

KIC 003347485

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})
003347485-01	OBS	5985.01	7.544814	137.118938	6166.2	7.730	288.8	328.3	1.61	5953	22.81	547.03
003347485-02	OBS	No	7.544778	133.351141	1204.9	7.391	64.5	74.5	1.61	5953	10.22	547.03
003347485-03	OBS	No	7.545471	132.827859	0.0	6.301	10.4	0.0	1.61	5953	0.02	546.97
003347485-04	OBS	No	223.918755	251.573193	1178.7	6.332	11.2	10.0	1.61	5953	10.50	5.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003347485-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
003347485-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003347485-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
003347485-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

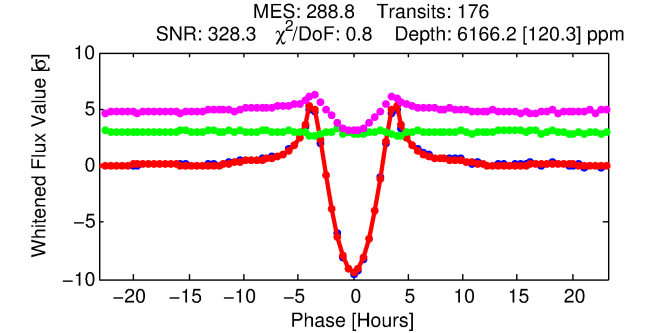
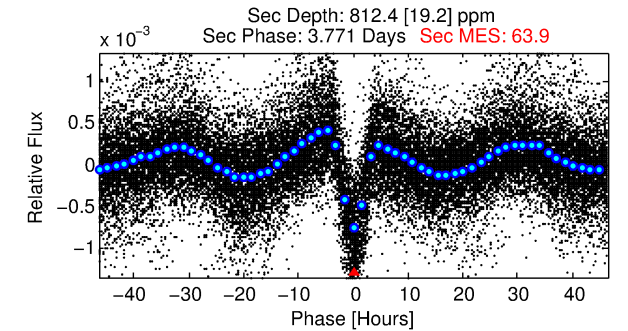
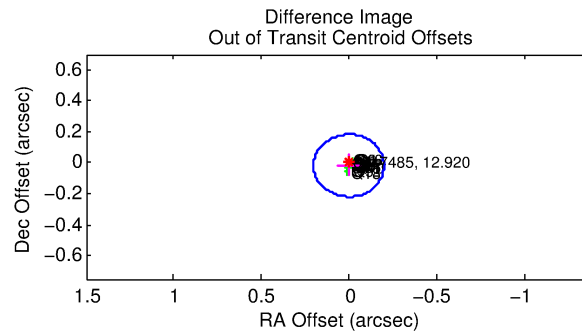
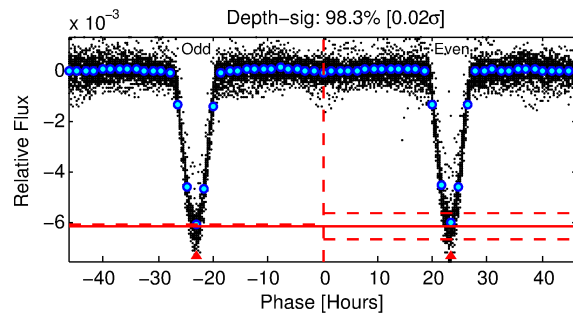
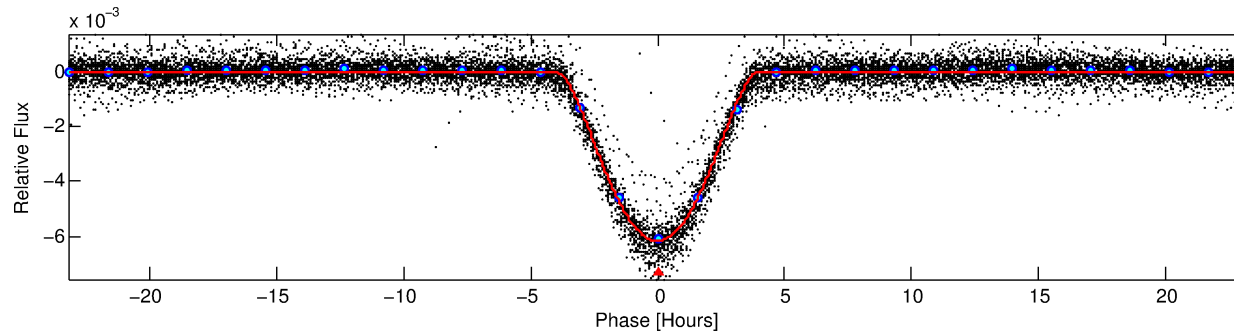
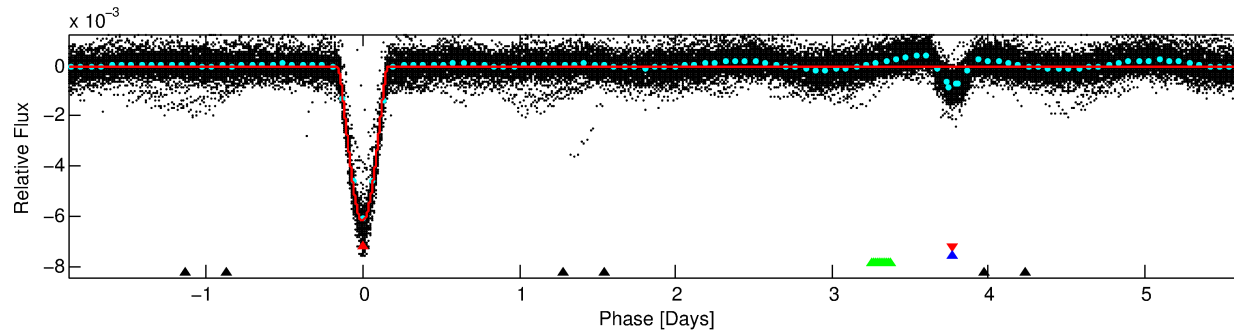
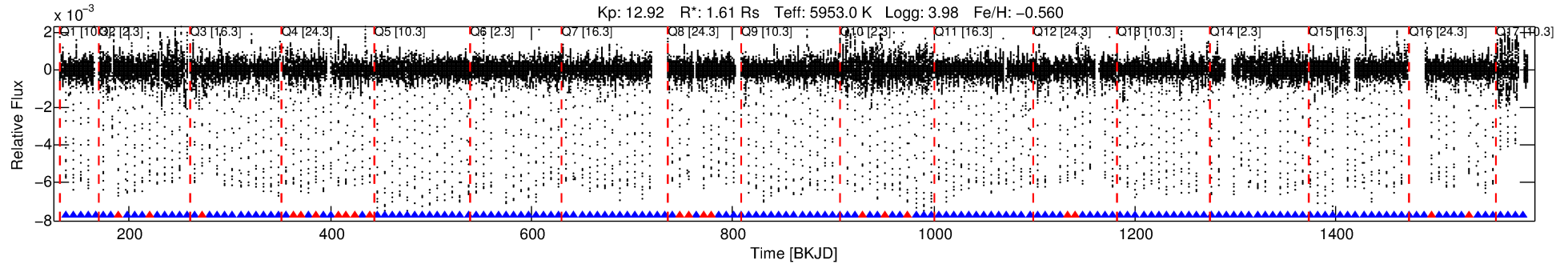
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003347485-01

No Significant Match Found

DV One-Page Summary

KIC: 3347485 Candidate: 1 of 4 Period: 7.545 d
KOI: K05985.01 Corr: 0.987



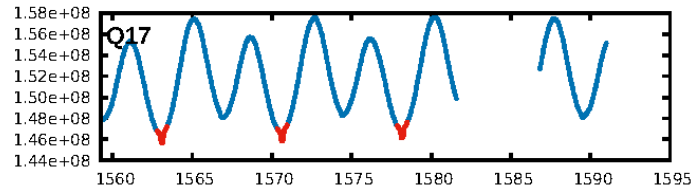
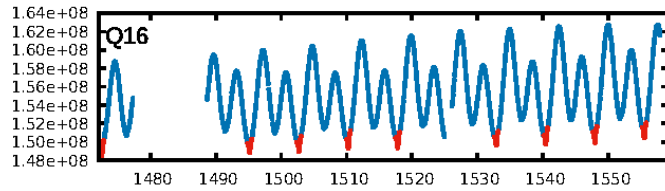
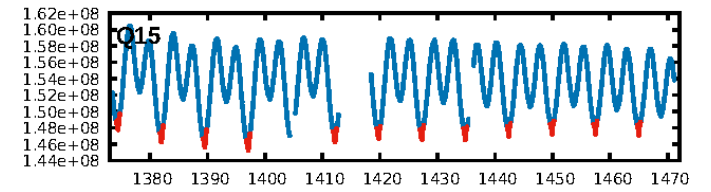
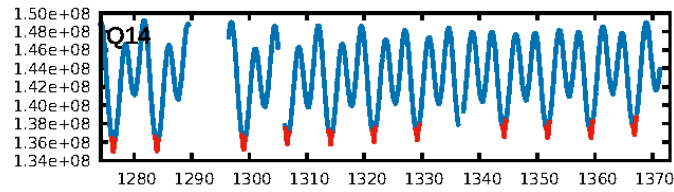
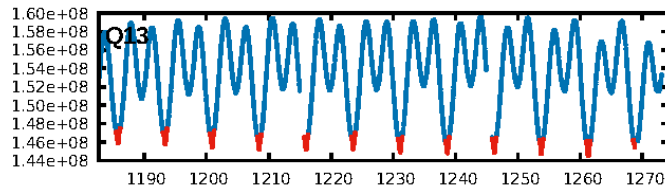
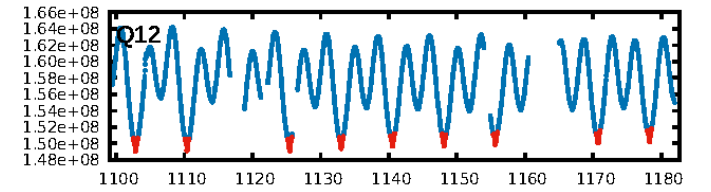
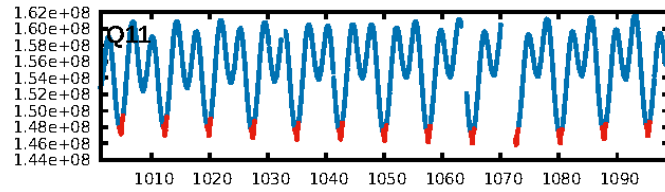
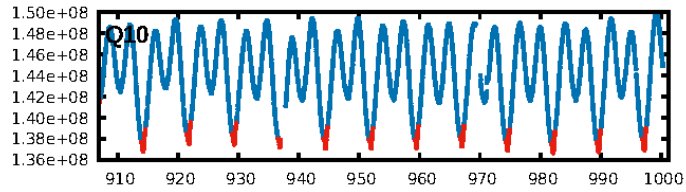
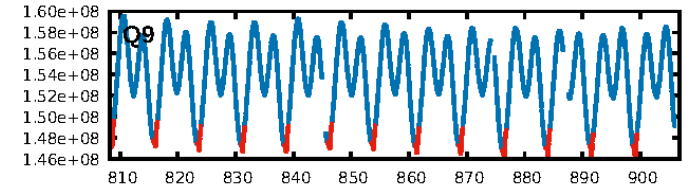
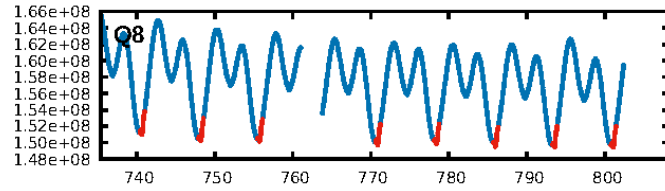
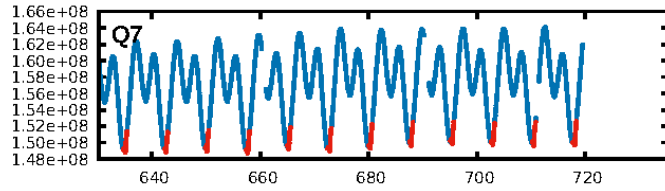
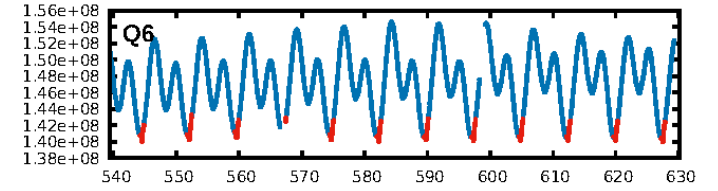
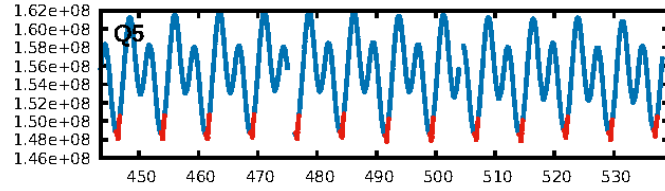
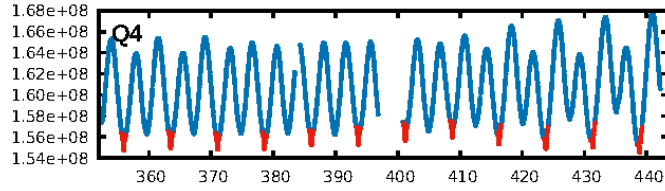
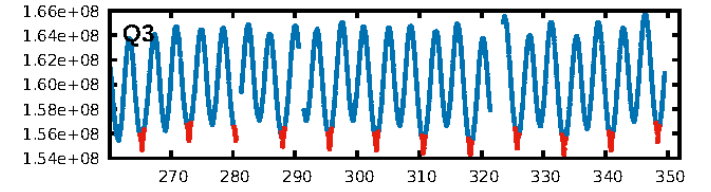
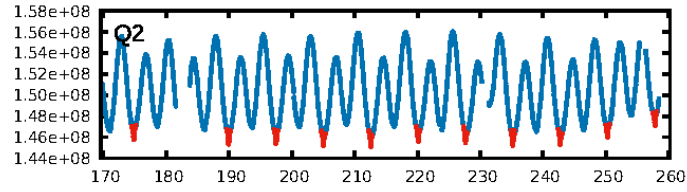
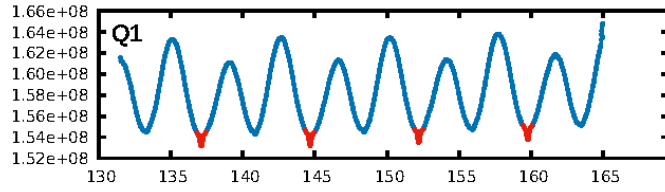
DV Fit Results:

Period = 7.54481 [0.00000] d
Epoch = 137.1189 [0.0003] BKJD
Rp/R* = 0.1299 [0.0061]
a/R* = 4.06 [0.03]
b = 1.00 [0.01]
Seff = 547.03 [449.38]
Teff = 1233 [253] K
Rp = 22.81 [10.09] Re
a = 0.0730 [0.0350] AU
Ag = 4.57 [3.75] [0.95σ]
Teffp = 2788 [101] K [5.71σ]

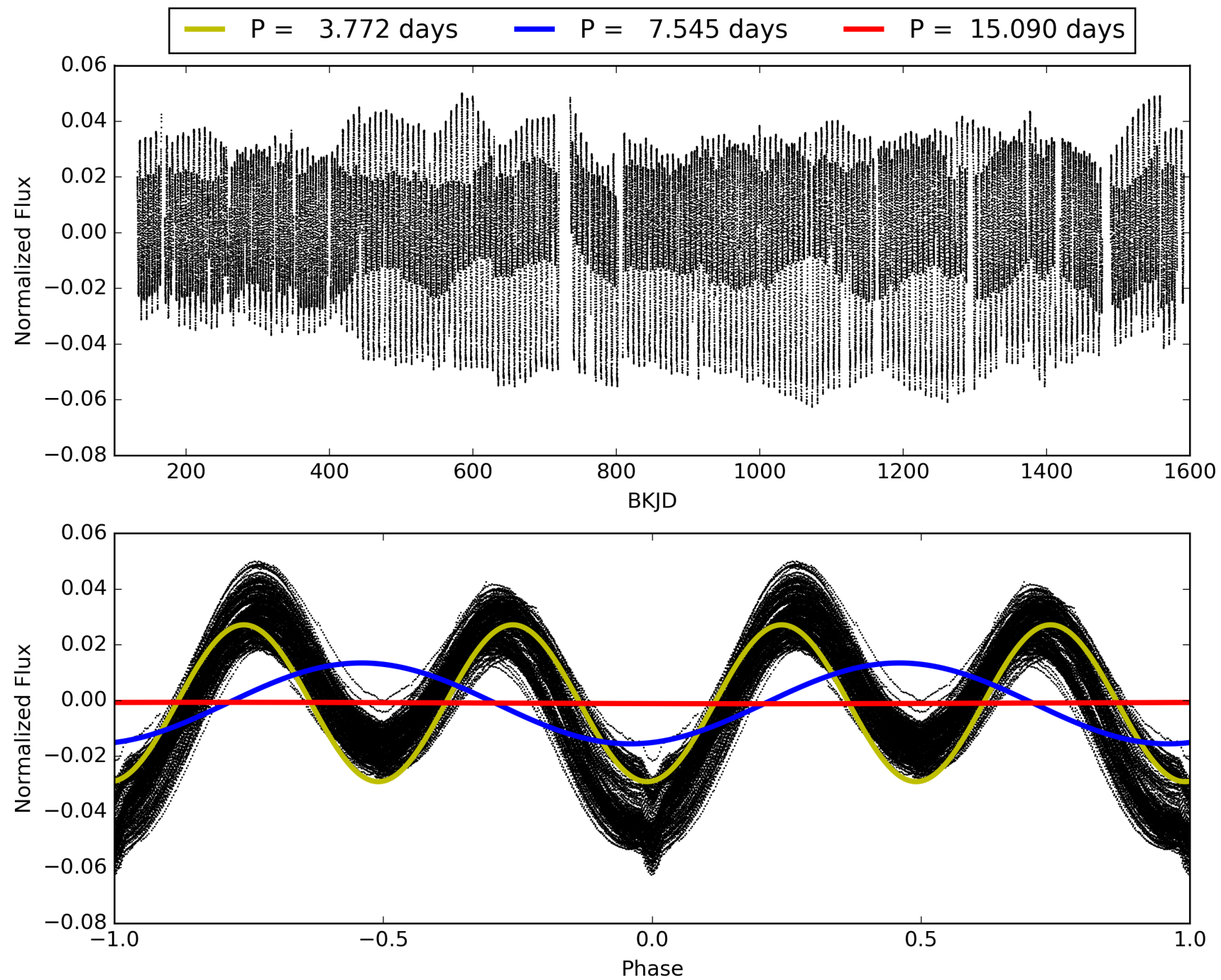
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.88 [148/169]
GhostDiagnostic-chr: 1.102
Centroid-sig: 0.3%
Centroid-so: 0.213 arcsec [16.70σ]
OotOffset-rm: 0.019 arcsec [0.28σ]
KicOffset-rm: 0.031 arcsec [0.46σ]
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]

TCE 003347485-01, PDC Light Curves

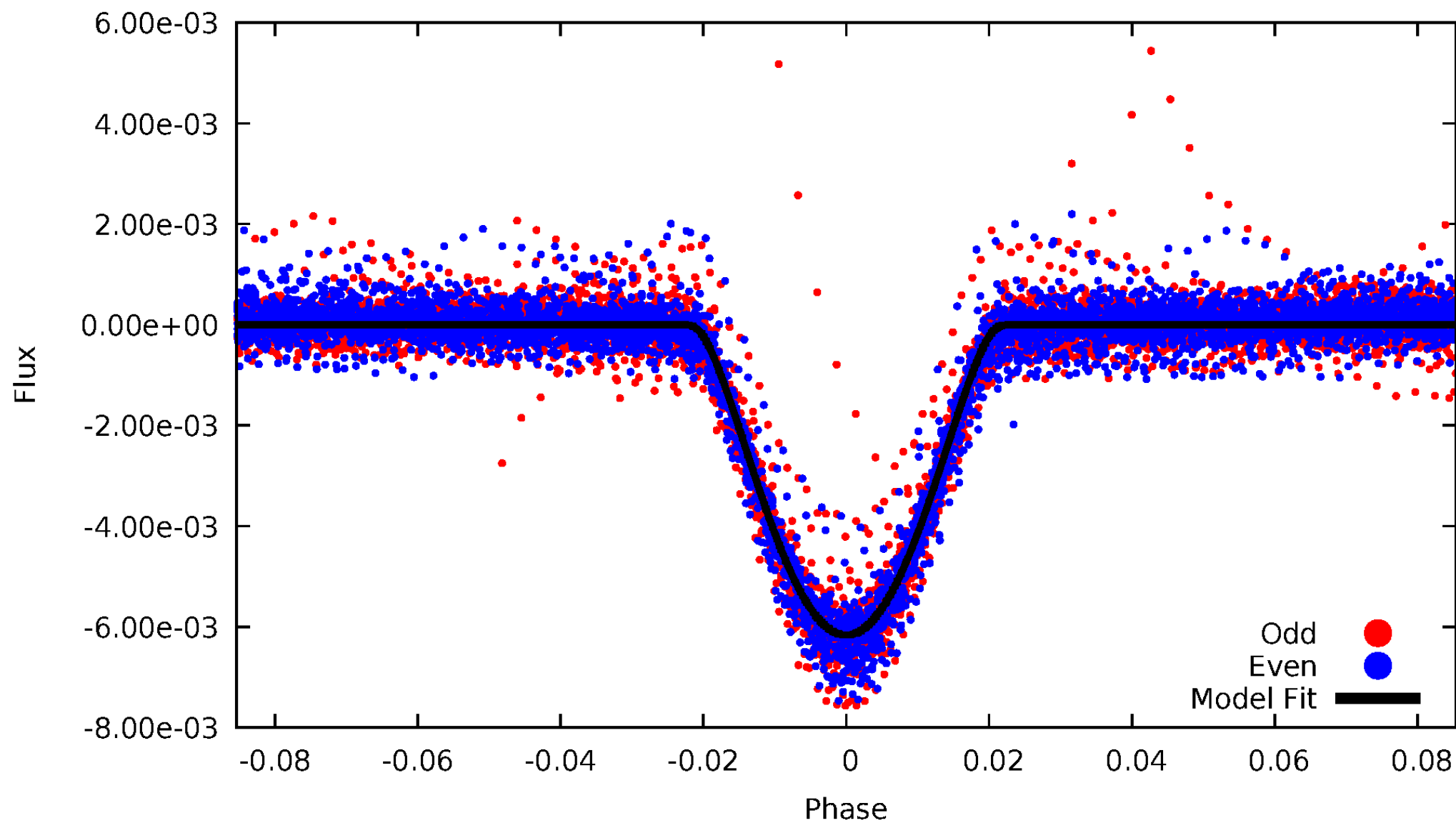


TCE 003347485-01



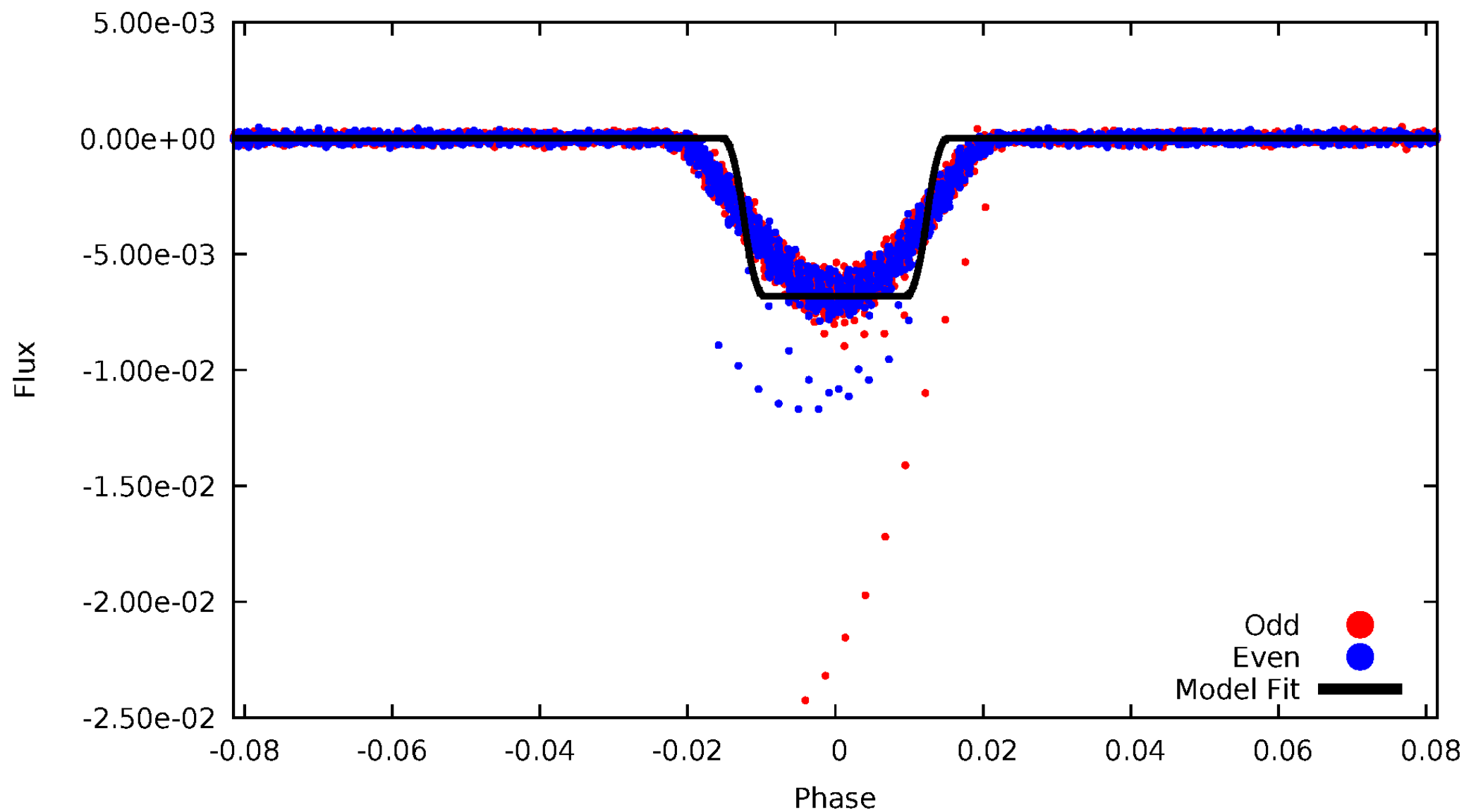
DV Odd/Even

TCE 003347485-01



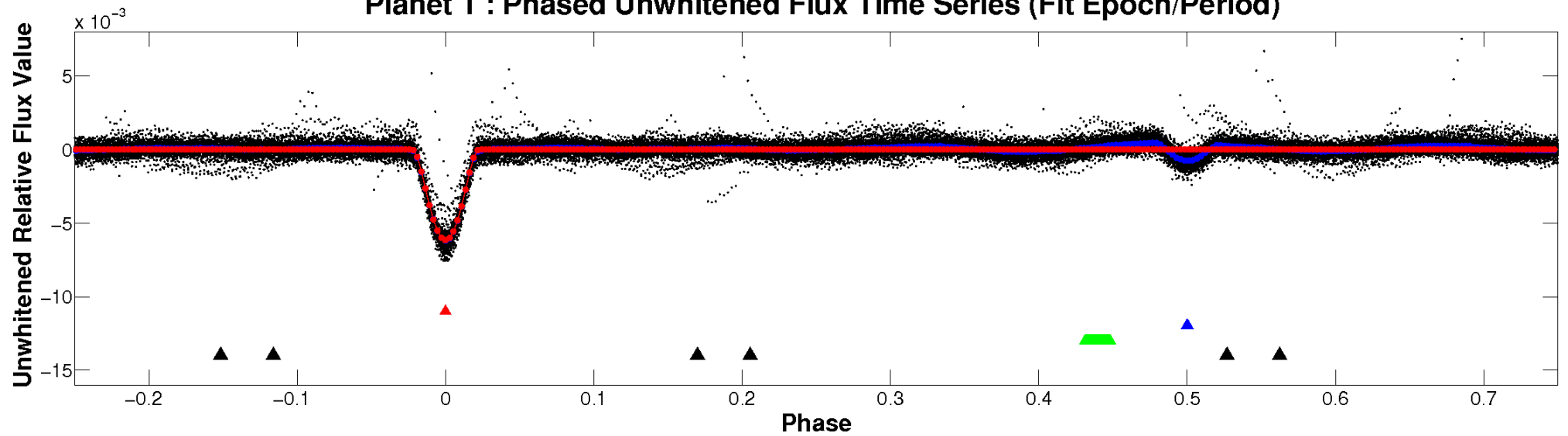
ALT Odd/Even

TCE 003347485-01

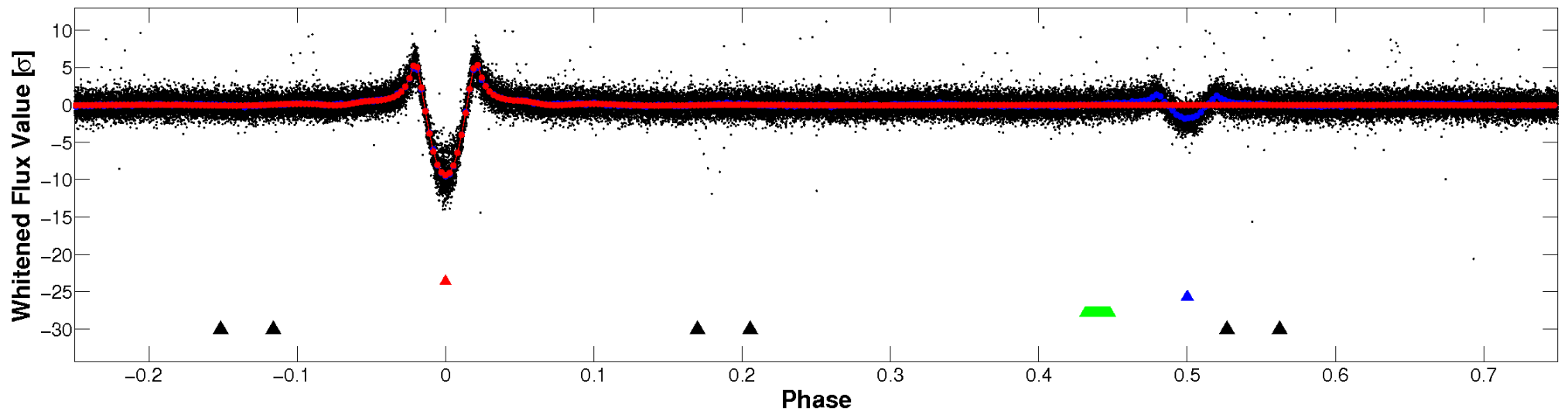


Non-Whitened Vs. Whitened Light Curve

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

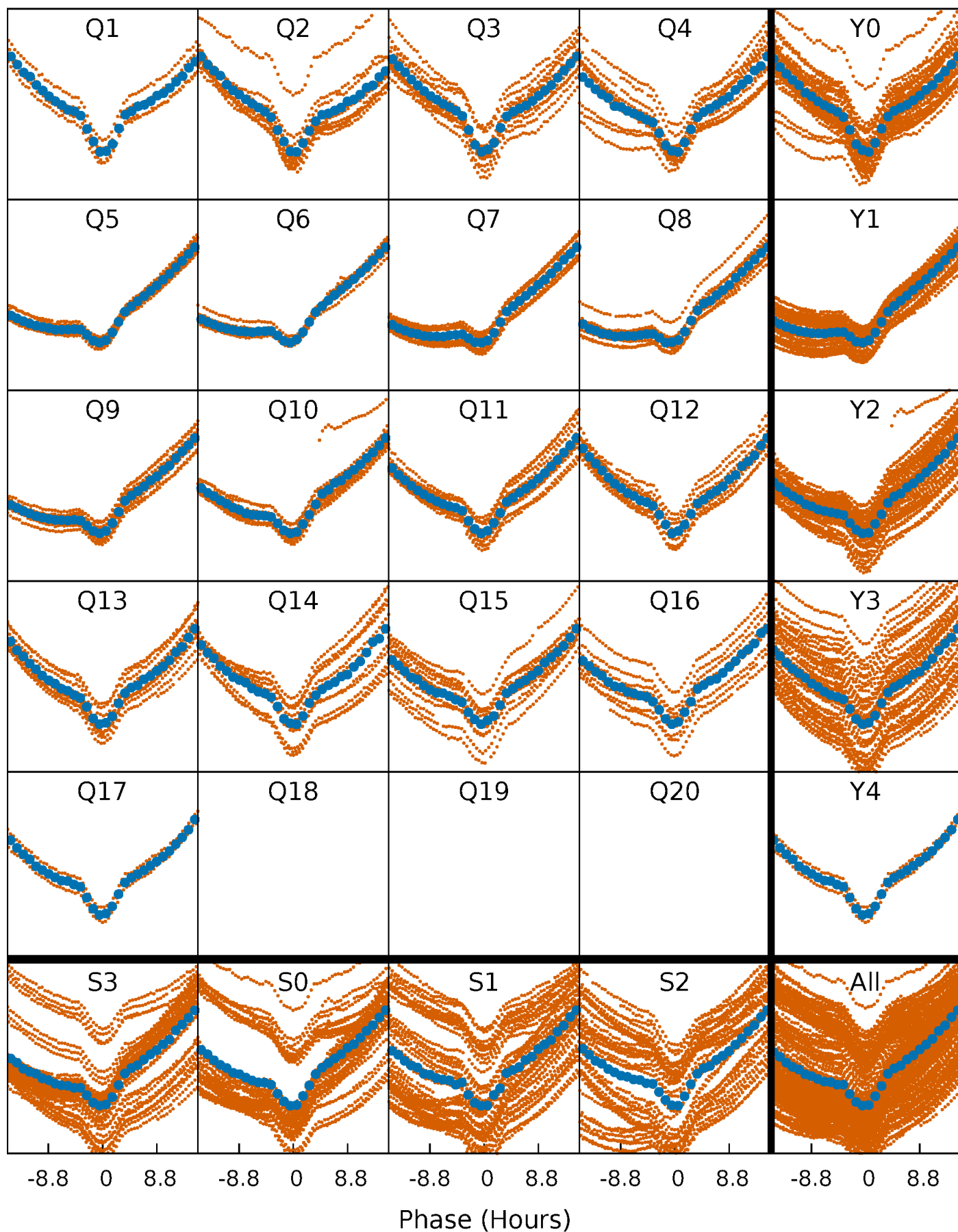


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



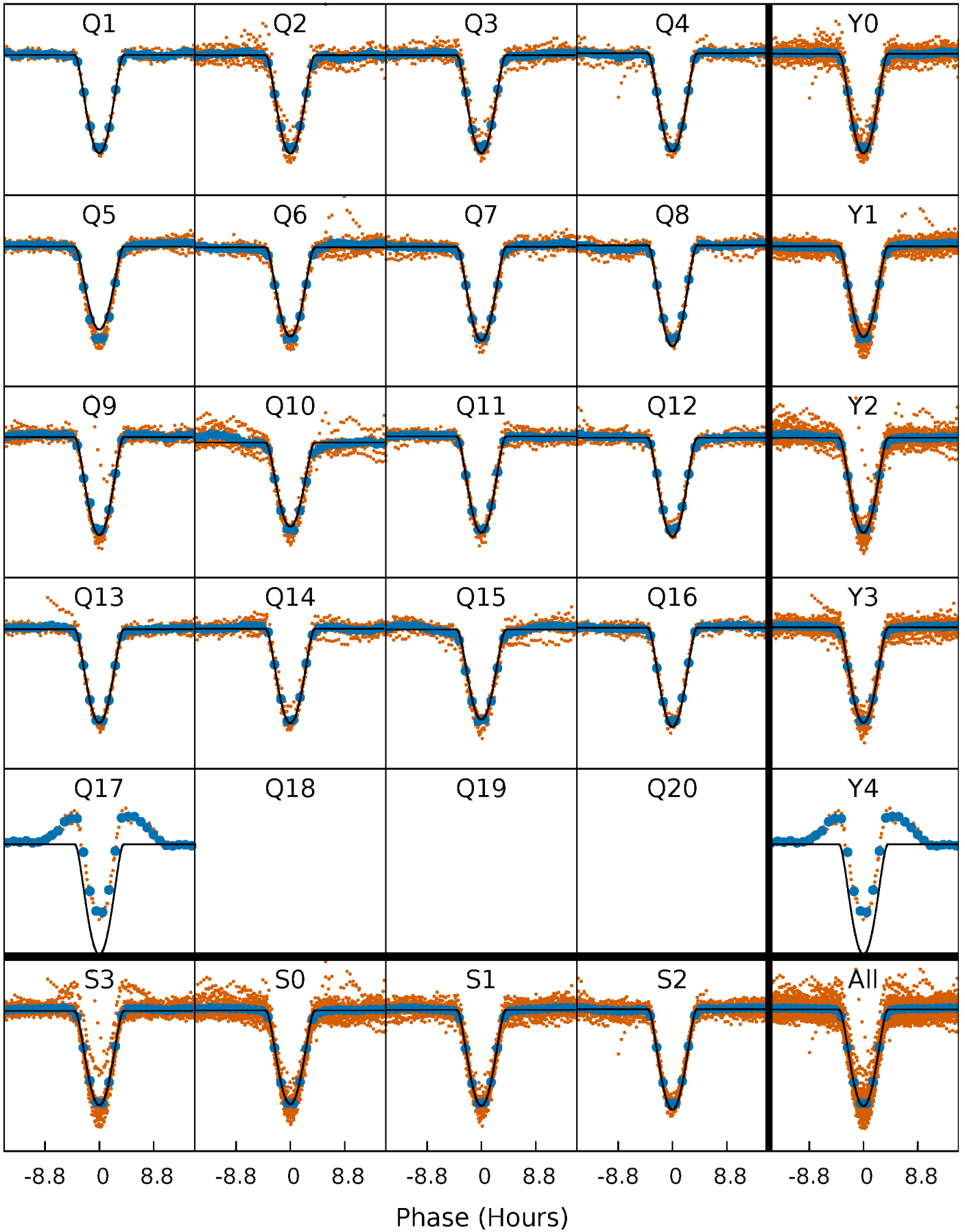
PDC Quarter-Phased Transit Curves

TCE 003347485-01 P= 7.544814 Days $T_0=137.118938$ (BKJD)



