

KIC 010789273

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})
010789273-01	OBS	No	0.959825	131.908525	2.7	0.850	284.6	0.0	3.03	8572	0.65	77204.74
010789273-02	OBS	No	0.960553	131.984952	10334.0	2.500	281.5	-1.0	3.03	8572	31.35	77126.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010789273-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010789273-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

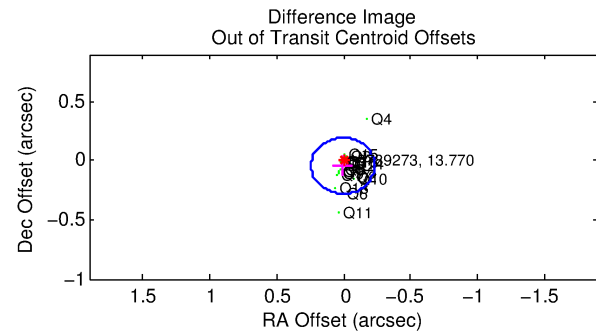
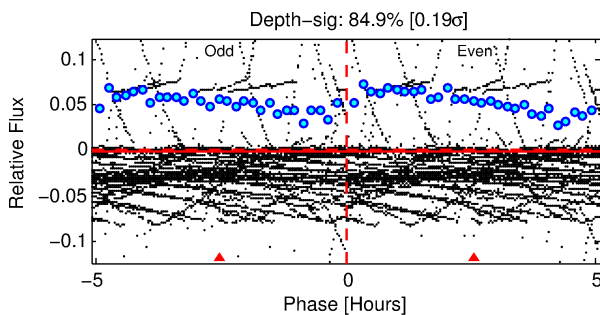
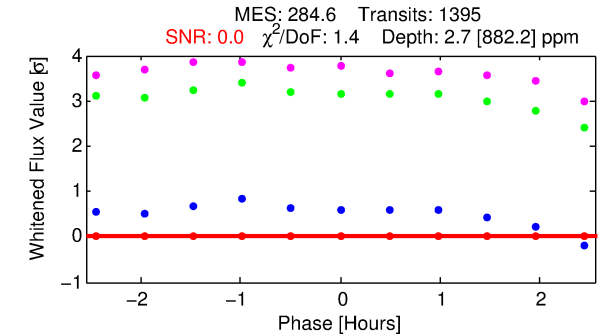
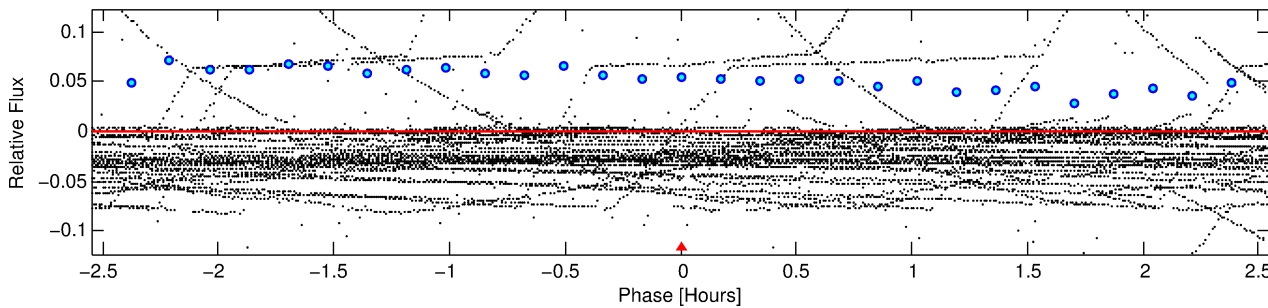
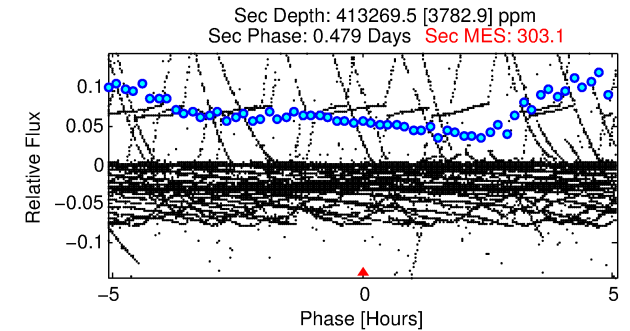
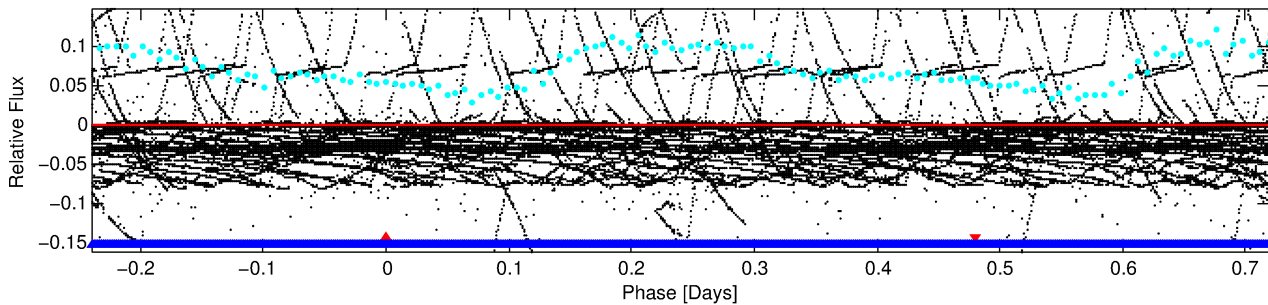
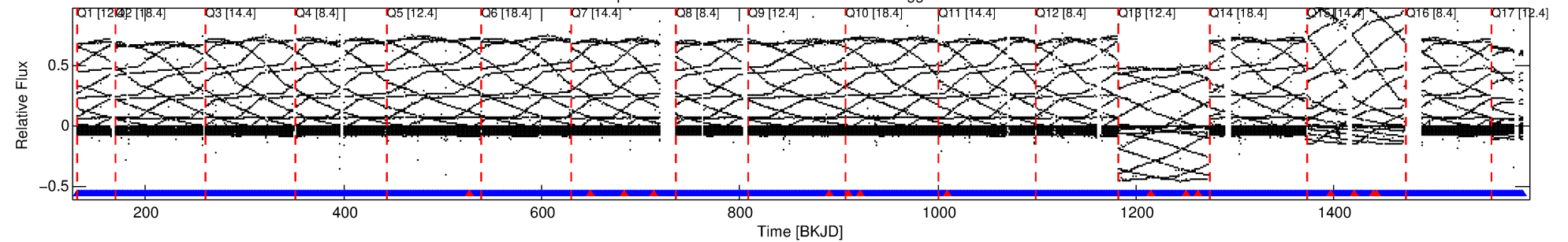
Ephemeris Match Information For 010789273-01

No Significant Match Found

DV One-Page Summary

KIC: 10789273 Candidate: 1 of 2 Period: 0.960 d

Kp: 13.77 R*: 3.03 Rs Teff: 8572.0 K Logg: 3.78 Fe/H: -0.200



DV Fit Results:

Period = 0.95983 [0.02513] d
Epoch = 131.9085 [1.9237] BKJD
Rp/R* = 0.0020 [0.3928]
a/R* = 2.14 [1650.18]
b = 0.98 [46.22]
Seff = 77204.74 [57456.64]
Teff = 4250 [791] K
Rp = 0.65 [130.04] Re
a = 0.0240 [0.0105] AU
Ag = 313842.16 [126272743.02] [0.00σ]
Teffp = 155545 [15646460] K [0.01σ]

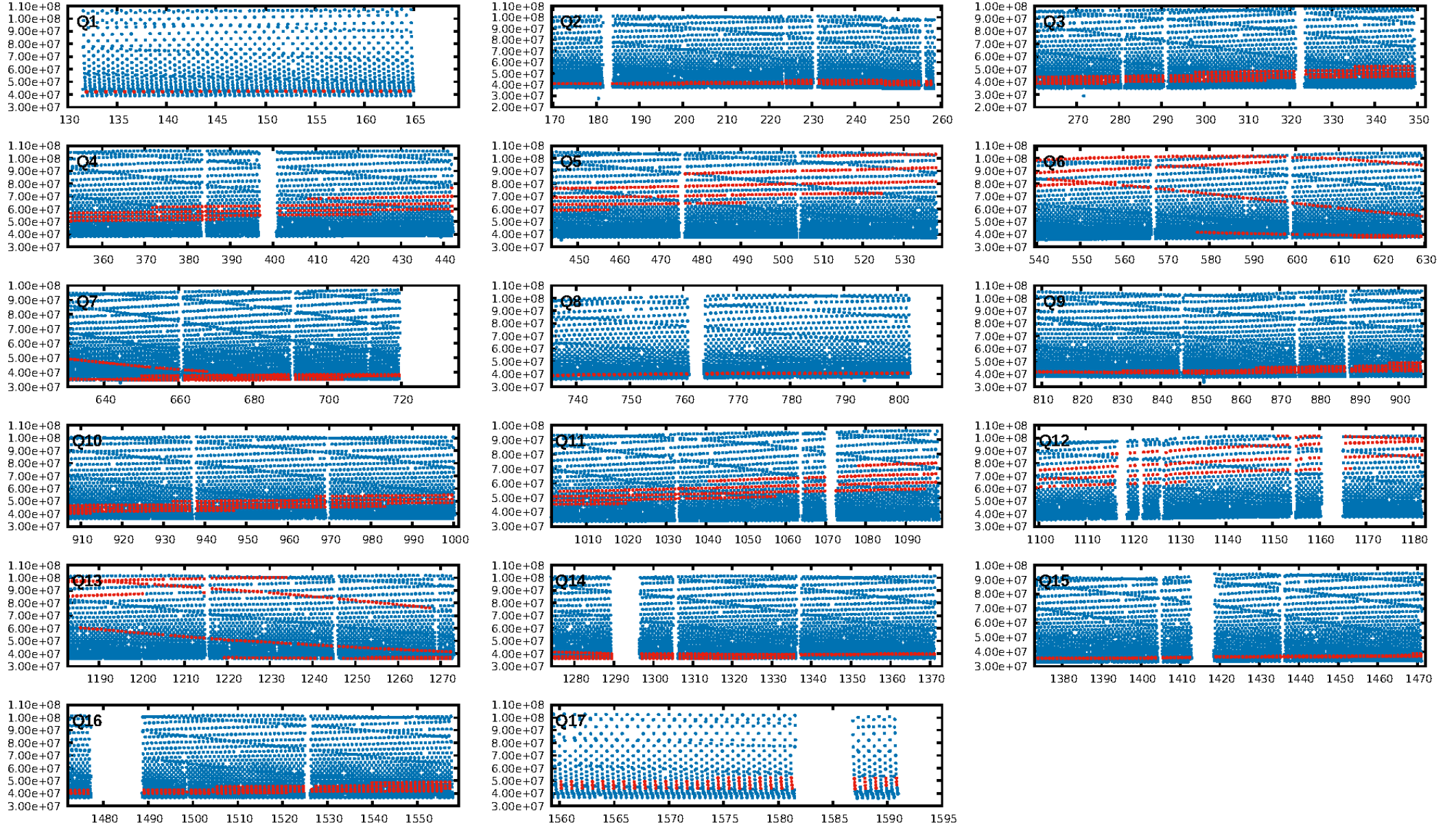
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.5% [0.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1317/1332]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OptOffset-rm: 0.043 arcsec [0.54σ]
KicOffset-rm: 0.022 arcsec [0.30σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.29 [5/17]

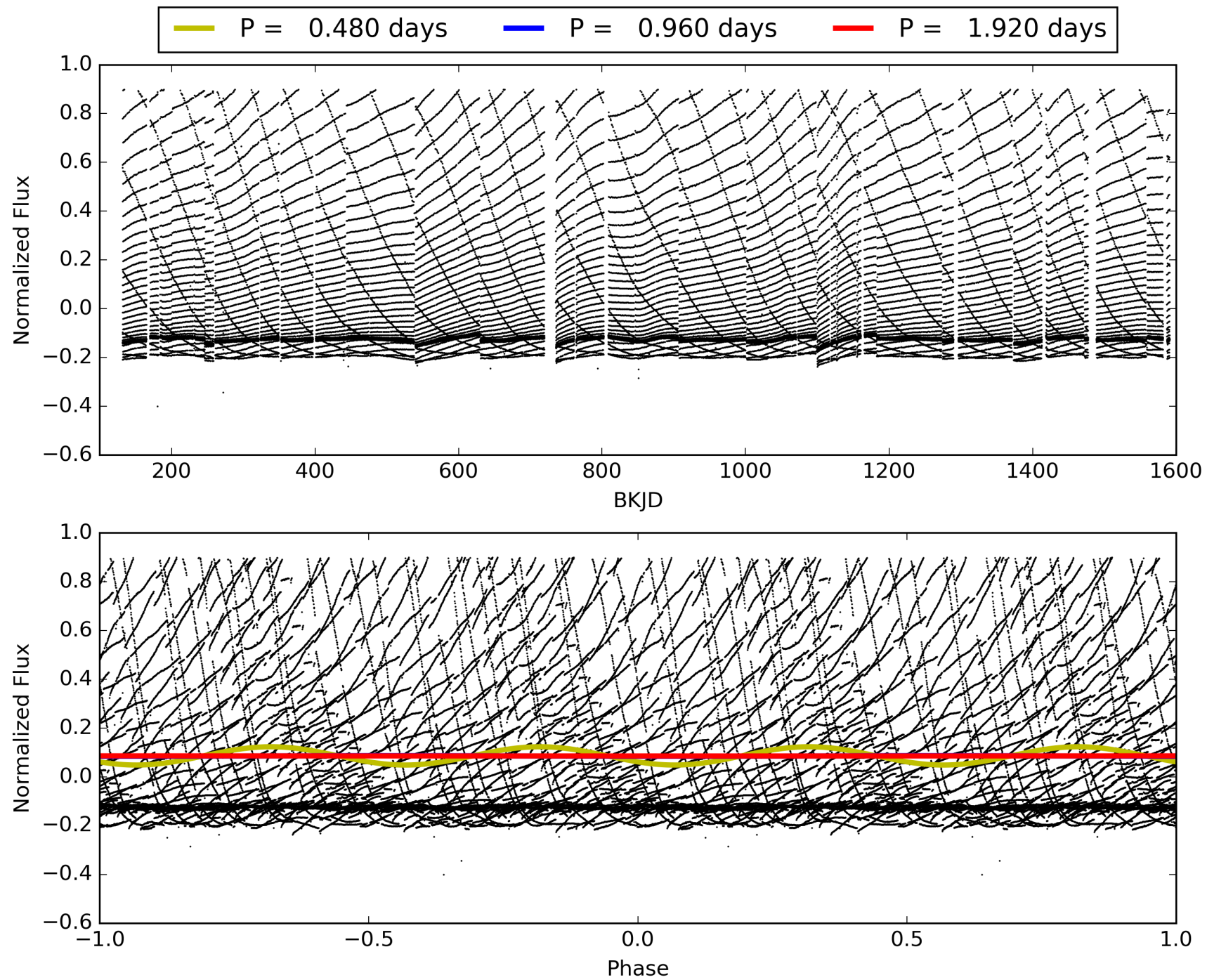
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:31:33 Z

