

KIC 007132542

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})
007132542-01	OBS	3517.01	66.361559	185.847235	405637.1	12.000	10382.7	-1.0	0.86	5583	46.76	7.34
007132542-02	OBS	No	66.360920	168.380814	407669.9	20.547	10197.6	3769.5	0.86	5583	59.12	7.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007132542-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007132542-02	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 007132542-01

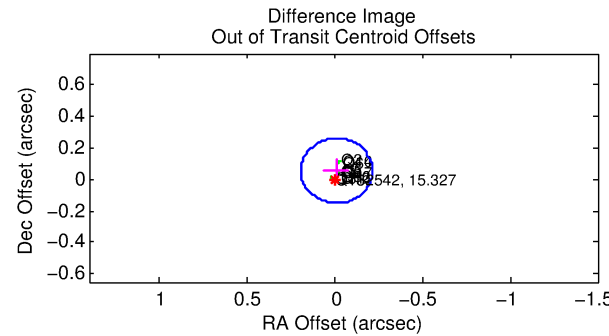
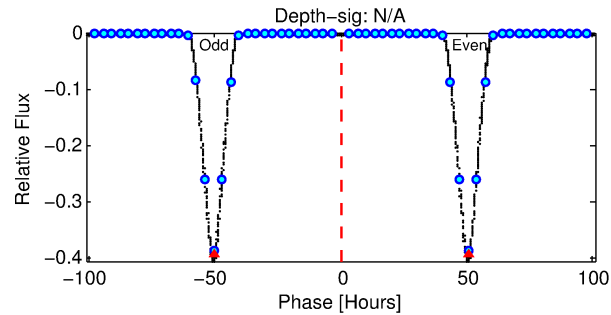
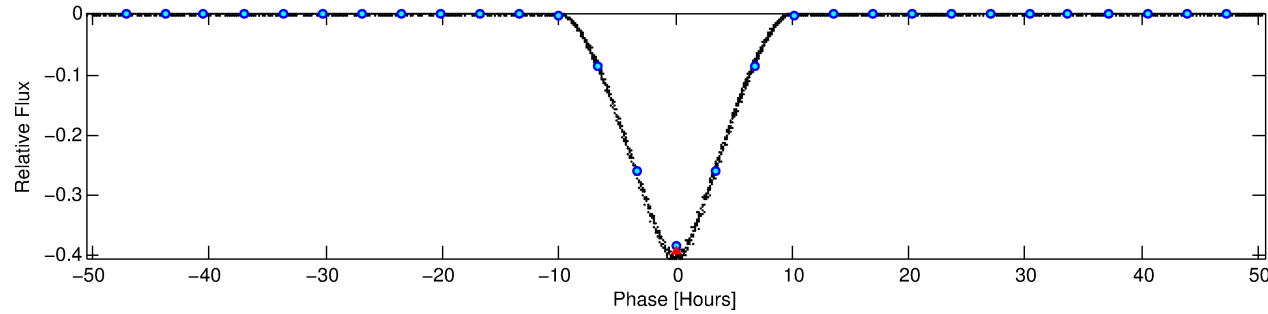
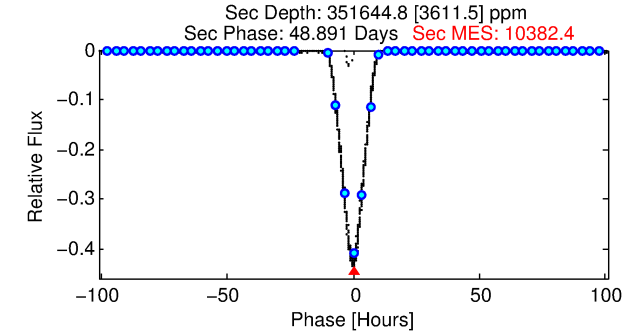
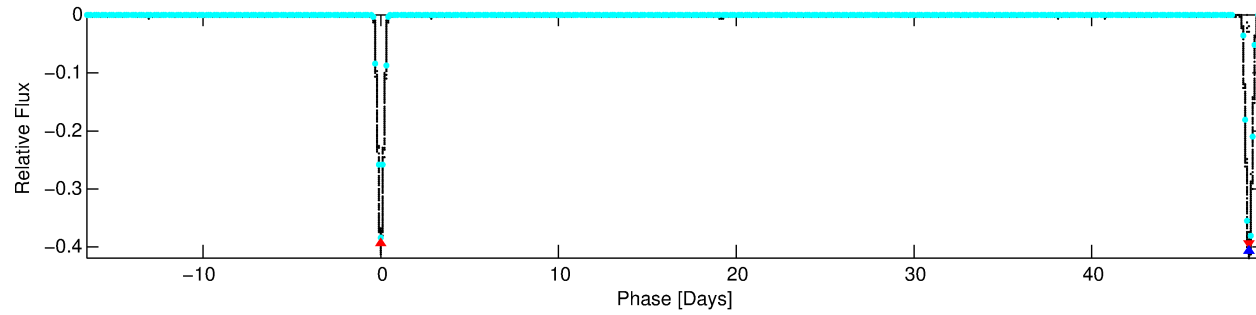
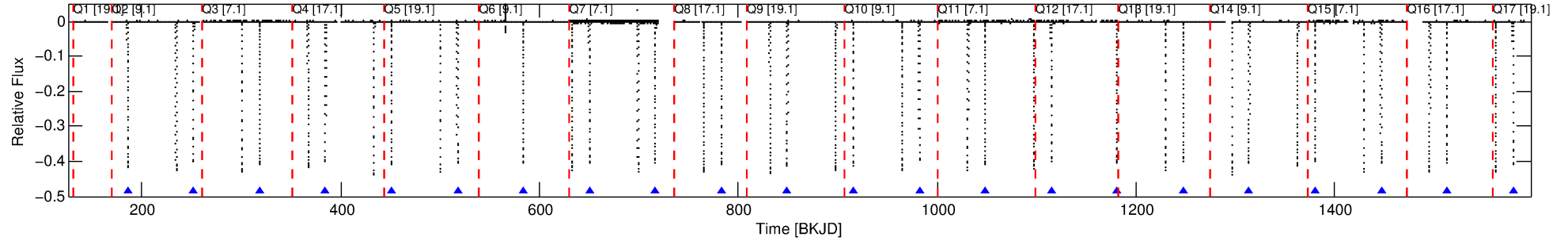
No Significant Match Found

DV One-Page Summary

KIC: 7132542 Candidate: 1 of 2 Period: 66.362 d

KOI: K03517 Corr: No Ephemeris Match

Kp: 15.33 R*: 0.86 Rs Teff: 5583.0 K Logg: 4.46 Fe/H: -0.400



TPS TCE Results:

Period = 66.36156 d
Epoch = 185.8472 BKJD

DV fit results are unavailable

DV Diagnostic Results:

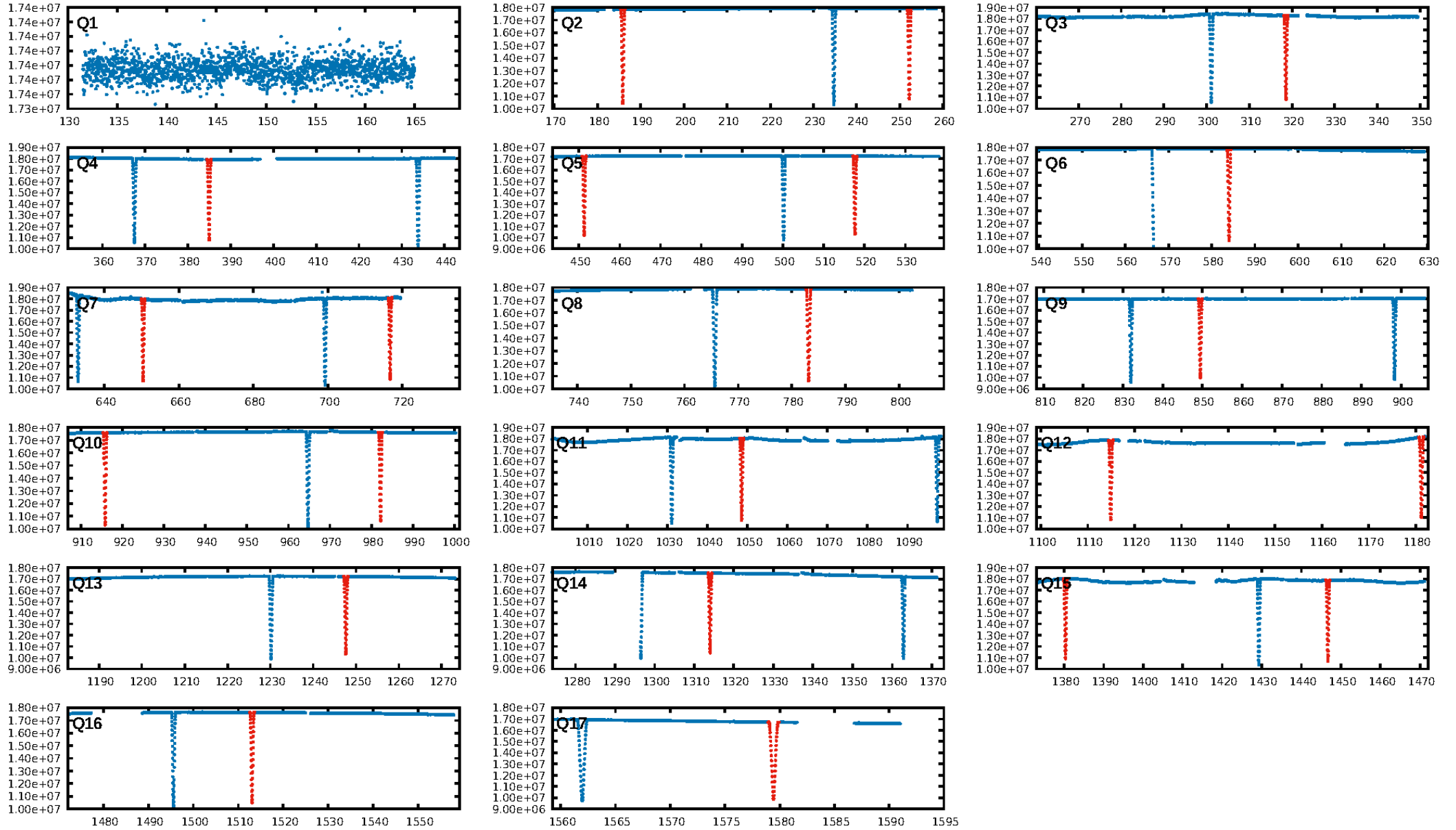
ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 3.874

Centroid-sig: 0.0%
Centroid-so: 0.044 arcsec [46.32σ]
OotOffset-rm: 0.057 arcsec [0.84σ]
KicOffset-rm: 0.129 arcsec [1.47σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

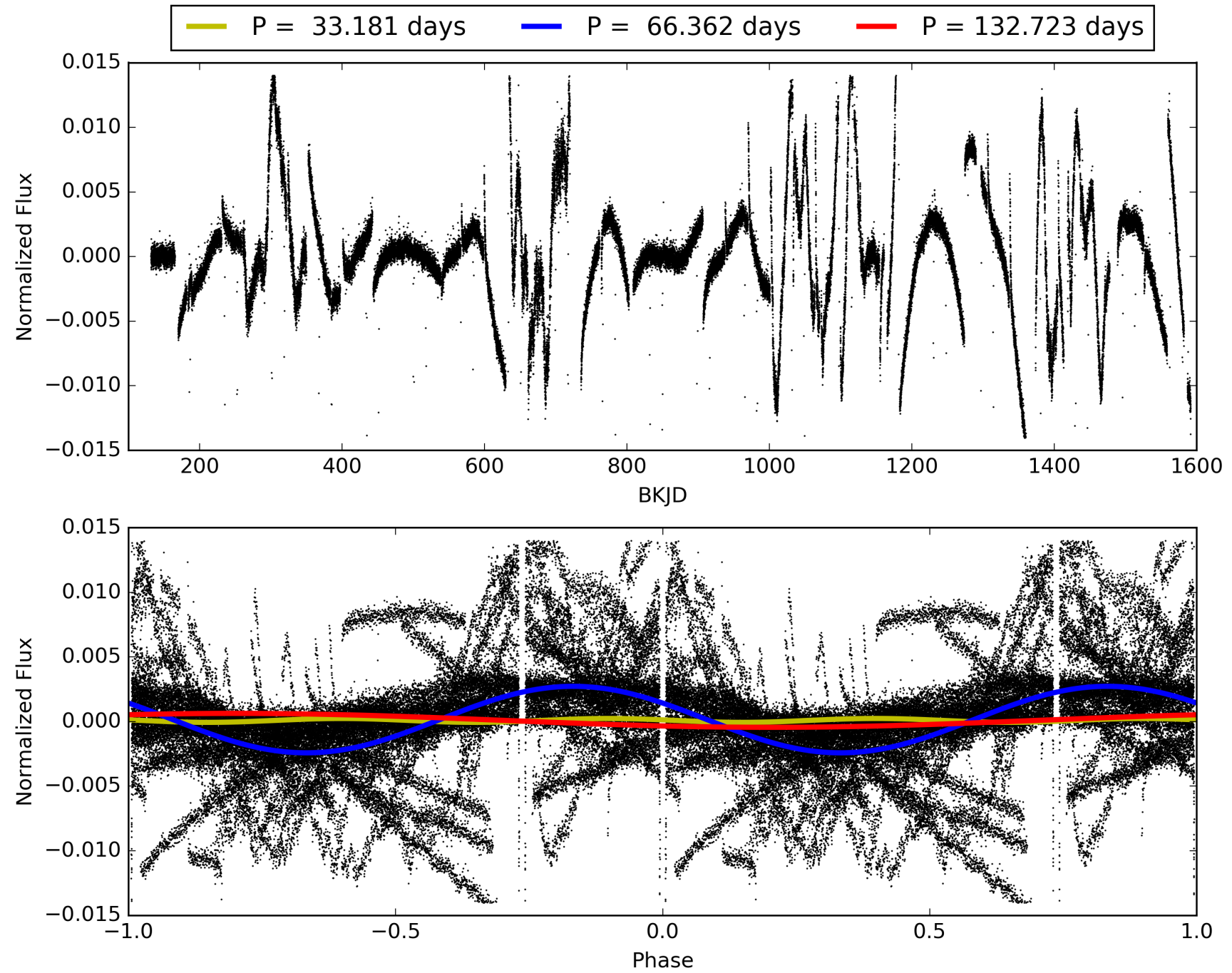
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:18:03 Z

