

KIC 003241344

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})
003241344-01	OBS	5984.01	3.912648	133.432869	276553.0	2.500	15073.7	-1.0	0.72	5616	35.38	254.02
003241344-02	OBS	No	3.912600	133.200168	18356.6	15.000	2460.8	-1.0	0.72	5616	9.76	254.02
003241344-03	OBS	No	1.956340	133.418610	21554.7	3.499	1333.2	1235.7	0.72	5616	11.74	640.08
003241344-04	OBS	No	489.129870	488.037850	2371.1	16.157	9.7	6.9	0.72	5616	4.09	0.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241344-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
003241344-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
003241344-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003241344-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

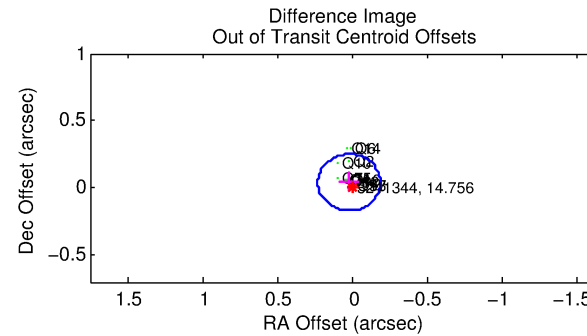
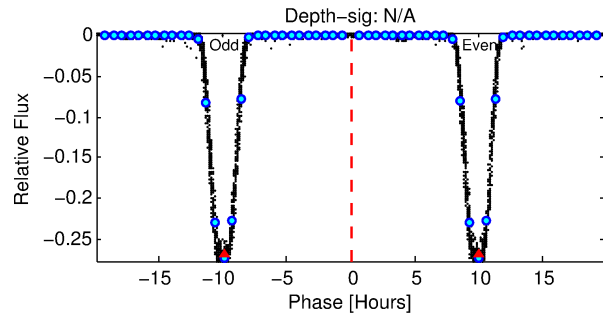
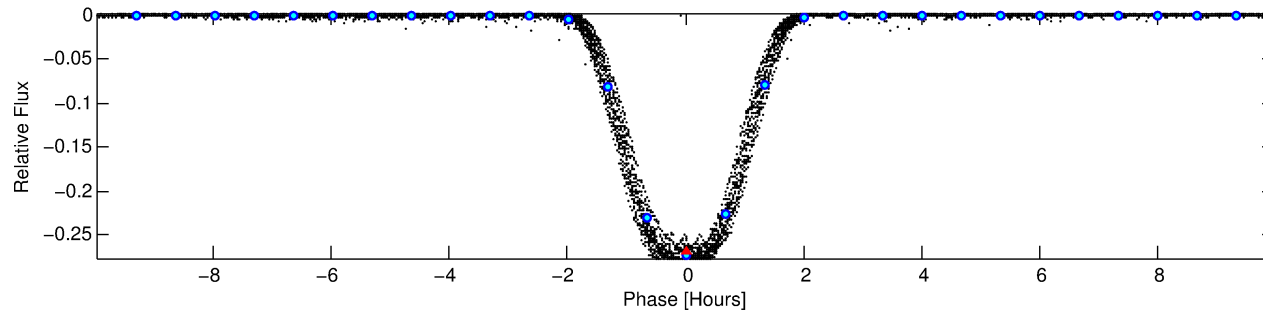
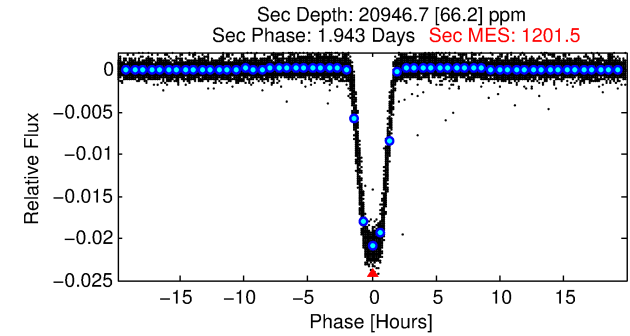
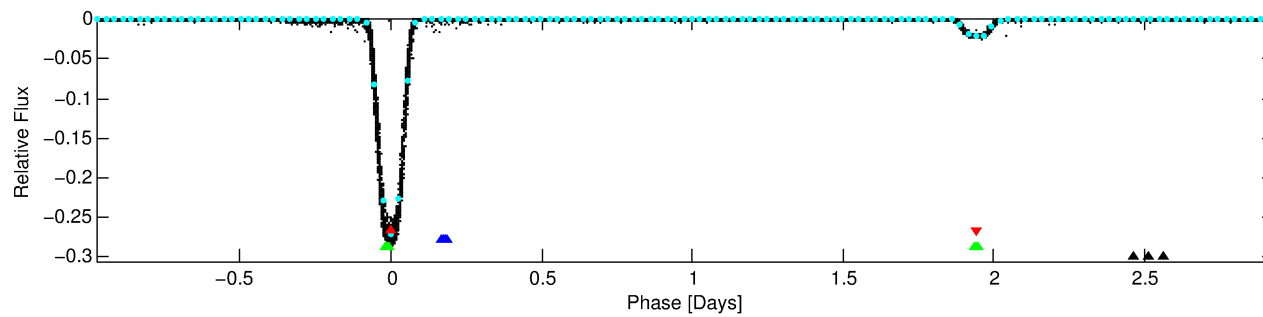
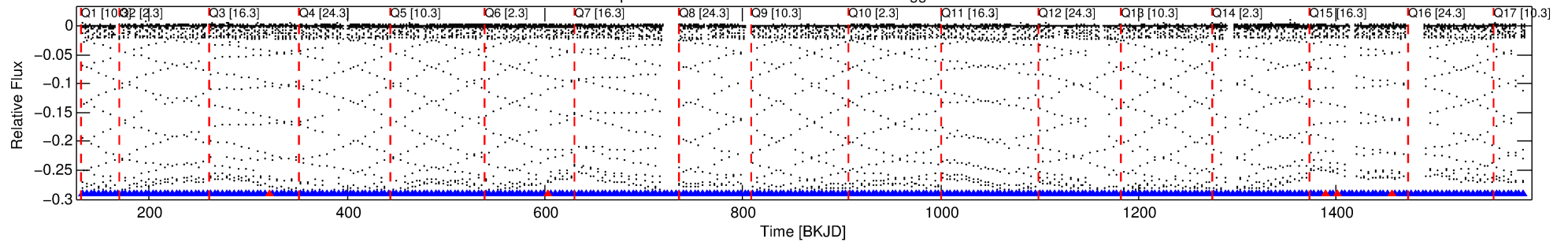
Ephemeris Match Information For 003241344-01

No Significant Match Found

DV One-Page Summary

KIC: 3241344 Candidate: 1 of 4 Period: 3.913 d
KOI: K05984.01 Corr: 0.841

Kp: 14.76 R*: 0.72 Rs Teff: 5616.0 K Logg: 4.55 Fe/H: -0.980



TPS TCE Results:

Period = 3.91265 d
Epoch = 133.4329 BKJD

DV fit results are unavailable

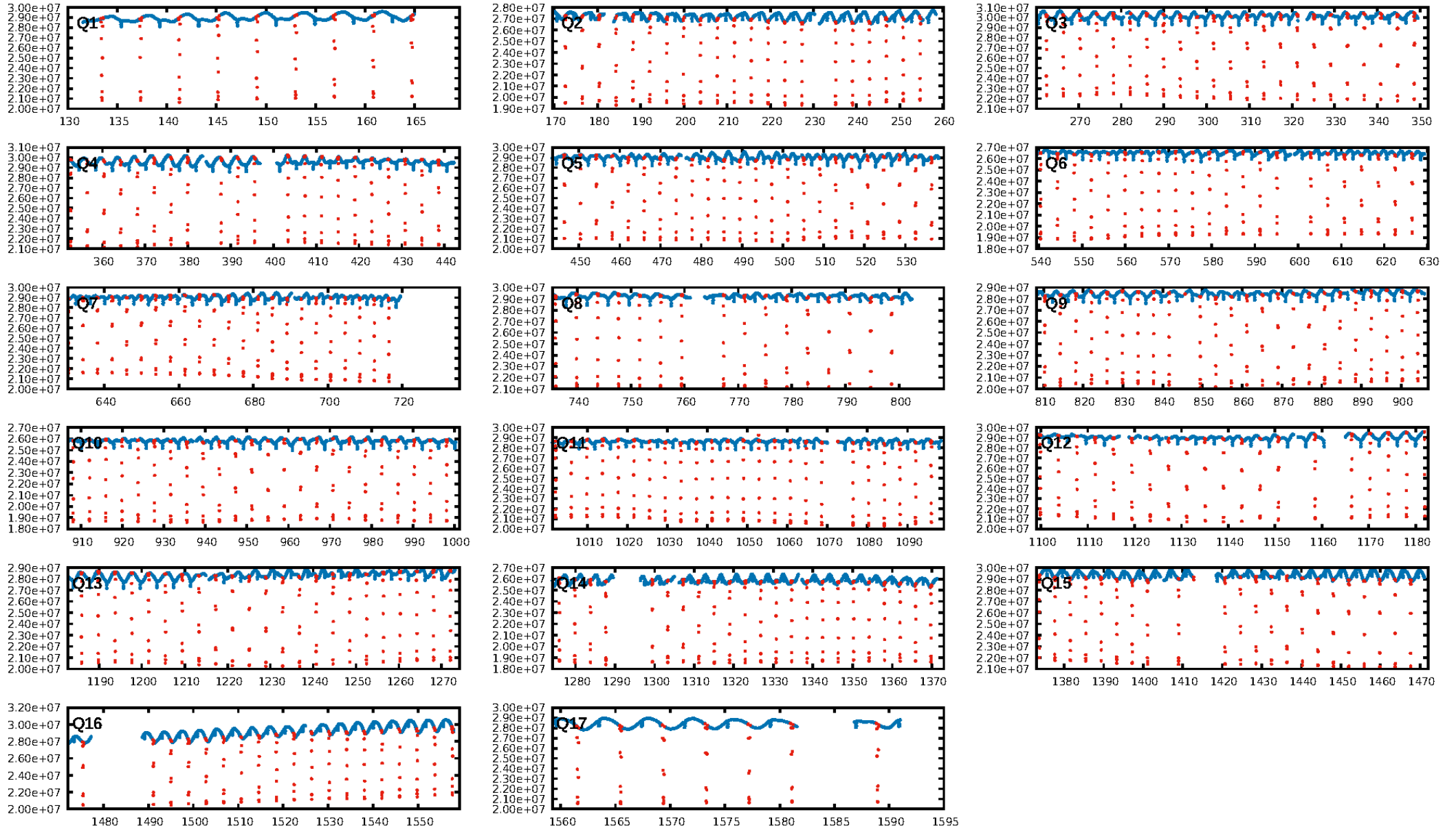
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [712.27σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [324/329]
GhostDiagnostic-chr: 1.32
Centroid-sig: 0.0%
Centroid-so: 0.295 arcsec [325.20σ]
OotOffset-rm: 0.045 arcsec [0.65σ]
KicOffset-rm: 0.180 arcsec [2.64σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

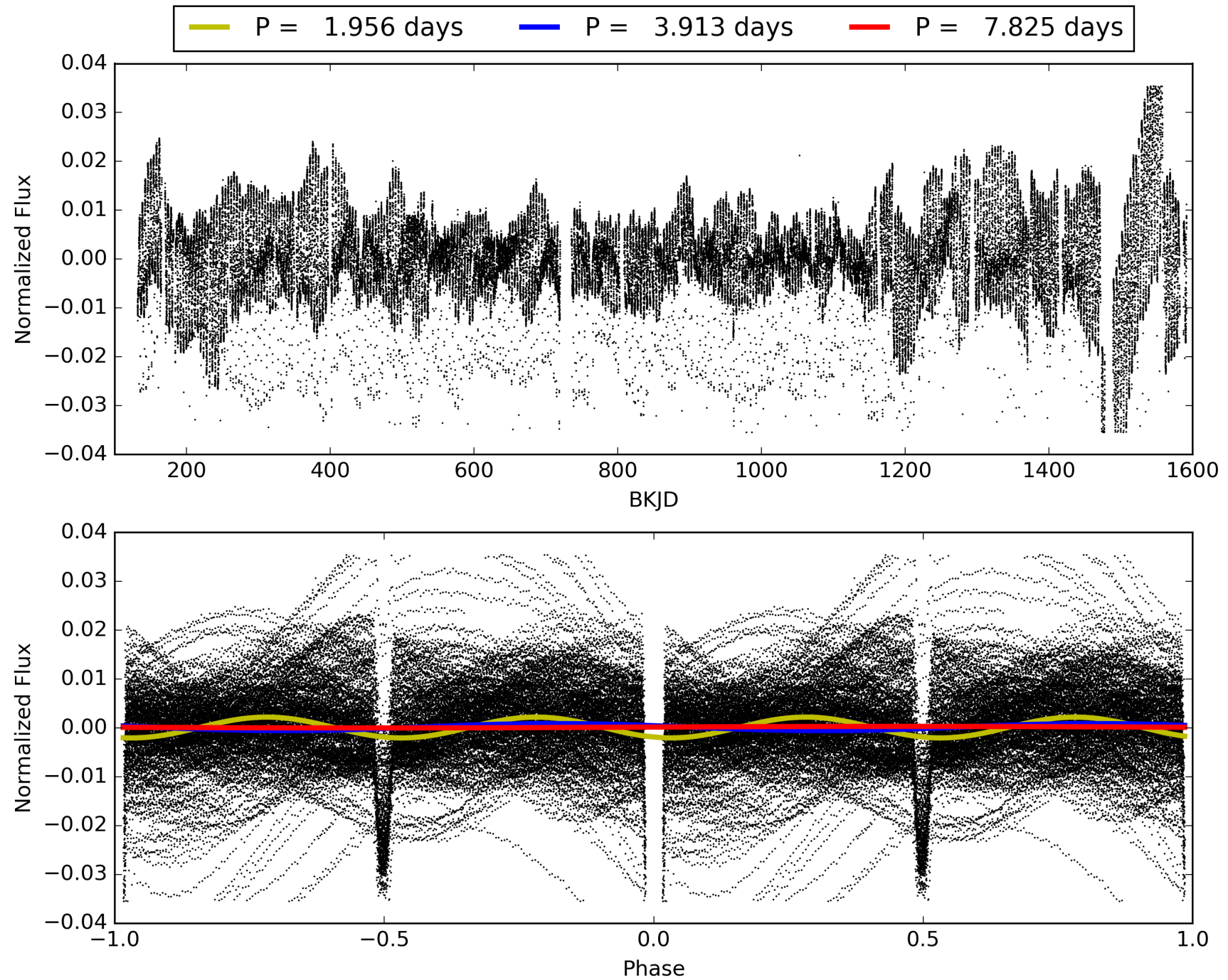
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:08:04 Z

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

TCE 003241344-01, PDC Light Curves

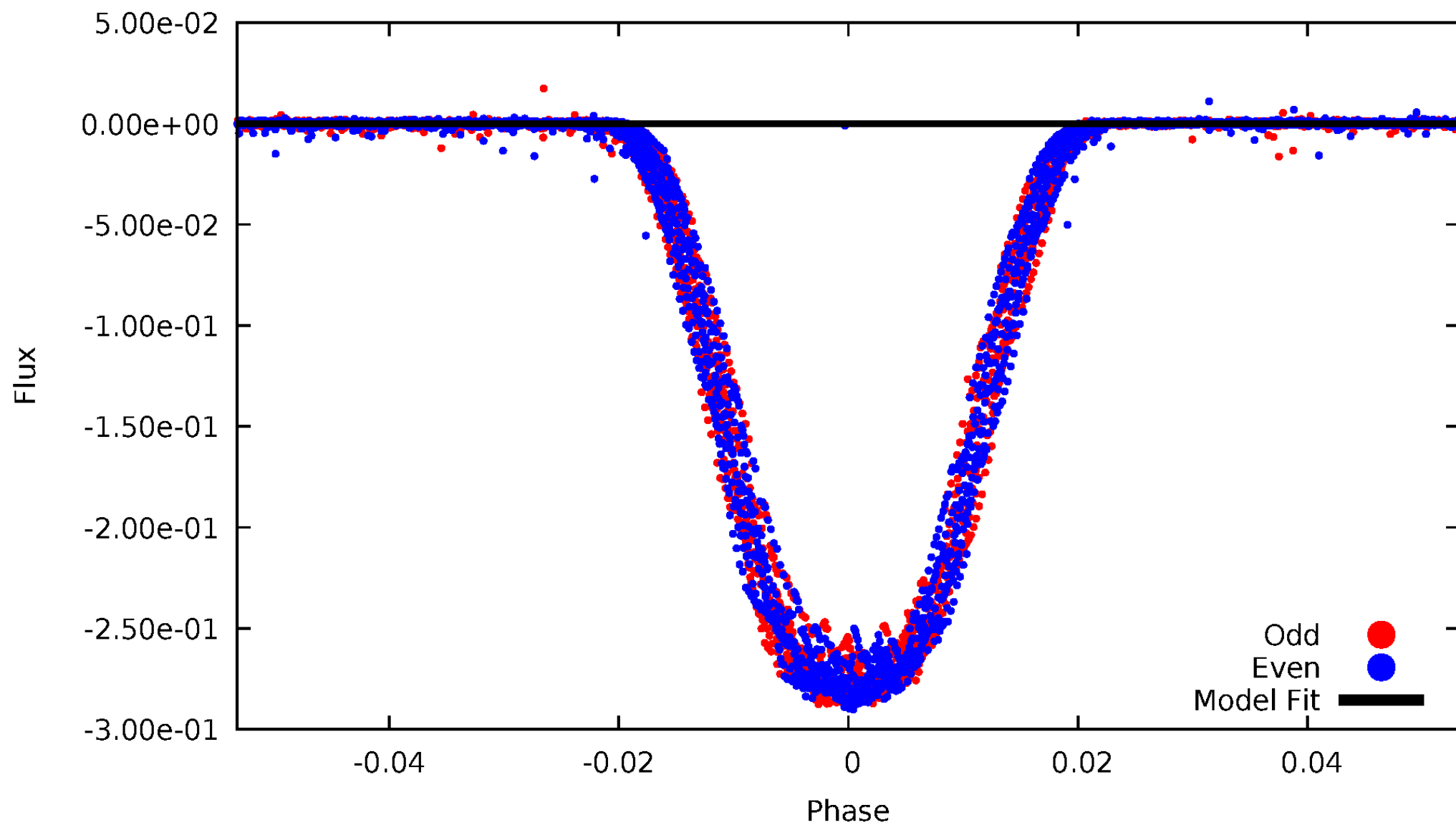


TCE 003241344-01



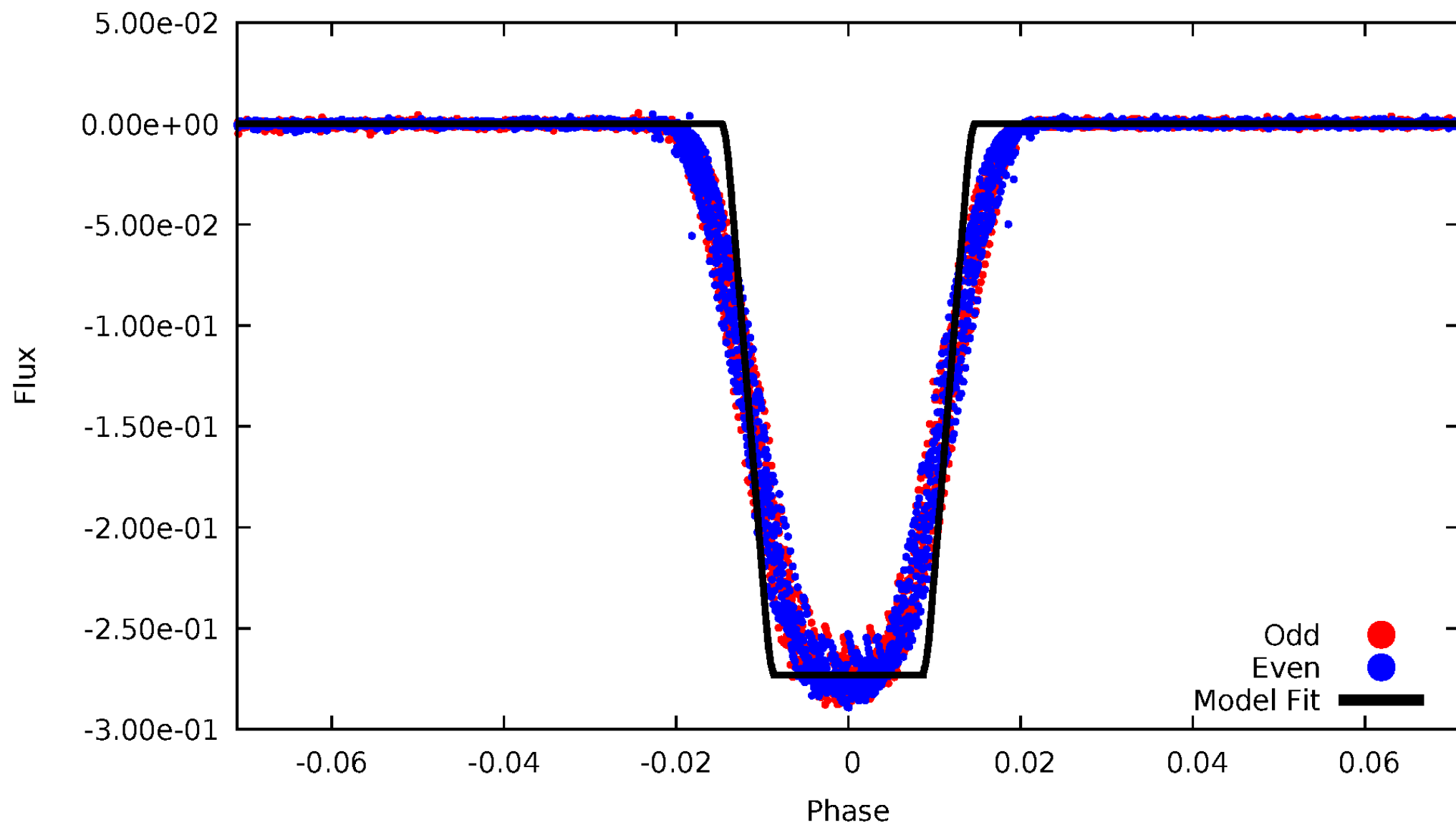
DV Odd/Even

TCE 003241344-01



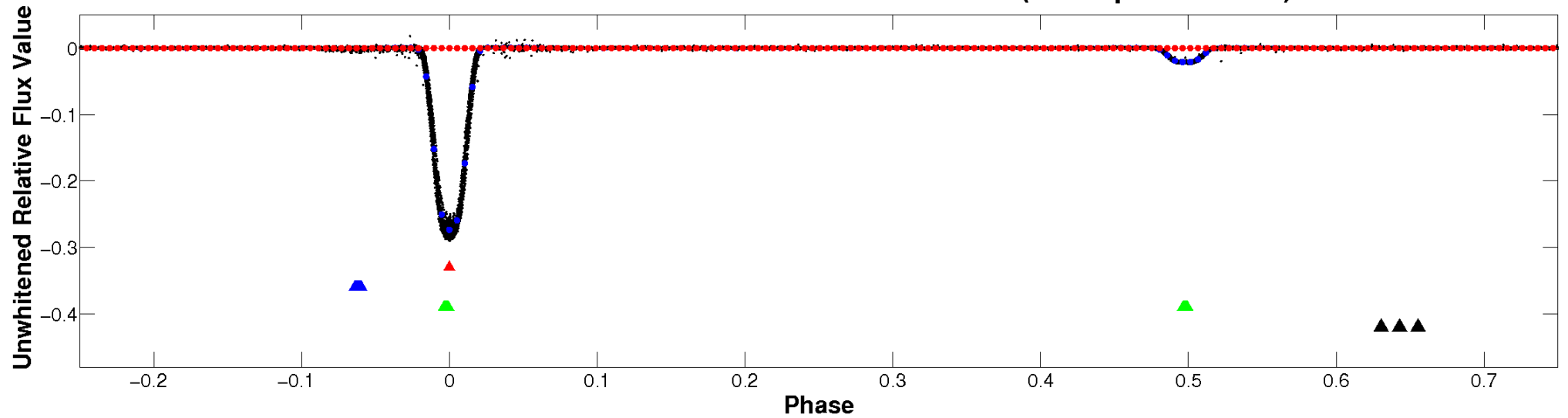
ALT Odd/Even

TCE 003241344-01

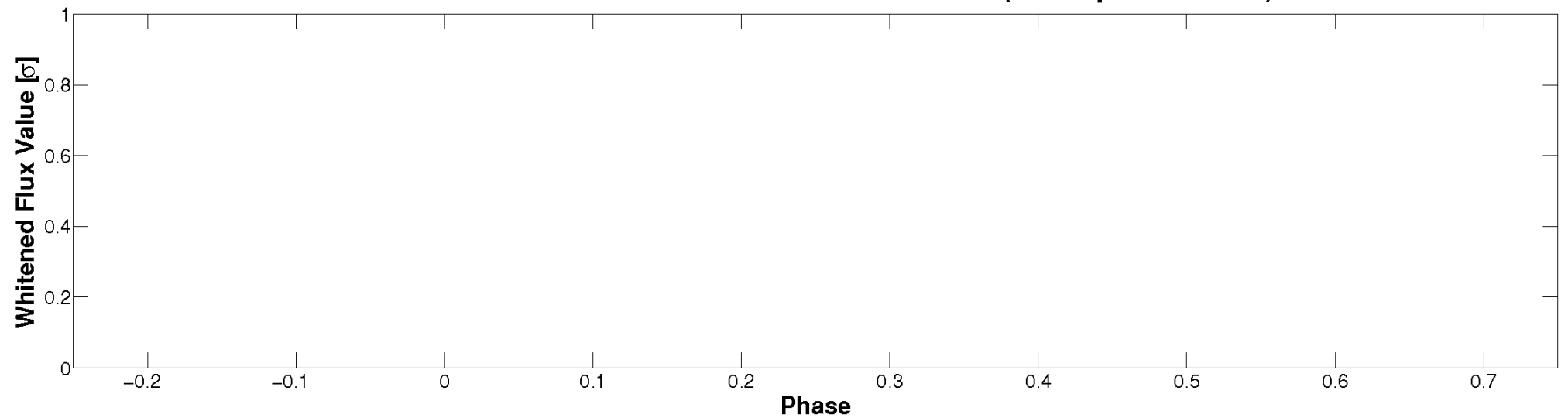


Non-Whitened Vs. Whitened Light Curve

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

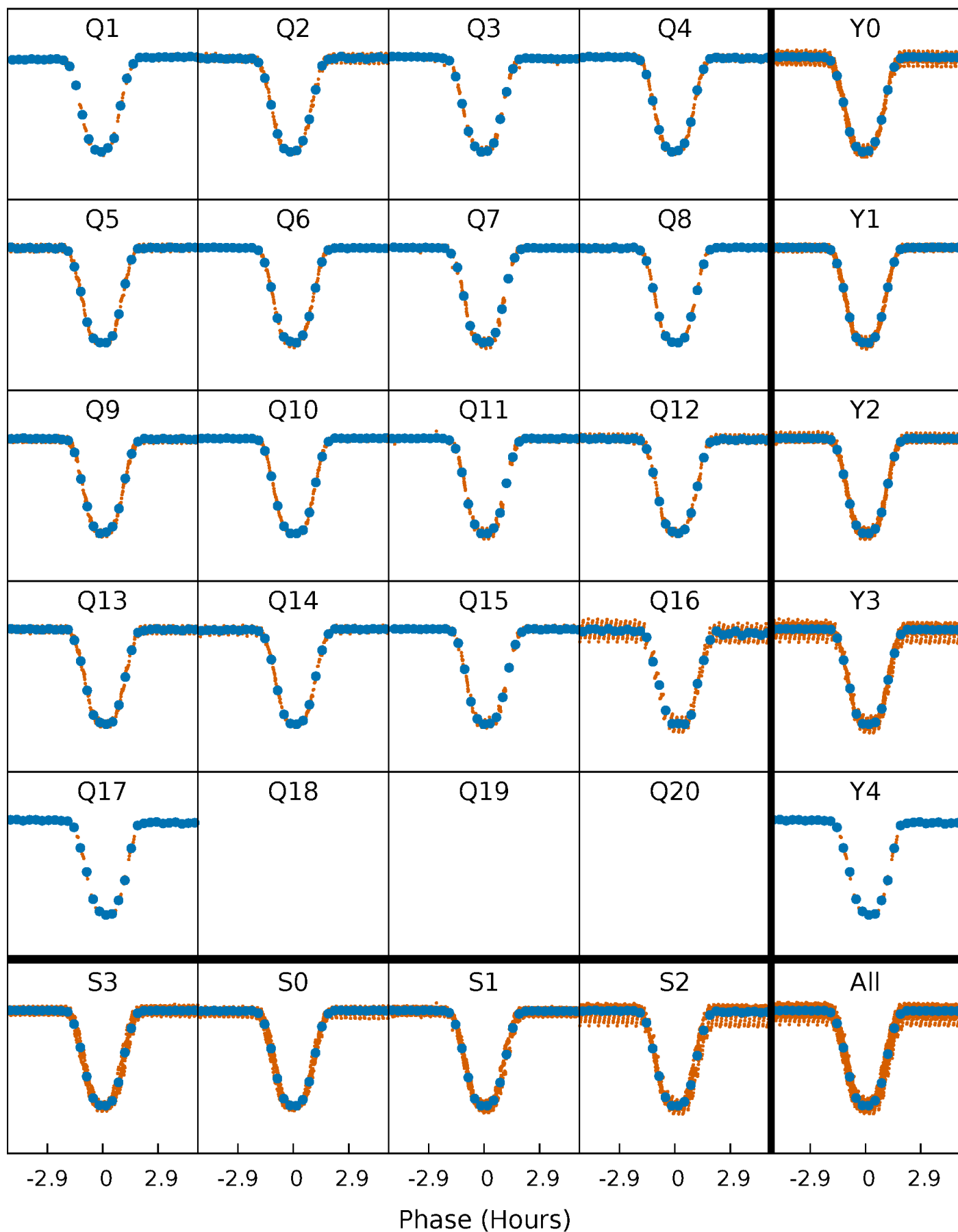


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



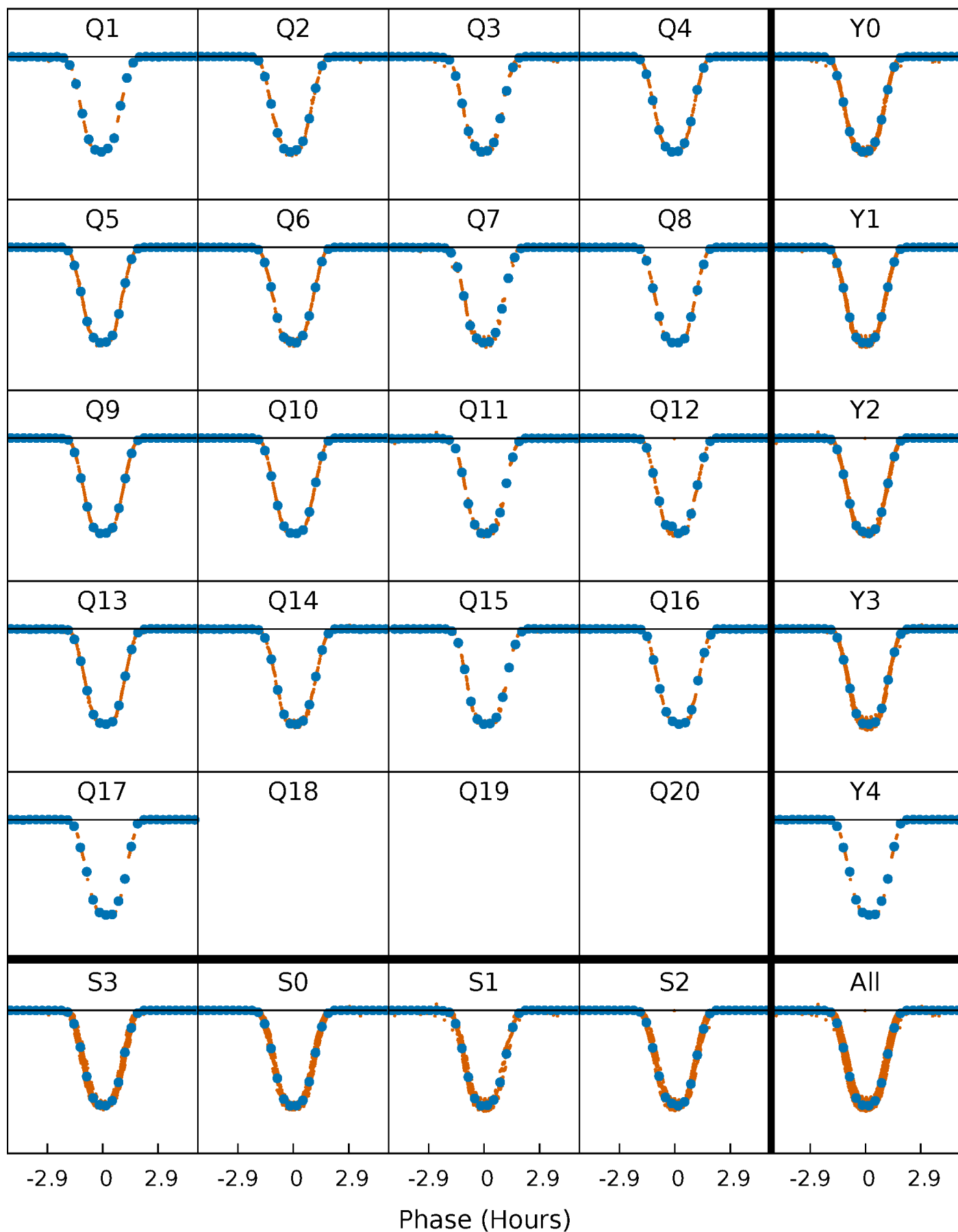
PDC Quarter-Phased Transit Curves

TCE 003241344-01 P= 3.912648 Days $T_0=133.432869$ (BKJD)



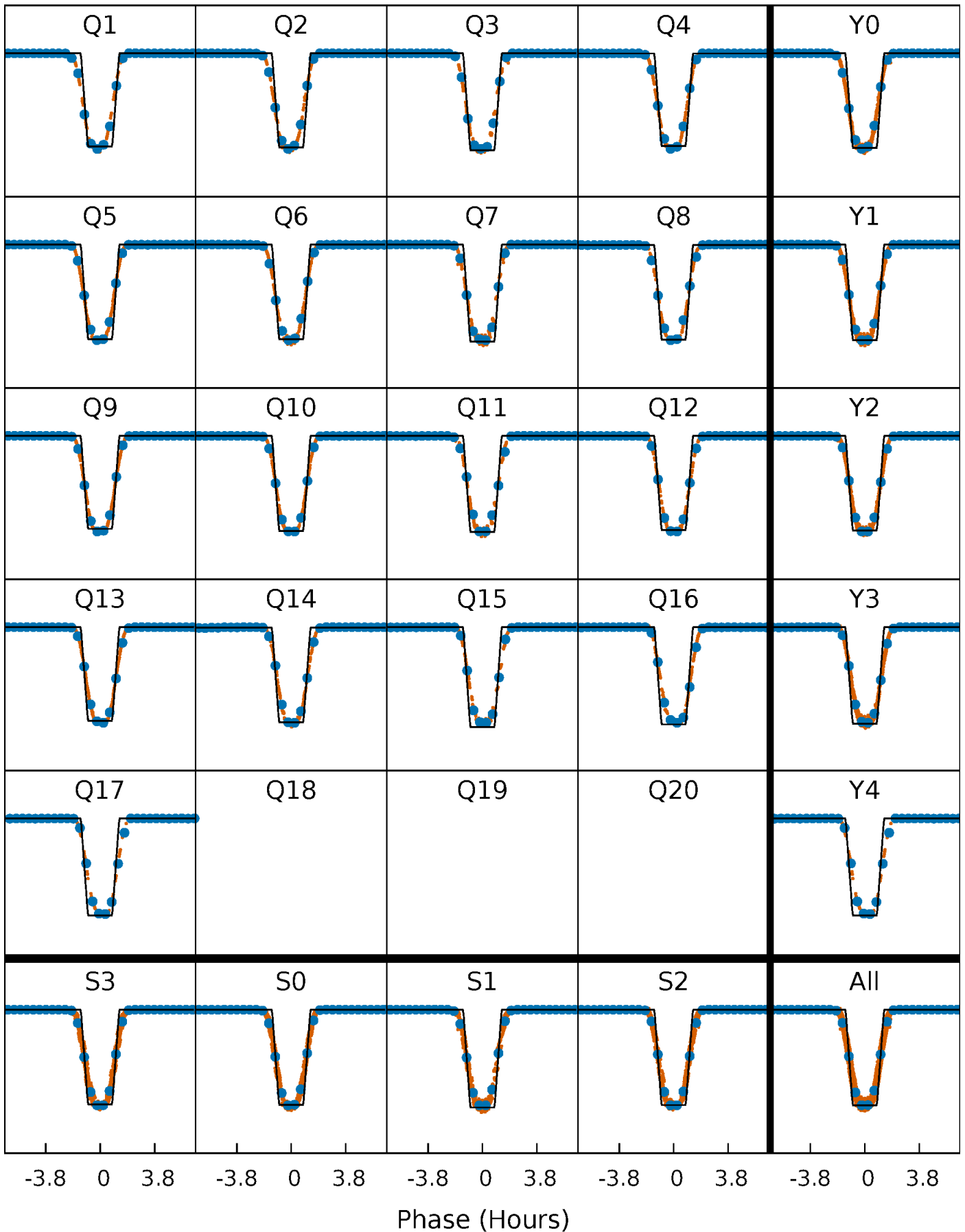
DV Quarter-Phased Transit Curves

TCE 003241344-01 P= 3.912648 Days $T_0=133.432869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

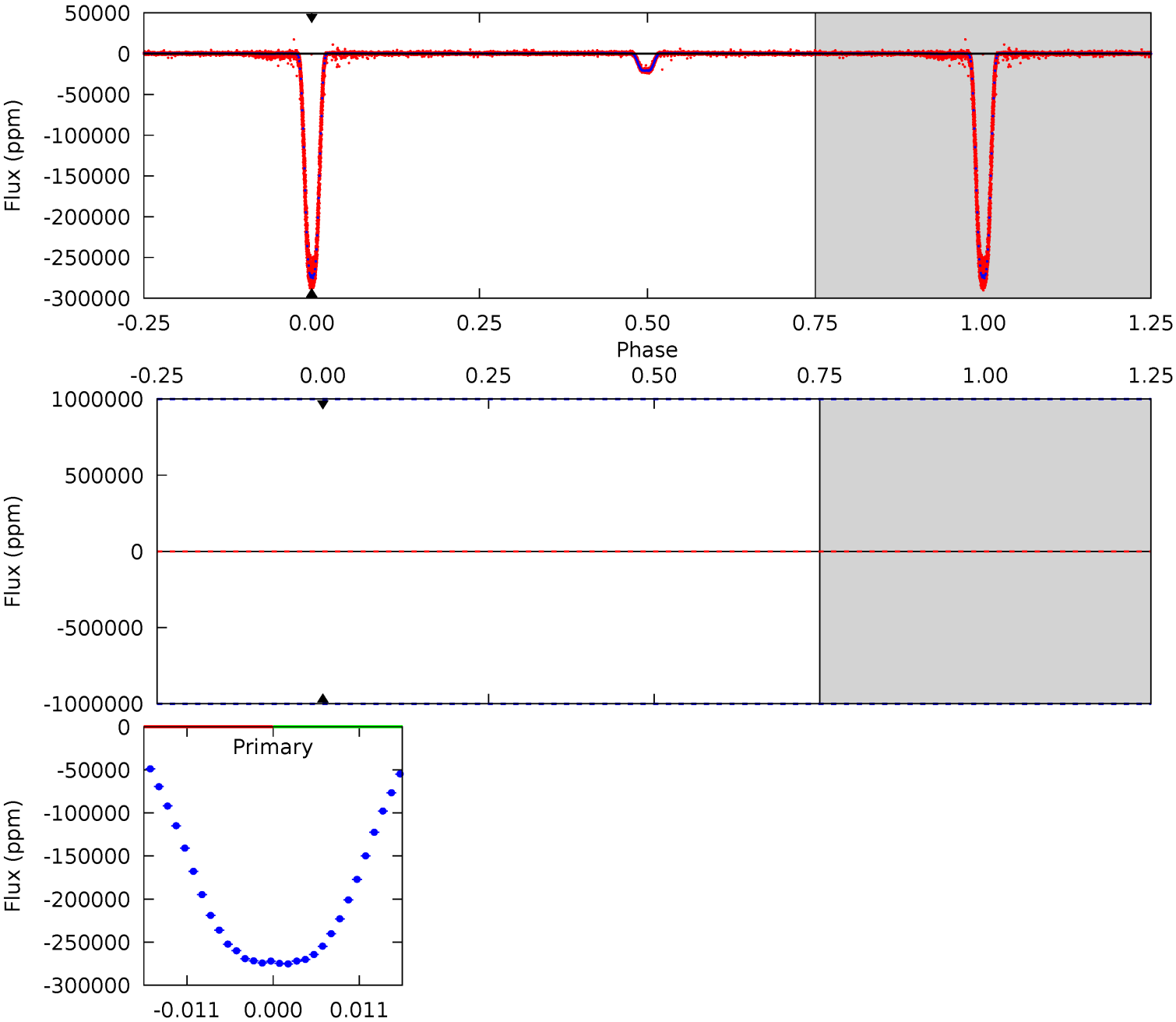
TCE 003241344-01 P= 3.912648 Days $T_0=133.434919$ (BKJD)