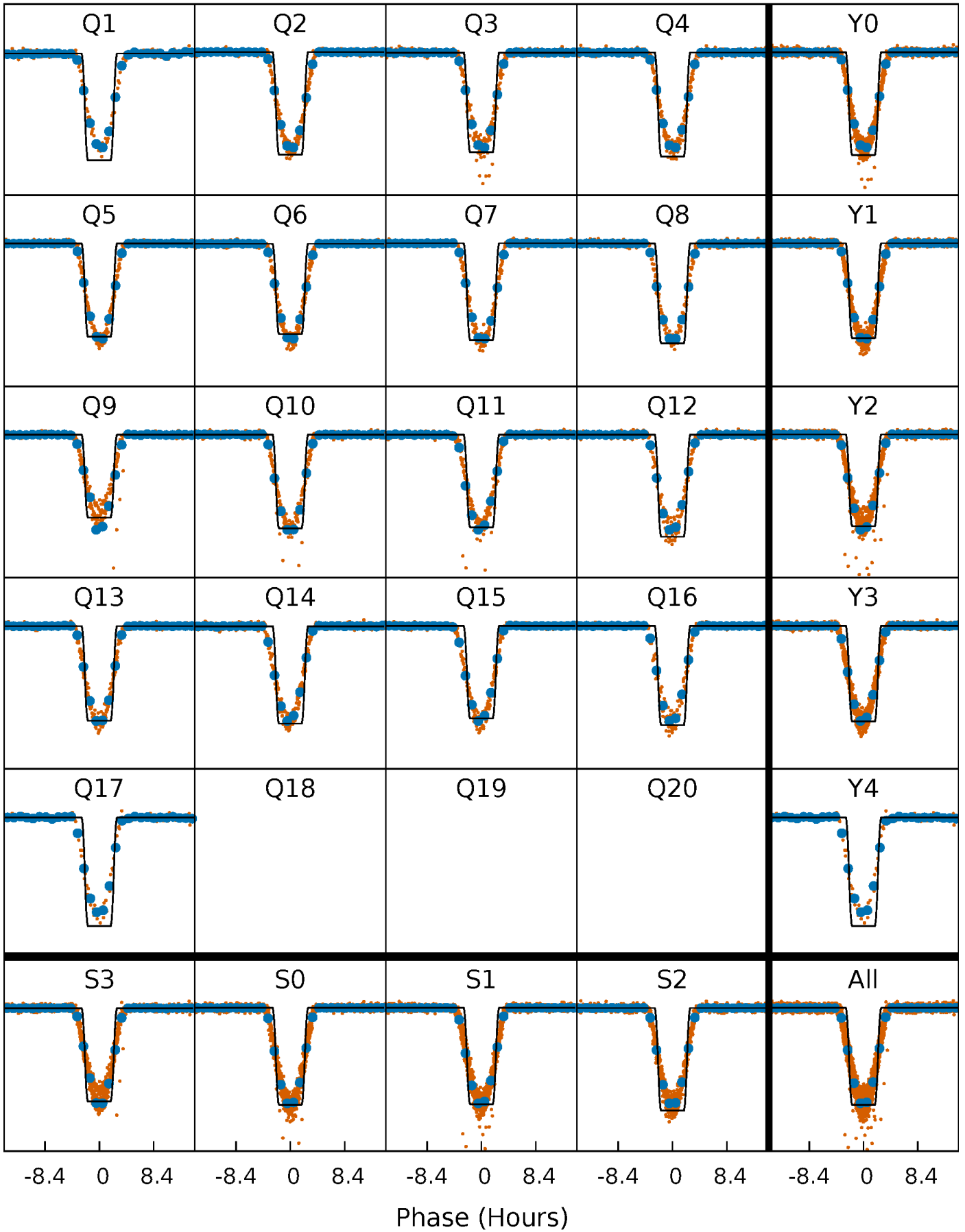
DV Quarter-Phased Transit Curves

TCE 003347485-01 P= 7.544814 Days $T_0=137.118938$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

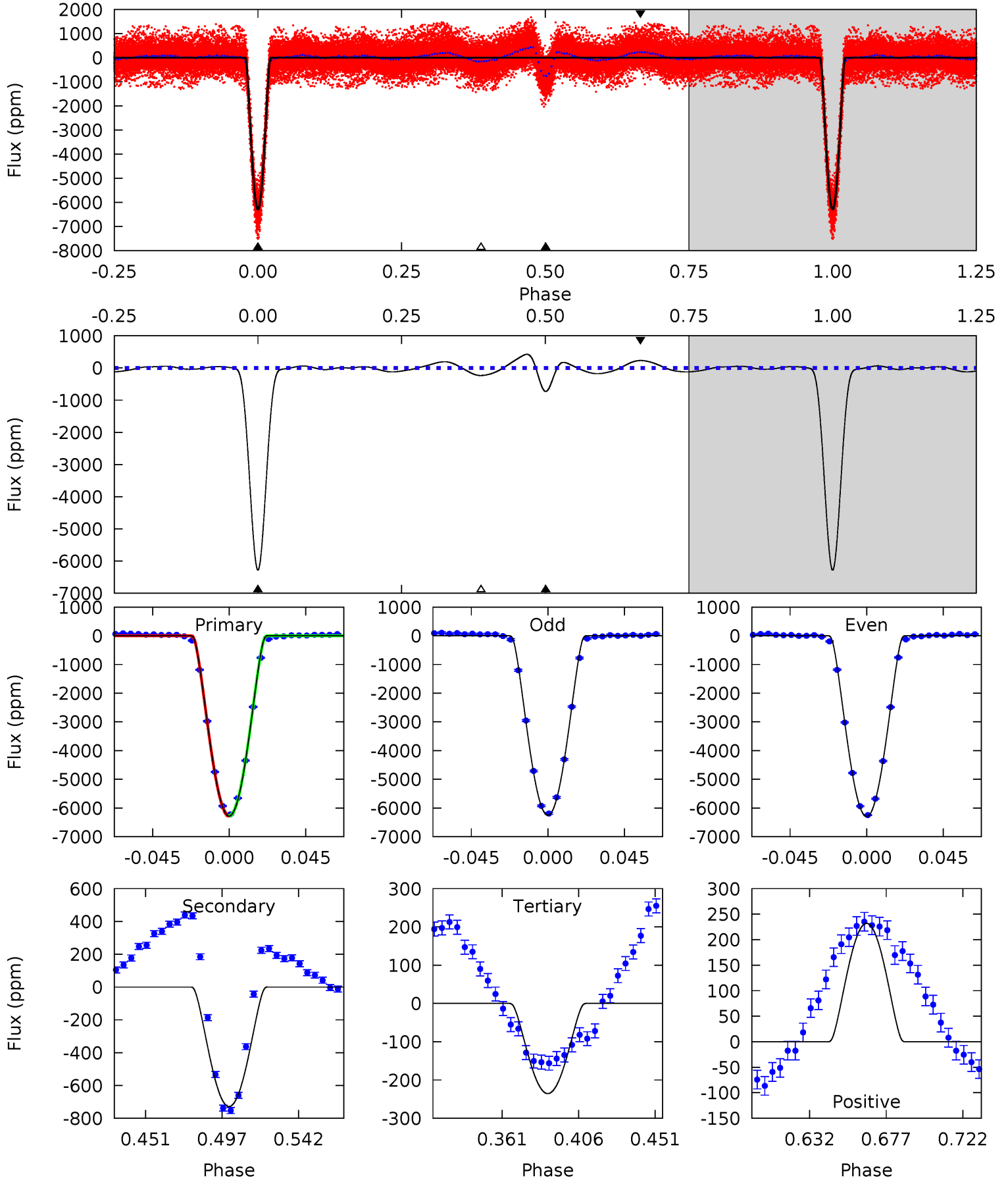
TCE 003347485-01 P= 7.544896 Days $T_0=137.111696$ (BKJD)



DV Model-Shift Uniqueness Test

003347485-01, P = 7.544814 Days, E = 129.574124 Days

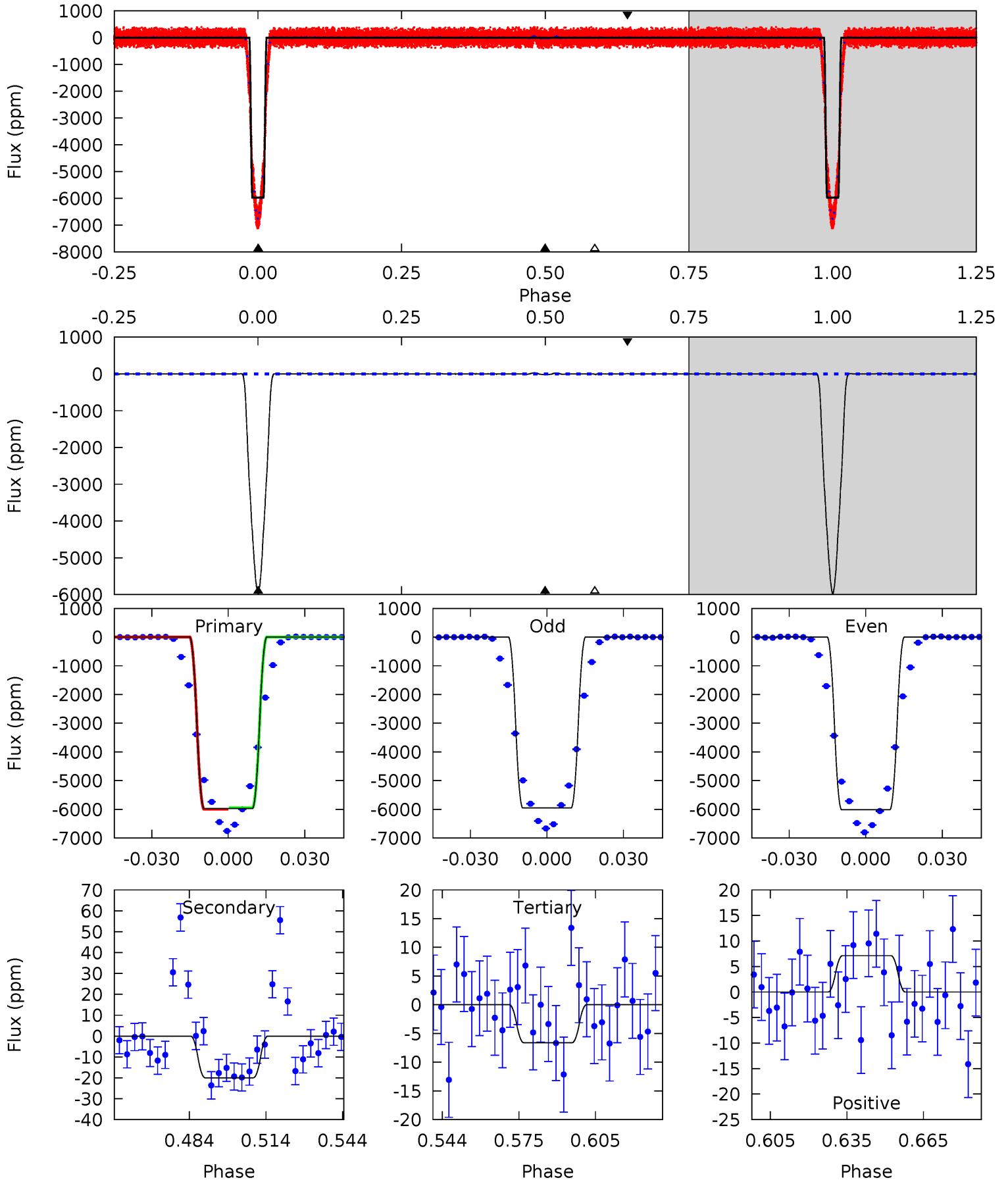
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
941.4	109.2	35.3	34.8	4.73	2.00	15.8	906.1	906.6	73.9	74.4	3.45	1.00	0.06	0.75



Alt Model-Shift Uniqueness Test

003347485-01, P = 7.544896 Days, E = 129.566800 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1820	6.08	2.01	2.17	4.81	2.17	0.78	1818	1818	4.07	3.91	8.43	1.01	0.00	0



Stellar Parameters For KIC 003347485

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5953^{+159}_{-159}	$3.984^{+0.495}_{-0.165}$	$-0.560^{+0.300}_{-0.250}$	$1.609^{+0.472}_{-0.708}$	$0.910^{+0.114}_{-0.103}$	$0.308^{+1.334}_{-0.142}$
	+3%/-3%	+12%/-4%	+54%/-45%	+29%/-44%	+13%/-11%	+434%/-46%
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 003347485-01 / KOI 5985.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-728 ± 7	$22.04^{+4.38}_{-5.39}$	1683^{+157}_{-206}	3245^{+74}_{-77}	$4.398^{+3.448}_{-1.269}$
Alt.	-20 ± 3	$13.76^{+2.79}_{-3.20}$	1687^{+152}_{-202}	1680^{+442}_{-3765}	$0.314^{+0.196}_{-0.106}$

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

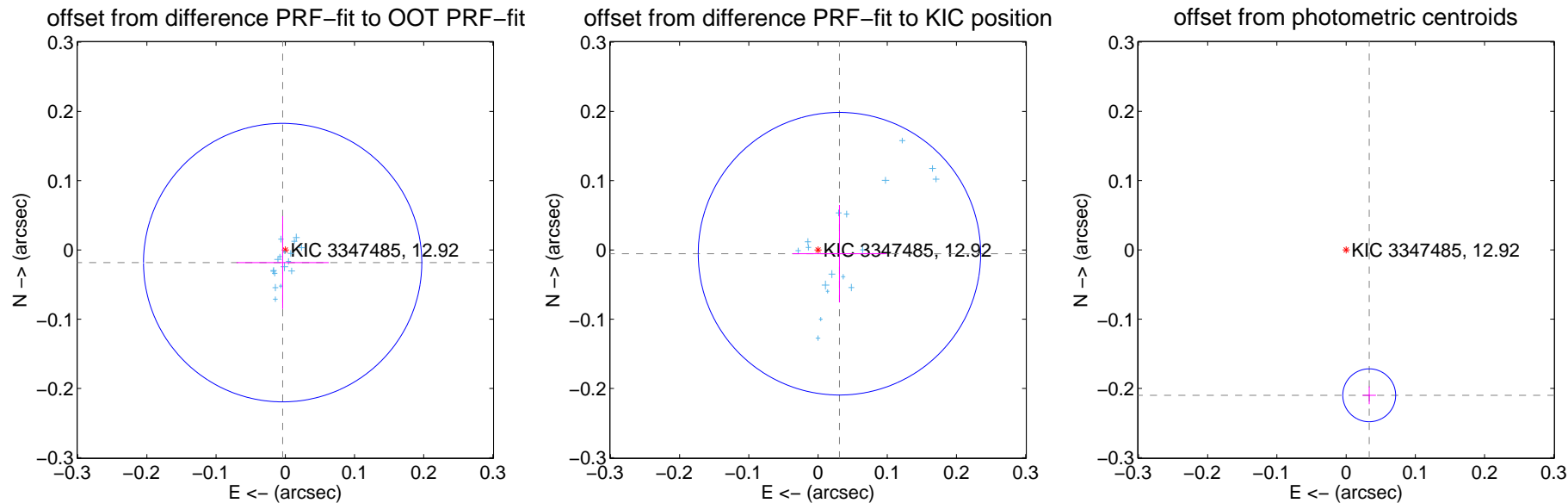
DV Centroid Data

Supplemental centroid analysis for 003347485-01. Kepler magnitude: 12.92. Transit SNR 328.34

There are 17 quarters with good PRF difference image offsets

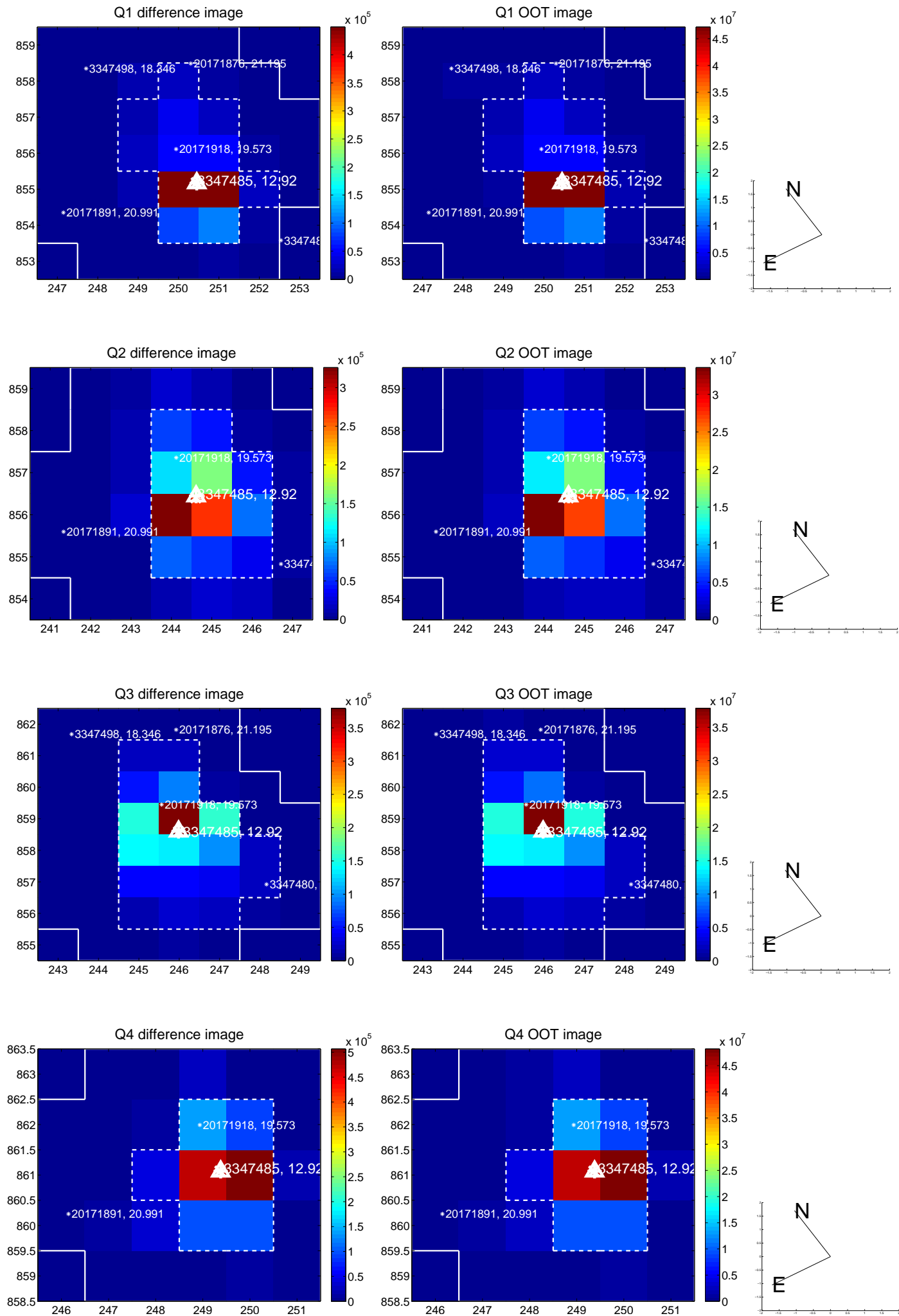
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.019 ± 0.067	0.28	0.004 ± 0.067	-0.018 ± 0.067
PRF-fit source offset from KIC position	0.031 ± 0.068	0.46	-0.031 ± 0.068	-0.005 ± 0.070
photometric centroid source offset	0.21 ± 0.01	16.70	-0.03 ± 0.01	-0.21 ± 0.01

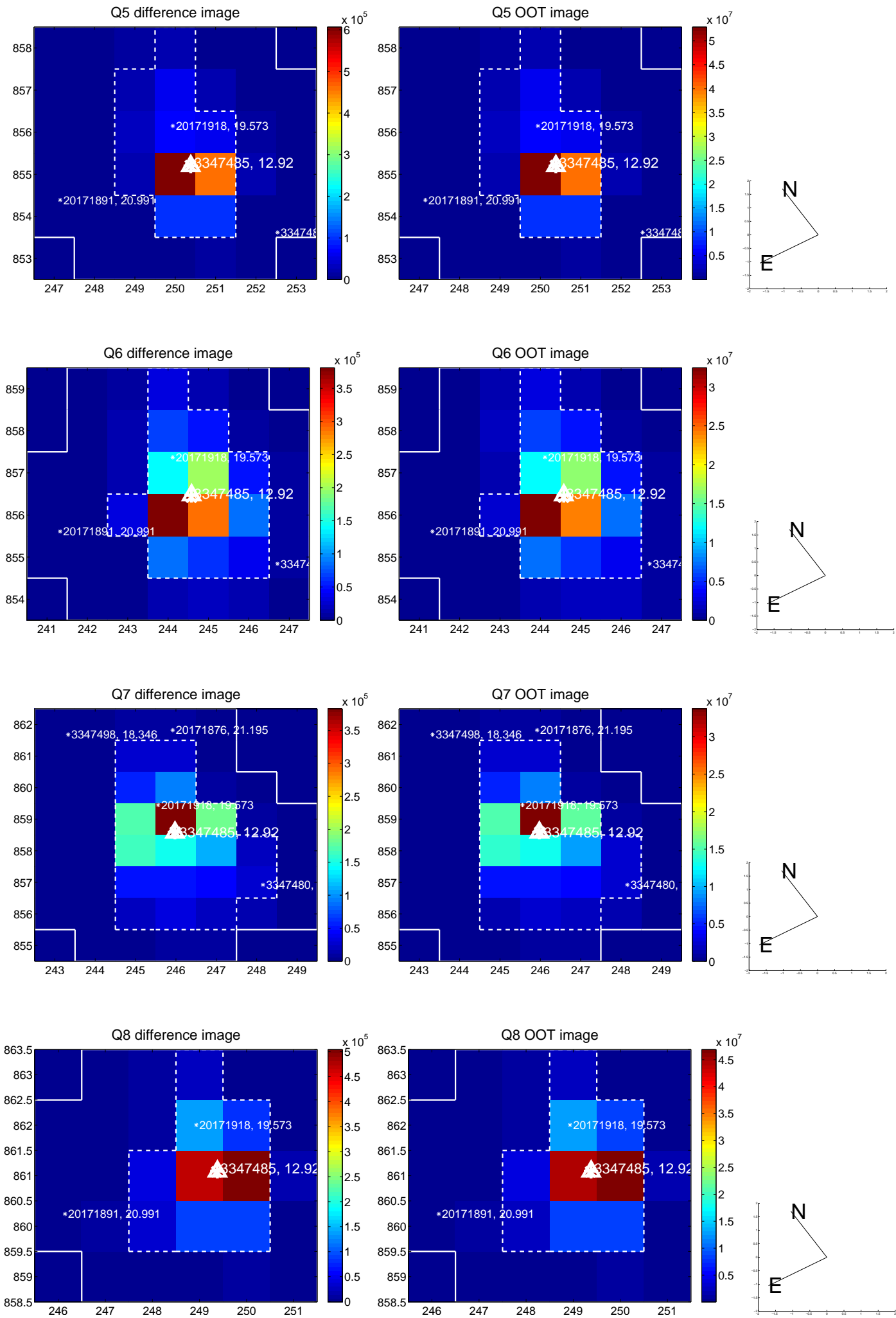


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

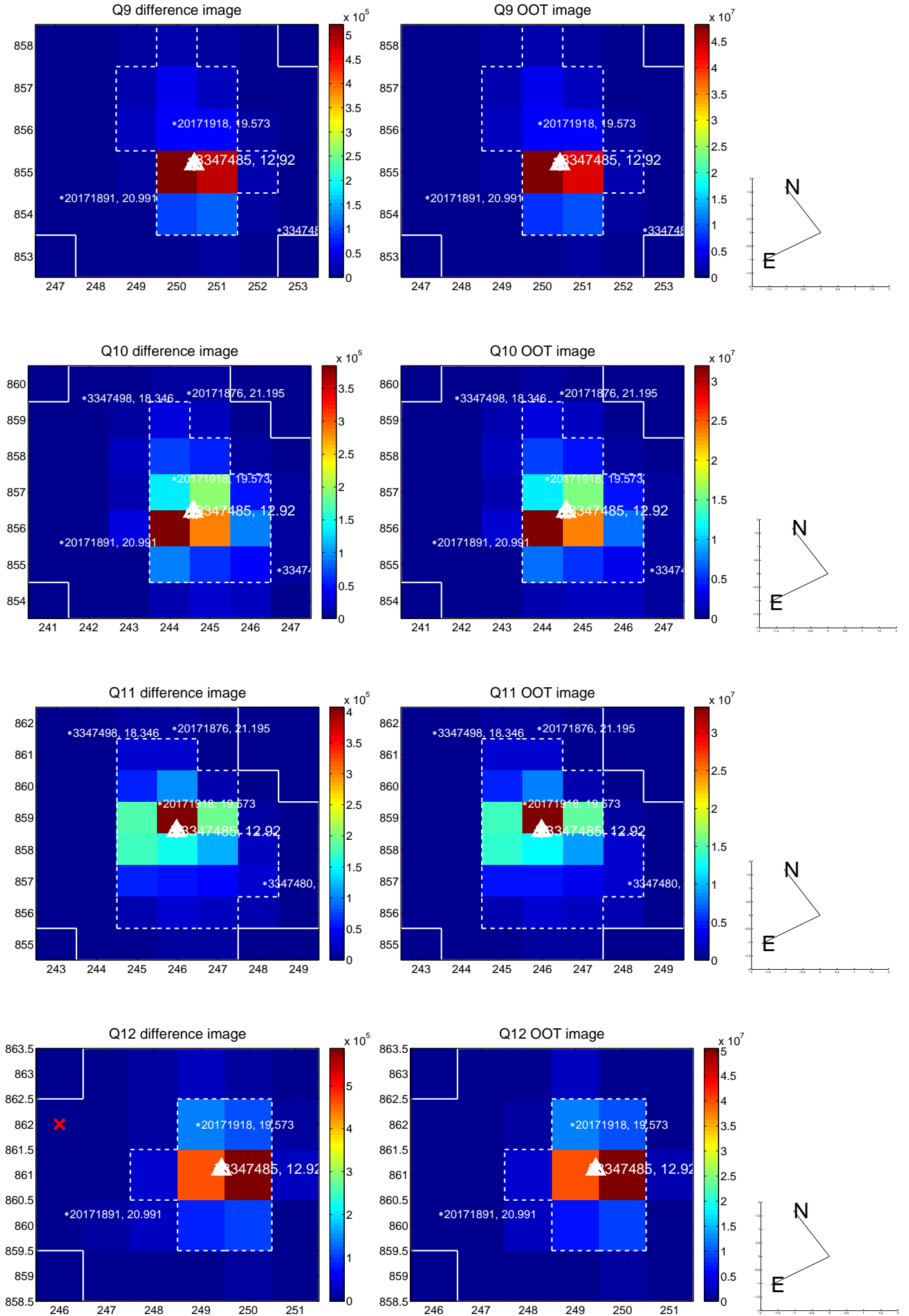
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



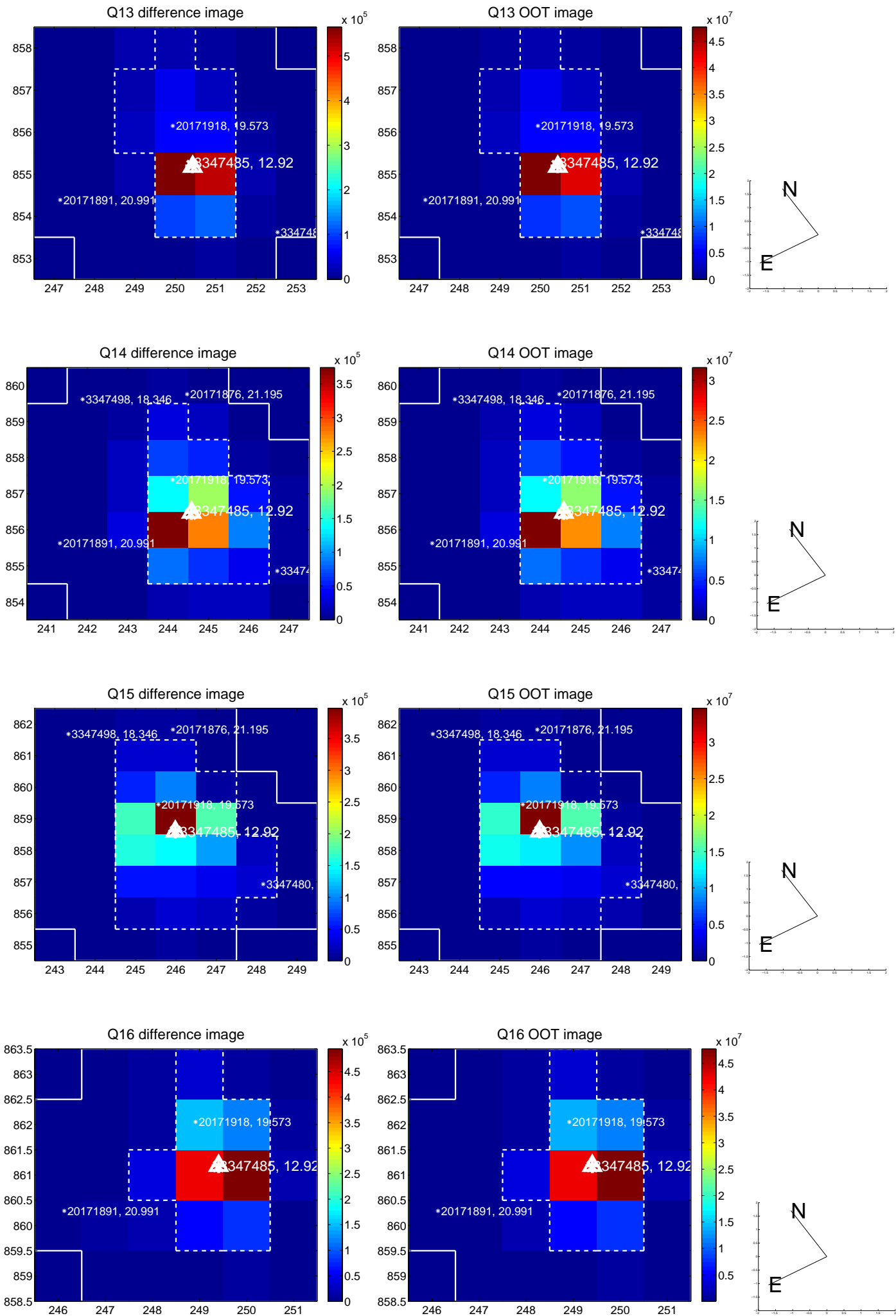
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



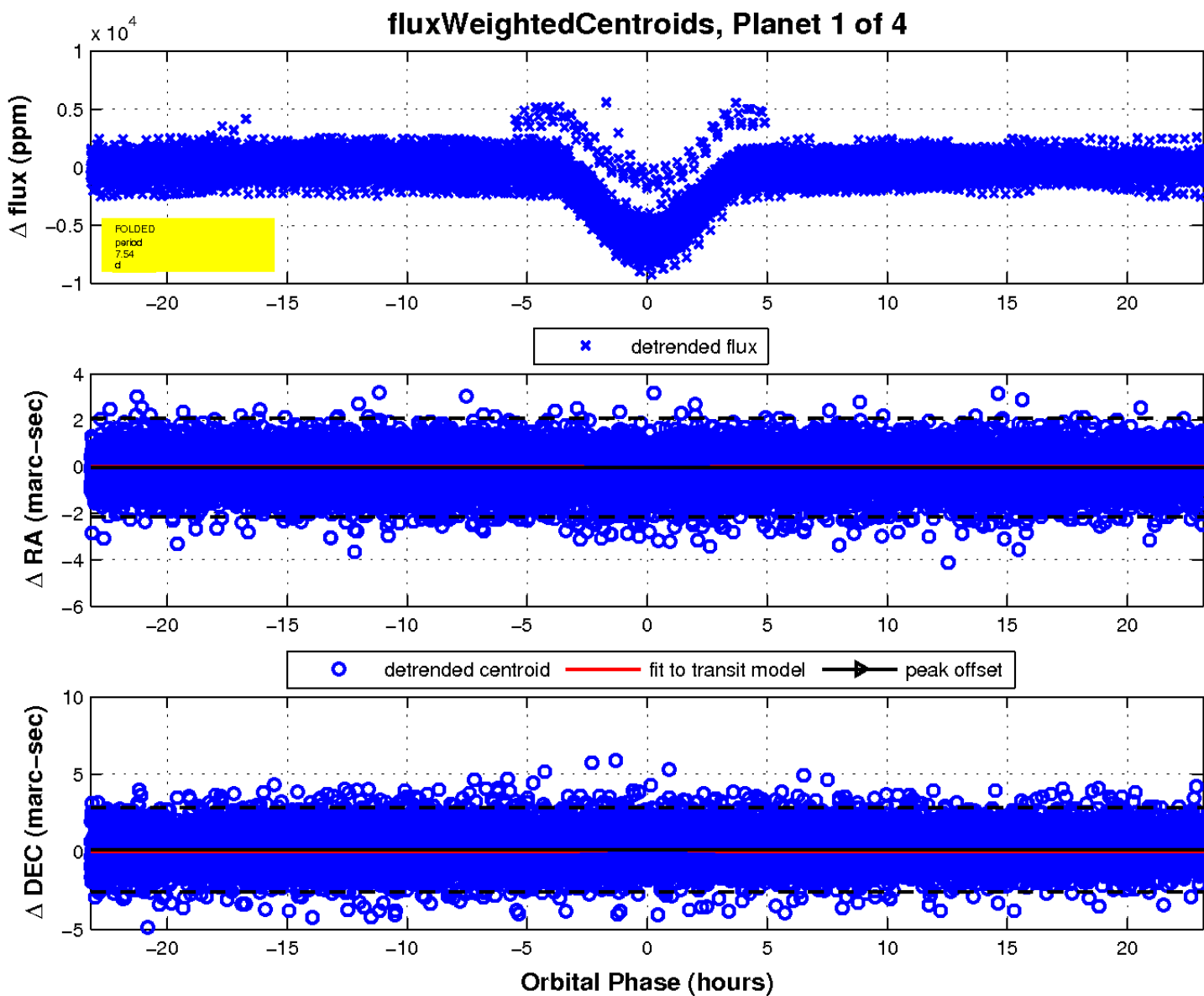
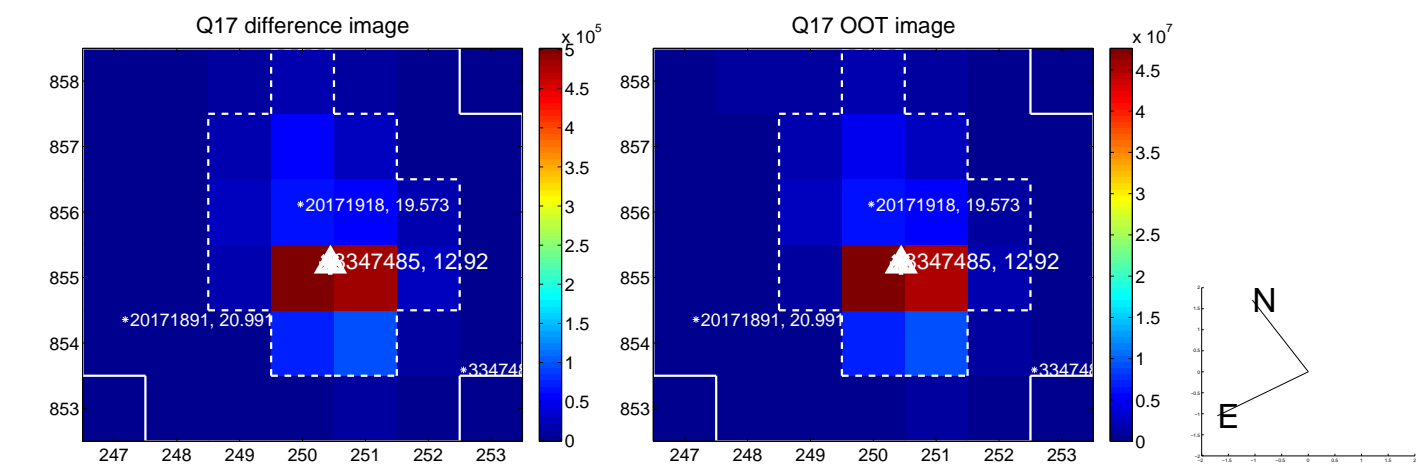
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

