

KIC 011100657

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})
011100657-01	OBS	1418.01	8.344107	136.548097	9502.3	1.776	154.9	157.4	0.84	5447	10.69	89.78
011100657-02	OBS	No	8.344096	132.457688	1216.1	1.964	16.6	21.4	0.84	5447	4.48	89.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011100657-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011100657-02	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.

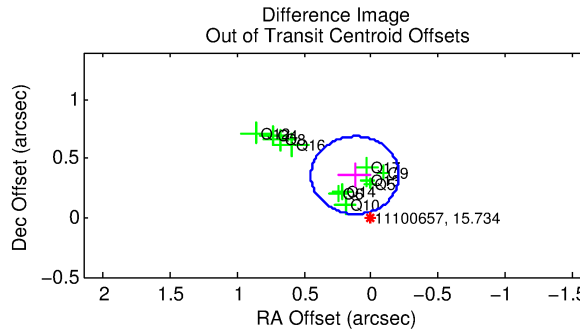
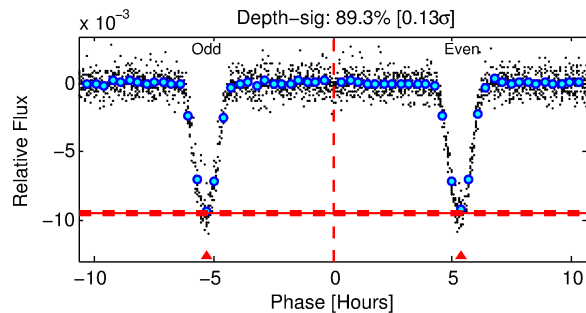
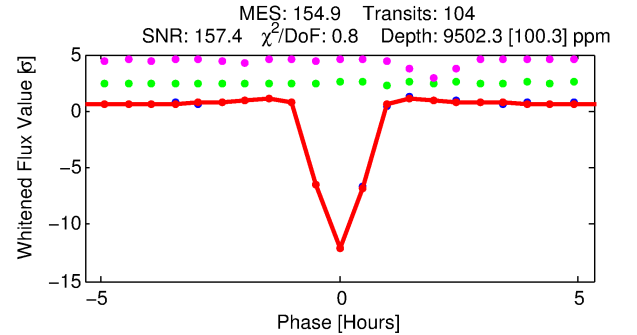
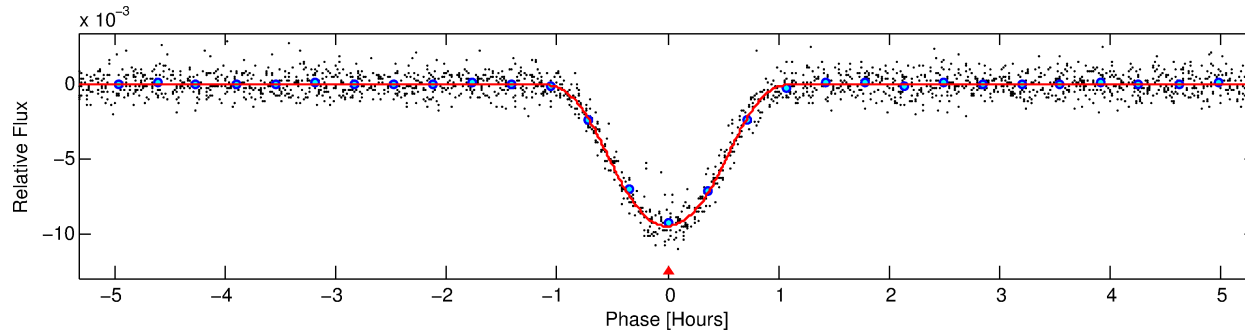
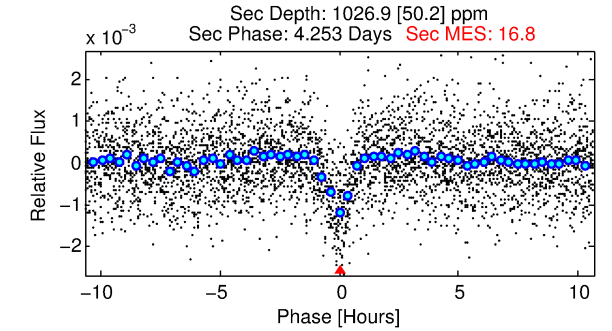
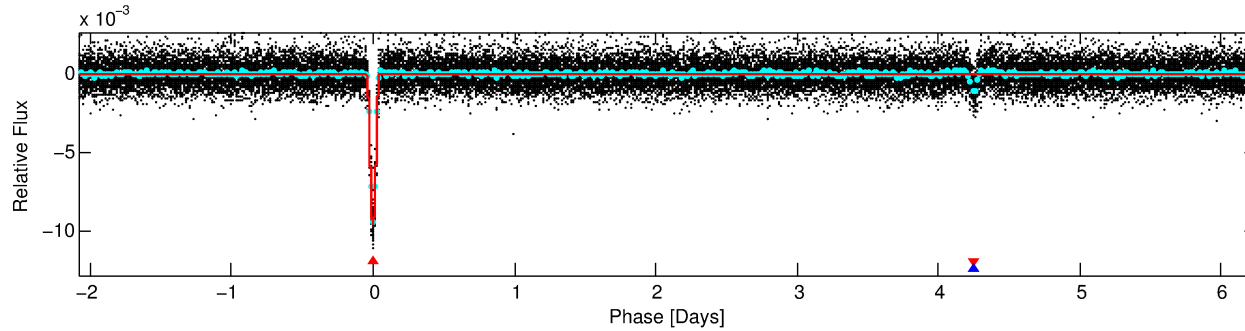
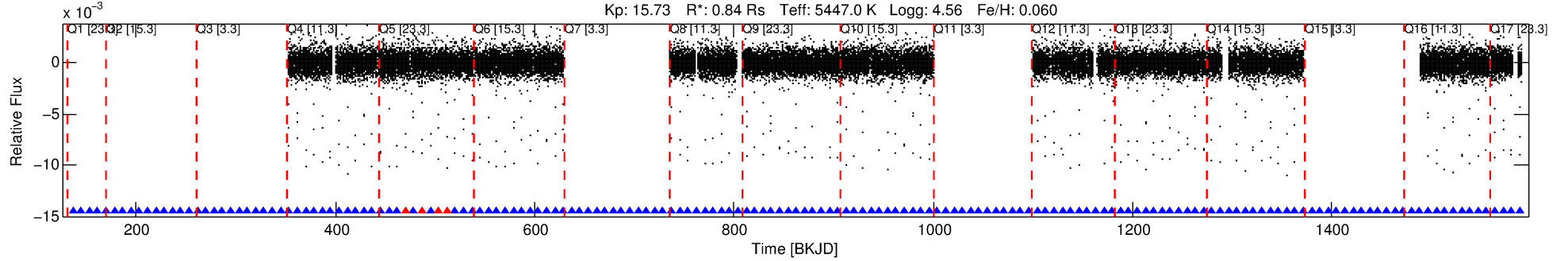
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011100657-01

