

KIC 007769072

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})
007769072-01	OBS	6914.01	0.608857	132.055917	1146.3	0.969	168.3	233.7	4.17	5022	17.41	0.00
007769072-02	OBS	No	0.608860	131.749072	356.6	0.690	35.9	71.6	4.17	5022	9.85	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007769072-01	OBS	FP	0.00	0	1	0	0	PLANET_IN_STAR—MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
007769072-02	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.

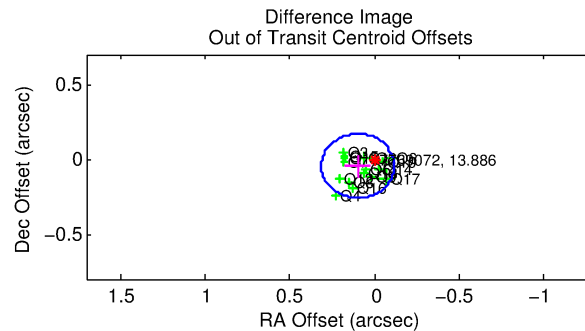
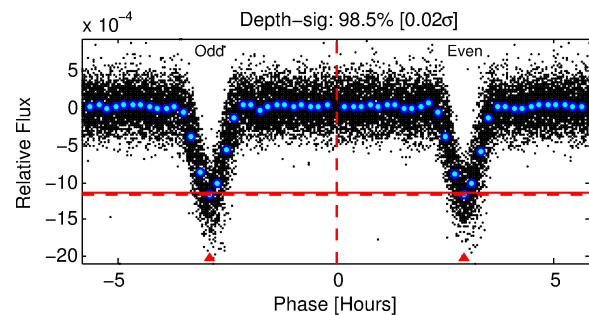
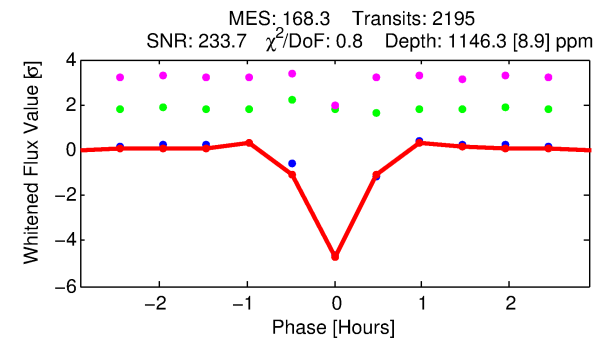
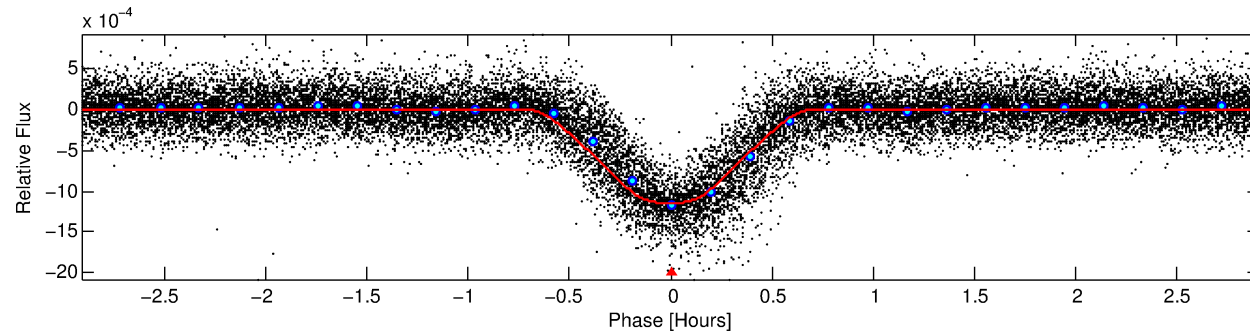
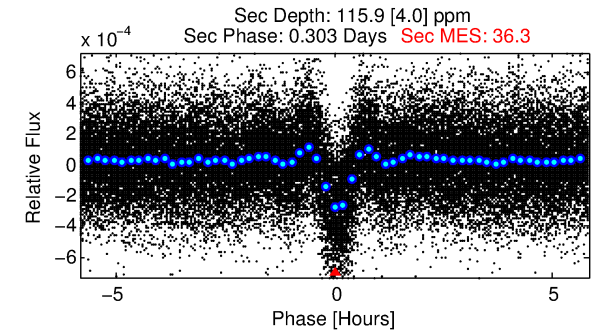
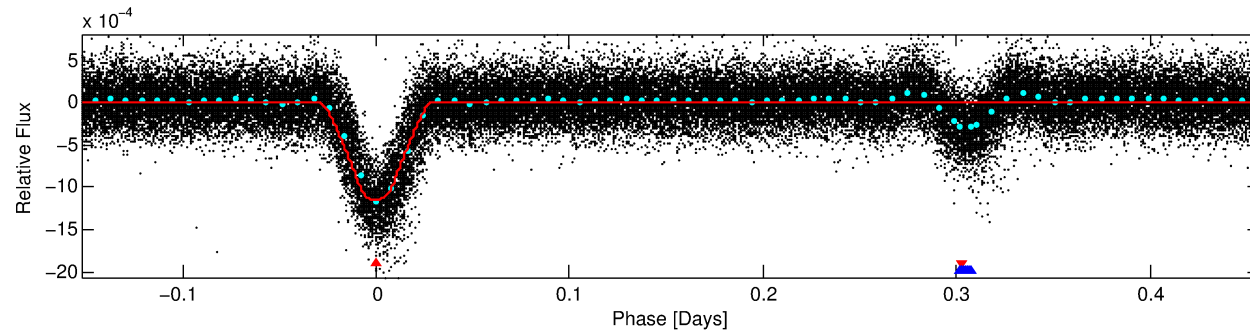
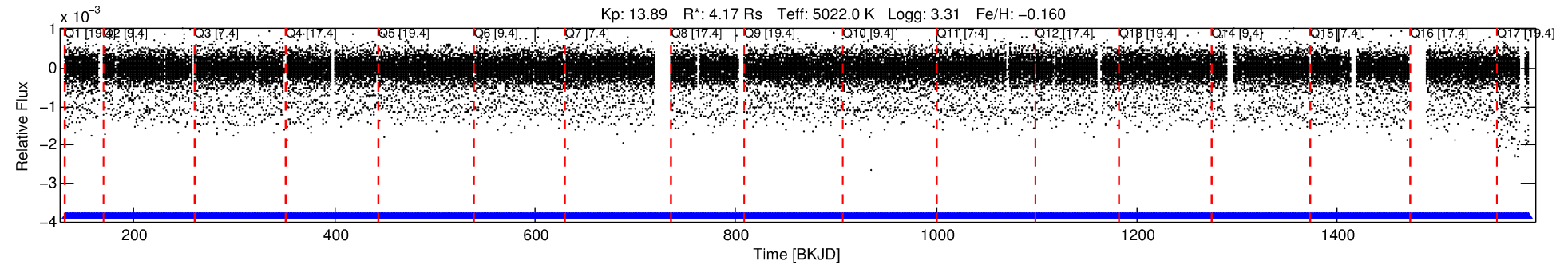
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007769072-01

No Significant Match Found

DV One-Page Summary

KIC: 7769072 Candidate: 1 of 2 Period: 0.609 d
KOI: K06914.01 Corr: 0.867



DV Fit Results:

Period = 0.60886 [0.00000] d
Epoch = 132.0559 [0.0001] BKJD
Rp/R* = 0.0383 [0.0010]
a/R* = 2.66 [0.21]
b = 0.90 [0.02]
Seff = N/A
Teq = N/A
Rp = 17.41 [6.45] Re
a = N/A
Ag = N/A
Teffp = N/A

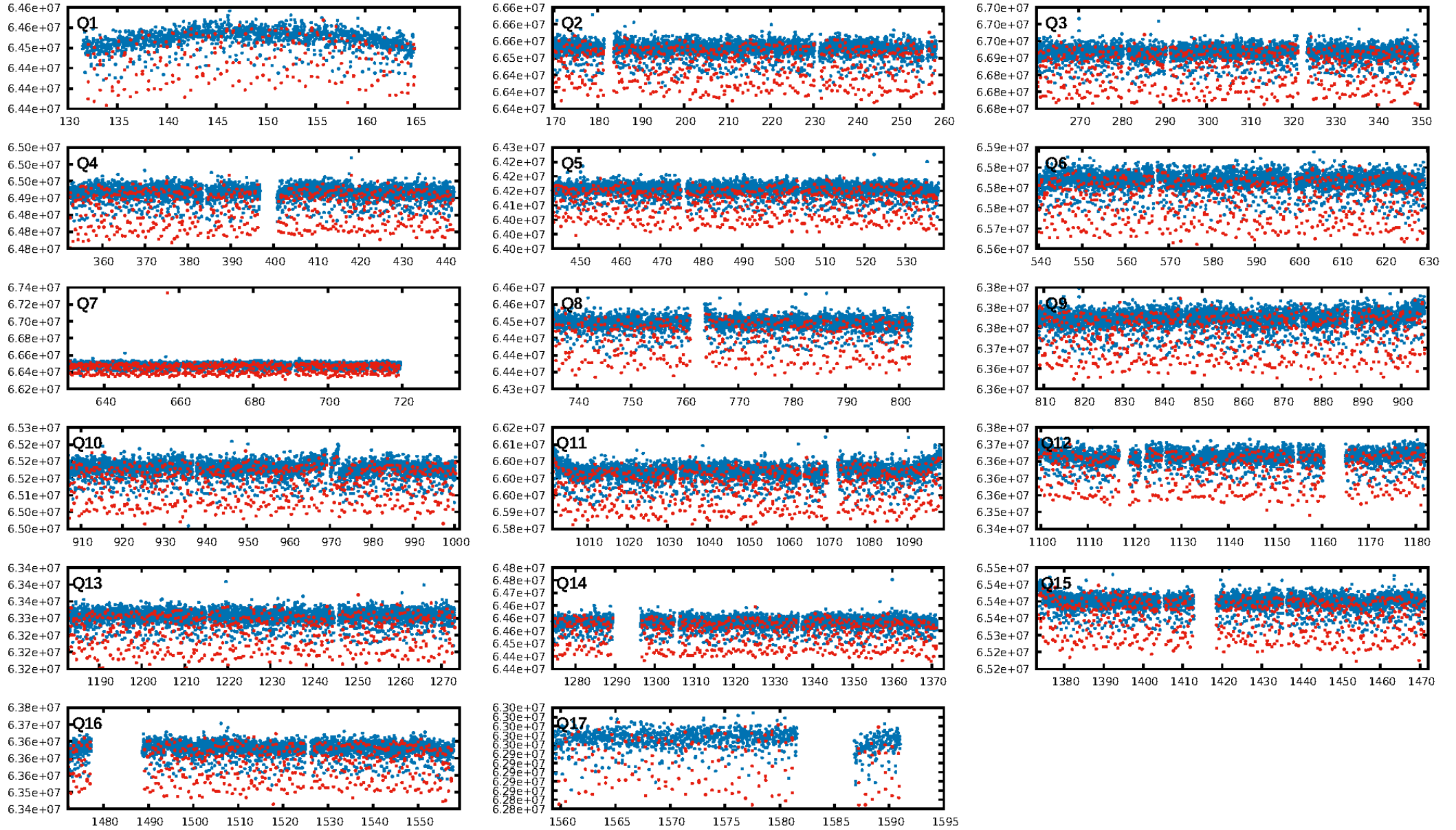
DV Diagnostic Results:

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 [2096/2096]
GhostDiagnostic-chr: 8.006
Centroid-sig: 0.0%
Centroid-so: 0.141 arcsec [4.29σ]
OotOffset-rm: 0.110 arcsec [1.54σ]
KicOffset-rm: 0.144 arcsec [2.02σ]
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]

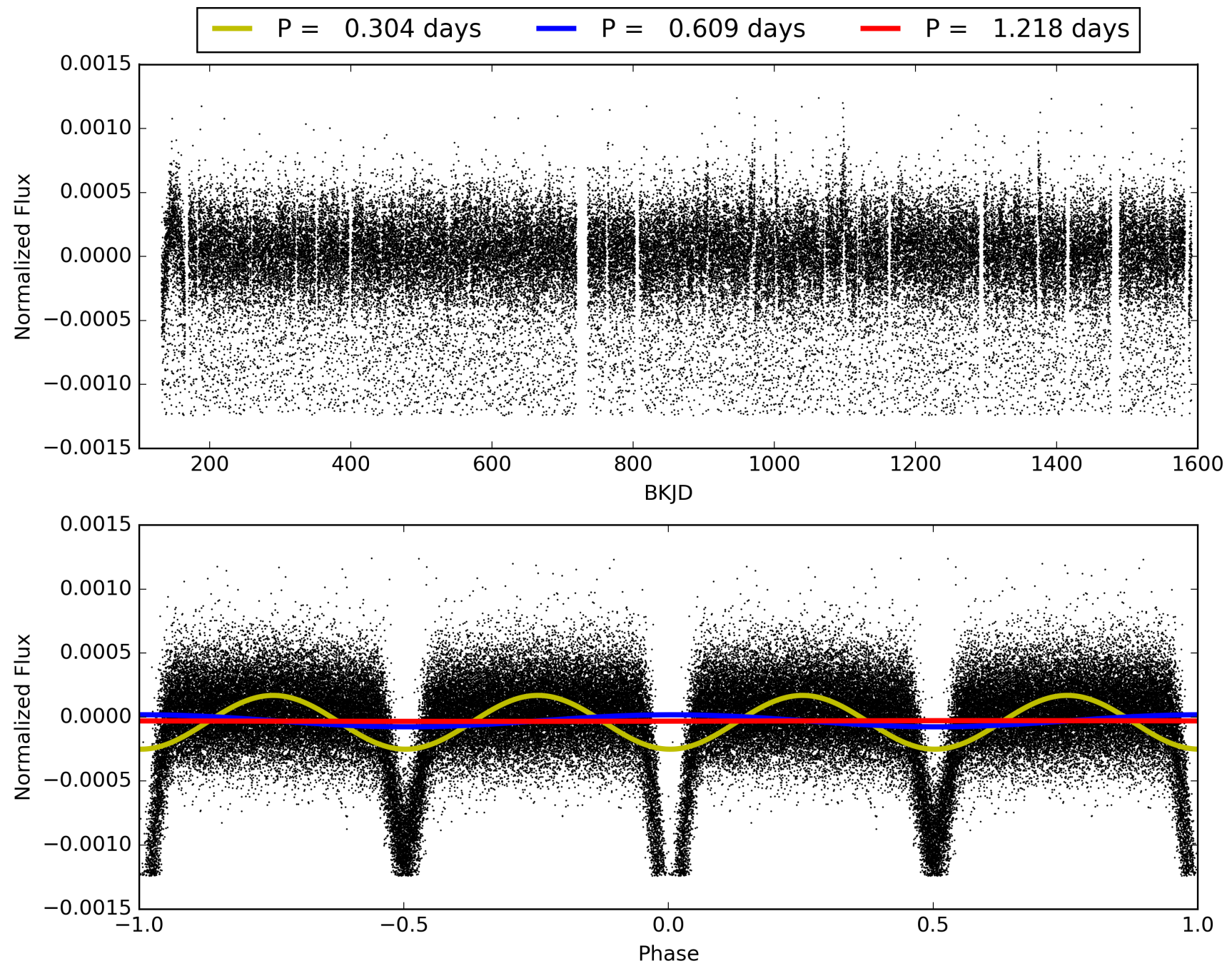
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:34:29 Z

