

KIC 007287391

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})
007287391-01	OBS	3546.01	4.286096	134.592105	171675.2	2.642	5723.9	3381.3	0.59	4206	25.69	52.40
007287391-02	OBS	No	4.286095	132.450516	25685.7	2.571	890.7	837.8	0.59	4206	10.87	52.40
007287391-03	OBS	No	453.771212	434.253785	2368.7	5.679	13.0	8.3	0.59	4206	2.90	0.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007287391-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
007287391-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007287391-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

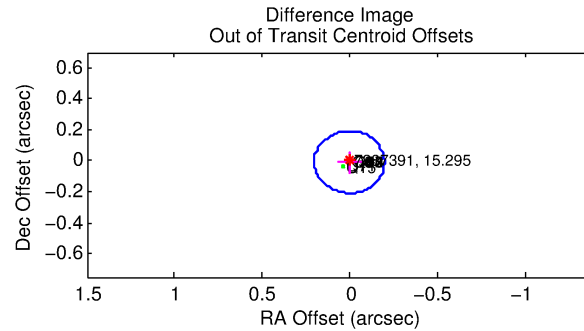
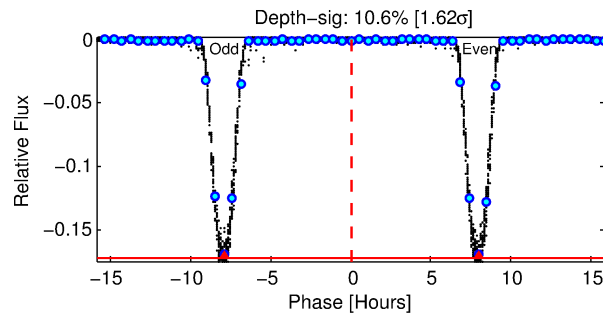
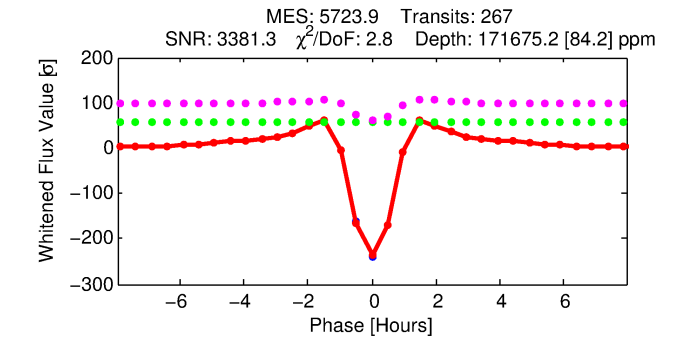
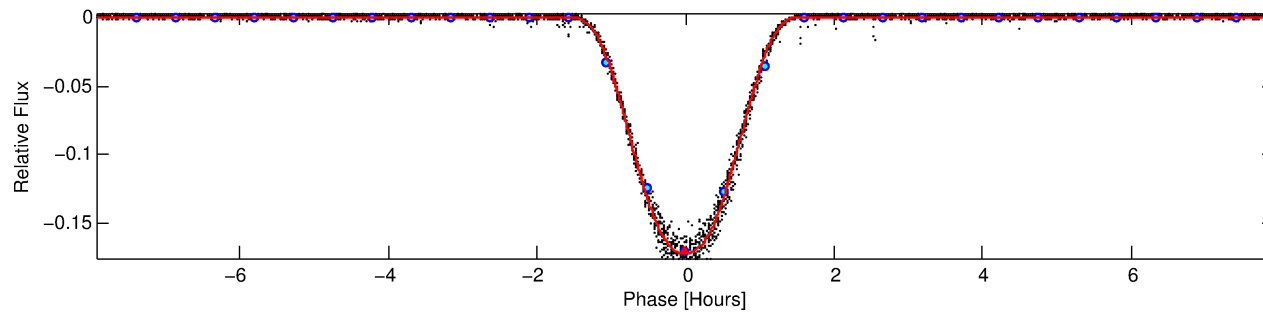
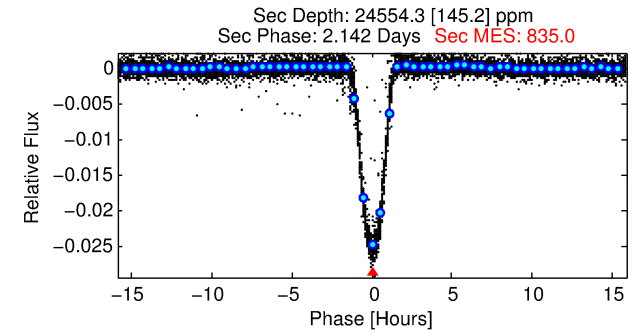
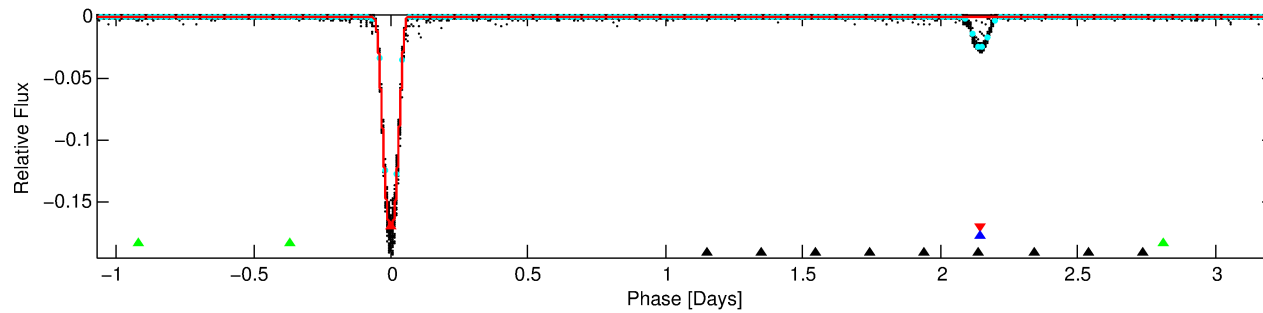
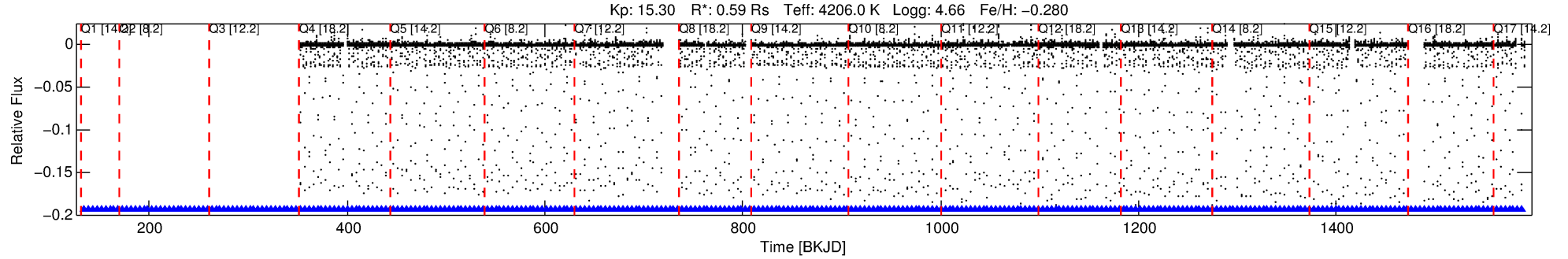
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007287391-01

No Significant Match Found

DV One-Page Summary

KIC: 7287391 Candidate: 1 of 4 Period: 4.286 d
KOI: K03546.01 Corr: 0.994



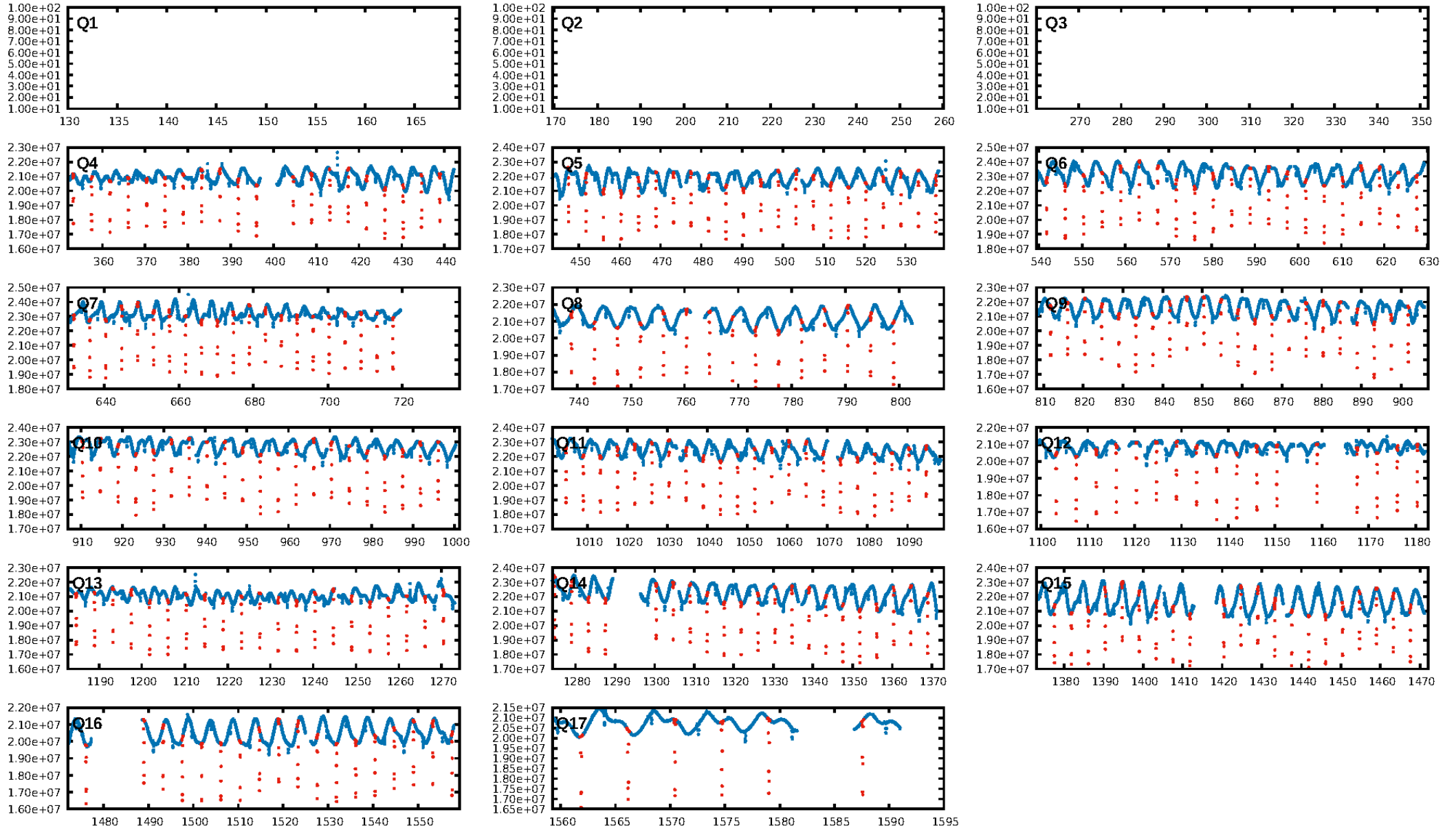
DV Fit Results:

Period = 4.28610 [0.00000] d
Epoch = 134.5921 [0.0000] BKJD
Rp/R* = 0.3983 [0.0002]
a/R* = 15.99 [0.01]
b = 0.54 [0.00]
Seff = 52.40 [9.95]
Teff = 686 [33] K
Rp = 25.69 [2.91] Re
a = 0.0432 [0.0037] AU
Ag = 38.25 [4.30] [8.67σ]
Teffp = 2638 [101] K [18.38σ]

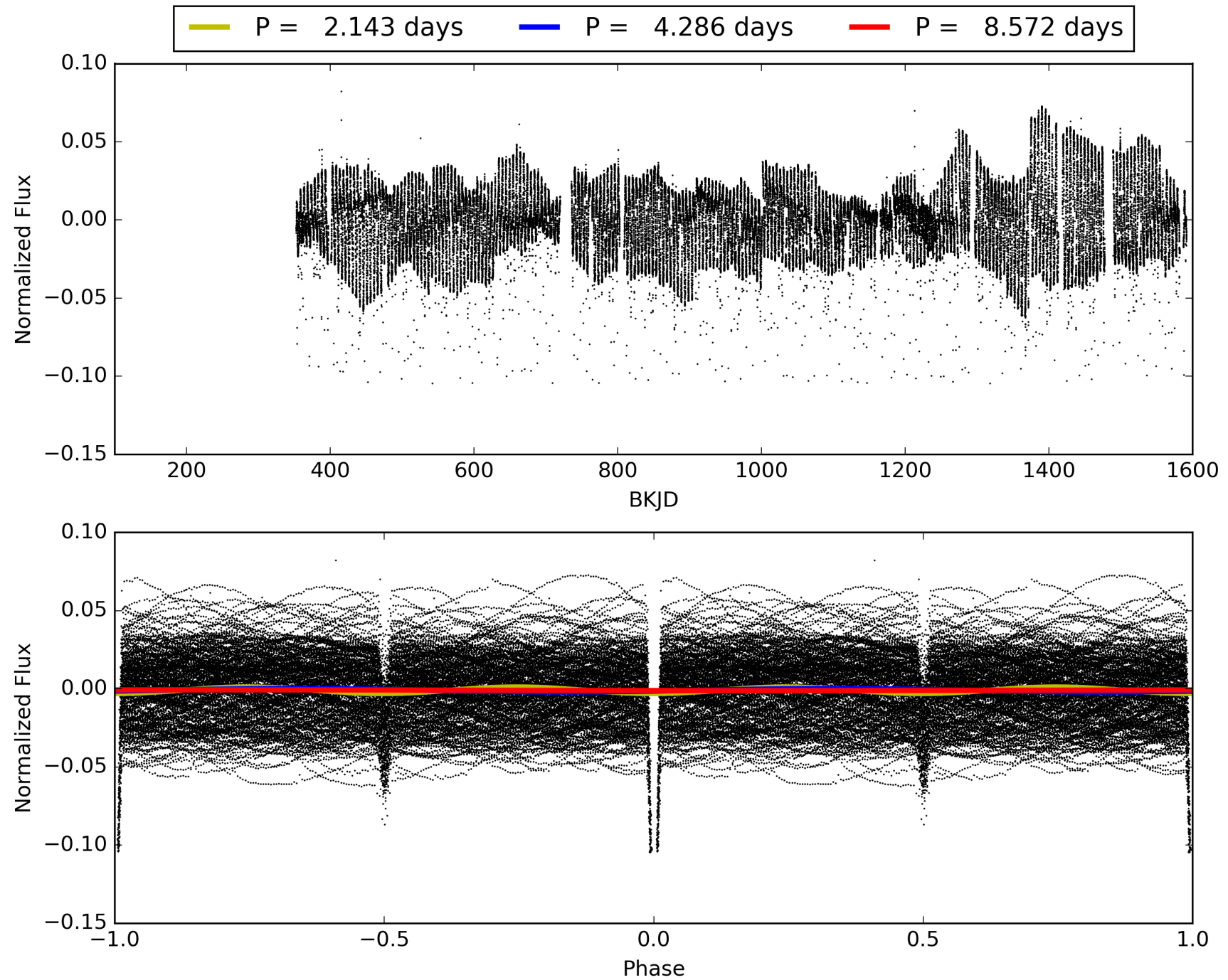
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [866.81σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [261/261]
GhostDiagnostic-chr: 1.644
Centroid-sig: 0.0%
Centroid-so: 0.179 arcsec [119.76σ]
OotOffset-rm: 0.010 arcsec [0.14σ]
KicOffset-rm: 0.162 arcsec [2.39σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
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TCE 007287391-01, PDC Light Curves