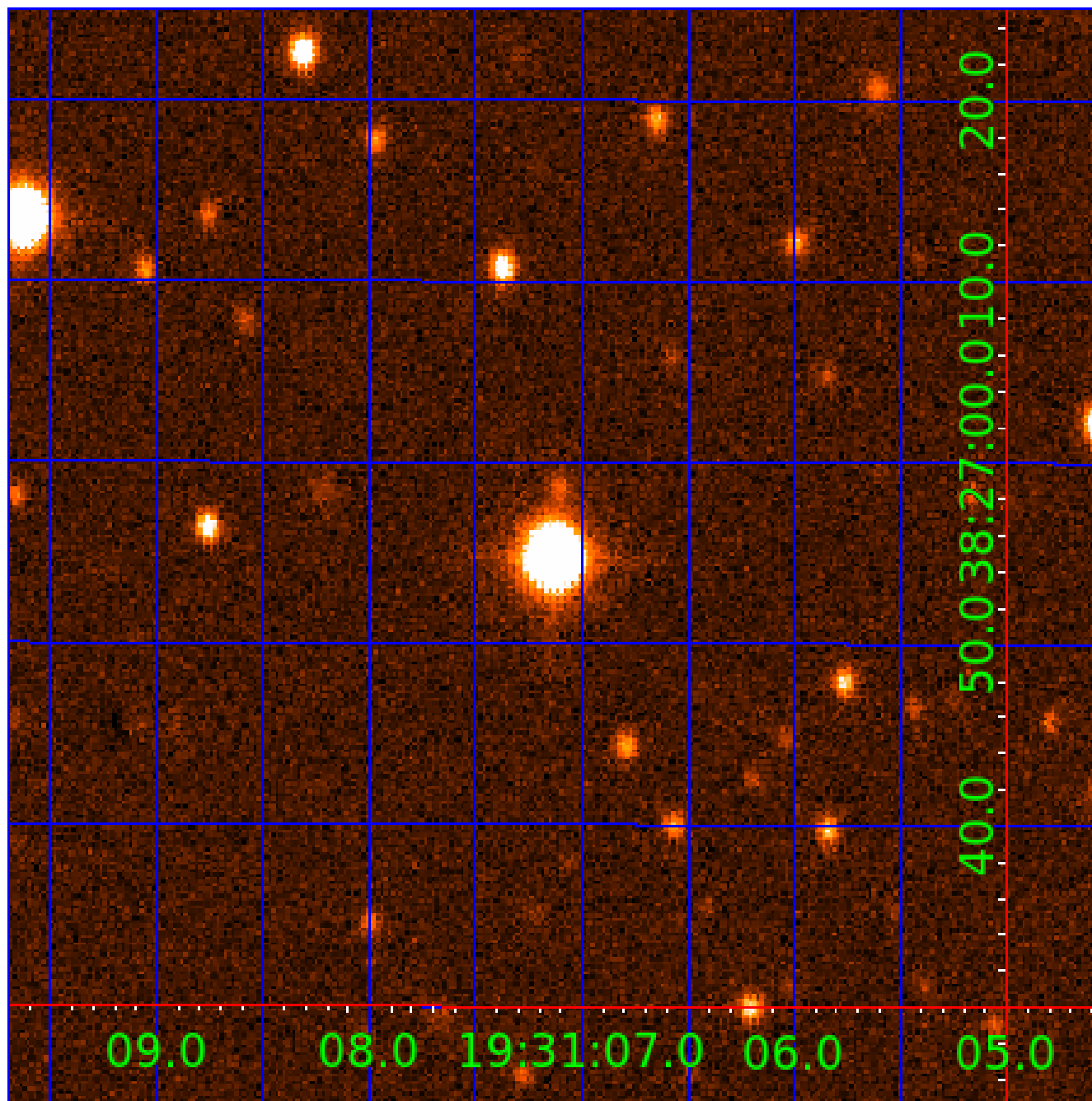


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003347485

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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003347485-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003347485-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
003347485-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

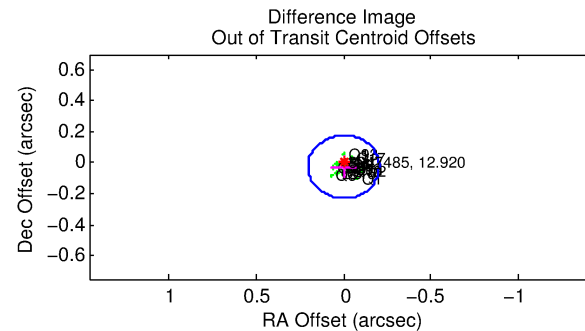
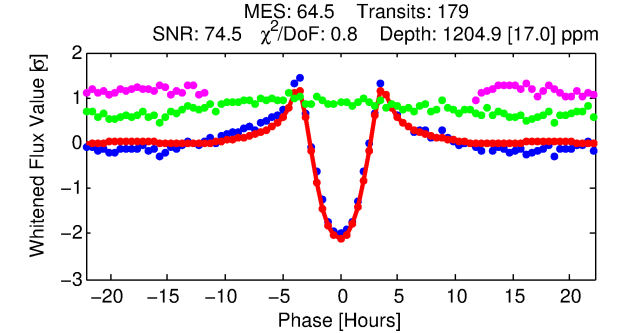
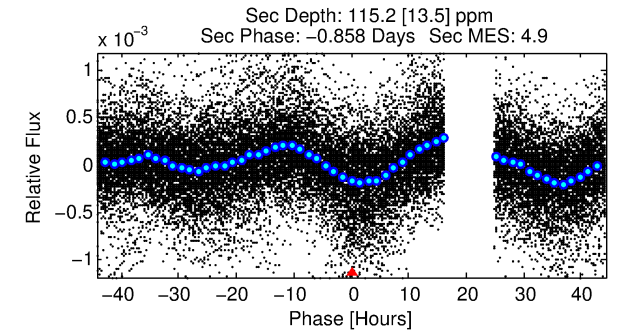
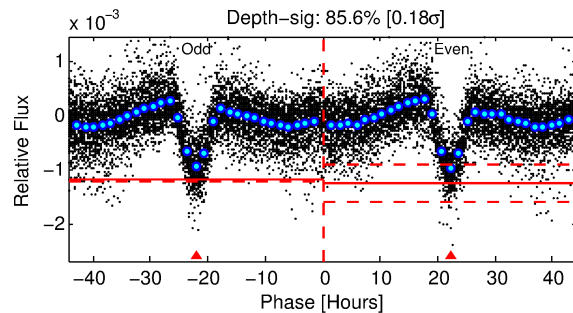
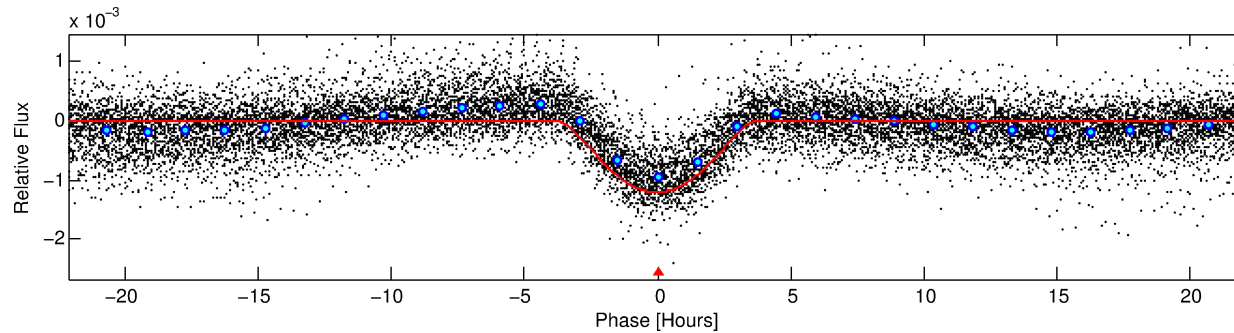
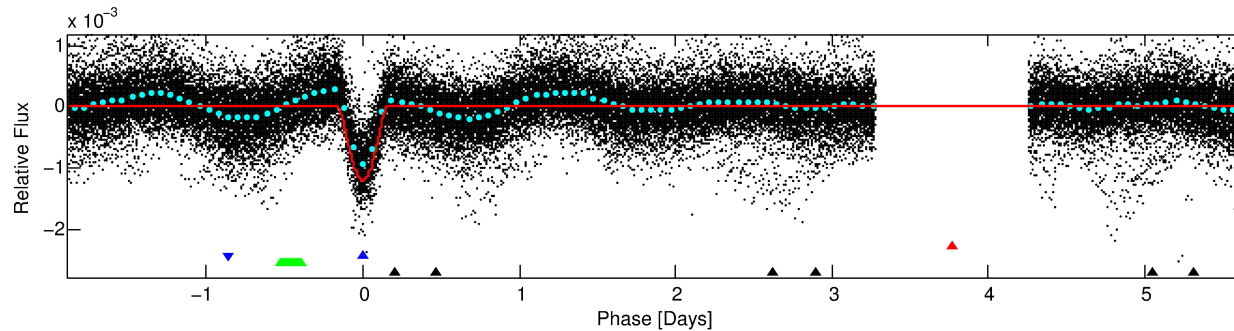
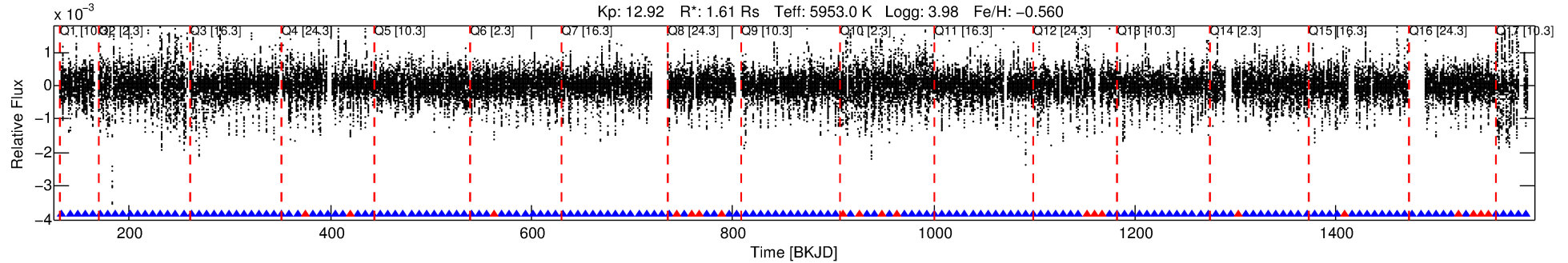
Ephemeris Match Information For 003347485-02

No Significant Match Found

DV One-Page Summary

KIC: 3347485 Candidate: 2 of 4 Period: 7.545 d
KOI: K05985 Corr: No Ephemeris Match

Kp: 12.92 R*: 1.61 Rs Teff: 5953.0 K Logg: 3.98 Fe/H: -0.560



DV Fit Results:

Period = 7.54478 [0.00001] d
Epoch = 133.3511 [0.0015] BKJD
Rp/R* = 0.0582 [0.0102]
a/R* = 2.95 [0.11]
b = 1.00 [0.02]
Seff = 547.03 [449.38]
Teq = 1233 [253] K
Rp = 10.22 [4.84] Re
a = 0.0730 [0.0350] AU
Ag = 3.23 [2.89] [0.77σ]
Teffp = 2557 [247] K [3.74σ]

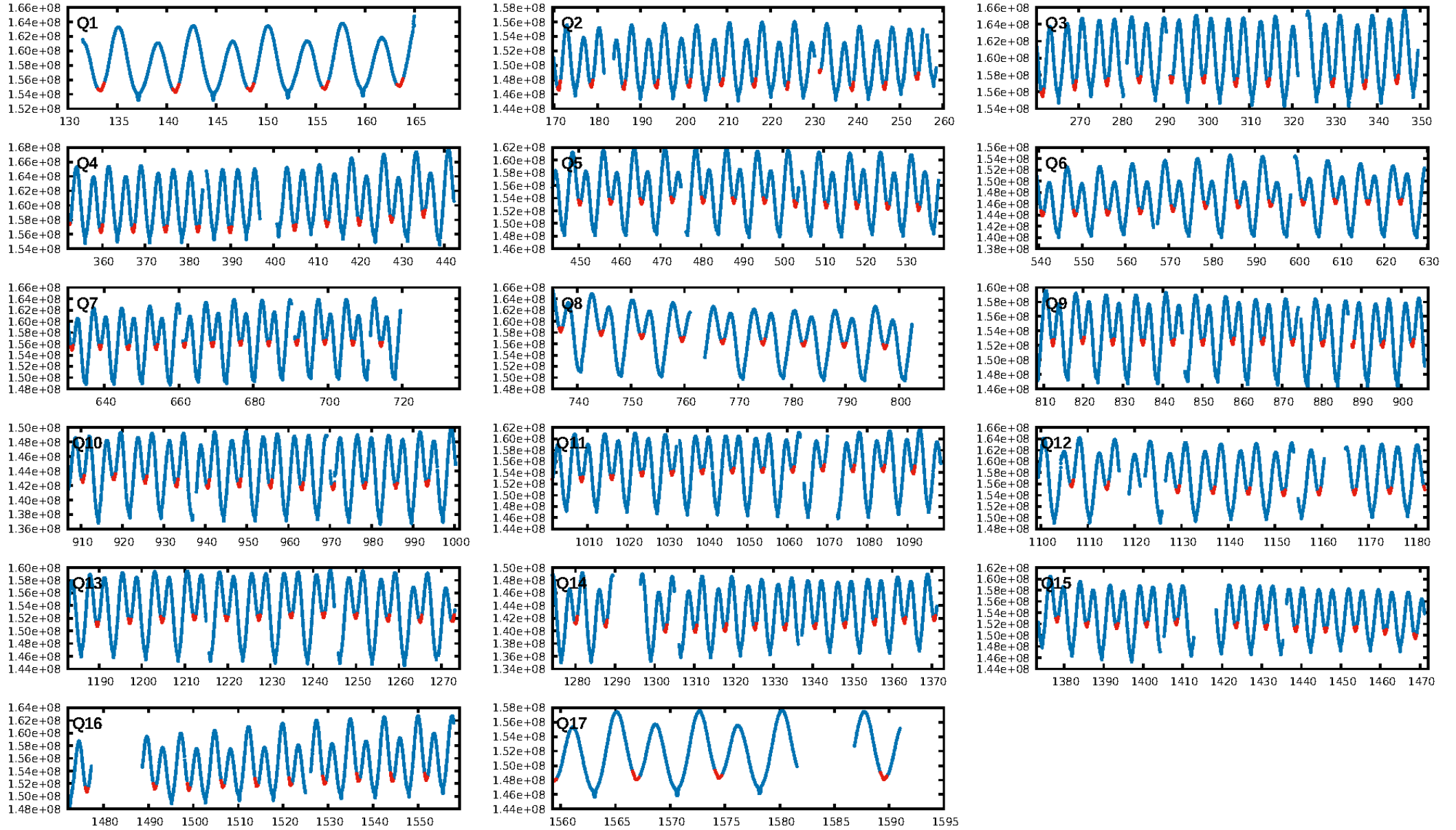
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 23.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.88 [150/170]
GhostDiagnostic-chr: 1.445
Centroid-sig: 1.4%
Centroid-so: 0.289 arcsec [4.53σ]
OotOffset-rm: 0.026 arcsec [0.39σ]
KicOffset-rm: 0.040 arcsec [0.58σ]
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]

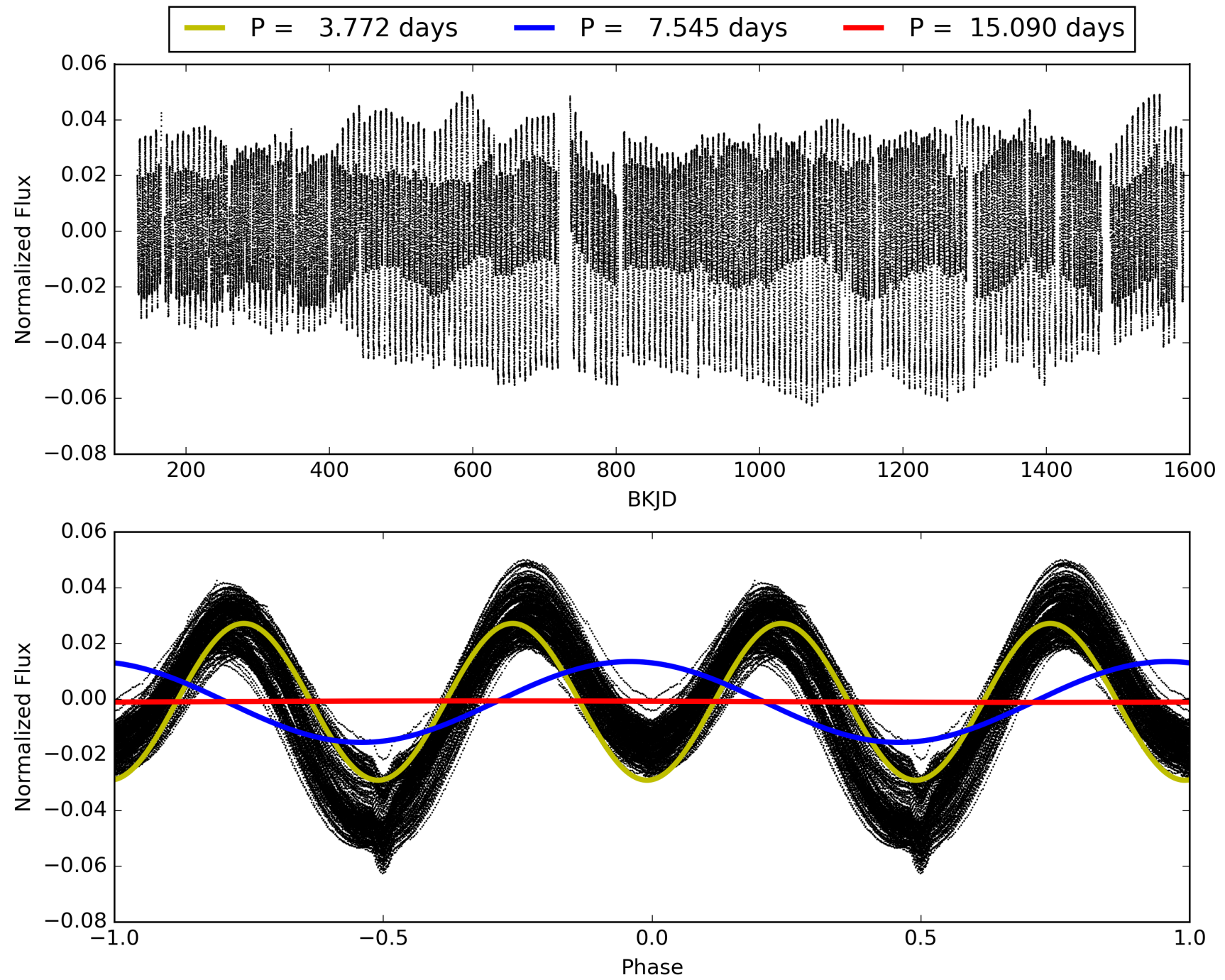
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003347485-02, PDC Light Curves

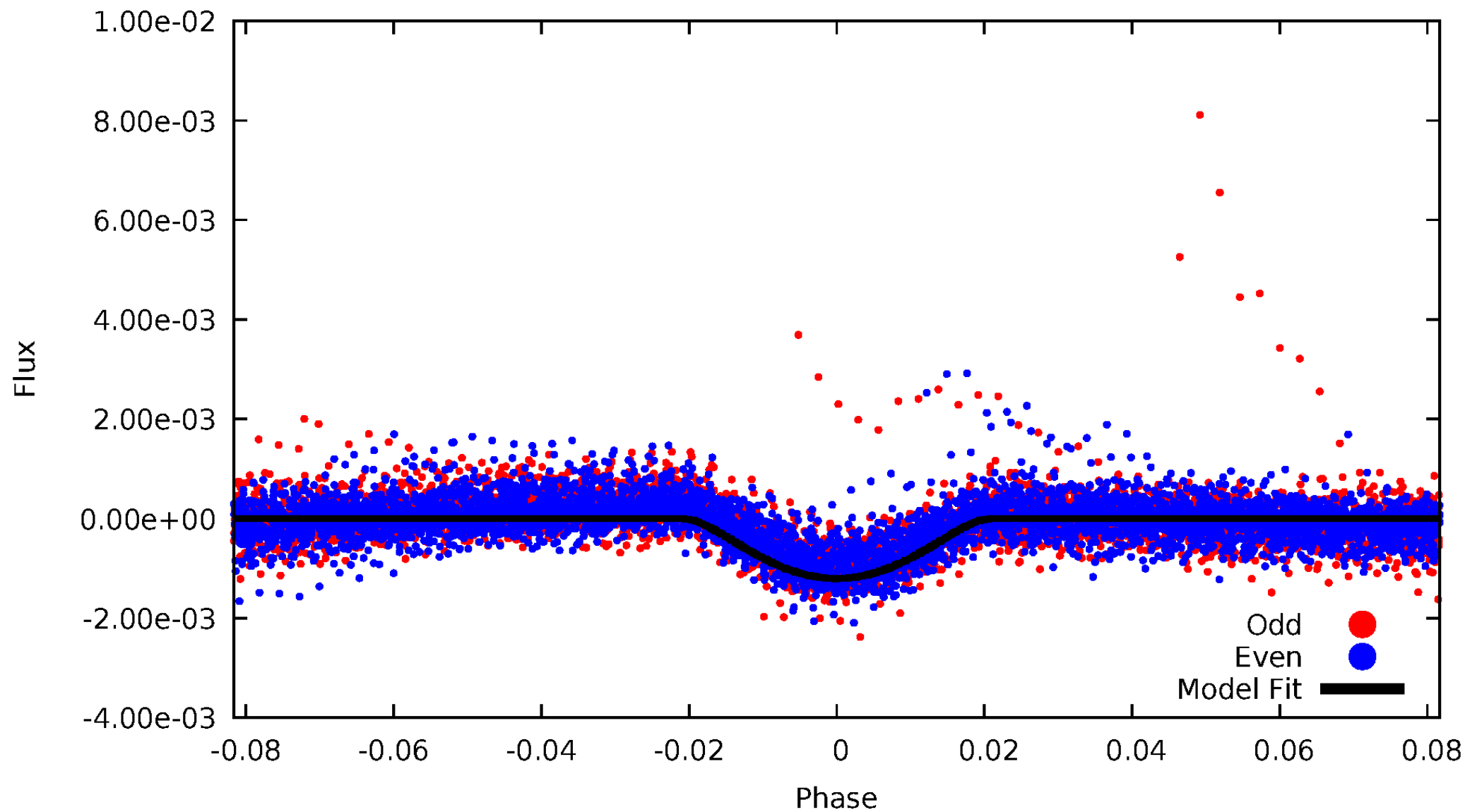


TCE 003347485-02



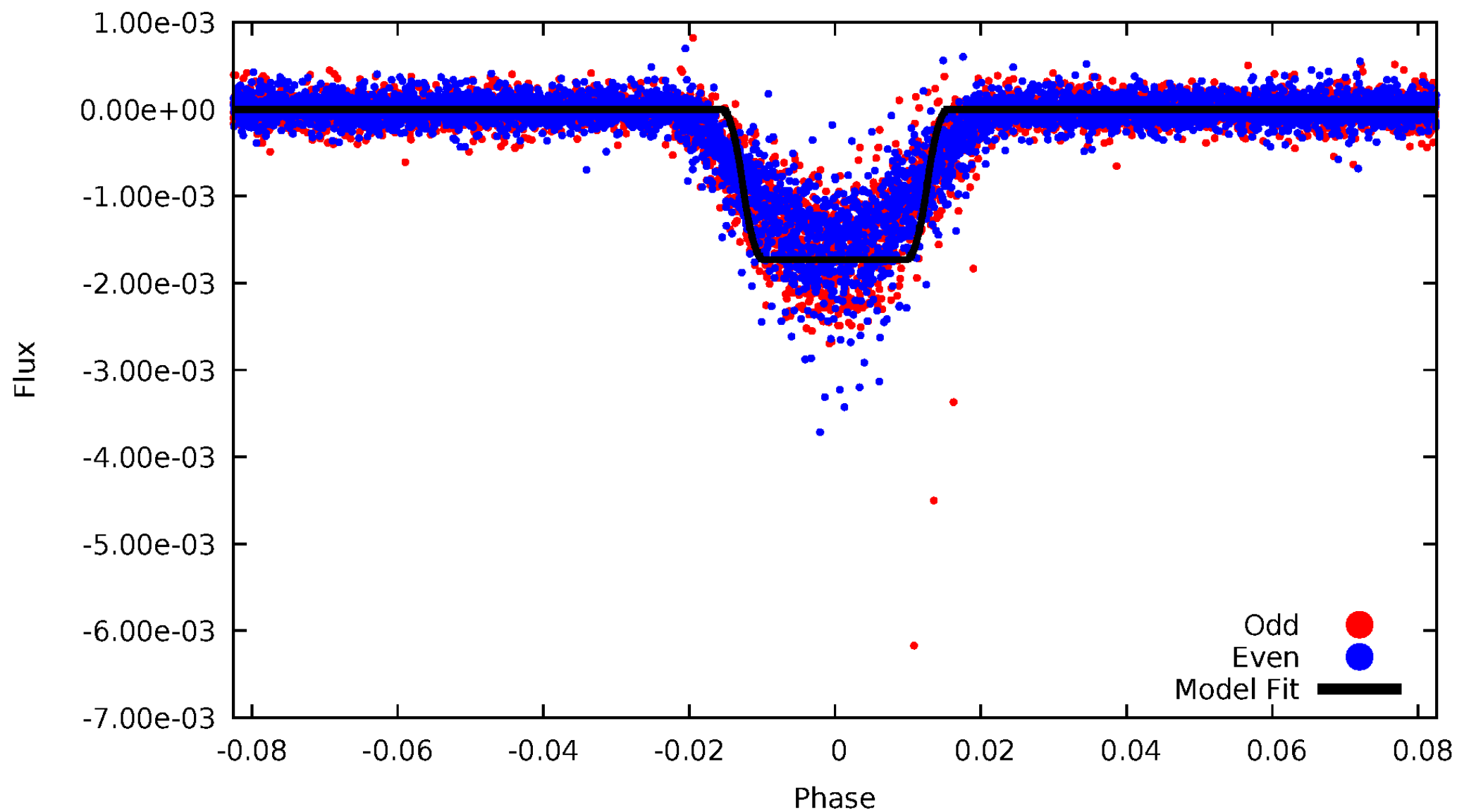
DV Odd/Even

TCE 003347485-02



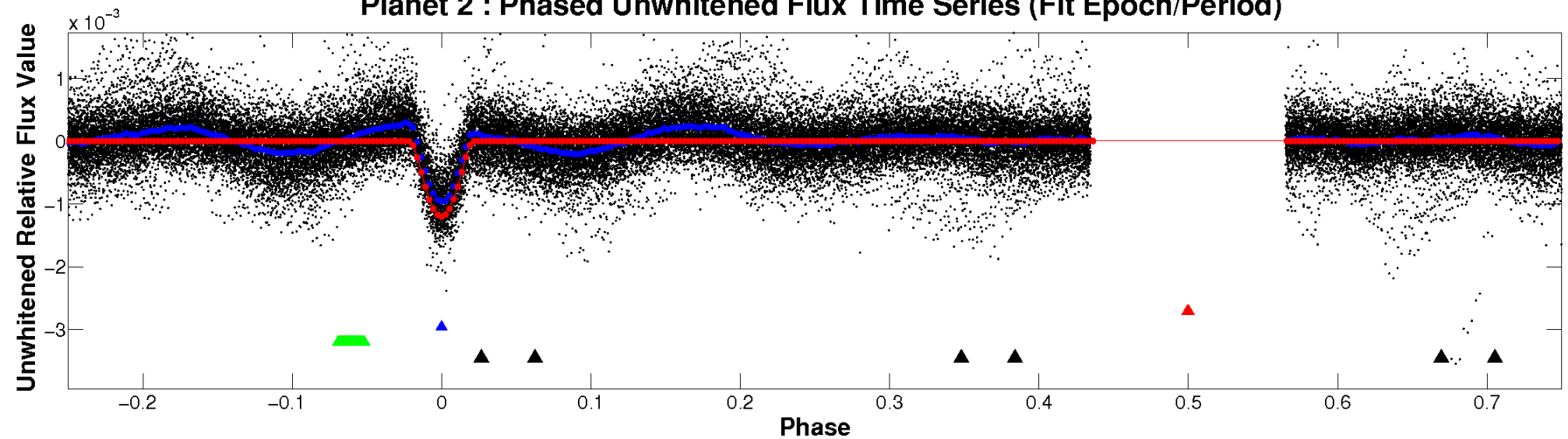
ALT Odd/Even

TCE 003347485-02

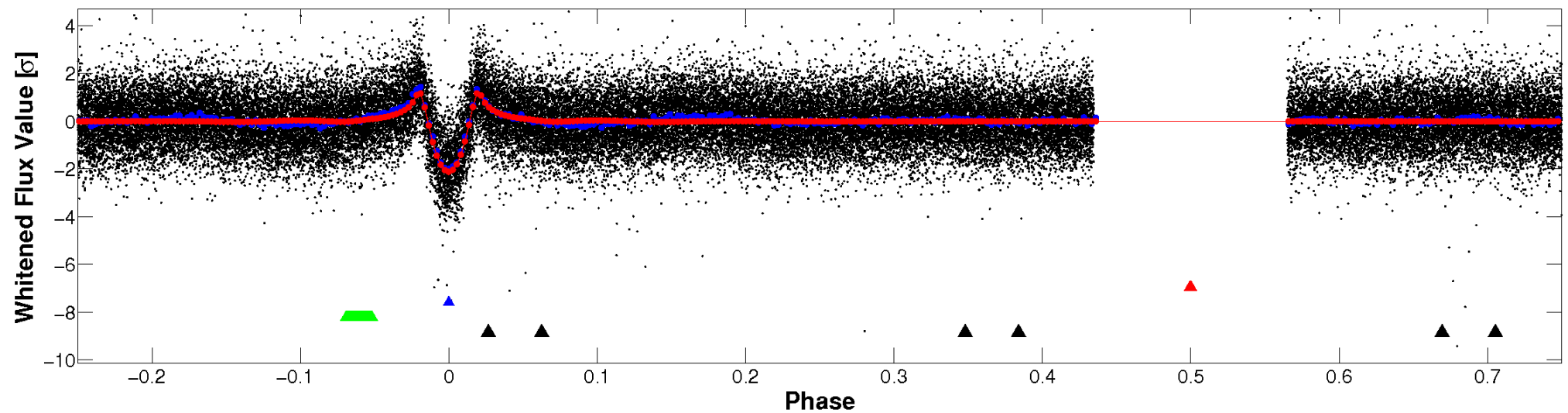


Non-Whitened Vs. Whitened Light Curve

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

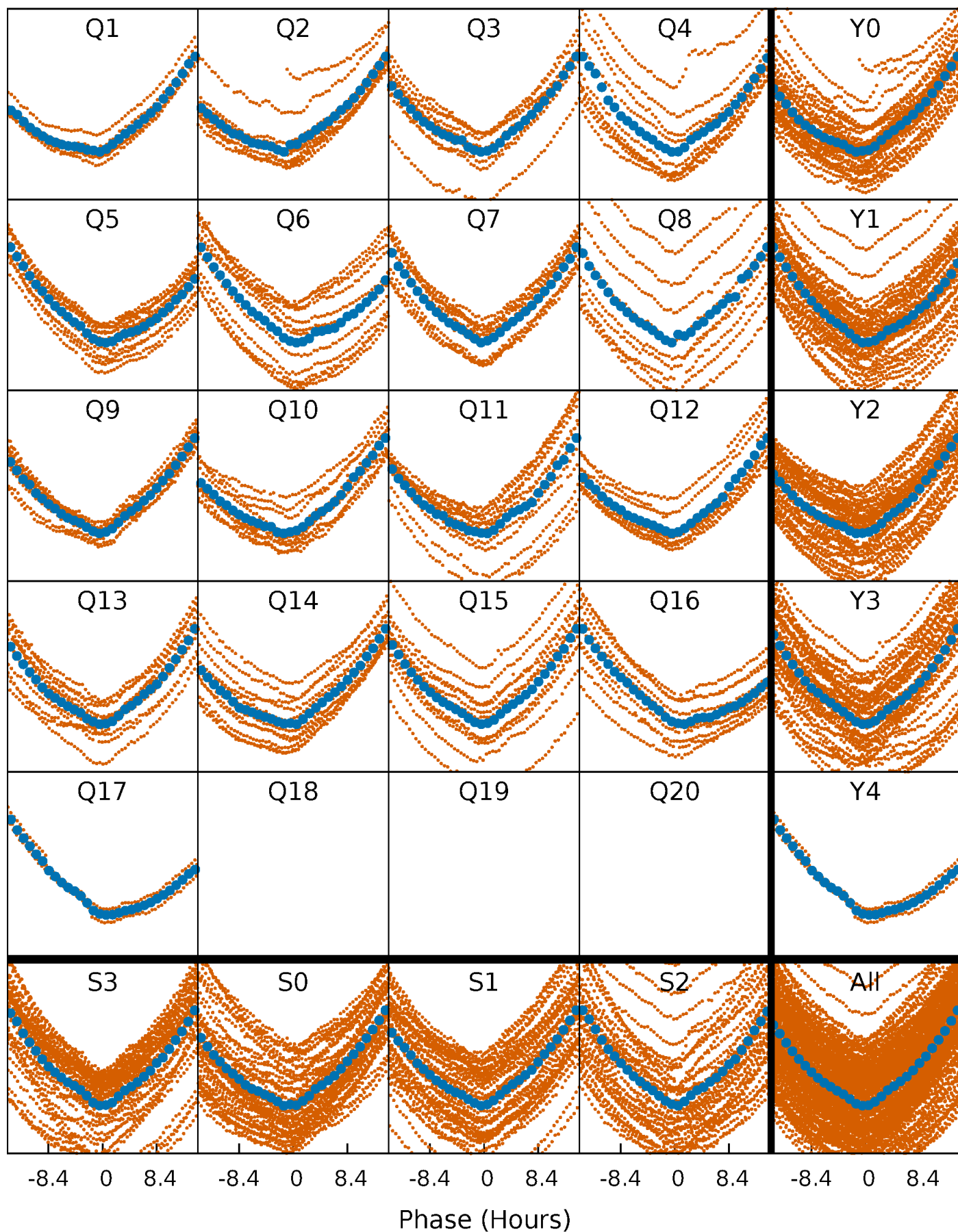


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



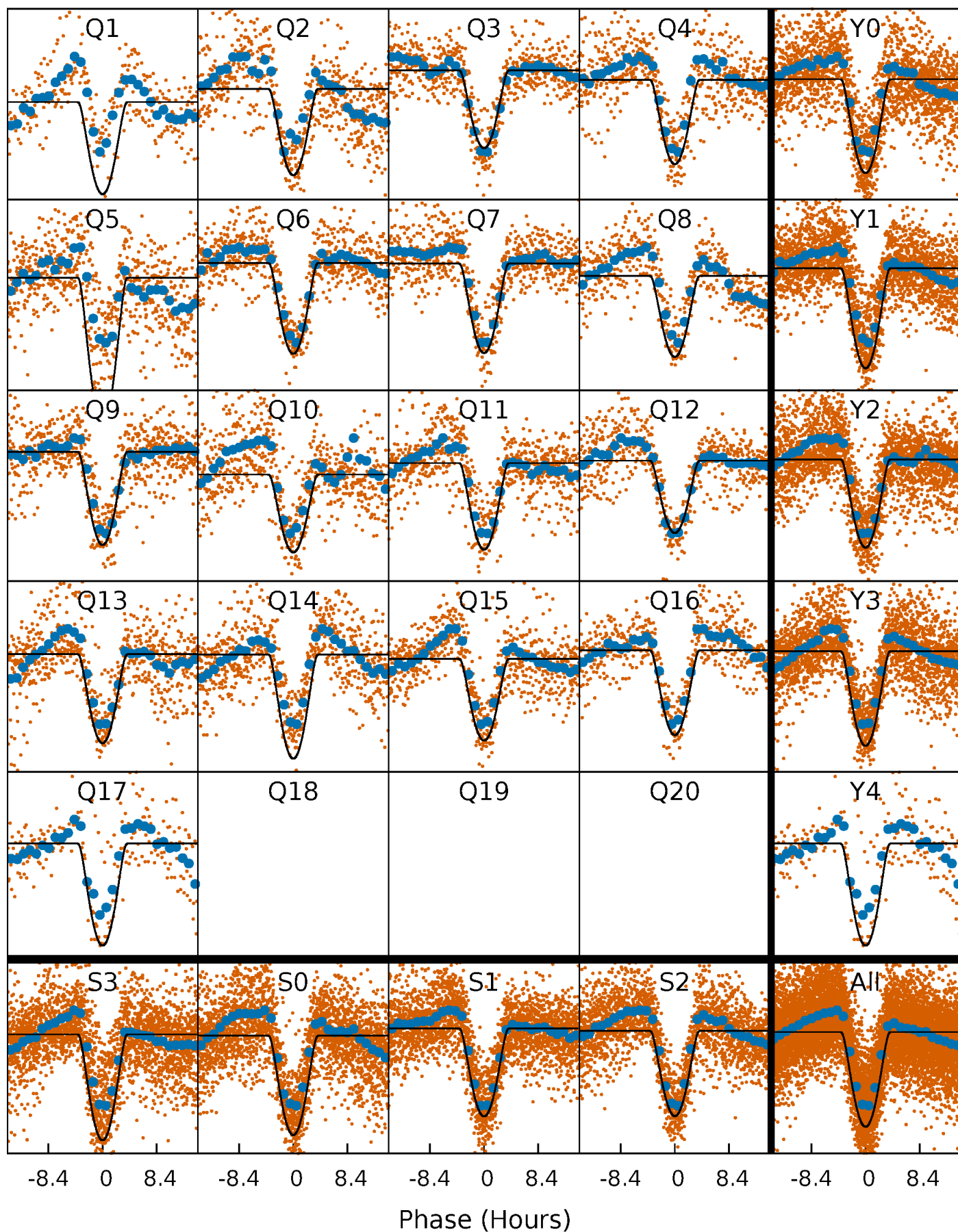
PDC Quarter-Phased Transit Curves

TCE 003347485-02 P= 7.544778 Days $T_0=133.351141$ (BKJD)