No Significant Match Found

DV One-Page Summary

KIC: 11100657 Candidate: 1 of 2 Period: 8.344 d
KOI: K01418.01 Corr: 0.992



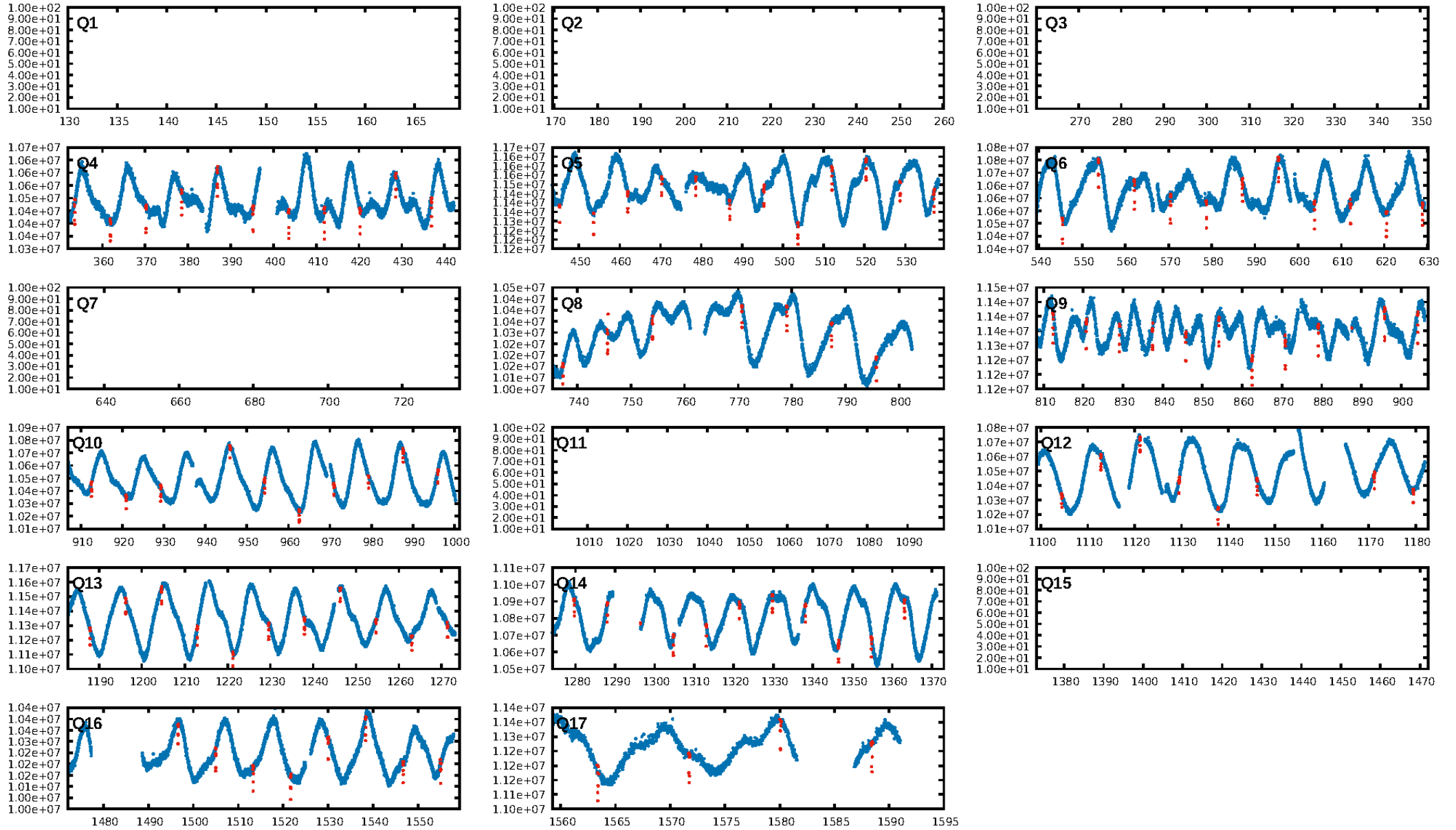
DV Fit Results:

Period = 8.34411 [0.00000] d
Epoch = 136.5481 [0.0003] BKJD
Rp/R* = 0.1169 [0.0094]
a/R* = 23.03 [0.90]
b = 0.91 [0.02]
Seff = 89.78 [28.98]
Teq = 785 [63] K
Rp = 10.69 [2.68] Re
a = 0.0785 [0.0158] AU
Ag = 30.49 [10.36] [2.85σ]
Teffp = 2852 [152] K [12.52σ]

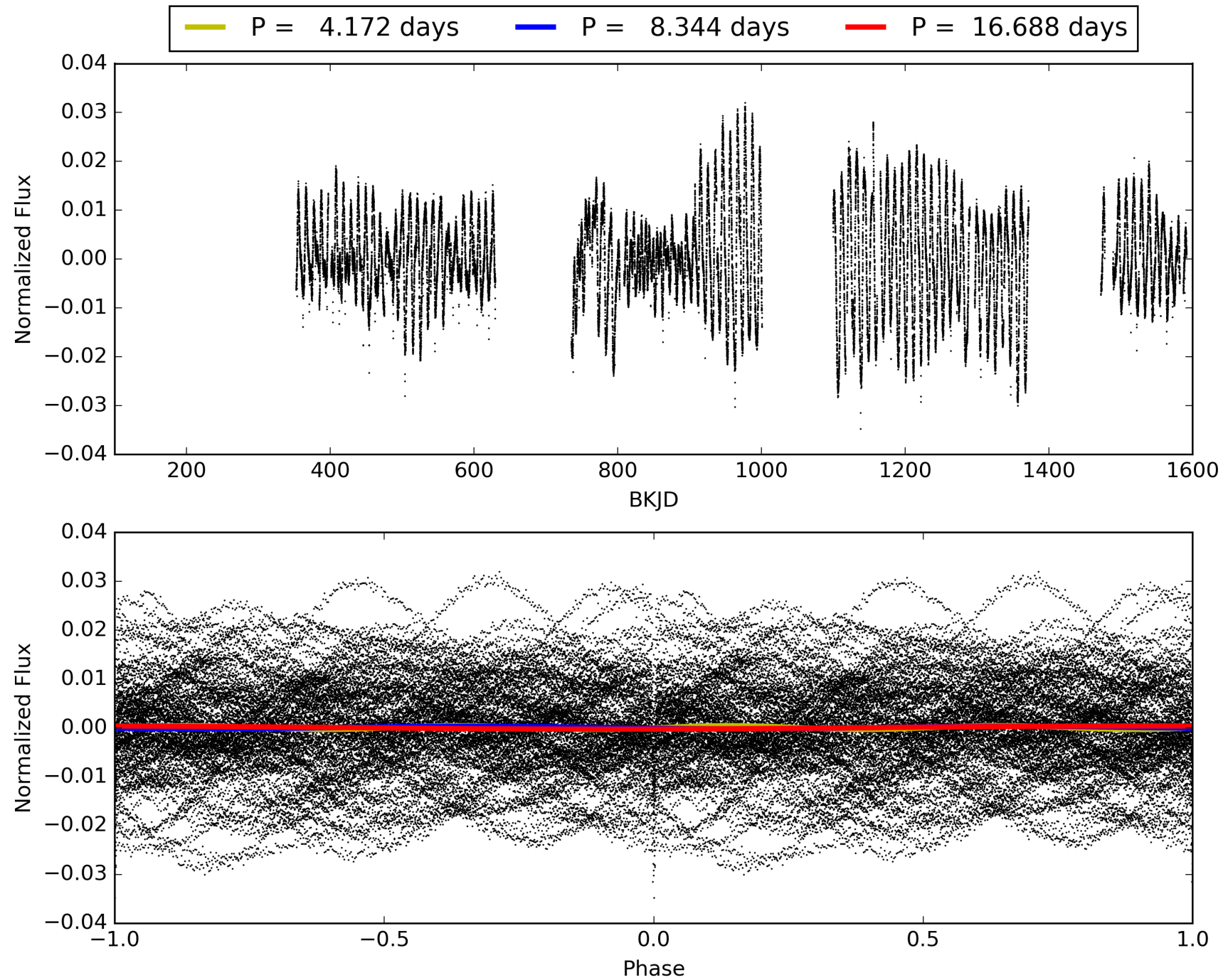
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00e]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [96/100]
GhostDiagnostic-chr: 3.044
Centroid-sig: 0.0%
Centroid-so: 0.875 arcsec [12.38σ]
OotOffset-rm: 0.380 arcsec [3.47σ]
KicOffset-rm: 0.245 arcsec [3.39σ]
OotOffset-st: 3/0/4/4 [11]
KicOffset-st: 3/0/4/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [11/11]

