

KIC 007347292

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})
007347292-01	OBS	No	395.627906	354.146159	2295.2	5.065	13.2	6.5	0.57	4733	2.71	0.19
007347292-02	OBS	No	322.930737	414.331898	2268.2	3.500	9.2	-1.0	0.57	4733	2.66	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007347292-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007347292-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

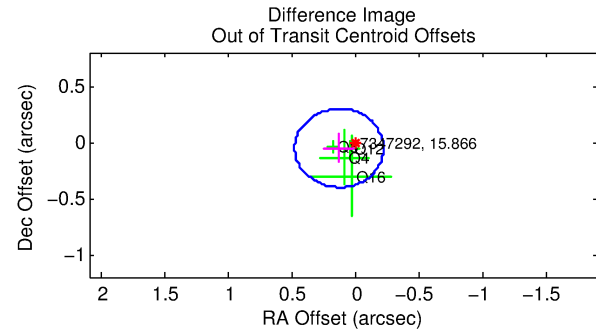
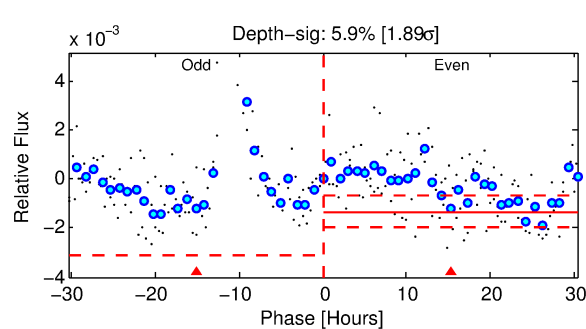
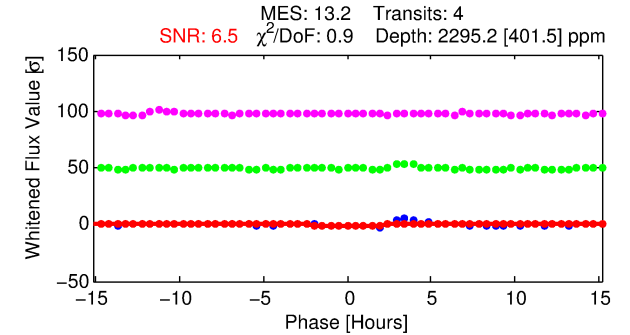
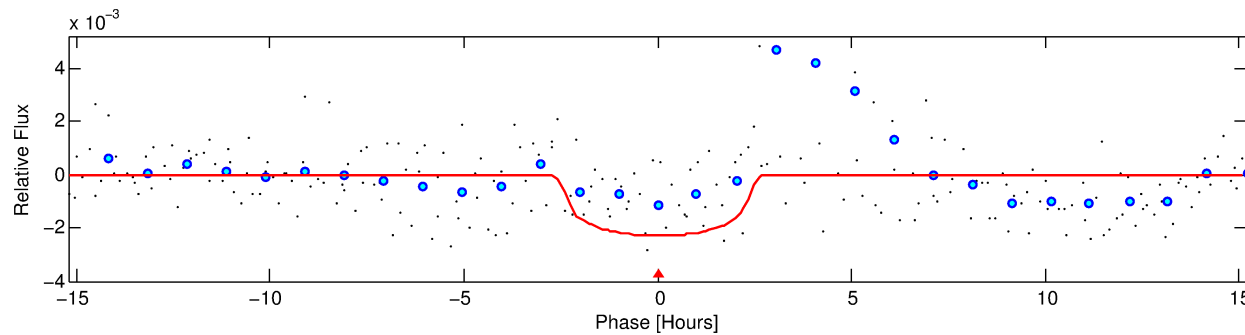
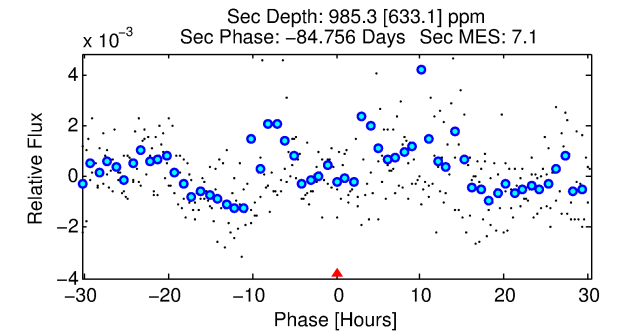
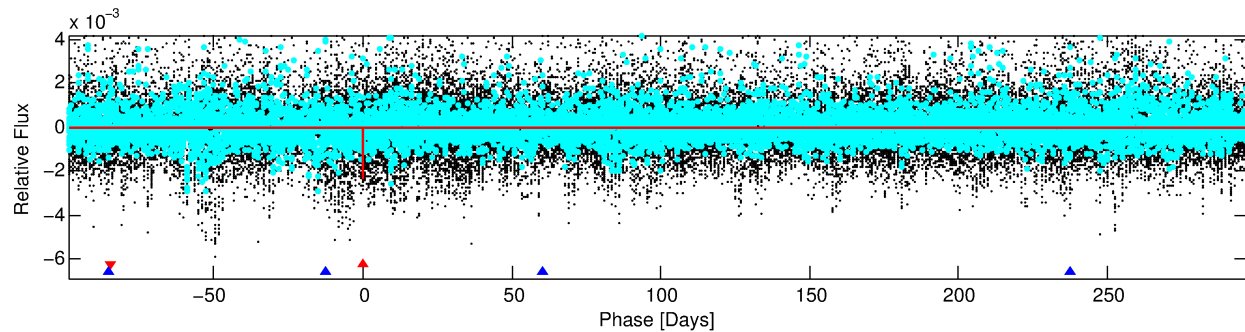
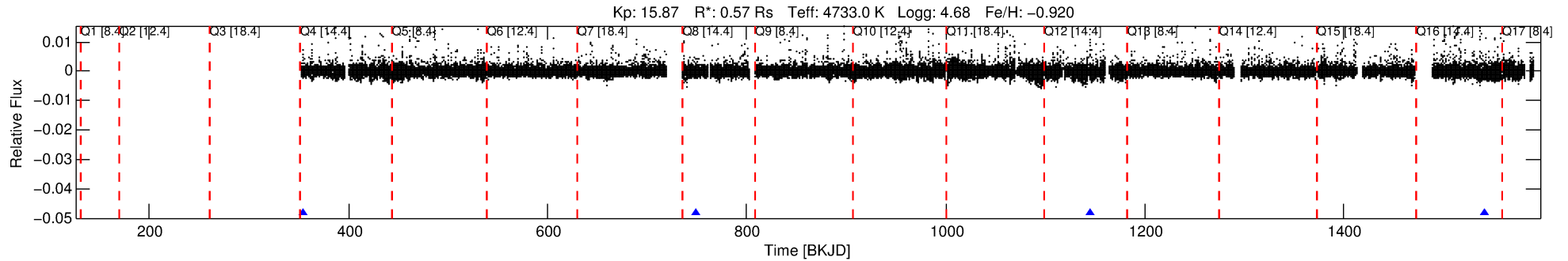
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007347292-01

No Significant Match Found

DV One-Page Summary

KIC: 7347292 Candidate: 1 of 2 Period: 395.628 d



DV Fit Results:

Period = 395.62791 [0.00442] d
Epoch = 354.1462 [0.0081] BKJD
Rp/R* = 0.0432 [0.0525]
a/R* = 598.06 [2582.56]
b = 0.29 [13.80]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 2.71 [3.30] Re
a = 0.8746 [0.0583] AU
Ag = 56600.55 [142394.56] [0.40σ]
Teffp = 4034 [2539] K [1.52σ]

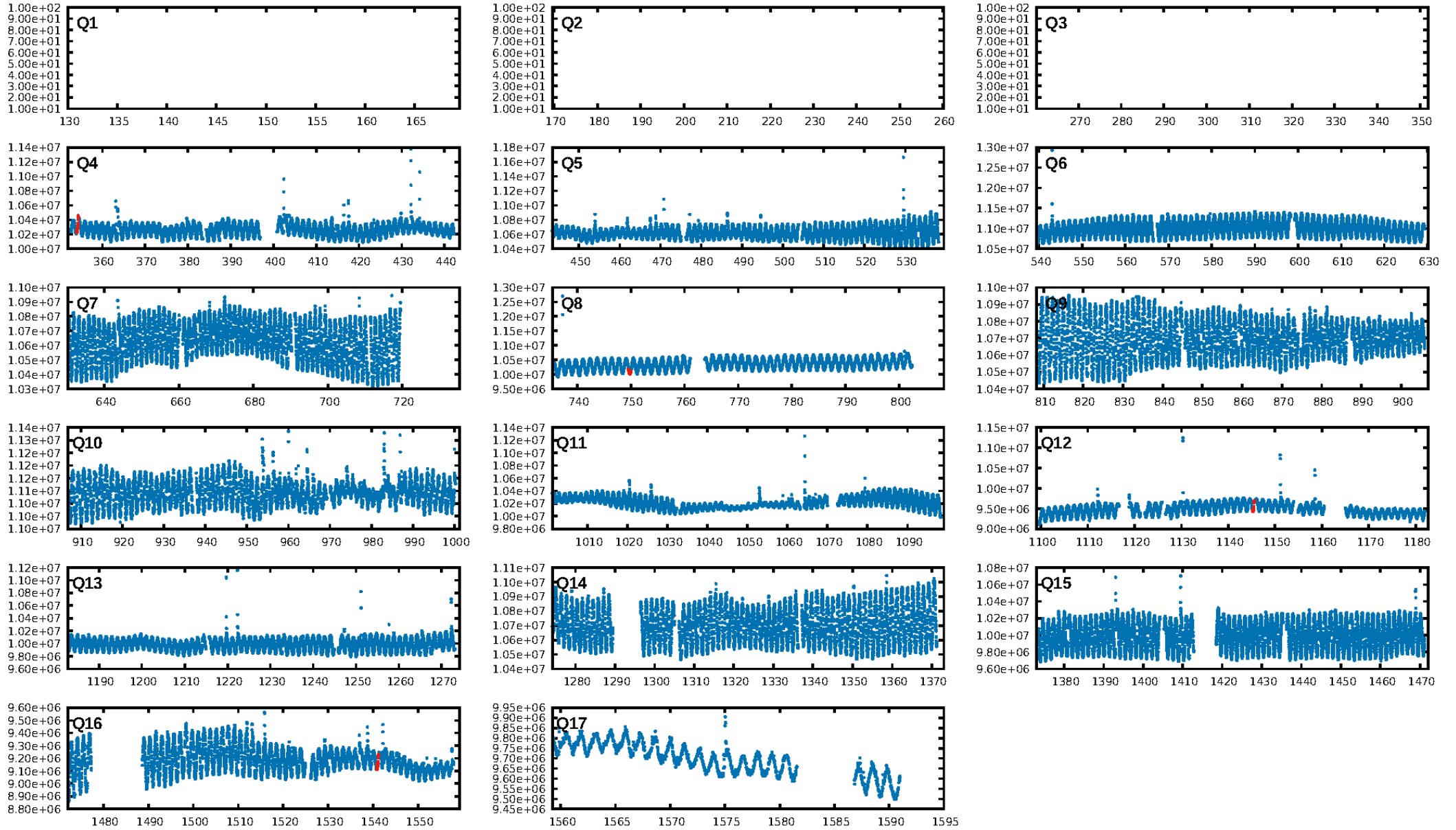
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [283.40σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 92.3%
Bootstrap-pfa: 2.45e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.354
Centroid-sig: 9.2%
Centroid-so: 0.530 arcsec [0.90σ]
OotOffset-rm: 0.145 arcsec [1.25σ]
KicOffset-rm: 0.107 arcsec [0.93σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

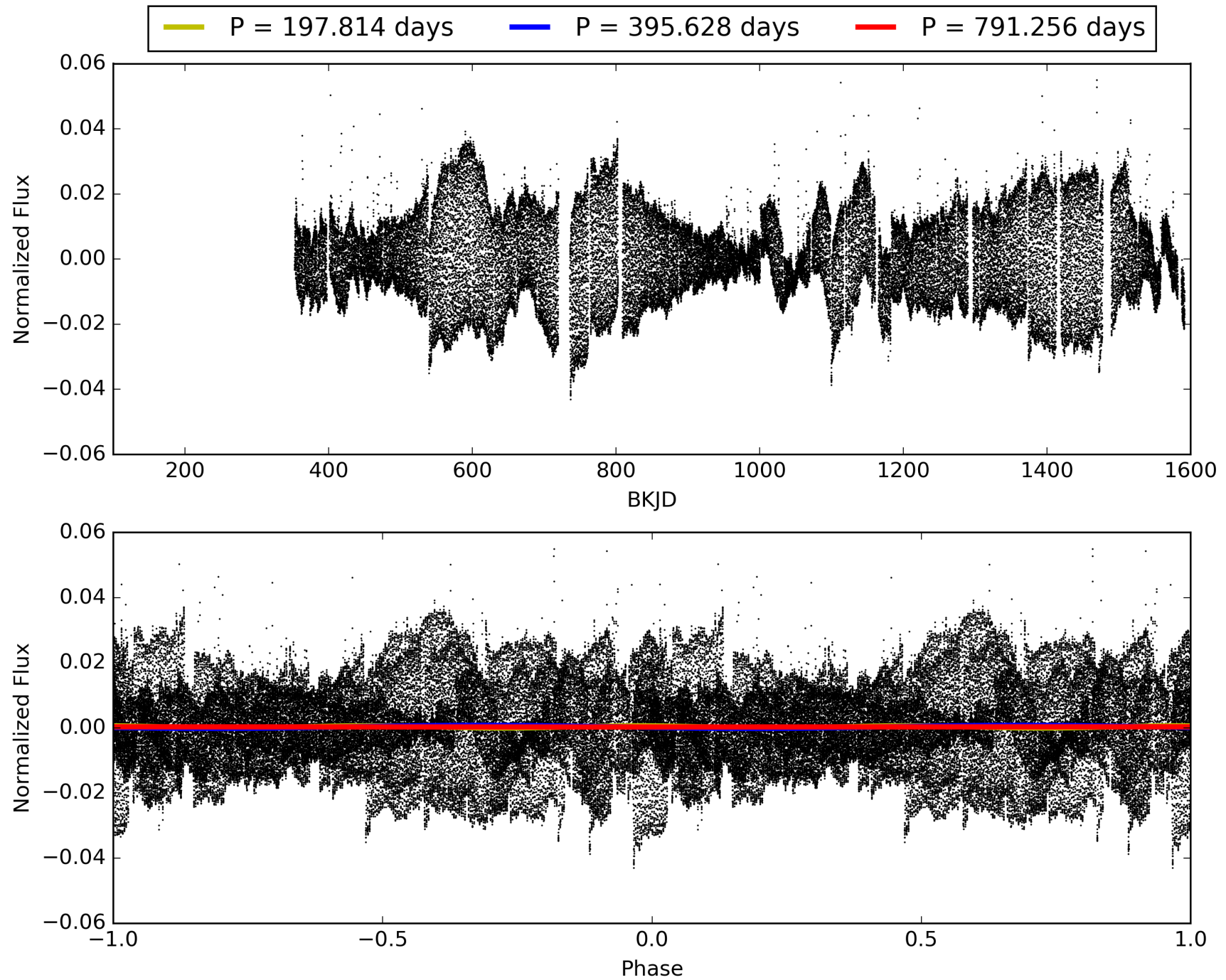
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:37:58 Z

