

KIC 005695904

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})
005695904-01	OBS	2983.01	0.847704	131.770133	167.0	0.850	15.1	15.3	0.37	3553	0.57	119.72
005695904-02	OBS	No	0.847708	132.188363	157.1	1.172	15.1	17.0	0.37	3553	0.55	119.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005695904-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST
005695904-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—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.

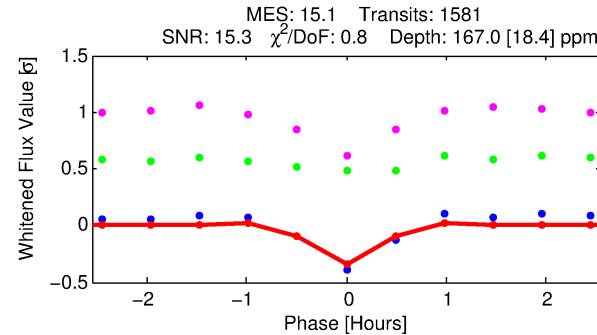
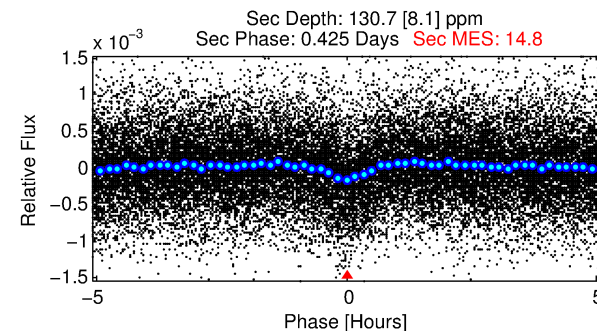
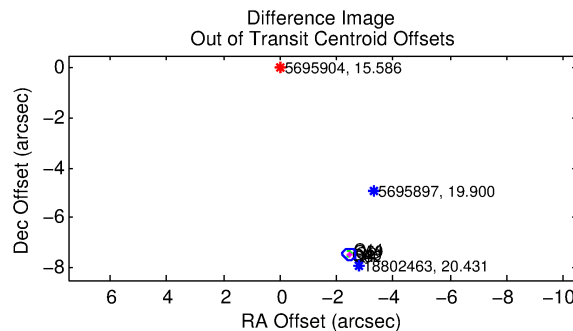
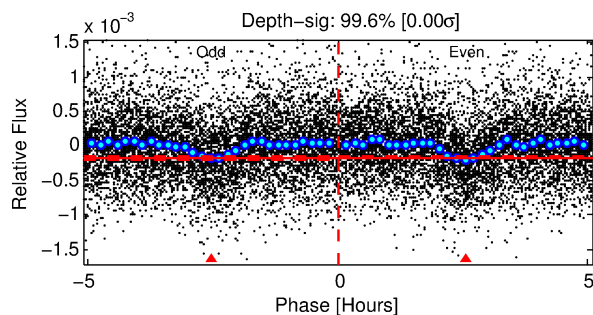
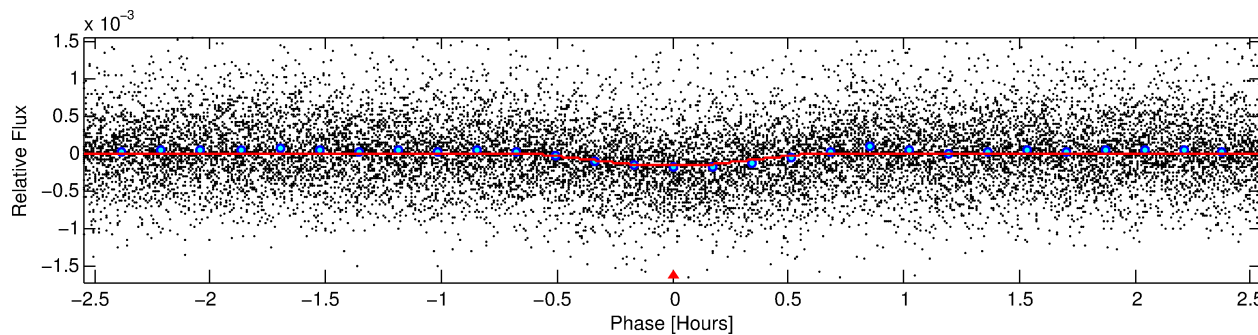
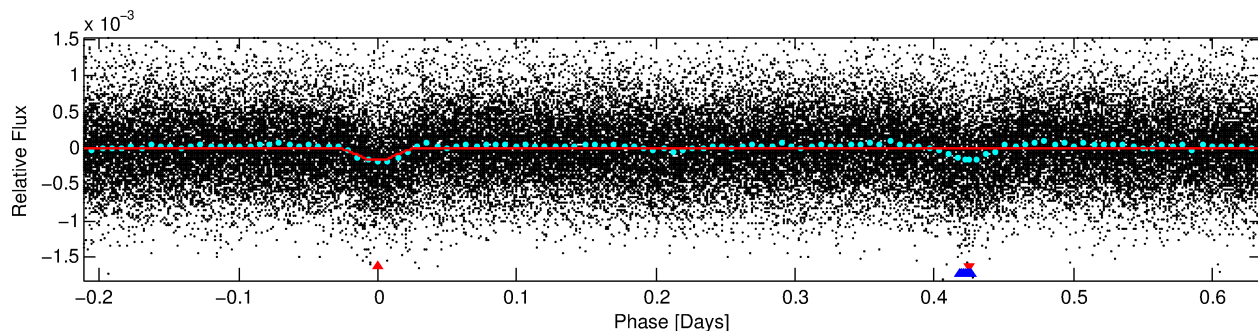
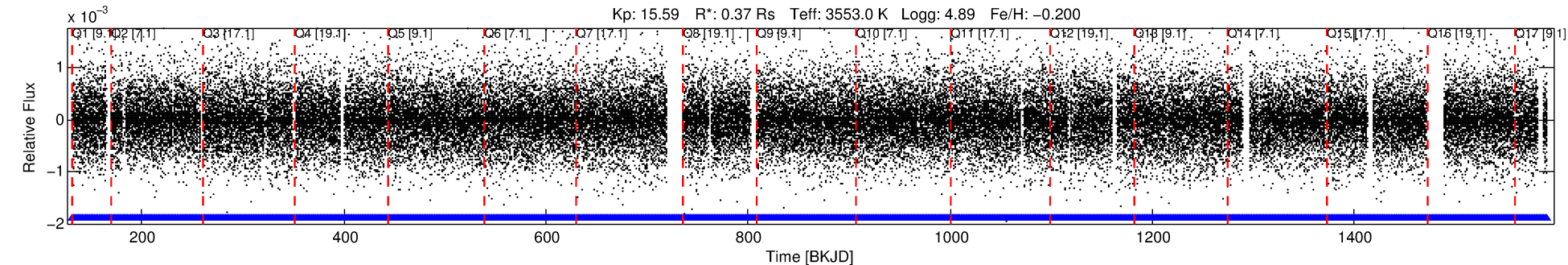
Ephemeris Match Information For 005695904-01

No Significant Match Found

DV One-Page Summary

KIC: 5695904 Candidate: 1 of 2 Period: 0.848 d
KOI: K02983 Corr: No Ephemeris Match

Kp: 15.59 R*: 0.37 Rs Teff: 3553.0 K Logg: 4.89 Fe/H: -0.200



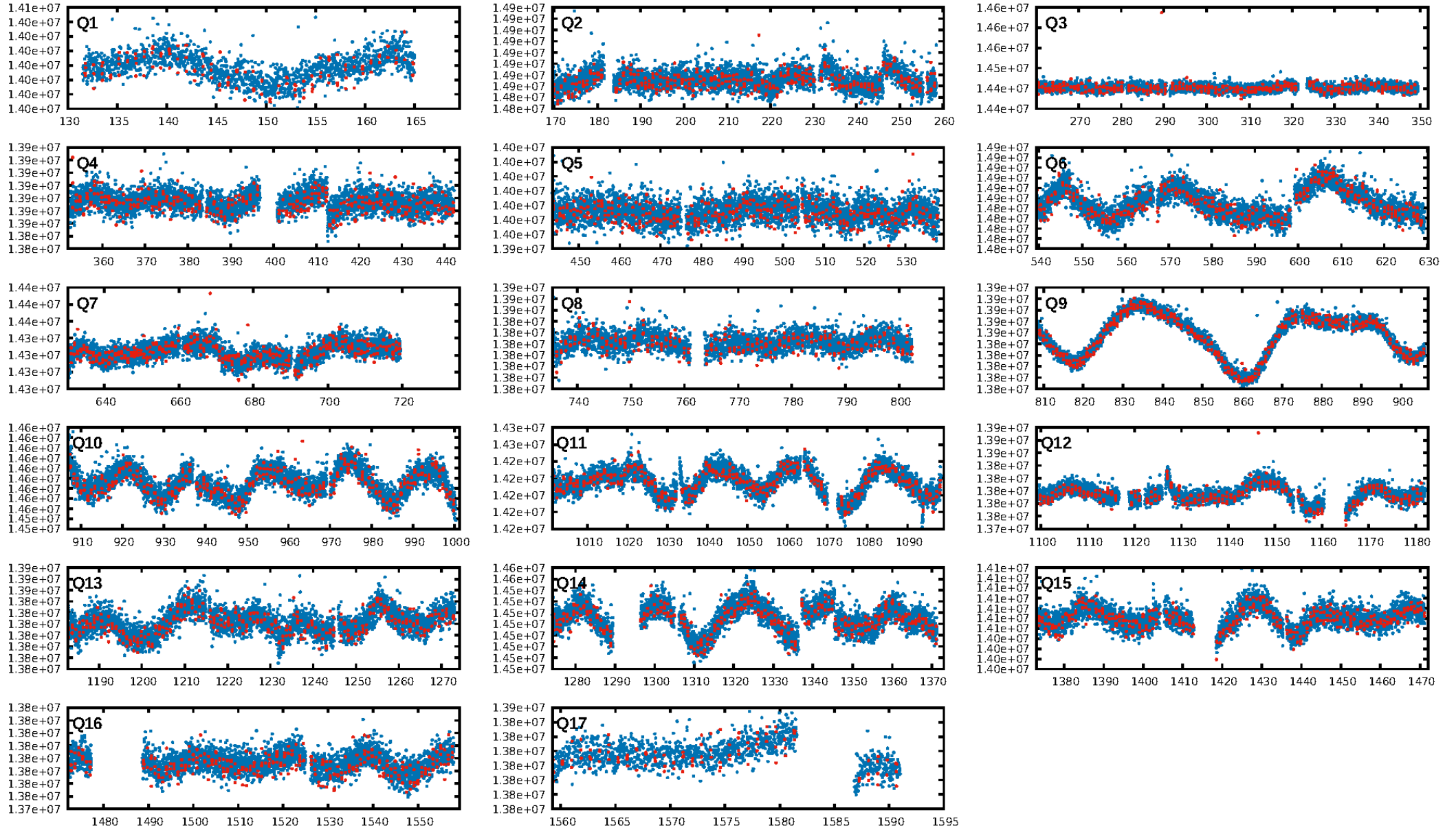
DV Fit Results:

Period = 0.84770 [0.00001] d
Epoch = 131.7701 [0.0010] BKJD
Rp/R* = 0.0142 [0.0073]
a/R* = 3.75 [8.17]
b = 0.90 [0.53]
Seff = 119.72 [14.67]
Teq = 843 [26] K
Rp = 0.57 [0.30] Re
a = 0.0127 [0.0010] AU
Ag = 35.83 [37.21] [0.94σ]
Teff = 3191 [826] K [2.84σ]

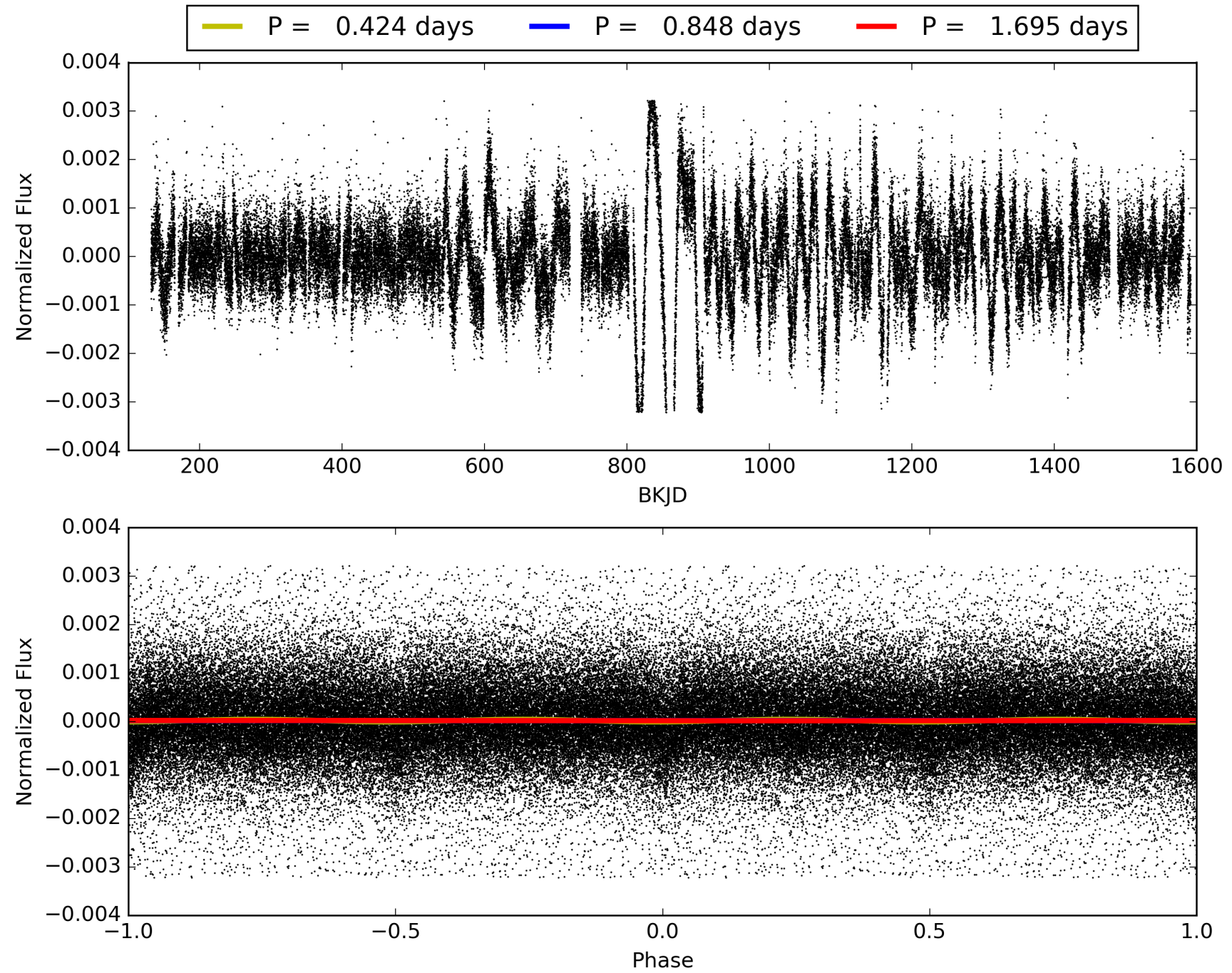
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.77e-50
RollingBand-fgt: 1.00 [1509/1509]
GhostDiagnostic-chr: -0.09728
Centroid-sig: 0.0%
Centroid-so: 113.072 arcsec [113.70σ]
OotOffset-rm: 7.852 arcsec [100.89σ]
KicOffset-rm: 8.412 arcsec [125.26σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005695904-01, PDC Light Curves

