

KIC 006307062

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})
006307062-01	OBS	3153.01	75.379202	167.099444	537344.7	4.500	7238.9	-1.0	0.77	5420	42.07	4.18
006307062-02	OBS	No	75.378963	155.498613	169303.7	7.742	2757.3	1752.2	0.77	5420	45.86	4.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006307062-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006307062-02	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 006307062-01

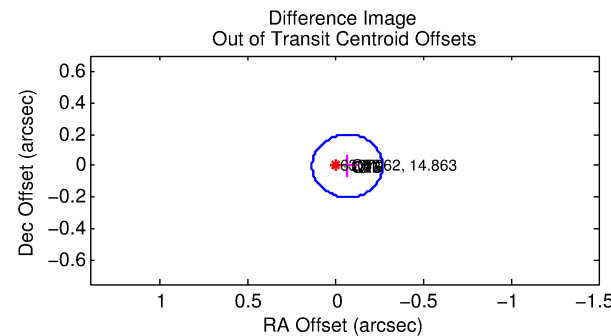
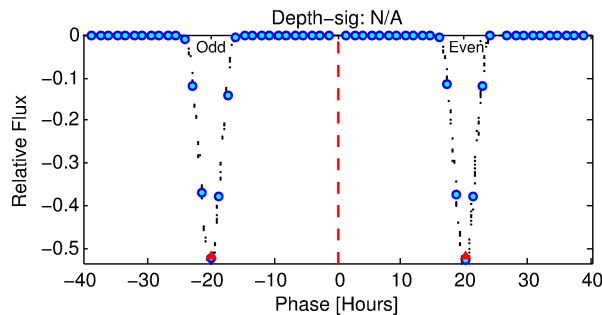
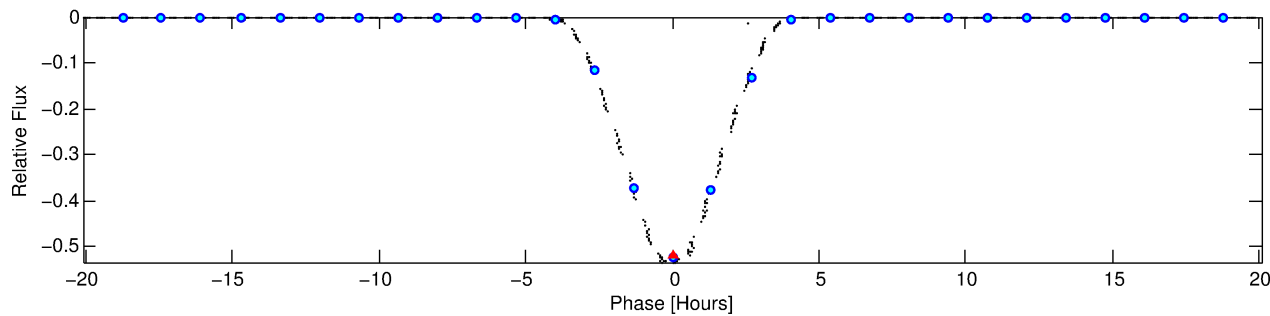
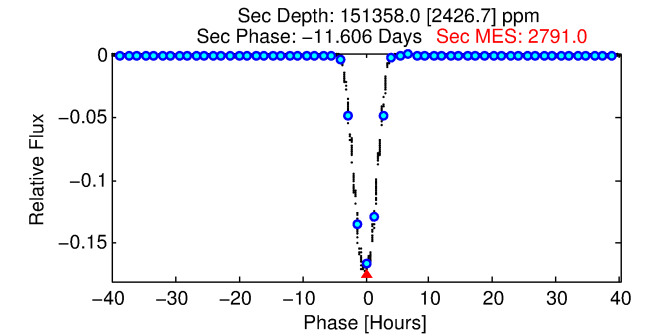
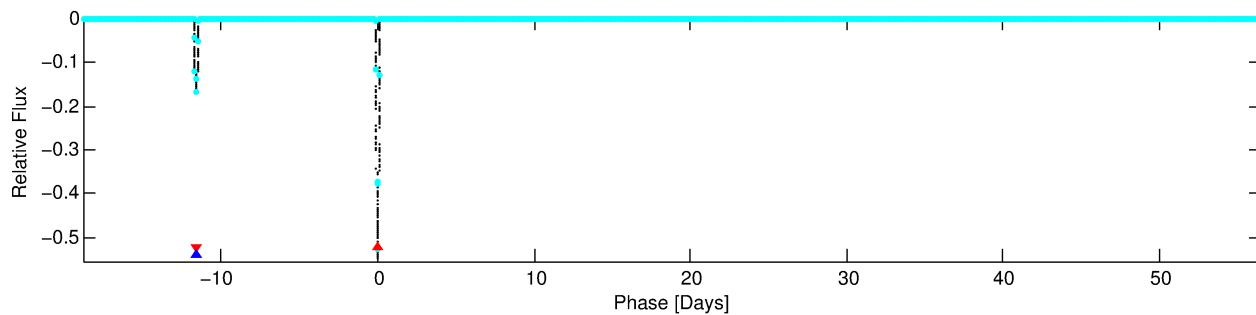
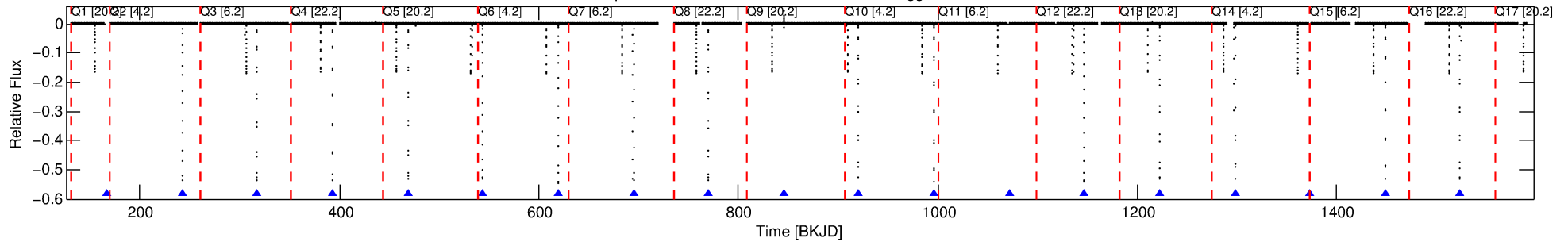
No Significant Match Found

DV One-Page Summary

KIC: 6307062 Candidate: 1 of 2 Period: 75.379 d

KOI: K03153.01 Corr: 0.763

Kp: 14.86 R*: 0.77 Rs Teff: 5420.0 K Logg: 4.60 Fe/H: -0.200



TPS TCE Results:

Period = 75.37920 d
Epoch = 167.0994 BKJD

DV fit results are unavailable

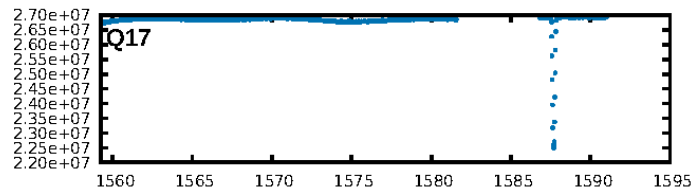
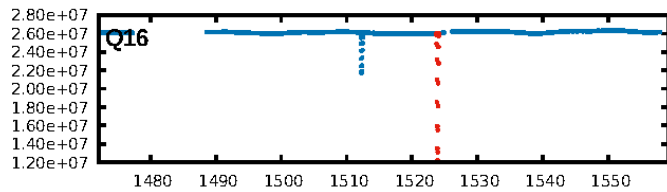
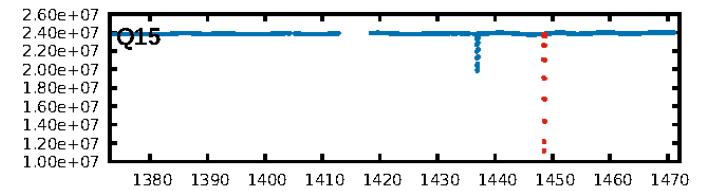
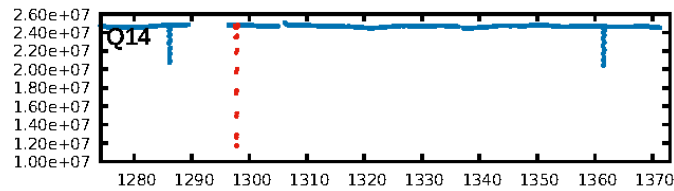
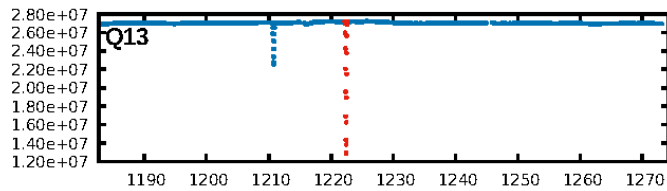
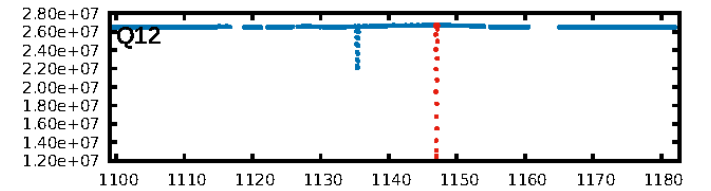
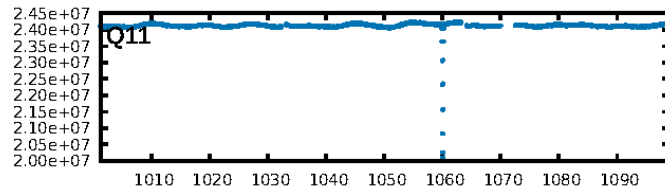
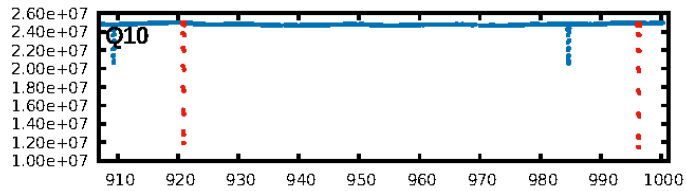
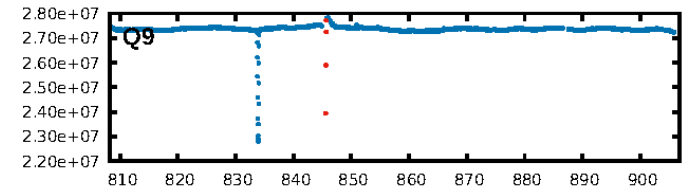
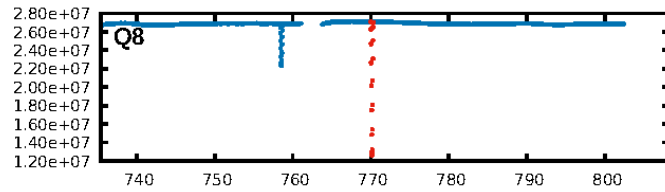
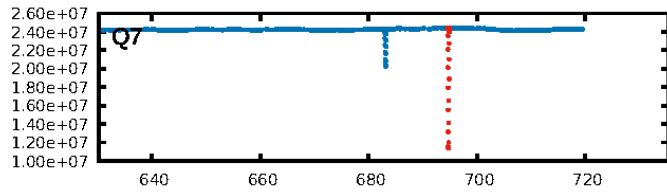
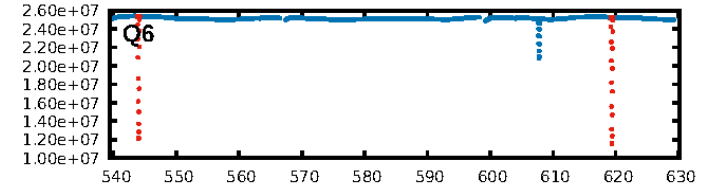
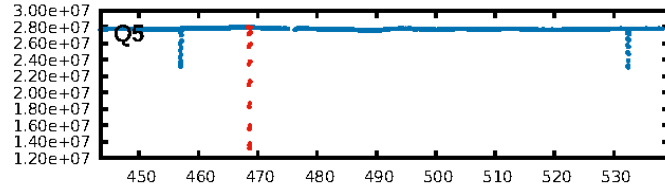
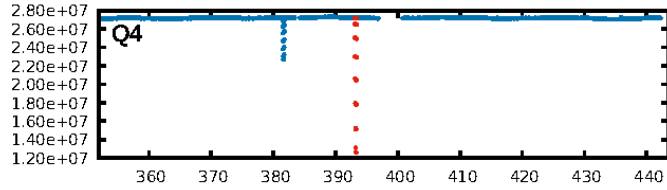
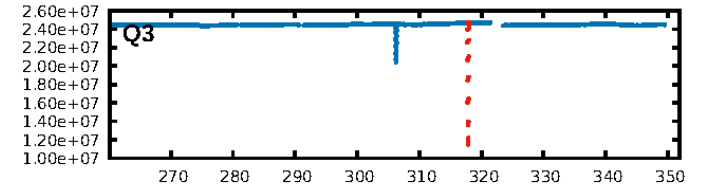
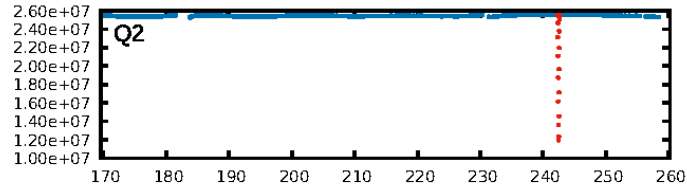
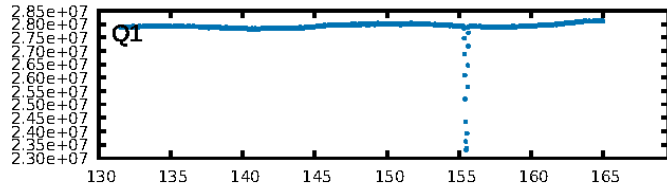
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 3.912
Centroid-sig: N/A
Centroid-so: 0.218 arcsec [176.41 σ]
OotOffset-rm: 0.067 arcsec [1.00 σ]
KicOffset-rm: 0.079 arcsec [1.17 σ]
OotOffset-st: 2/3/4/0 [9]
KicOffset-st: 4/3/4/2 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

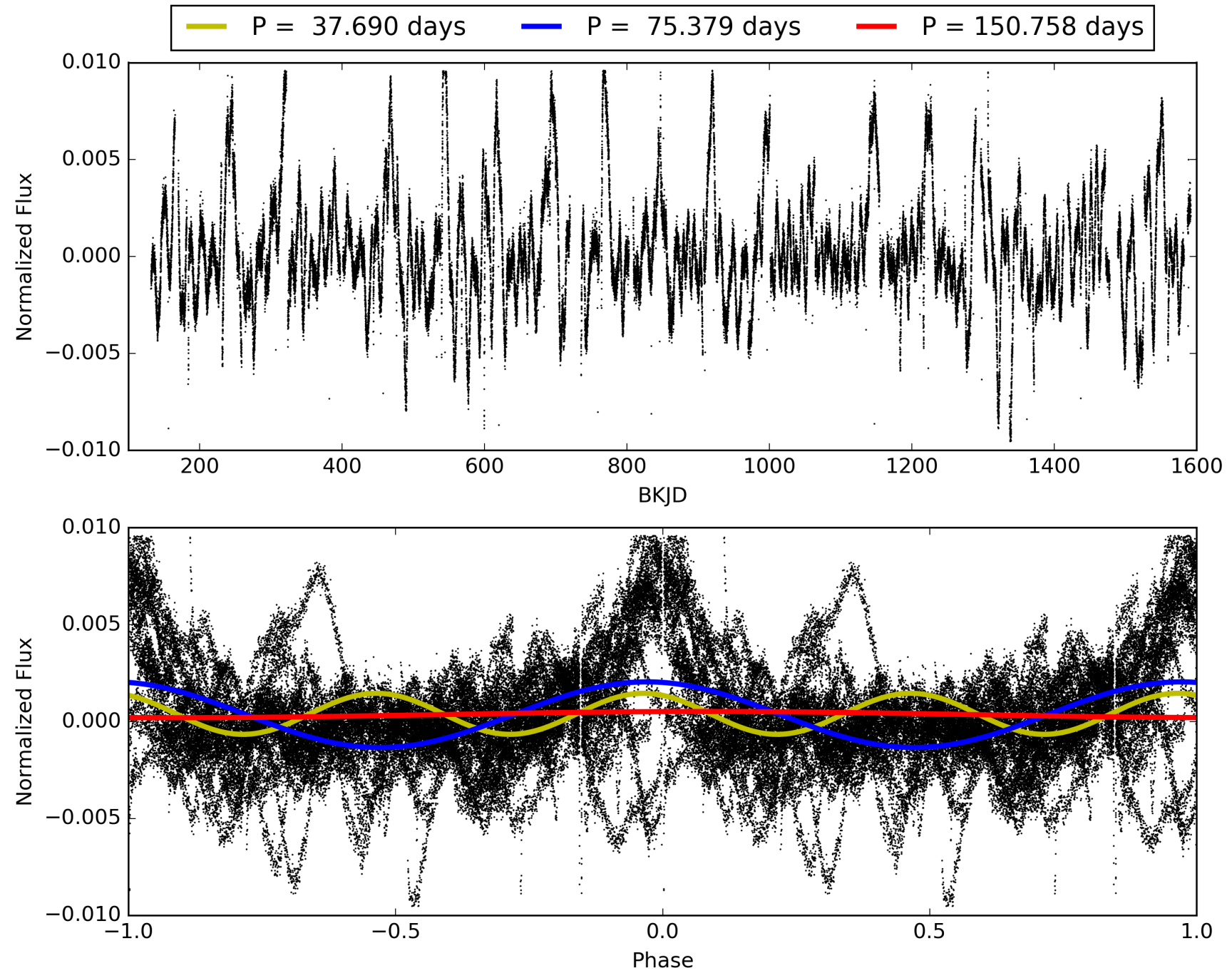
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:11:45 Z

