

KIC 008374499

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})
008374499-01	OBS	7026.01	5.251924	136.735174	188437.1	3.500	14686.2	-1.0	0.92	6099	40.32	299.49
008374499-02	OBS	No	2.625943	131.538239	42865.1	3.500	3146.6	-1.0	0.92	6099	19.09	754.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008374499-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008374499-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

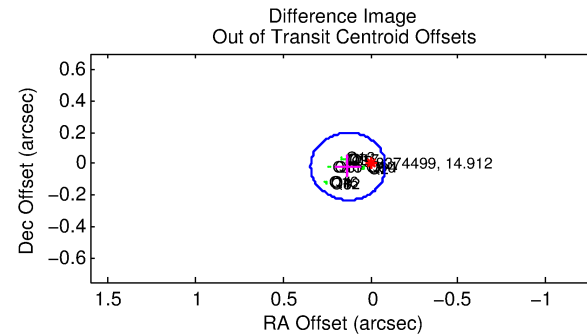
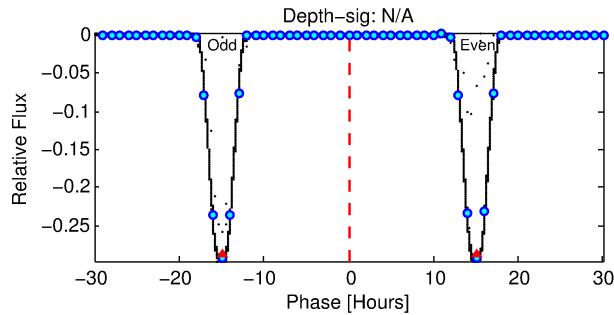
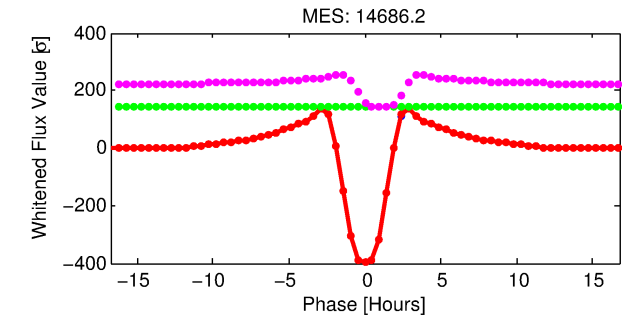
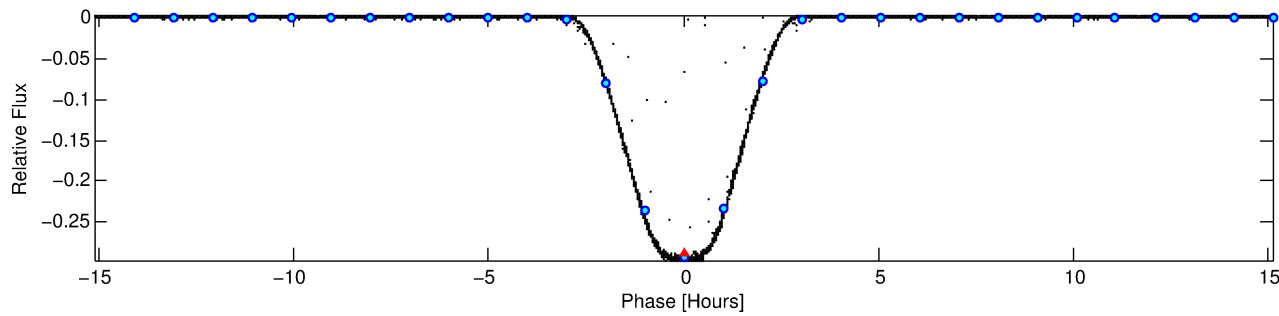
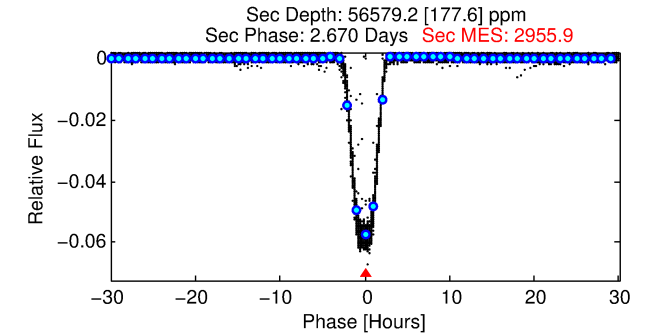
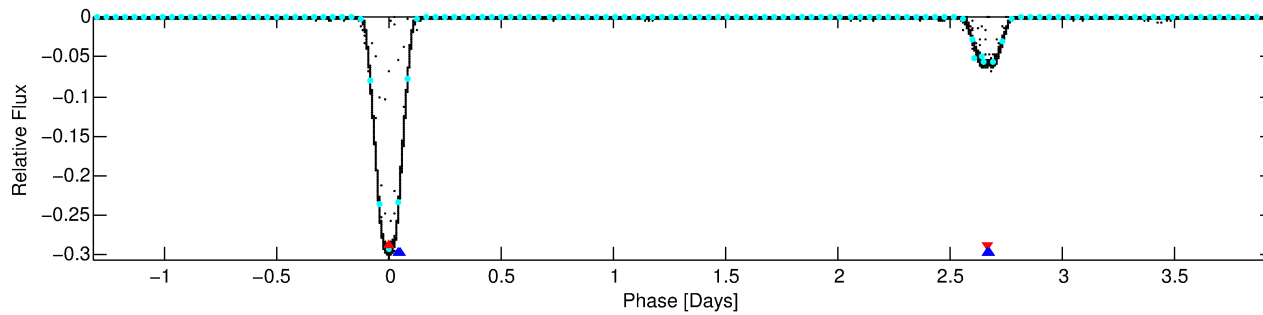
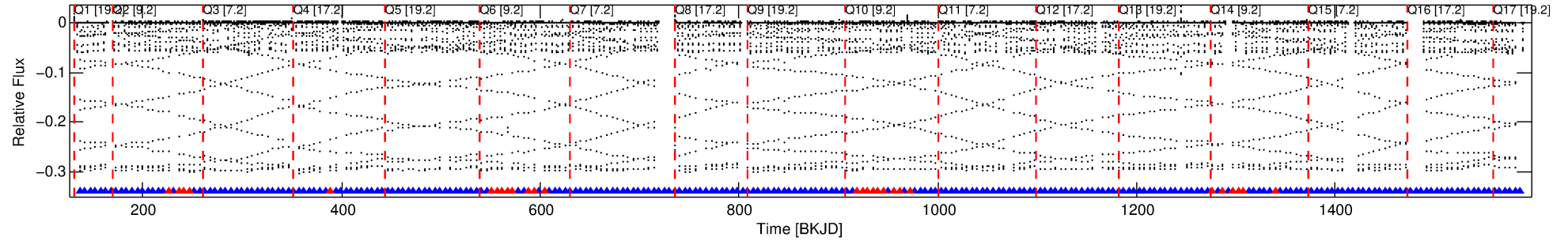
Ephemeris Match Information For 008374499-01

No Significant Match Found

DV One-Page Summary

KIC: 8374499 Candidate: 1 of 2 Period: 5.252 d
KOI: K07026.01 Corr: 0.790

Kp: 14.91 R*: 0.92 Rs Teff: 6099.0 K Logg: 4.51 Fe/H: -0.280



TPS TCE Results:

Period = 5.25192 d
Epoch = 136.7352 BKJD

DV fit results are unavailable

DV Diagnostic Results:

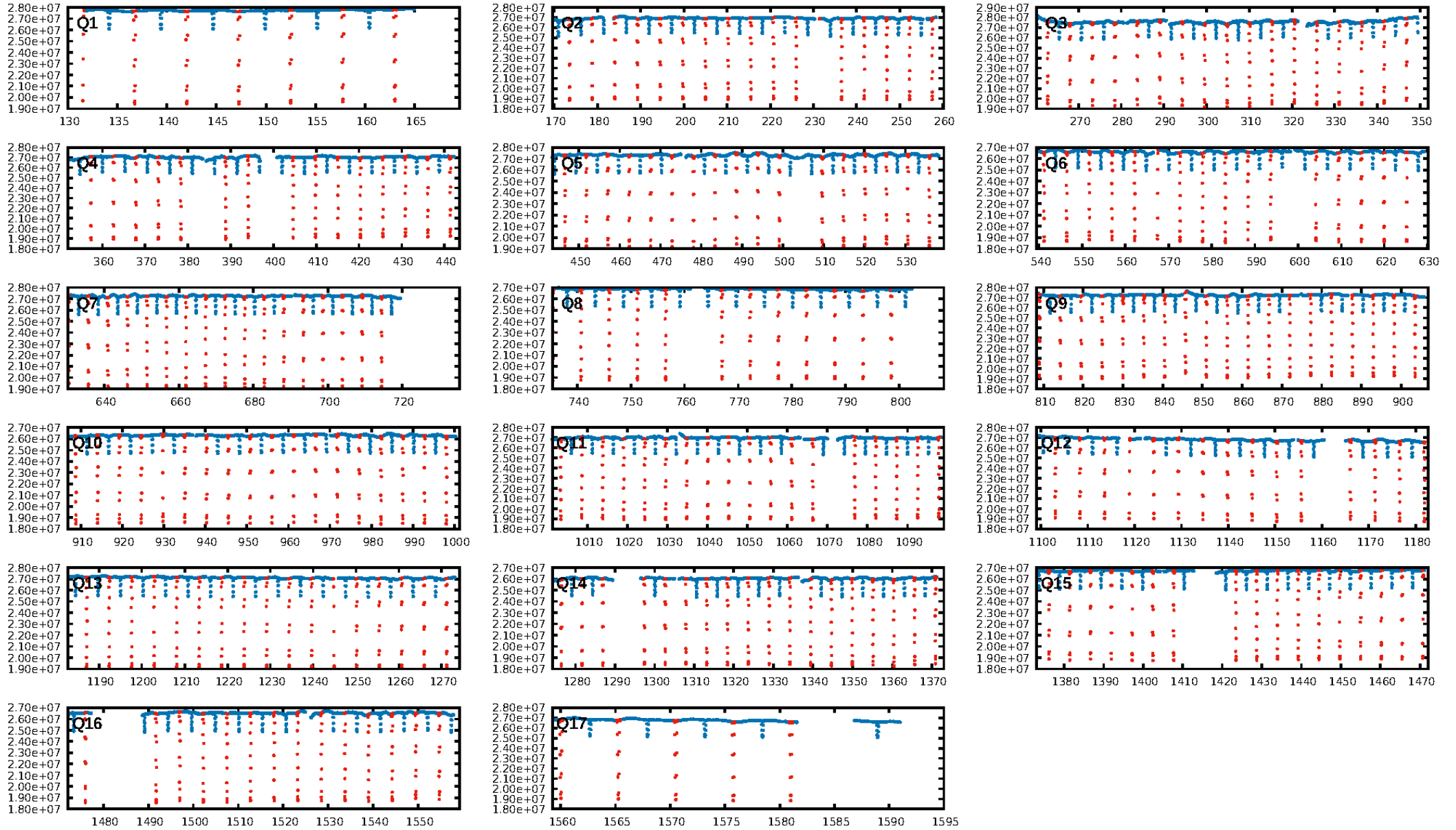
ShortPeriod-sig: 100.0% [12.73σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [217/245]
GhostDiagnostic-chr: 2.495

Centroid-sig: 0.0%
Centroid-so: 0.532 arcsec [764.36σ]
OotOffset-rm: 0.130 arcsec [1.83σ]
KicOffset-rm: 0.072 arcsec [1.06σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

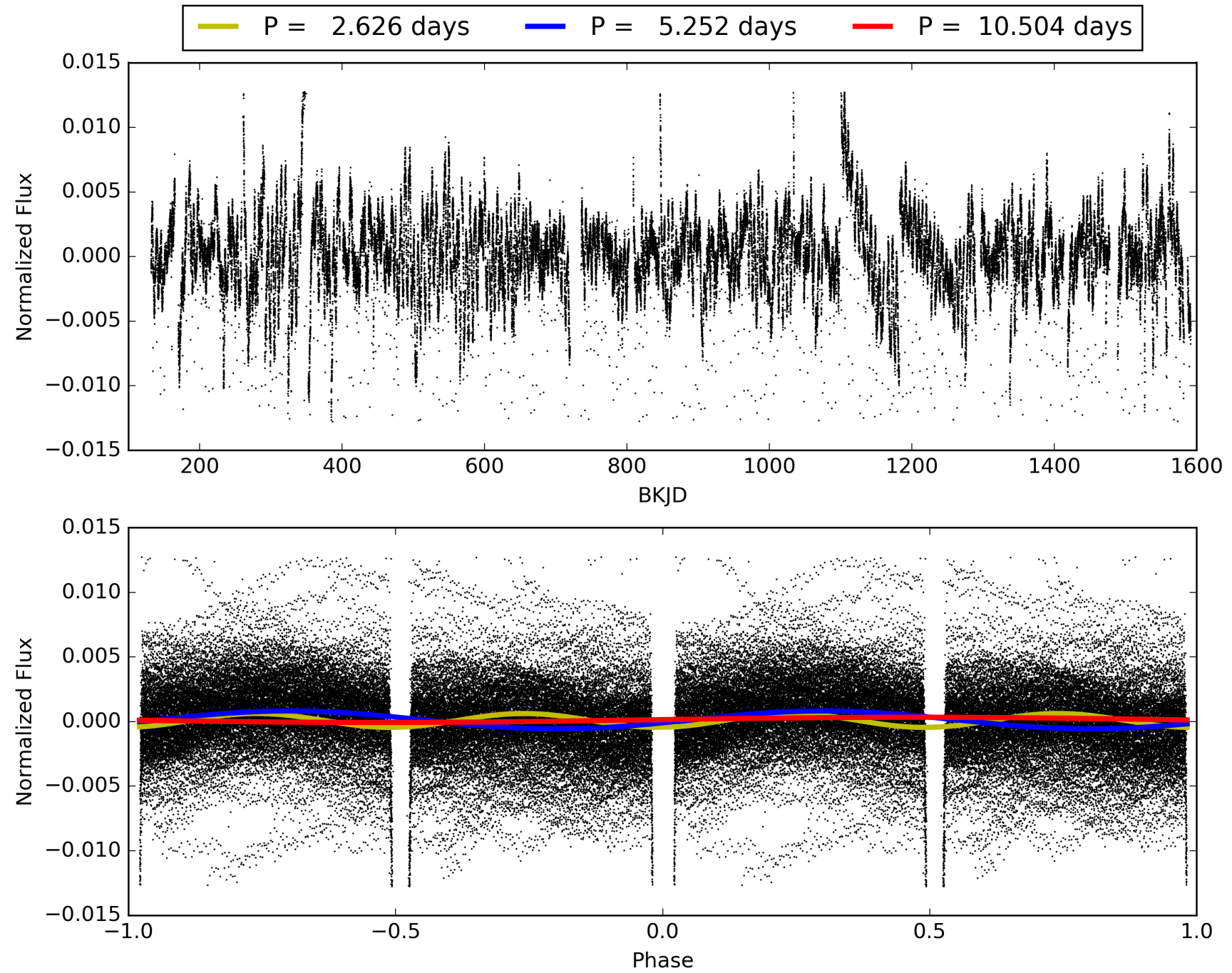
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:04:50 Z