DV Model-Shift Uniqueness Test

003241344-01, P = 3.912648 Days, E = 129.520221 Days

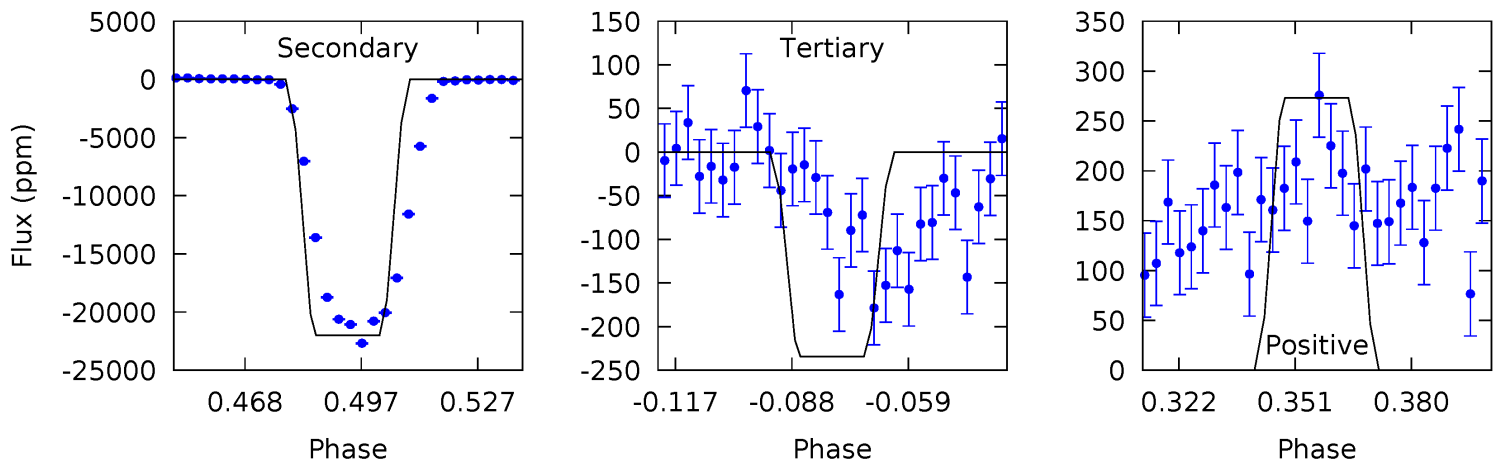
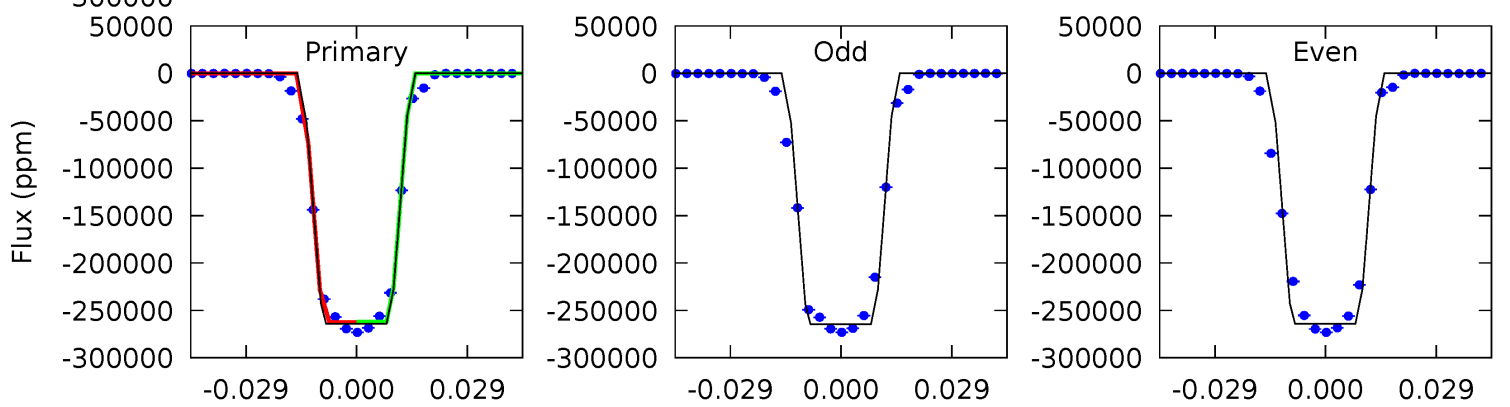
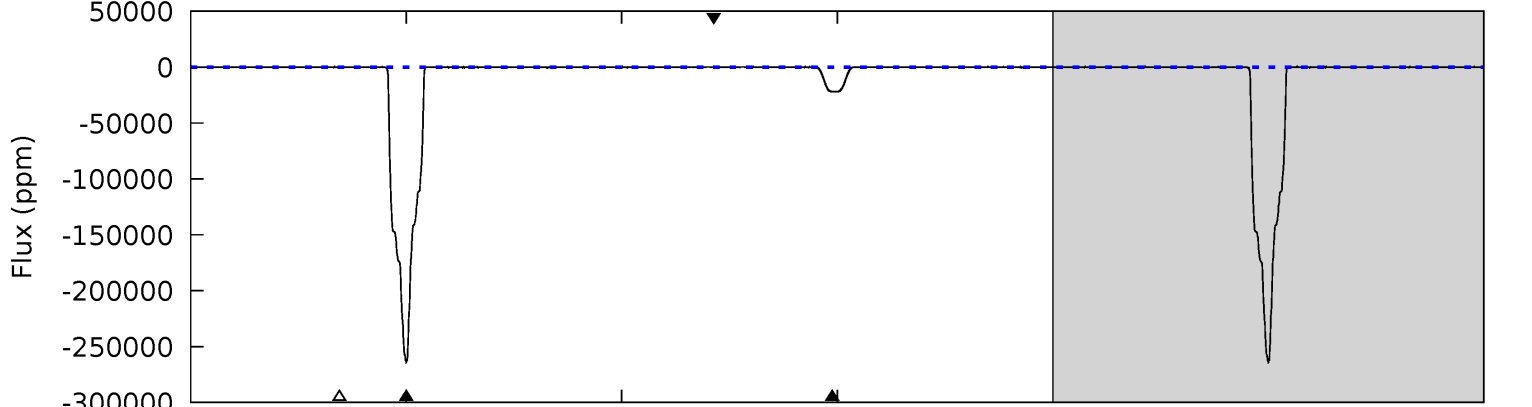
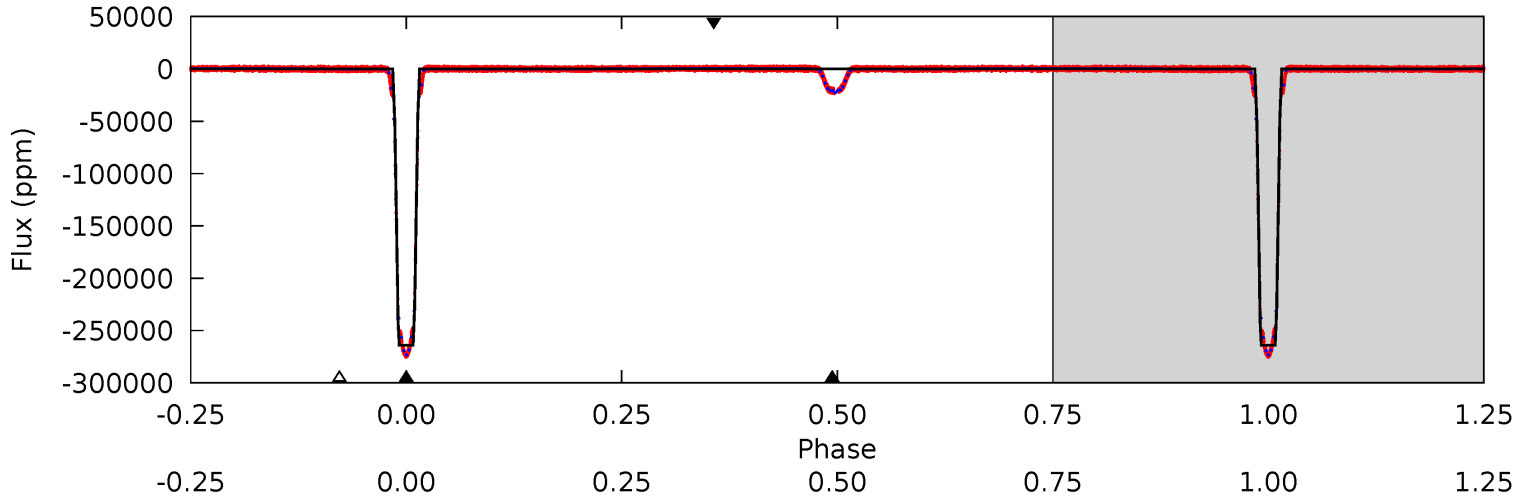
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003241344-01, P = 3.912648 Days, E = 129.522271 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5685	473.8	5.05	5.88	4.82	2.18	1.97	5680	5679	468.8	467.9	8.70	1.00	0.00	0



Stellar Parameters For KIC 003241344

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5616^{+185}_{-168}	$4.553^{+0.099}_{-0.081}$	$-0.980^{+0.300}_{-0.300}$	$0.720^{+0.086}_{-0.078}$	$0.675^{+0.079}_{-0.023}$	$2.547^{+0.938}_{-0.628}$
	+3%/-3%	+2%/-2%	+31%/-31%	+12%/-11%	+12%/-3%	+37%/-25%
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 003241344-01 / KOI 5984.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$36.10^{+7.89}_{-8.22}$	1421^{+66}_{-61}	-2533^{+7561}_{-2303}	$-1.134^{+102.020}_{-78.099}$
Alt.	-22009 ± 46	$41.46^{+8.31}_{-7.97}$	1421^{+63}_{-62}	3479^{+270}_{-205}	13^{+7}_{-4}

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

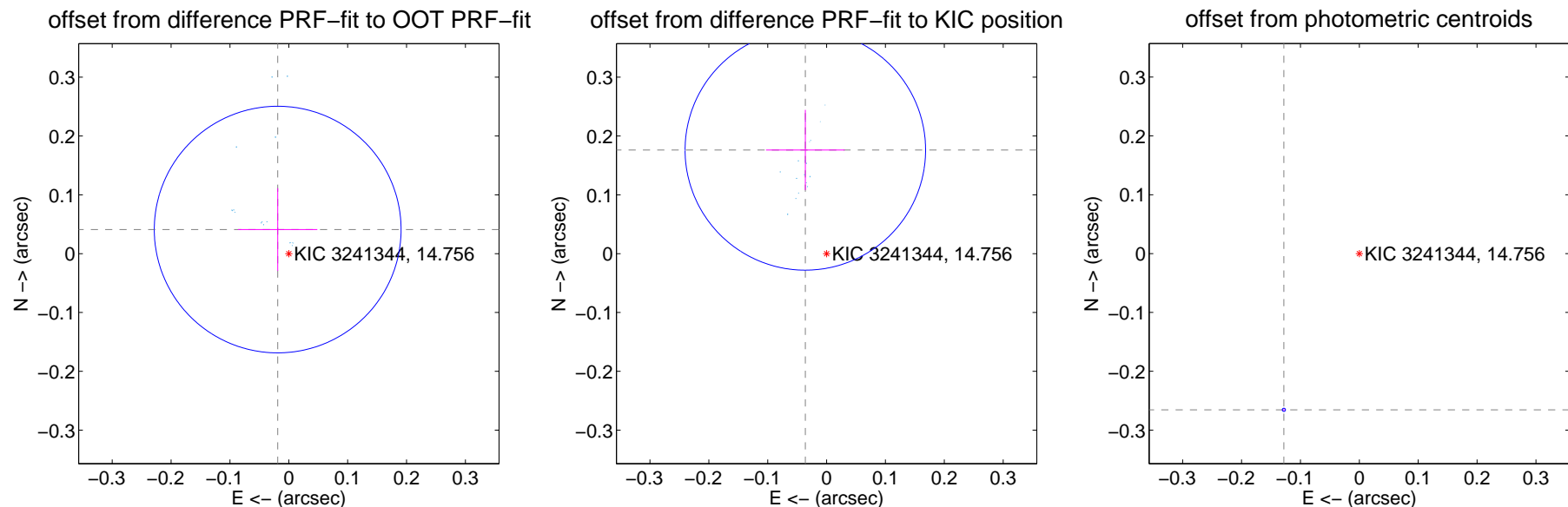
DV Centroid Data

Supplemental centroid analysis for 003241344-01. Kepler magnitude: 14.76. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

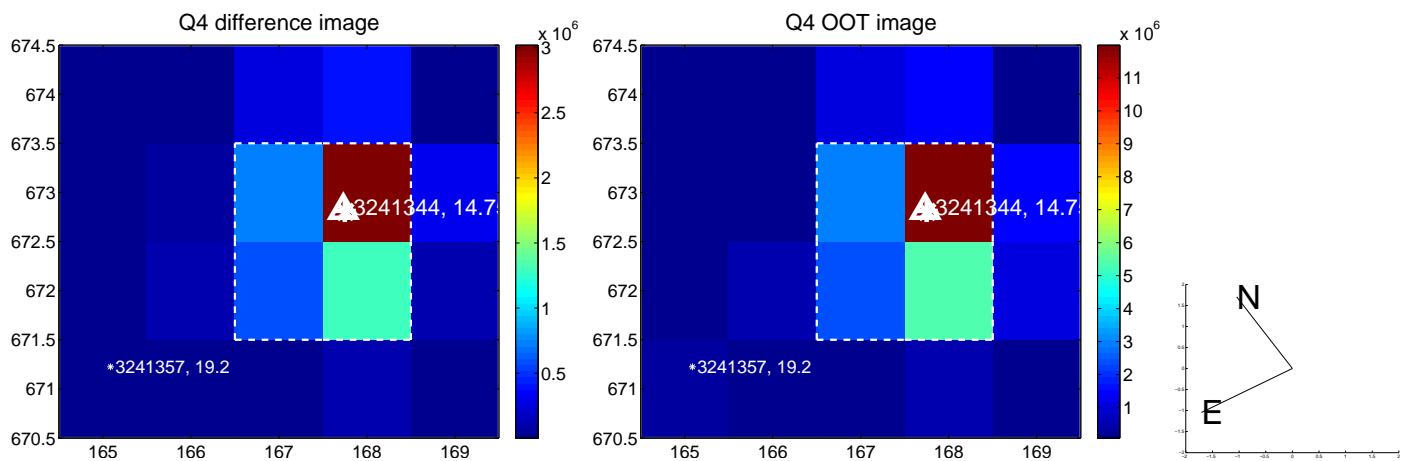
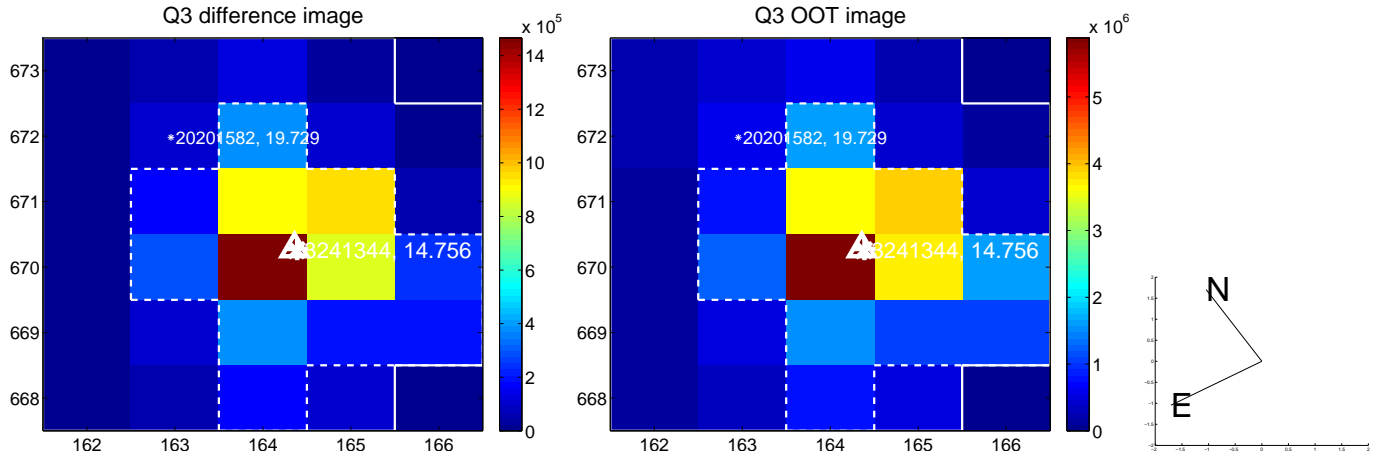
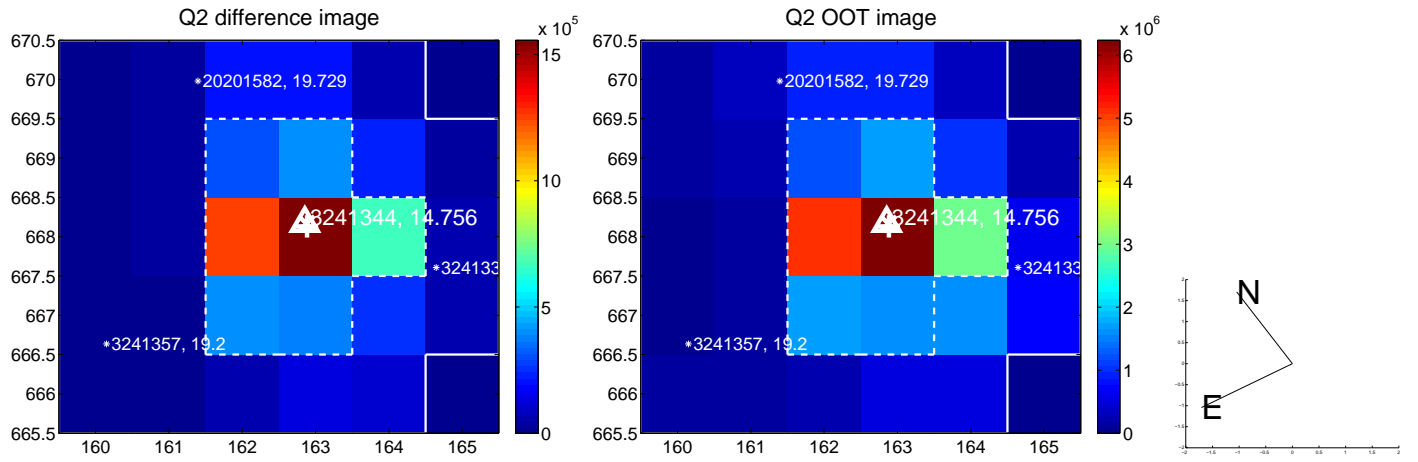
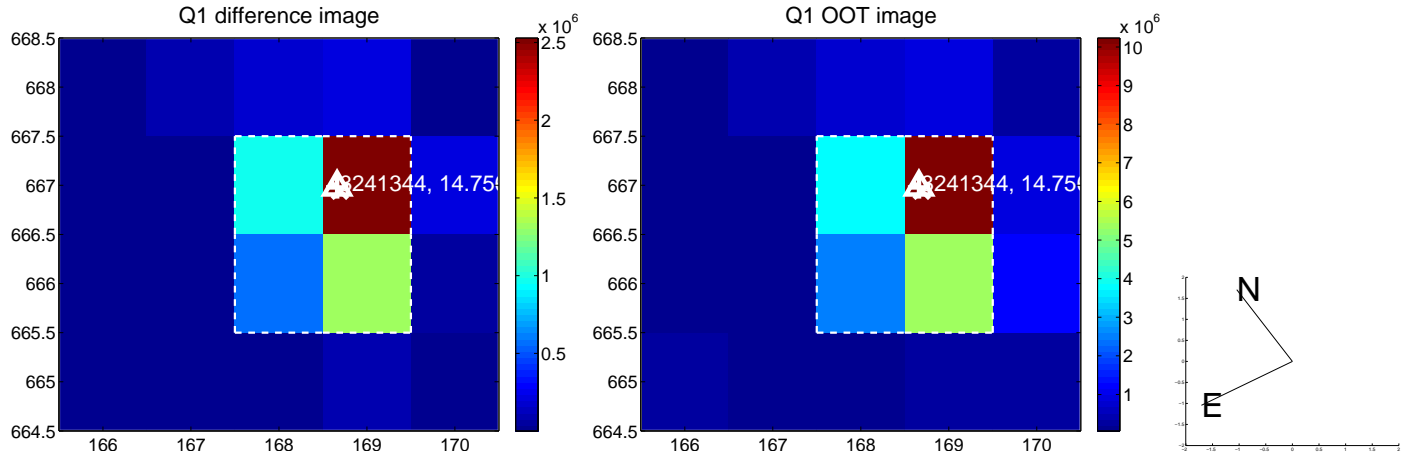
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.070	0.65	0.019 ± 0.067	0.041 ± 0.070
PRF-fit source offset from KIC position	0.180 ± 0.068	2.64	0.036 ± 0.067	0.176 ± 0.068
photometric centroid source offset	0.29 ± 0.00	325.20	0.13 ± 0.00	-0.27 ± 0.00

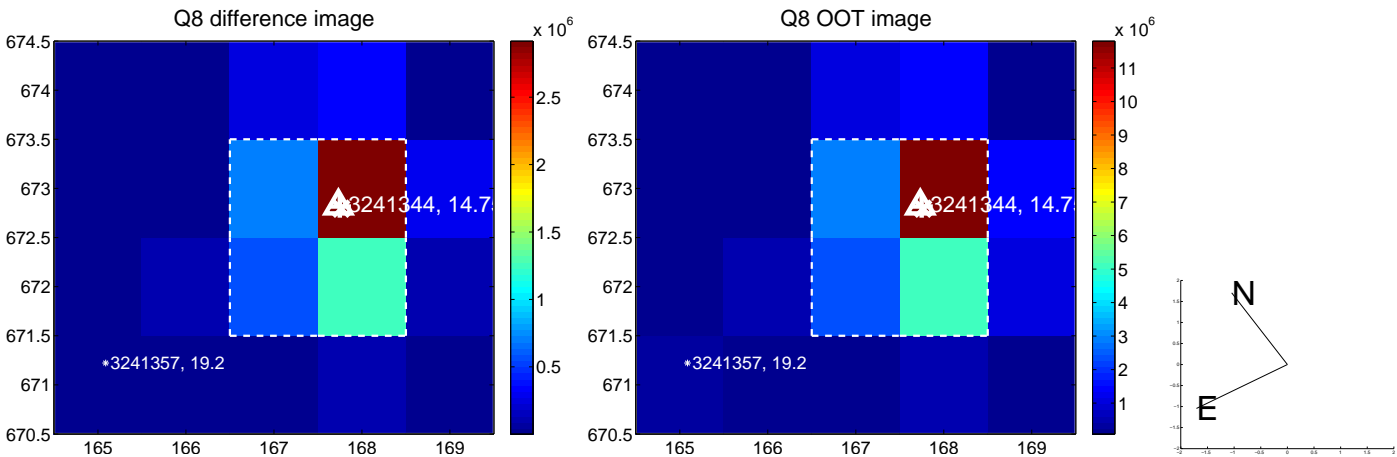
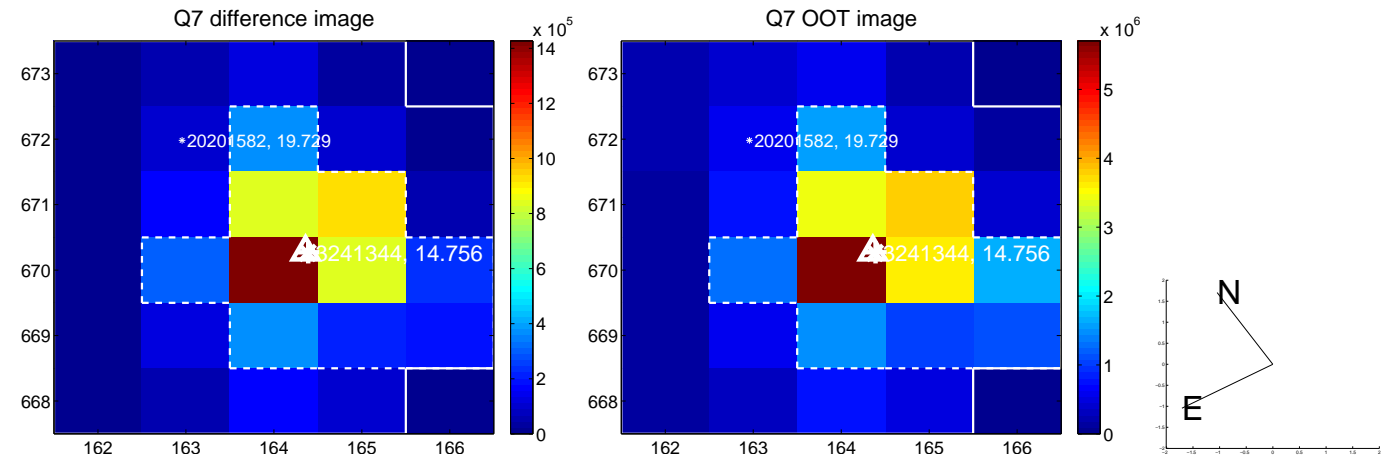
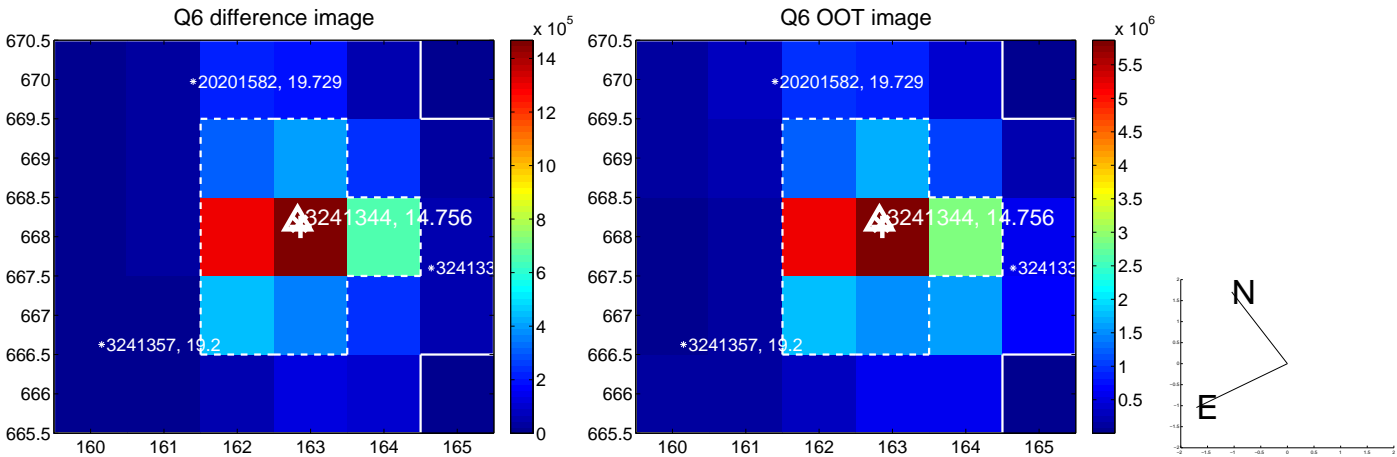
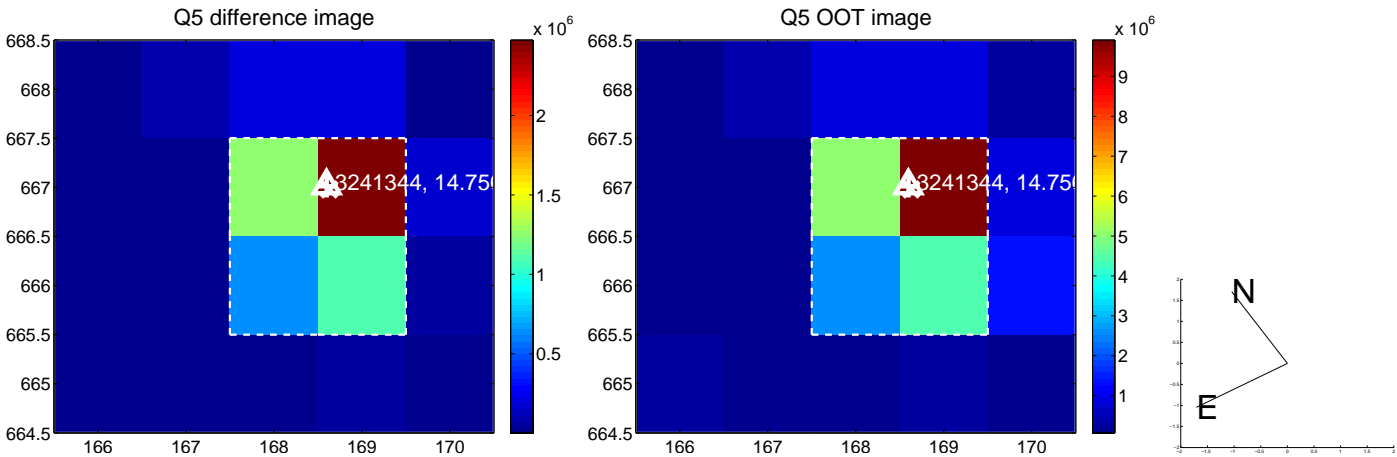


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

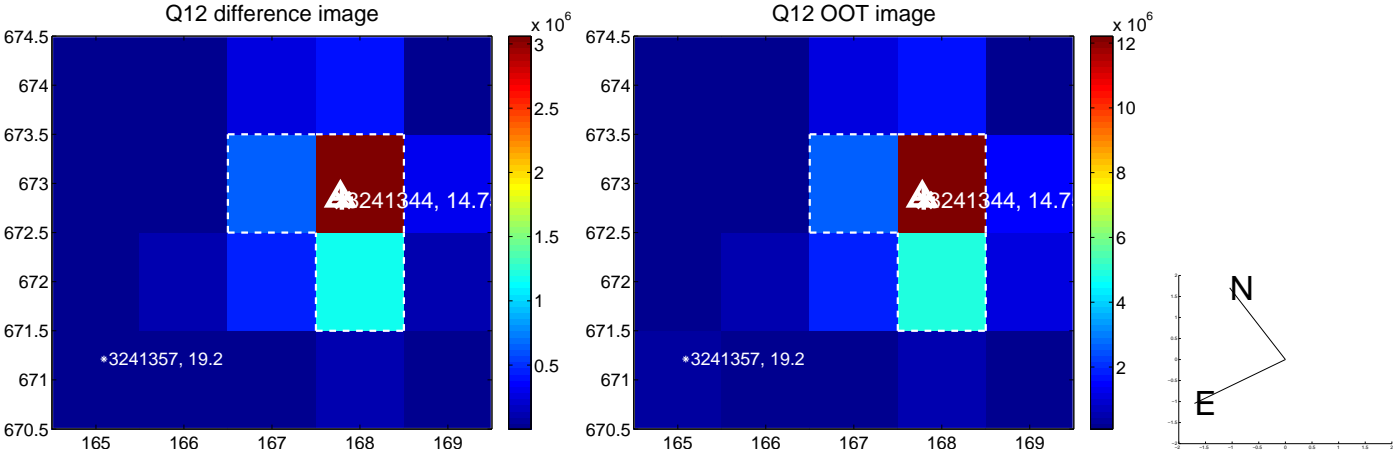
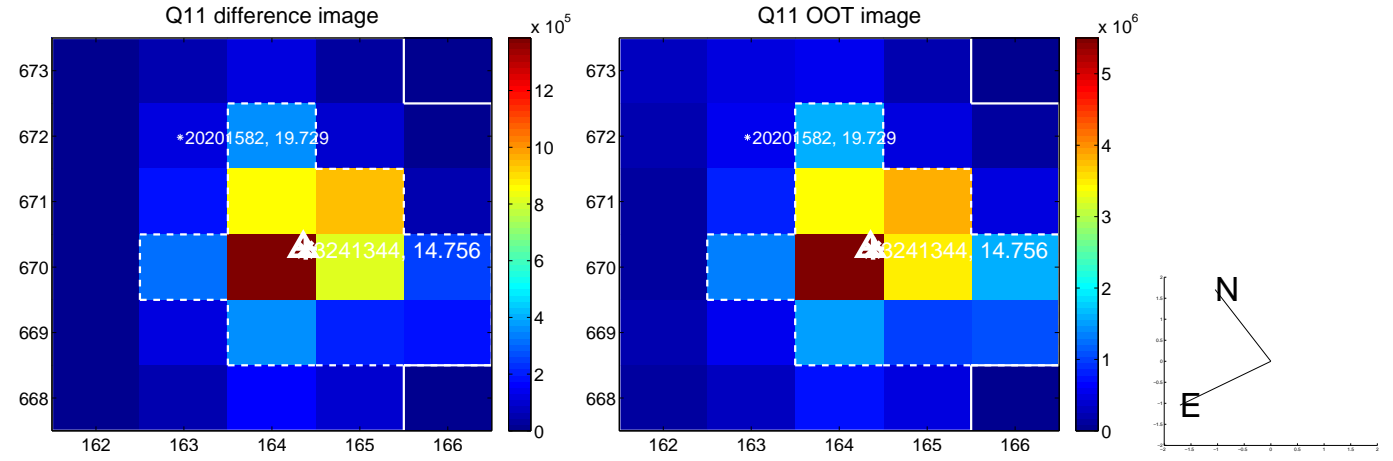
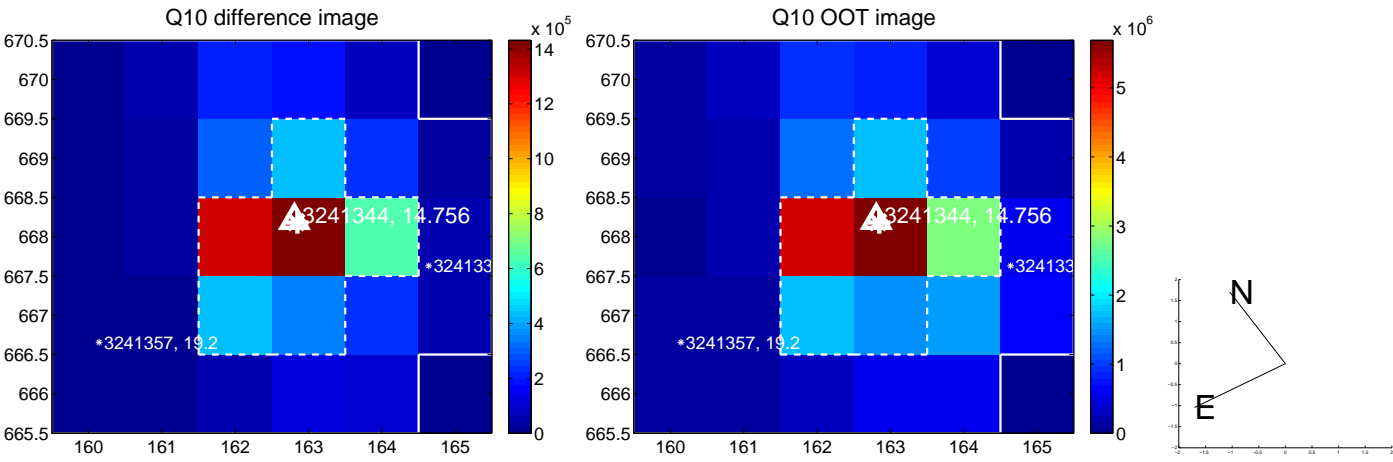
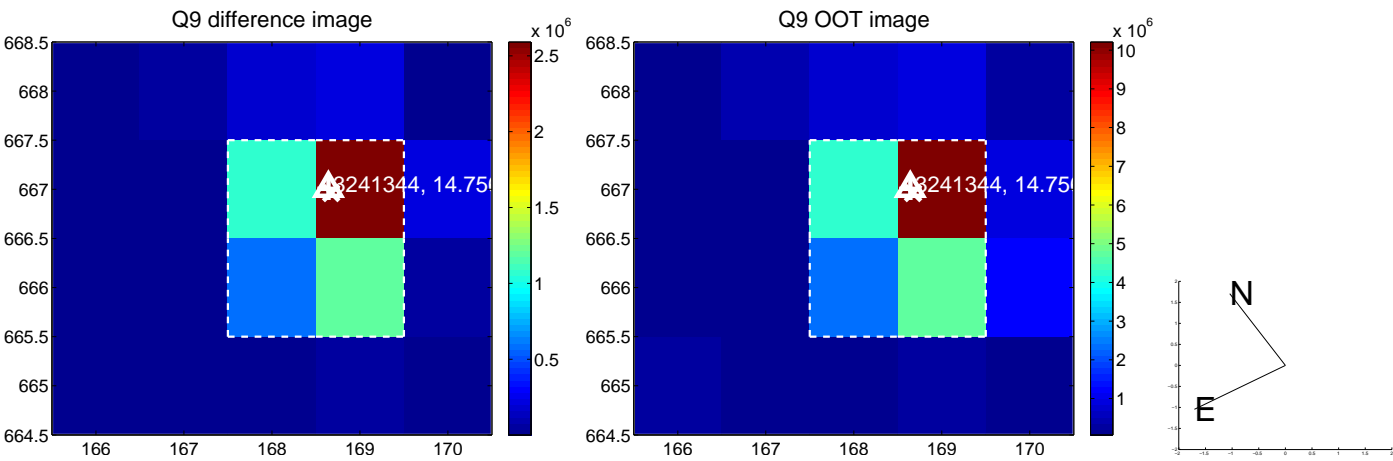
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



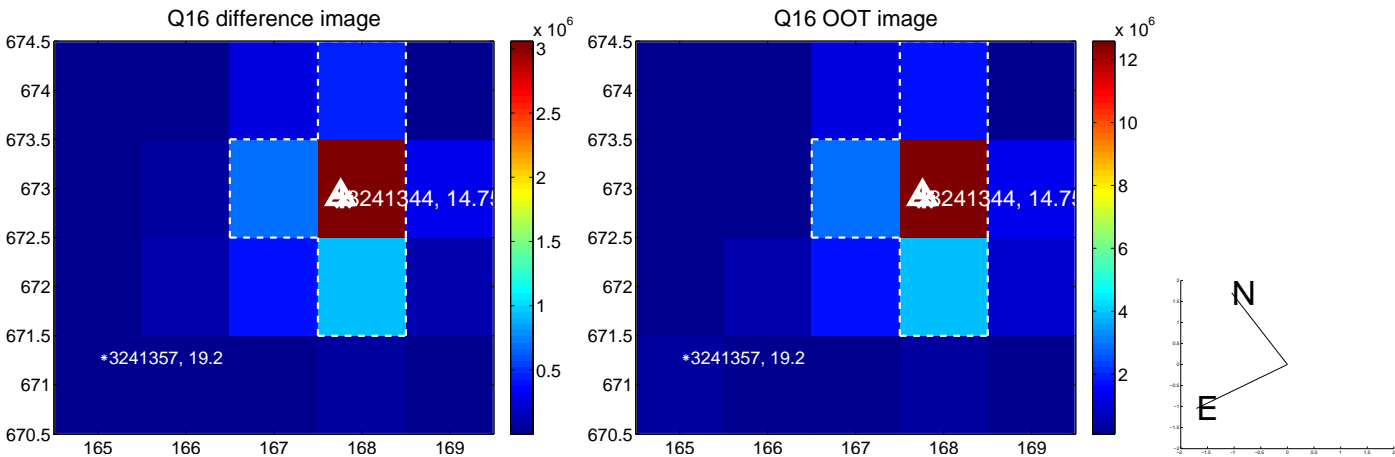
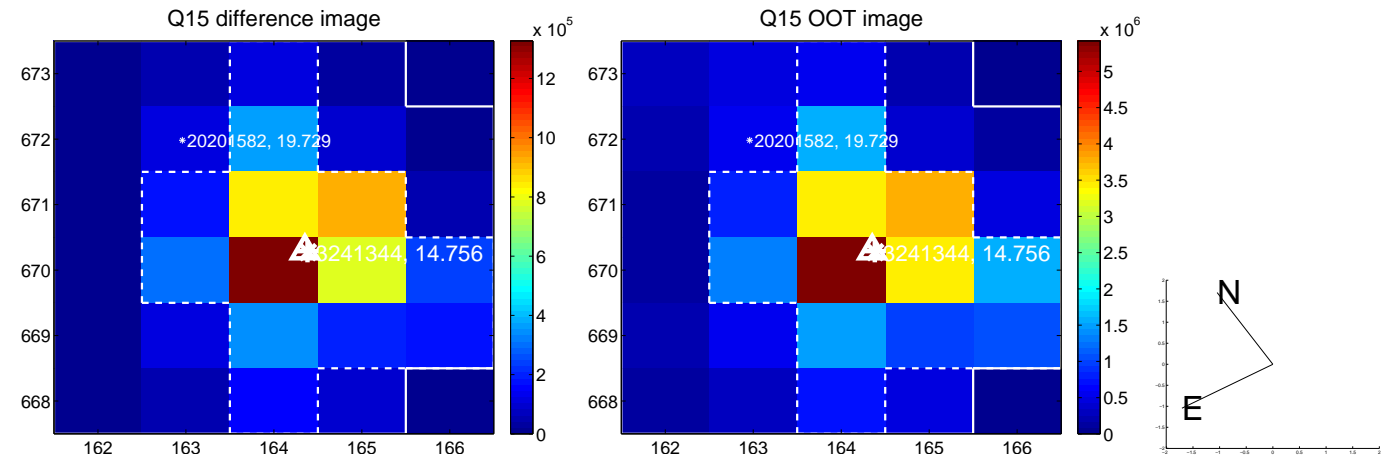
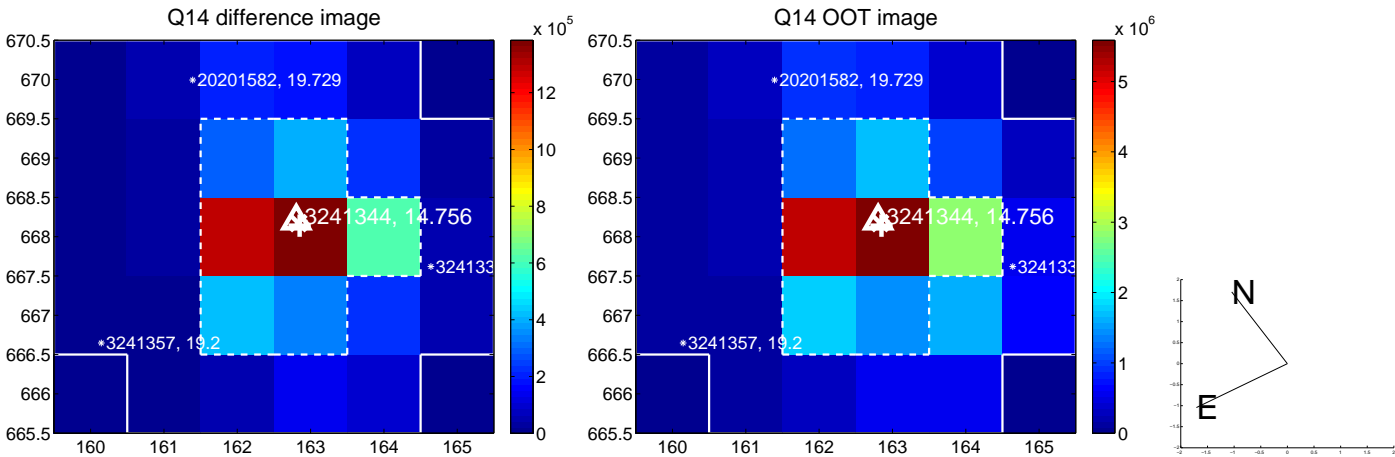
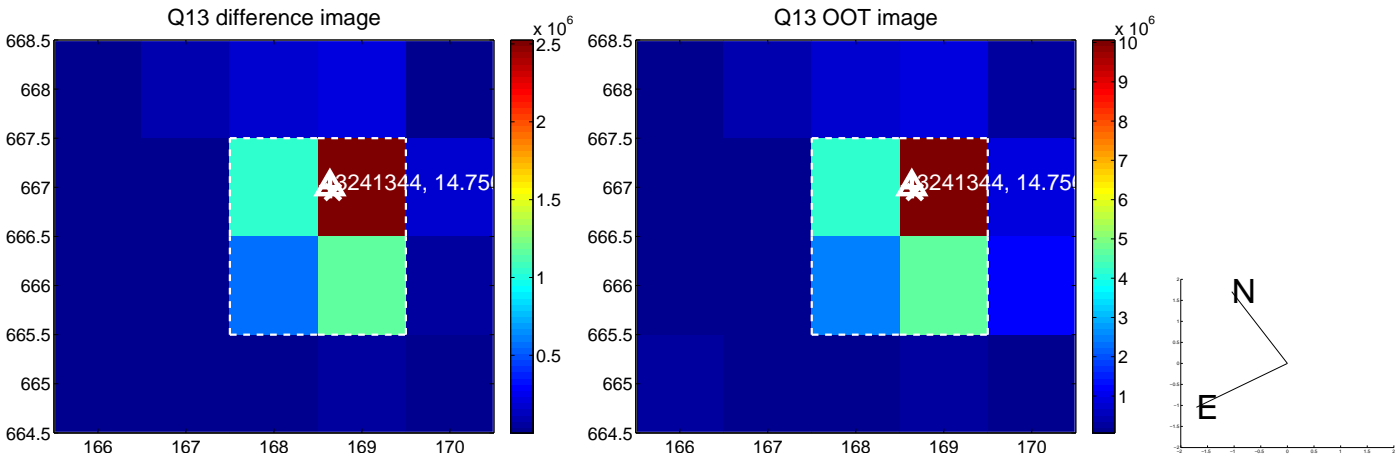
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