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

TCE 006307062-01, PDC Light Curves

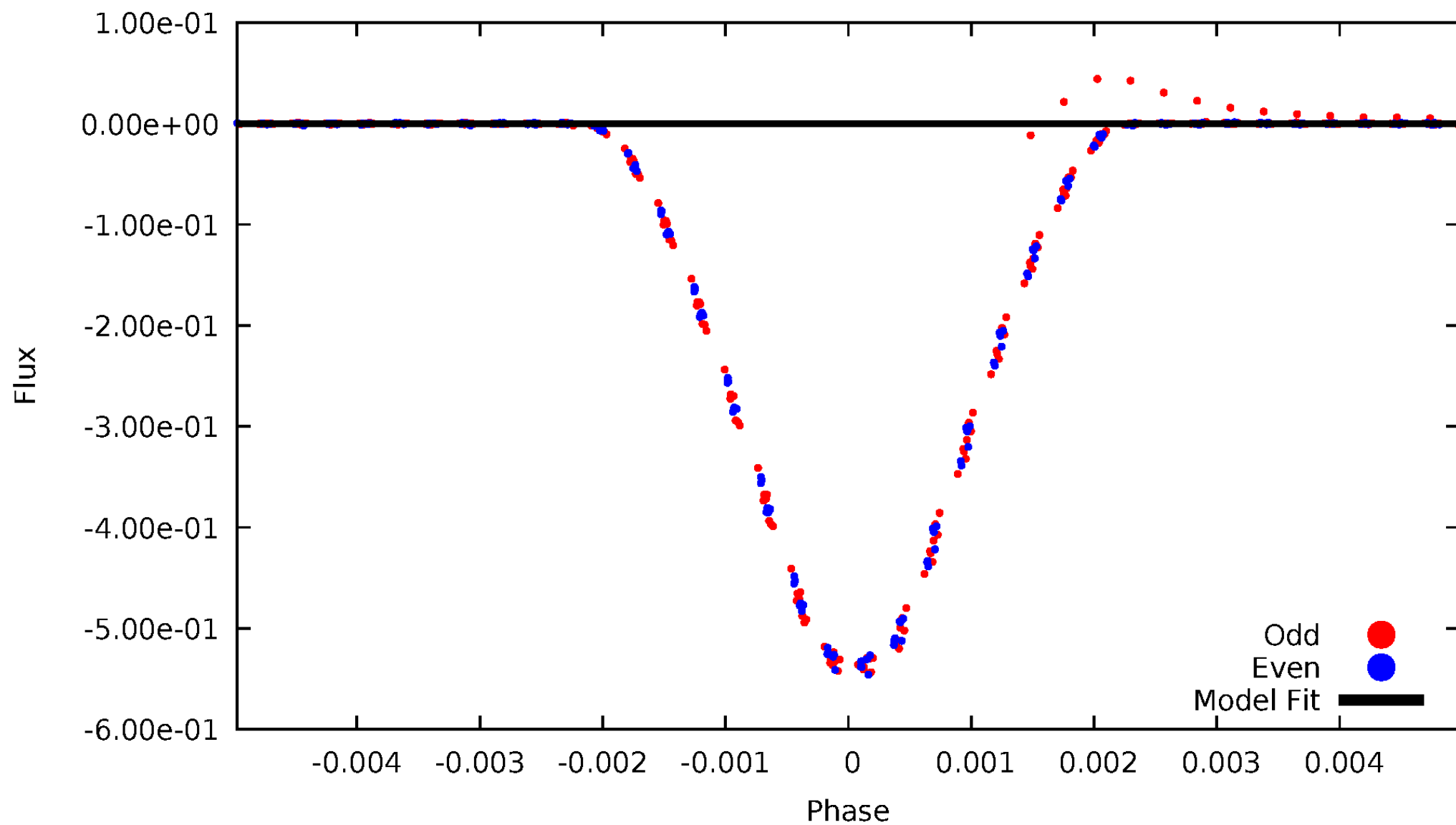


TCE 006307062-01



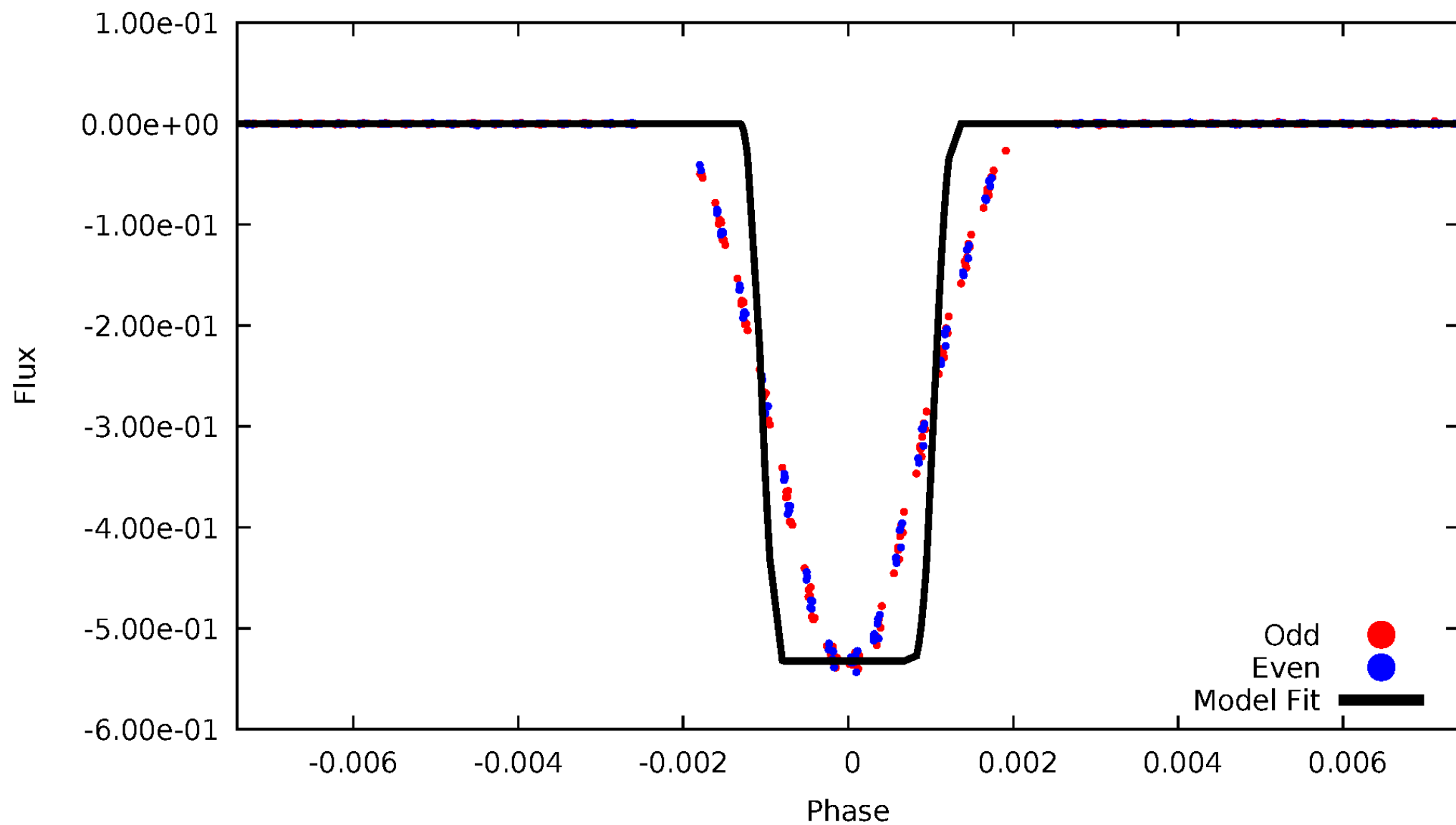
DV Odd/Even

TCE 006307062-01



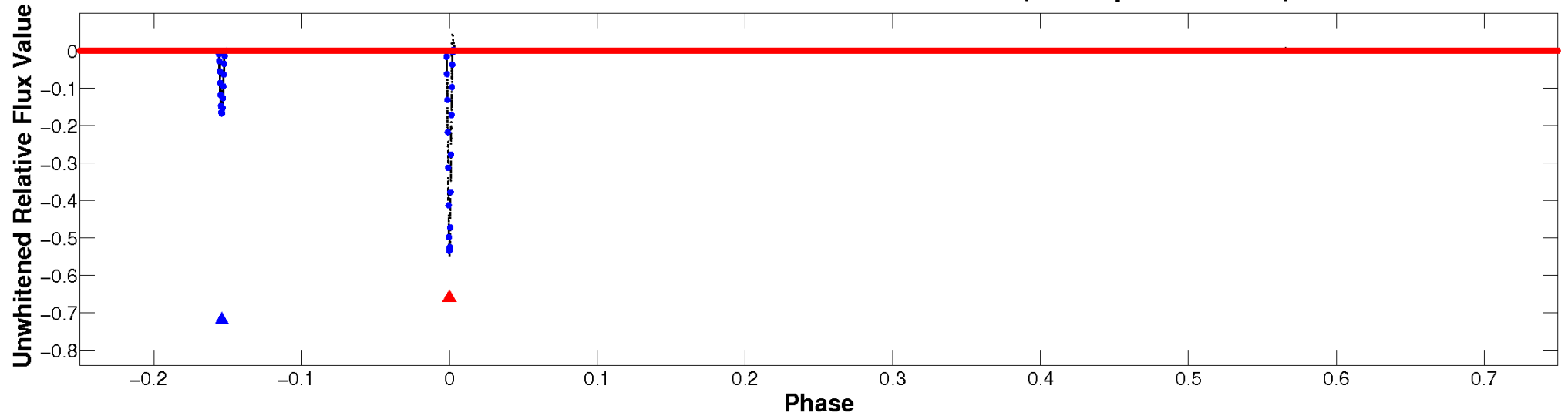
ALT Odd/Even

TCE 006307062-01



Non-Whitened Vs. Whitened Light Curve

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

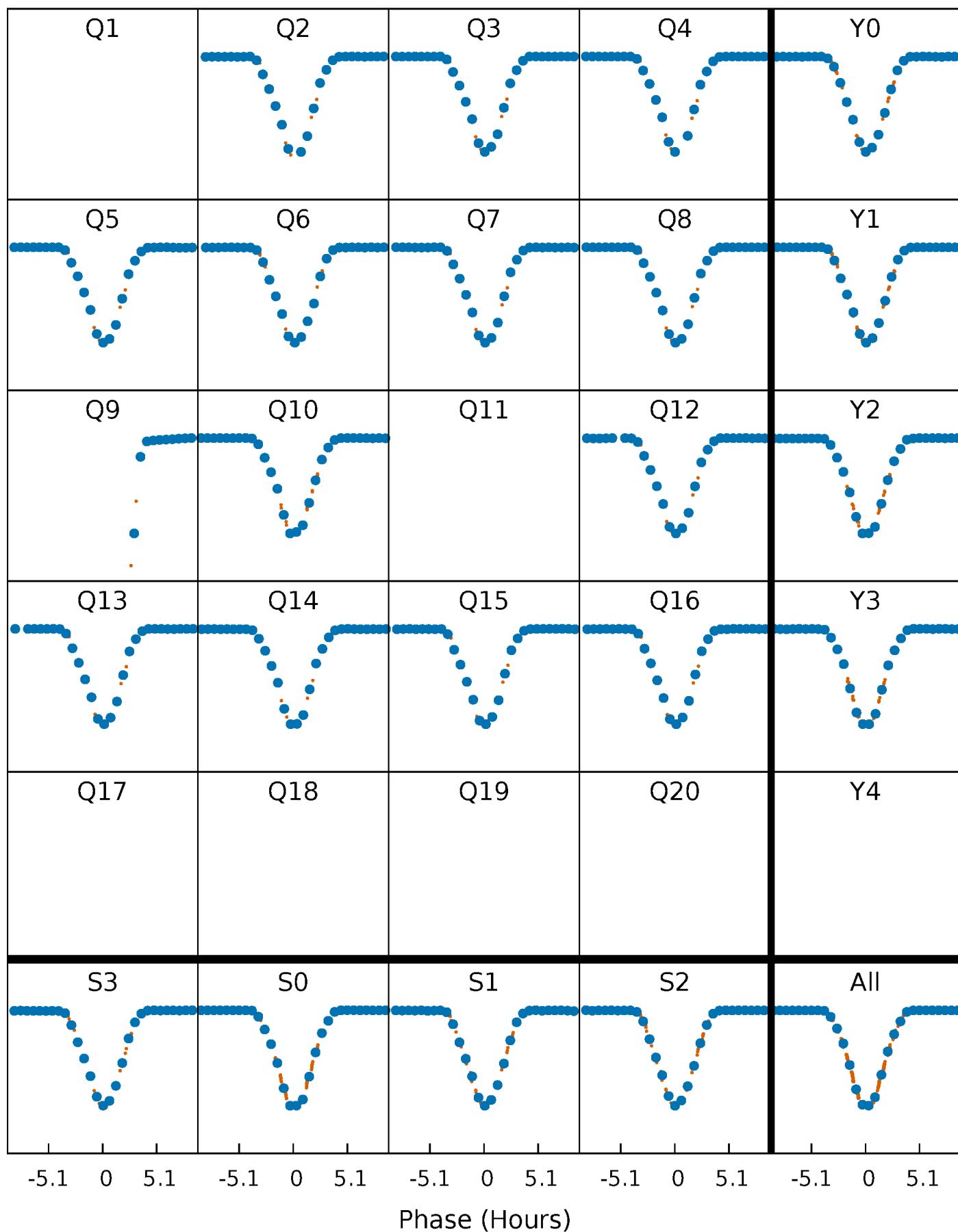


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



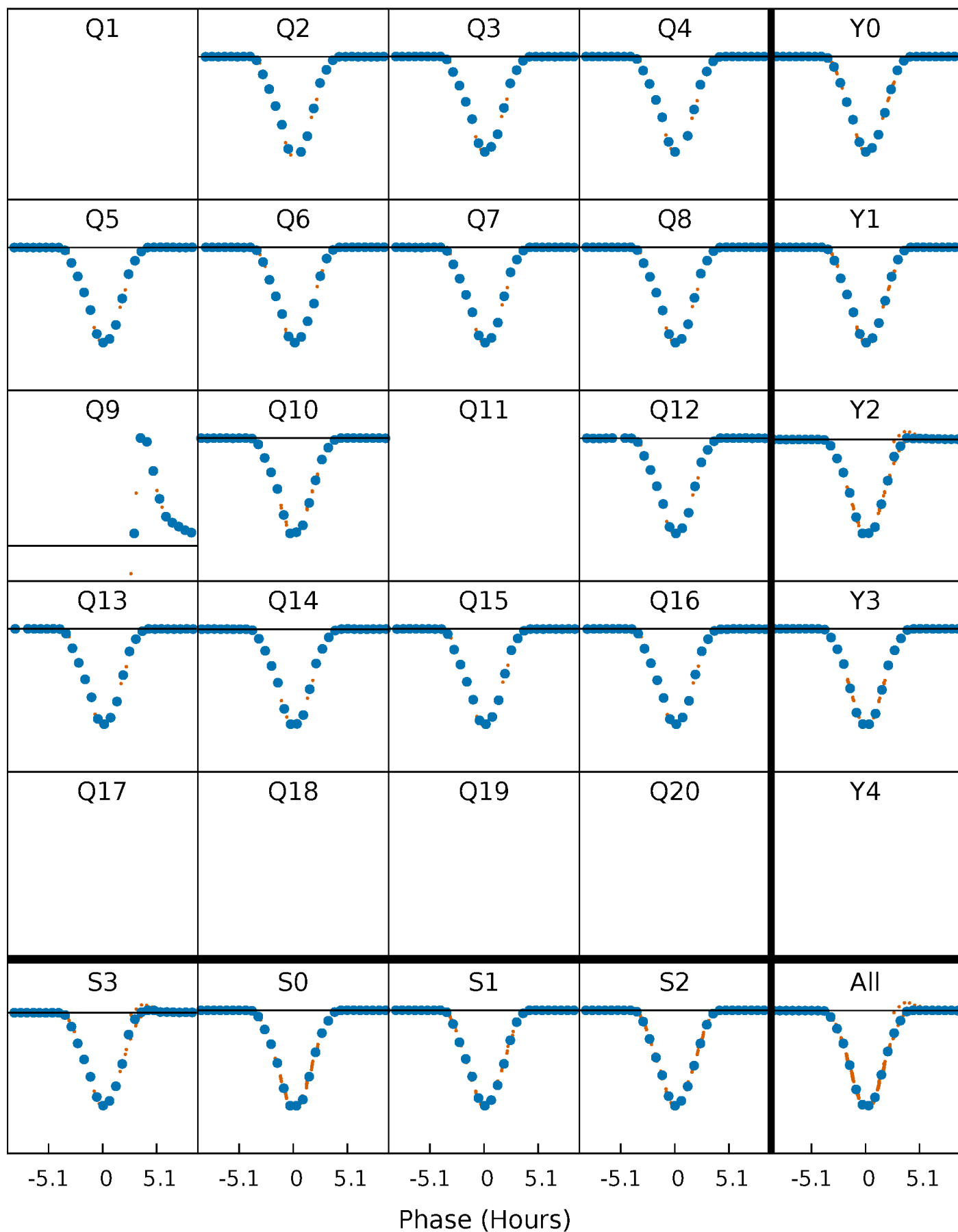
PDC Quarter-Phased Transit Curves

TCE 006307062-01 P= 75.379202 Days $T_0=167.099444$ (BKJD)



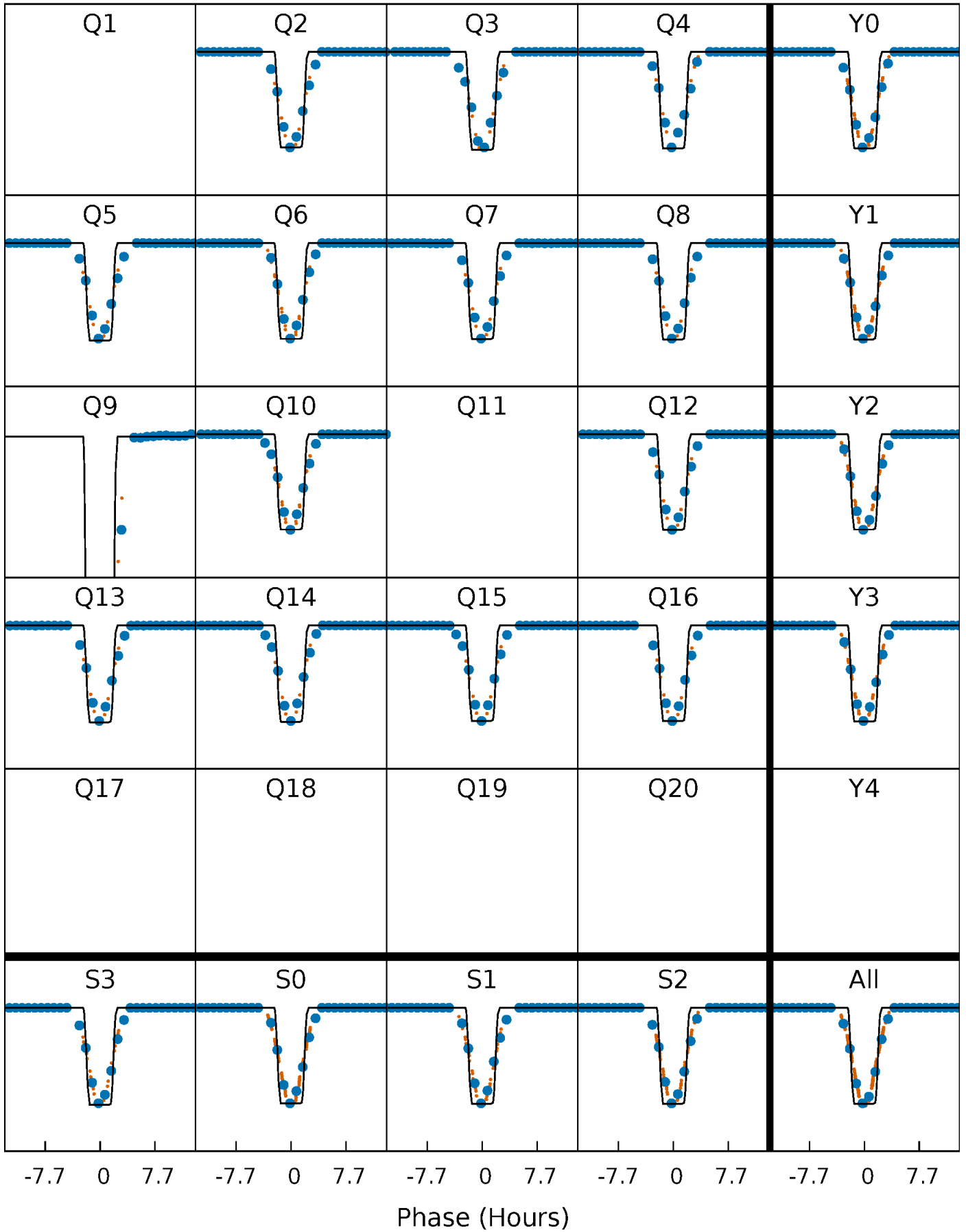
DV Quarter-Phased Transit Curves

TCE 006307062-01 P= 75.379202 Days $T_0=167.099444$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