TCE 011100657-01, PDC Light Curves

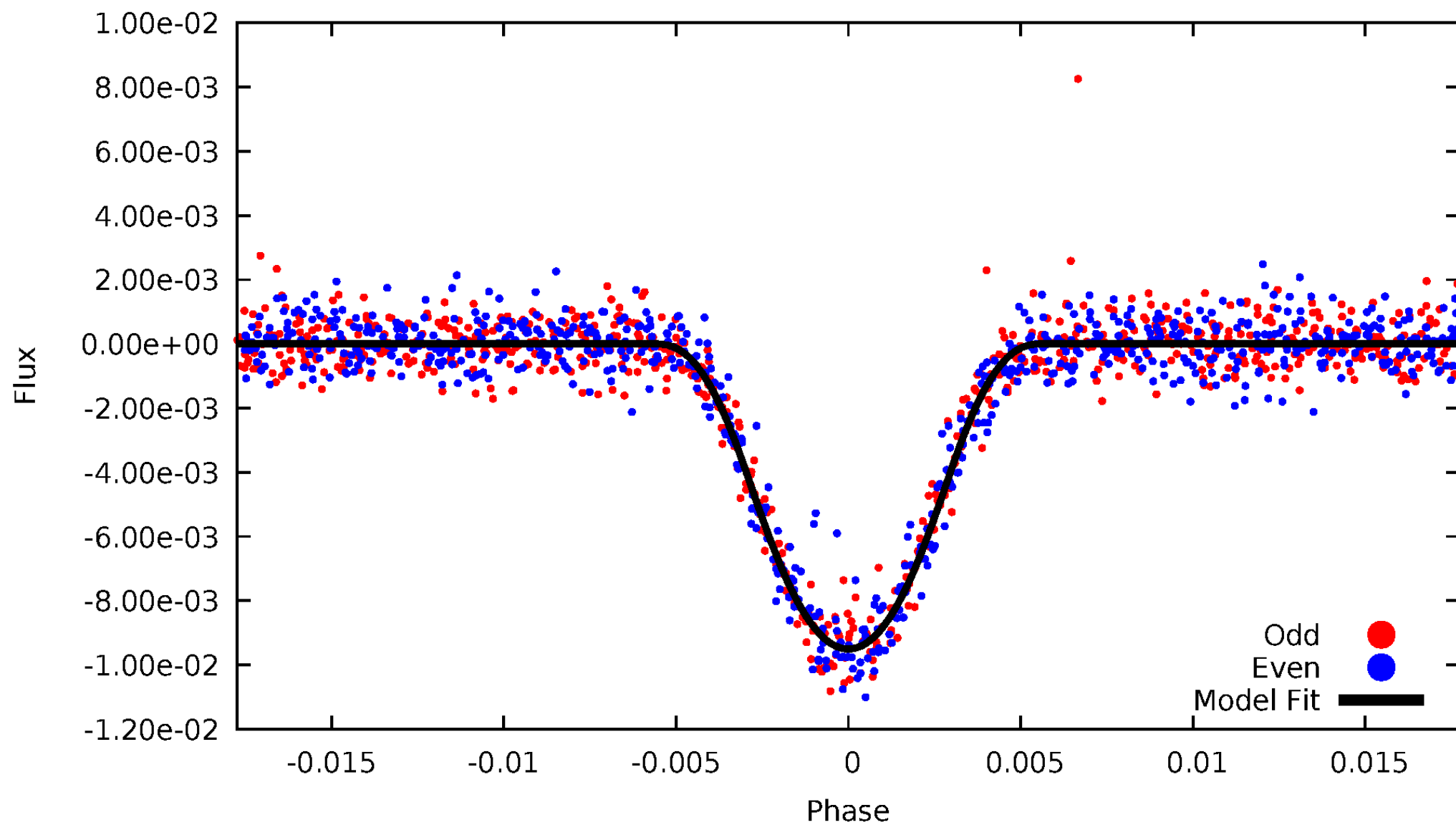


TCE 011100657-01



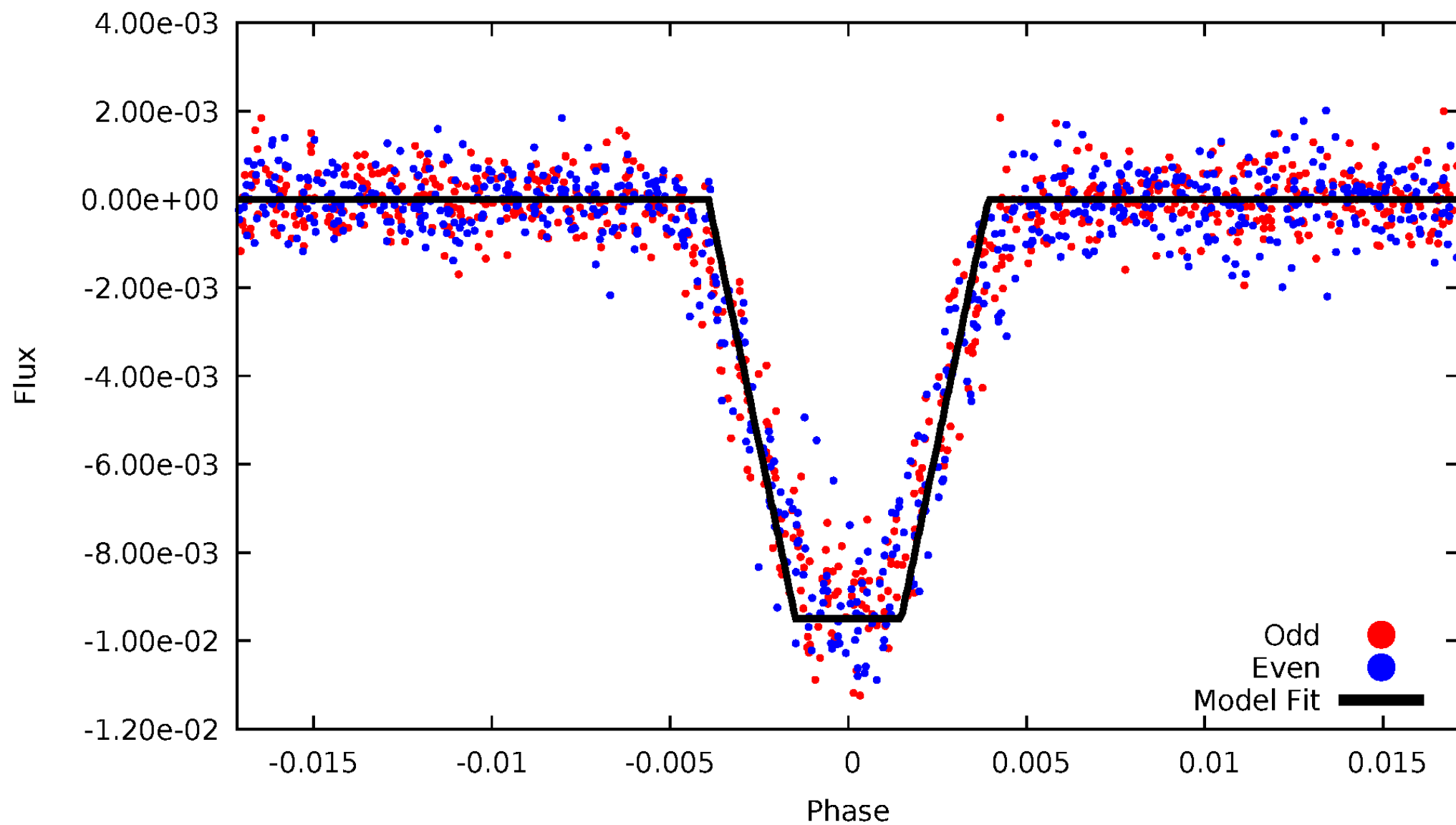
DV Odd/Even

TCE 011100657-01



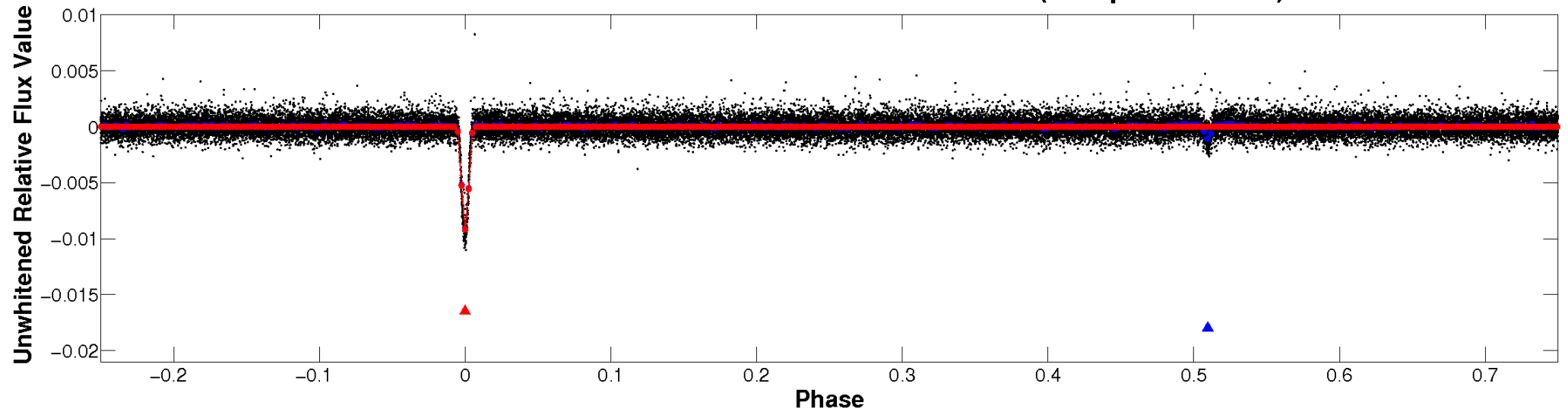
ALT Odd/Even

TCE 011100657-01

