

KIC 011455484

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})
011455484-01	OBS	3673.01	6.142812	135.161054	88605.7	6.252	1054.6	821.2	1.00	5780	30.41	231.98
011455484-02	OBS	No	6.142811	132.156505	26072.1	6.115	310.6	284.0	1.00	5780	17.31	231.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011455484-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_KIC_POS
011455484-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS

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.

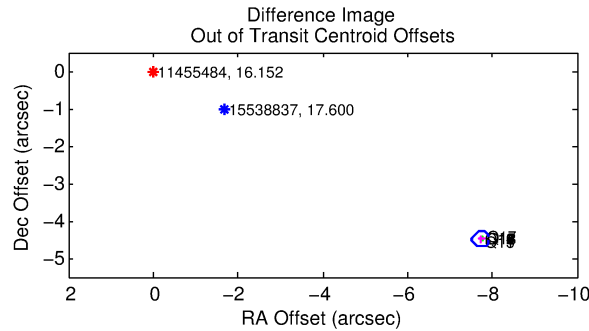
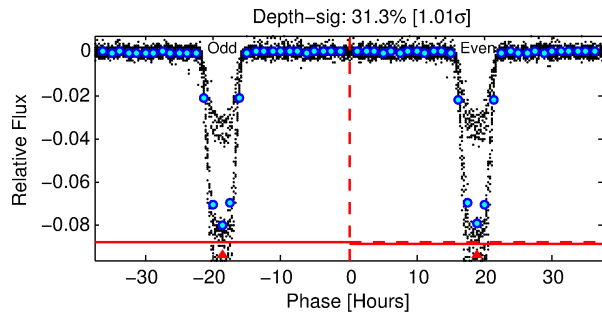
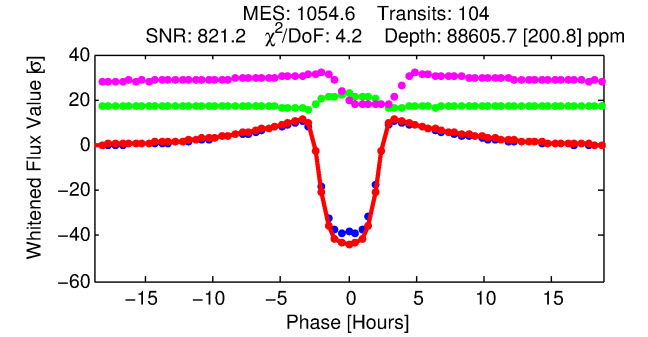
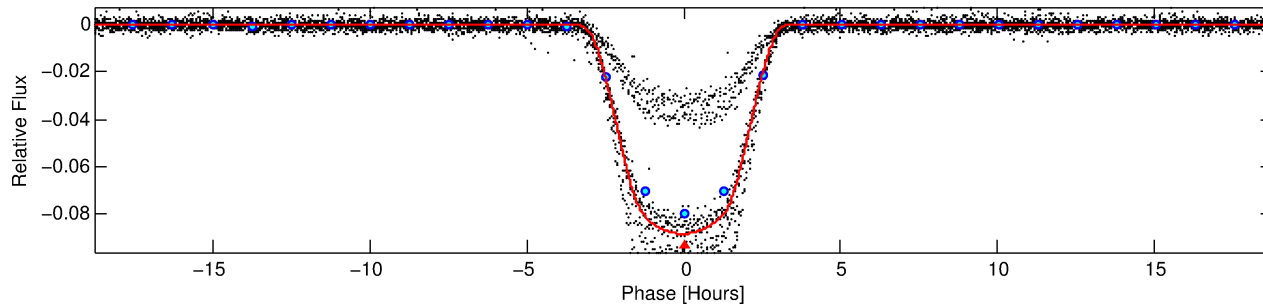
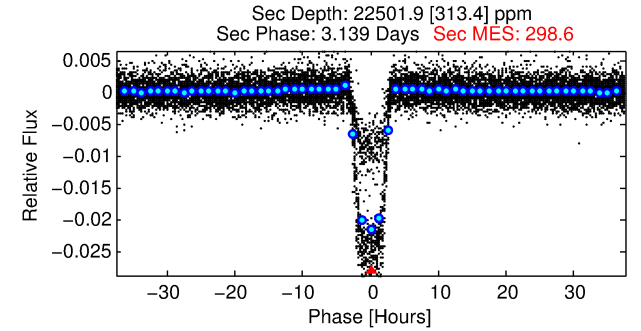
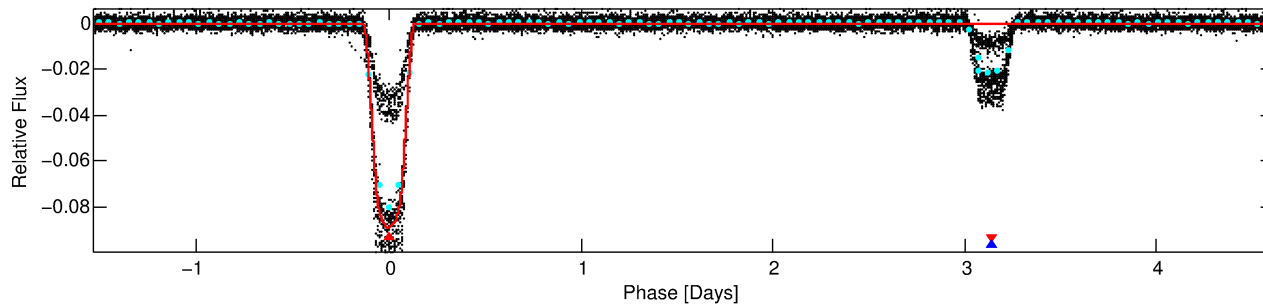
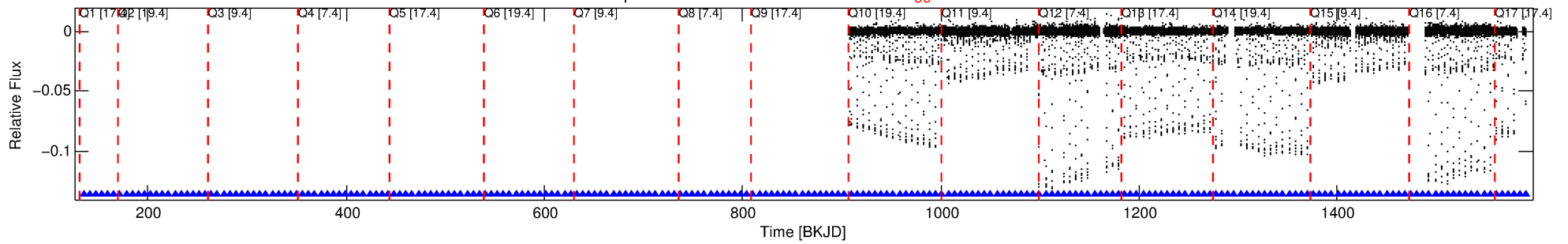
Ephemeris Match Information For 011455484-01

No Significant Match Found

DV One-Page Summary

KIC: 11455484 Candidate: 1 of 2 Period: 6.143 d
KOI: K03673.01 Corr: 0.994

Kp: 16.15 R^* : 1.00 R_s T_{eff} : 5780.0 K Logg : 4.44 Fe/H: 0.000



DV Fit Results:

Period = 6.14281 [0.00000] d
Epoch = 135.1611 [0.0006] BKJD
 R_p/R^* = 0.2787 [0.0006]
 a/R^* = 9.03 [0.05]
 b = 0.45 [0.01]
 S_{eff} = 231.98 [0.00]
 T_{eq} = 995 [0] K
 R_p = 30.41 [0.06] R_e
 a = 0.0657 [0.0000] AU
 A_g = 57.70 [0.84] [67.70 σ]
 T_{effp} = 4241 [15] K [210.92 σ]

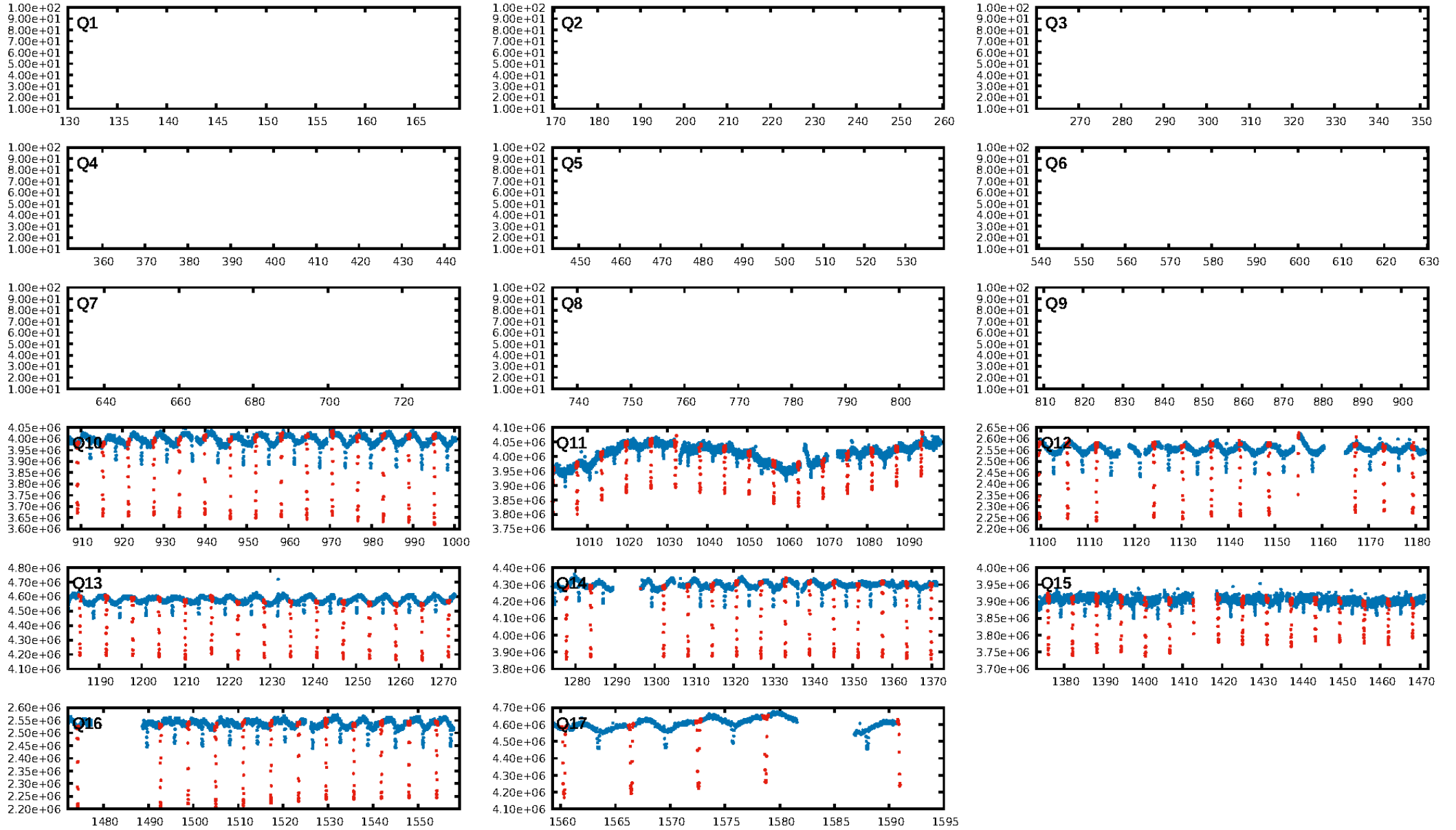
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [99/99]
GhostDiagnostic-chr: 1.161
Centroid-sig: 0.0%
Centroid-so: 3.529 arcsec [2226.12 σ]
OotOffset-rm: 8.937 arcsec [132.29 σ]
KicOffset-rm: 2.043 arcsec [29.36 σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

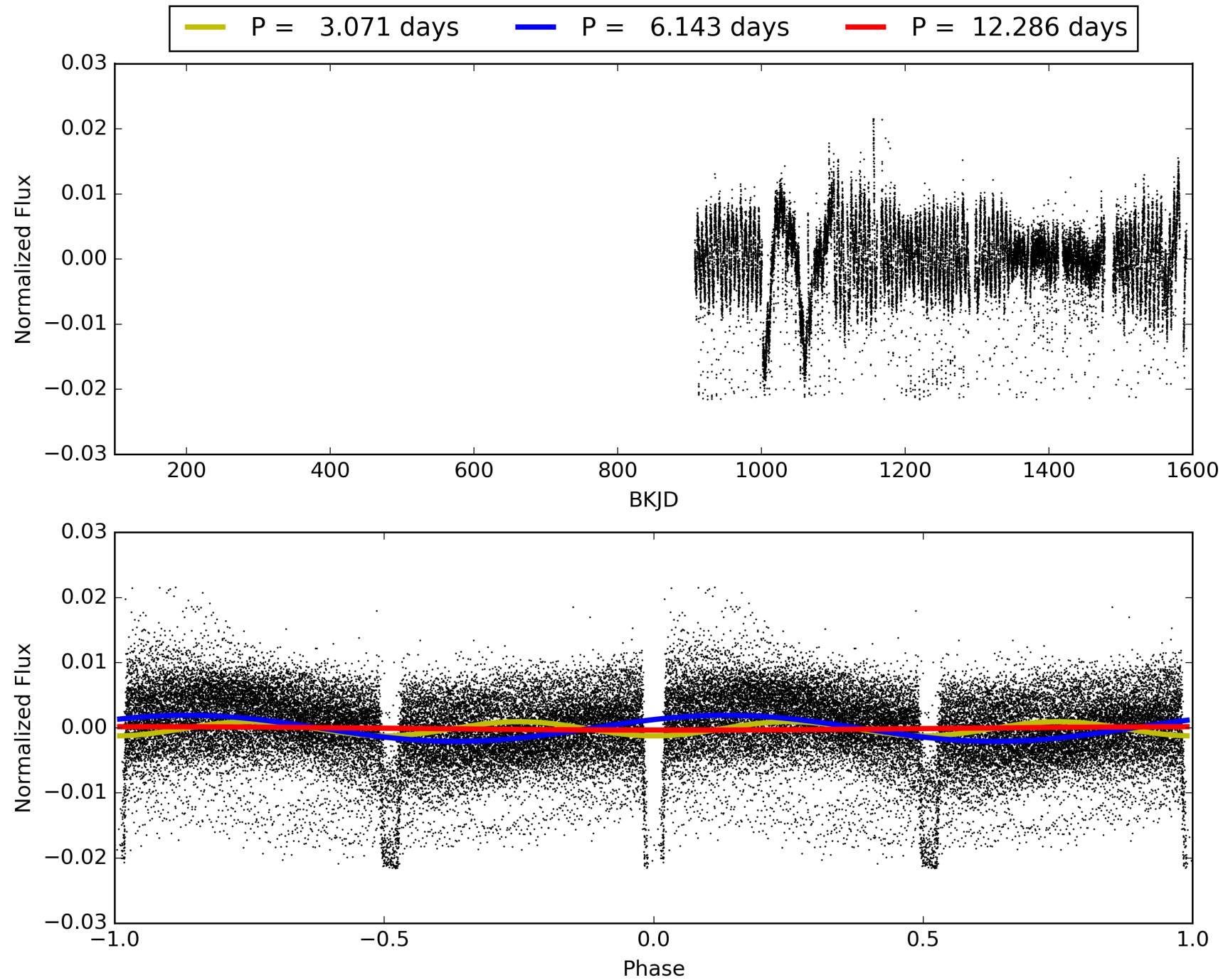
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:23:35 Z