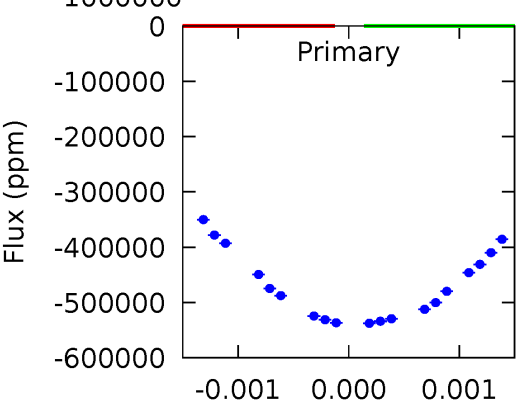
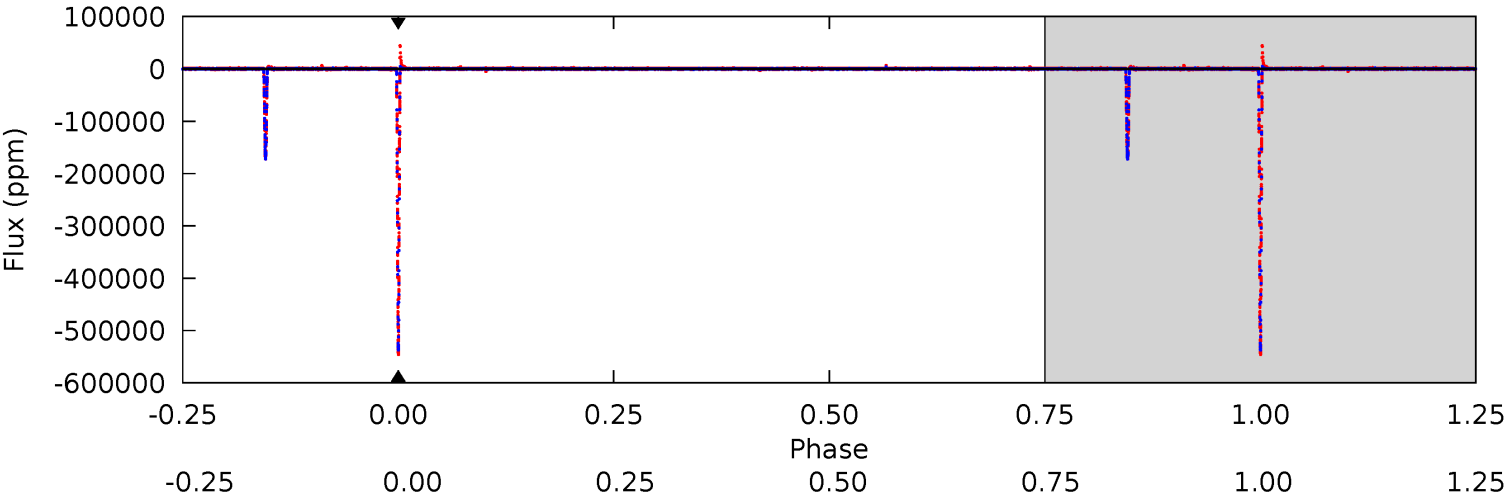
TCE 006307062-01 P= 75.379202 Days $T_0=167.104433$ (BKJD)



DV Model-Shift Uniqueness Test

006307062-01, P = 75.379202 Days, E = 91.720242 Days

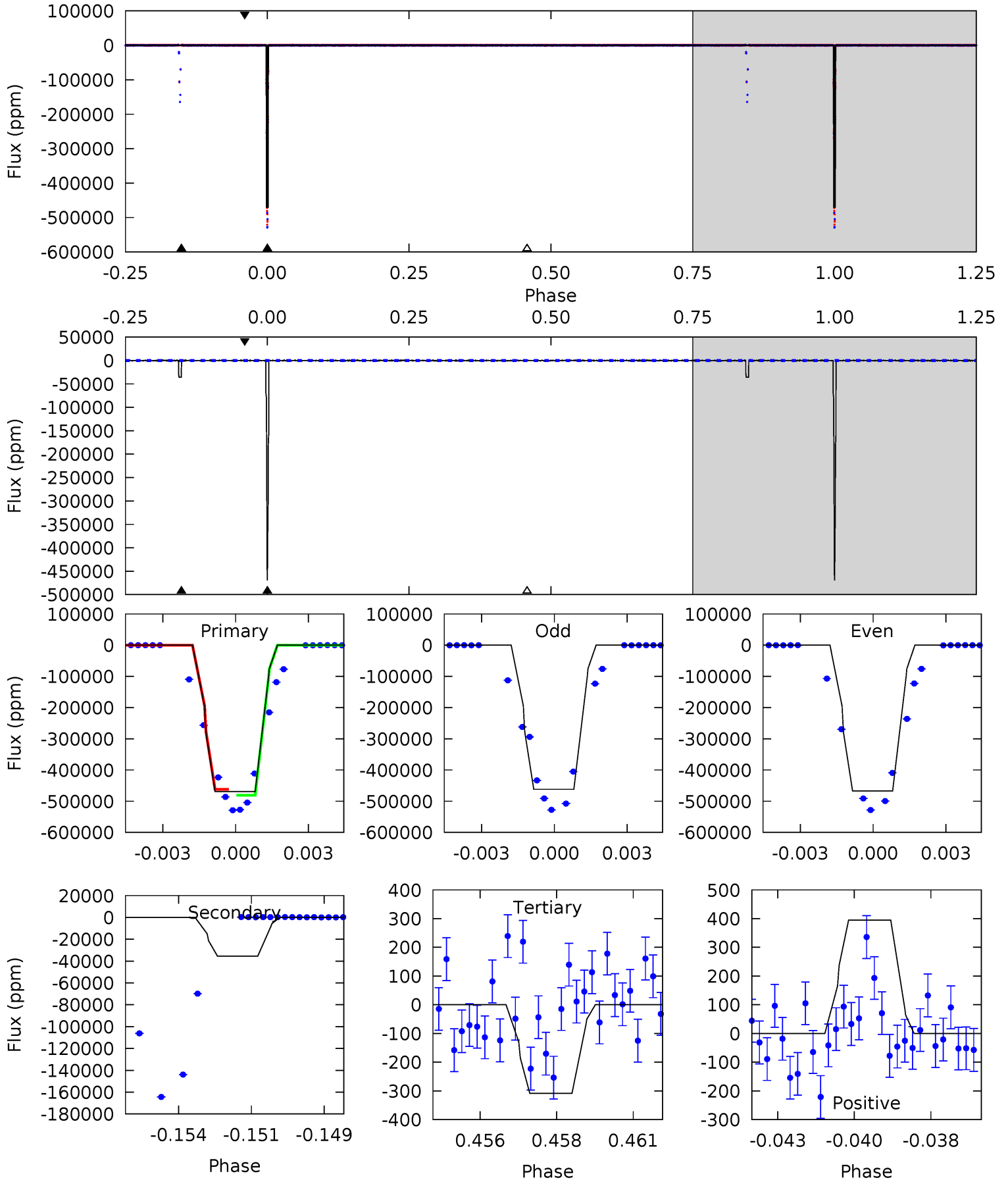
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006307062-01, P = 75.379202 Days, E = 91.725231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2504	189.9	1.65	2.11	5.28	3.02	6.01	2502	2502	188.3	187.8	35.0	0.99	0.00	0



Stellar Parameters For KIC 006307062

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5420^{+162}_{-146}	$4.596^{+0.030}_{-0.120}$	$-0.200^{+0.300}_{-0.300}$	$0.771^{+0.136}_{-0.063}$	$0.864^{+0.080}_{-0.098}$	$2.658^{+0.431}_{-0.966}$
	+3%/-3%	+1%/-3%	+150%/-150%	+18%/-8%	+9%/-11%	+16%/-36%
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 006307062-01 / KOI 3153.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$43.53^{+9.63}_{-8.92}$	519^{+24}_{-20}	2506^{+2101}_{-6900}	65^{+3556}_{-2855}
Alt.	-35601 ± 187	$63.64^{+9.76}_{-9.54}$	518^{+24}_{-17}	3320^{+165}_{-152}	543^{+203}_{-131}

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

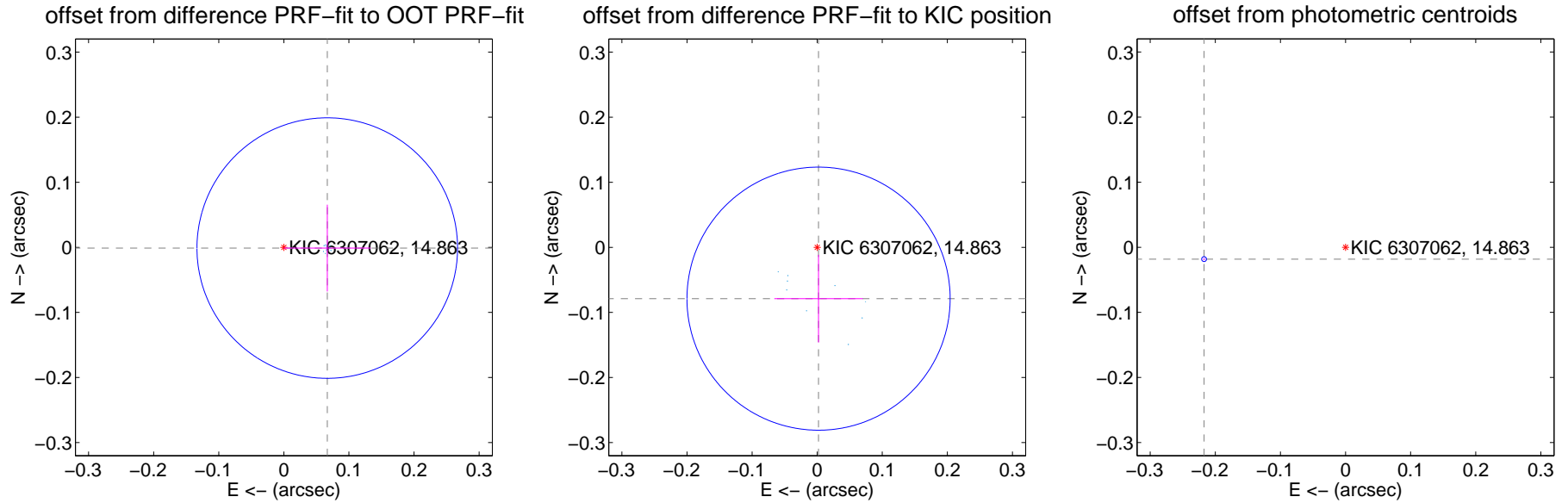
DV Centroid Data

Supplemental centroid analysis for 006307062-01. Kepler magnitude: 14.86. Transit SNR -1.00

There are 13 quarters with good PRF difference image offsets

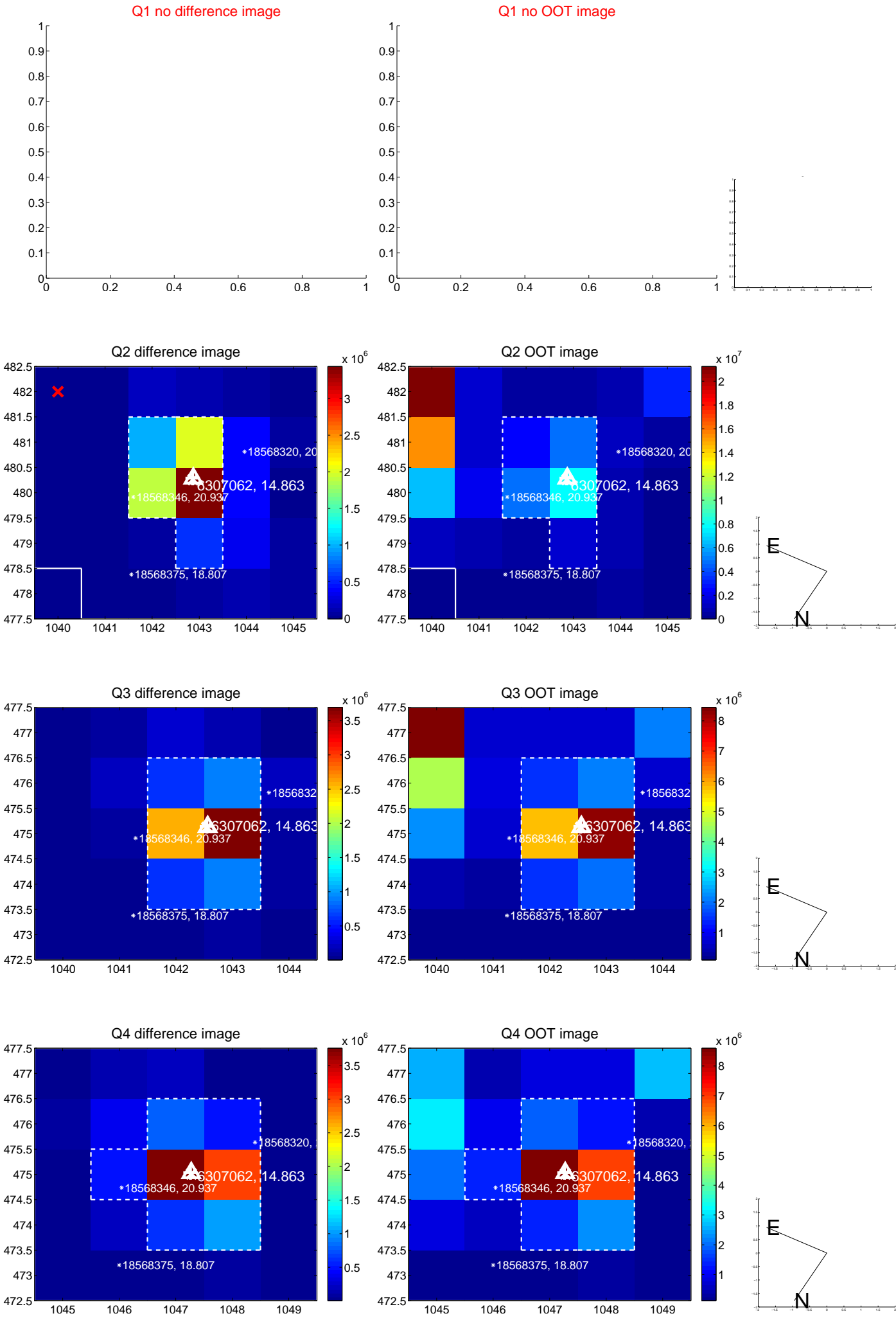
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.067	1.00	-0.067 ± 0.067	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.079 ± 0.067	1.17	-0.002 ± 0.068	-0.079 ± 0.067
photometric centroid source offset	0.22 ± 0.00	176.41	0.22 ± 0.00	-0.02 ± 0.00

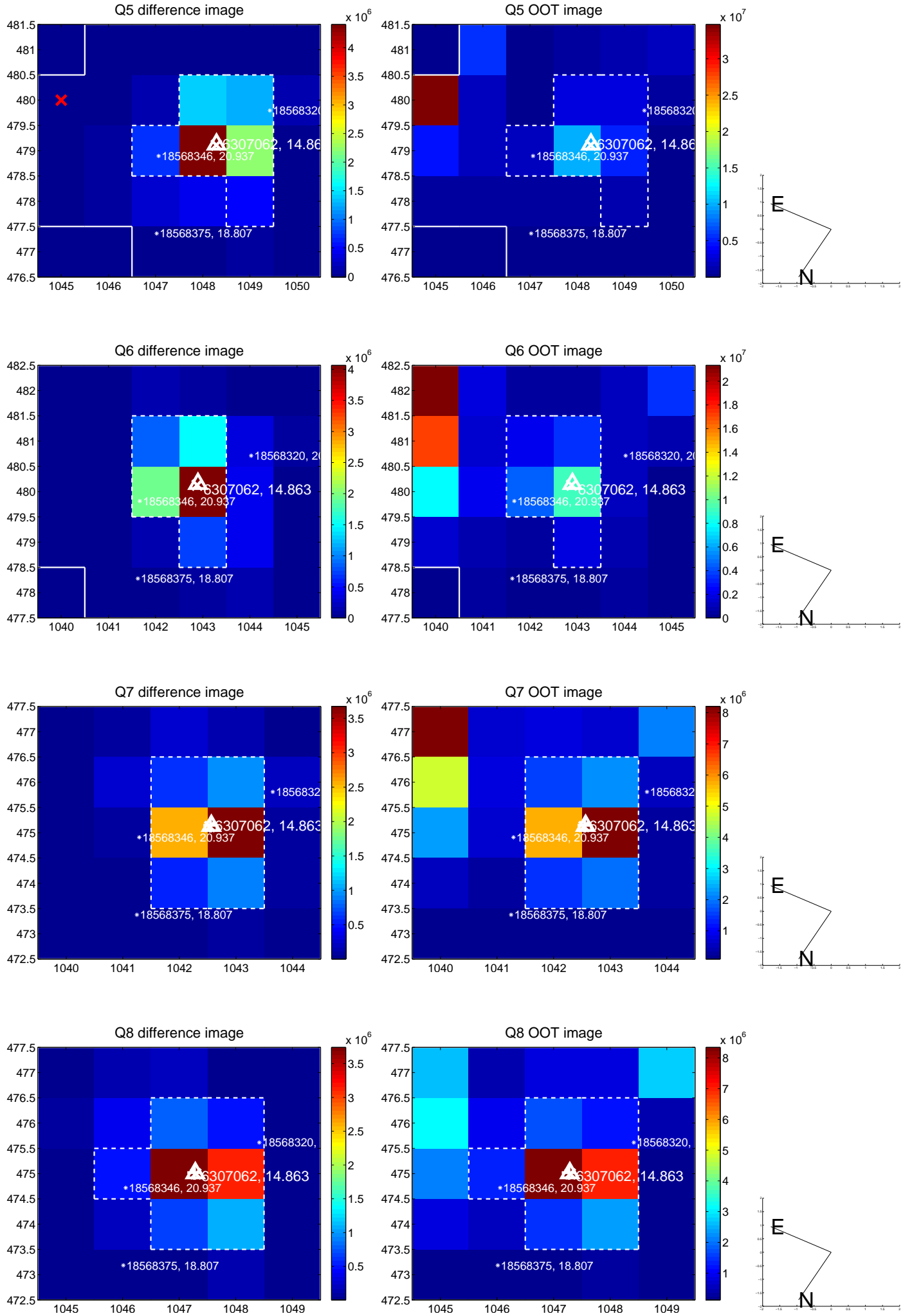


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

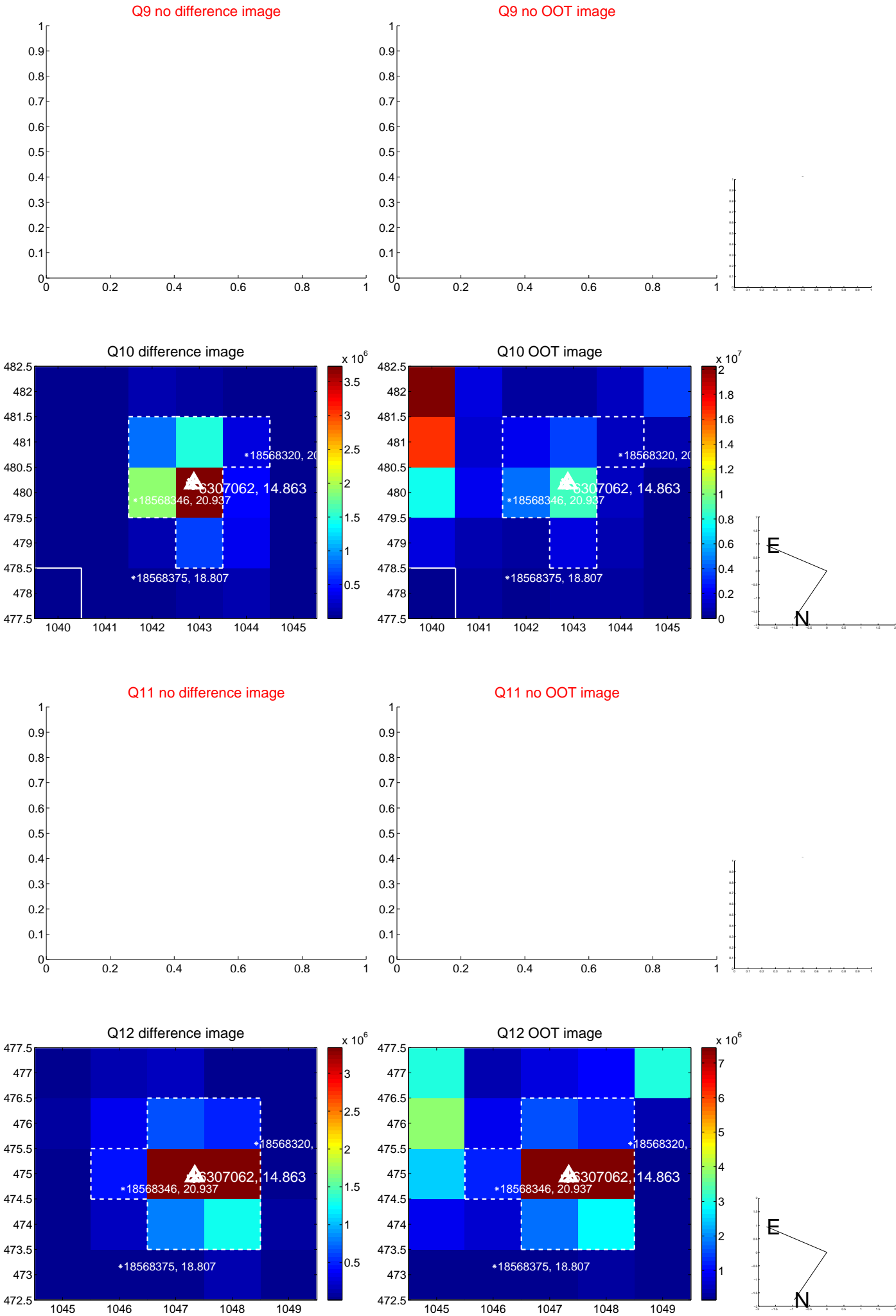
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



