

KIC 003342592

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})
003342592-01	OBS	0402.01	17.177328	136.191834	24453.3	7.684	1431.6	1313.0	0.97	6032	15.33	63.81
003342592-02	OBS	No	17.177230	144.988235	553.1	7.628	32.8	34.6	0.97	6032	2.53	63.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003342592-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
003342592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

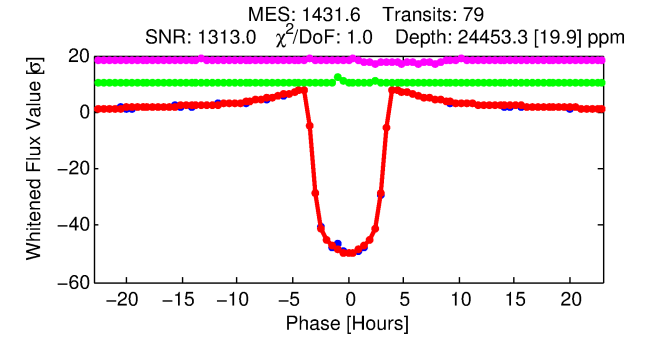
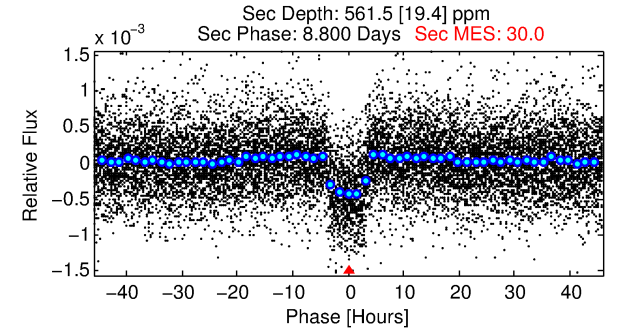
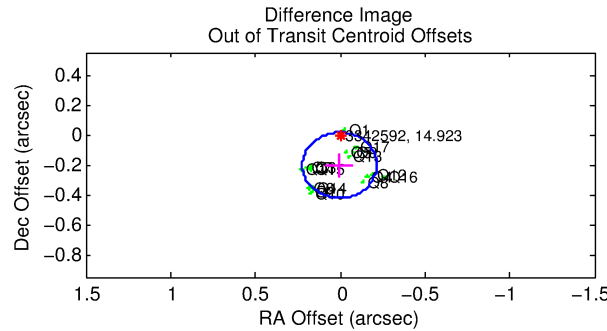
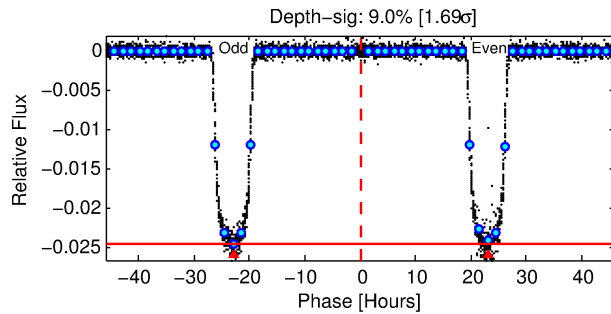
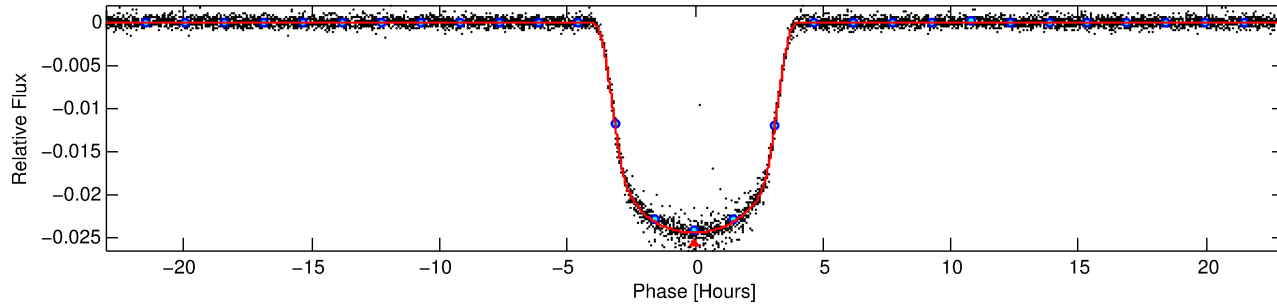
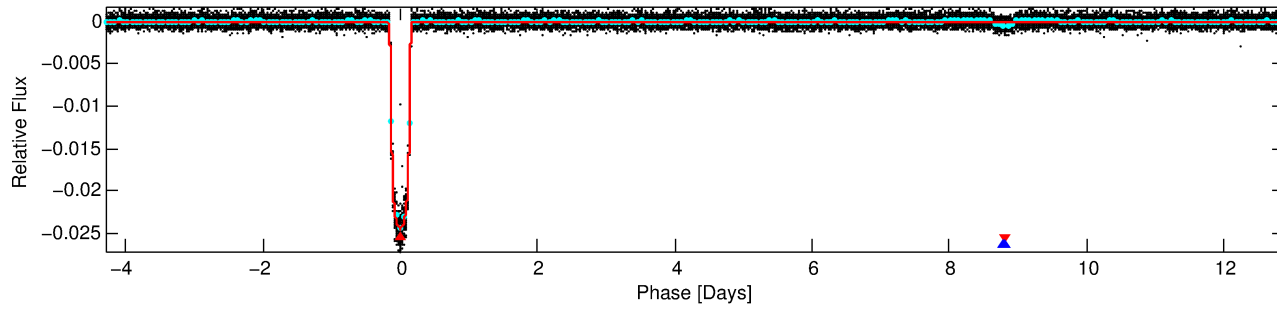
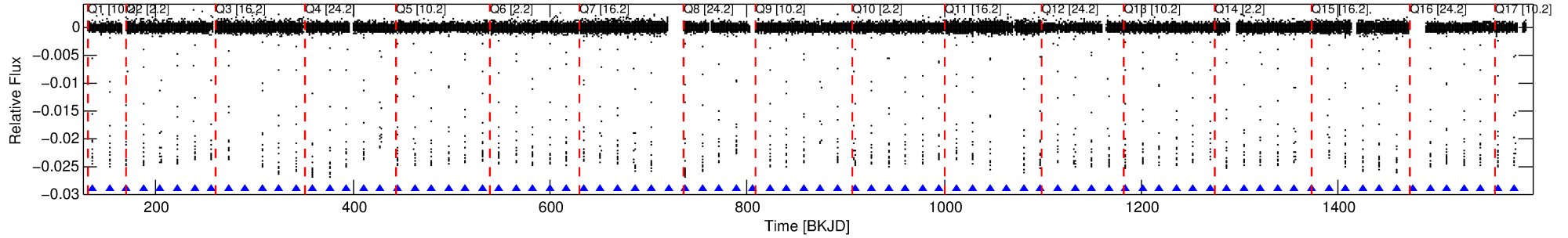
Ephemeris Match Information For 003342592-01

No Significant Match Found

DV One-Page Summary

KIC: 3342592 Candidate: 1 of 2 Period: 17.177 d
KOI: K00402.01 Corr: 0.993

Kp: 14.92 R*: 0.97 Rs Teff: 6032.0 K Logg: 4.49 Fe/H: -0.060



DV Fit Results:

Period = 17.17733 [0.00000] d
Epoch = 136.1918 [0.0001] BKJD
Rp/R* = 0.1444 [0.0001]
a/R* = 18.84 [0.07]
b = 0.31 [0.01]
Seff = 63.81 [26.76]
Teq = 721 [76] K
Rp = 15.33 [4.96] Re
a = 0.1327 [0.0361] AU
Ag = 23.14 [9.19] [2.41σ]
Teffp = 2444 [88] K [14.89σ]

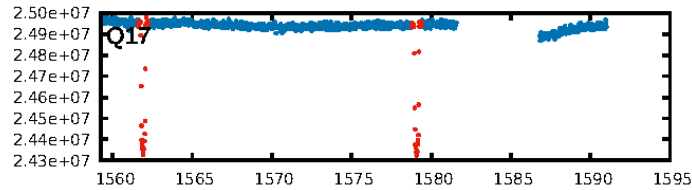
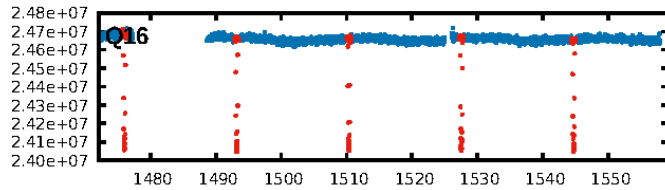
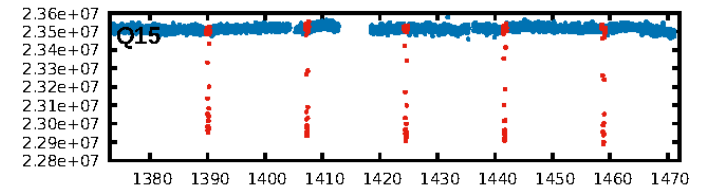
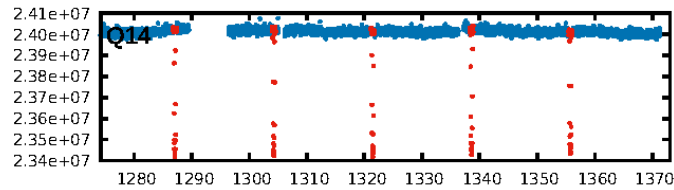
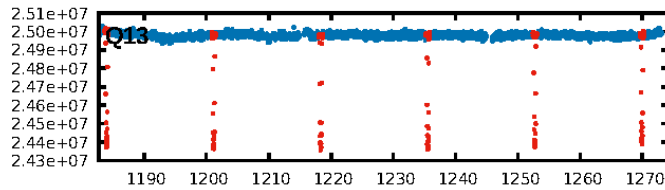
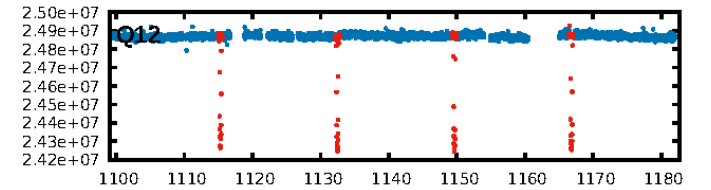
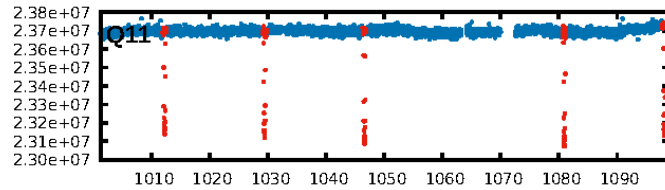
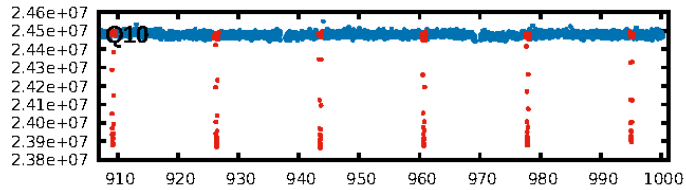
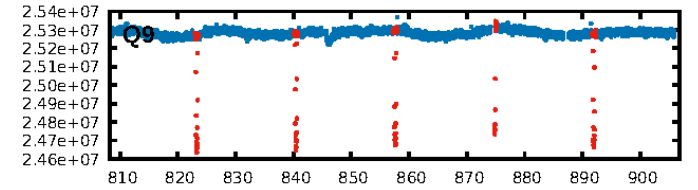
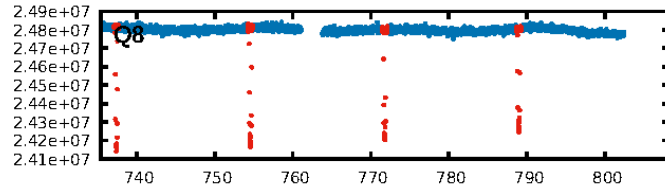
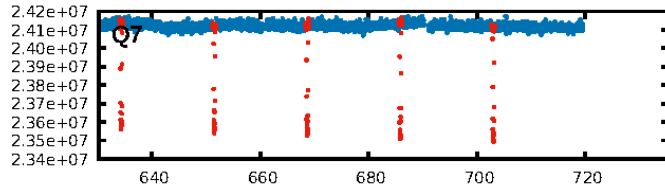
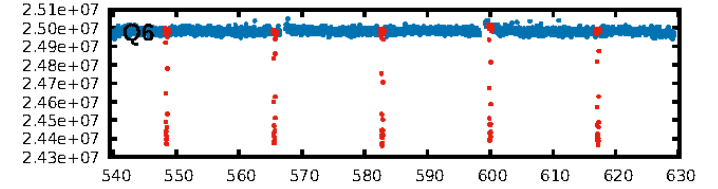
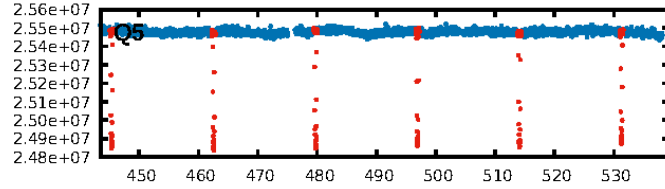
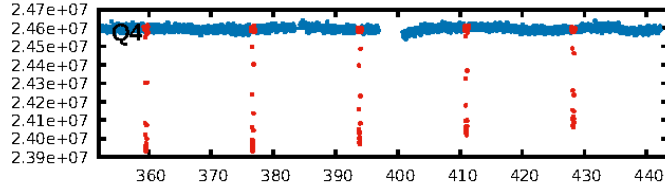
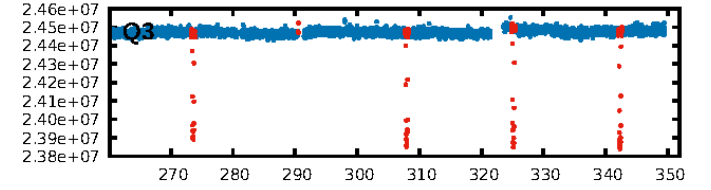
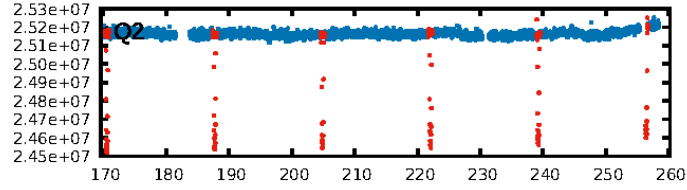
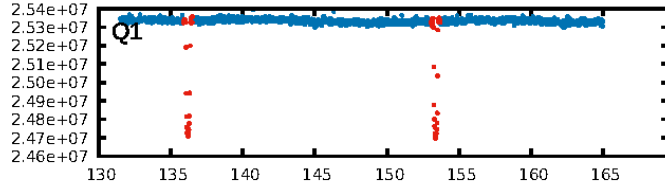
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [75/75]
GhostDiagnostic-chr: 4.279
Centroid-sig: N/A
Centroid-so: 0.391 arcsec [44.59σ]
OotOffset-rm: 0.204 arcsec [2.79σ]
KicOffset-rm: 0.062 arcsec [0.90σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

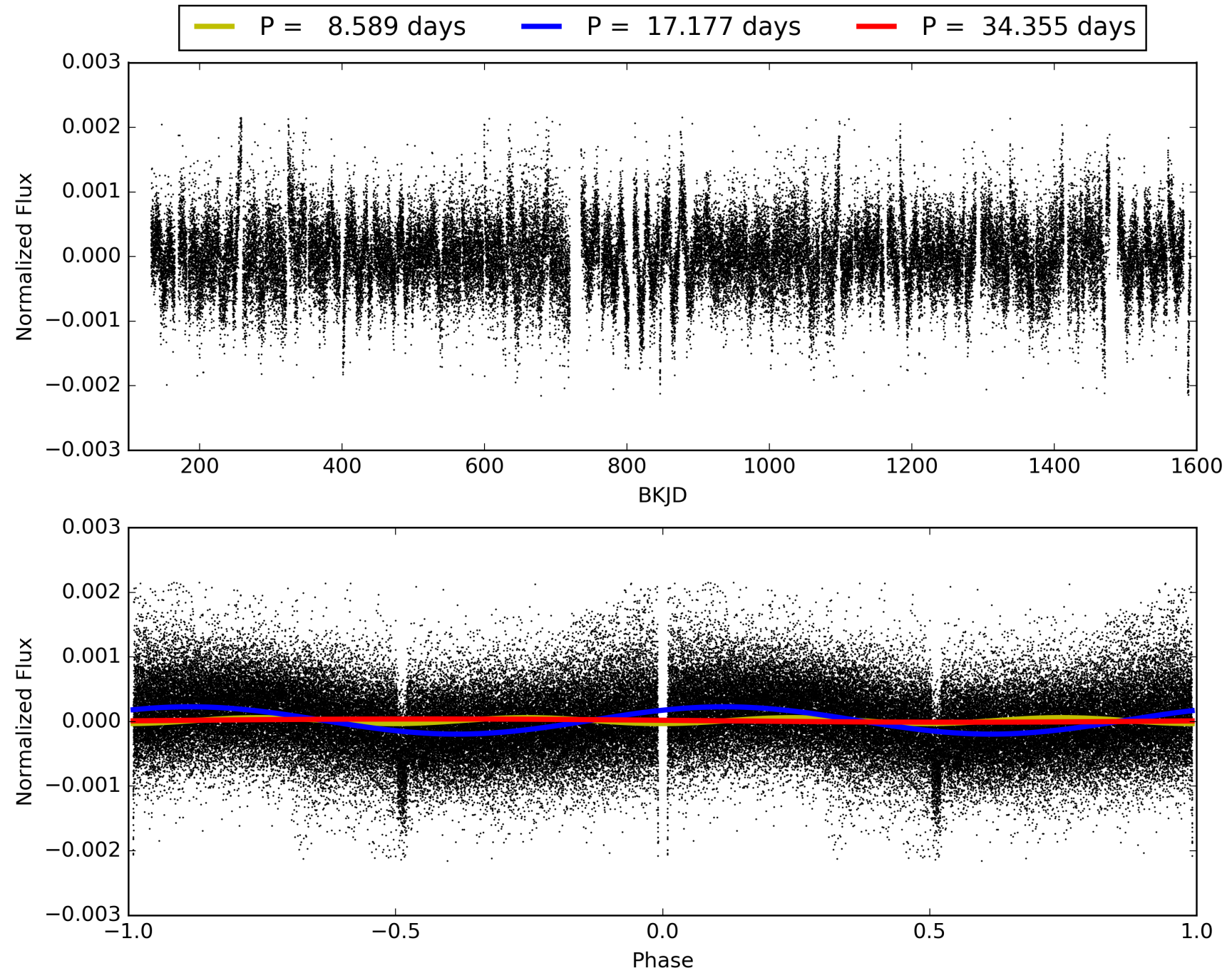
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:28:57 Z