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

TCE 008374499-01, PDC Light Curves

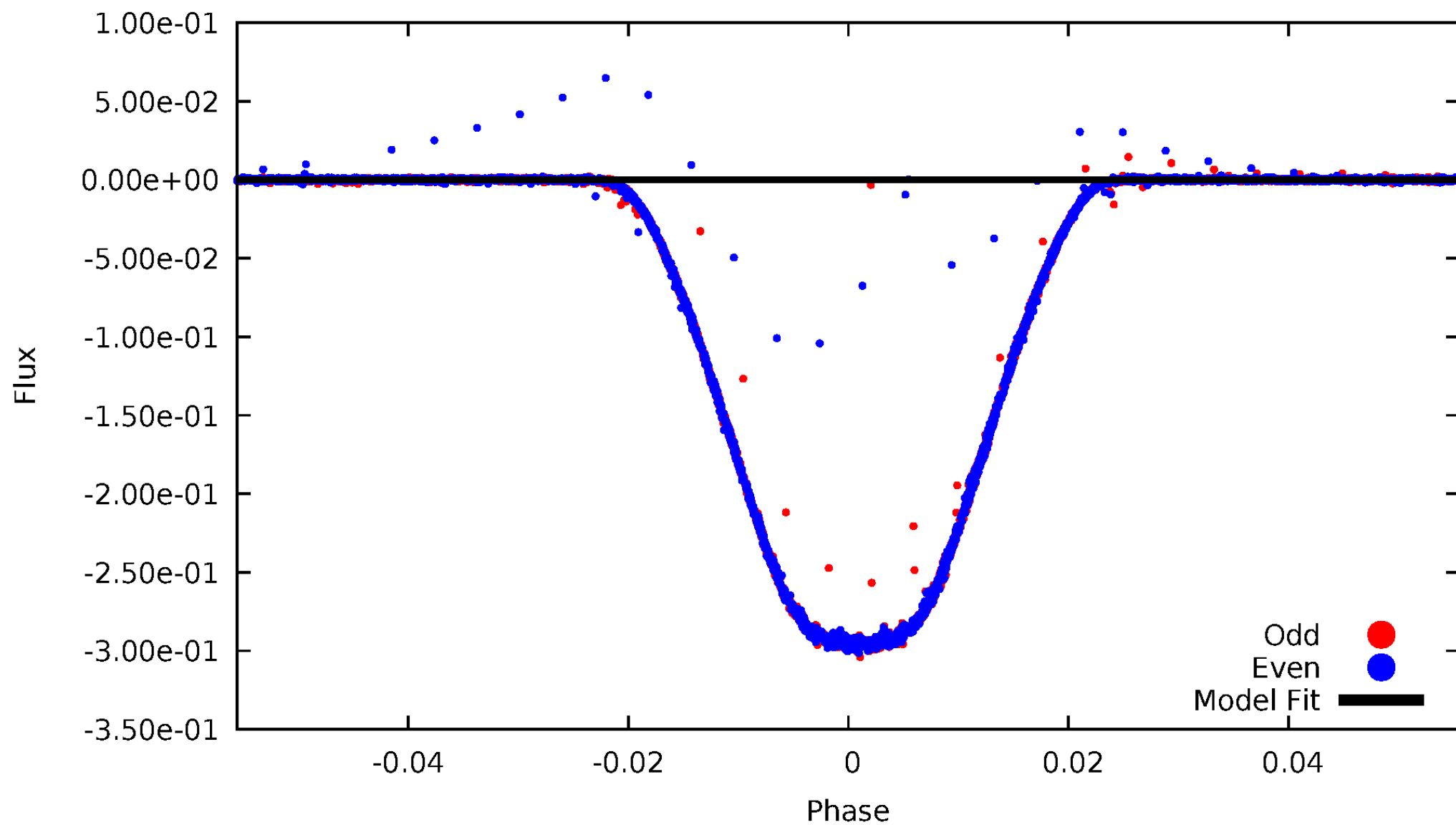


TCE 008374499-01



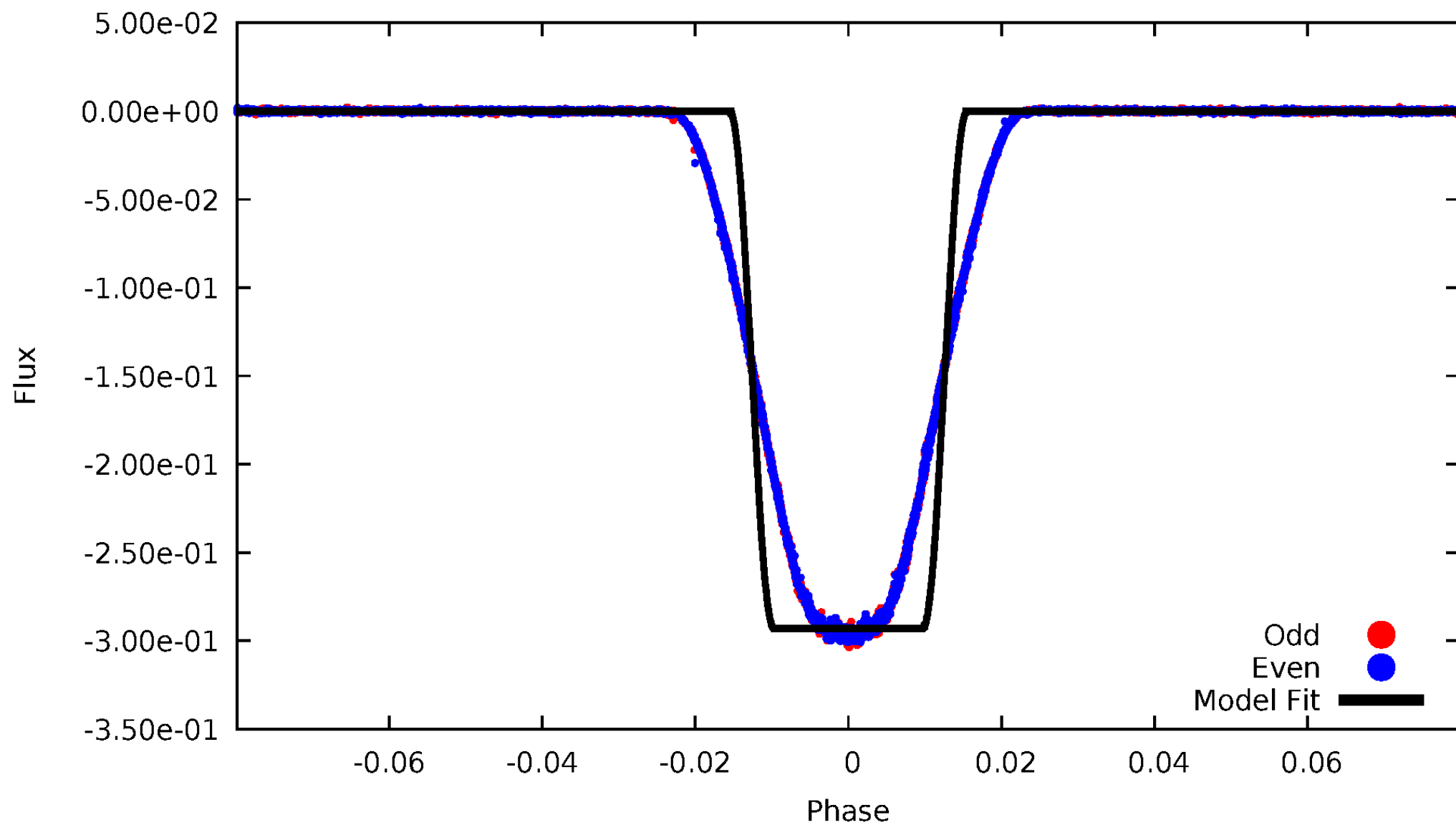
DV Odd/Even

TCE 008374499-01



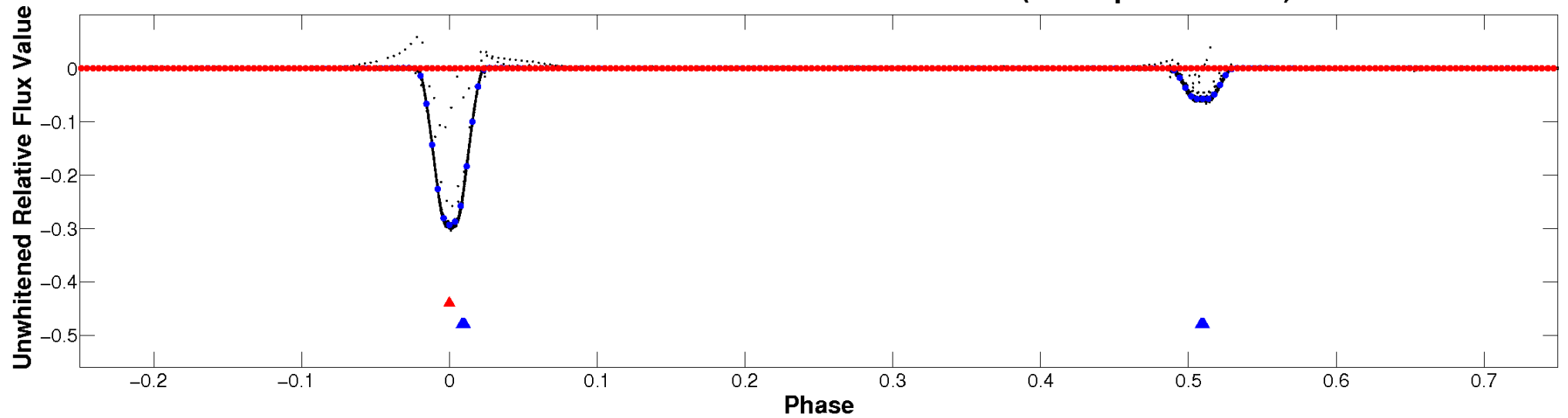
ALT Odd/Even

TCE 008374499-01



Non-Whitened Vs. Whitened Light Curve

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

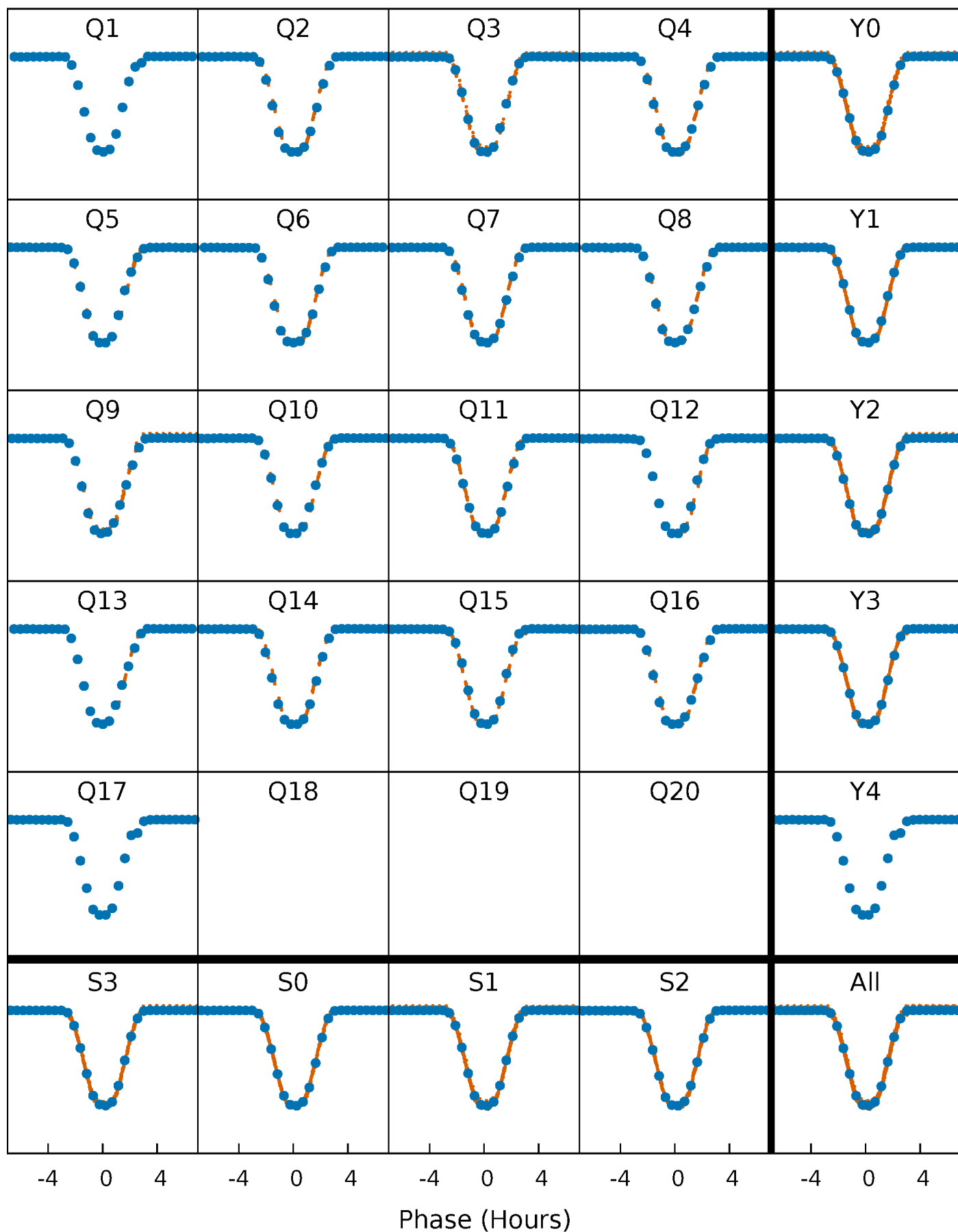


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



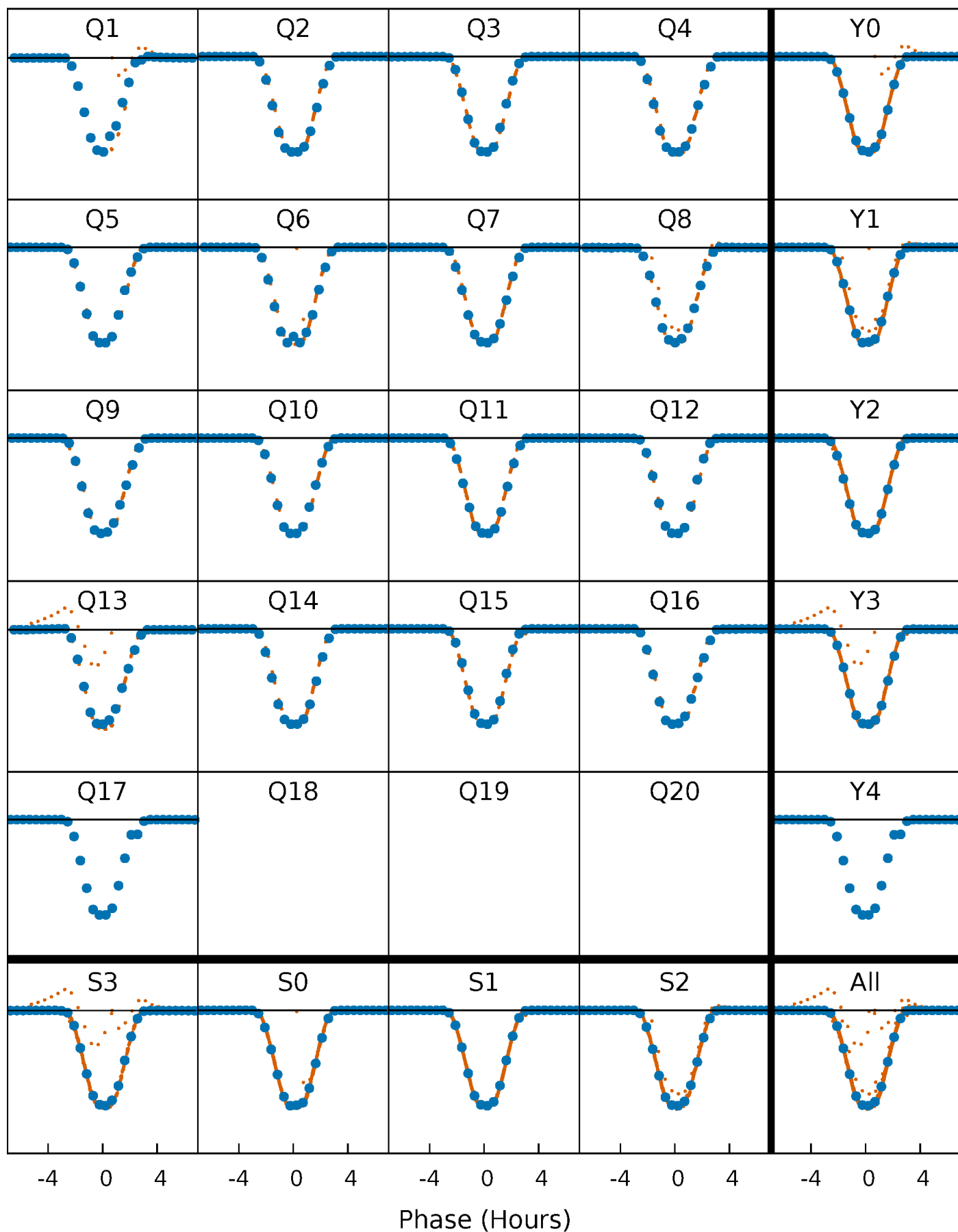
PDC Quarter-Phased Transit Curves

TCE 008374499-01 P= 5.251924 Days $T_0=136.735174$ (BKJD)



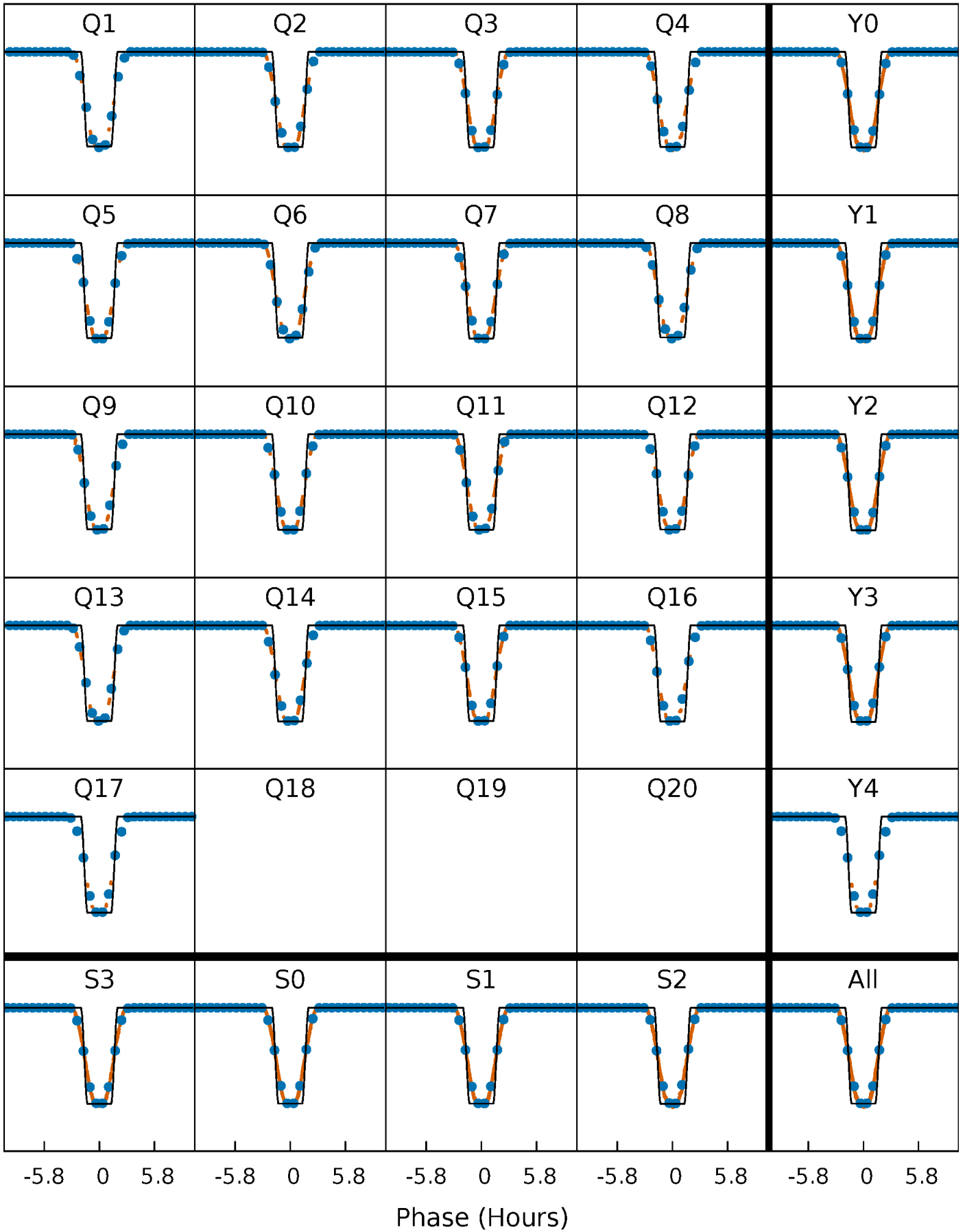
DV Quarter-Phased Transit Curves

TCE 008374499-01 P= 5.251924 Days $T_0=136.735174$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

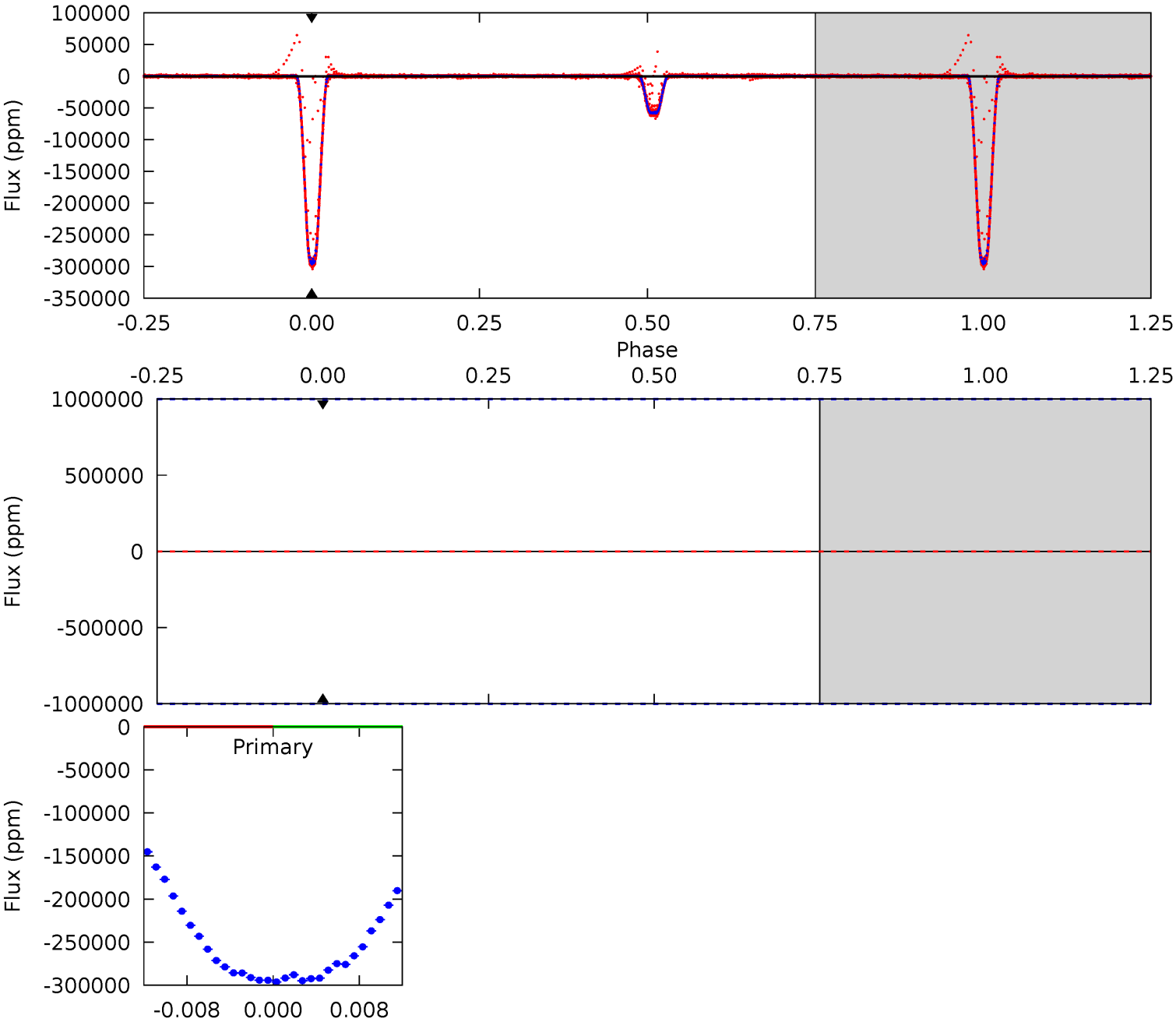
TCE 008374499-01 P= 5.251924 Days $T_0=136.740204$ (BKJD)



DV Model-Shift Uniqueness Test

008374499-01, P = 5.251924 Days, E = 131.483250 Days

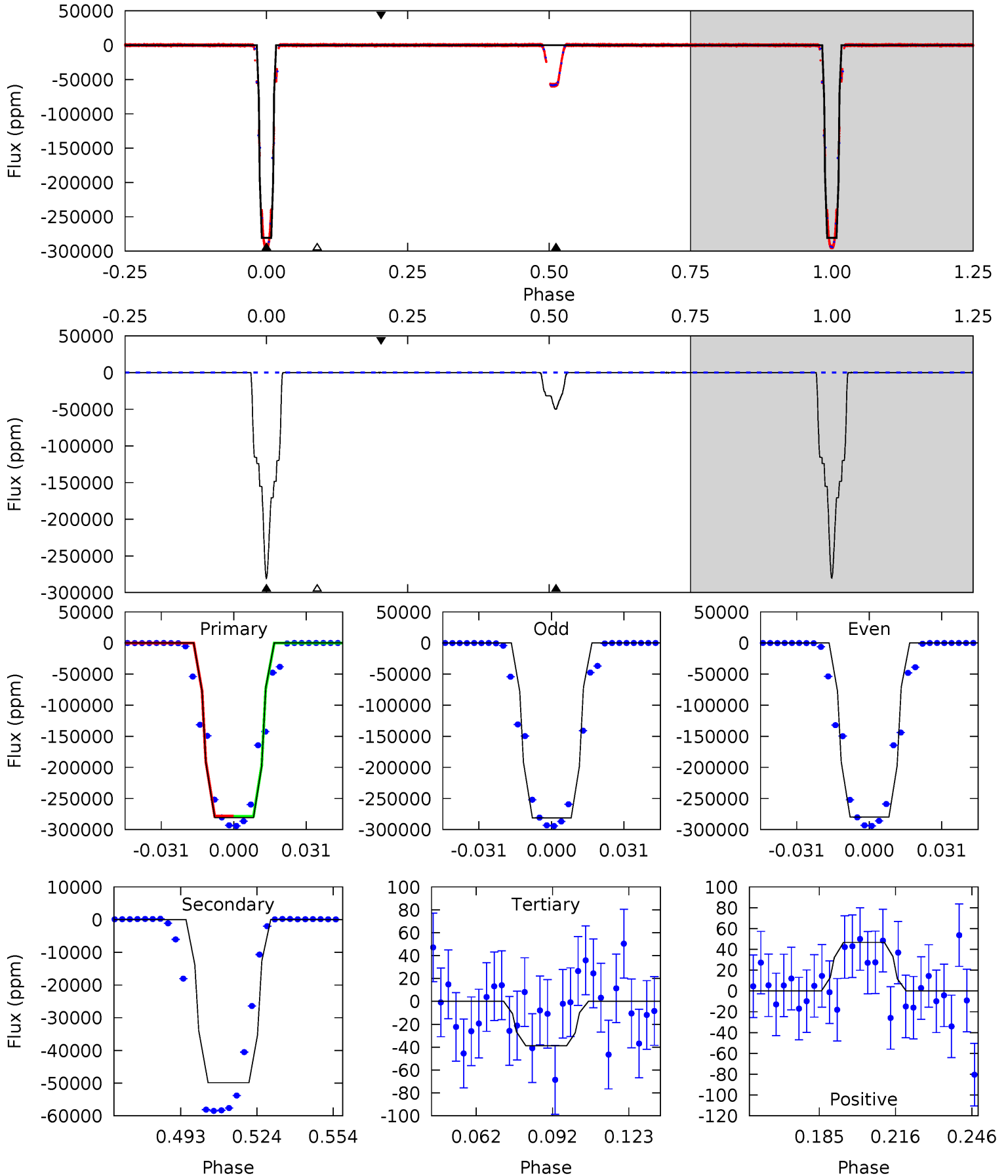
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008374499-01, P = 5.251924 Days, E = 131.488280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17298	3074	2.39	2.88	4.81	2.16	1.91	17296	17295	3071	3071	38.7	1.00	0.00	0



