

KIC 004736562

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})
004736562-01	OBS	No	0.522118	131.828607	317.6	1.000	21.0	24.5	2.23	7454	4.64	67340.85
004736562-02	OBS	No	0.522121	131.654614	296.8	0.815	19.6	22.2	2.23	7454	4.50	67340.27
004736562-03	OBS	No	0.522123	132.001621	64.0	1.499	19.0	6.2	2.23	7454	1.82	67340.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004736562-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
004736562-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
004736562-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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

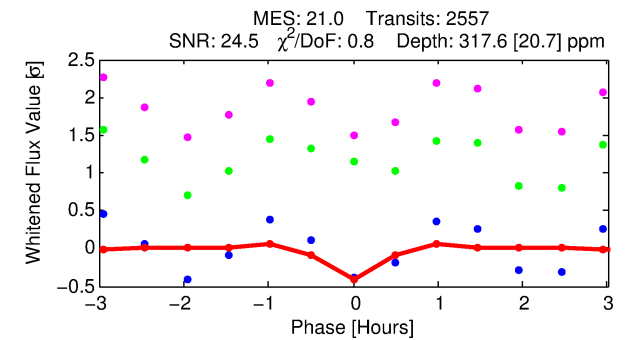
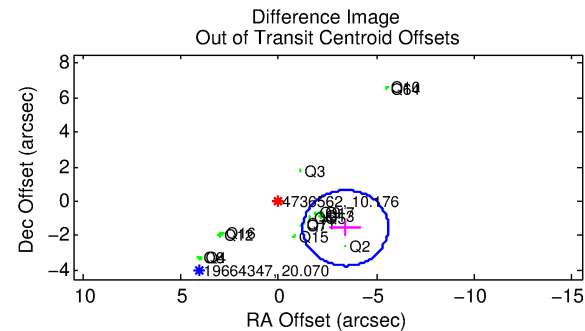
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 004736562-01

No Significant Match Found

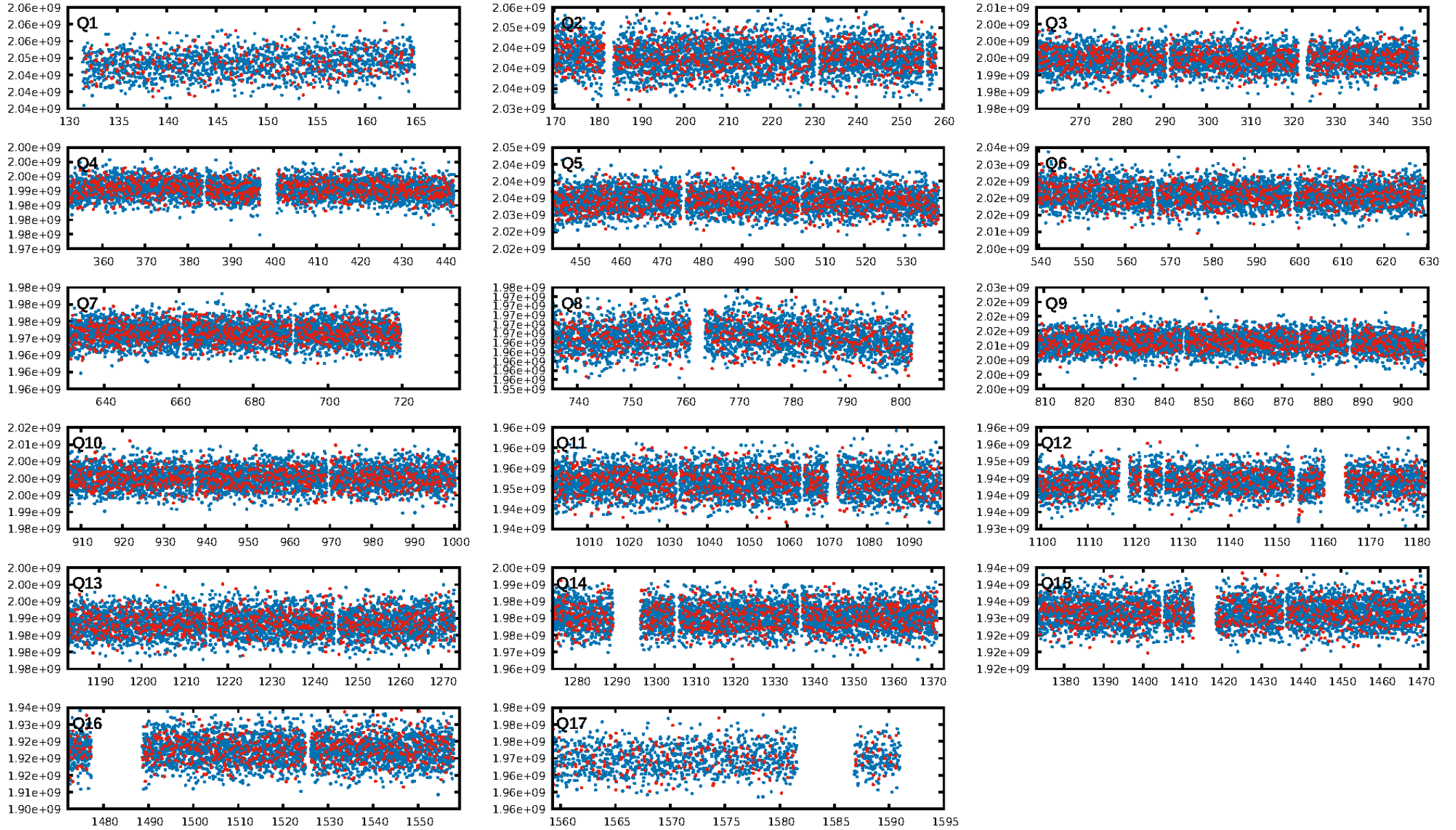
KIC: 4736562 Candidate: 1 of 3 Period: 0.522 d



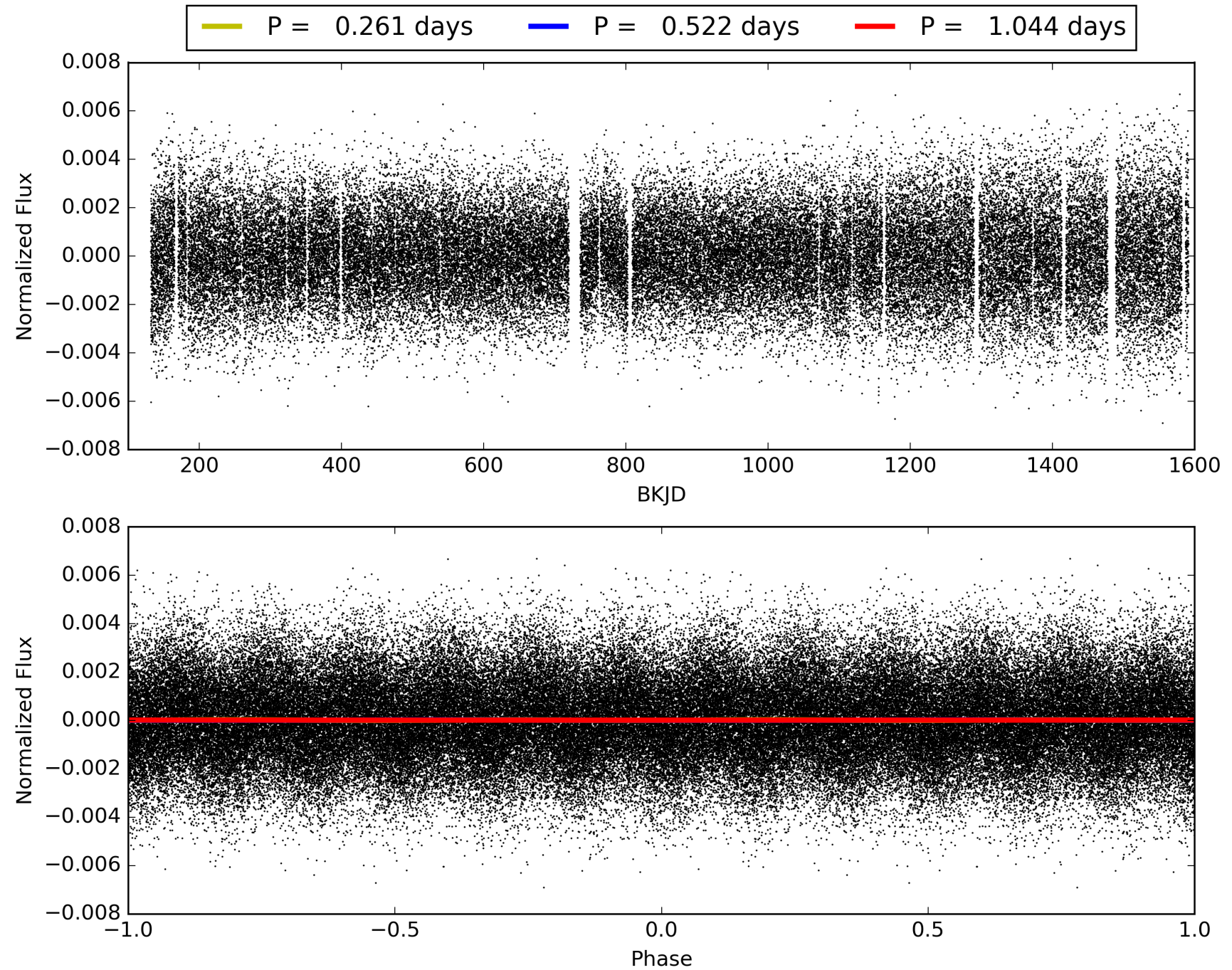
ShortPeriod-sig: N/A
 LongPeriod-sig: 0.0% [0.00s]
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: N/A
 RollingBand-fgt: 1.00 [2437/2442]
 GhostDiagnostic-chr: N/A
 Centroid-sig: 25.5%
 Centroid-so: 0.030 arcsec [0.45s]
 OotOffset-rm: 3.753 arcsec [5.15s]
 KicOffset-rm: 2.749 arcsec [5.08s]
 OotOffset-st: 4/4/4/5 [17]
 KicOffset-st: 4/4/4/5 [17]
 DiffImageQuality-fgm: 0.18 [3/17]
 DiffImageOverlap-fno: 0.00 [0/17]

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

TCE 004736562-01, PDC Light Curves

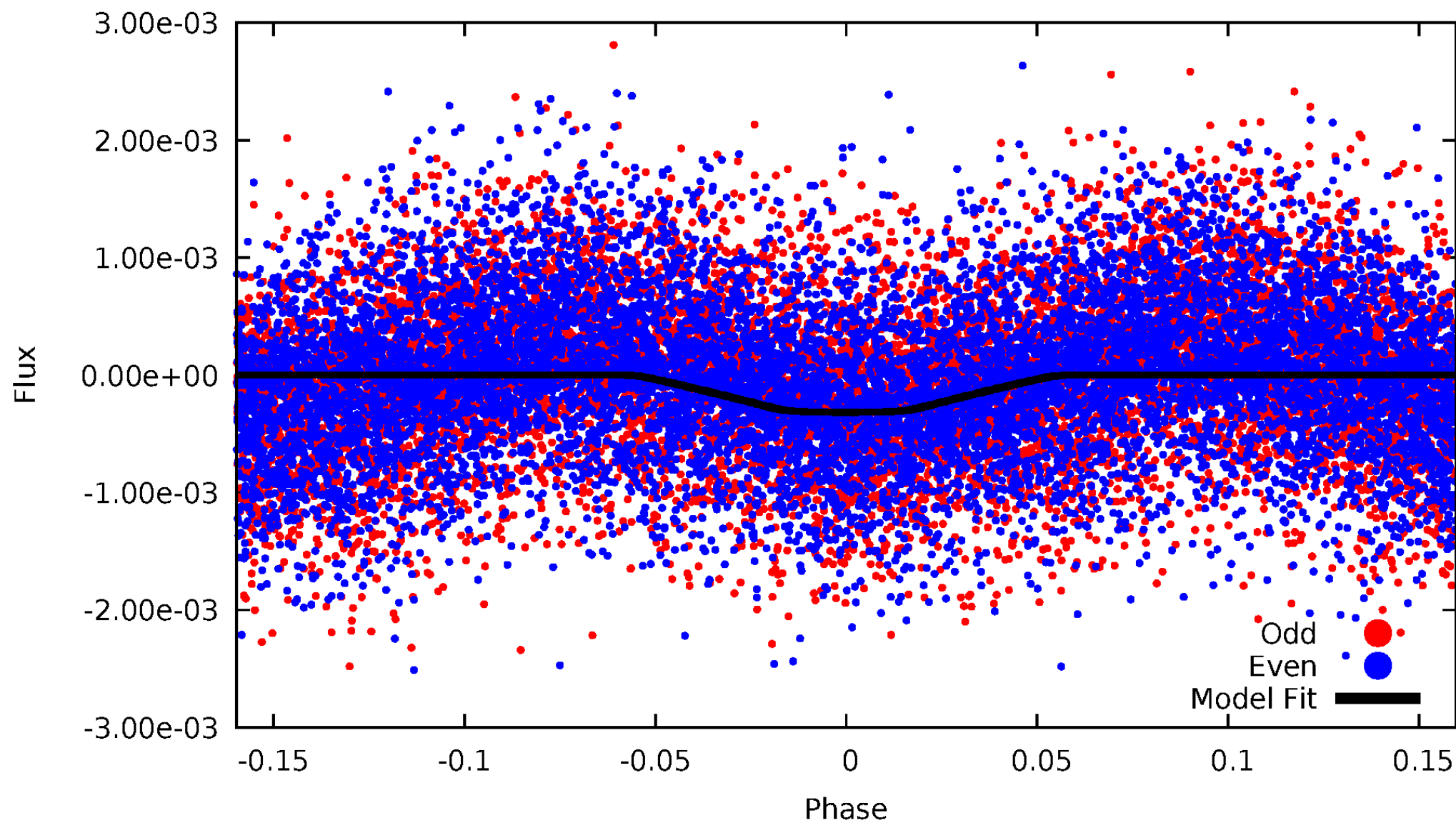


TCE 004736562-01



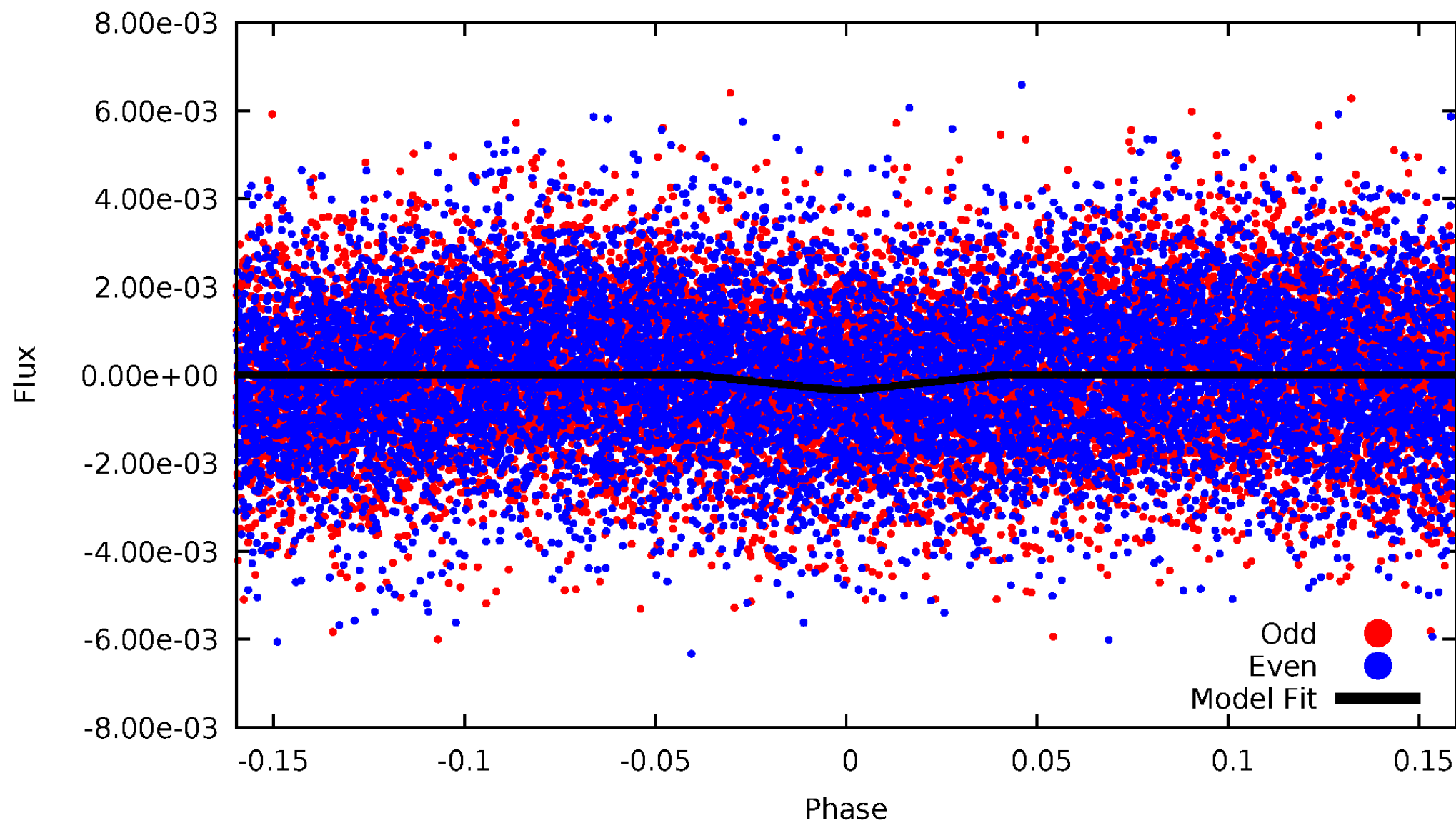
DV Odd/Even

TCE 004736562-01



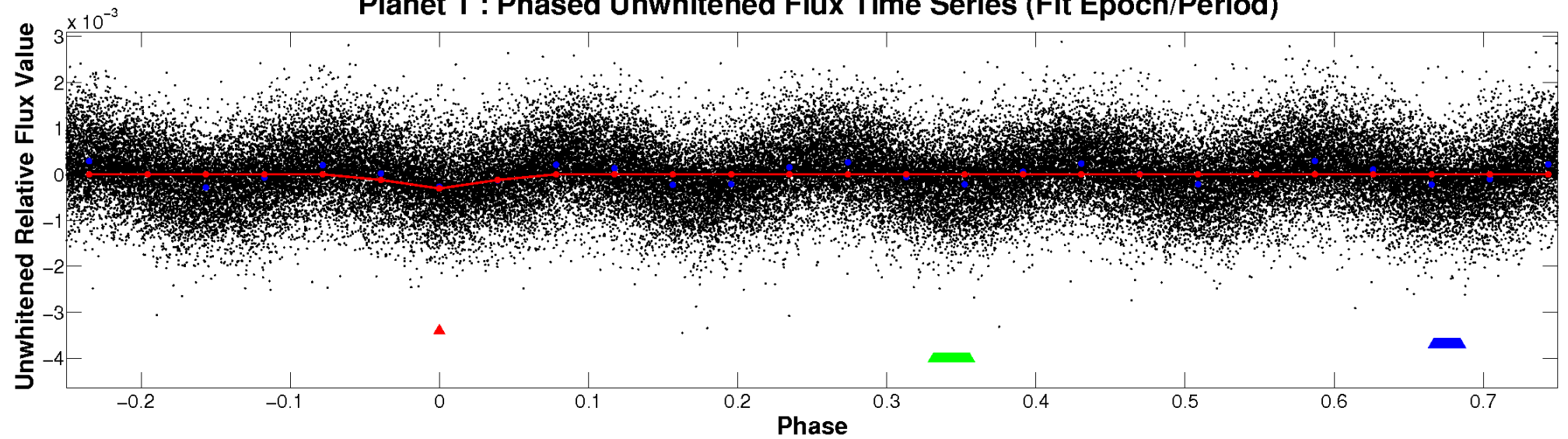
ALT Odd/Even

TCE 004736562-01

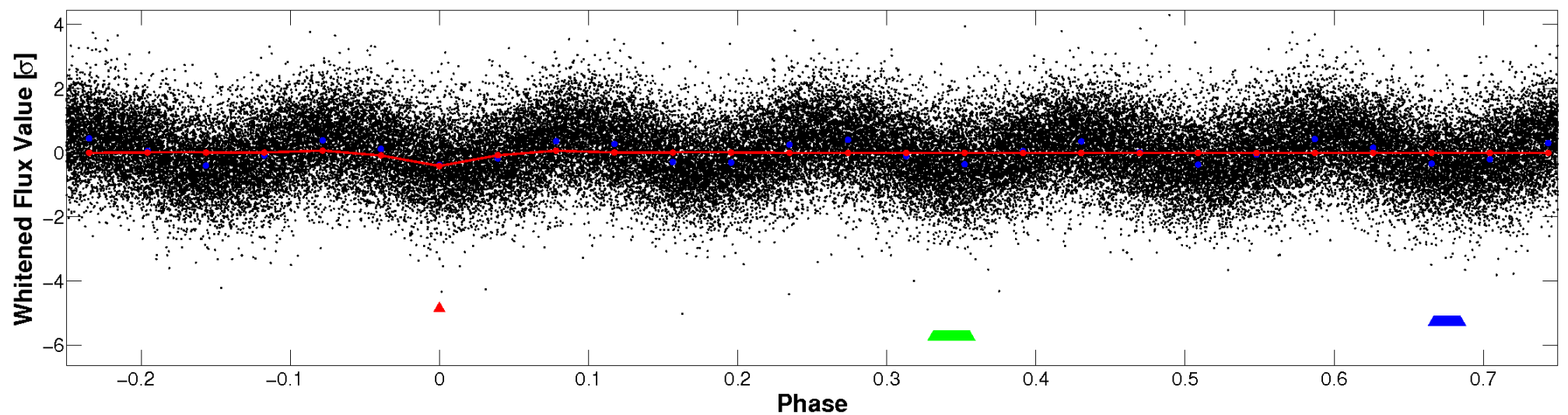


Non-Whitened Vs. Whitened Light Curve

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

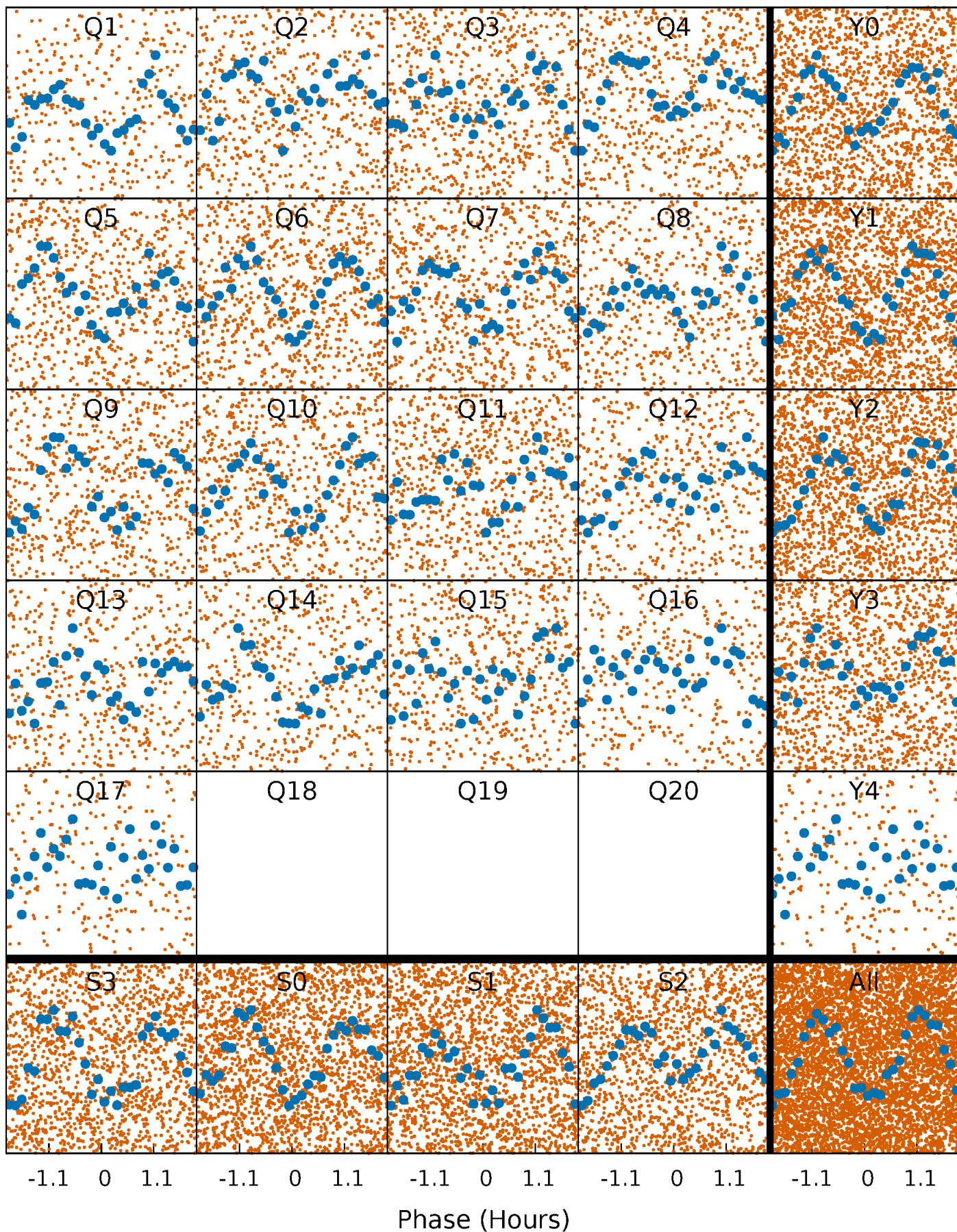


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



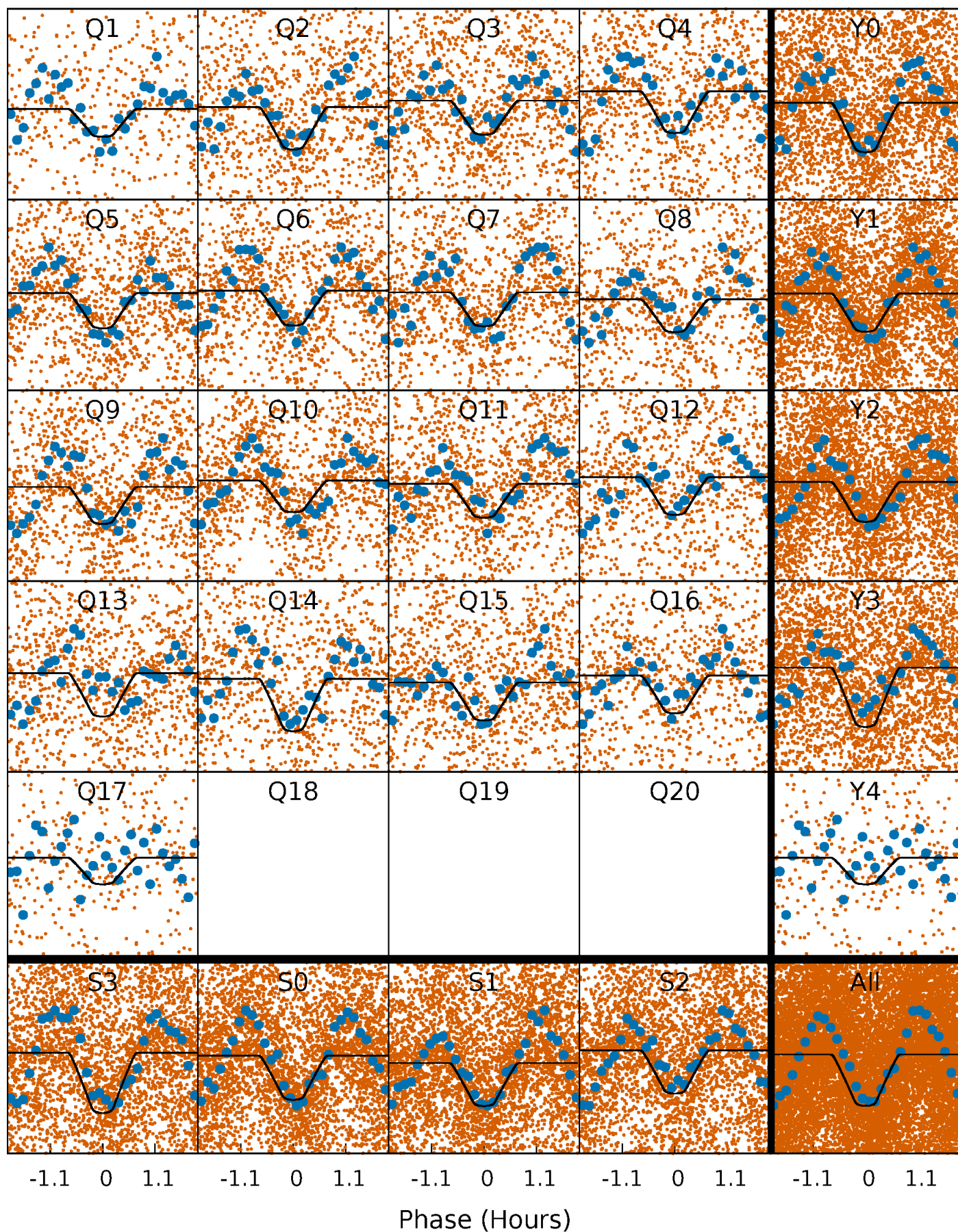
PDC Quarter-Phased Transit Curves

TCE 004736562-01 P= 0.522118 Days $T_0=131.828607$ (BKJD)



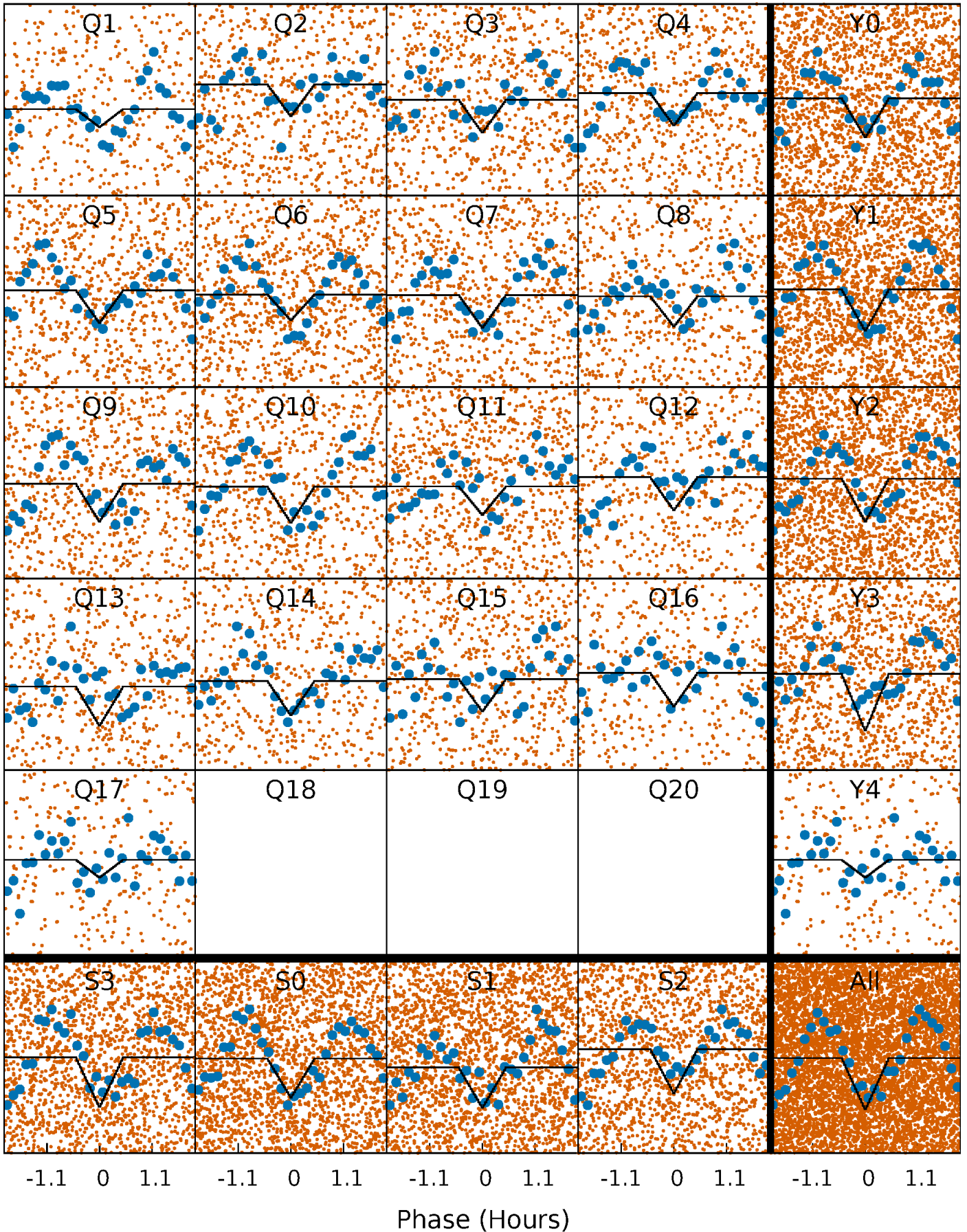
DV Quarter-Phased Transit Curves

TCE 004736562-01 P= 0.522118 Days $T_0=131.828607$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

