

KIC 006606934

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})
006606934-01	OBS	6028.01	37.806942	153.840913	105869.1	3.842	2925.5	2581.2	1.10	6387	52.41	34.22
006606934-02	OBS	No	37.807966	154.129626	399.0	5.737	10.1	12.6	1.10	6387	2.24	34.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606934-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—DEEP_V_SHAPED
006606934-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA—RESIDUAL_TCE—CENT_FEW_DIFFS—HALO_GHOST

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.

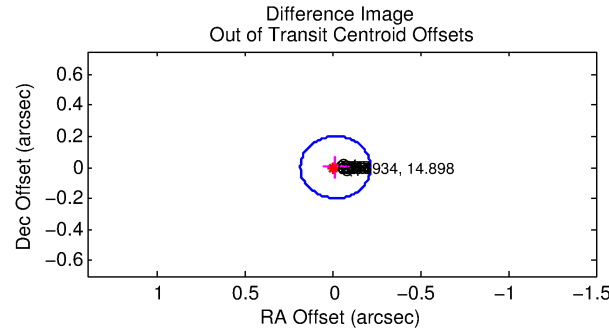
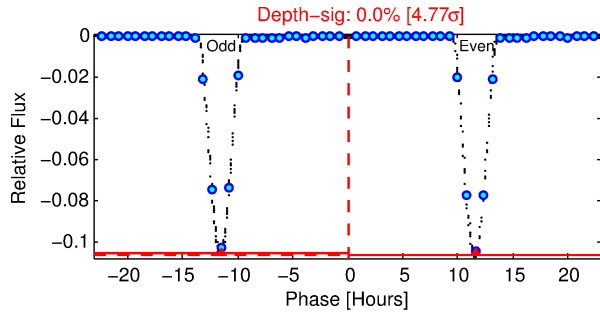
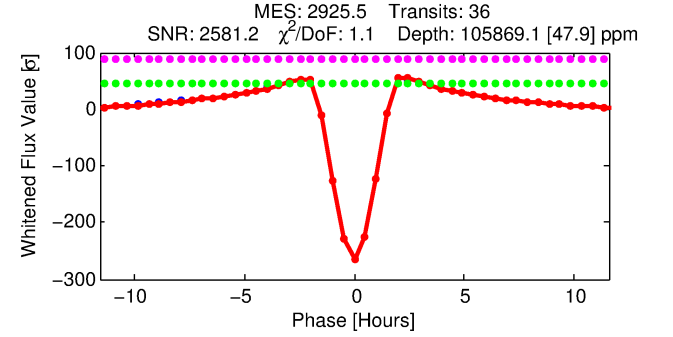
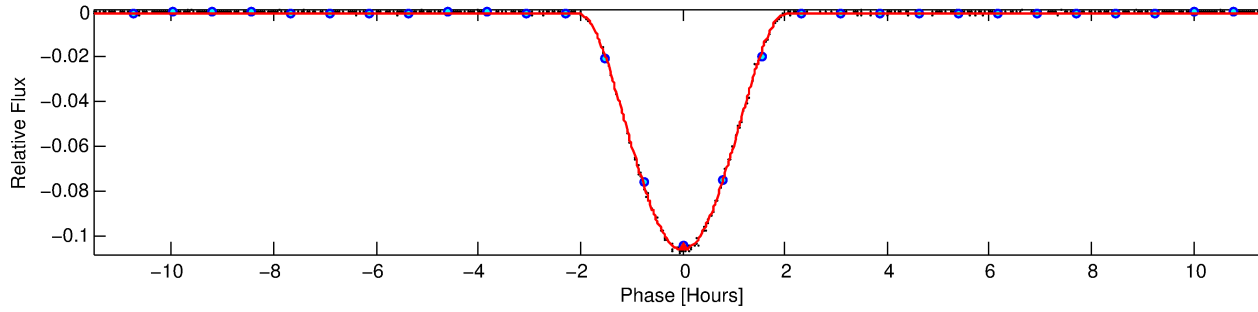
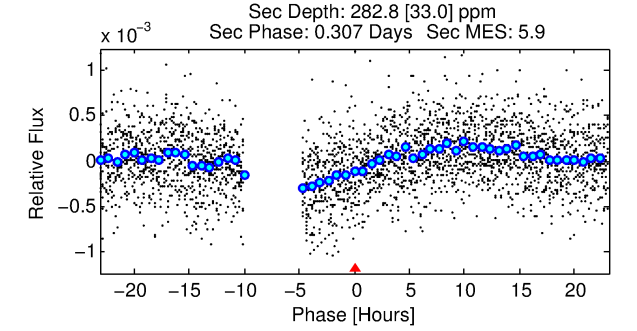
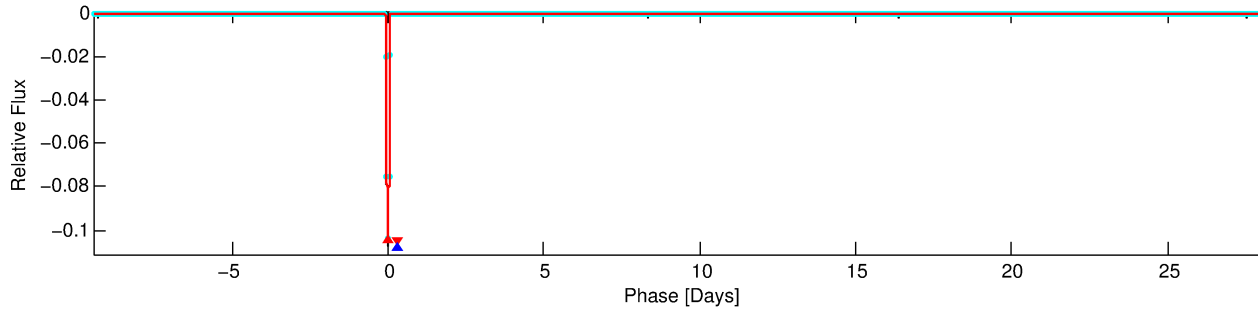
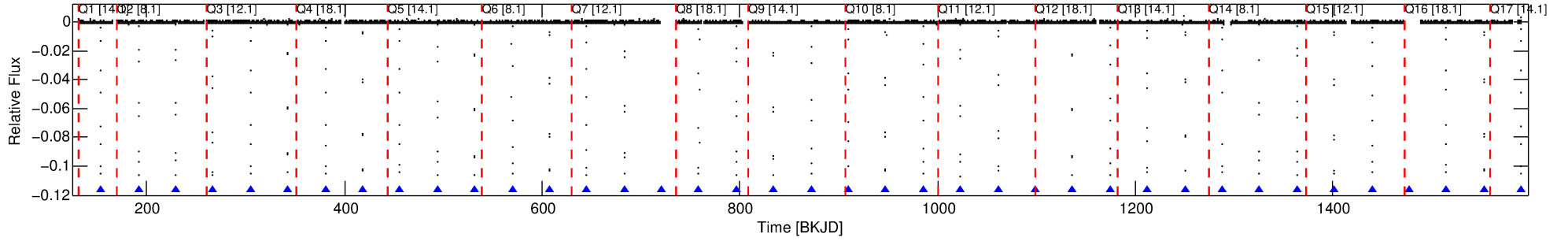
Ephemeris Match Information For 006606934-01

No Significant Match Found

DV One-Page Summary

KIC: 6606934 Candidate: 1 of 2 Period: 37.807 d
KOI: K06028.01 Corr: 0.999

Kp: 14.90 R*: 1.10 Rs Teff: 6387.0 K Logg: 4.41 Fe/H: -0.120



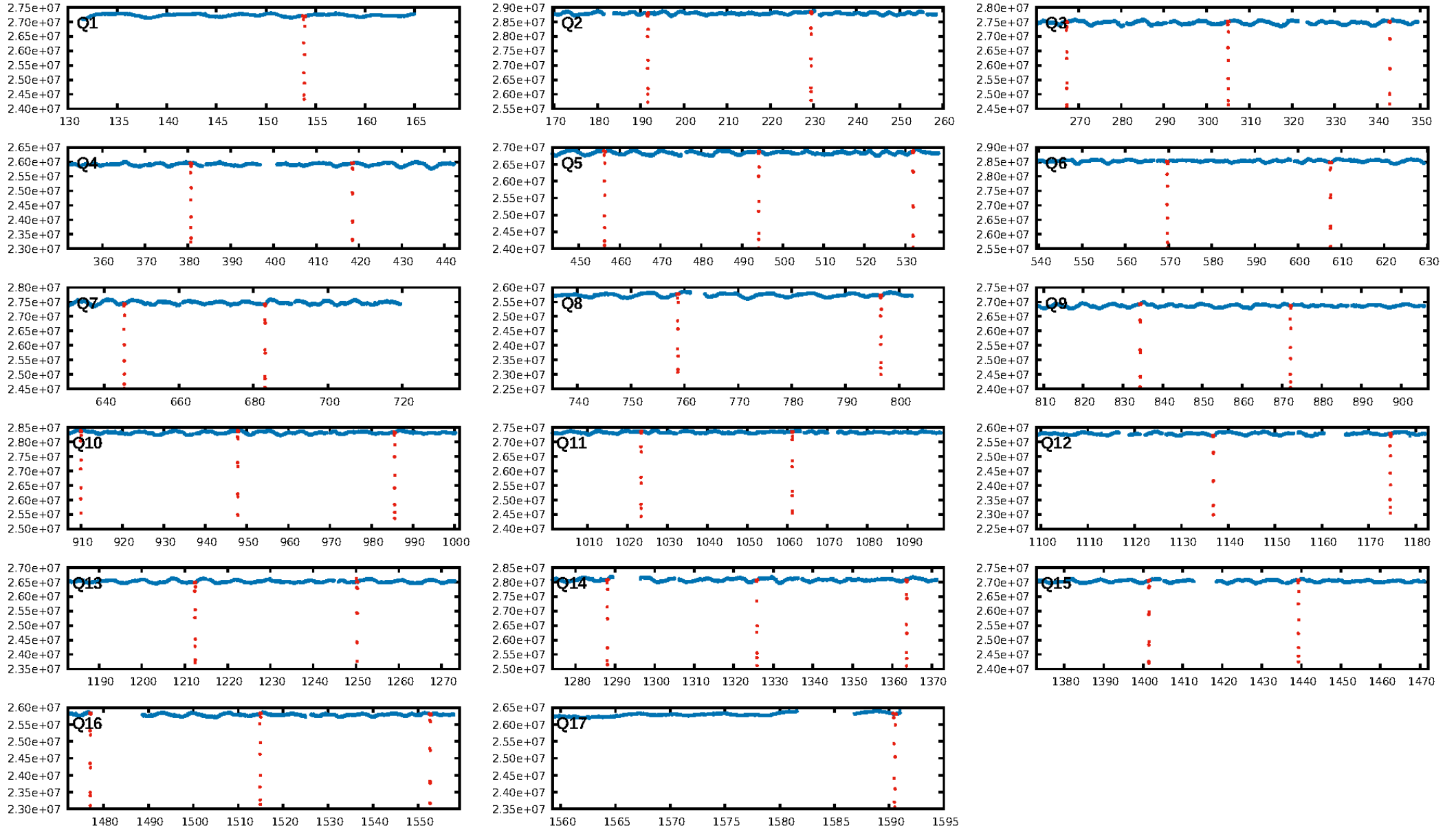
DV Fit Results:

Period = 37.80694 [0.00000] d
Epoch = 153.8409 [0.0000] BKJD
Rp/R* = 0.4347 [0.0173]
a/R* = 83.96 [0.10]
b = 0.90 [0.03]
Seff = 34.22 [13.82]
Teq = 617 [62] K
Rp = 52.41 [16.59] Re
a = 0.2307 [0.0607] AU
Ag = 3.01 [1.23] [1.64σ]
Teffp = 1256 [61] K [7.35σ]

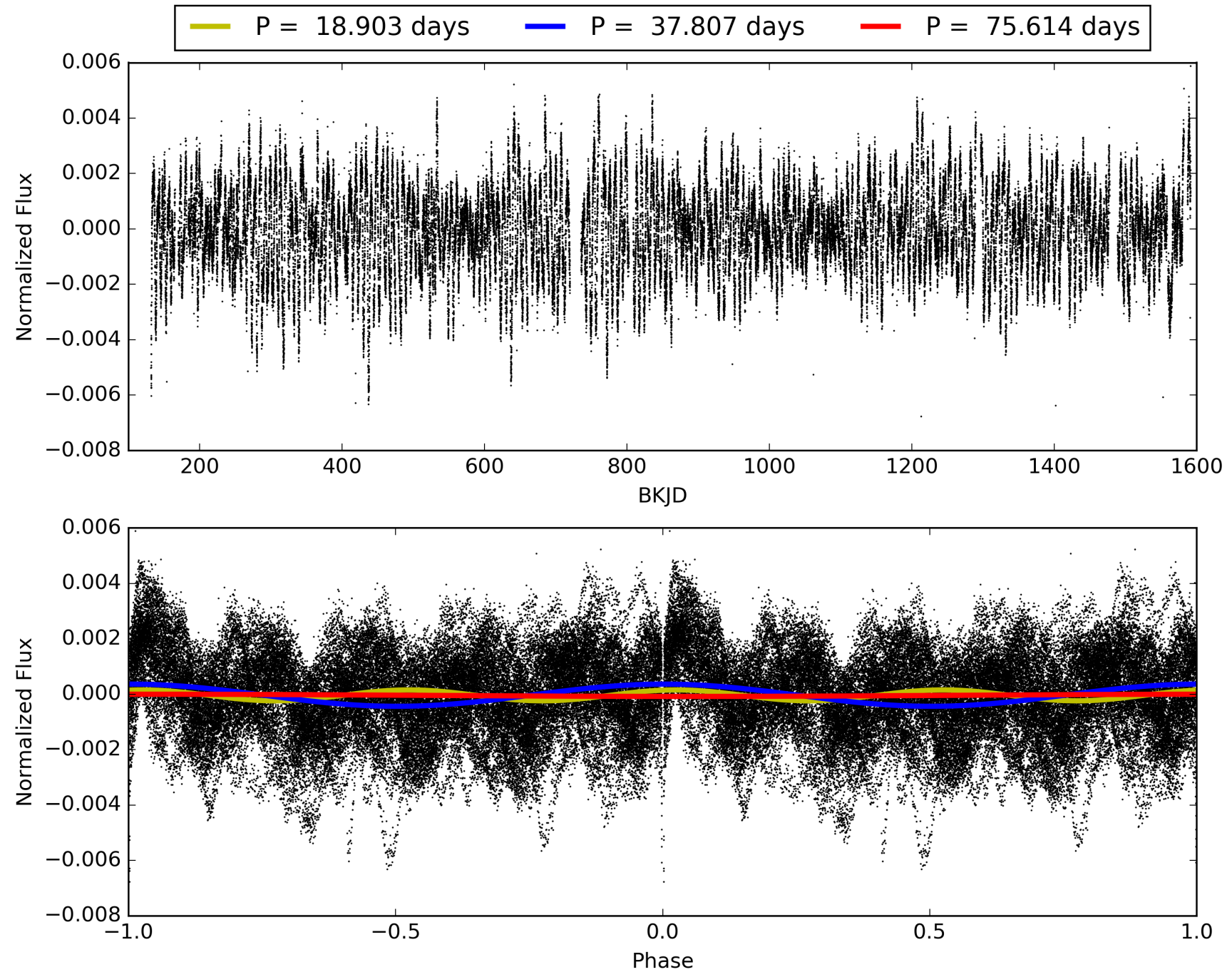
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.3% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 51.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [34/34]
GhostDiagnostic-chr: 6.729
Centroid-sig: 0.0%
Centroid-so: 0.196 arcsec [50.76σ]
OotOffset-rm: 0.016 arcsec [0.24σ]
KicOffset-rm: 0.157 arcsec [2.33σ]
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]

