

KIC 004142768

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})
004142768-01	OBS	6387.01	13.995852	131.657363	19421.9	4.962	870.9	866.1	2.70	5638	60.41	494.26
004142768-02	OBS	No	13.995944	132.023819	2980.6	10.652	61.4	57.3	2.70	5638	27.41	494.26
004142768-03	OBS	No	13.996105	132.879453	476.5	6.079	28.1	18.6	2.70	5638	6.01	494.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004142768-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004142768-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
004142768-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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.

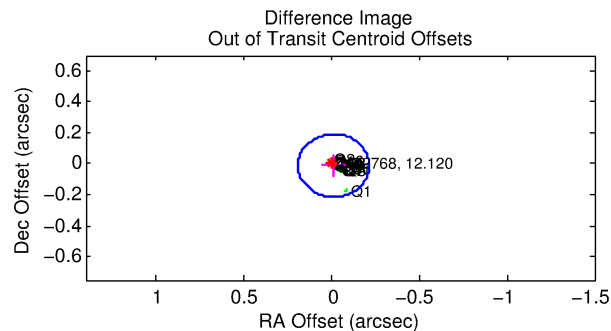
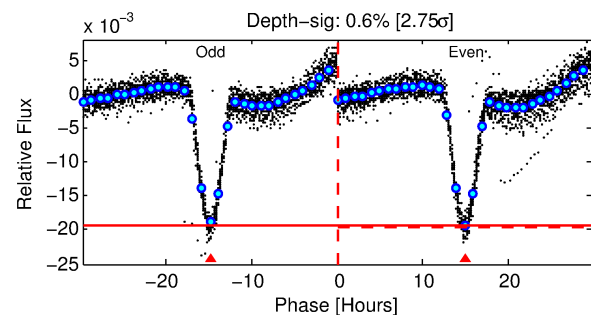
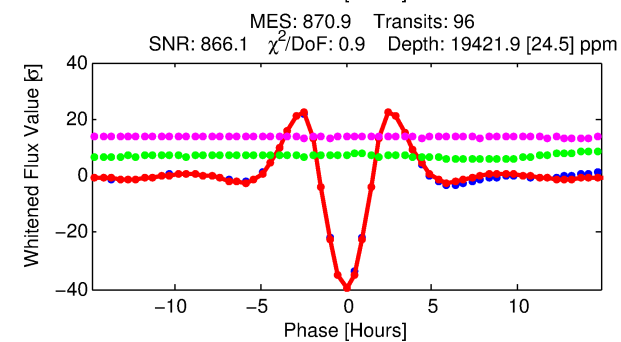
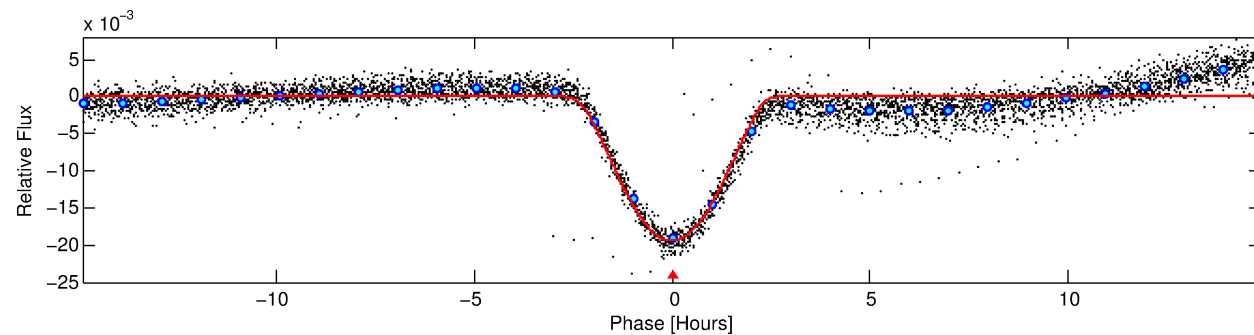
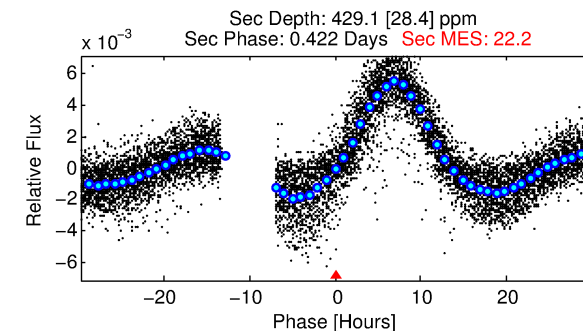
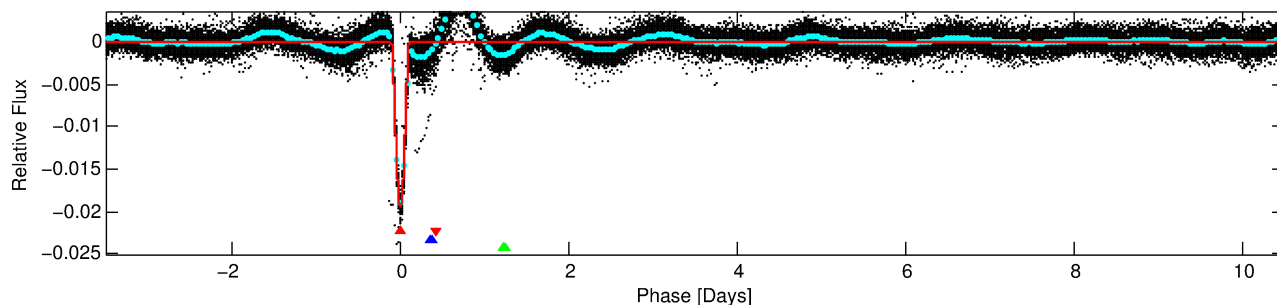
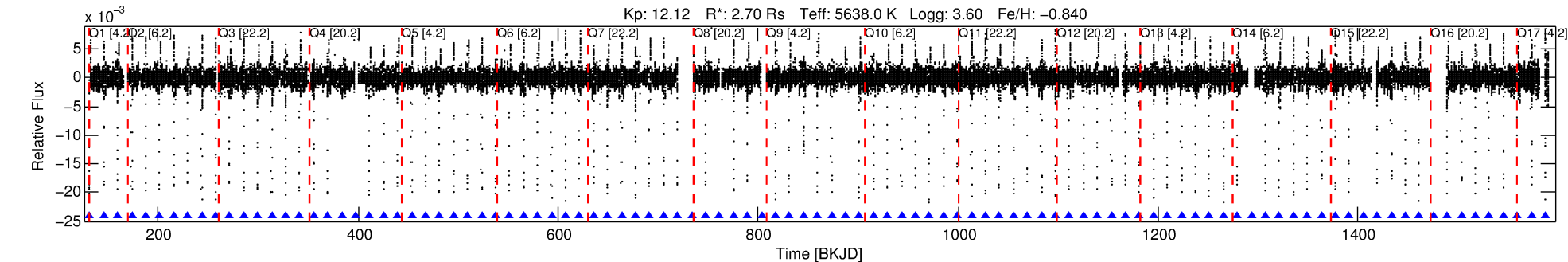
Ephemeris Match Information For 004142768-01

No Significant Match Found

DV One-Page Summary

KIC: 4142768 Candidate: 1 of 3 Period: 13.996 d
KOI: K06387.01 Corr: 0.992

Kp: 12.12 R*: 2.70 Rs Teff: 5638.0 K Logg: 3.60 Fe/H: -0.840



DV Fit Results:

Period = 13.99585 [0.00000] d
Epoch = 131.6574 [0.0001] BKJD
Rp/R* = 0.2048 [0.0108]
a/R* = 15.39 [0.11]
b = 0.97 [0.02]
Seff = 494.26 [758.23]
Teq = 1202 [461] K
Rp = 60.41 [43.83] Re
a = 0.1157 [0.1007] AU
Ag = 0.87 [1.33] [-0.10σ]
Teffp = 1793 [85] K [1.26σ]

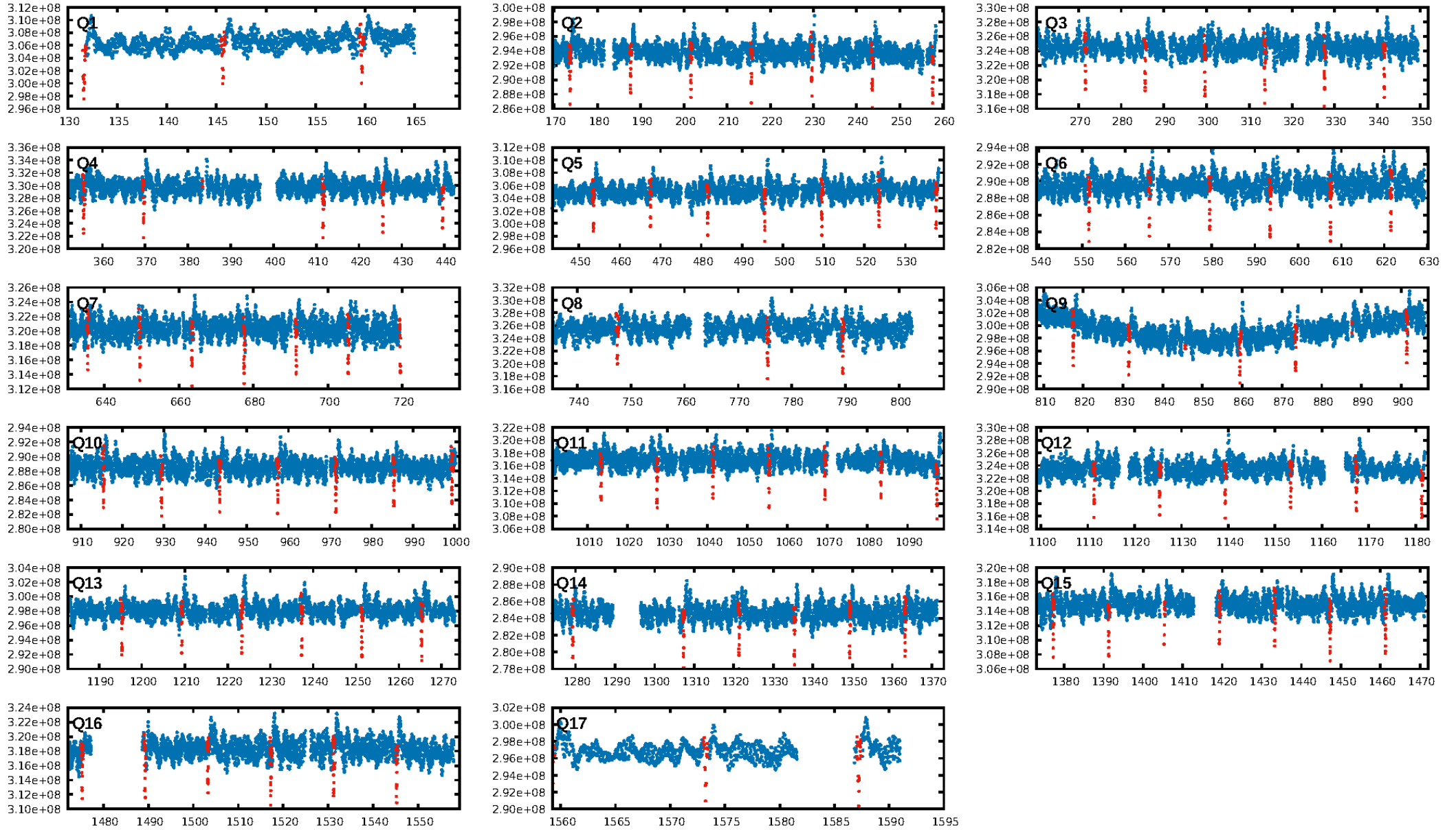
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 23.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [90/90]
GhostDiagnostic-chr: 2.362
Centroid-sig: 0.0%
Centroid-so: 0.008 arcsec [2.60σ]
OotOffset-rm: 0.016 arcsec [0.24σ]
KicOffset-rm: 0.102 arcsec [1.43σ]
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]

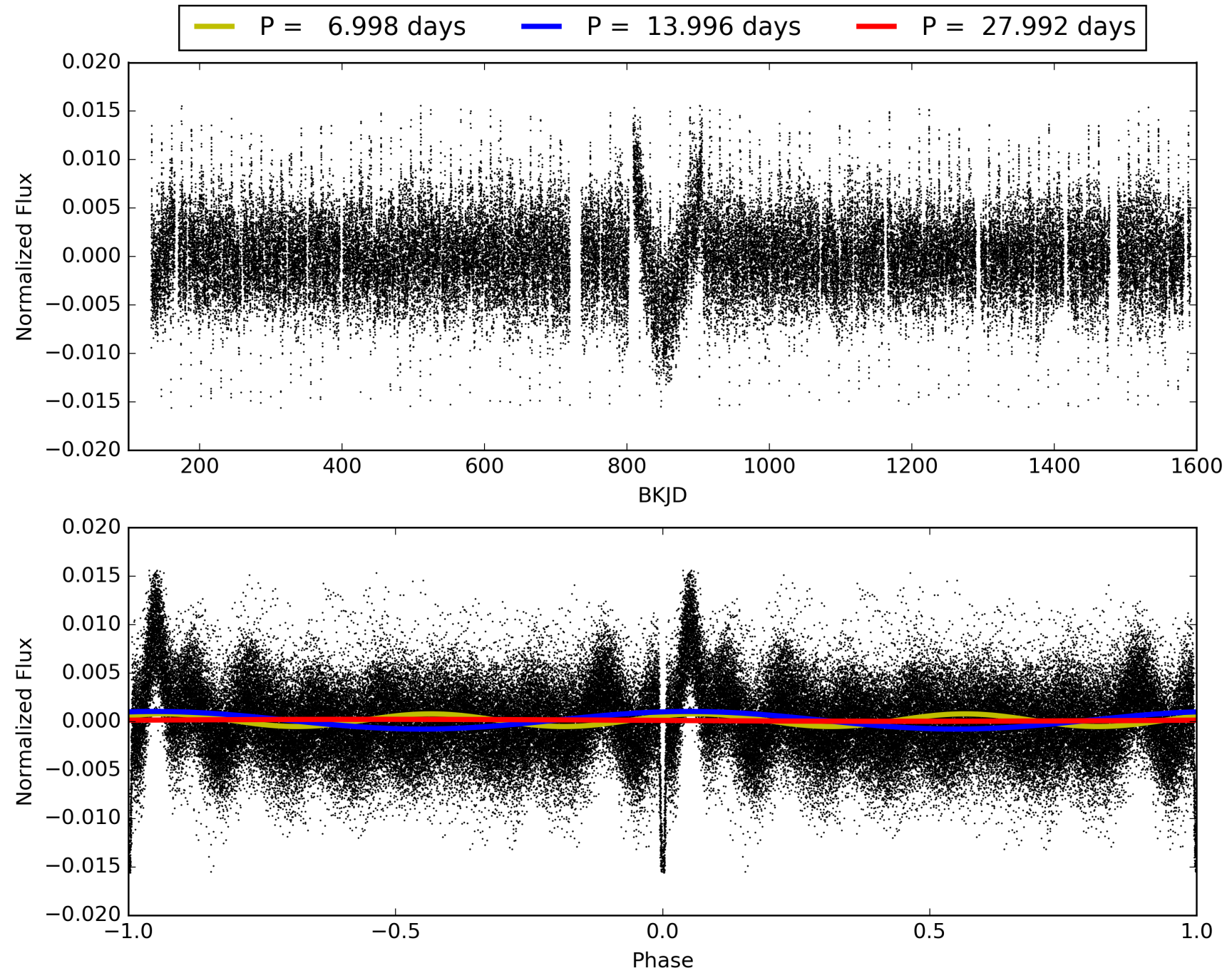
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:16:30 Z

