

KIC 007690855

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})
007690855-01	OBS	No	1.572663	132.907633	98.2	3.537	112.4	20.2	0.56	4223	1.17	189.57
007690855-02	OBS	4077.01	1.572525	132.167444	9192.7	2.000	184.9	-1.0	0.56	4223	5.24	189.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007690855-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
007690855-02	OBS	FP	0.00	1	0	0	1	LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—EPHEM_MATCH

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 007690855-01

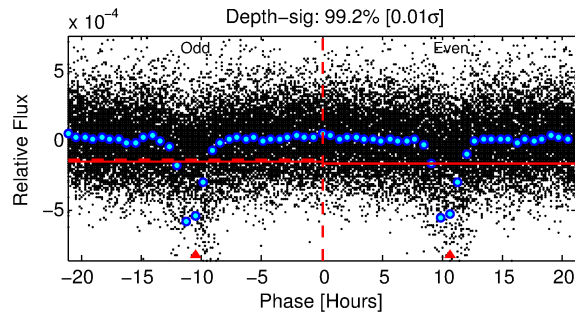
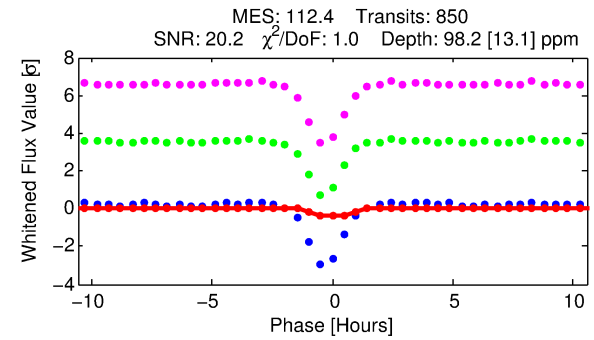
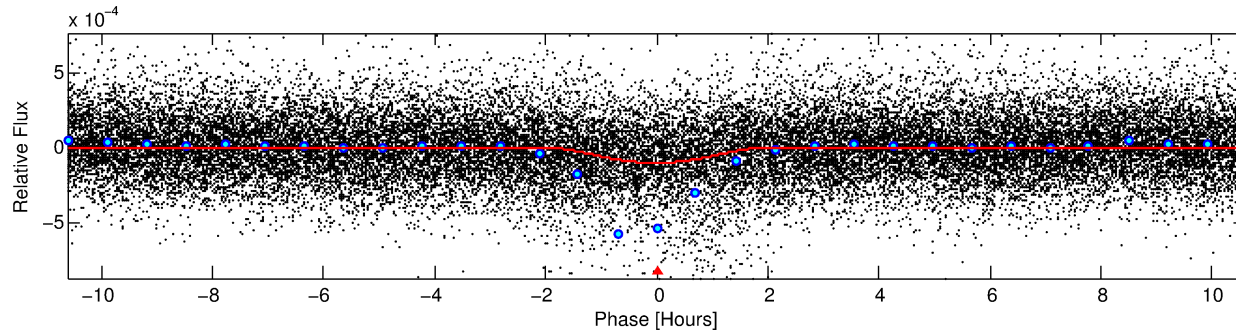
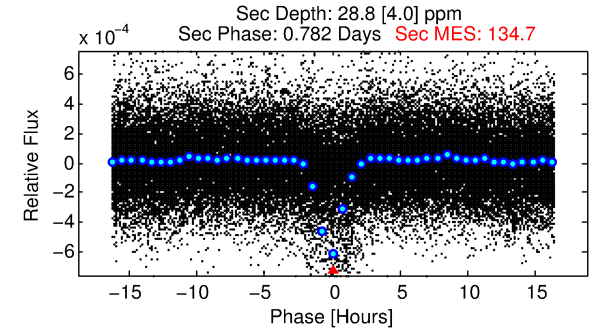
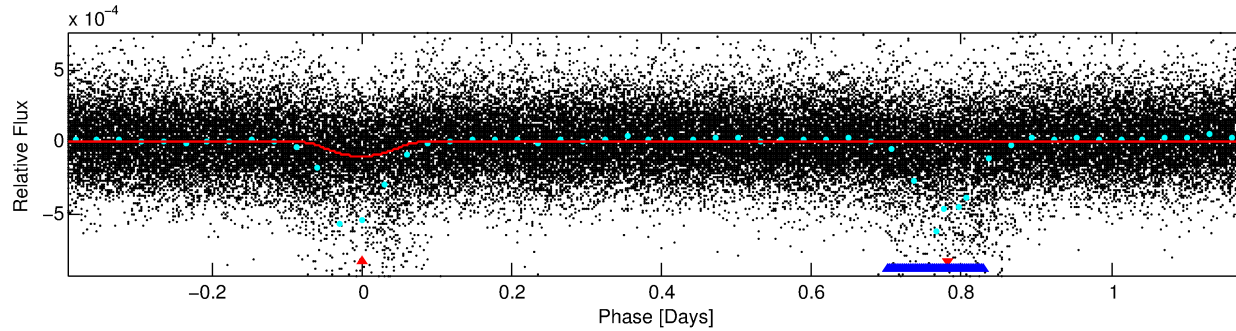
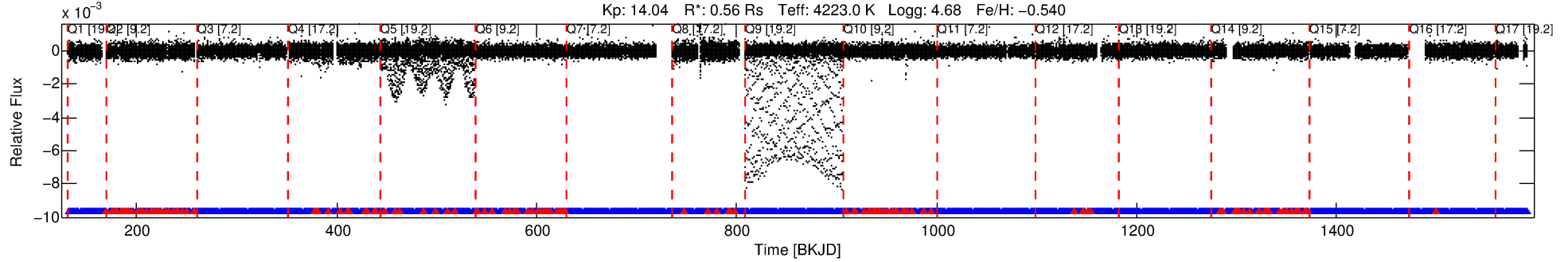
No Significant Match Found

DV One-Page Summary

KIC: 7690855 Candidate: 1 of 2 Period: 1.573 d

KOI: K04077 Corr: No Ephemeris Match

Kp: 14.04 R*: 0.56 Rs Teff: 4223.0 K Logg: 4.68 Fe/H: -0.540



DV Fit Results:

Period = 1.57266 [0.00001] d
Epoch = 132.9076 [0.0026] BKJD
Rp/R* = 0.0193 [0.0334]
a/R* = 1.22 [0.15]
b = 1.00 [0.05]
Seff = 189.57 [36.40]
Teff = 946 [45] K
Rp = 1.17 [2.03] Re
a = 0.0216 [0.0020] AU
Ag = 5.36 [18.55] [0.24σ]
Teffp = 2226 [1925] K [0.66σ]

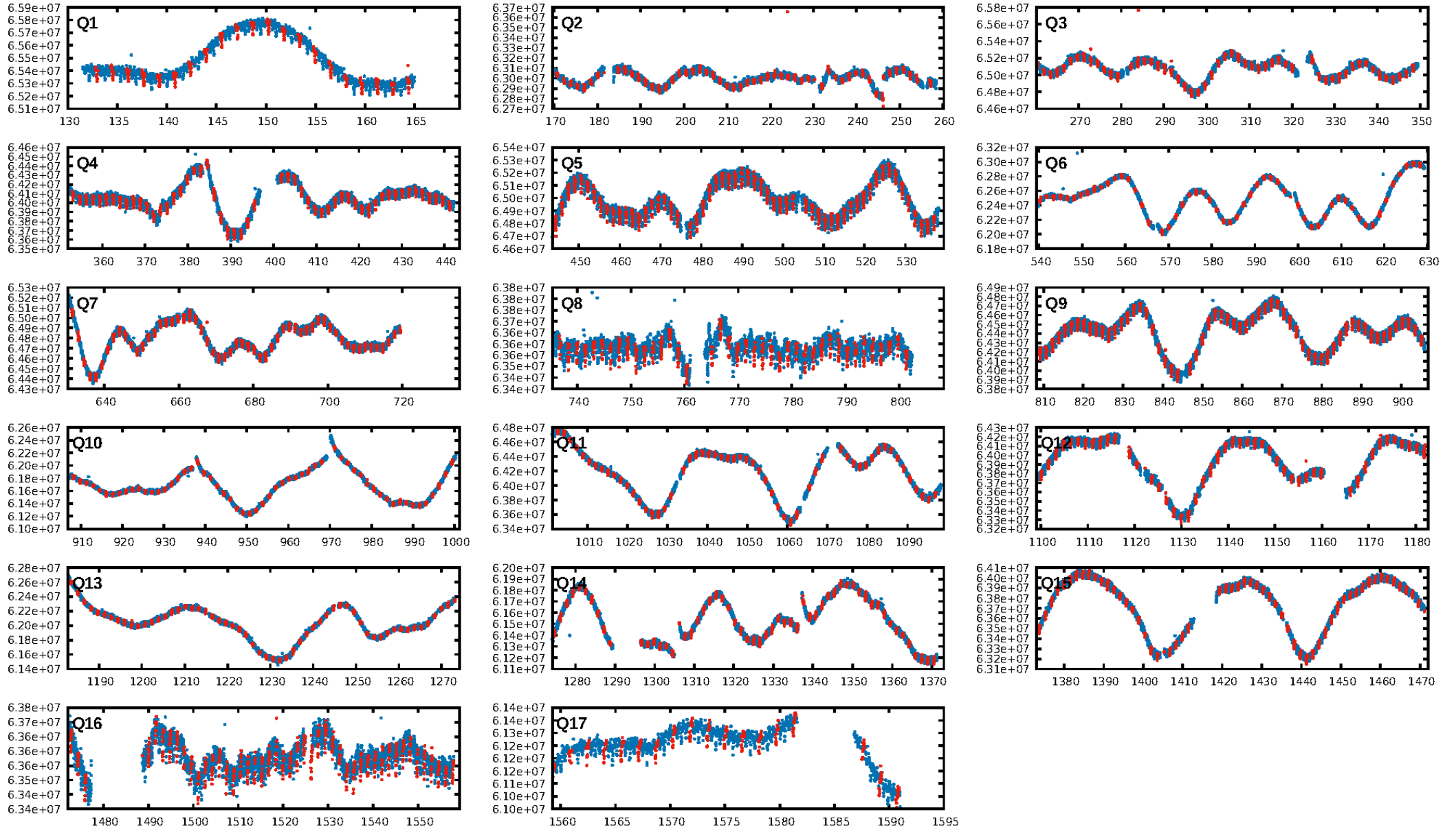
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.85 [691/811]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

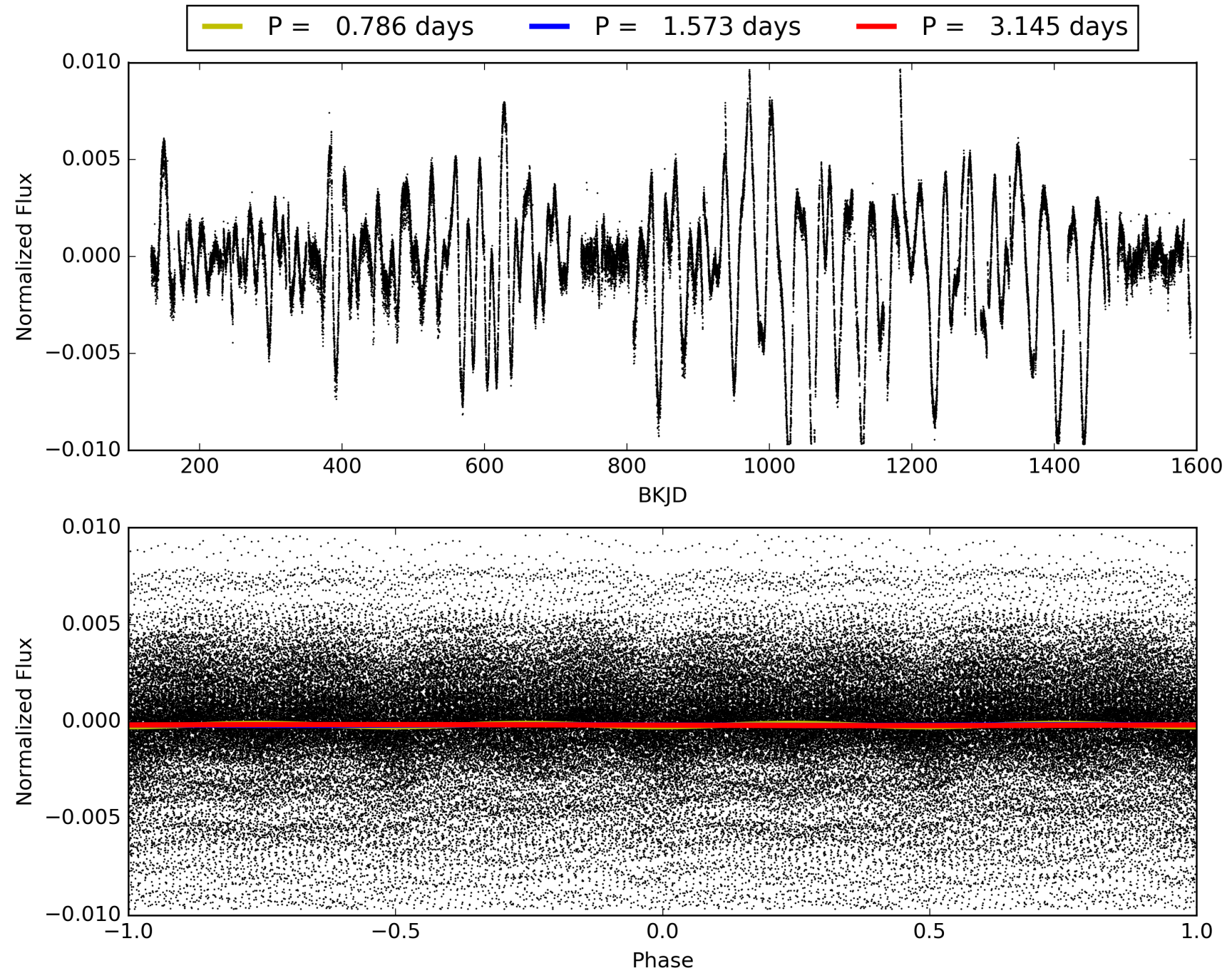
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007690855-01, PDC Light Curves