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

TCE 003342592-01, PDC Light Curves

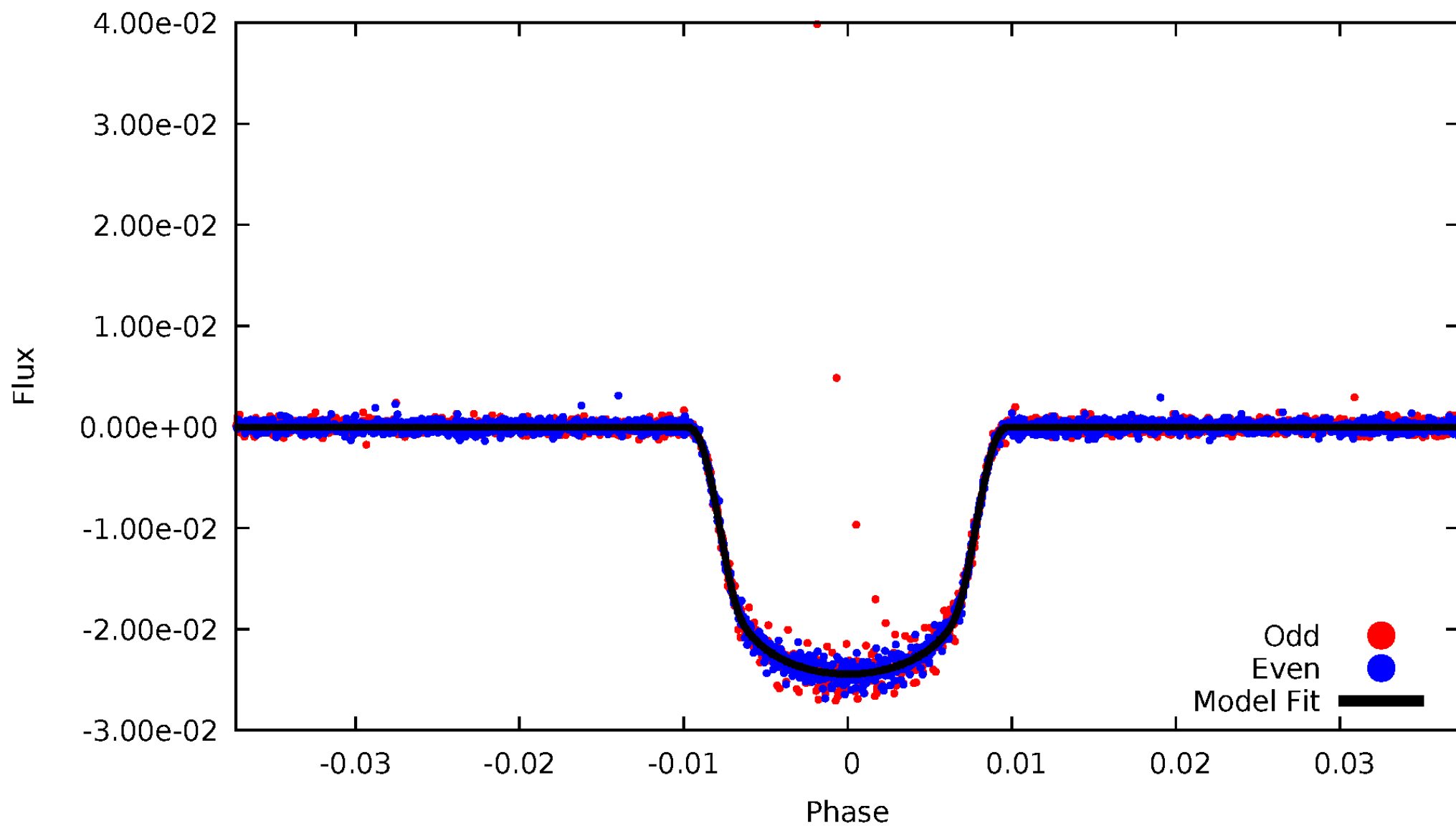


TCE 003342592-01



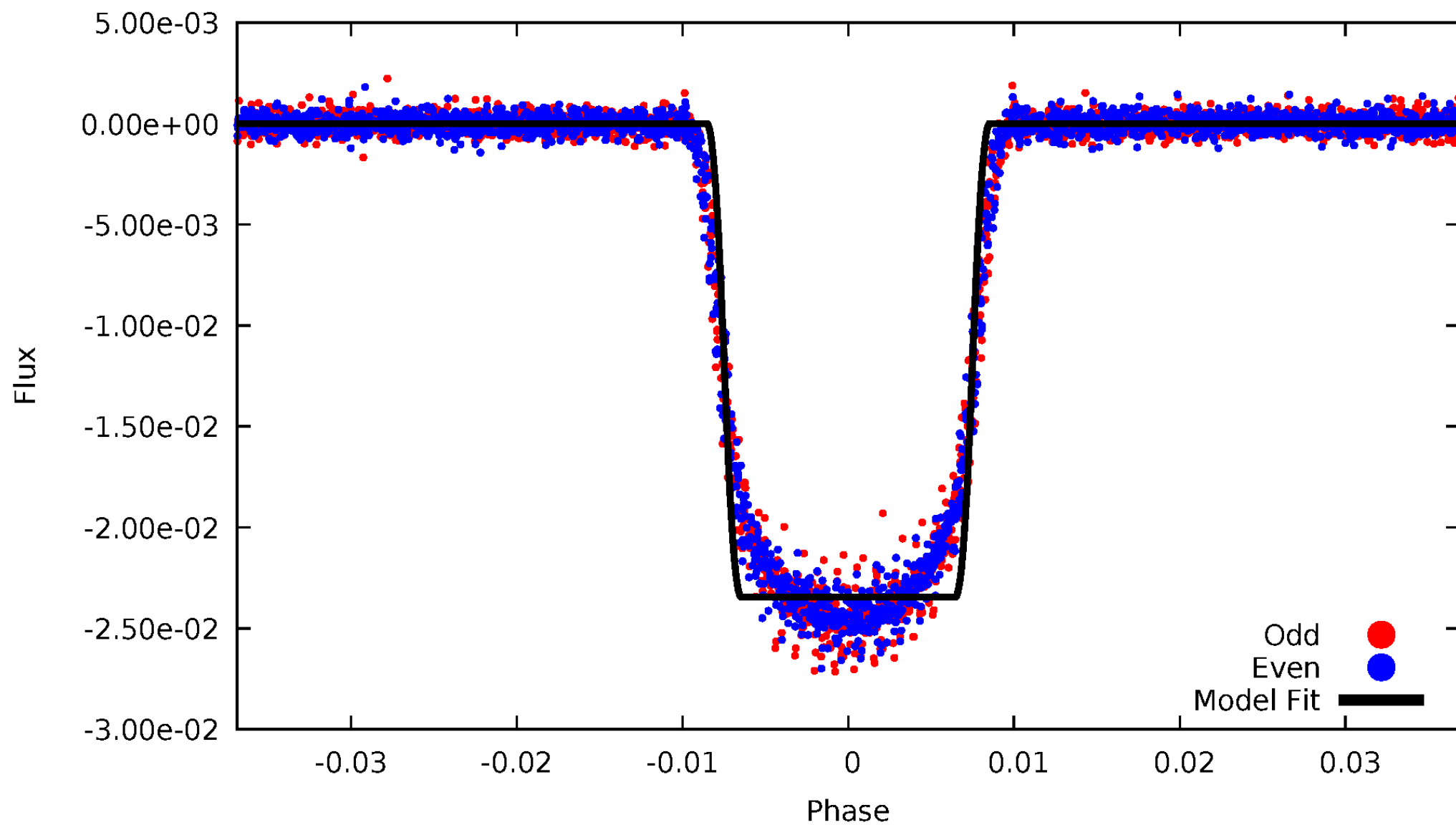
DV Odd/Even

TCE 003342592-01



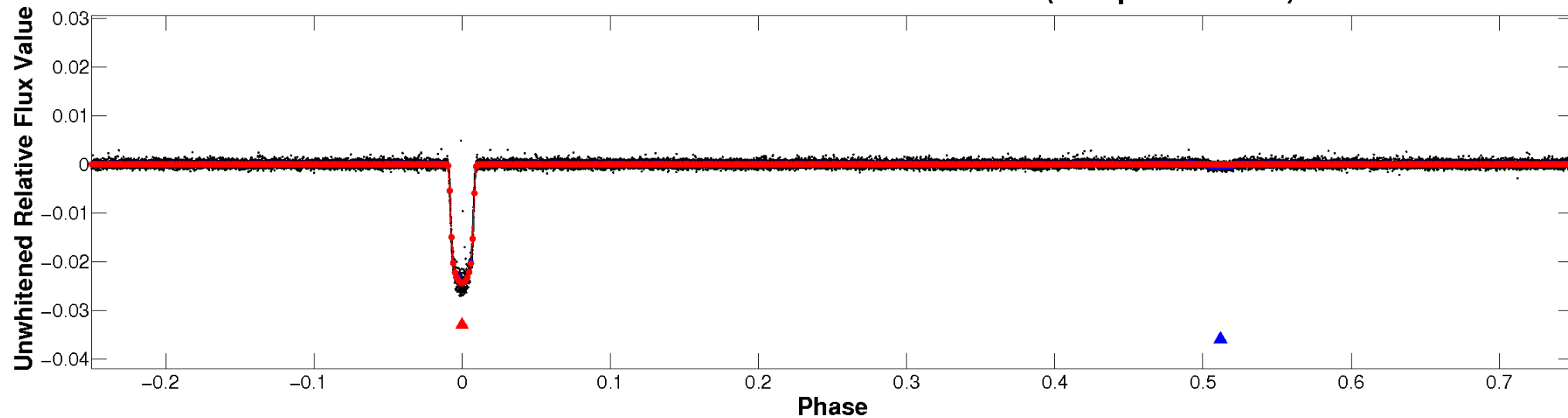
ALT Odd/Even

TCE 003342592-01

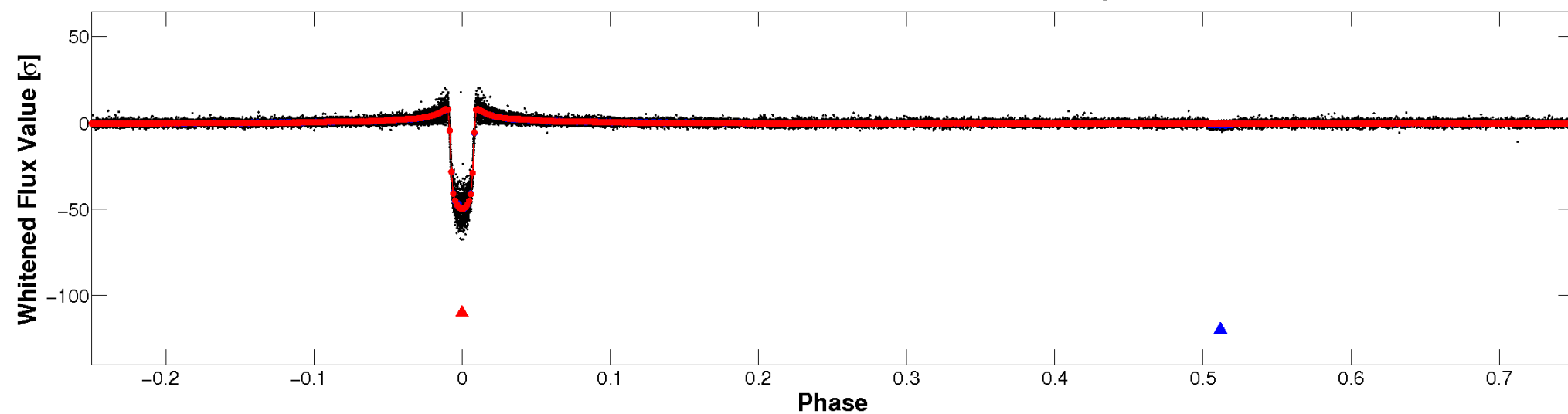


Non-Whitened Vs. Whitened Light Curve

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

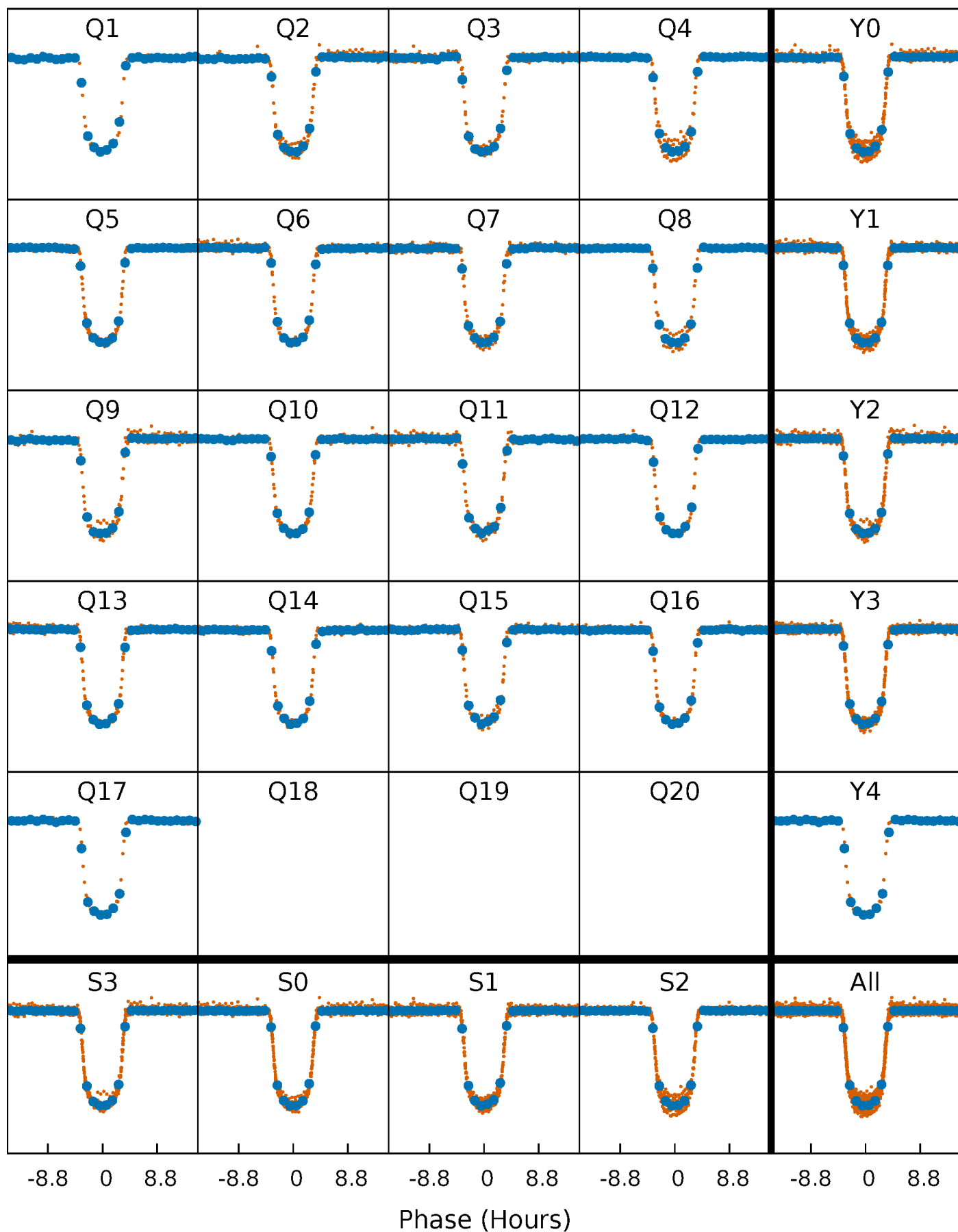


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



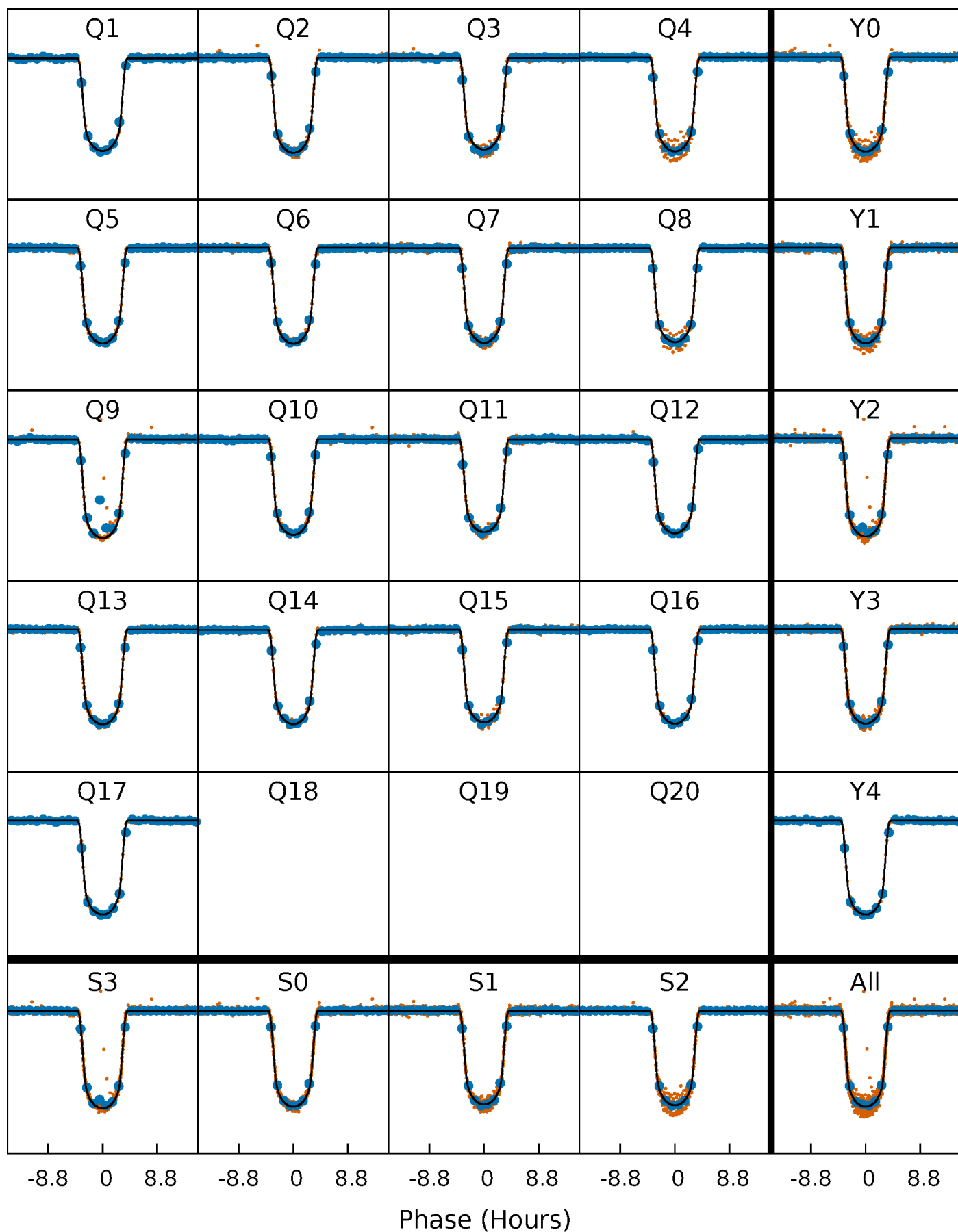
PDC Quarter-Phased Transit Curves

TCE 003342592-01 P= 17.177328 Days $T_0=136.191834$ (BKJD)



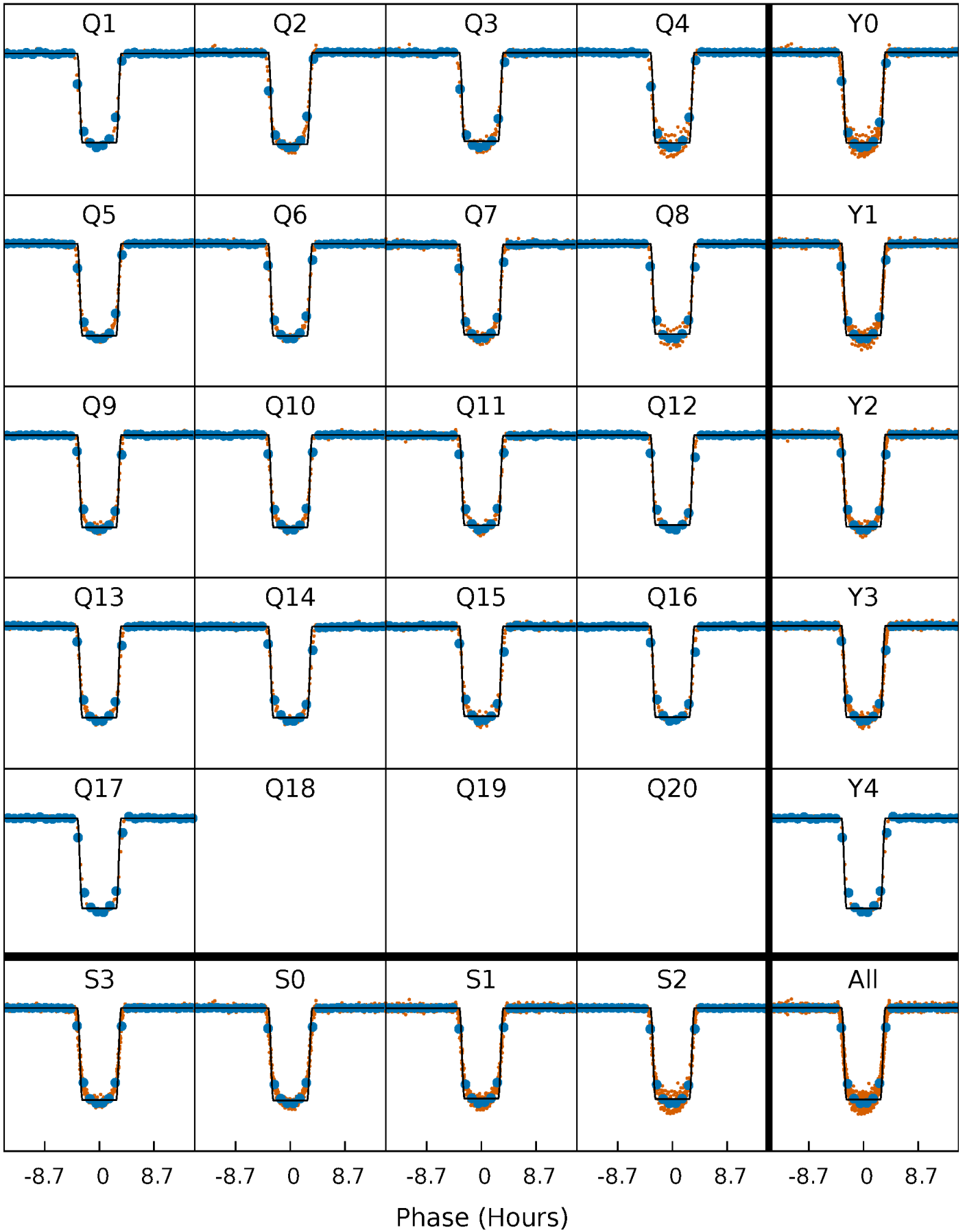
DV Quarter-Phased Transit Curves

TCE 003342592-01 P= 17.177328 Days $T_0=136.191834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

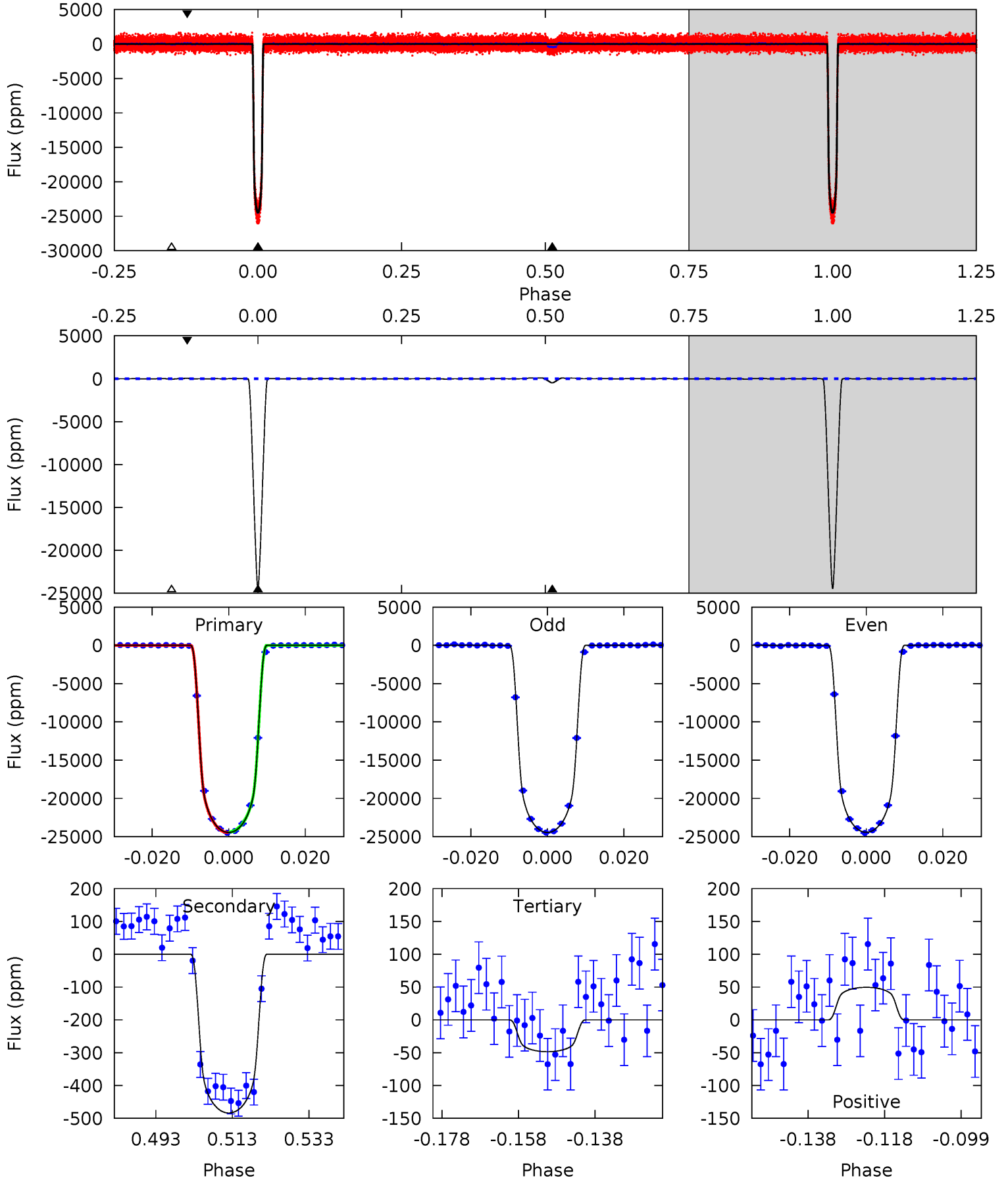
TCE 003342592-01 P= 17.177177 Days $T_0=136.198248$ (BKJD)