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

TCE 004142768-01, PDC Light Curves

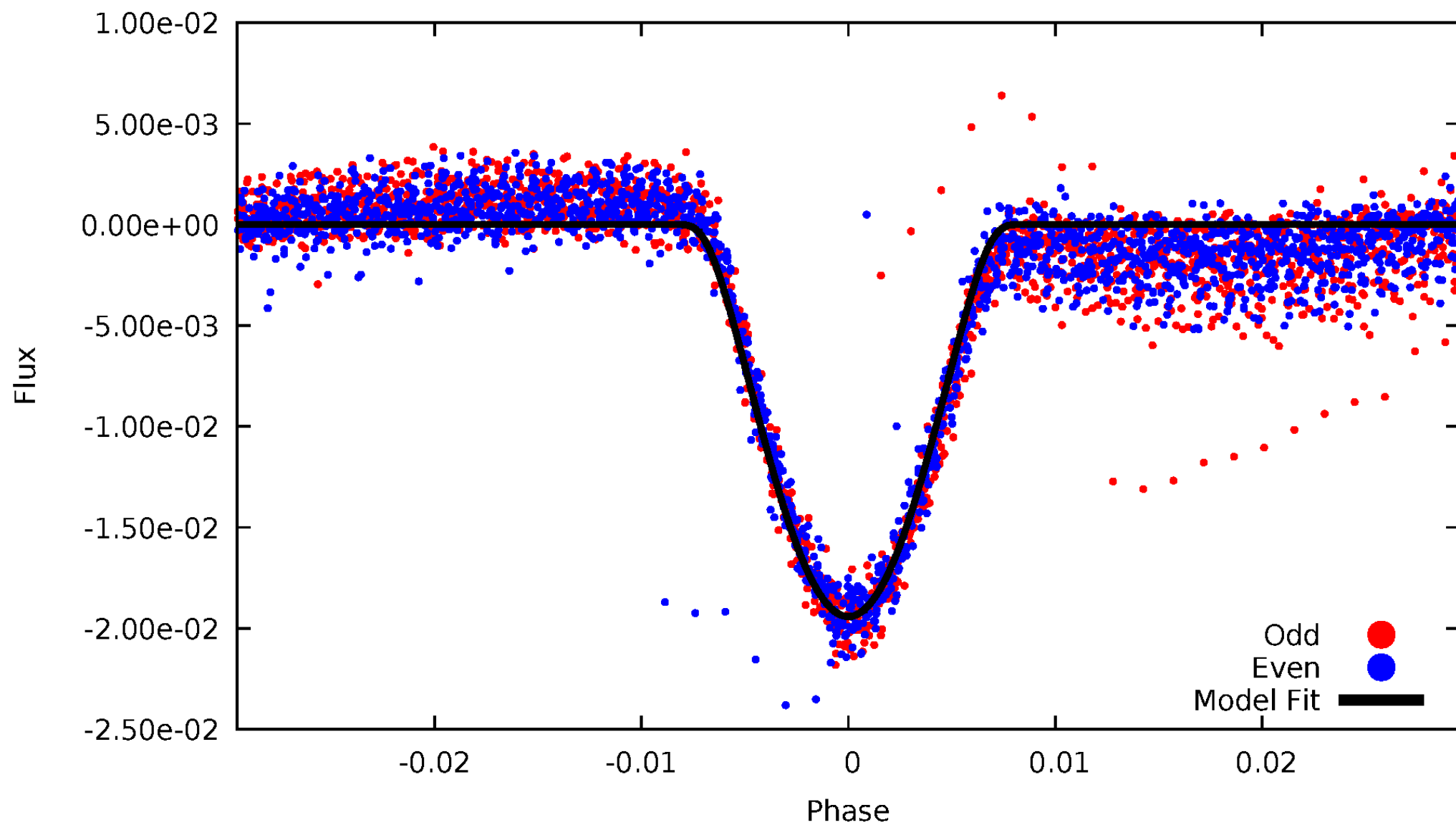


TCE 004142768-01



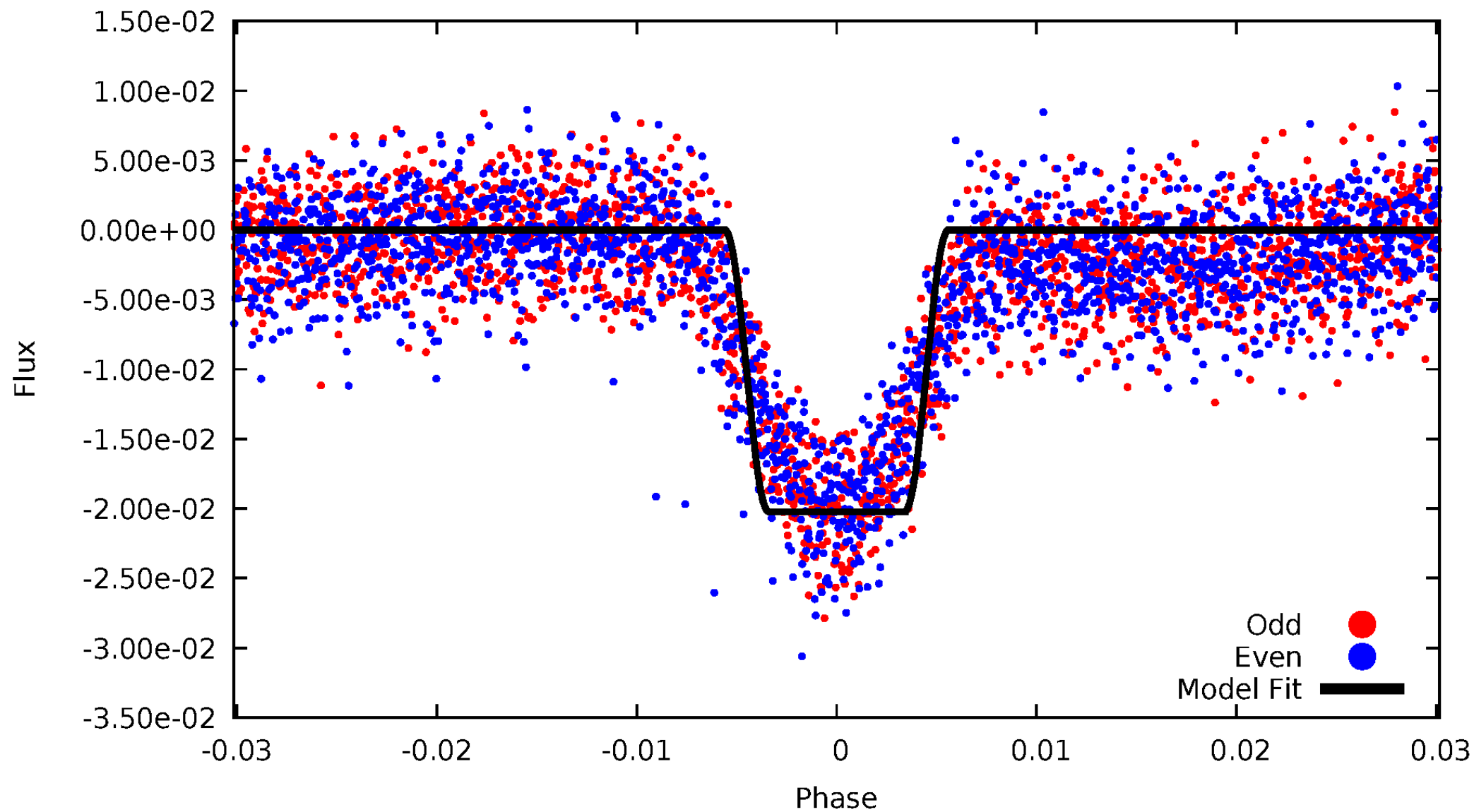
DV Odd/Even

TCE 004142768-01



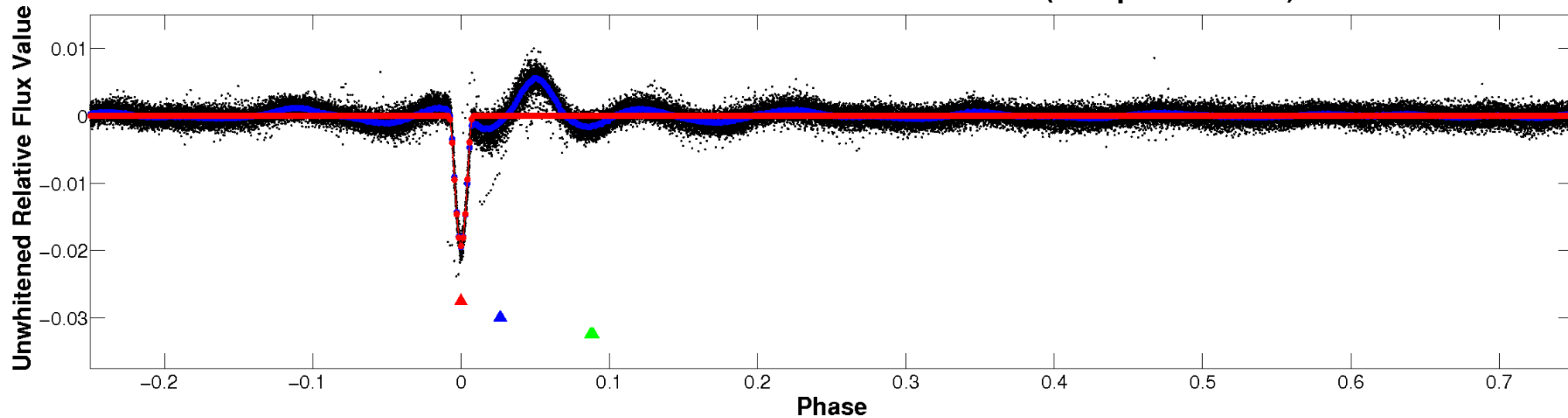
ALT Odd/Even

TCE 004142768-01

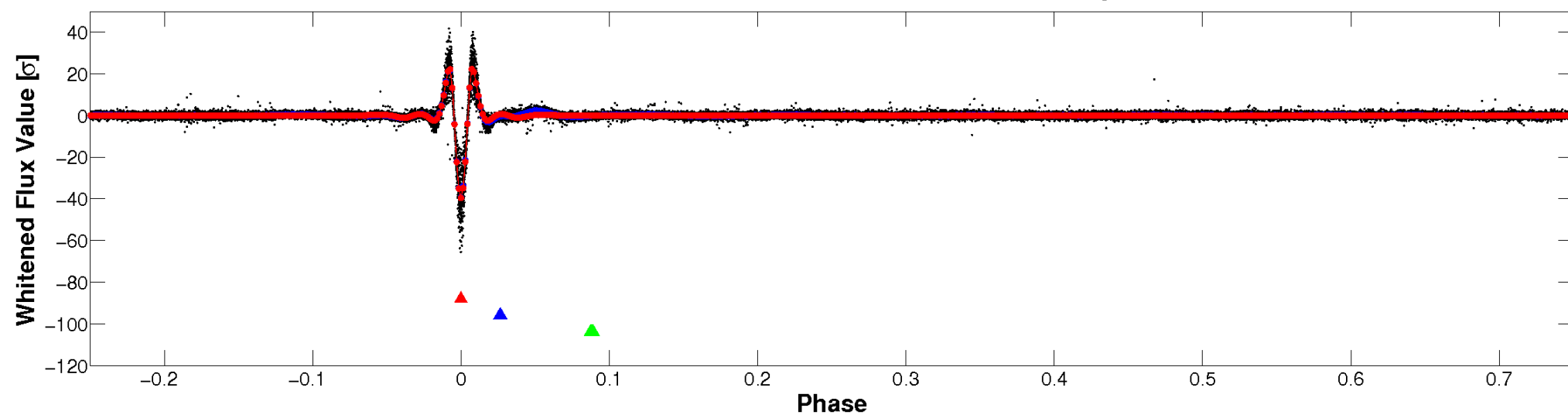


Non-Whitened Vs. Whitened Light Curve

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

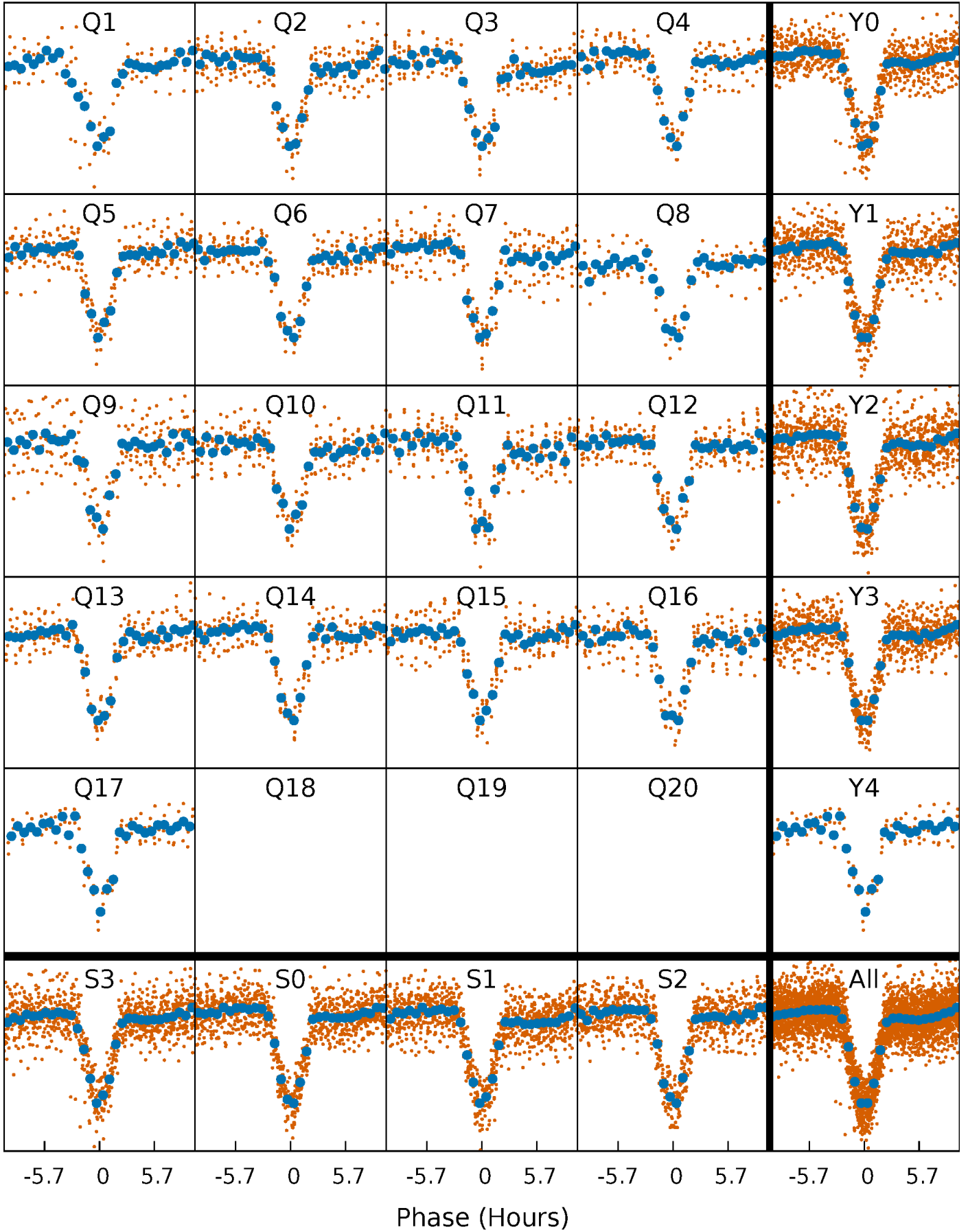


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



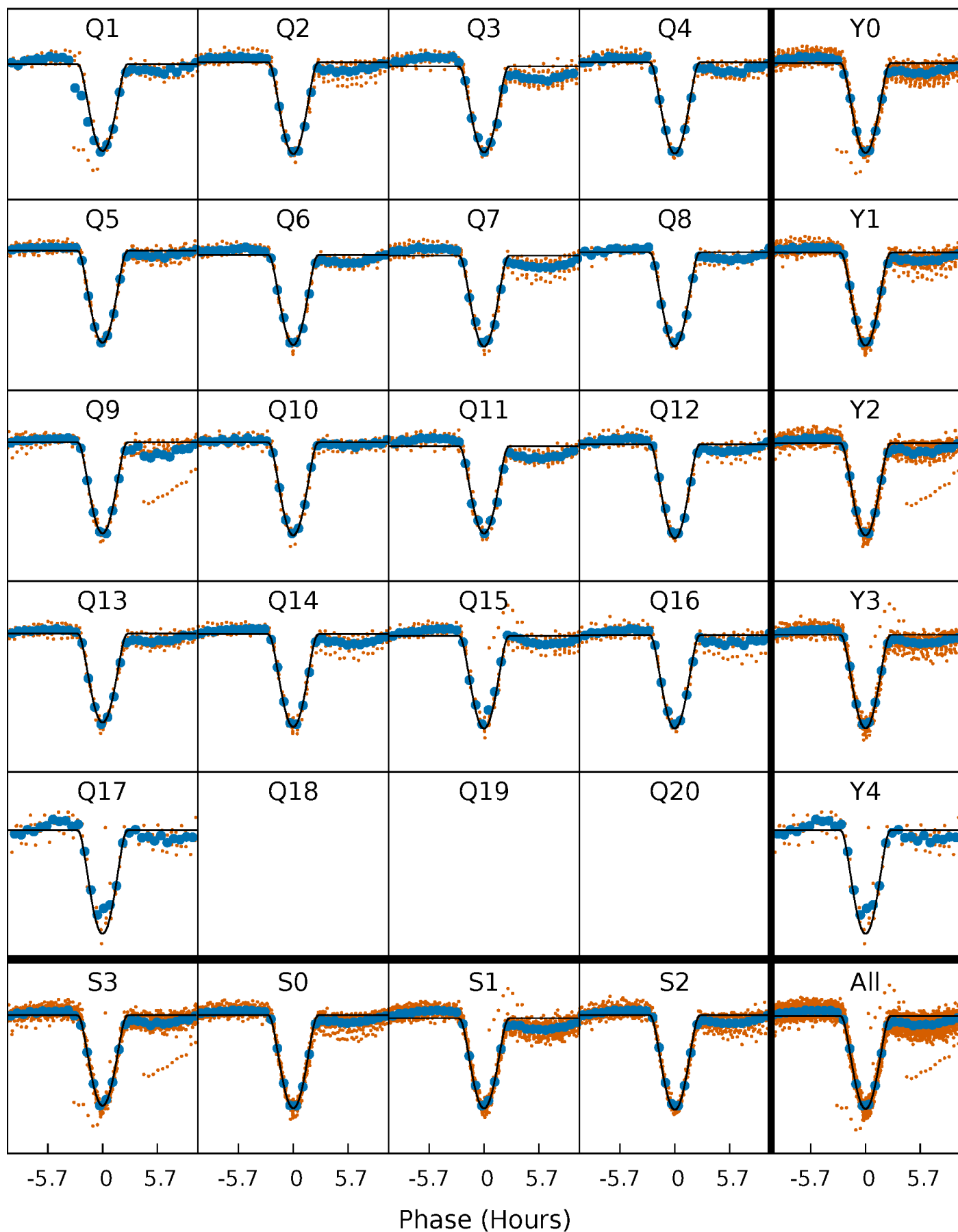
PDC Quarter-Phased Transit Curves

TCE 004142768-01 P= 13.995852 Days $T_0=131.657363$ (BKJD)



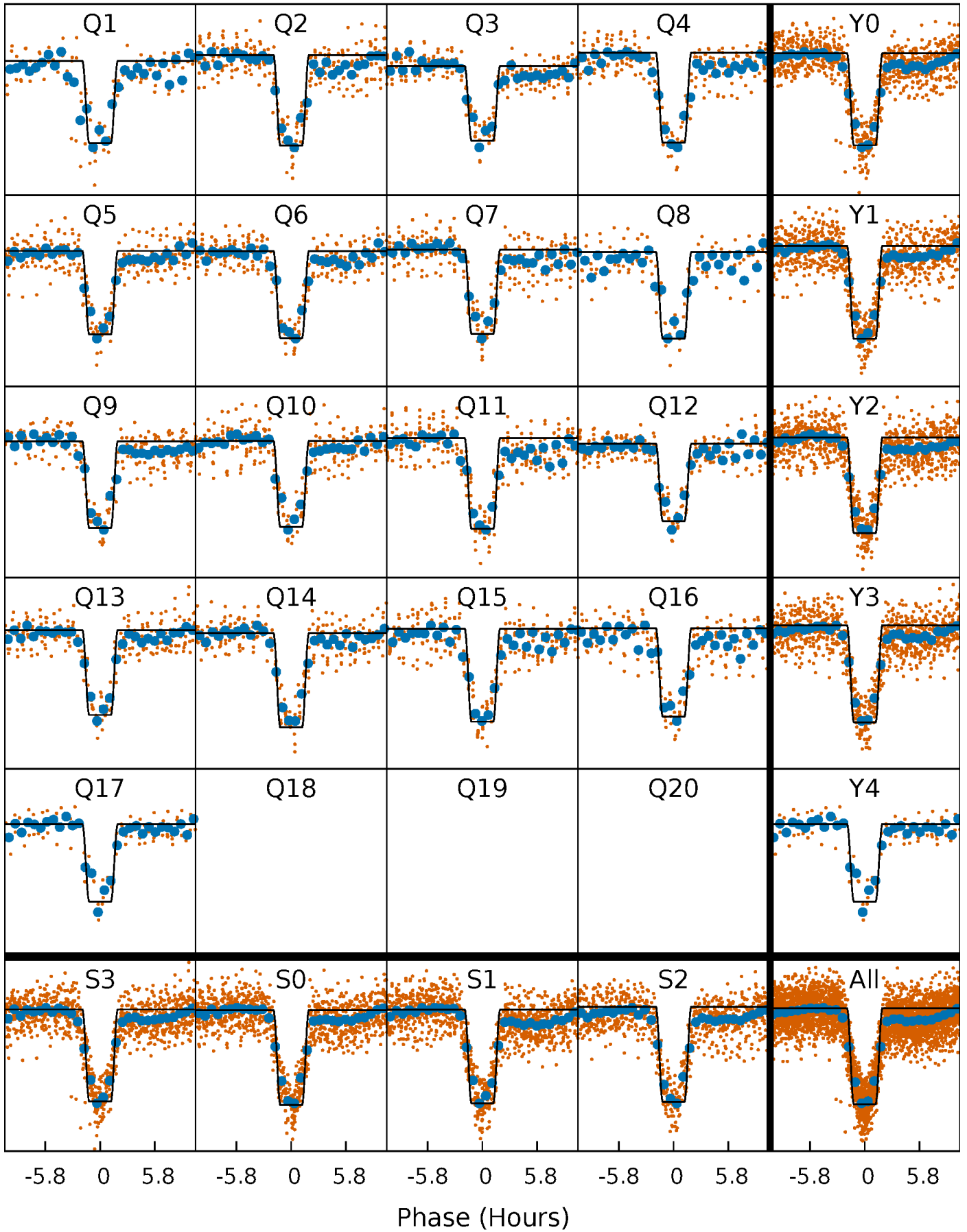
DV Quarter-Phased Transit Curves

TCE 004142768-01 P= 13.995852 Days $T_0=131.657363$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

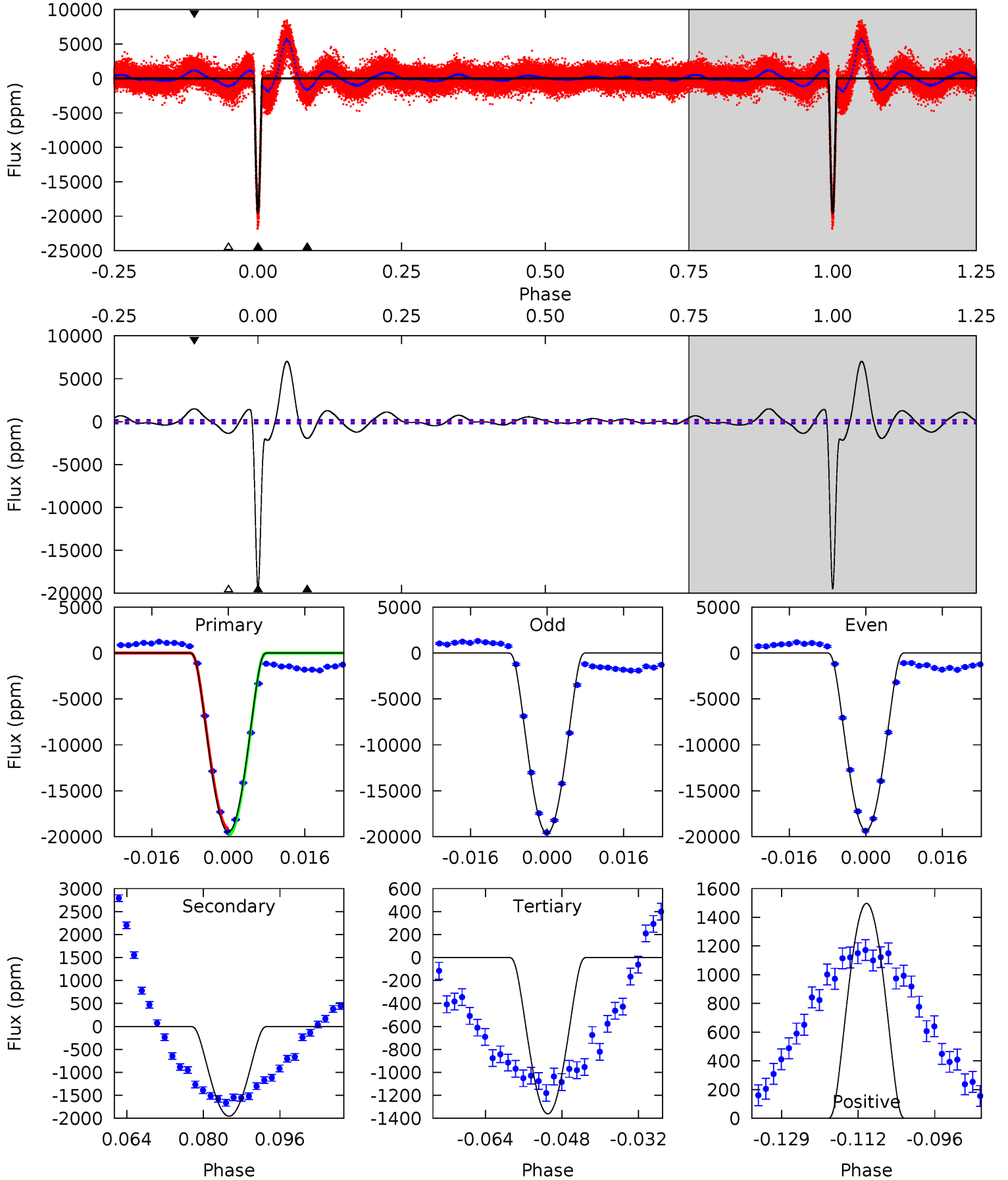
TCE 004142768-01 P= 13.995846 Days $T_0=131.659789$ (BKJD)



DV Model-Shift Uniqueness Test

004142768-01, P = 13.995852 Days, E = 117.661511 Days

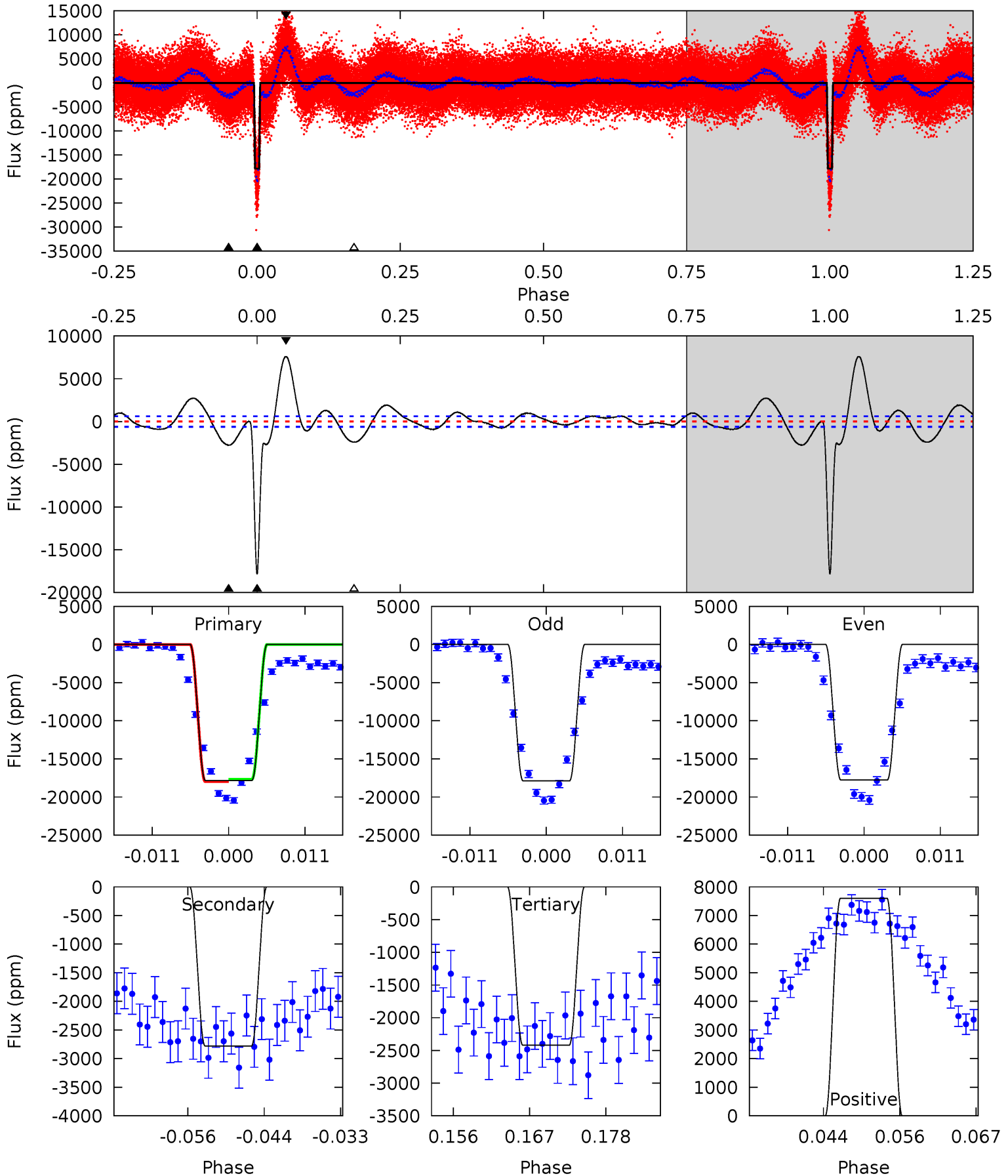
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
510.5	51.3	35.7	39.2	4.93	2.41	28.2	474.8	471.2	15.6	12.0	3.82	0.99	0.26	10.2



Alt Model-Shift Uniqueness Test

004142768-01, P = 13.995846 Days, E = 117.663943 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.4	22.7	19.7	62.1	5.01	2.54	11.9	125.7	83.4	2.93	-39.4	0.46	1.01	0.30	1.36



Stellar Parameters For KIC 004142768

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5638^{+203}_{-203}	$3.597^{+0.944}_{-0.236}$	$-0.840^{+0.350}_{-0.300}$	$2.703^{+1.053}_{-1.956}$	$1.055^{+0.231}_{-0.282}$	$0.075^{+2.238}_{-0.043}$
	+4%/-4%	+26%/-7%	+42%/-36%	+39%/-72%	+22%/-27%	+2975%/-57%
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 004142768-01 / KOI 6387.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1956 ± 38	$58.66^{+14.31}_{-21.29}$	1639^{+208}_{-325}	3170^{+92}_{-98}	$4.326^{+6.083}_{-1.566}$
Alt.	-2779 ± 123	$40.30^{+10.26}_{-15.50}$	1638^{+197}_{-345}	3787^{+153}_{-135}	13^{+20}_{-5}

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

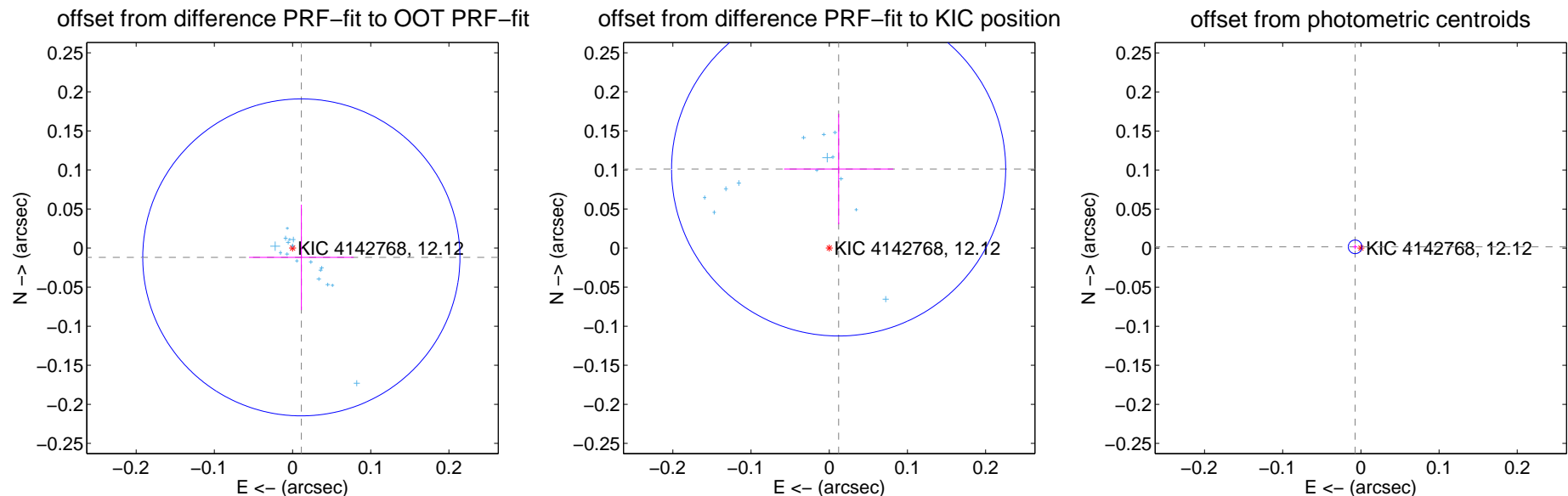
DV Centroid Data

Supplemental centroid analysis for 004142768-01. Kepler magnitude: 12.12. Transit SNR 866.12

There are 17 quarters with good PRF difference image offsets

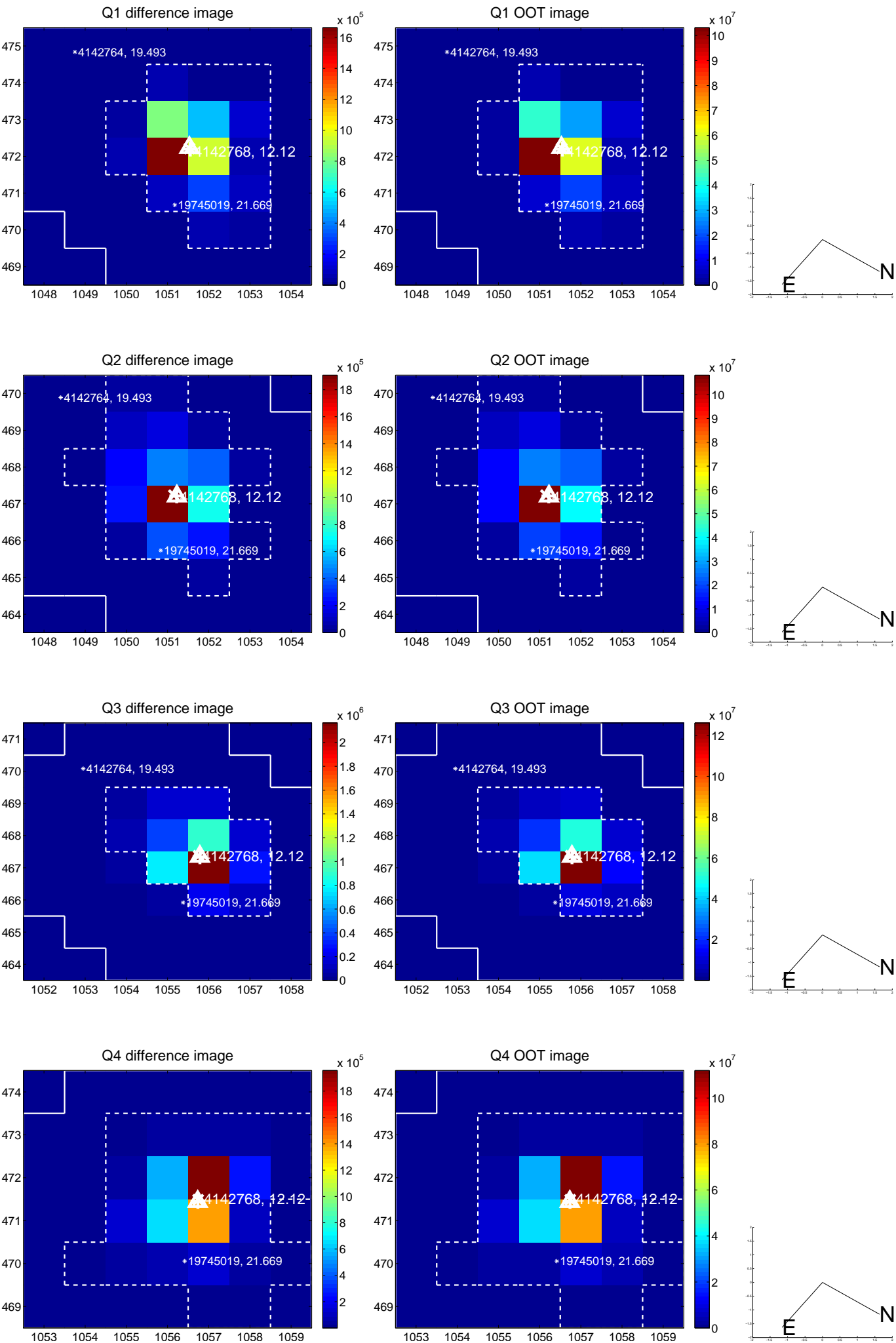
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.068	0.24	-0.011 ± 0.067	-0.012 ± 0.067
PRF-fit source offset from KIC position	0.102 ± 0.071	1.43	-0.012 ± 0.070	0.101 ± 0.071
photometric centroid source offset	0.01 ± 0.00	2.60	0.01 ± 0.00	0.00 ± 0.00

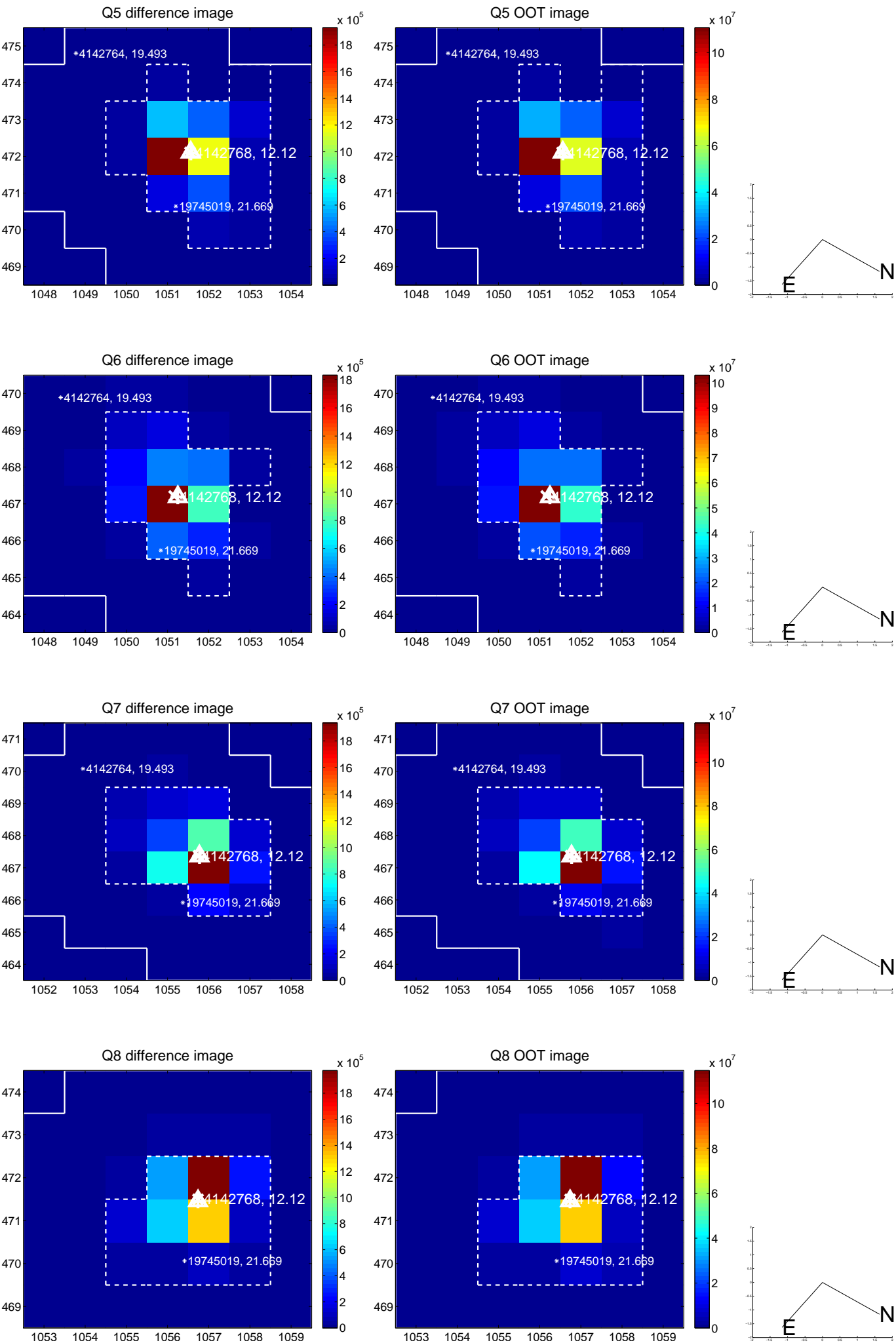


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

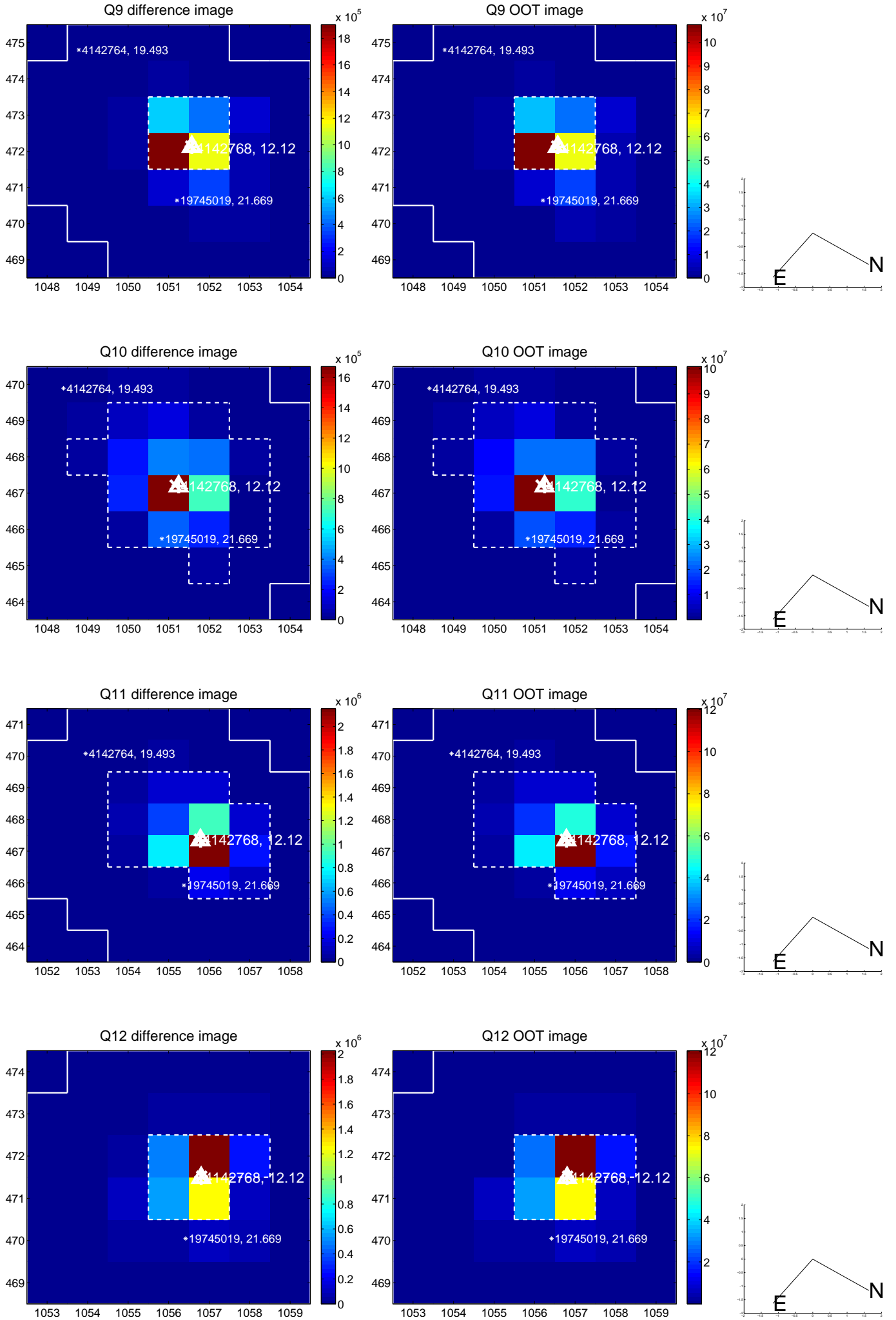
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