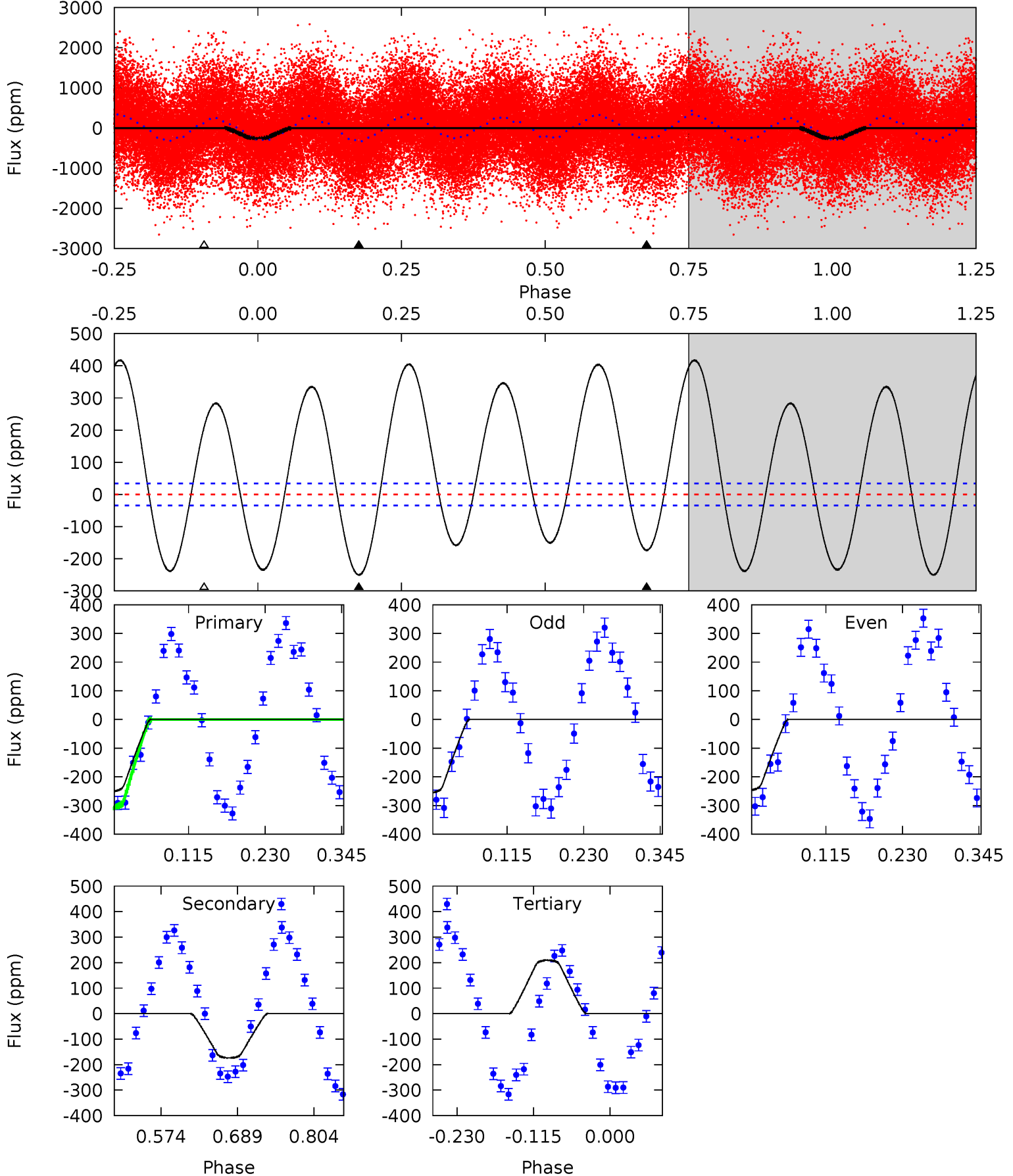
TCE 004736562-01 P= 0.522118 Days $T_0=131.828399$ (BKJD)



DV Model-Shift Uniqueness Test

004736562-01, P = 0.522118 Days, E = 131.306489 Days

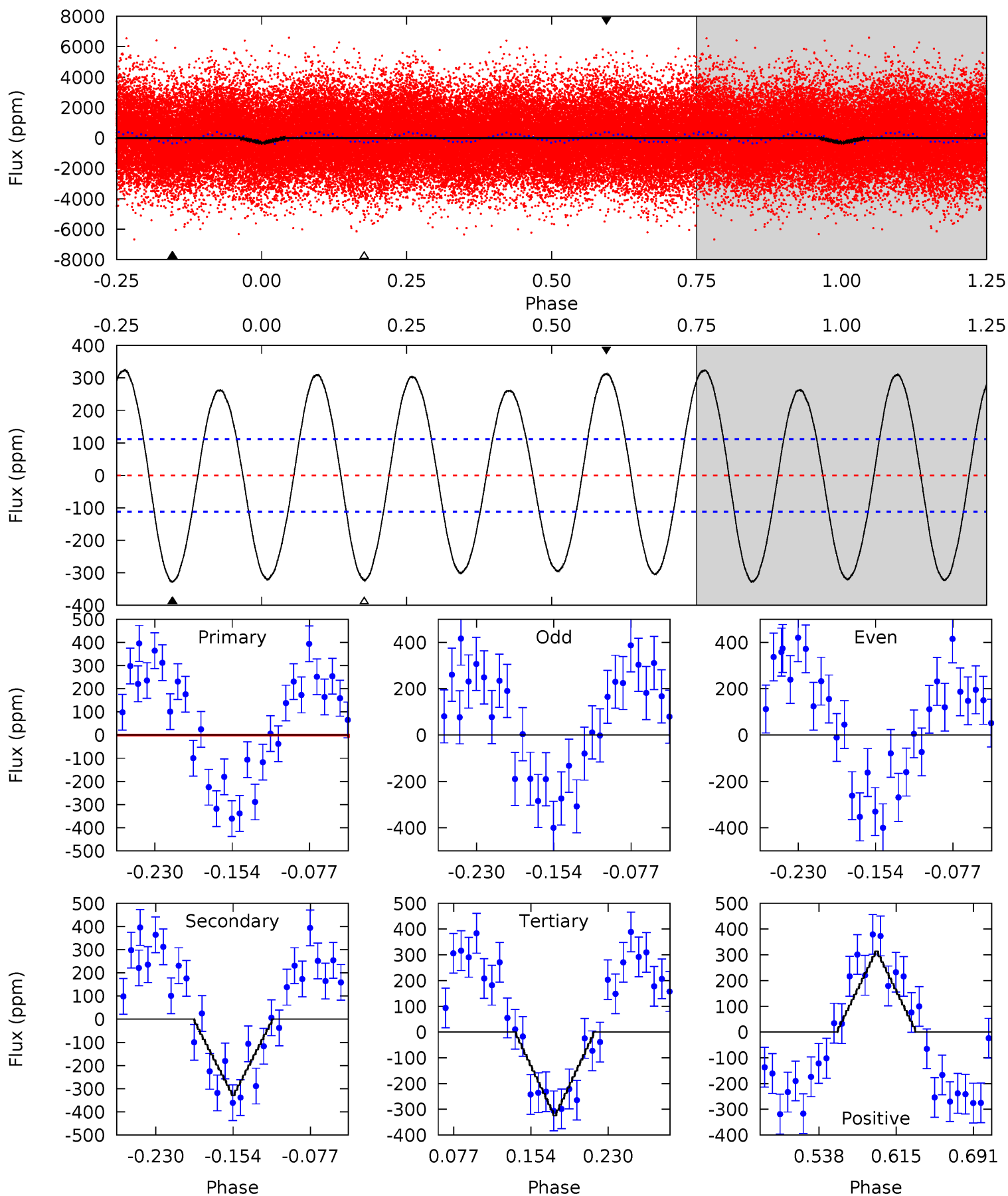
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	22.9	-27.7	0	4.54	1.58	22.9	60.7	33.0	50.6	22.9	0.56	0.97	0.63	7.50



Alt Model-Shift Uniqueness Test

004736562-01, P = 0.522118 Days, E = 131.306281 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	13.6	13.5	13.0	4.62	1.77	8.94	0.14	0.59	0.17	0.61	1.10	1.02	0.50	2.61



Stellar Parameters For KIC 004736562

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7454^{+233}_{-311}	$3.897^{+0.368}_{-0.123}$	$-0.500^{+0.250}_{-0.300}$	$2.235^{+0.475}_{-0.883}$	$1.435^{+0.210}_{-0.257}$	$0.181^{+0.521}_{-0.065}$
	+3%/-4%	+9%/-3%	+50%/-60%	+21%/-40%	+15%/-18%	+288%/-36%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004736562-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-174 ± 8	$4.33^{+1.11}_{-1.03}$	5604^{+425}_{-581}	5626^{+674}_{-628}	$1.053^{+0.716}_{-0.391}$
Alt.	-329 ± 24	$4.40^{+0.94}_{-1.05}$	5597^{+427}_{-563}	6917^{+837}_{-699}	$1.922^{+1.409}_{-0.618}$

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

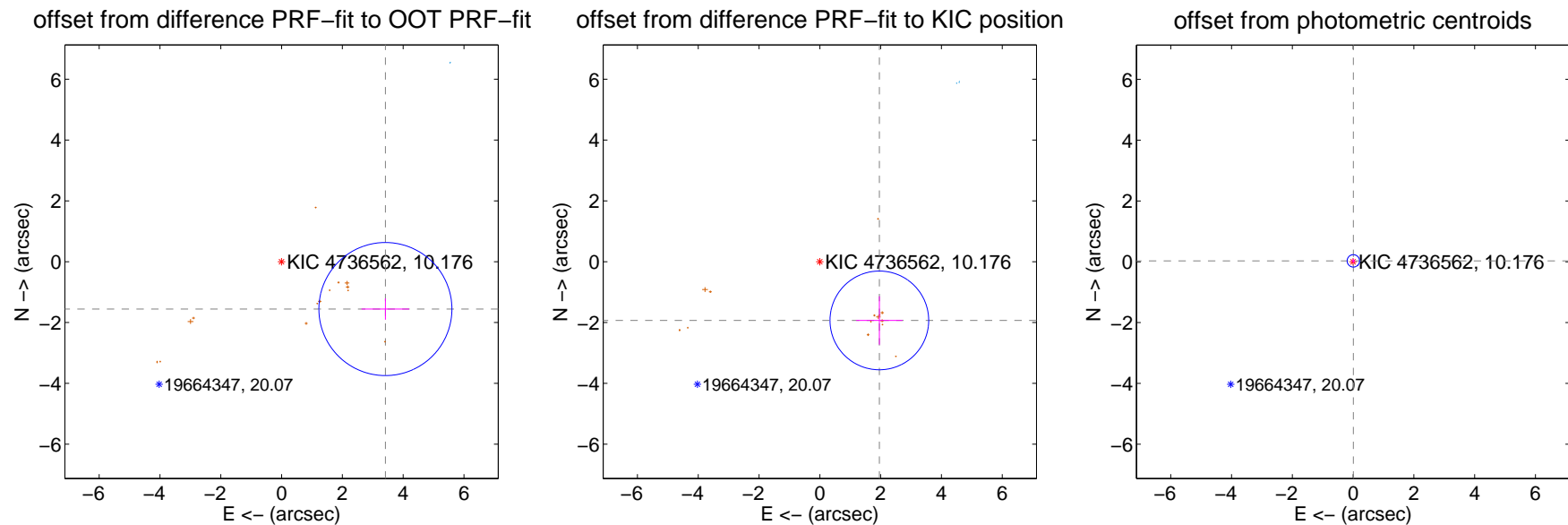
DV Centroid Data

Supplemental centroid analysis for 004736562-01. **Kepler magnitude: 10.18.** Transit SNR 24.46

There are 3 quarters with good PRF difference image offsets

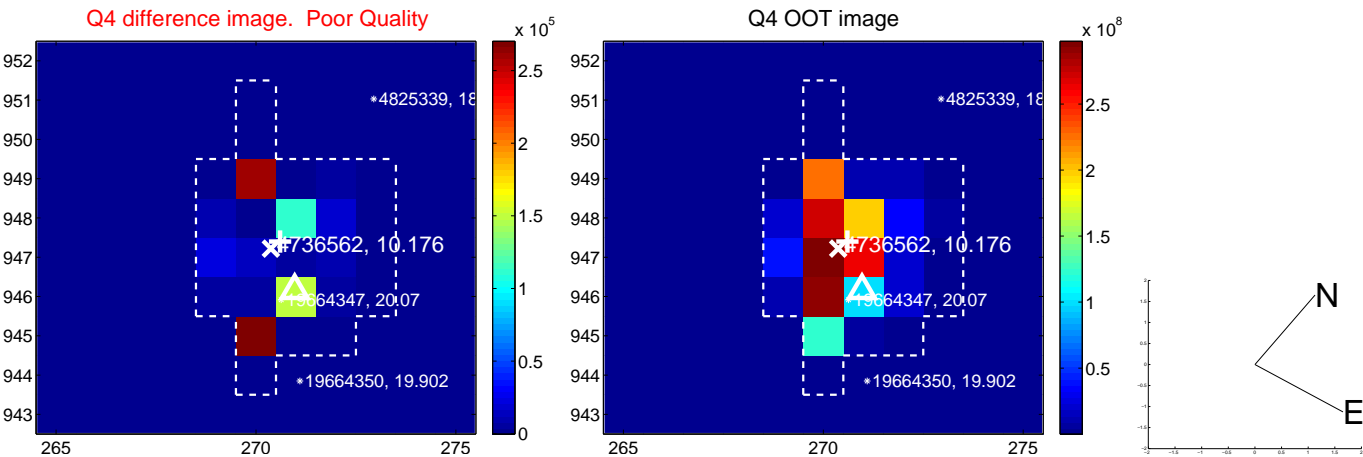
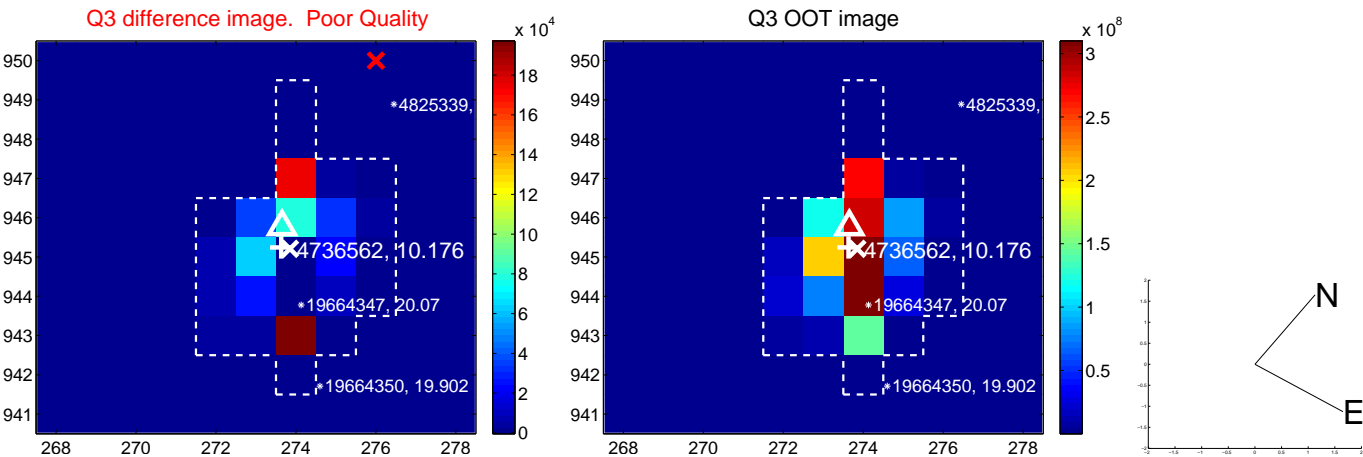
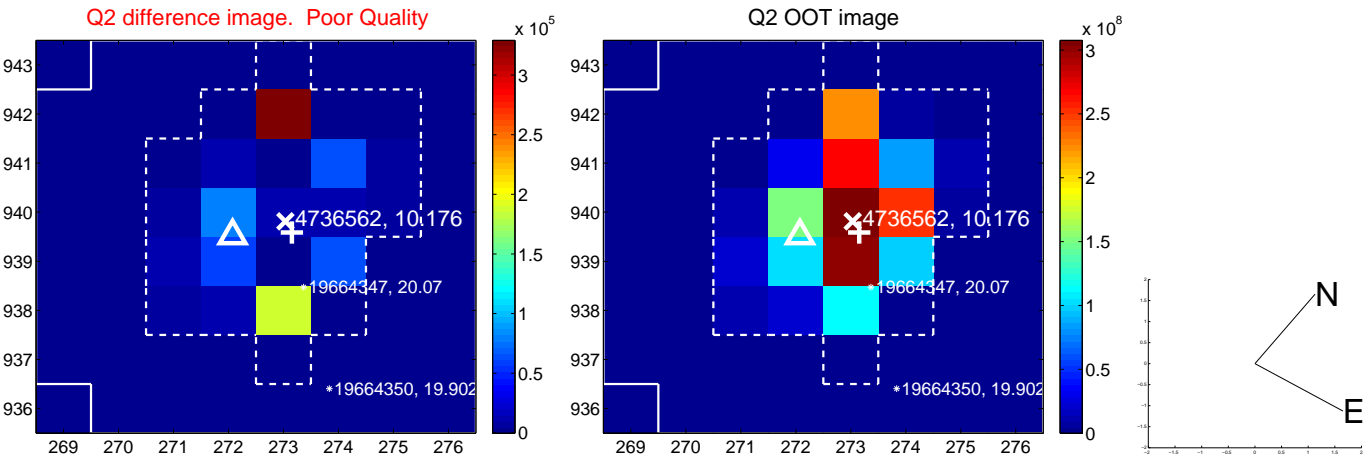
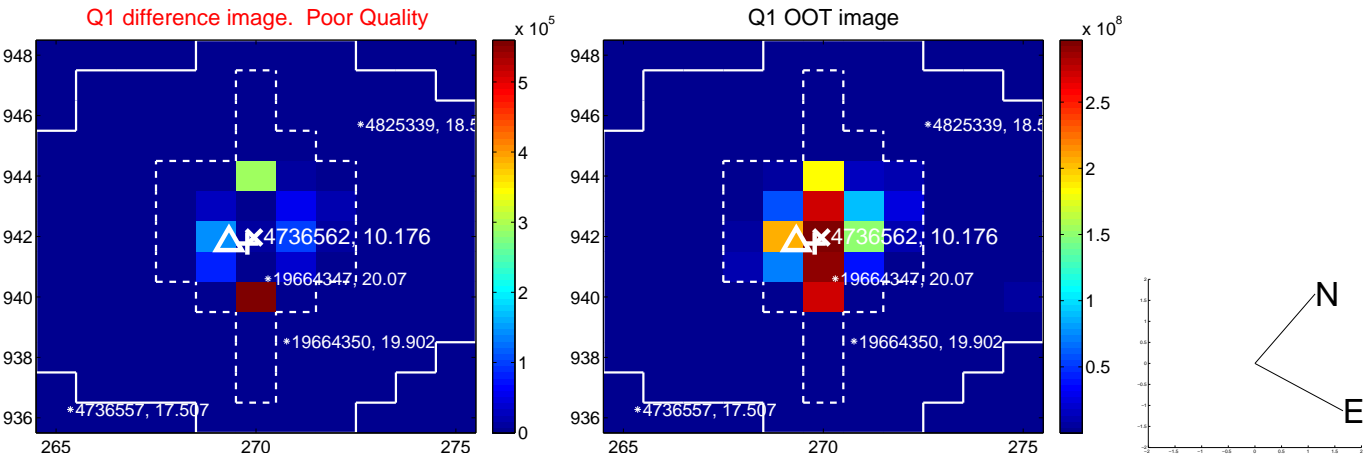
The direct PRF centroid is offset from the target star catalog position by about 1.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.753 ± 0.729	5.15	-3.415 ± 0.785	-1.557 ± 0.350
PRF-fit source offset from KIC position	2.749 ± 0.541	5.08	-1.957 ± 0.760	-1.930 ± 0.796
photometric centroid source offset	0.03 ± 0.07	0.45	-0.01 ± 0.05	0.03 ± 0.07

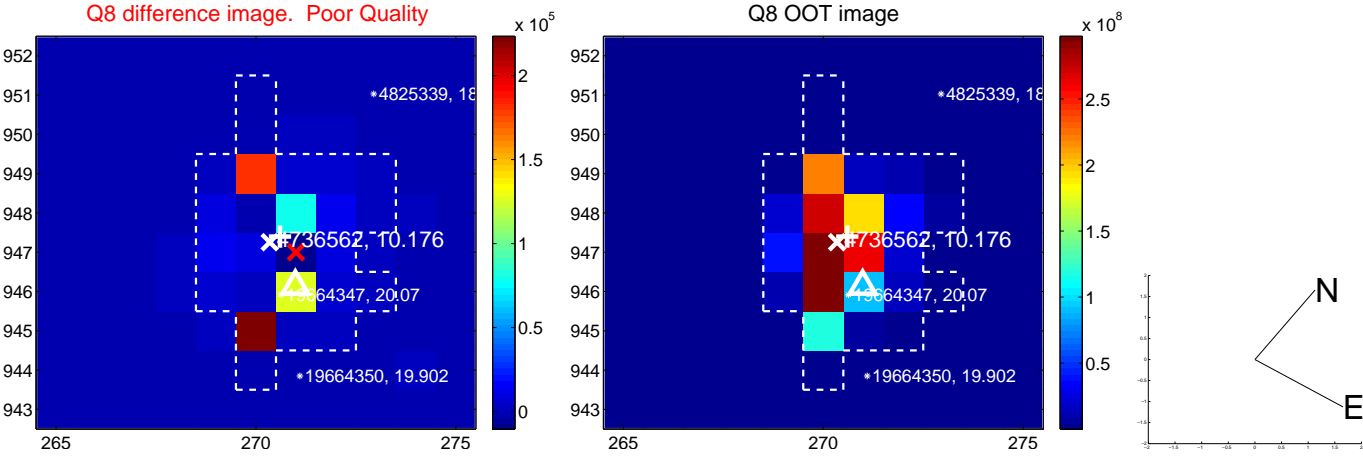
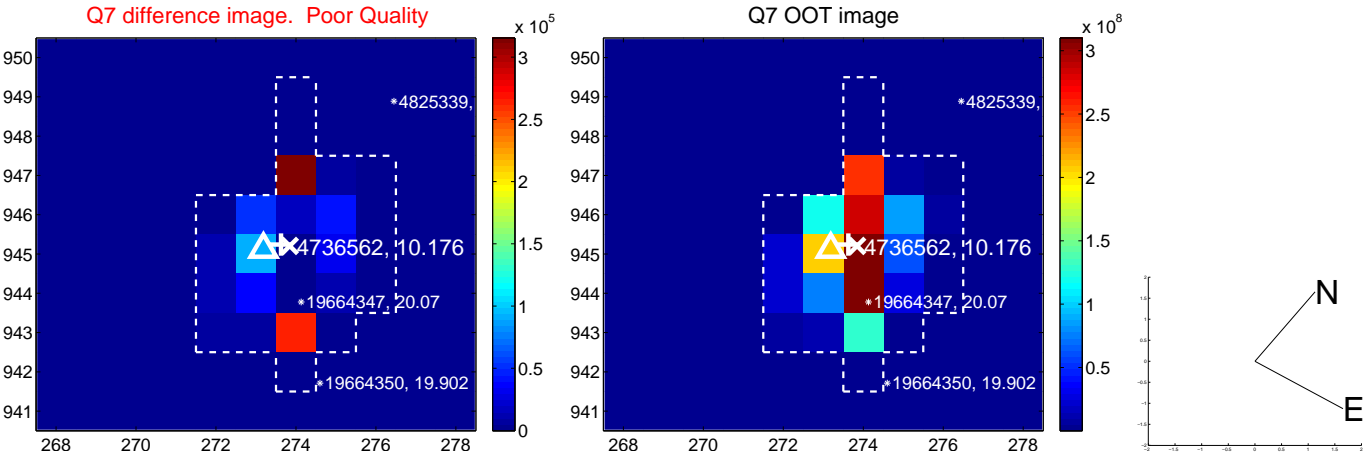
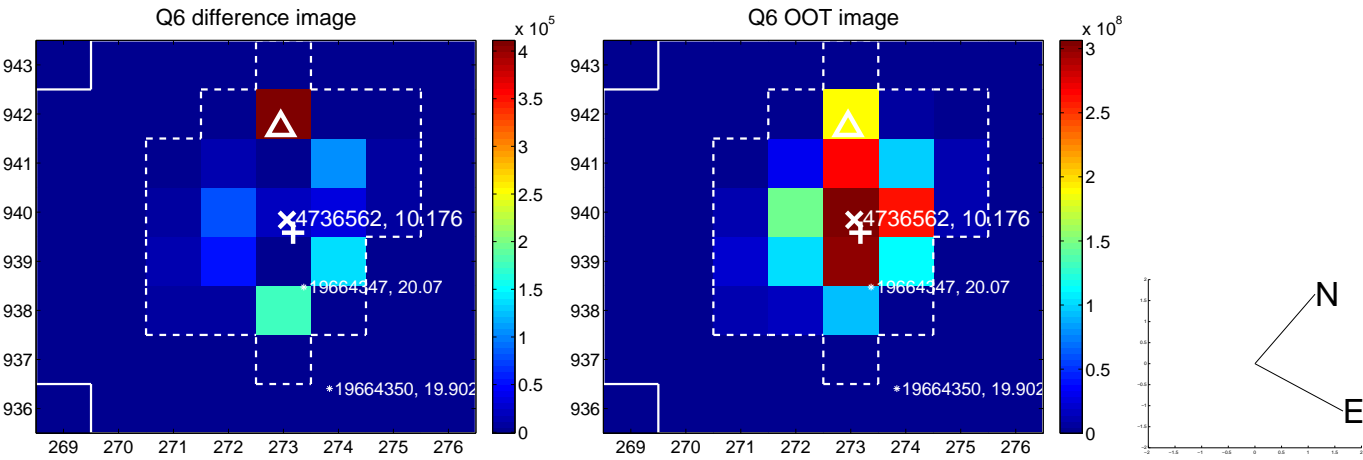
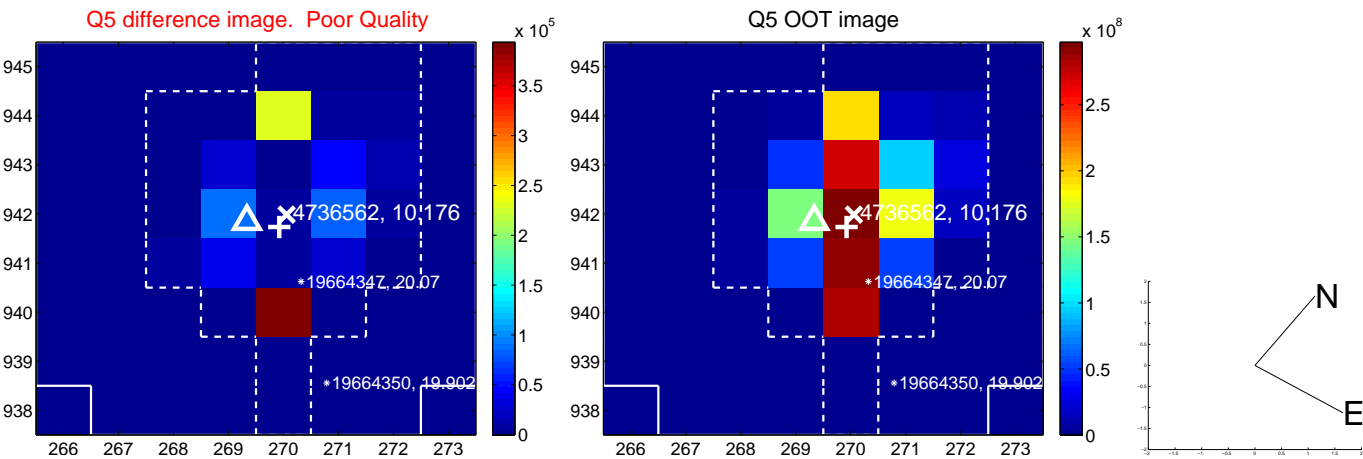