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

TCE 007769072-01, PDC Light Curves

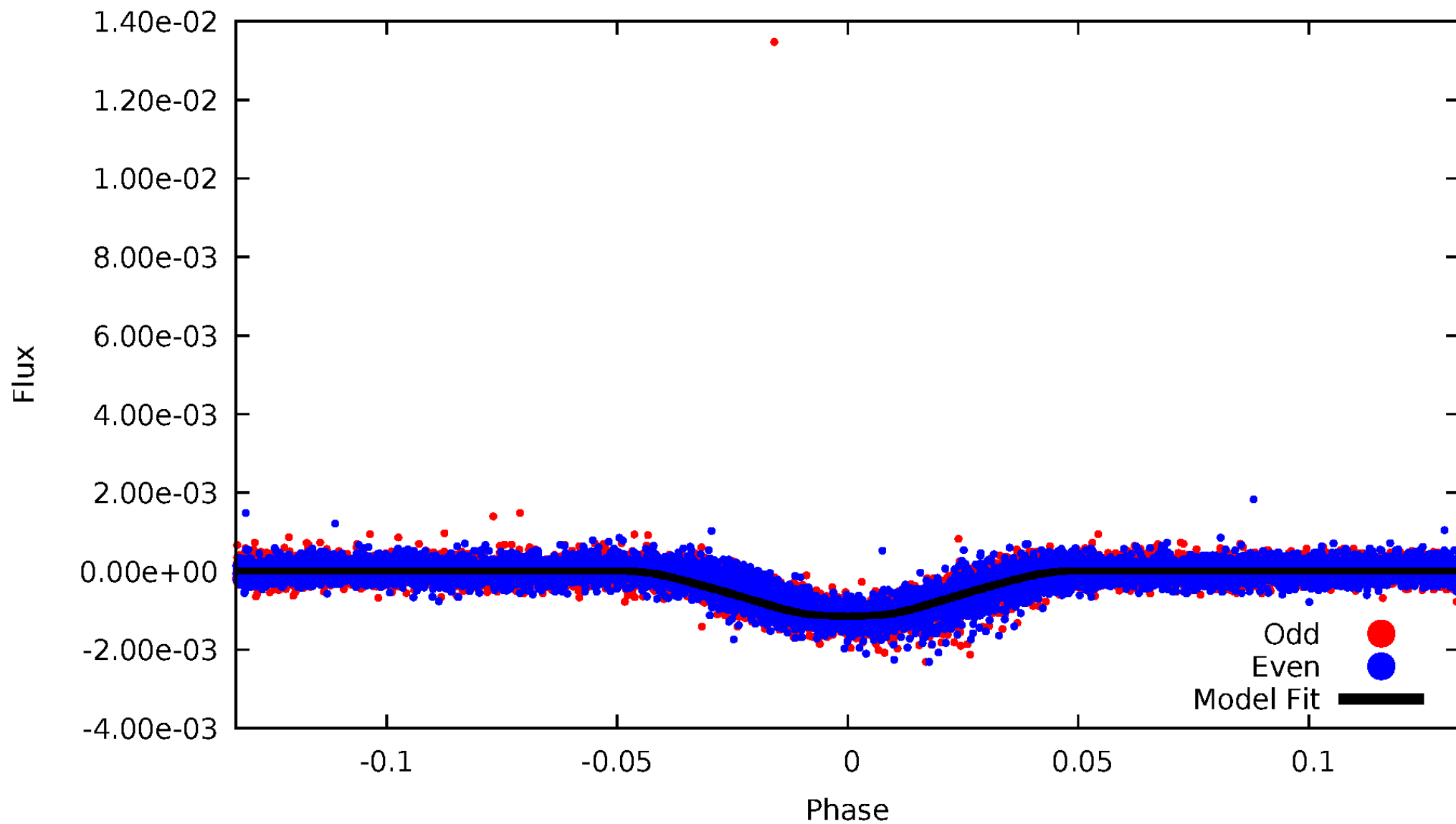


TCE 007769072-01



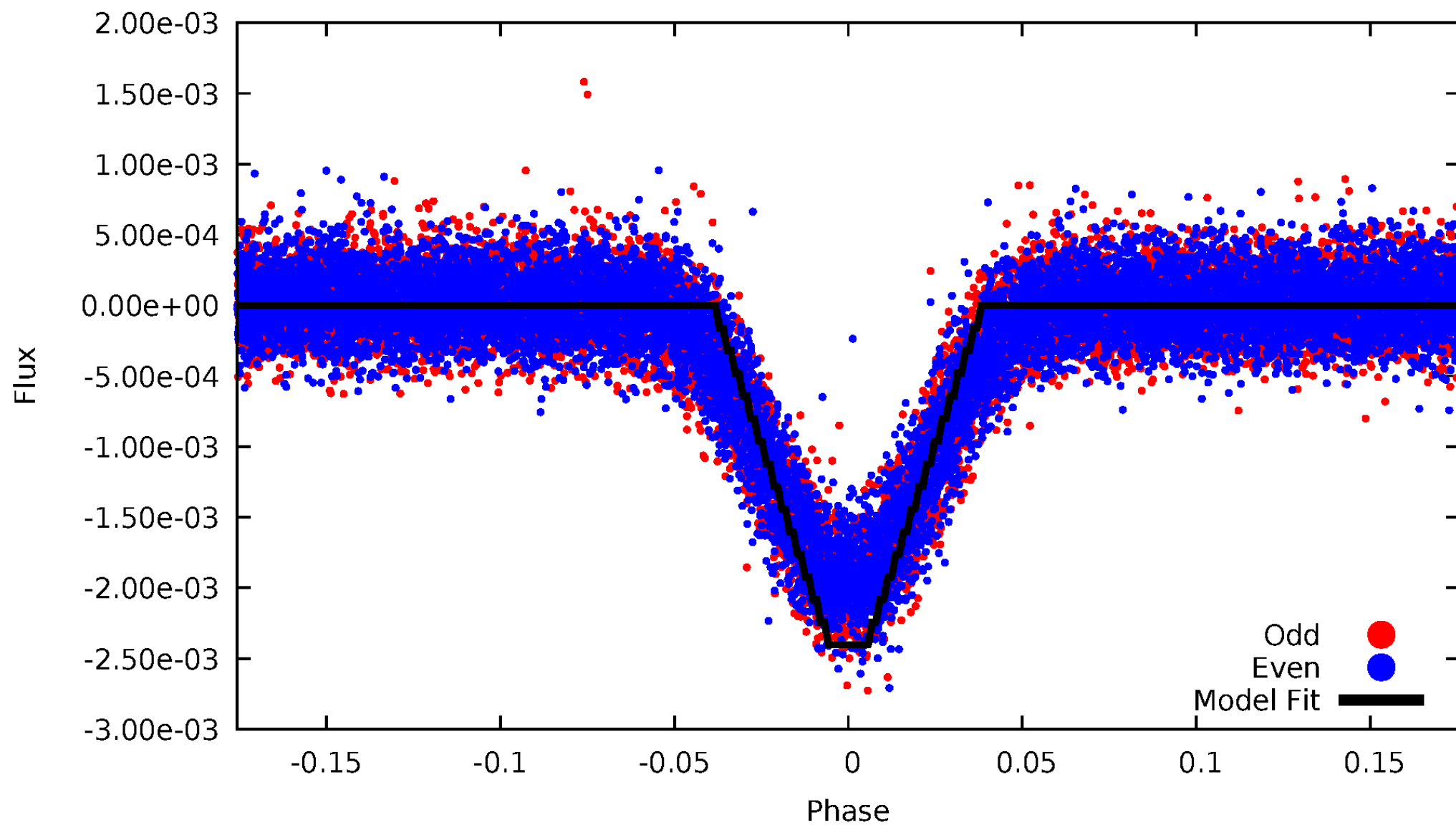
DV Odd/Even

TCE 007769072-01



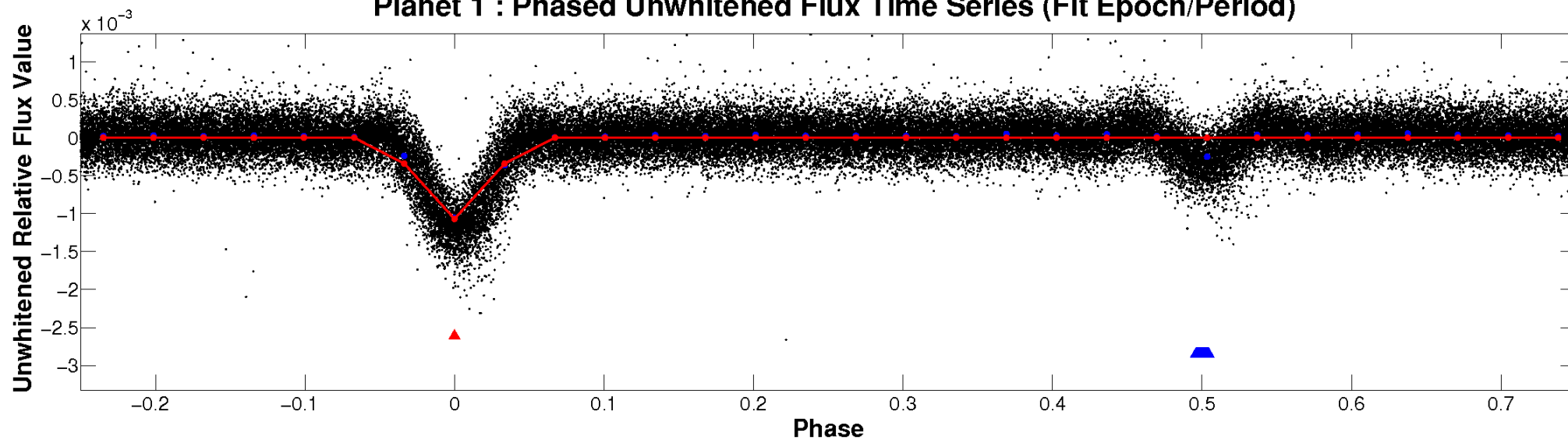
ALT Odd/Even

TCE 007769072-01

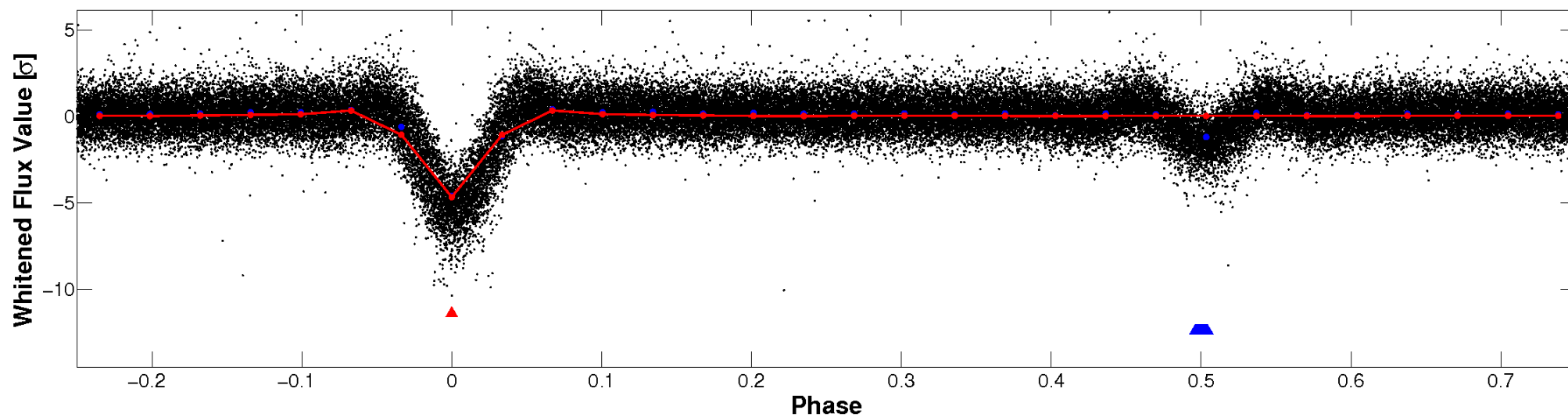


Non-Whitened Vs. Whitened Light Curve

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

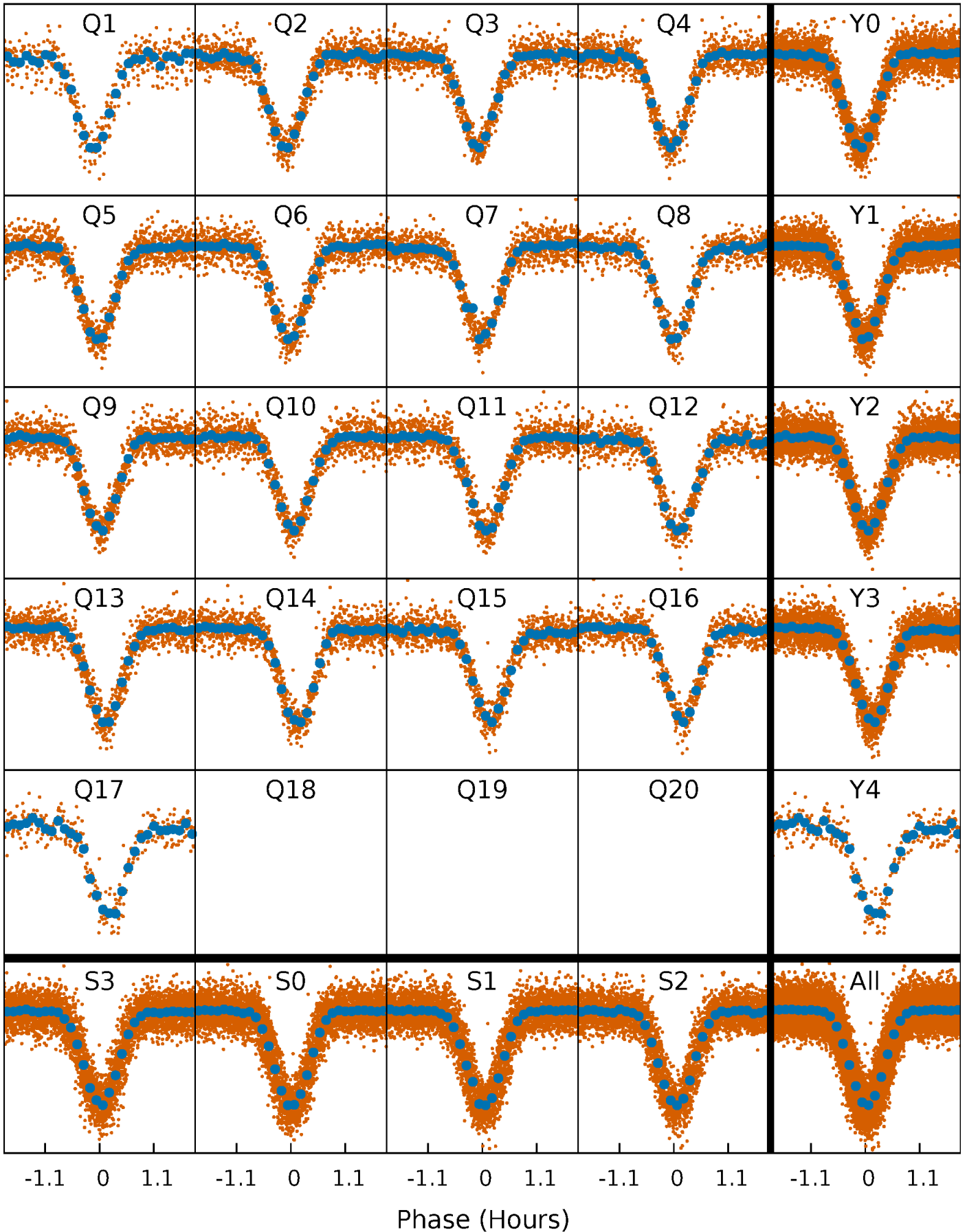


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



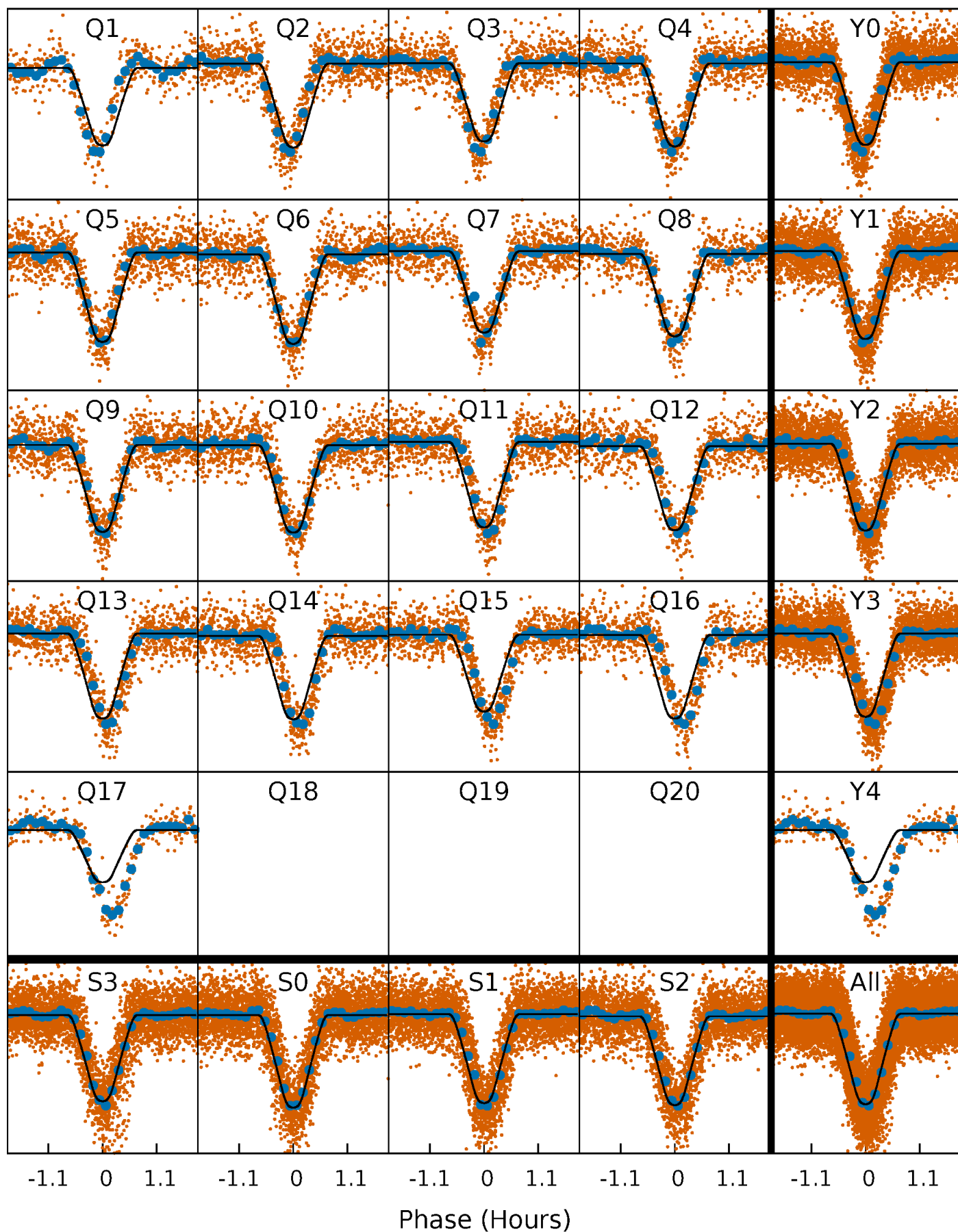
PDC Quarter-Phased Transit Curves

TCE 007769072-01 P= 0.608857 Days $T_0=132.055917$ (BKJD)



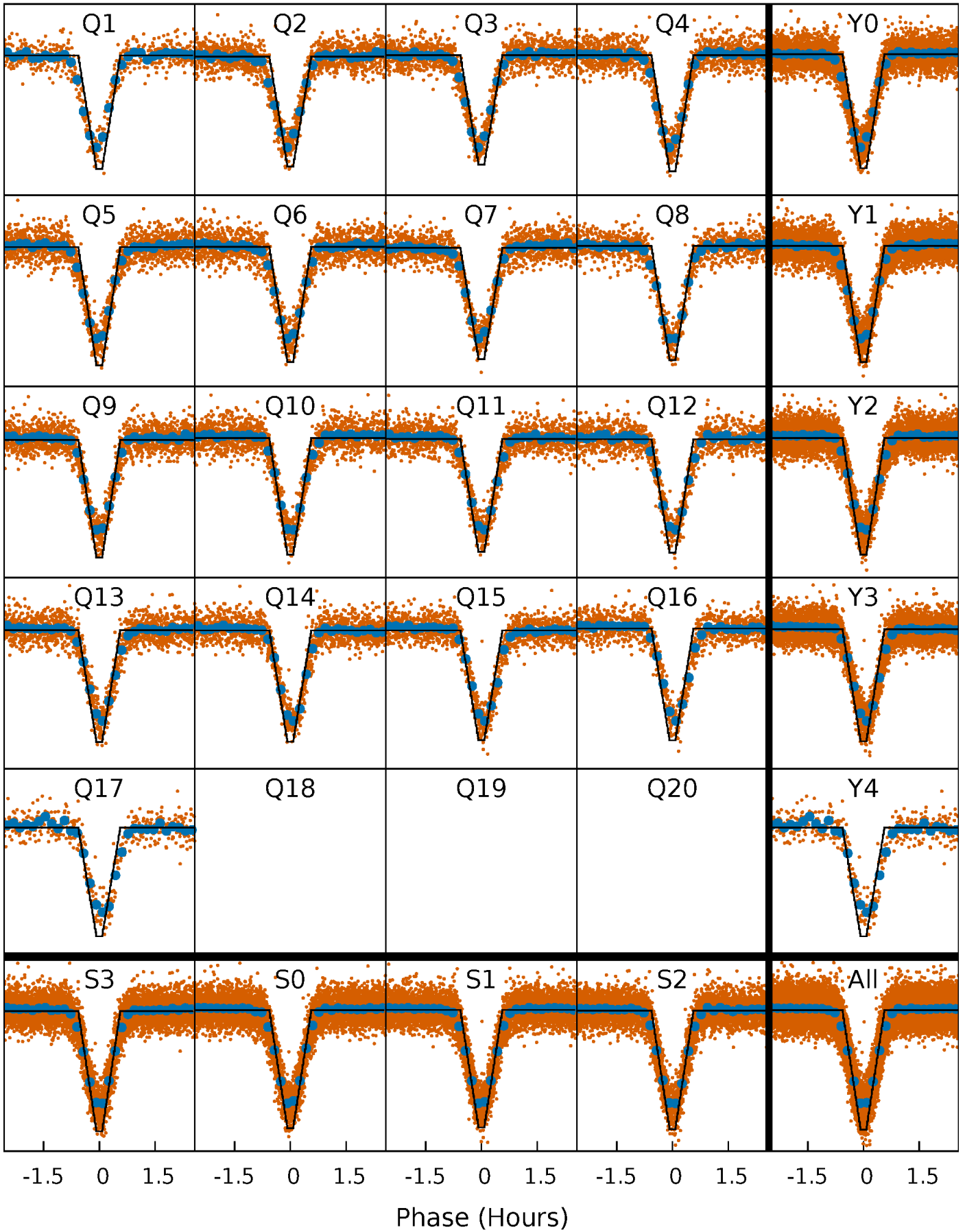
DV Quarter-Phased Transit Curves

TCE 007769072-01 P= 0.608857 Days $T_0=132.055917$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

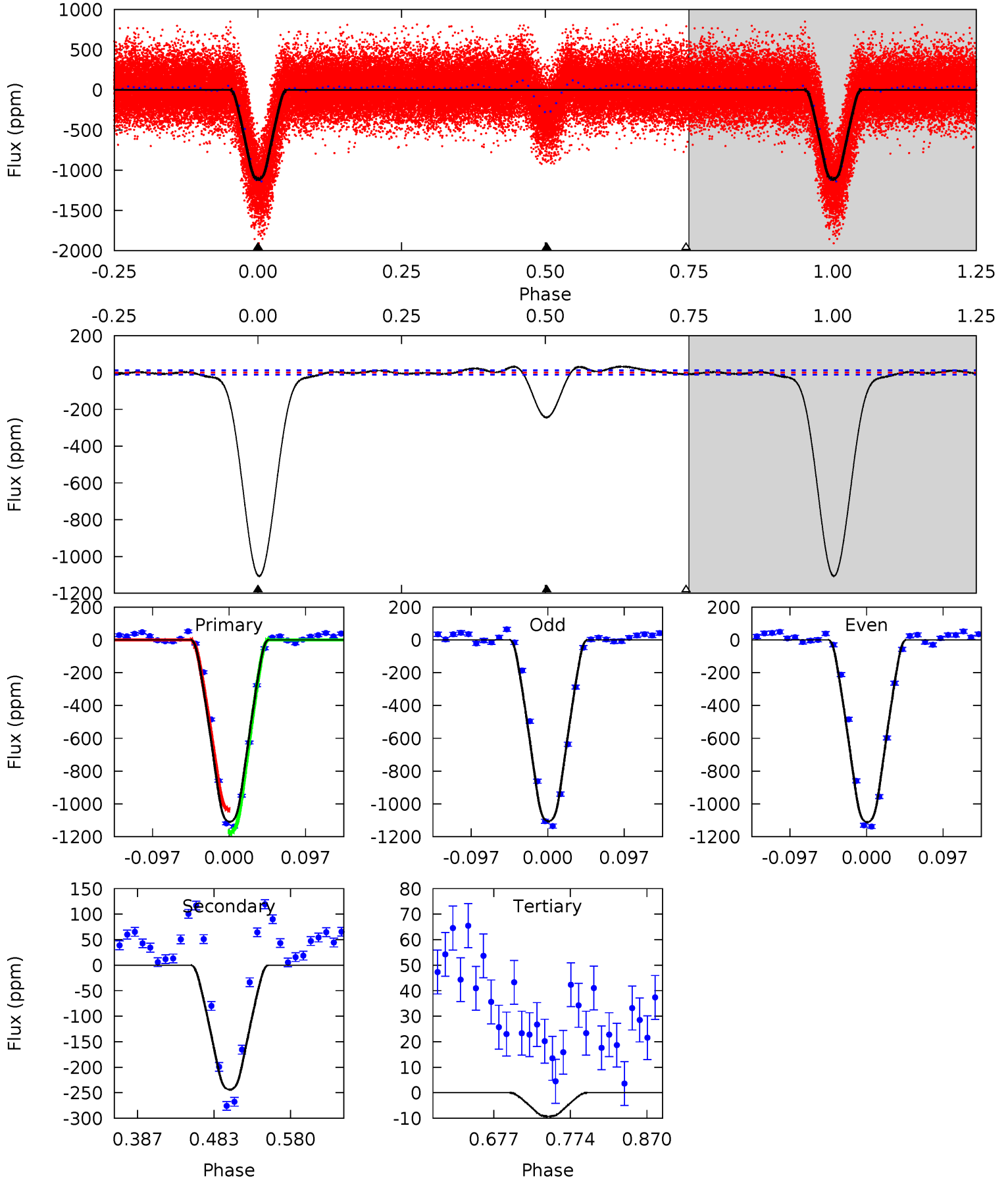
TCE 007769072-01 P= 0.608860 Days $T_0=132.054117$ (BKJD)



DV Model-Shift Uniqueness Test

007769072-01, P = 0.608857 Days, E = 131.447060 Days

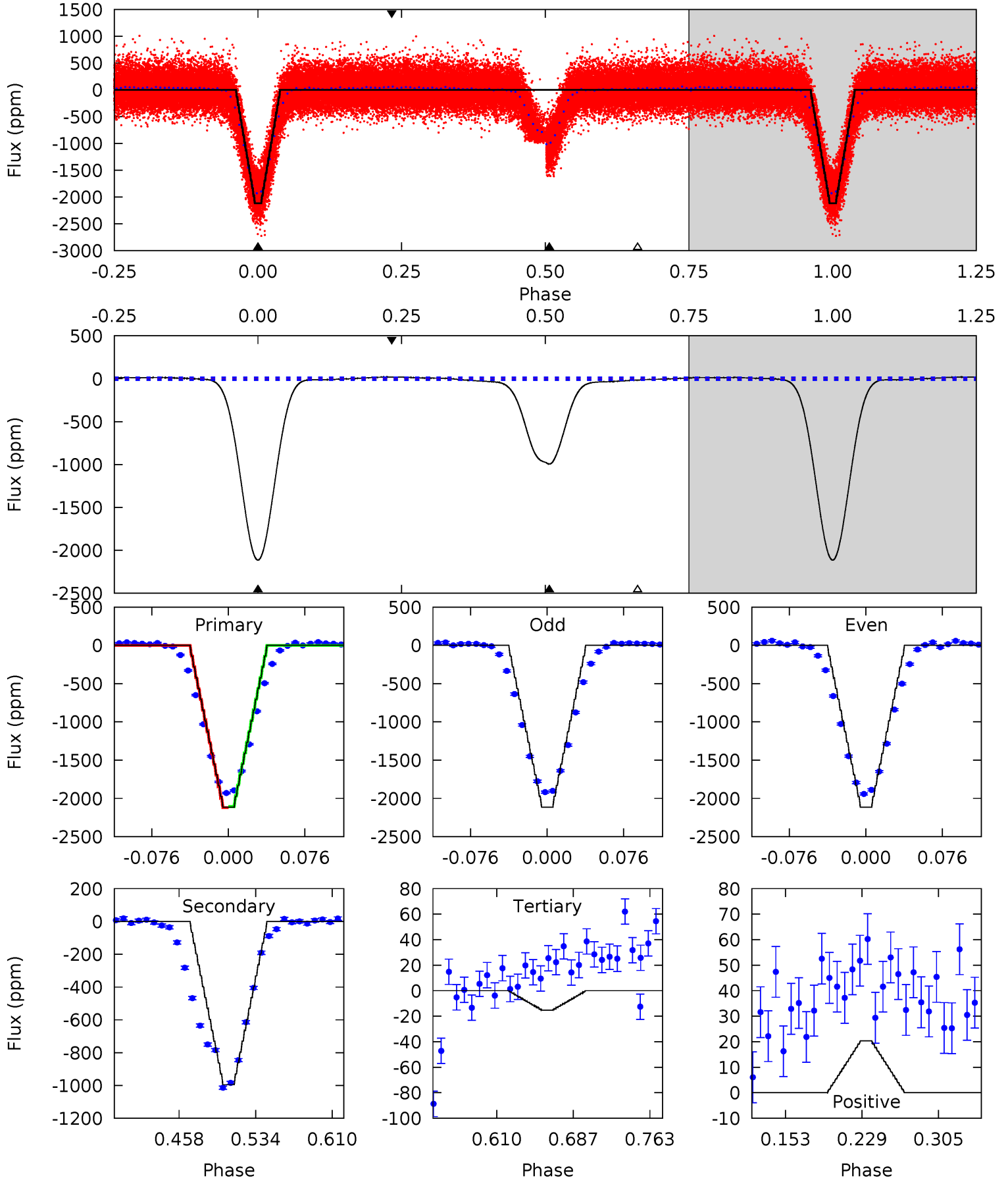
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
434.2	95.5	3.62	0	4.57	1.66	4.29	430.6	434.2	91.8	95.5	0.99	1.00	0.03	27.4