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

TCE 007347292-01, PDC Light Curves

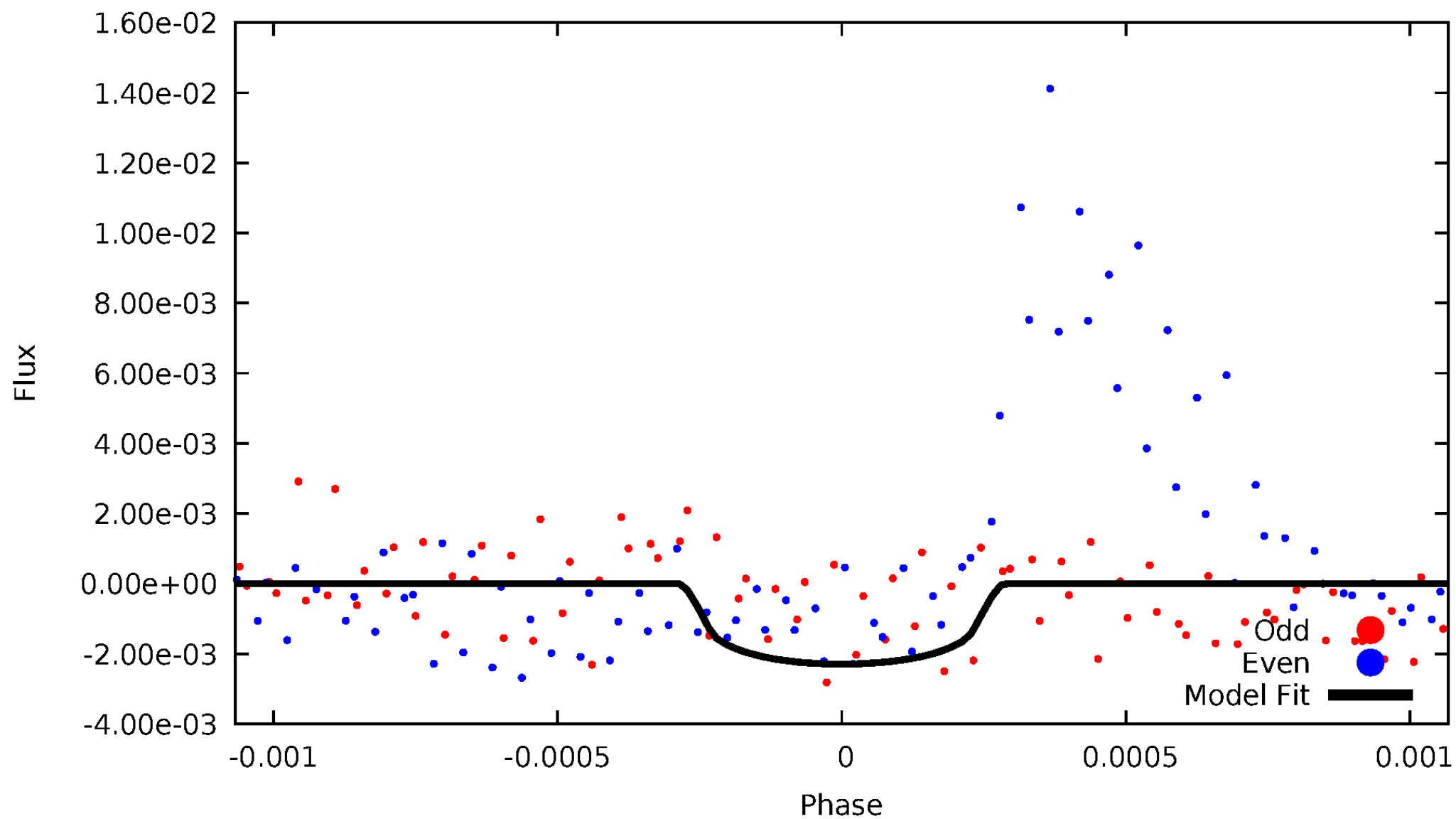


TCE 007347292-01



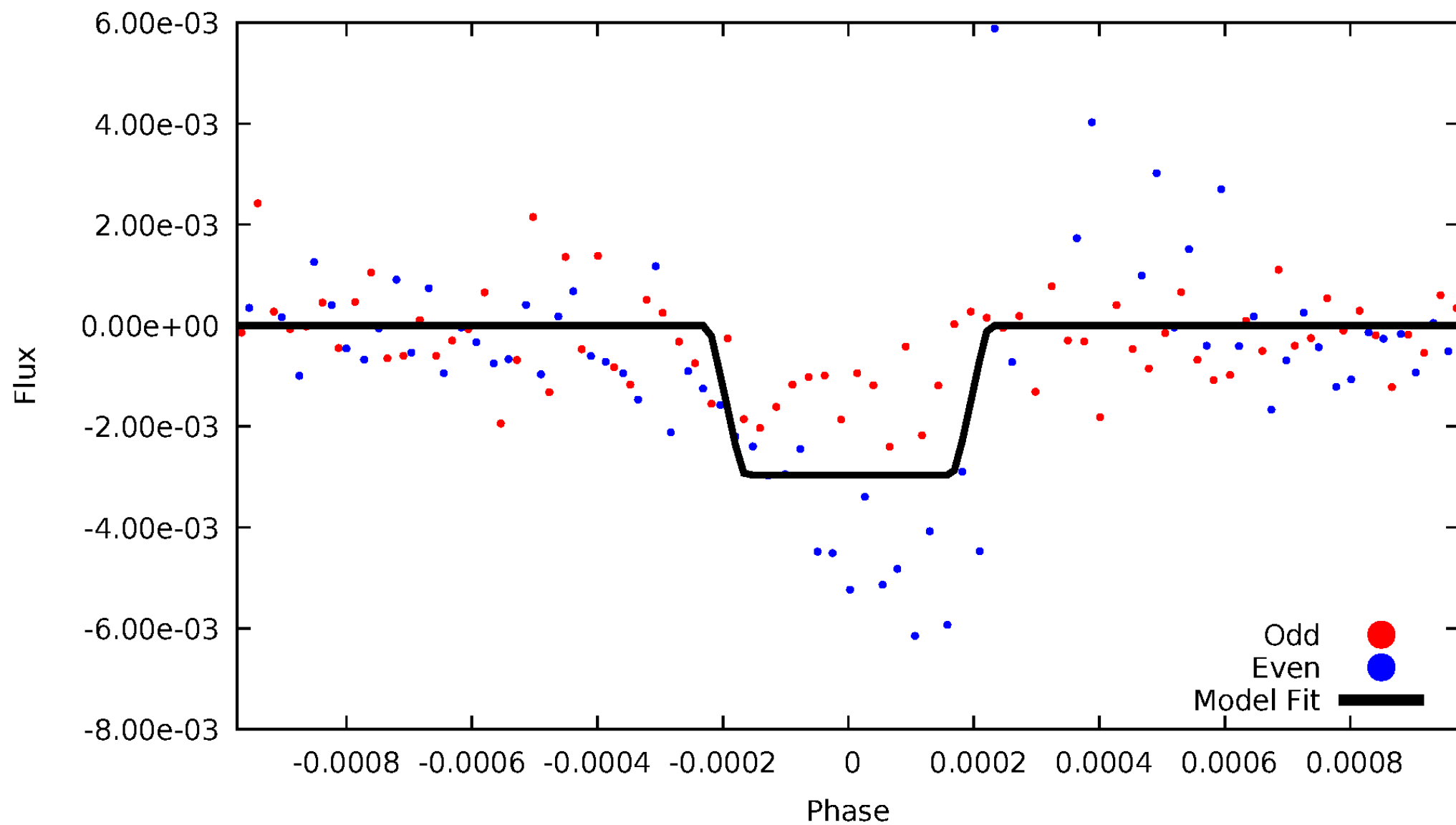
DV Odd/Even

TCE 007347292-01

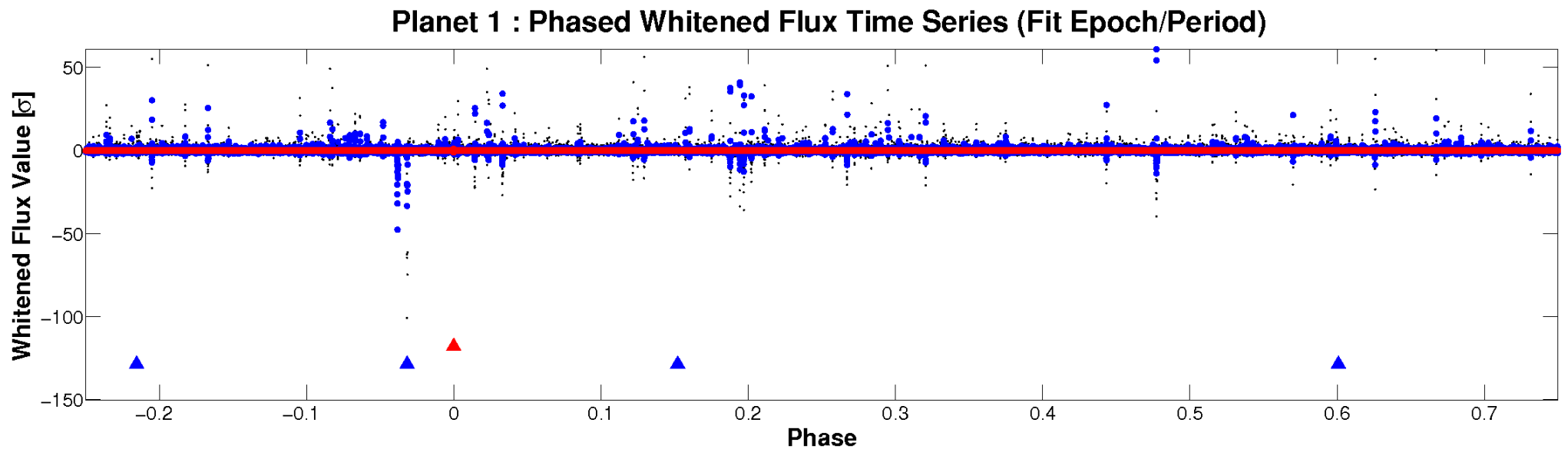
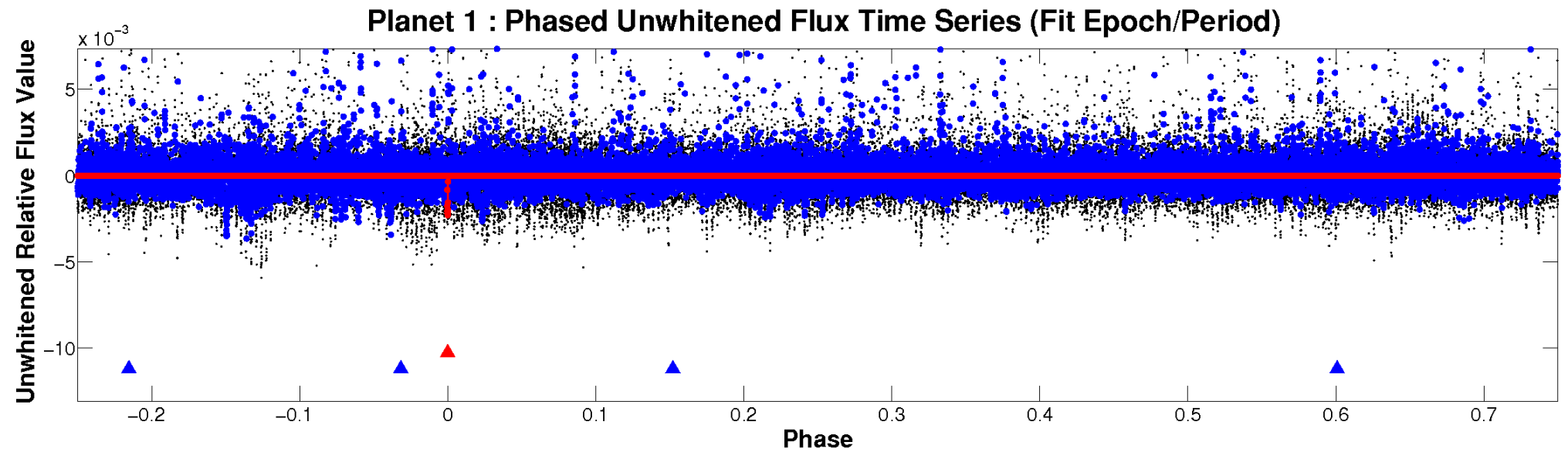


ALT Odd/Even

TCE 007347292-01

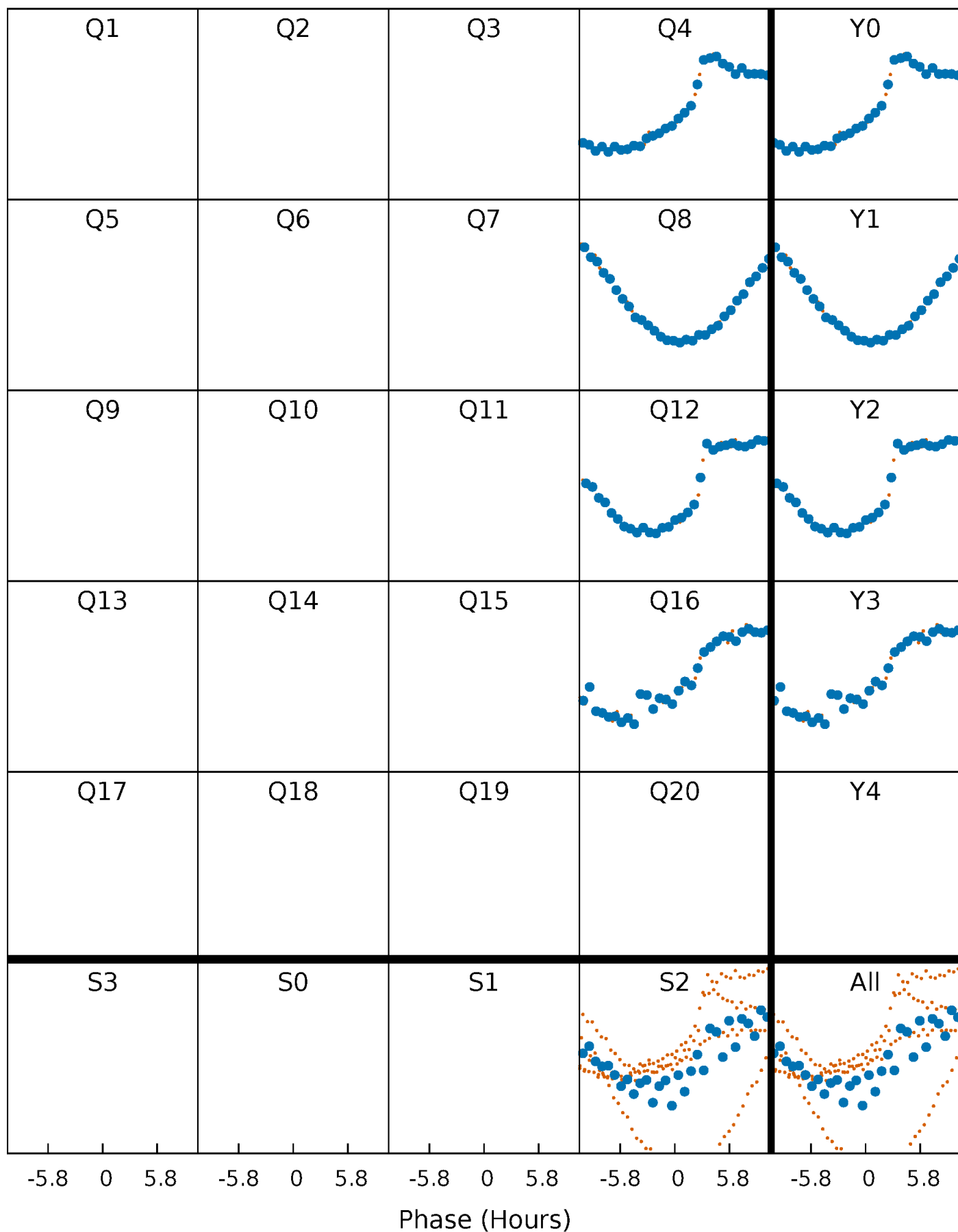


Non-Whitened Vs. Whitened Light Curve



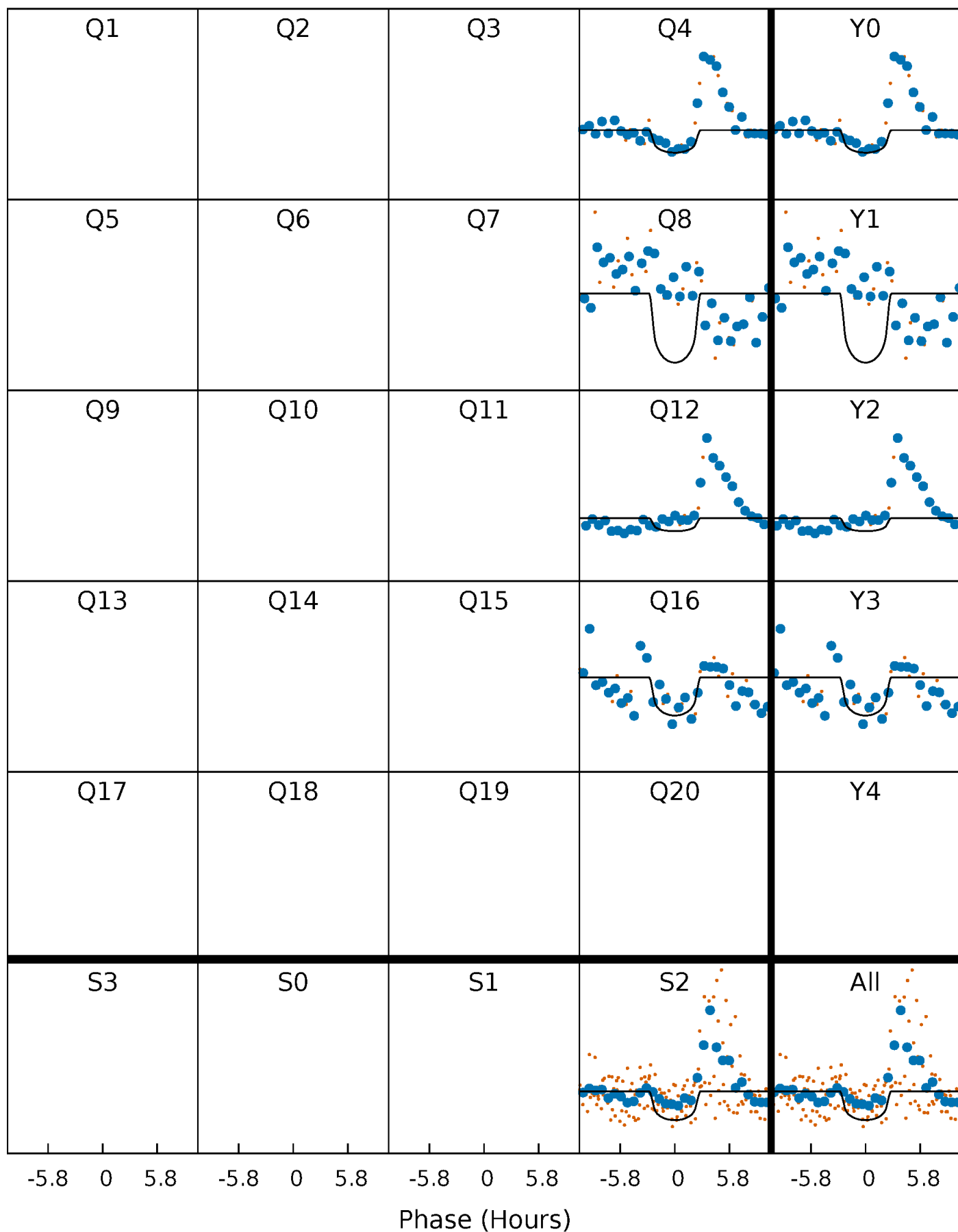
PDC Quarter-Phased Transit Curves

TCE 007347292-01 P=395.627906 Days $T_0=354.146159$ (BKJD)