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

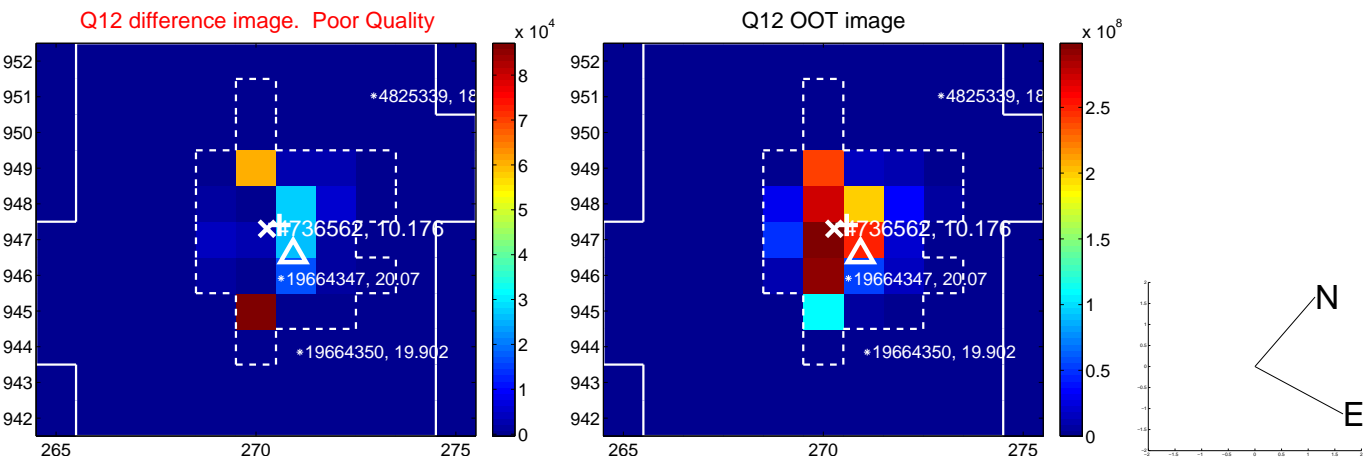
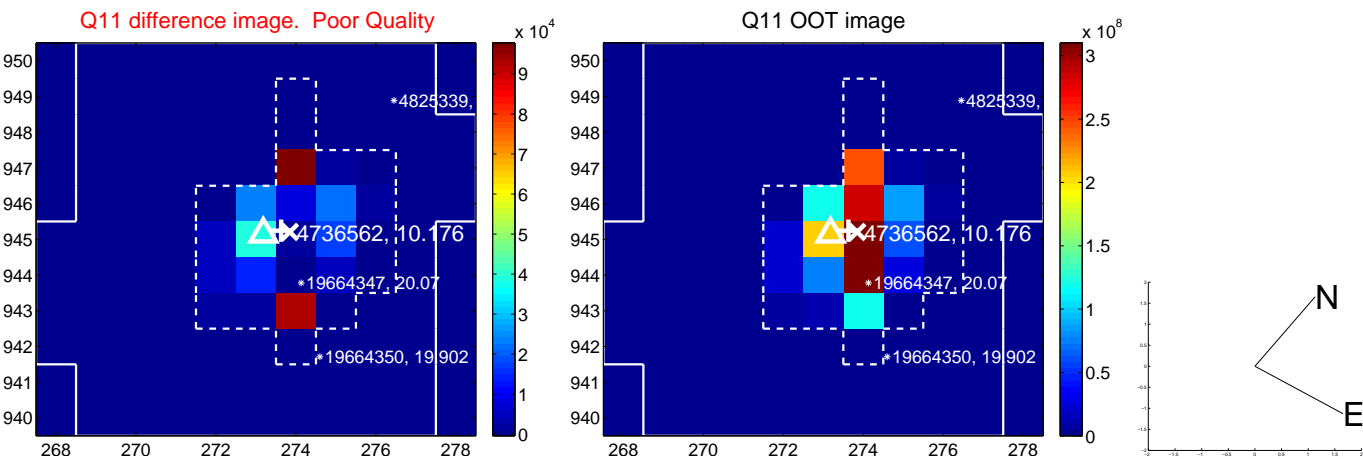
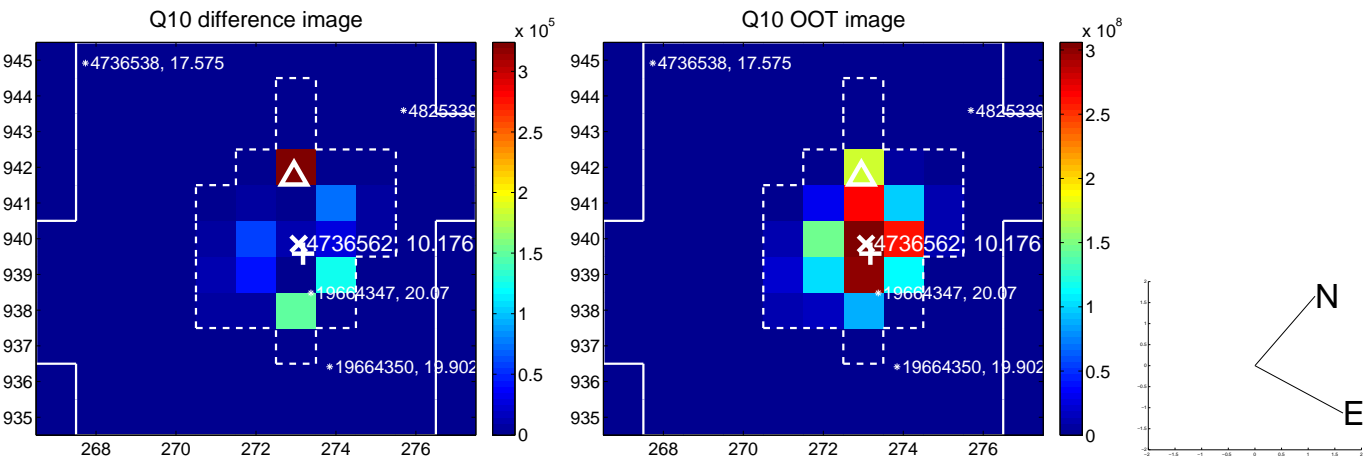
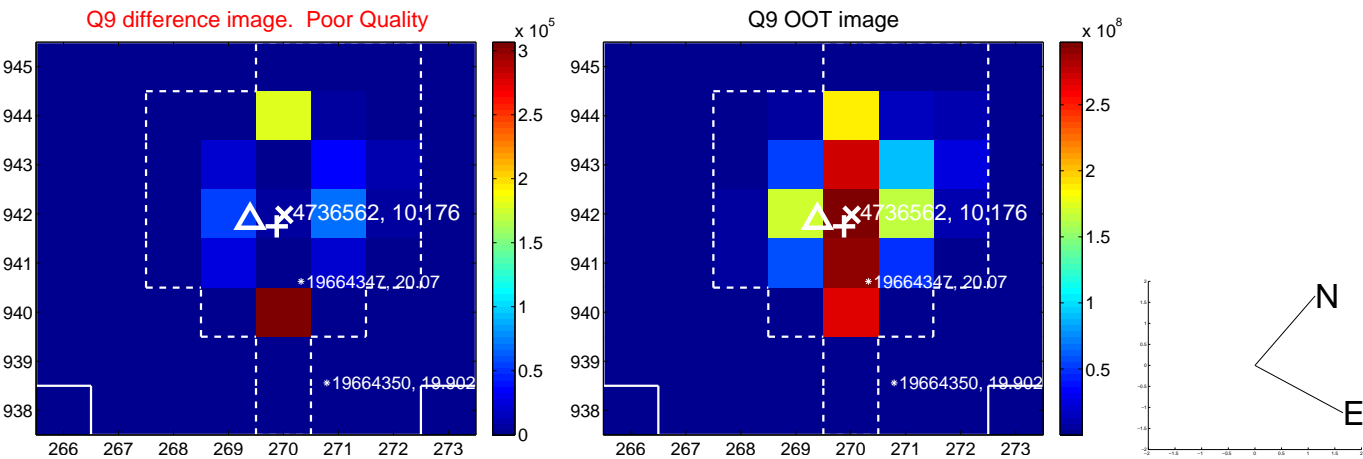
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



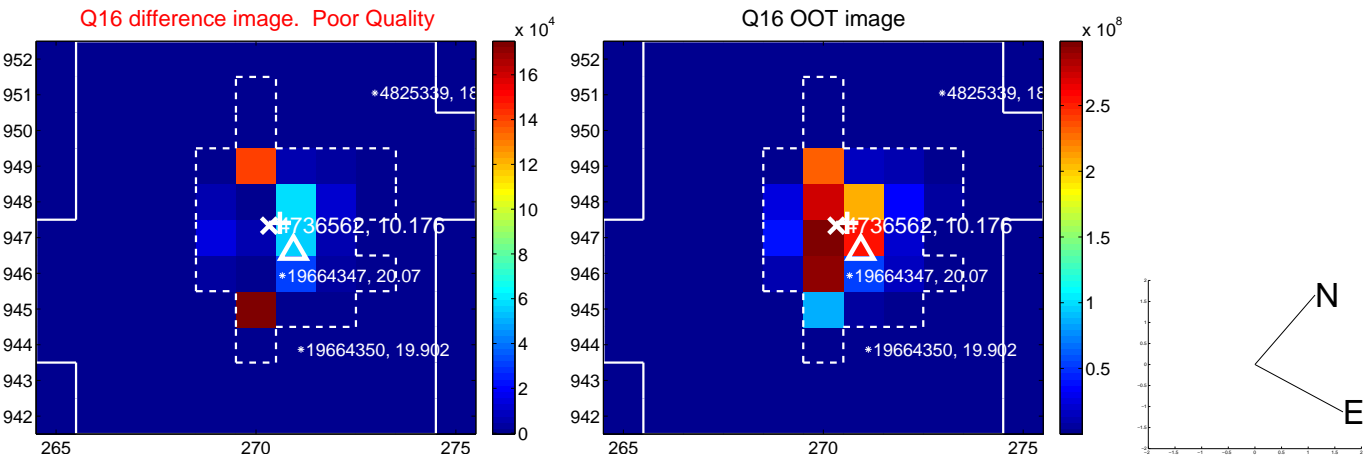
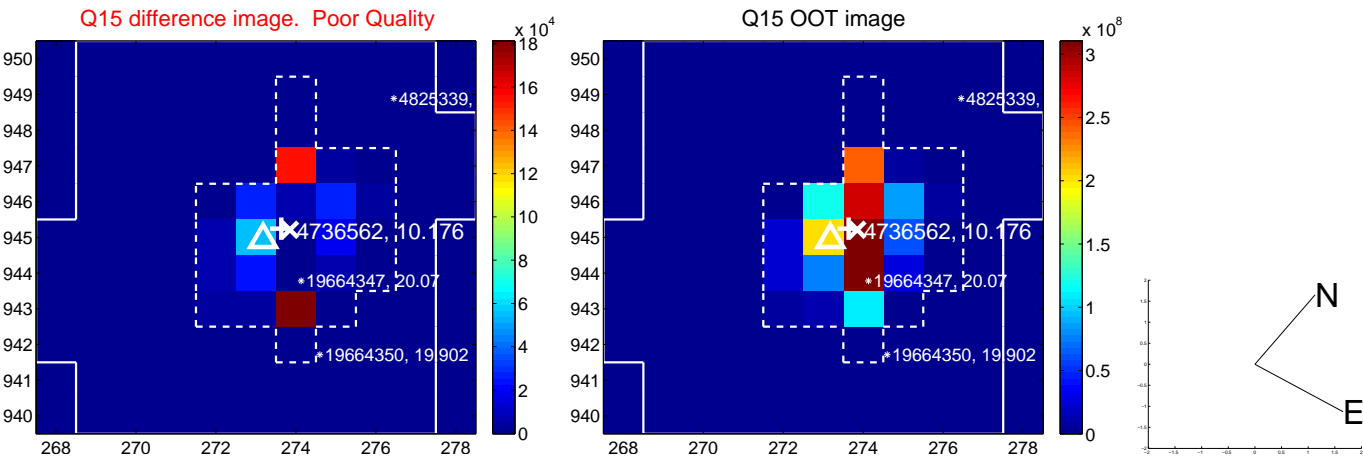
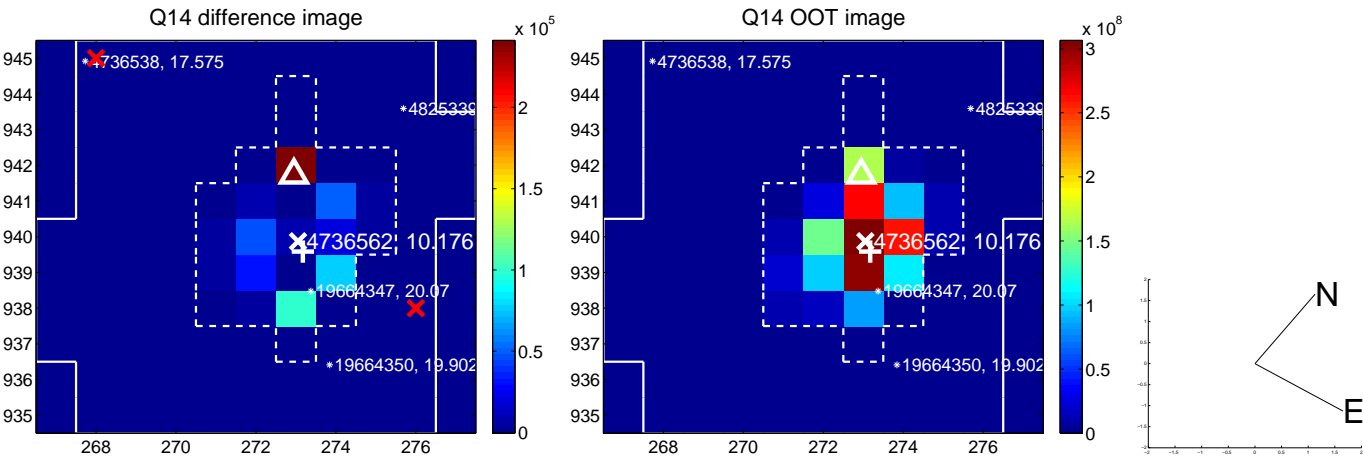
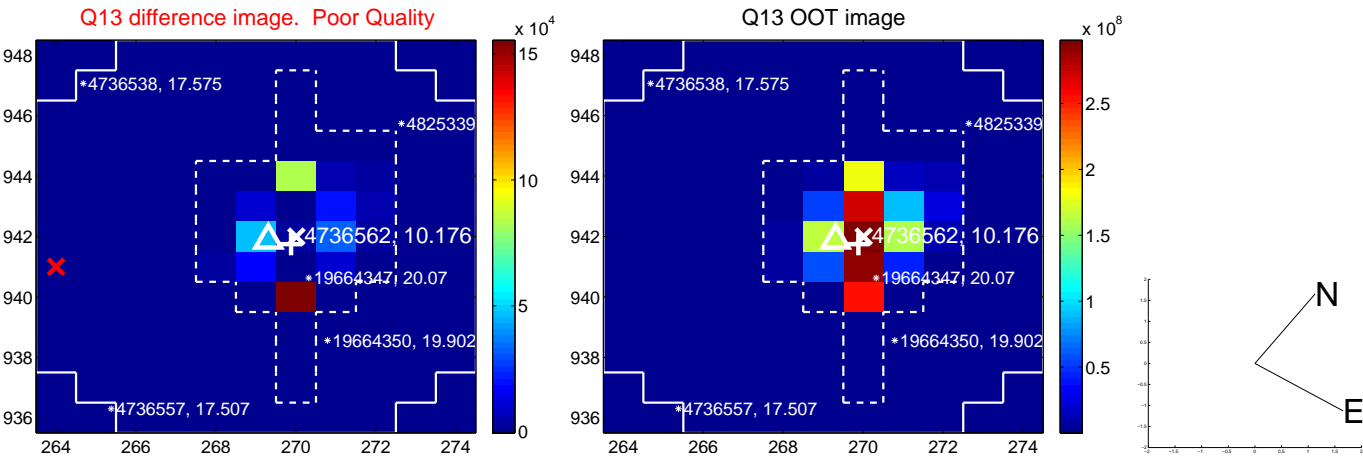
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



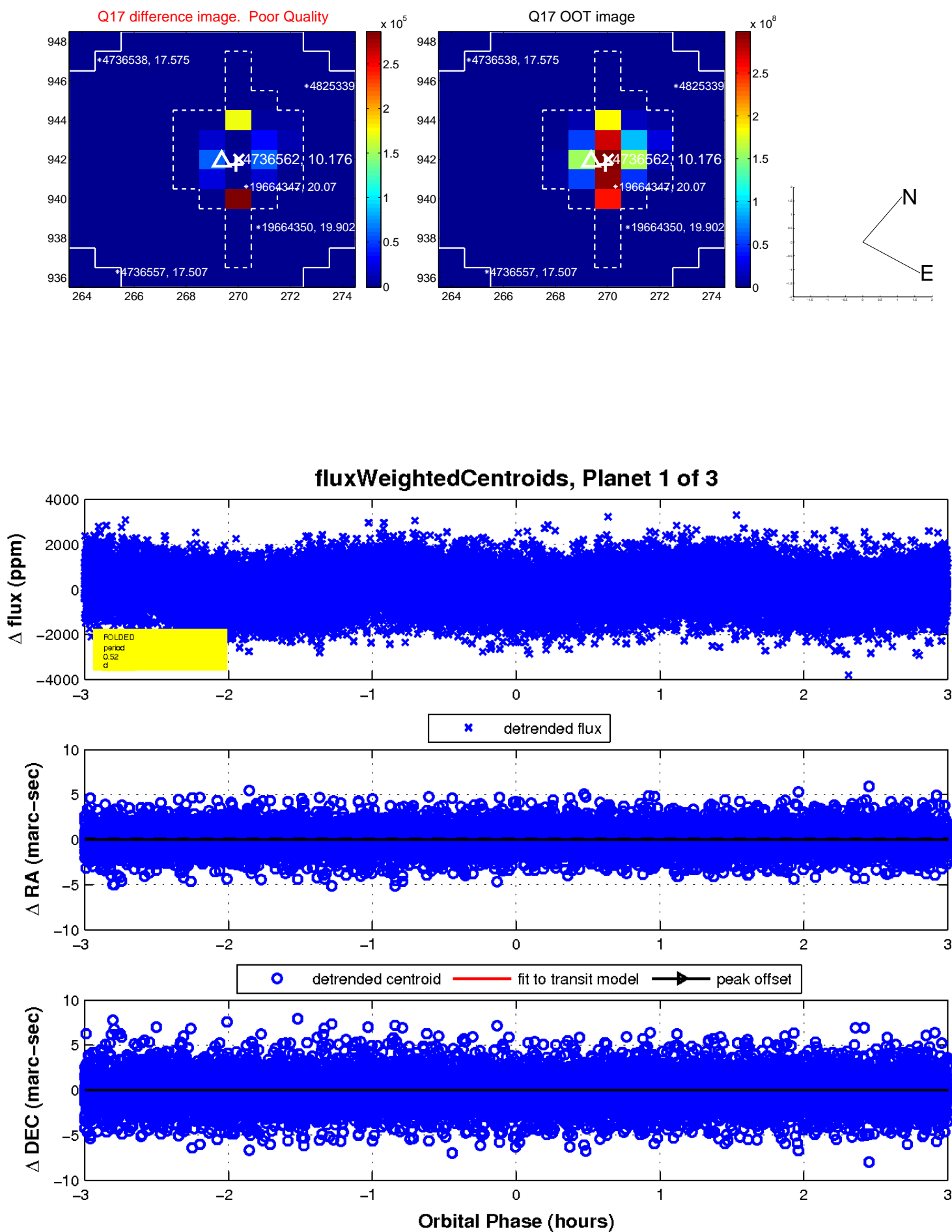
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

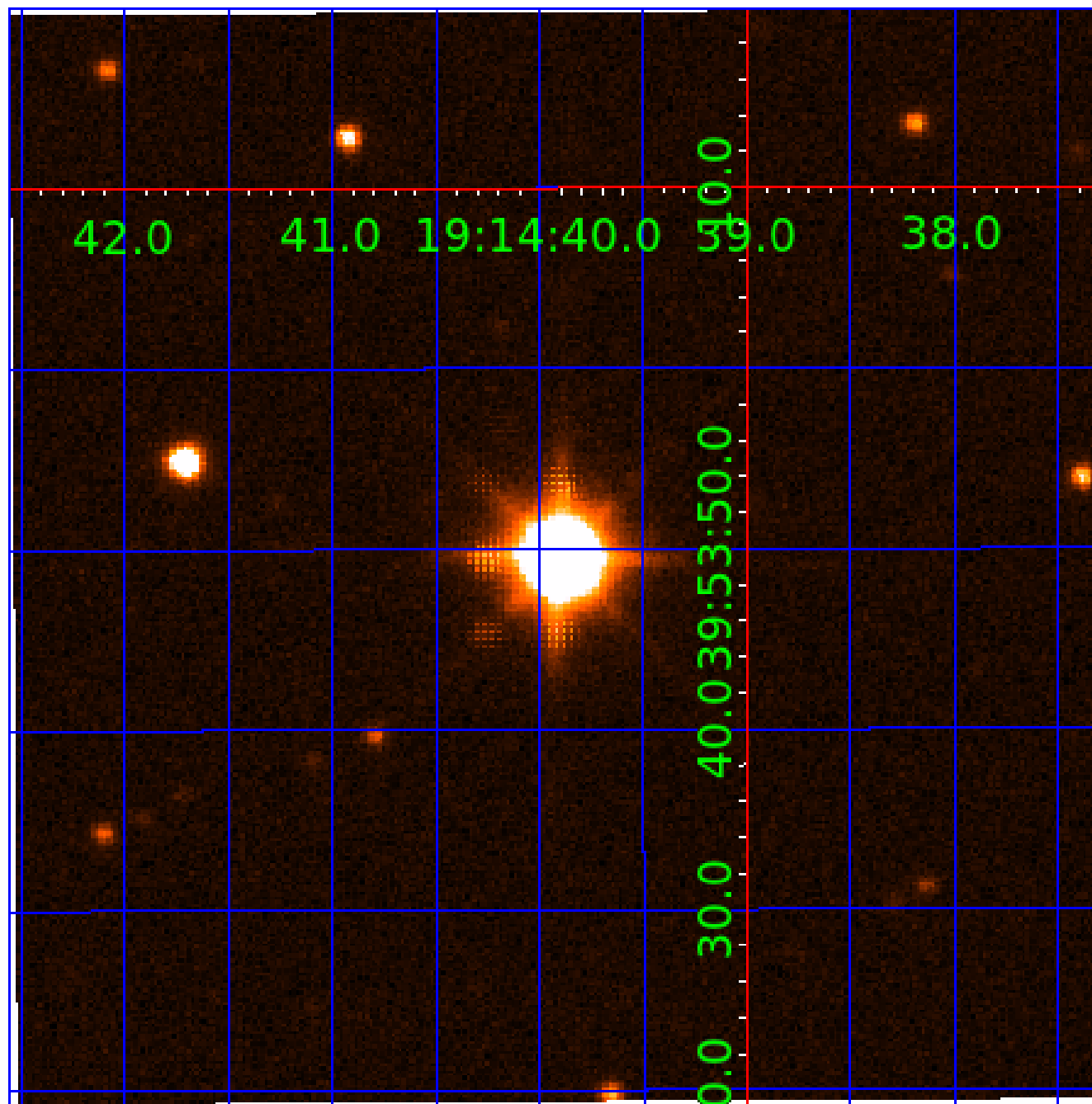


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004736562

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})
004736562-01	OBS	No	0.522118	131.828607	317.6	1.000	21.0	24.5	2.23	7454	4.64	67340.85
004736562-02	OBS	No	0.522121	131.654614	296.8	0.815	19.6	22.2	2.23	7454	4.50	67340.27
004736562-03	OBS	No	0.522123	132.001621	64.0	1.499	19.0	6.2	2.23	7454	1.82	67340.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004736562-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
004736562-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
004736562-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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

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

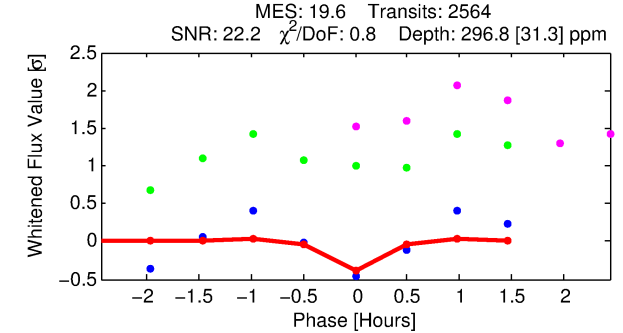
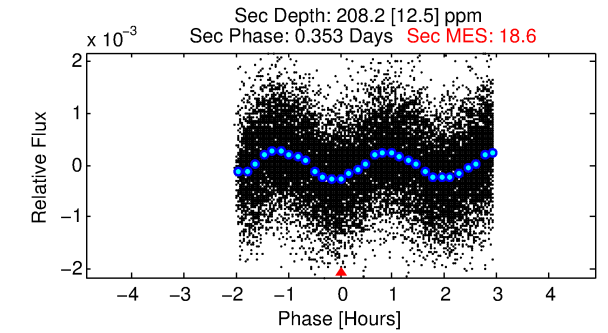
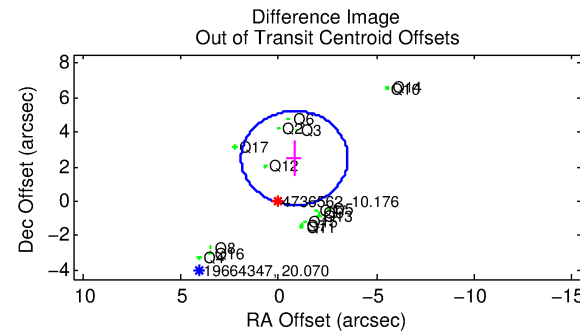
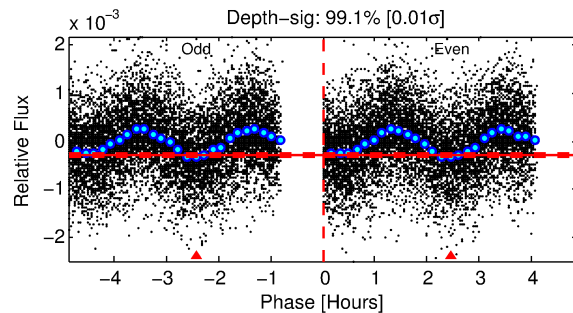
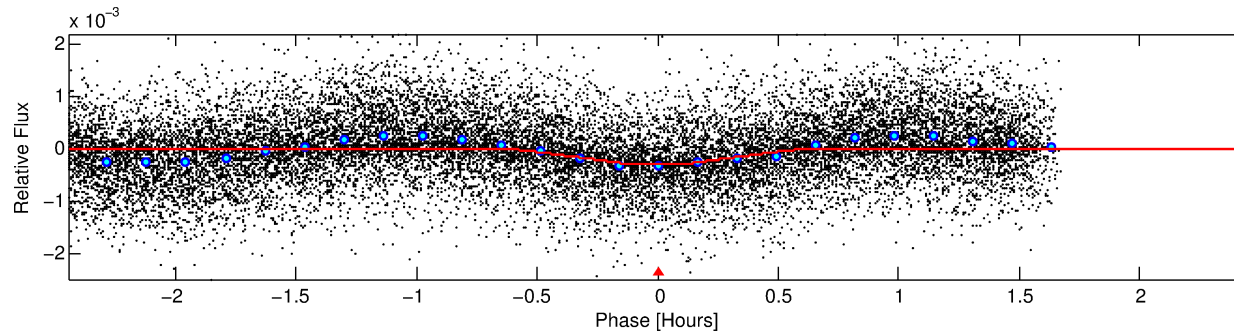
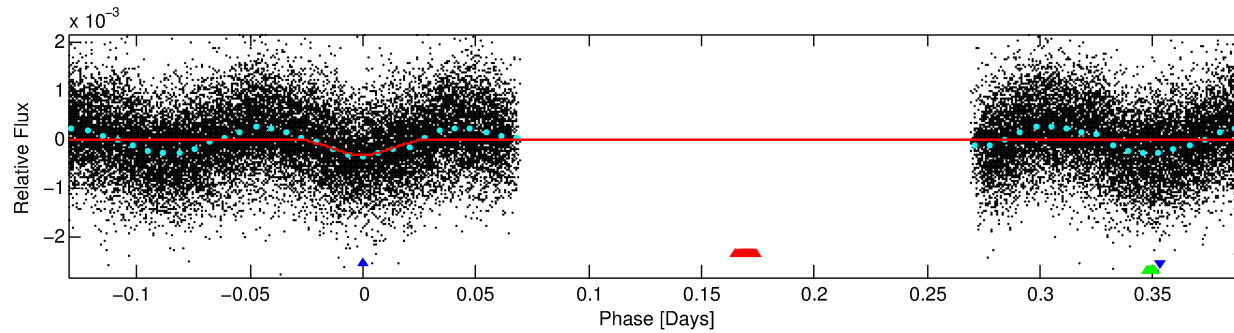
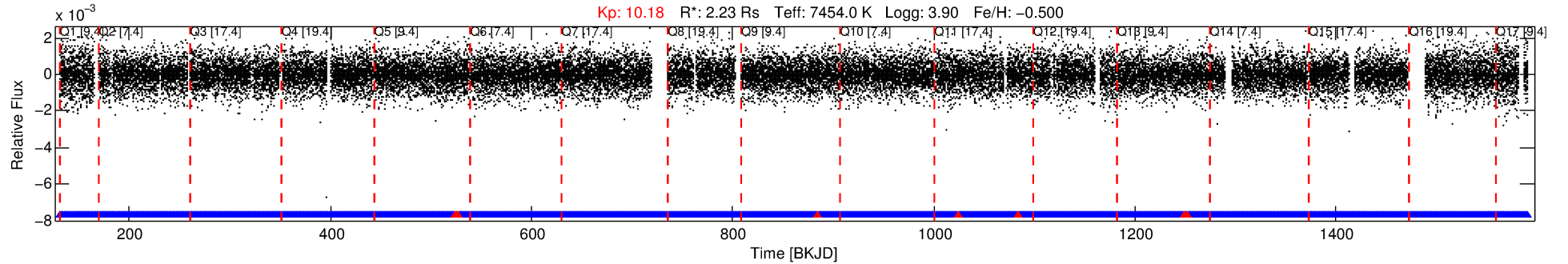
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004736562-02

No Significant Match Found

DV One-Page Summary

KIC: 4736562 Candidate: 2 of 3 Period: 0.522 d



DV Fit Results:

Period = 0.52212 [0.00001] d
Epoch = 131.6546 [0.0006] BKJD
Rp/R* = 0.0185 [0.0046]
a/R* = 2.53 [3.31]
b = 0.90 [0.34]
Seff = 67340.27 [43450.78]
Teq = 4108 [663] K
Rp = 4.50 [2.10] Re
a = 0.0143 [0.0055] AU
Ag = 1.16 [0.93] [0.17 σ]
Teffp = 6589 [872] K [2.26 σ]