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

TCE 007132542-01, PDC Light Curves

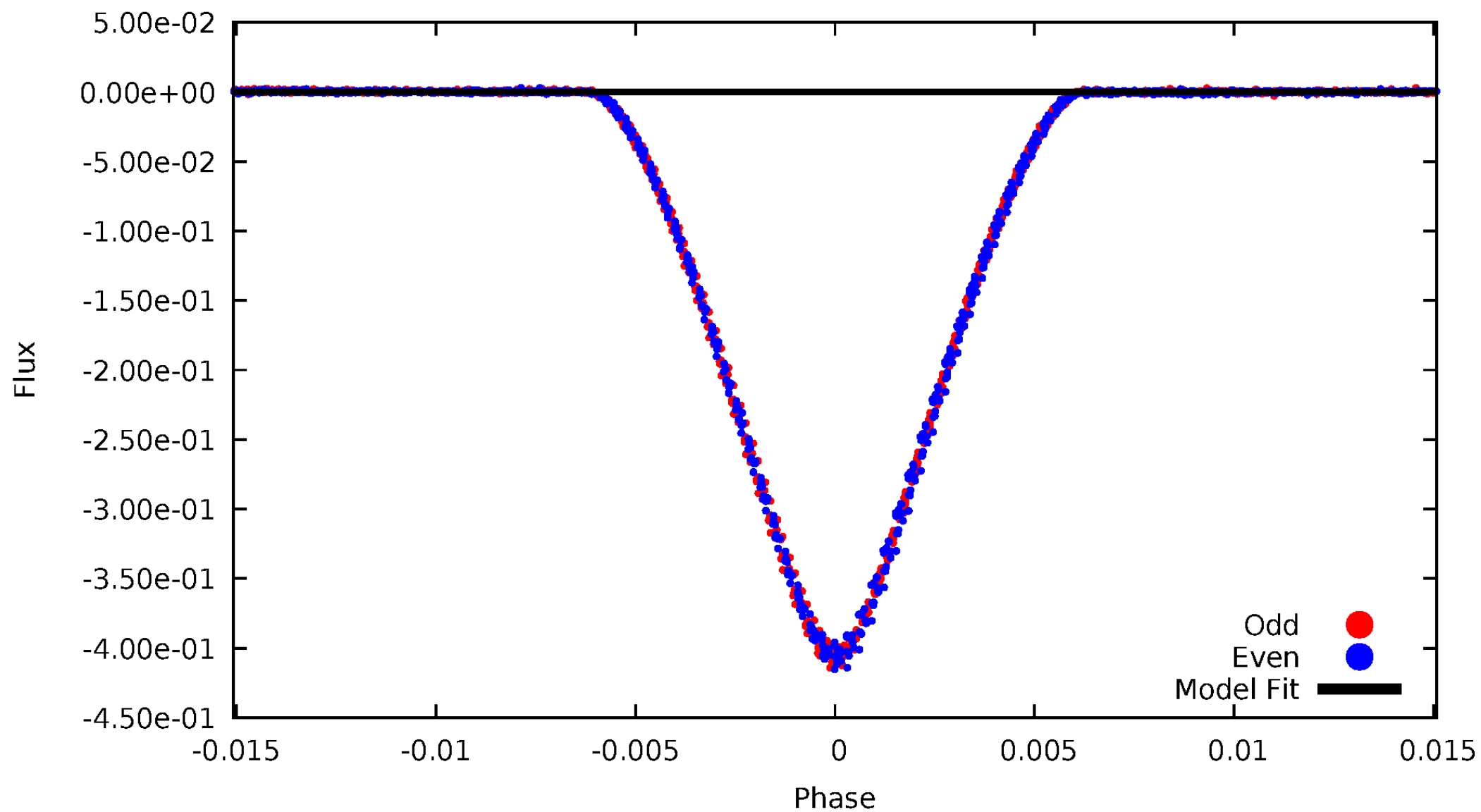


TCE 007132542-01



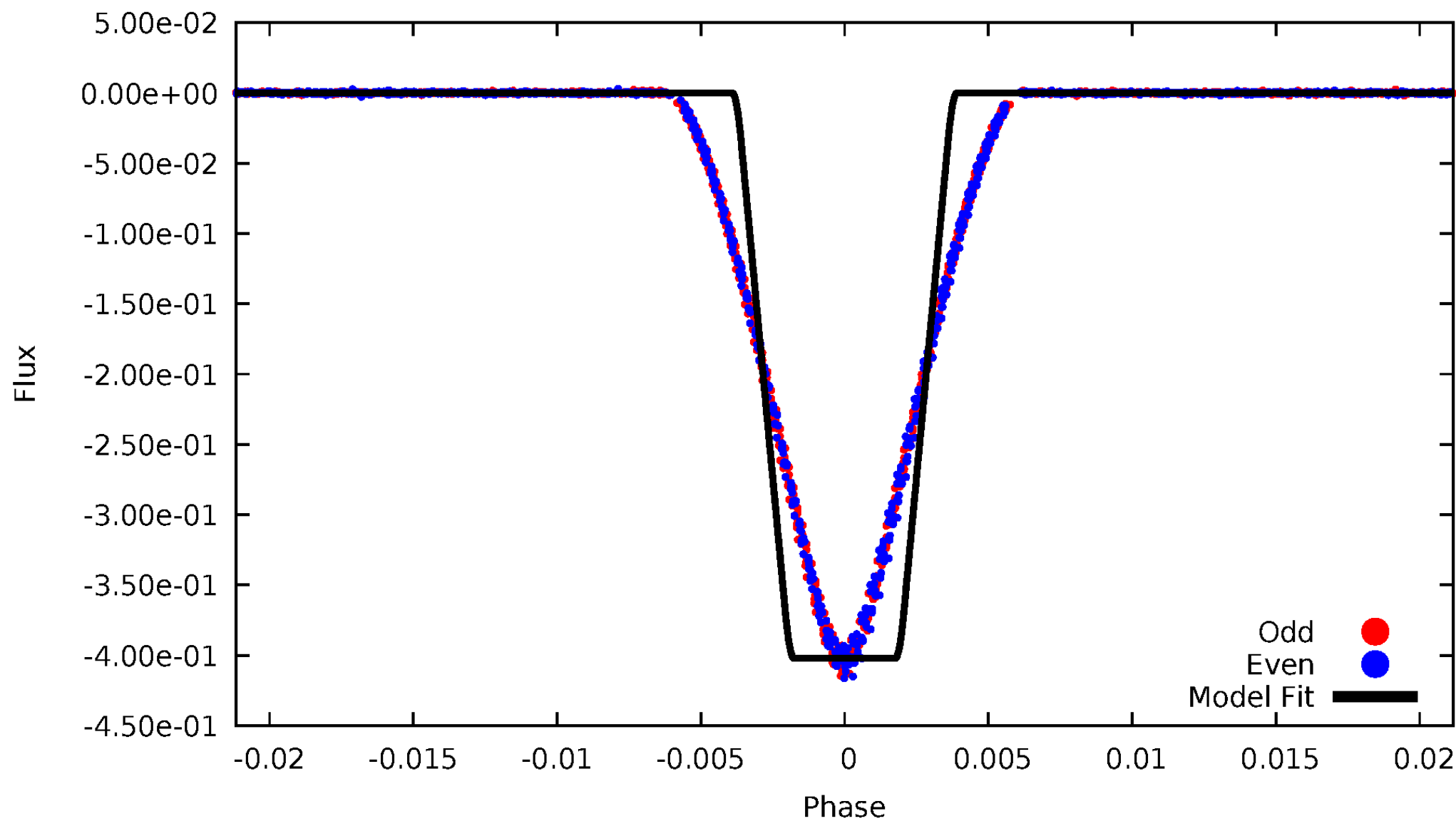
DV Odd/Even

TCE 007132542-01



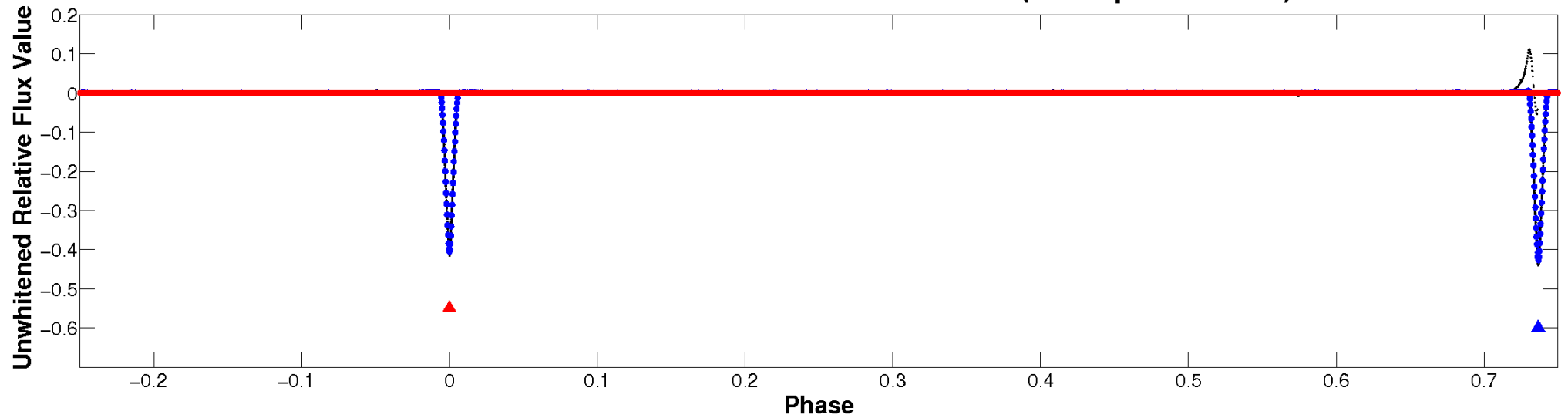
ALT Odd/Even

TCE 007132542-01

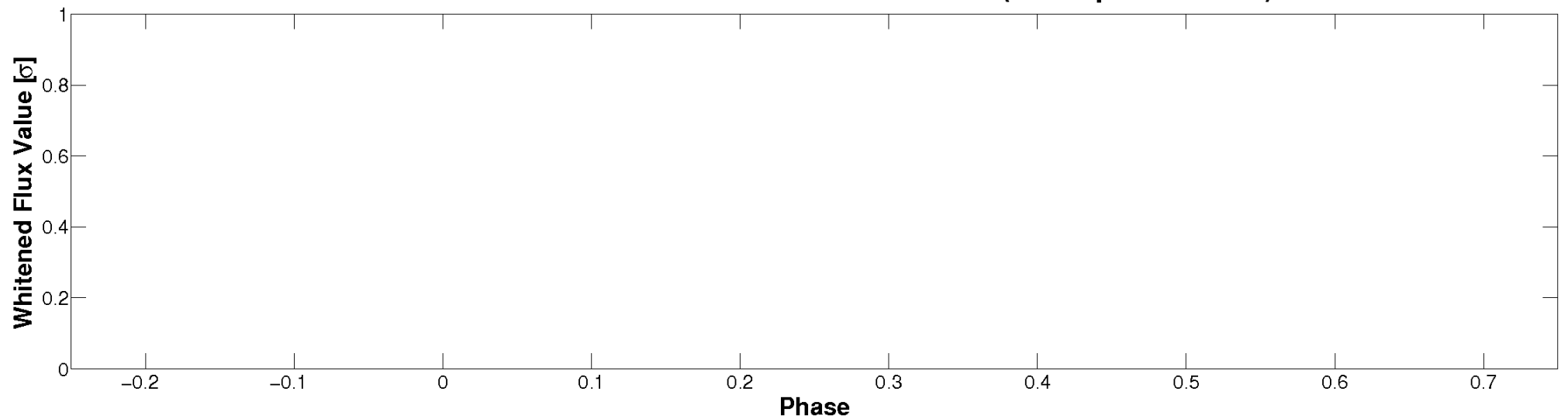


Non-Whitened Vs. Whitened Light Curve

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

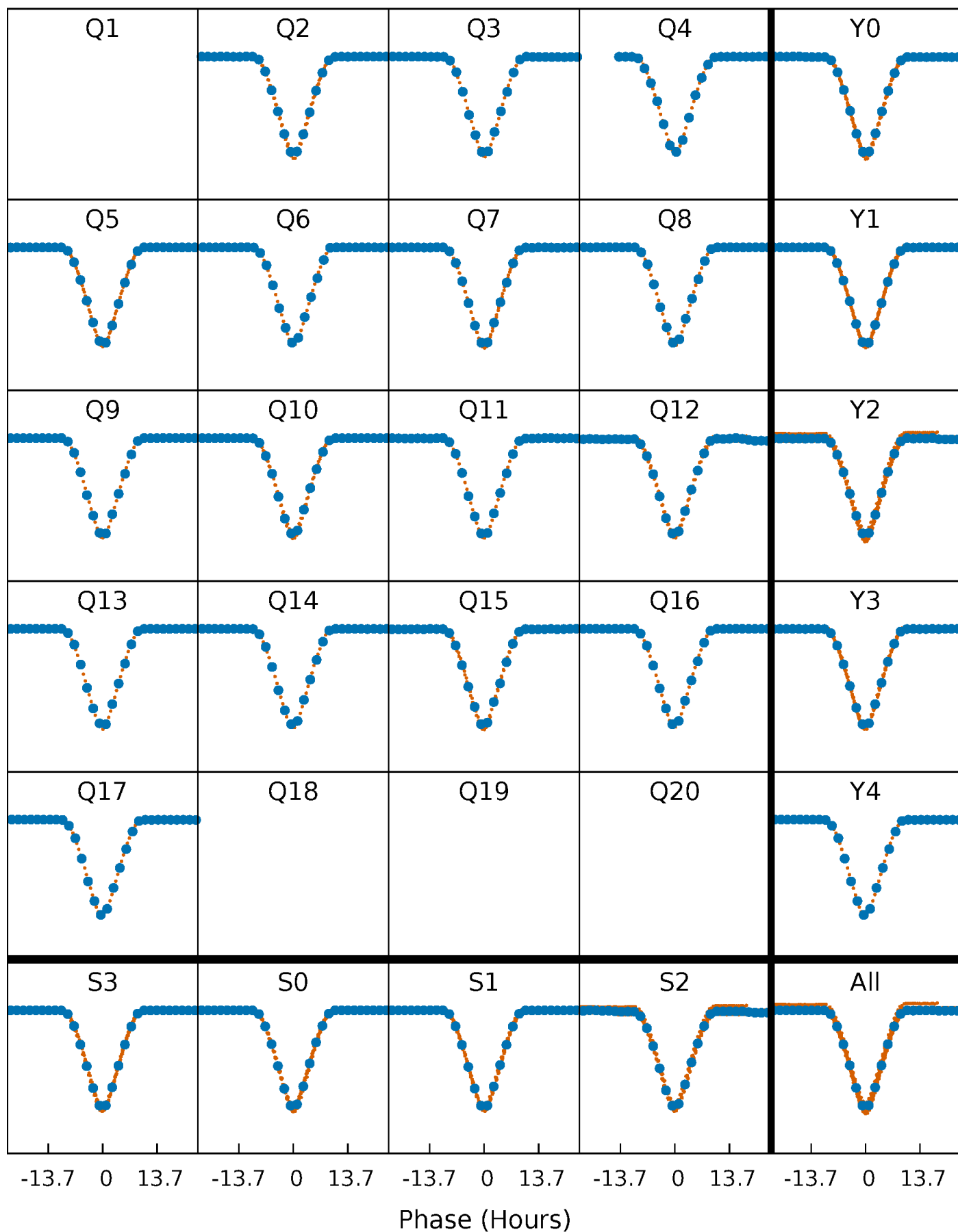


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



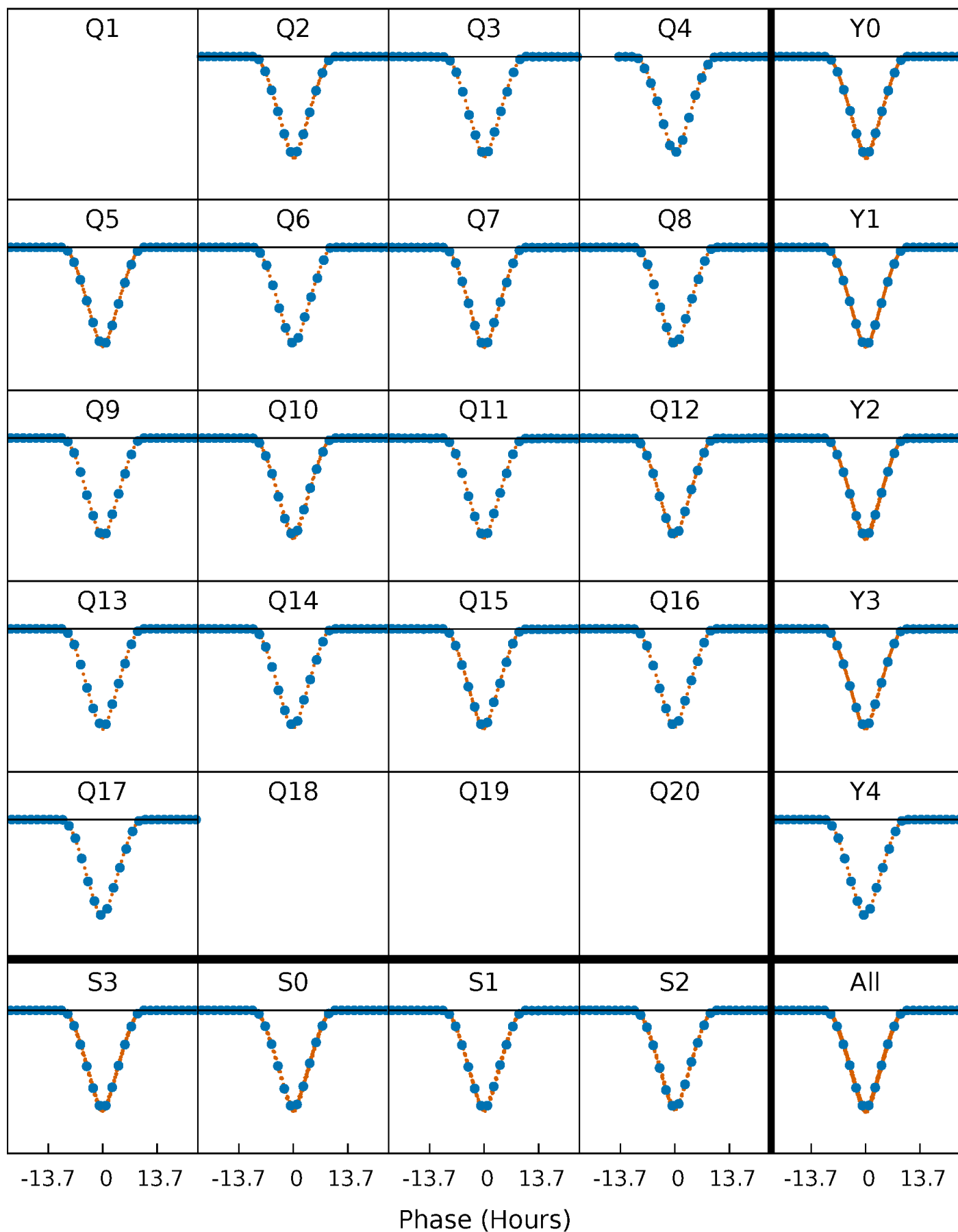
PDC Quarter-Phased Transit Curves

TCE 007132542-01 P= 66.361559 Days $T_0=185.847236$ (BKJD)



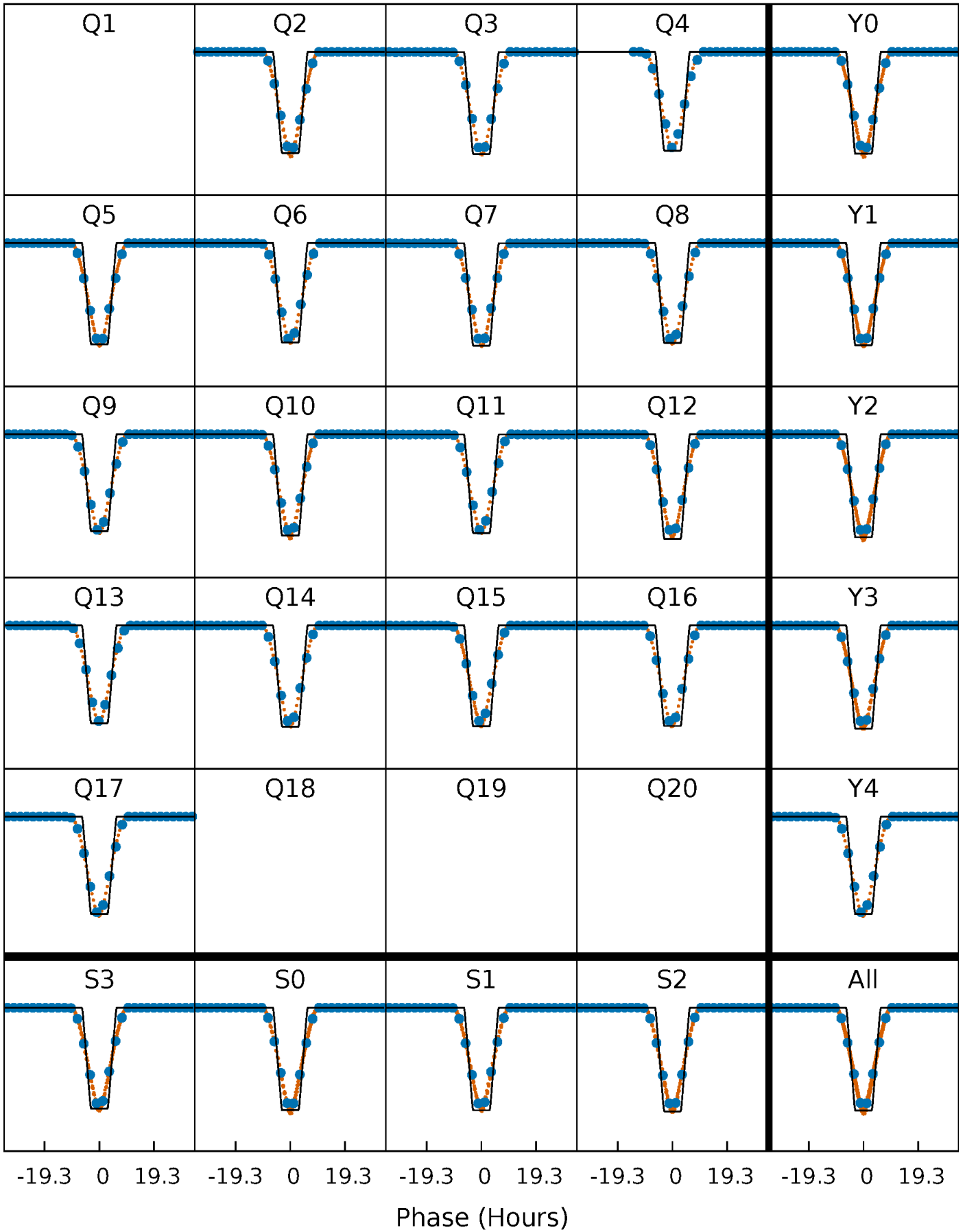
DV Quarter-Phased Transit Curves

TCE 007132542-01 P= 66.361559 Days $T_0=185.847236$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

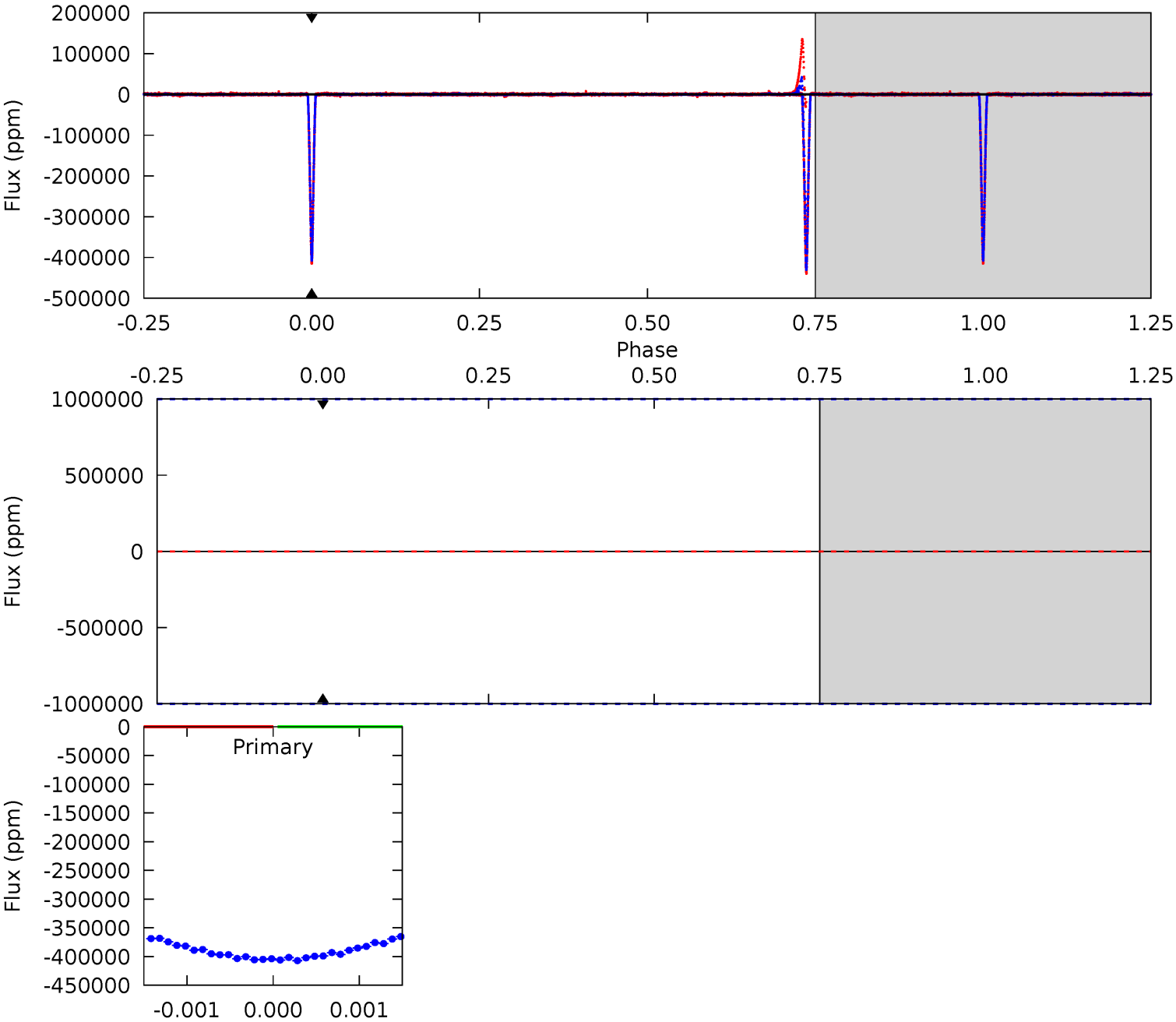
TCE 007132542-01 P= 66.361559 Days $T_0=185.847973$ (BKJD)



