

KIC 005014753

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})
005014753-01	OBS	0606.01	3.170618	134.001618	14640.7	2.720	1215.5	860.0	1.03	6068	14.45	706.70
005014753-02	OBS	No	3.170639	132.412659	943.8	2.324	75.4	84.9	1.03	6068	3.76	706.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005014753-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
005014753-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

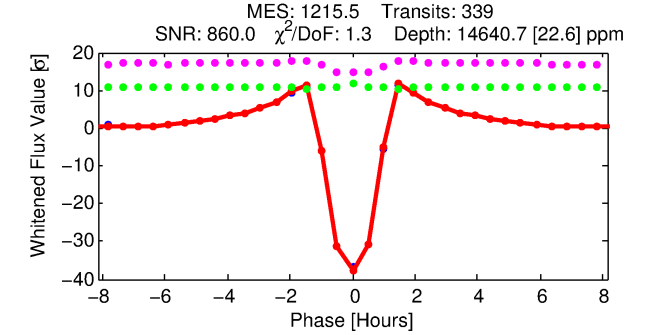
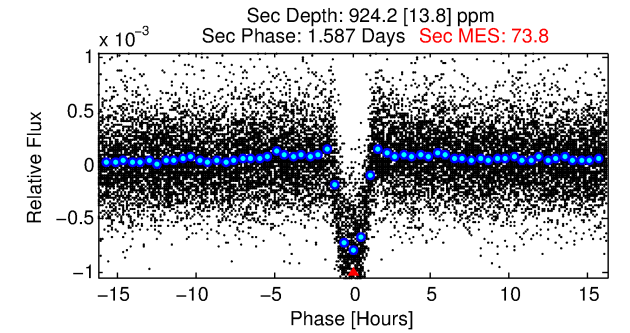
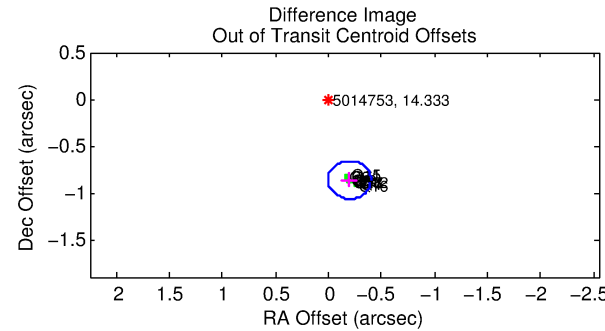
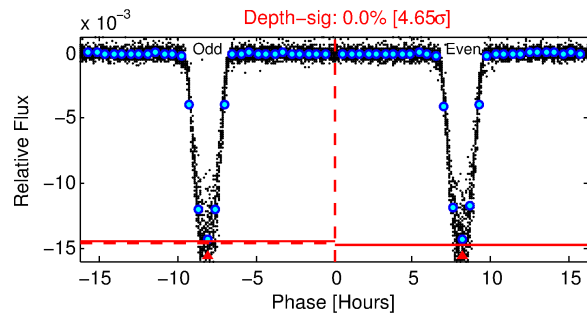
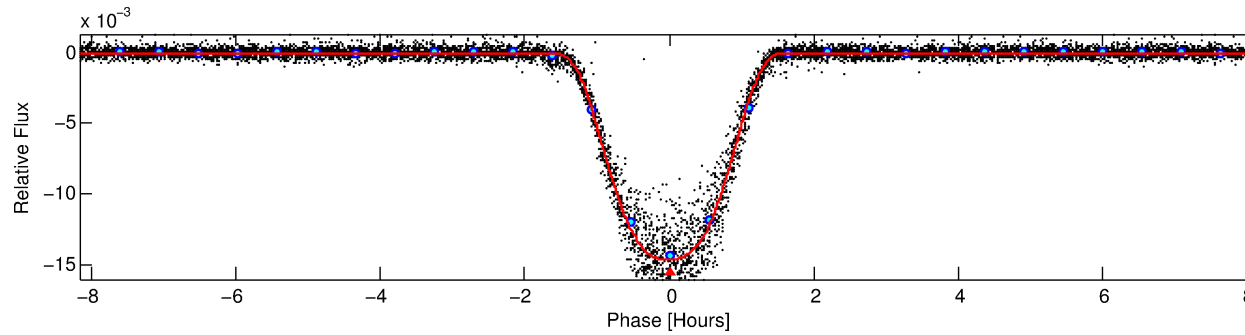
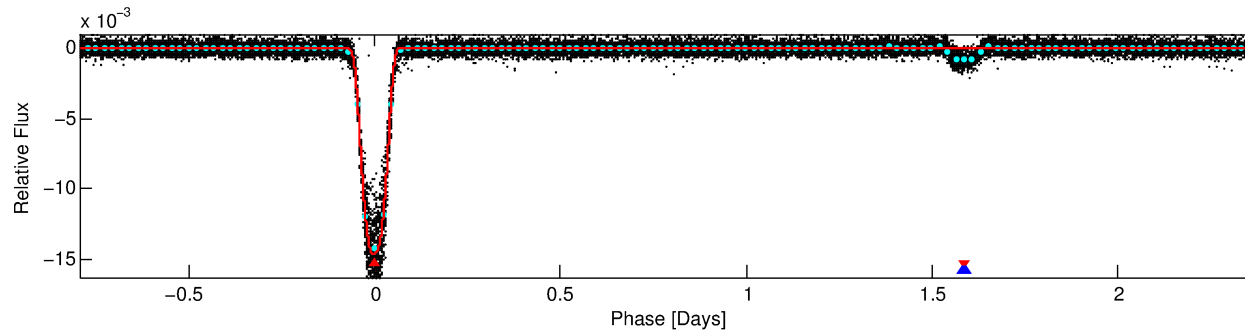
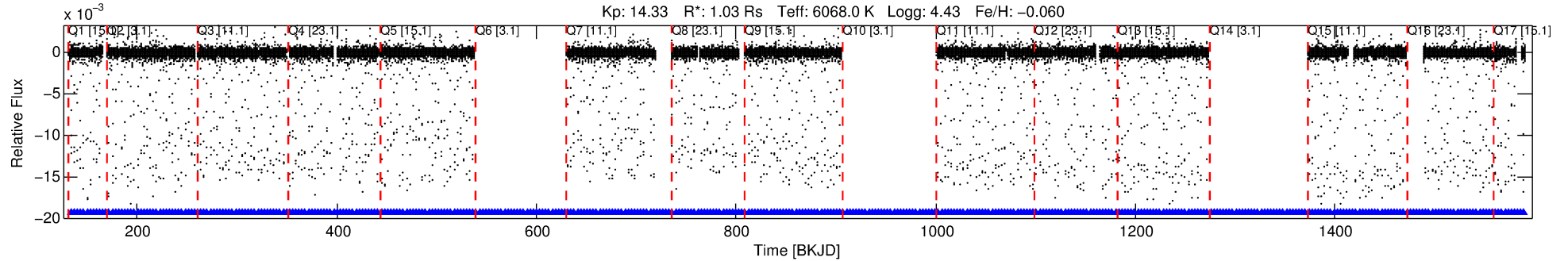
Ephemeris Match Information For 005014753-01

No Significant Match Found

DV One-Page Summary

KIC: 5014753 Candidate: 1 of 2 Period: 3.171 d
KOI: K00606.01 Corr: 0.991

Kp: 14.33 R*: 1.03 Rs Teff: 6068.0 K Logg: 4.43 Fe/H: -0.060



DV Fit Results:

Period = 3.17062 [0.00000] d
Epoch = 134.0016 [0.0000] BKJD
Rp/R* = 0.1280 [0.0002]
a/R* = 6.62 [0.01]
b = 0.86 [0.00]
Seff = 706.69 [293.58]
Teq = 1315 [137] K
Rp = 14.45 [4.61] Re
a = 0.0429 [0.0114] AU
Ag = 4.48 [1.73] [2.01σ]
Teffp = 2957 [114] K [9.24σ]

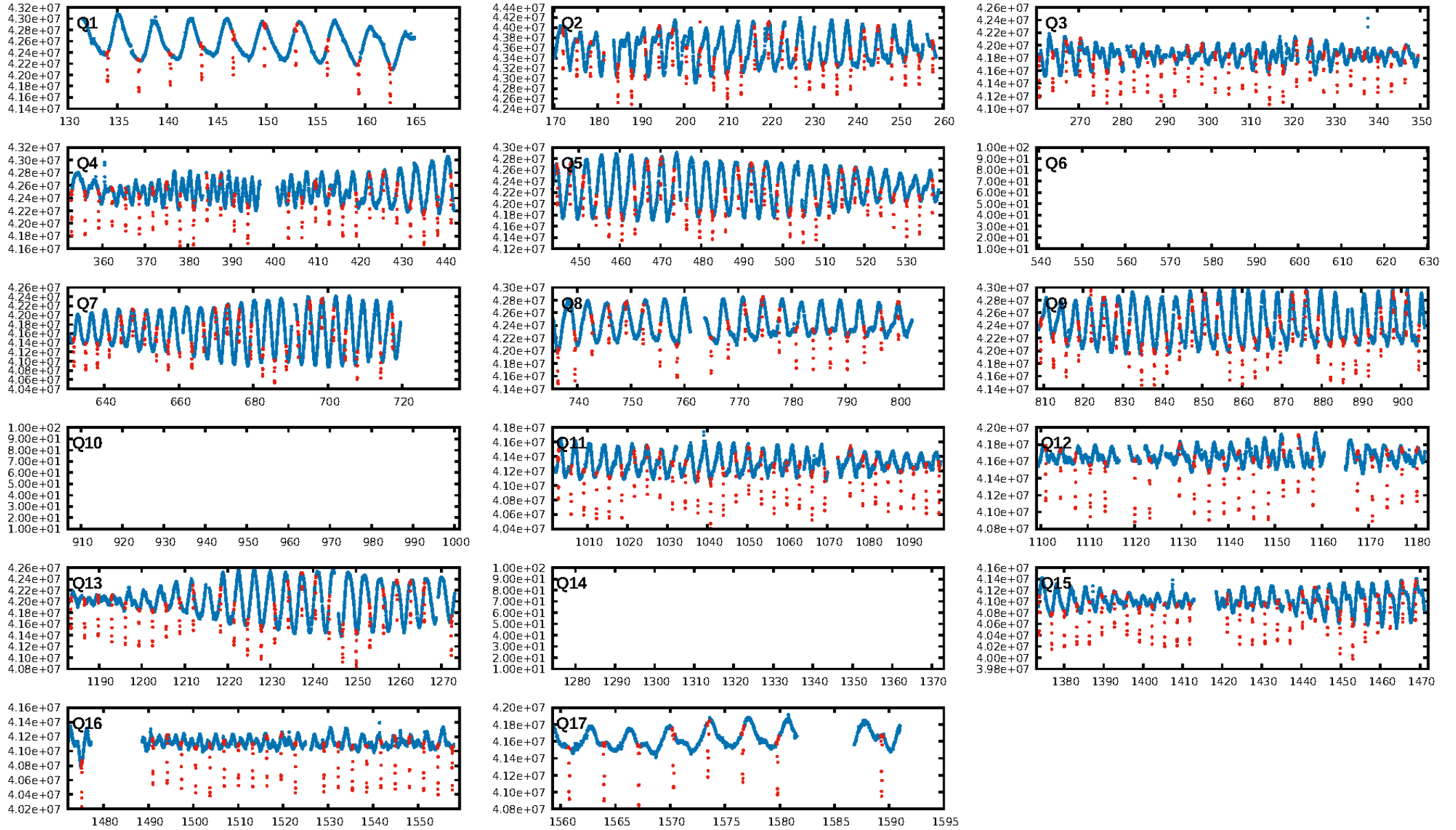
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [321/321]
GhostDiagnostic-chr: 2.287
Centroid-sig: N/A
Centroid-so: 0.148 arcsec [14.81σ]
OotOffset-rm: 0.886 arcsec [13.14σ]
KicOffset-rm: 0.926 arcsec [12.87σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

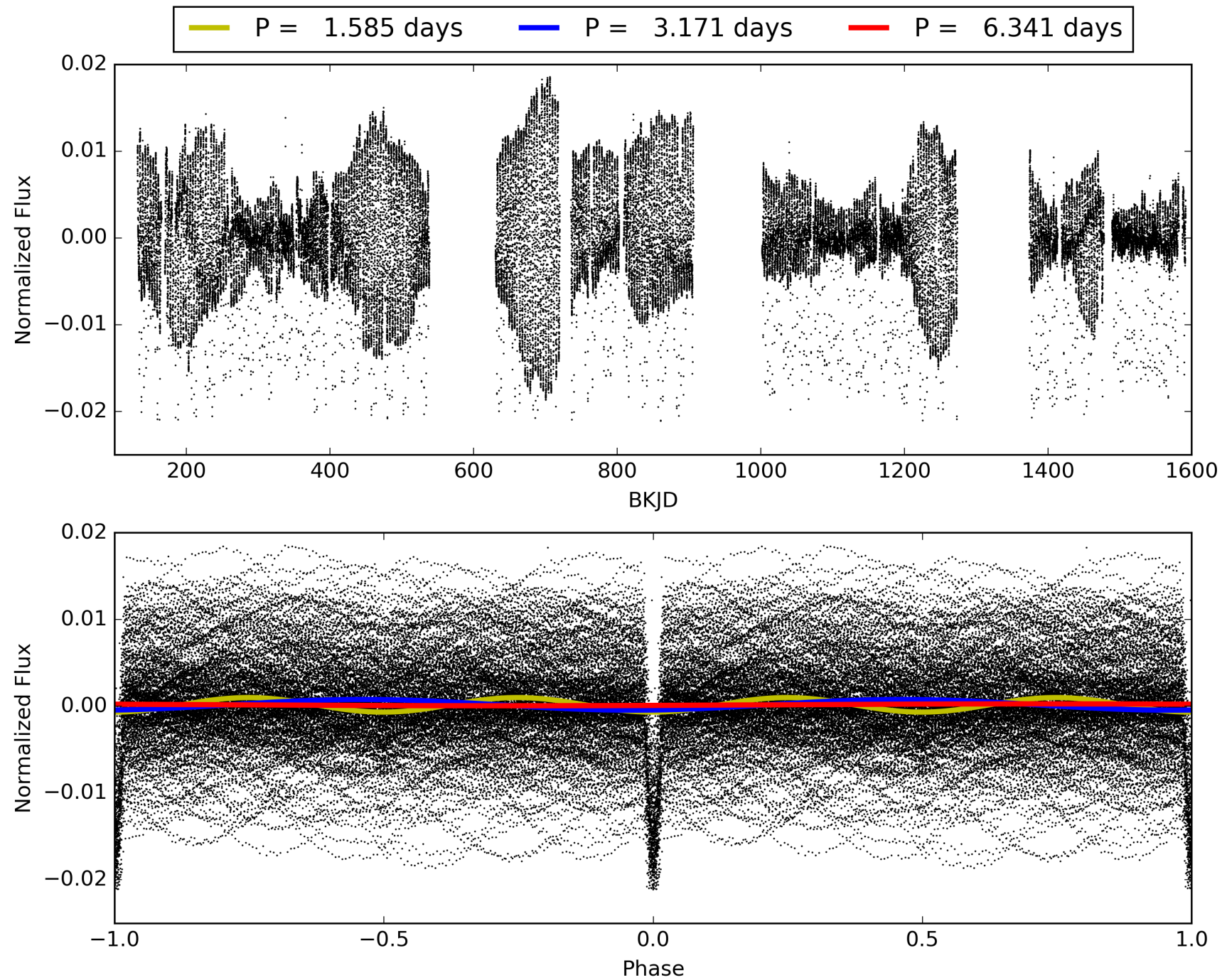
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:10:15 Z