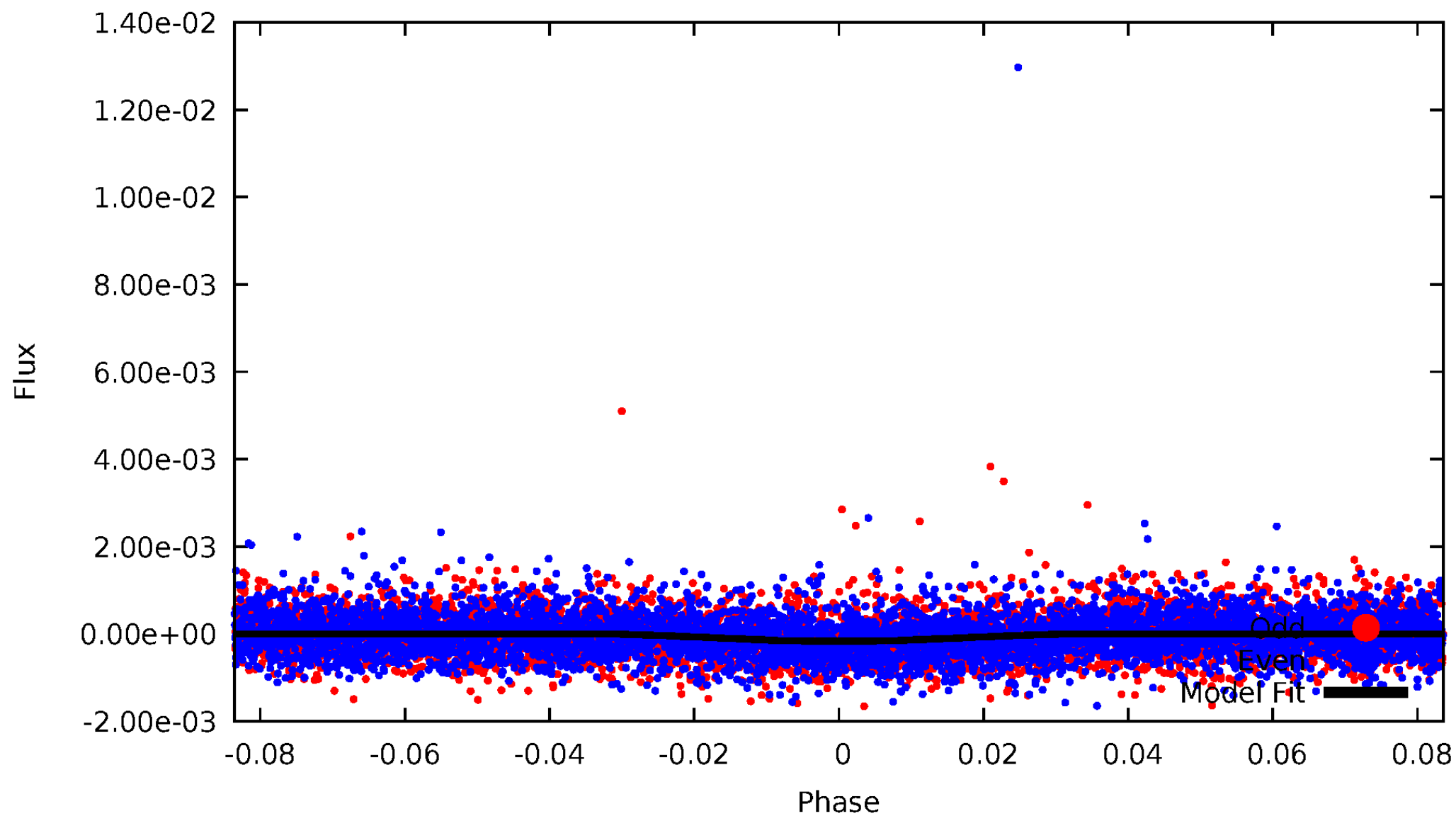


TCE 005695904-01



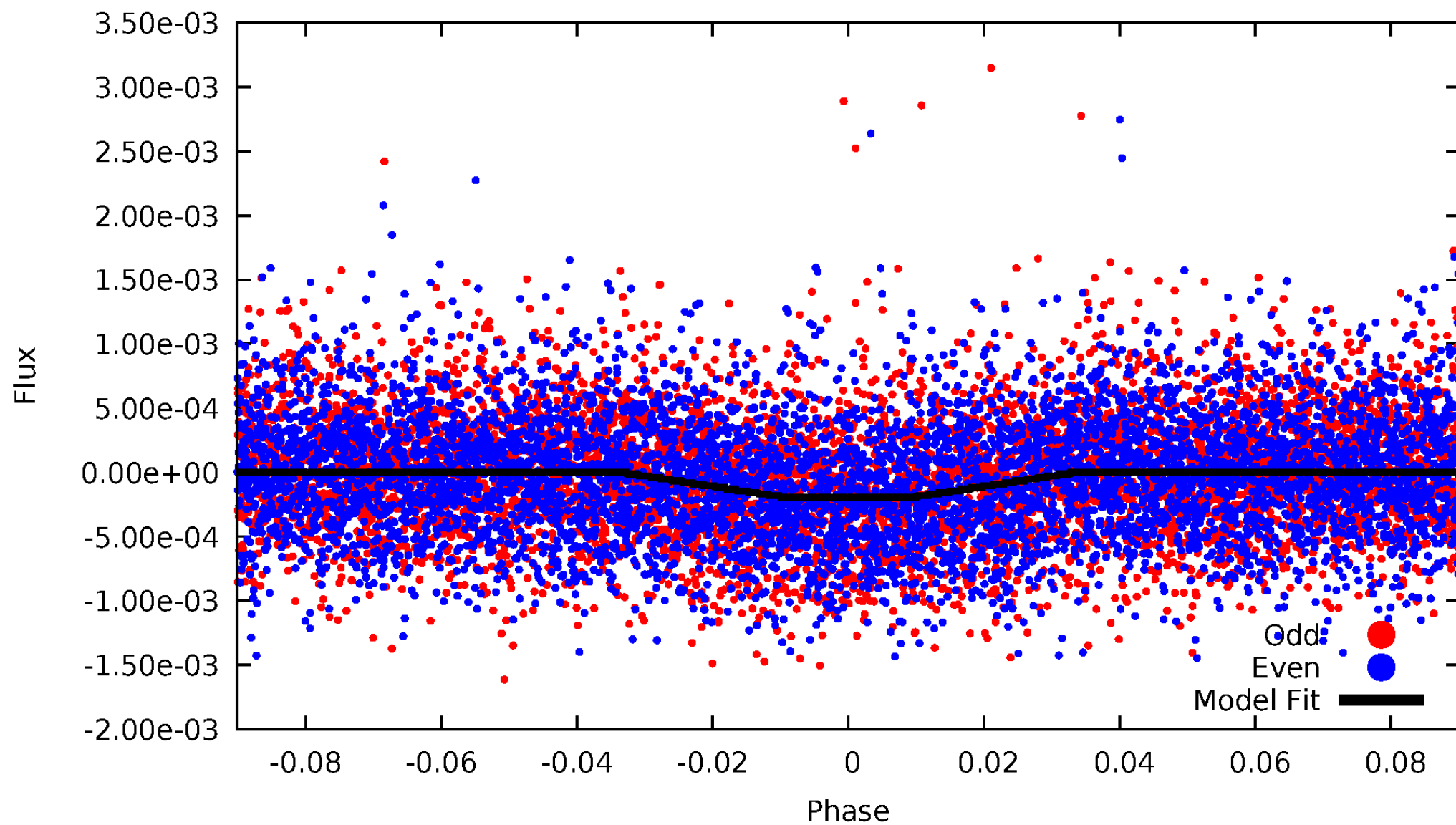
DV Odd/Even

TCE 005695904-01

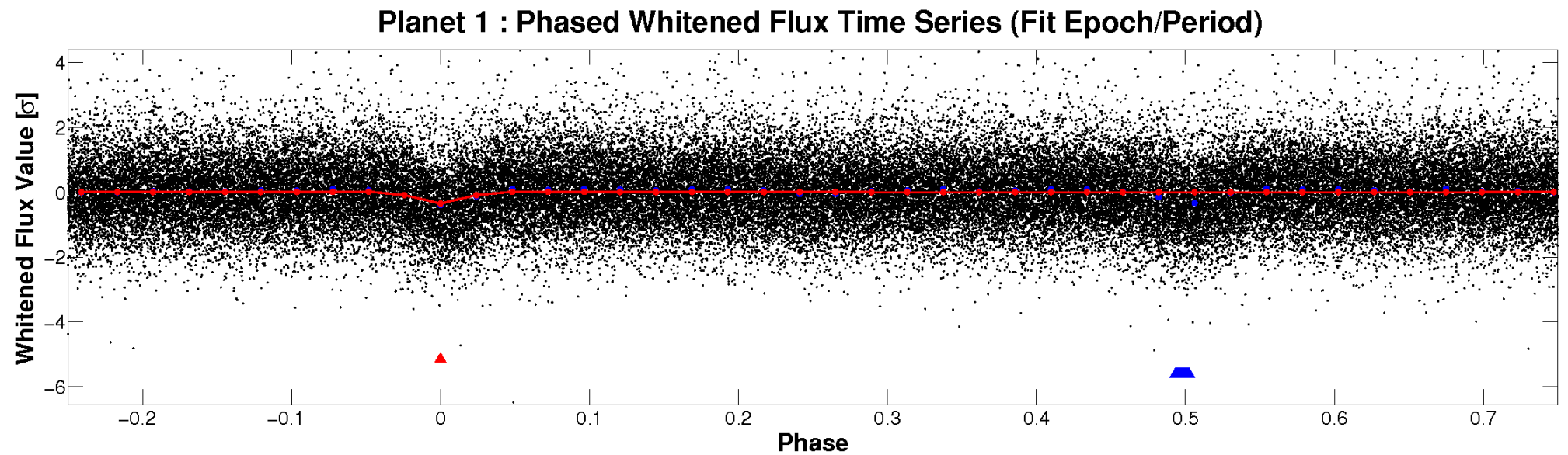
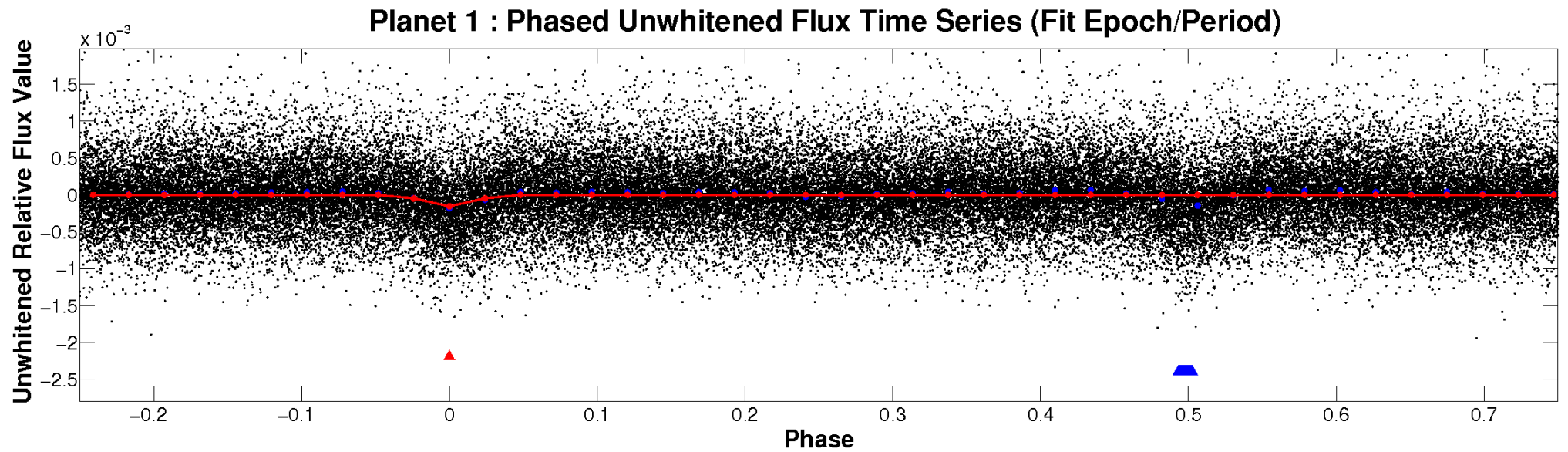


ALT Odd/Even

TCE 005695904-01

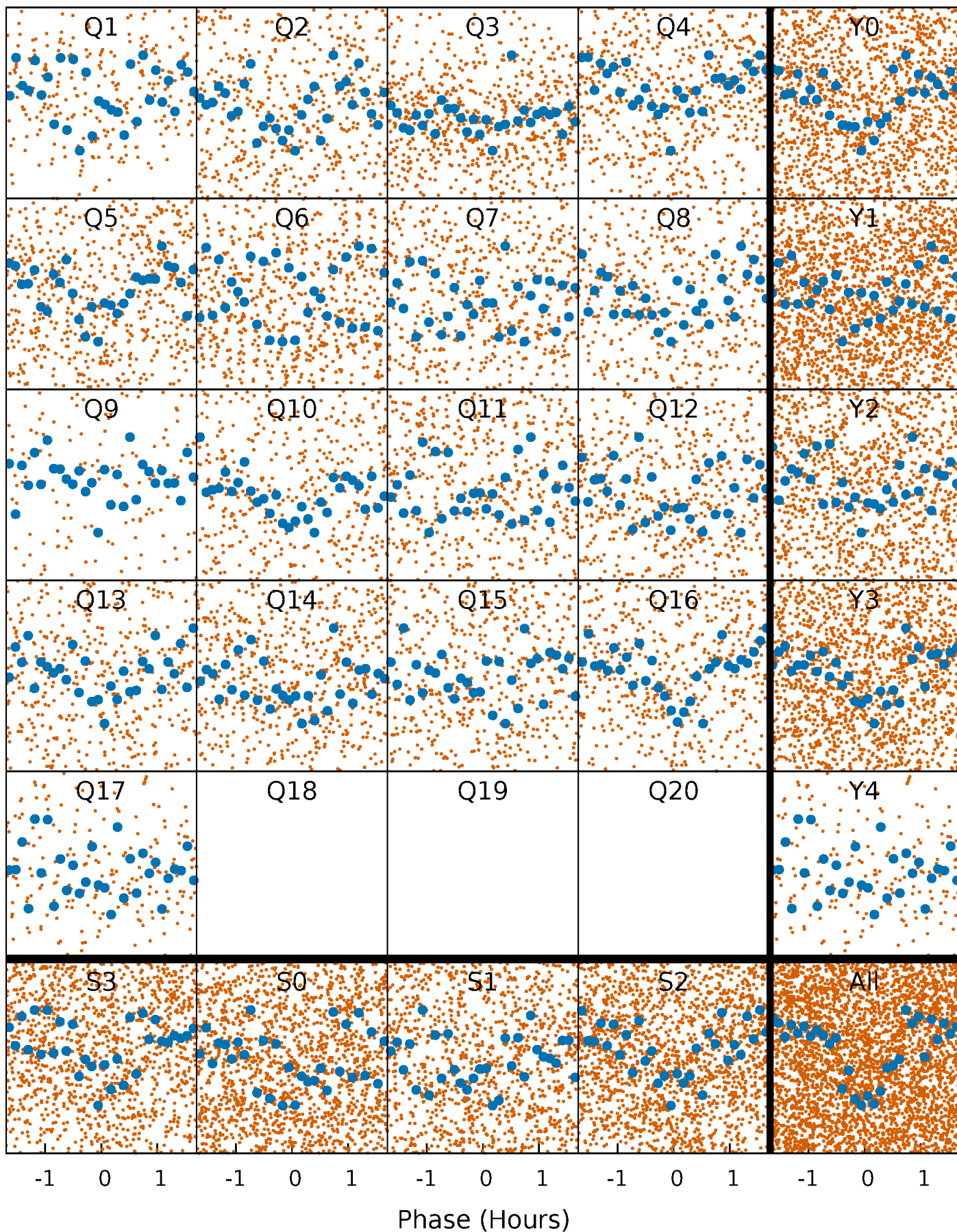


Non-Whitened Vs. Whitened Light Curve



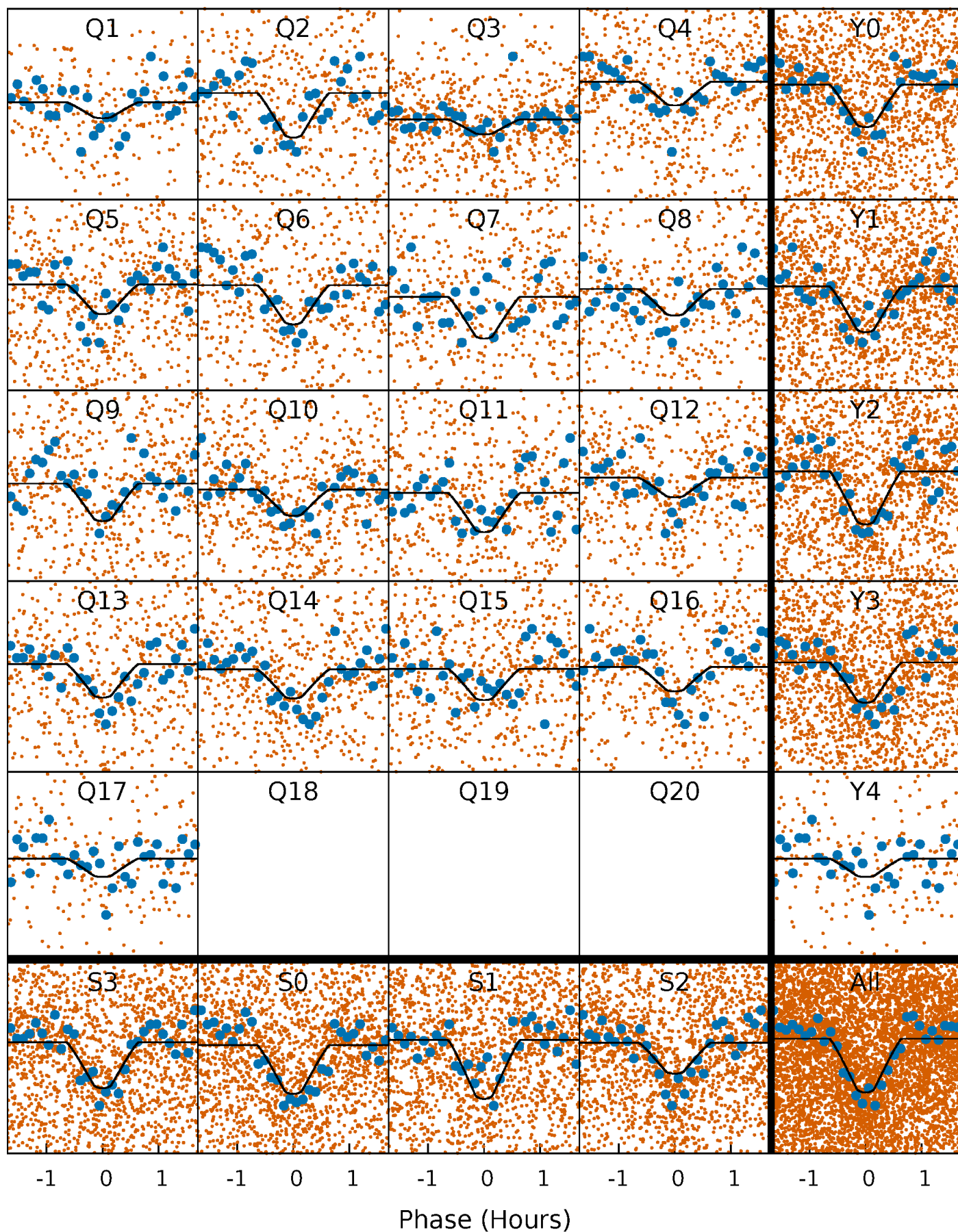
PDC Quarter-Phased Transit Curves

TCE 005695904-01 P= 0.847704 Days $T_0=131.770133$ (BKJD)



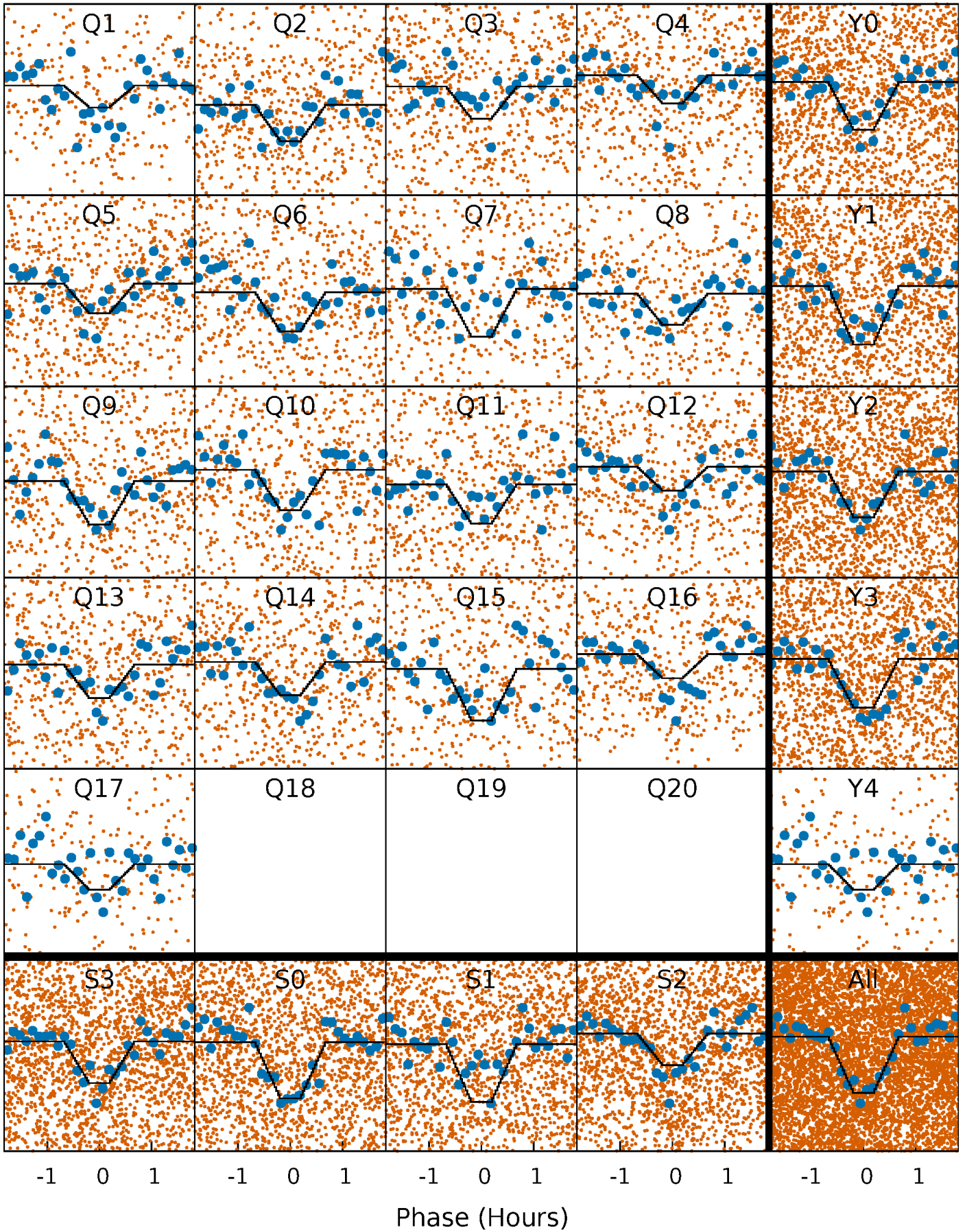
DV Quarter-Phased Transit Curves

TCE 005695904-01 P= 0.847704 Days $T_0=131.770133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

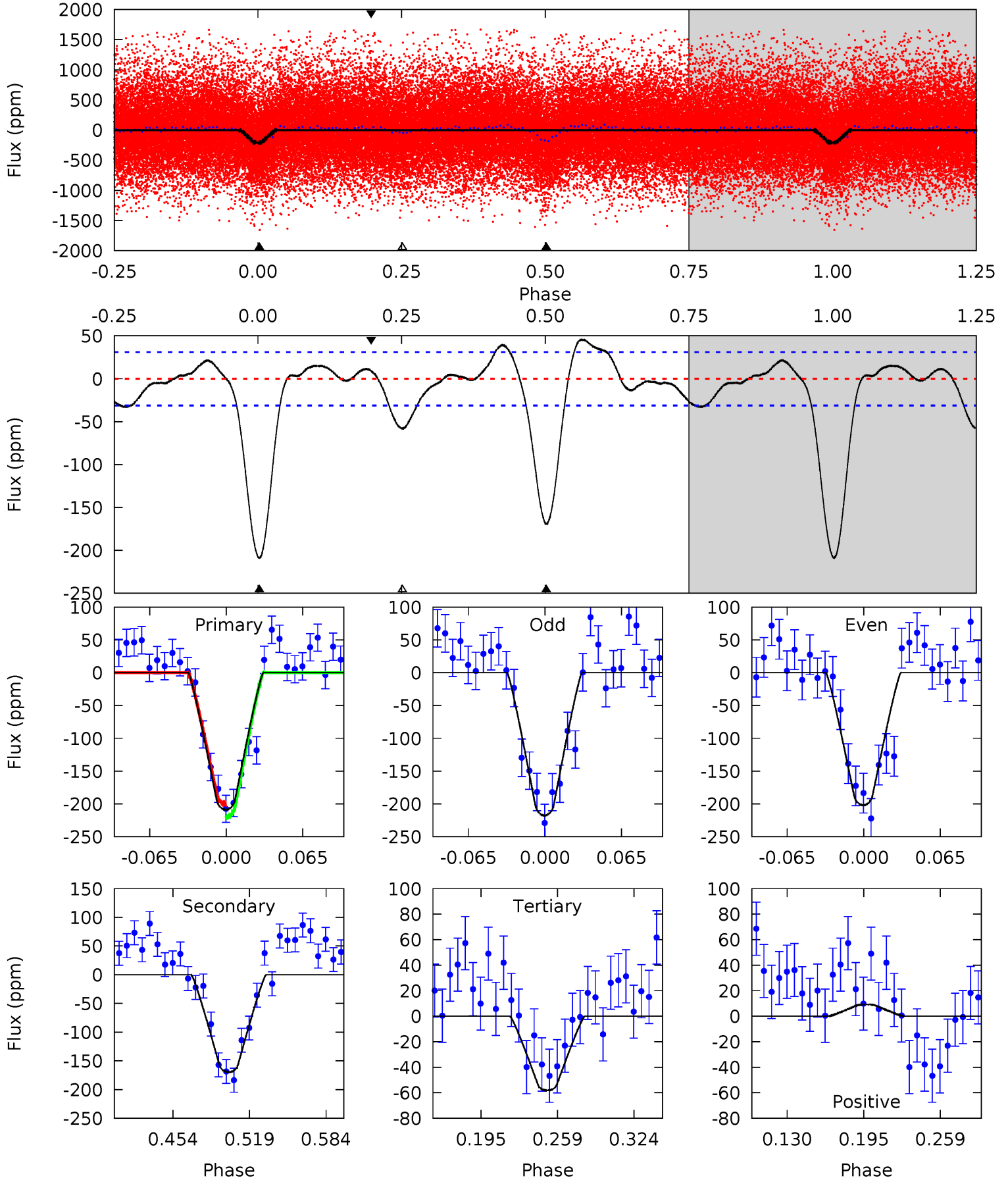
TCE 005695904-01 P= 0.847705 Days $T_0=131.770017$ (BKJD)



DV Model-Shift Uniqueness Test

005695904-01, P = 0.847704 Days, E = 130.922429 Days

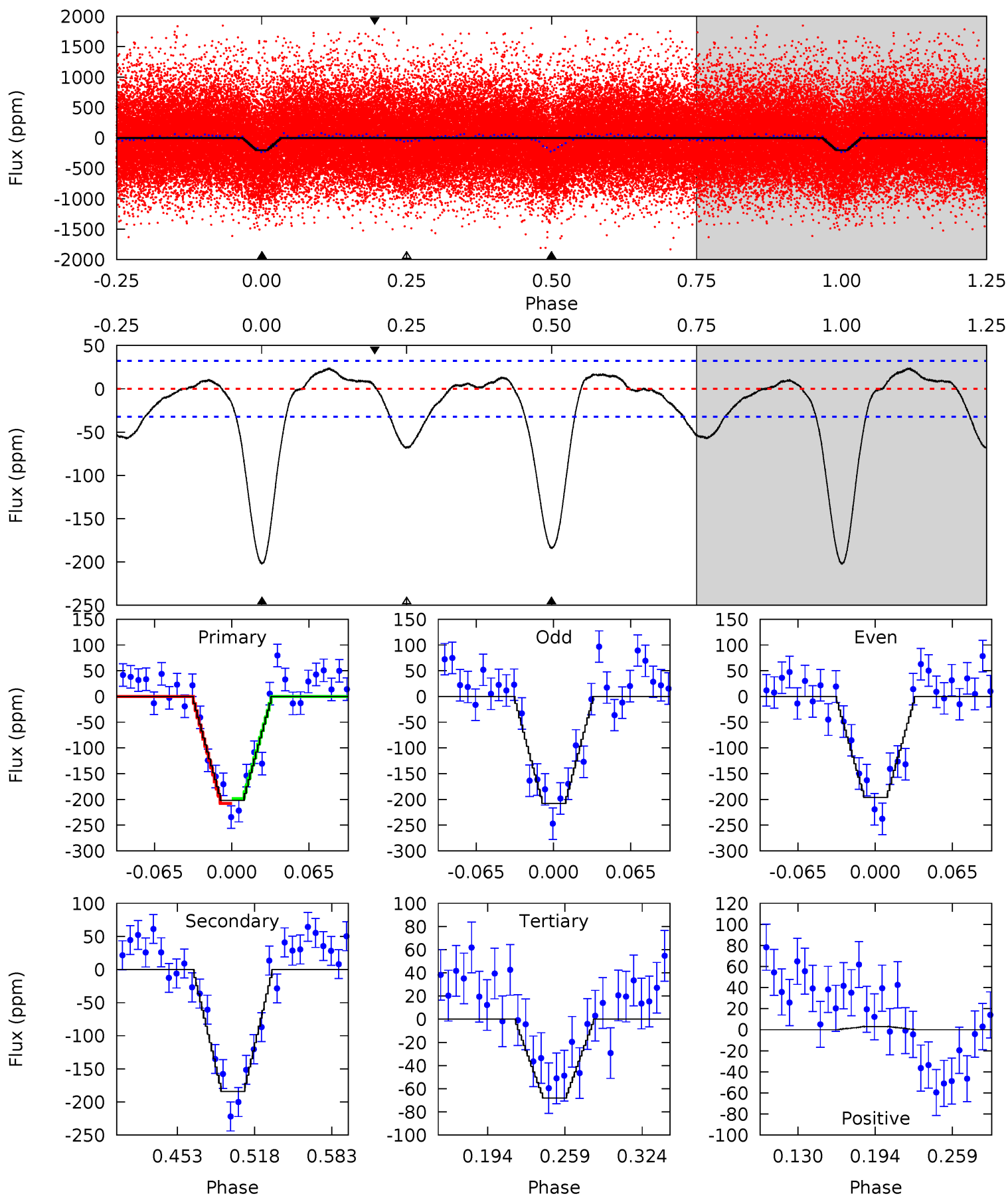
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.2	25.3	8.70	1.37	4.65	1.85	3.10	22.5	29.8	16.6	24.0	1.17	0.96	0.18	1.53