DV Model-Shift Uniqueness Test

007132542-01, P = 66.361559 Days, E = 119.485677 Days

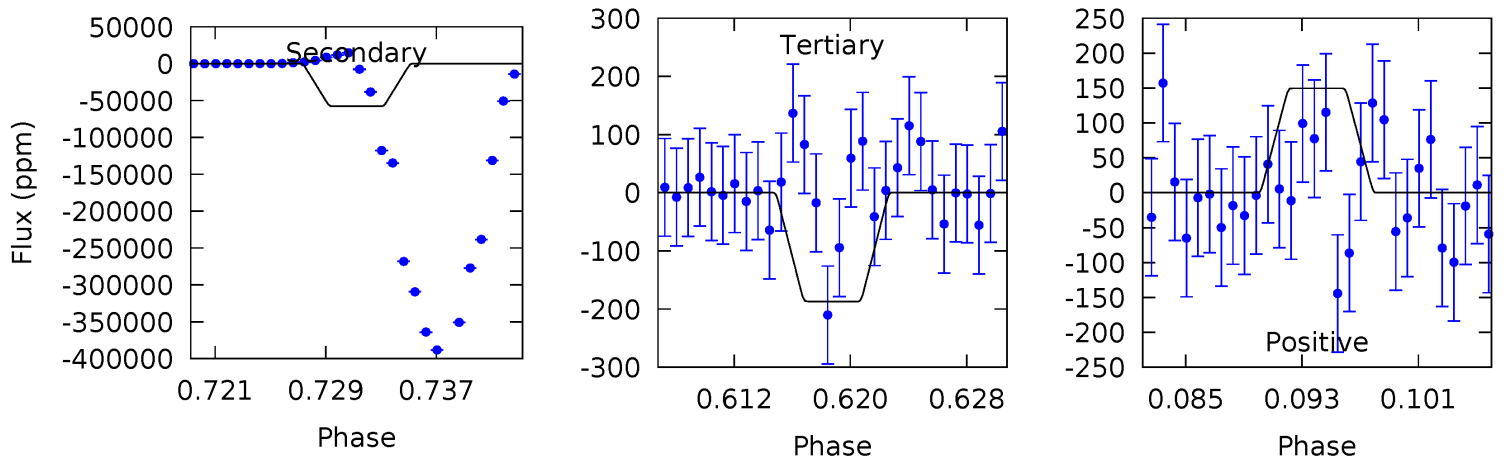
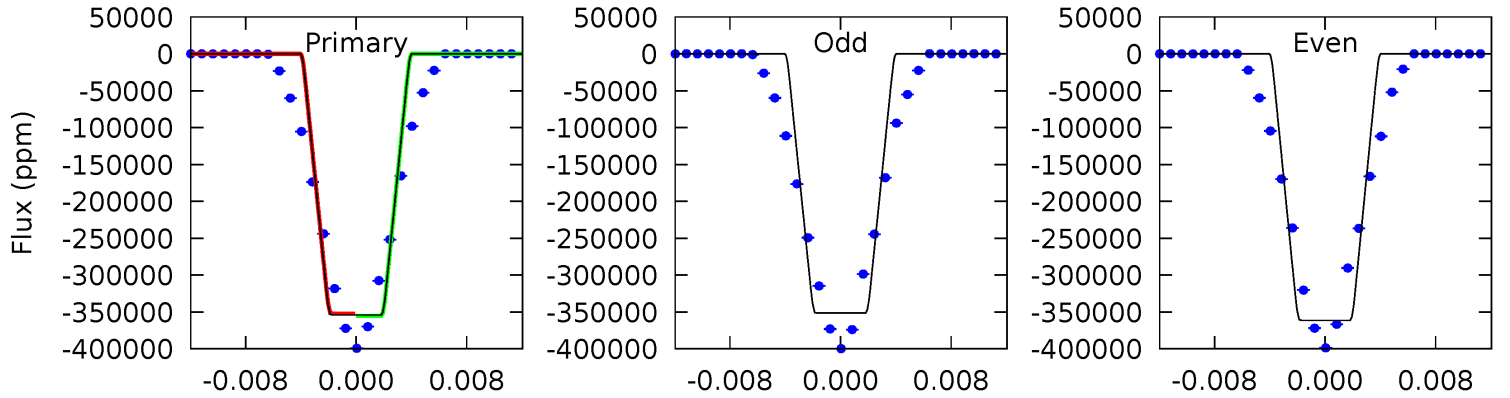
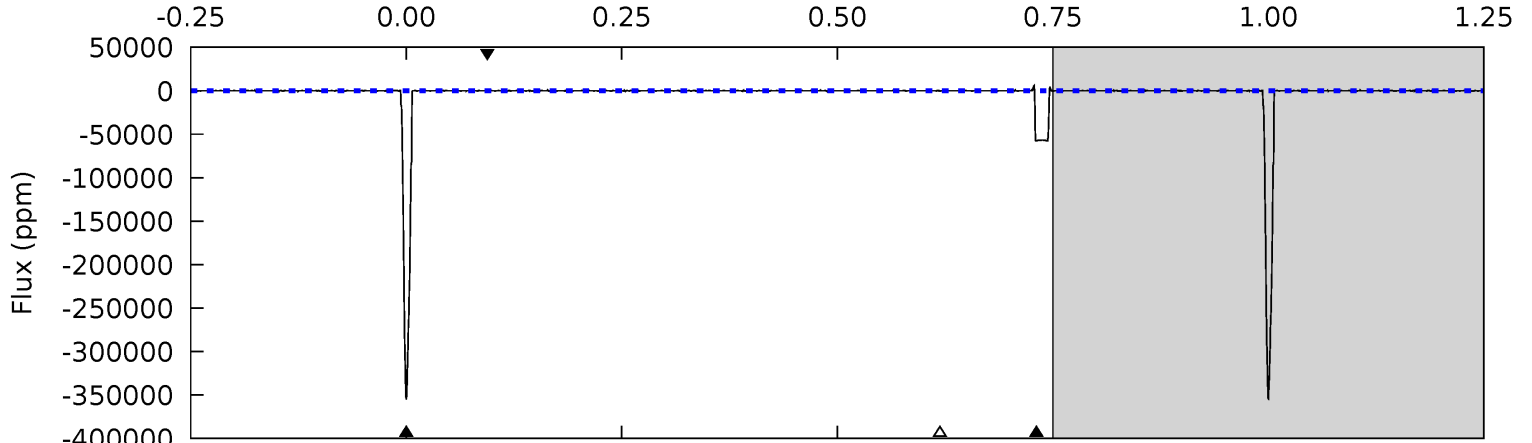
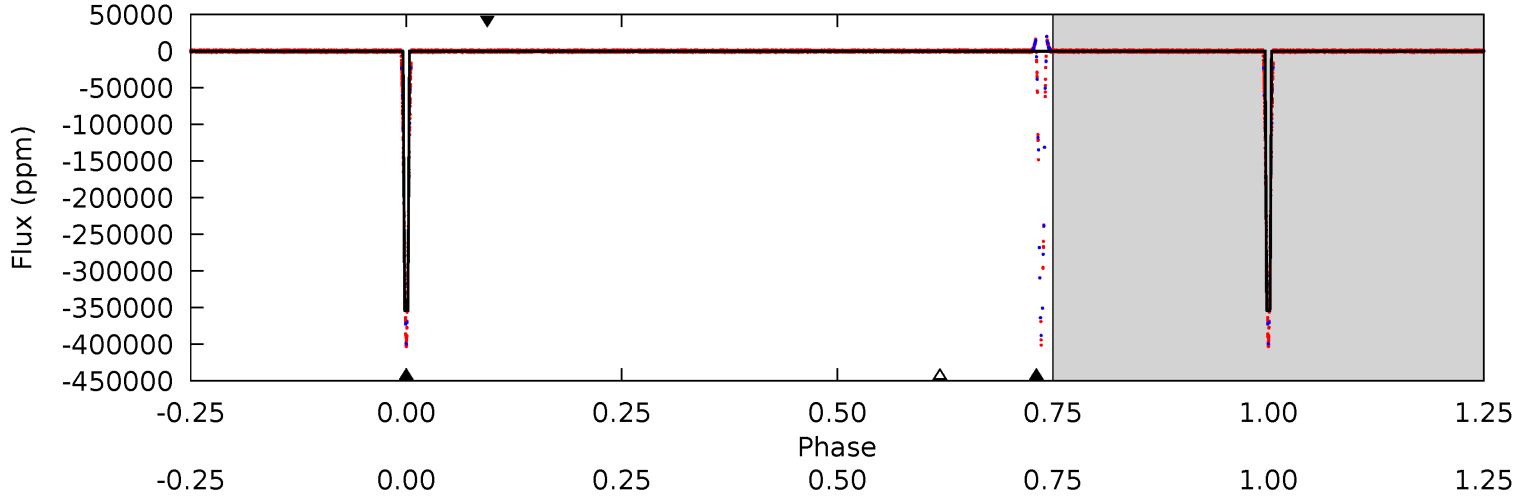
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007132542-01, P = 66.361559 Days, E = 119.486414 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1487	242.8	0.78	0.63	5.07	2.66	6.44	1486	1486	242.1	242.2	33.1	1.00	0.02	0



Stellar Parameters For KIC 007132542

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5583^{+169}_{-169}	$4.463^{+0.121}_{-0.162}$	$-0.400^{+0.350}_{-0.300}$	$0.857^{+0.199}_{-0.123}$	$0.778^{+0.115}_{-0.053}$	$1.741^{+0.939}_{-0.758}$
	+3%/-3%	+3%/-4%	+87%/-75%	+23%/-14%	+15%/-7%	+54%/-44%
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 007132542-01 / KOI 3517.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$46.85^{+11.71}_{-10.52}$	589^{+37}_{-30}	-2802^{+7462}_{-1778}	$-92.800^{+2374.027}_{-2077.676}$
Alt.	-57837 ± 238	$60.03^{+11.85}_{-10.44}$	590^{+36}_{-32}	3850^{+241}_{-187}	820^{+391}_{-239}

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

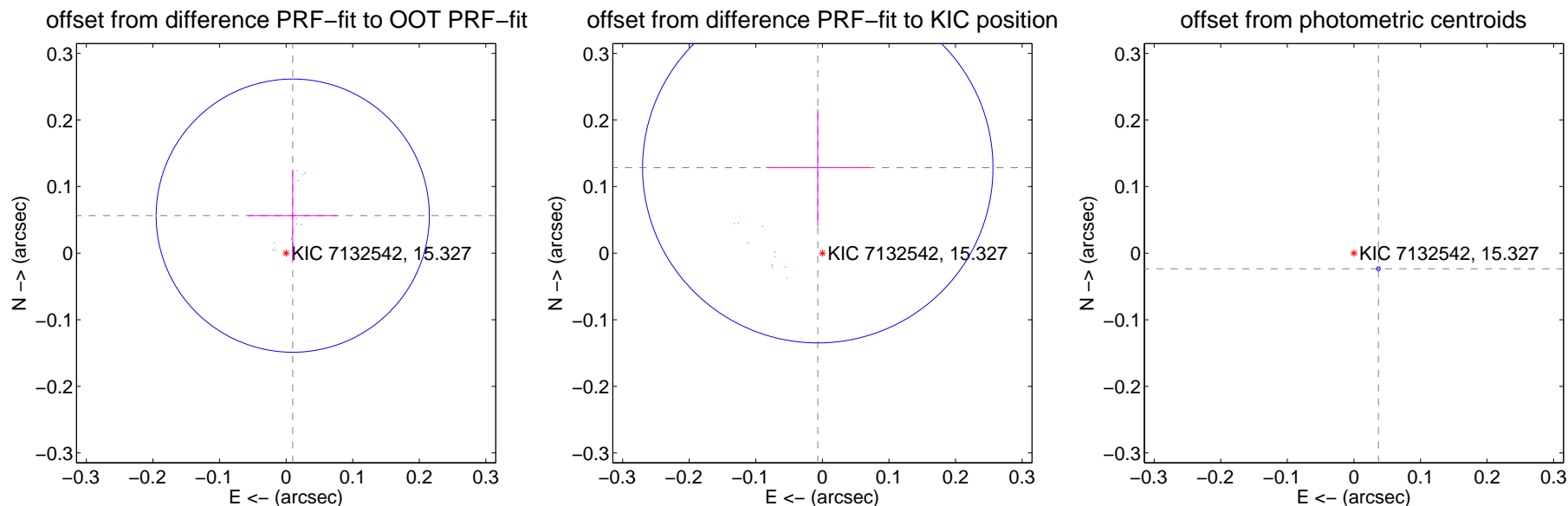
DV Centroid Data

Supplemental centroid analysis for 007132542-01. Kepler magnitude: 15.33. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

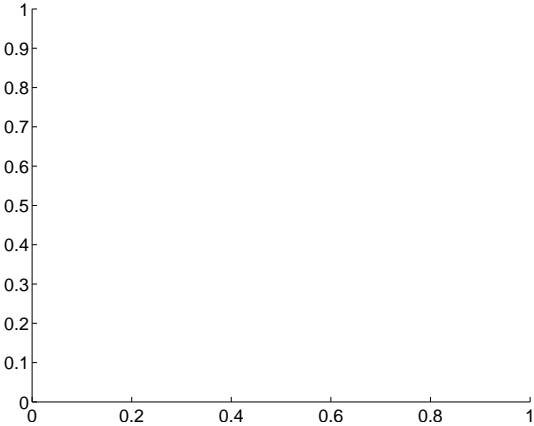
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.057 ± 0.068	0.84	-0.010 ± 0.067	0.056 ± 0.068
PRF-fit source offset from KIC position	0.129 ± 0.088	1.47	0.007 ± 0.078	0.128 ± 0.088
photometric centroid source offset	0.04 ± 0.00	46.32	-0.04 ± 0.00	-0.02 ± 0.00



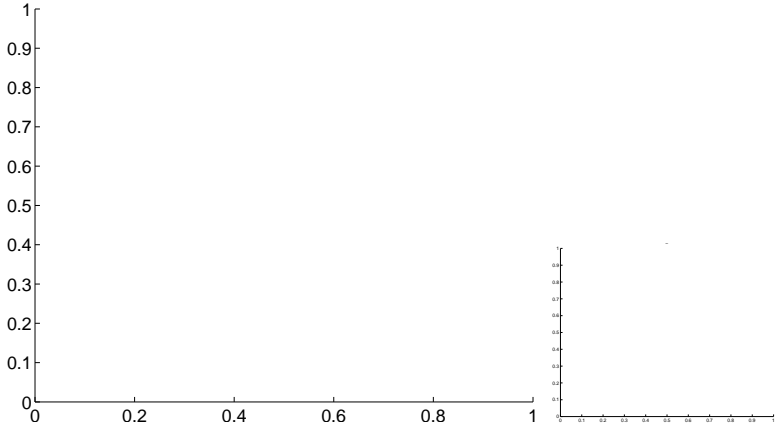
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

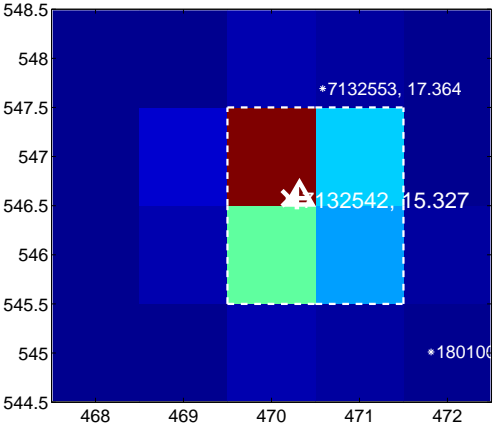
Q1 no difference image



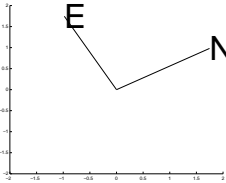
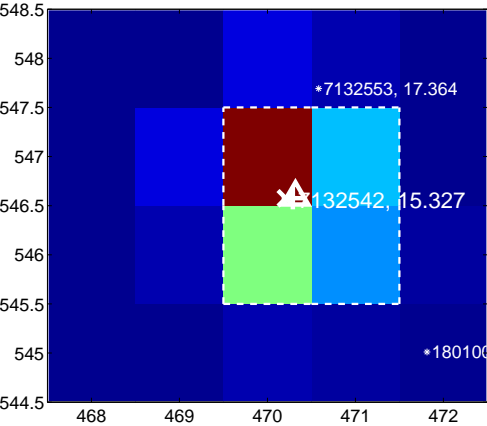
Q1 no OOT image



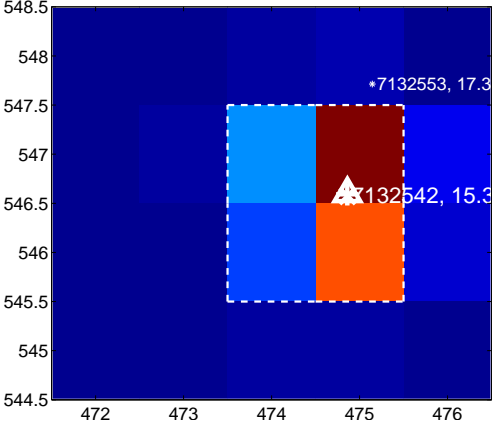
Q2 difference image



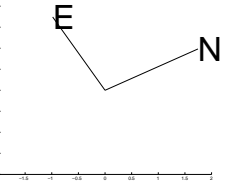
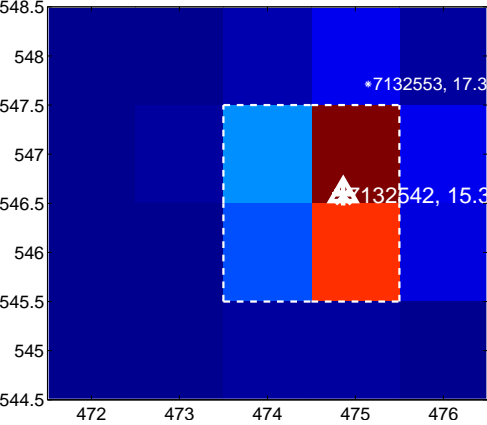
Q2 OOT image