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

TCE 005014753-01, PDC Light Curves

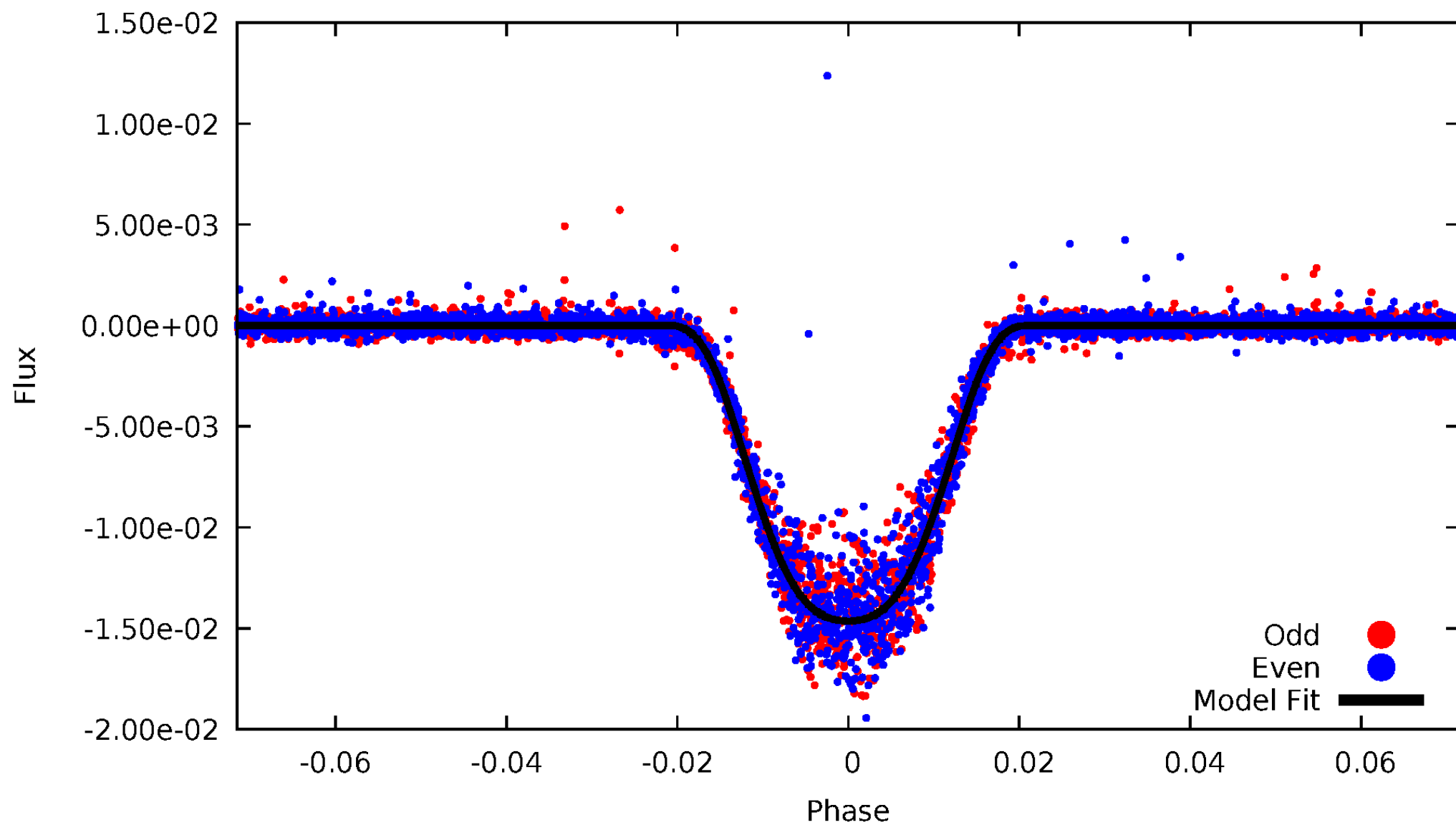


TCE 005014753-01



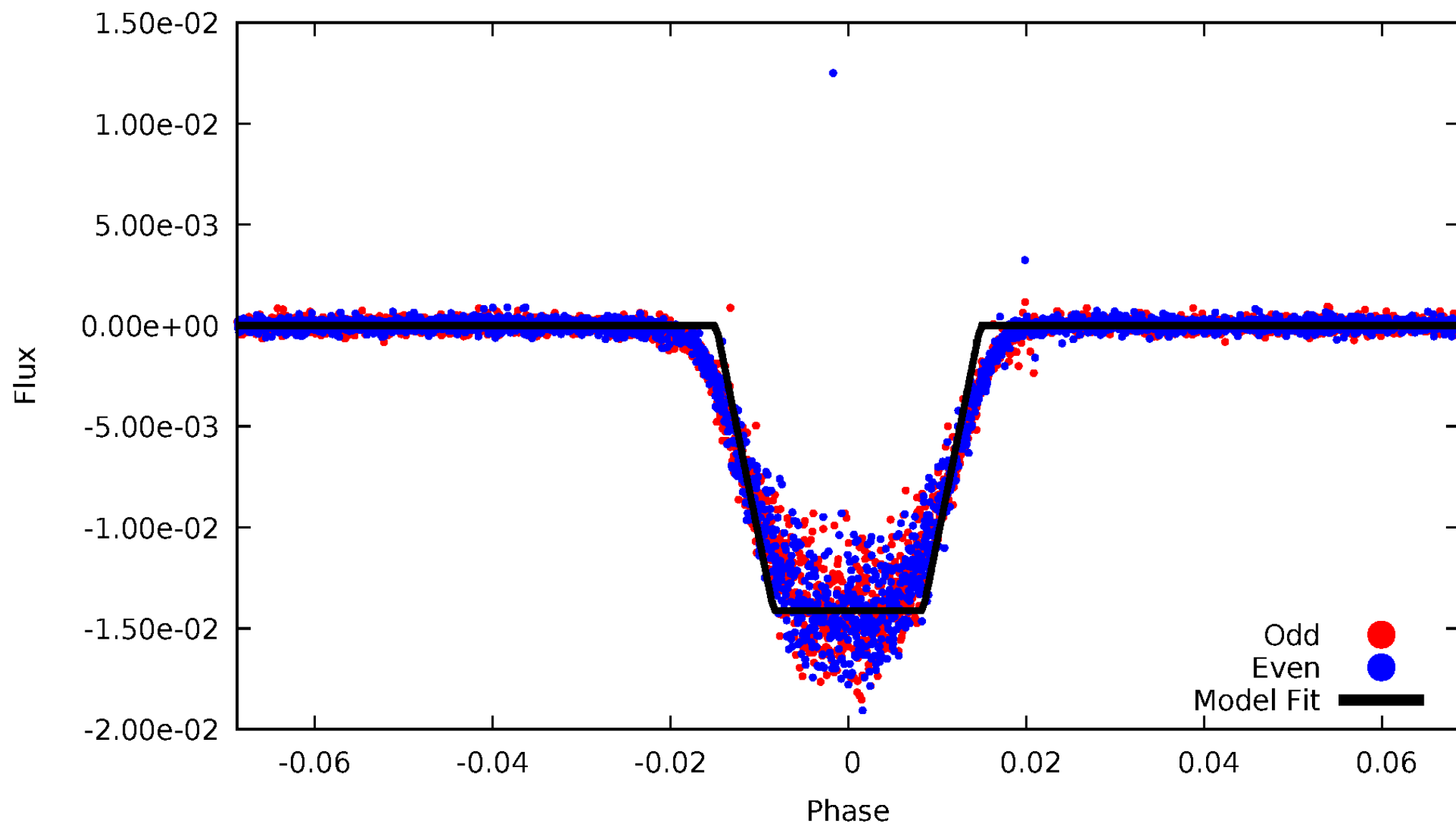
DV Odd/Even

TCE 005014753-01



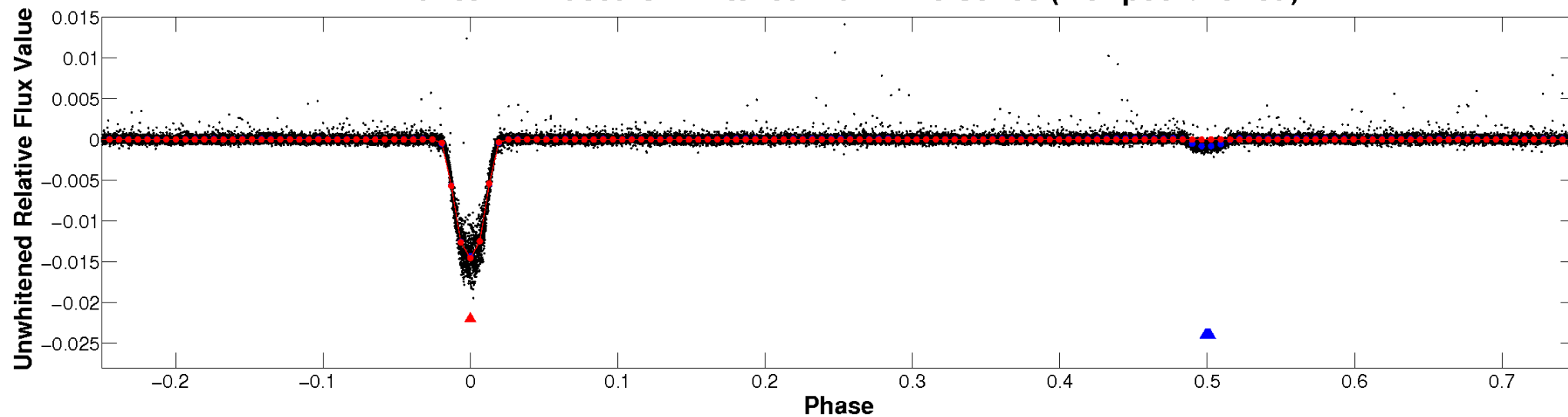
ALT Odd/Even

TCE 005014753-01

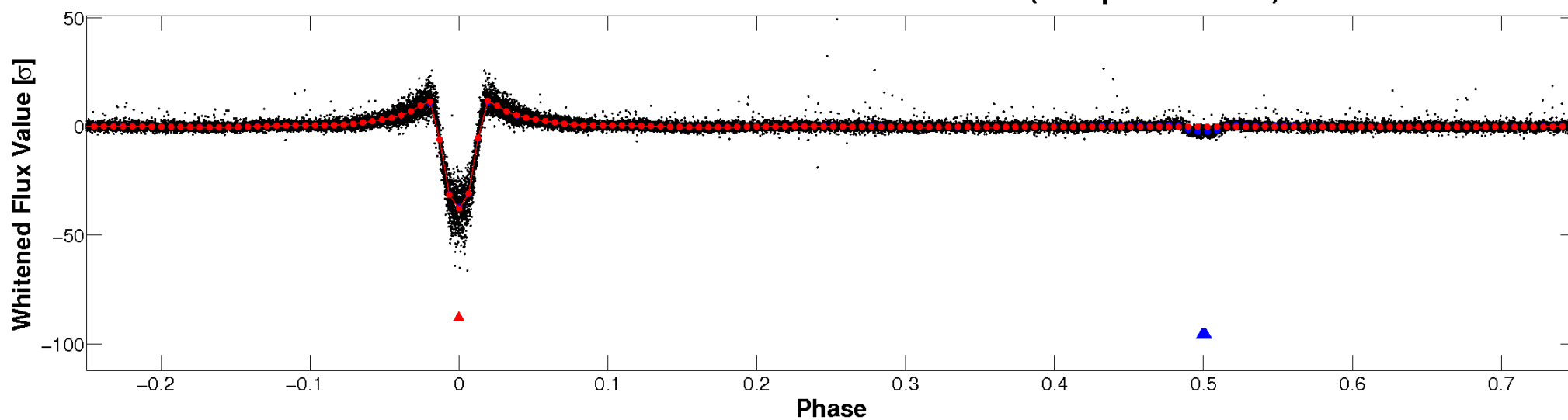


Non-Whitened Vs. Whitened Light Curve

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

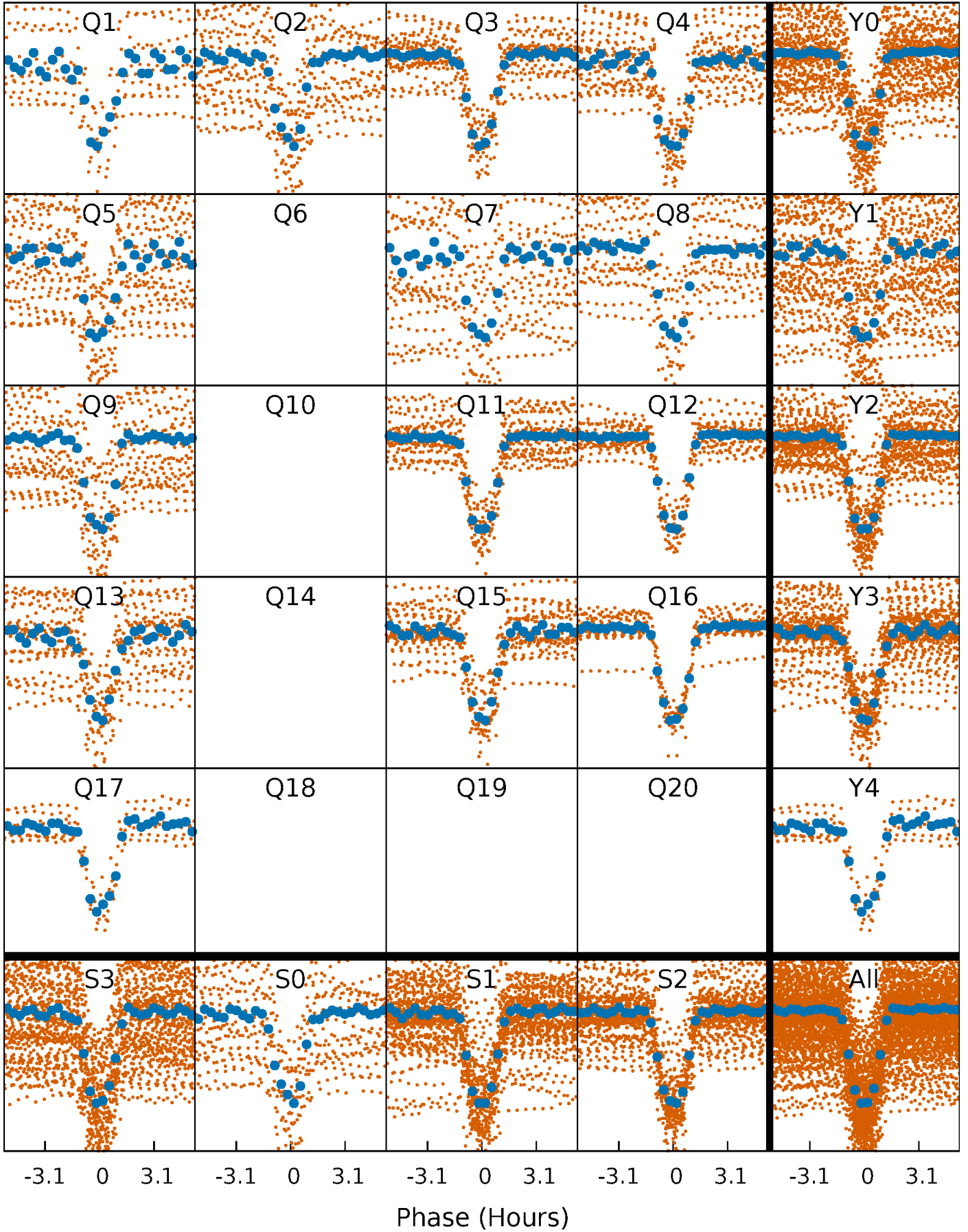


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



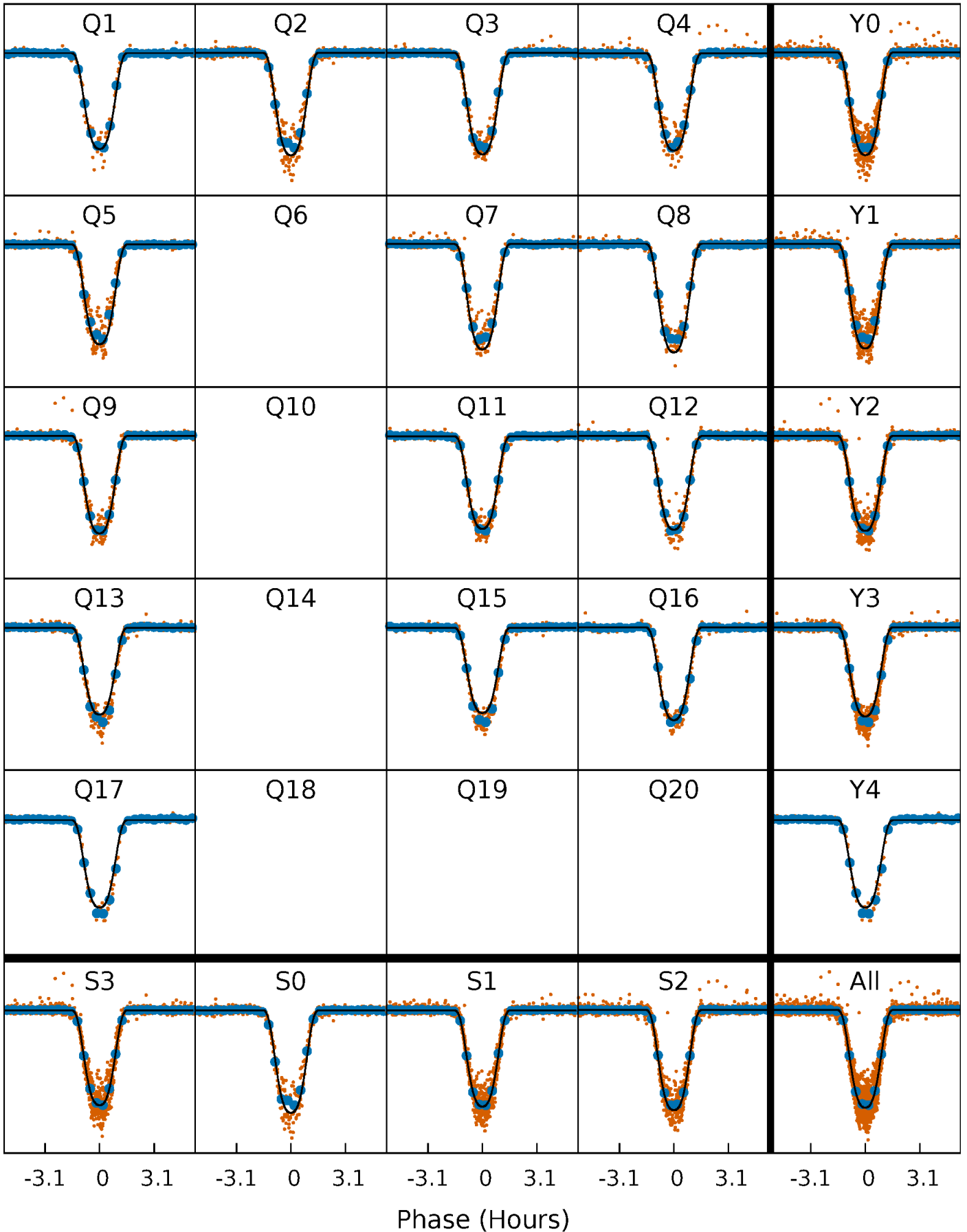
PDC Quarter-Phased Transit Curves

TCE 005014753-01 P= 3.170618 Days $T_0=134.001618$ (BKJD)



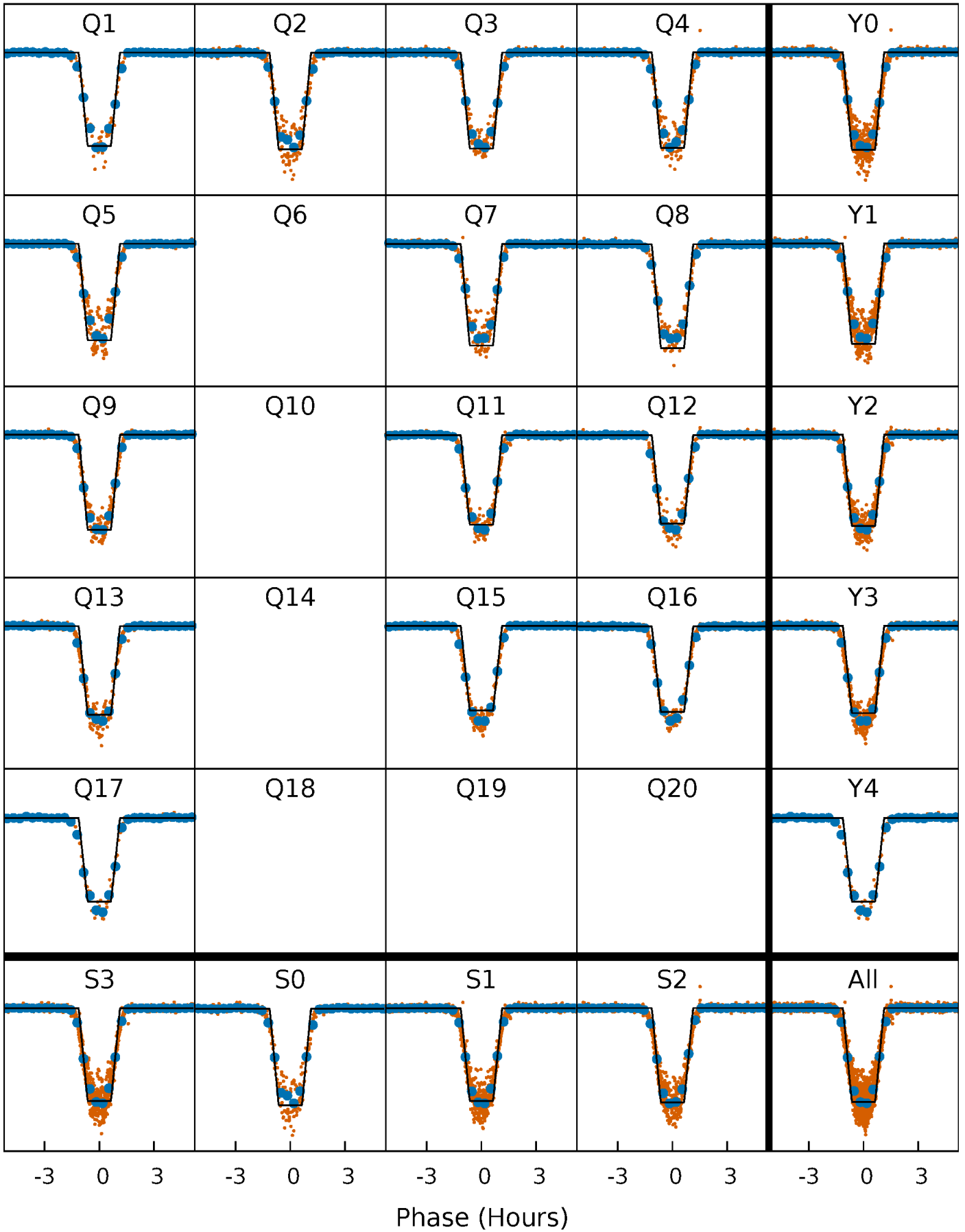
DV Quarter-Phased Transit Curves

TCE 005014753-01 P= 3.170618 Days $T_0=134.001618$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

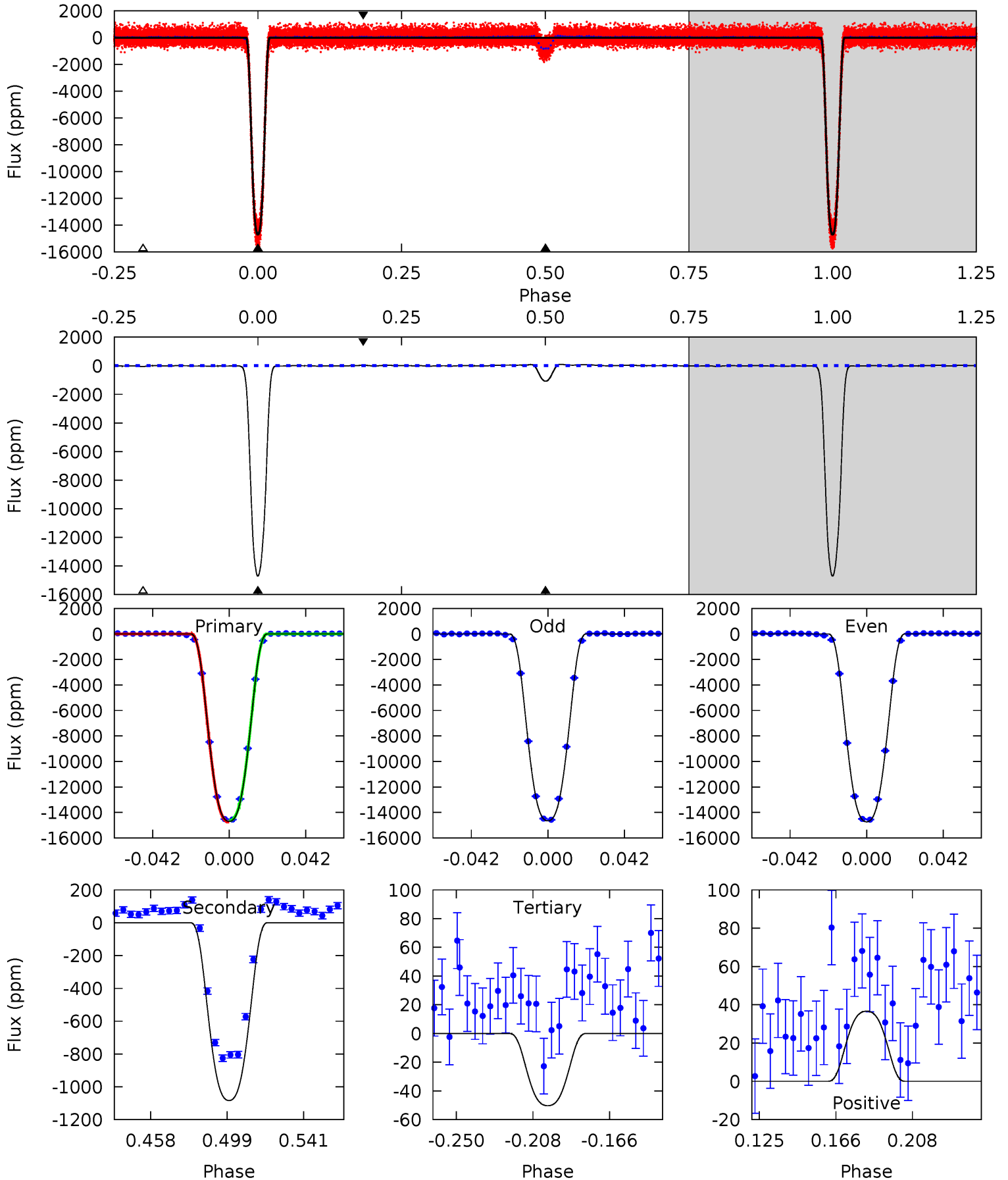
TCE 005014753-01 P= 3.170631 Days $T_0=133.998919$ (BKJD)