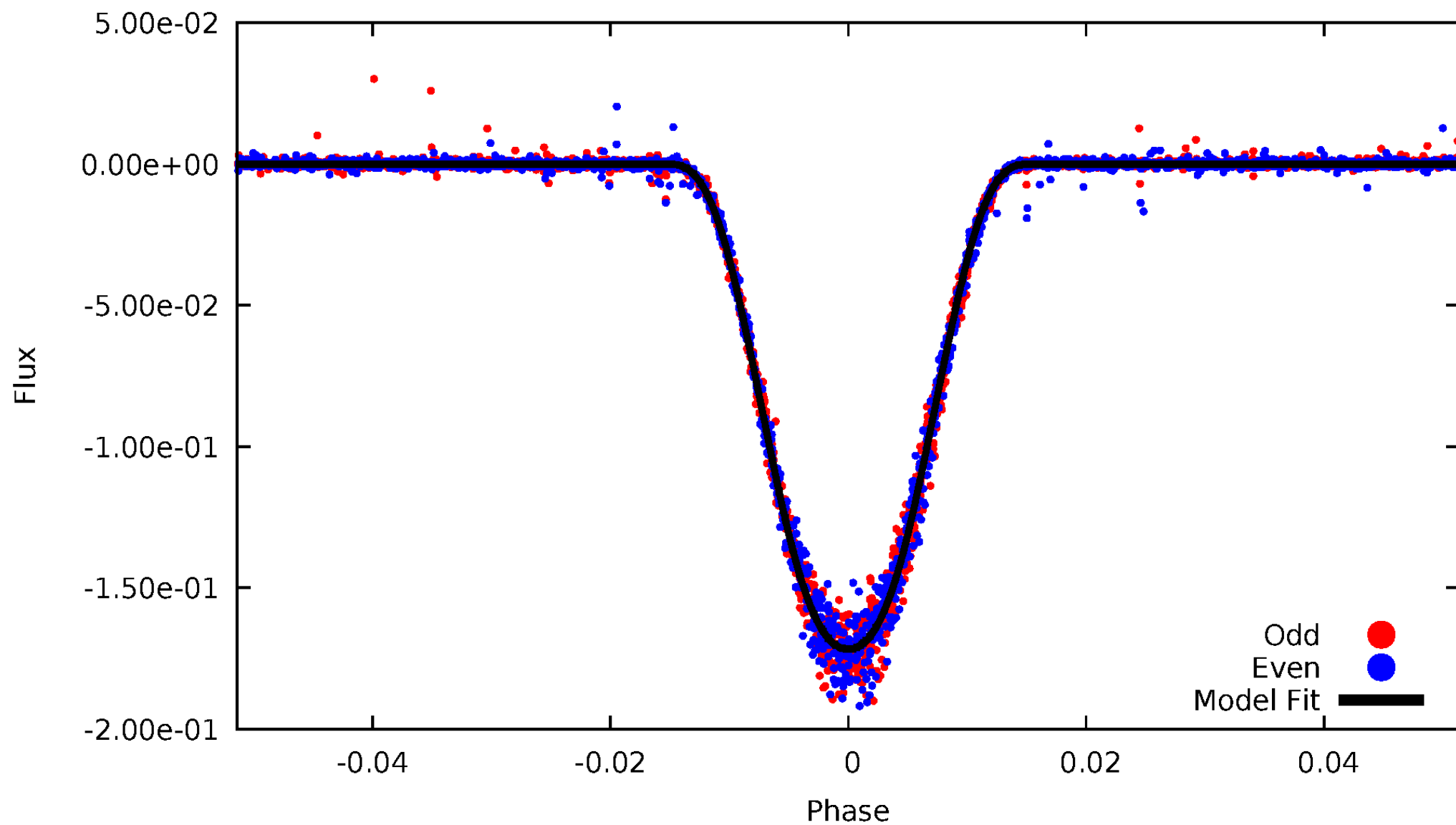


TCE 007287391-01



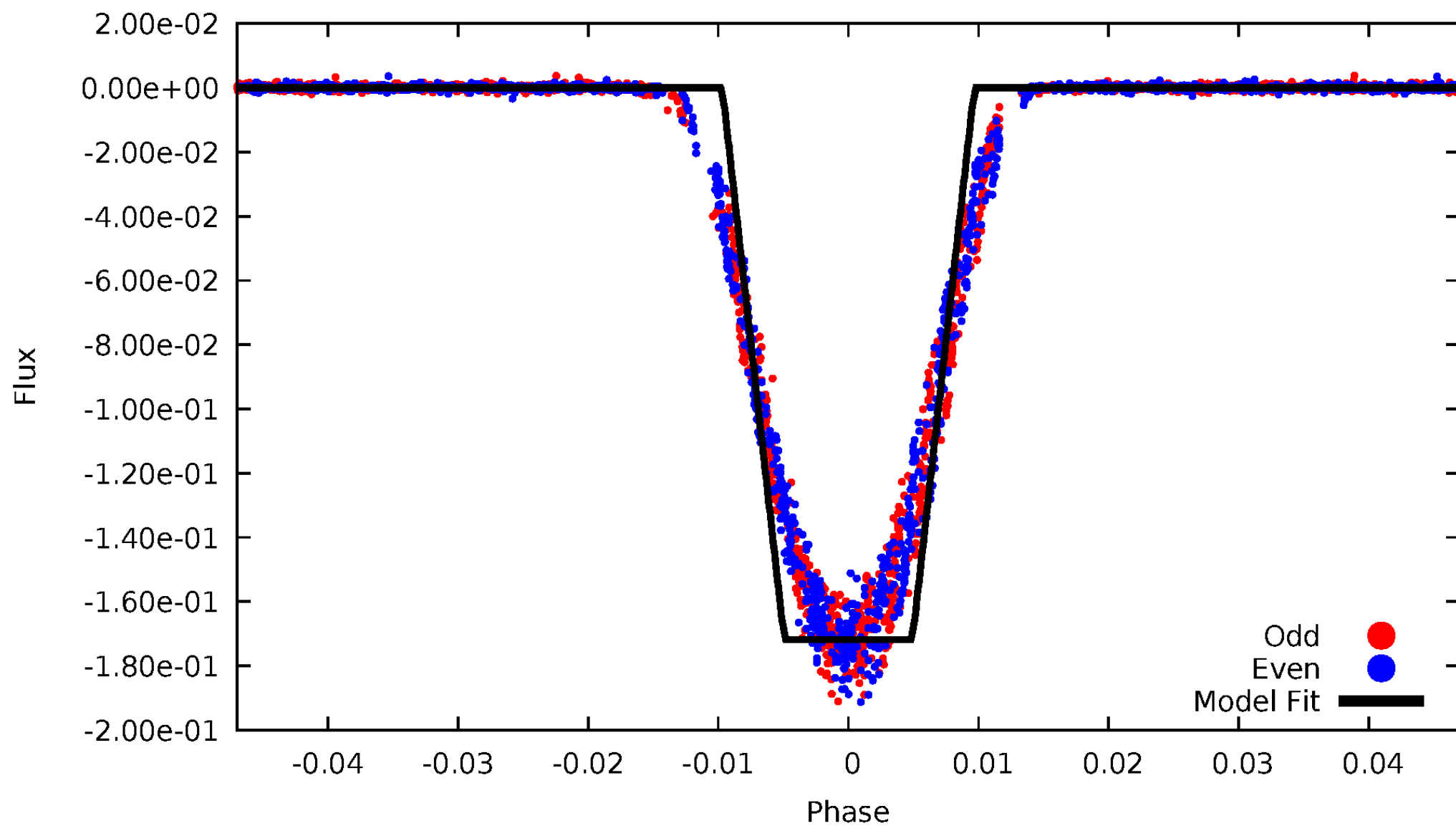
DV Odd/Even

TCE 007287391-01



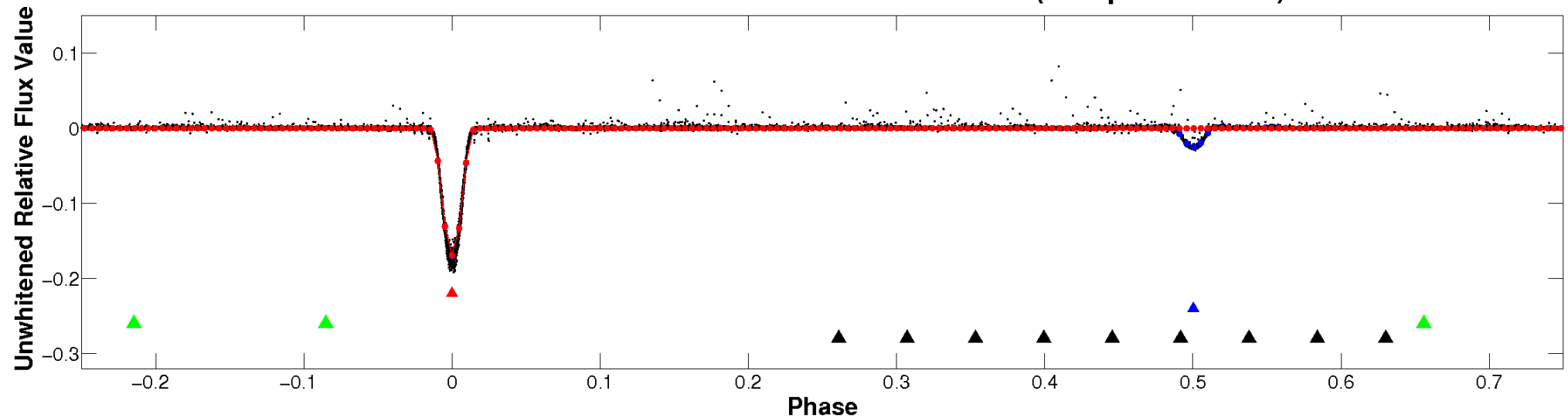
ALT Odd/Even

TCE 007287391-01

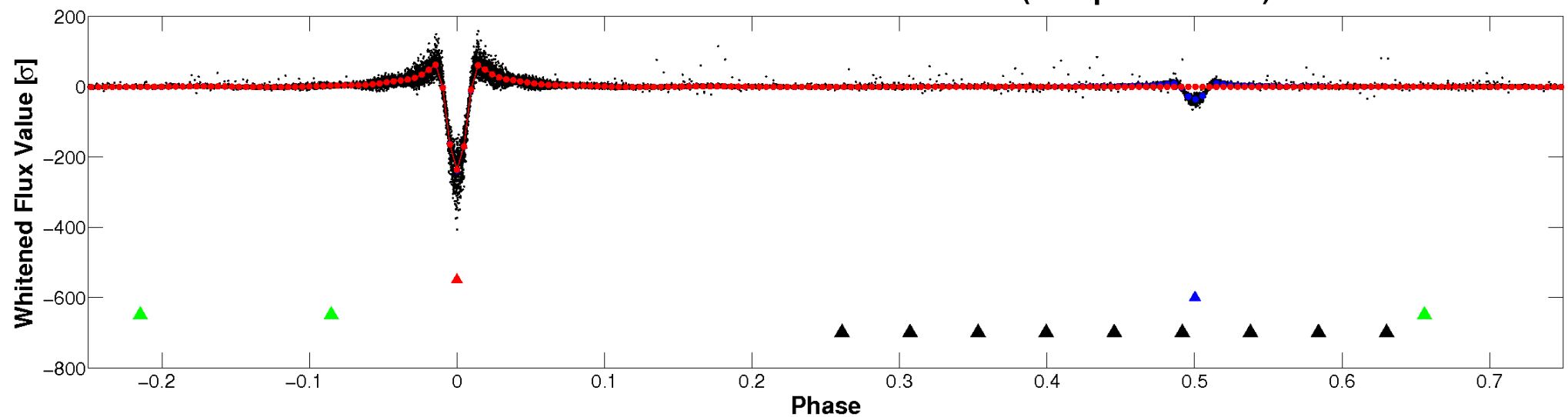


Non-Whitened Vs. Whitened Light Curve

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

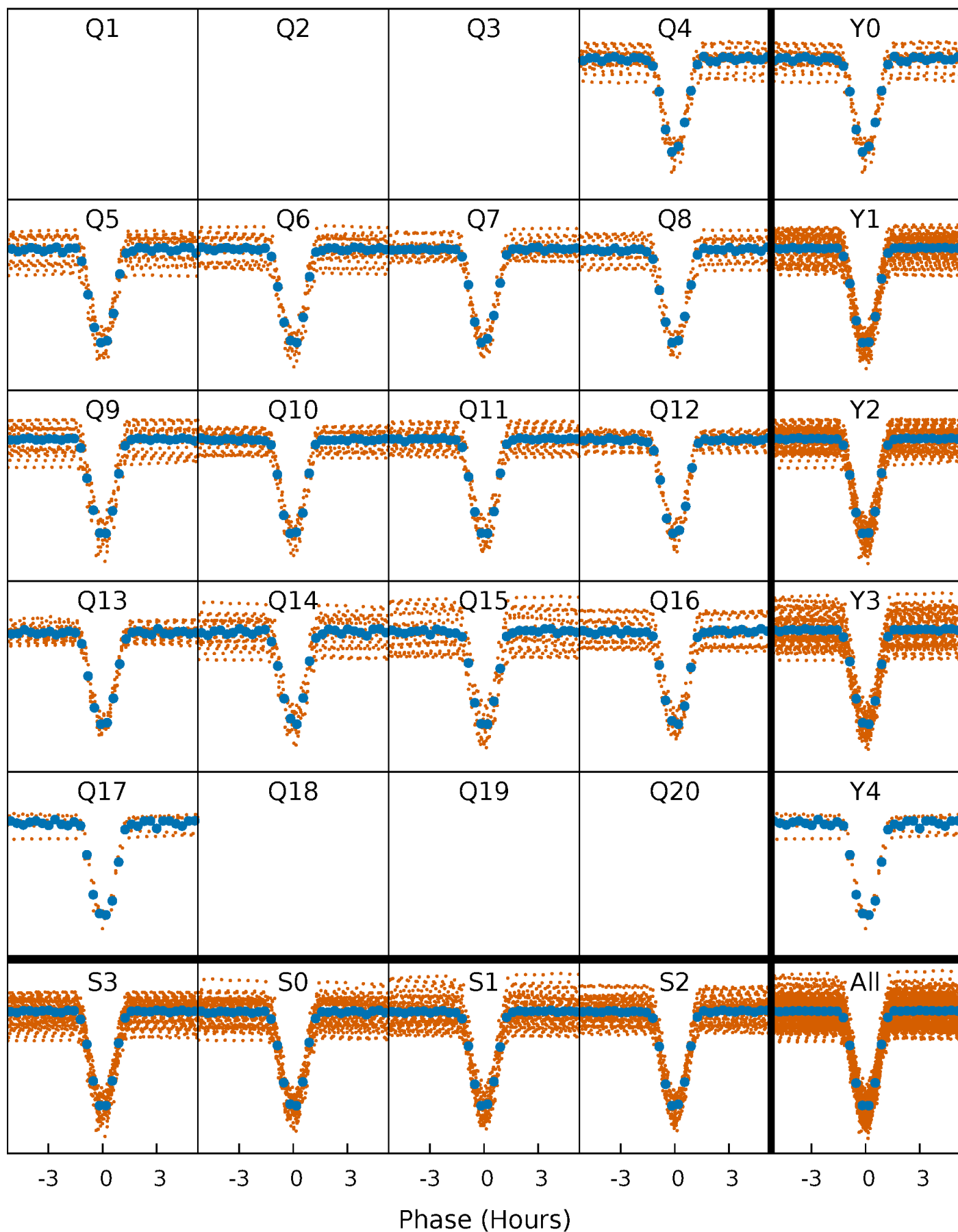


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



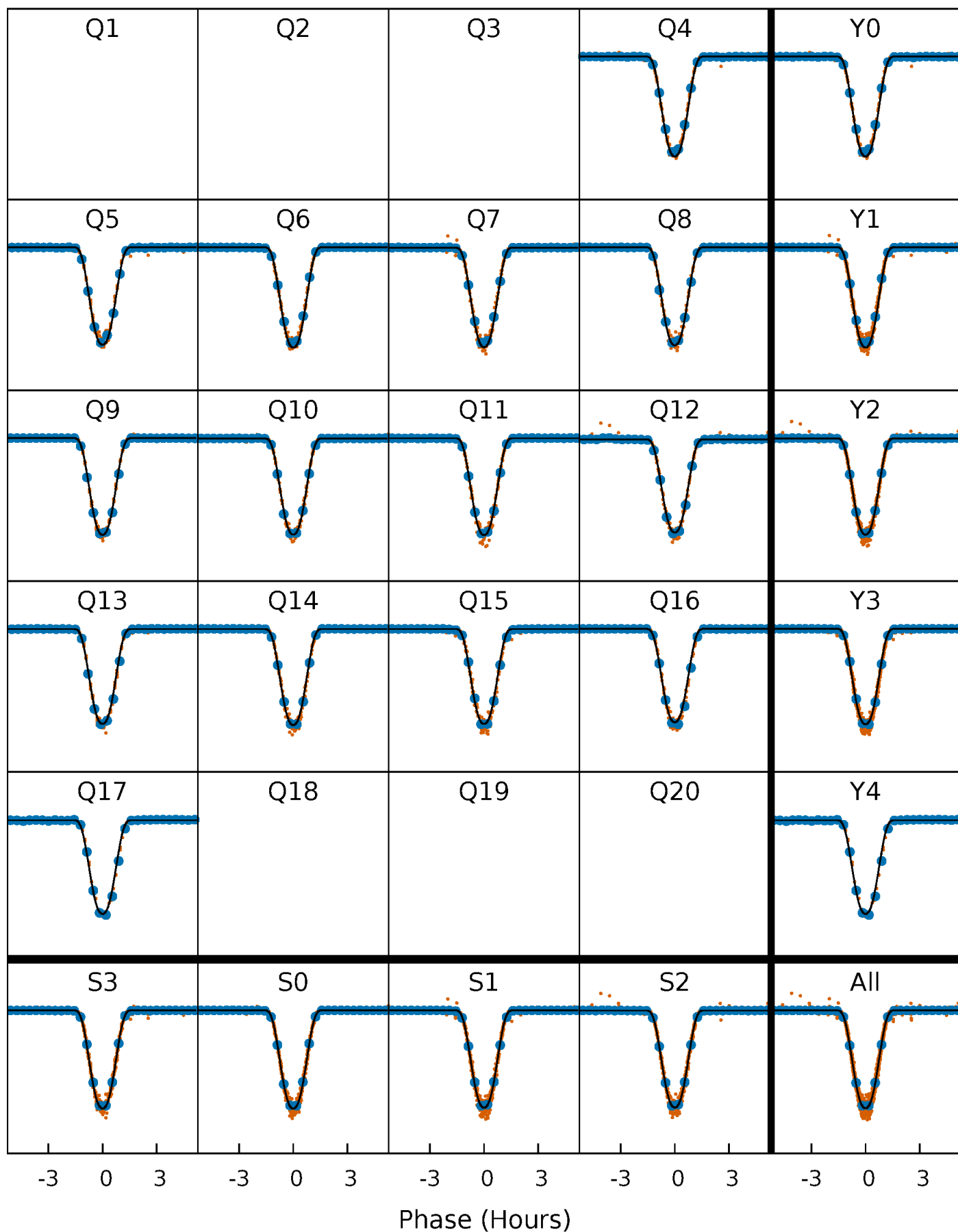
PDC Quarter-Phased Transit Curves

TCE 007287391-01 P= 4.286096 Days $T_0=134.592105$ (BKJD)



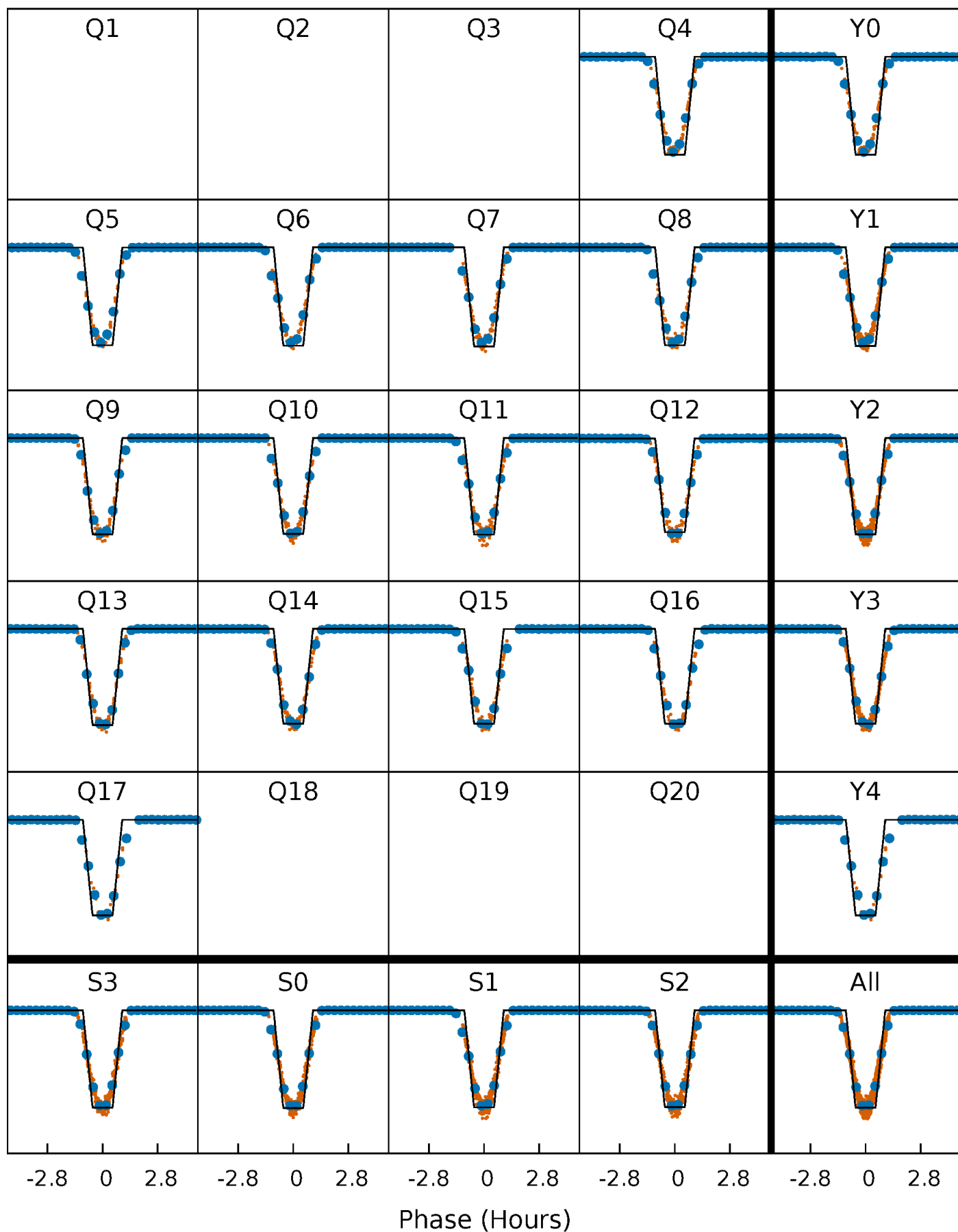
DV Quarter-Phased Transit Curves

TCE 007287391-01 P= 4.286096 Days $T_0=134.592105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

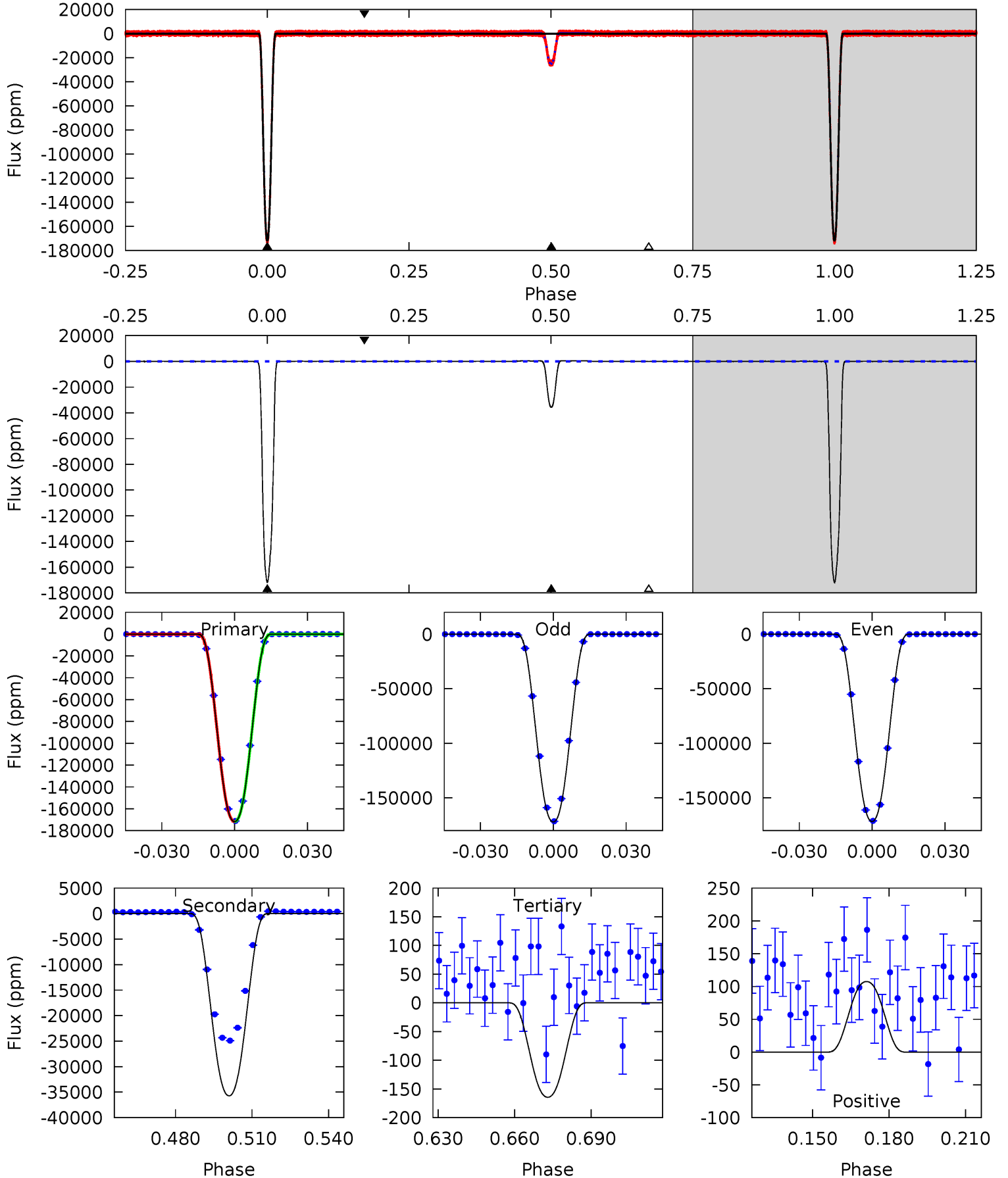
TCE 007287391-01 P= 4.286082 Days $T_0=134.594978$ (BKJD)



DV Model-Shift Uniqueness Test

007287391-01, P = 4.286096 Days, E = 134.592105 Days

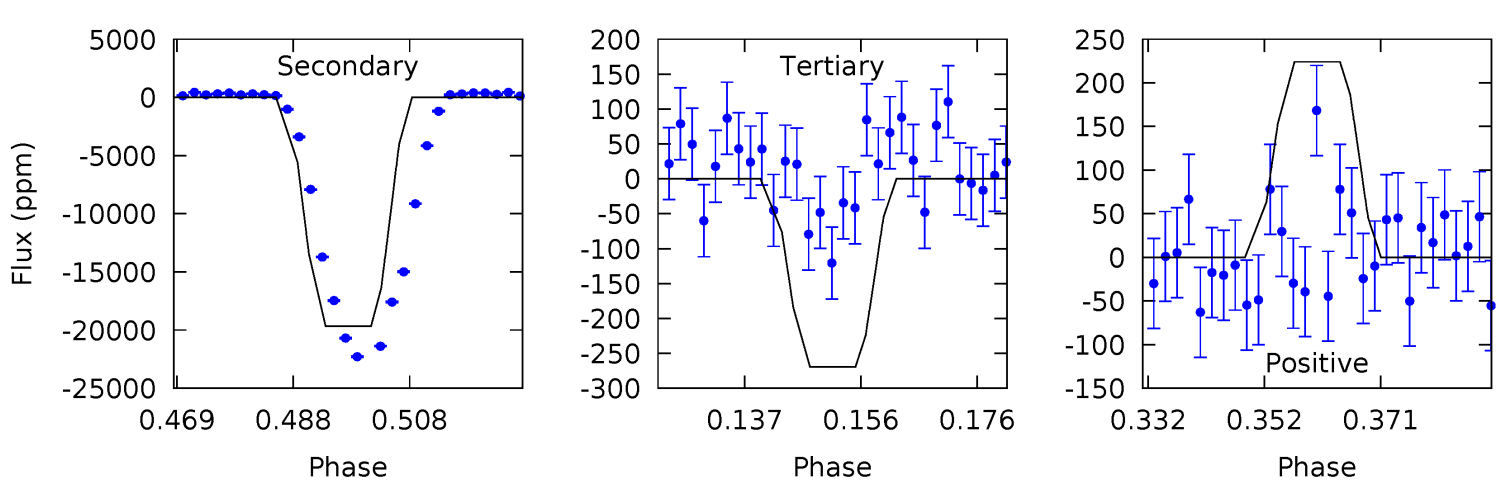
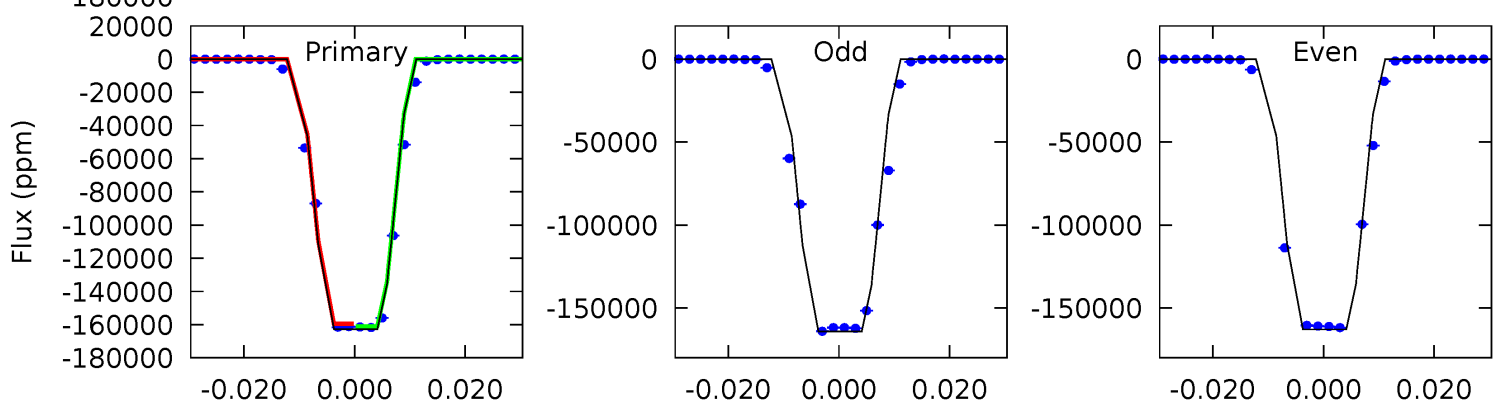
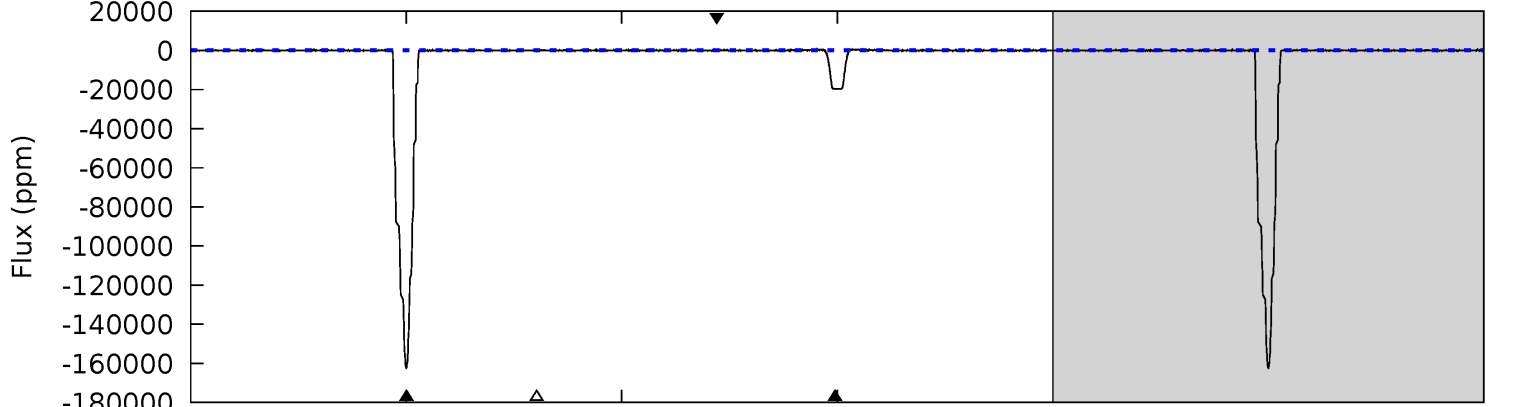
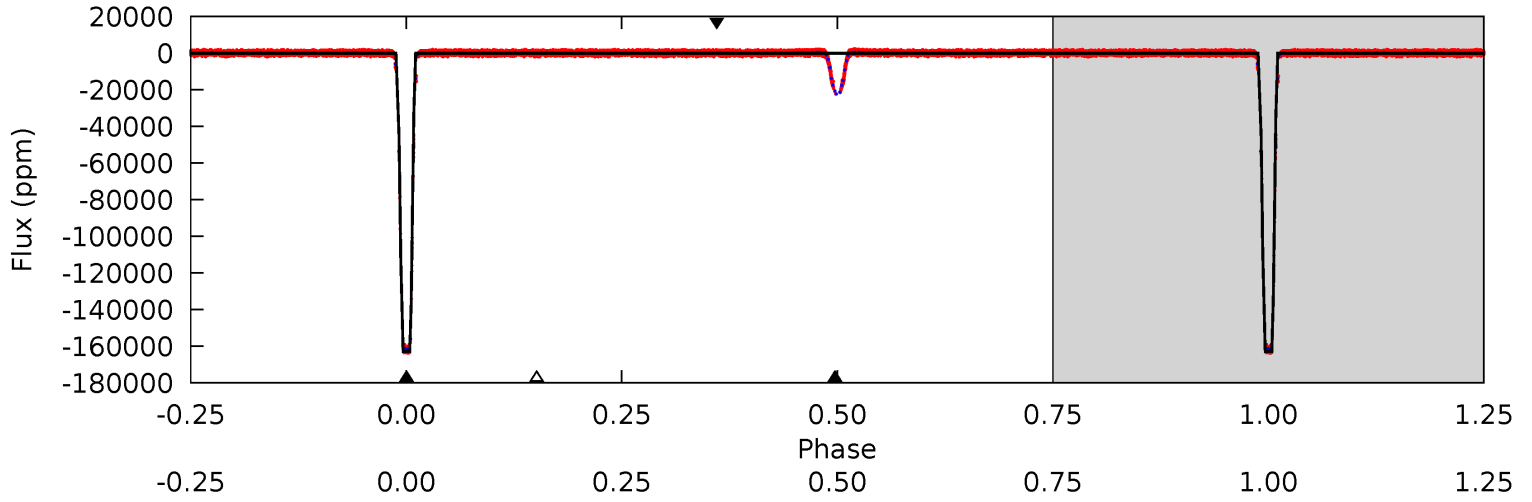
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7829	1627	7.49	4.90	4.81	2.17	5.11	7821	7824	1620	1622	10.6	1.00	0.00	2.04



Alt Model-Shift Uniqueness Test

007287391-01, P = 4.286082 Days, E = 134.594978 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2985	360.7	4.94	4.11	4.90	2.34	1.72	2980	2981	355.7	356.6	11.2	1.00	0.00	0



Stellar Parameters For KIC 007287391

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4206^{+146}_{-161}	$4.663^{+0.054}_{-0.027}$	$-0.280^{+0.300}_{-0.300}$	$0.591^{+0.048}_{-0.067}$	$0.587^{+0.063}_{-0.063}$	$4.000^{+1.073}_{-0.480}$
	+3%/-4%	+1%/-1%	+107%/-107%	+8%/-11%	+11%/-11%	+27%/-12%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007287391-01 / KOI 3546.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35716 ± 22	$25.62^{+1.23}_{-1.56}$	952^{+41}_{-39}	3300^{+93}_{-102}	59^{+5}_{-4}
Alt.	-19664 ± 55	$26.67^{+1.35}_{-1.53}$	952^{+39}_{-38}	2979^{+75}_{-86}	29^{+2}_{-2}

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

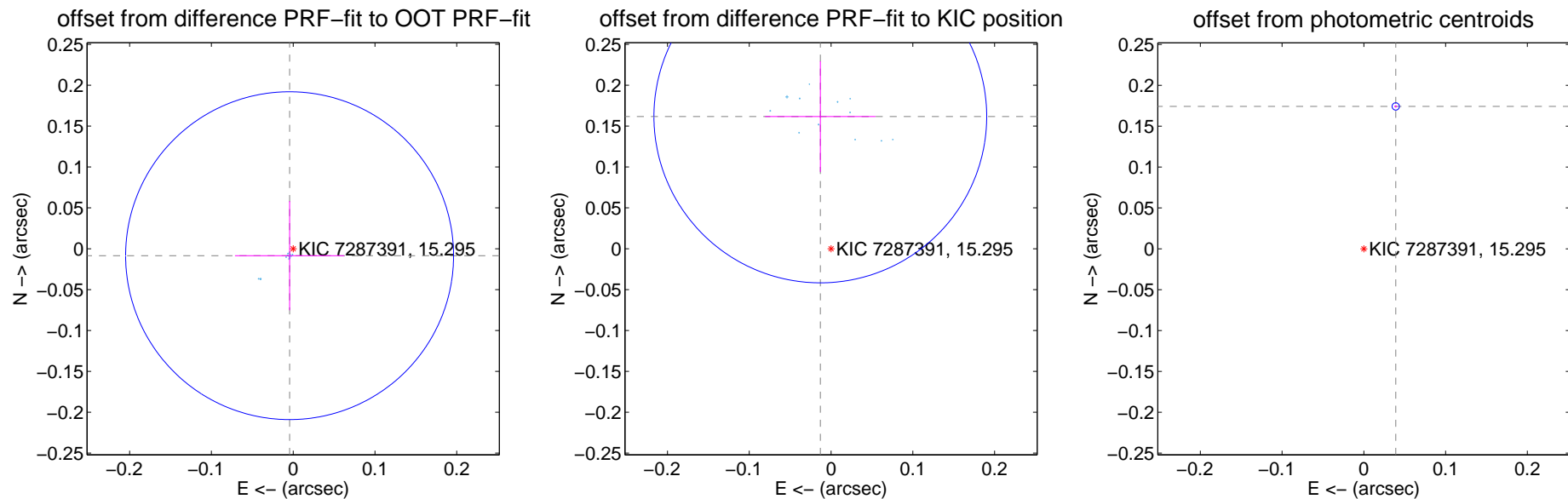
DV Centroid Data

Supplemental centroid analysis for 007287391-01. Kepler magnitude: 15.29. Transit SNR 3381.31