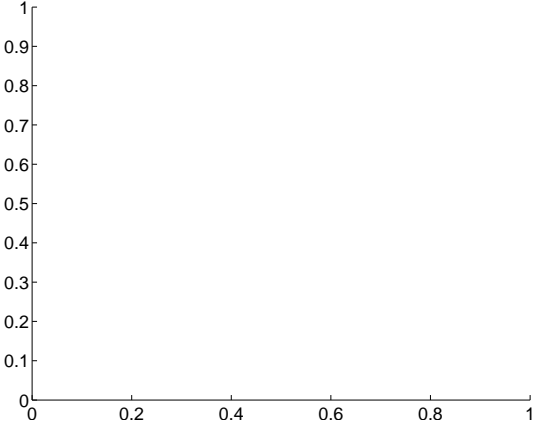
Q3 difference image



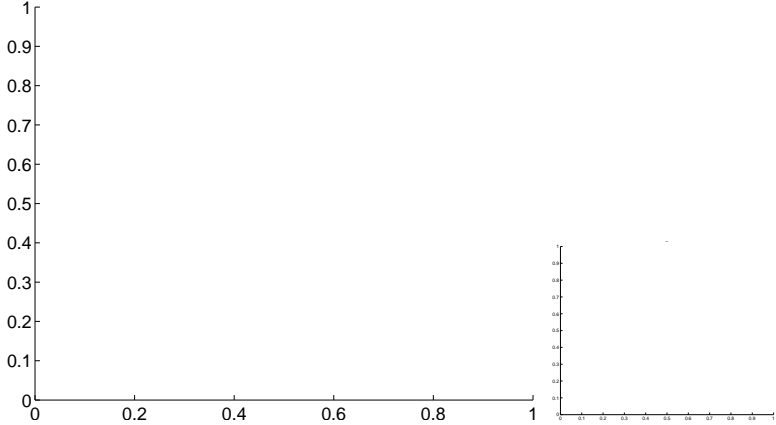
Q3 OOT image



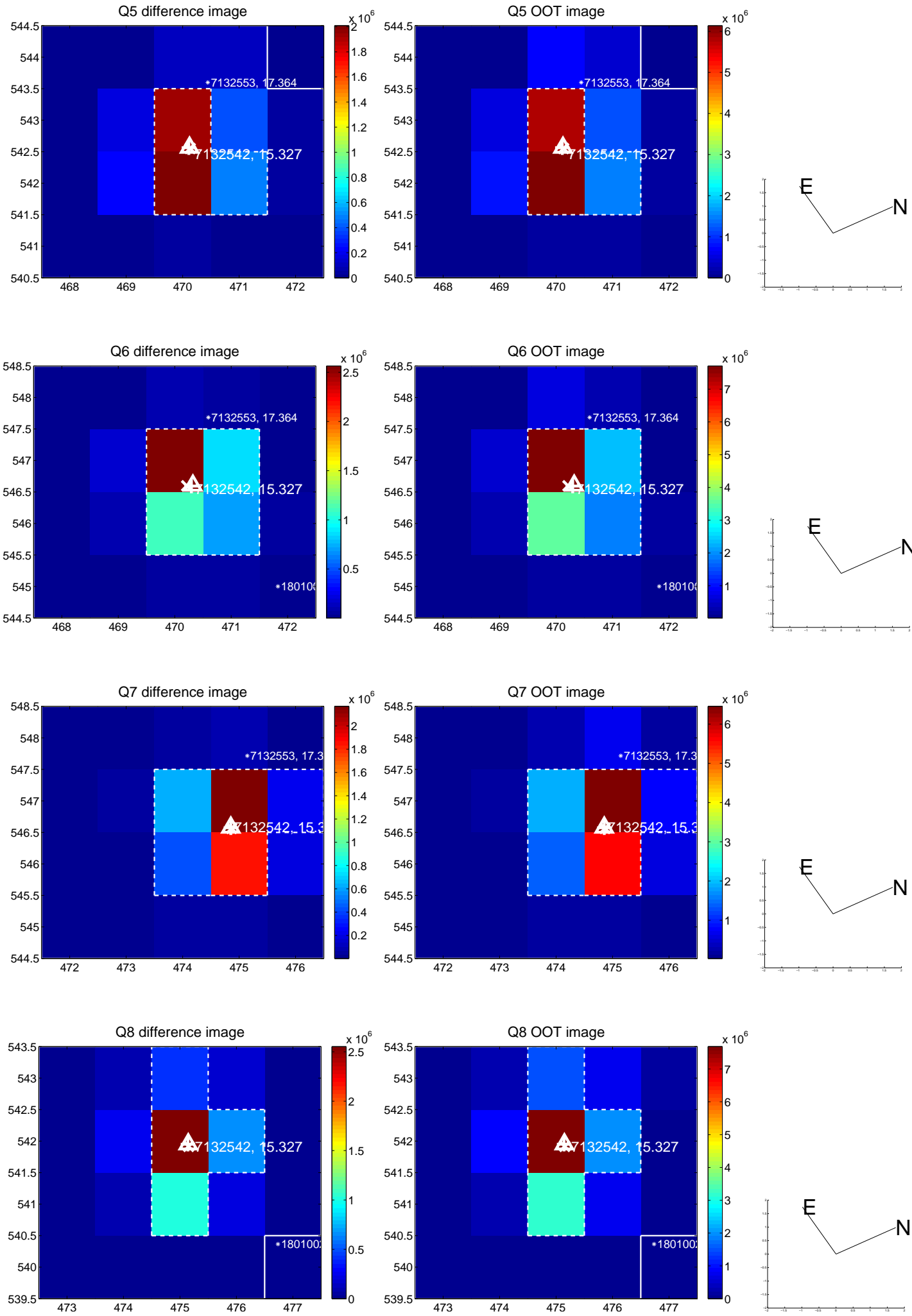
Q4 no difference image



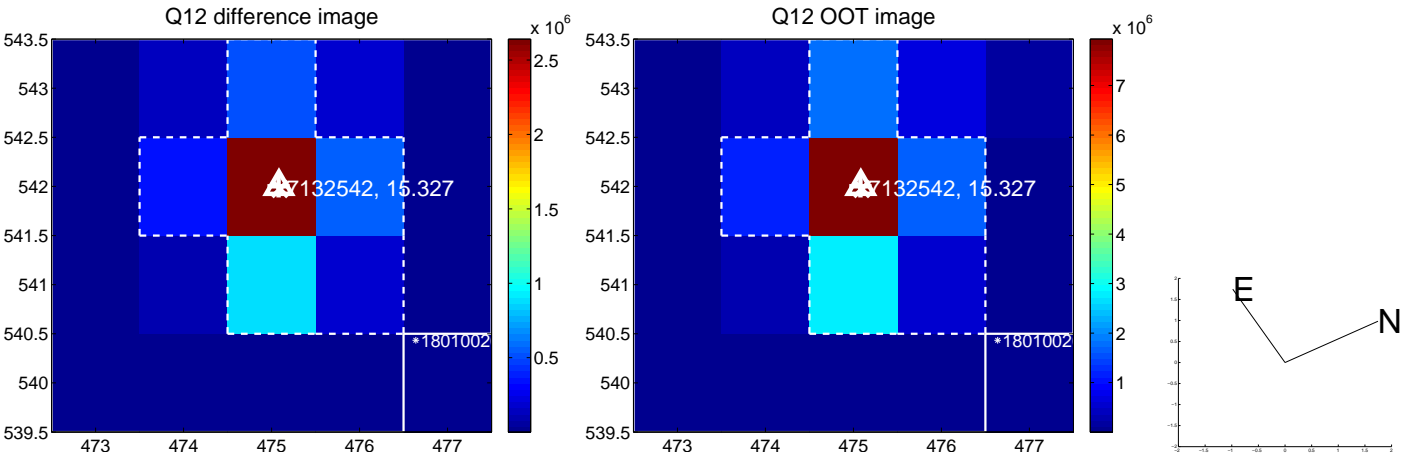
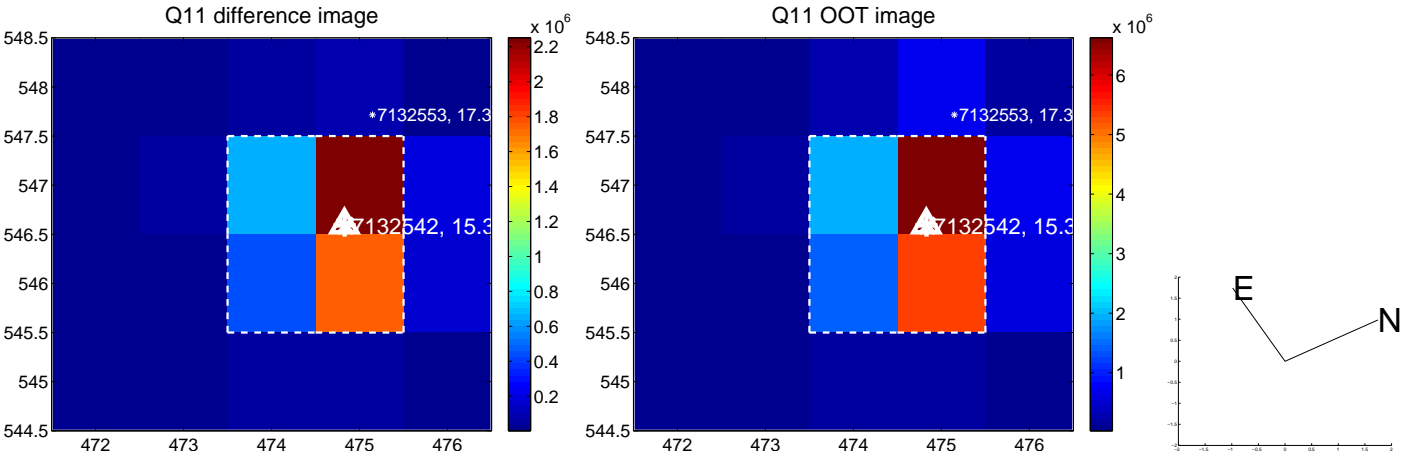
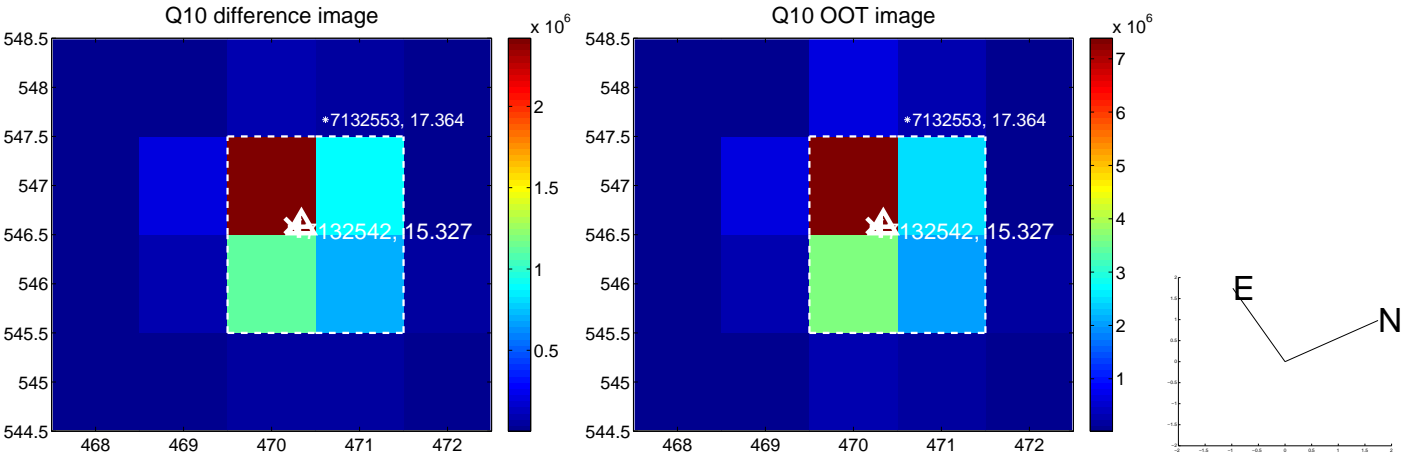
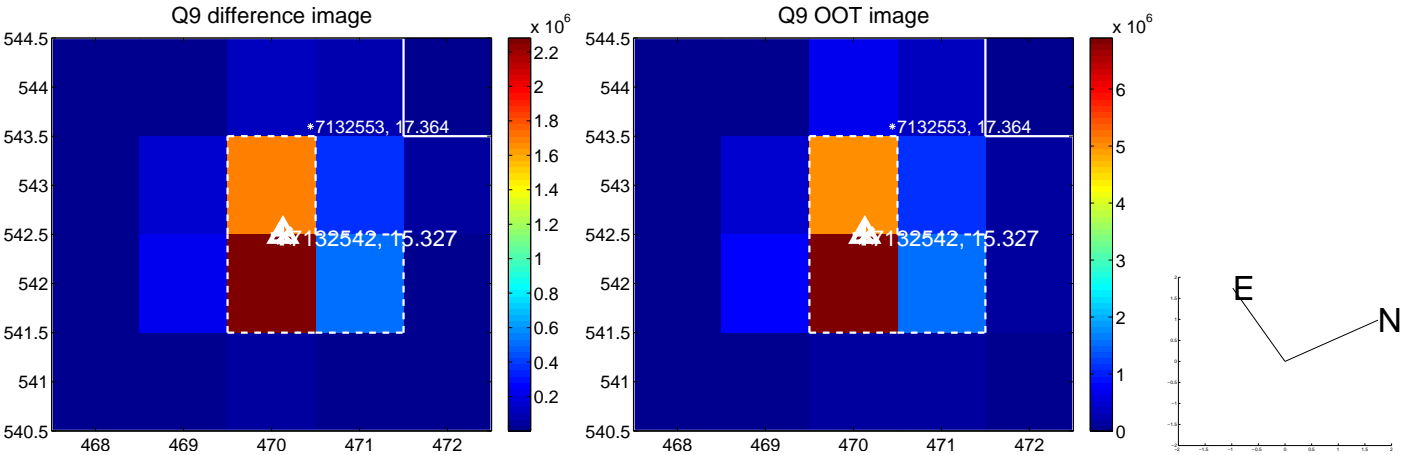
Q4 no OOT image



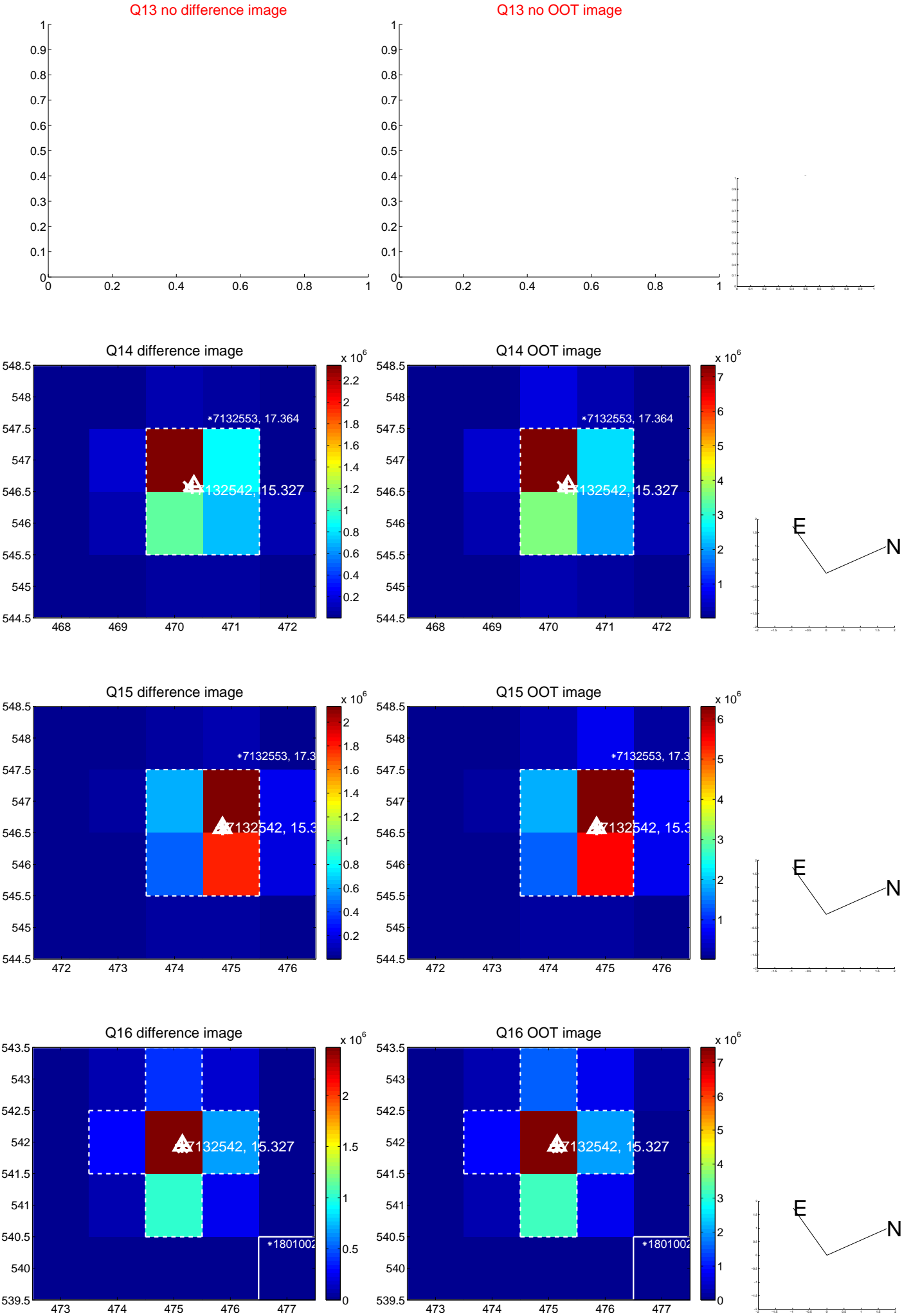
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



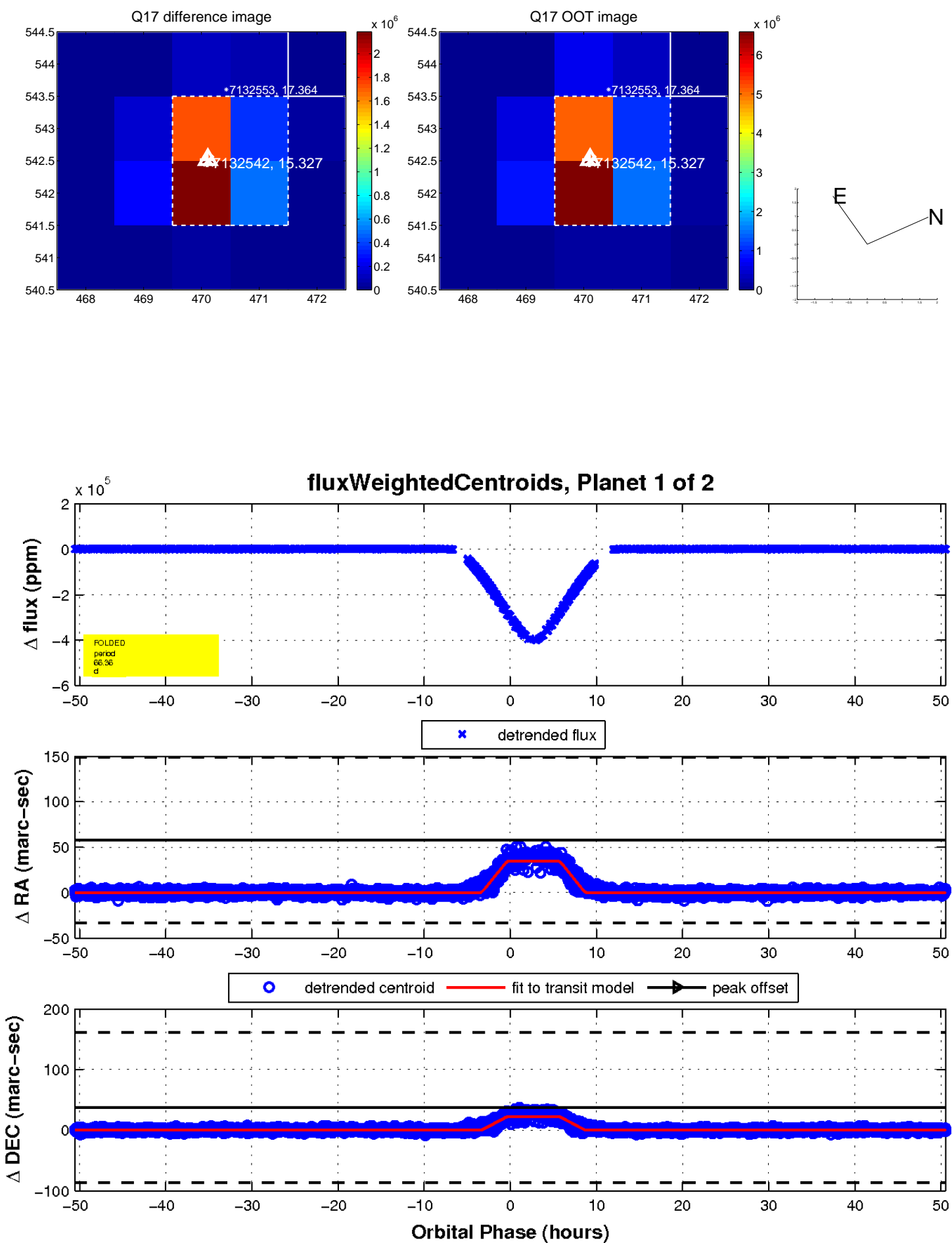
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



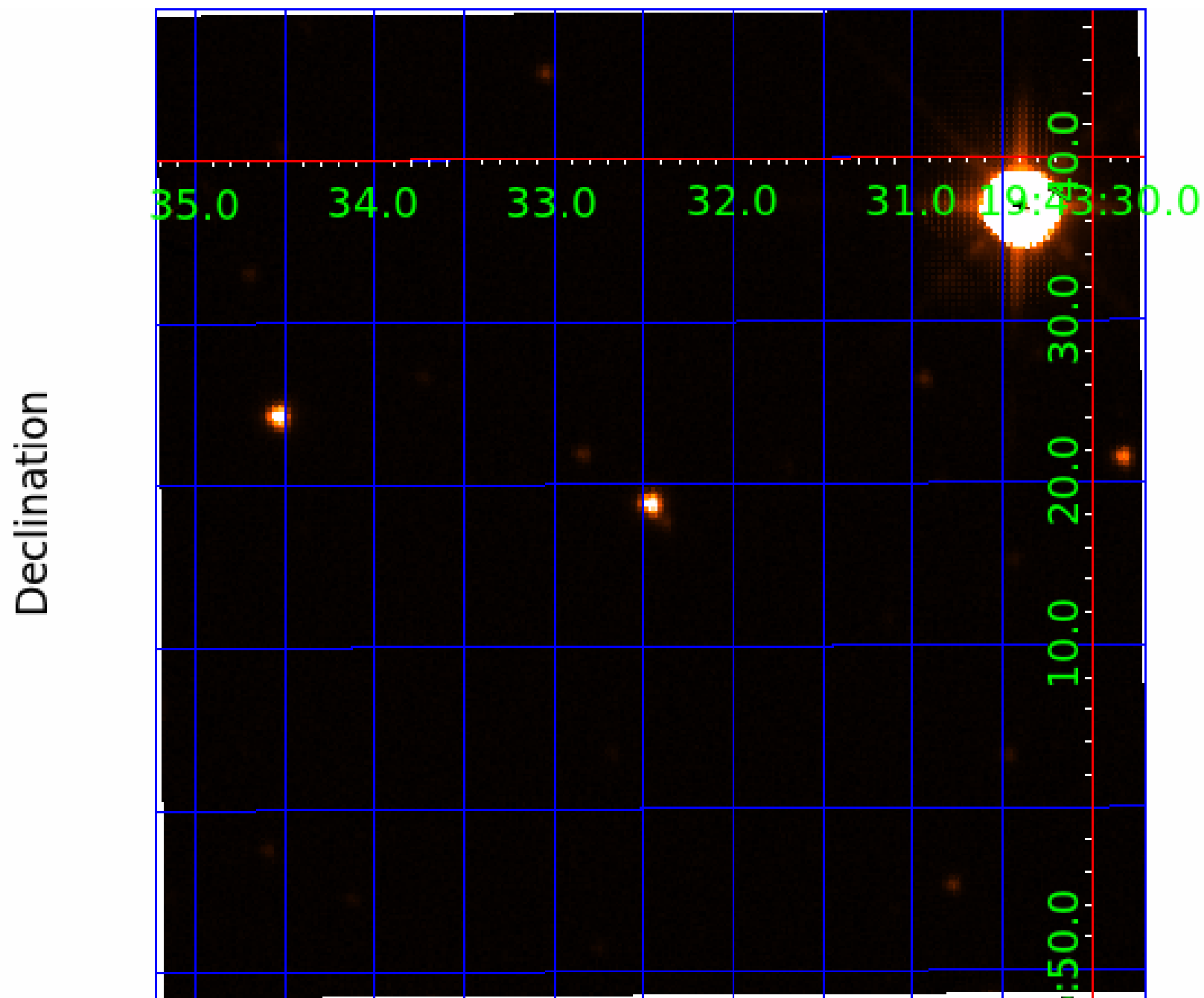
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007132542

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})
007132542-01	OBS	3517.01	66.361559	185.847235	405637.1	12.000	10382.7	-1.0	0.86	5583	46.76	7.34
007132542-02	OBS	No	66.360920	168.380814	407669.9	20.547	10197.6	3769.5	0.86	5583	59.12	7.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007132542-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007132542-02	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 007132542-02