DV Model-Shift Uniqueness Test

005014753-01, P = 3.170618 Days, E = 130.831000 Days

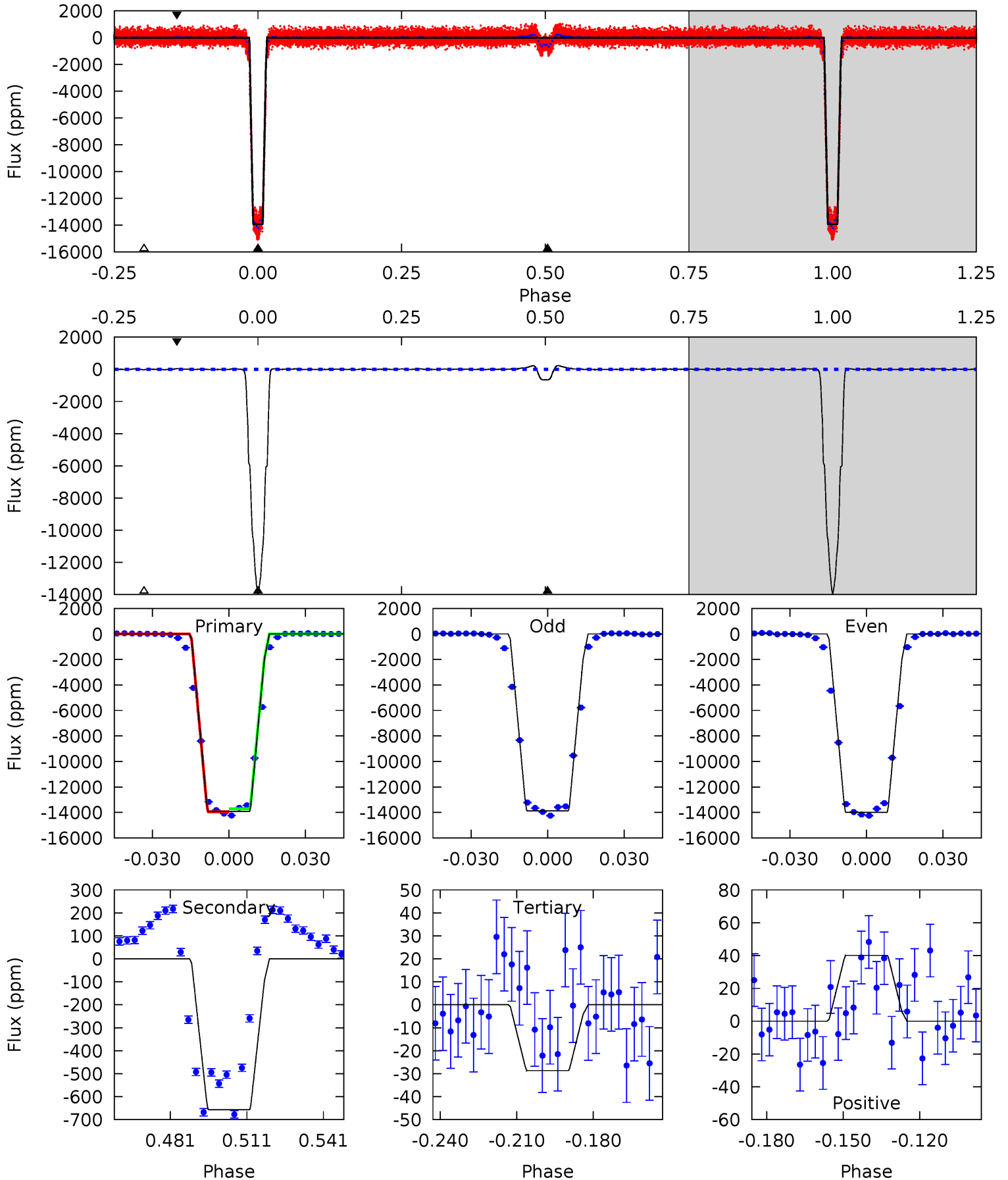
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2119	156.3	7.25	5.28	4.75	2.04	3.17	2112	2114	149.0	151.0	5.16	0.99	0.01	0



Alt Model-Shift Uniqueness Test

005014753-01, P = 3.170631 Days, E = 130.828288 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1524	71.9	3.14	4.39	4.81	2.17	2.39	1521	1520	68.7	67.5	7.00	0.99	0.02	0



Stellar Parameters For KIC 005014753

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6068^{+190}_{-232}	$4.428^{+0.070}_{-0.210}$	$-0.060^{+0.250}_{-0.300}$	$1.034^{+0.330}_{-0.141}$	$1.042^{+0.159}_{-0.130}$	$1.328^{+0.493}_{-0.691}$
	+3%/-4%	+2%/-5%	+417%/-500%	+32%/-14%	+15%/-12%	+37%/-52%
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 005014753-01 / KOI 0606.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1084 ± 7	$14.74^{+2.63}_{-1.23}$	1875^{+149}_{-104}	3515^{+71}_{-88}	$4.944^{+0.844}_{-1.246}$
Alt.	-656 ± 9	$13.83^{+2.20}_{-1.22}$	1876^{+137}_{-111}	3300^{+70}_{-82}	$3.415^{+0.591}_{-0.818}$

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

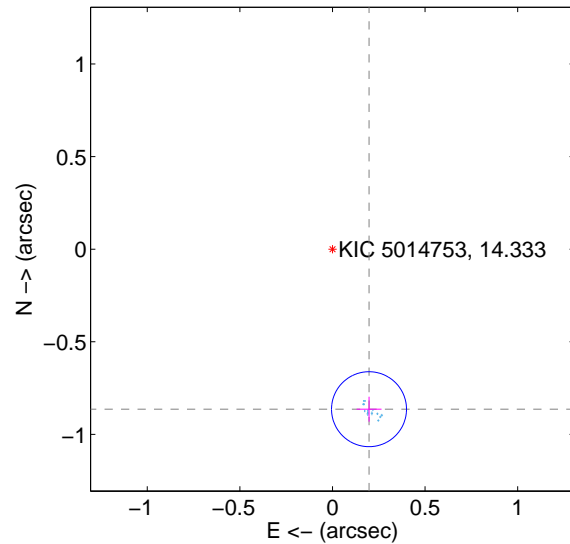
Supplemental centroid analysis for 005014753-01. Kepler magnitude: 14.33. Transit SNR 860.01

There are 14 quarters with good PRF difference image offsets

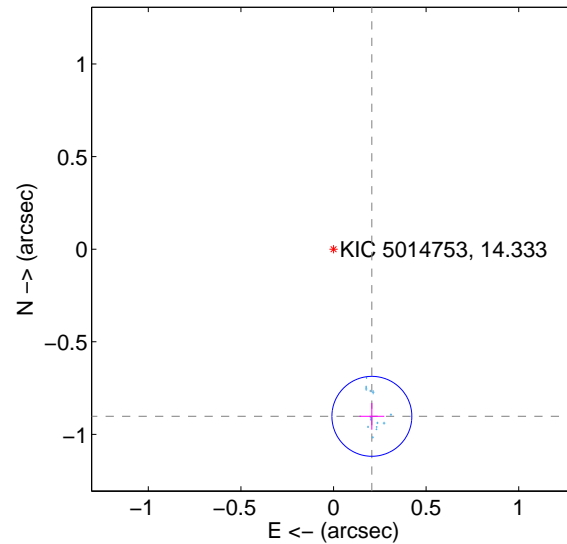
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.886 ± 0.067	13.14	-0.197 ± 0.067	-0.864 ± 0.067
PRF-fit source offset from KIC position	0.926 ± 0.072	12.87	-0.207 ± 0.067	-0.902 ± 0.072
photometric centroid source offset	0.15 ± 0.01	14.81	-0.03 ± 0.01	-0.14 ± 0.01

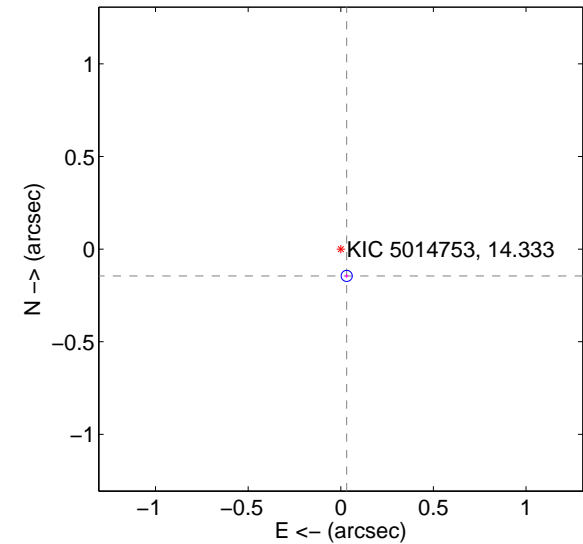
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

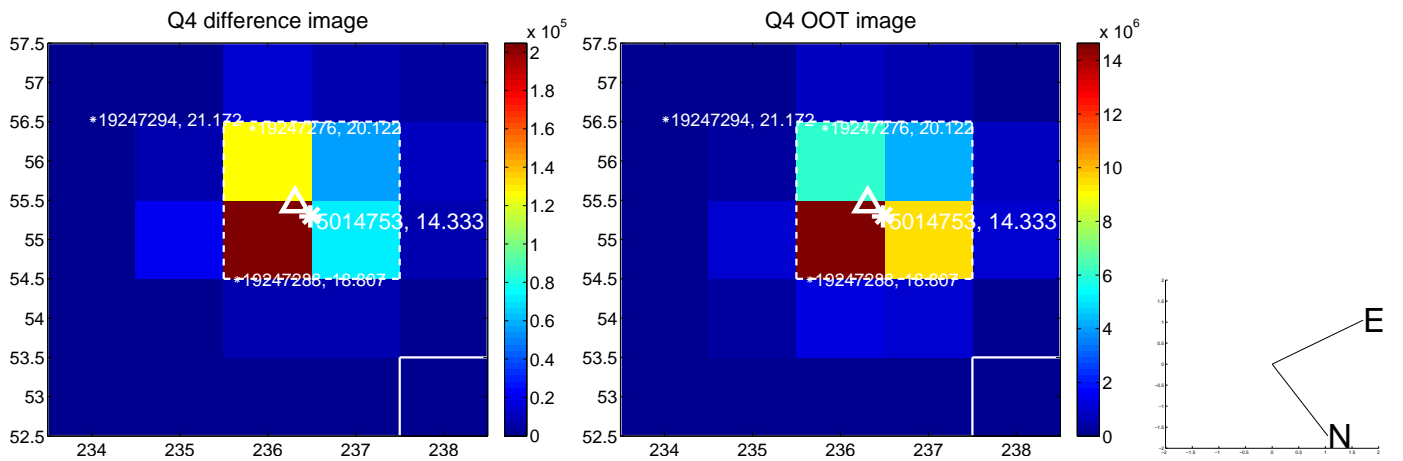
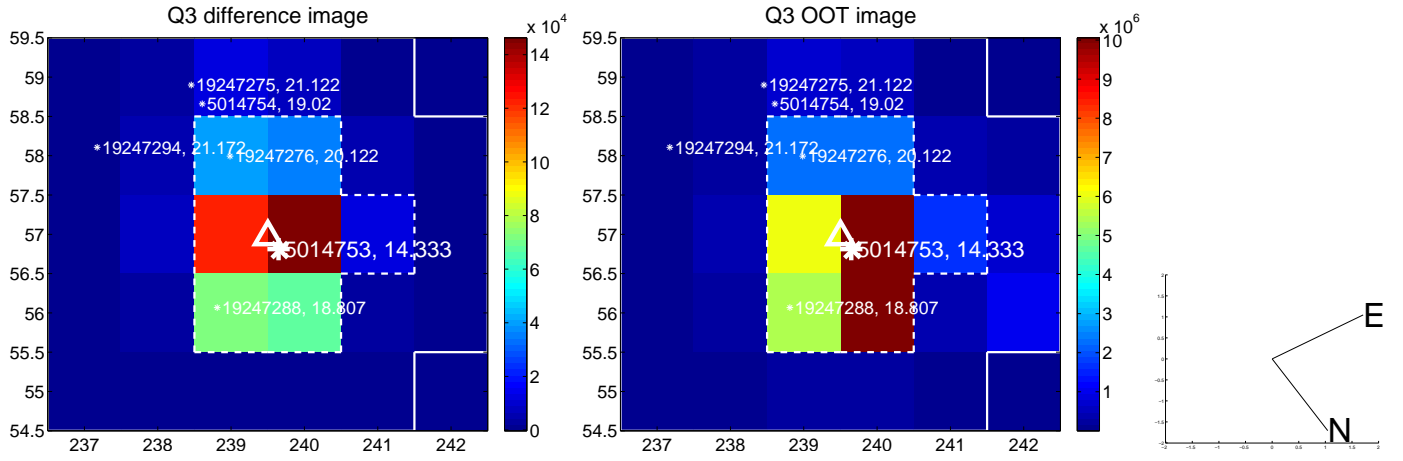
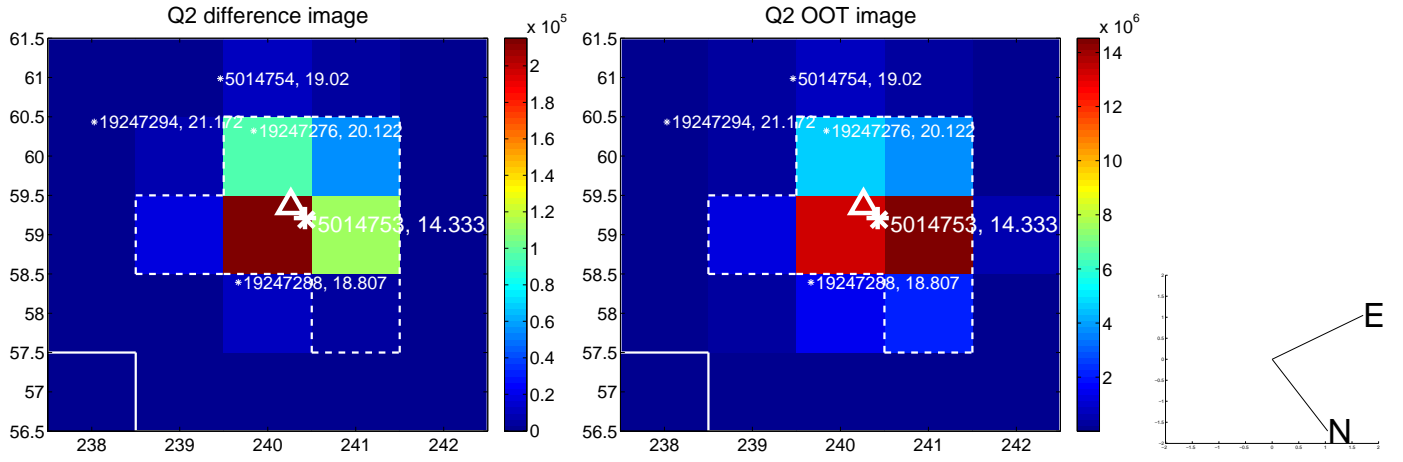
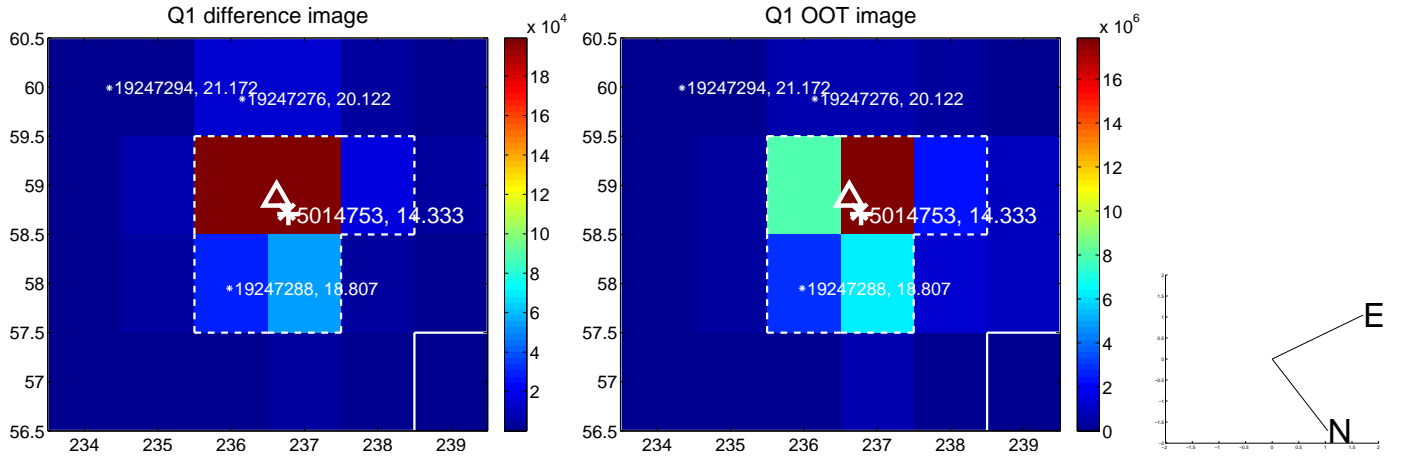


offset from photometric centroids

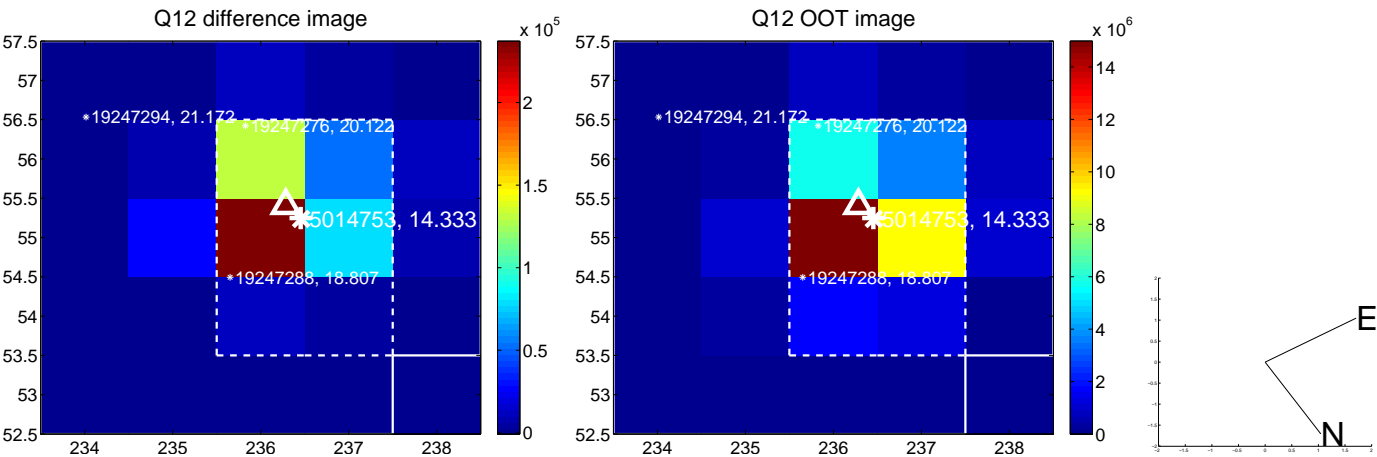
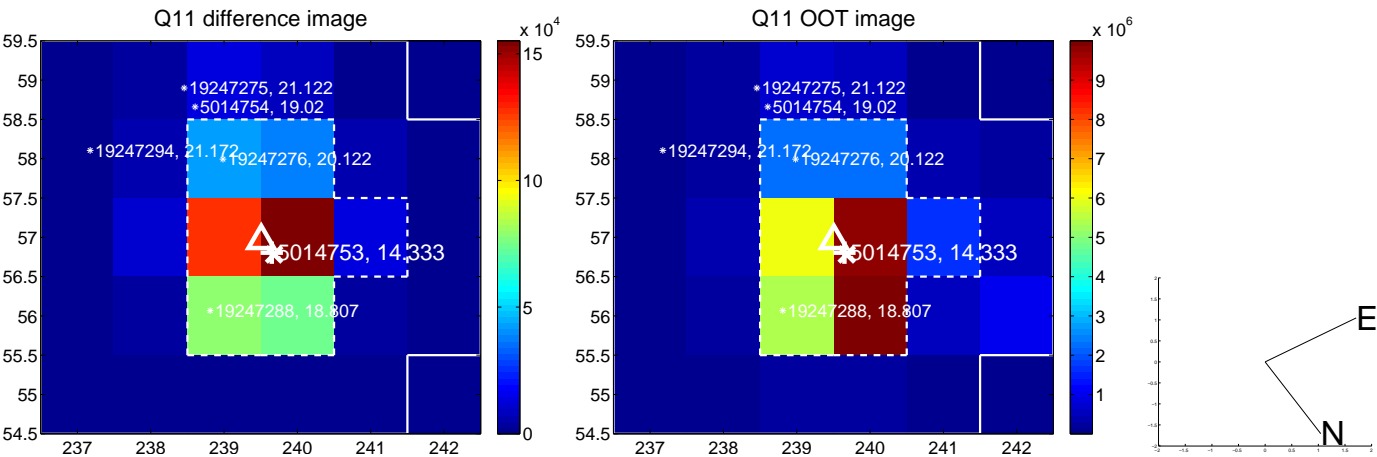
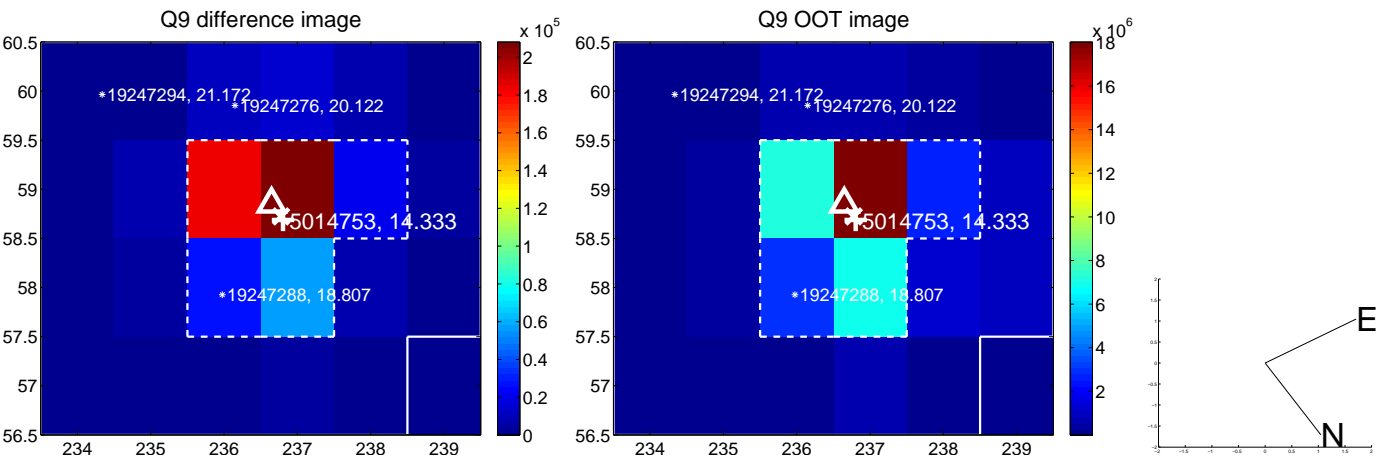