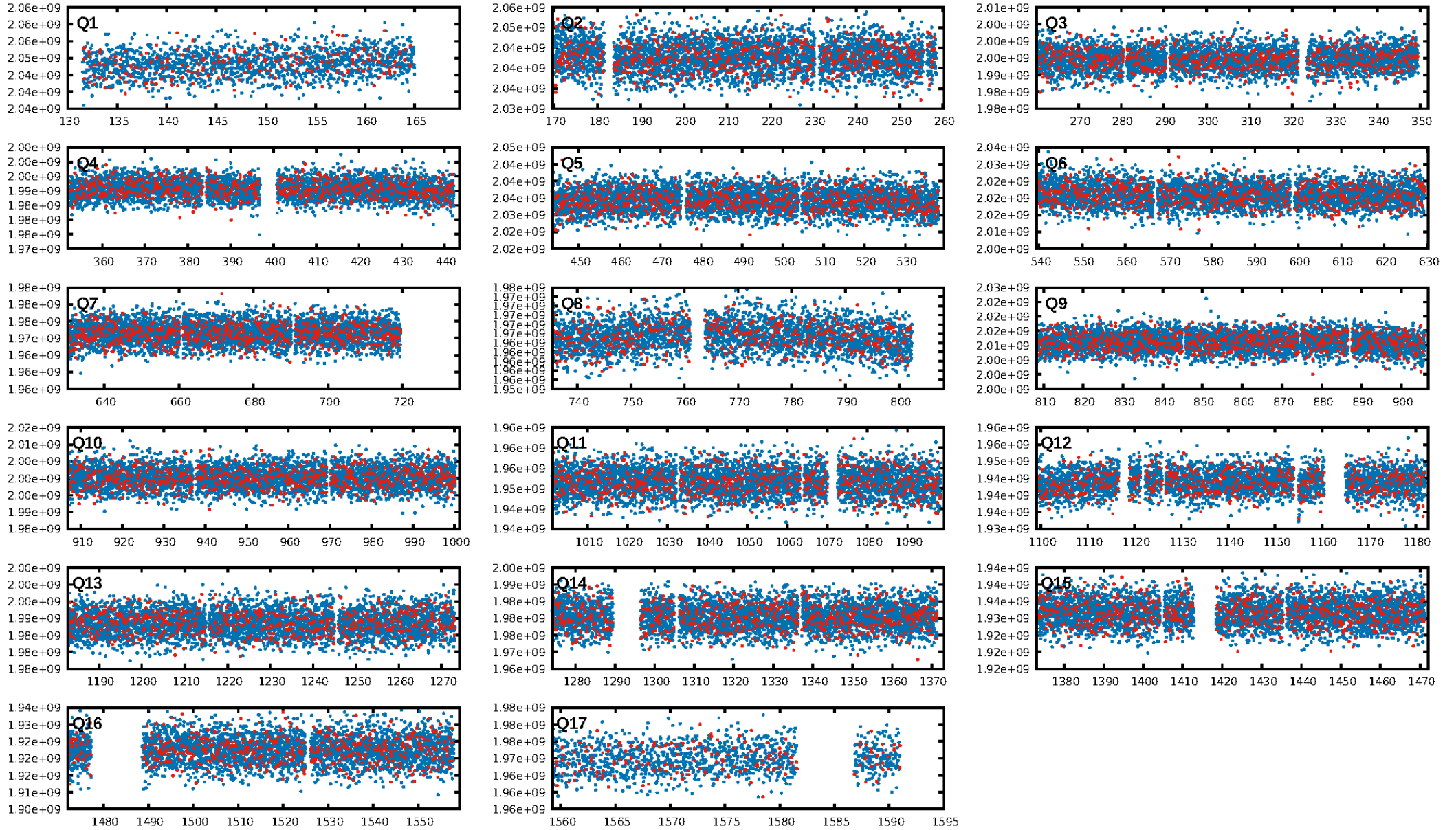
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2438/2448]
GhostDiagnostic-chr: N/A
Centroid-sig: 1.8%
Centroid-so: 0.056 arcsec [0.70 σ]
OotOffset-rm: 2.621 arcsec [2.89 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 2.503 arcsec [3.05 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 0.00 [0/17]

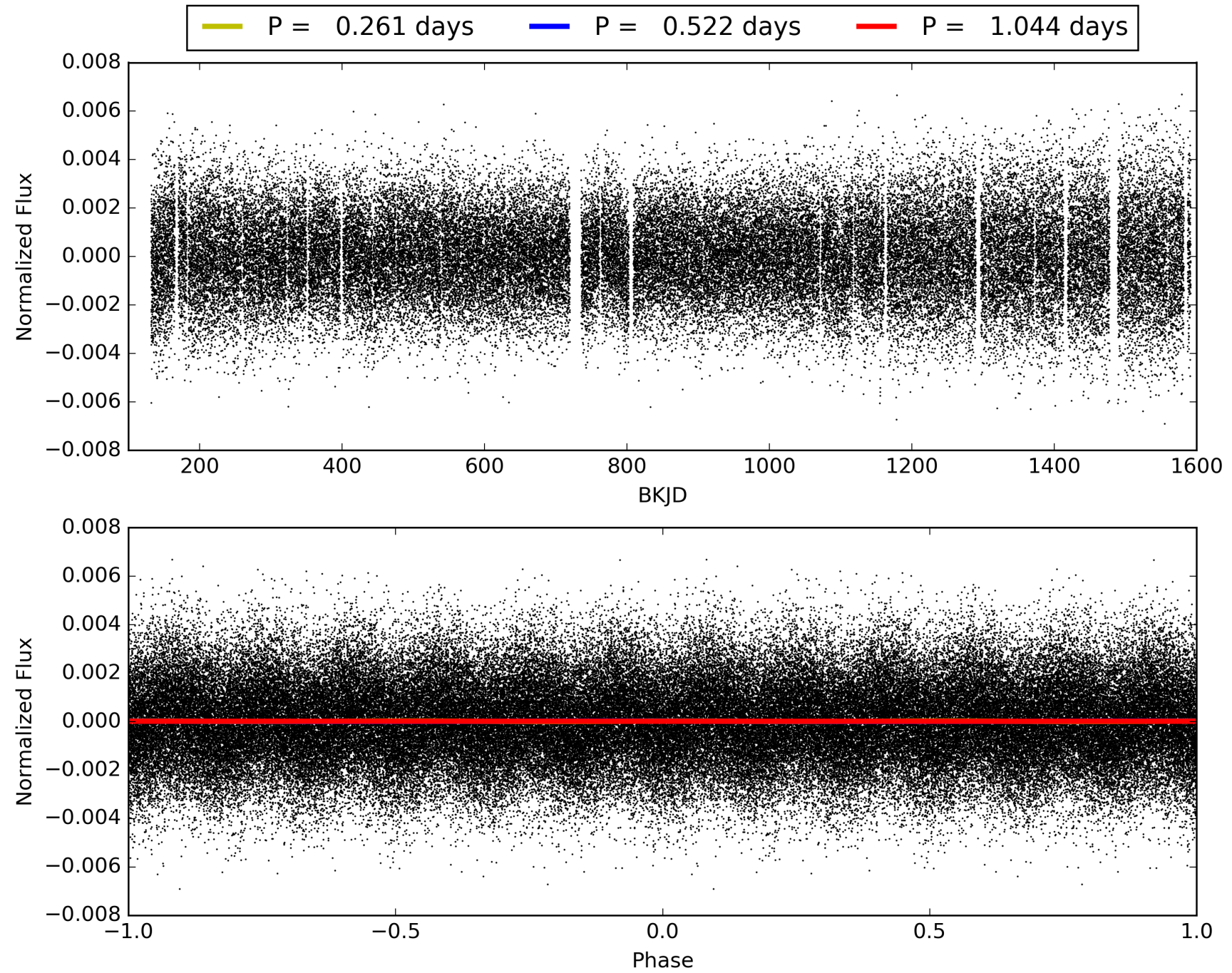
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:22:37 Z

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

TCE 004736562-02, PDC Light Curves

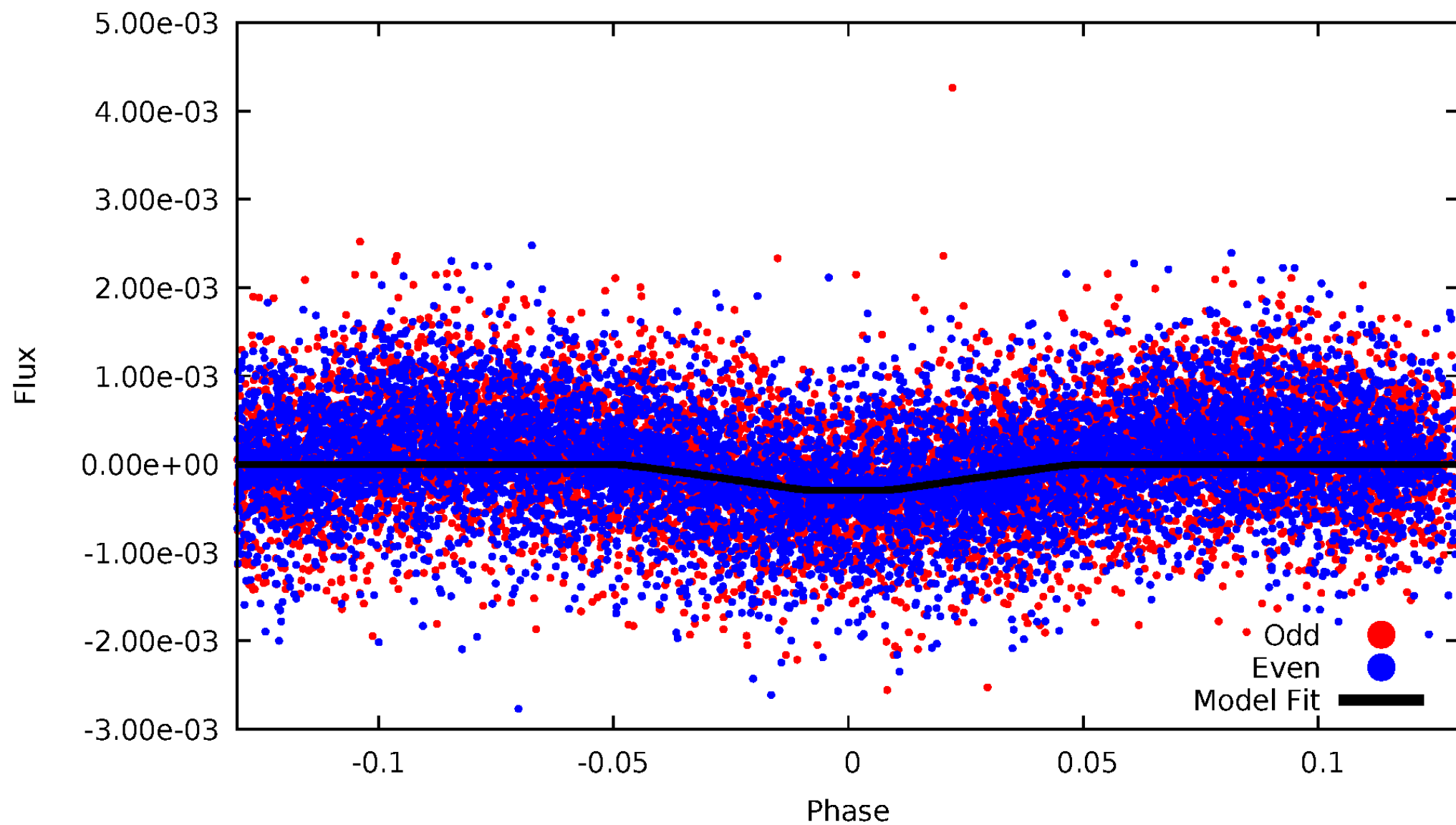


TCE 004736562-02



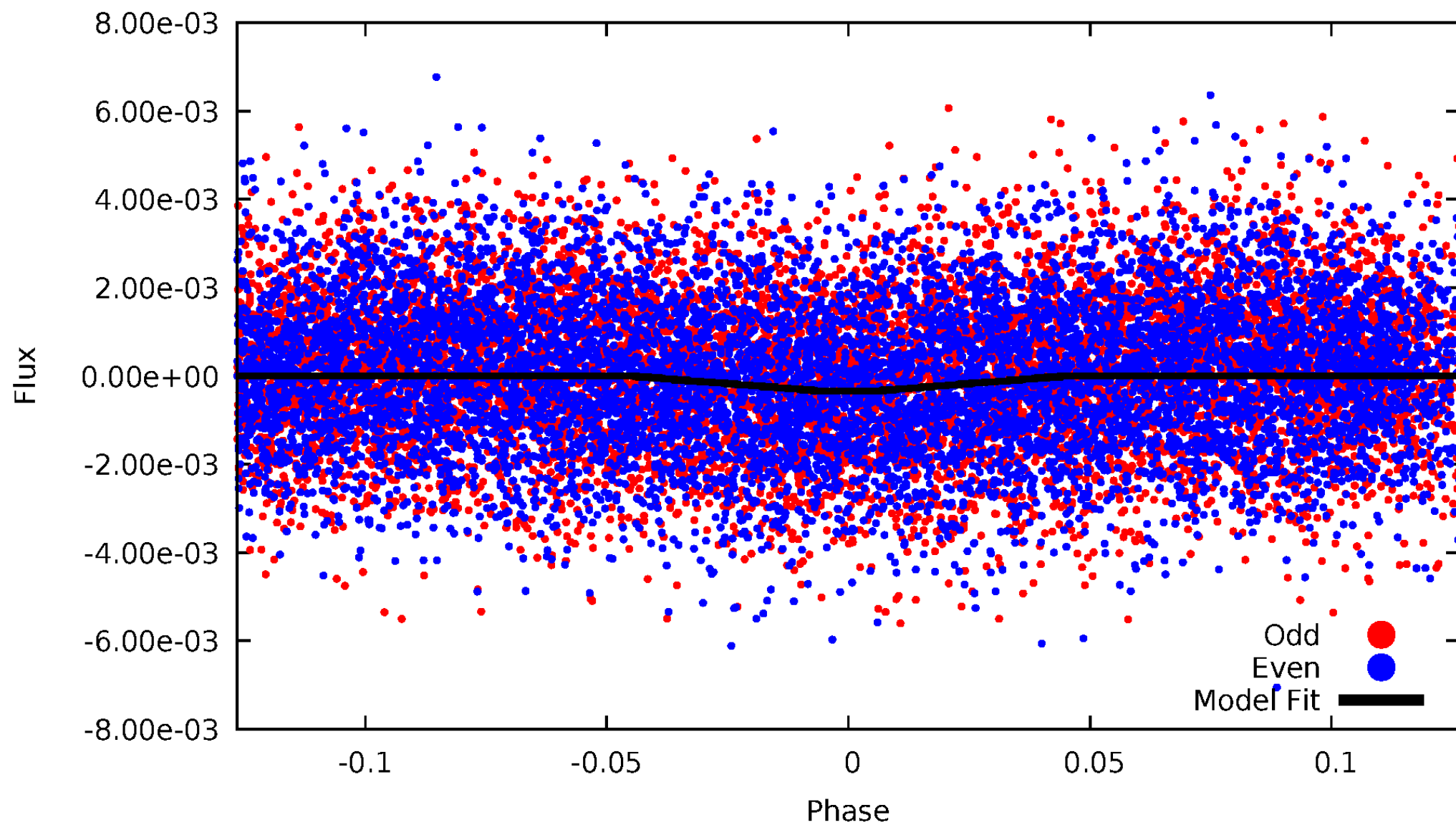
DV Odd/Even

TCE 004736562-02



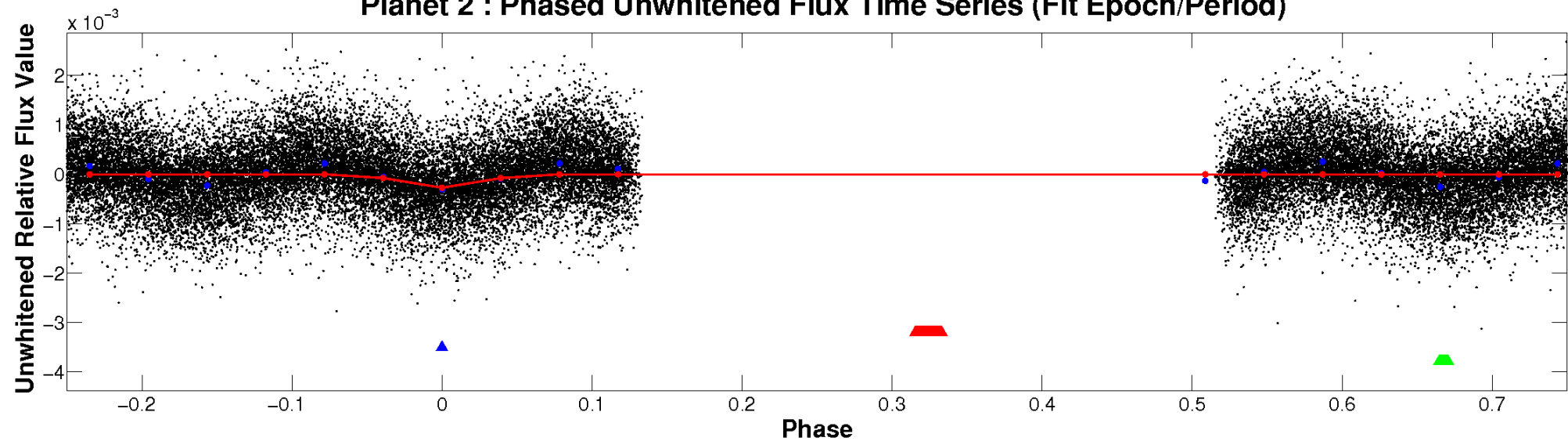
ALT Odd/Even

TCE 004736562-02

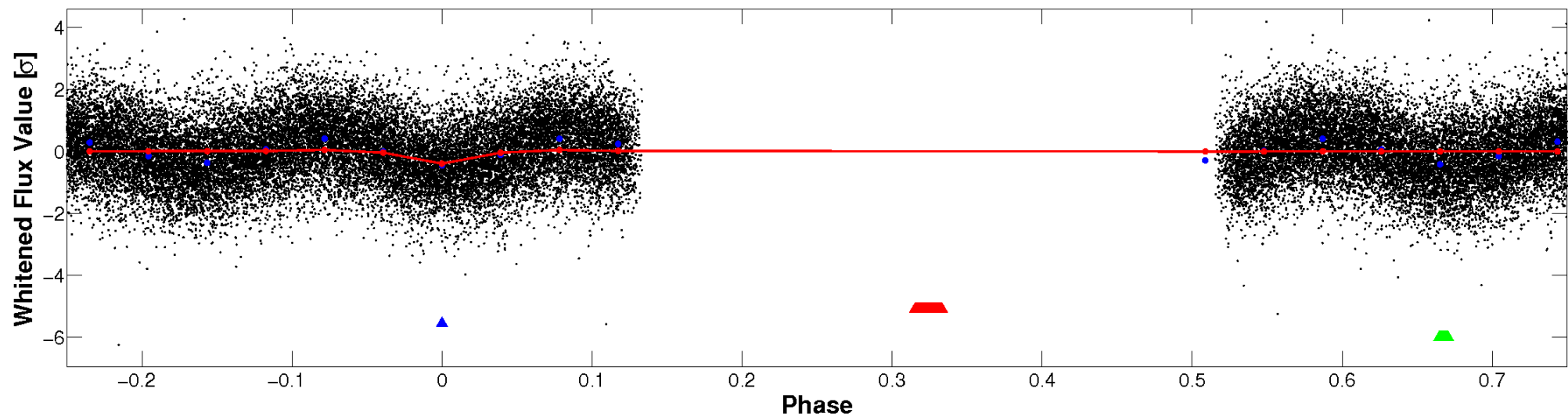


Non-Whitened Vs. Whitened Light Curve

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

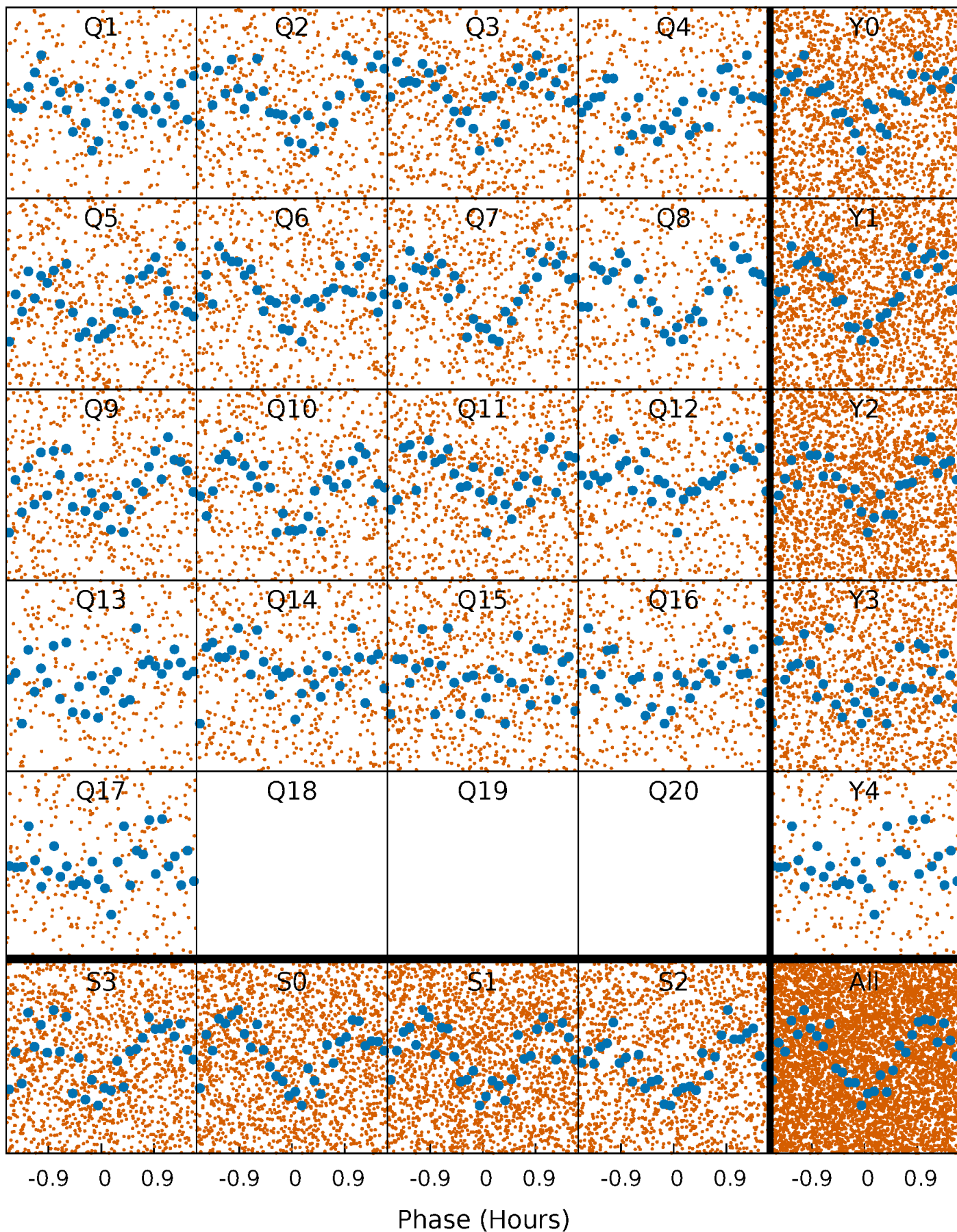


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



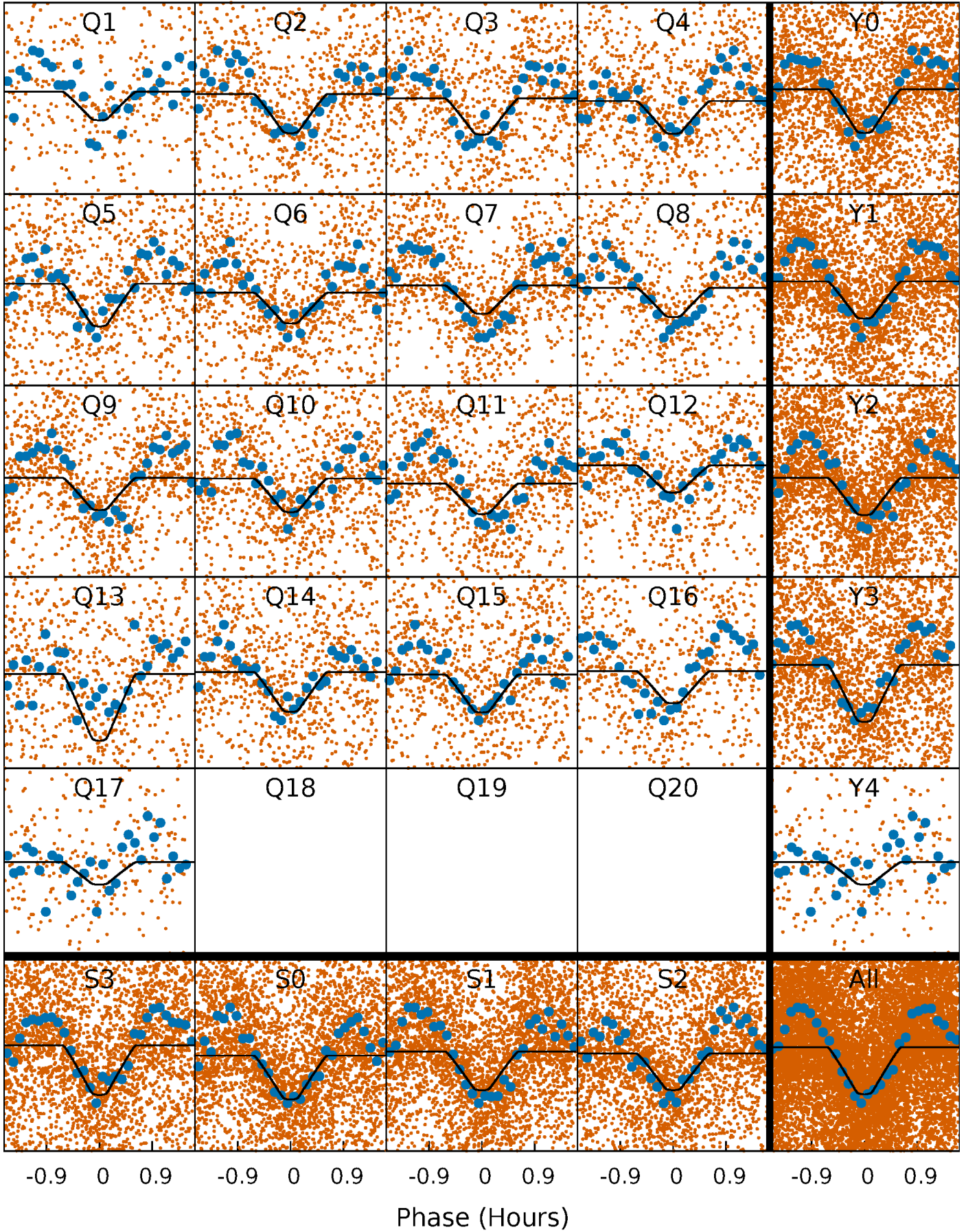
PDC Quarter-Phased Transit Curves

TCE 004736562-02 P= 0.522121 Days $T_0=131.654614$ (BKJD)



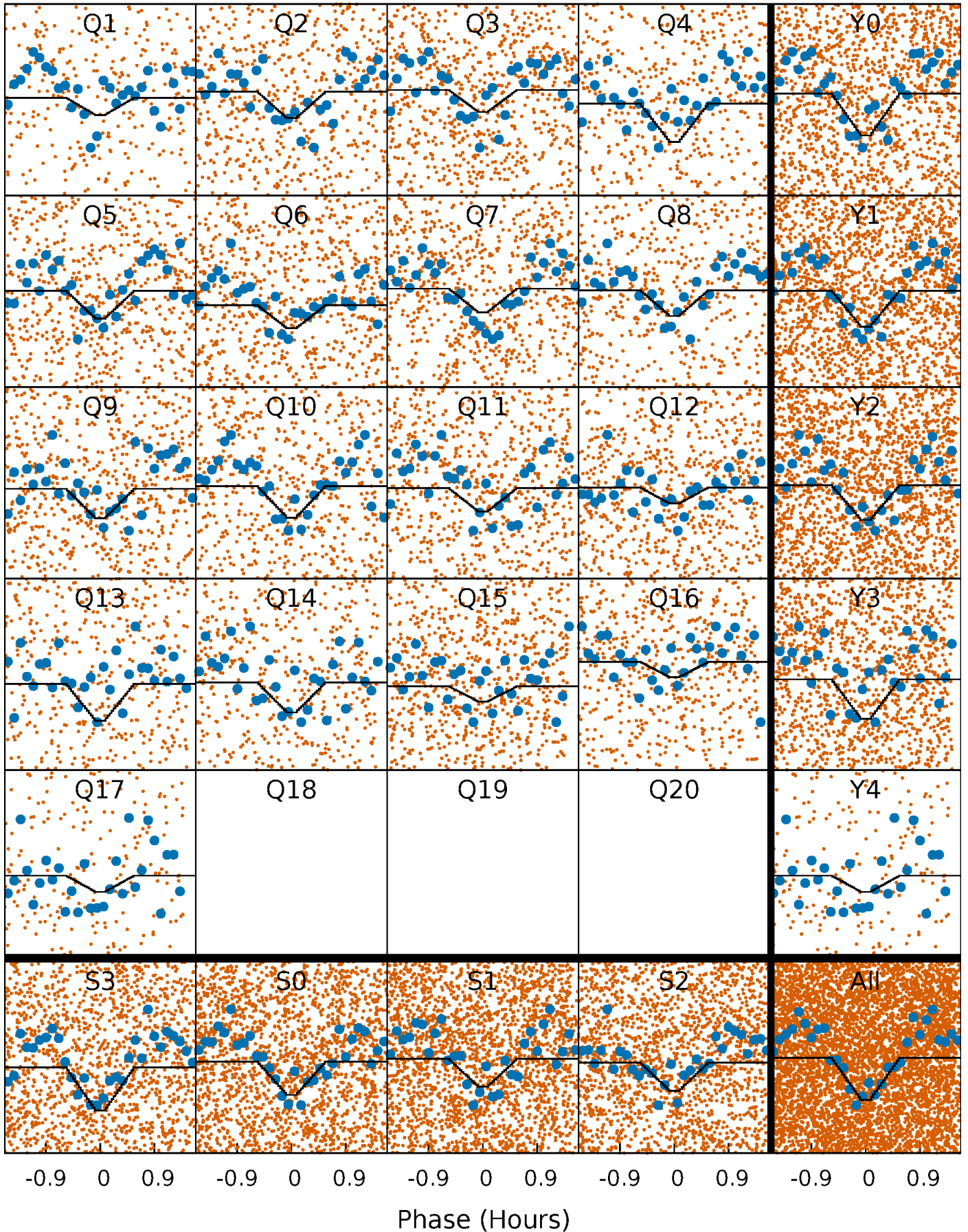
DV Quarter-Phased Transit Curves

TCE 004736562-02 P= 0.522121 Days $T_0=131.654614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

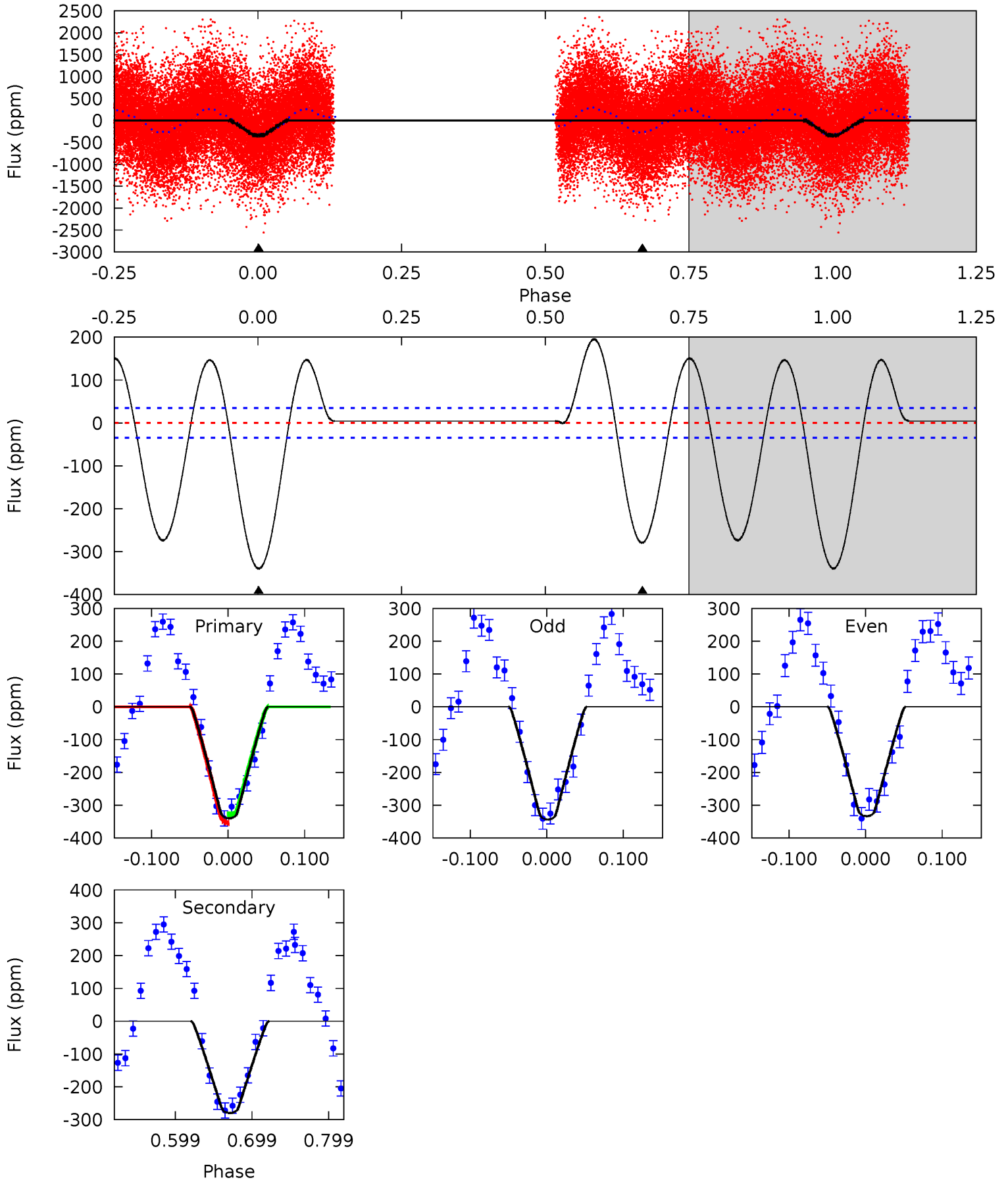
TCE 004736562-02 P= 0.522123 Days $T_0=131.654582$ (BKJD)