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

TCE 010789273-01, PDC Light Curves

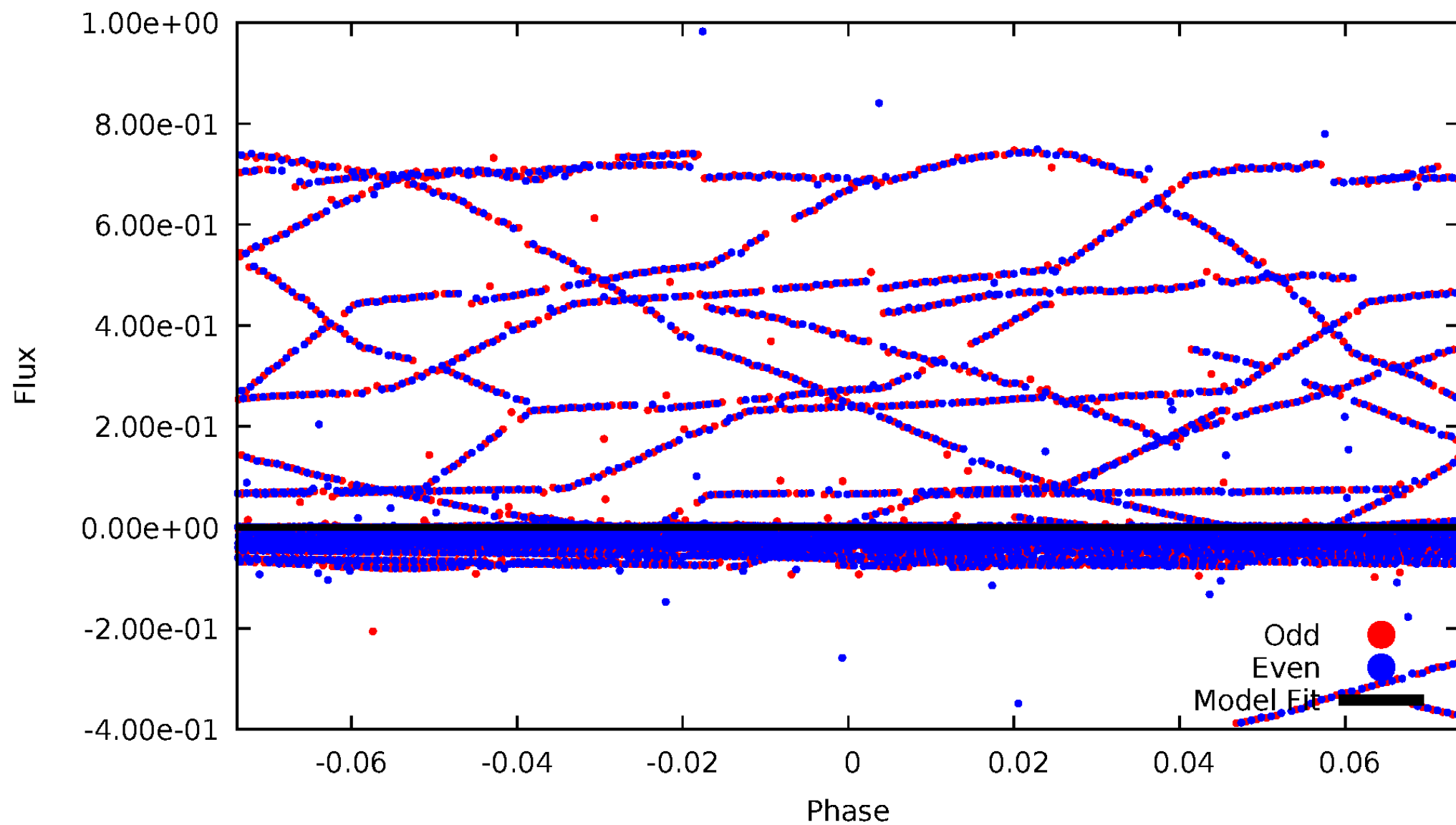


TCE 010789273-01



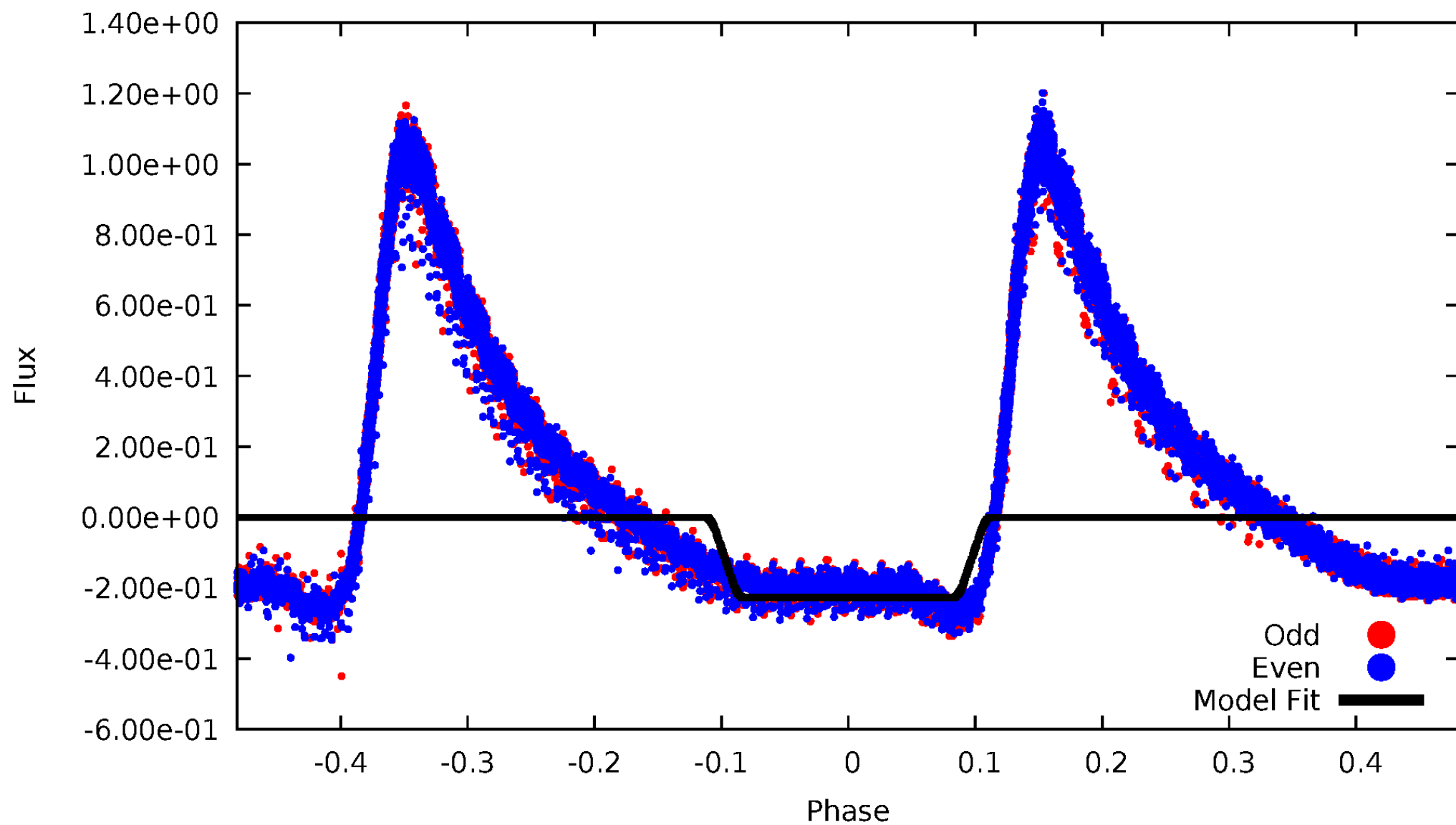
DV Odd/Even

TCE 010789273-01



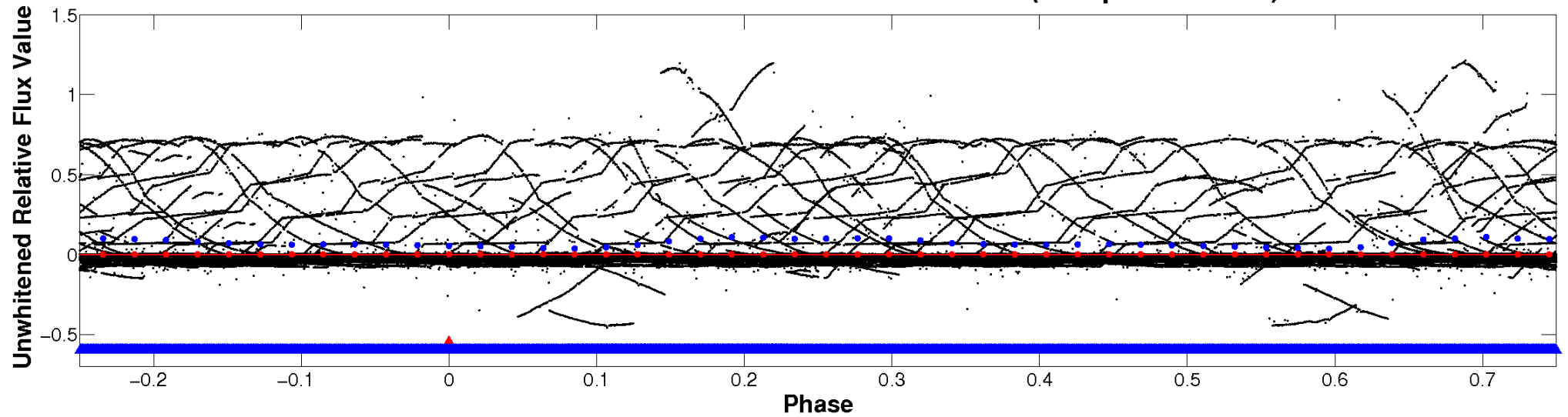
ALT Odd/Even

TCE 010789273-01

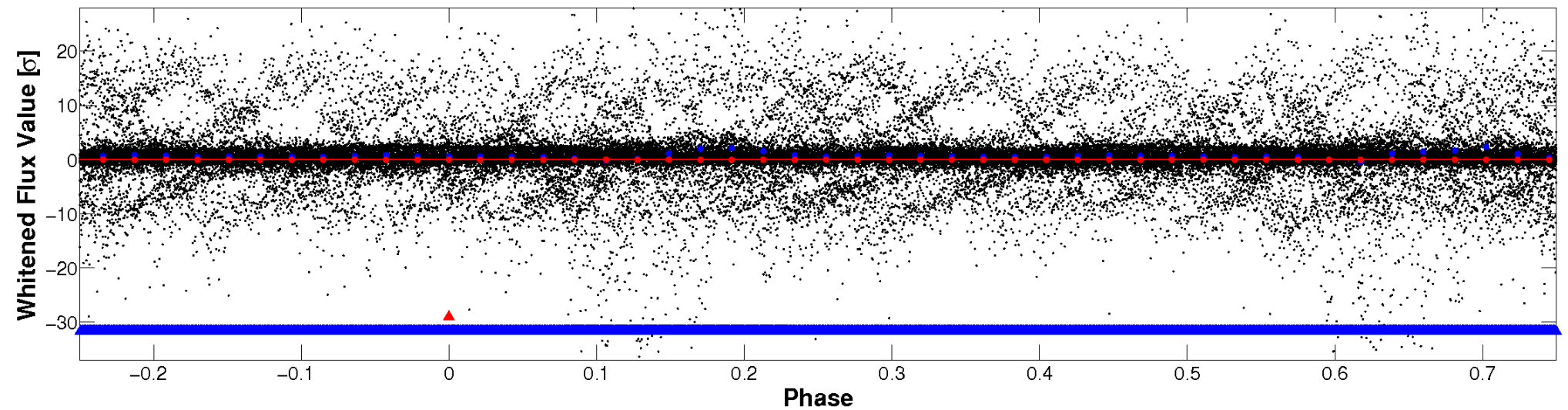


Non-Whitened Vs. Whitened Light Curve

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

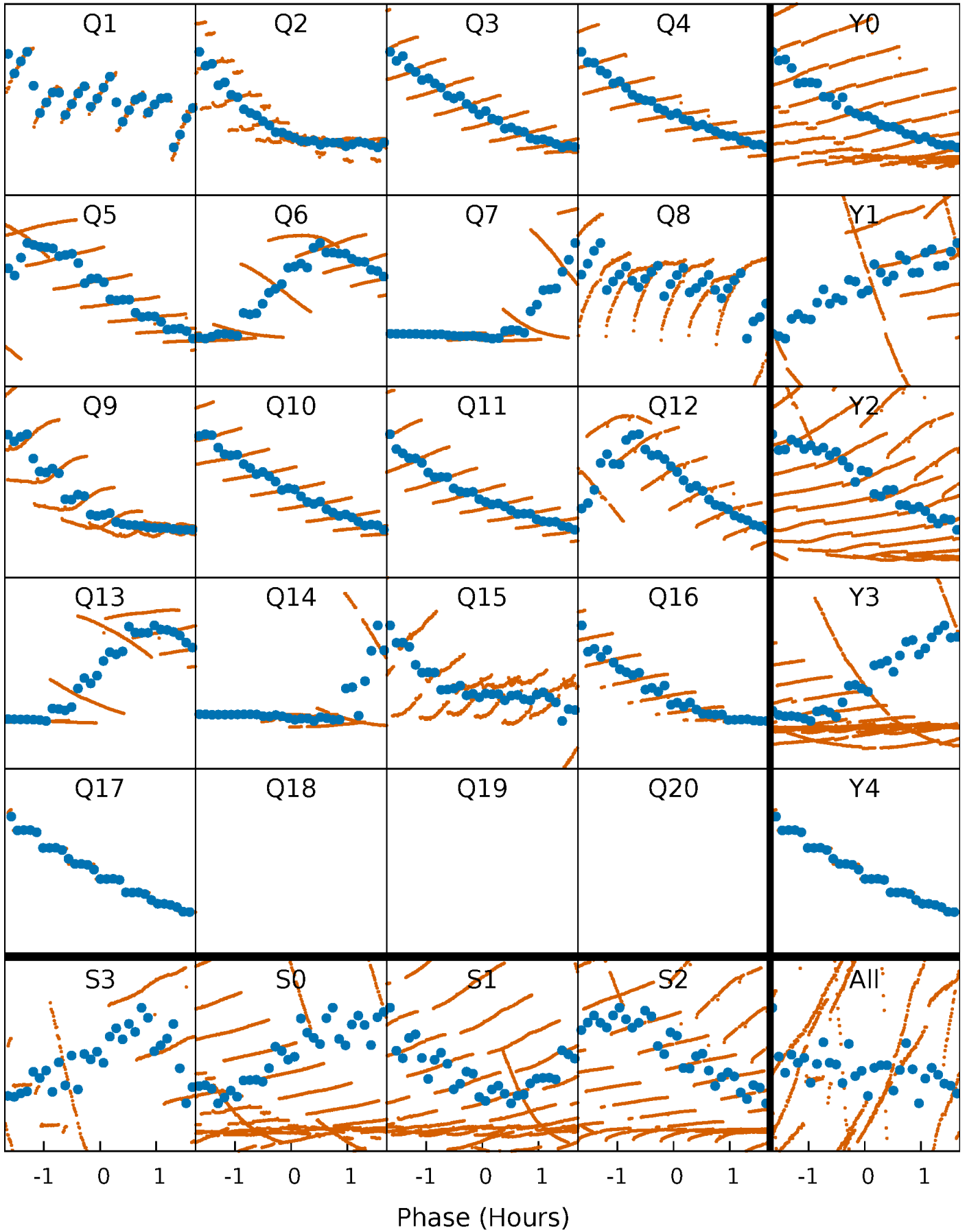


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



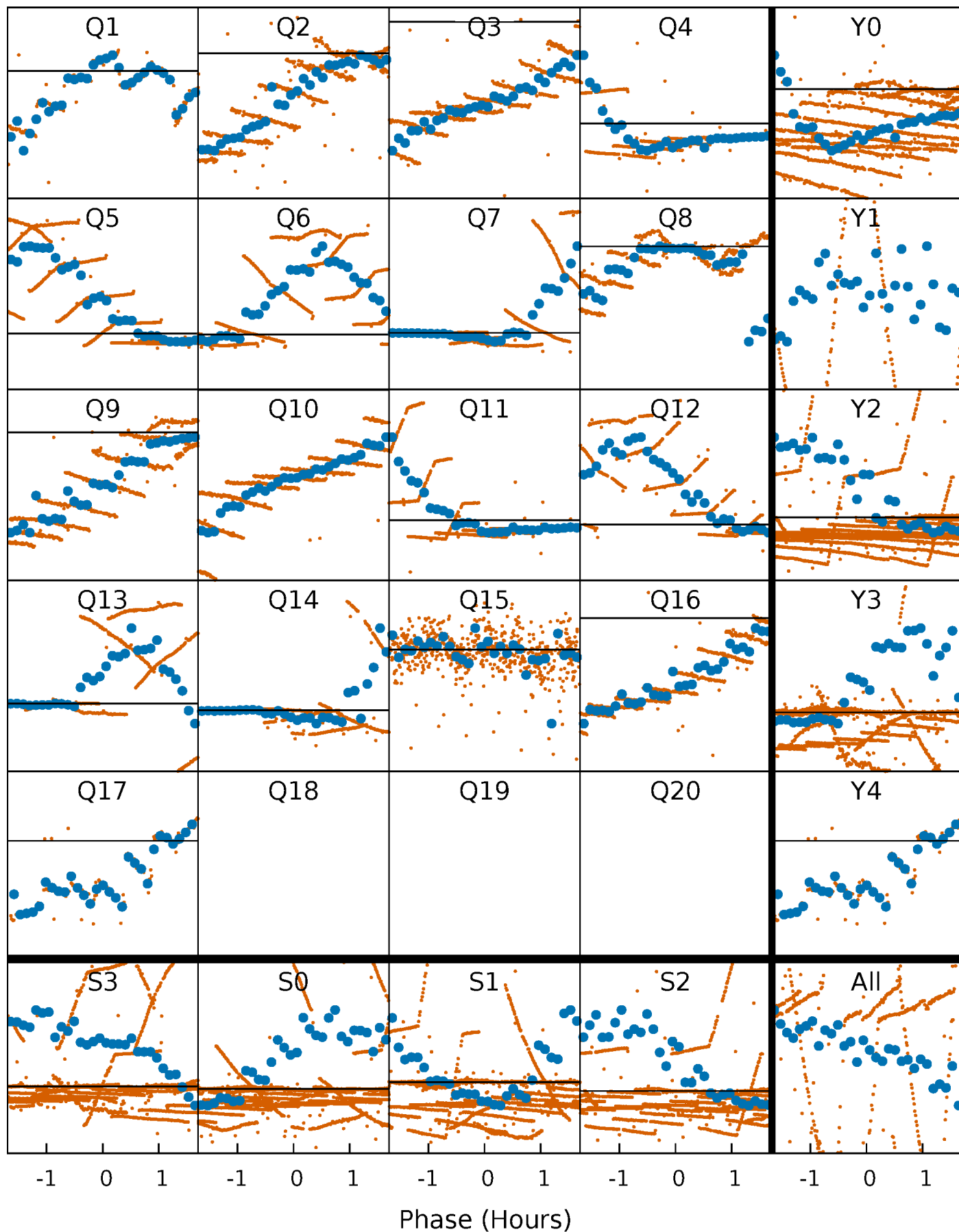
PDC Quarter-Phased Transit Curves

TCE 010789273-01 P= 0.959825 Days $T_0=131.908525$ (BKJD)



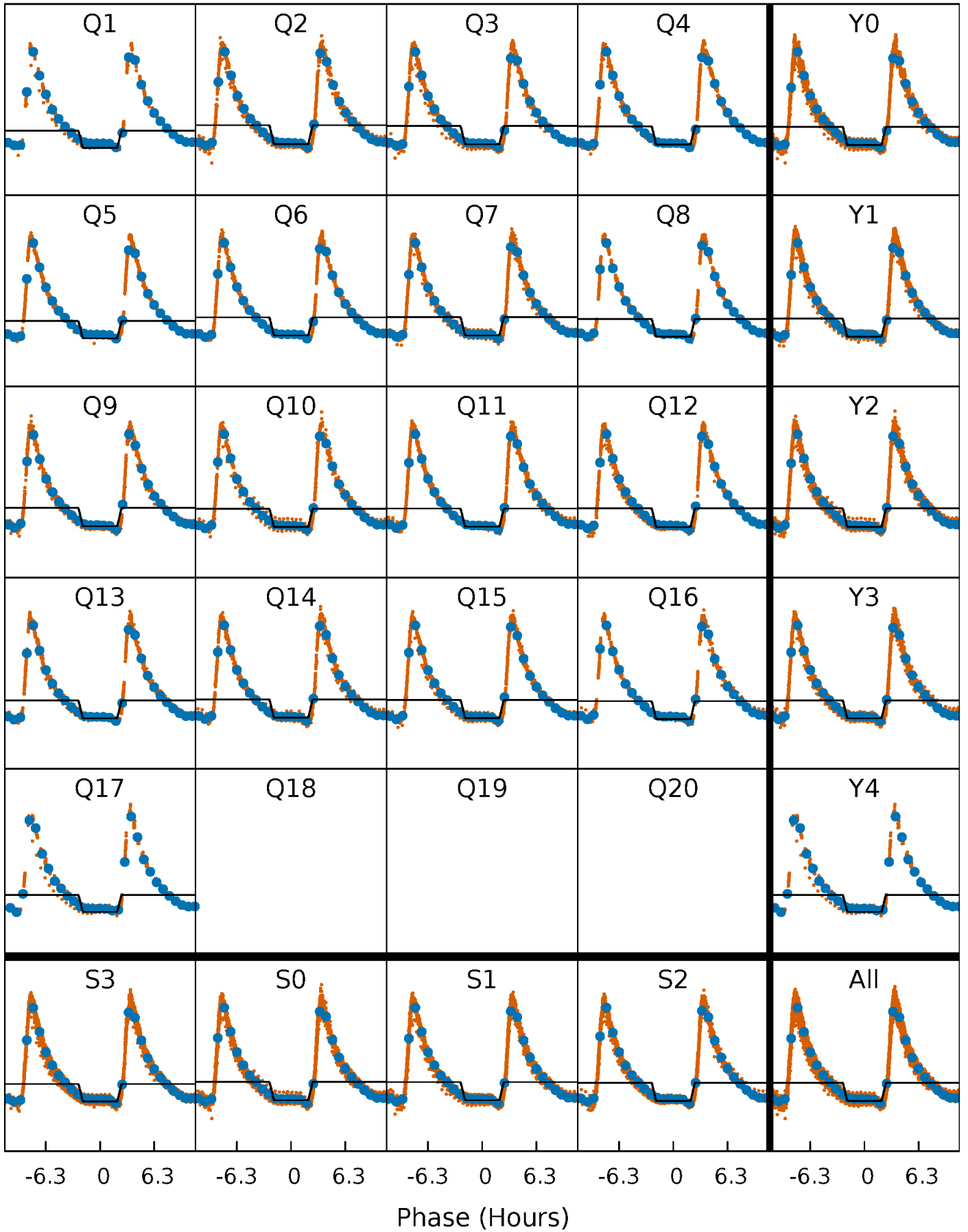
DV Quarter-Phased Transit Curves

TCE 010789273-01 P= 0.959825 Days $T_0=131.908525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

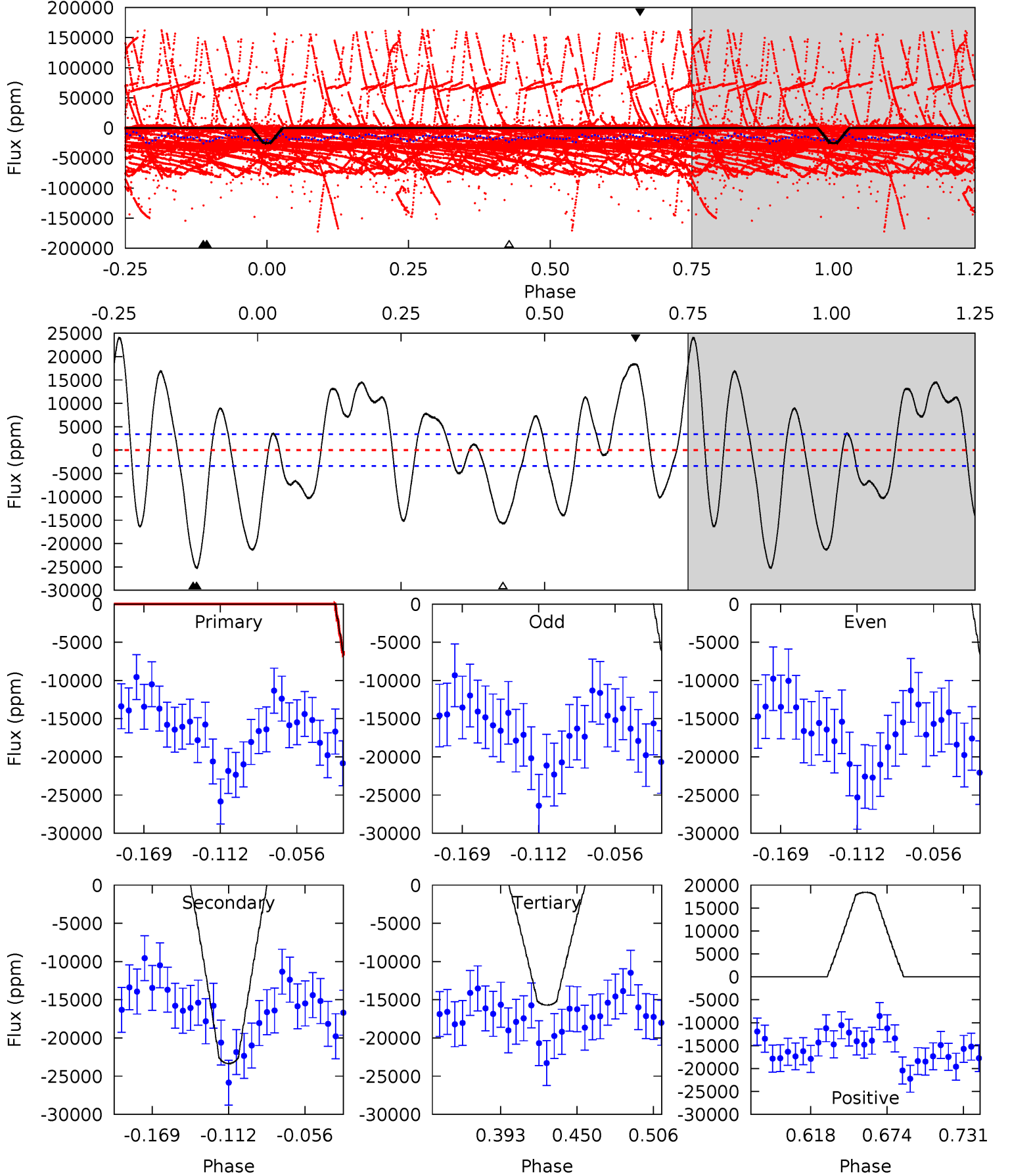
TCE 010789273-01 P= 0.960562 Days $T_0=131.908228$ (BKJD)



DV Model-Shift Uniqueness Test

010789273-01, P = 0.959825 Days, E = 130.948700 Days

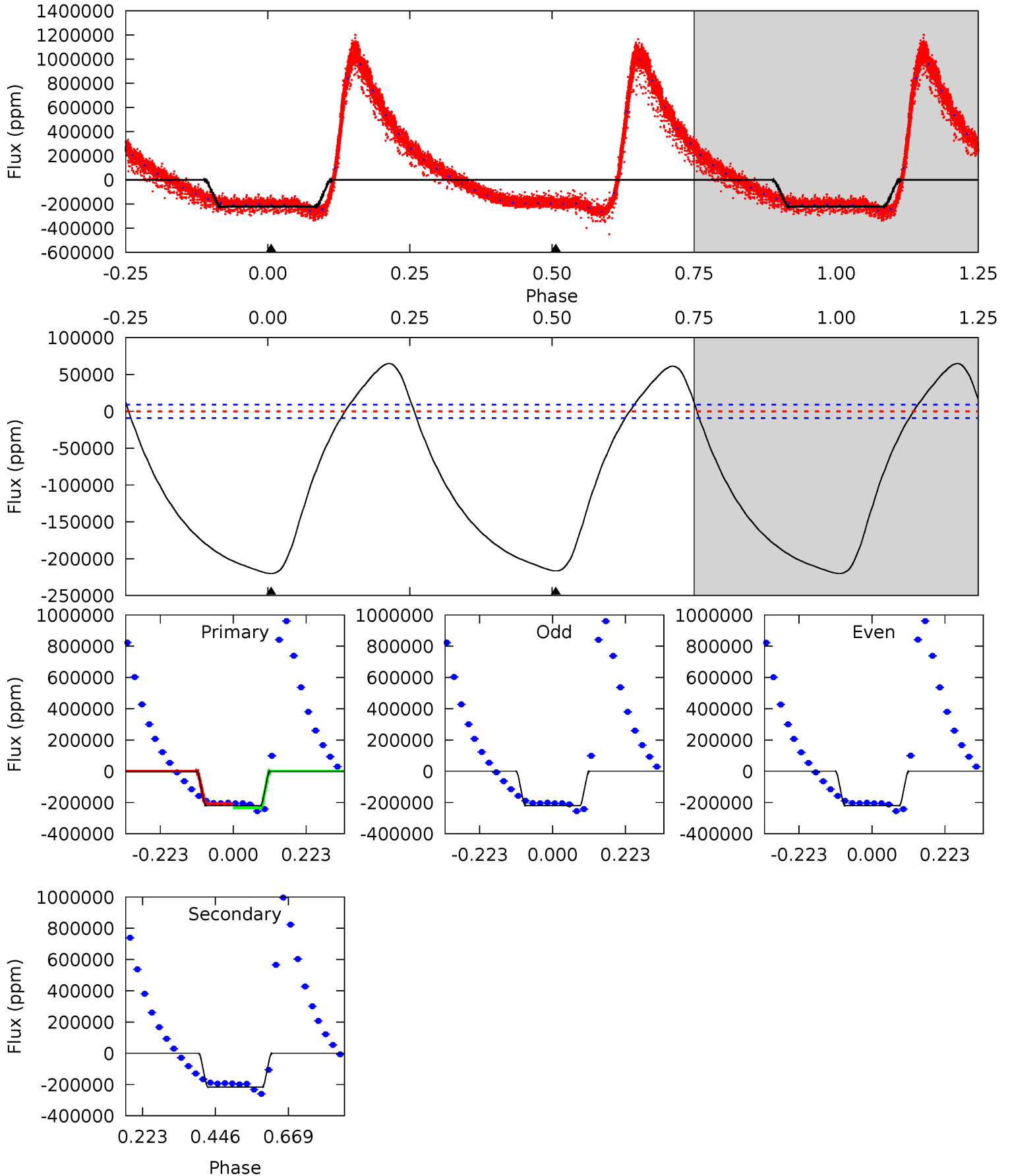
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.8	32.2	21.6	25.4	4.68	1.91	13.9	13.1	9.39	10.5	6.80	0.87	-4.39	0.49	1.81