DV Model-Shift Uniqueness Test

003342592-01, P = 17.177328 Days, E = 119.014506 Days

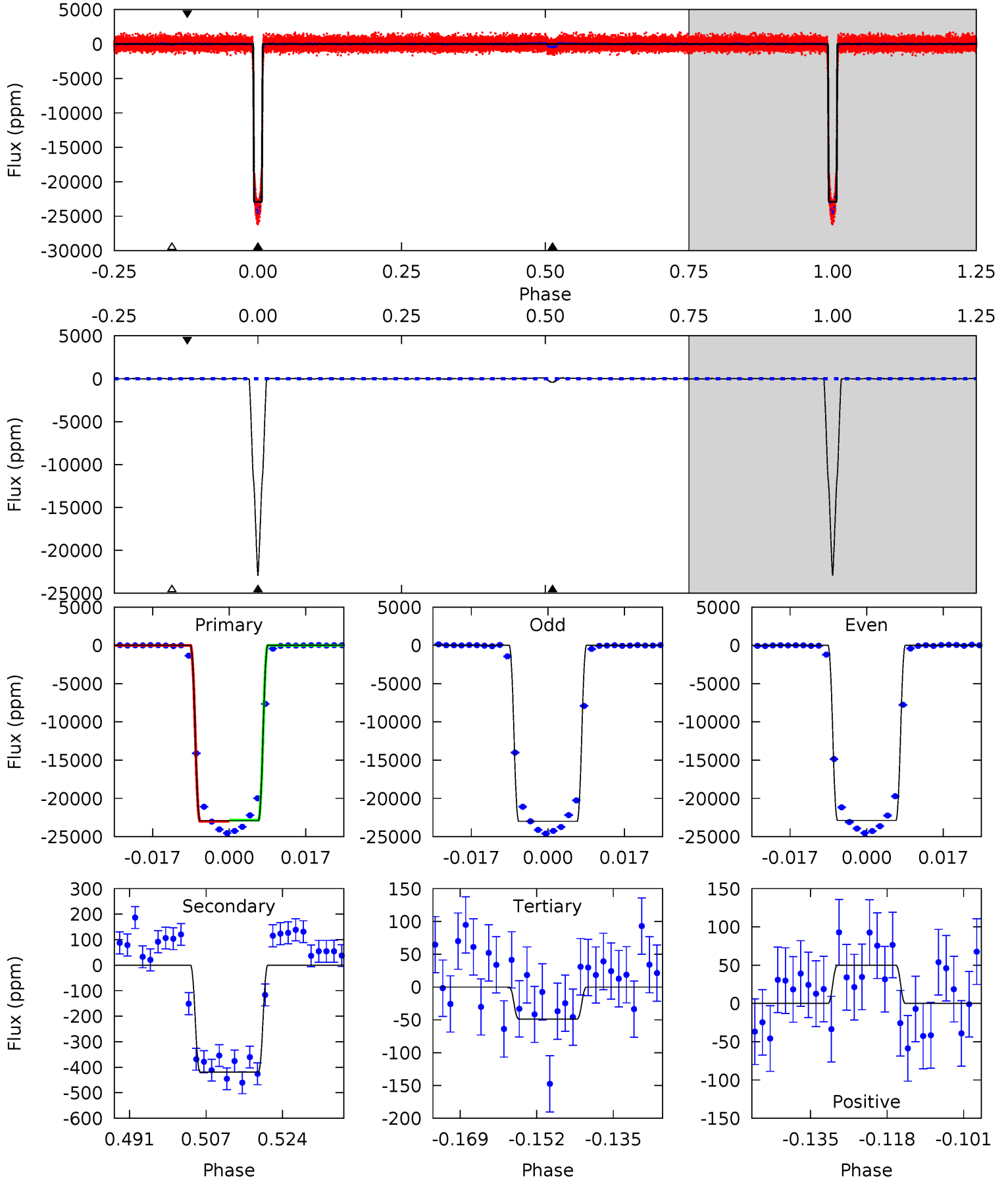
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2105	41.7	4.18	4.27	4.89	2.33	1.88	2101	2101	37.5	37.4	1.16	0.99	0.00	3.84



Alt Model-Shift Uniqueness Test

003342592-01, P = 17.177177 Days, E = 119.021071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1695	31.0	3.60	3.70	4.92	2.39	1.47	1691	1691	27.4	27.3	4.30	1.00	0.00	5.68



Stellar Parameters For KIC 003342592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6032^{+189}_{-210}	$4.485^{+0.054}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$0.973^{+0.315}_{-0.105}$	$1.055^{+0.139}_{-0.139}$	$1.612^{+0.461}_{-0.899}$
	+3%/-3%	+1%/-5%	+417%/-500%	+32%/-11%	+13%/-13%	+29%/-56%
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 003342592-01 / KOI 0402.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-484 ± 12	$15.79^{+2.74}_{-1.28}$	1030^{+74}_{-52}	3009^{+56}_{-64}	18^{+3}_{-5}
Alt.	-419 ± 14	$16.59^{+2.90}_{-1.28}$	1028^{+71}_{-50}	2895^{+56}_{-51}	14^{+2}_{-3}

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

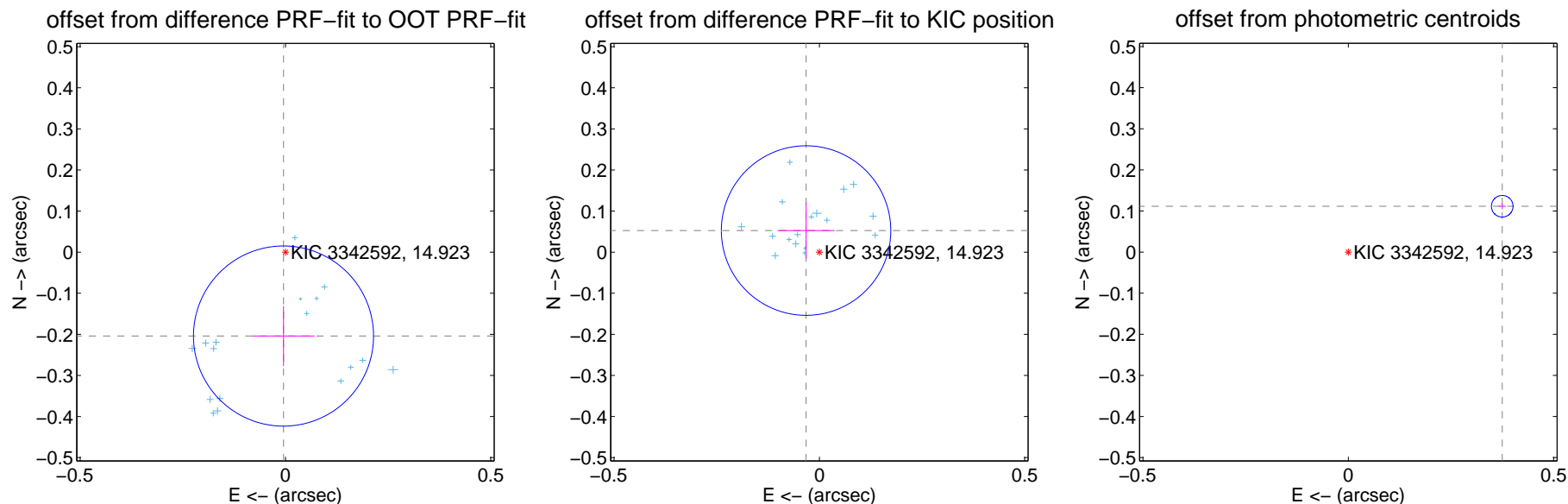
DV Centroid Data

Supplemental centroid analysis for 003342592-01. Kepler magnitude: 14.92. Transit SNR 1312.98

There are 17 quarters with good PRF difference image offsets

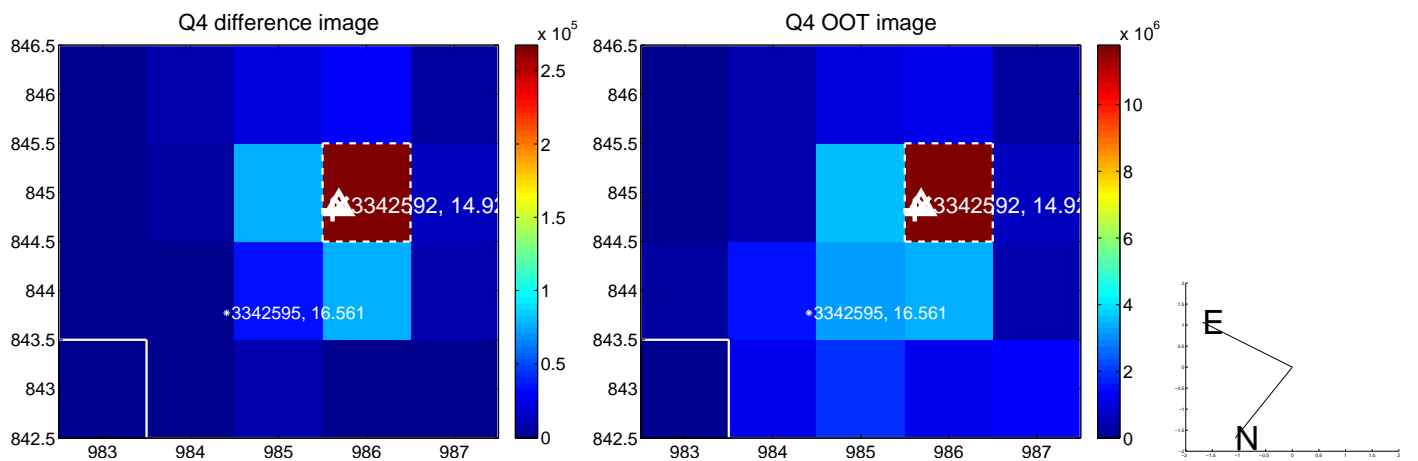
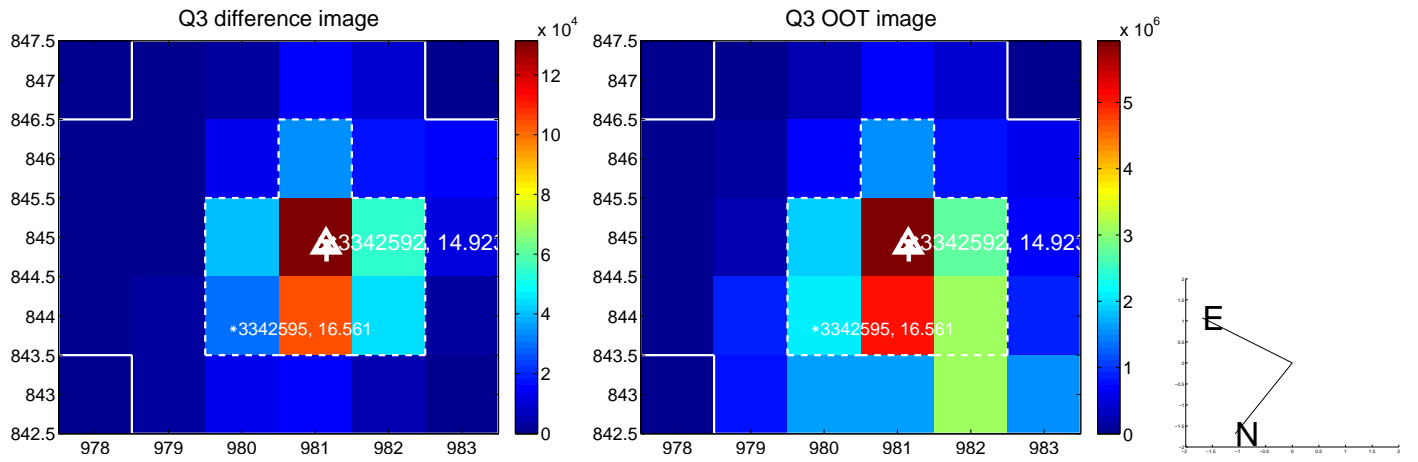
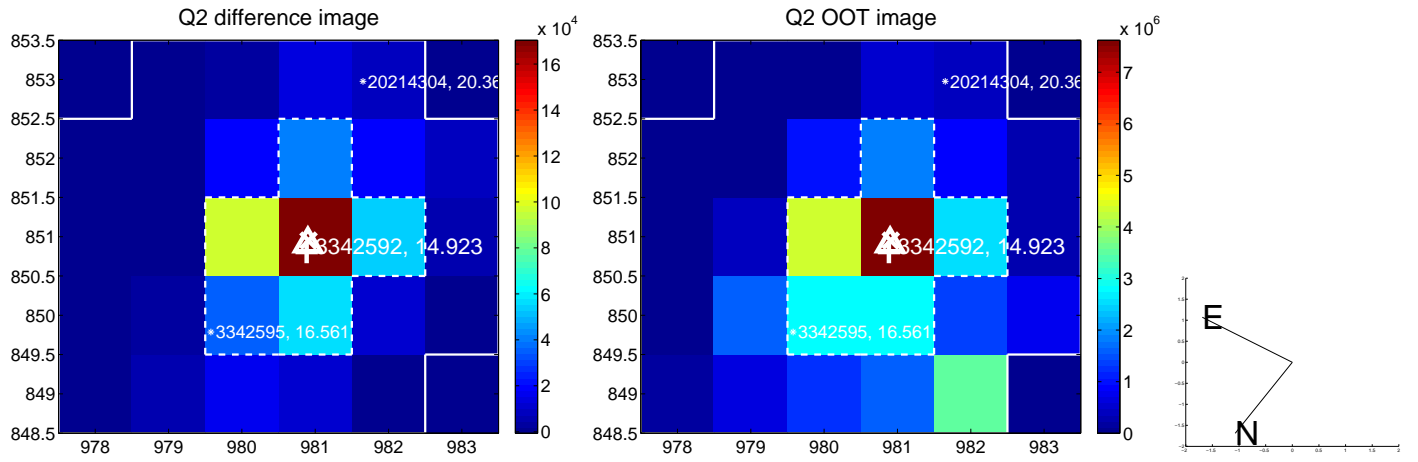
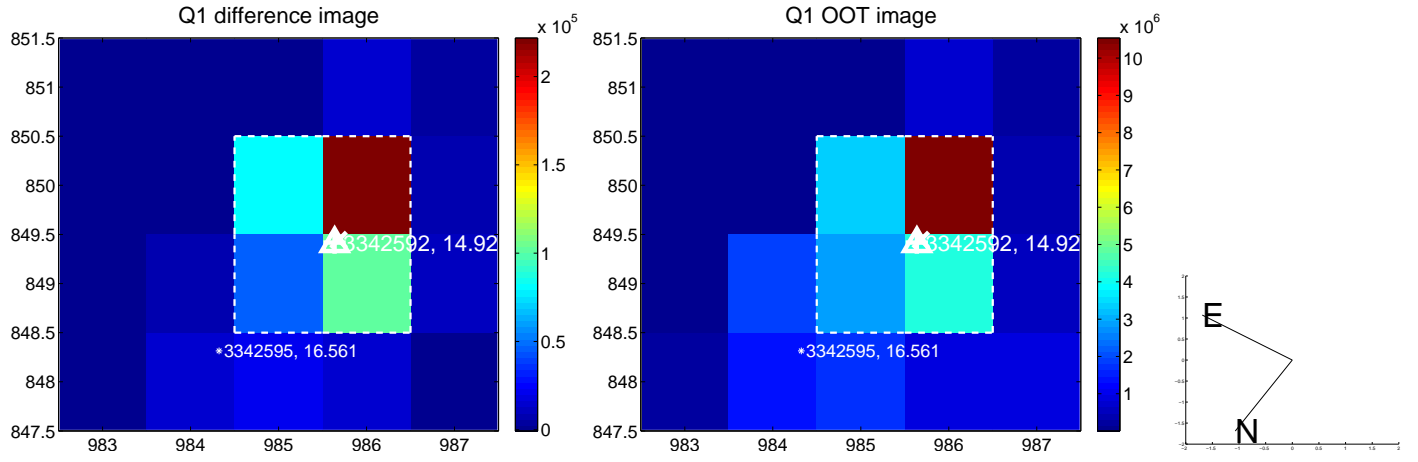
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.204 ± 0.073	2.79	0.005 ± 0.076	-0.204 ± 0.073
PRF-fit source offset from KIC position	0.062 ± 0.069	0.90	0.032 ± 0.069	0.053 ± 0.068
photometric centroid source offset	0.39 ± 0.01	44.59	-0.37 ± 0.01	0.11 ± 0.01

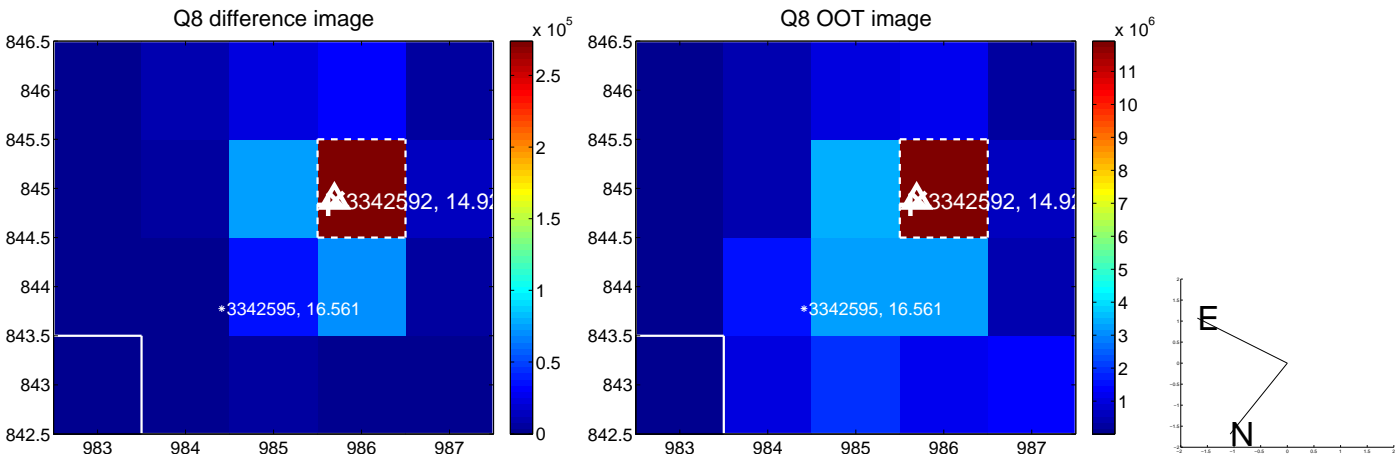
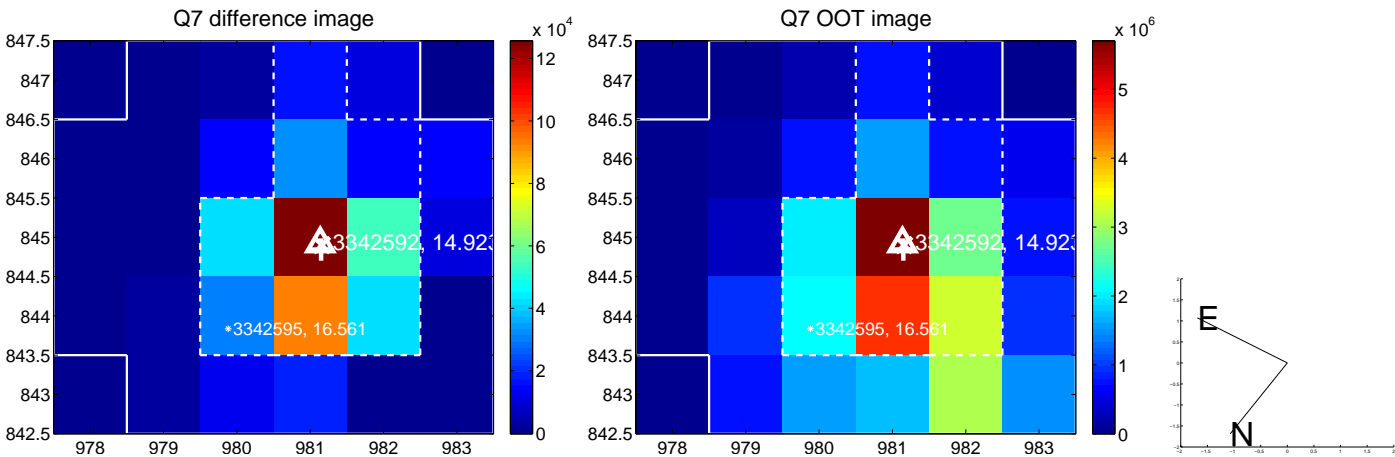
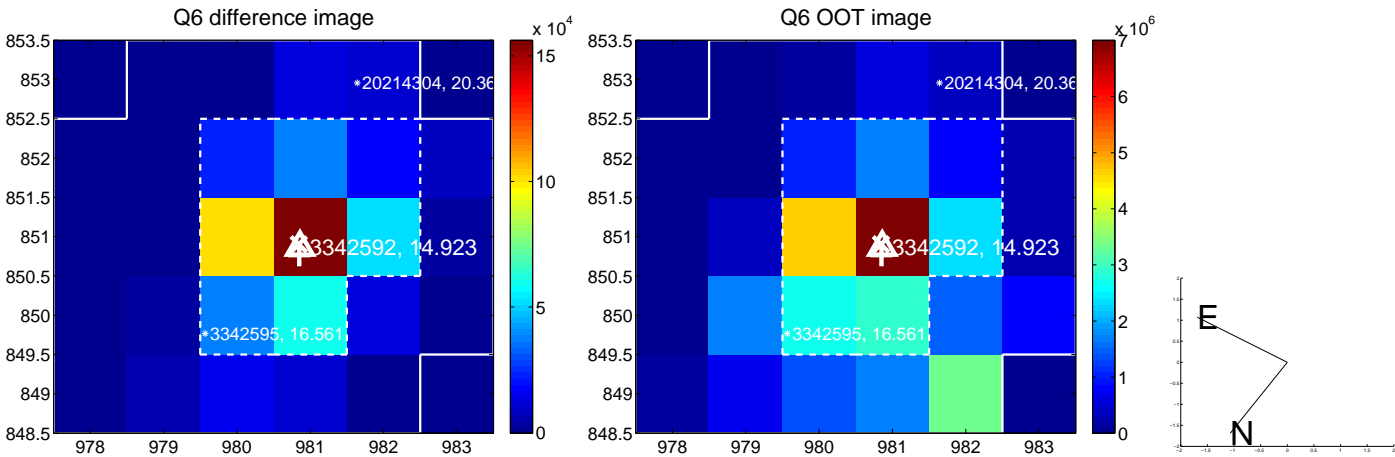
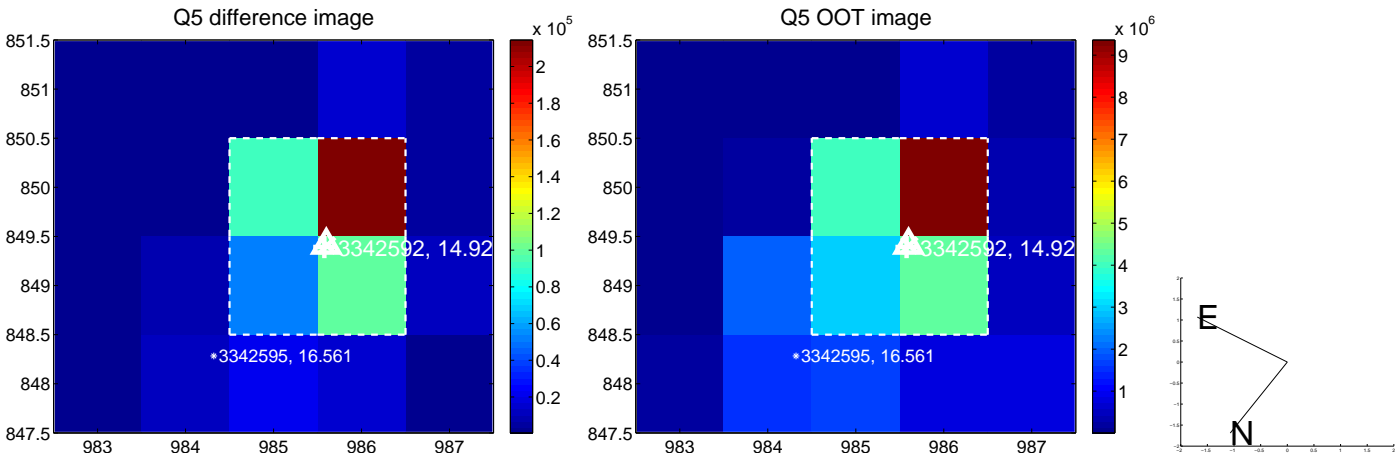