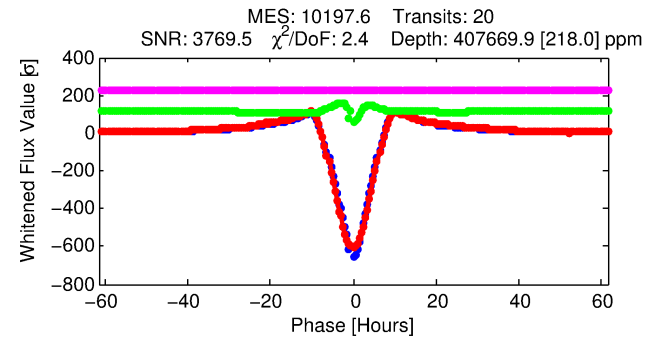
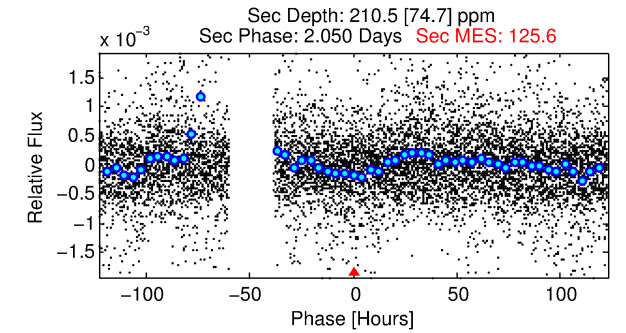
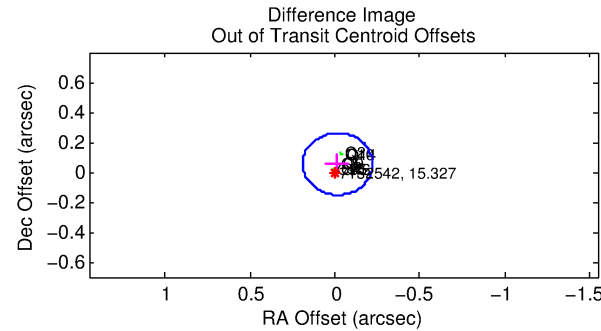
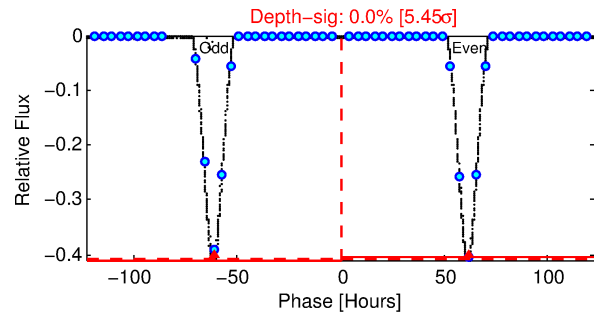
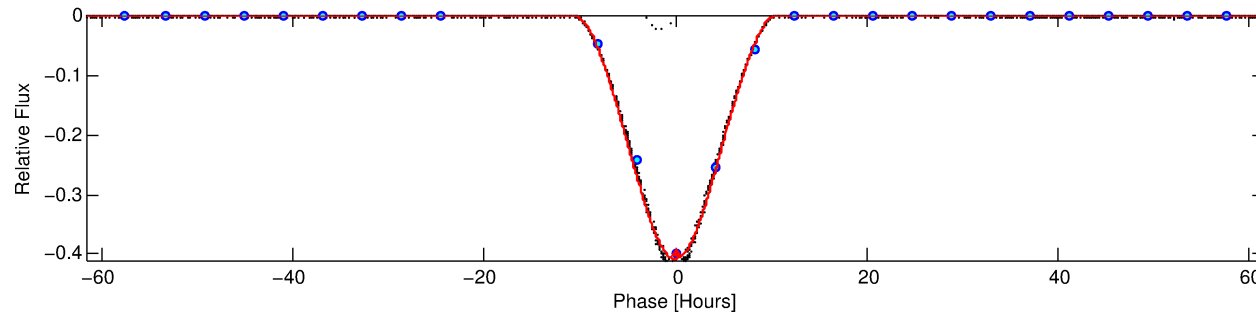
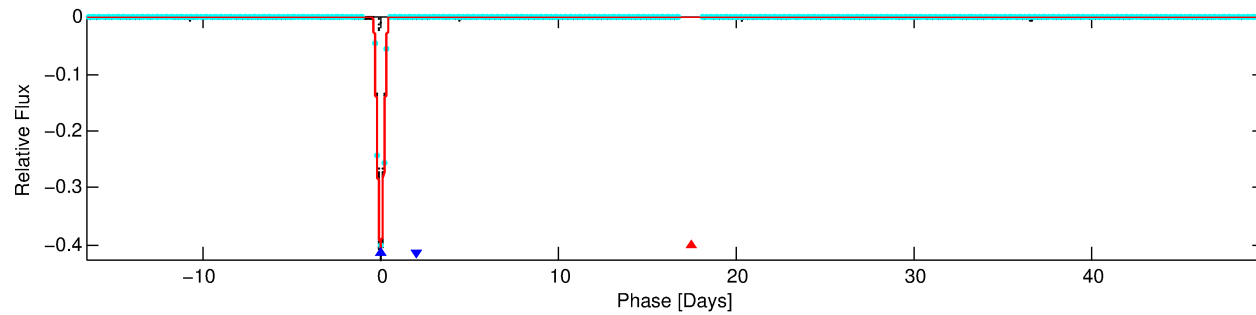
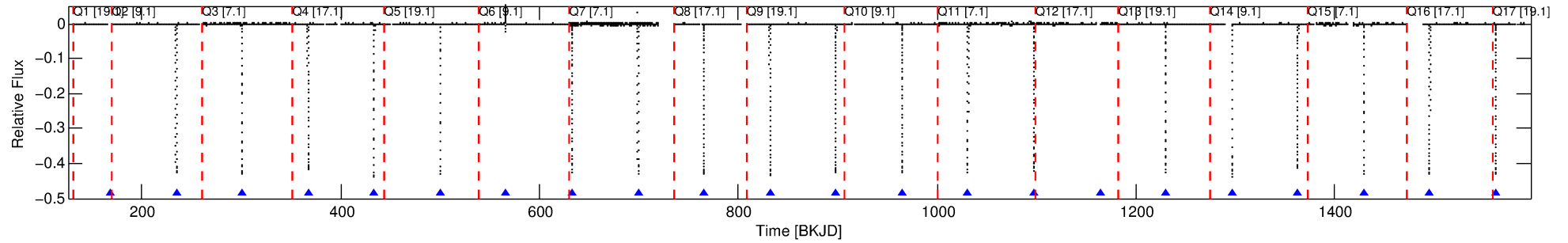
No Significant Match Found

DV One-Page Summary

KIC: 7132542 Candidate: 2 of 2 Period: 66.361 d

KOI: K03517.01 Corr: 0.992

Kp: 15.33 R*: 0.86 Rs Teff: 5583.0 K Logg: 4.46 Fe/H: -0.400



DV Fit Results:

Period = 66.36092 [0.00001] d
Epoch = 168.3808 [0.0001] BKJD
Rp/R* = 0.6322 [0.0029]
a/R* = 38.71 [0.03]
b = 0.45 [0.01]
Seff = 7.34 [2.33]
Teff = 420 [33] K
Rp = 59.12 [13.73] Re
a = 0.2951 [0.0586] AU
Ag = 2.88 [1.33] [1.42σ]
Teffp = 846 [79] K [4.95σ]

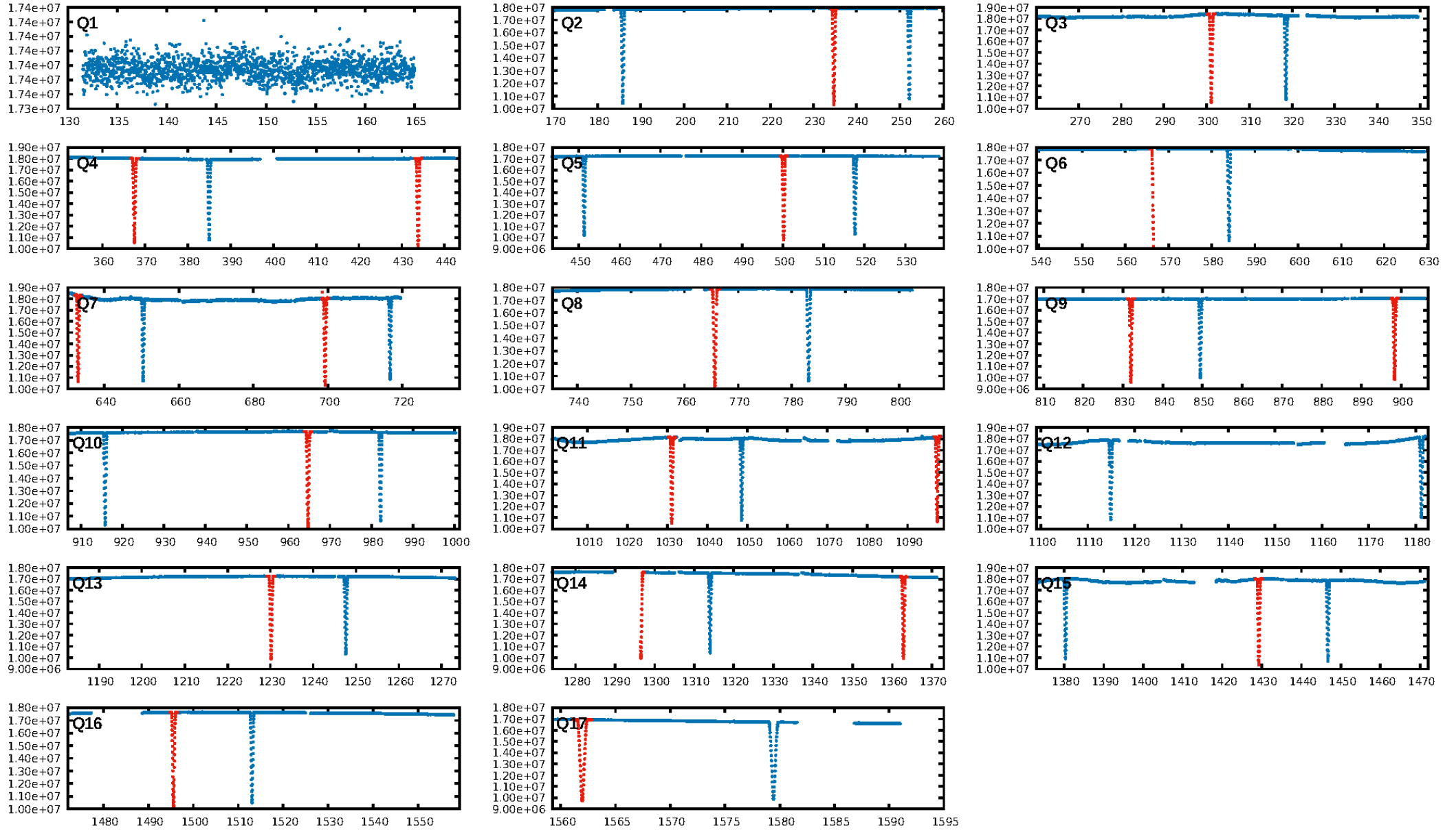
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: 3.417
Centroid-sig: 0.0%
Centroid-so: 0.061 arcsec [59.91σ]
OotOffset-rm: 0.056 arcsec [0.81σ]
KicOffset-rm: 0.119 arcsec [1.20σ]
OotOffset-st: 3/3/2/2 [10]
KicOffset-st: 3/3/2/2 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

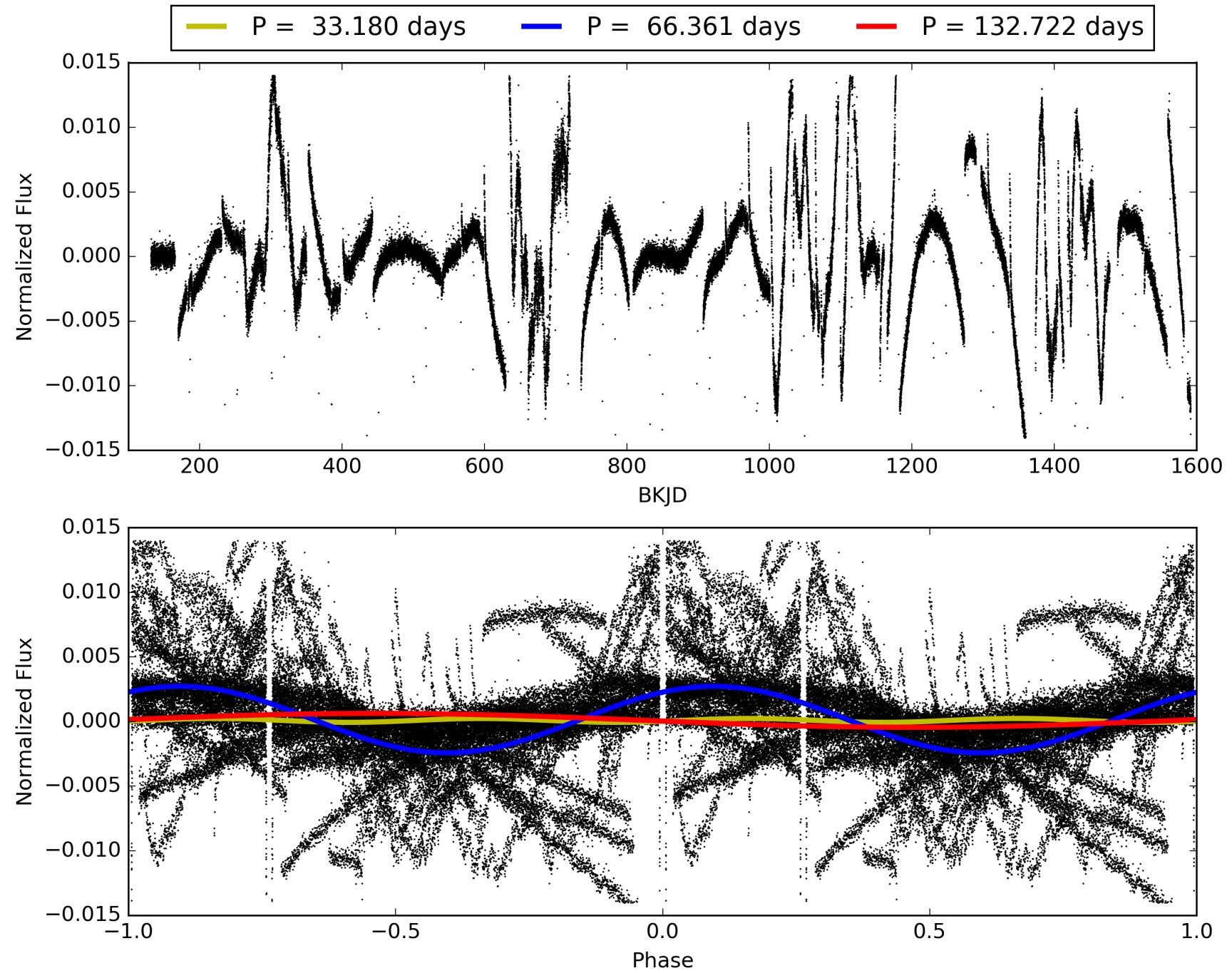
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:18:07 Z