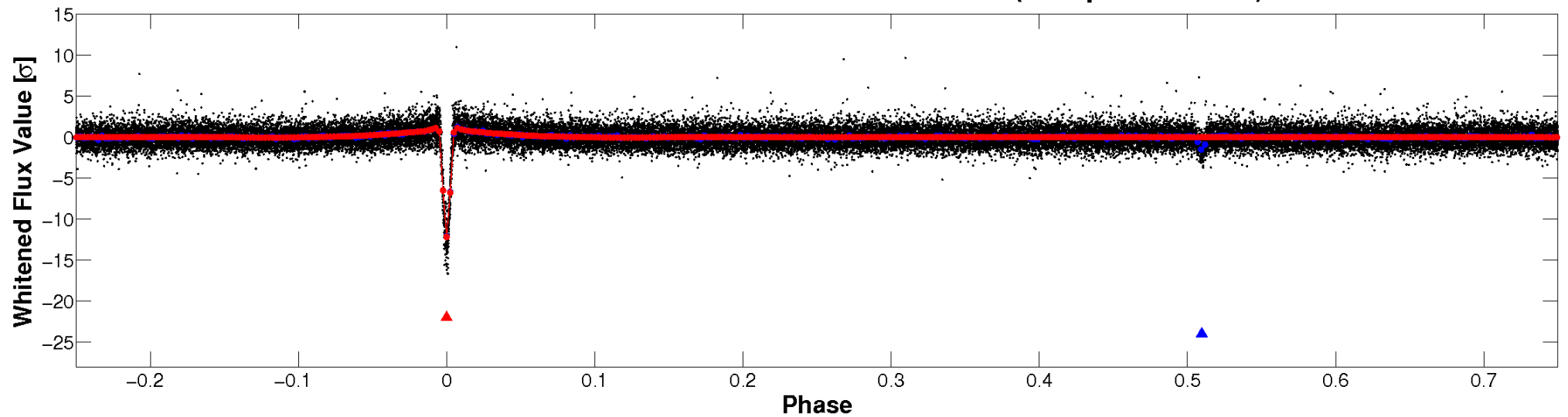


Non-Whitened Vs. Whitened Light Curve

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

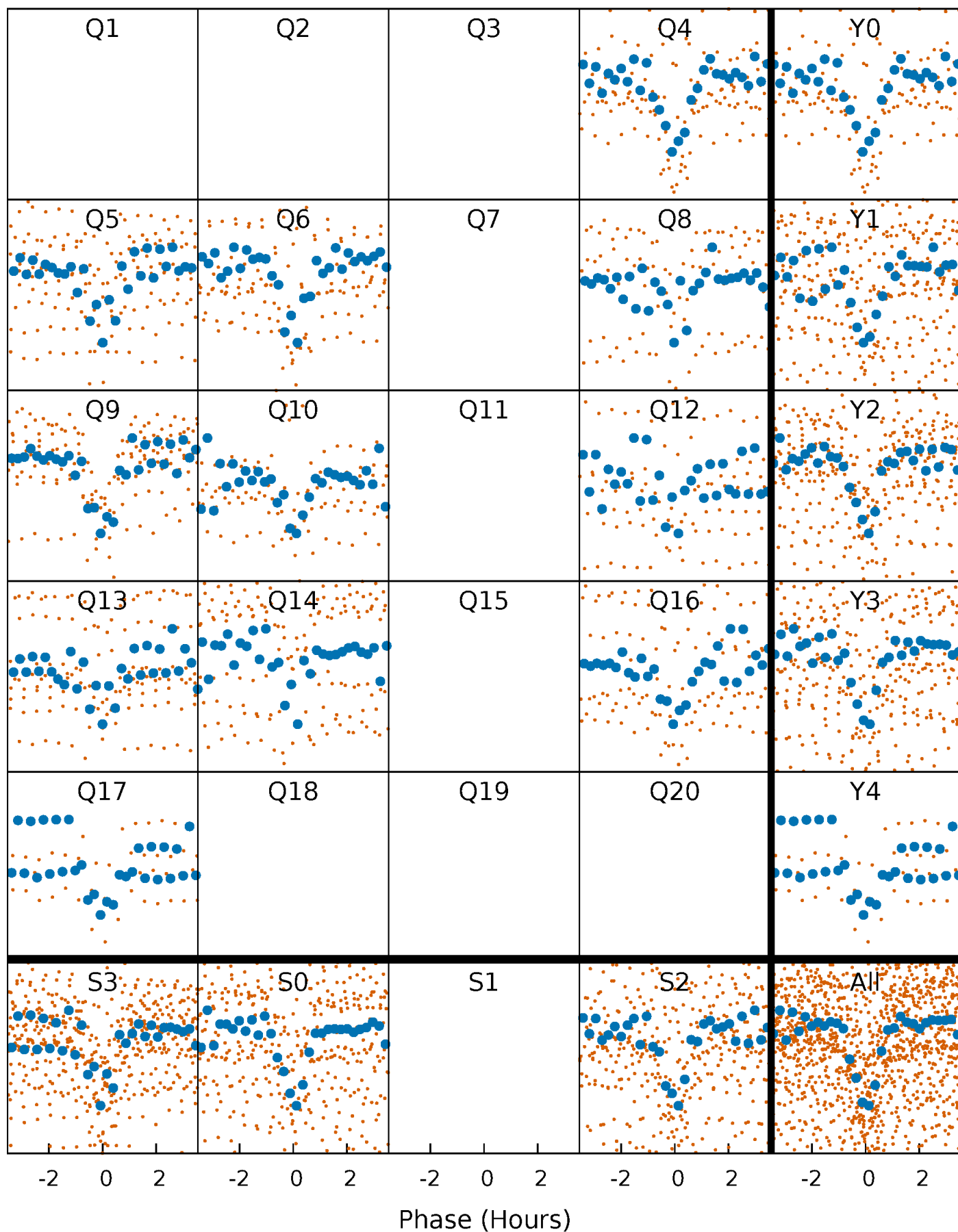


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



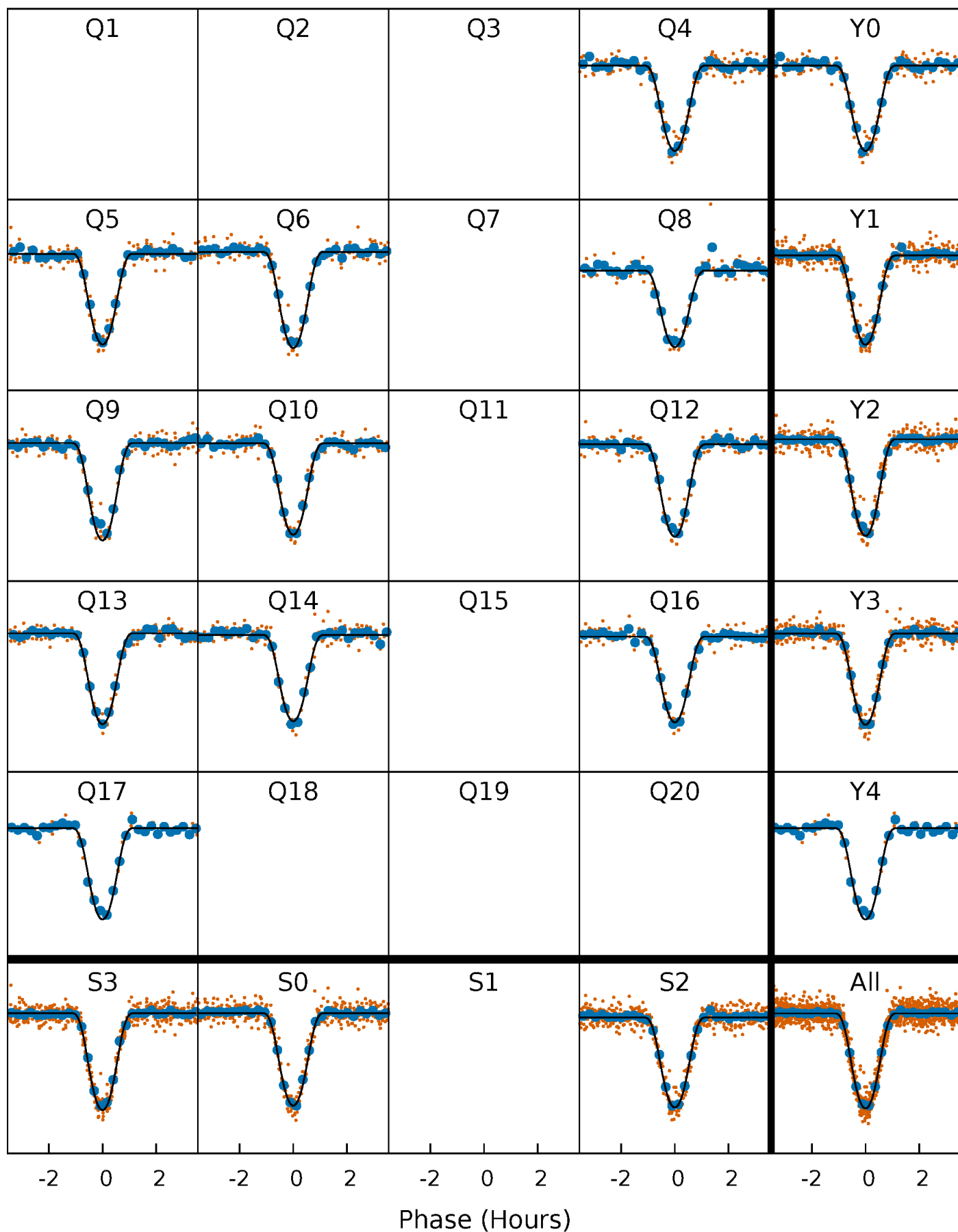