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

TCE 011455484-01, PDC Light Curves

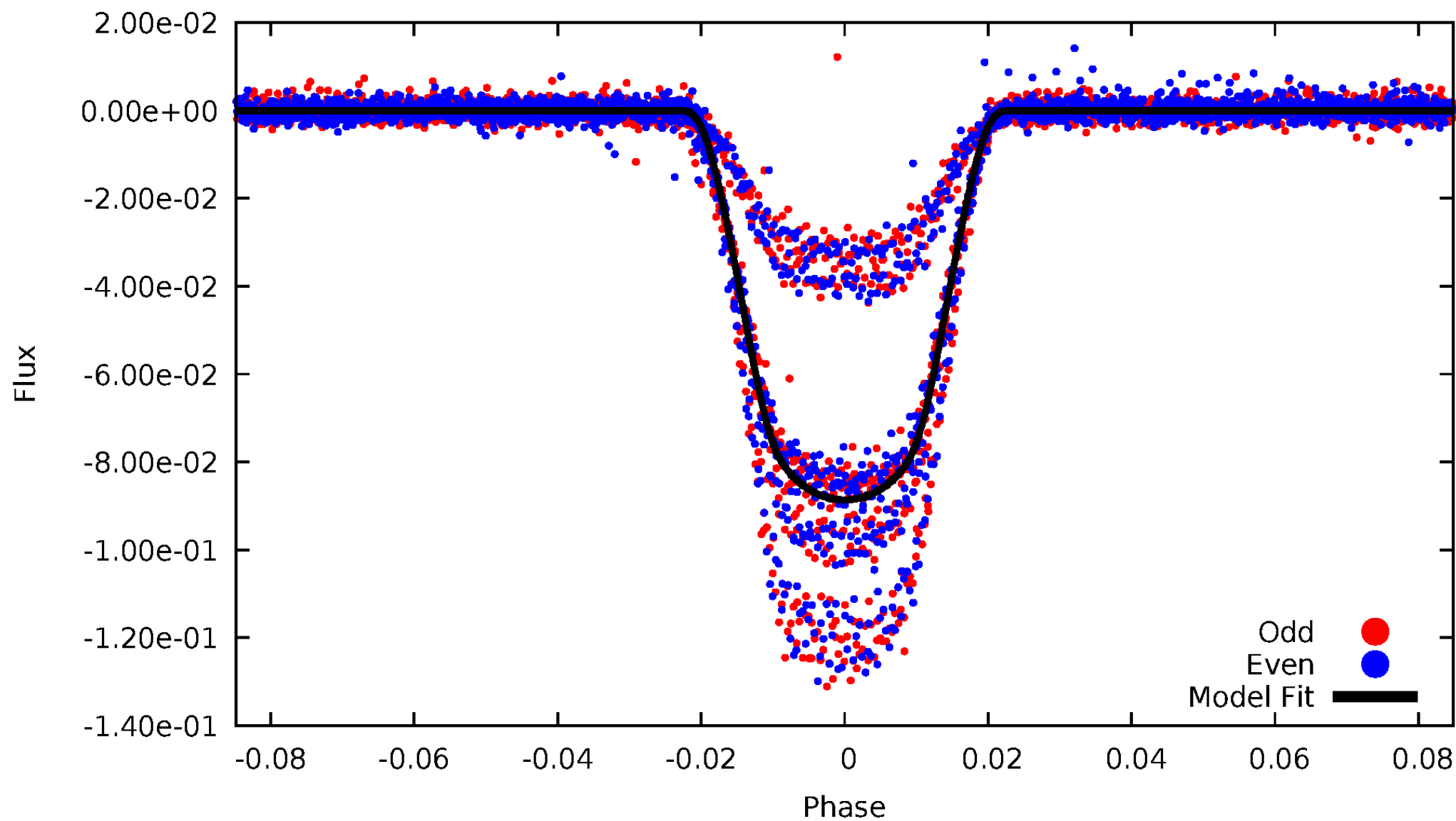


TCE 011455484-01



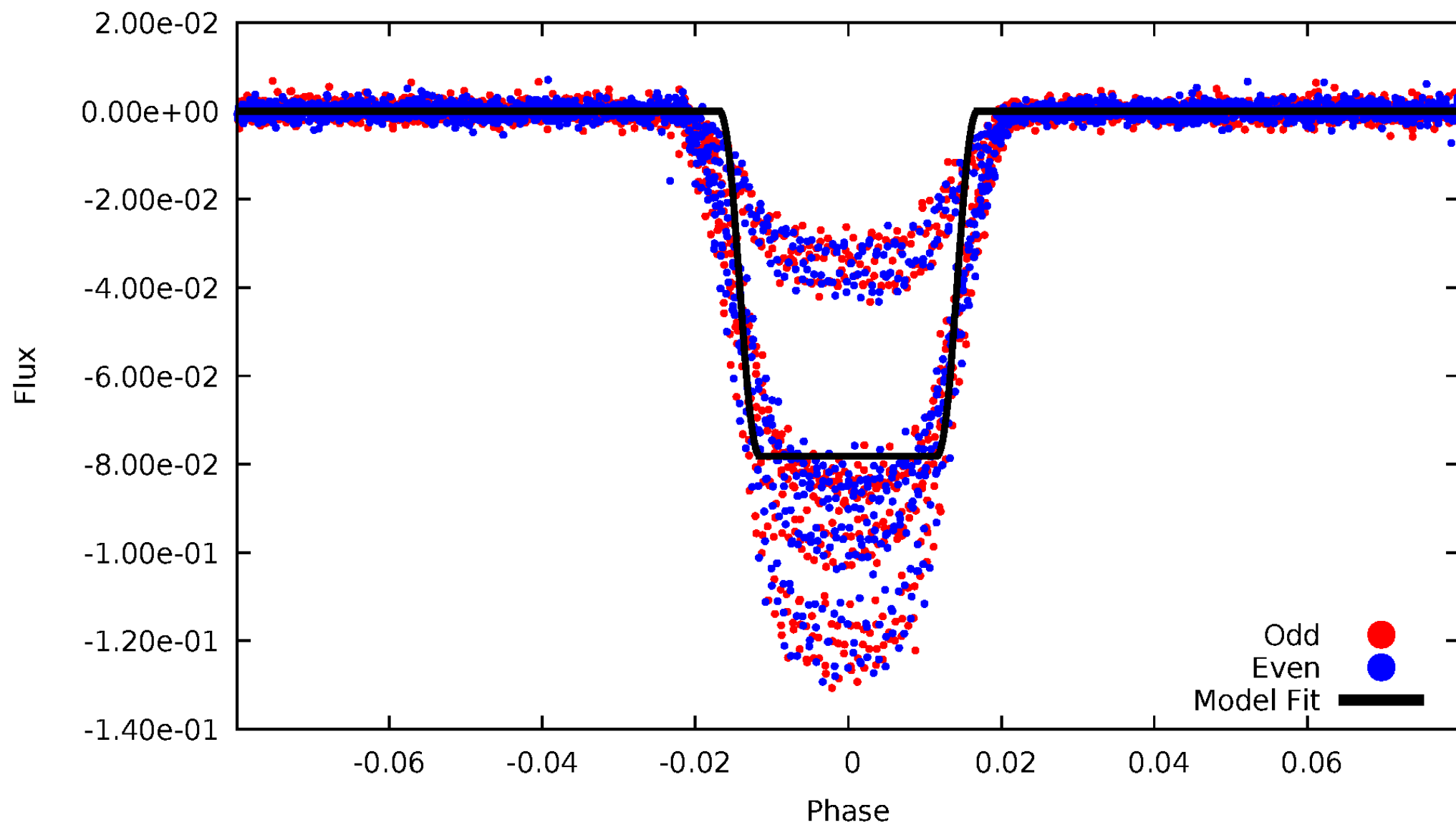
DV Odd/Even

TCE 011455484-01



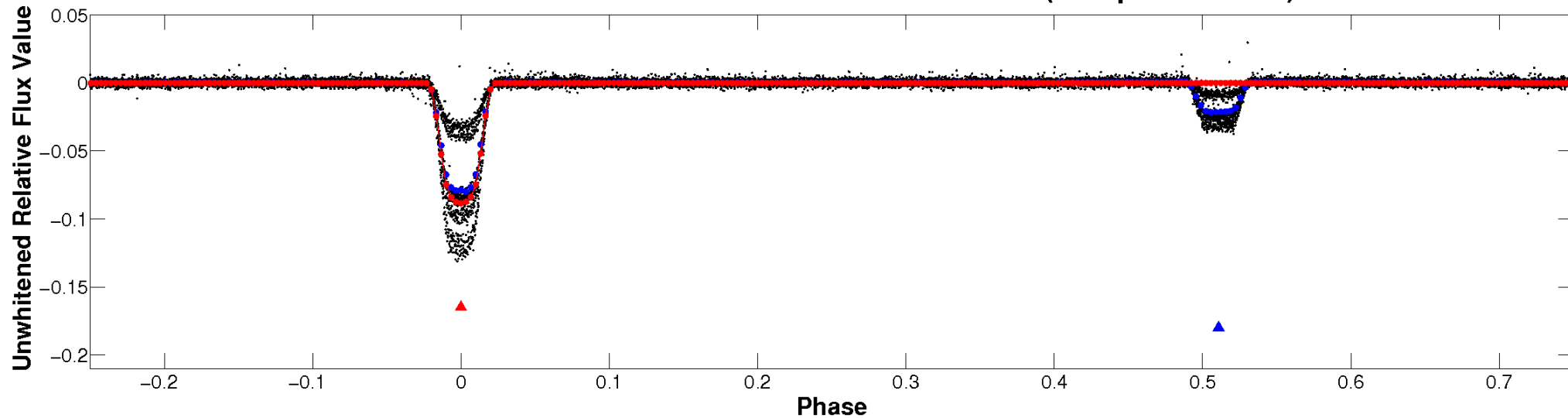
ALT Odd/Even

TCE 011455484-01

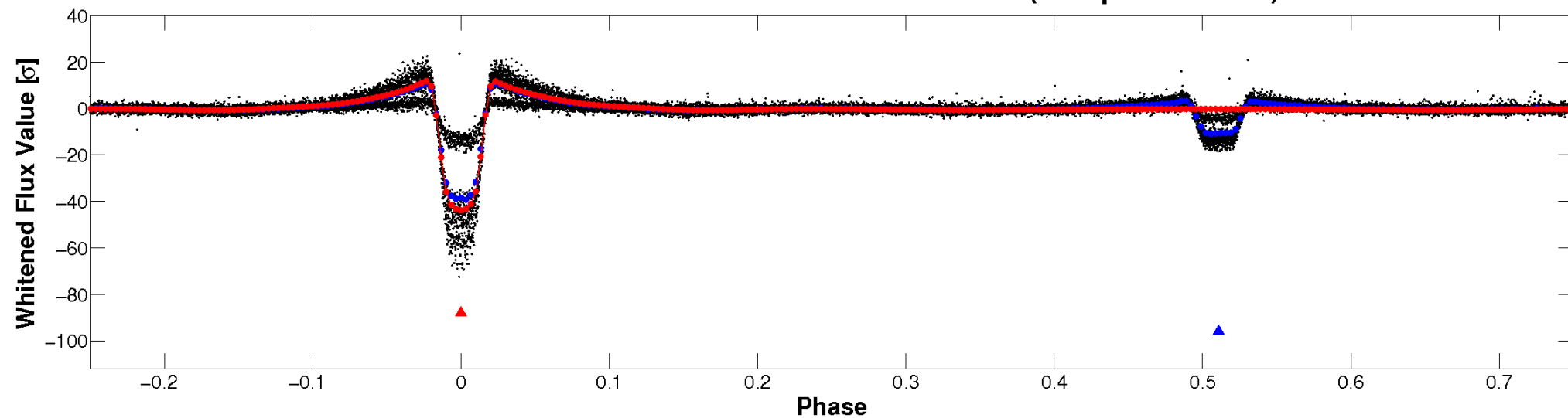


Non-Whitened Vs. Whitened Light Curve

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

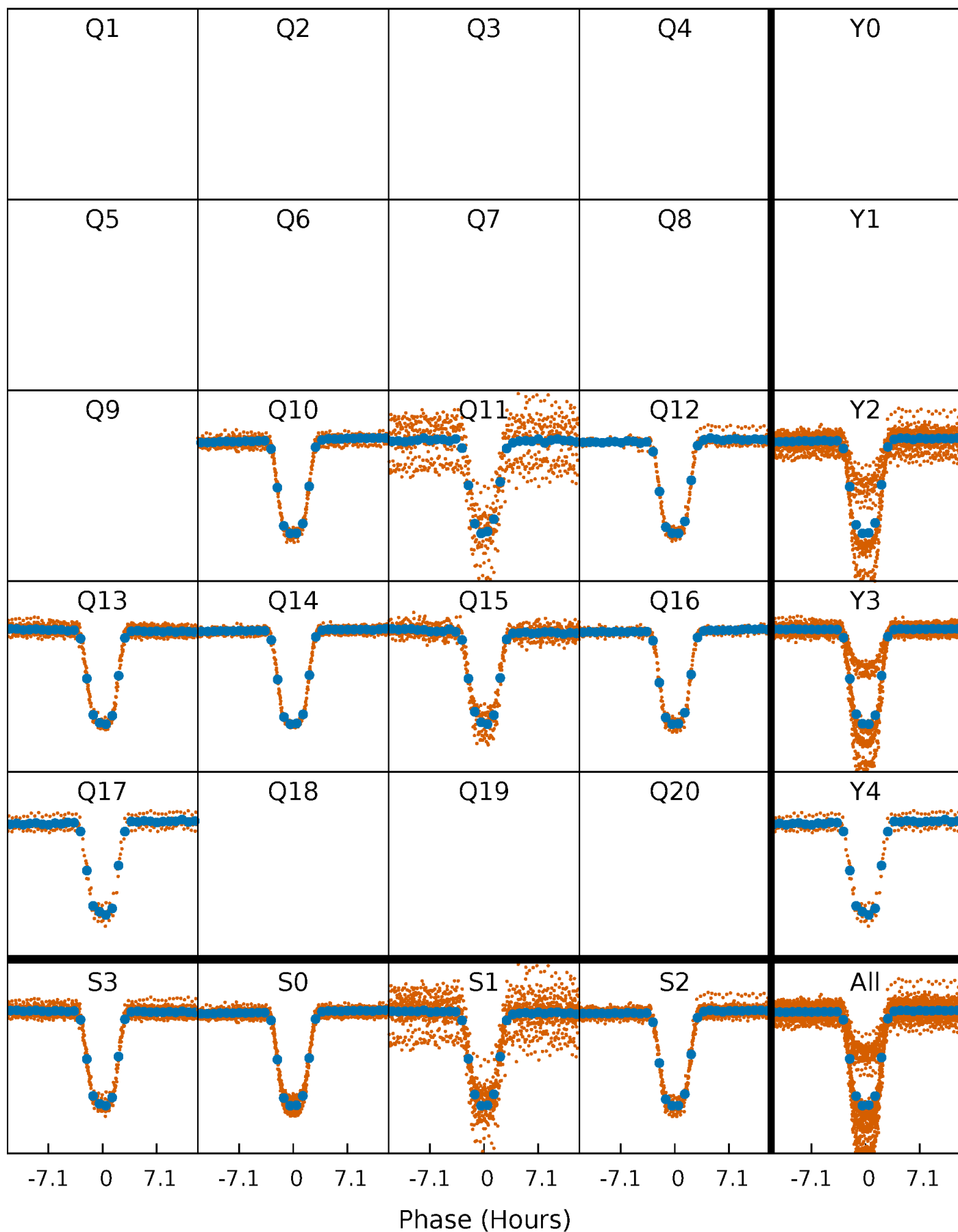


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



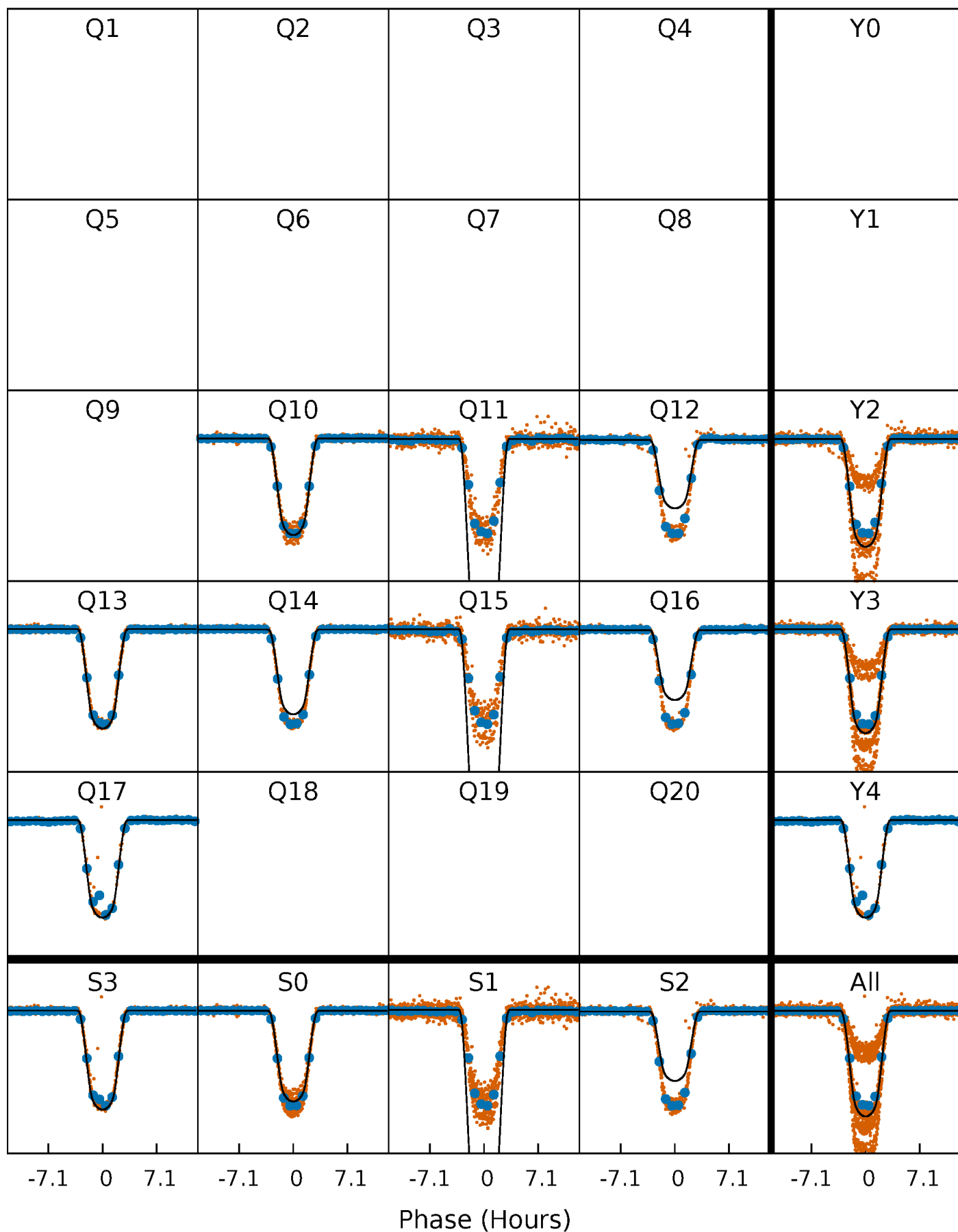
PDC Quarter-Phased Transit Curves

TCE 011455484-01 P= 6.142812 Days $T_0=135.161054$ (BKJD)



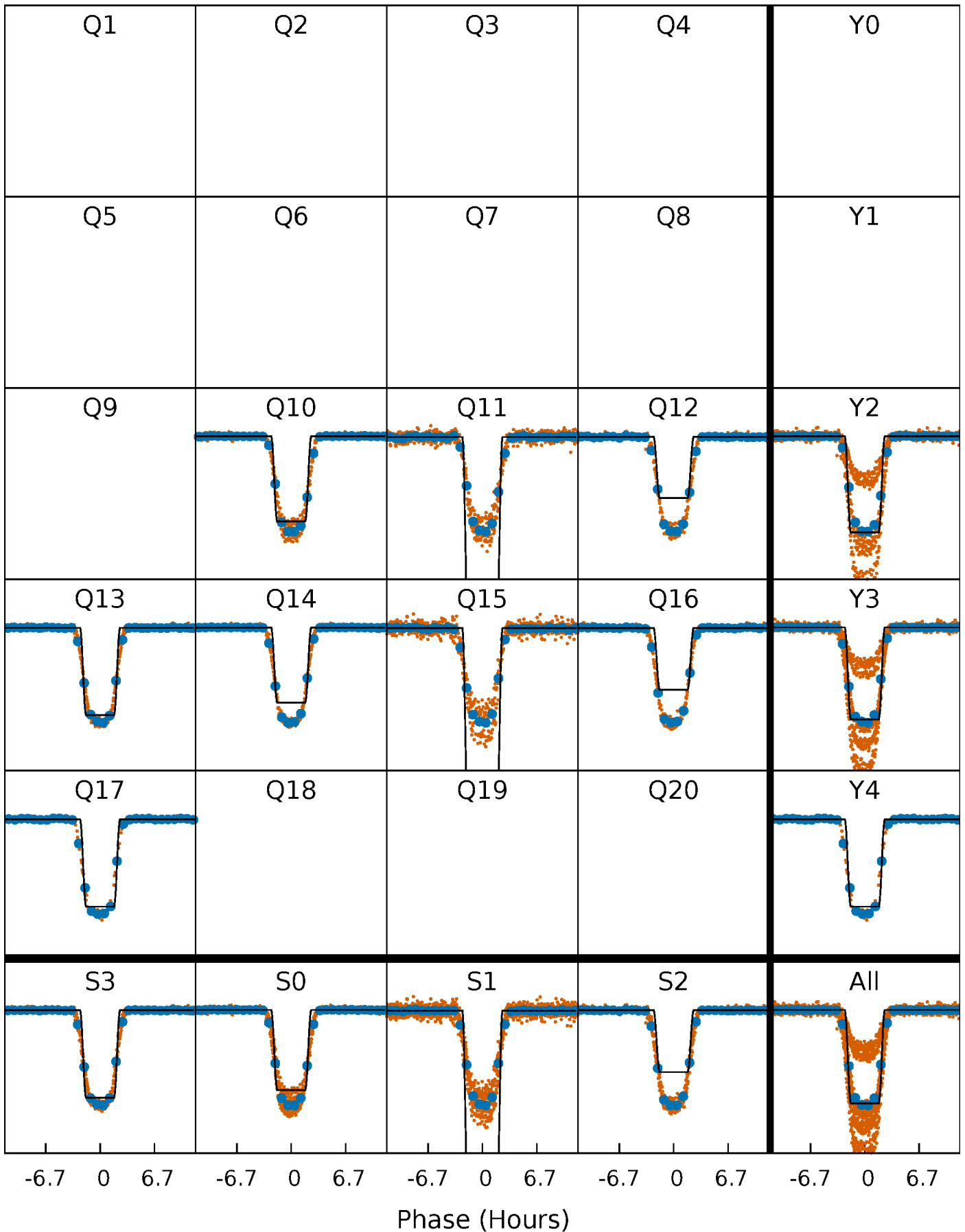
DV Quarter-Phased Transit Curves

TCE 011455484-01 P= 6.142812 Days $T_0=135.161054$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

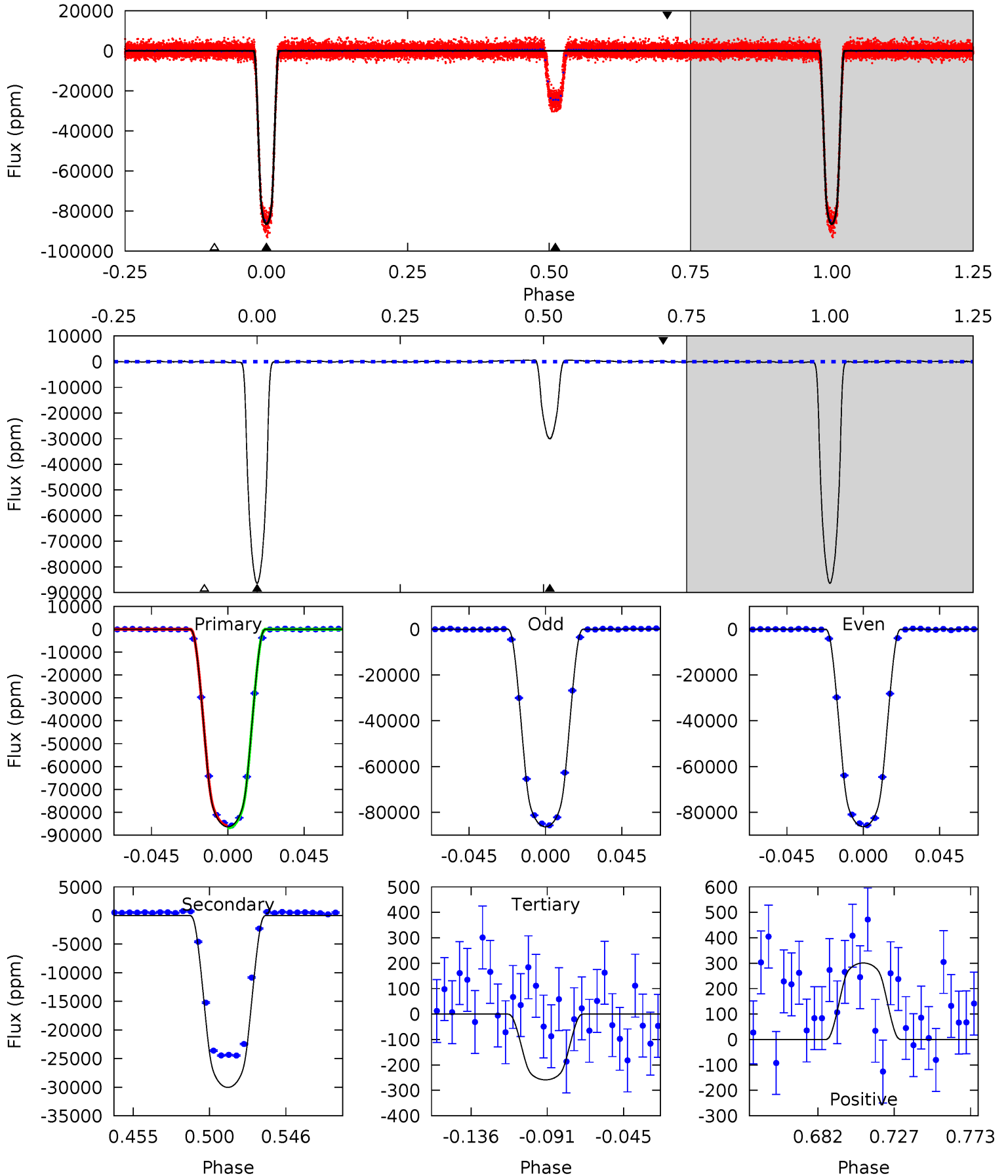