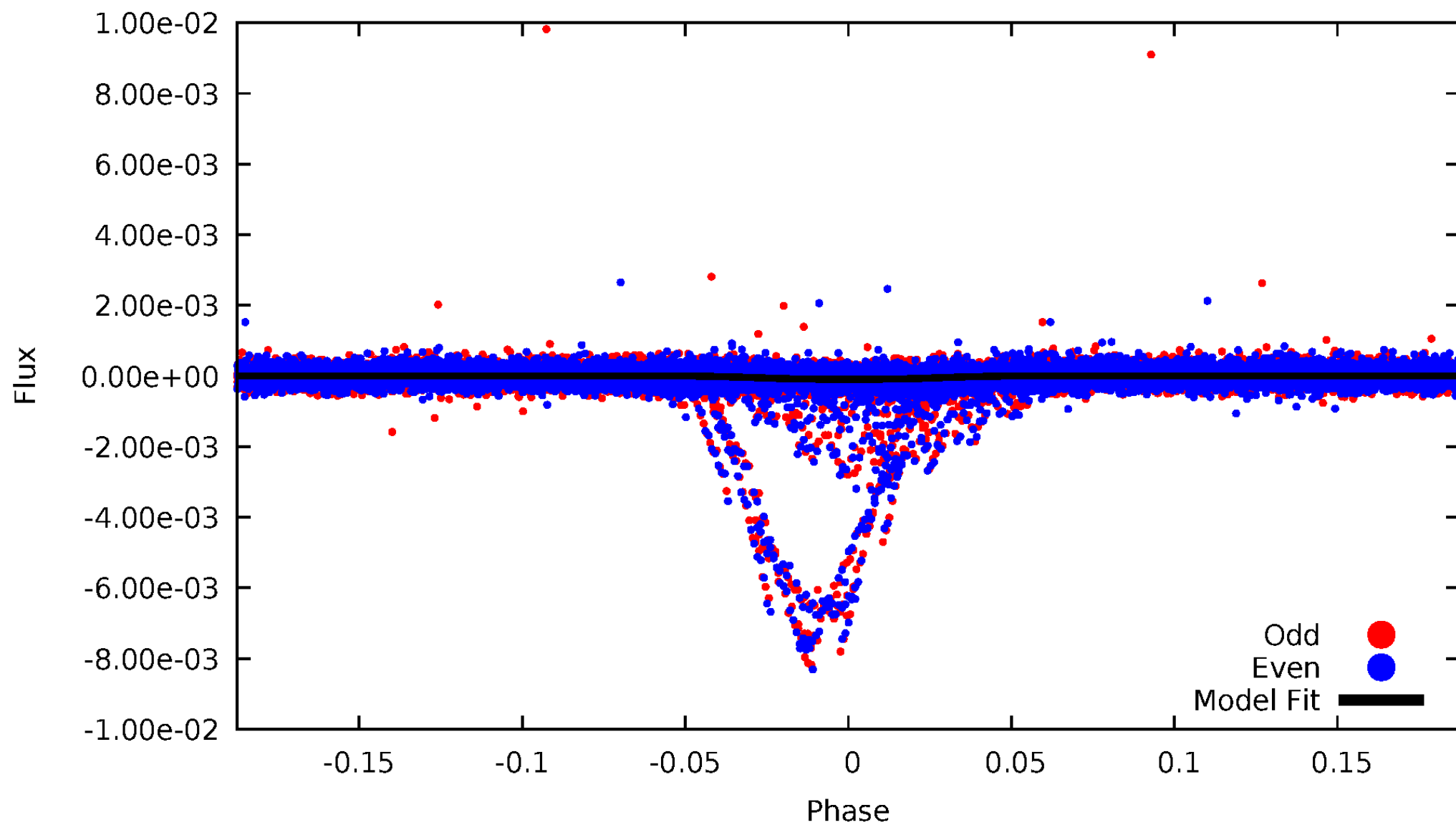


TCE 007690855-01



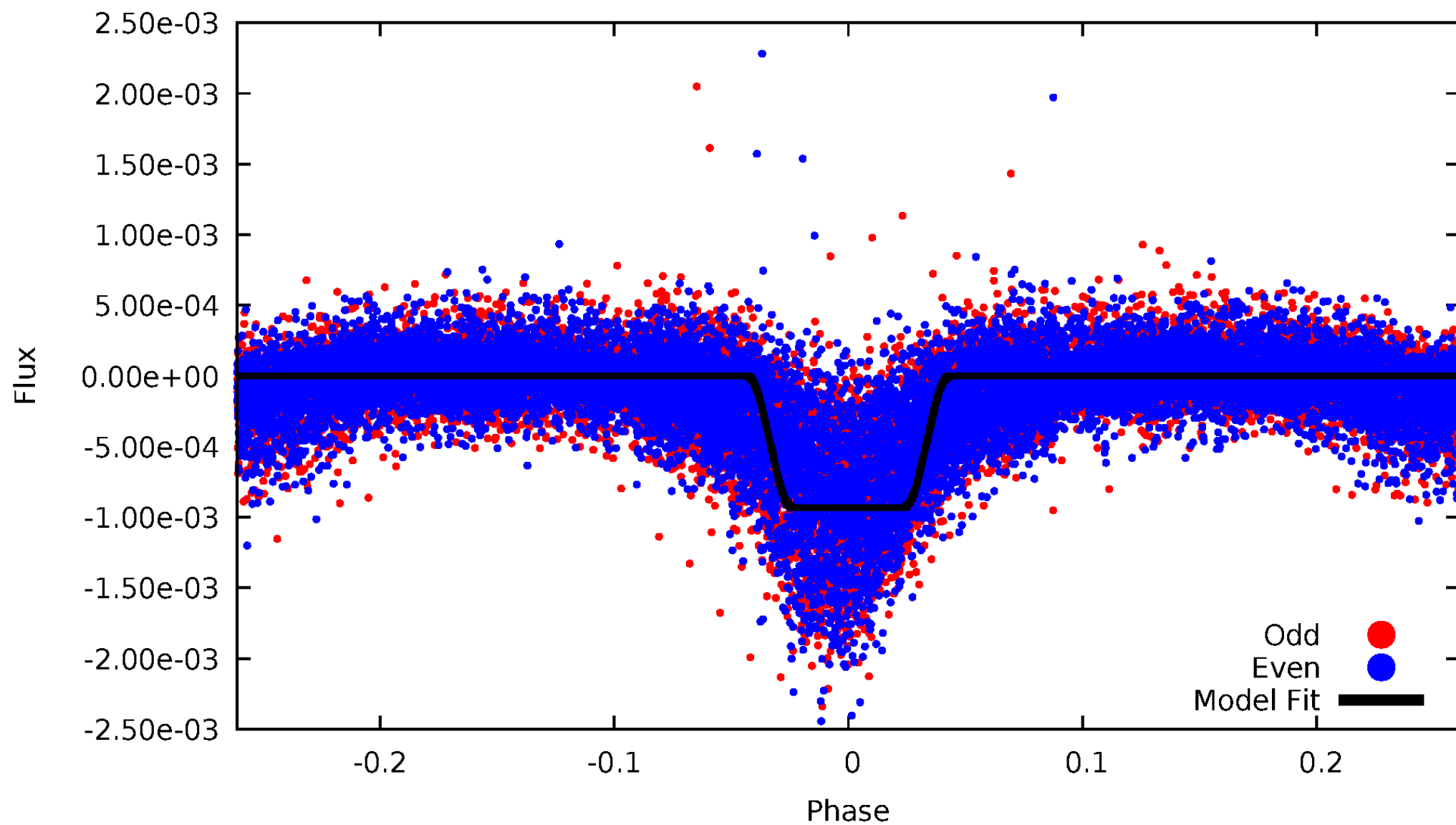
DV Odd/Even

TCE 007690855-01

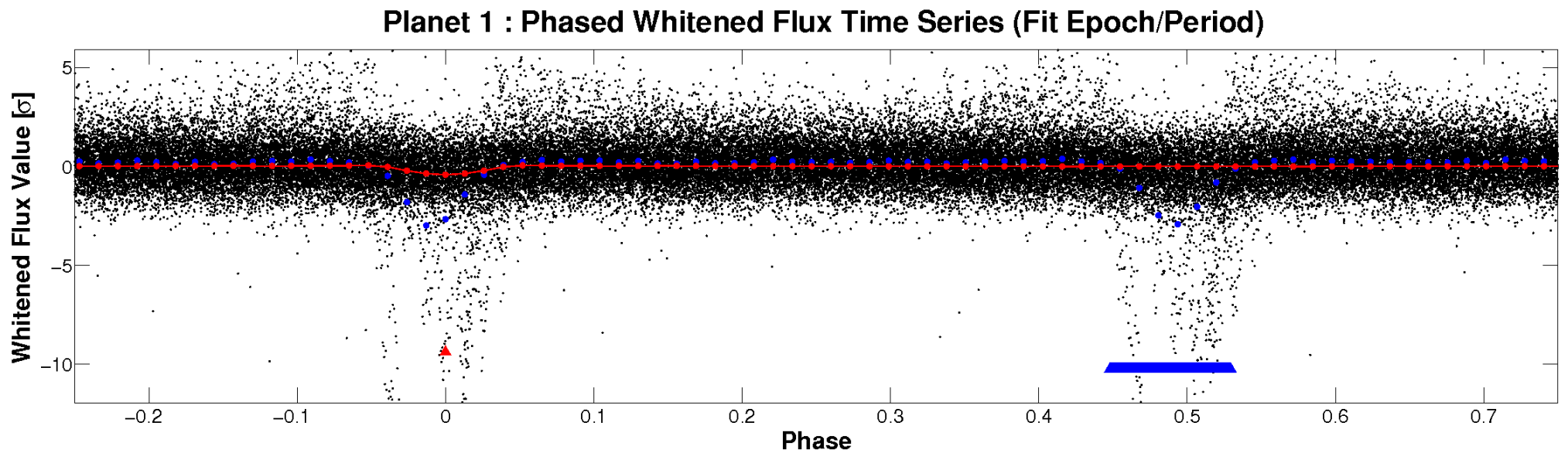
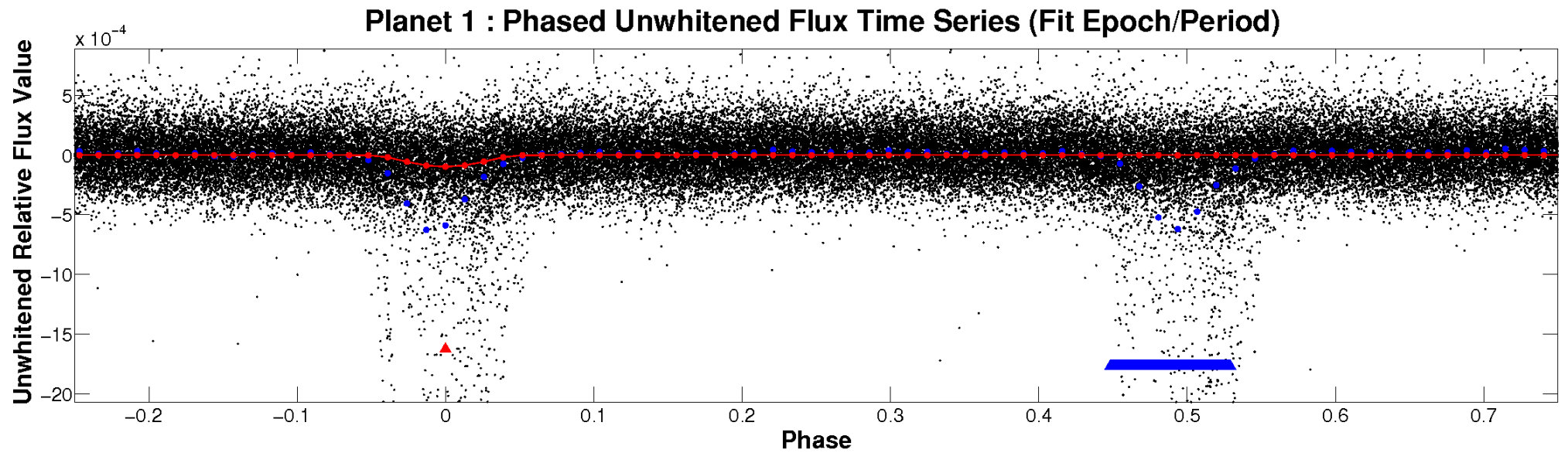


ALT Odd/Even

TCE 007690855-01

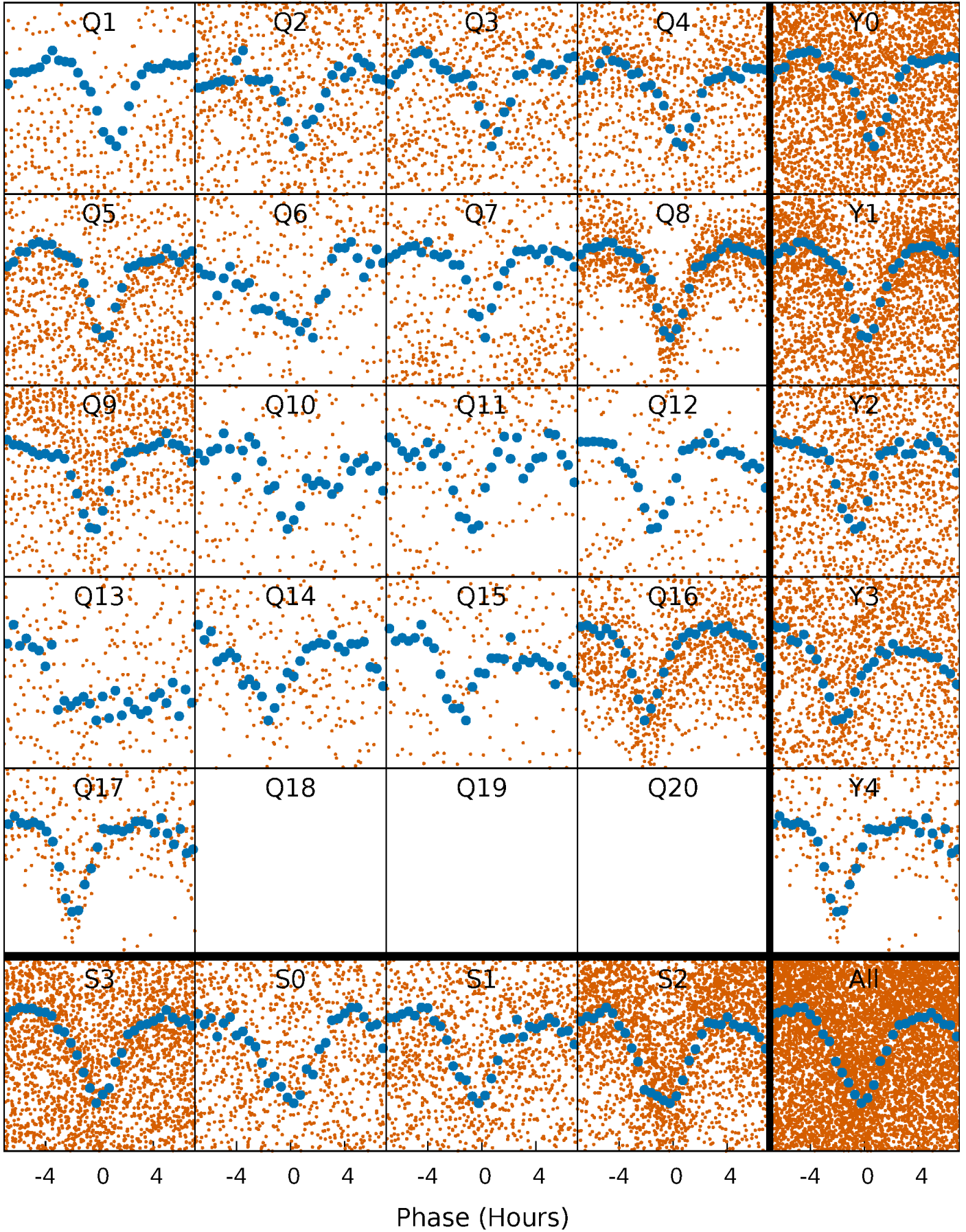


Non-Whitened Vs. Whitened Light Curve



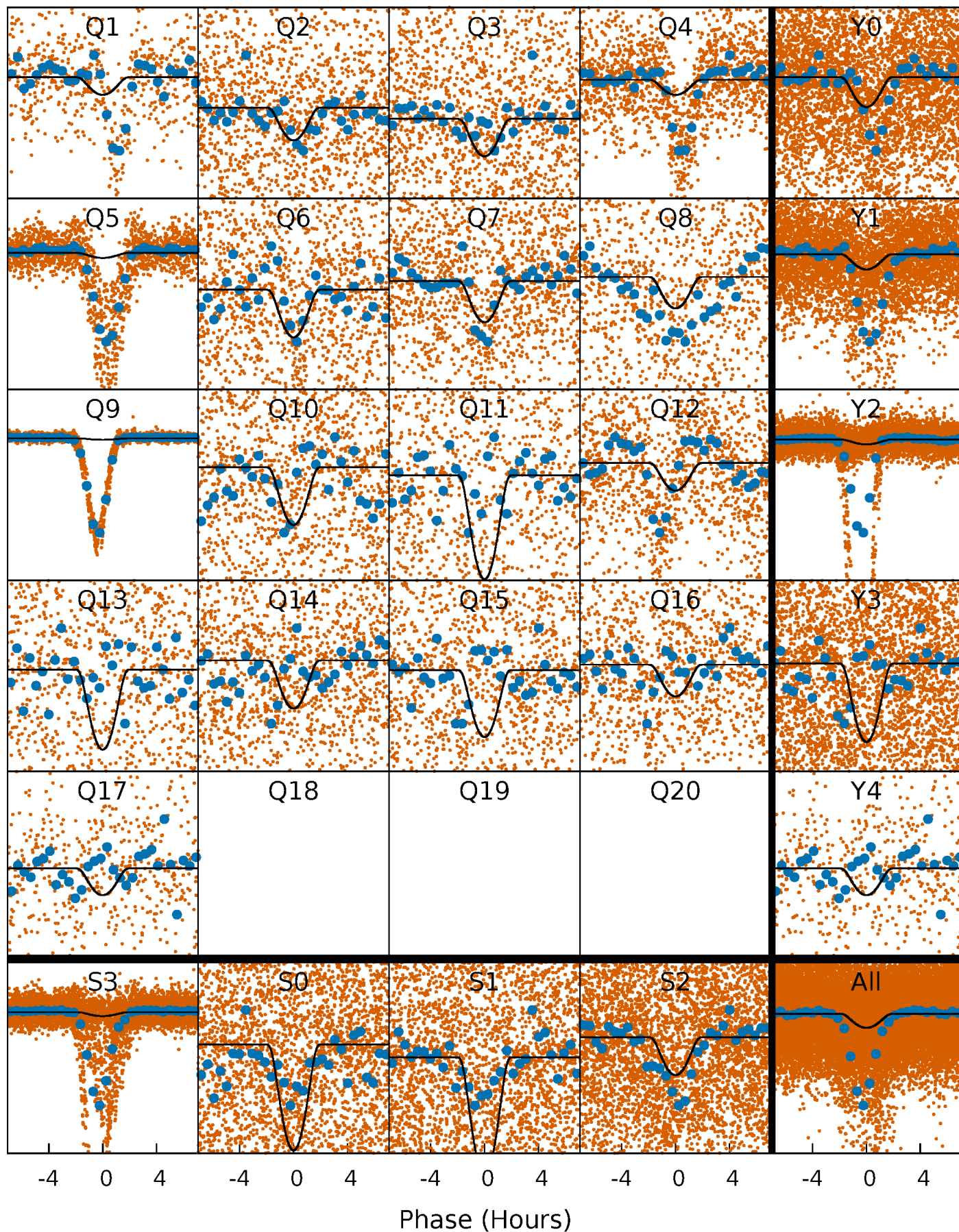
PDC Quarter-Phased Transit Curves

TCE 007690855-01 P= 1.572663 Days $T_0=132.907633$ (BKJD)



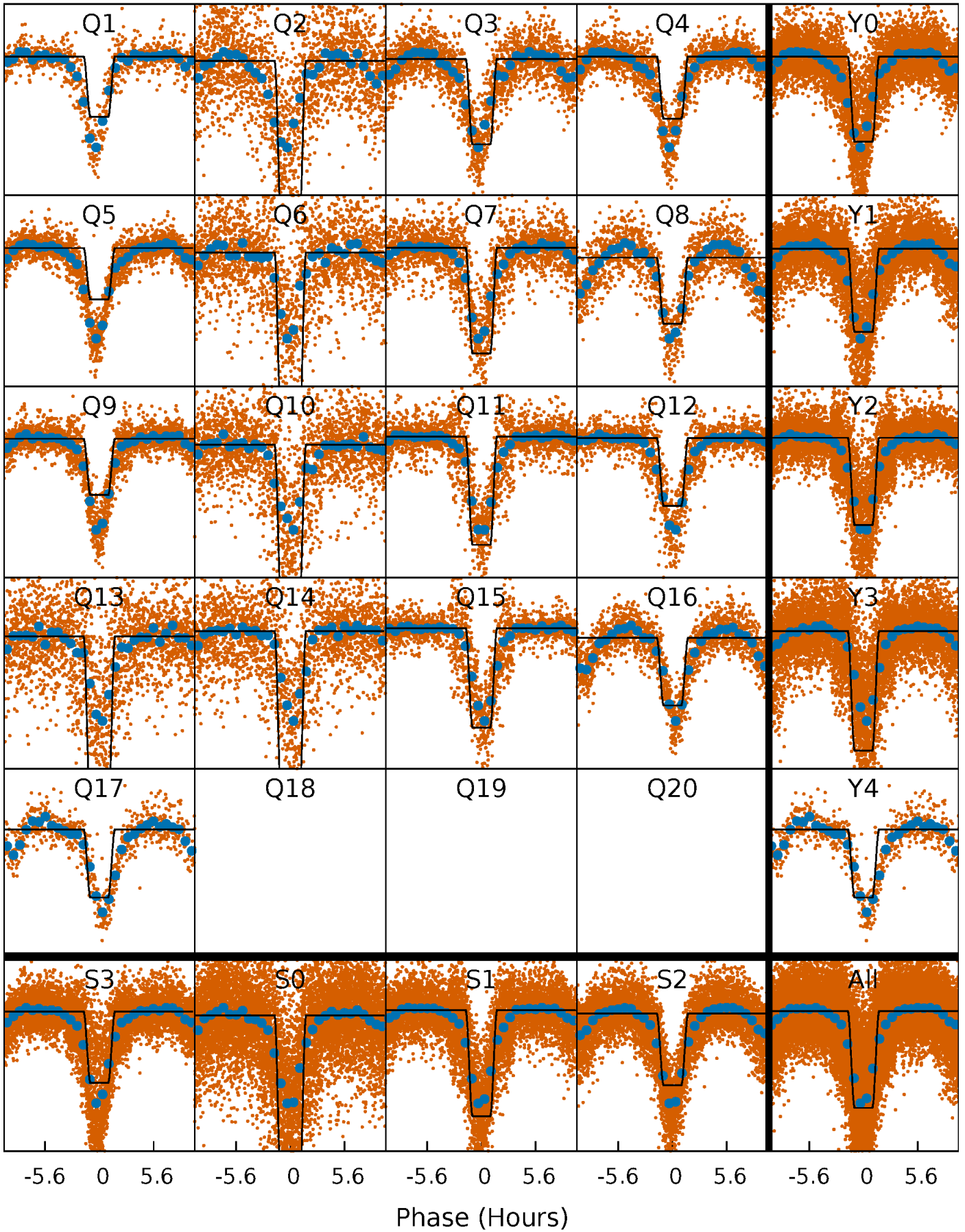
DV Quarter-Phased Transit Curves

TCE 007690855-01 P= 1.572663 Days $T_0=132.907633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

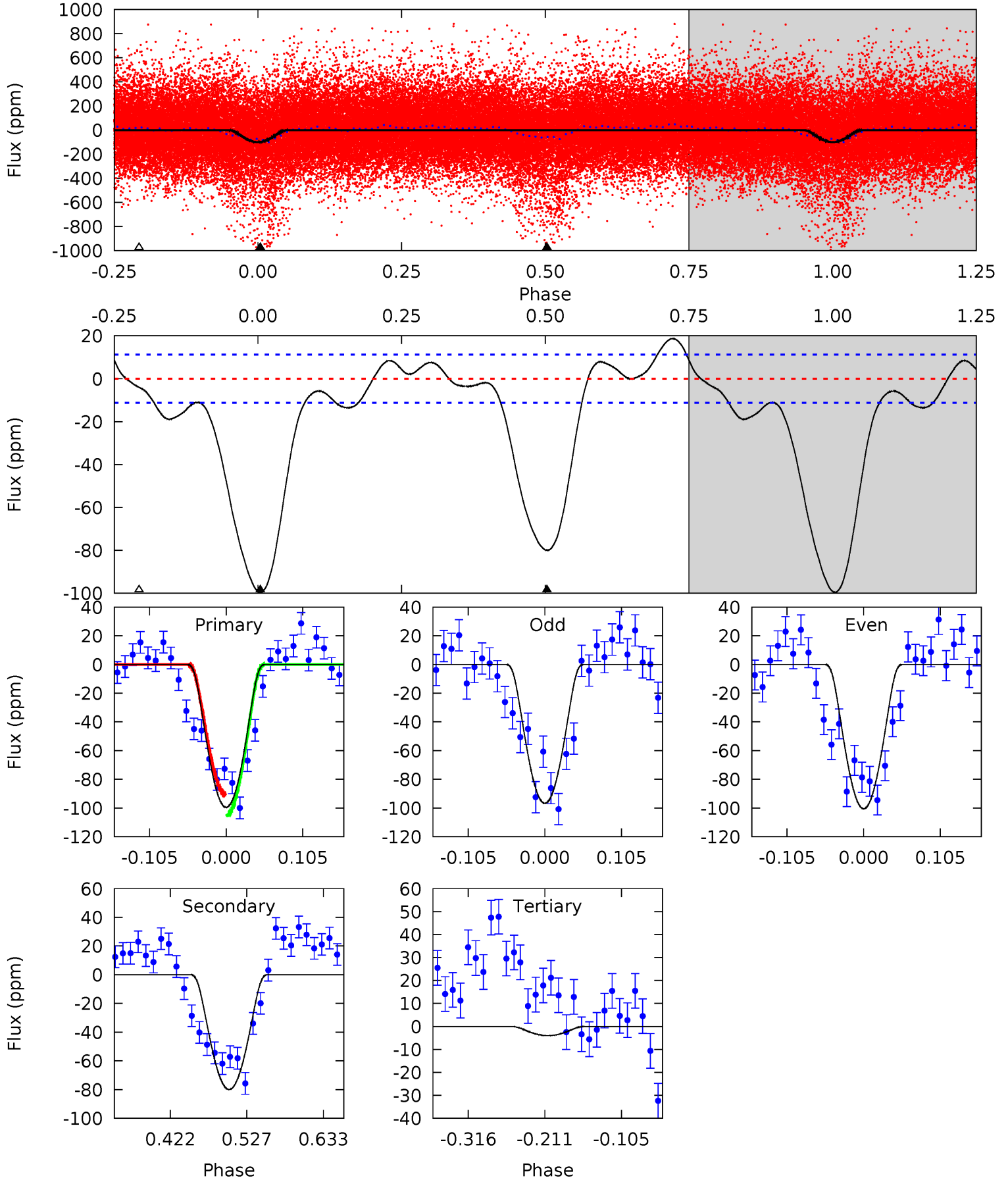
TCE 007690855-01 $P = 1.572483$ Days $T_0 = 132.973199$ (BKJD)