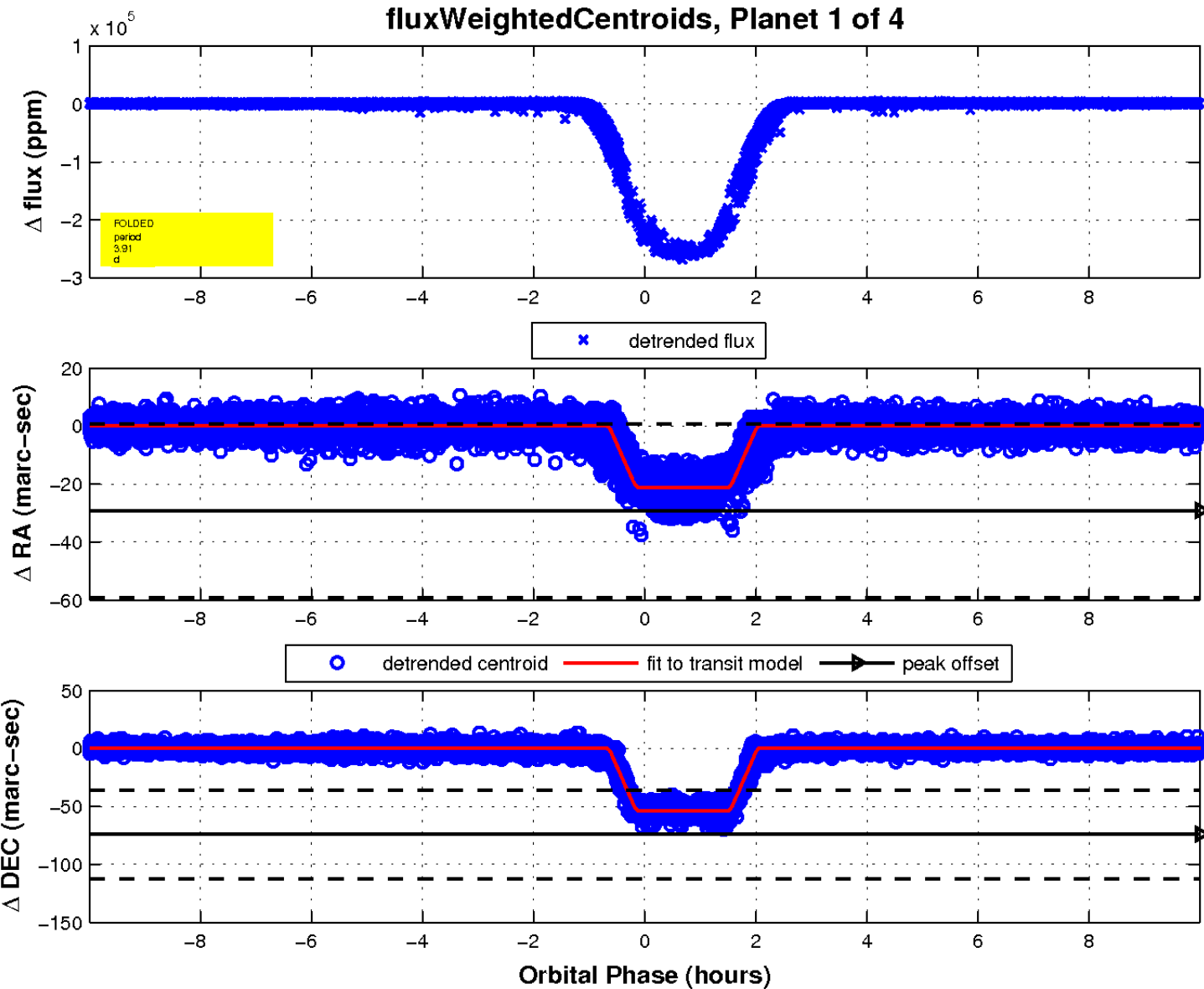
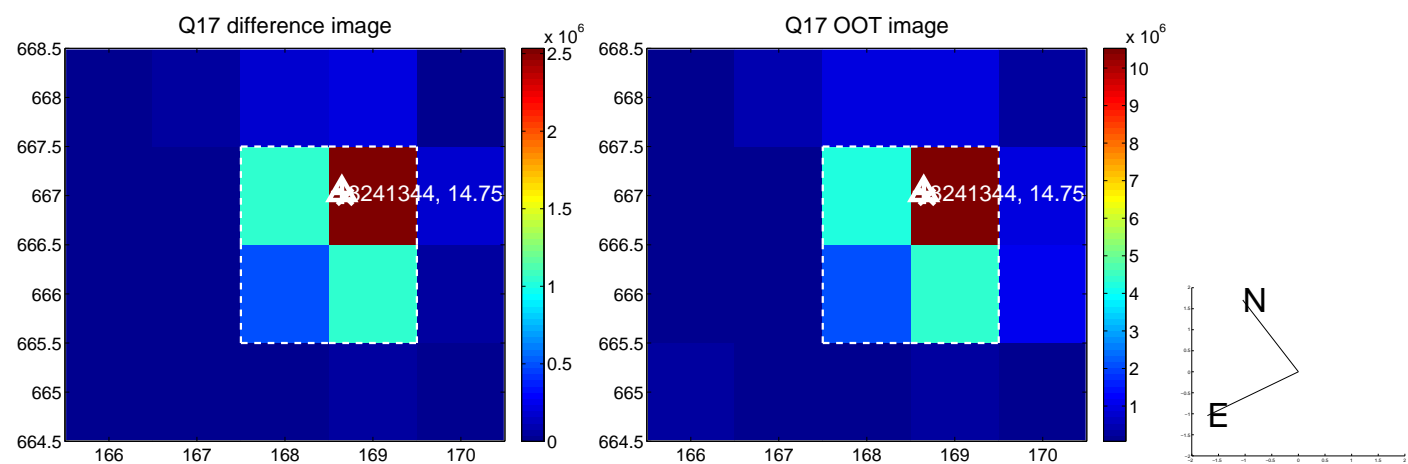
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

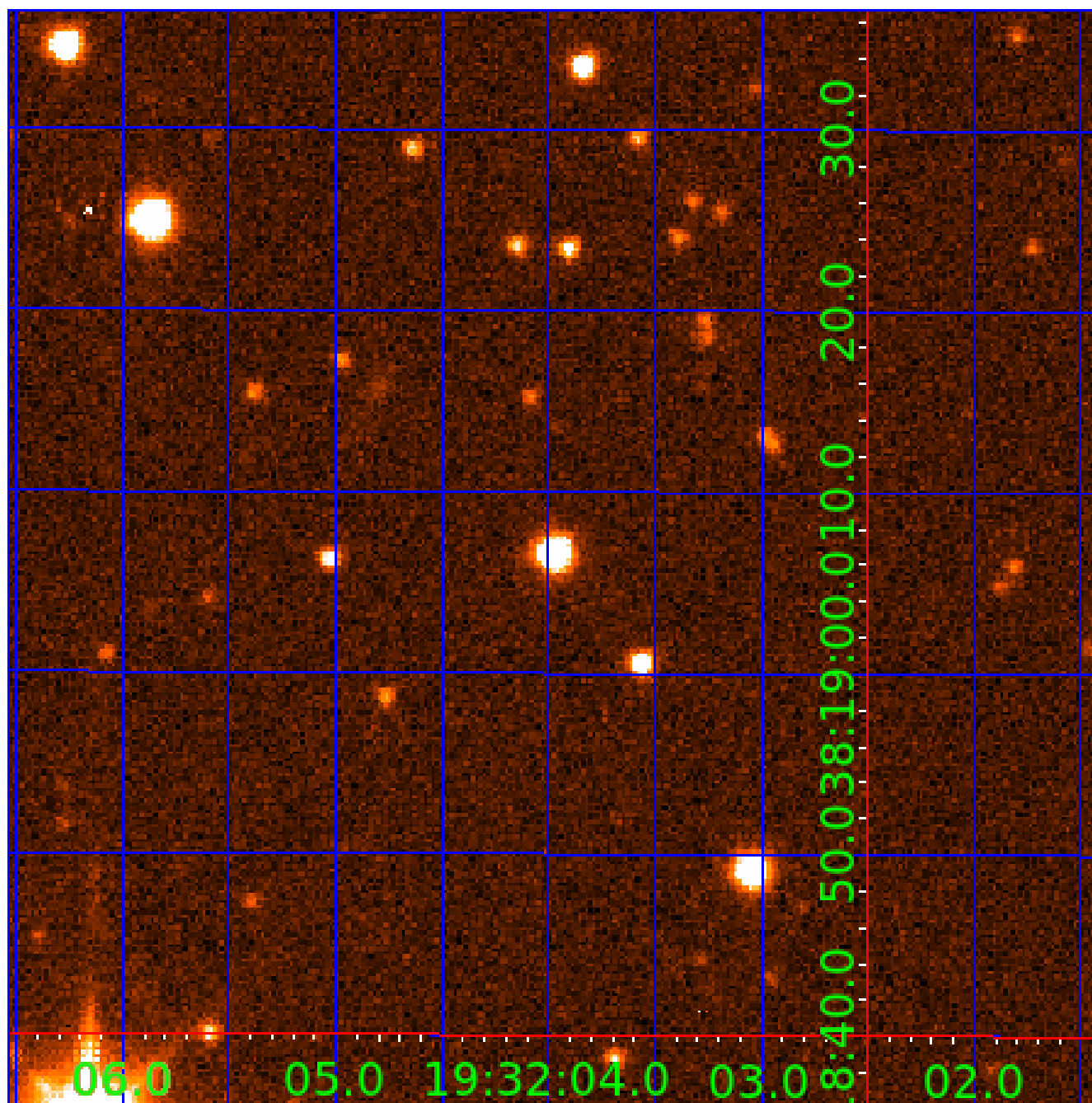


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003241344

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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003241344-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
003241344-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003241344-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

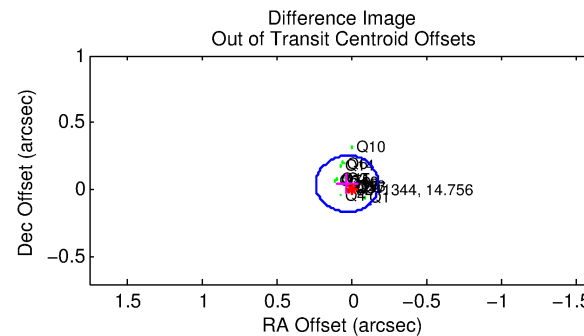
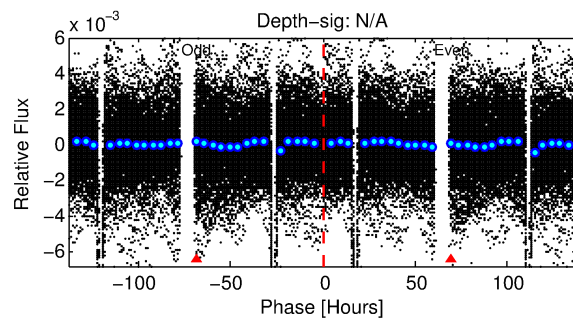
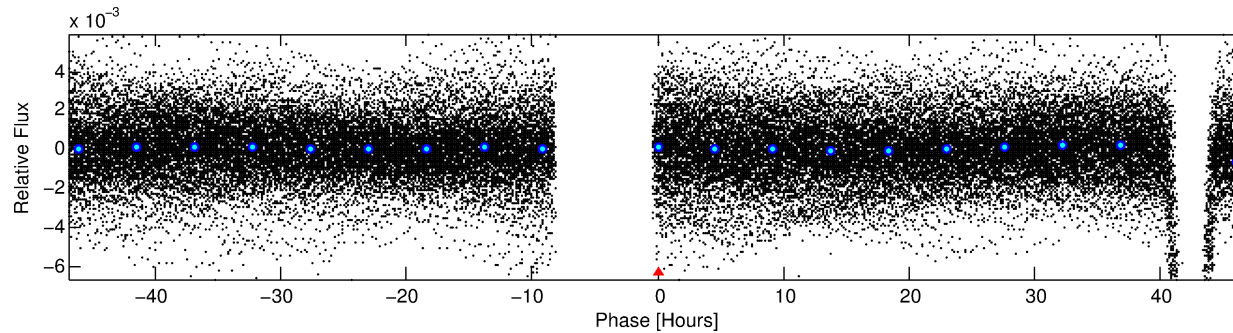
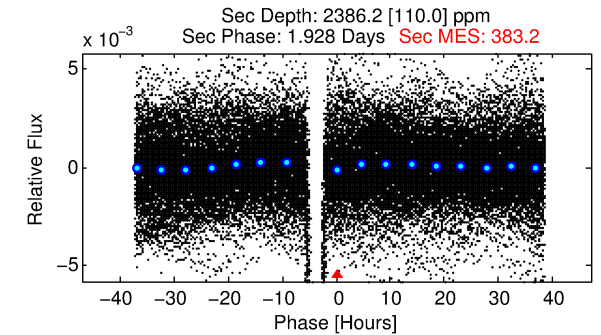
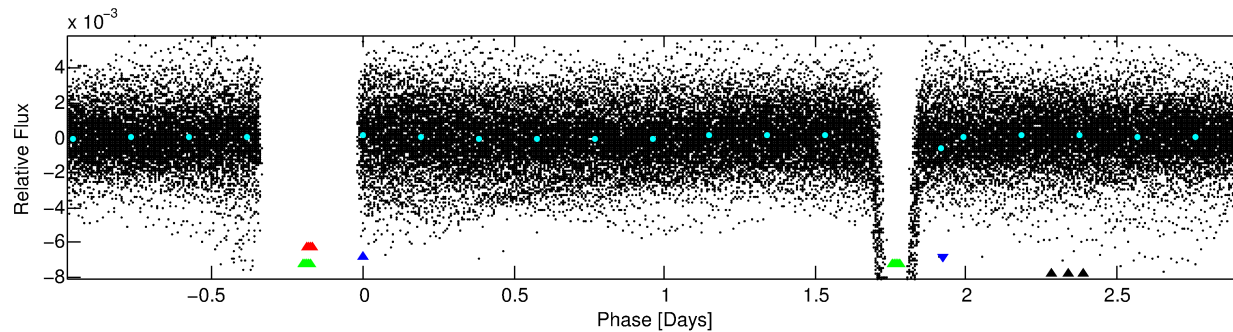
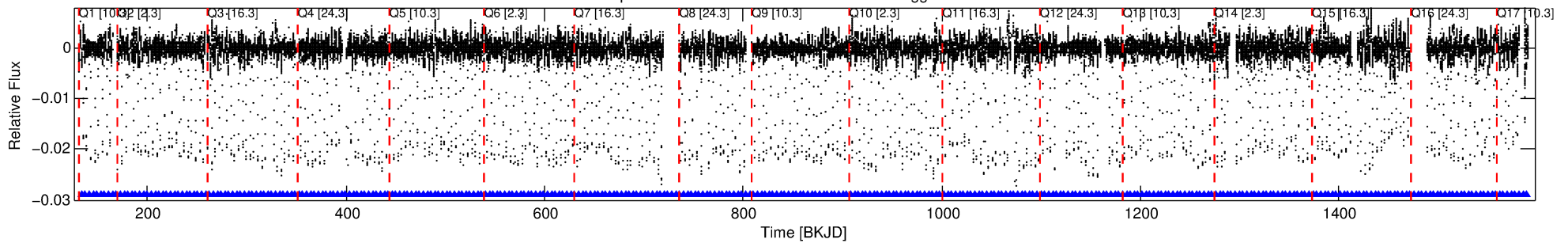
Ephemeris Match Information For 003241344-02

No Significant Match Found

DV One-Page Summary

KIC: 3241344 Candidate: 2 of 4 Period: 3.913 d
KOI: K05984 Corr: No Ephemeris Match

Kp: 14.76 R*: 0.72 Rs Teff: 5616.0 K Logg: 4.55 Fe/H: -0.980



TPS TCE Results:

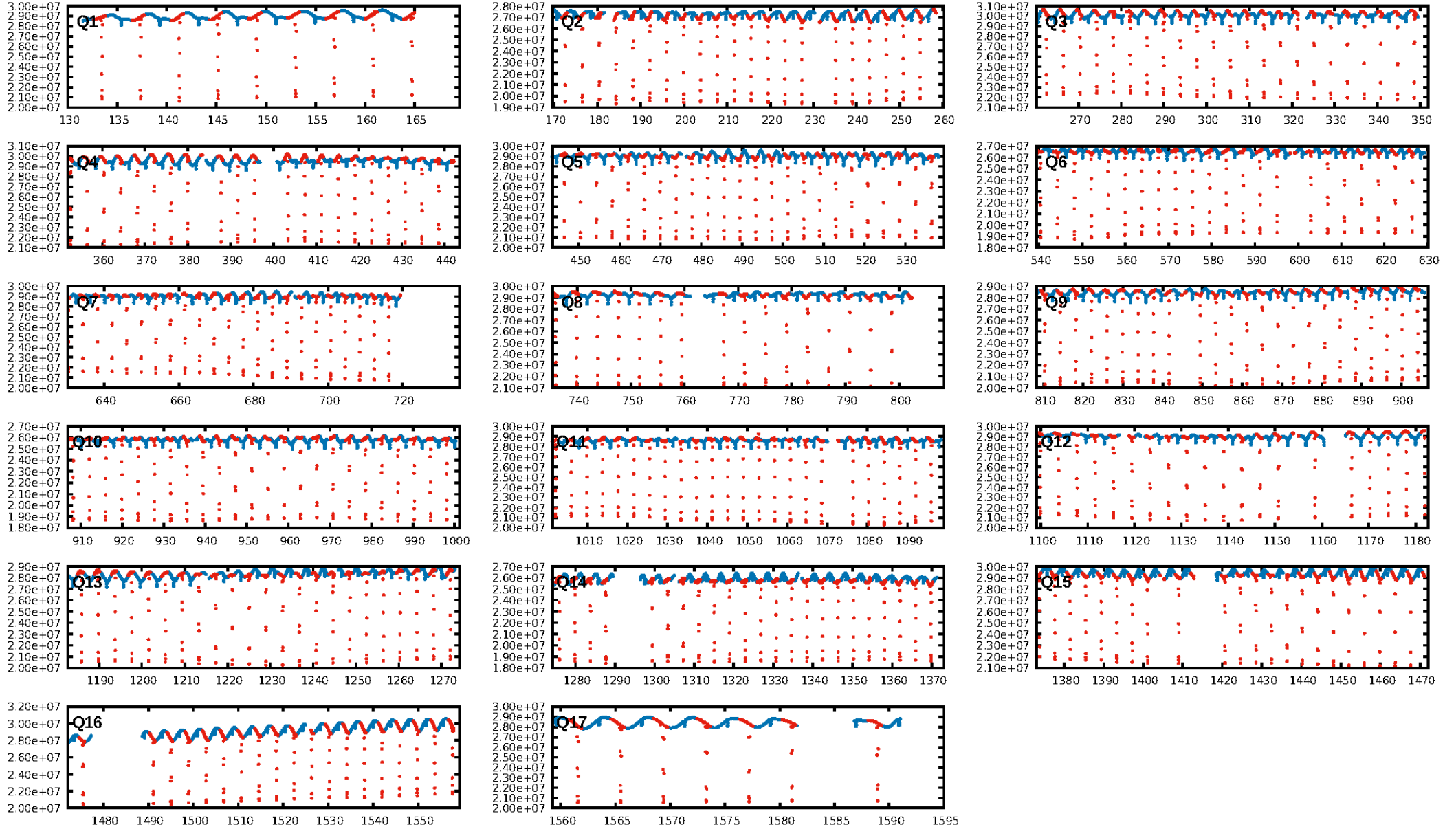
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Epoch = 133.2002 BKJD

DV fit results are unavailable

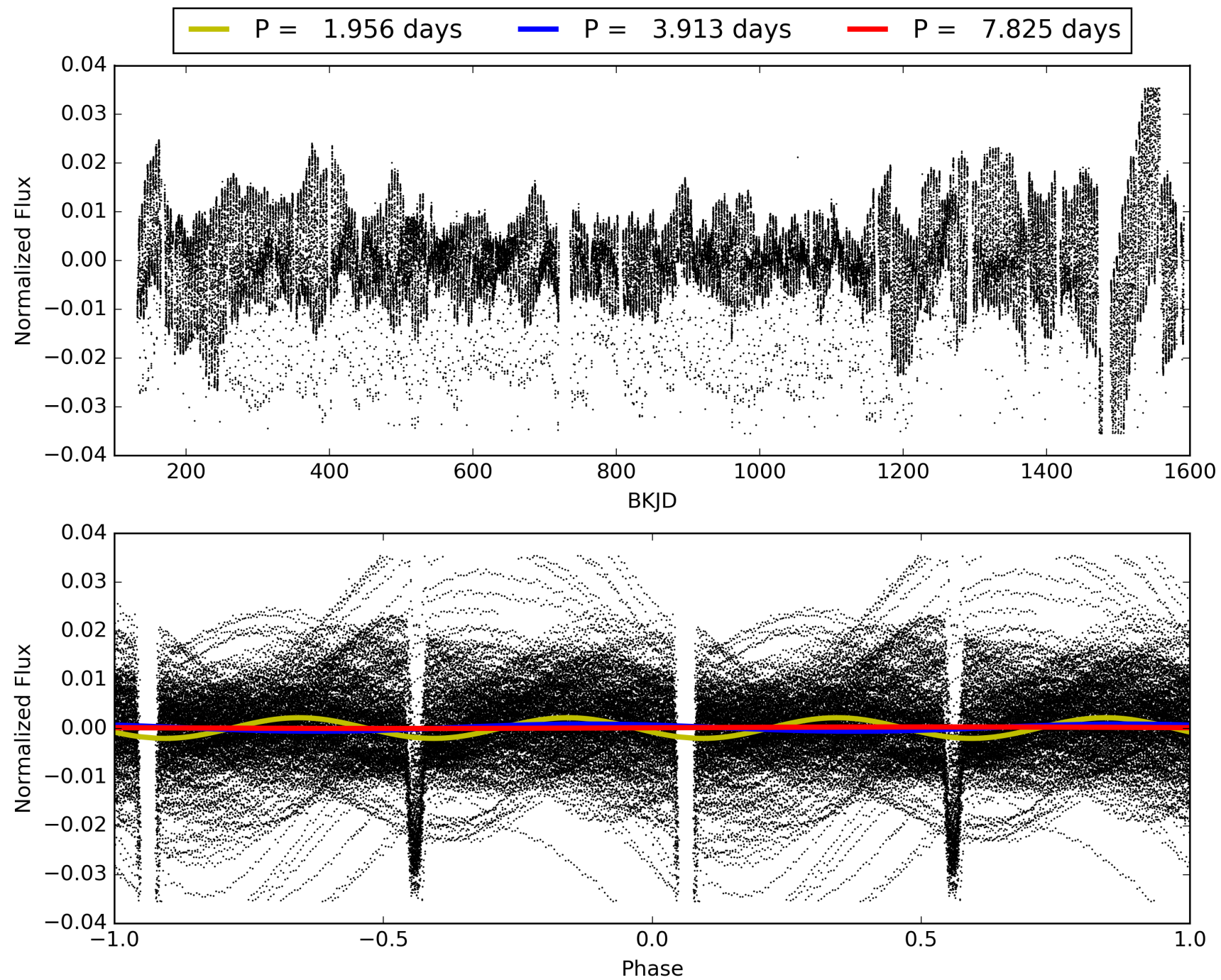
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.05 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [339/339]
GhostDiagnostic-chr: -2.112
Centroid-sig: 3.1%
Centroid-so: 0.334 arcsec [2.50 σ]
OotOffset-rm: 0.051 arcsec [0.73 σ]
KicOffset-rm: 0.173 arcsec [2.49 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 003241344-02, PDC Light Curves

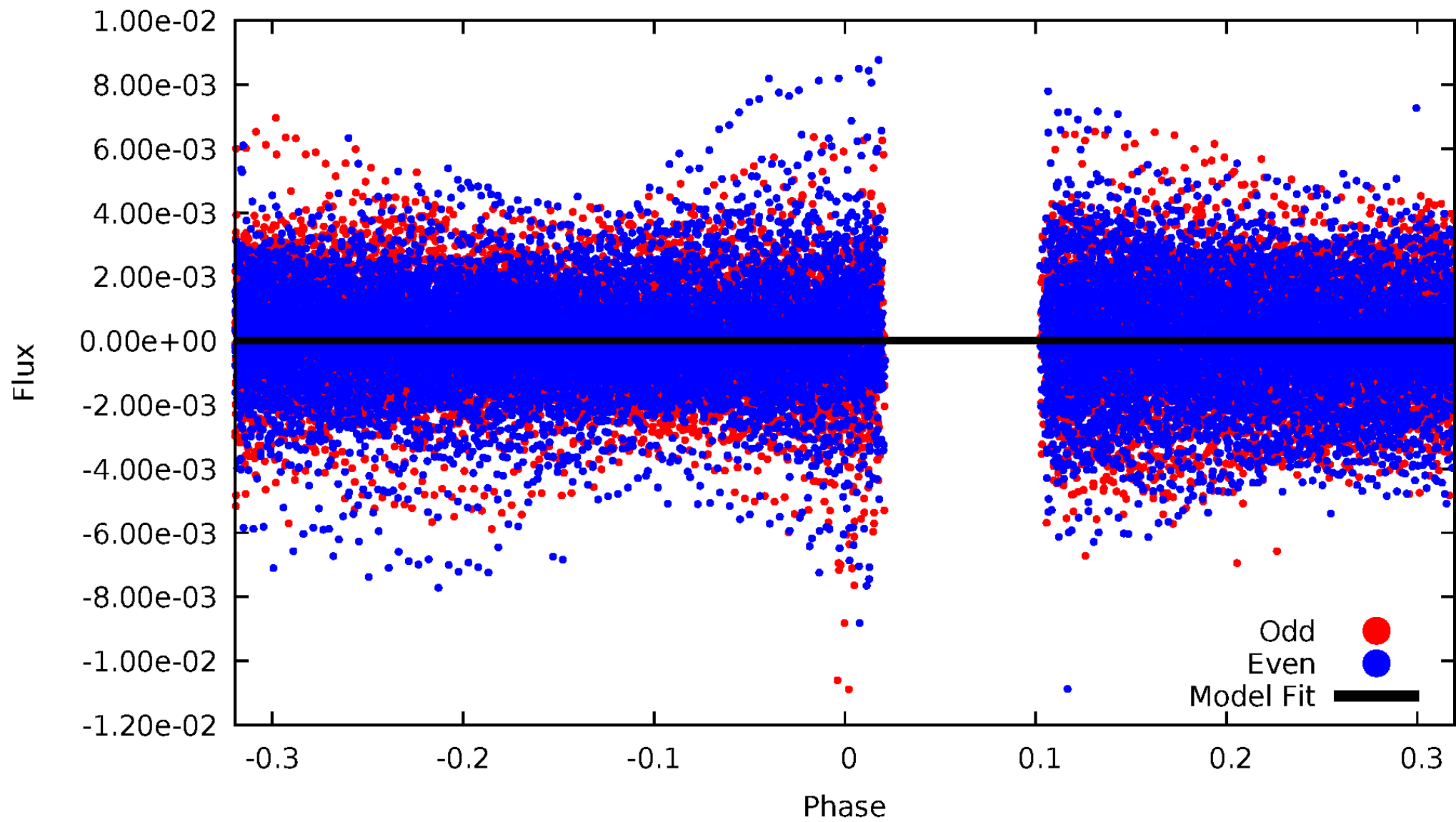


TCE 003241344-02



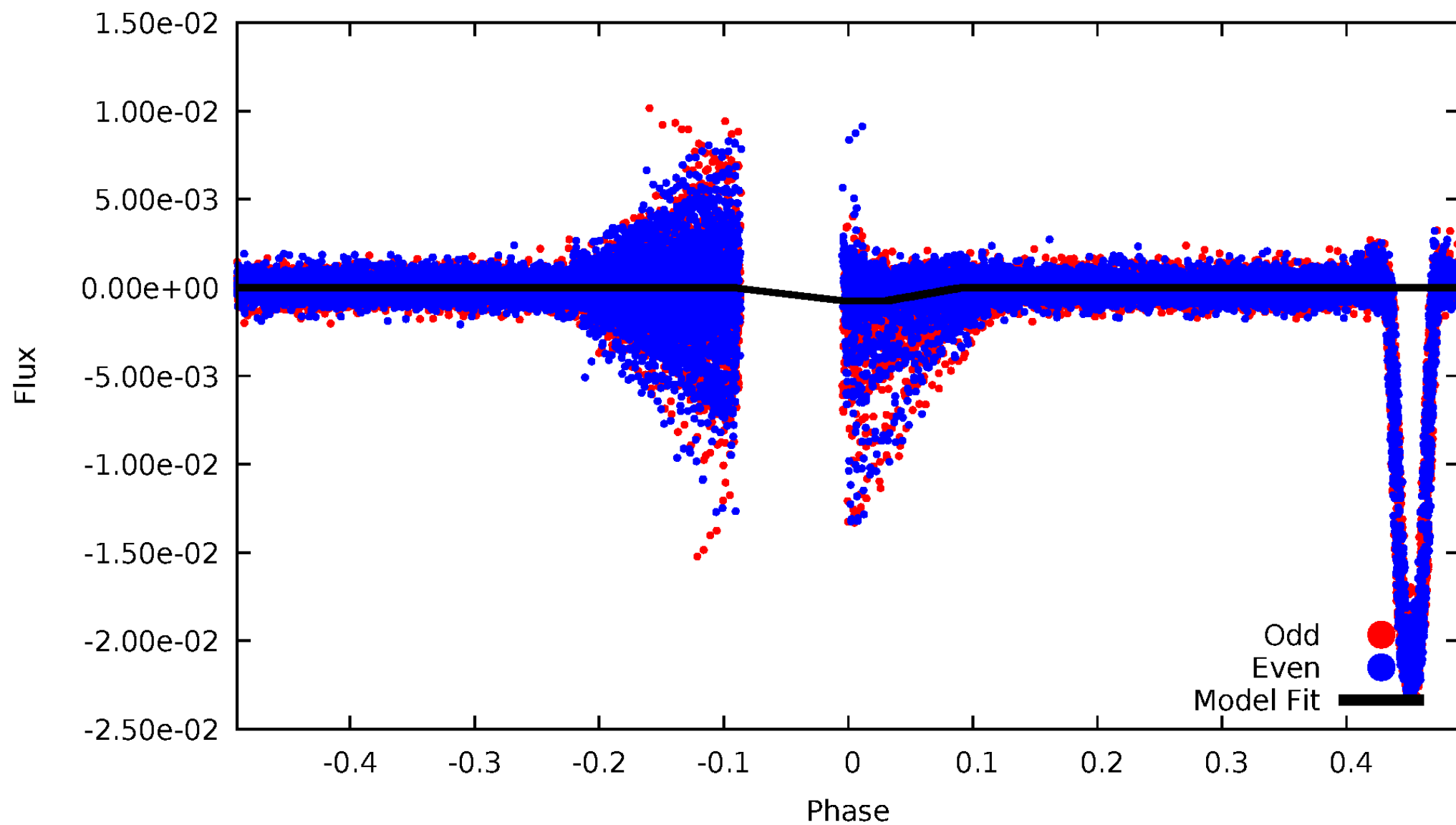
DV Odd/Even

TCE 003241344-02



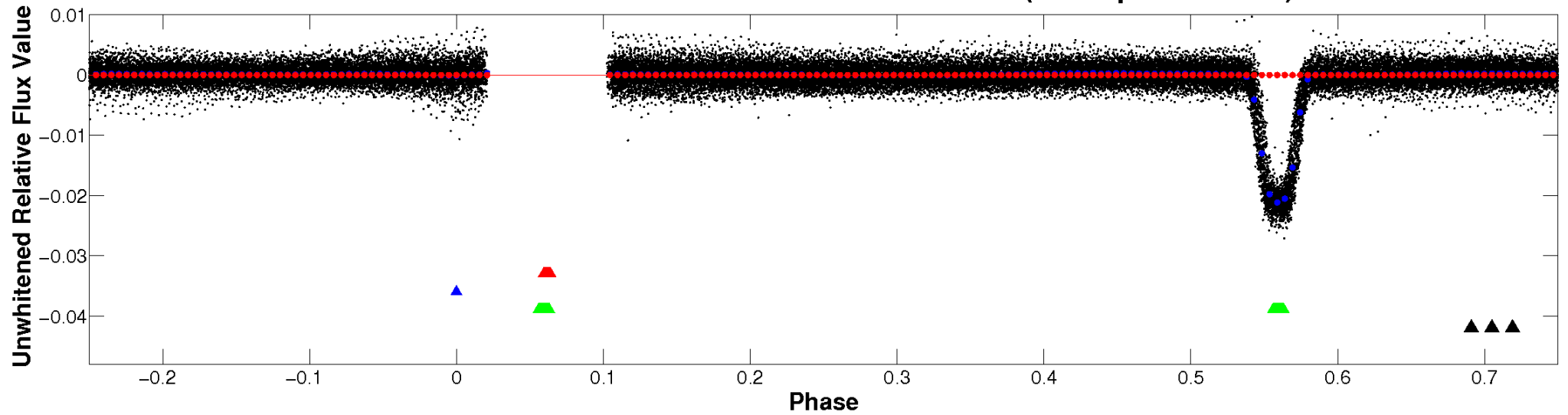
ALT Odd/Even

TCE 003241344-02

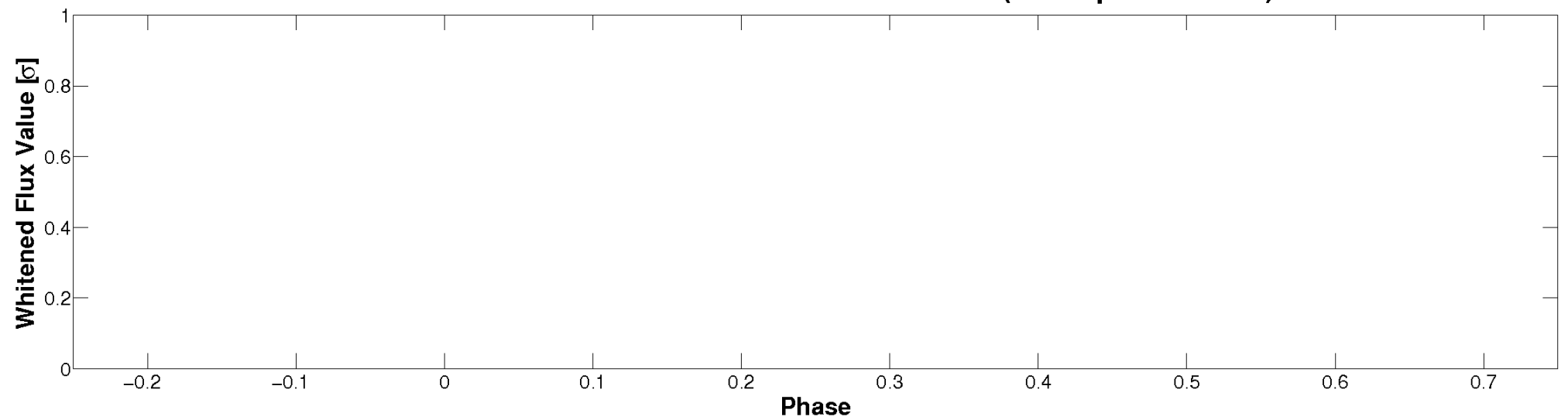


Non-Whitened Vs. Whitened Light Curve

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

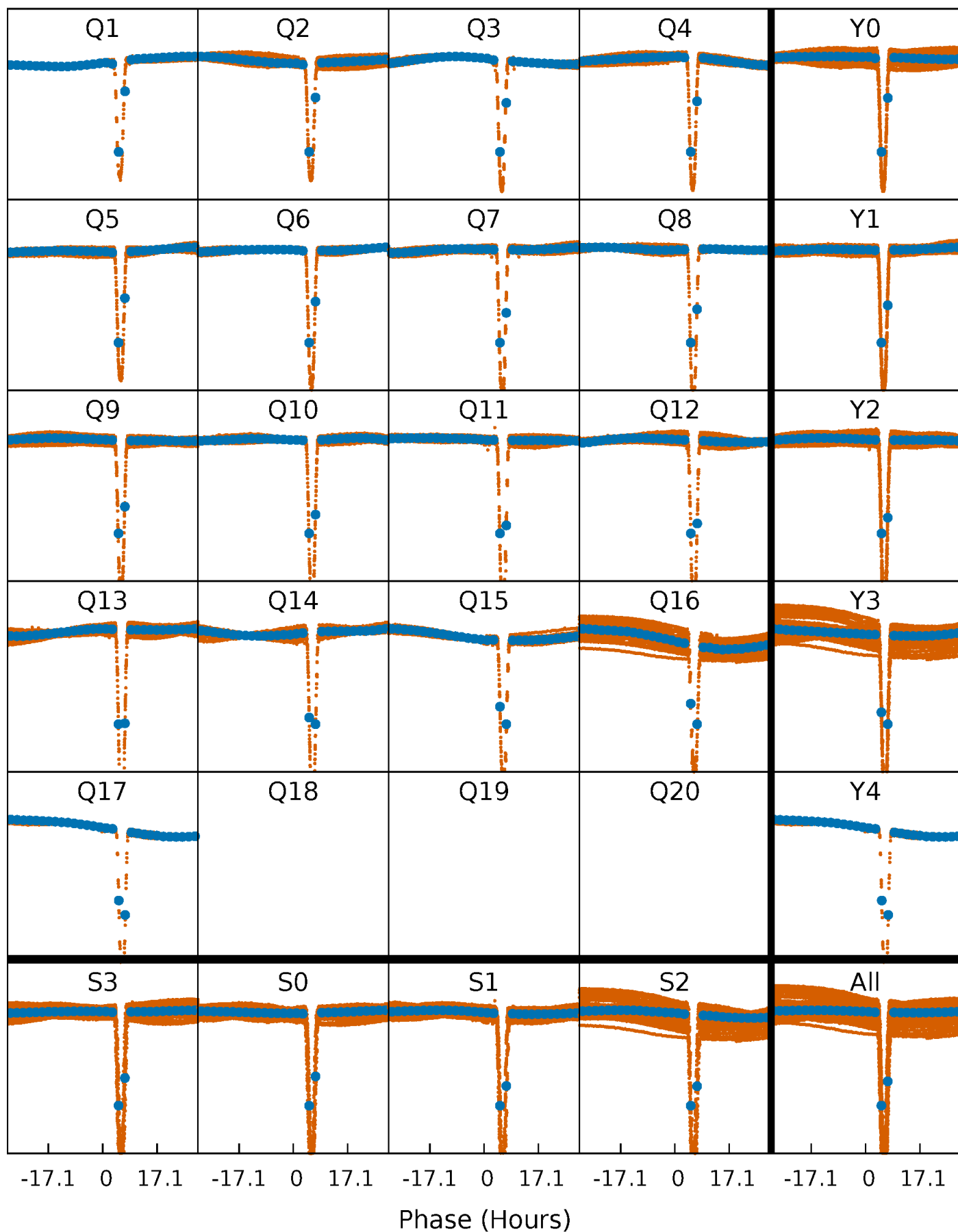


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



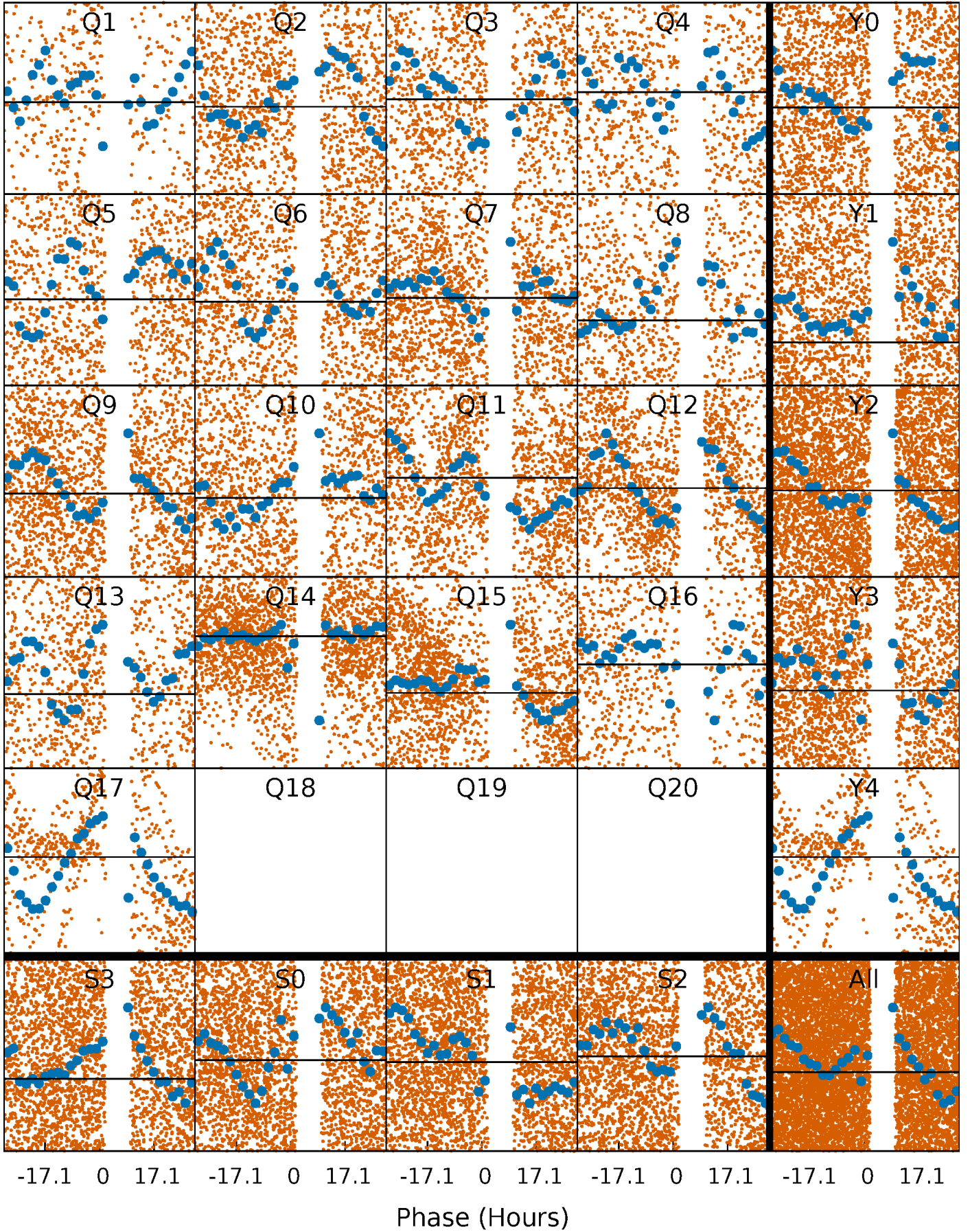
PDC Quarter-Phased Transit Curves

TCE 003241344-02 P= 3.912600 Days $T_0=133.200168$ (BKJD)