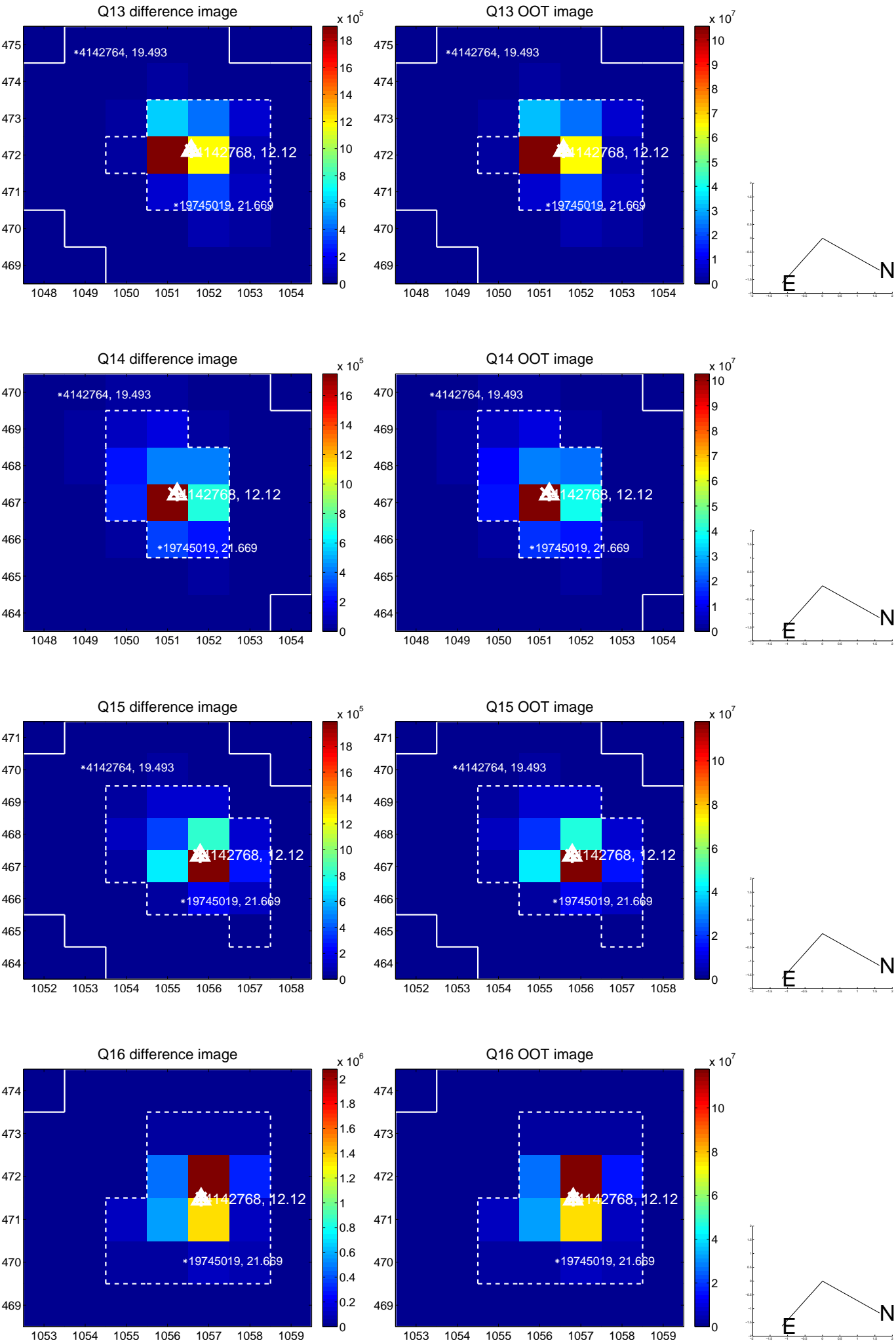
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



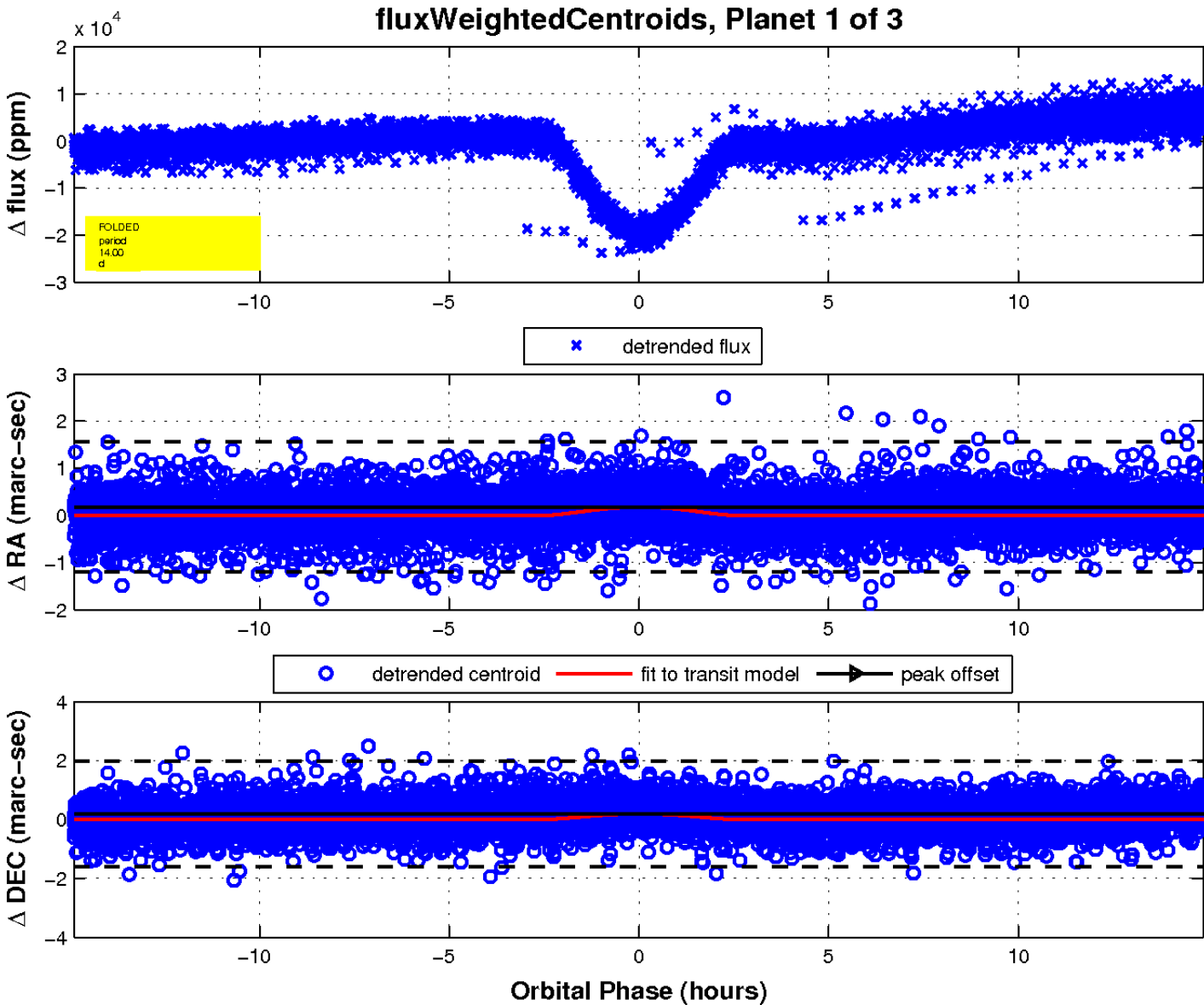
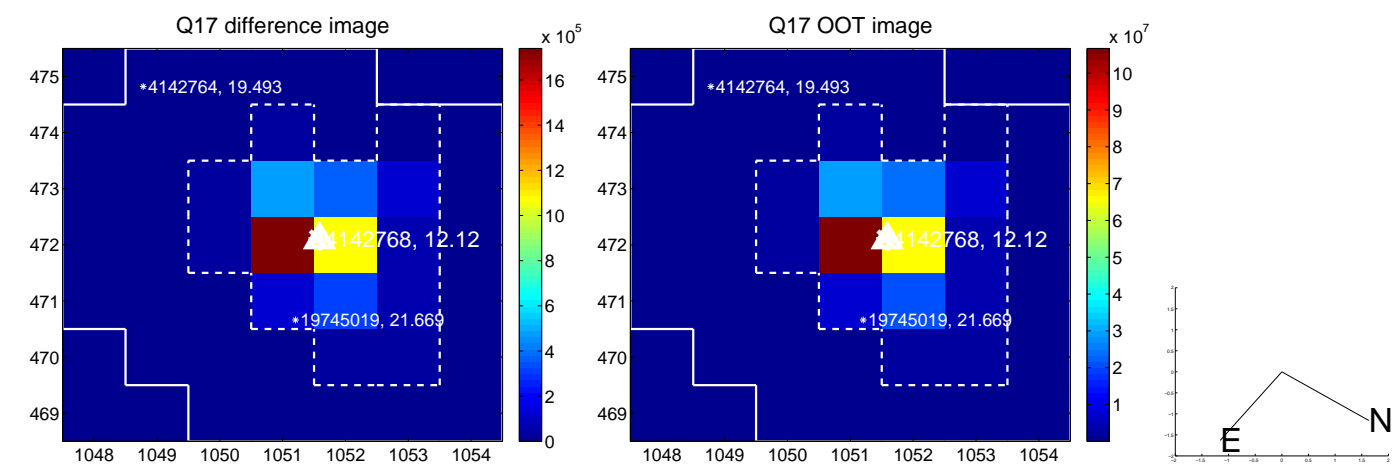
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

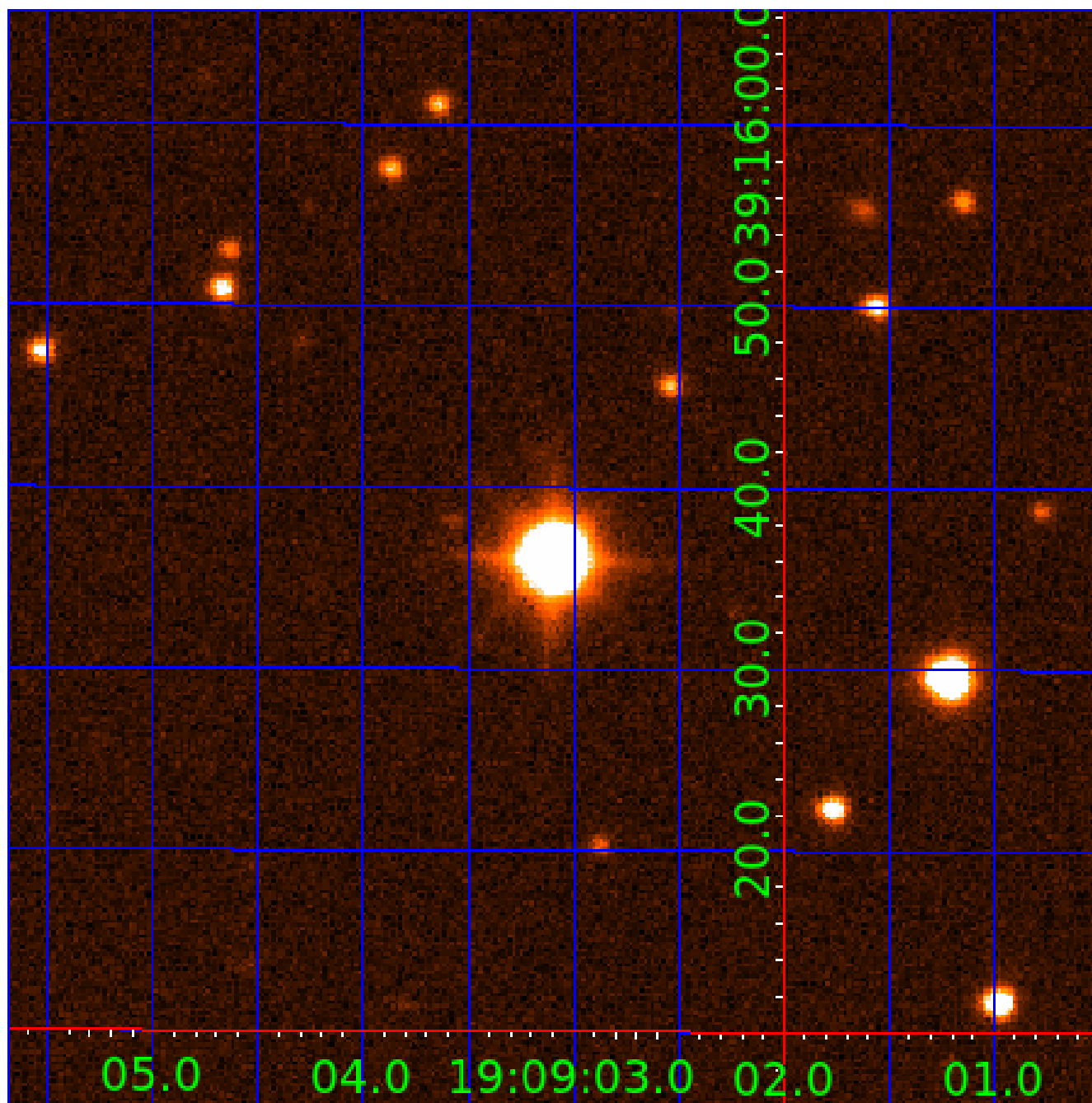


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004142768

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})
004142768-01	OBS	6387.01	13.995852	131.657363	19421.9	4.962	870.9	866.1	2.70	5638	60.41	494.26
004142768-02	OBS	No	13.995944	132.023819	2980.6	10.652	61.4	57.3	2.70	5638	27.41	494.26
004142768-03	OBS	No	13.996105	132.879453	476.5	6.079	28.1	18.6	2.70	5638	6.01	494.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004142768-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004142768-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
004142768-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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.

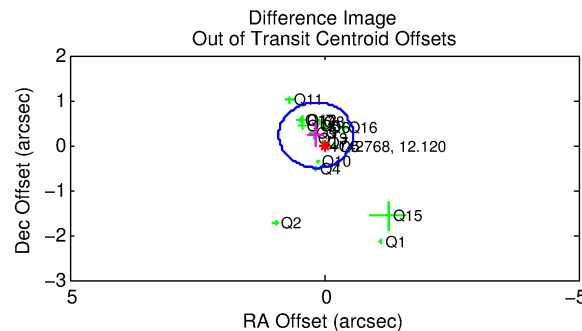
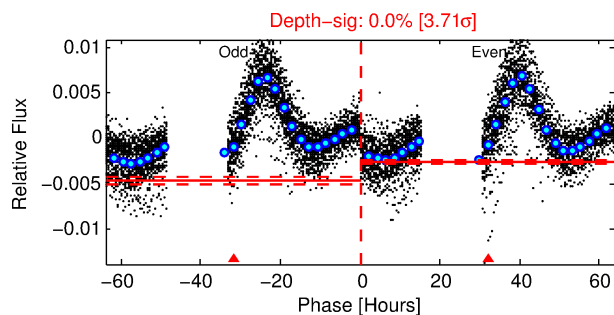
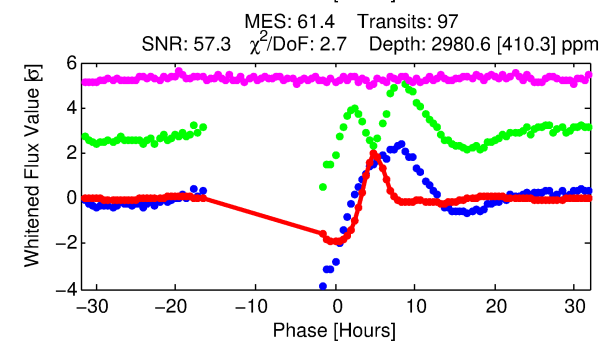
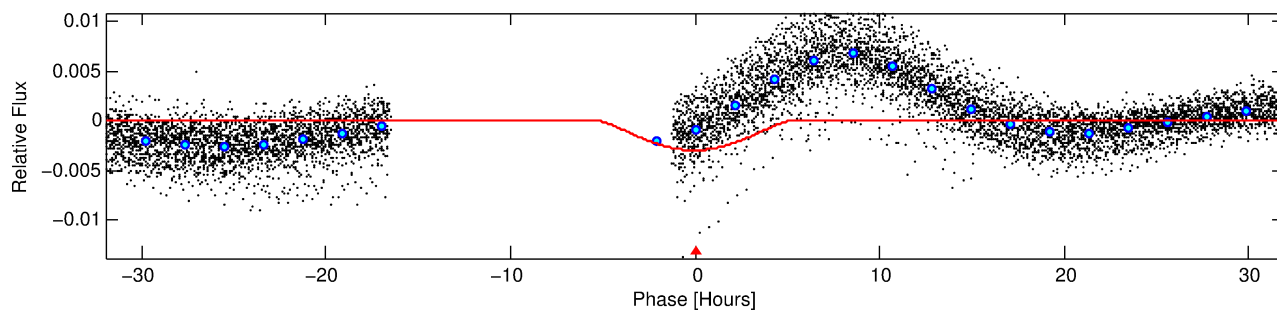
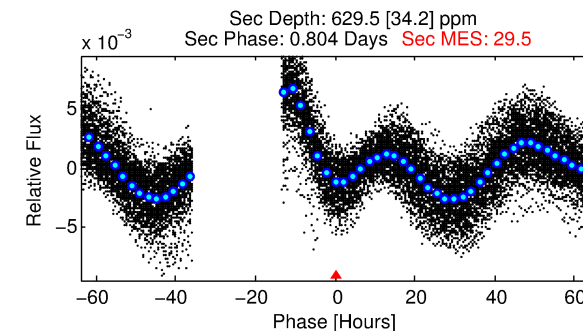
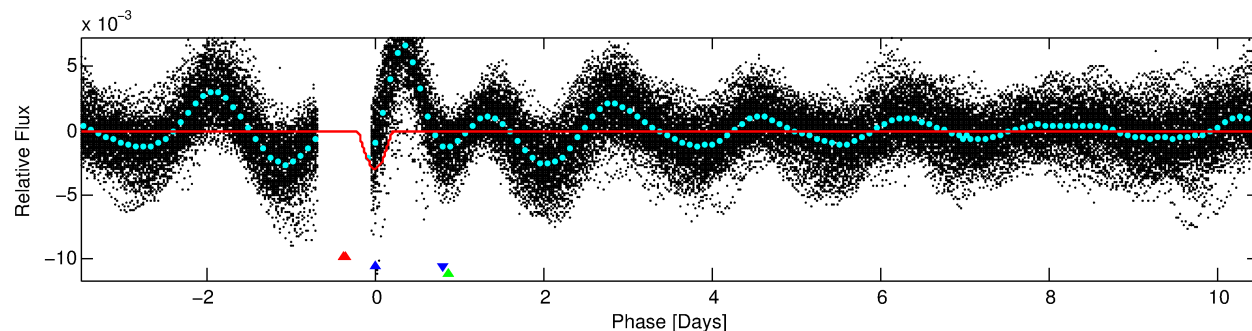
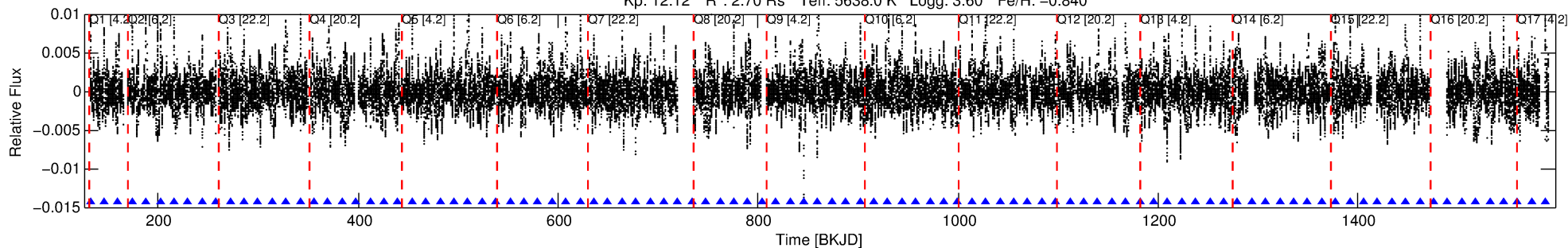
Ephemeris Match Information For 004142768-02

No Significant Match Found

DV One-Page Summary

KIC: 4142768 Candidate: 2 of 3 Period: 13.996 d
KOI: K06387 Corr: No Ephemeris Match

Kp: 12.12 R*: 2.70 Rs Teff: 5638.0 K Logg: 3.60 Fe/H: -0.840



DV Fit Results:

Period = 13.99594 [0.00007] d
Epoch = 132.0238 [0.0078] BKJD
Rp/R* = 0.0929 [0.0292]
a/R* = 4.55 [0.30]
b = 1.00 [0.05]
Seff = 494.26 [758.23]
Teq = 1202 [461] K
Rp = 27.41 [21.63] Re
a = 0.1157 [0.1007] AU
Ag = 6.17 [10.19] [0.51σ]
Teffp = 2929 [474] K [2.61σ]

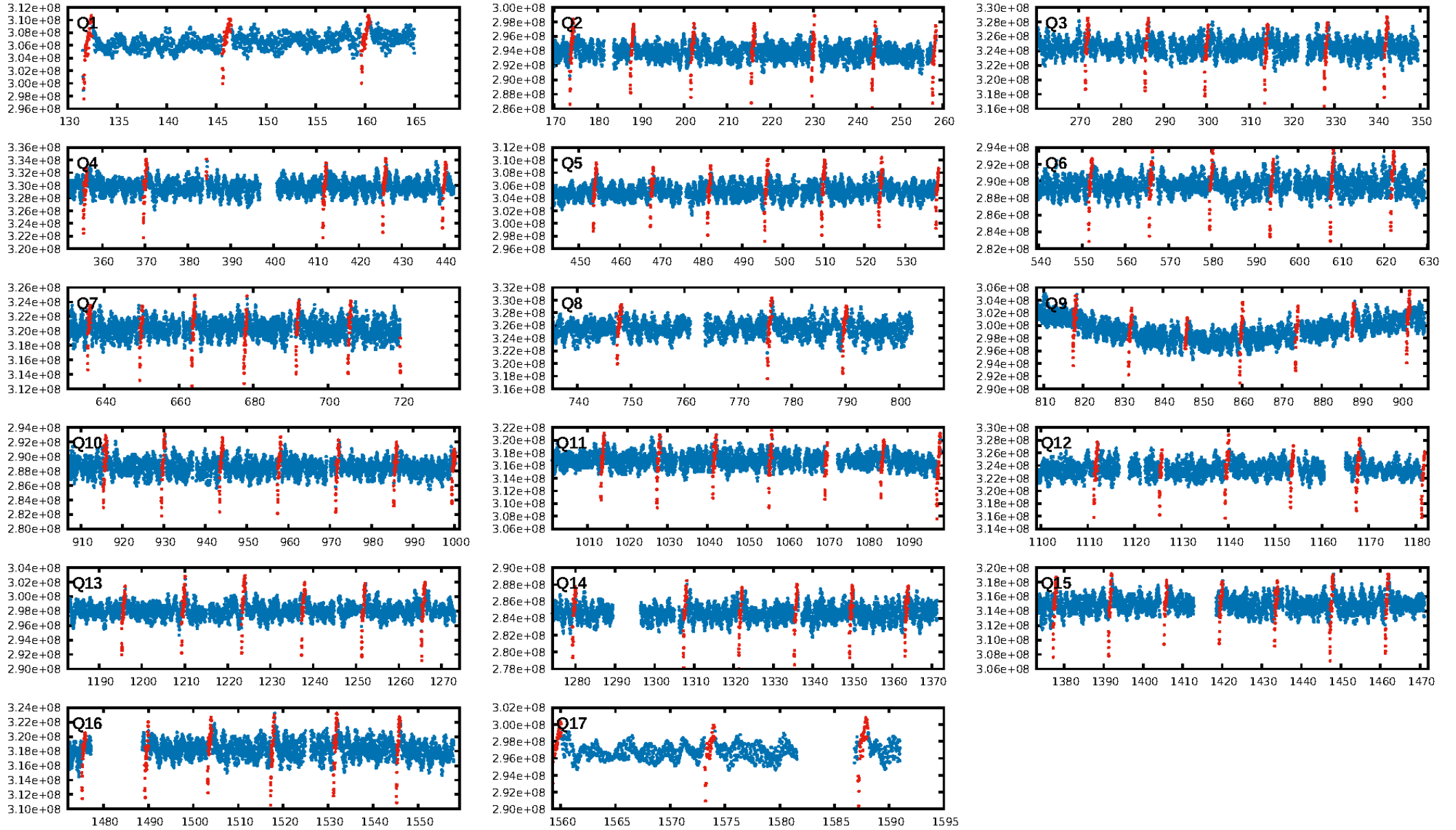
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [91/91]
GhostDiagnostic-chr: 1.114
Centroid-sig: 0.0%
Centroid-so: 0.066 arcsec [4.29σ]
OotOffset-rm: 0.277 arcsec [1.14σ]
KicOffset-rm: 0.388 arcsec [1.67σ]
OotOffset-st: 4/4/4/5 [17]
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DiffImageOverlap-fno: 0.00 [0/17]