DV Model-Shift Uniqueness Test

007690855-01, P = 1.572663 Days, E = 131.334970 Days

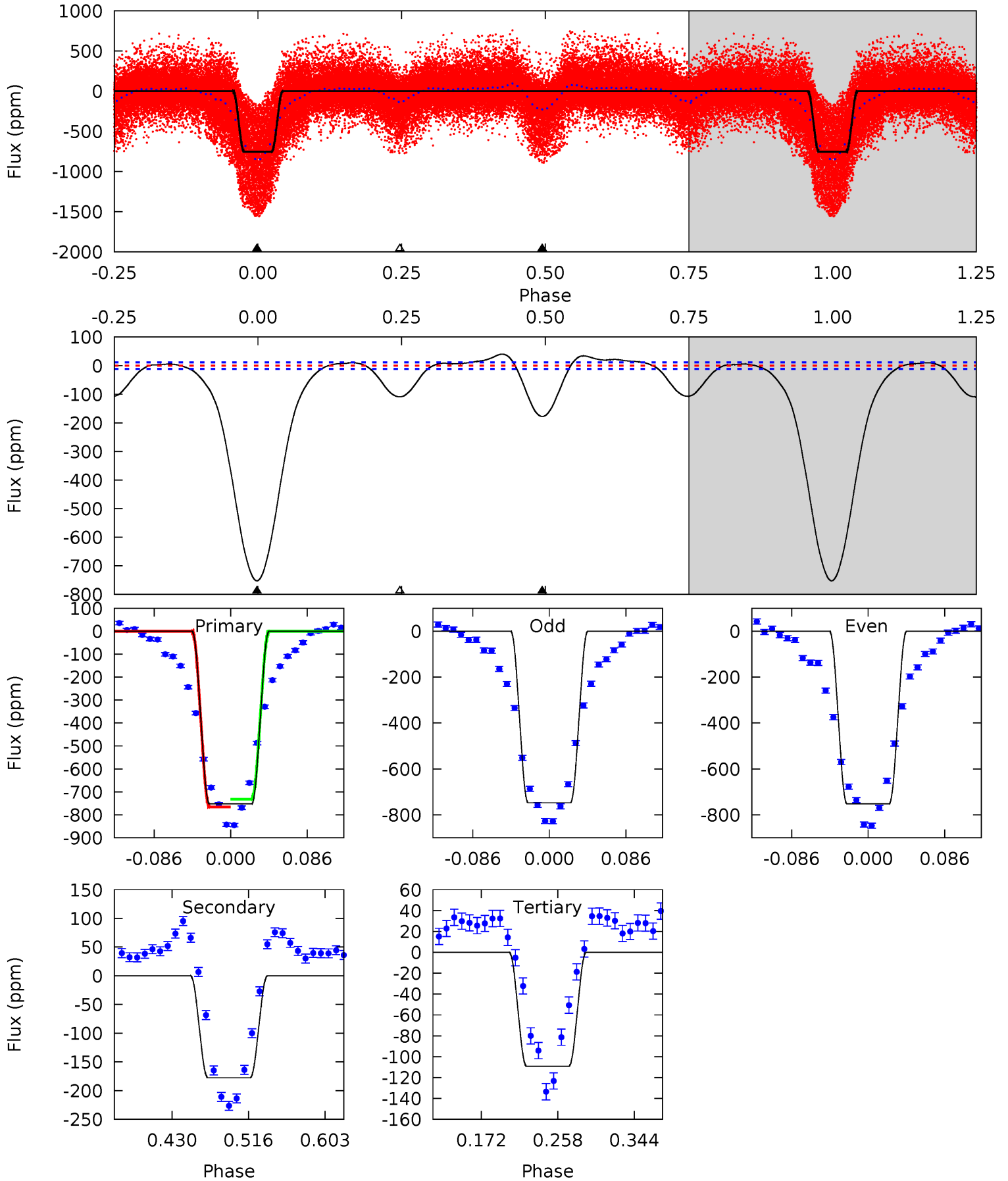
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.4	32.4	1.63	0	4.55	1.62	3.77	38.8	40.4	30.8	32.4	0.76	6.96	0.16	2.94



Alt Model-Shift Uniqueness Test

007690855-01, P = 1.572483 Days, E = 131.400716 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
308.6	72.8	44.8	0	4.60	1.72	16.3	263.8	308.6	28.1	72.8	0.82	1.03	0.05	6.78



Stellar Parameters For KIC 007690855

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4223^{+119}_{-149}	$4.681^{+0.068}_{-0.027}$	$-0.540^{+0.300}_{-0.300}$	$0.557^{+0.044}_{-0.065}$	$0.544^{+0.056}_{-0.046}$	$4.423^{+1.371}_{-0.599}$
	+3%/-4%	+1%/-1%	+56%/-56%	+8%/-12%	+10%/-8%	+31%/-14%
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 007690855-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-80 ± 2	$1.80^{+1.81}_{-1.13}$	1309^{+46}_{-53}	2850^{+1045}_{-499}	$6.331^{+39.668}_{-4.739}$
Alt.	-178 ± 2	$2.23^{+1.94}_{-1.33}$	1310^{+47}_{-54}	2996^{+1050}_{-479}	$9.369^{+46.029}_{-6.680}$

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

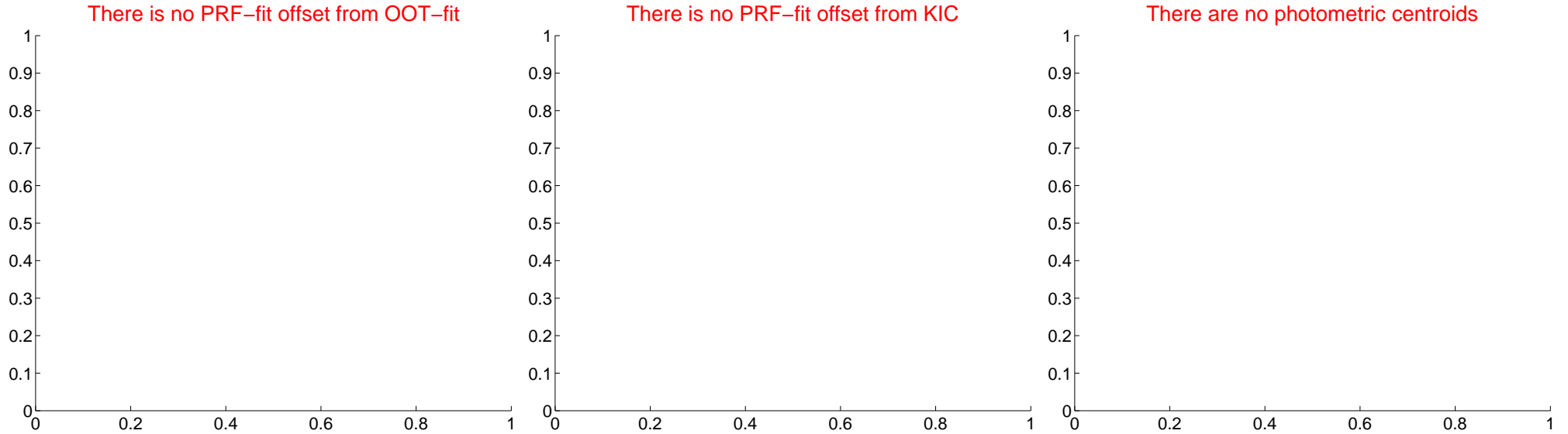
DV Centroid Data

Supplemental centroid analysis for 007690855-01. Kepler magnitude: 14.04. Transit SNR 20.18

There are 0 quarters with good PRF difference image offsets

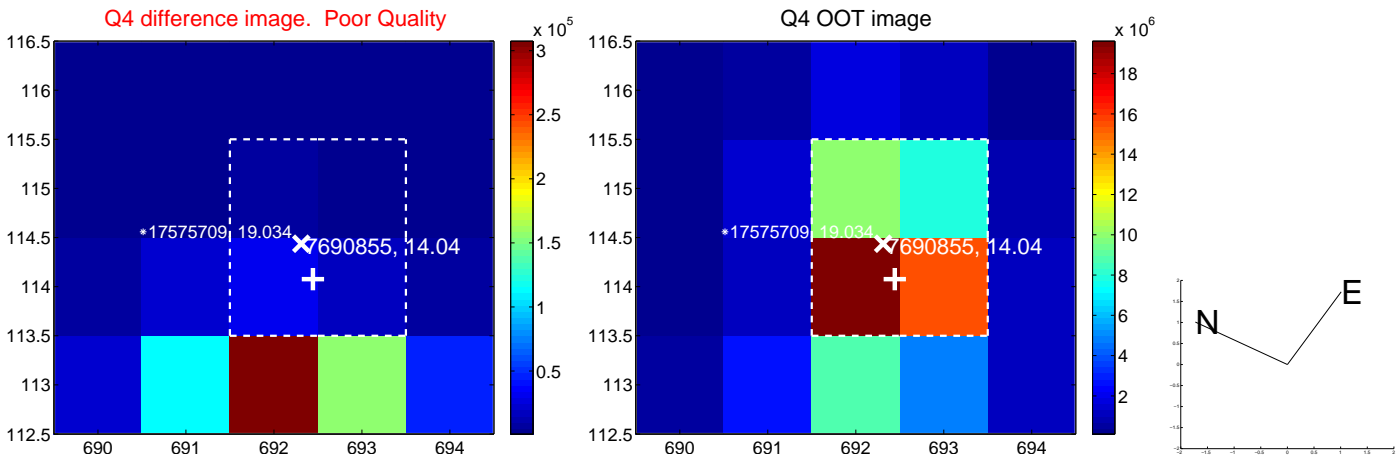
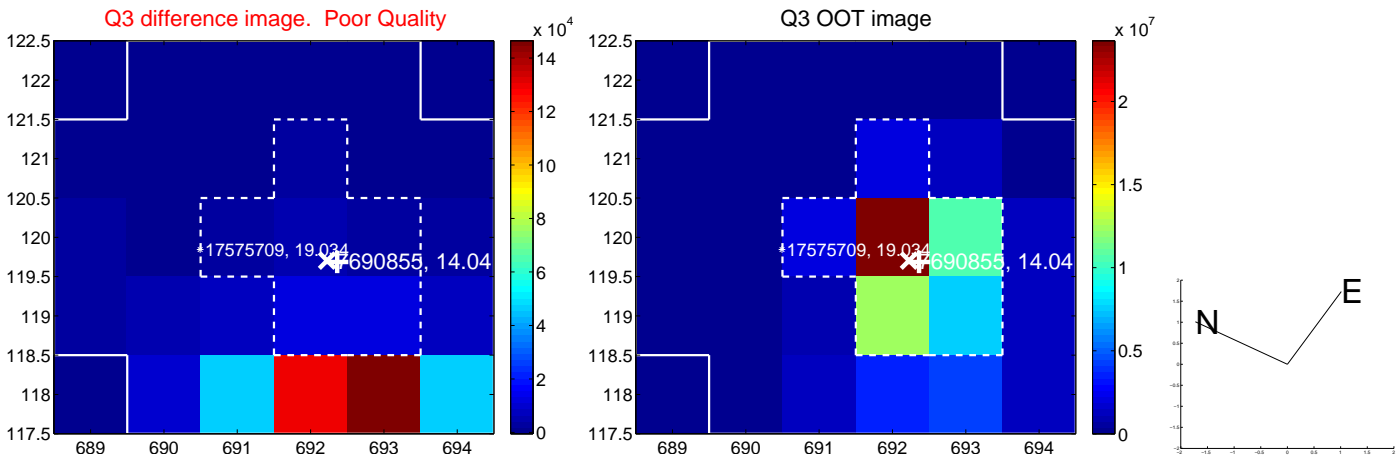
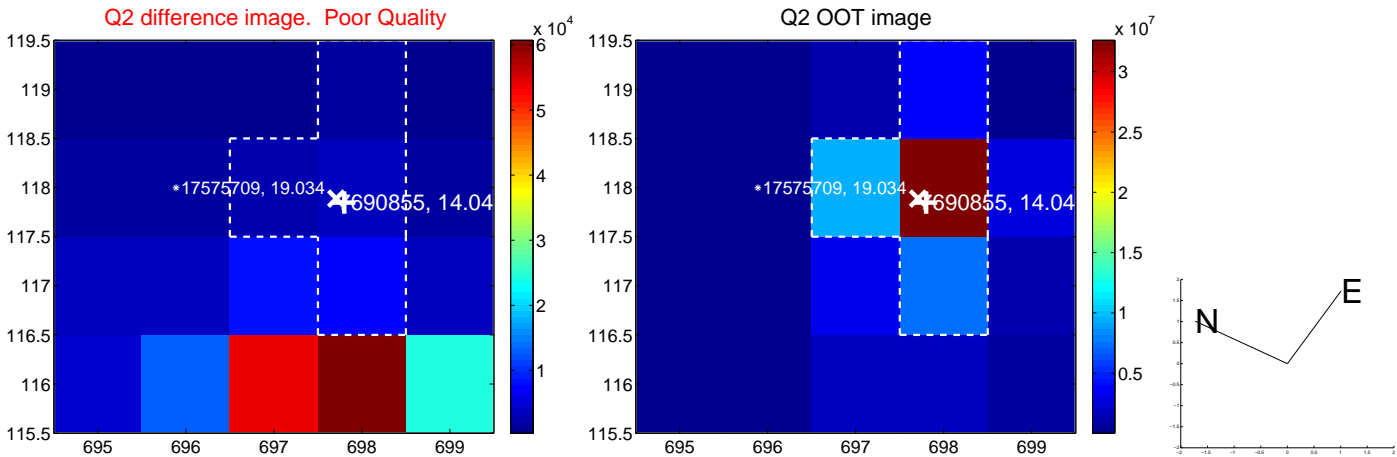
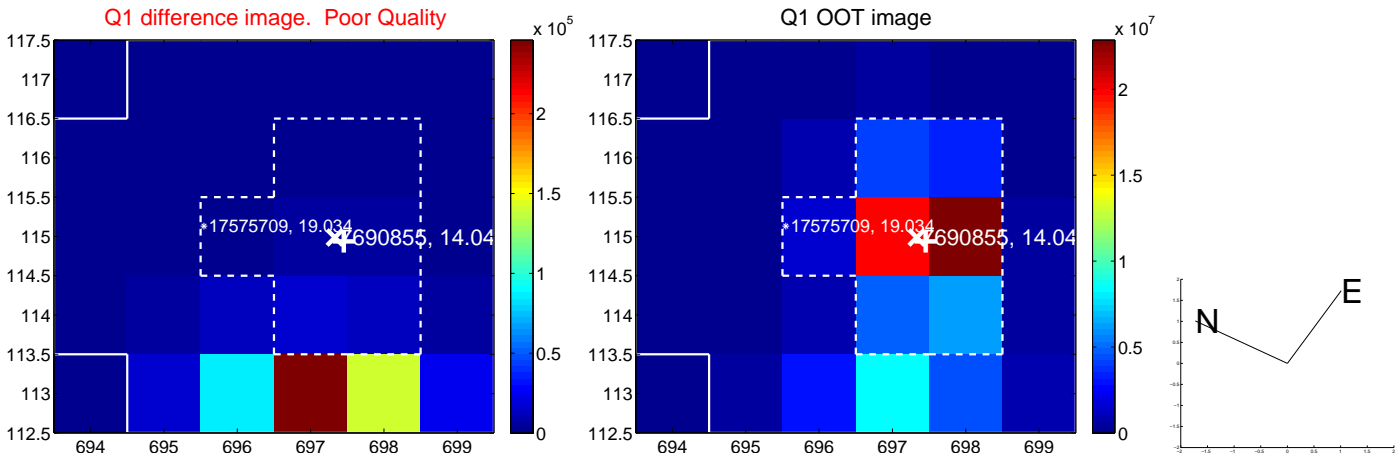
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

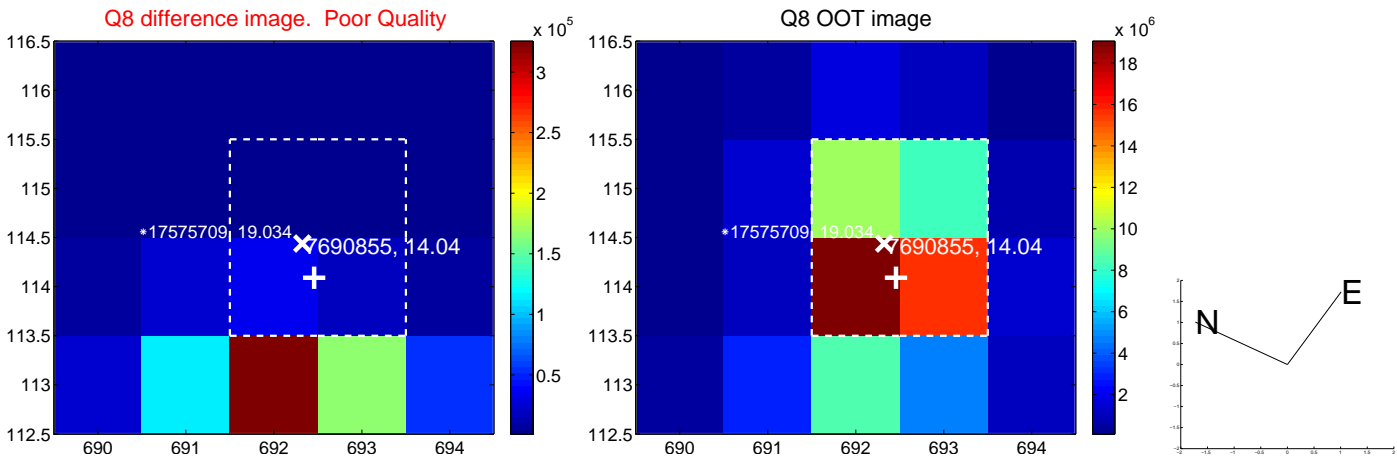
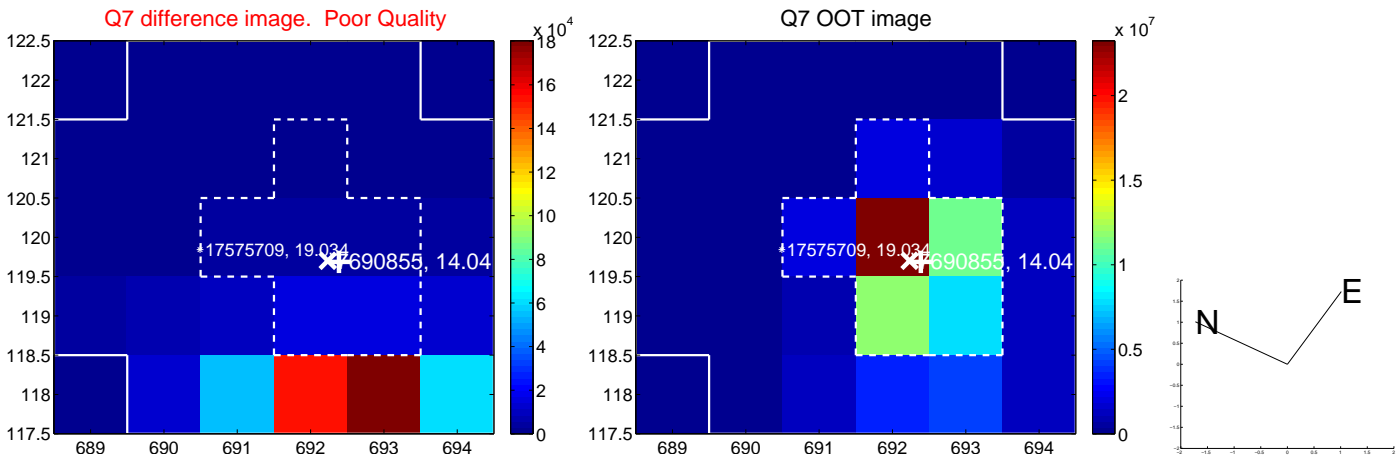
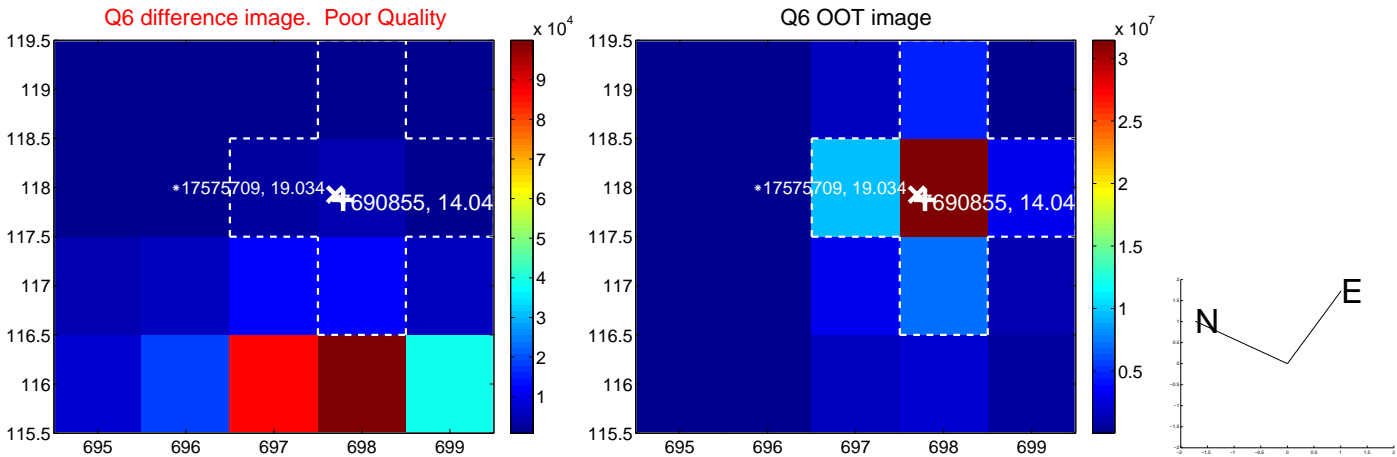
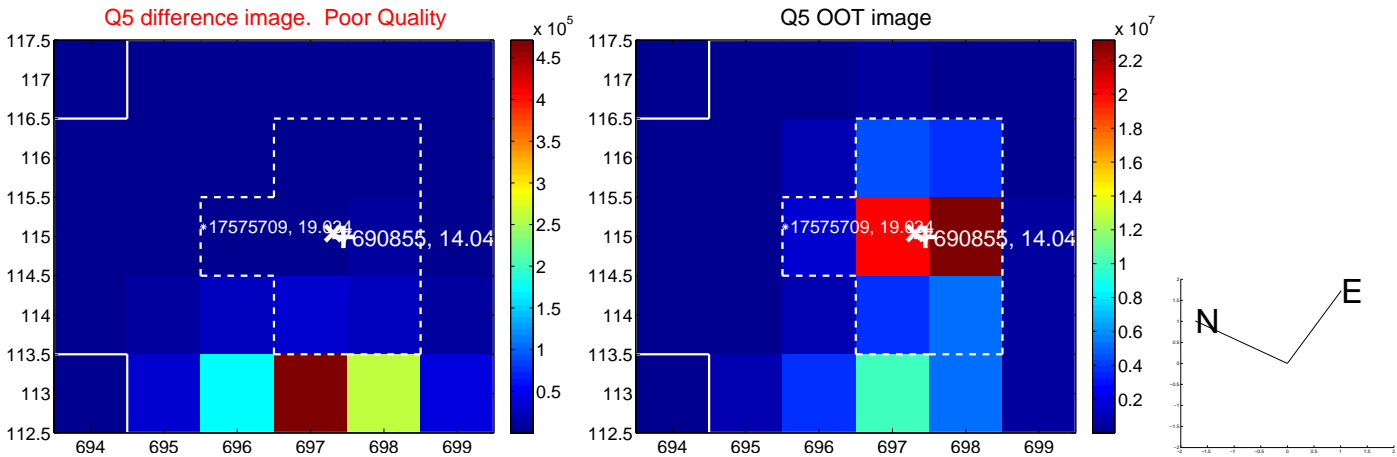