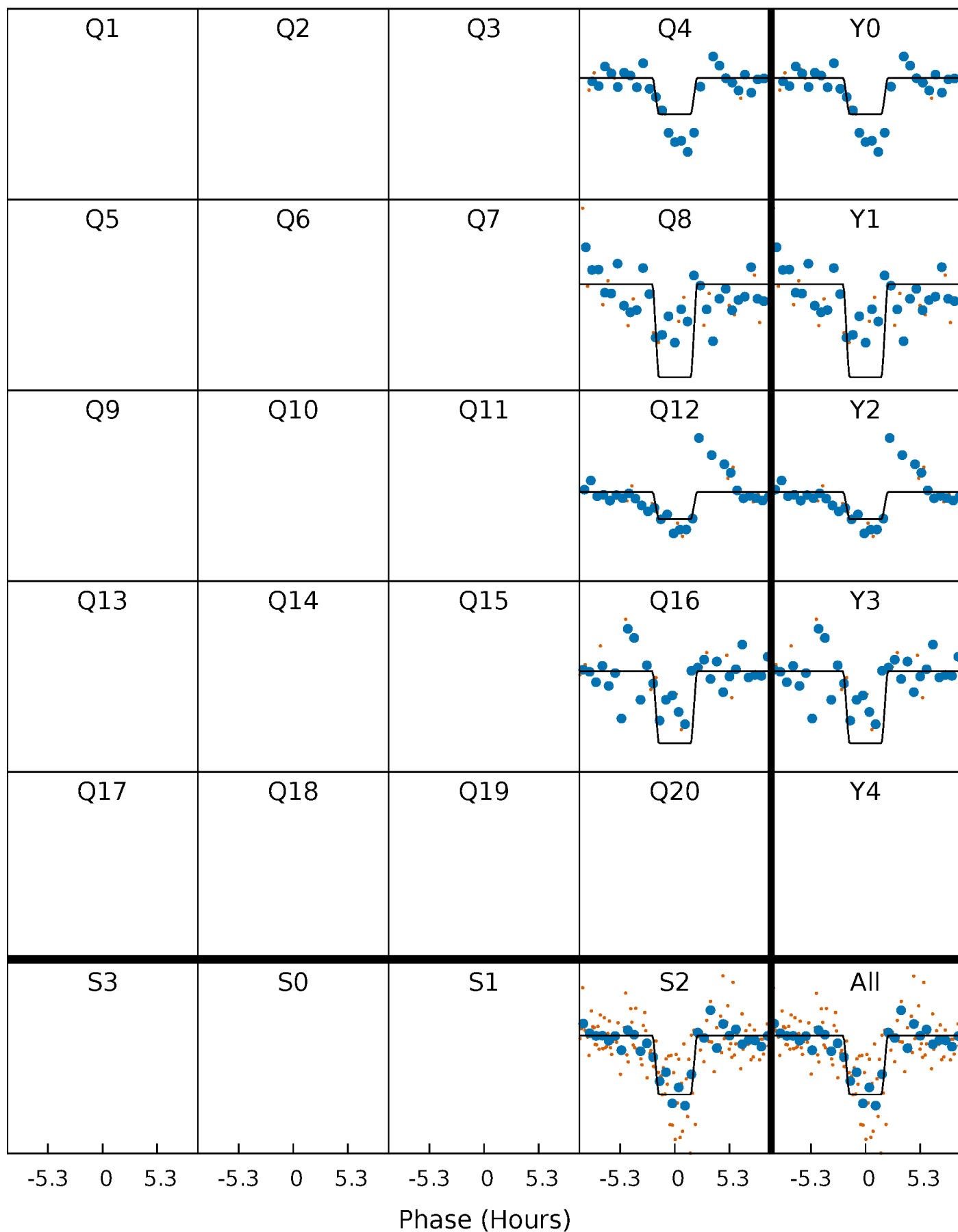
DV Quarter-Phased Transit Curves

TCE 007347292-01 $P=395.627906$ Days $T_0=354.146159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

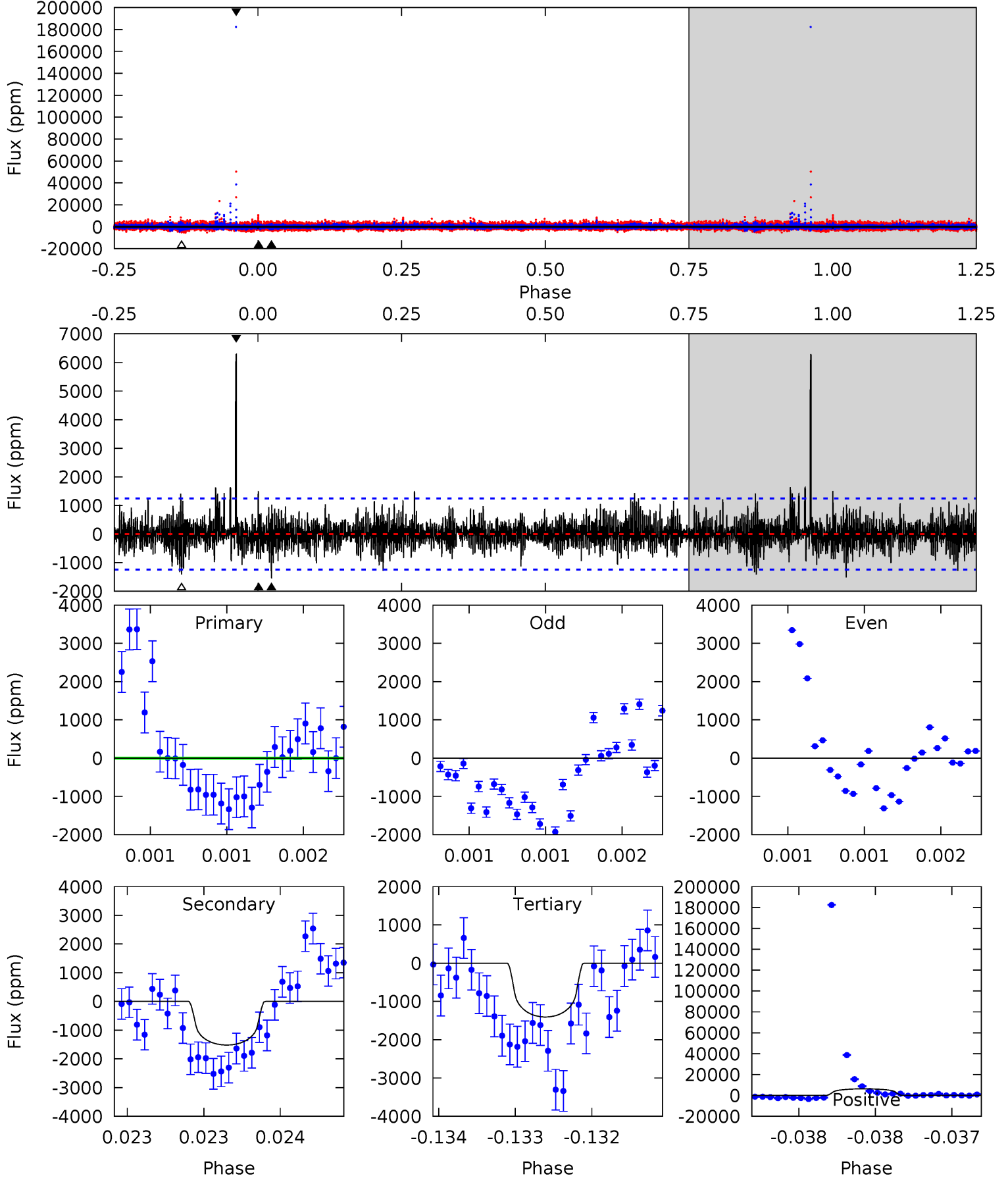
TCE 007347292-01 P=395.640694 Days $T_0=354.153074$ (BKJD)



DV Model-Shift Uniqueness Test

007347292-01, P = 395.627906 Days, E = 354.146159 Days

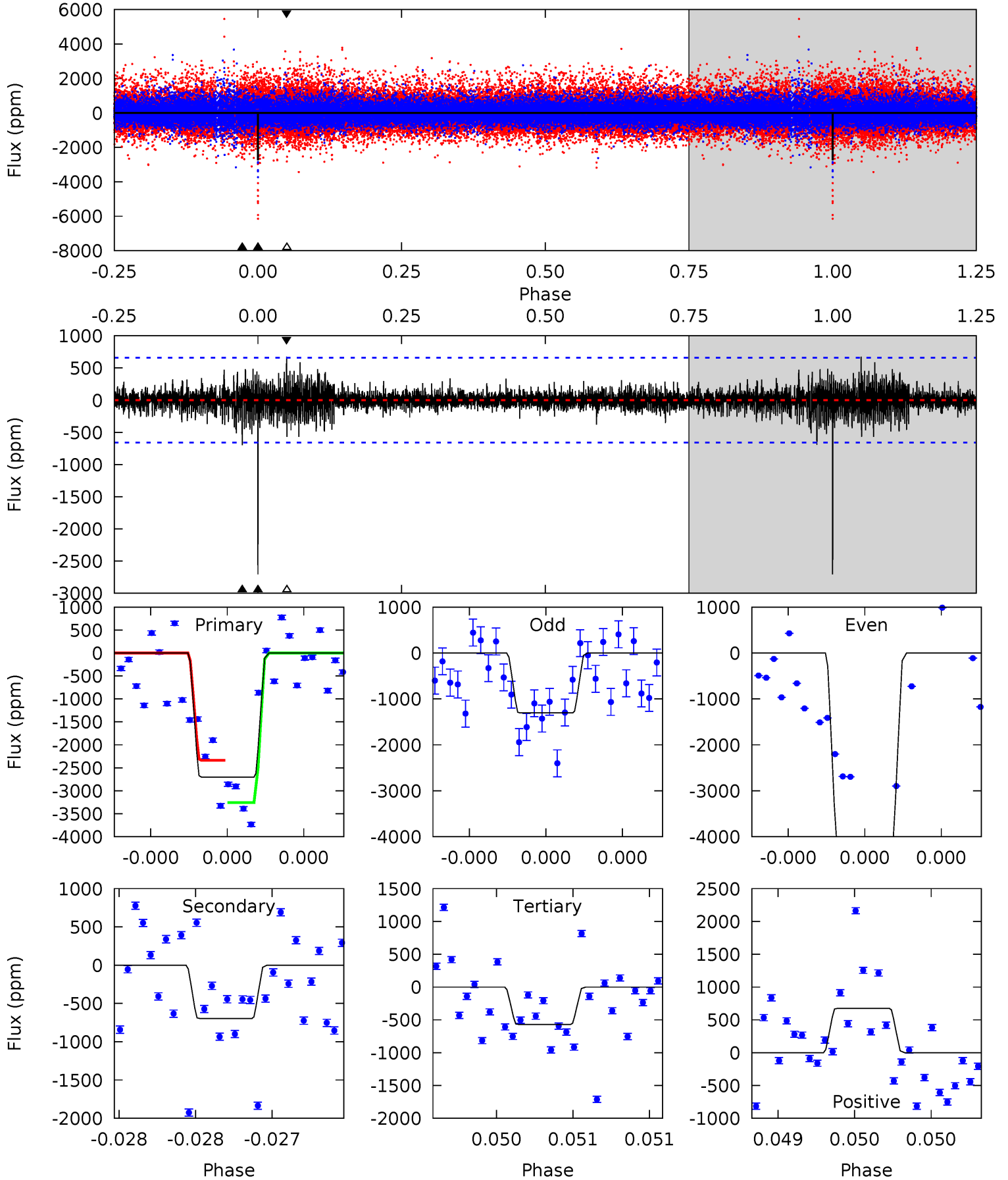
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.92	6.77	6.28	28.1	5.55	3.44	1.78	-2.36	-24.2	0.49	-21.3	0.36	0.90	0.81	0.17



Alt Model-Shift Uniqueness Test

007347292-01, P = 395.640694 Days, E = 354.153074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	5.91	4.83	5.71	5.59	3.51	0.96	18.1	17.2	1.08	0.19	11.5	1.10	0.20	3.86



Stellar Parameters For KIC 007347292

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4733^{+171}_{-171}	$4.676^{+0.052}_{-0.032}$	$-0.920^{+0.300}_{-0.300}$	$0.574^{+0.046}_{-0.041}$	$0.570^{+0.053}_{-0.029}$	$4.245^{+0.890}_{-0.613}$
	+4%/-4%	+1%/-1%	+33%/-33%	+8%/-7%	+9%/-5%	+21%/-14%
Source	KIC0	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 007347292-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1517 ± 224	$3.62^{+3.14}_{-2.19}$	235^{+10}_{-9}	4055^{+2011}_{-750}	$48878^{+276789}_{-34293}$
Alt.	-696 ± 118	$4.19^{+2.84}_{-2.57}$	235^{+10}_{-10}	3400^{+1293}_{-489}	17384^{+94052}_{-11336}

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 $A_{obs} \gg 1.0$

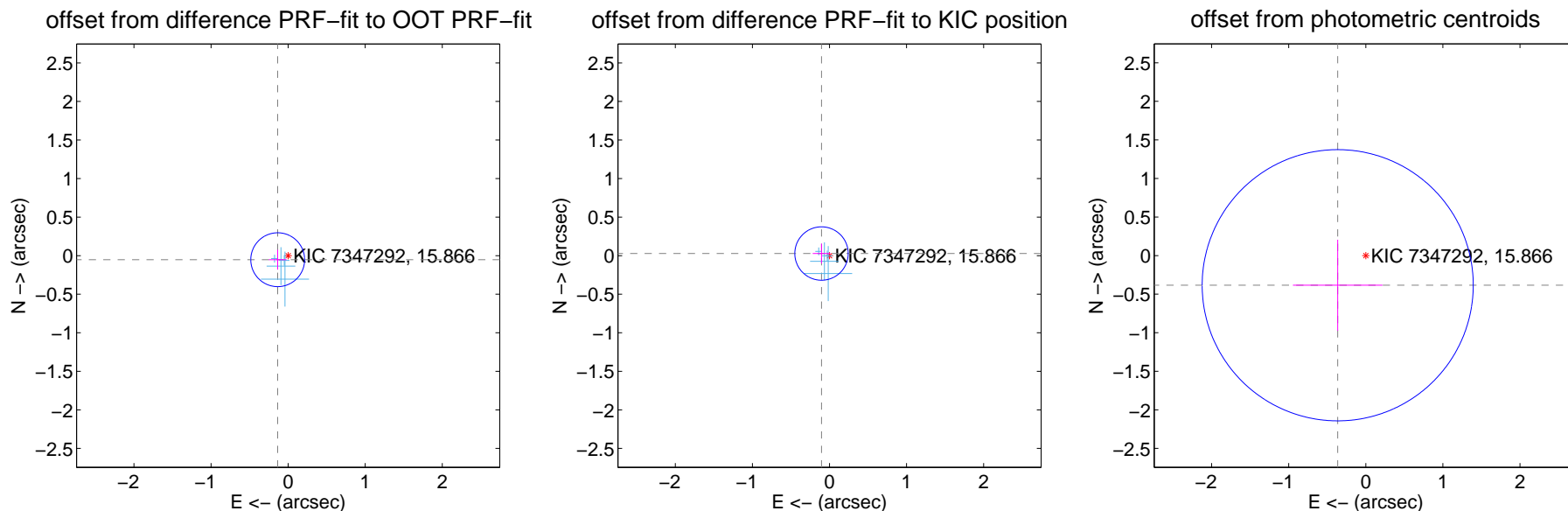
DV Centroid Data

Supplemental centroid analysis for 007347292-01. Kepler magnitude: 15.87. Transit SNR 6.48

There are 4 quarters with good PRF difference image offsets

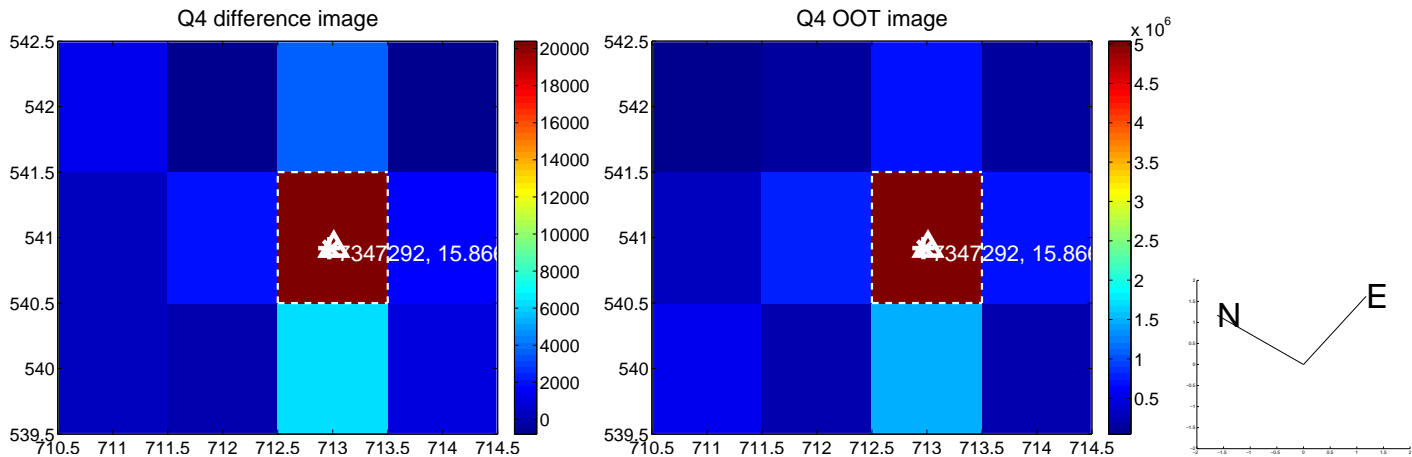
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.145 ± 0.116	1.25	0.135 ± 0.114	-0.053 ± 0.129
PRF-fit source offset from KIC position	0.107 ± 0.115	0.93	0.104 ± 0.114	0.028 ± 0.129
photometric centroid source offset	0.53 ± 0.59	0.90	0.36 ± 0.58	-0.38 ± 0.59