Stellar Parameters For KIC 008374499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6099^{+164}_{-200}	$4.511^{+0.050}_{-0.200}$	$-0.280^{+0.300}_{-0.300}$	$0.919^{+0.275}_{-0.092}$	$1.000^{+0.131}_{-0.131}$	$1.814^{+0.365}_{-0.900}$
	+3%/-3%	+1%/-4%	+107%/-107%	+30%/-10%	+13%/-13%	+20%/-50%
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 008374499-01 / KOI 7026.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$42.16^{+12.44}_{-10.73}$	1511^{+100}_{-65}	2980^{+2742}_{-8419}	$3.326^{+130.585}_{-110.730}$
Alt.	-49860 ± 16	$57.90^{+13.06}_{-11.89}$	1512^{+109}_{-72}	4182^{+328}_{-258}	30^{+17}_{-9}

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

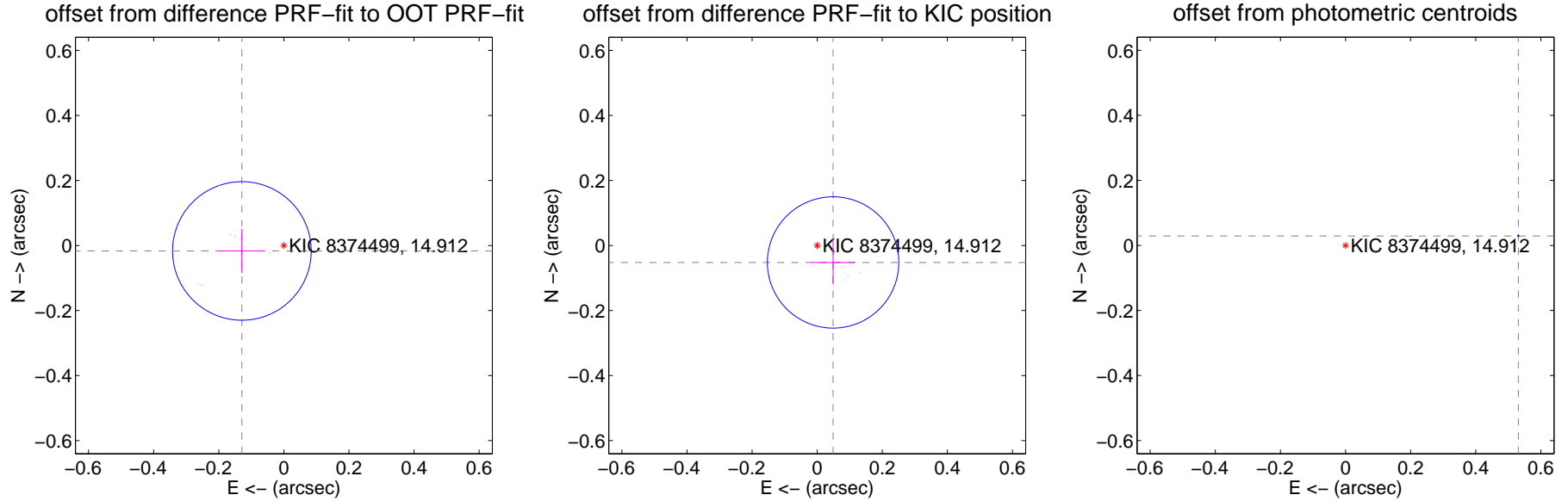
DV Centroid Data

Supplemental centroid analysis for 008374499-01. Kepler magnitude: 14.91. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

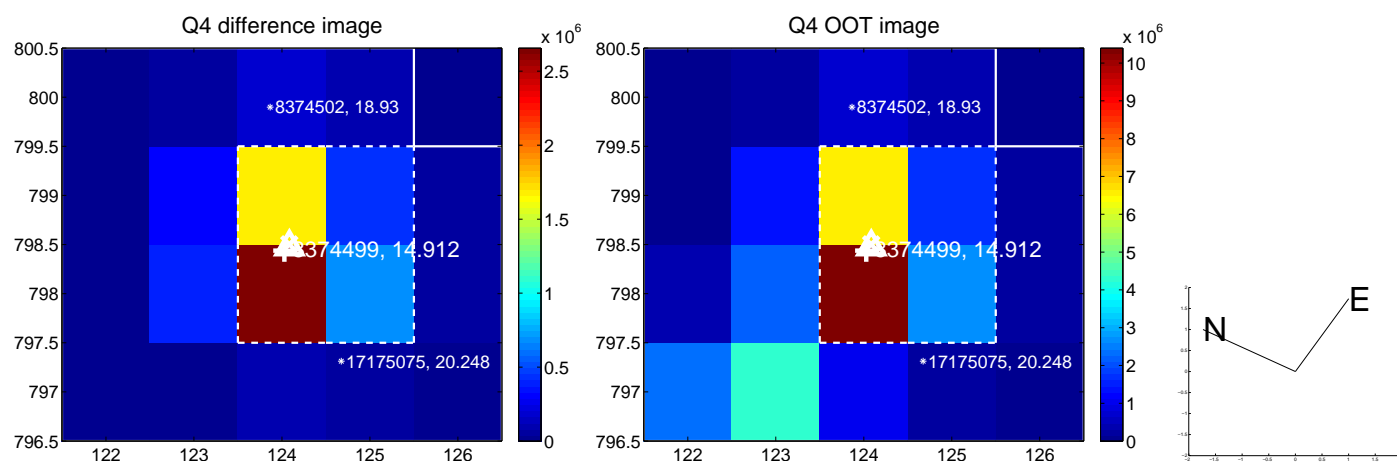
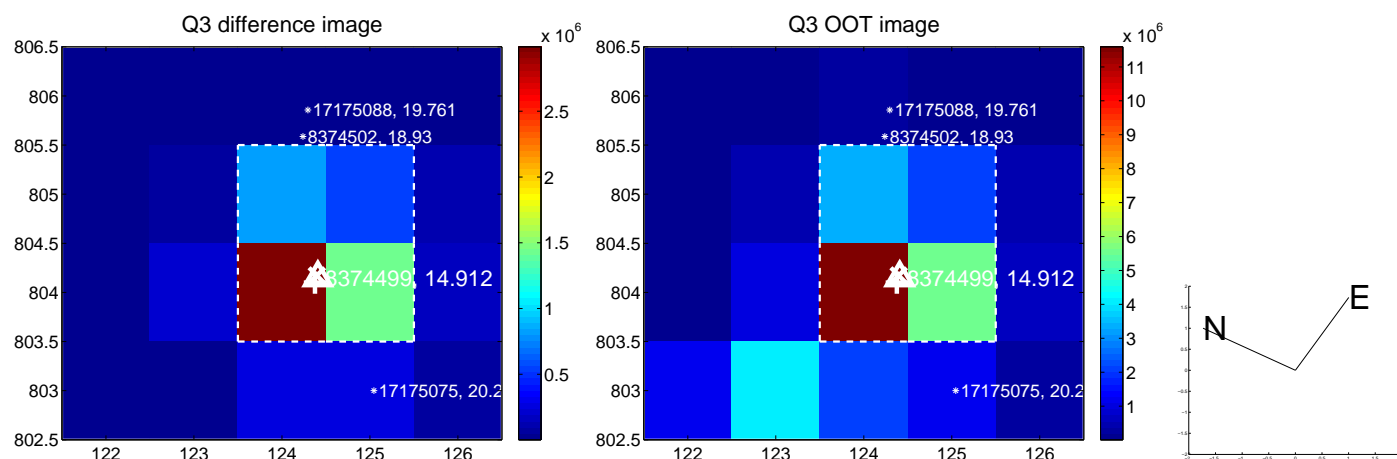
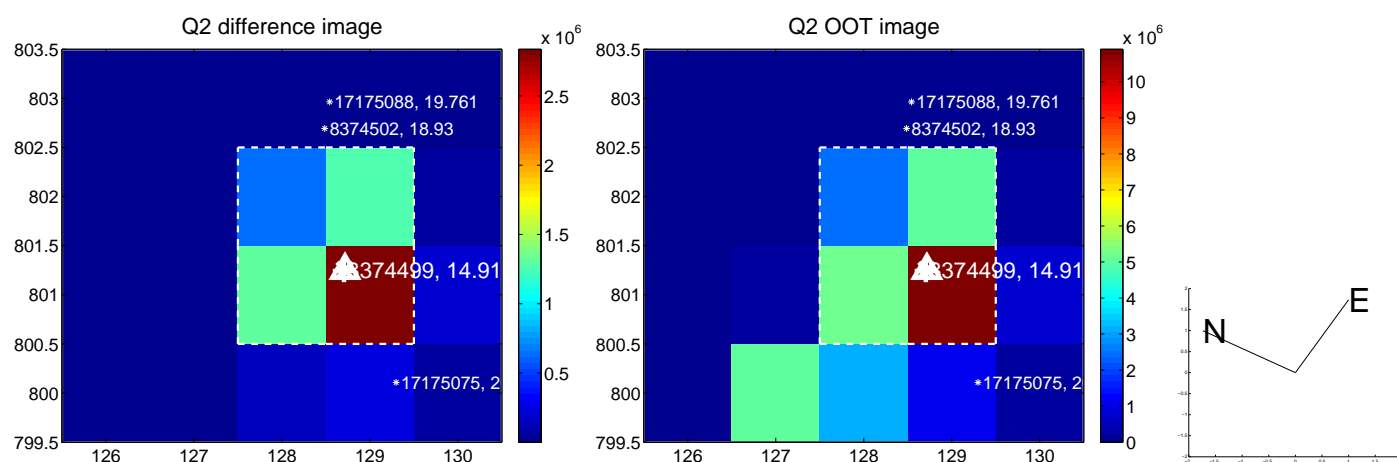
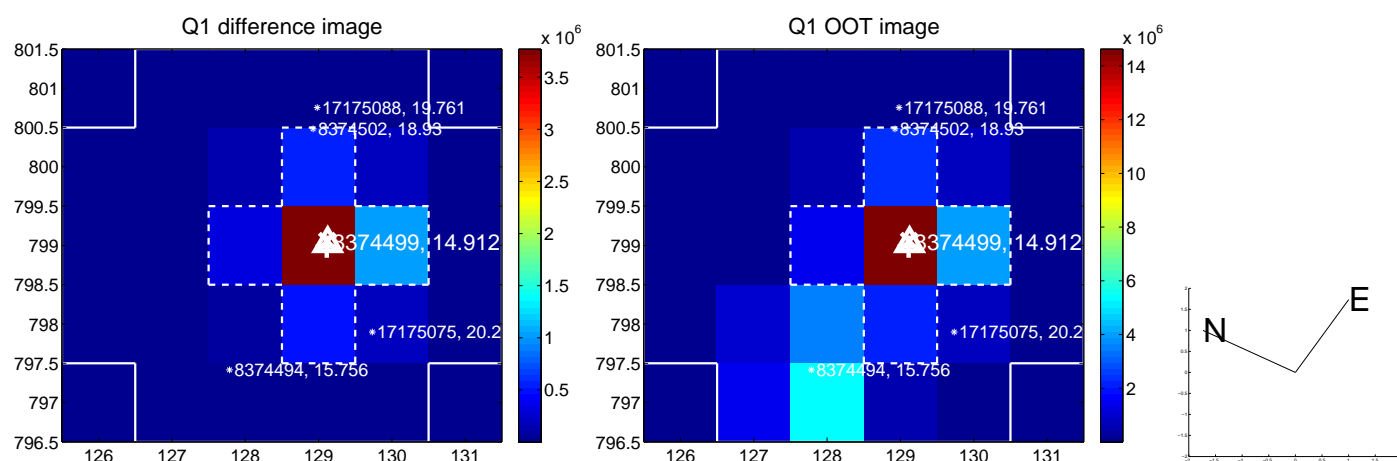
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 0.071	1.83	0.129 ± 0.071	-0.017 ± 0.068
PRF-fit source offset from KIC position	0.072 ± 0.067	1.06	-0.049 ± 0.067	-0.052 ± 0.067
photometric centroid source offset	0.53 ± 0.00	764.36	-0.53 ± 0.00	0.03 ± 0.00

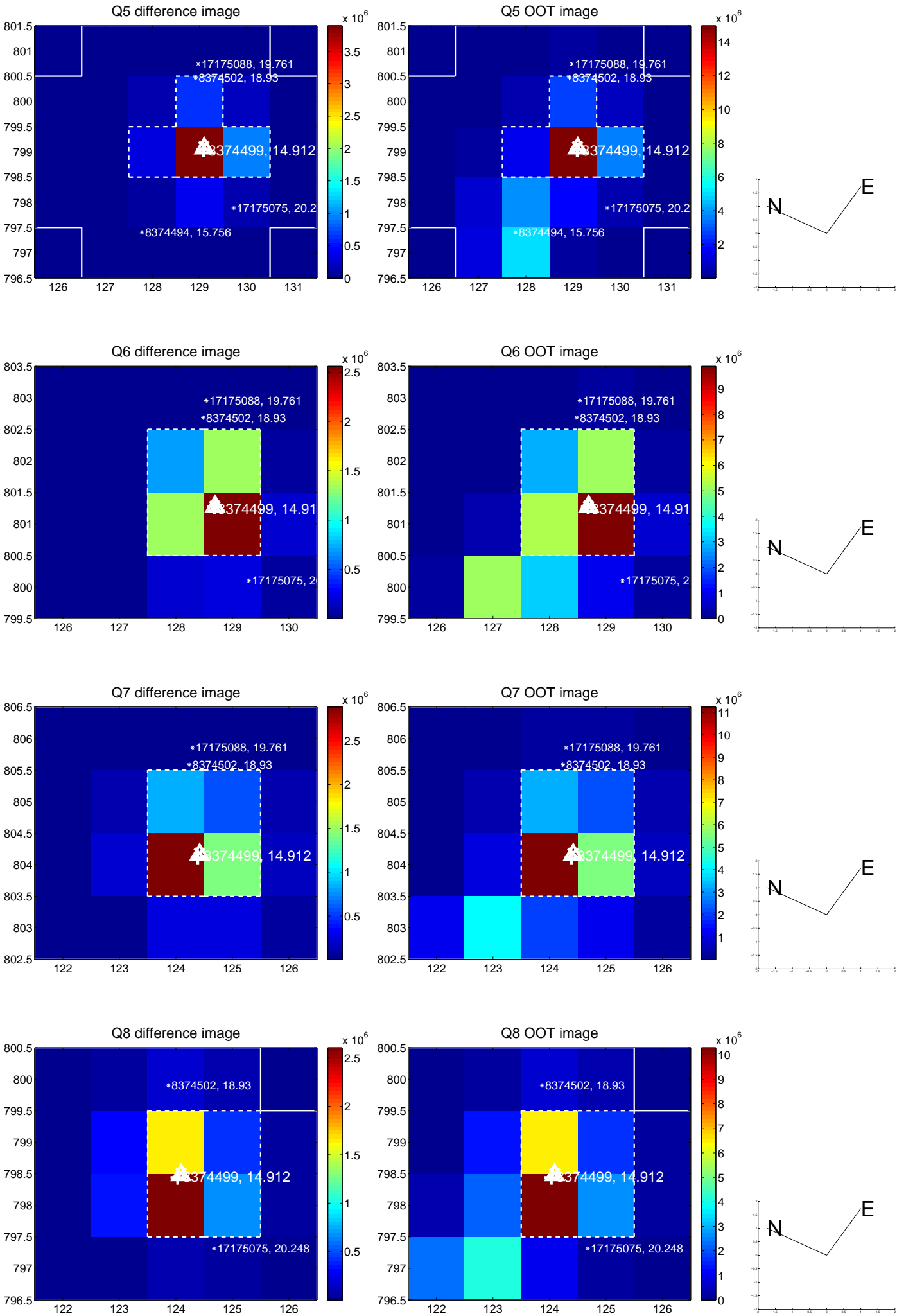


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

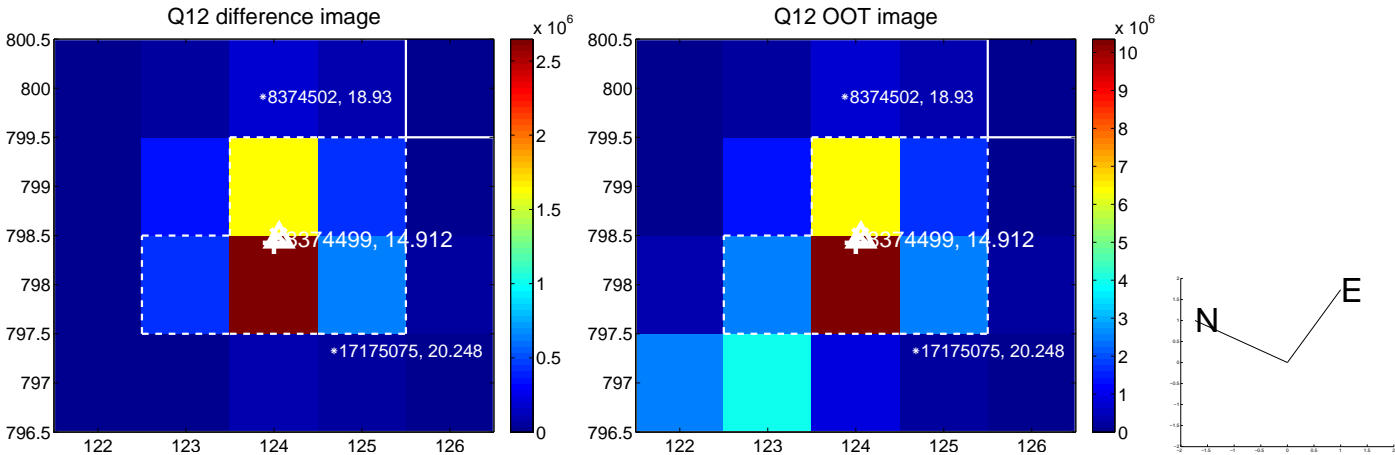
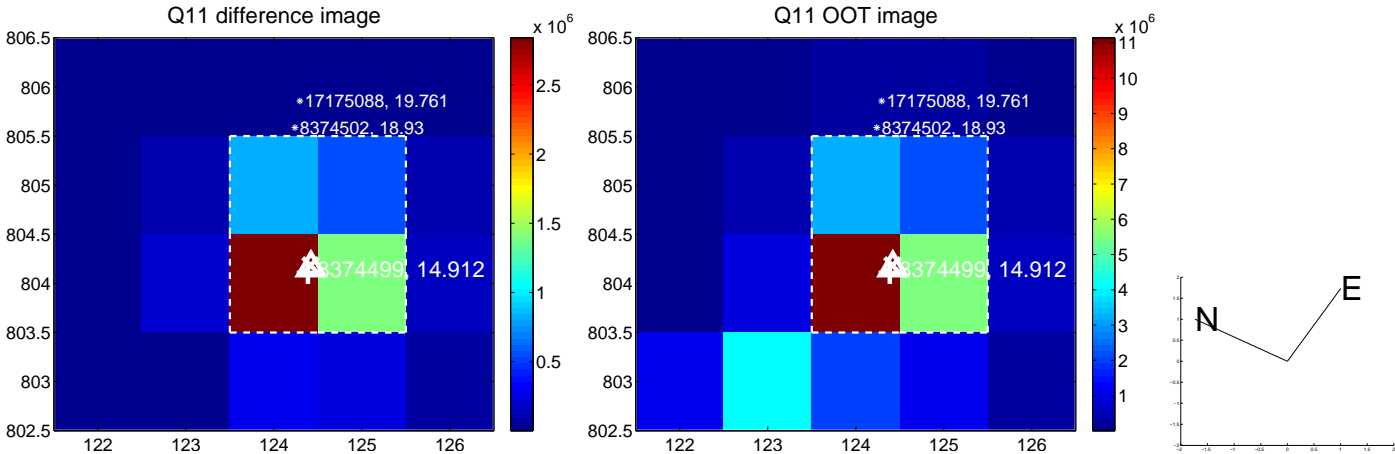
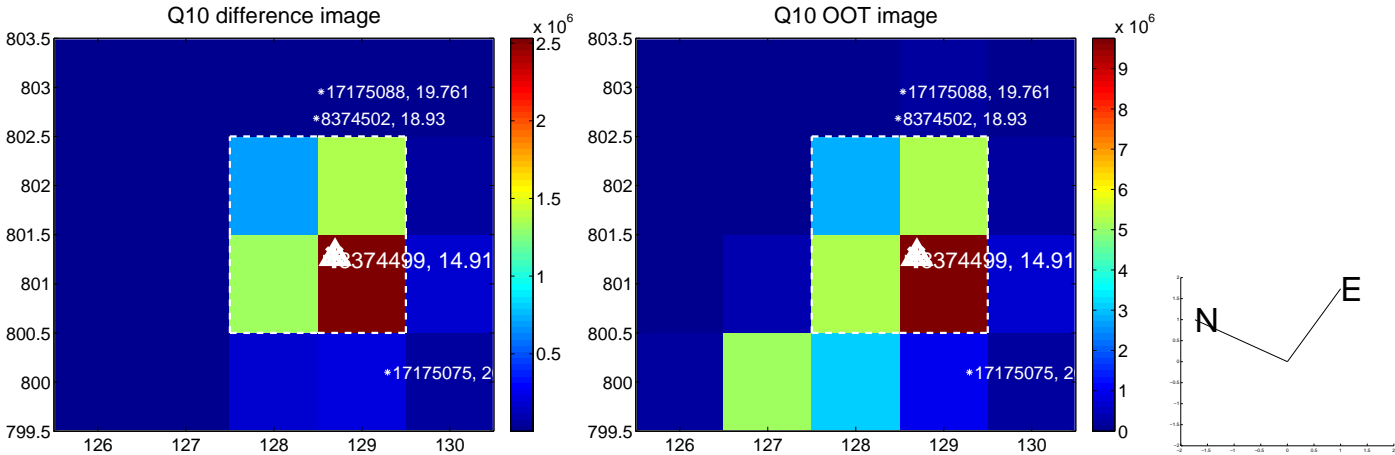
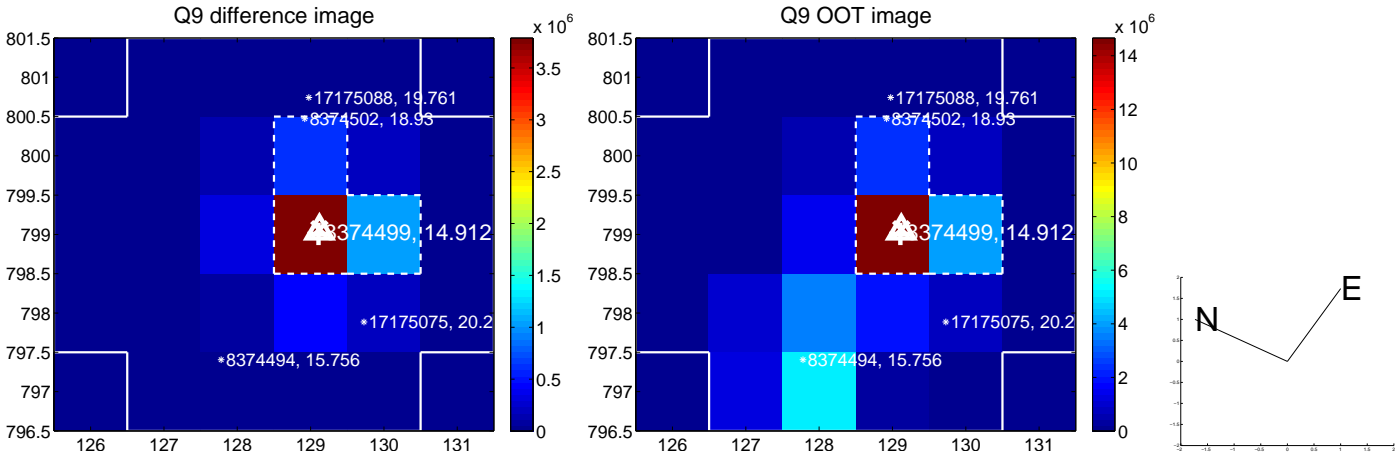
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