TCE 006606934-01, PDC Light Curves

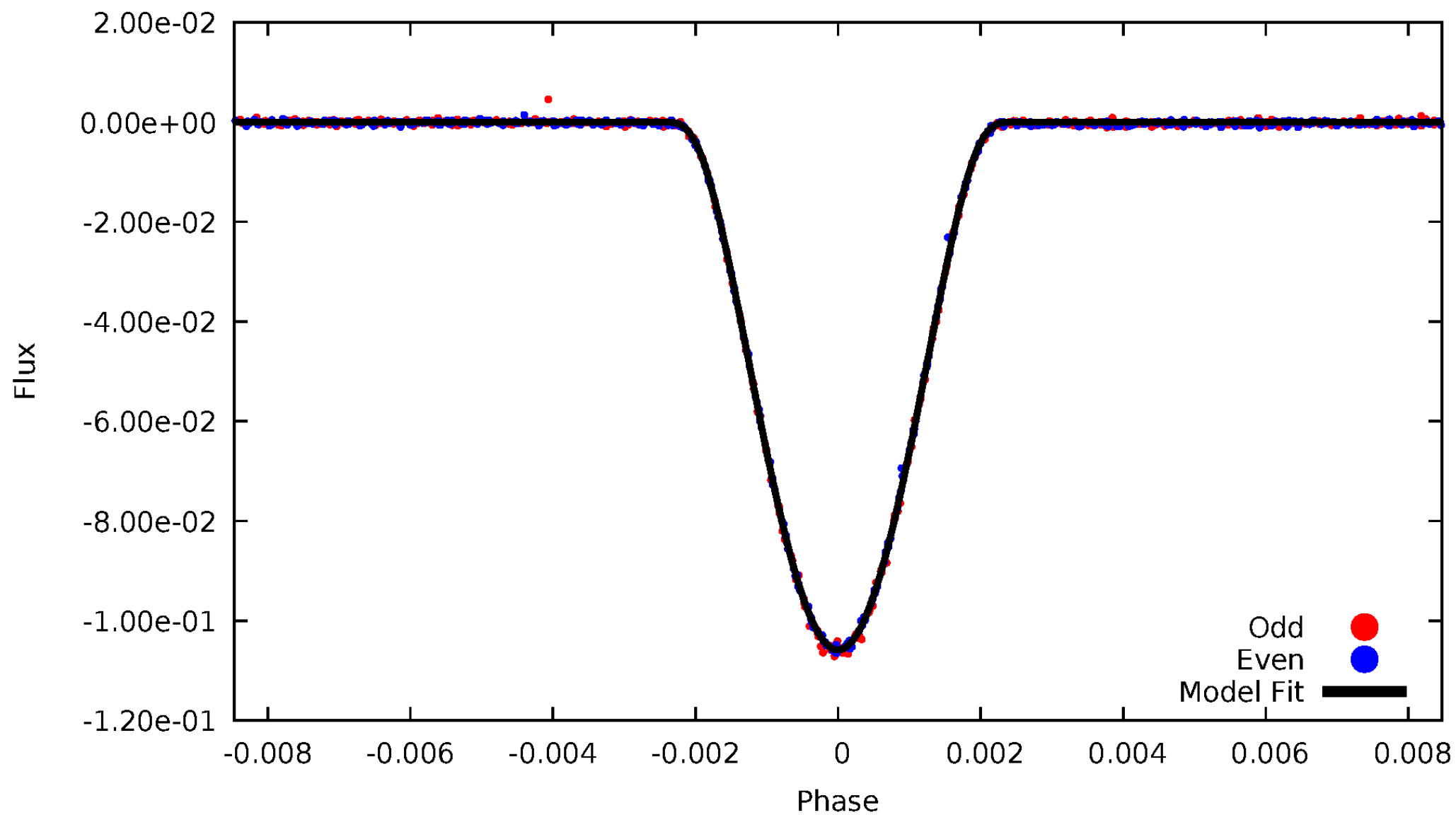


TCE 006606934-01



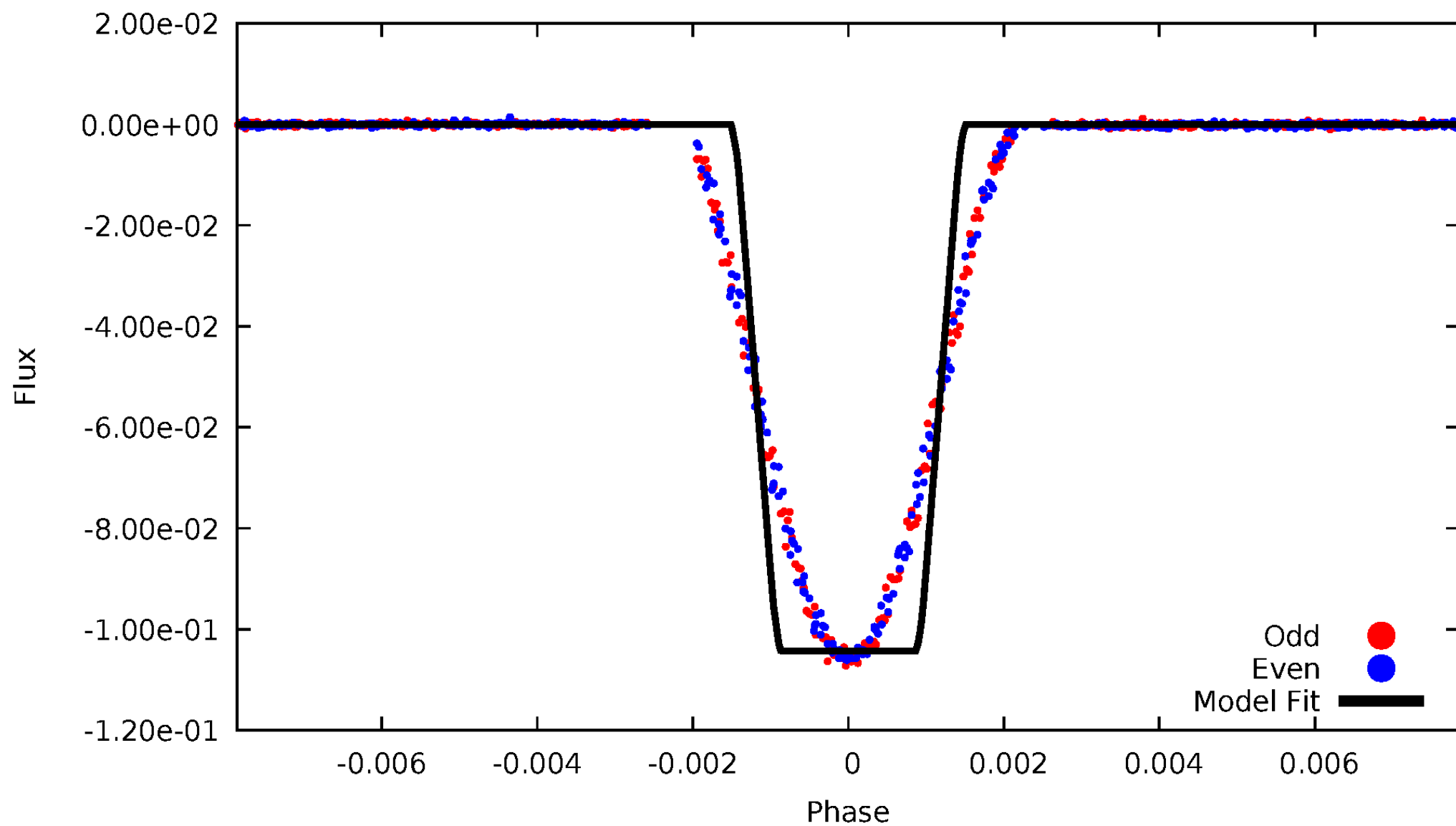
DV Odd/Even

TCE 006606934-01



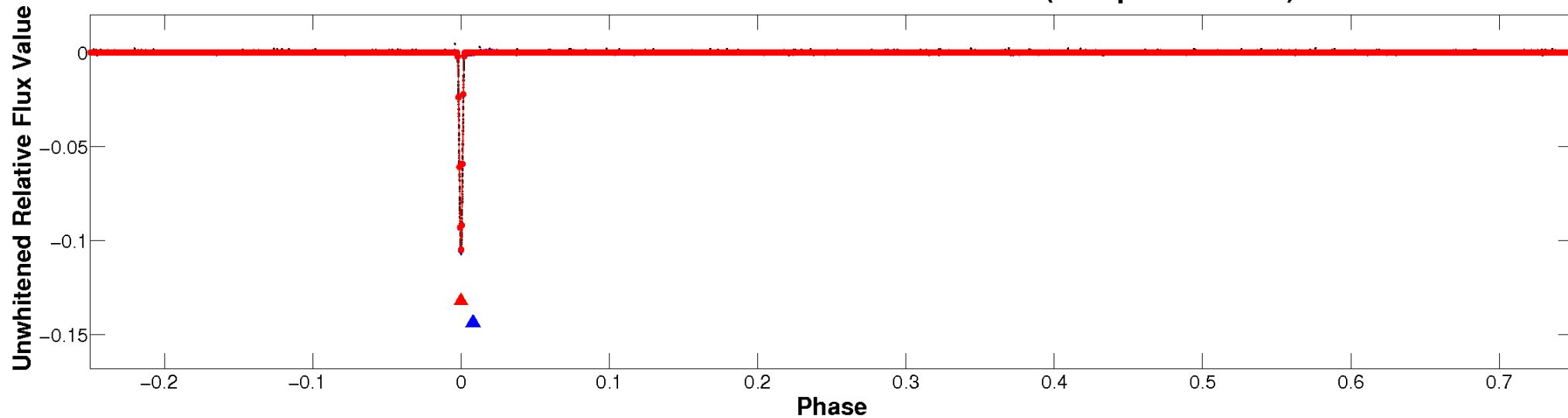
ALT Odd/Even

TCE 006606934-01

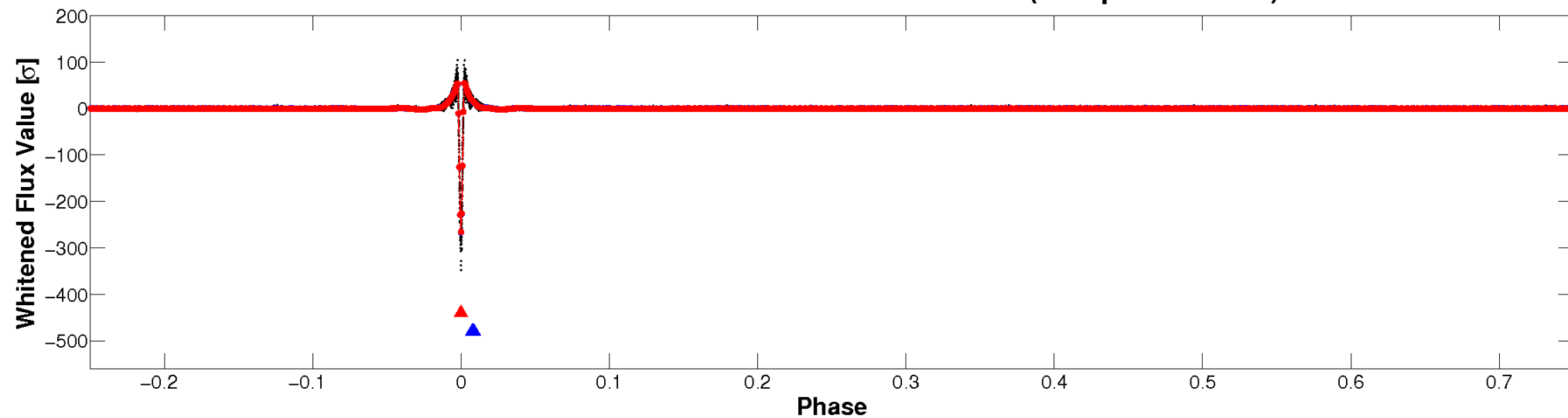


Non-Whitened Vs. Whitened Light Curve

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

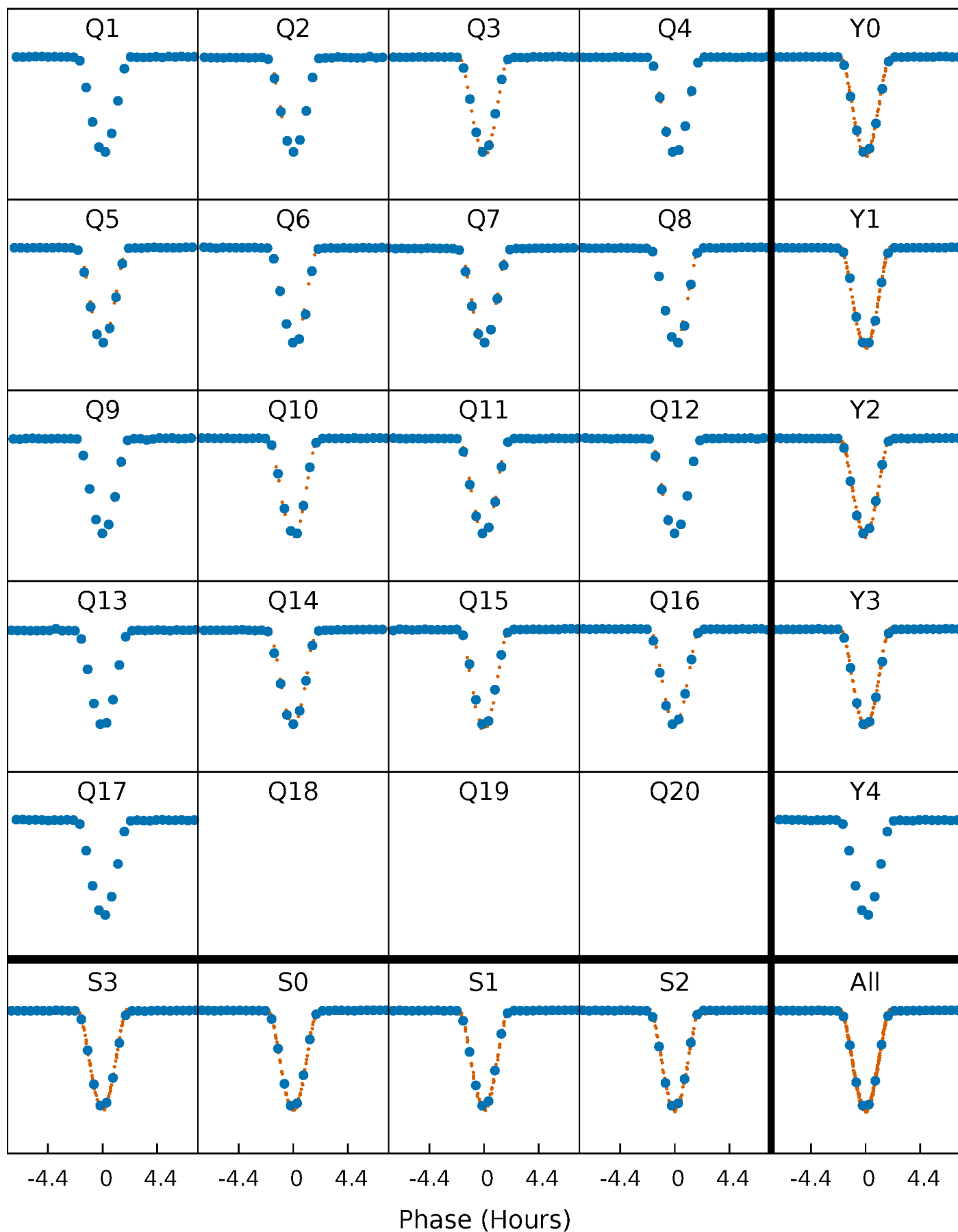


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



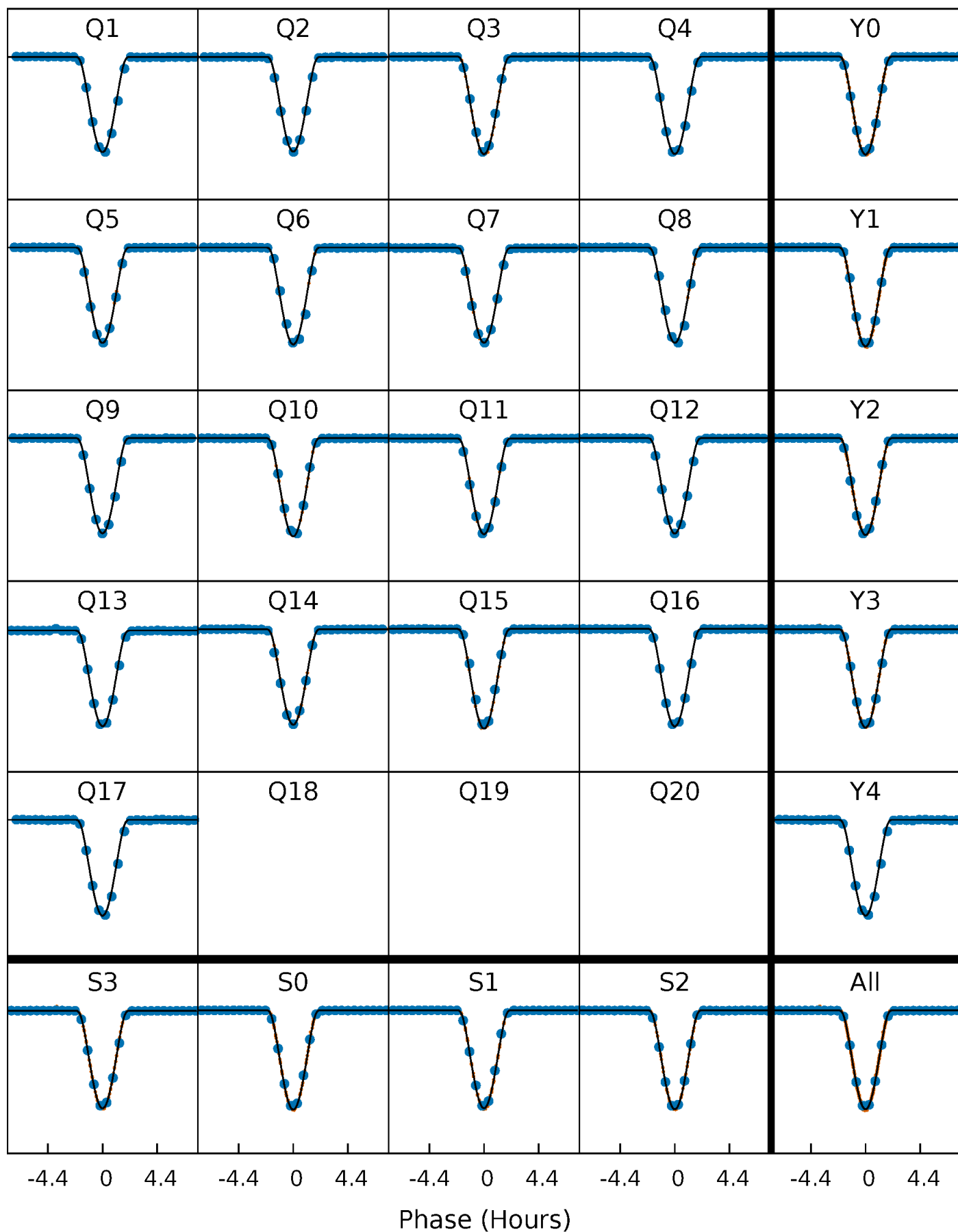
PDC Quarter-Phased Transit Curves

TCE 006606934-01 P= 37.806942 Days $T_0=153.840913$ (BKJD)



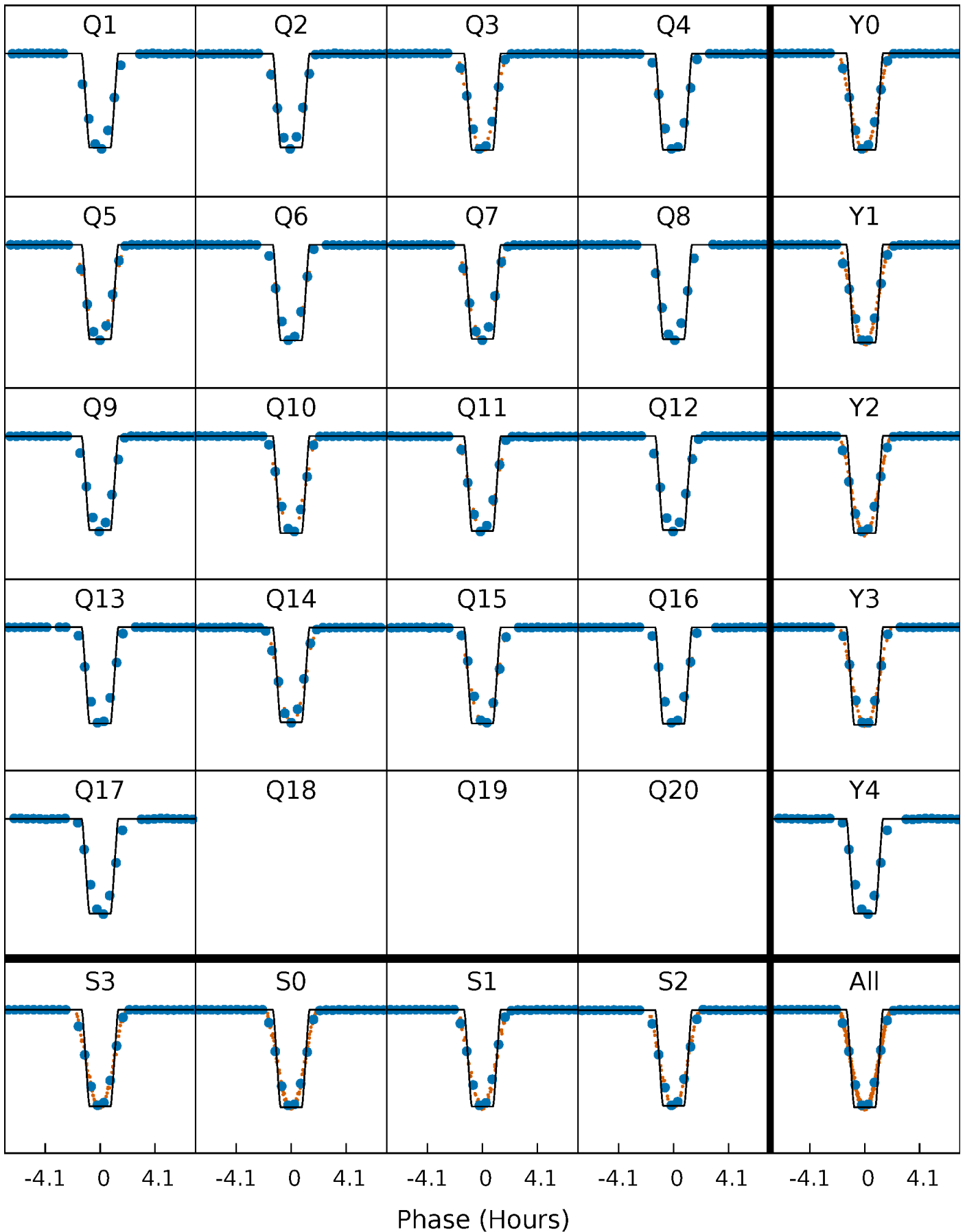
DV Quarter-Phased Transit Curves

TCE 006606934-01 P= 37.806942 Days $T_0=153.840913$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

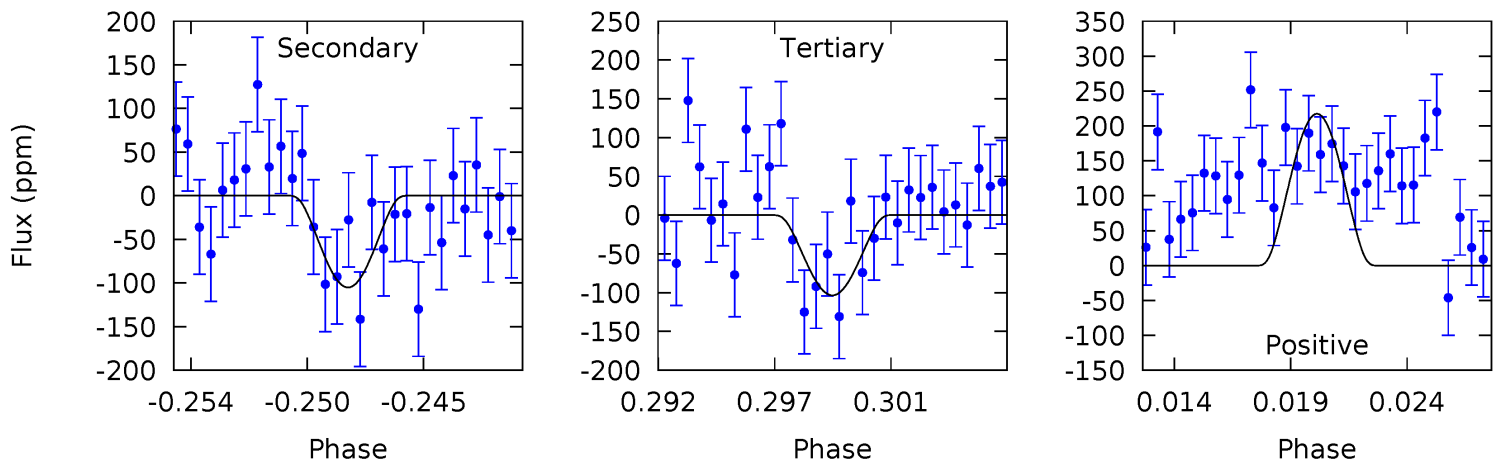
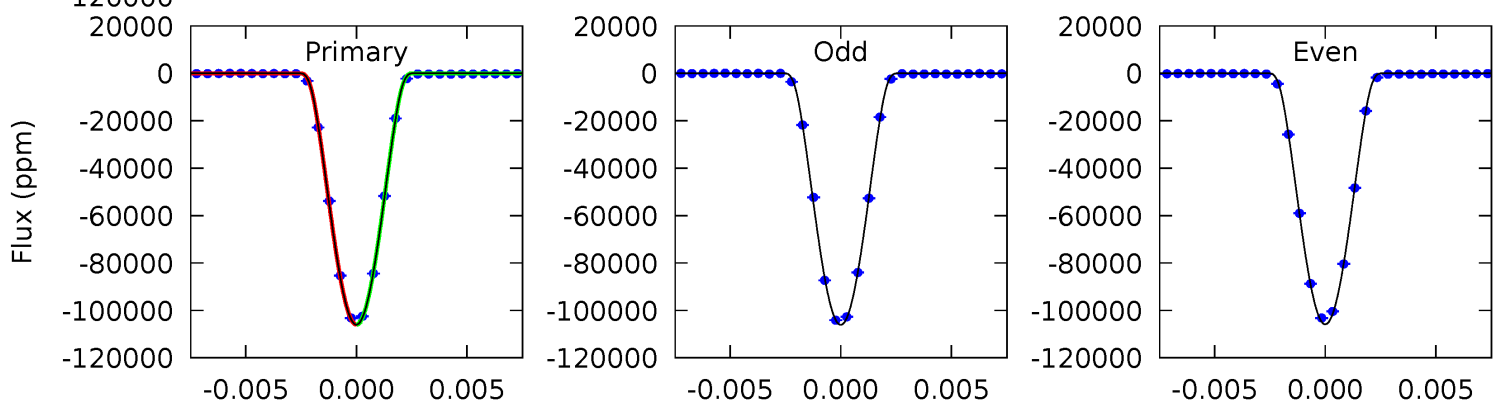
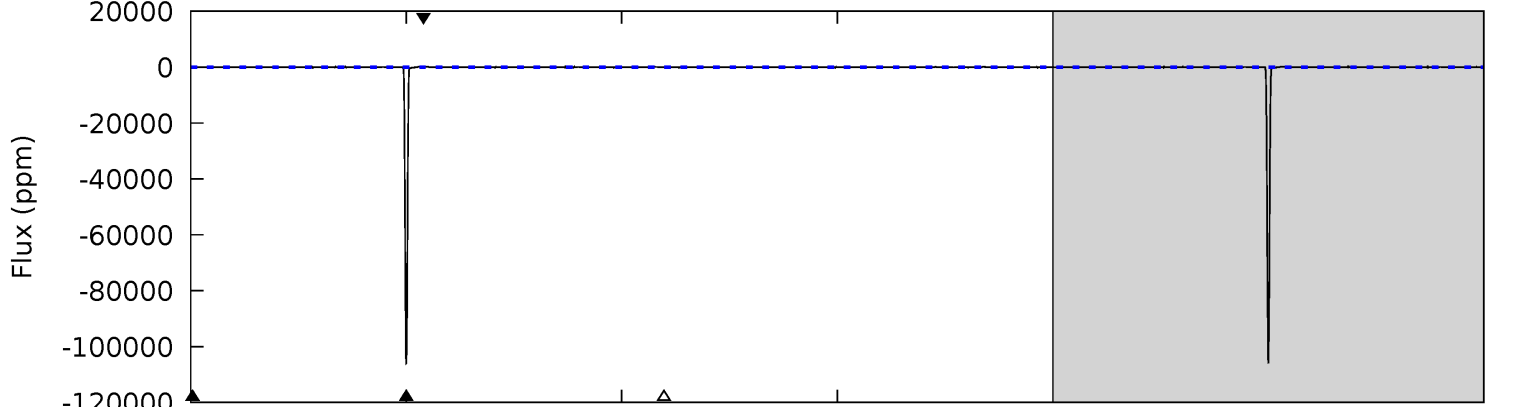
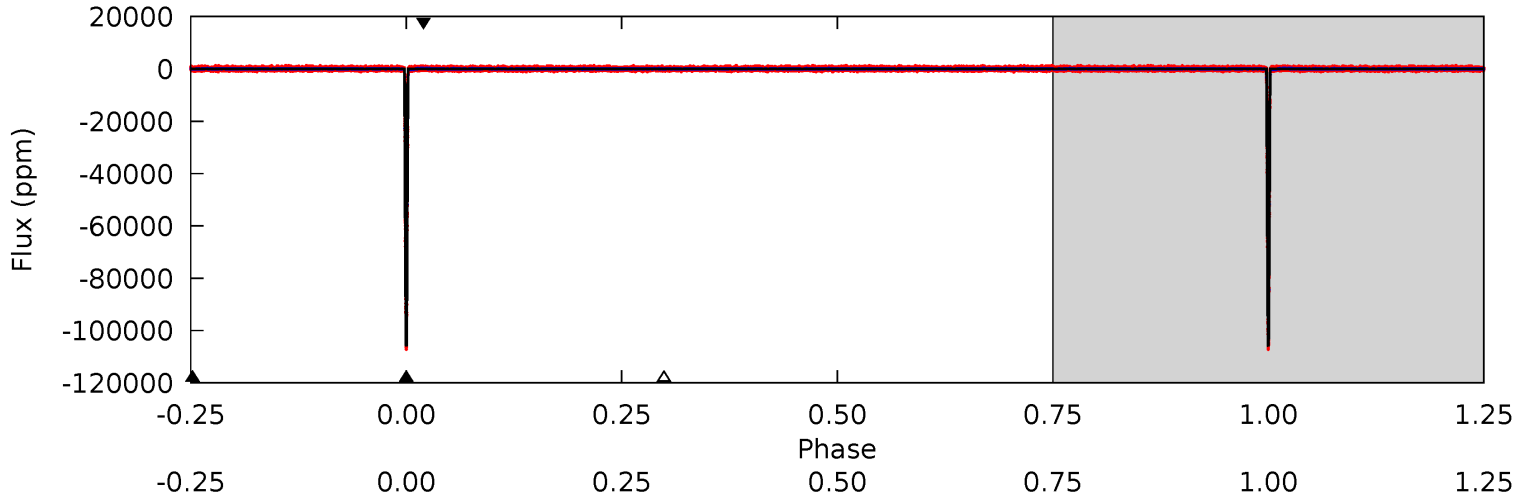
TCE 006606934-01 P= 37.806799 Days $T_0=153.843500$ (BKJD)