There are 14 quarters with good PRF difference image offsets

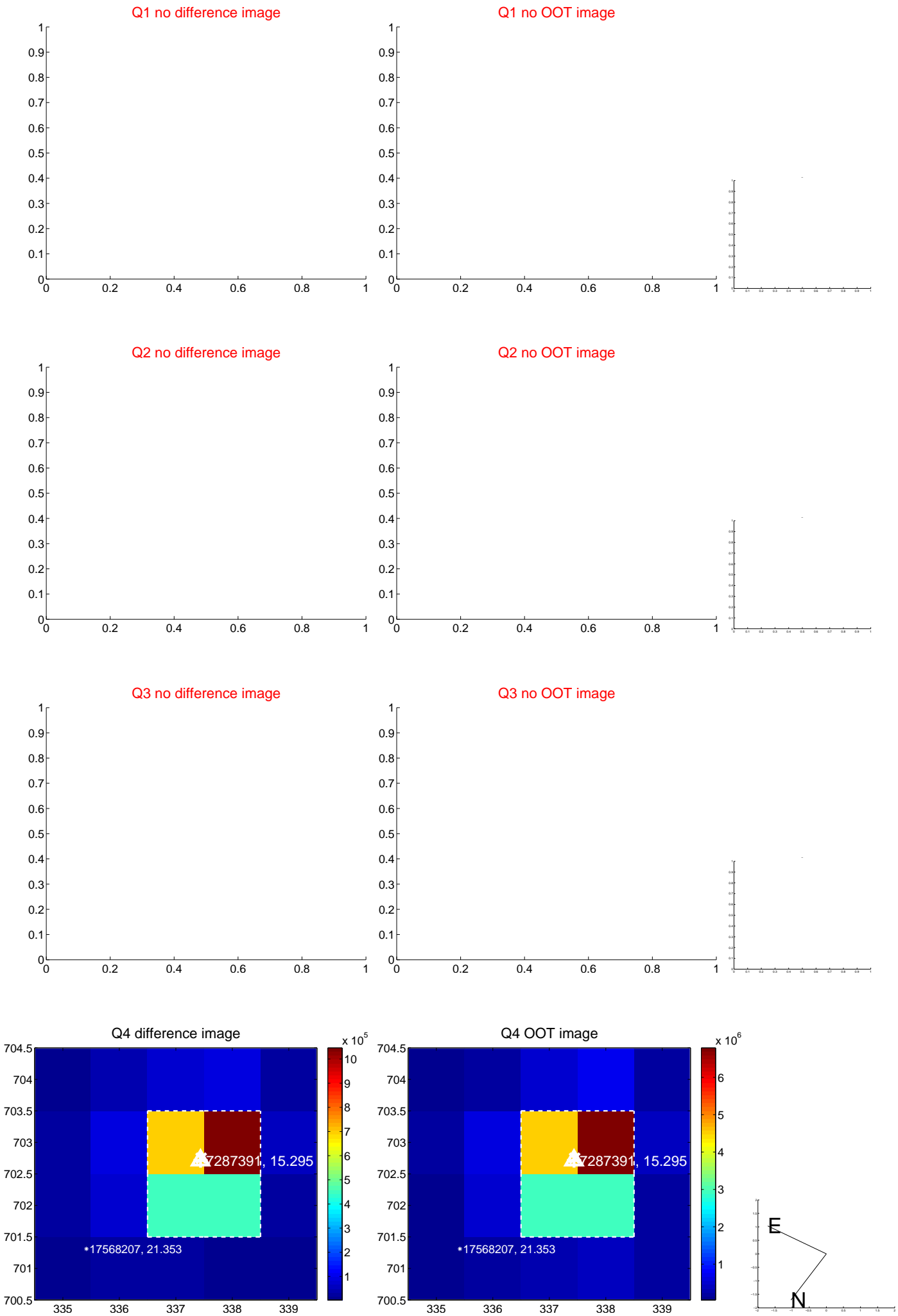
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.14	0.004 ± 0.067	-0.008 ± 0.067
PRF-fit source offset from KIC position	0.162 ± 0.068	2.39	0.013 ± 0.068	0.162 ± 0.068
photometric centroid source offset	0.18 ± 0.00	119.76	-0.04 ± 0.00	0.17 ± 0.00

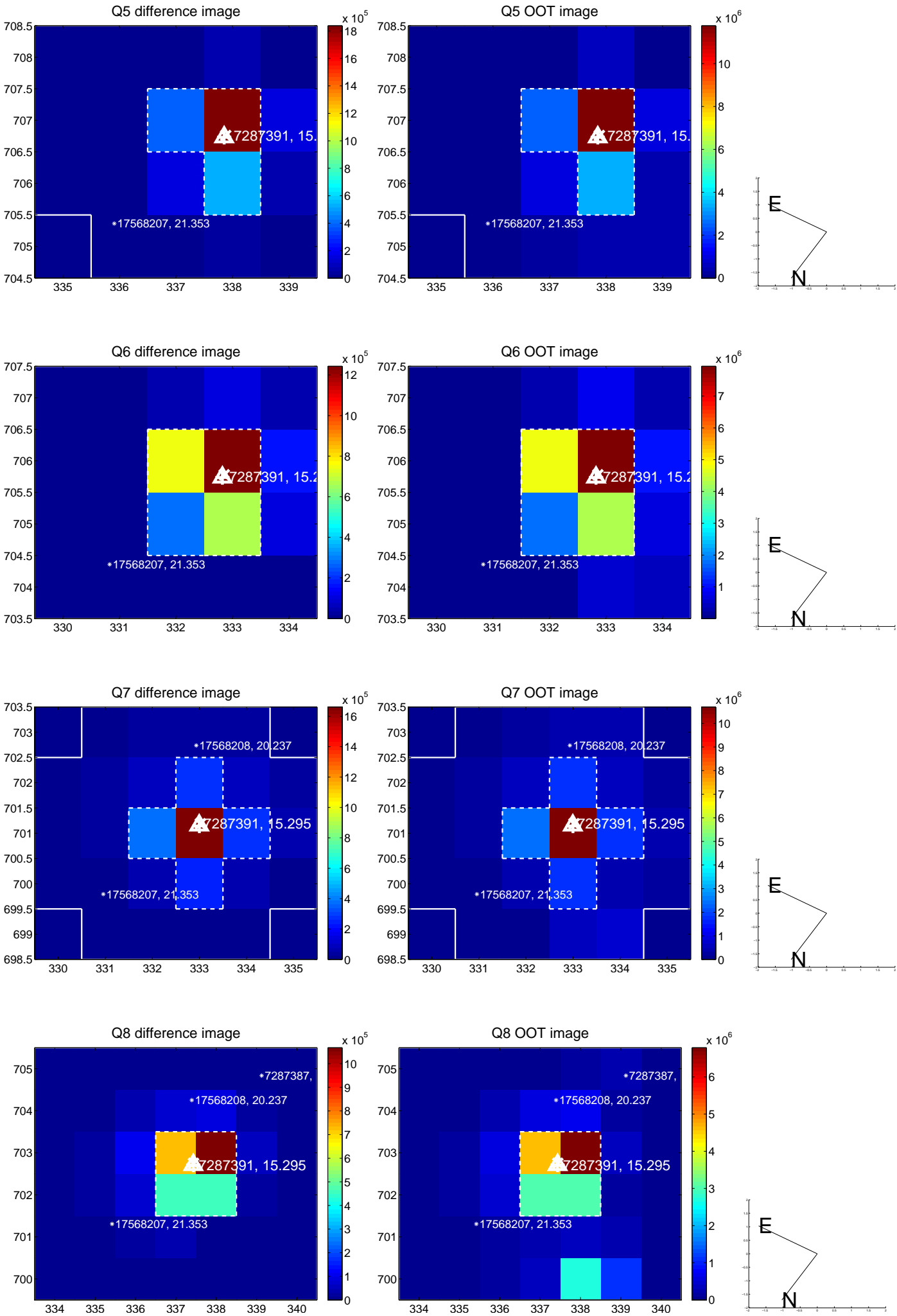


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

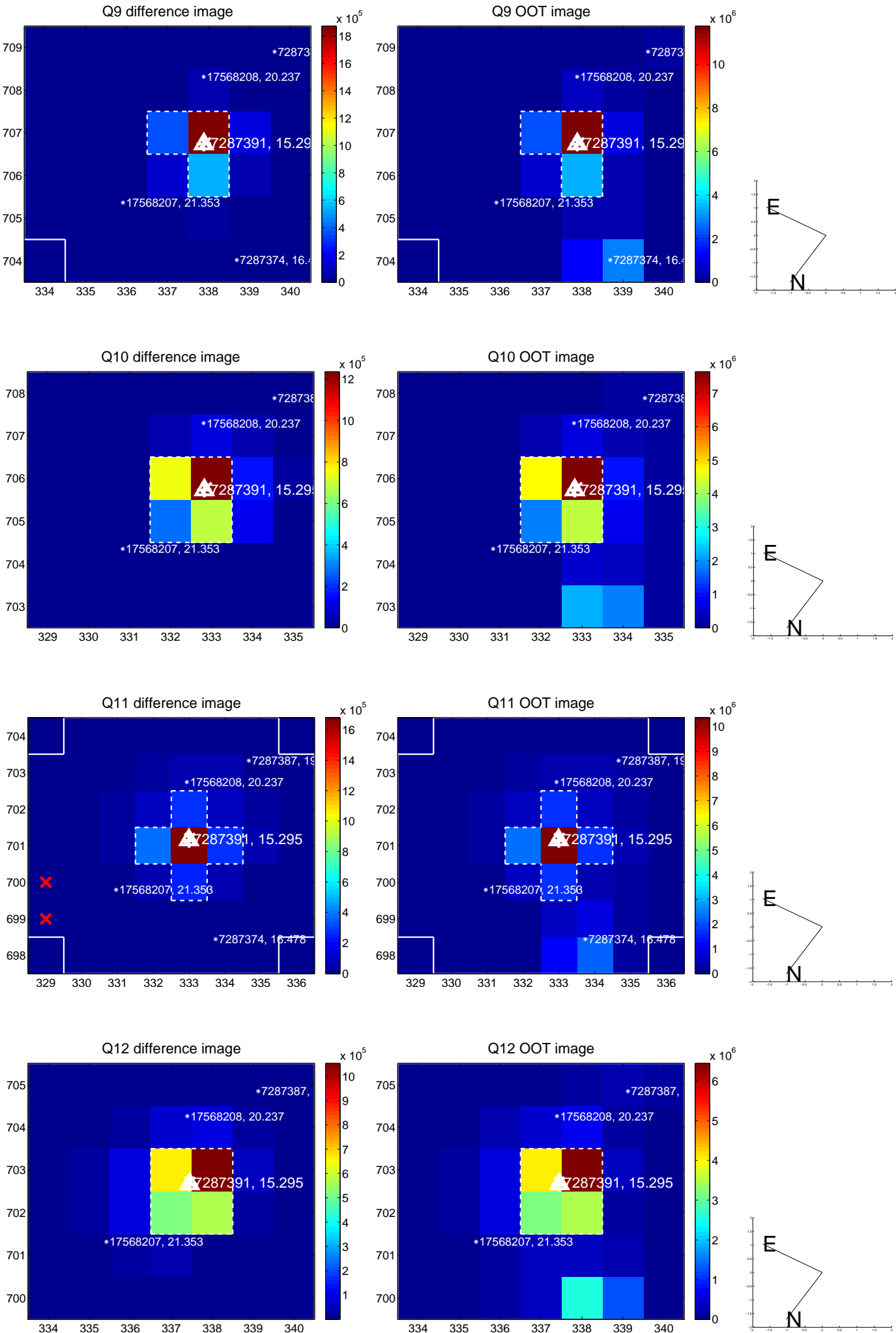
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



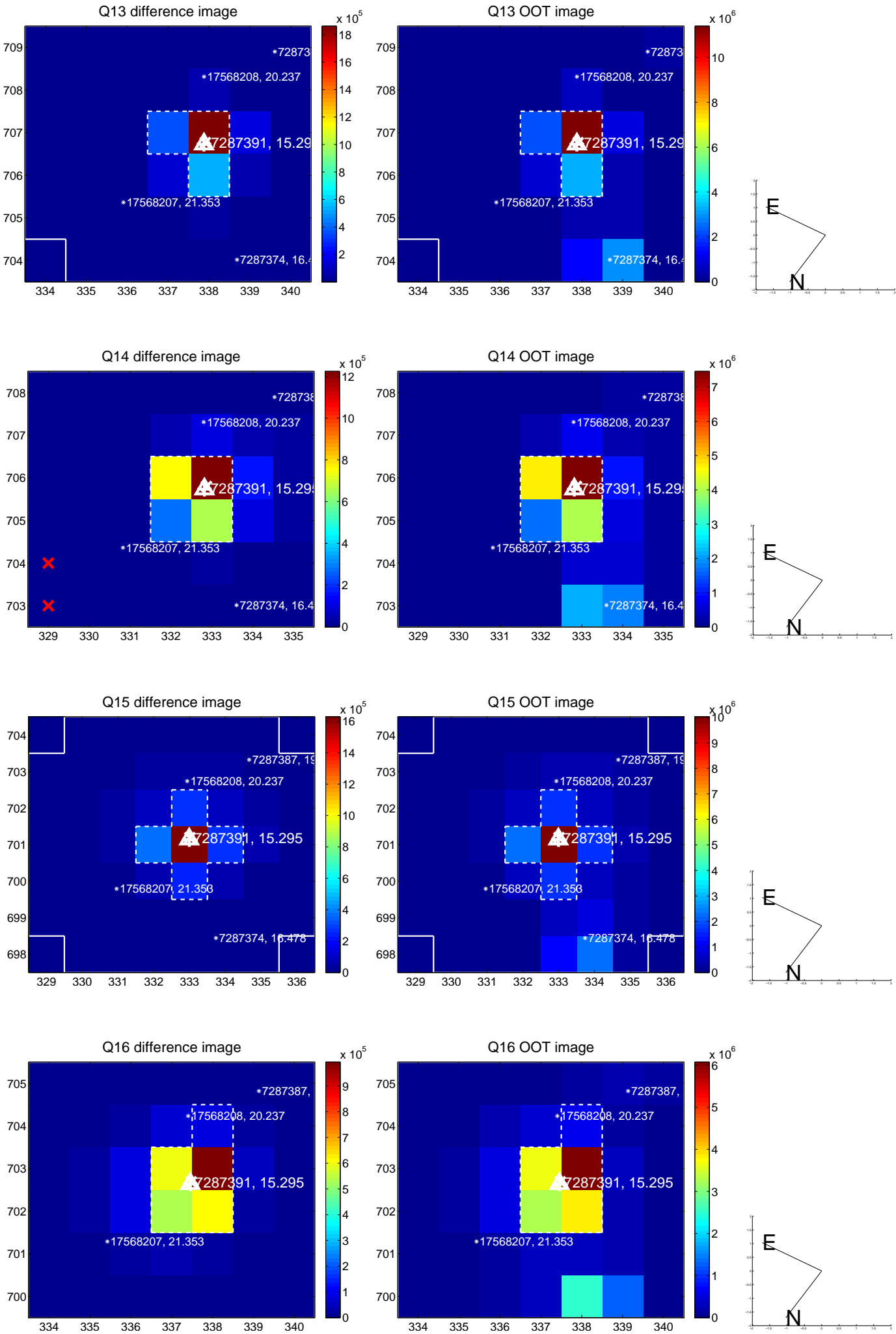
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



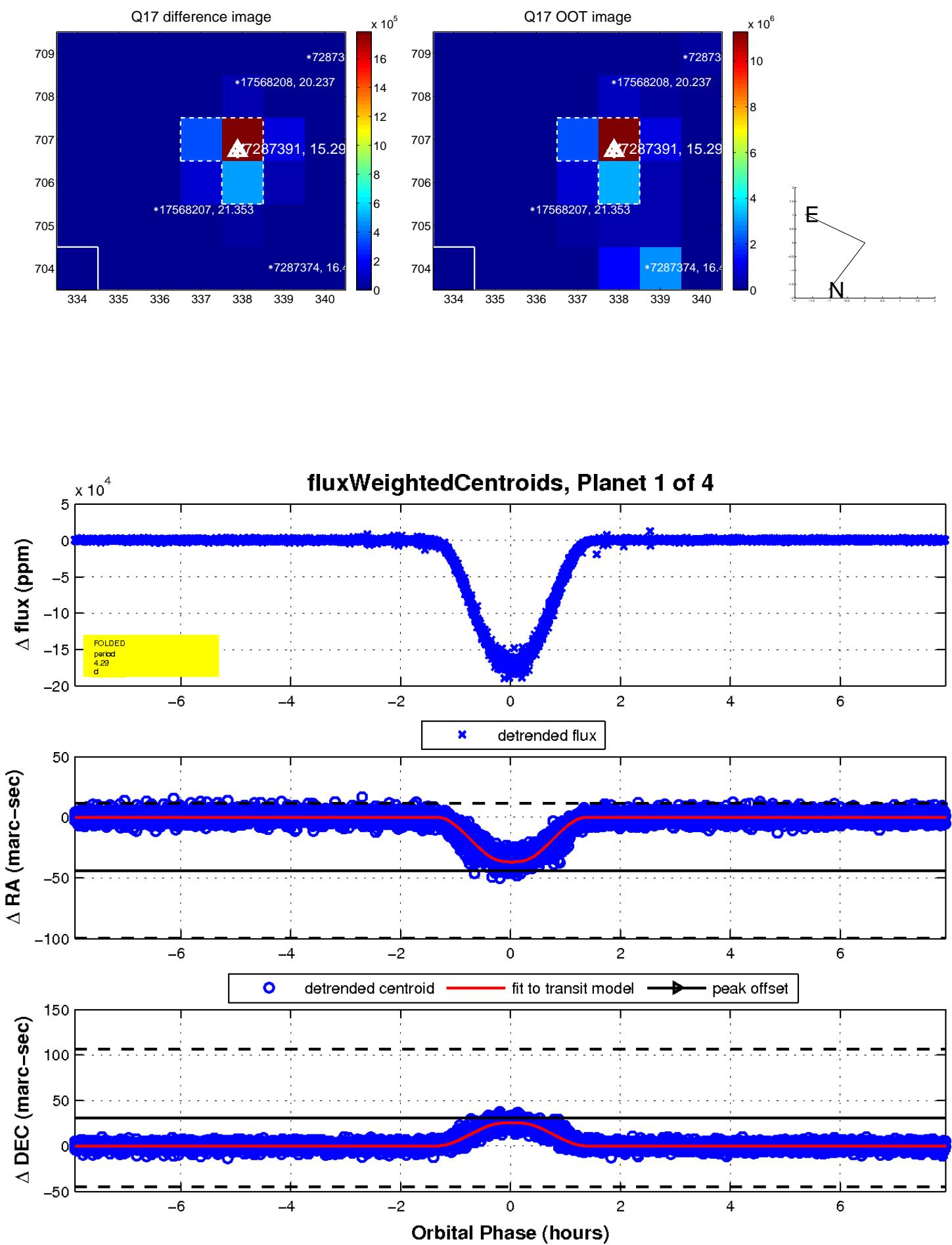
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

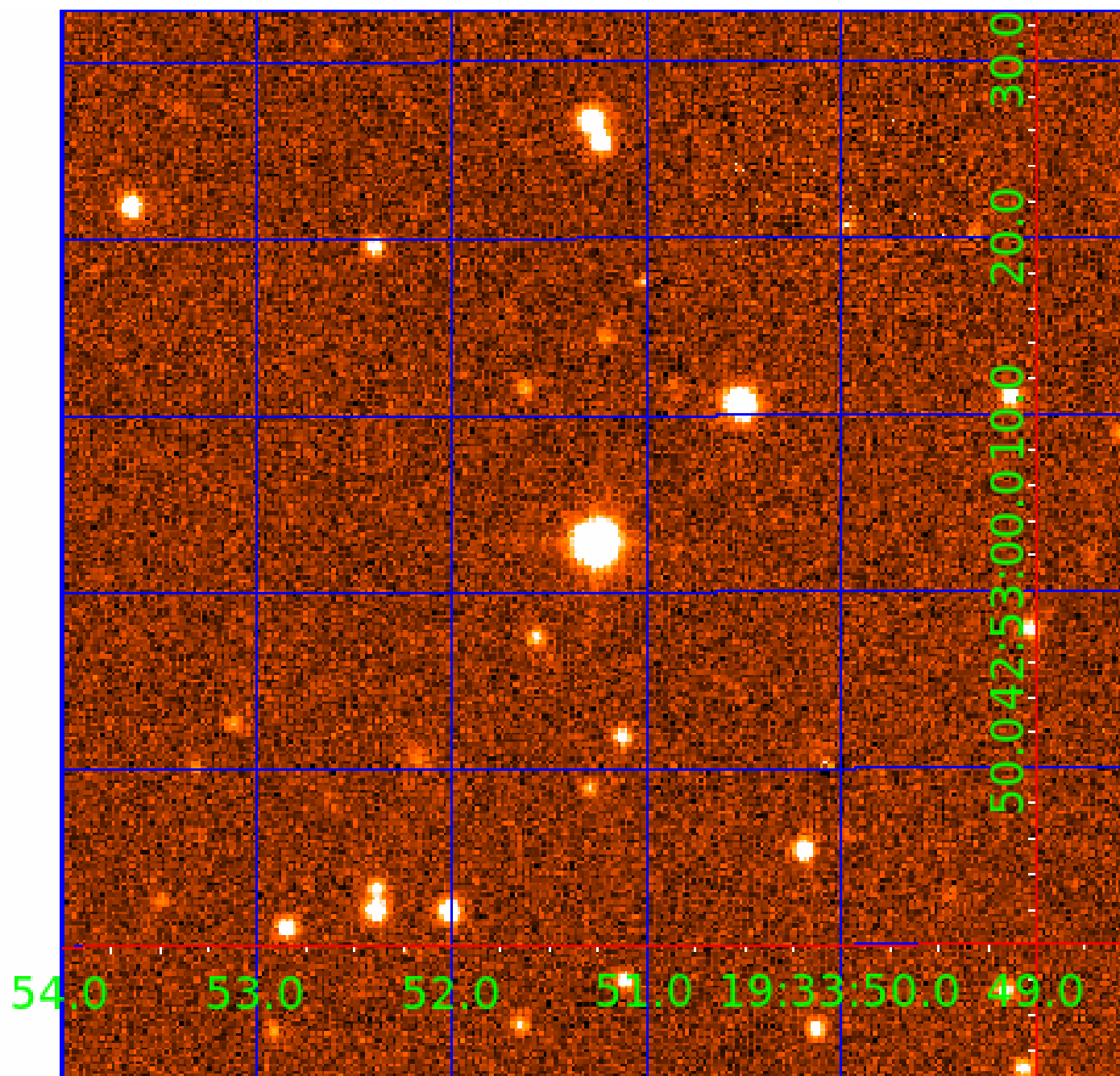


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007287391

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})
007287391-01	OBS	3546.01	4.286096	134.592105	171675.2	2.642	5723.9	3381.3	0.59	4206	25.69	52.40
007287391-02	OBS	No	4.286095	132.450516	25685.7	2.571	890.7	837.8	0.59	4206	10.87	52.40
007287391-03	OBS	No	453.771212	434.253785	2368.7	5.679	13.0	8.3	0.59	4206	2.90	0.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007287391-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
007287391-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007287391-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

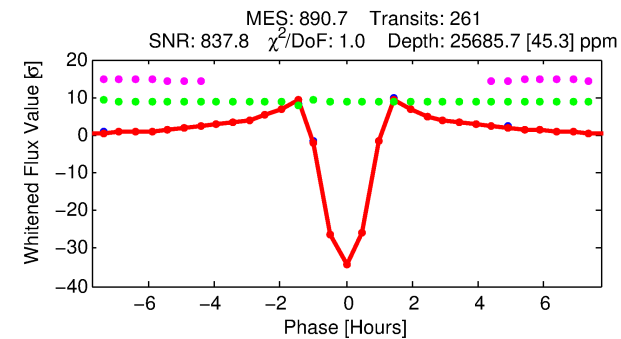
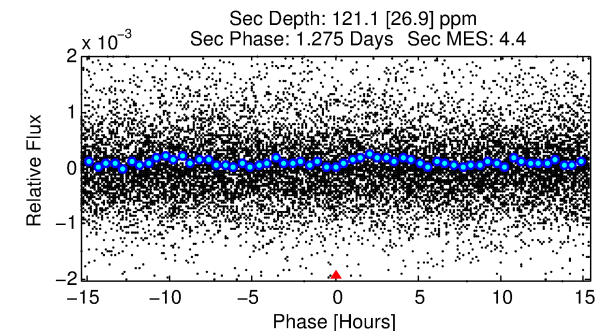
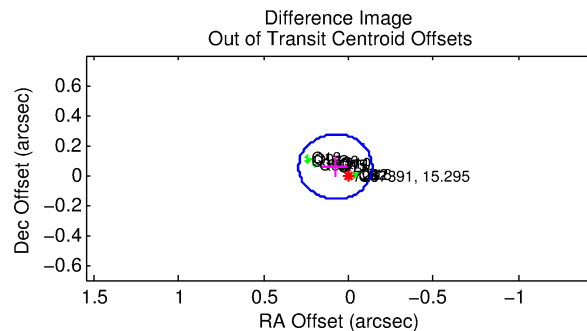
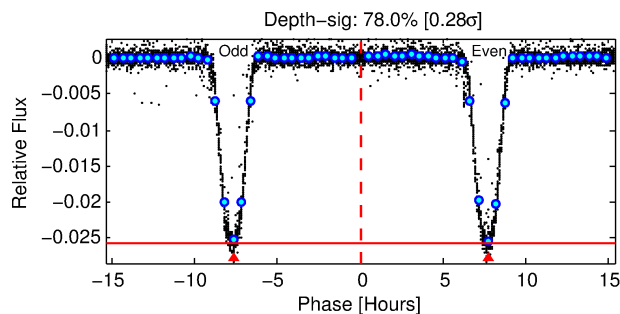
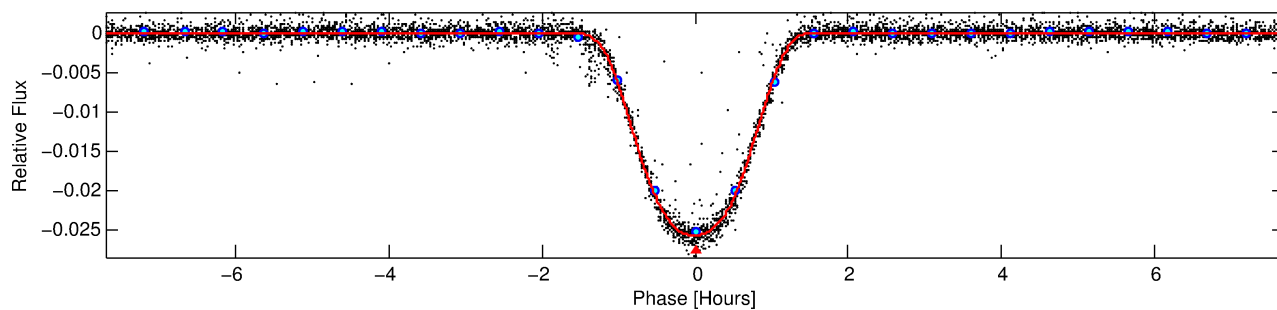
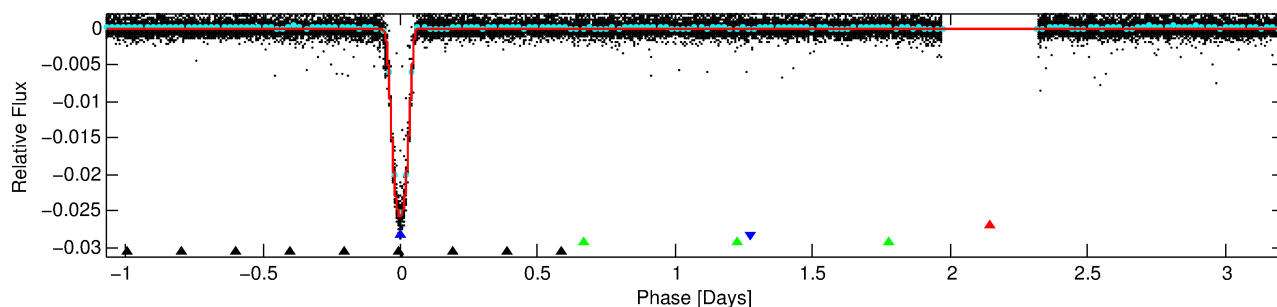
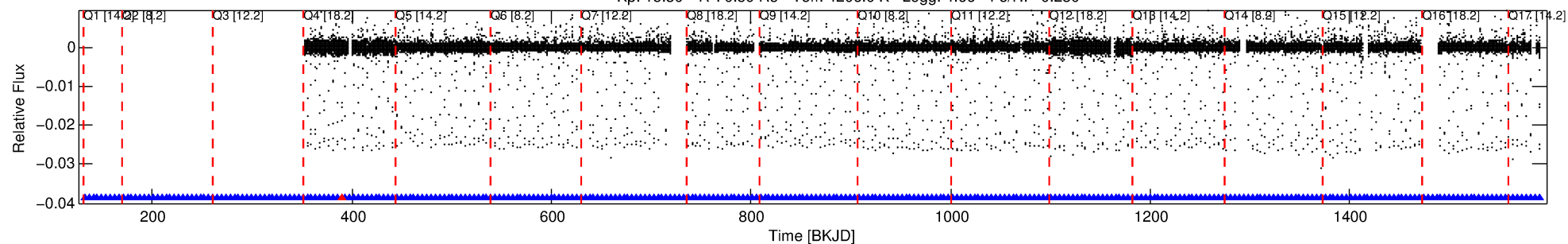
Ephemeris Match Information For 007287391-02