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

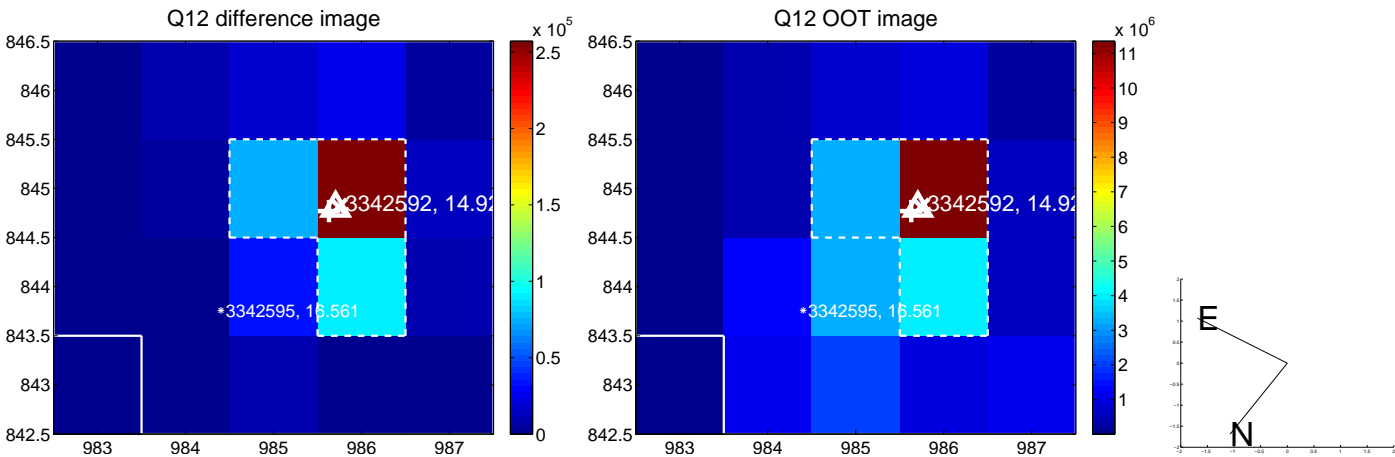
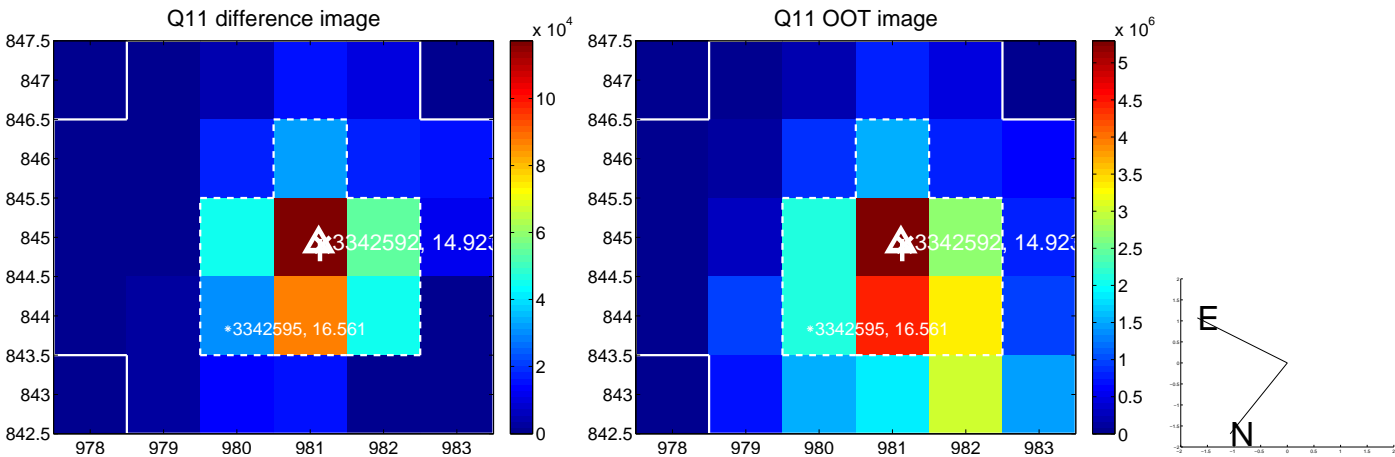
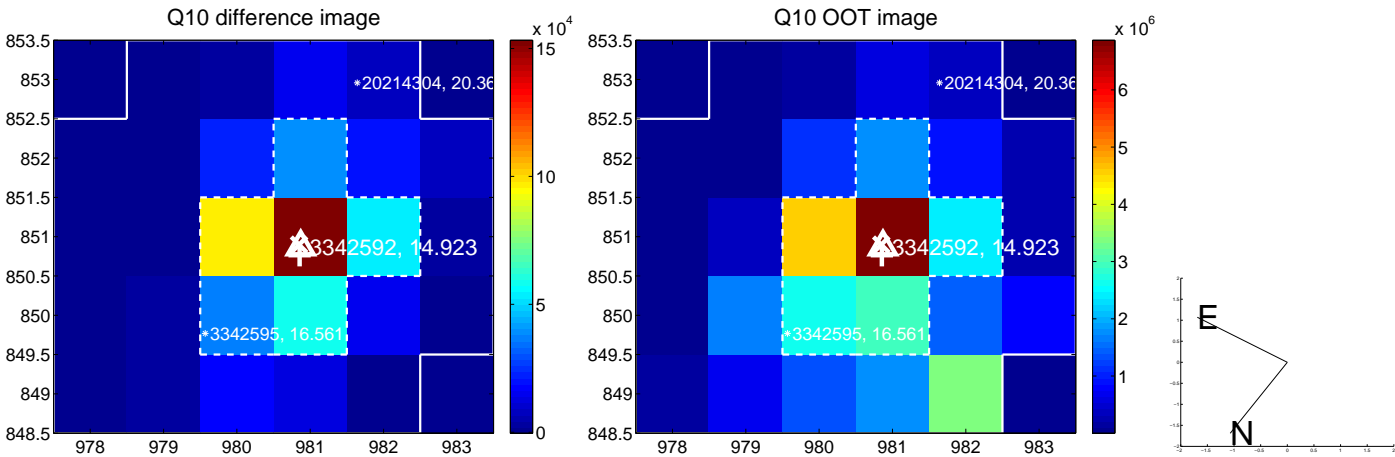
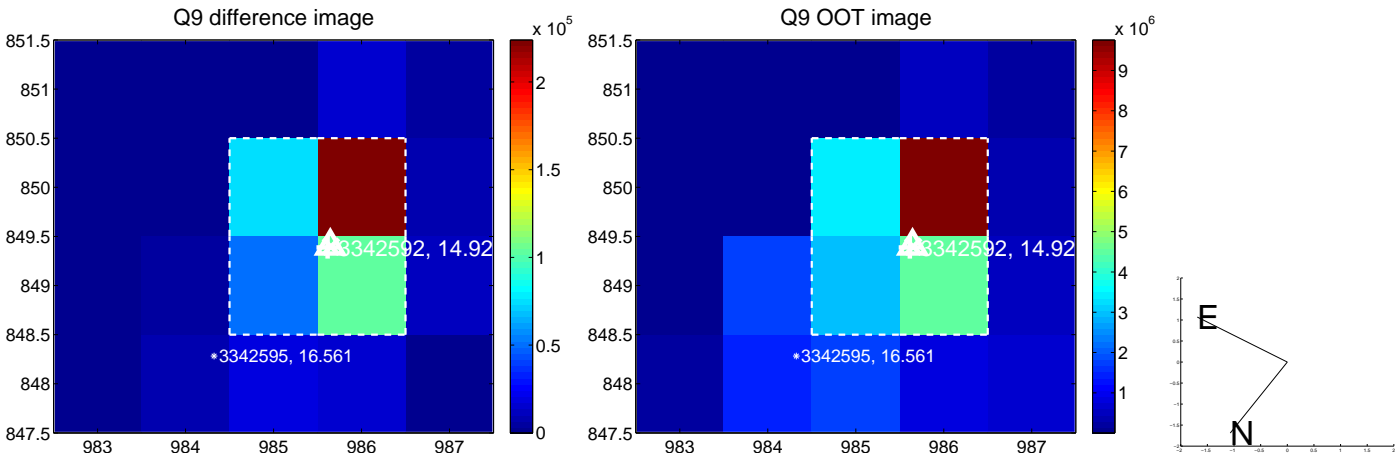
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



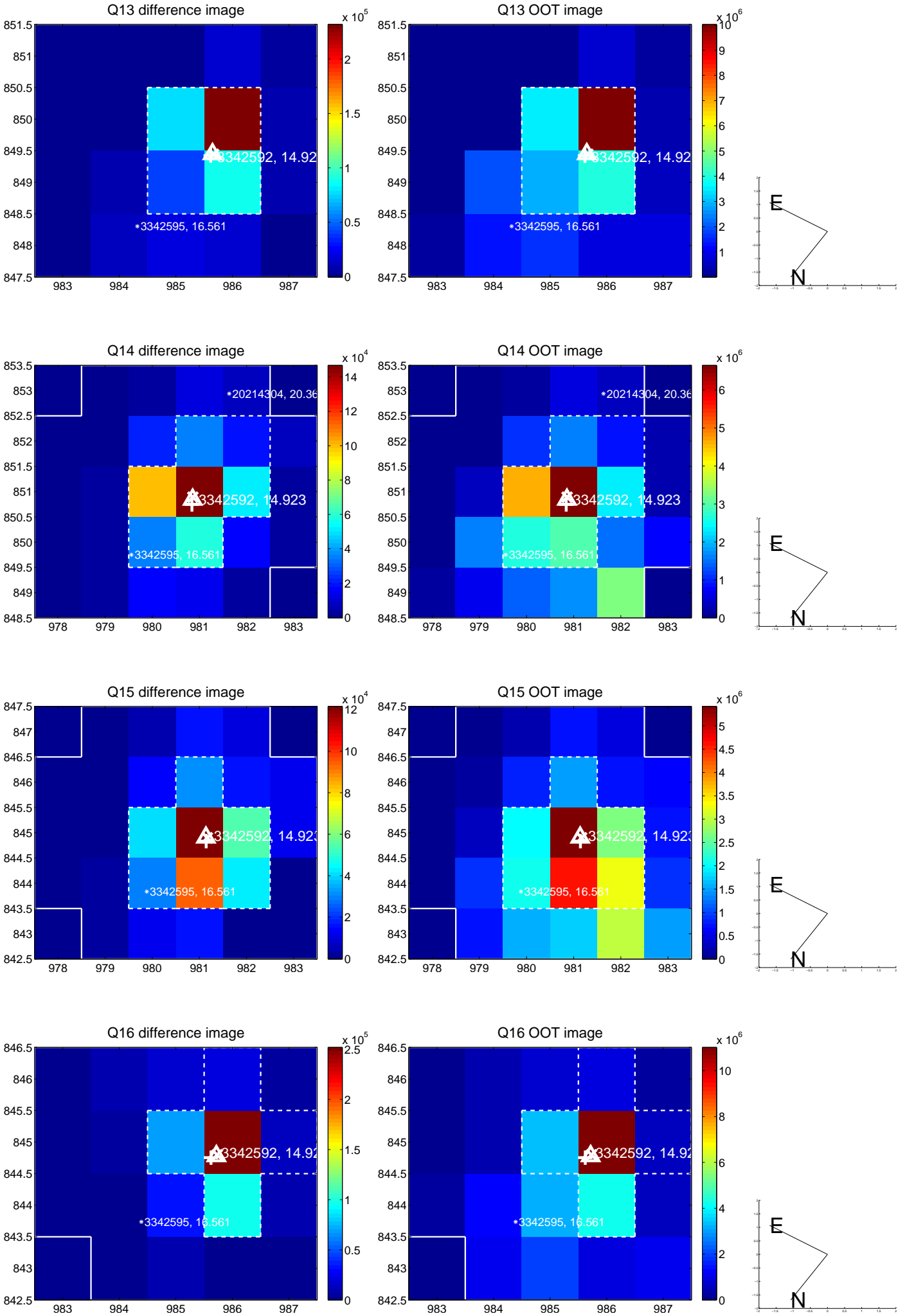
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



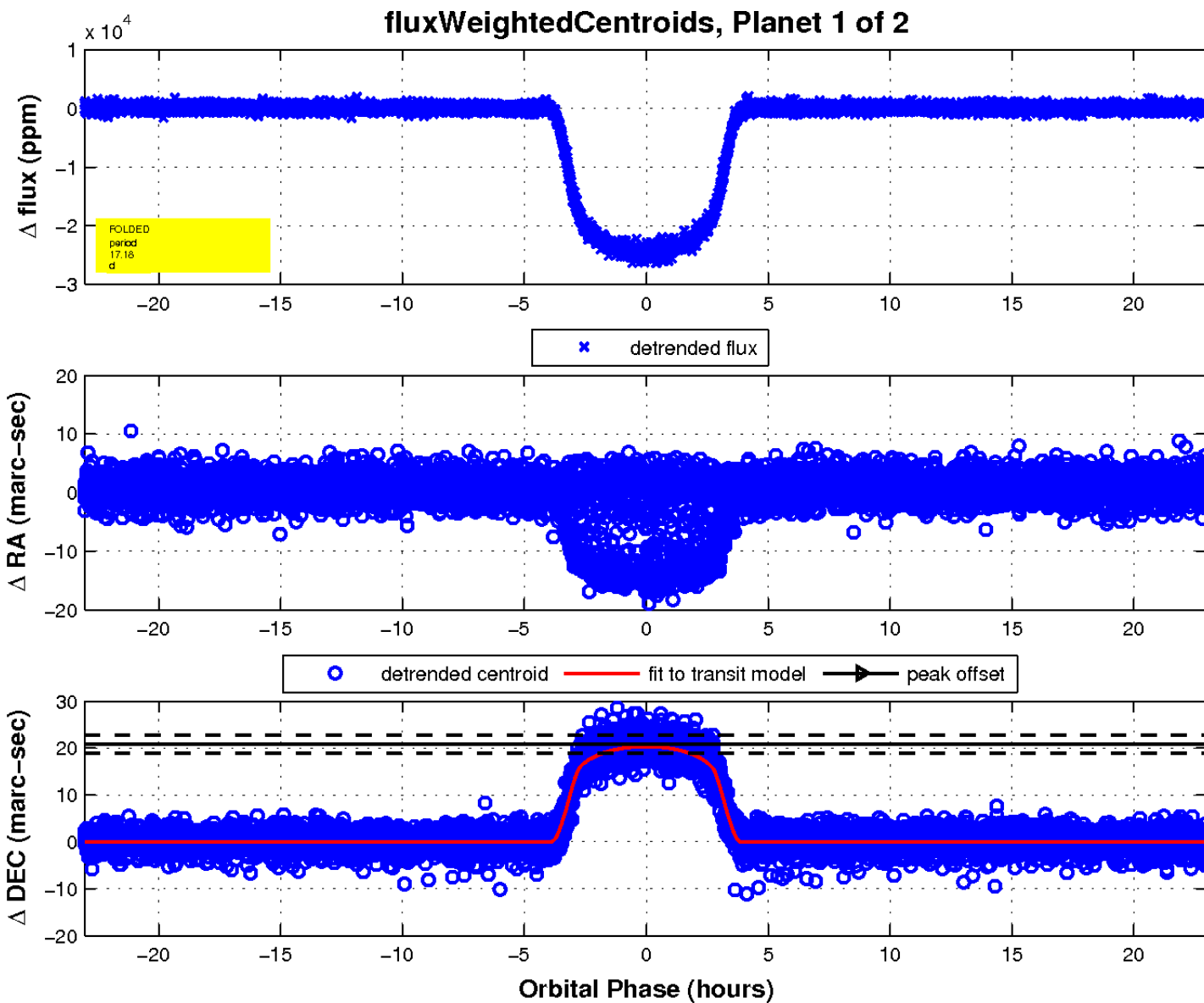
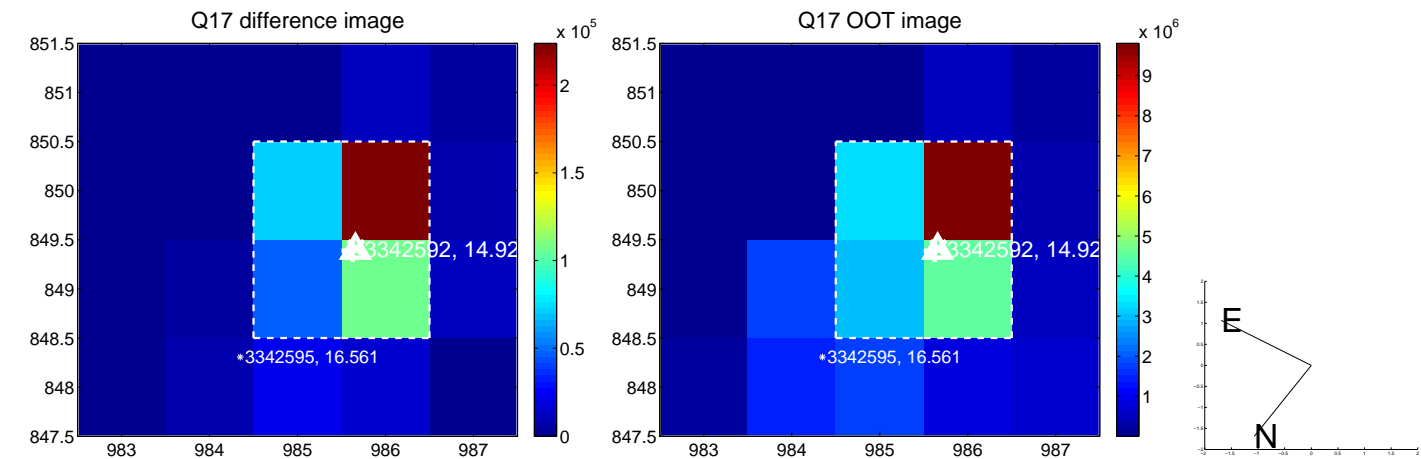
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