Alt Model-Shift Uniqueness Test

005695904-01, P = 0.847705 Days, E = 130.922312 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.2	26.6	9.85	0.44	4.66	1.85	3.42	19.4	28.8	16.8	26.2	0.87	0.97	0.10	0.70



Stellar Parameters For KIC 005695904

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3553^{+56}_{-64}	$4.887^{+0.044}_{-0.036}$	$-0.200^{+0.100}_{-0.100}$	$0.368^{+0.036}_{-0.040}$	$0.383^{+0.042}_{-0.050}$	$10.820^{+2.593}_{-1.743}$
	+2%/-2%	+1%/-1%	+50%/-50%	+10%/-11%	+11%/-13%	+24%/-16%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005695904-01 / KOI 2983.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-170 ± 7	$0.59^{+0.29}_{-0.27}$	1175^{+30}_{-29}	3390^{+795}_{-363}	43^{+101}_{-23}
Alt.	-184 ± 7	$0.55^{+0.30}_{-0.27}$	1177^{+27}_{-31}	3528^{+938}_{-436}	54^{+151}_{-31}

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

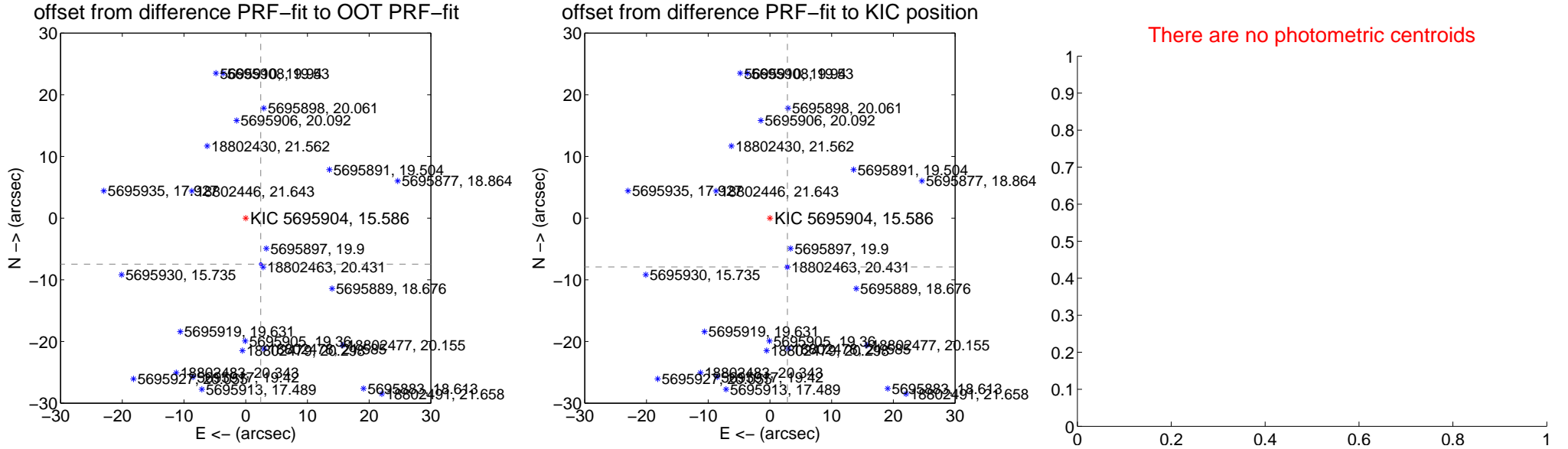
DV Centroid Data

Supplemental centroid analysis for 005695904-01. Kepler magnitude: 15.59. Transit SNR 15.25

There are 8 quarters with good PRF difference image offsets

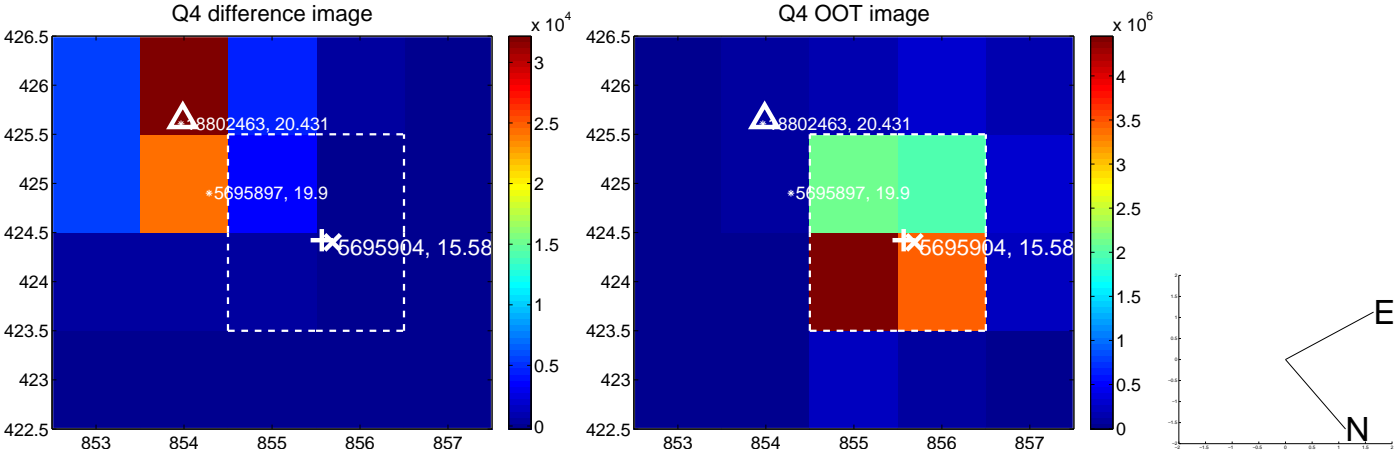
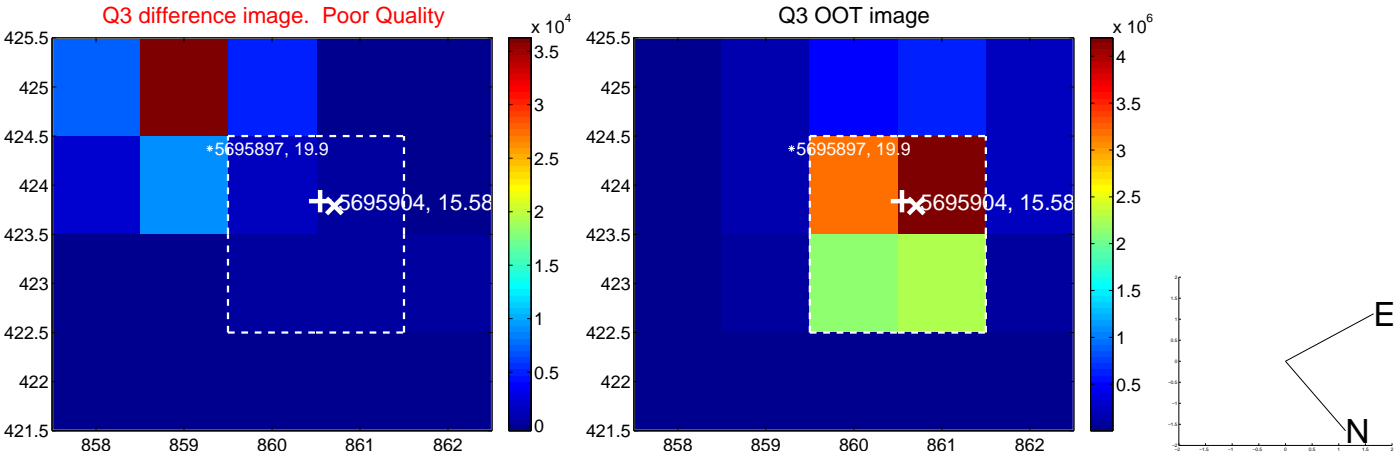
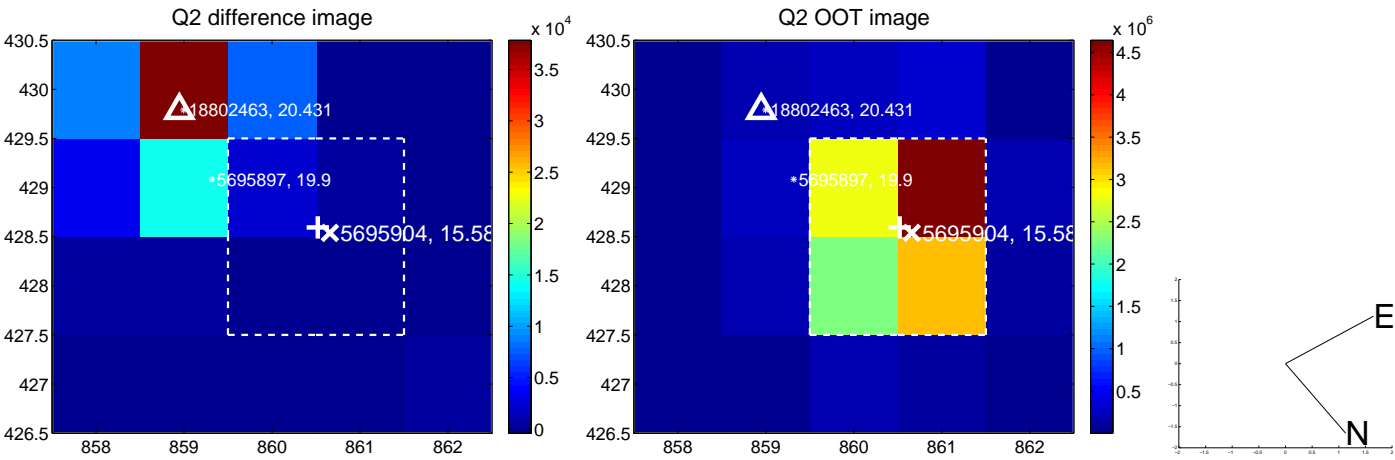
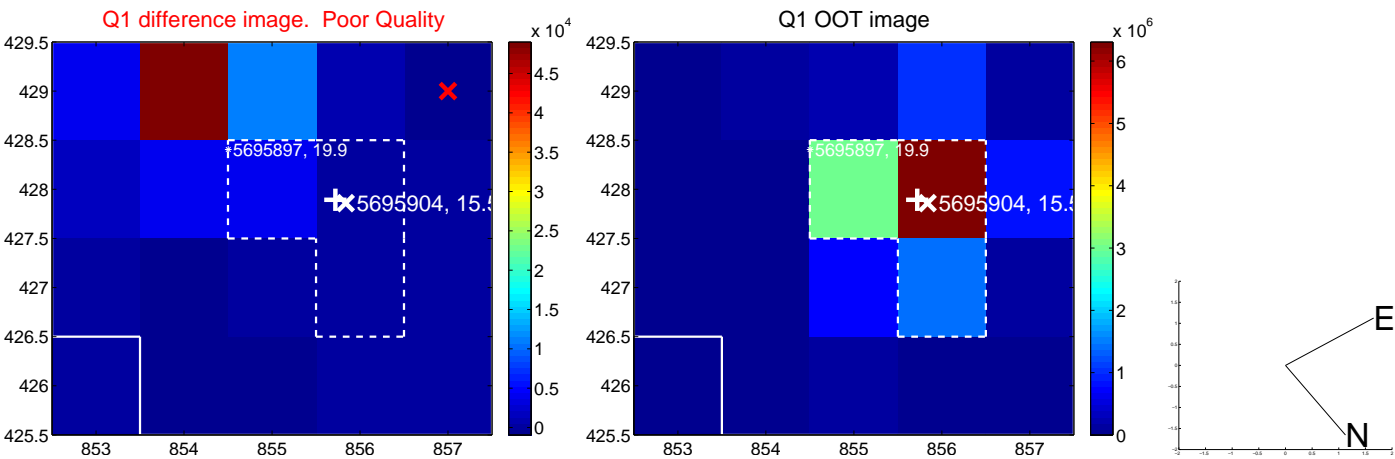
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.852 \pm 0.078	100.89	-2.442 \pm 0.068	-7.463 \pm 0.079
PRF-fit source offset from KIC position	8.412 \pm 0.067	125.26	-2.832 \pm 0.069	-7.921 \pm 0.067
photometric centroid source offset	—	—	—	—

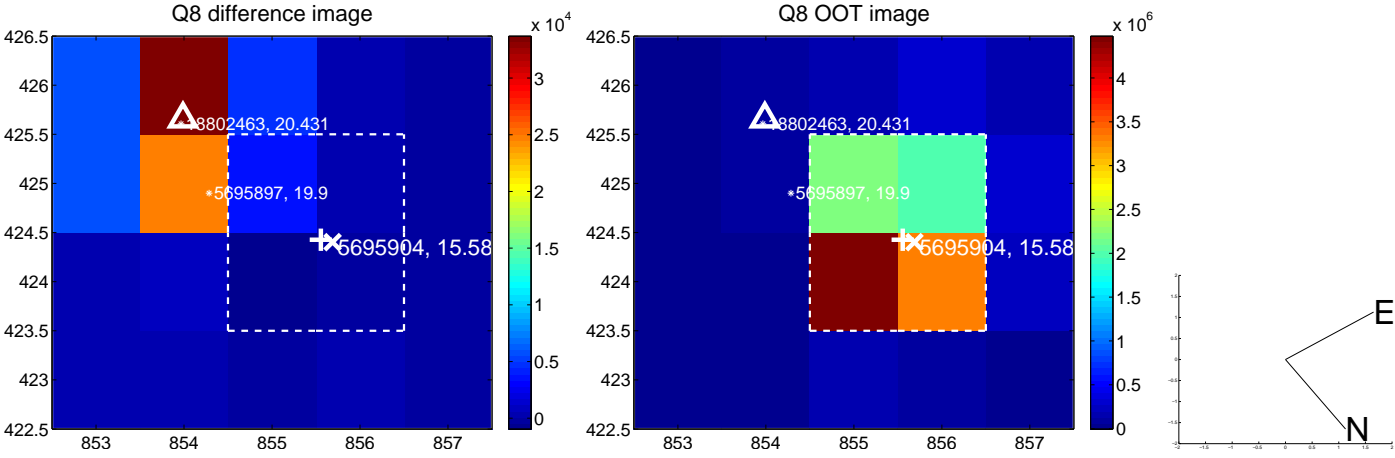
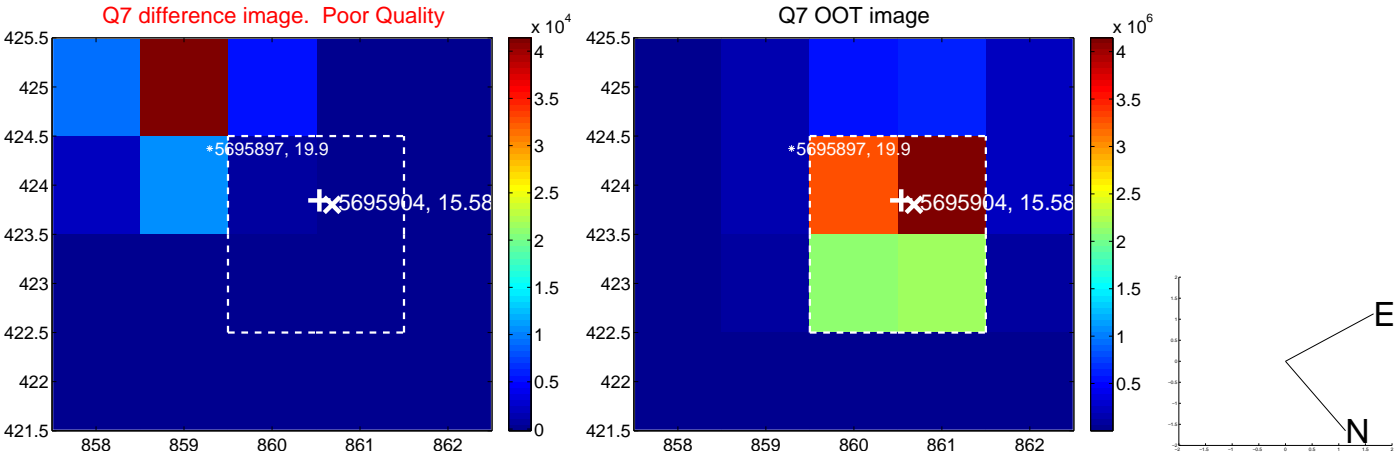
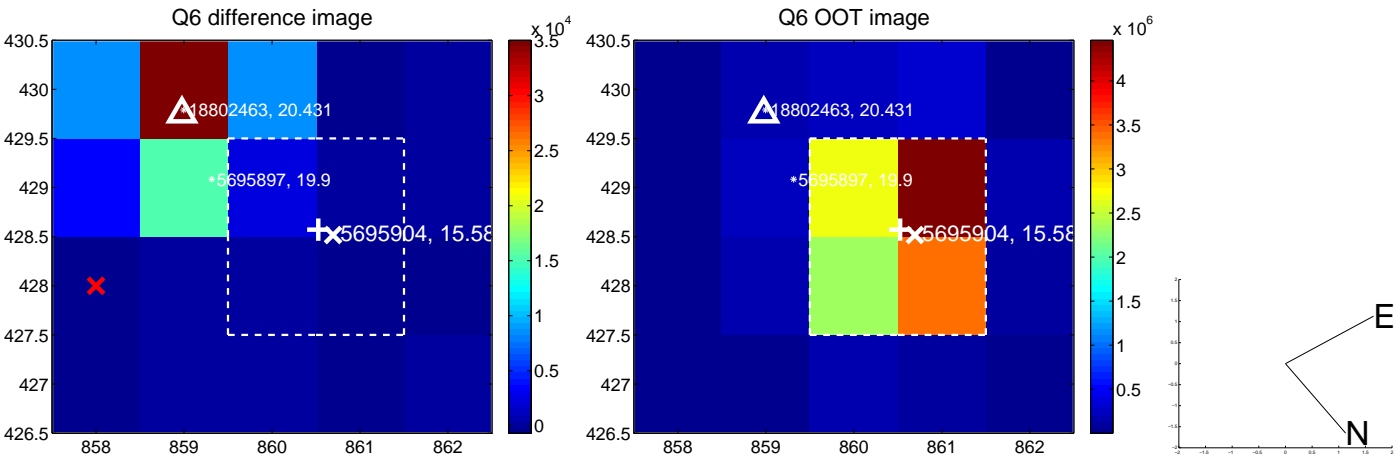
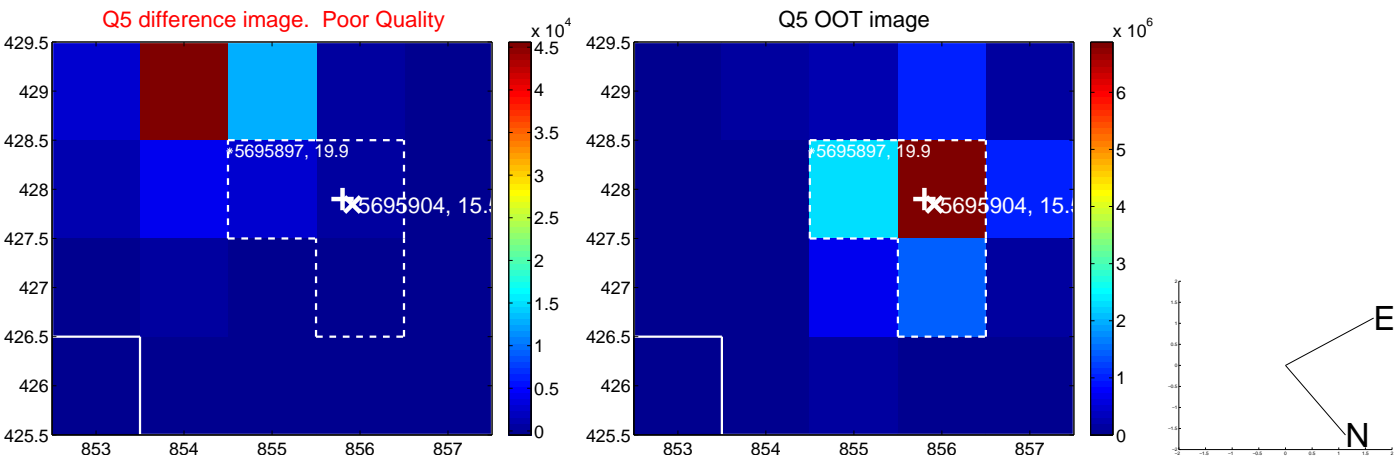