DV Model-Shift Uniqueness Test

006606934-01, P = 37.806942 Days, E = 116.033971 Days

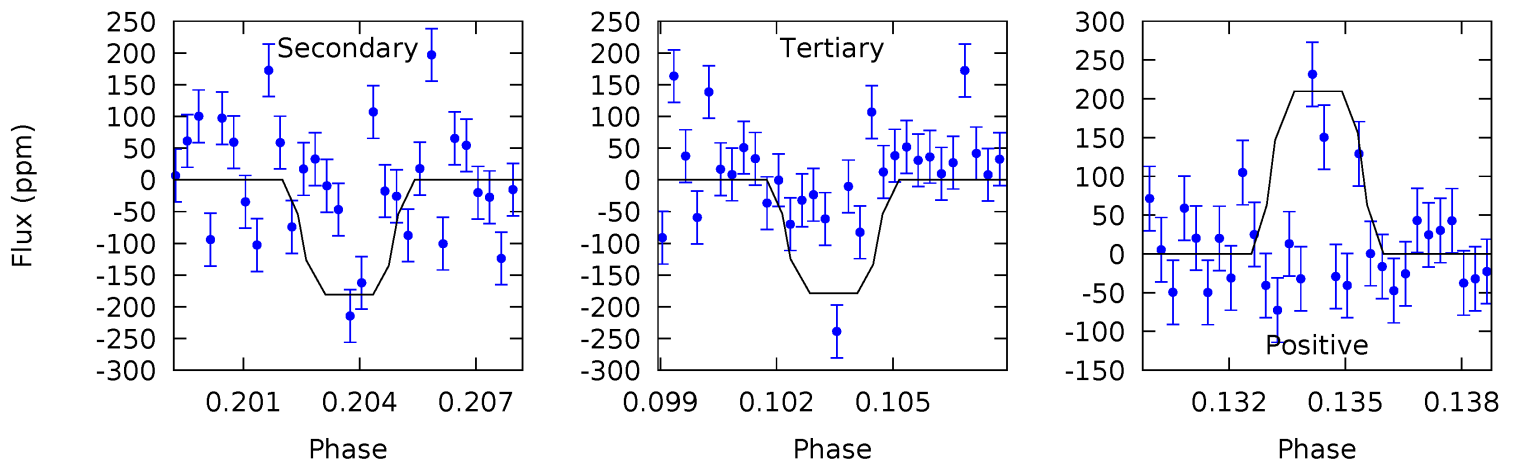
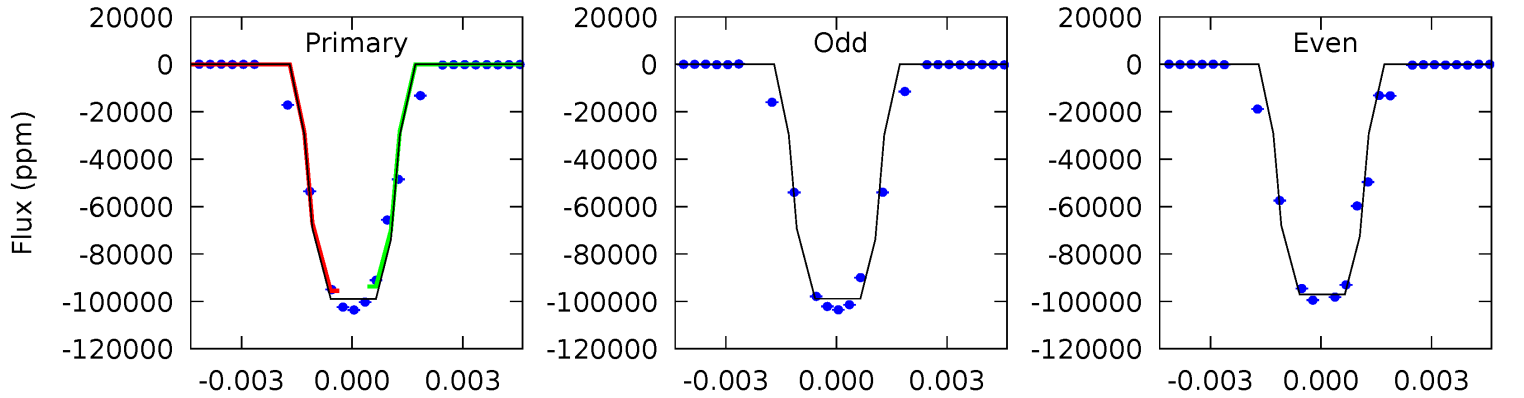
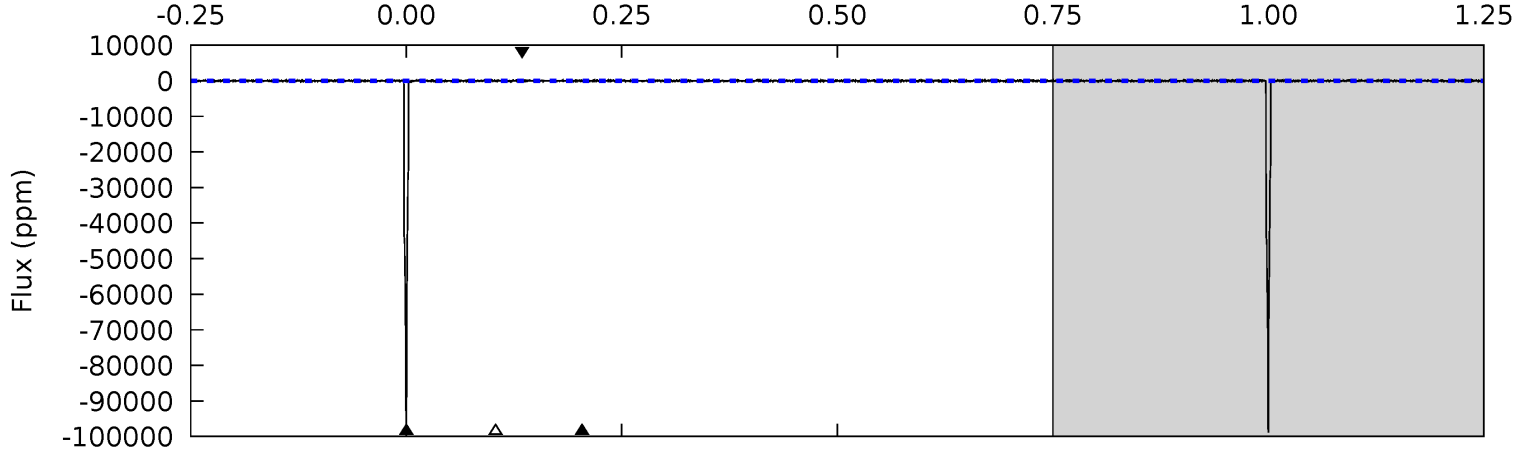
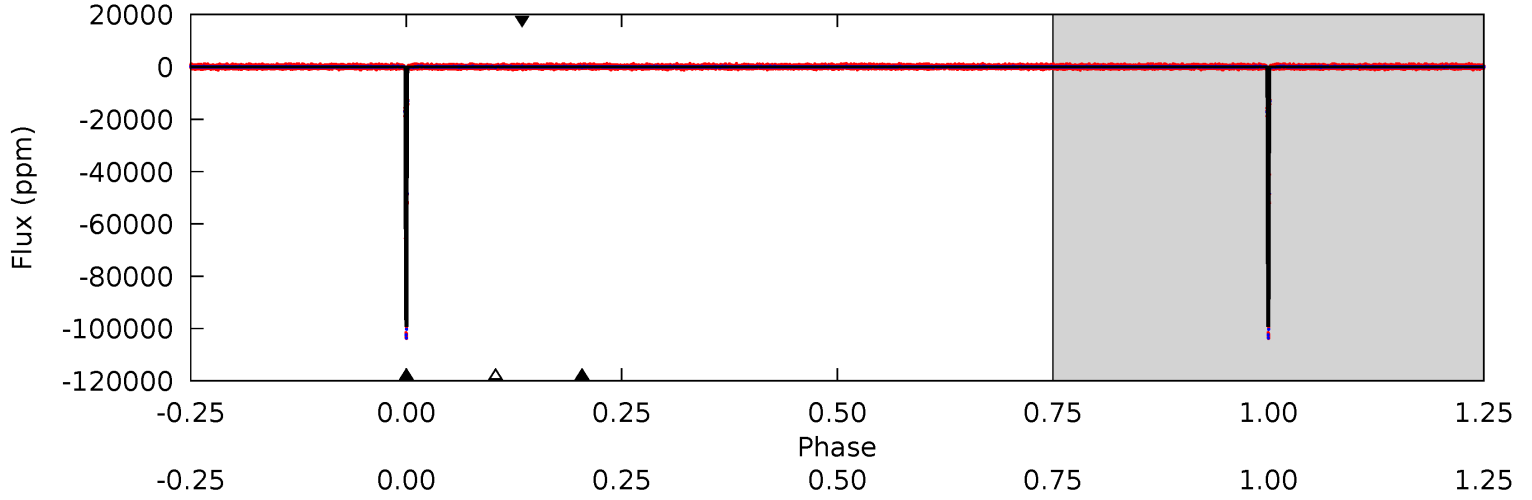
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5863	5.82	5.72	12.0	5.17	2.83	2.42	5858	5851	0.10	-6.21	7.22	1.00	0.00	0



Alt Model-Shift Uniqueness Test

006606934-01, P = 37.806799 Days, E = 116.036701 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2163	3.95	3.90	4.58	5.25	2.97	1.14	2159	2158	0.05	-0.63	21.4	1.00	0.00	0



Stellar Parameters For KIC 006606934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6387^{+172}_{-211}	$4.410^{+0.065}_{-0.208}$	$-0.120^{+0.250}_{-0.300}$	$1.105^{+0.347}_{-0.124}$	$1.145^{+0.162}_{-0.162}$	$1.195^{+0.350}_{-0.647}$
	+3%/-3%	+1%/-5%	+208%/-250%	+31%/-11%	+14%/-14%	+29%/-54%
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 006606934-01 / KOI 6028.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-105 ± 18	$53.76^{+8.47}_{-4.92}$	876^{+62}_{-44}	1912^{+53}_{-64}	$1.023^{+0.288}_{-0.299}$
Alt.	-181 ± 46	$40.35^{+7.04}_{-4.10}$	879^{+68}_{-47}	2210^{+75}_{-92}	$3.079^{+1.091}_{-1.045}$

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 $A_{obs} \gg 1.0$

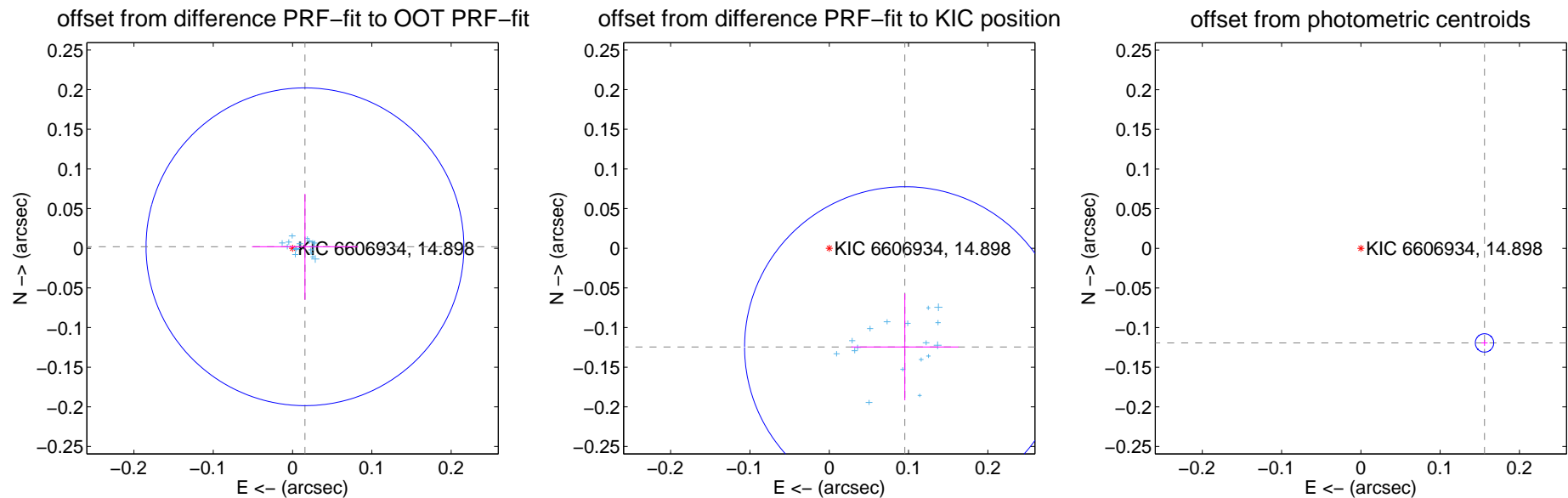
DV Centroid Data

Supplemental centroid analysis for 006606934-01. Kepler magnitude: 14.90. Transit SNR 2581.18

There are 17 quarters with good PRF difference image offsets

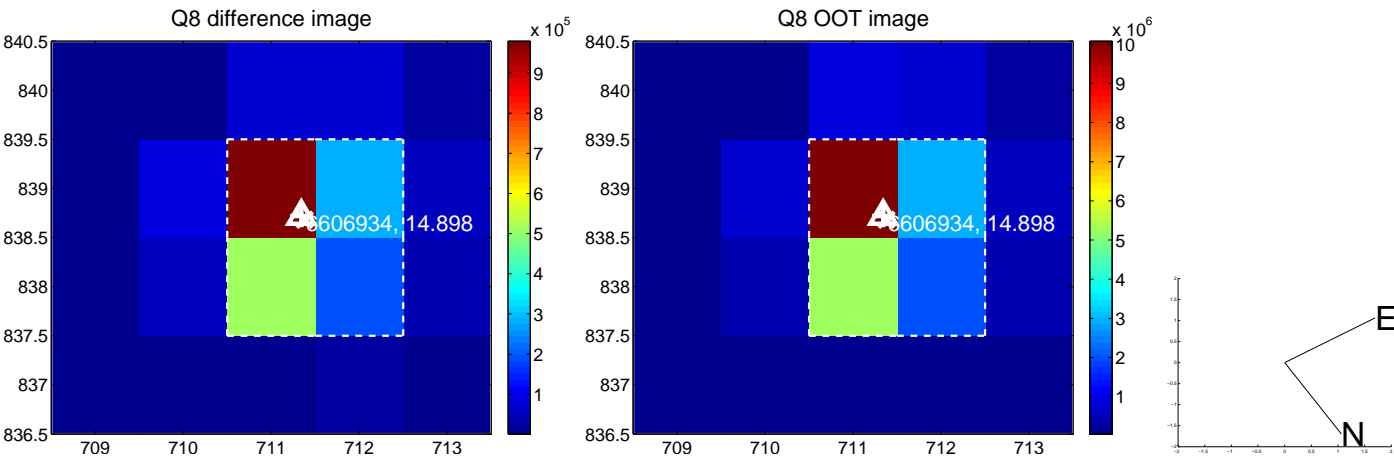
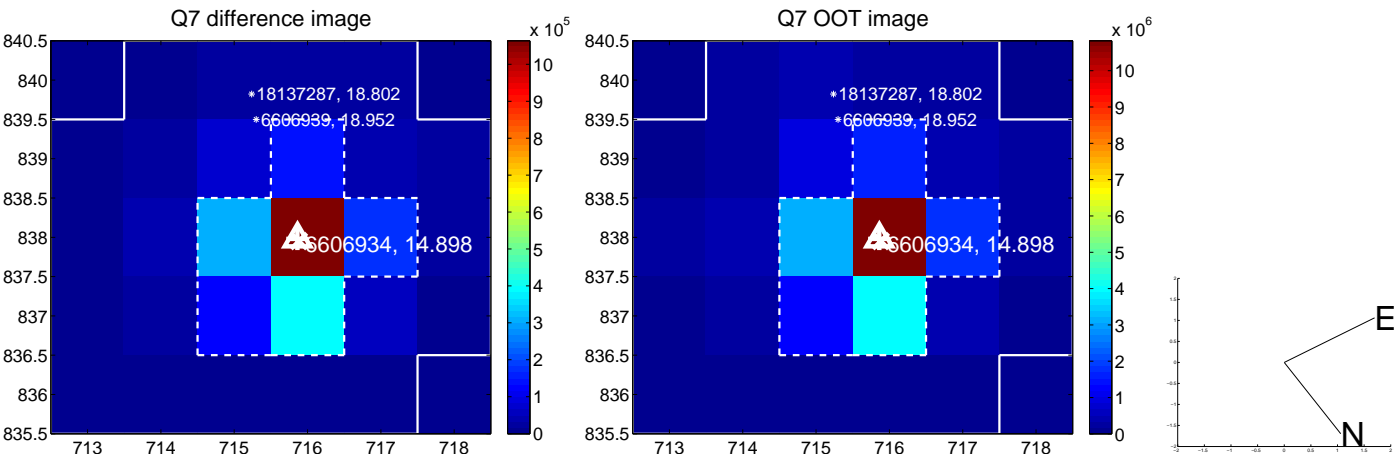
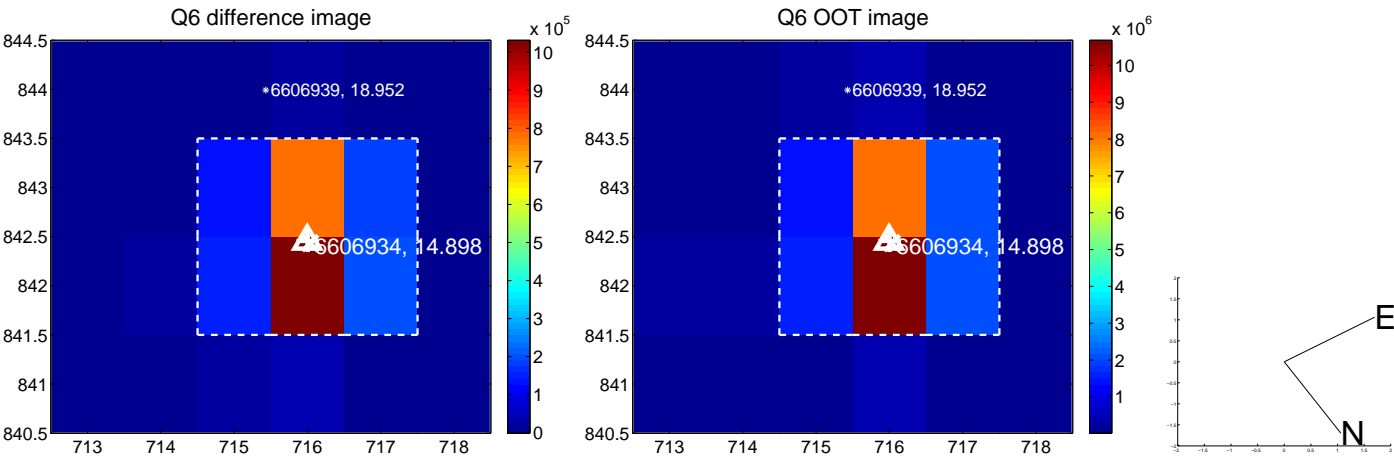
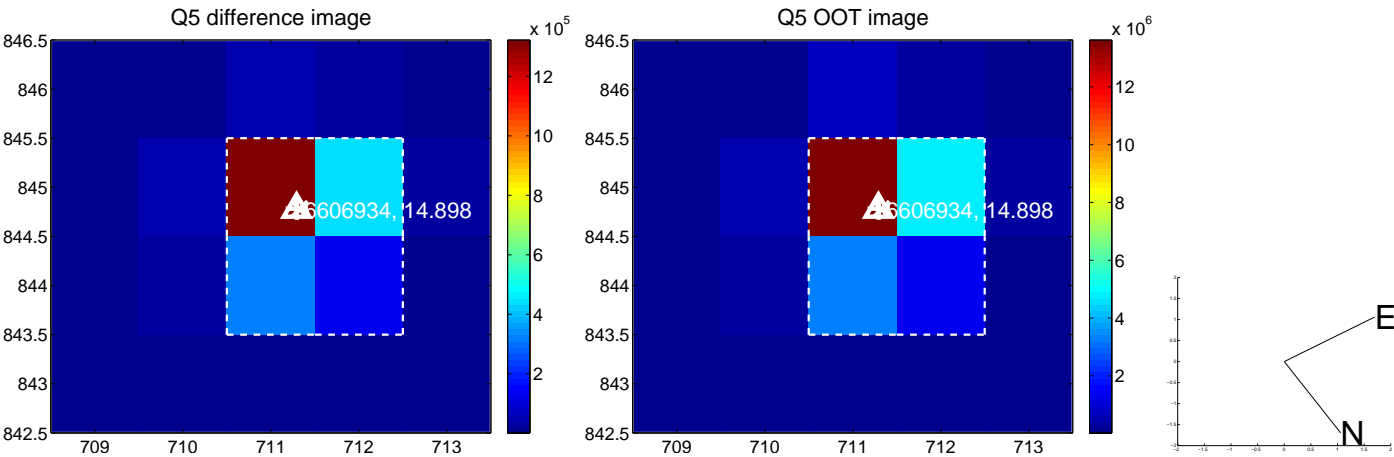
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.067	0.24	-0.016 ± 0.067	0.002 ± 0.067
PRF-fit source offset from KIC position	0.157 ± 0.067	2.33	-0.095 ± 0.068	-0.124 ± 0.067
photometric centroid source offset	0.20 ± 0.00	50.76	-0.16 ± 0.00	-0.12 ± 0.00