Alt Model-Shift Uniqueness Test

010789273-01, P = 0.960562 Days, E = 130.947666 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
105.2	103.5	0	0	4.39	1.22	15.6	105.2	105.2	103.5	103.5	0.05	1.00	0.23	8.02



Stellar Parameters For KIC 010789273

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8572^{+237}_{-385}	$3.776^{+0.432}_{-0.135}$	$-0.200^{+0.350}_{-0.400}$	$3.034^{+0.754}_{-1.292}$	$2.009^{+0.382}_{-0.466}$	$0.101^{+0.403}_{-0.039}$
	+3%/-4%	+11%/-4%	+175%/-200%	+25%/-43%	+19%/-23%	+397%/-38%
Source	KIC0	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 010789273-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23348 ± 726	$79.26^{+96.86}_{-58.55}$	5761^{+496}_{-673}	5802^{+10737}_{-9299}	$1.227^{+16.124}_{-0.981}$
Alt.	-216523 ± 2091	$159.23^{+127.40}_{-91.18}$	5761^{+470}_{-655}	8122^{+8109}_{-2404}	$3.423^{+15.831}_{-2.356}$

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

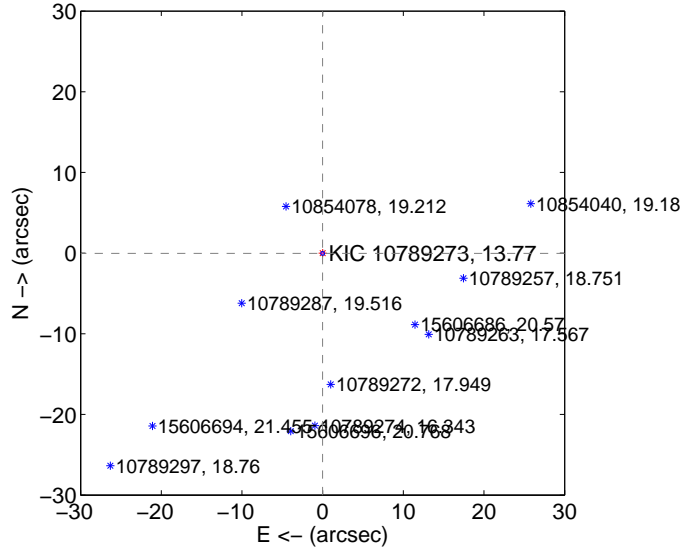
Supplemental centroid analysis for 010789273-01. Kepler magnitude: 13.77. Transit SNR 0.01

There are 12 quarters with good PRF difference image offsets

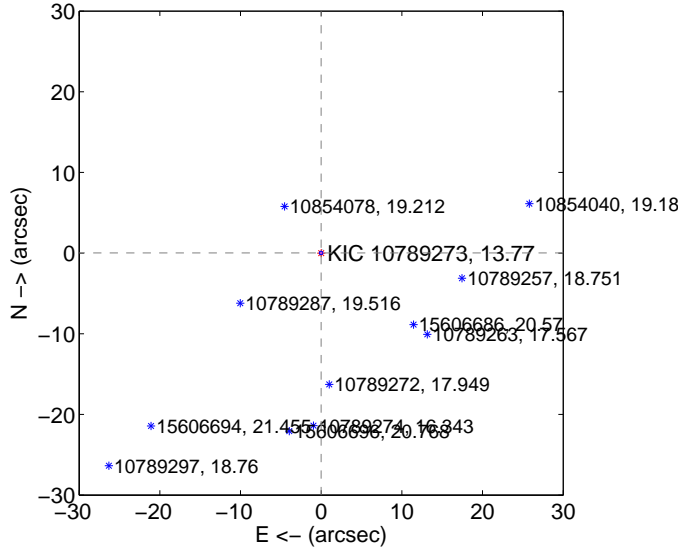
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.079	0.54	0.005 ± 0.068	-0.043 ± 0.079
PRF-fit source offset from KIC position	0.022 ± 0.073	0.30	0.012 ± 0.069	0.019 ± 0.078
photometric centroid source offset	—	—	—	—

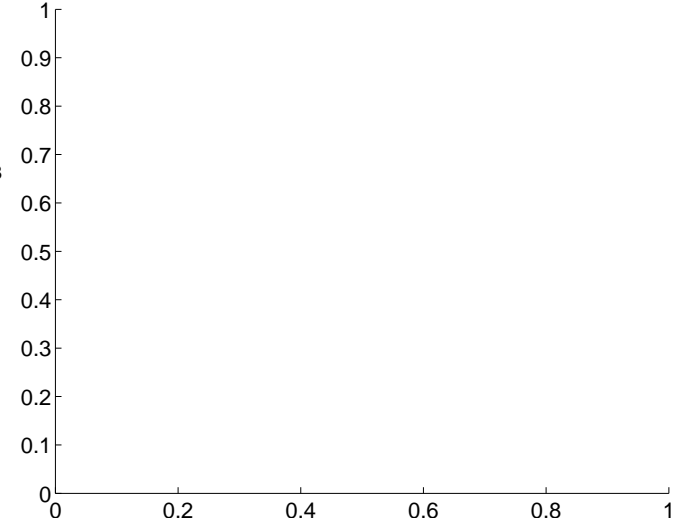
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

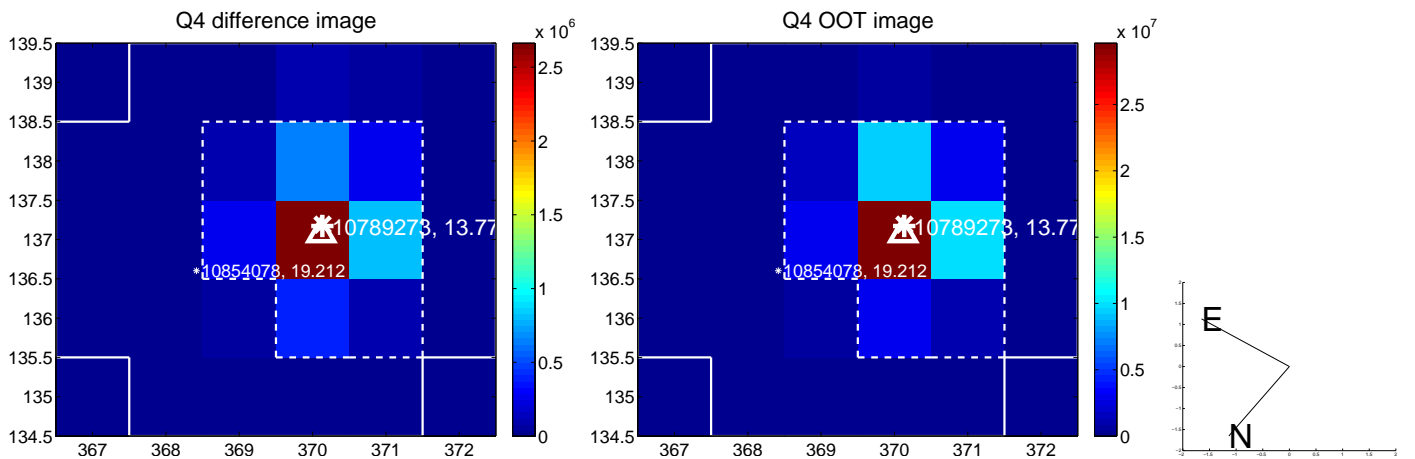
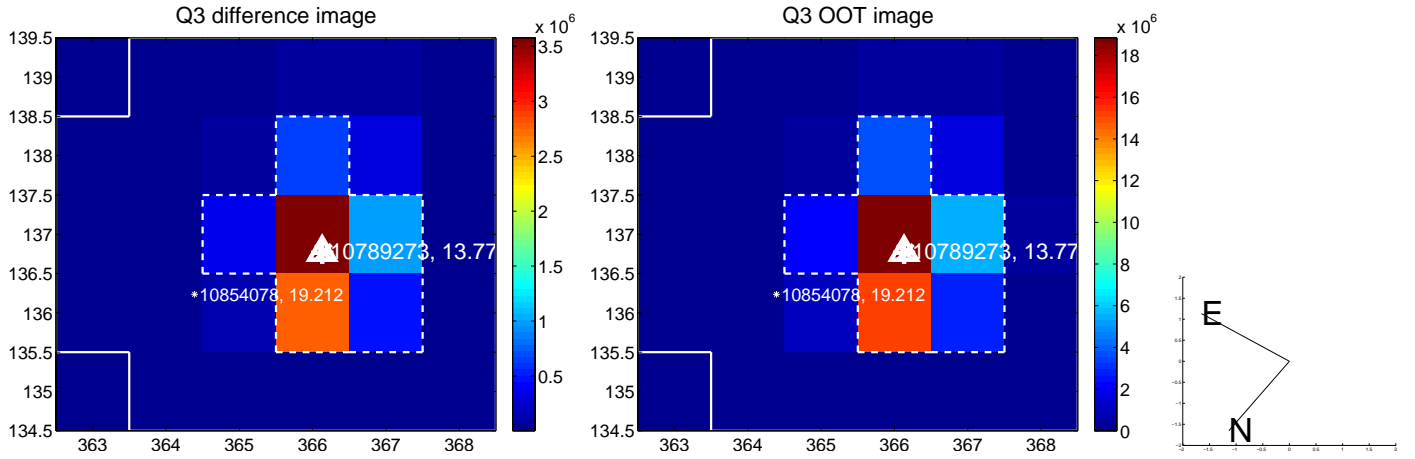
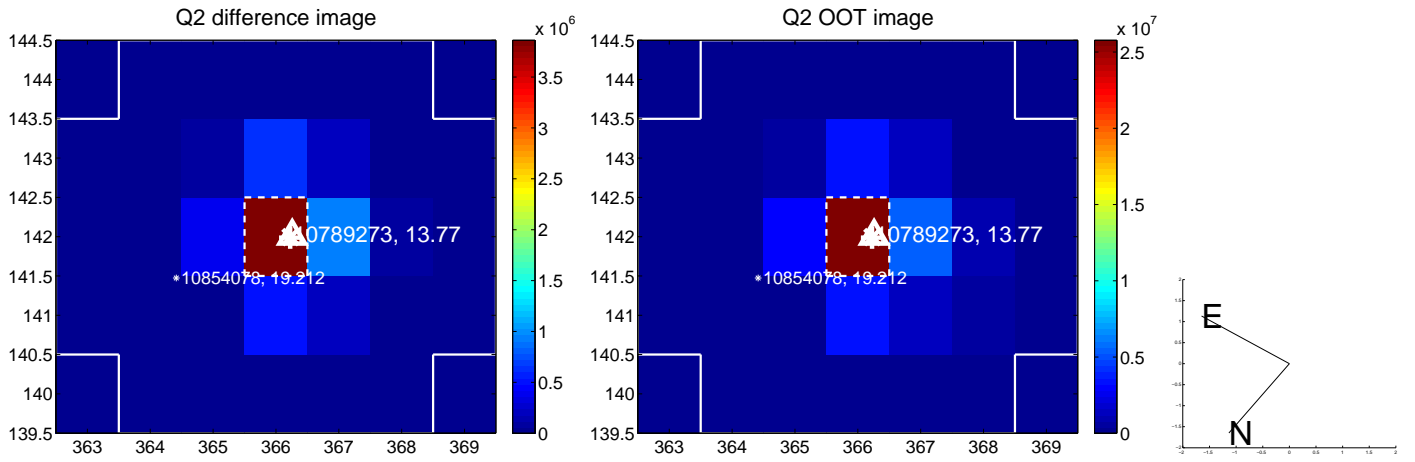
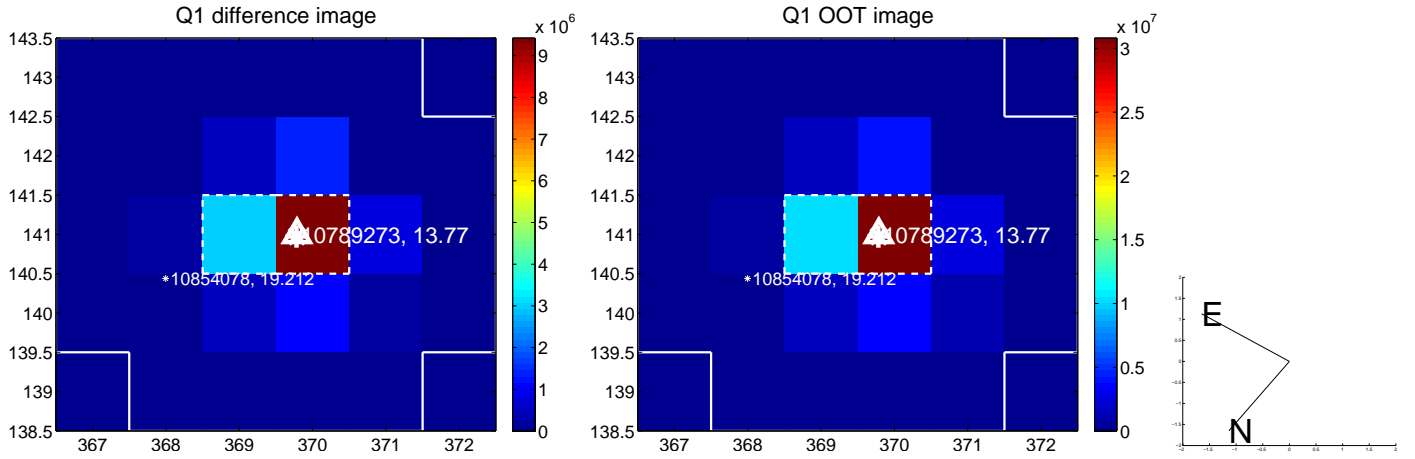


There are no photometric centroids

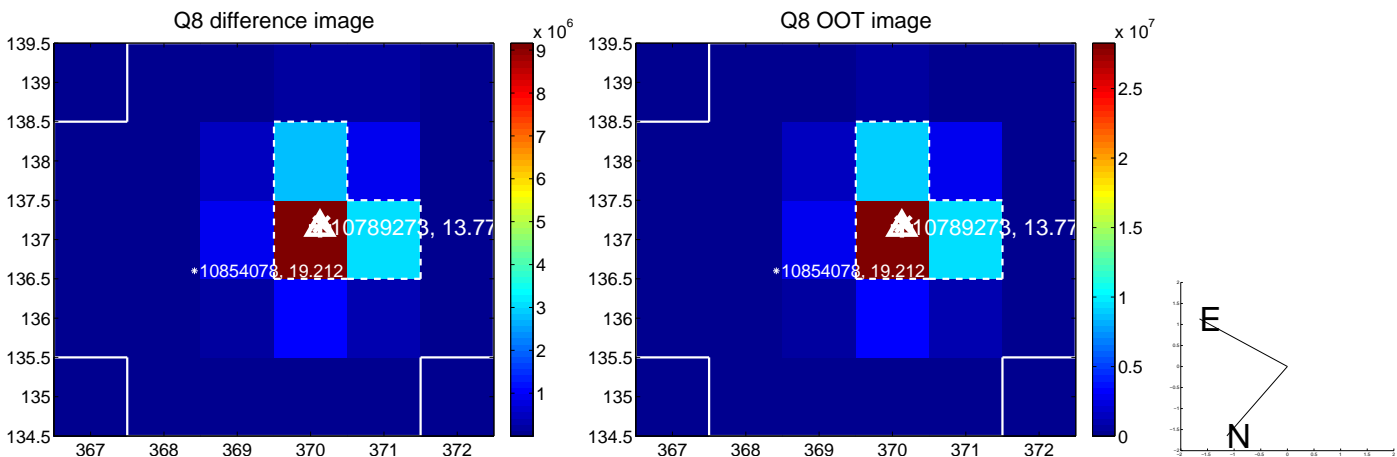
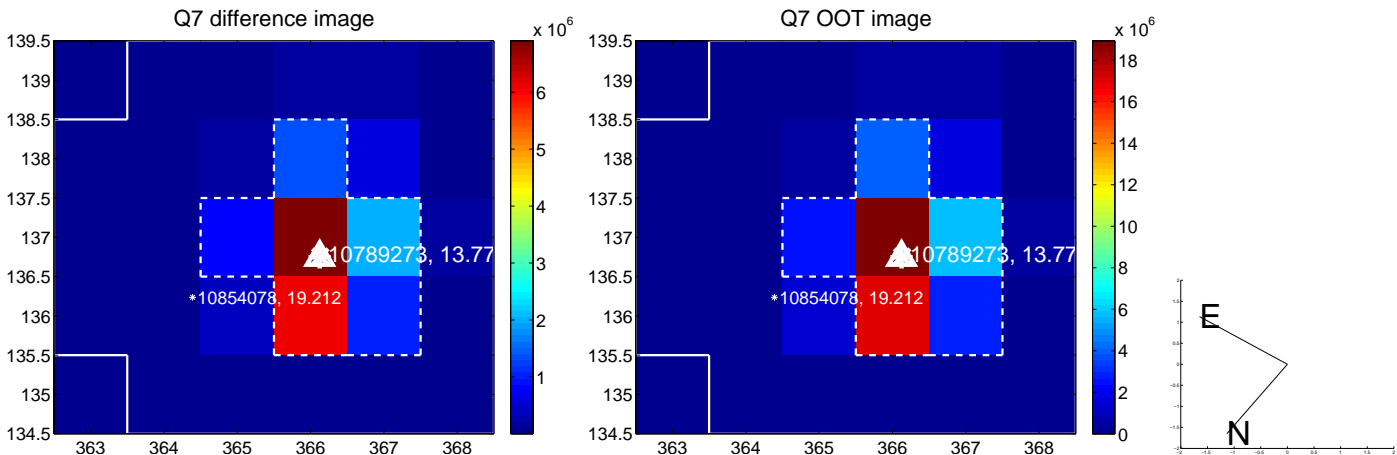
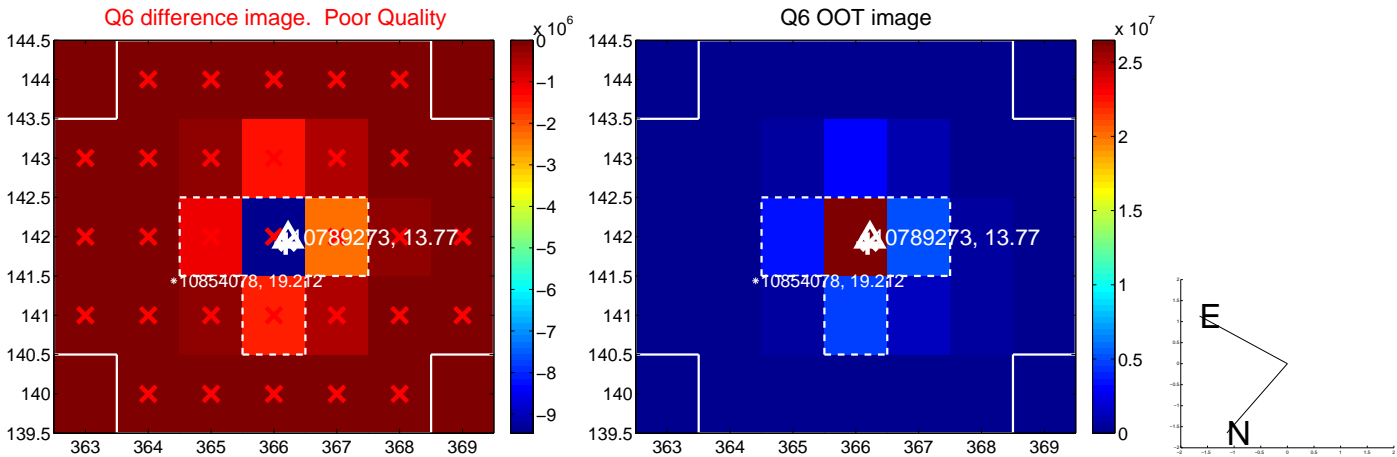
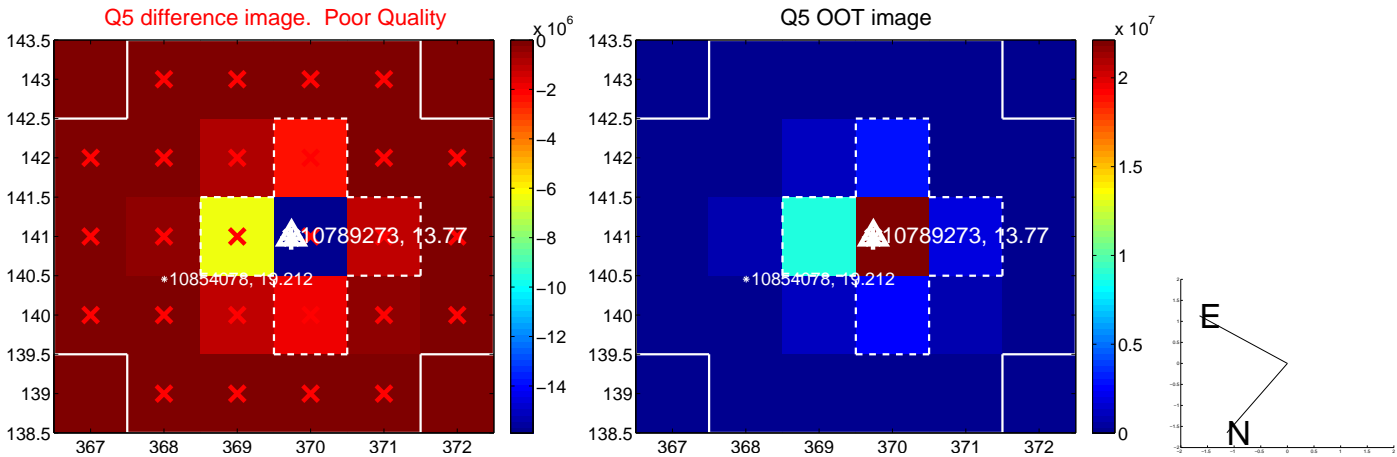