No Significant Match Found

DV One-Page Summary

KIC: 7287391 Candidate: 2 of 4 Period: 4.286 d
KOI: K03546 Corr: No Ephemeris Match

Kp: 15.30 R*: 0.59 Rs Teff: 4206.0 K Logg: 4.66 Fe/H: -0.280



DV Fit Results:

Period = 4.28610 [0.00000] d
Epoch = 132.4505 [0.0001] BKJD
Rp/R* = 0.1686 [0.0003]
a/R* = 10.72 [0.03]
b = 0.81 [0.00]
Seff = 52.40 [9.95]
Teq = 686 [33] K
Rp = 10.87 [1.23] Re
a = 0.0432 [0.0037] AU
Ag = 1.05 [0.26] [0.20σ]
Teff = 1074 [73] K [4.88σ]

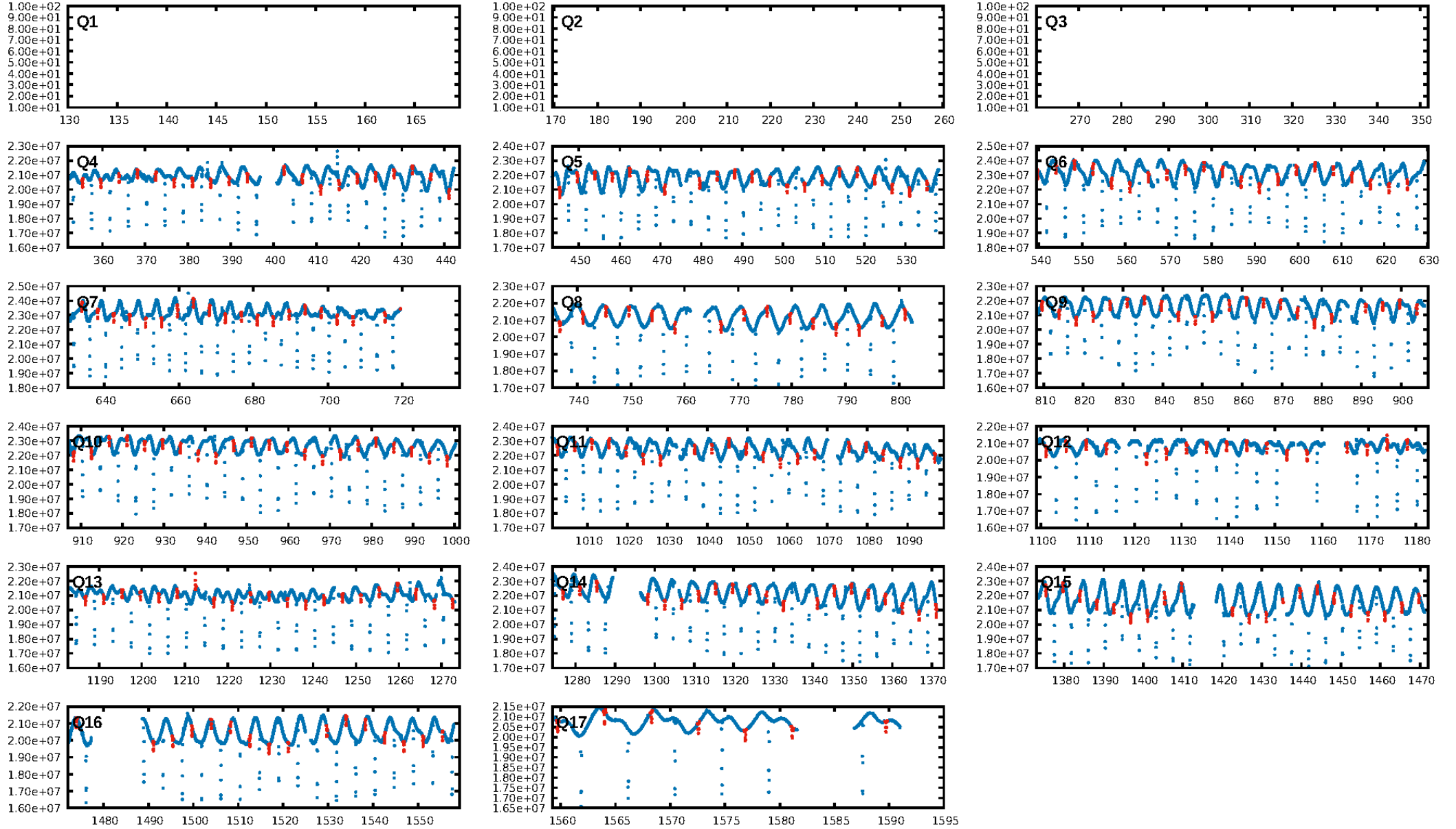
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [253/254]
GhostDiagnostic-chr: 1.614
Centroid-sig: 0.0%
Centroid-so: 0.246 arcsec [26.17σ]
OotOffset-rm: 0.096 arcsec [1.33σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-rm: 0.265 arcsec [3.64σ]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

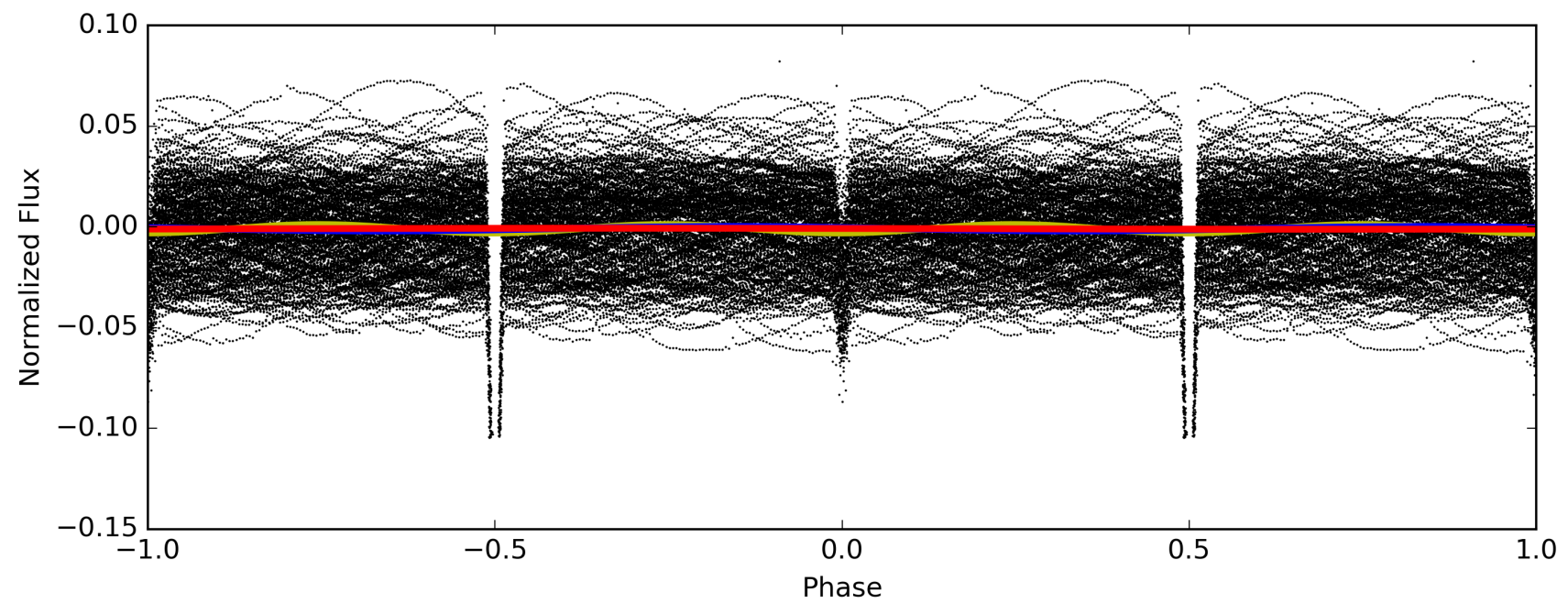
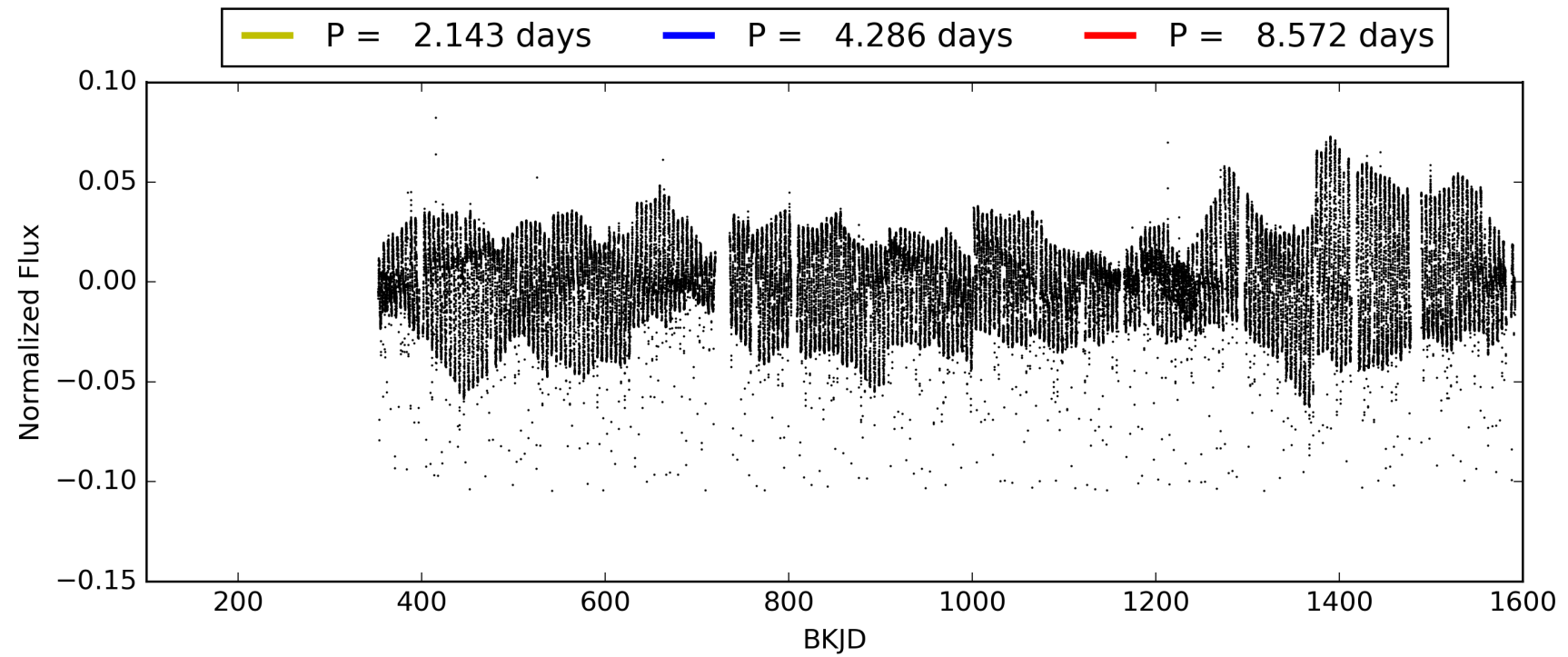
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:48:02 Z