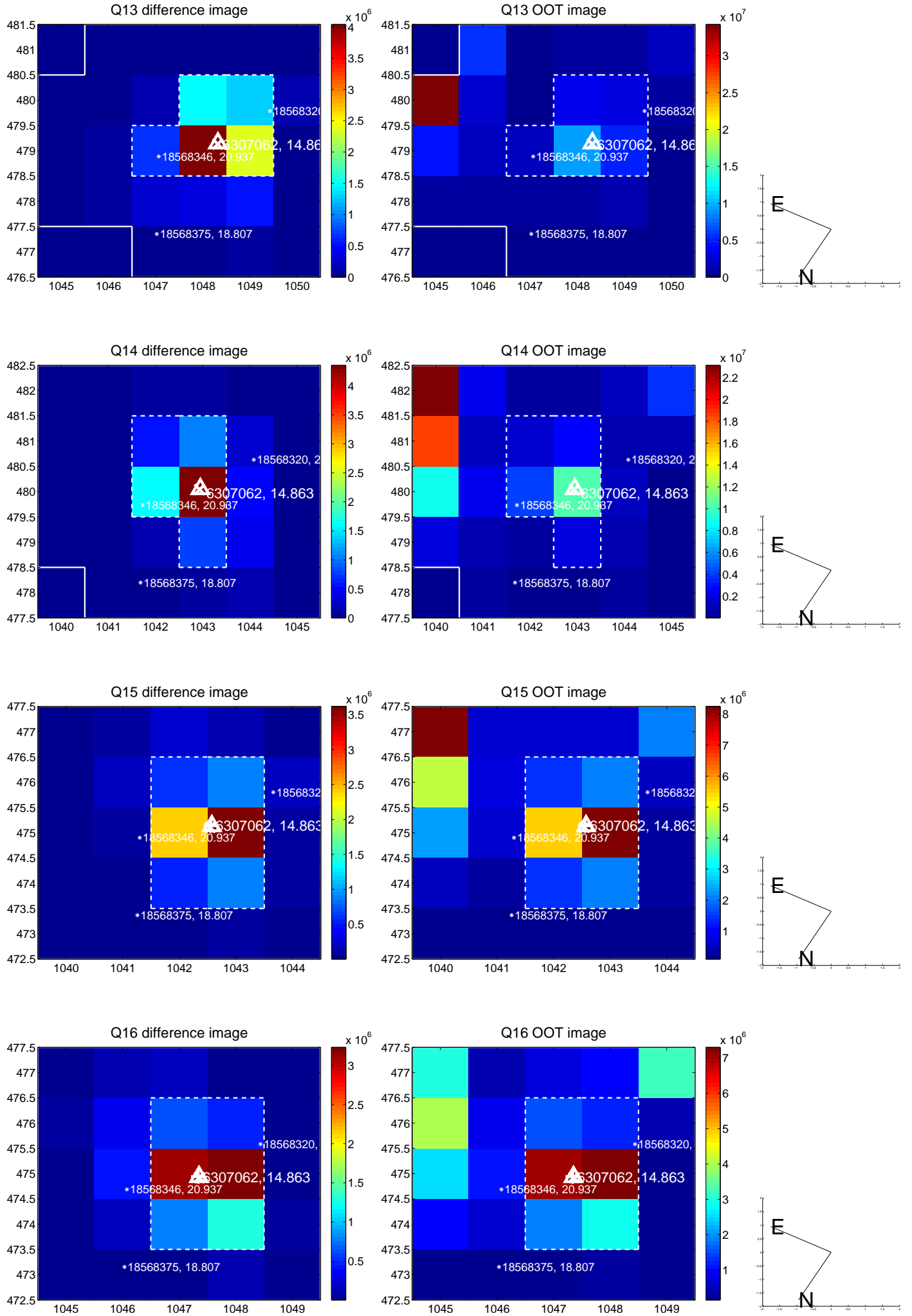
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



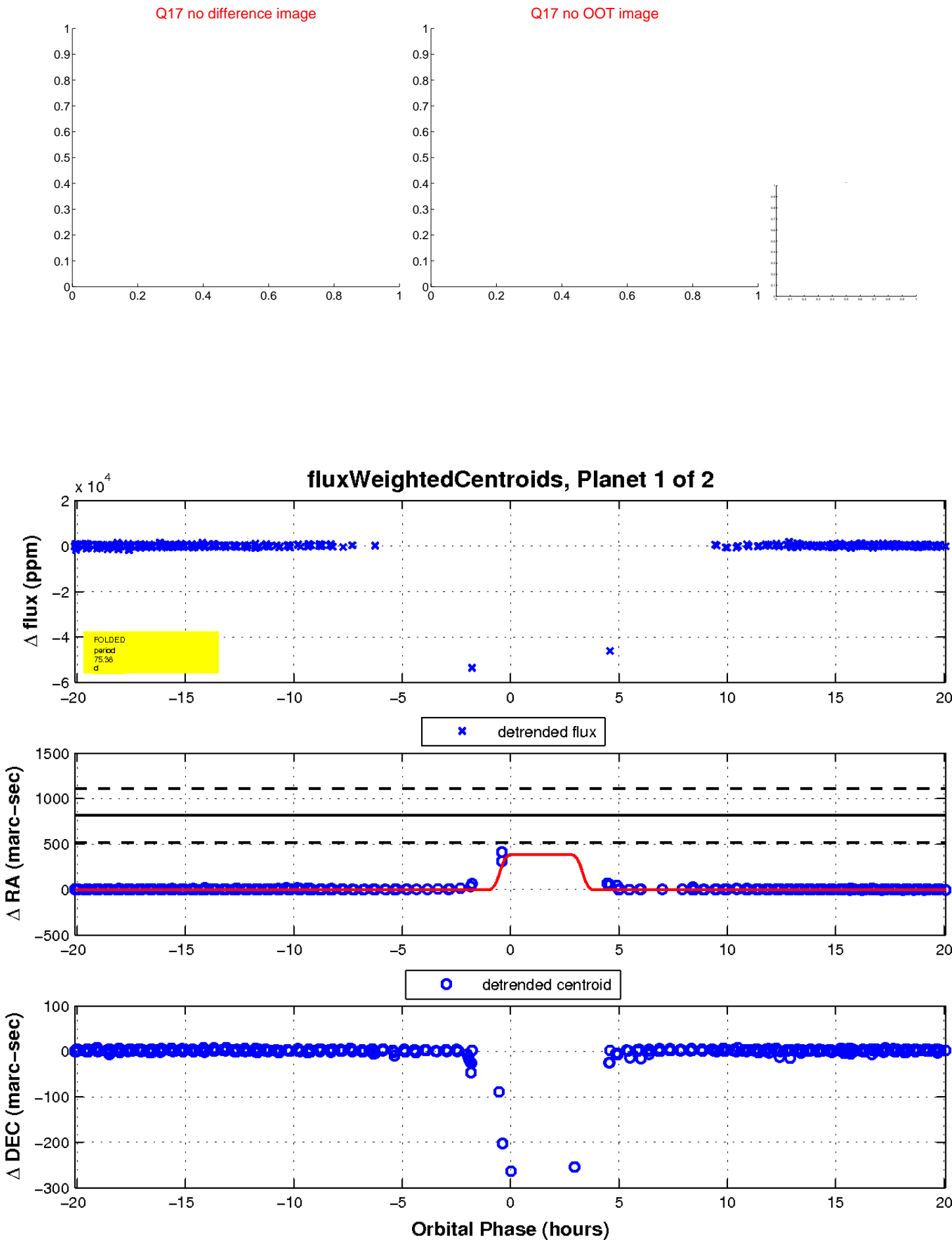
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

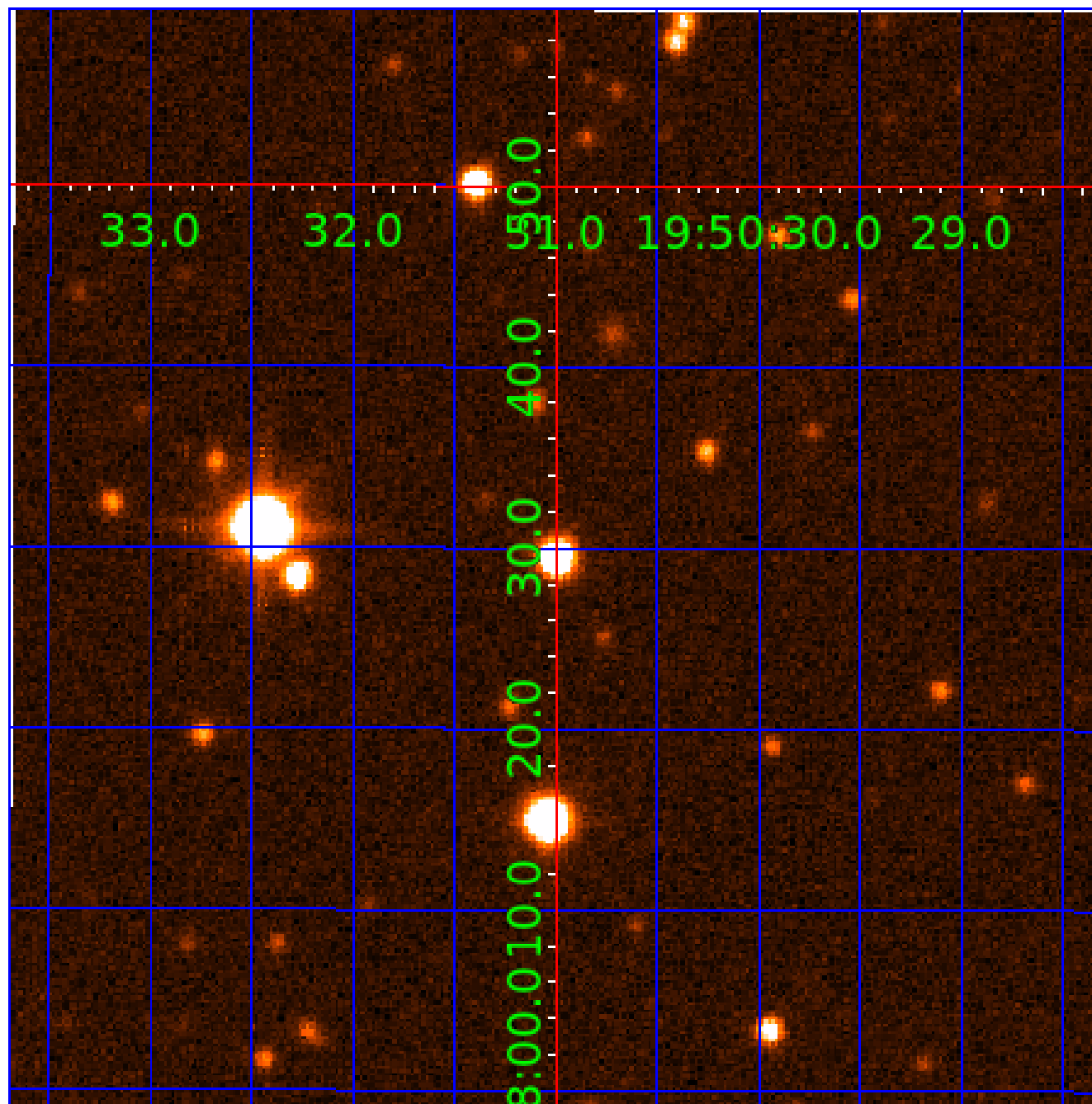


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006307062

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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006307062-02	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.

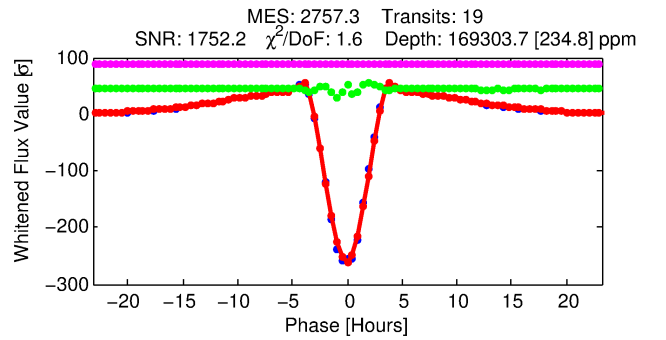
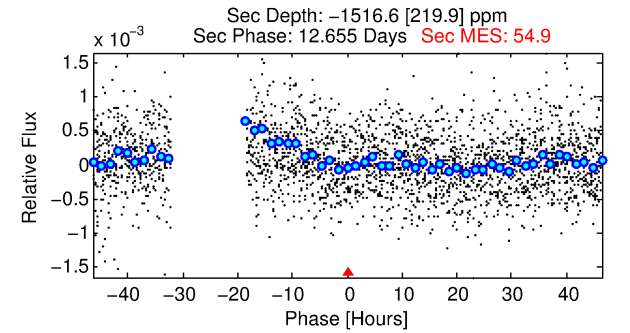
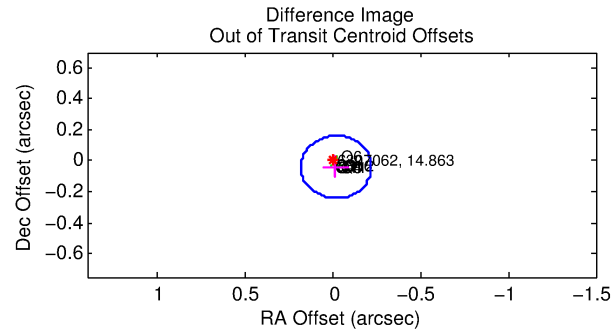
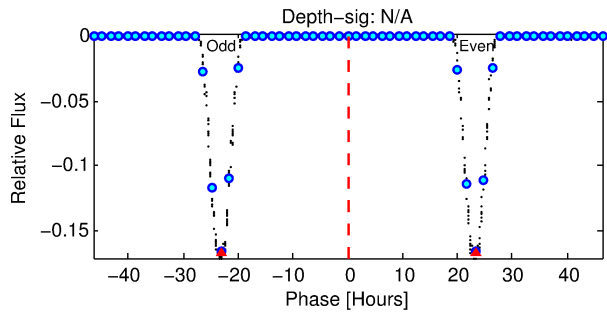
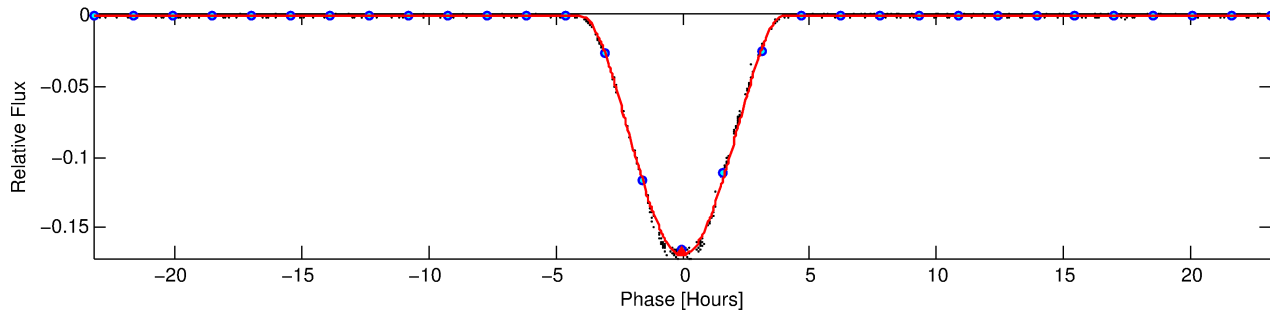
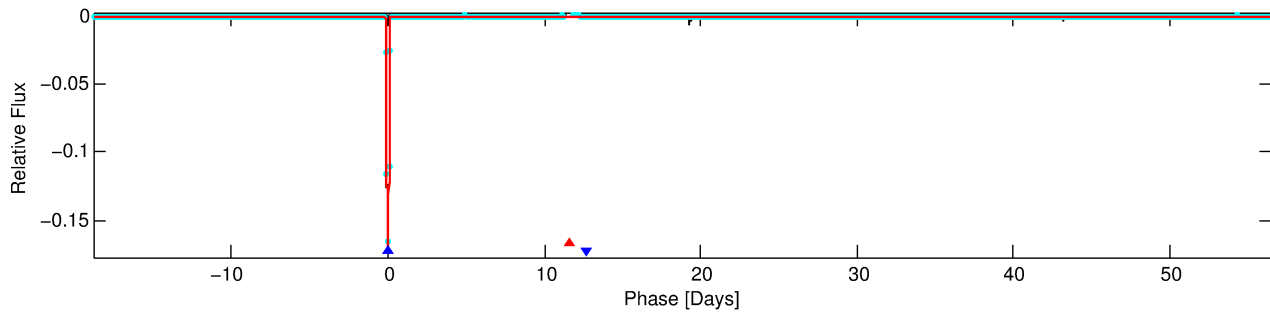
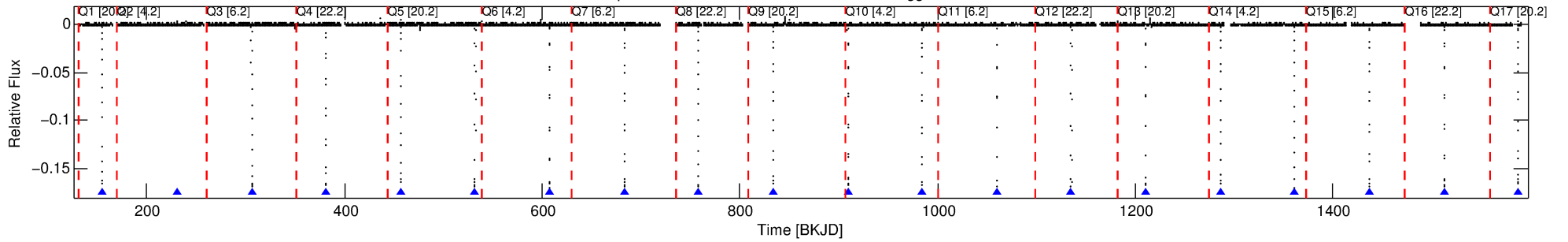
Ephemeris Match Information For 006307062-02

No Significant Match Found

DV One-Page Summary

KIC: 6307062 Candidate: 2 of 2 Period: 75.379 d
KOI: K03153 Corr: No Ephemeris Match