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

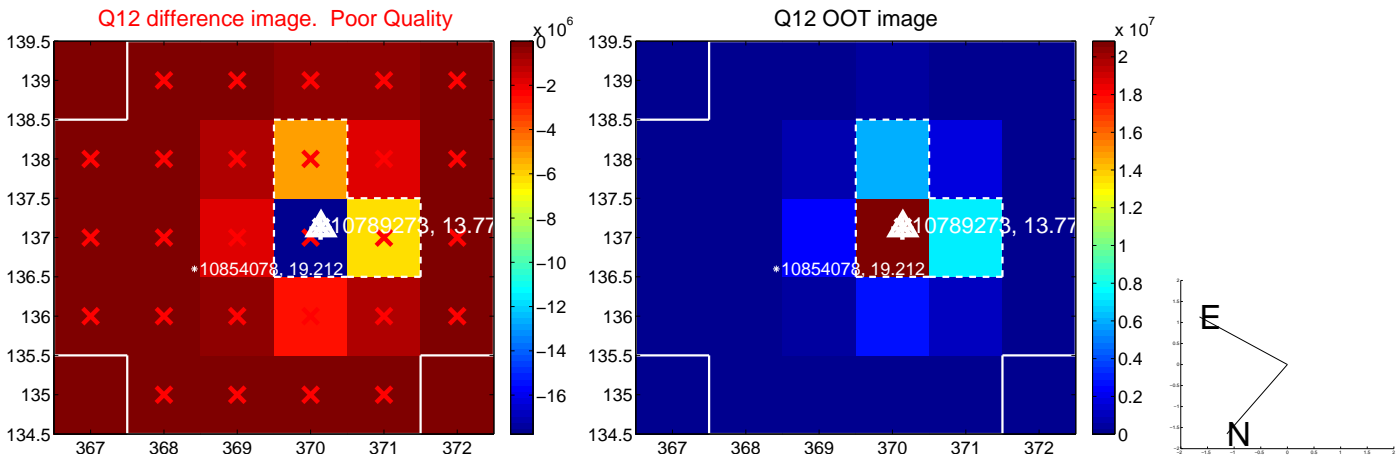
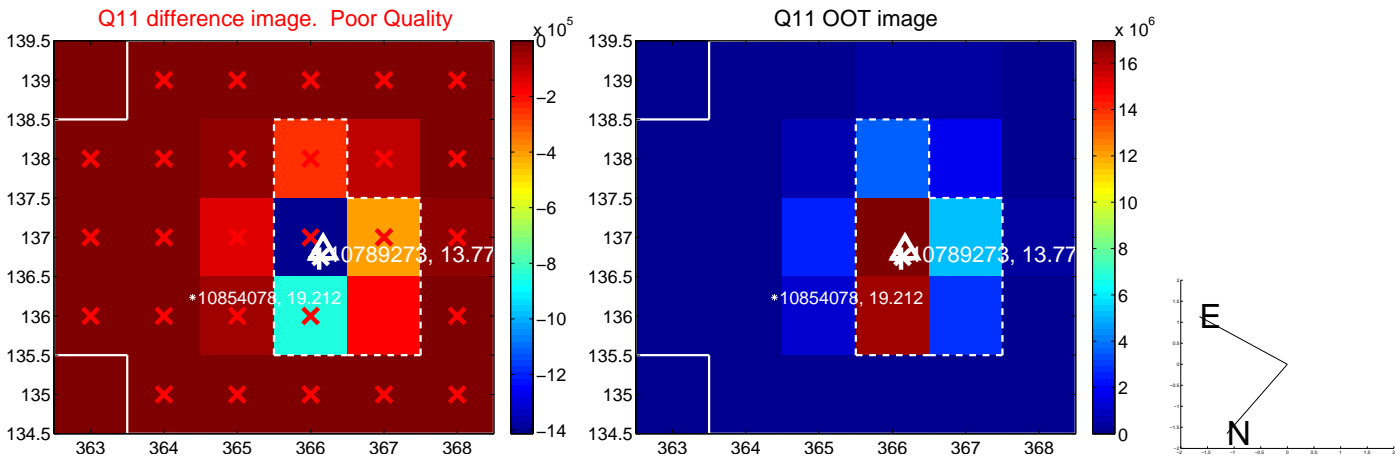
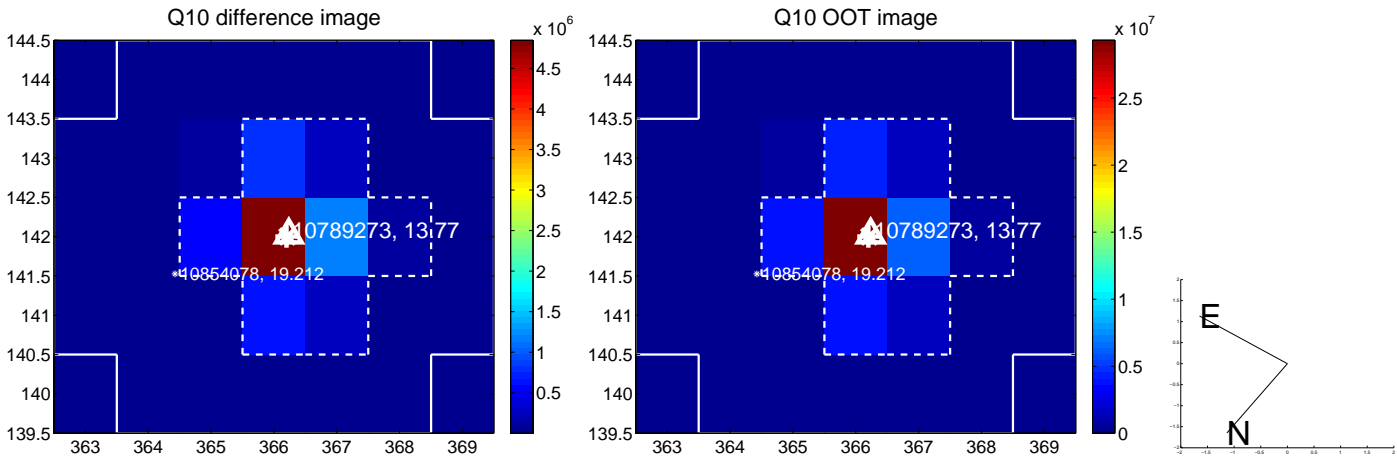
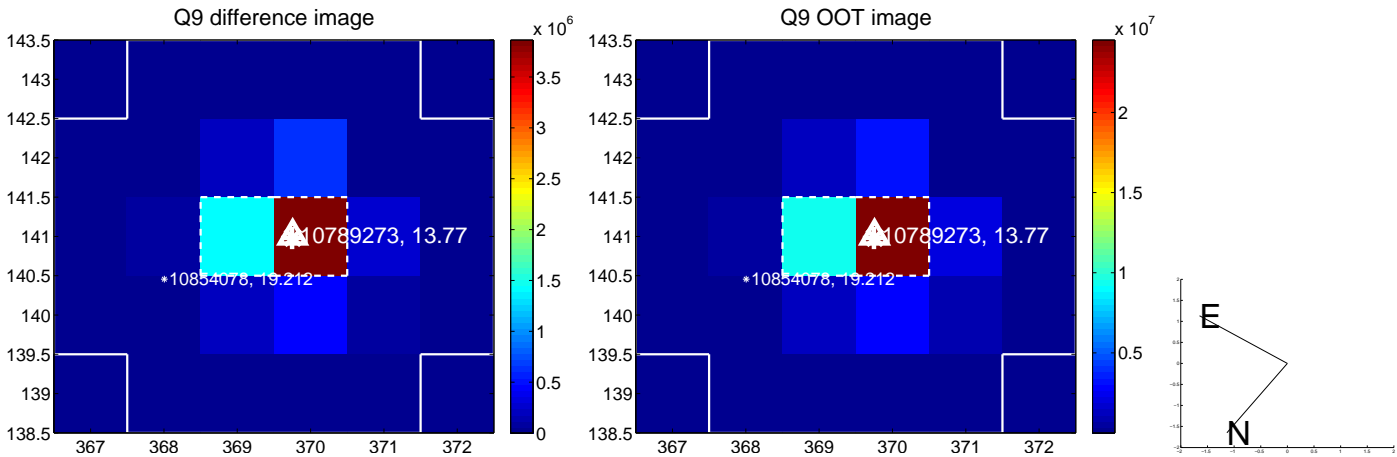
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



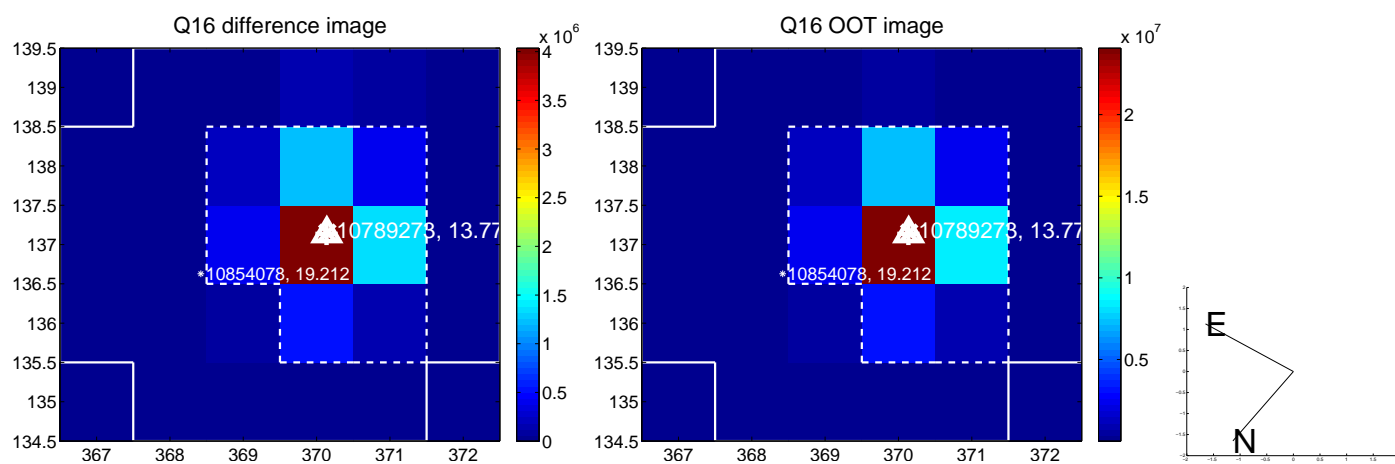
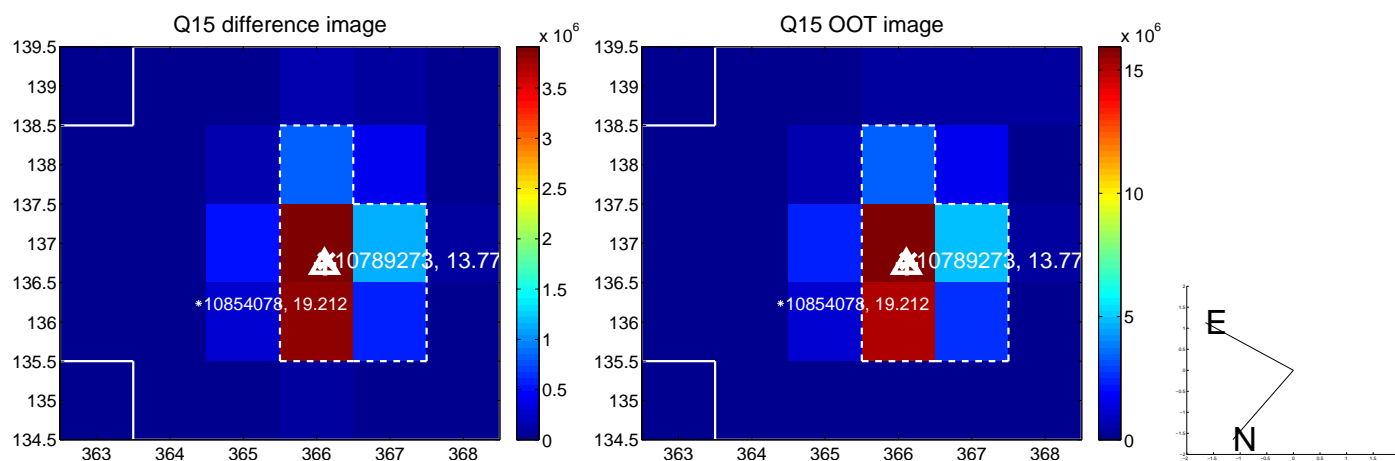
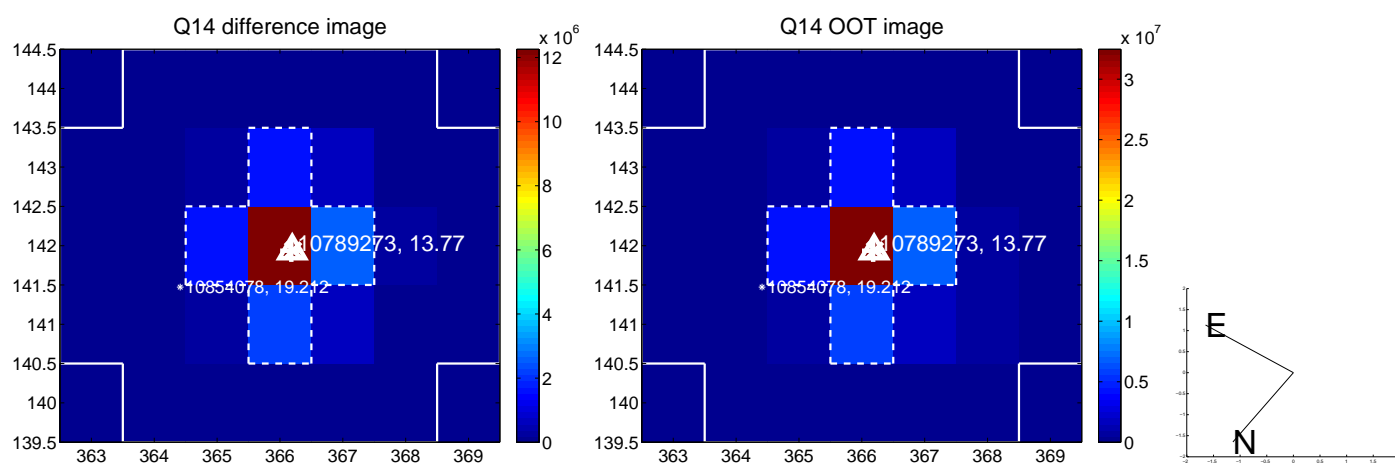
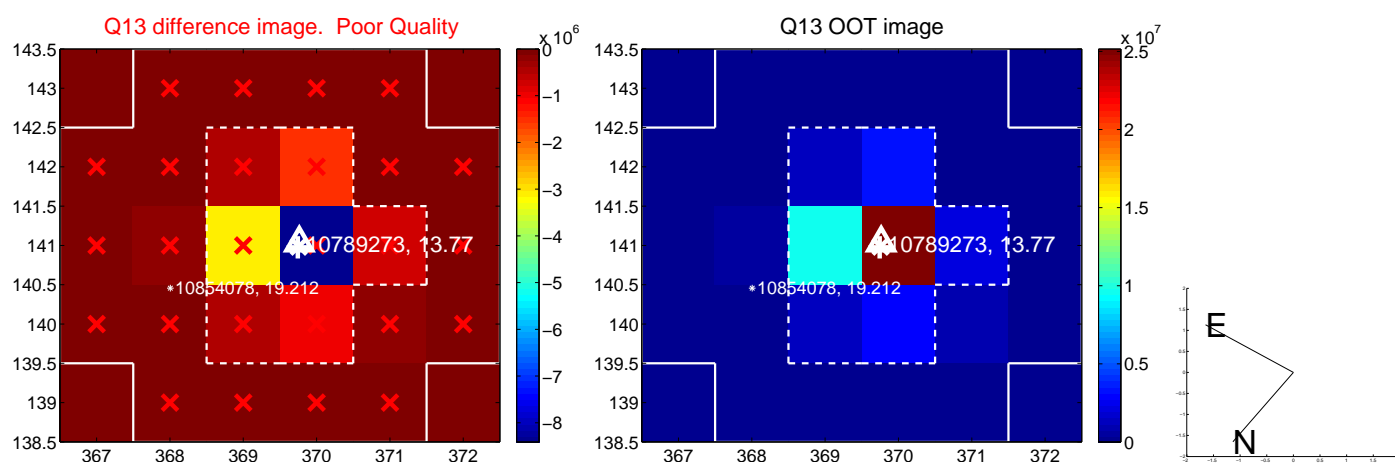
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



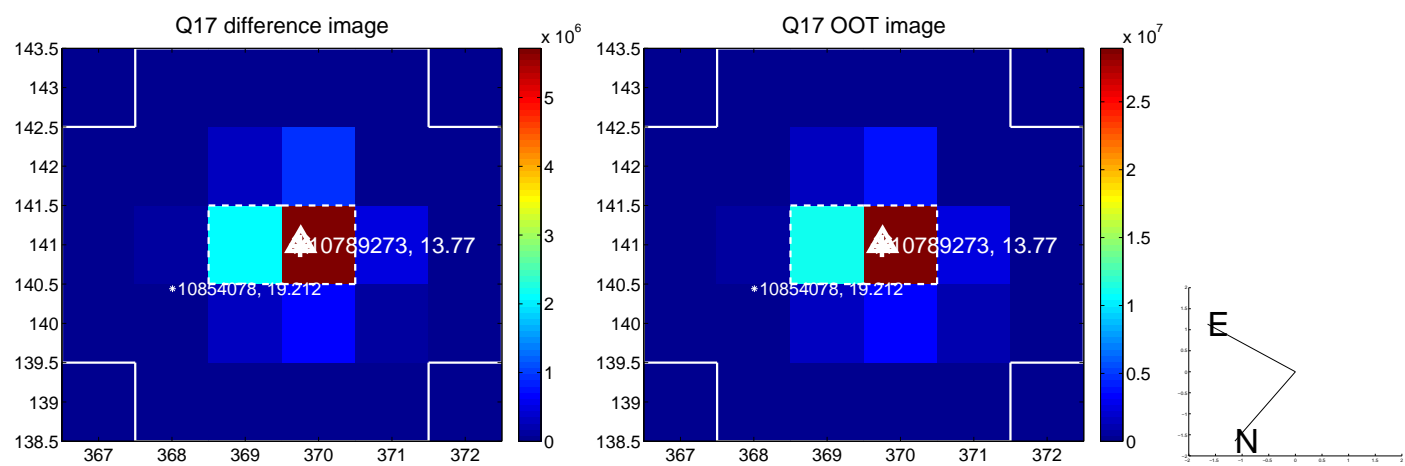
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



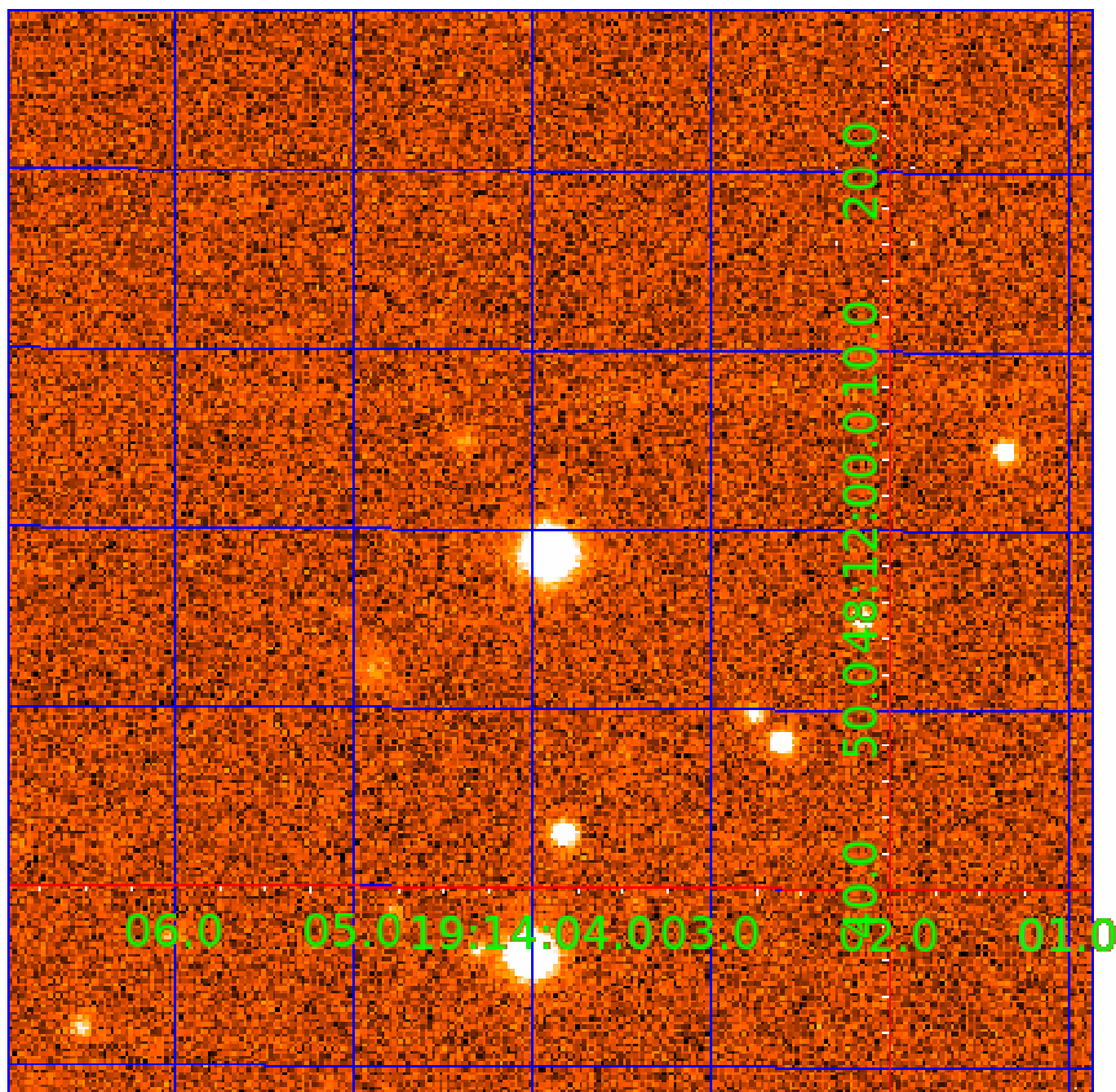
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 010789273