PDC Quarter-Phased Transit Curves

TCE 011100657-01 P= 8.344107 Days $T_0=136.548097$ (BKJD)



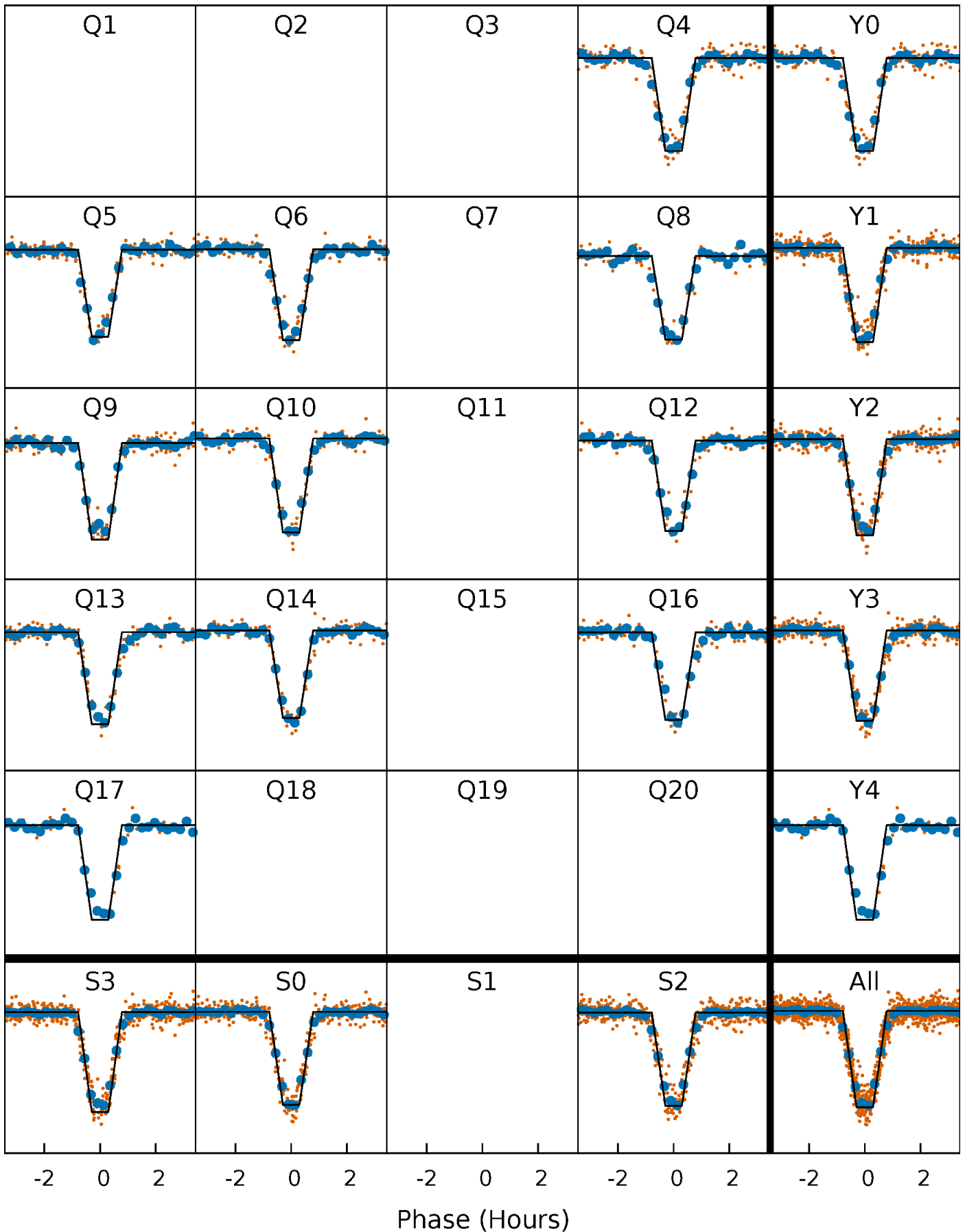
DV Quarter-Phased Transit Curves

TCE 011100657-01 P= 8.344107 Days $T_0=136.548097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