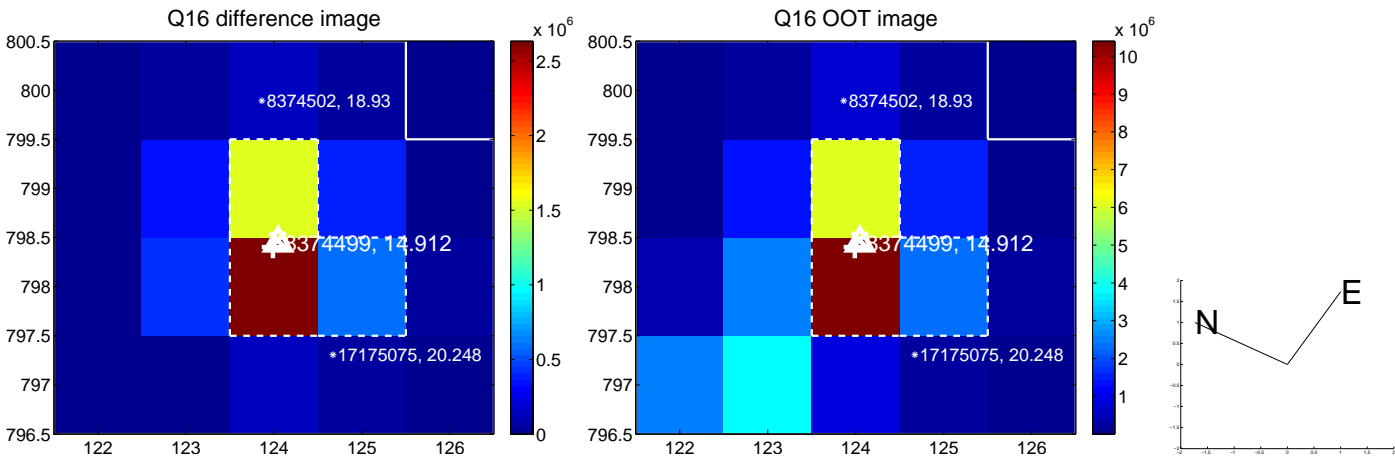
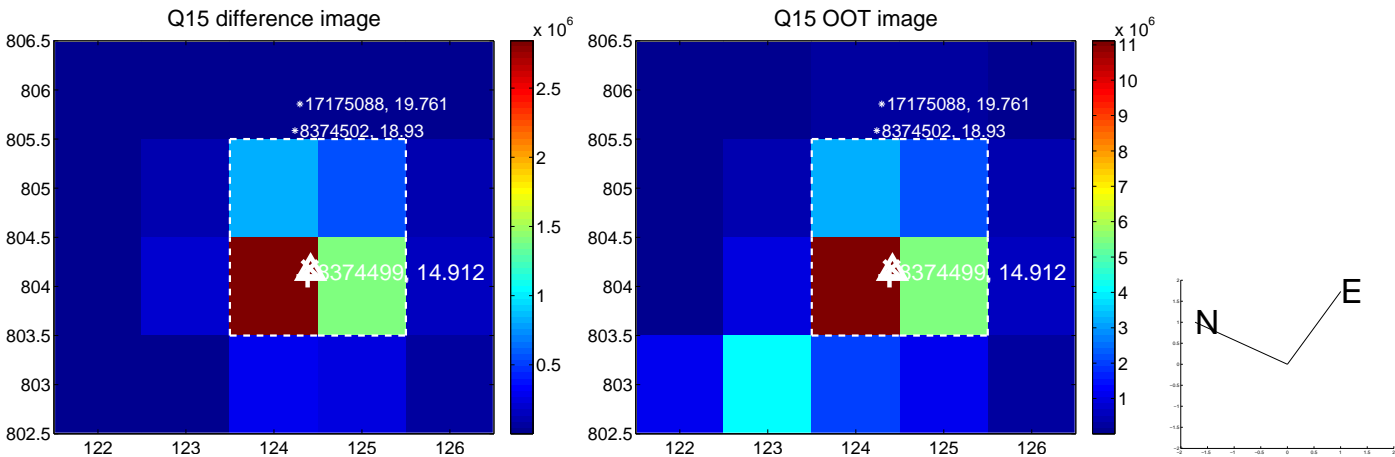
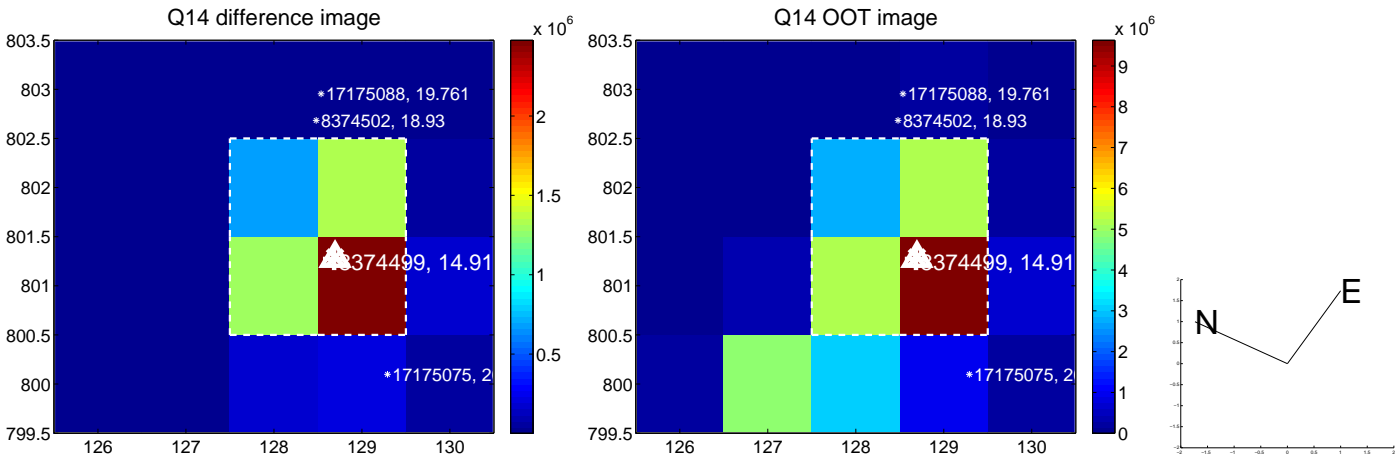
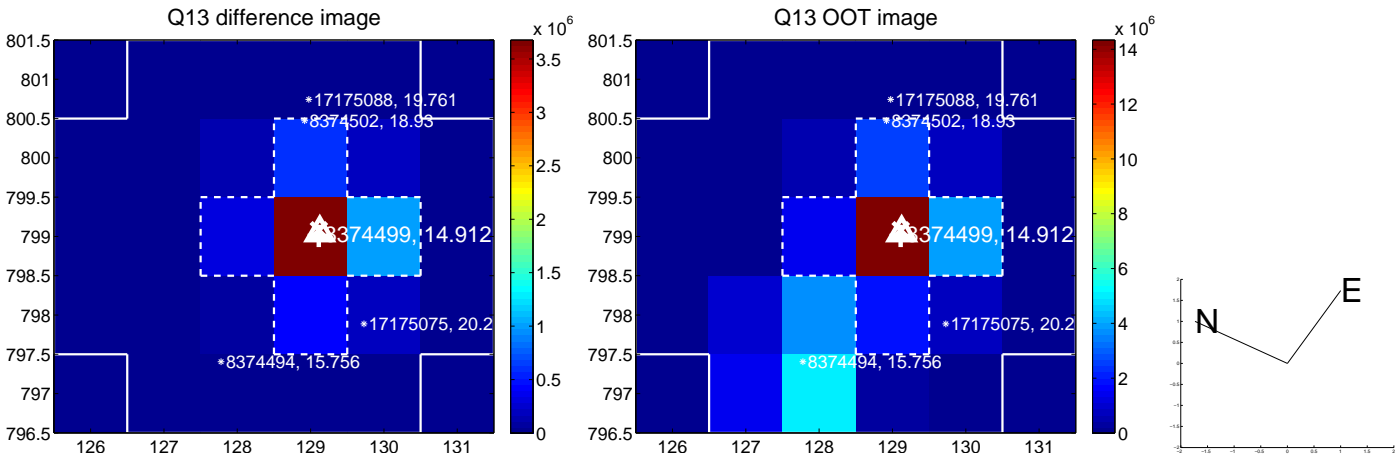
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



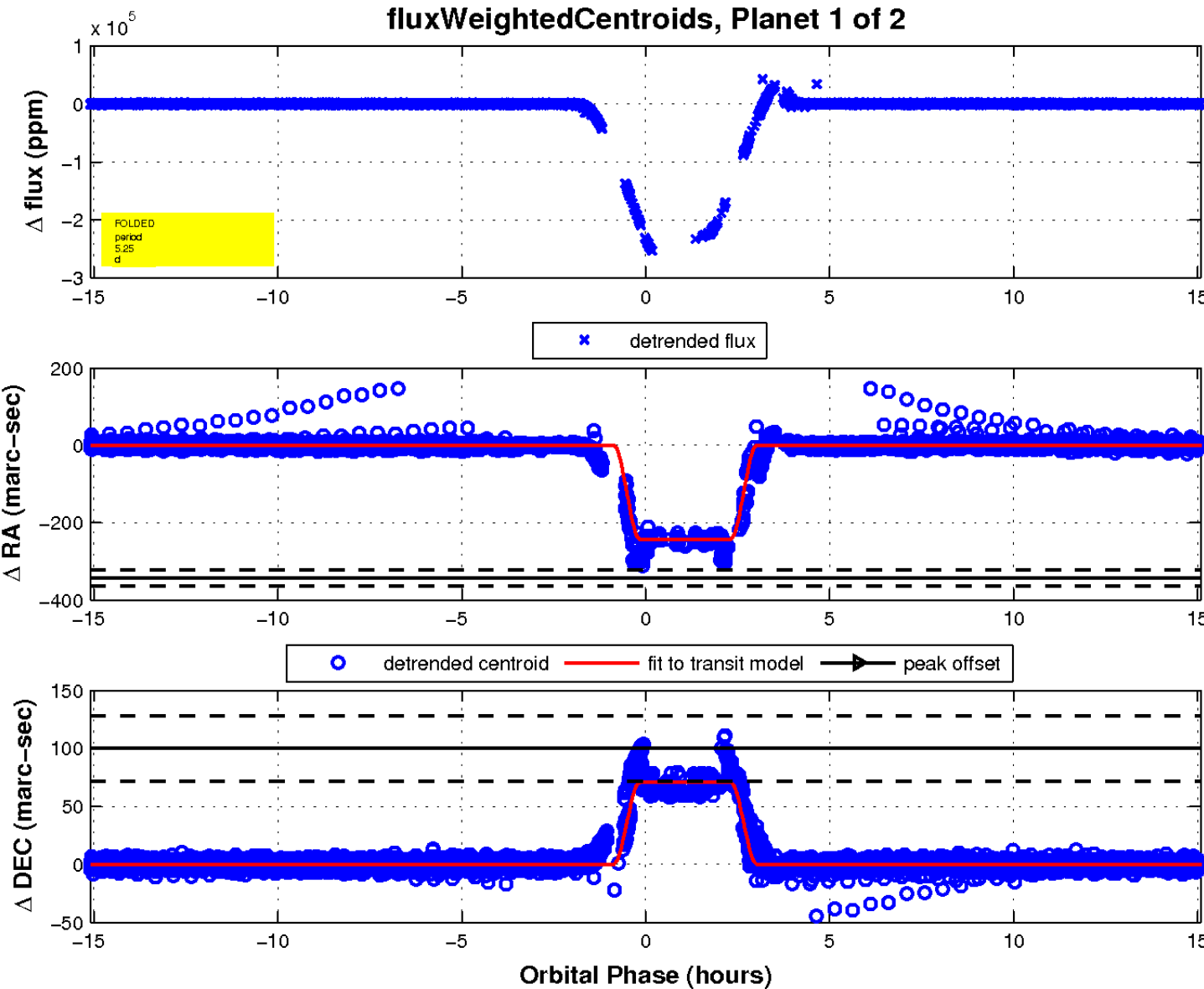
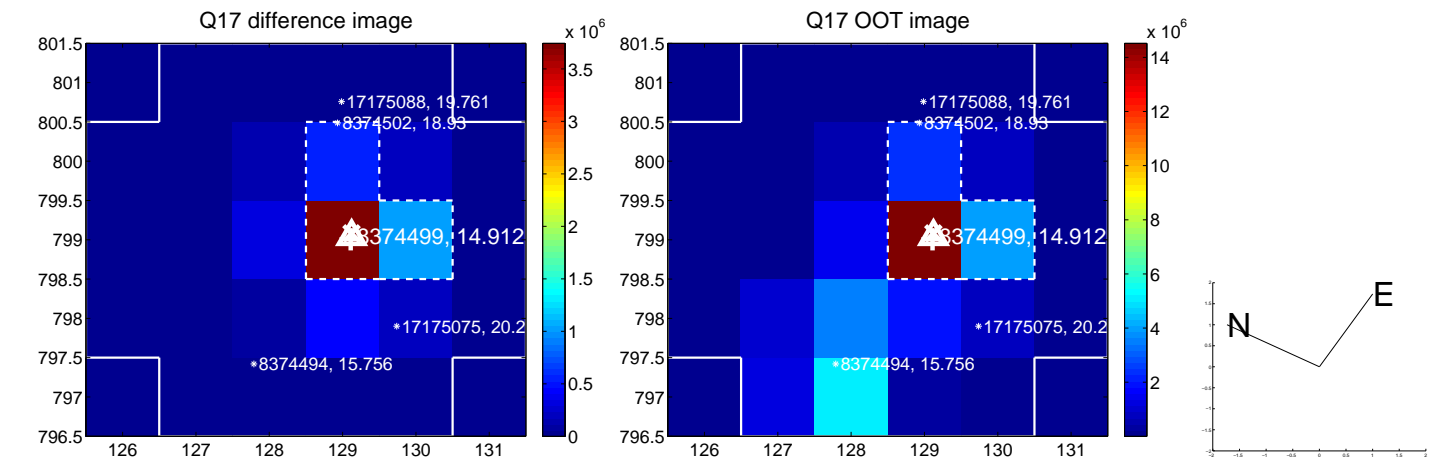
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

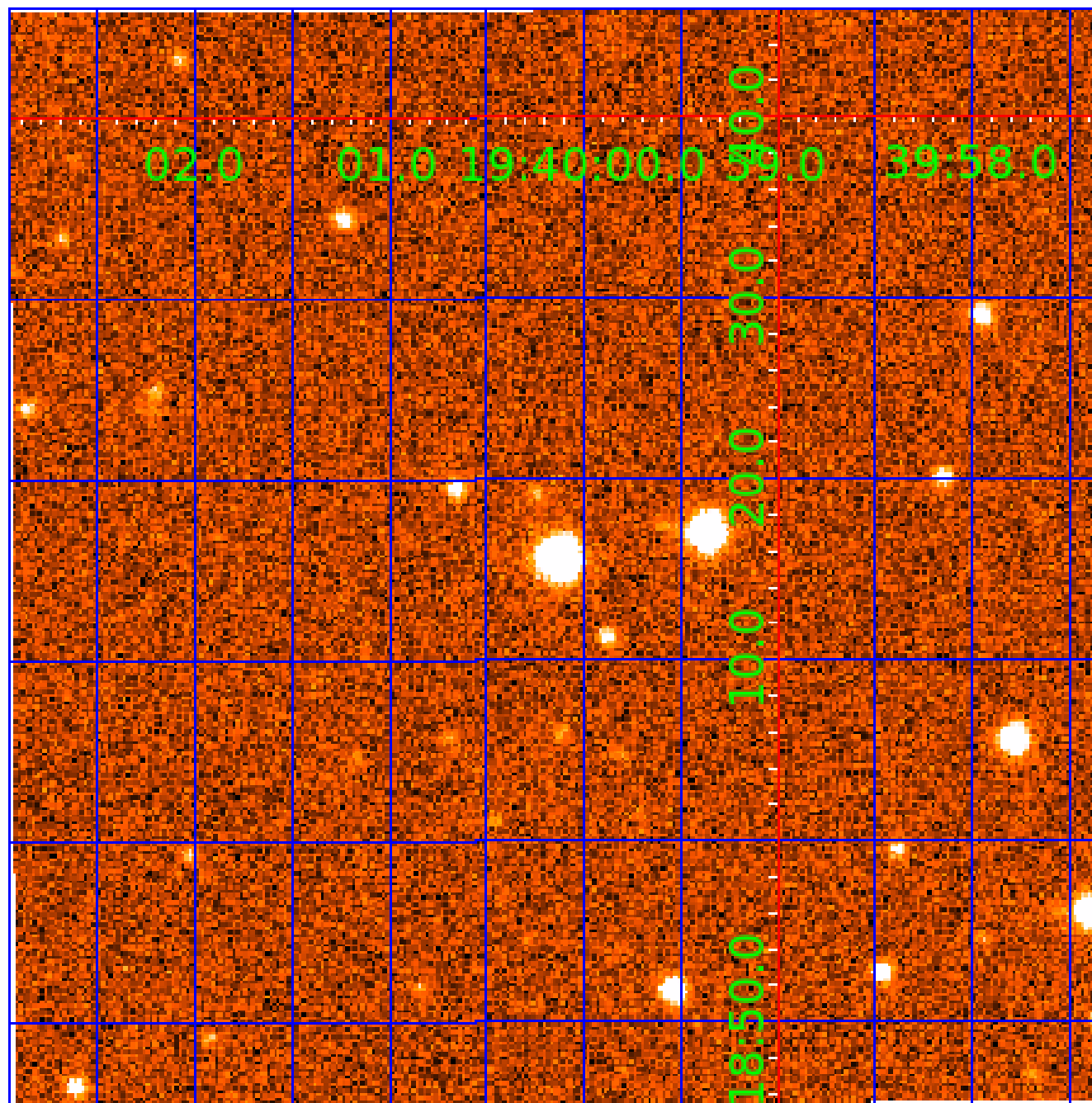


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008374499

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})
008374499-01	OBS	7026.01	5.251924	136.735174	188437.1	3.500	14686.2	-1.0	0.92	6099	40.32	299.49
008374499-02	OBS	No	2.625943	131.538239	42865.1	3.500	3146.6	-1.0	0.92	6099	19.09	754.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008374499-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008374499-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