TCE 011455484-01 P= 6.142924 Days $T_0=135.141089$ (BKJD)



DV Model-Shift Uniqueness Test

011455484-01, P = 6.142812 Days, E = 135.161054 Days

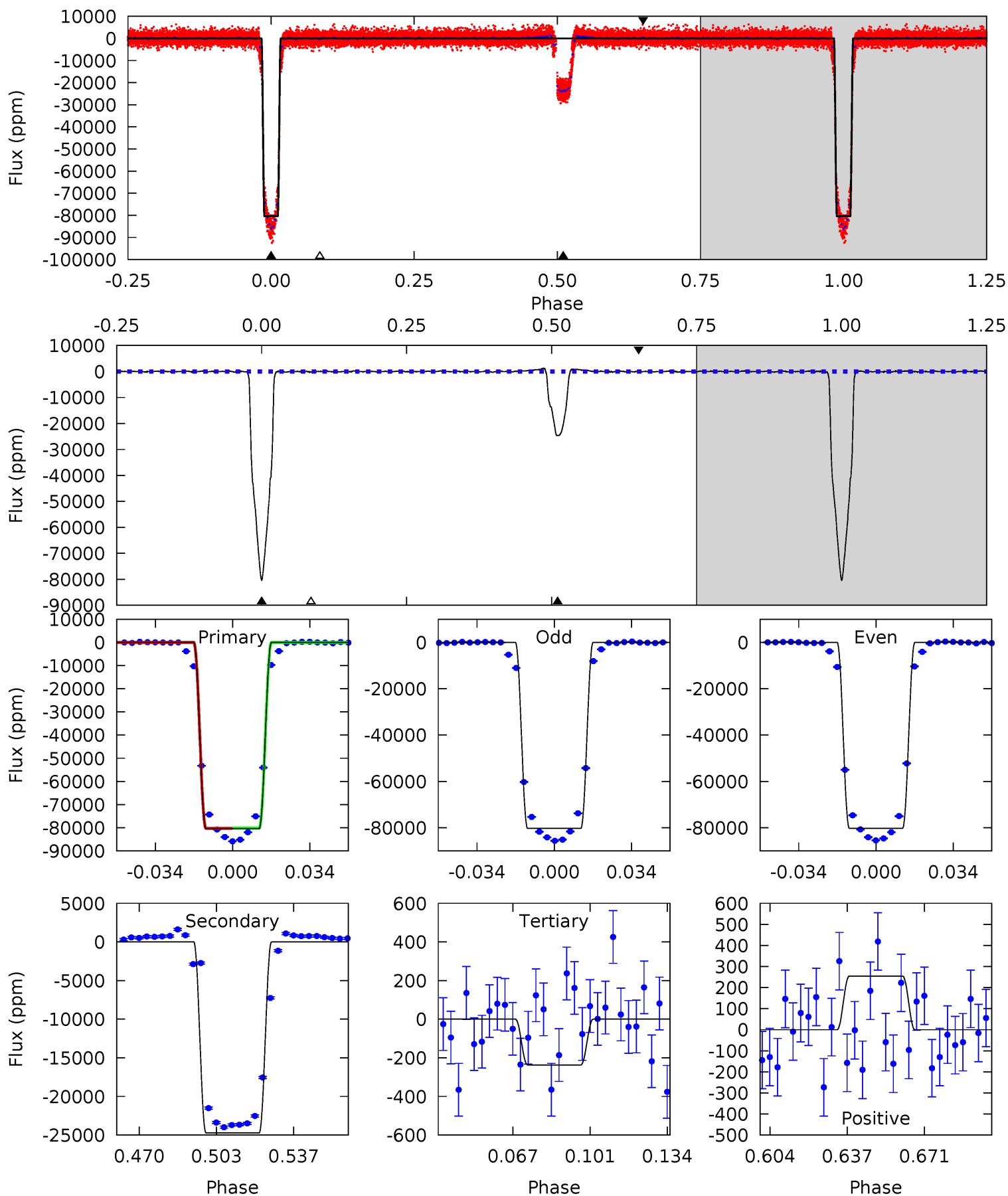
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1388	482.5	4.15	4.83	4.73	2.00	2.55	1384	1383	478.4	477.7	0.41	0.92	0.01	0



Alt Model-Shift Uniqueness Test

011455484-01, P = 6.142924 Days, E = 135.141089 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
894.3	275.0	2.63	2.83	4.79	2.13	1.61	891.7	891.5	272.4	272.2	0.37	0.93	0.02	0.78



Stellar Parameters For KIC 011455484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 011455484-01 / KOI 3673.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30034 ± 62	$30.49^{+1.89}_{-2.01}$	1387^{+66}_{-62}	4721^{+141}_{-143}	79^{+10}_{-8}
Alt.	-24718 ± 90	$30.46^{+2.33}_{-2.09}$	1391^{+70}_{-66}	4540^{+130}_{-132}	65^{+8}_{-8}