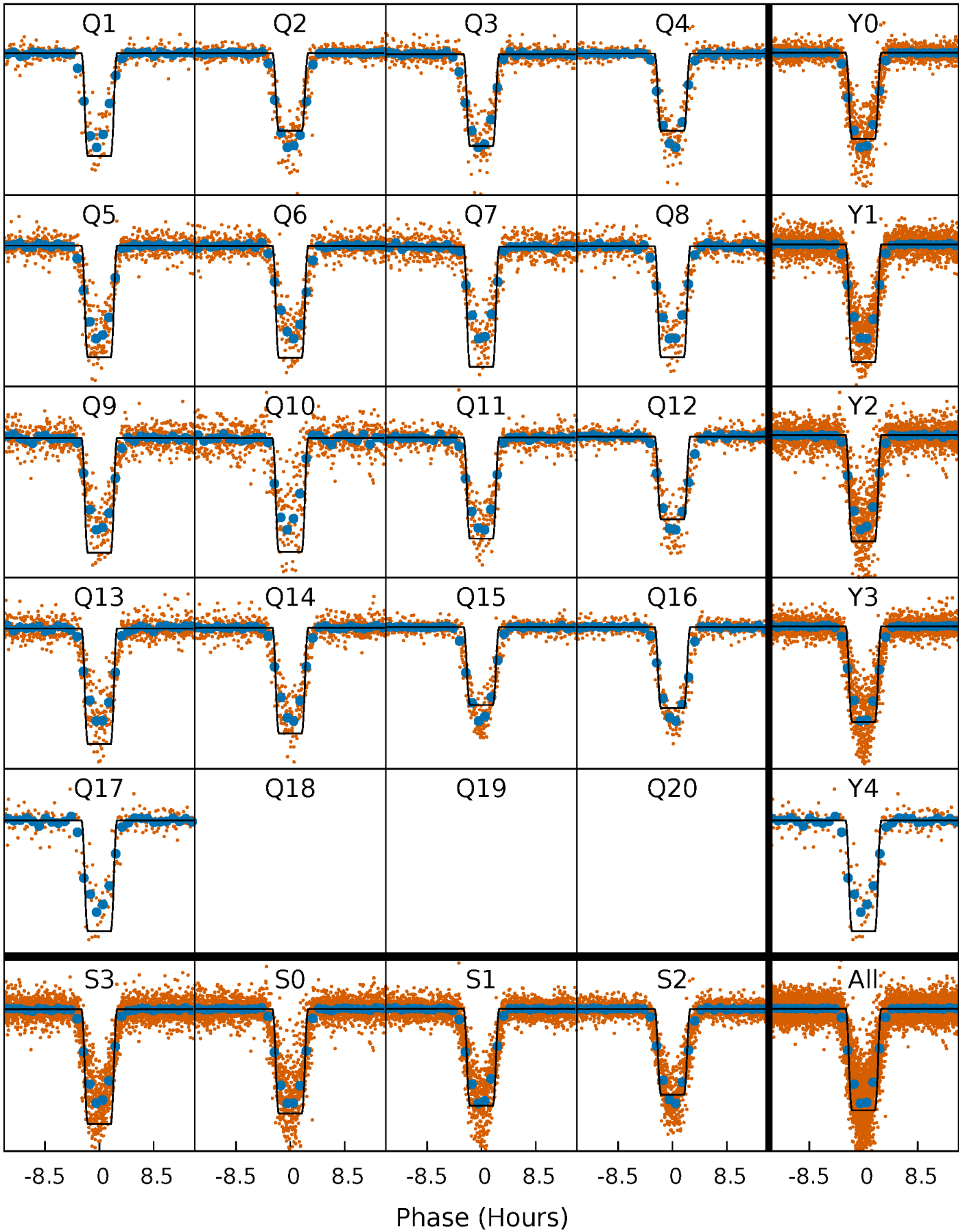
DV Quarter-Phased Transit Curves

TCE 003347485-02 P= 7.544778 Days $T_0=133.351141$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

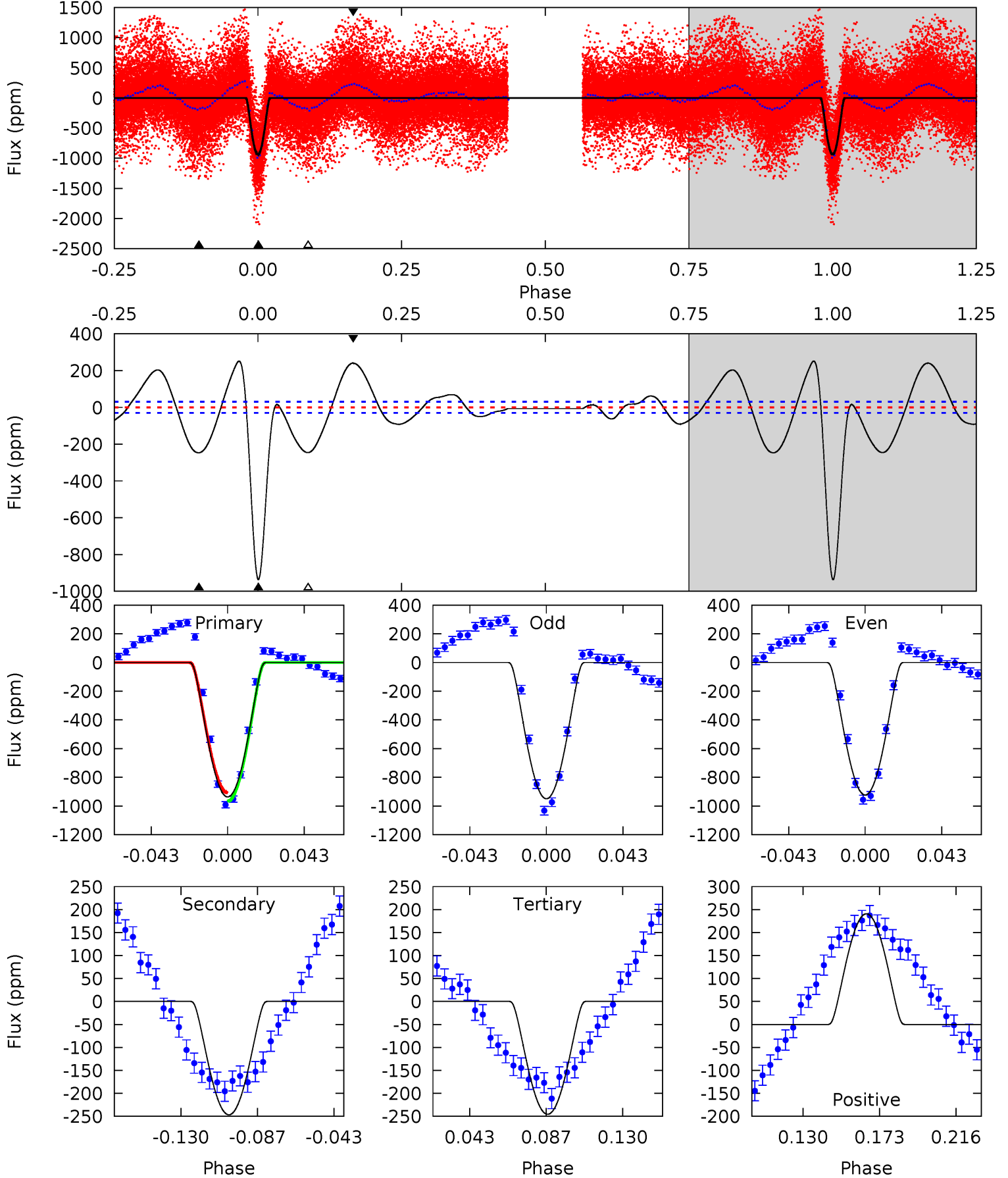
TCE 003347485-02 P= 7.544742 Days $T_0=133.353141$ (BKJD)



DV Model-Shift Uniqueness Test

003347485-02, P = 7.544778 Days, E = 125.806363 Days

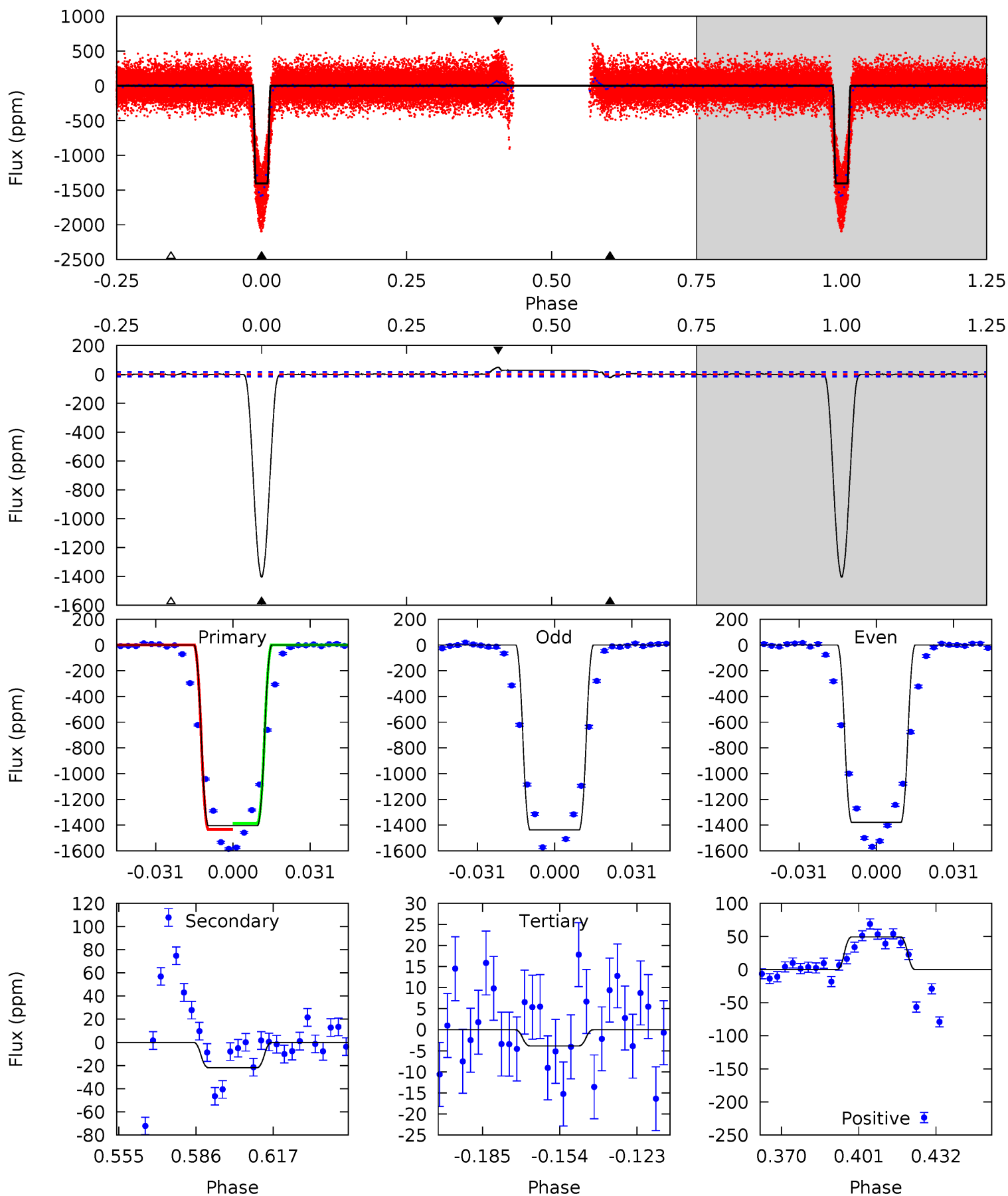
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
146.3	38.5	38.4	37.6	4.74	2.02	16.5	107.9	108.7	0.17	0.92	2.04	0.93	0.21	4.43



Alt Model-Shift Uniqueness Test

003347485-02, P = 7.544742 Days, E = 125.808399 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
449.7	6.99	1.24	15.8	4.81	2.16	2.25	448.5	433.9	5.75	-8.79	9.34	1.05	0.03	0



Stellar Parameters For KIC 003347485

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5953^{+159}_{-159}	$3.984^{+0.495}_{-0.165}$	$-0.560^{+0.300}_{-0.250}$	$1.609^{+0.472}_{-0.708}$	$0.910^{+0.114}_{-0.103}$	$0.308^{+1.334}_{-0.142}$
	+3%/-3%	+12%/-4%	+54%/-45%	+29%/-44%	+13%/-11%	+434%/-46%
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 003347485-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-247 ± 6	$9.49^{+2.91}_{-2.51}$	1688^{+149}_{-206}	3546^{+235}_{-208}	$8.125^{+6.827}_{-3.338}$
Alt.	-22 ± 3	$6.75^{+2.50}_{-2.20}$	1682^{+160}_{-216}	2651^{+295}_{-192}	$1.393^{+1.630}_{-0.632}$

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

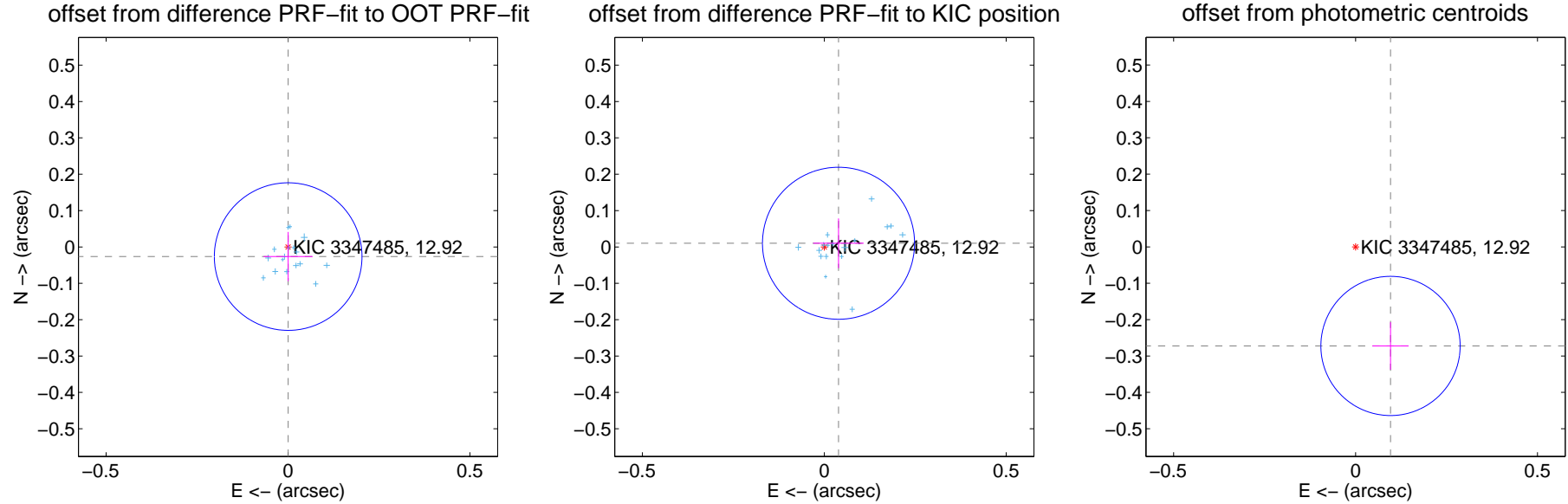
DV Centroid Data

Supplemental centroid analysis for 003347485-02. Kepler magnitude: 12.92. Transit SNR 74.55

There are 17 quarters with good PRF difference image offsets

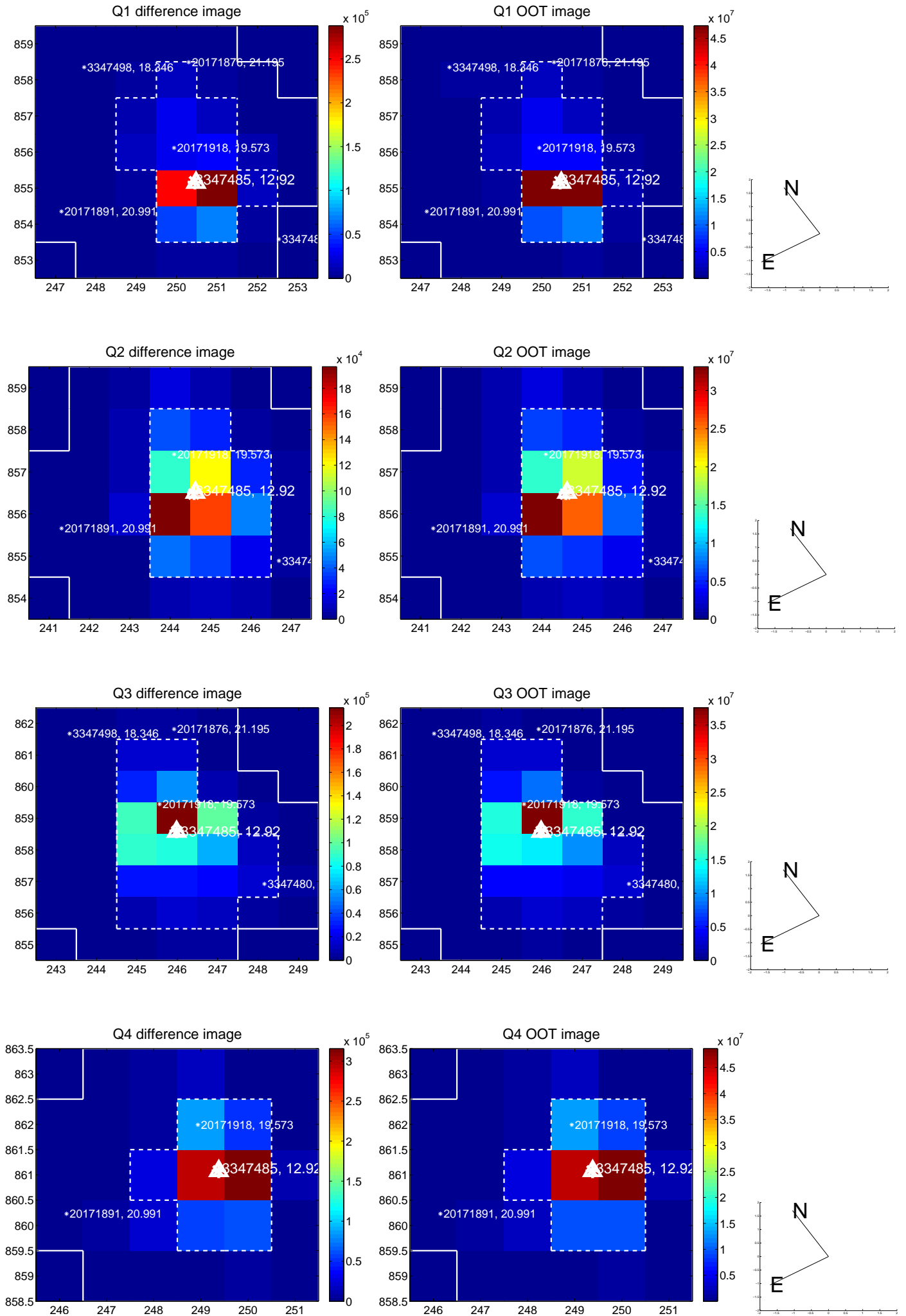
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.026 ± 0.068	0.39	-0.000 ± 0.067	-0.026 ± 0.068
PRF-fit source offset from KIC position	0.040 ± 0.070	0.58	-0.039 ± 0.069	0.010 ± 0.068
photometric centroid source offset	0.29 ± 0.06	4.53	-0.10 ± 0.05	-0.27 ± 0.07

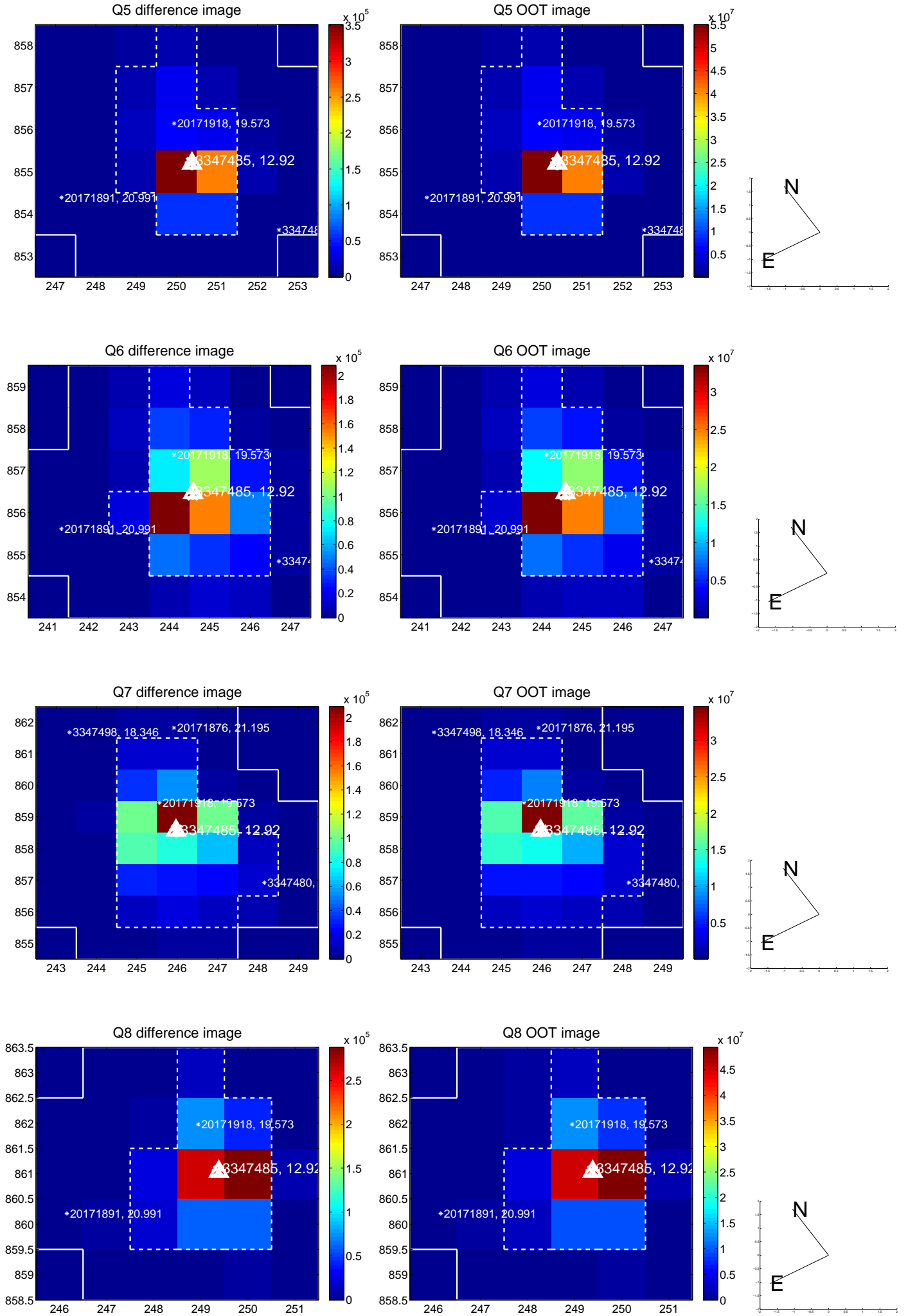


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

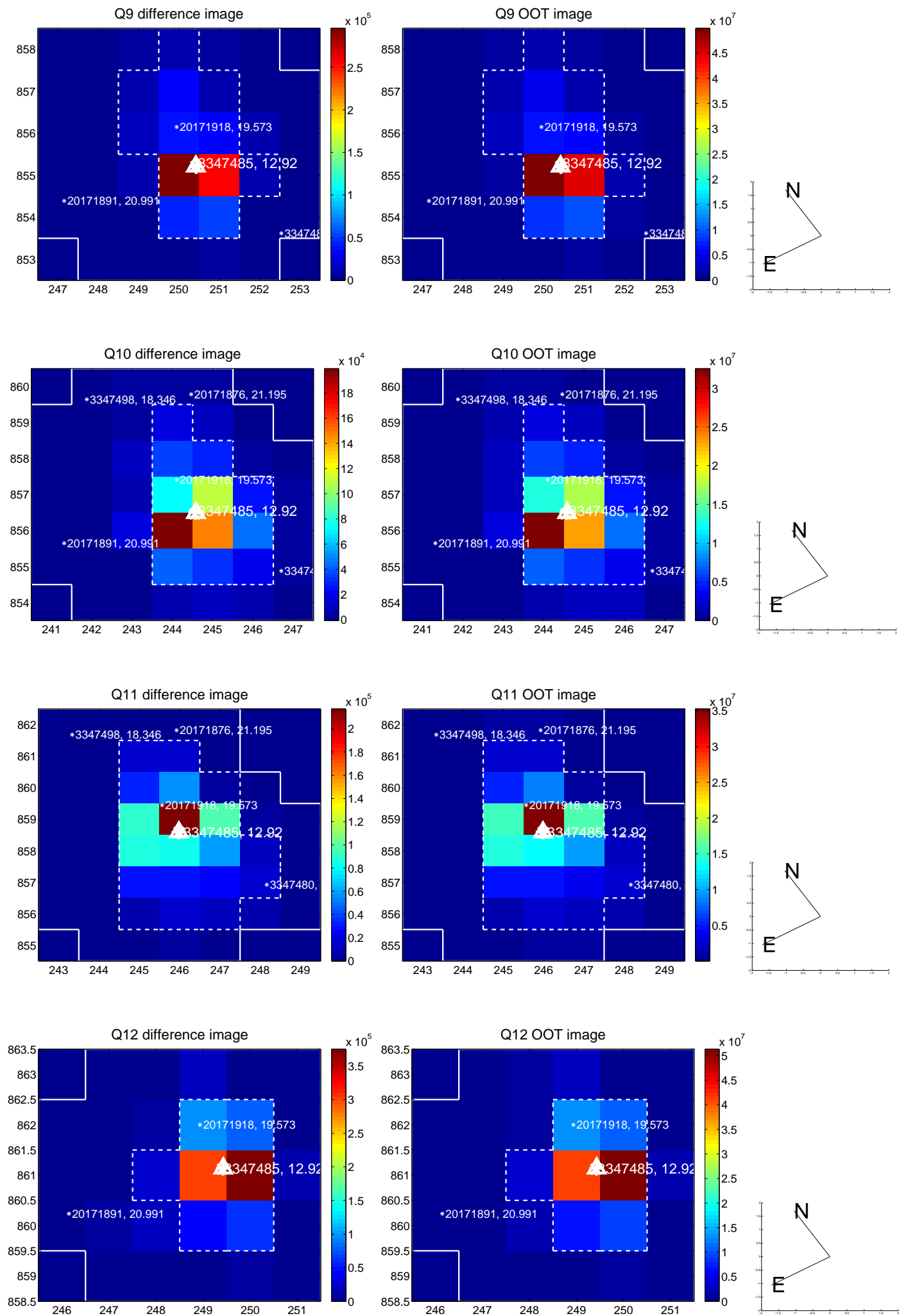
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



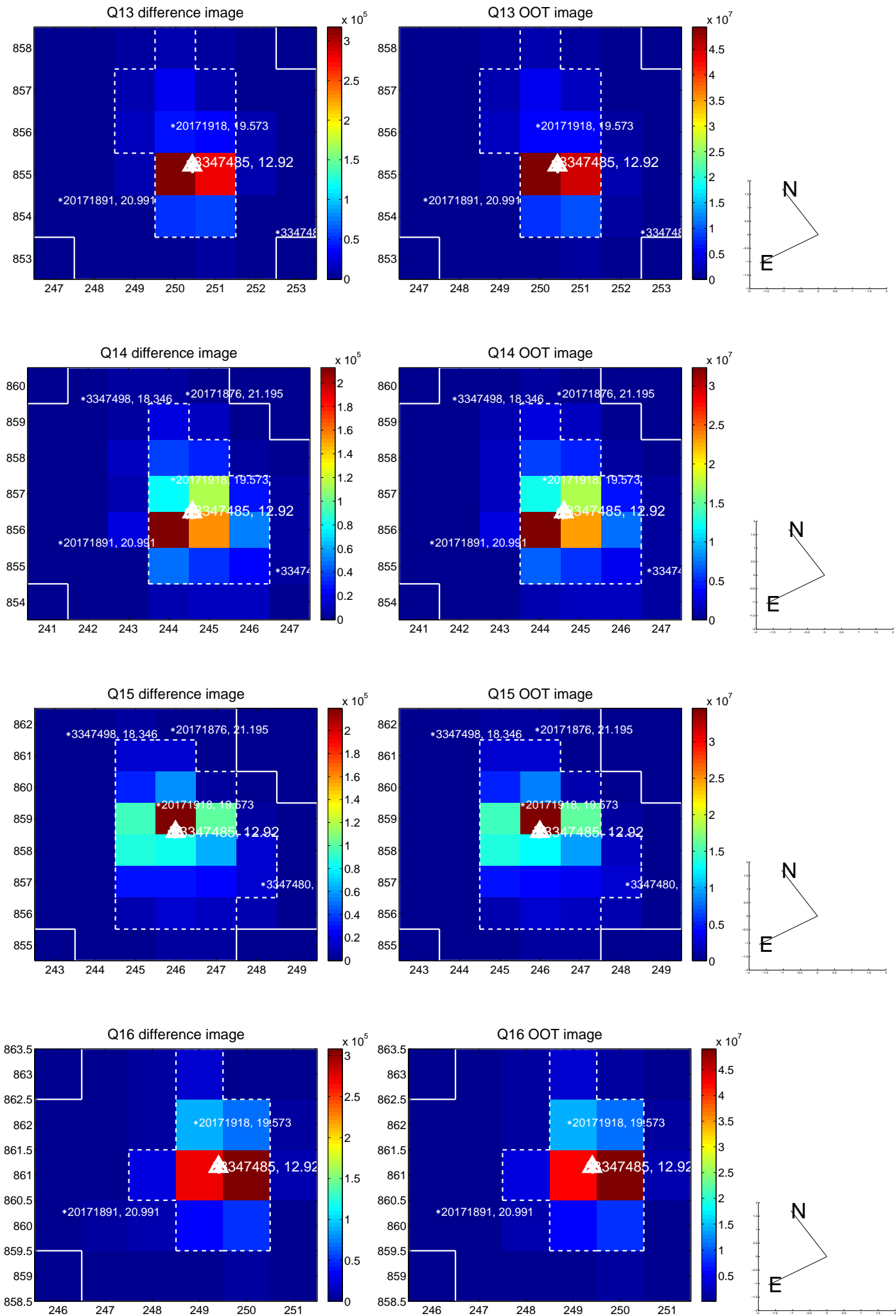
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



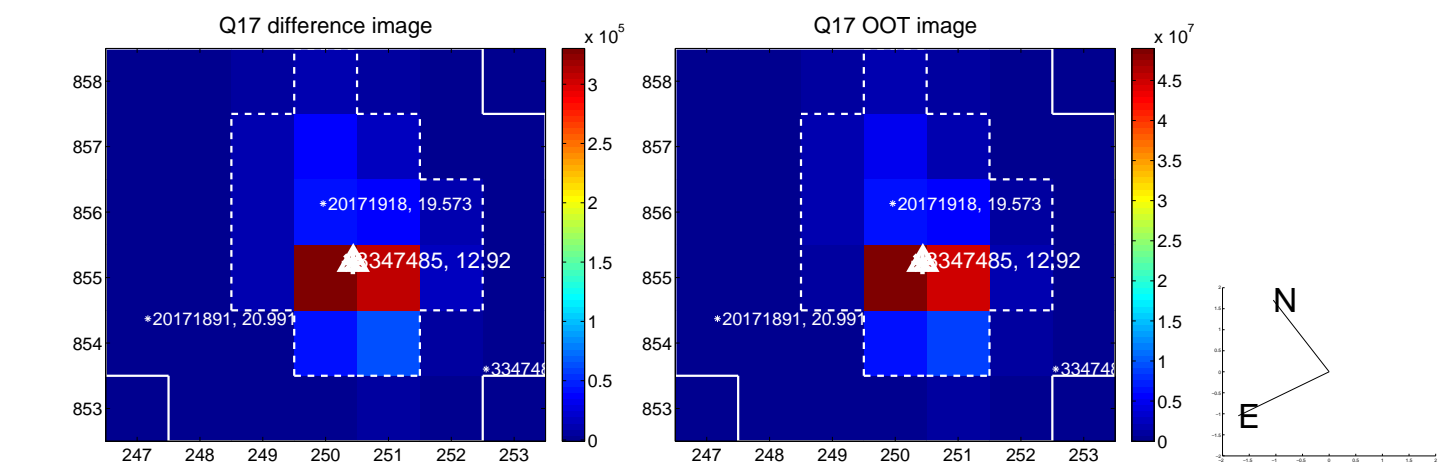
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



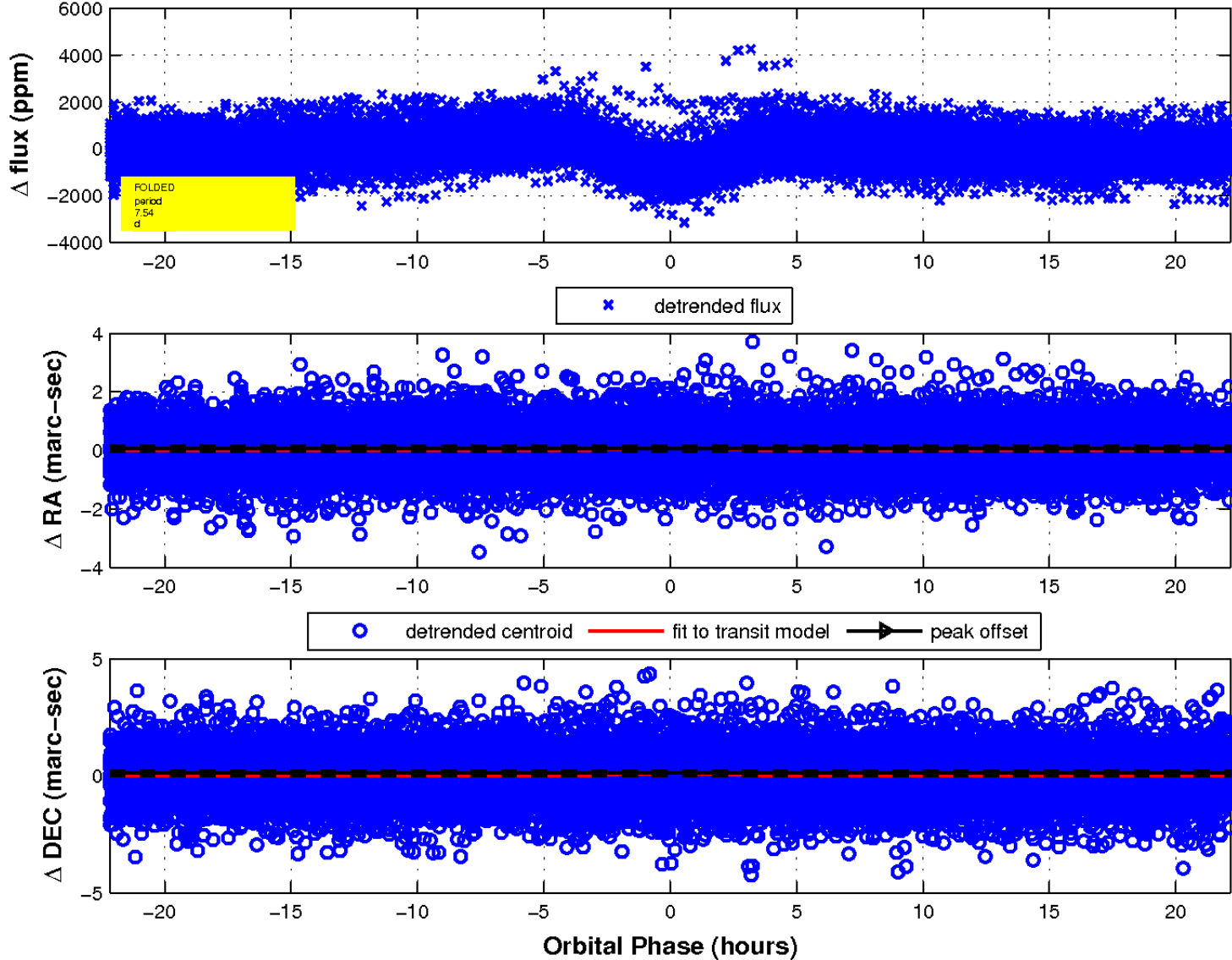
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