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

TCE 007132542-02, PDC Light Curves

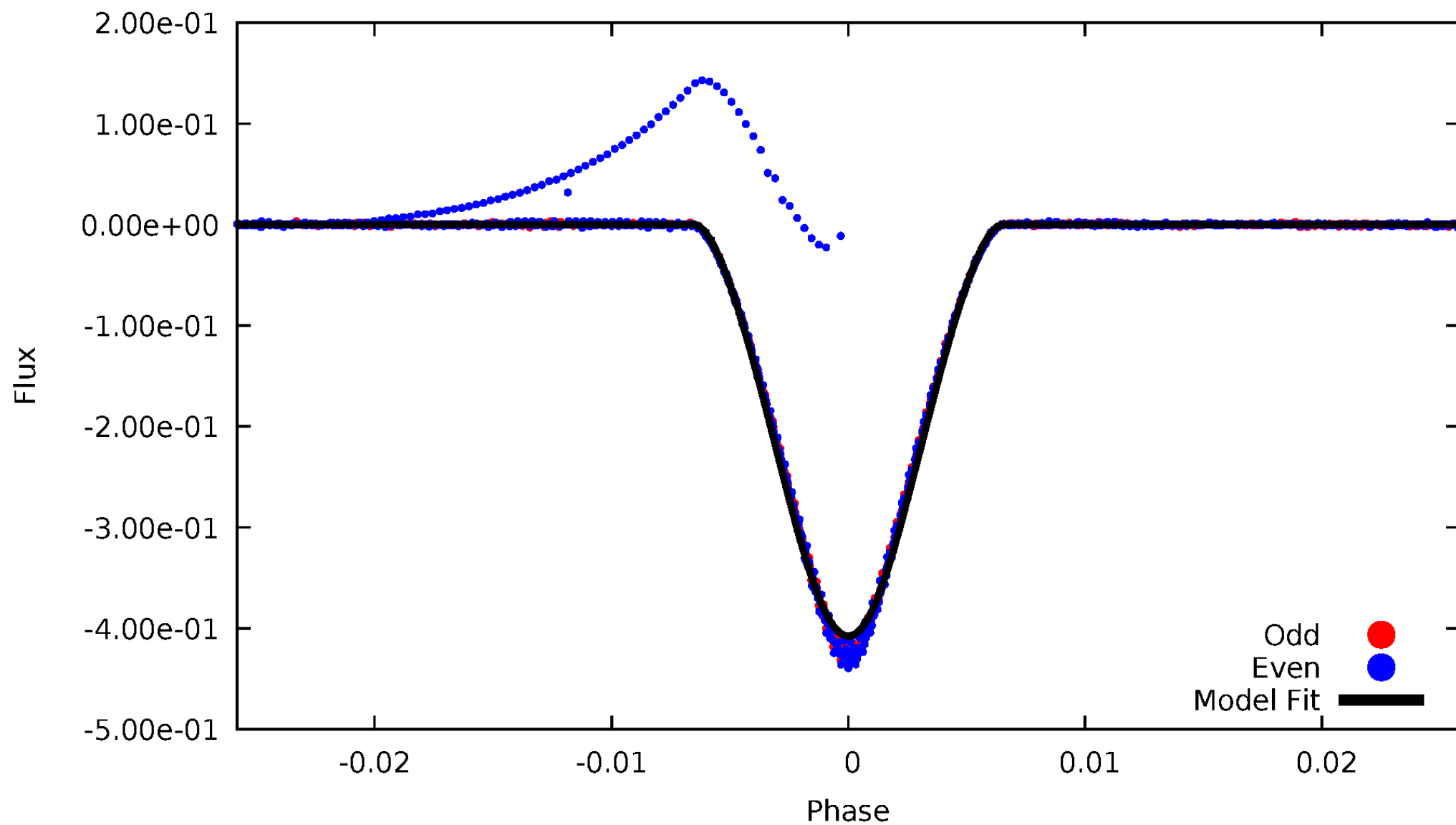


TCE 007132542-02



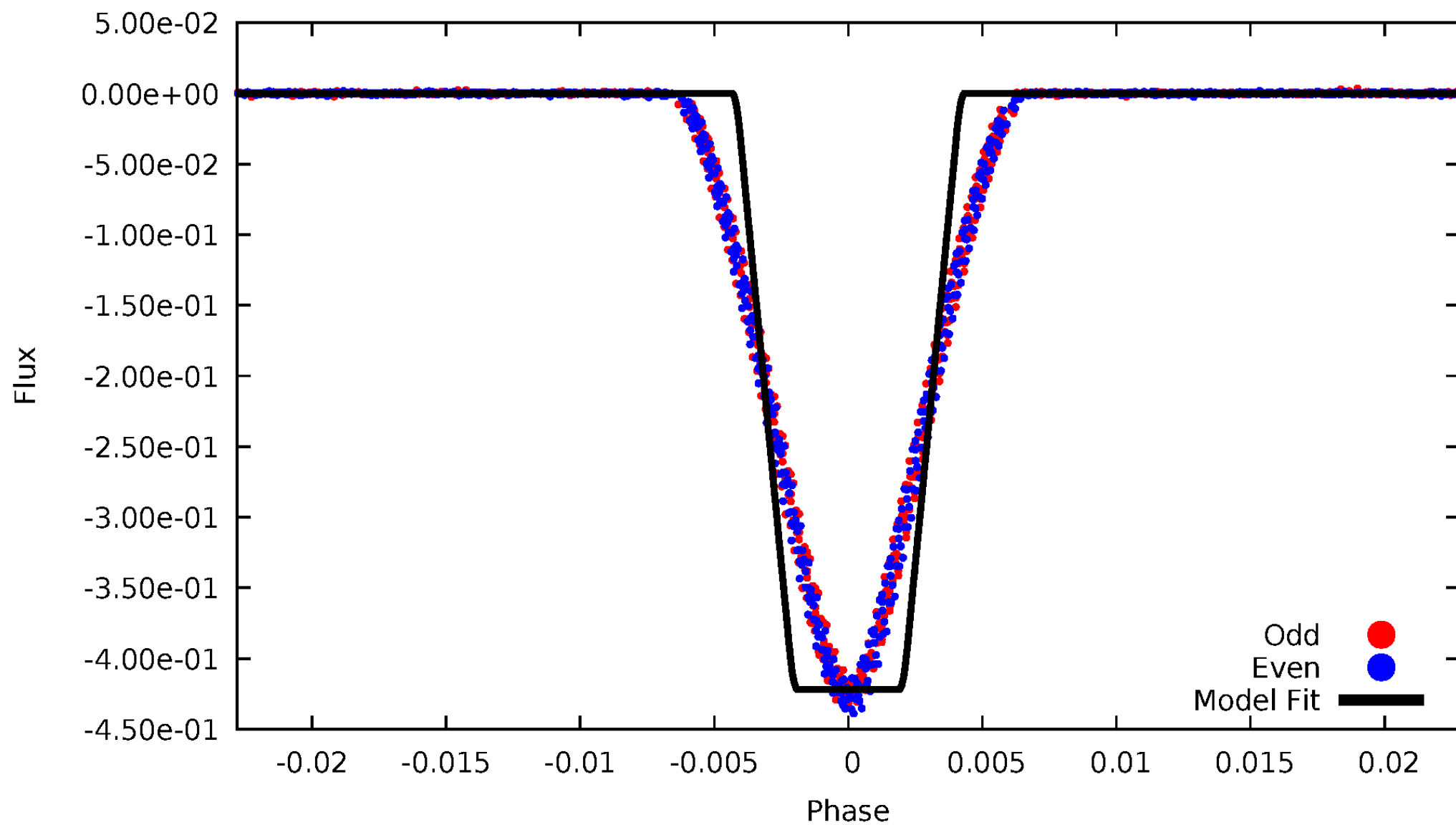
DV Odd/Even

TCE 007132542-02



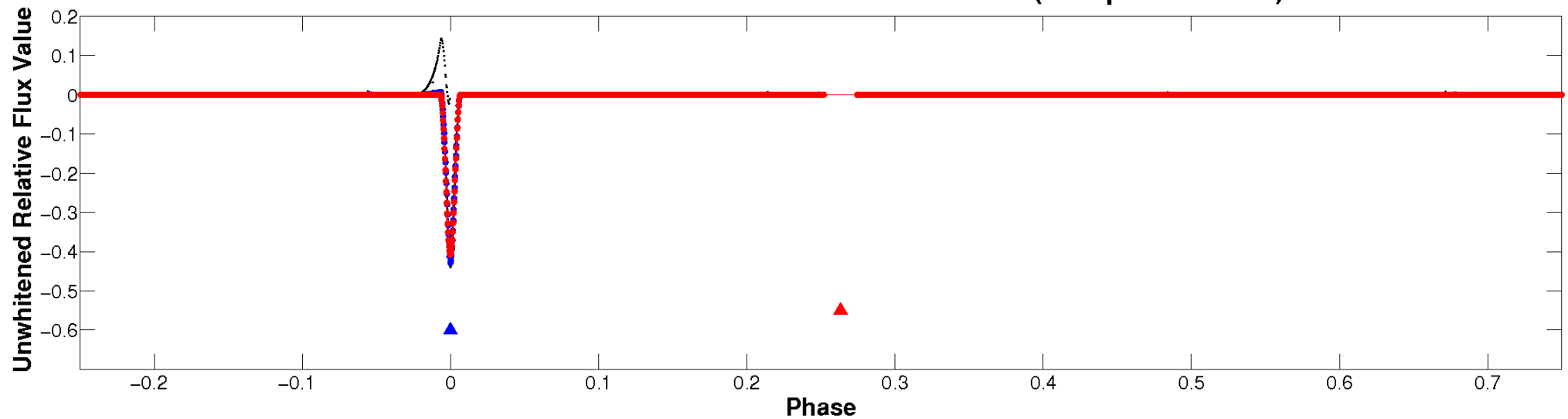
ALT Odd/Even

TCE 007132542-02

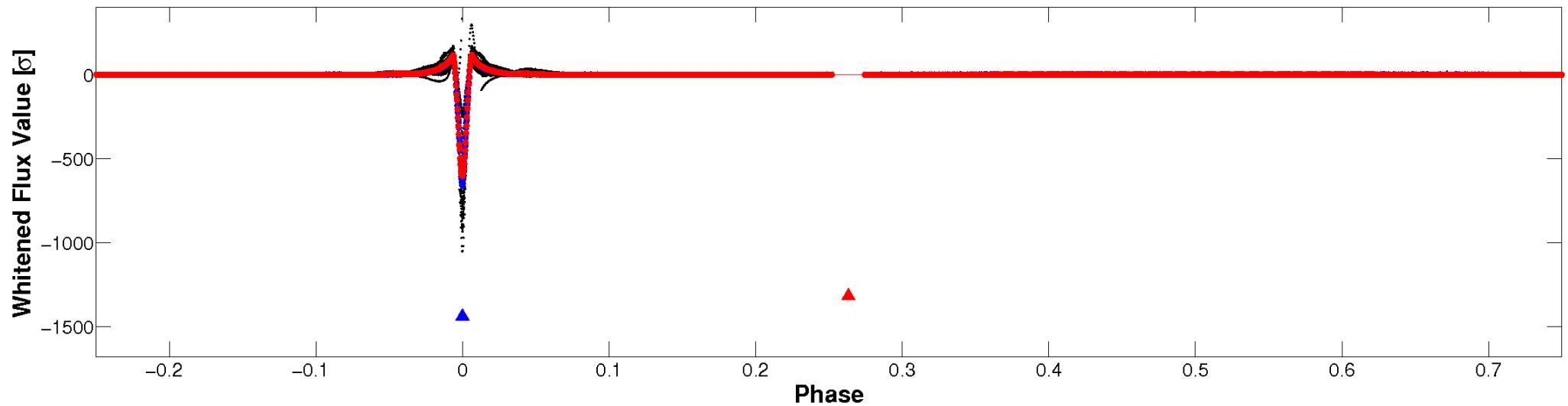


Non-Whitened Vs. Whitened Light Curve

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

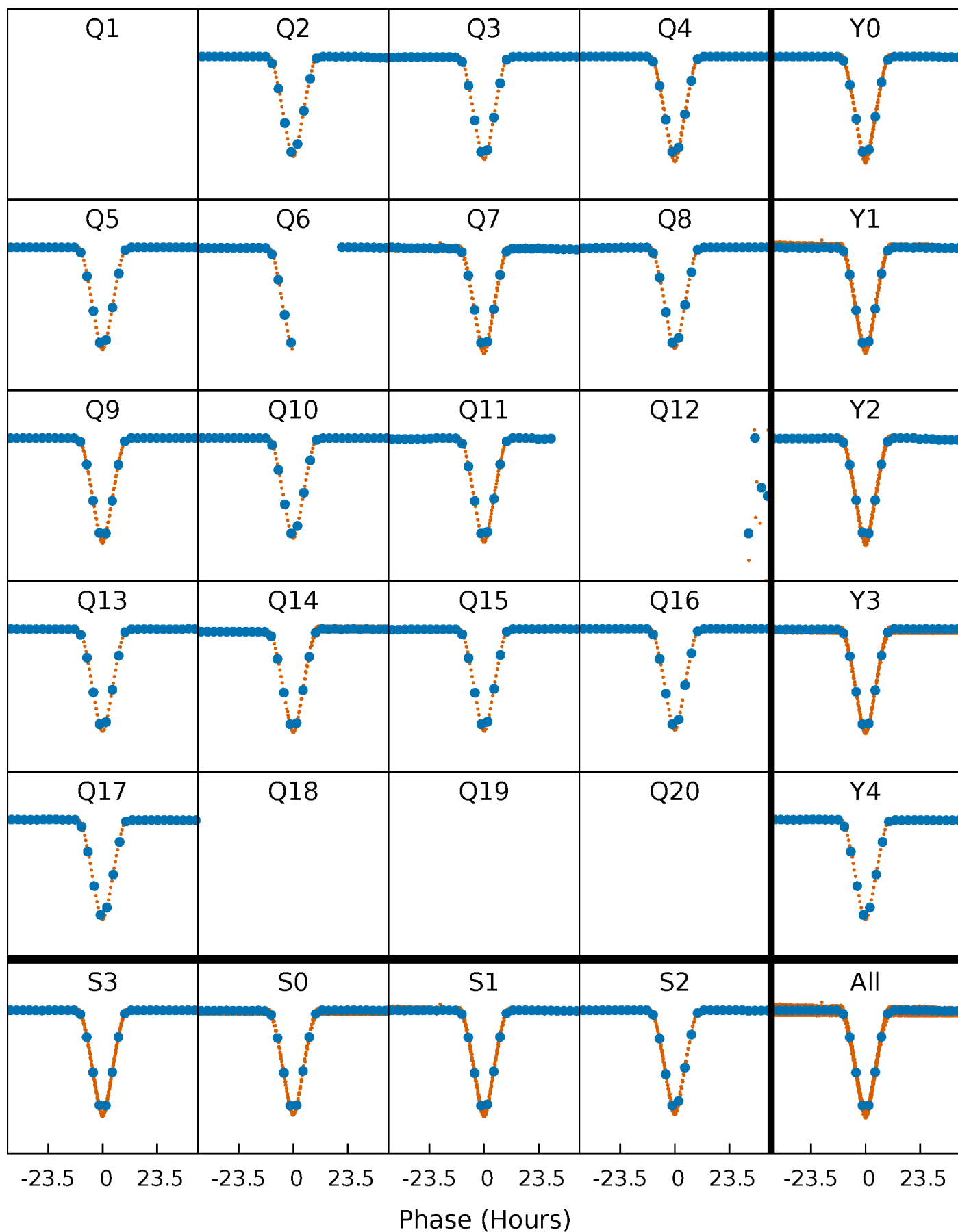


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



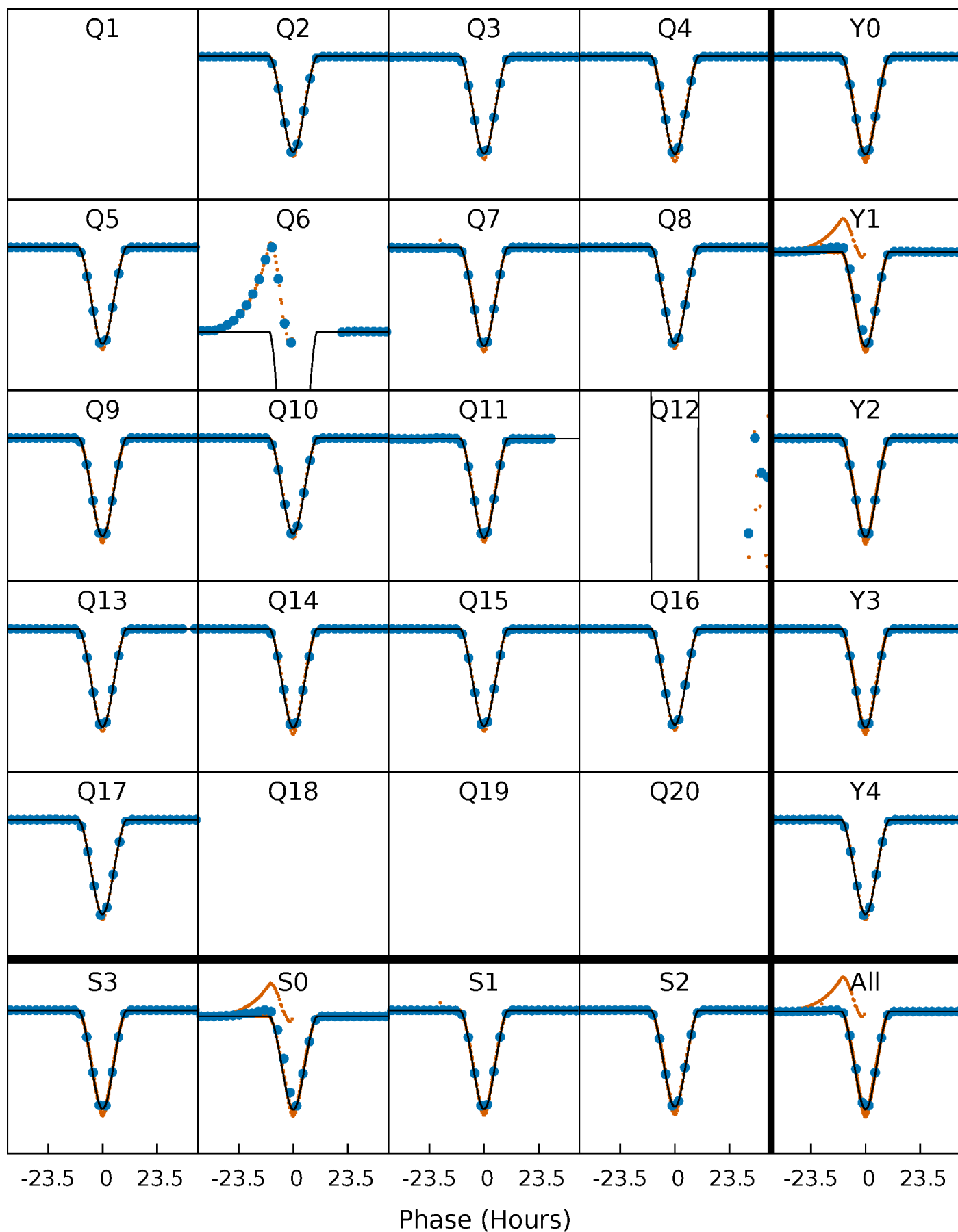
PDC Quarter-Phased Transit Curves

TCE 007132542-02 P= 66.360920 Days $T_0=168.380814$ (BKJD)



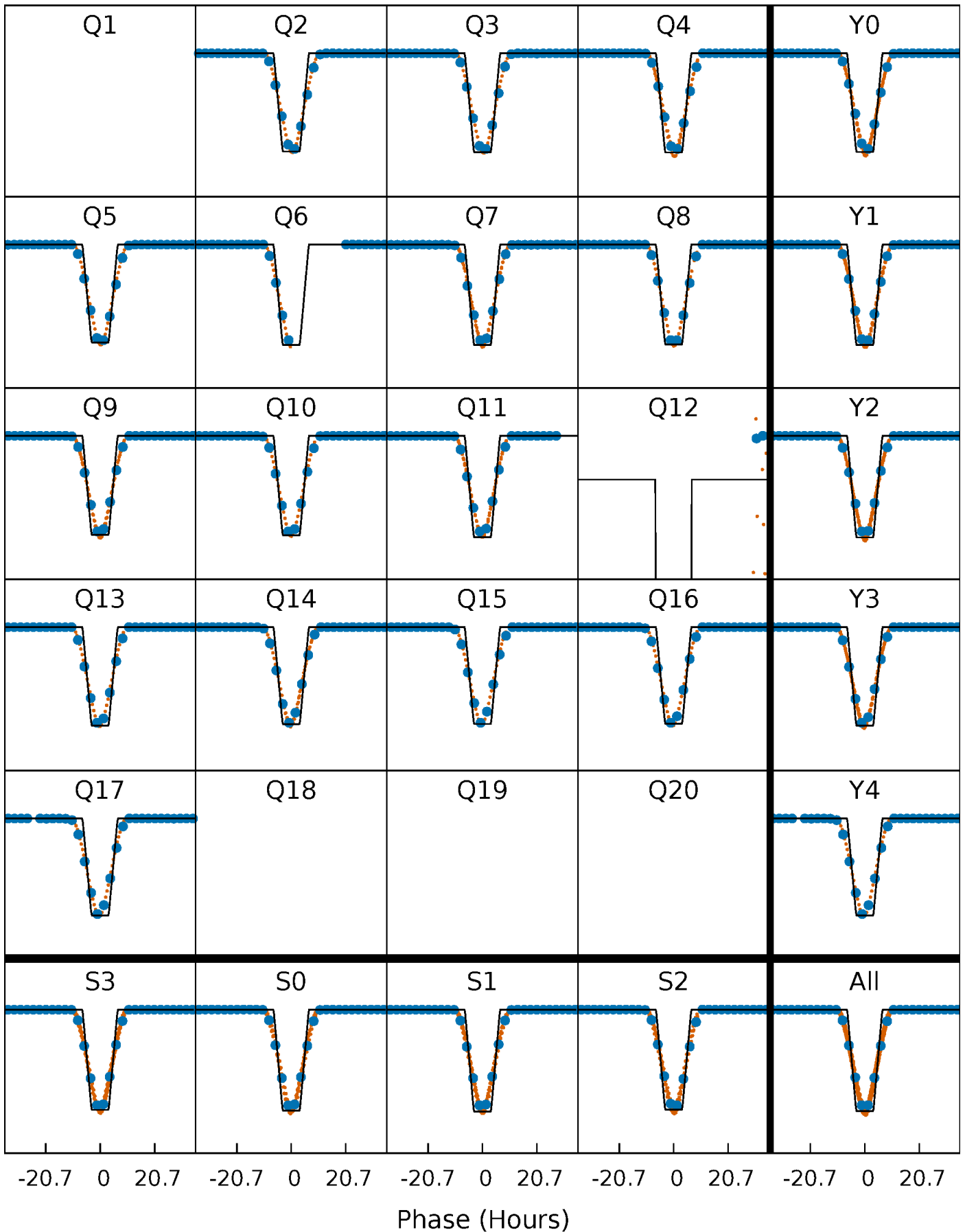
DV Quarter-Phased Transit Curves

TCE 007132542-02 P= 66.360920 Days $T_0=168.380814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

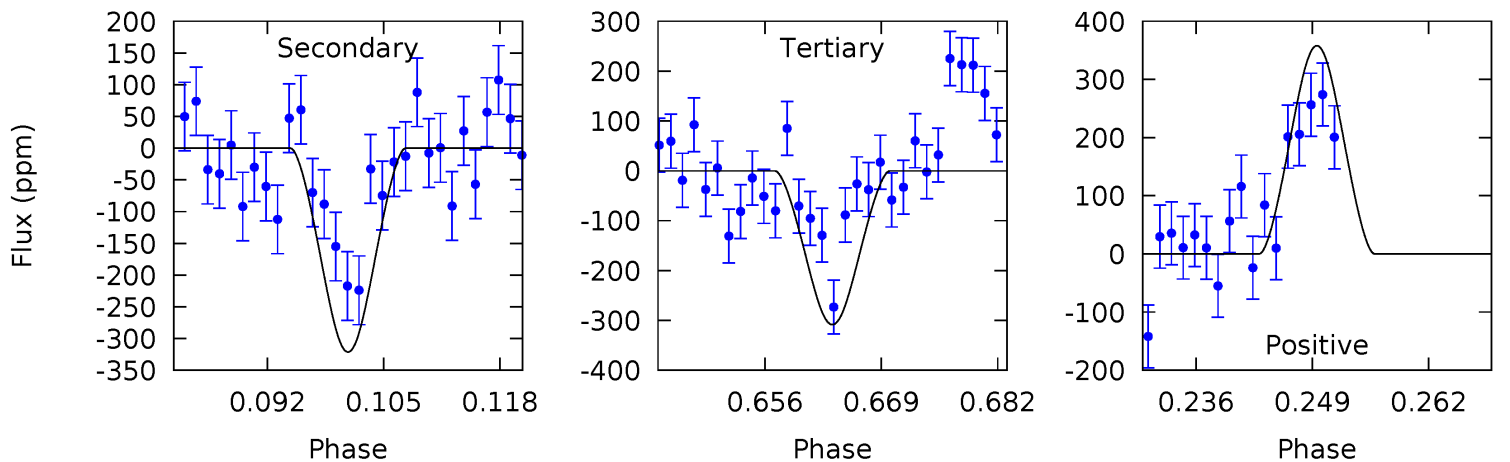
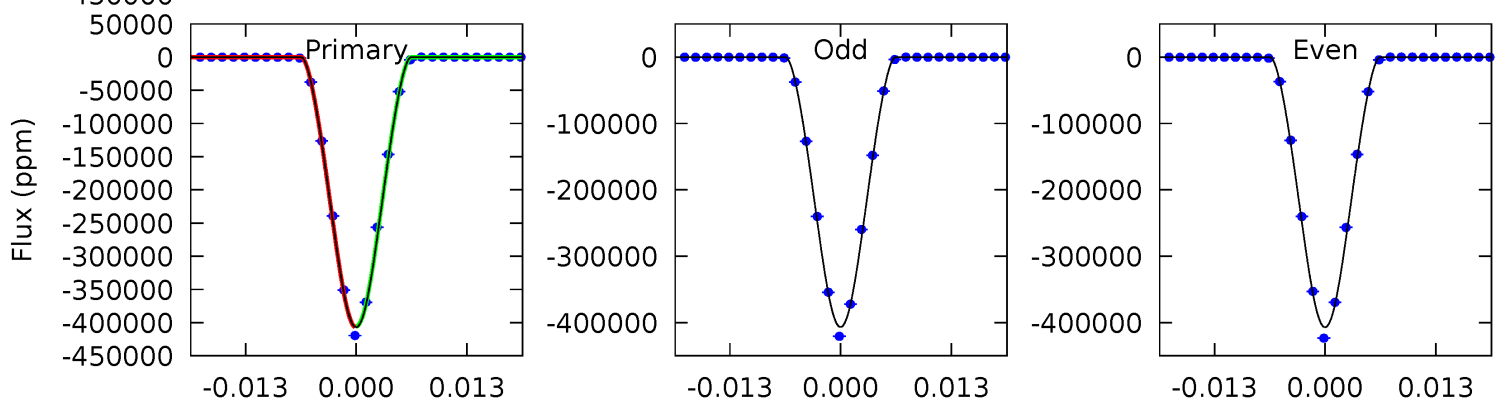
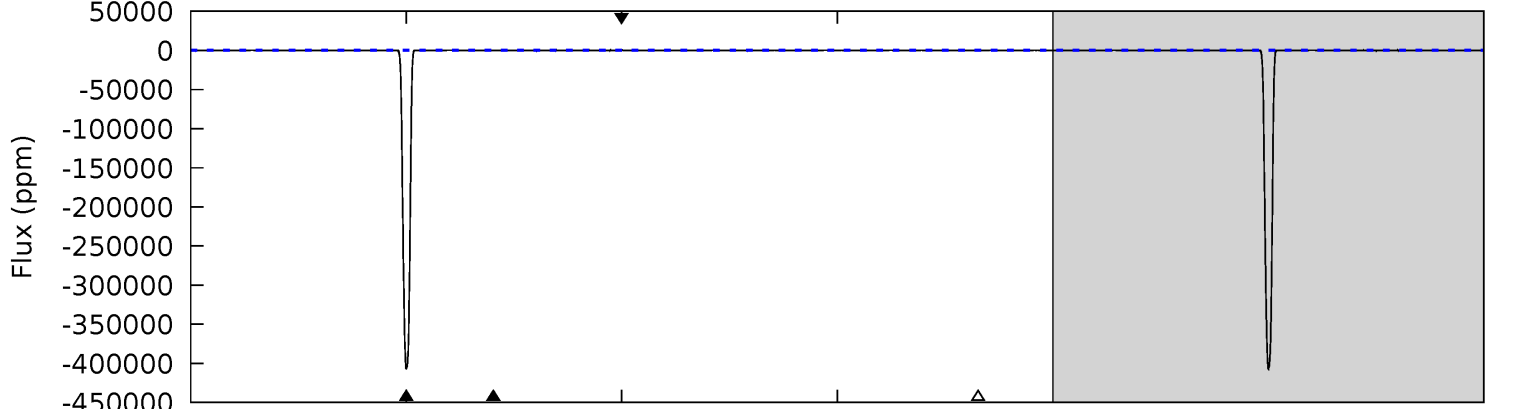
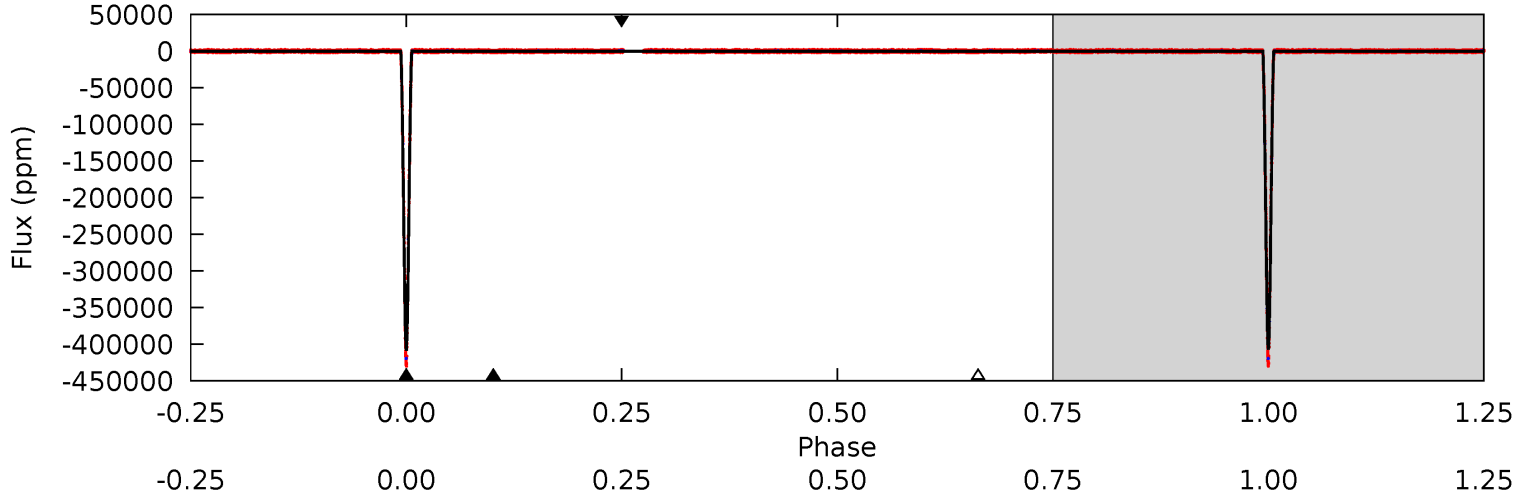
TCE 007132542-02 P= 66.362588 Days $T_0=168.361321$ (BKJD)