DV Model-Shift Uniqueness Test

004736562-02, P = 0.522121 Days, E = 131.132493 Days

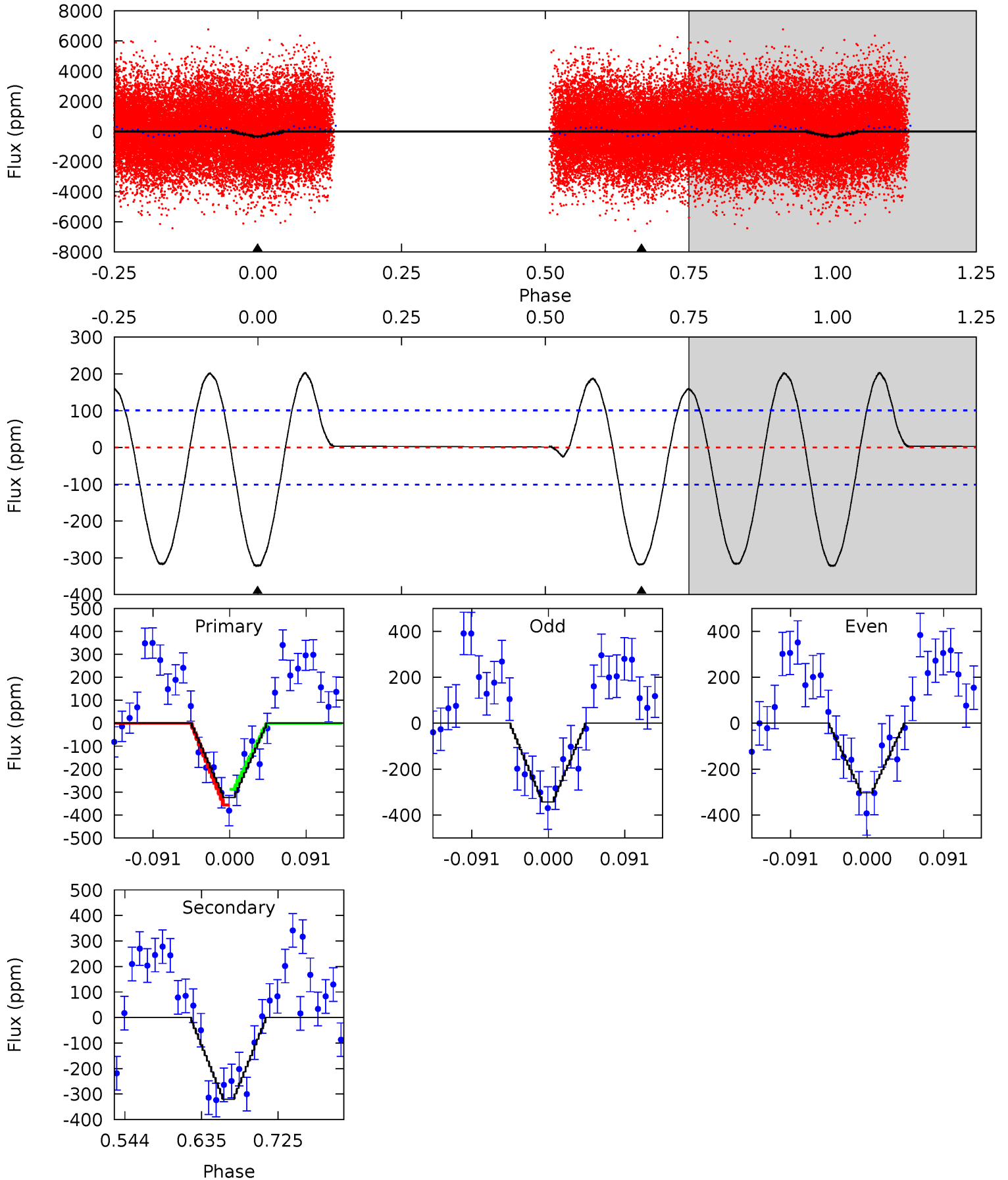
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.7	36.8	0	0	4.57	1.65	17.2	44.7	44.7	36.8	36.8	0.68	1.04	0.36	1.68



Alt Model-Shift Uniqueness Test

004736562-02, P = 0.522123 Days, E = 131.132459 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	14.5	0	0	4.59	1.69	7.22	14.7	14.7	14.5	14.5	0.90	0.99	0.39	1.55



Stellar Parameters For KIC 004736562

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7454^{+233}_{-311}	$3.897^{+0.368}_{-0.123}$	$-0.500^{+0.250}_{-0.300}$	$2.235^{+0.475}_{-0.883}$	$1.435^{+0.210}_{-0.257}$	$0.181^{+0.521}_{-0.065}$
	+3%/-4%	+9%/-3%	+50%/-60%	+21%/-40%	+15%/-18%	+288%/-36%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004736562-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-280 ± 8	$4.23^{+1.40}_{-1.36}$	5613^{+450}_{-580}	6634^{+1563}_{-947}	$1.757^{+1.981}_{-0.756}$
Alt.	-320 ± 22	$4.17^{+1.38}_{-1.26}$	5556^{+470}_{-561}	6924^{+1617}_{-916}	$2.120^{+2.120}_{-0.939}$

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

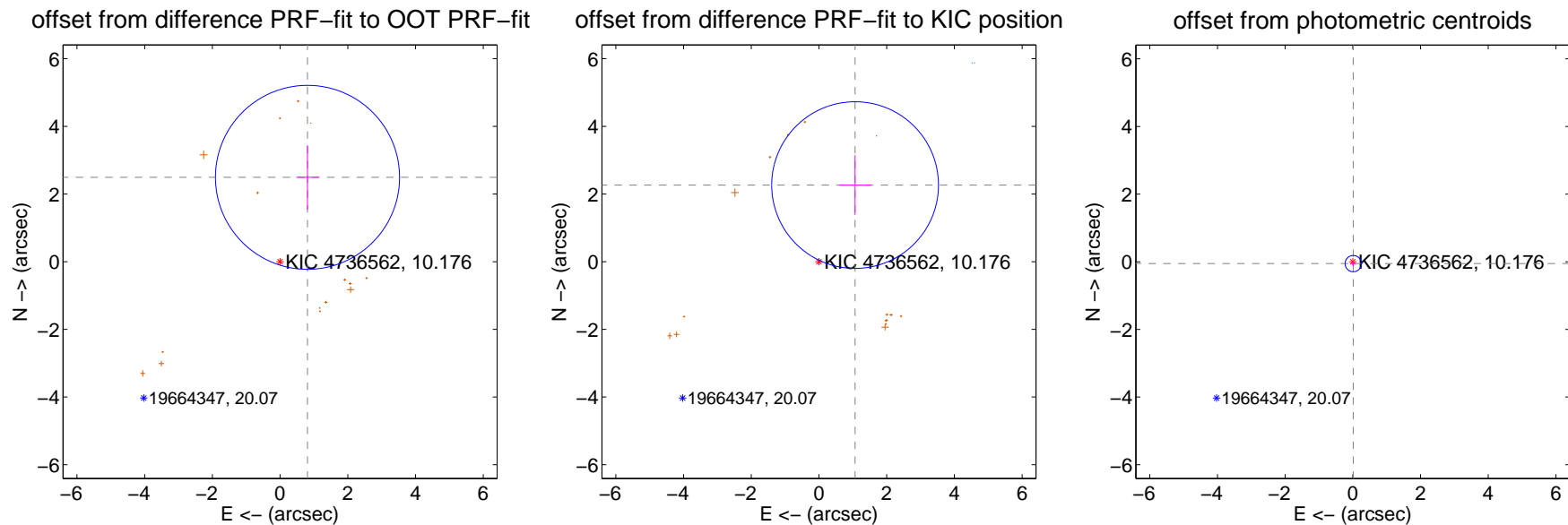
DV Centroid Data

Supplemental centroid analysis for 004736562-02. **Kepler magnitude: 10.18.** Transit SNR 22.18

There are 2 quarters with good PRF difference image offsets

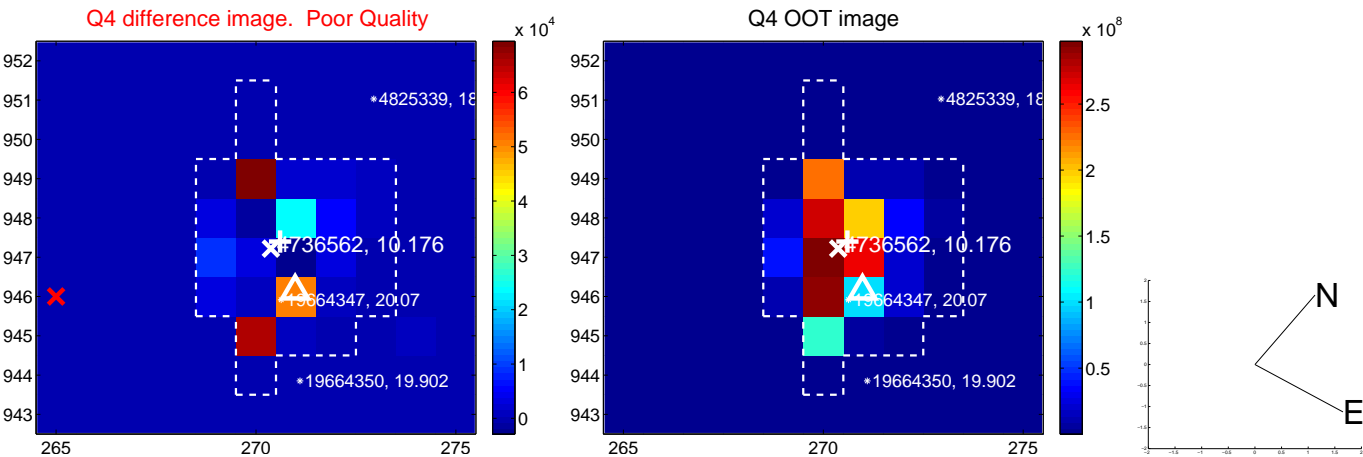
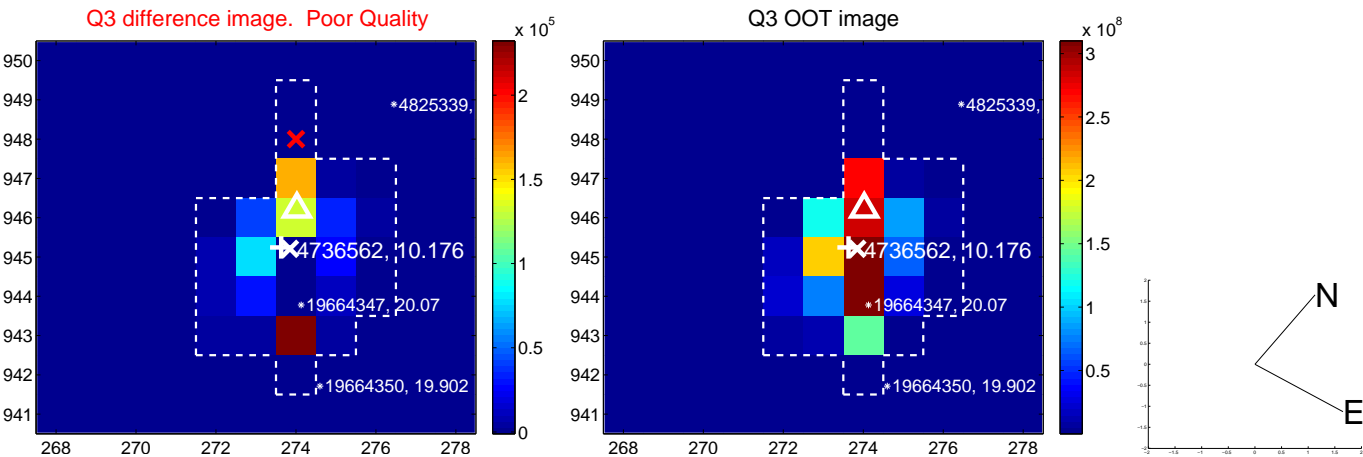
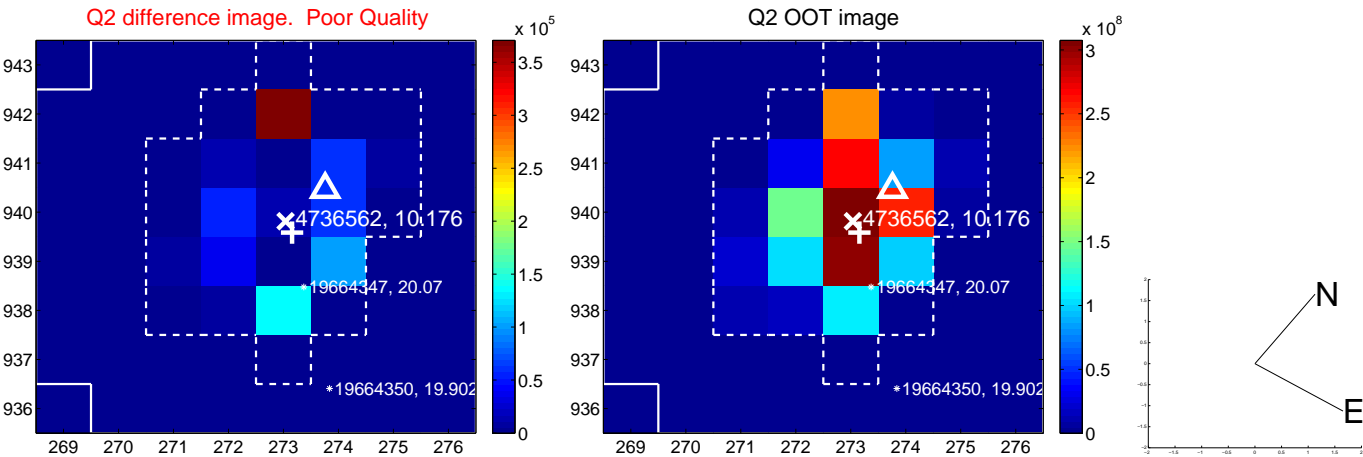
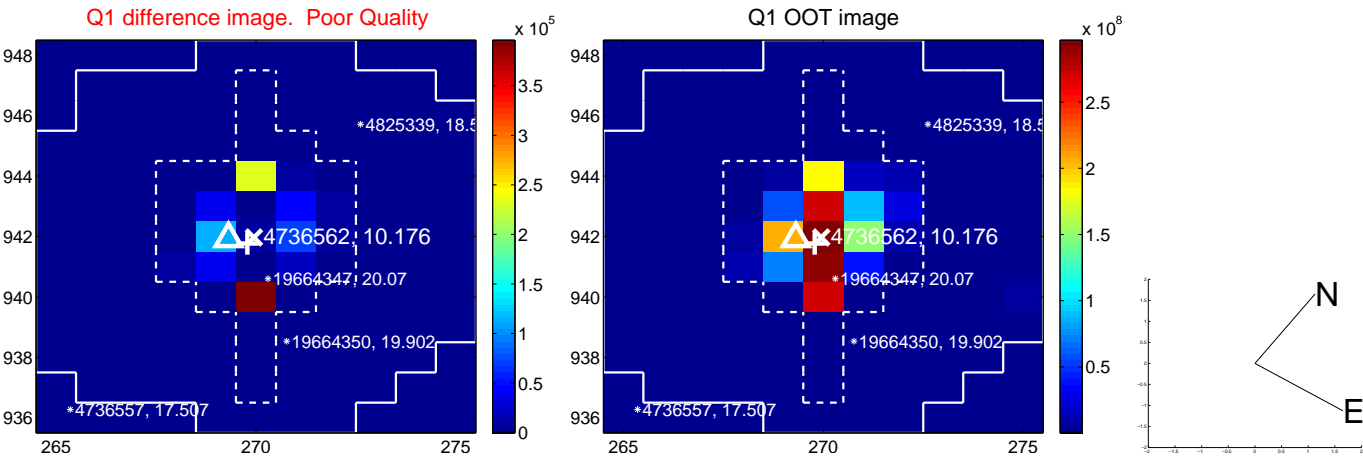
The direct PRF centroid is offset from the target star catalog position by about 1.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.621 ± 0.906	2.89	-0.809 ± 0.333	2.493 ± 0.947
PRF-fit source offset from KIC position	2.503 ± 0.821	3.05	-1.066 ± 0.465	2.265 ± 0.881
photometric centroid source offset	0.06 ± 0.08	0.70	-0.01 ± 0.06	-0.05 ± 0.08

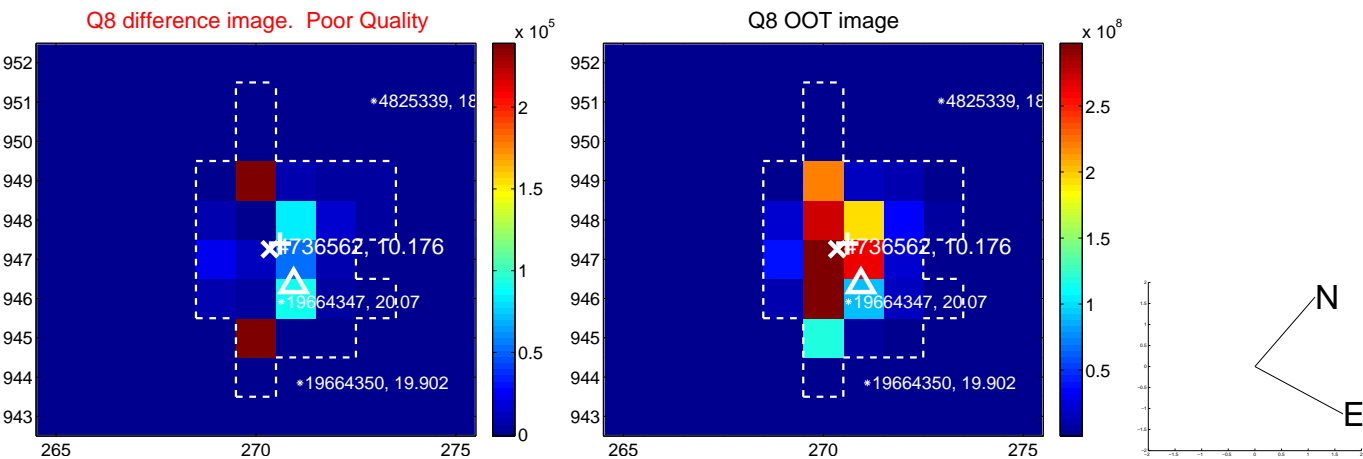
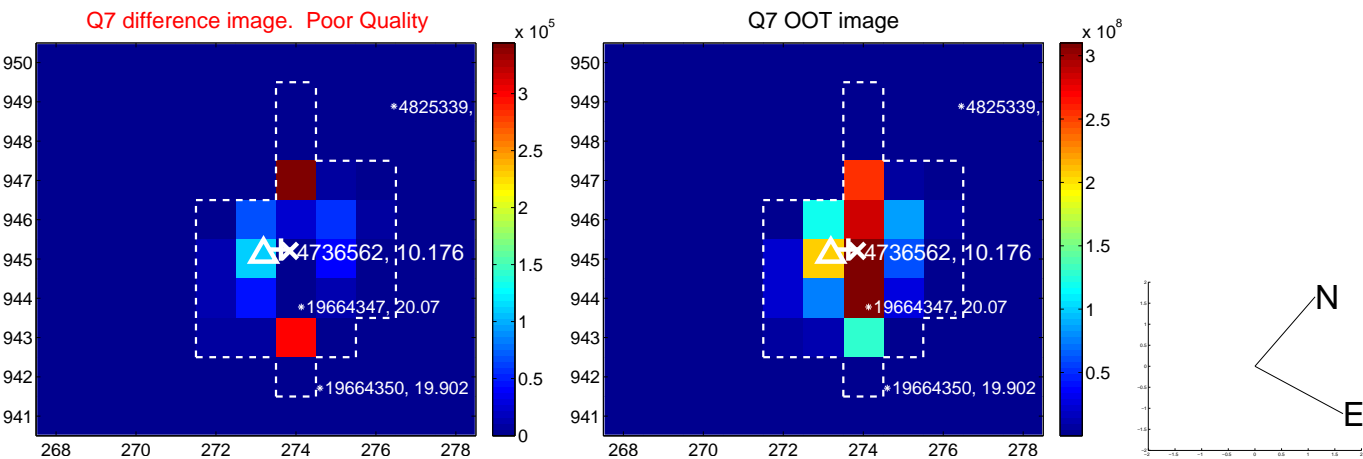
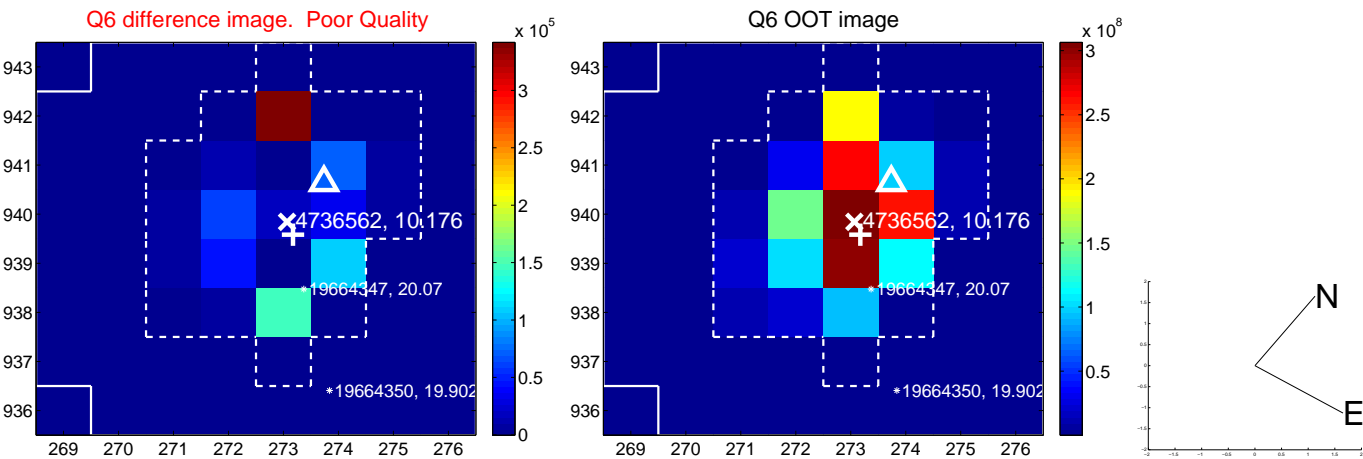
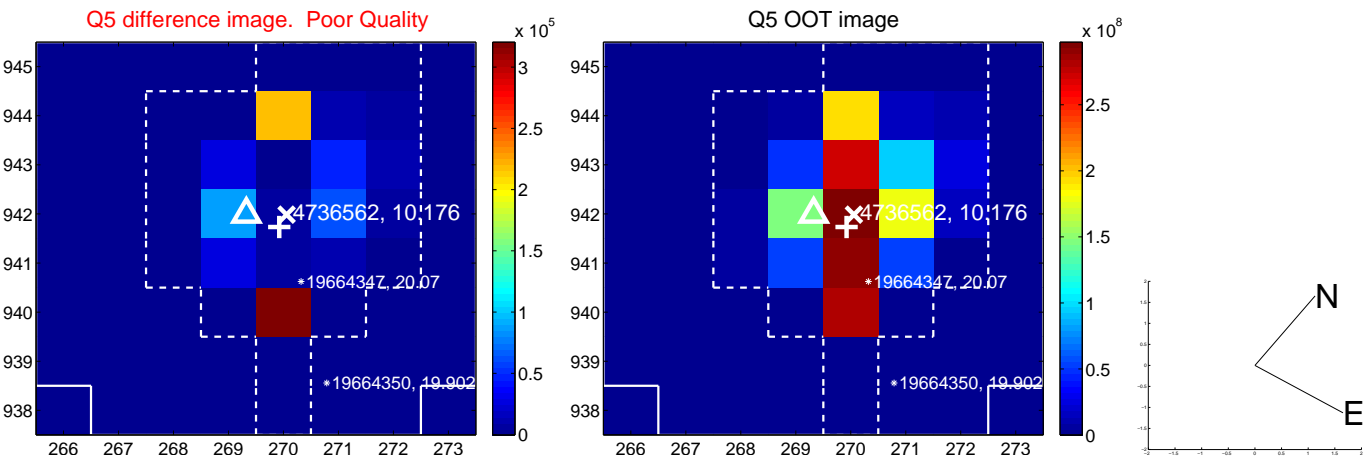


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

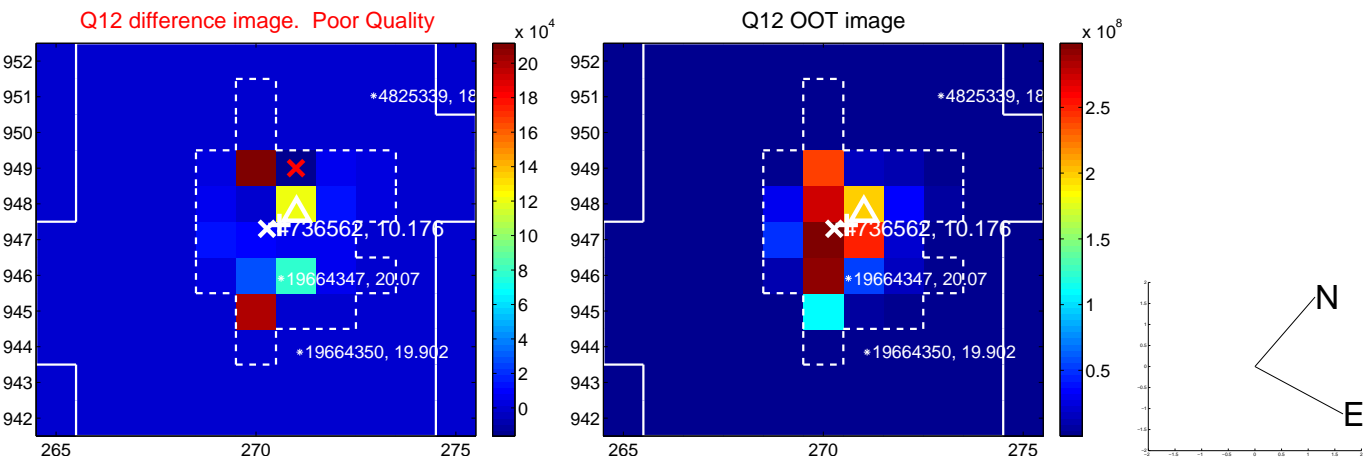
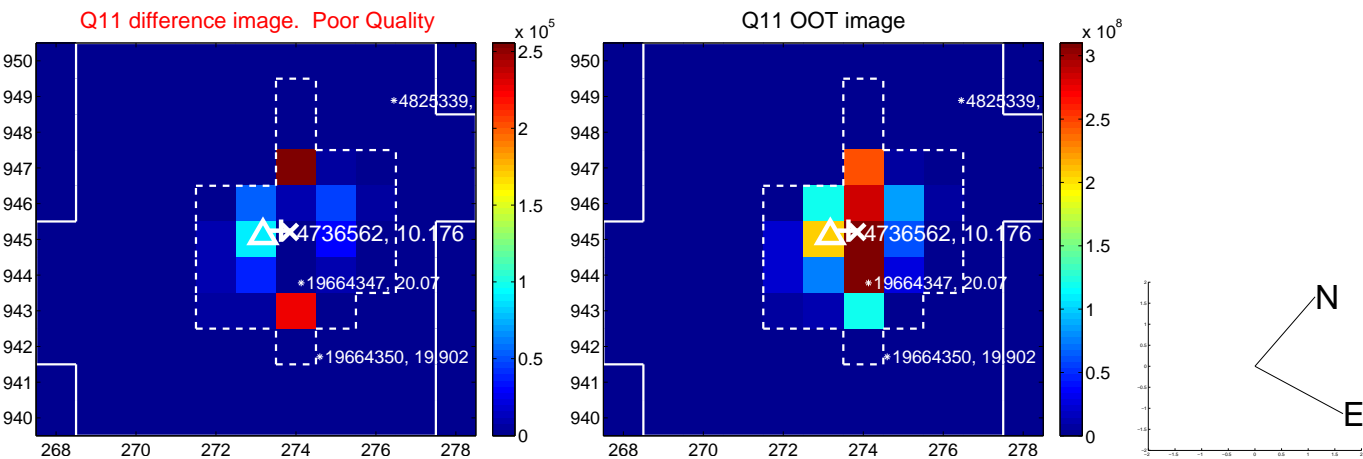
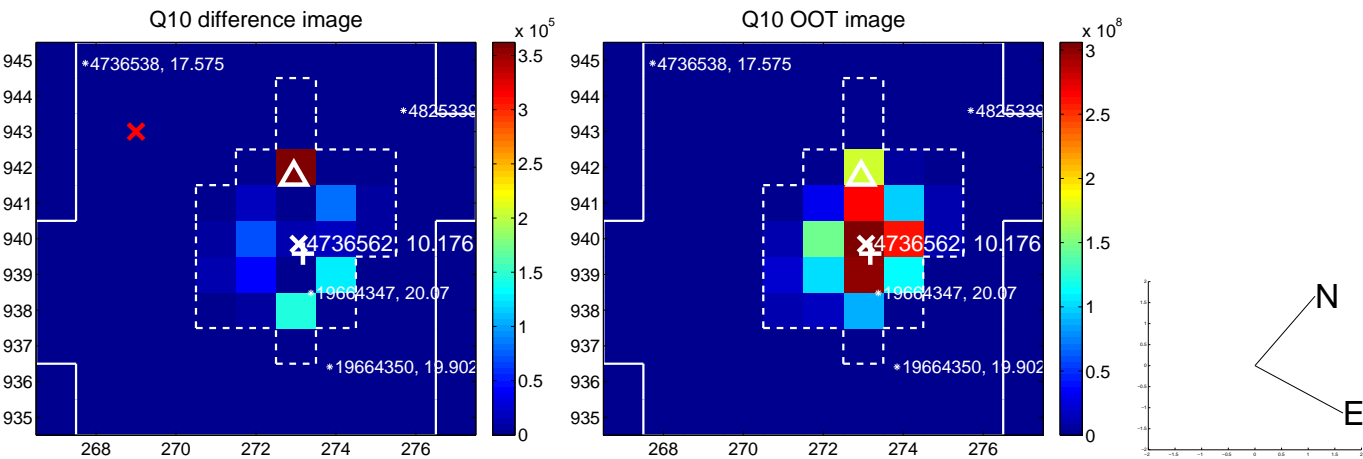
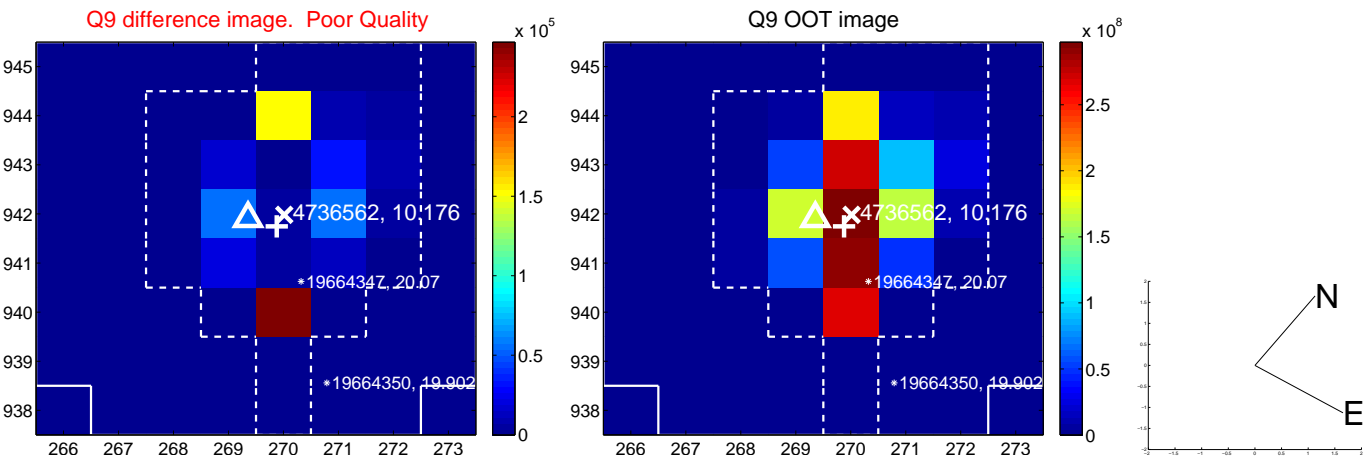
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