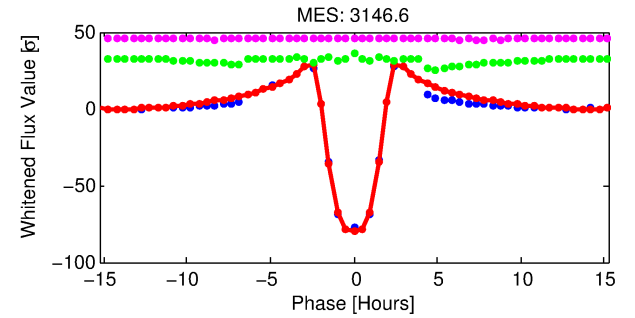
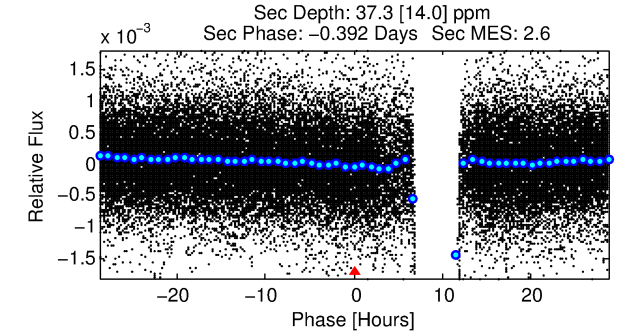
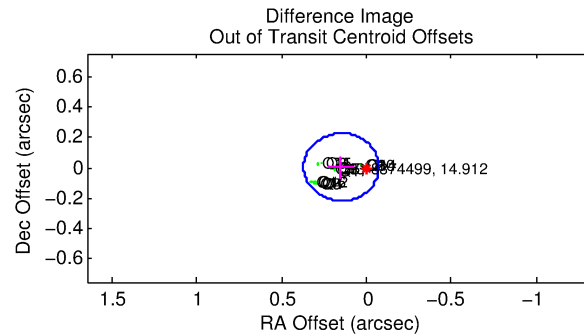
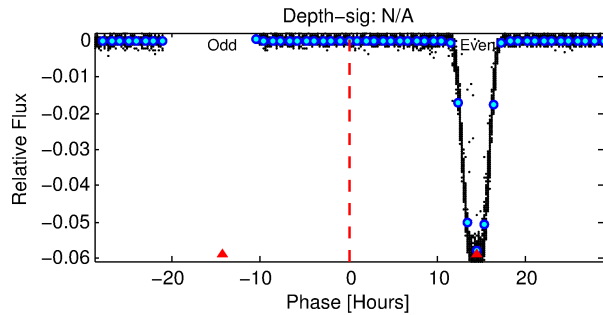
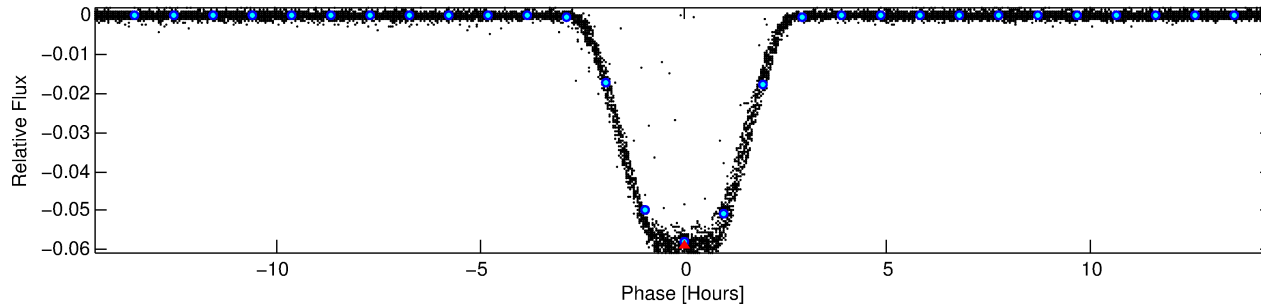
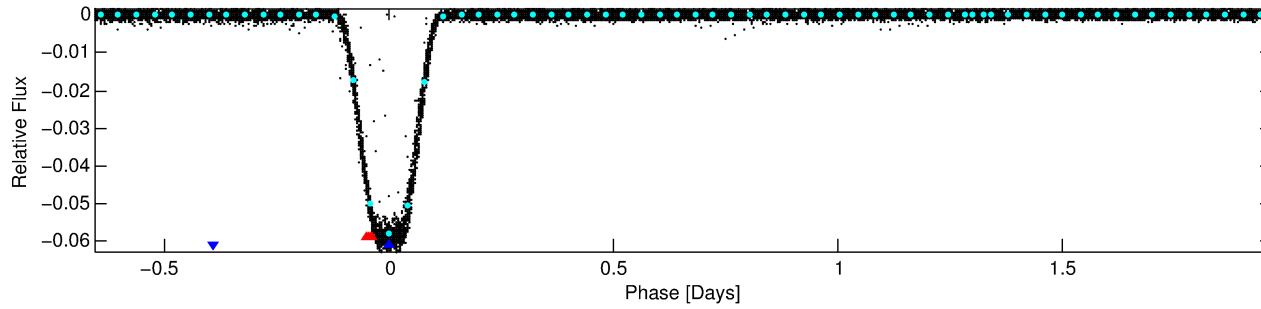
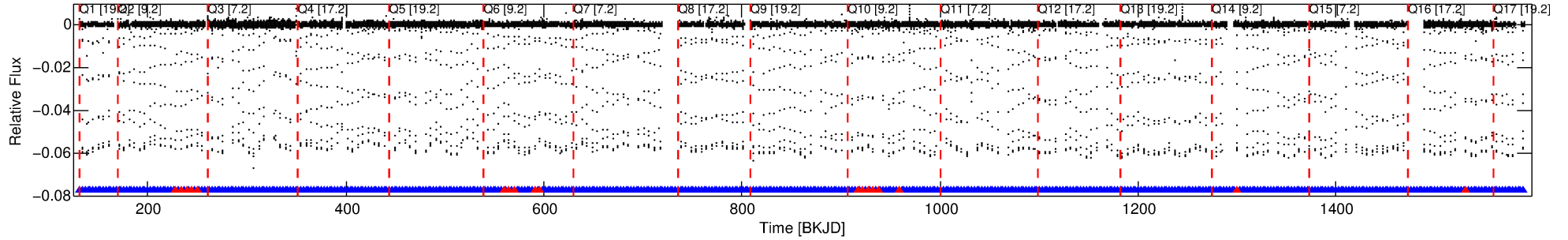
Ephemeris Match Information For 008374499-02

No Significant Match Found

DV One-Page Summary

KIC: 8374499 Candidate: 2 of 2 Period: 2.626 d
KOI: K07026 Corr: No Ephemeris Match

Kp: 14.91 R*: 0.92 Rs Teff: 6099.0 K Logg: 4.51 Fe/H: -0.280



TPS TCE Results:

Period = 2.62594 d
Epoch = 131.5382 BKJD

DV fit results are unavailable

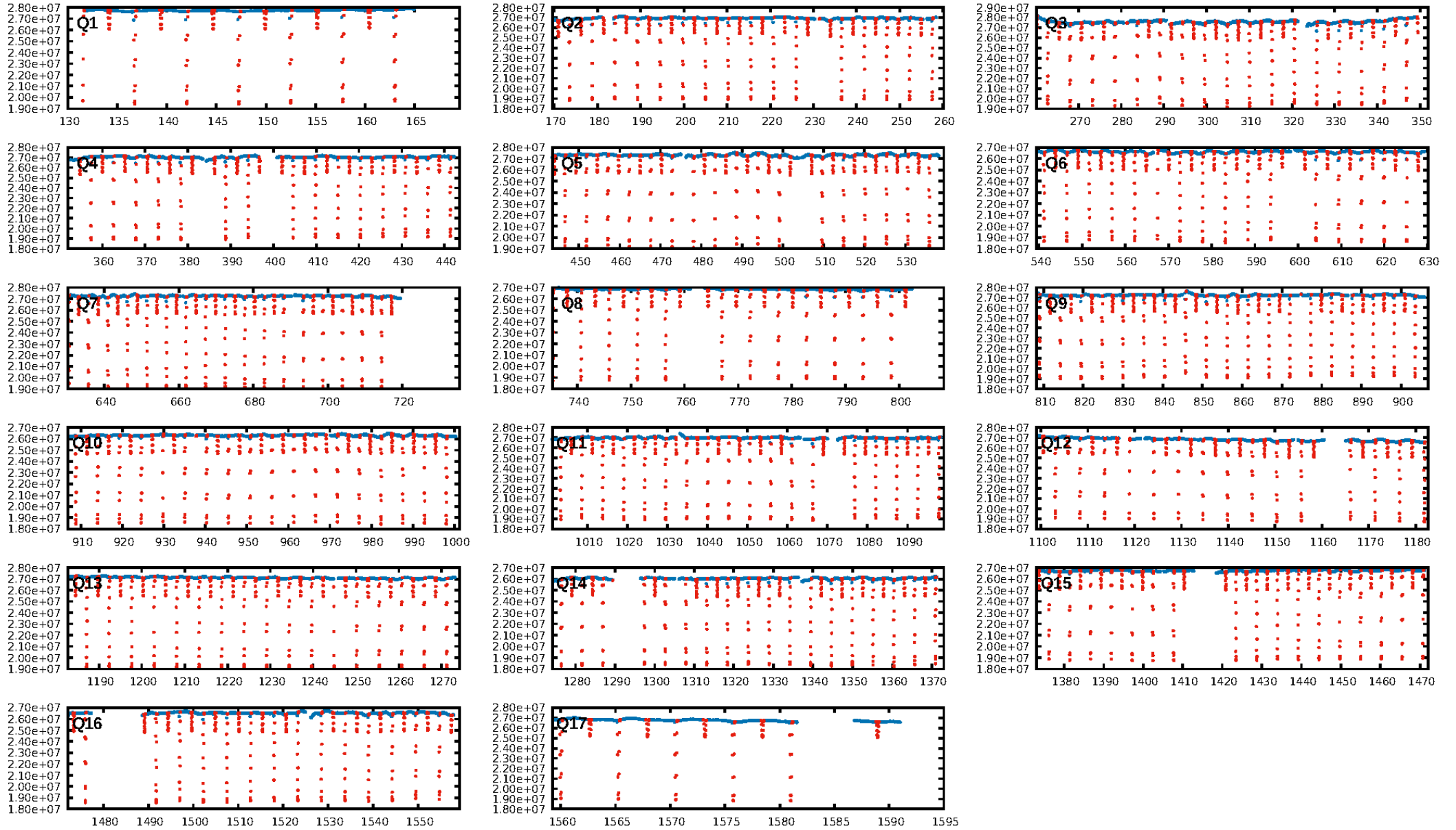
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [12.73σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [222/240]
GhostDiagnostic-chr: 3.289
Centroid-sig: 0.0%
Centroid-so: 0.522 arcsec [235.64σ]
OotOffset-rm: 0.152 arcsec [2.05σ]
KicOffset-rm: 0.041 arcsec [0.61σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

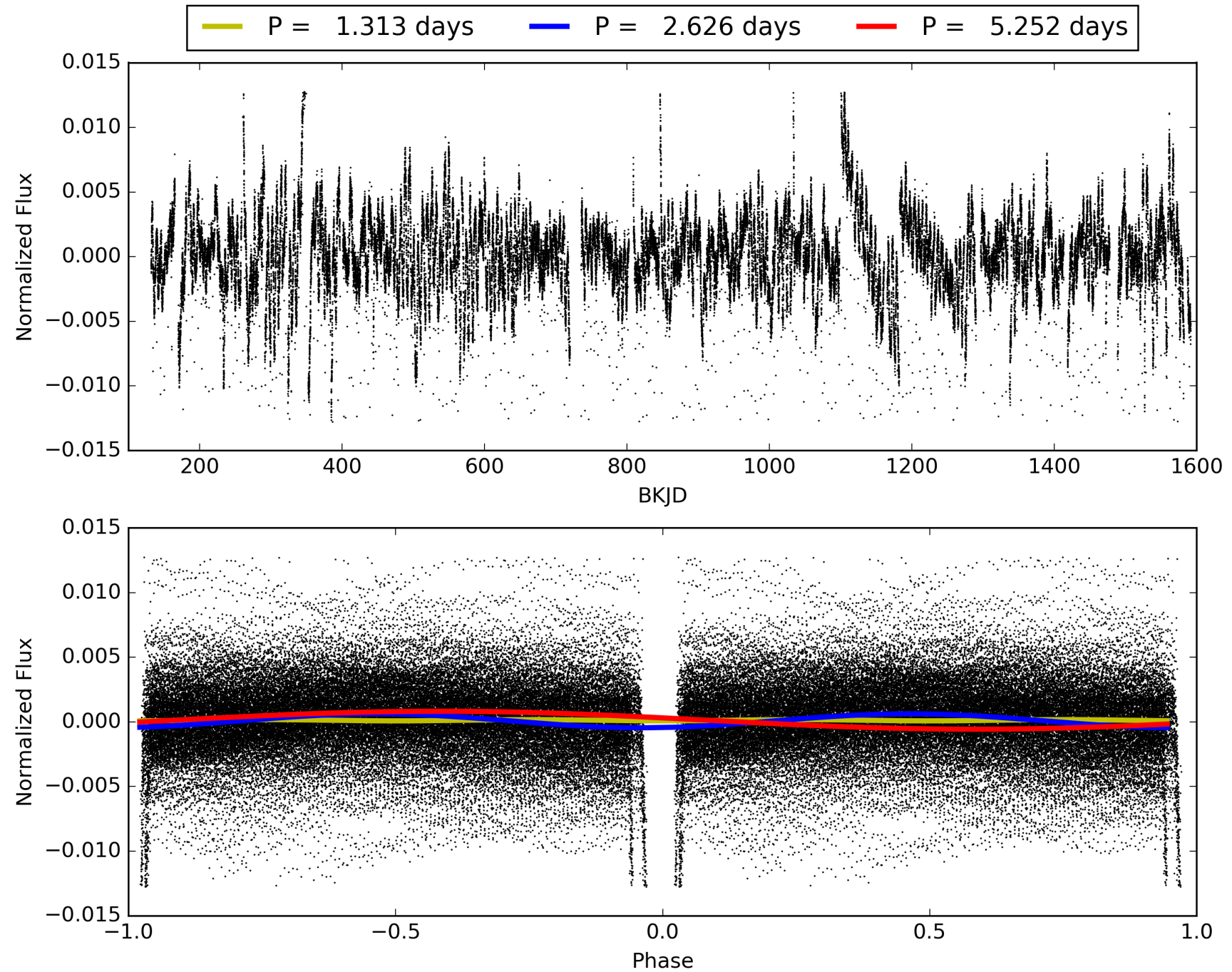
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:04:56 Z