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

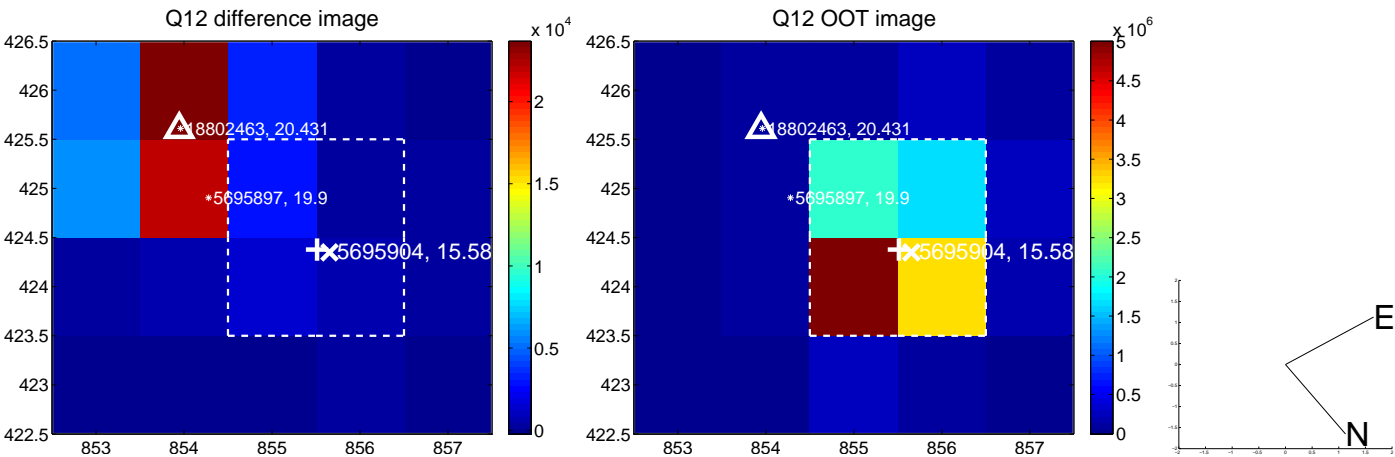
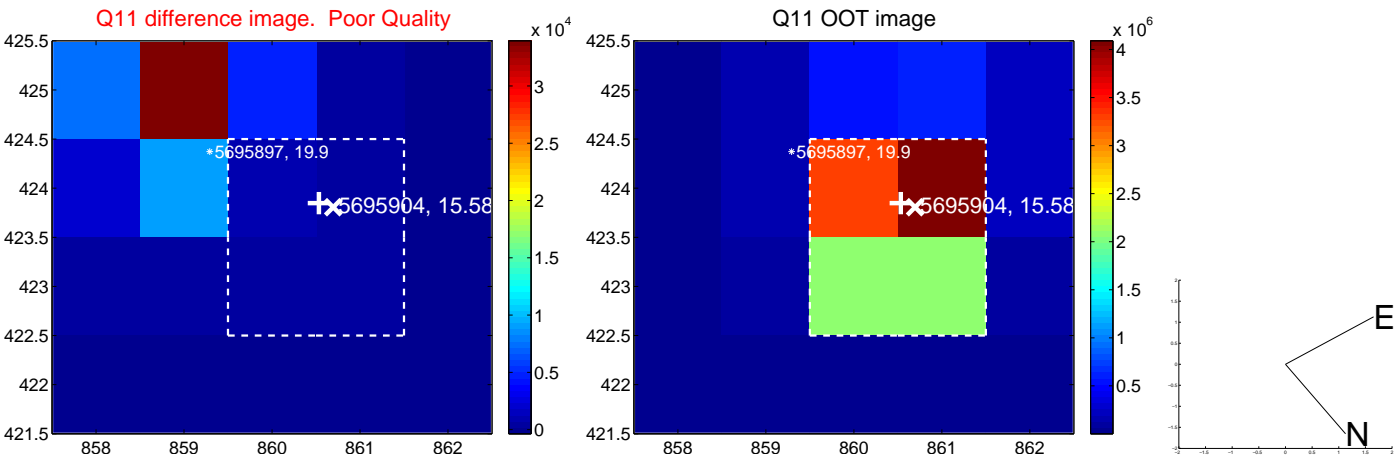
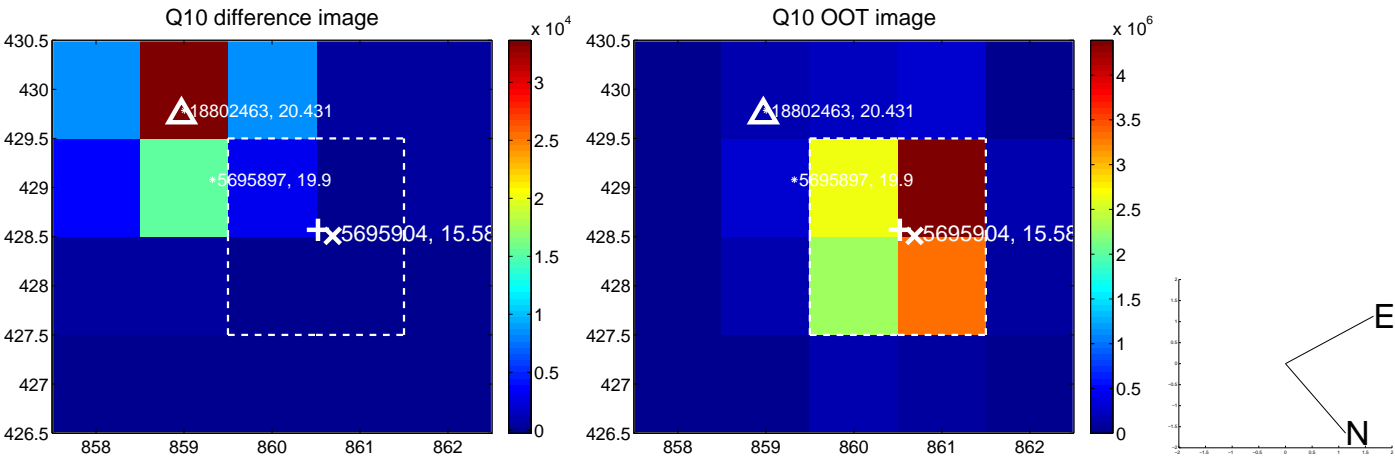
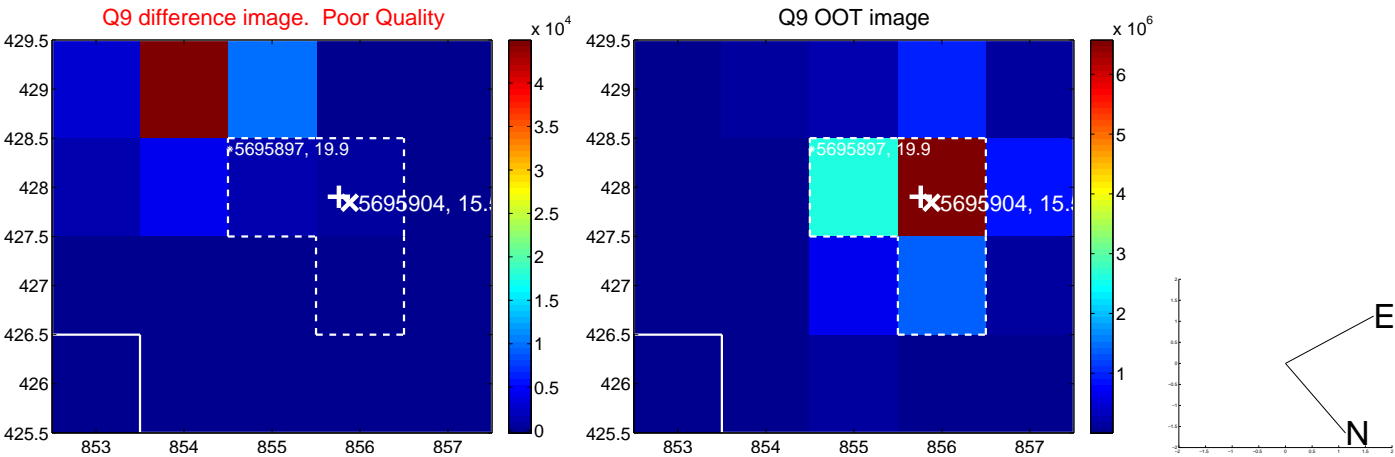
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



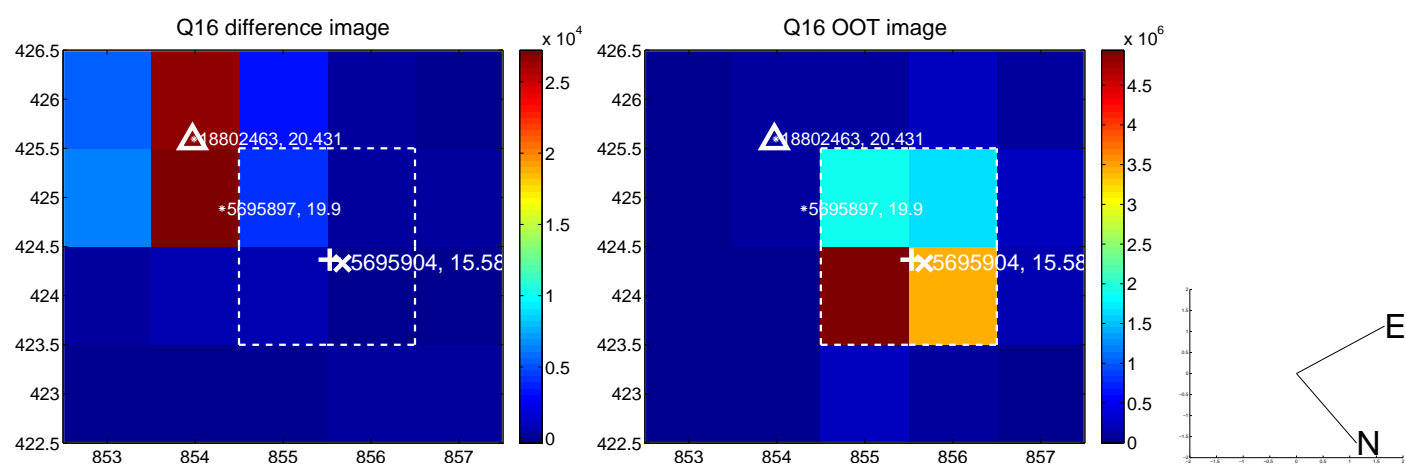
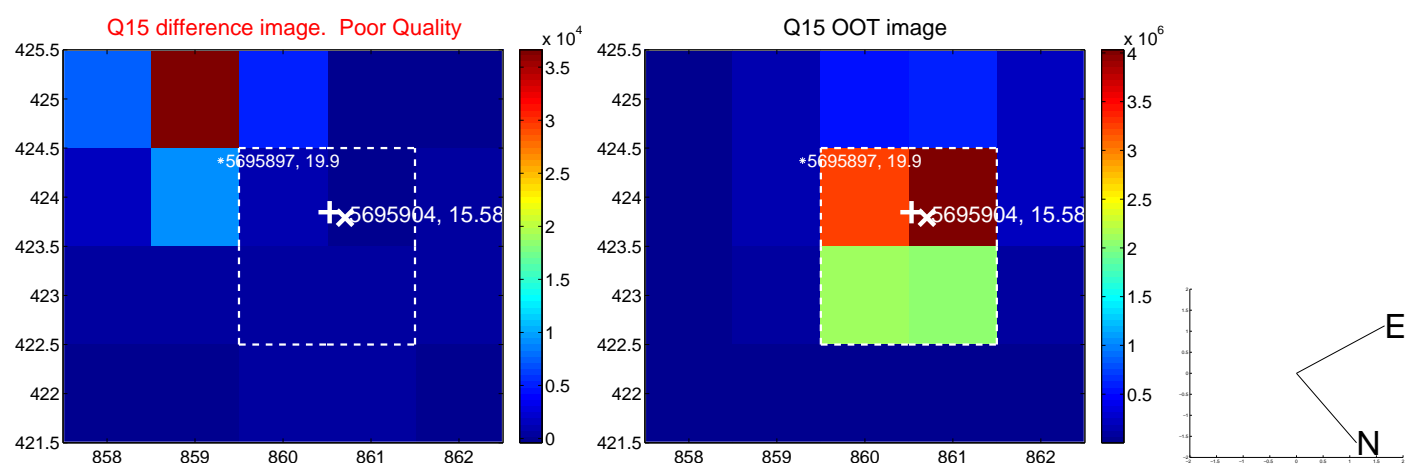
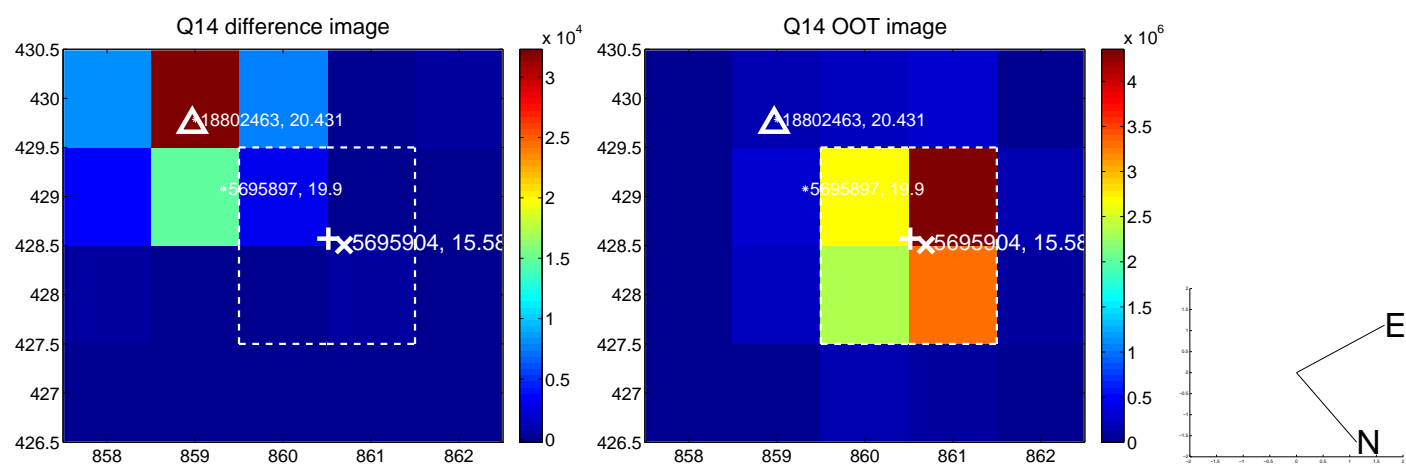
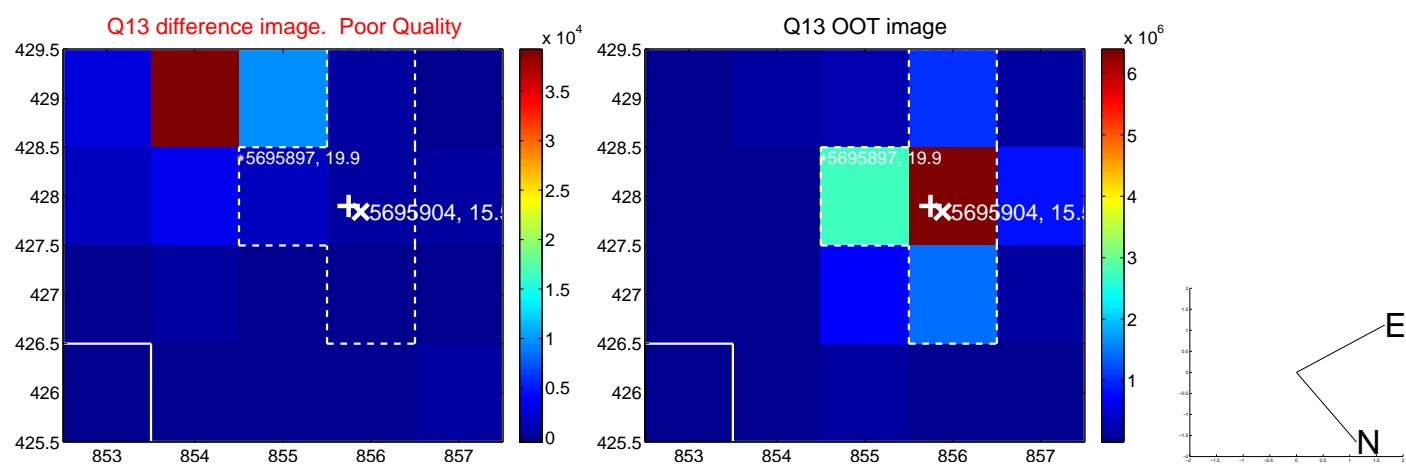
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



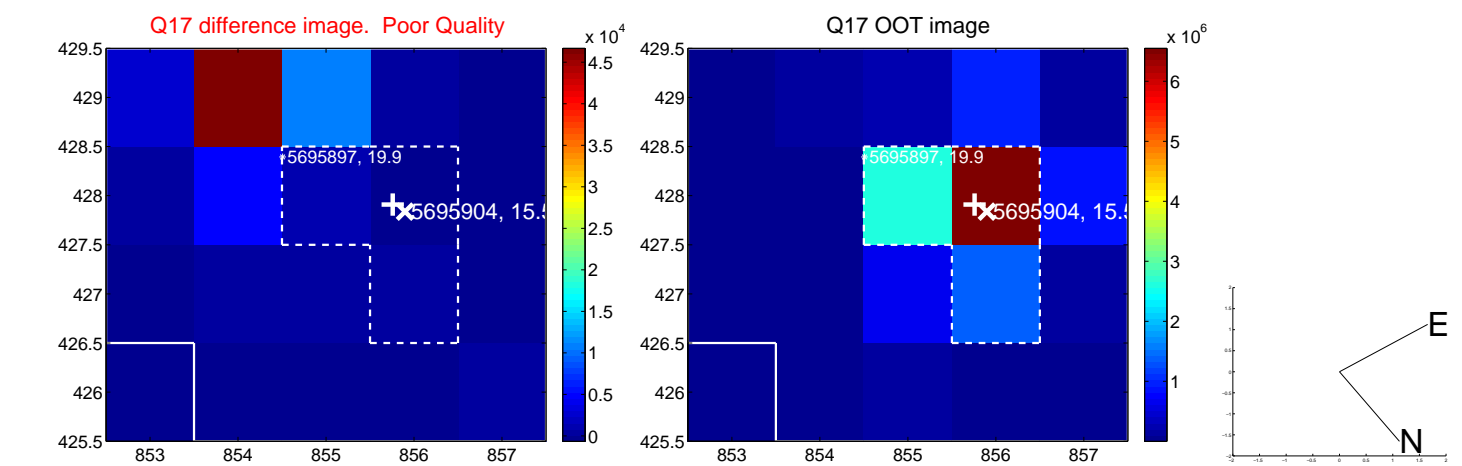
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



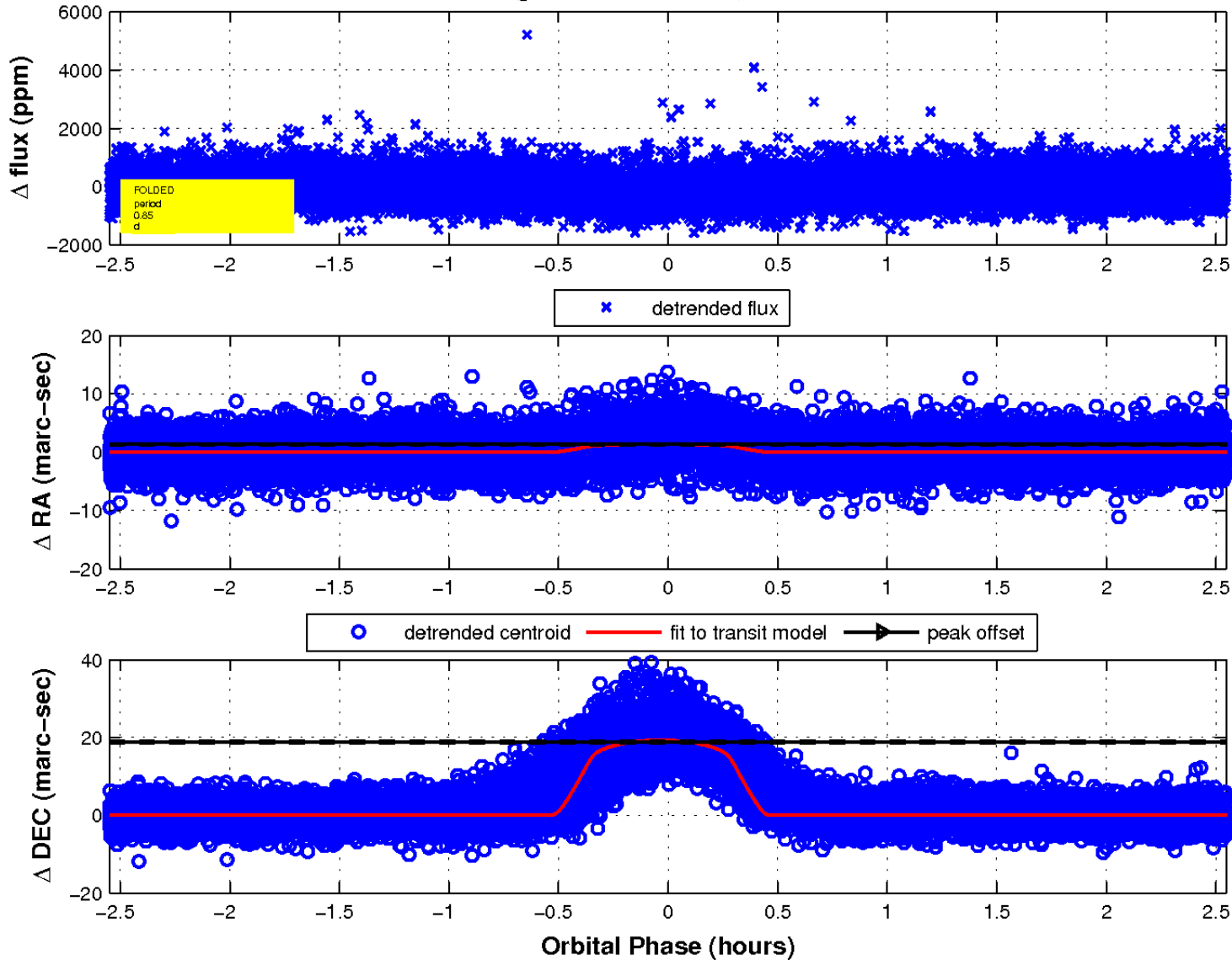
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

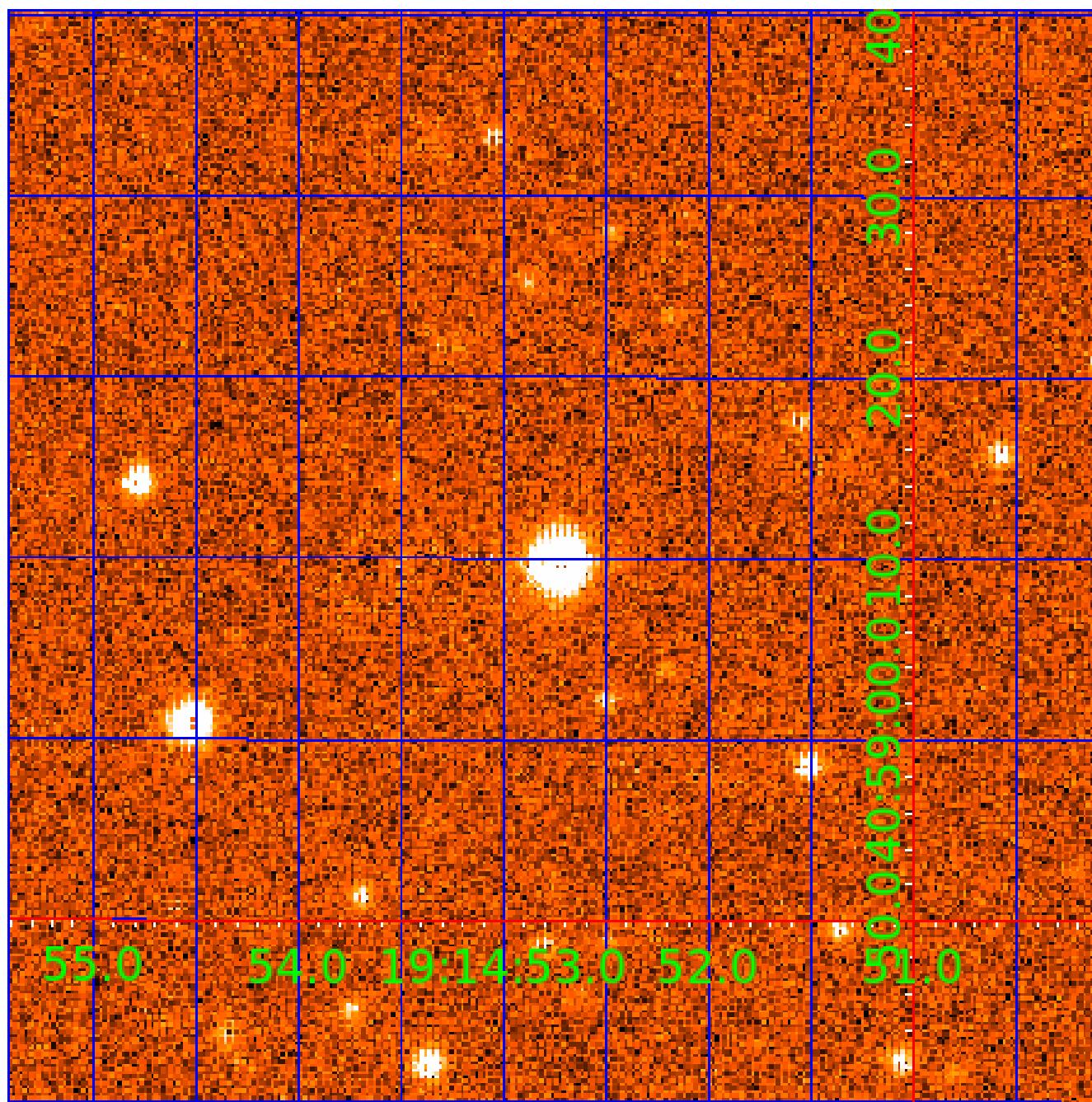


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 005695904

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})
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005695904-02	OBS	No	0.847708	132.188363	157.1	1.172	15.1	17.0	0.37	3553	0.55	119.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005695904-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST
005695904-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—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.