Alt Model-Shift Uniqueness Test

007769072-01, P = 0.608860 Days, E = 131.445257 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
684.5	322.3	4.95	6.60	4.62	1.77	5.75	679.5	677.9	317.4	315.7	0.32	1.01	0.01	2.30



Stellar Parameters For KIC 007769072

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5022^{+125}_{-125}	$3.311^{+0.360}_{-0.270}$	$-0.160^{+0.250}_{-0.250}$	$4.167^{+1.539}_{-1.539}$	$1.298^{+0.180}_{-0.335}$	$0.025^{+0.066}_{-0.015}$
	+2%/-2%	+11%/-8%	+156%/-156%	+37%/-37%	+14%/-26%	+261%/-57%
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 007769072-01 / KOI 6914.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-244 ± 3	$17.63^{+3.80}_{-4.11}$	5152^{+523}_{-614}	-4050^{+554}_{-417}	$0.101^{+0.062}_{-0.033}$
Alt.	-995 ± 3	$21.89^{+5.21}_{-5.03}$	5067^{+564}_{-575}	-3000^{+6424}_{-956}	$0.268^{+0.158}_{-0.092}$

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

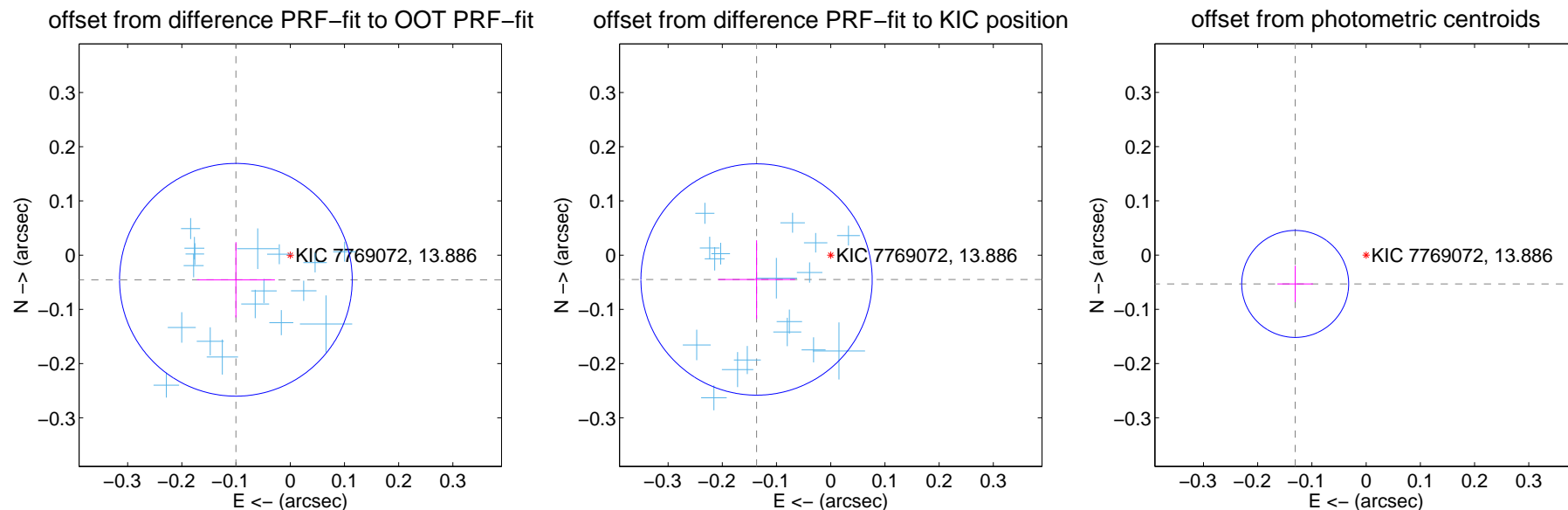
DV Centroid Data

Supplemental centroid analysis for 007769072-01. Kepler magnitude: 13.89. Transit SNR 233.69

There are 17 quarters with good PRF difference image offsets

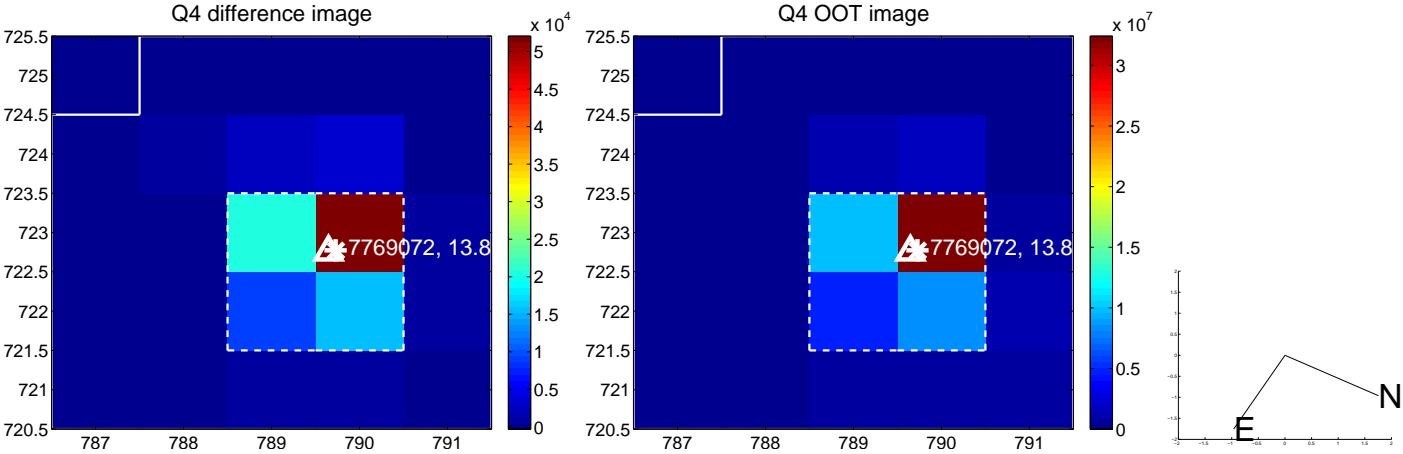
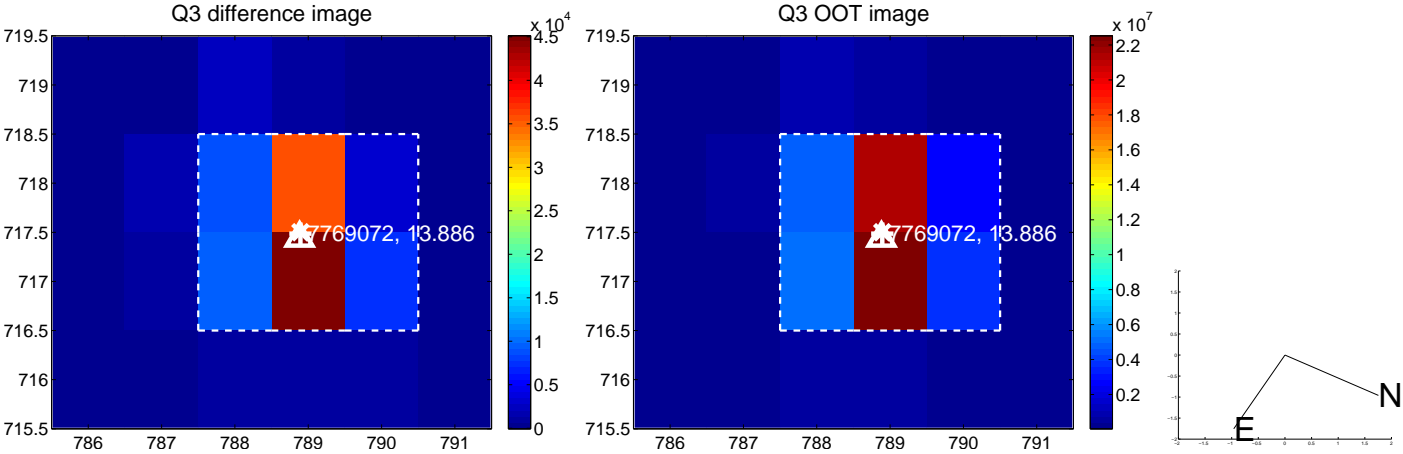
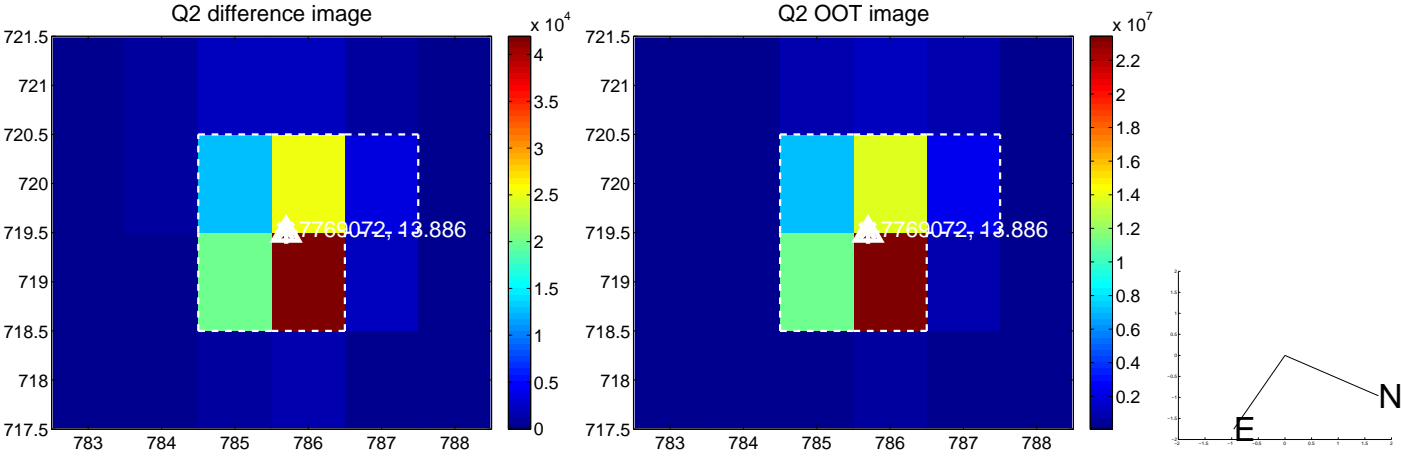
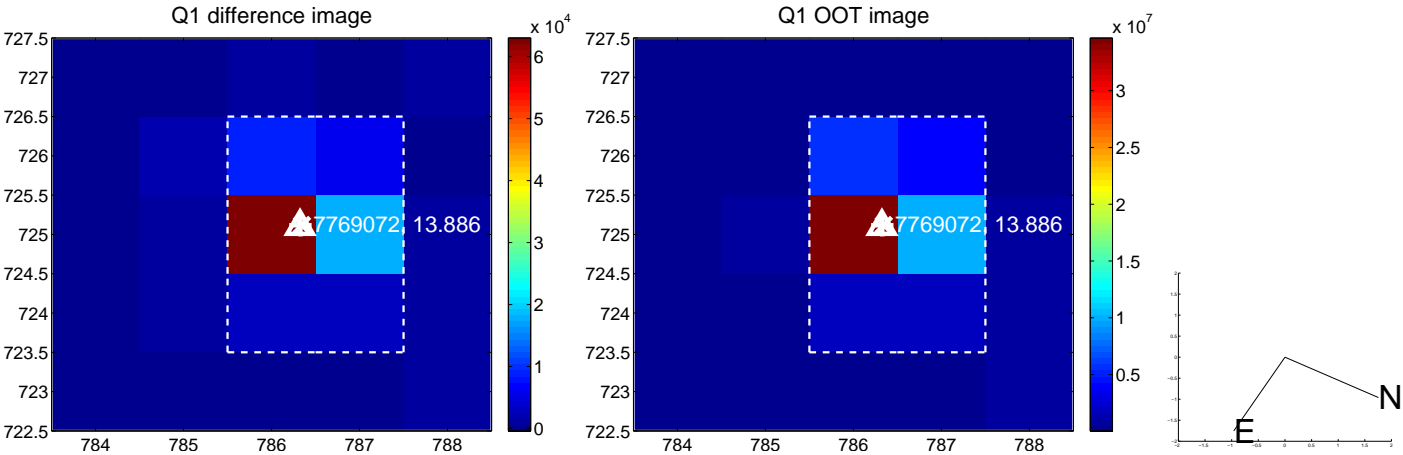
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.110 ± 0.072	1.54	0.100 ± 0.072	-0.045 ± 0.070
PRF-fit source offset from KIC position	0.144 ± 0.071	2.02	0.137 ± 0.071	-0.045 ± 0.072
photometric centroid source offset	0.14 ± 0.03	4.29	0.13 ± 0.03	-0.05 ± 0.03

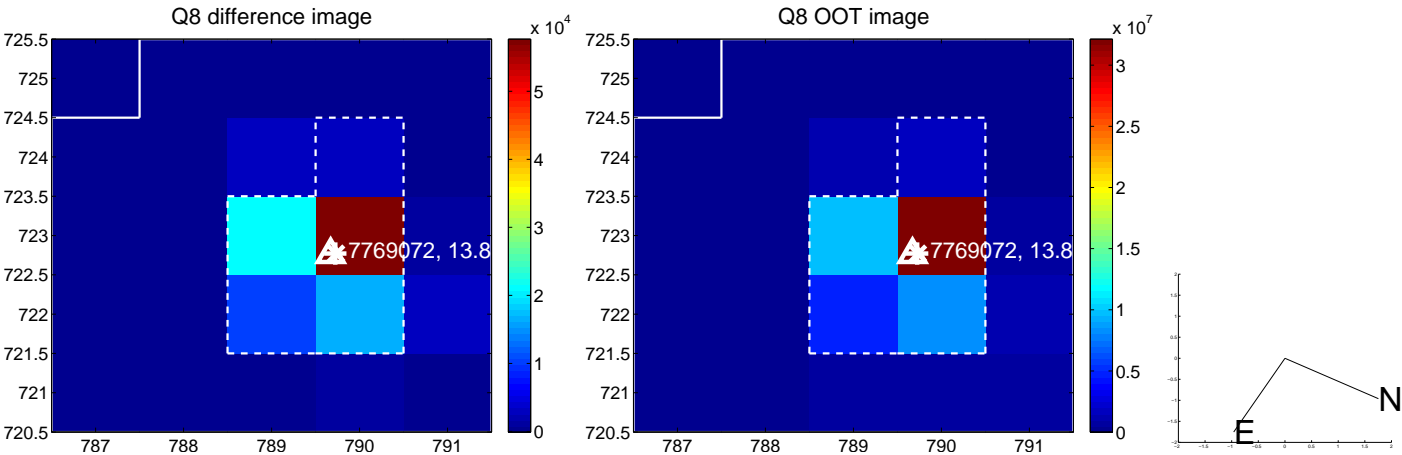
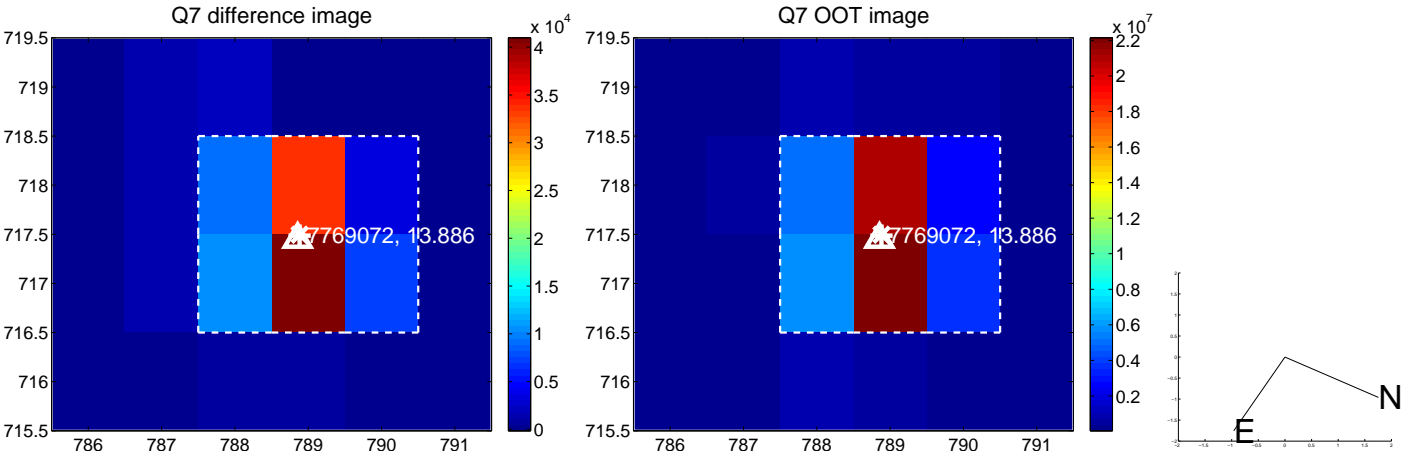
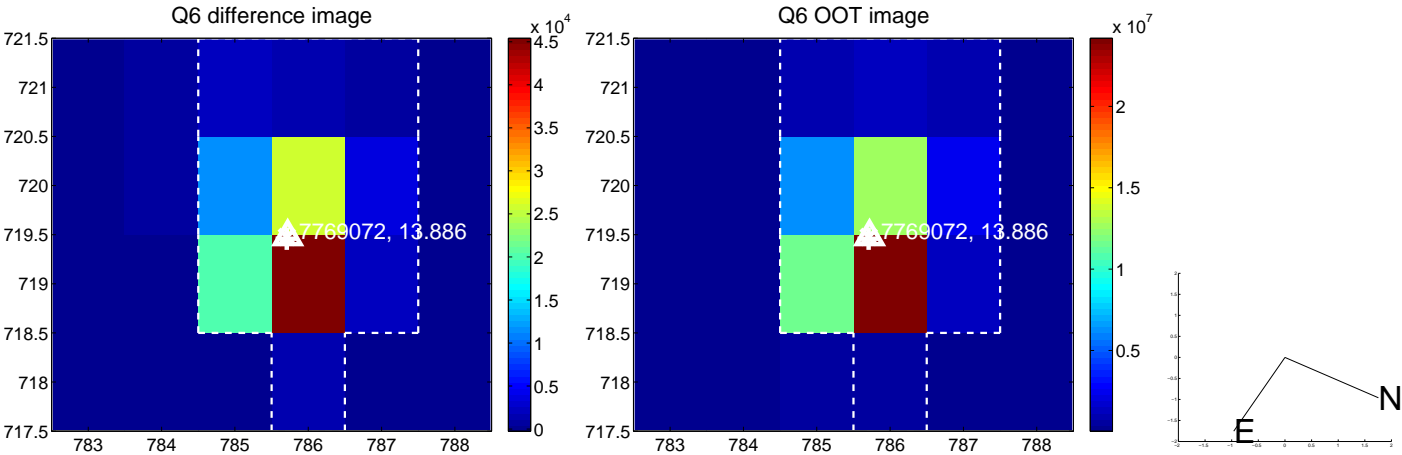
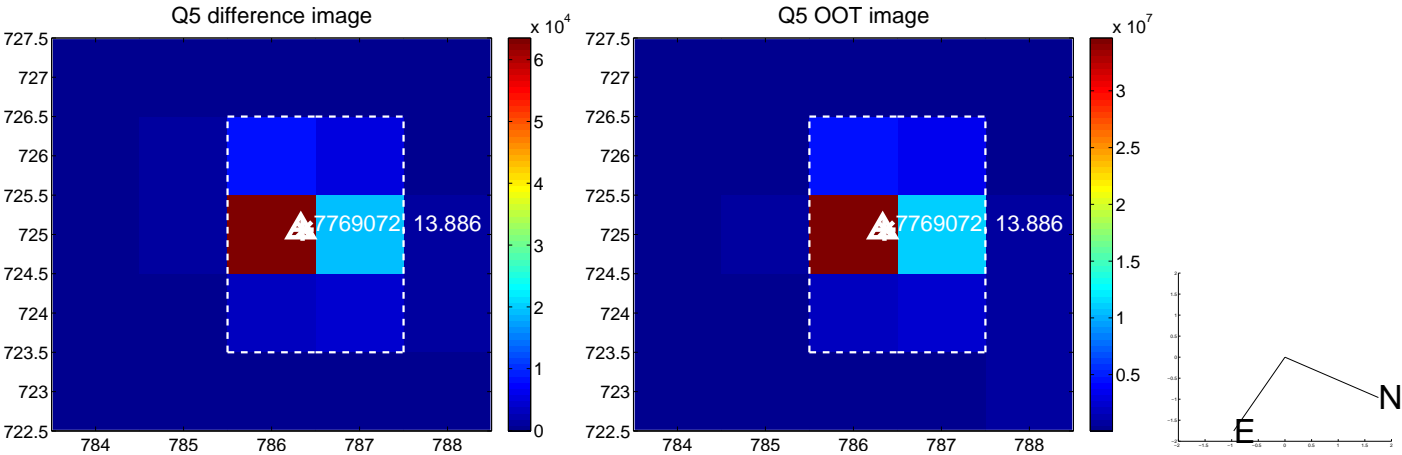