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

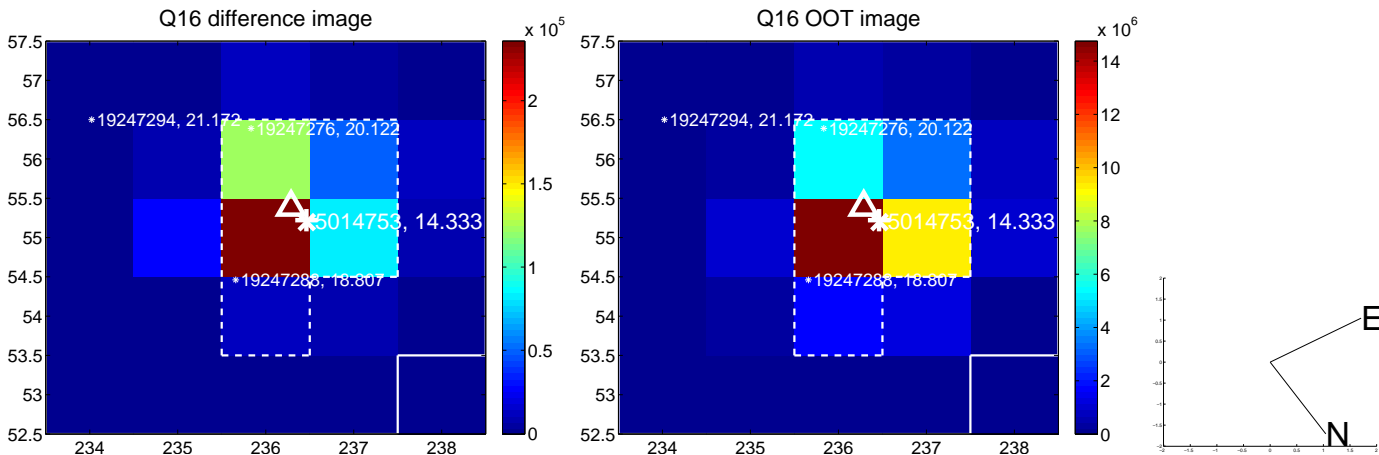
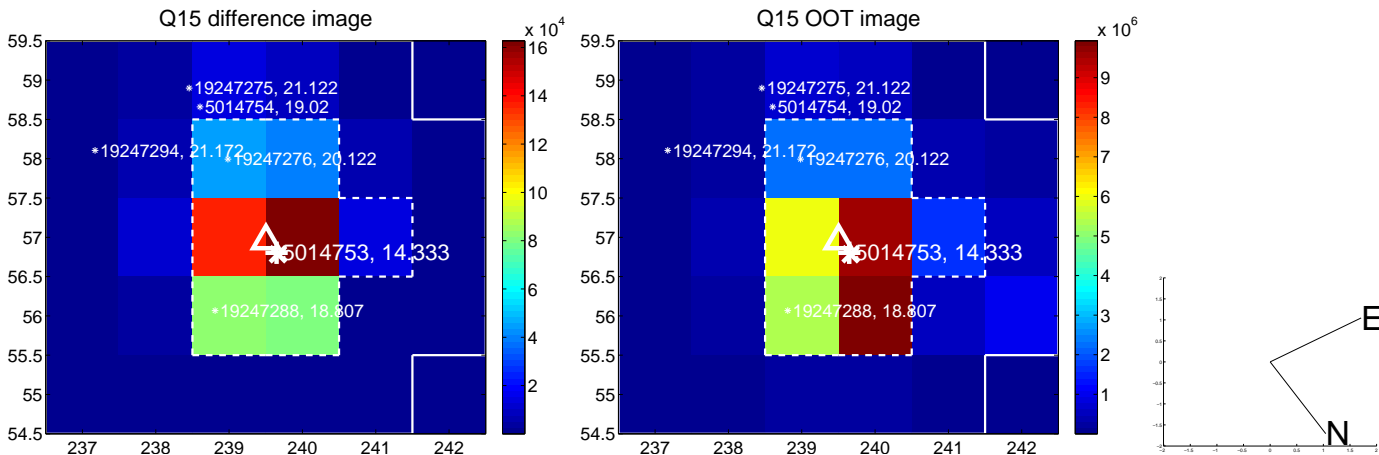
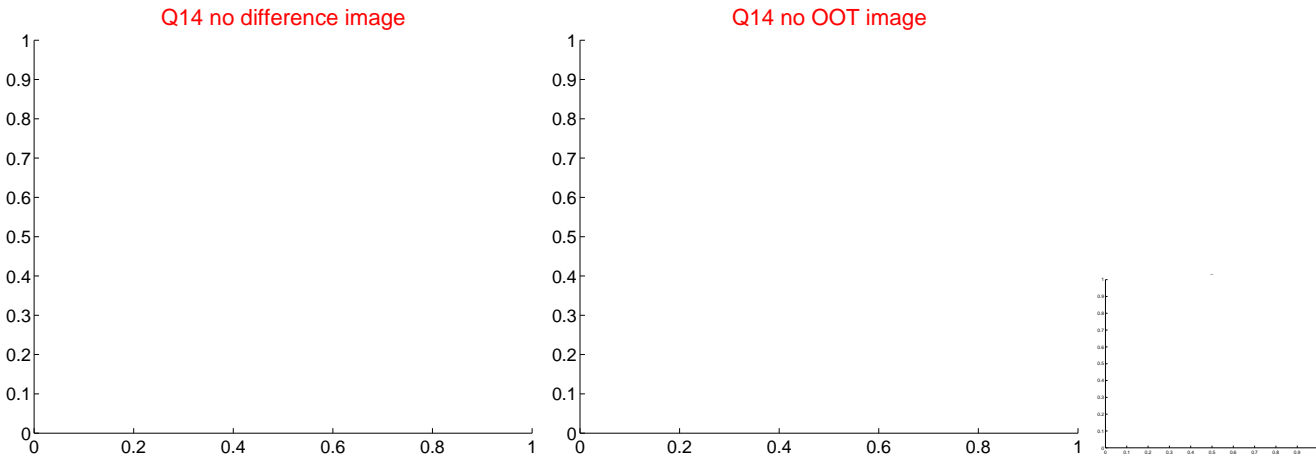
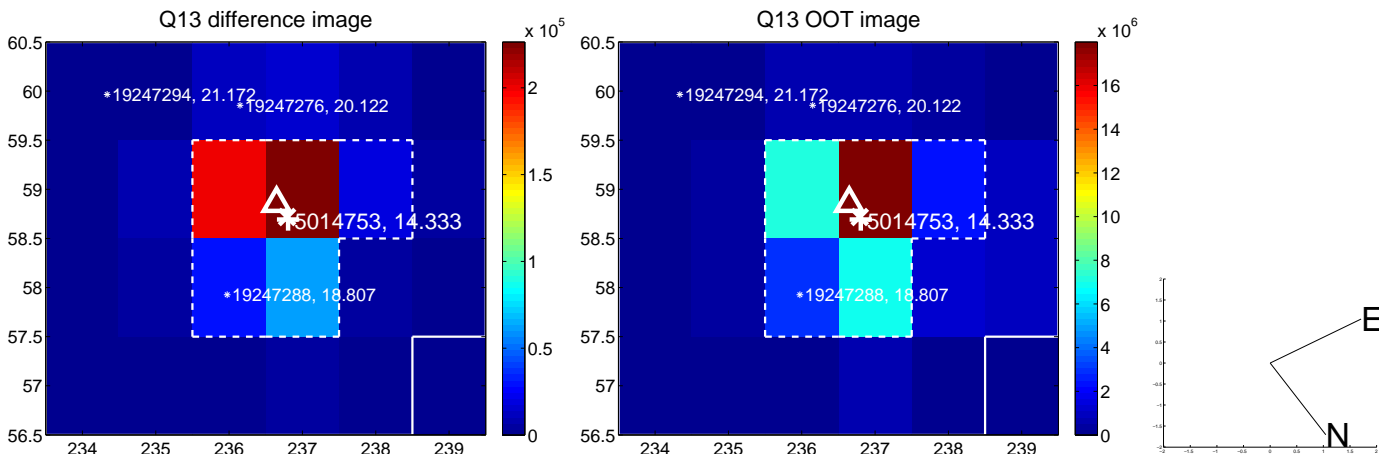
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



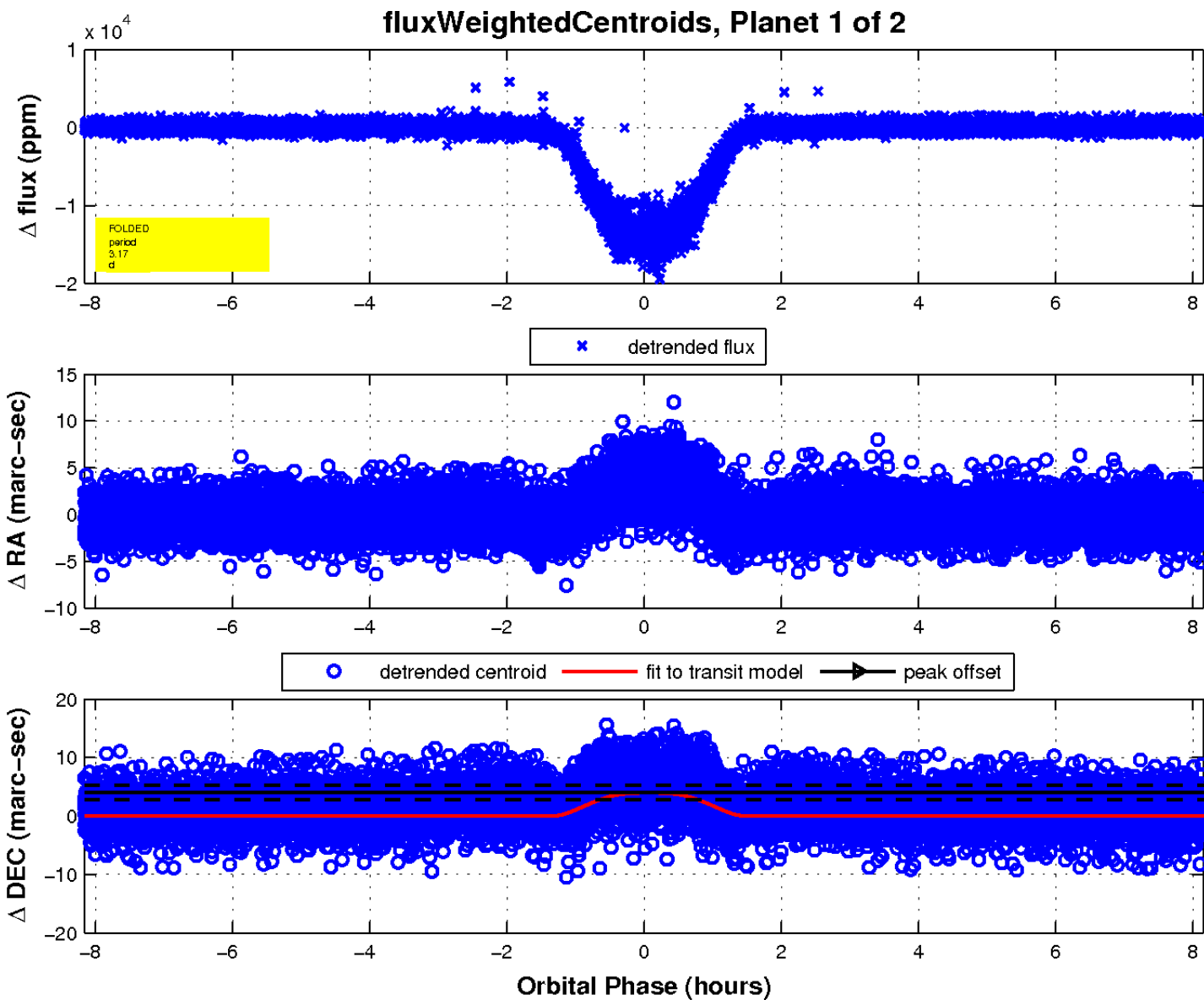
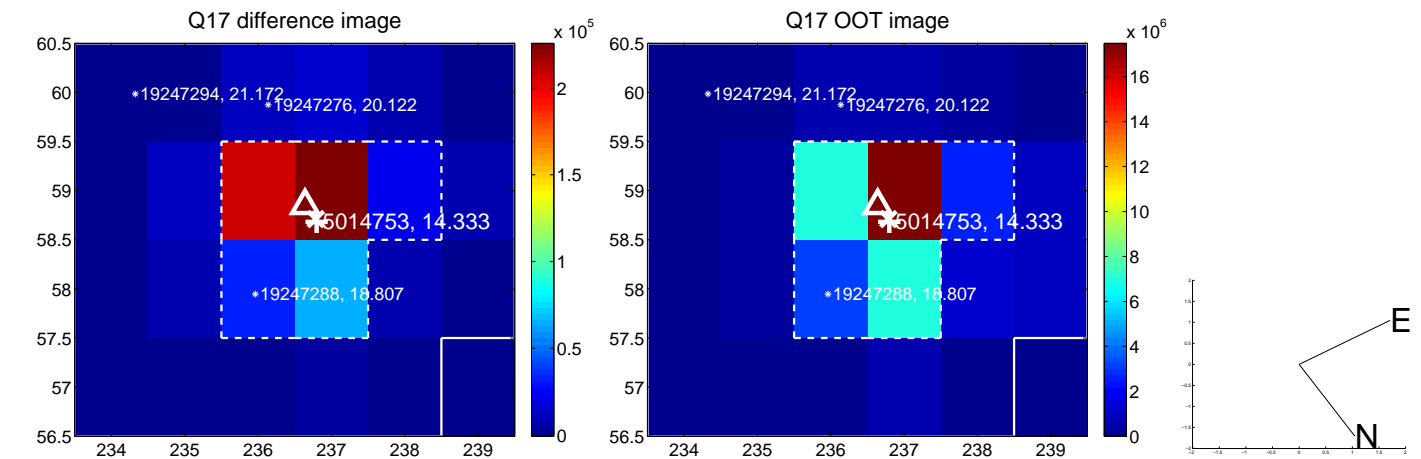
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

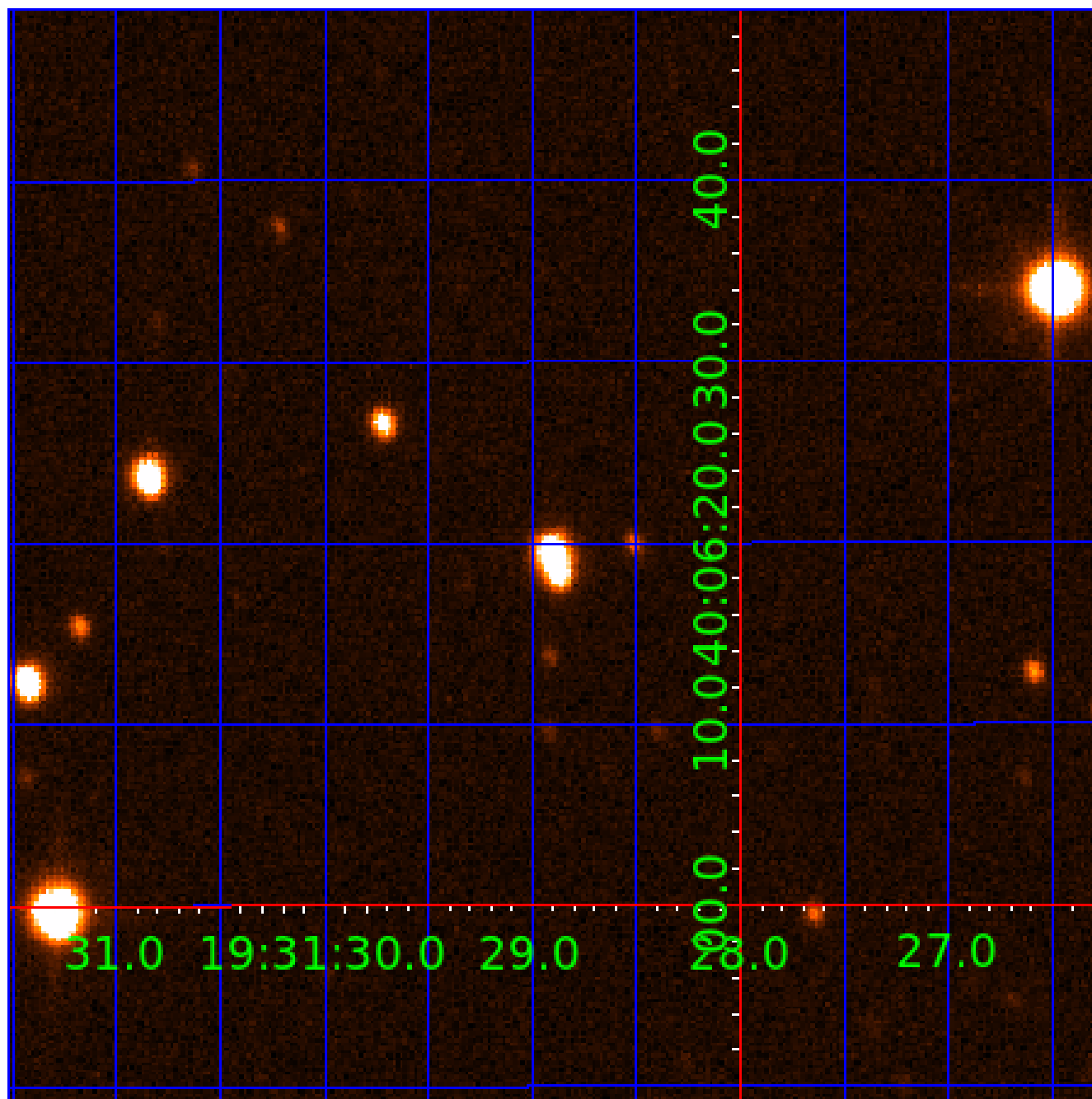


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005014753

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})
005014753-01	OBS	0606.01	3.170618	134.001618	14640.7	2.720	1215.5	860.0	1.03	6068	14.45	706.70
005014753-02	OBS	No	3.170639	132.412659	943.8	2.324	75.4	84.9	1.03	6068	3.76	706.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005014753-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
005014753-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