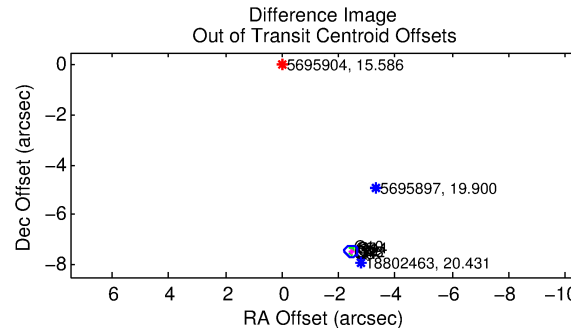
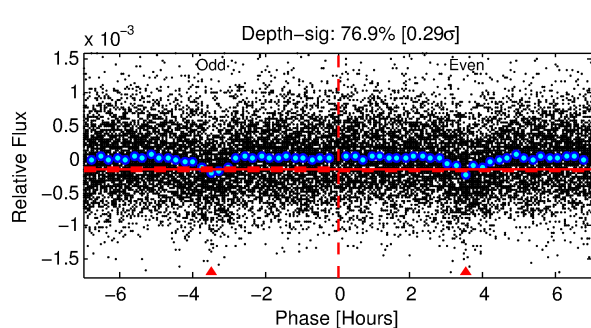
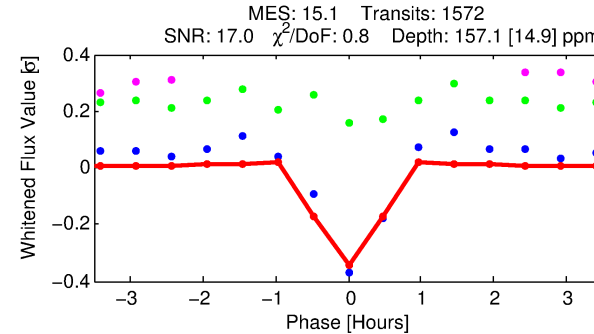
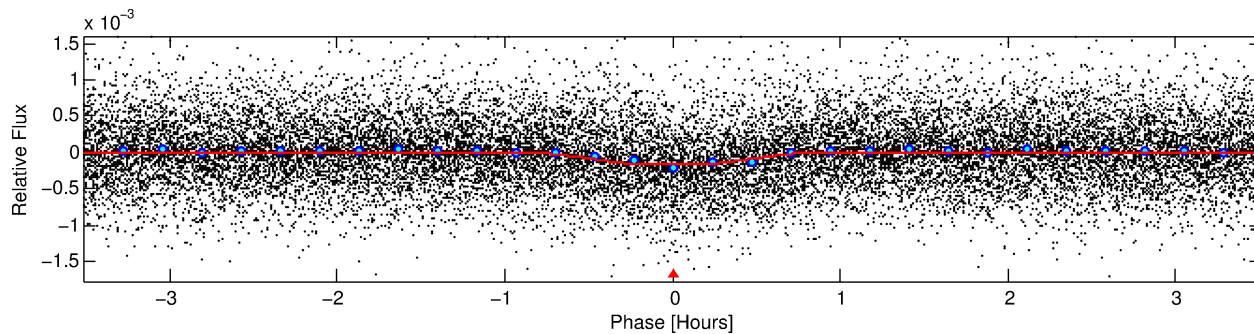
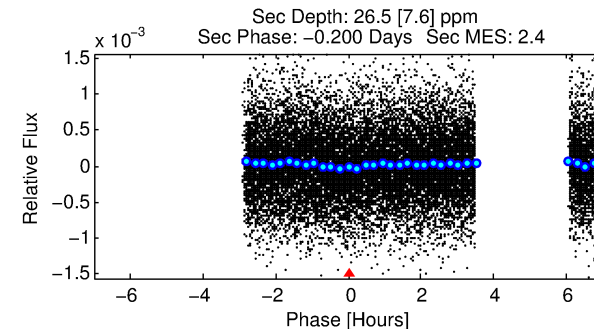
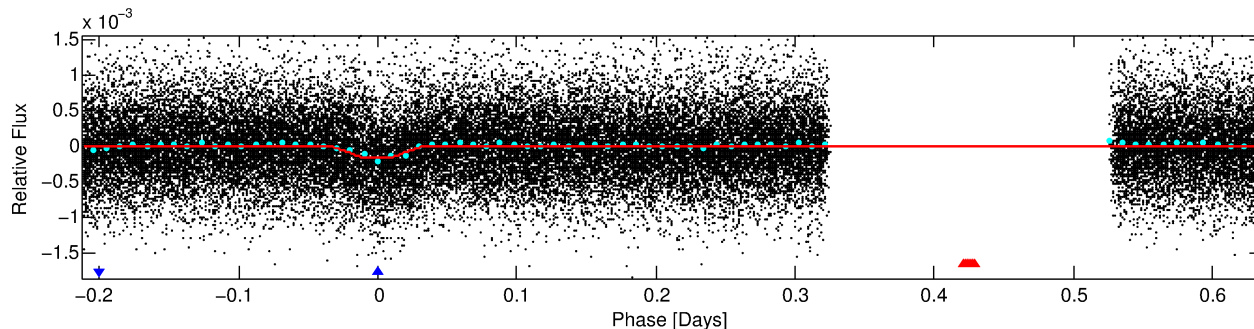
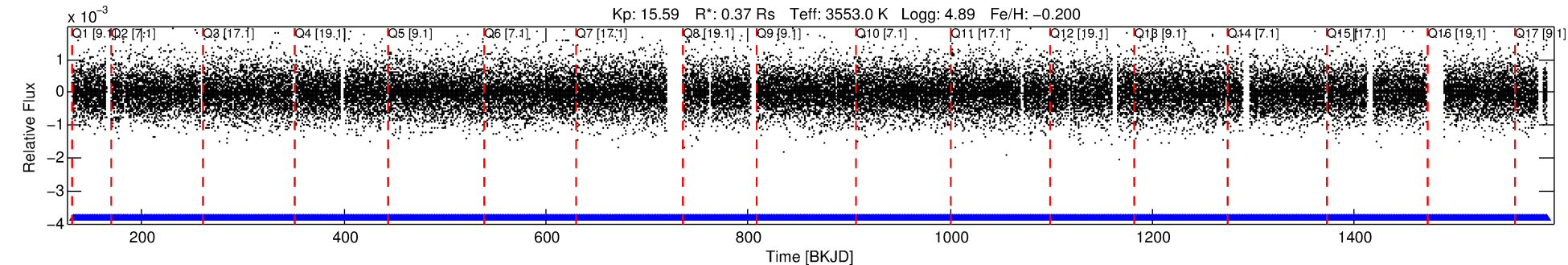
Ephemeris Match Information For 005695904-02

No Significant Match Found

DV One-Page Summary

KIC: 5695904 Candidate: 2 of 2 Period: 0.848 d
KOI: K02983 Corr: No Ephemeris Match

Kp: 15.59 R*: 0.37 Rs Teff: 3553.0 K Logg: 4.89 Fe/H: -0.200



DV Fit Results:

Period = 0.84771 [0.00001] d
Epoch = 132.1884 [0.0011] BKJD
Rp/R* = 0.0138 [0.0067]
a/R* = 2.71 [5.22]
b = 0.90 [0.46]
Seff = 119.72 [14.67]
Teq = 843 [26] K
Rp = 0.55 [0.28] Re
a = 0.0127 [0.0010] AU
Ag = 7.70 [7.91] [0.85σ]
Teff = 2172 [557] K [2.39σ]

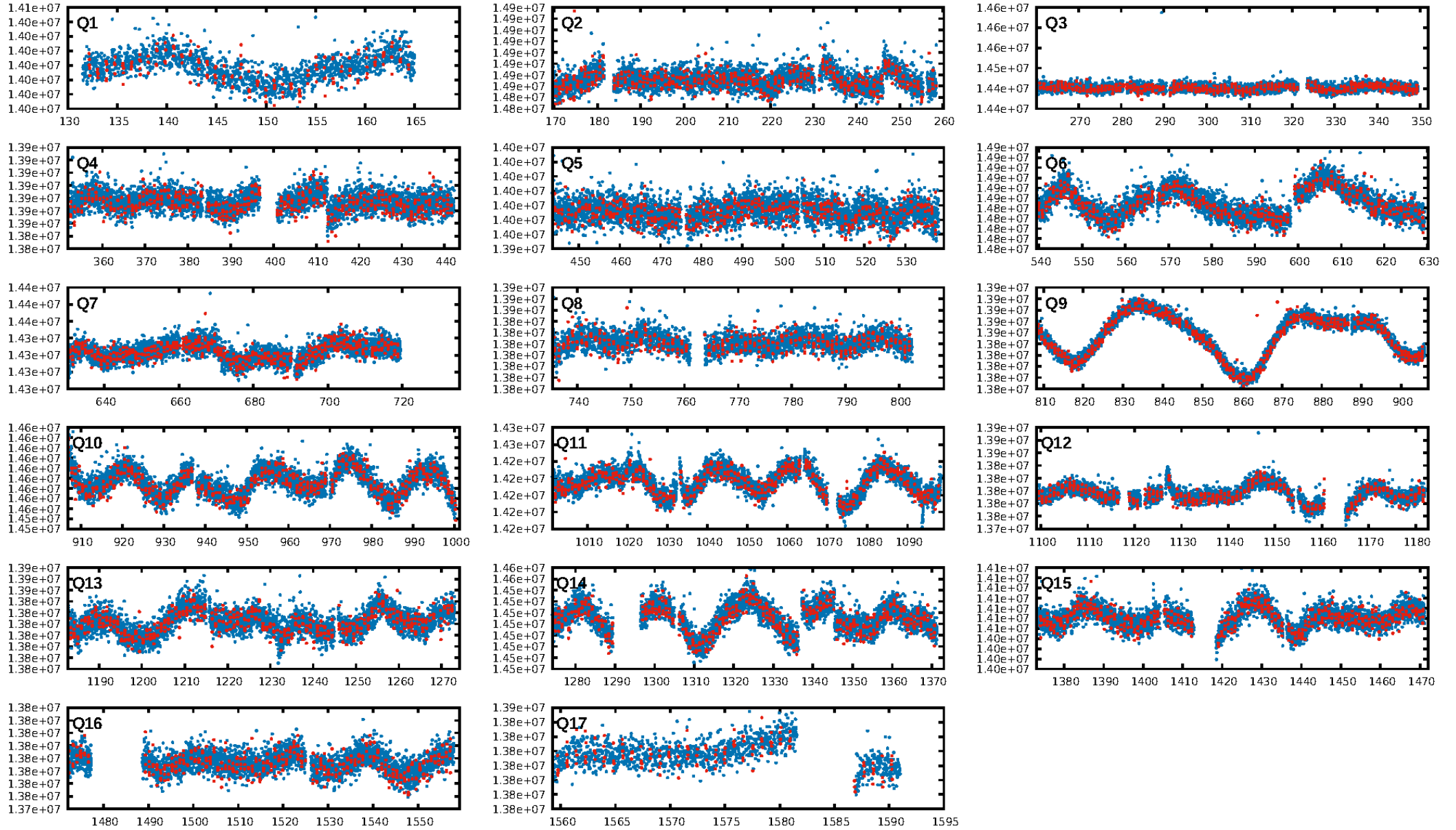
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.68e-50
RollingBand-fgt: 1.00 [1502/1502]
GhostDiagnostic-chr: -0.1041
Centroid-sig: 0.0%
Centroid-so: 102.896 arcsec [111.61σ]
OotOffset-rm: 7.852 arcsec [100.63σ]
KicOffset-rm: 8.412 arcsec [123.83σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

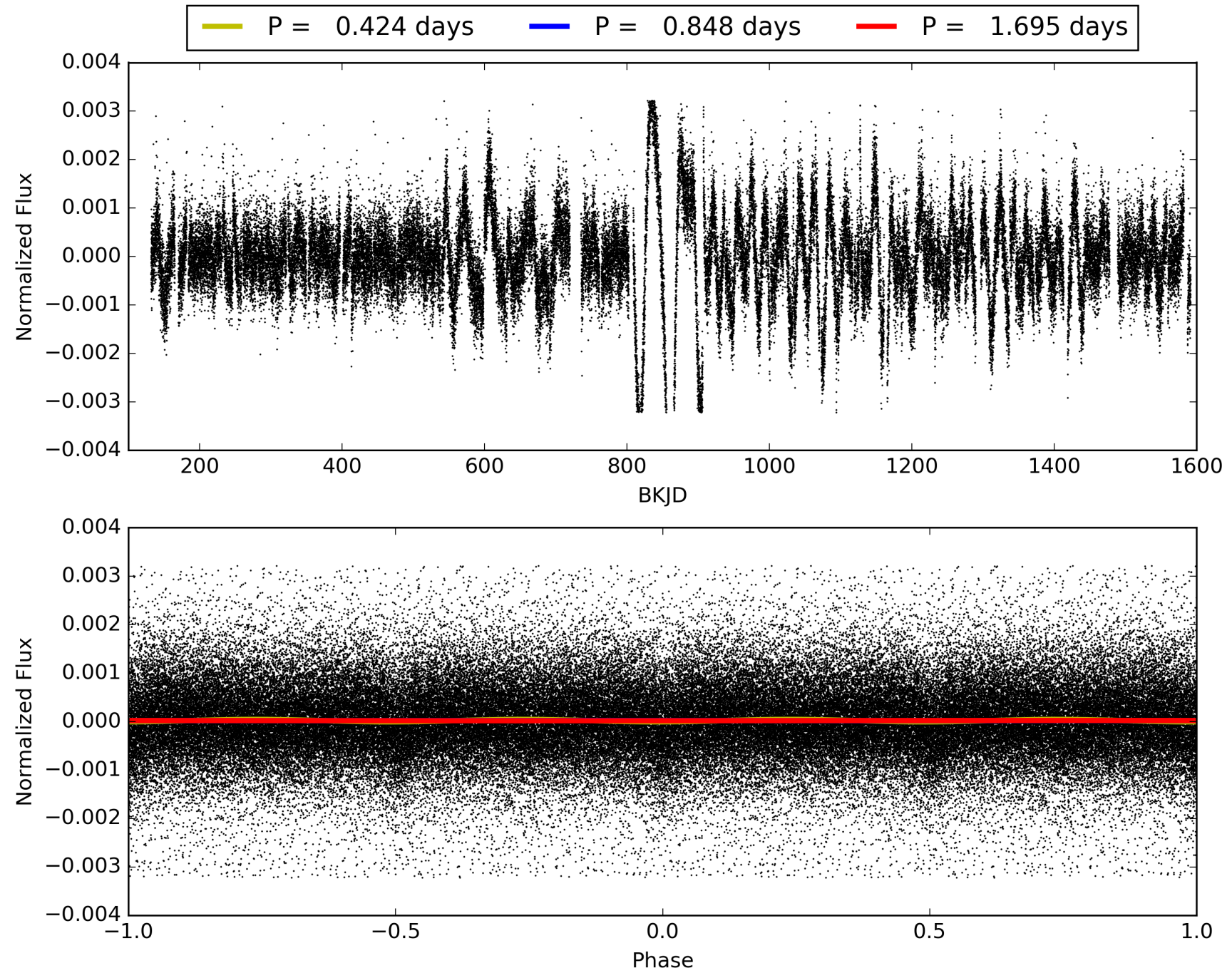
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005695904-02, PDC Light Curves