DV Model-Shift Uniqueness Test

007132542-02, P = 66.360920 Days, E = 102.019894 Days

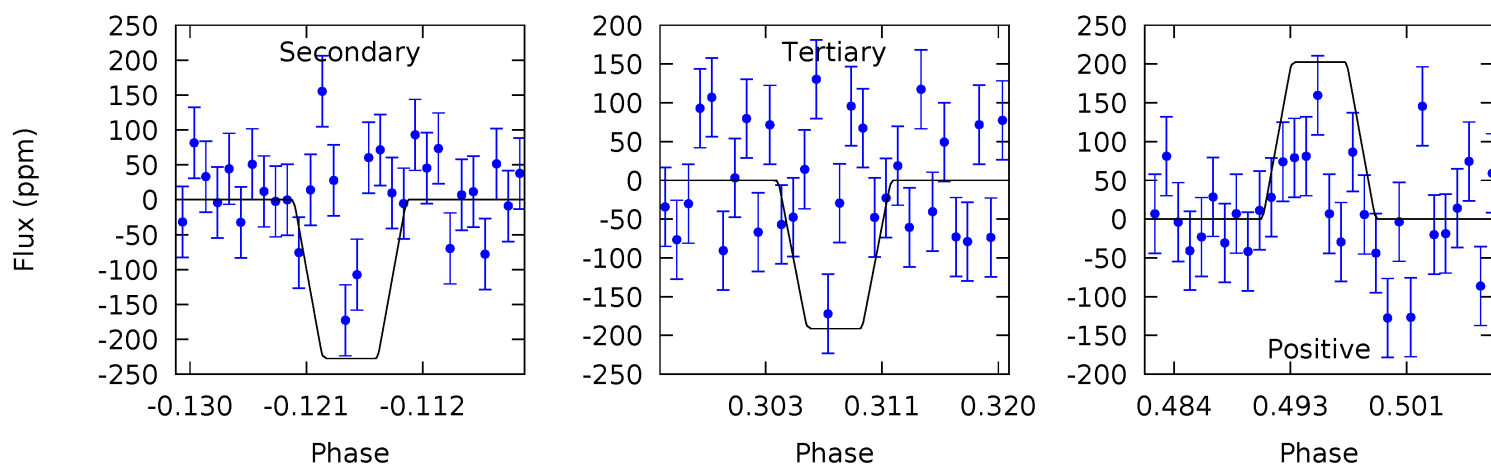
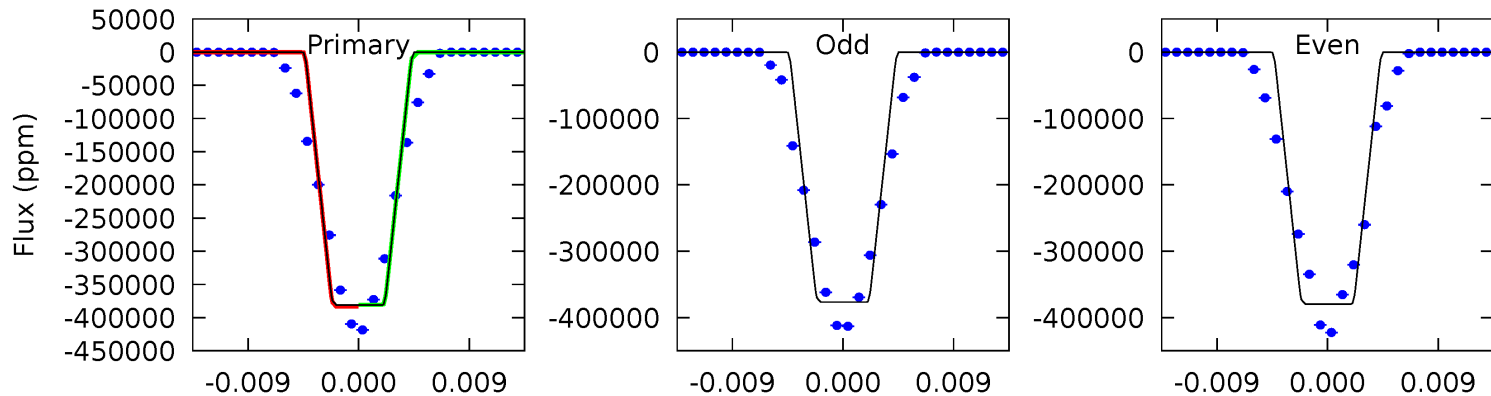
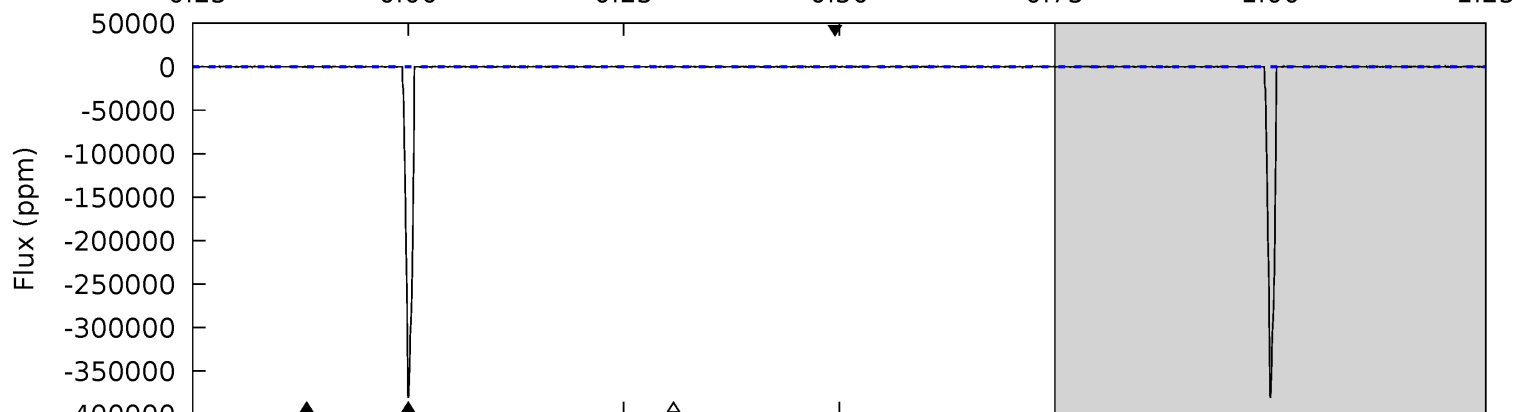
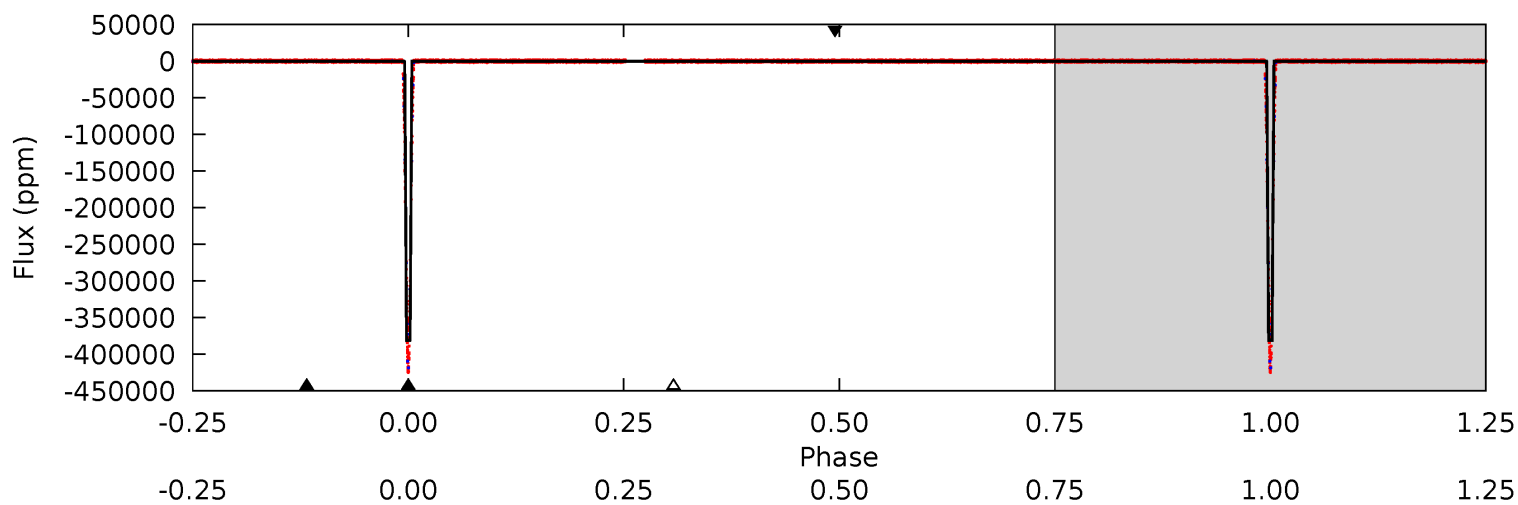
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15939	12.6	12.1	14.0	4.97	2.48	4.20	15927	15925	0.50	-1.43	4.01	0.95	0.00	0



Alt Model-Shift Uniqueness Test

007132542-02, P = 66.362588 Days, E = 101.998733 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7937	4.74	3.98	4.22	5.05	2.63	1.18	7933	7932	0.76	0.52	30.0	1.00	0.00	25.8



Stellar Parameters For KIC 007132542

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5583^{+169}_{-169}	$4.463^{+0.121}_{-0.162}$	$-0.400^{+0.350}_{-0.300}$	$0.857^{+0.199}_{-0.123}$	$0.778^{+0.115}_{-0.053}$	$1.741^{+0.939}_{-0.758}$
	+3%/-3%	+3%/-4%	+87%/-75%	+23%/-14%	+15%/-7%	+54%/-44%
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 007132542-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-321 ± 26	$59.79^{+8.21}_{-5.09}$	589^{+37}_{-30}	1938^{+27}_{-32}	$4.302^{+0.874}_{-0.872}$
Alt.	-227 ± 48	$61.46^{+8.70}_{-6.03}$	590^{+37}_{-35}	1853^{+46}_{-52}	$2.820^{+0.941}_{-0.767}$

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 $A_{obs} \gg 1.0$

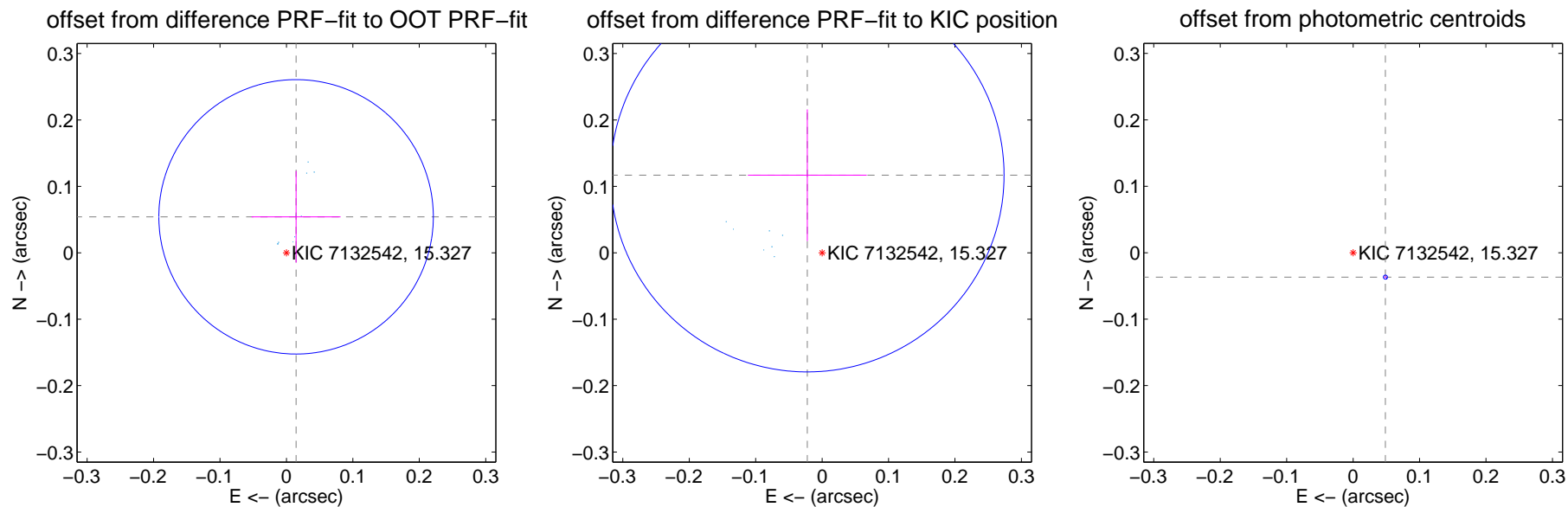
DV Centroid Data

Supplemental centroid analysis for 007132542-02. Kepler magnitude: 15.33. Transit SNR 3769.55

There are 10 quarters with good PRF difference image offsets

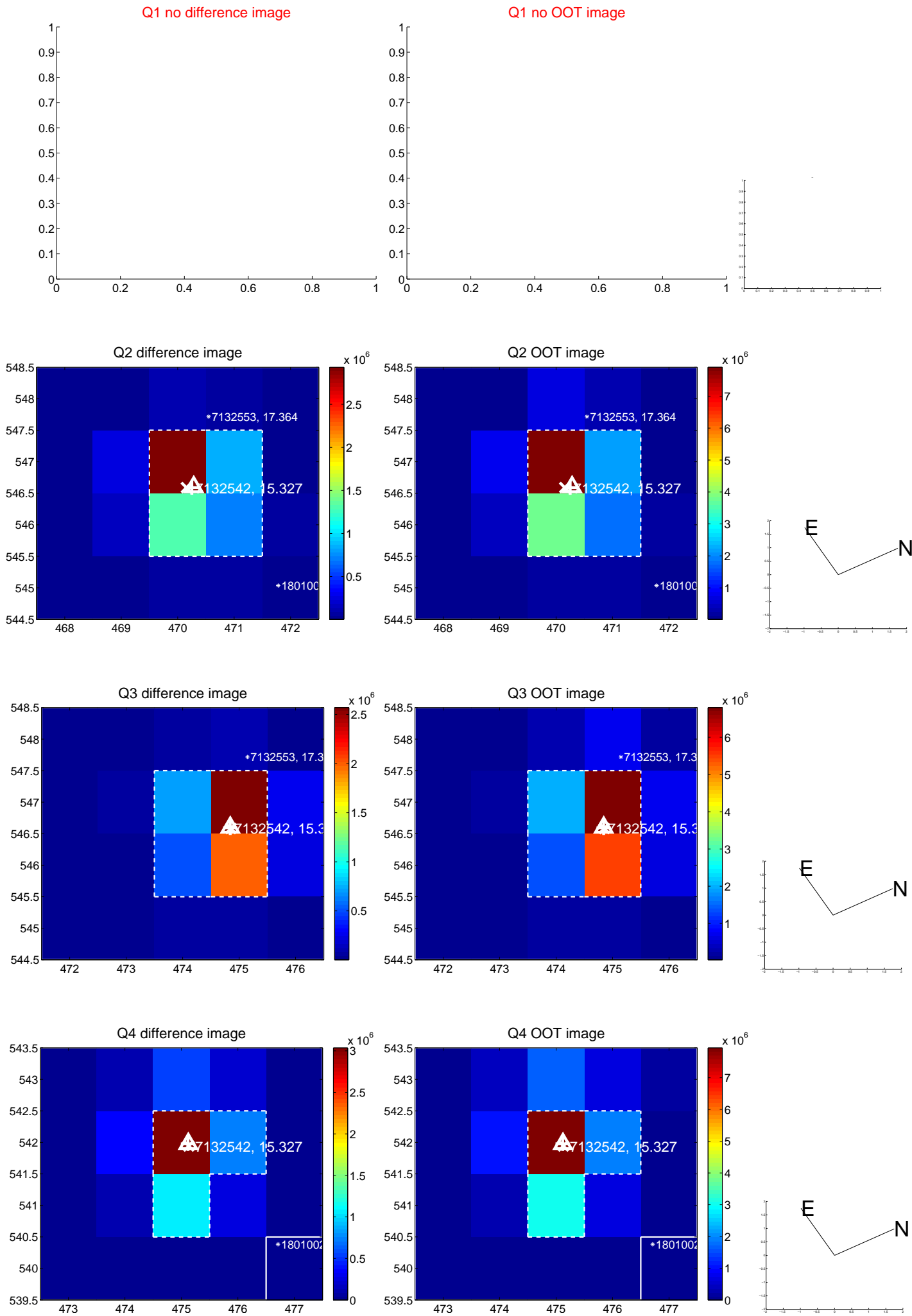
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.069	0.81	-0.015 ± 0.067	0.054 ± 0.069
PRF-fit source offset from KIC position	0.119 ± 0.099	1.20	0.022 ± 0.090	0.117 ± 0.099
photometric centroid source offset	0.06 ± 0.00	59.91	-0.05 ± 0.00	-0.04 ± 0.00