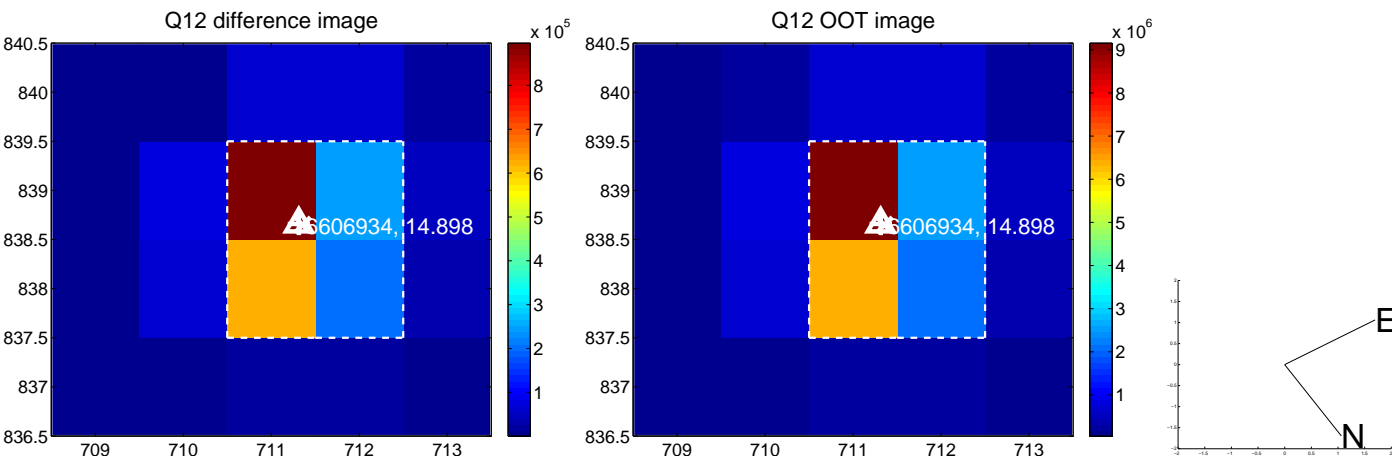
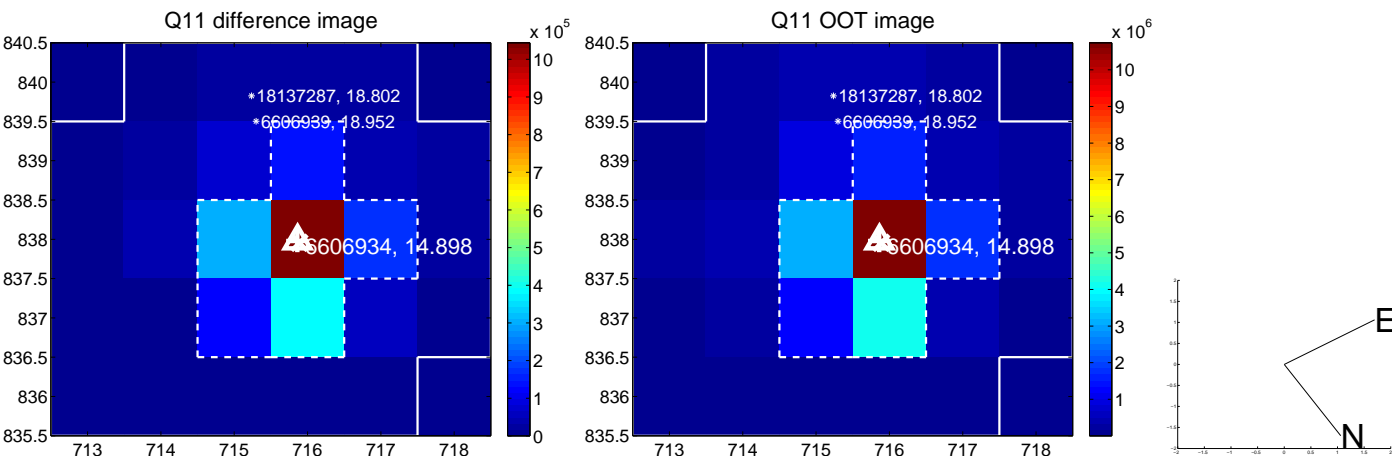
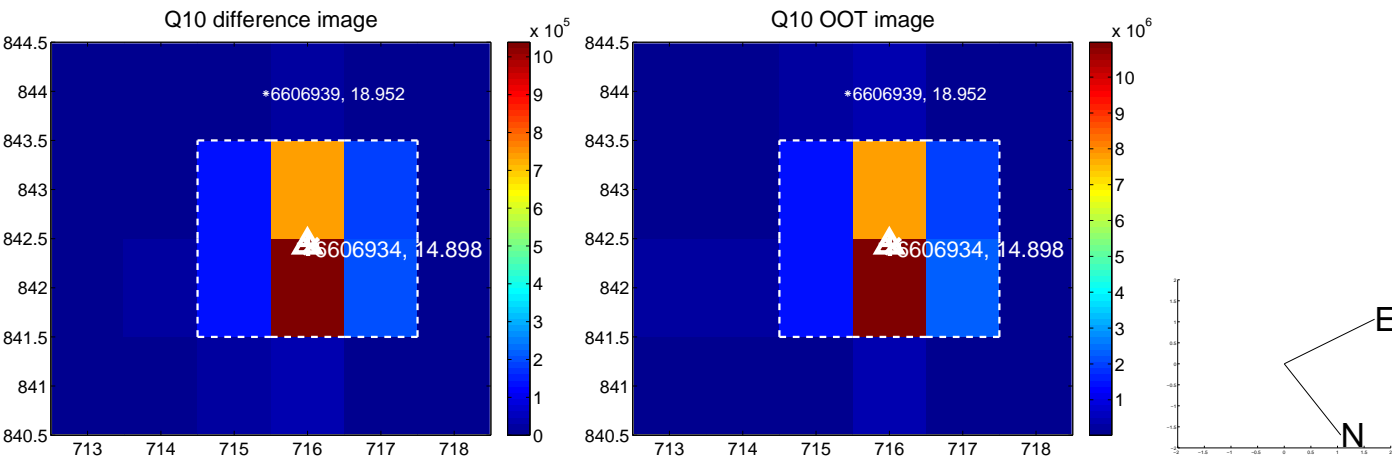
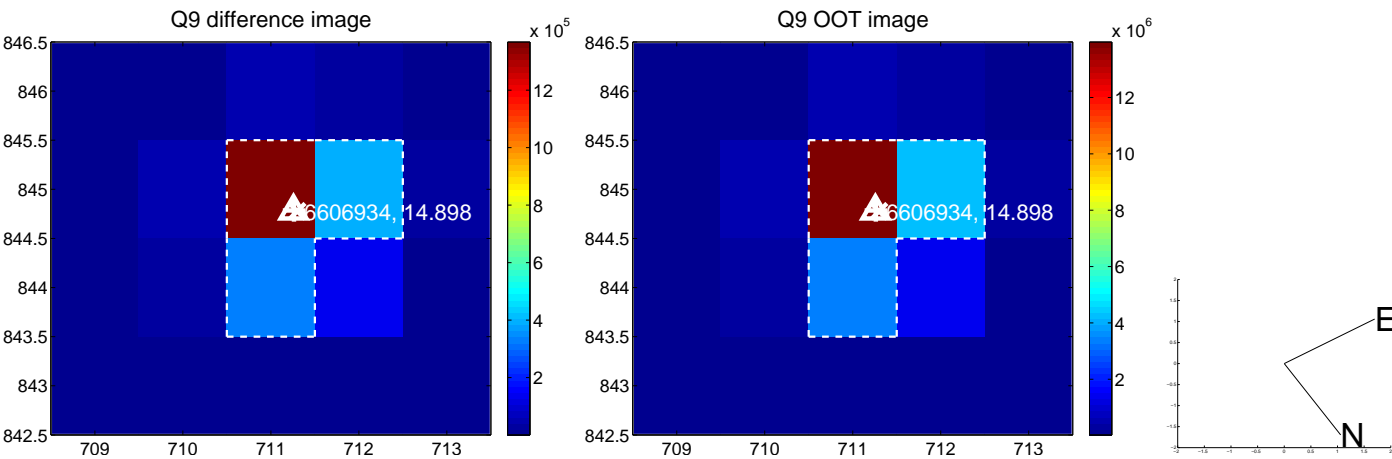


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

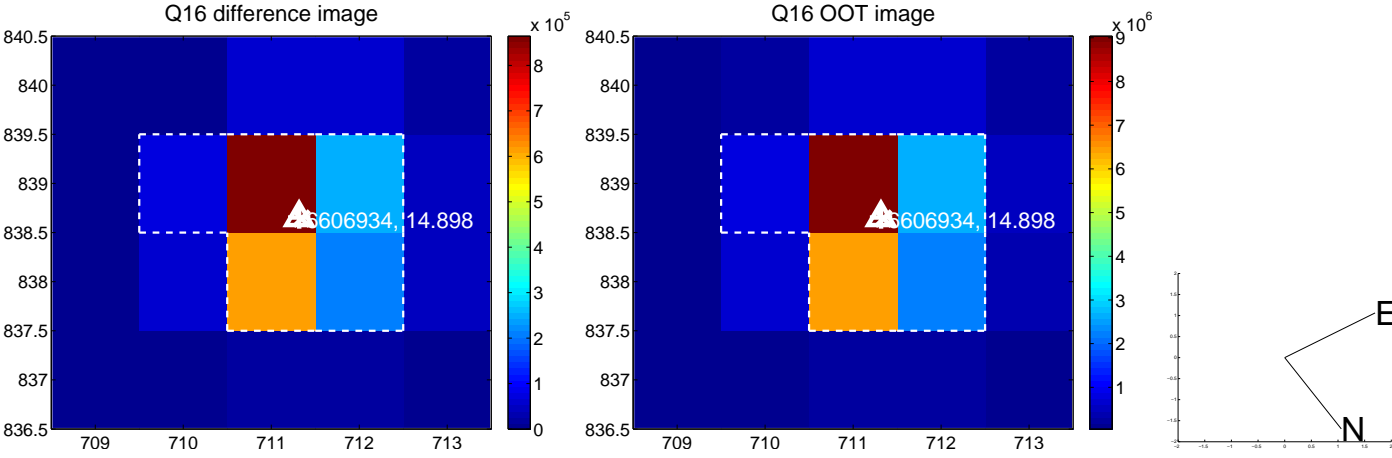
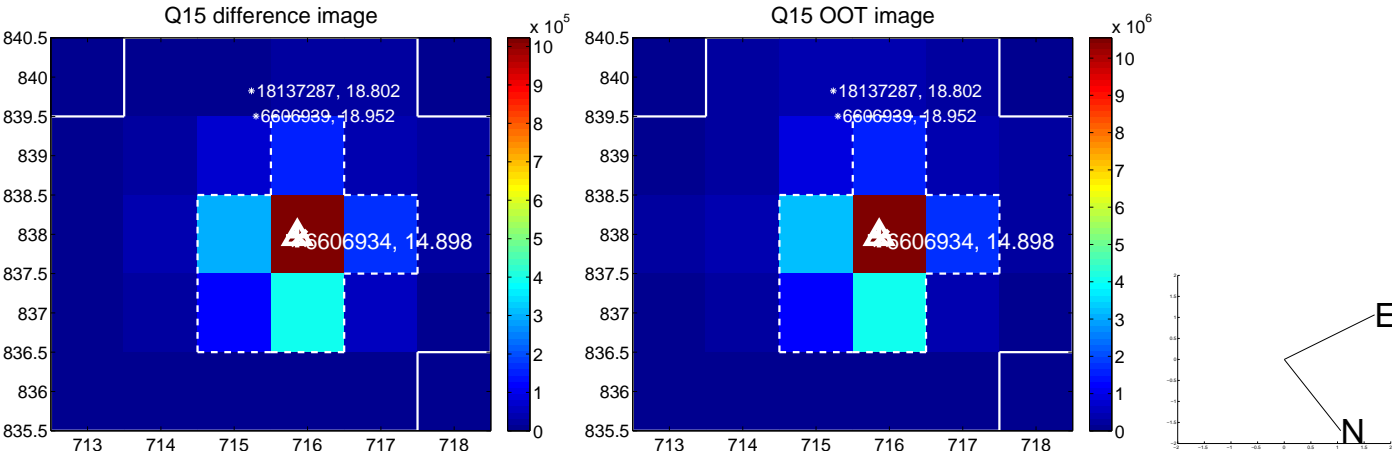
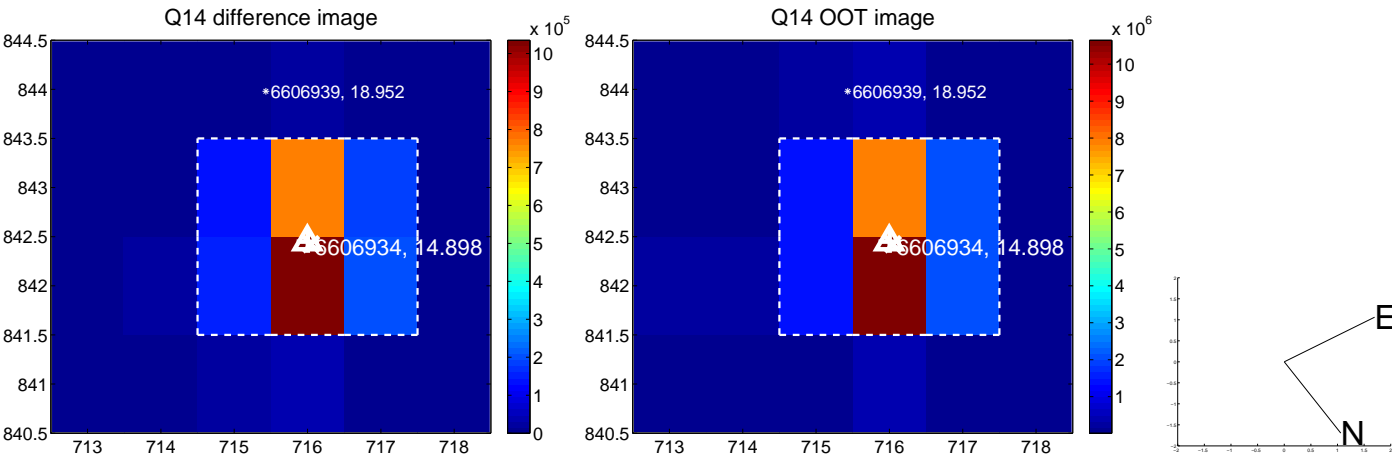
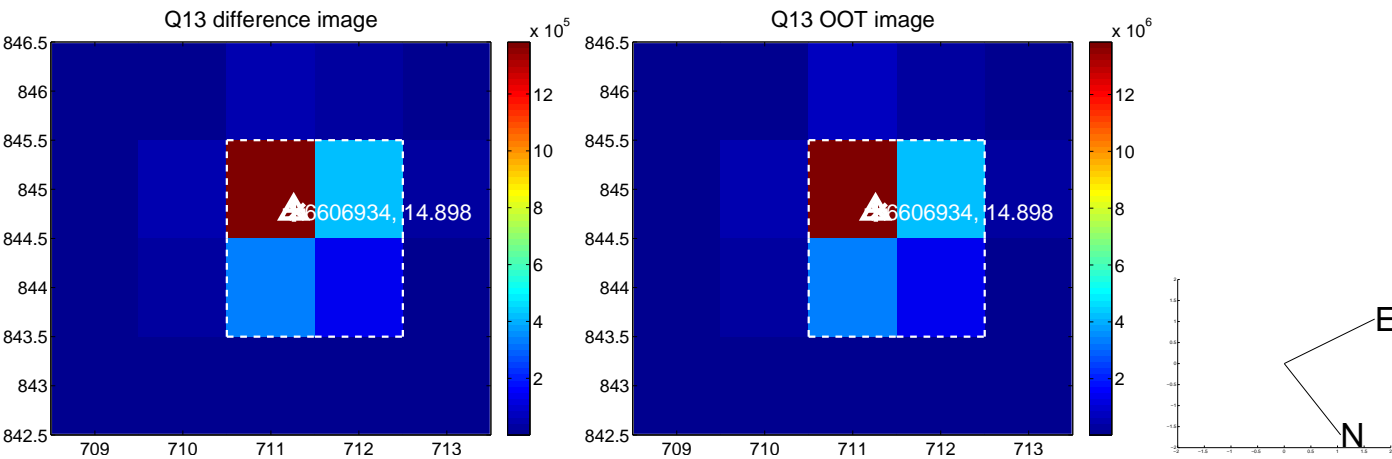
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