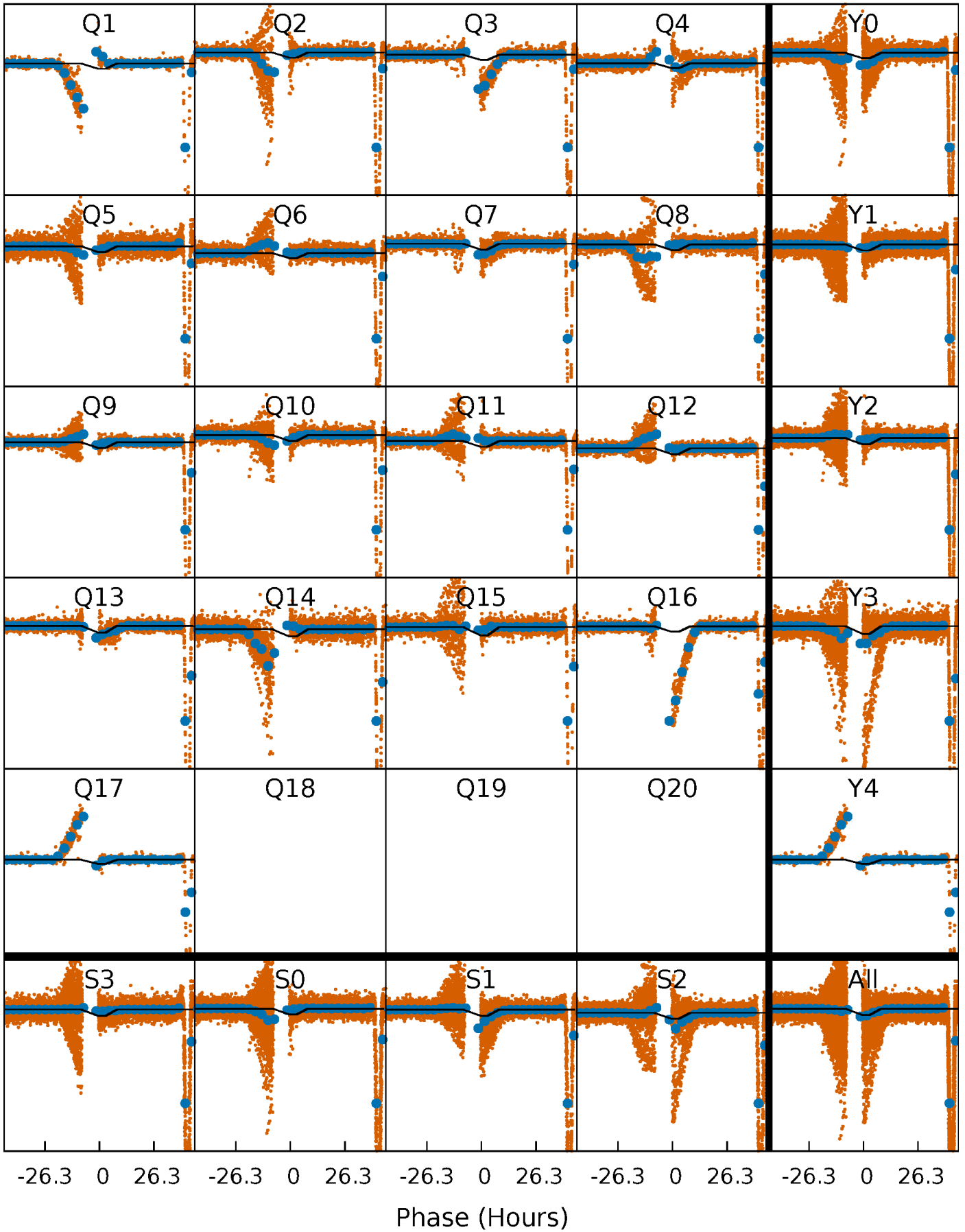
DV Quarter-Phased Transit Curves

TCE 003241344-02 P= 3.912600 Days $T_0=133.200168$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

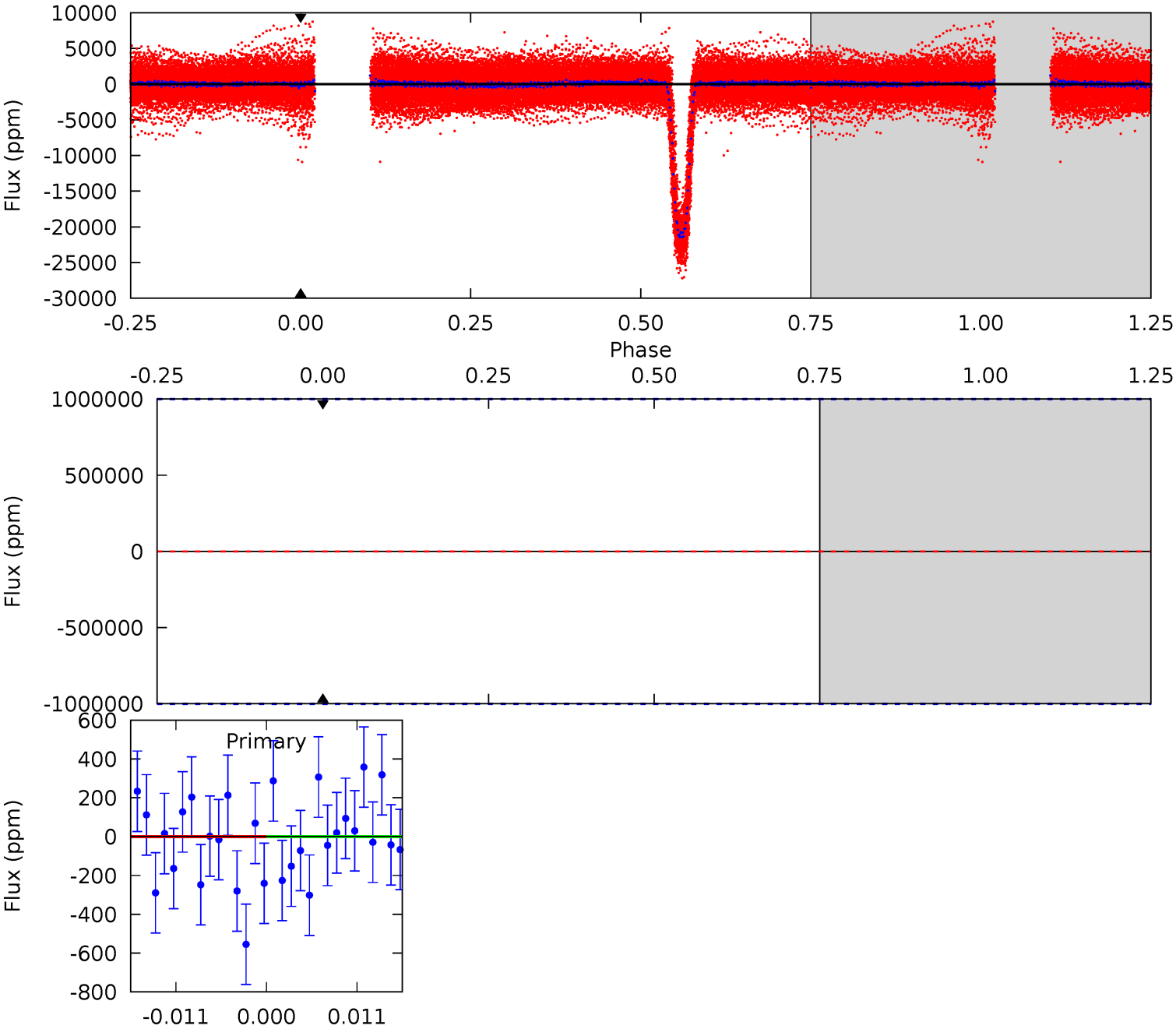
TCE 003241344-02 P= 3.912600 Days $T_0=133.619536$ (BKJD)



DV Model-Shift Uniqueness Test

003241344-02, P = 3.912600 Days, E = 129.287568 Days

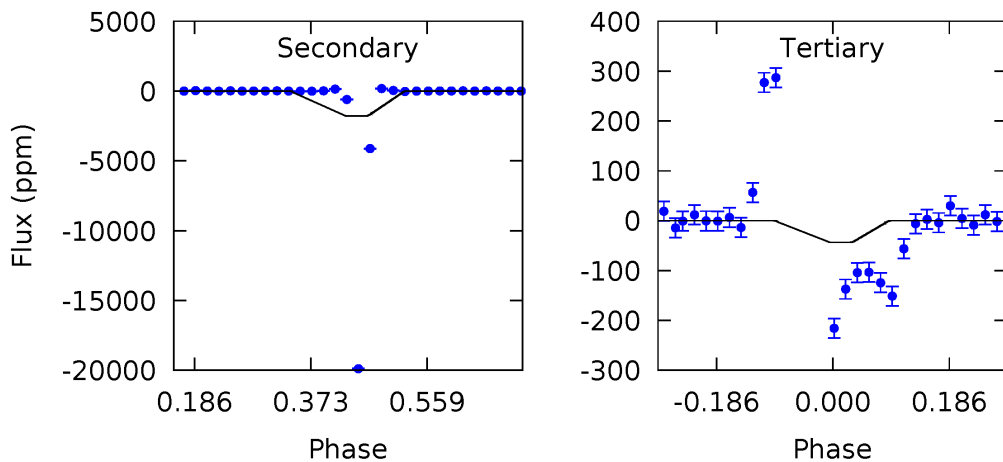
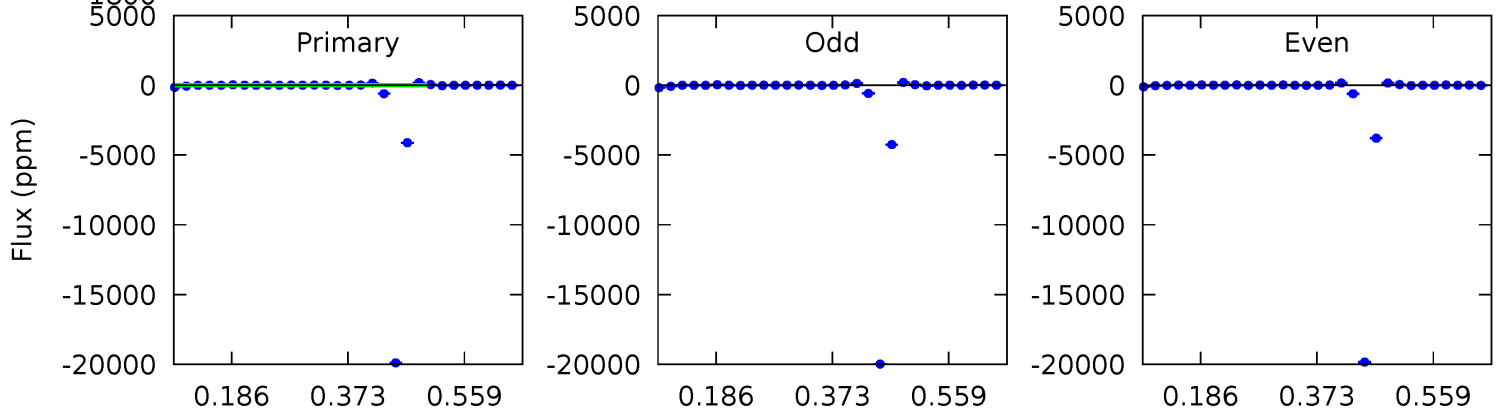
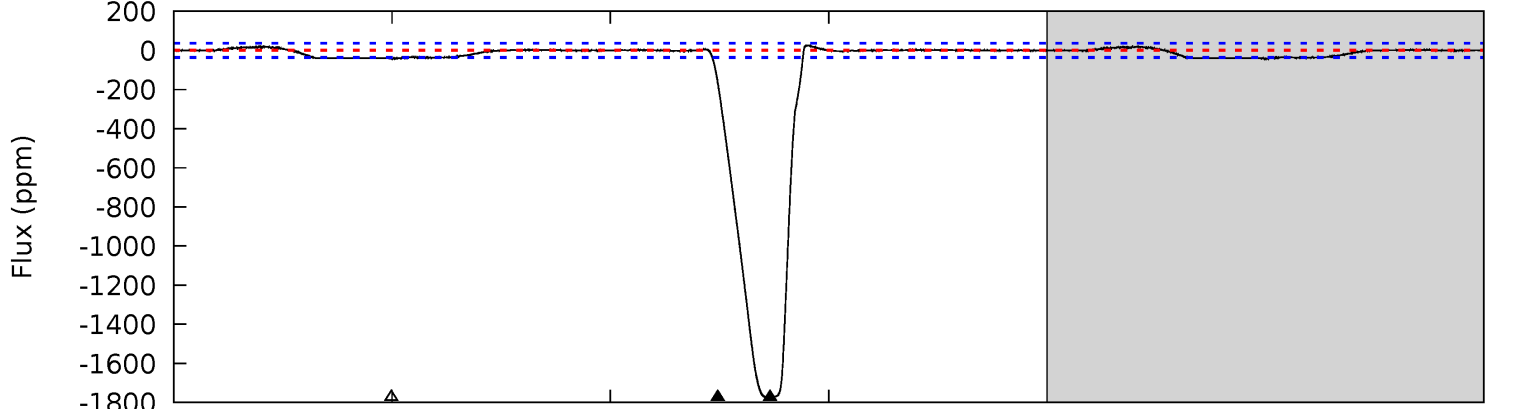
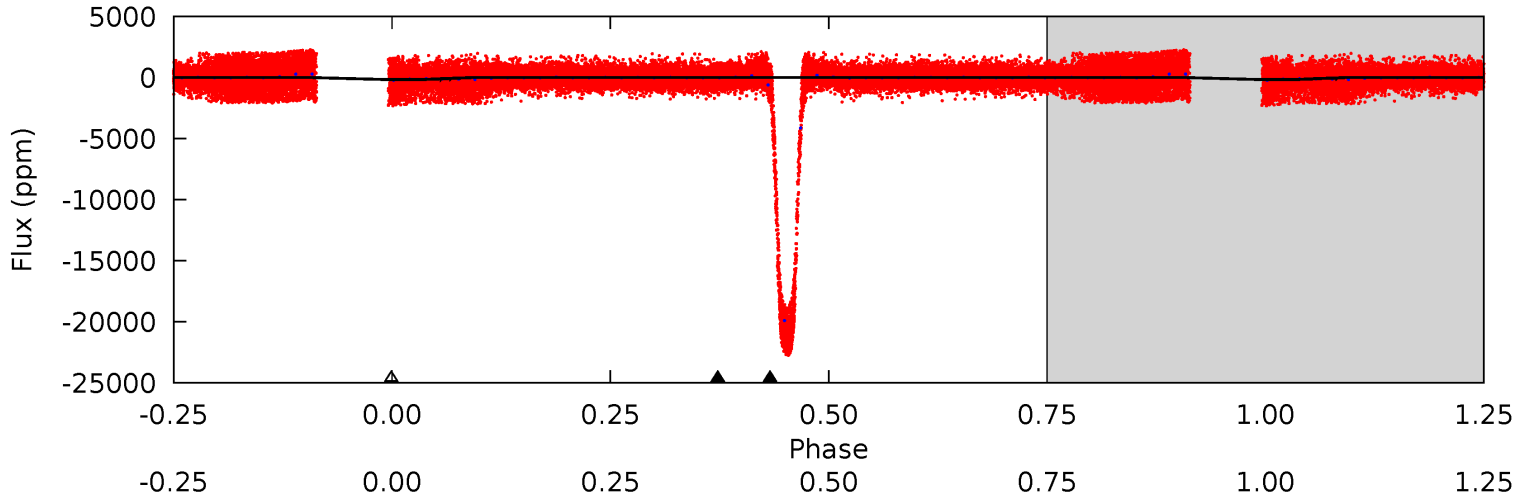
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003241344-02, P = 3.912600 Days, E = 129.706936 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	215.8	5.26	0	4.43	1.32	1.87	14.9	20.2	210.5	215.8	0.66	8.40	0.01	1.27



Stellar Parameters For KIC 003241344

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5616^{+185}_{-168}	$4.553^{+0.099}_{-0.081}$	$-0.980^{+0.300}_{-0.300}$	$0.720^{+0.086}_{-0.078}$	$0.675^{+0.079}_{-0.023}$	$2.547^{+0.938}_{-0.628}$
	+3%/-3%	+2%/-2%	+31%/-31%	+12%/-11%	+12%/-3%	+37%/-25%
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 003241344-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$10.58^{+7.75}_{-6.46}$	1423^{+61}_{-67}	3499^{+7918}_{-13559}	19^{+1529}_{-1327}
Alt.	-1778 ± 8	$6.28^{+6.23}_{-4.43}$	1422^{+58}_{-70}	4333^{+3324}_{-924}	47^{+490}_{-35}

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

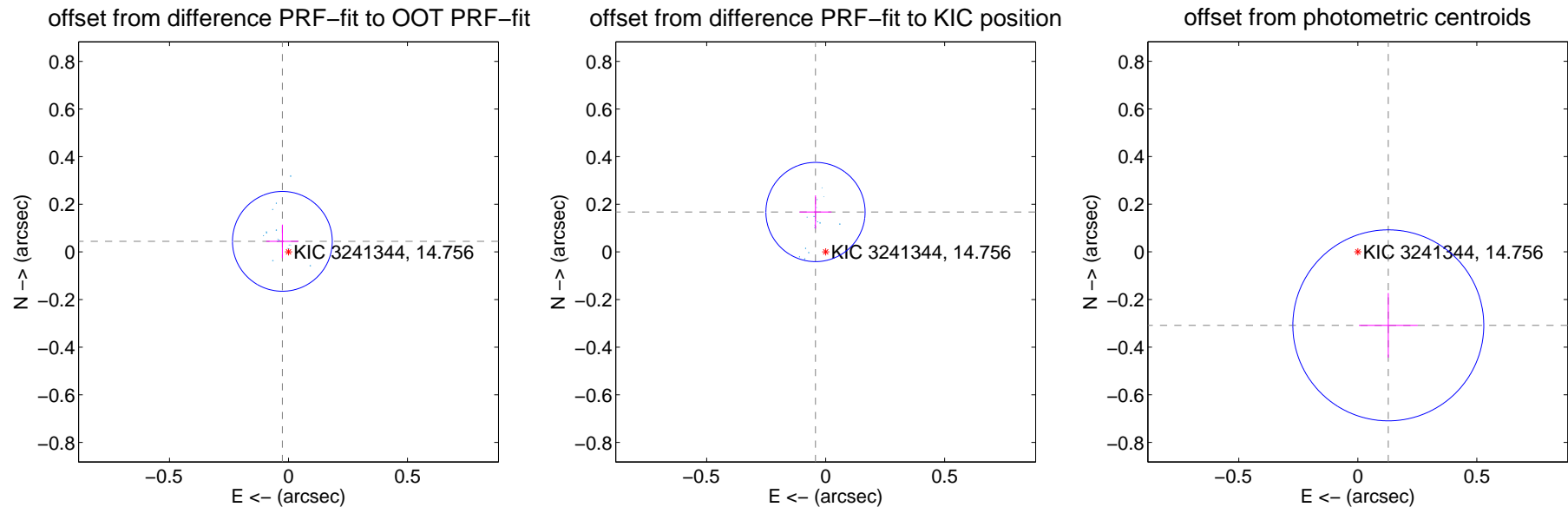
DV Centroid Data

Supplemental centroid analysis for 003241344-02. Kepler magnitude: 14.76. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

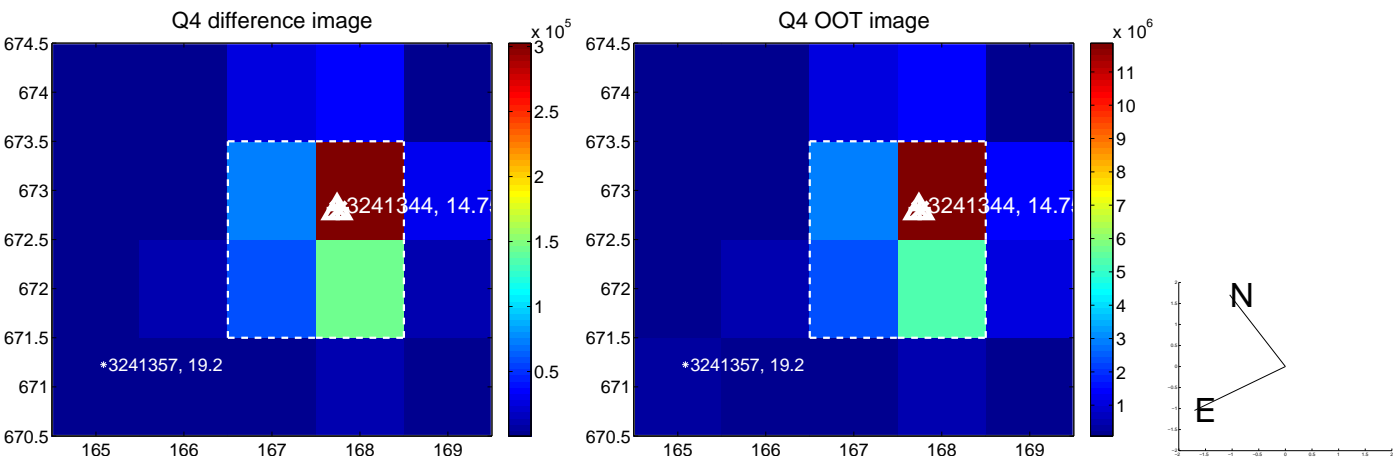
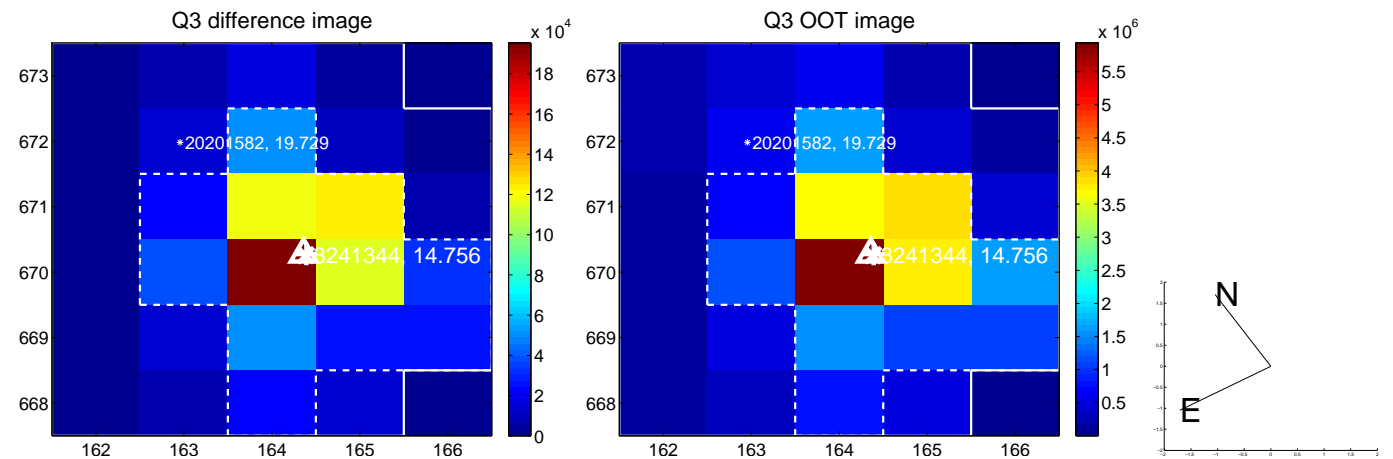
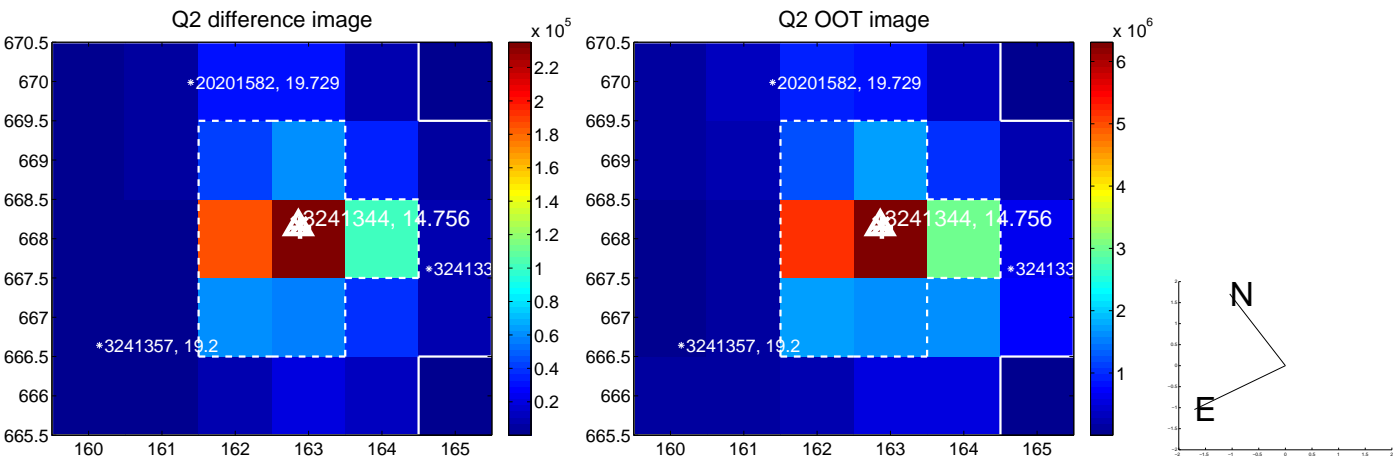
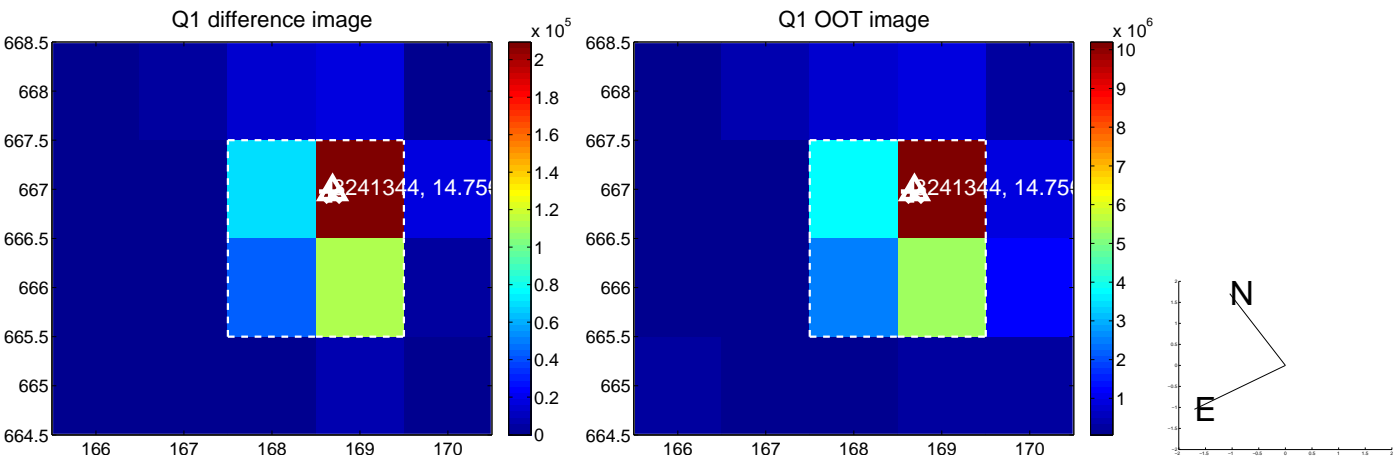
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.070	0.73	0.026 ± 0.068	0.044 ± 0.070
PRF-fit source offset from KIC position	0.173 ± 0.069	2.49	0.043 ± 0.067	0.168 ± 0.070
photometric centroid source offset	0.33 ± 0.13	2.50	-0.13 ± 0.12	-0.31 ± 0.14

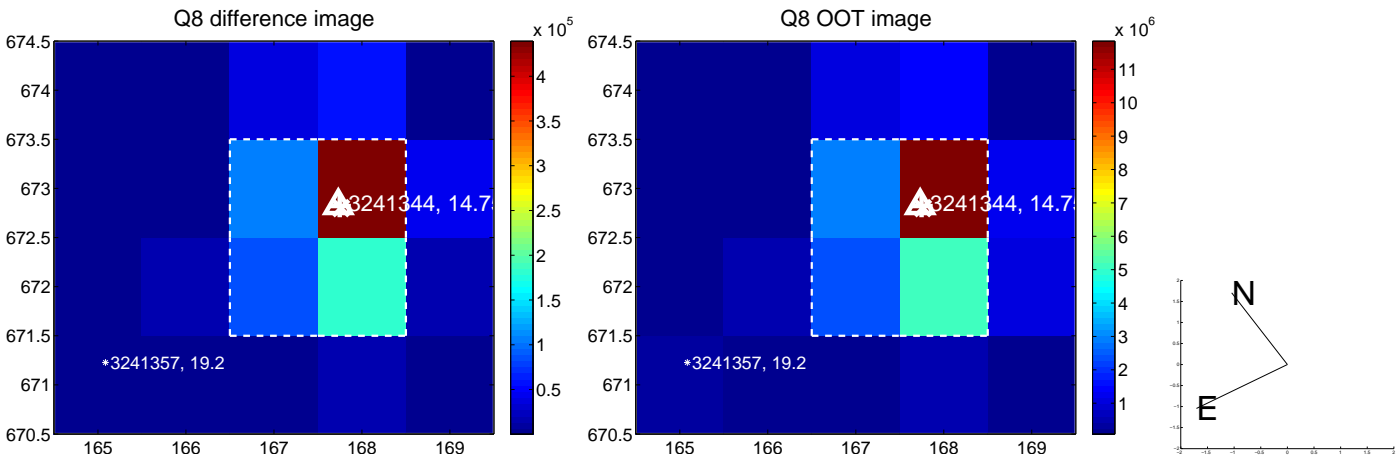
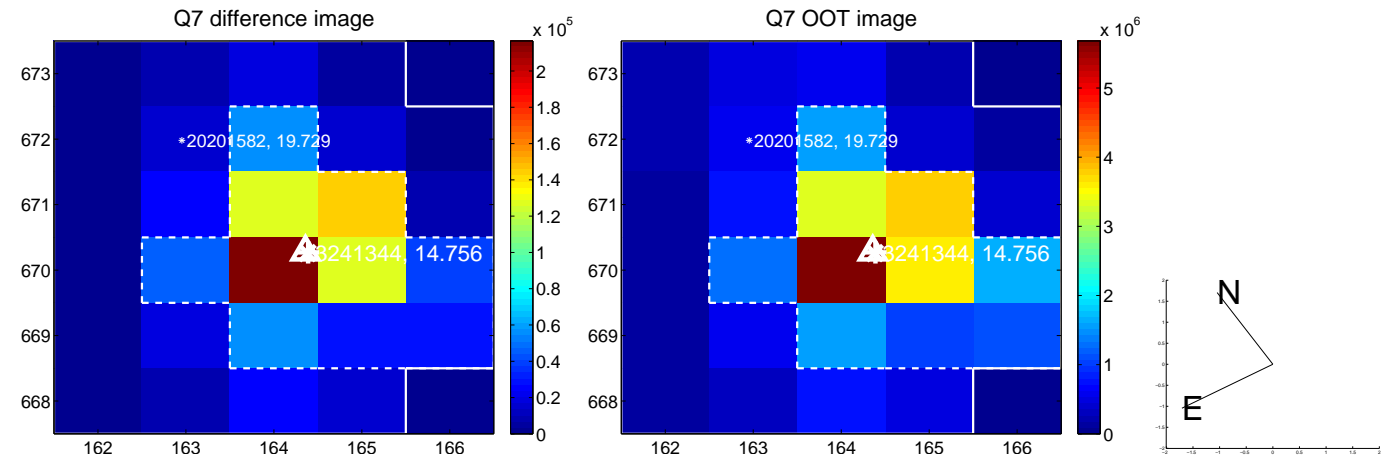
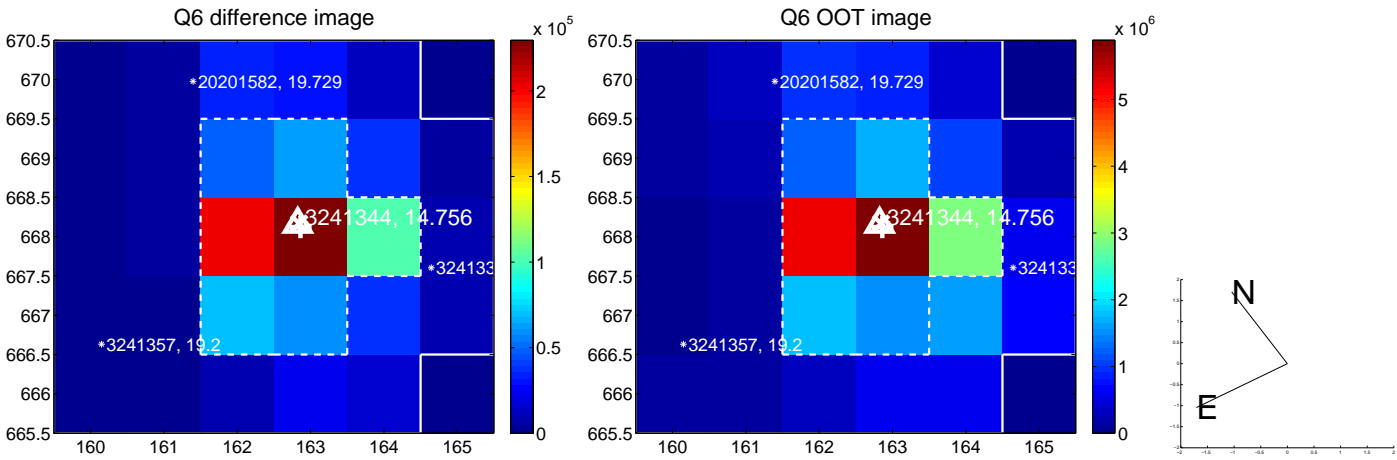
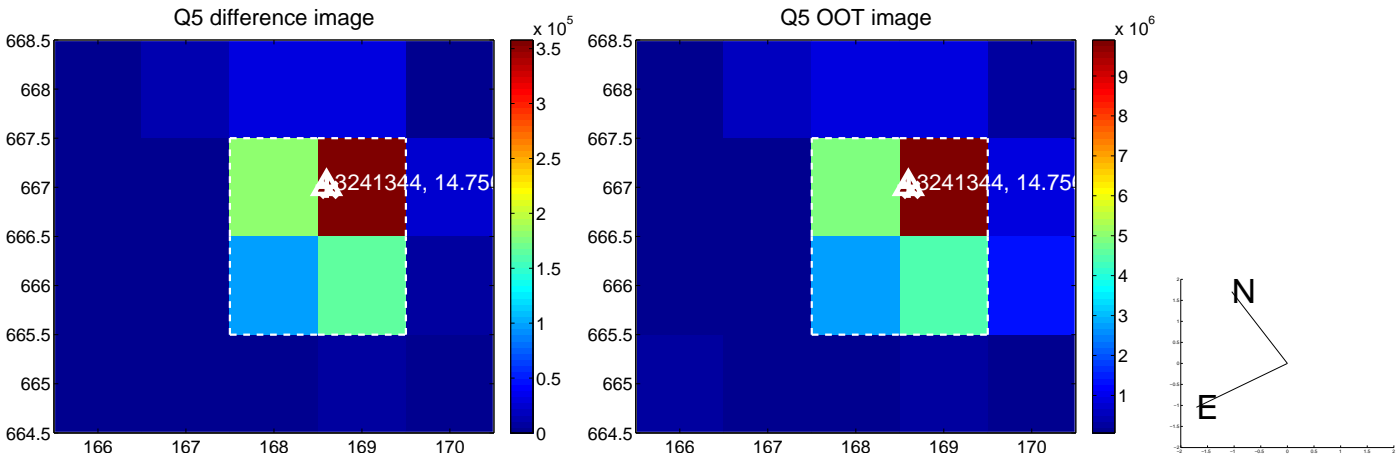


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

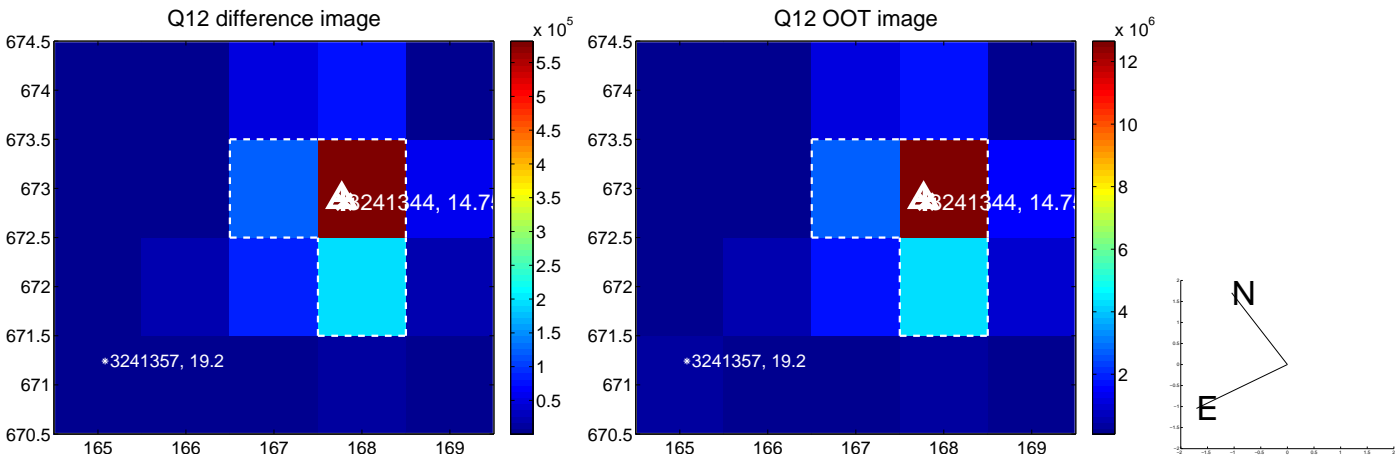
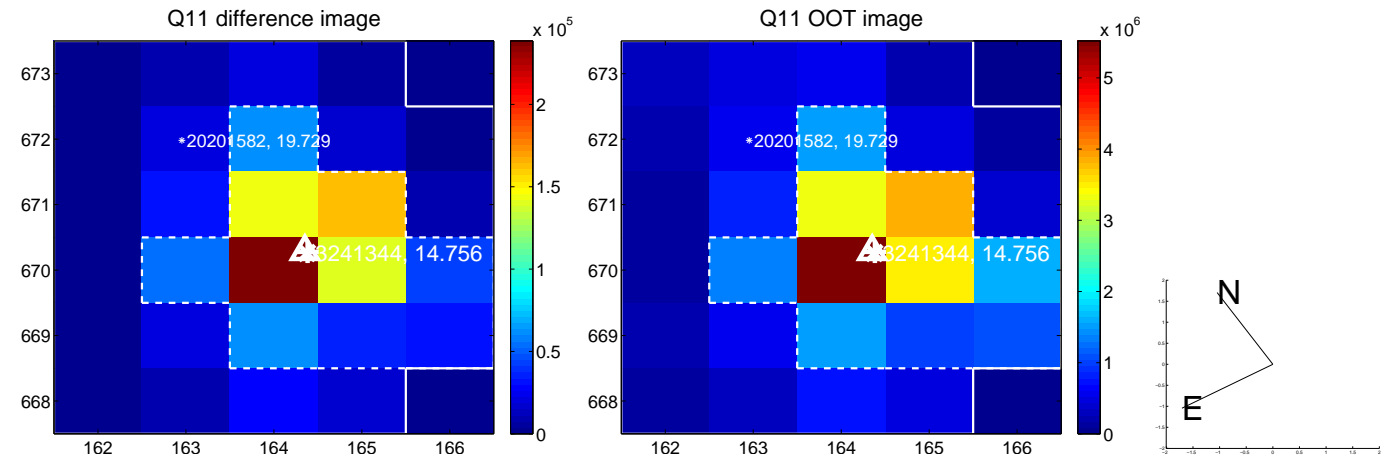
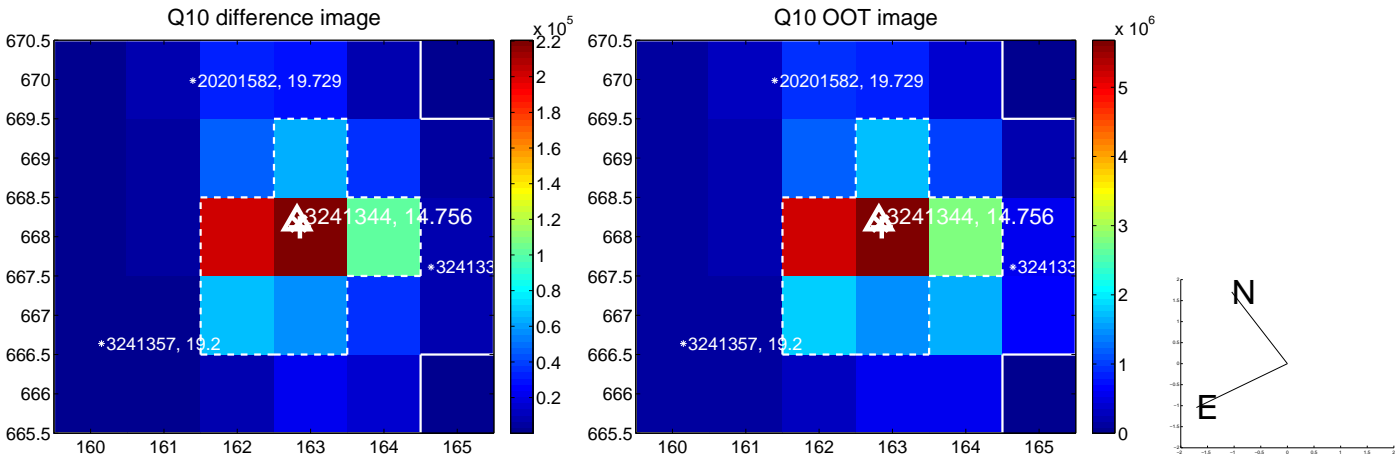
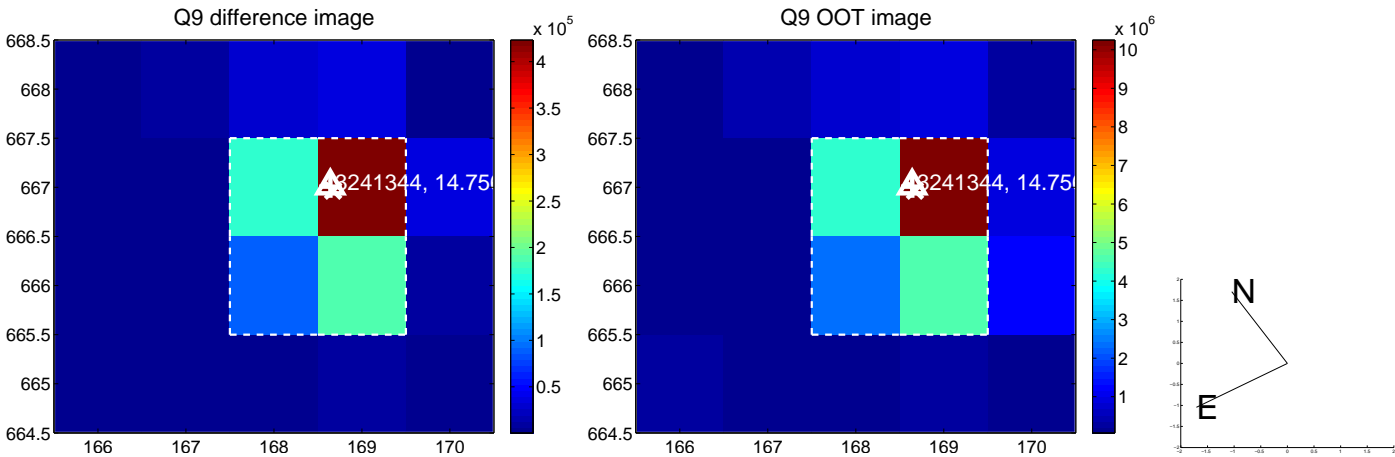
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