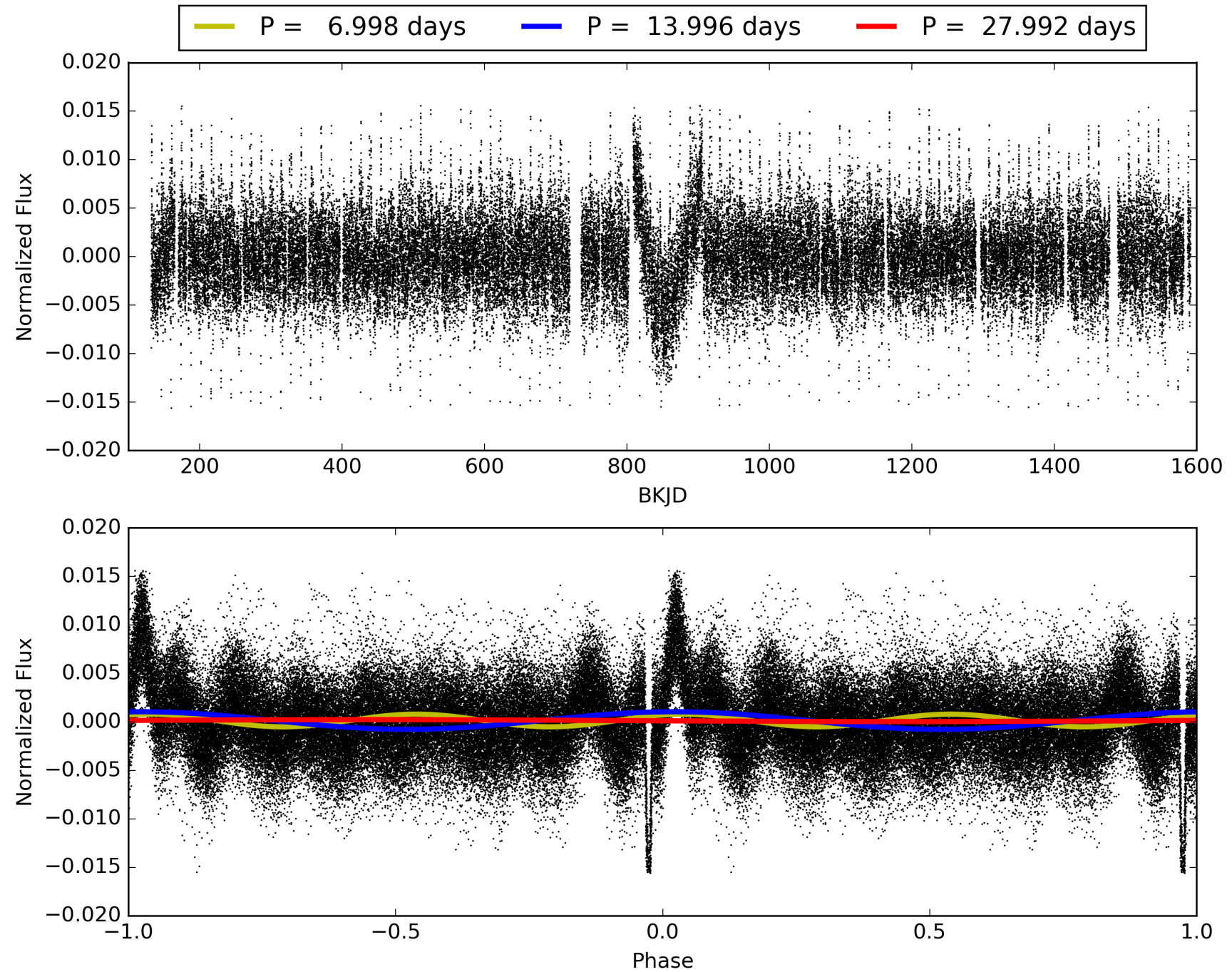
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004142768-02, PDC Light Curves

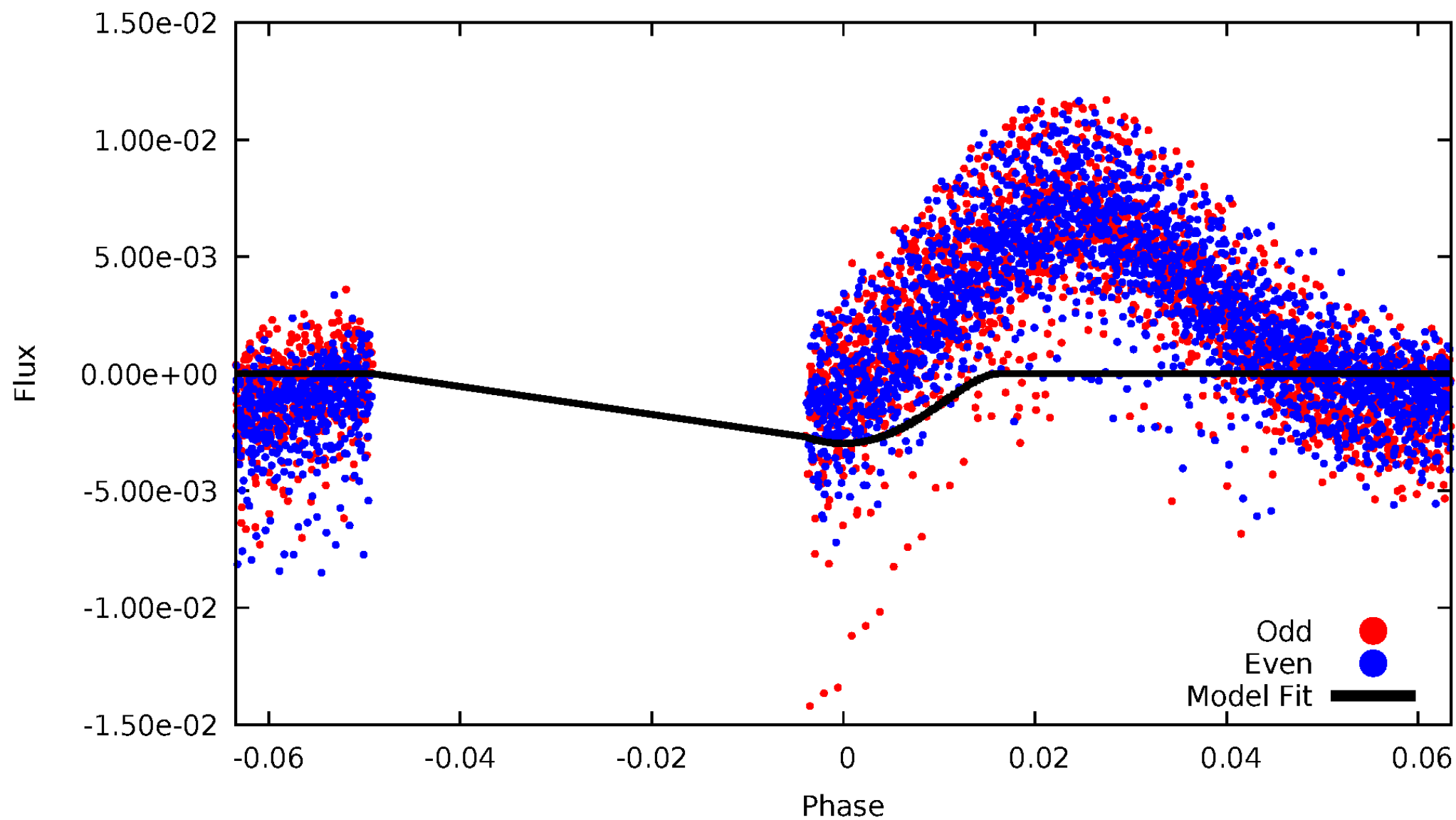


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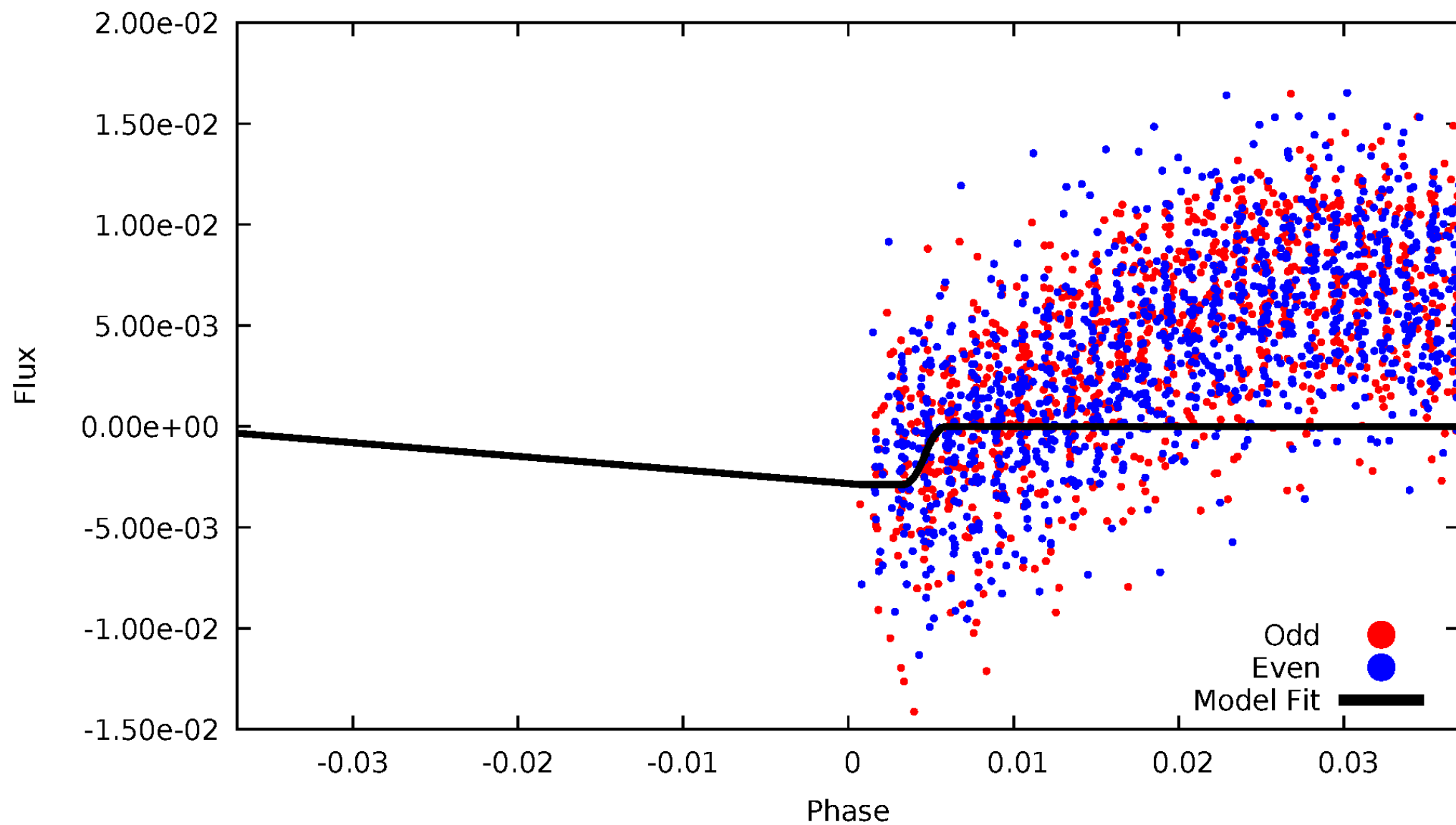
DV Odd/Even

TCE 004142768-02



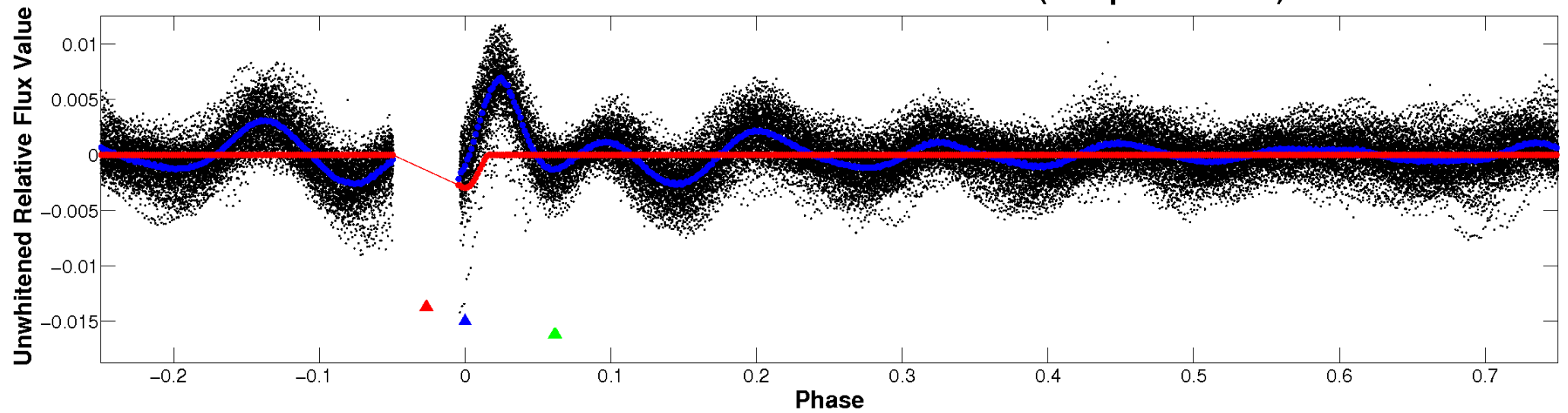
ALT Odd/Even

TCE 004142768-02

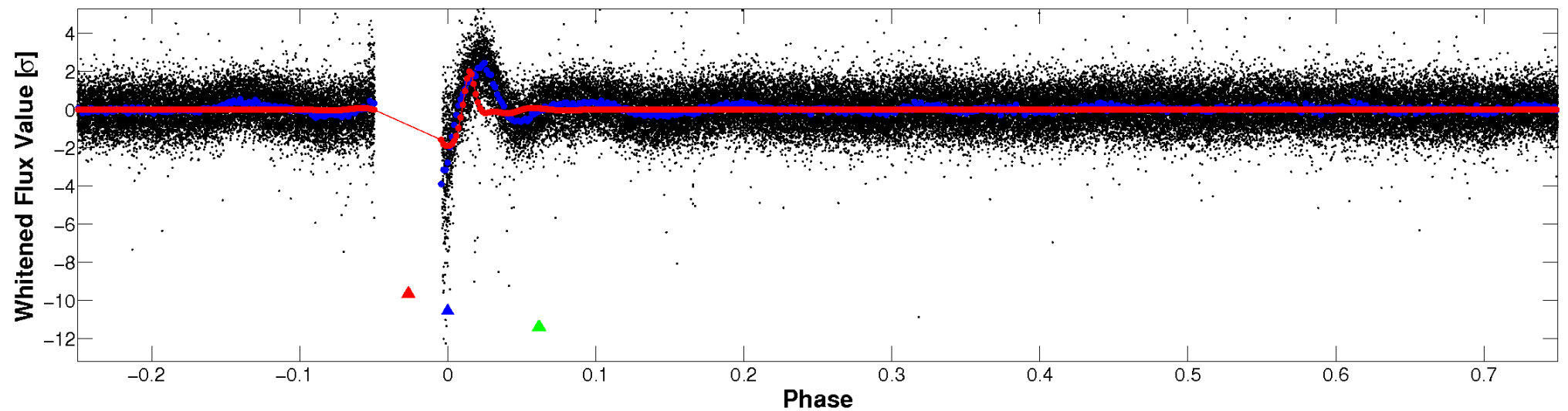


Non-Whitened Vs. Whitened Light Curve

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

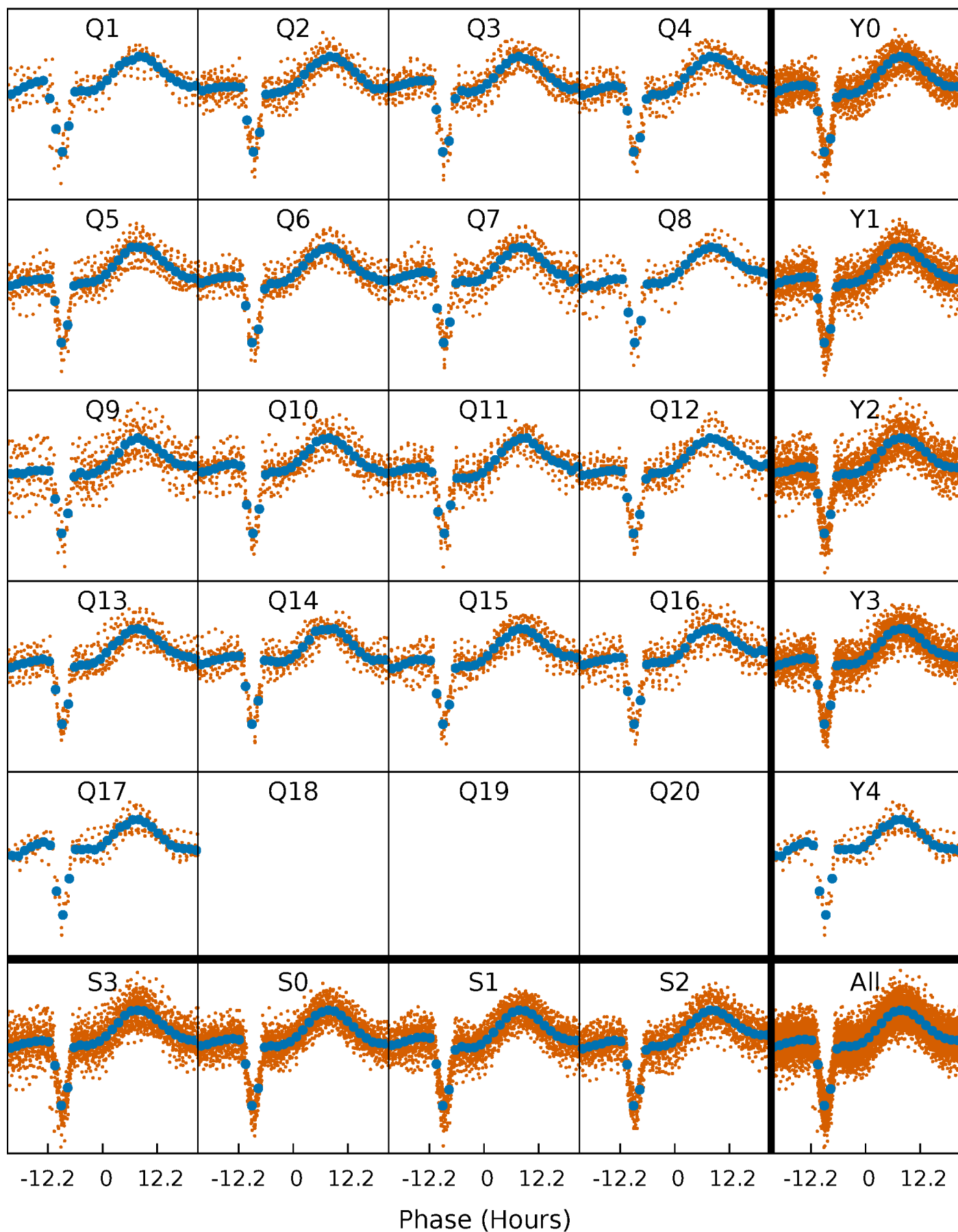


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



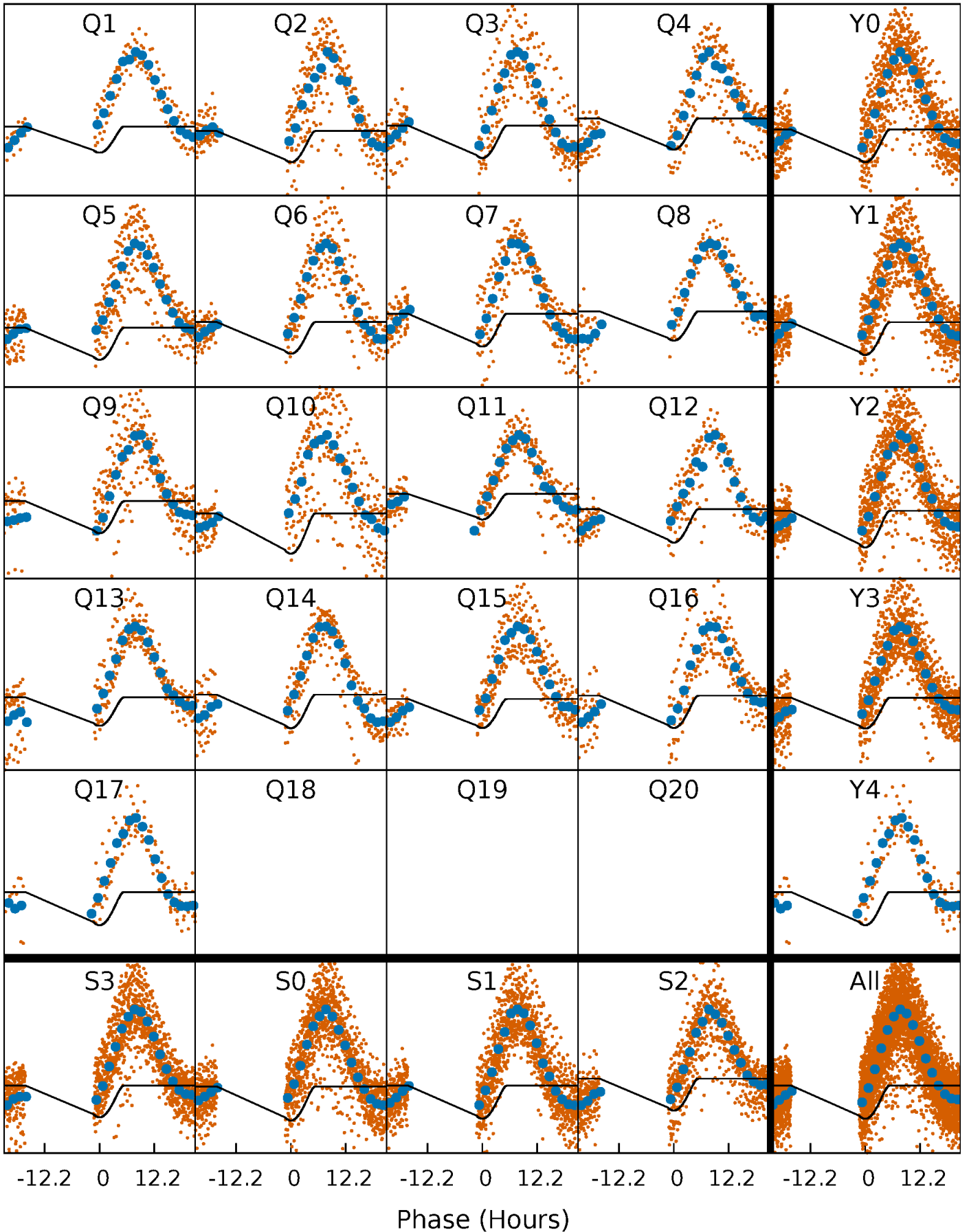
PDC Quarter-Phased Transit Curves

TCE 004142768-02 P= 13.995944 Days $T_0=132.023819$ (BKJD)



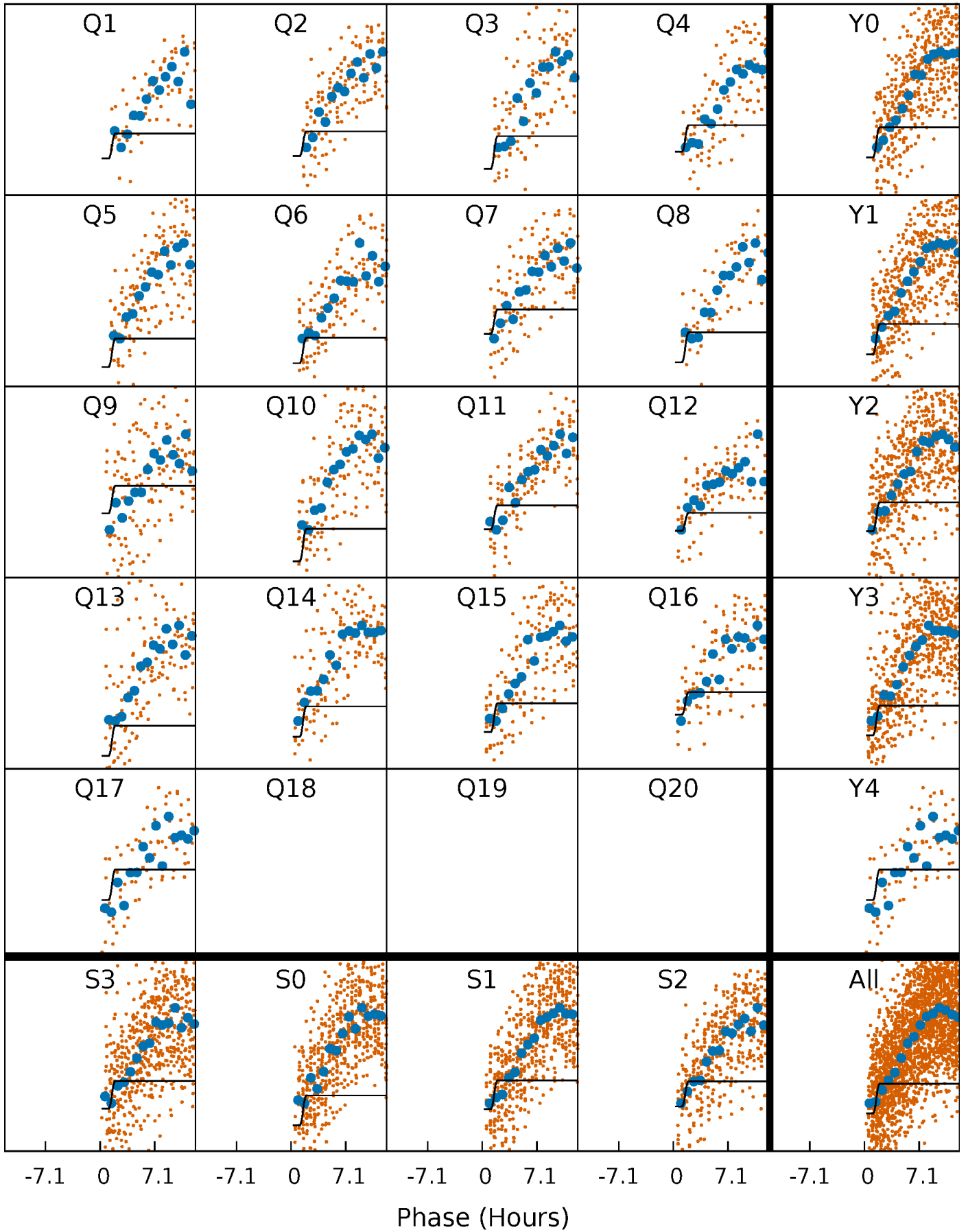
DV Quarter-Phased Transit Curves

TCE 004142768-02 P= 13.995944 Days $T_0=132.023819$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

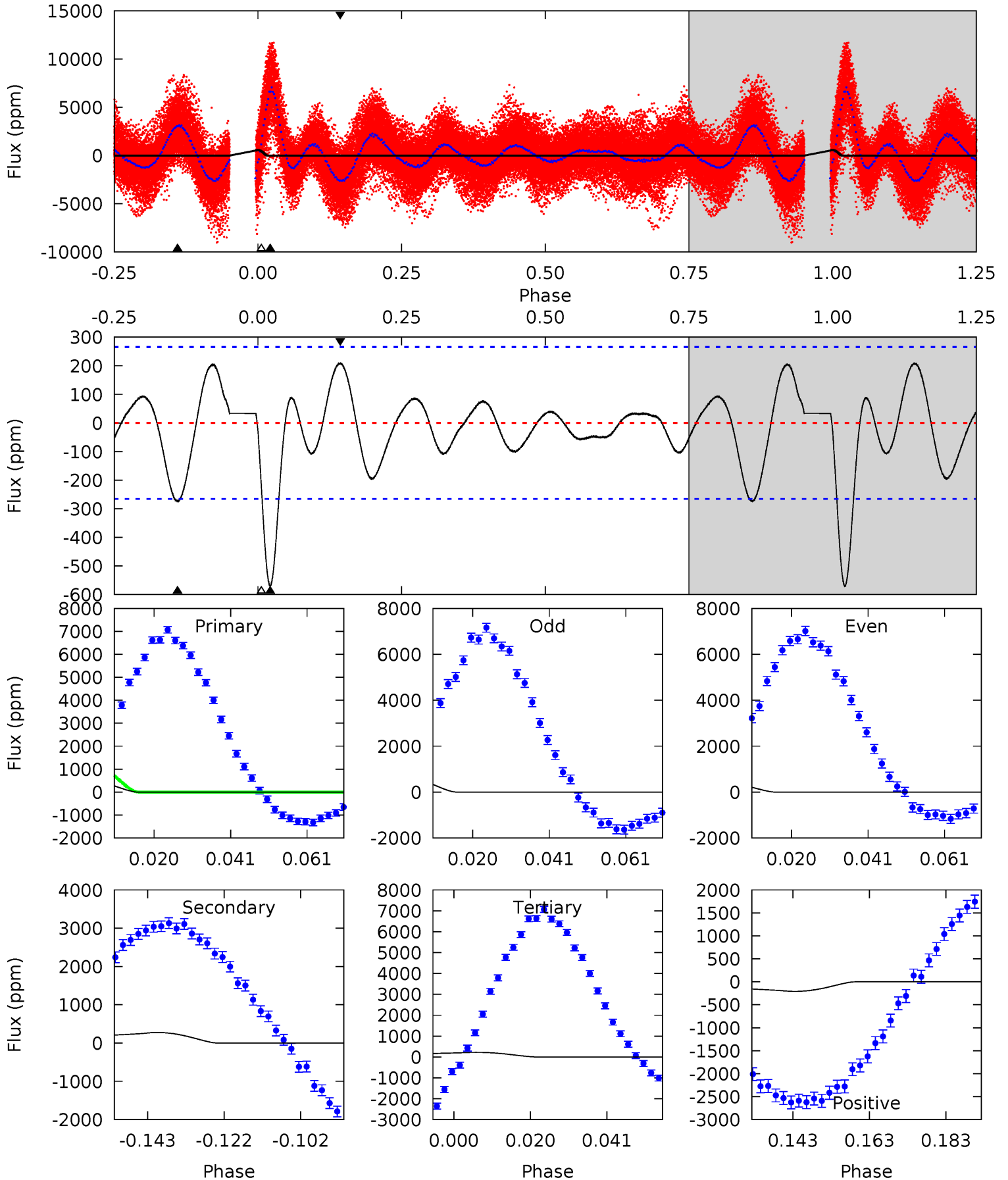
TCE 004142768-02 P= 13.996311 Days $T_0=131.920785$ (BKJD)