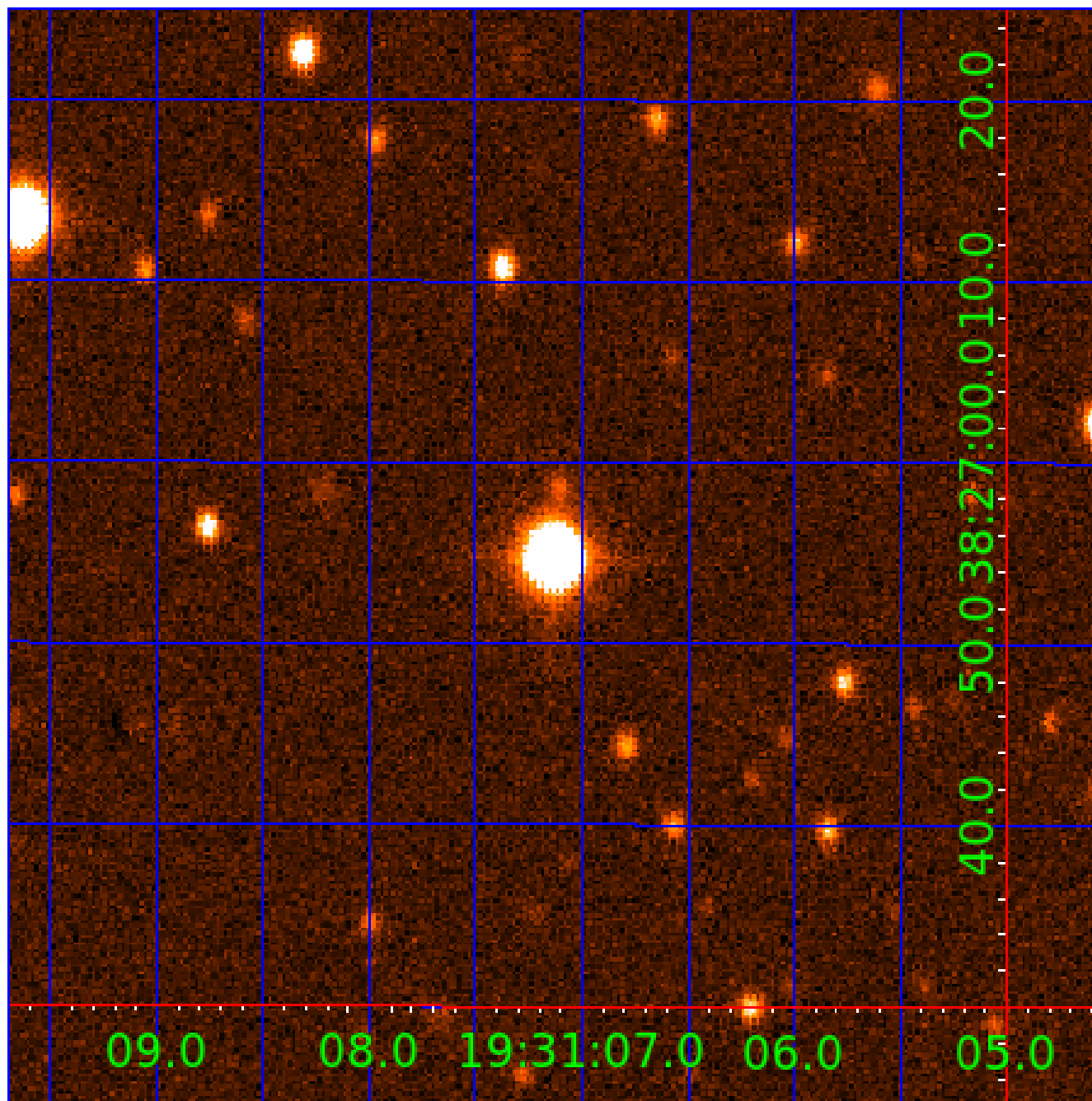


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 003347485

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})
003347485-01	OBS	5985.01	7.544814	137.118938	6166.2	7.730	288.8	328.3	1.61	5953	22.81	547.03
003347485-02	OBS	No	7.544778	133.351141	1204.9	7.391	64.5	74.5	1.61	5953	10.22	547.03
003347485-03	OBS	No	7.545471	132.827859	0.0	6.301	10.4	0.0	1.61	5953	0.02	546.97
003347485-04	OBS	No	223.918755	251.573193	1178.7	6.332	11.2	10.0	1.61	5953	10.50	5.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003347485-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
003347485-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003347485-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
003347485-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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 003347485-03

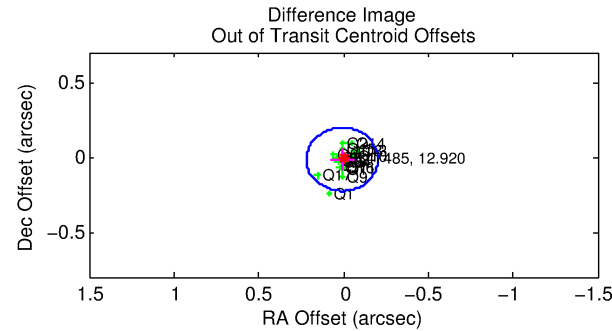
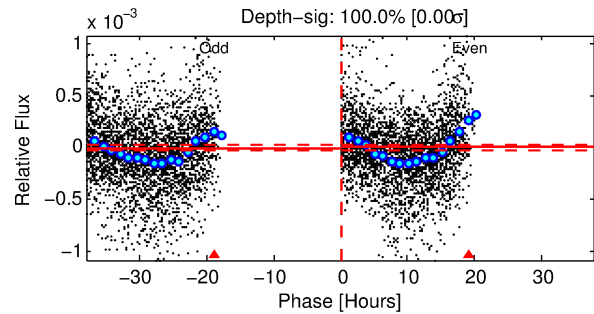
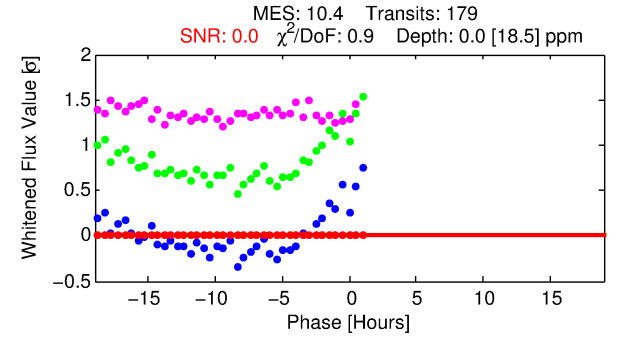
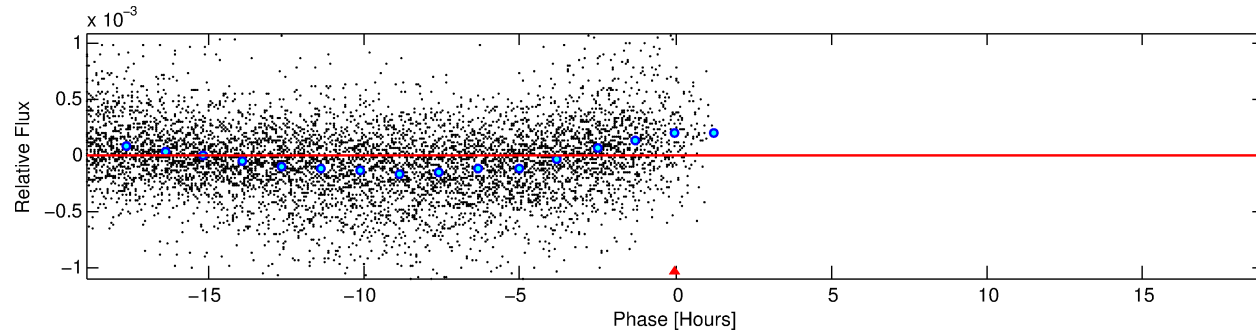
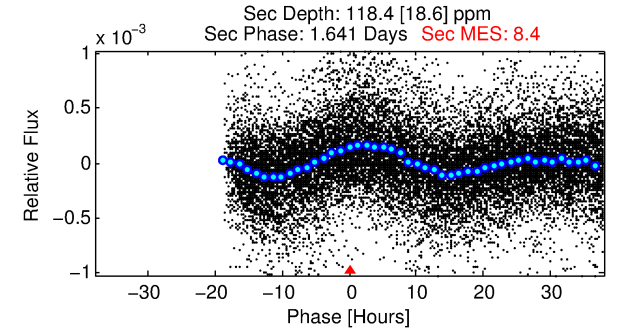
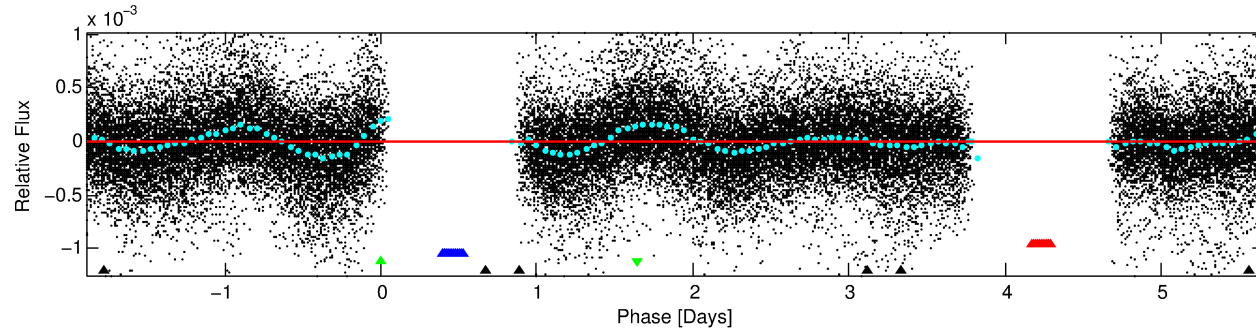
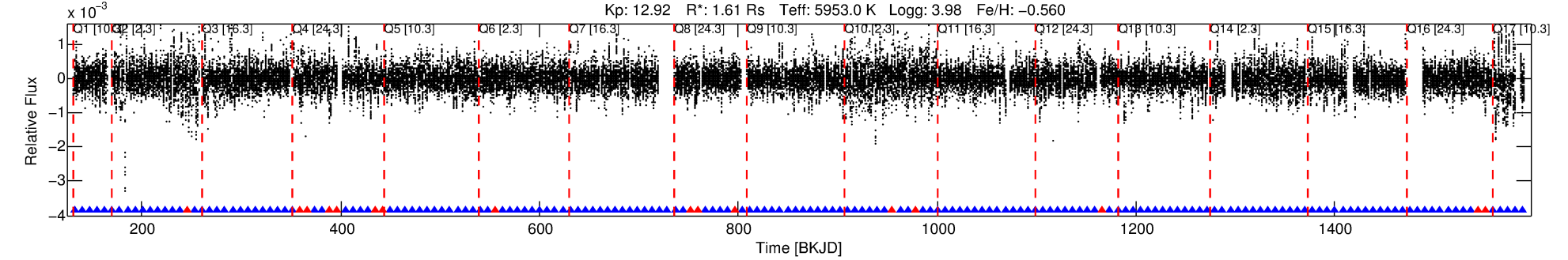
No Significant Match Found

DV One-Page Summary

KIC: 3347485 Candidate: 3 of 4 Period: 7.545 d

KOI: K05985 Corr: No Ephemeris Match

Kp: 12.92 R*: 1.61 Rs Teff: 5953.0 K Logg: 3.98 Fe/H: -0.560



DV Fit Results:

Period = 7.54547 [0.48549] d
Epoch = 132.8279 [50.9915] BKJD
Rp/R* = 0.0001 [0.0774]
a/R* = 6.60 [382.18]
b = 0.70 [57.20]
Seff = 546.97 [451.77]
Teq = 1233 [255] K
Rp = 0.02 [13.59] Re
a = 0.0730 [0.0352] AU
Ag = 851903.94 [1147406318.80] [0.00σ]
Teffp = 57923 [19504193] K [0.00σ]

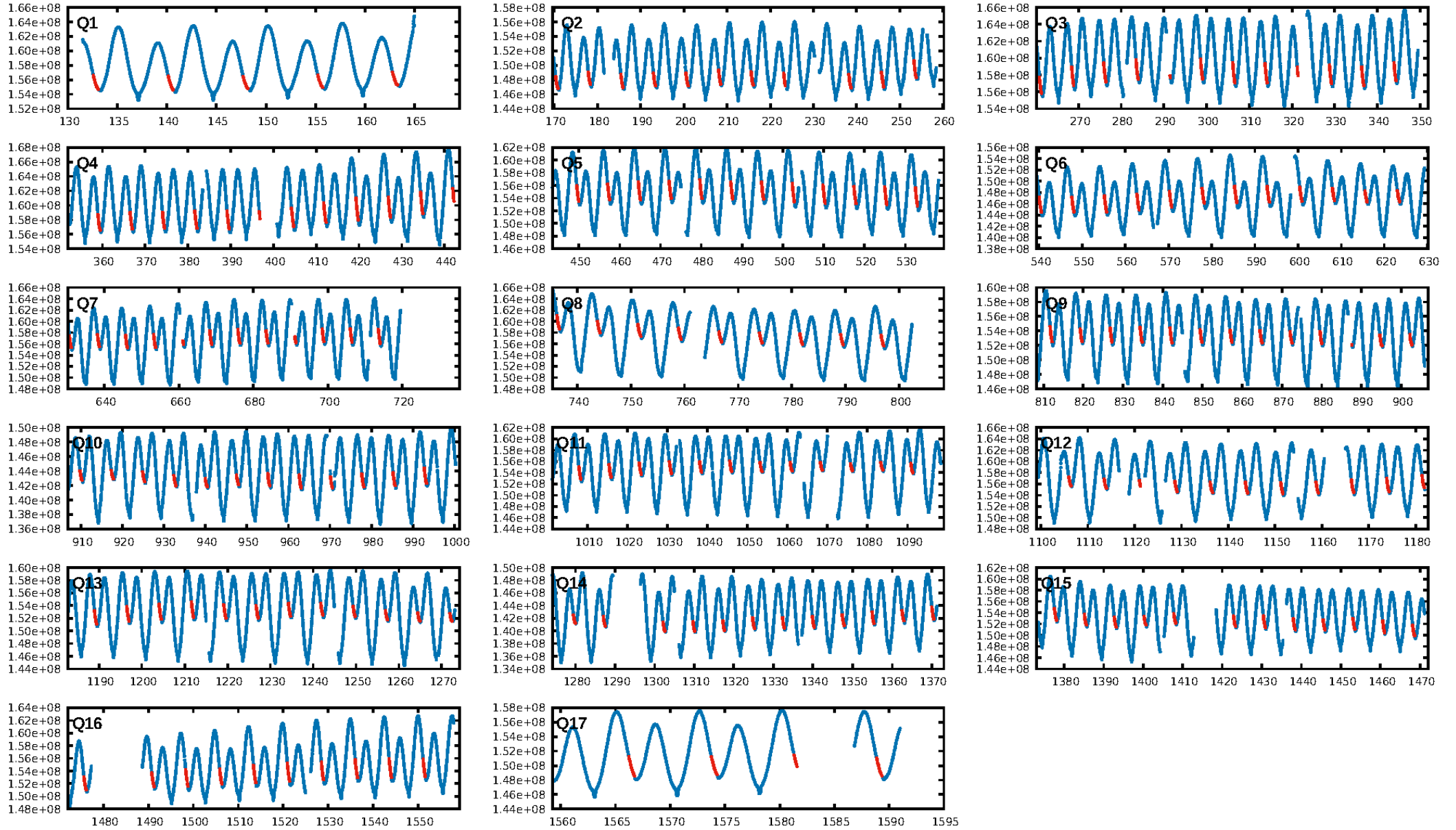
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [581.37σ]
ModelChiSquare2-sig: 31.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.40e-19
RollingBand-fgt: 0.91 [154/170]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.017 arcsec [0.24σ]
KicOffset-rm: 0.028 arcsec [0.39σ]
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]

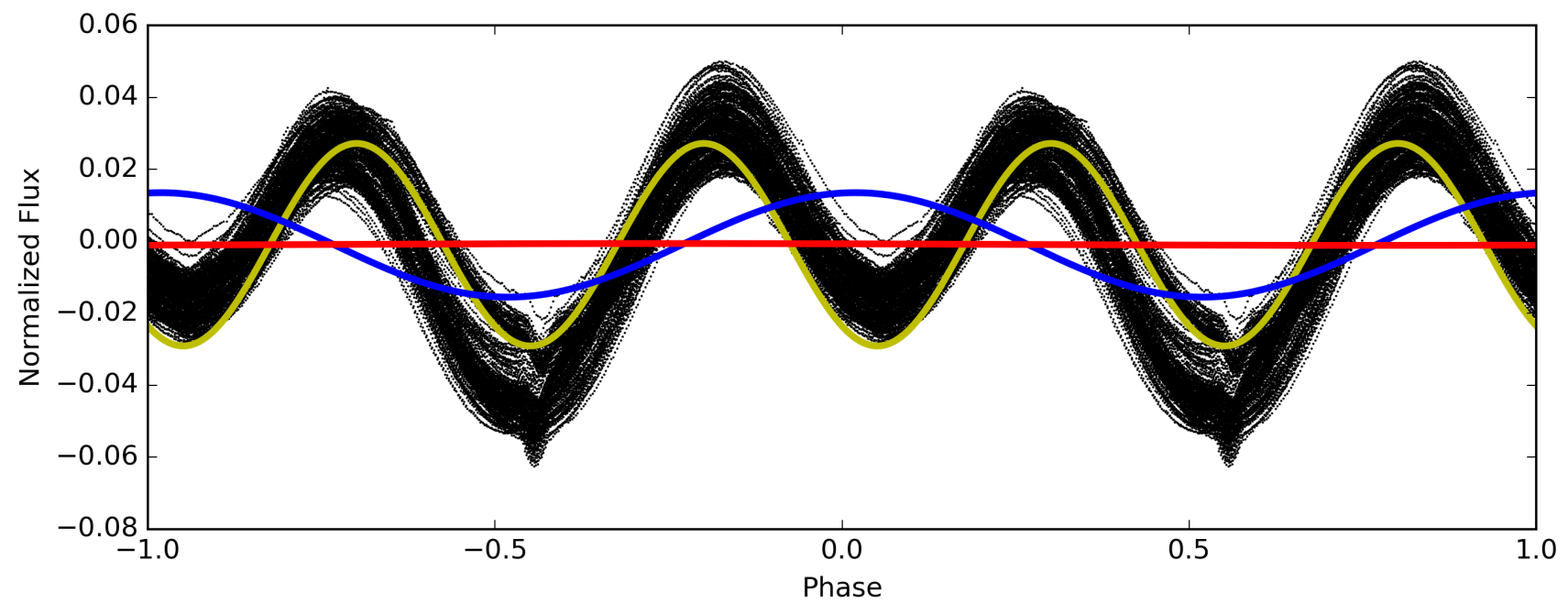
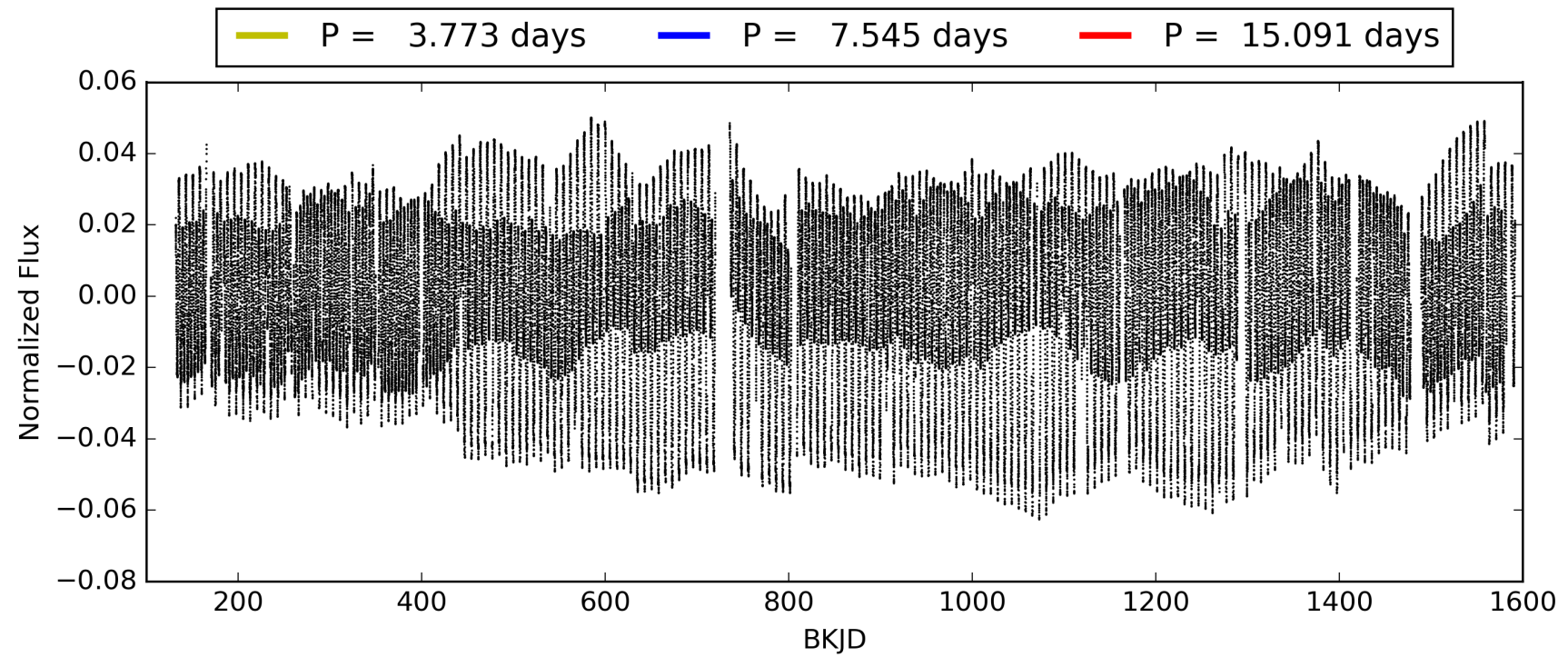
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:13:18 Z

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

TCE 003347485-03, PDC Light Curves

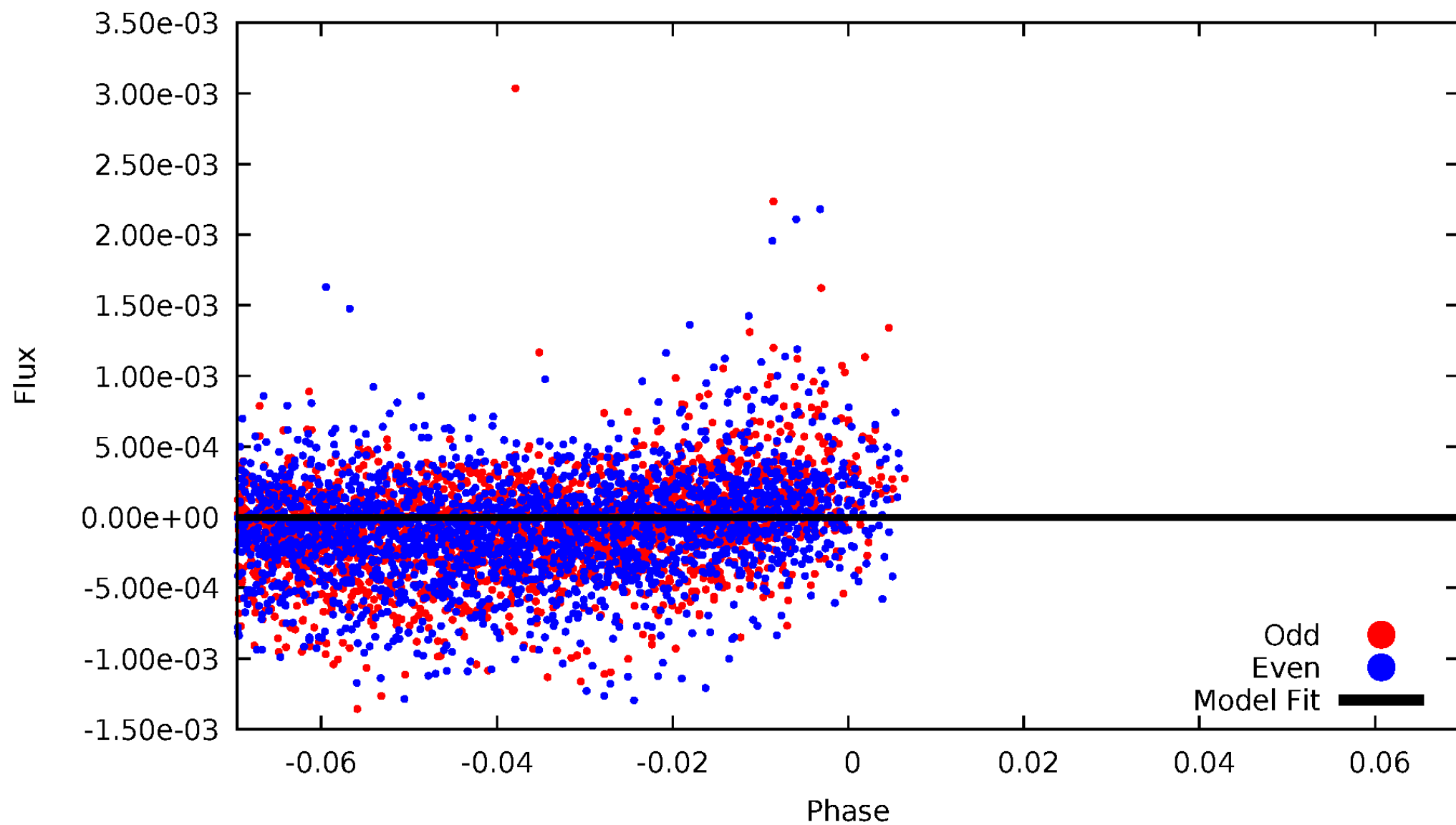


TCE 003347485-03



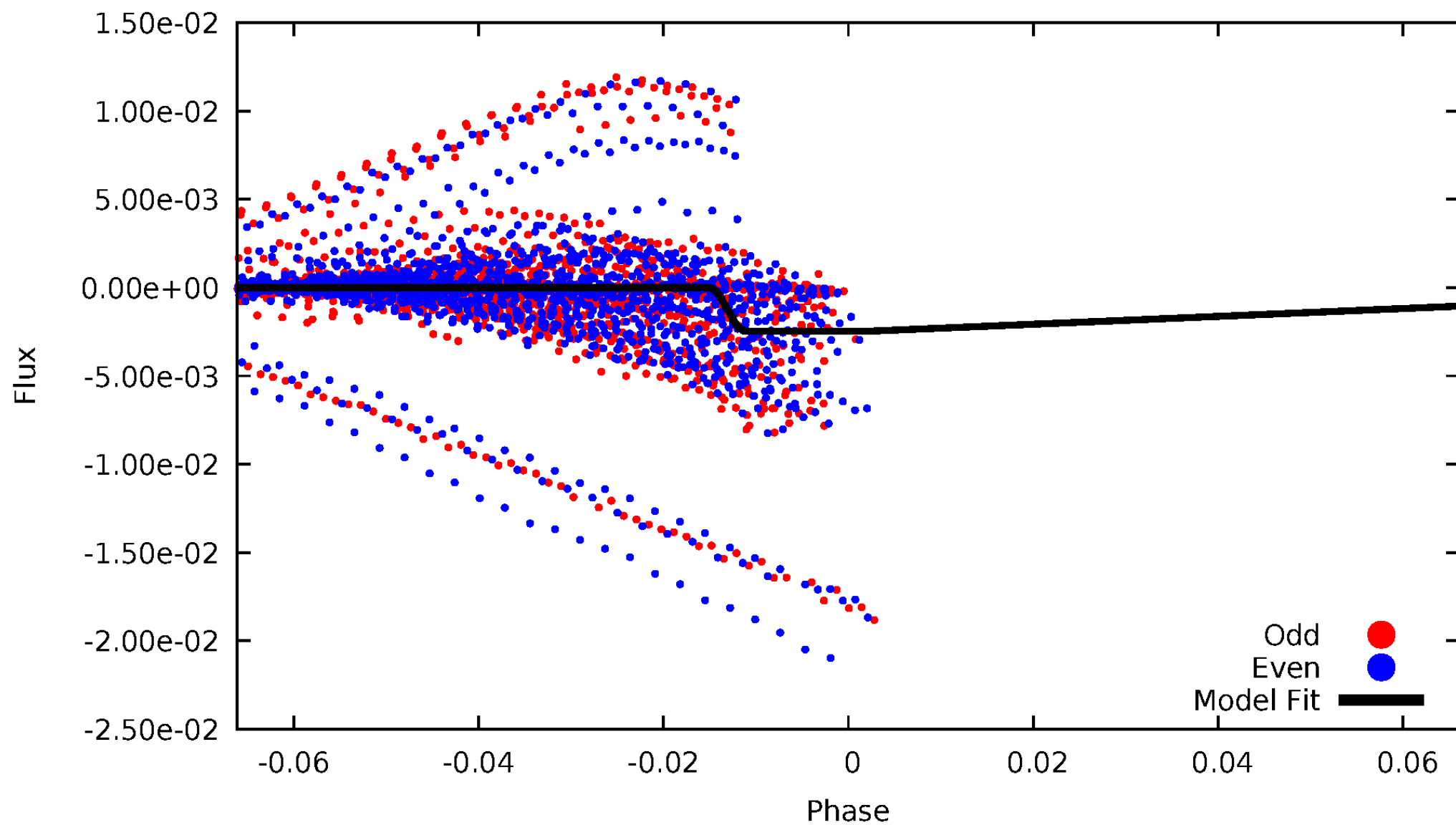
DV Odd/Even

TCE 003347485-03



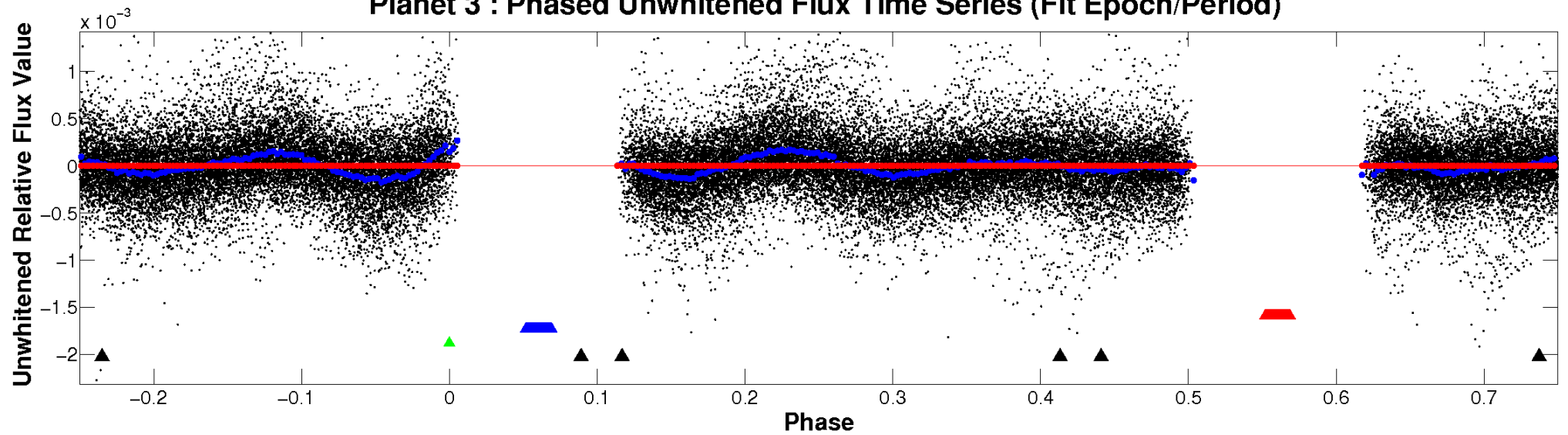
ALT Odd/Even

TCE 003347485-03

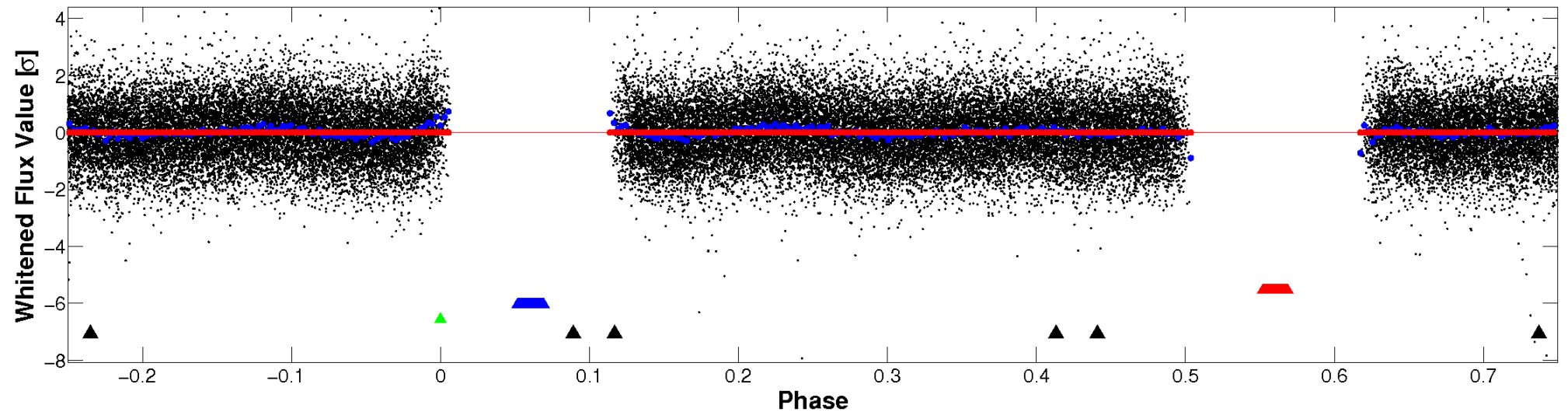


Non-Whitened Vs. Whitened Light Curve

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

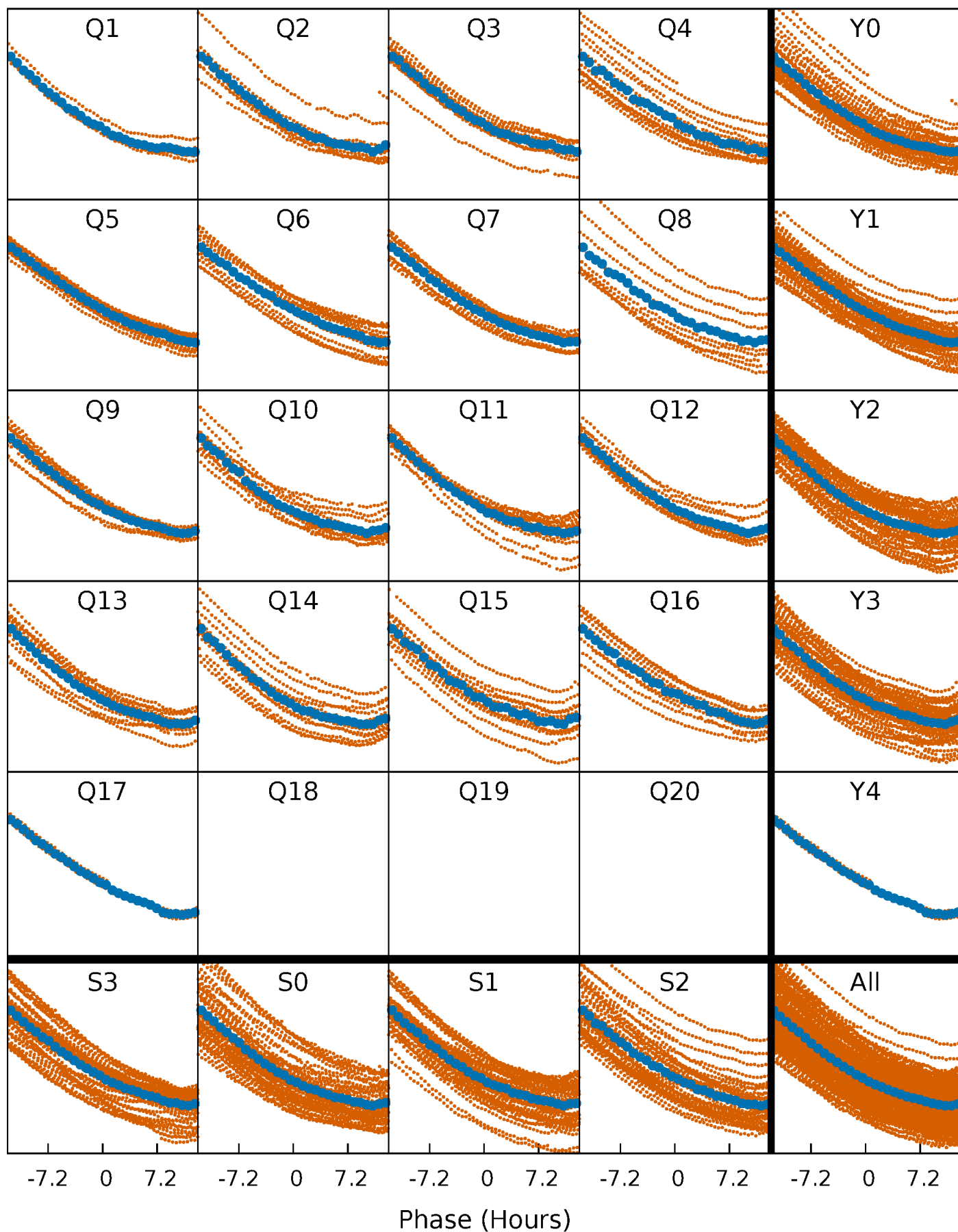


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



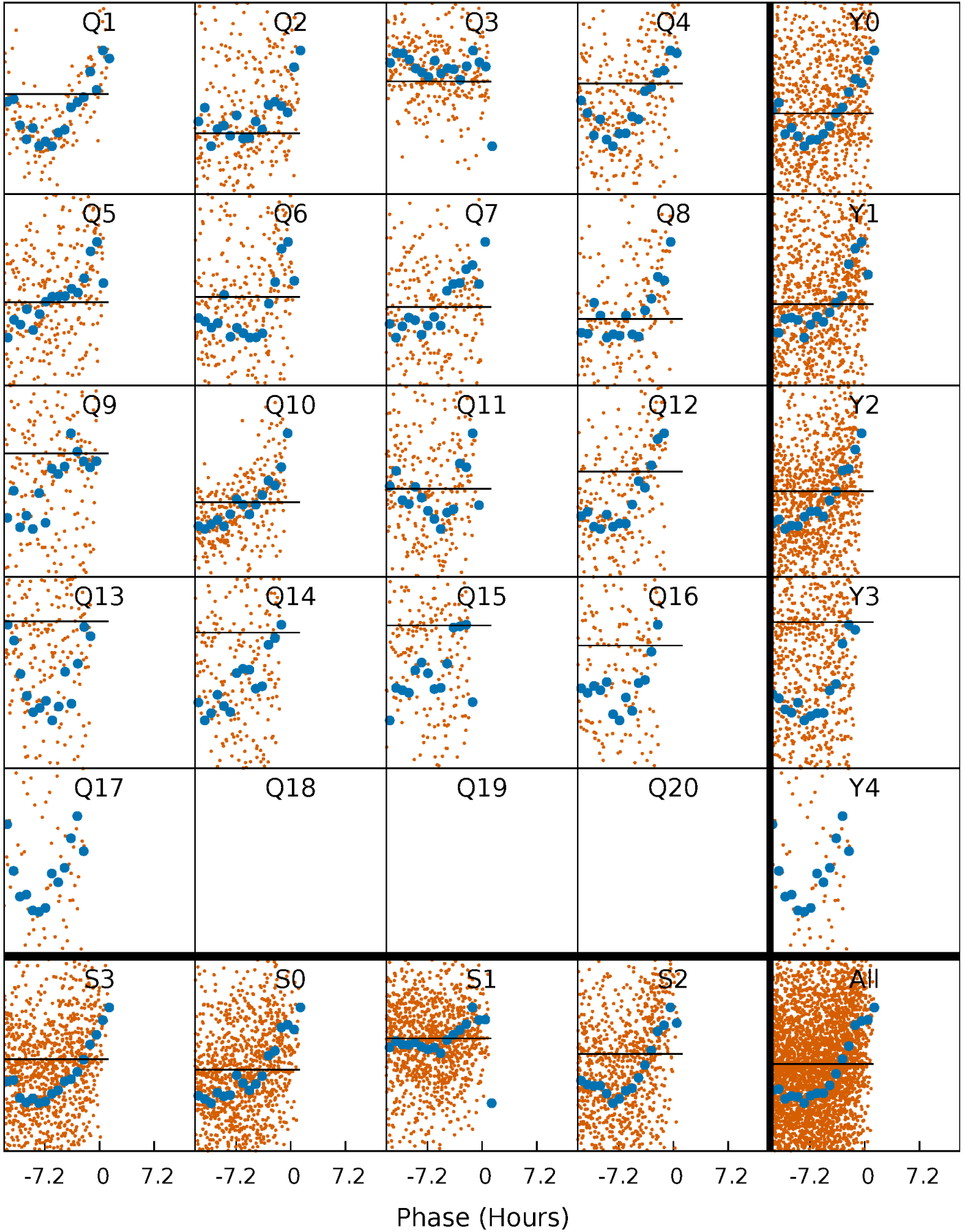
PDC Quarter-Phased Transit Curves

TCE 003347485-03 P= 7.545471 Days $T_0=132.827859$ (BKJD)