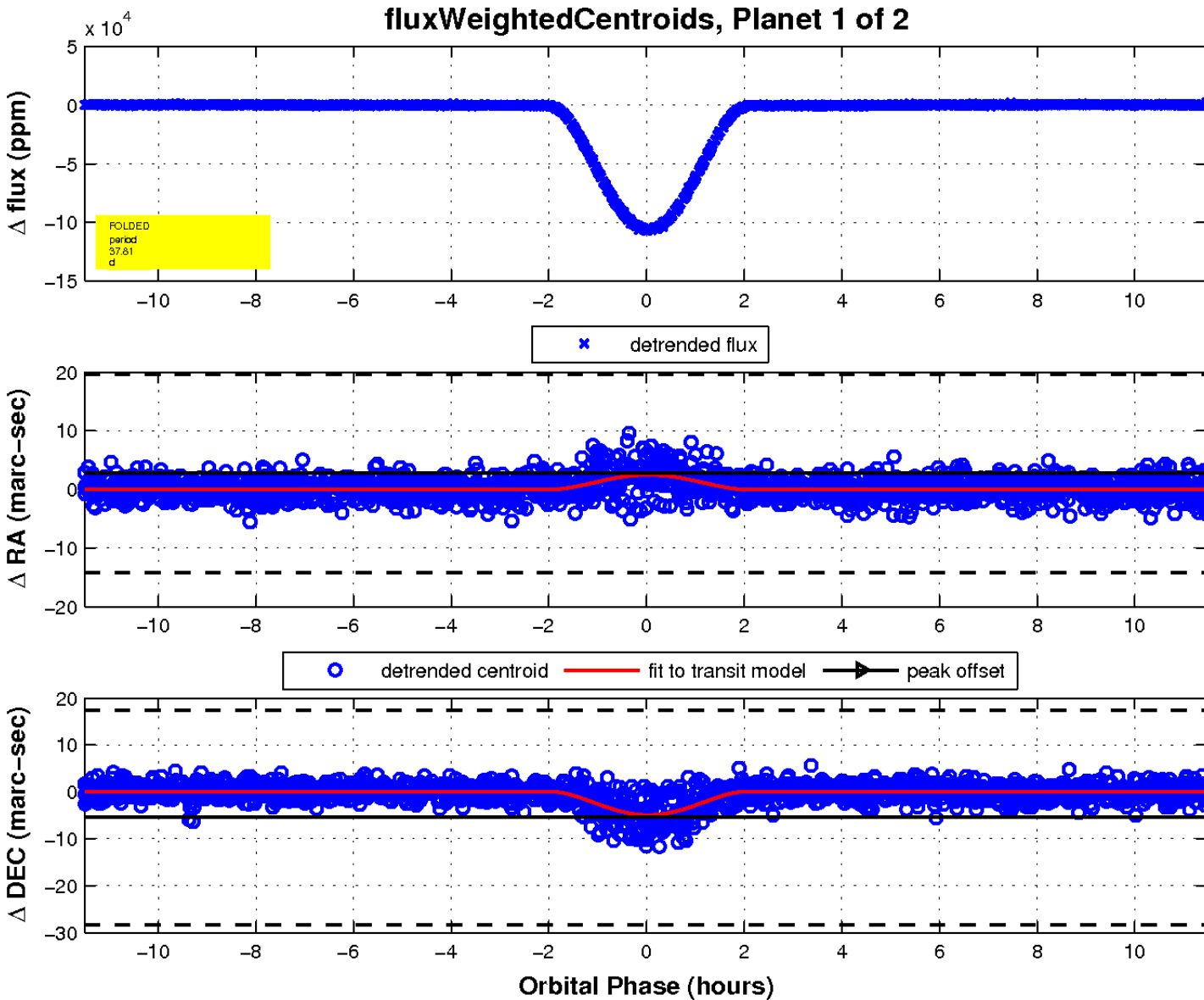
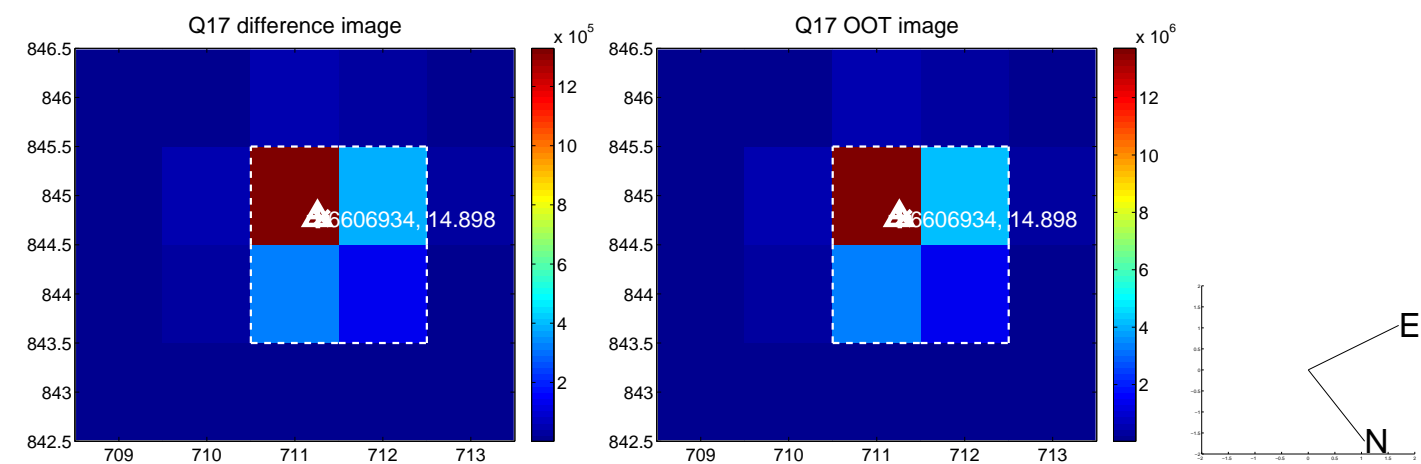
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

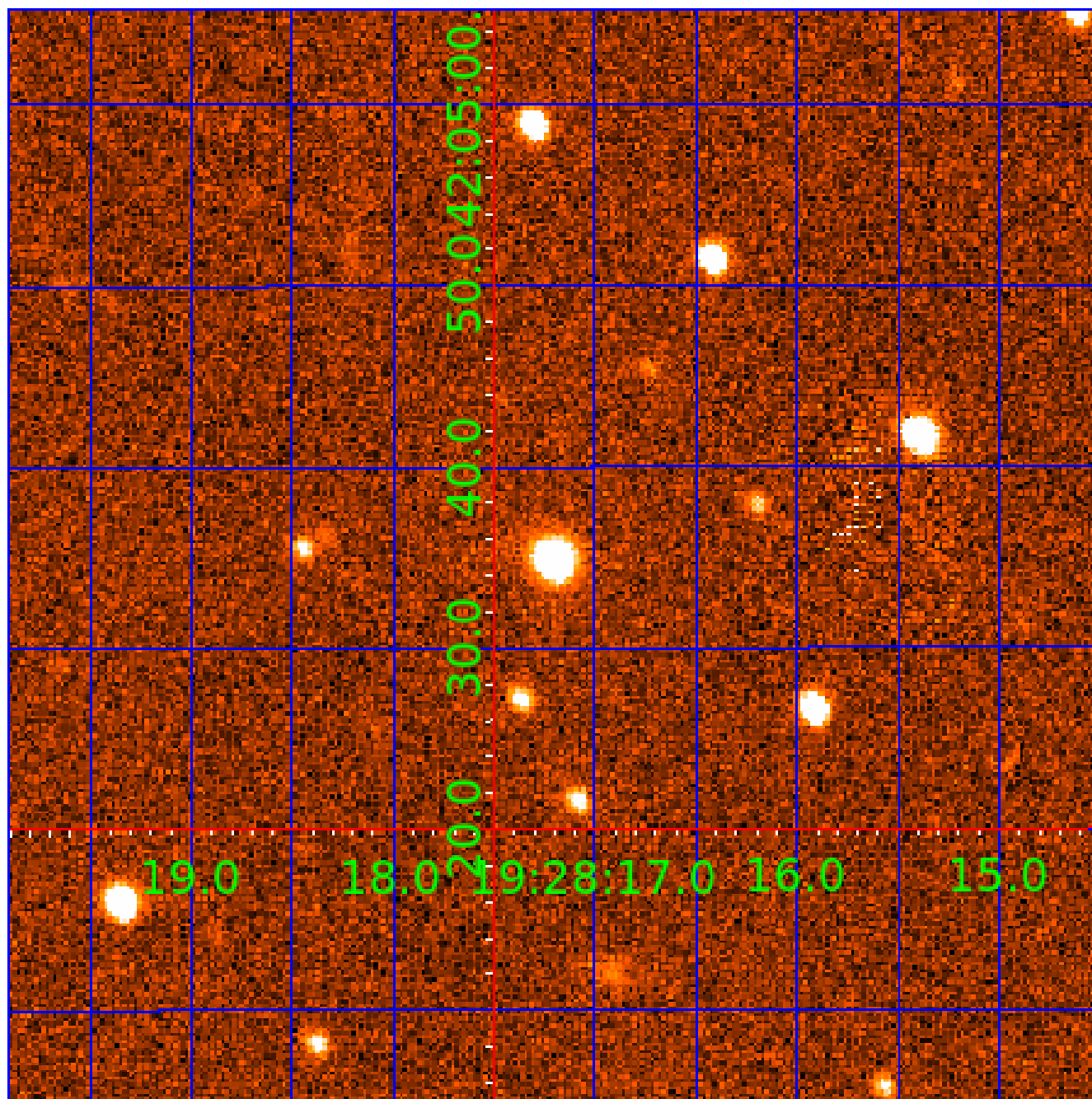


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006606934

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})
006606934-01	OBS	6028.01	37.806942	153.840913	105869.1	3.842	2925.5	2581.2	1.10	6387	52.41	34.22
006606934-02	OBS	No	37.807966	154.129626	399.0	5.737	10.1	12.6	1.10	6387	2.24	34.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606934-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—DEEP_V_SHAPED
006606934-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA—RESIDUAL_TCE—CENT_FEW_DIFFS—HALO_GHOST

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 006606934-02

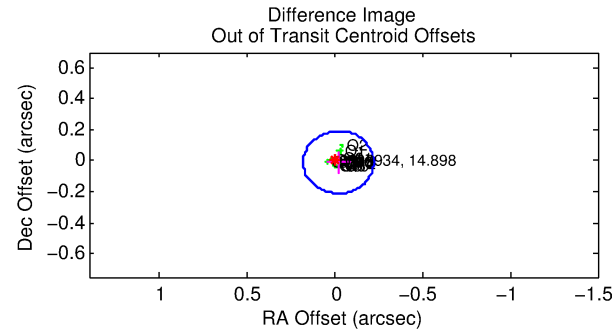
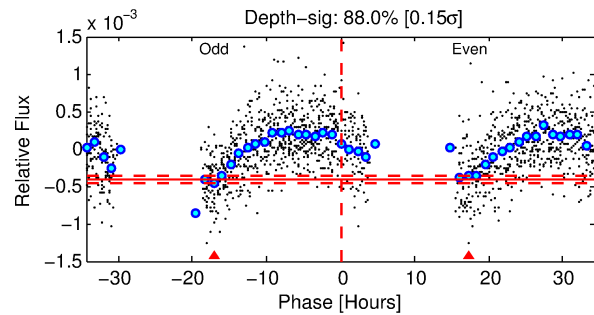
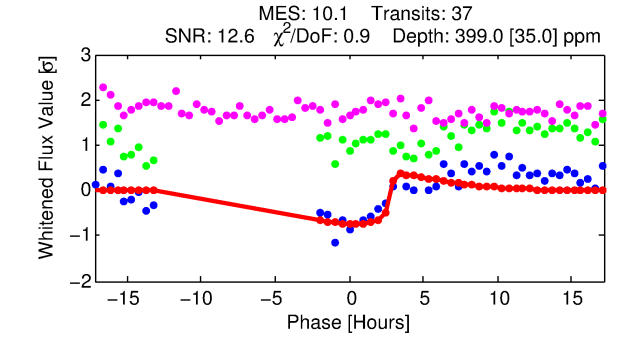
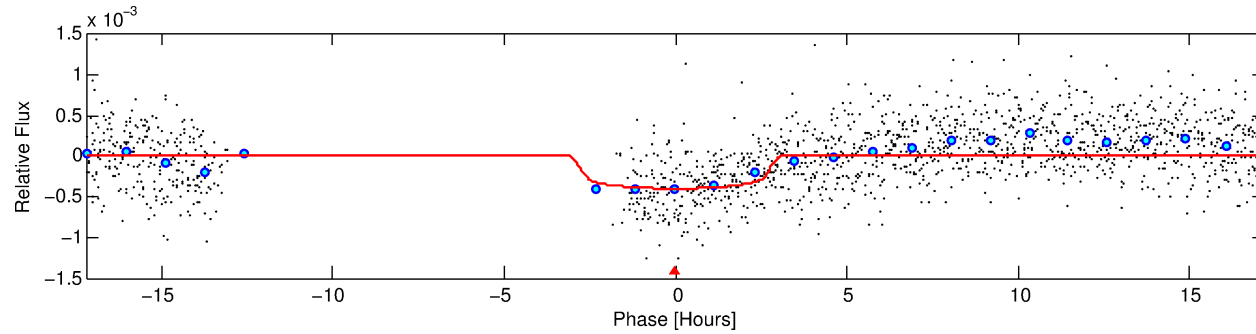
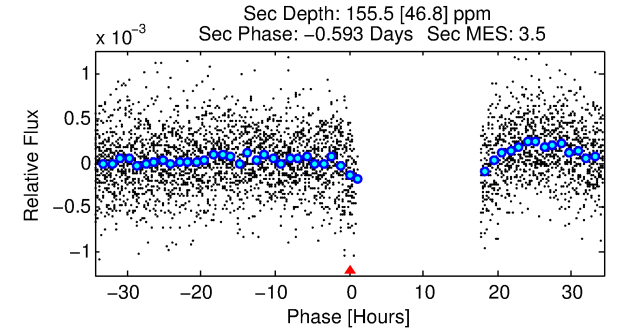
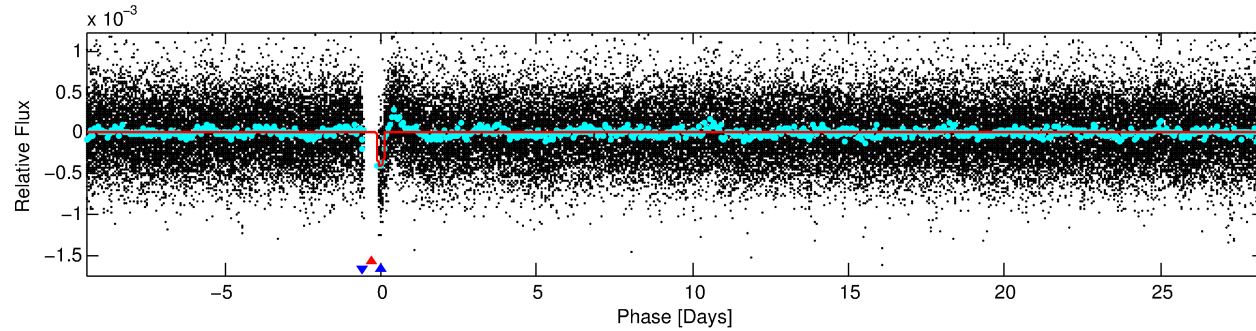
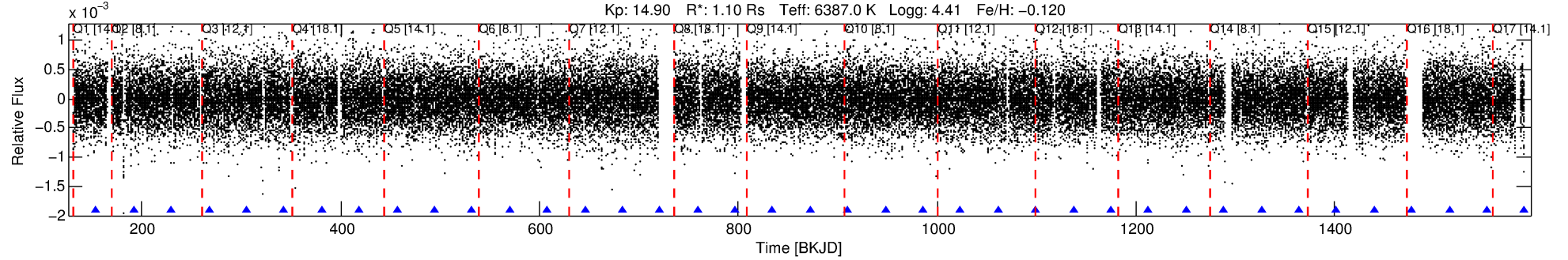
No Significant Match Found

DV One-Page Summary

KIC: 6606934 Candidate: 2 of 2 Period: 37.808 d

KOI: K06028 Corr: No Ephemeris Match

Kp: 14.90 R*: 1.10 Rs Teff: 6387.0 K Logg: 4.41 Fe/H: -0.120



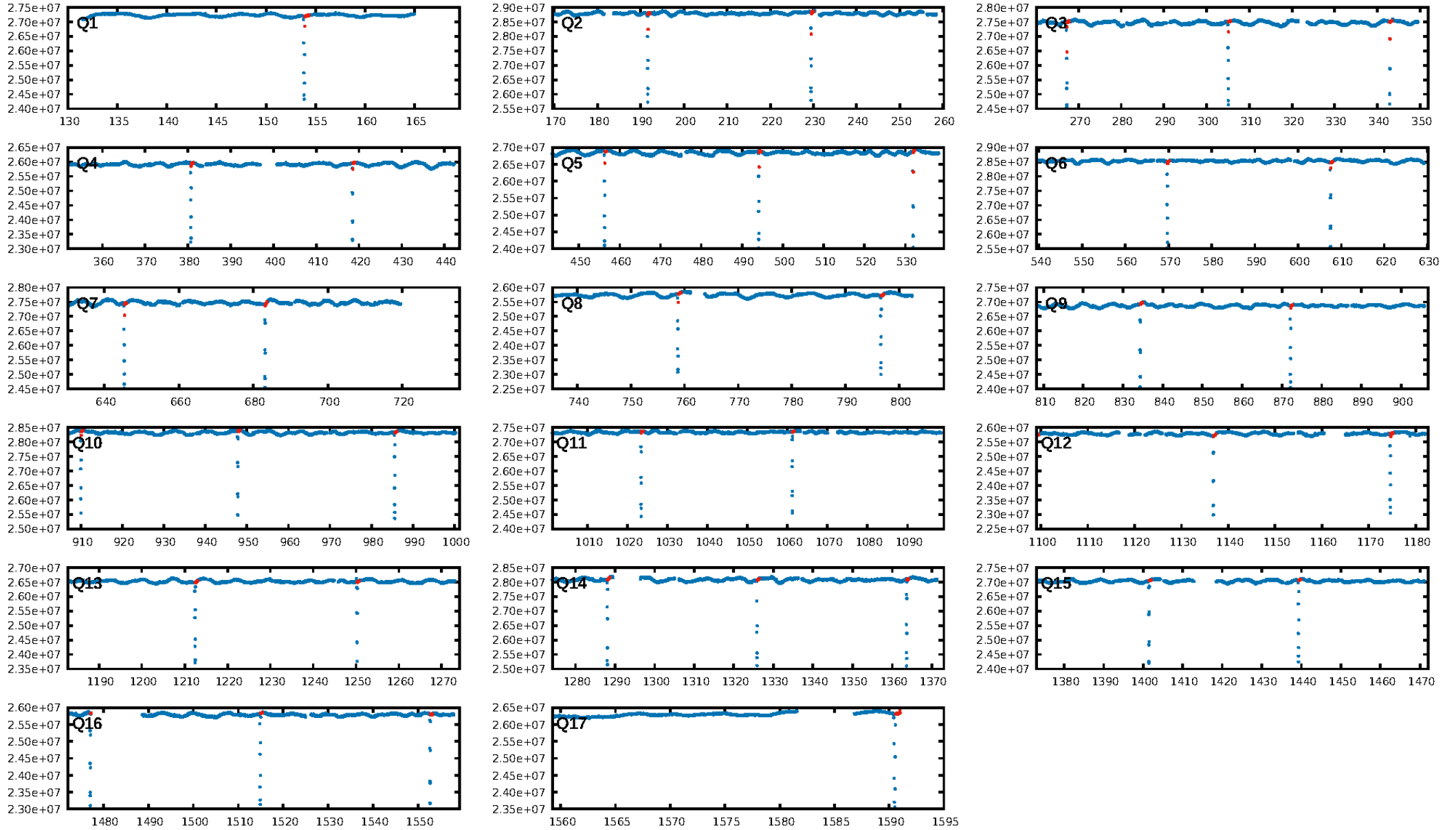
DV Fit Results:

Period = 37.80797 [0.00035] d
Epoch = 154.1296 [0.0139] BKJD
Rp/R* = 0.0186 [0.0235]
a/R* = 48.62 [316.88]
b = 0.32 [18.06]
Seff = 34.21 [13.82]
Teff = 617 [62] K
Rp = 2.24 [2.92] Re
a = 0.2307 [0.0607] AU
Ag = 909.31 [2347.51] [0.39σ]
Teffp = 5236 [3347] K [1.38σ]