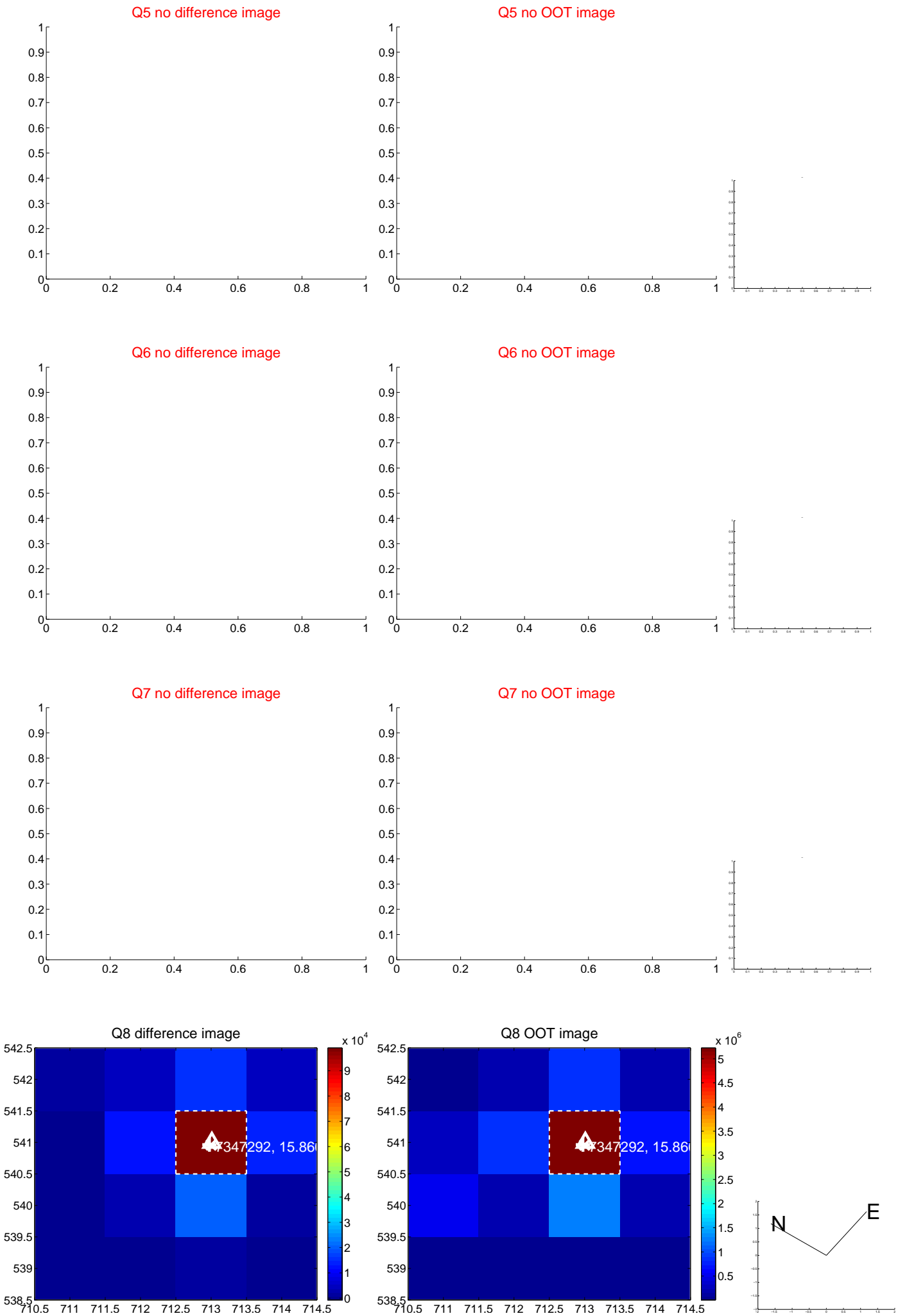


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

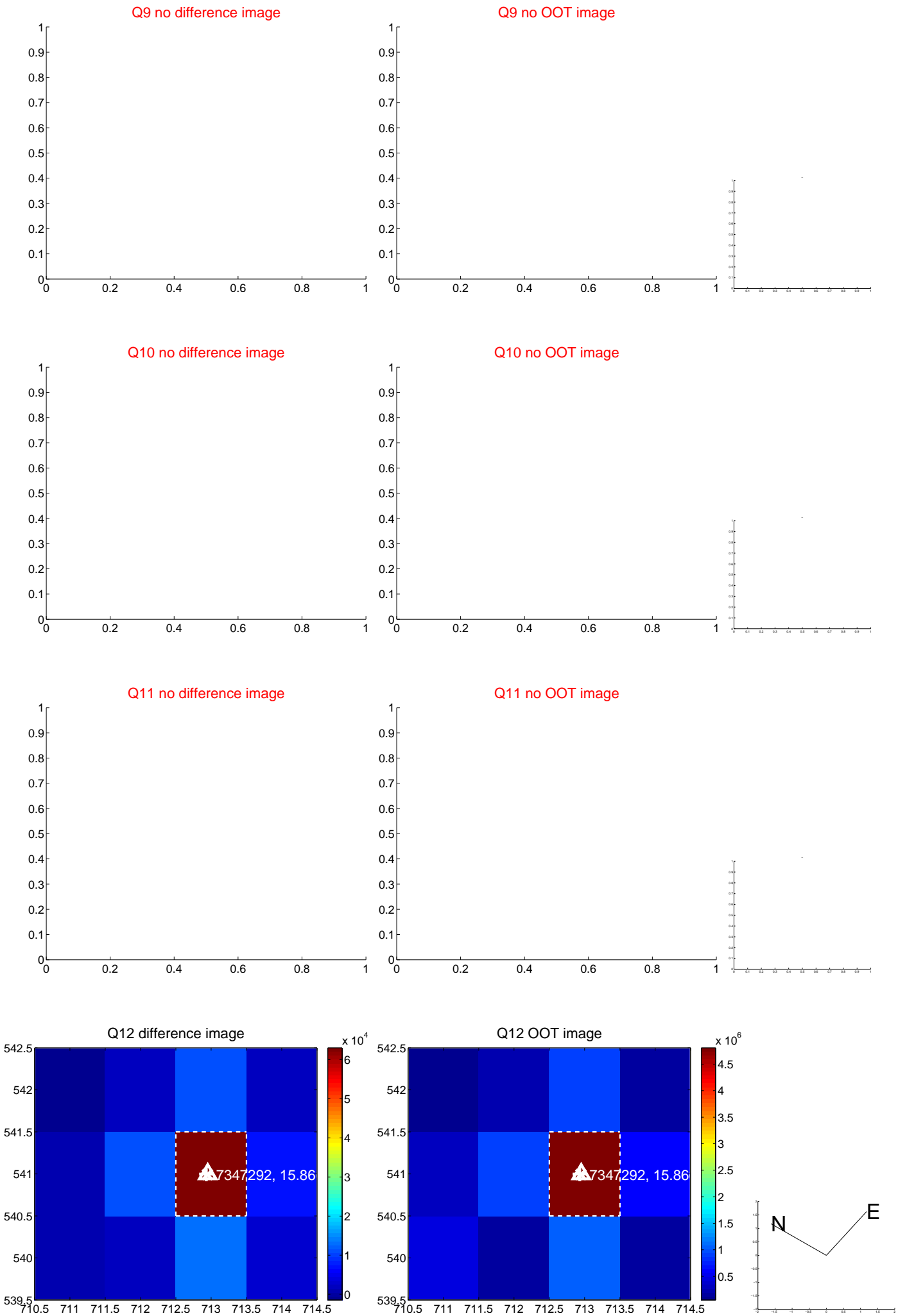
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



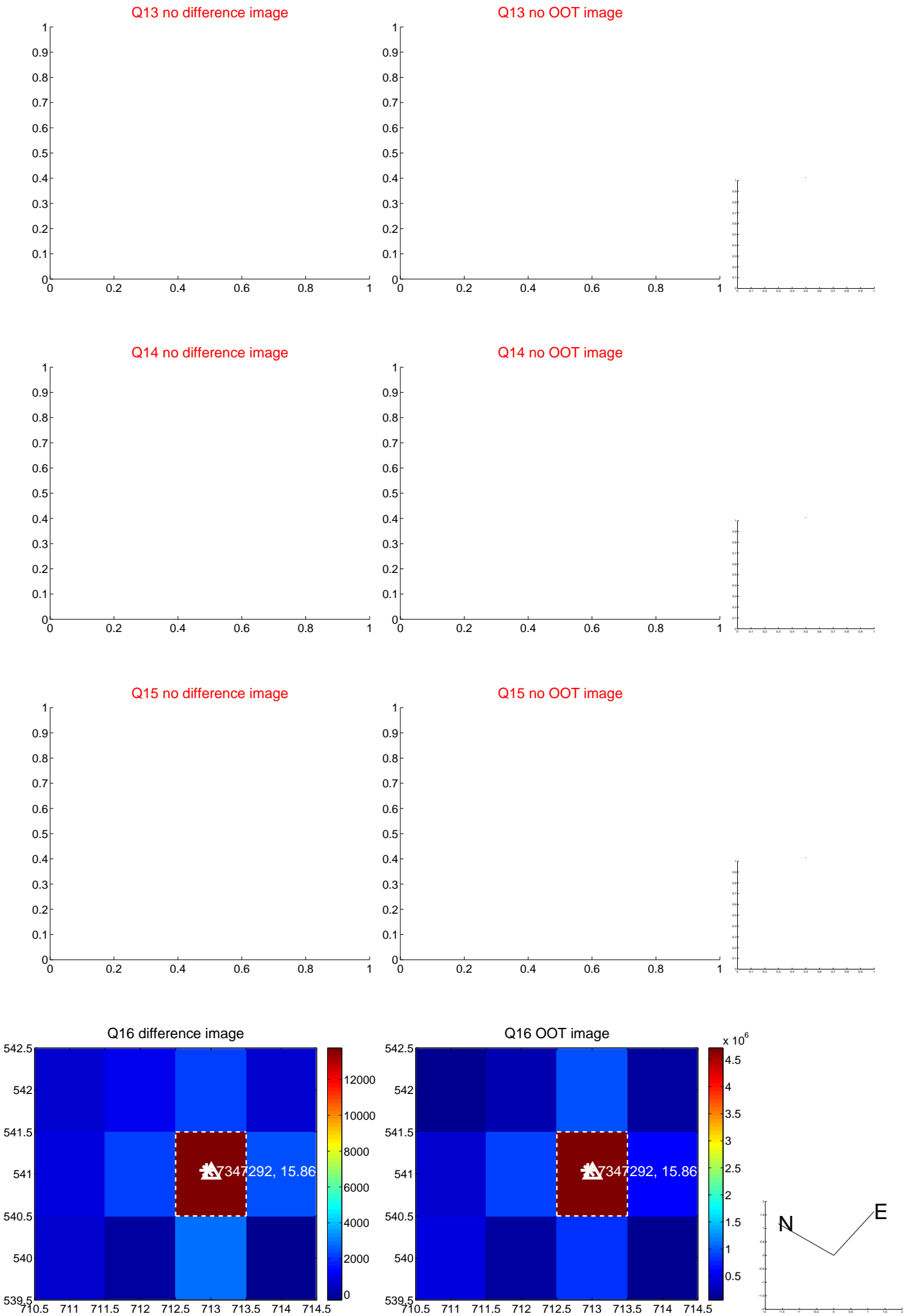
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



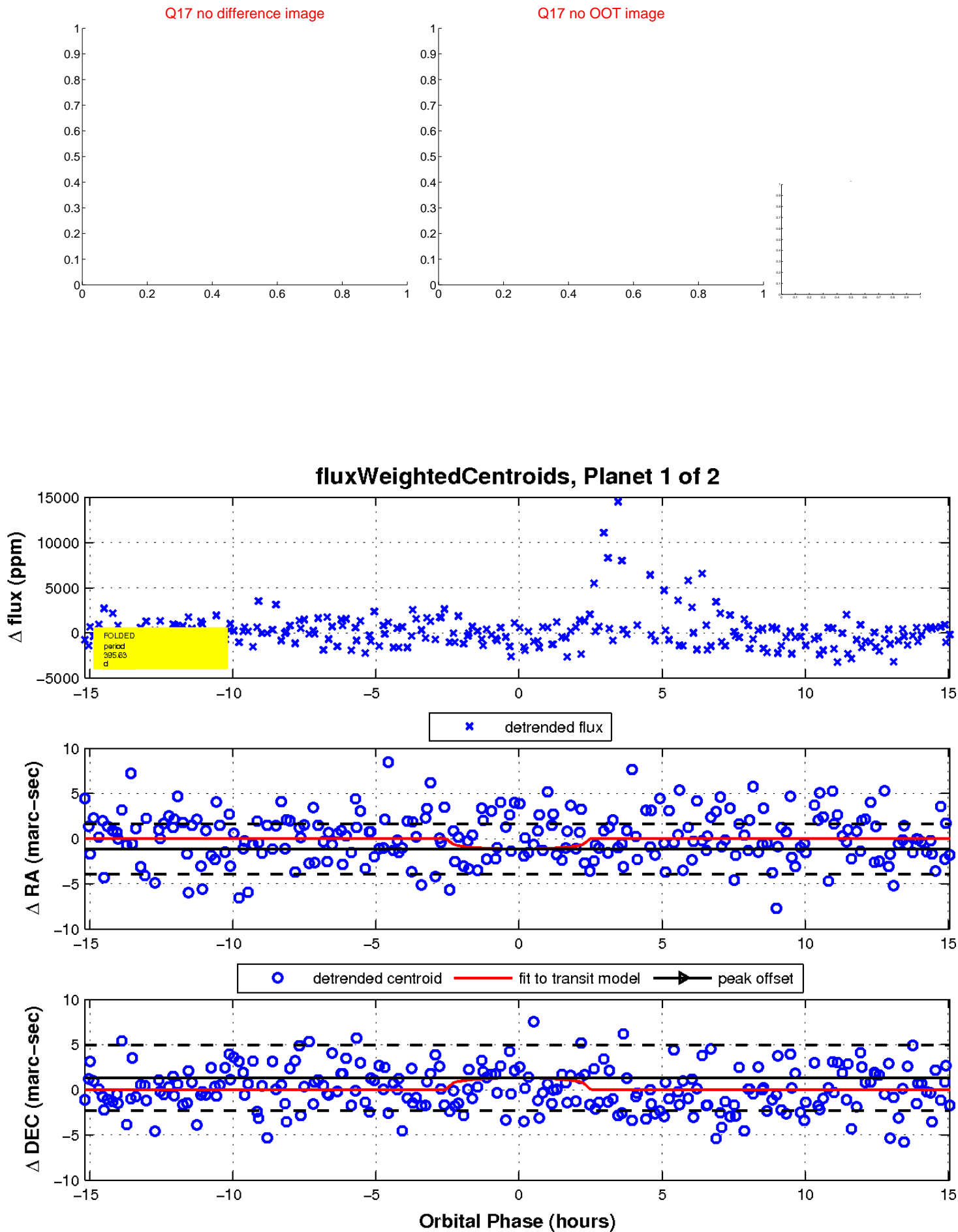
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