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

TCE 008374499-02, PDC Light Curves

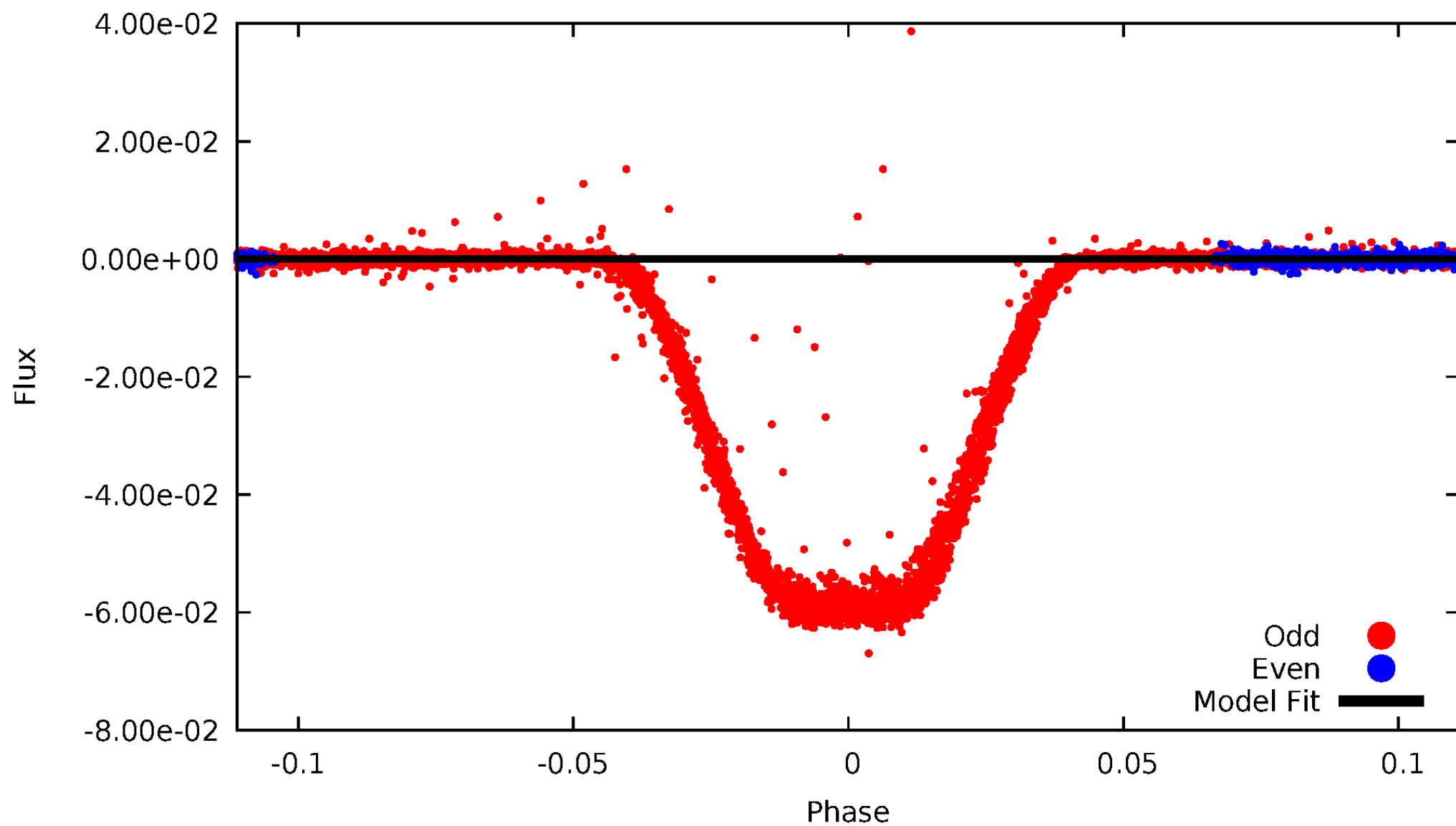


TCE 008374499-02



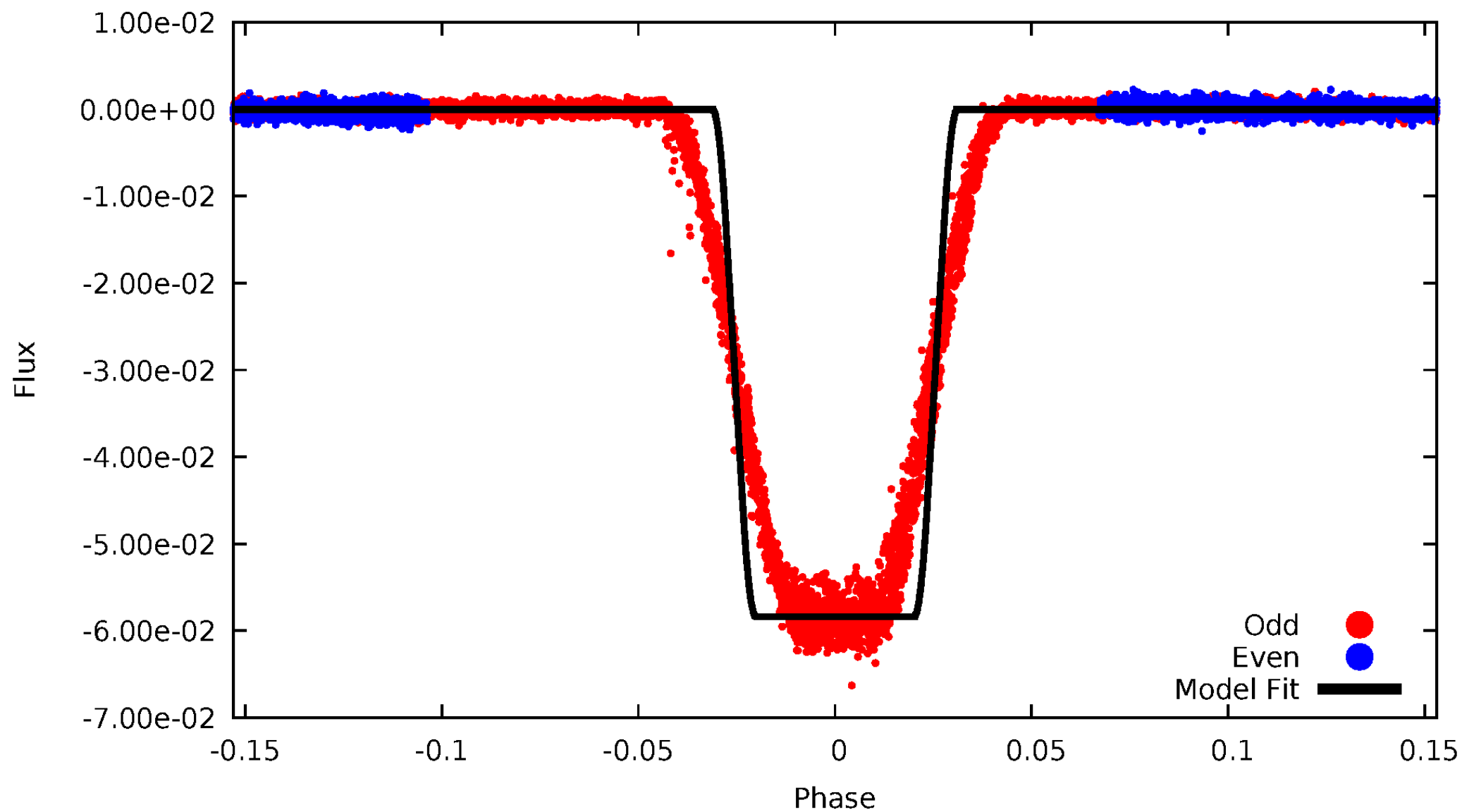
DV Odd/Even

TCE 008374499-02



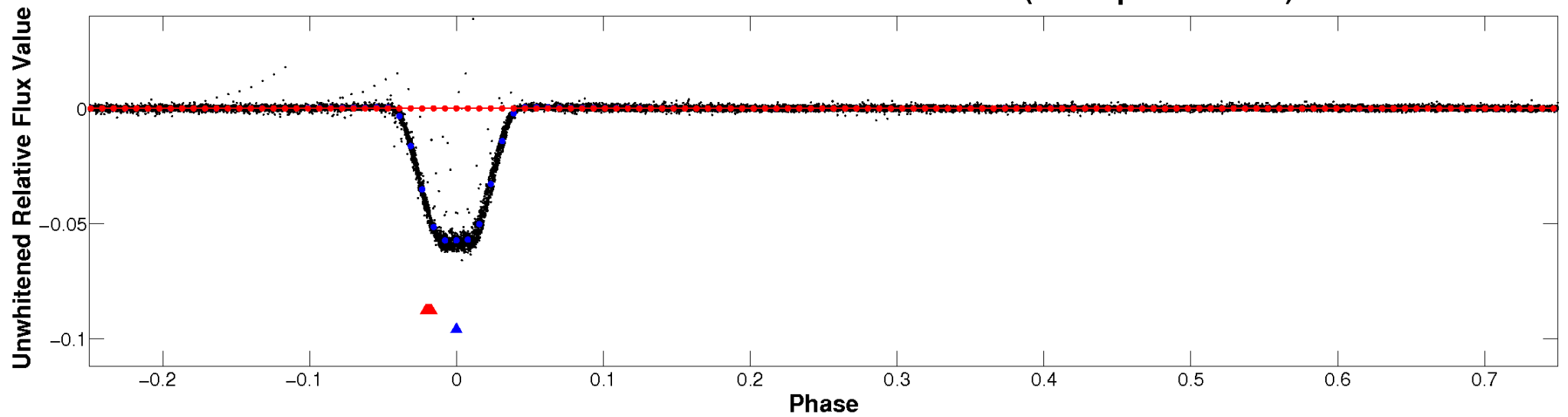
ALT Odd/Even

TCE 008374499-02



Non-Whitened Vs. Whitened Light Curve

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

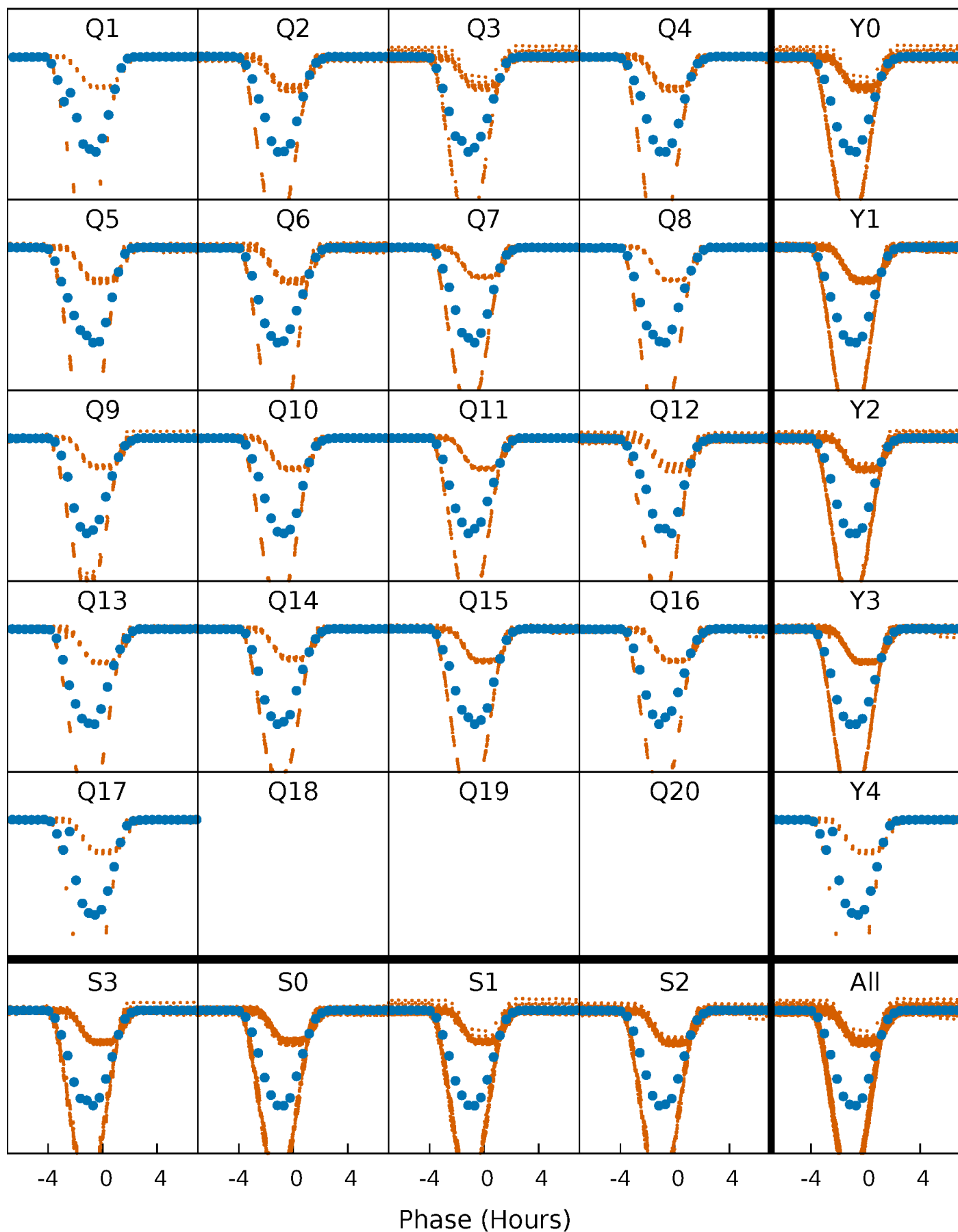


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



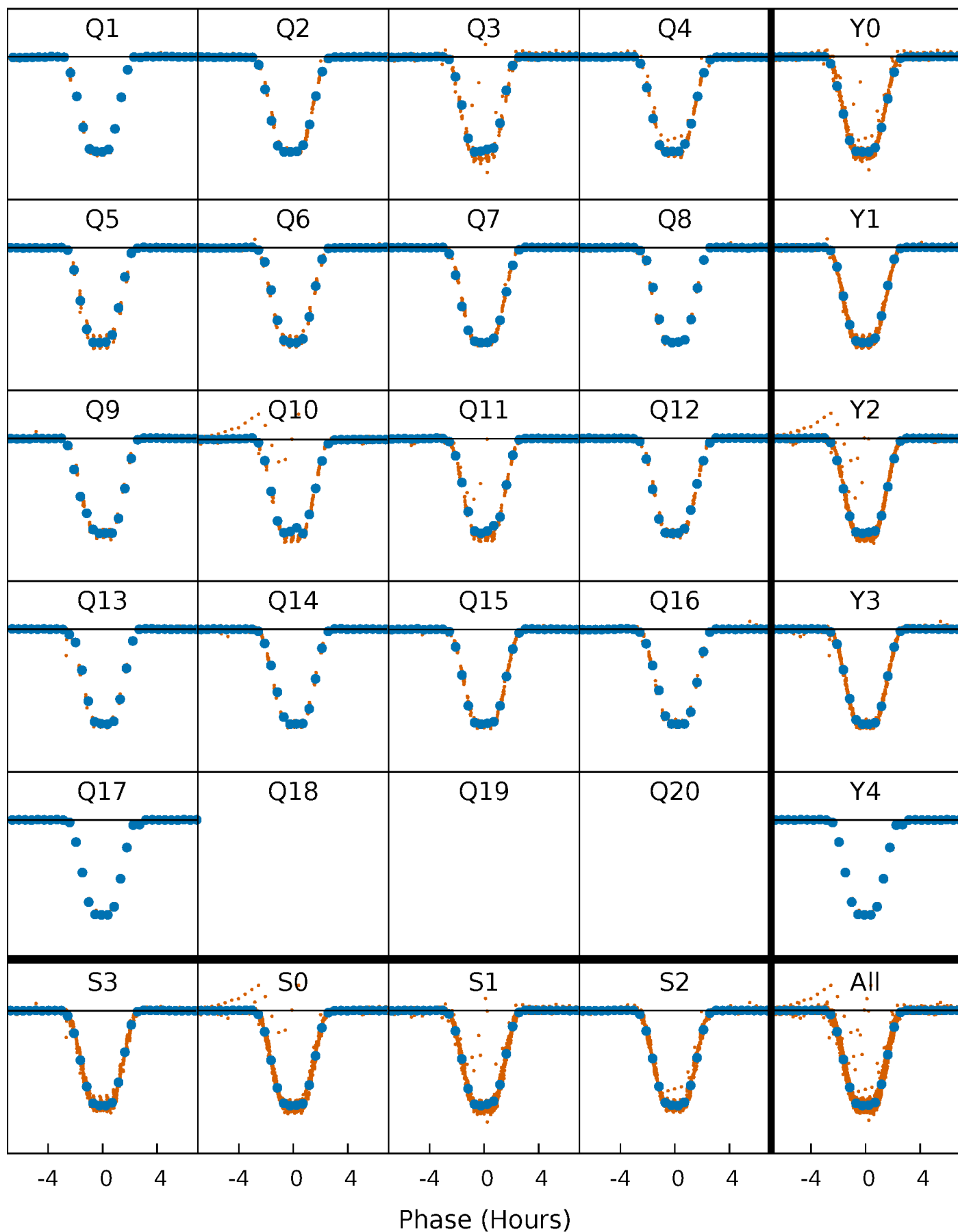
PDC Quarter-Phased Transit Curves

TCE 008374499-02 P= 2.625943 Days $T_0=131.538239$ (BKJD)



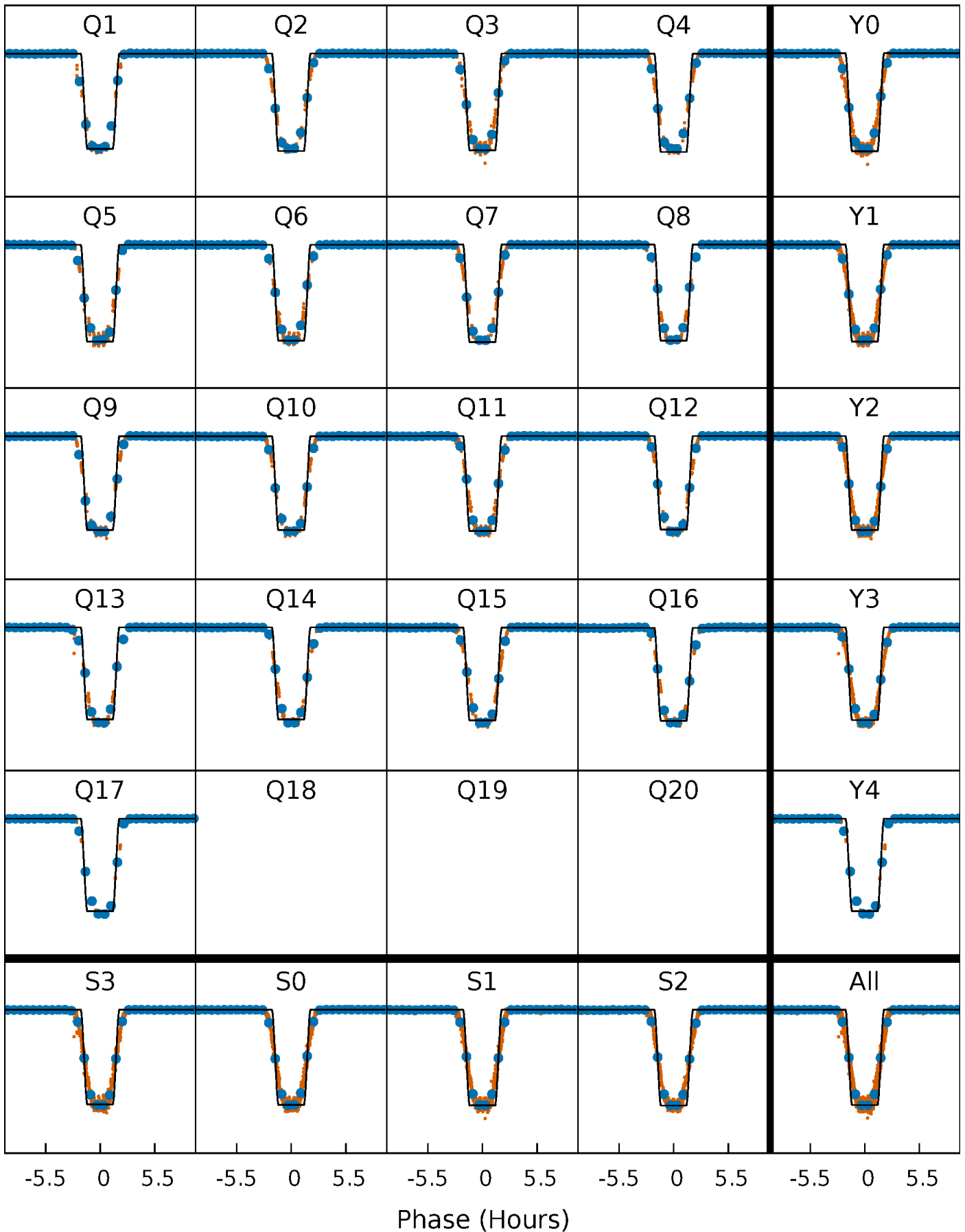
DV Quarter-Phased Transit Curves

TCE 008374499-02 P= 2.625943 Days $T_0=131.538239$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

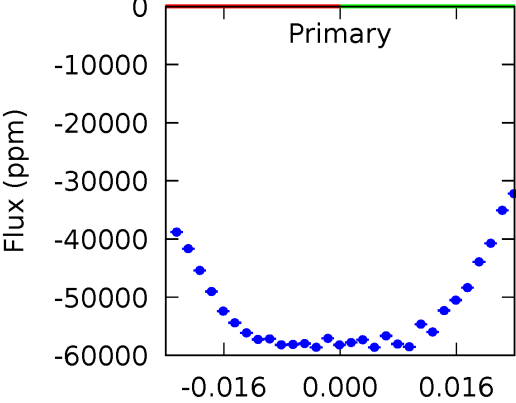
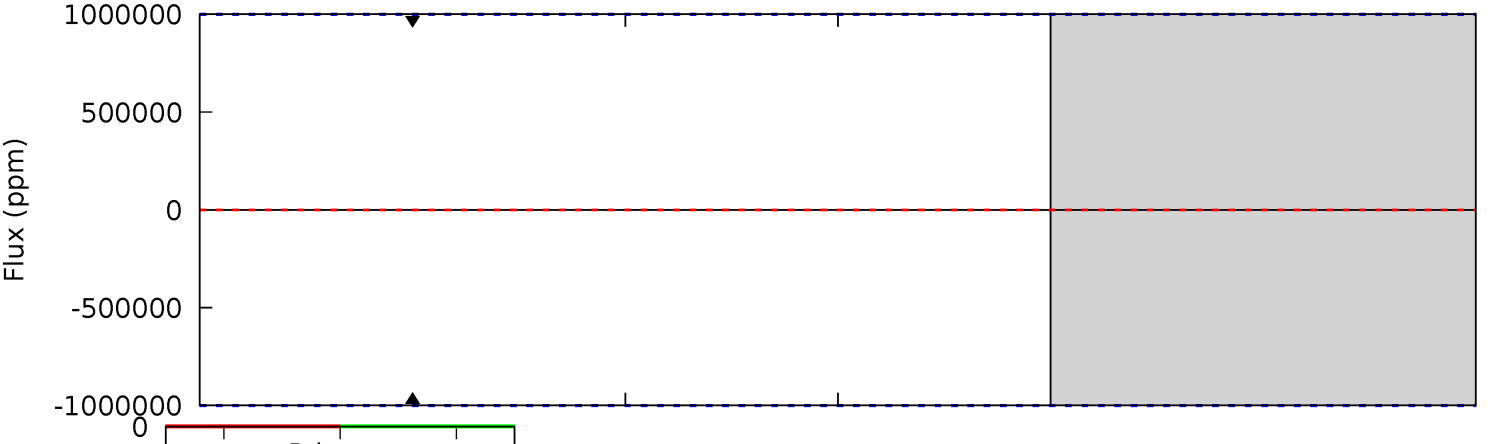
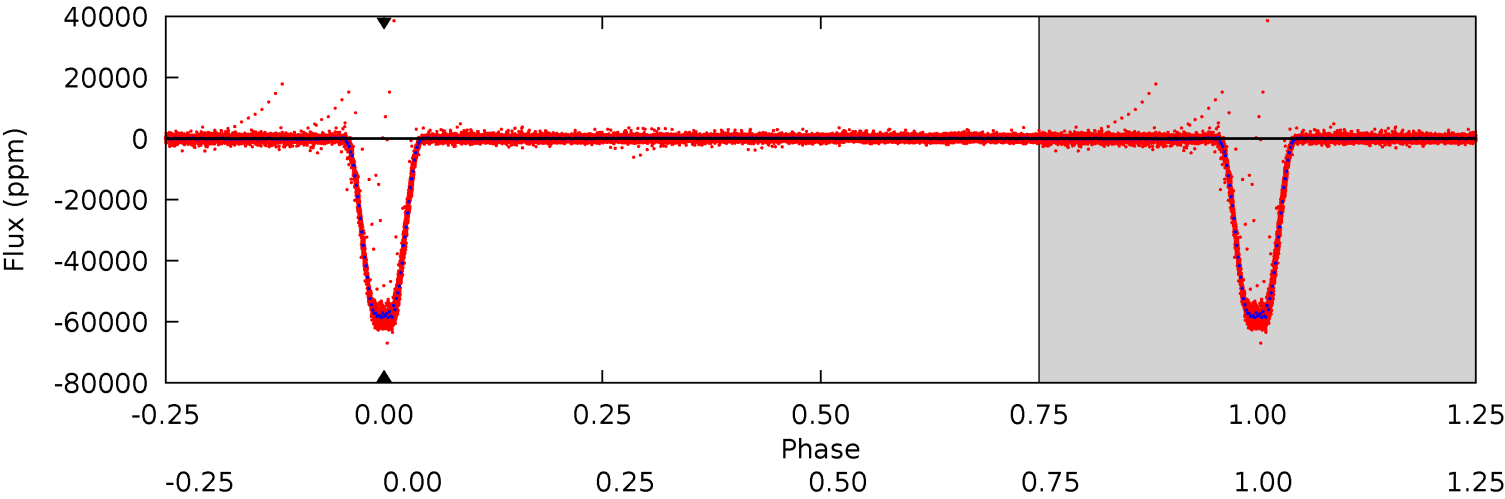
TCE 008374499-02 P= 2.625943 Days $T_0=131.536731$ (BKJD)



DV Model-Shift Uniqueness Test

008374499-02, P = 2.625943 Days, E = 131.538239 Days

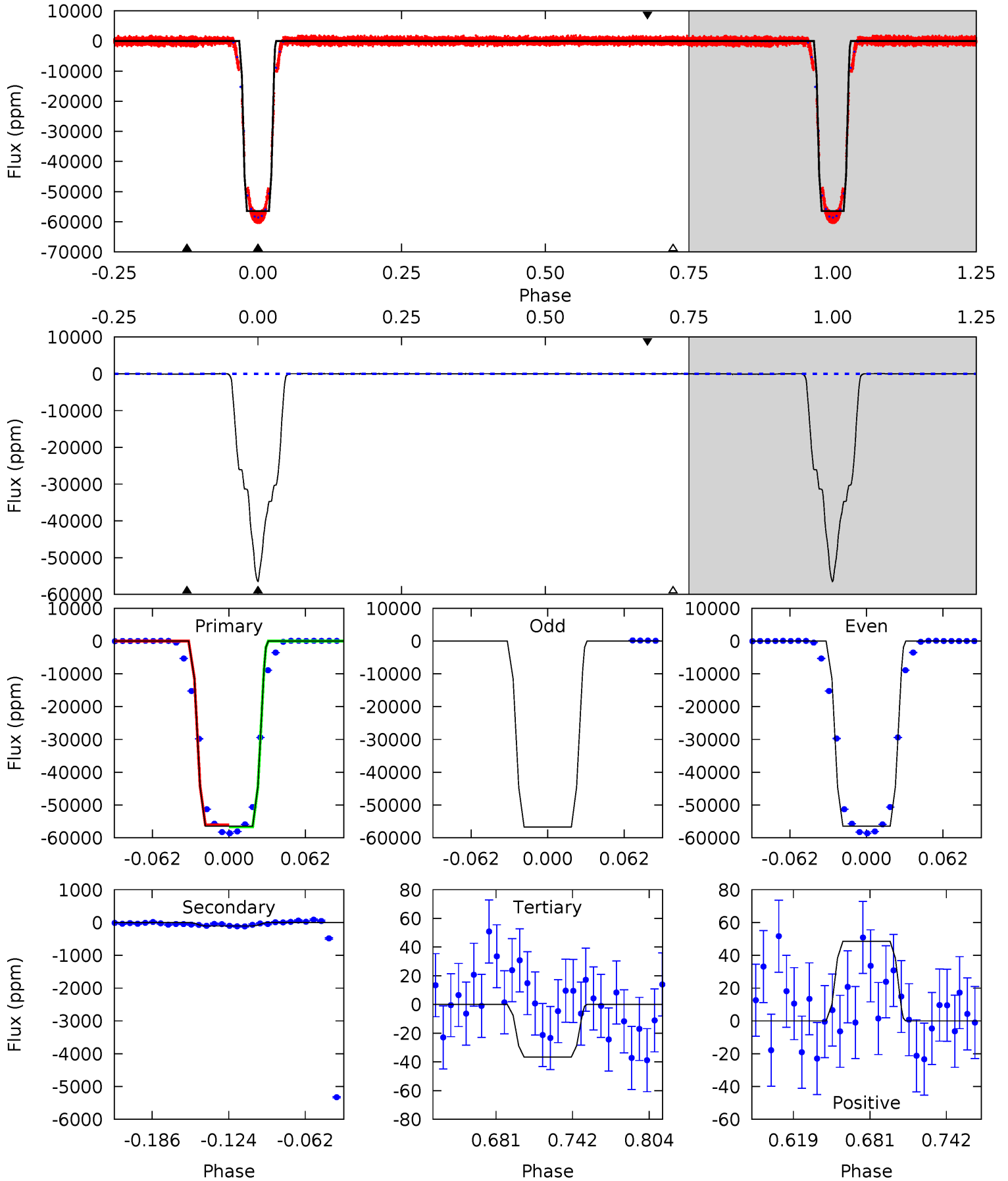
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008374499-02, P = 2.625943 Days, E = 131.536731 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3673	6.85	2.38	3.16	4.66	1.87	1.26	3671	3670	4.47	3.69	9.52	1.00	0.00	19.8