Kp: 14.86 R*: 0.77 Rs Teff: 5420.0 K Logg: 4.60 Fe/H: -0.200



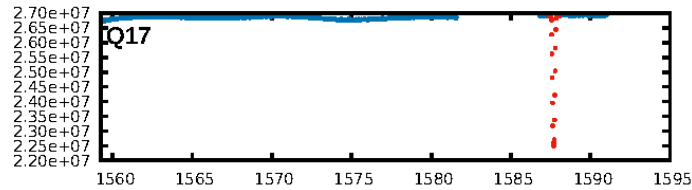
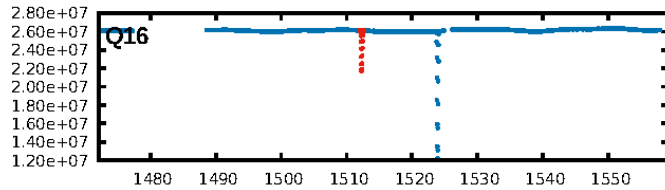
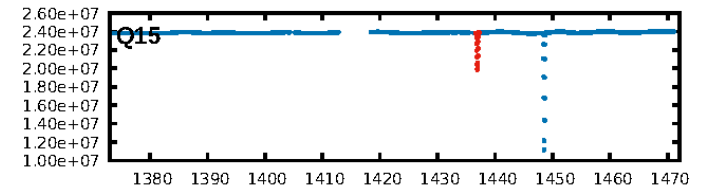
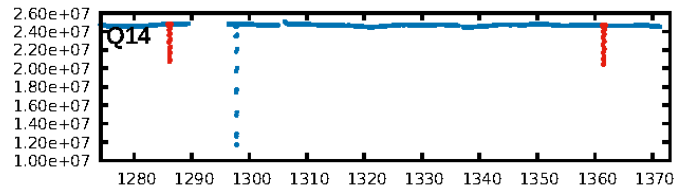
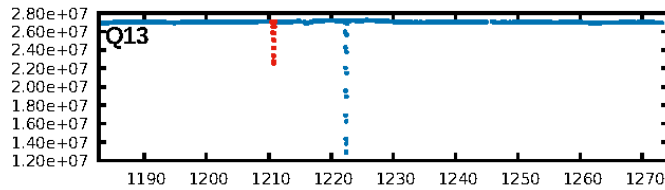
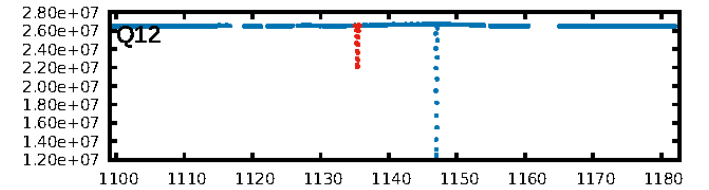
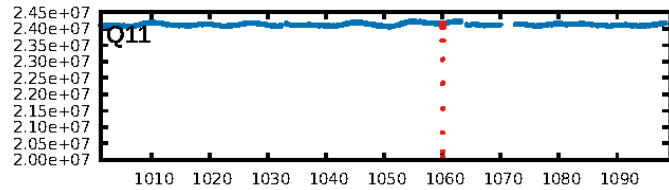
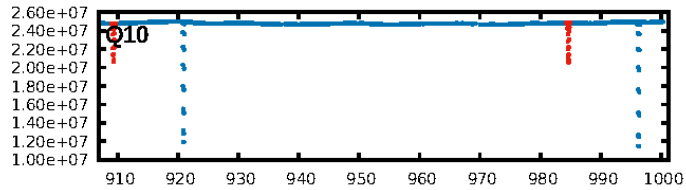
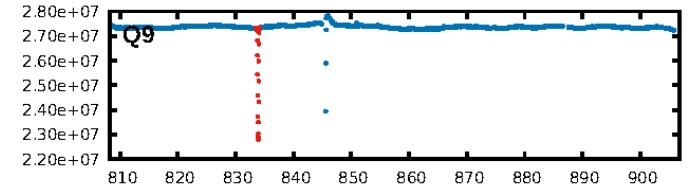
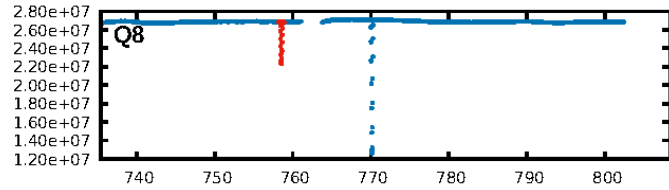
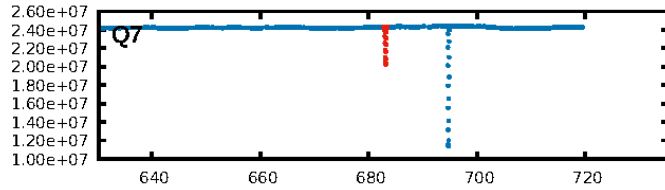
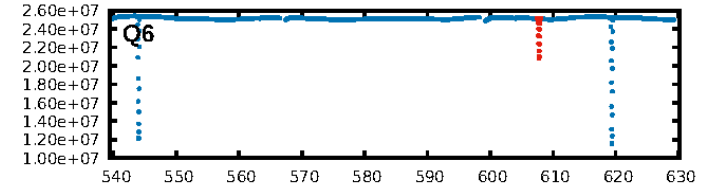
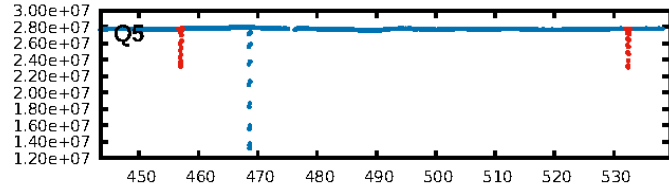
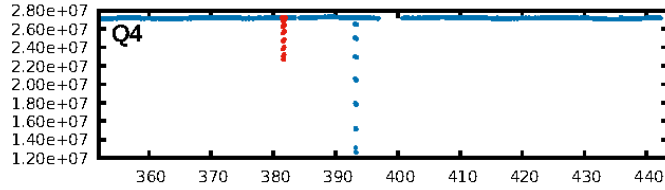
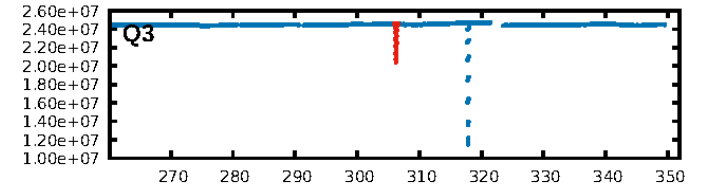
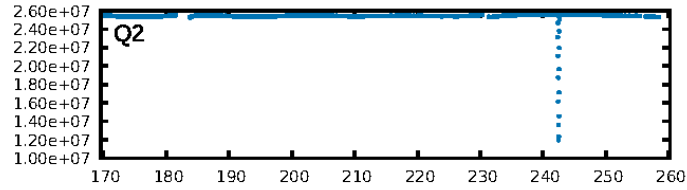
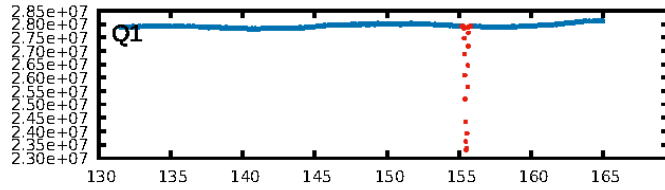
DV Fit Results:

Period = 75.37896 [0.00001] d
Epoch = 155.4986 [0.0001] BKJD
Rp/R* = 0.5451 [0.0529]
a/R* = 94.89 [1.06]
b = 0.87 [0.08]
Seff = 4.18 [1.04]
Teq = 365 [23] K
Rp = 45.86 [9.23] Re
a = 0.3316 [0.0495] AU
Ag = N/A
Teffp = N/A

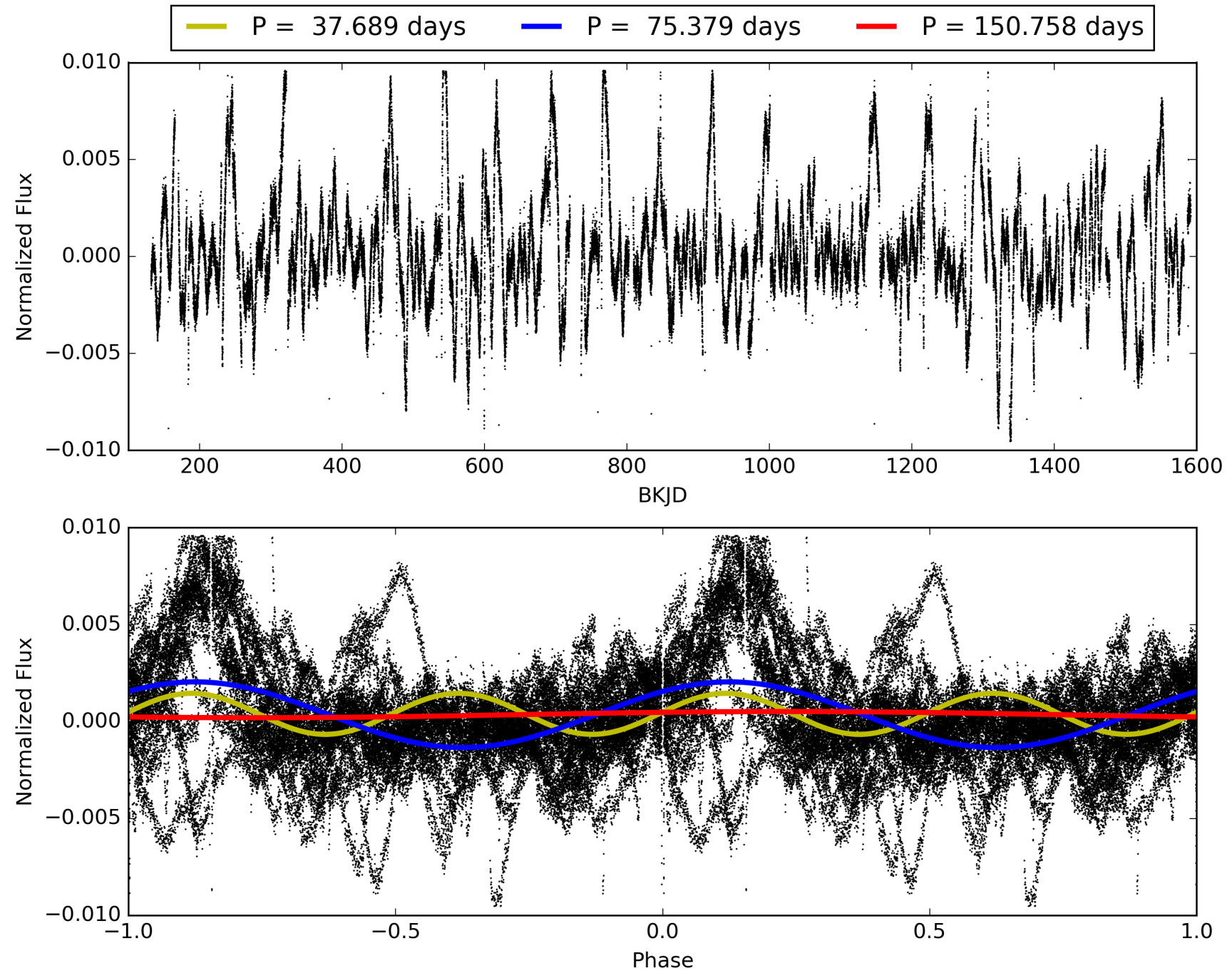
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 83.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 6.009
Centroid-sig: N/A
Centroid-so: 0.277 arcsec [79.63σ]
OotOffset-rm: 0.044 arcsec [0.65σ]
KicOffset-rm: 0.099 arcsec [1.46σ]
OotOffset-st: 1/3/4/0 [8]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006307062-02, PDC Light Curves