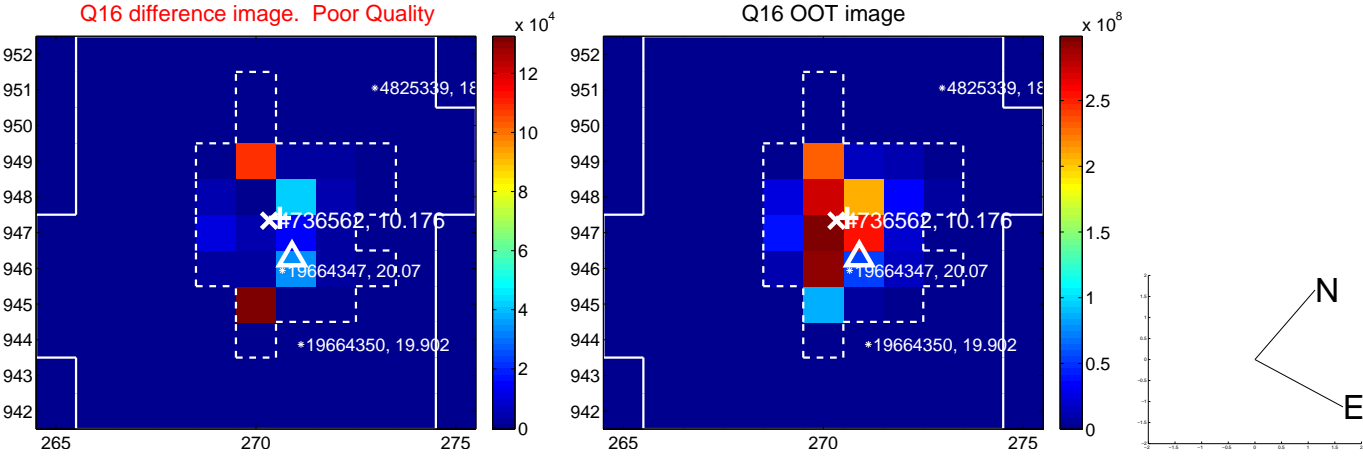
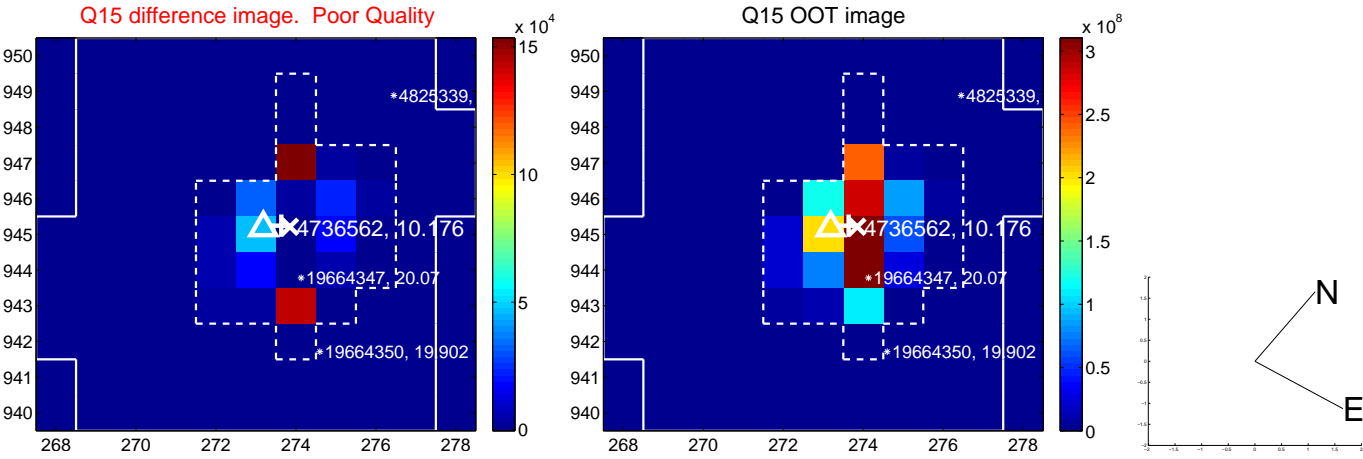
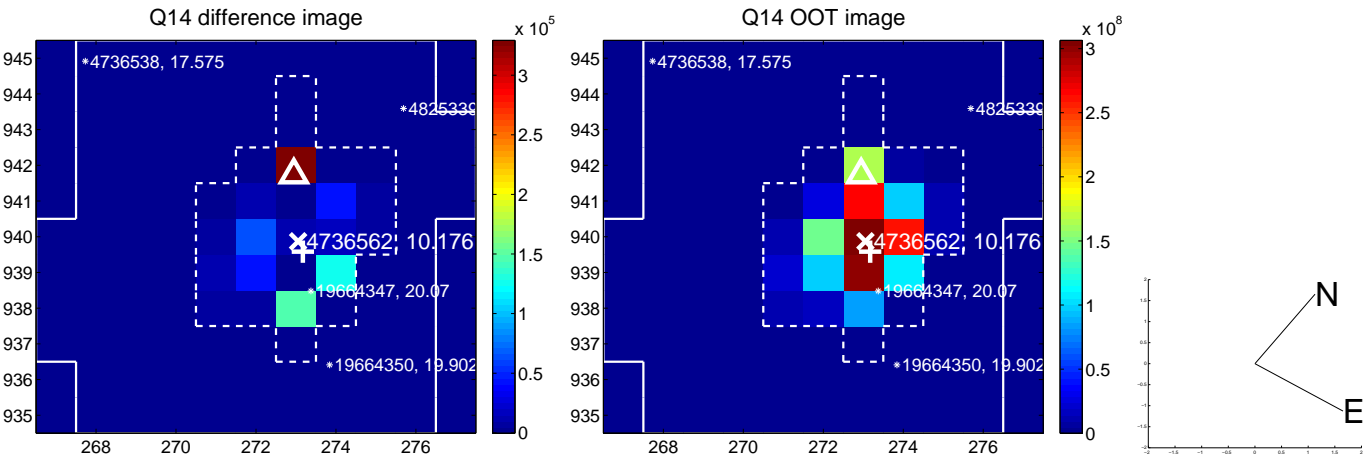
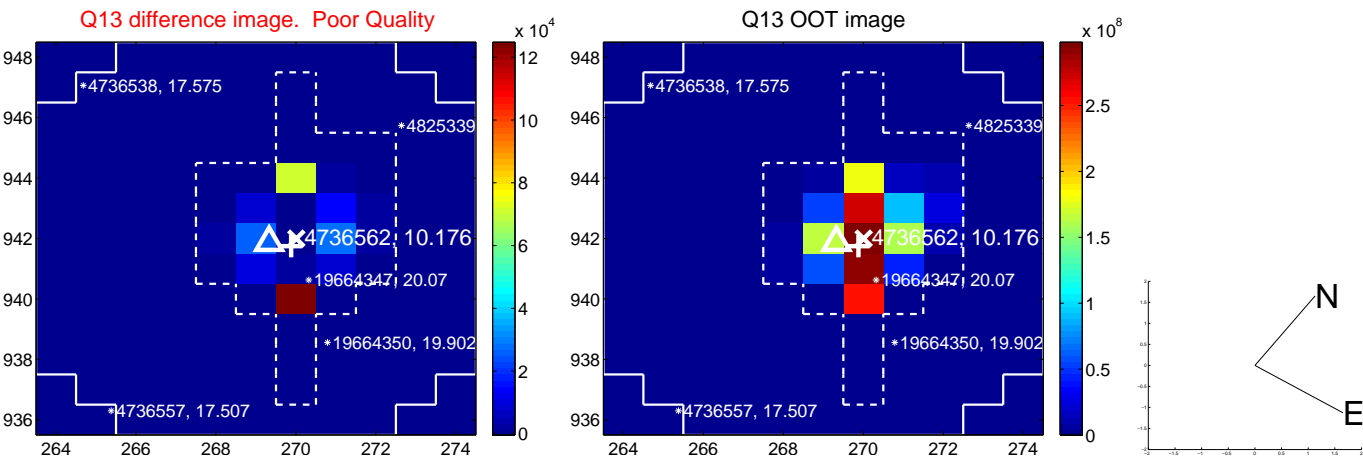
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



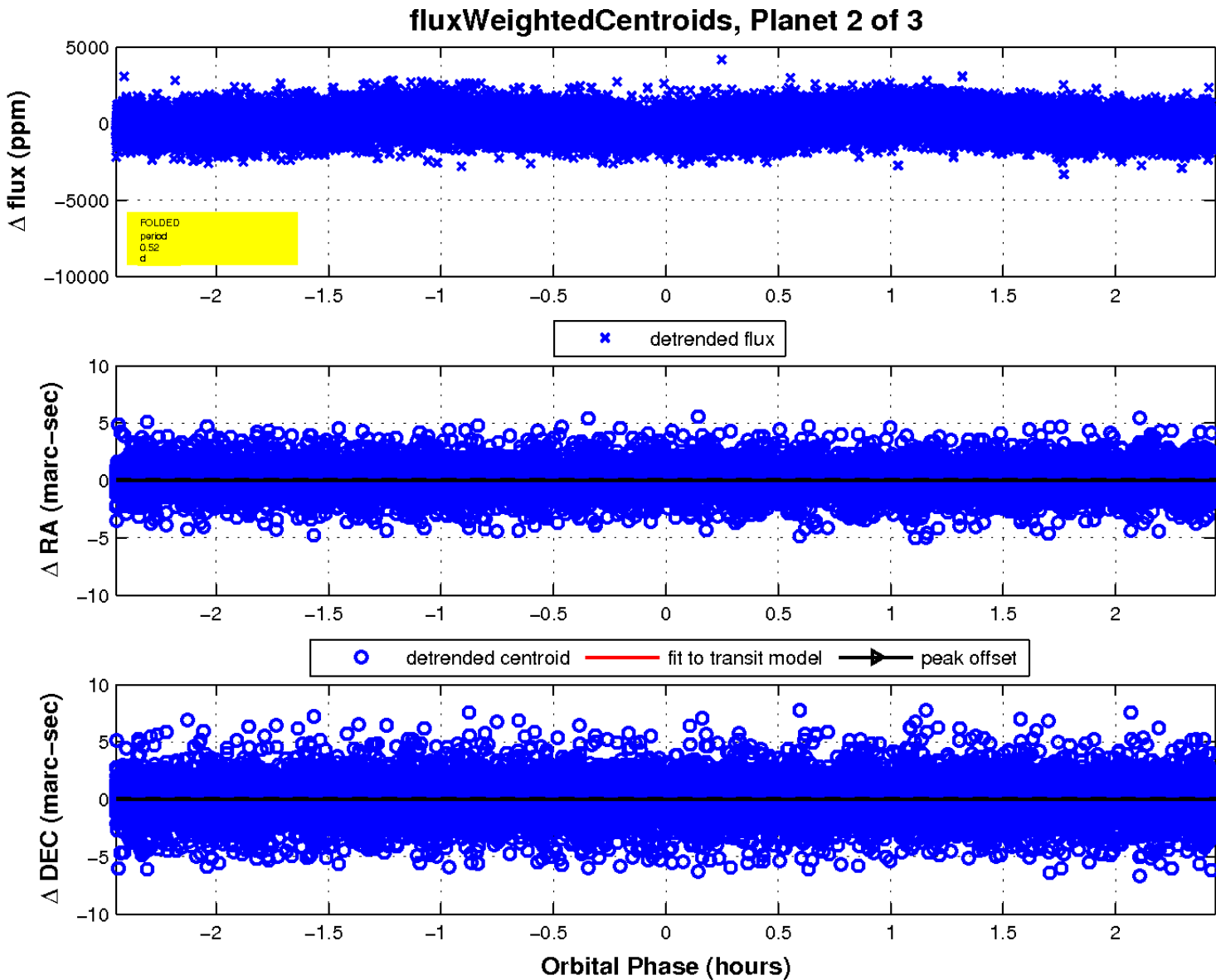
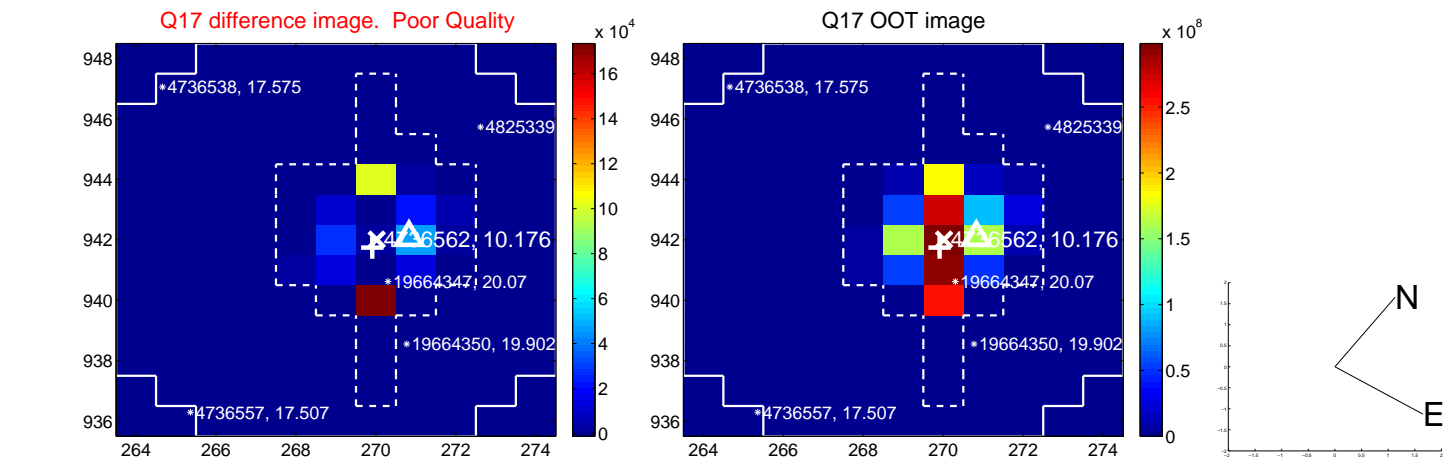
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

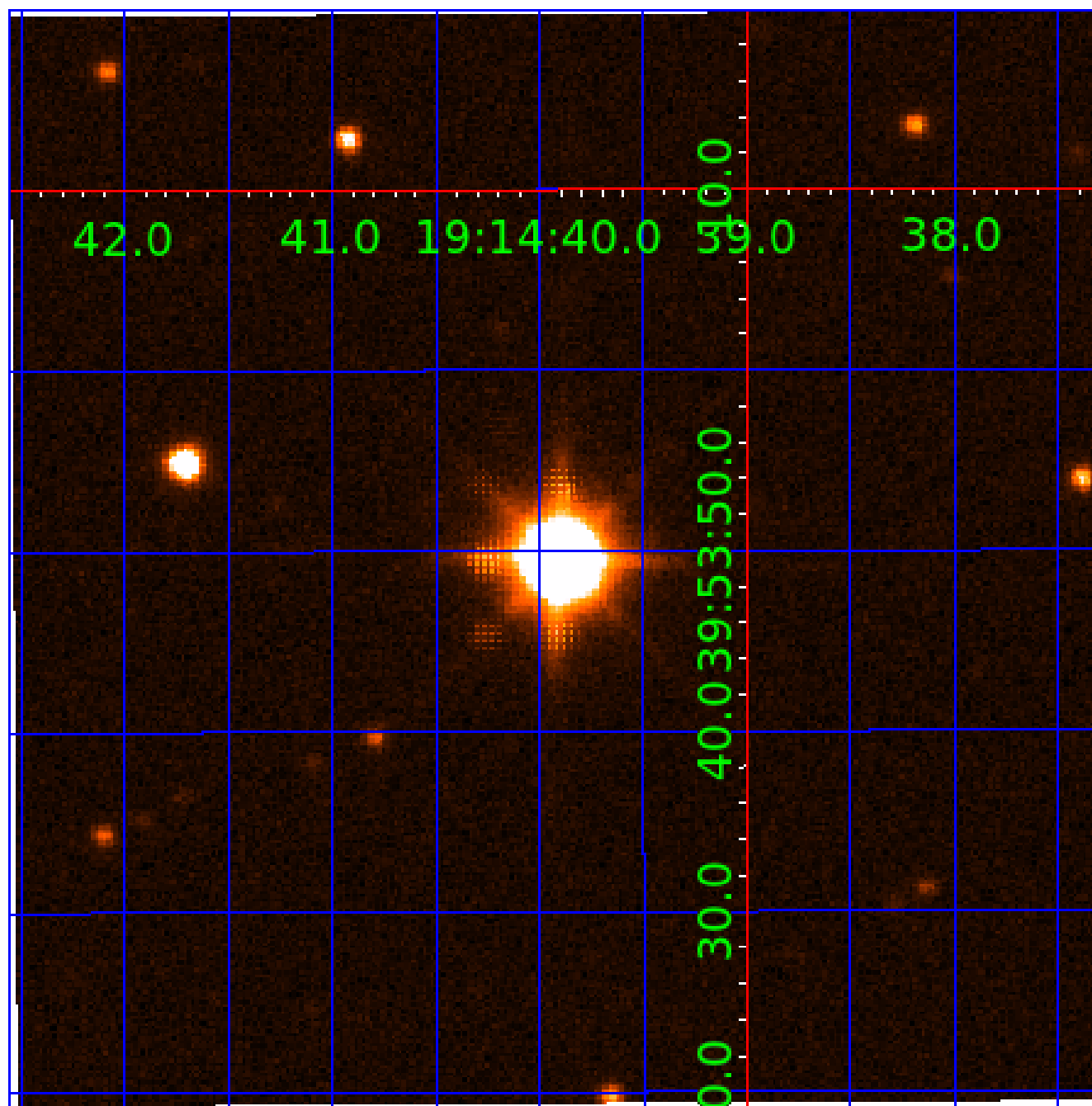


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004736562

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})
004736562-01	OBS	No	0.522118	131.828607	317.6	1.000	21.0	24.5	2.23	7454	4.64	67340.85
004736562-02	OBS	No	0.522121	131.654614	296.8	0.815	19.6	22.2	2.23	7454	4.50	67340.27
004736562-03	OBS	No	0.522123	132.001621	64.0	1.499	19.0	6.2	2.23	7454	1.82	67340.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004736562-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
004736562-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
004736562-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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

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

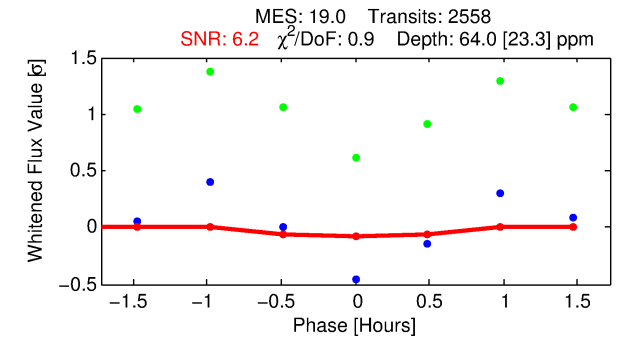
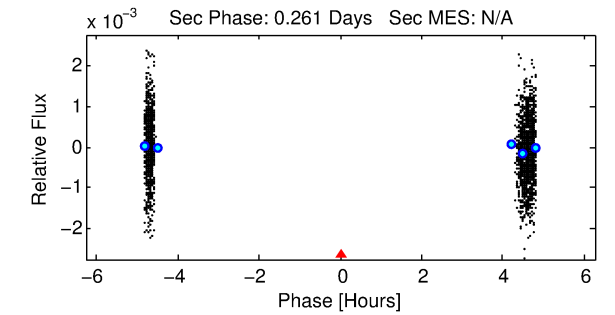
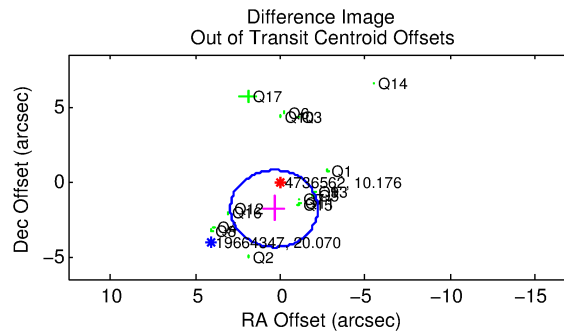
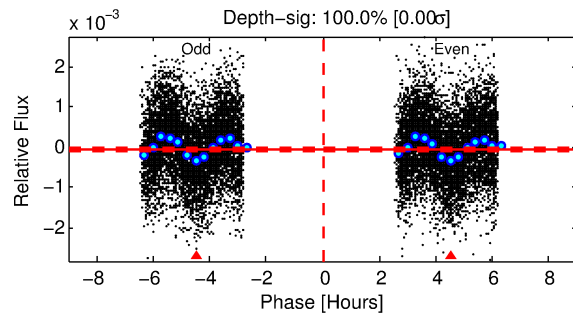
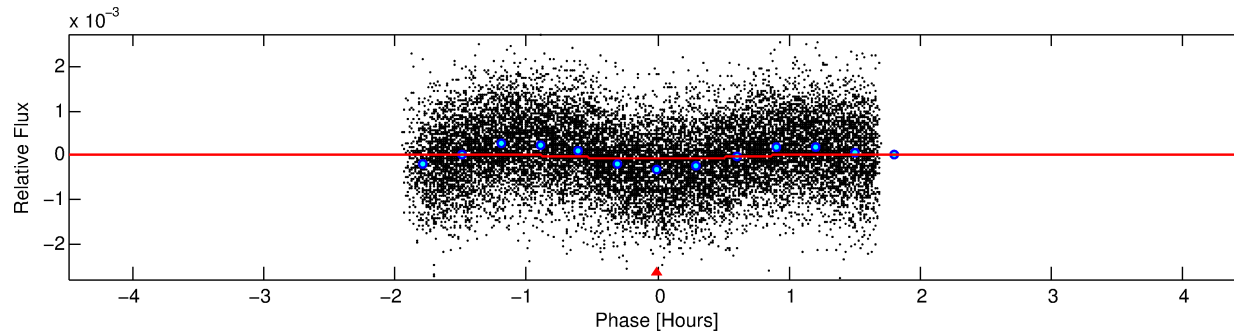
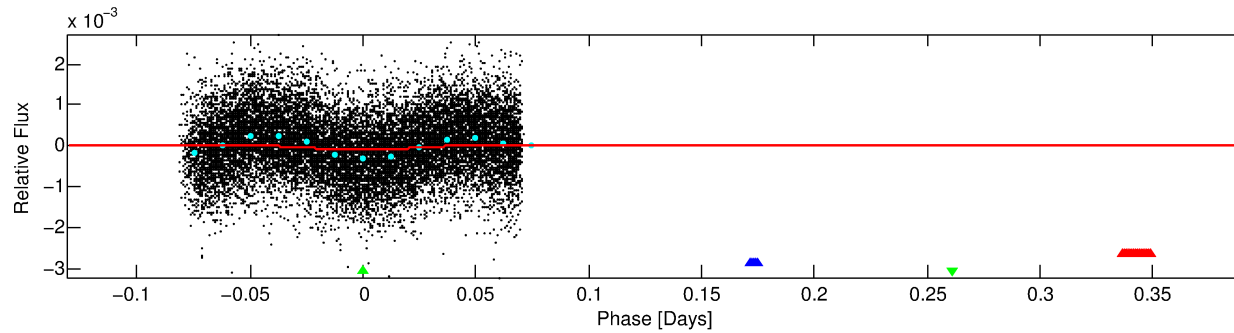
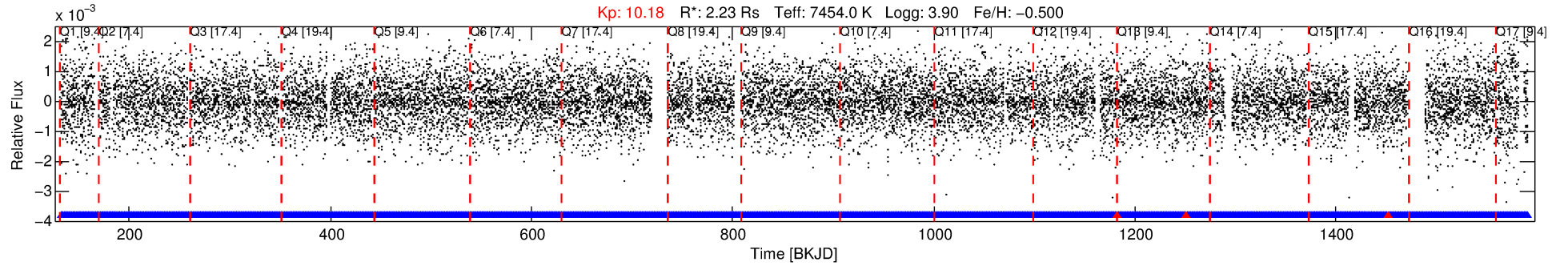
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004736562-03

No Significant Match Found

DV One-Page Summary

KIC: 4736562 Candidate: 3 of 3 Period: 0.522 d



DV Fit Results:

Period = 0.52212 [0.00003] d
Epoch = 132.0016 [0.0034] BKJD
Rp/R* = 0.0075 [0.0121]
a/R* = 2.73 [23.01]
b = 0.10 [95.17]
Seff = 67340.07 [43450.65]
Teq = 4108 [663] K
Rp = 1.82 [3.04] Re
a = 0.0143 [0.0055] AU

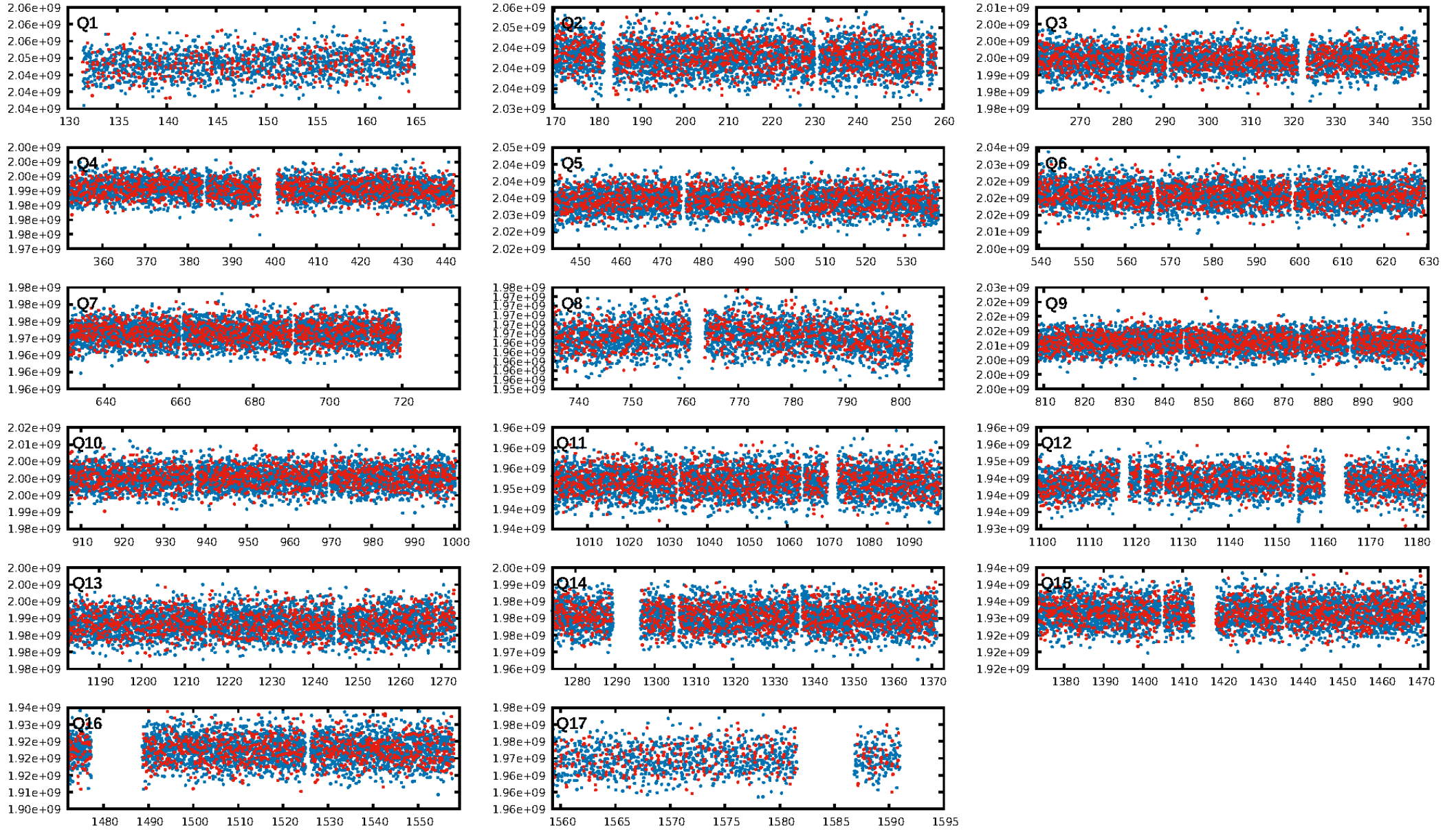
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2439/2442]
GhostDiagnostic-chr: N/A
Centroid-sig: 53.8%
Centroid-so: 0.227 arcsec [0.85 σ]
OotOffset-rm: 1.839 arcsec [2.14 σ]
KicOffset-rm: 1.584 arcsec [2.05 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 0.00 [0/17]