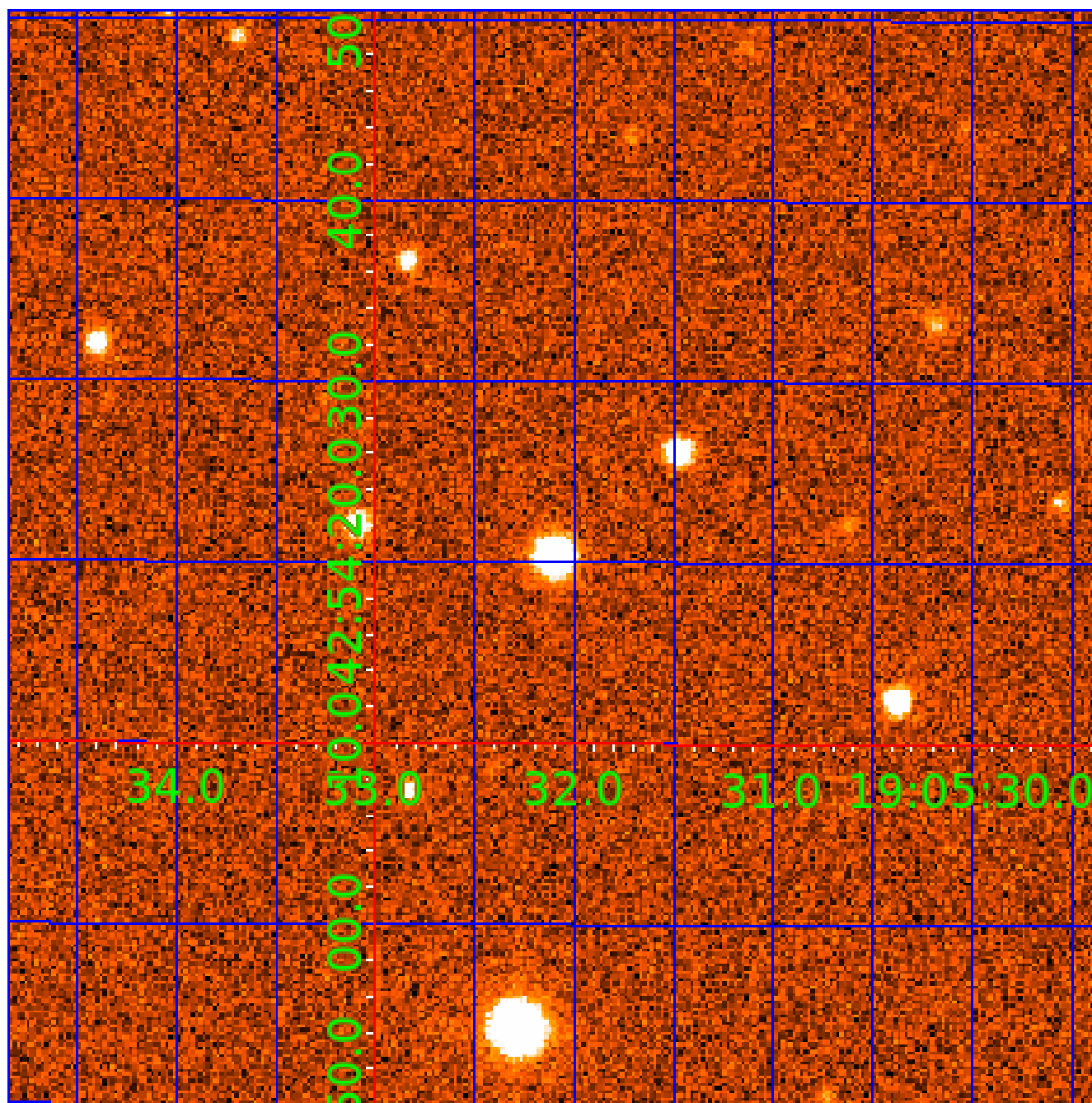


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007347292

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})
007347292-01	OBS	No	395.627906	354.146159	2295.2	5.065	13.2	6.5	0.57	4733	2.71	0.19
007347292-02	OBS	No	322.930737	414.331898	2268.2	3.500	9.2	-1.0	0.57	4733	2.66	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007347292-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007347292-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

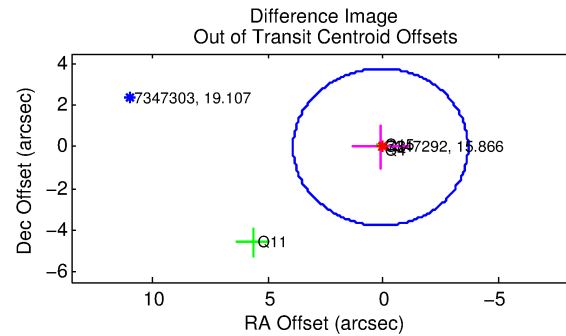
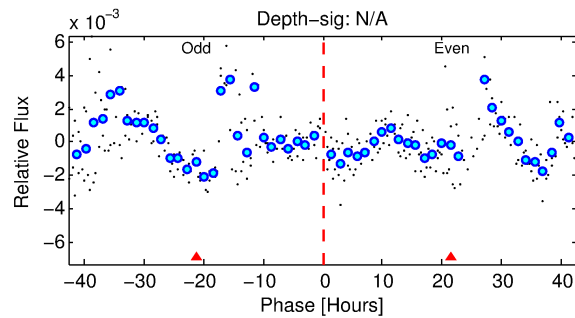
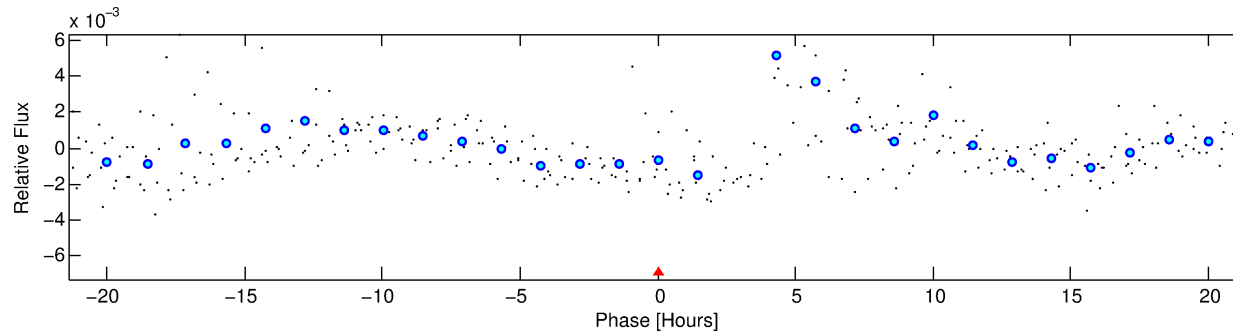
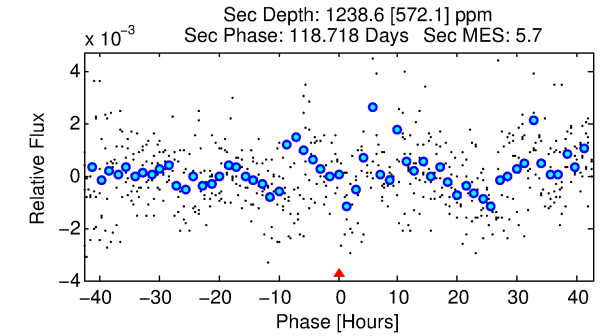
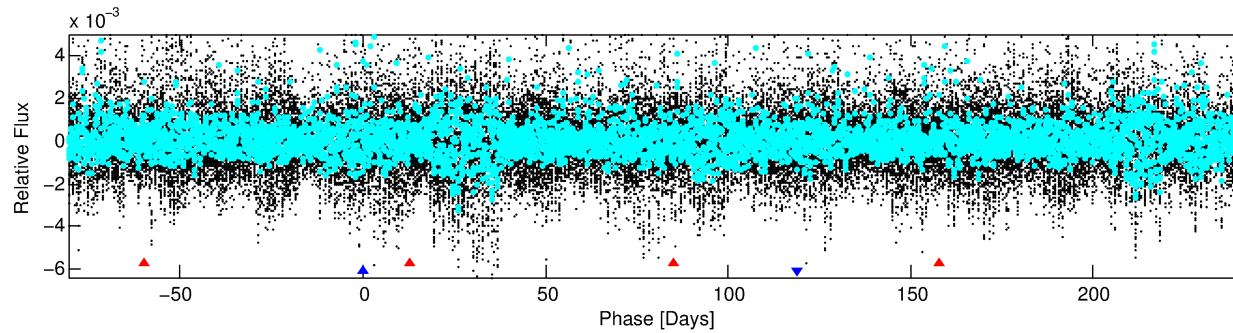
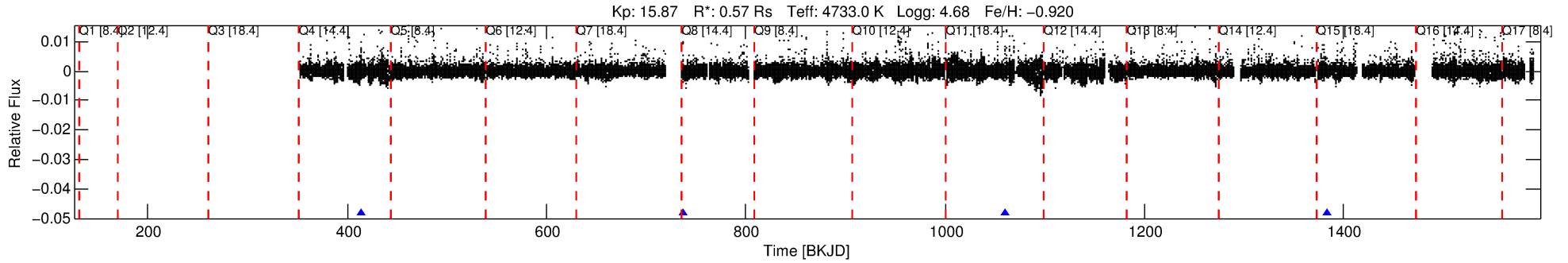
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007347292-02

No Significant Match Found

DV One-Page Summary

KIC: 7347292 Candidate: 2 of 2 Period: 322.931 d



TPS TCE Results:

Period = 322.93074 d
Epoch = 414.3319 BKJD

DV fit results are unavailable

DV Diagnostic Results:

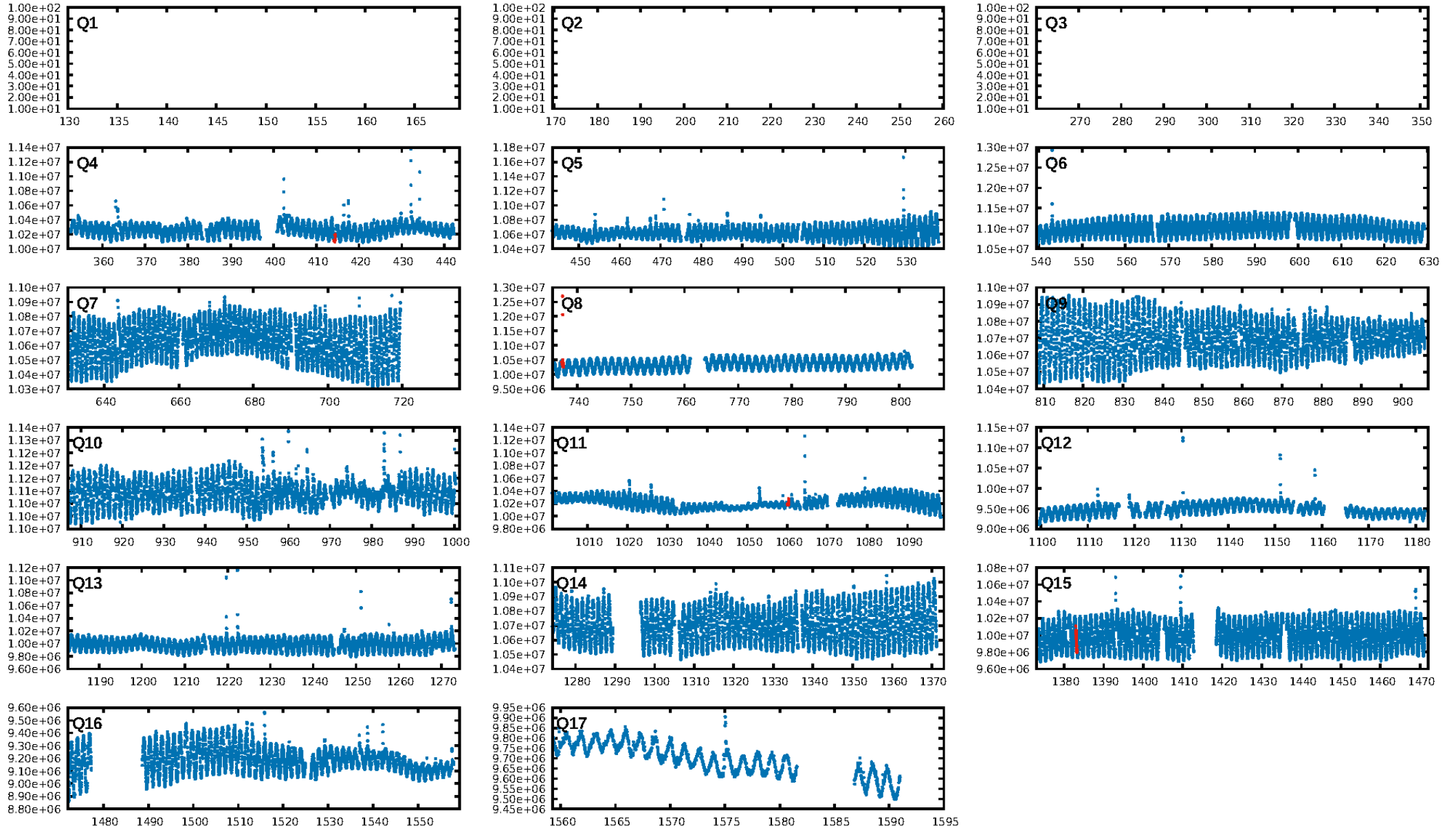
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [283.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.19e-07
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.6117

Centroid-sig: 5.6%
Centroid-so: 1.669 arcsec [1.28σ]
OotOffset-rm: 0.118 arcsec [0.09σ]
KicOffset-rm: 0.119 arcsec [0.64σ]
OotOffset-st: 0/2/2/0 [4]
KicOffset-st: 0/2/2/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

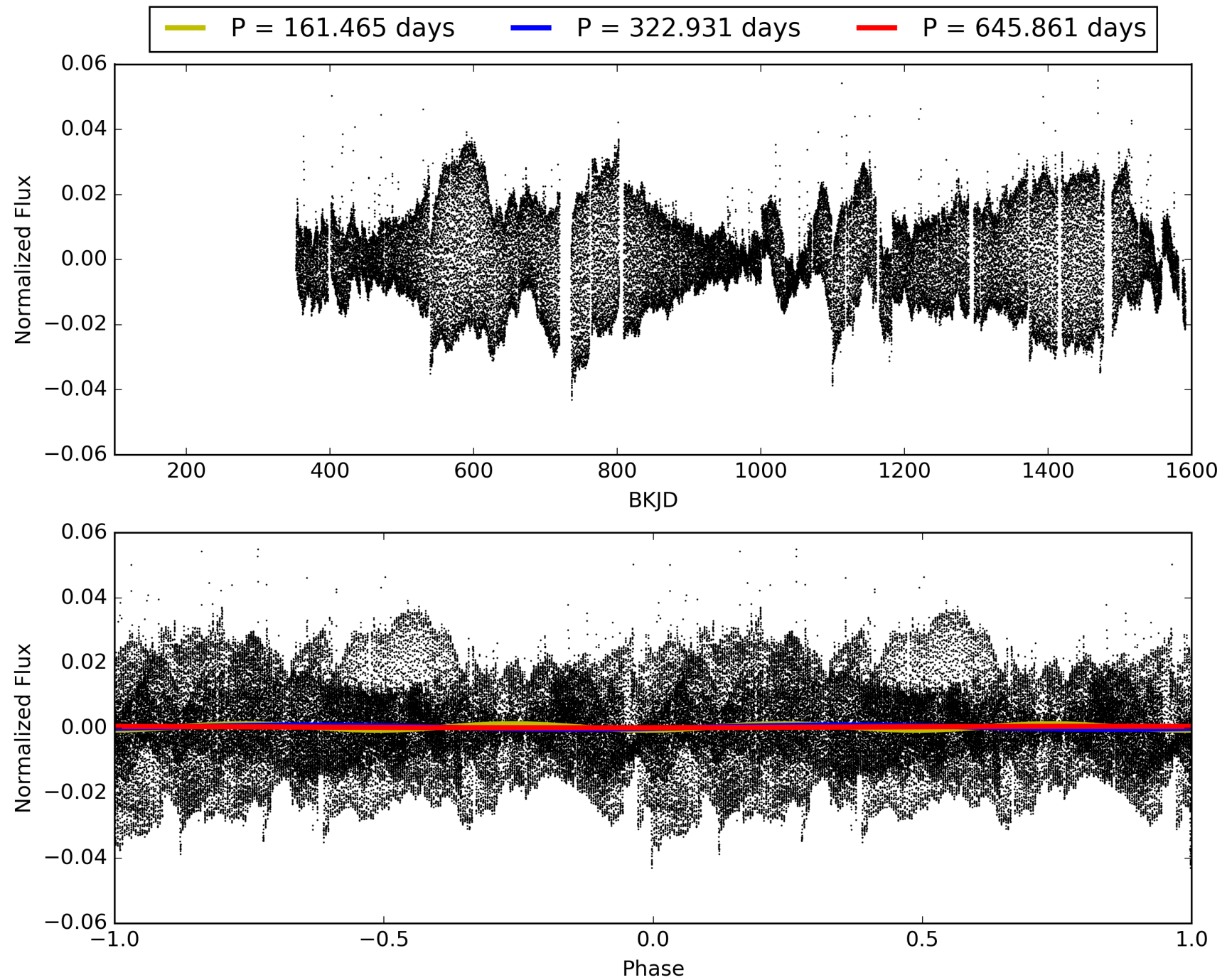
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:38:07 Z