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

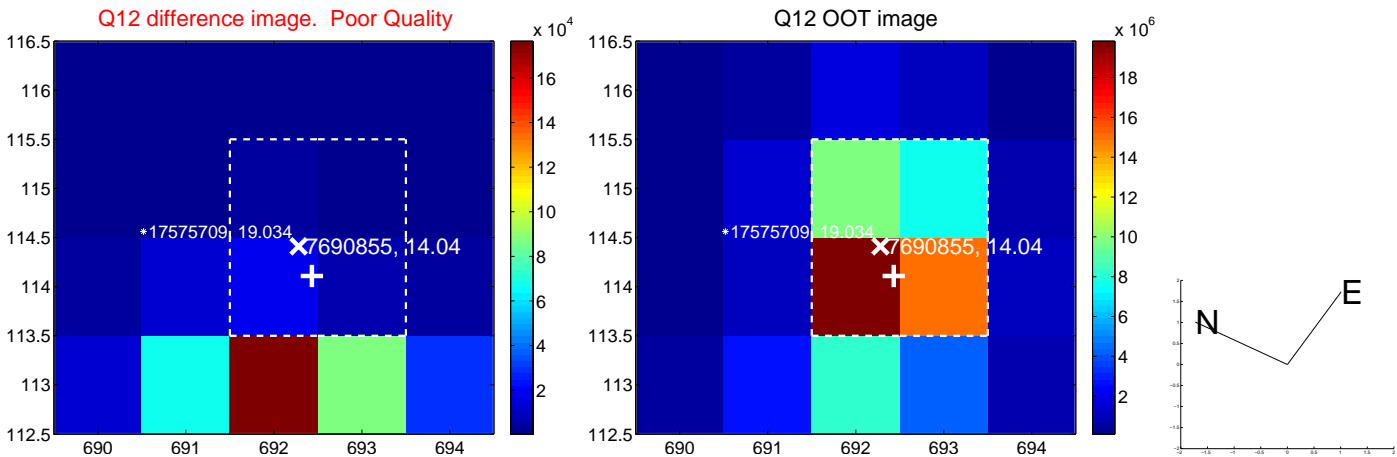
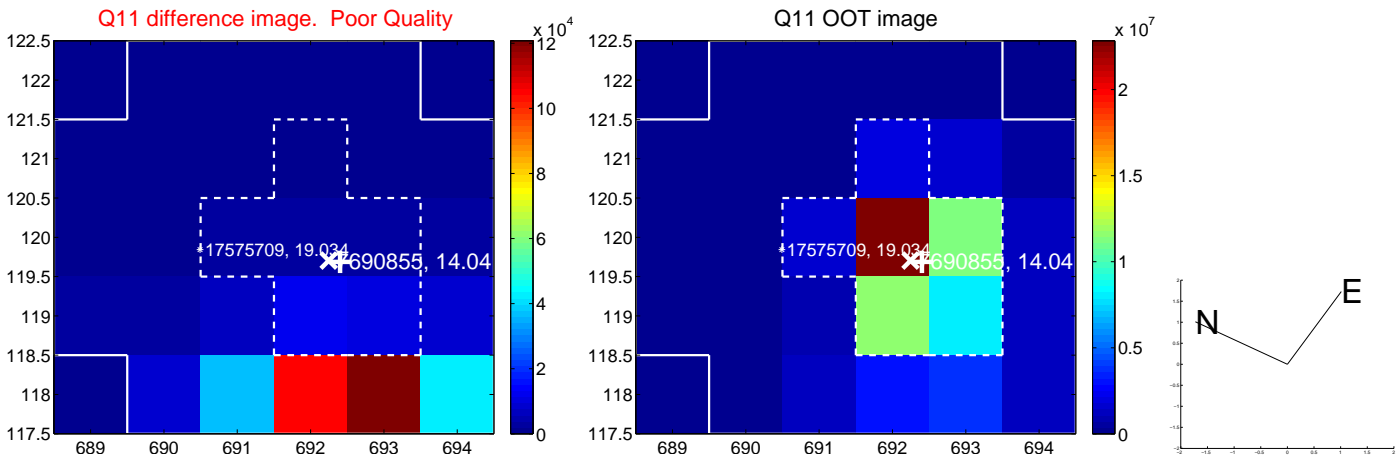
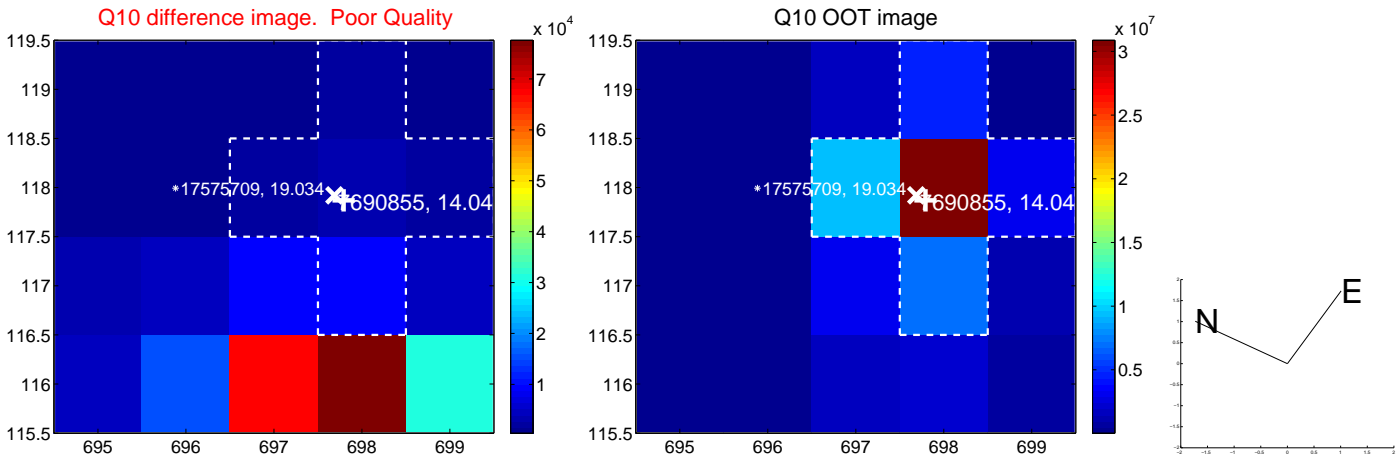
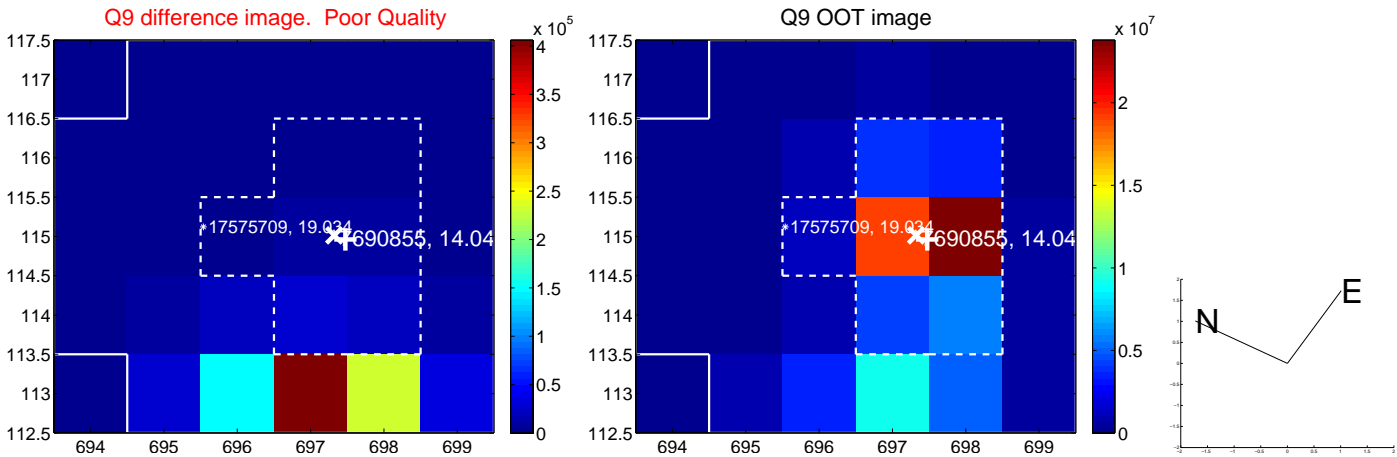
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



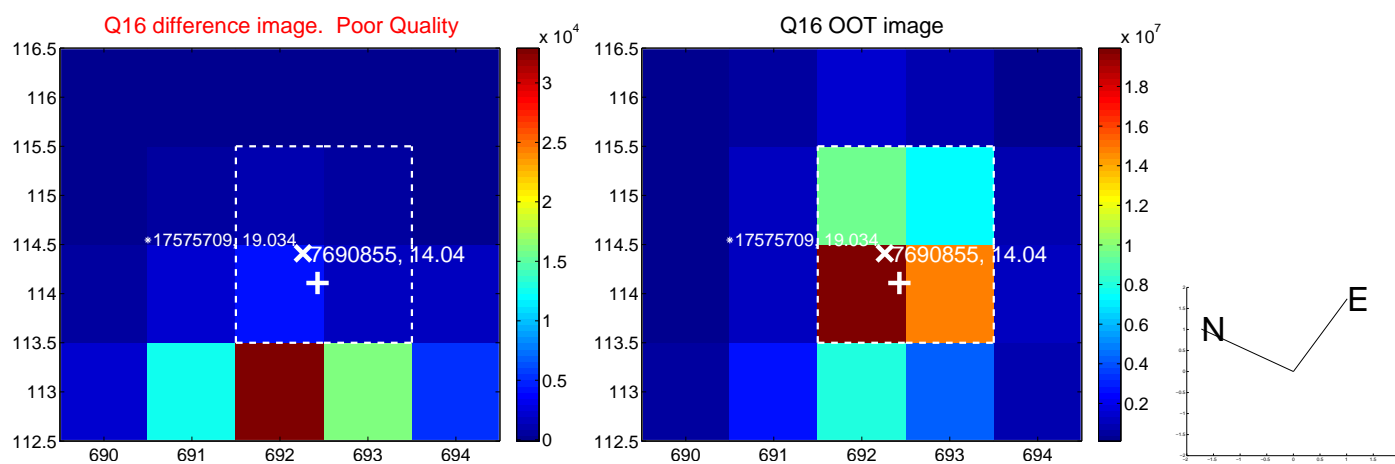
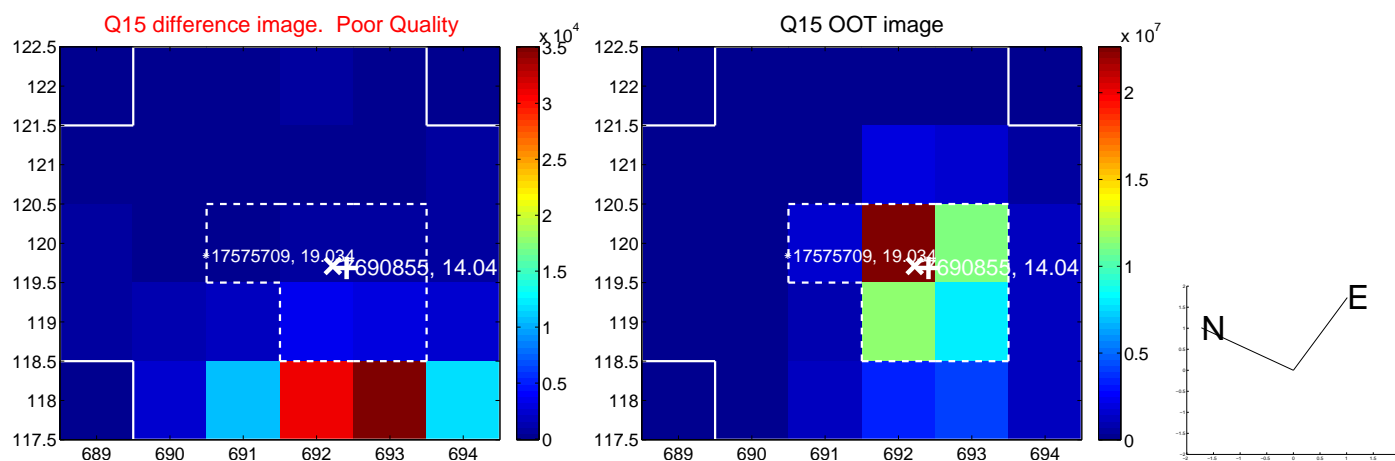
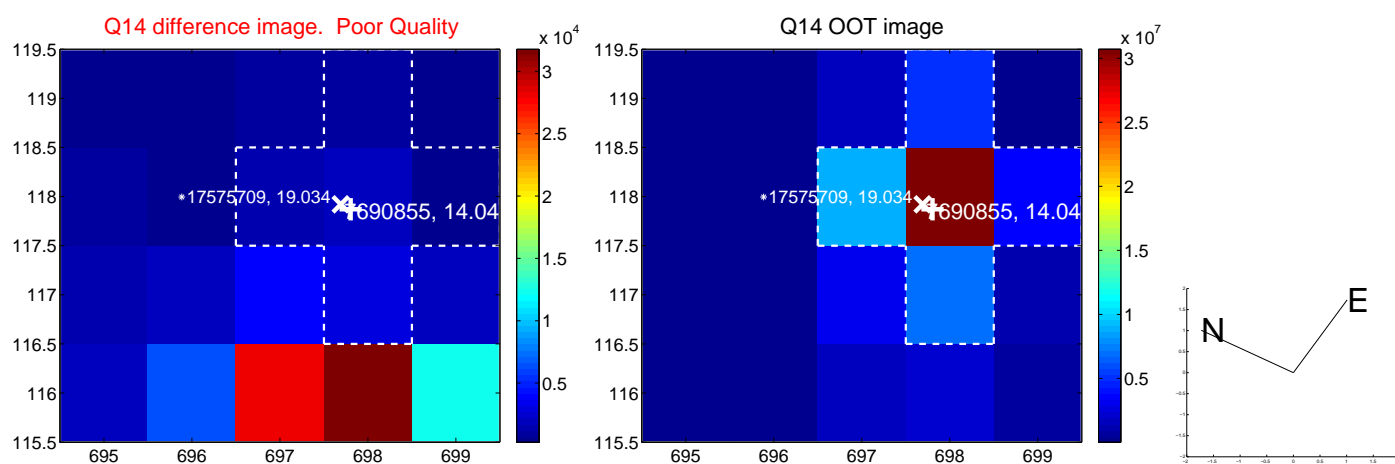
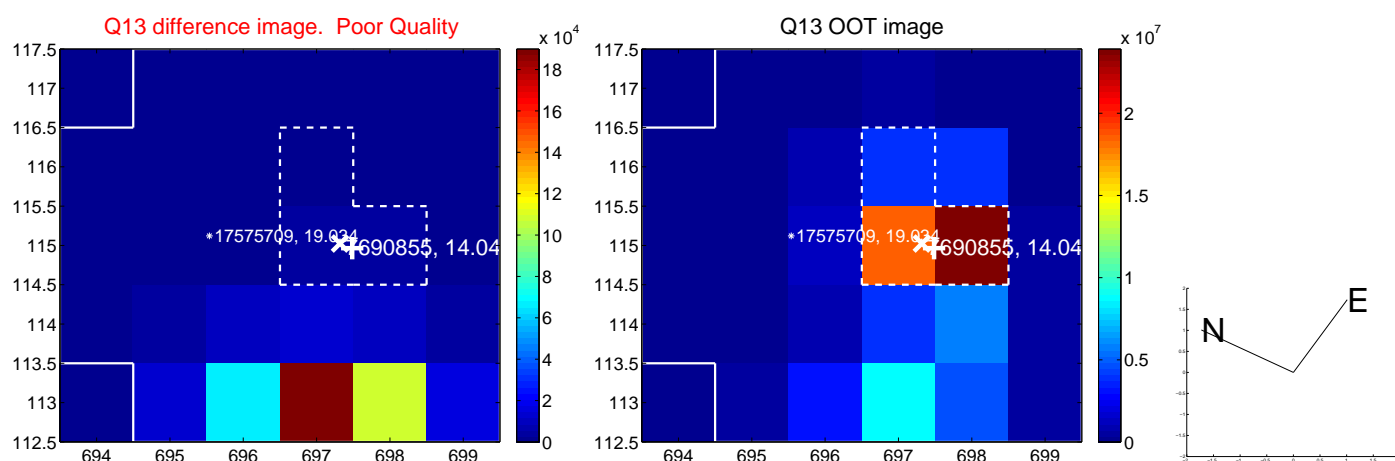
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



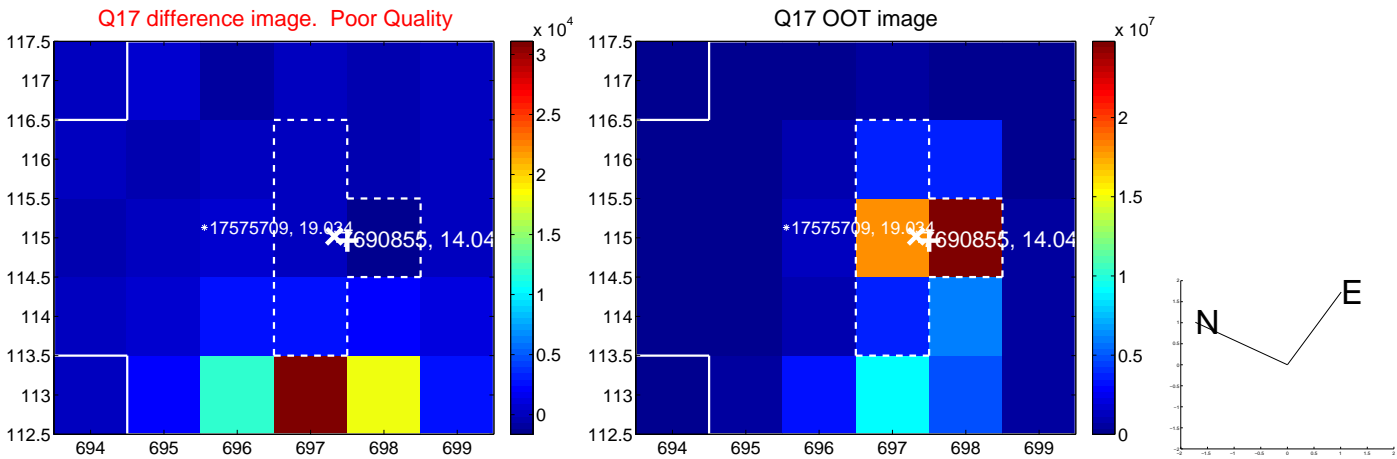
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



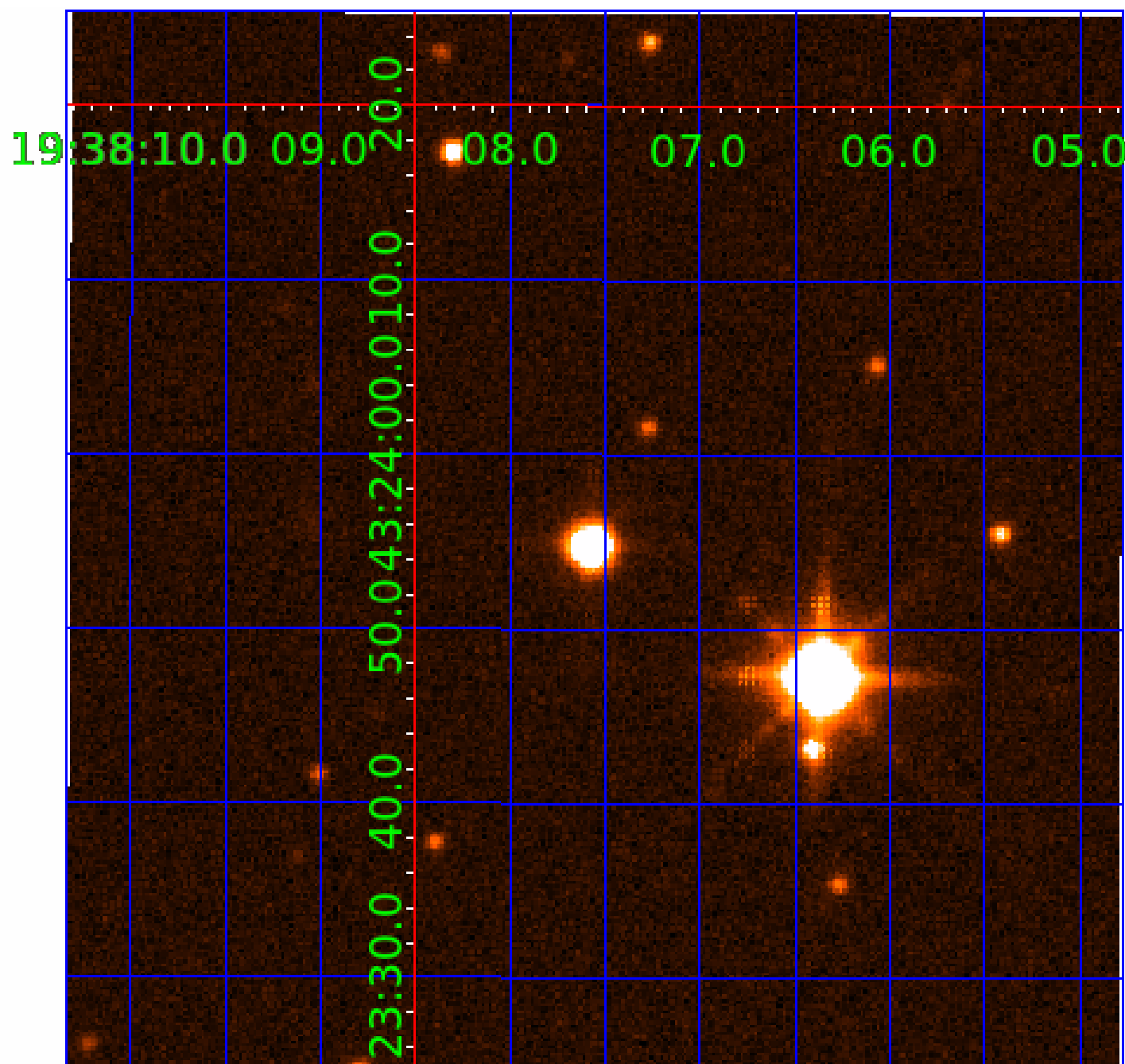
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007690855