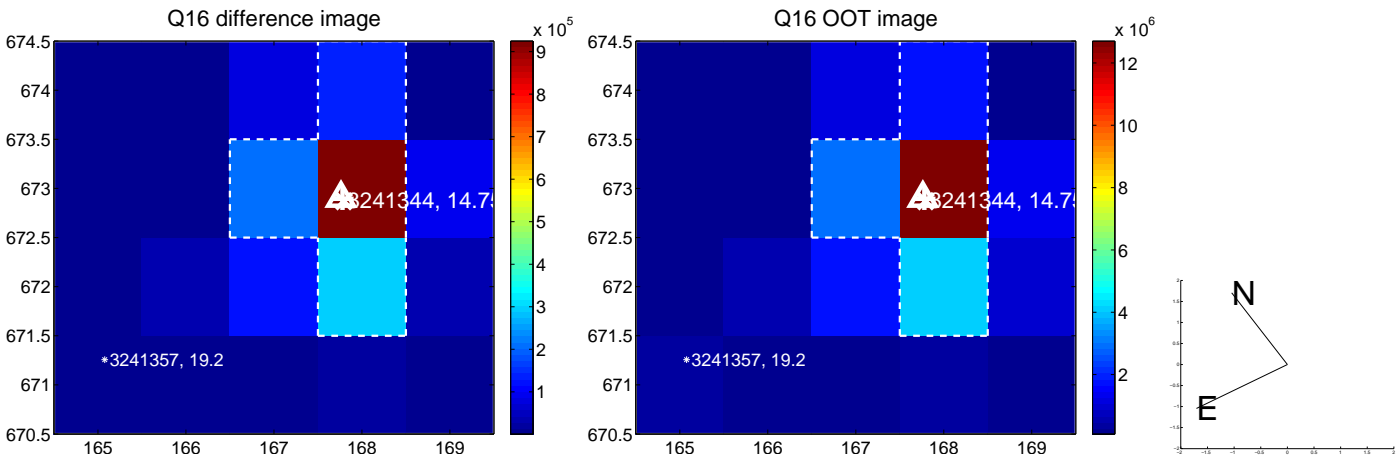
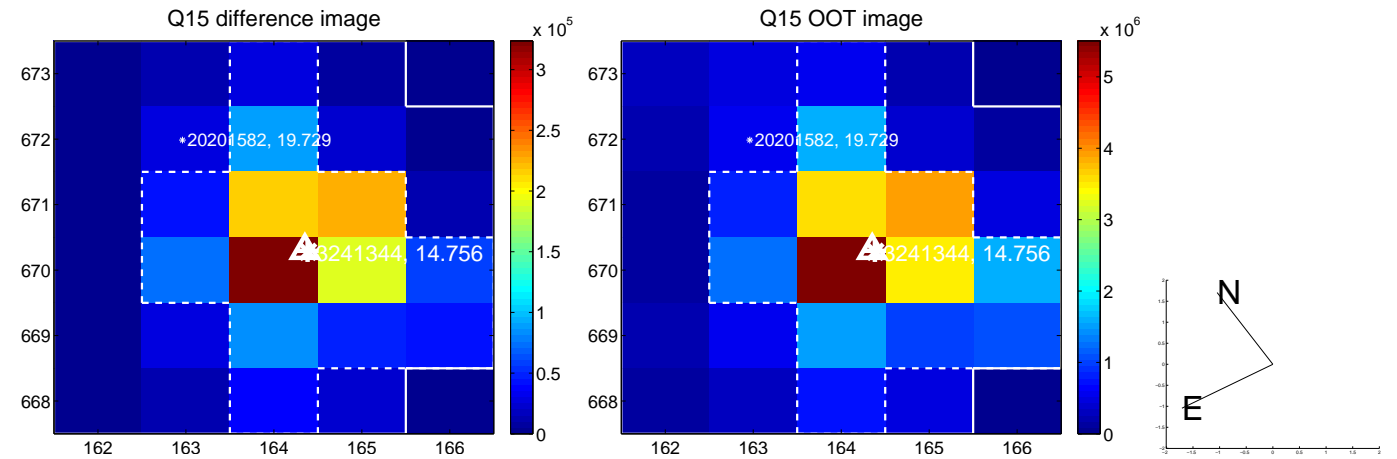
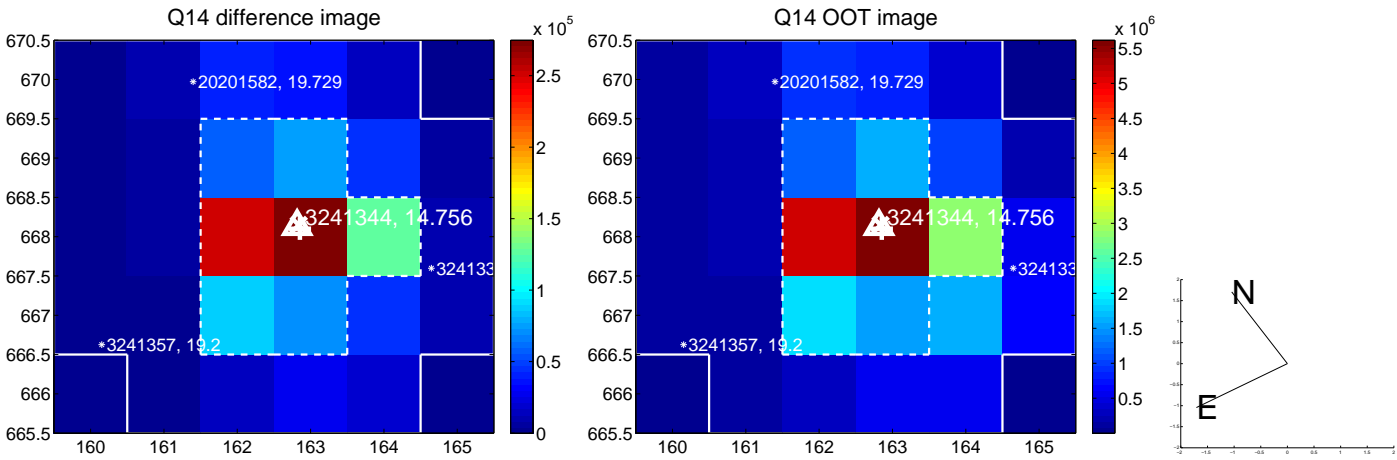
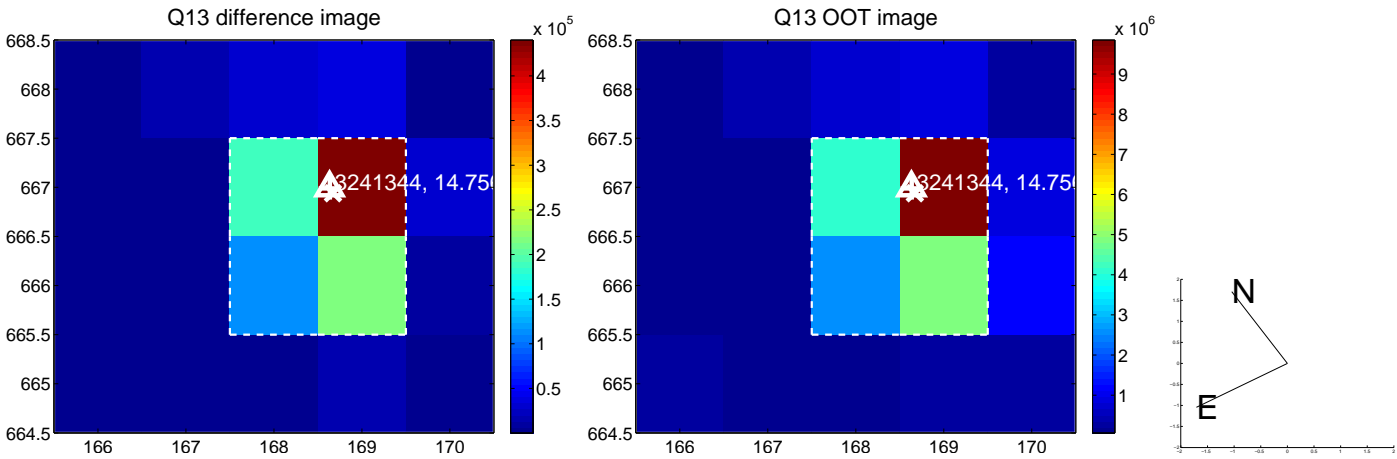
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



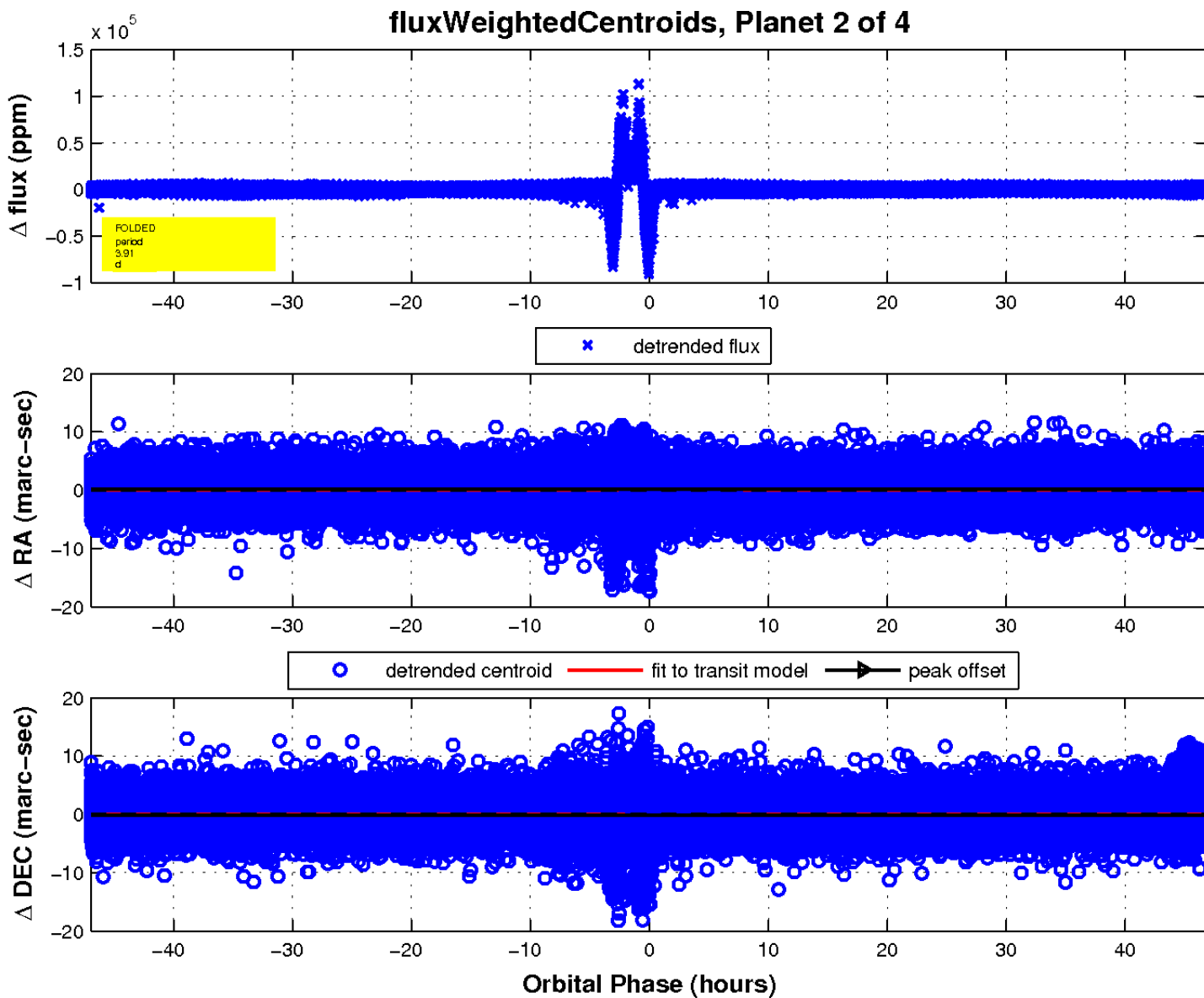
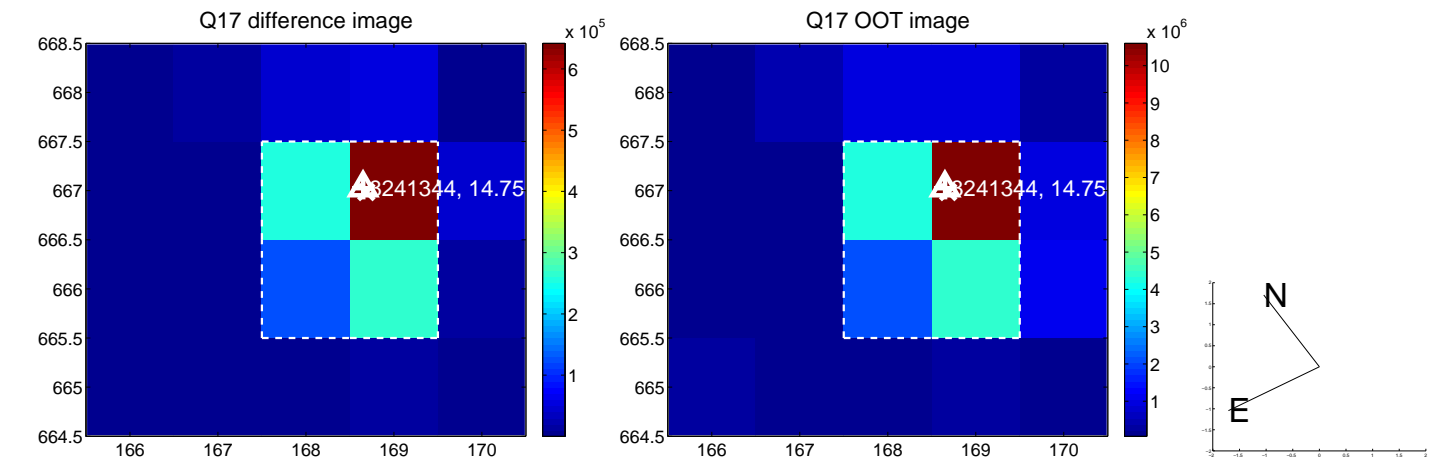
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

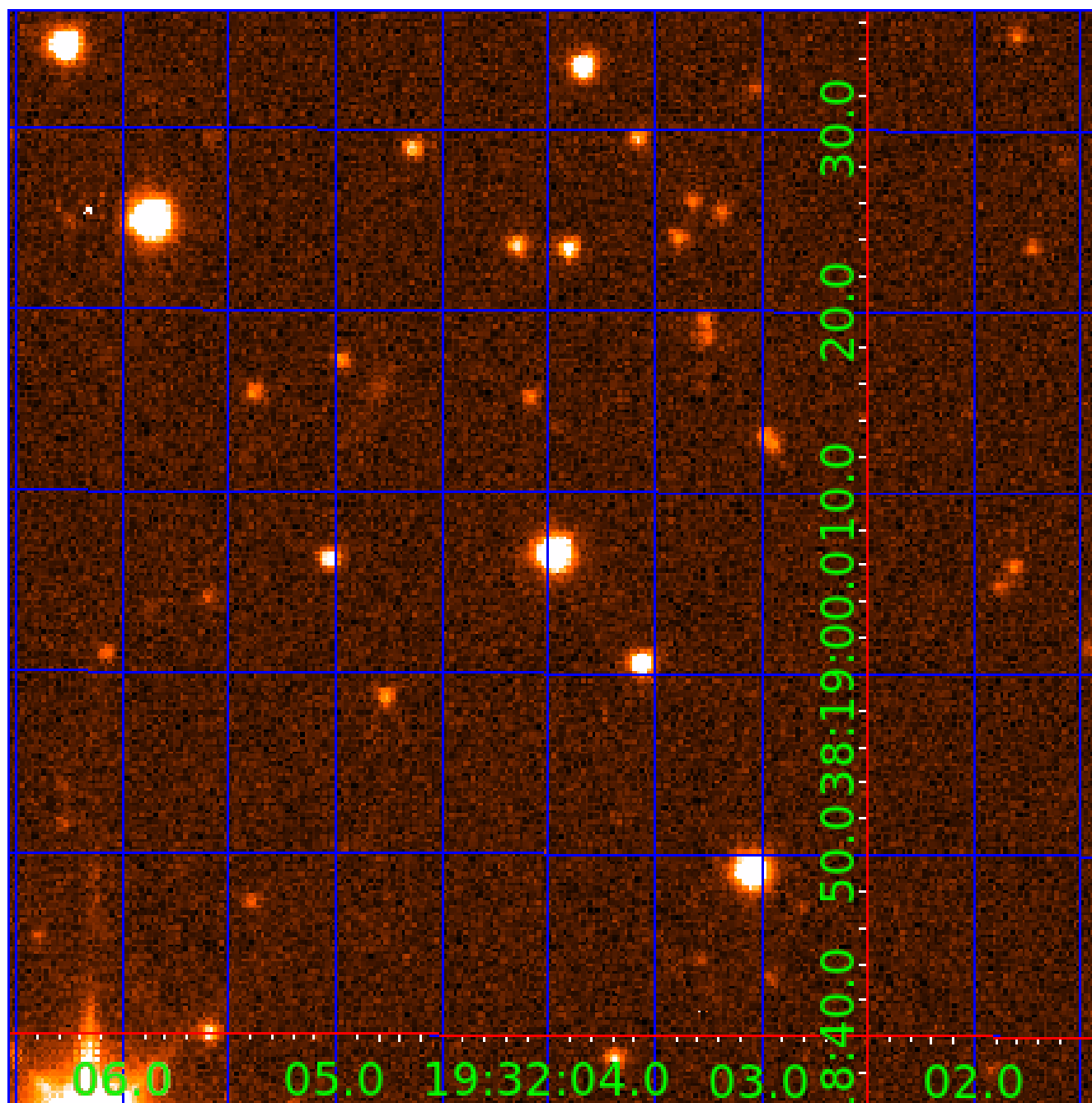


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003241344

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})
003241344-01	OBS	5984.01	3.912648	133.432869	276553.0	2.500	15073.7	-1.0	0.72	5616	35.38	254.02
003241344-02	OBS	No	3.912600	133.200168	18356.6	15.000	2460.8	-1.0	0.72	5616	9.76	254.02
003241344-03	OBS	No	1.956340	133.418610	21554.7	3.499	1333.2	1235.7	0.72	5616	11.74	640.08
003241344-04	OBS	No	489.129870	488.037850	2371.1	16.157	9.7	6.9	0.72	5616	4.09	0.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241344-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
003241344-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
003241344-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003241344-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

Ephemeris Match Information For 003241344-03

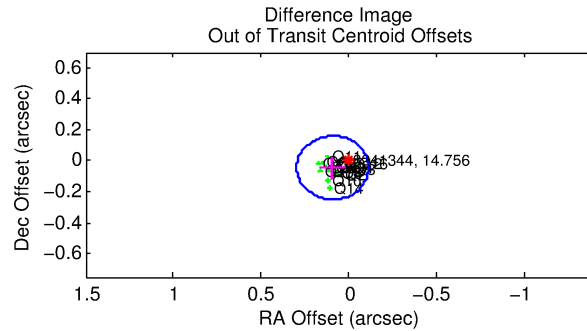
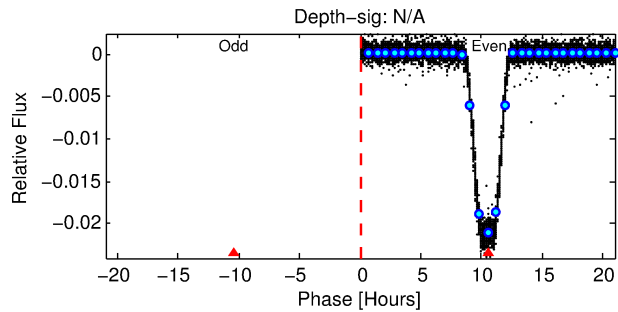
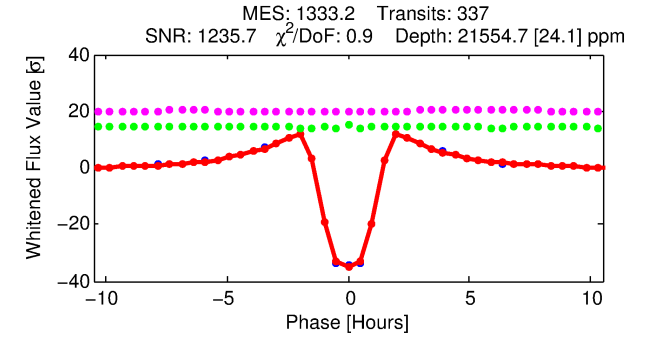
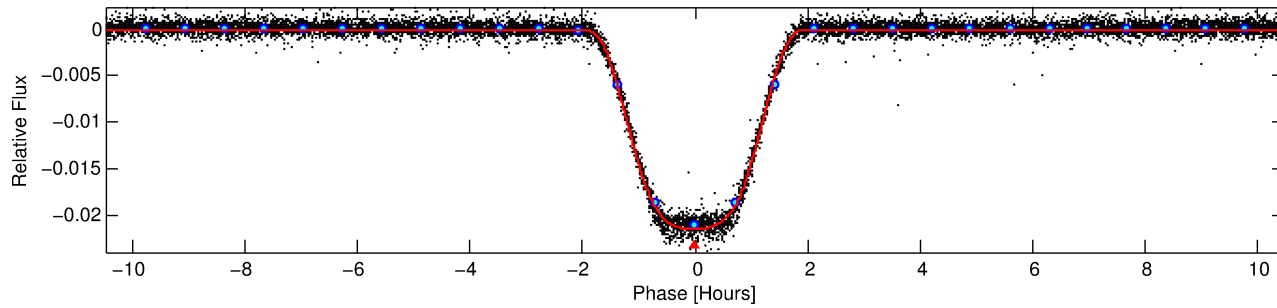
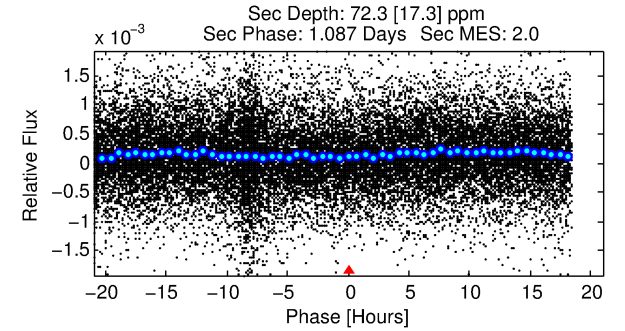
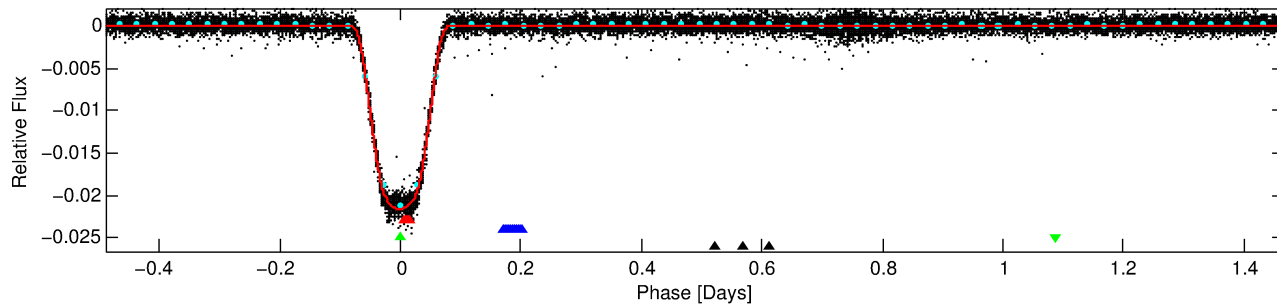
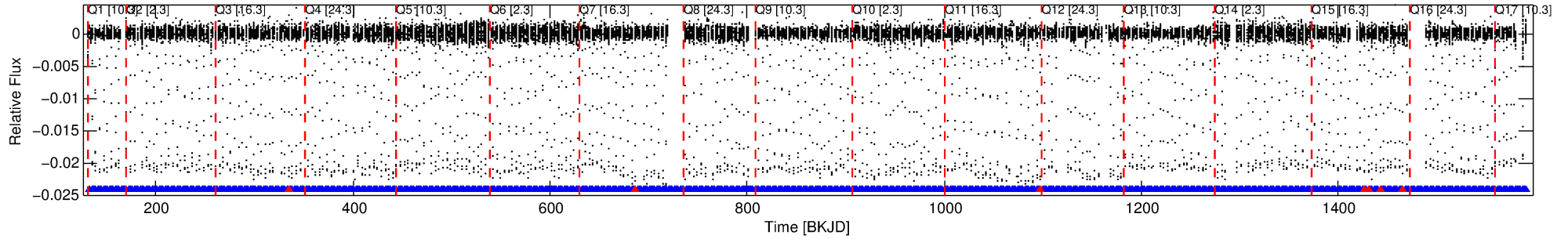
No Significant Match Found

DV One-Page Summary

KIC: 3241344 Candidate: 3 of 4 Period: 1.956 d

KOI: K05984 Corr: No Ephemeris Match

Kp: 14.76 R*: 0.72 Rs Teff: 5616.0 K Logg: 4.55 Fe/H: -0.980



DV Fit Results:

Period = 1.95634 [0.00000] d
Epoch = 133.4186 [0.0000] BKJD
Rp/R* = 0.1495 [0.0001]
a/R* = 3.68 [0.01]
b = 0.79 [0.00]
Seff = 640.08 [138.47]
Teq = 1283 [69] K
Rp = 11.74 [1.40] Re
a = 0.0269 [0.0030] AU
Ag = 0.21 [0.06] [-12.94σ]
Teff = 1339 [91] K [0.49σ]

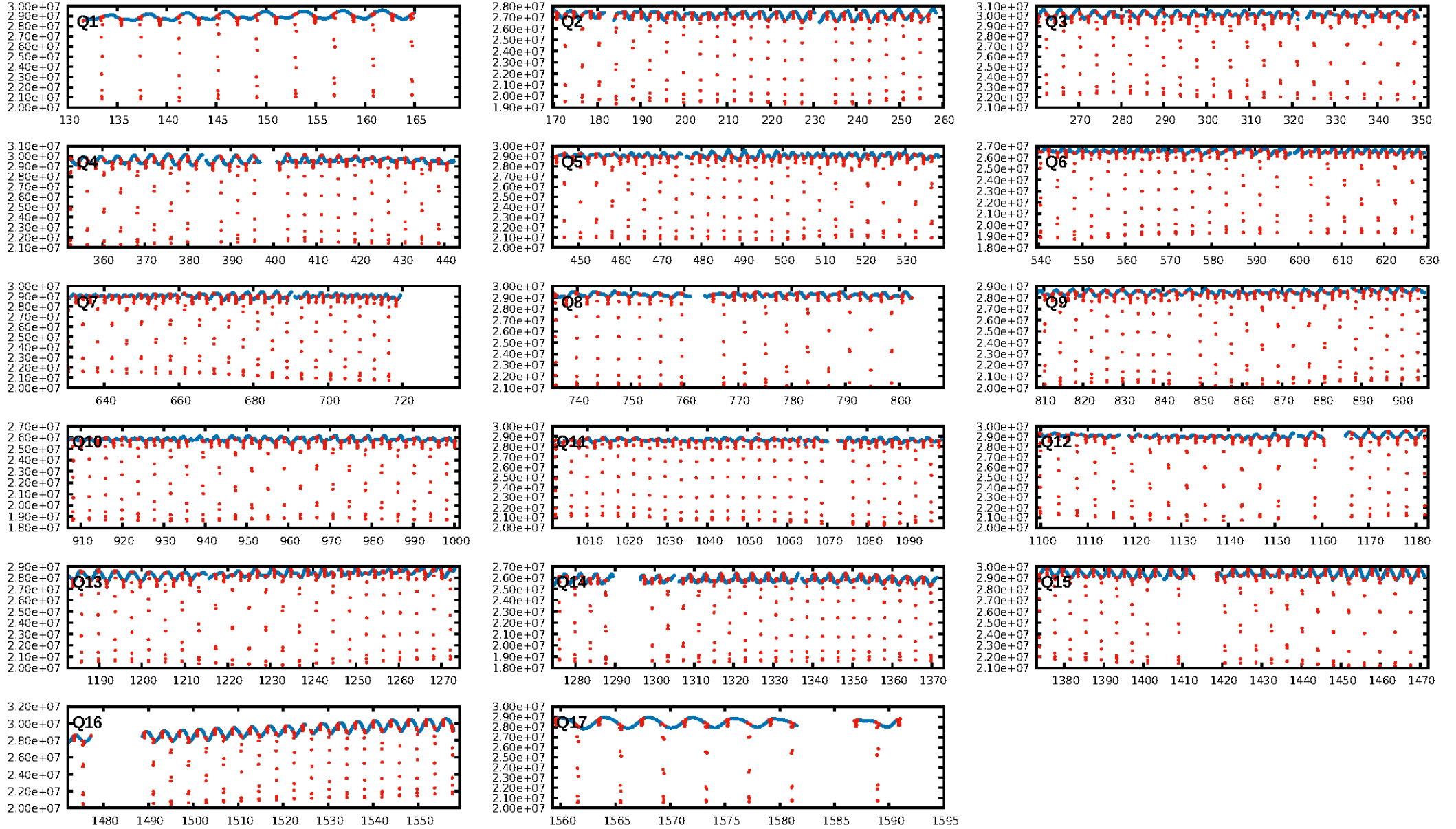
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.8% [3.05σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [315/322]
GhostDiagnostic-chr: 2.155
Centroid-sig: 0.0%
Centroid-so: 0.388 arcsec [52.73σ]
OotOffset-rm: 0.103 arcsec [1.51σ]
KicOffset-rm: 0.131 arcsec [1.79σ]
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]

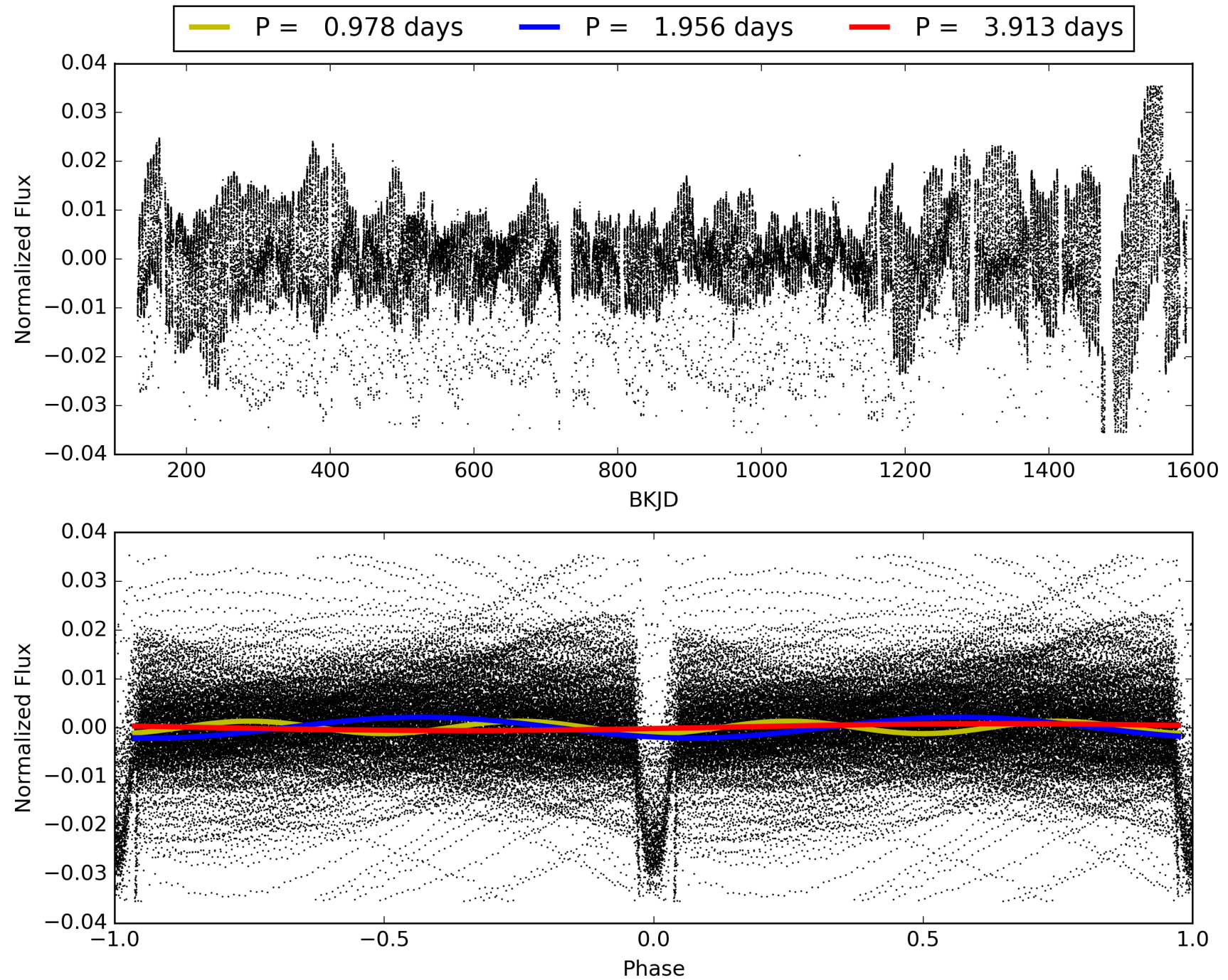
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:08:23 Z