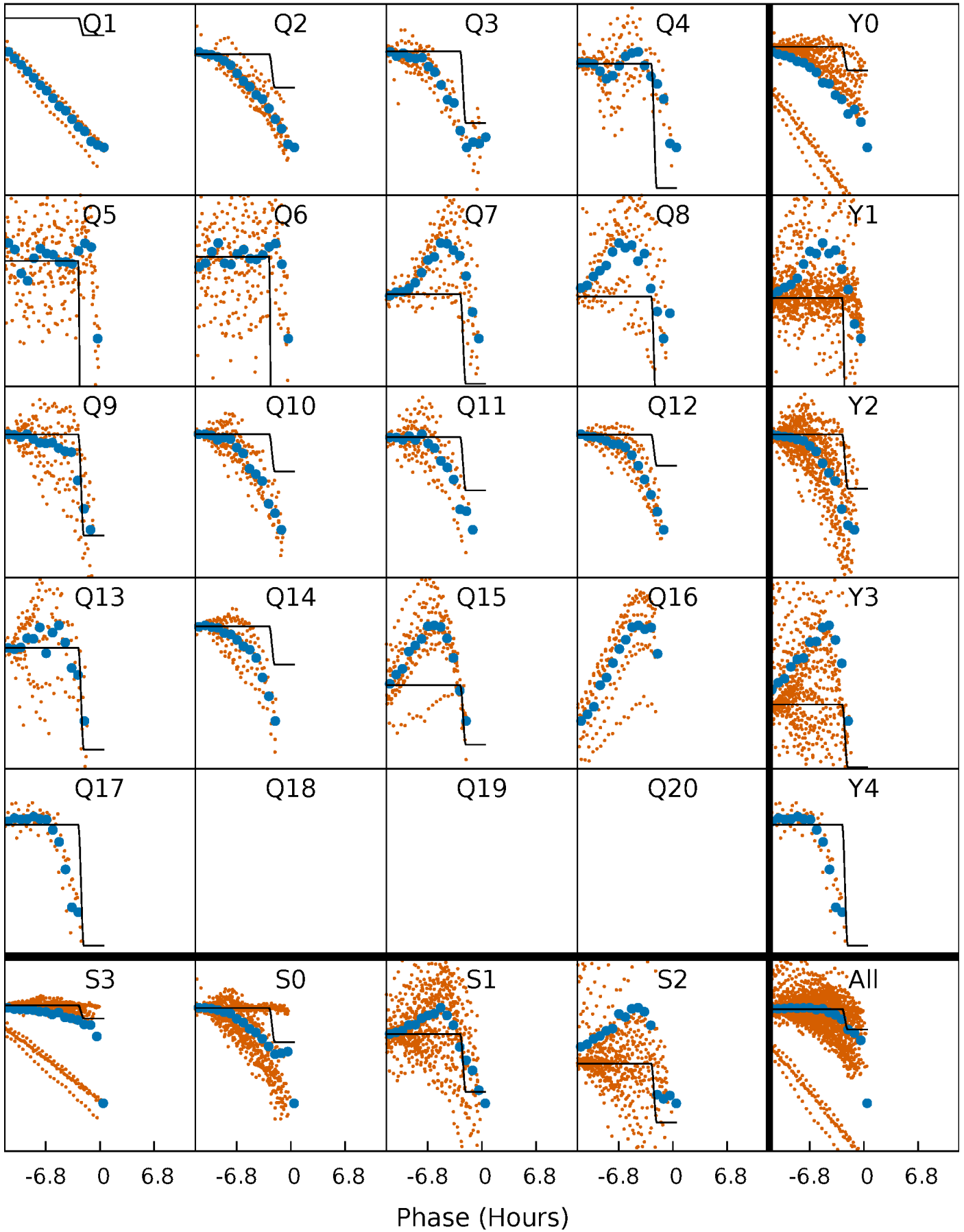
DV Quarter-Phased Transit Curves

TCE 003347485-03 $P = 7.545471$ Days $T_0 = 132.827859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

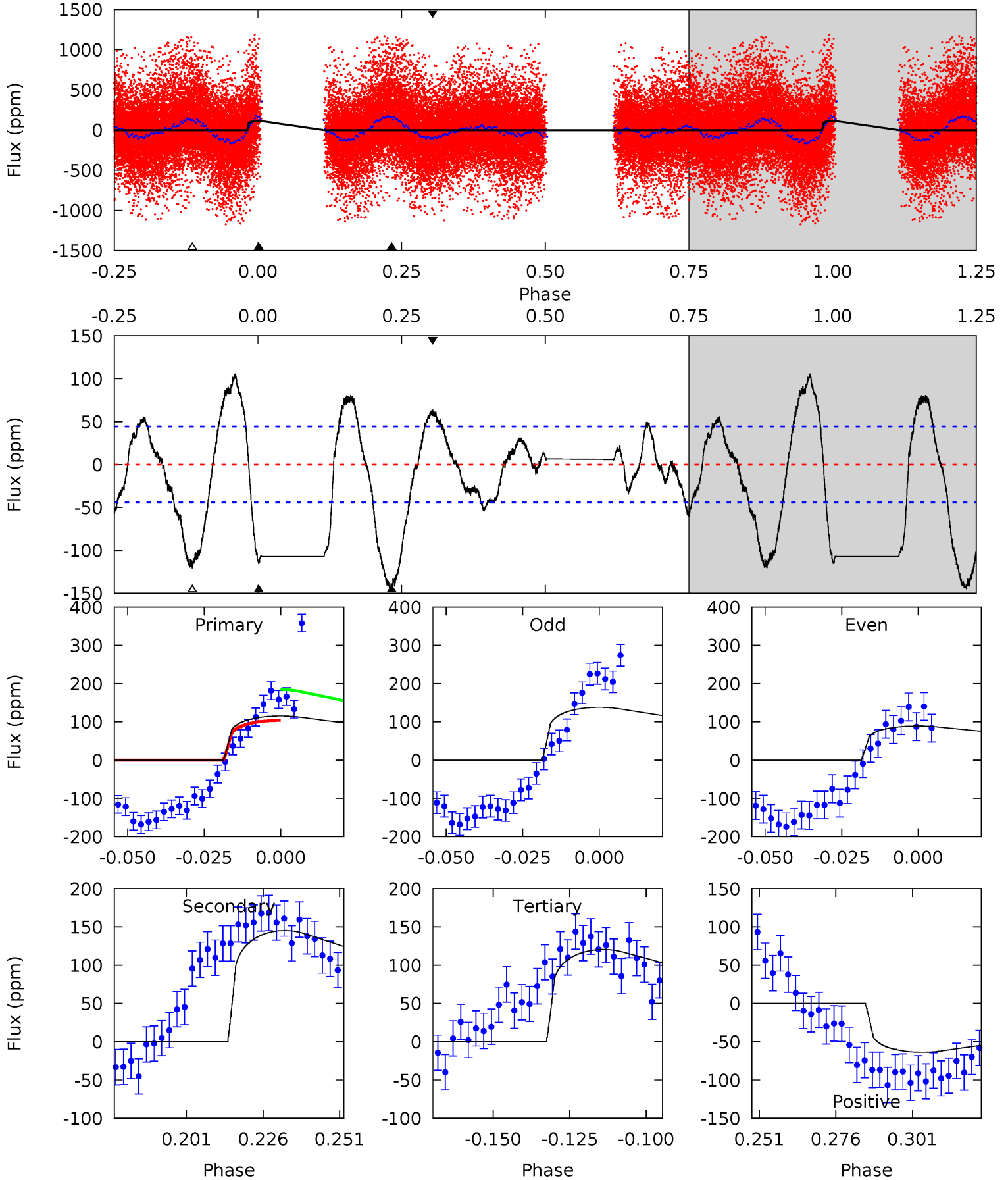
TCE 003347485-03 $P = 7.545394$ Days $T_0 = 132.855549$ (BKJD)



DV Model-Shift Uniqueness Test

003347485-03, P = 7.545471 Days, E = 125.282388 Days

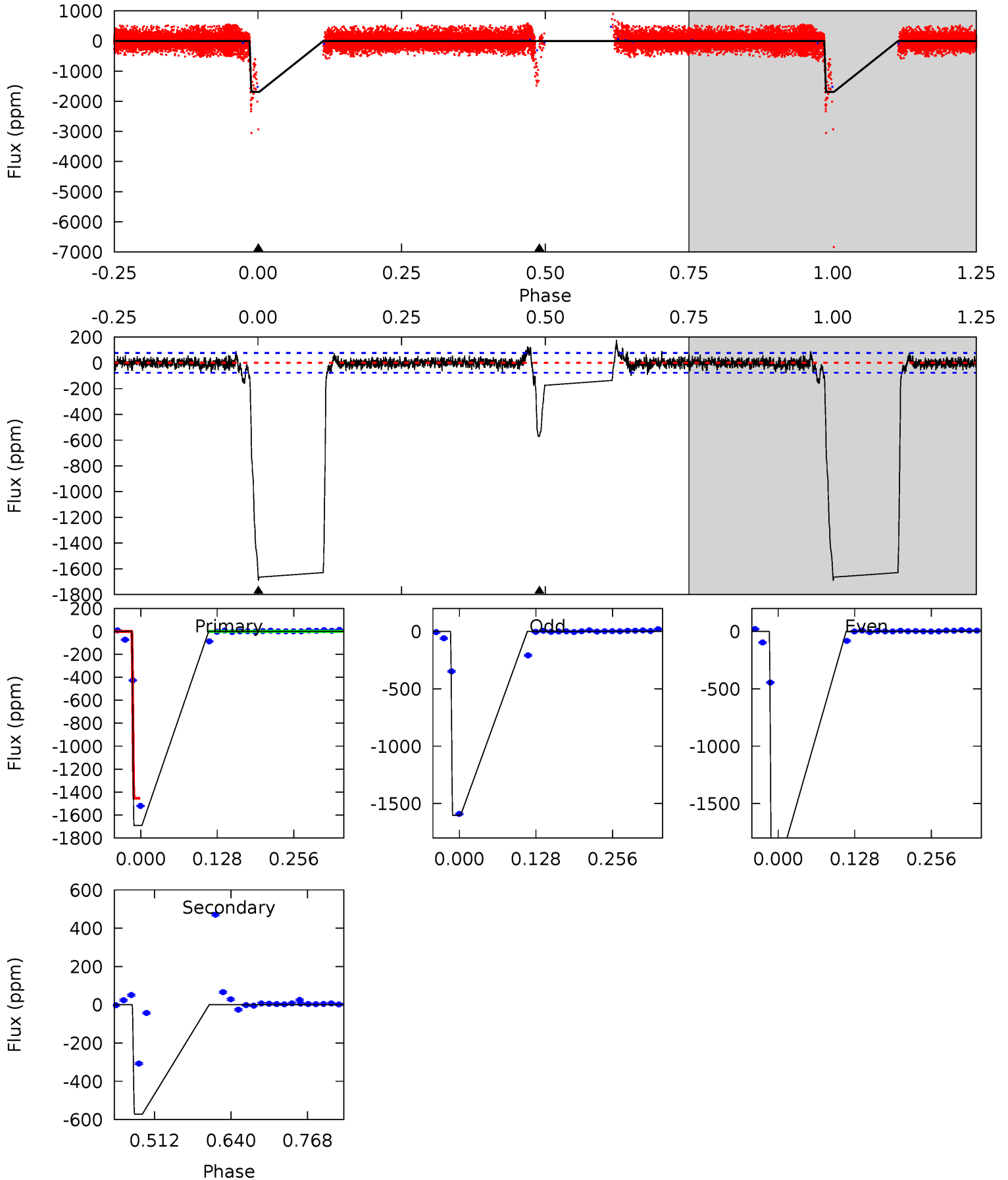
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	15.9	13.2	6.97	4.85	2.24	5.19	-0.55	5.64	2.72	8.91	2.68	1.28	0.42	2.49



Alt Model-Shift Uniqueness Test

003347485-03, P = 7.545394 Days, E = 125.310155 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.7	33.7	0	0	4.51	1.52	1.20	99.7	99.7	33.7	33.7	9.92	1.50	0.10	0



Stellar Parameters For KIC 003347485

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5953^{+159}_{-159}	$3.984^{+0.495}_{-0.165}$	$-0.560^{+0.300}_{-0.250}$	$1.609^{+0.472}_{-0.708}$	$0.910^{+0.114}_{-0.103}$	$0.308^{+1.334}_{-0.142}$
	+3%/-3%	+12%/-4%	+54%/-45%	+29%/-44%	+13%/-11%	+434%/-46%
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 003347485-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-145 ± 9	$8.45^{+9.62}_{-6.17}$	1685^{+156}_{-227}	3346^{+2123}_{-699}	$5.929^{+71.530}_{-4.620}$
Alt.	-571 ± 17	$11.70^{+12.02}_{-7.28}$	1690^{+153}_{-195}	3751^{+1783}_{-713}	12^{+79}_{-9}

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

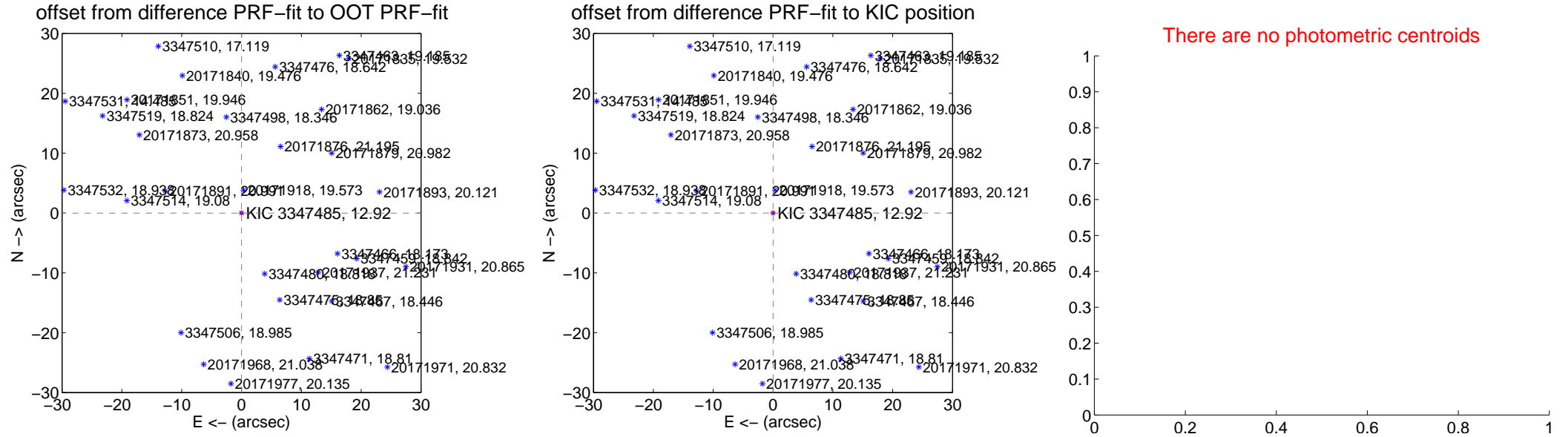
DV Centroid Data

Supplemental centroid analysis for 003347485-03. Kepler magnitude: 12.92. Transit SNR 0.00

There are 17 quarters with good PRF difference image offsets

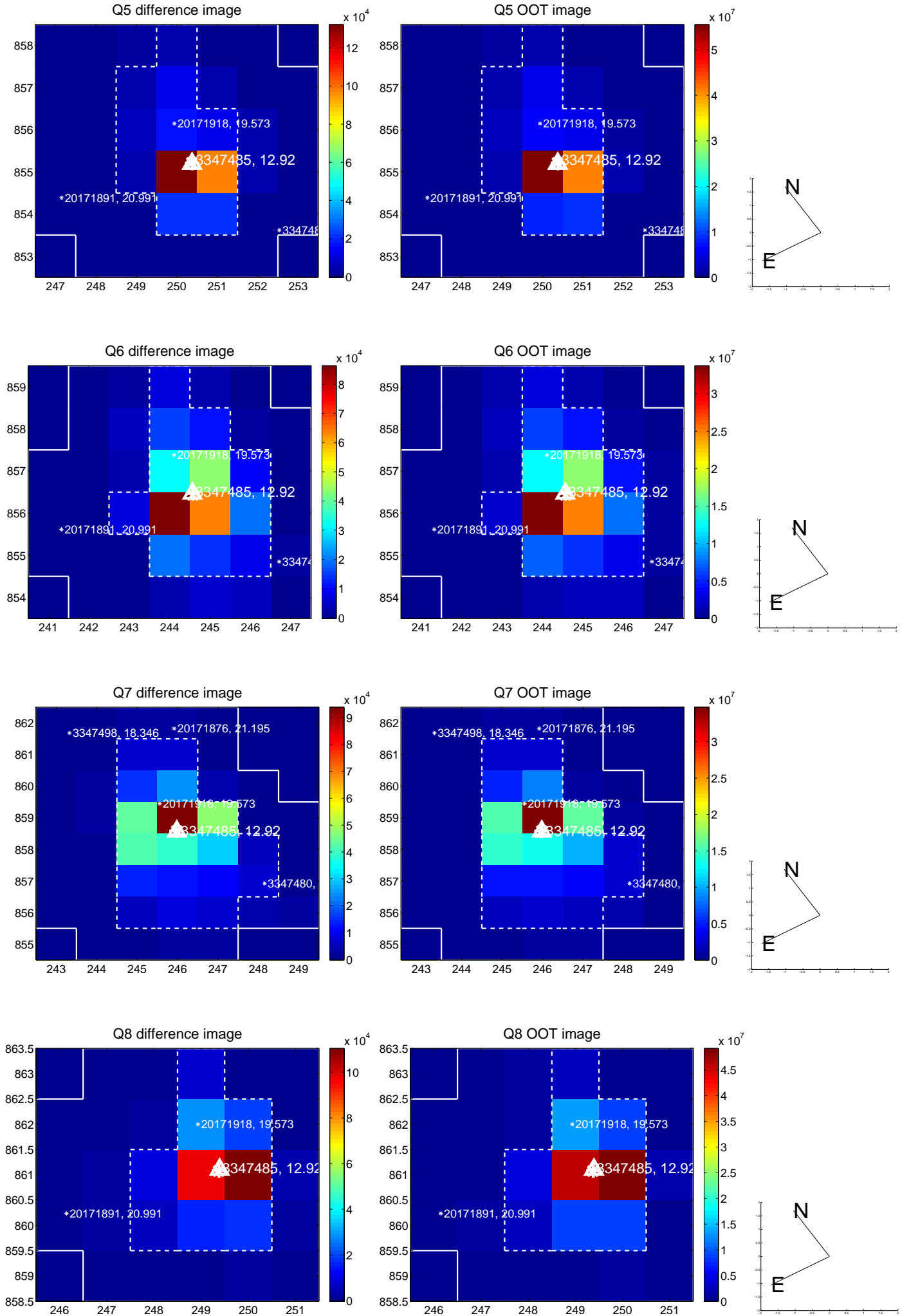
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.070	0.24	0.008 ± 0.068	-0.015 ± 0.070
PRF-fit source offset from KIC position	0.028 ± 0.070	0.39	-0.027 ± 0.070	-0.005 ± 0.075
photometric centroid source offset	—	—	—	—

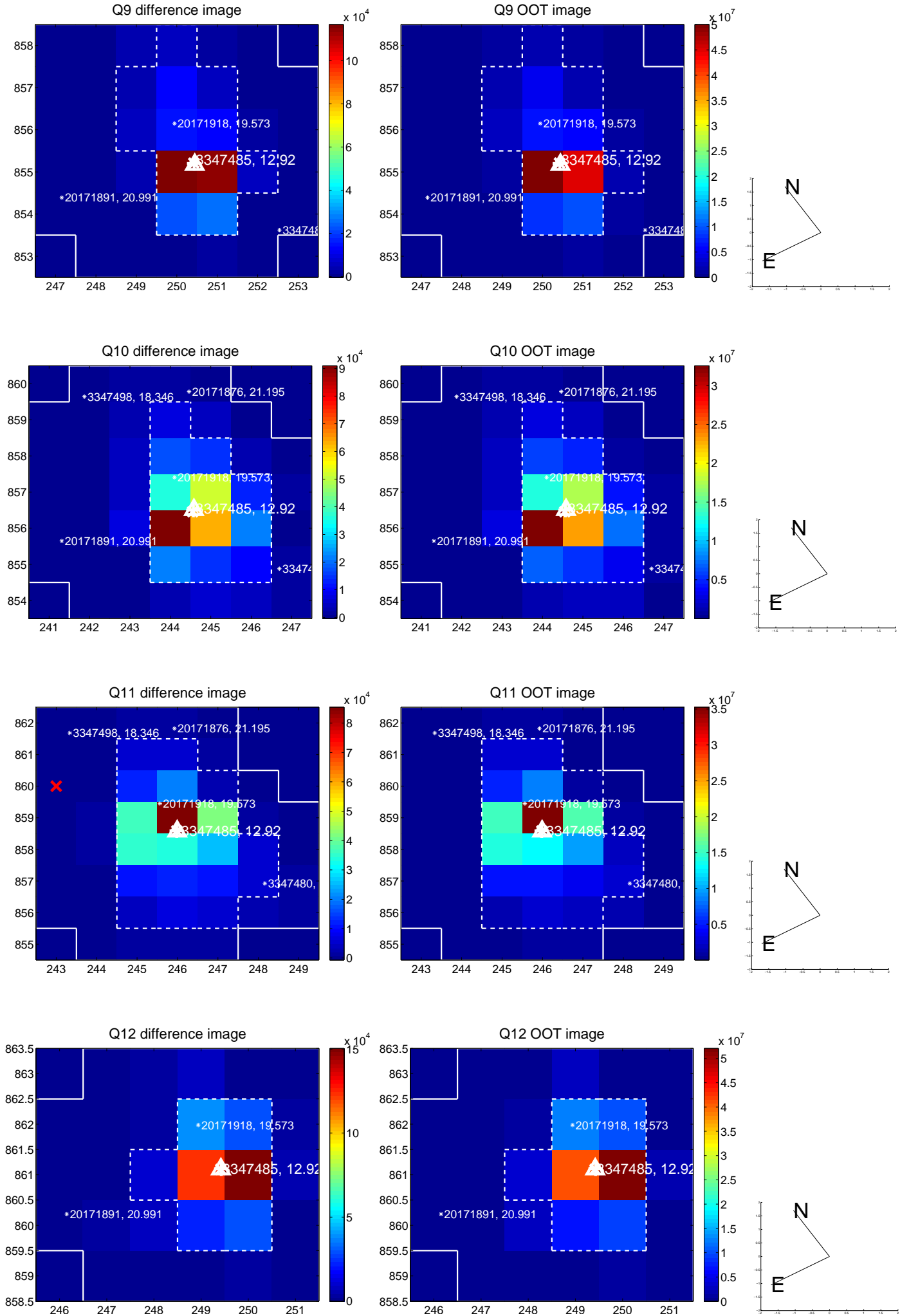


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

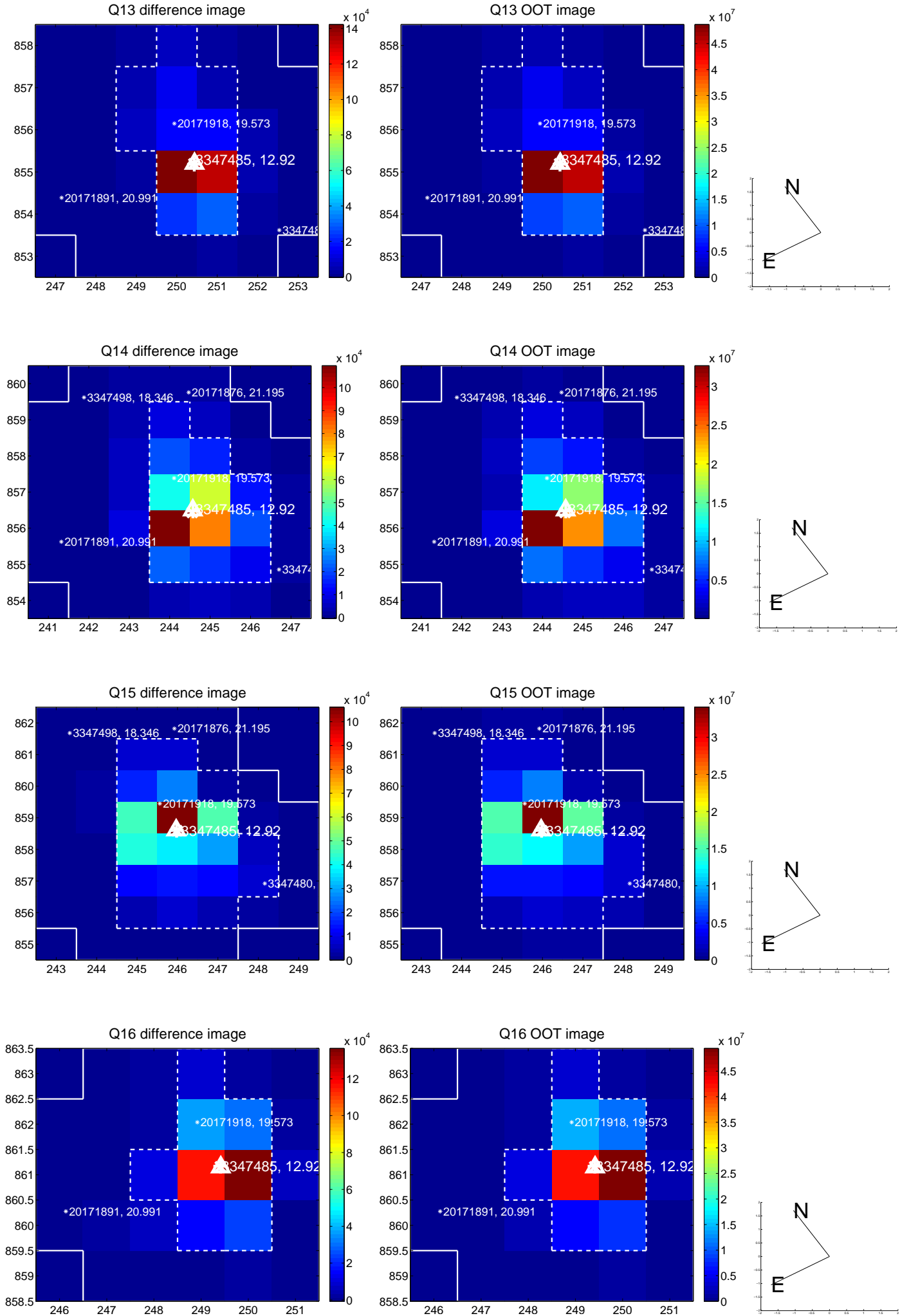
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



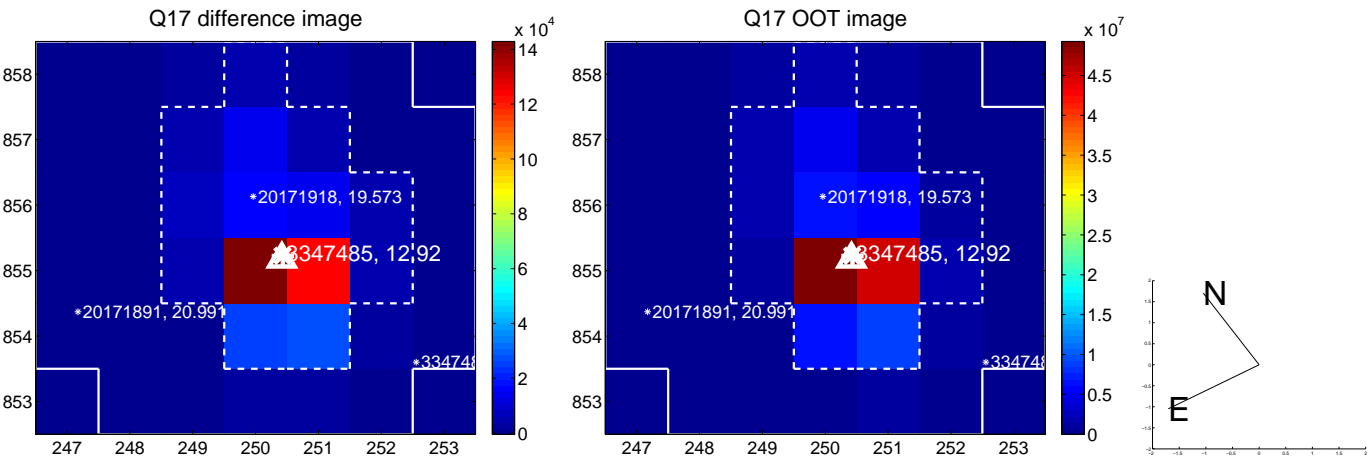
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



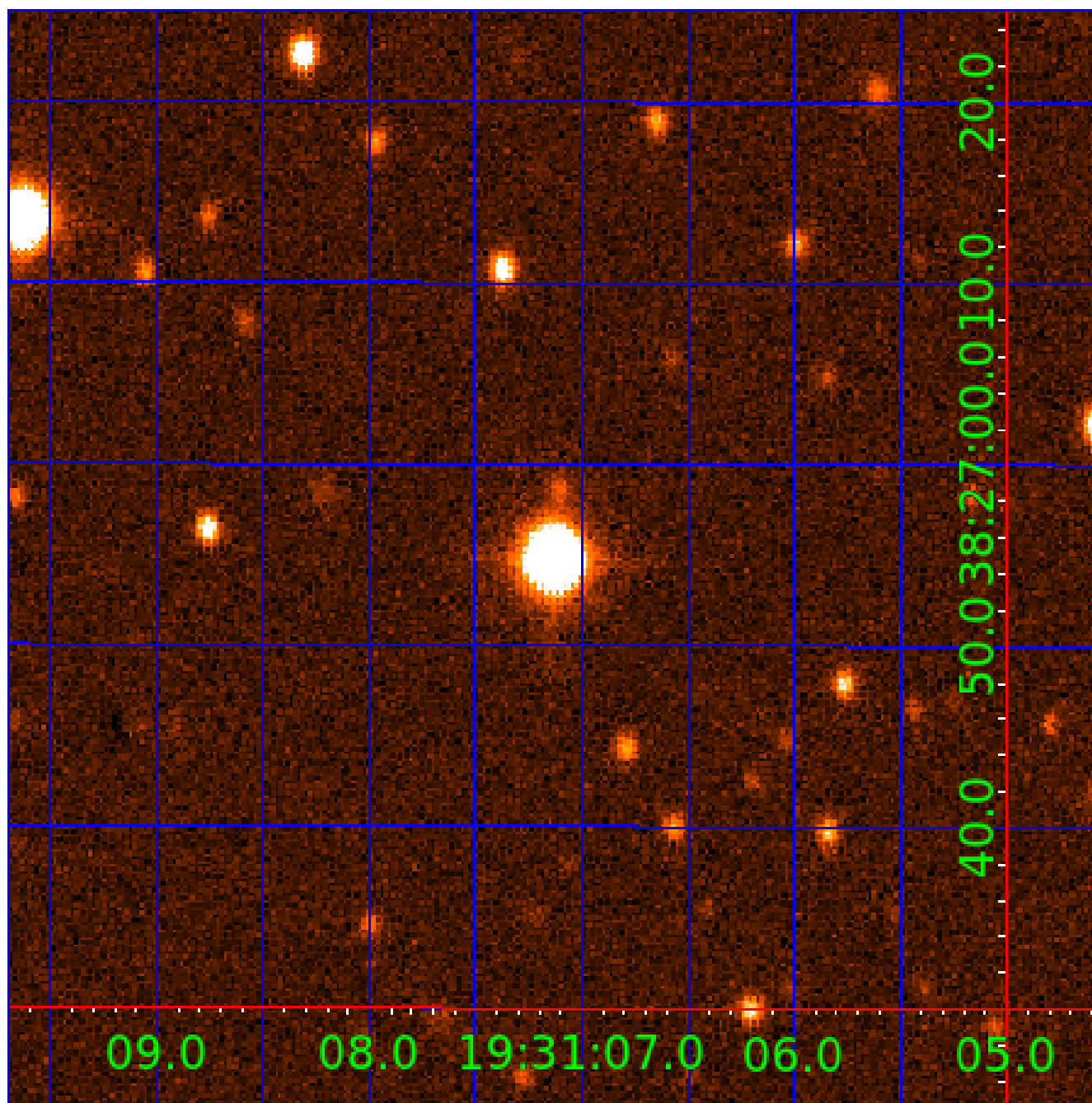
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 003347485