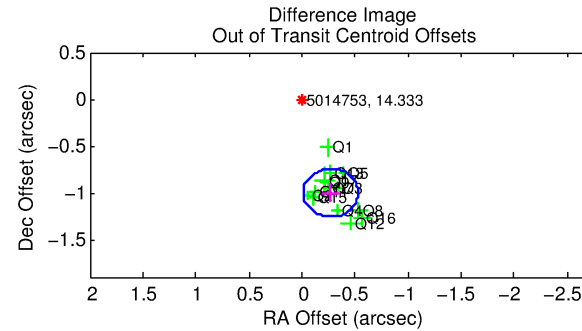
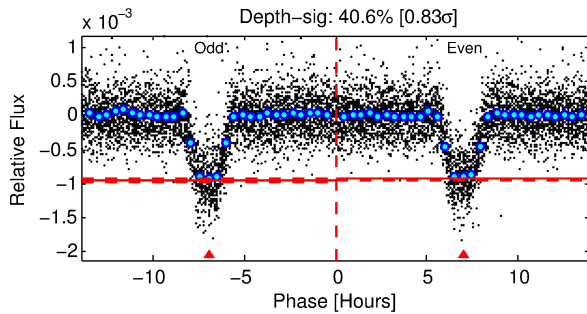
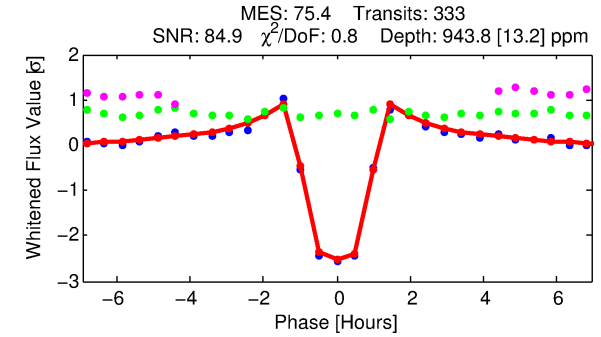
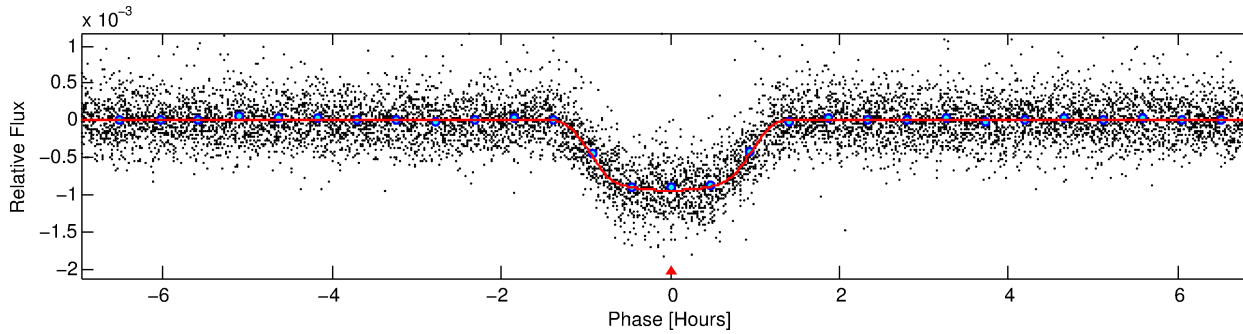
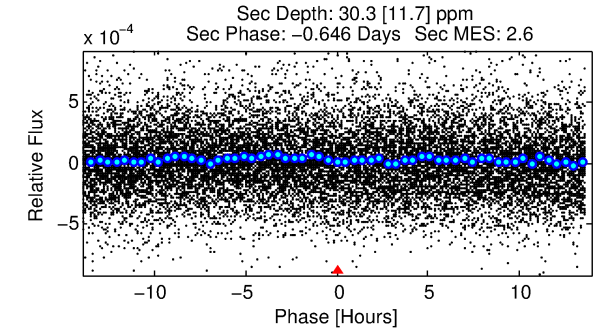
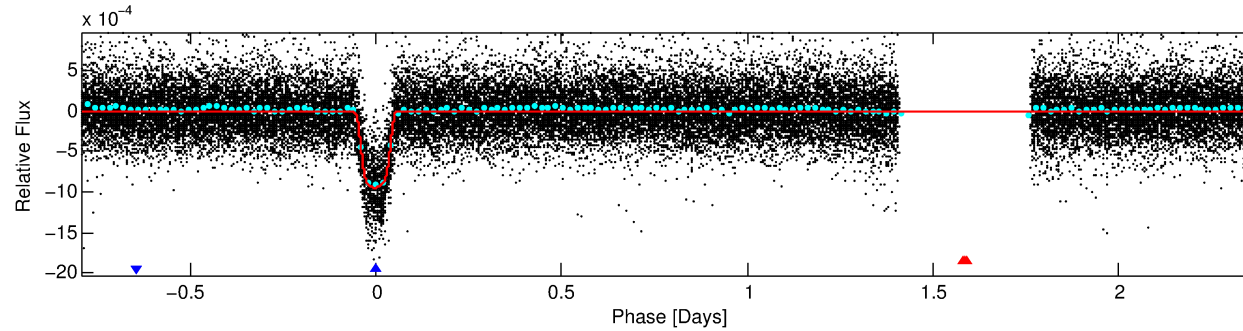
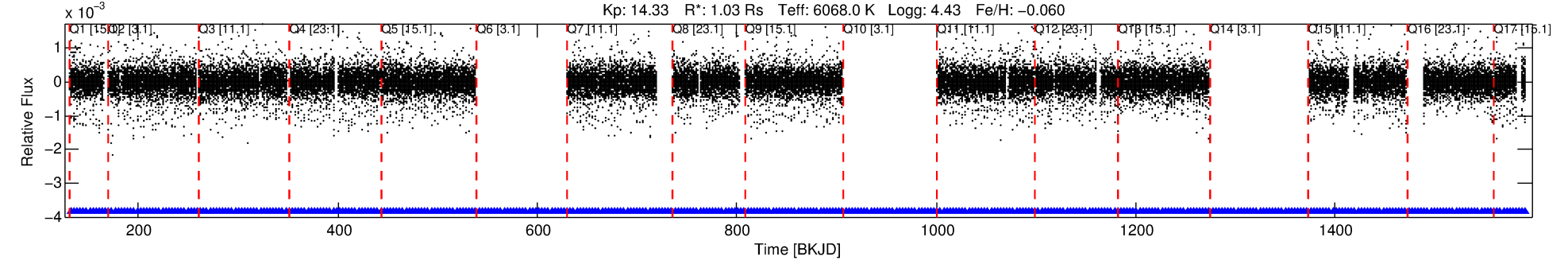
Ephemeris Match Information For 005014753-02

No Significant Match Found

DV One-Page Summary

KIC: 5014753 Candidate: 2 of 2 Period: 3.171 d
KOI: K00606 Corr: No Ephemeris Match

Kp: 14.33 R*: 1.03 Rs Teff: 6068.0 K Logg: 4.43 Fe/H: -0.060



DV Fit Results:

Period = 3.17064 [0.00000] d
Epoch = 132.4127 [0.0003] BKJD
Rp/R* = 0.0333 [0.0008]
a/R* = 5.36 [0.55]
b = 0.90 [0.02]
Seff = 706.69 [293.57]
Teq = 1315 [137] K
Rp = 3.76 [1.20] Re
a = 0.0429 [0.0114] AU
Ag = 2.17 [1.19] [0.98σ]
Teffp = 2466 [257] K [3.96σ]

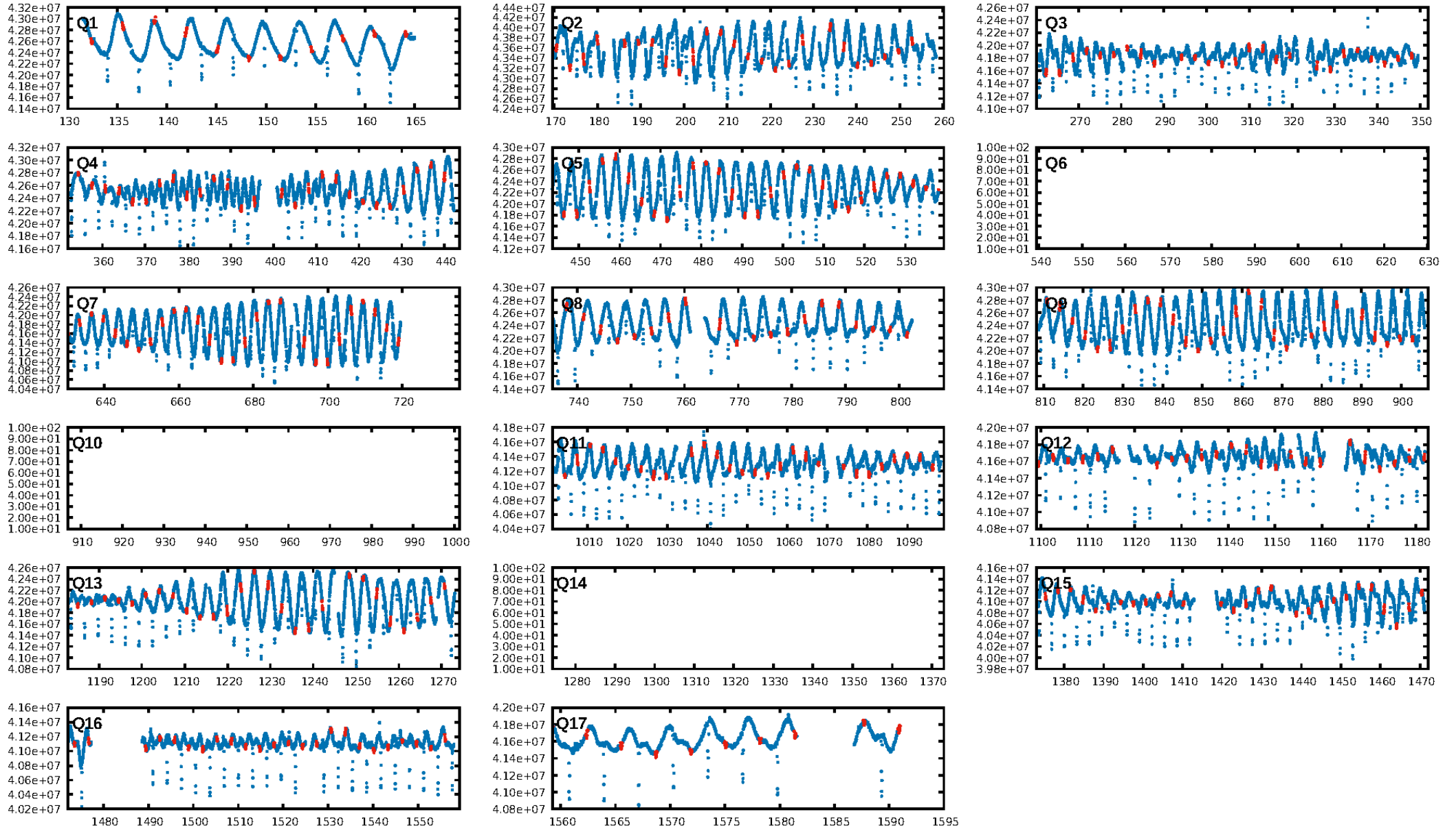
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [312/312]
GhostDiagnostic-chr: 2.399
Centroid-sig: N/A
Centroid-so: 0.186 arcsec [1.46σ]
OotOffset-rm: 1.037 arcsec [12.07σ]
KicOffset-rm: 1.078 arcsec [10.12σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

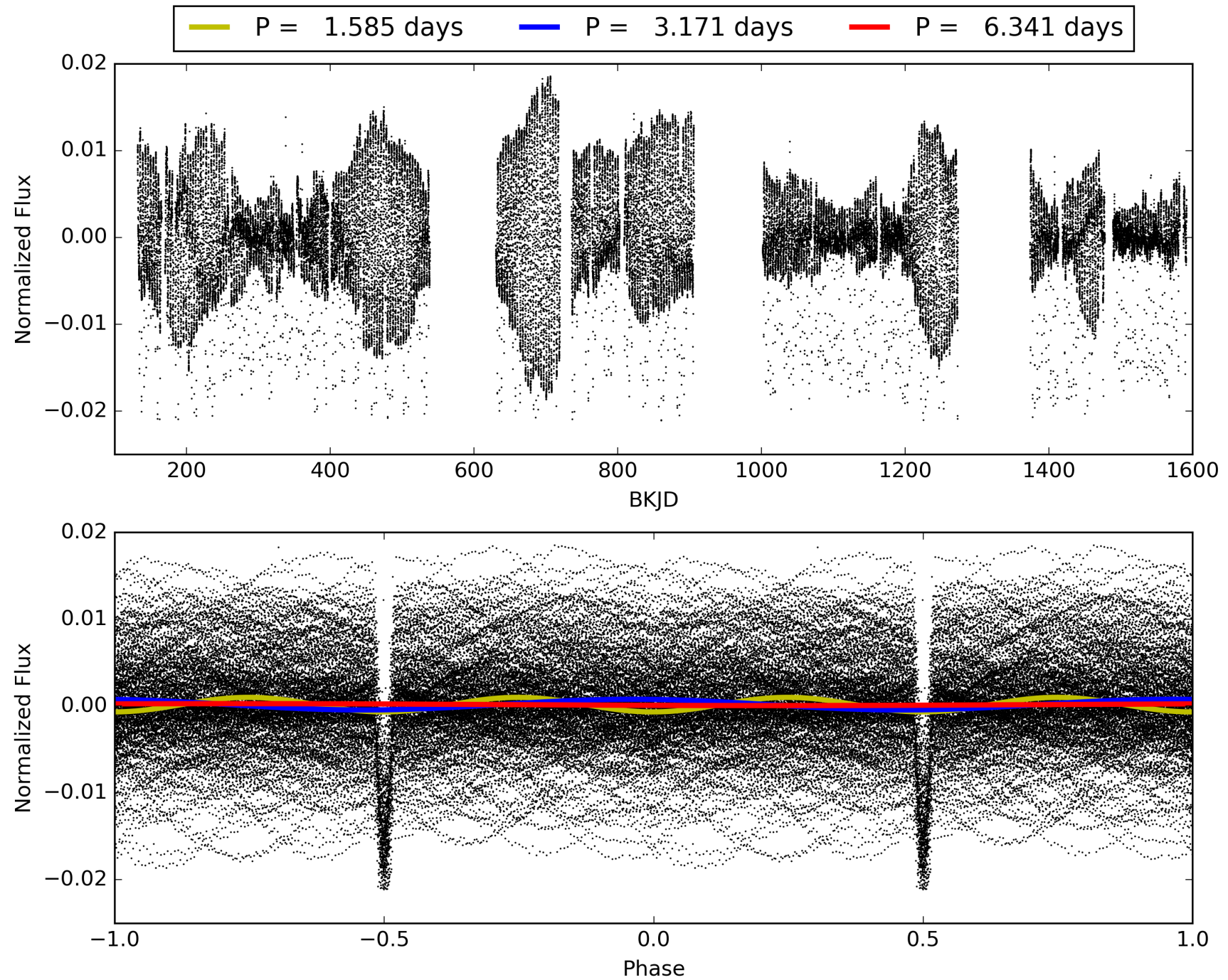
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:10:21 Z

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TCE 005014753-02, PDC Light Curves