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

TCE 007287391-02, PDC Light Curves

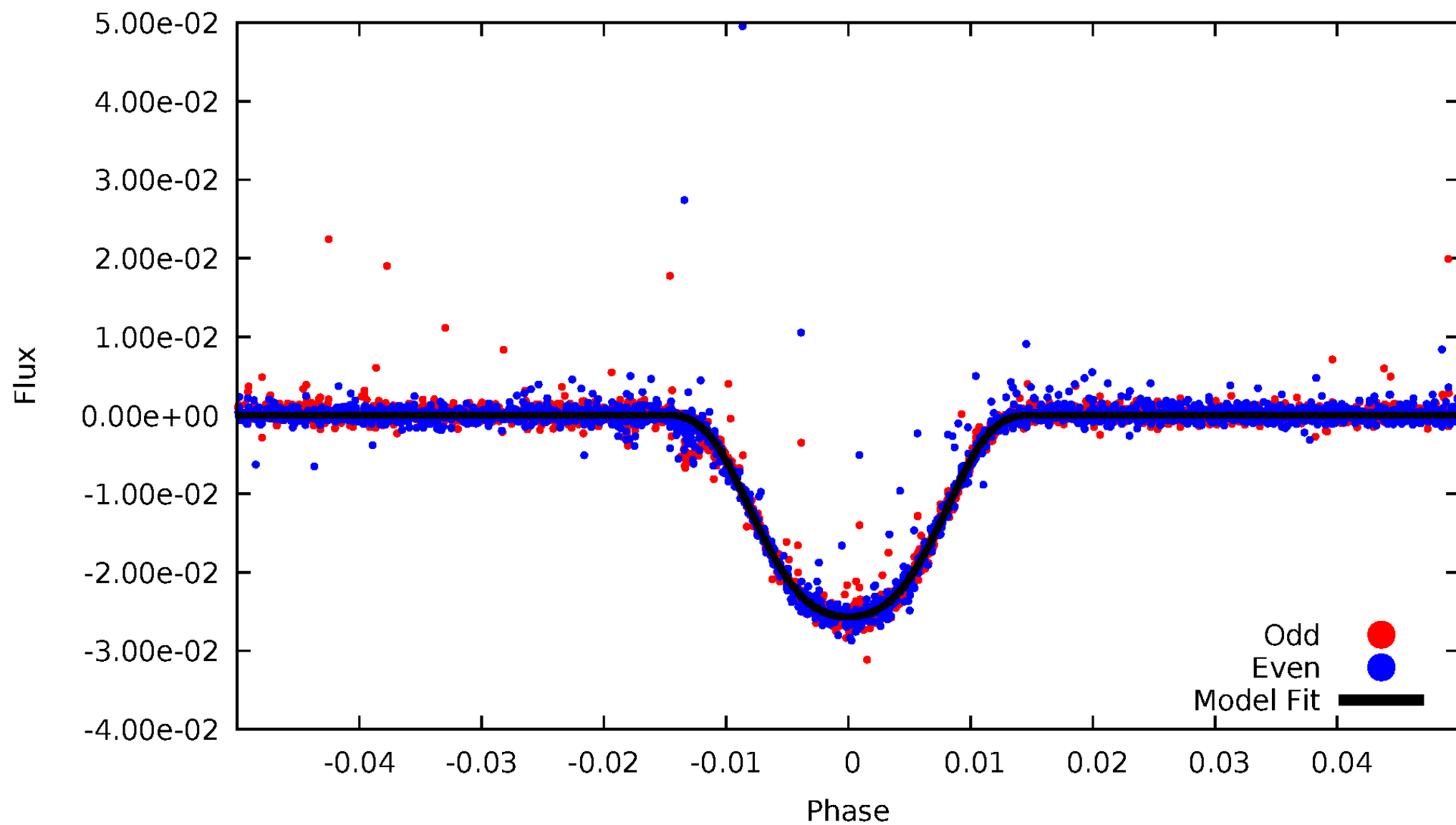


TCE 007287391-02



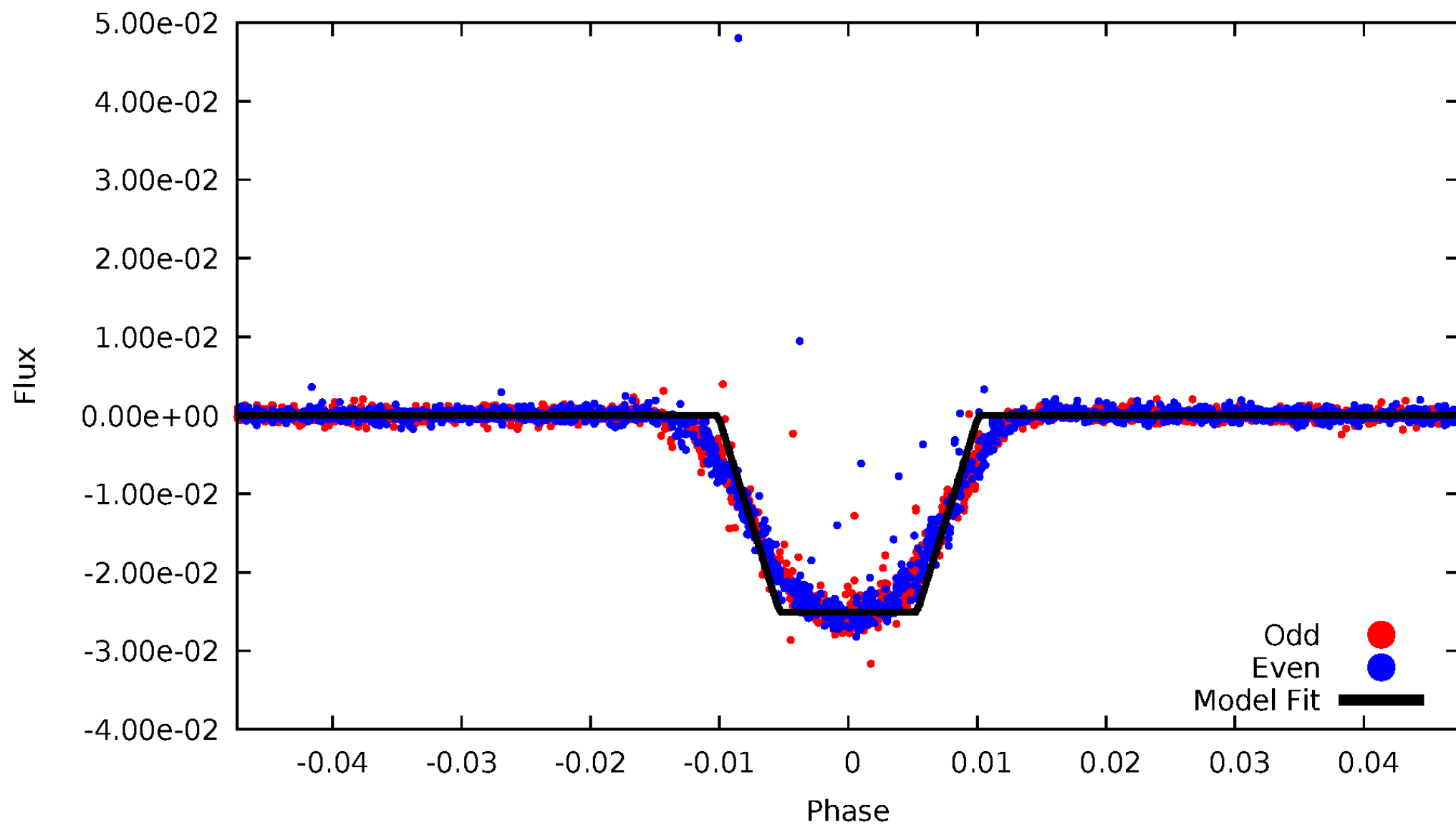
DV Odd/Even

TCE 007287391-02



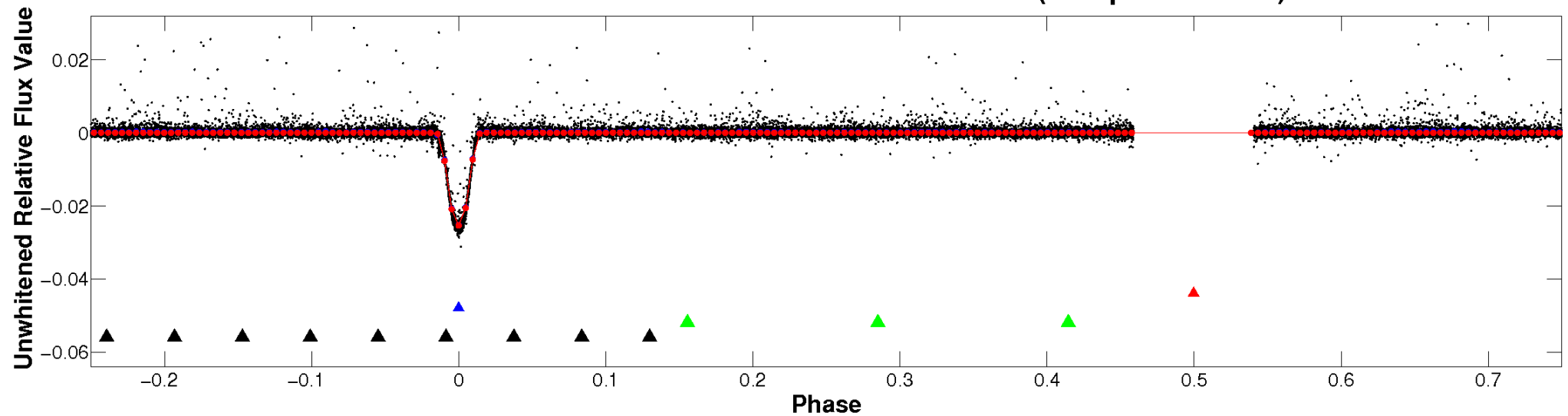
ALT Odd/Even

TCE 007287391-02

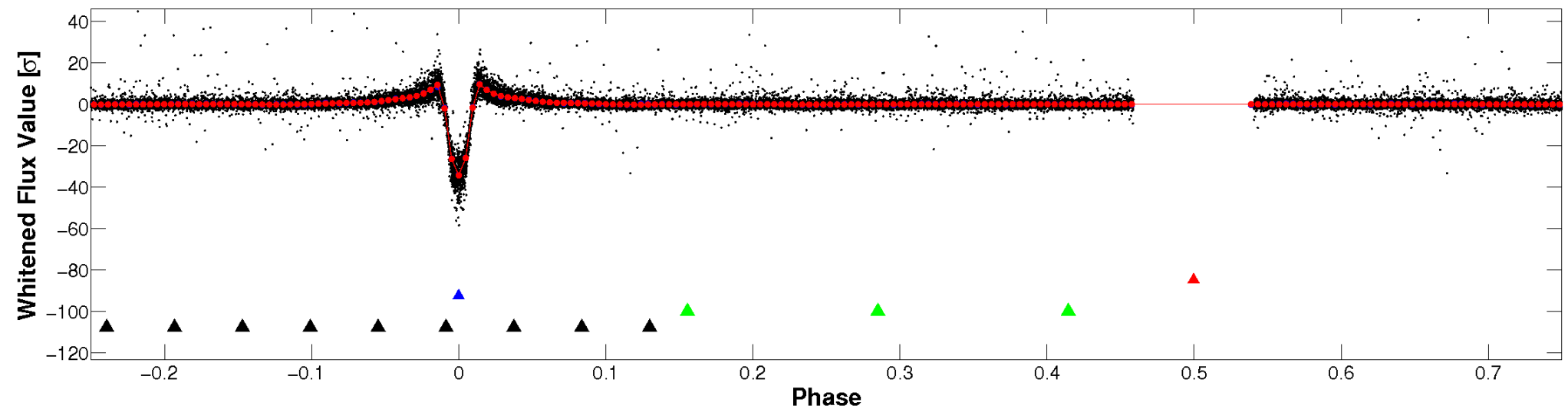


Non-Whitened Vs. Whitened Light Curve

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

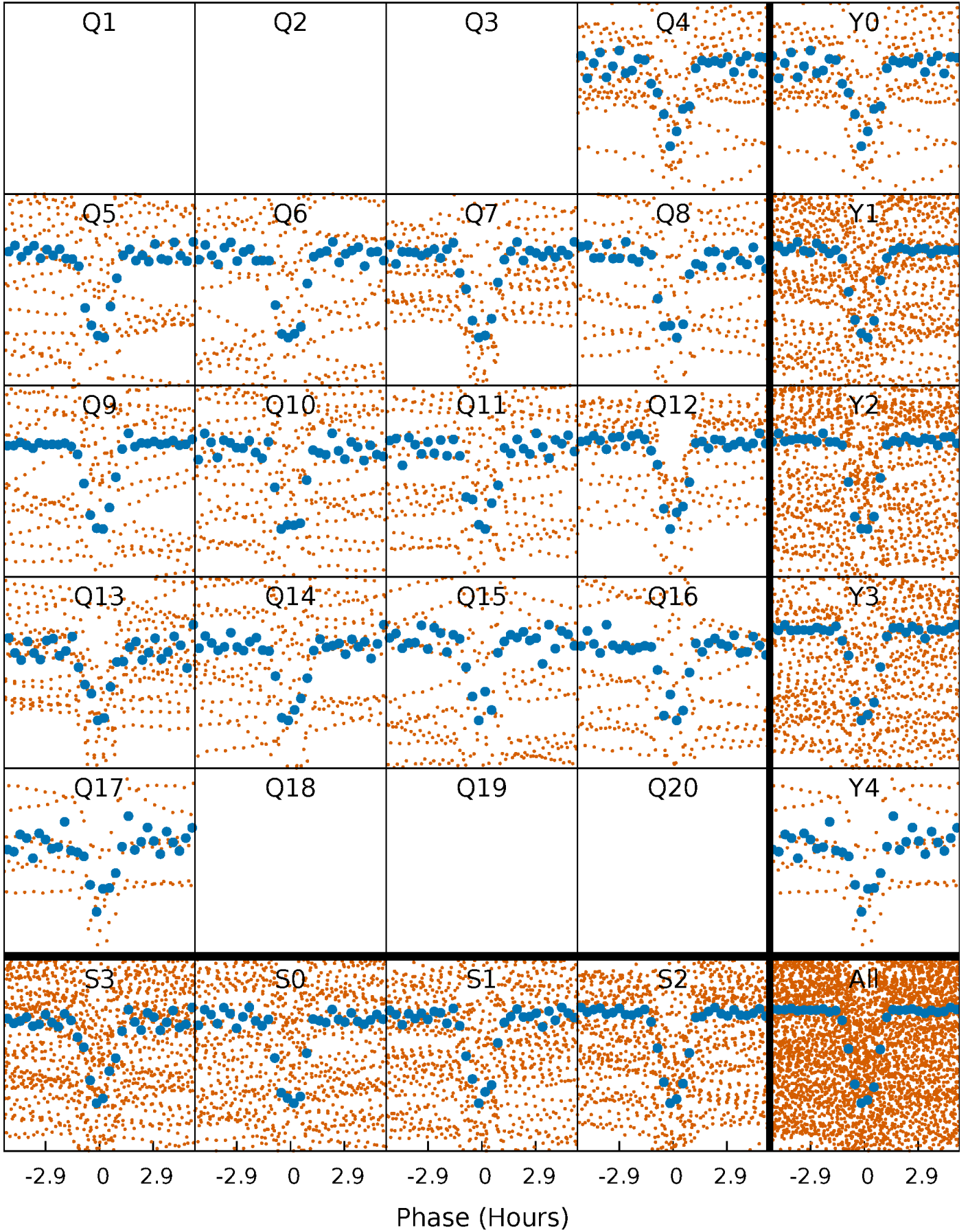


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



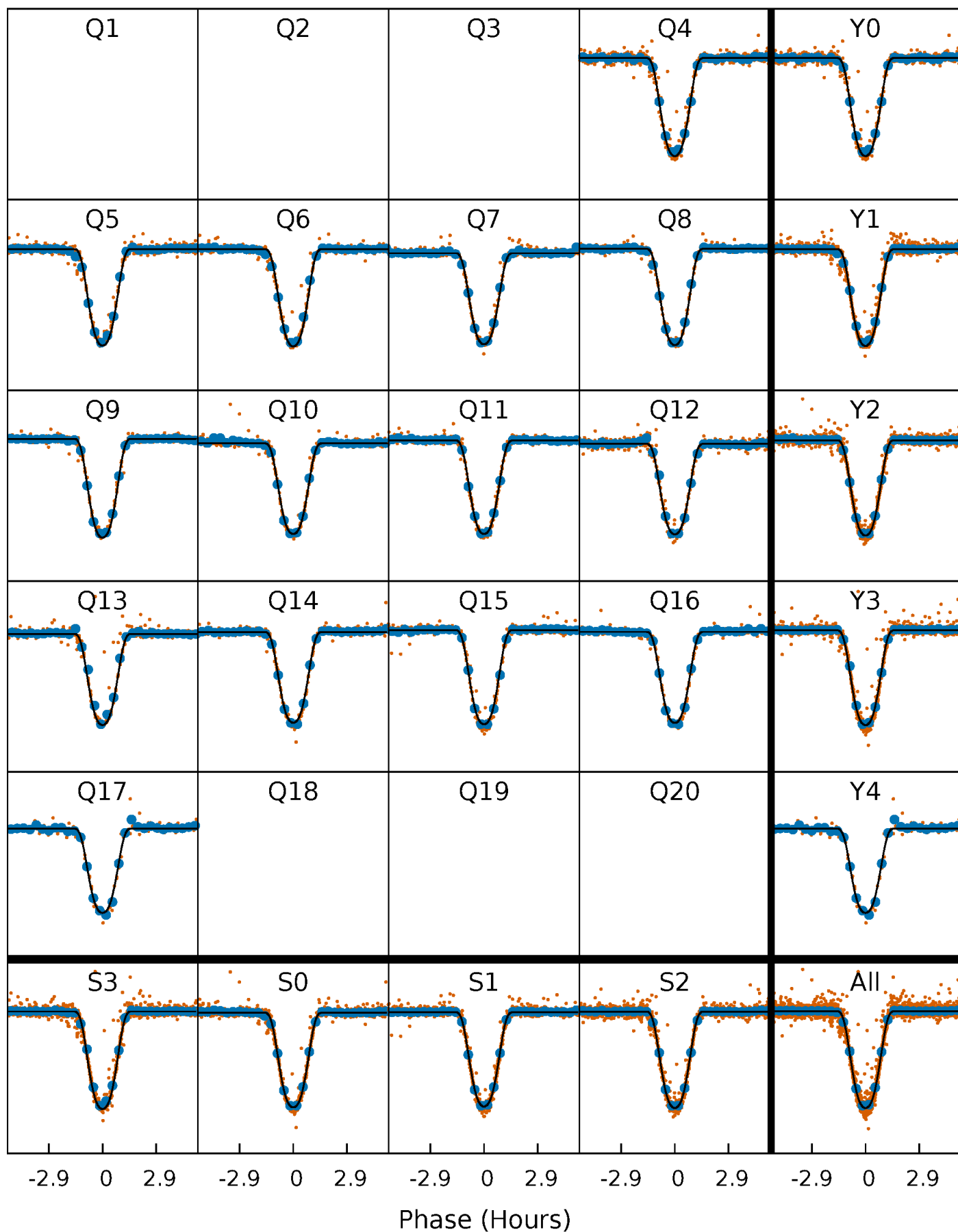
PDC Quarter-Phased Transit Curves

TCE 007287391-02 $P = 4.286095$ Days $T_0 = 132.450516$ (BKJD)



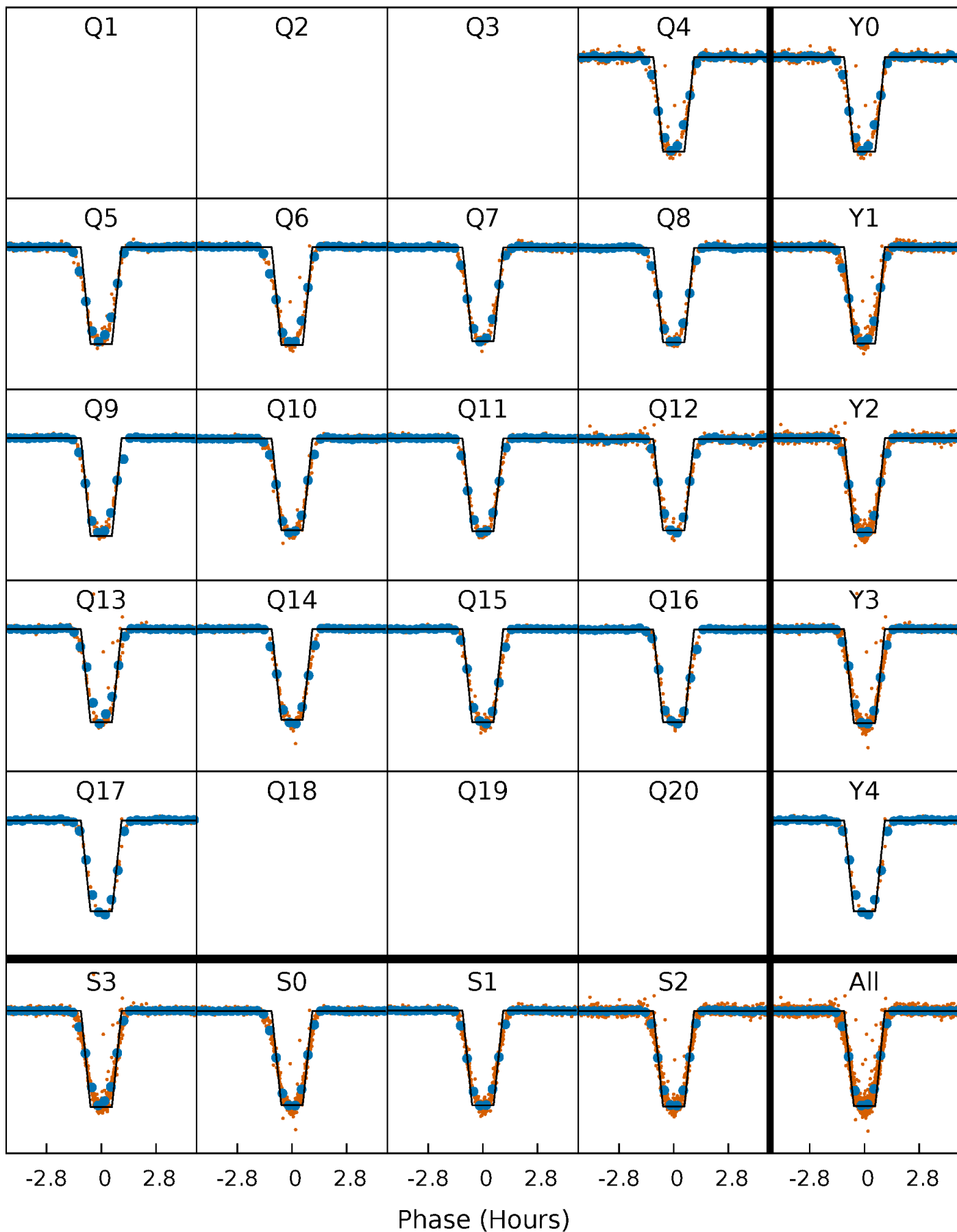
DV Quarter-Phased Transit Curves

TCE 007287391-02 P= 4.286095 Days $T_0=132.450516$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

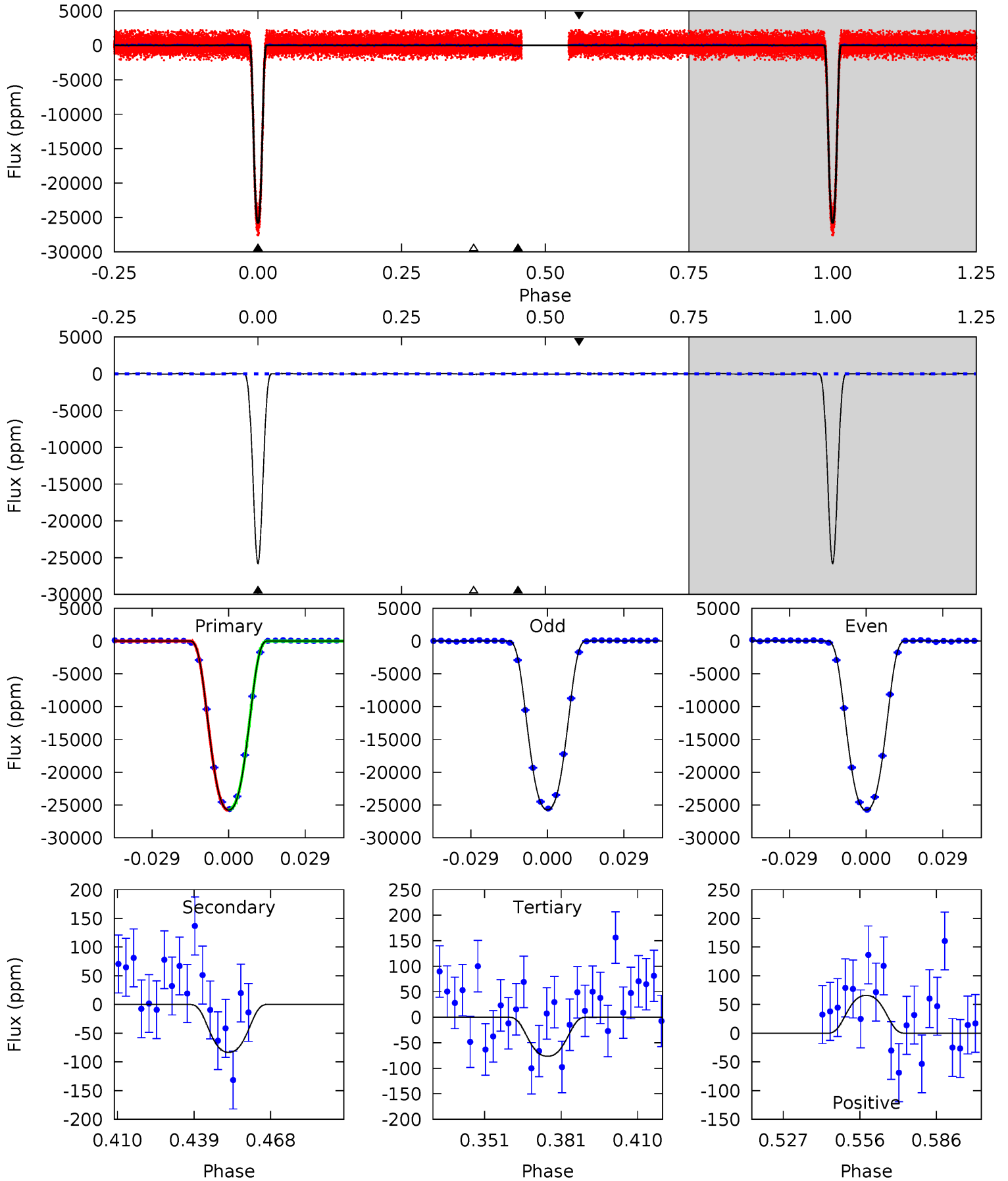
TCE 007287391-02 $P = 4.286082$ Days $T_0 = 132.453328$ (BKJD)



DV Model-Shift Uniqueness Test

007287391-02, P = 4.286095 Days, E = 132.450516 Days

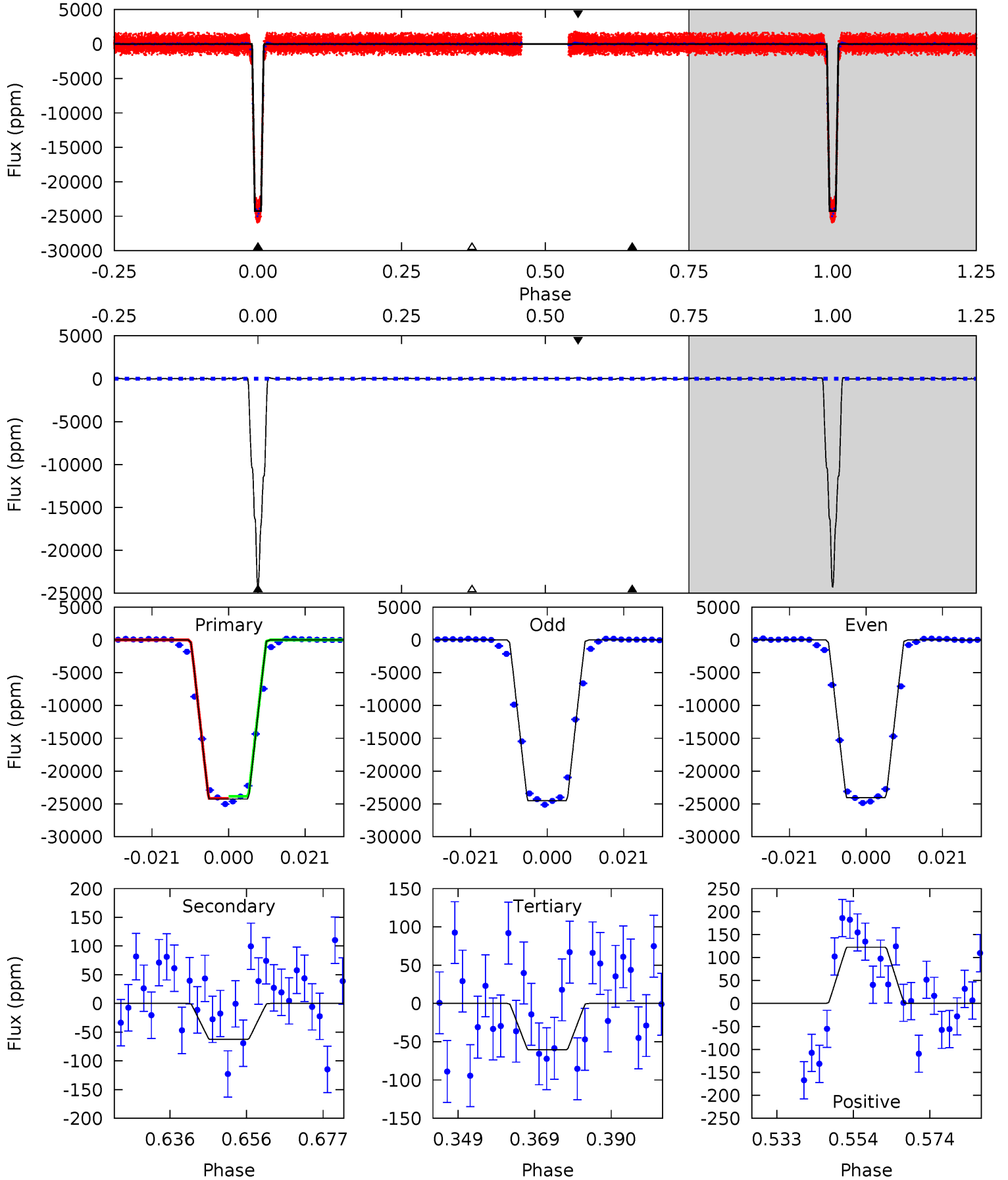
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1661	5.37	4.93	4.24	4.82	2.18	1.92	1656	1657	0.44	1.13	1.52	0.99	0.00	0



Alt Model-Shift Uniqueness Test

007287391-02, P = 4.286082 Days, E = 132.453328 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1231	3.17	3.07	6.21	4.89	2.32	1.29	1228	1225	0.10	-3.04	11.2	0.99	0.01	0



Stellar Parameters For KIC 007287391

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4206^{+146}_{-161}	$4.663^{+0.054}_{-0.027}$	$-0.280^{+0.300}_{-0.300}$	$0.591^{+0.048}_{-0.067}$	$0.587^{+0.063}_{-0.063}$	$4.000^{+1.073}_{-0.480}$
	+3%/-4%	+1%/-1%	+107%/-107%	+8%/-11%	+11%/-11%	+27%/-12%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007287391-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-83 ± 16	$10.87^{+0.52}_{-0.65}$	953^{+38}_{-42}	1833^{+63}_{-71}	$0.737^{+0.151}_{-0.143}$
Alt.	-62 ± 20	$10.20^{+0.46}_{-0.62}$	952^{+40}_{-39}	1784^{+94}_{-147}	$0.628^{+0.202}_{-0.198}$

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 $A_{obs} \gg 1.0$

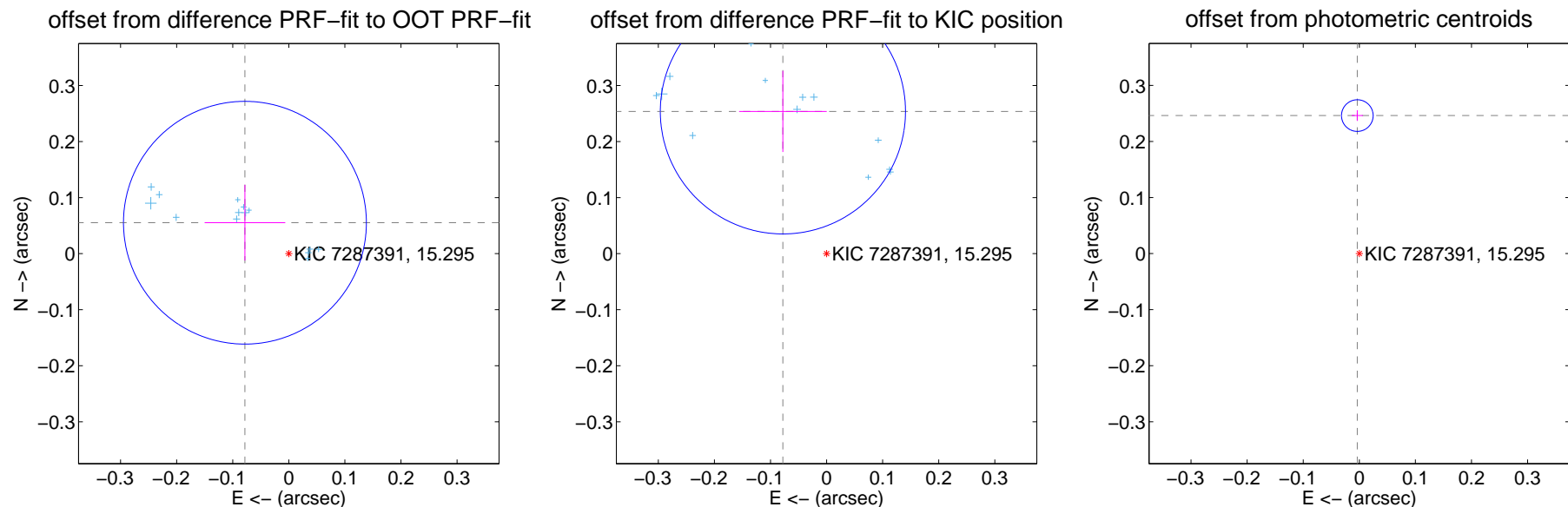
DV Centroid Data

Supplemental centroid analysis for 007287391-02. Kepler magnitude: 15.29. Transit SNR 837.79

There are 14 quarters with good PRF difference image offsets

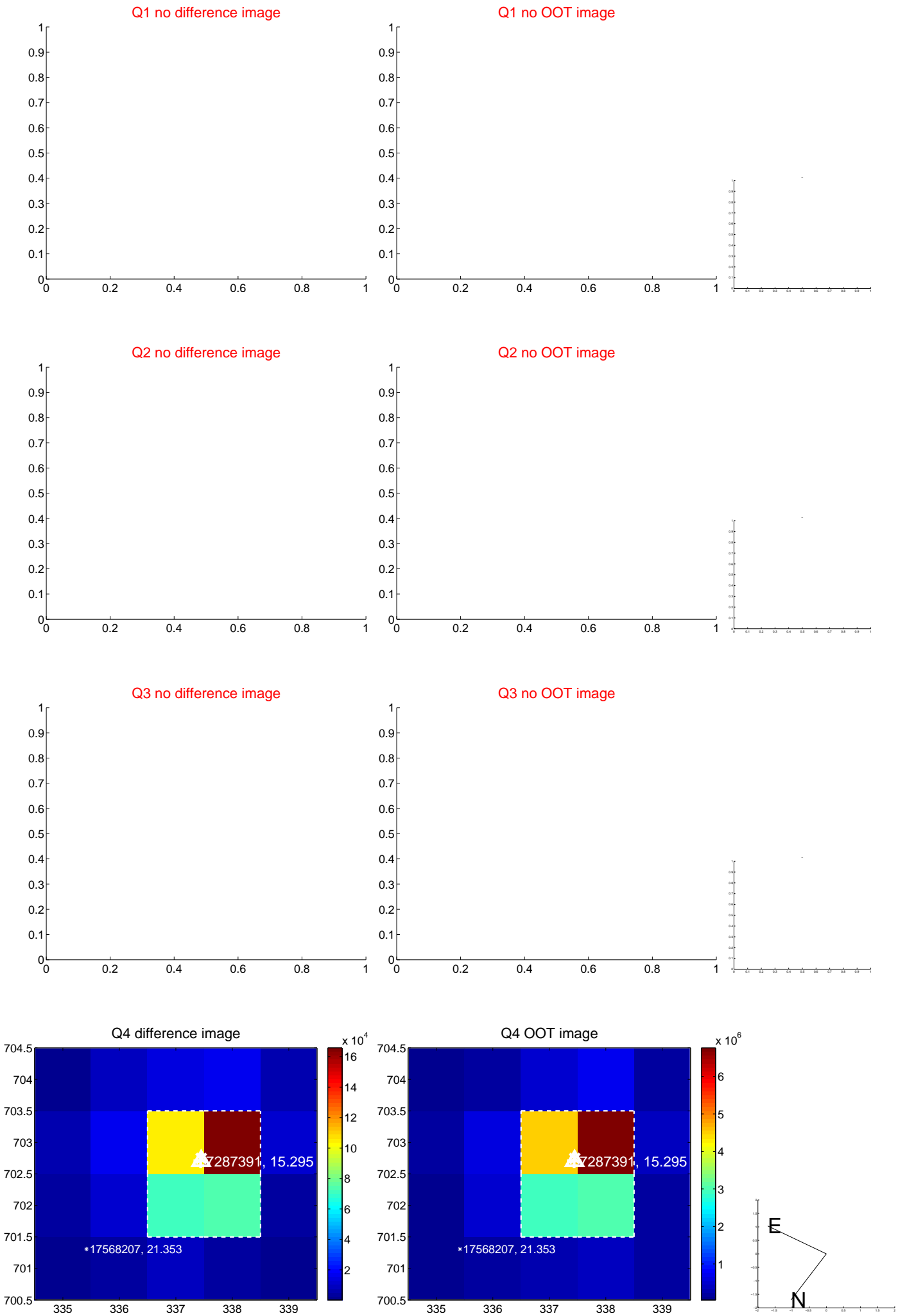
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.072	1.33	0.078 ± 0.072	0.055 ± 0.068
PRF-fit source offset from KIC position	0.265 ± 0.073	3.64	0.078 ± 0.078	0.254 ± 0.072
photometric centroid source offset	0.25 ± 0.01	26.17	0.00 ± 0.01	0.25 ± 0.01

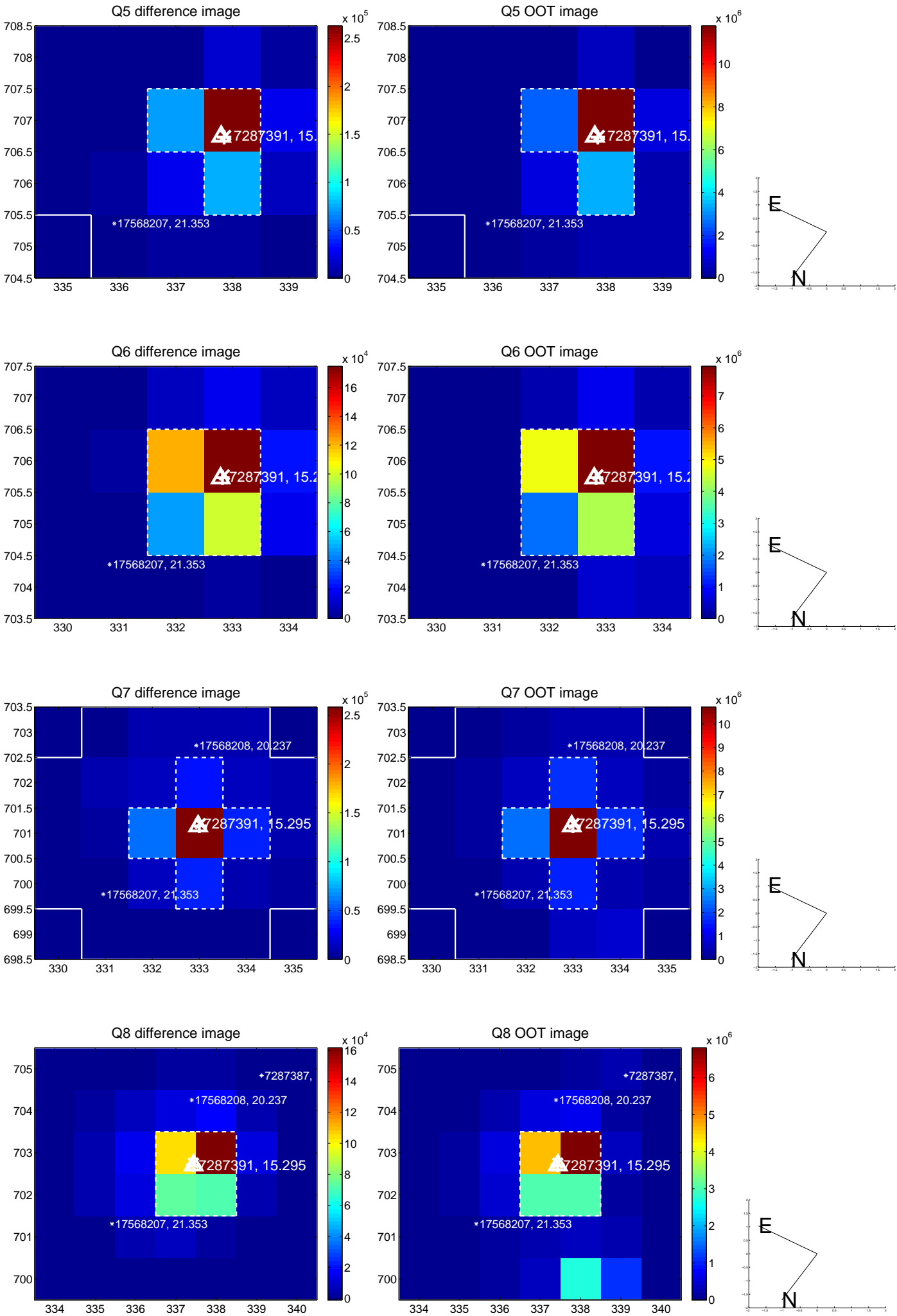


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

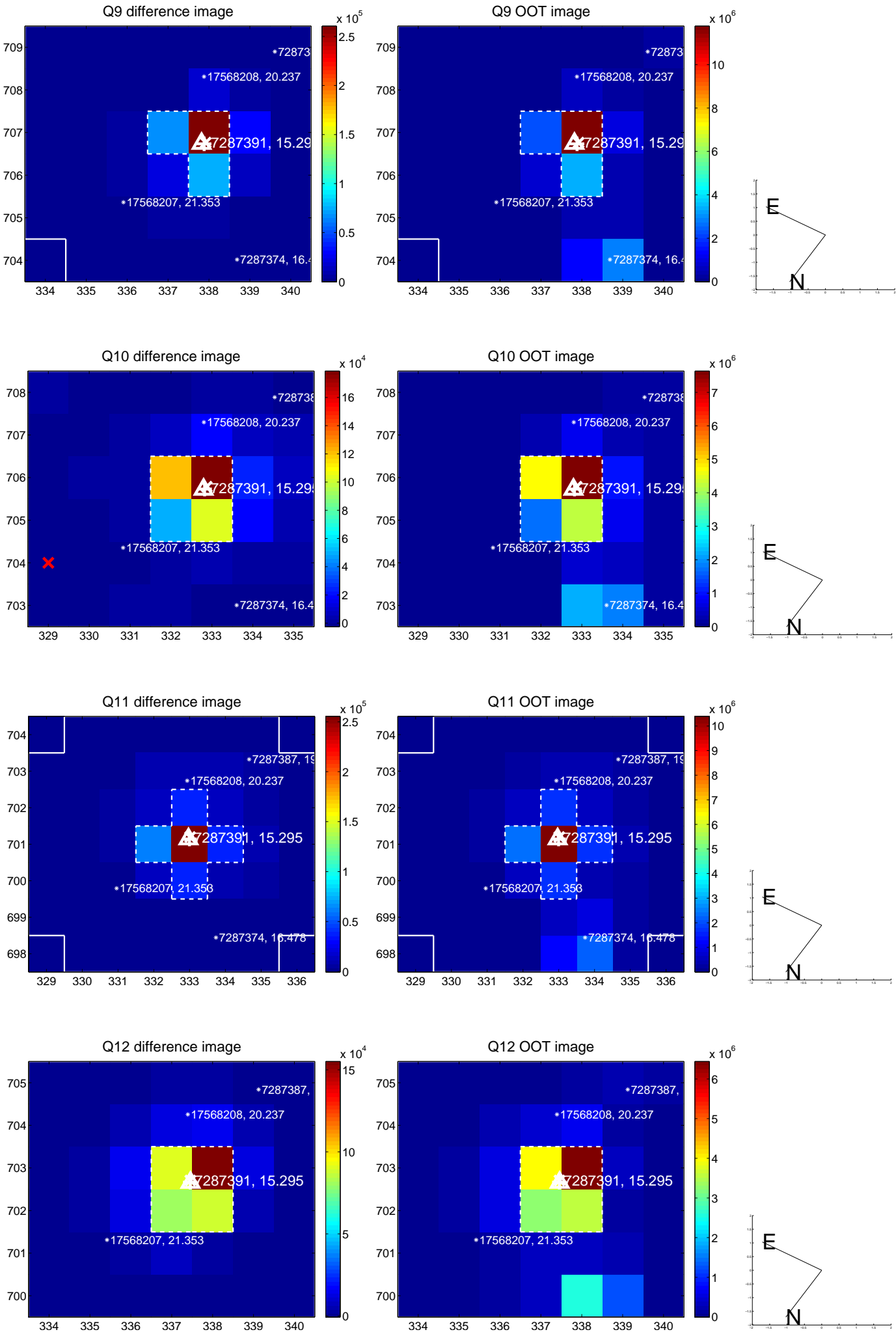
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