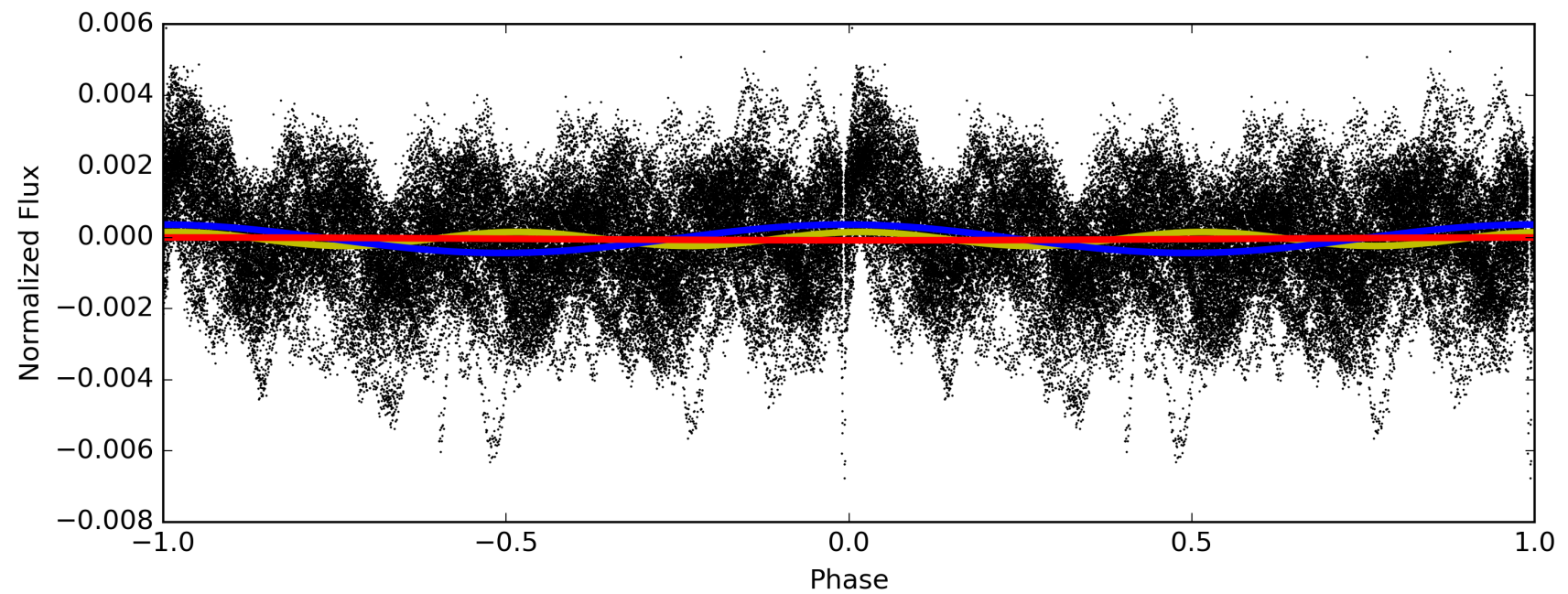
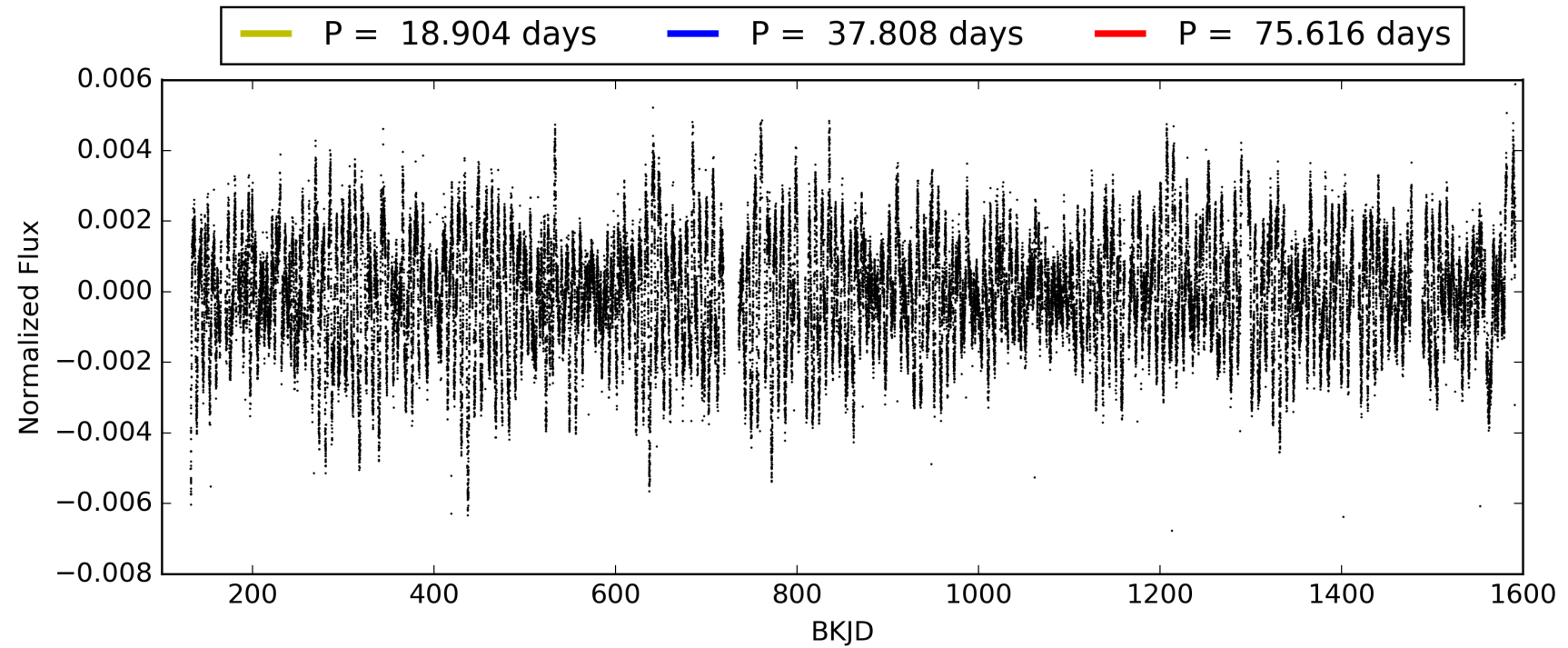
DV Diagnostic Results:

ShortPeriod-sig: 0.3% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.17e-24
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: 0.2407
Centroid-sig: 9.7%
Centroid-so: 0.865 arcsec [1.47σ]
OotOffset-rm: 0.023 arcsec [0.35σ]
KicOffset-rm: 0.166 arcsec [2.45σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
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TCE 006606934-02, PDC Light Curves

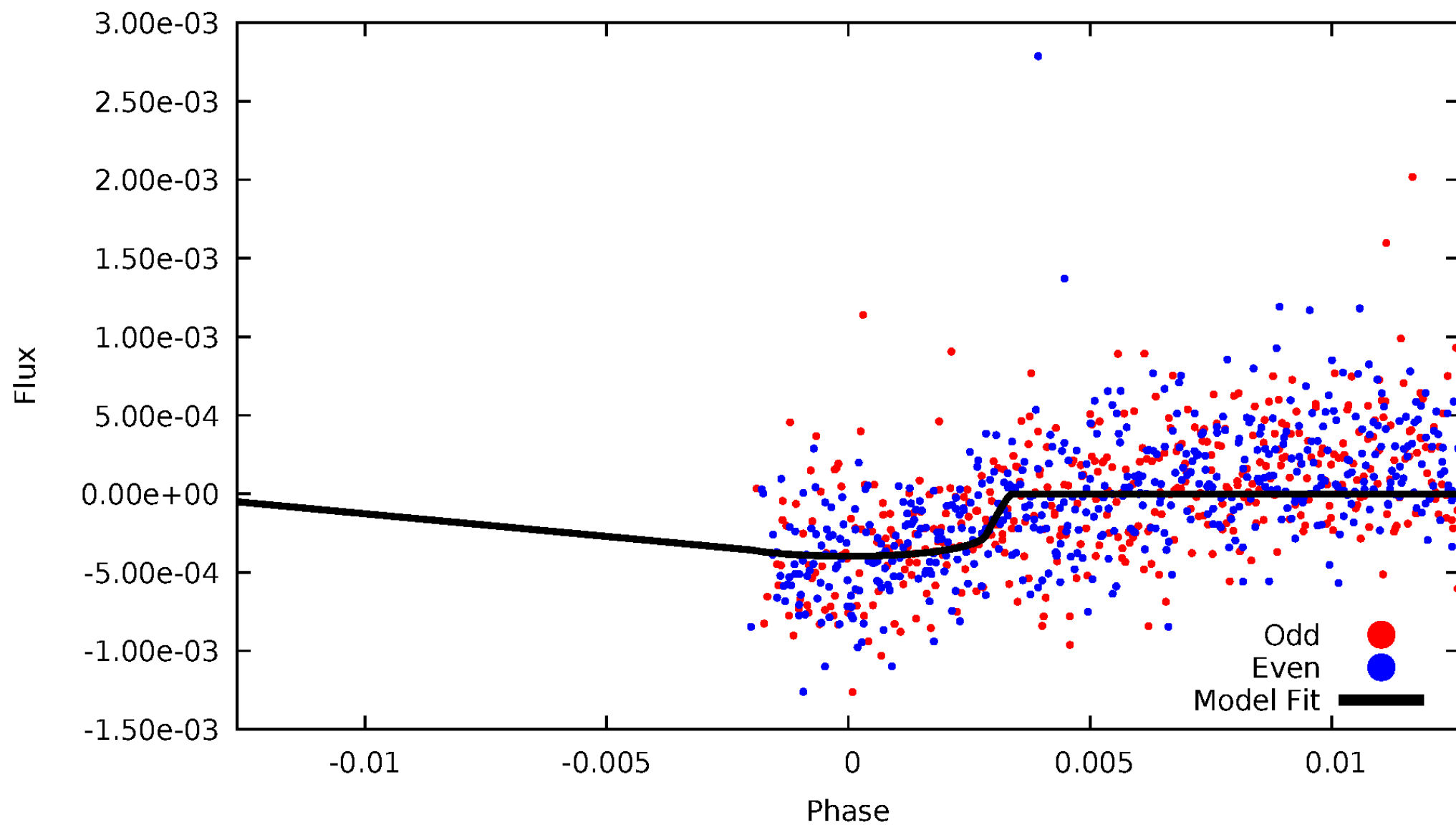


TCE 006606934-02



DV Odd/Even

TCE 006606934-02

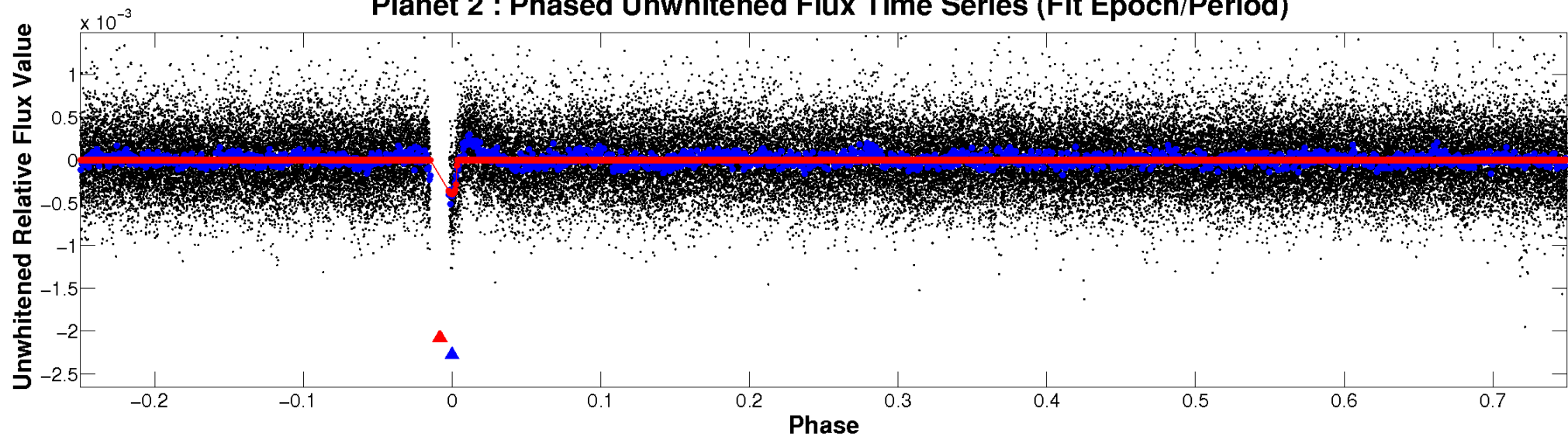


ALT Odd/Even

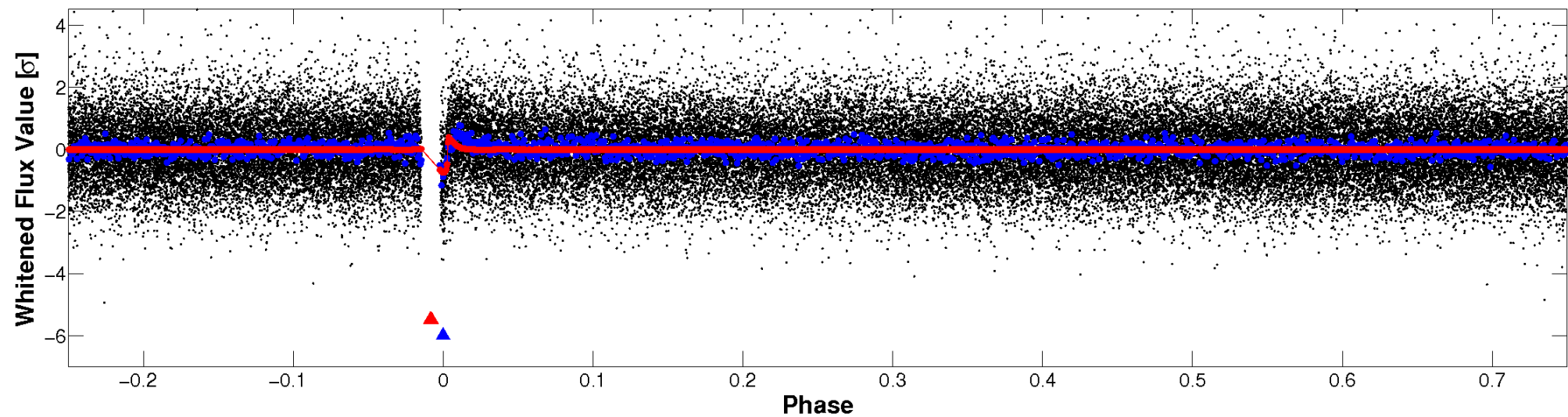
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

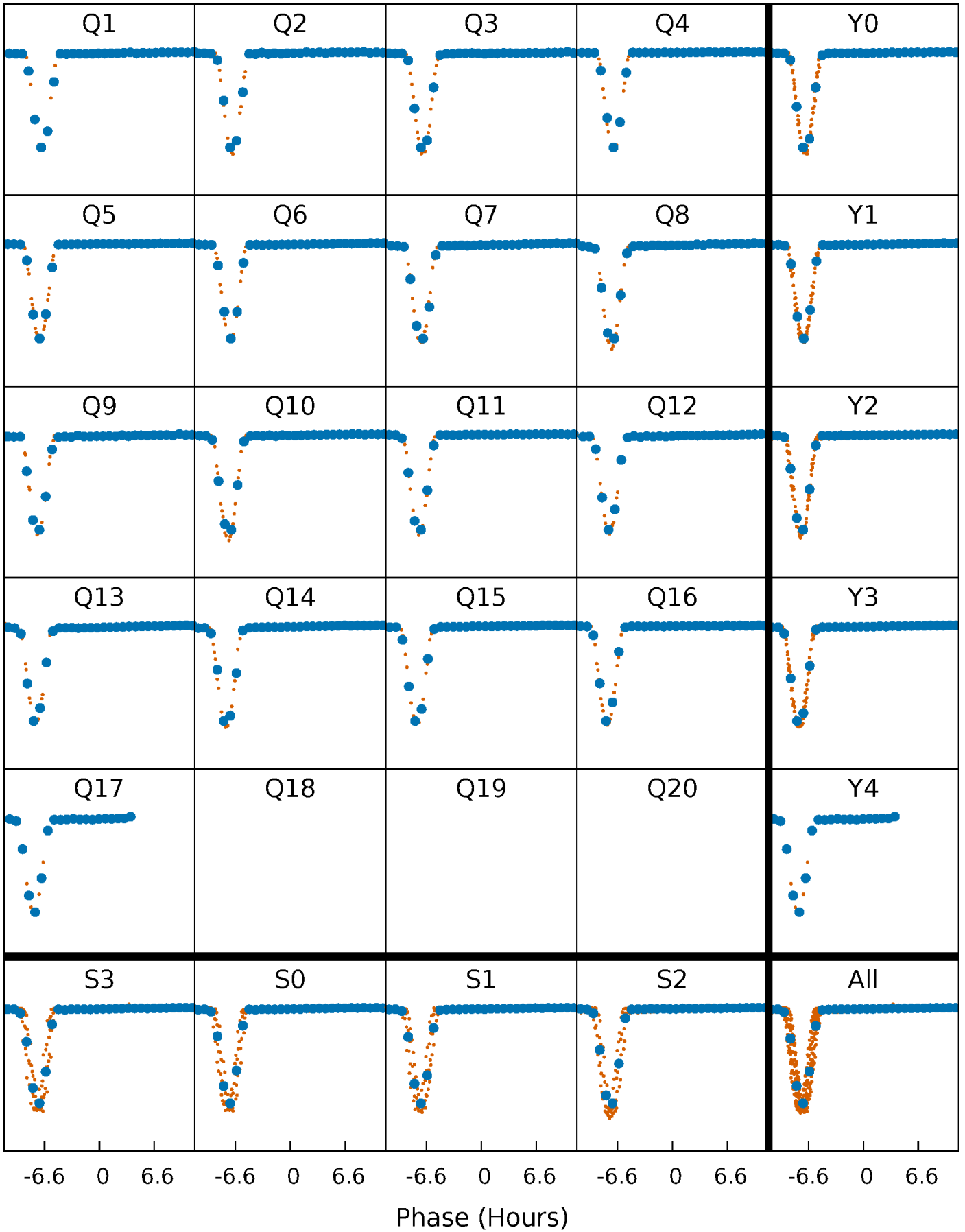


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



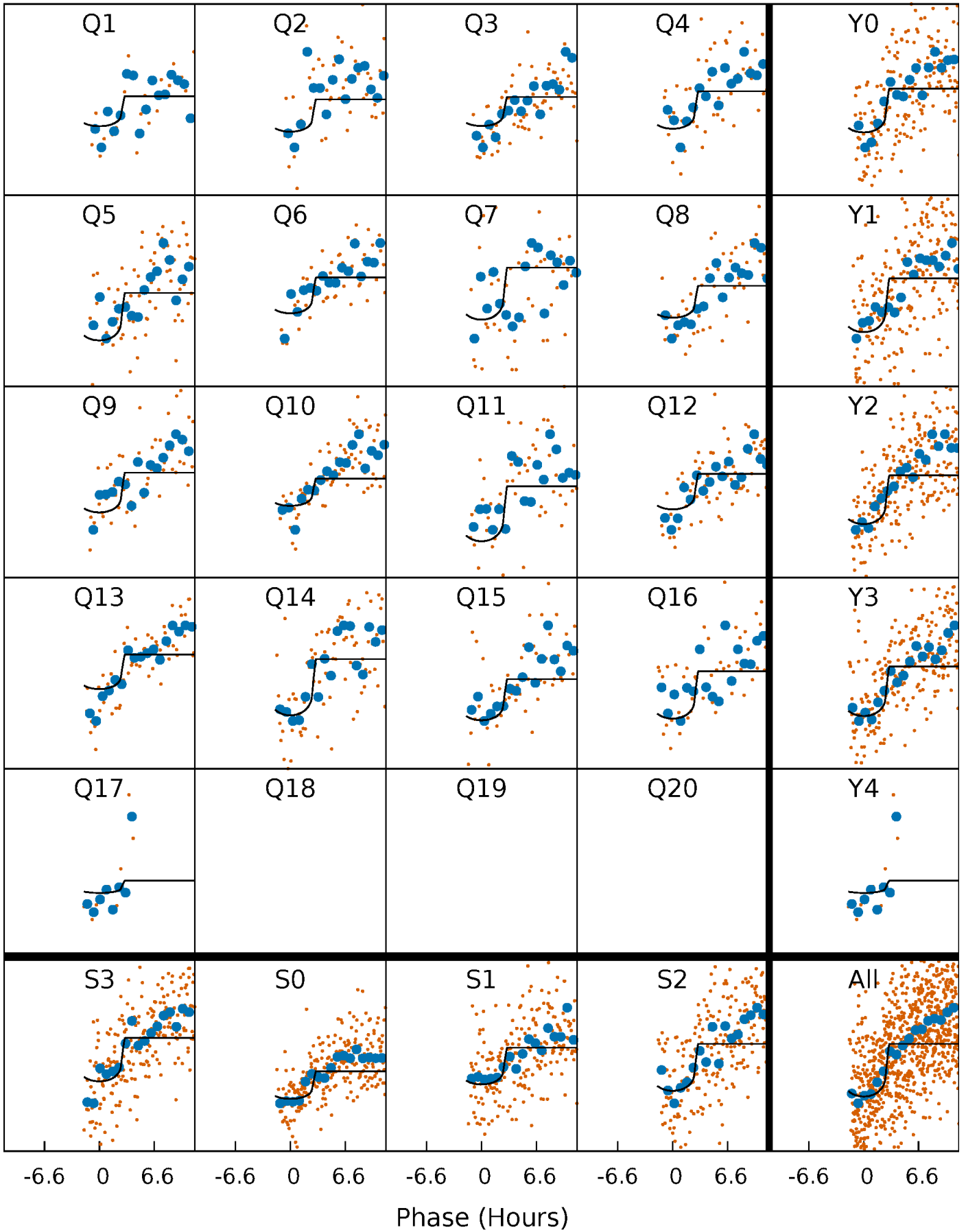
PDC Quarter-Phased Transit Curves

TCE 006606934-02 P= 37.807966 Days $T_0=154.129626$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006606934-02 $P = 37.807966$ Days $T_0 = 154.129626$ (BKJD)