DV Model-Shift Uniqueness Test

004142768-02, P = 13.995944 Days, E = 118.027875 Days

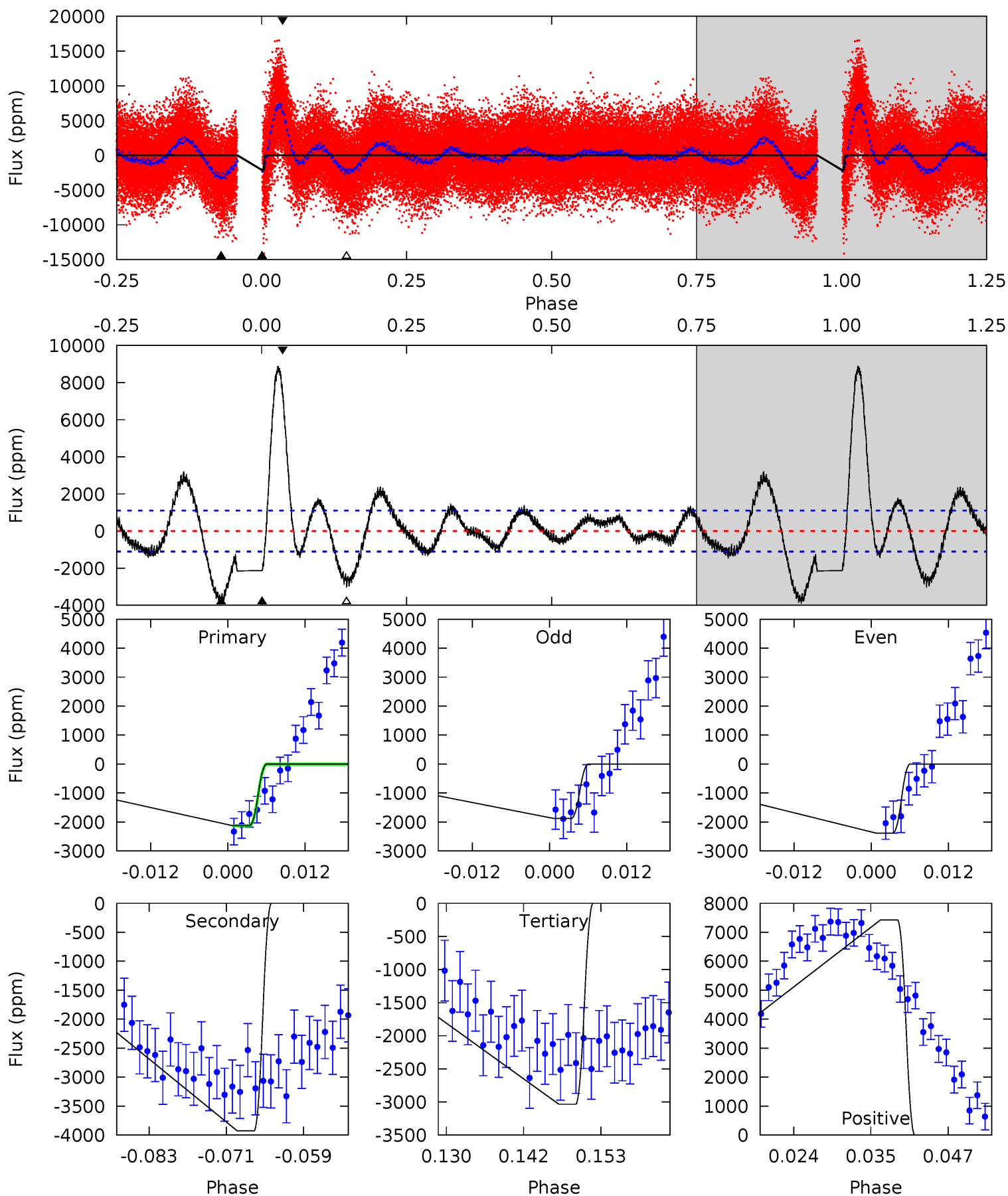
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	5.05	4.07	3.84	4.89	2.32	1.70	6.46	6.70	0.98	1.21	2.35	1.33	0.27	1.13



Alt Model-Shift Uniqueness Test

004142768-02, P = 13.996311 Days, E = 131.920785 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	17.7	13.7	33.5	4.99	2.52	7.45	-4.09	-23.9	4.03	-15.8	1.13	1.09	0.69	0



Stellar Parameters For KIC 004142768

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5638^{+203}_{-203}	$3.597^{+0.944}_{-0.236}$	$-0.840^{+0.350}_{-0.300}$	$2.703^{+1.053}_{-1.956}$	$1.055^{+0.231}_{-0.282}$	$0.075^{+2.238}_{-0.043}$
	+4%/-4%	+26%/-7%	+42%/-36%	+39%/-72%	+22%/-27%	+2975%/-57%
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 004142768-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-274 ± 54	$23.90^{+13.71}_{-10.79}$	1634^{+204}_{-334}	2997^{+396}_{-297}	$3.464^{+7.221}_{-2.063}$
Alt.	-3927 ± 222	$13.87^{+11.03}_{-7.72}$	1643^{+210}_{-311}	6064^{+3241}_{-1134}	152^{+618}_{-104}

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 $A_{obs} \gg 1.0$

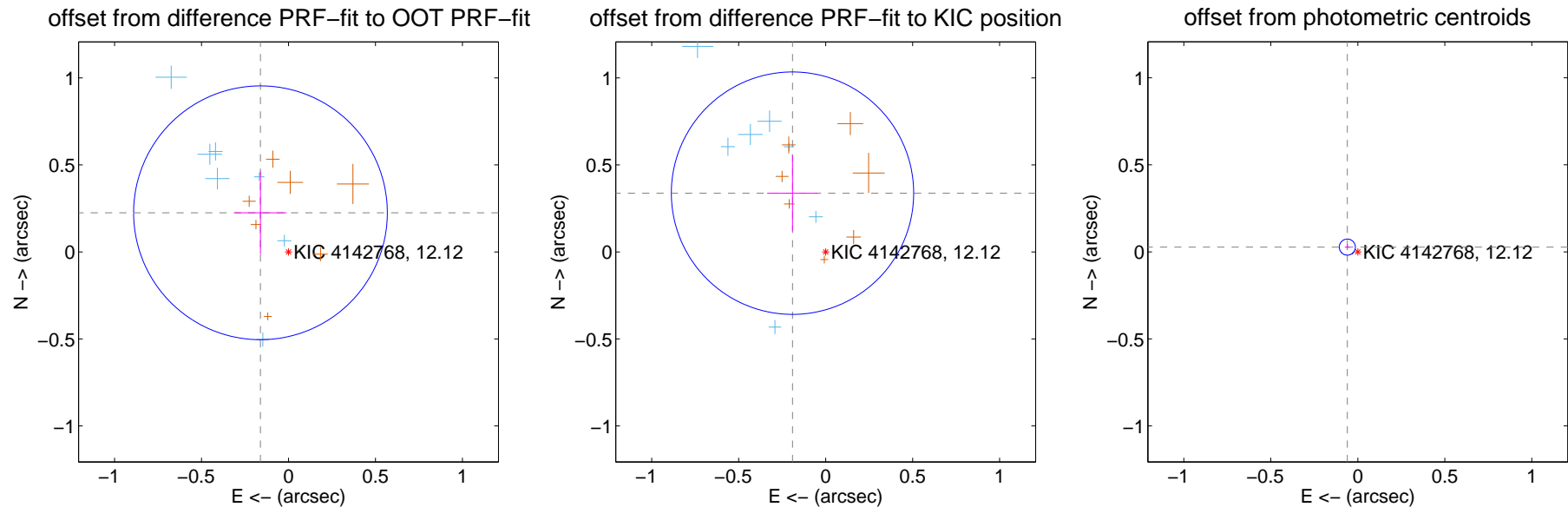
DV Centroid Data

Supplemental centroid analysis for 004142768-02. Kepler magnitude: 12.12. Transit SNR 57.30

There are 7 quarters with good PRF difference image offsets

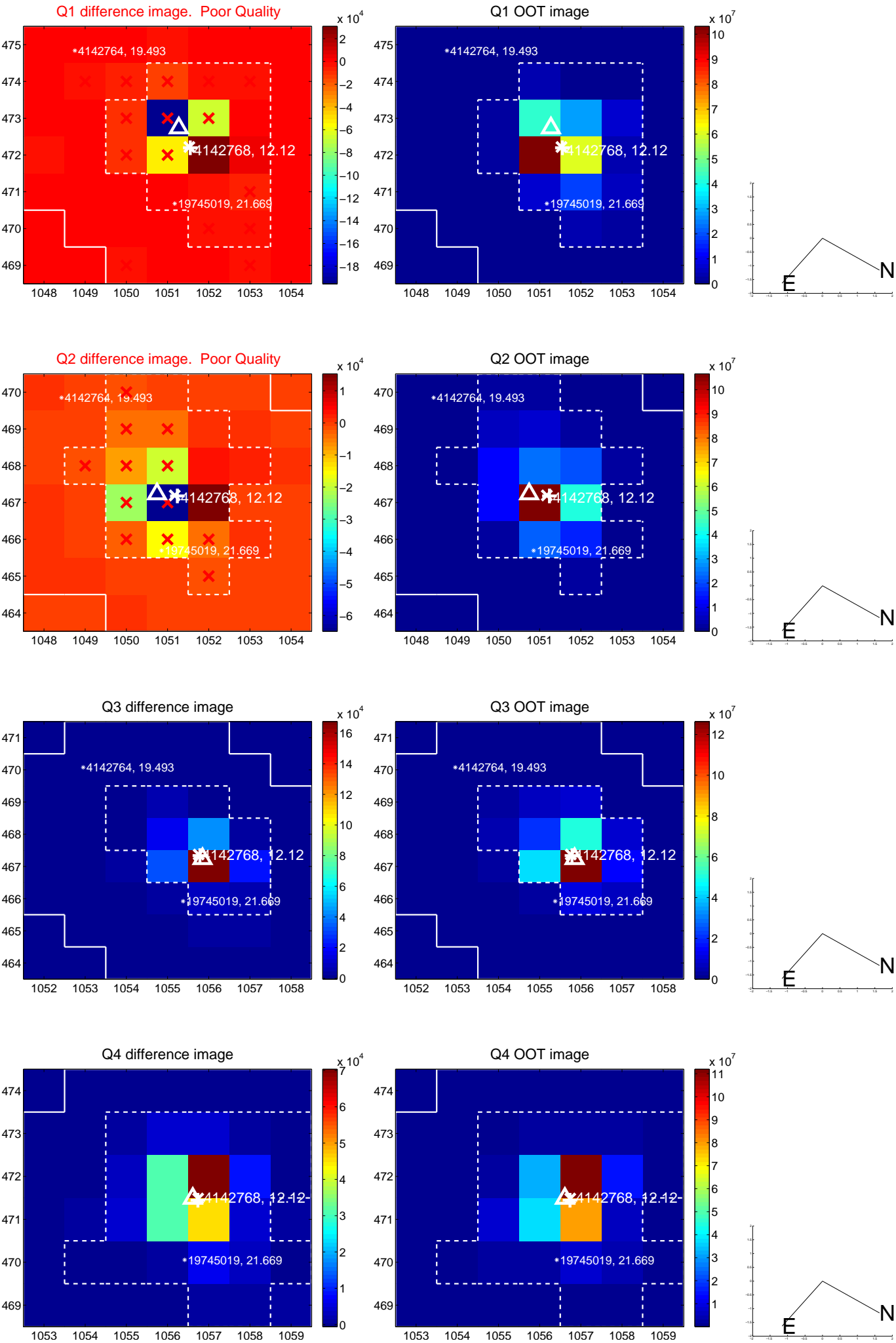
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.277 ± 0.243	1.14	0.161 ± 0.149	0.225 ± 0.237
PRF-fit source offset from KIC position	0.388 ± 0.232	1.67	0.191 ± 0.146	0.338 ± 0.218
photometric centroid source offset	0.07 ± 0.02	4.29	0.06 ± 0.02	0.03 ± 0.02

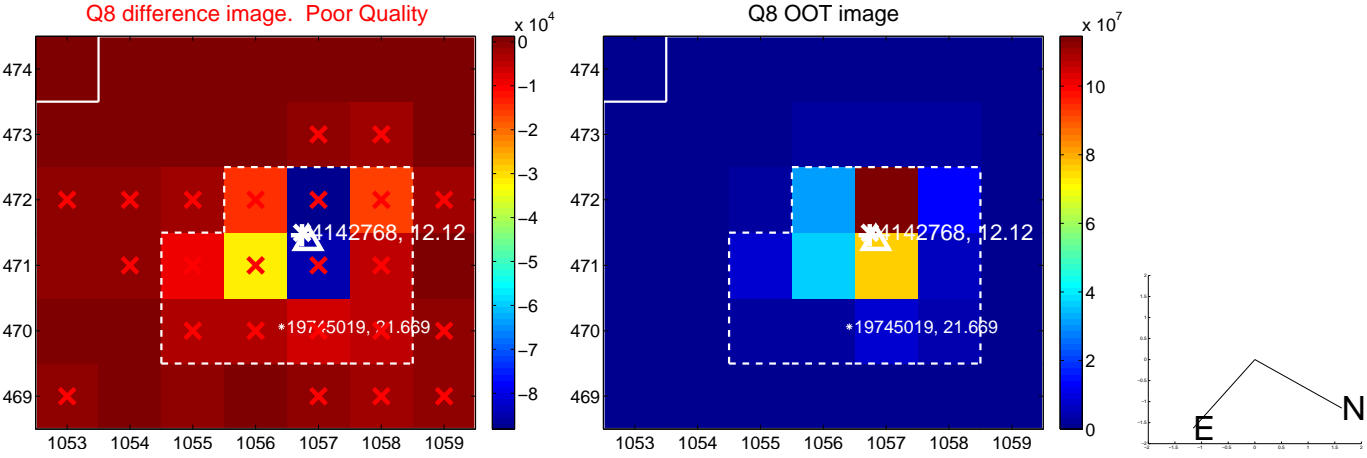
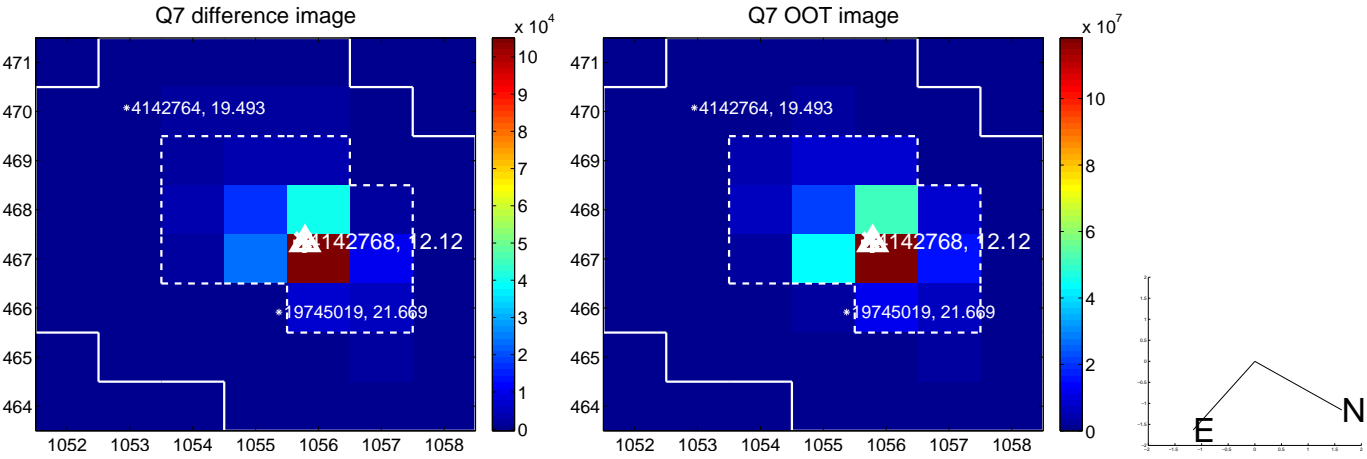
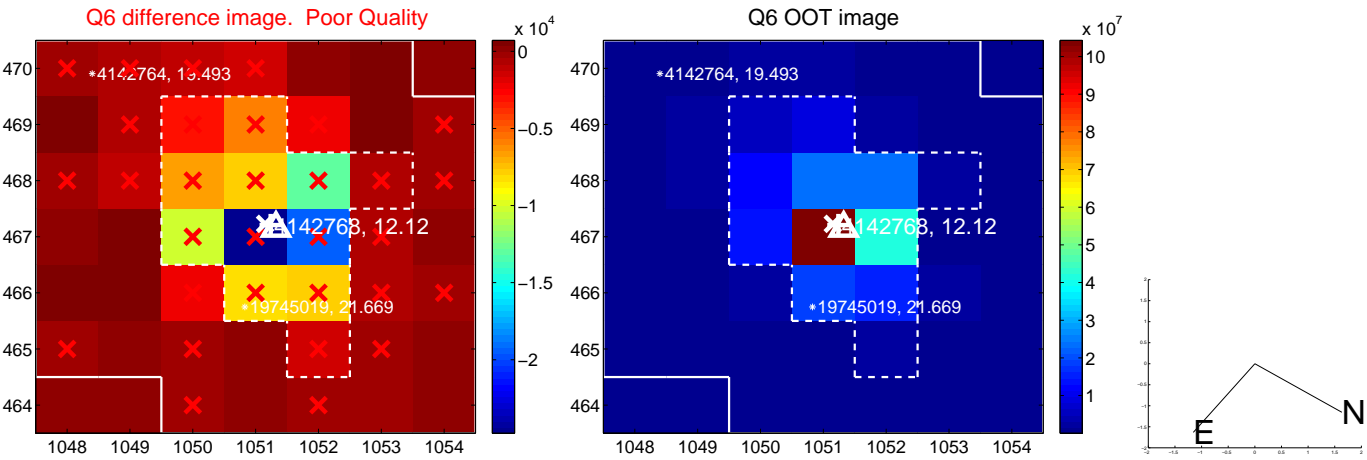
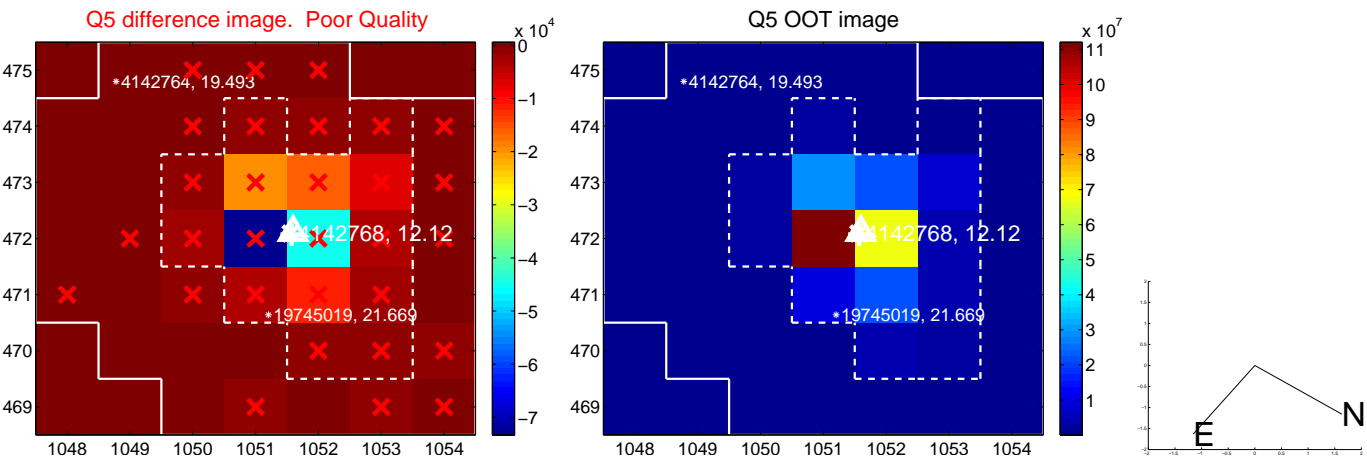


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

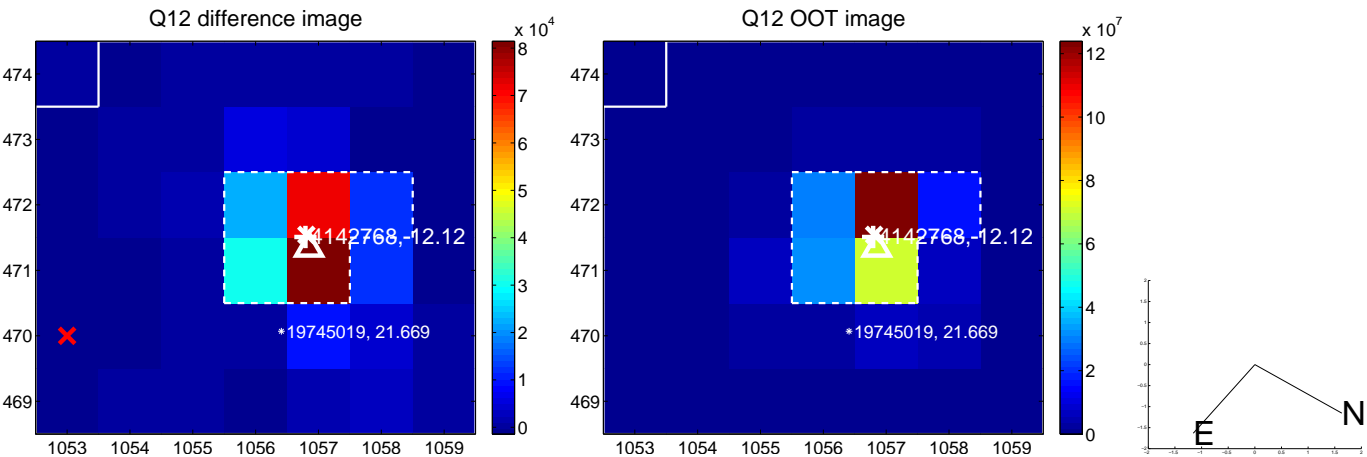
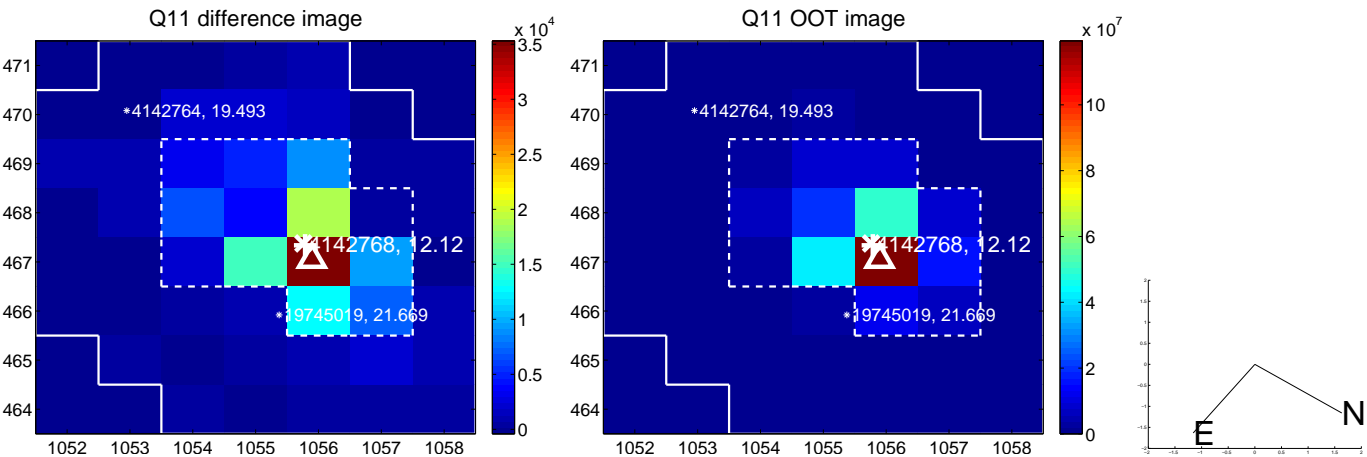
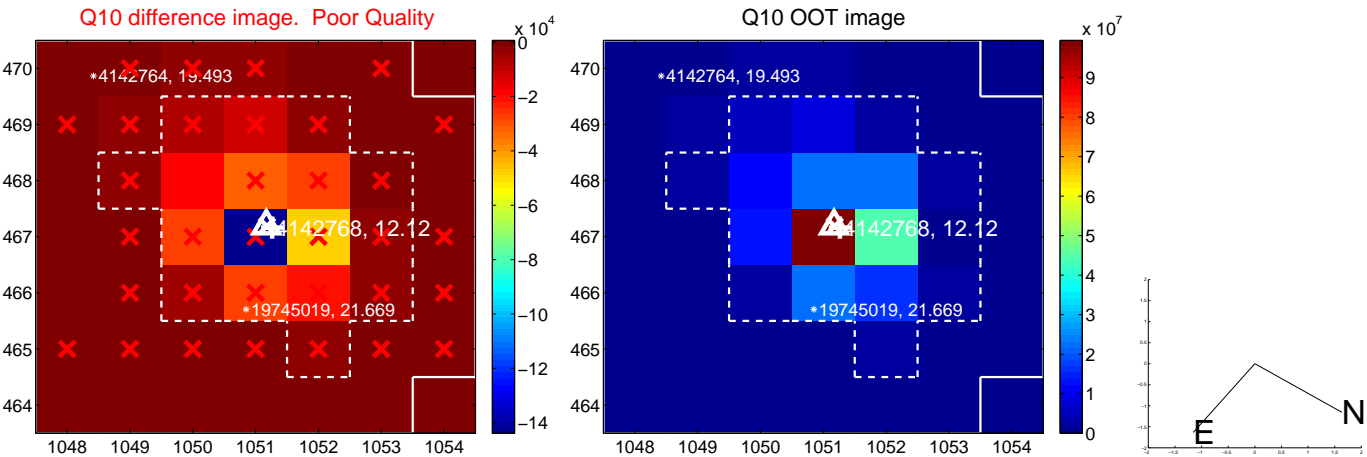
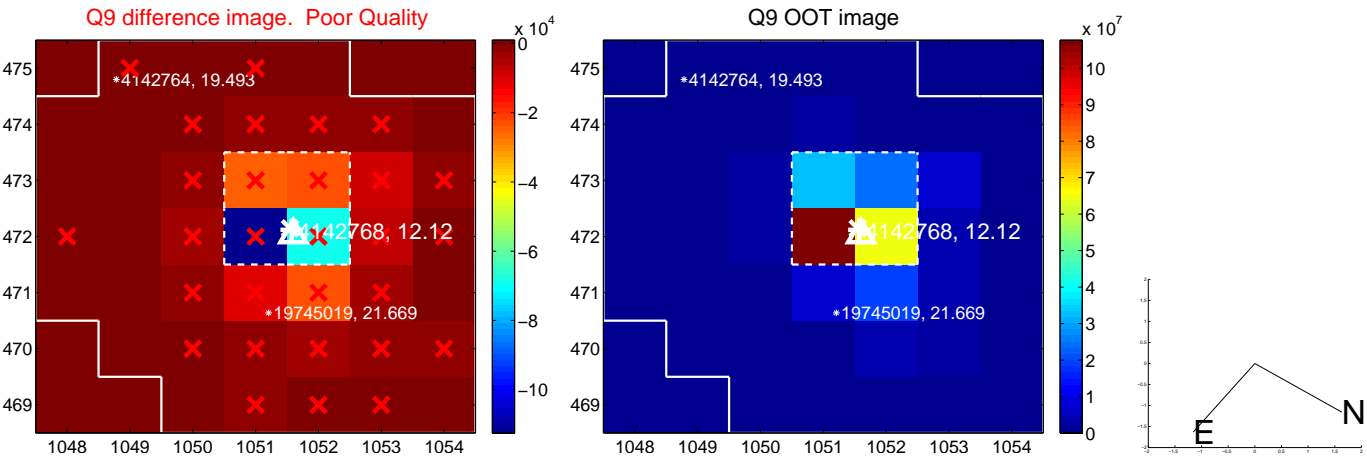
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