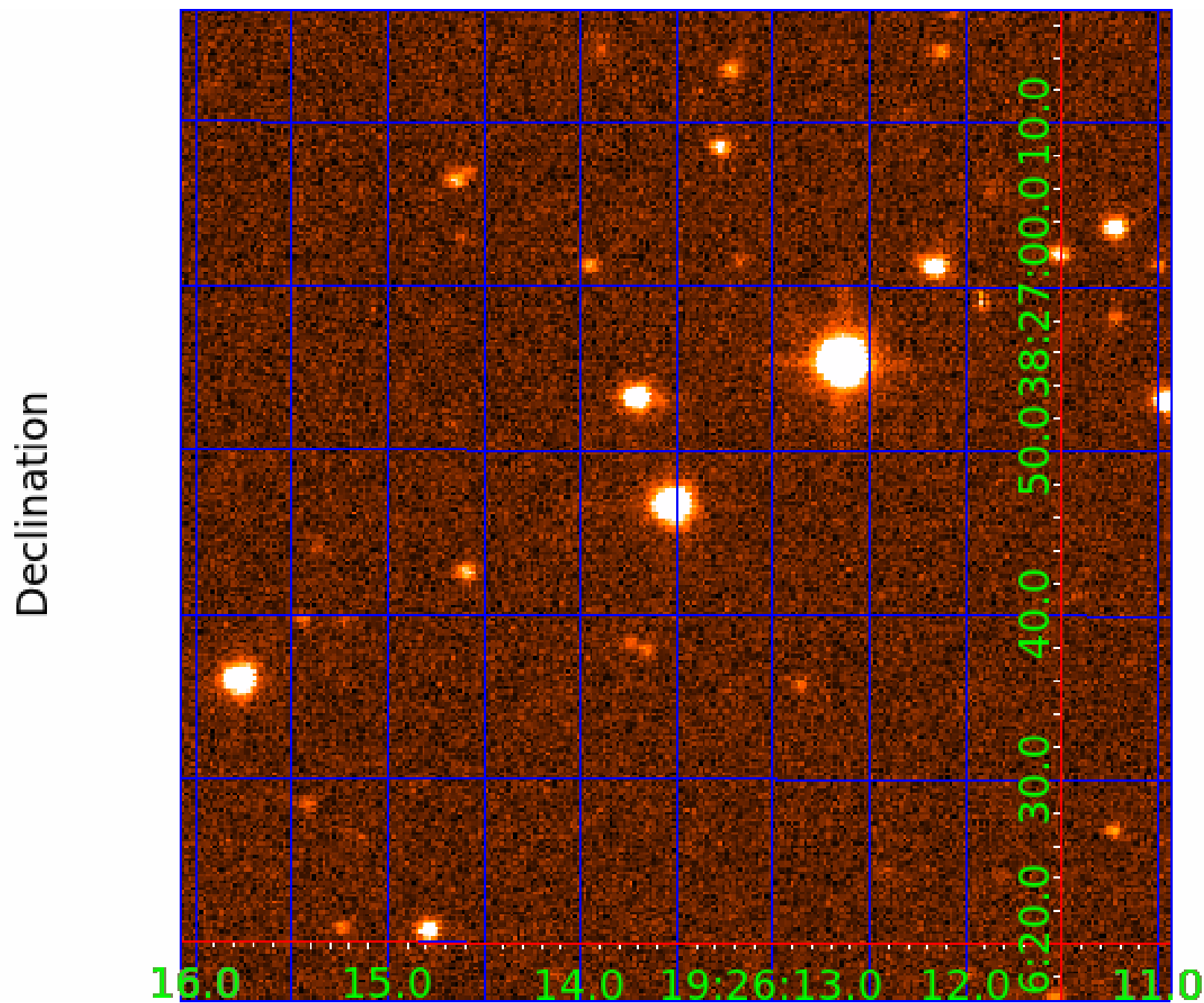
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003342592

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})
003342592-01	OBS	0402.01	17.177328	136.191834	24453.3	7.684	1431.6	1313.0	0.97	6032	15.33	63.81
003342592-02	OBS	No	17.177230	144.988235	553.1	7.628	32.8	34.6	0.97	6032	2.53	63.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003342592-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
003342592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

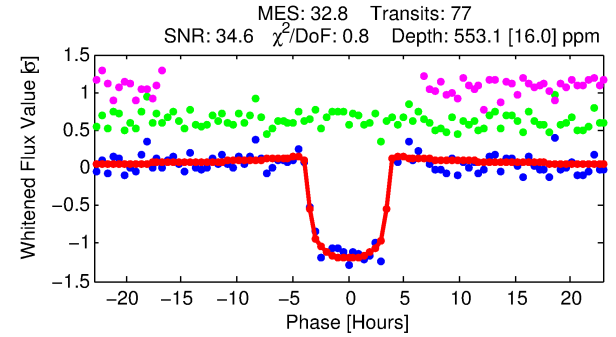
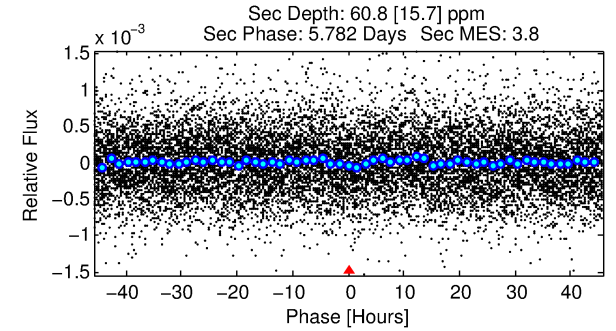
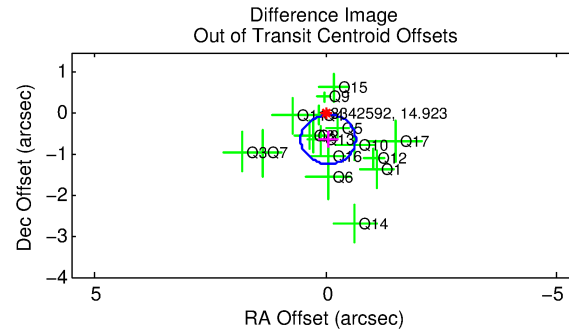
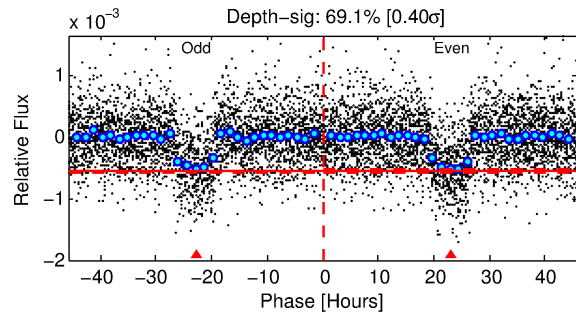
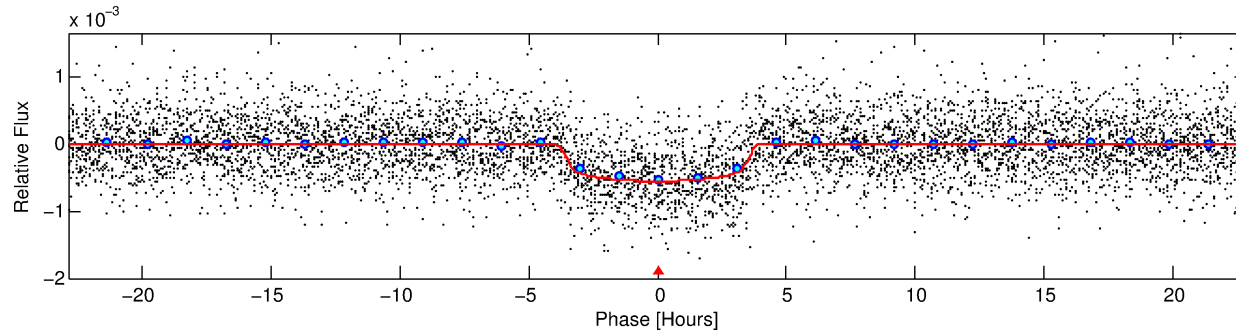
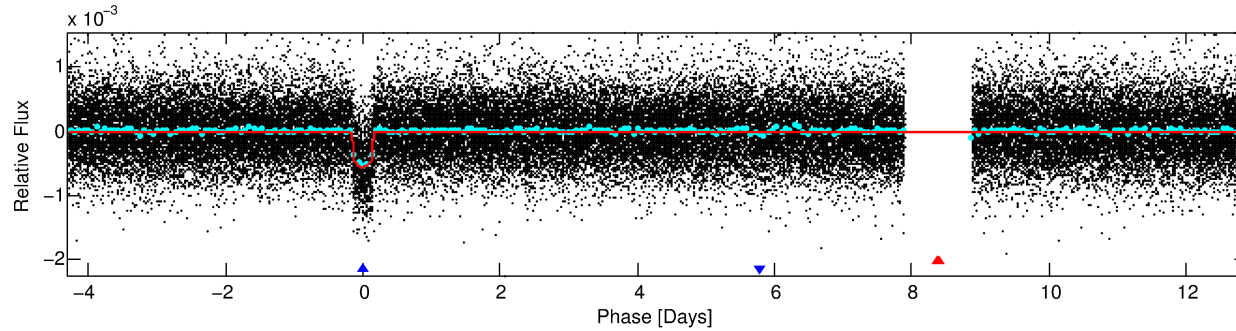
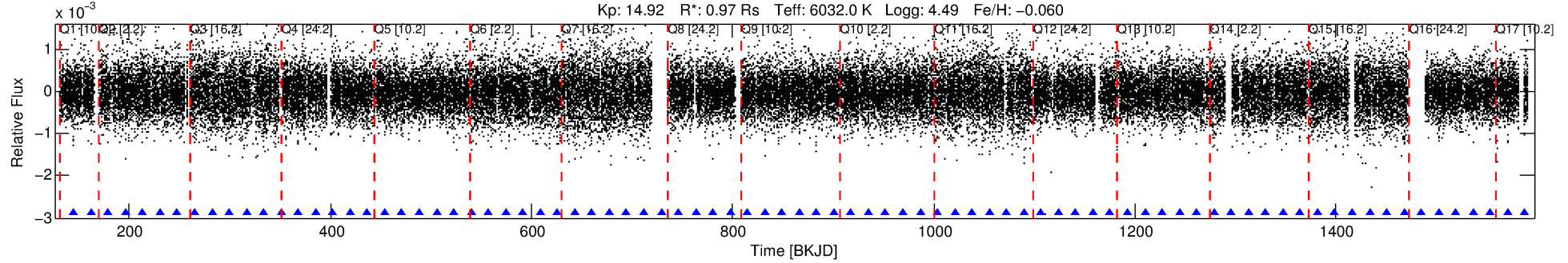
Ephemeris Match Information For 003342592-02

No Significant Match Found

DV One-Page Summary

KIC: 3342592 Candidate: 2 of 2 Period: 17.177 d
KOI: K00402 Corr: No Ephemeris Match

Kp: 14.92 R*: 0.97 Rs Teff: 6032.0 K Logg: 4.49 Fe/H: -0.060



DV Fit Results:

Period = 17.17723 [0.00008] d
Epoch = 144.9882 [0.0038] BKJD
Rp/R* = 0.0238 [0.0020]
a/R* = 11.09 [4.50]
b = 0.80 [0.19]
Seff = 63.81 [26.76]
Teq = 721 [76] K
Rp = 2.53 [0.85] Re
a = 0.1327 [0.0361] AU
Ag = 91.97 [46.25] [1.97σ]
Teffp = 3451 [294] K [9.00σ]

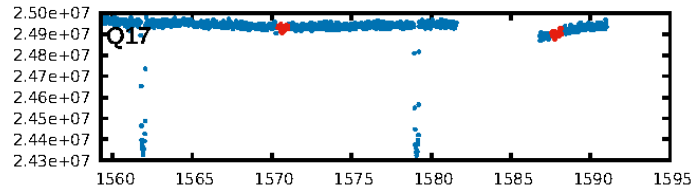
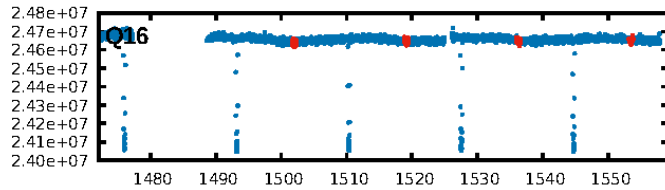
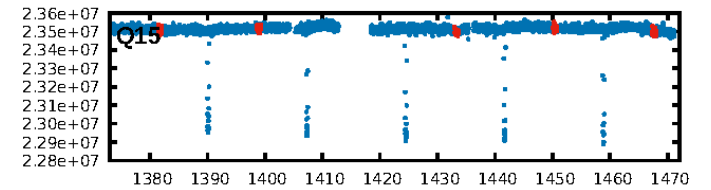
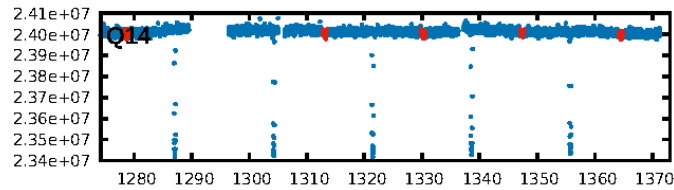
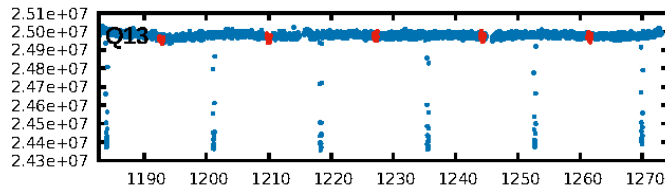
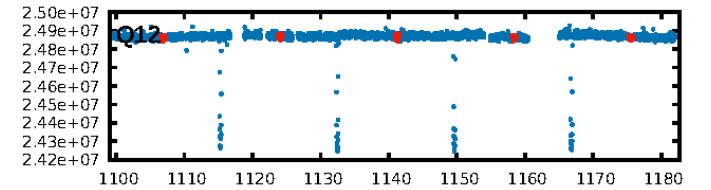
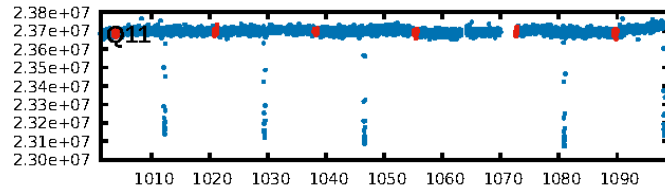
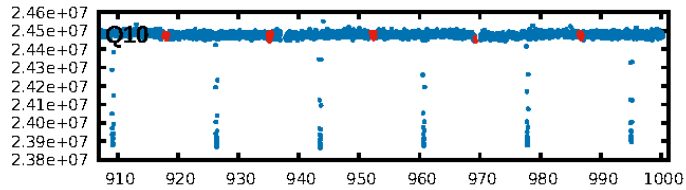
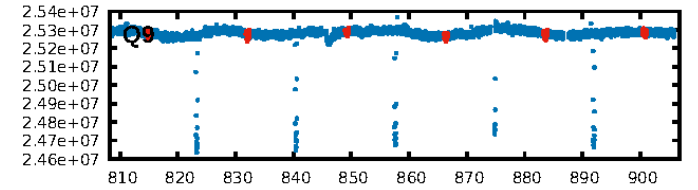
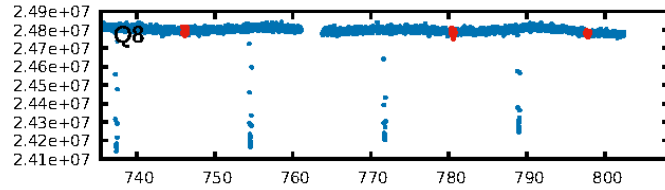
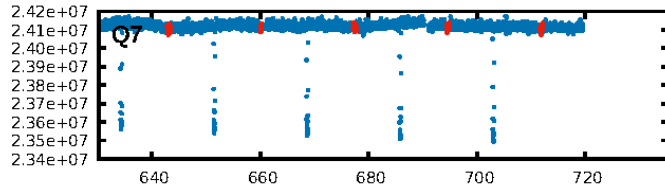
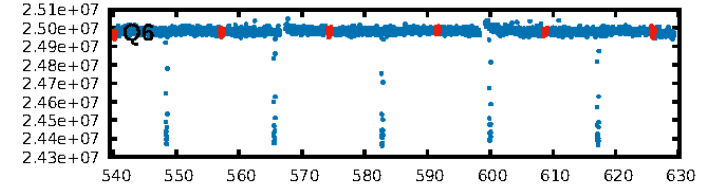
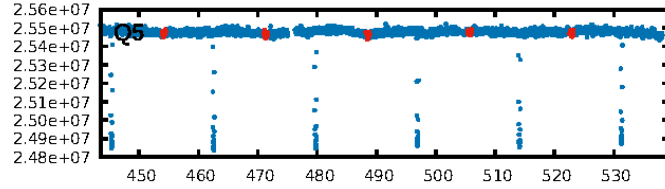
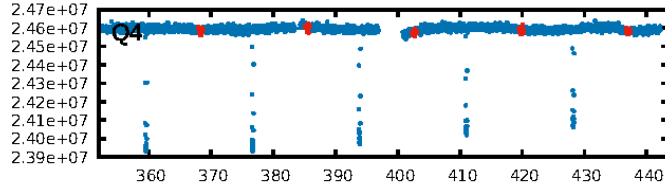
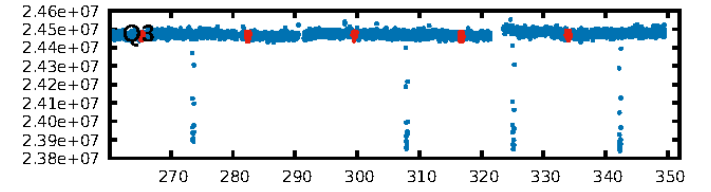
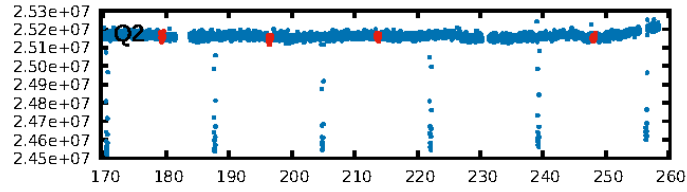
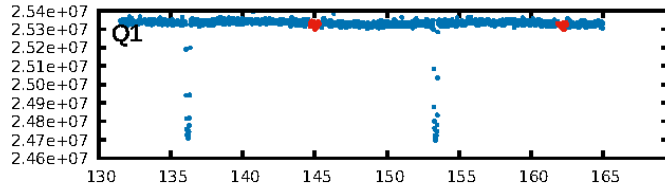
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 98.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.59e-226
RollingBand-fgt: 1.00 [73/73]
GhostDiagnostic-chr: 5.163
Centroid-sig: N/A
Centroid-so: 0.563 arcsec [1.78σ]
OotOffset-rm: 0.634 arcsec [3.18σ]
KicOffset-rm: 0.369 arcsec [2.10σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

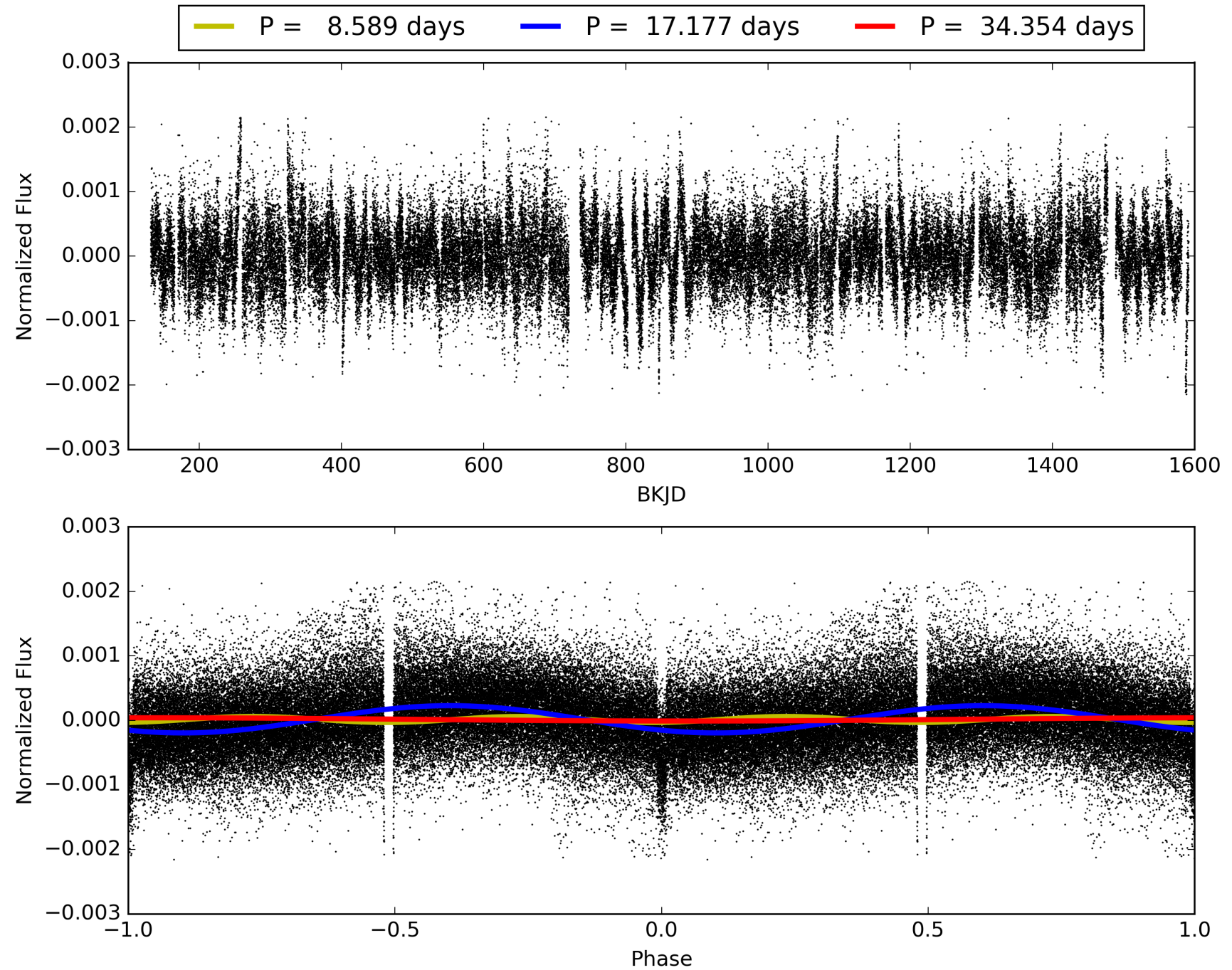
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:29:03 Z