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

TCE 003241344-03, PDC Light Curves

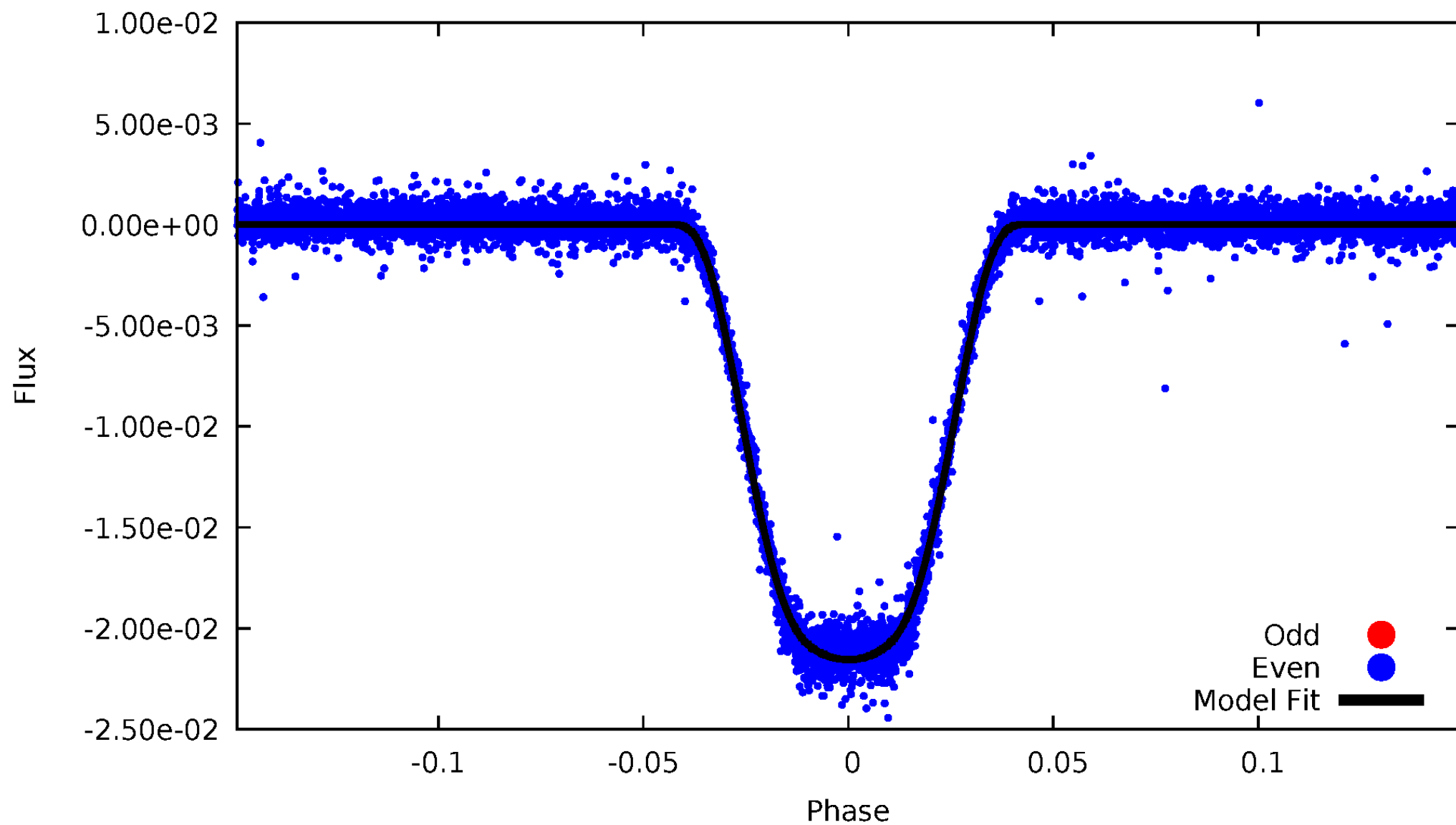


TCE 003241344-03



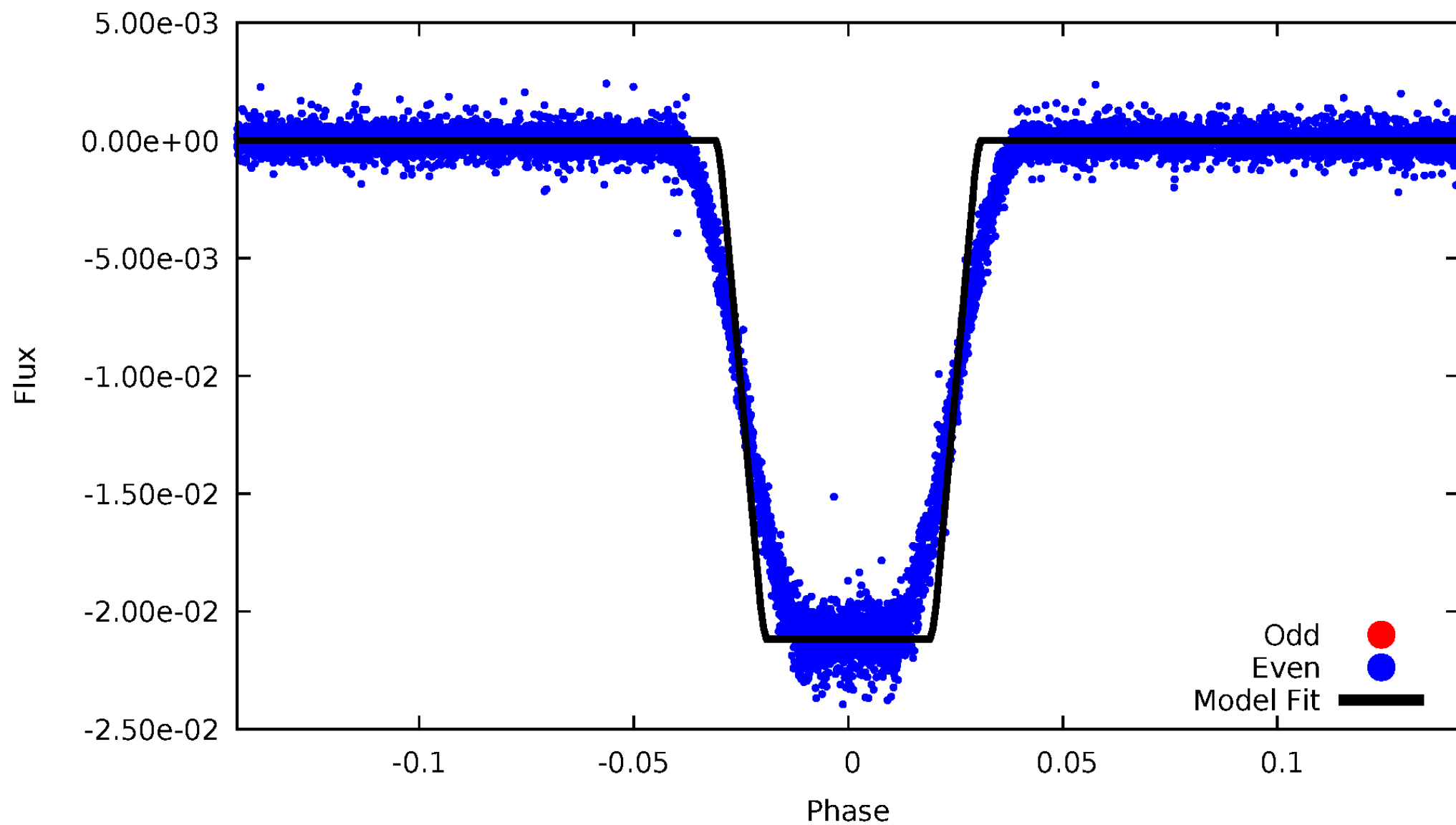
DV Odd/Even

TCE 003241344-03



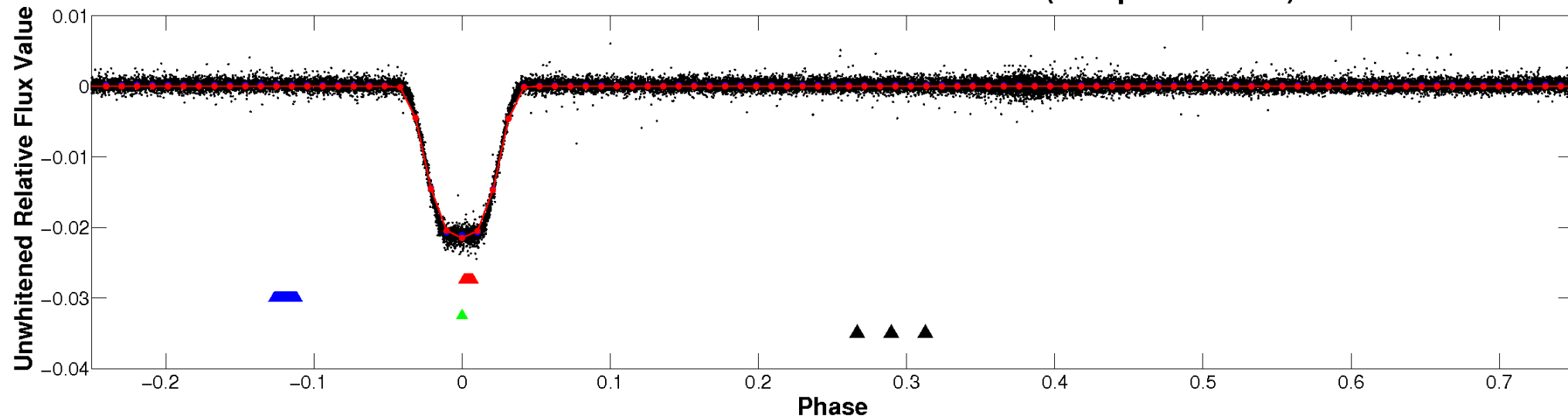
ALT Odd/Even

TCE 003241344-03

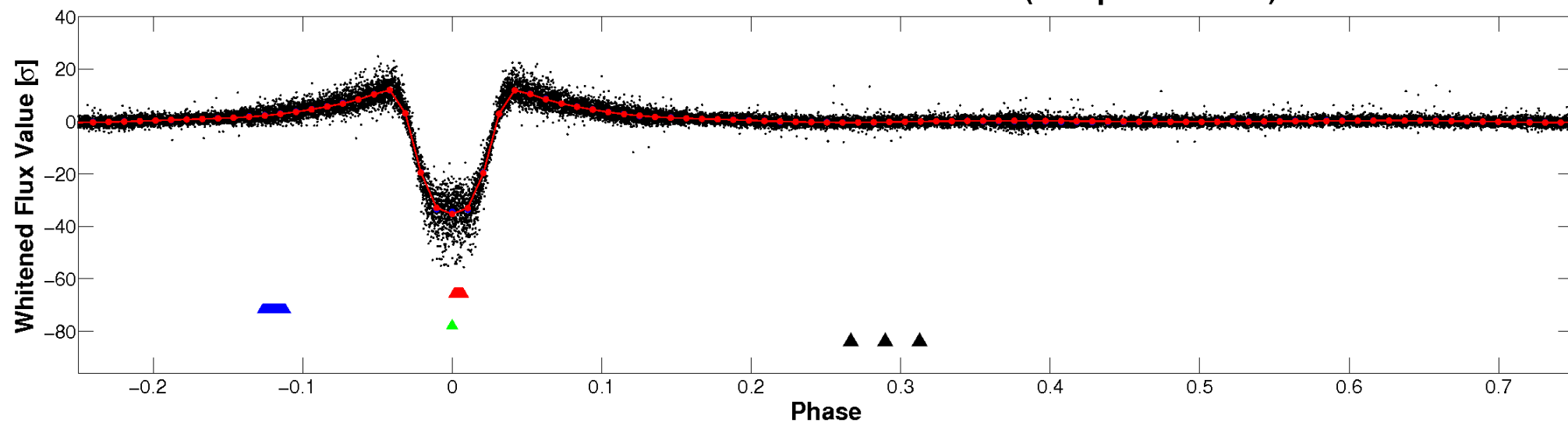


Non-Whitened Vs. Whitened Light Curve

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

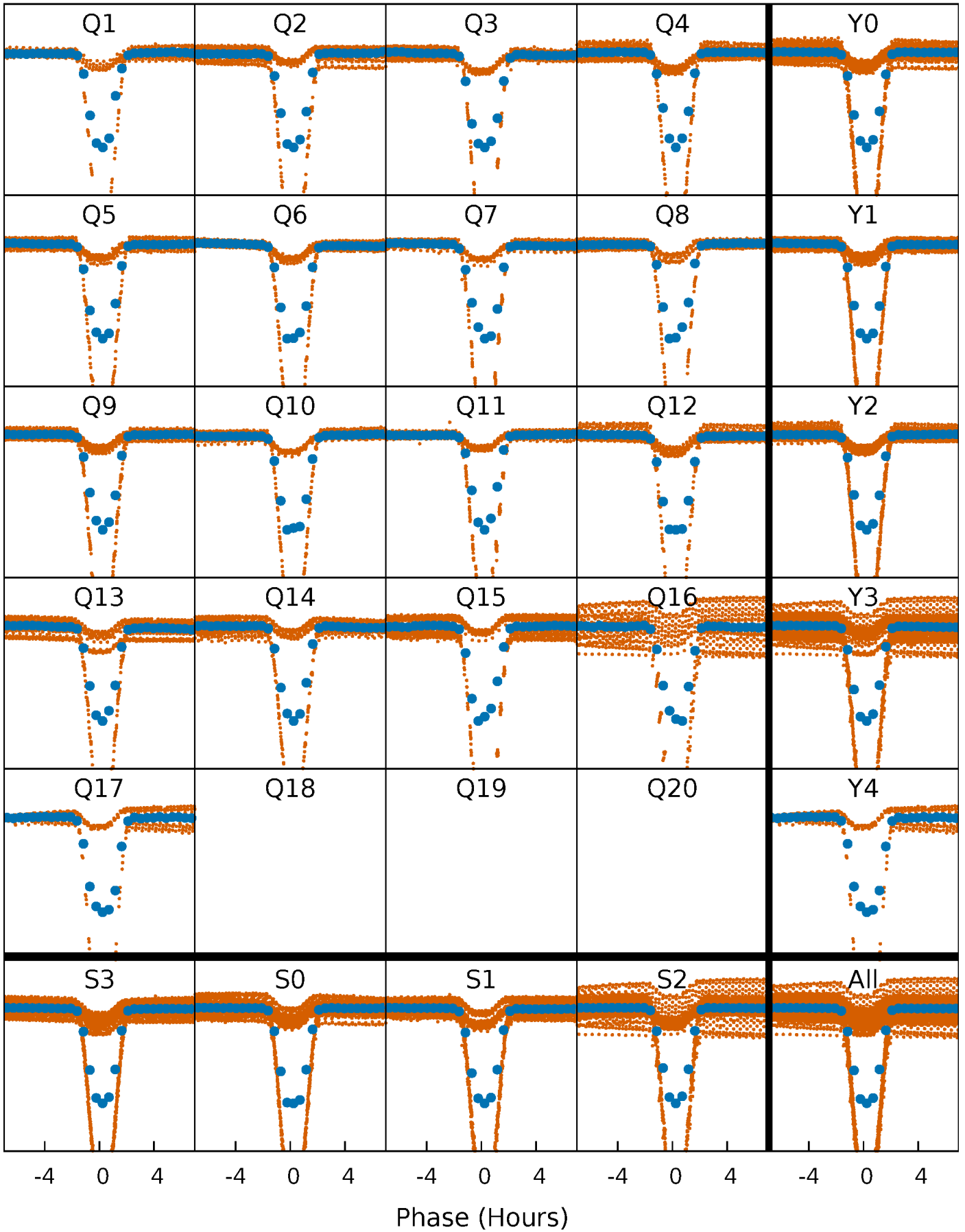


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



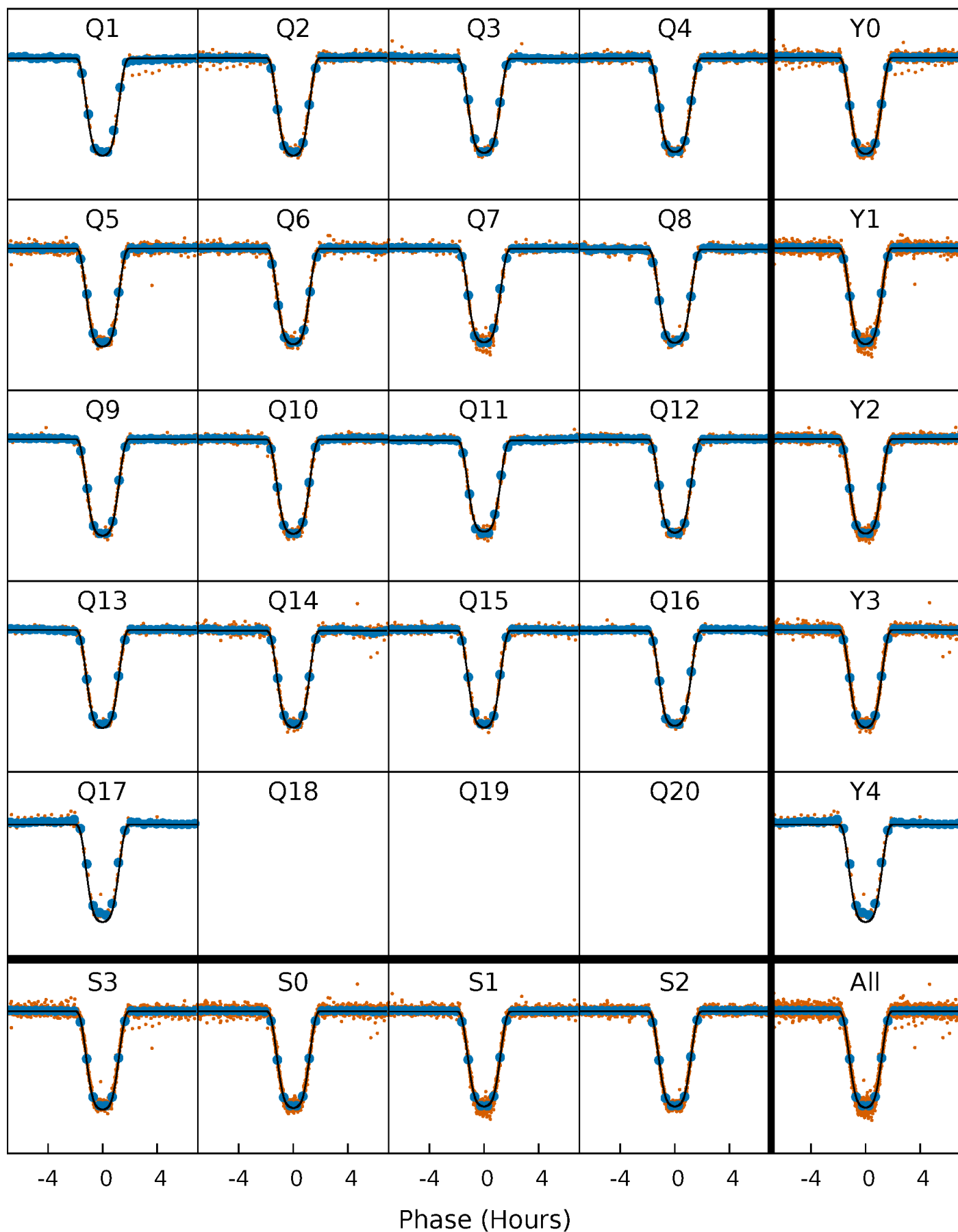
PDC Quarter-Phased Transit Curves

TCE 003241344-03 P= 1.956340 Days $T_0=133.418610$ (BKJD)



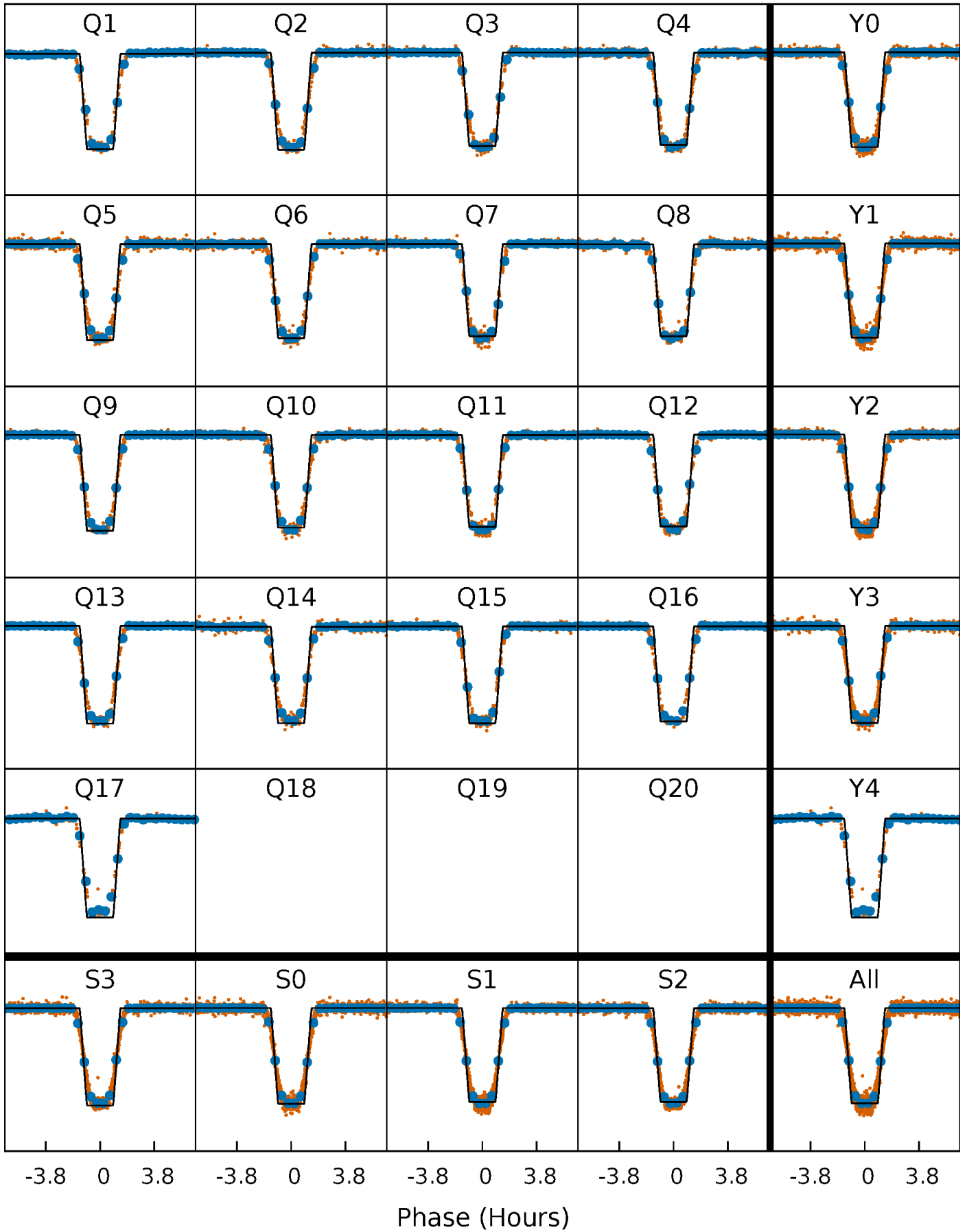
DV Quarter-Phased Transit Curves

TCE 003241344-03 P= 1.956340 Days $T_0=133.418610$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

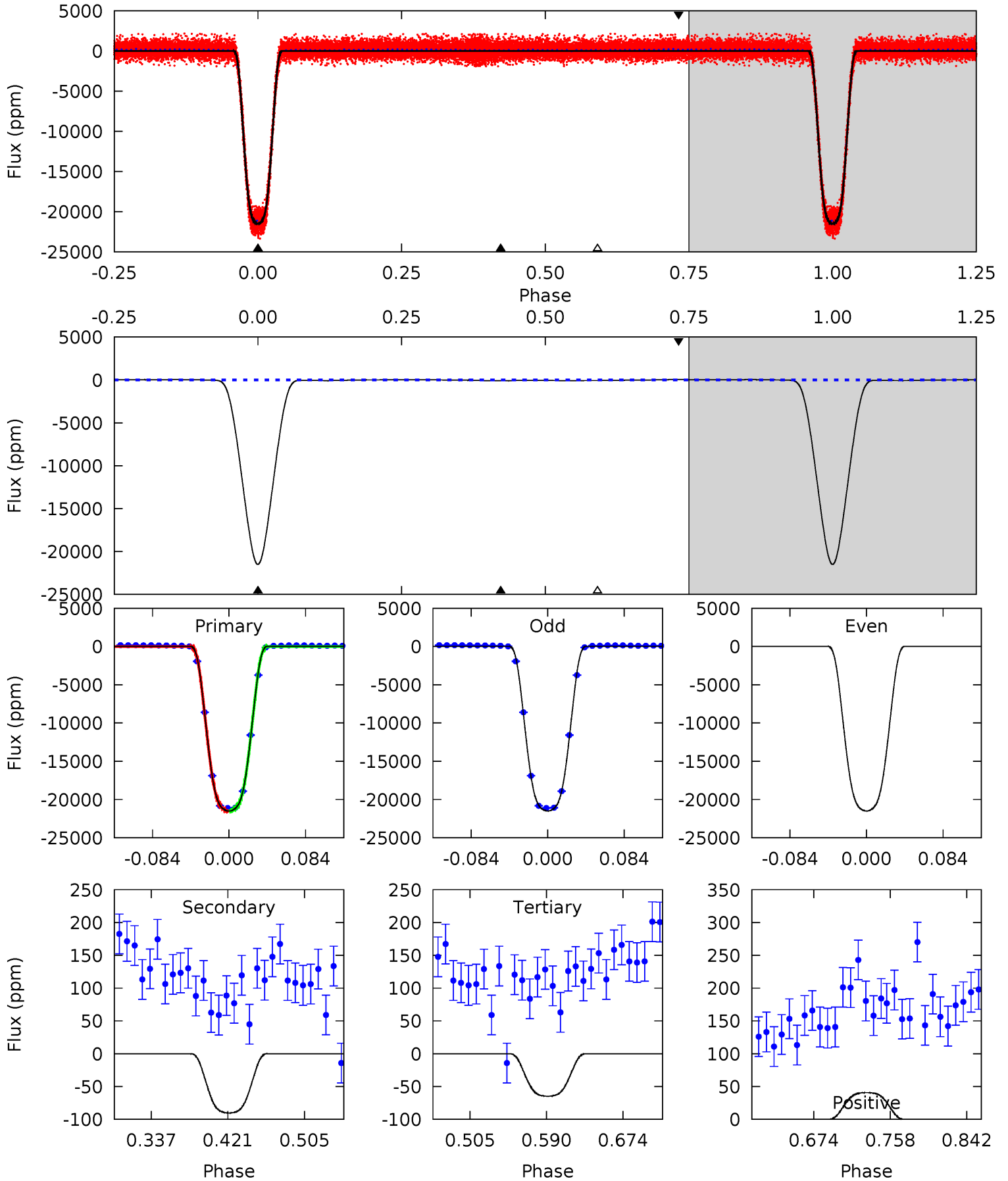
TCE 003241344-03 P= 1.956343 Days $T_0=133.417033$ (BKJD)



DV Model-Shift Uniqueness Test

003241344-03, P = 1.956340 Days, E = 131.462270 Days

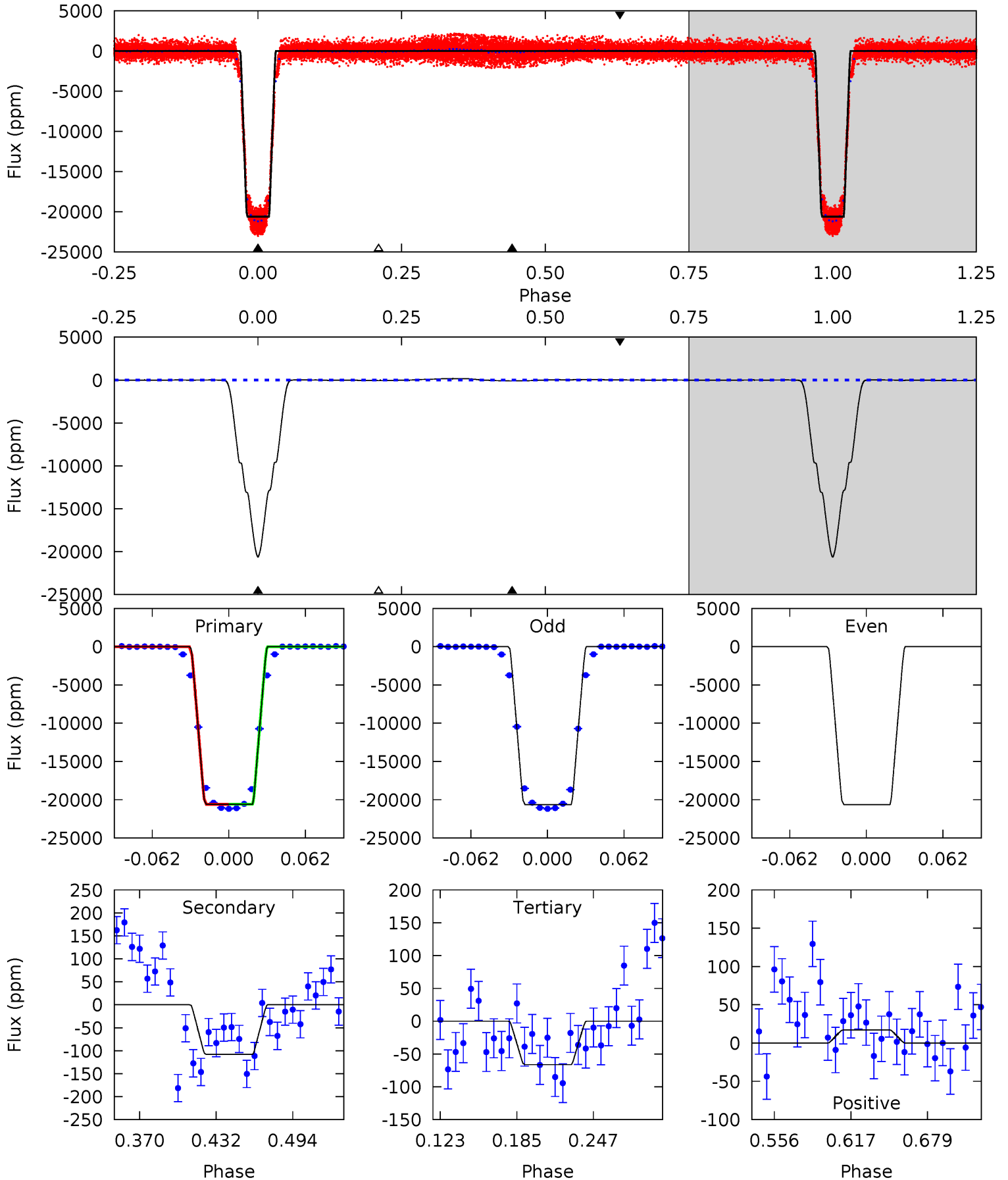
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2037	8.57	6.14	3.86	4.60	1.73	3.63	2031	2033	2.43	4.71	0	1.01	0.00	0.12



Alt Model-Shift Uniqueness Test

003241344-03, P = 1.956343 Days, E = 131.460690 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1580	8.30	5.08	1.31	4.66	1.87	3.51	1575	1579	3.22	6.99	0	1.00	0.01	0.65



Stellar Parameters For KIC 003241344

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5616^{+185}_{-168}	$4.553^{+0.099}_{-0.081}$	$-0.980^{+0.300}_{-0.300}$	$0.720^{+0.086}_{-0.078}$	$0.675^{+0.079}_{-0.023}$	$2.547^{+0.938}_{-0.628}$
	+3%/-3%	+2%/-2%	+31%/-31%	+12%/-11%	+12%/-3%	+37%/-25%
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 003241344-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-90 ± 11	$11.76^{+0.81}_{-0.73}$	1791^{+87}_{-80}	-1889^{+3614}_{-159}	$0.261^{+0.053}_{-0.036}$
Alt.	-108 ± 13	$11.50^{+0.81}_{-0.70}$	1792^{+77}_{-71}	1833^{+220}_{-3657}	$0.327^{+0.059}_{-0.052}$

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

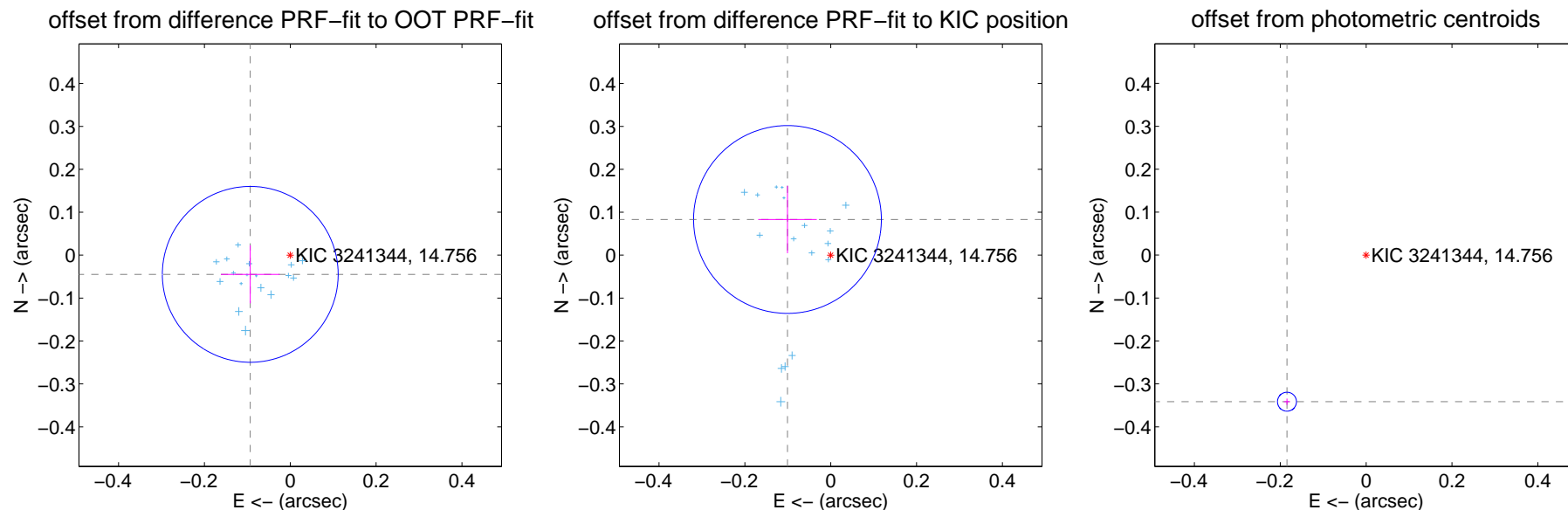
DV Centroid Data

Supplemental centroid analysis for 003241344-03. Kepler magnitude: 14.76. Transit SNR 1235.70

There are 17 quarters with good PRF difference image offsets

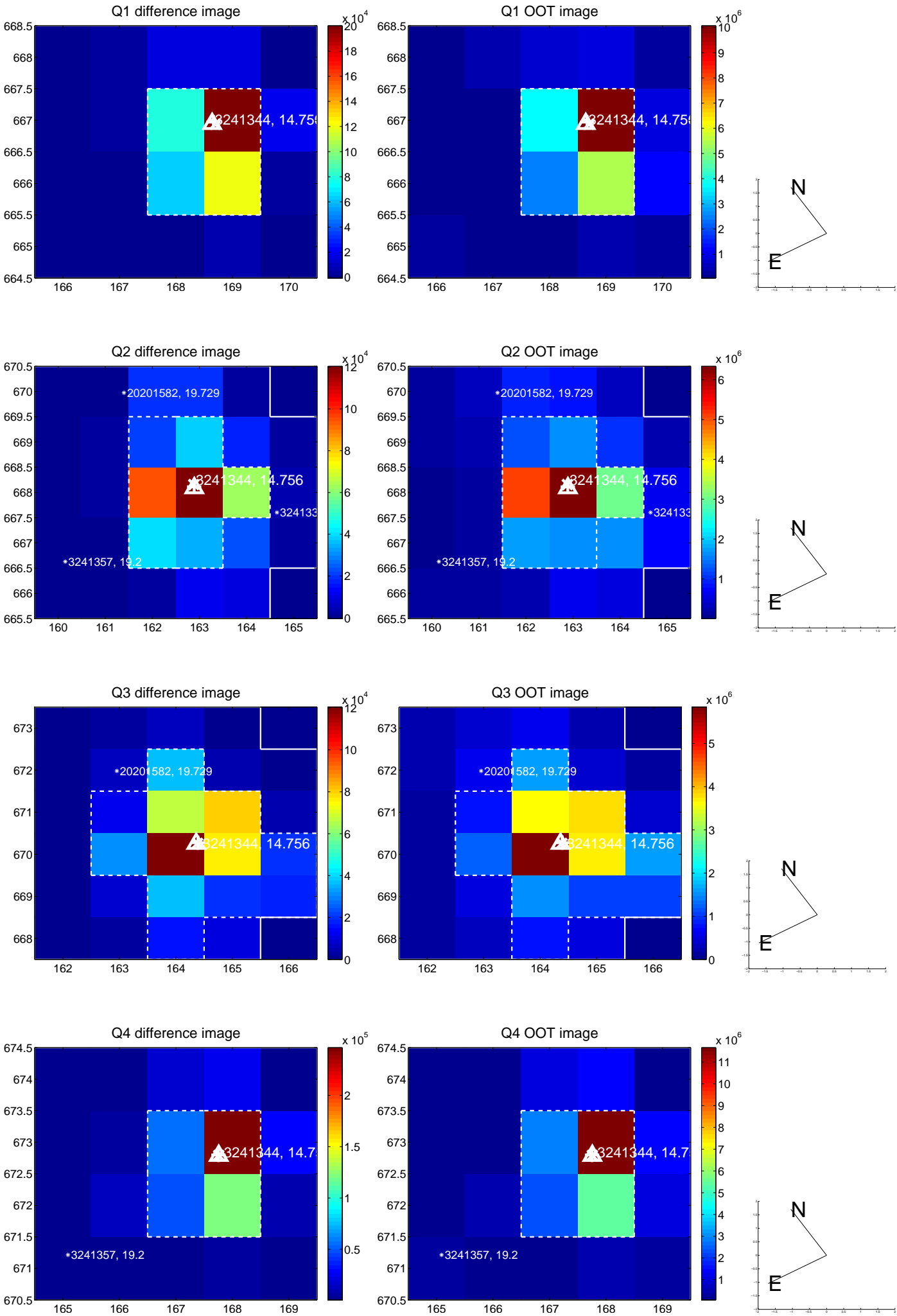
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.103 ± 0.068	1.51	0.093 ± 0.068	-0.045 ± 0.067
PRF-fit source offset from KIC position	0.131 ± 0.073	1.79	0.101 ± 0.068	0.083 ± 0.079
photometric centroid source offset	0.39 ± 0.01	52.73	0.18 ± 0.01	-0.34 ± 0.01

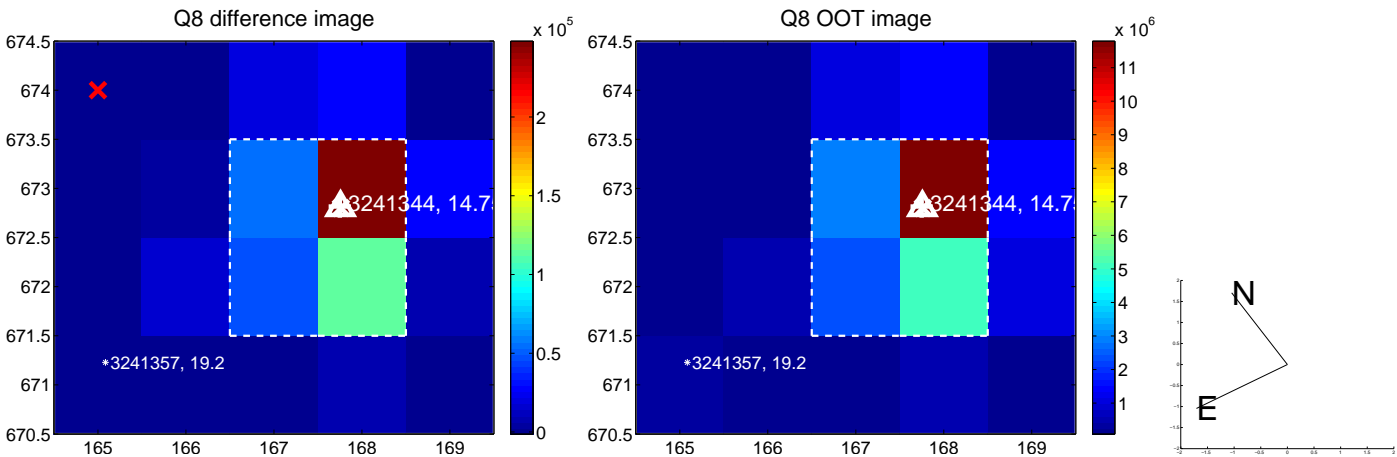
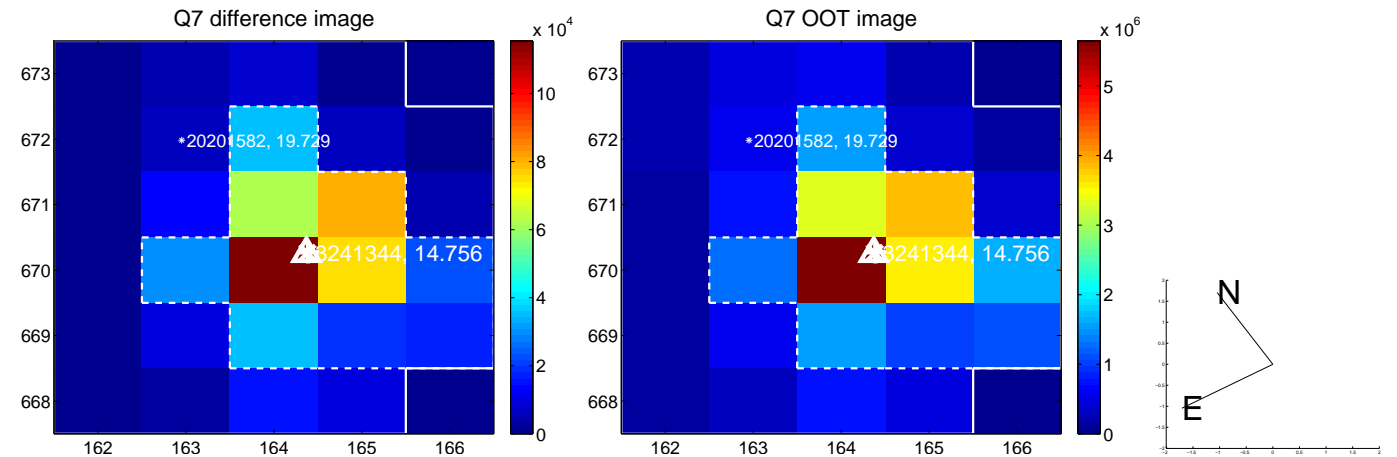
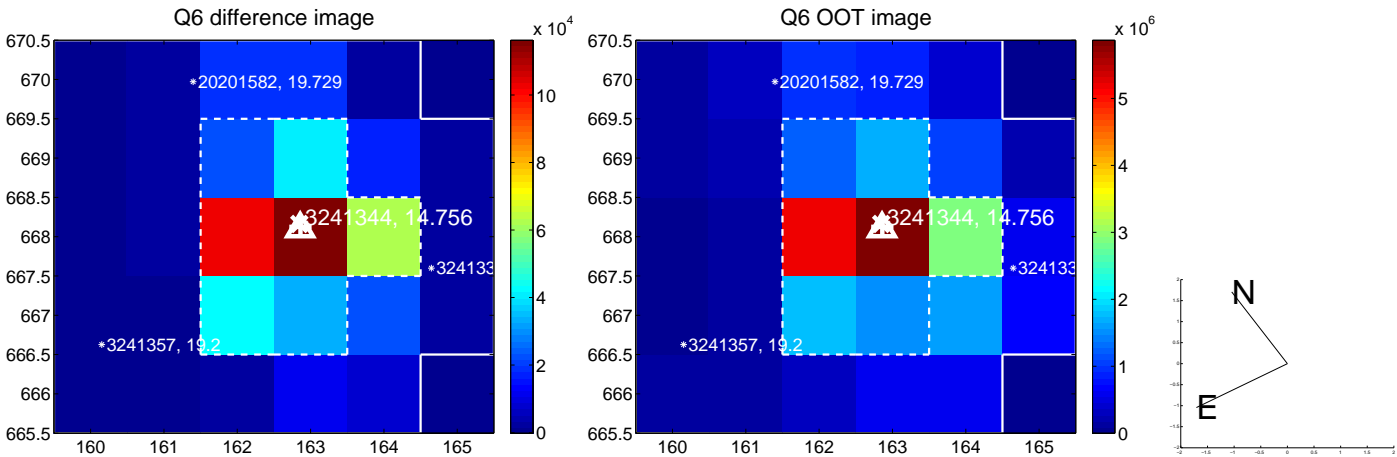
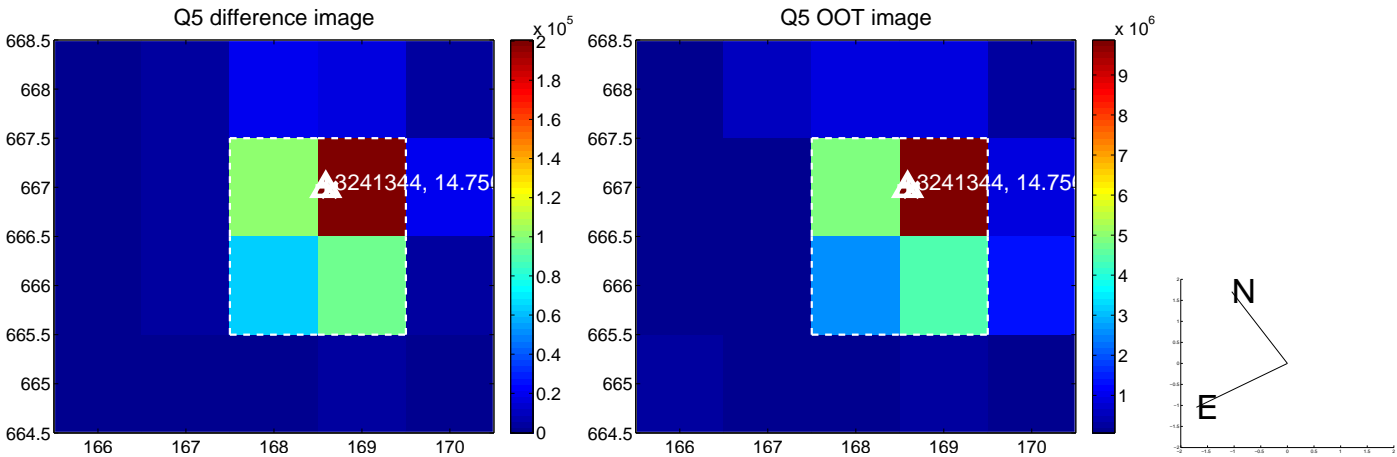