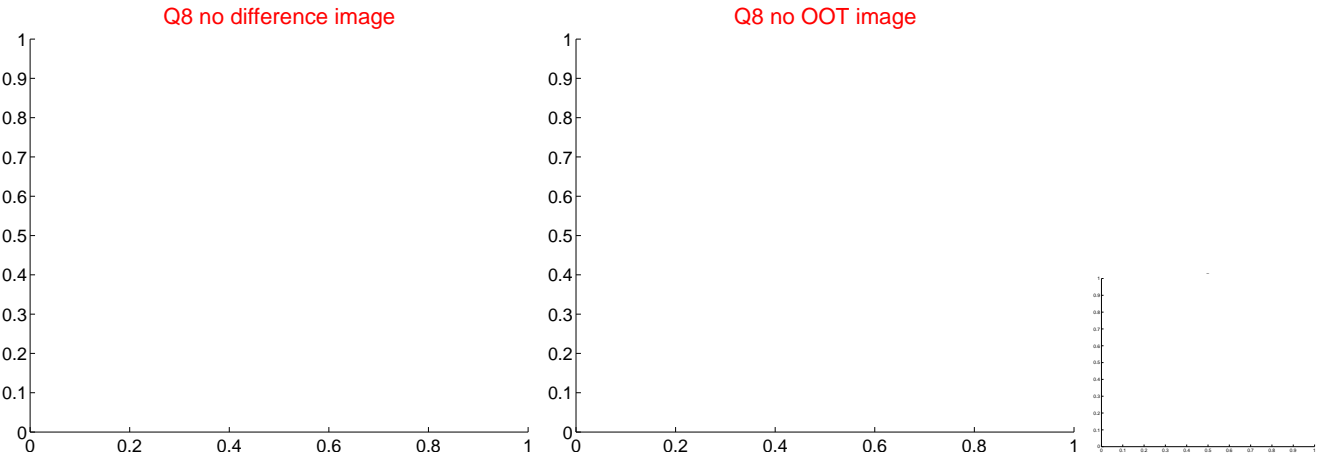
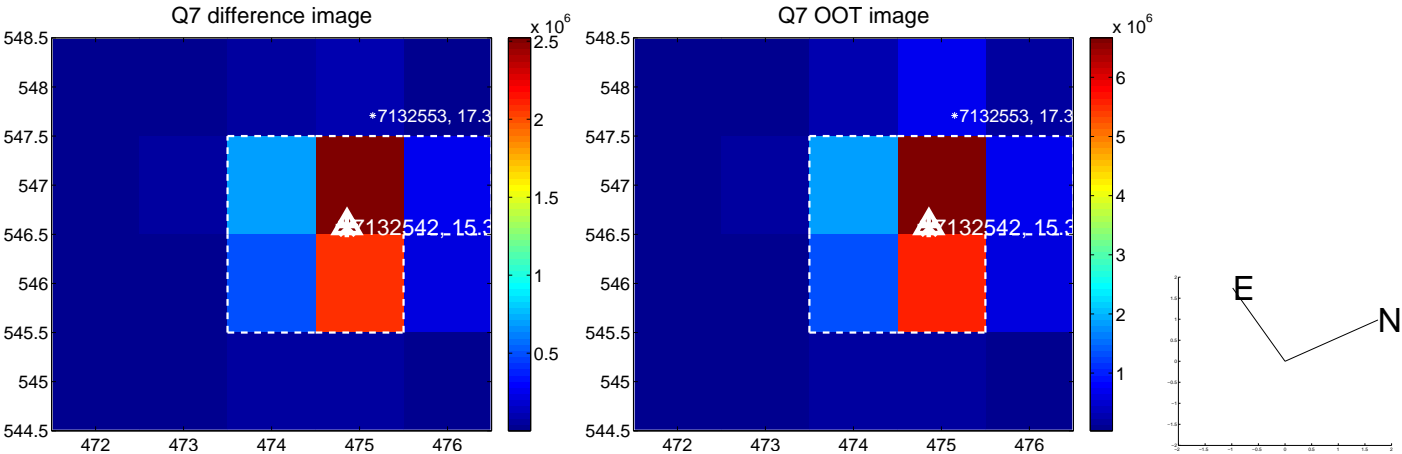
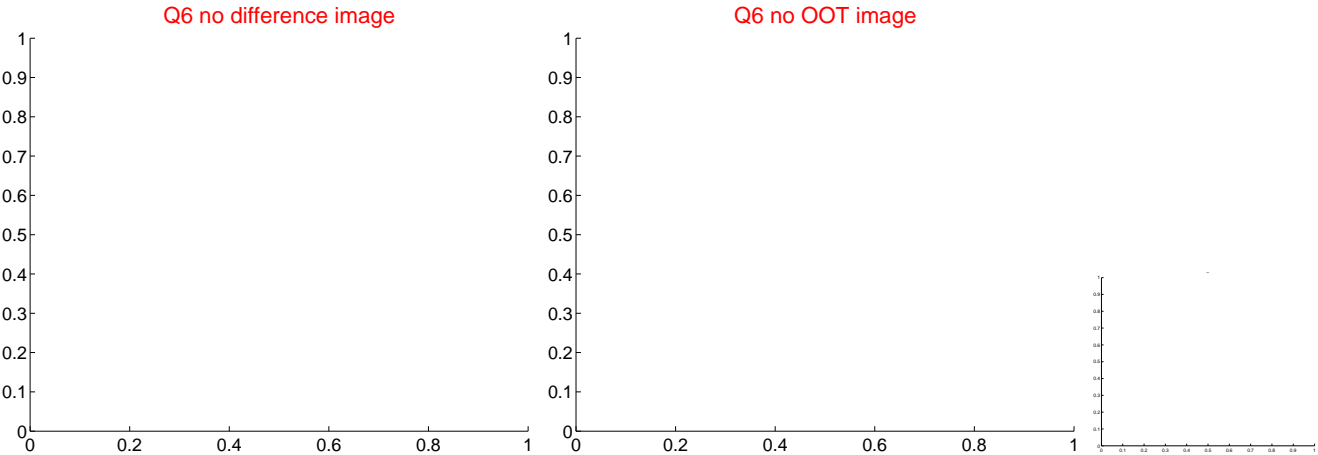
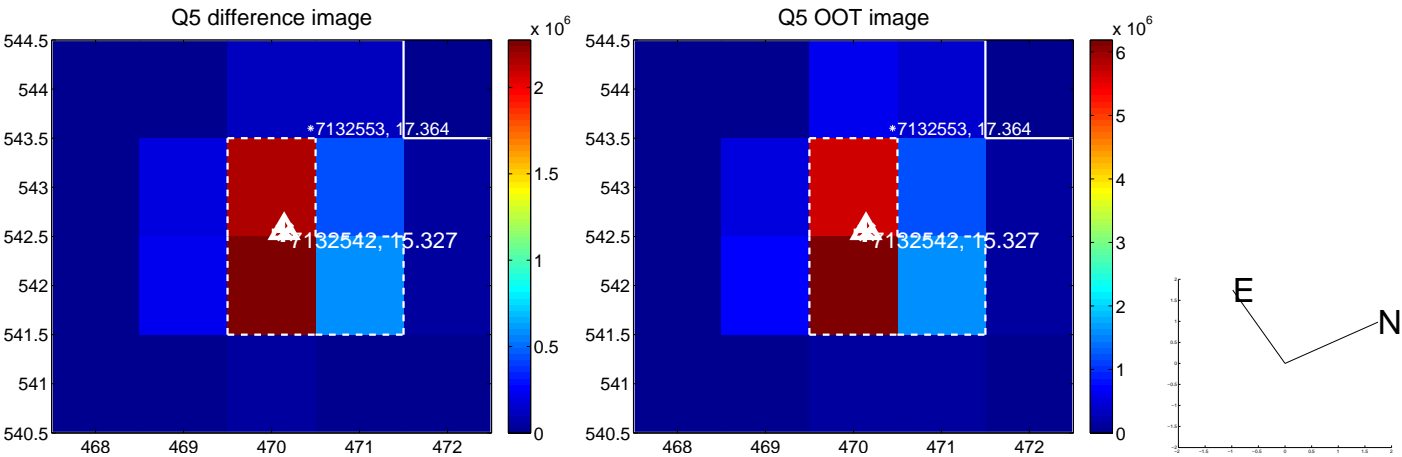


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

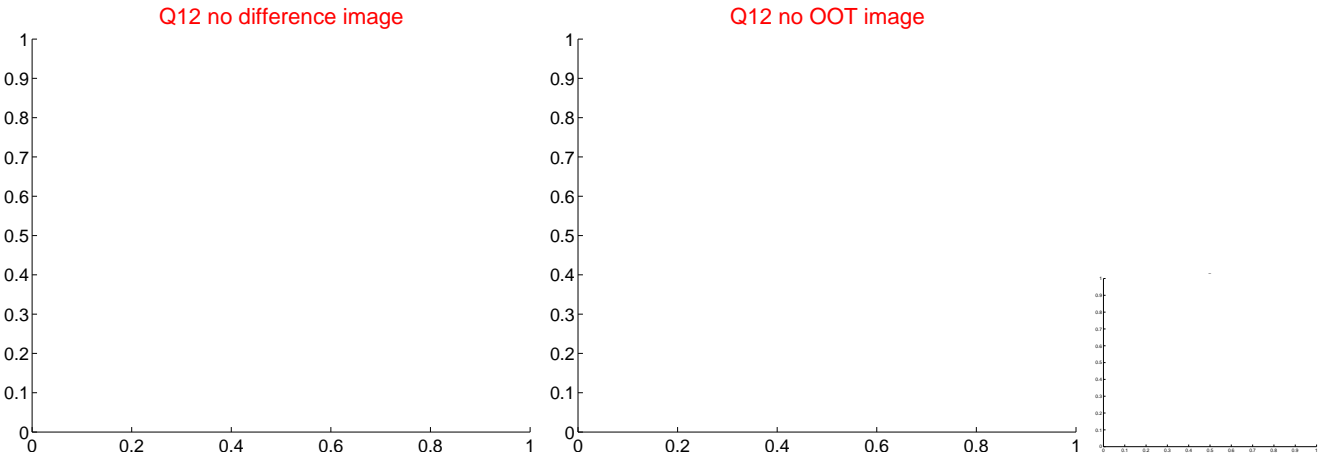
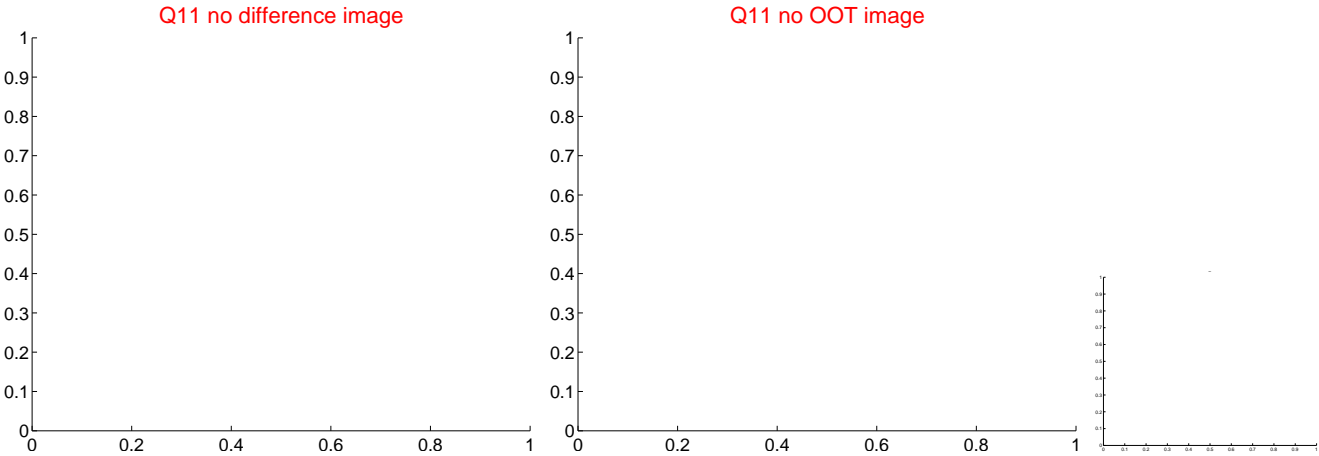
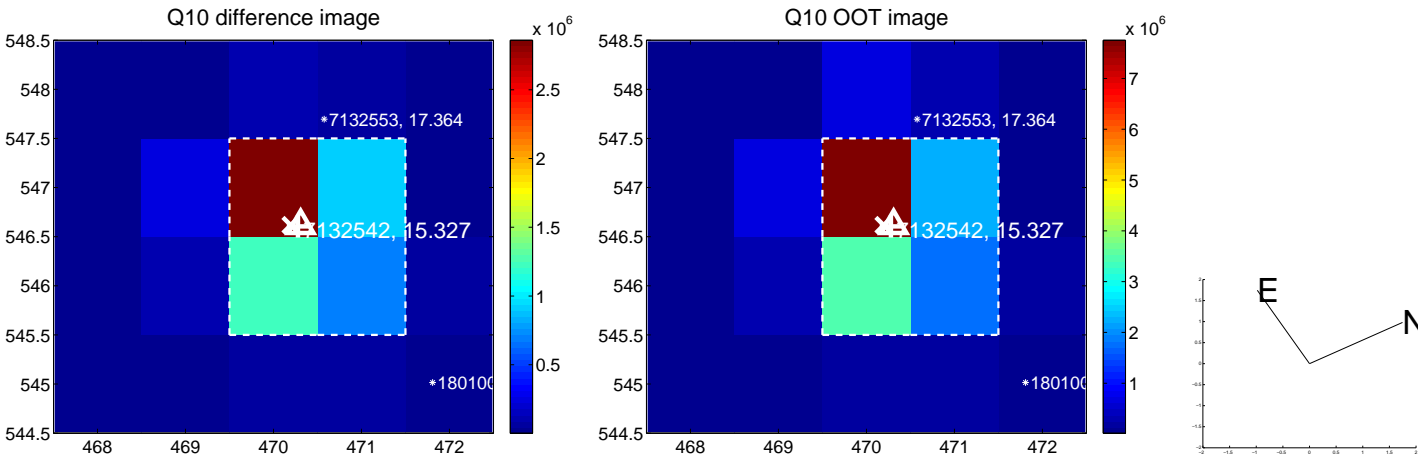
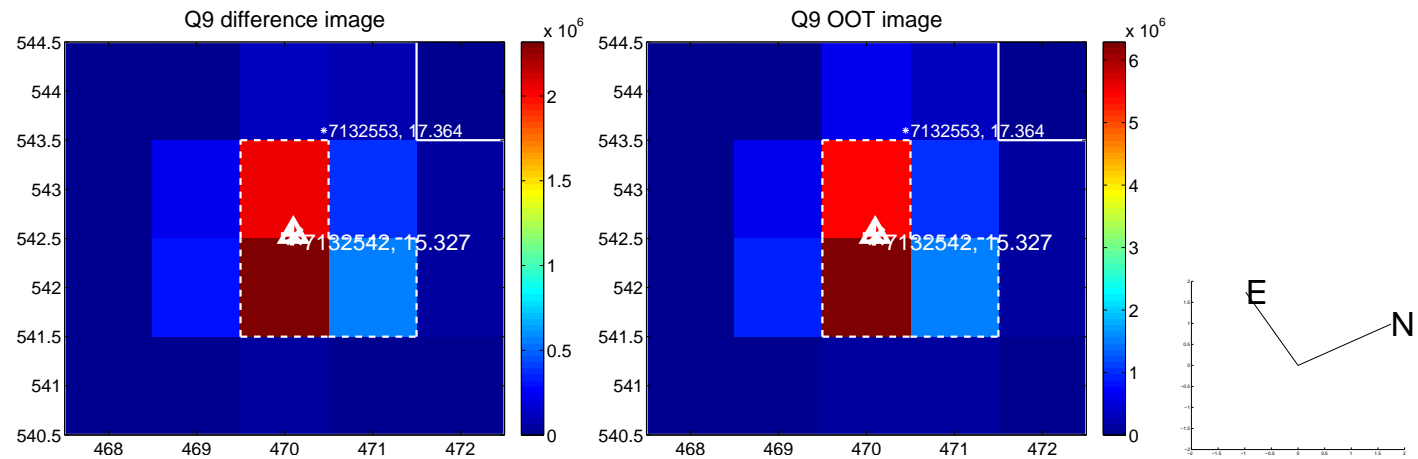
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



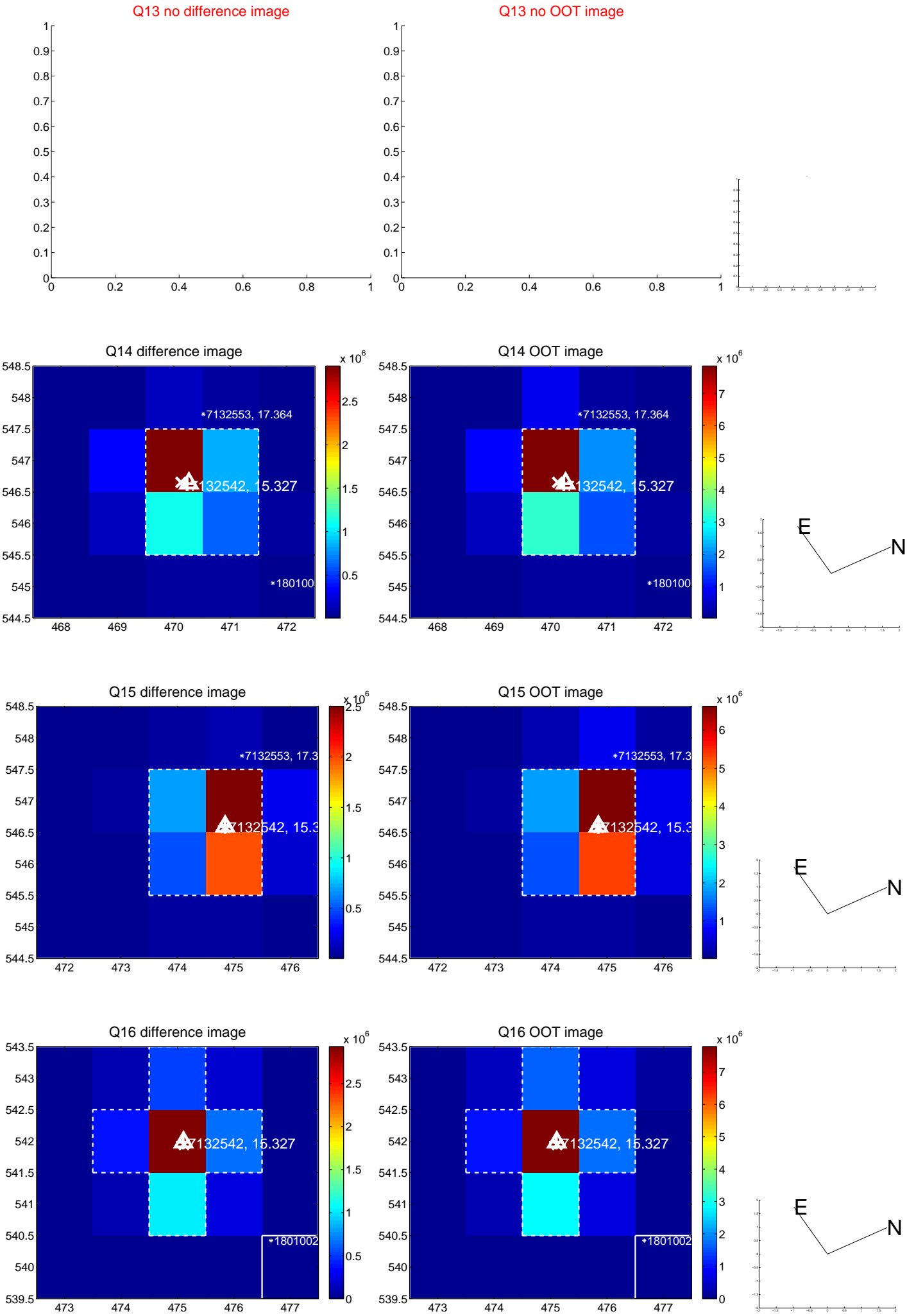
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



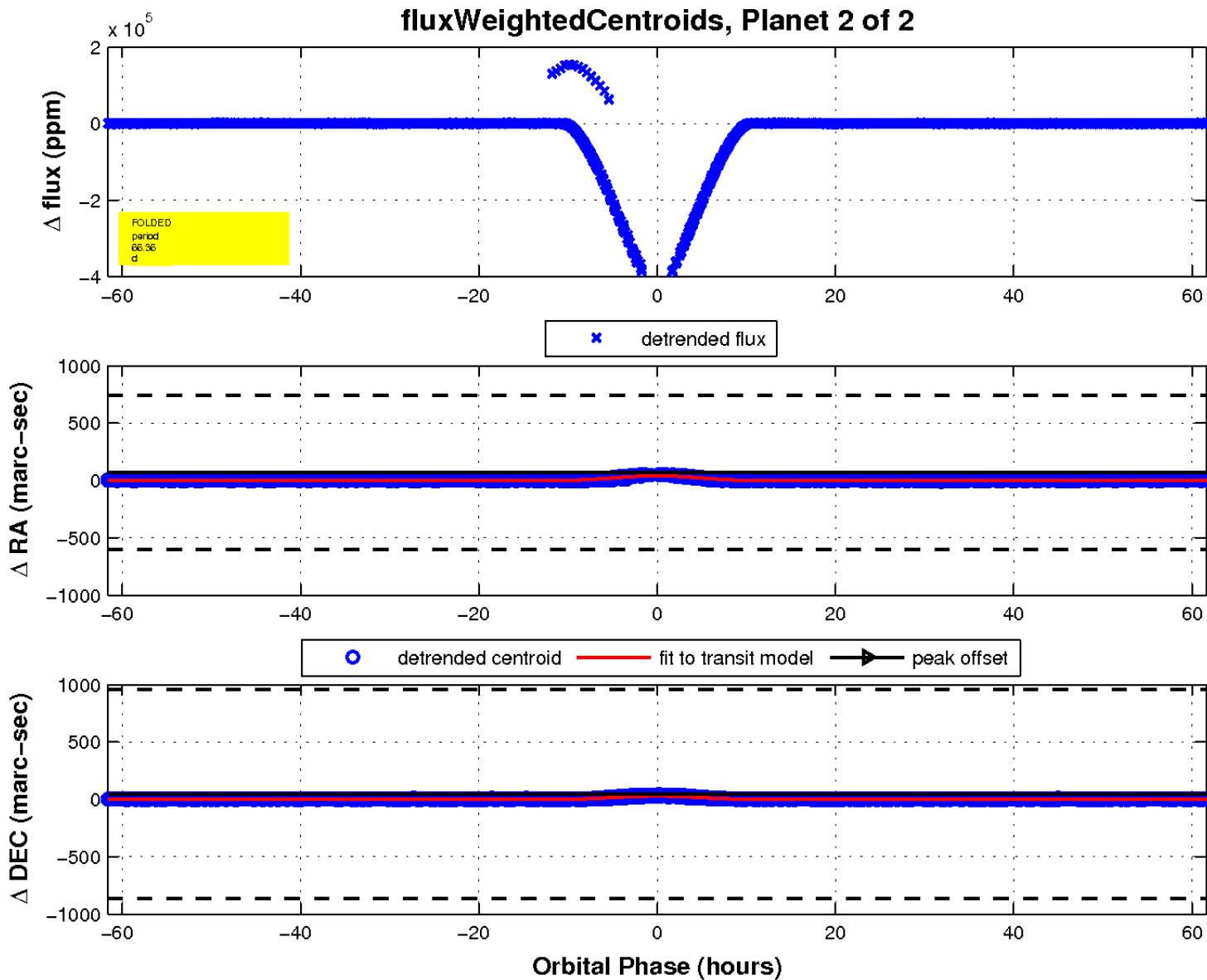
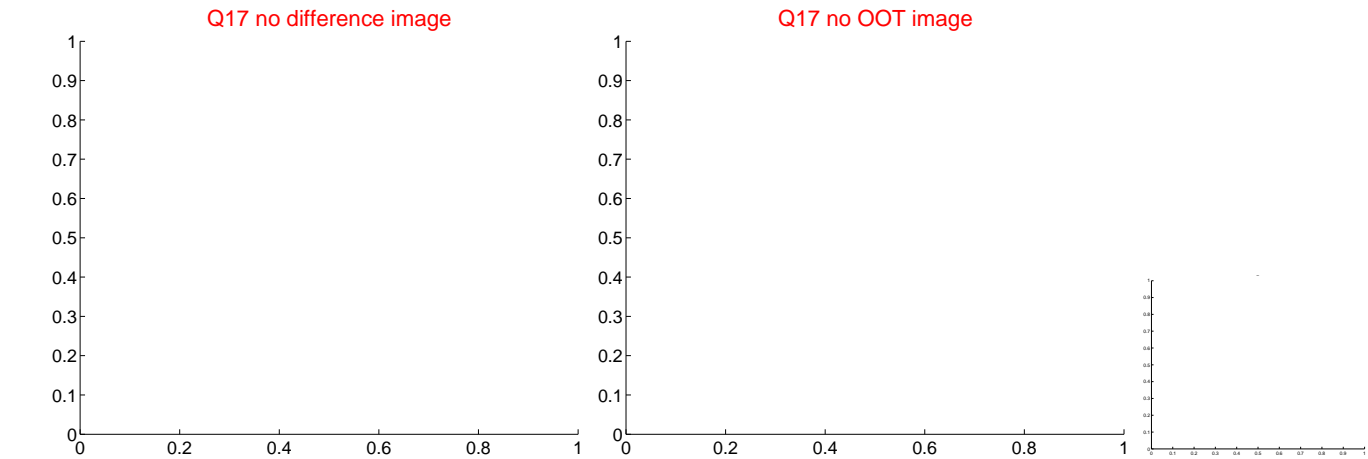
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