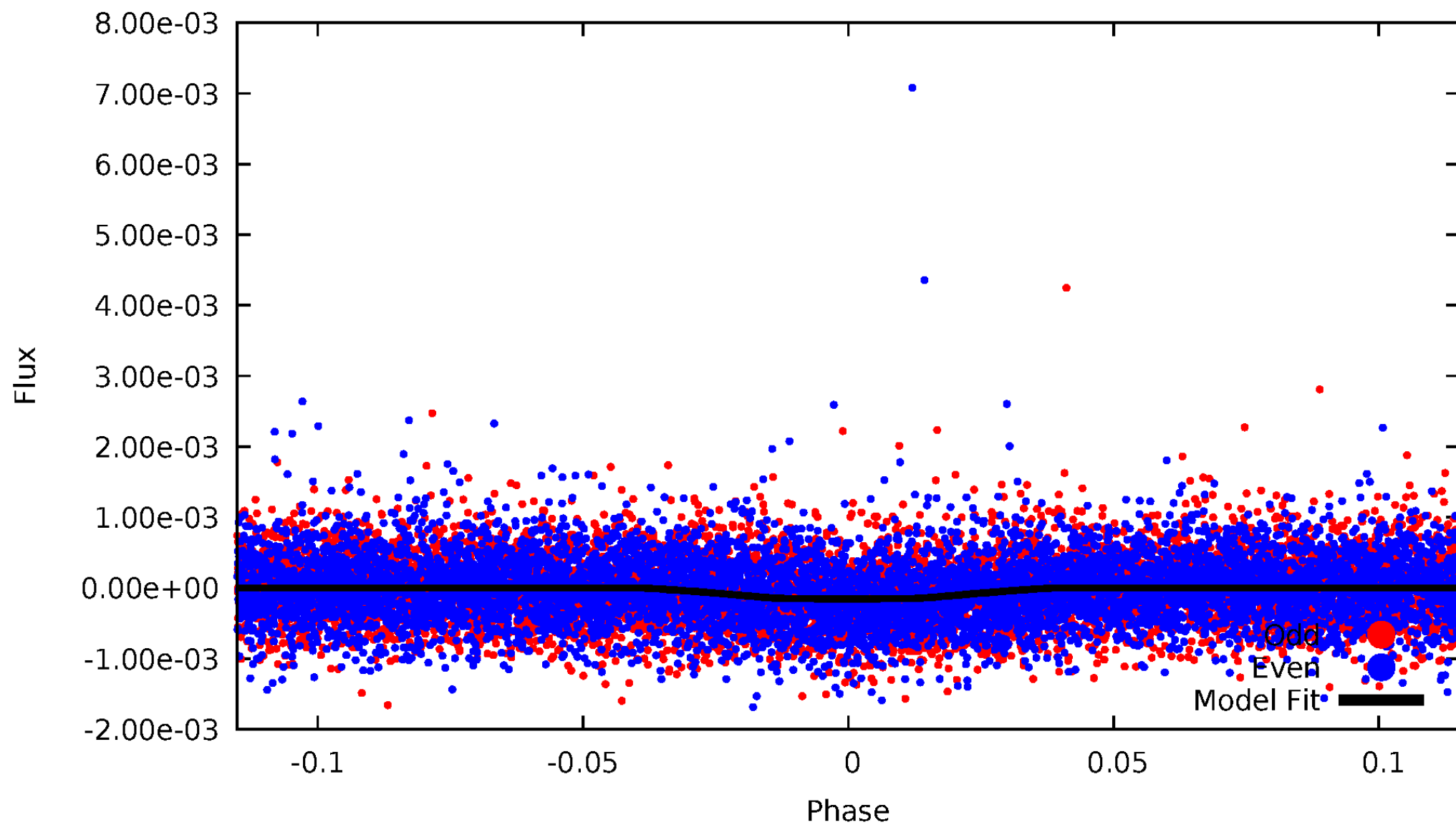


TCE 005695904-02



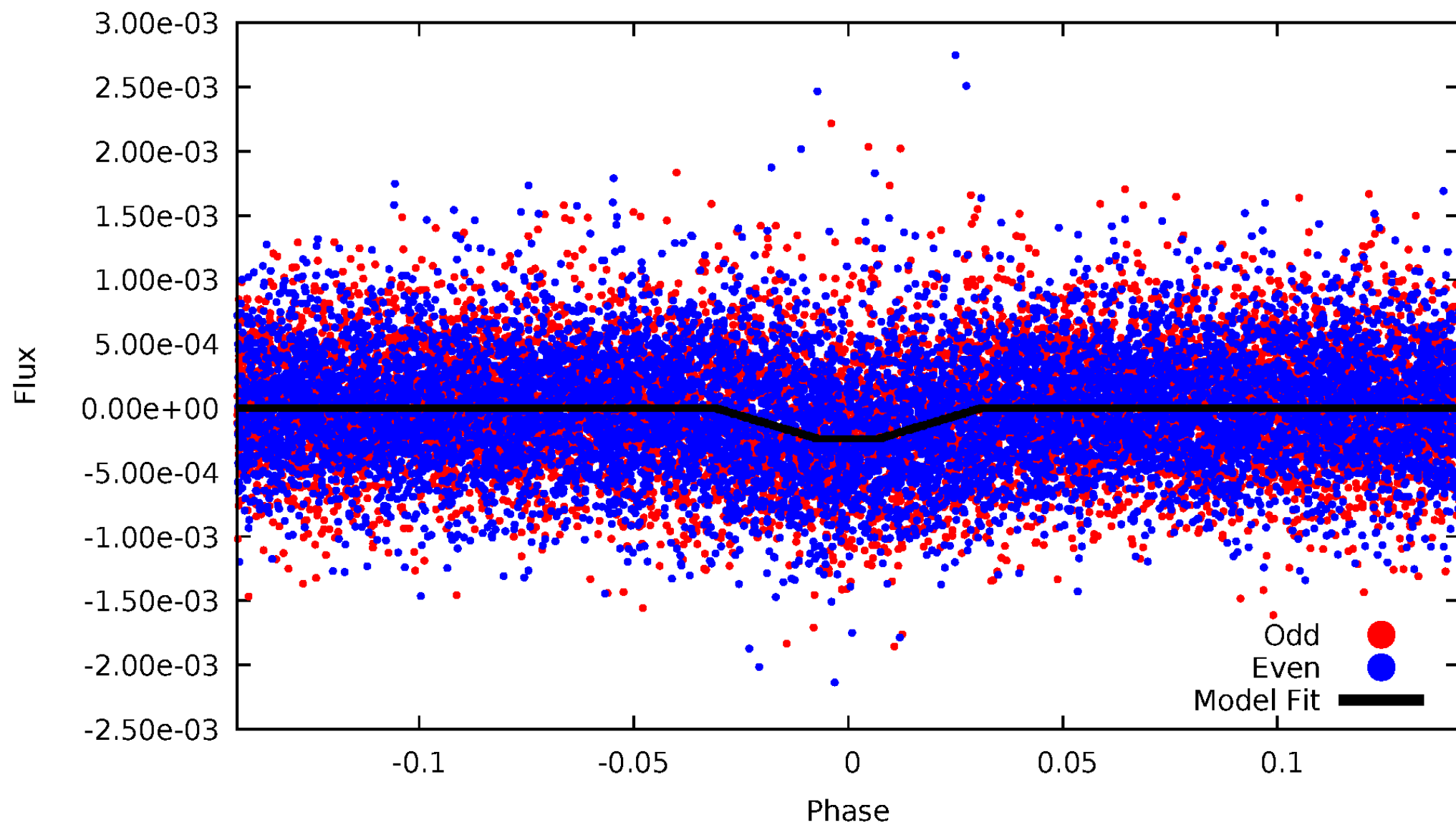
DV Odd/Even

TCE 005695904-02



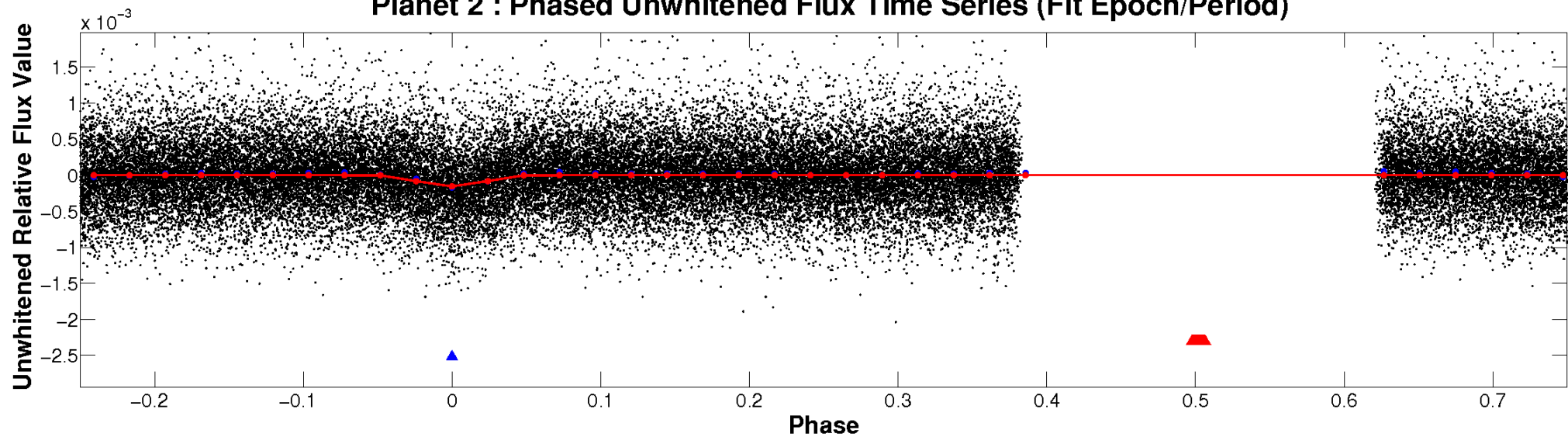
ALT Odd/Even

TCE 005695904-02

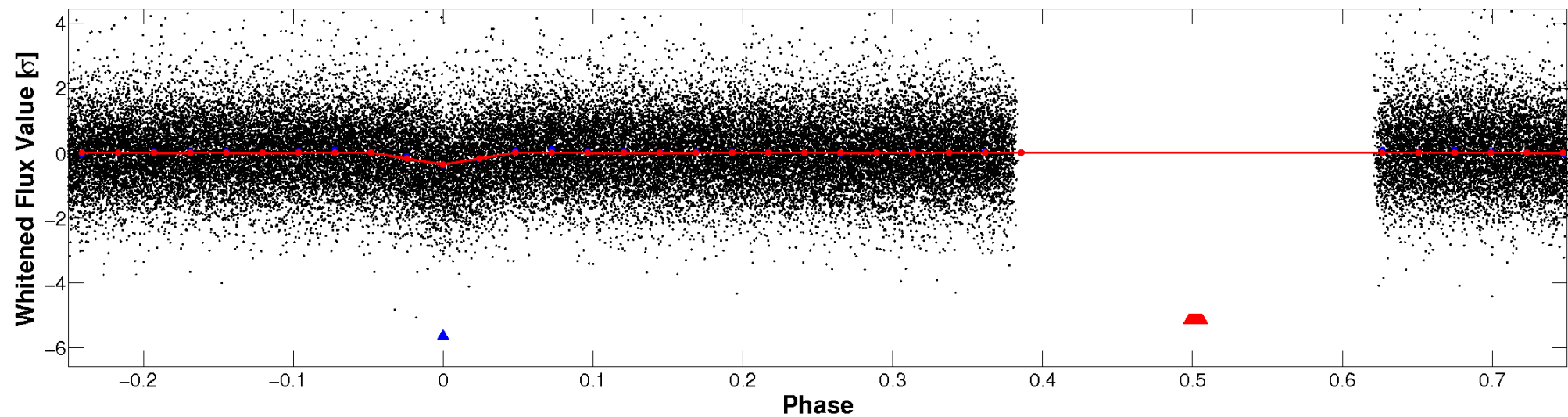


Non-Whitened Vs. Whitened Light Curve

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

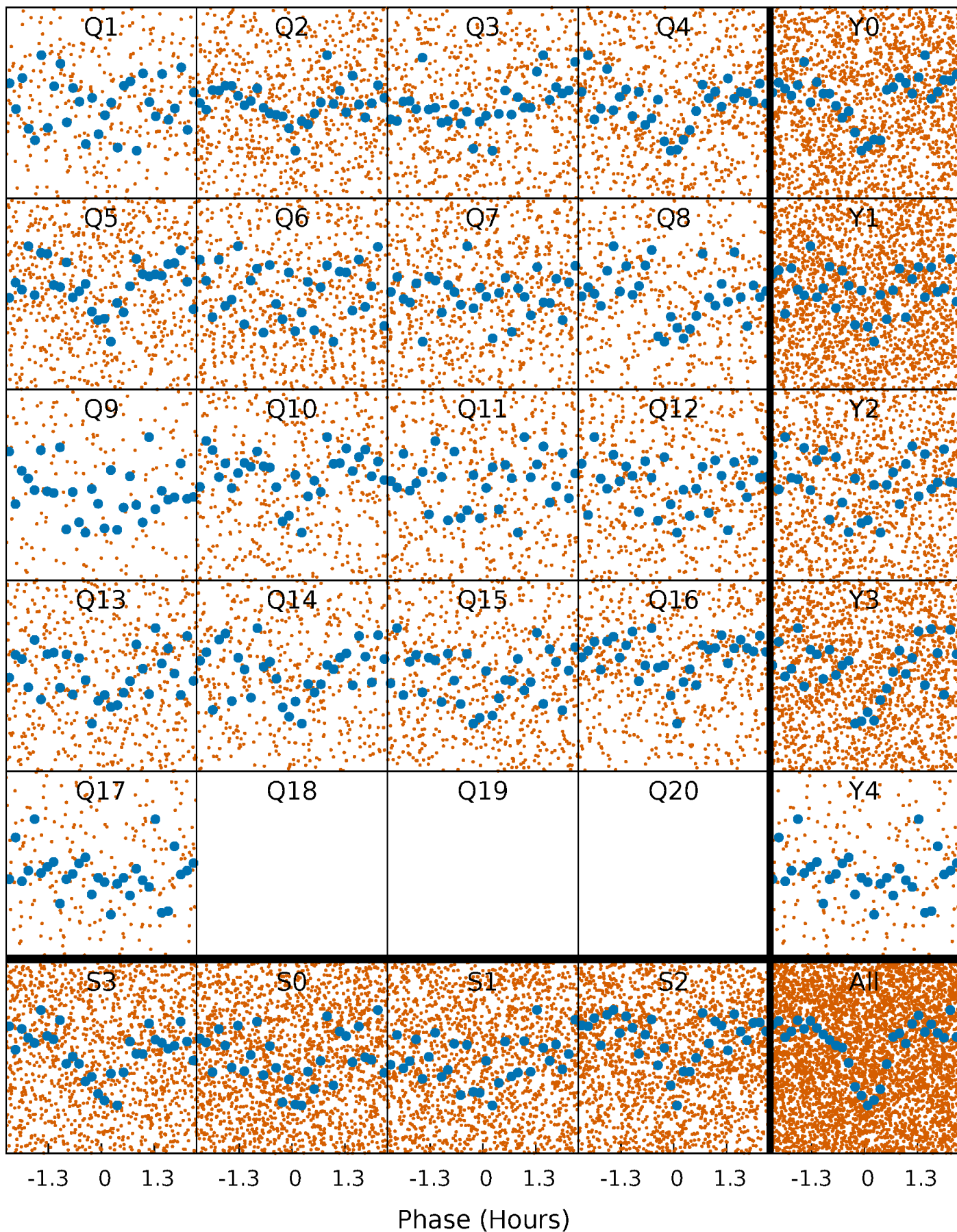


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



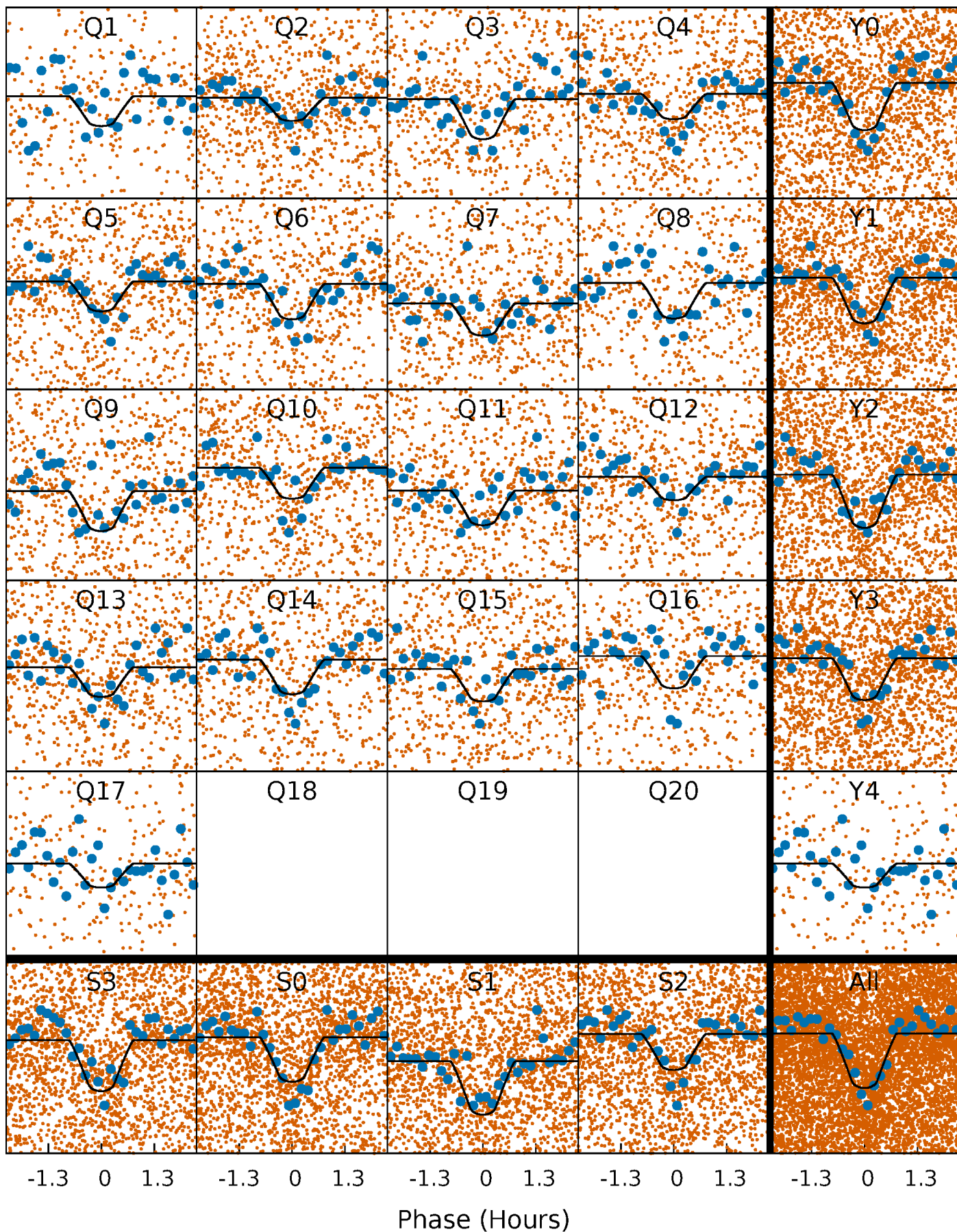
PDC Quarter-Phased Transit Curves

TCE 005695904-02 P= 0.847708 Days $T_0=132.188363$ (BKJD)



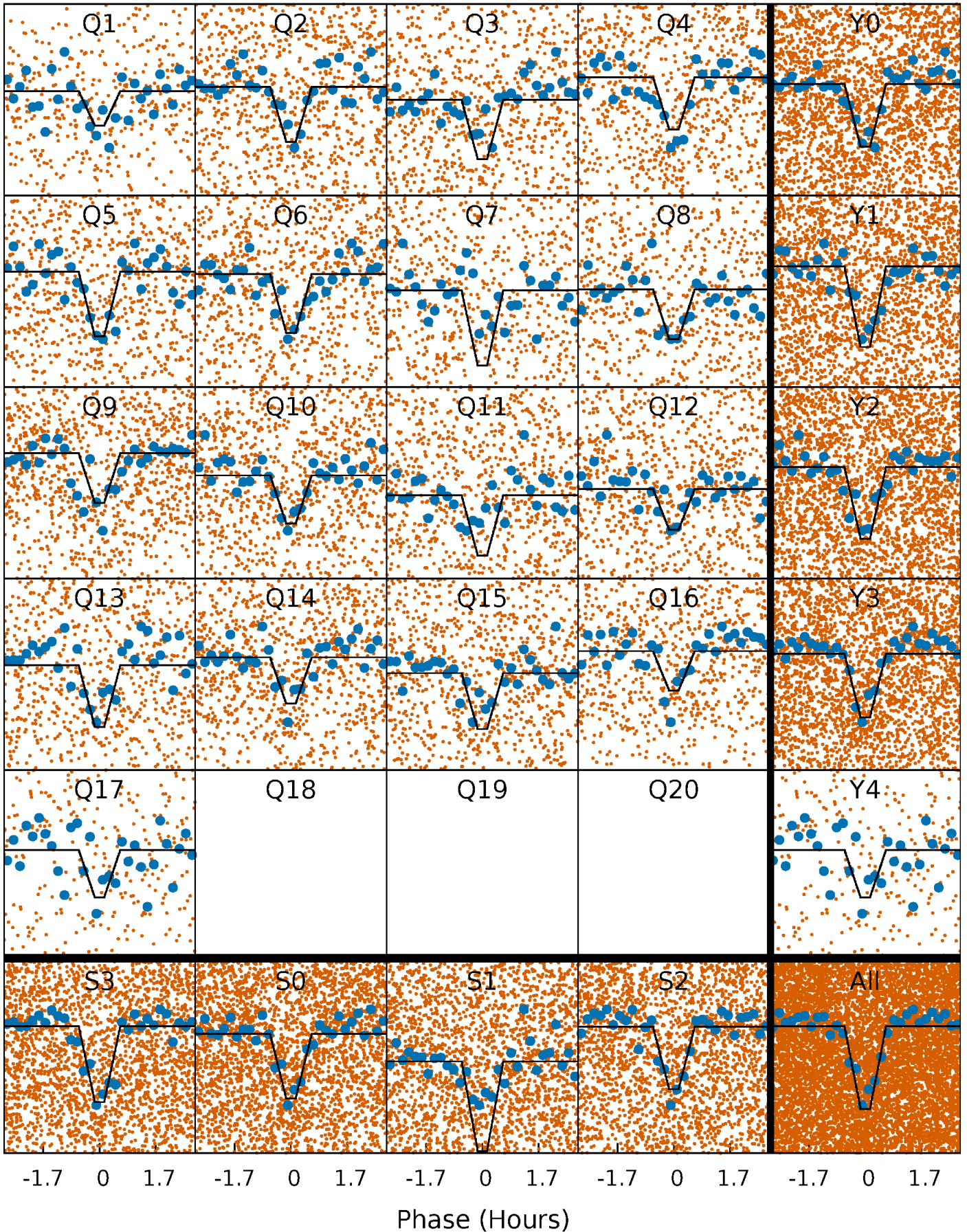
DV Quarter-Phased Transit Curves

TCE 005695904-02 P= 0.847708 Days $T_0=132.188363$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

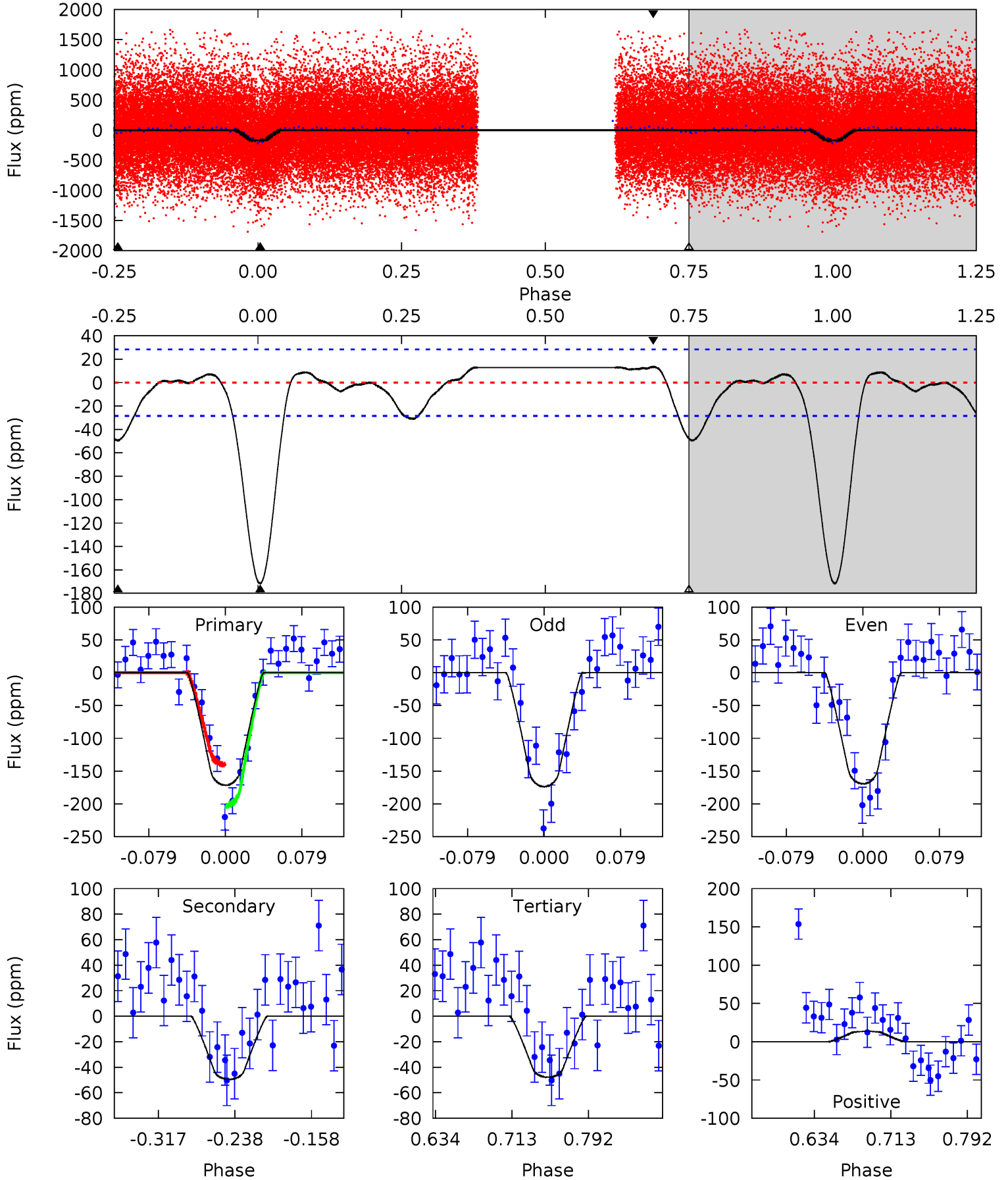
TCE 005695904-02 $P = 0.847713$ Days $T_0 = 132.187590$ (BKJD)