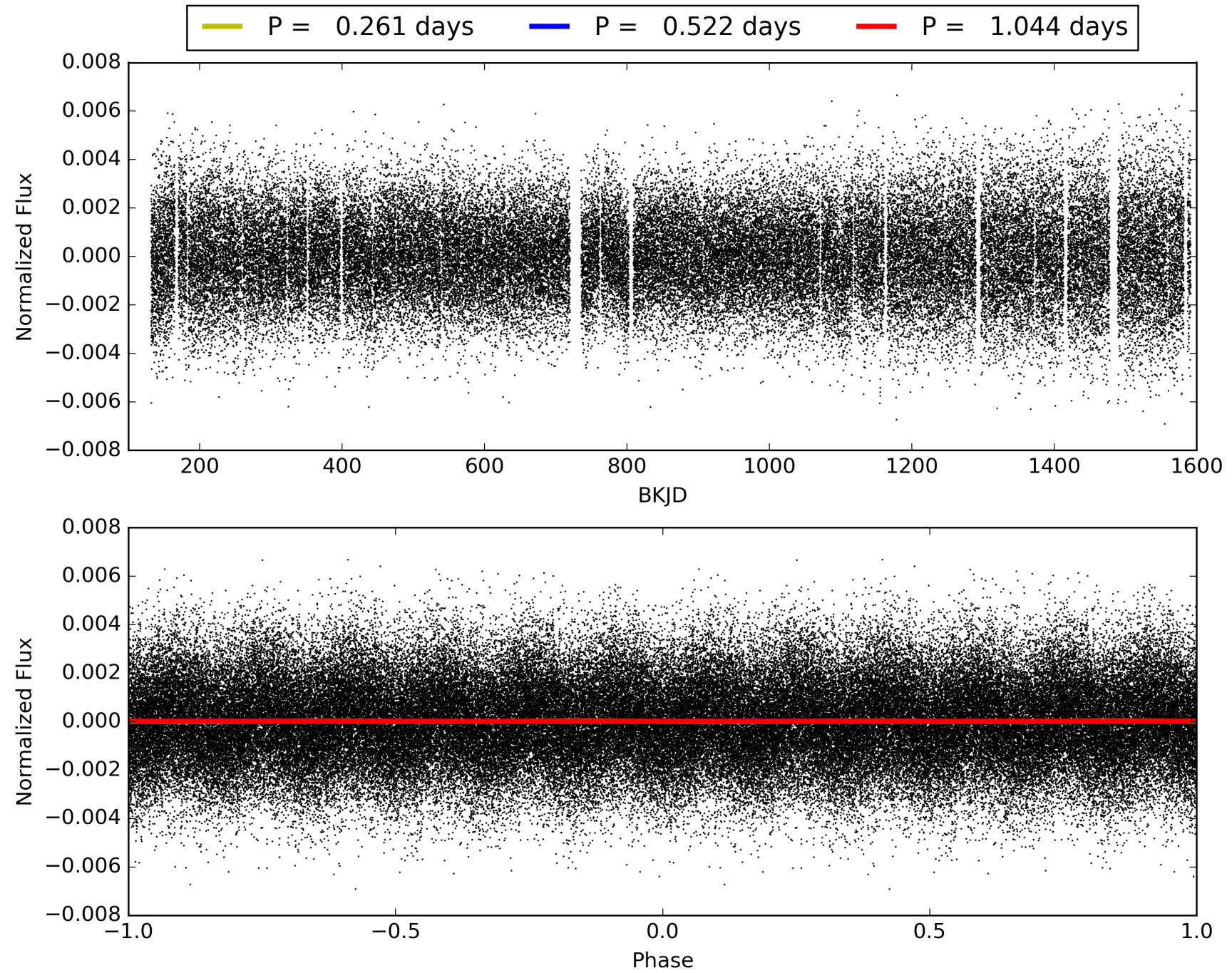
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:22:45 Z

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

TCE 004736562-03, PDC Light Curves

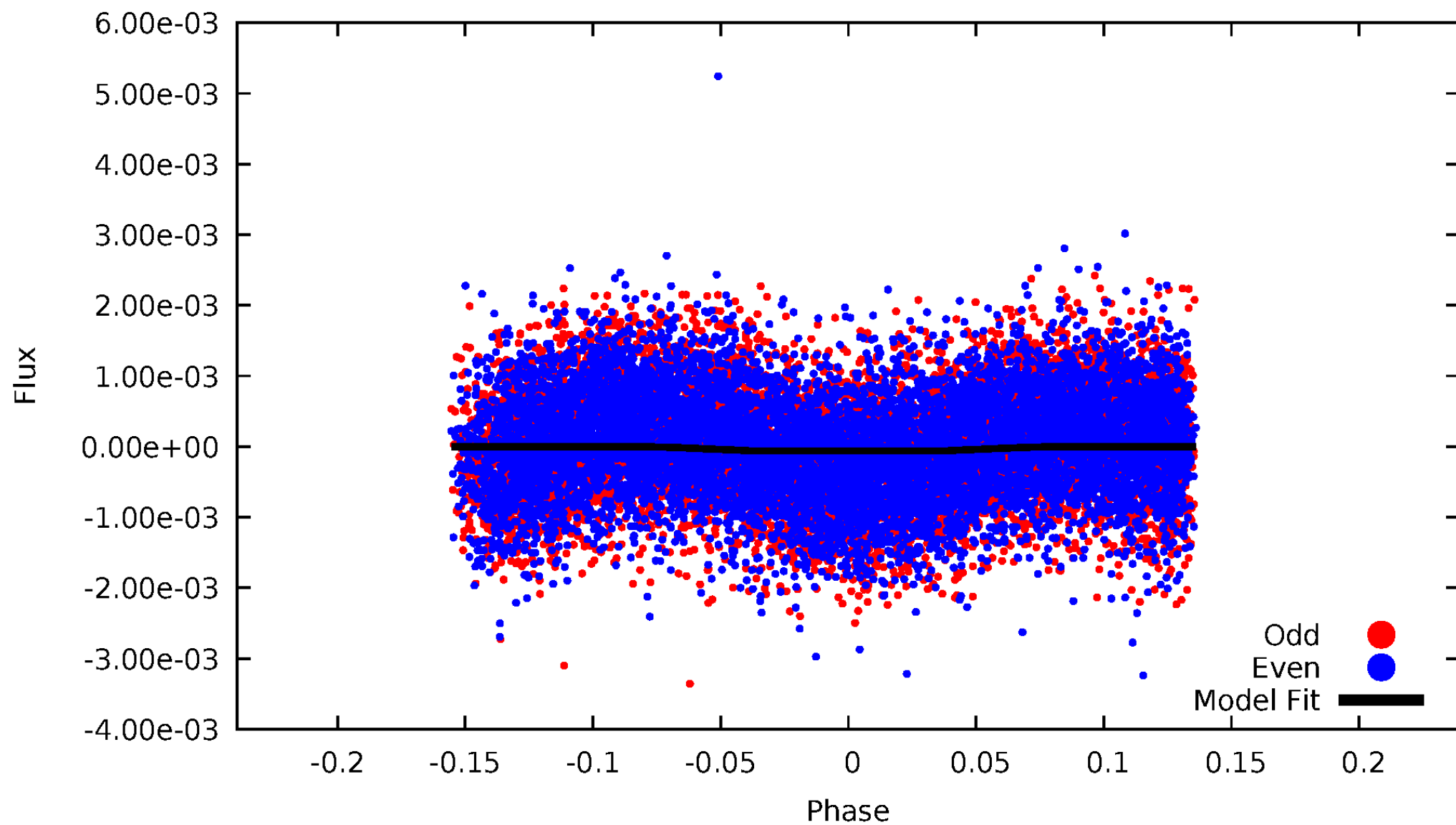


TCE 004736562-03



DV Odd/Even

TCE 004736562-03

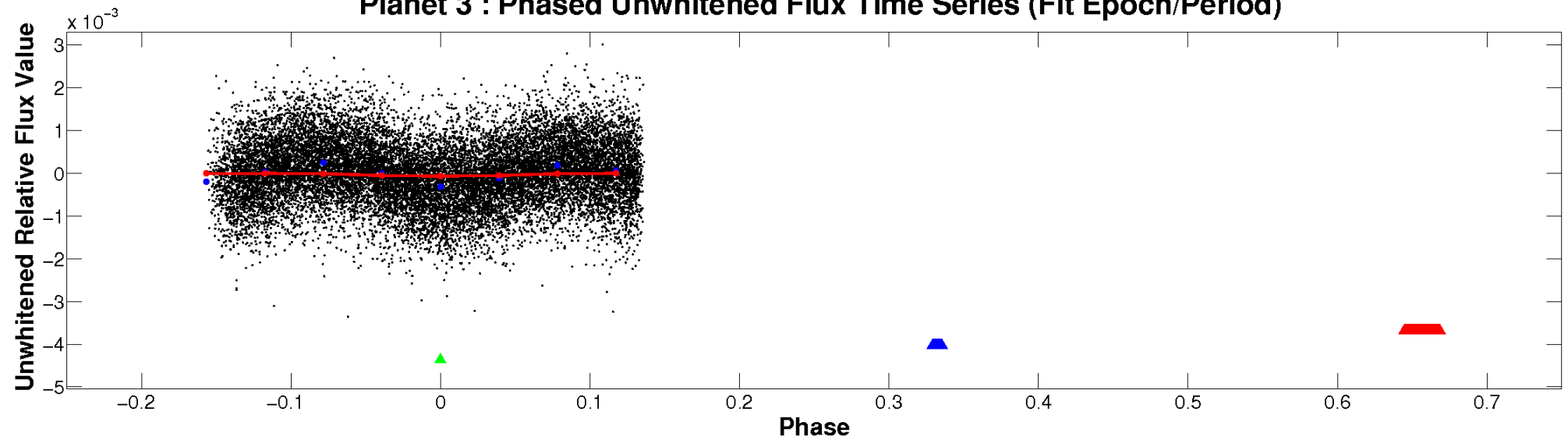


ALT Odd/Even

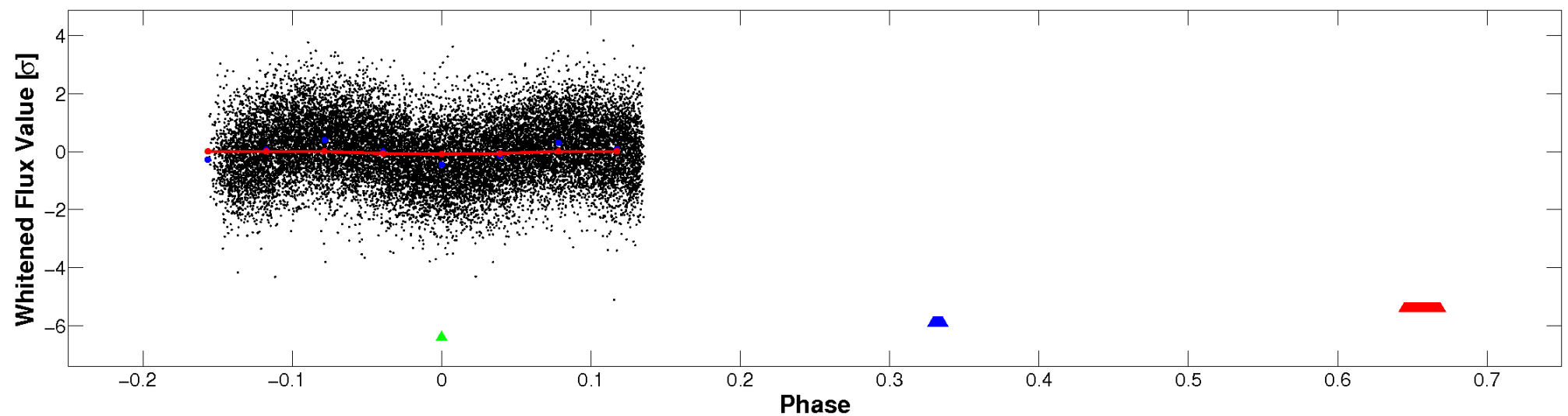
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

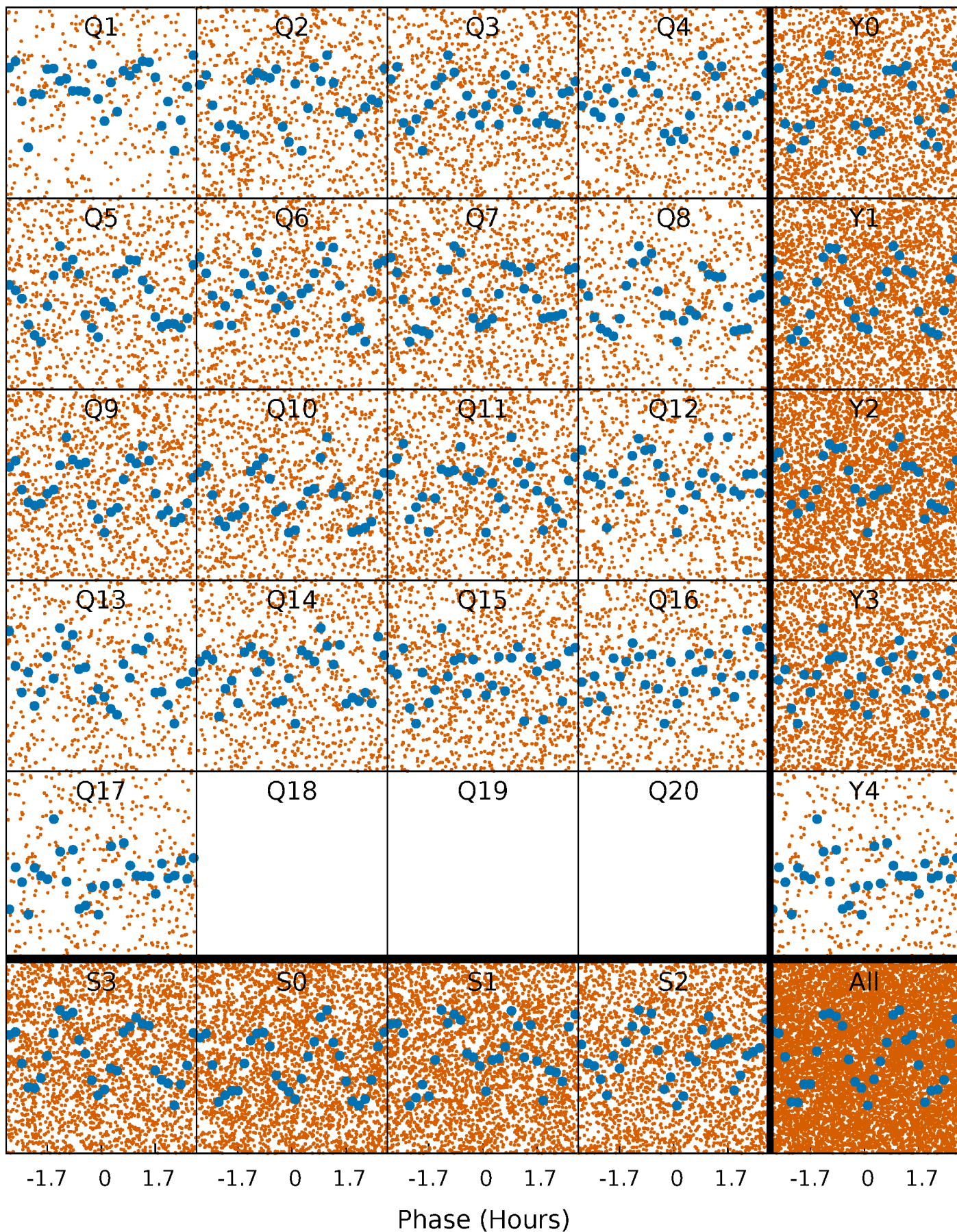


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



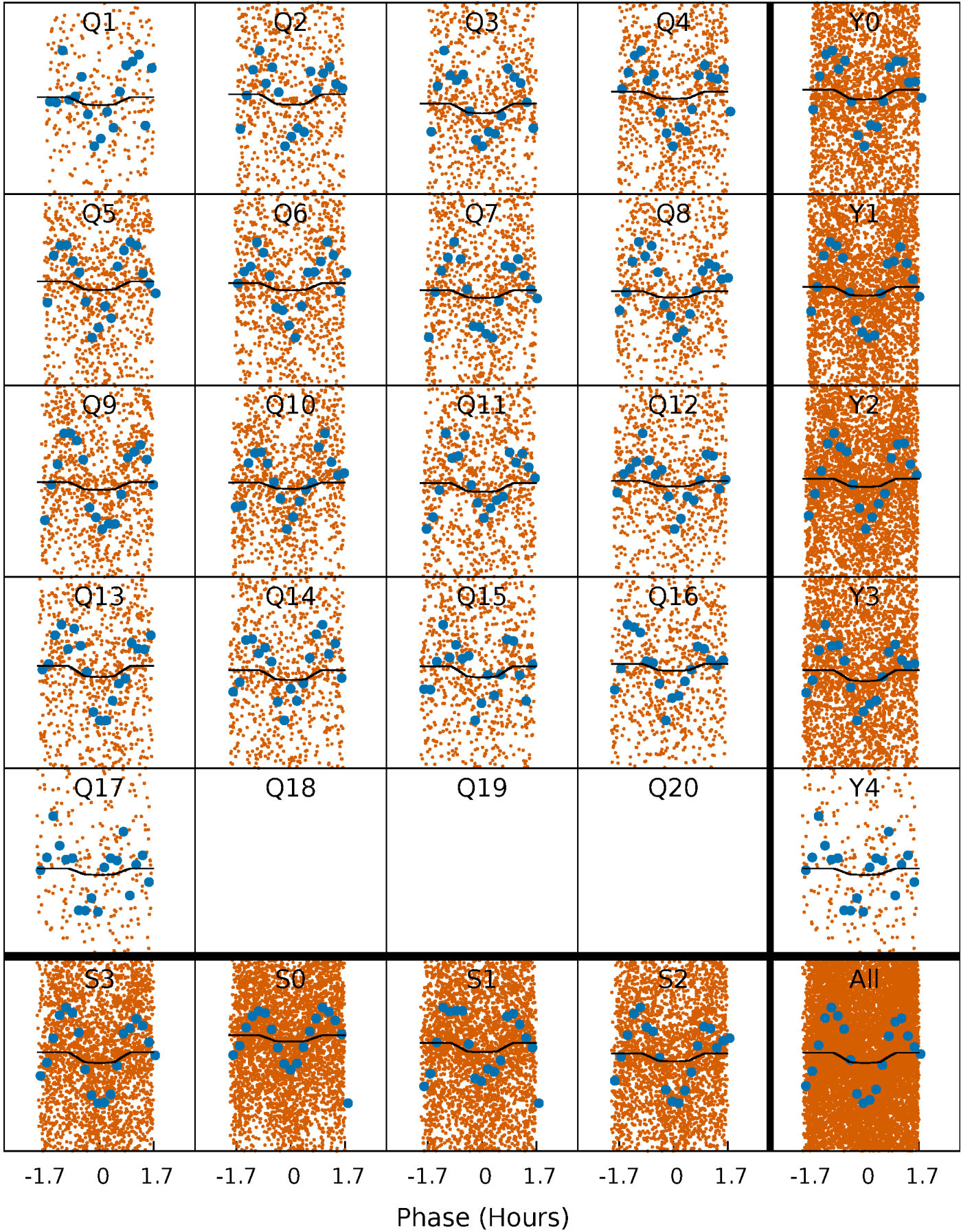
PDC Quarter-Phased Transit Curves

TCE 004736562-03 P= 0.522123 Days $T_0=132.001621$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004736562-03 $P = 0.522123$ Days $T_0 = 132.001621$ (BKJD)

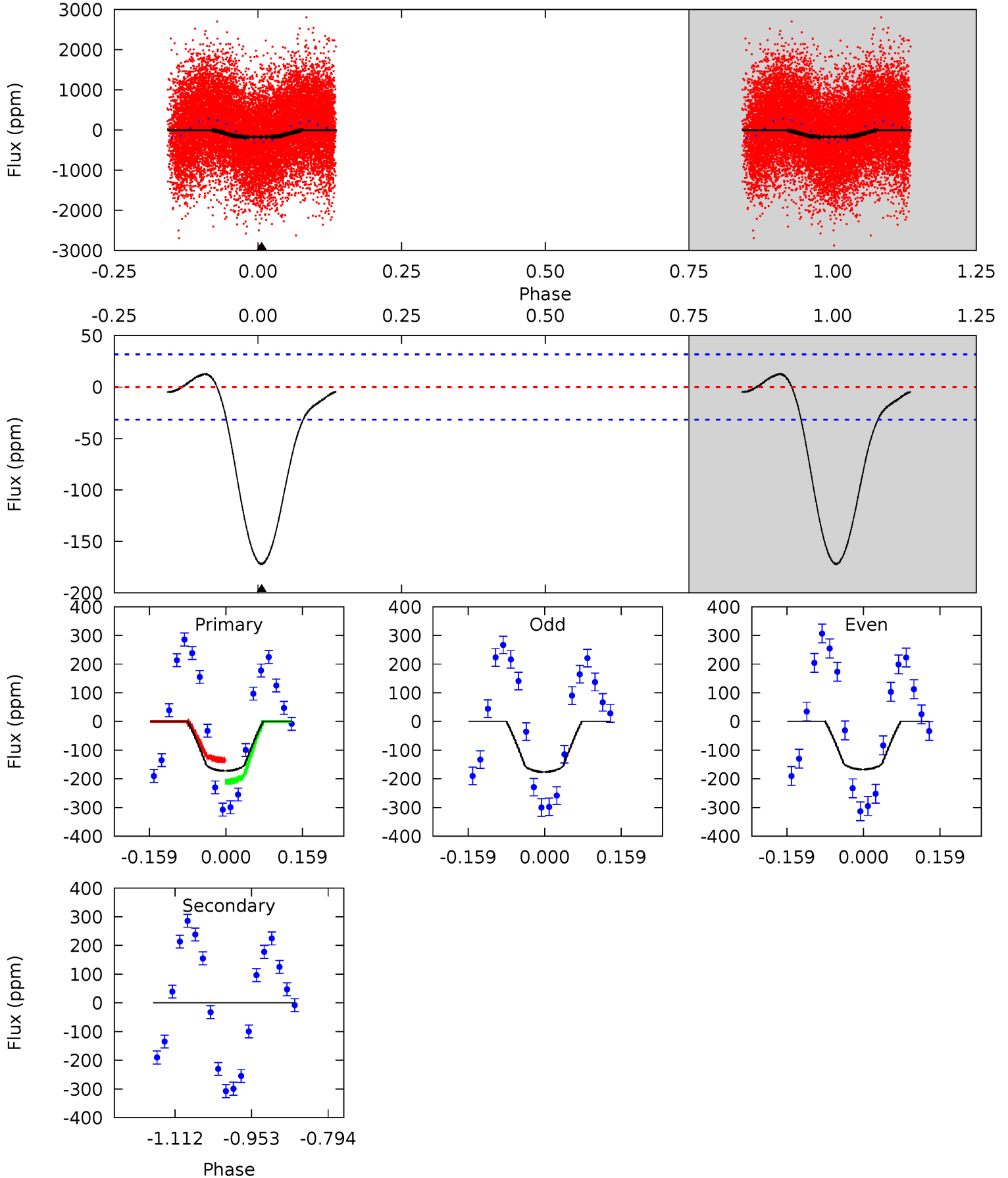


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004736562-03, P = 0.522123 Days, E = 131.479498 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	0	0	0	4.47	1.41	0.44	24.2	24.2	0	0	0.61	1.13	0.07	5.19



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004736562

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7454^{+233}_{-311}	$3.897^{+0.368}_{-0.123}$	$-0.500^{+0.250}_{-0.300}$	$2.235^{+0.475}_{-0.883}$	$1.435^{+0.210}_{-0.257}$	$0.181^{+0.521}_{-0.065}$
	+3%/-4%	+9%/-3%	+50%/-60%	+21%/-40%	+15%/-18%	+288%/-36%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004736562-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 7	$2.55^{+2.37}_{-1.74}$	5572^{+427}_{-595}	-4647^{+1165}_{-564}	$0.000^{+0.214}_{-0.173}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

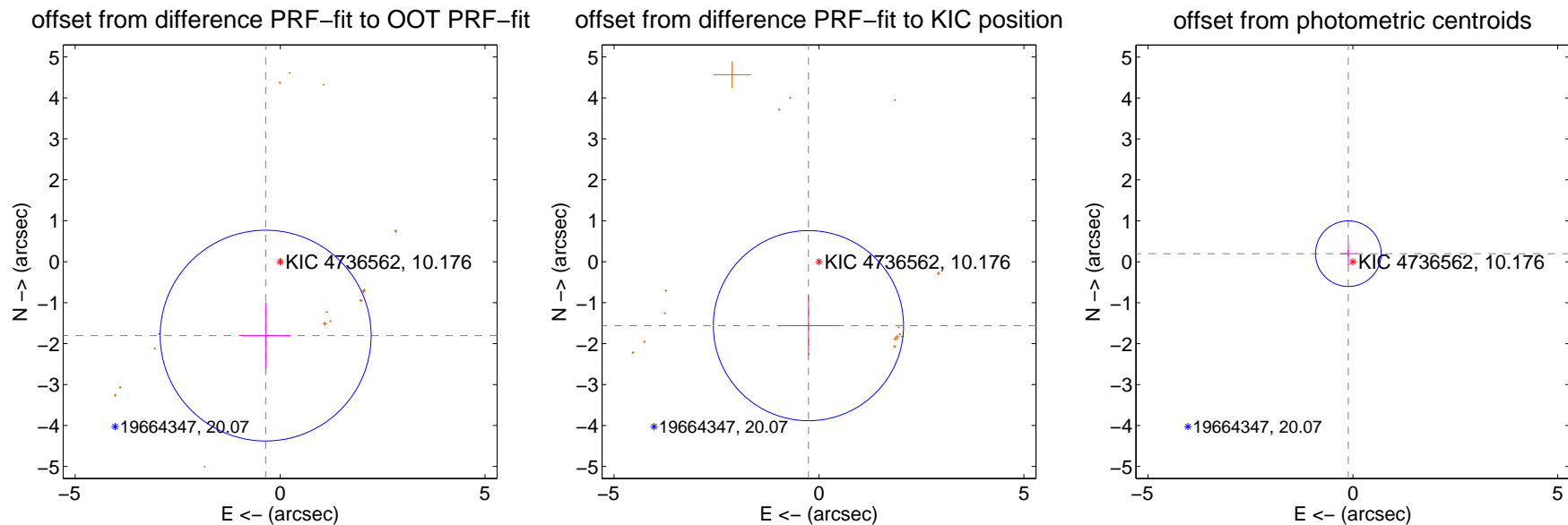
DV Centroid Data

Supplemental centroid analysis for 004736562-03. **Kepler magnitude: 10.18.** Transit SNR 6.21

There are 1 quarters with good PRF difference image offsets

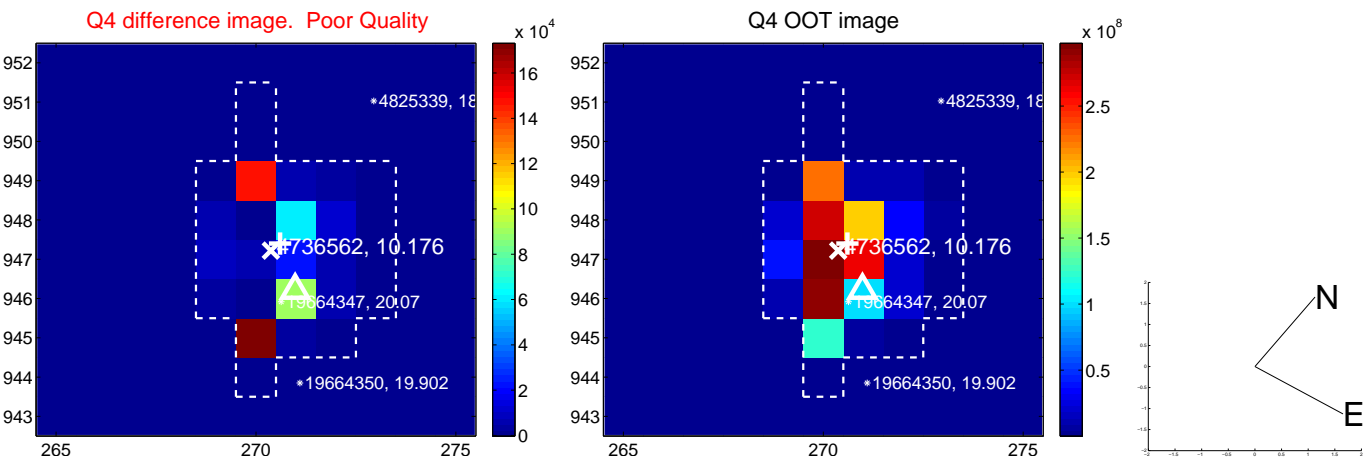
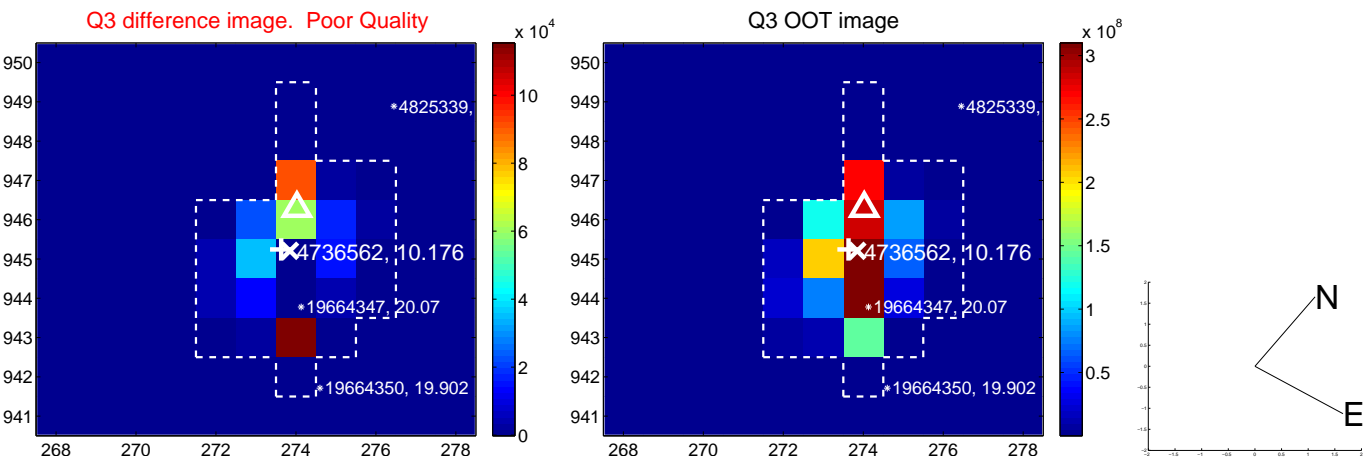
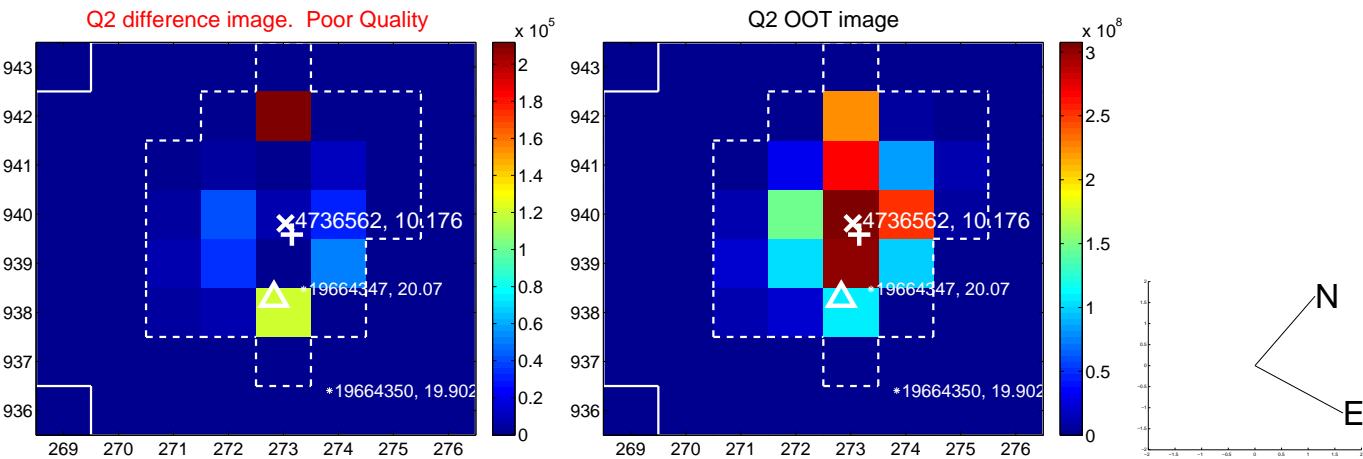
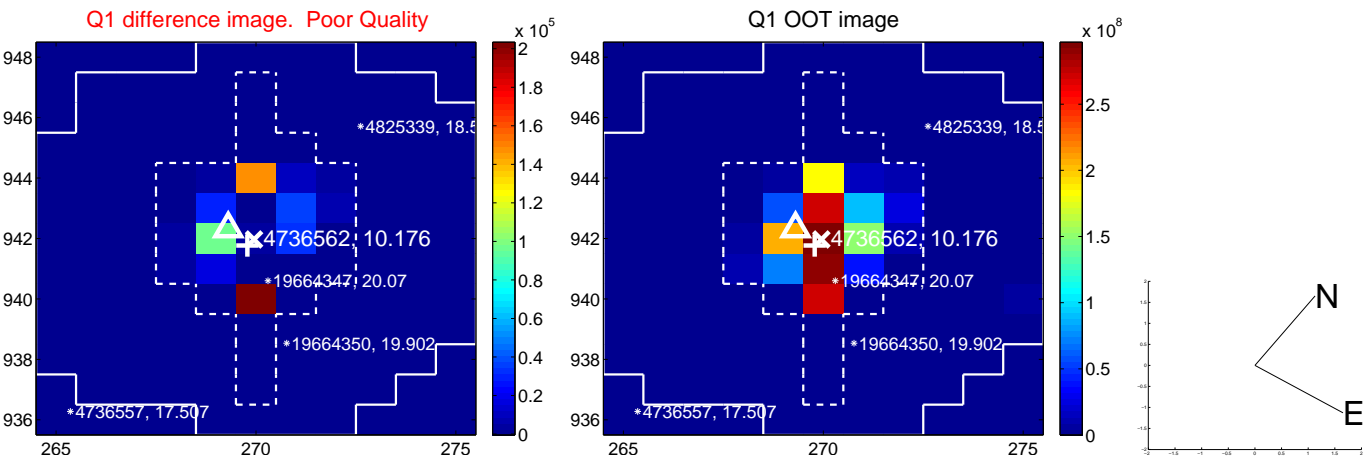
The direct PRF centroid is offset from the target star catalog position by about 1.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.839 ± 0.858	2.14	0.352 ± 0.611	-1.805 ± 0.812
PRF-fit source offset from KIC position	1.584 ± 0.774	2.05	0.257 ± 0.722	-1.563 ± 0.733
photometric centroid source offset	0.23 ± 0.27	0.85	0.11 ± 0.21	0.20 ± 0.28

