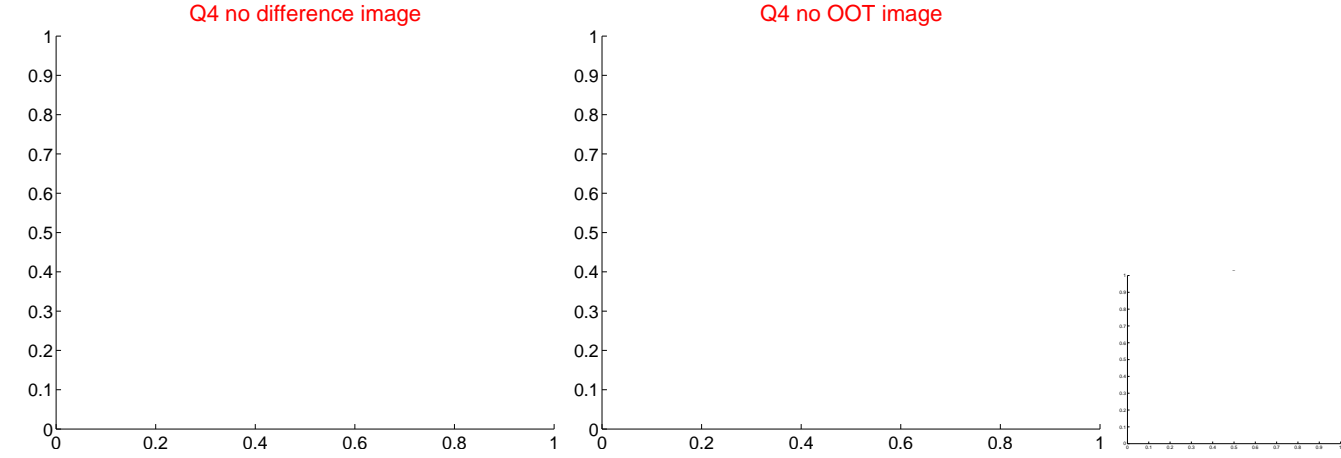
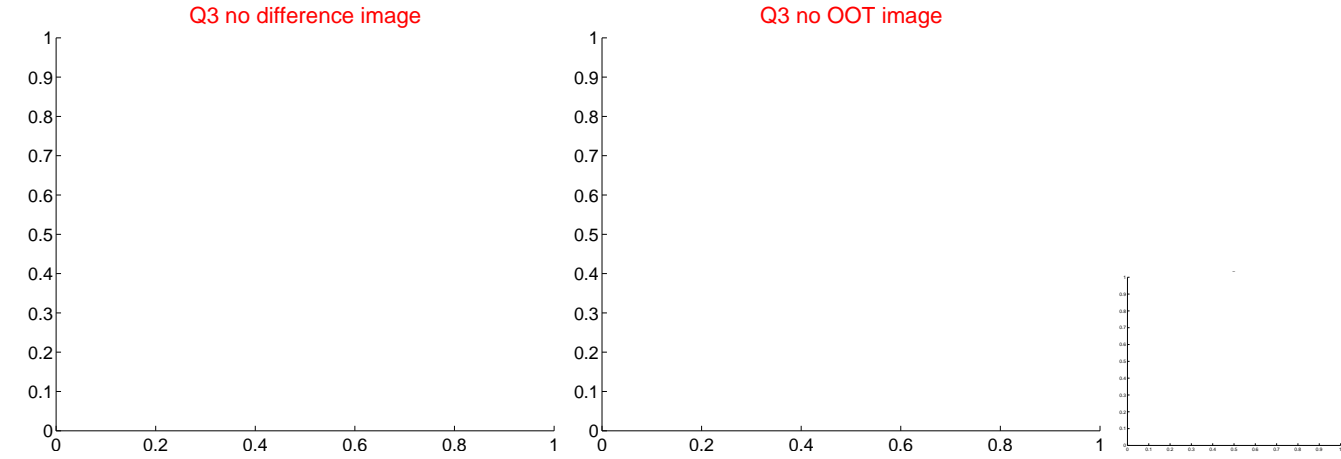
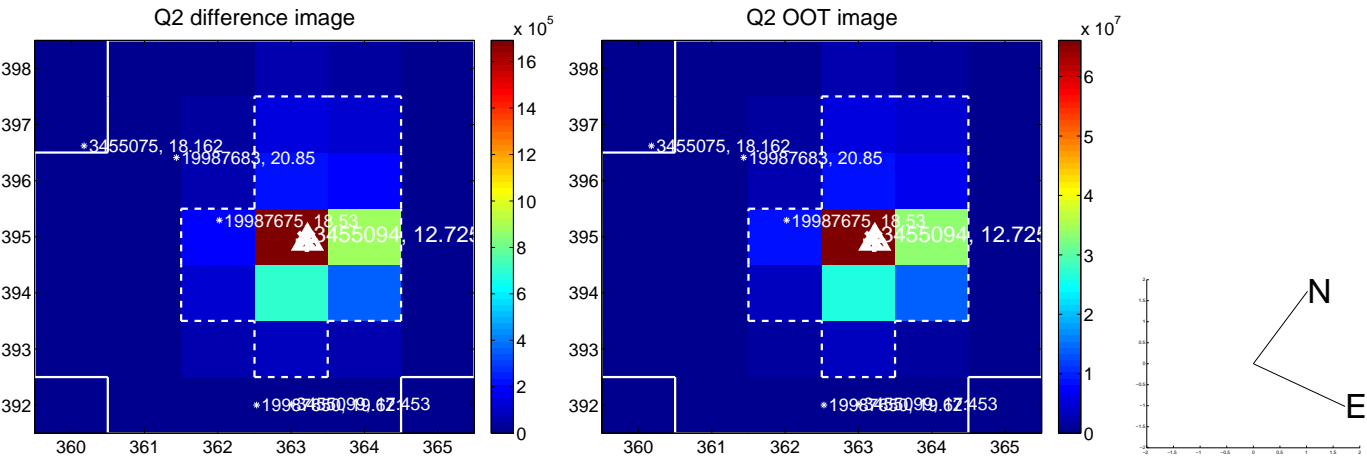
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.069	0.96	0.014 ± 0.067	0.065 ± 0.069