DV Model-Shift Uniqueness Test

005695904-02, P = 0.847708 Days, E = 131.340655 Days

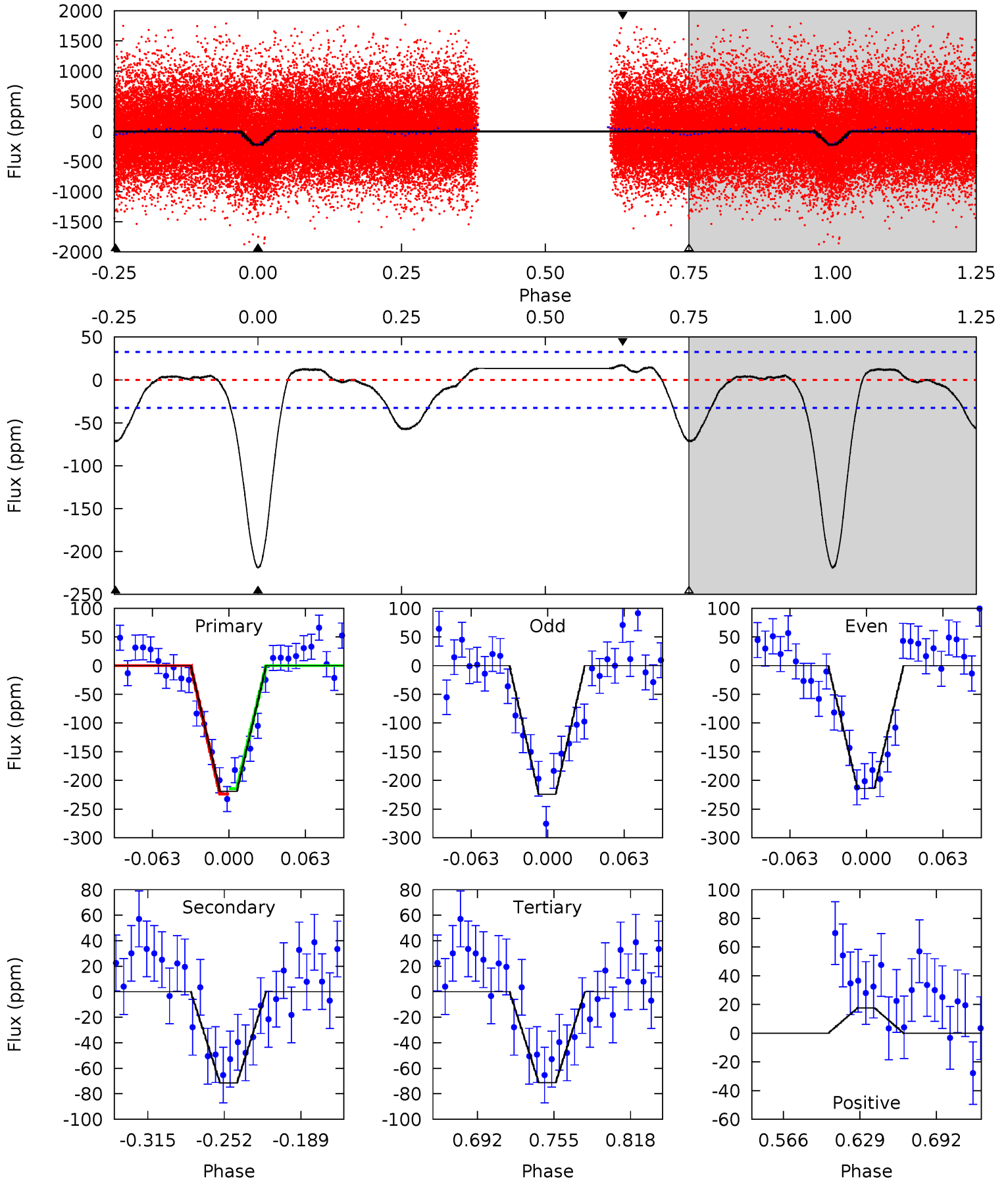
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.9	8.04	7.77	2.20	4.61	1.76	2.20	20.1	25.7	0.26	5.83	0.36	0.91	0.07	5.11



Alt Model-Shift Uniqueness Test

005695904-02, P = 0.847713 Days, E = 131.339877 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.4	10.2	10.2	2.52	4.66	1.86	3.18	21.2	28.9	0.04	7.72	0.72	0.91	0.07	0.67



Stellar Parameters For KIC 005695904

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3553^{+56}_{-64}	$4.887^{+0.044}_{-0.036}$	$-0.200^{+0.100}_{-0.100}$	$0.368^{+0.036}_{-0.040}$	$0.383^{+0.042}_{-0.050}$	$10.820^{+2.593}_{-1.743}$
	+2%/-2%	+1%/-1%	+50%/-50%	+10%/-11%	+11%/-13%	+24%/-16%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005695904-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-49 ± 6	$0.56^{+0.25}_{-0.26}$	1176^{+28}_{-28}	2882^{+582}_{-283}	14^{+33}_{-7}
Alt.	-72 ± 7	$0.61^{+0.29}_{-0.26}$	1176^{+27}_{-30}	2965^{+551}_{-295}	17^{+36}_{-9}

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

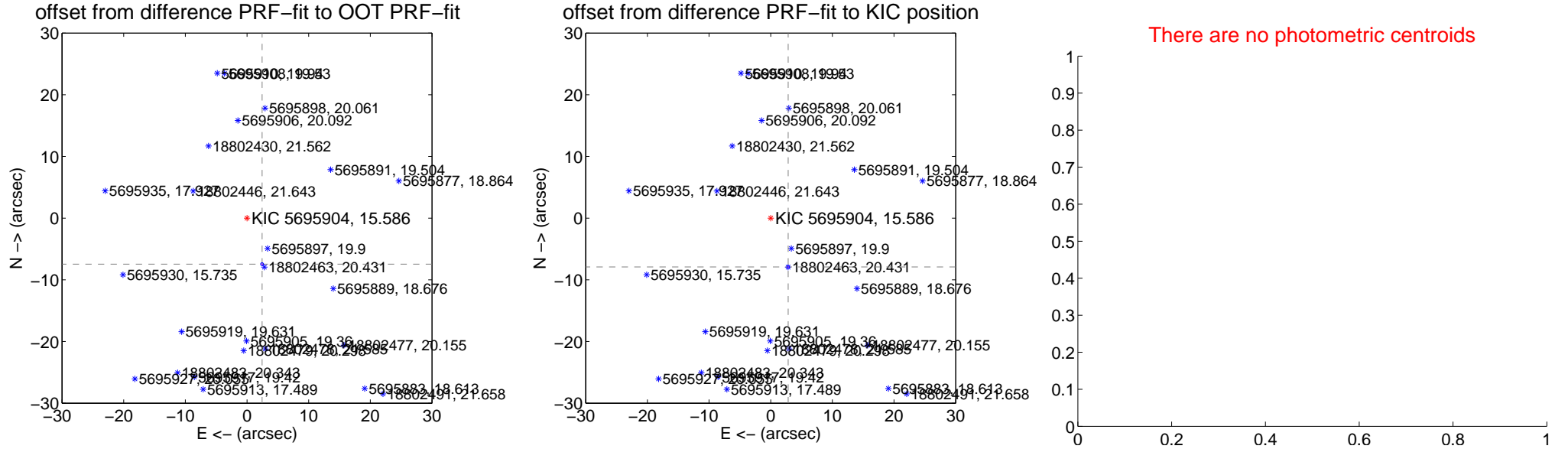
DV Centroid Data

Supplemental centroid analysis for 005695904-02. Kepler magnitude: 15.59. Transit SNR 17.05

There are 8 quarters with good PRF difference image offsets

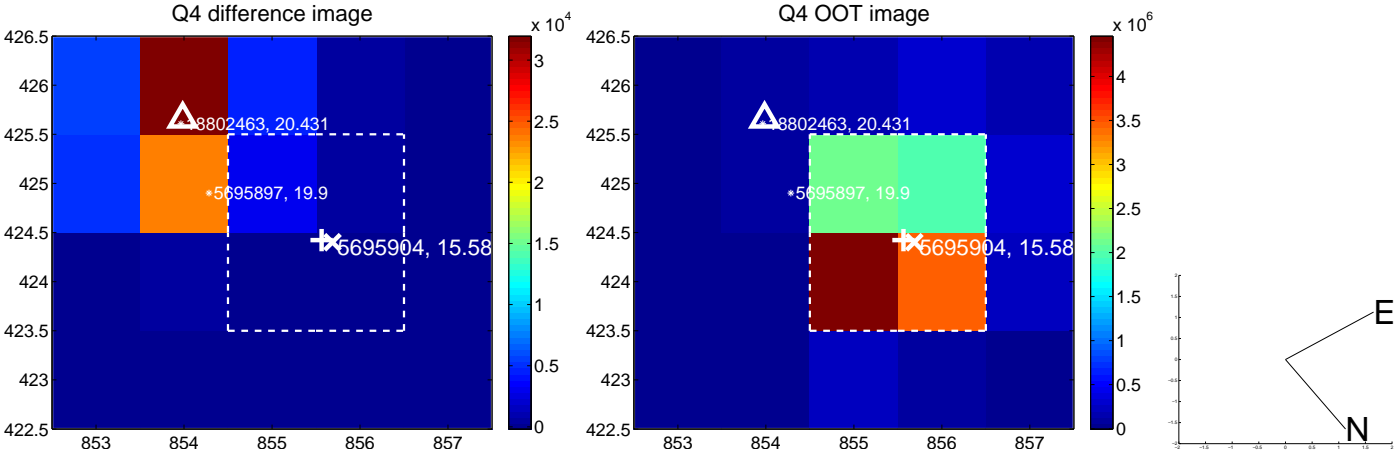
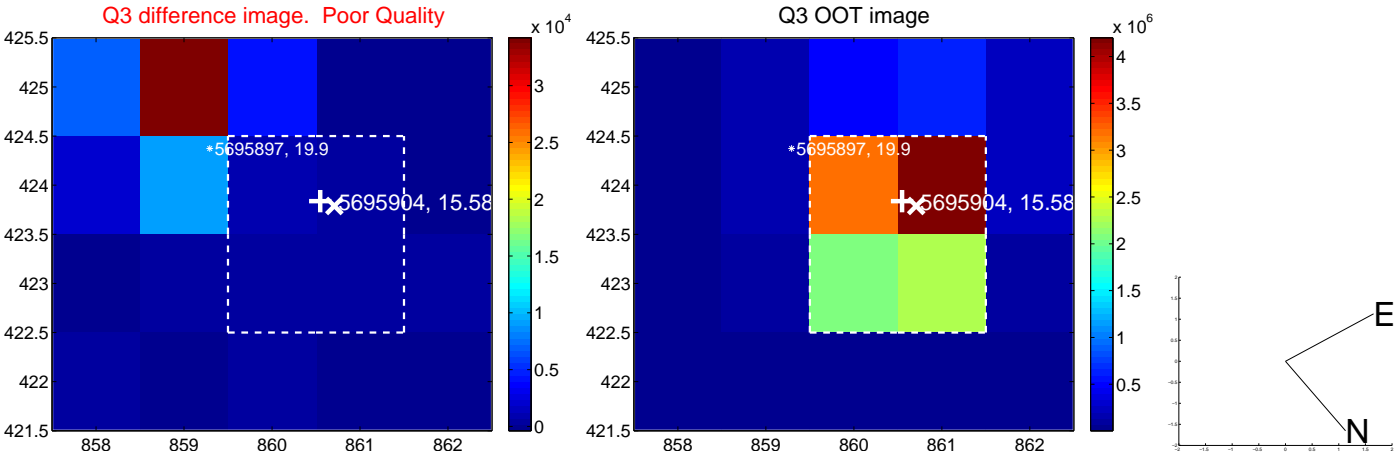
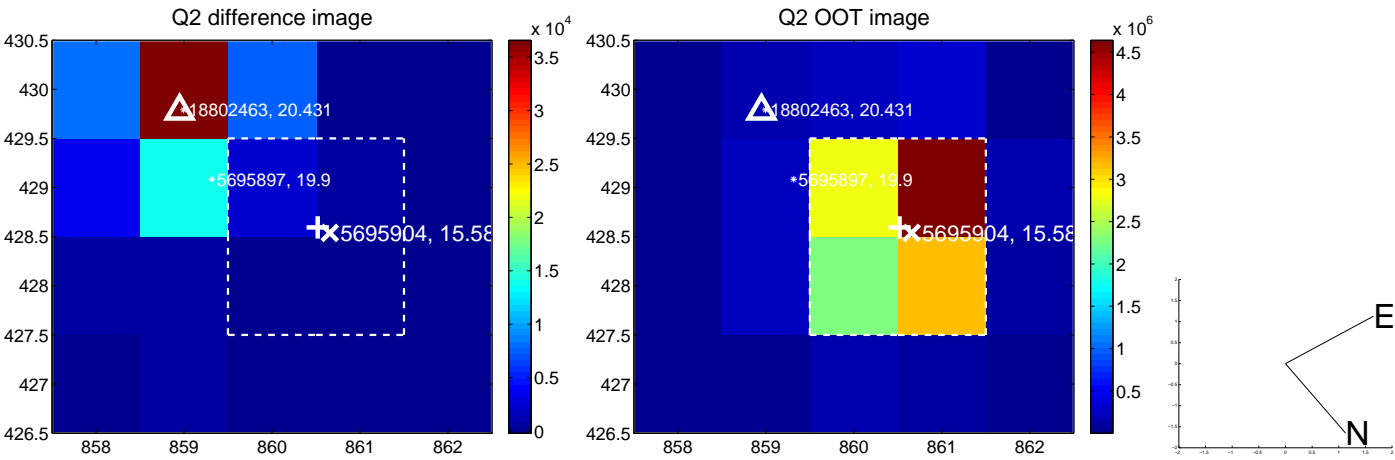
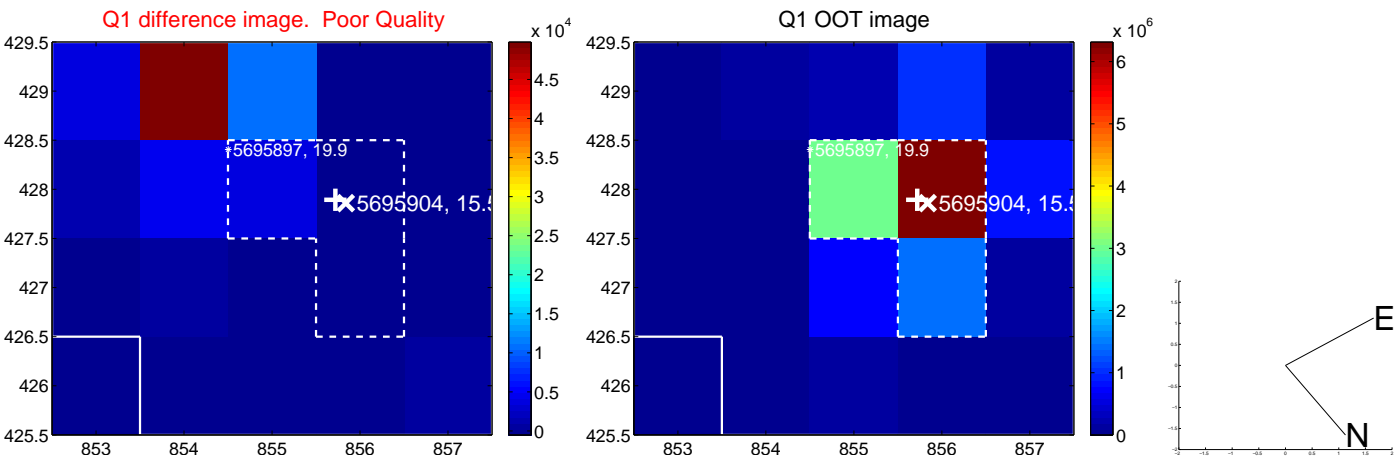
The direct PRF centroid is offset from the target star catalog position by about 0.60 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.852 \pm 0.078	100.63	-2.444 \pm 0.069	-7.462 \pm 0.079
PRF-fit source offset from KIC position	8.412 \pm 0.068	123.83	-2.829 \pm 0.070	-7.921 \pm 0.067
photometric centroid source offset	—	—	—	—

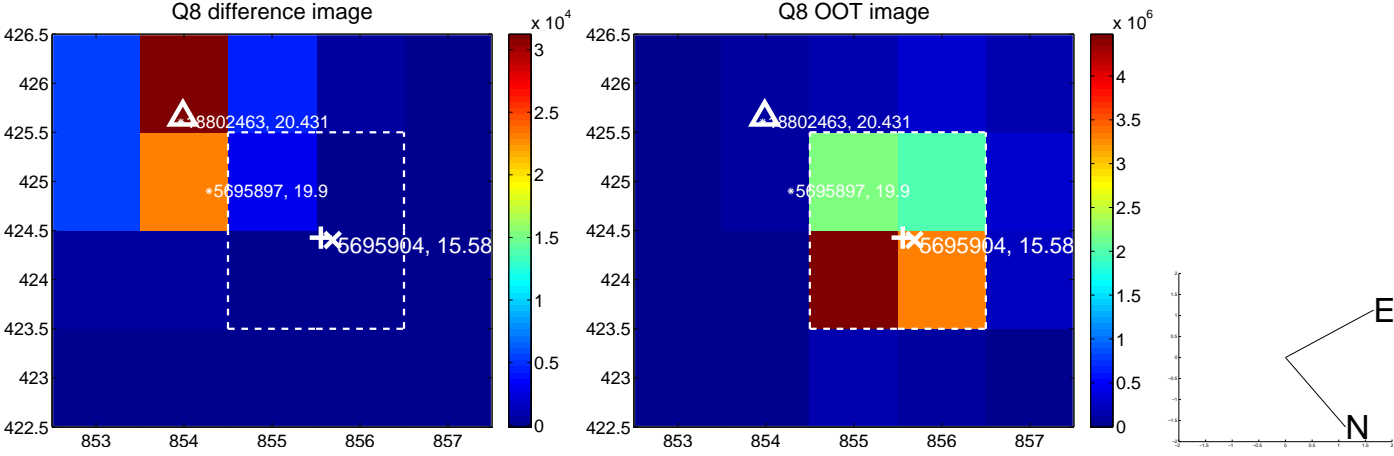
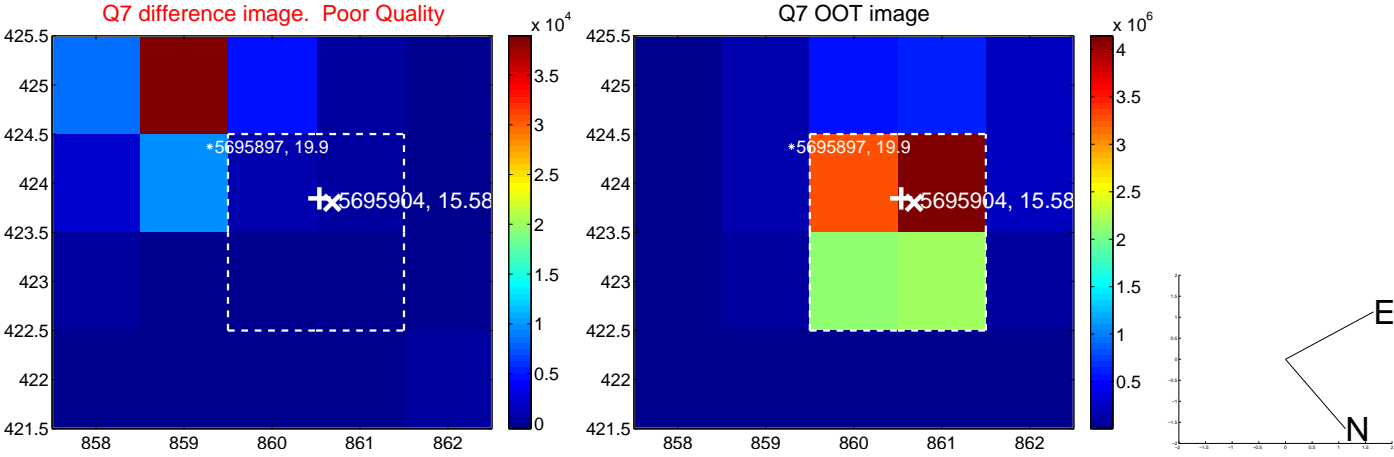
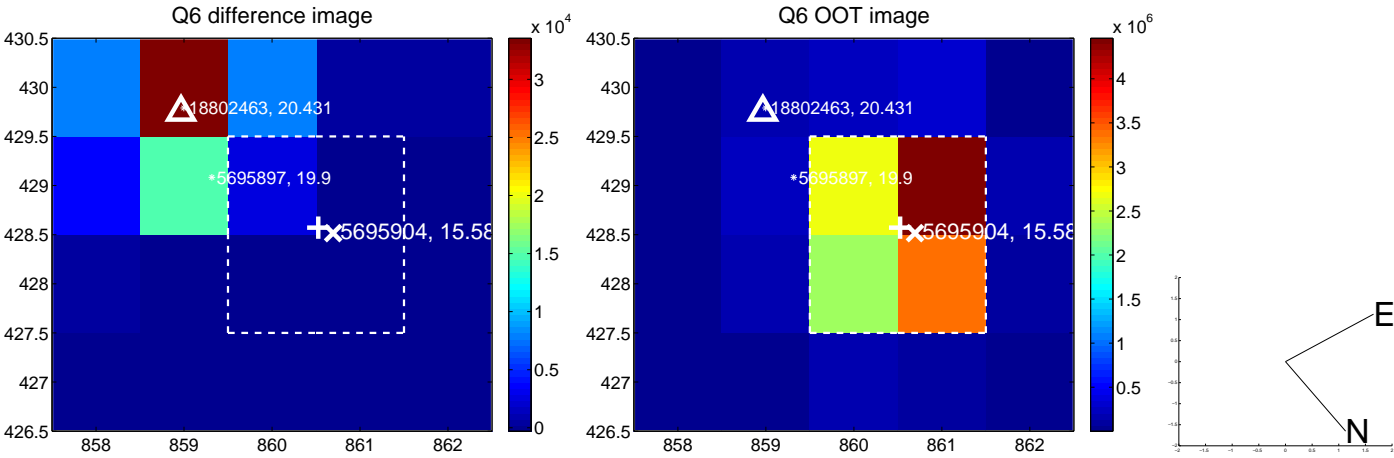
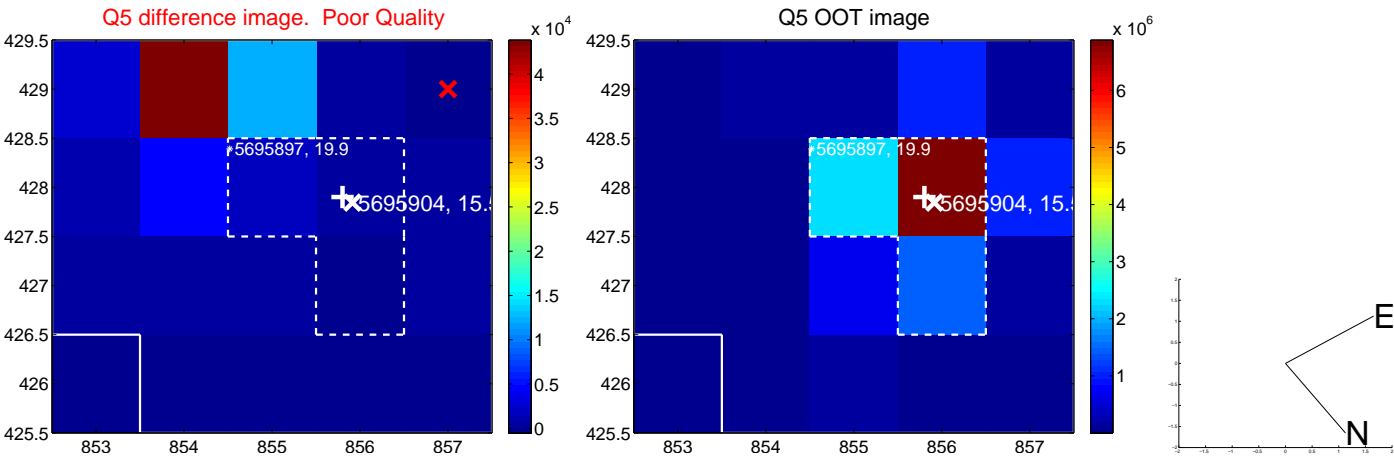