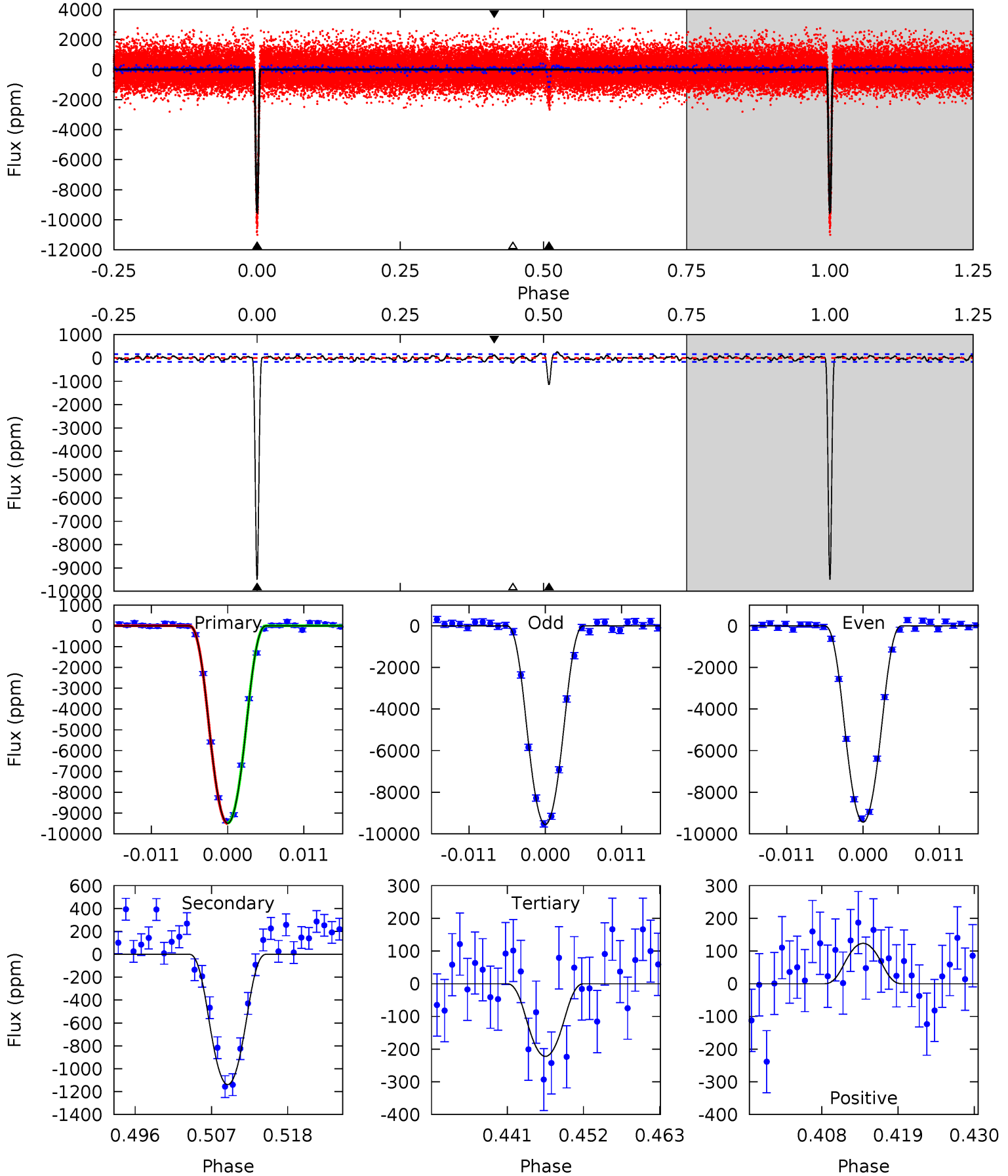
TCE 011100657-01 P= 8.344055 Days $T_0=136.553243$ (BKJD)



DV Model-Shift Uniqueness Test

011100657-01, P = 8.344107 Days, E = 136.548097 Days

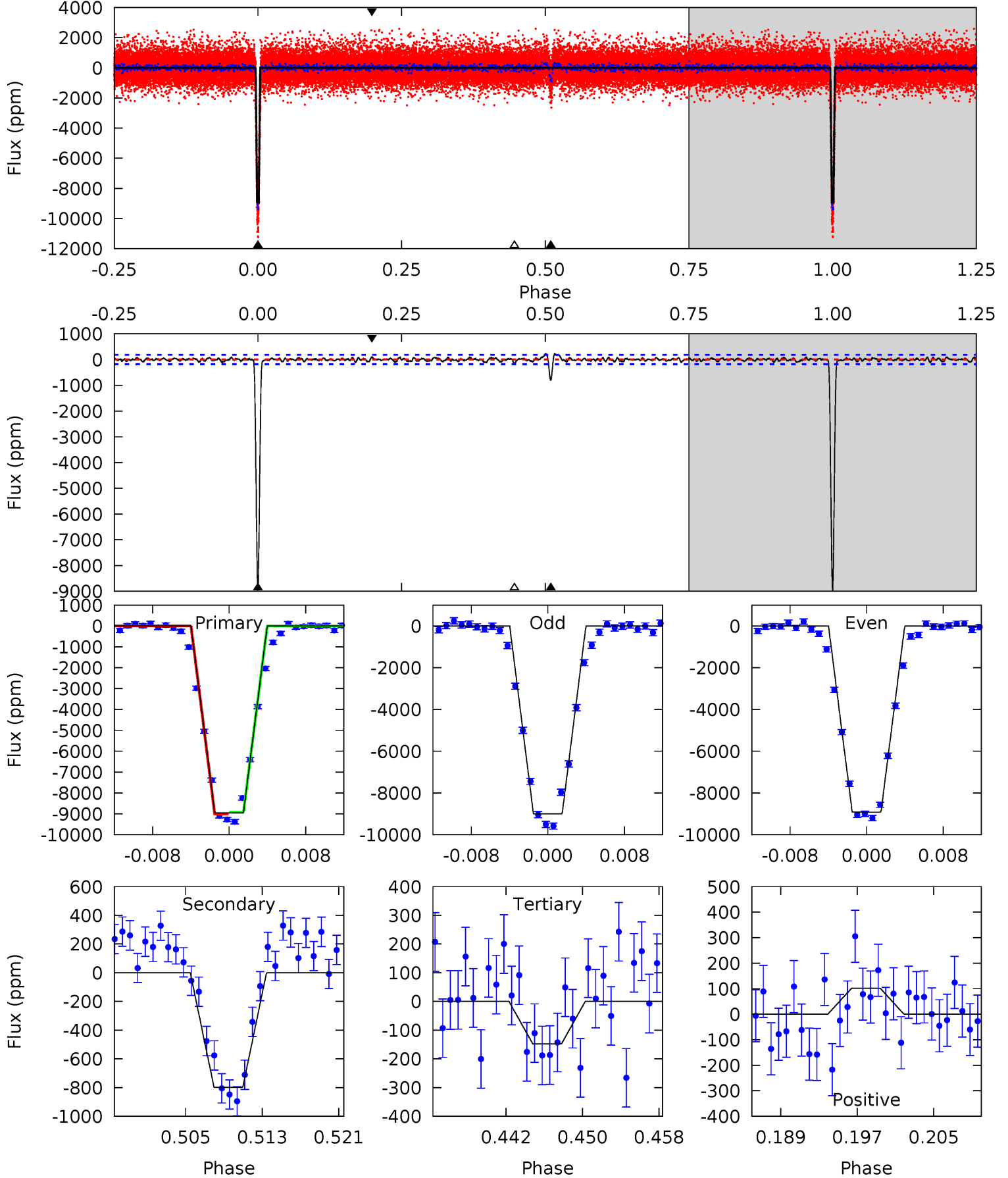
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
286.5	34.4	6.71	3.72	5.01	2.54	1.82	279.8	282.8	27.7	30.6	1.72	0.99	0.03	0.46