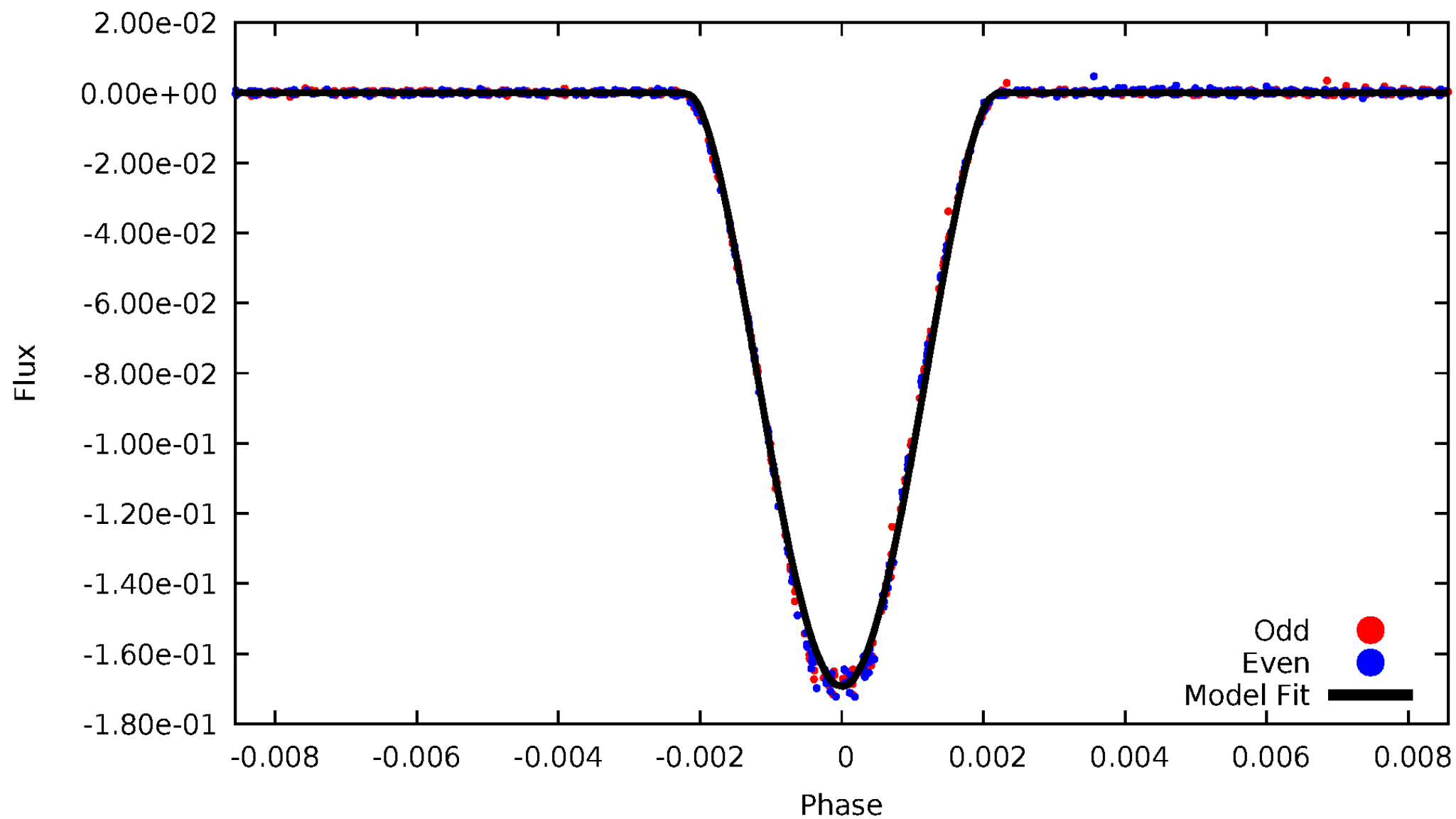


TCE 006307062-02



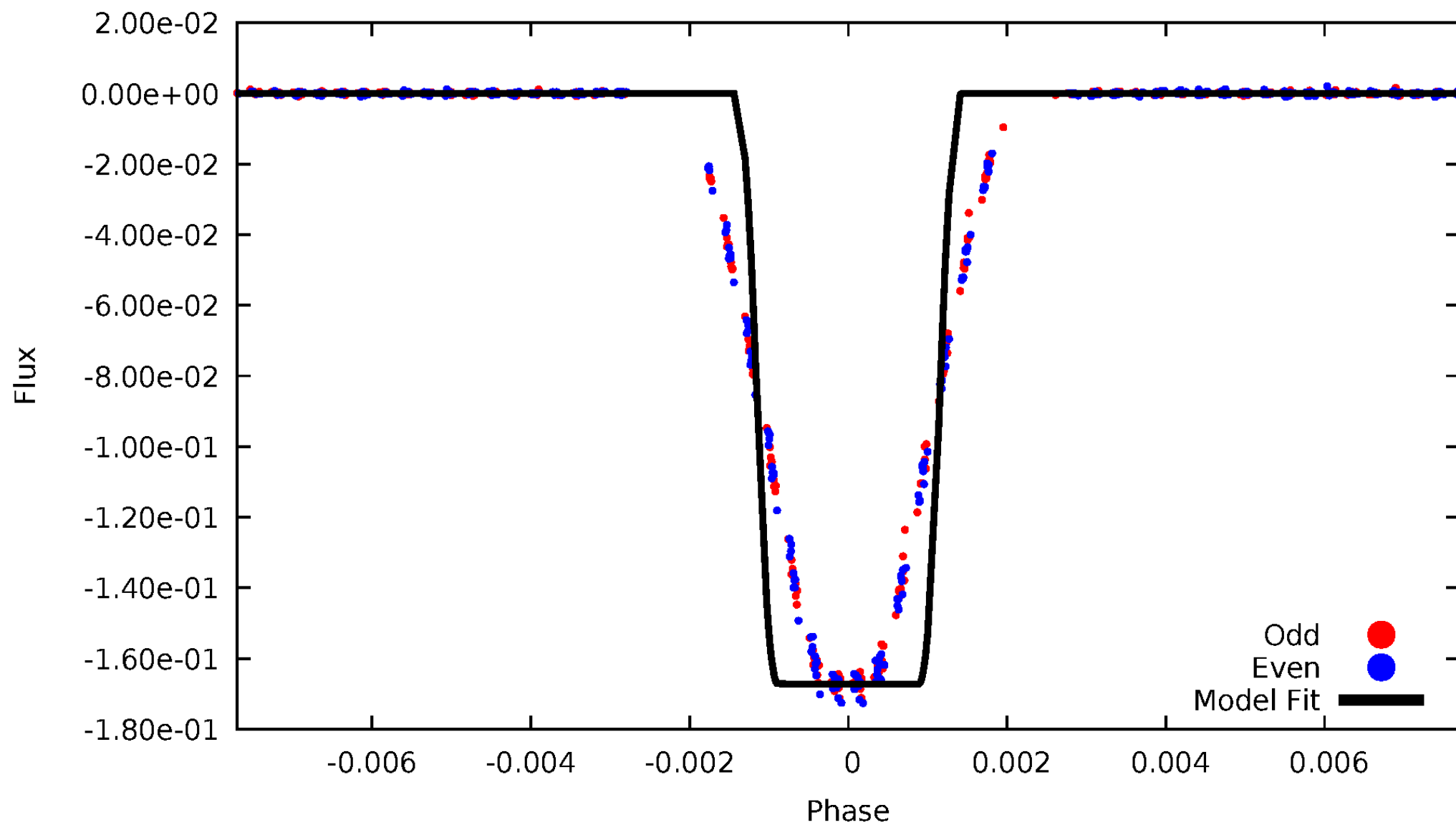
DV Odd/Even

TCE 006307062-02



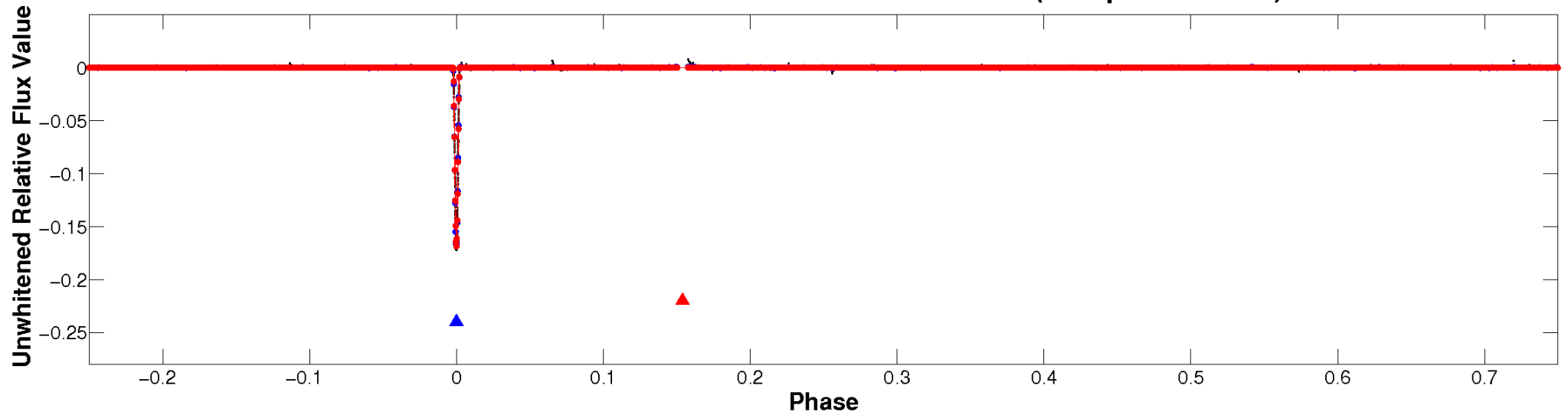
ALT Odd/Even

TCE 006307062-02

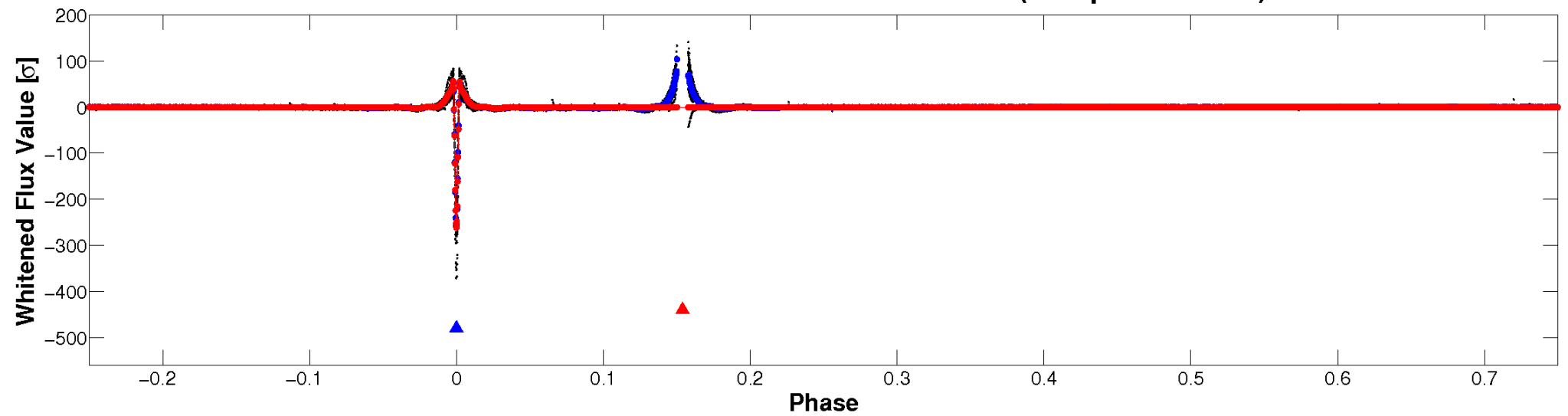


Non-Whitened Vs. Whitened Light Curve

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

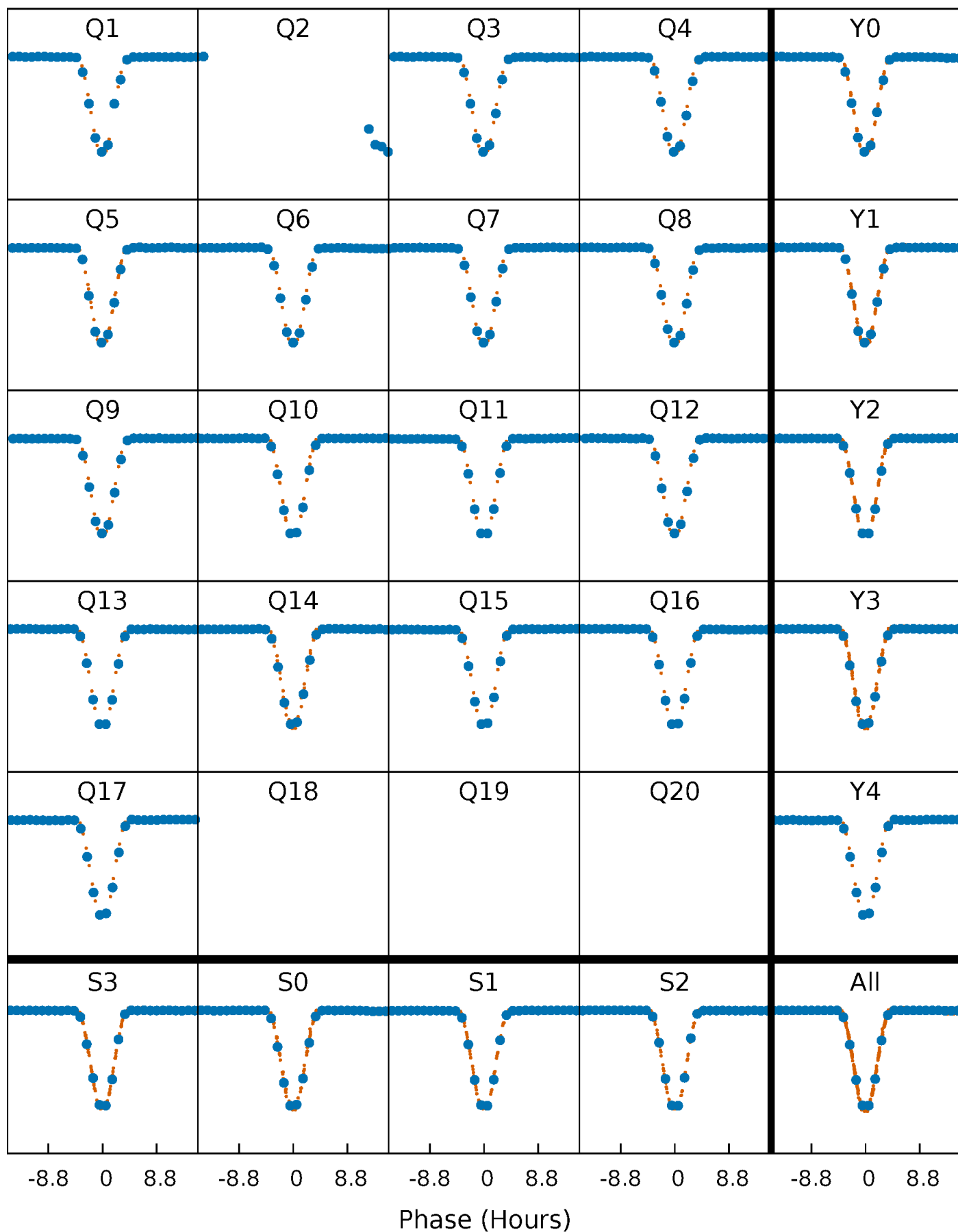


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



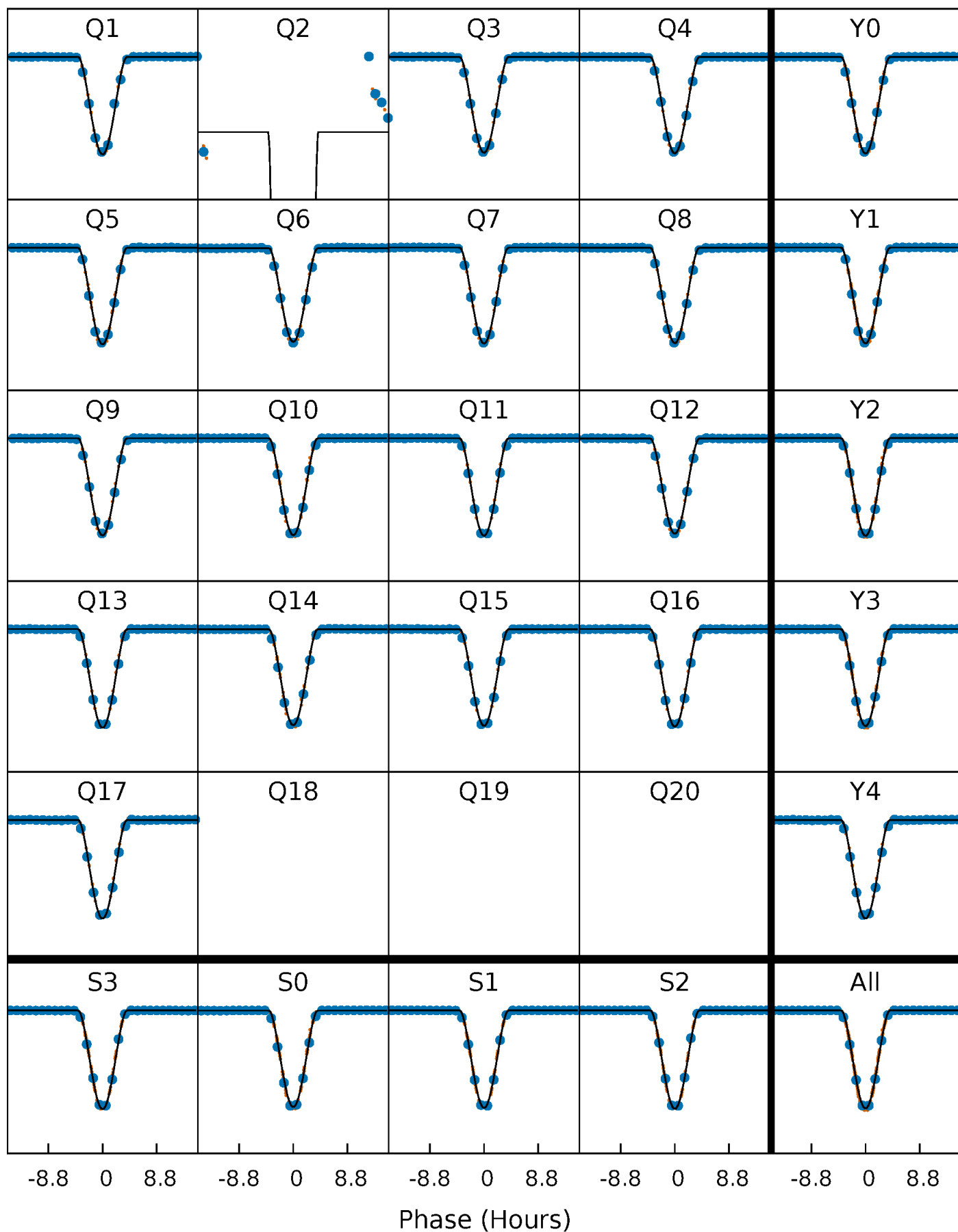
PDC Quarter-Phased Transit Curves

TCE 006307062-02 P= 75.378963 Days $T_0=155.498613$ (BKJD)



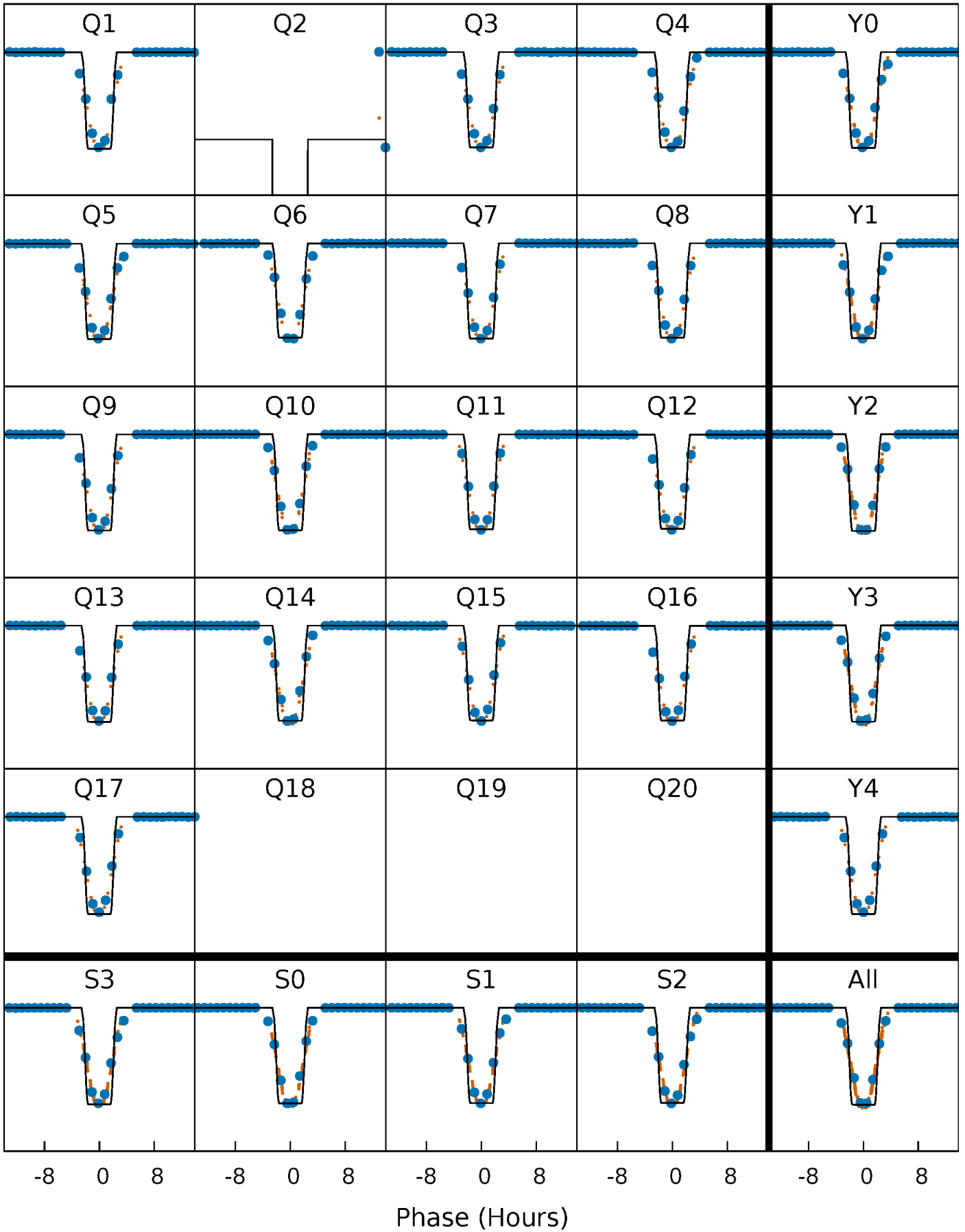
DV Quarter-Phased Transit Curves

TCE 006307062-02 P= 75.378963 Days $T_0=155.498613$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

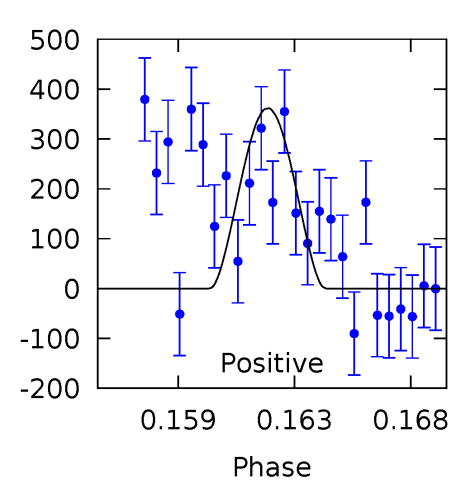
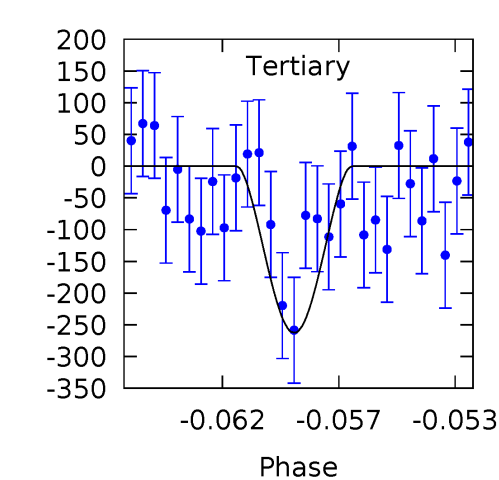
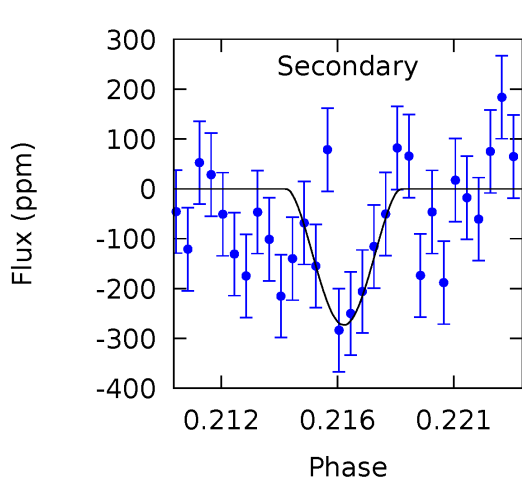
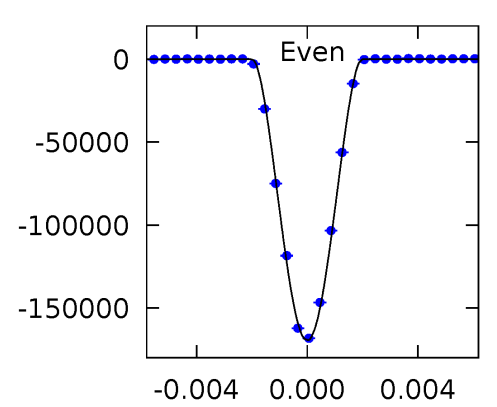
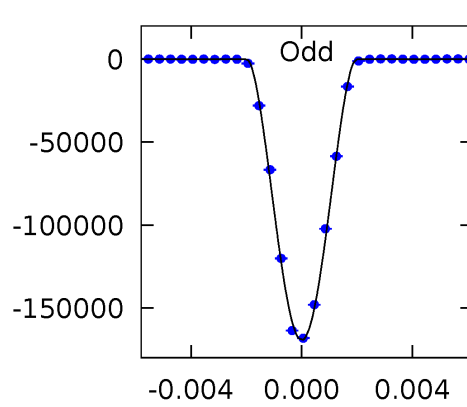
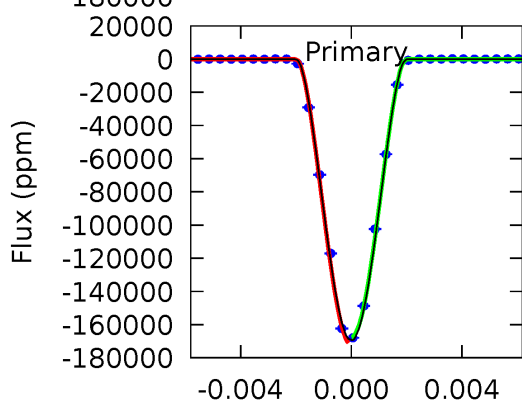
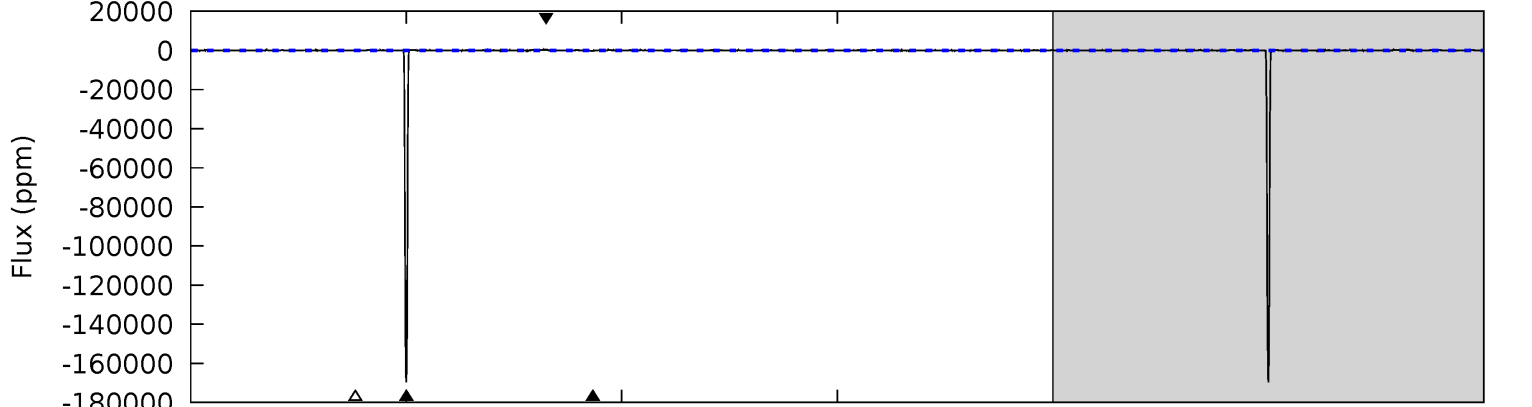
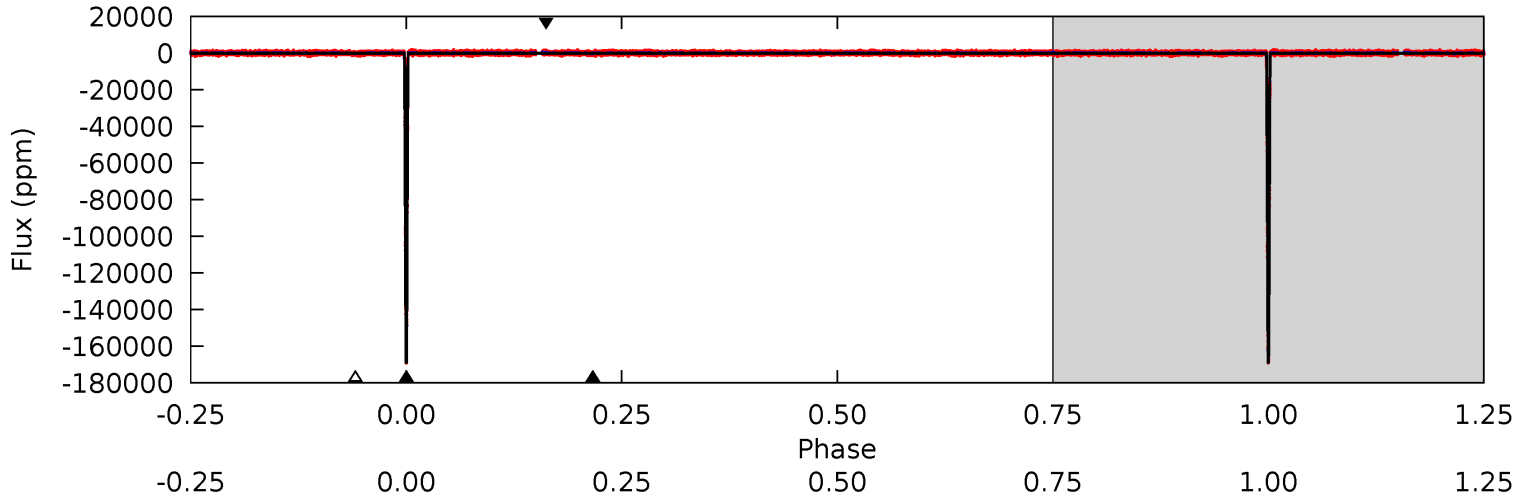
TCE 006307062-02 P= 75.379202 Days $T_0=155.495039$ (BKJD)