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})
007690855-01	OBS	No	1.572663	132.907633	98.2	3.537	112.4	20.2	0.56	4223	1.17	189.57
007690855-02	OBS	4077.01	1.572525	132.167444	9192.7	2.000	184.9	-1.0	0.56	4223	5.24	189.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007690855-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
007690855-02	OBS	FP	0.00	1	0	0	1	LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—EPHEM_MATCH

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 007690855-02

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007690855-02	7690855	007690843-pri	7690843	2:1	15.2	4	0	11.08	14.04	6.03	Direct-PRF	0	0.55	0.12

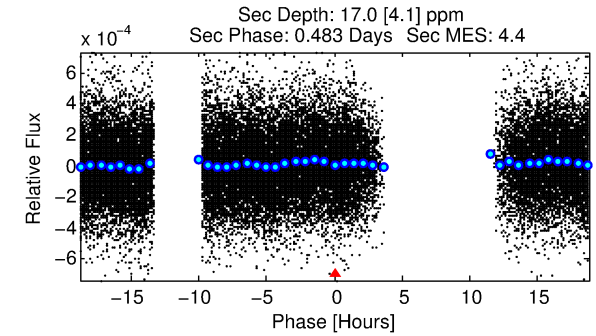
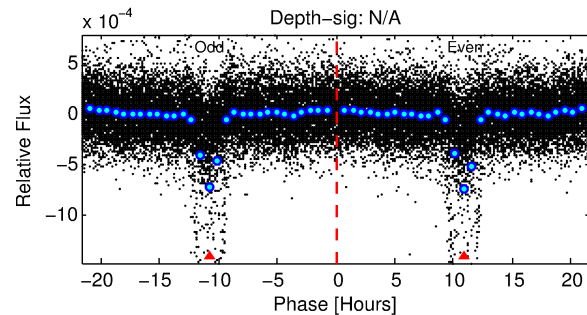
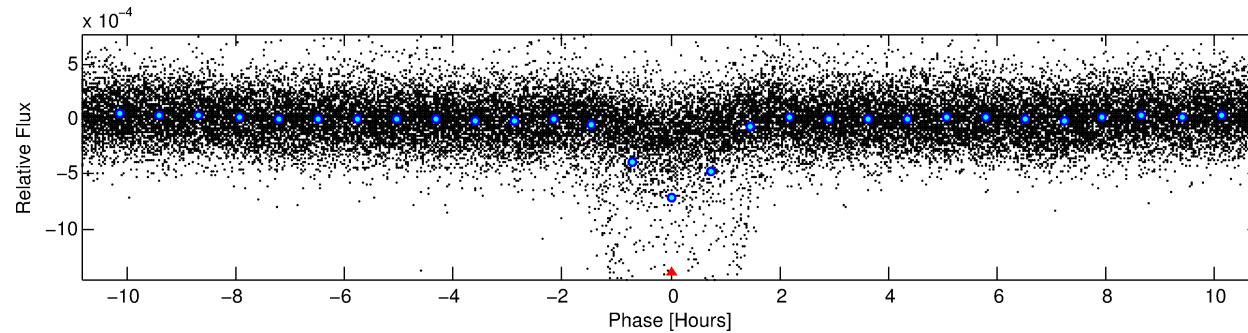
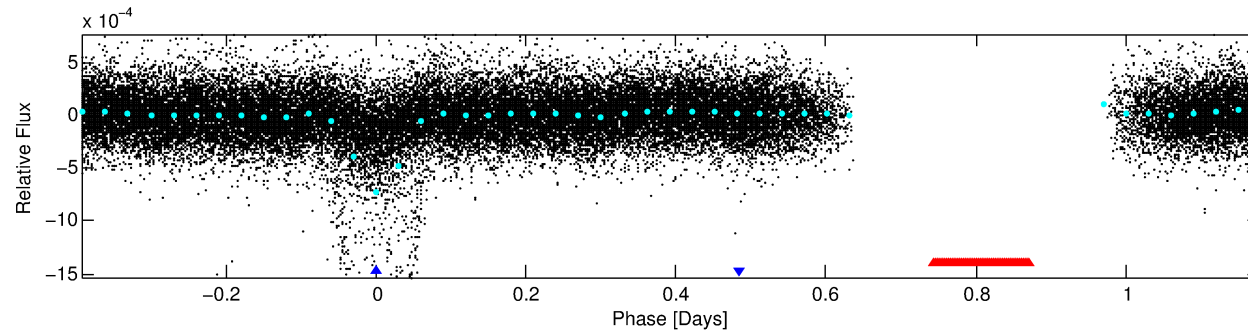
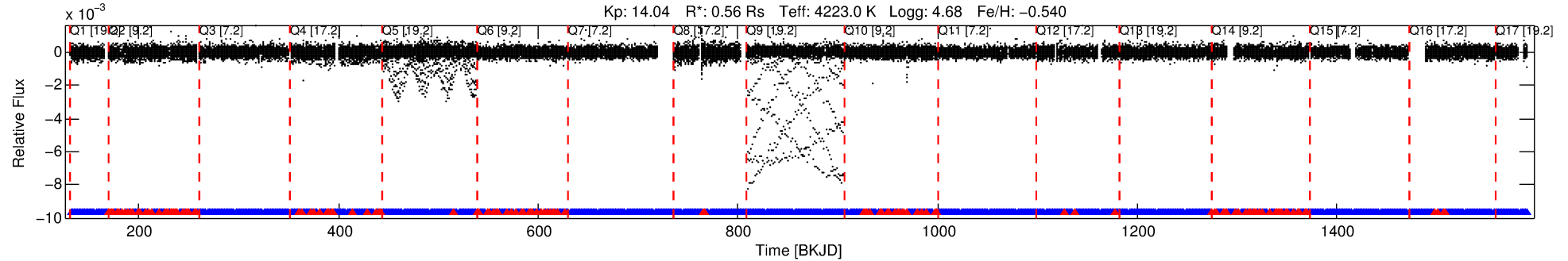
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7690855 Candidate: 2 of 2 Period: 1.573 d

KOI: K04077 Corr: No Ephemeris Match

Kp: 14.04 R*: 0.56 Rs Teff: 4223.0 K Logg: 4.68 Fe/H: -0.540



TPS TCE Results:

Period = 1.57253 d
Epoch = 132.1674 BKJD

DV fit results are unavailable

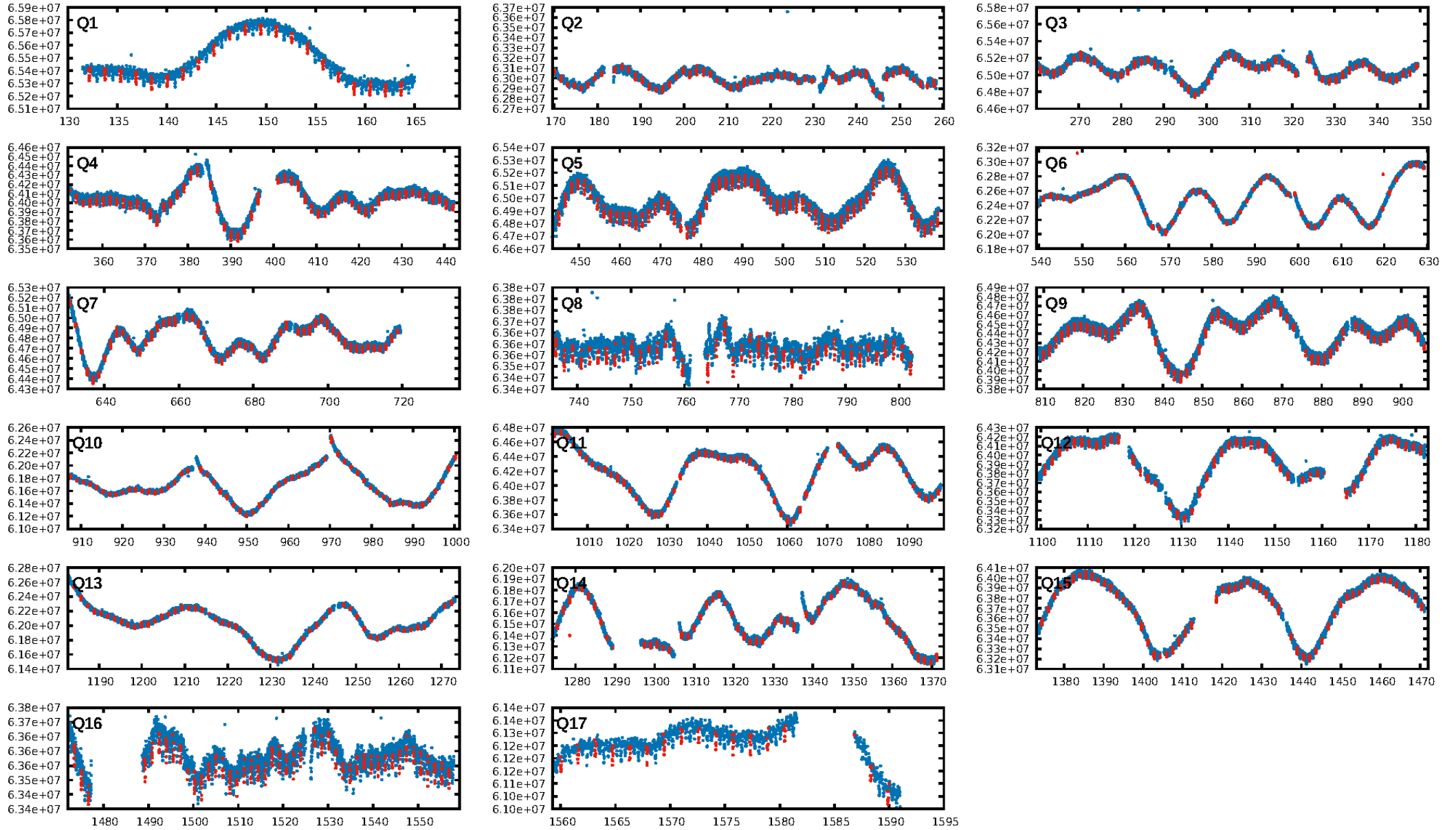
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.84 [691/818]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
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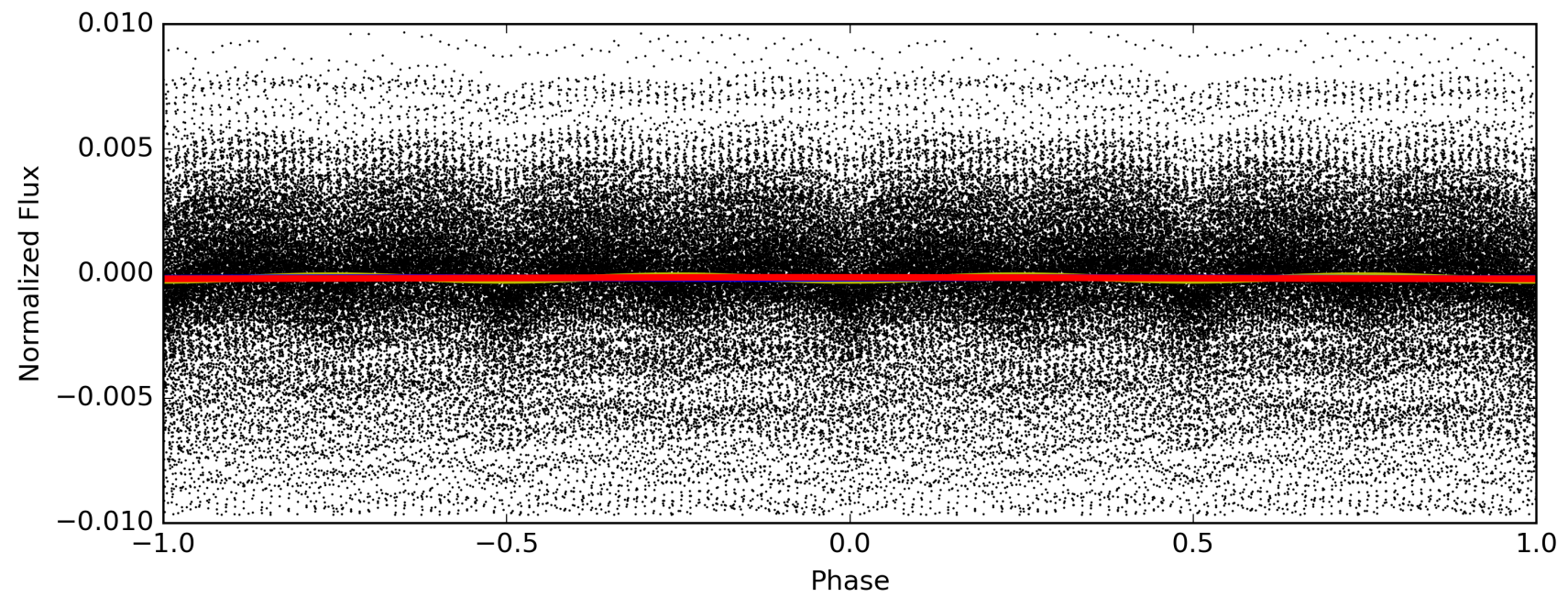
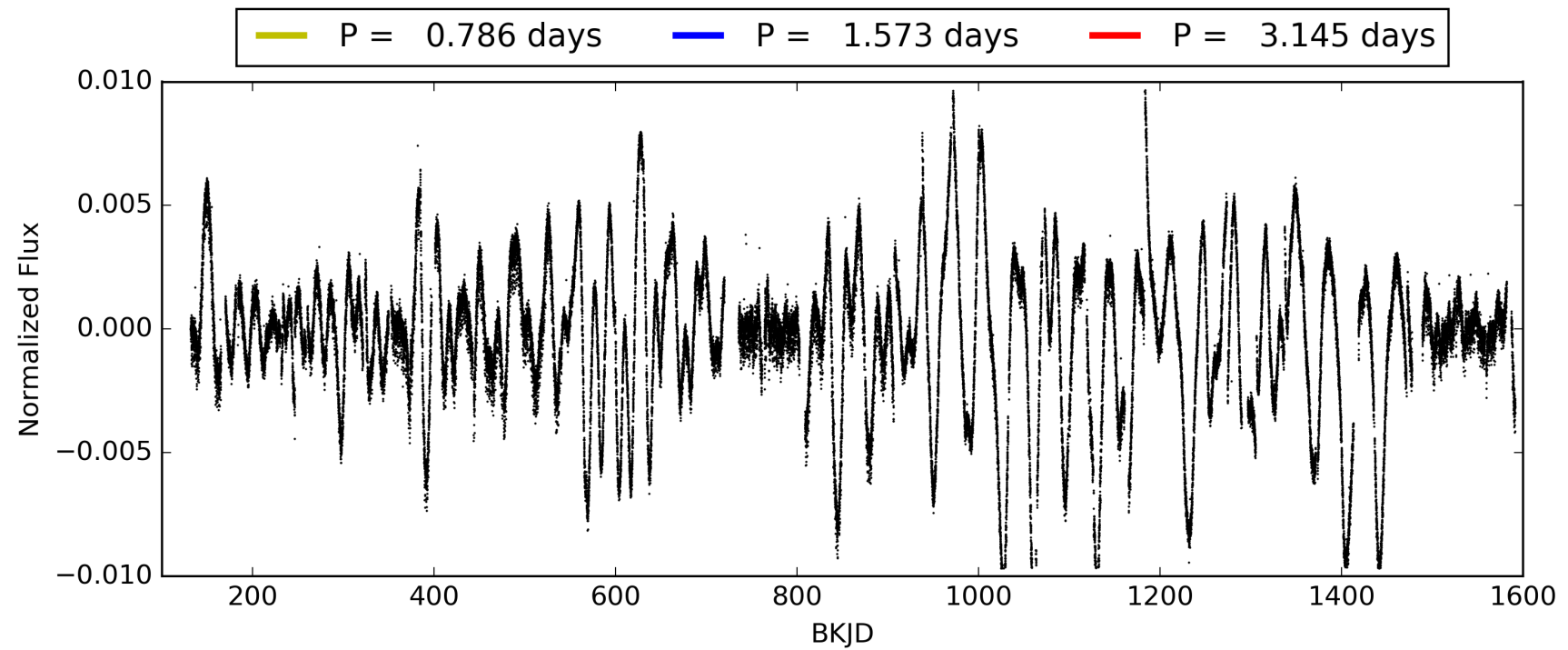
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007690855-02, PDC Light Curves