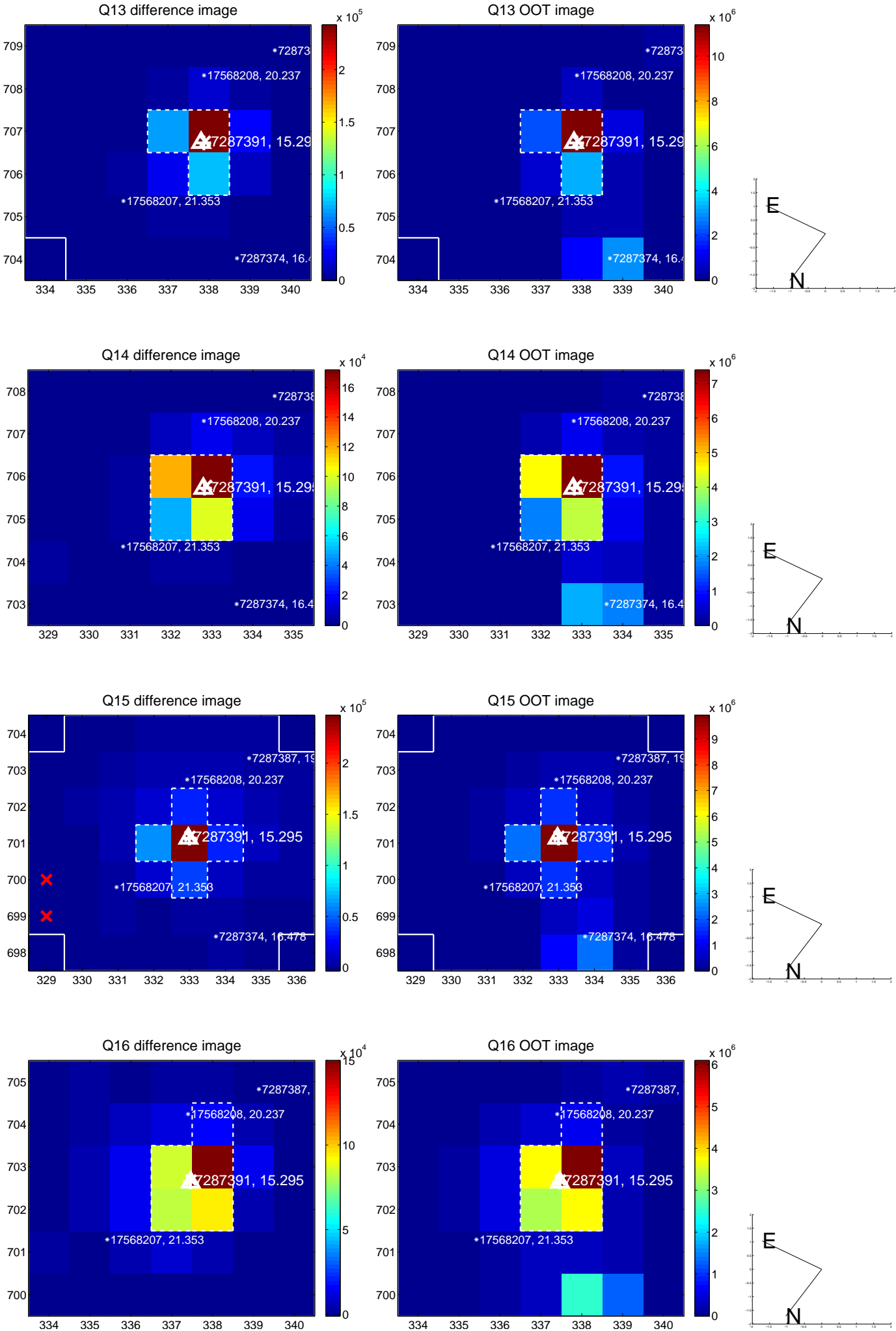
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



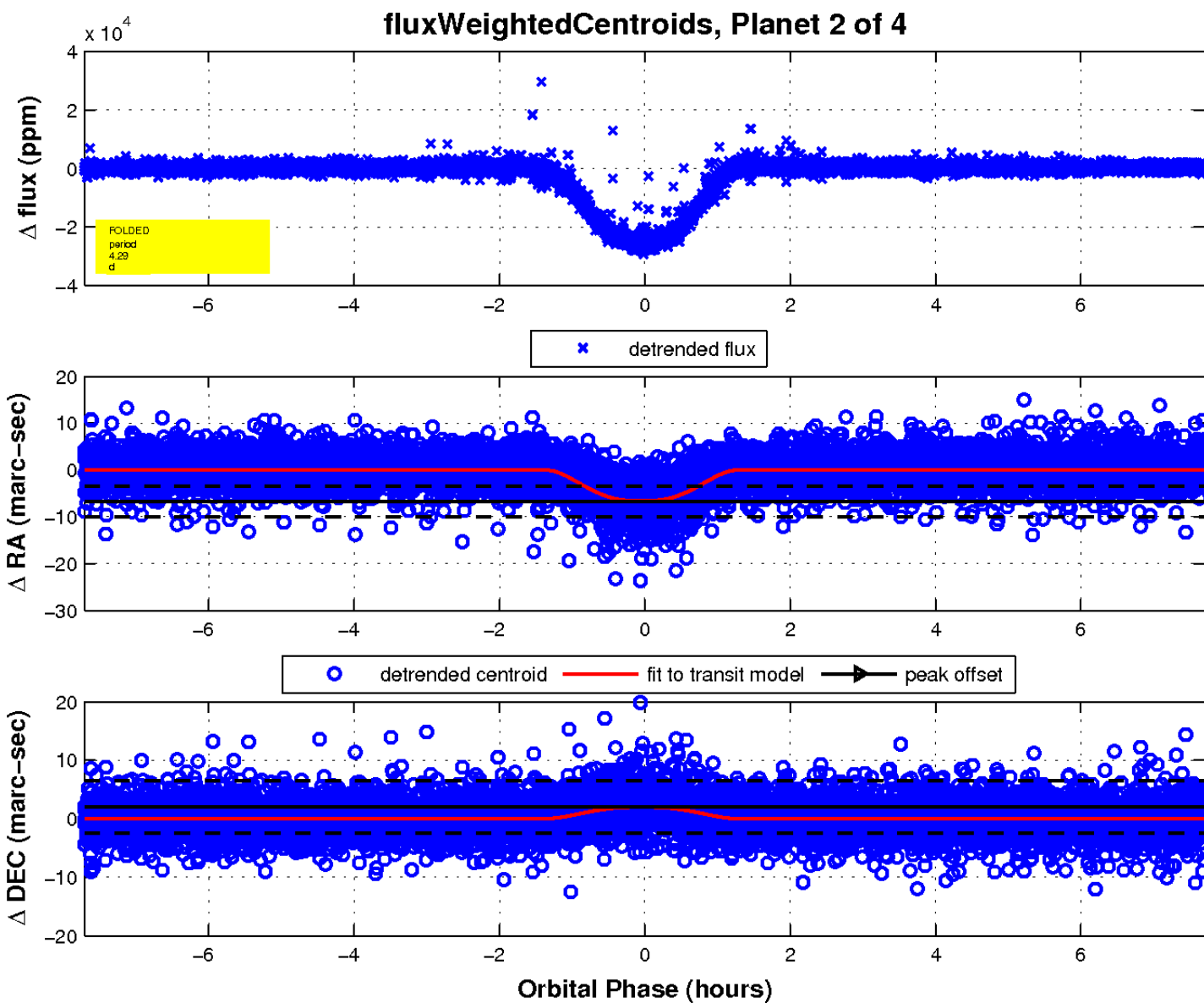
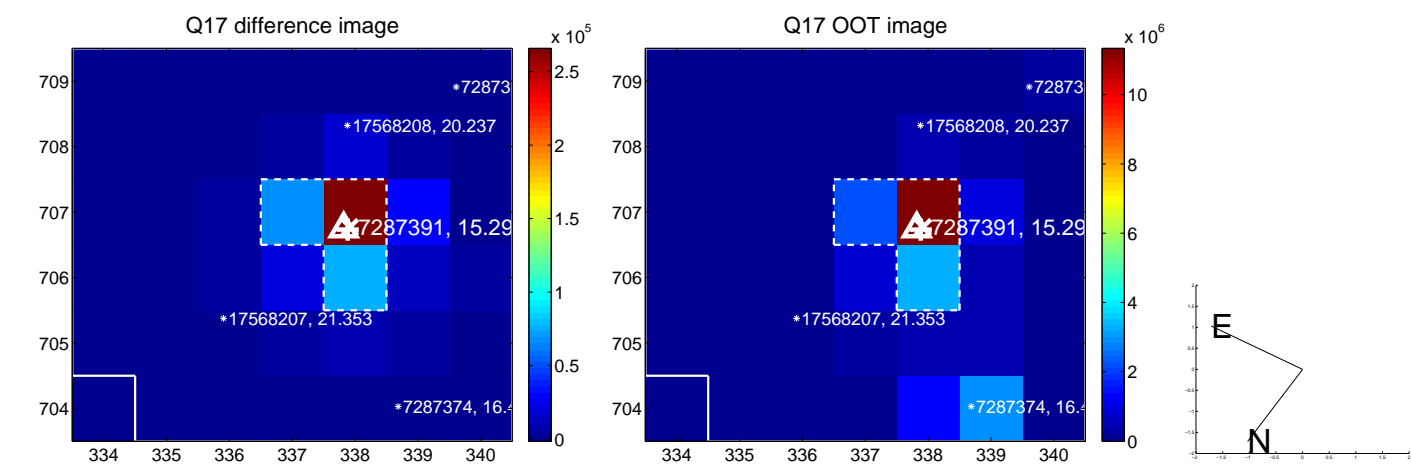
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

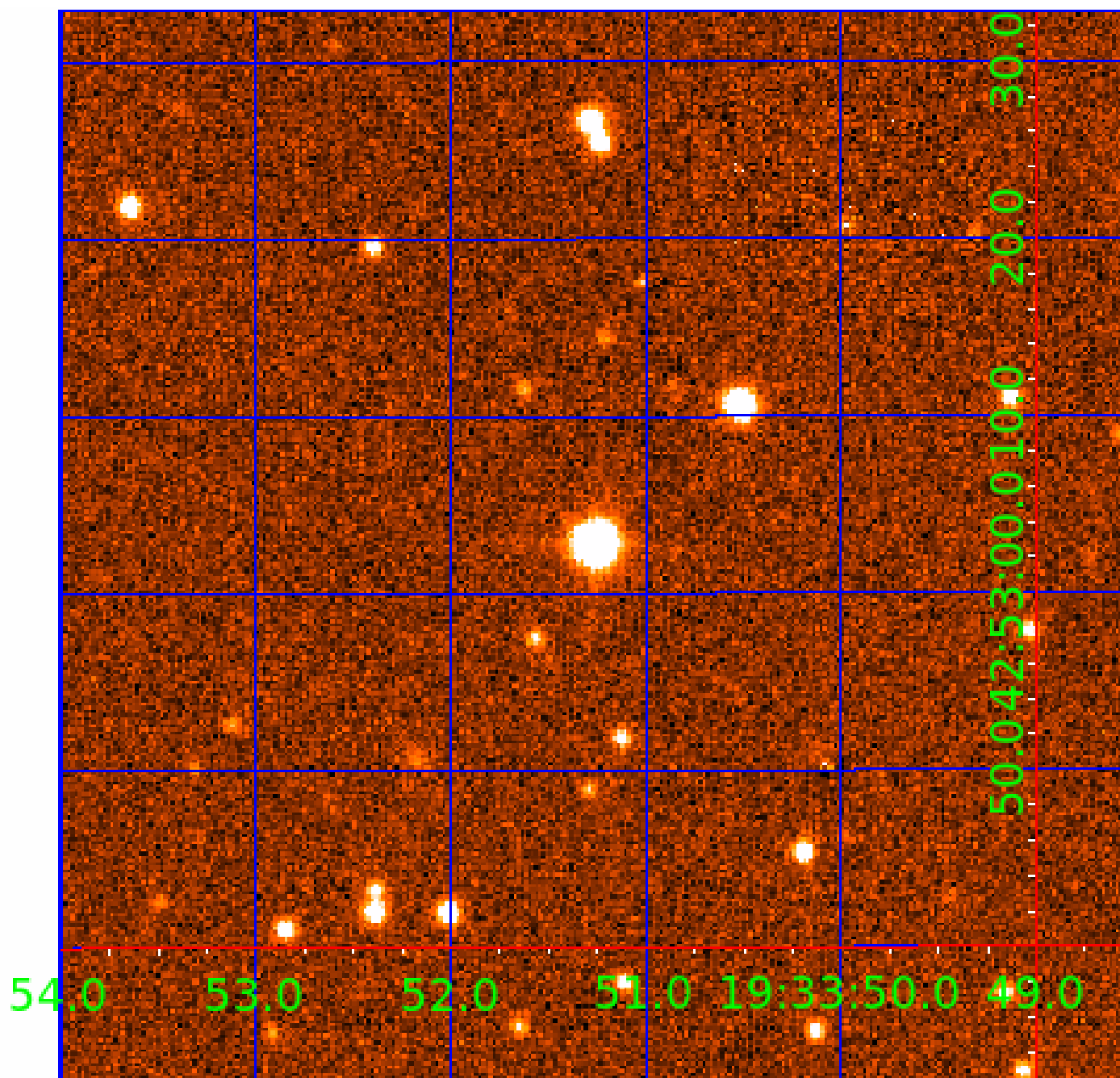


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007287391

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})
007287391-01	OBS	3546.01	4.286096	134.592105	171675.2	2.642	5723.9	3381.3	0.59	4206	25.69	52.40
007287391-02	OBS	No	4.286095	132.450516	25685.7	2.571	890.7	837.8	0.59	4206	10.87	52.40
007287391-03	OBS	No	453.771212	434.253785	2368.7	5.679	13.0	8.3	0.59	4206	2.90	0.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007287391-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
007287391-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007287391-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

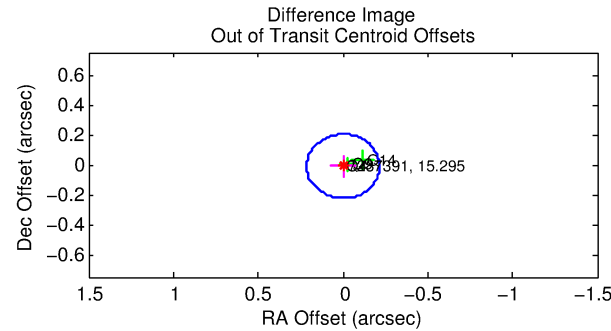
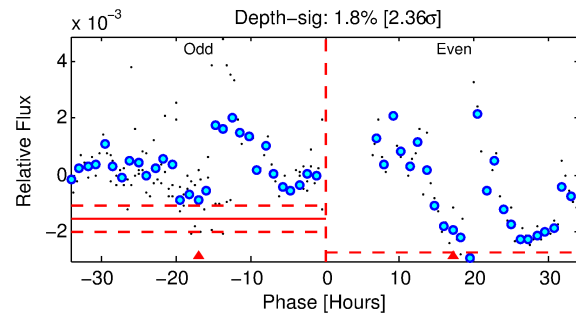
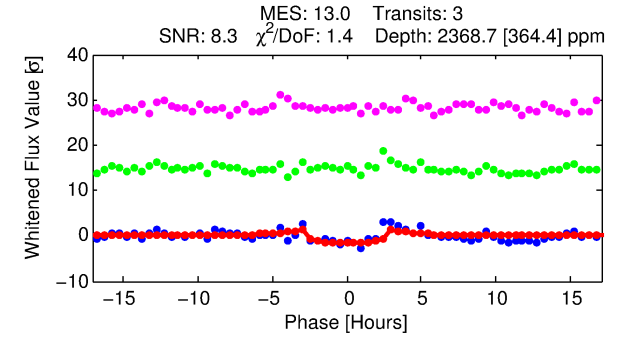
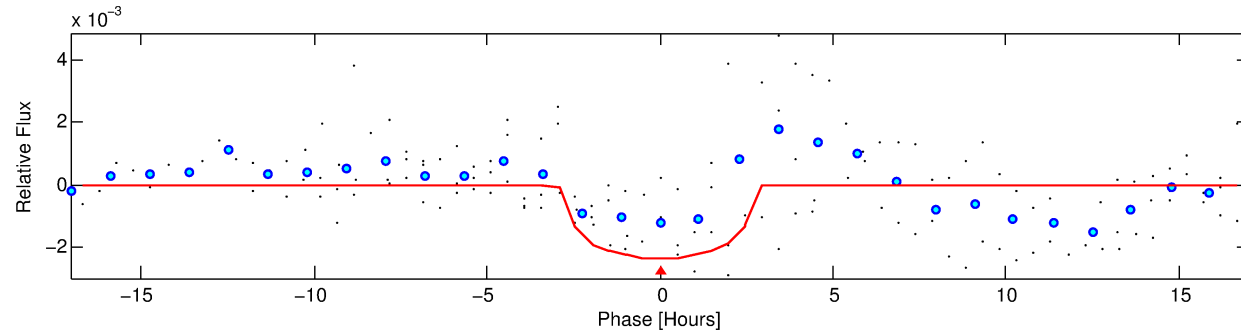
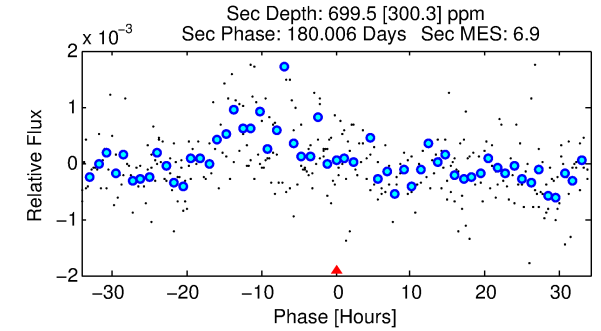
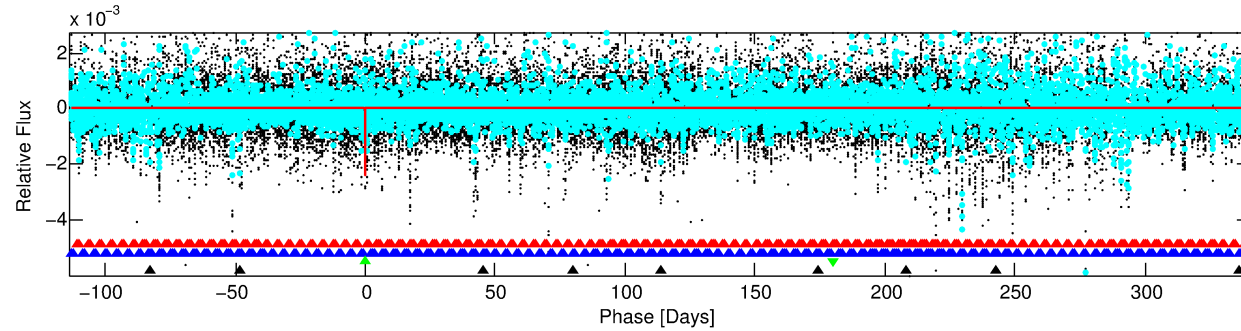
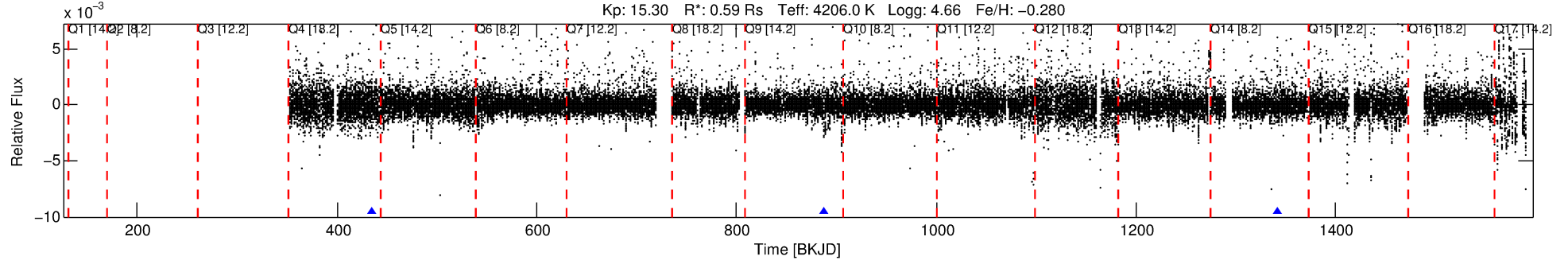
Ephemeris Match Information For 007287391-03

No Significant Match Found

DV One-Page Summary

KIC: 7287391 Candidate: 3 of 4 Period: 453.771 d
KOI: K03546 Corr: No Ephemeris Match

Kp: 15.30 R*: 0.59 Rs Teff: 4206.0 K Logg: 4.66 Fe/H: -0.280



DV Fit Results:

Period = 453.77121 [0.00738] d
Epoch = 434.2538 [0.0115] BKJD
Rp/R* = 0.0450 [0.0226]
a/R* = 562.34 [935.70]
b = 0.49 [2.57]
Seff = 0.10 [0.02]
Teq = 145 [7] K
Rp = 2.90 [1.50] Re
a = 0.9675 [0.0834] AU
Ag = 42702.75 [46935.85] [0.91σ]
Teffp = 3223 [890] K [3.46σ]

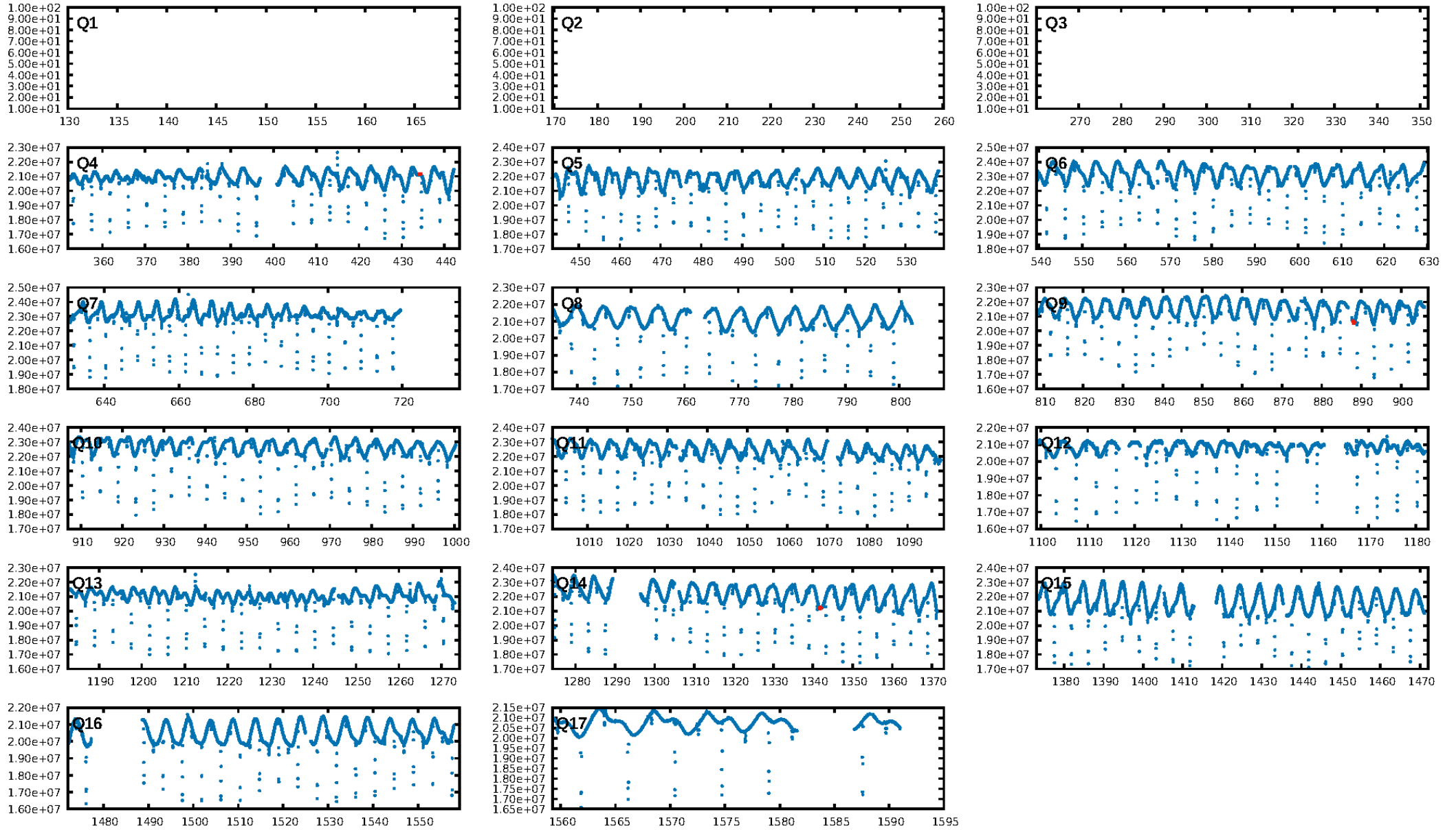
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1047.26σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 76.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.4398
Centroid-sig: 60.4%
Centroid-so: 0.788 arcsec [1.20σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.138 arcsec [1.77σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