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

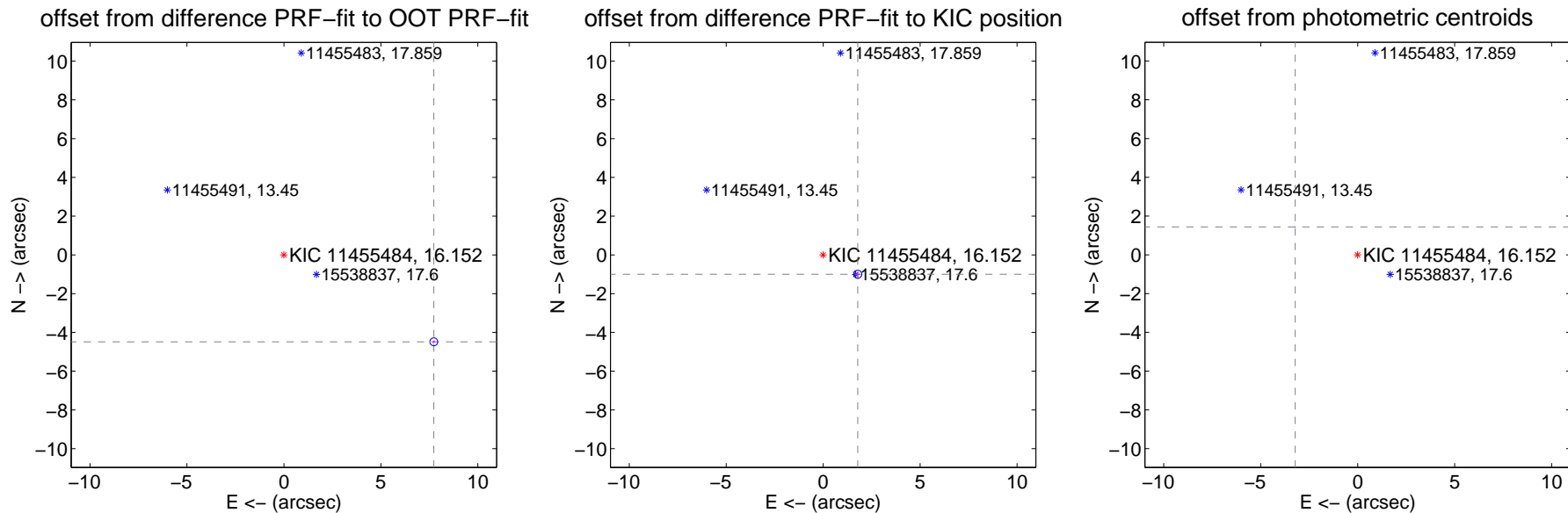
DV Centroid Data

Supplemental centroid analysis for 011455484-01. Kepler magnitude: 16.15. Transit SNR 821.15

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.92 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.937 ± 0.068	132.29	-7.730 ± 0.067	-4.485 ± 0.069
PRF-fit source offset from KIC position	2.043 ± 0.070	29.36	-1.783 ± 0.069	-0.998 ± 0.072
photometric centroid source offset	3.53 ± 0.00	2226.13	3.22 ± 0.00	1.44 ± 0.00



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

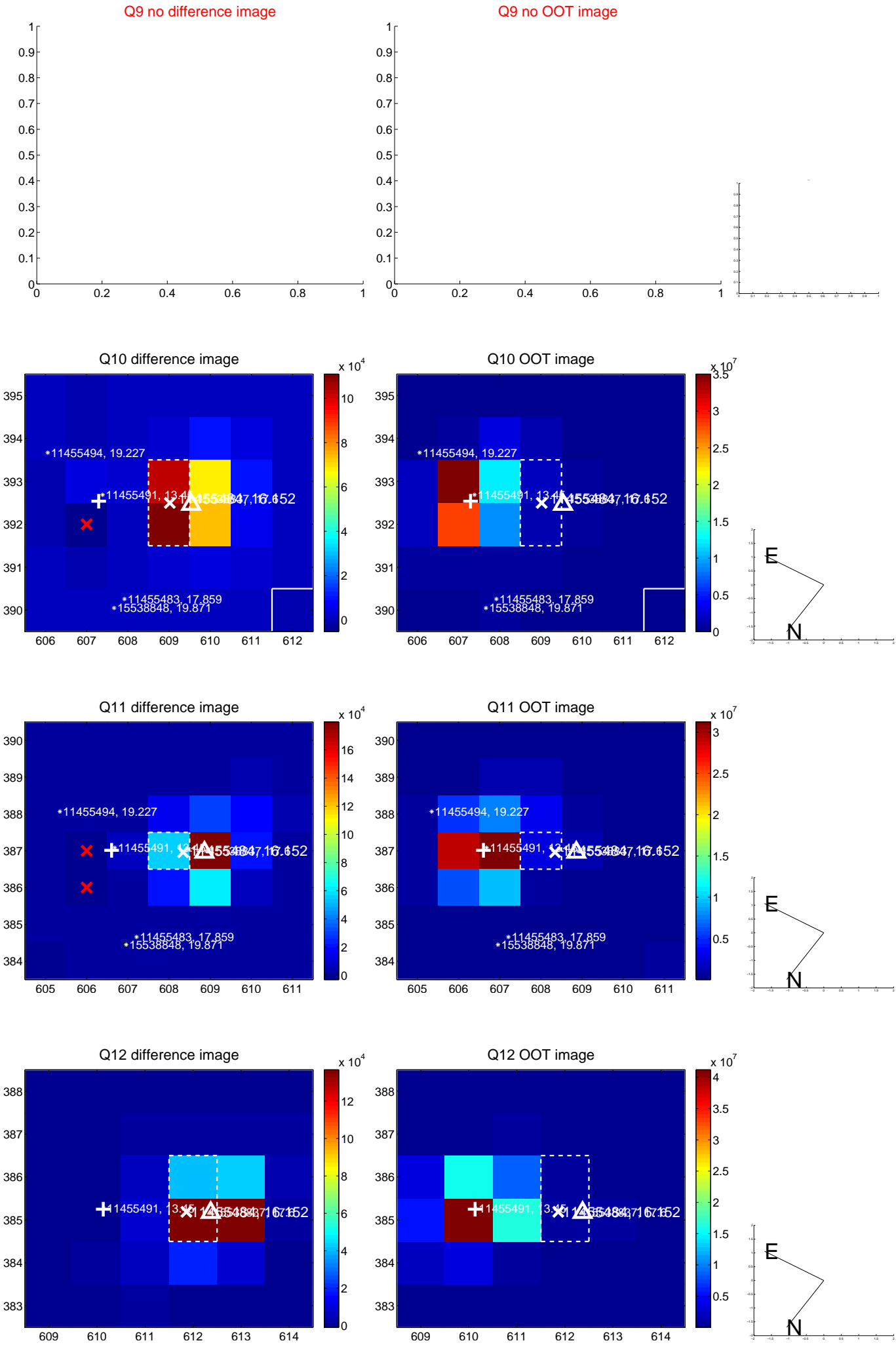
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



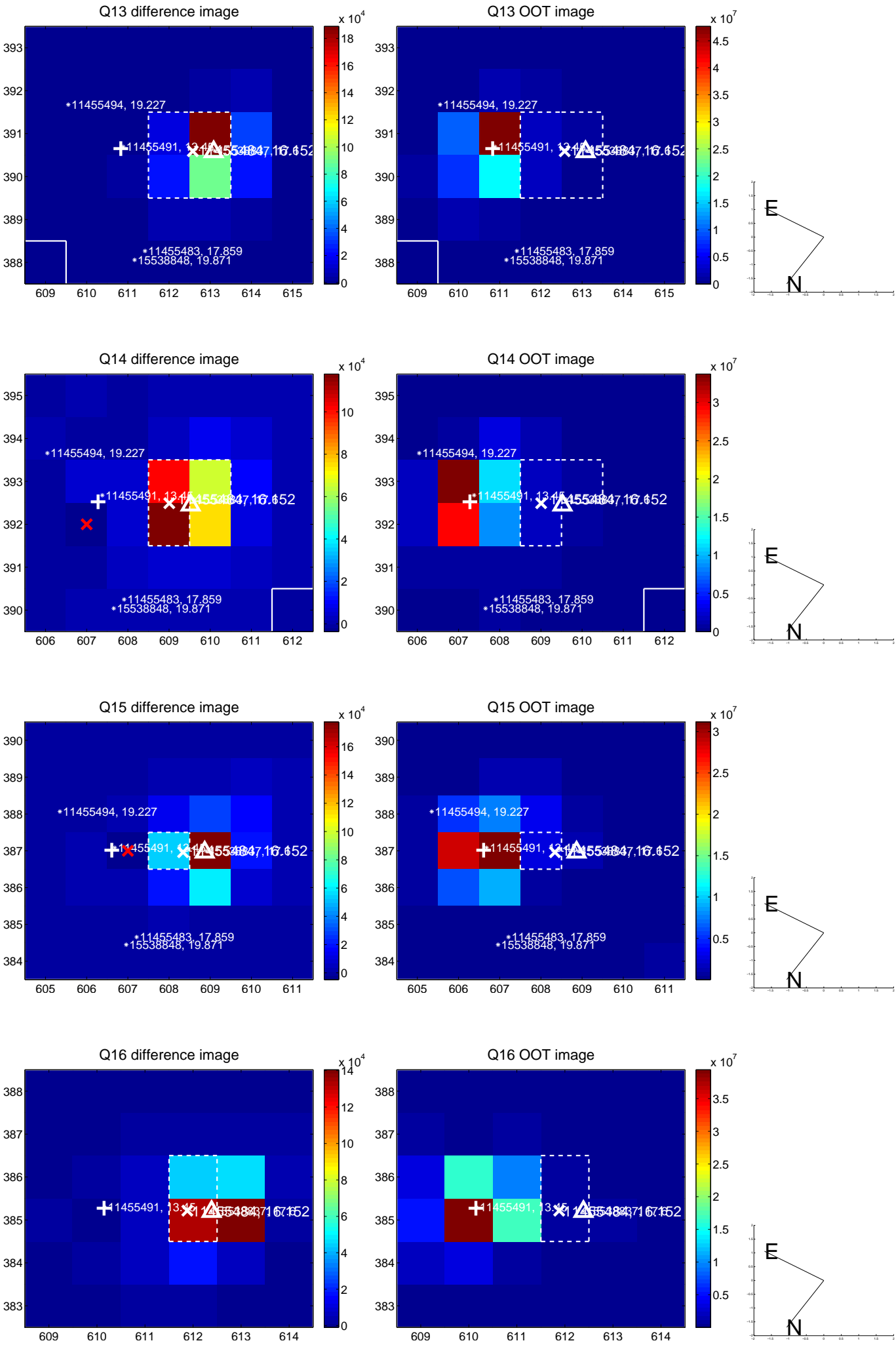
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



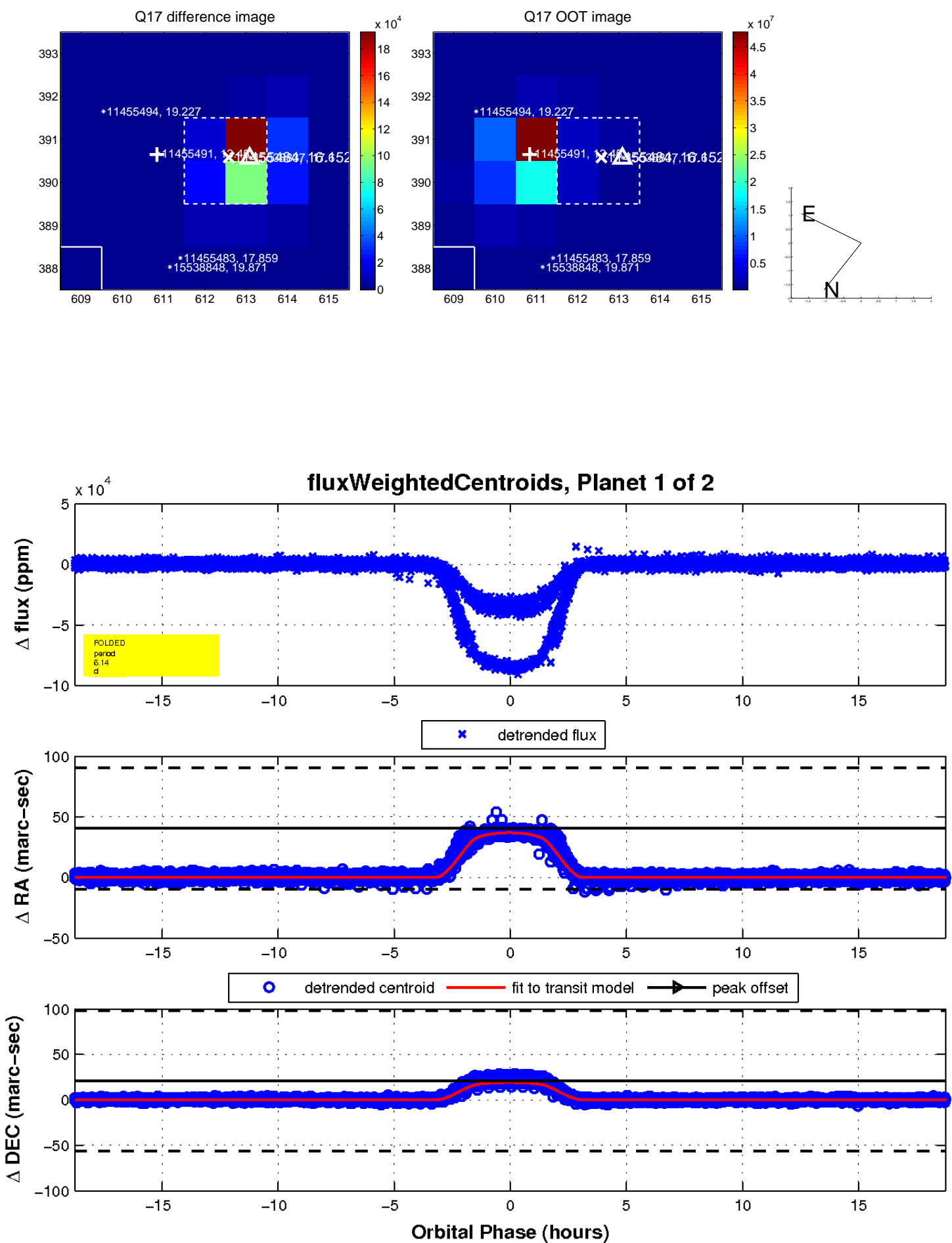
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

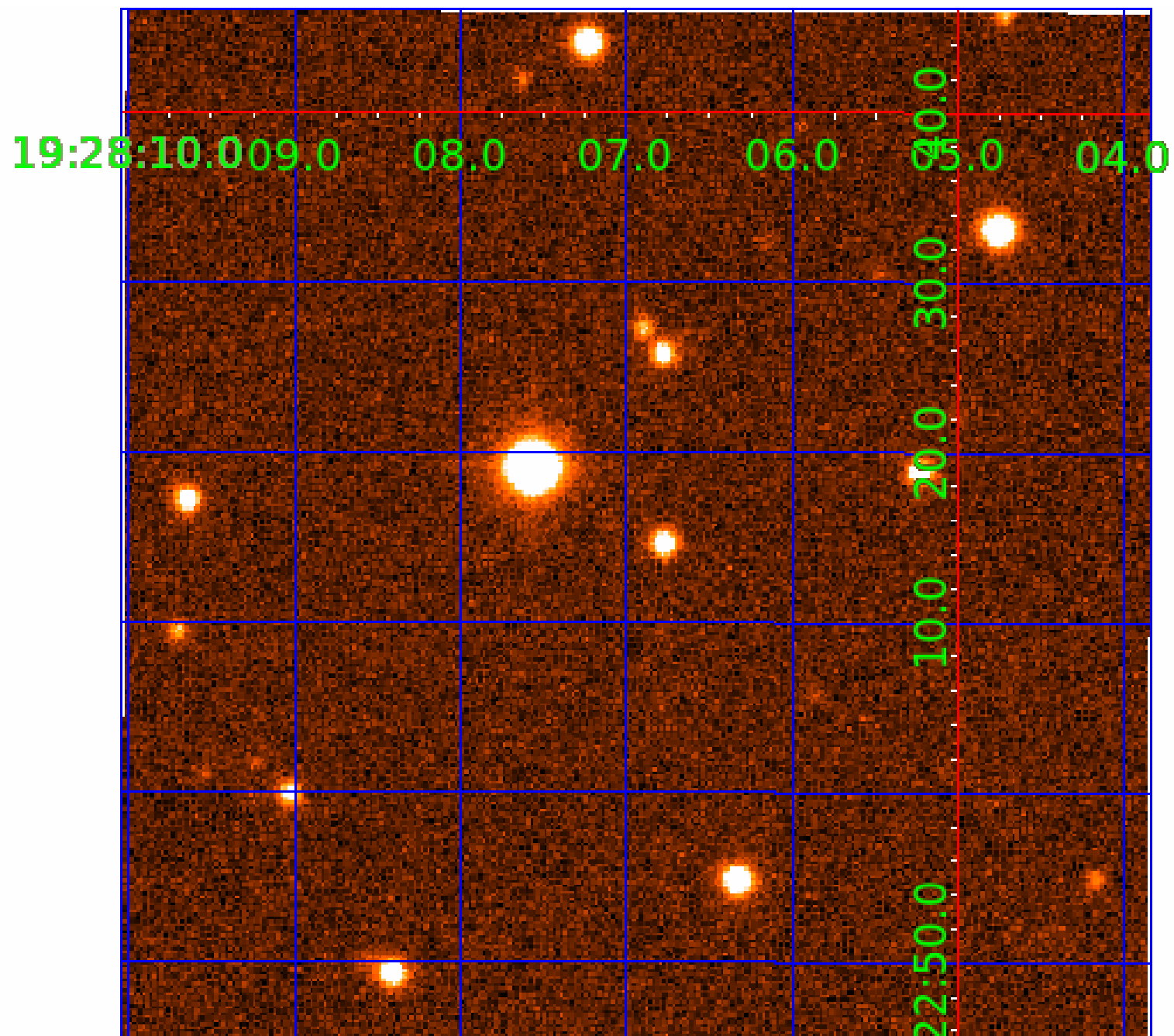


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011455484

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})
011455484-01	OBS	3673.01	6.142812	135.161054	88605.7	6.252	1054.6	821.2	1.00	5780	30.41	231.98
011455484-02	OBS	No	6.142811	132.156505	26072.1	6.115	310.6	284.0	1.00	5780	17.31	231.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011455484-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_KIC_POS
011455484-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS