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})
010789273-01	OBS	No	0.959825	131.908525	2.7	0.850	284.6	0.0	3.03	8572	0.65	77204.74
010789273-02	OBS	No	0.960553	131.984952	10334.0	2.500	281.5	-1.0	3.03	8572	31.35	77126.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010789273-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010789273-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

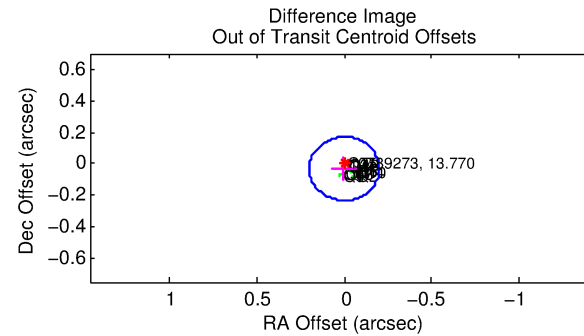
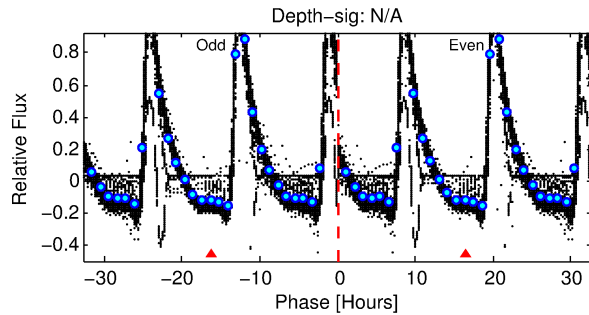
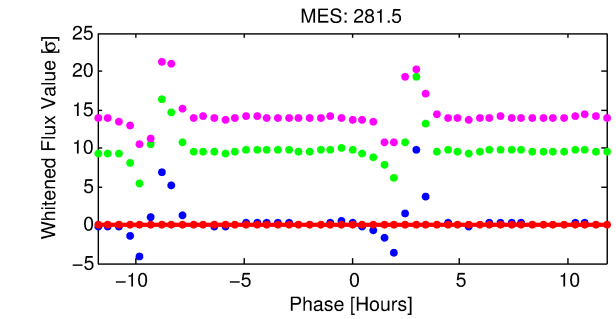
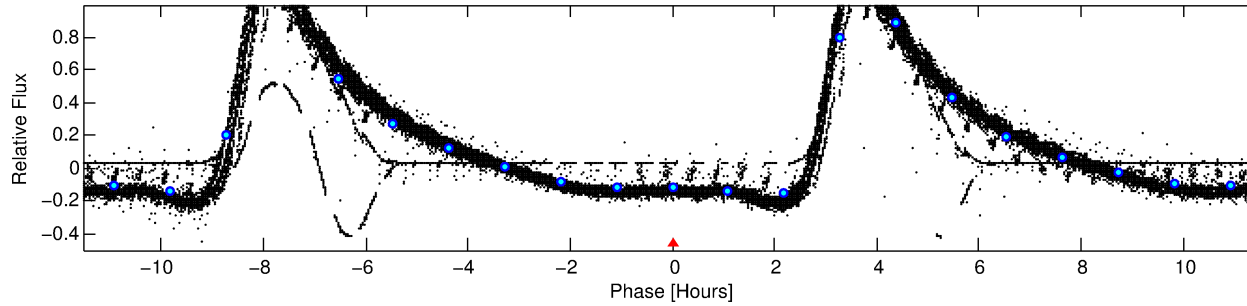
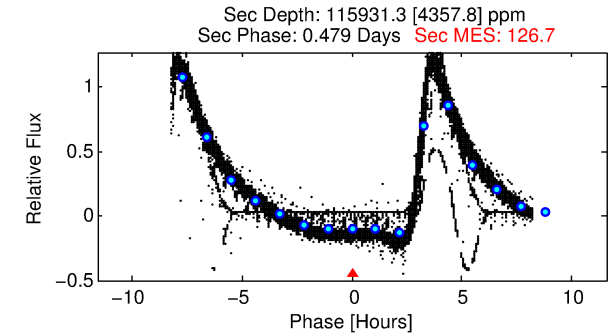
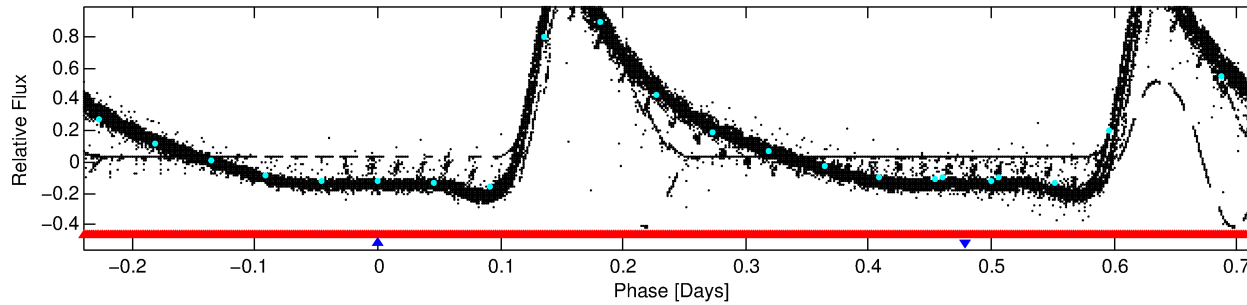
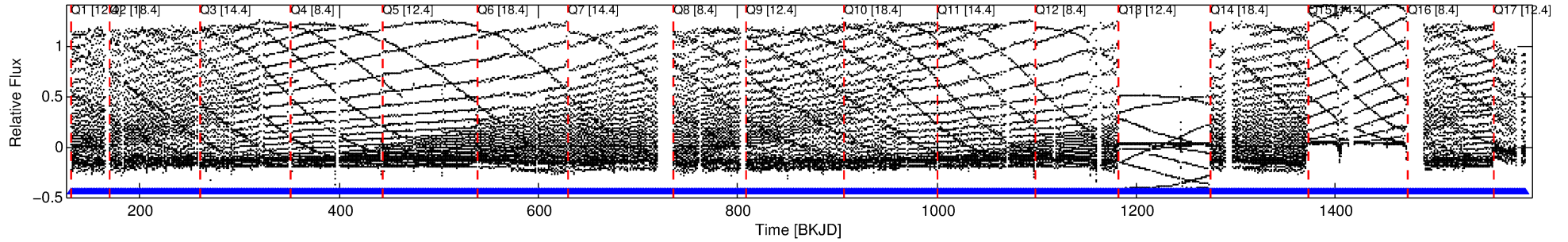
Ephemeris Match Information For 010789273-02

No Significant Match Found

DV One-Page Summary

KIC: 10789273 Candidate: 2 of 2 Period: 0.961 d

Kp: 13.77 R*: 3.03 Rs Teff: 8572.0 K Logg: 3.78 Fe/H: -0.200



TPS TCE Results:

Period = 0.96055 d
Epoch = 131.9850 BKJD

DV fit results are unavailable

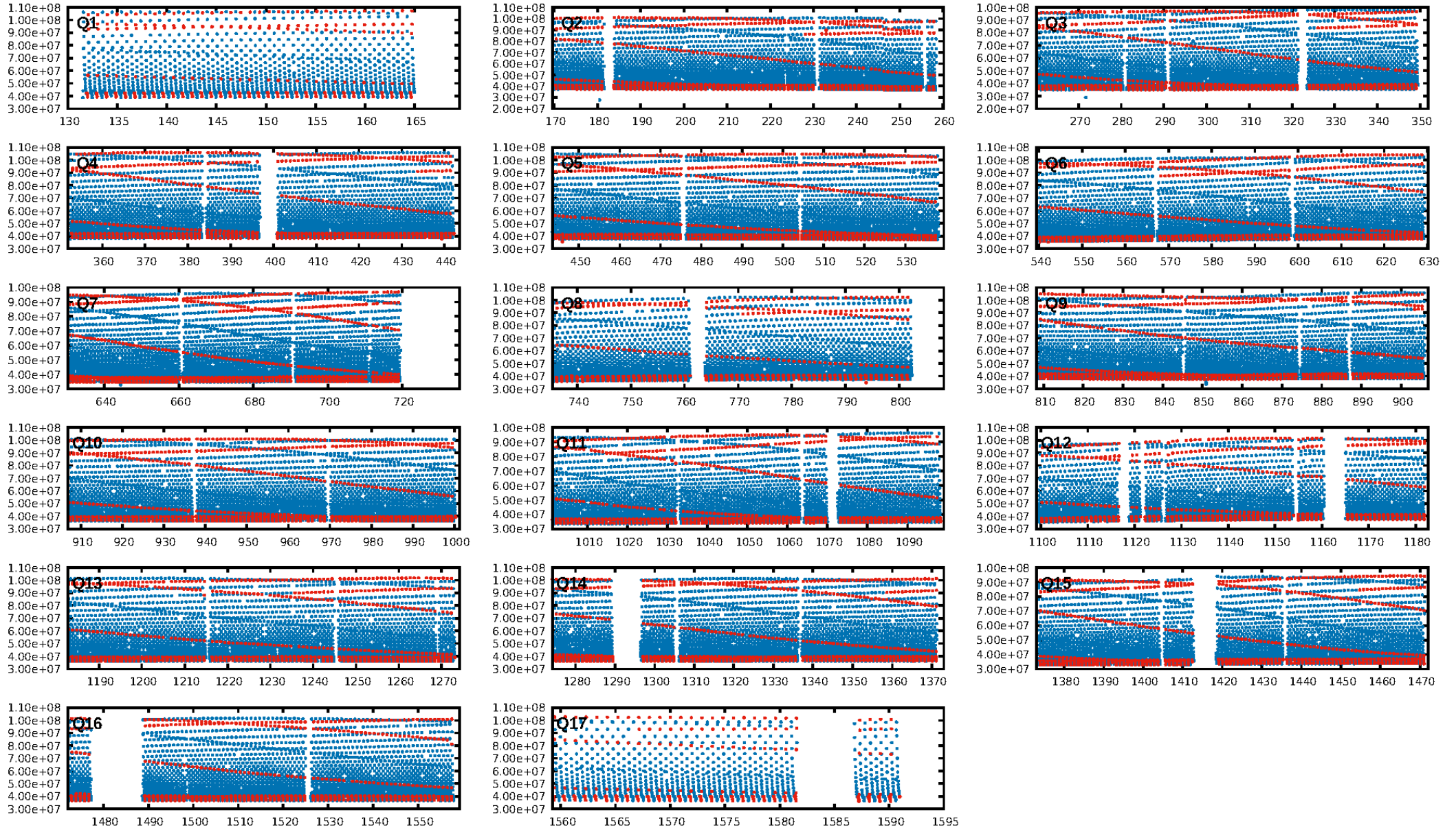
DV Diagnostic Results:

ShortPeriod-sig: 0.5% [0.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1332/1332]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.087 arcsec [215.88σ]
OotOffset-rm: 0.031 arcsec [0.47σ]
KicOffset-rm: 0.036 arcsec [0.52σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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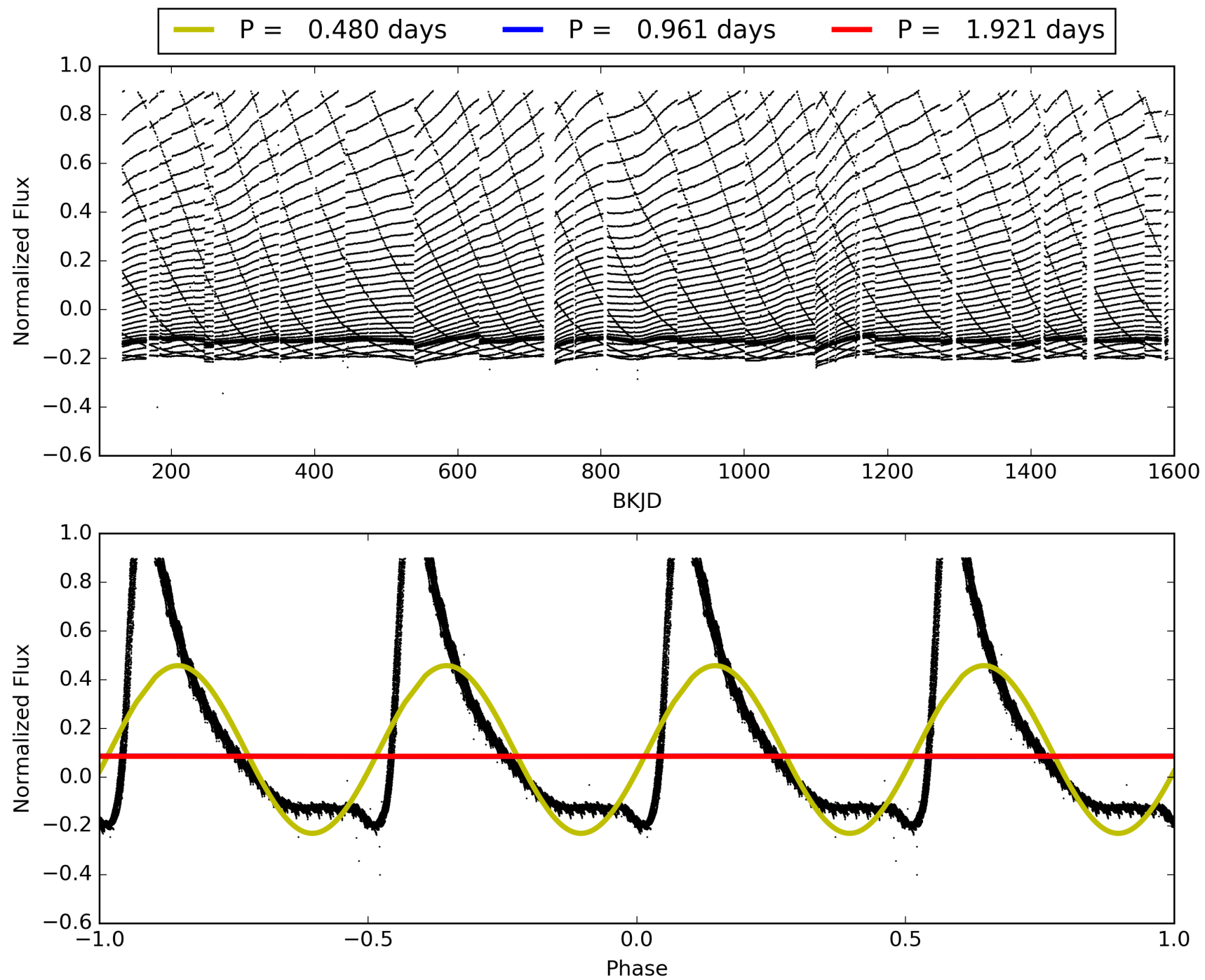
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:31:43 Z