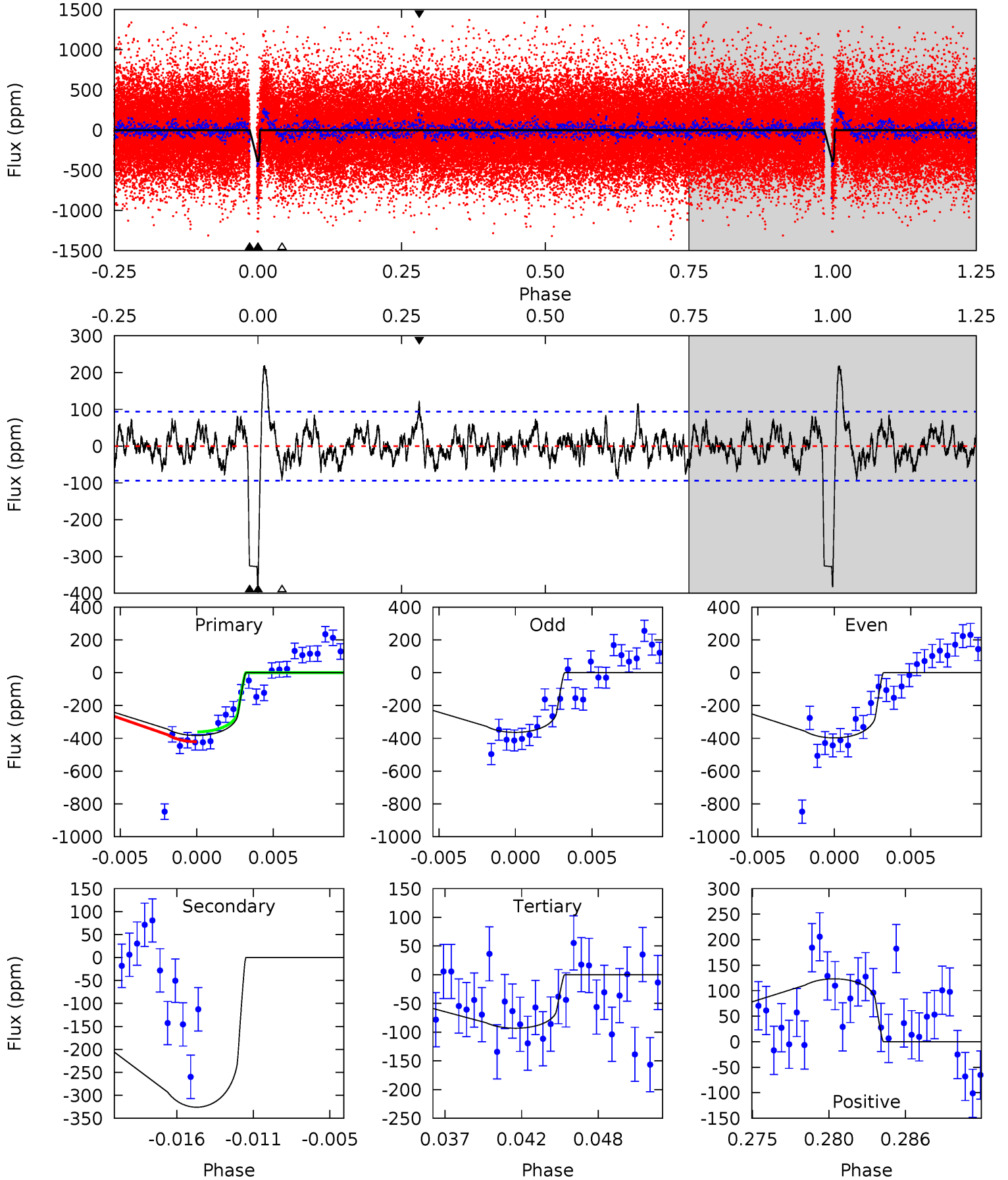


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006606934-02, P = 37.807966 Days, E = 116.321660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	17.9	5.11	6.76	5.15	2.79	2.08	15.9	14.3	12.8	11.1	0.91	1.02	0.36	1.52



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006606934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6387^{+172}_{-211}	$4.410^{+0.065}_{-0.208}$	$-0.120^{+0.250}_{-0.300}$	$1.105^{+0.347}_{-0.124}$	$1.145^{+0.162}_{-0.162}$	$1.195^{+0.350}_{-0.647}$
	+3%/-3%	+1%/-5%	+208%/-250%	+31%/-11%	+14%/-14%	+29%/-54%
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 006606934-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-326 ± 18	$3.32^{+2.42}_{-2.13}$	877^{+68}_{-45}	5322^{+4235}_{-1022}	875^{+5855}_{-587}
Alt.	N/A	N/A	N/A	N/A	N/A

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

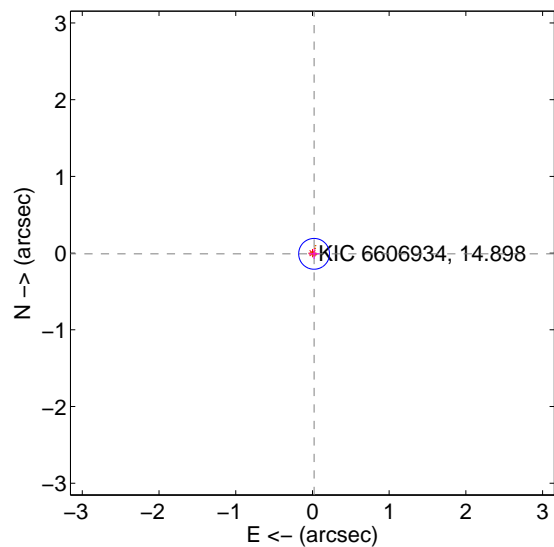
Supplemental centroid analysis for 006606934-02. Kepler magnitude: 14.90. Transit SNR 12.57

There are 0 quarters with good PRF difference image offsets

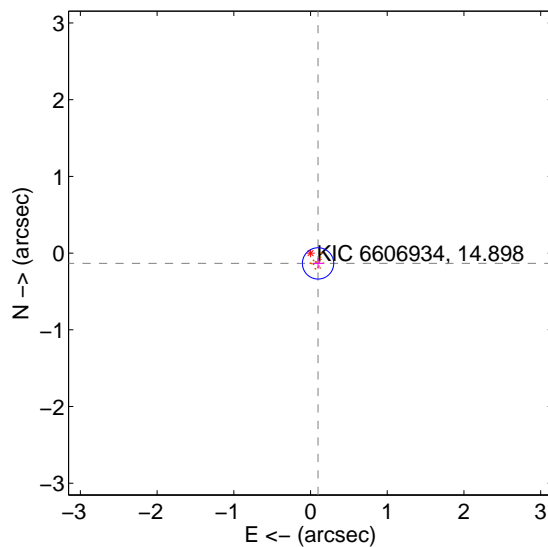
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.023 ± 0.067	0.35	-0.021 ± 0.067	-0.010 ± 0.067
PRF-fit source offset from KIC position	0.166 ± 0.068	2.45	-0.098 ± 0.068	-0.134 ± 0.068
photometric centroid source offset	0.86 ± 0.59	1.47	0.32 ± 0.62	-0.80 ± 0.58

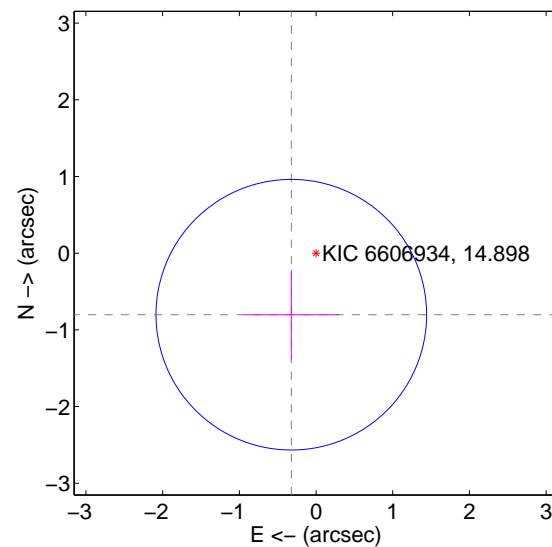
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

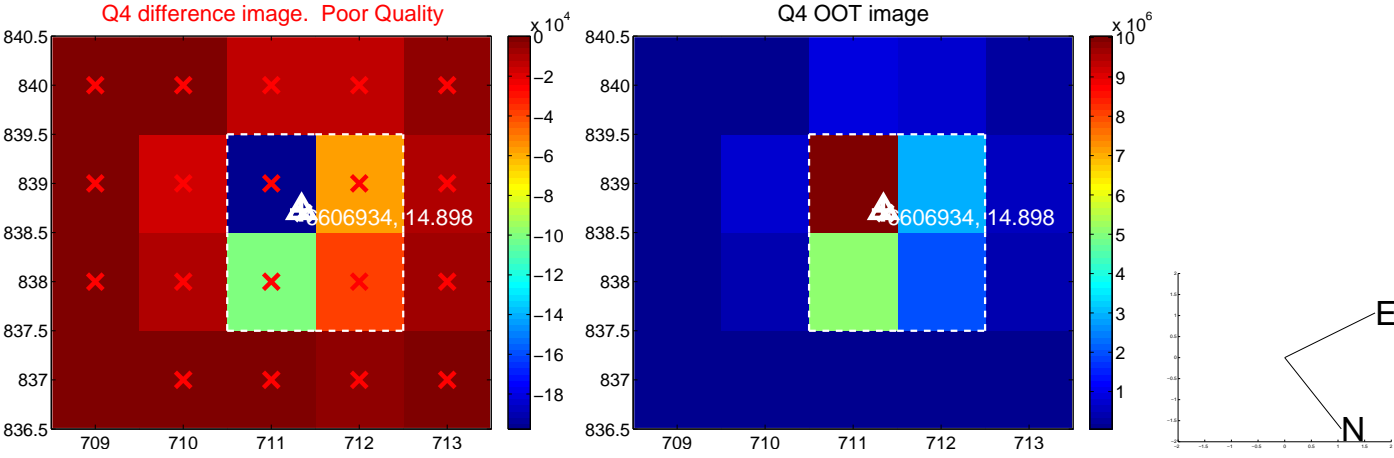
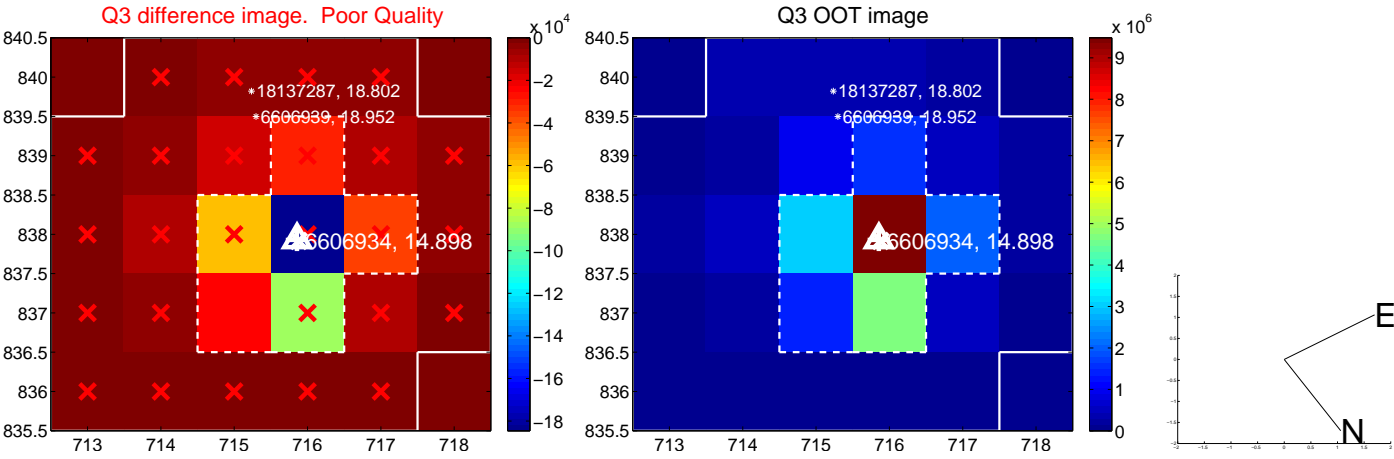
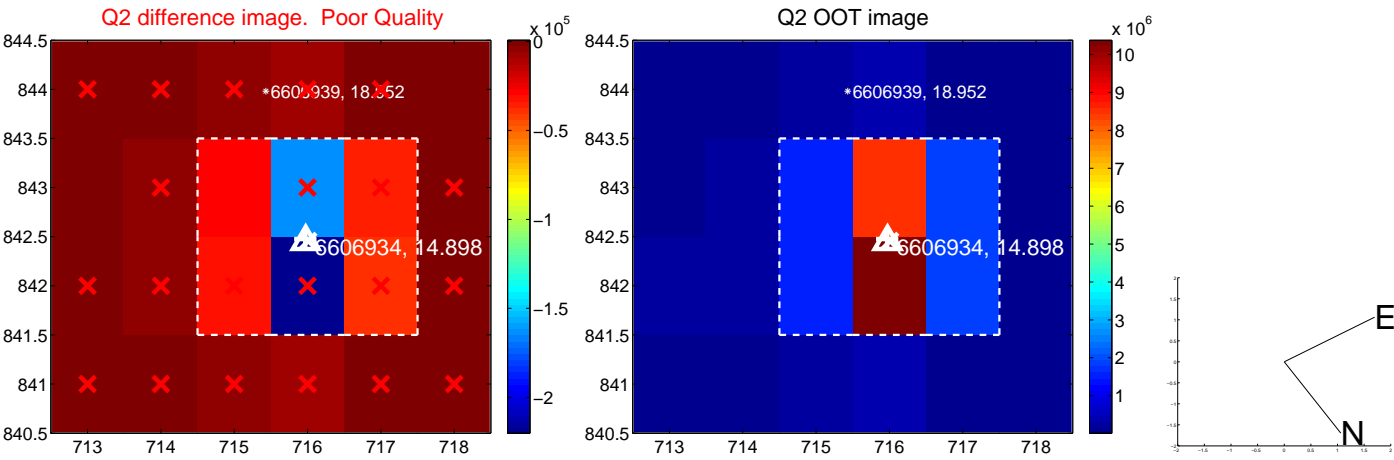
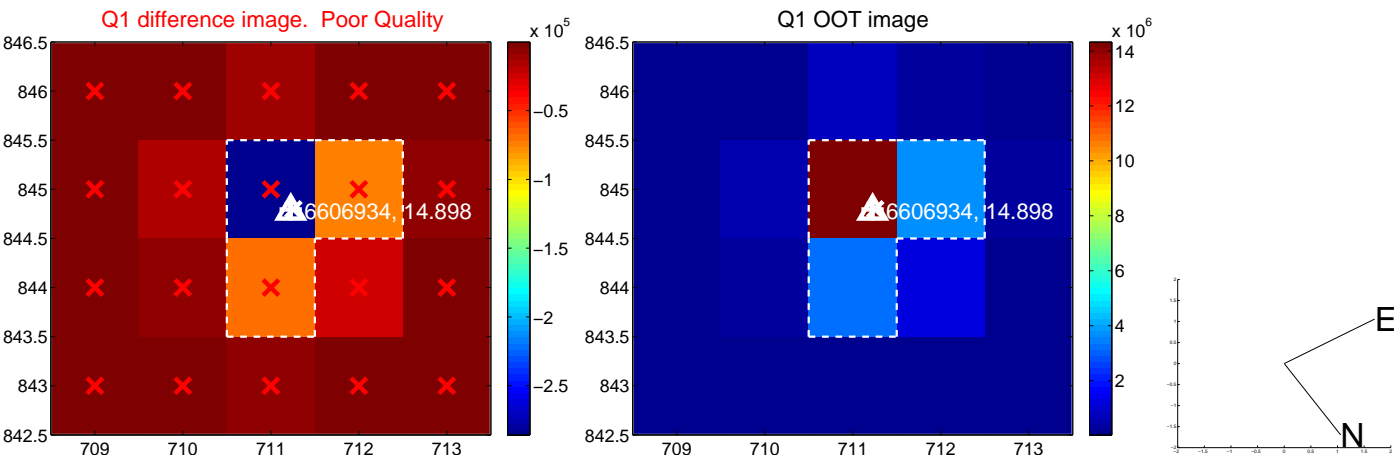


offset from photometric centroids

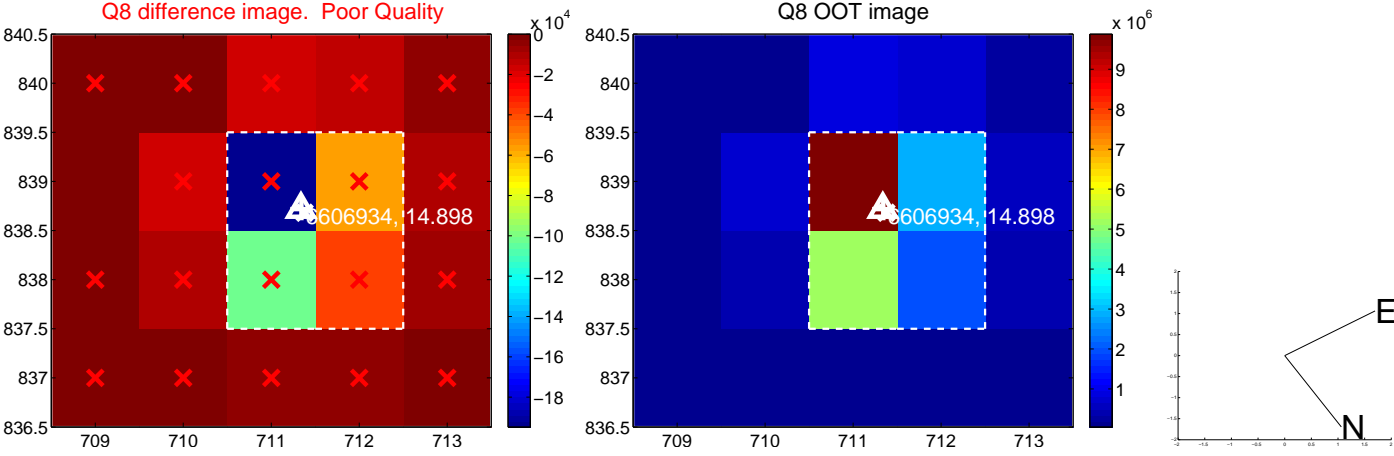
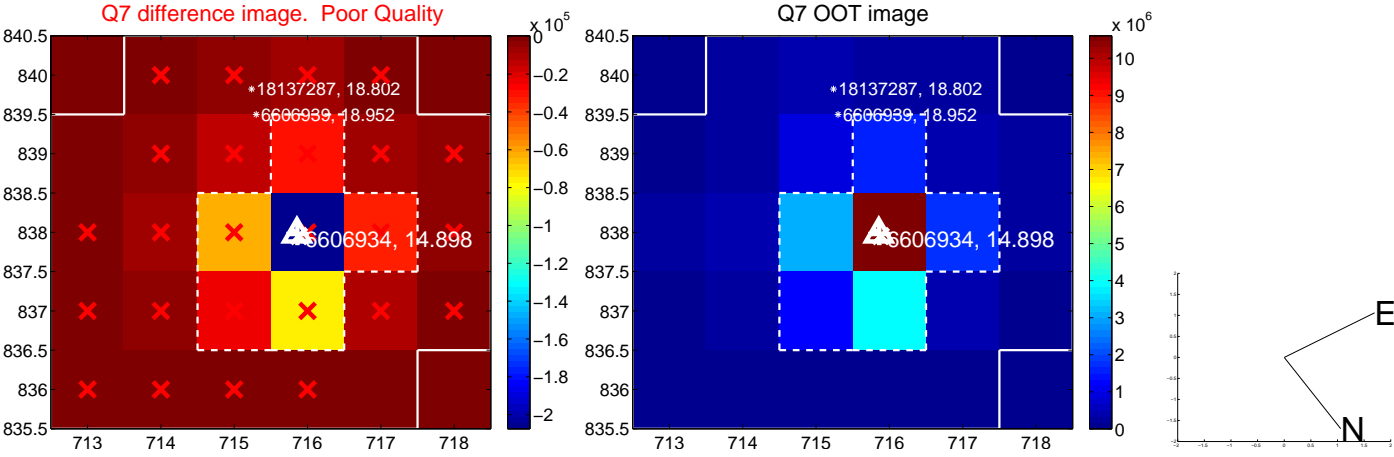
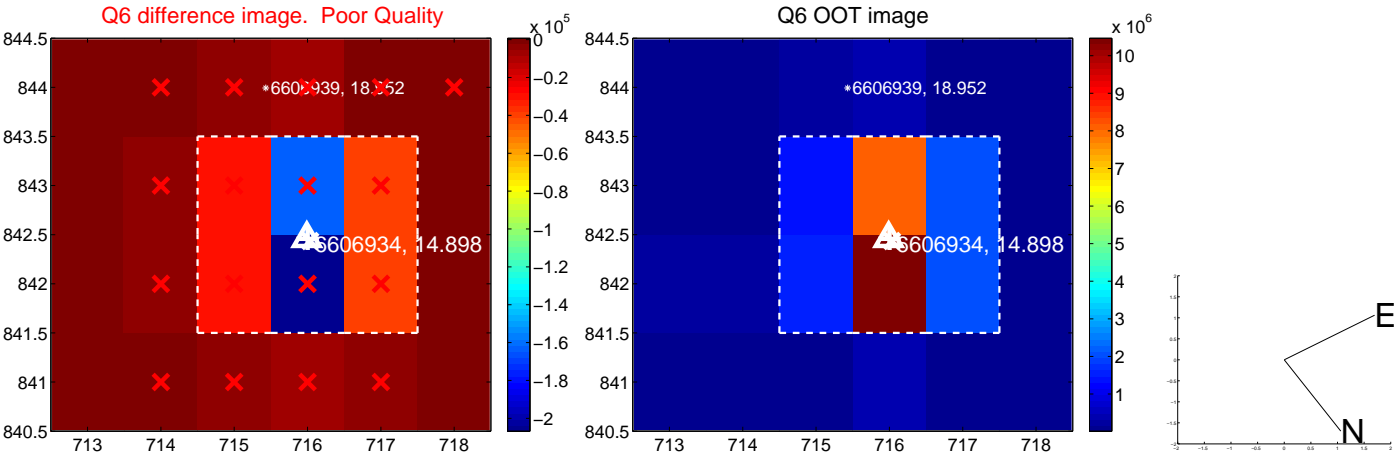
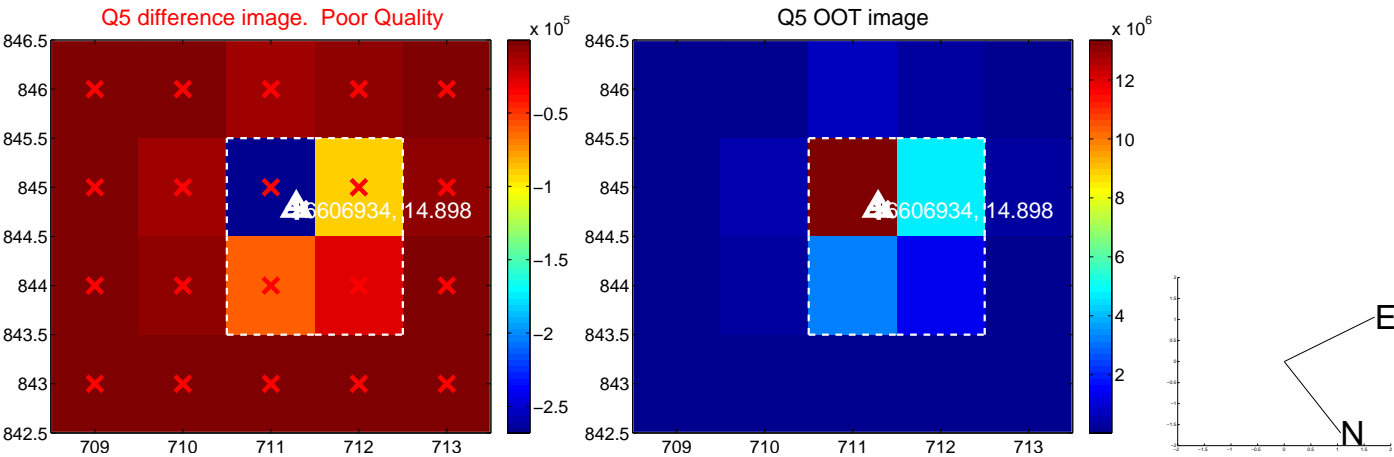