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

TCE 003342592-02, PDC Light Curves

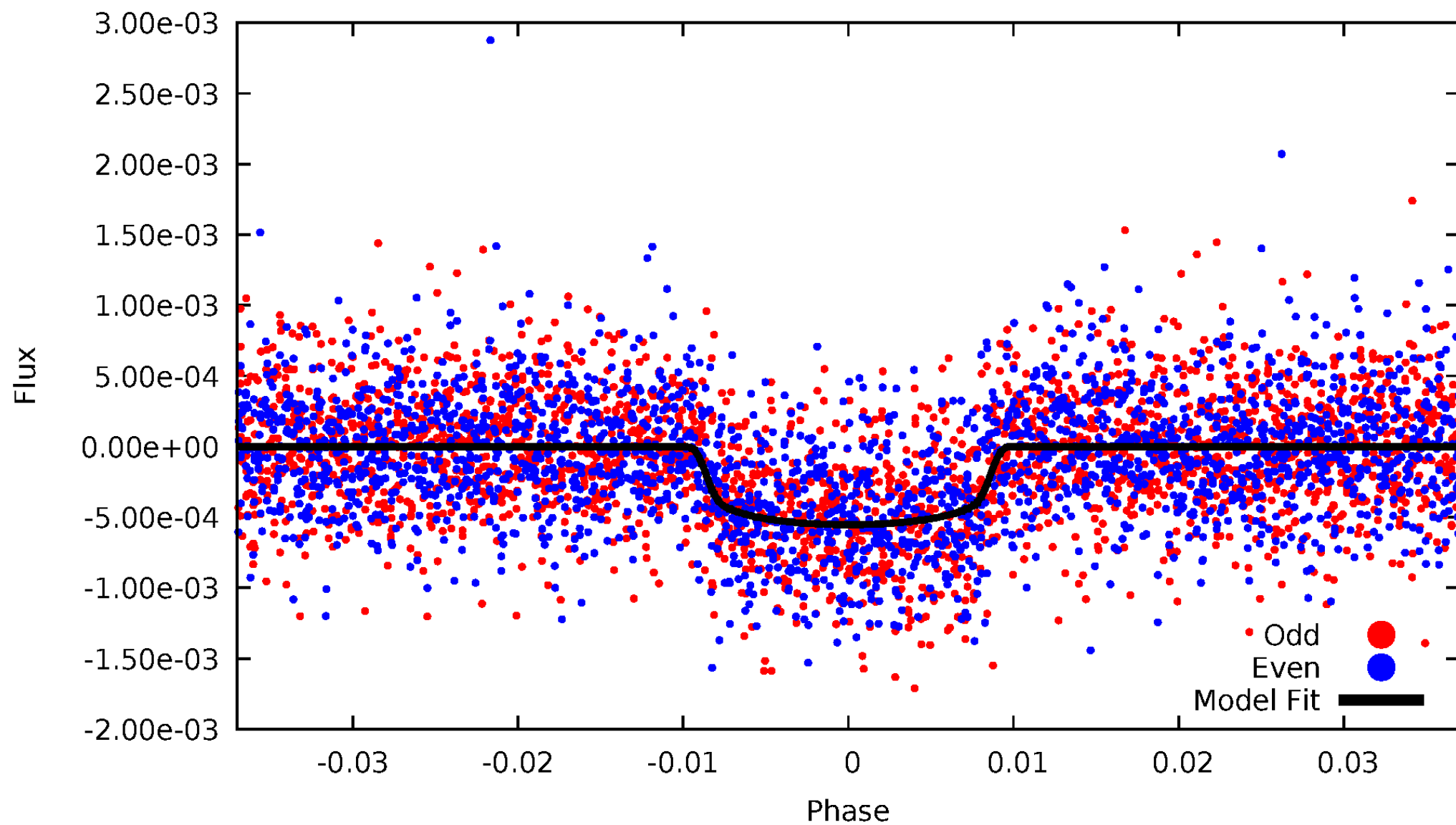


TCE 003342592-02



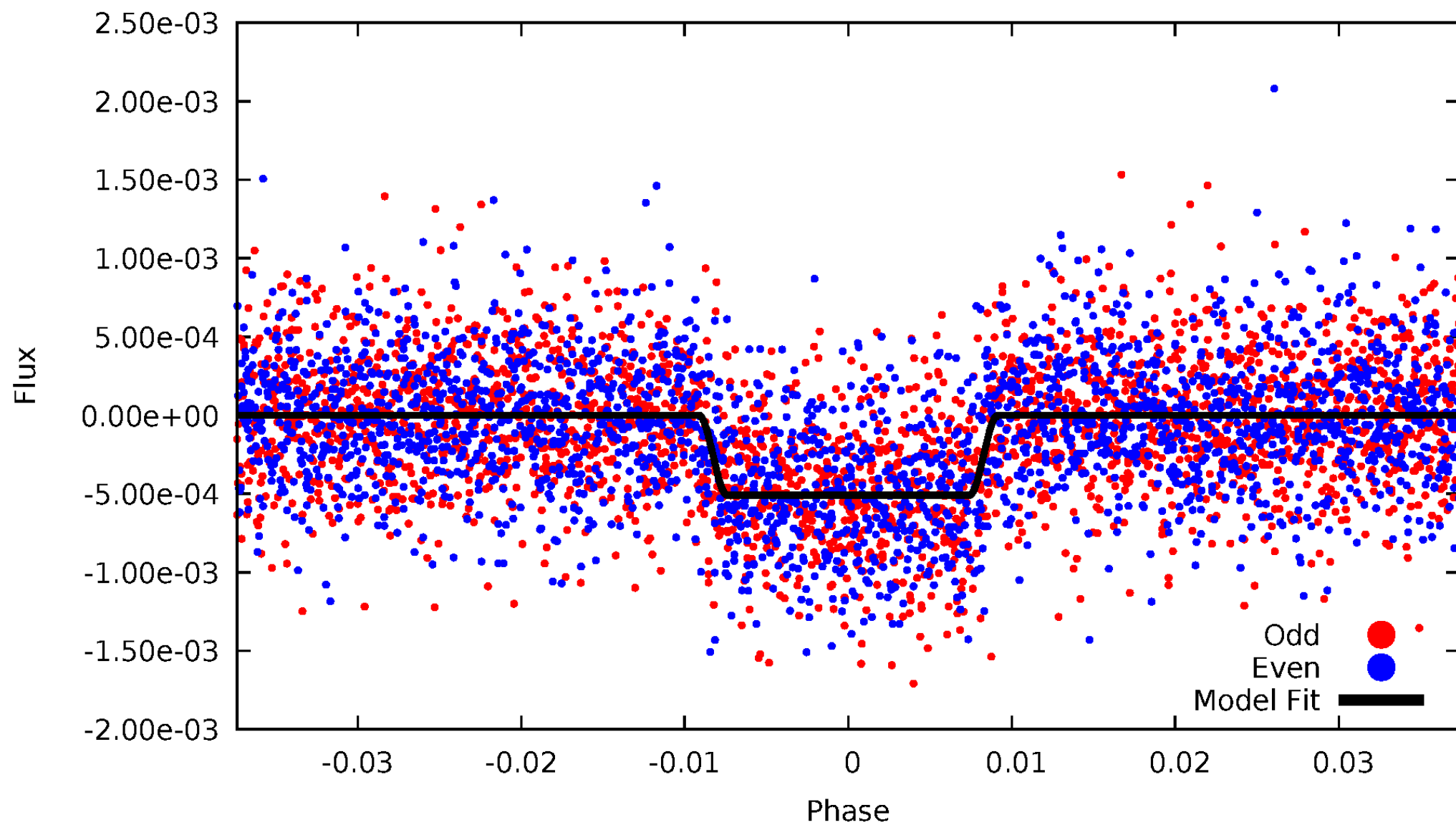
DV Odd/Even

TCE 003342592-02



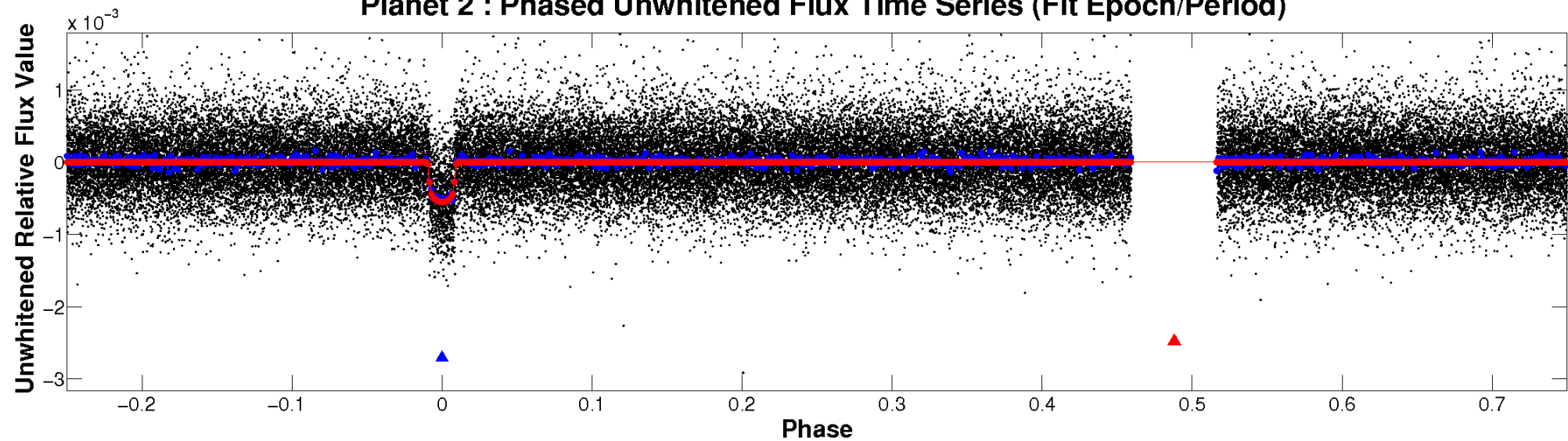
ALT Odd/Even

TCE 003342592-02

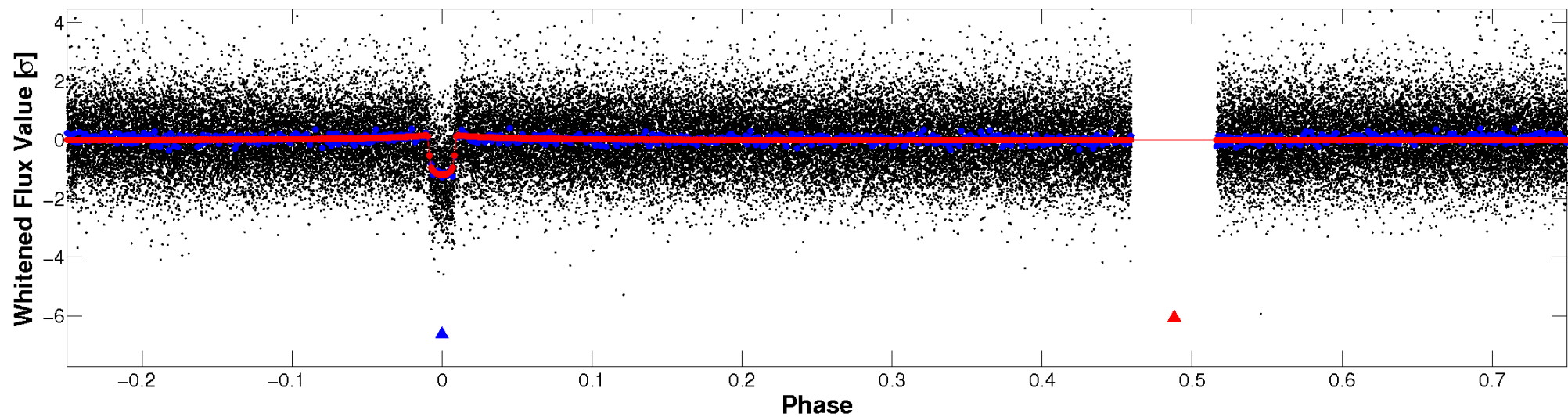


Non-Whitened Vs. Whitened Light Curve

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

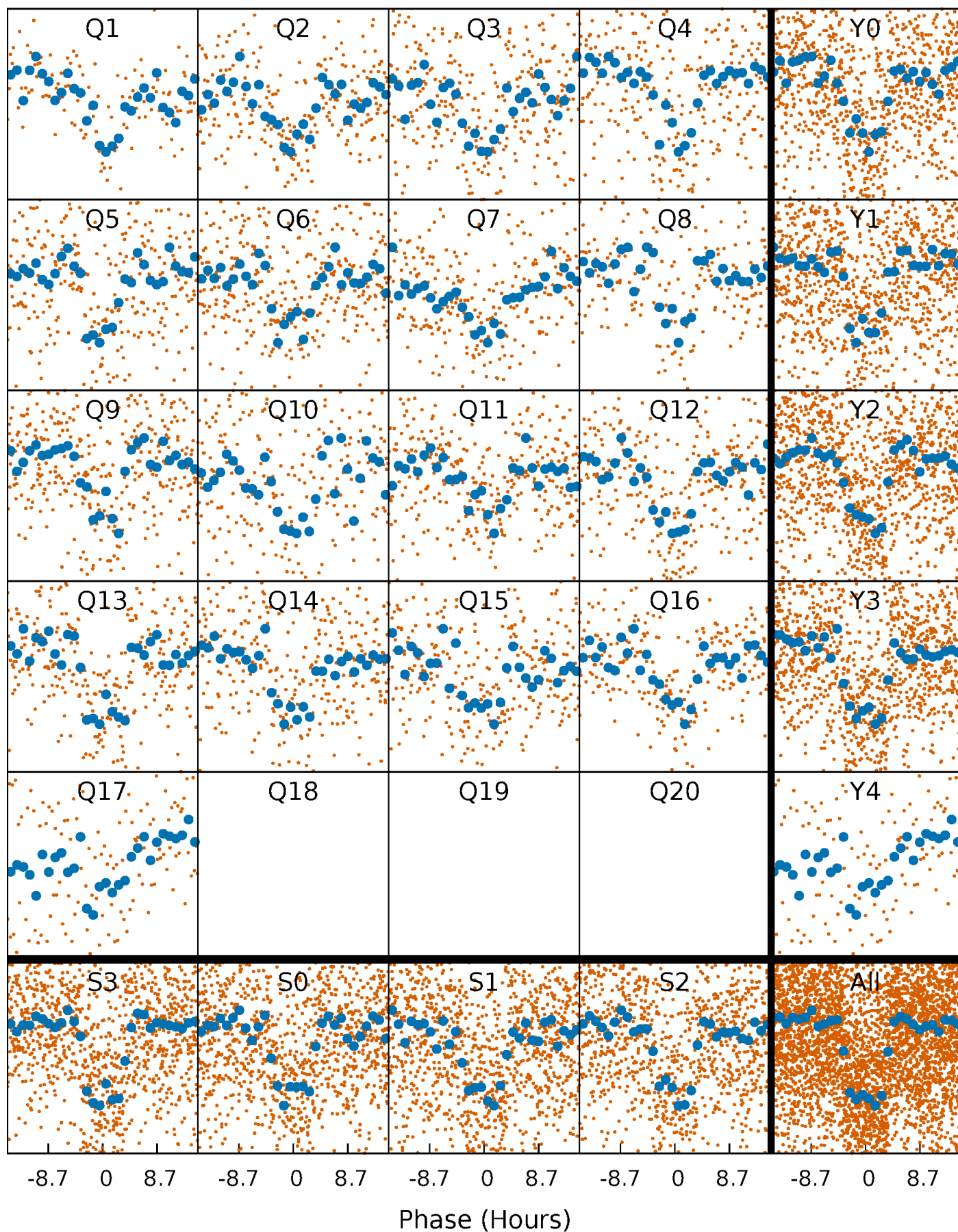


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



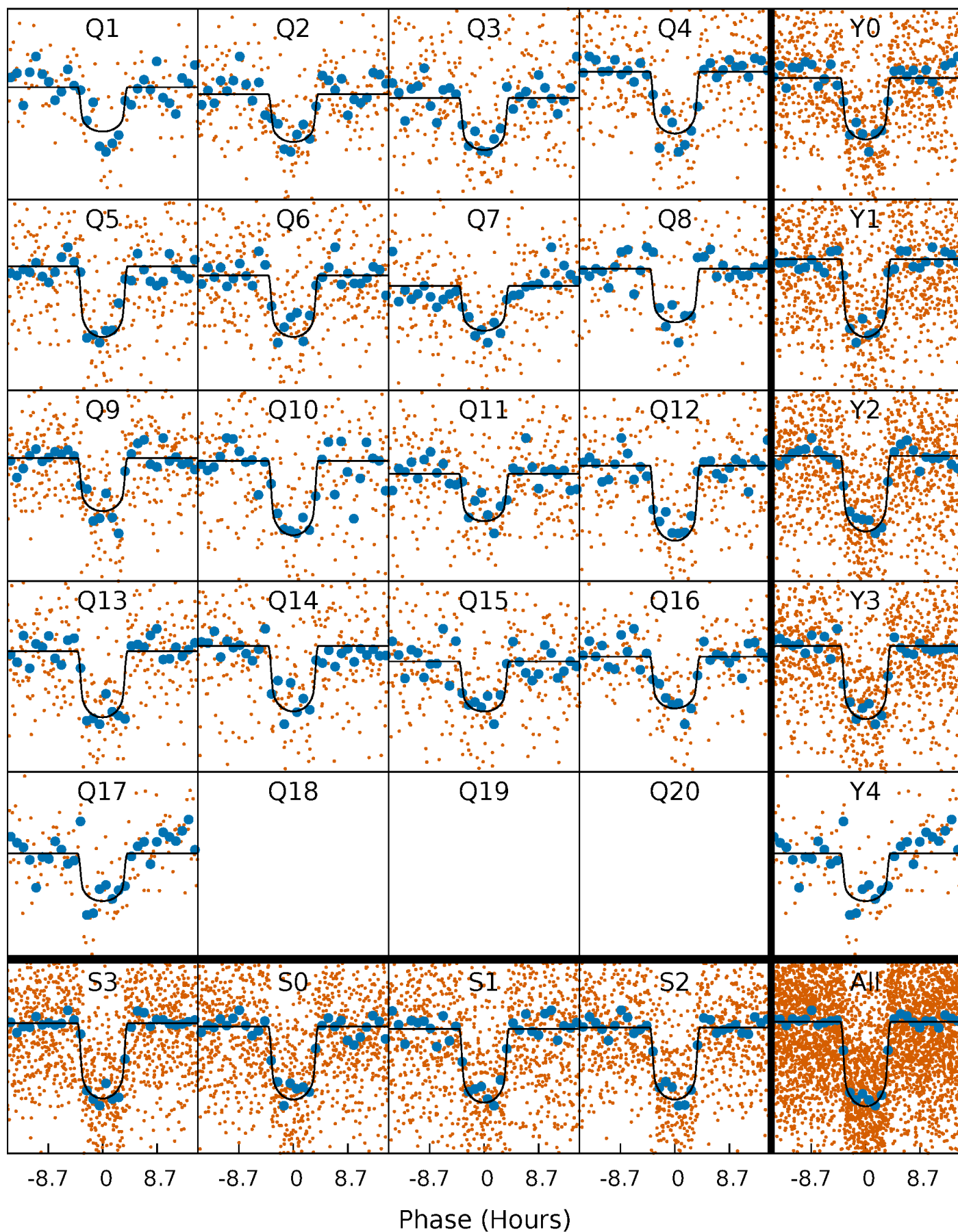
PDC Quarter-Phased Transit Curves

TCE 003342592-02 P= 17.177230 Days $T_0=144.988235$ (BKJD)



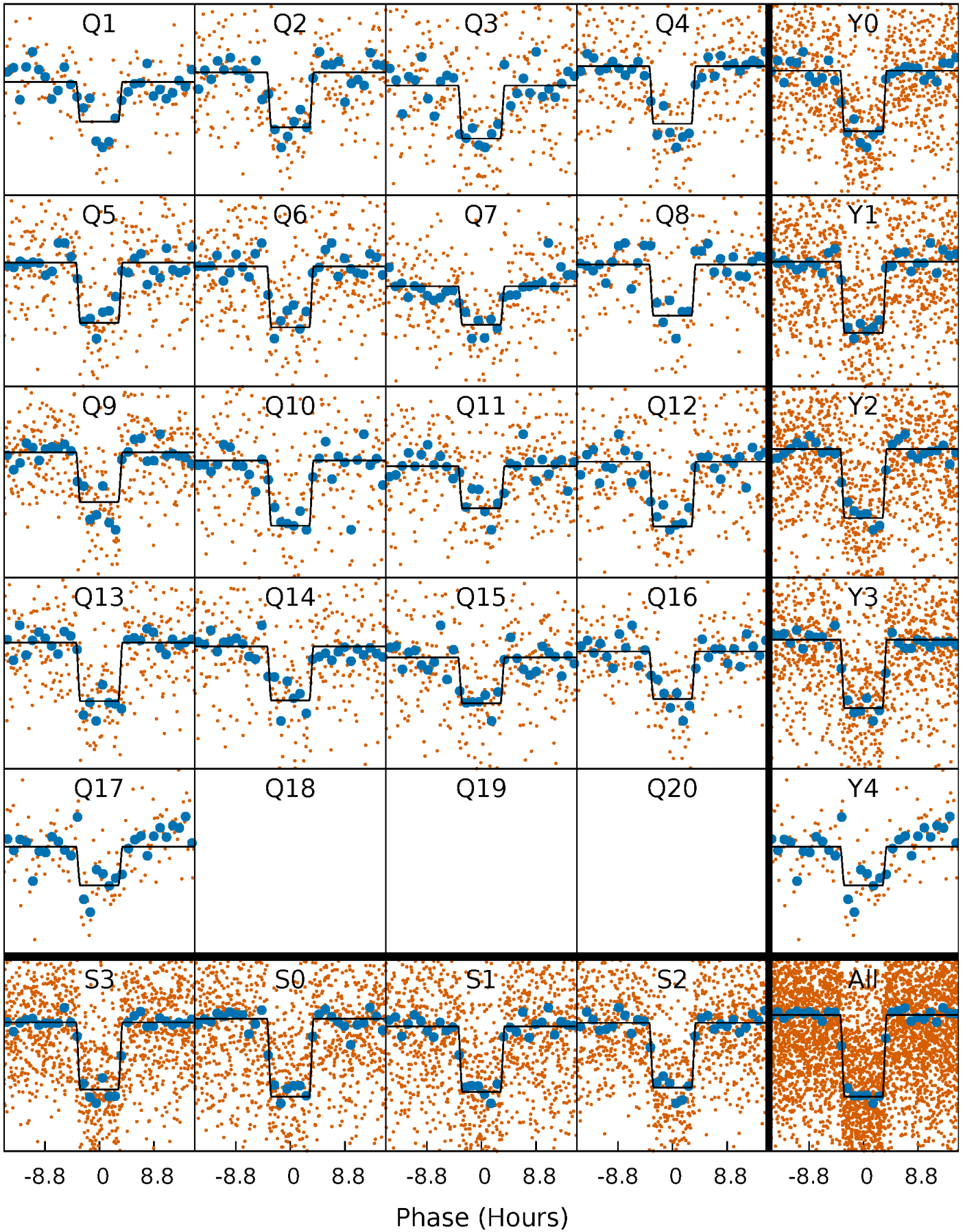
DV Quarter-Phased Transit Curves

TCE 003342592-02 P= 17.177230 Days $T_0=144.988235$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