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

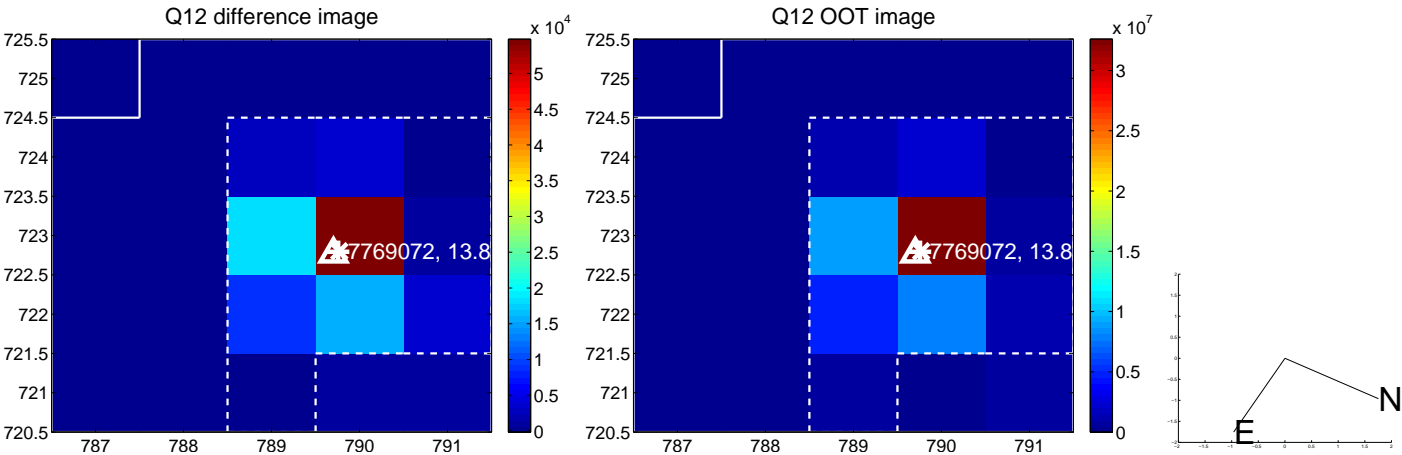
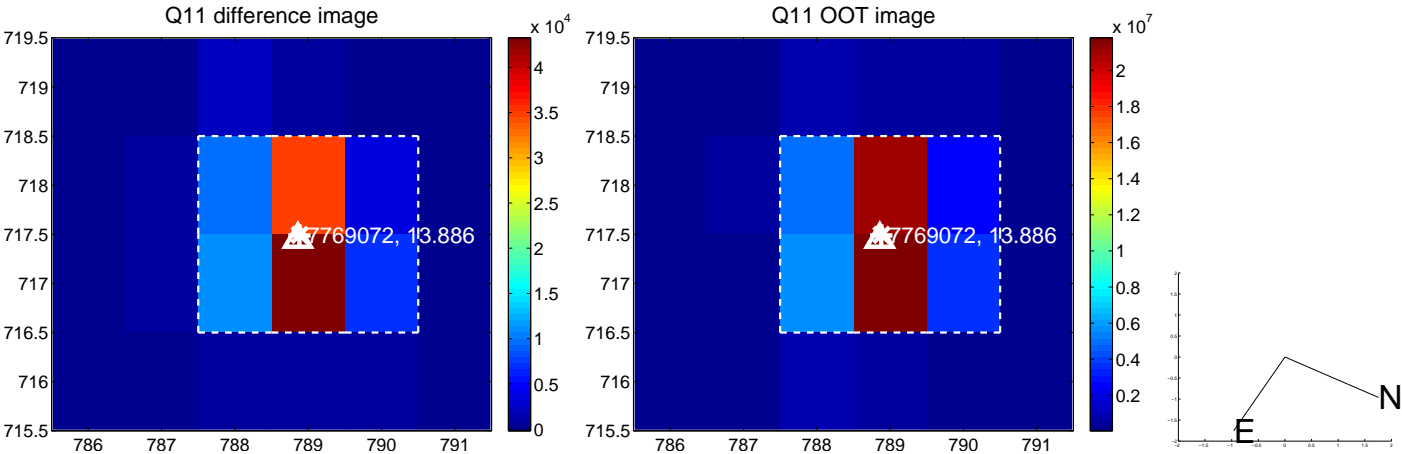
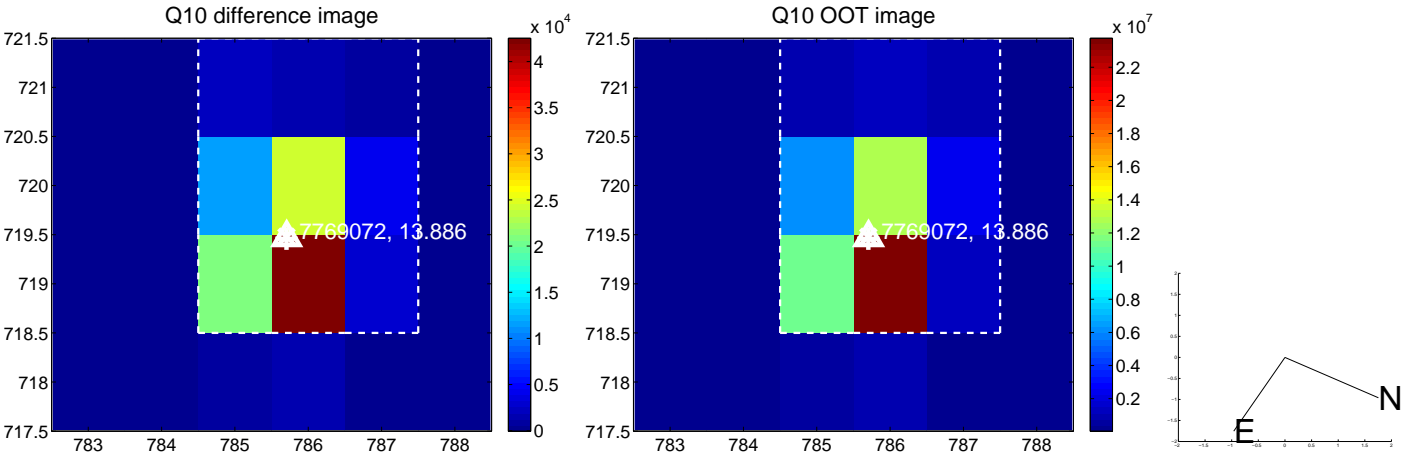
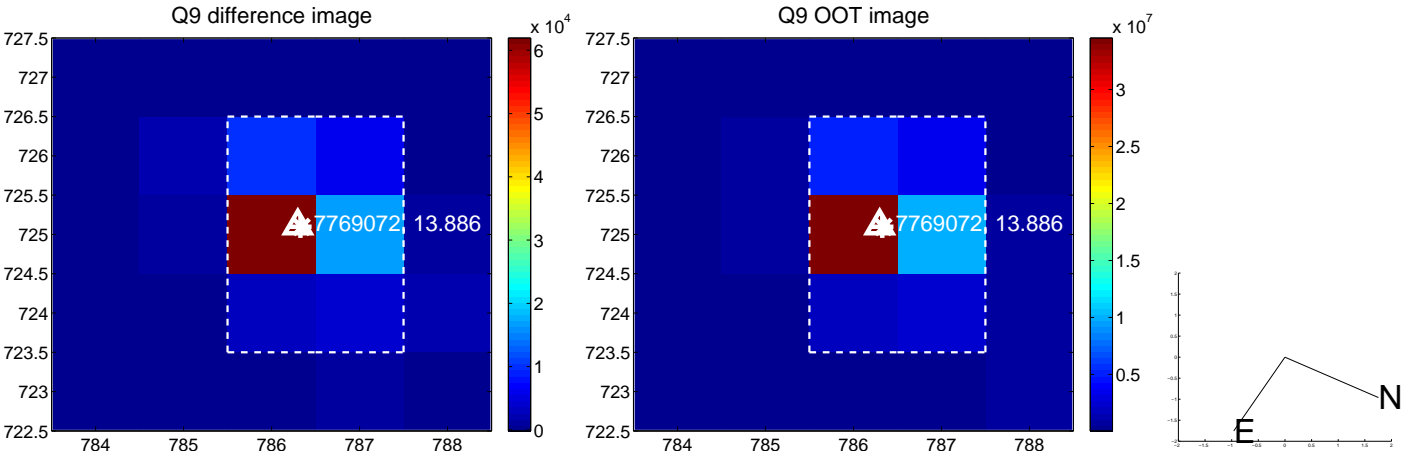
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



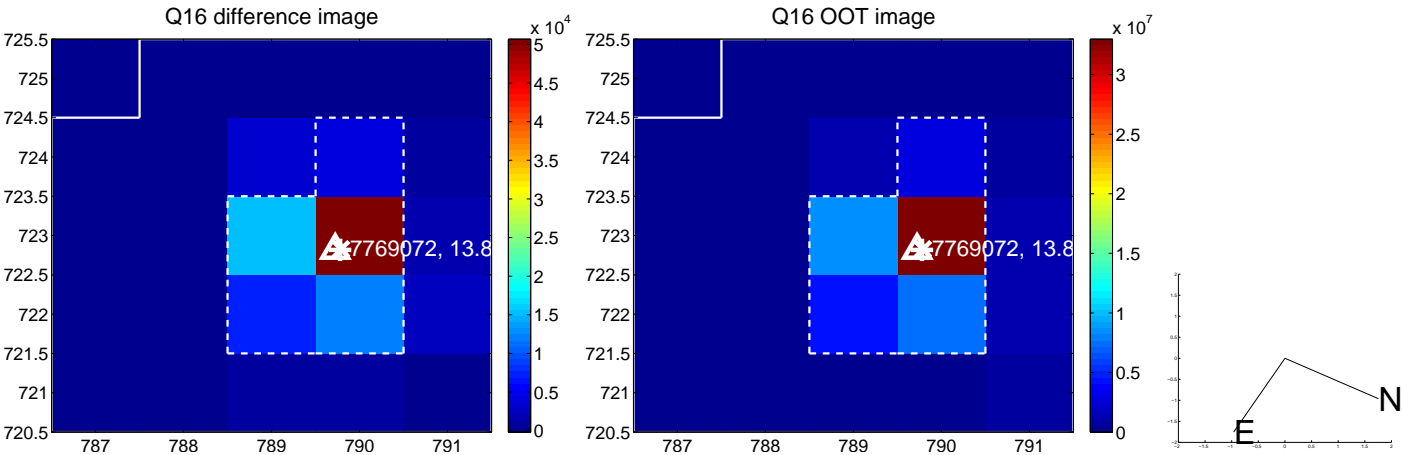
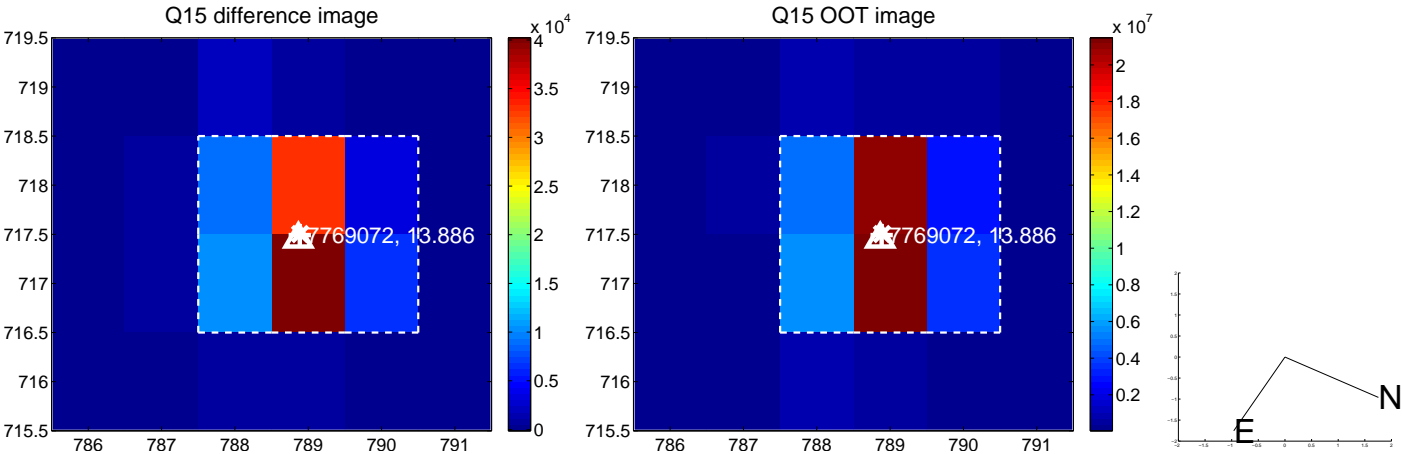
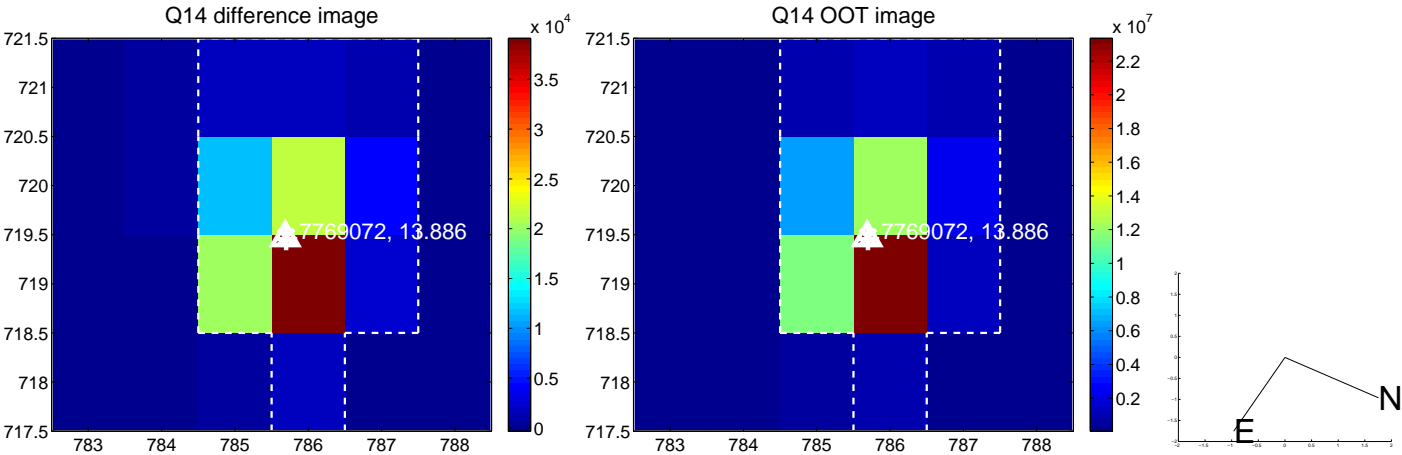
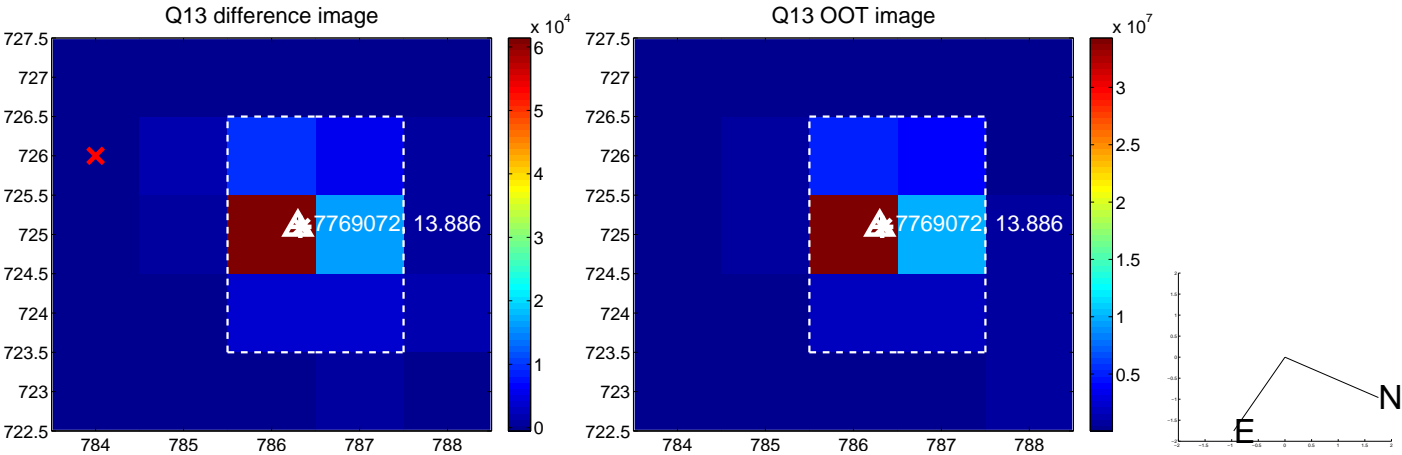
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



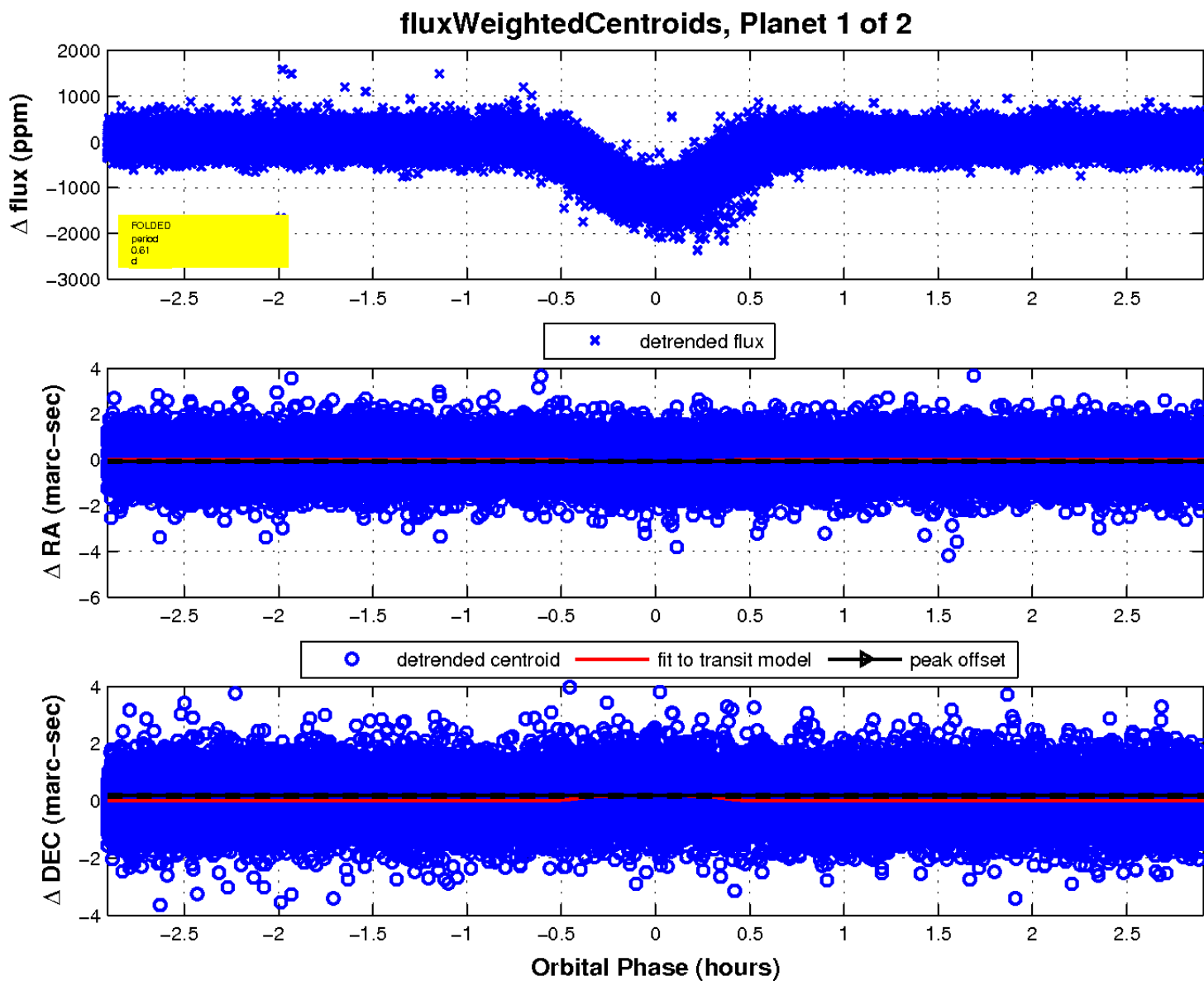
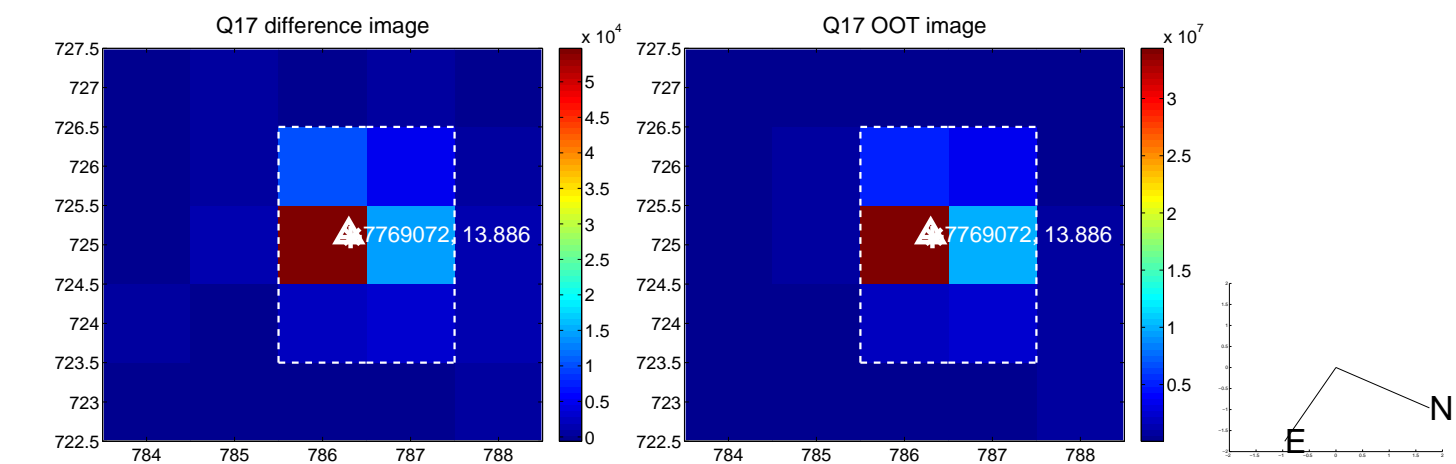
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