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

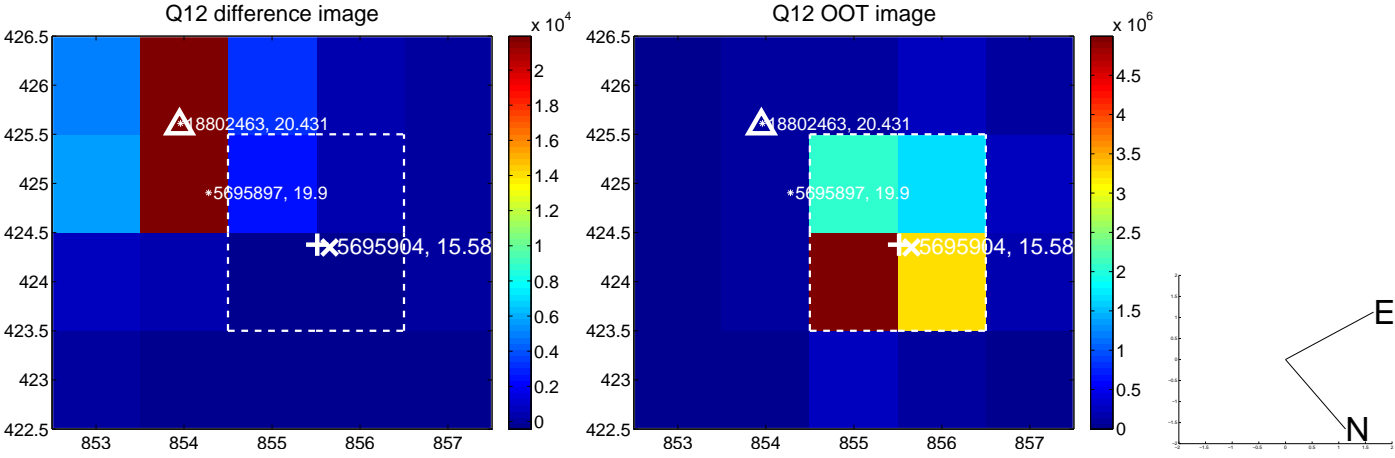
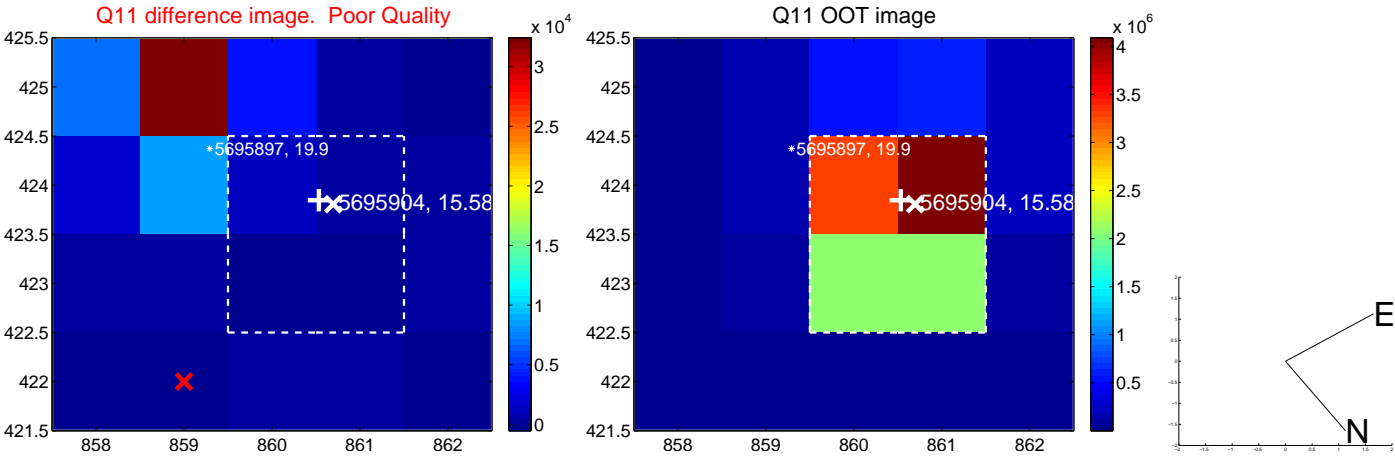
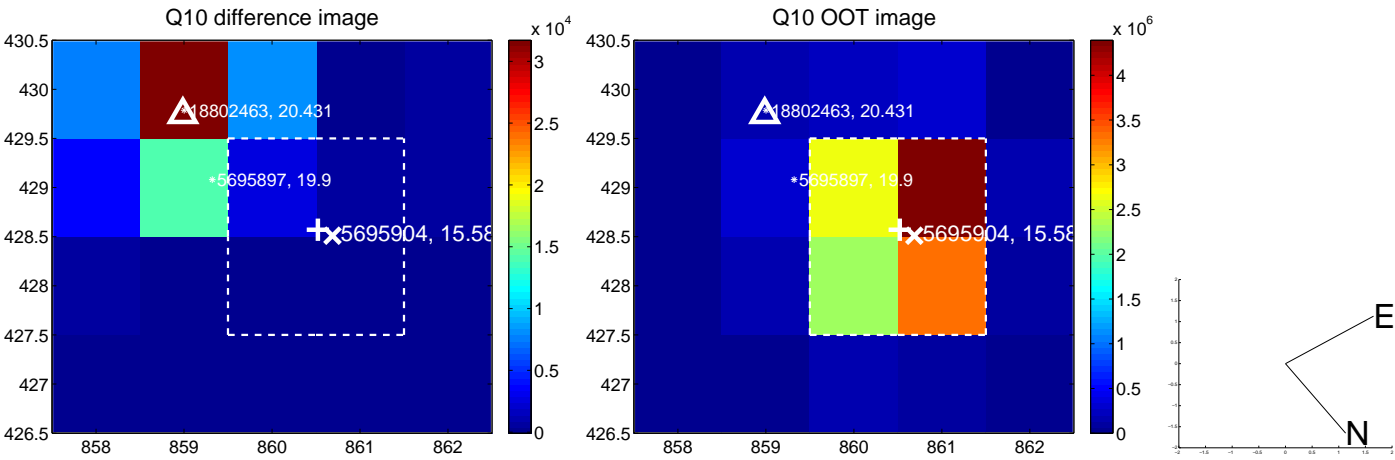
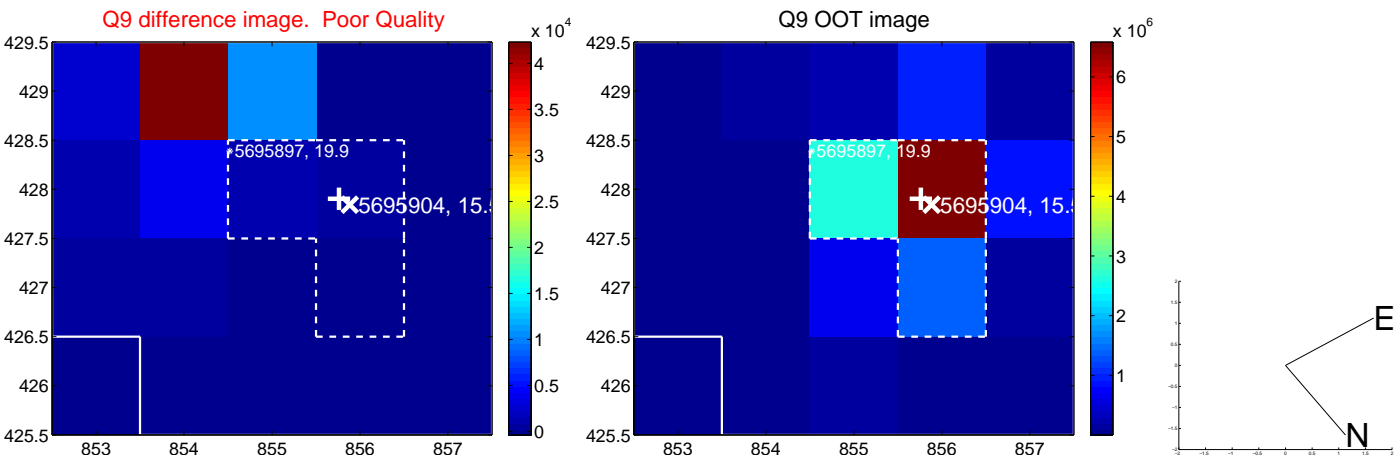
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



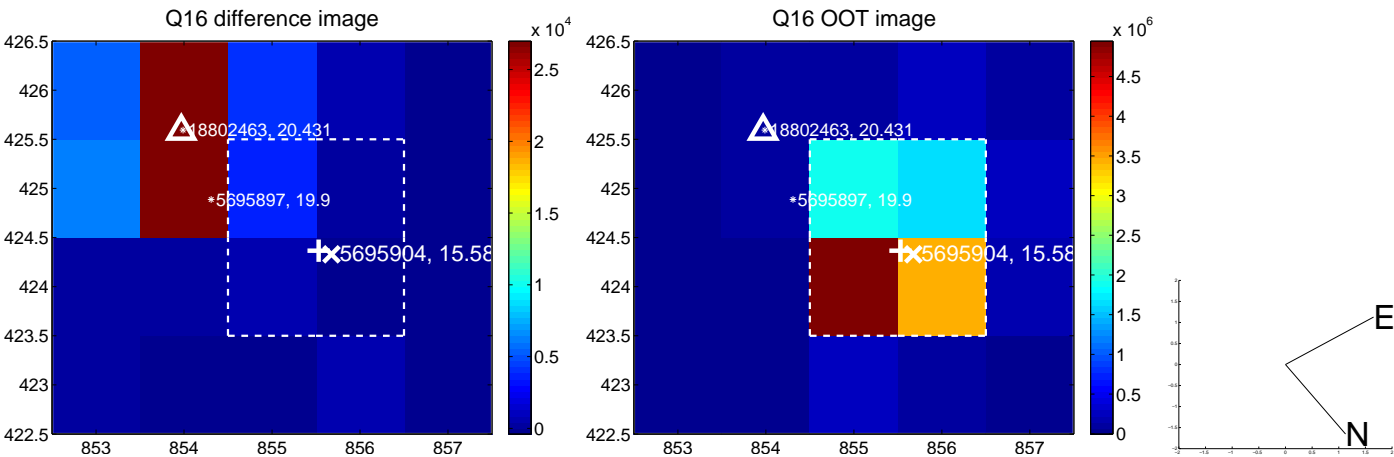
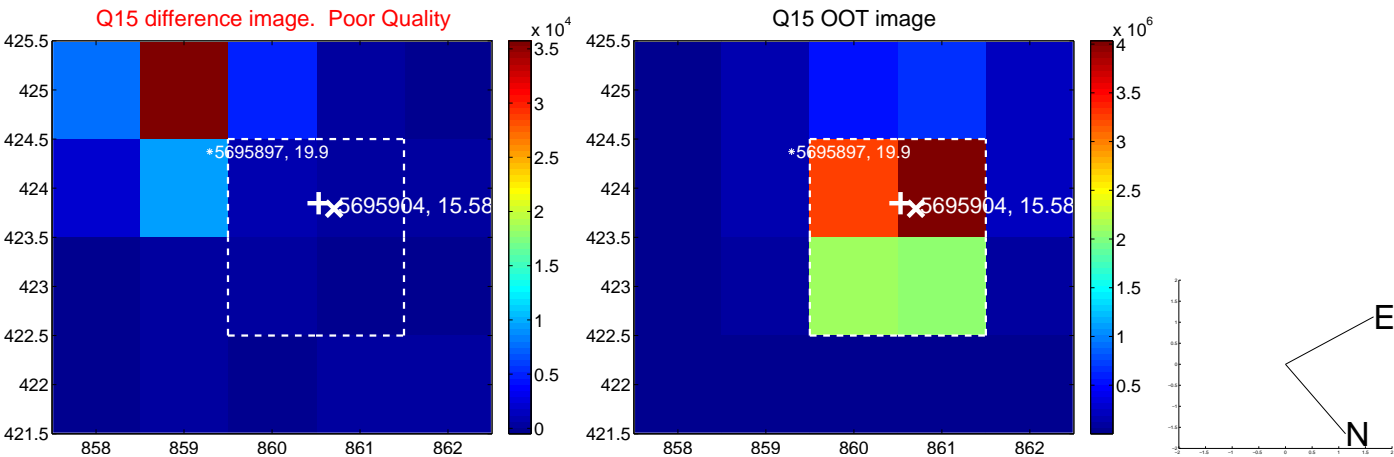
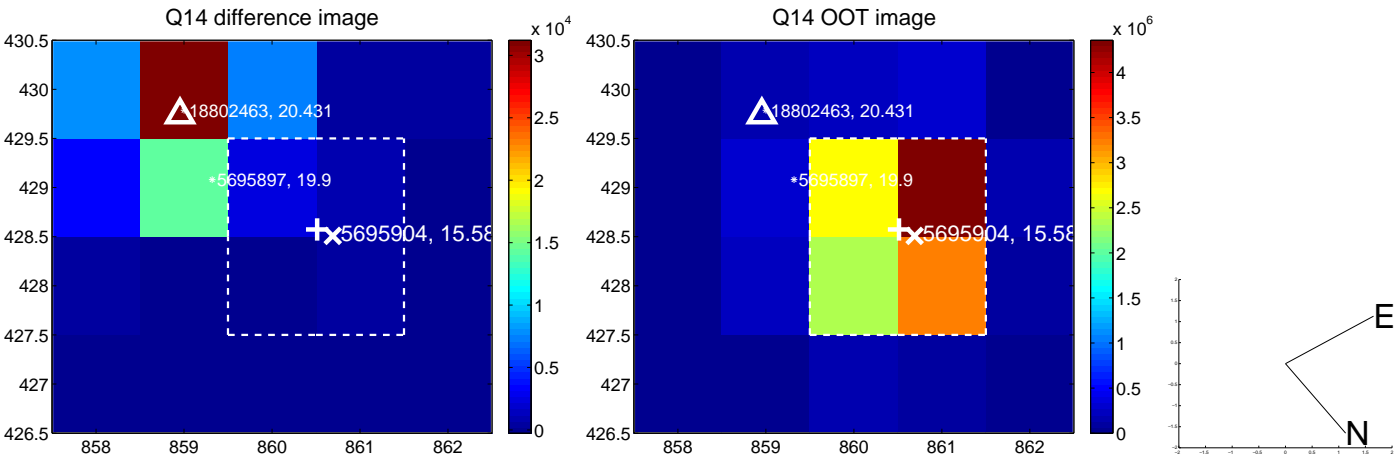
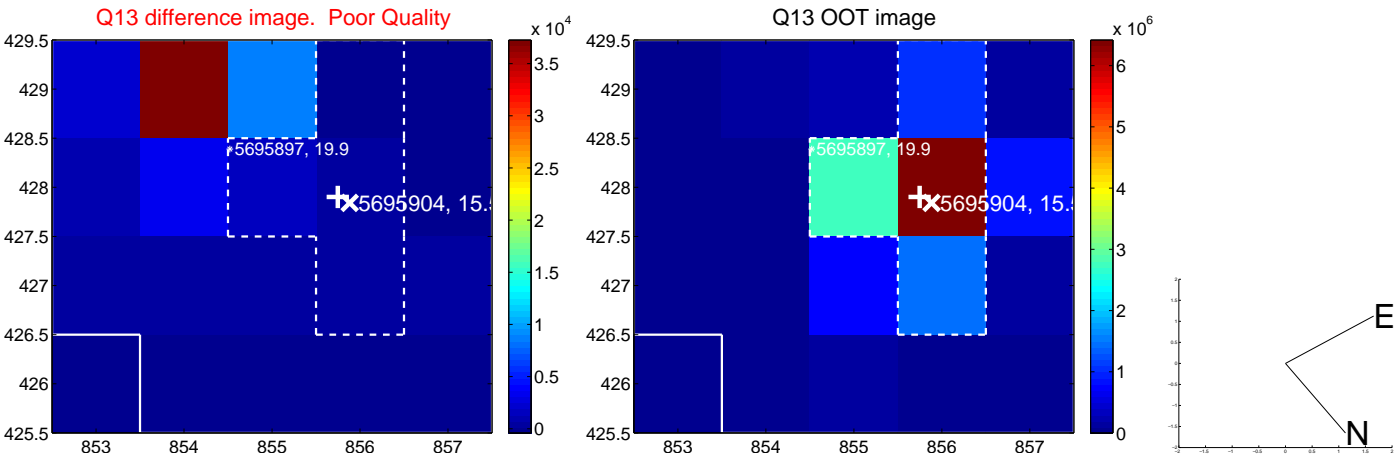
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



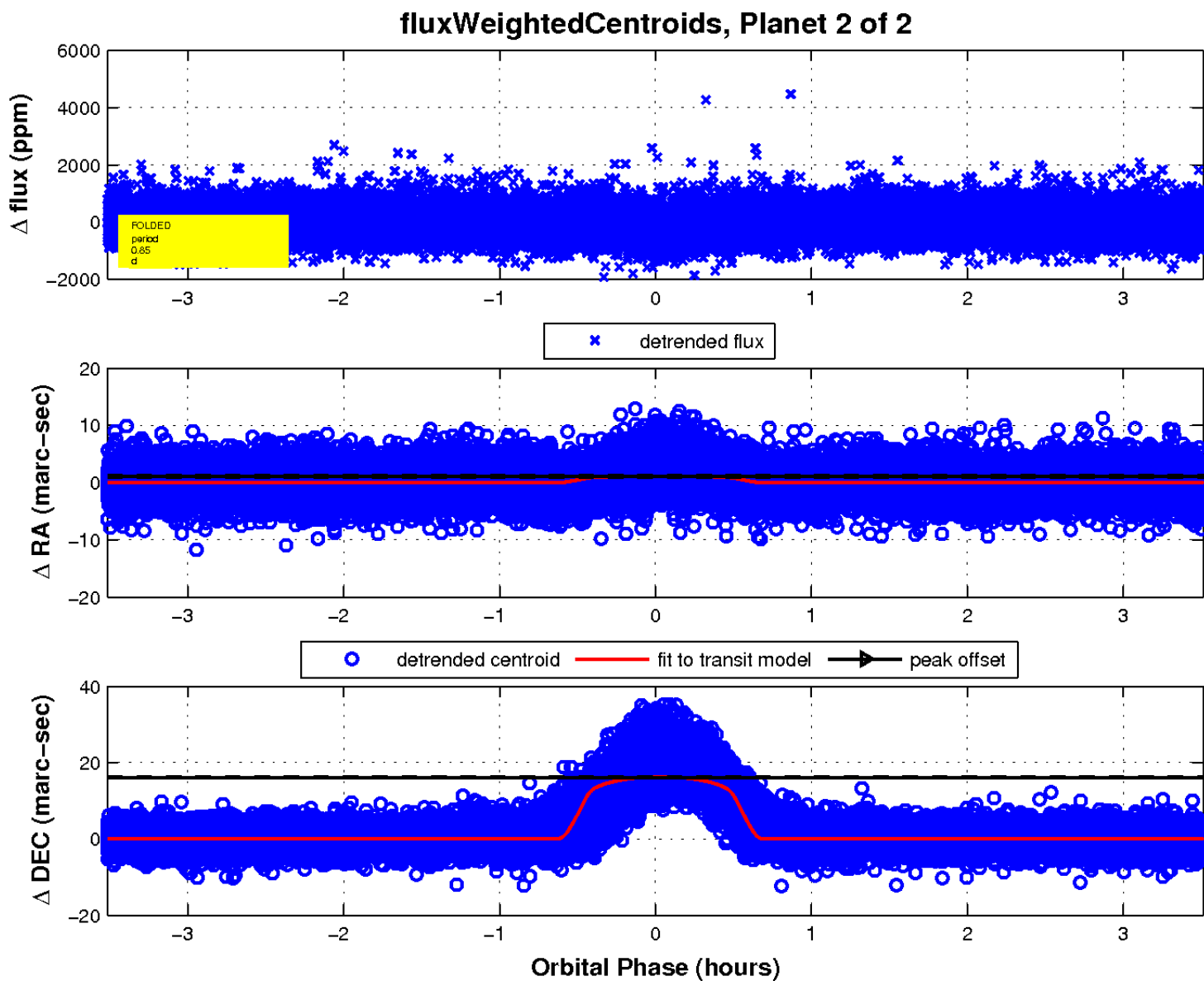
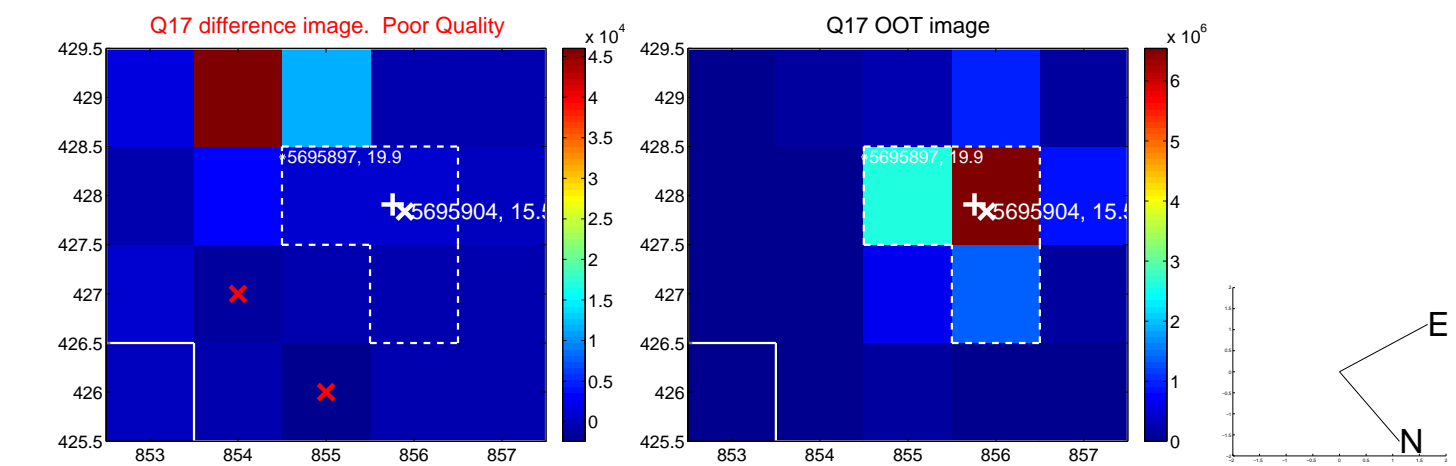
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