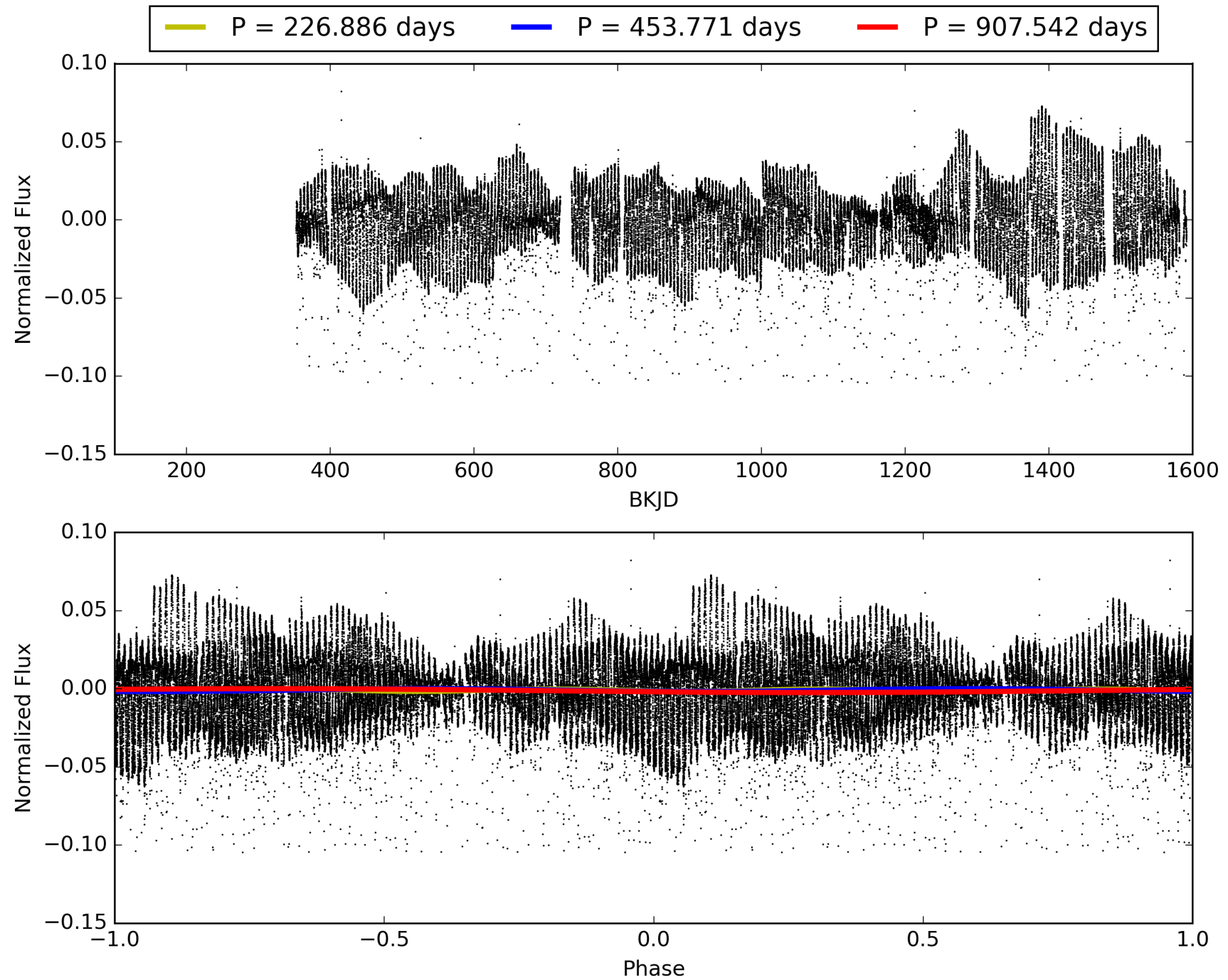
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:48:13 Z

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

TCE 007287391-03, PDC Light Curves

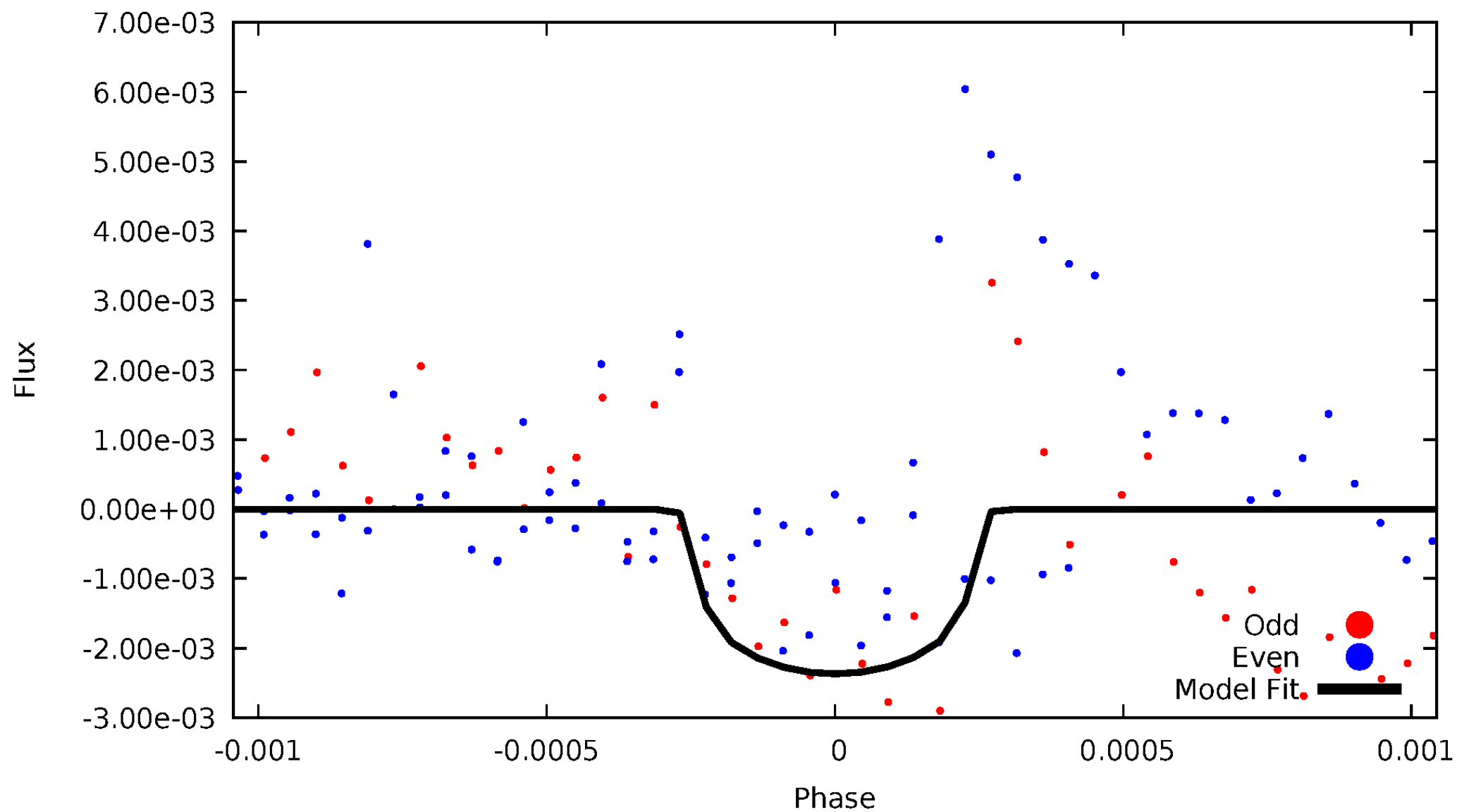


TCE 007287391-03



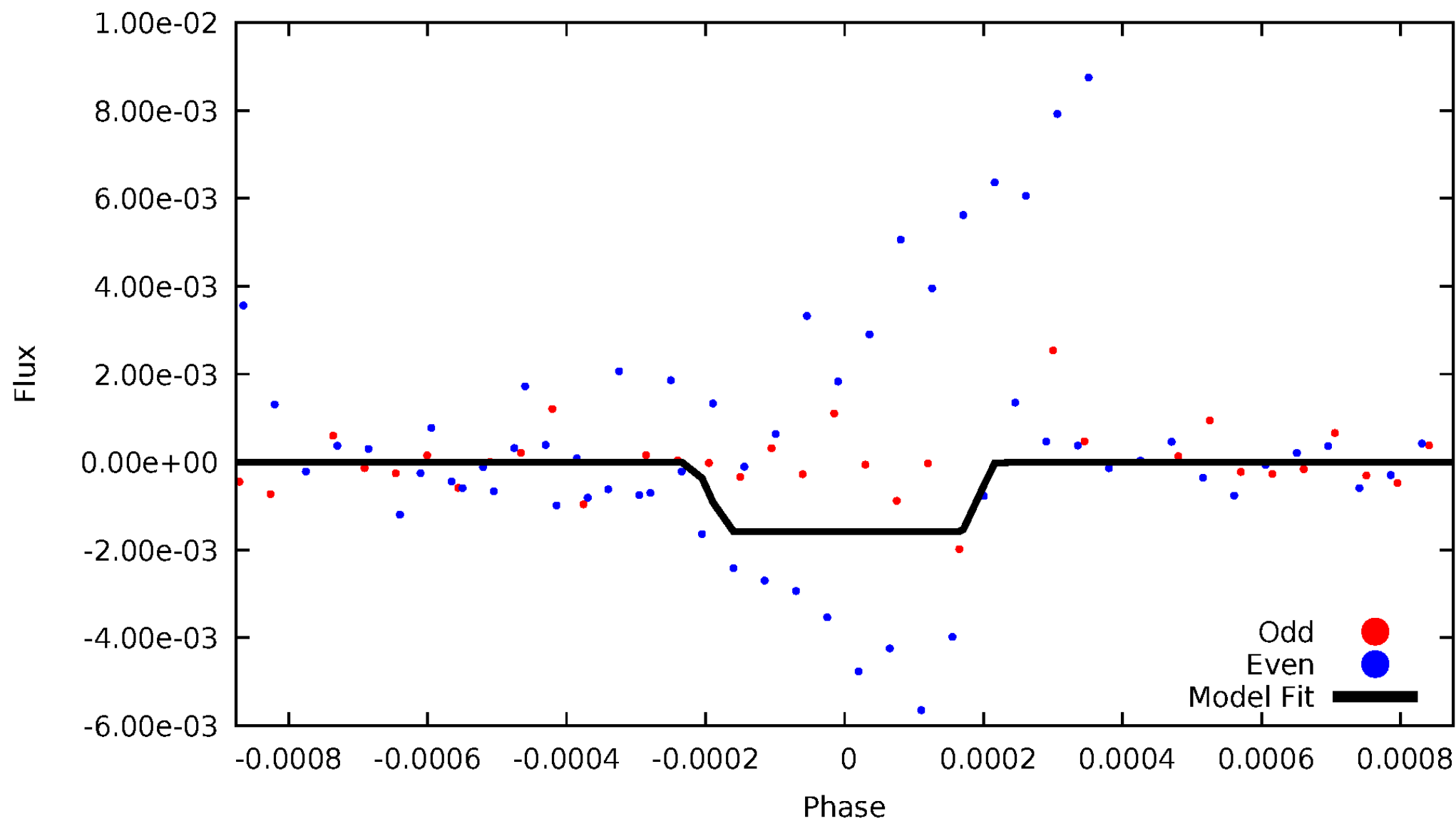
DV Odd/Even

TCE 007287391-03



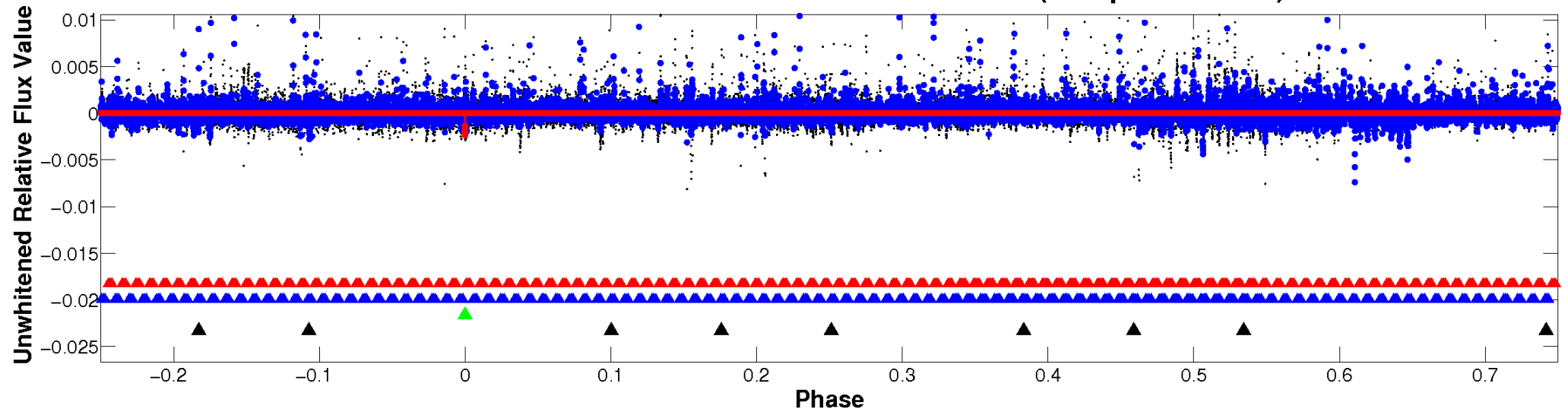
ALT Odd/Even

TCE 007287391-03

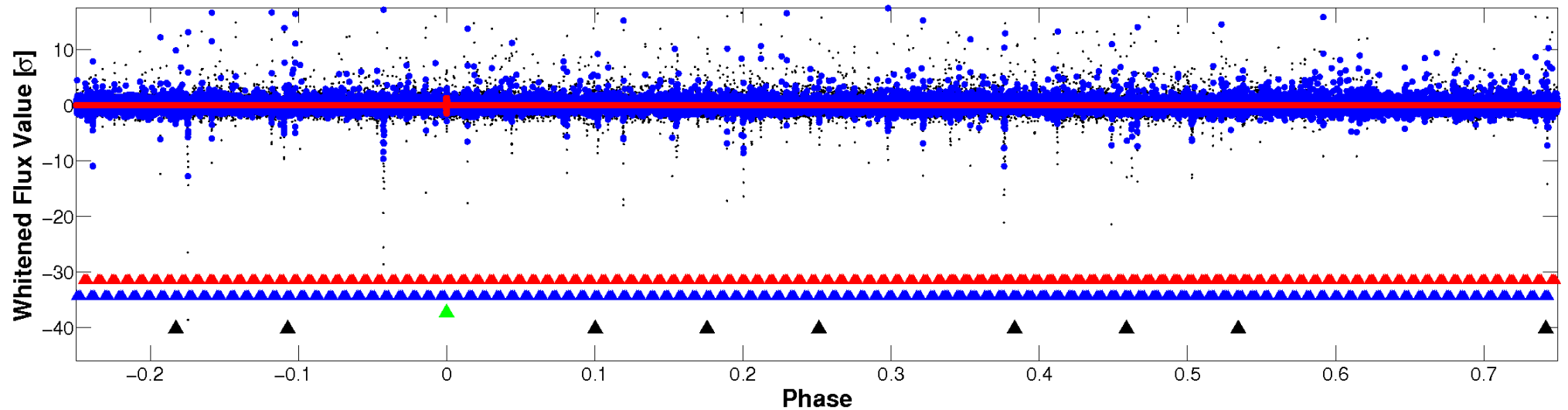


Non-Whitened Vs. Whitened Light Curve

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

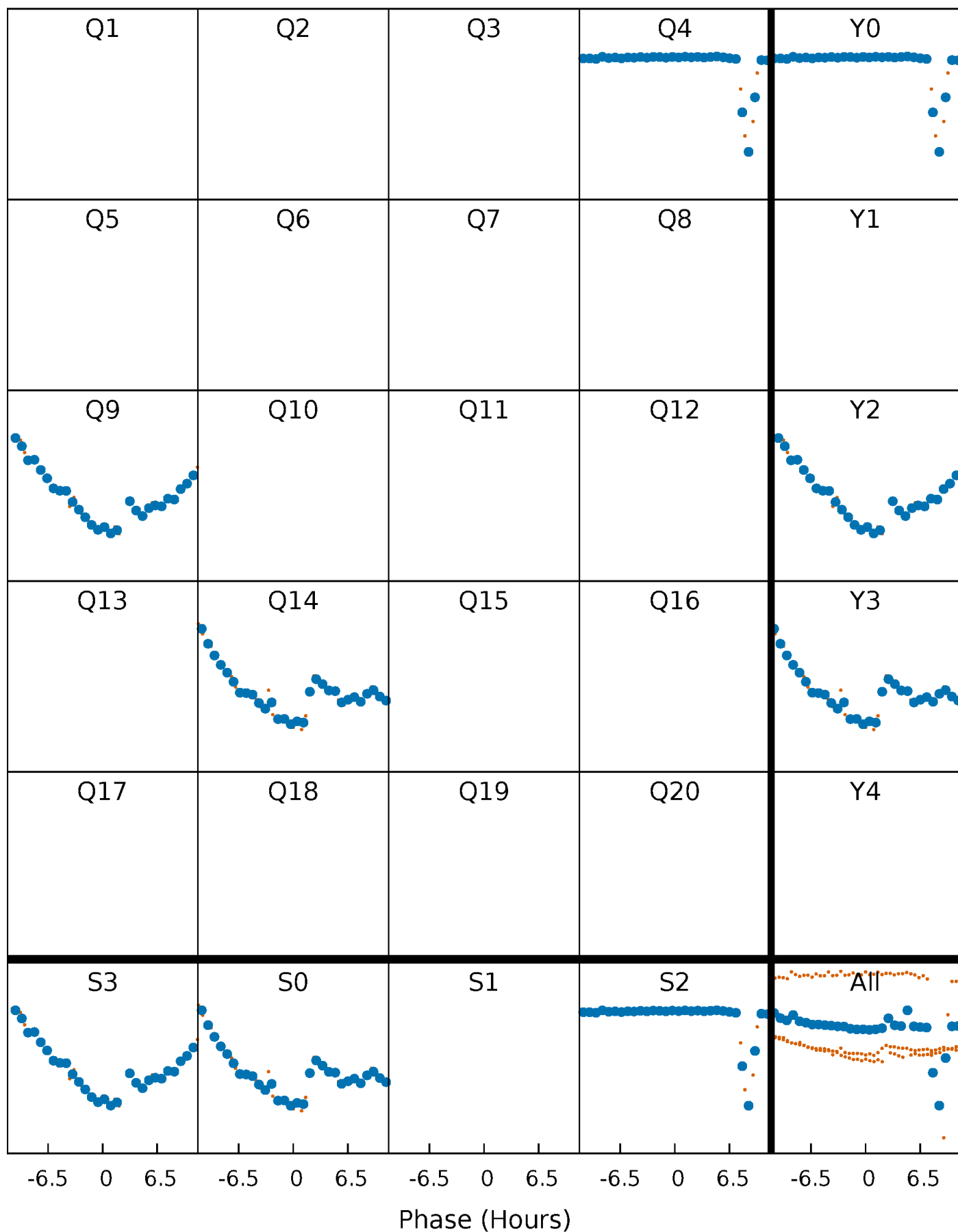


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



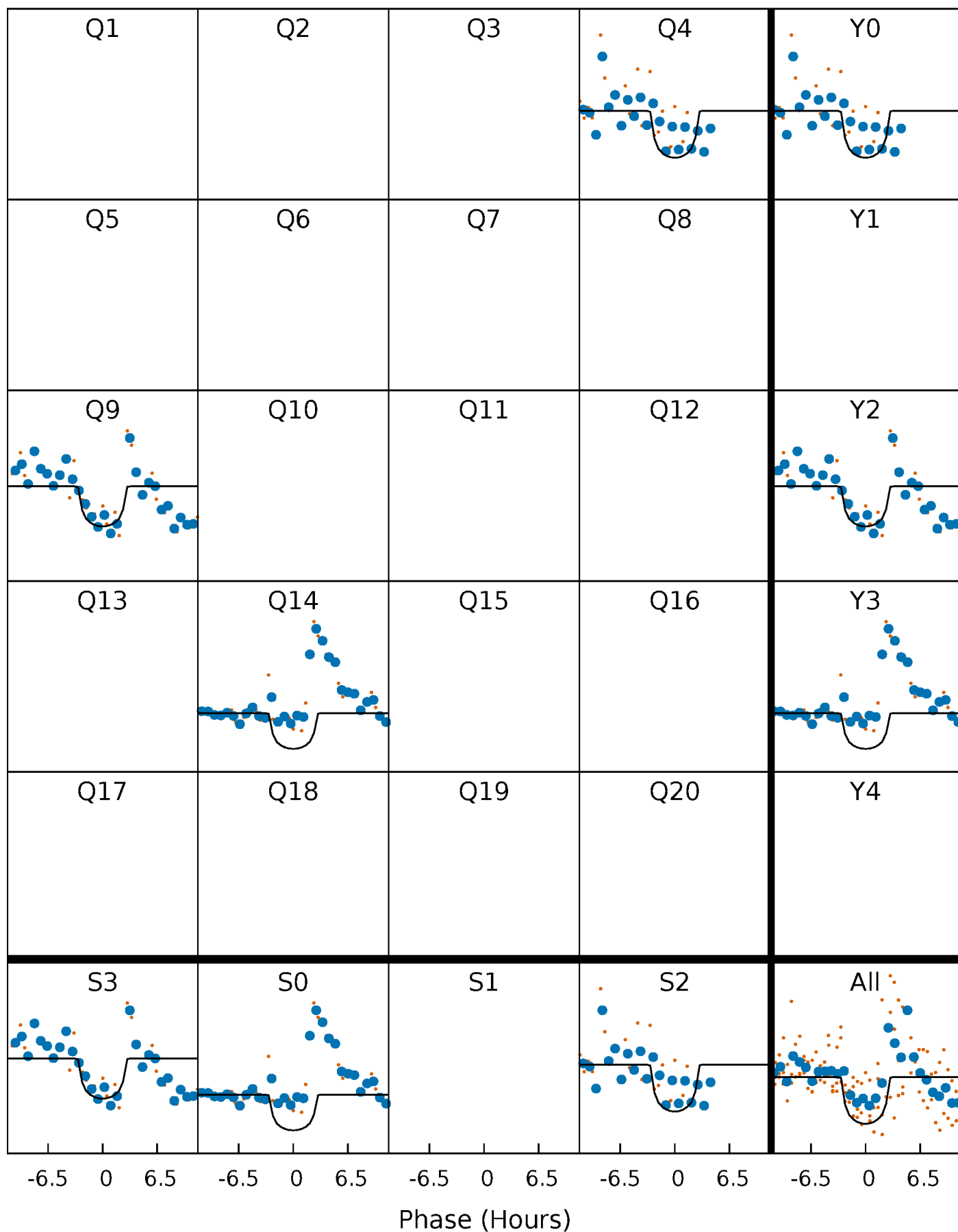
PDC Quarter-Phased Transit Curves

TCE 007287391-03 P=453.771212 Days $T_0=434.253785$ (BKJD)



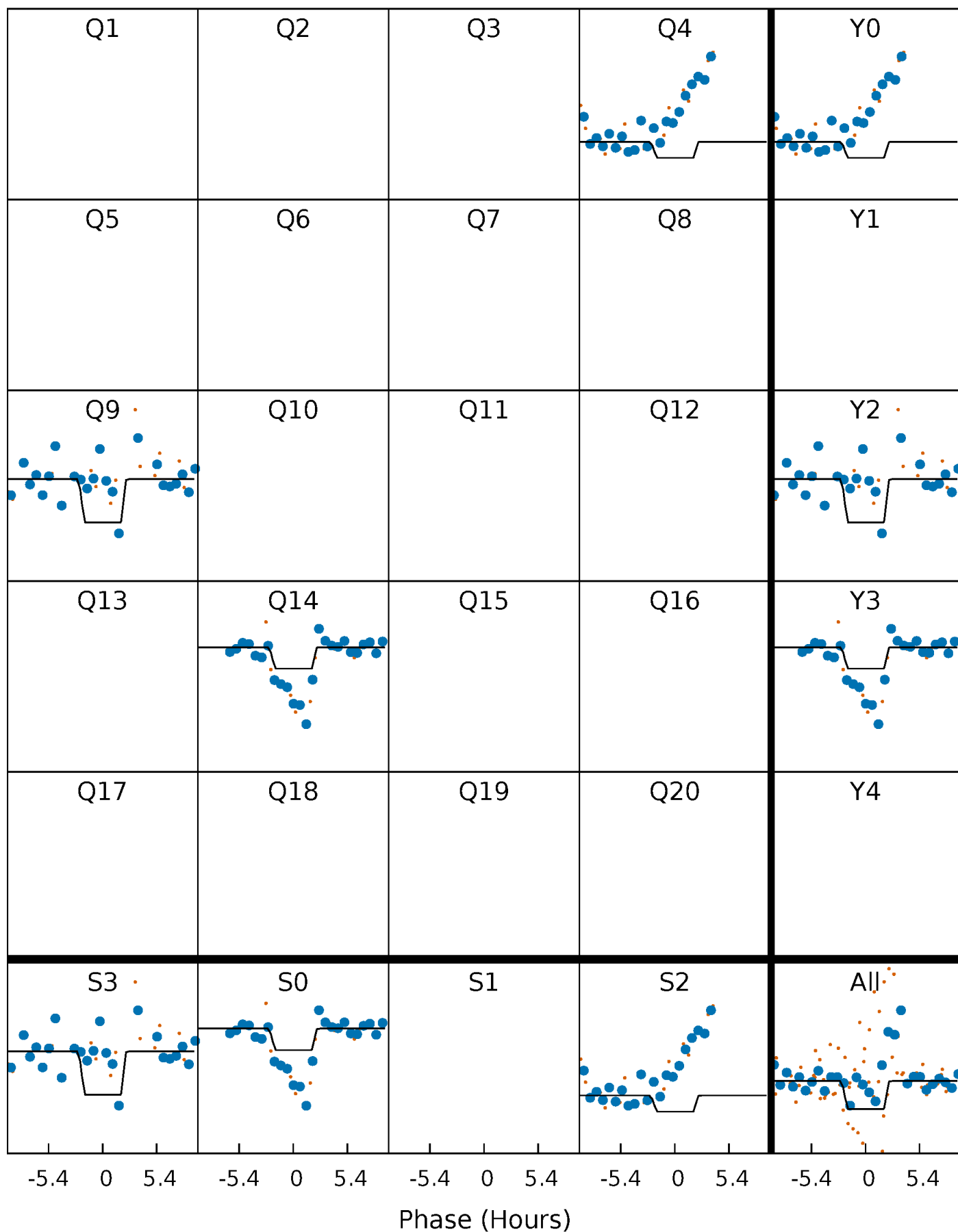
DV Quarter-Phased Transit Curves

TCE 007287391-03 $P=453.771212$ Days $T_0=434.253785$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