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

TCE 007347292-02, PDC Light Curves

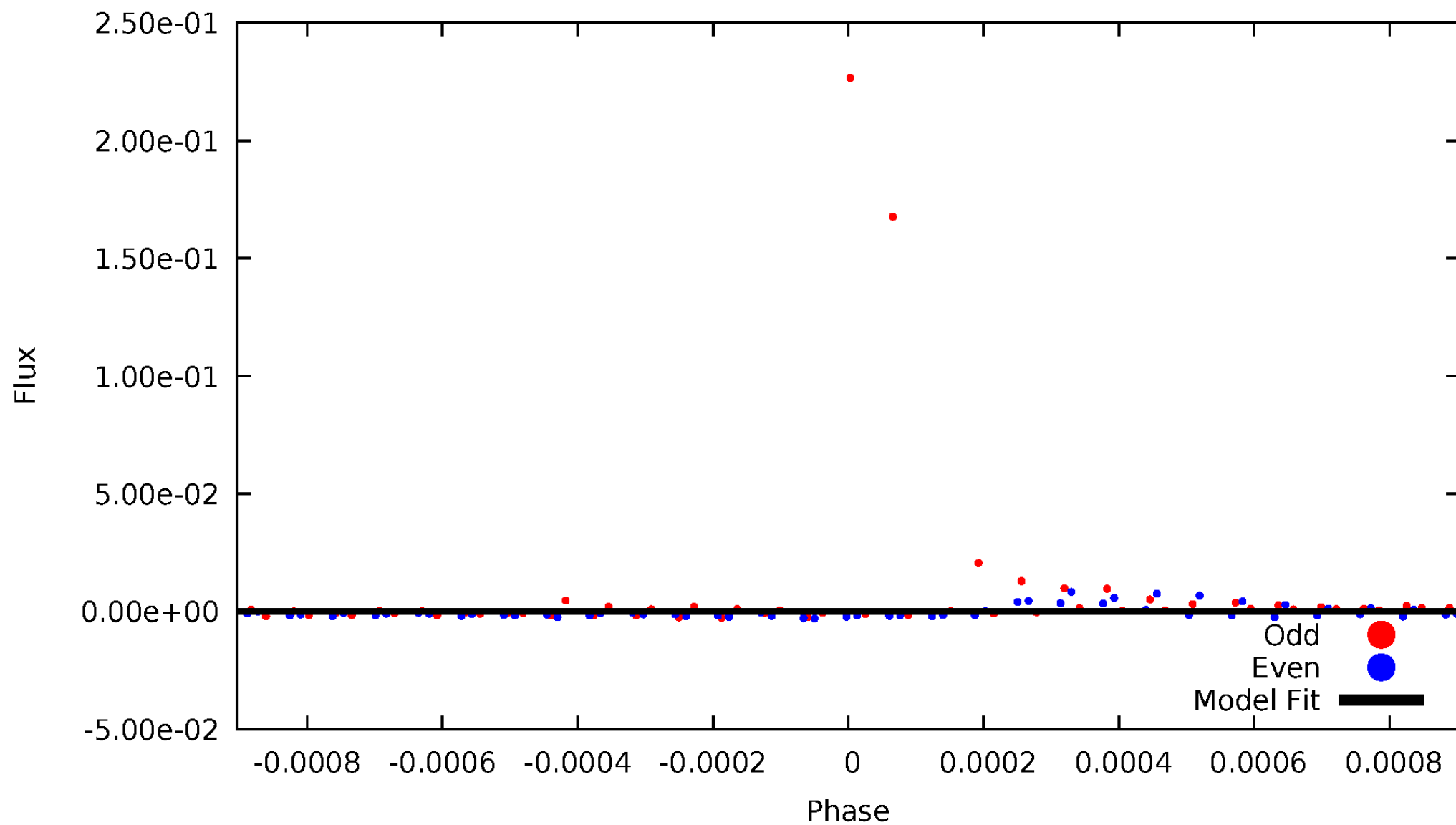


TCE 007347292-02



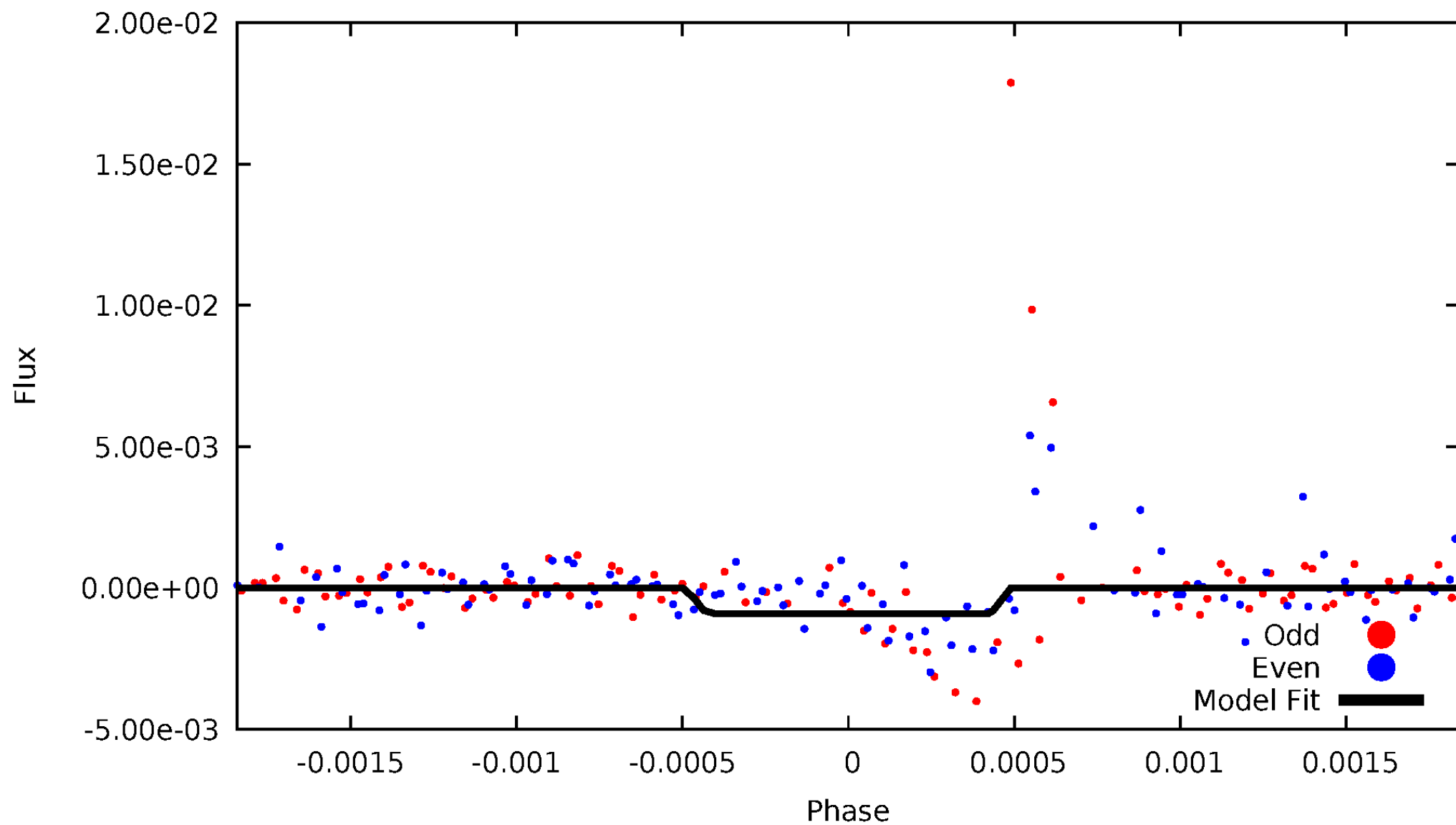
DV Odd/Even

TCE 007347292-02



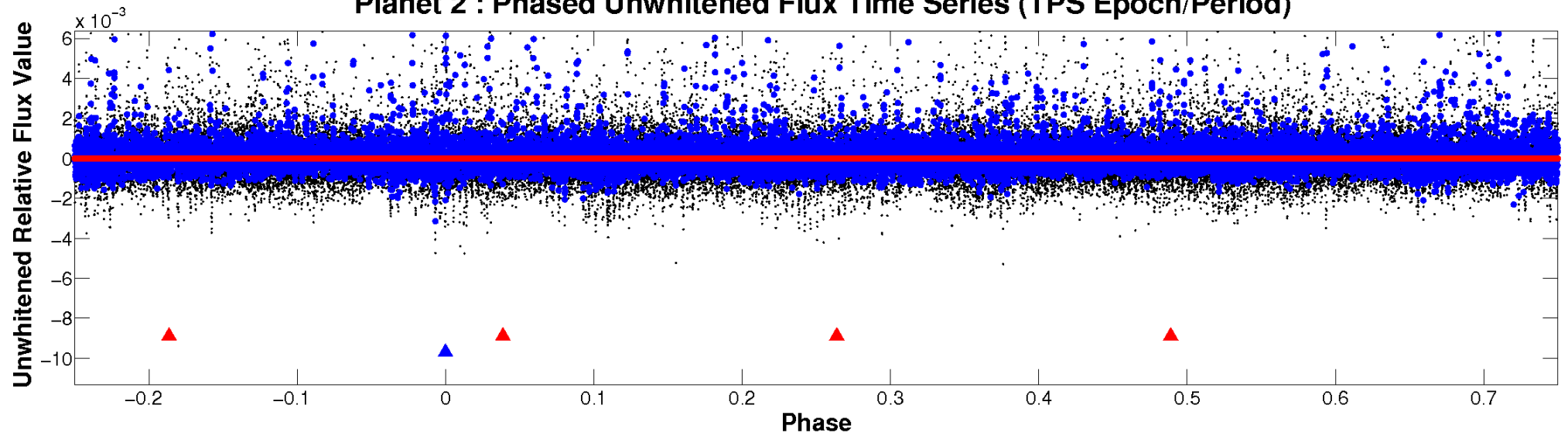
ALT Odd/Even

TCE 007347292-02



Non-Whitened Vs. Whitened Light Curve

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

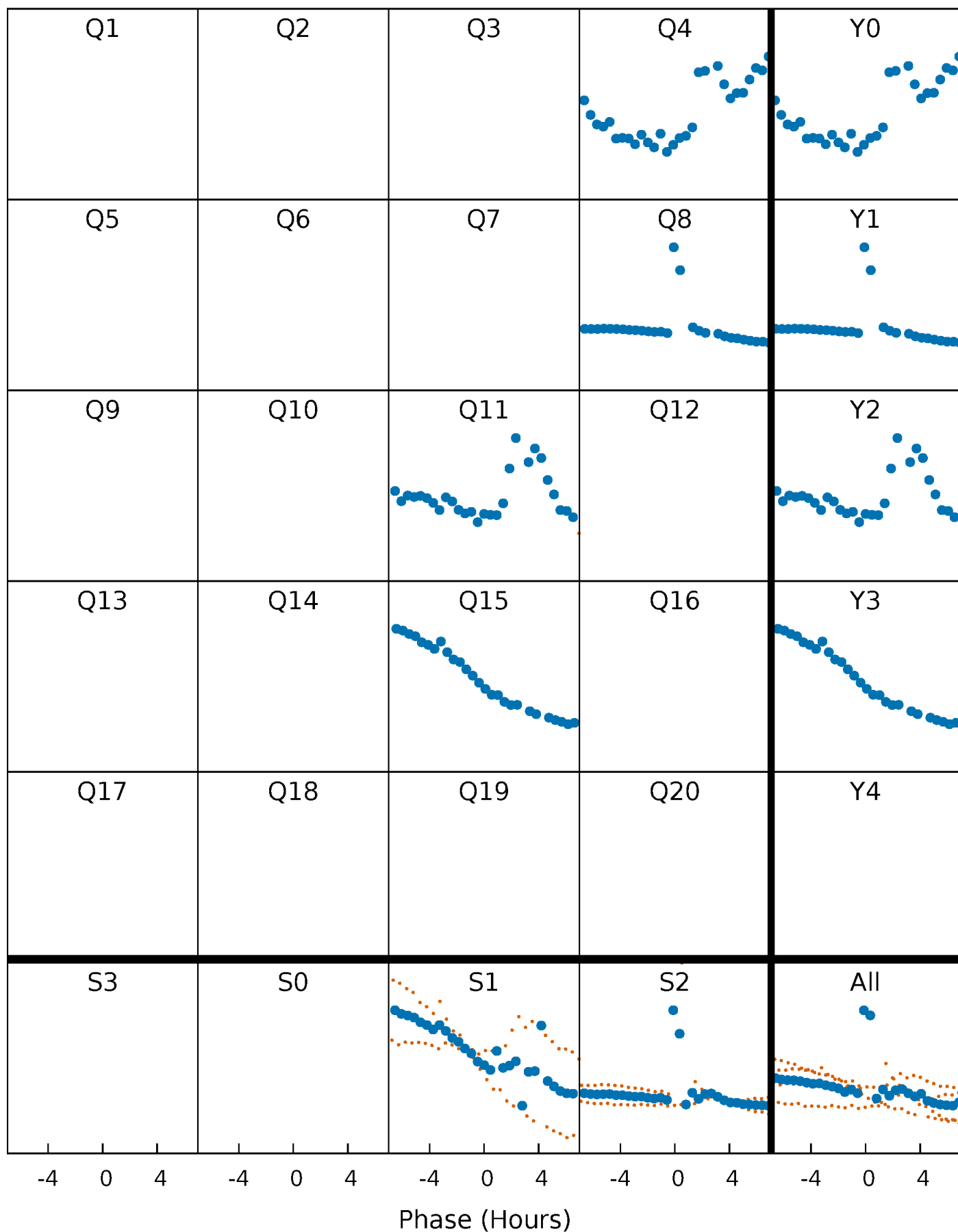


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



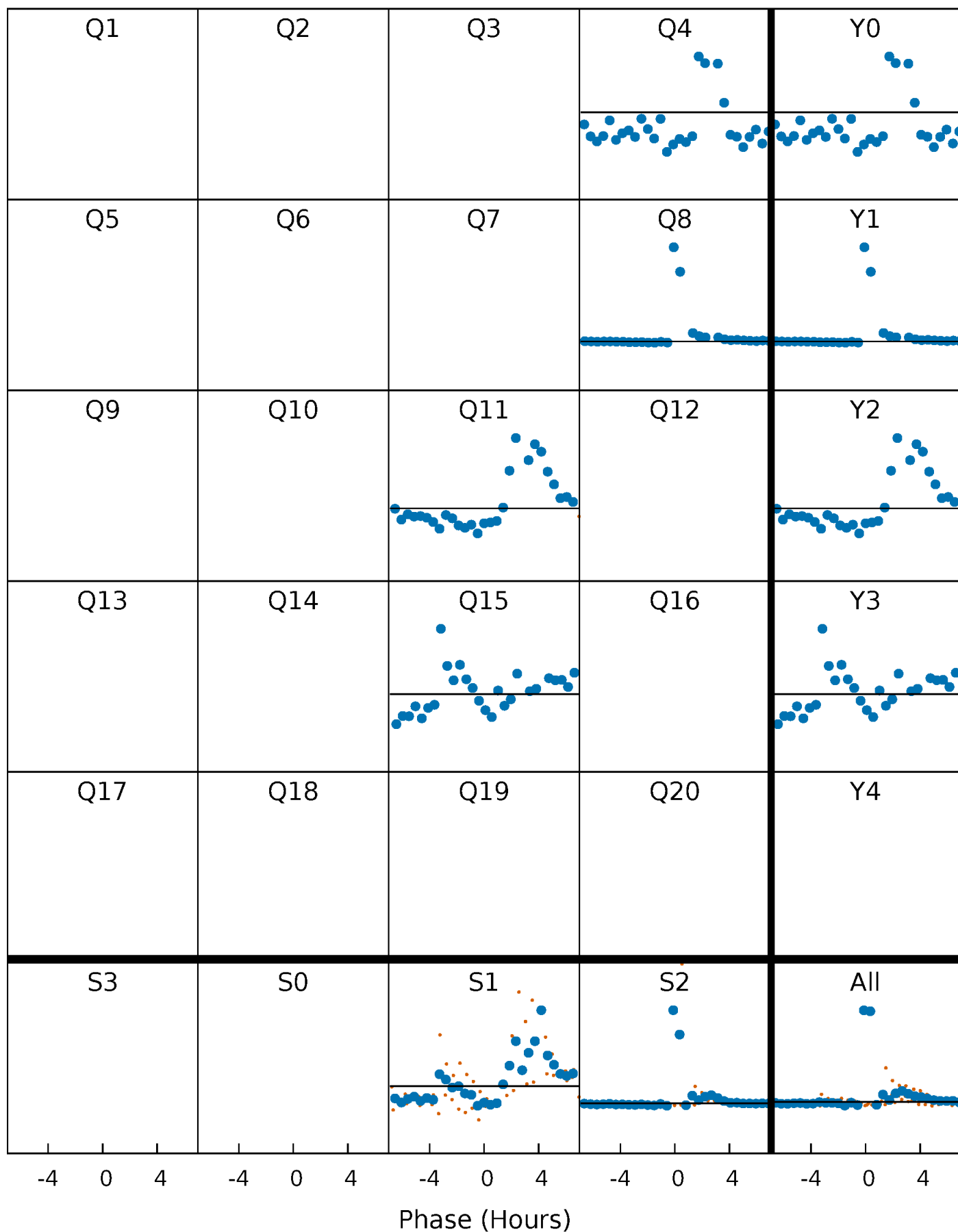
PDC Quarter-Phased Transit Curves

TCE 007347292-02 $P=322.930737$ Days $T_0=414.331898$ (BKJD)