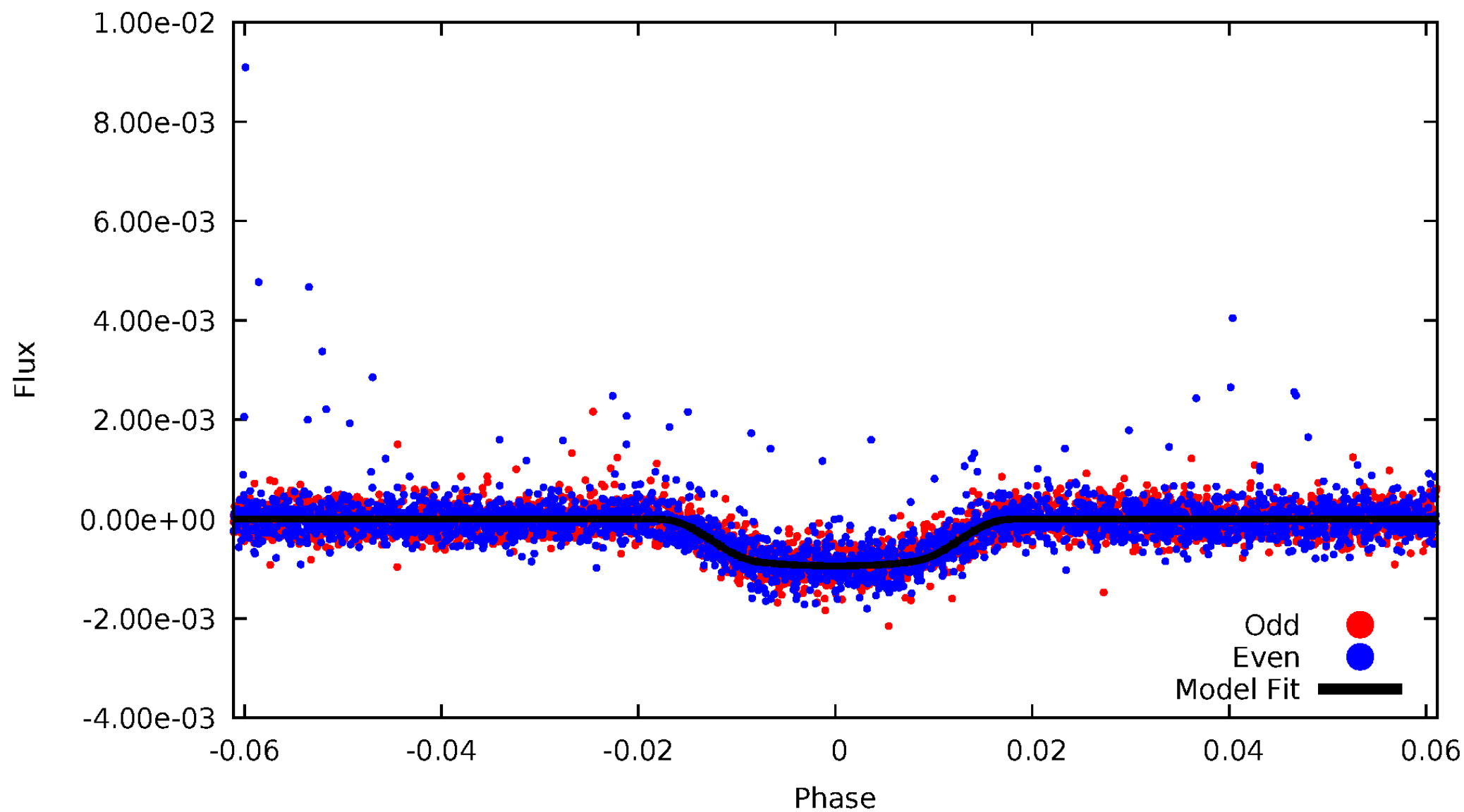


TCE 005014753-02



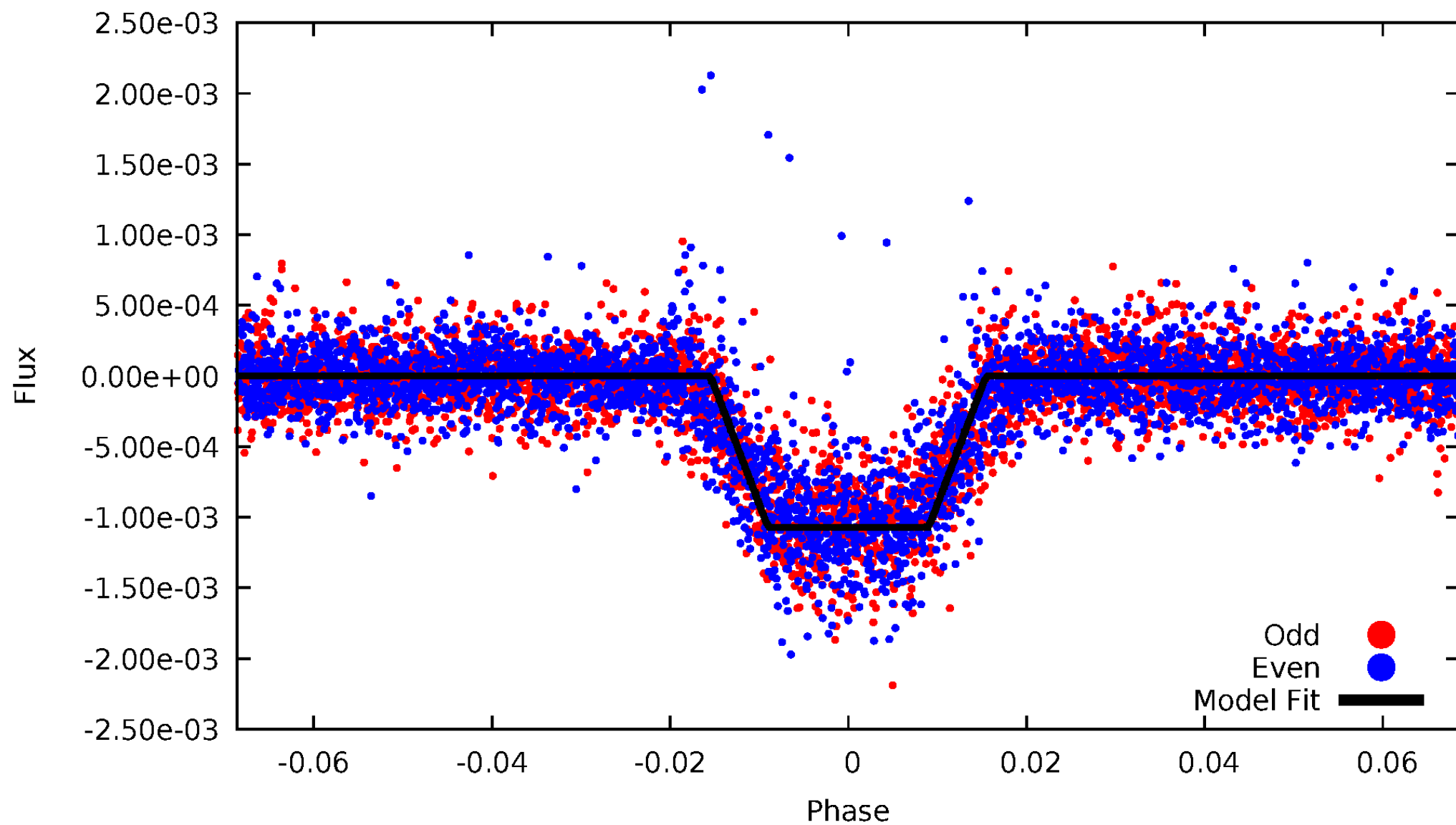
DV Odd/Even

TCE 005014753-02



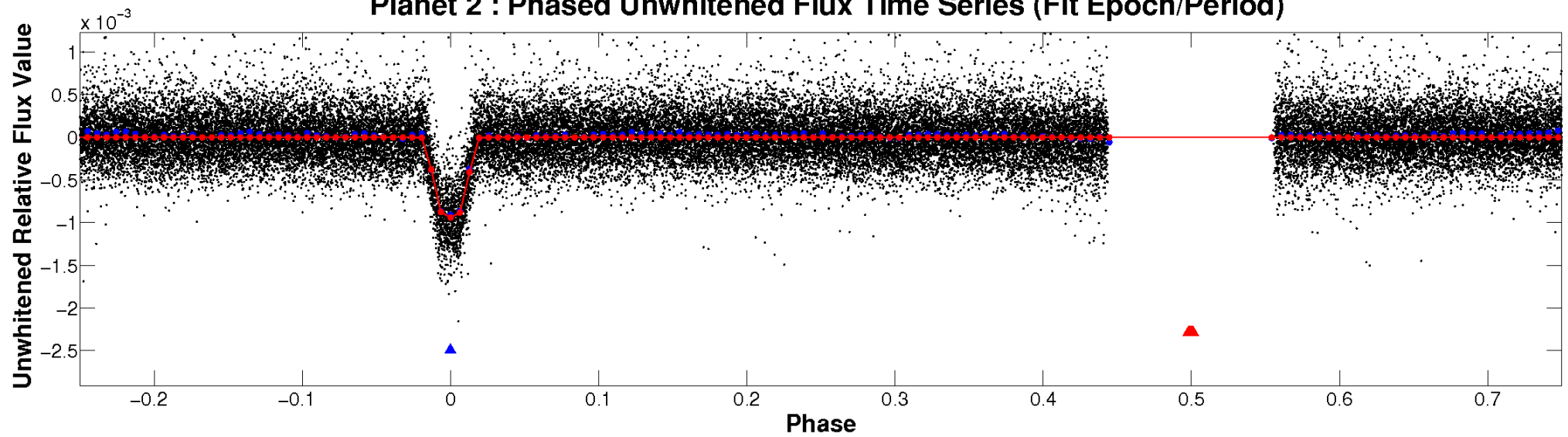
ALT Odd/Even

TCE 005014753-02

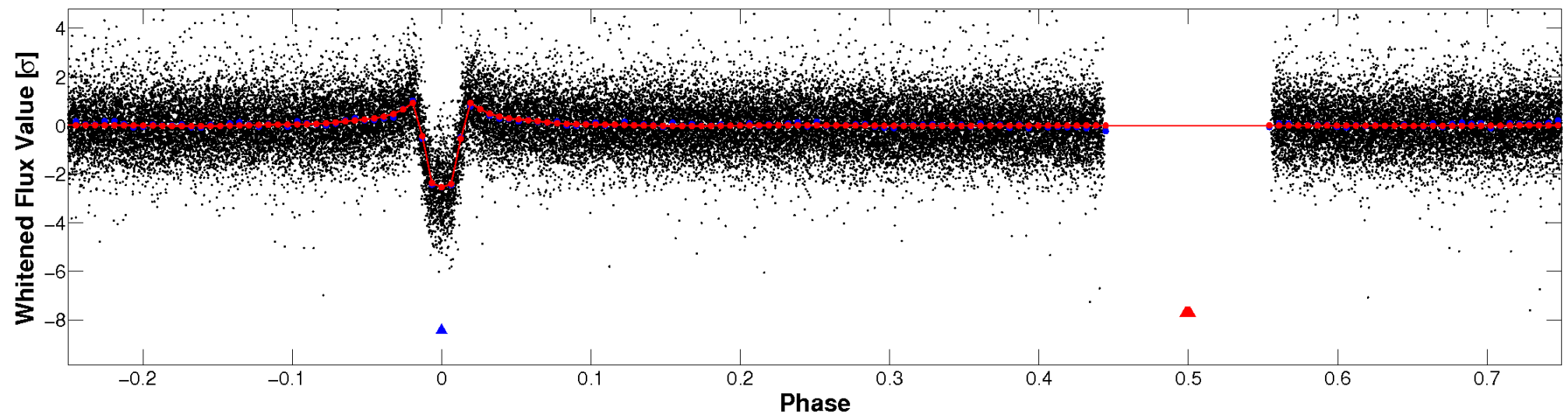


Non-Whitened Vs. Whitened Light Curve

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

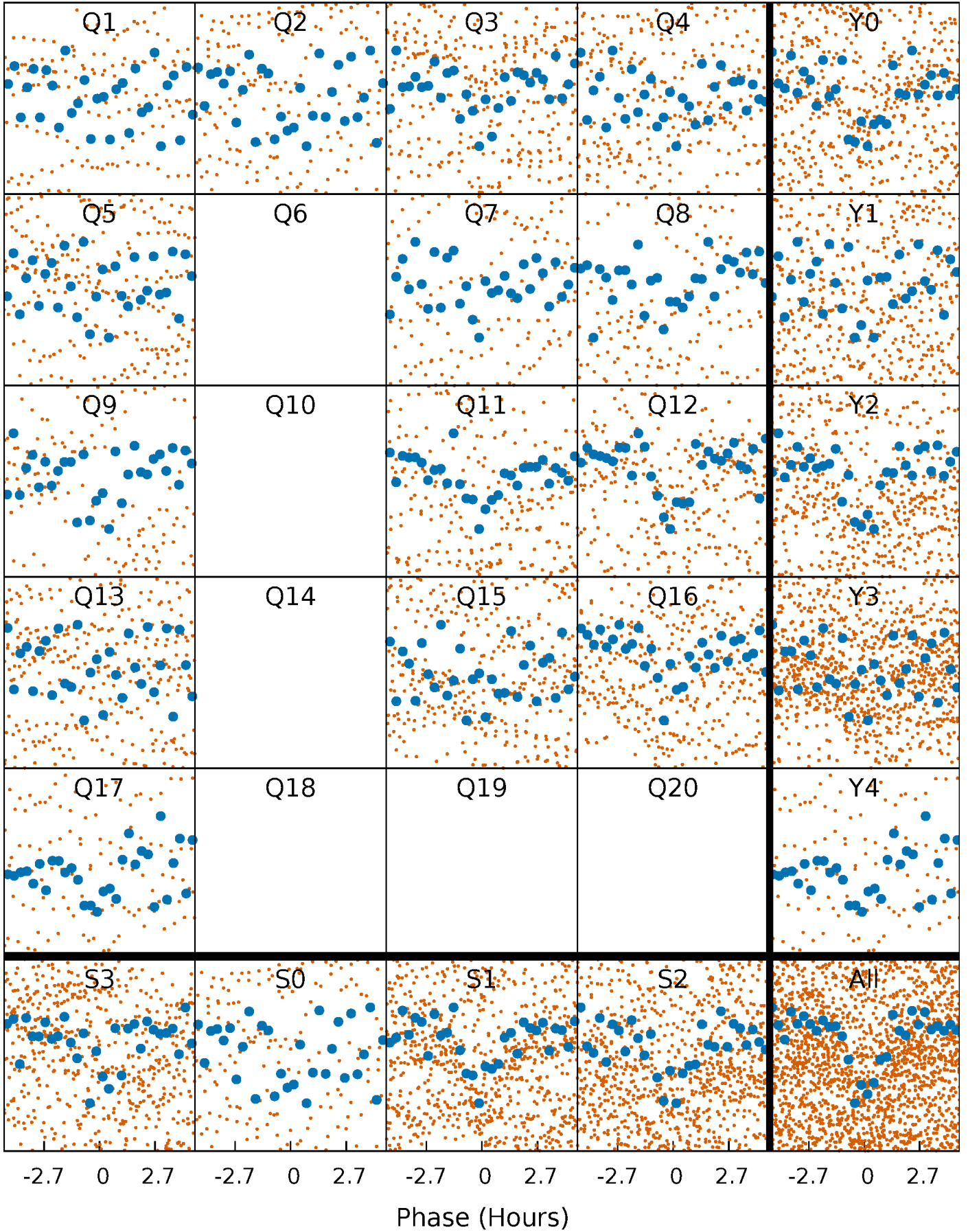


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



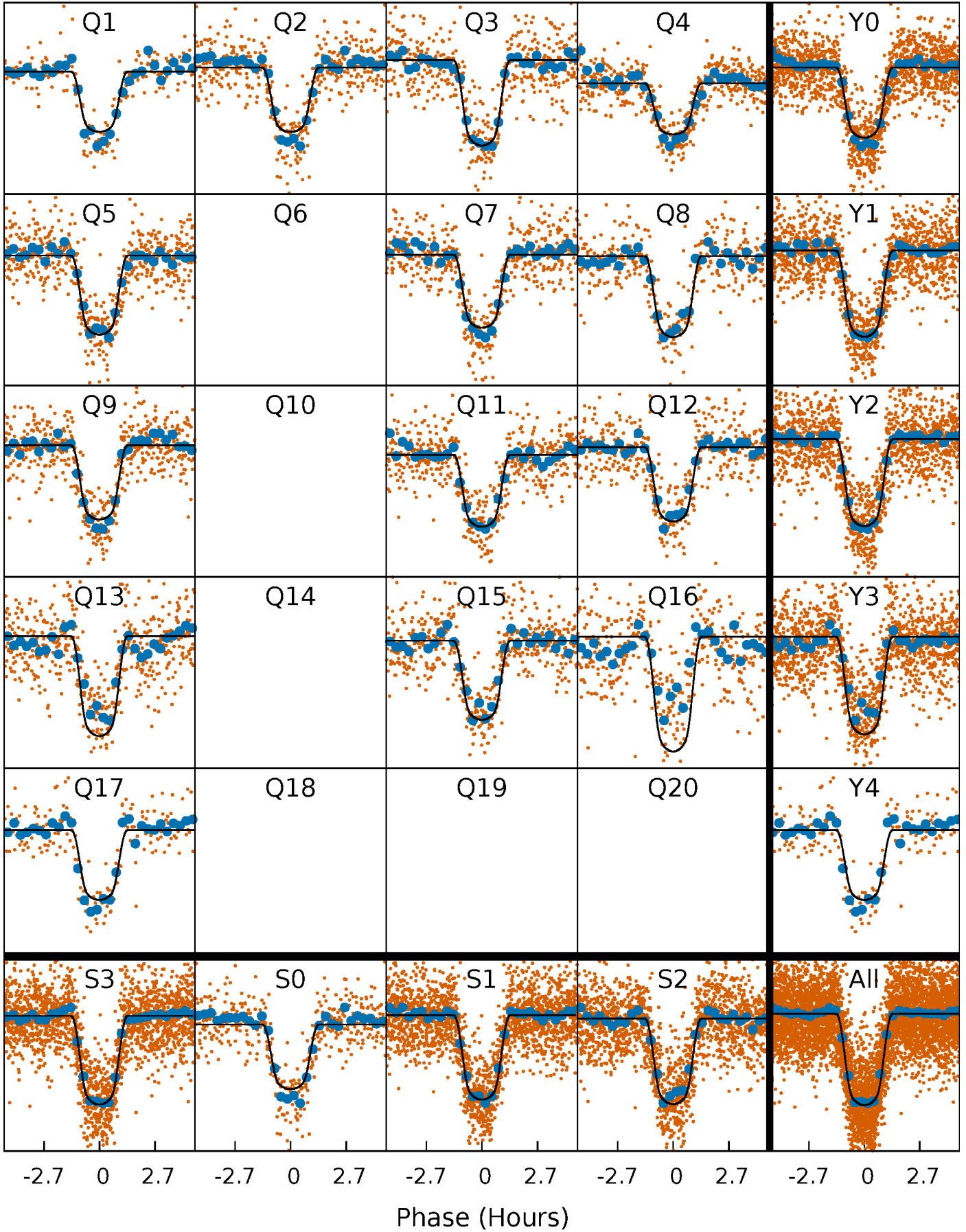
PDC Quarter-Phased Transit Curves

TCE 005014753-02 P= 3.170639 Days $T_0=132.412659$ (BKJD)



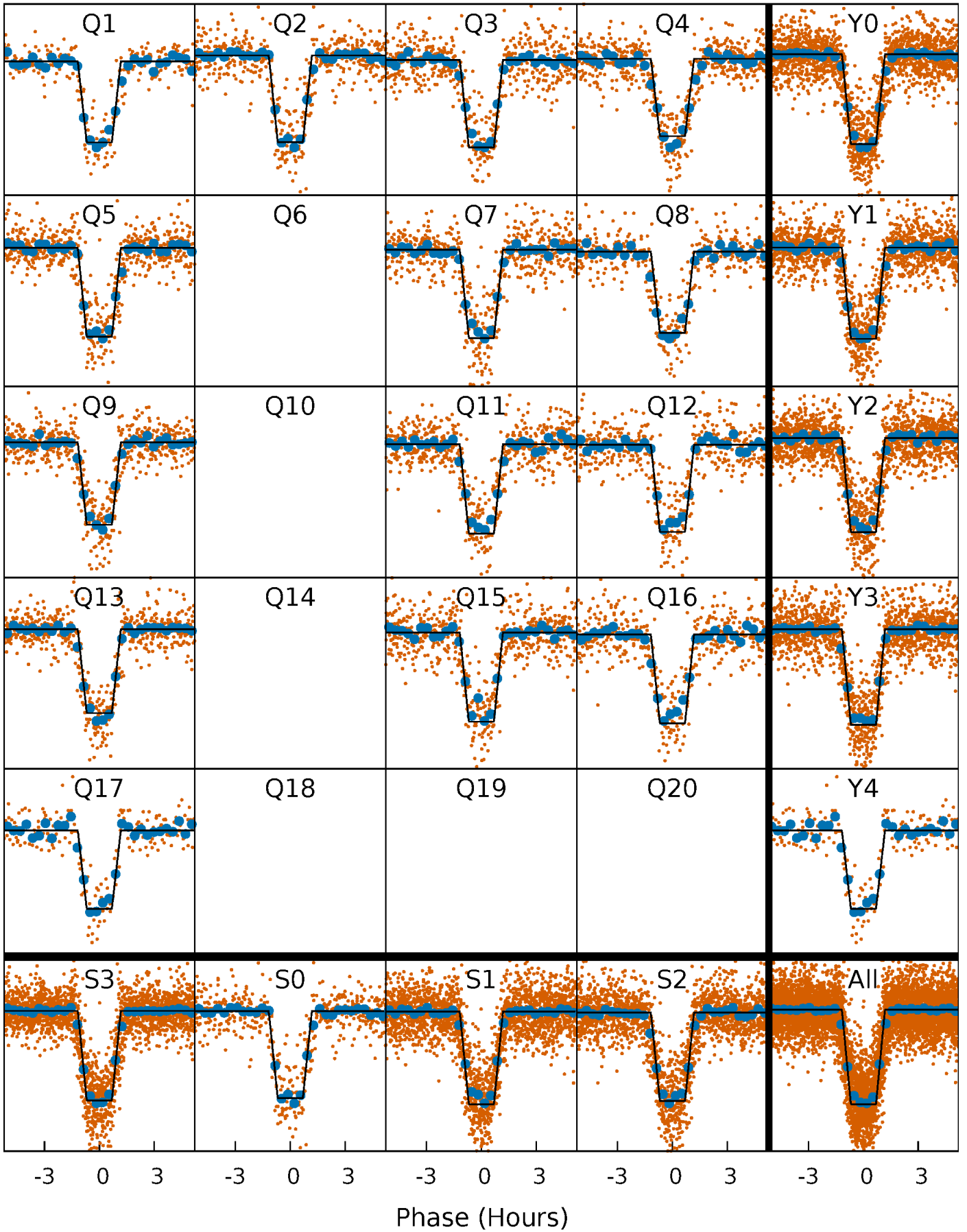
DV Quarter-Phased Transit Curves

TCE 005014753-02 P= 3.170639 Days $T_0=132.412659$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

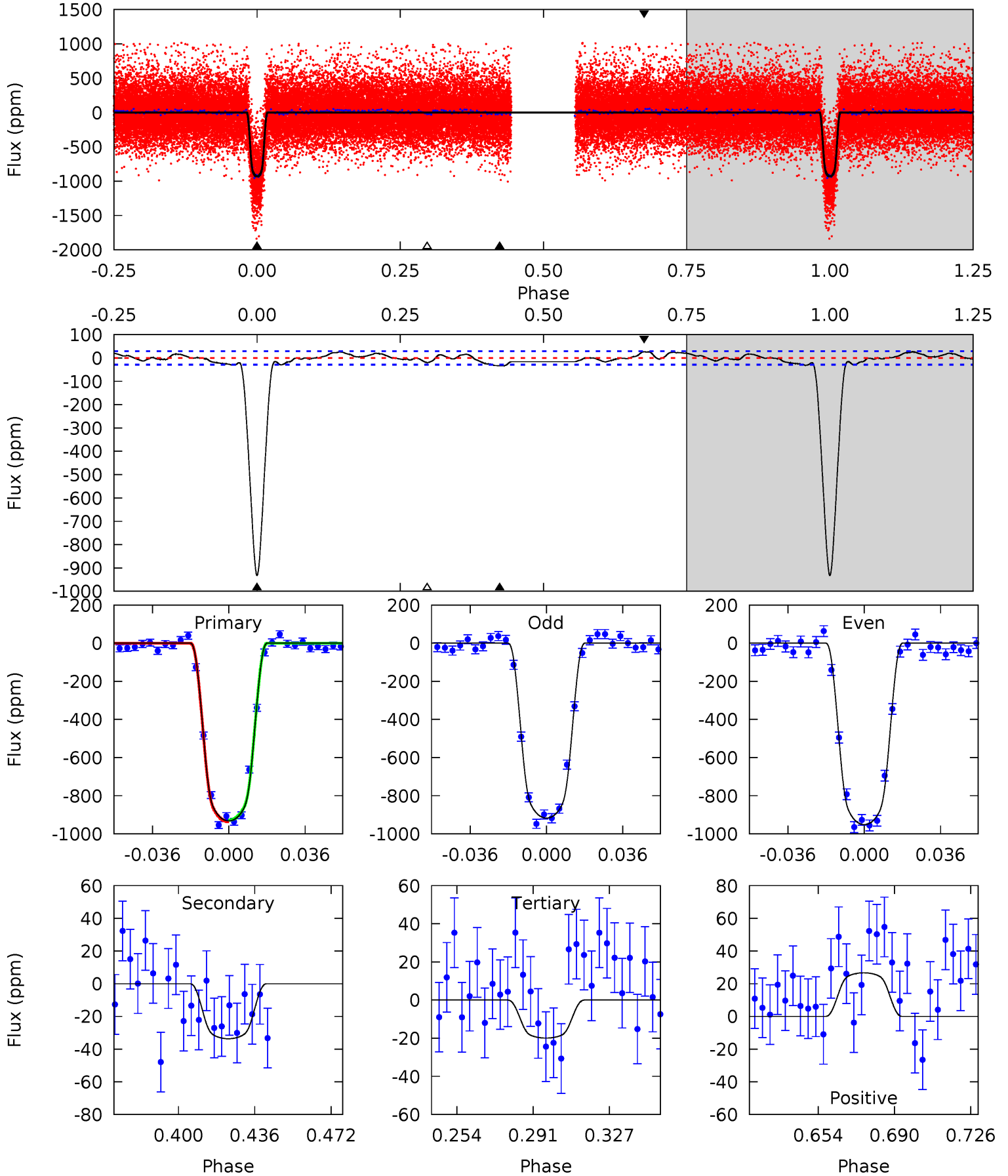
TCE 005014753-02 P= 3.170631 Days $T_0=132.414228$ (BKJD)



DV Model-Shift Uniqueness Test

005014753-02, P = 3.170639 Days, E = 129.242020 Days

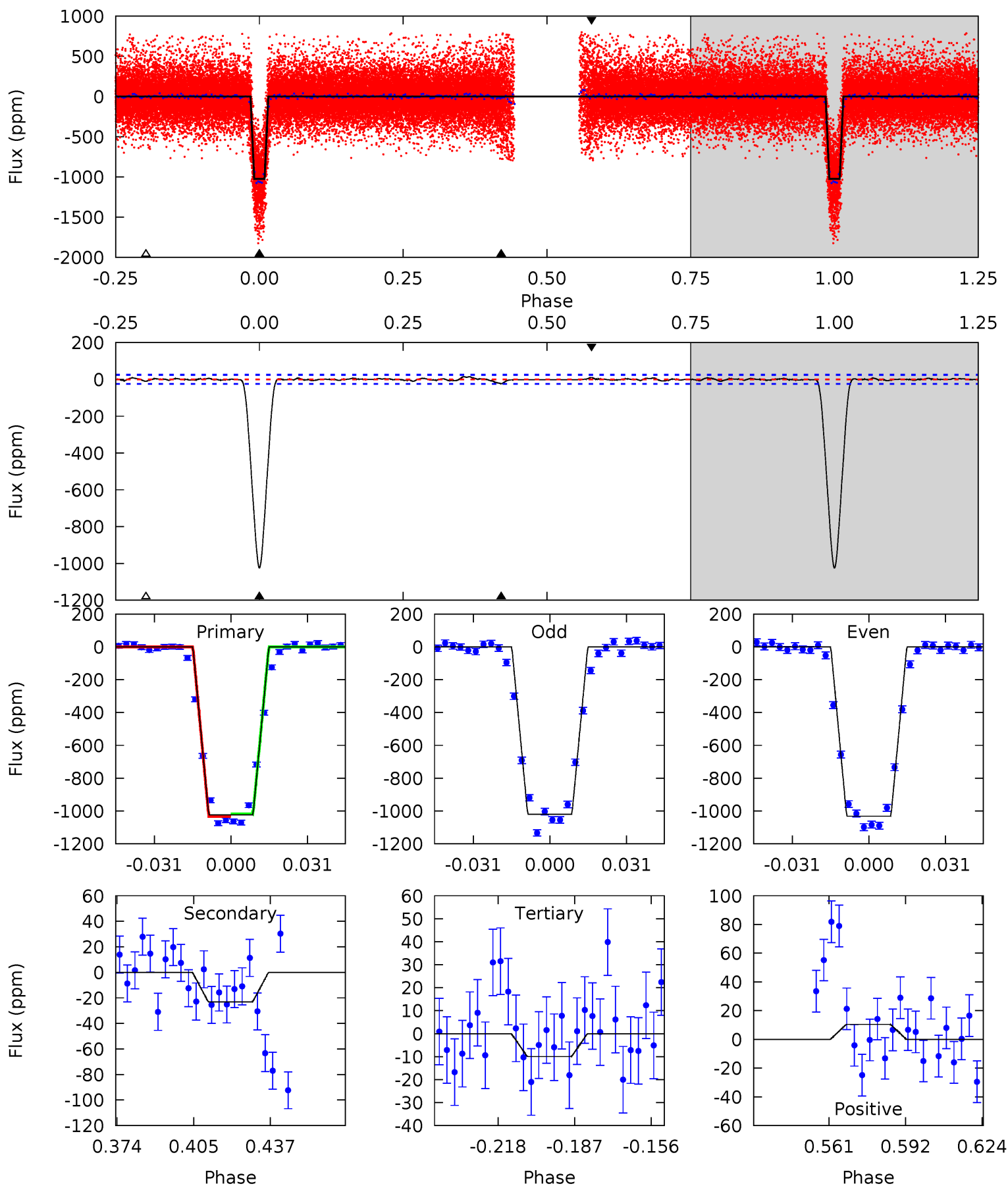
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
153.8	5.55	3.29	4.40	4.77	2.09	2.18	150.5	149.4	2.26	1.15	2.86	0.97	0.03	0.73