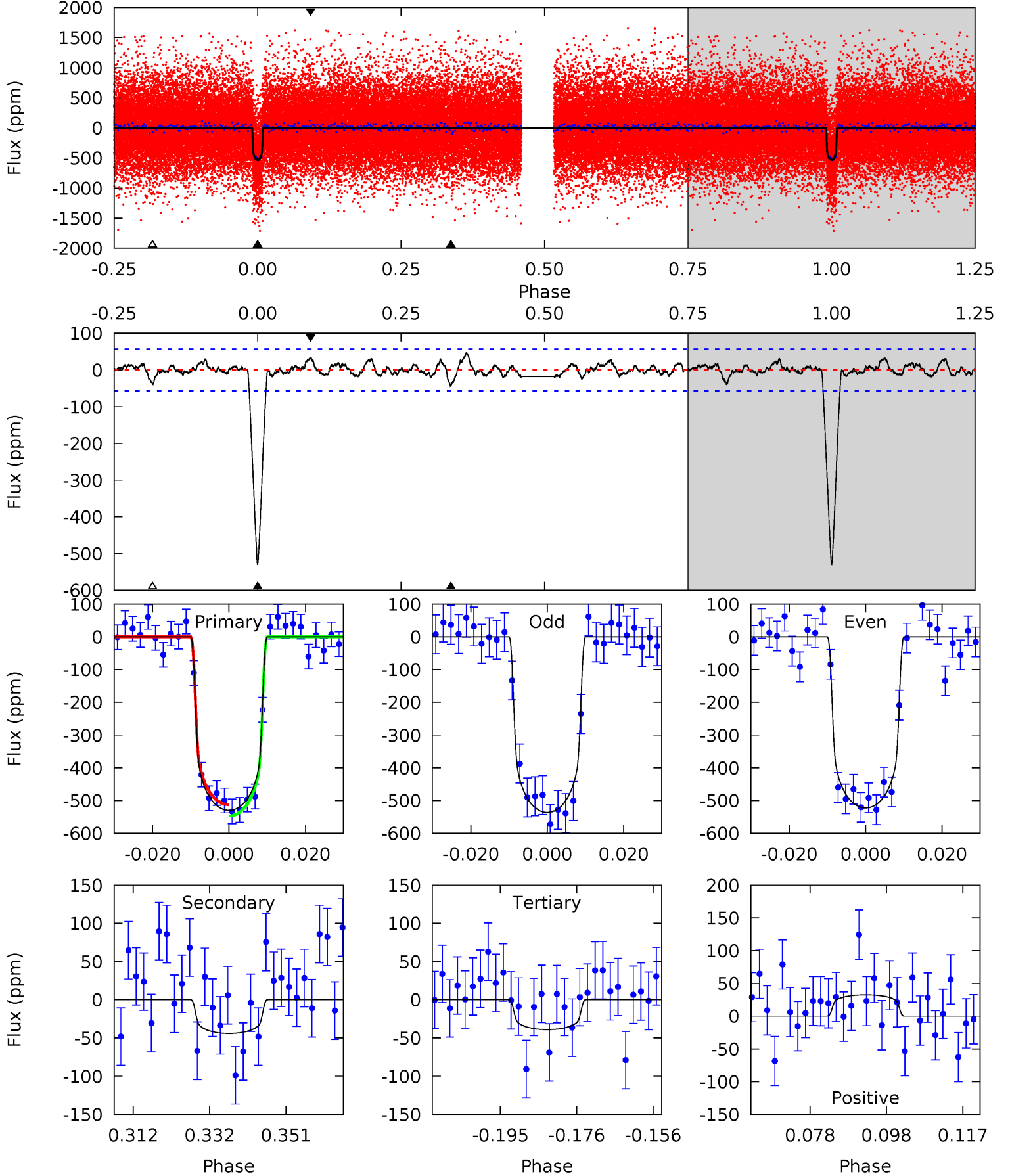
TCE 003342592-02 P= 17.177108 Days $T_0=144.995170$ (BKJD)



DV Model-Shift Uniqueness Test

003342592-02, $P = 17.177230$ Days, $E = 127.811005$ Days

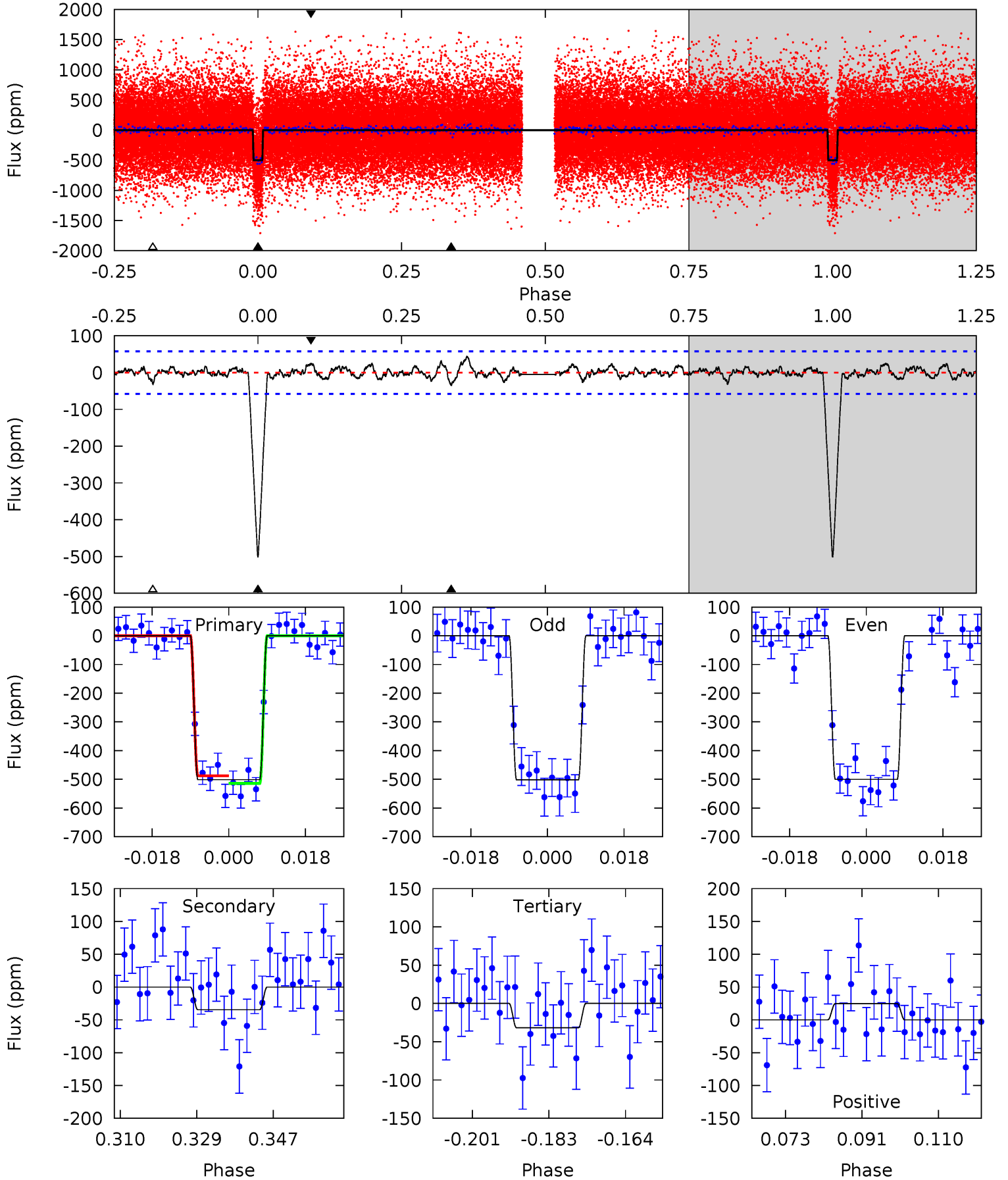
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.0	3.83	3.39	2.81	4.90	2.34	1.06	42.6	43.2	0.44	1.01	0.60	1.04	0.08	1.48



Alt Model-Shift Uniqueness Test

003342592-02, P = 17.177108 Days, E = 127.818062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.4	2.93	2.68	2.10	4.91	2.36	0.90	39.7	40.3	0.25	0.83	0.05	1.00	0.08	1.10



Stellar Parameters For KIC 003342592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6032^{+189}_{-210}	$4.485^{+0.054}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$0.973^{+0.315}_{-0.105}$	$1.055^{+0.139}_{-0.139}$	$1.612^{+0.461}_{-0.899}$
	+3%/-3%	+1%/-5%	+417%/-500%	+32%/-11%	+13%/-13%	+29%/-56%
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 003342592-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-44 ± 12	$2.63^{+0.45}_{-0.32}$	1029^{+75}_{-51}	3617^{+201}_{-209}	58^{+26}_{-20}
Alt.	-35 ± 12	$2.50^{+0.50}_{-0.33}$	1030^{+81}_{-56}	3532^{+229}_{-249}	52^{+26}_{-22}

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 $A_{obs} \gg 1.0$

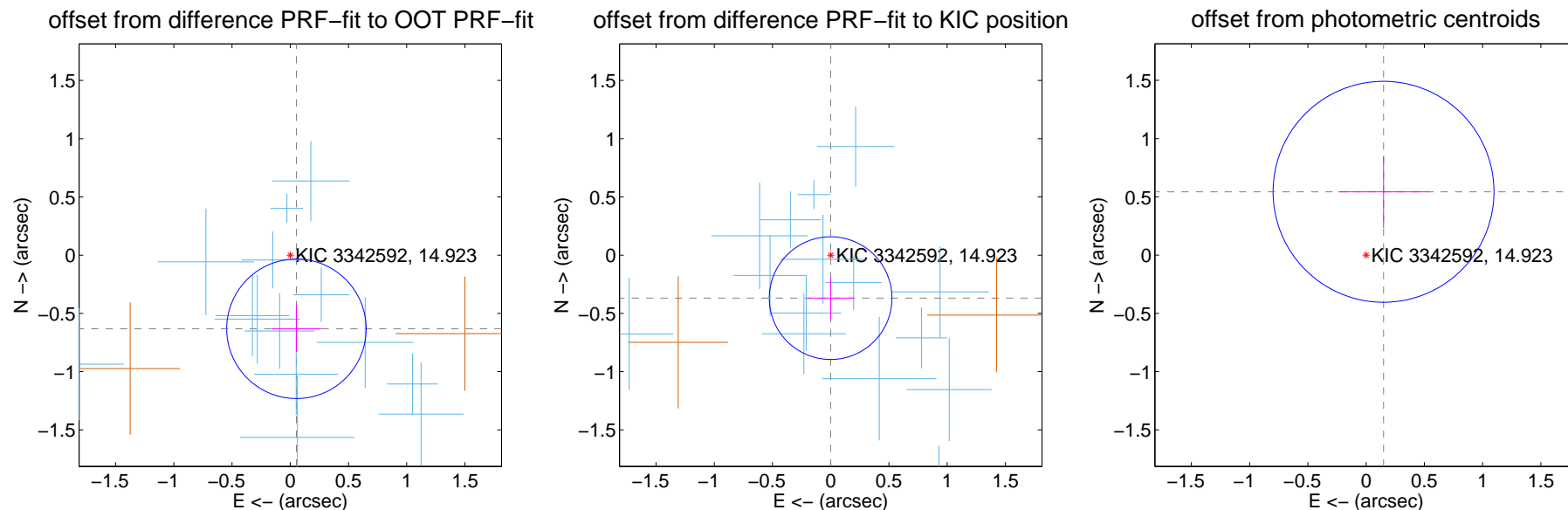
DV Centroid Data

Supplemental centroid analysis for 003342592-02. Kepler magnitude: 14.92. Transit SNR 34.60

There are 15 quarters with good PRF difference image offsets

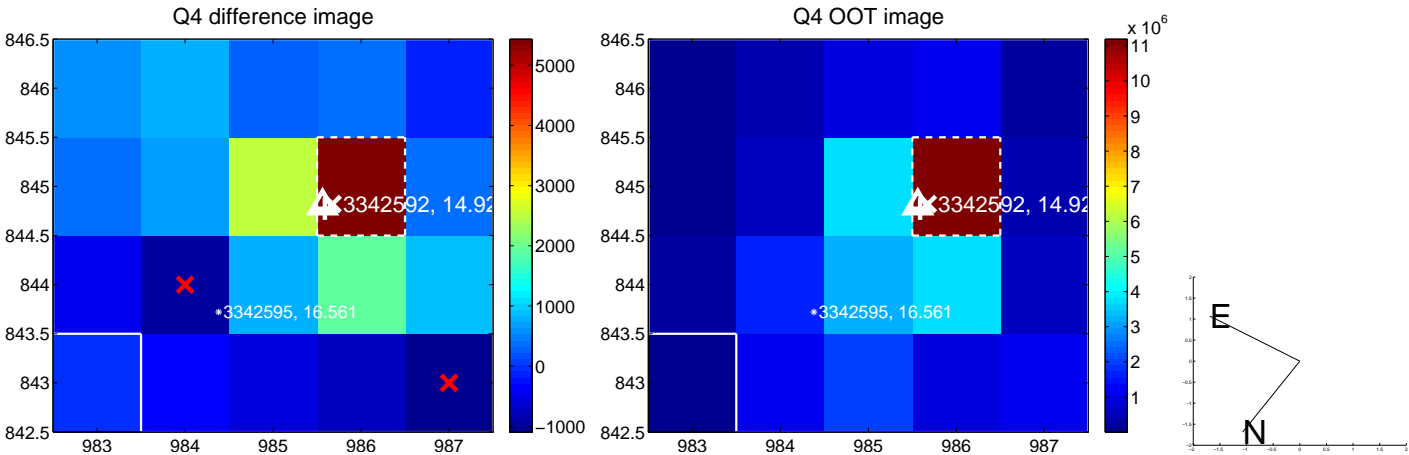
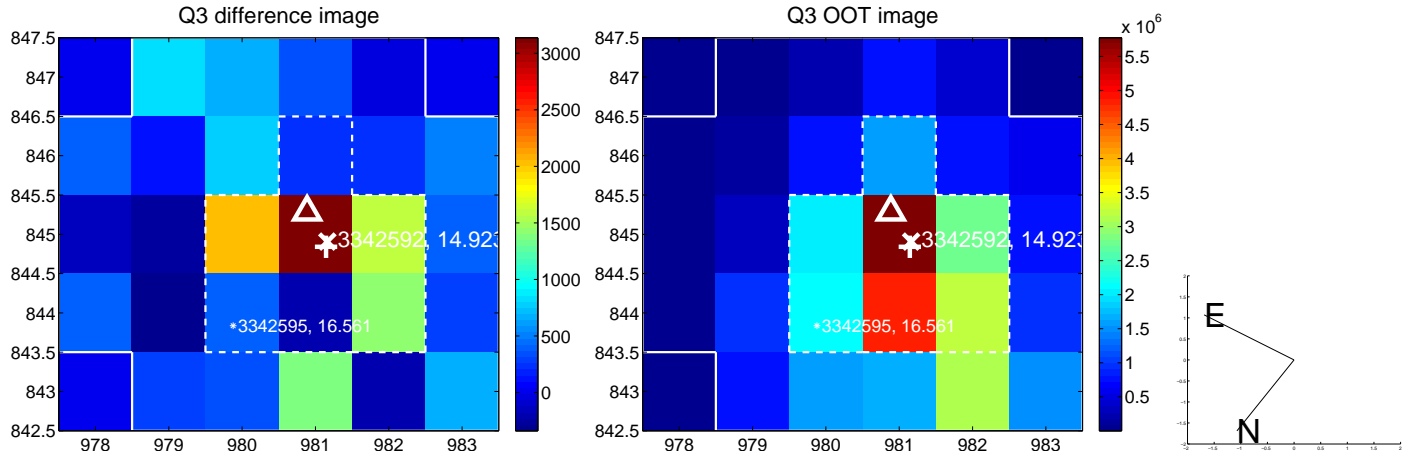
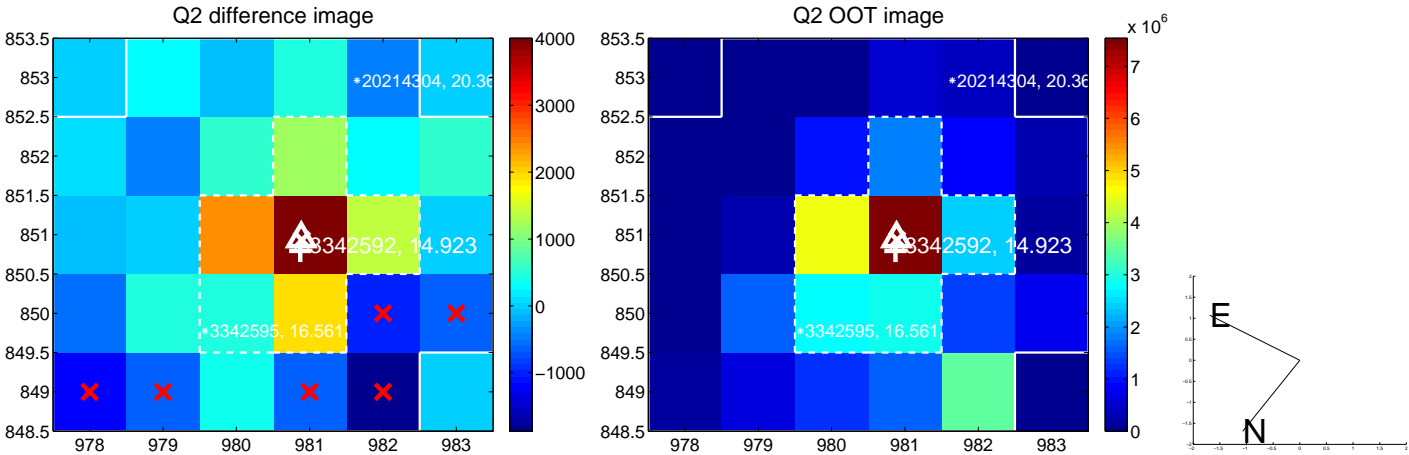
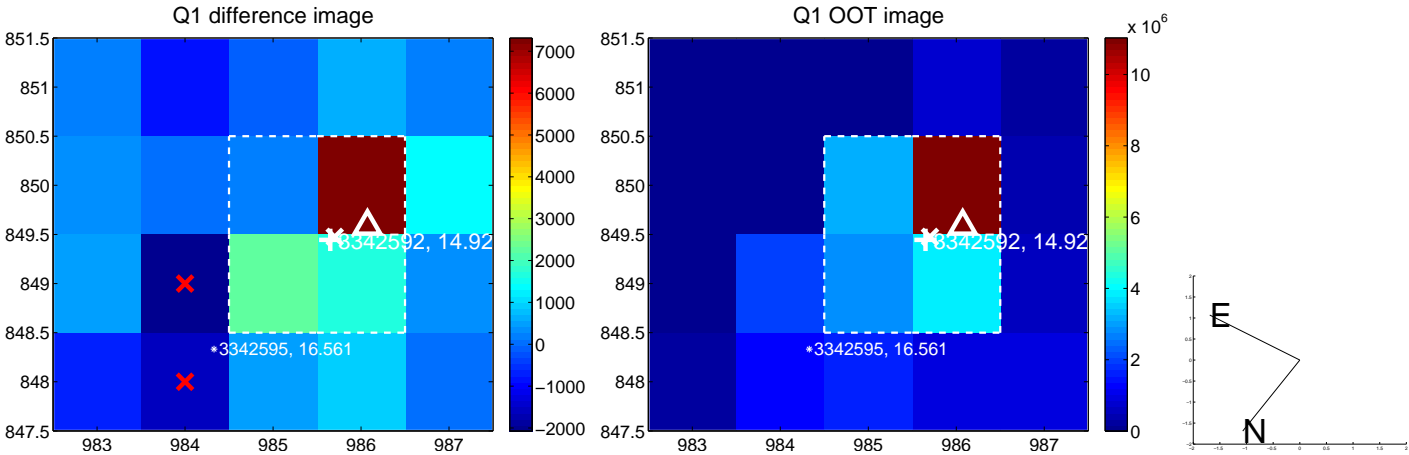
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.634 ± 0.200	3.18	-0.053 ± 0.213	-0.632 ± 0.197
PRF-fit source offset from KIC position	0.369 ± 0.176	2.10	0.001 ± 0.203	-0.369 ± 0.176
photometric centroid source offset	0.56 ± 0.32	1.78	-0.15 ± 0.39	0.54 ± 0.31