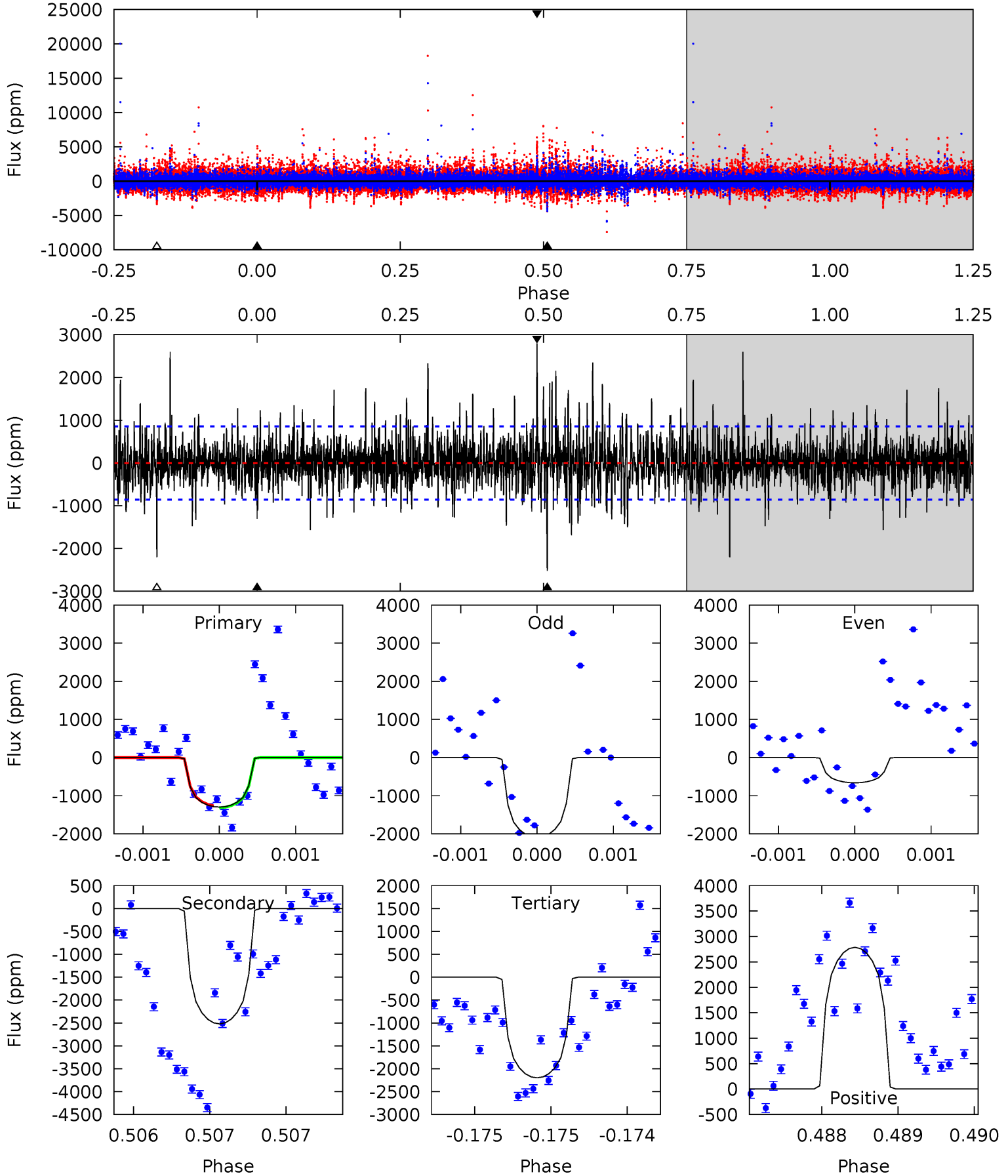
TCE 007287391-03 P=453.754444 Days $T_0=434.278430$ (BKJD)



DV Model-Shift Uniqueness Test

007287391-03, P = 453.771212 Days, E = 434.253785 Days

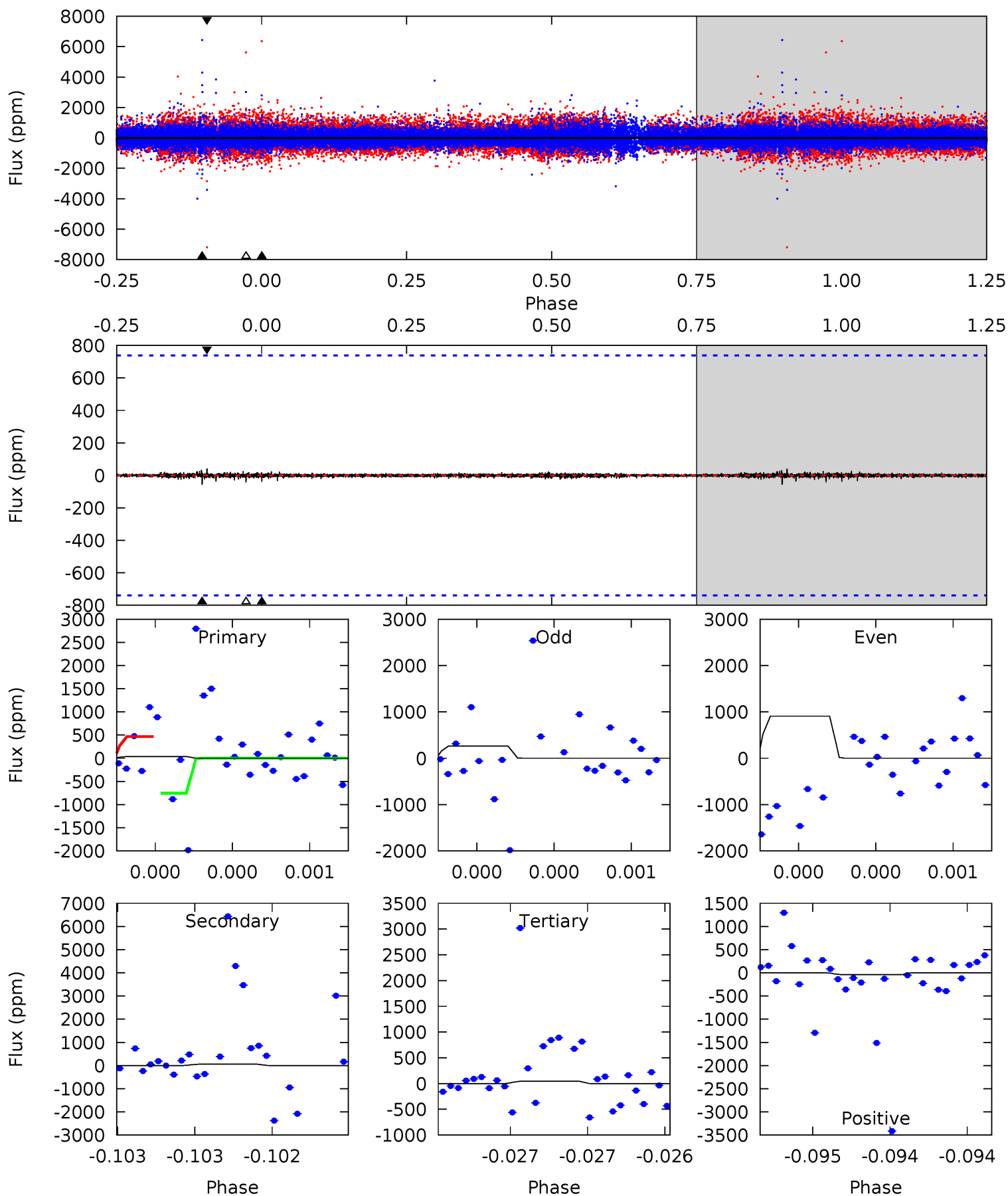
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.41	16.3	14.2	18.0	5.55	3.44	2.85	-5.84	-9.64	2.08	-1.73	3.54	0.78	0.53	0.15



Alt Model-Shift Uniqueness Test

007287391-03, P = 453.754444 Days, E = 434.278430 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.29	0.43	0.34	0.31	5.61	3.53	0.04	-0.05	-0.02	0.09	0.12	2.91	1.44	0.42	1.07



Stellar Parameters For KIC 007287391

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4206^{+146}_{-161}	$4.663^{+0.054}_{-0.027}$	$-0.280^{+0.300}_{-0.300}$	$0.591^{+0.048}_{-0.067}$	$0.587^{+0.063}_{-0.063}$	$4.000^{+1.073}_{-0.480}$
	+3%/-4%	+1%/-1%	+107%/-107%	+8%/-11%	+11%/-11%	+27%/-12%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007287391-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2521 ± 154	$2.85^{+1.42}_{-1.36}$	201^{+8}_{-8}	4427^{+1318}_{-626}	$164700^{+386765}_{-90820}$
Alt.	-57 ± 132	$2.64^{+1.34}_{-1.31}$	202^{+8}_{-8}	2483^{+698}_{-5092}	3633^{+19315}_{-9182}

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

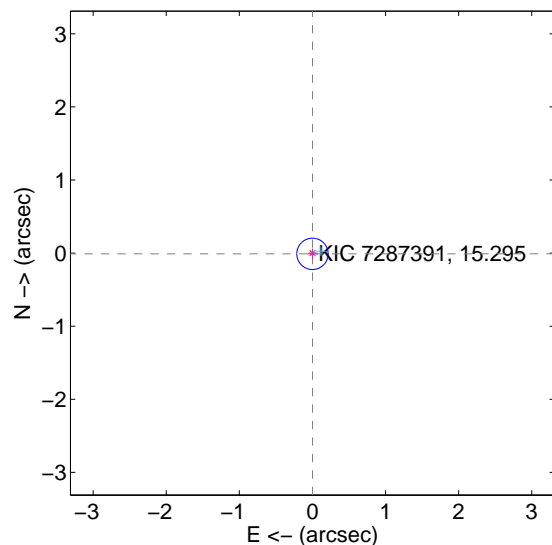
Supplemental centroid analysis for 007287391-03. Kepler magnitude: 15.29. Transit SNR 8.32

There are 2 quarters with good PRF difference image offsets

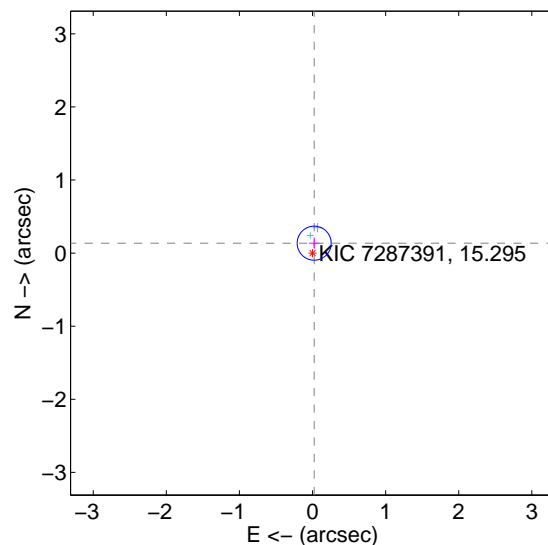
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.071	0.15	-0.000 ± 0.072	-0.010 ± 0.071
PRF-fit source offset from KIC position	0.138 ± 0.078	1.77	-0.023 ± 0.070	0.136 ± 0.077
photometric centroid source offset	0.79 ± 0.66	1.20	-0.47 ± 0.69	0.64 ± 0.64

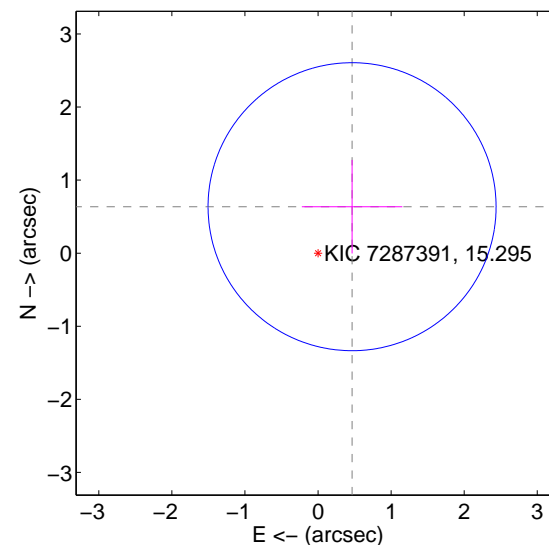
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

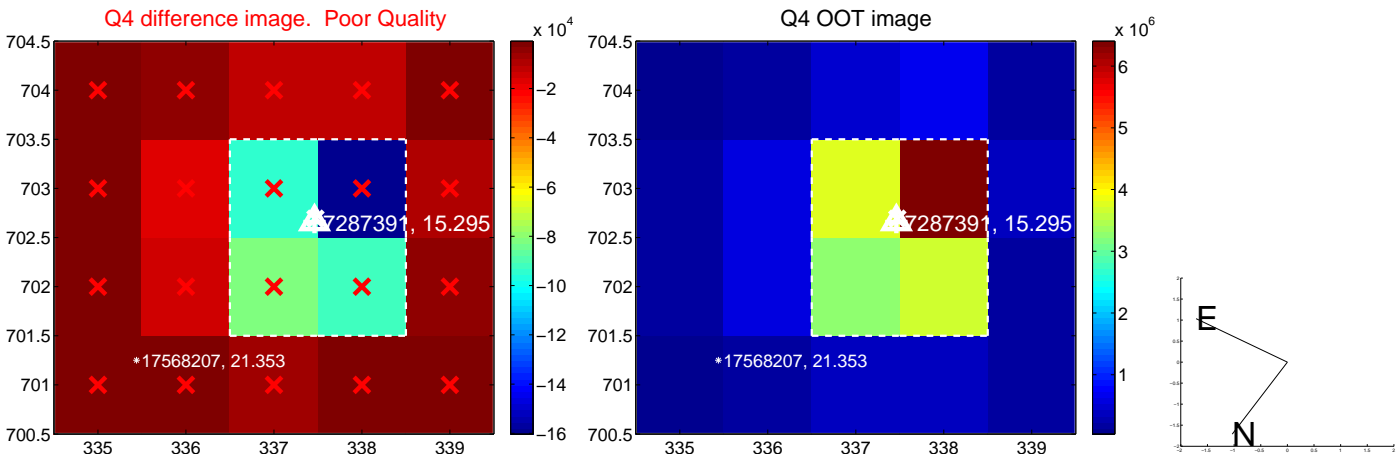
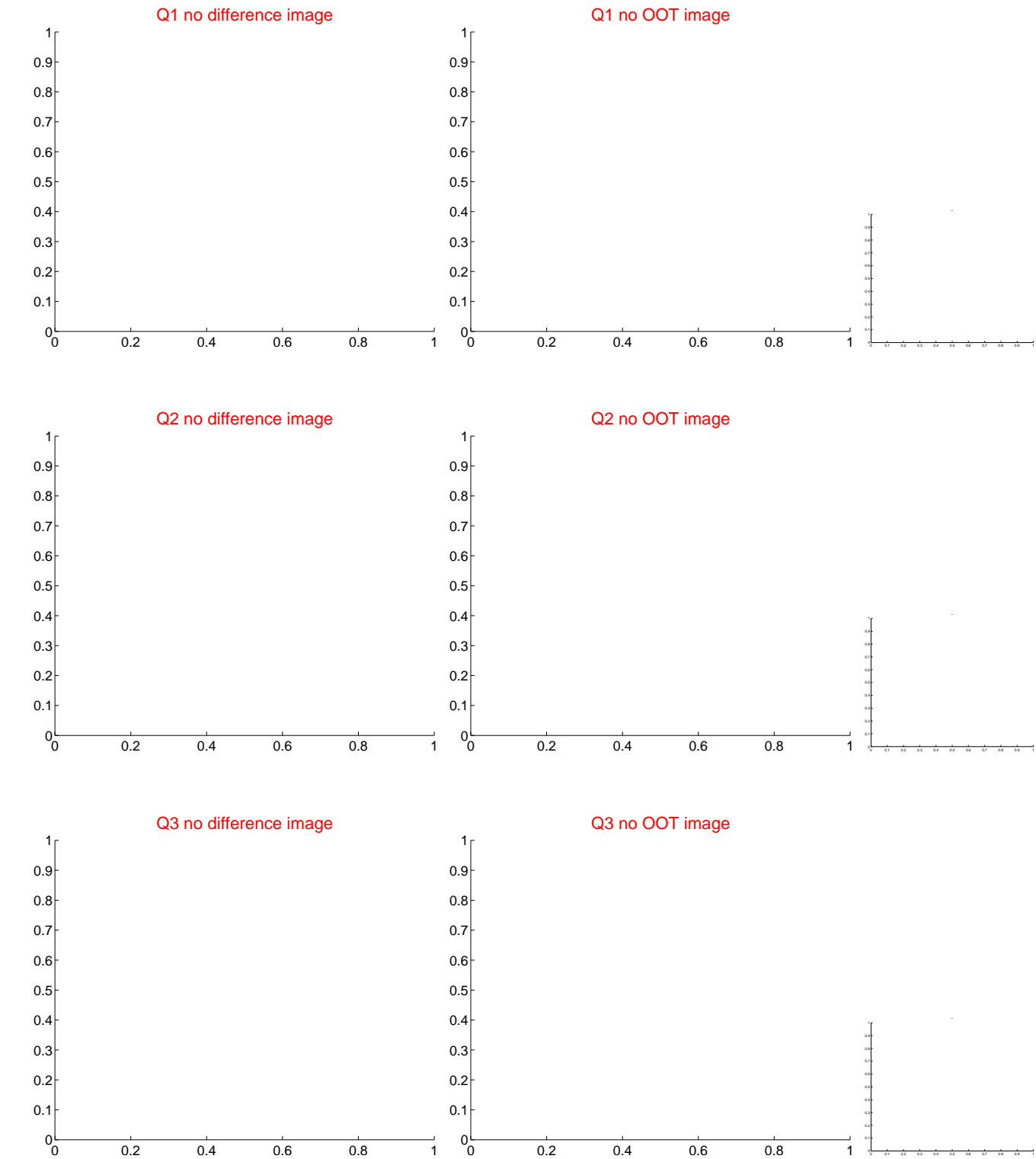


offset from photometric centroids



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.

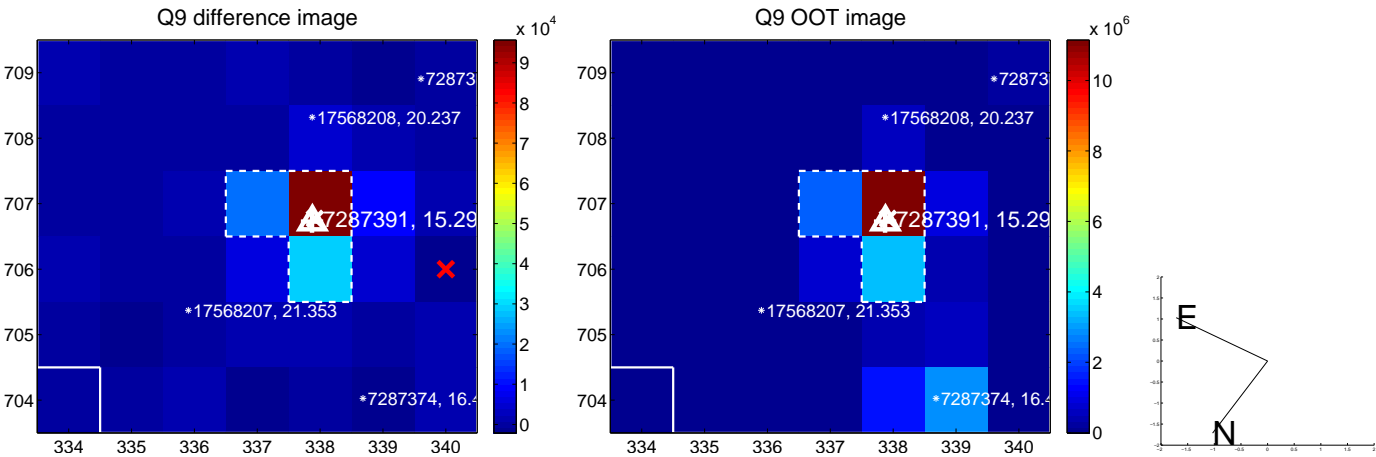
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



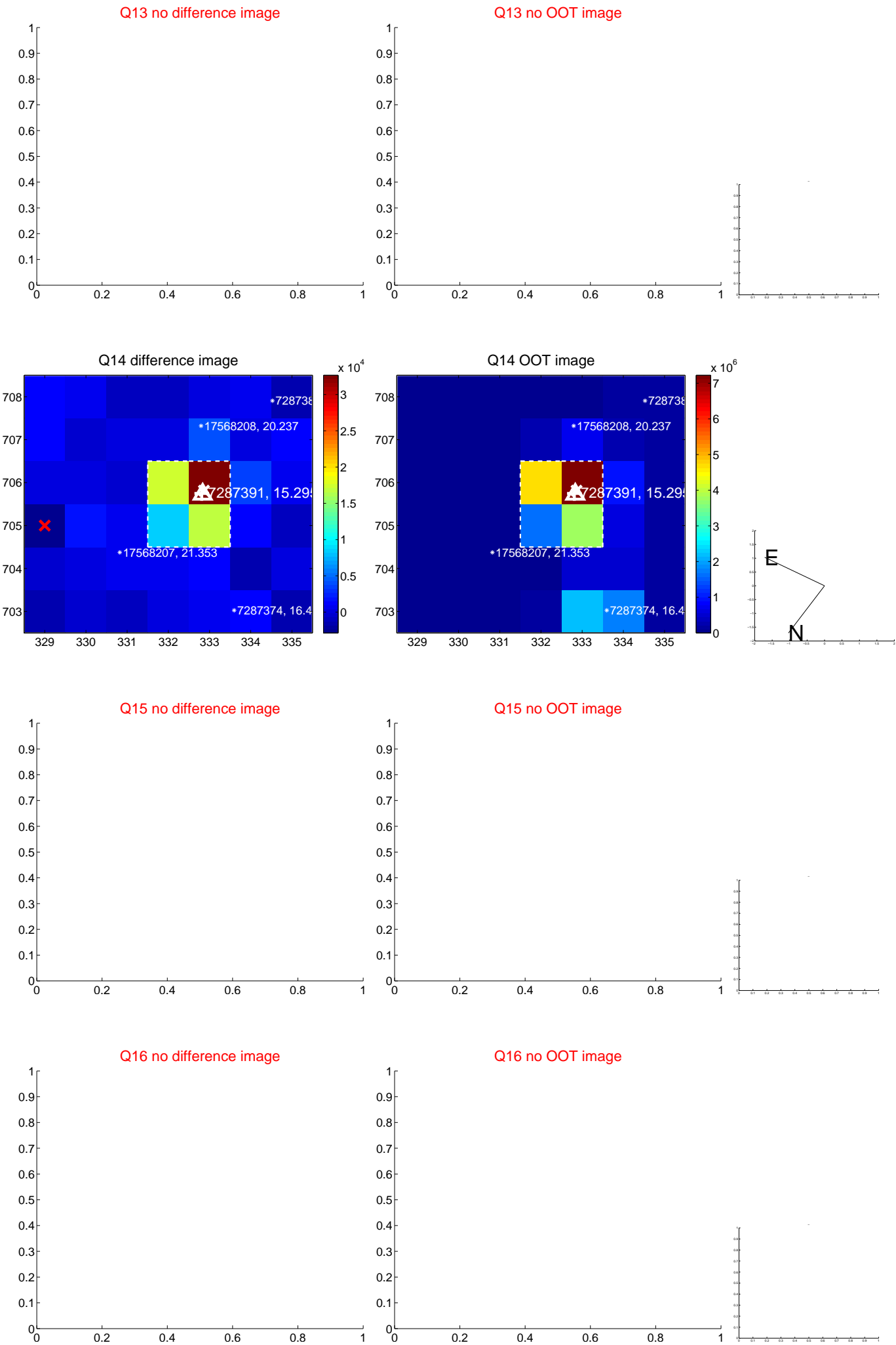
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



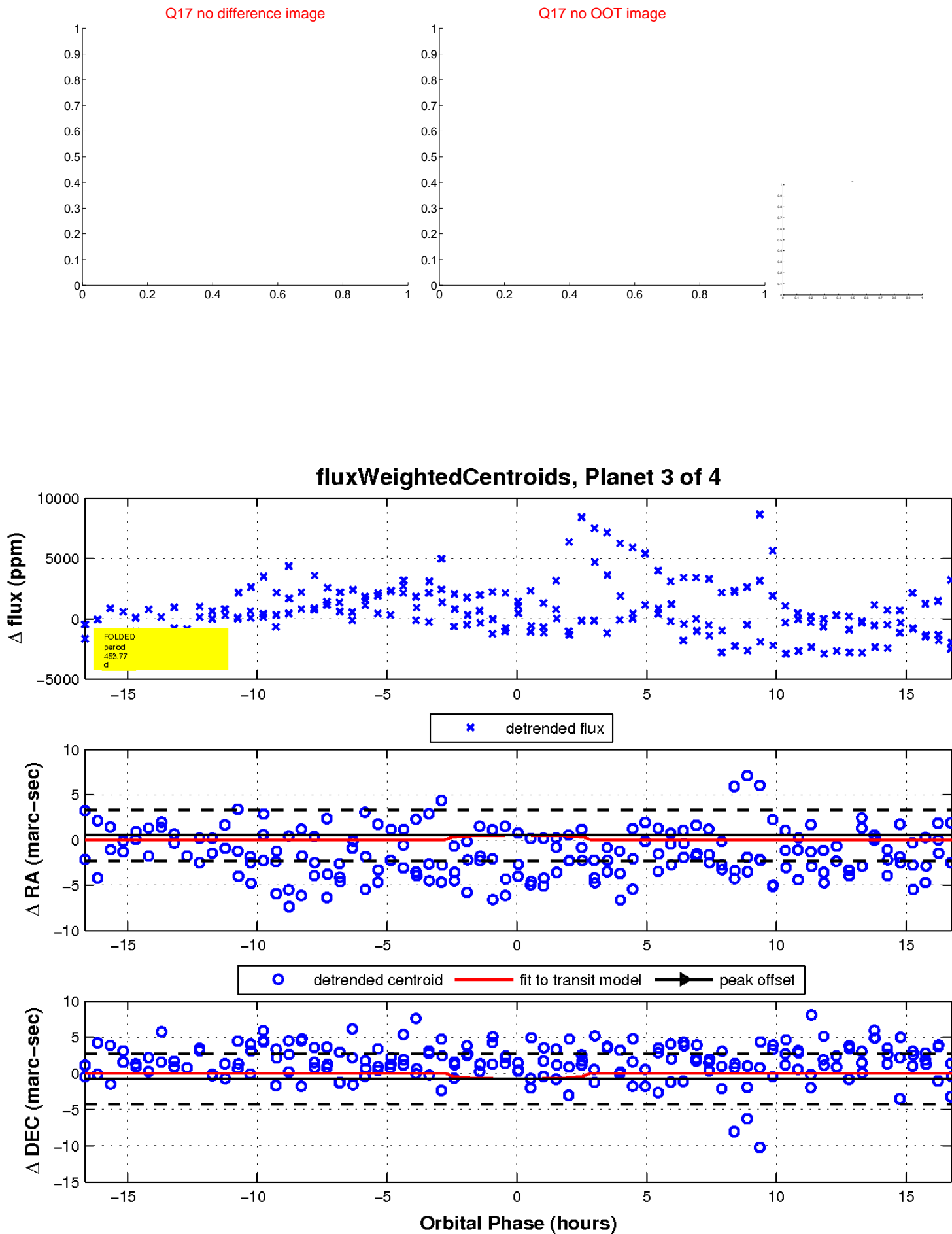
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