Alt Model-Shift Uniqueness Test

005014753-02, P = 3.170631 Days, E = 129.243597 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
198.6	4.49	1.93	2.03	4.80	2.15	0.81	196.6	196.6	2.56	2.47	1.19	0.99	0.01	1.47



Stellar Parameters For KIC 005014753

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6068^{+190}_{-232}	$4.428^{+0.070}_{-0.210}$	$-0.060^{+0.250}_{-0.300}$	$1.034^{+0.330}_{-0.141}$	$1.042^{+0.159}_{-0.130}$	$1.328^{+0.493}_{-0.691}$
	+3%/-4%	+2%/-5%	+417%/-500%	+32%/-14%	+15%/-12%	+37%/-52%
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 005014753-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-34 ± 6	$3.88^{+0.65}_{-0.37}$	1875^{+139}_{-105}	3077^{+116}_{-129}	$2.185^{+0.659}_{-0.621}$
Alt.	-23 ± 5	$3.81^{+0.64}_{-0.36}$	1874^{+142}_{-106}	2897^{+129}_{-132}	$1.523^{+0.560}_{-0.426}$

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 $A_{obs} \gg 1.0$

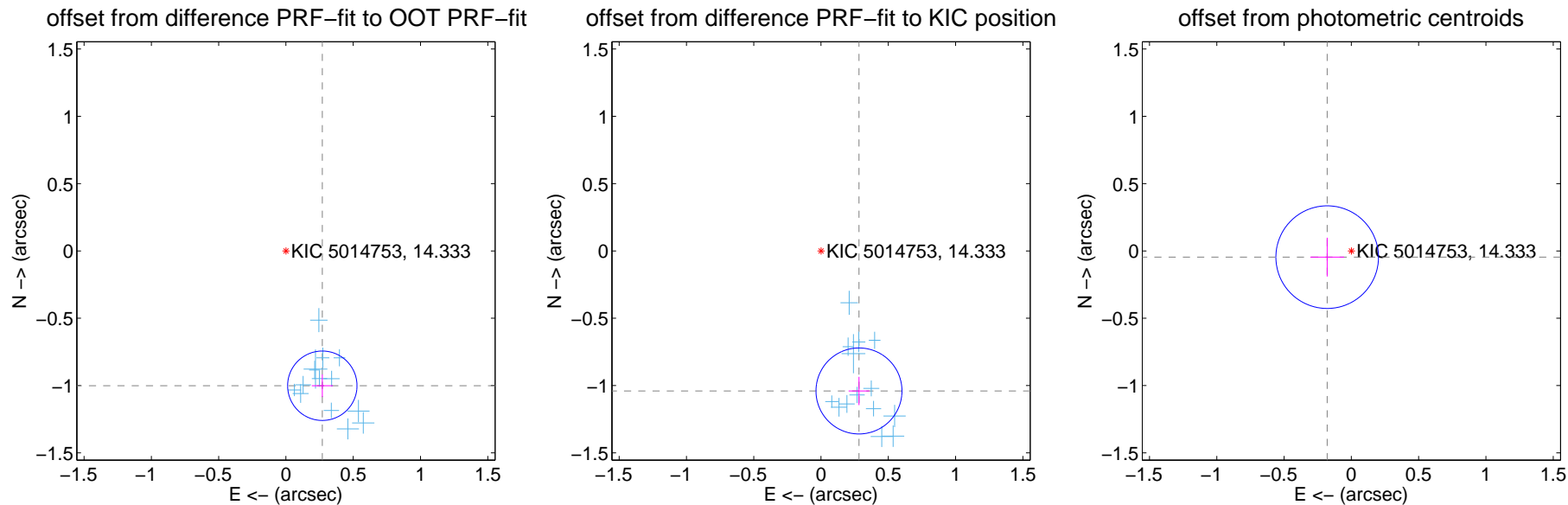
DV Centroid Data

Supplemental centroid analysis for 005014753-02. Kepler magnitude: 14.33. Transit SNR 84.90

There are 14 quarters with good PRF difference image offsets

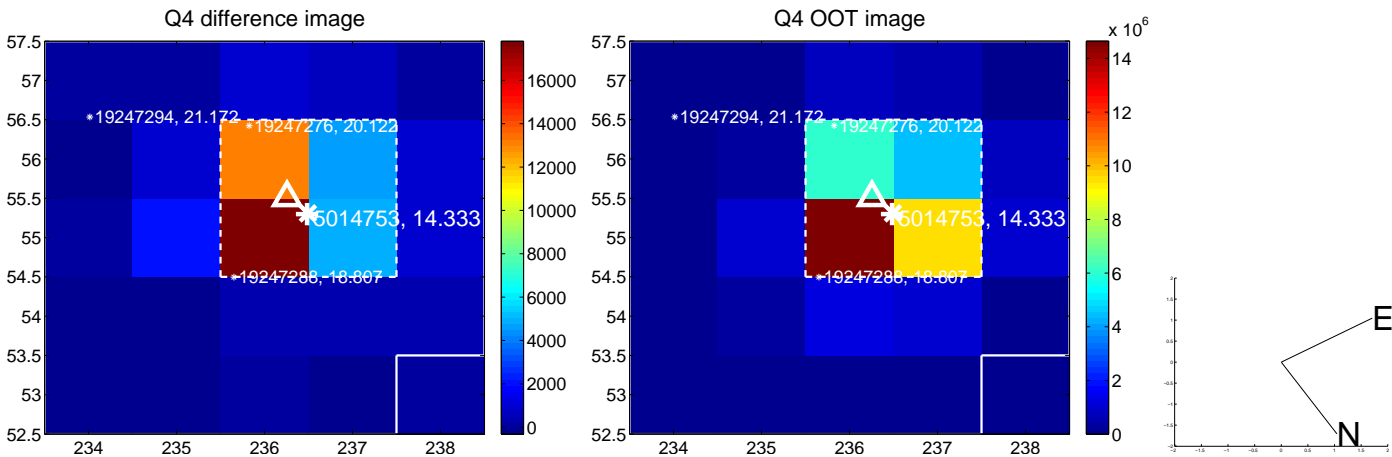
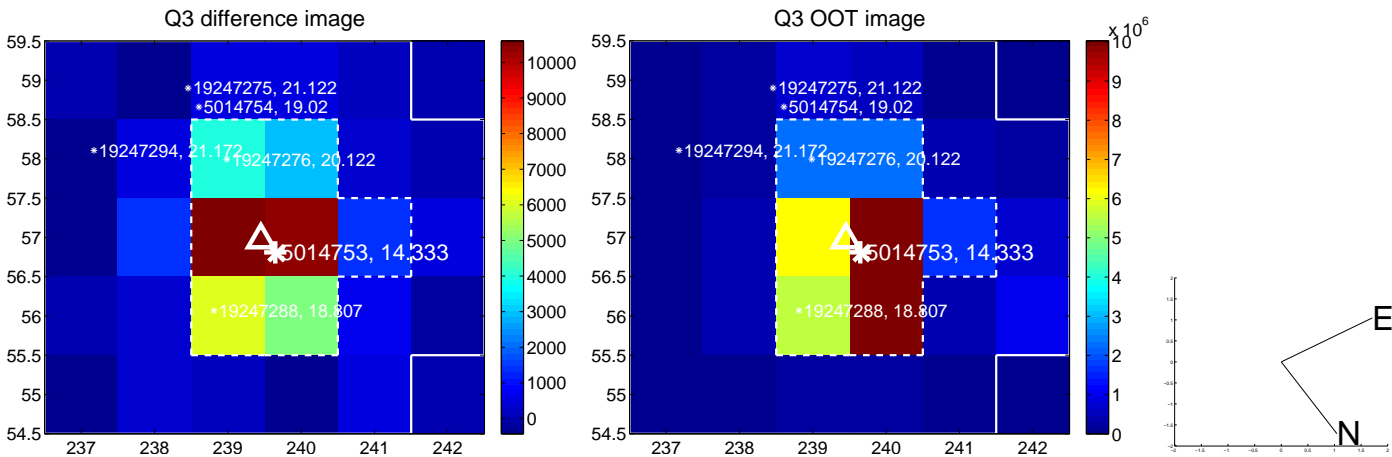
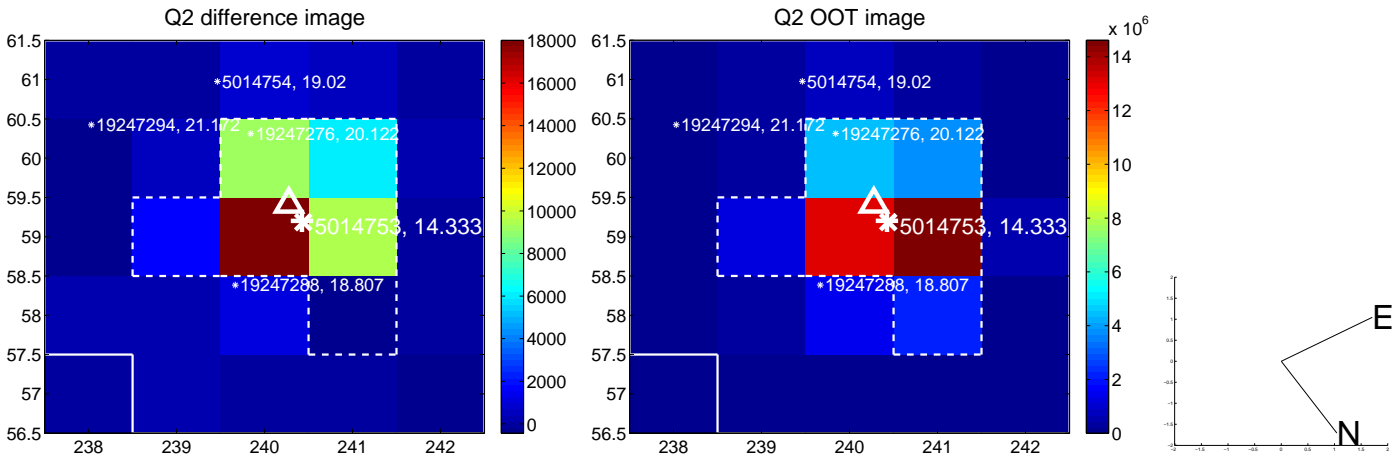
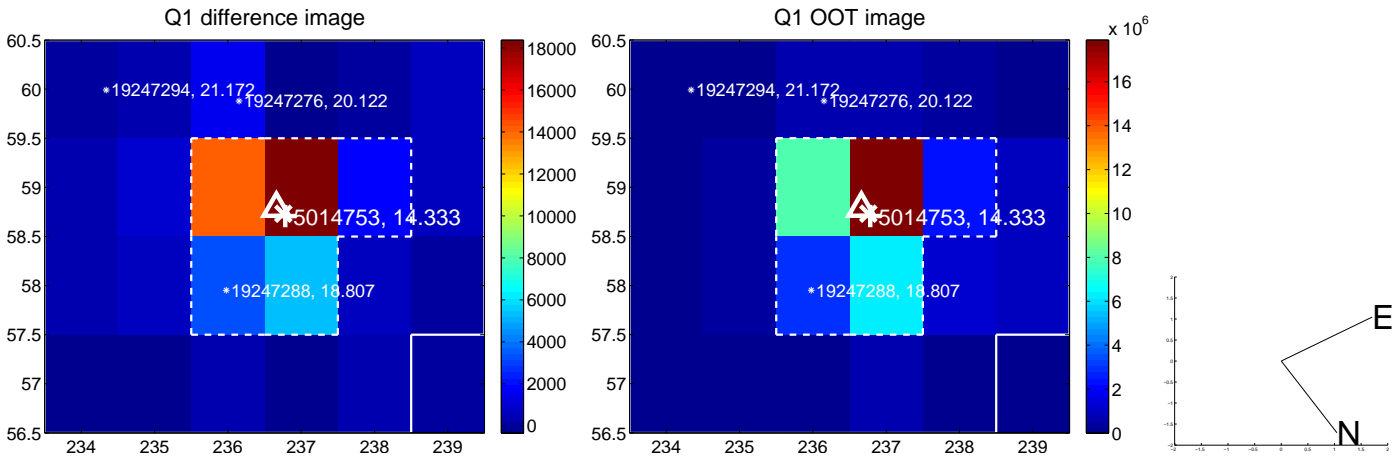
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.037 ± 0.086	12.07	-0.270 ± 0.078	-1.001 ± 0.084
PRF-fit source offset from KIC position	1.078 ± 0.106	10.12	-0.282 ± 0.077	-1.040 ± 0.105
photometric centroid source offset	0.19 ± 0.13	1.46	0.18 ± 0.13	-0.05 ± 0.14

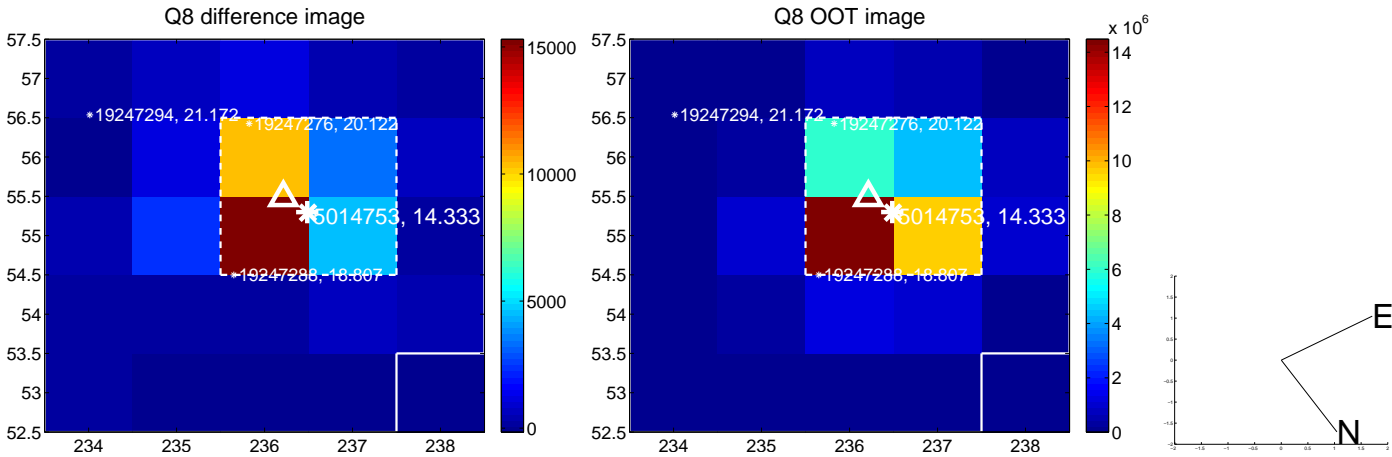
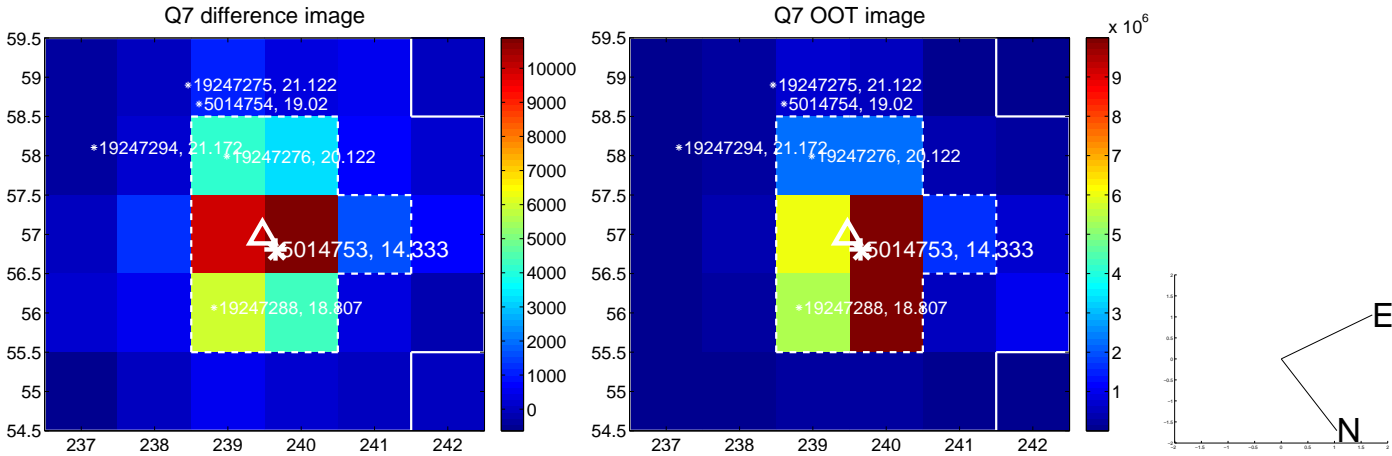
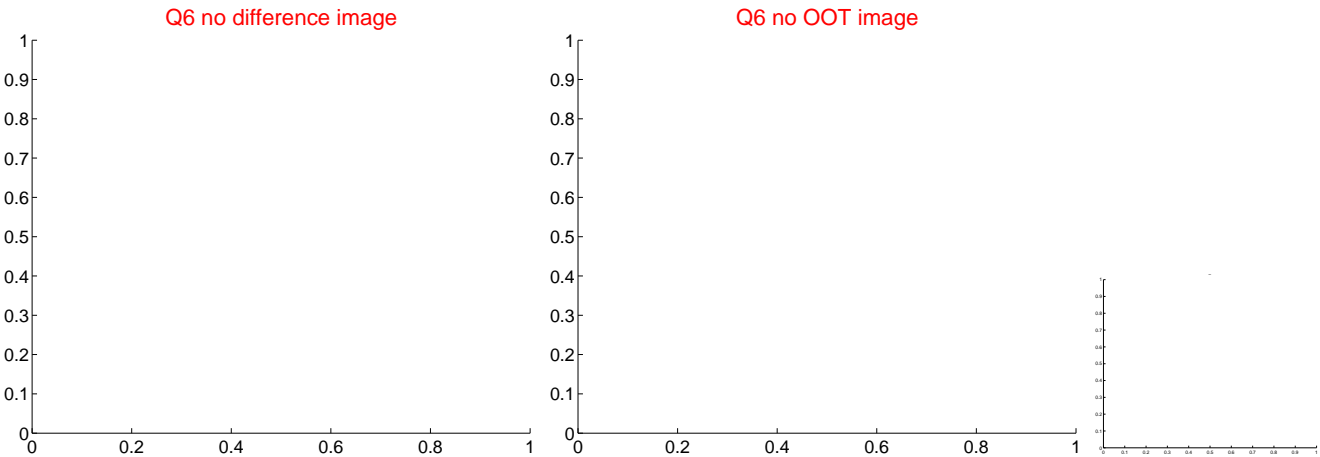
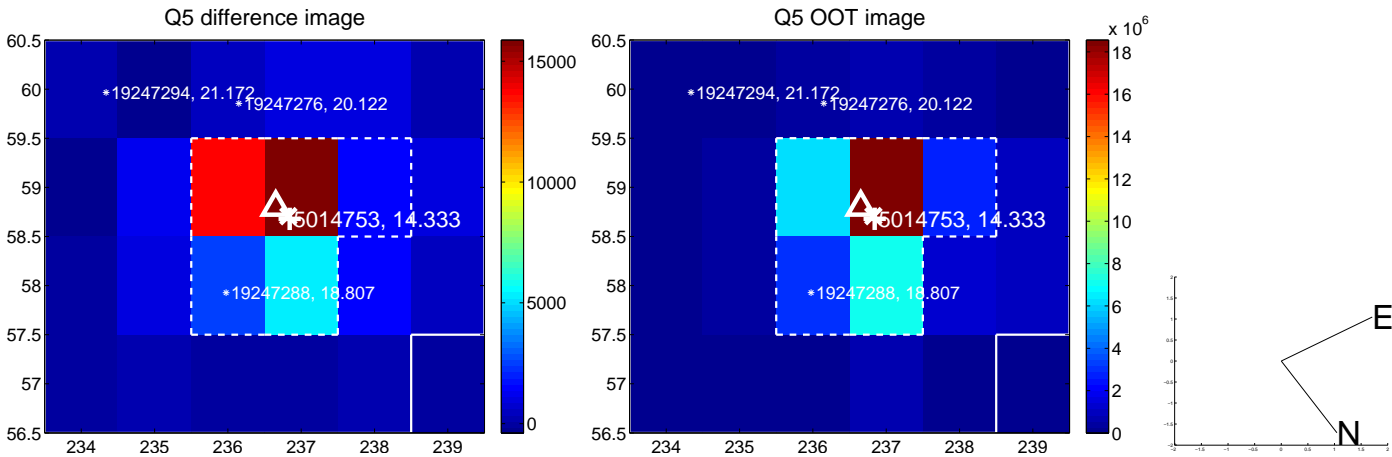