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

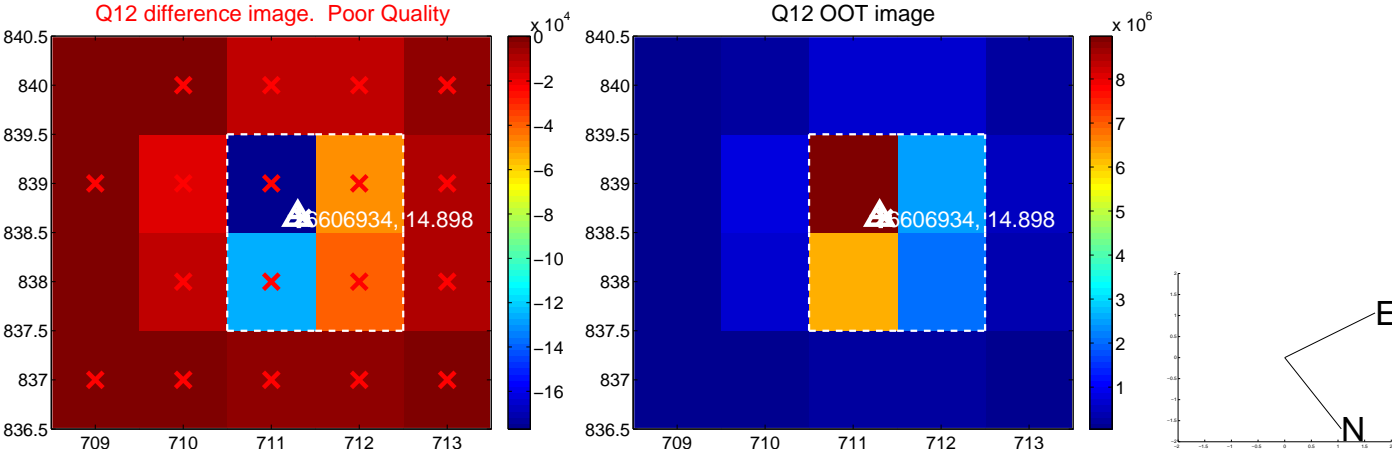
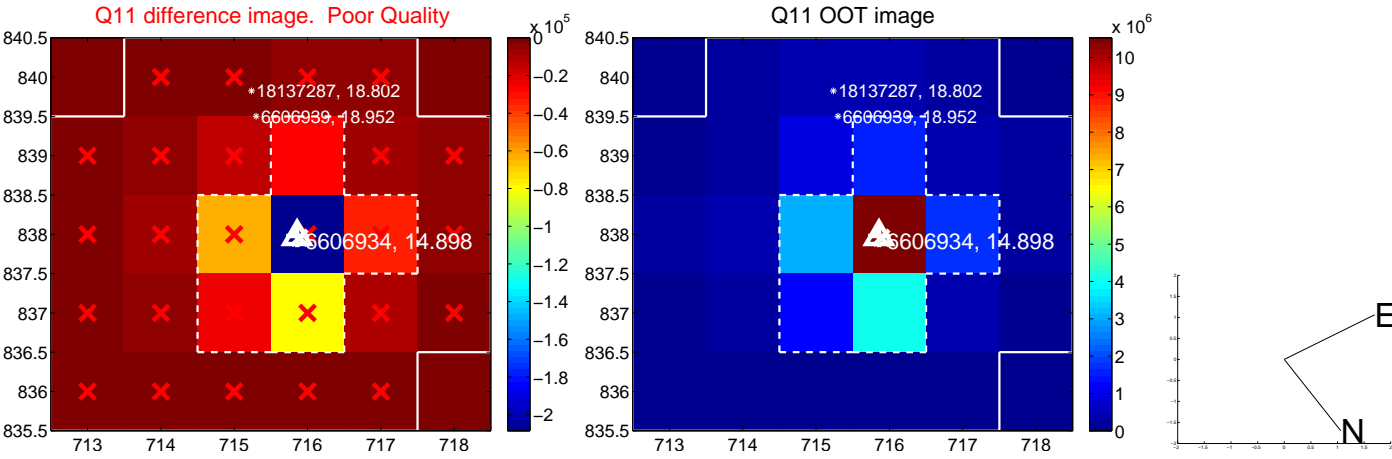
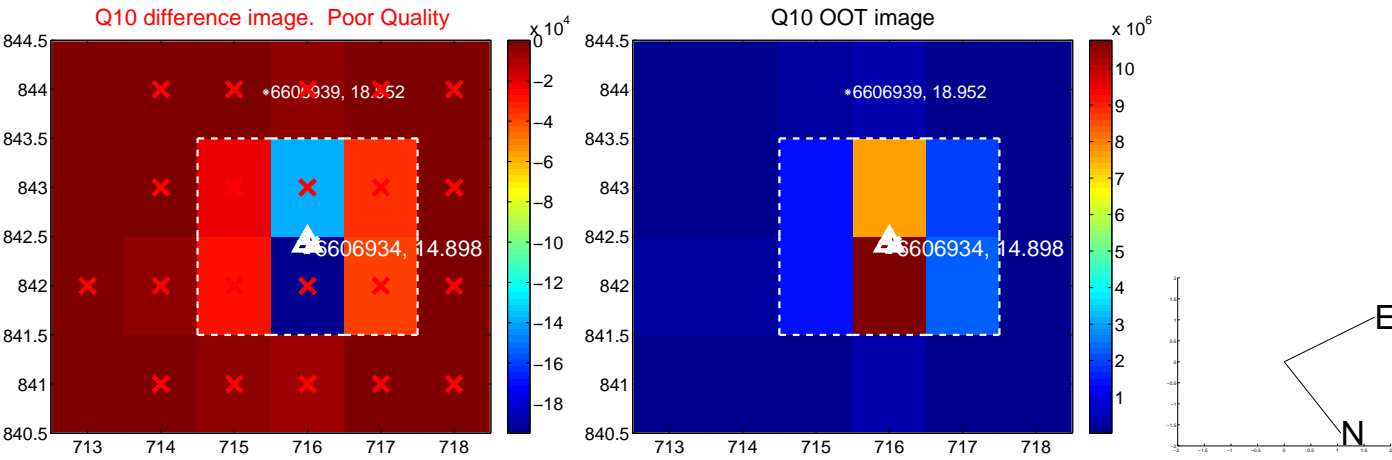
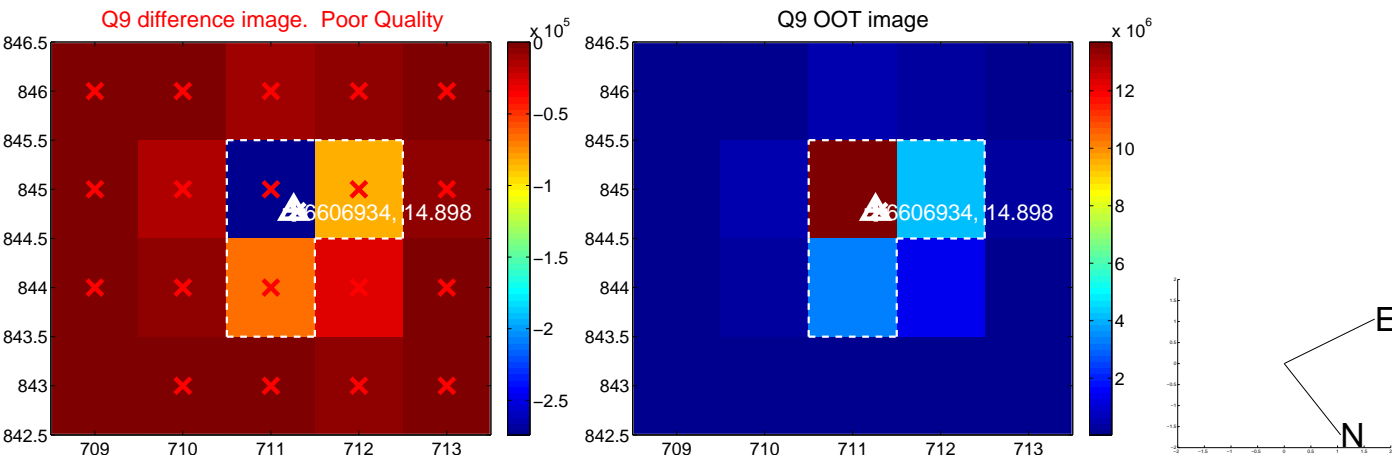
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



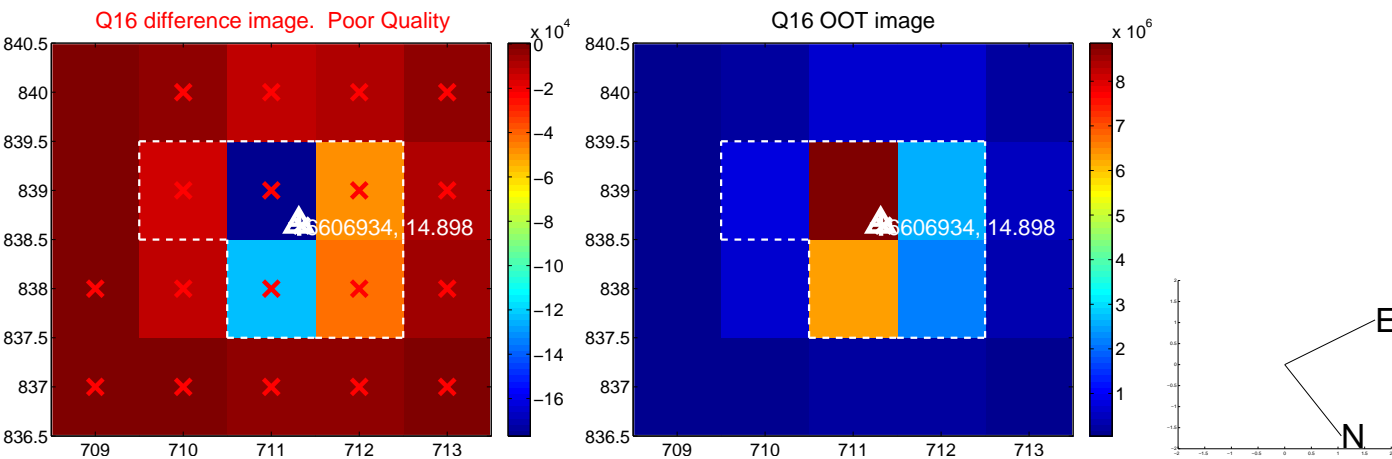
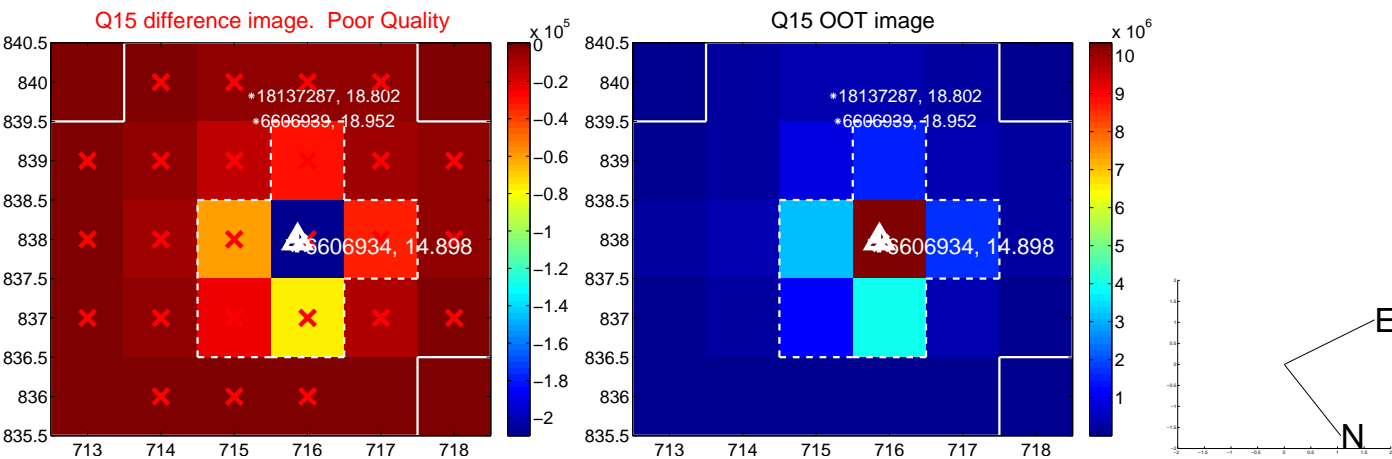
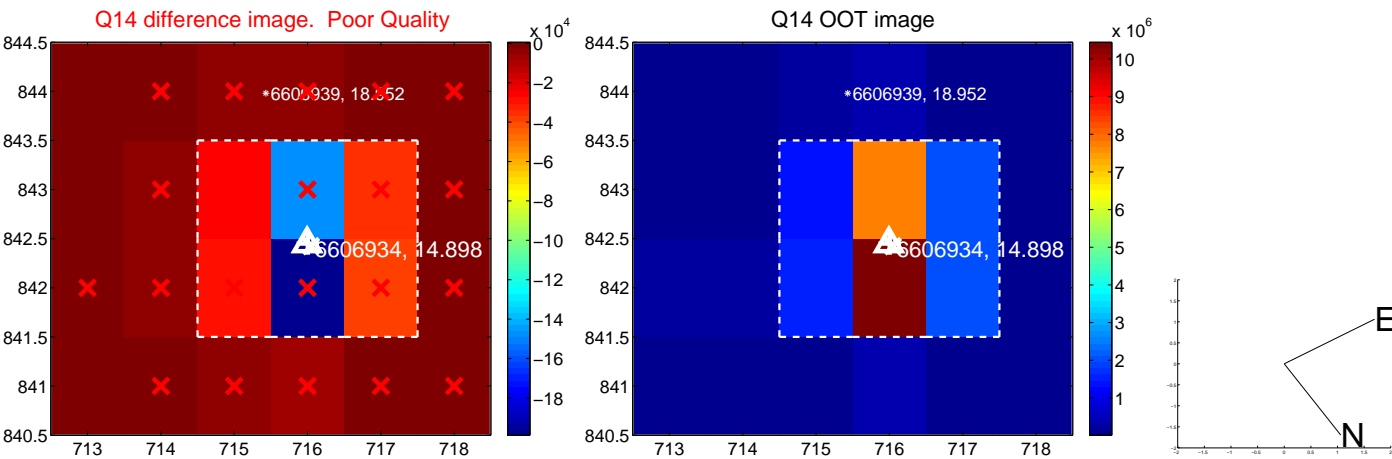
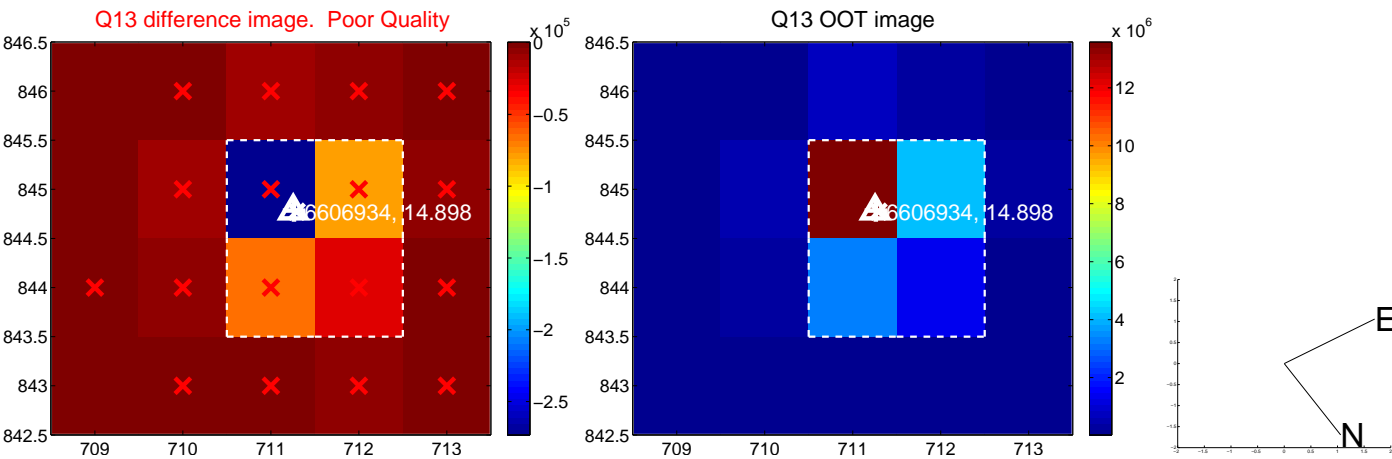
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



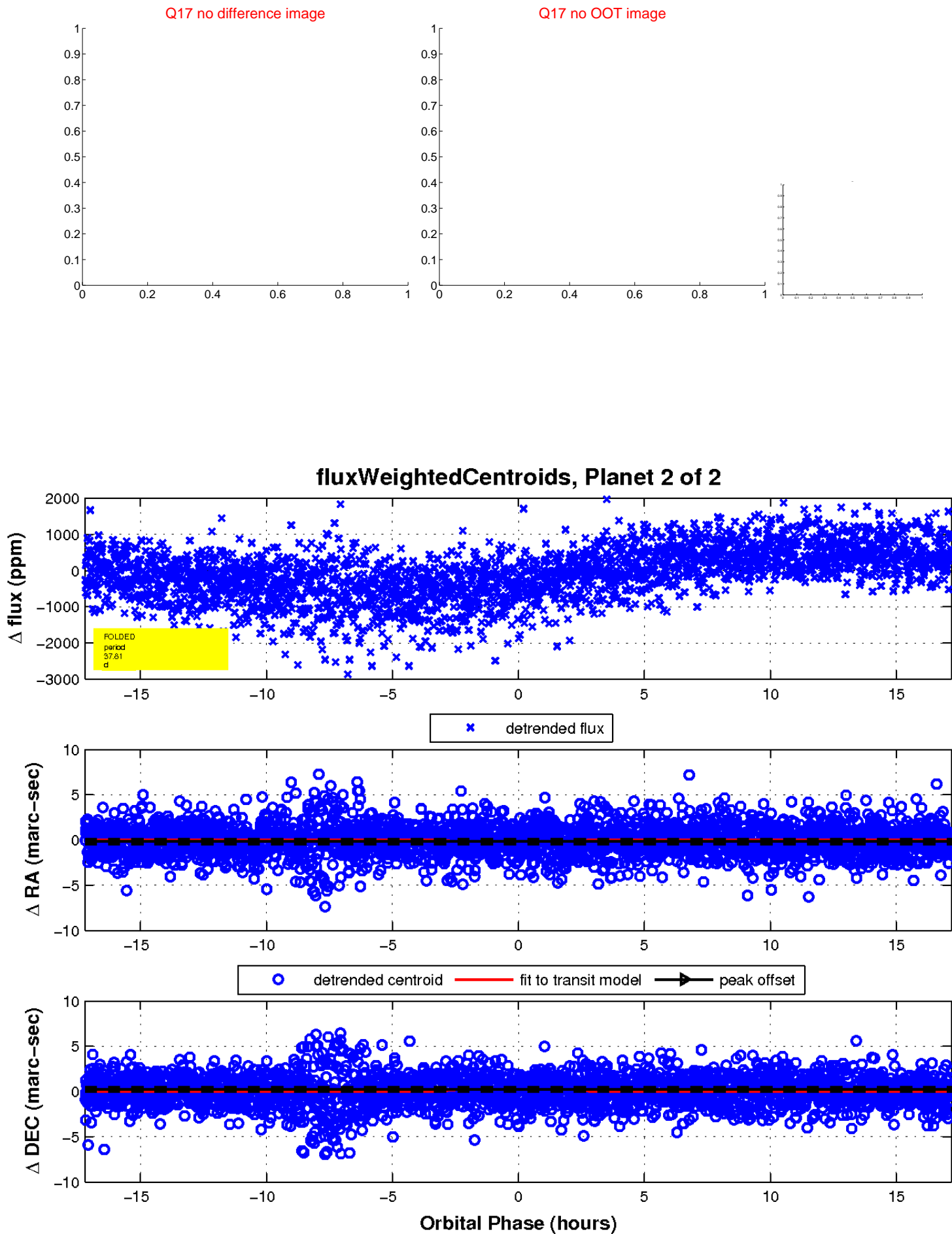
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