Alt Model-Shift Uniqueness Test

011100657-01, P = 8.344055 Days, E = 136.553243 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
252.6	22.5	4.16	2.86	5.07	2.66	1.30	248.5	249.8	18.4	19.7	1.12	1.00	0.03	1.26



Stellar Parameters For KIC 011100657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5447^{+179}_{-179}	$4.559^{+0.038}_{-0.162}$	$0.060^{+0.250}_{-0.300}$	$0.838^{+0.199}_{-0.080}$	$0.928^{+0.083}_{-0.101}$	$2.221^{+0.446}_{-0.936}$
	+3%/-3%	+1%/-4%	+417%/-500%	+24%/-10%	+9%/-11%	+20%/-42%
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 011100657-01 / KOI 1418.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1139±33	$11.17^{+1.57}_{-1.30}$	1123^{+73}_{-54}	3420^{+117}_{-106}	31^{+8}_{-7}
Alt.	-798±35	$9.31^{+1.39}_{-1.17}$	1125^{+71}_{-52}	3428^{+138}_{-133}	31^{+9}_{-7}

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

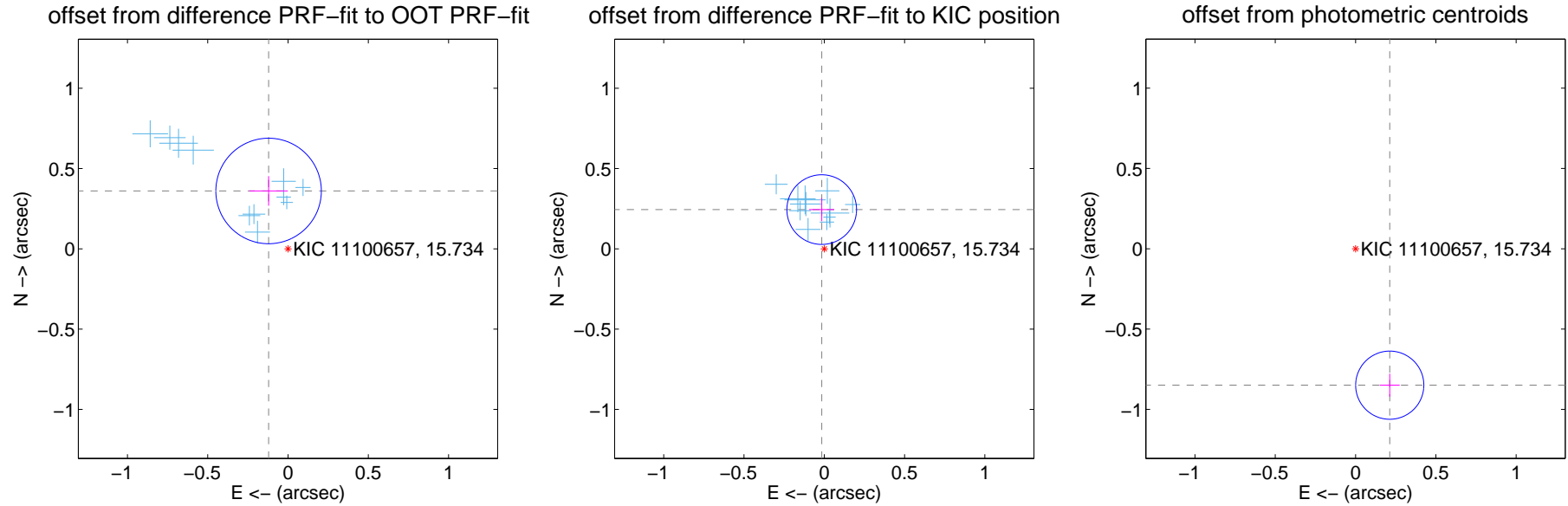
DV Centroid Data

Supplemental centroid analysis for 011100657-01. Kepler magnitude: 15.73. Transit SNR 157.37

There are 11 quarters with good PRF difference image offsets

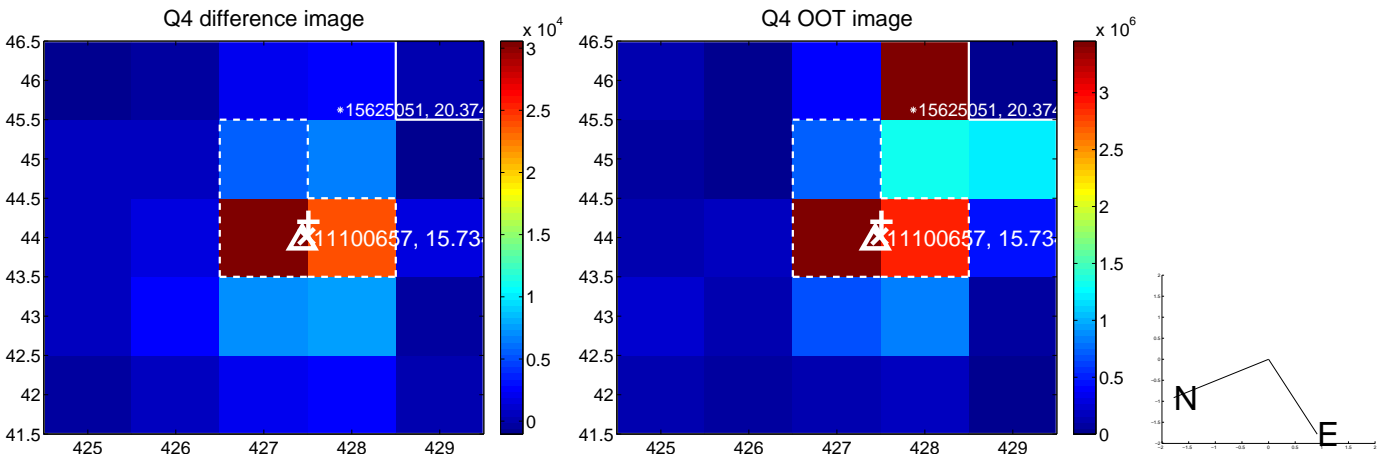
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 \pm 0.109	3.47	0.121 \pm 0.120	0.360 \pm 0.092
PRF-fit source offset from KIC position	0.245 \pm 0.072	3.39	0.016 \pm 0.078	0.244 \pm 0.072
photometric centroid source offset	0.88 \pm 0.07	12.38	-0.21 \pm 0.06	-0.85 \pm 0.07