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})
003347485-01	OBS	5985.01	7.544814	137.118938	6166.2	7.730	288.8	328.3	1.61	5953	22.81	547.03
003347485-02	OBS	No	7.544778	133.351141	1204.9	7.391	64.5	74.5	1.61	5953	10.22	547.03
003347485-03	OBS	No	7.545471	132.827859	0.0	6.301	10.4	0.0	1.61	5953	0.02	546.97
003347485-04	OBS	No	223.918755	251.573193	1178.7	6.332	11.2	10.0	1.61	5953	10.50	5.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003347485-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
003347485-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
003347485-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
003347485-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

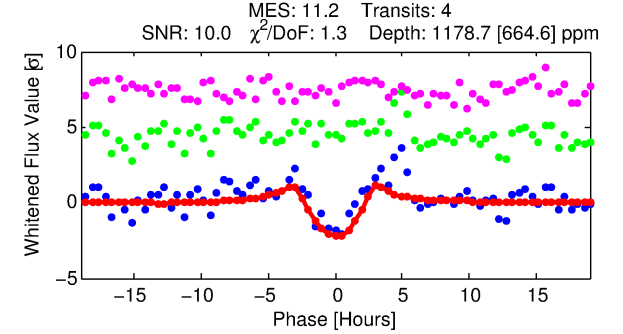
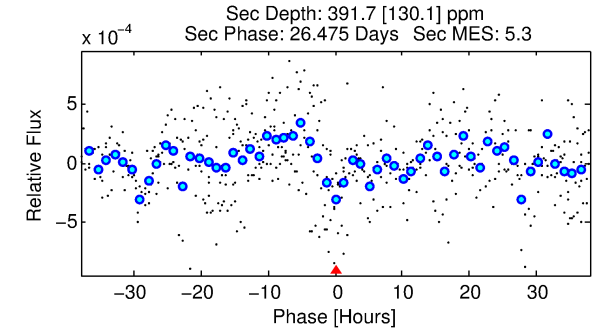
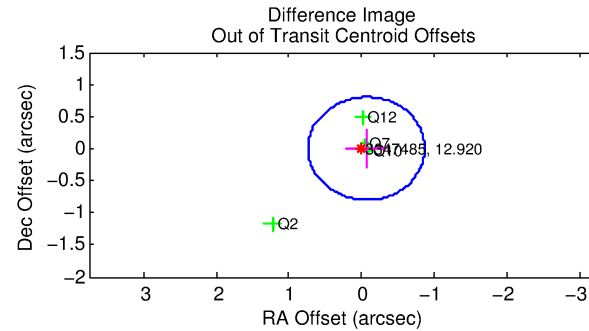
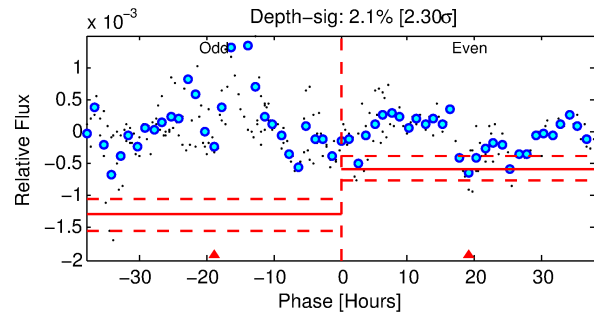
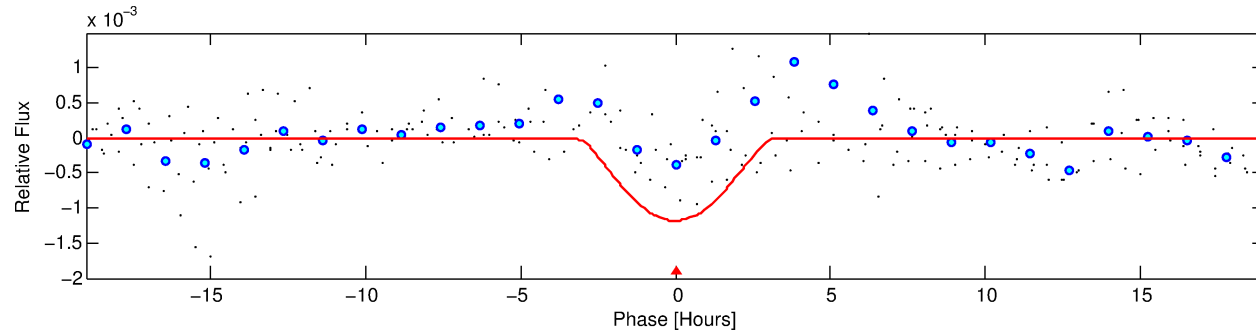
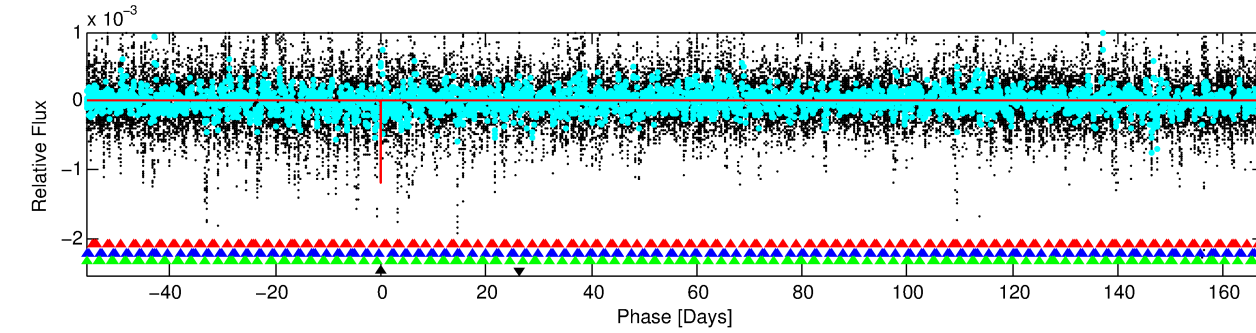
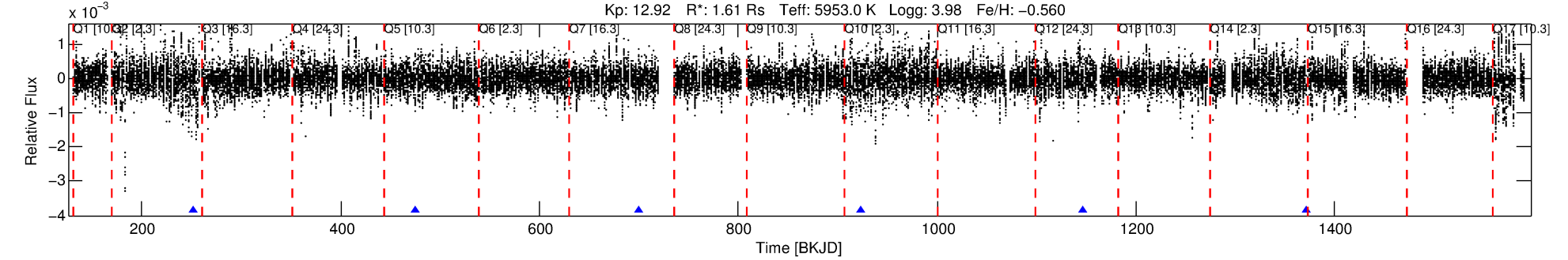
Ephemeris Match Information For 003347485-04

No Significant Match Found

DV One-Page Summary

KIC: 3347485 Candidate: 4 of 4 Period: 223.919 d
KOI: K05985 Corr: No Ephemeris Match

Kp: 12.92 R*: 1.61 Rs Teff: 5953.0 K Logg: 3.98 Fe/H: -0.560



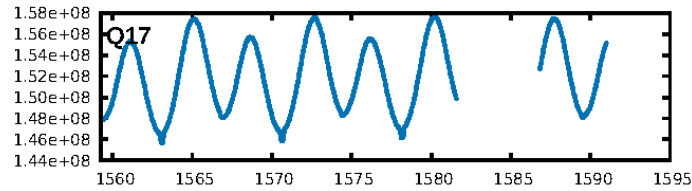
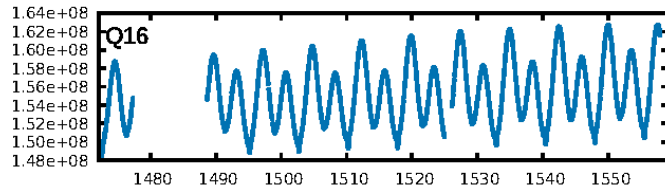
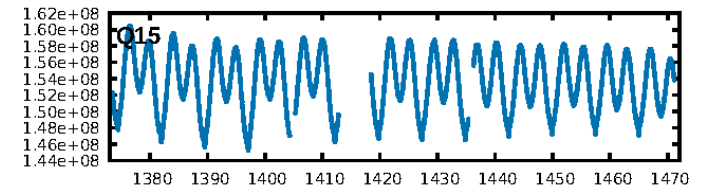
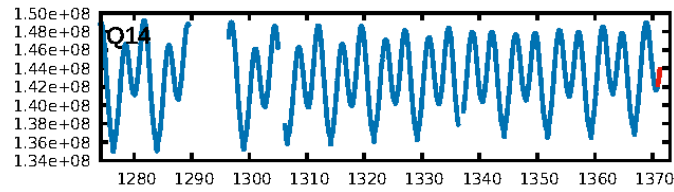
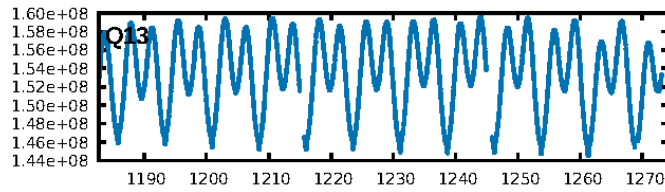
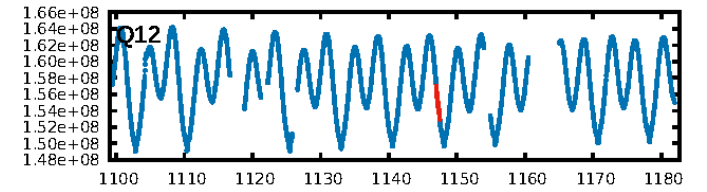
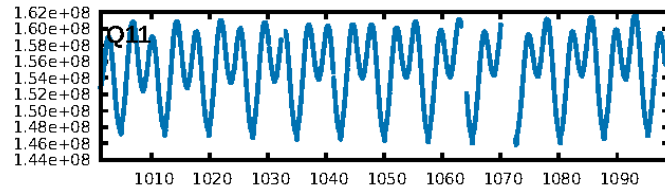
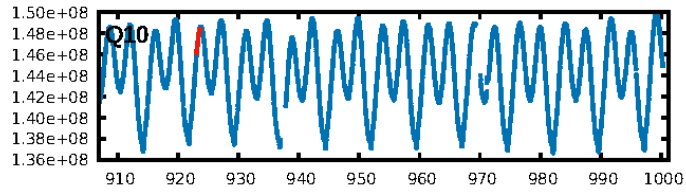
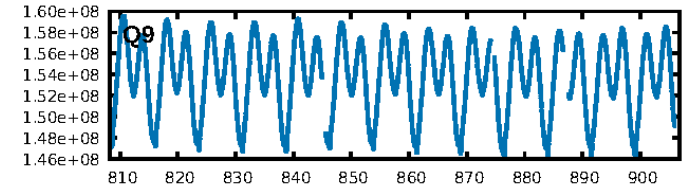
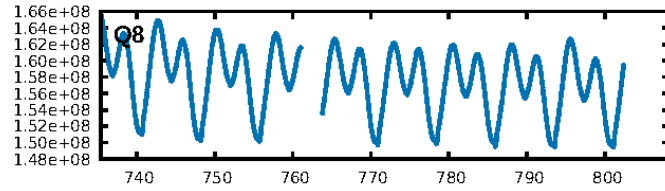
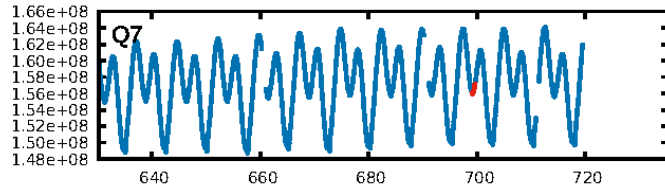
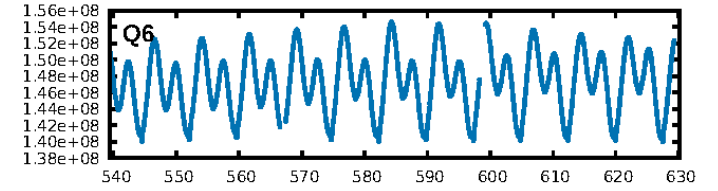
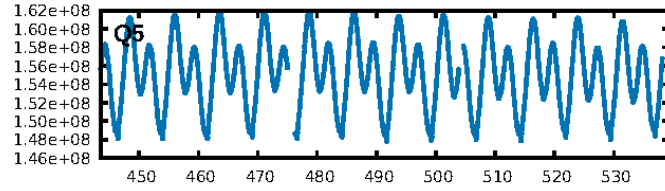
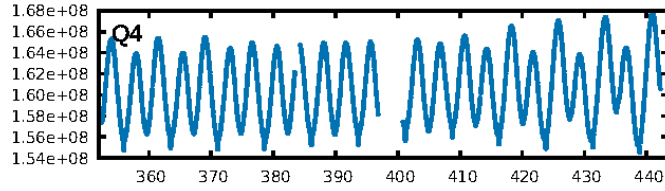
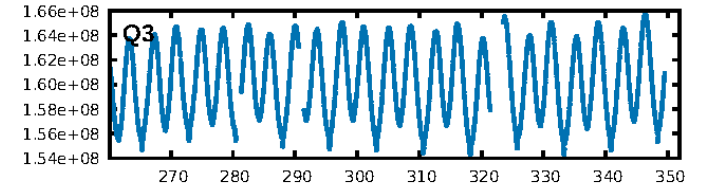
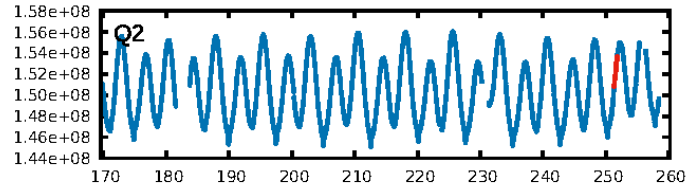
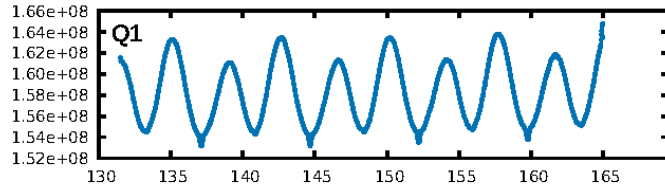
DV Fit Results:

Period = 223.91875 [0.00424] d
Epoch = 251.5732 [0.0151] BKJD
Rp/R* = 0.0598 [0.1367]
a/R* = 94.85 [50.89]
b = 1.00 [0.17]
Seff = 5.95 [4.89]
Teq = 398 [82] K
Rp = 10.50 [24.44] Re
a = 0.6995 [0.3358] AU
Ag = 956.15 [4450.18] [0.21σ]
Teffp = 3424 [3924] K [0.77σ]

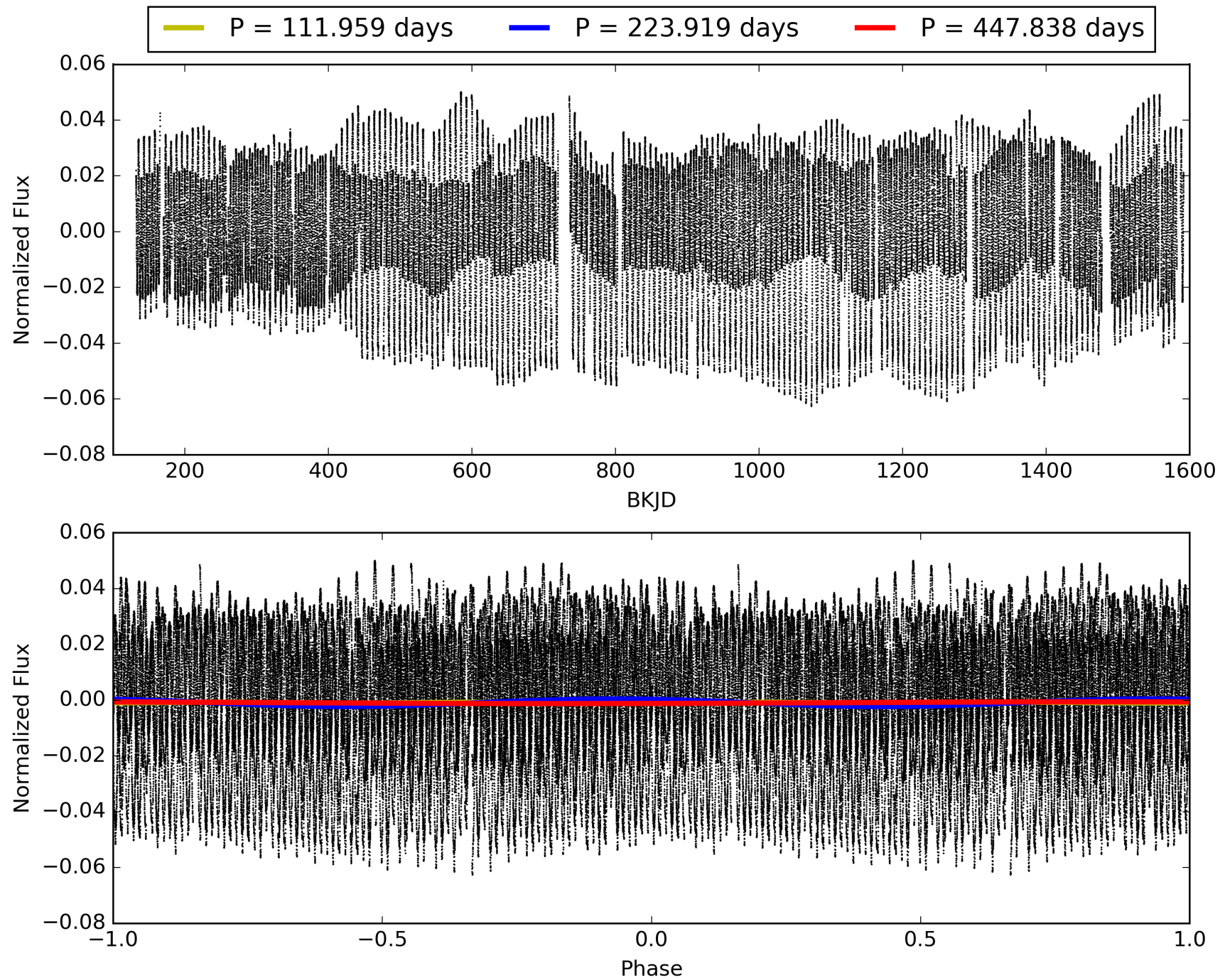
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [581.37σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.5%
ModelChiSquareGof-sig: 76.0%
Bootstrap-pfa: 1.53e-16
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.2853
Centroid-sig: 60.8%
Centroid-so: 0.357 arcsec [0.86σ]
OotOffset-rm: 0.065 arcsec [0.24σ]
KicOffset-rm: 0.117 arcsec [0.39σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.75 [3/4]

TCE 003347485-04, PDC Light Curves

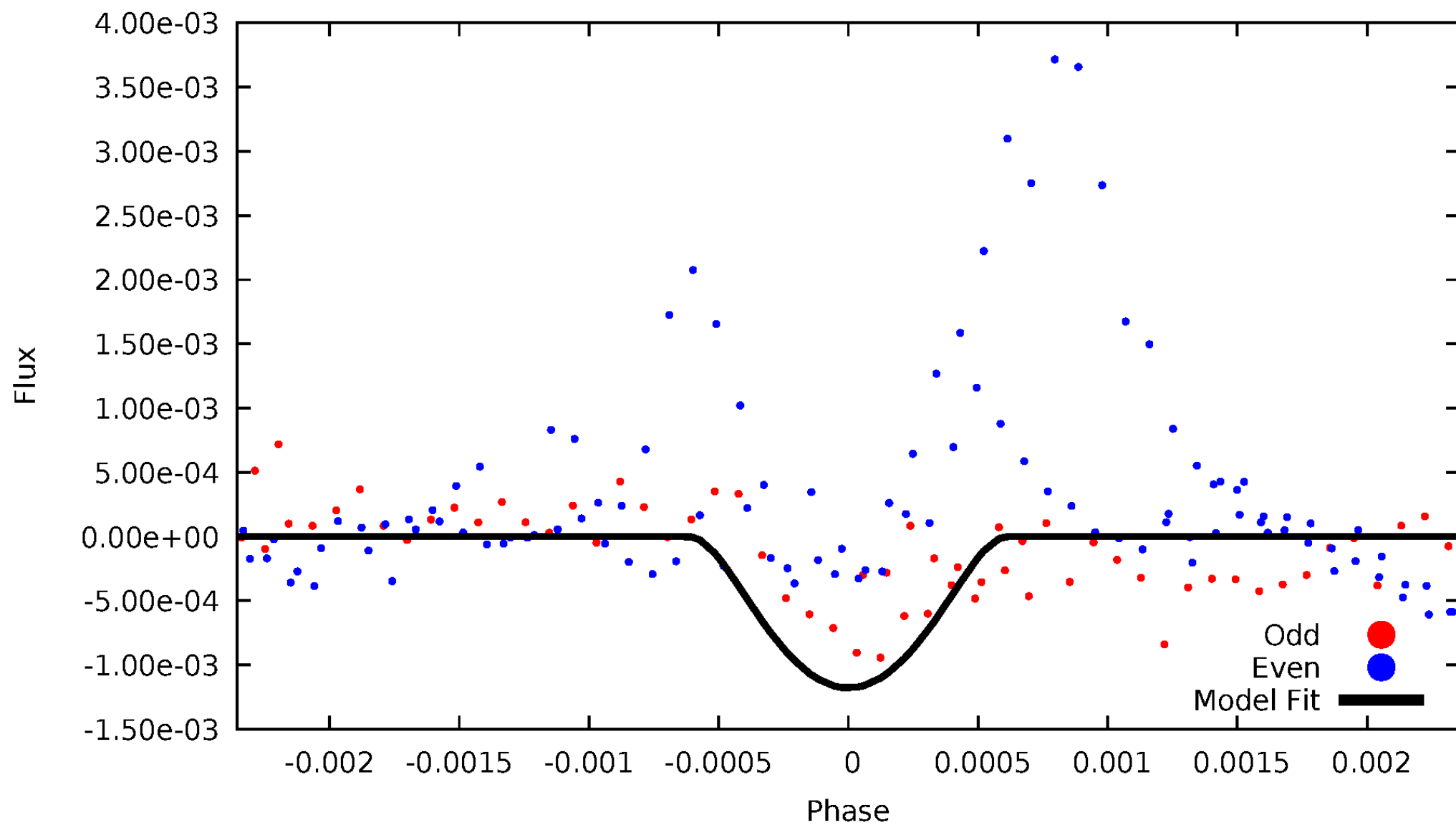


TCE 003347485-04



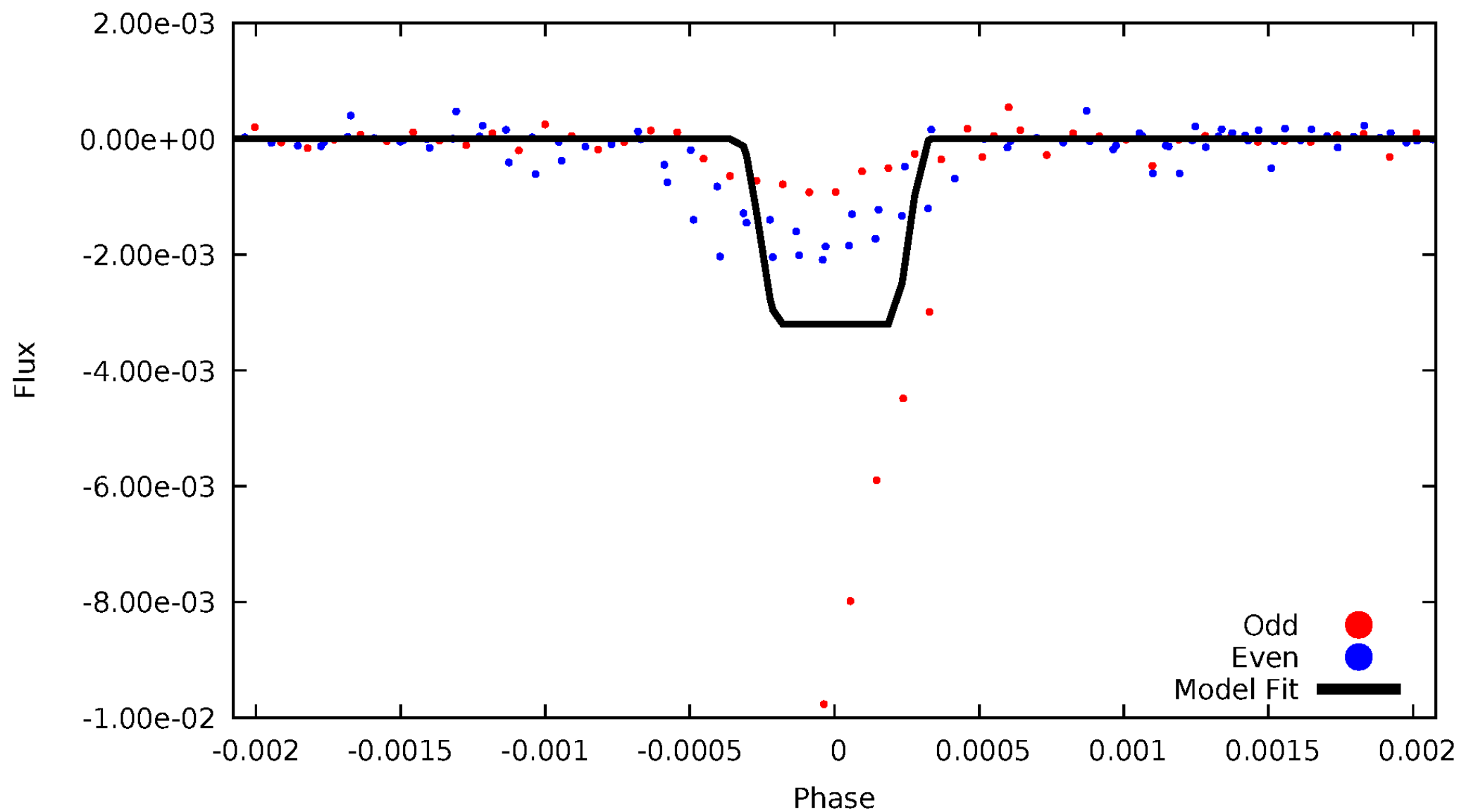
DV Odd/Even

TCE 003347485-04



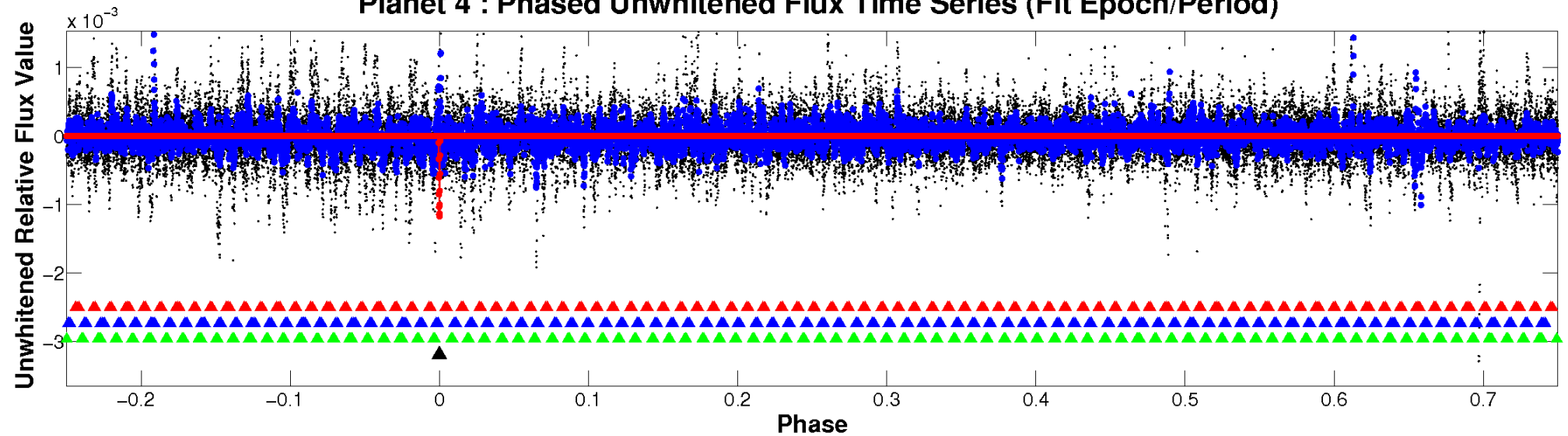
ALT Odd/Even

TCE 003347485-04

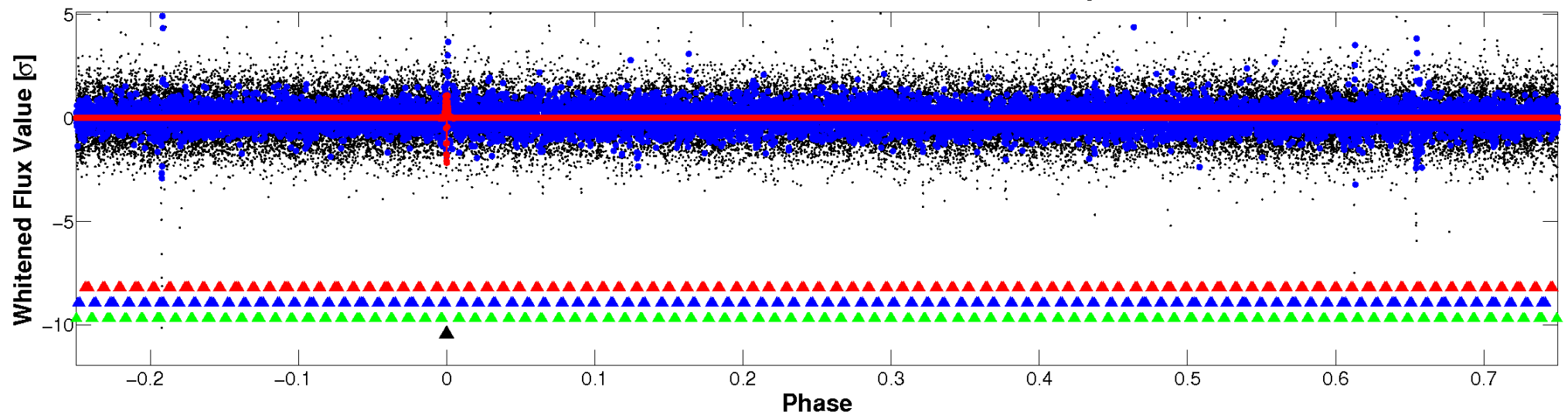


Non-Whitened Vs. Whitened Light Curve

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

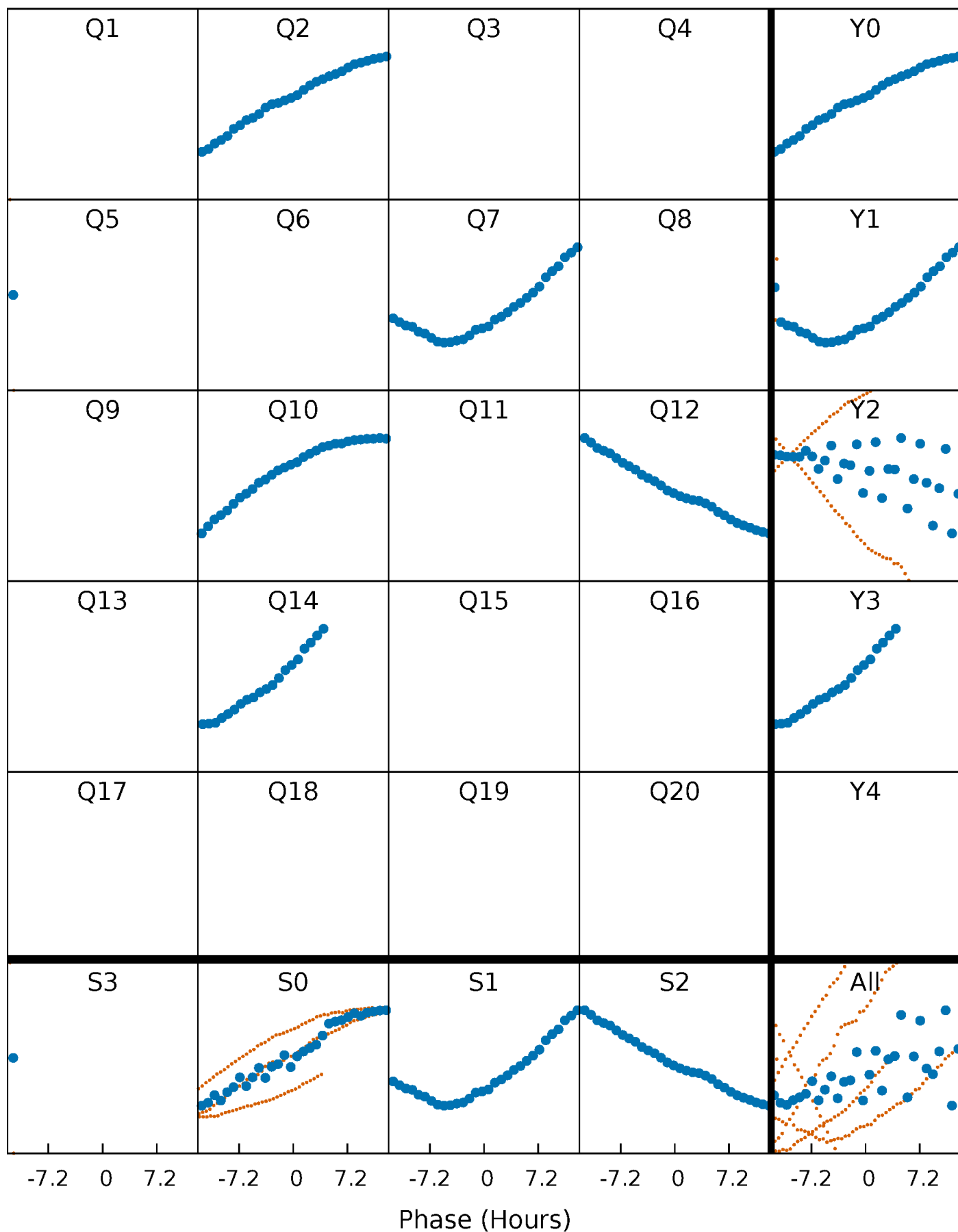


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



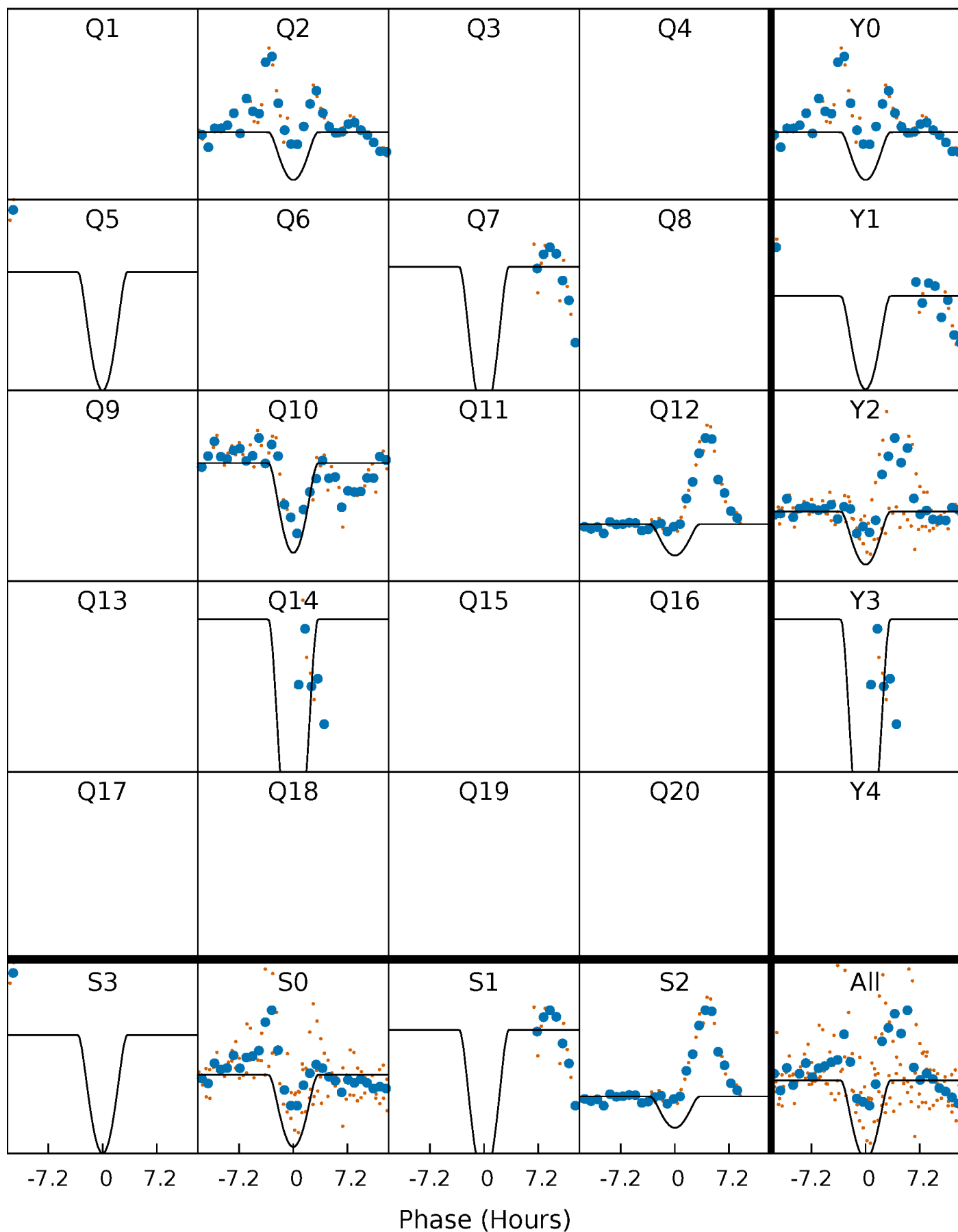
PDC Quarter-Phased Transit Curves

TCE 003347485-04 P=223.918755 Days $T_0=251.573193$ (BKJD)