PRF-fit source offset from KIC position	0.065 ± 0.076	0.86	-0.055 ± 0.074	0.035 ± 0.071
photometric centroid source offset	0.16 ± 0.07	2.10	-0.16 ± 0.07	0.01 ± 0.09

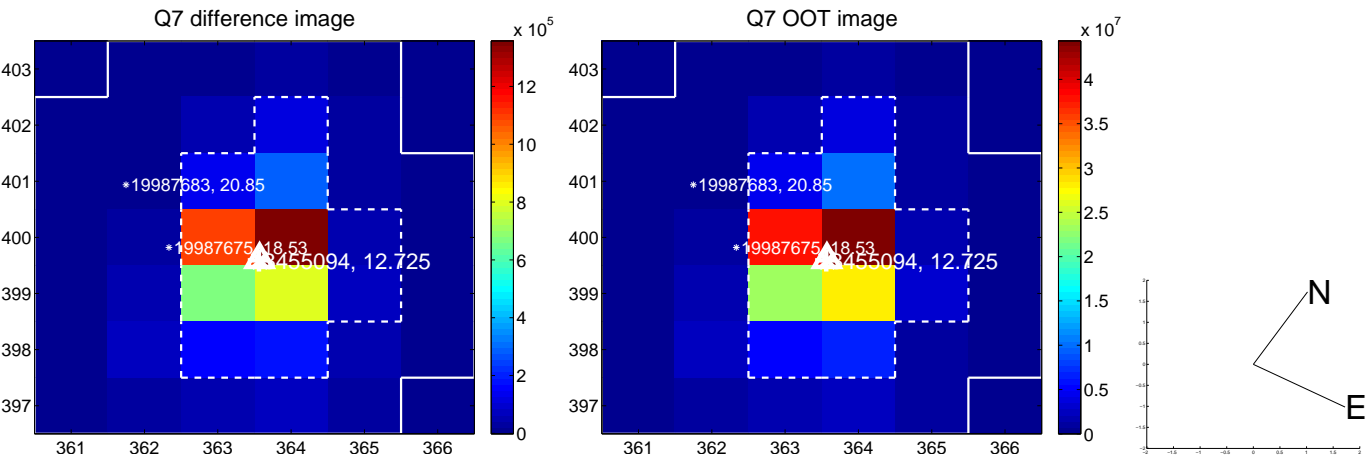
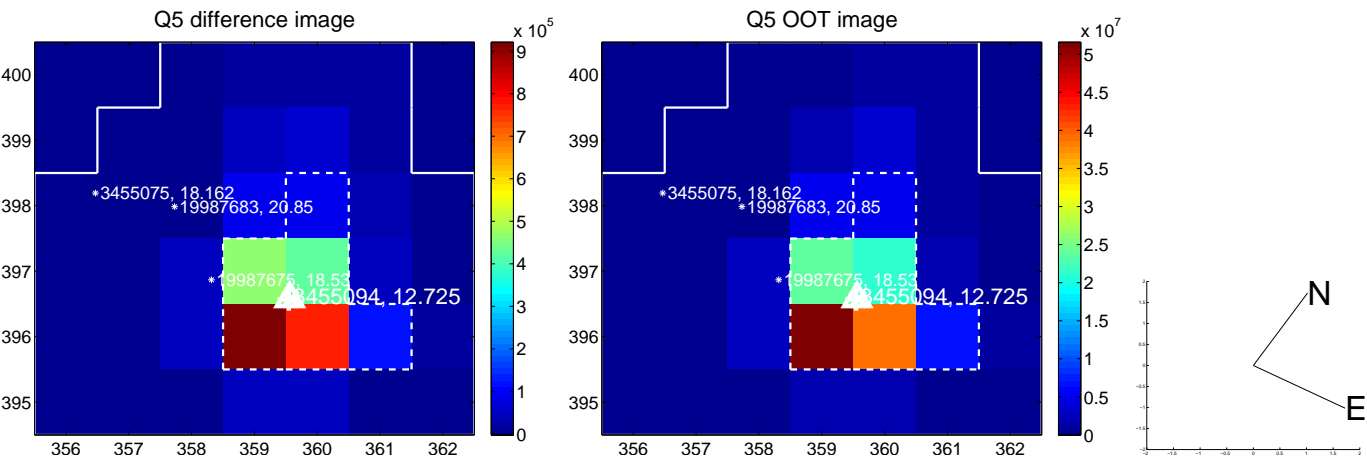


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

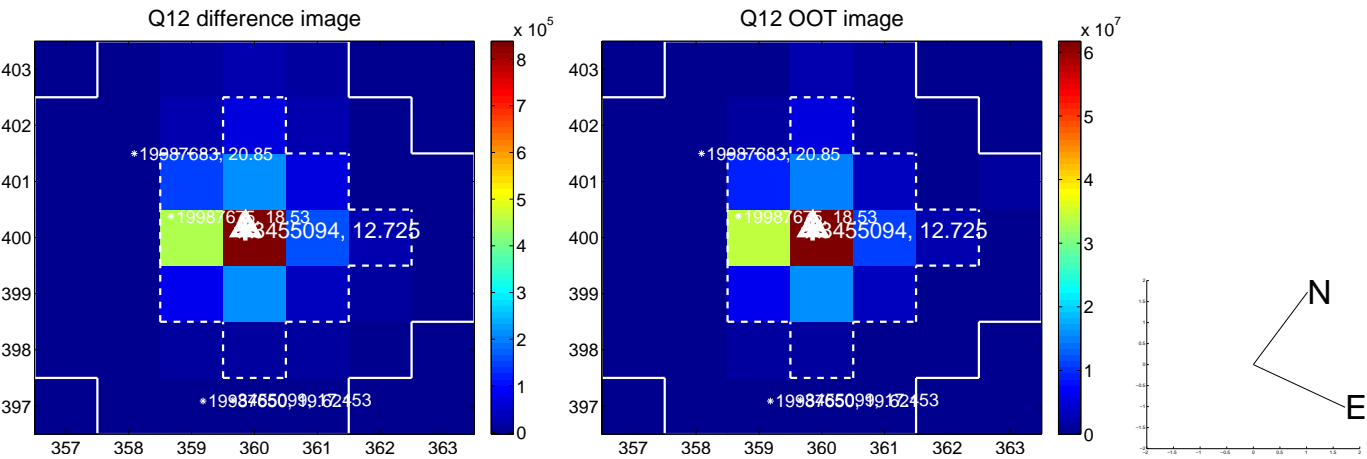