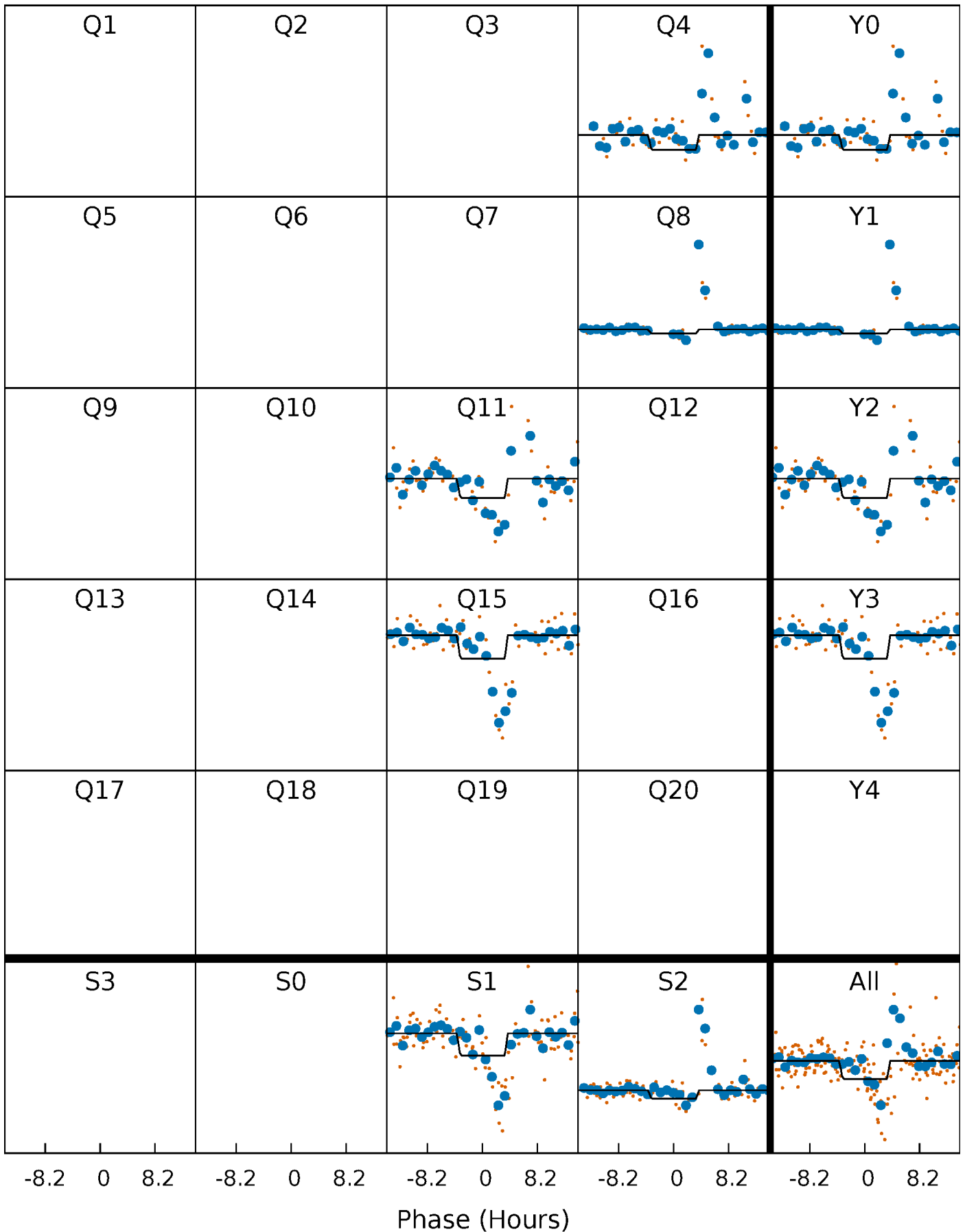
DV Quarter-Phased Transit Curves

TCE 007347292-02 $P=322.930737$ Days $T_0=414.331898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

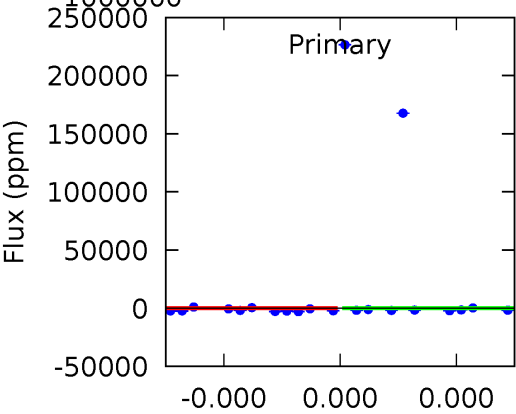
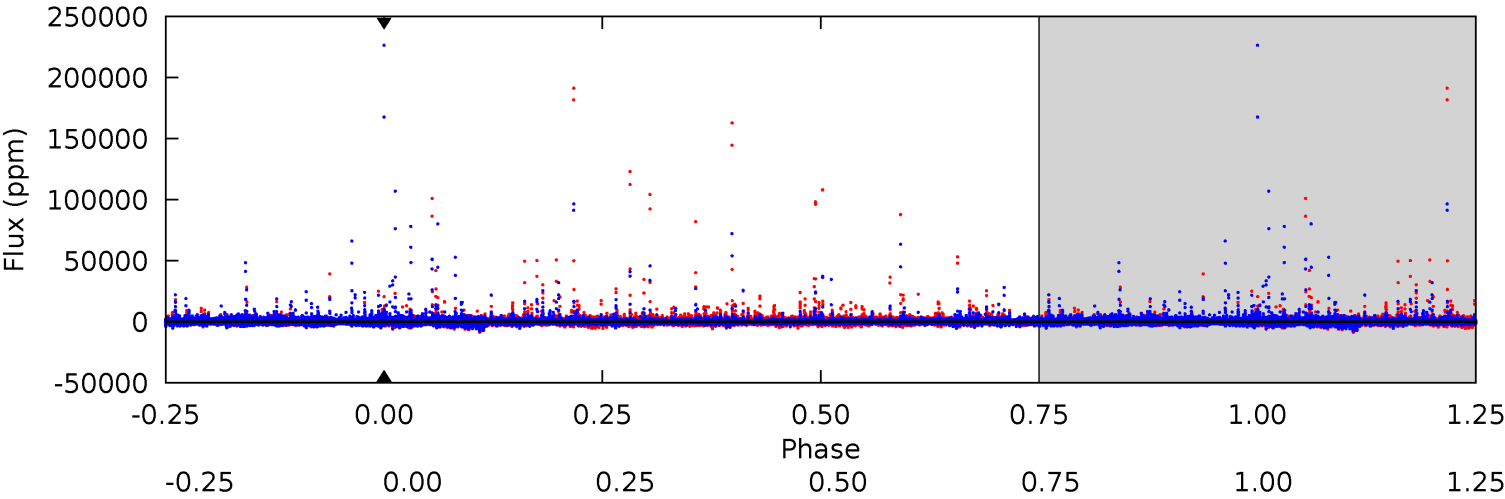
TCE 007347292-02 P=322.930737 Days $T_0=414.235875$ (BKJD)



DV Model-Shift Uniqueness Test

007347292-02, P = 322.930737 Days, E = 91.401161 Days

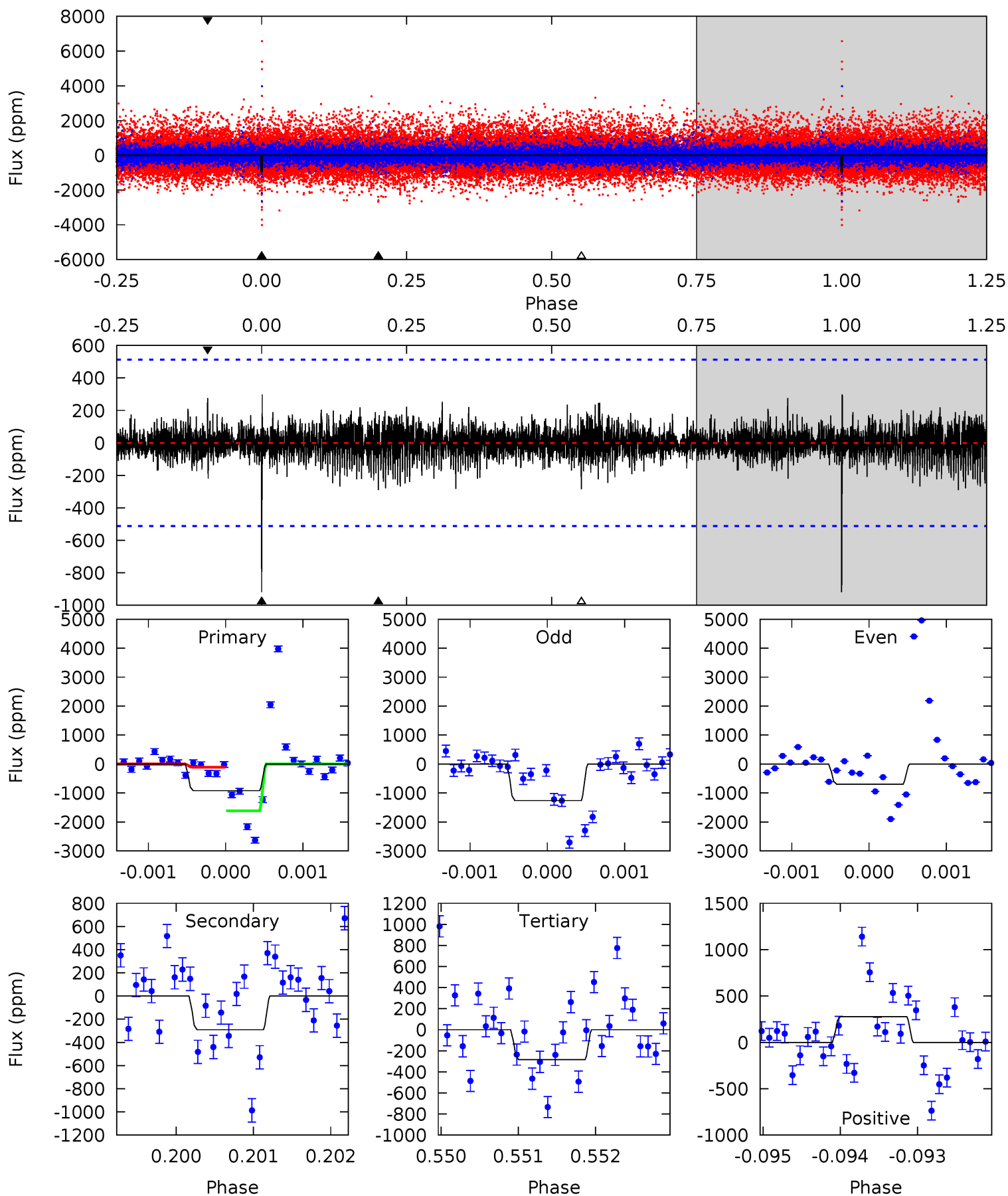
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007347292-02, $P = 322.930737$ Days, $E = 91.305138$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.79	3.10	3.03	2.94	5.46	3.30	0.70	6.76	6.85	0.07	0.16	2.95	0.80	0.25	8.02



Stellar Parameters For KIC 007347292

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4733^{+171}_{-171}	$4.676^{+0.052}_{-0.032}$	$-0.920^{+0.300}_{-0.300}$	$0.574^{+0.046}_{-0.041}$	$0.570^{+0.053}_{-0.029}$	$4.245^{+0.890}_{-0.613}$
	+4%/-4%	+1%/-1%	+33%/-33%	+8%/-7%	+9%/-5%	+21%/-14%
Source	KIC0	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 007347292-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$5.36^{+5.25}_{-3.67}$	252^{+10}_{-10}	4404^{+8452}_{-14443}	$53066^{+2361648}_{-1375239}$
Alt.	-291 ± 94	$5.26^{+4.85}_{-3.54}$	251^{+11}_{-9}	2799^{+1183}_{-442}	3270^{+28512}_{-2416}

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 $A_{obs} \gg 1.0$

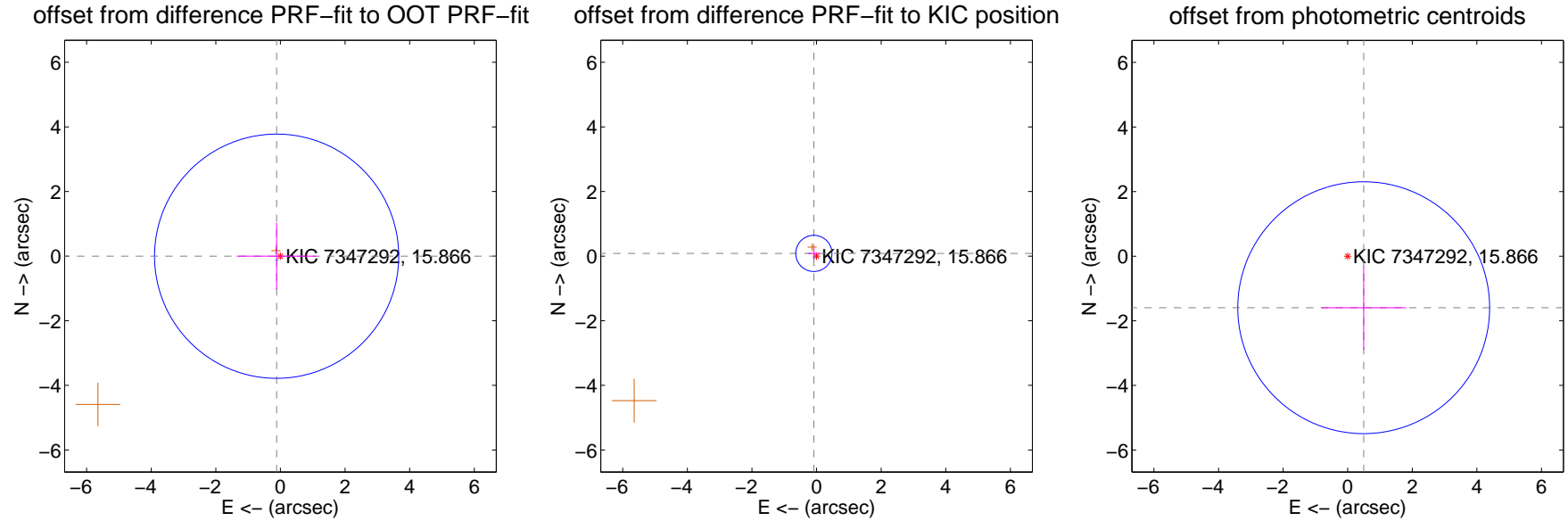
DV Centroid Data

Supplemental centroid analysis for 007347292-02. Kepler magnitude: 15.87. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

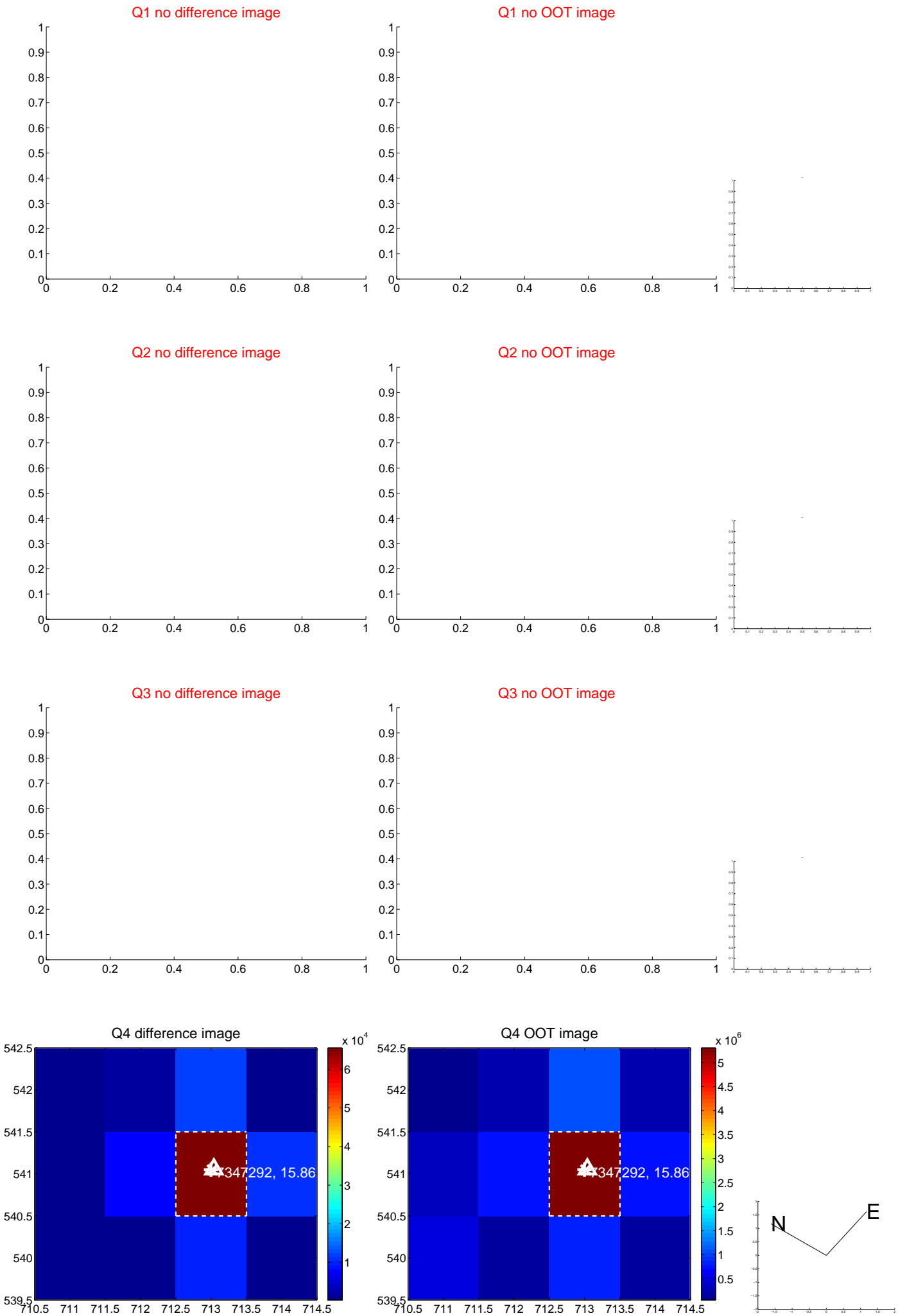
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 1.260	0.09	0.118 ± 1.237	-0.003 ± 1.036
PRF-fit source offset from KIC position	0.119 ± 0.187	0.64	0.084 ± 0.189	0.084 ± 0.184
photometric centroid source offset	1.67 ± 1.30	1.28	-0.49 ± 1.31	-1.59 ± 1.30