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 011455484-02

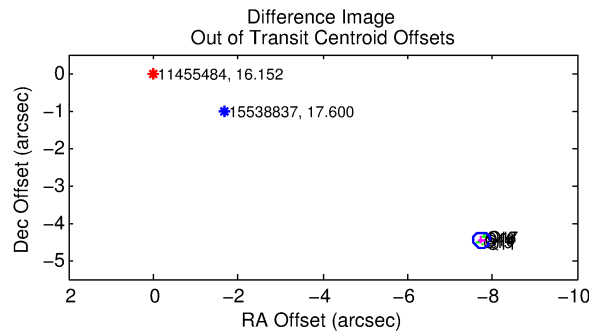
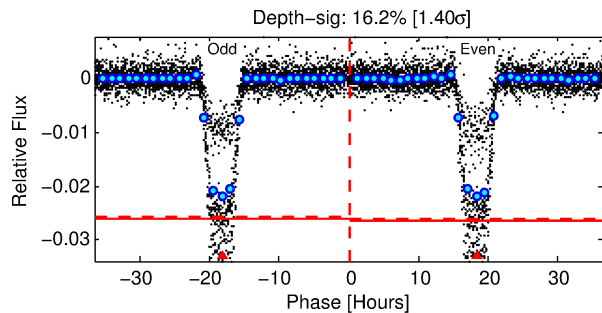
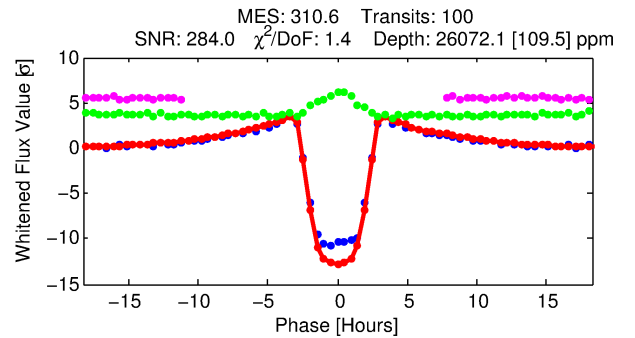
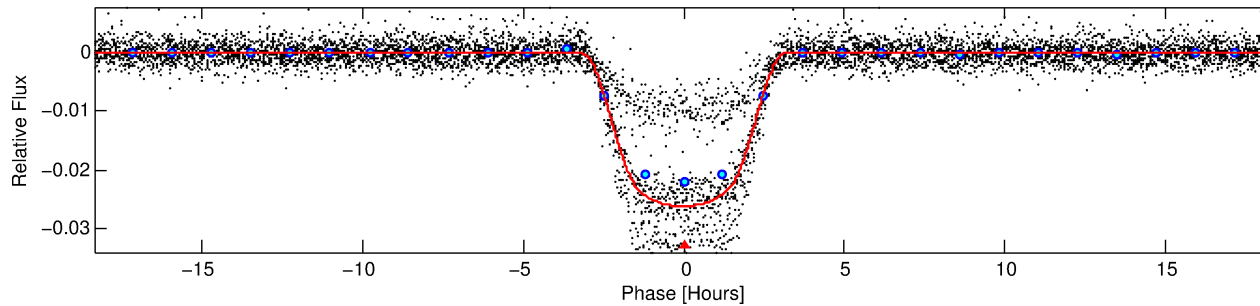
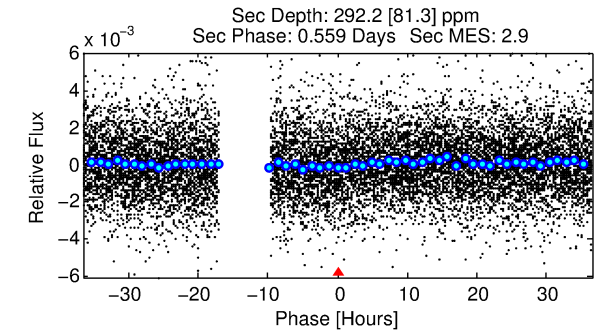
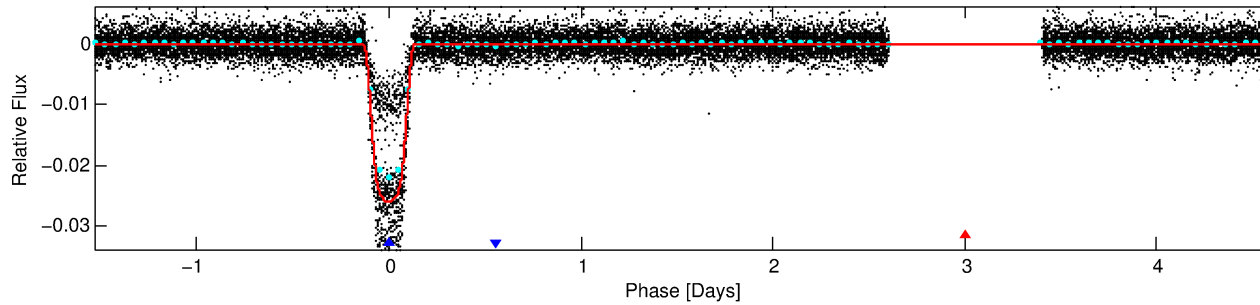
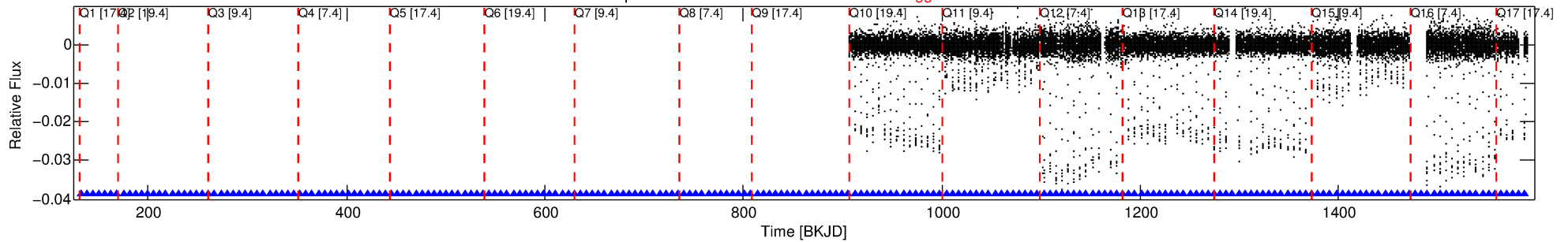
No Significant Match Found

DV One-Page Summary

KIC: 11455484 Candidate: 2 of 2 Period: 6.143 d

KOI: K03673 Corr: No Ephemeris Match

Kp: 16.15 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 6.14281 [0.00001] d
Epoch = 132.1565 [0.0010] BKJD
Rp/R* = 0.1587 [0.0006]
a/R* = 7.15 [0.09]
b = 0.70 [0.01]
Seff = 231.98 [0.00]
Teq = 995 [0] K
Rp = 17.31 [0.07] Re
a = 0.0657 [0.0000] AU
Ag = 2.31 [0.64] [2.04σ]
Teffp = 1897 [132] K [6.84σ]

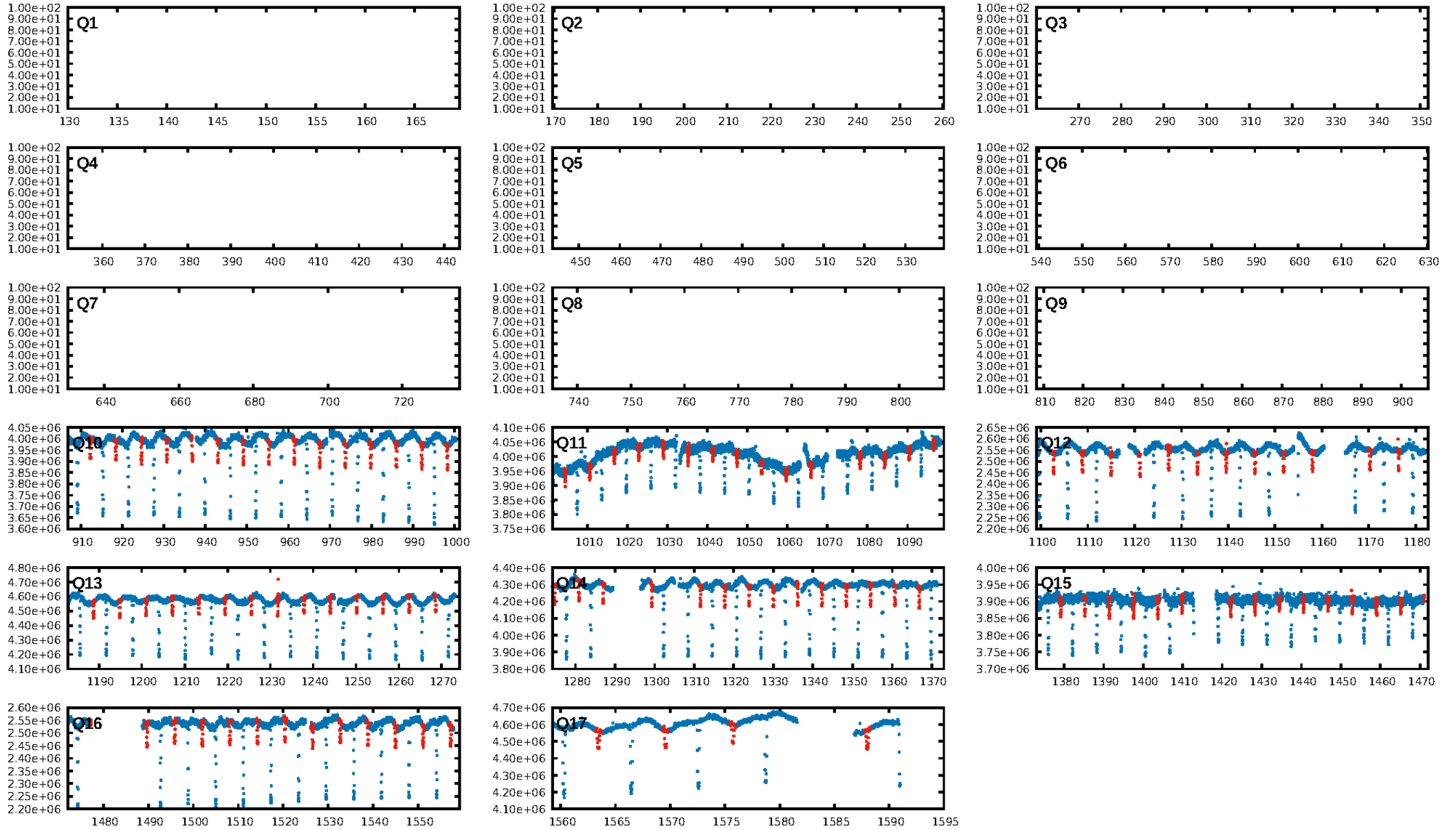
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 60.1%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [96/96]
GhostDiagnostic-chr: 1.054
Centroid-sig: 0.0%
Centroid-so: 3.559 arcsec [673.82σ]
OotOffset-rm: 8.934 arcsec [130.38σ]
KicOffset-rm: 2.034 arcsec [29.36σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

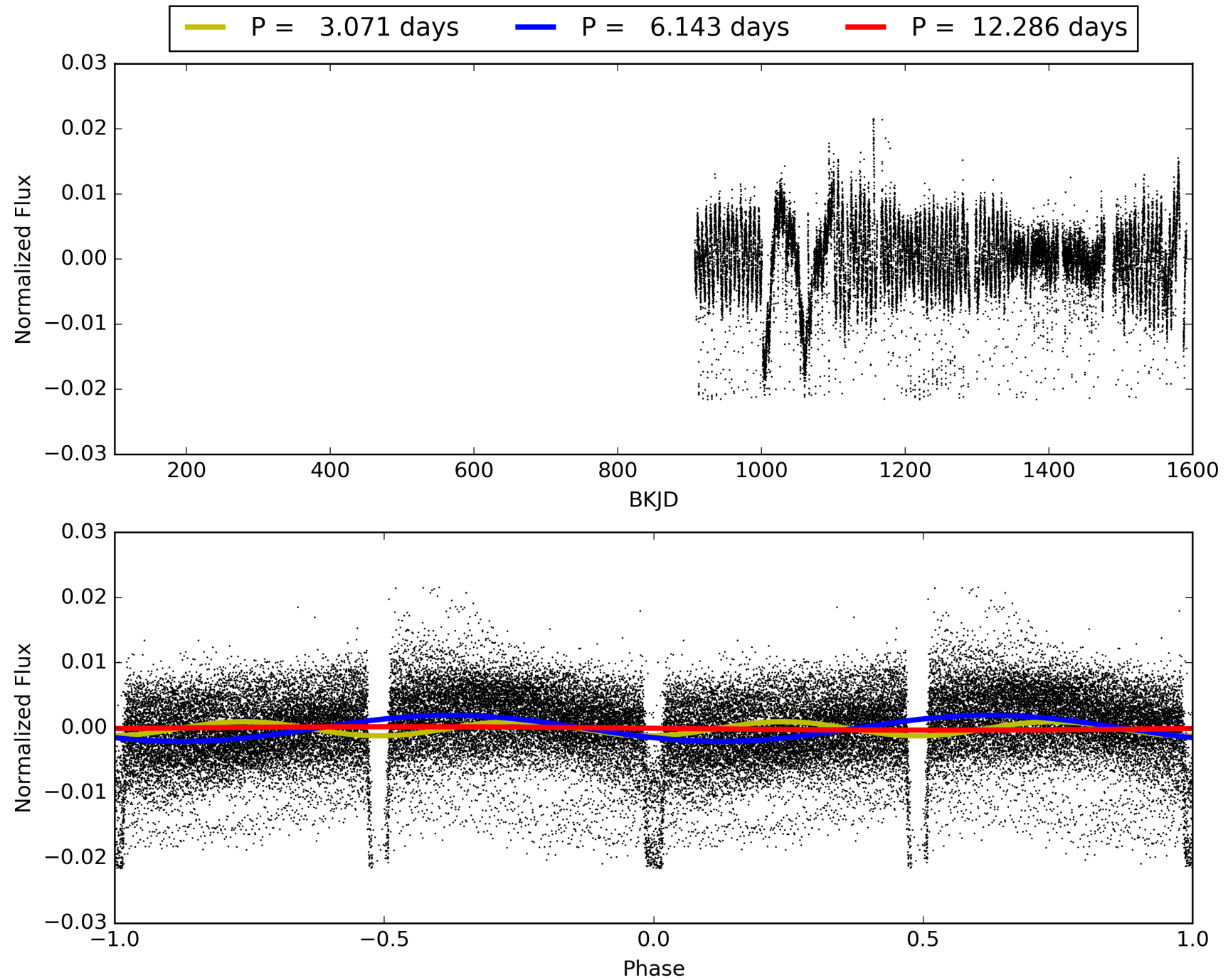
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:23:40 Z