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

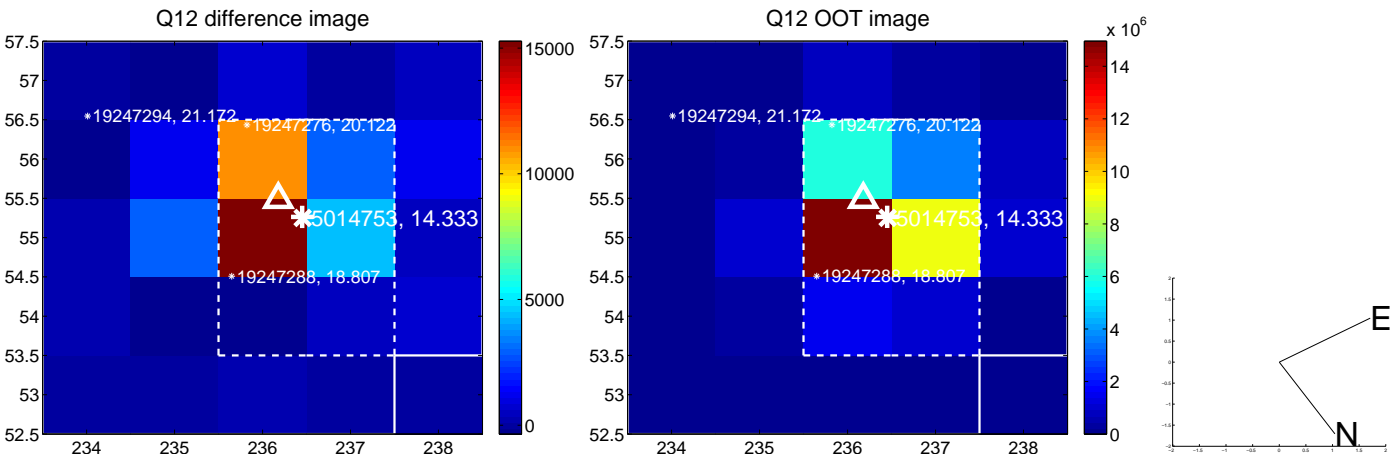
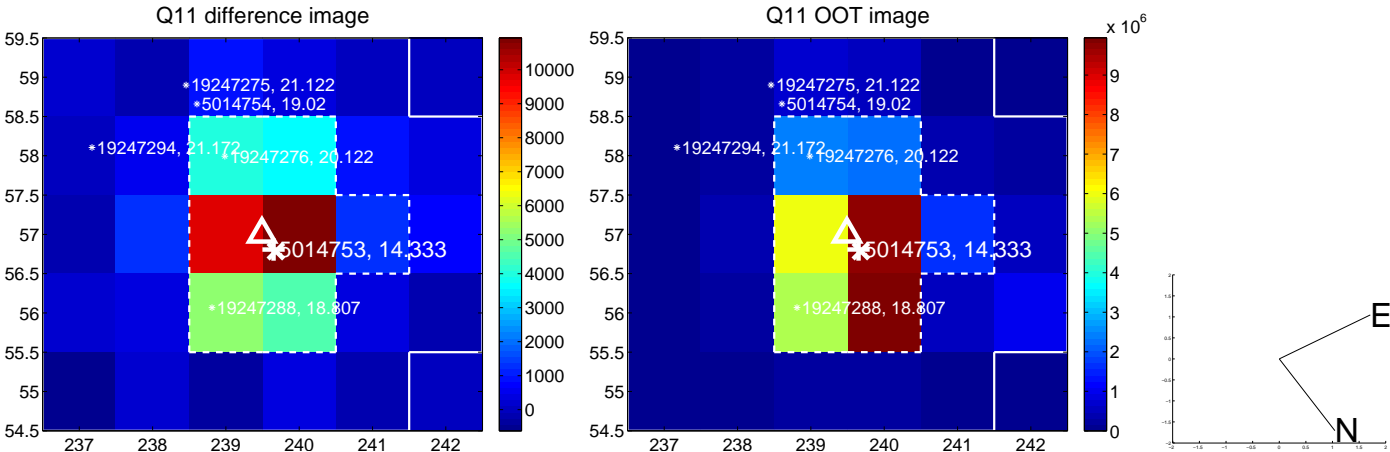
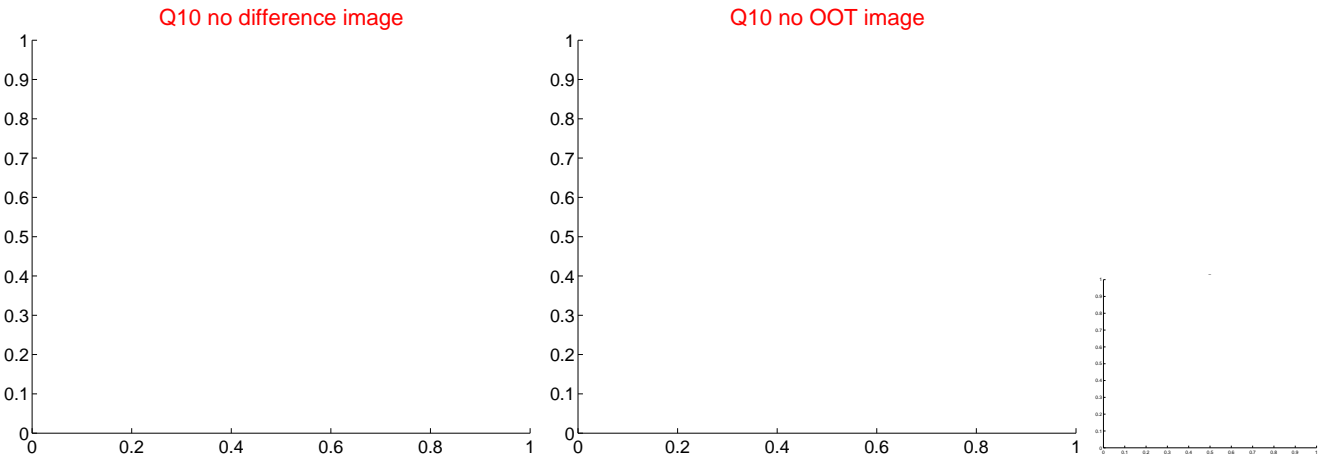
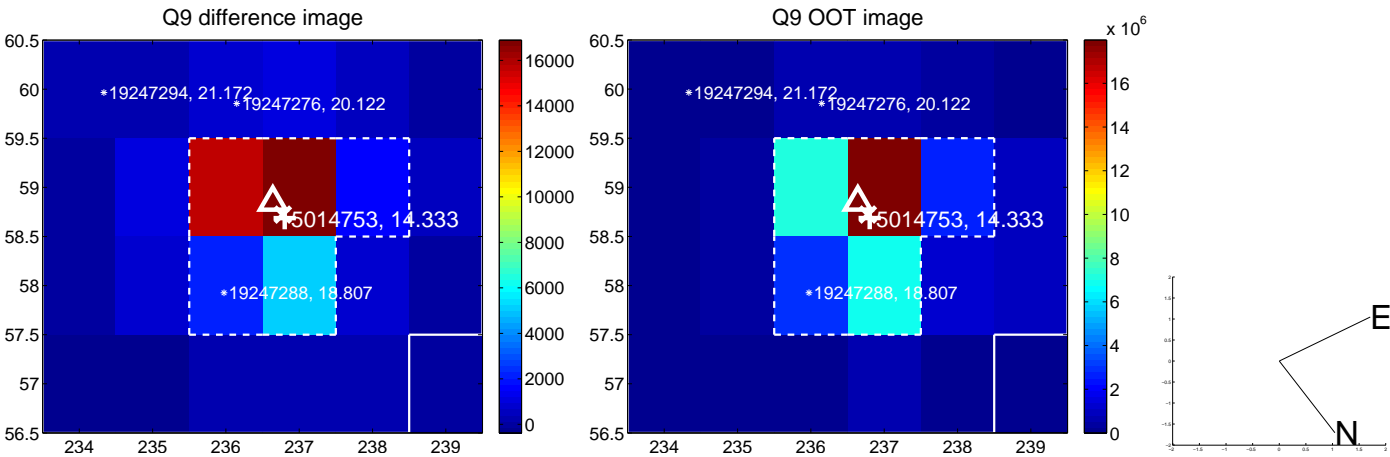
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



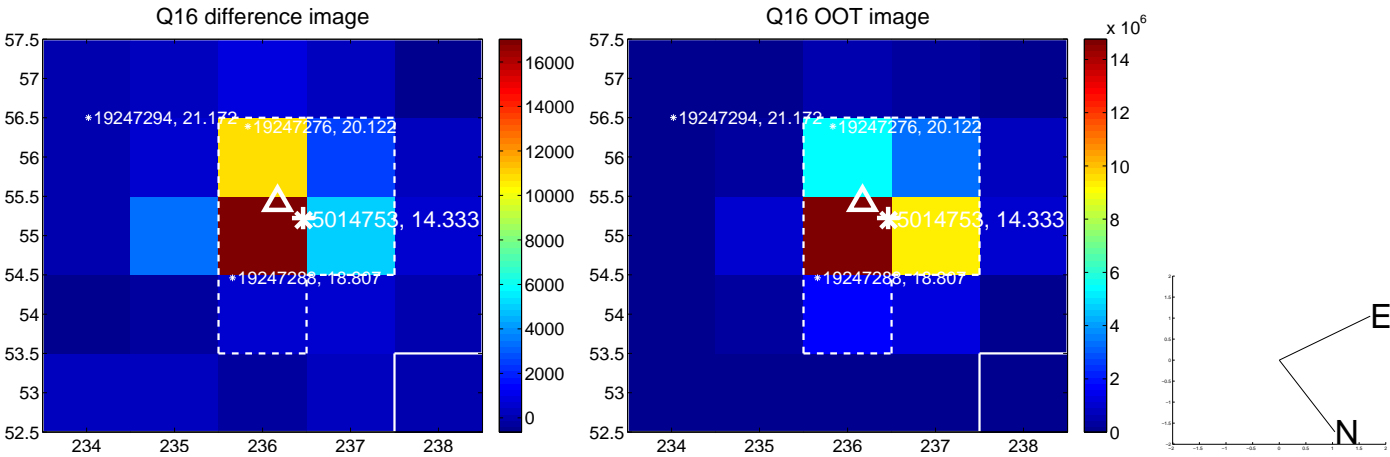
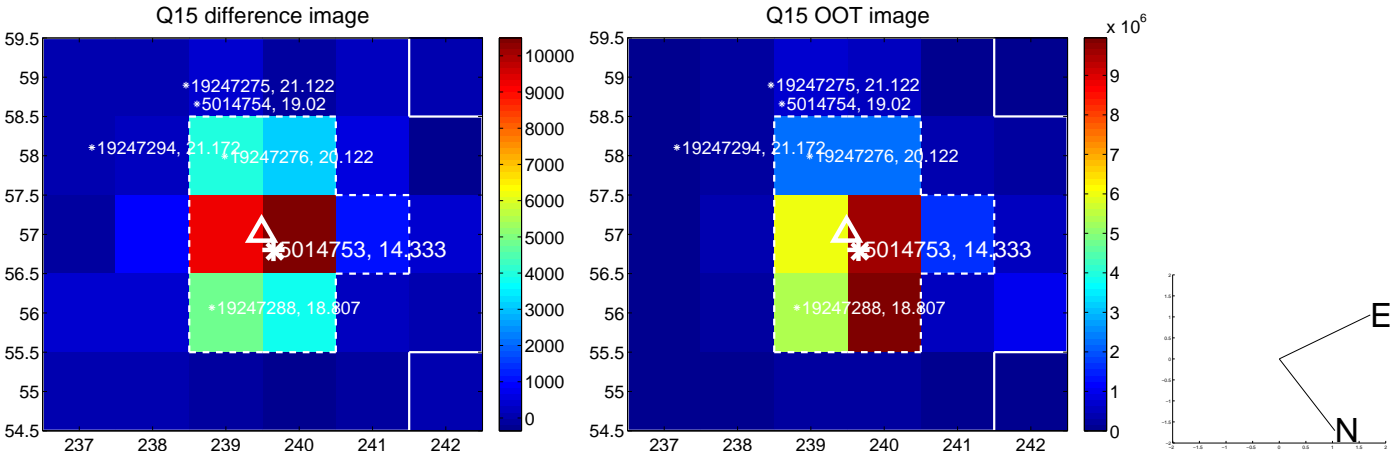
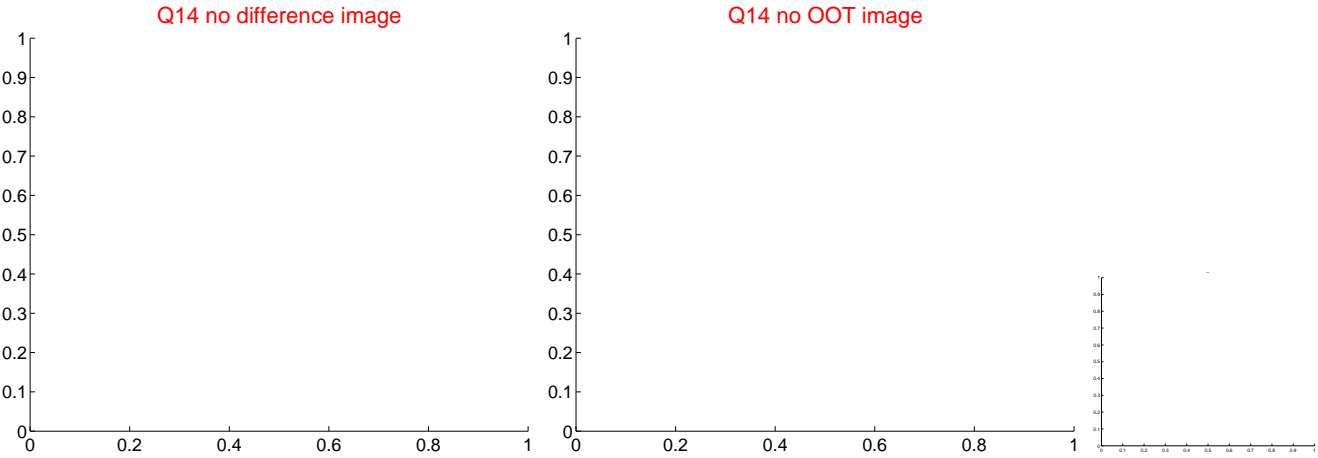
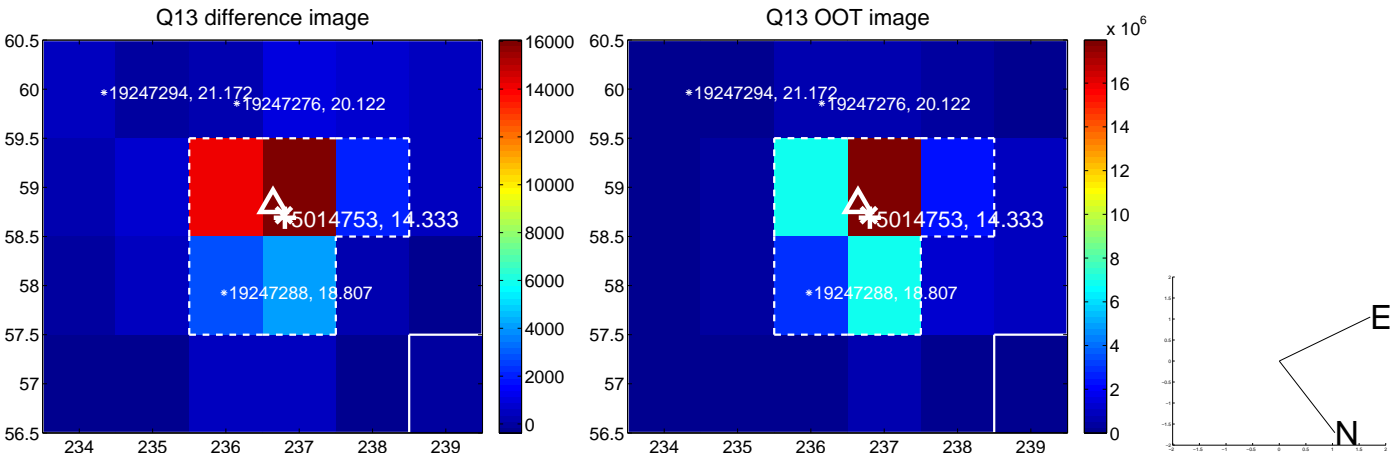
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



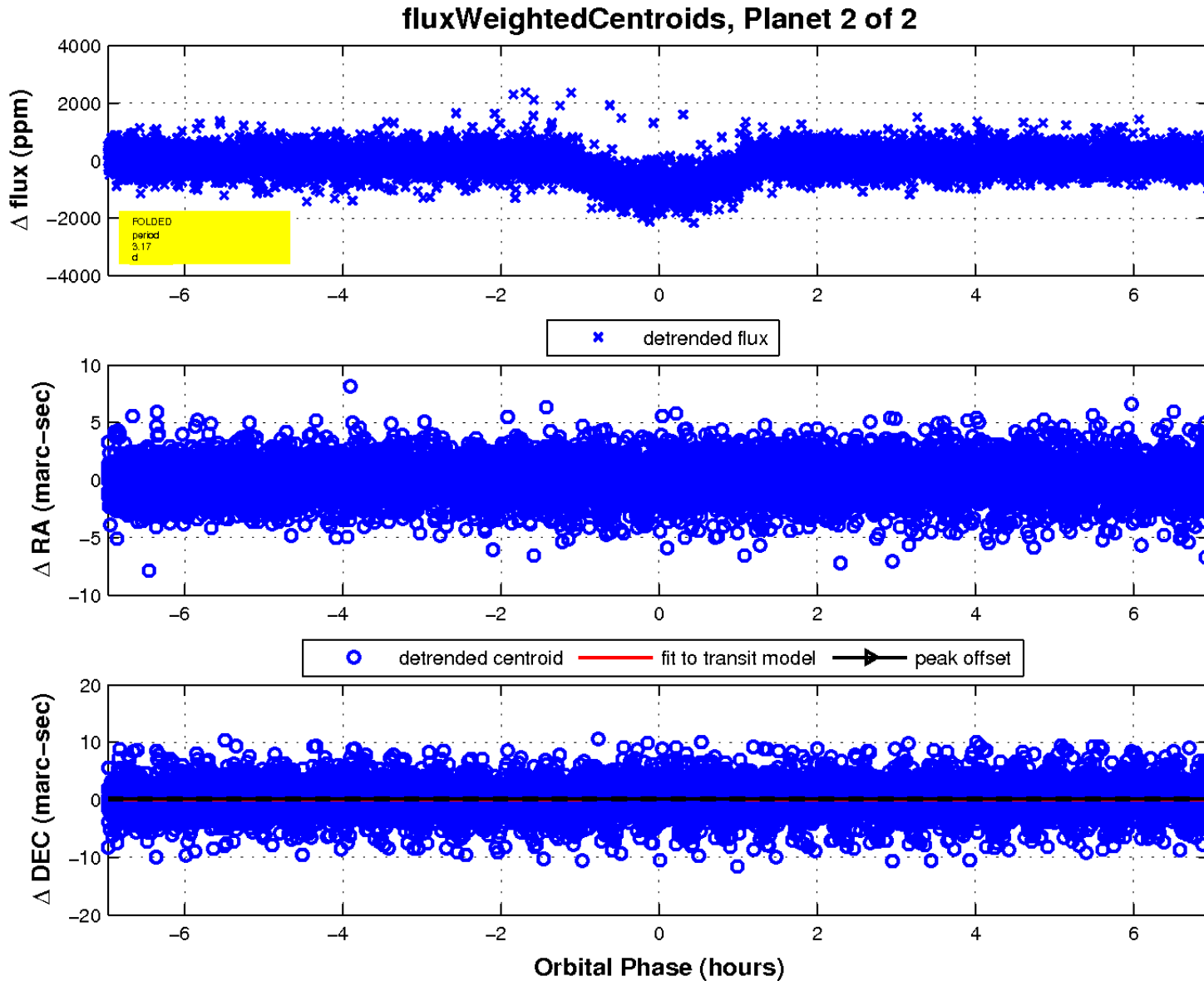
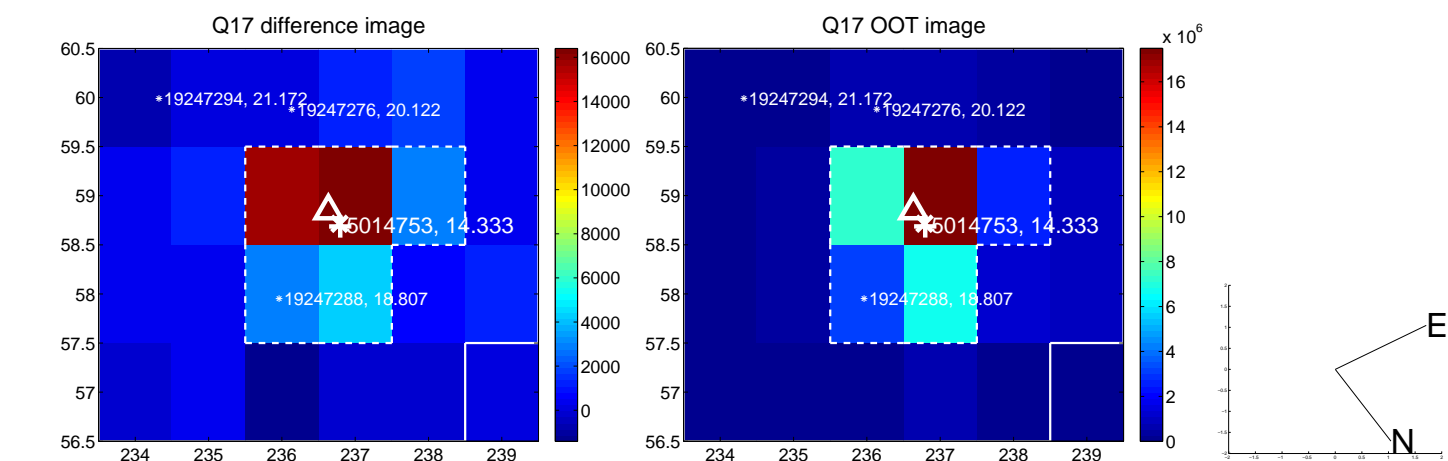
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