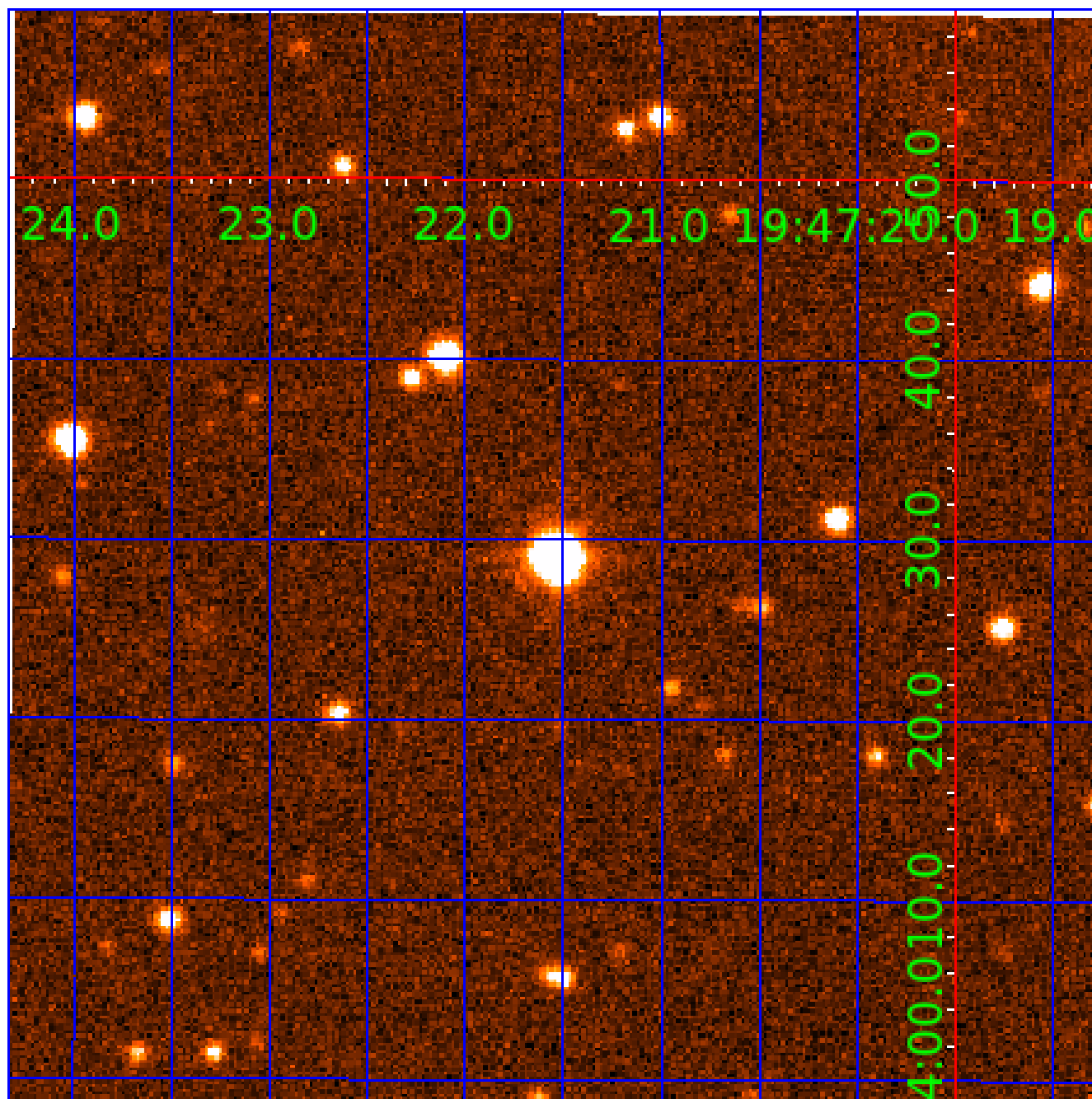


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007769072

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})
007769072-01	OBS	6914.01	0.608857	132.055917	1146.3	0.969	168.3	233.7	4.17	5022	17.41	0.00
007769072-02	OBS	No	0.608860	131.749072	356.6	0.690	35.9	71.6	4.17	5022	9.85	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007769072-01	OBS	FP	0.00	0	1	0	0	PLANET_IN_STAR—MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
007769072-02	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 007769072-02

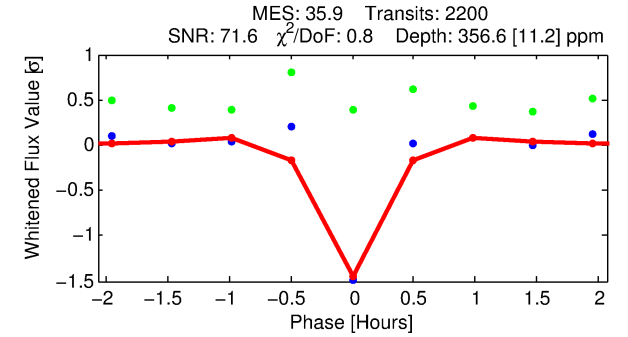
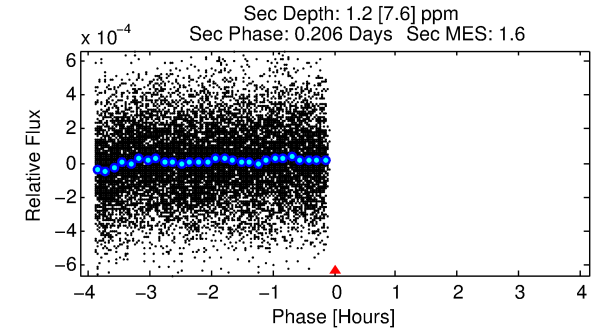
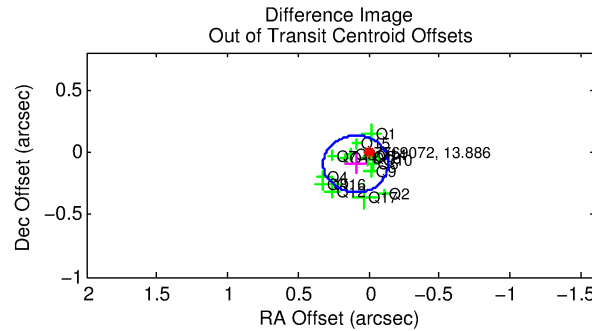
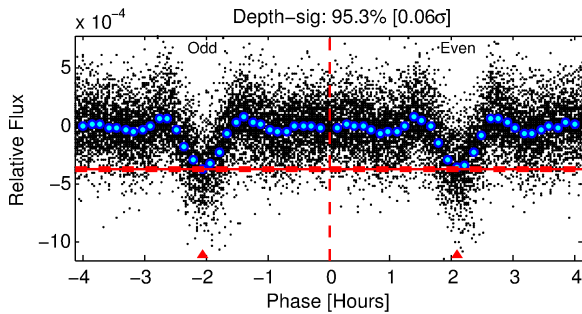
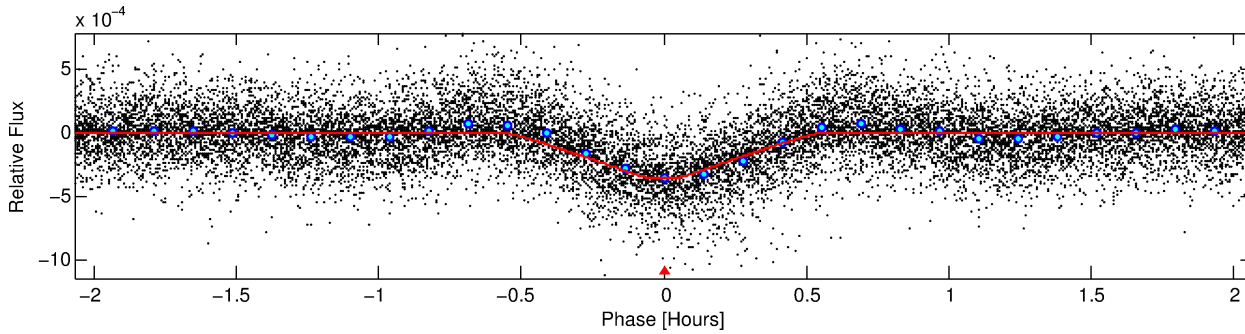
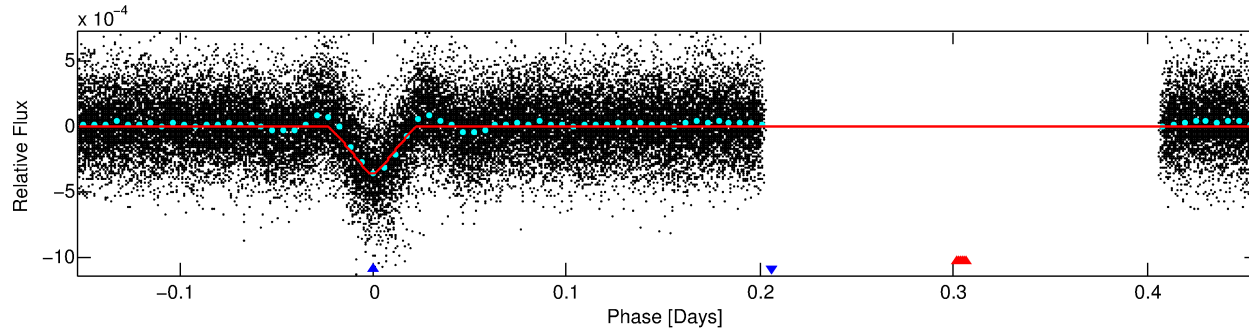
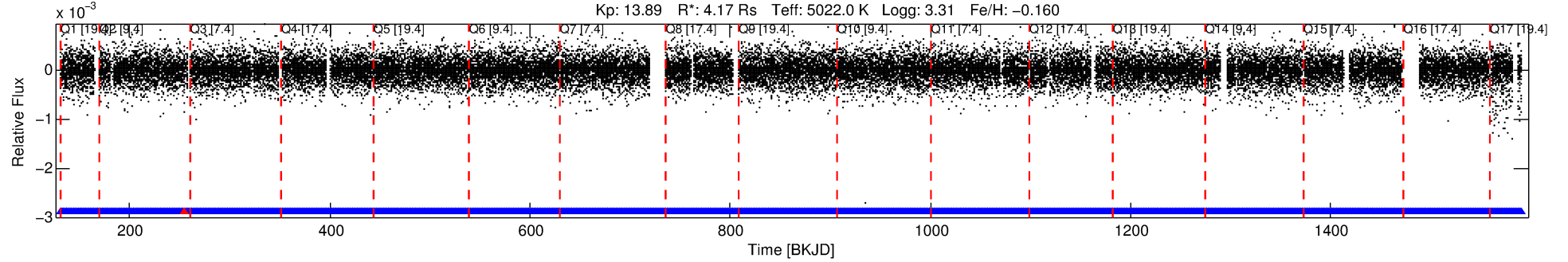
No Significant Match Found

DV One-Page Summary

KIC: 7769072 Candidate: 2 of 2 Period: 0.609 d

KOI: K06914 Corr: No Ephemeris Match

Kp: 13.89 R*: 4.17 Rs Teff: 5022.0 K Logg: 3.31 Fe/H: -0.160



DV Fit Results:

Period = 0.60886 [0.00000] d
Epoch = 131.7491 [0.0002] BKJD
Rp/R* = 0.0217 [0.0032]
a/R* = 3.37 [1.78]
b = 0.90 [0.12]
Seff = N/A
Teq = N/A
Rp = 9.85 [3.91] Re
a = N/A
Ag = N/A
Teffp = N/A

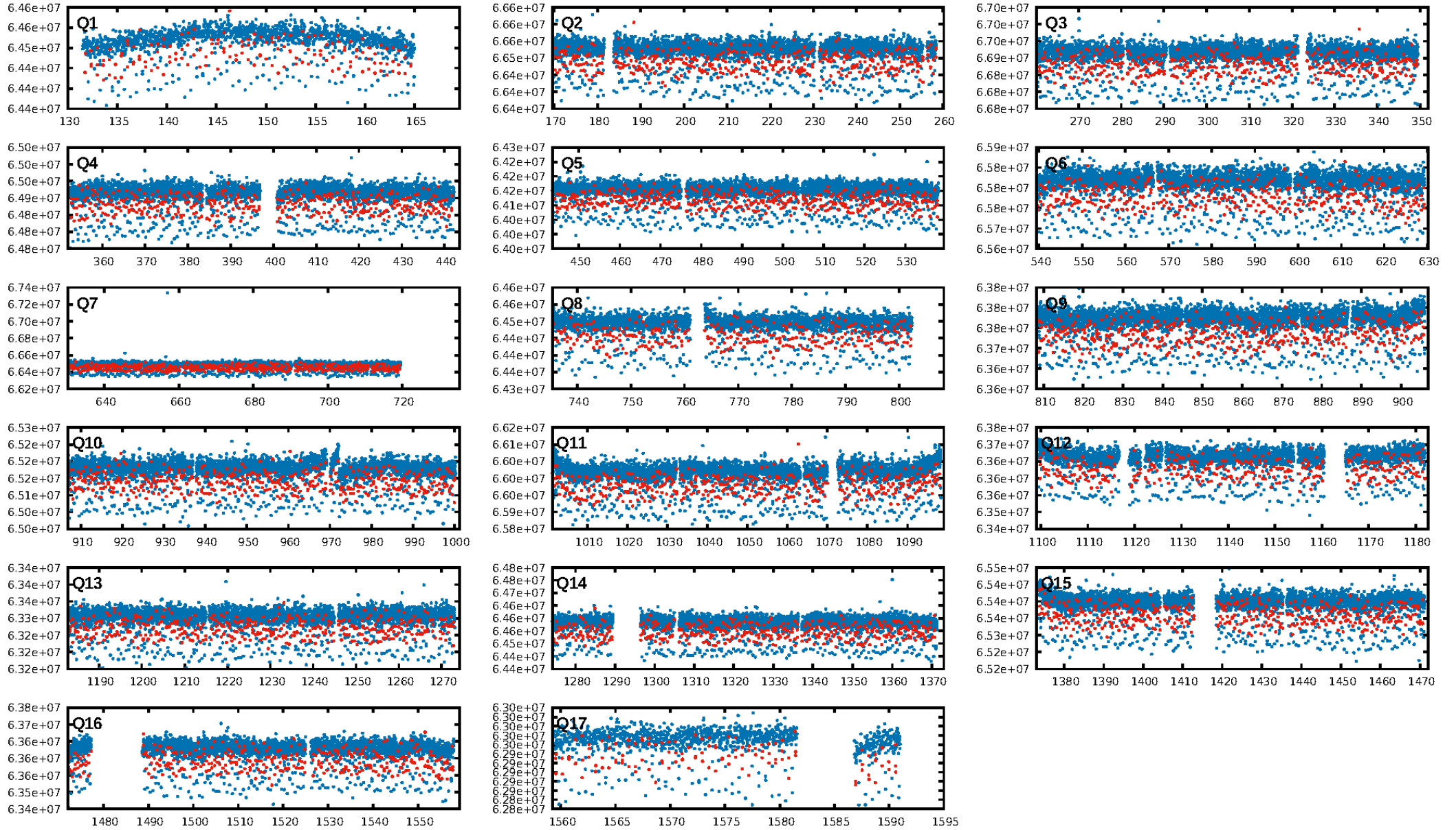
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.92e-268
RollingBand-fgt: 1.00 [2100/2101]
GhostDiagnostic-chr: -10.93
Centroid-sig: 0.0%
Centroid-so: 0.962 arcsec [7.93σ]
OotOffset-rm: 0.133 arcsec [1.75σ]
KicOffset-rm: 0.168 arcsec [2.18σ]
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]

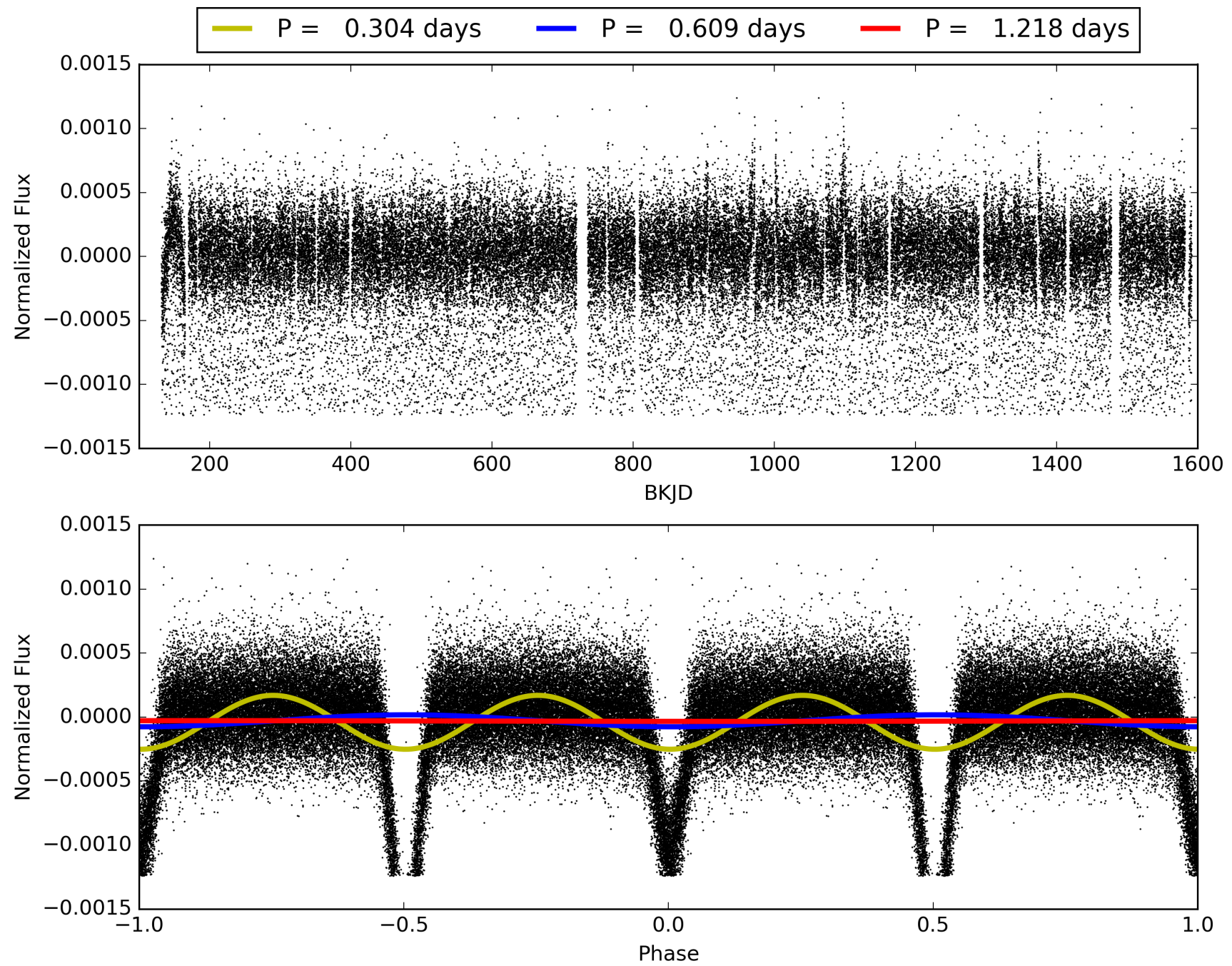
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:34:38 Z