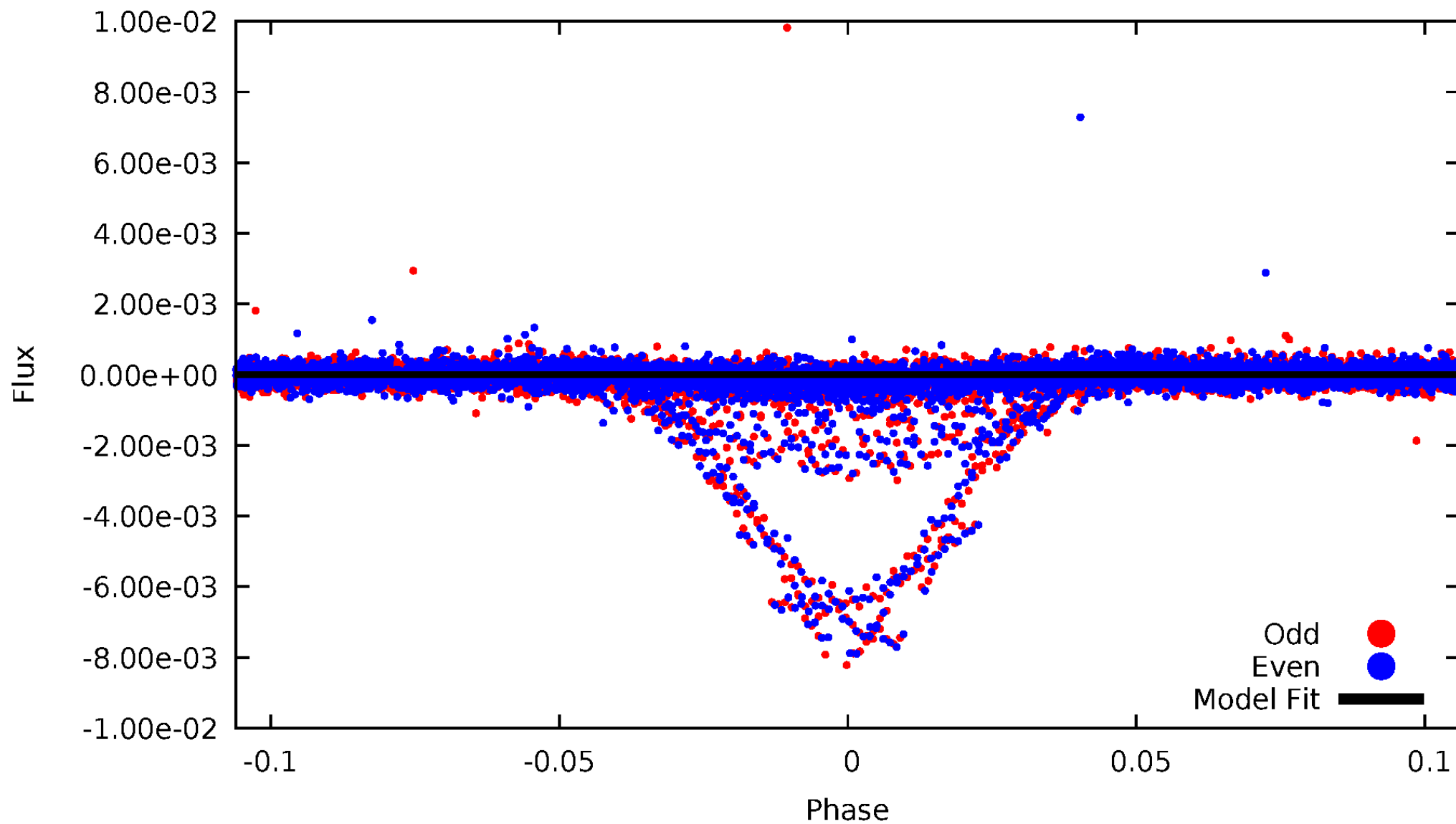


TCE 007690855-02



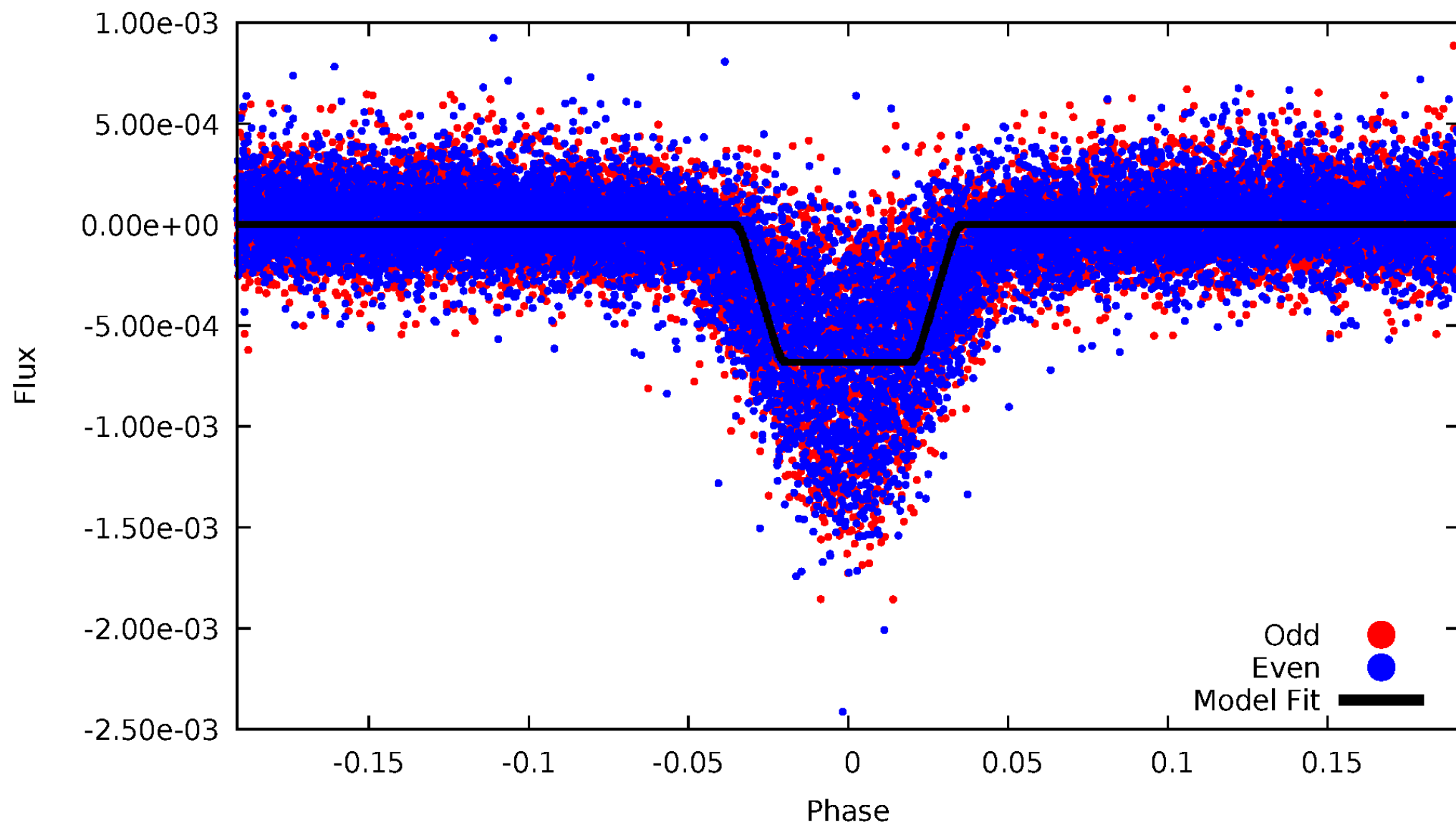
DV Odd/Even

TCE 007690855-02



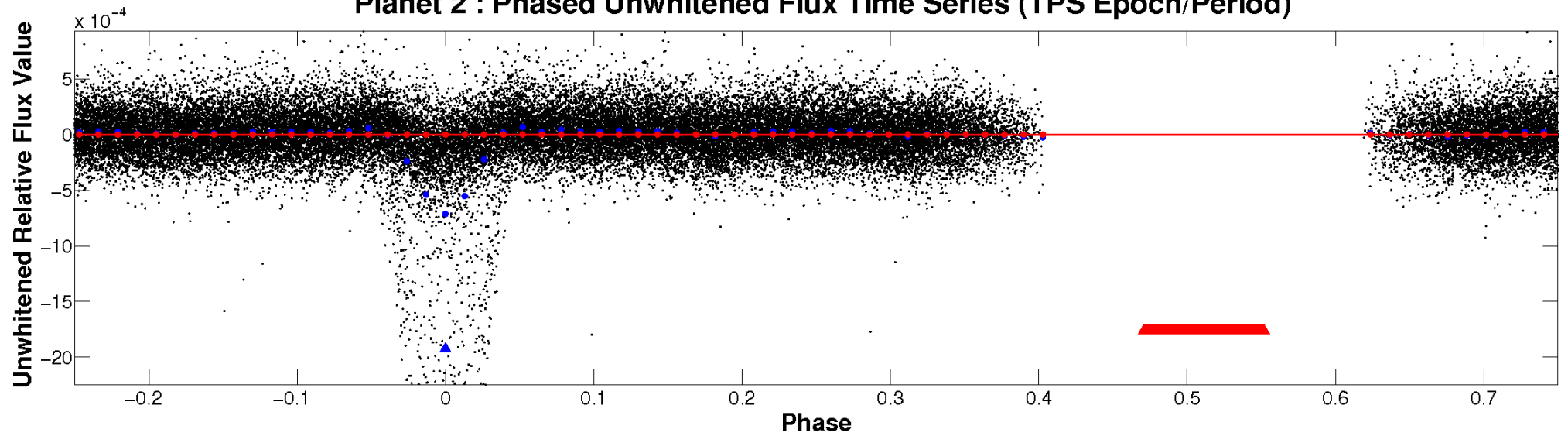
ALT Odd/Even

TCE 007690855-02

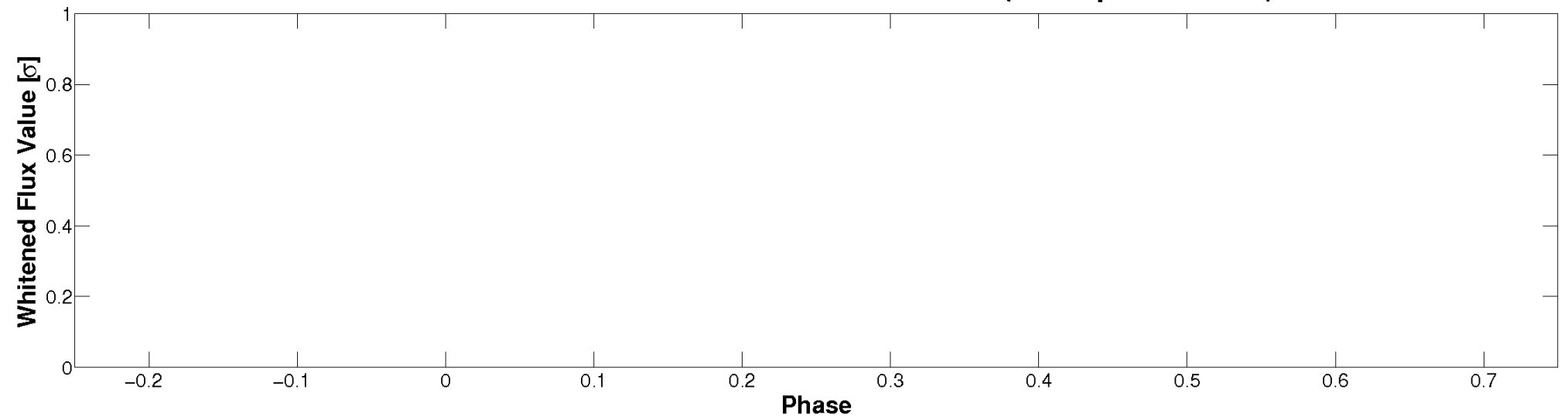


Non-Whitened Vs. Whitened Light Curve

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

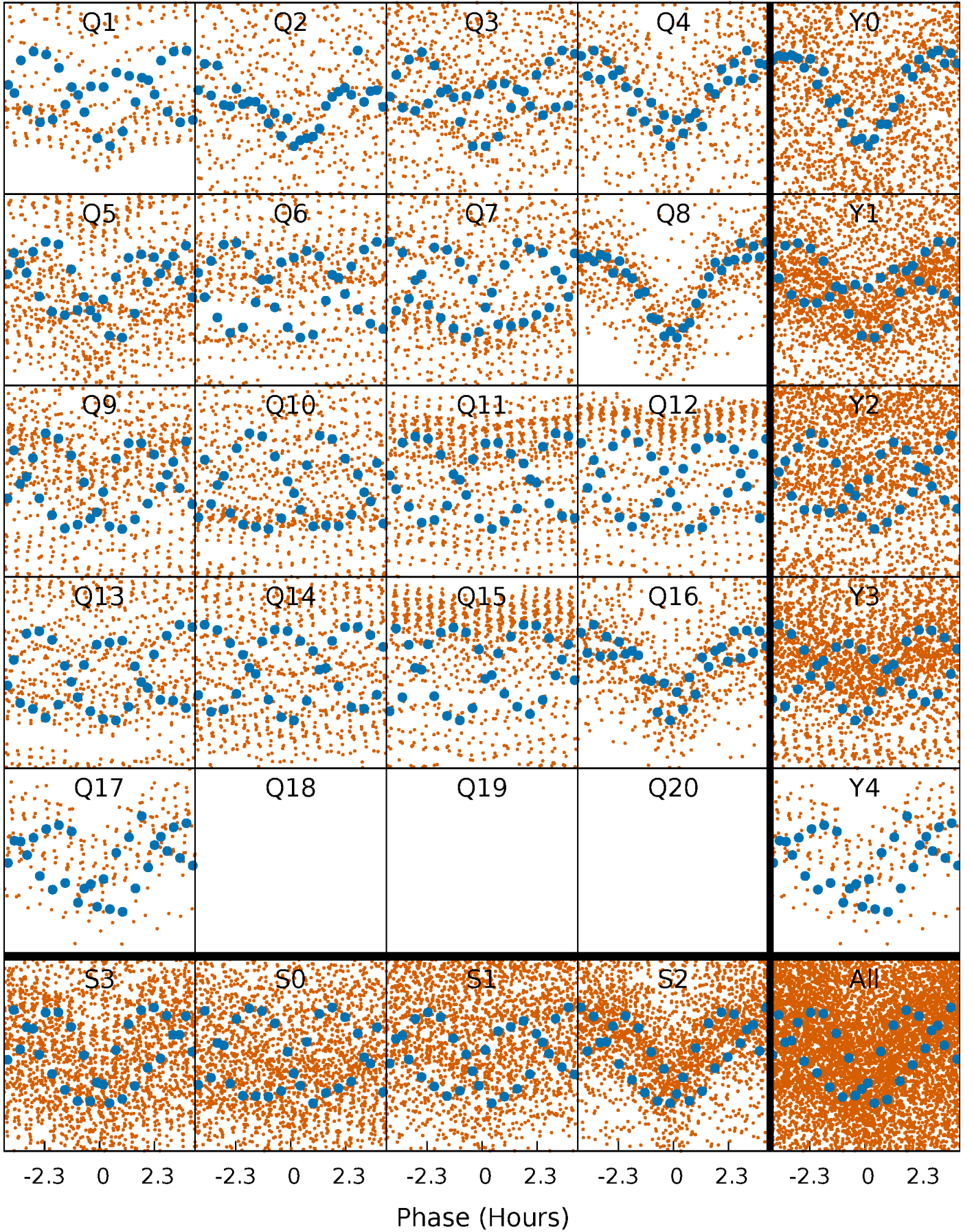


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



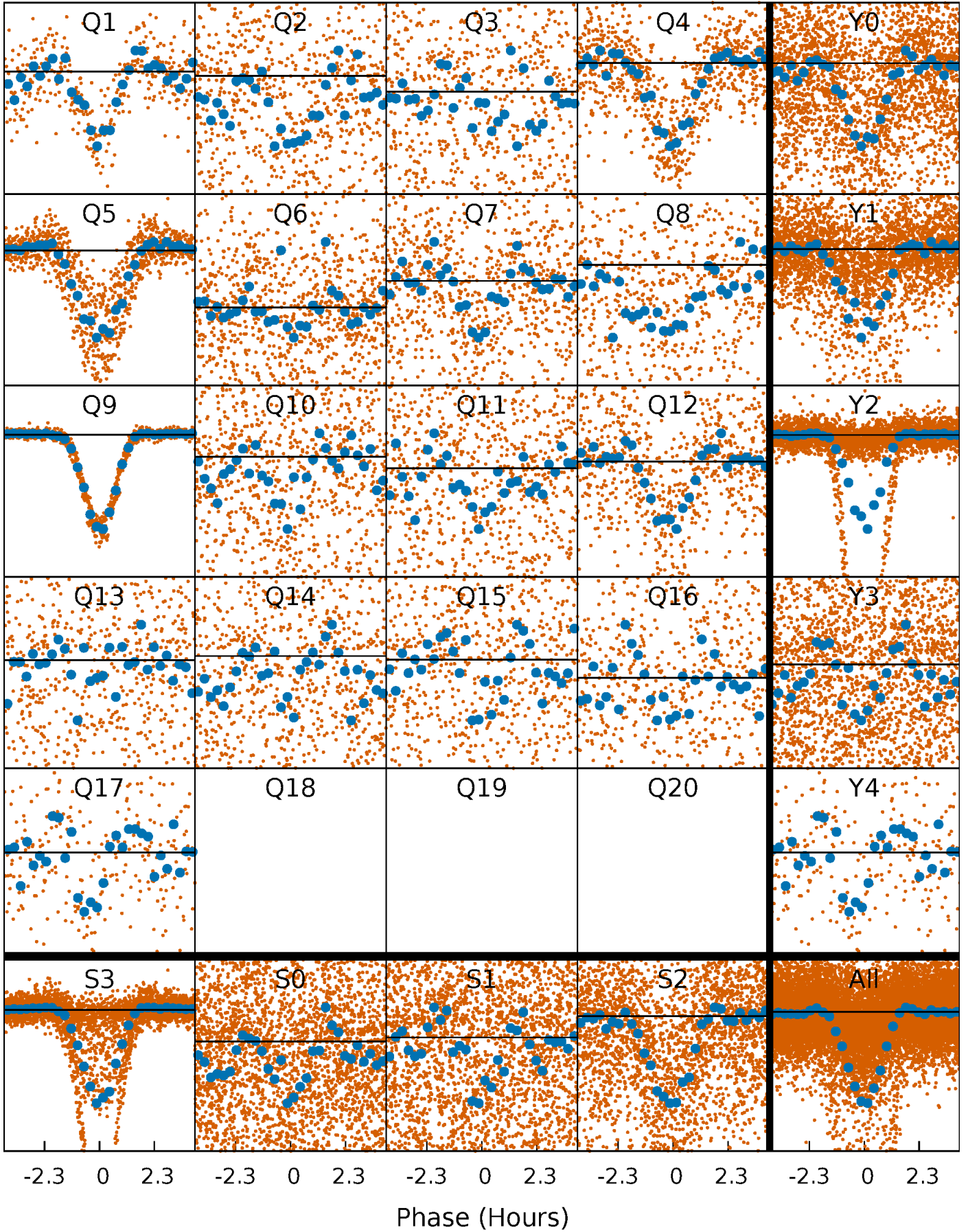
PDC Quarter-Phased Transit Curves

TCE 007690855-02 P= 1.572525 Days $T_0=132.167444$ (BKJD)



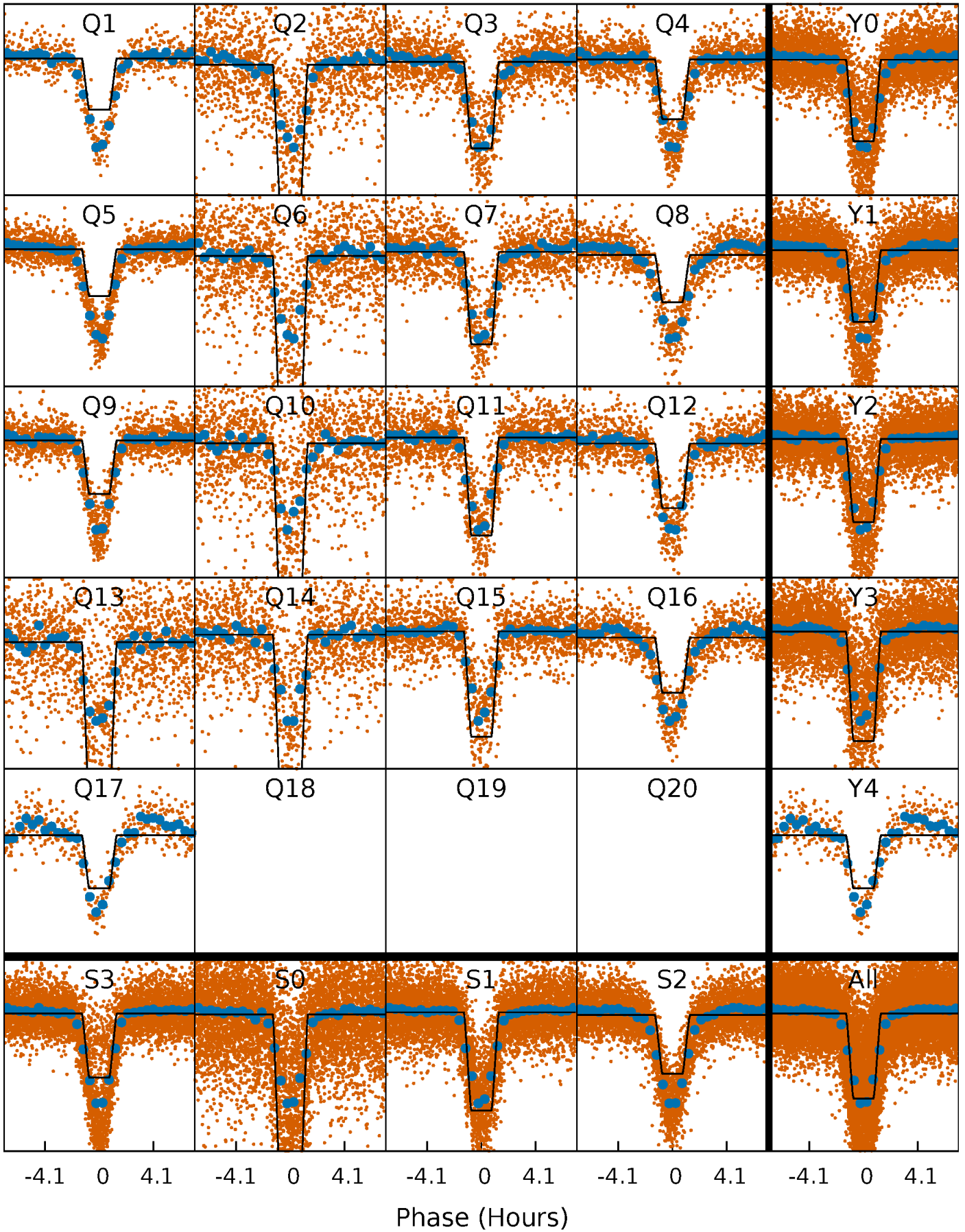
DV Quarter-Phased Transit Curves

TCE 007690855-02 $P = 1.572525$ Days $T_0 = 132.167444$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

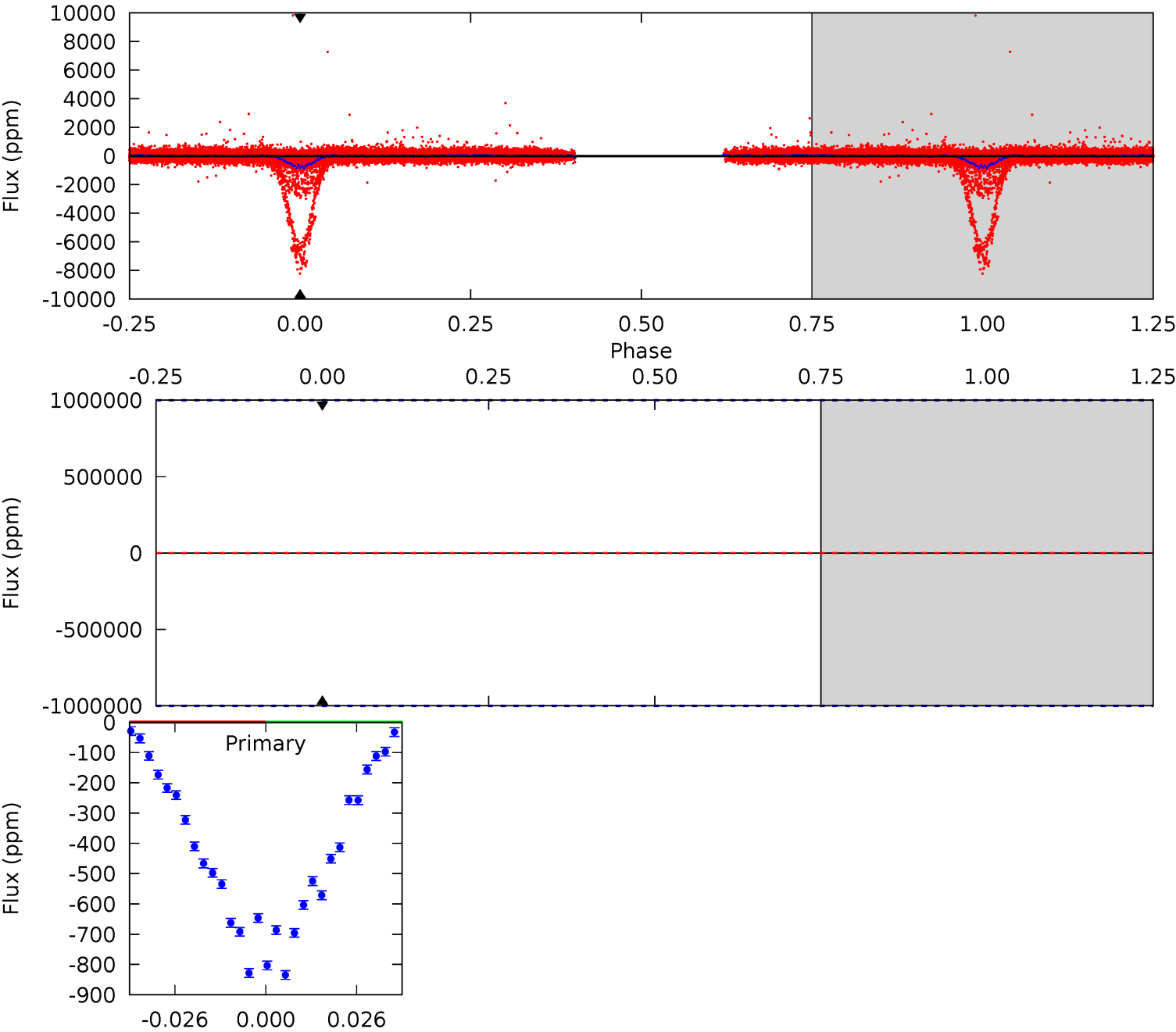
TCE 007690855-02 P= 1.572525 Days $T_0=132.164758$ (BKJD)