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

TCE 011455484-02, PDC Light Curves

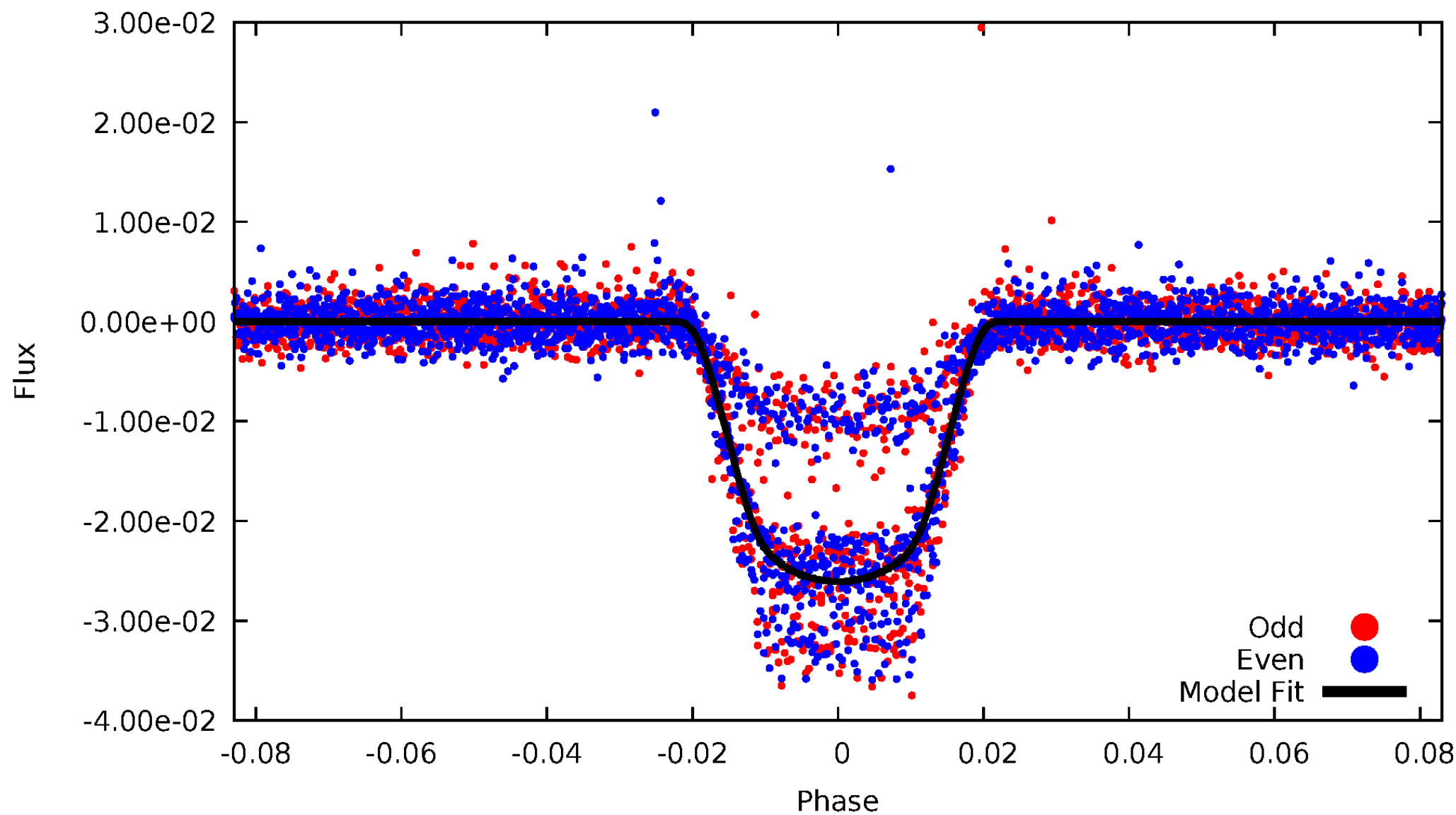


TCE 011455484-02



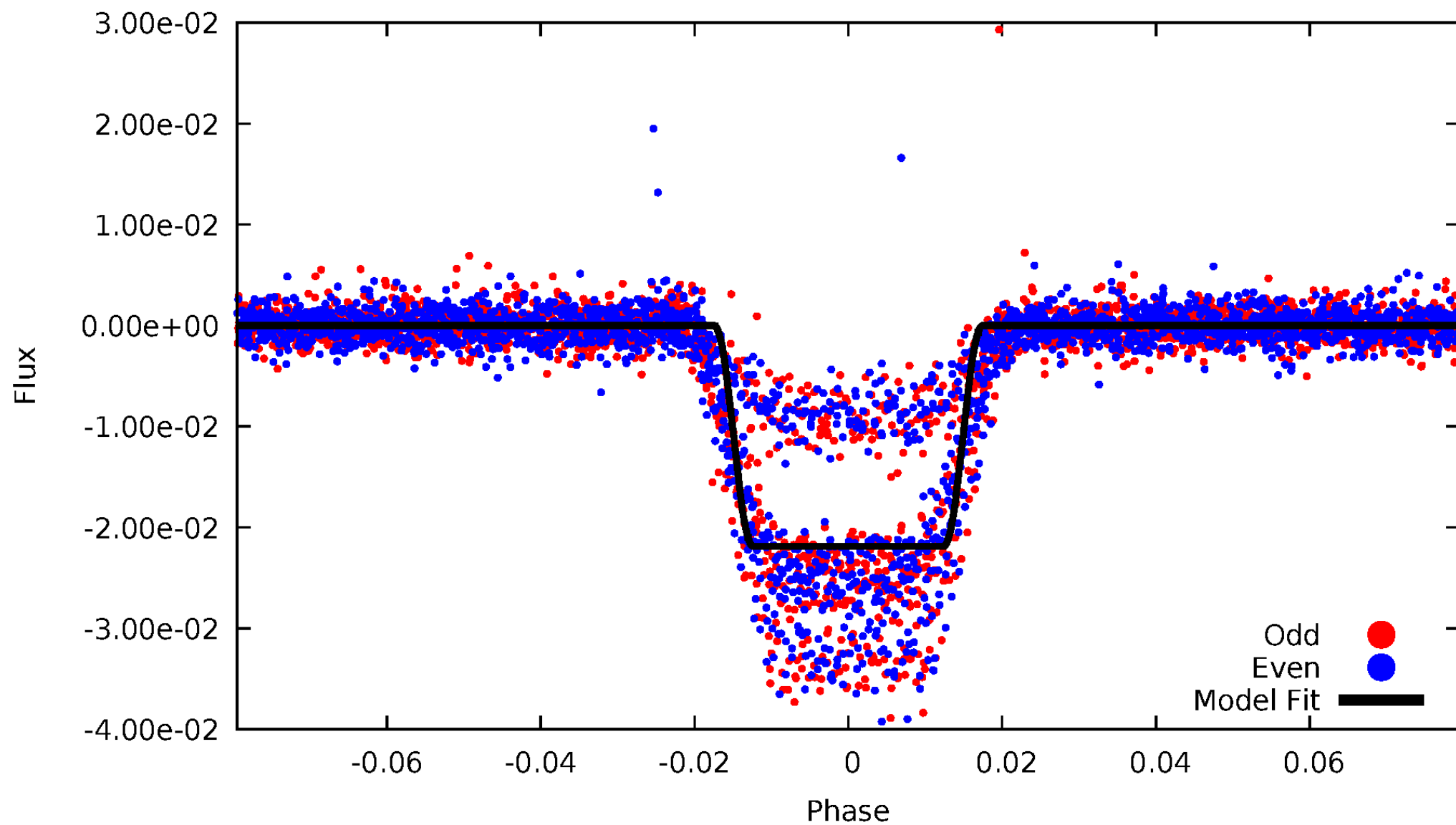
DV Odd/Even

TCE 011455484-02



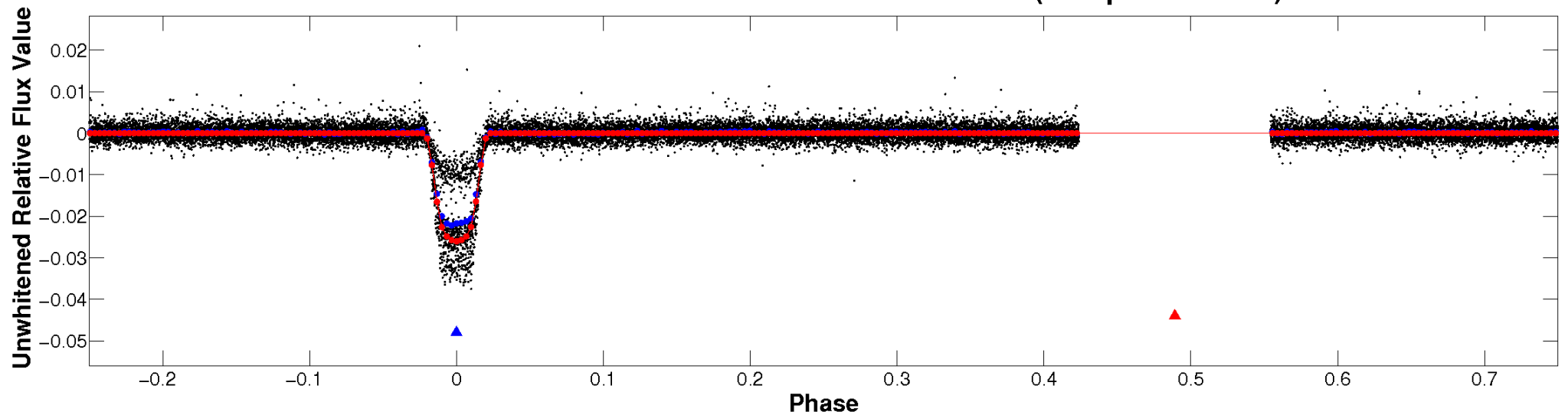
ALT Odd/Even

TCE 011455484-02

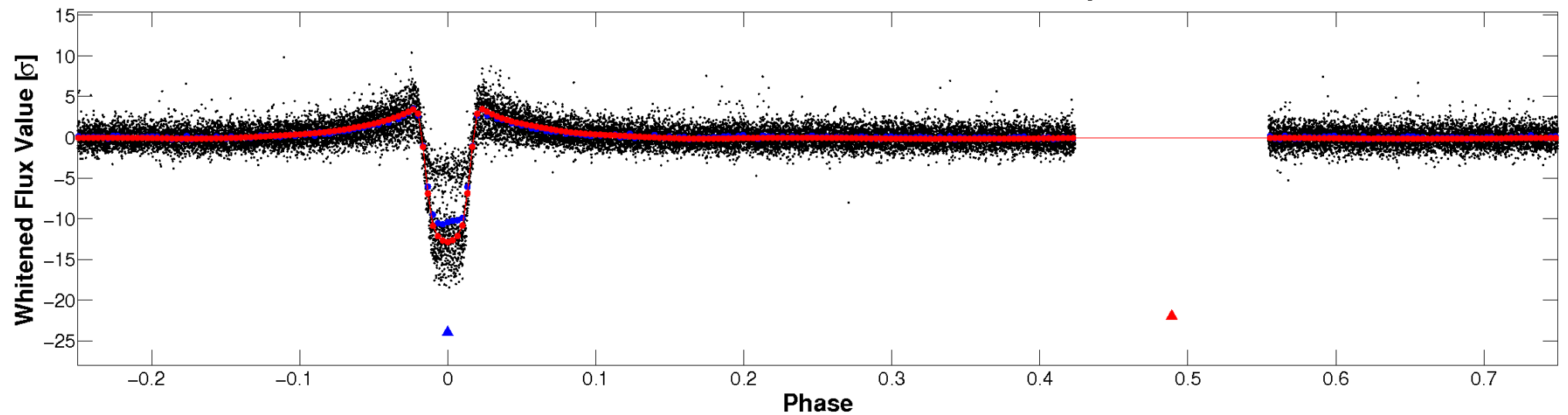


Non-Whitened Vs. Whitened Light Curve

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

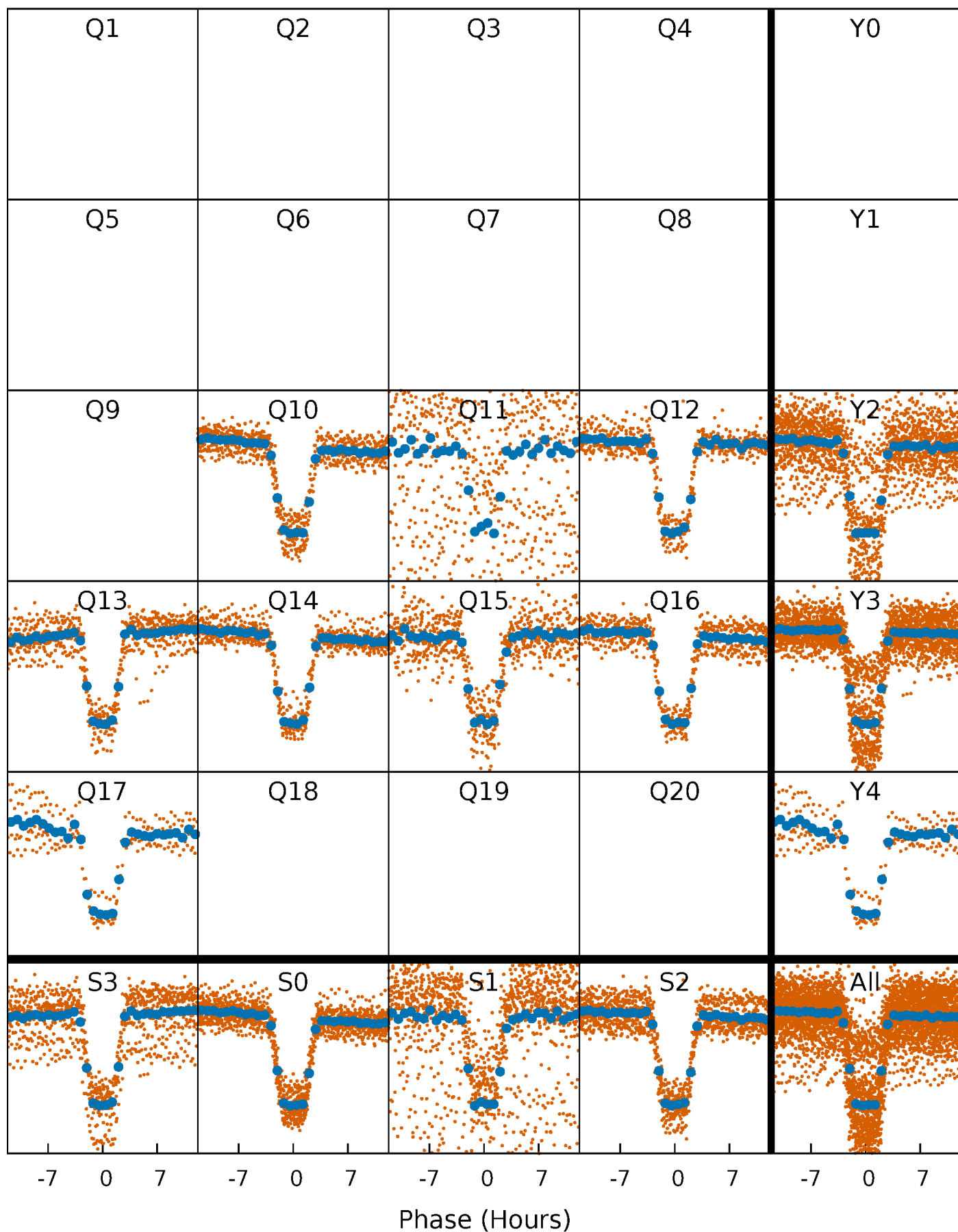


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



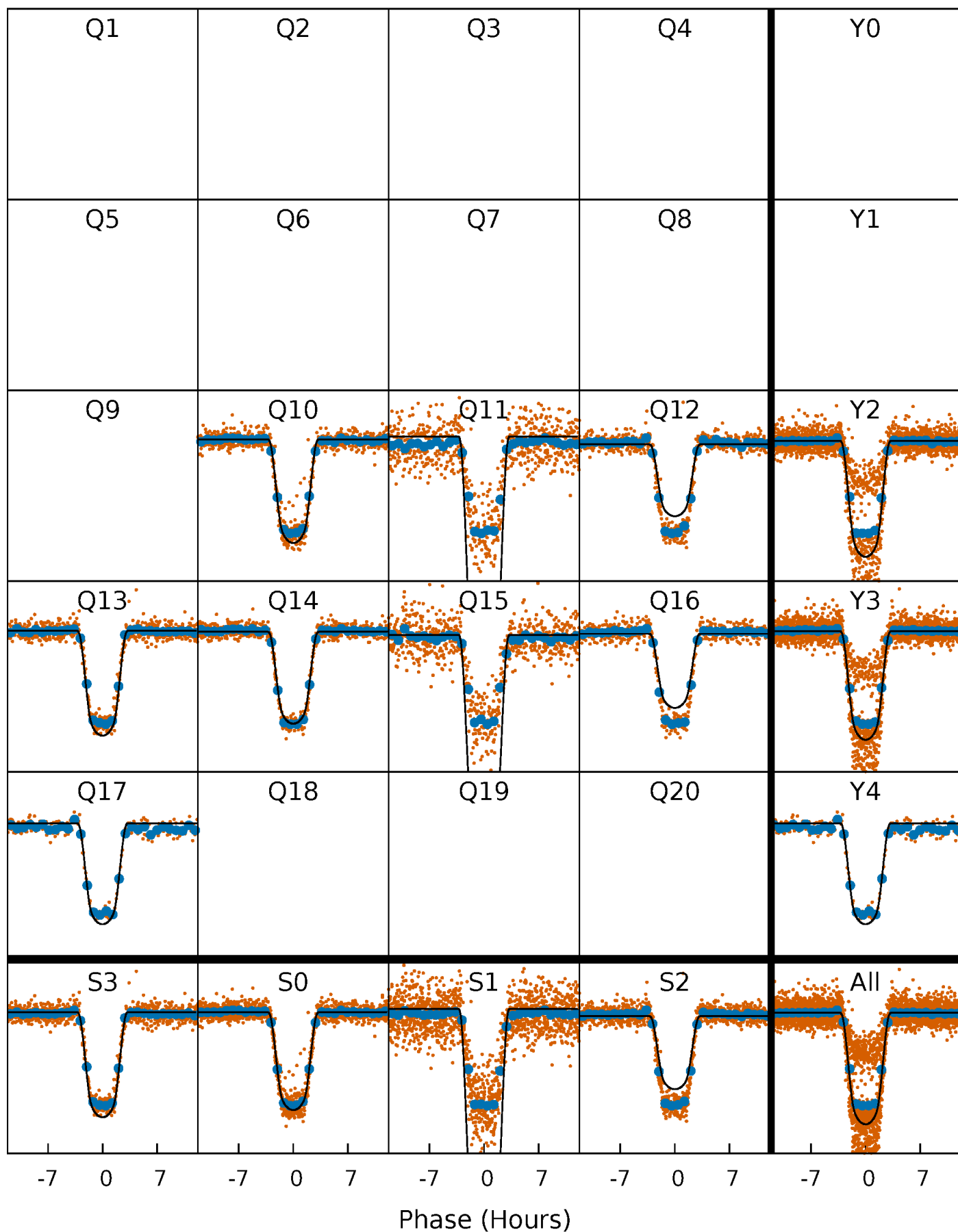
PDC Quarter-Phased Transit Curves

TCE 011455484-02 $P = 6.142810$ Days $T_0 = 132.156505$ (BKJD)



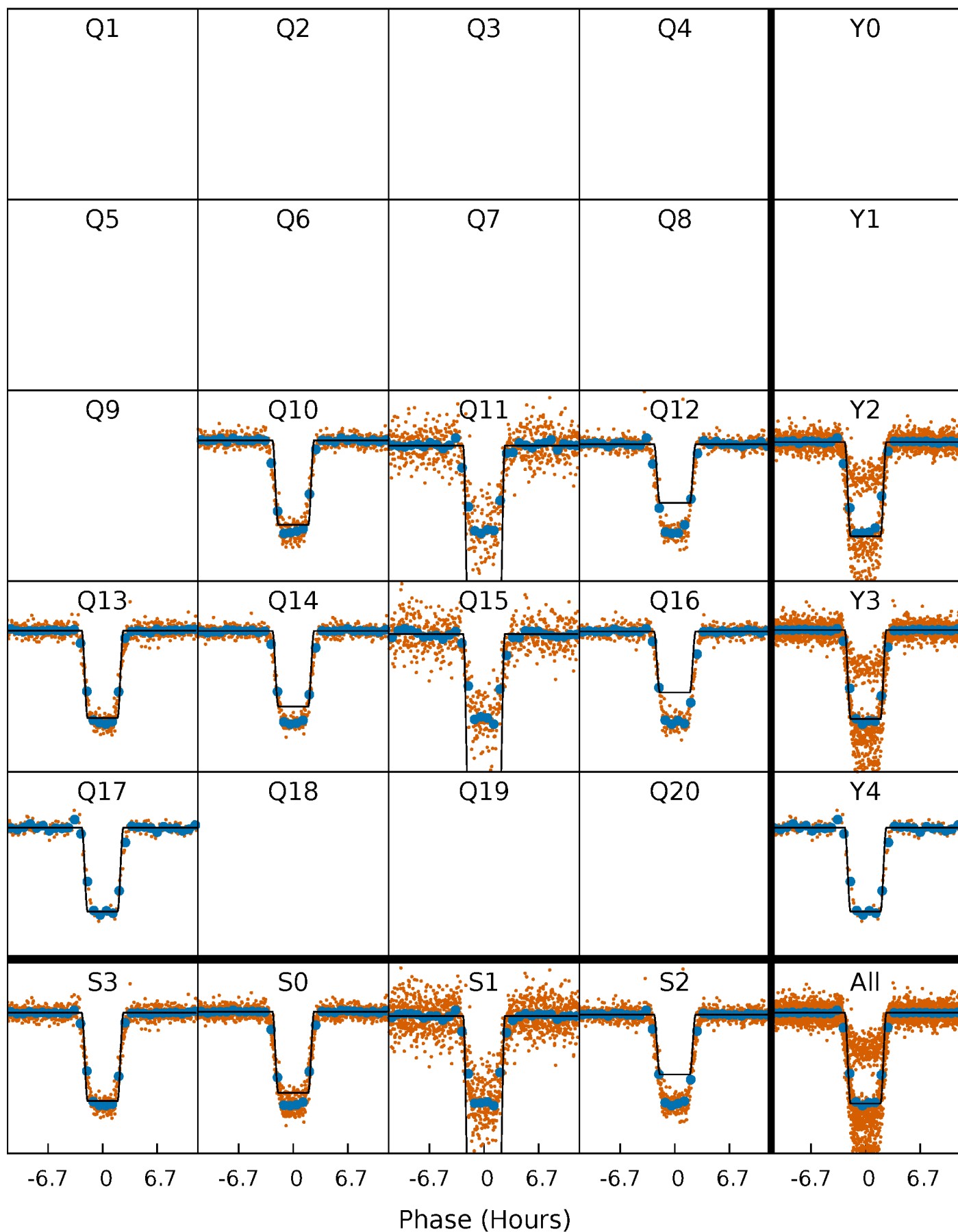
DV Quarter-Phased Transit Curves

TCE 011455484-02 P= 6.142810 Days $T_0=132.156505$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

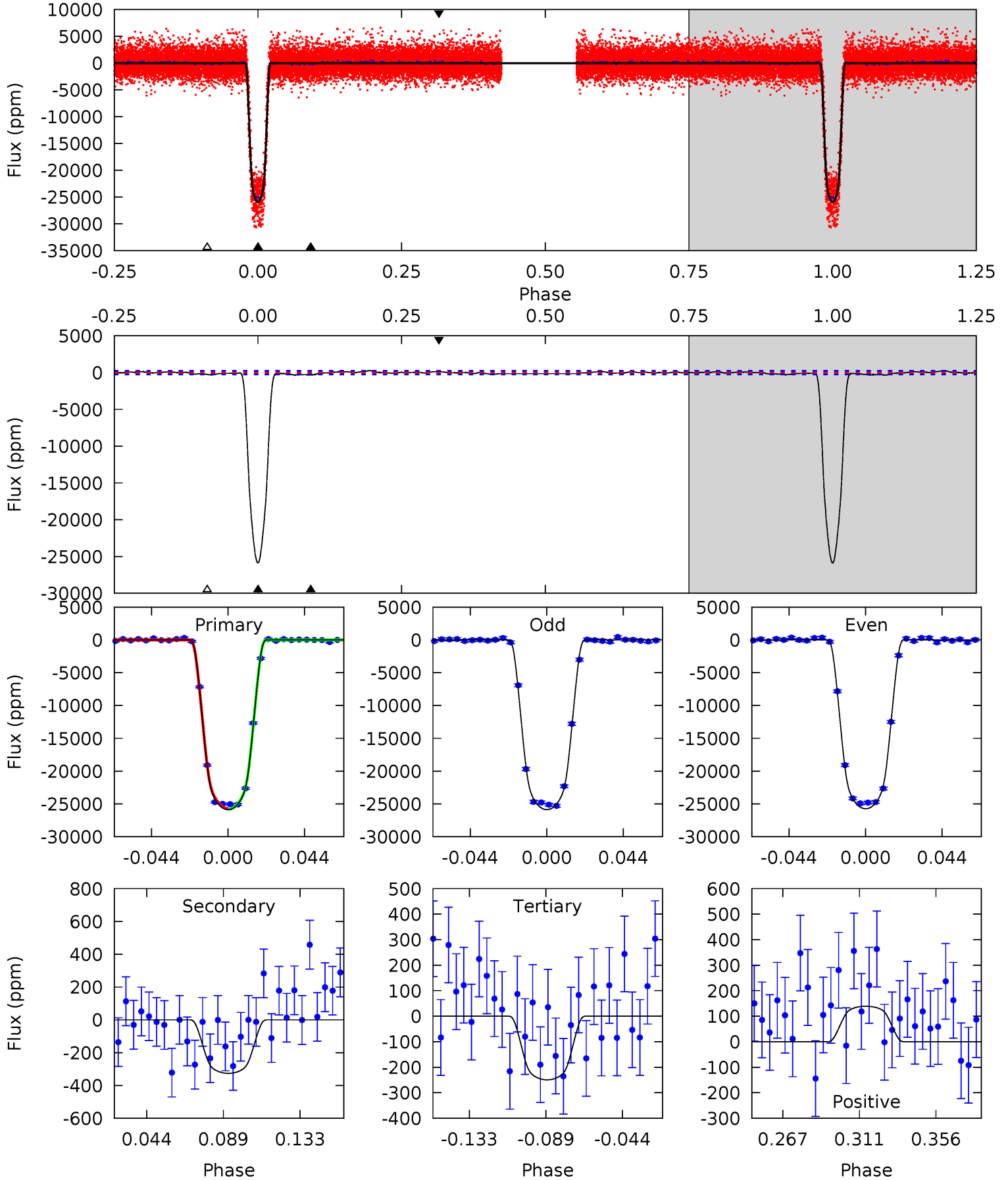
TCE 011455484-02 P= 6.142693 Days $T_0=132.177792$ (BKJD)



DV Model-Shift Uniqueness Test