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

TCE 007769072-02, PDC Light Curves

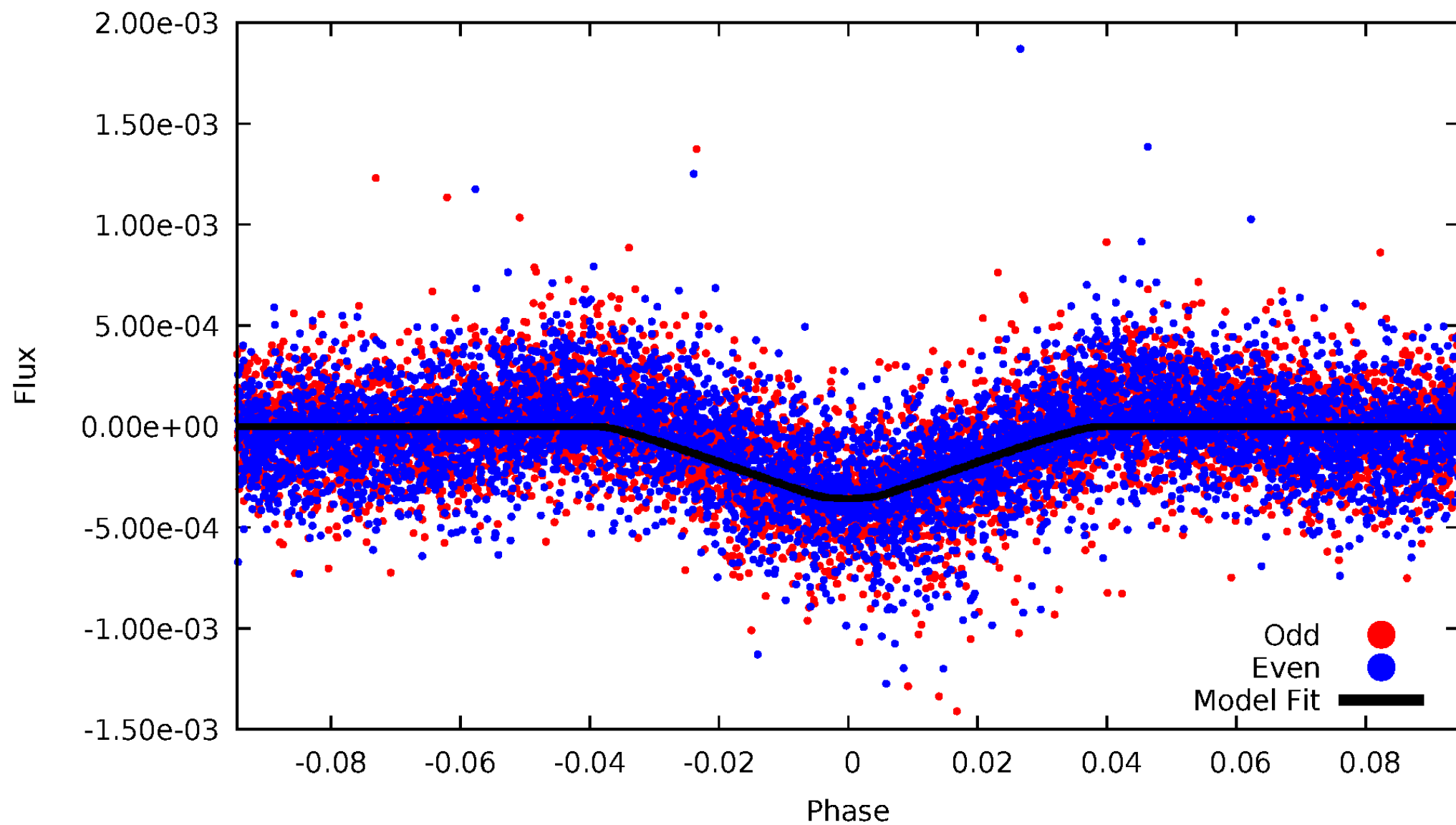


TCE 007769072-02



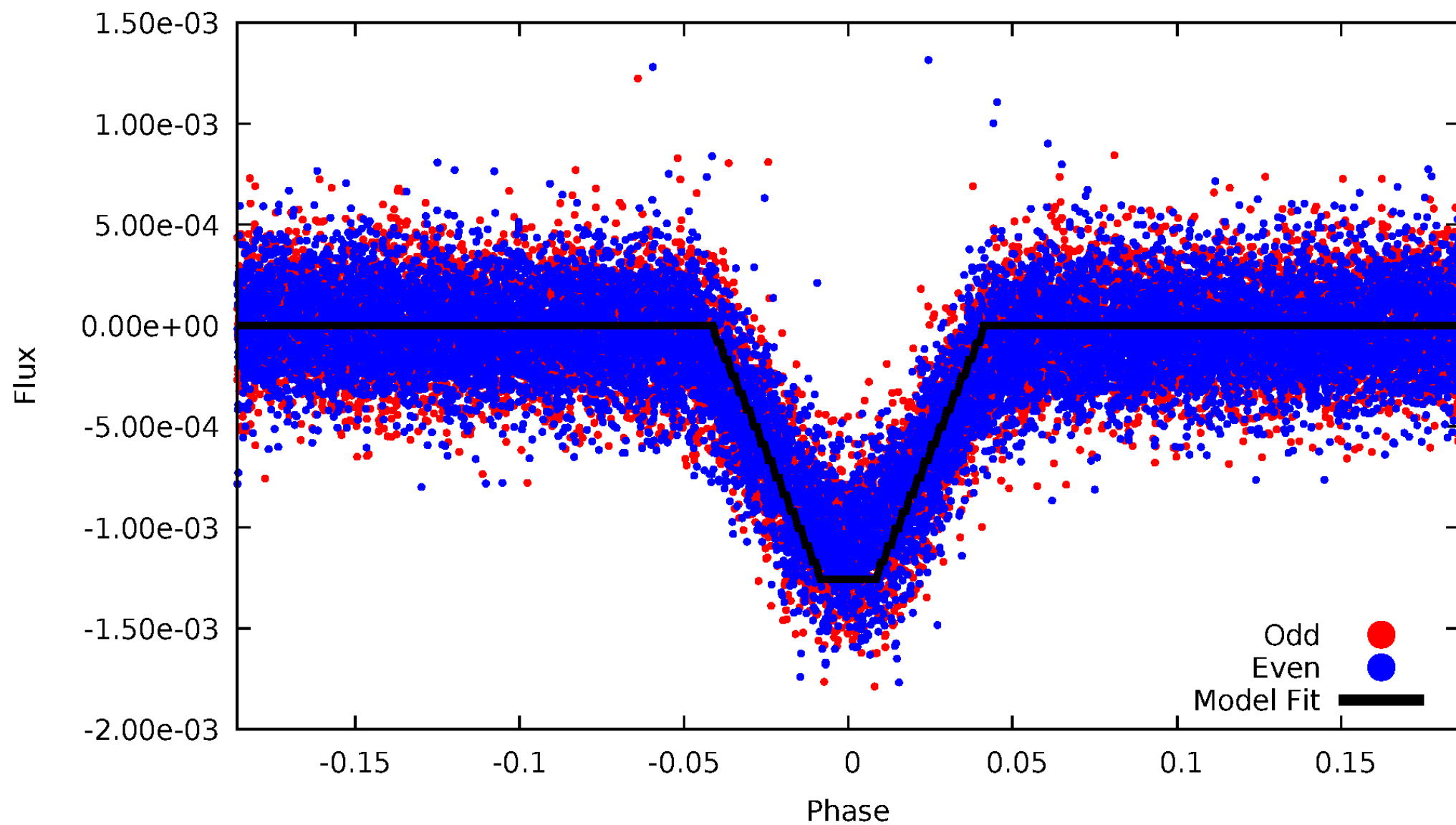
DV Odd/Even

TCE 007769072-02



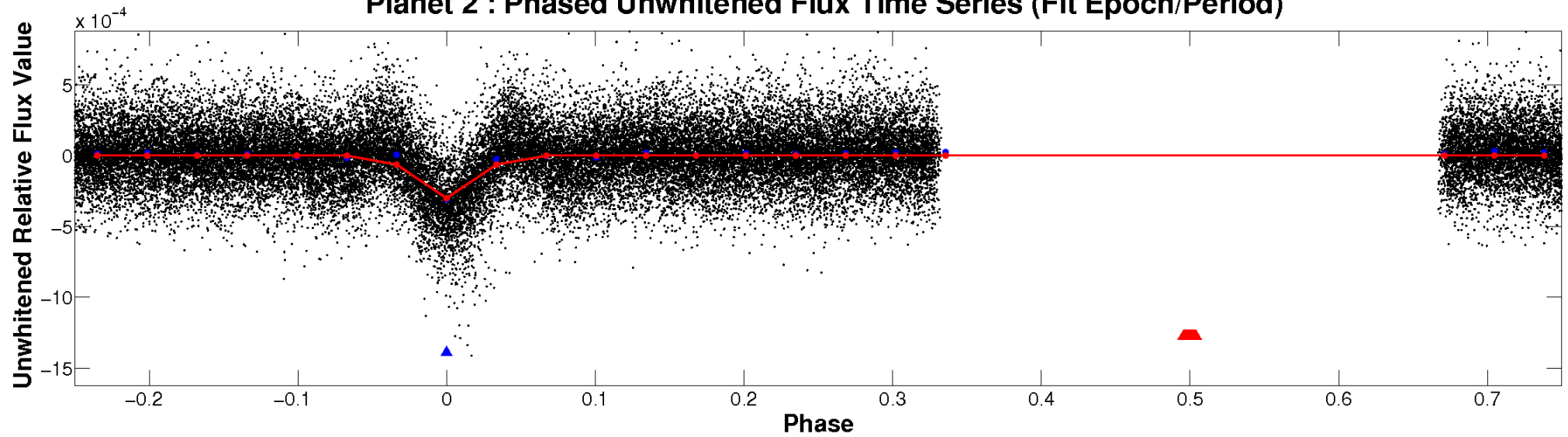
ALT Odd/Even

TCE 007769072-02

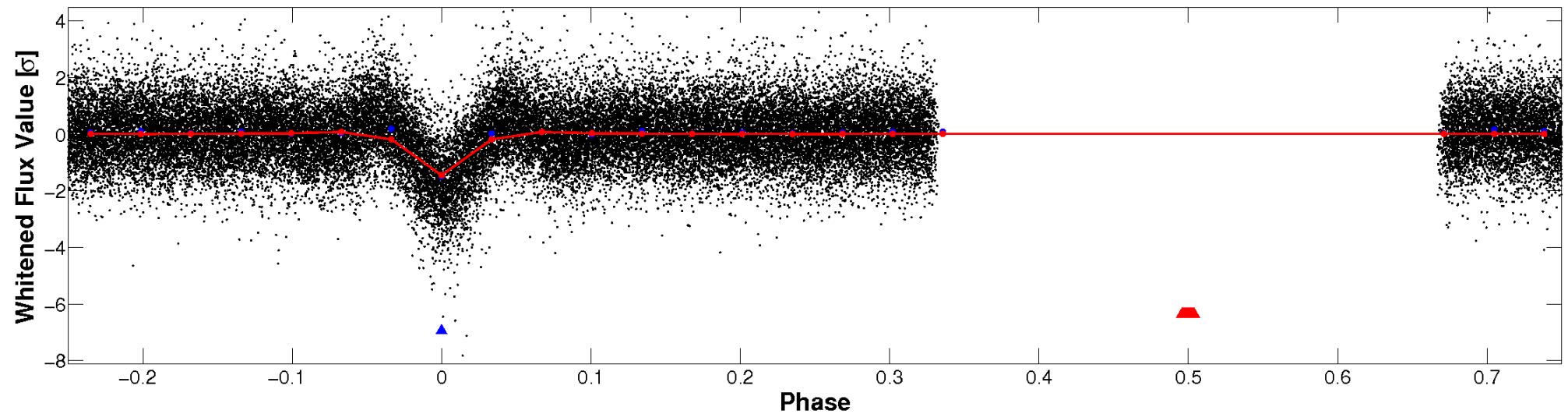


Non-Whitened Vs. Whitened Light Curve

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

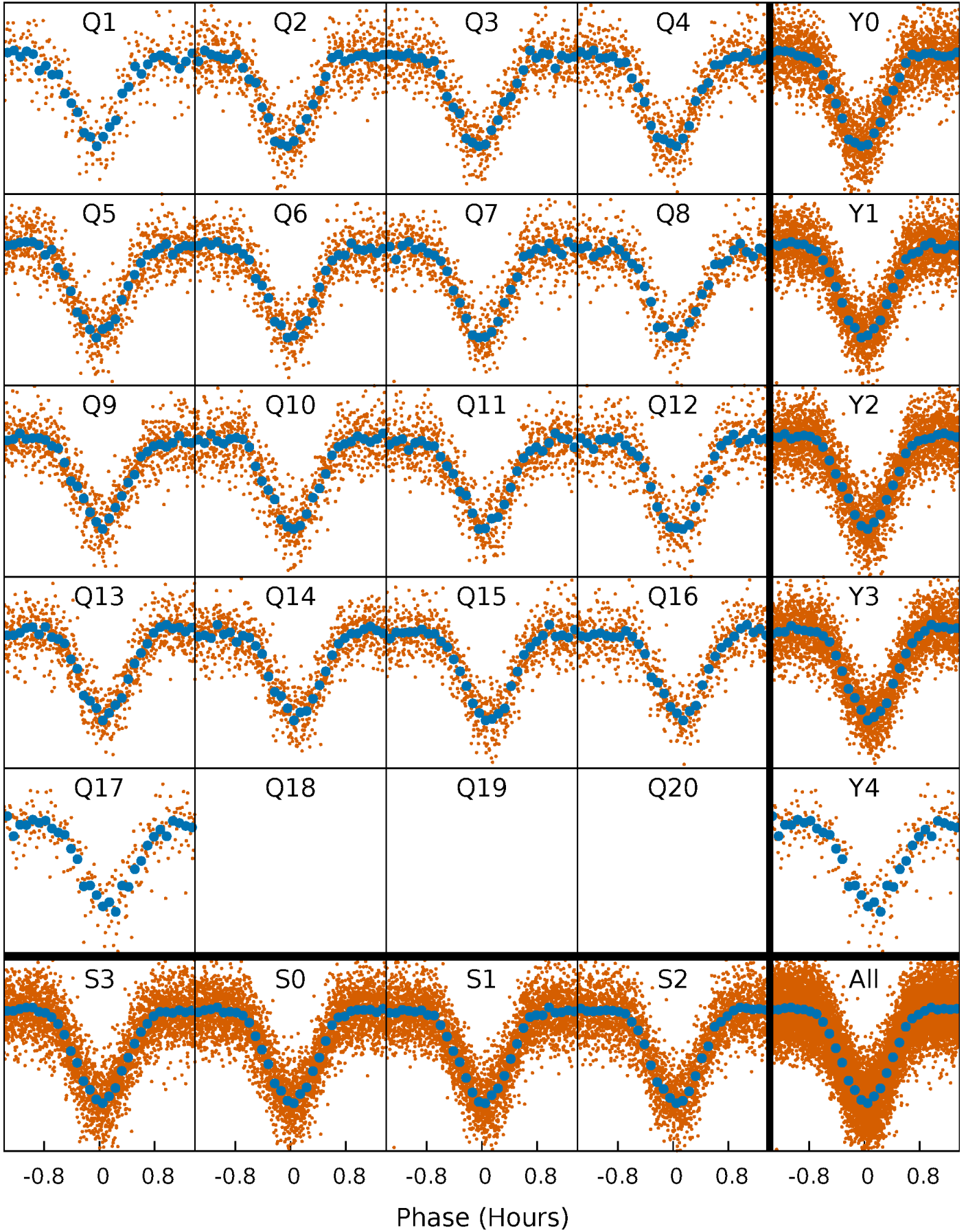


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



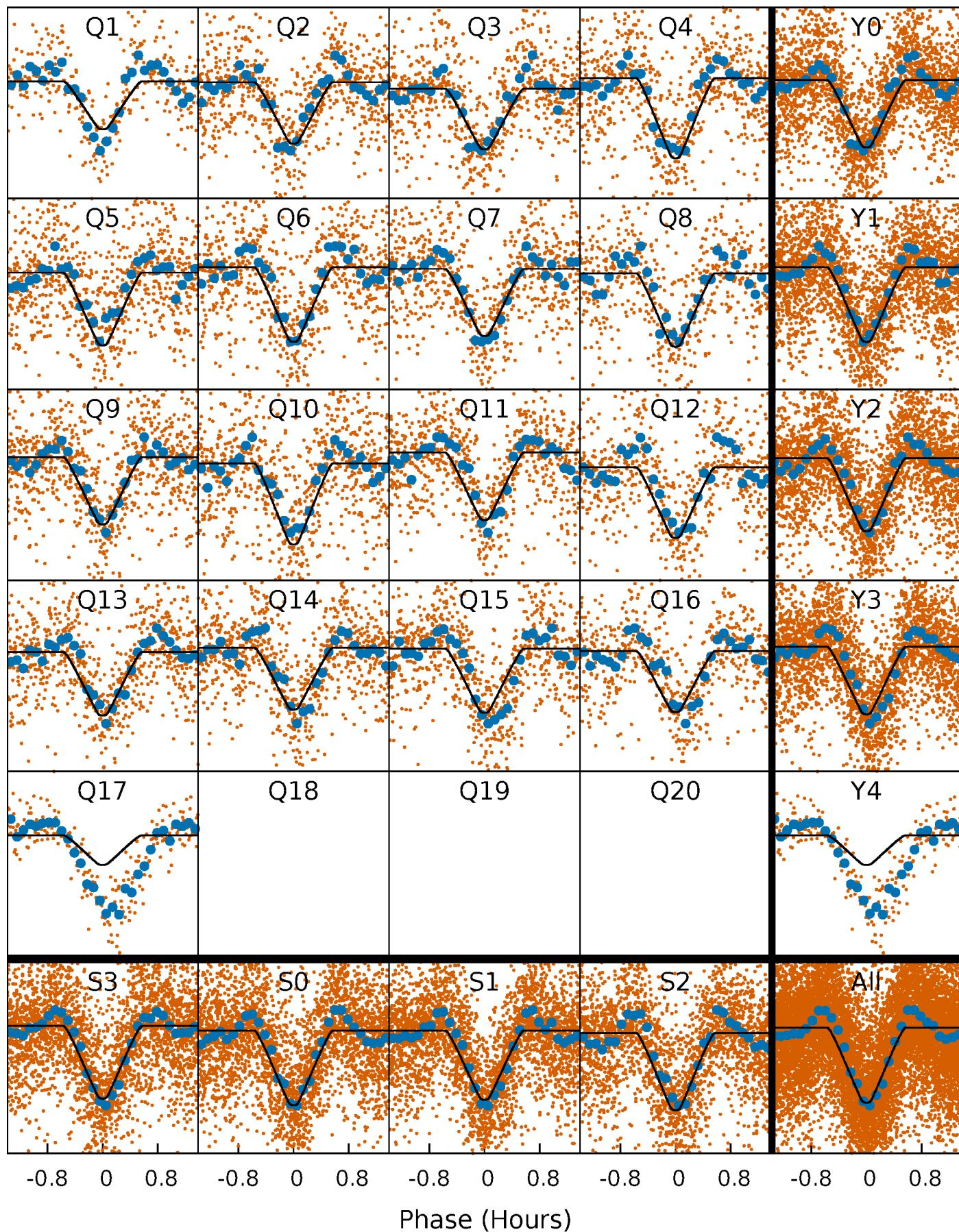
PDC Quarter-Phased Transit Curves

TCE 007769072-02 P= 0.608860 Days $T_0=131.749072$ (BKJD)



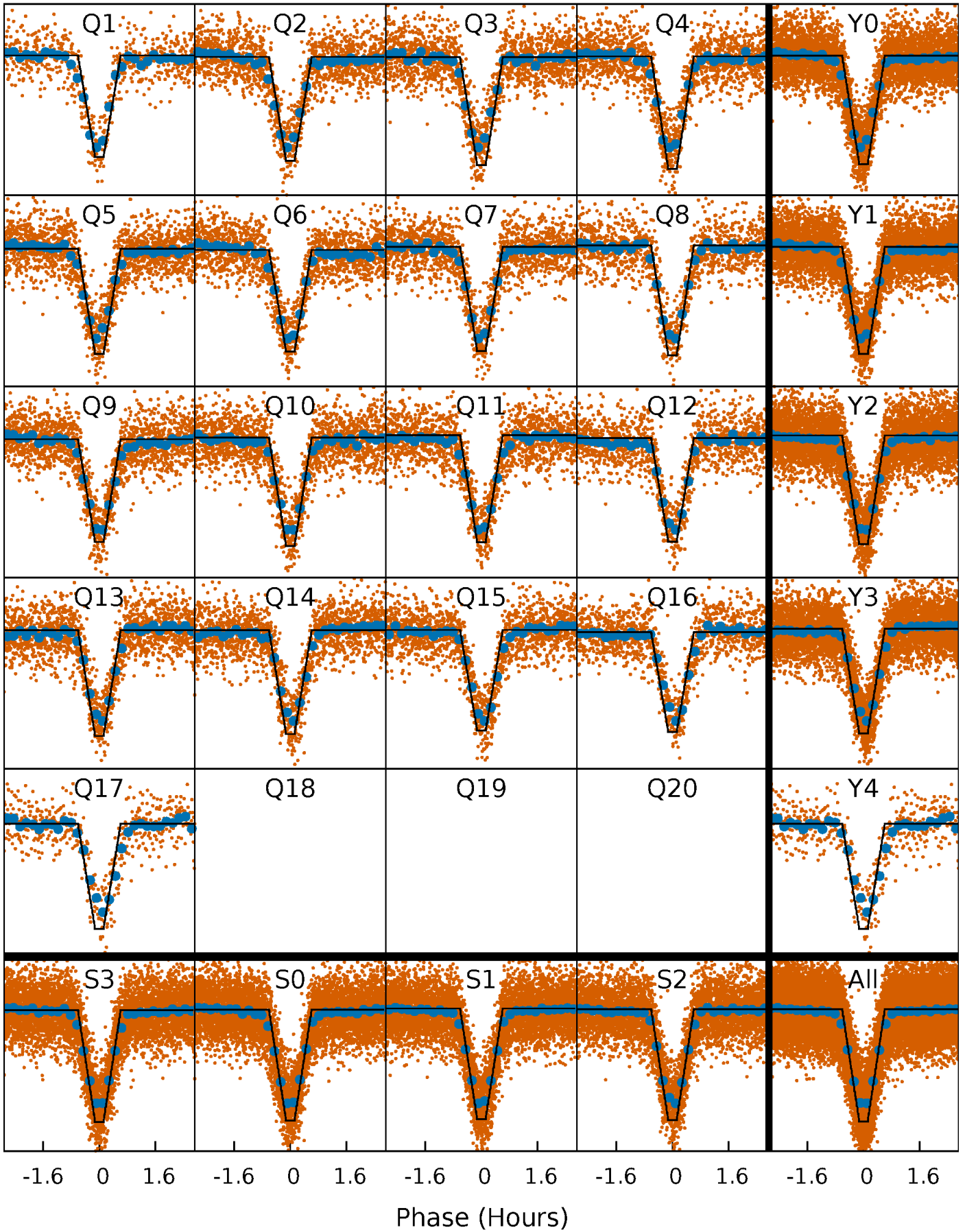
DV Quarter-Phased Transit Curves

TCE 007769072-02 $P = 0.608860$ Days $T_0 = 131.749072$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

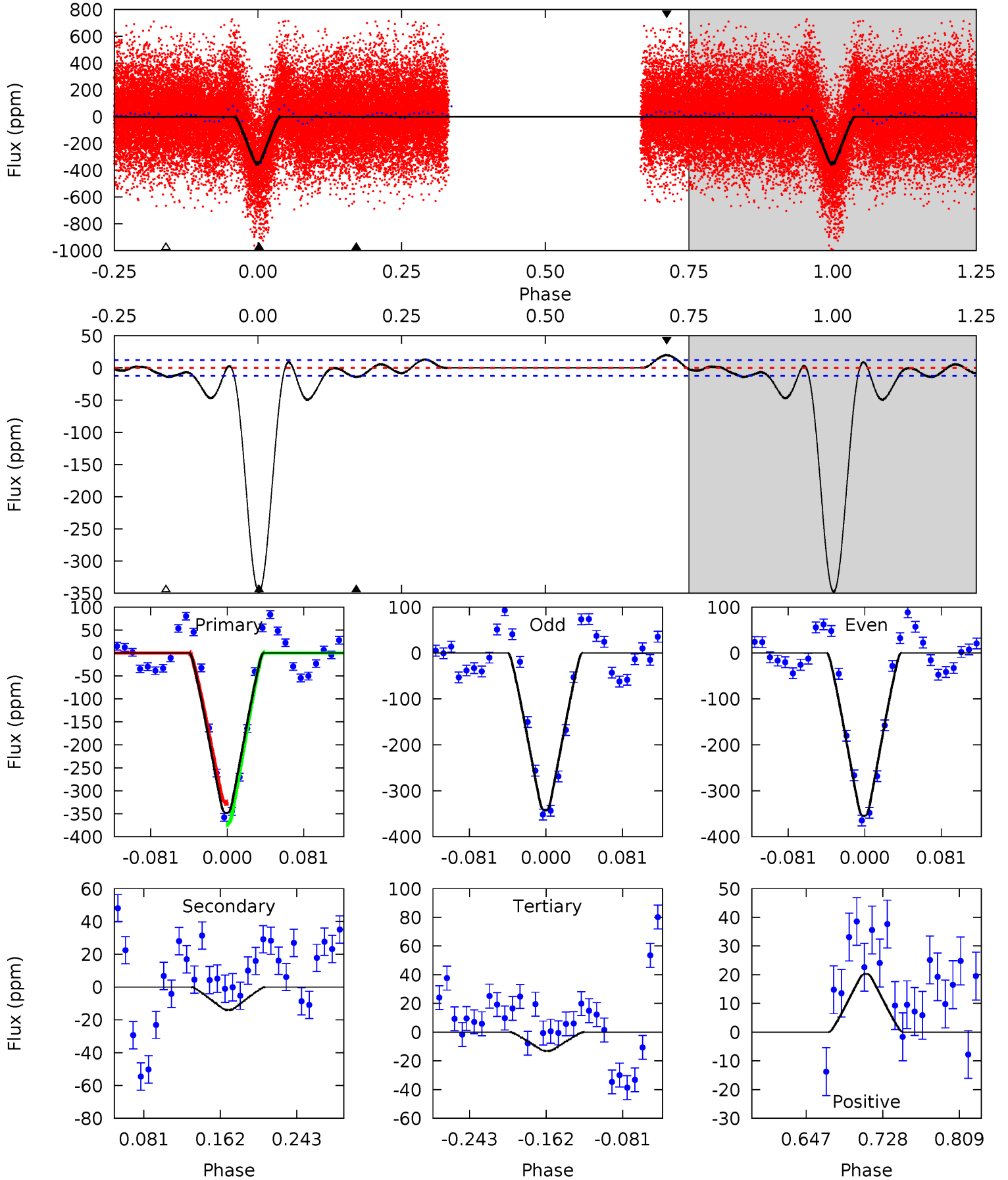
TCE 007769072-02 P= 0.608860 Days $T_0=131.749631$ (BKJD)