DV Model-Shift Uniqueness Test

007690855-02, P = 1.572525 Days, E = 130.594919 Days

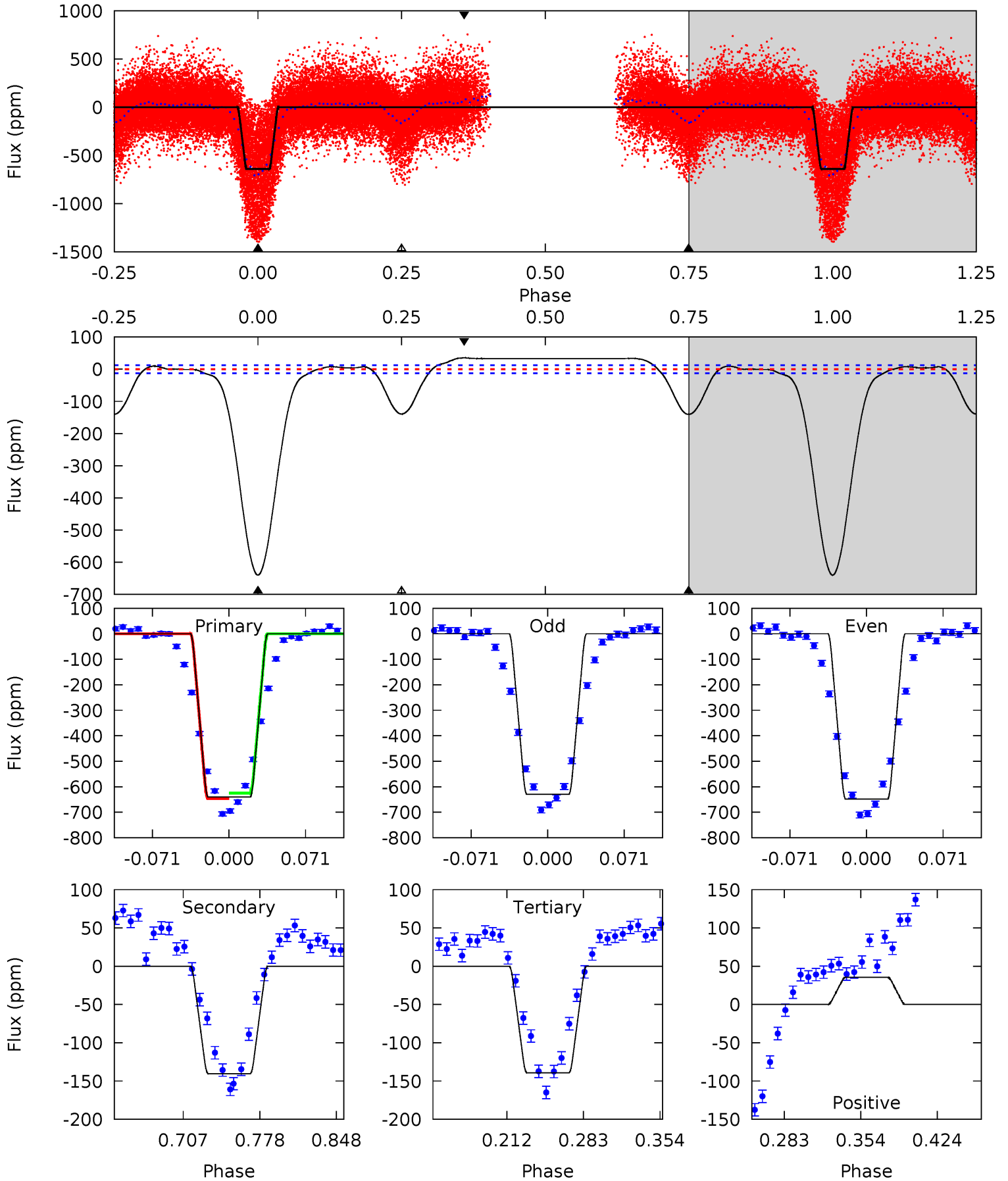
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007690855-02, P = 1.572525 Days, E = 130.592233 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
238.0	52.2	51.8	13.2	4.64	1.81	16.4	186.2	224.9	0.40	39.1	3.49	1.08	0.05	4.12



Stellar Parameters For KIC 007690855

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4223^{+119}_{-149}	$4.681^{+0.068}_{-0.027}$	$-0.540^{+0.300}_{-0.300}$	$0.557^{+0.044}_{-0.065}$	$0.544^{+0.056}_{-0.046}$	$4.423^{+1.371}_{-0.599}$
	+3%/-4%	+1%/-1%	+56%/-56%	+8%/-12%	+10%/-8%	+31%/-14%
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 007690855-02 / KOI 4077.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$6.92^{+5.51}_{-4.43}$	1311^{+46}_{-56}	3239^{+4563}_{-10528}	16^{+949}_{-843}
Alt.	-140 ± 3	$4.74^{+4.70}_{-3.29}$	1310^{+45}_{-59}	2361^{+977}_{-552}	$1.605^{+15.957}_{-1.201}$

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 $A_{obs} \gg 1.0$

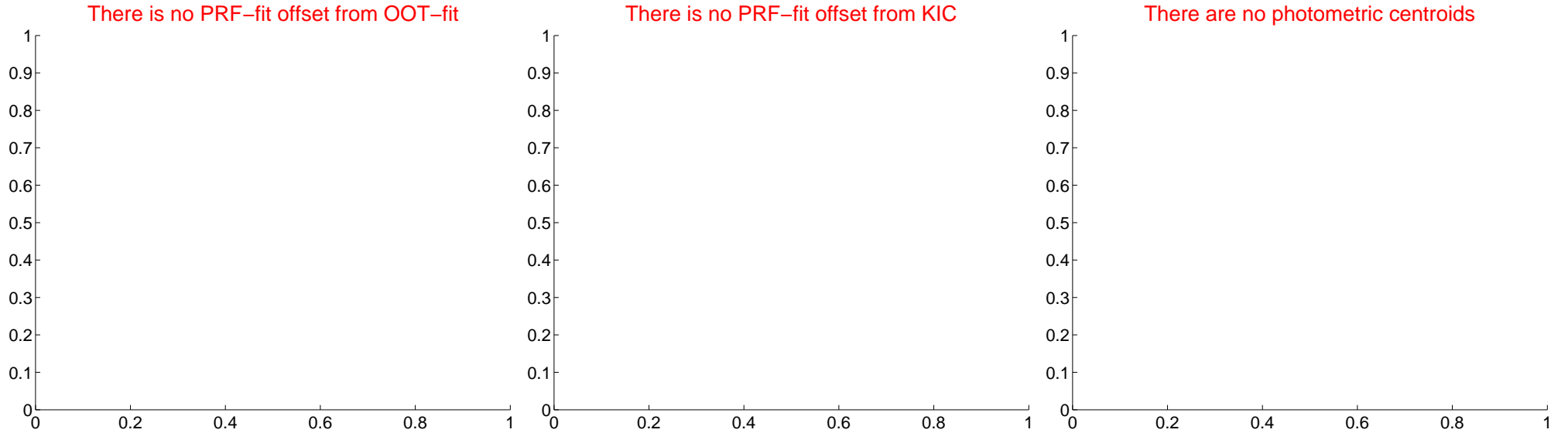
DV Centroid Data

Supplemental centroid analysis for 007690855-02. Kepler magnitude: 14.04. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

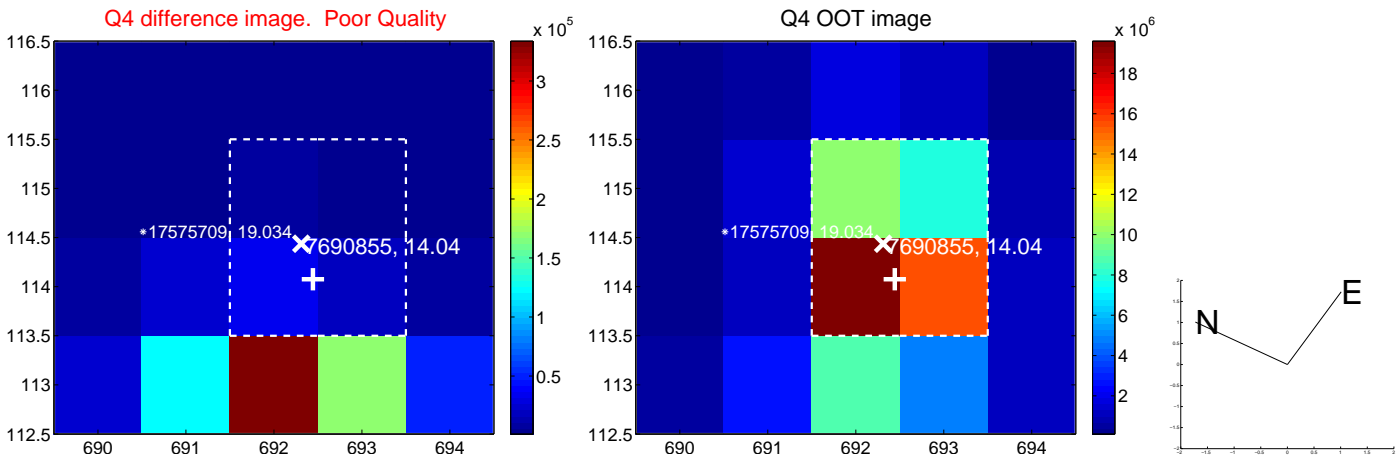
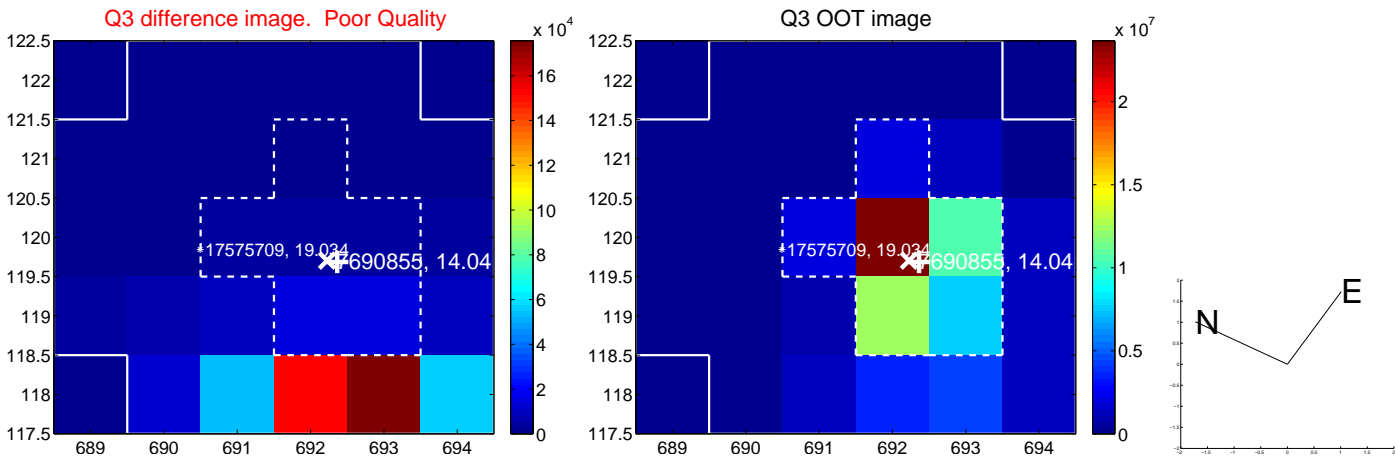
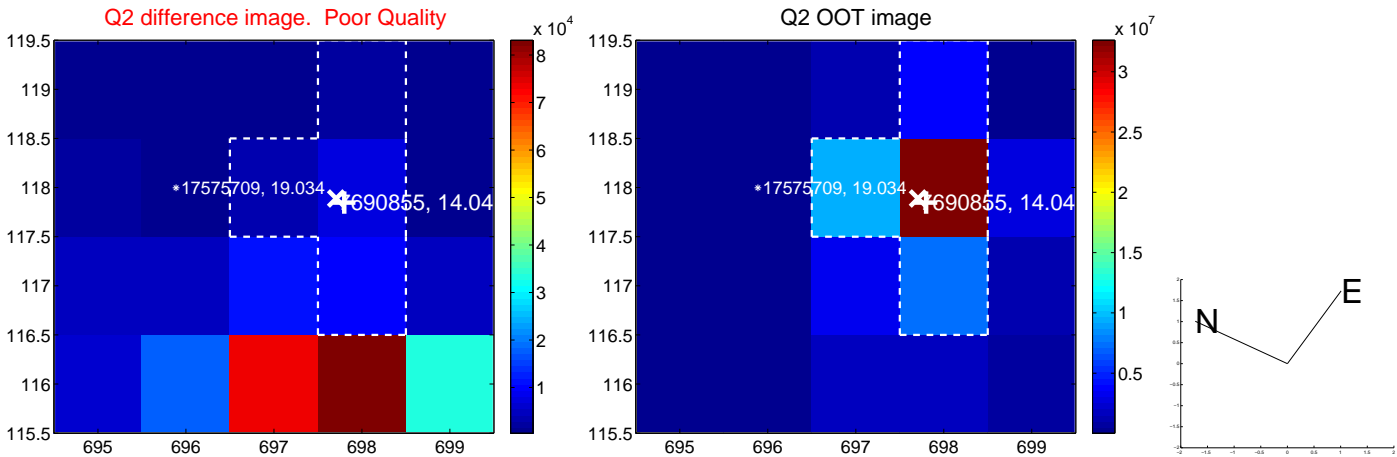
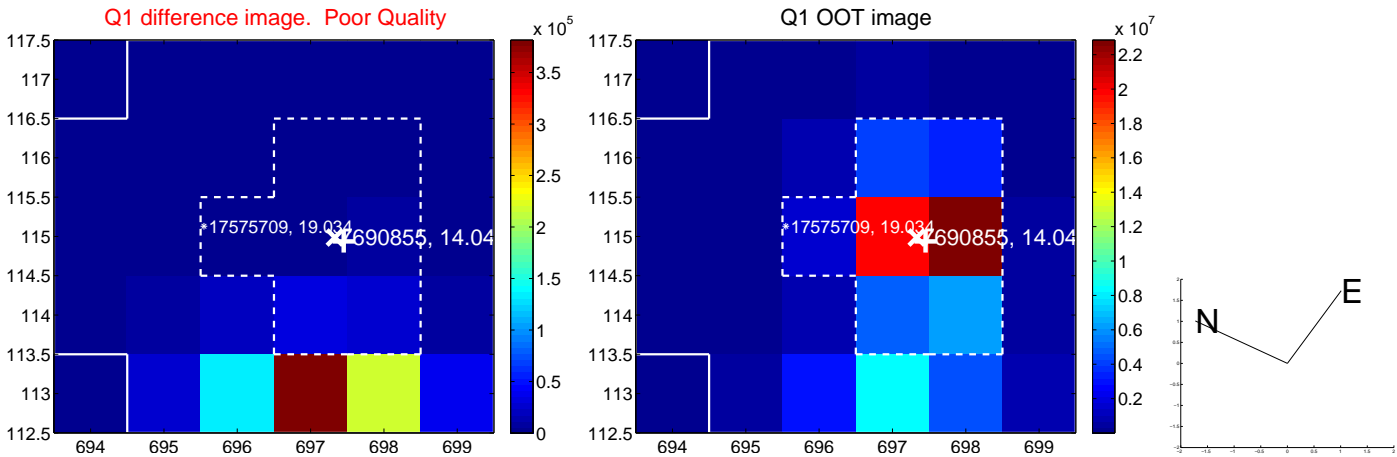
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

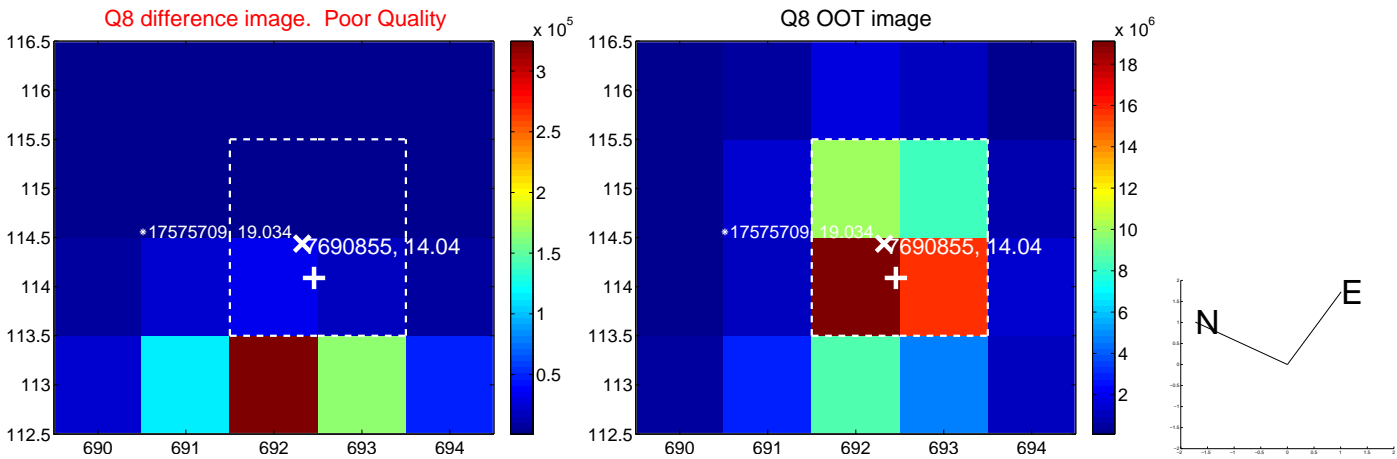
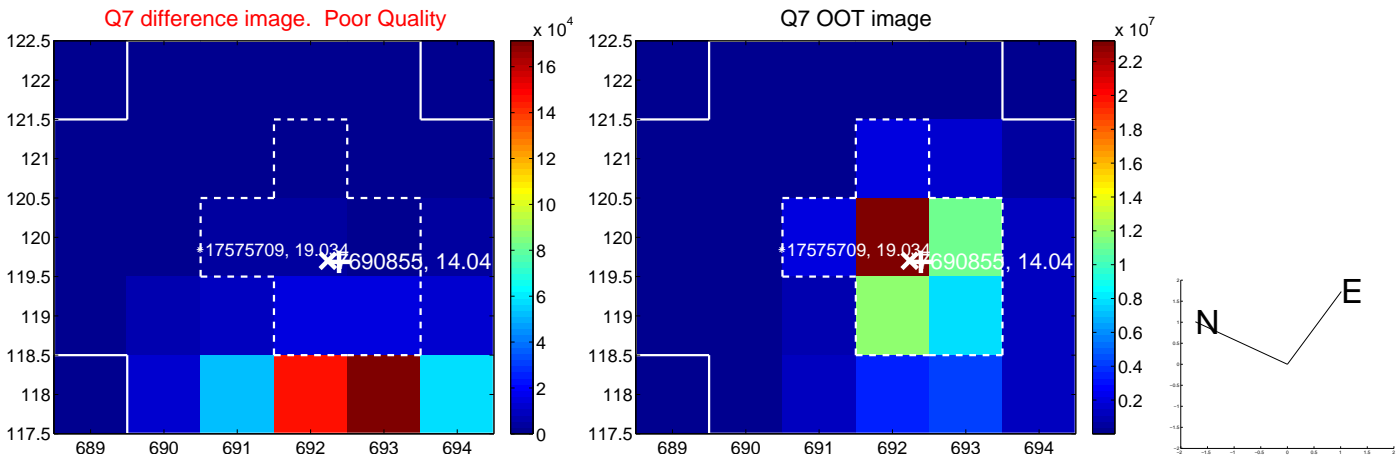
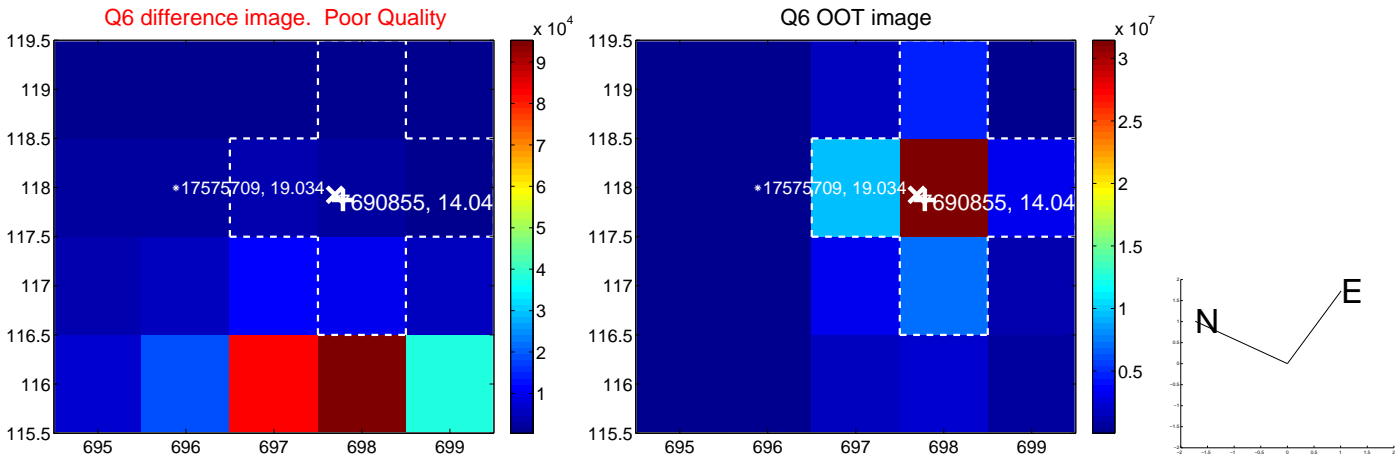
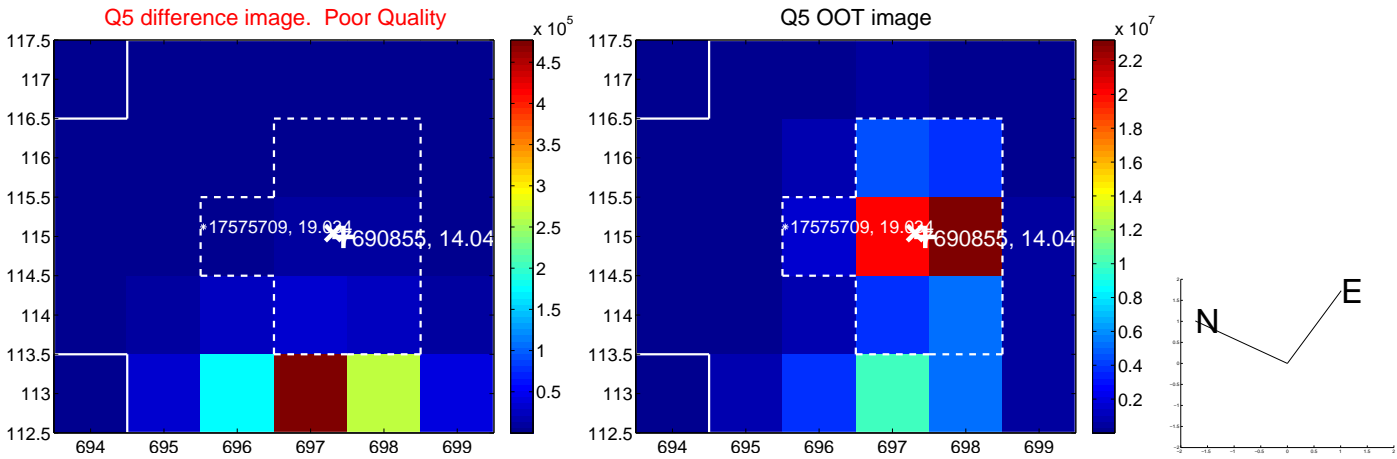