DV Model-Shift Uniqueness Test

006307062-02, P = 75.378963 Days, E = 80.119650 Days

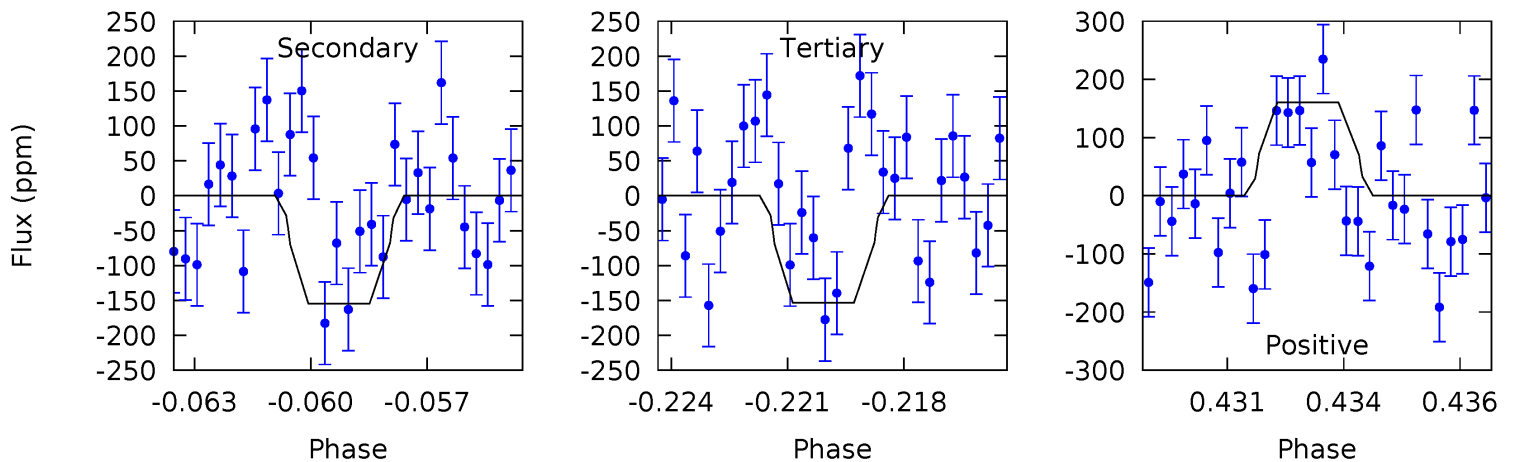
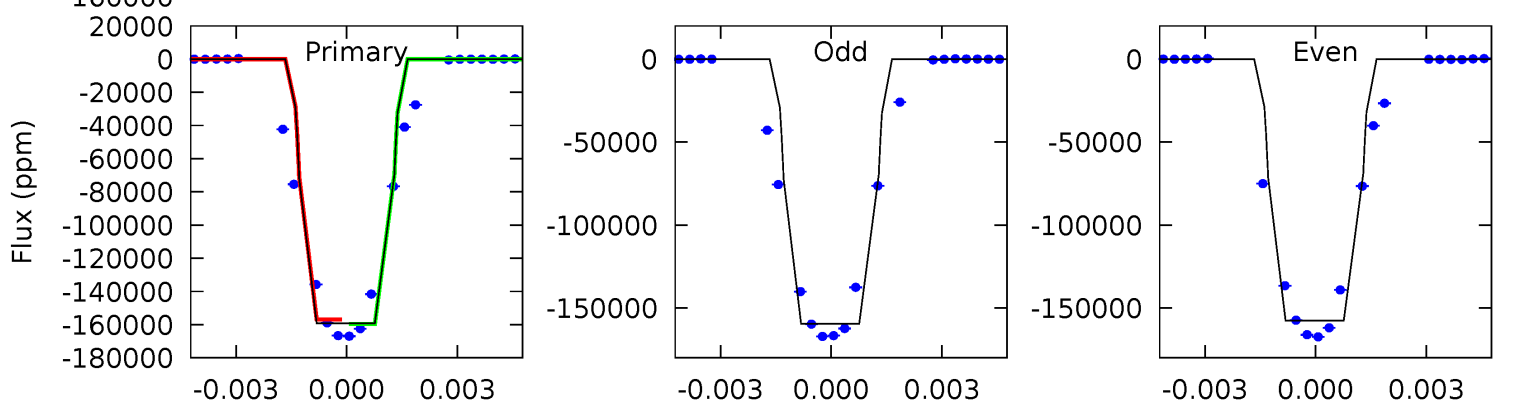
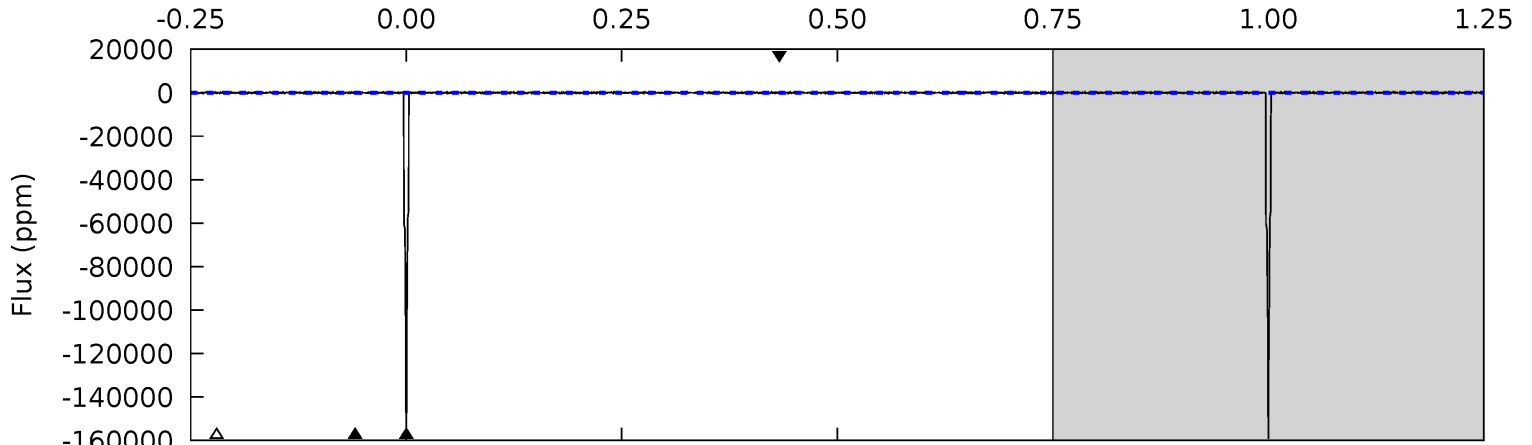
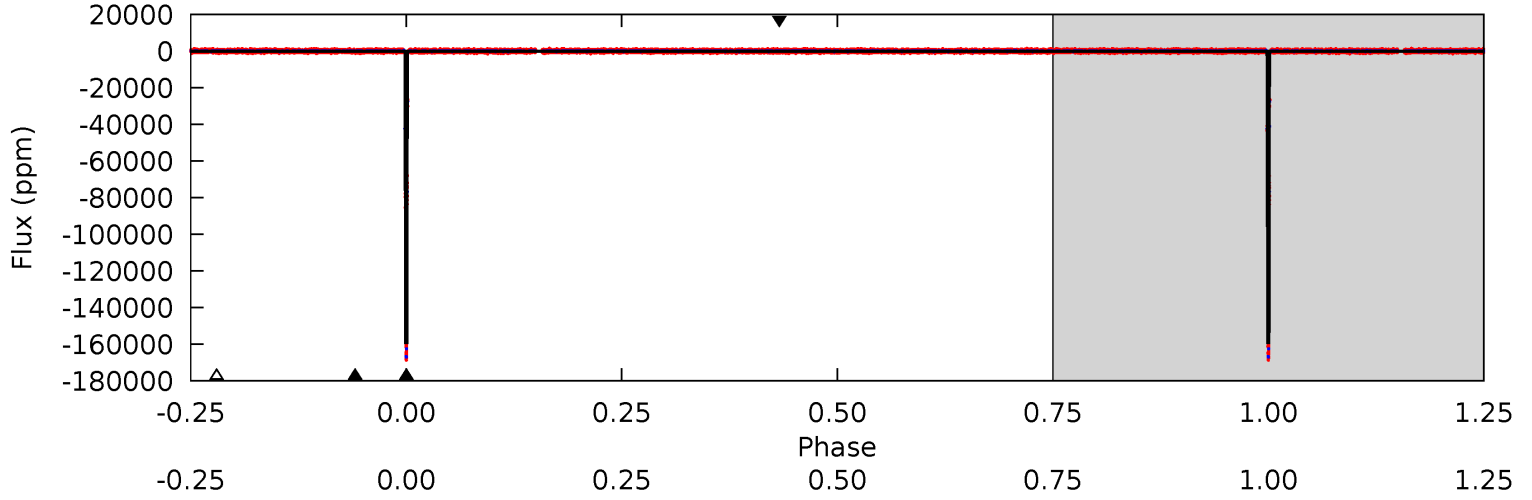
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6208	10.0	9.62	13.2	5.18	2.85	3.01	6199	6195	0.39	-3.24	4.45	1.00	0.00	0



Alt Model-Shift Uniqueness Test

006307062-02, P = 75.379202 Days, E = 80.115837 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3916	3.80	3.77	3.94	5.27	3.00	17.1	3912	3912	0.03	-0.14	23.9	1.00	0.00	0



Stellar Parameters For KIC 006307062

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5420^{+162}_{-146}	$4.596^{+0.030}_{-0.120}$	$-0.200^{+0.300}_{-0.300}$	$0.771^{+0.136}_{-0.063}$	$0.864^{+0.080}_{-0.098}$	$2.658^{+0.431}_{-0.966}$
	+3%/-3%	+1%/-3%	+150%/-150%	+18%/-8%	+9%/-11%	+16%/-36%
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 006307062-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-273 ± 27	$47.36^{+5.88}_{-5.60}$	517^{+23}_{-20}	1944^{+53}_{-49}	$7.277^{+2.150}_{-1.595}$
Alt.	-155 ± 41	$35.24^{+5.89}_{-5.21}$	519^{+23}_{-19}	1946^{+85}_{-82}	$7.289^{+3.648}_{-2.477}$

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

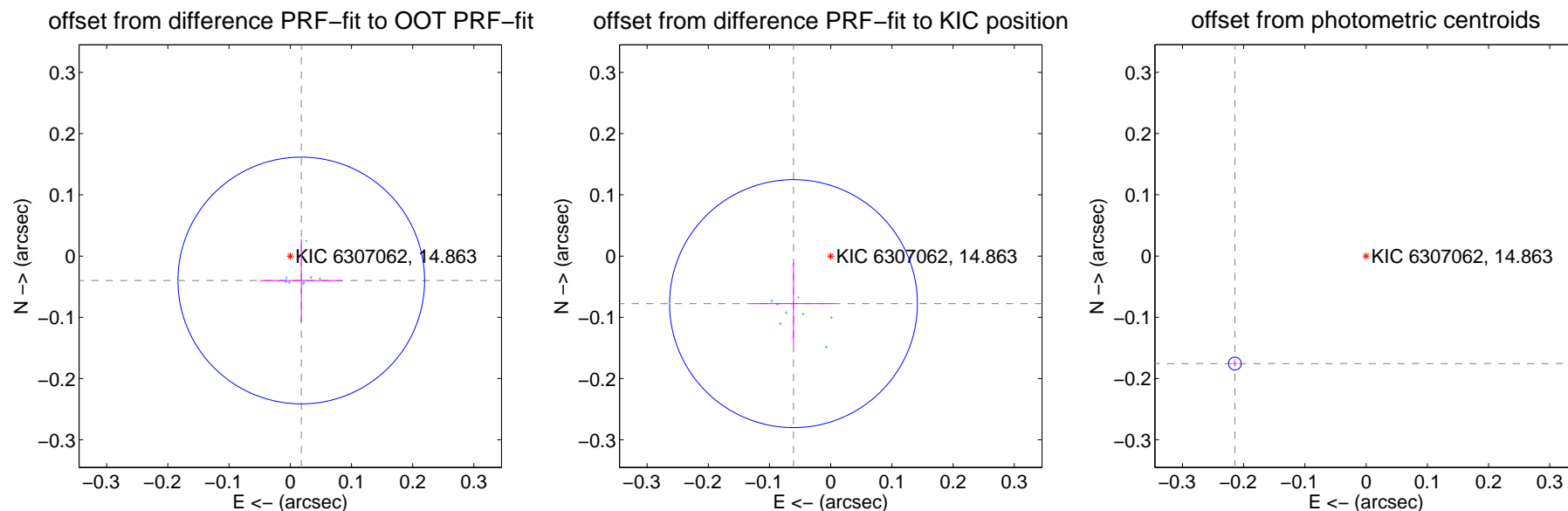
DV Centroid Data

Supplemental centroid analysis for 006307062-02. Kepler magnitude: 14.86. Transit SNR 1752.17

There are 14 quarters with good PRF difference image offsets

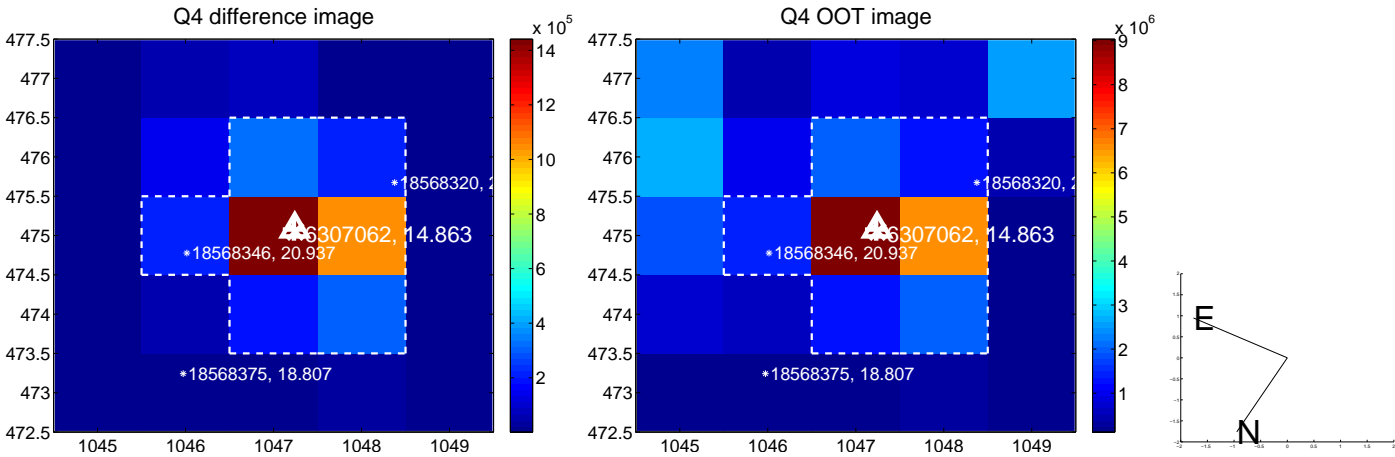
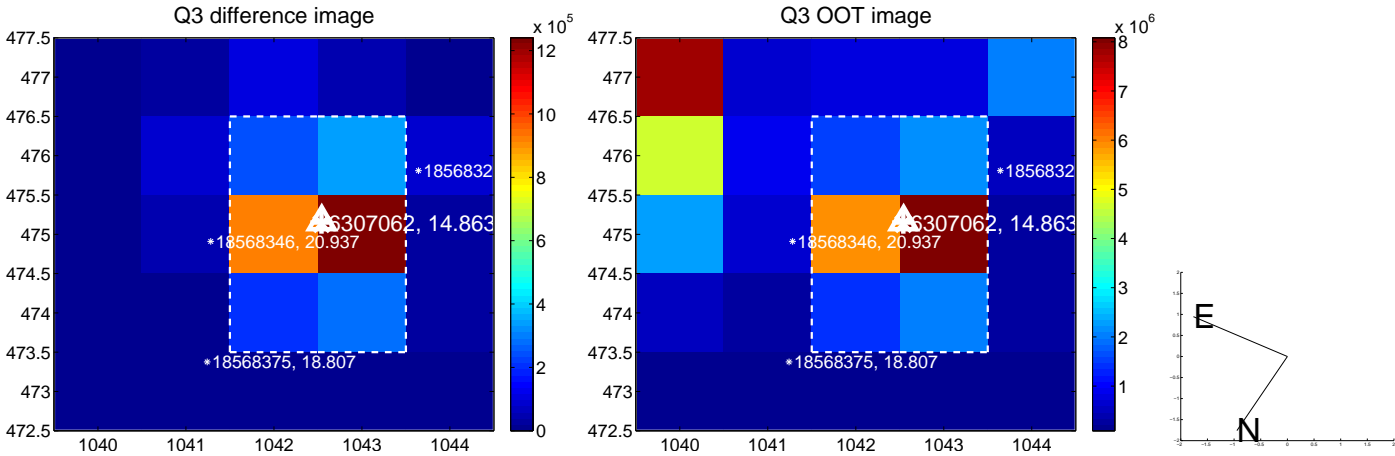
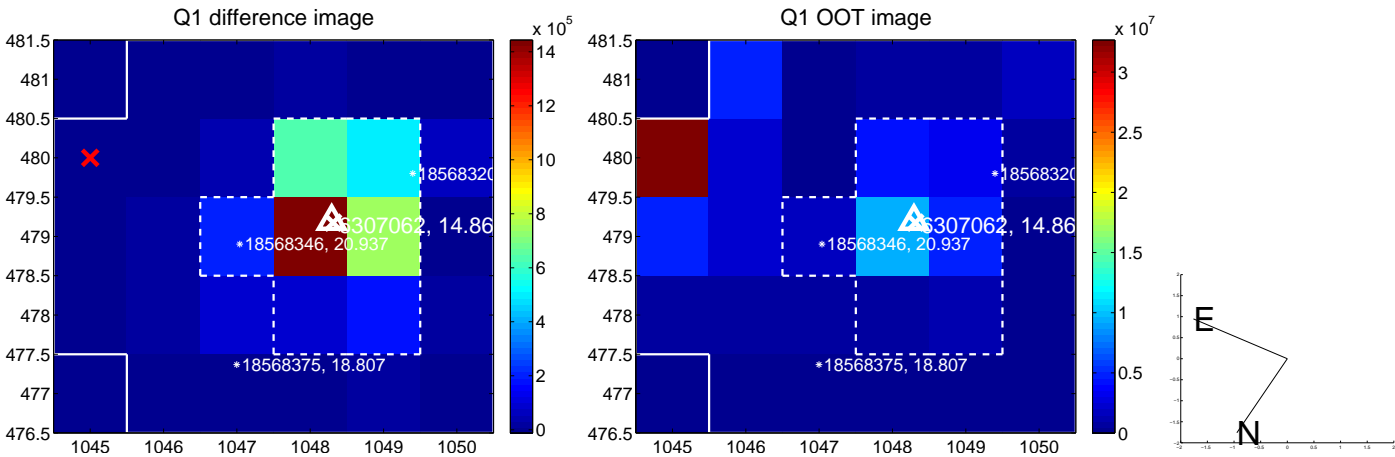
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.067	0.65	-0.018 ± 0.067	-0.040 ± 0.067
PRF-fit source offset from KIC position	0.099 ± 0.067	1.46	0.061 ± 0.067	-0.078 ± 0.068
photometric centroid source offset	0.28 ± 0.00	79.63	0.21 ± 0.00	-0.18 ± 0.00