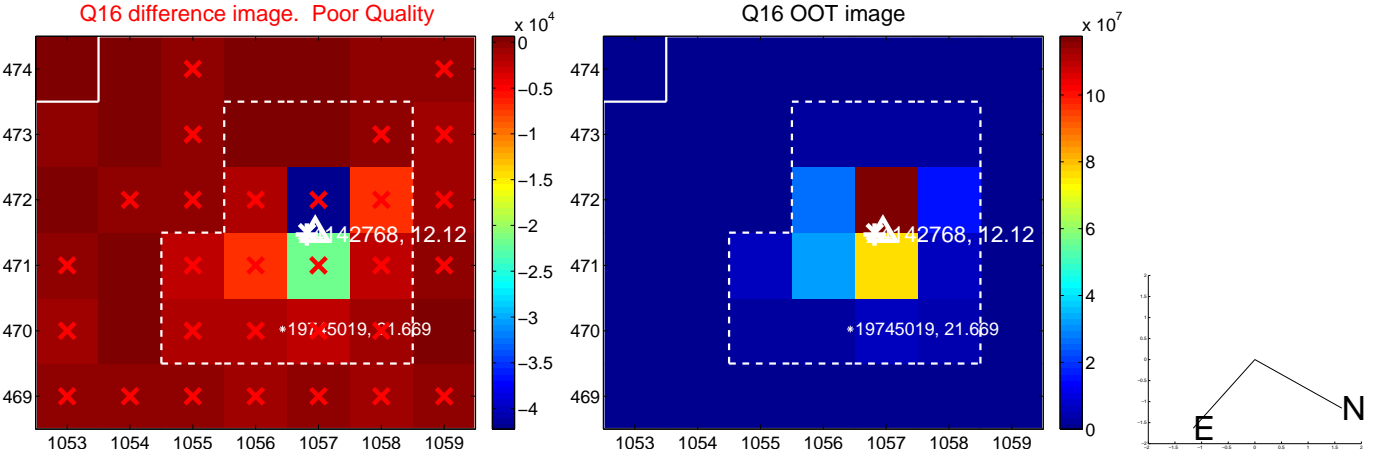
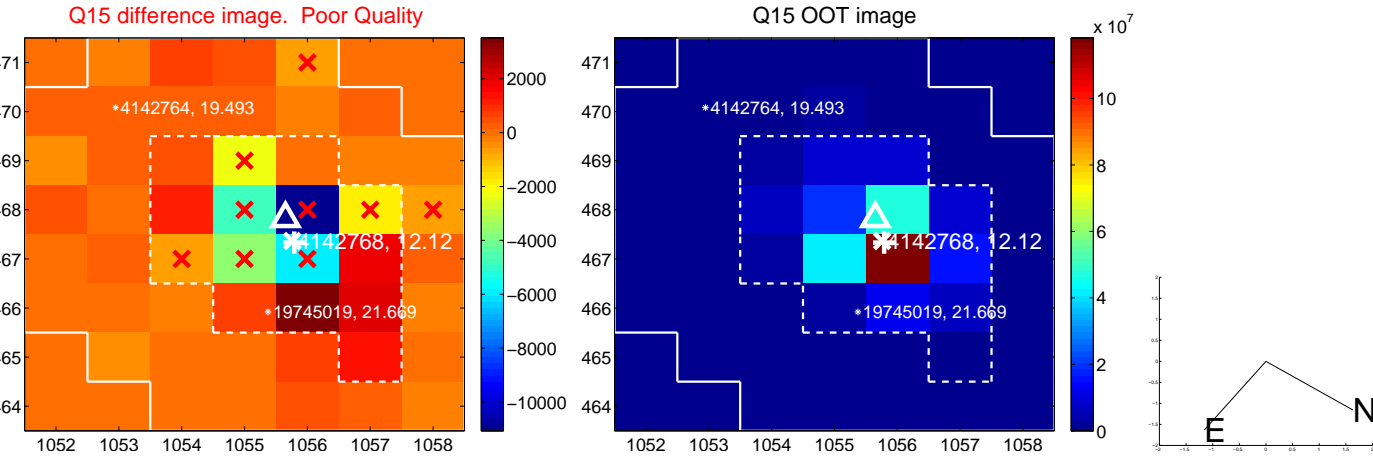
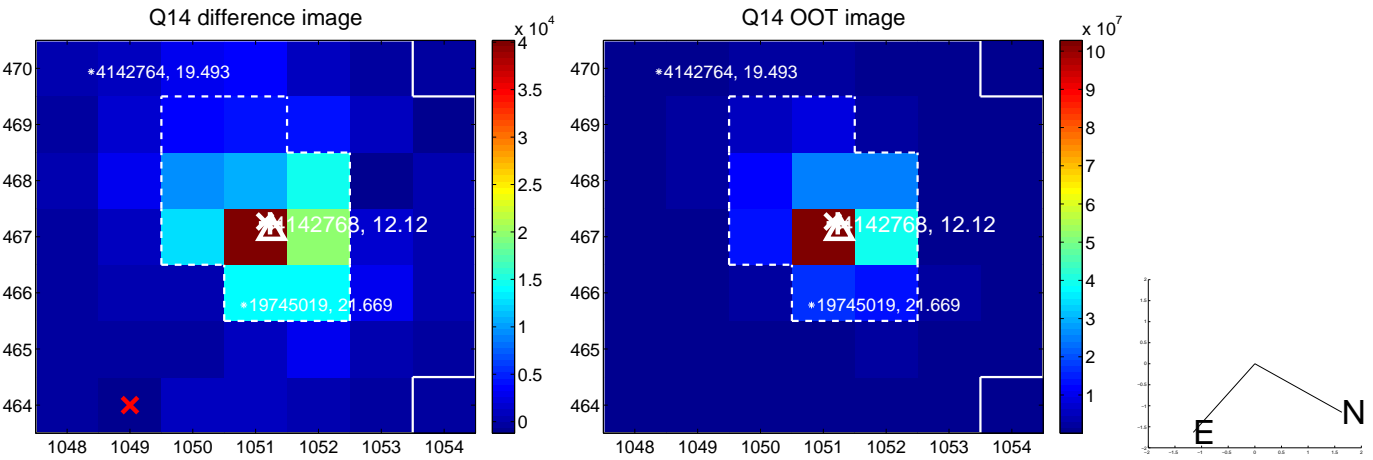
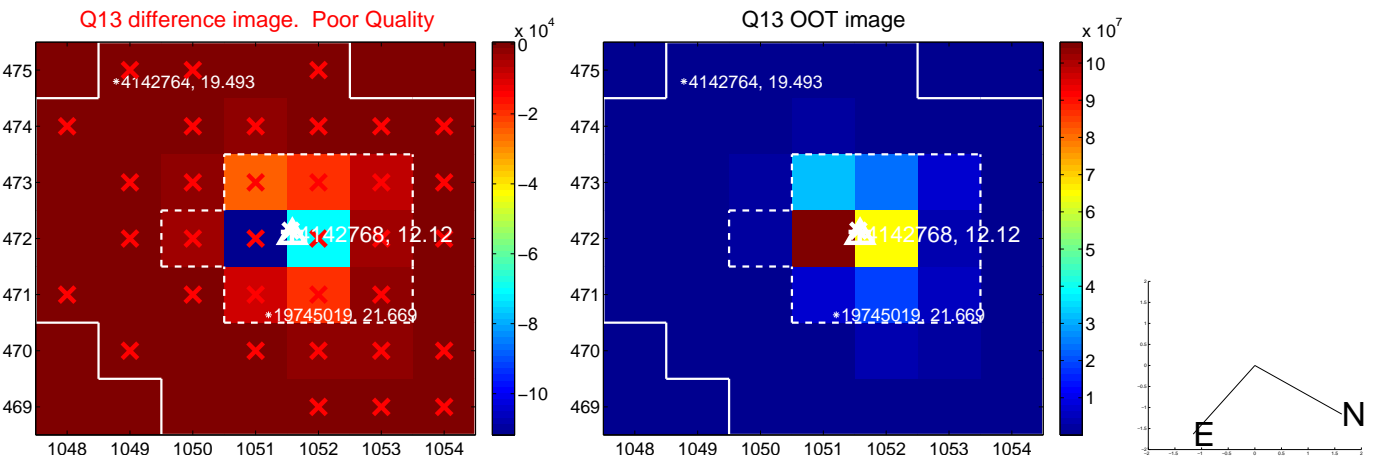
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



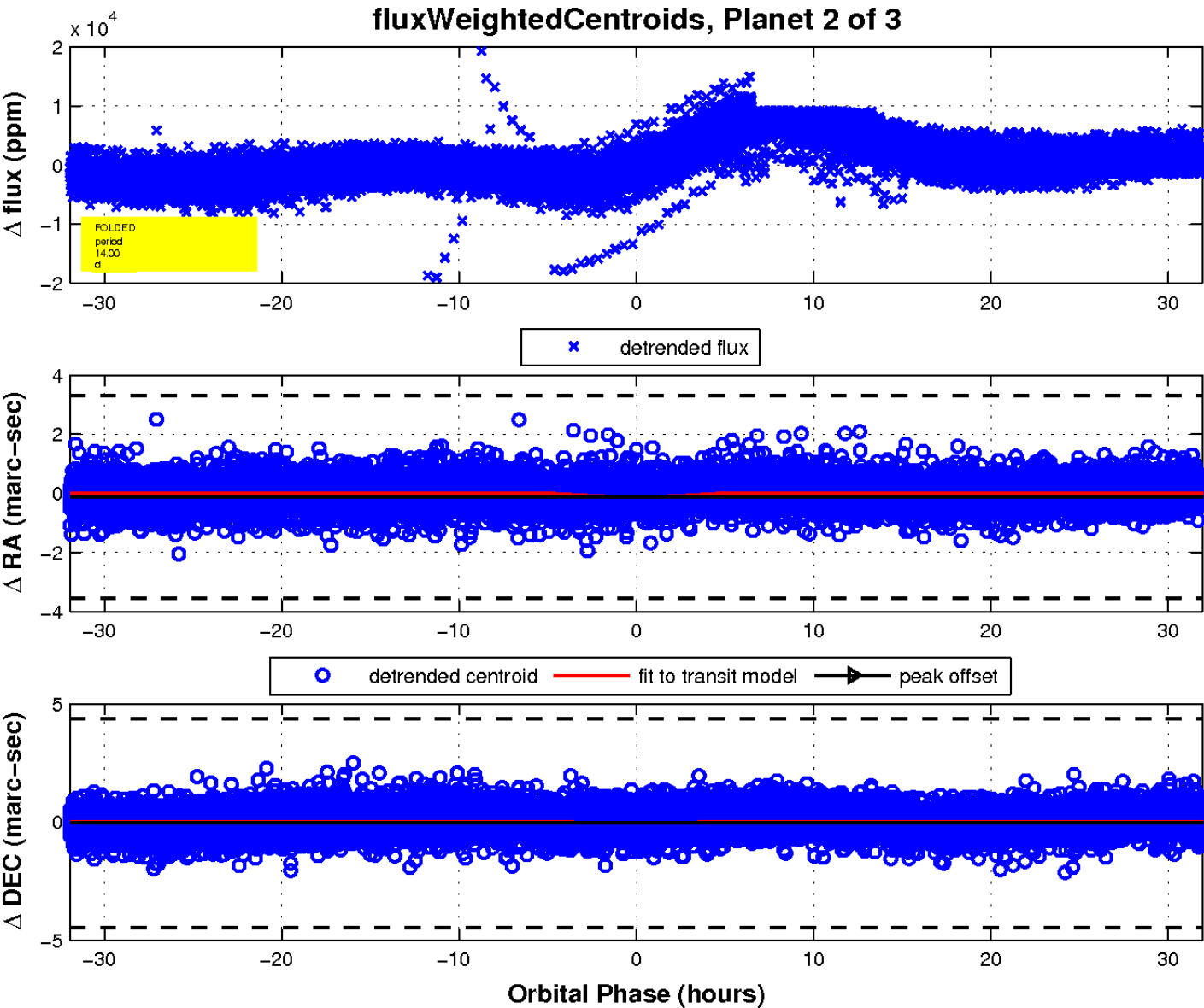
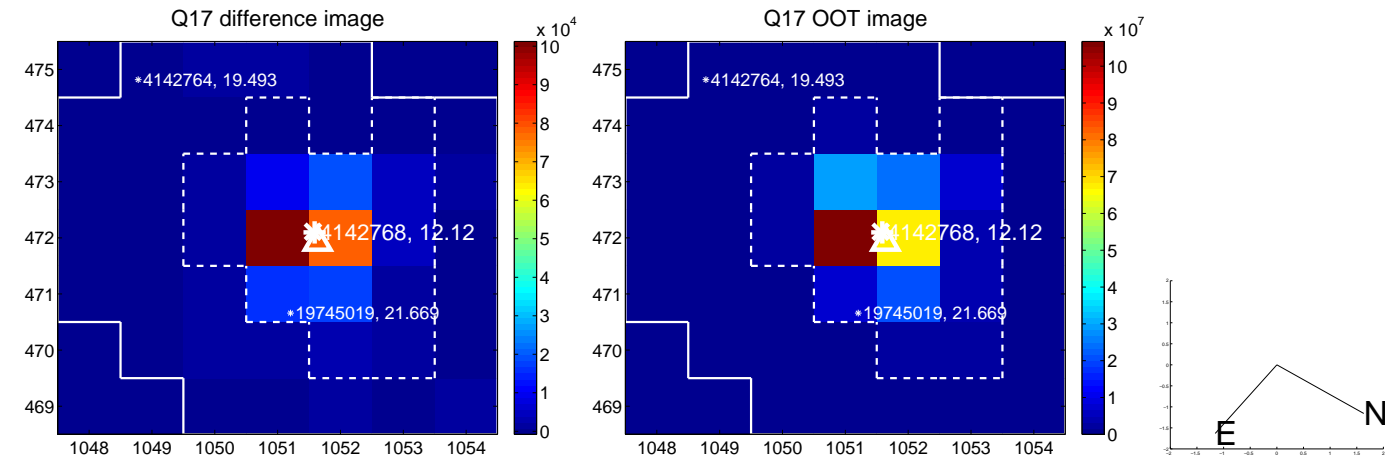
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

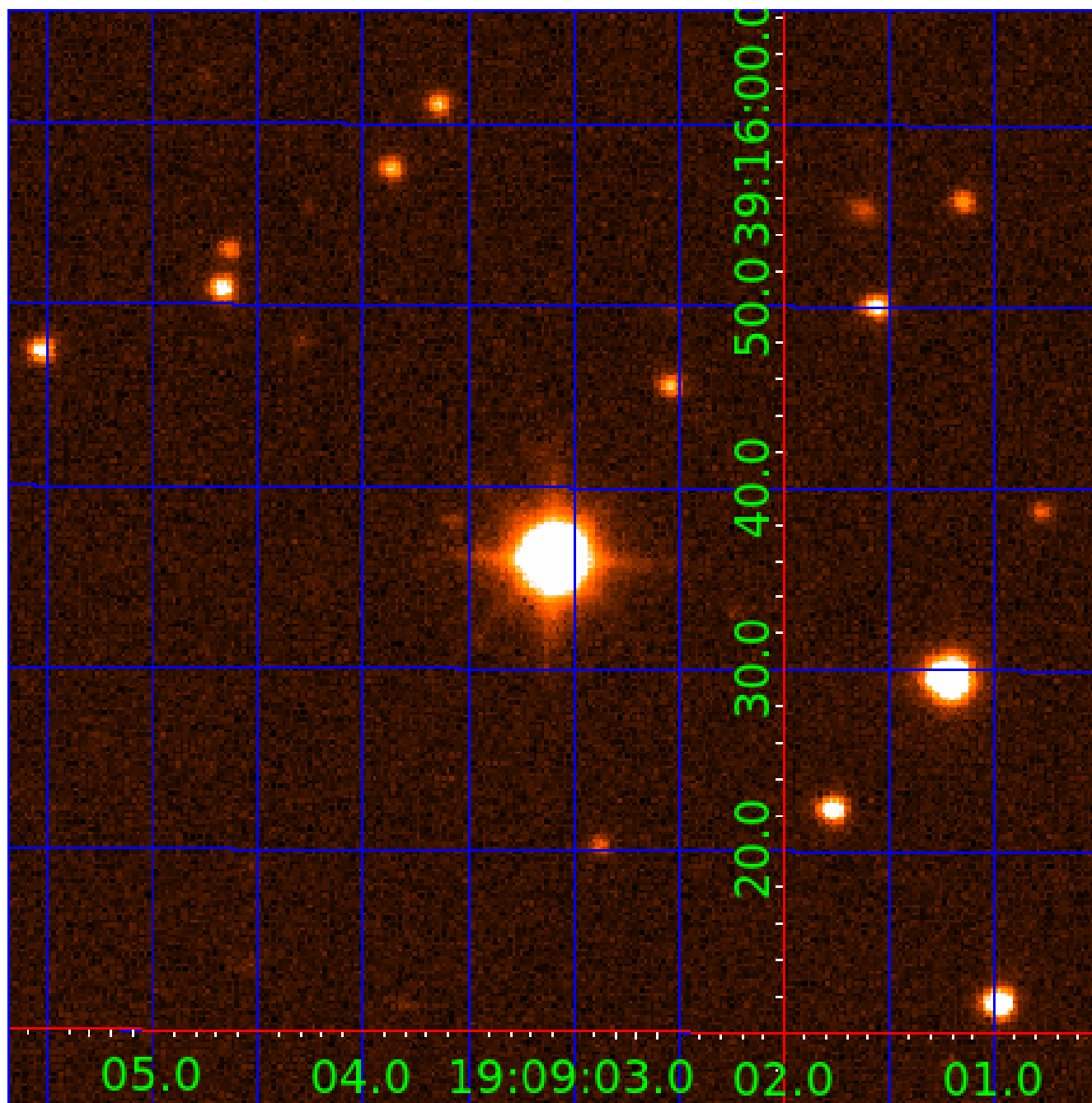


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004142768

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})
004142768-01	OBS	6387.01	13.995852	131.657363	19421.9	4.962	870.9	866.1	2.70	5638	60.41	494.26
004142768-02	OBS	No	13.995944	132.023819	2980.6	10.652	61.4	57.3	2.70	5638	27.41	494.26
004142768-03	OBS	No	13.996105	132.879453	476.5	6.079	28.1	18.6	2.70	5638	6.01	494.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004142768-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004142768-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
004142768-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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 004142768-03

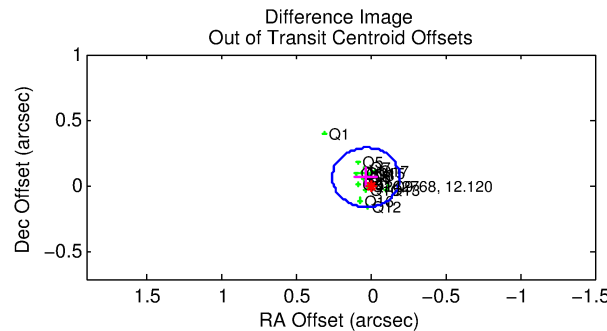
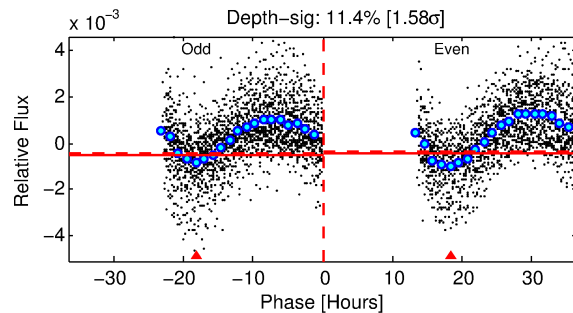
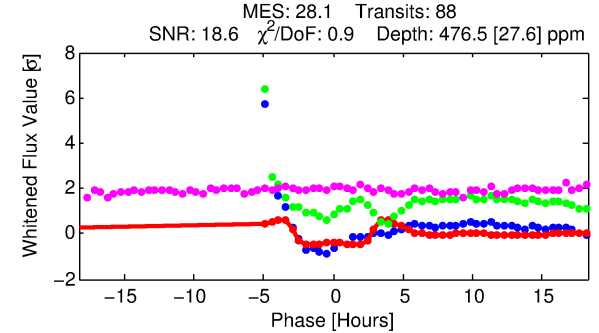
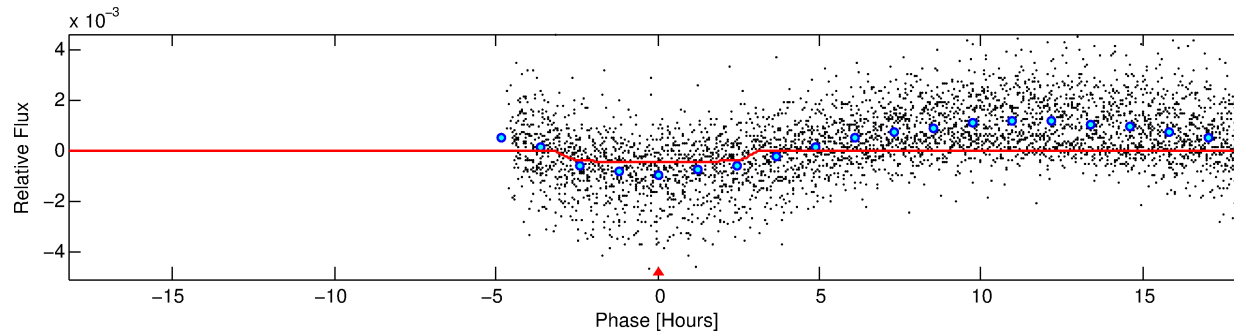
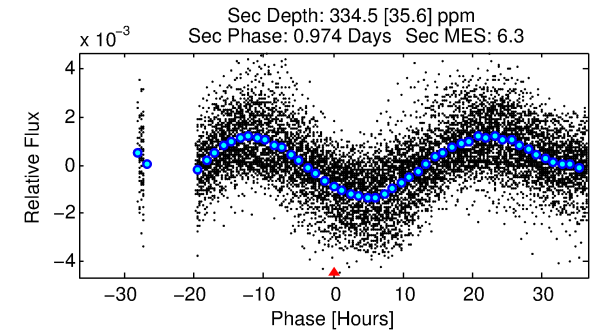
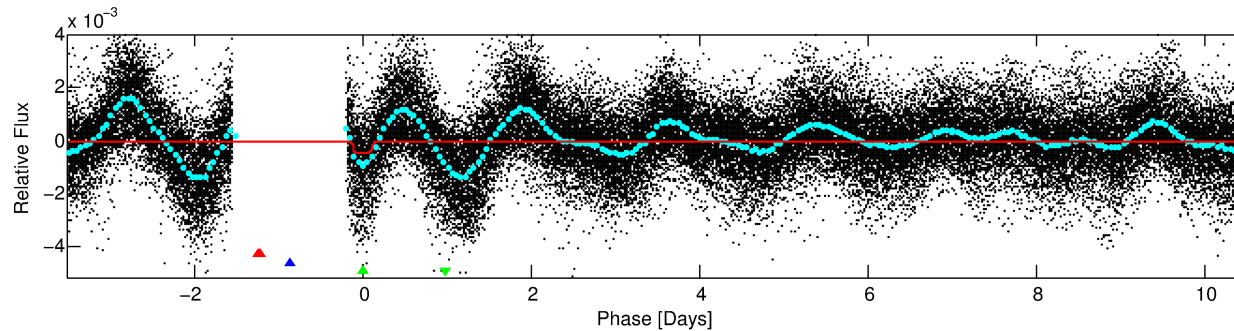
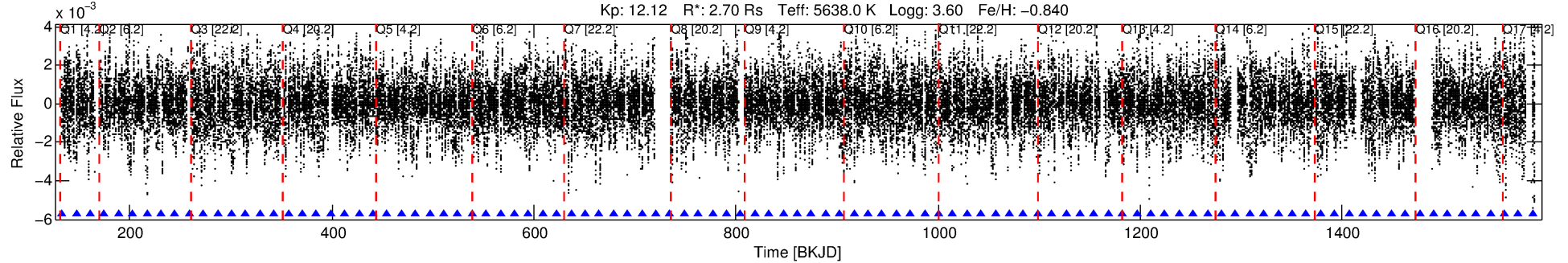
No Significant Match Found

DV One-Page Summary

KIC: 4142768 Candidate: 3 of 3 Period: 13.996 d

KOI: K06387 Corr: No Ephemeris Match

Kp: 12.12 R*: 2.70 Rs Teff: 5638.0 K Logg: 3.60 Fe/H: -0.840



DV Fit Results:

Period = 13.99610 [0.00006] d
Epoch = 132.8795 [0.0038] BKJD
Rp/R* = 0.0204 [0.0100]
a/R* = 16.22 [37.86]
b = 0.44 [4.37]
Seff = 494.25 [758.22]
Teq = 1202 [461] K
Rp = 6.01 [5.26] Re
a = 0.1157 [0.1007] AU
Ag = 68.16 [124.07] [0.54σ]
Teffp = 5341 [1336] K [2.93σ]

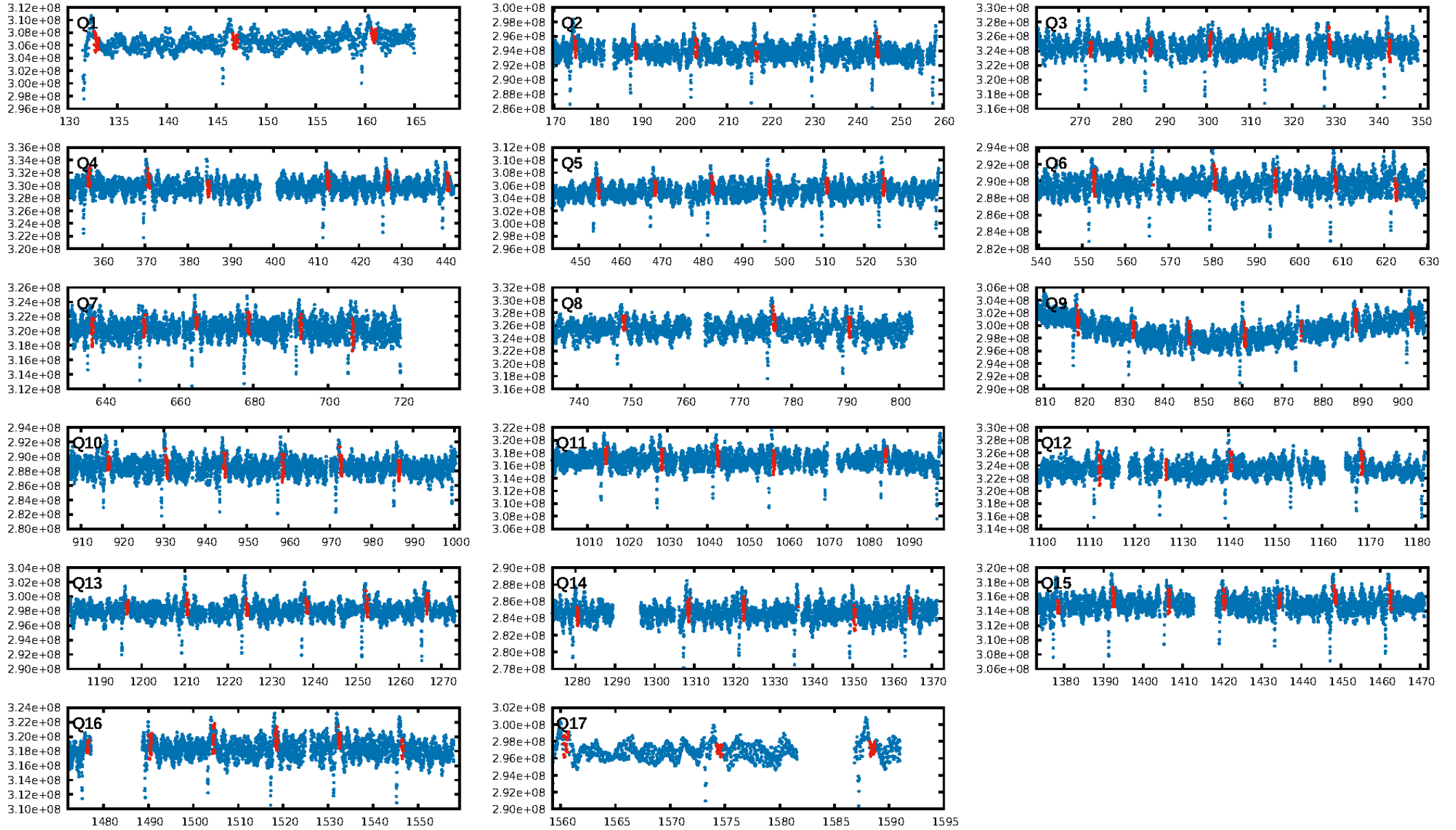
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.19e-163
RollingBand-fgt: 1.00 [82/82]
GhostDiagnostic-chr: -2.091
Centroid-sig: 0.0%
Centroid-so: 0.251 arcsec [2.51σ]
OotOffset-rm: 0.074 arcsec [0.99σ]
KicOffset-rm: 0.276 arcsec [3.61σ]
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]