DV Model-Shift Uniqueness Test

007769072-02, P = 0.608860 Days, E = 131.140212 Days

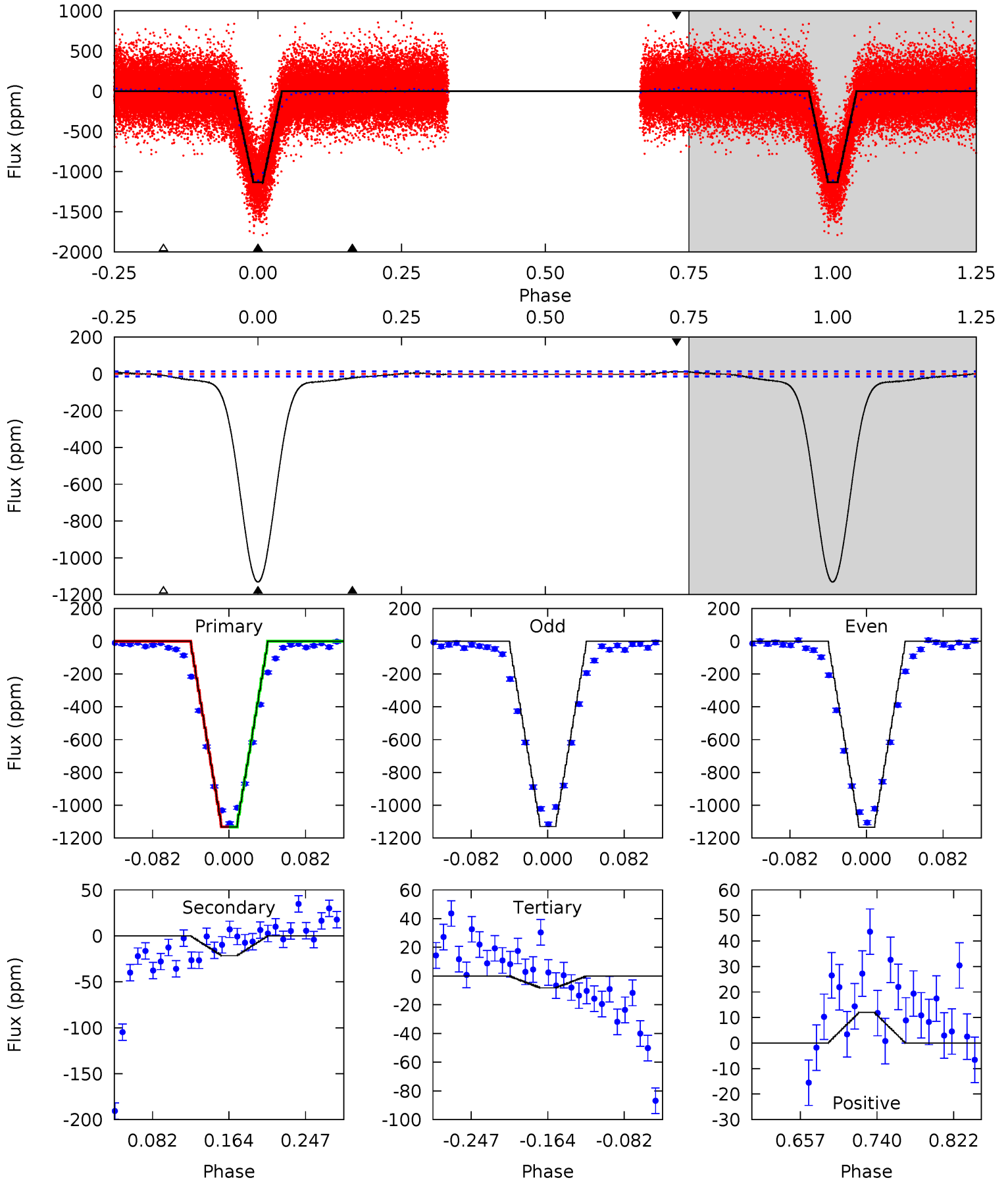
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
130.5	5.23	4.91	7.59	4.61	1.75	5.79	125.6	122.9	0.32	-2.36	2.31	1.02	0.06	8.95



Alt Model-Shift Uniqueness Test

007769072-02, P = 0.608860 Days, E = 131.140771 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
384.7	7.33	2.79	4.07	4.61	1.74	5.27	381.9	380.6	4.54	3.25	0.64	1.00	0.01	0.21



Stellar Parameters For KIC 007769072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5022^{+125}_{-125}	$3.311^{+0.360}_{-0.270}$	$-0.160^{+0.250}_{-0.250}$	$4.167^{+1.539}_{-1.539}$	$1.298^{+0.180}_{-0.335}$	$0.025^{+0.066}_{-0.015}$
	+2%/-2%	+11%/-8%	+156%/-156%	+37%/-37%	+14%/-26%	+261%/-57%
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 007769072-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 3	$9.58^{+2.74}_{-2.47}$	5116^{+522}_{-584}	-4289^{+393}_{-347}	$0.019^{+0.014}_{-0.008}$
Alt.	-22 ± 3	$15.96^{+3.91}_{-3.40}$	5102^{+563}_{-498}	-4305^{+331}_{-380}	$0.011^{+0.007}_{-0.004}$

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

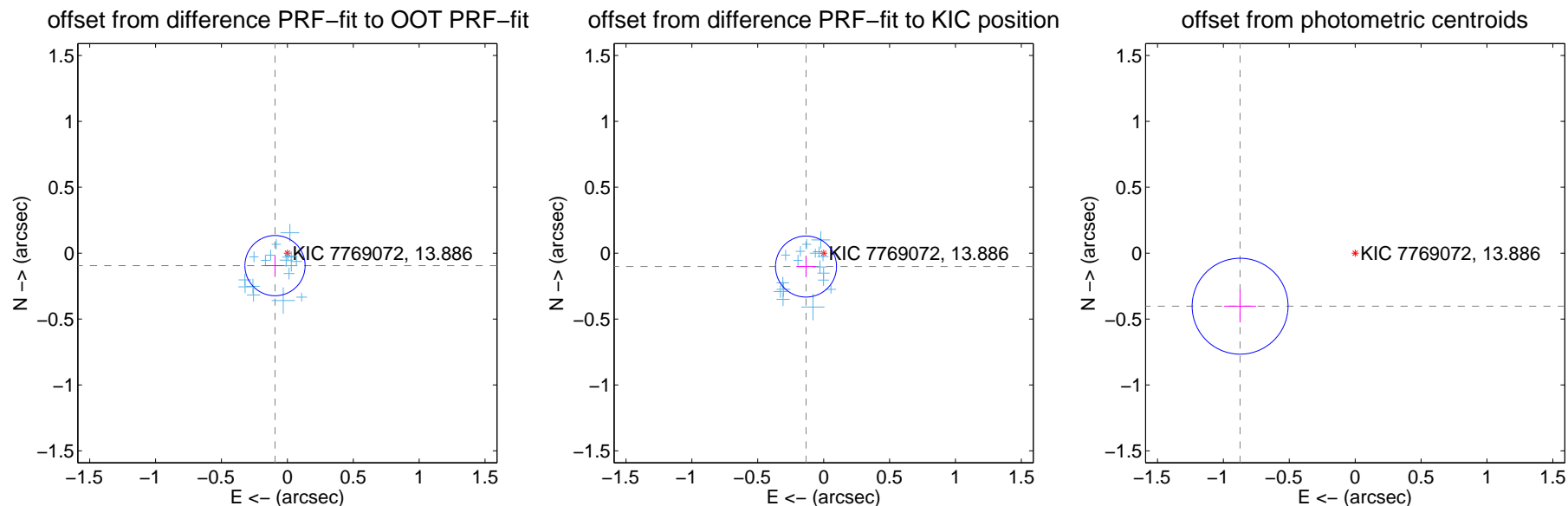
DV Centroid Data

Supplemental centroid analysis for 007769072-02. Kepler magnitude: 13.89. Transit SNR 71.55

There are 17 quarters with good PRF difference image offsets

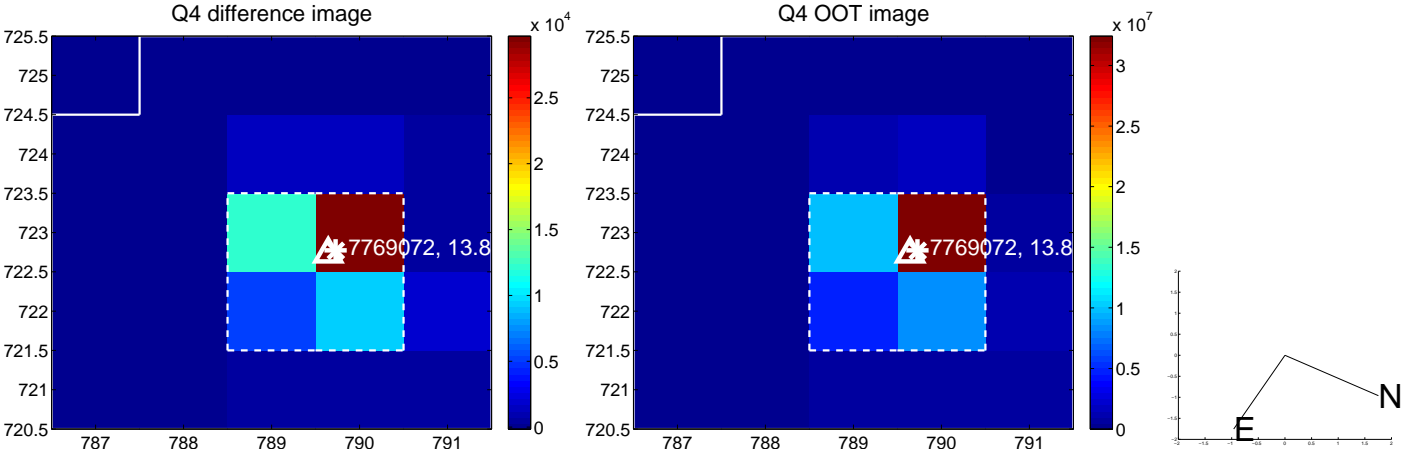
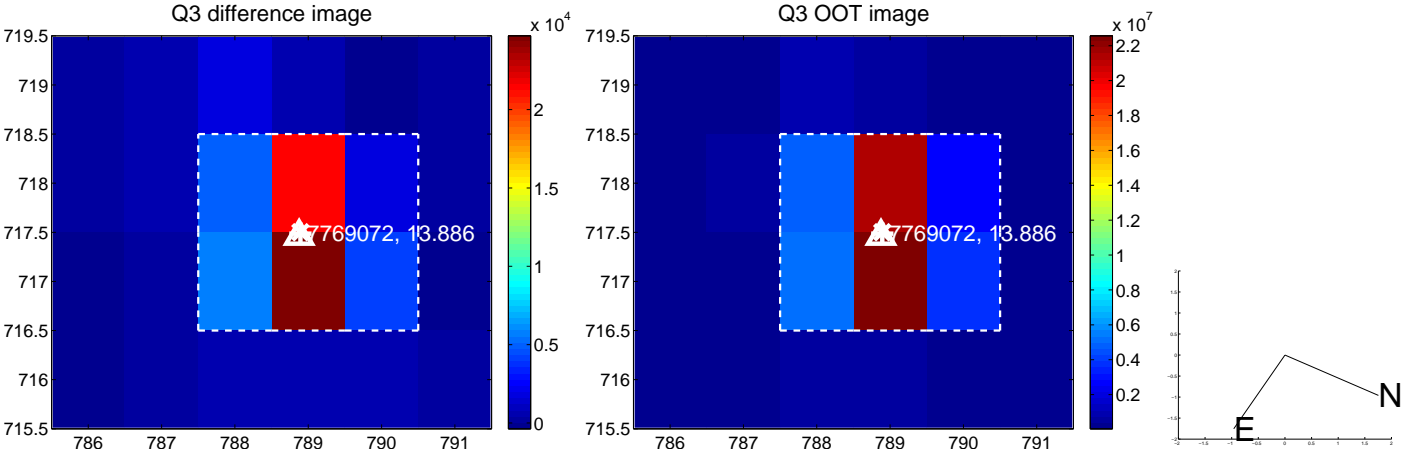
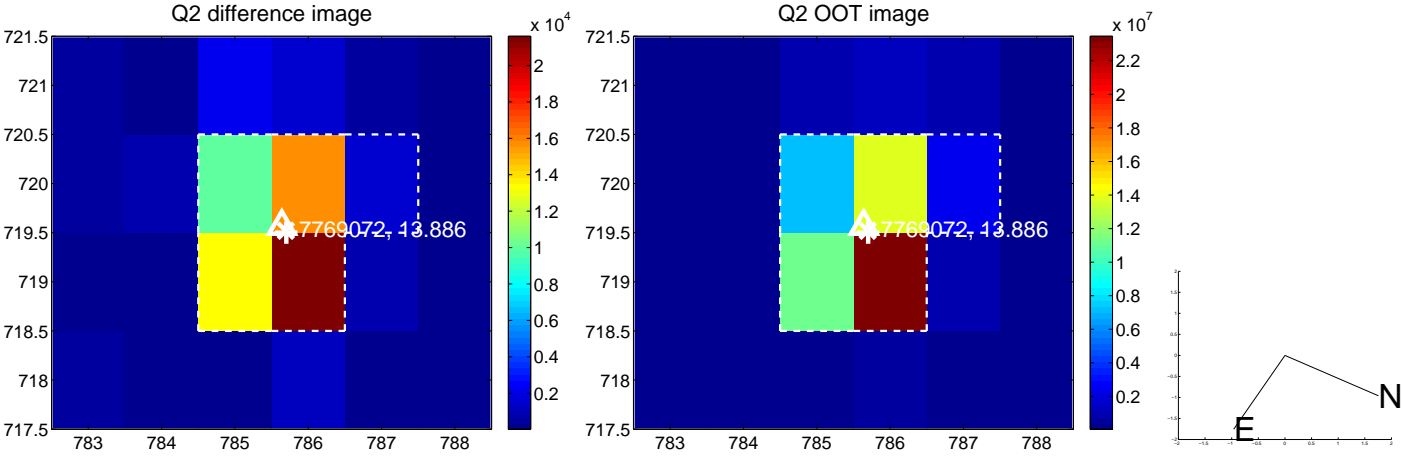
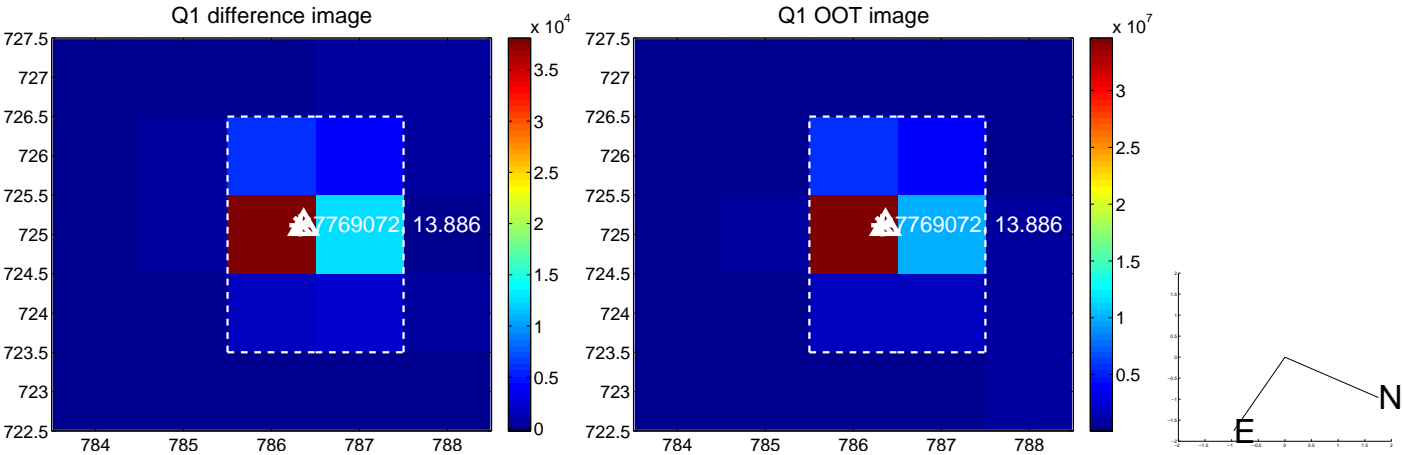
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.133 ± 0.076	1.75	0.094 ± 0.074	-0.095 ± 0.075
PRF-fit source offset from KIC position	0.168 ± 0.077	2.18	0.134 ± 0.074	-0.102 ± 0.077
photometric centroid source offset	0.96 ± 0.12	7.93	0.87 ± 0.12	-0.40 ± 0.12

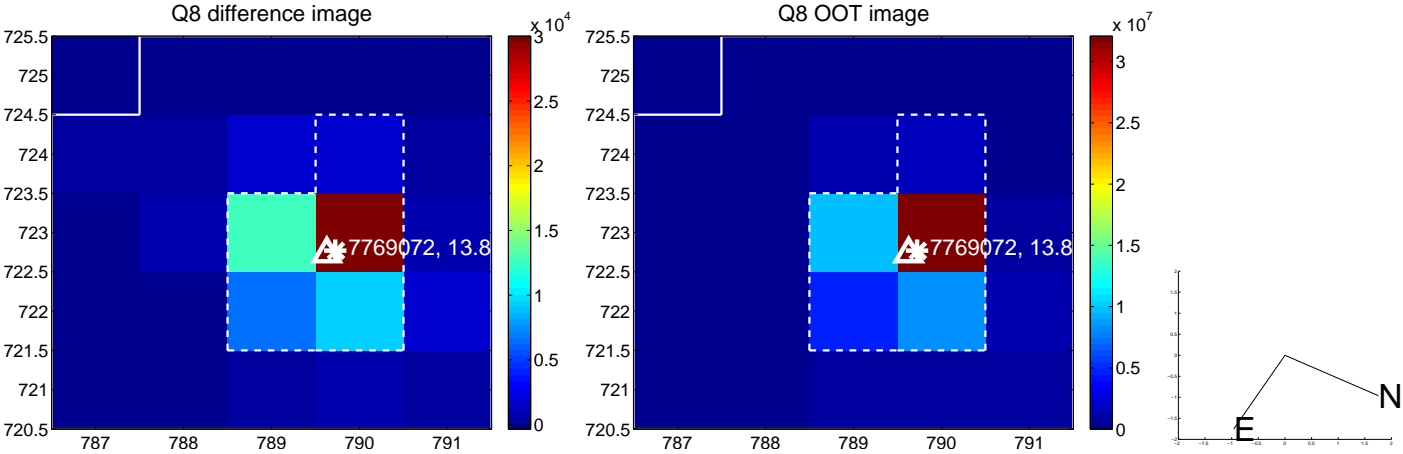
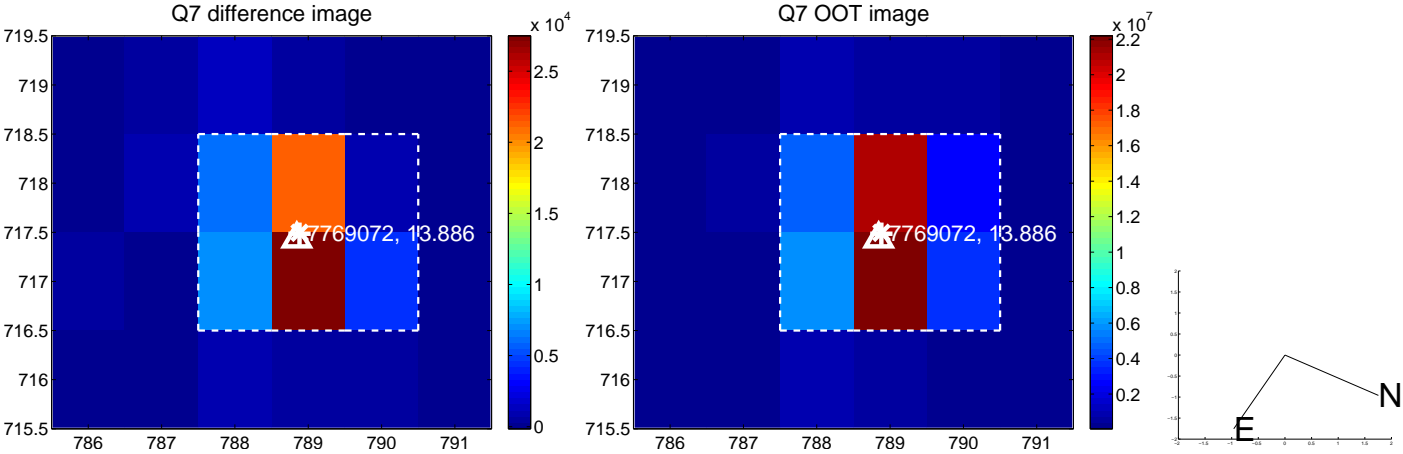
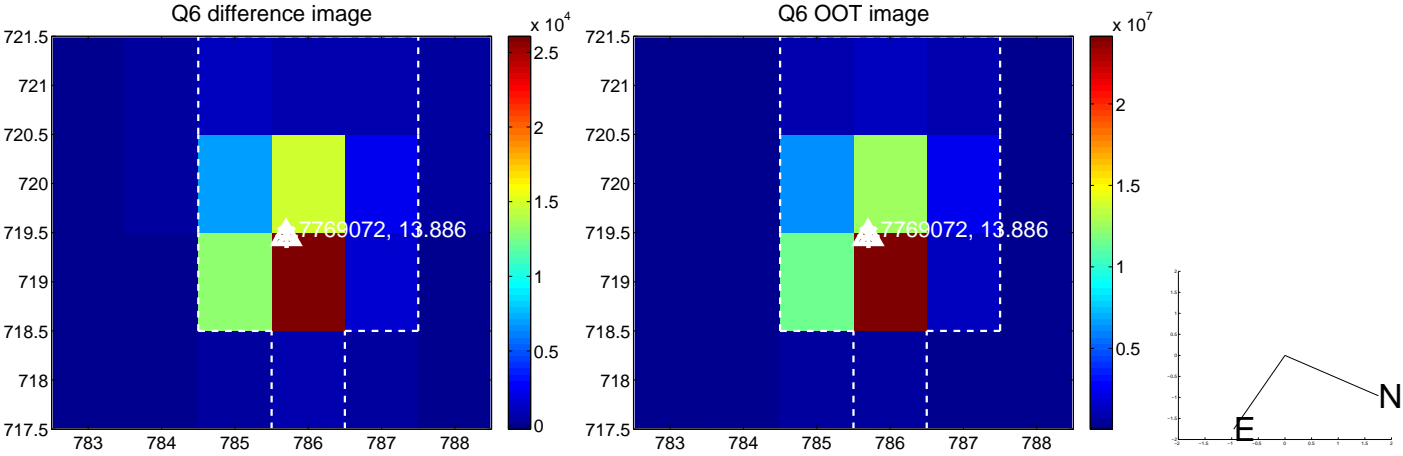
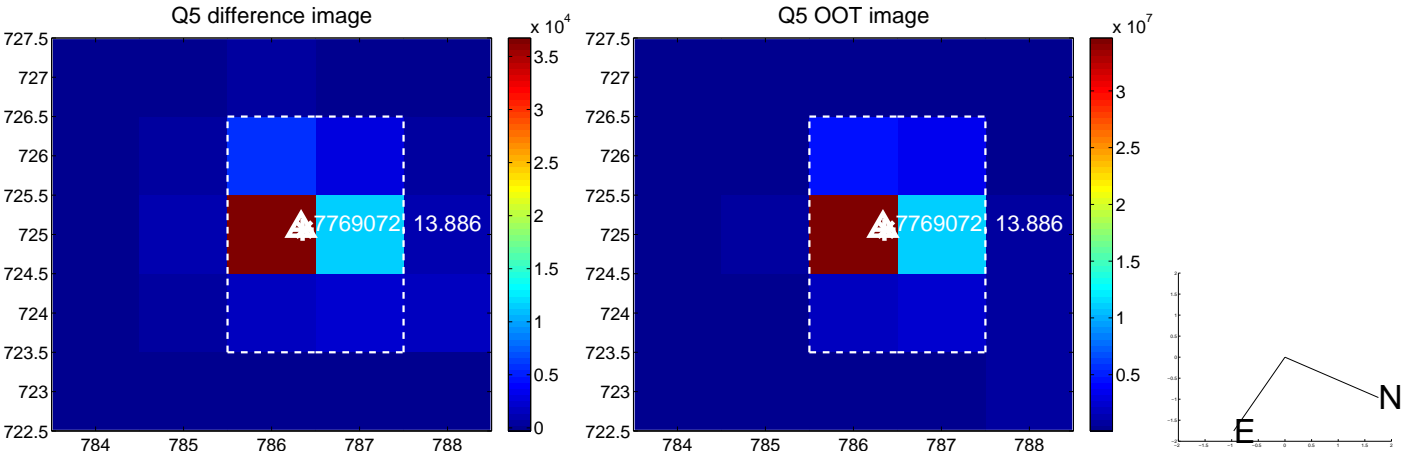