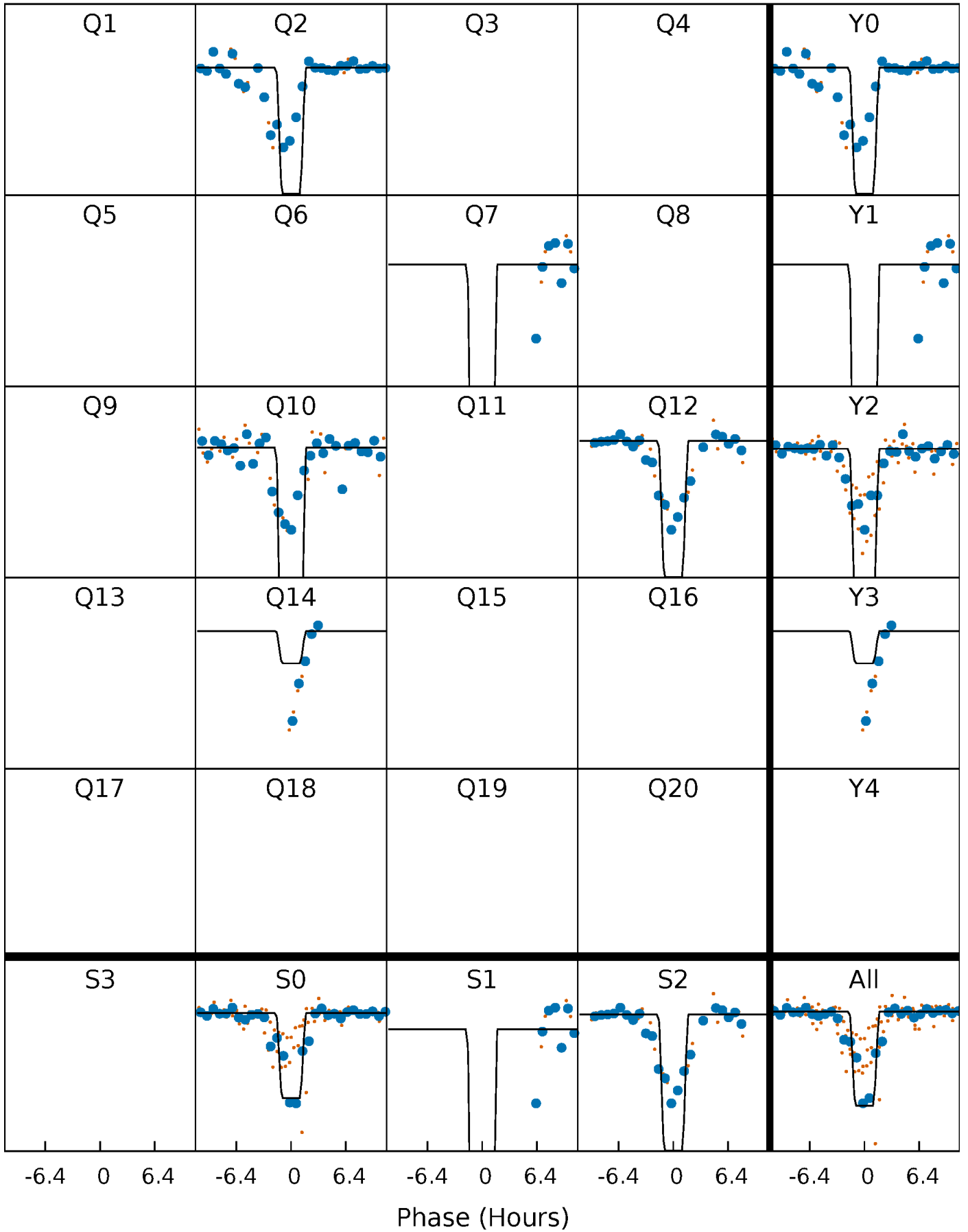
DV Quarter-Phased Transit Curves

TCE 003347485-04 P=223.918755 Days $T_0=251.573193$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

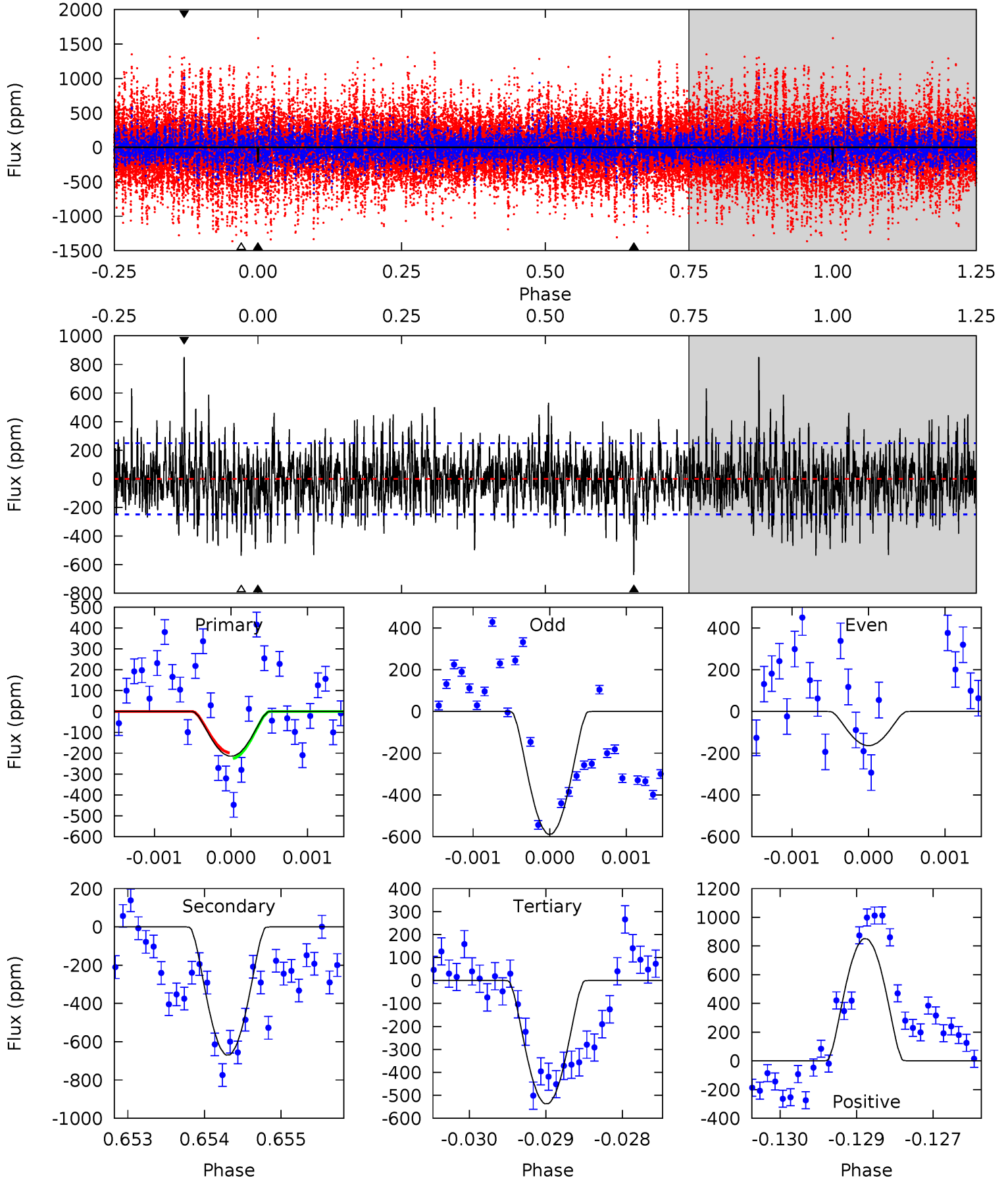
TCE 003347485-04 P=223.915713 Days $T_0=251.609265$ (BKJD)



DV Model-Shift Uniqueness Test

003347485-04, P = 223.918755 Days, E = 27.654438 Days

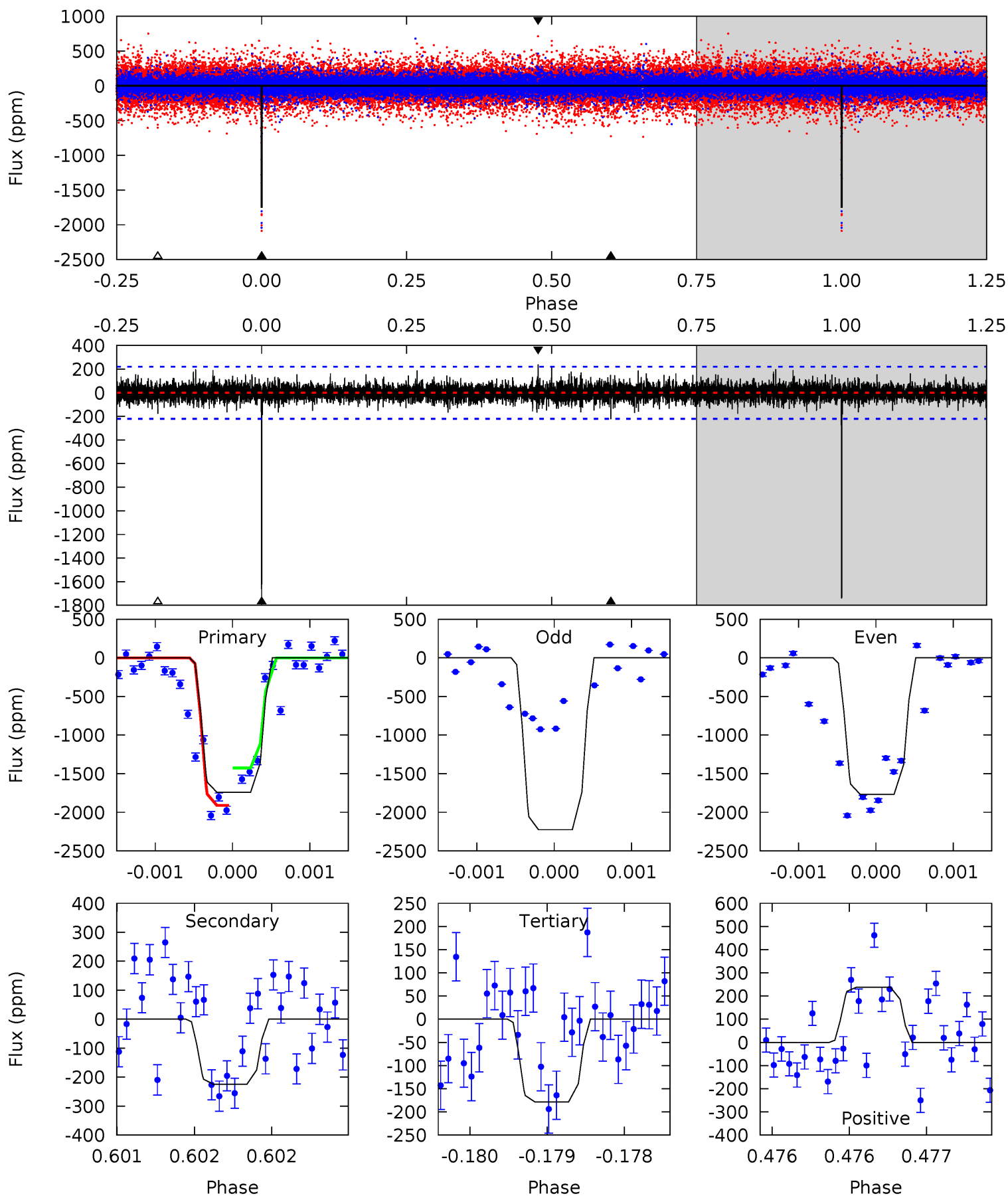
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.66	14.6	11.7	18.5	5.42	3.24	3.32	-7.02	-13.9	2.89	-3.94	4.66	2.60	0.56	0.30



Alt Model-Shift Uniqueness Test

003347485-04, P = 223.915713 Days, E = 27.693552 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.7	5.63	4.47	5.98	5.53	3.41	1.09	39.2	37.7	1.15	-0.35	6.38	1.72	0.12	6.35



Stellar Parameters For KIC 003347485

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5953^{+159}_{-159}	$3.984^{+0.495}_{-0.165}$	$-0.560^{+0.300}_{-0.250}$	$1.609^{+0.472}_{-0.708}$	$0.910^{+0.114}_{-0.103}$	$0.308^{+1.334}_{-0.142}$
	+3%/-3%	+12%/-4%	+54%/-45%	+29%/-44%	+13%/-11%	+434%/-46%
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 003347485-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-670 ± 46	$19.12^{+18.07}_{-13.26}$	543^{+51}_{-72}	3276^{+1567}_{-504}	494^{+4885}_{-360}
Alt.	-224 ± 40	$18.90^{+18.95}_{-12.54}$	543^{+49}_{-75}	2840^{+1139}_{-432}	163^{+1456}_{-121}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

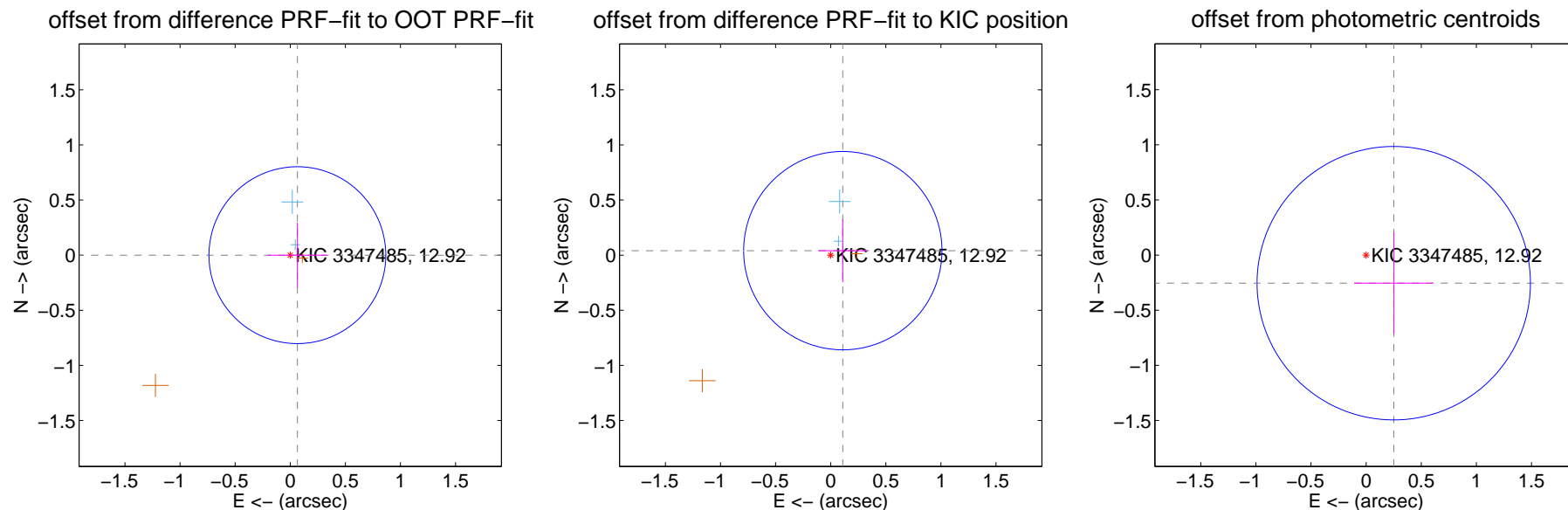
DV Centroid Data

Supplemental centroid analysis for 003347485-04. Kepler magnitude: 12.92. Transit SNR 9.98

There are 2 quarters with good PRF difference image offsets

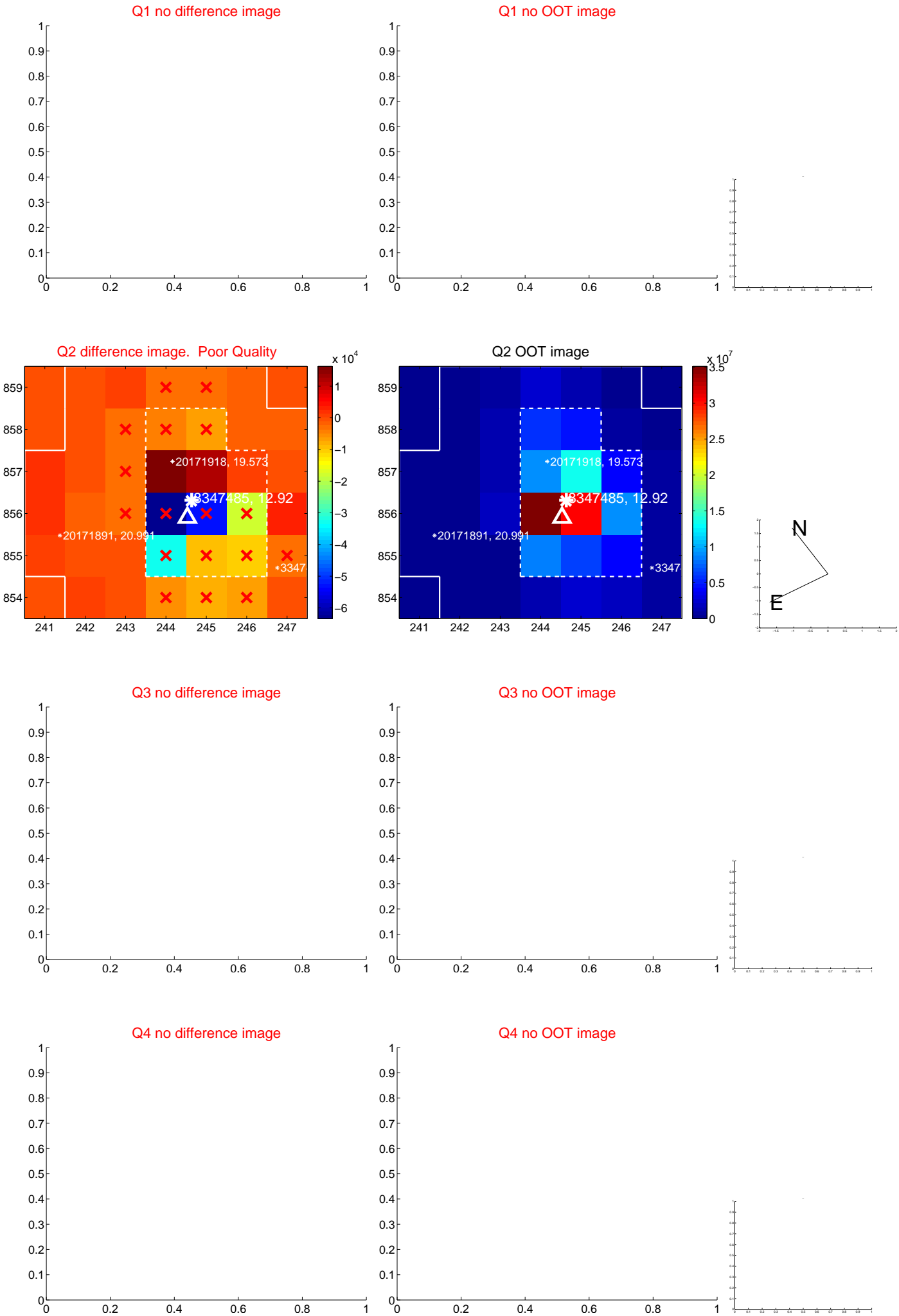
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.065 ± 0.267	0.24	-0.065 ± 0.268	-0.000 ± 0.295
PRF-fit source offset from KIC position	0.117 ± 0.300	0.39	-0.110 ± 0.225	0.041 ± 0.285
photometric centroid source offset	0.36 ± 0.41	0.86	-0.25 ± 0.36	-0.25 ± 0.46

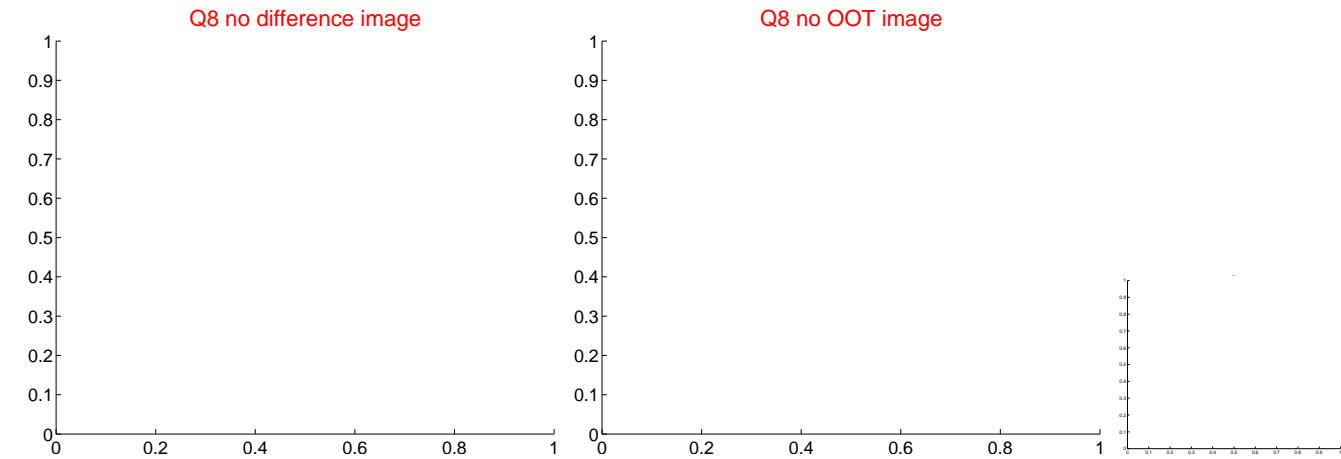
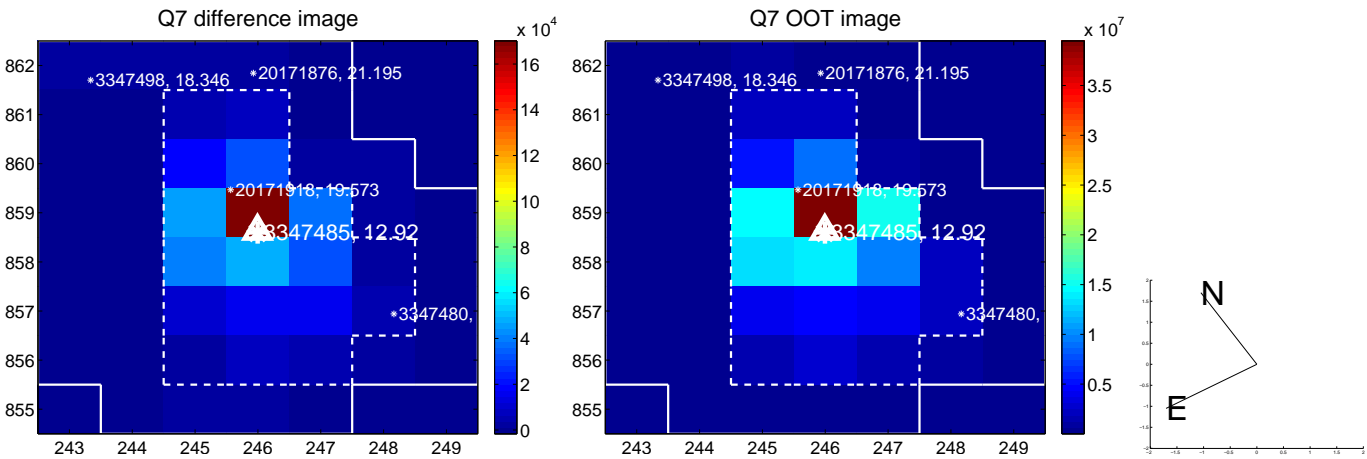
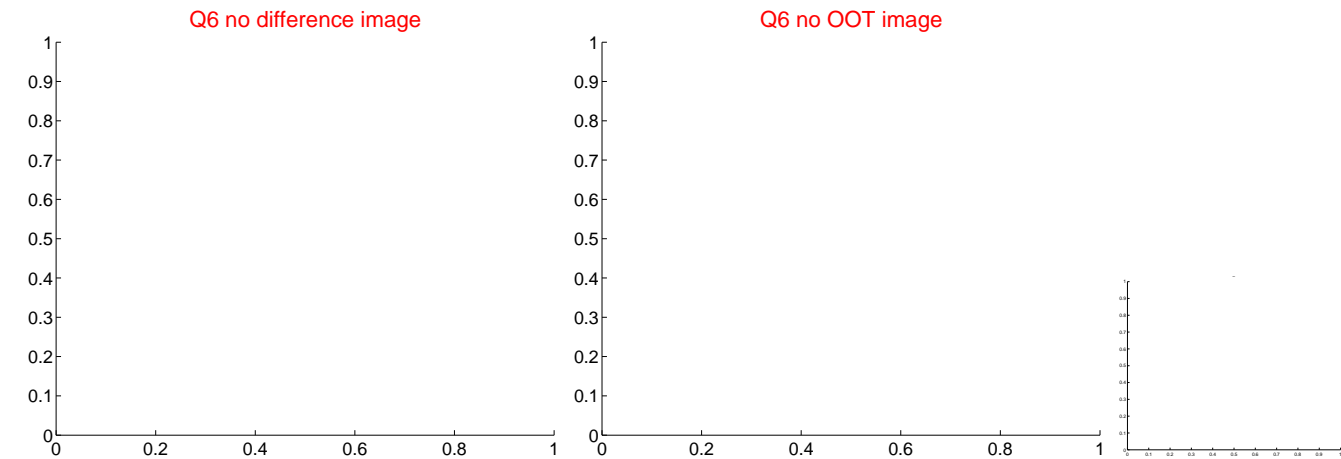
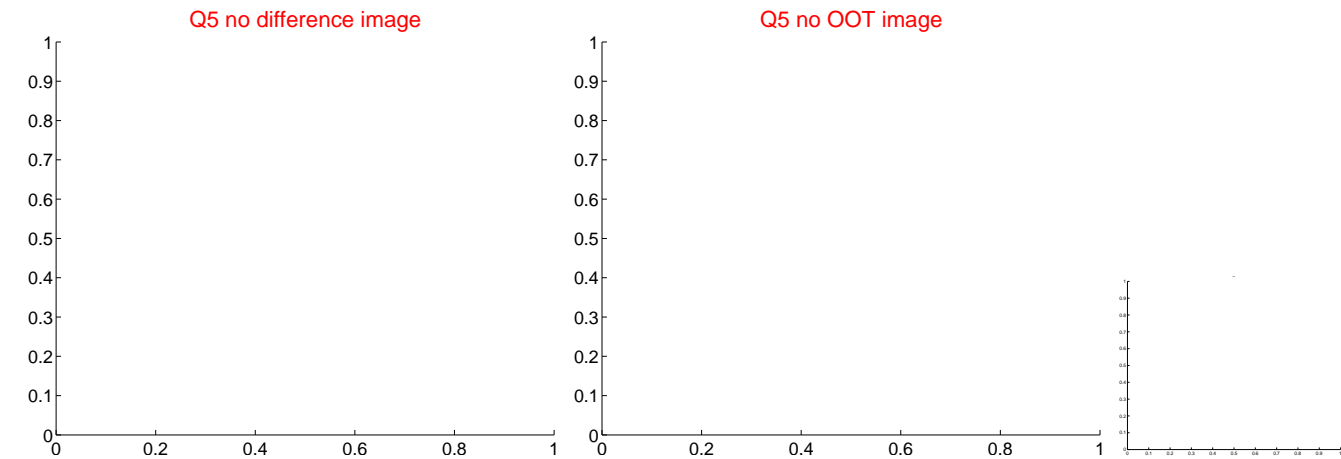


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

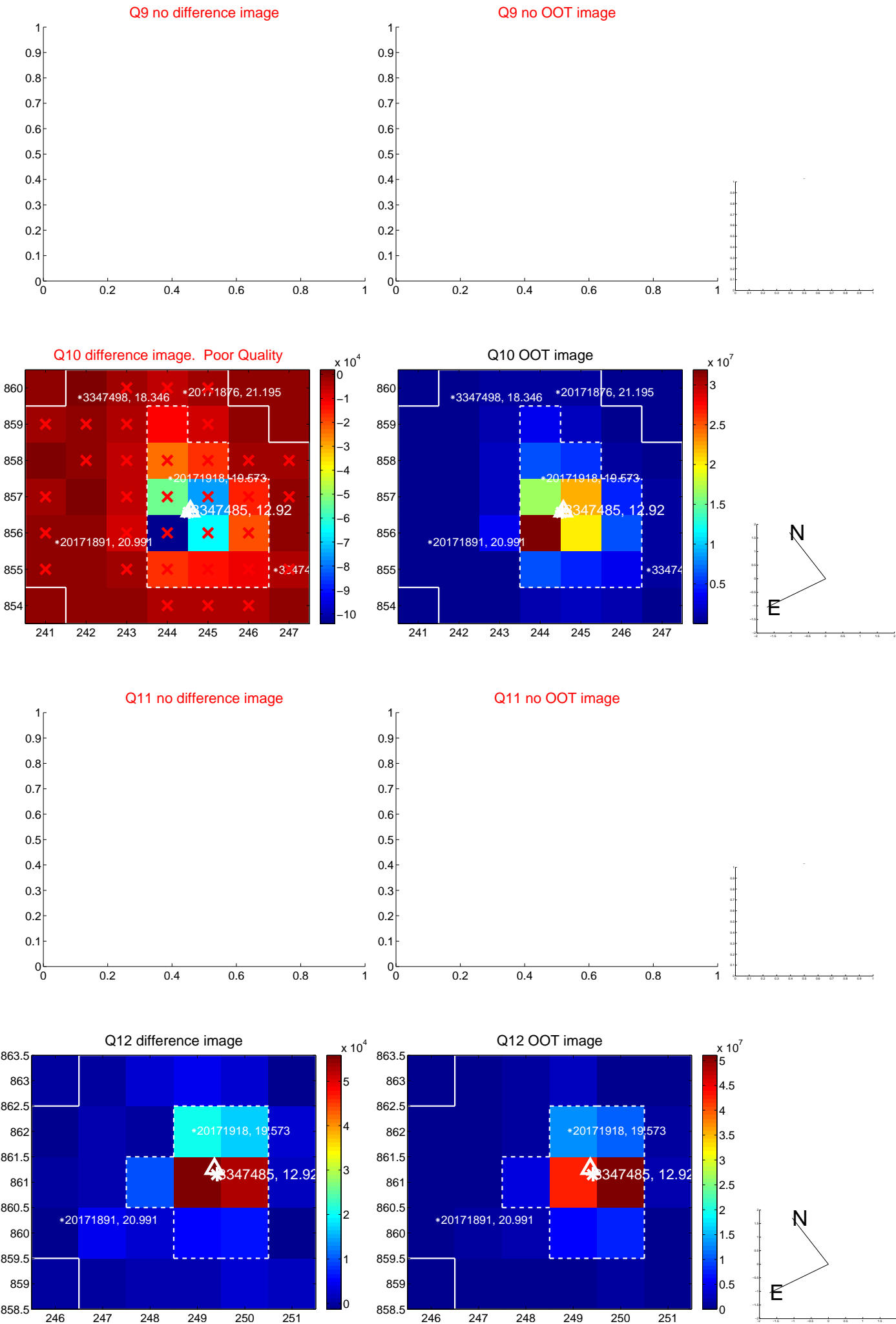
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



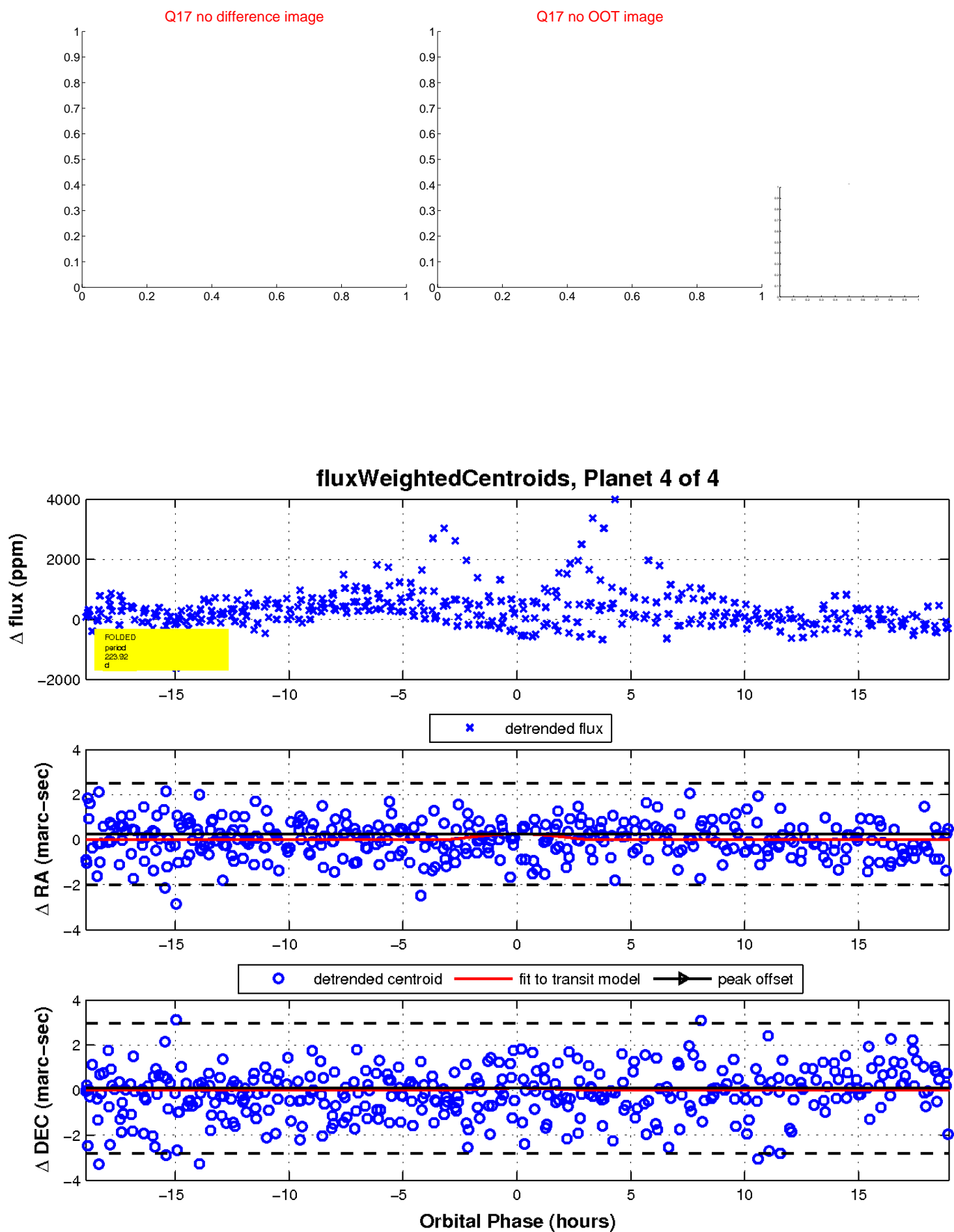
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