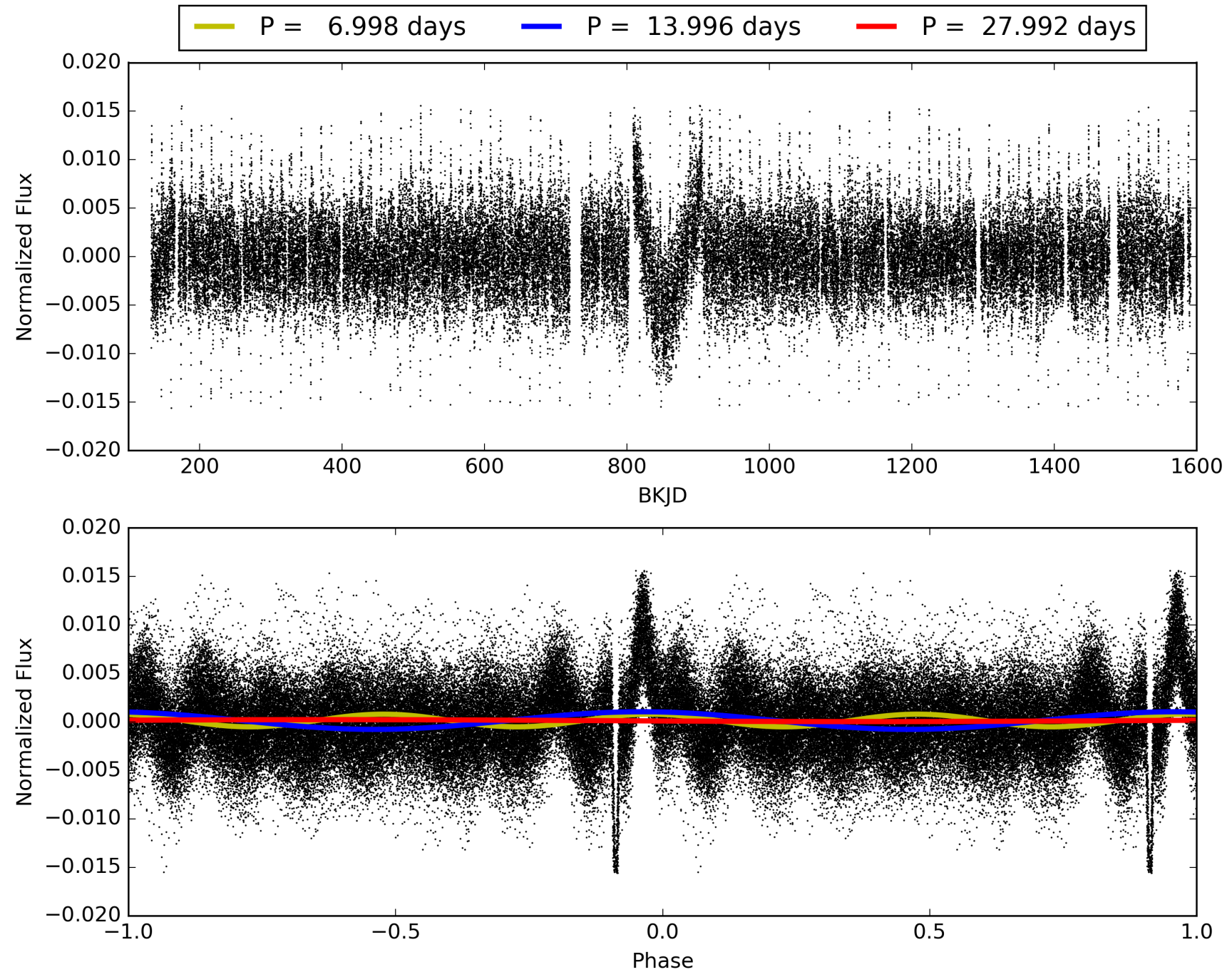
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:16:43 Z

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

TCE 004142768-03, PDC Light Curves

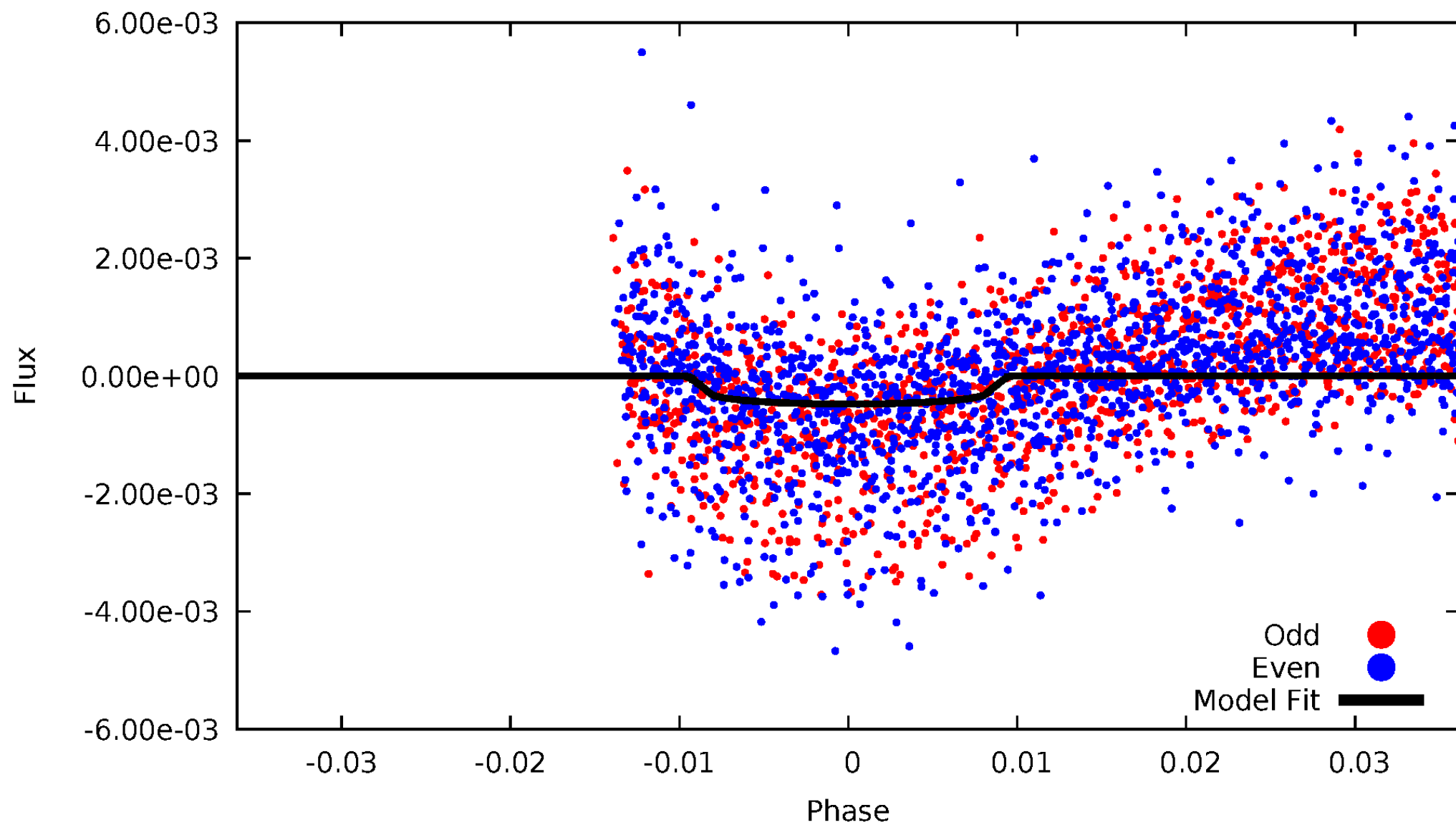


TCE 004142768-03



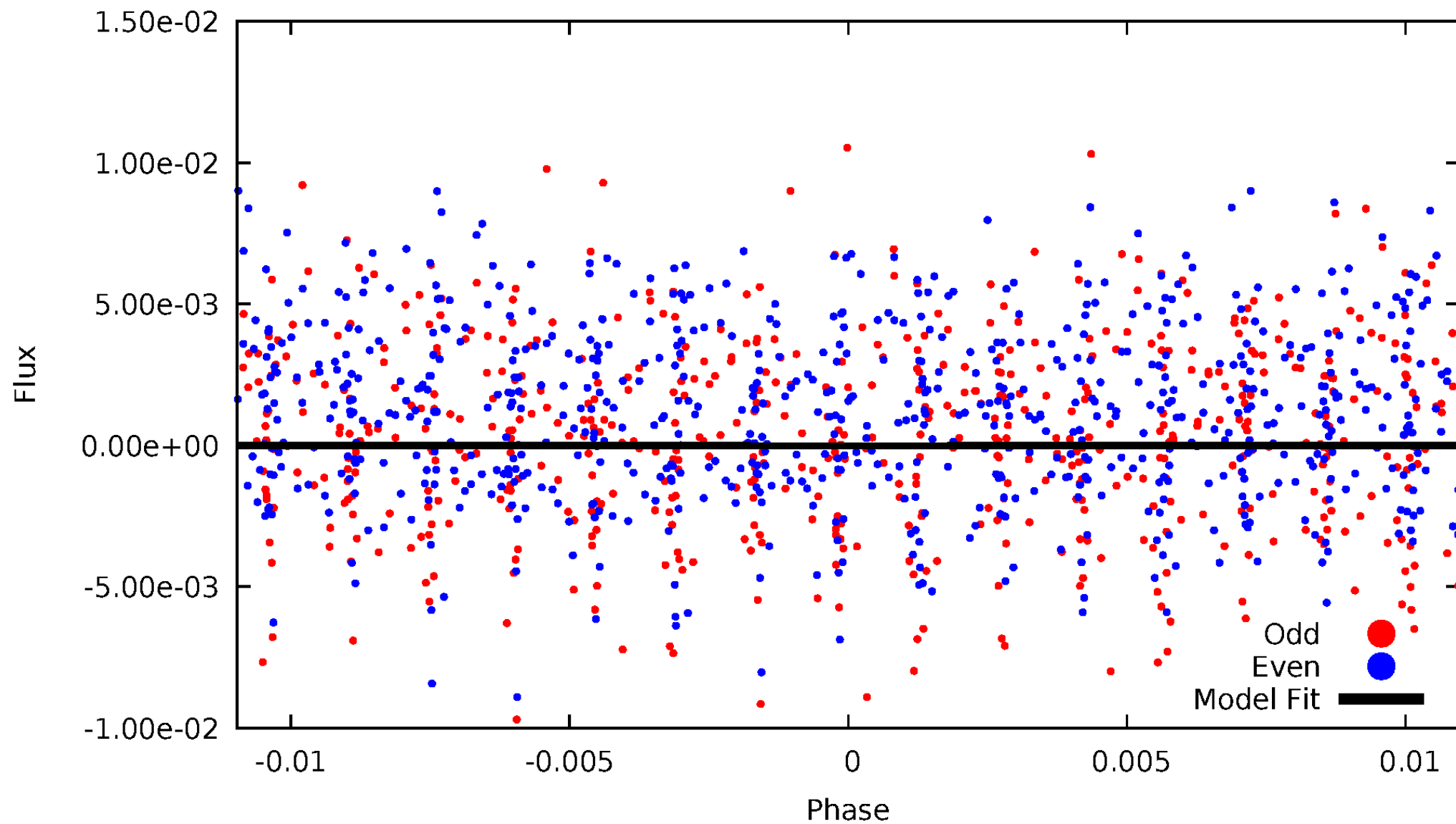
DV Odd/Even

TCE 004142768-03



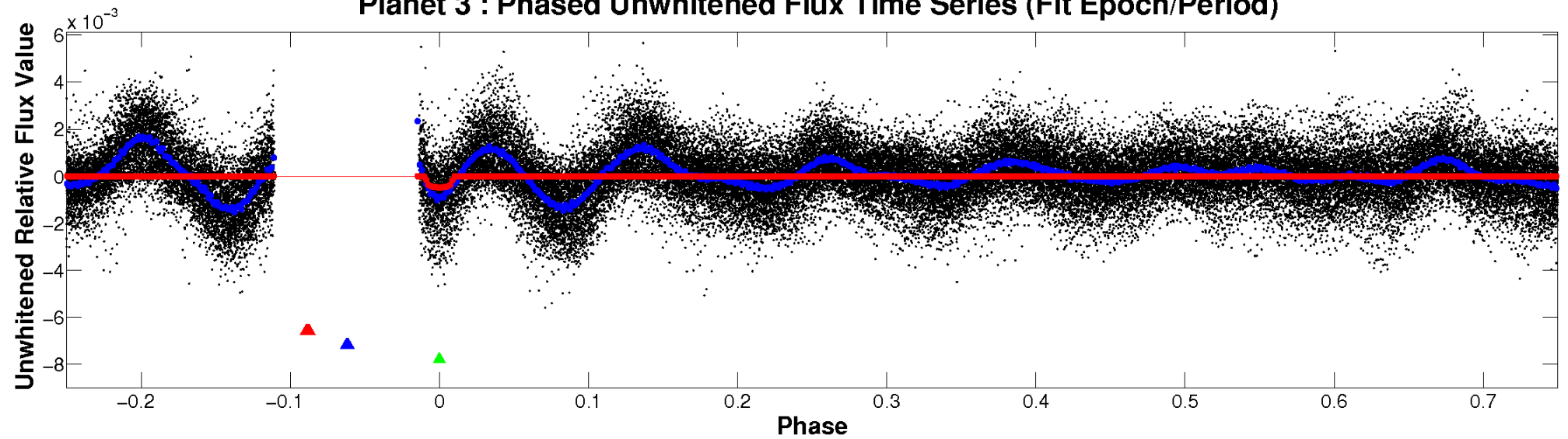
ALT Odd/Even

TCE 004142768-03

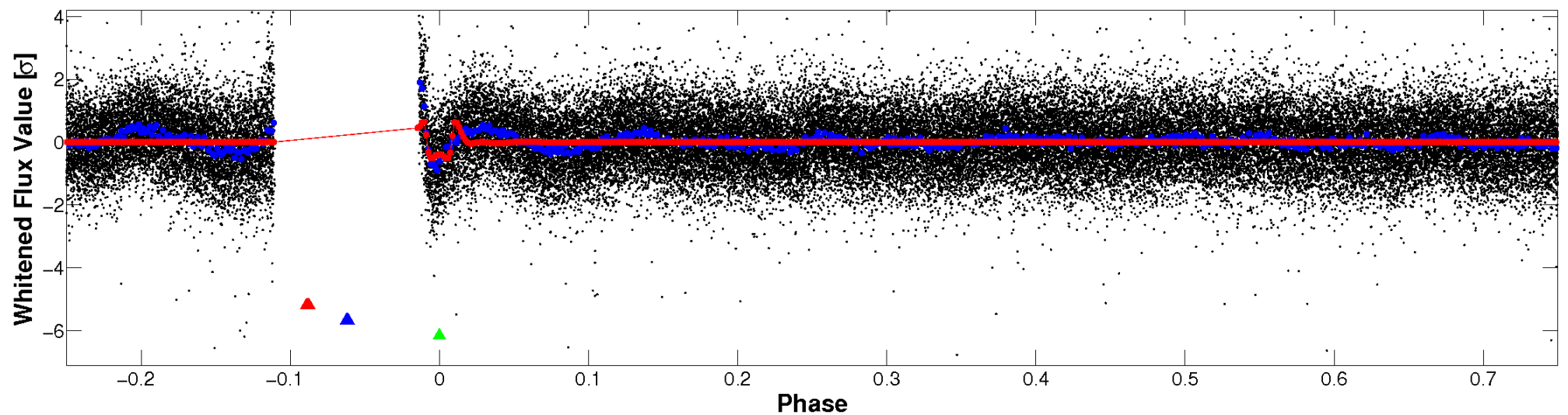


Non-Whitened Vs. Whitened Light Curve

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

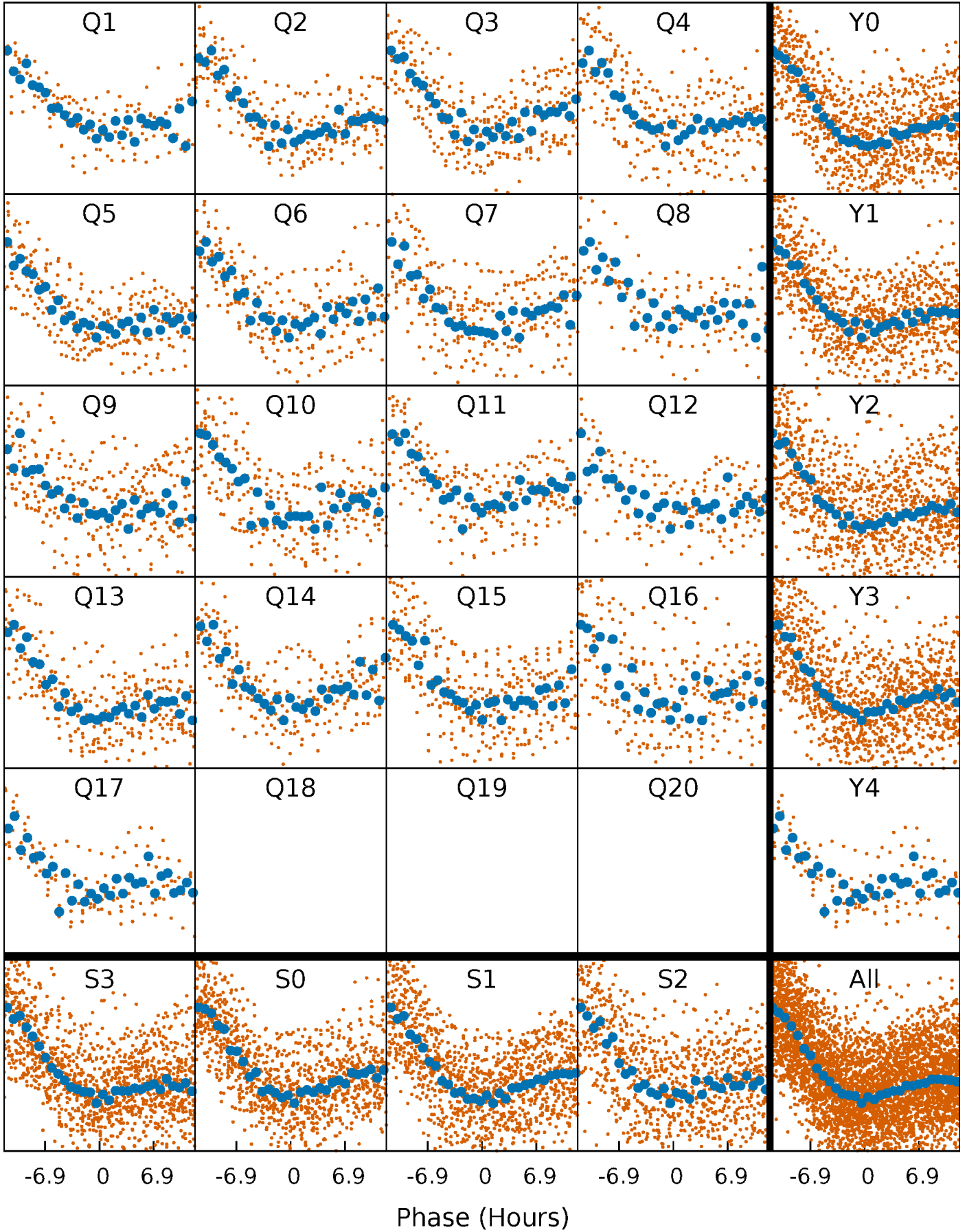


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



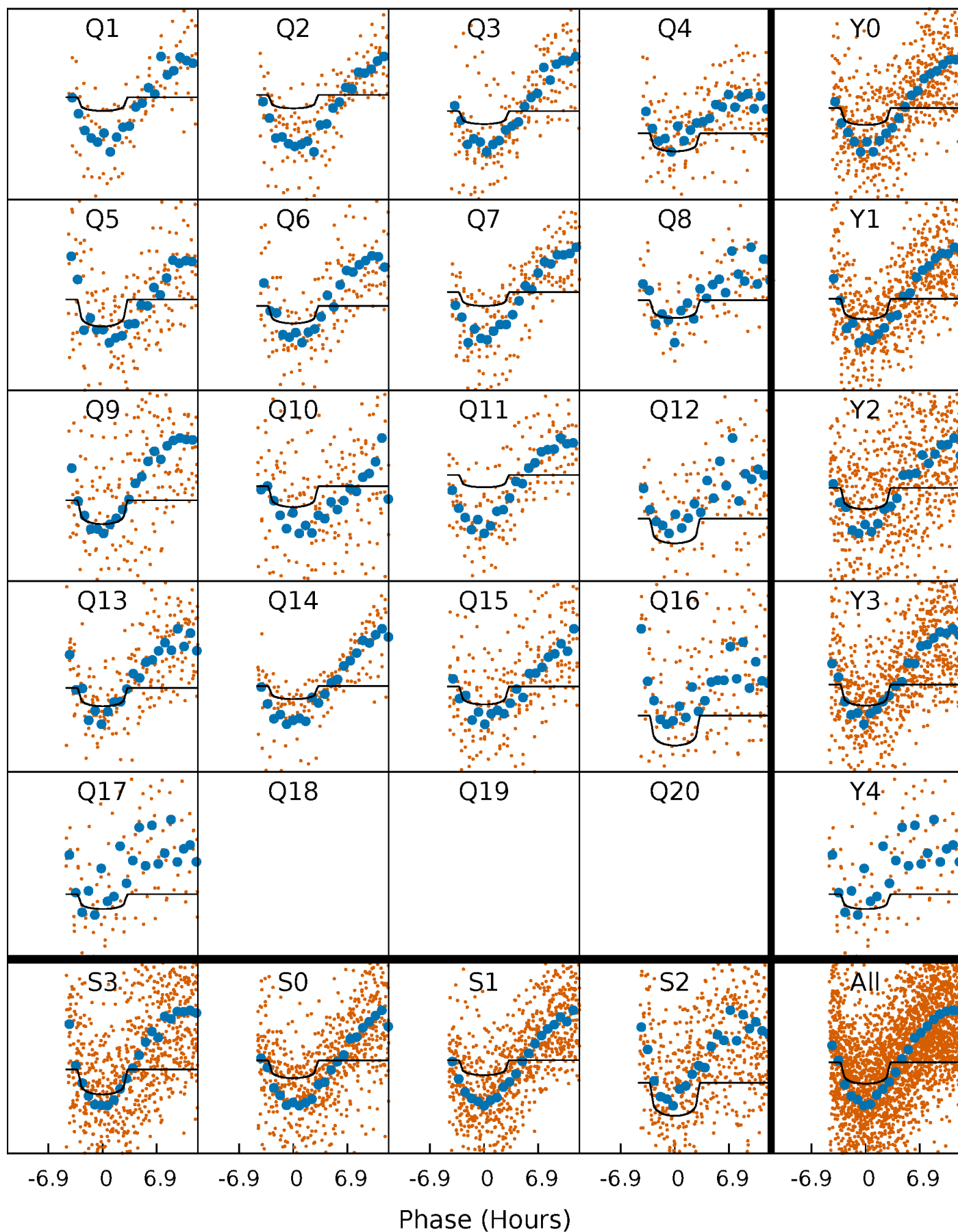
PDC Quarter-Phased Transit Curves

TCE 004142768-03 P= 13.996105 Days $T_0=132.879453$ (BKJD)



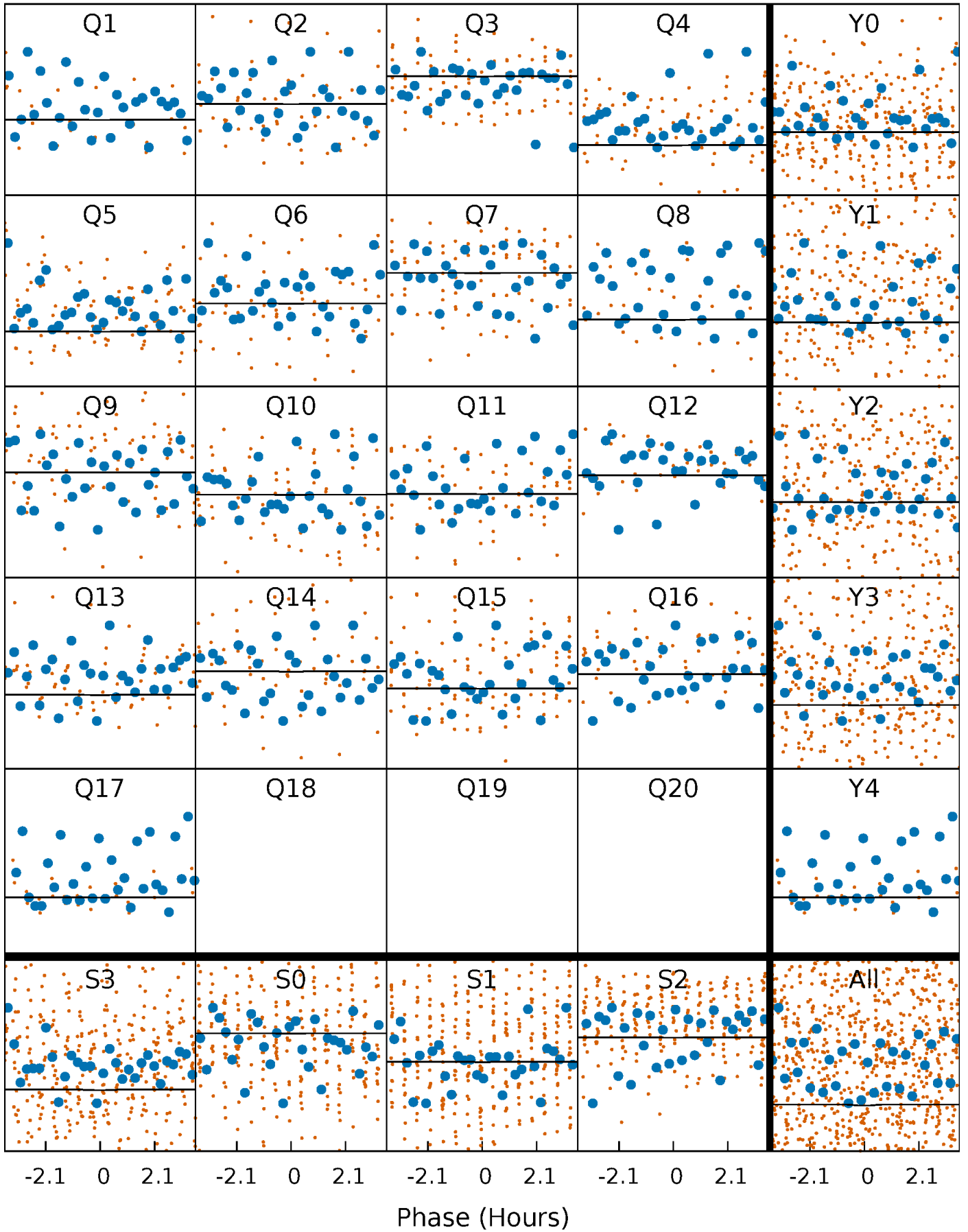
DV Quarter-Phased Transit Curves

TCE 004142768-03 P= 13.996105 Days $T_0=132.879453$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

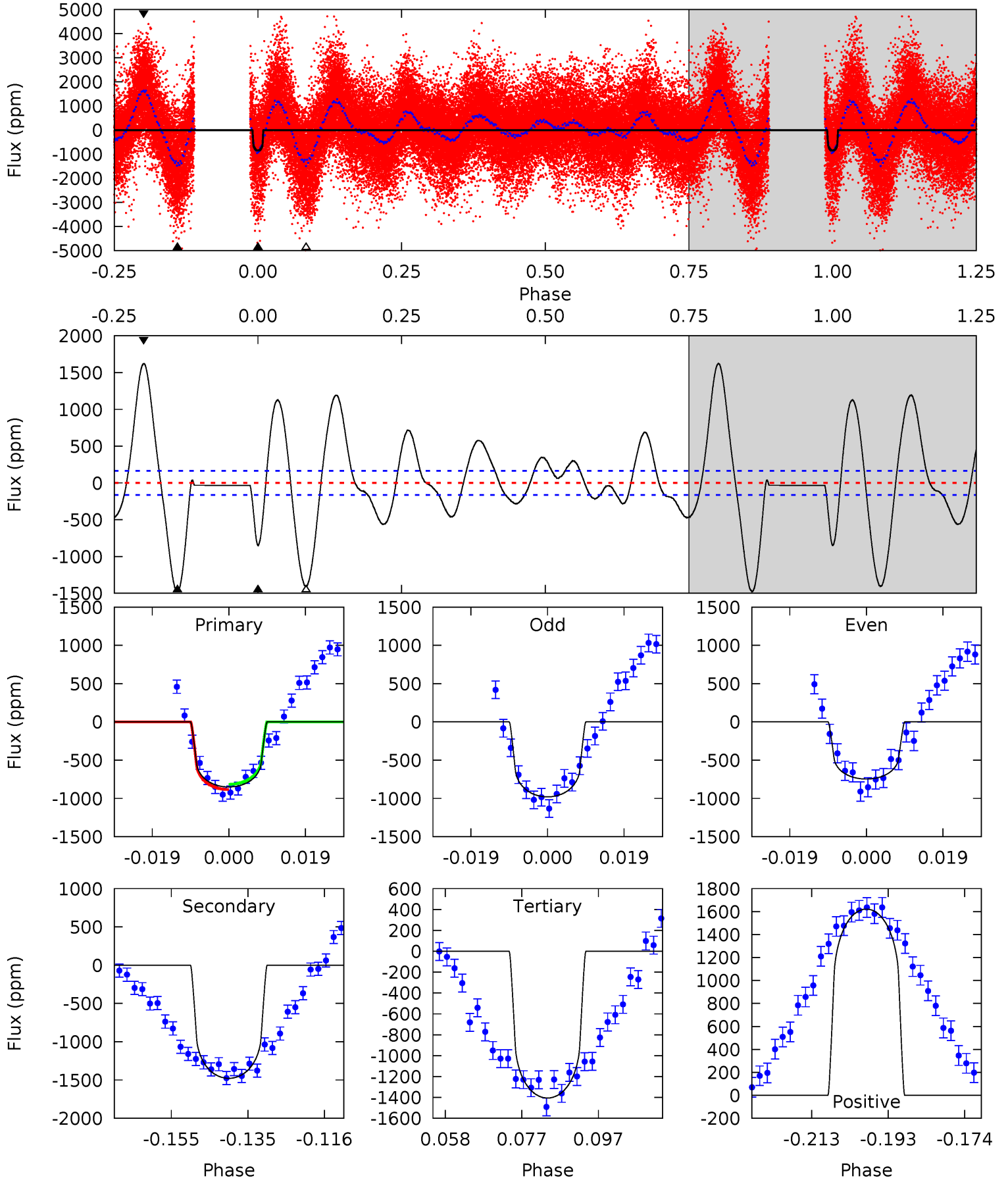
TCE 004142768-03 P= 13.996270 Days $T_0=132.870381$ (BKJD)