Stellar Parameters For KIC 008374499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6099^{+164}_{-200}	$4.511^{+0.050}_{-0.200}$	$-0.280^{+0.300}_{-0.300}$	$0.919^{+0.275}_{-0.092}$	$1.000^{+0.131}_{-0.131}$	$1.814^{+0.365}_{-0.900}$
	+3%/-3%	+1%/-4%	+107%/-107%	+30%/-10%	+13%/-13%	+20%/-50%
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 008374499-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$20.54^{+9.97}_{-9.20}$	1908^{+133}_{-100}	4091^{+4610}_{-12292}	10^{+217}_{-196}
Alt.	-105 ± 15	$25.64^{+11.17}_{-10.89}$	1904^{+119}_{-90}	-2281^{+4285}_{-125}	$0.120^{+0.235}_{-0.060}$

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 $A_{obs} \gg 1.0$

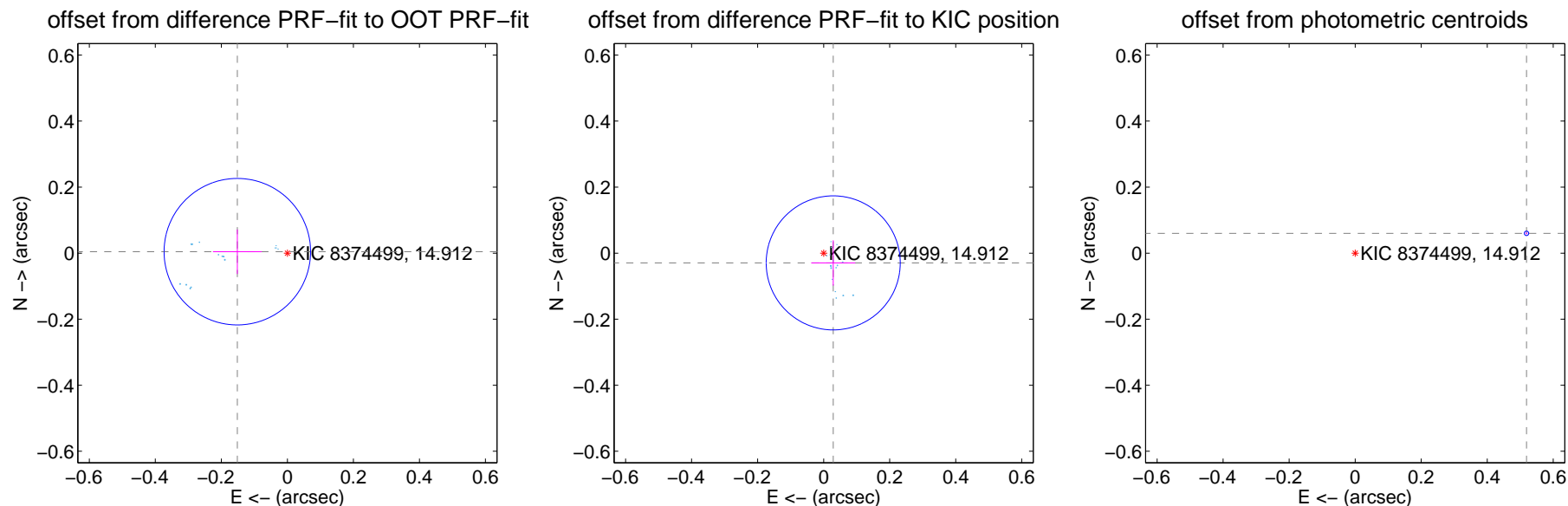
DV Centroid Data

Supplemental centroid analysis for 008374499-02. Kepler magnitude: 14.91. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

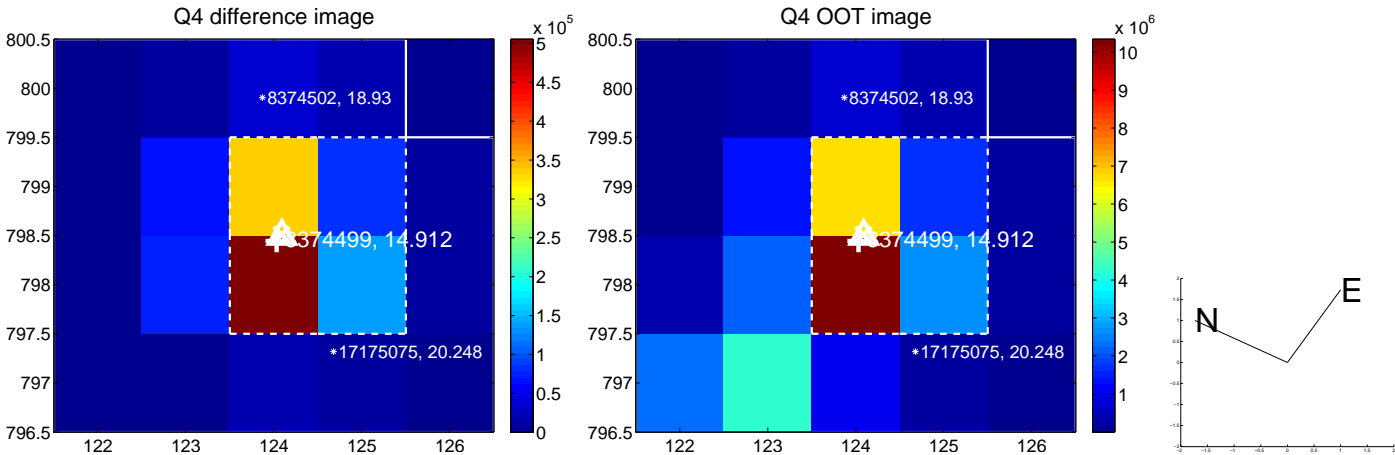
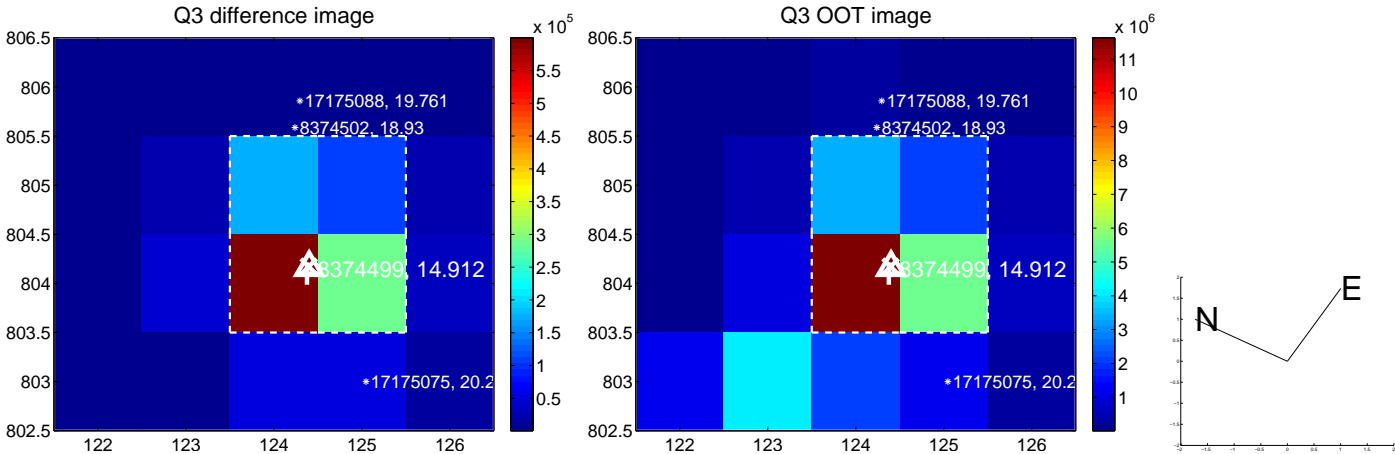
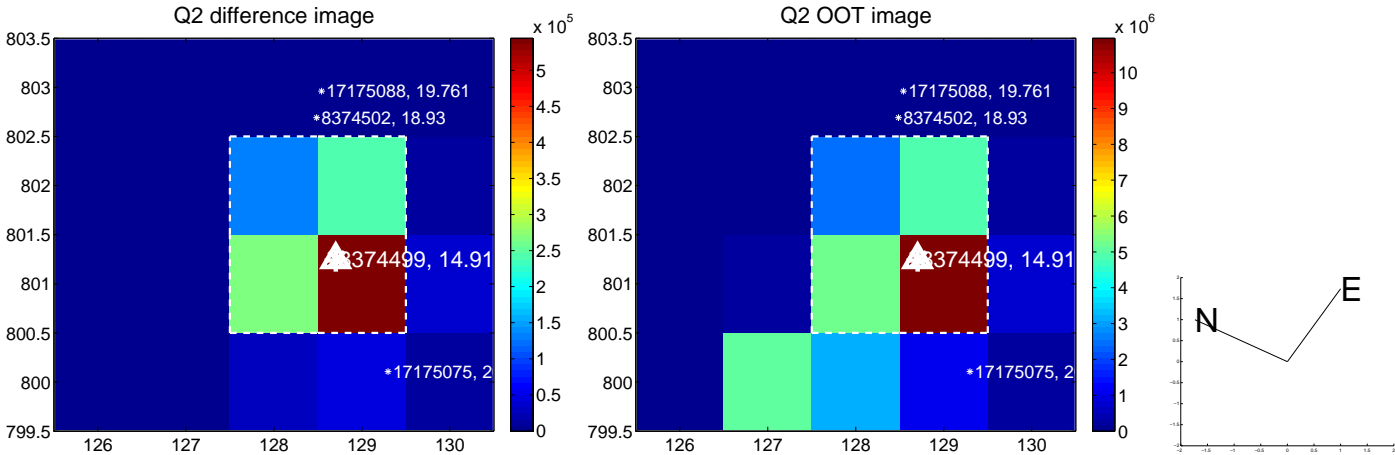
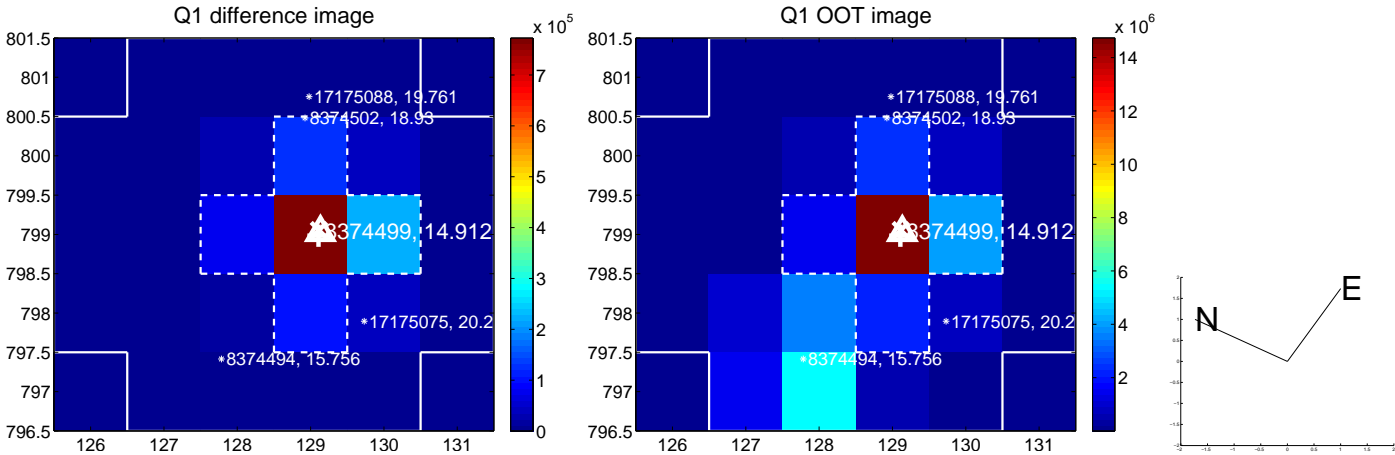
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.074	2.05	0.152 ± 0.074	0.004 ± 0.067
PRF-fit source offset from KIC position	0.041 ± 0.068	0.61	-0.029 ± 0.067	-0.029 ± 0.069
photometric centroid source offset	0.52 ± 0.00	235.64	-0.52 ± 0.00	0.06 ± 0.00

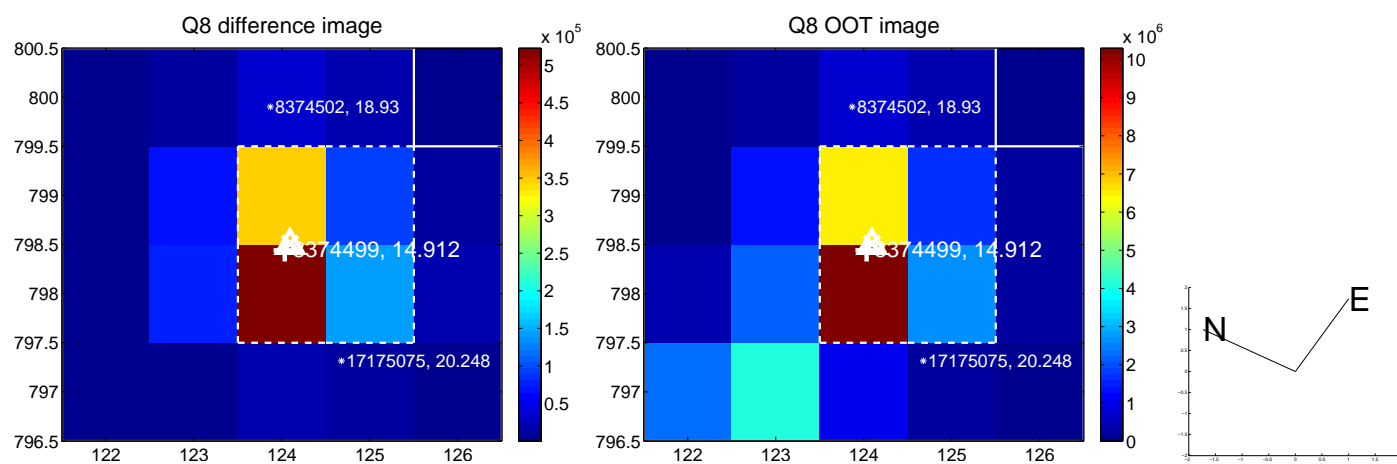
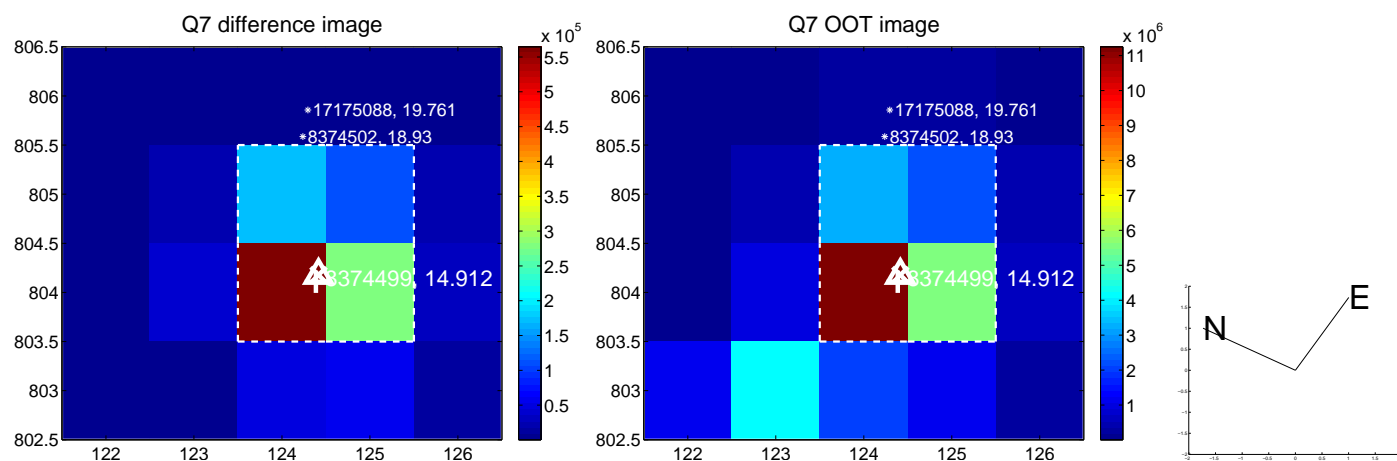
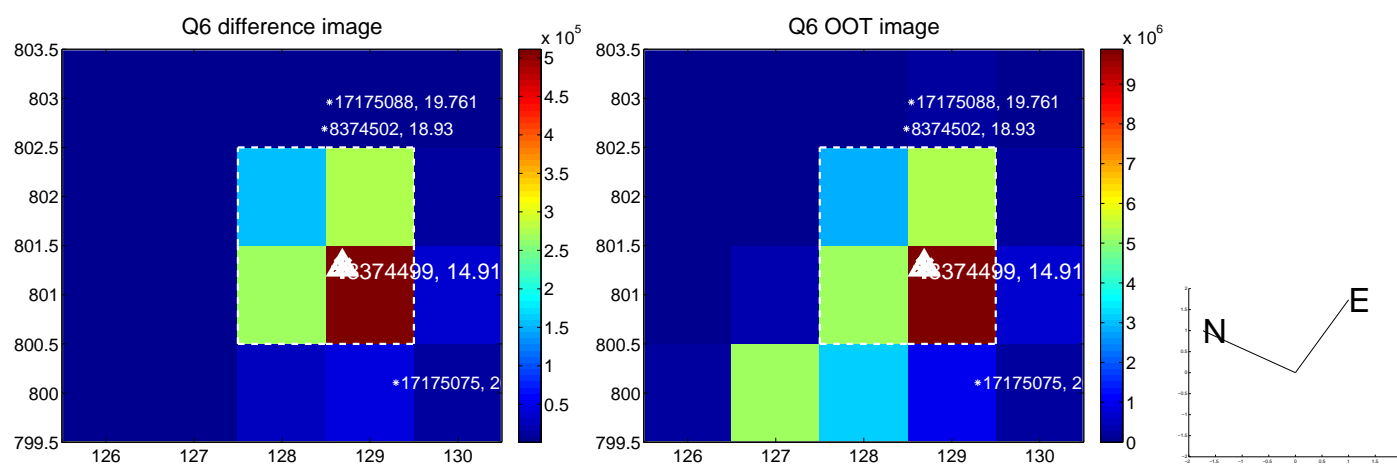
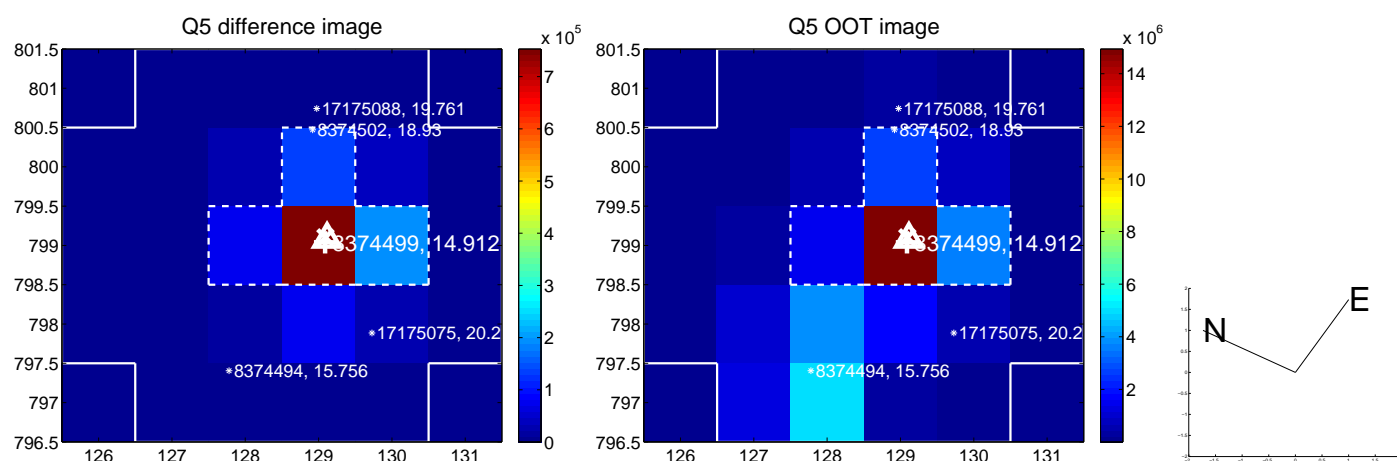