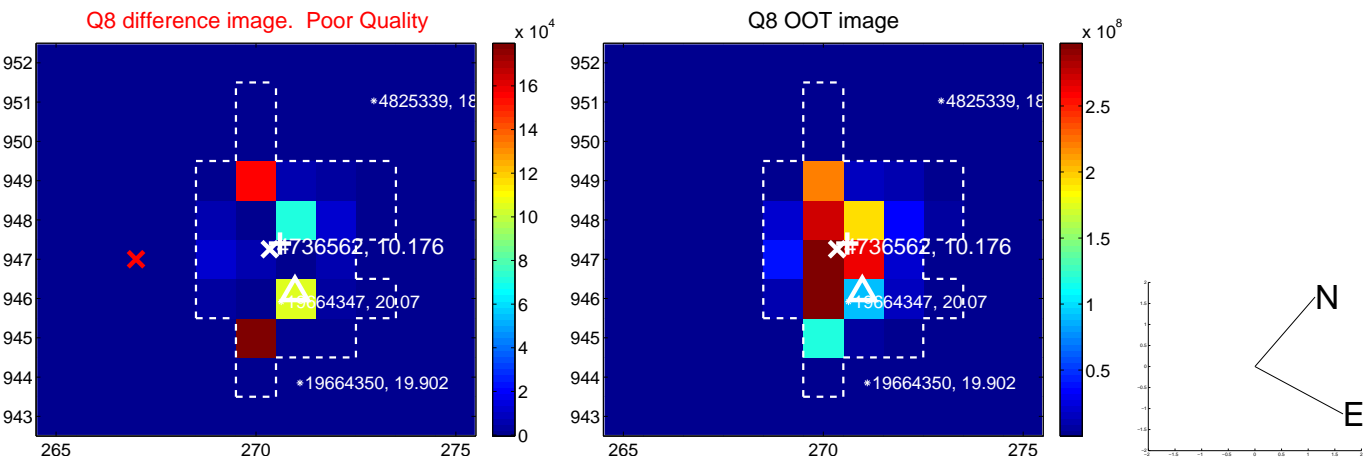
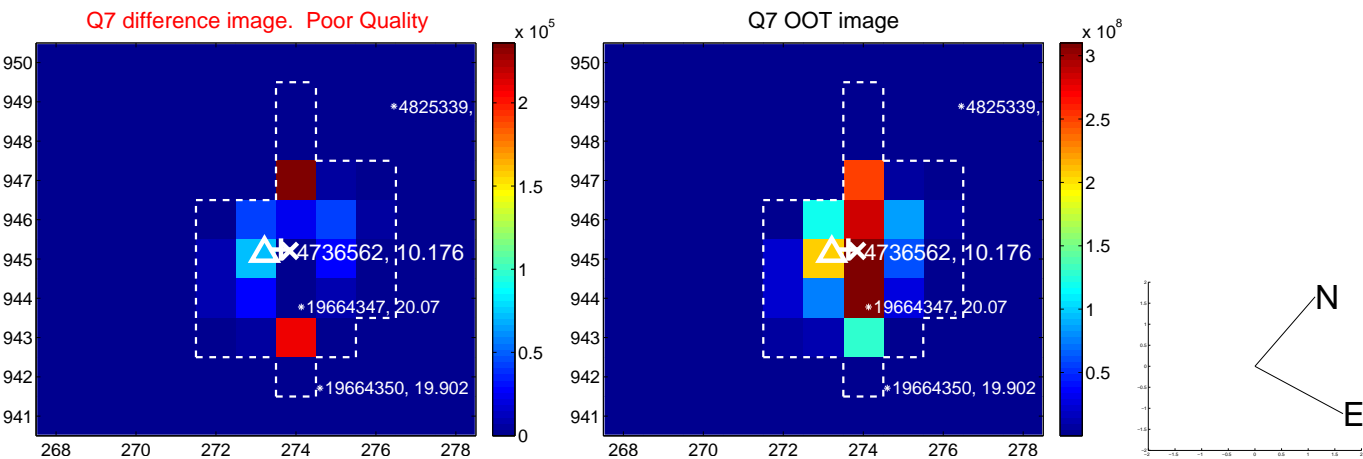
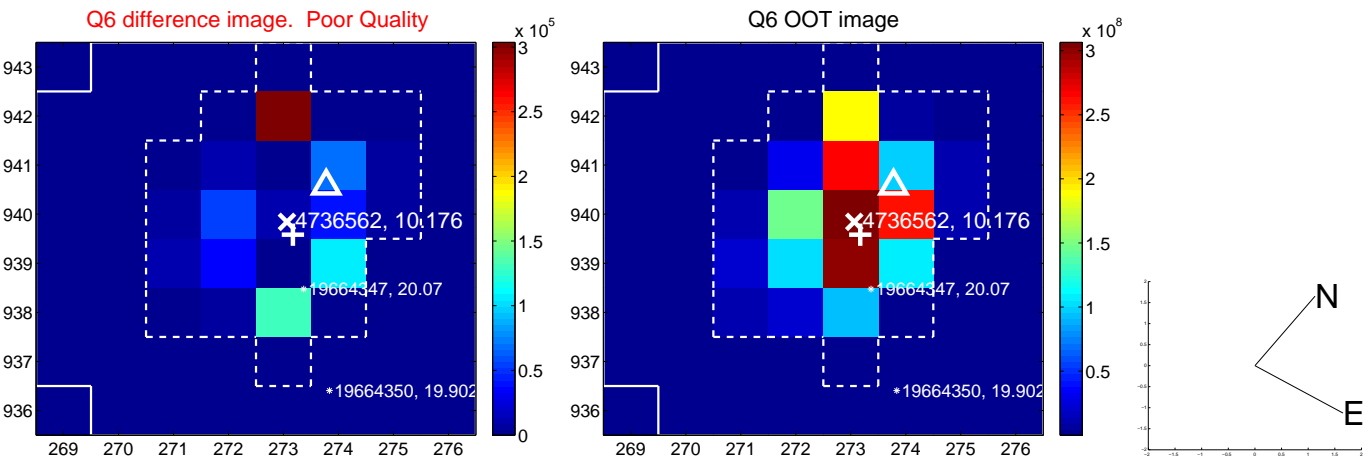
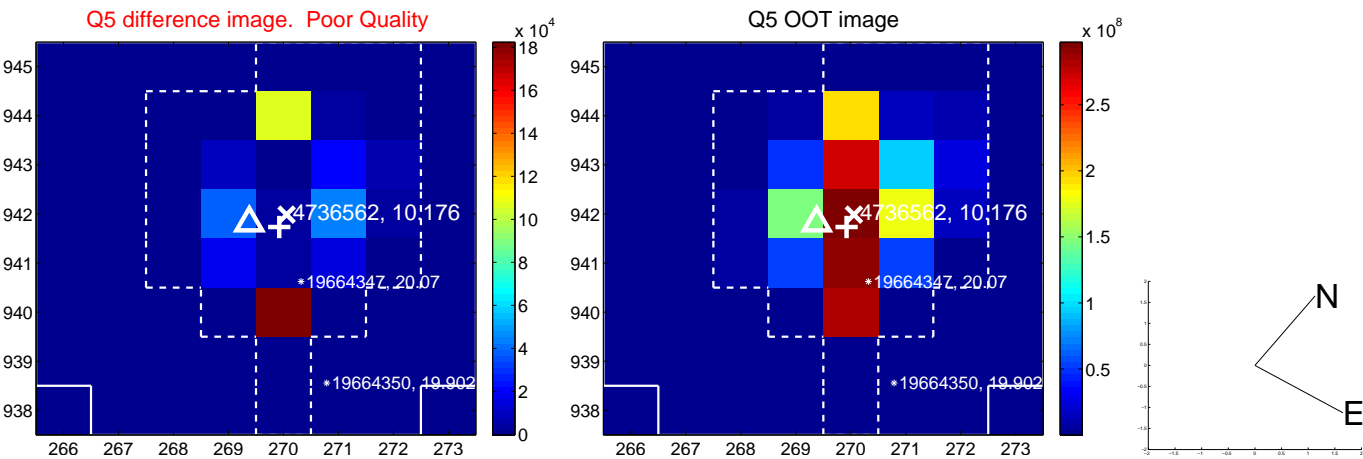


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

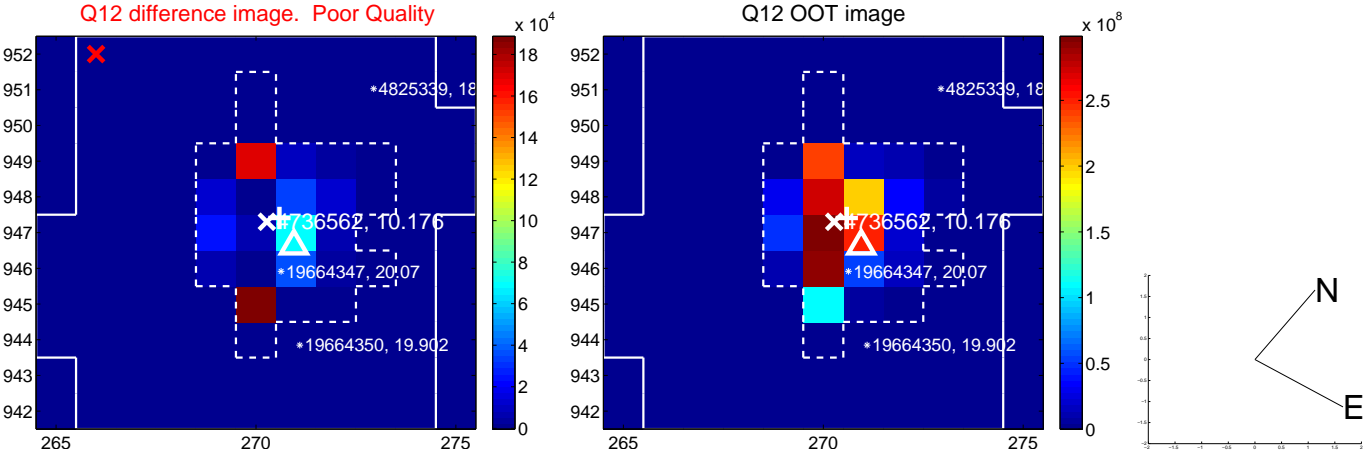
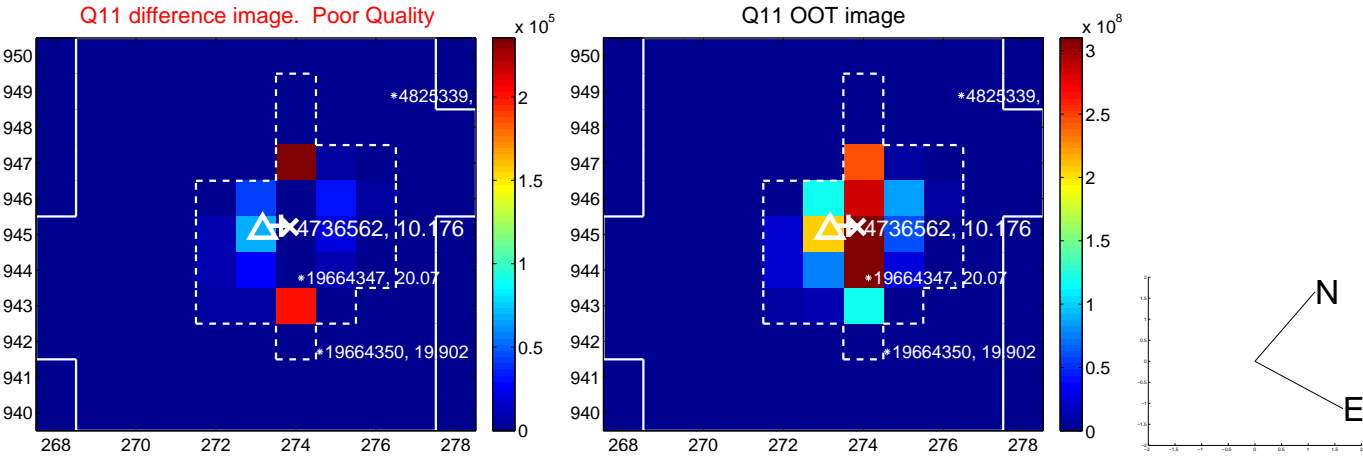
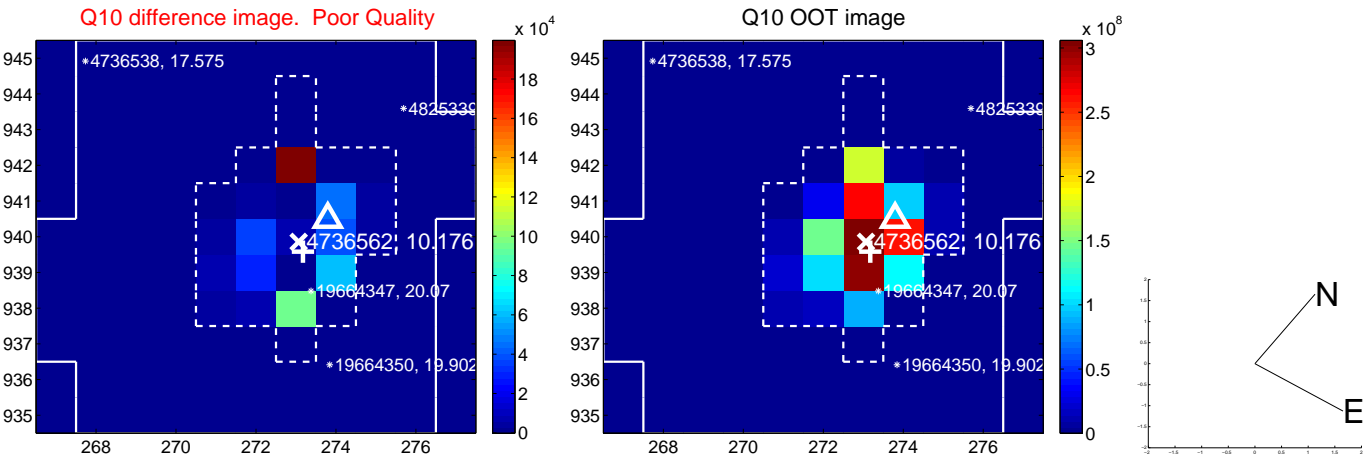
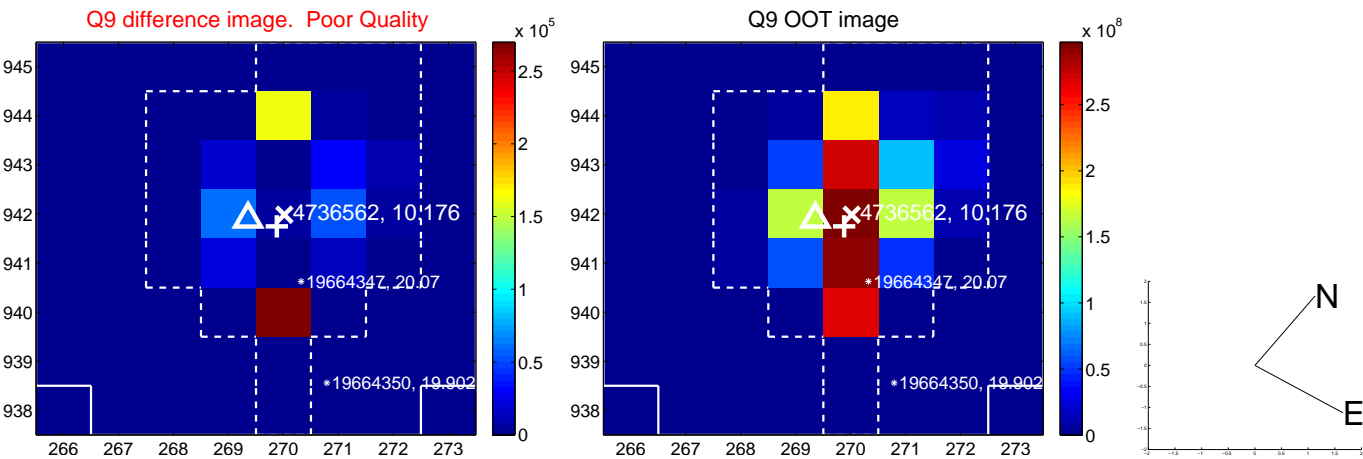
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



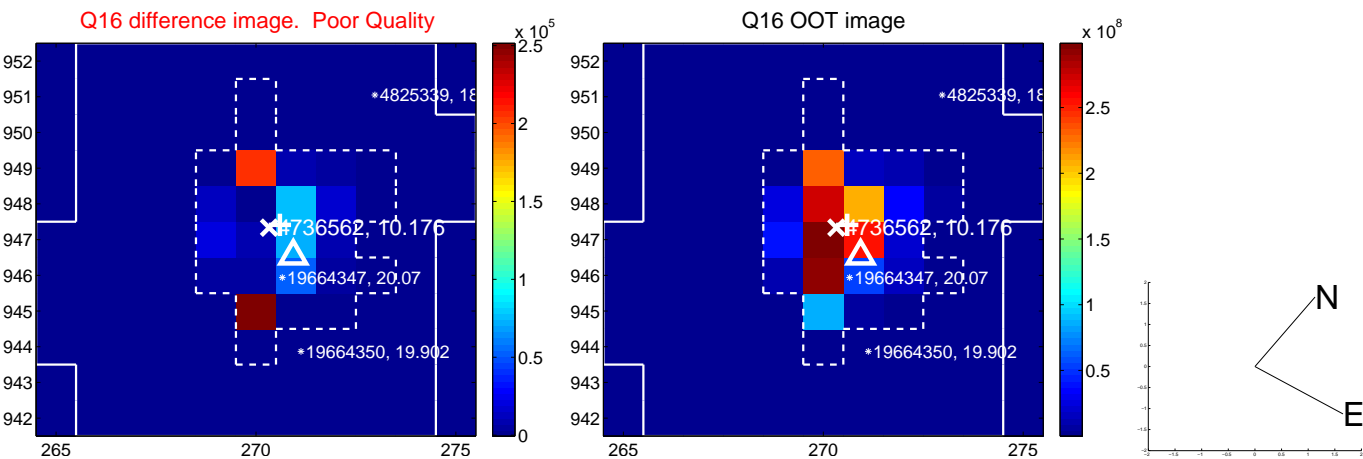
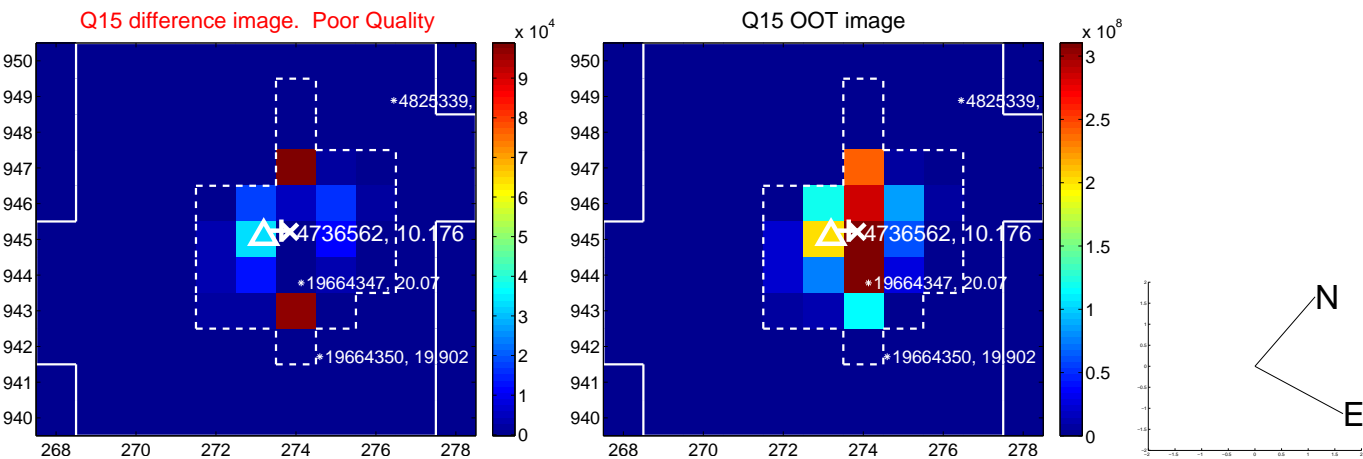
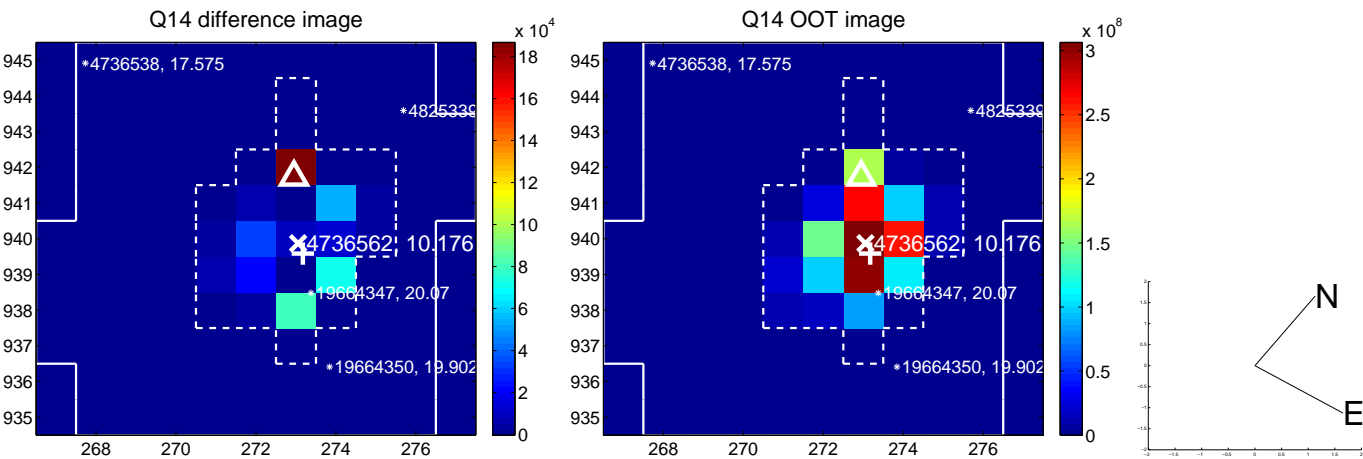
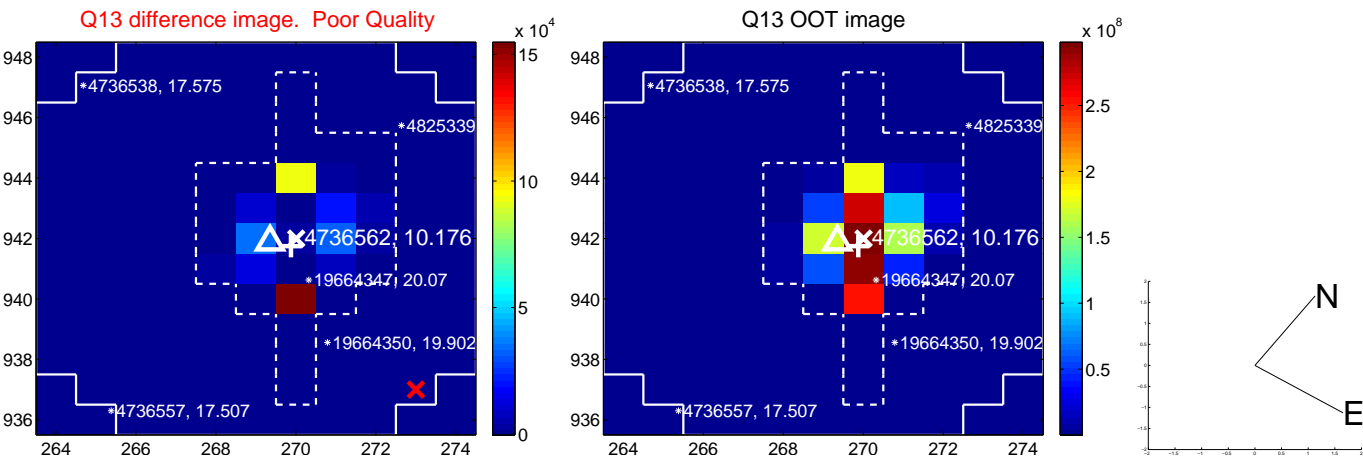
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



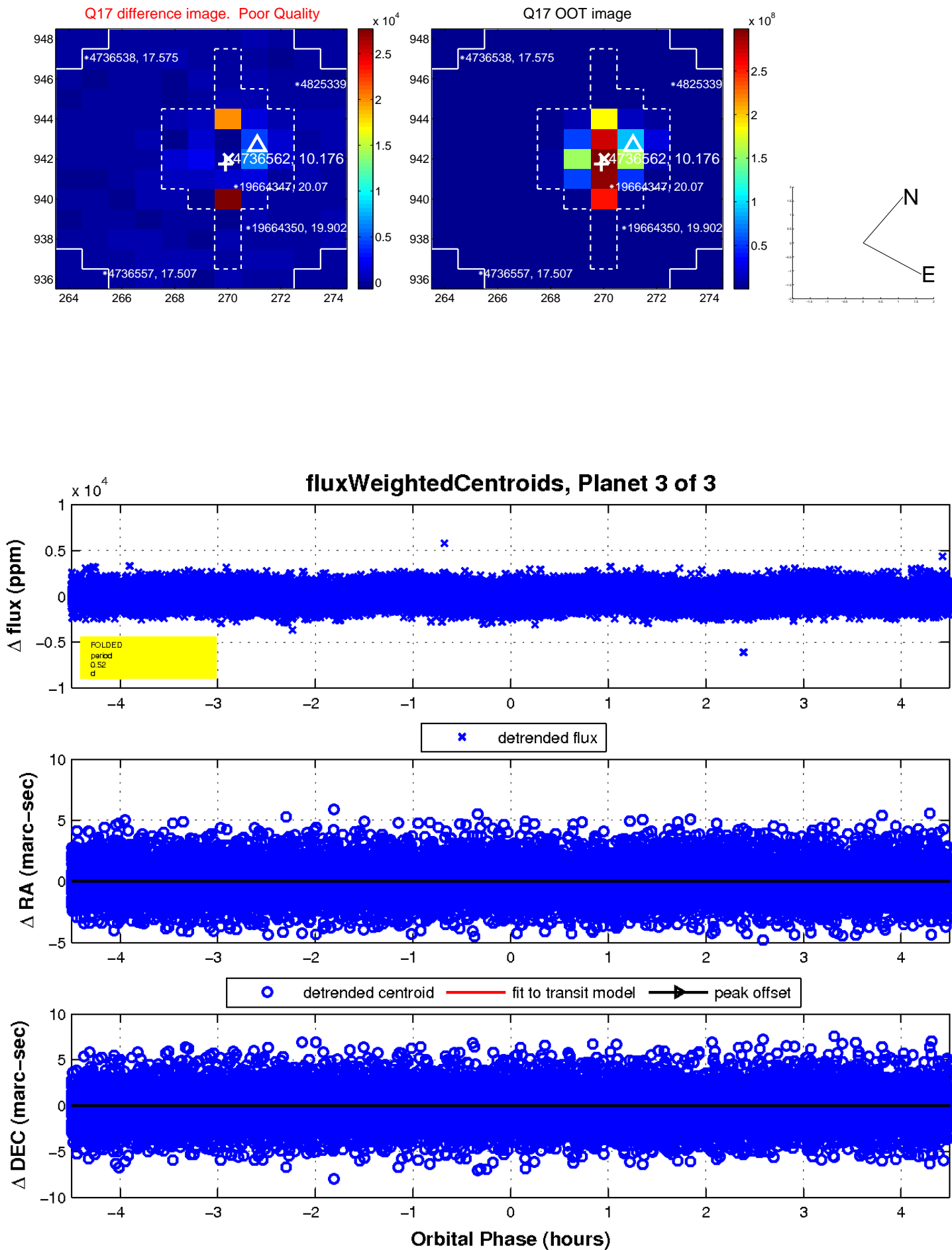
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