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

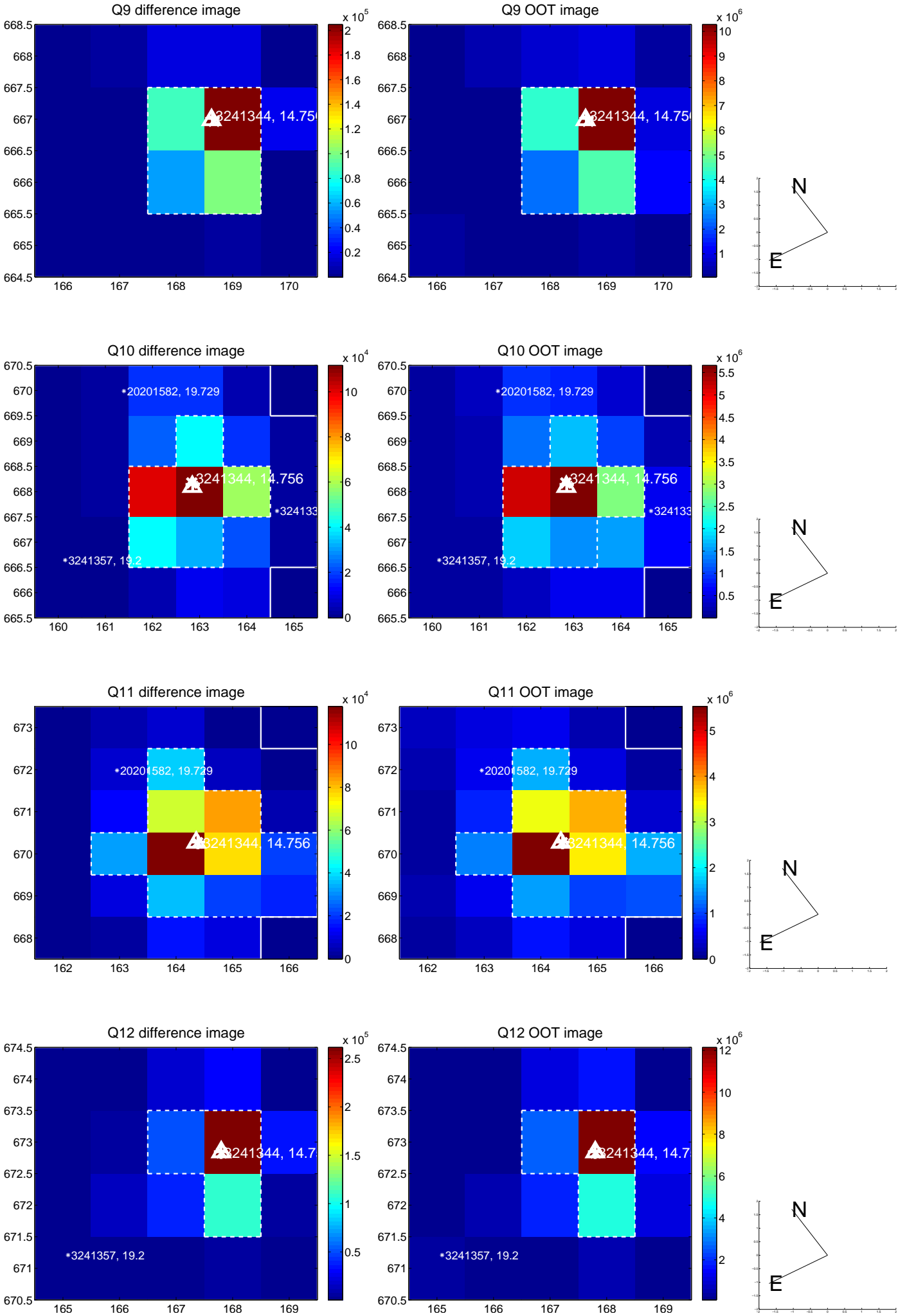
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



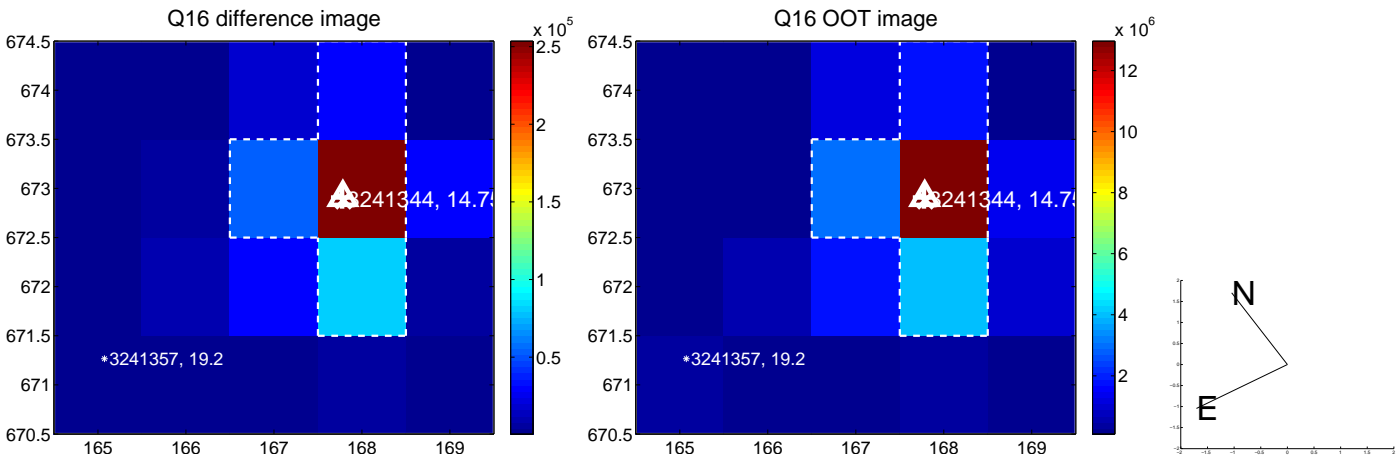
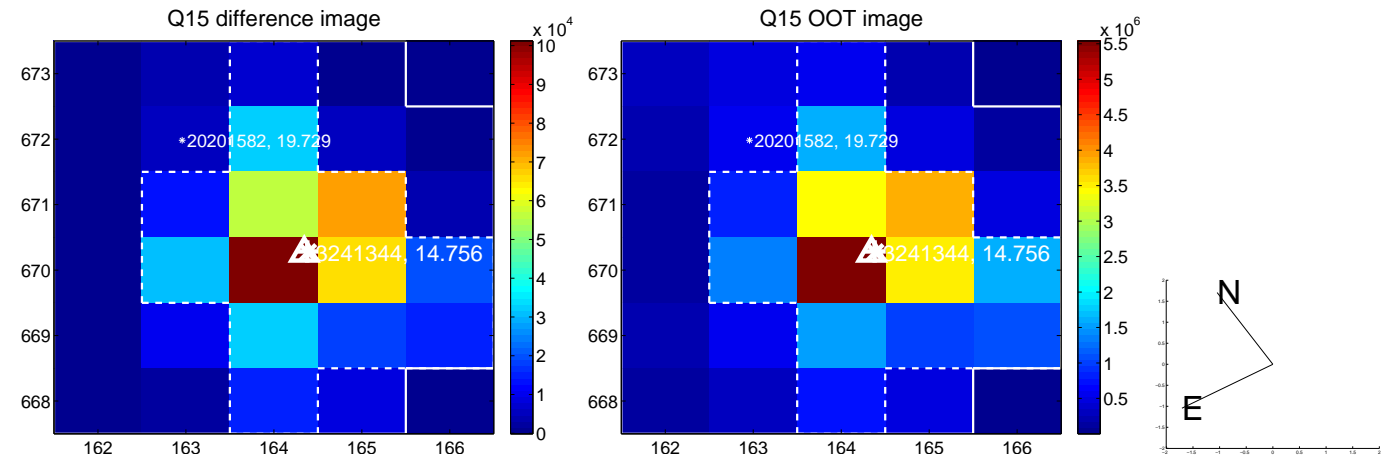
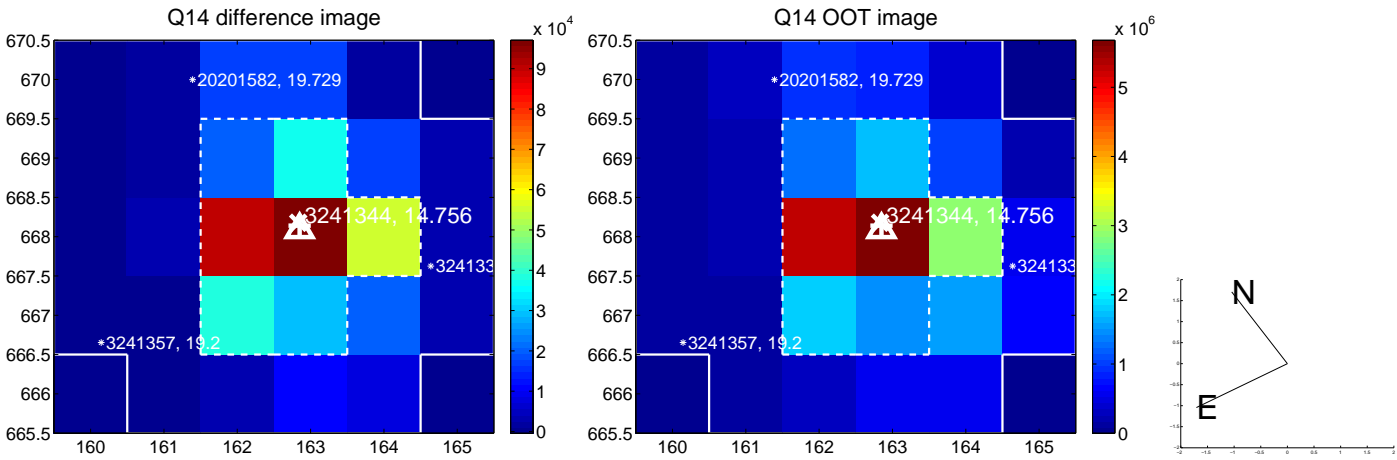
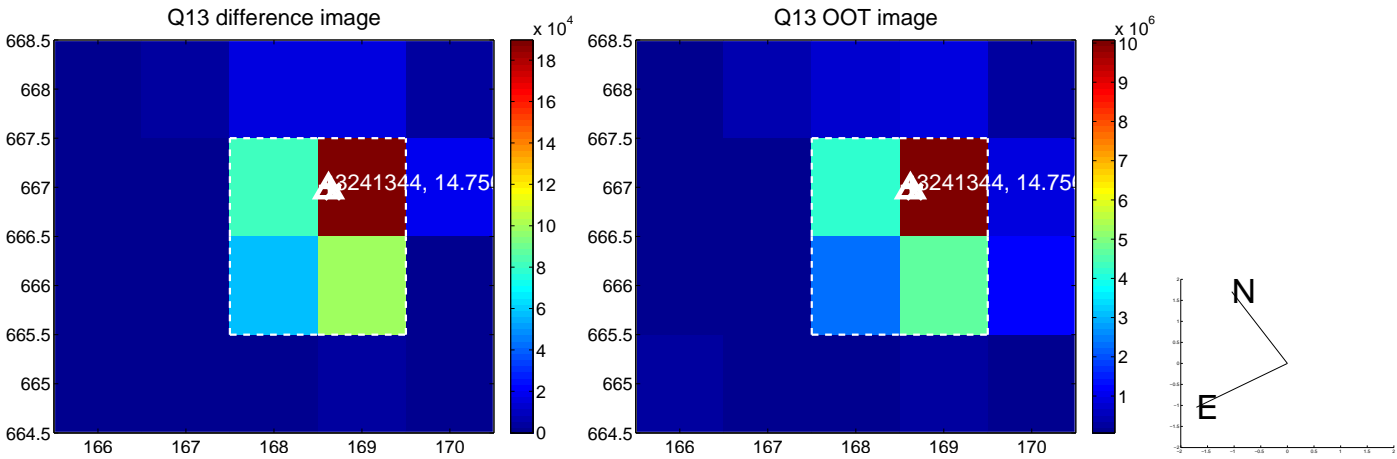
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



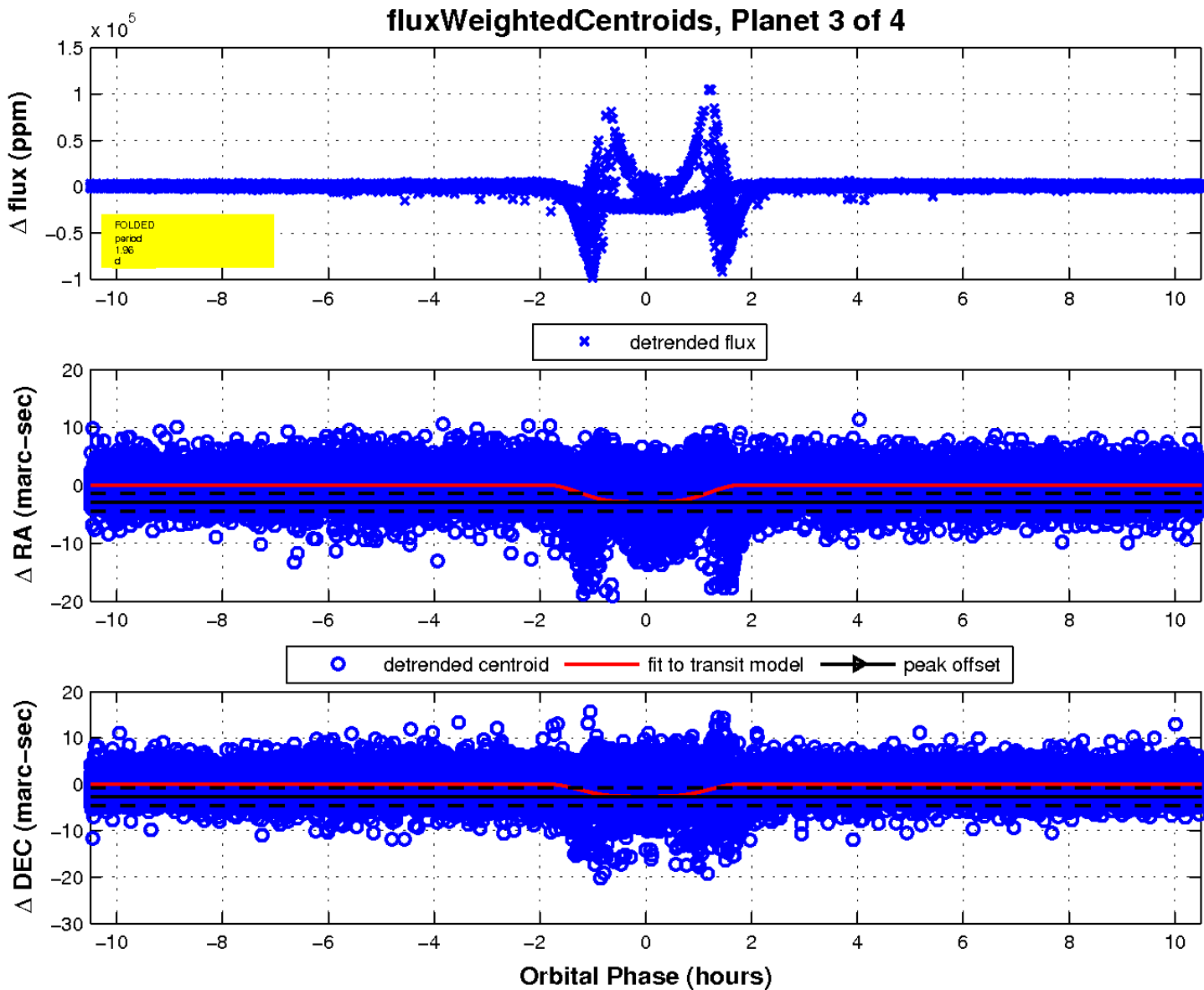
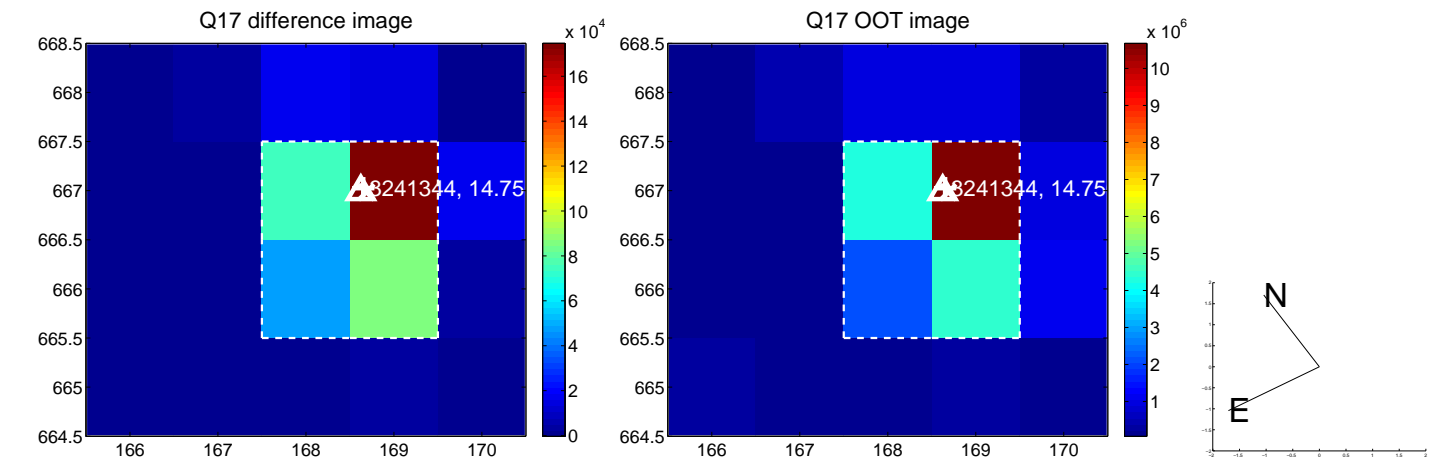
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

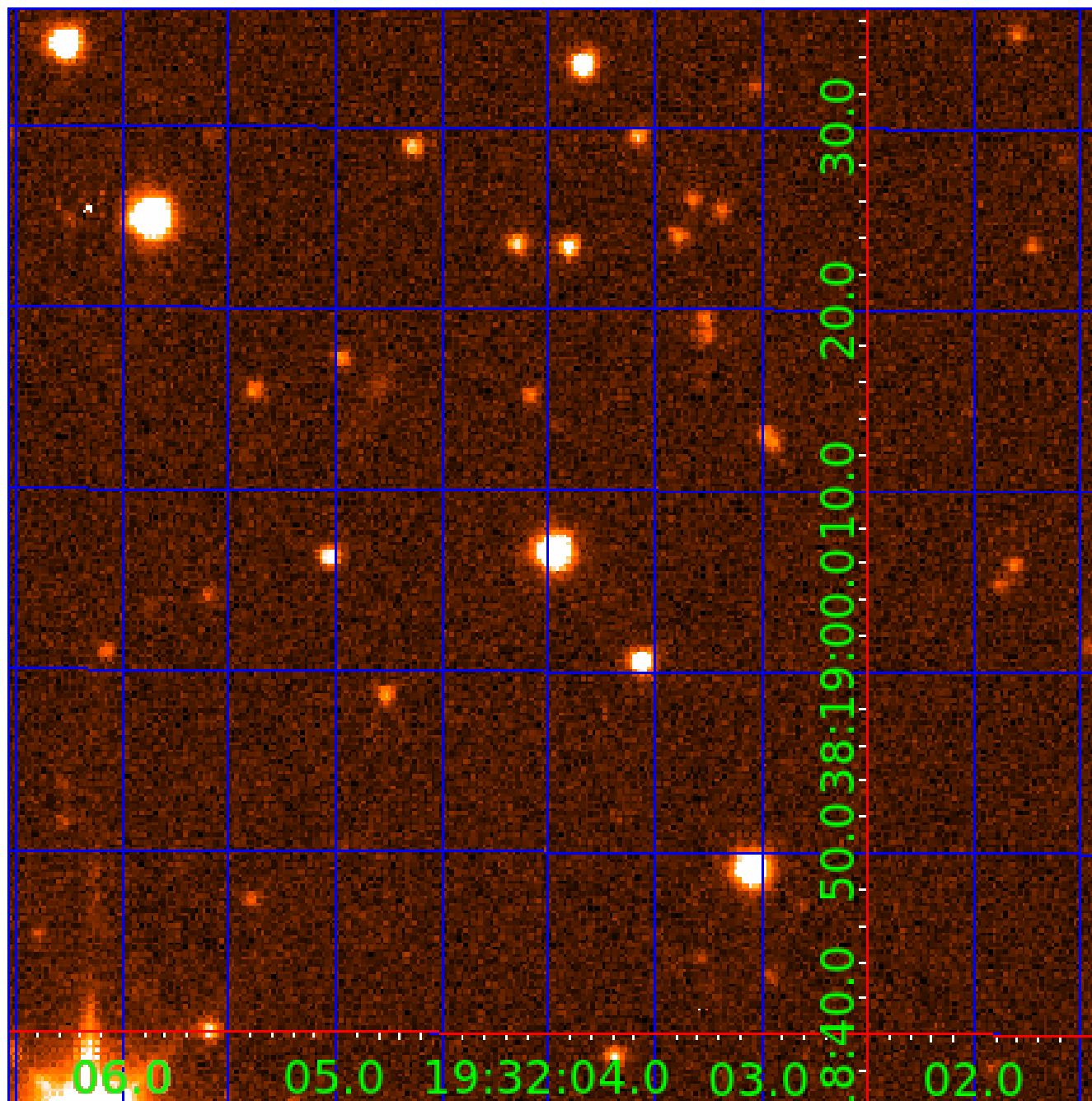


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003241344

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})
003241344-01	OBS	5984.01	3.912648	133.432869	276553.0	2.500	15073.7	-1.0	0.72	5616	35.38	254.02
003241344-02	OBS	No	3.912600	133.200168	18356.6	15.000	2460.8	-1.0	0.72	5616	9.76	254.02
003241344-03	OBS	No	1.956340	133.418610	21554.7	3.499	1333.2	1235.7	0.72	5616	11.74	640.08
003241344-04	OBS	No	489.129870	488.037850	2371.1	16.157	9.7	6.9	0.72	5616	4.09	0.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241344-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
003241344-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
003241344-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003241344-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

Ephemeris Match Information For 003241344-04

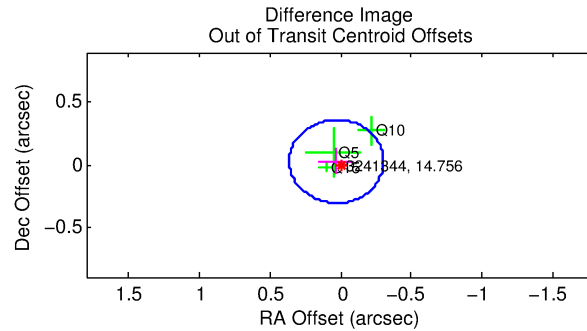
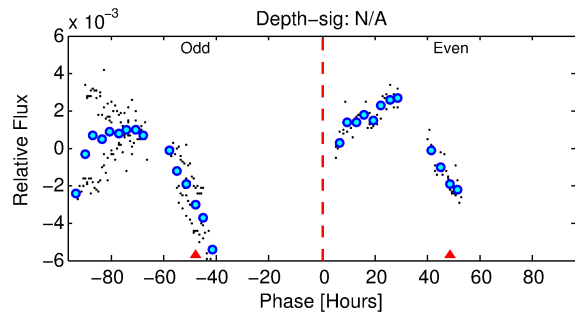
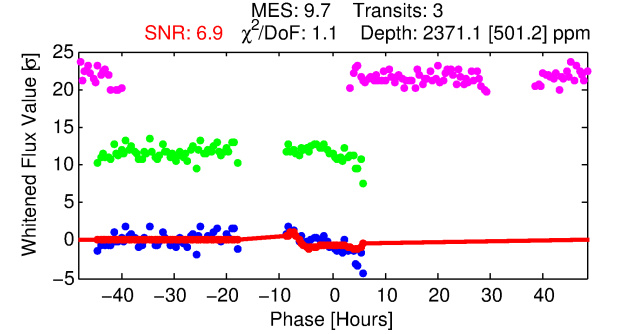
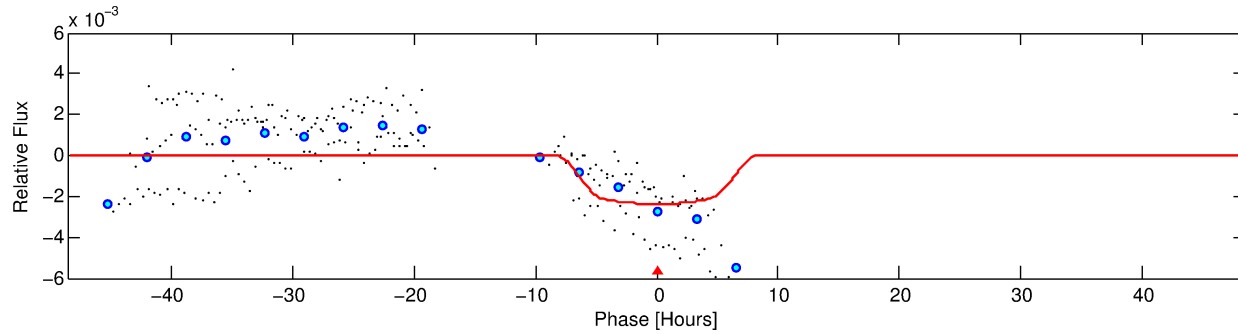
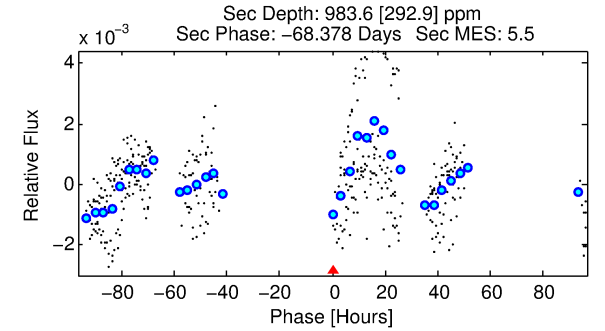
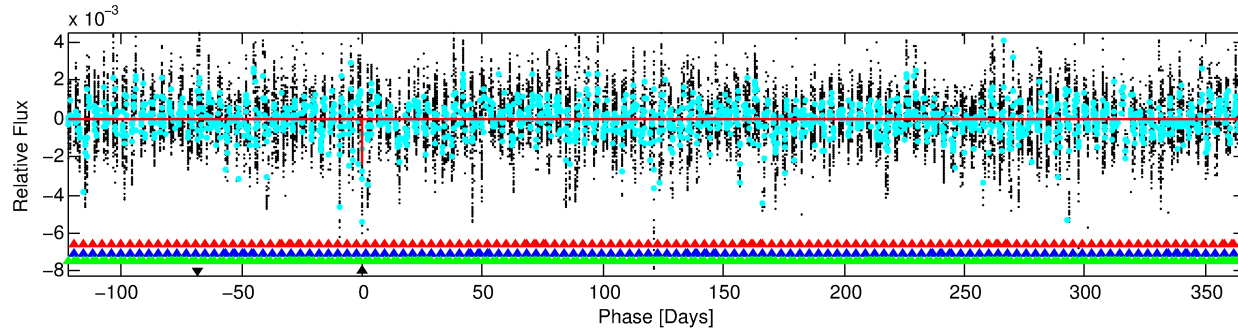
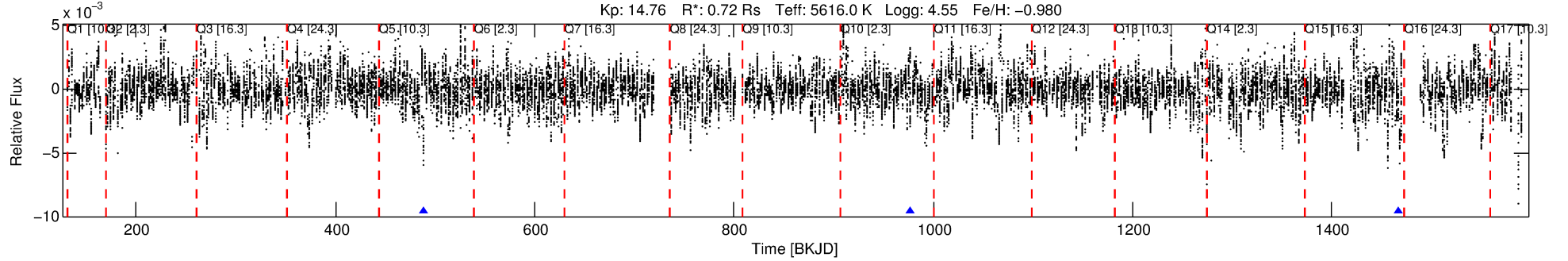
No Significant Match Found

DV One-Page Summary

KIC: 3241344 Candidate: 4 of 4 Period: 489.130 d

KOI: K05984 Corr: No Ephemeris Match

Kp: 14.76 R*: 0.72 Rs Teff: 5616.0 K Logg: 4.55 Fe/H: -0.980



DV Fit Results:

Period = 489.12987 [0.02000] d
Epoch = 488.0379 [0.0249] BKJD
Rp/R* = 0.0520 [0.0062]
a/R* = 130.52 [26.68]
b = 0.89 [0.04]
Seff = 0.41 [0.09]
Teq = 204 [11] K
Rp = 4.09 [0.69] Re
a = 1.0663 [0.1174] AU
Ag = 36831.07 [15408.26] [2.39σ]
Teffp = 4361 [440] K [9.44σ]

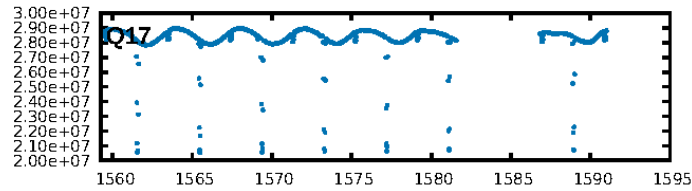
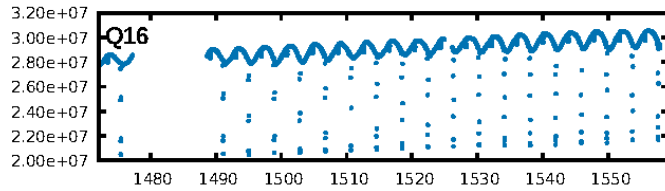
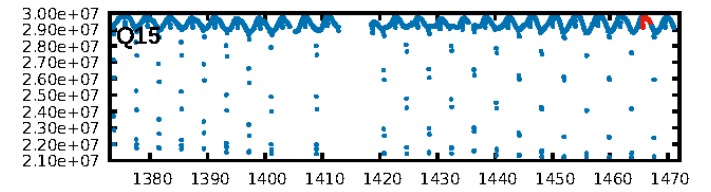
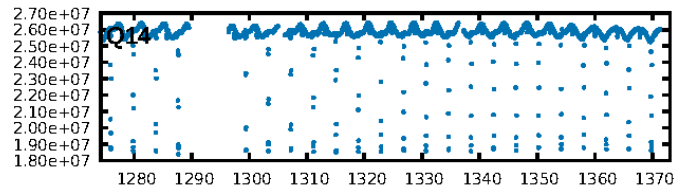
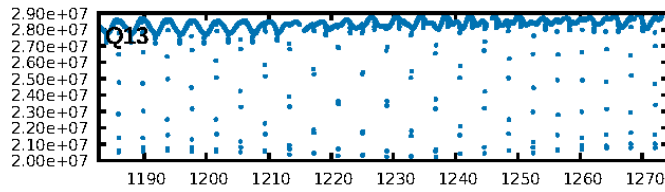
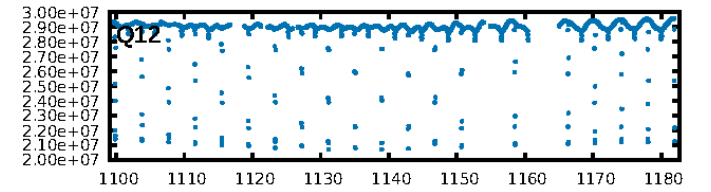
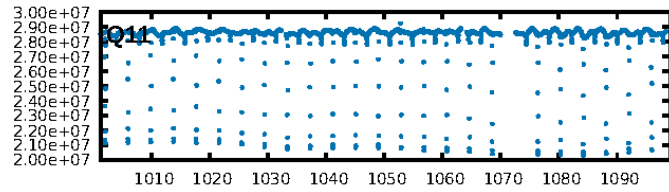
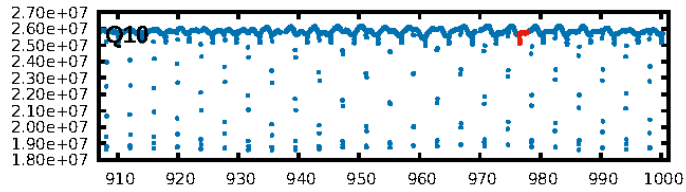
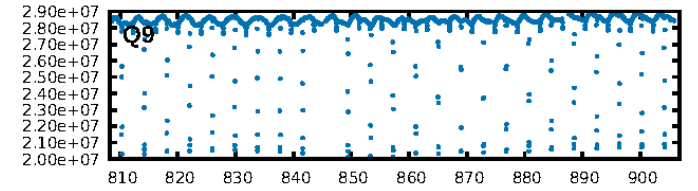
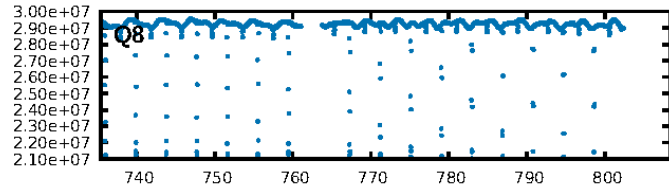
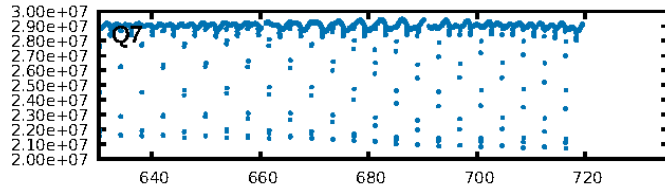
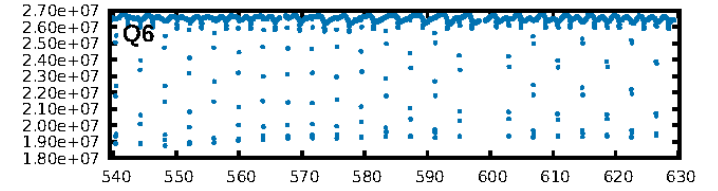
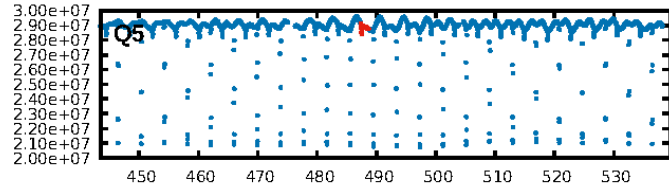
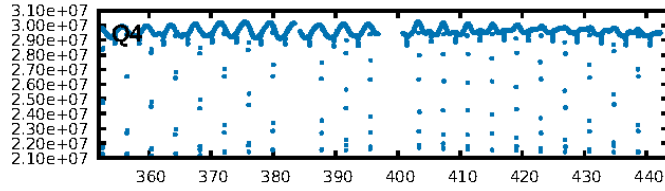
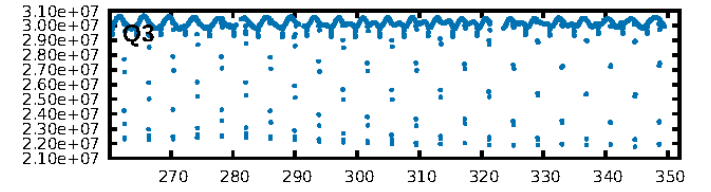
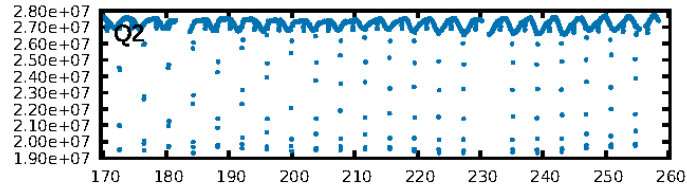
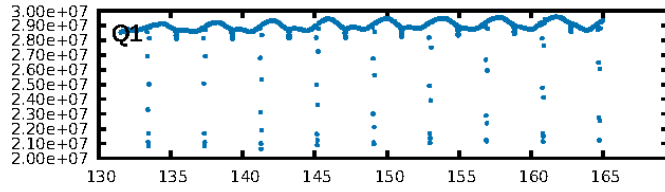
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [712.27σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4691
Centroid-sig: 35.2%
Centroid-so: 0.265 arcsec [0.63σ]
OotOffset-rm: 0.040 arcsec [0.36σ]
KicOffset-rm: 0.069 arcsec [0.64σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/3]

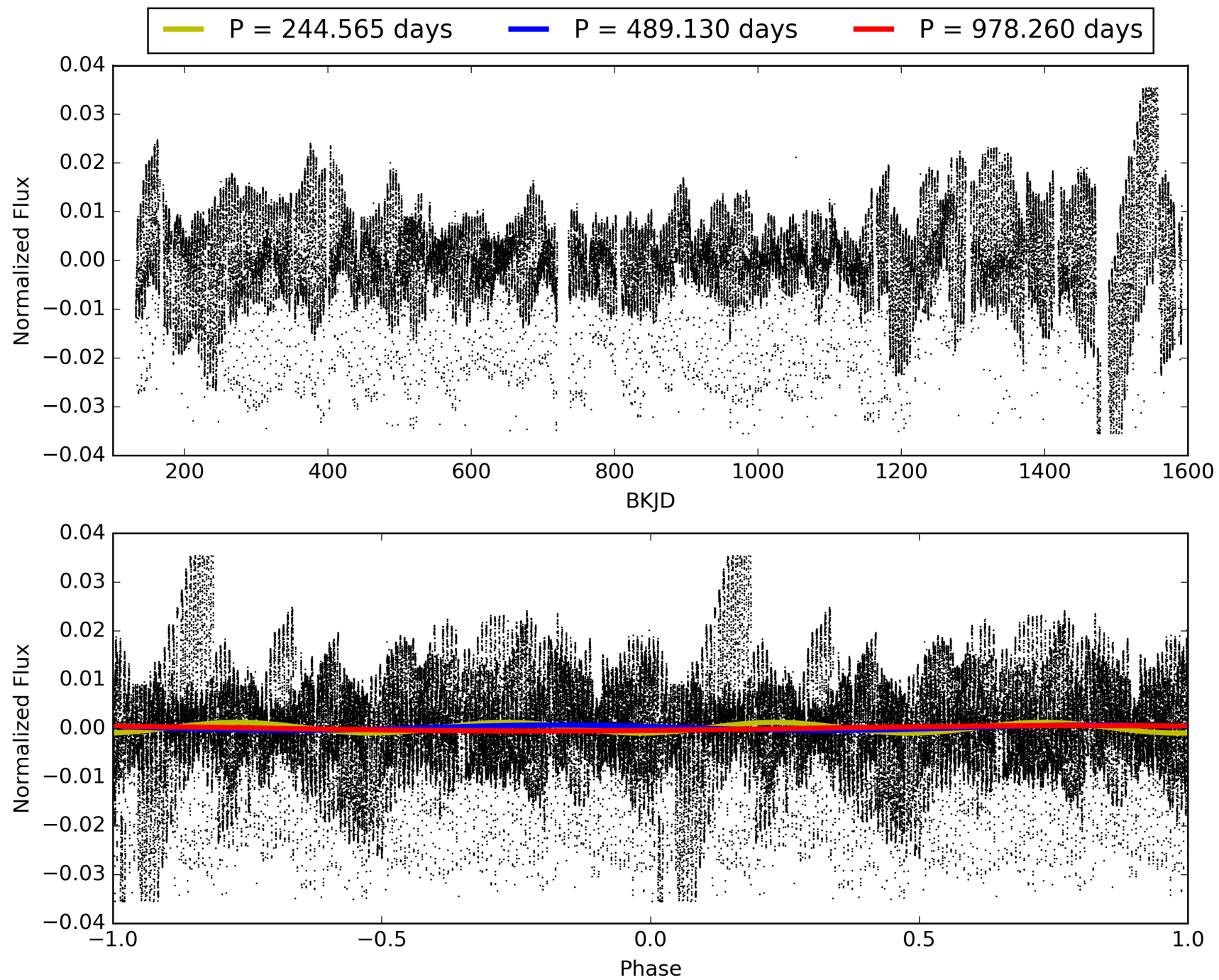
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:08:30 Z