011455484-02, P = 6.142810 Days, E = 132.156505 Days

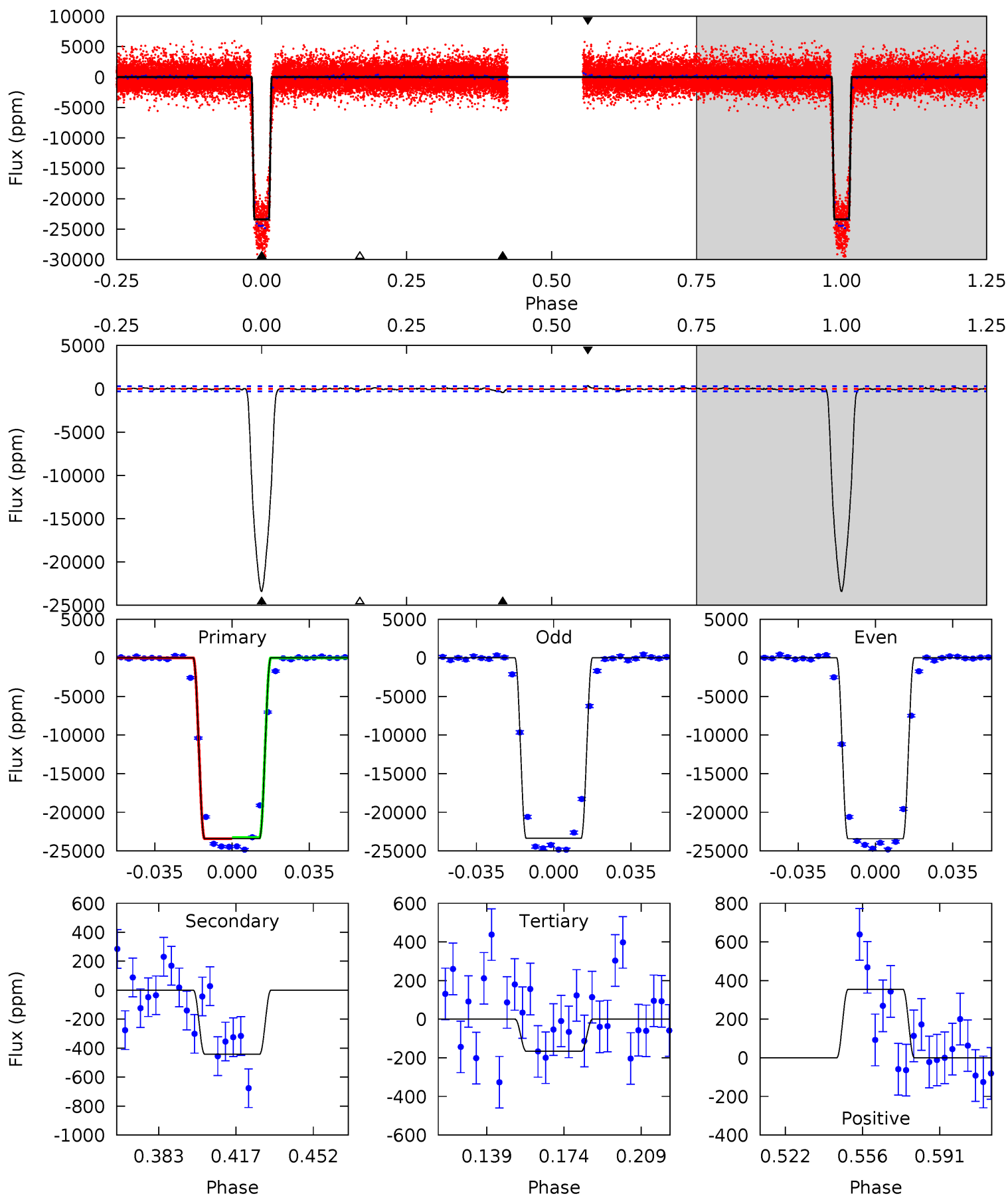
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
488.1	6.15	4.70	2.62	4.73	2.01	1.82	483.4	485.5	1.45	3.52	1.28	0.92	0.01	0



Alt Model-Shift Uniqueness Test

011455484-02, P = 6.142693 Days, E = 132.177792 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
381.9	7.21	2.71	5.78	4.78	2.11	1.00	379.2	376.2	4.49	1.43	0.50	0.93	0.01	0



Stellar Parameters For KIC 011455484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 011455484-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-326 ± 53	$17.30^{+1.13}_{-1.25}$	1388^{+64}_{-64}	2675^{+78}_{-82}	$2.577^{+0.573}_{-0.492}$
Alt.	-442 ± 61	$16.13^{+1.16}_{-1.05}$	1392^{+67}_{-67}	2856^{+79}_{-79}	$4.000^{+0.766}_{-0.732}$

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

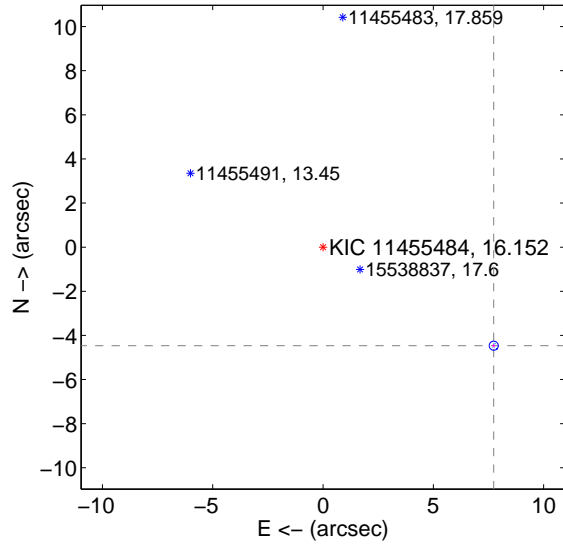
Supplemental centroid analysis for 011455484-02. Kepler magnitude: 16.15. Transit SNR 284.00