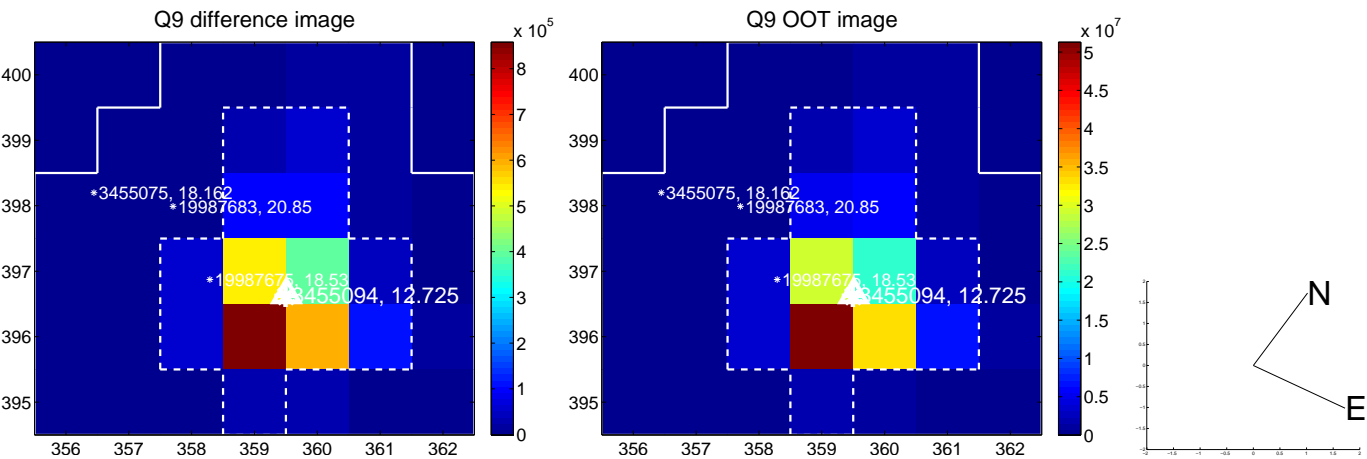
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



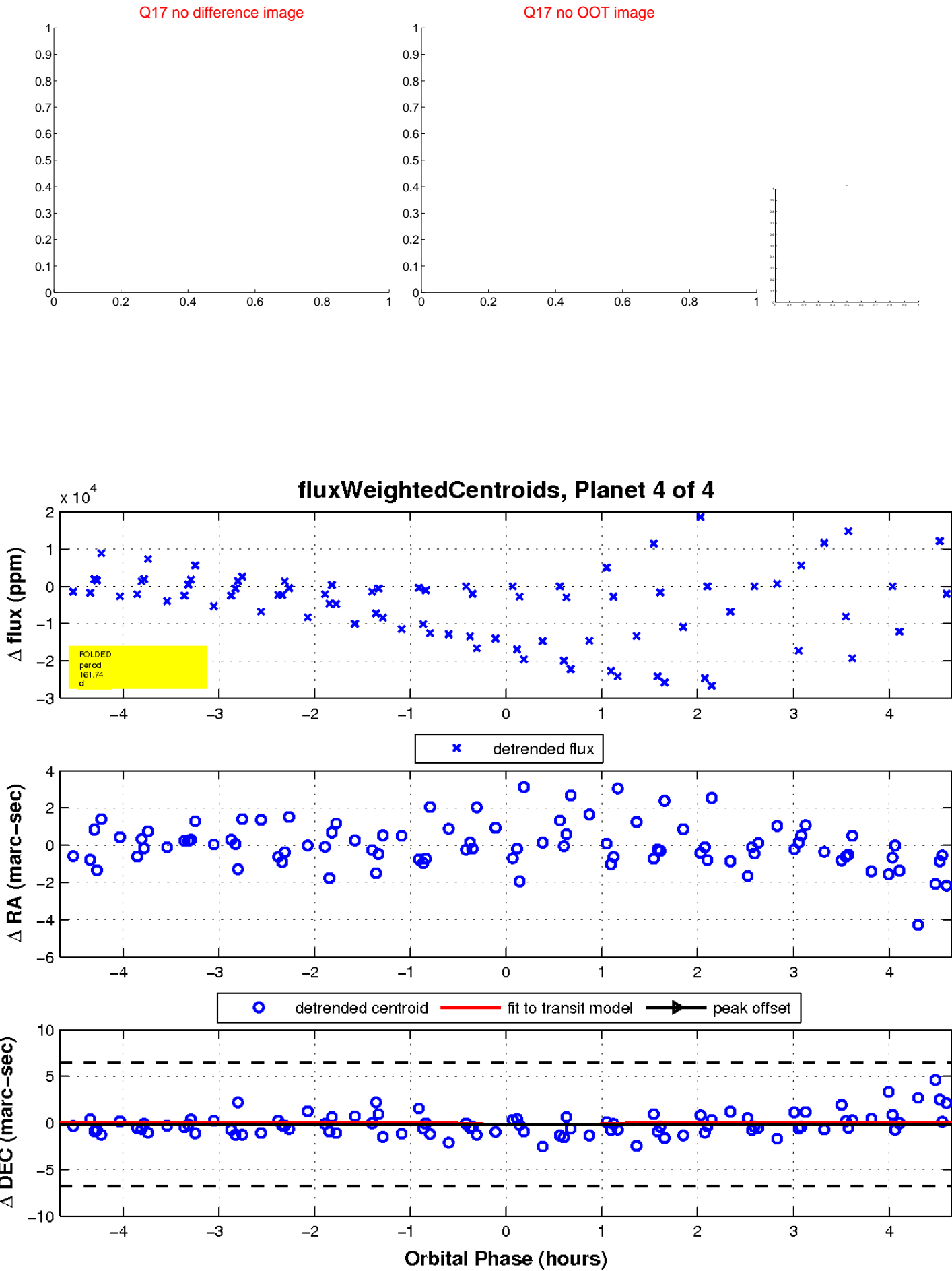
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