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

TCE 010789273-02, PDC Light Curves

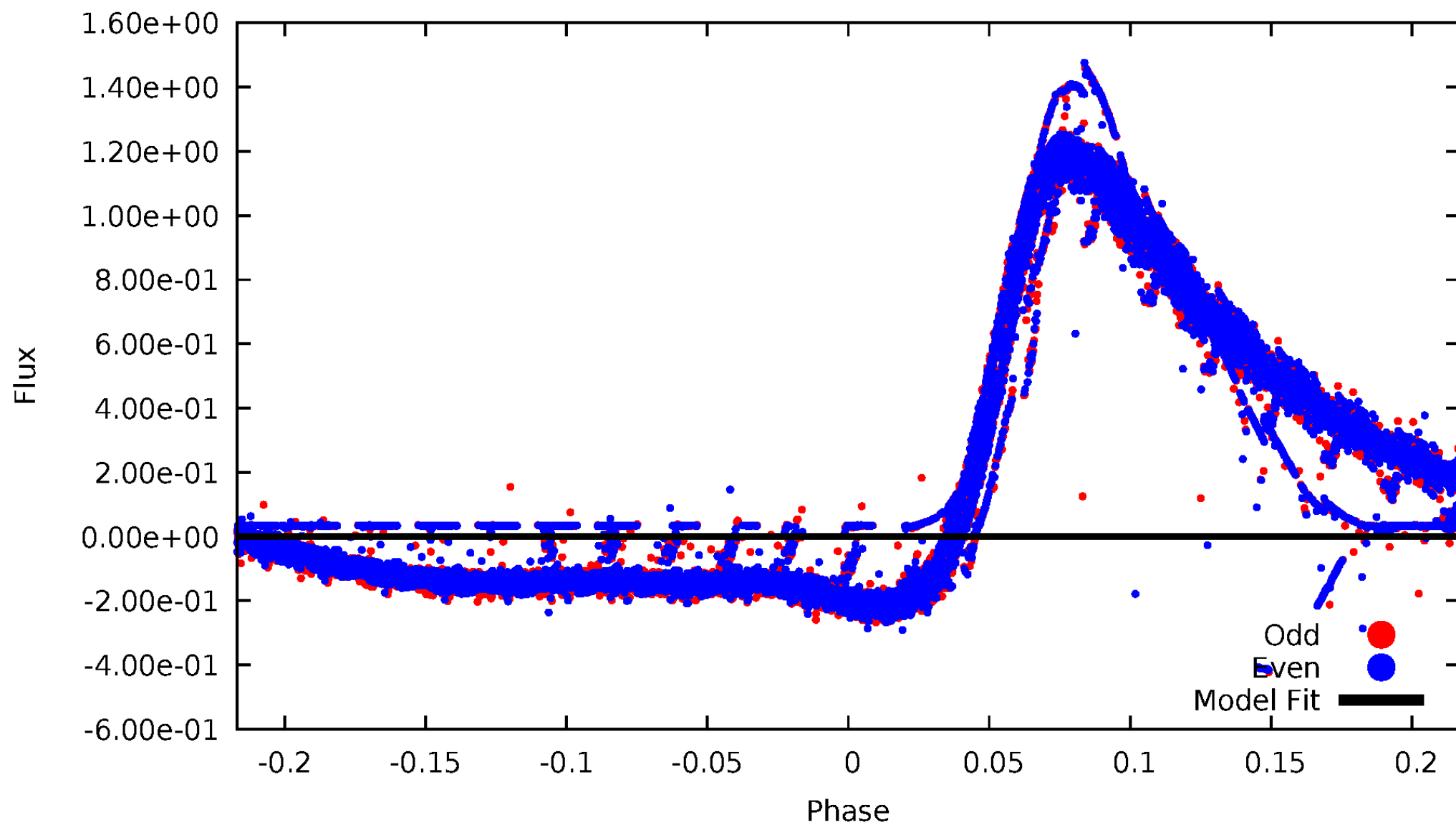


TCE 010789273-02



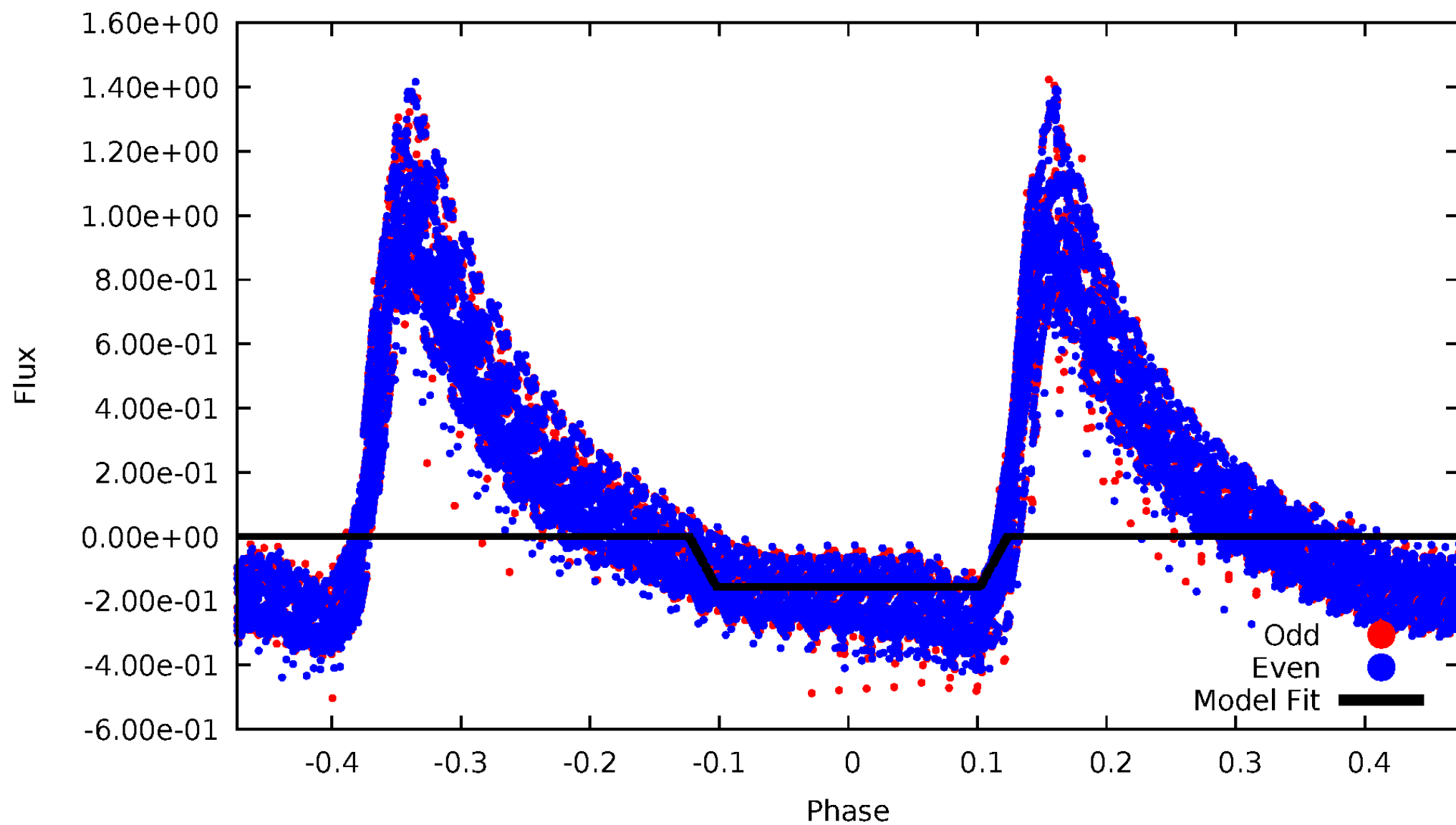
DV Odd/Even

TCE 010789273-02



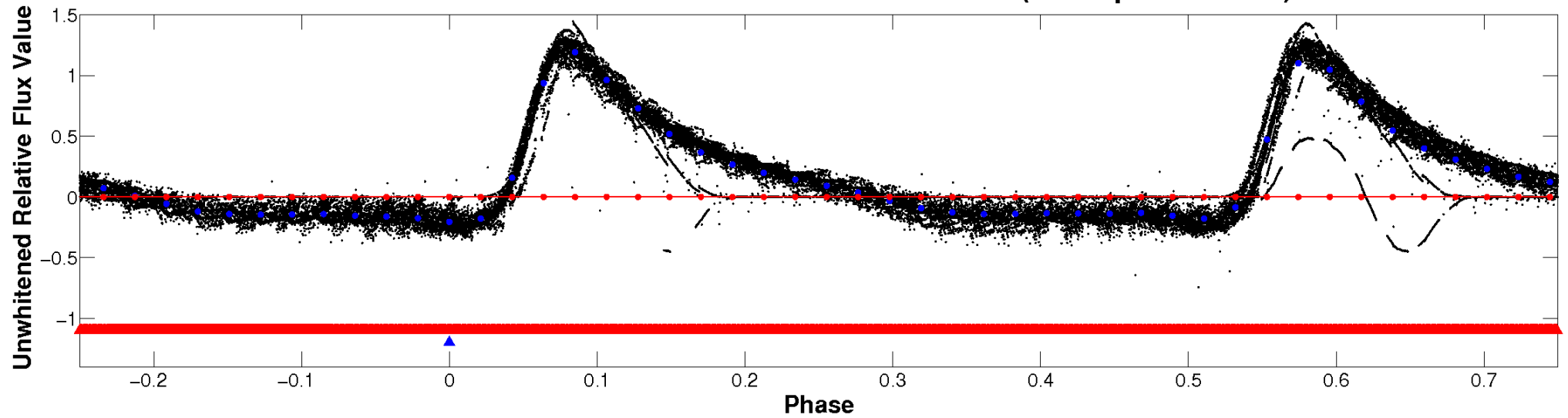
ALT Odd/Even

TCE 010789273-02

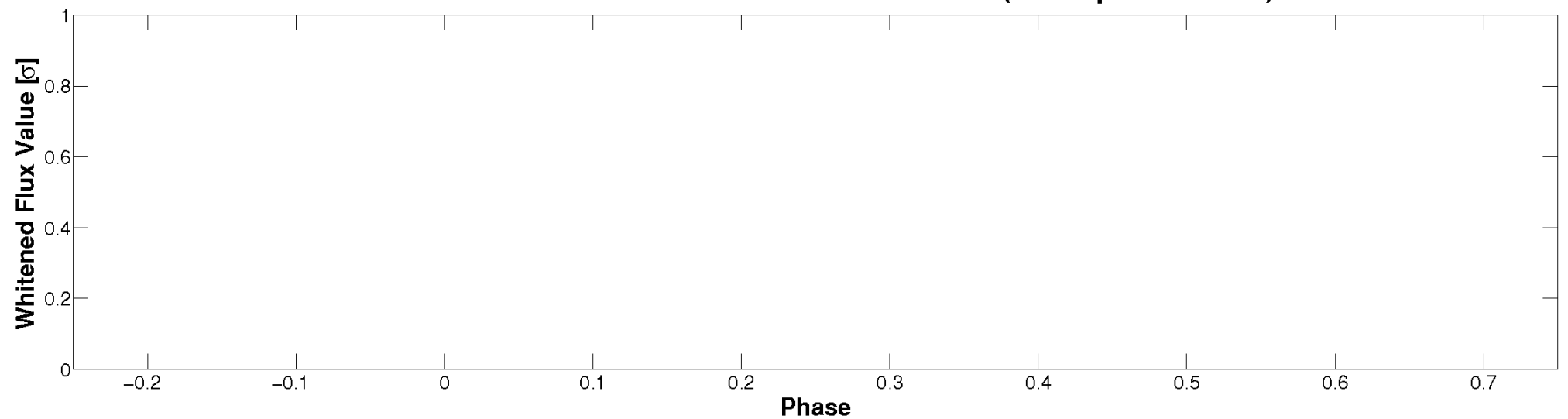


Non-Whitened Vs. Whitened Light Curve

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

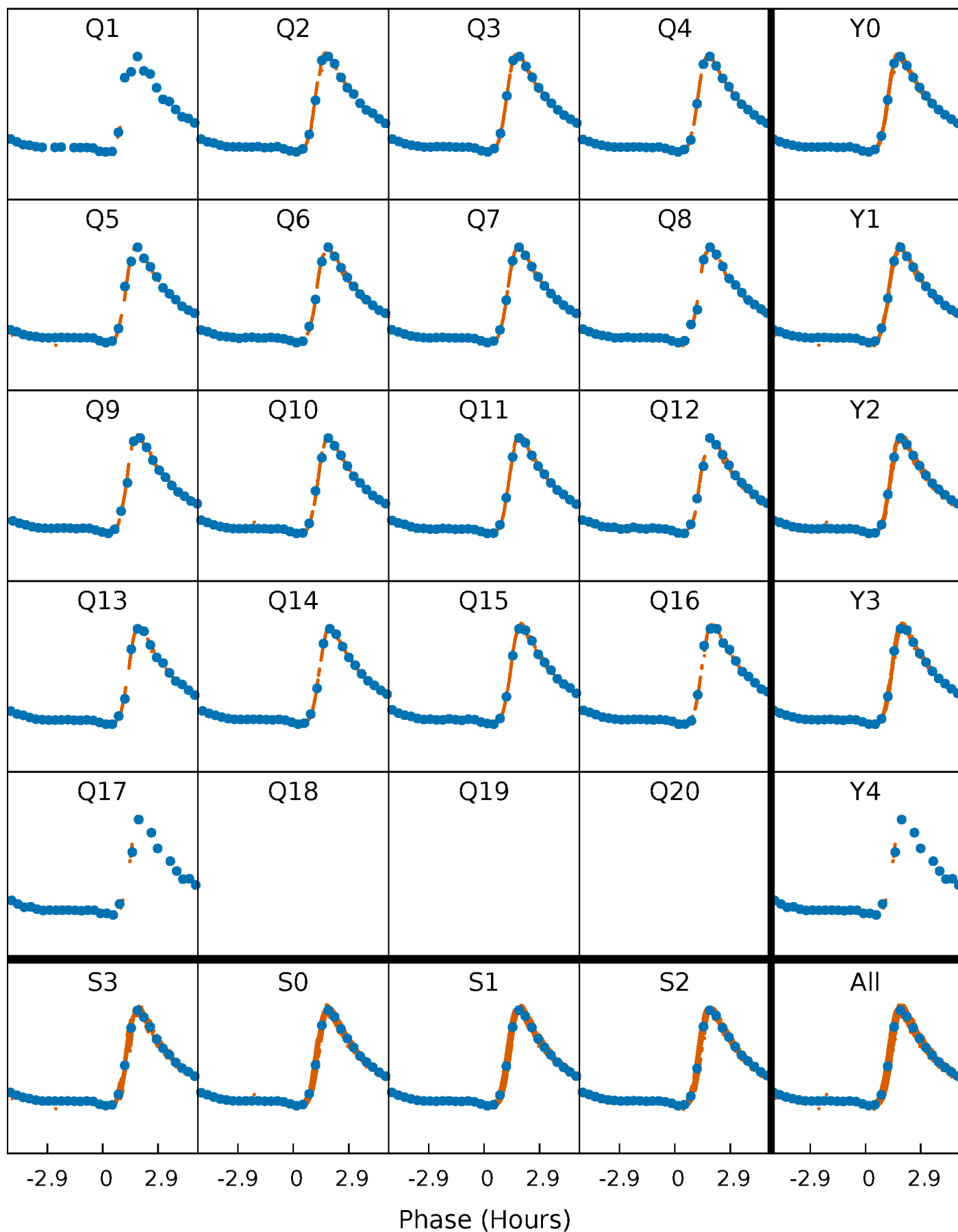


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



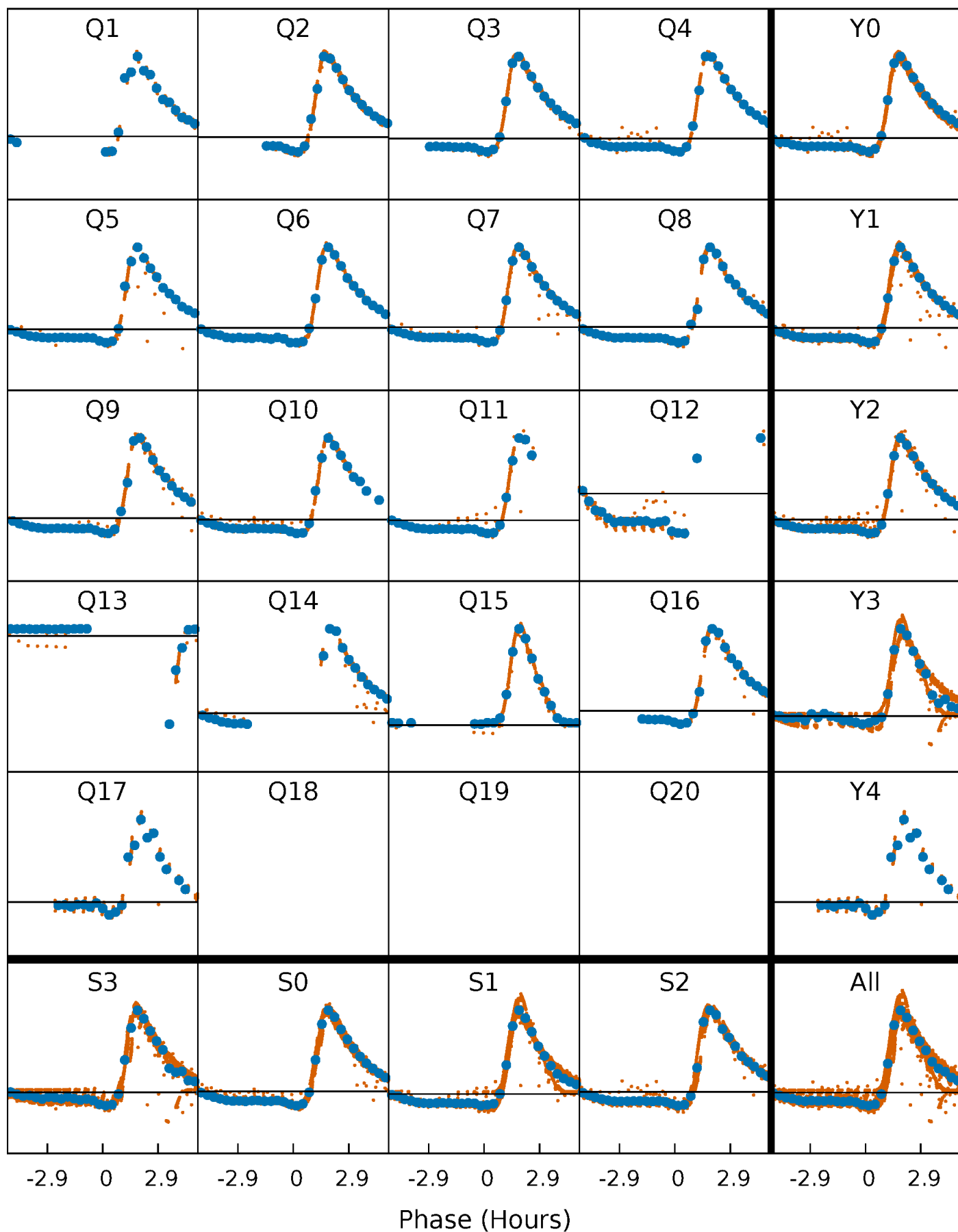
PDC Quarter-Phased Transit Curves

TCE 010789273-02 P= 0.960553 Days $T_0=131.984952$ (BKJD)



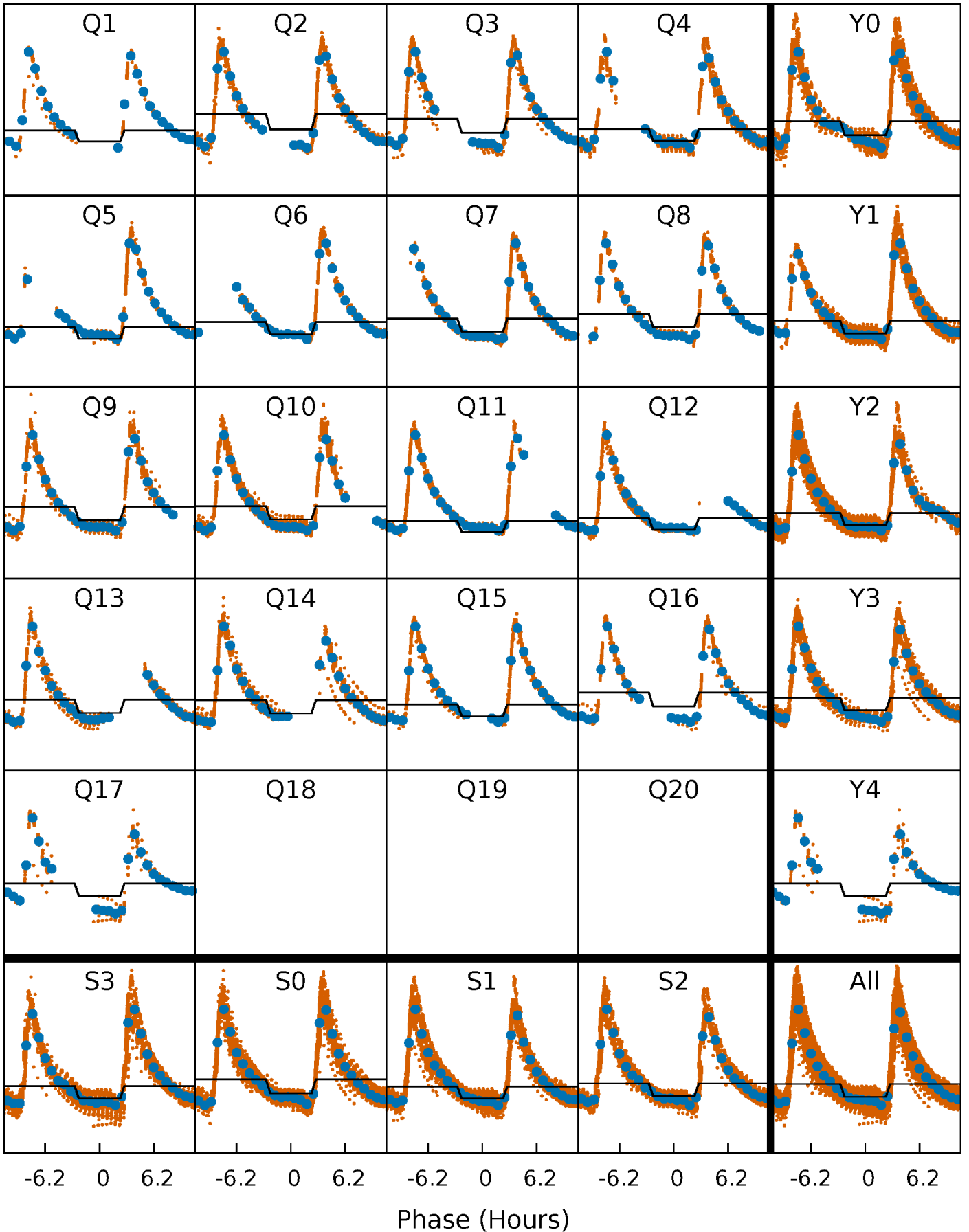
DV Quarter-Phased Transit Curves

TCE 010789273-02 $P = 0.960553$ Days $T_0 = 131.984952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

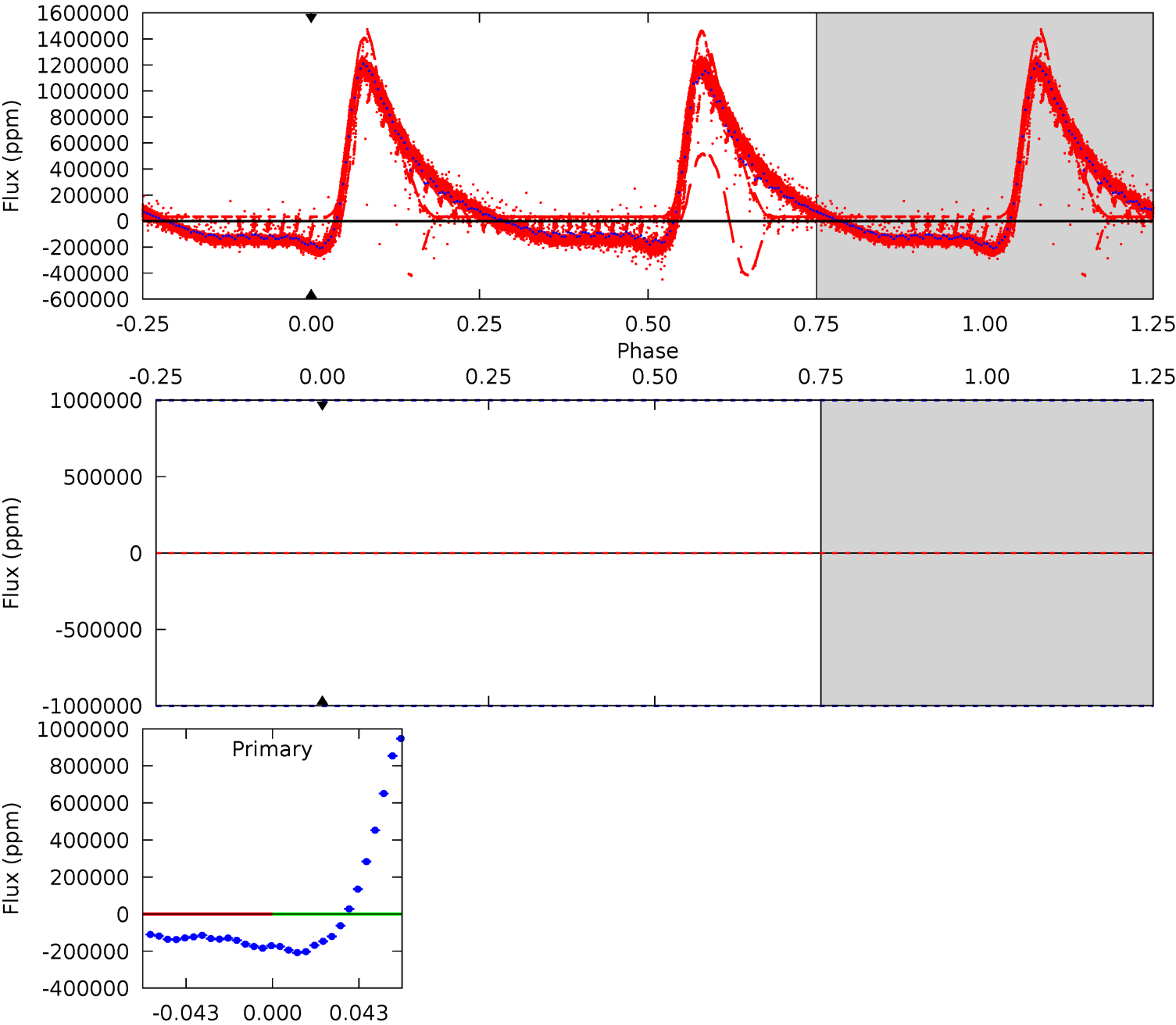
TCE 010789273-02 P= 0.960553 Days $T_0=131.909011$ (BKJD)