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

TCE 003241344-04, PDC Light Curves

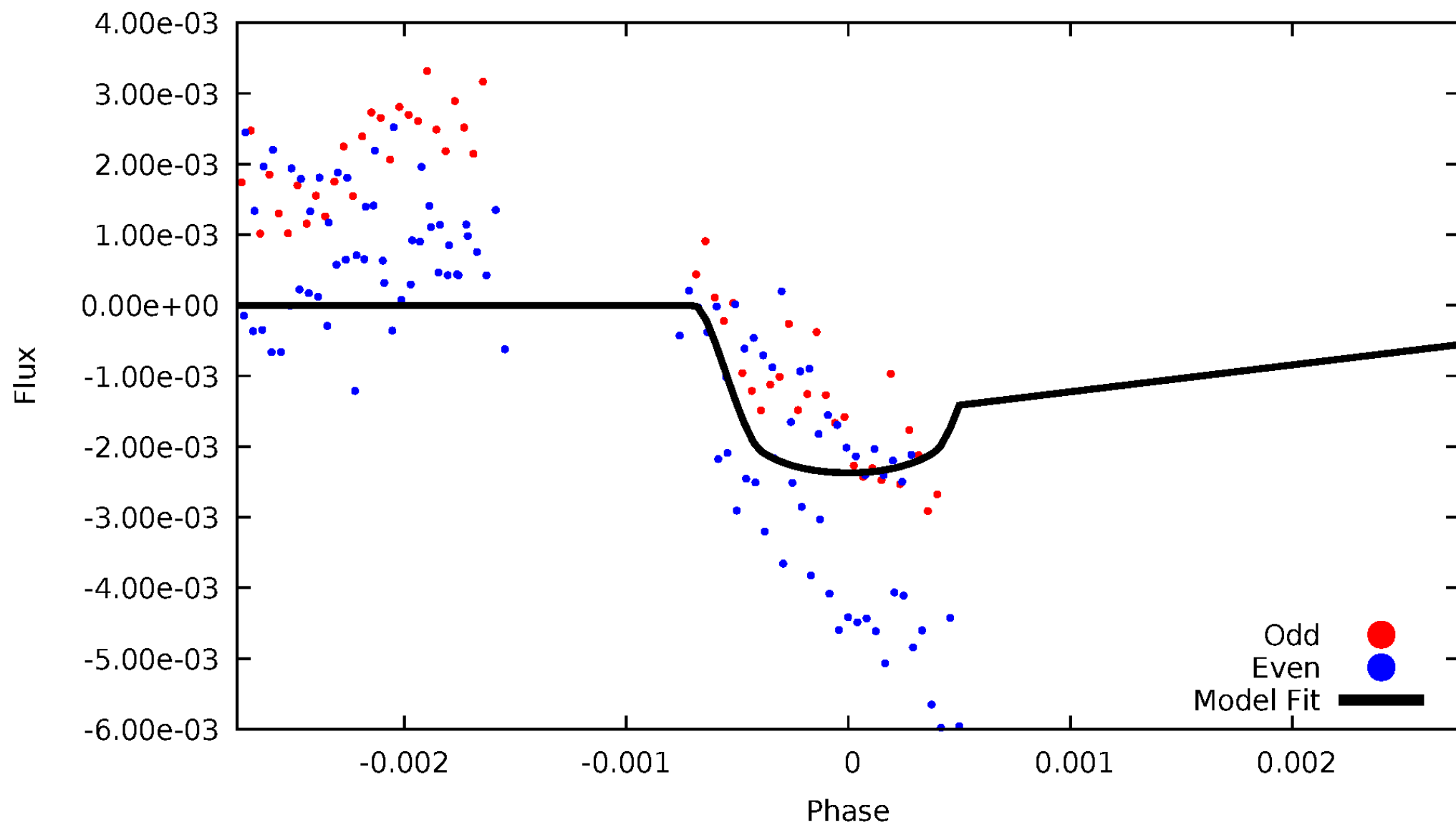


TCE 003241344-04



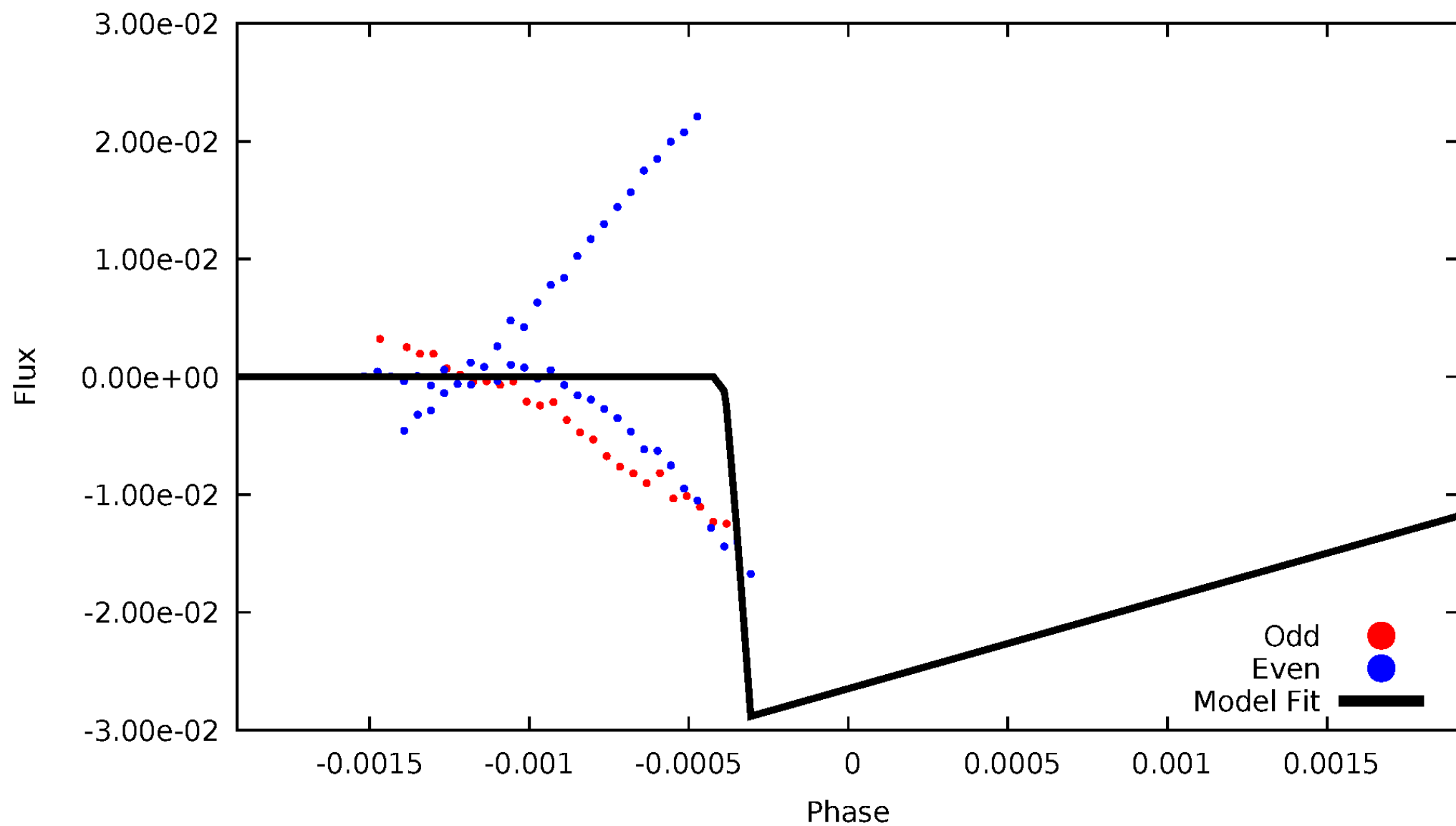
DV Odd/Even

TCE 003241344-04



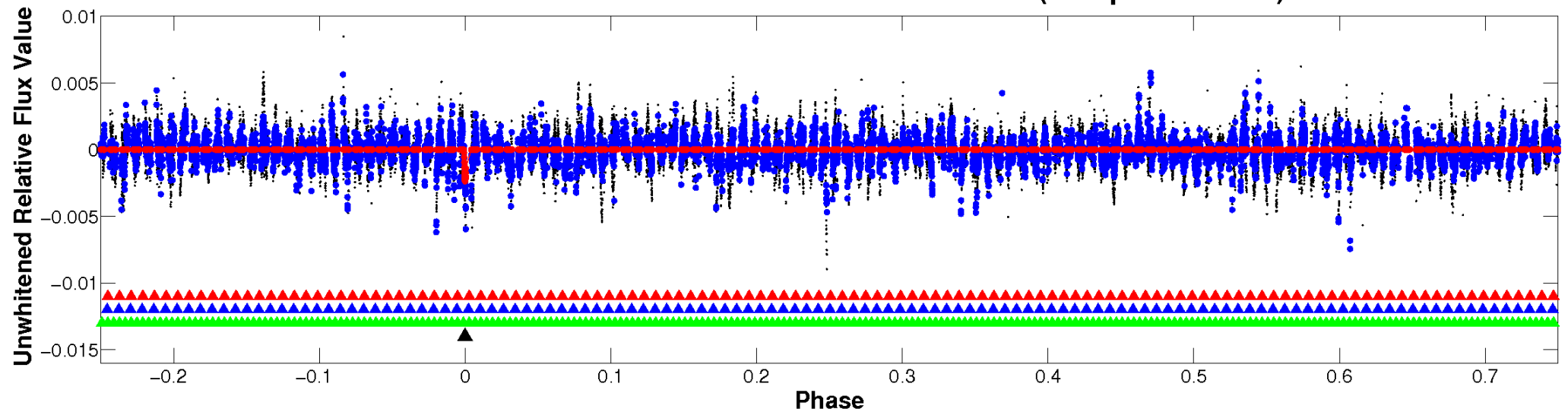
ALT Odd/Even

TCE 003241344-04

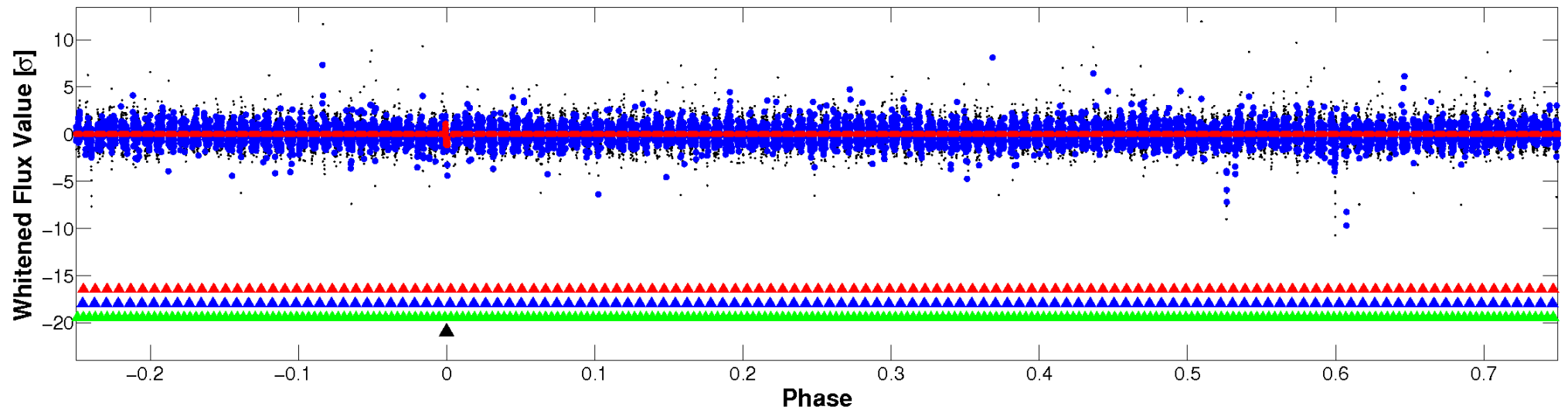


Non-Whitened Vs. Whitened Light Curve

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

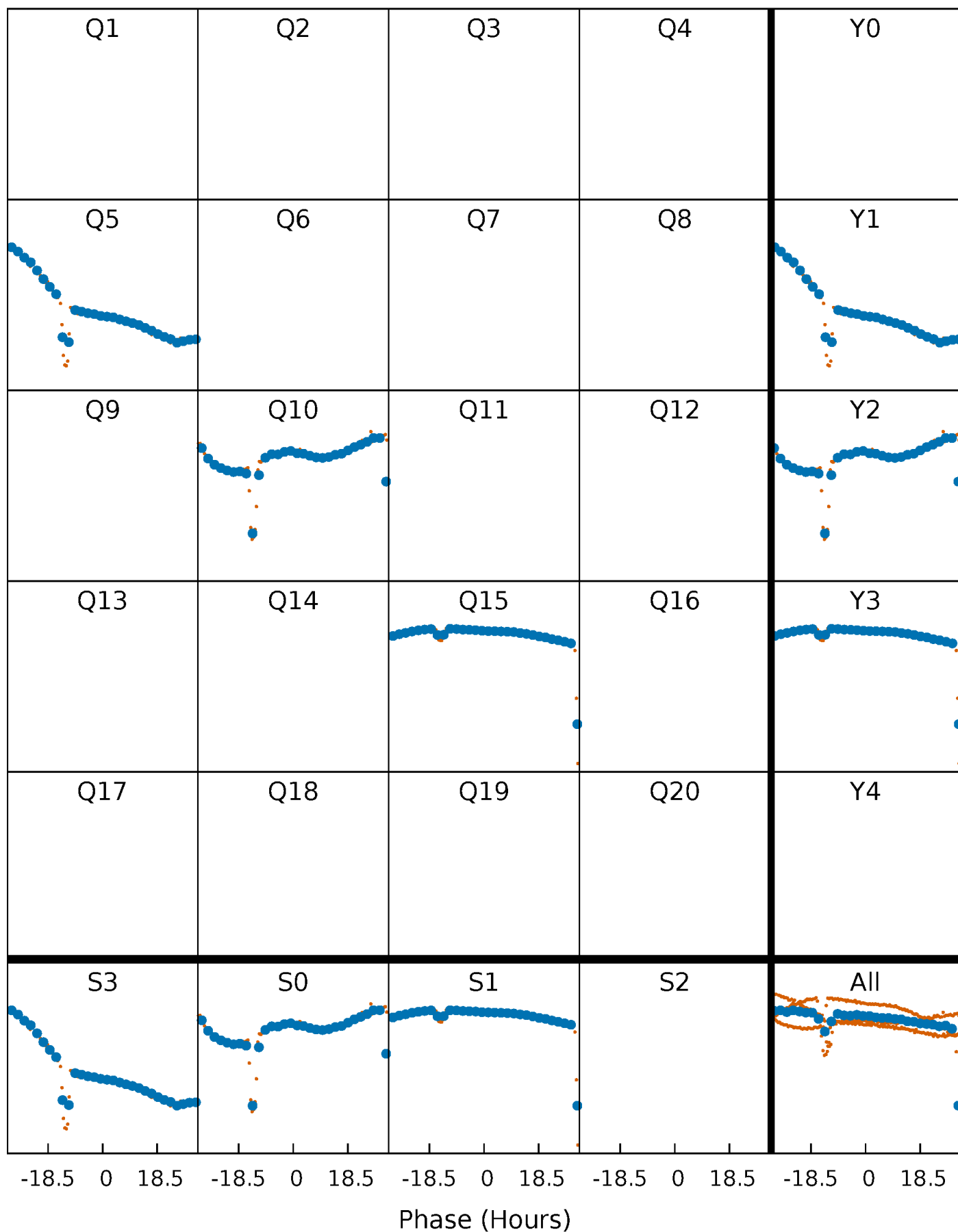


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



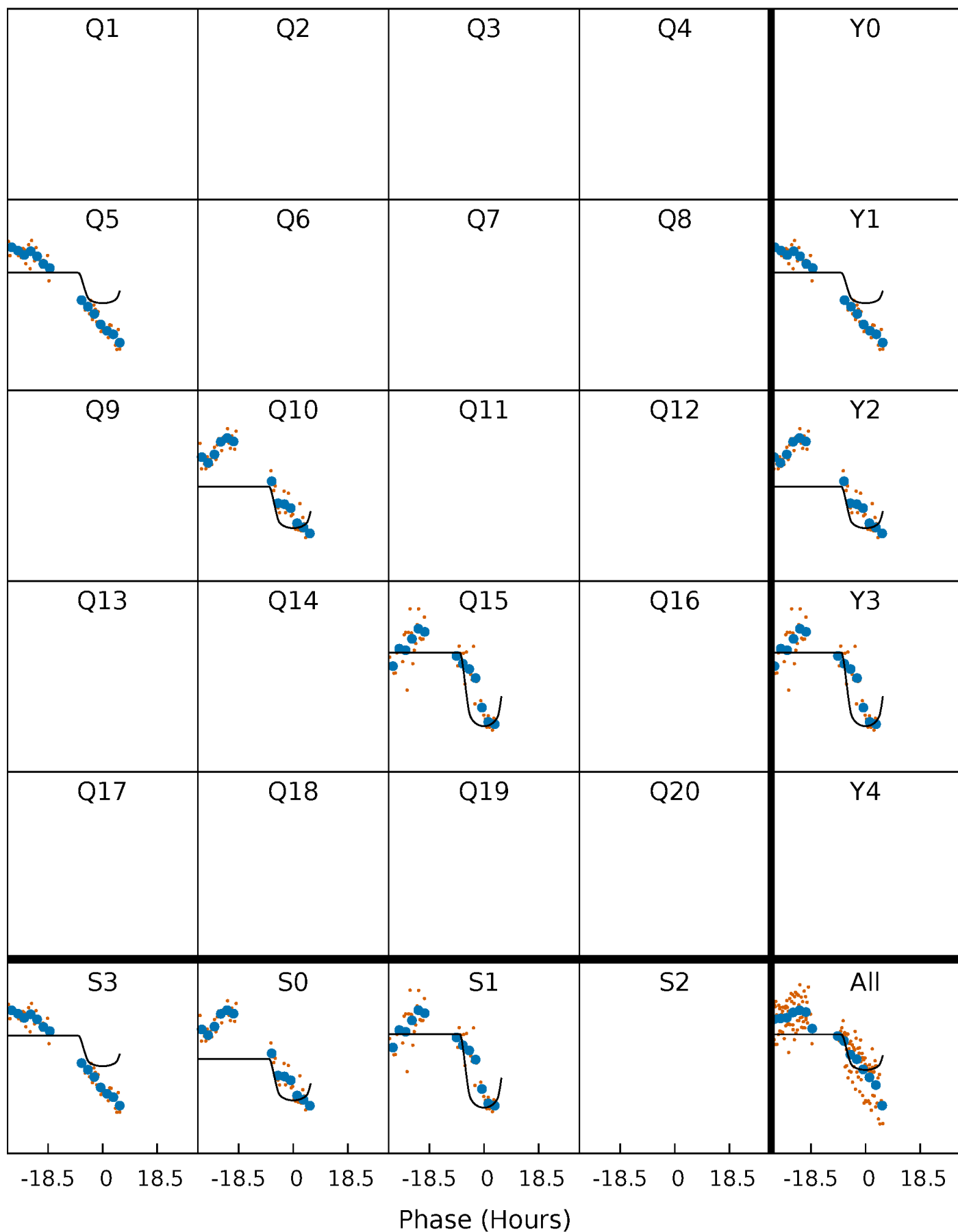
PDC Quarter-Phased Transit Curves

TCE 003241344-04 $P=489.129870$ Days $T_0=488.037850$ (BKJD)



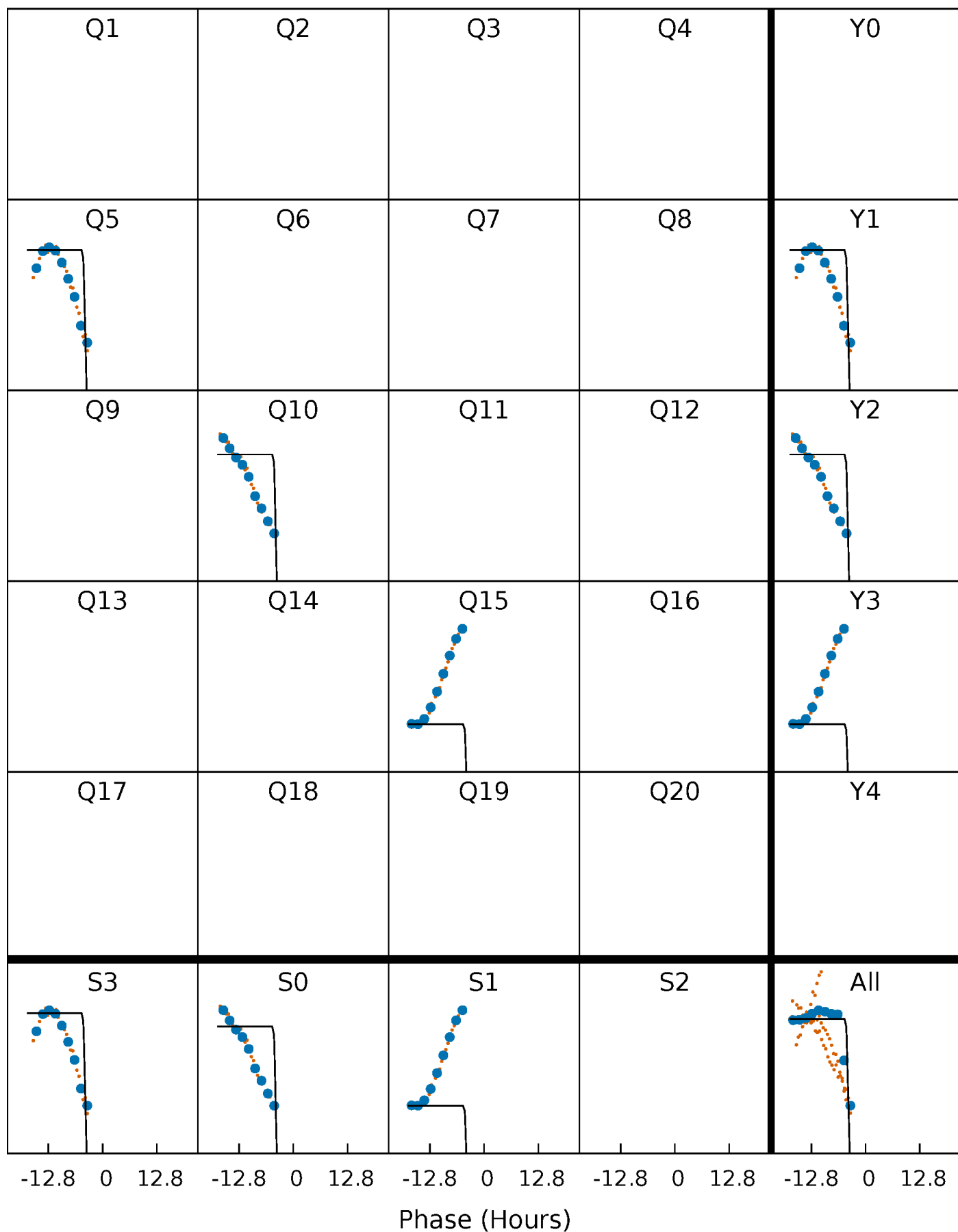
DV Quarter-Phased Transit Curves

TCE 003241344-04 $P=489.129870$ Days $T_0=488.037850$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

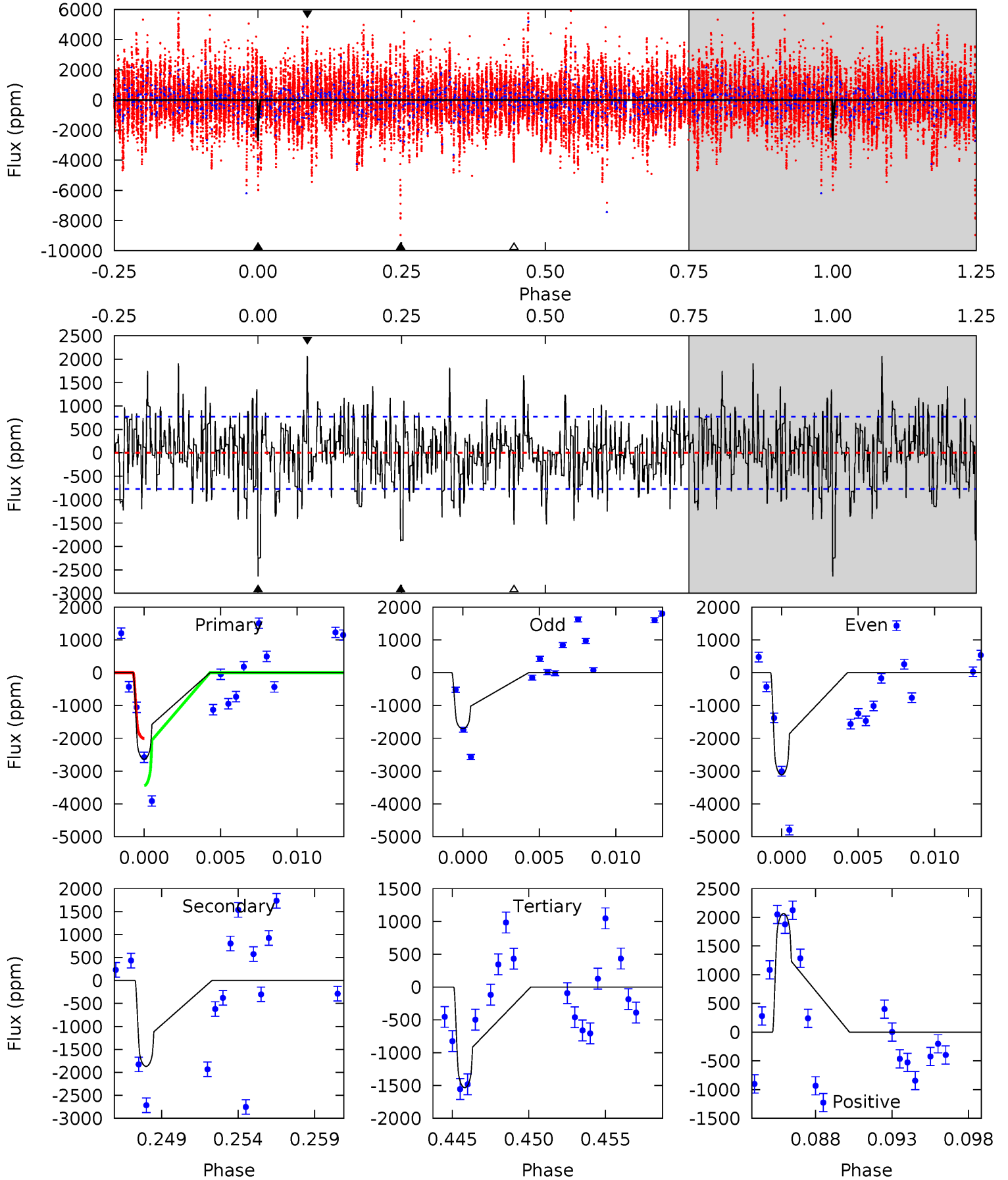
TCE 003241344-04 P=489.118126 Days $T_0=488.431869$ (BKJD)



DV Model-Shift Uniqueness Test

003241344-04, P = 489.129870 Days, E = 488.037850 Days

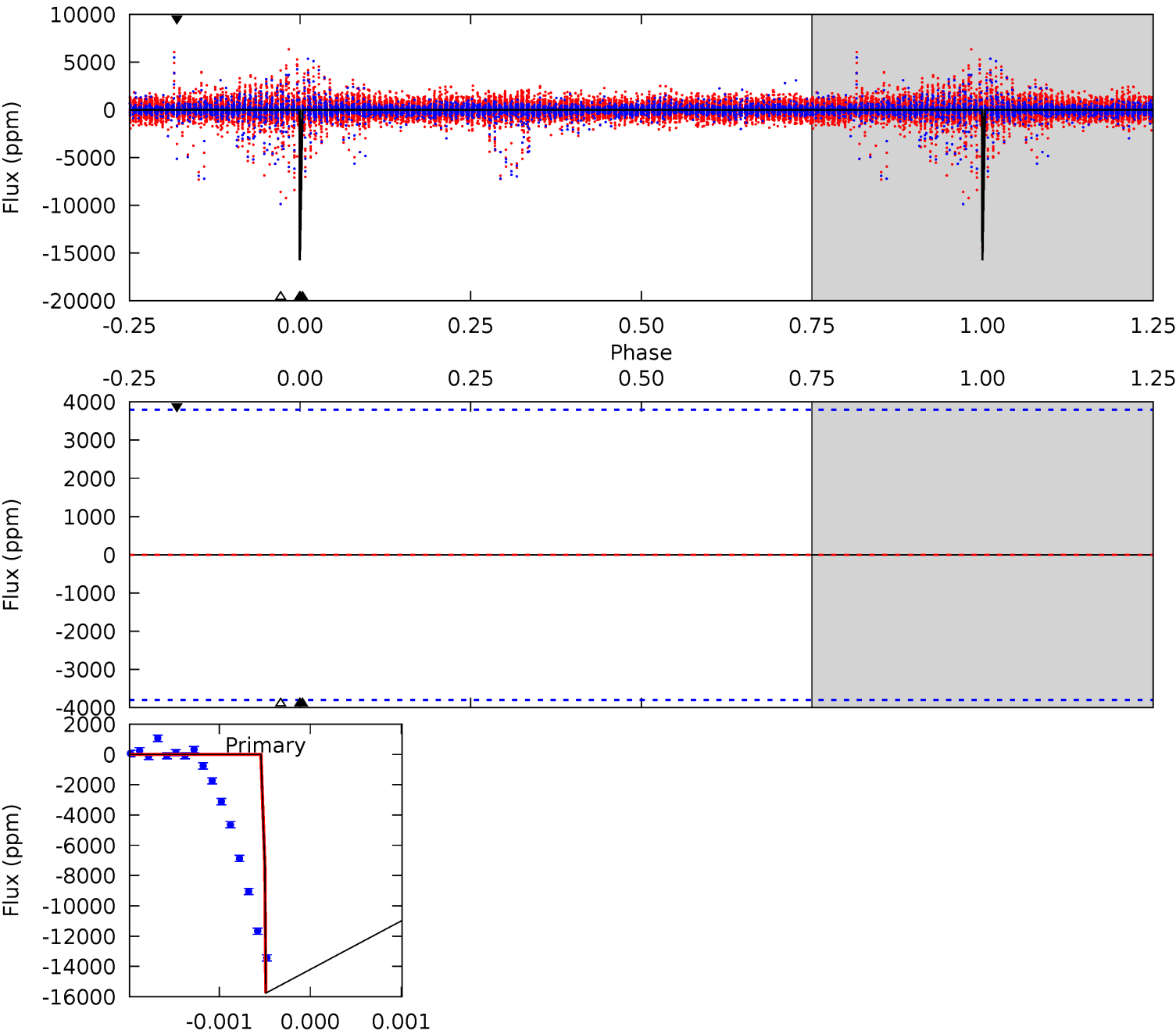
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	12.5	10.2	13.8	5.16	2.81	3.74	7.39	3.82	2.25	-1.31	4.58	1.50	0.44	4.71



Alt Model-Shift Uniqueness Test

003241344-04, P = 489.118126 Days, E = 488.431869 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	5.50	3.36	0	0	0	0	0	0	0	0	0



Stellar Parameters For KIC 003241344

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+185}_{-168}	$4.553^{+0.099}_{-0.081}$	$-0.980^{+0.300}_{-0.300}$	$0.720^{+0.086}_{-0.078}$	$0.675^{+0.079}_{-0.023}$	$2.547^{+0.938}_{-0.628}$
	+3%/-3%	+2%/-2%	+31%/-31%	+12%/-11%	+12%/-3%	+37%/-25%
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 003241344-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1870 ± 150	$4.08^{+0.60}_{-0.53}$	284^{+14}_{-12}	5184^{+359}_{-298}	71272^{+24062}_{-17332}
Alt.	-0 ± 691	$14.58^{+1.16}_{-1.06}$	284^{+12}_{-13}	-1810^{+4621}_{-1025}	$-38.208^{+1910.259}_{-1993.097}$

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

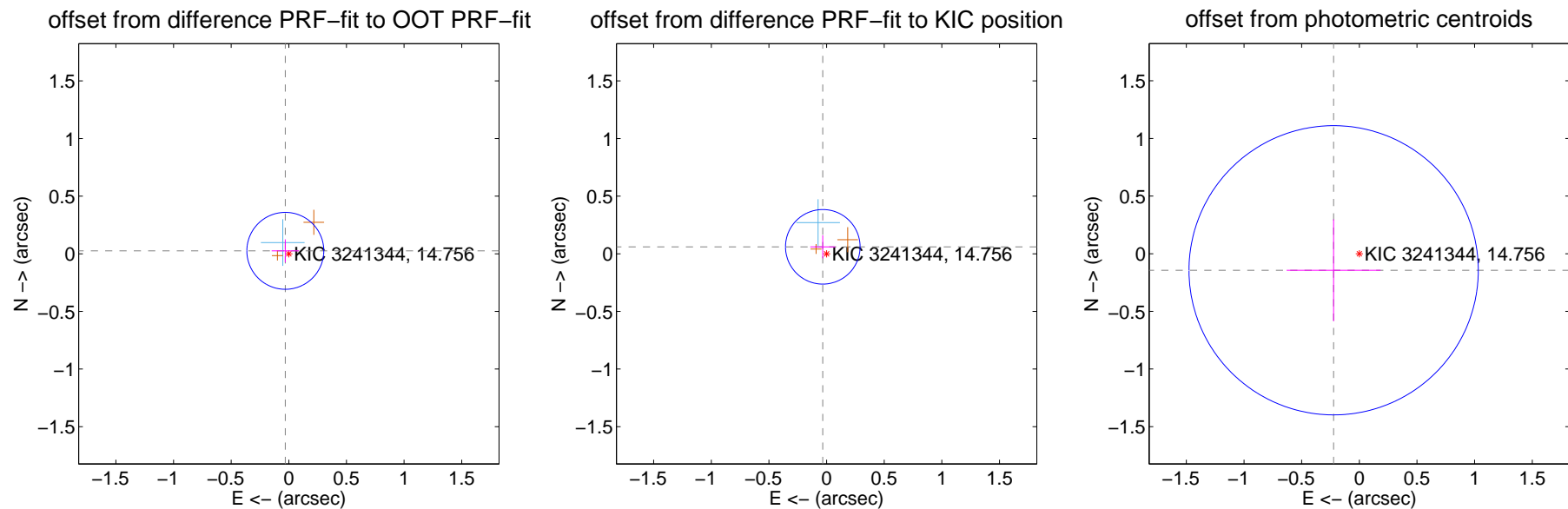
DV Centroid Data

Supplemental centroid analysis for 003241344-04. Kepler magnitude: 14.76. Transit SNR 6.92

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.040 ± 0.111	0.36	0.030 ± 0.119	0.026 ± 0.100
PRF-fit source offset from KIC position	0.069 ± 0.108	0.64	0.033 ± 0.108	0.060 ± 0.099
photometric centroid source offset	0.27 ± 0.42	0.63	0.22 ± 0.41	-0.14 ± 0.44

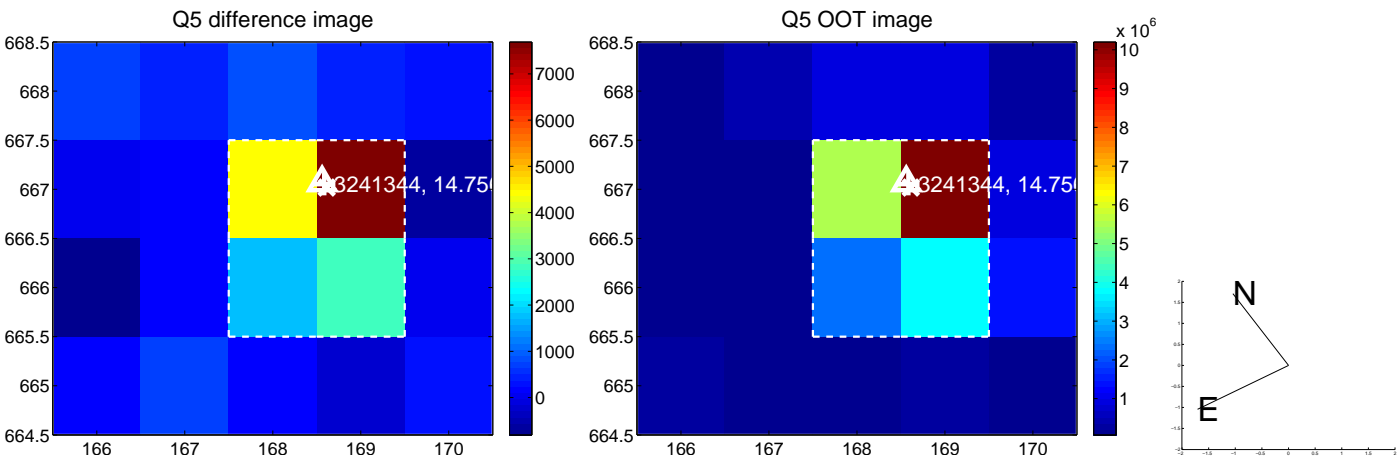


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

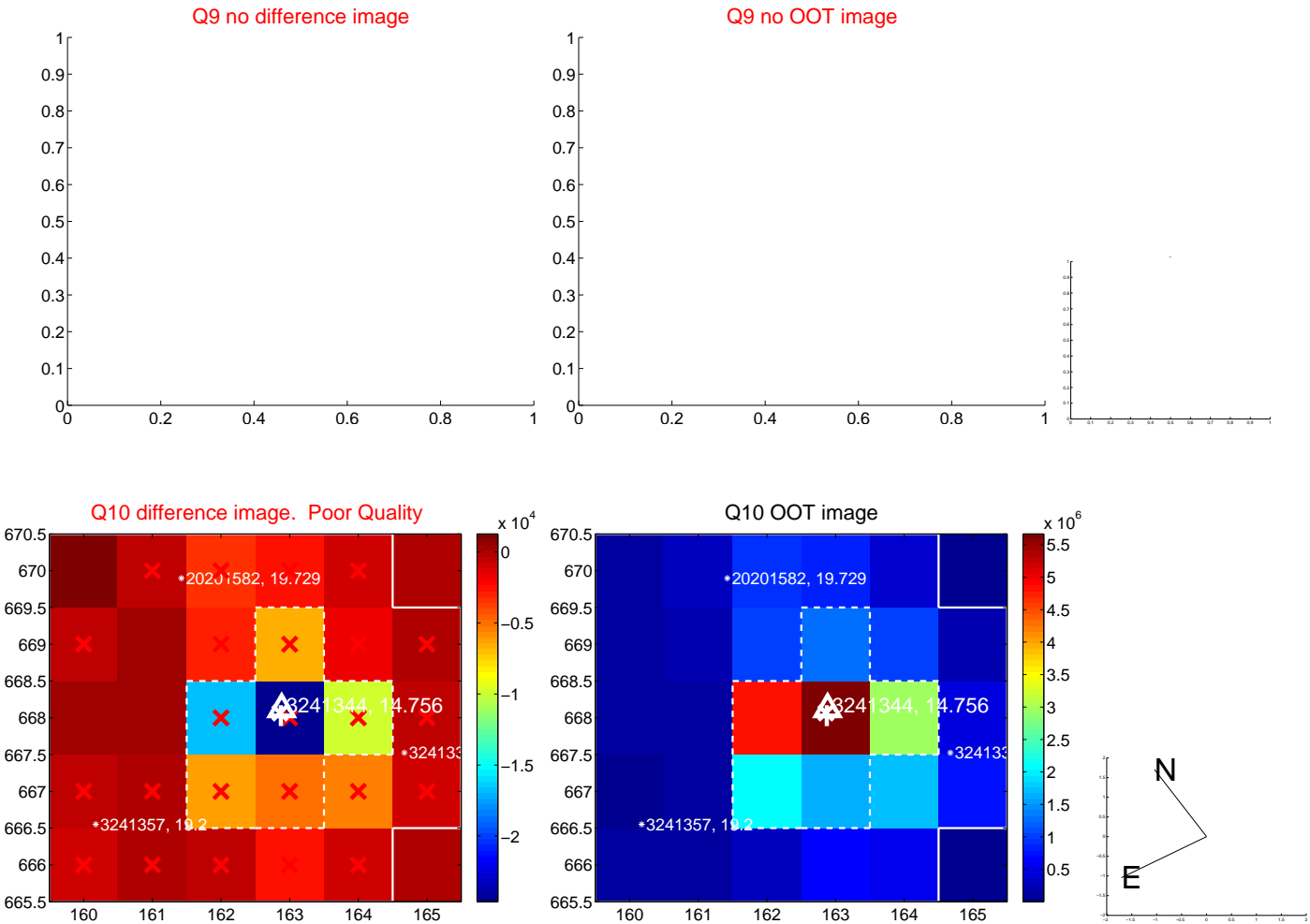
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



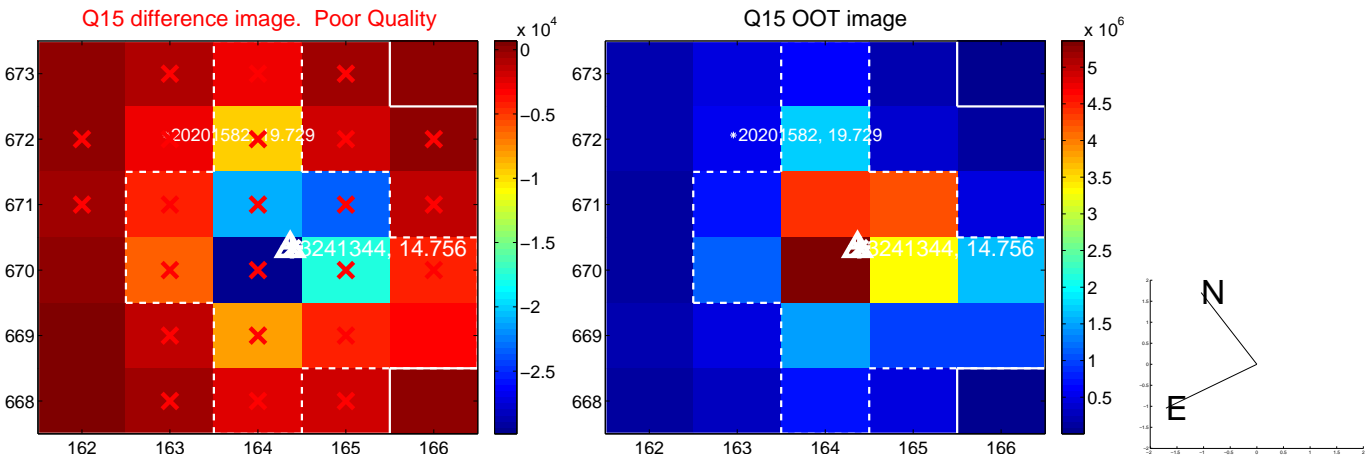
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



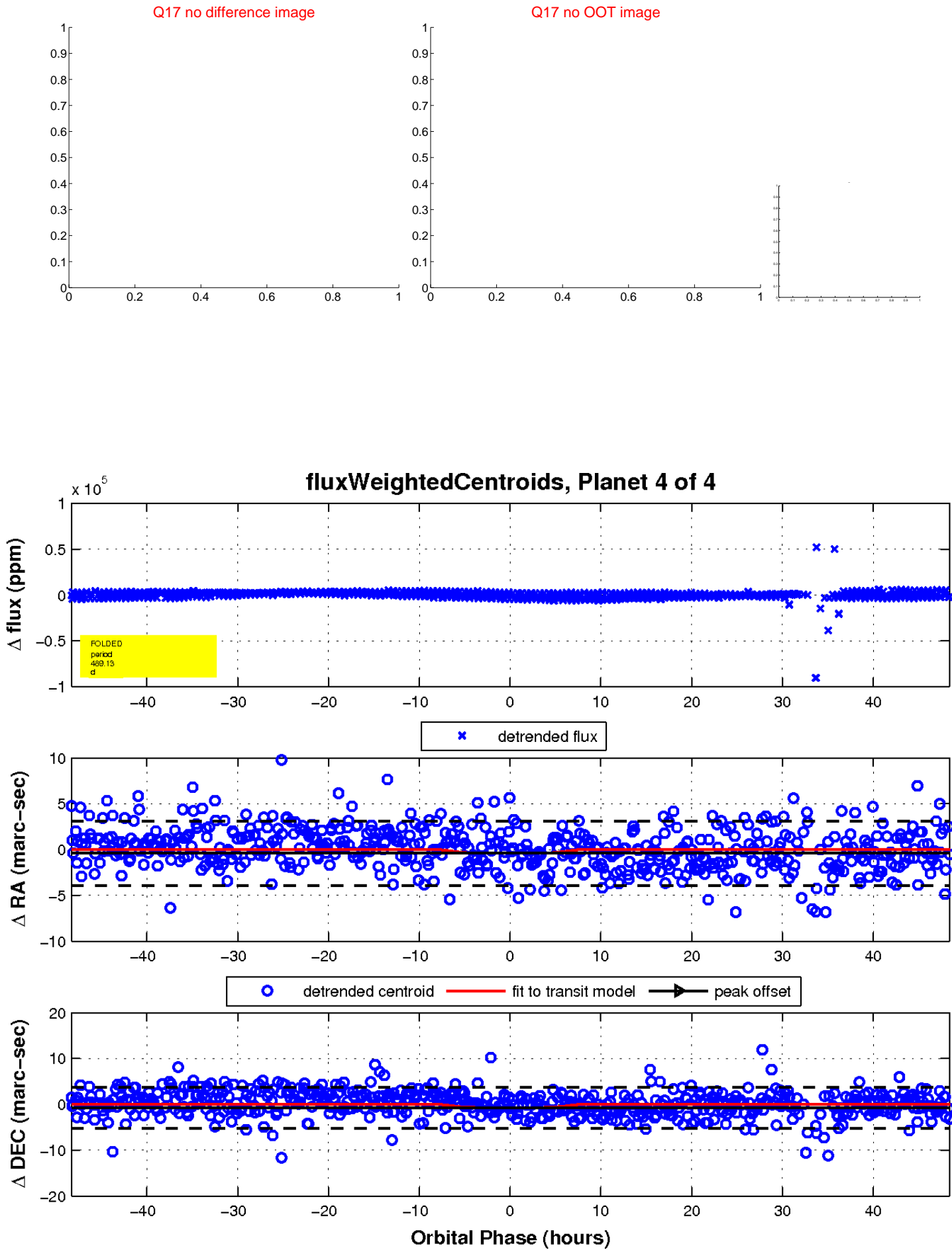
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