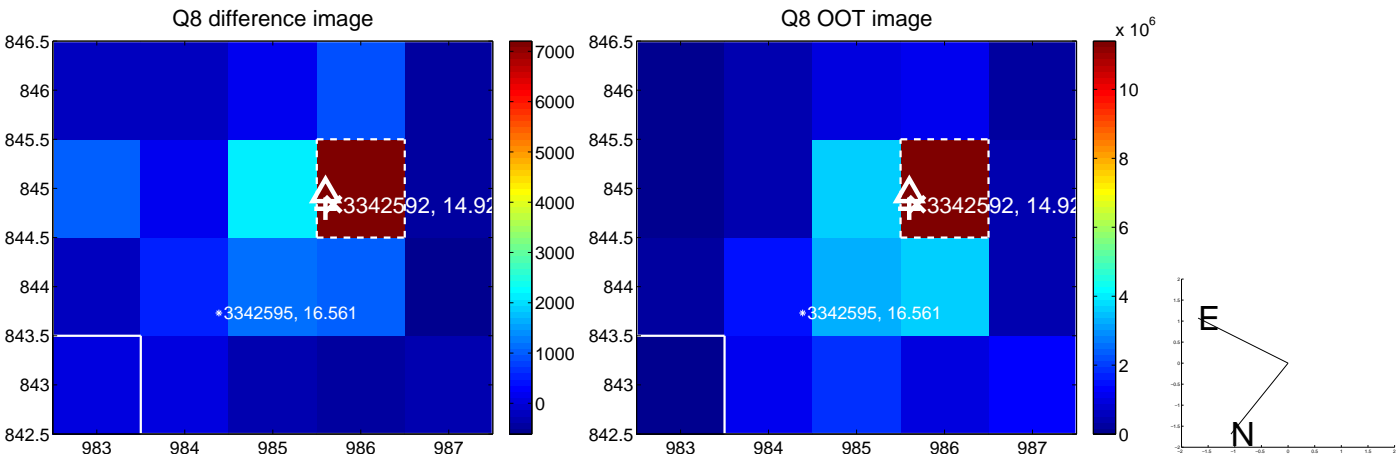
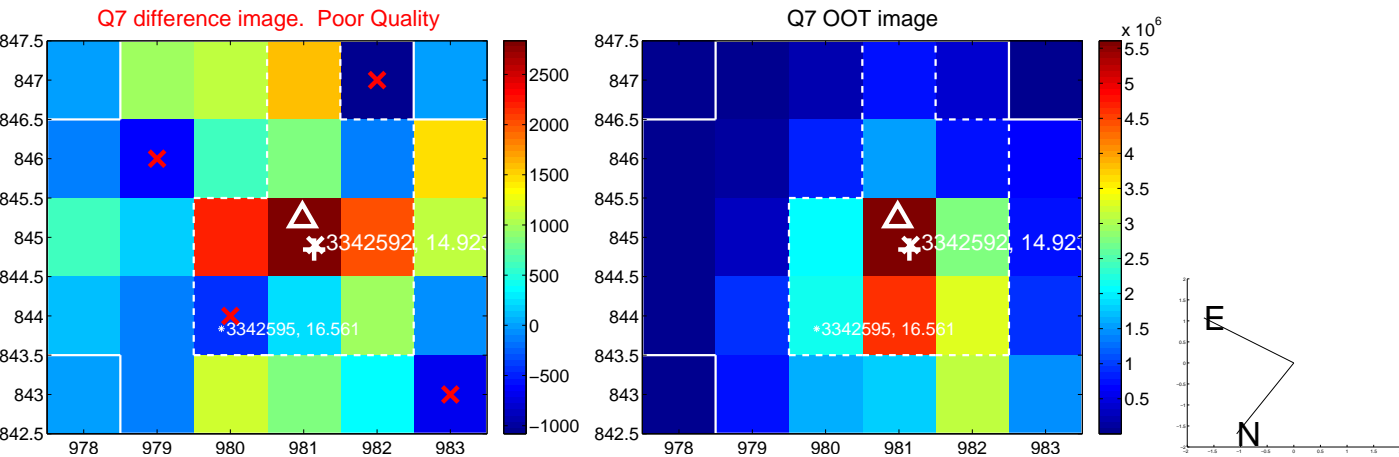
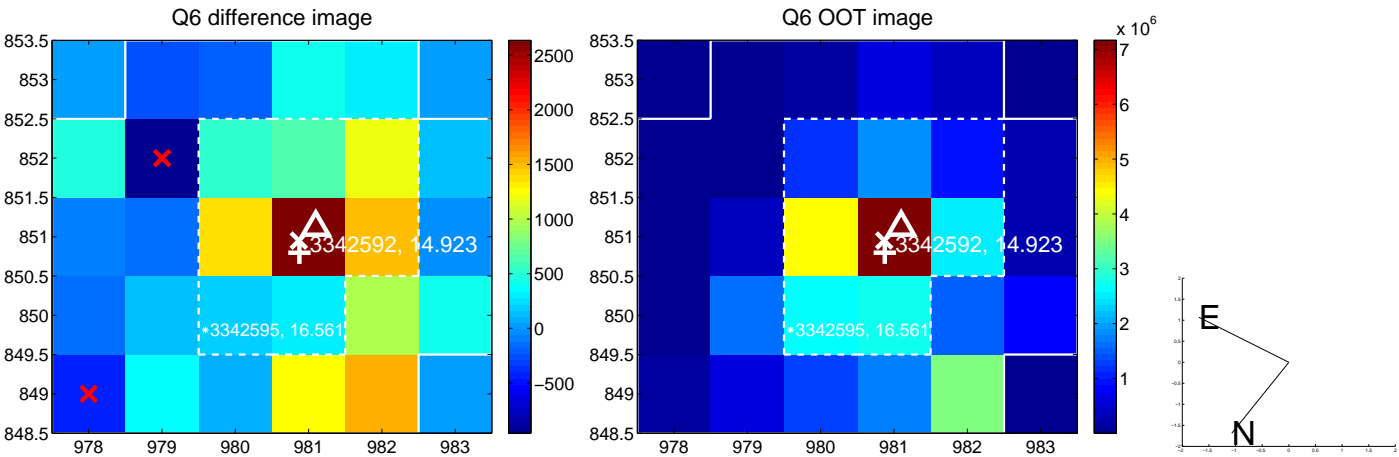
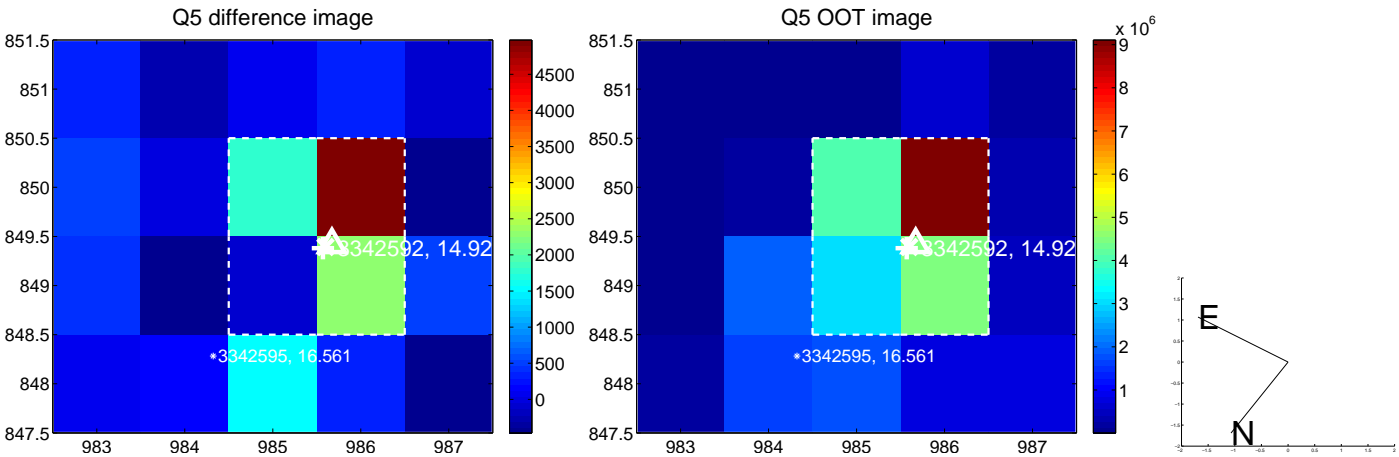


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

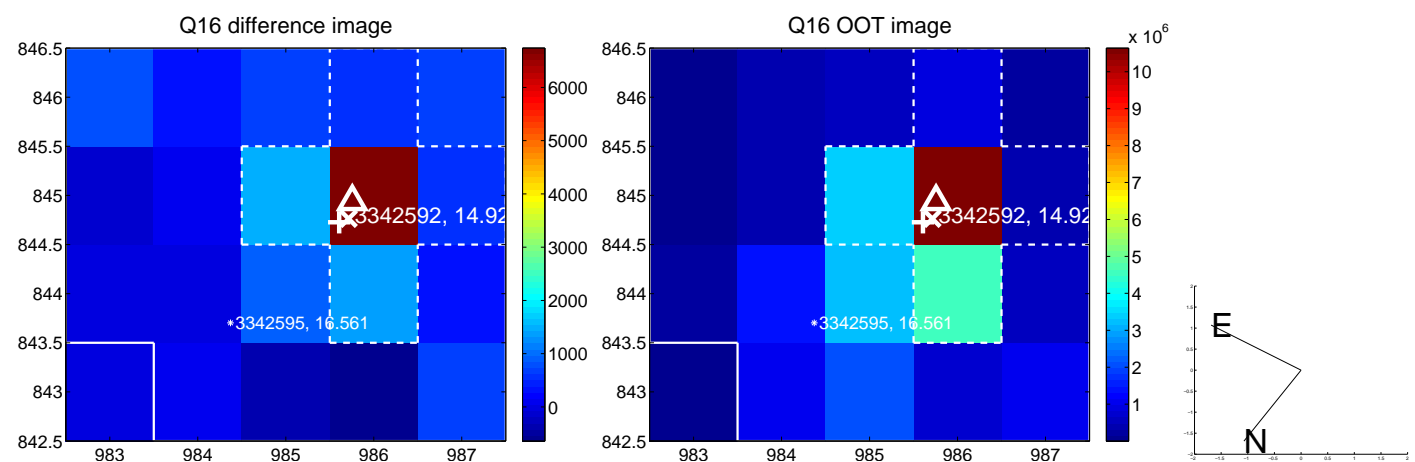
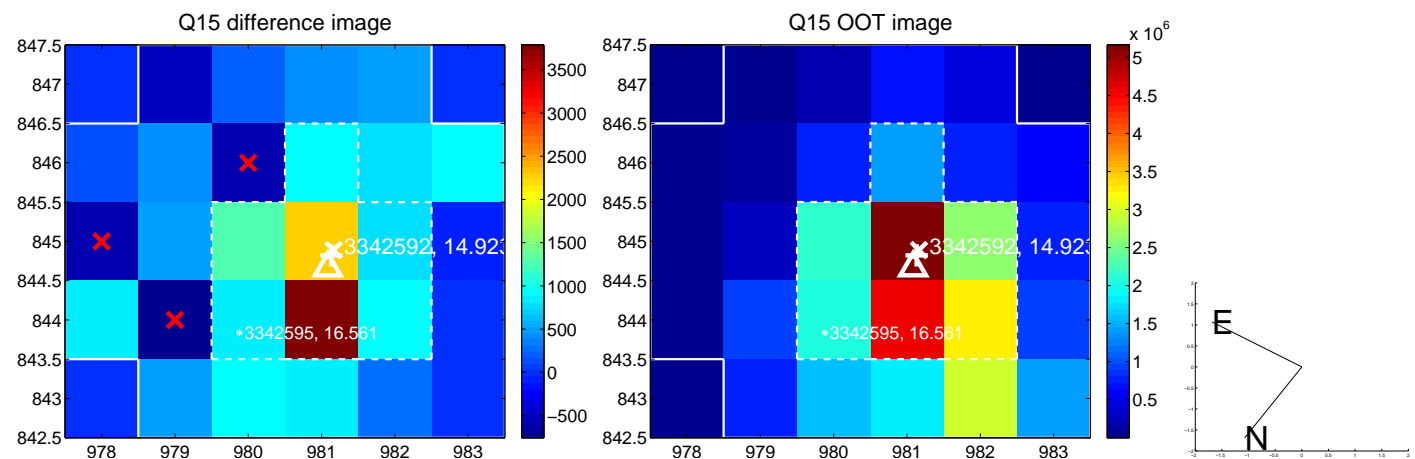
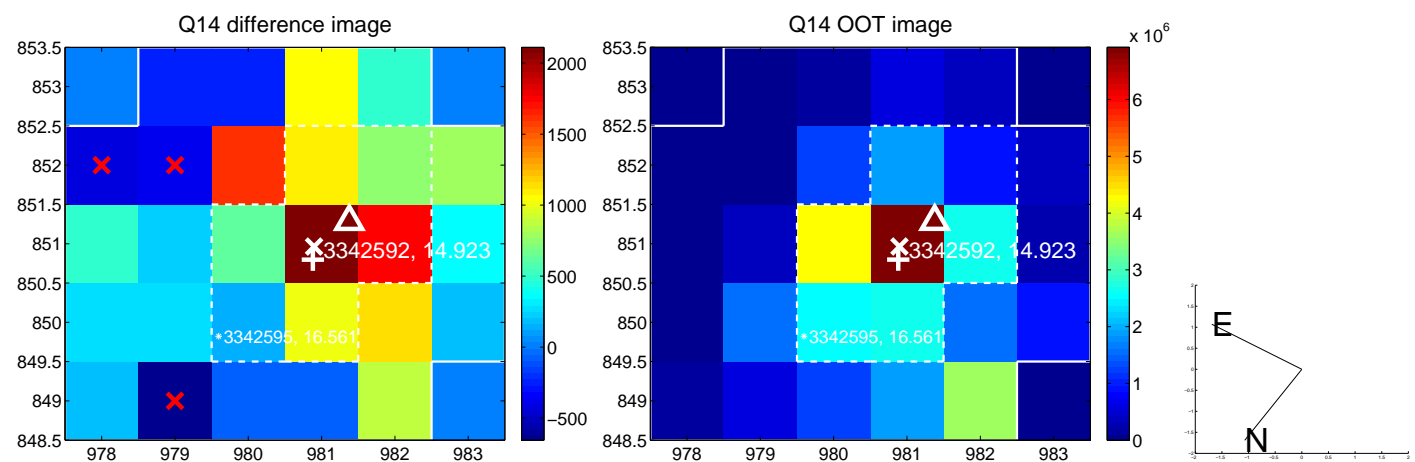
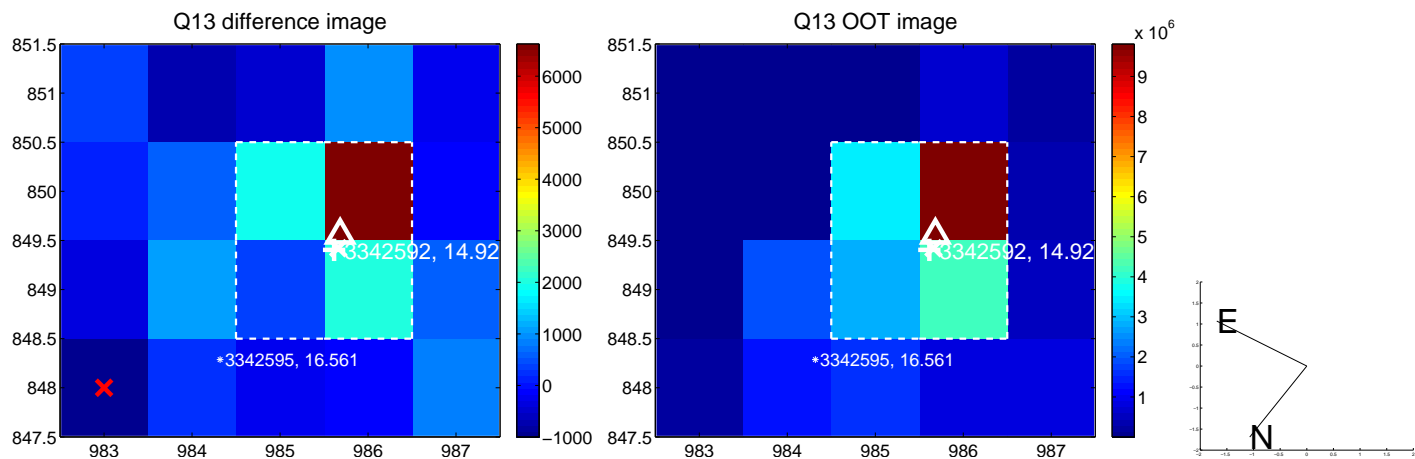
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



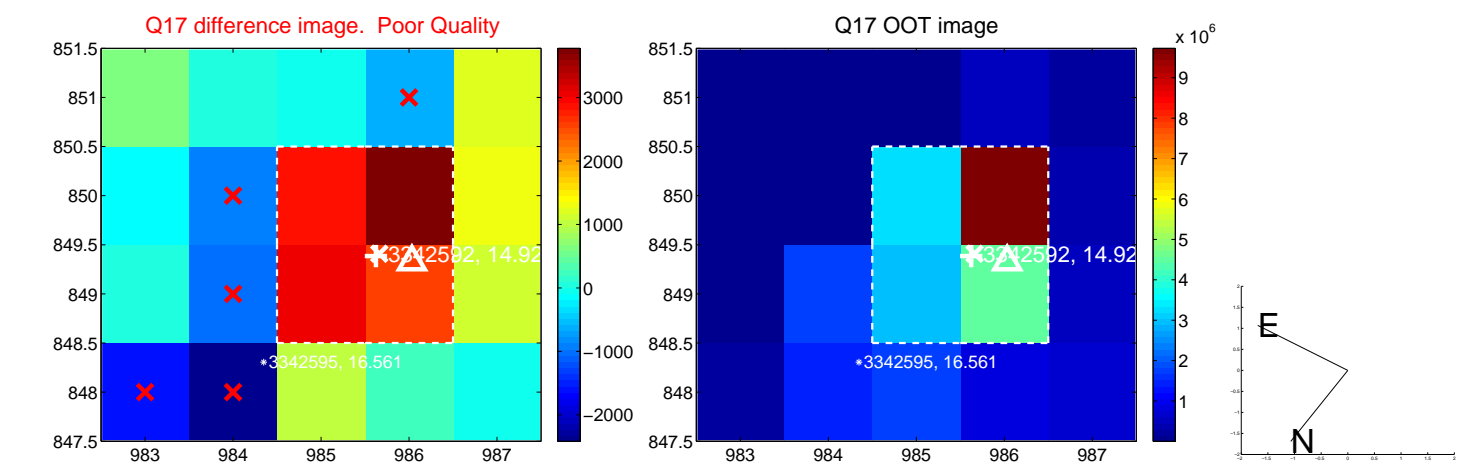
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



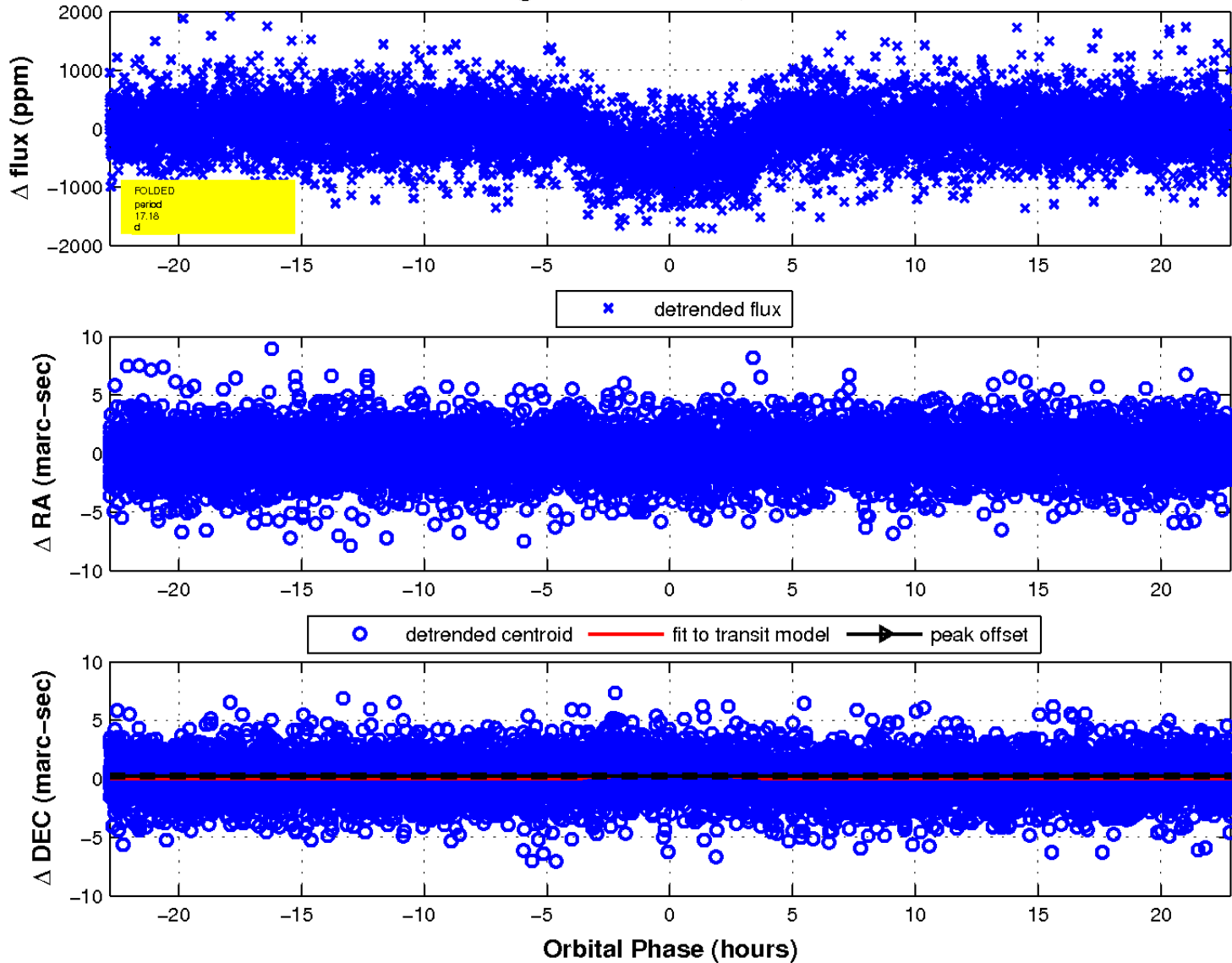
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