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

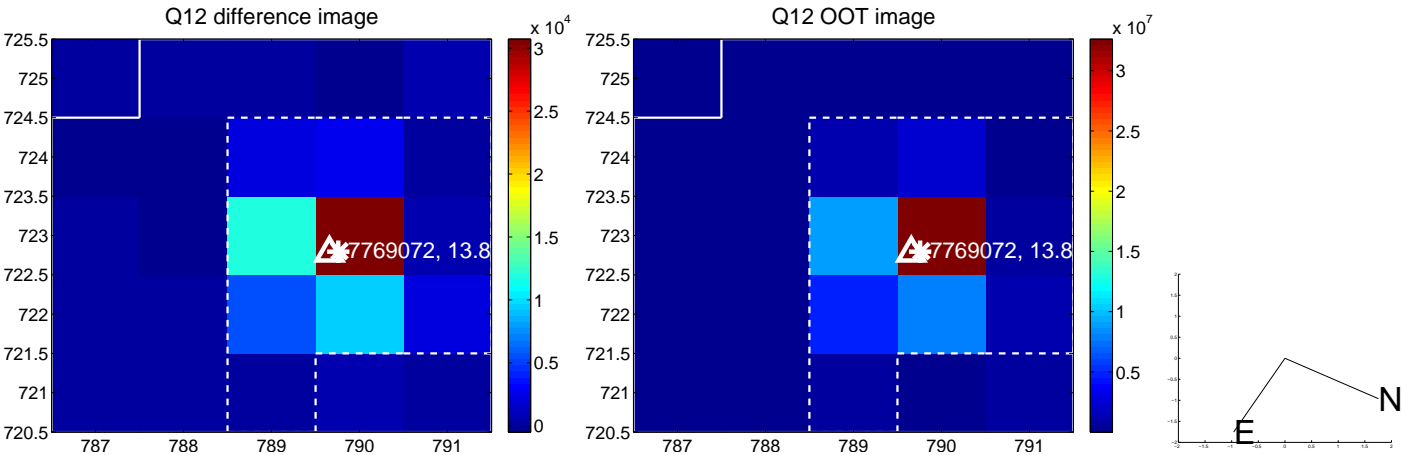
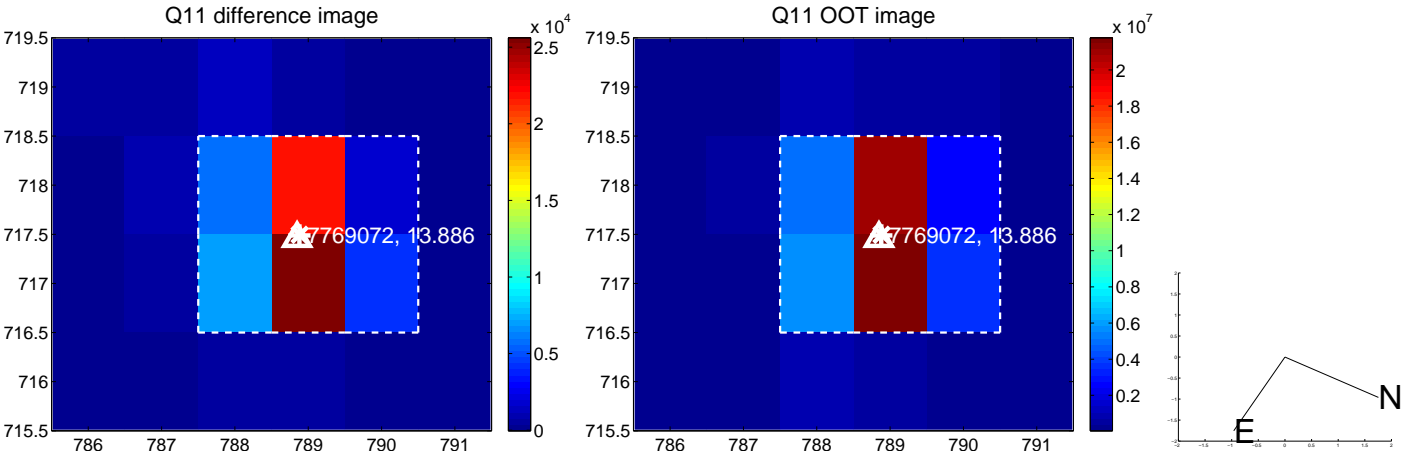
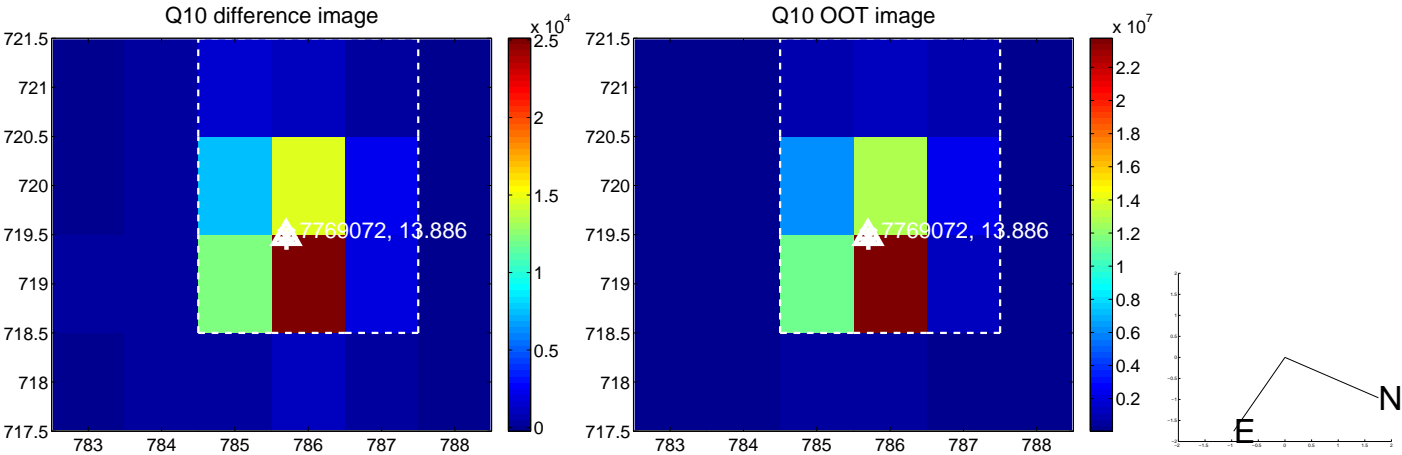
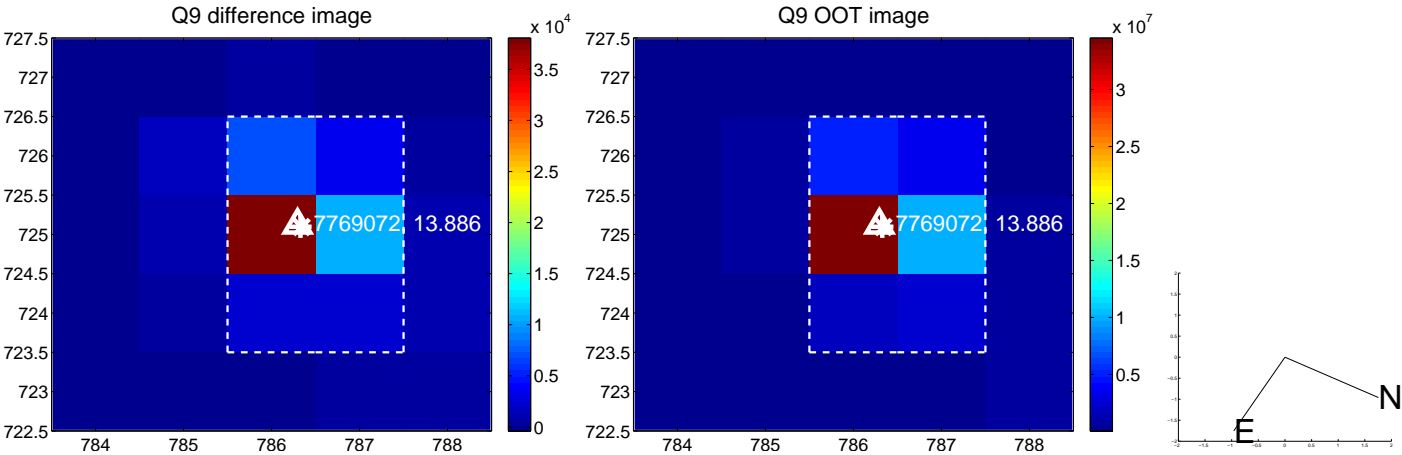
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



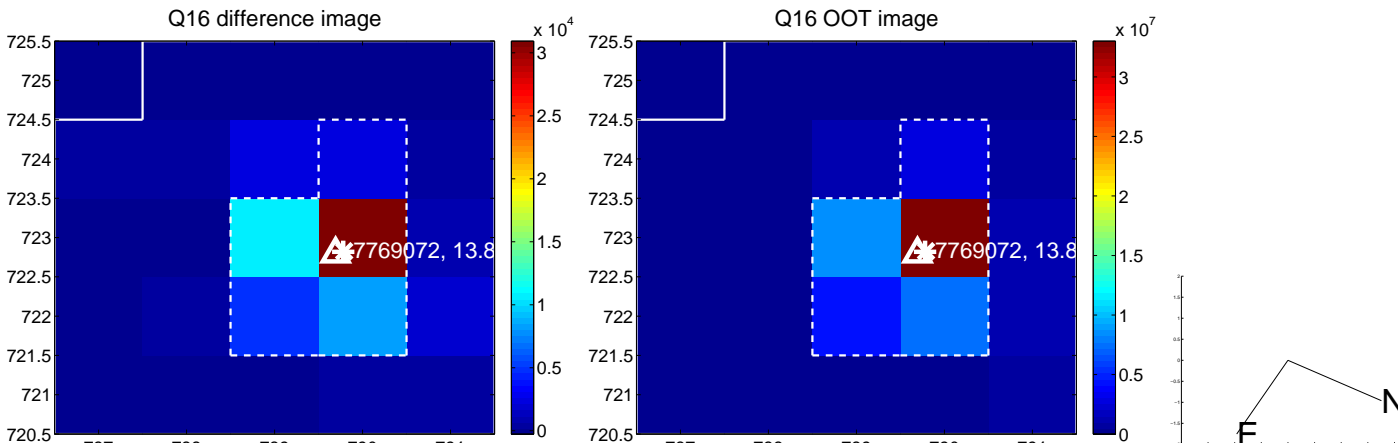
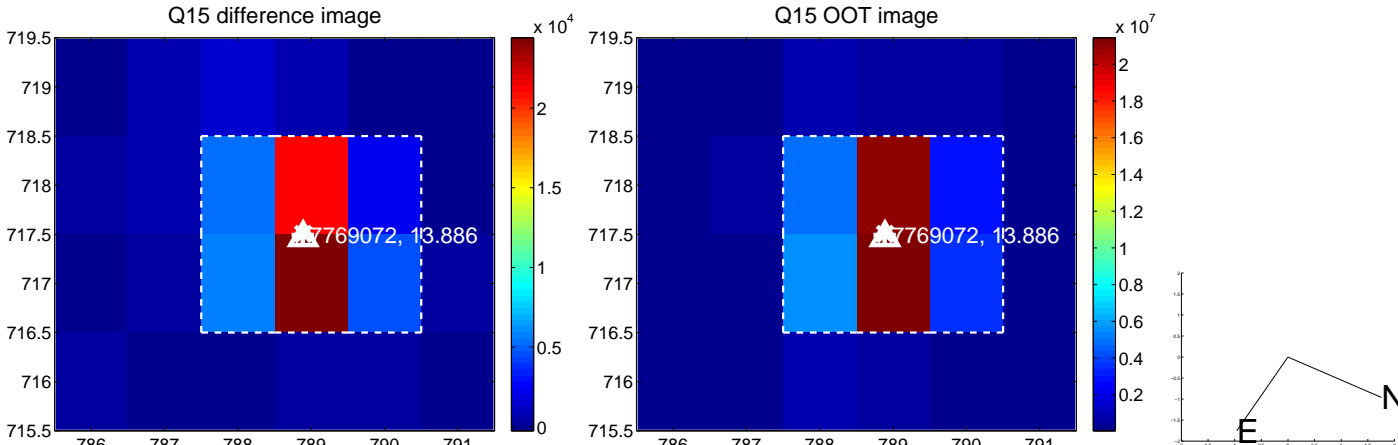
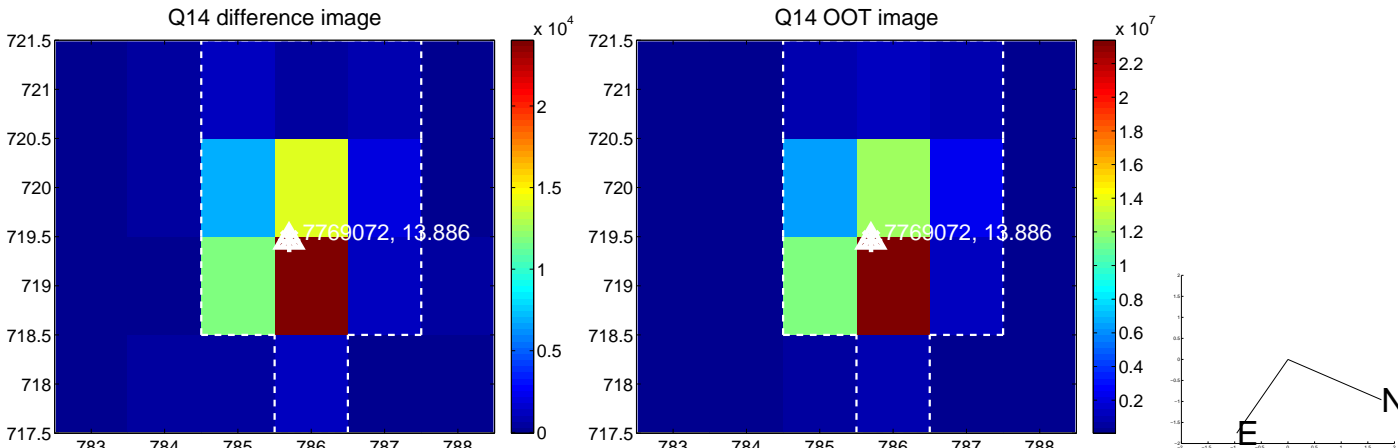
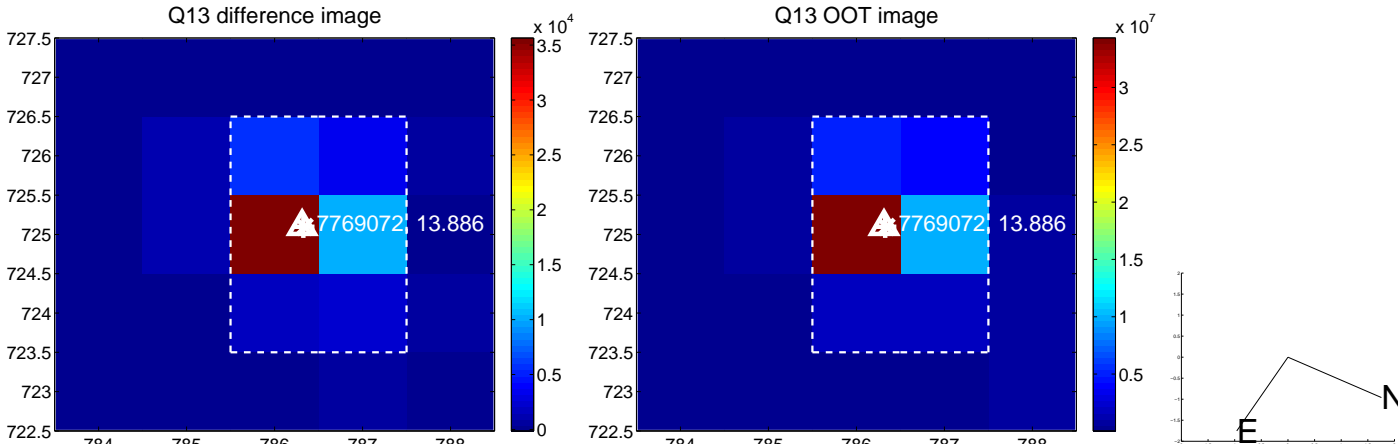
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



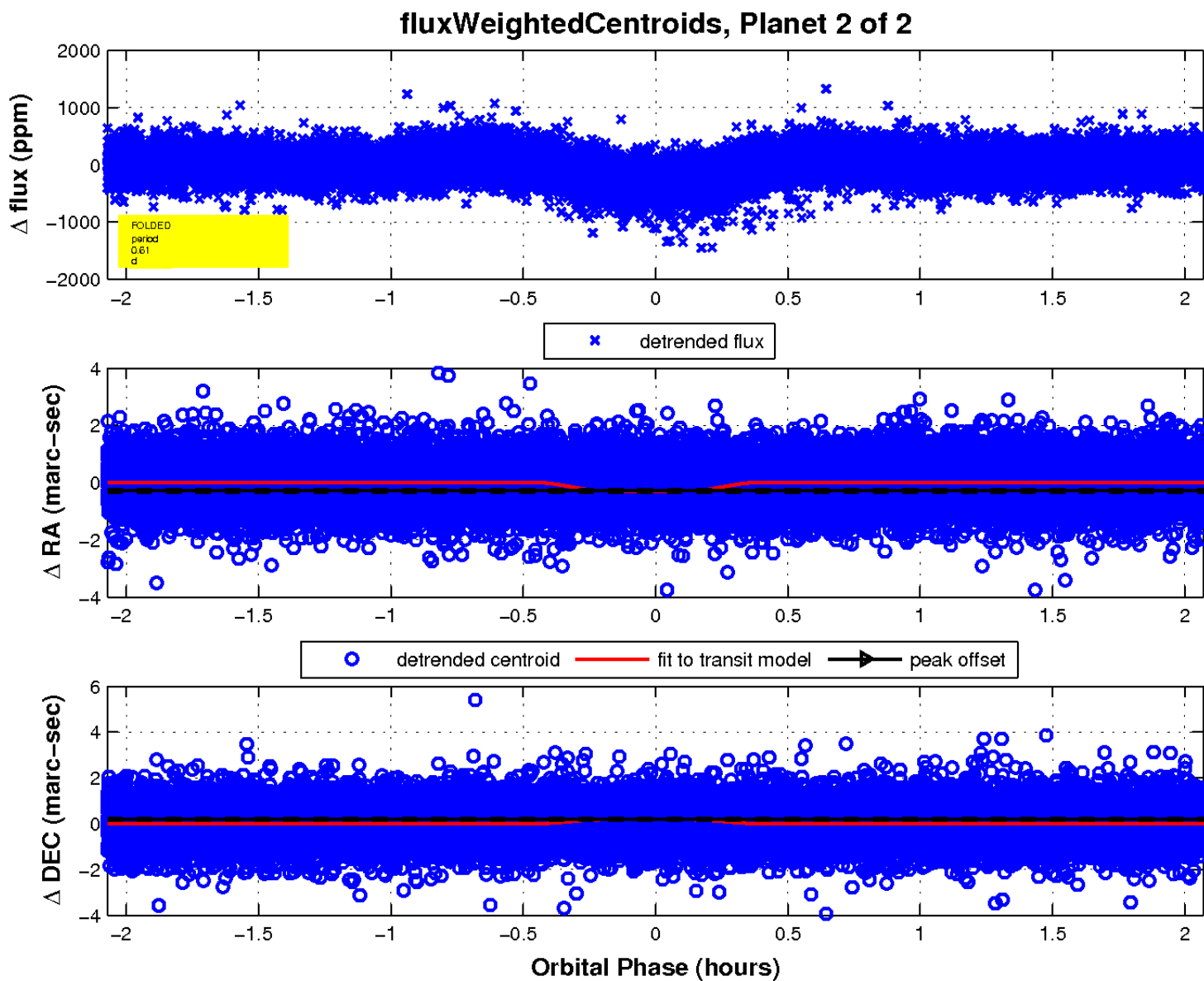
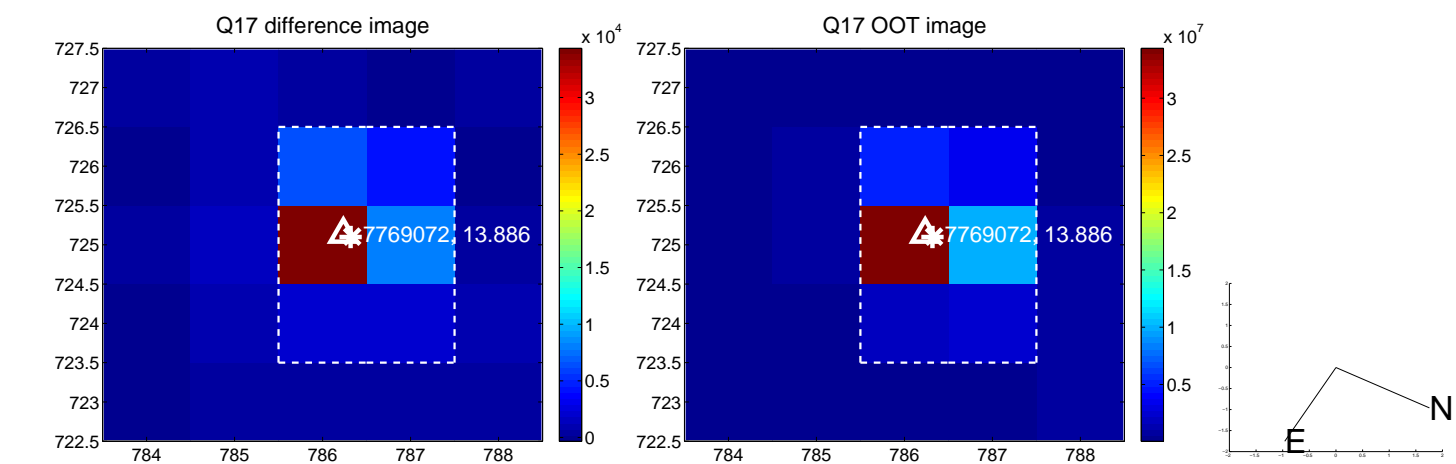
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