DV Model-Shift Uniqueness Test

004142768-03, P = 13.996105 Days, E = 118.883348 Days

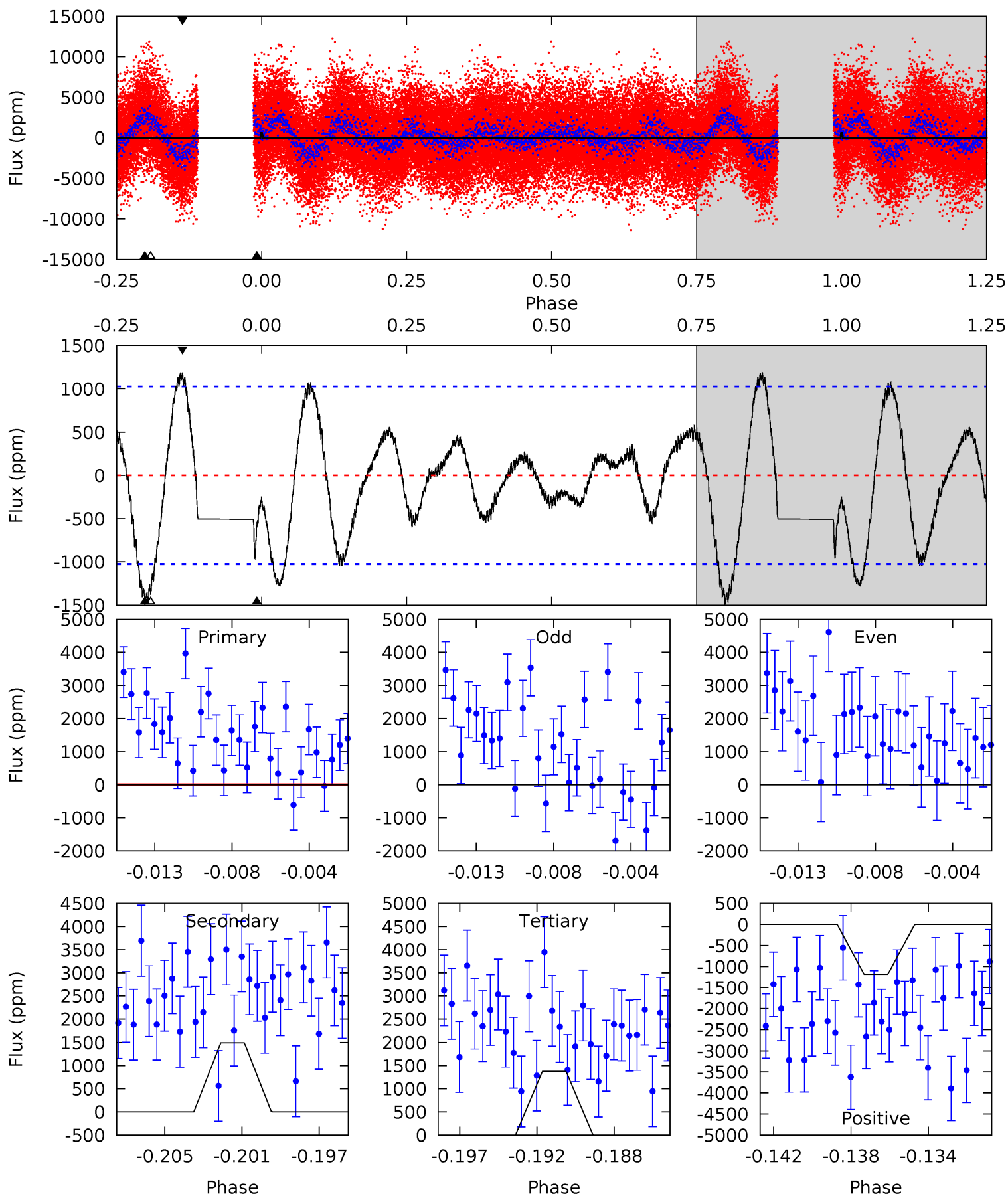
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	44.1	42.0	48.4	4.90	2.34	15.9	-16.6	-23.0	2.15	-4.30	3.46	1.34	0.52	1.05



Alt Model-Shift Uniqueness Test

004142768-03, P = 13.996270 Days, E = 118.874111 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.96	7.53	6.95	6.01	5.19	2.86	2.55	-3.99	-3.05	0.58	1.52	2.58	0.78	0.44	1.60



Stellar Parameters For KIC 004142768

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5638^{+203}_{-203}	$3.597^{+0.944}_{-0.236}$	$-0.840^{+0.350}_{-0.300}$	$2.703^{+1.053}_{-1.956}$	$1.055^{+0.231}_{-0.282}$	$0.075^{+2.238}_{-0.043}$
	+4%/-4%	+26%/-7%	+42%/-36%	+39%/-72%	+22%/-27%	+2975%/-57%
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 004142768-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1478 ± 34	$5.43^{+3.59}_{-3.07}$	1644^{+211}_{-296}	7800^{+5502}_{-1449}	364^{+1589}_{-228}
Alt.	-1488 ± 198	$2.23^{+2.78}_{-1.63}$	1636^{+216}_{-335}	14864^{+45905}_{-6257}	2232^{+26529}_{-1772}

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 $A_{obs} \gg 1.0$

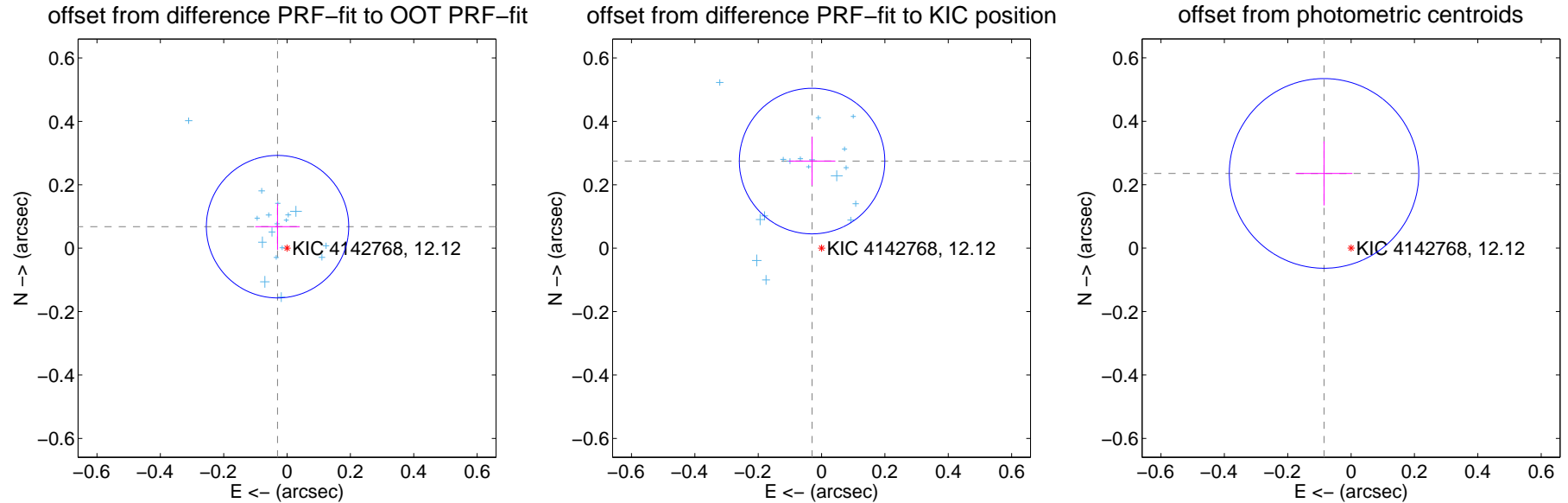
DV Centroid Data

Supplemental centroid analysis for 004142768-03. Kepler magnitude: 12.12. Transit SNR 18.63

There are 17 quarters with good PRF difference image offsets

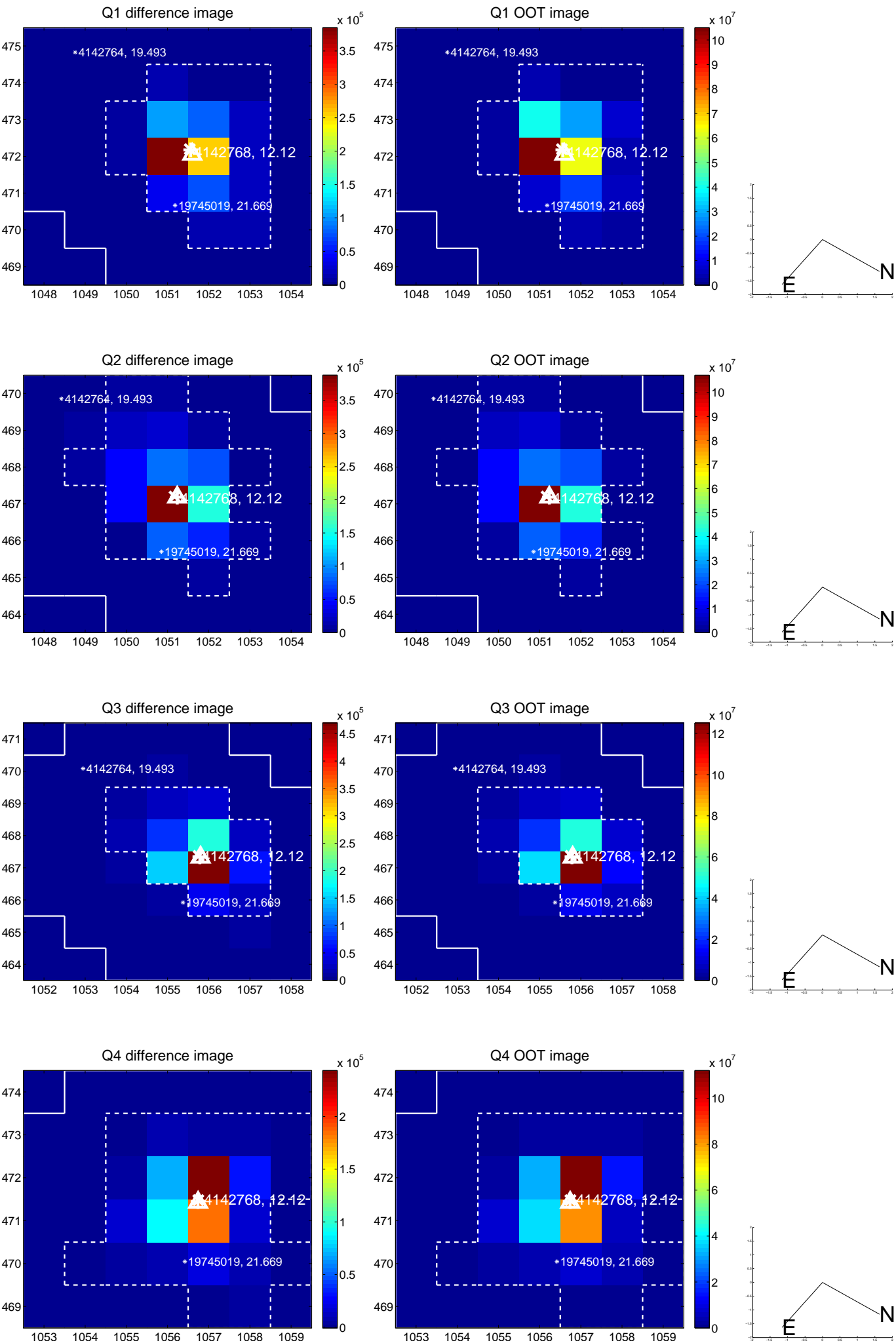
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.074 ± 0.075	0.99	0.030 ± 0.070	0.068 ± 0.073
PRF-fit source offset from KIC position	0.276 ± 0.077	3.61	0.030 ± 0.073	0.275 ± 0.077
photometric centroid source offset	0.25 ± 0.10	2.51	0.09 ± 0.09	0.24 ± 0.10

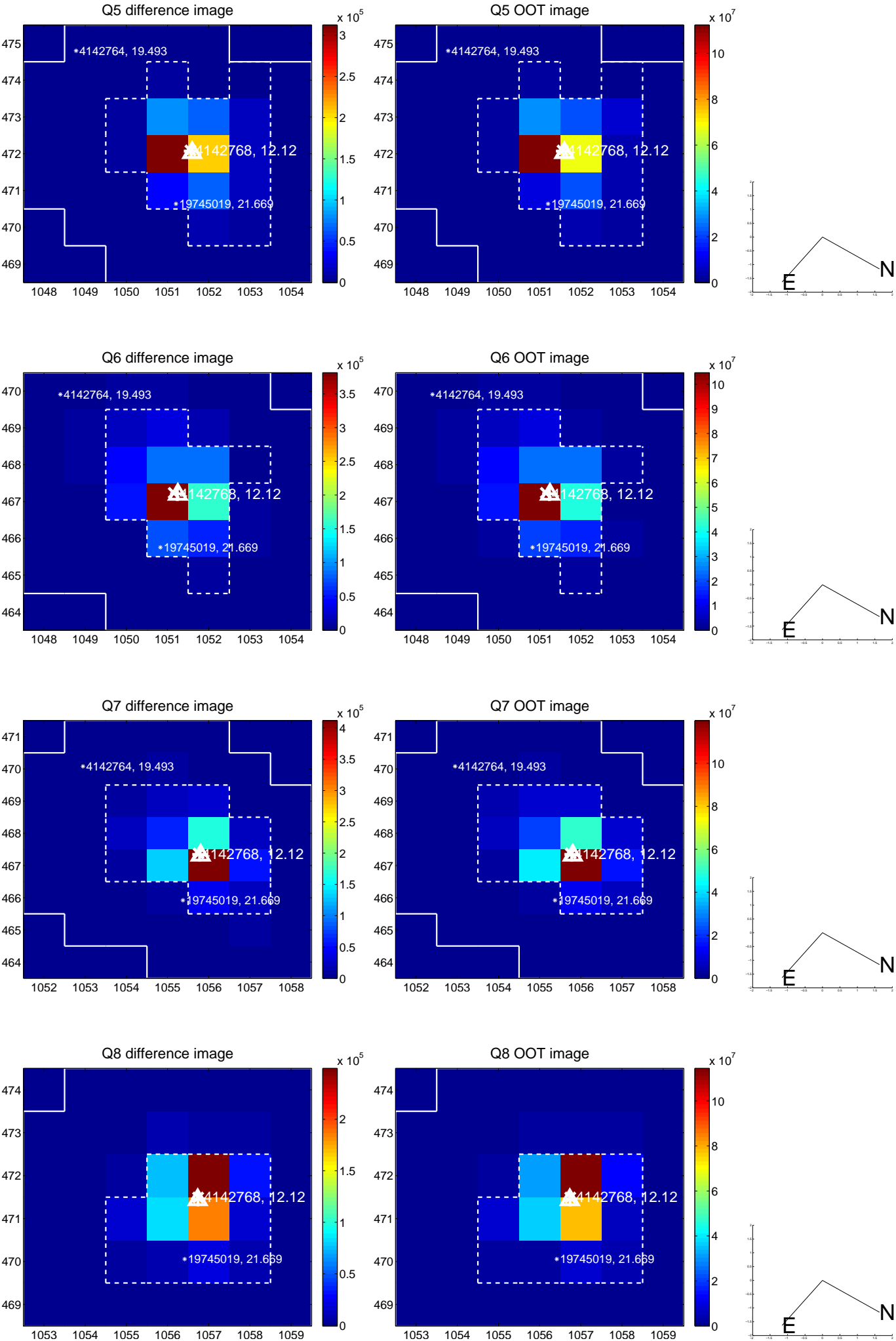


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

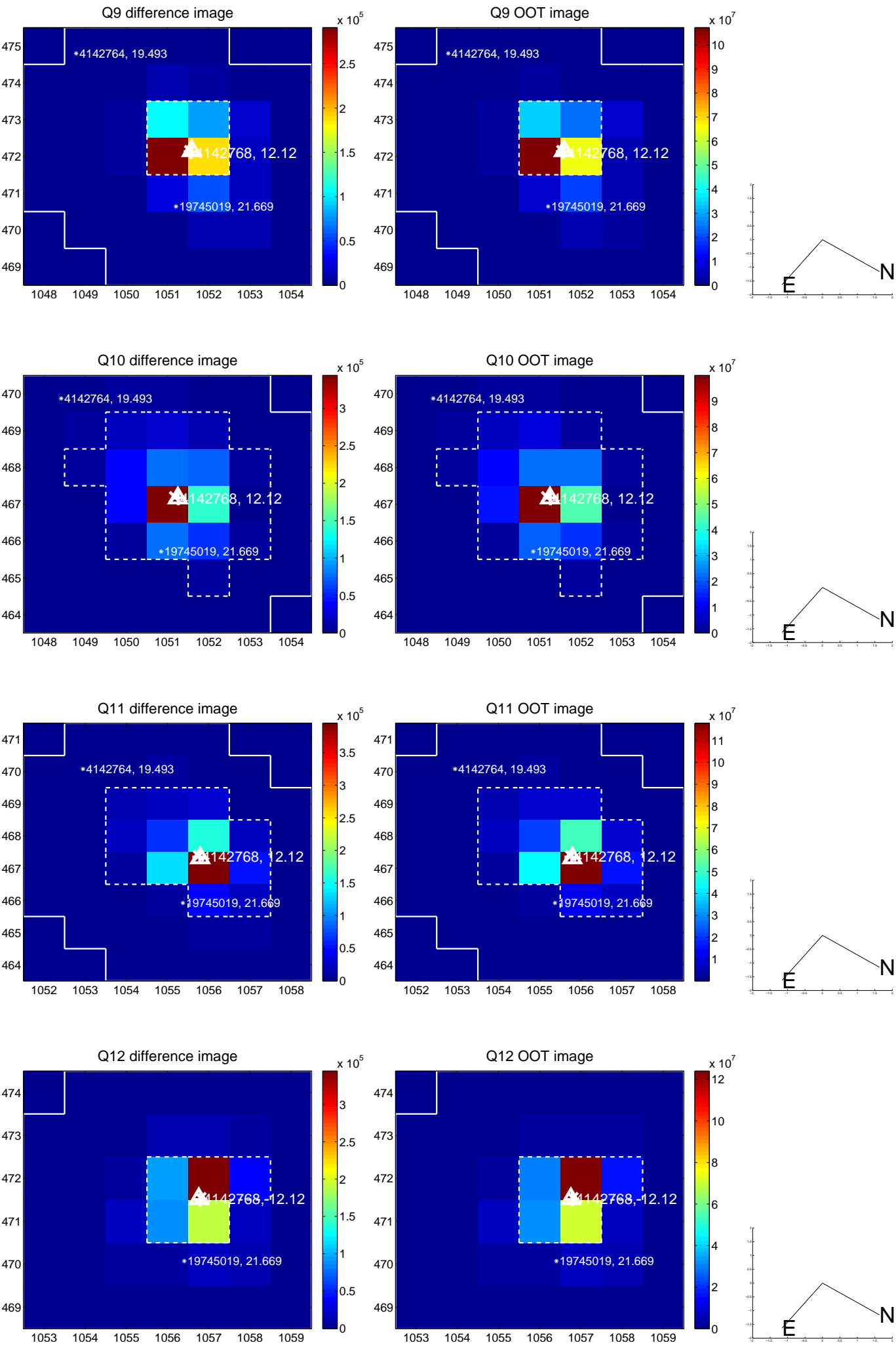
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



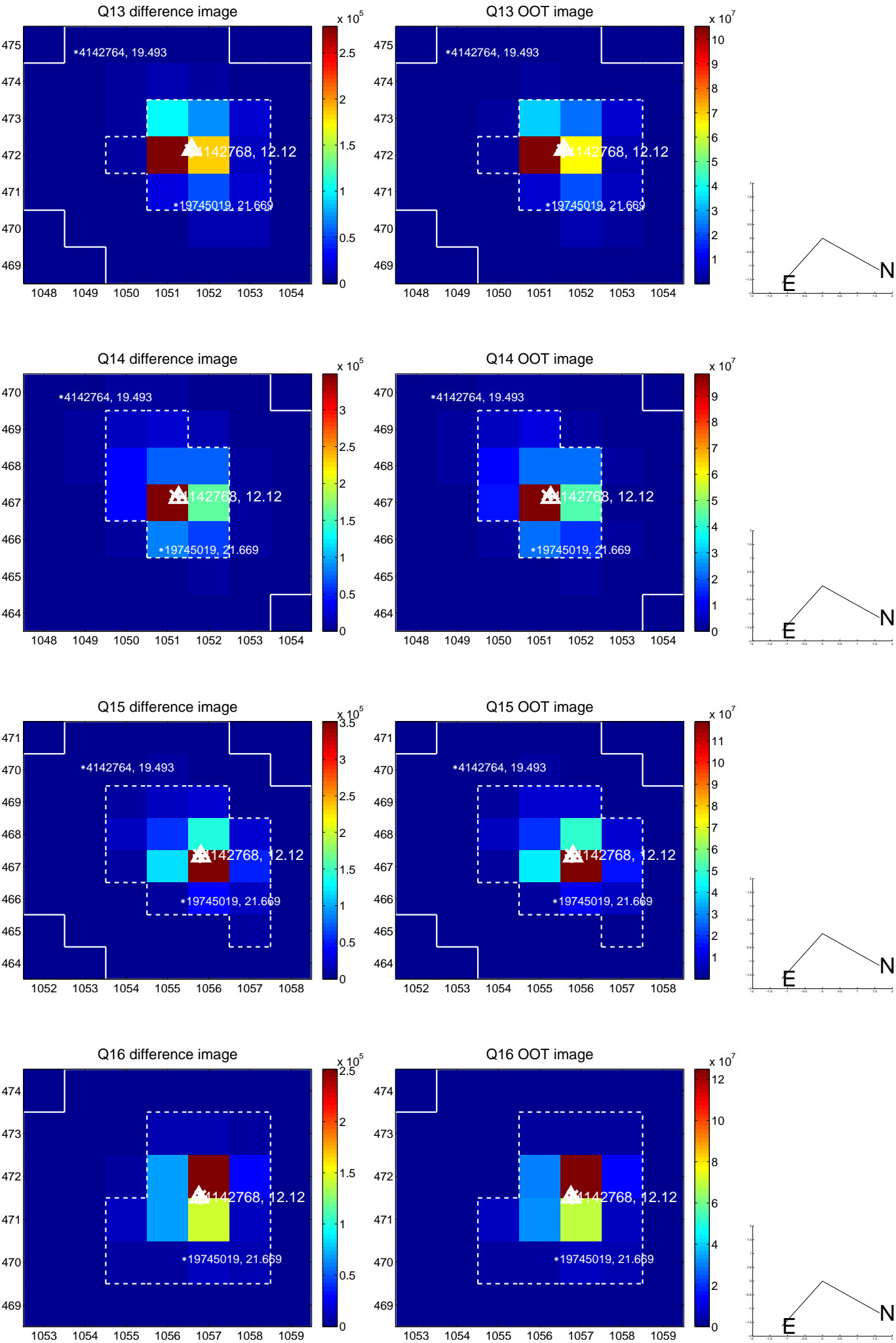
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



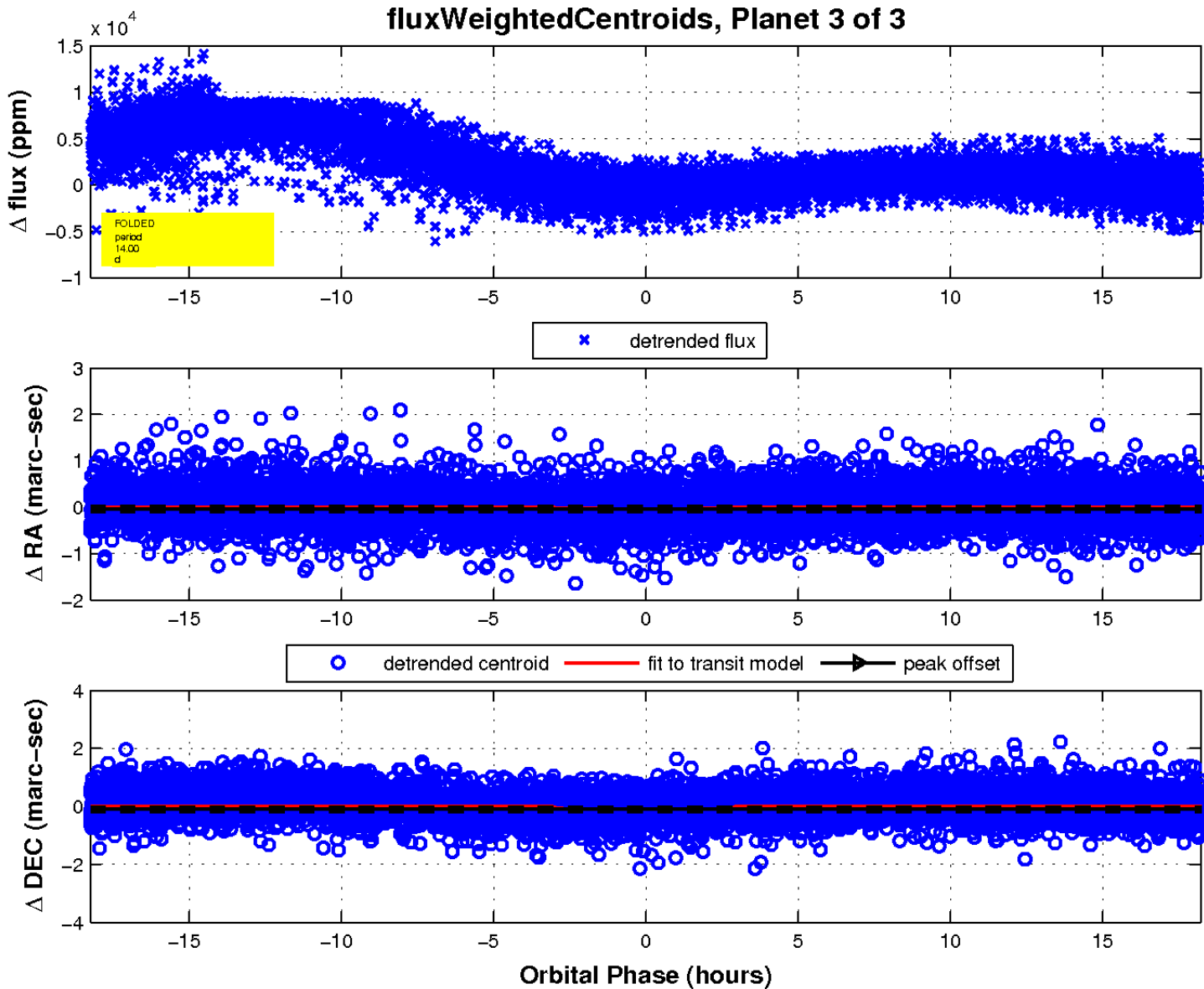
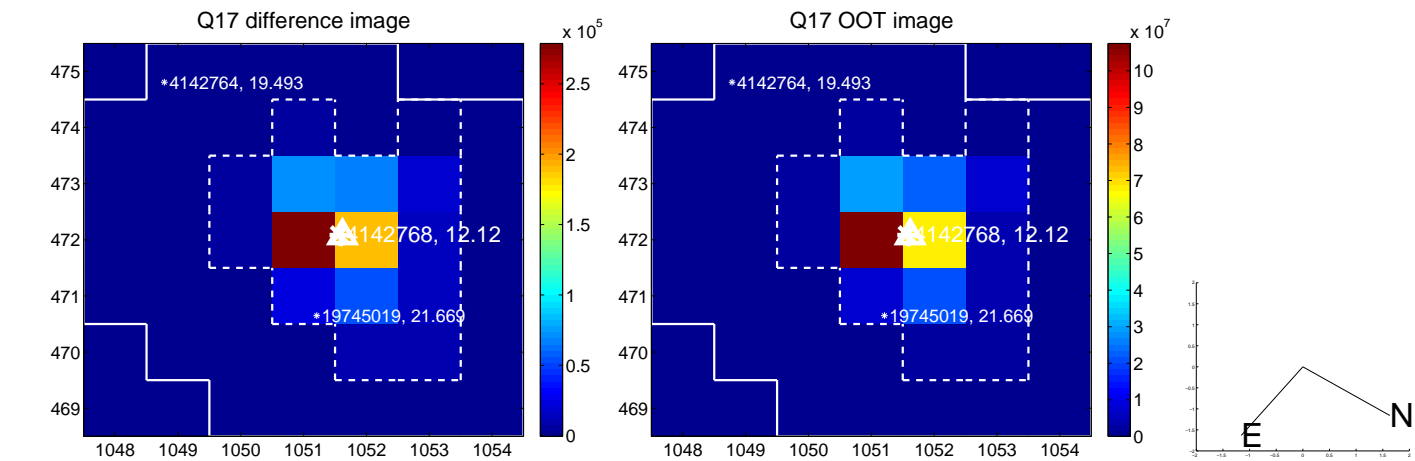
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