DV Model-Shift Uniqueness Test

010789273-02, P = 0.960553 Days, E = 131.024399 Days

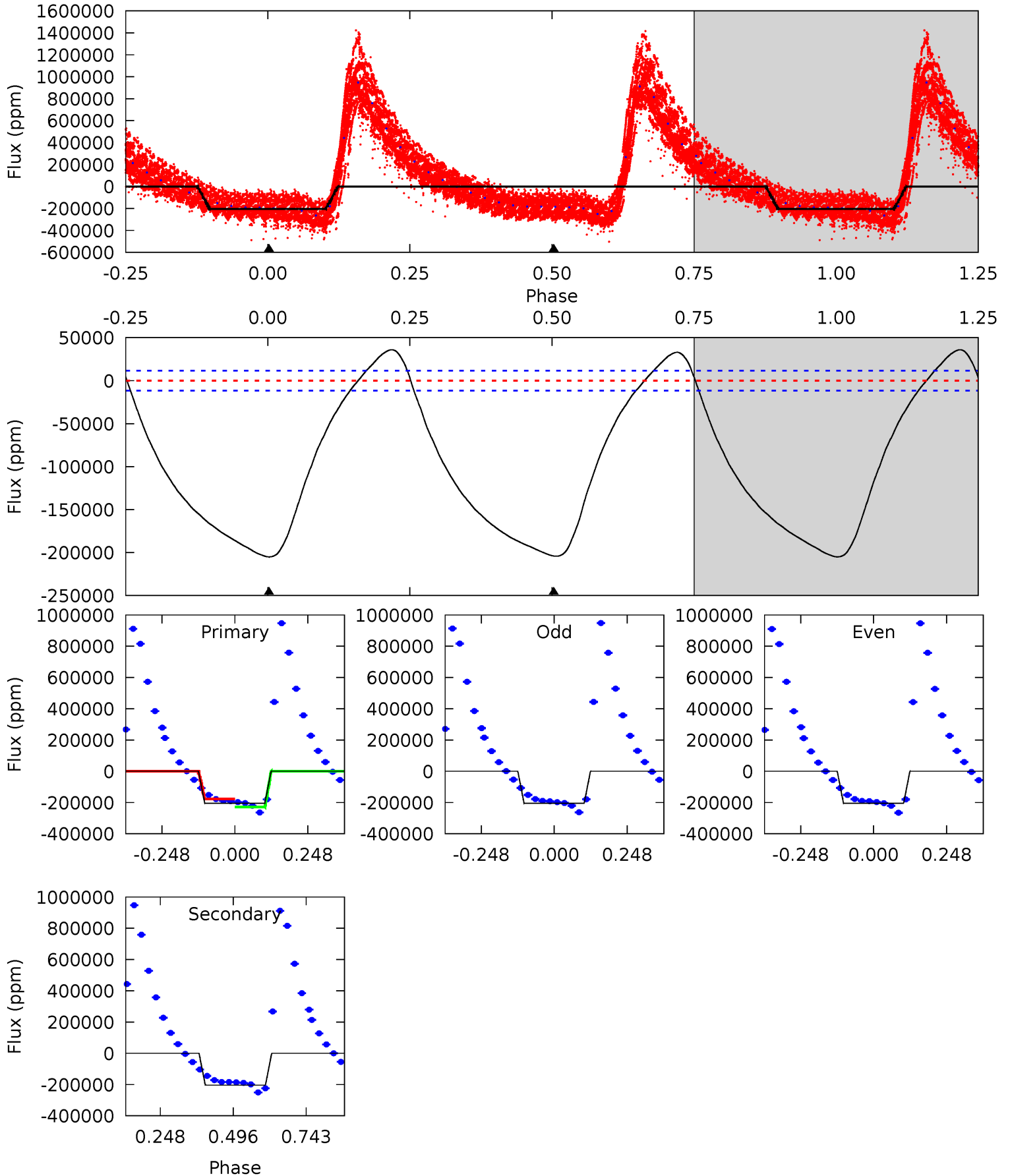
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010789273-02, P = 0.960553 Days, E = 130.948458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.4	77.1	0	0	4.37	1.16	9.21	77.4	77.4	77.1	77.1	0.10	0.97	0.15	12.8



Stellar Parameters For KIC 010789273

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8572^{+237}_{-385}	$3.776^{+0.432}_{-0.135}$	$-0.200^{+0.350}_{-0.400}$	$3.034^{+0.754}_{-1.292}$	$2.009^{+0.382}_{-0.466}$	$0.101^{+0.403}_{-0.039}$
	+3%/-4%	+11%/-4%	+175%/-200%	+25%/-43%	+19%/-23%	+397%/-38%
Source	KIC0	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 010789273-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$35.87^{+26.98}_{-22.38}$	5735^{+507}_{-623}	-5394^{+30625}_{-23727}	$-0.236^{+38.811}_{-47.076}$
Alt.	-204006 ± 2647	$120.37^{+41.09}_{-39.52}$	5765^{+510}_{-670}	9976^{+2951}_{-1673}	$5.549^{+6.482}_{-2.365}$

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

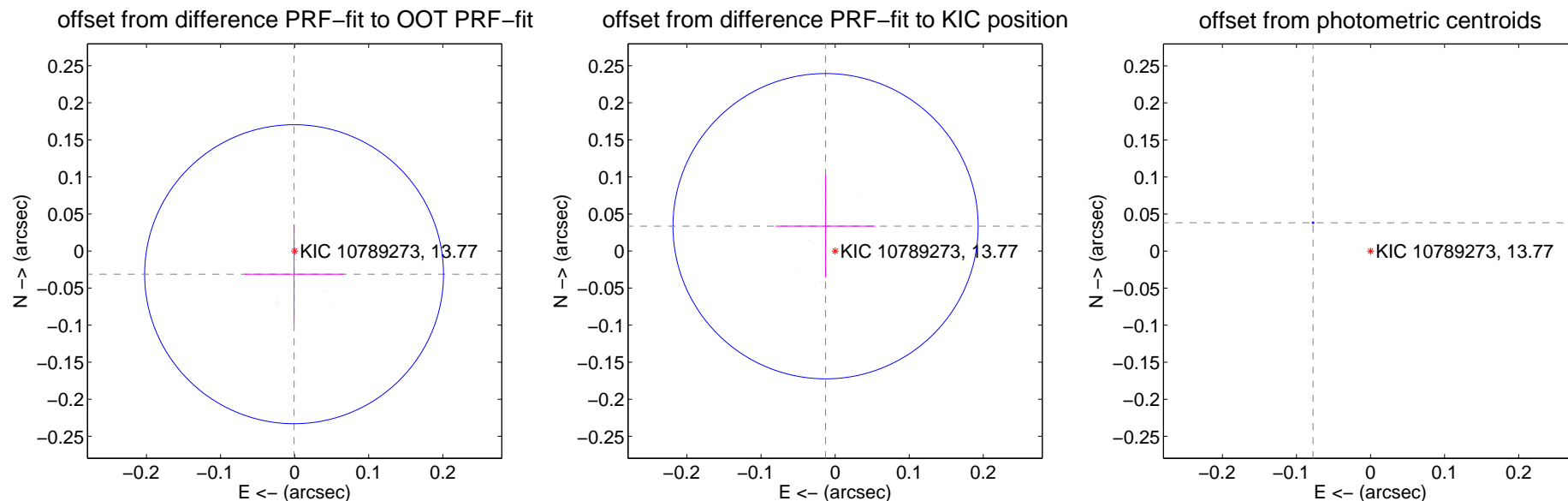
DV Centroid Data

Supplemental centroid analysis for 010789273-02. Kepler magnitude: 13.77. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

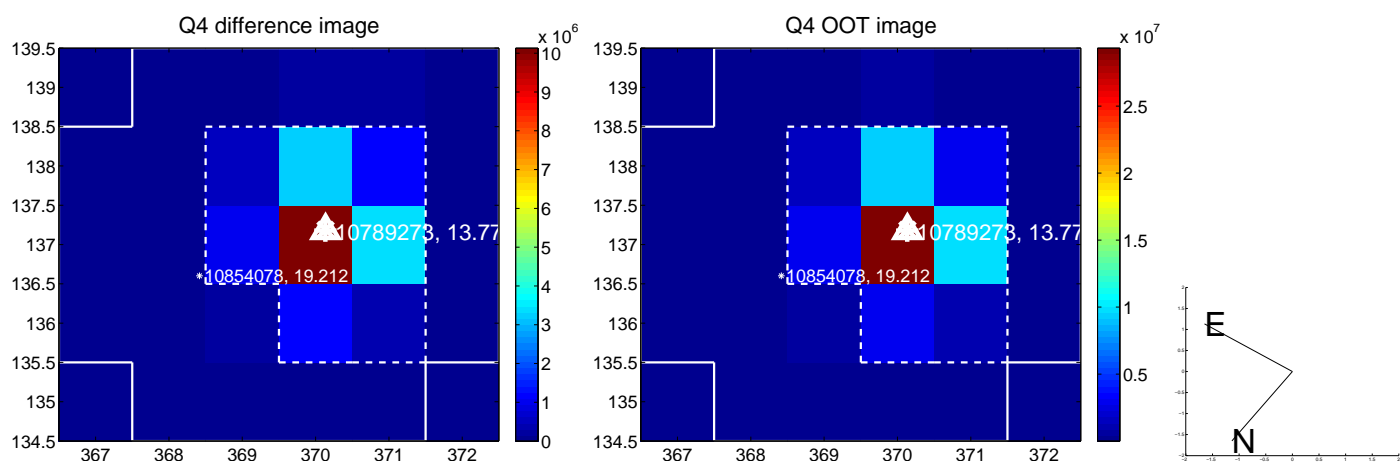
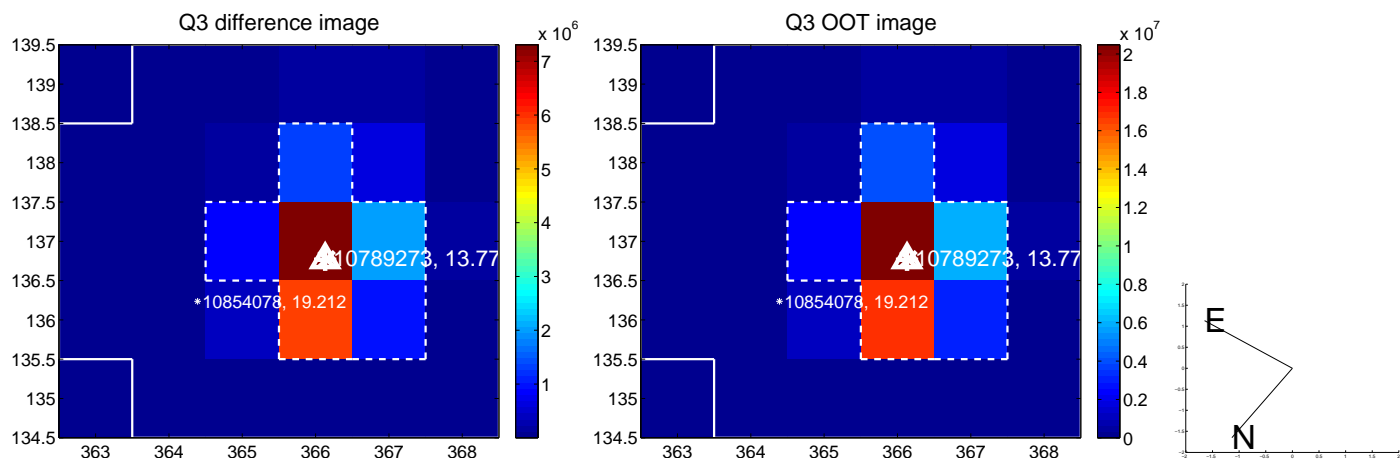
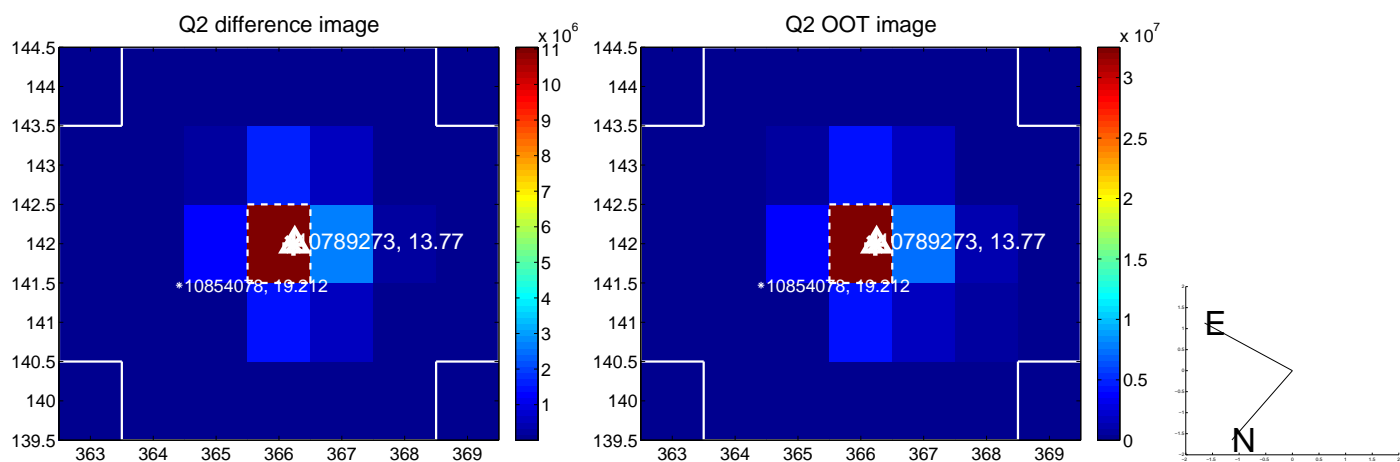
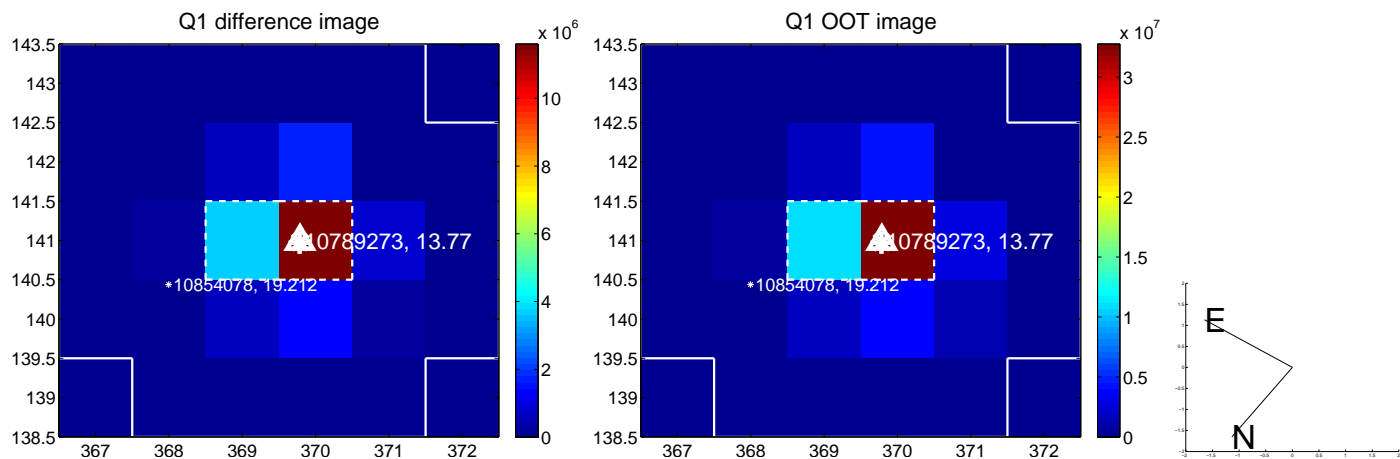
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.067	0.47	0.001 ± 0.067	-0.031 ± 0.067
PRF-fit source offset from KIC position	0.036 ± 0.069	0.52	0.013 ± 0.067	0.034 ± 0.069
photometric centroid source offset	0.09 ± 0.00	215.88	0.08 ± 0.00	0.04 ± 0.00

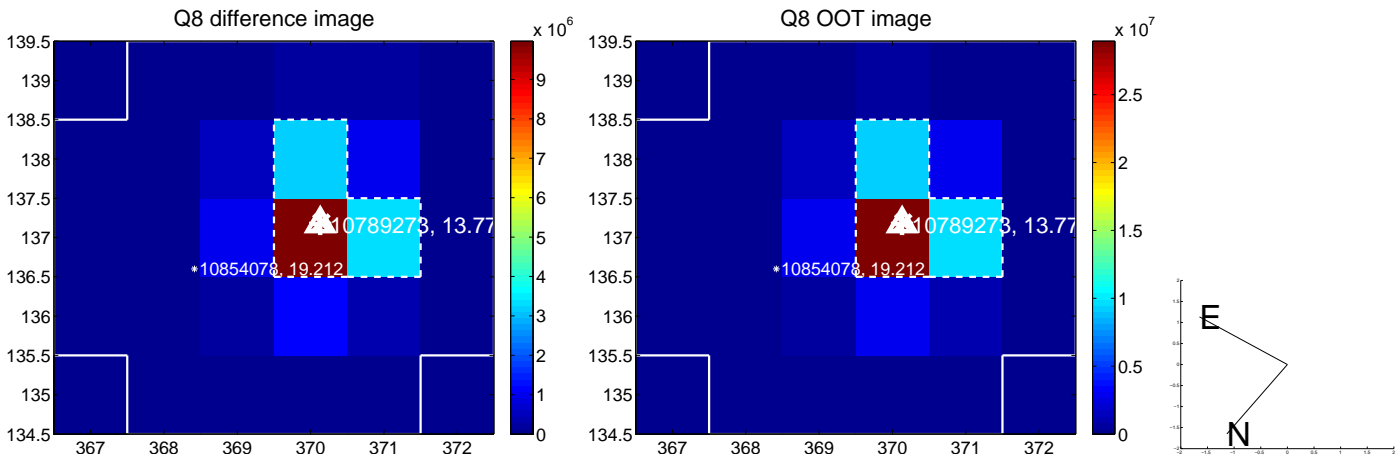
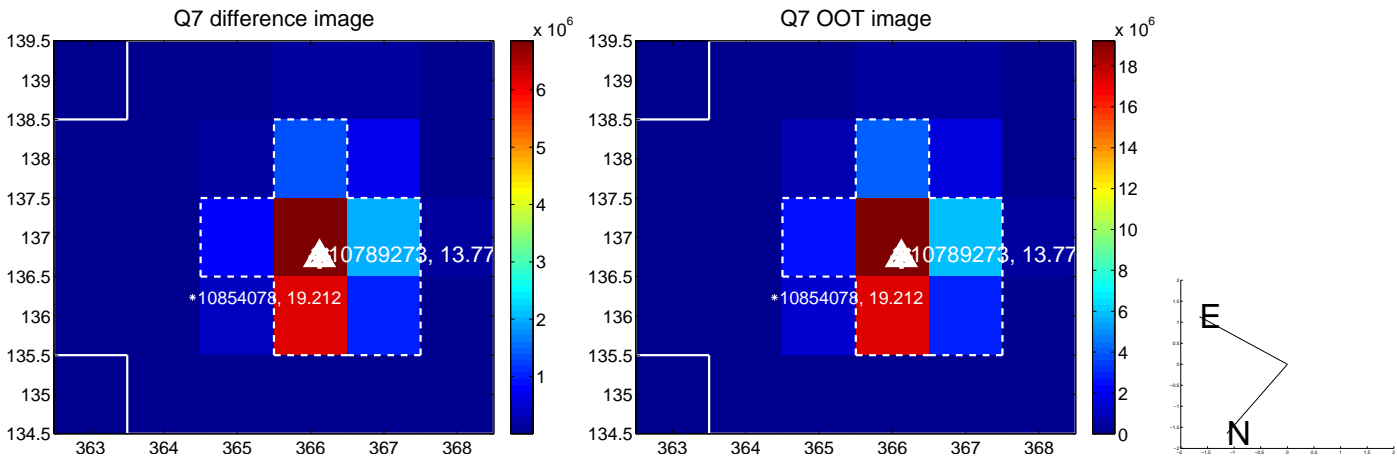
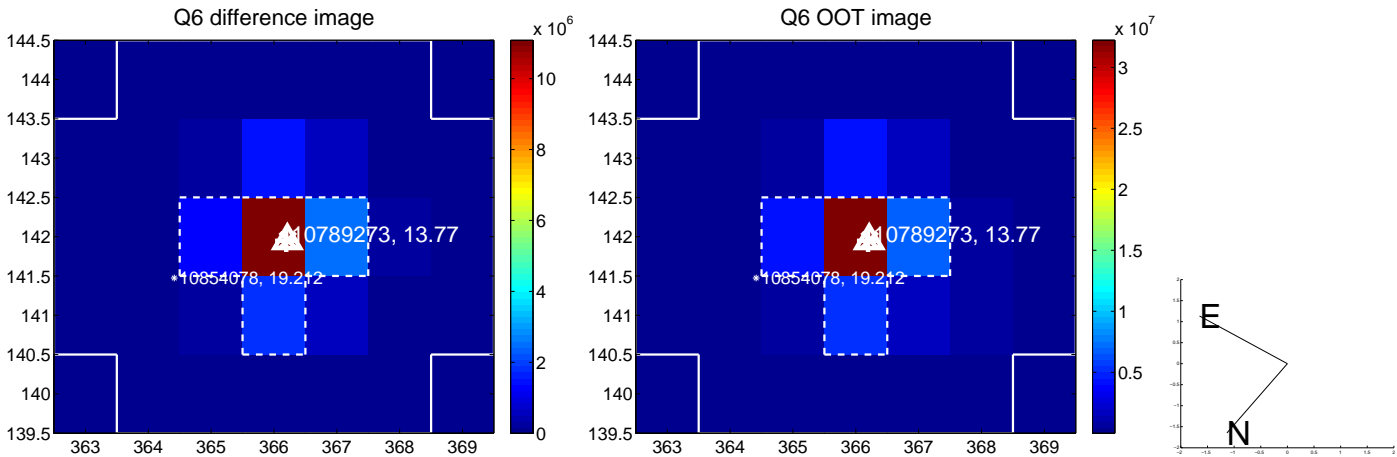
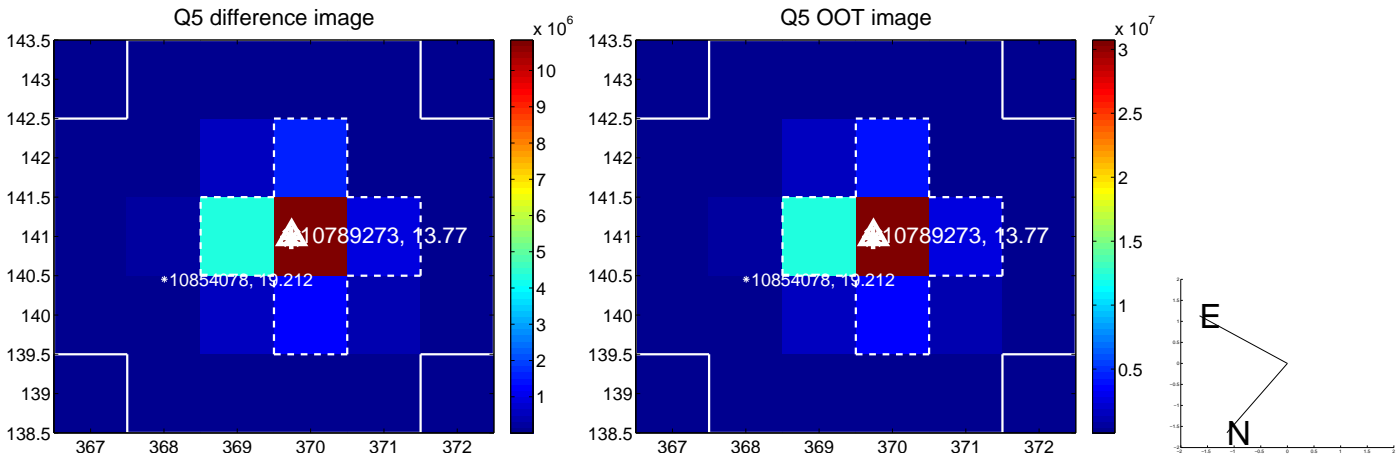