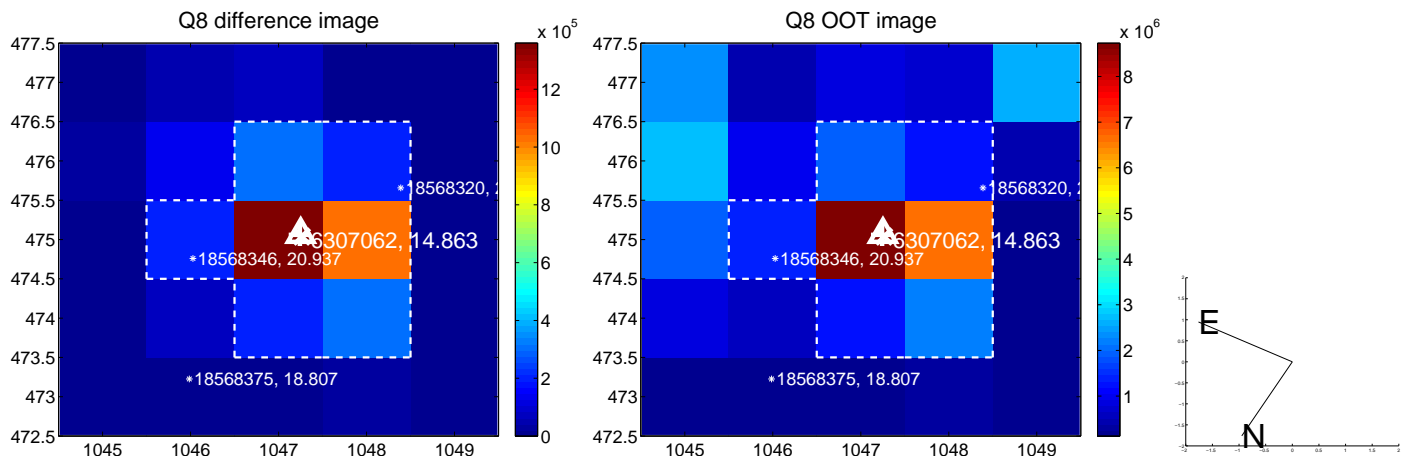
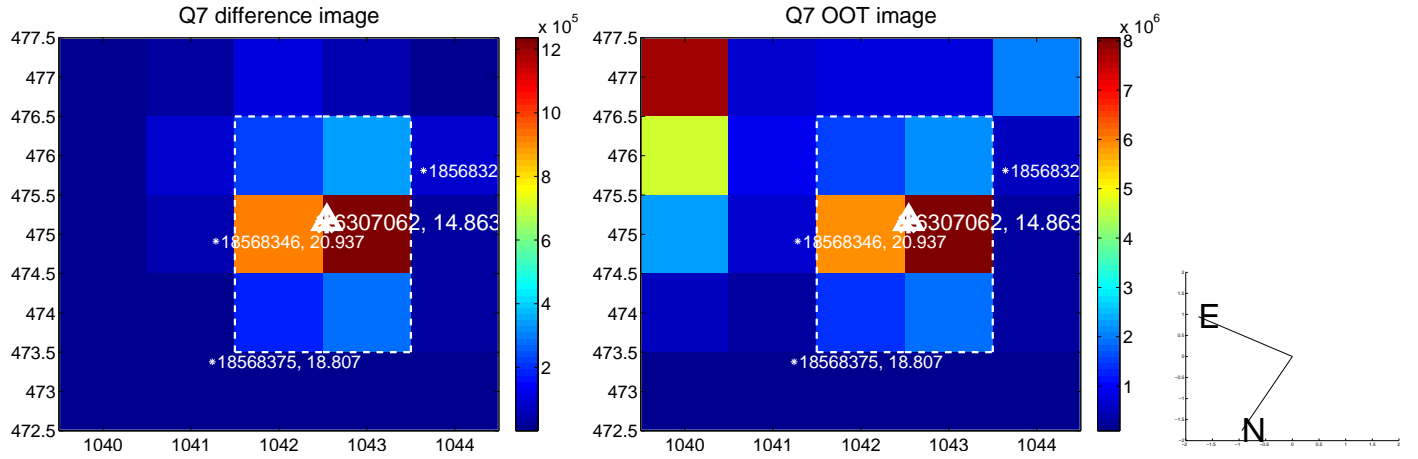
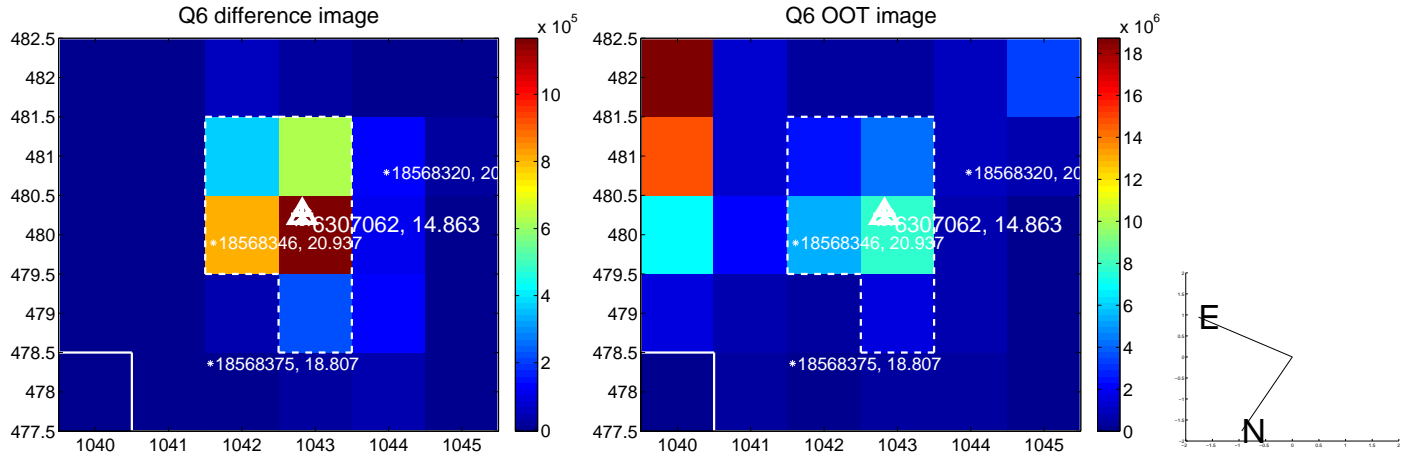
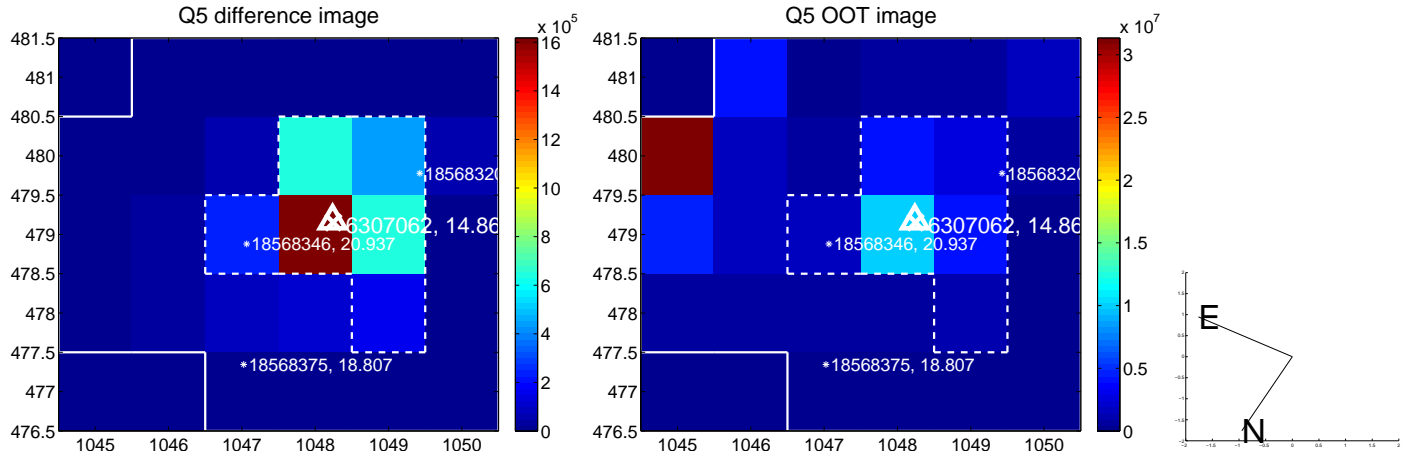


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

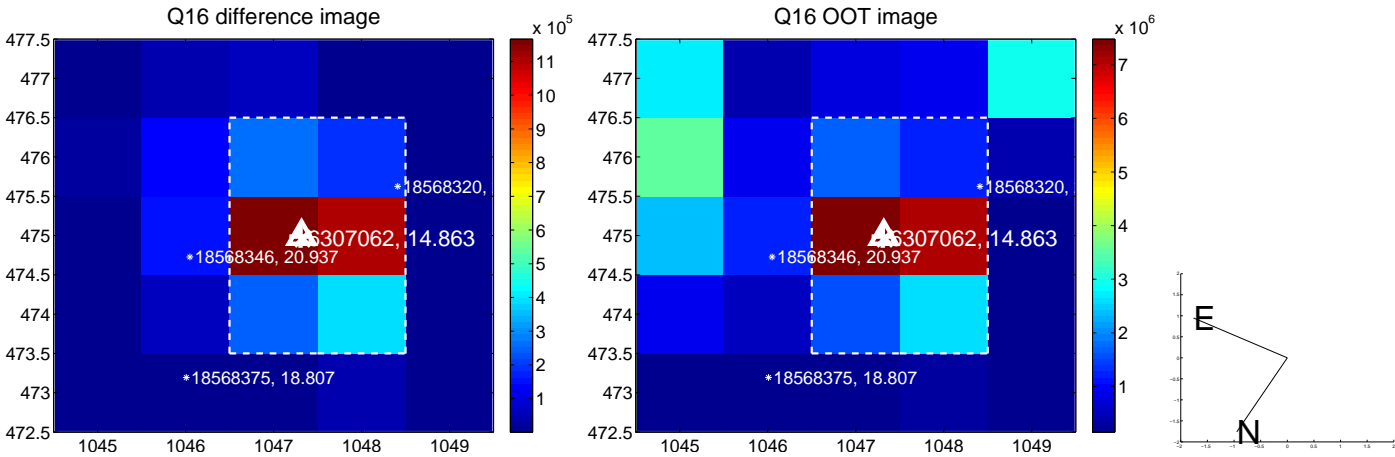
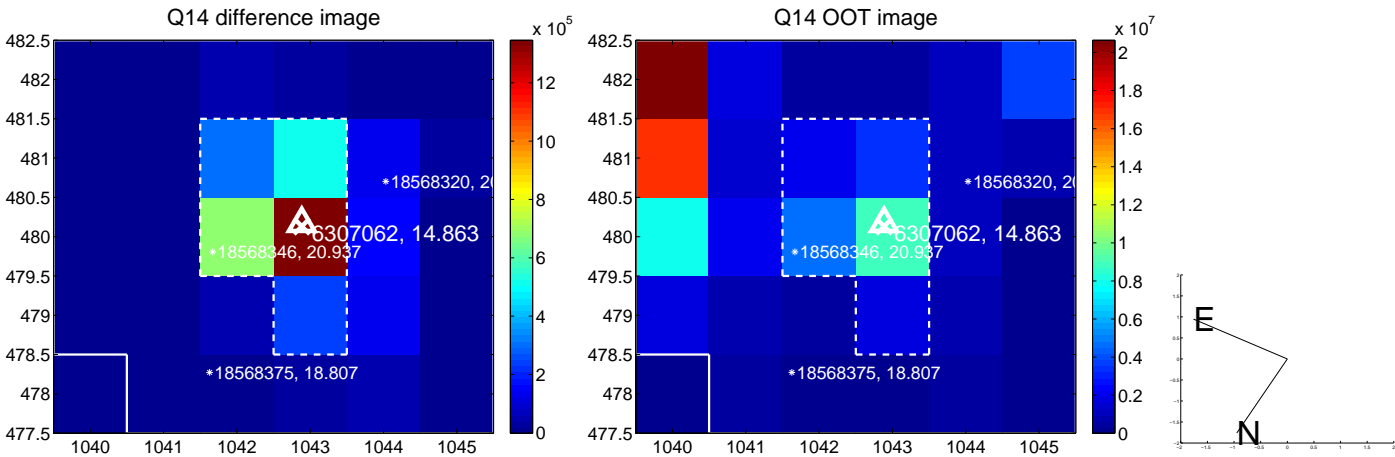
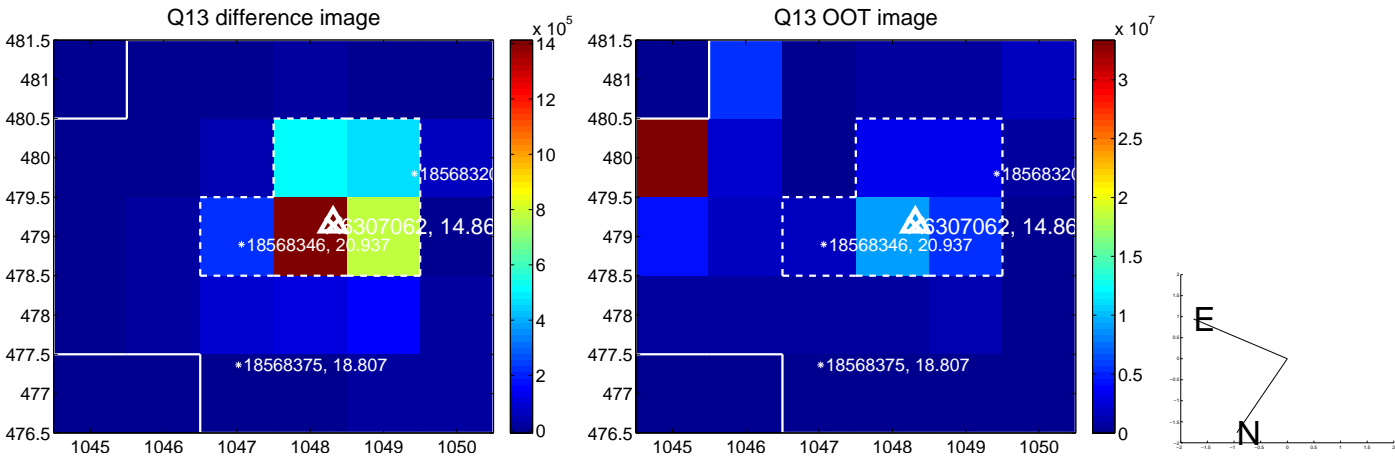
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



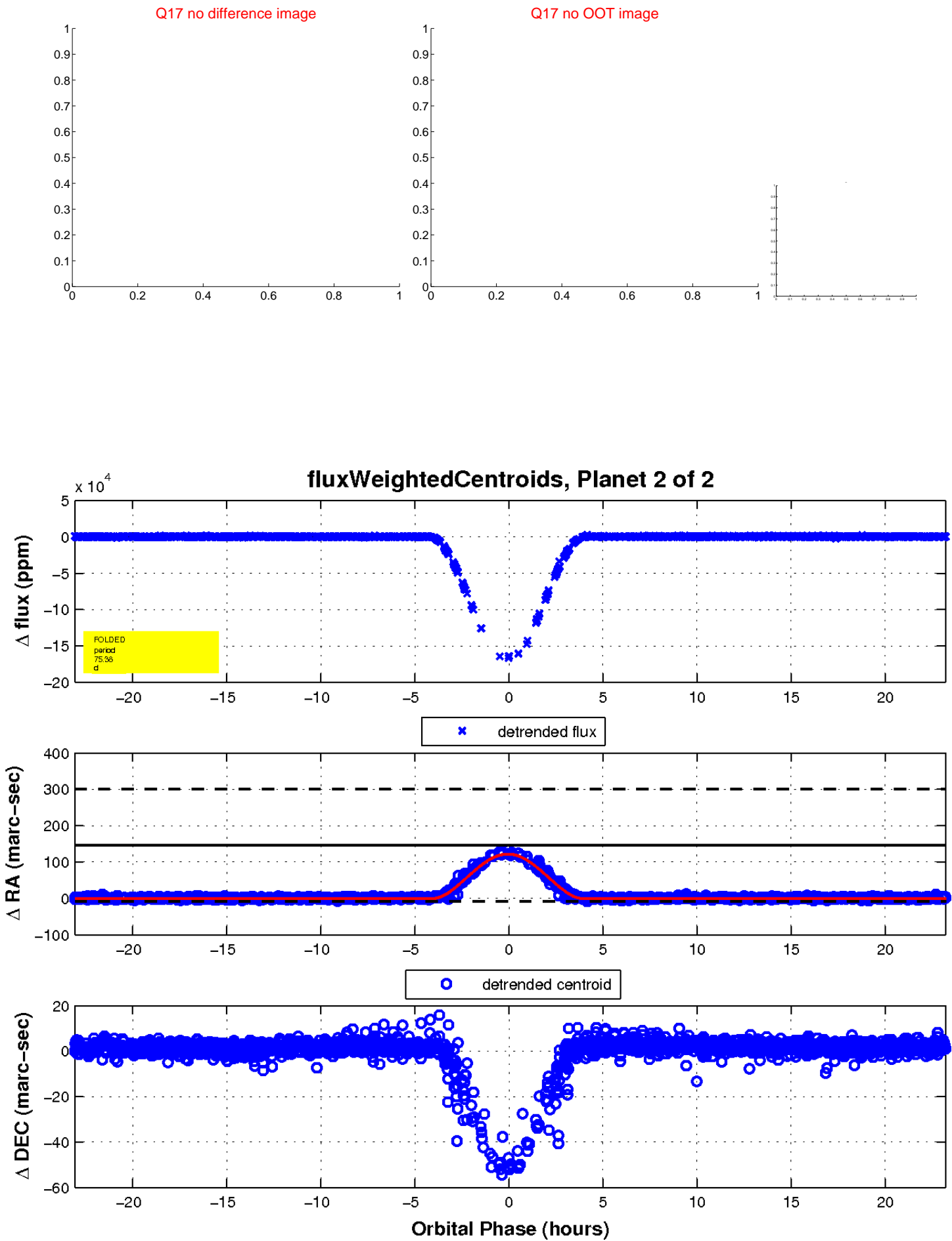
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