There are 8 quarters with good PRF difference image offsets

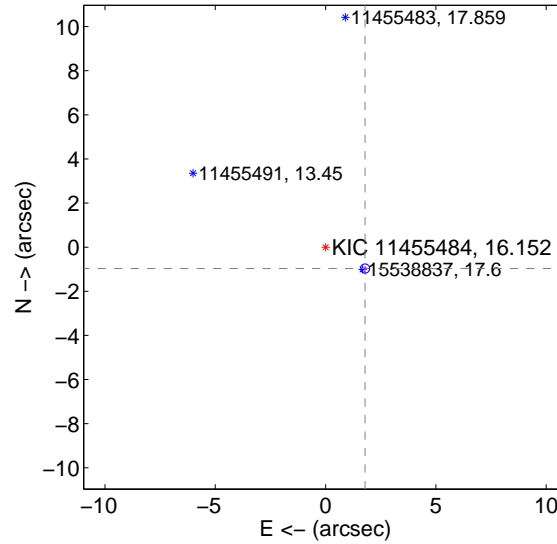
The OOT PRF centroid is offset from the target star catalog position by about 6.92 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.934 ± 0.069	130.38	-7.738 ± 0.068	-4.466 ± 0.071
PRF-fit source offset from KIC position	2.034 ± 0.069	29.36	-1.789 ± 0.069	-0.968 ± 0.071
photometric centroid source offset	3.56 ± 0.01	673.82	3.25 ± 0.01	1.45 ± 0.00

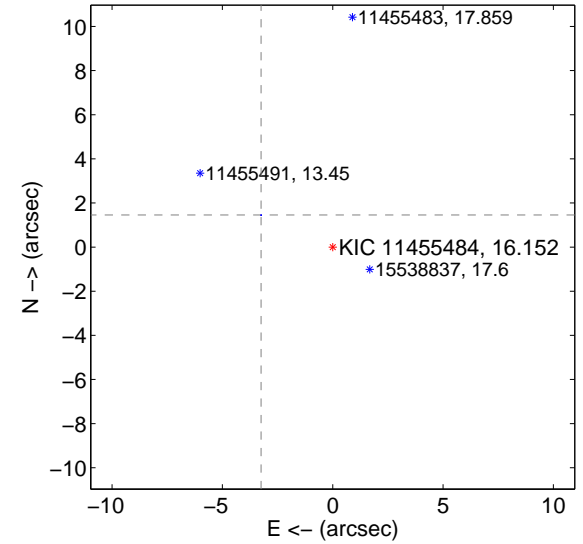
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.

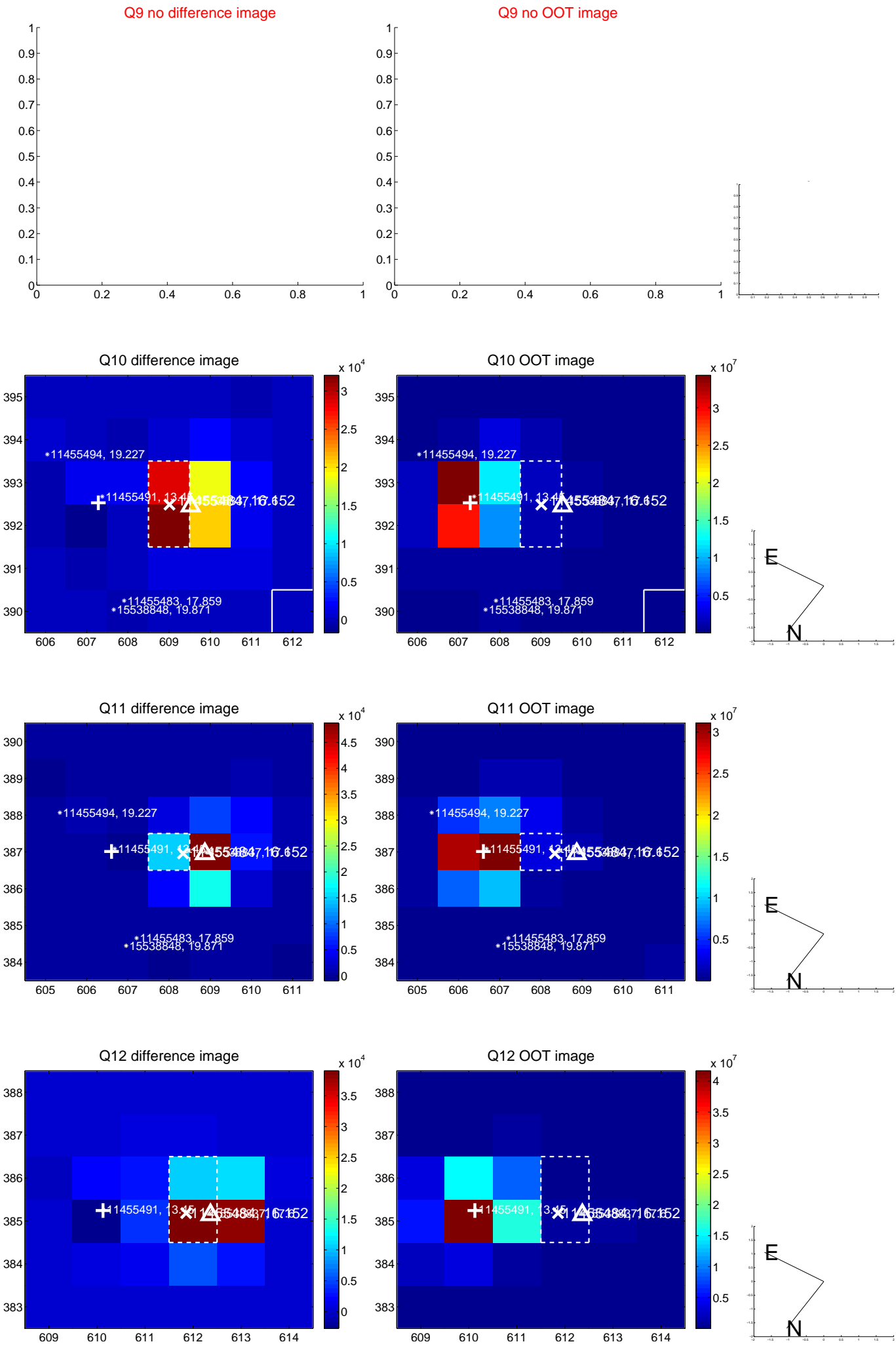
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



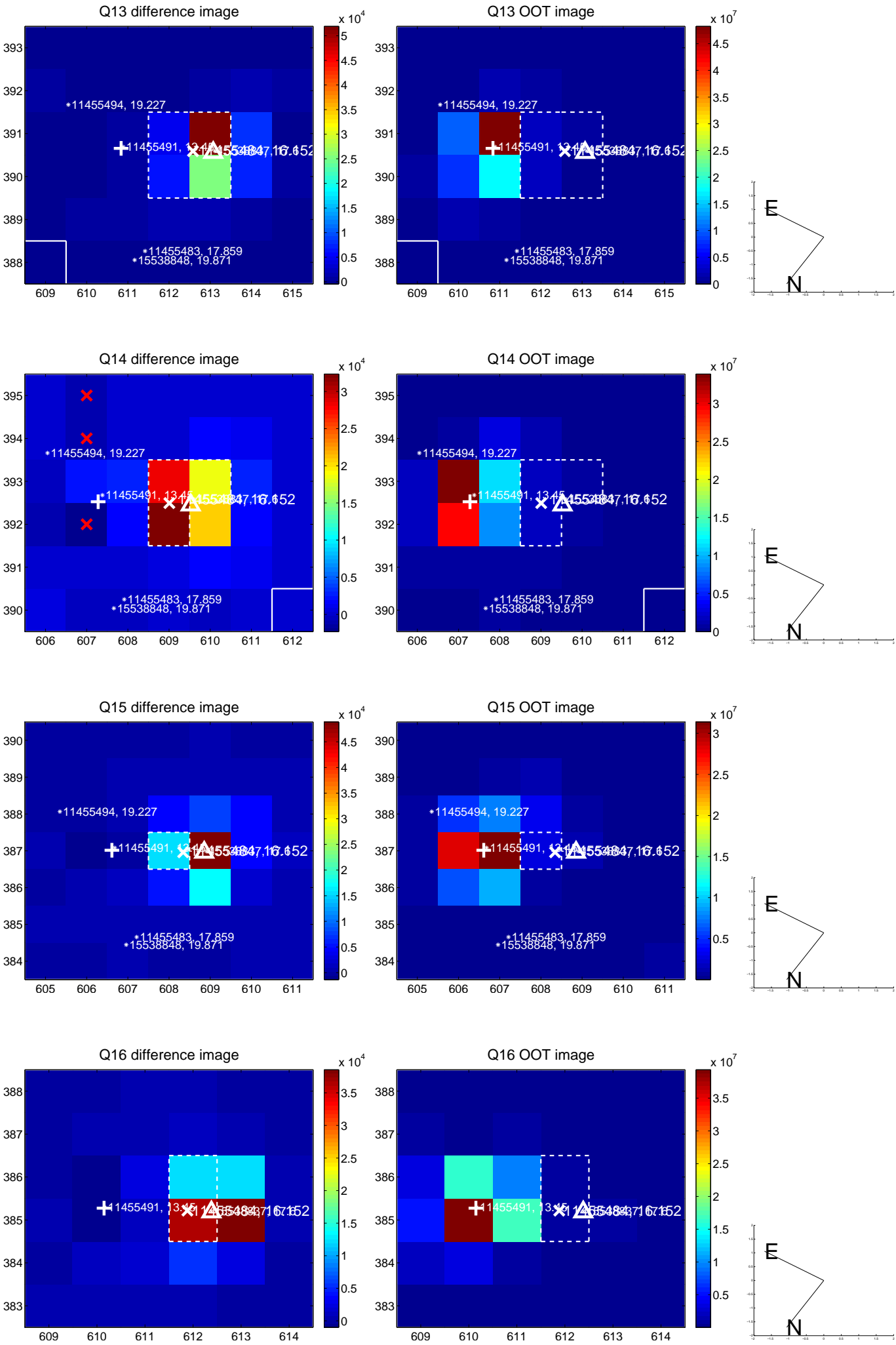
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



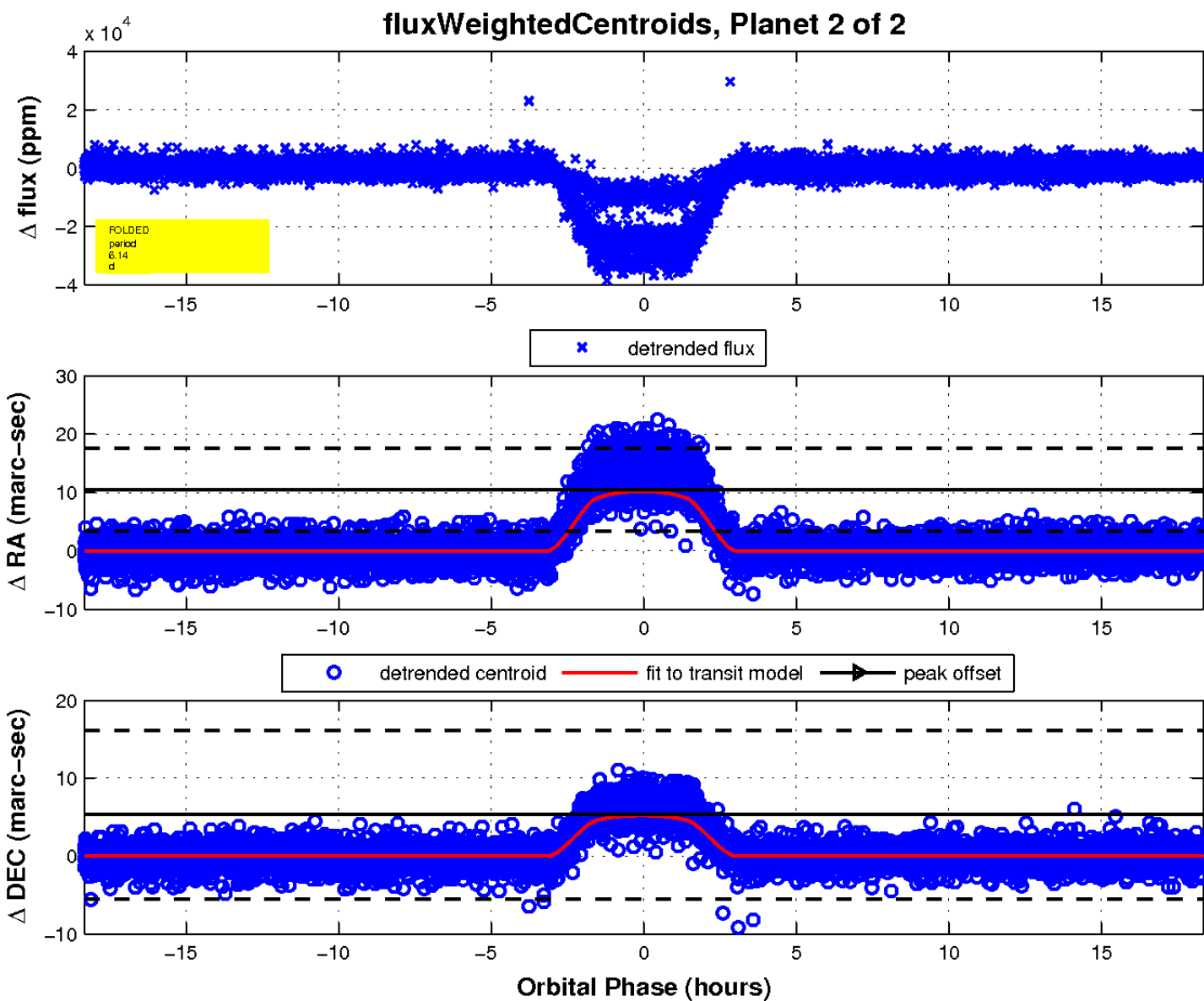
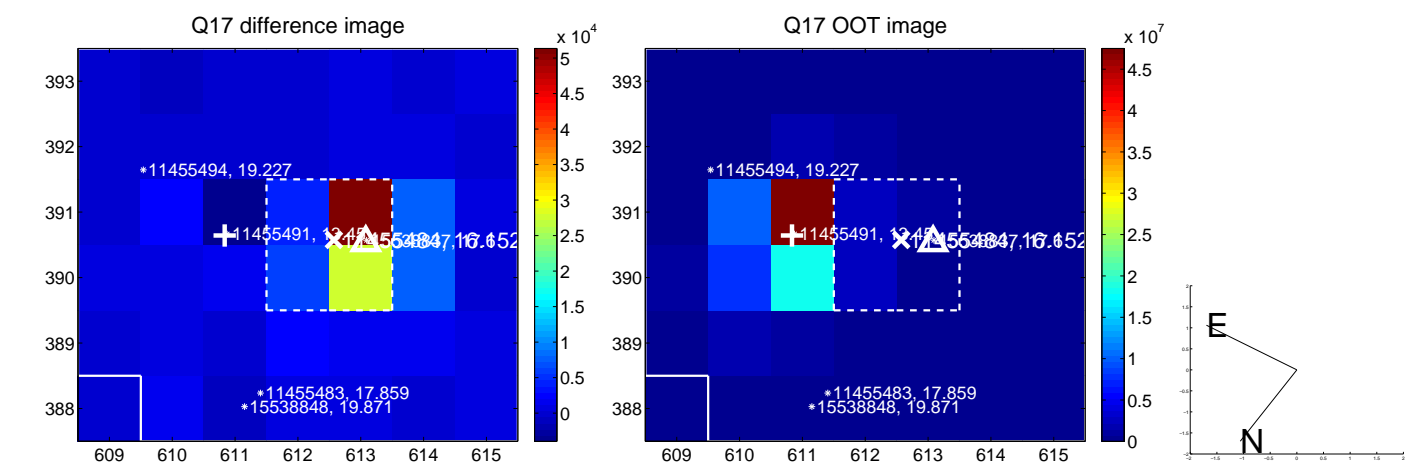
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