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

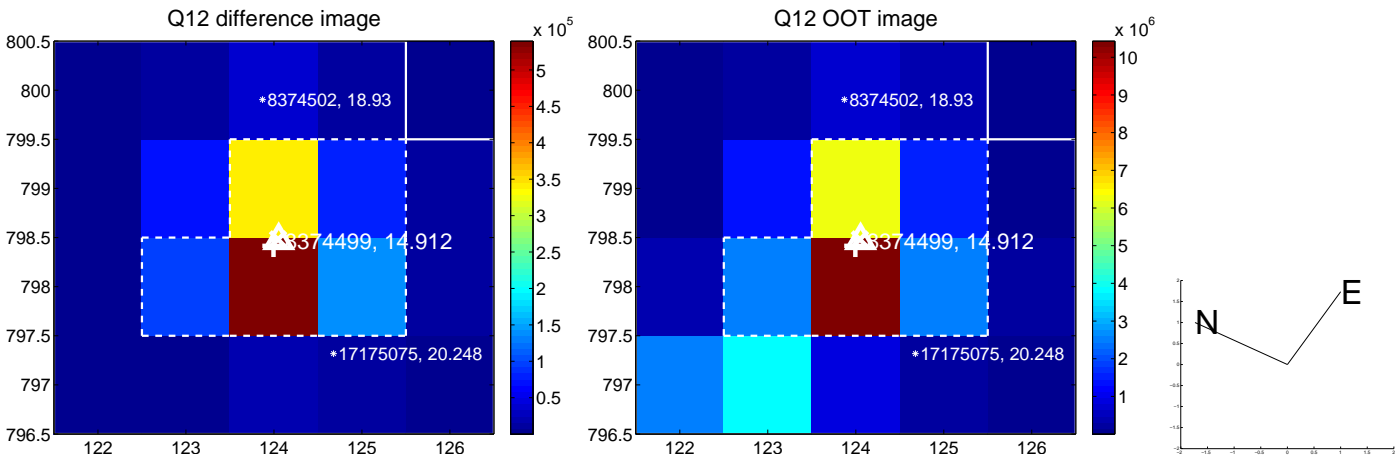
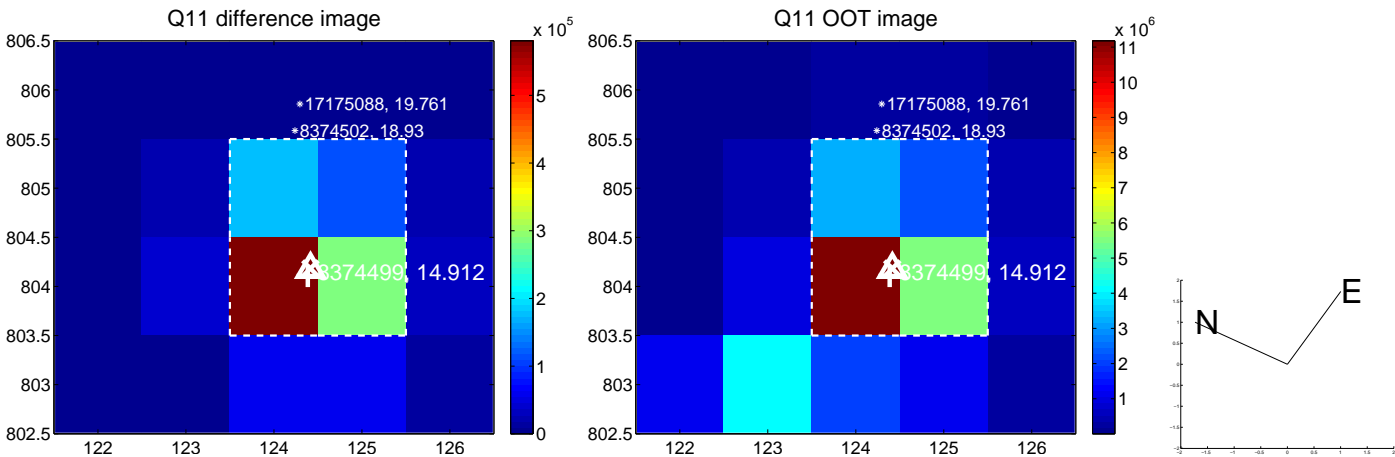
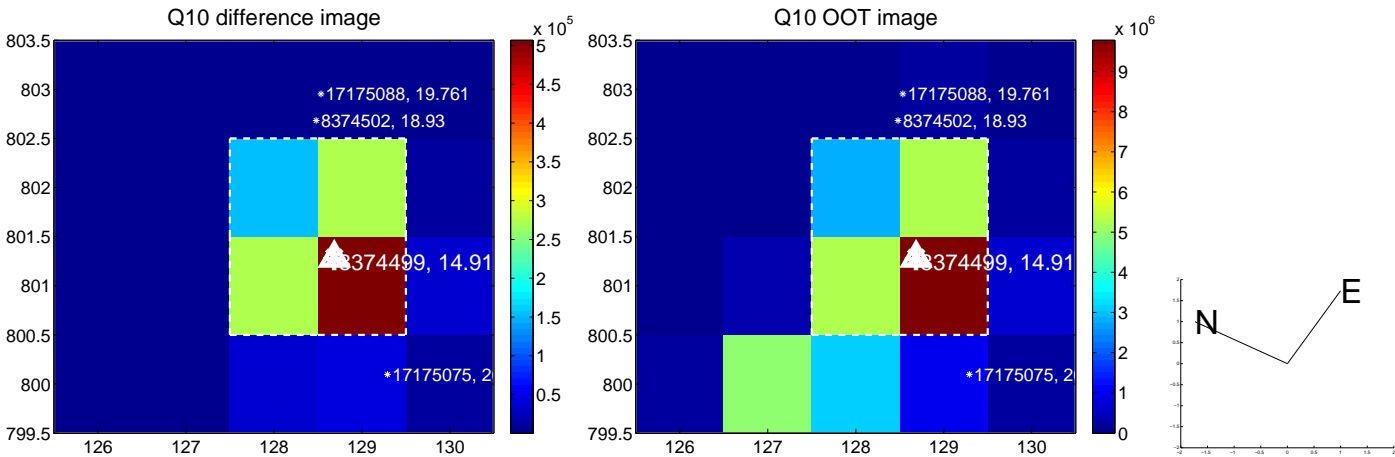
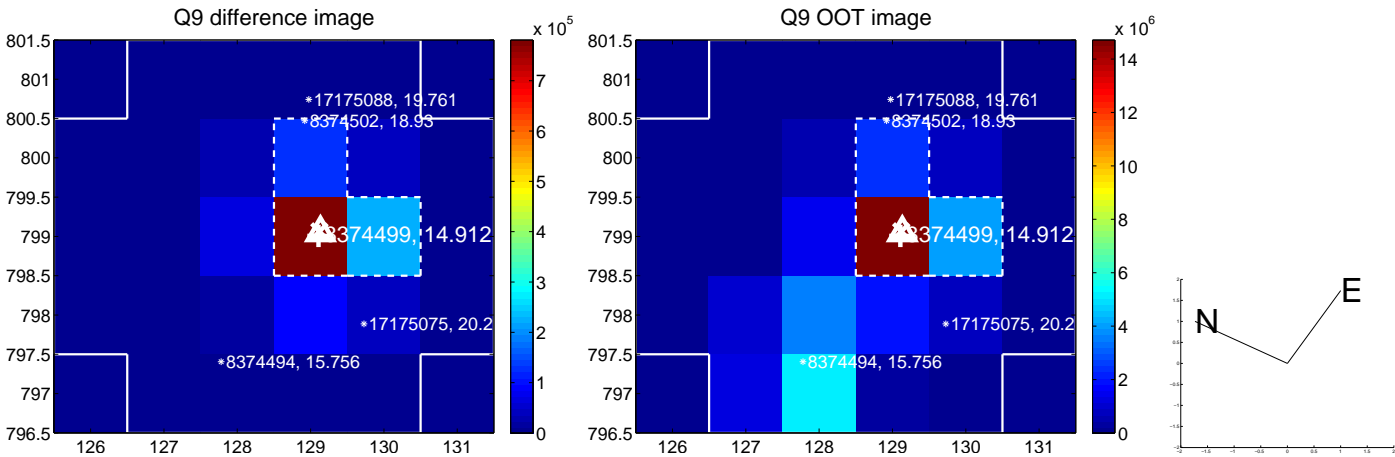
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



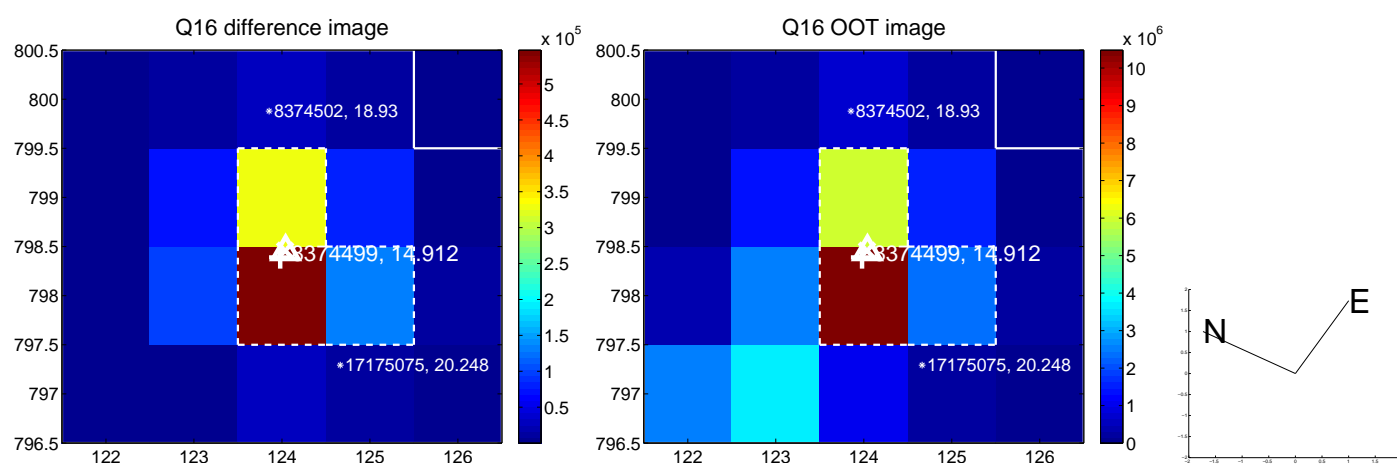
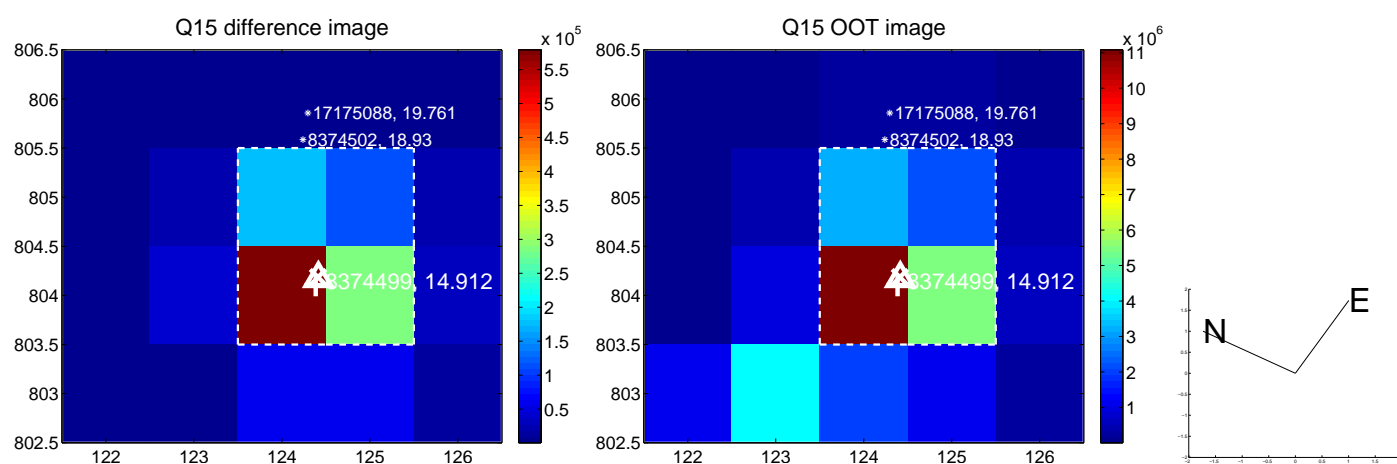
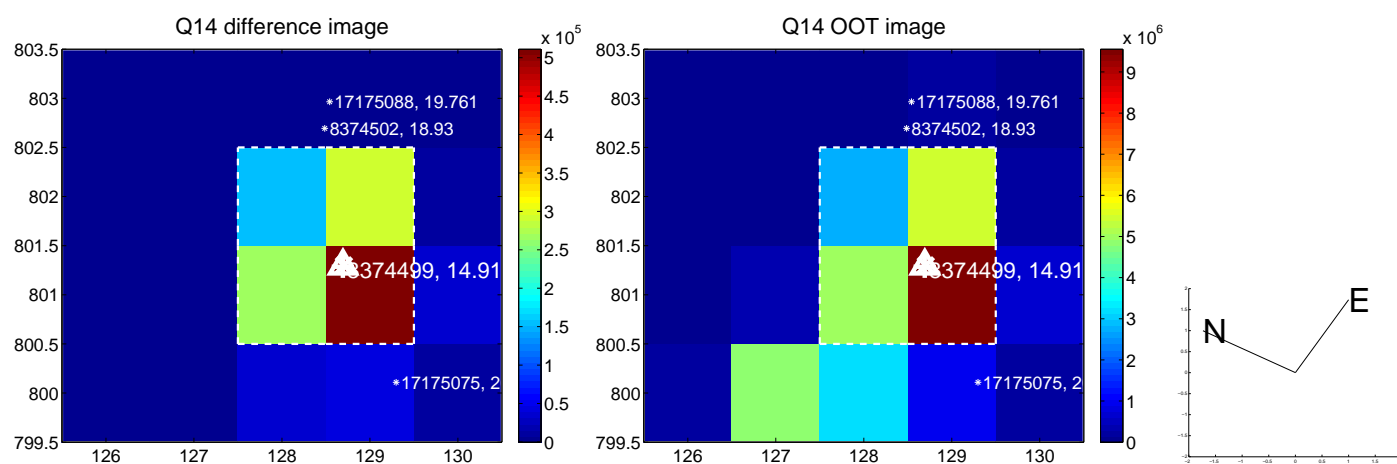
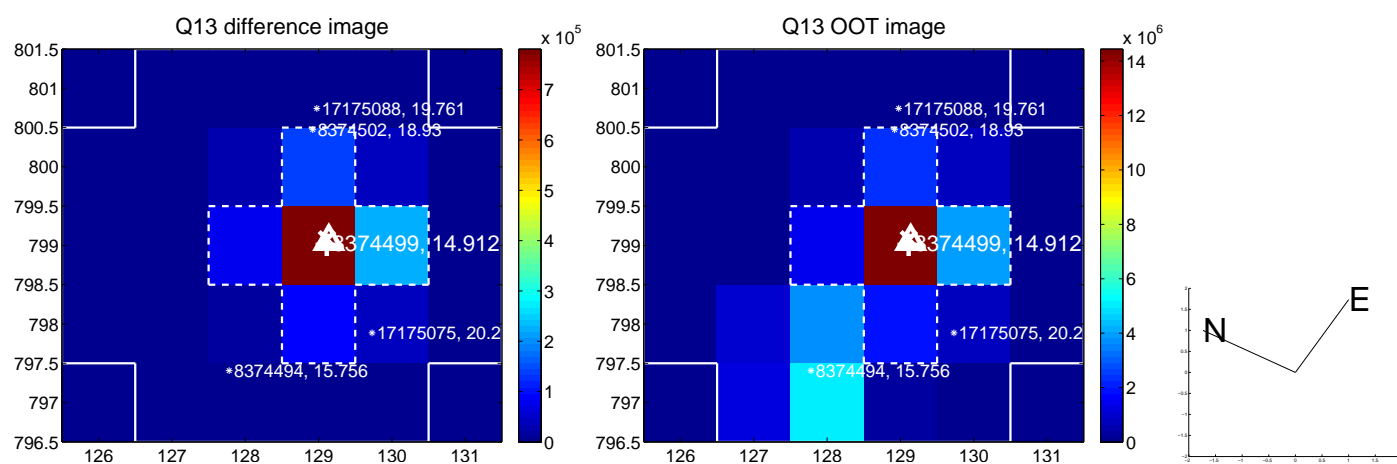
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



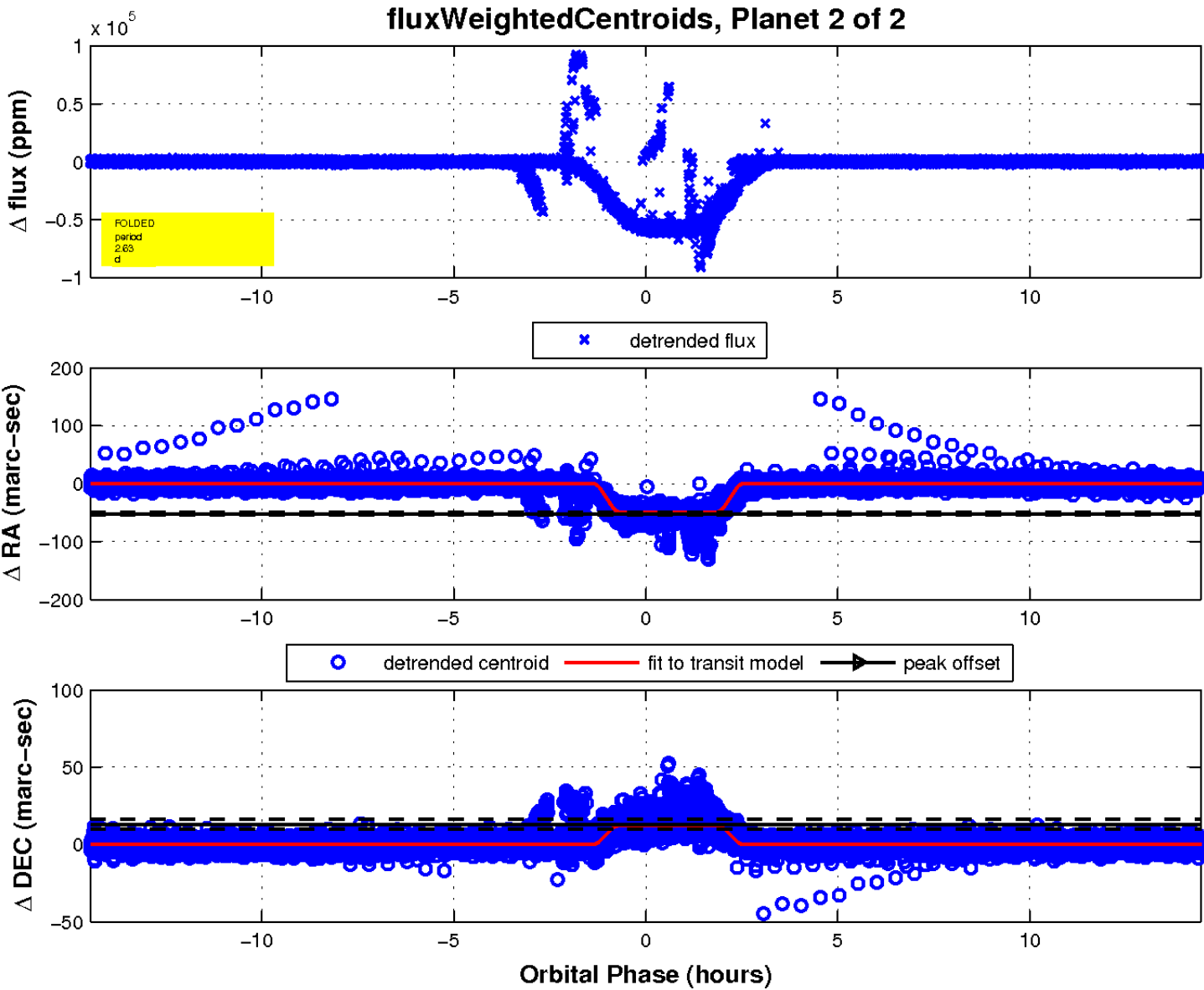
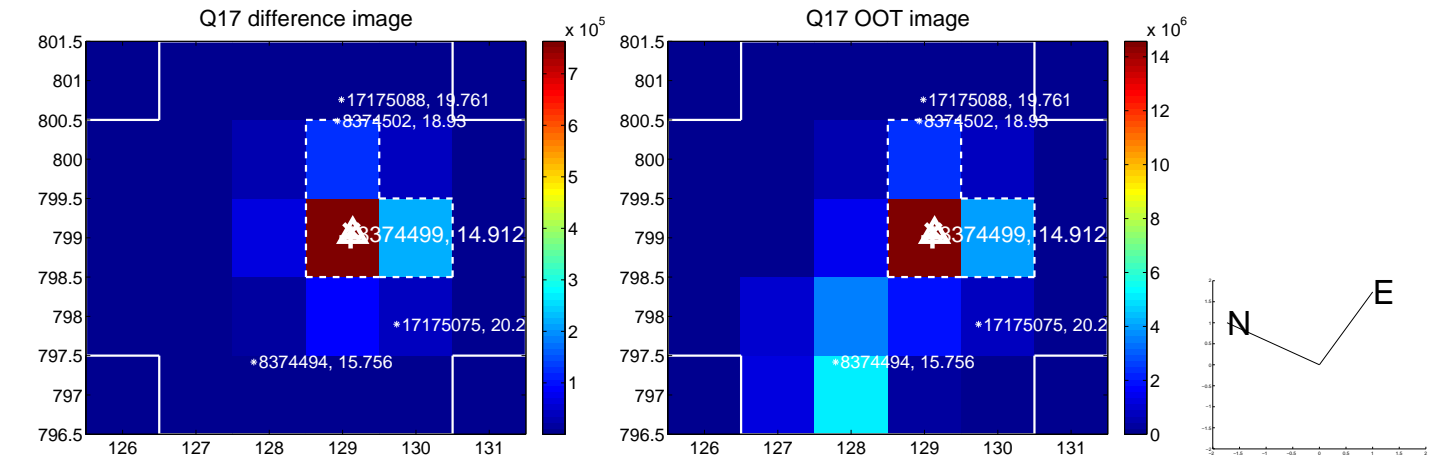
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