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

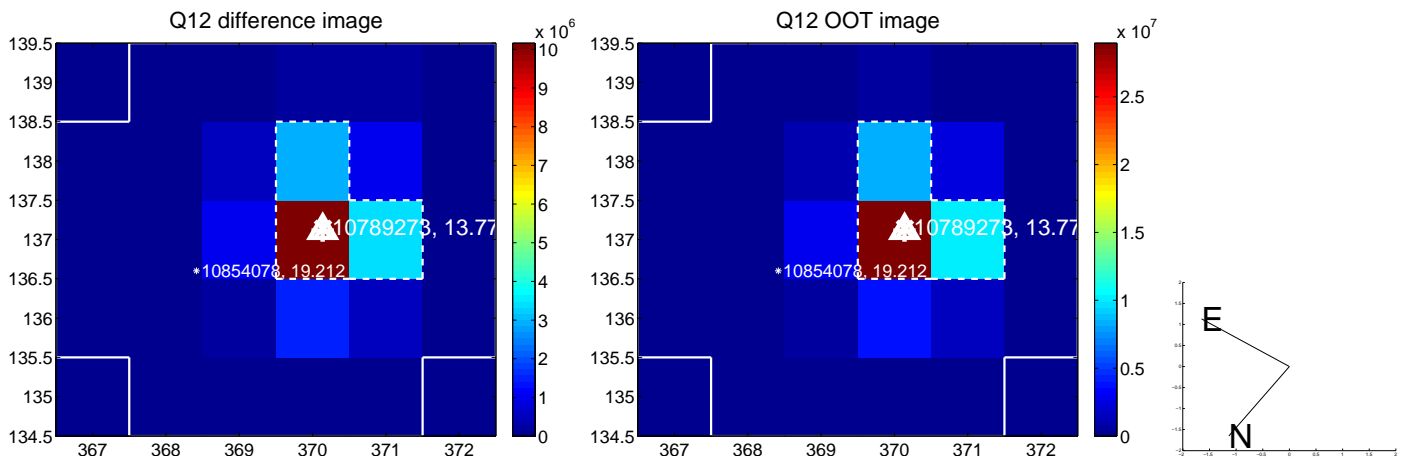
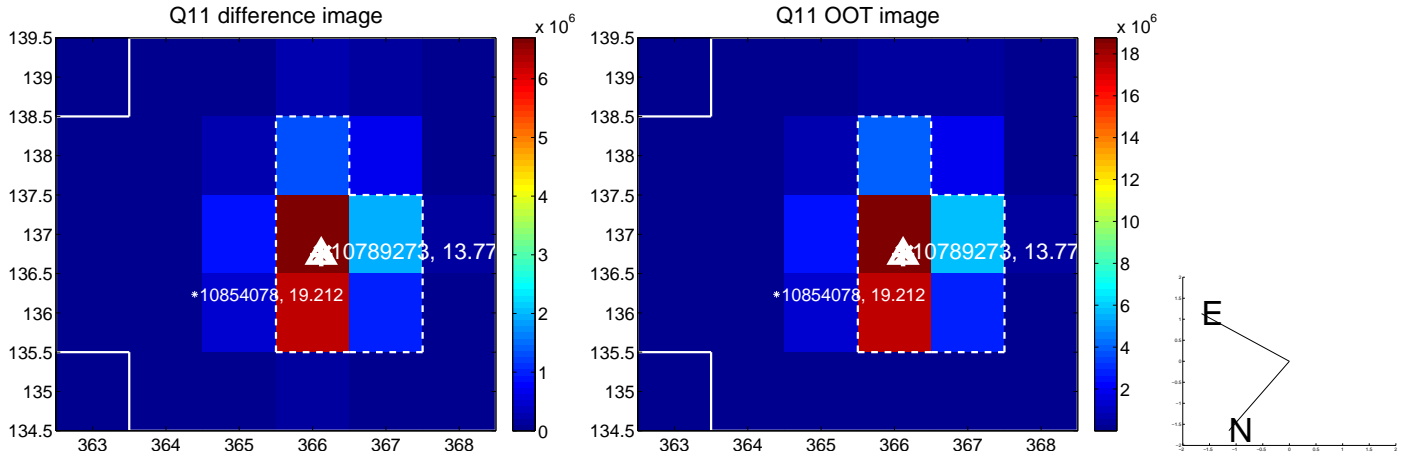
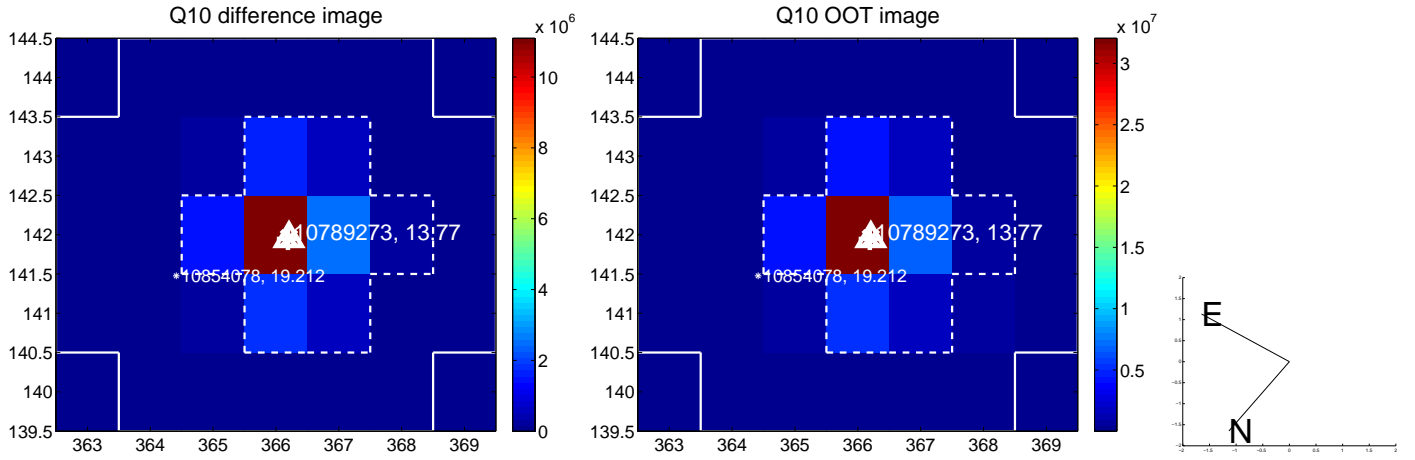
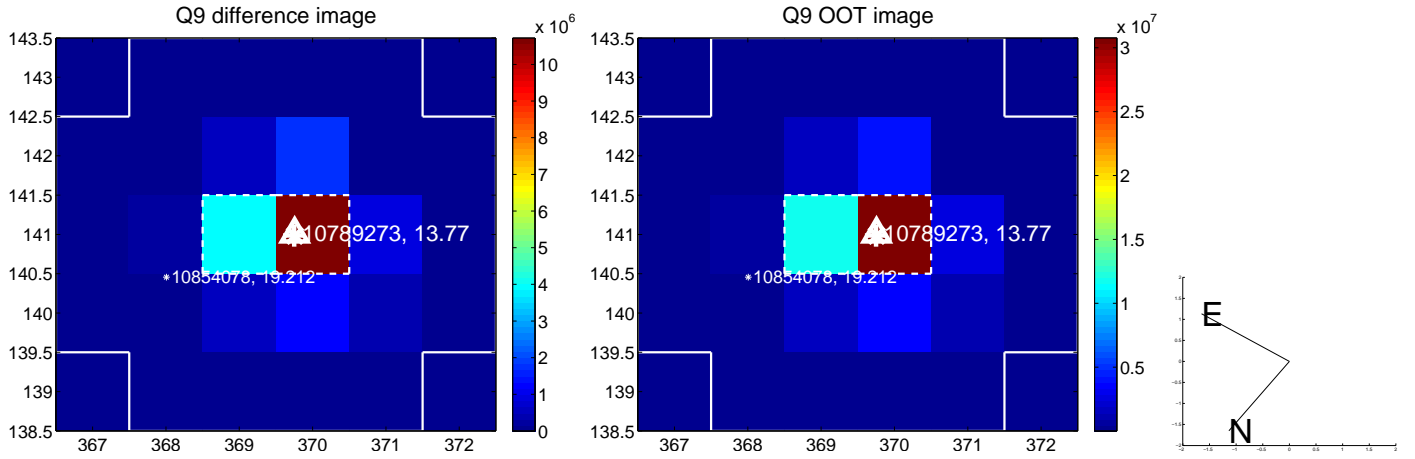
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



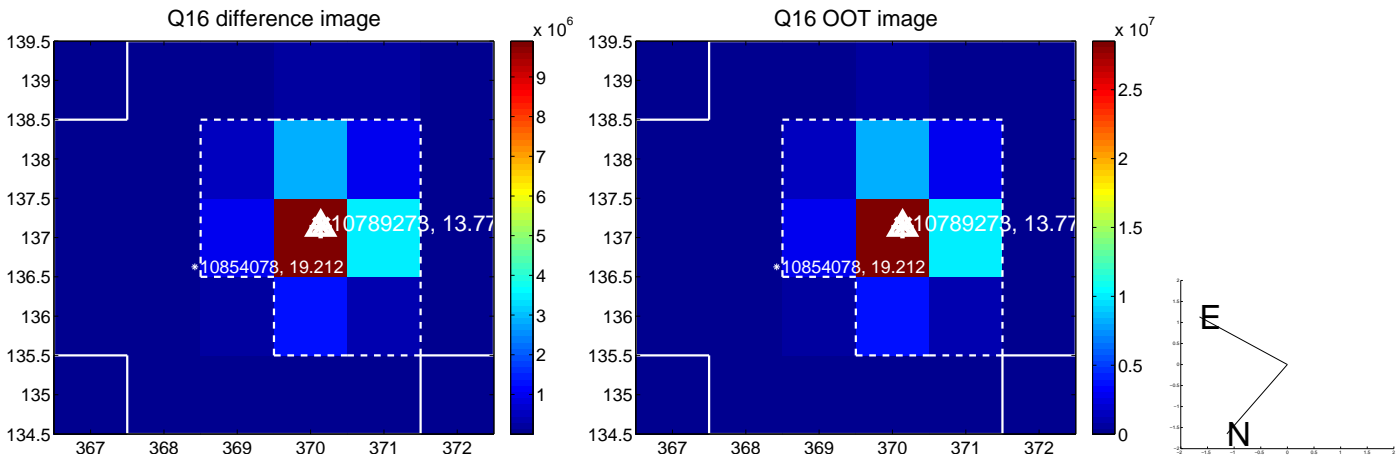
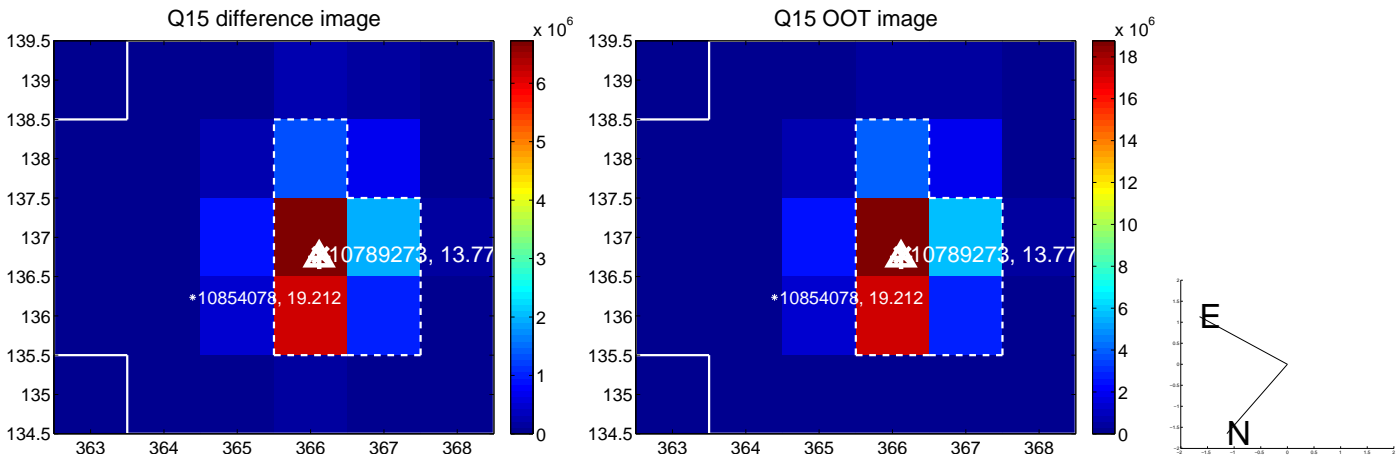
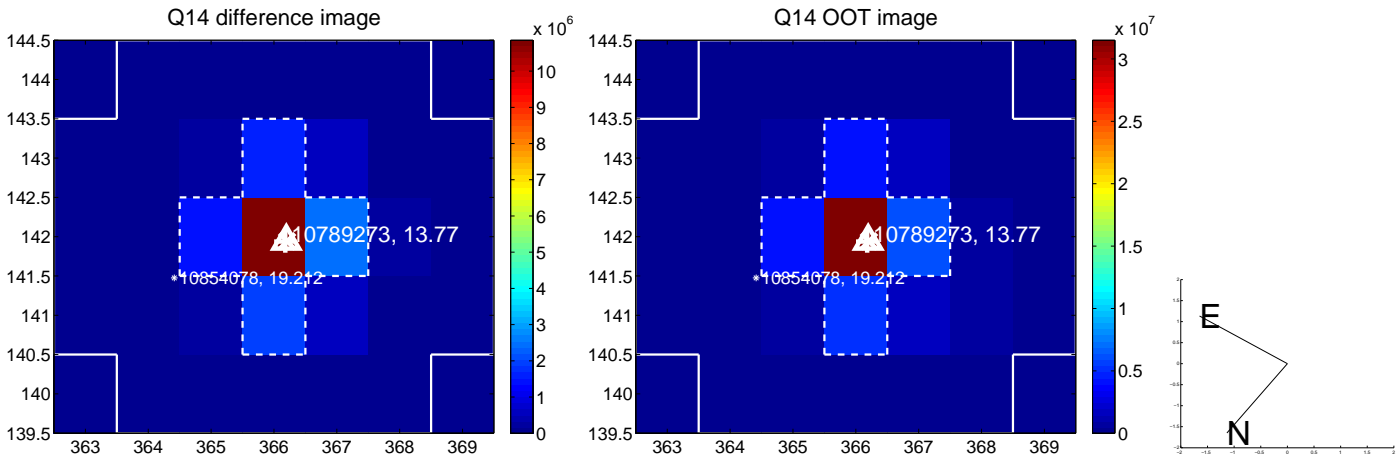
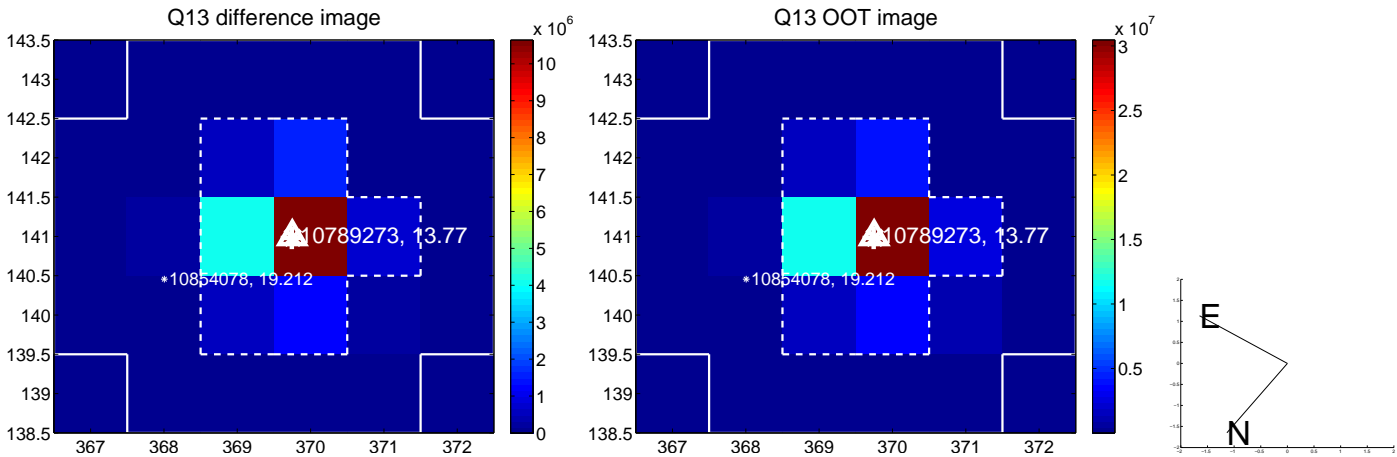
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



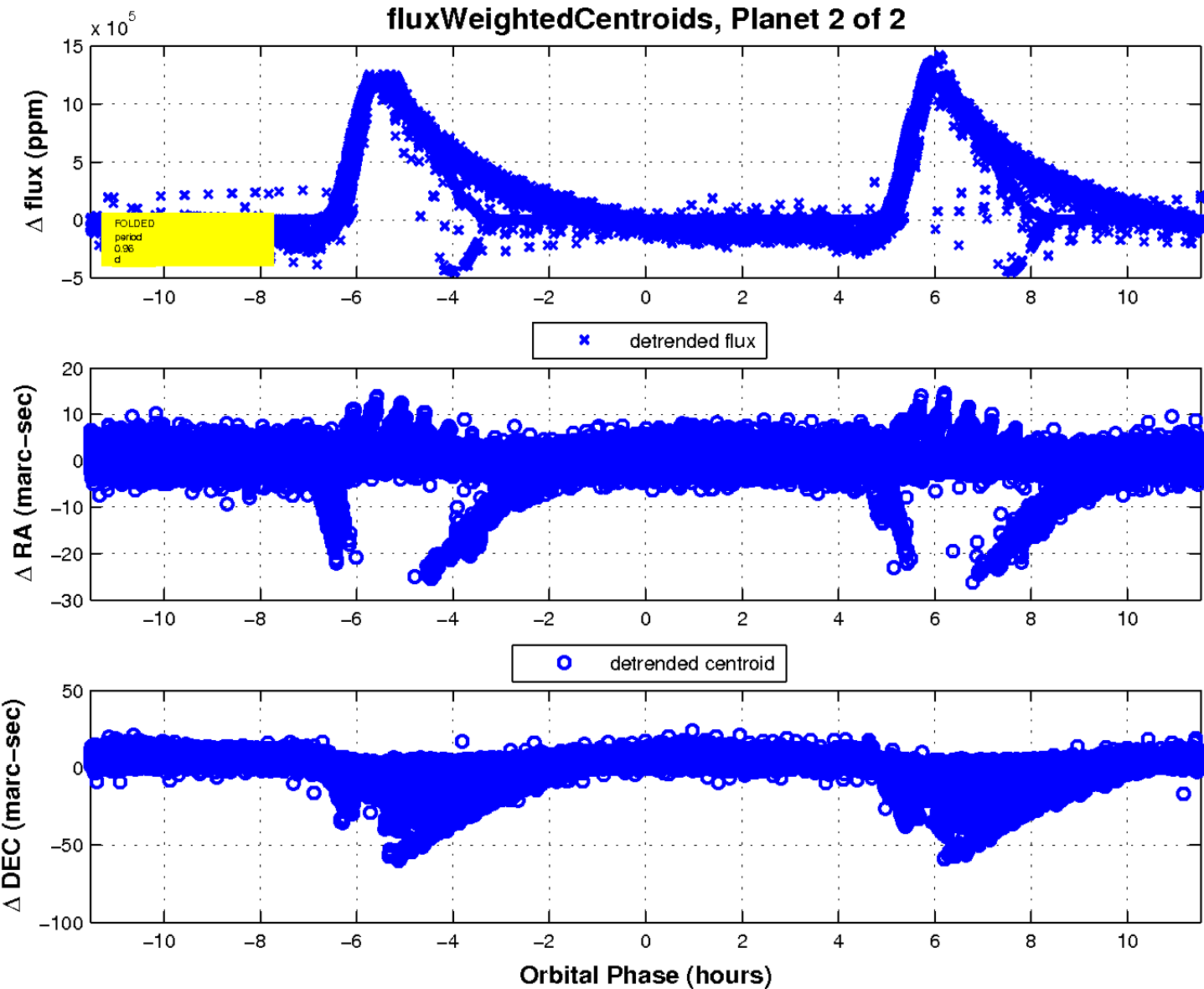
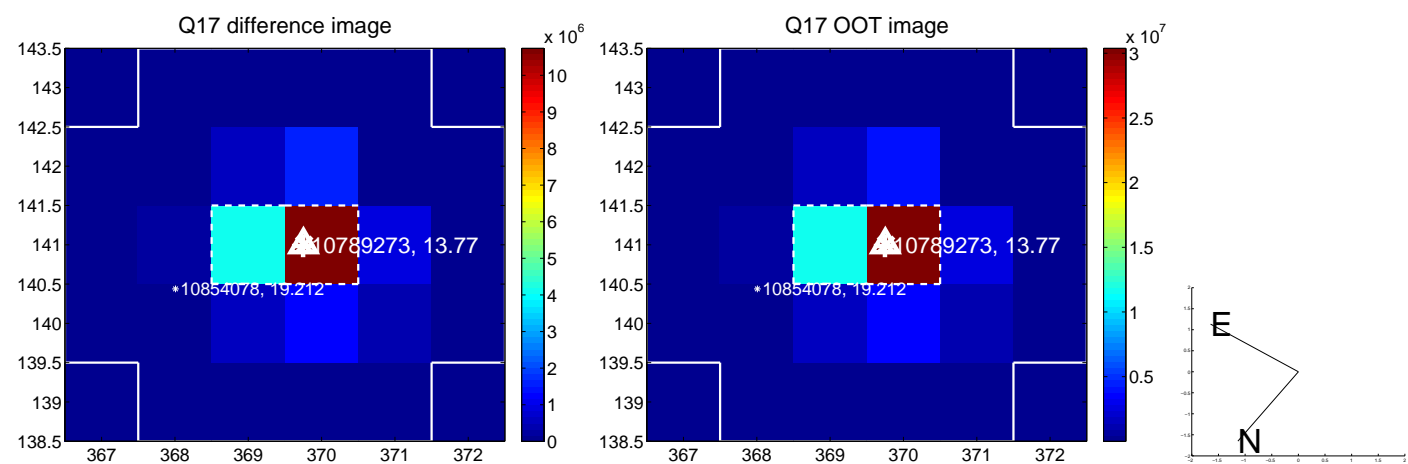
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