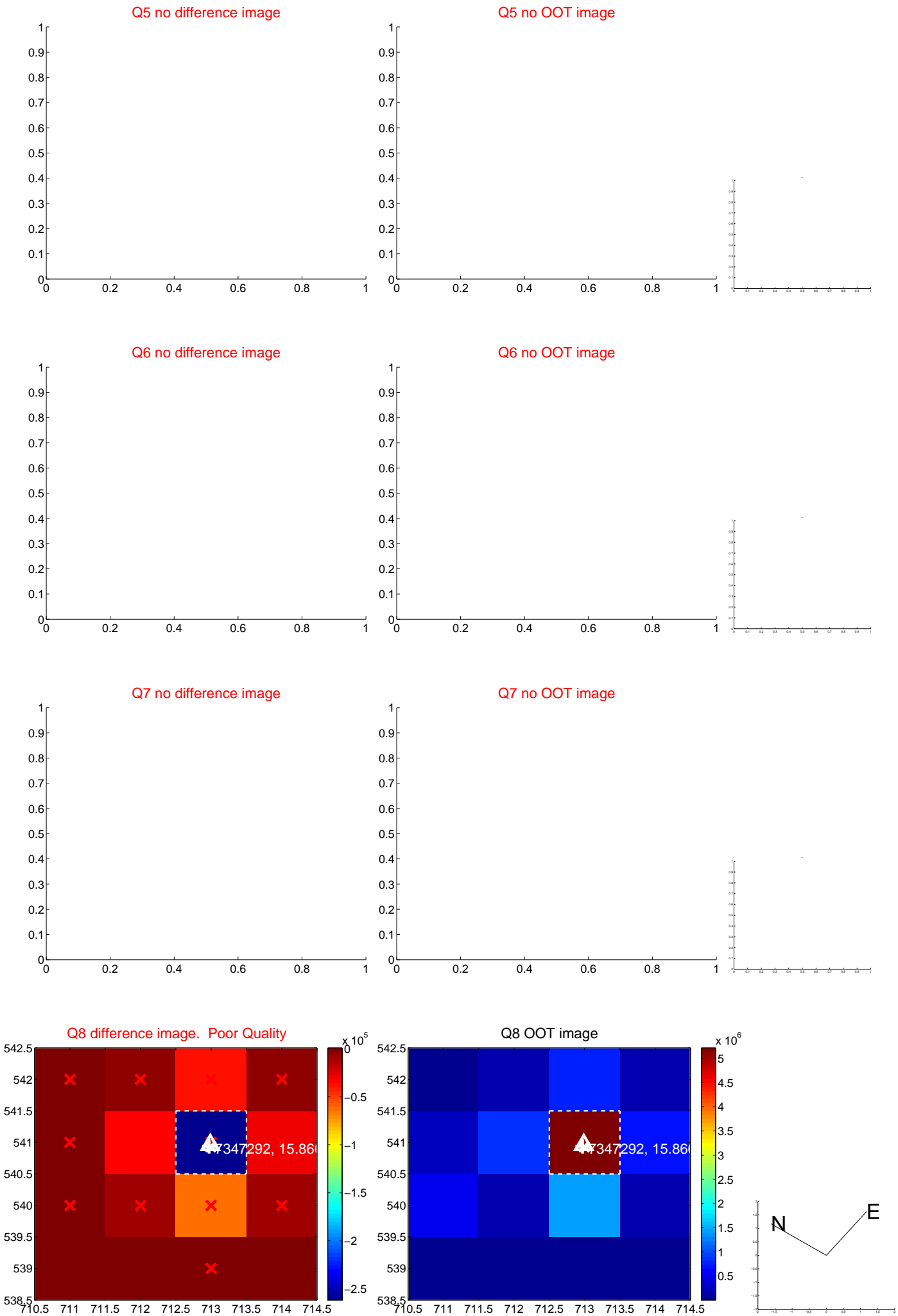


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



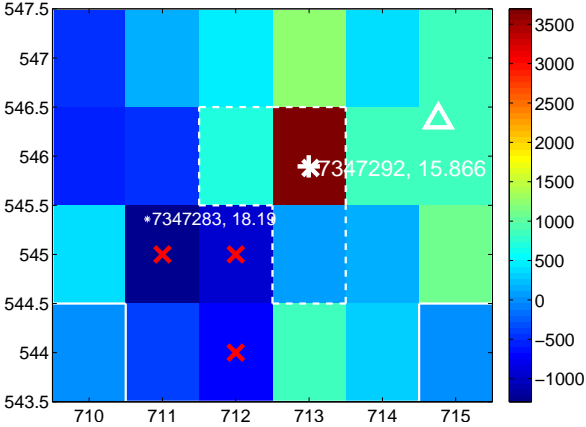
Q10 no difference image



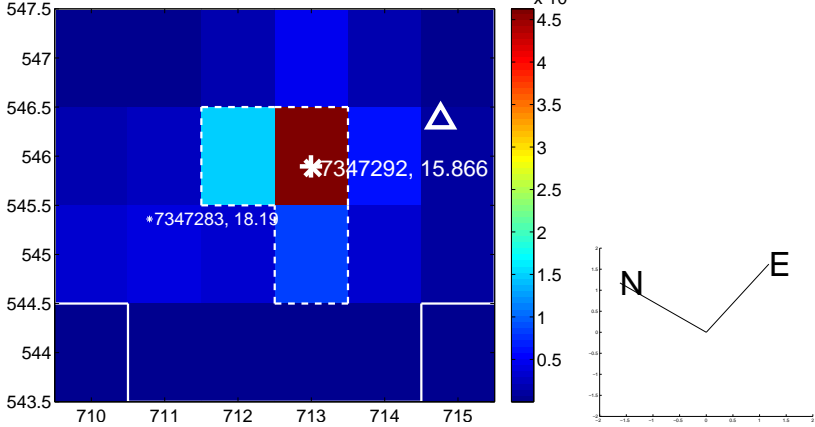
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



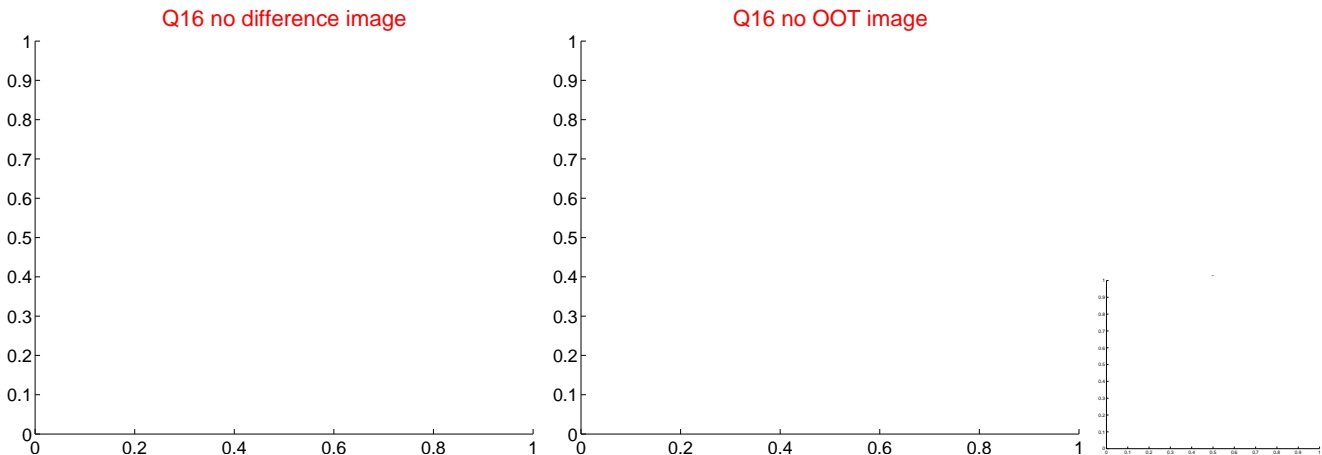
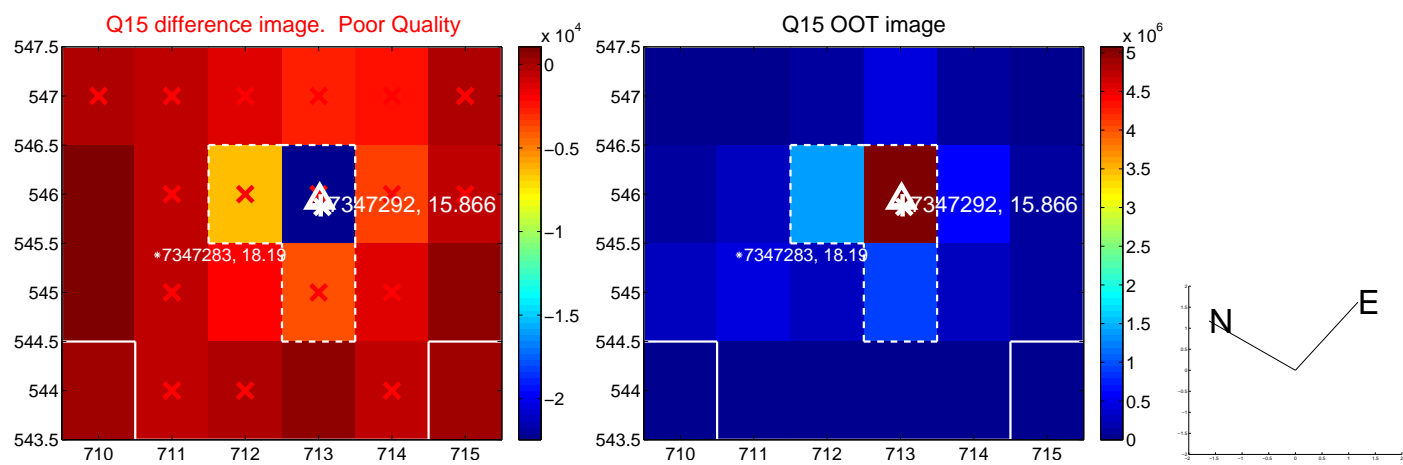
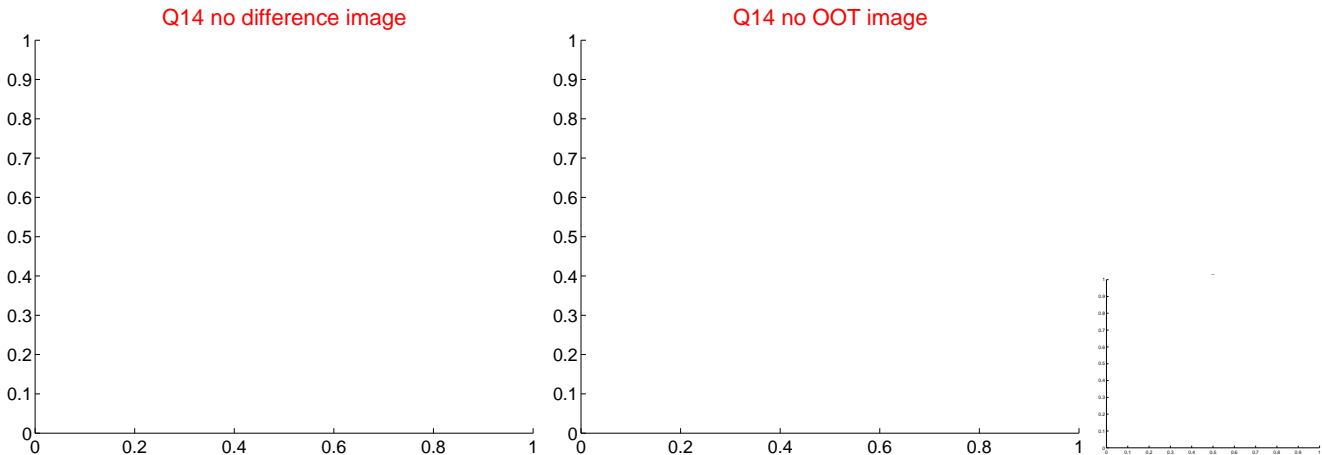
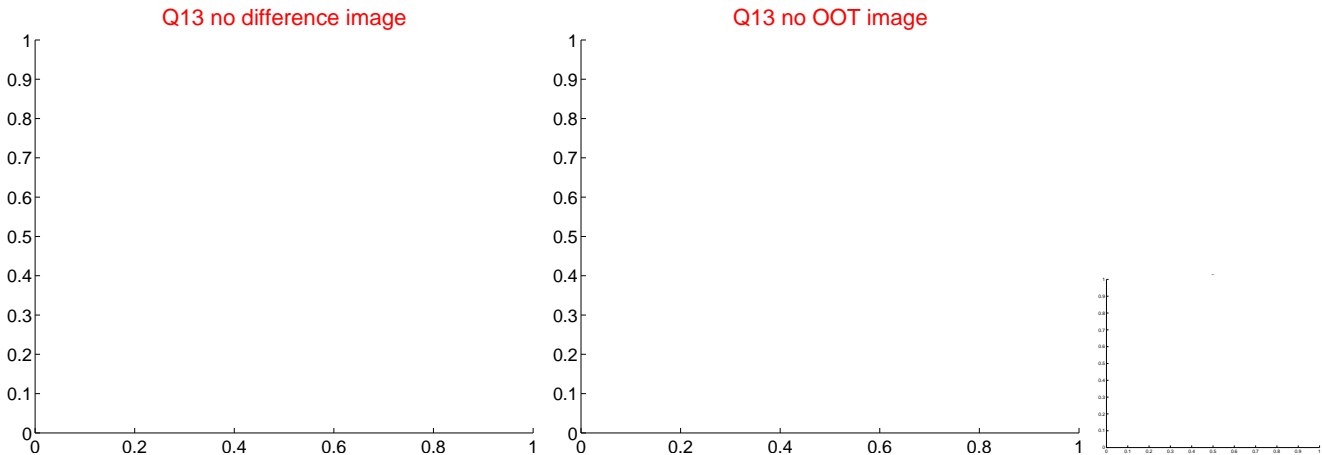
Q12 no difference image



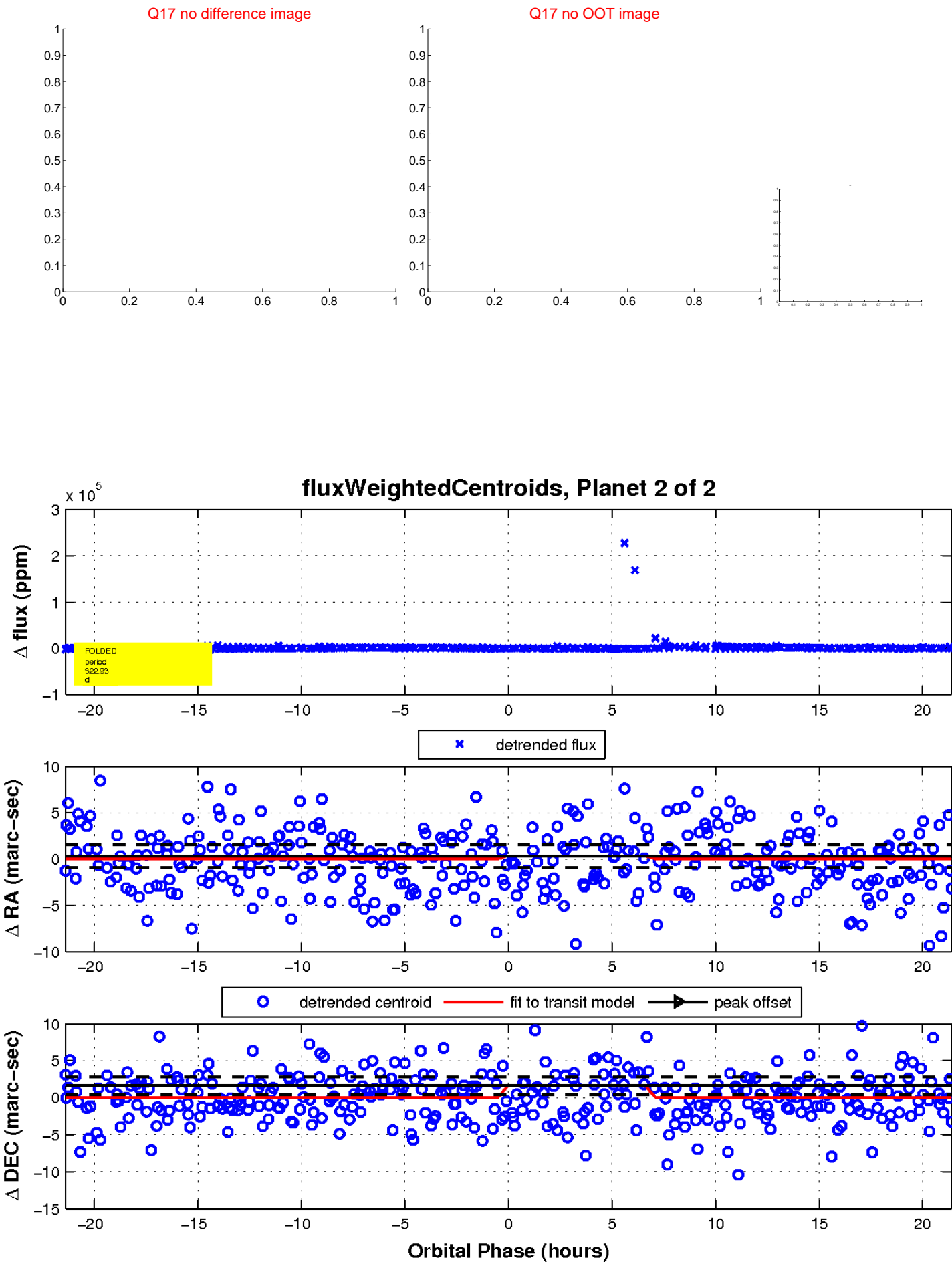
Q12 no OOT image



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