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

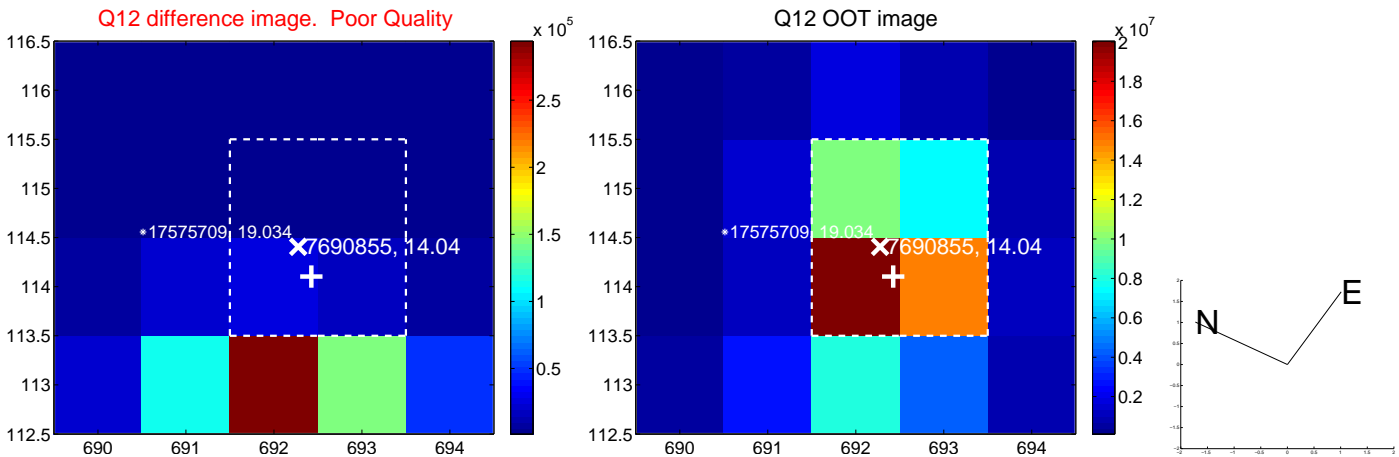
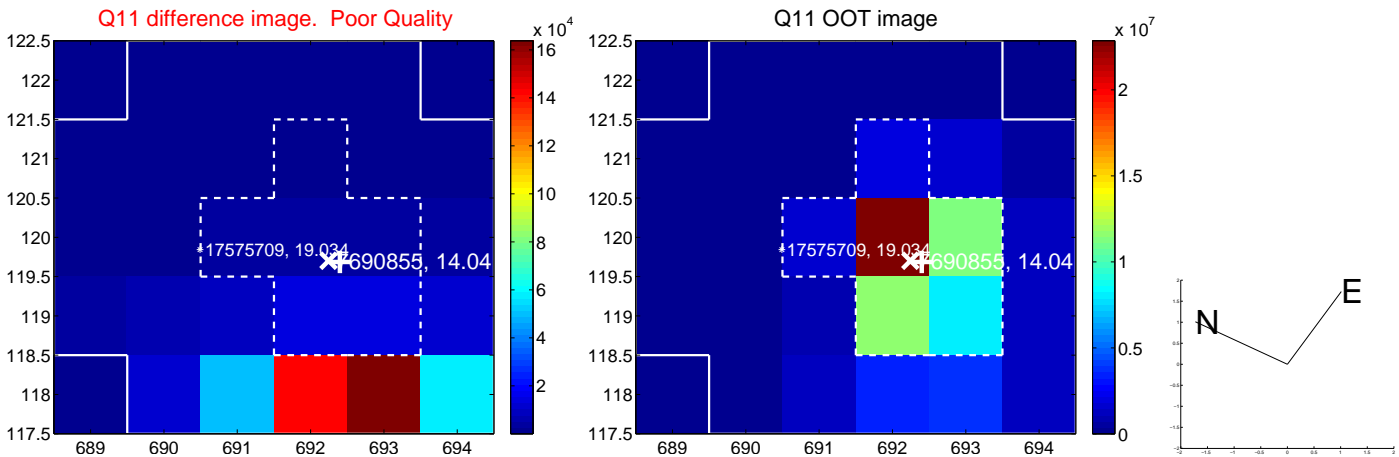
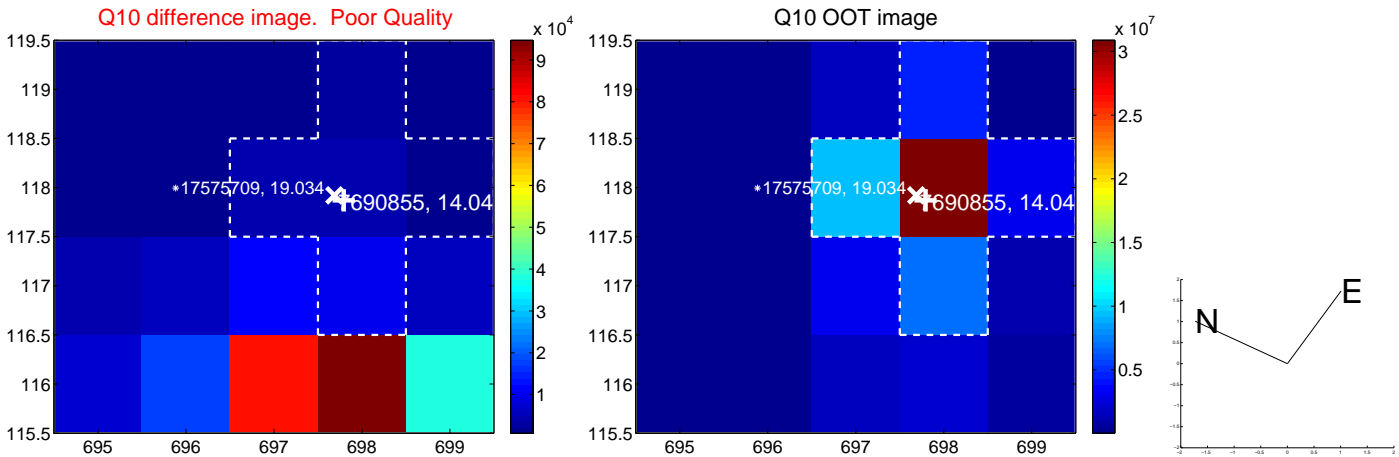
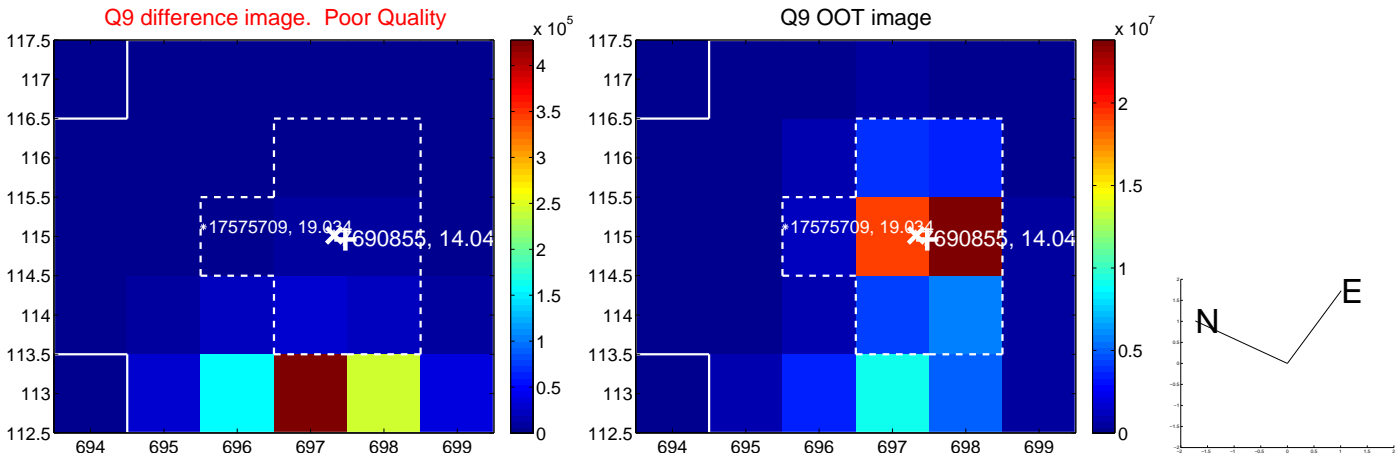
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



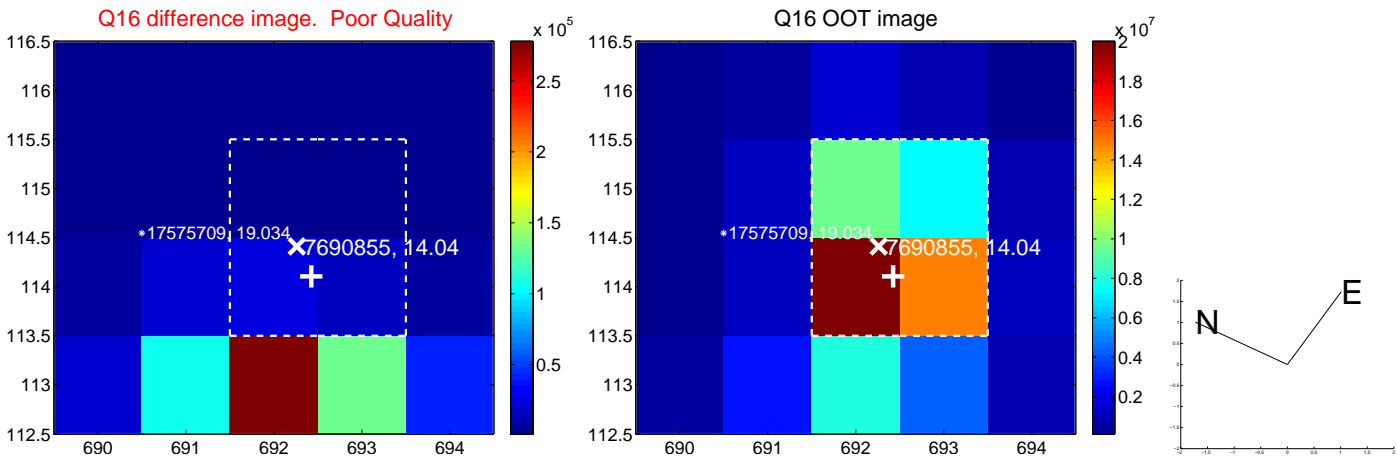
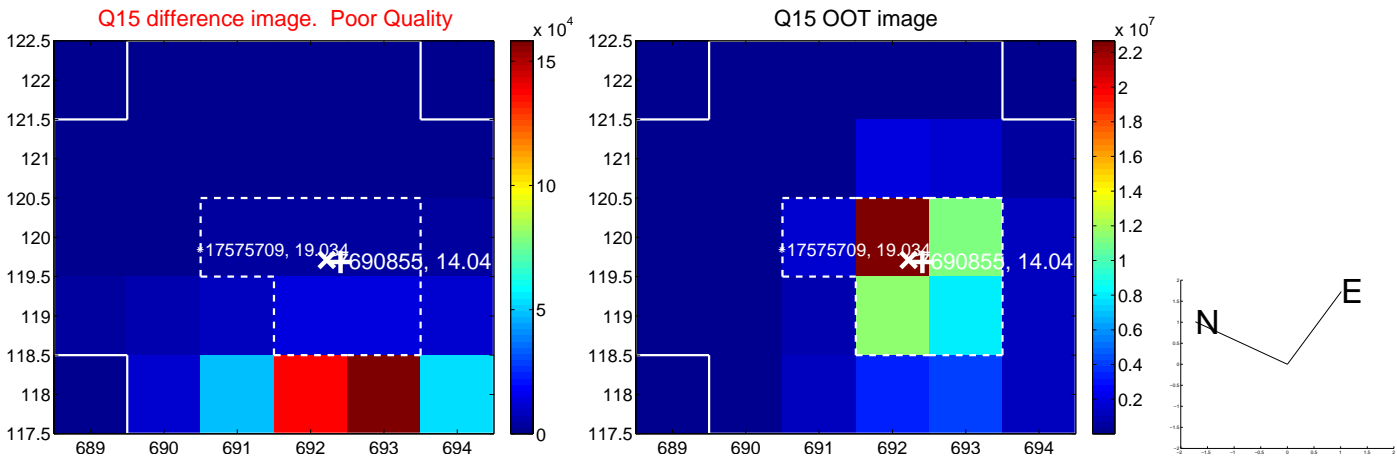
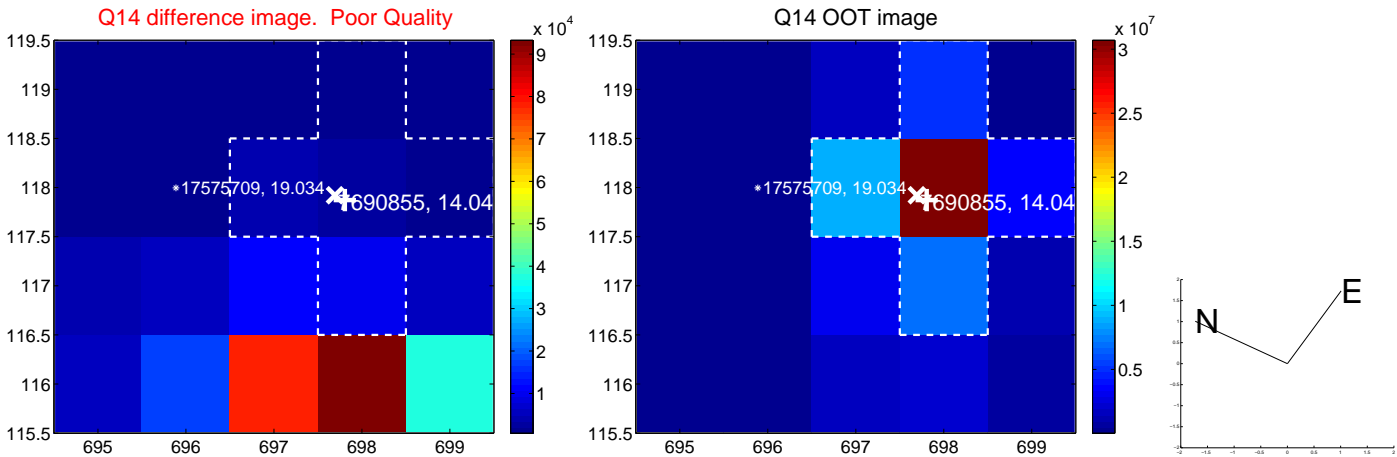
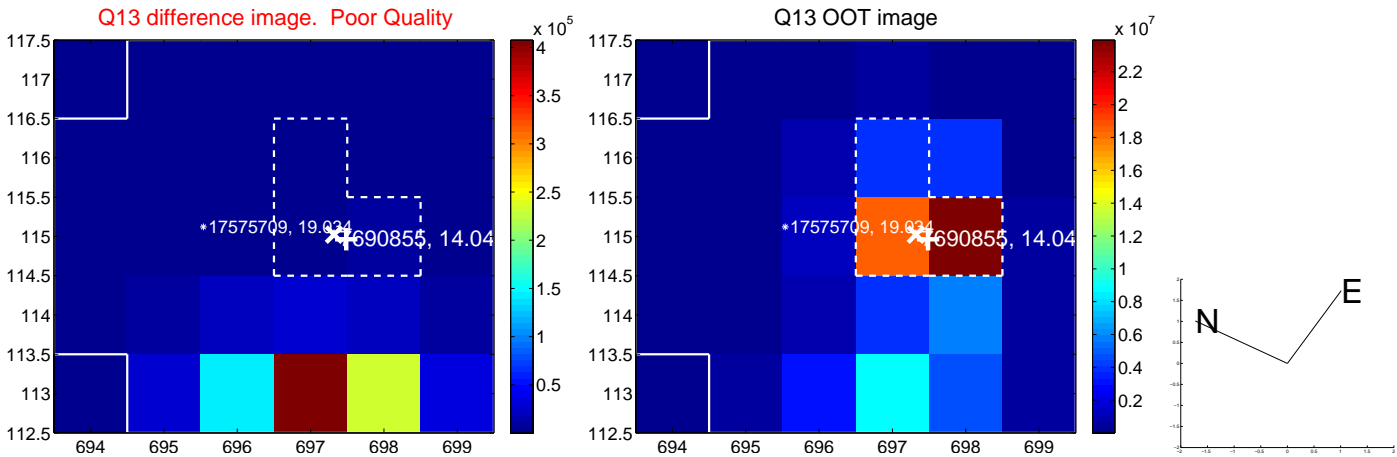
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



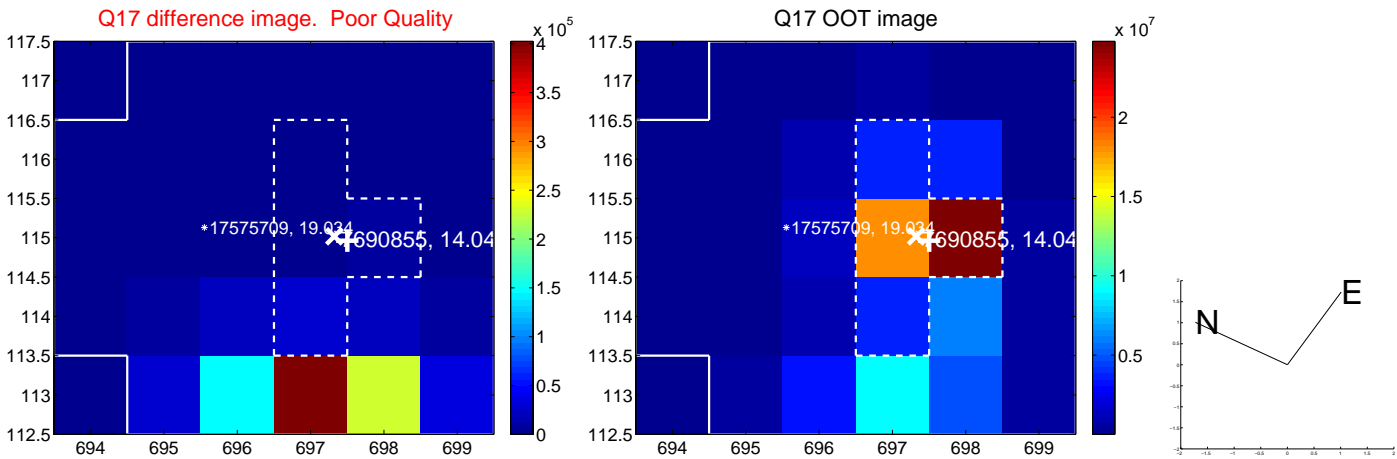
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