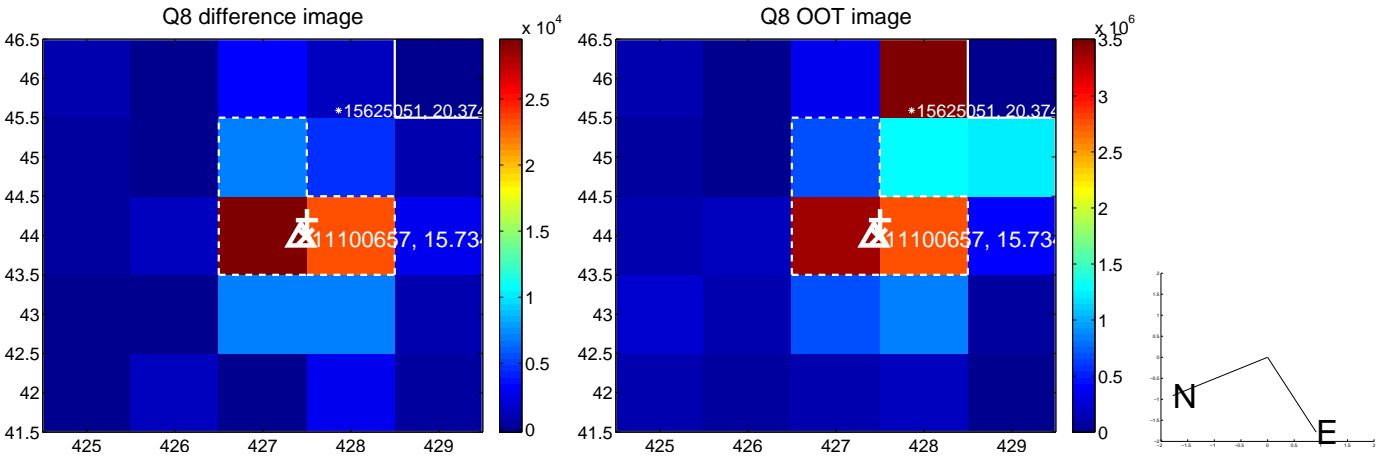
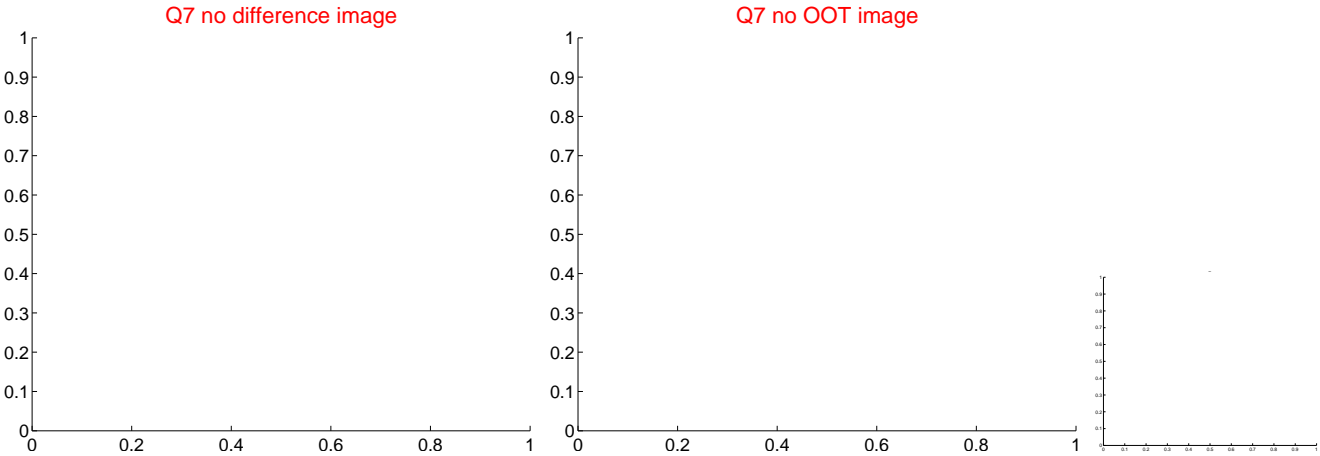
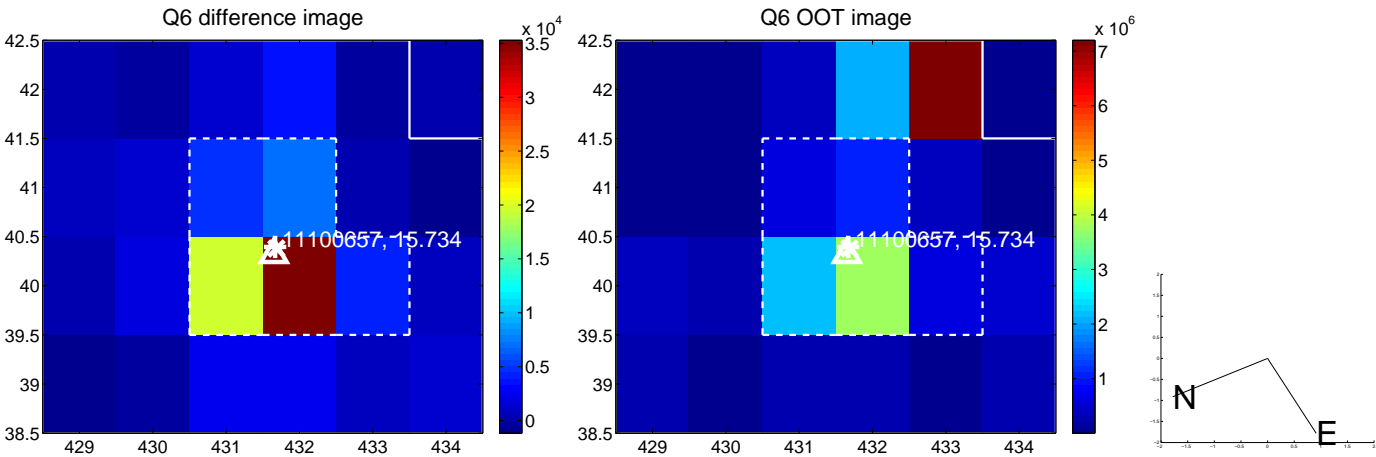
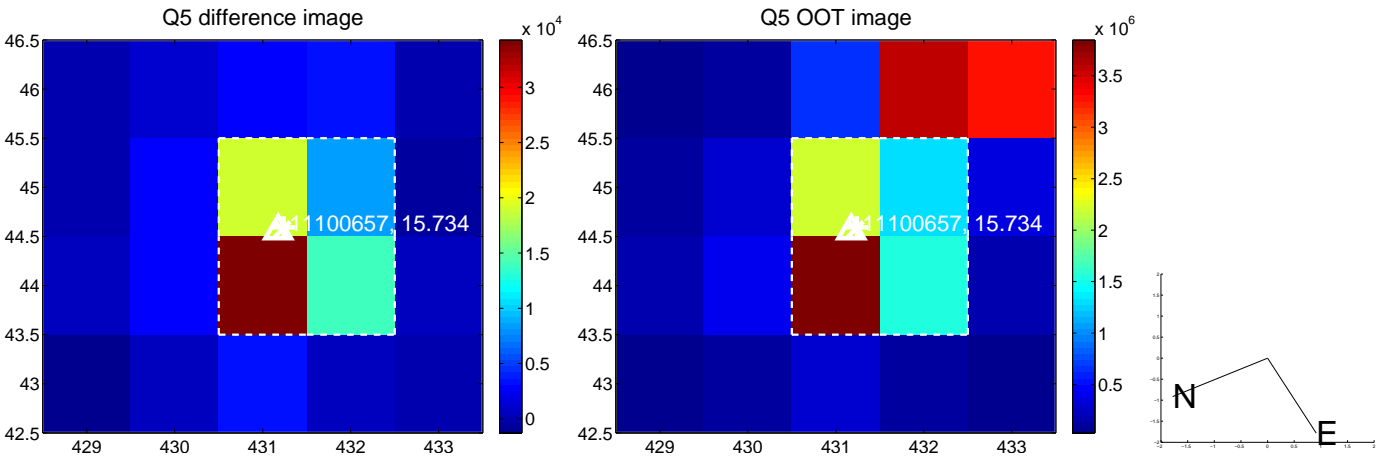


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

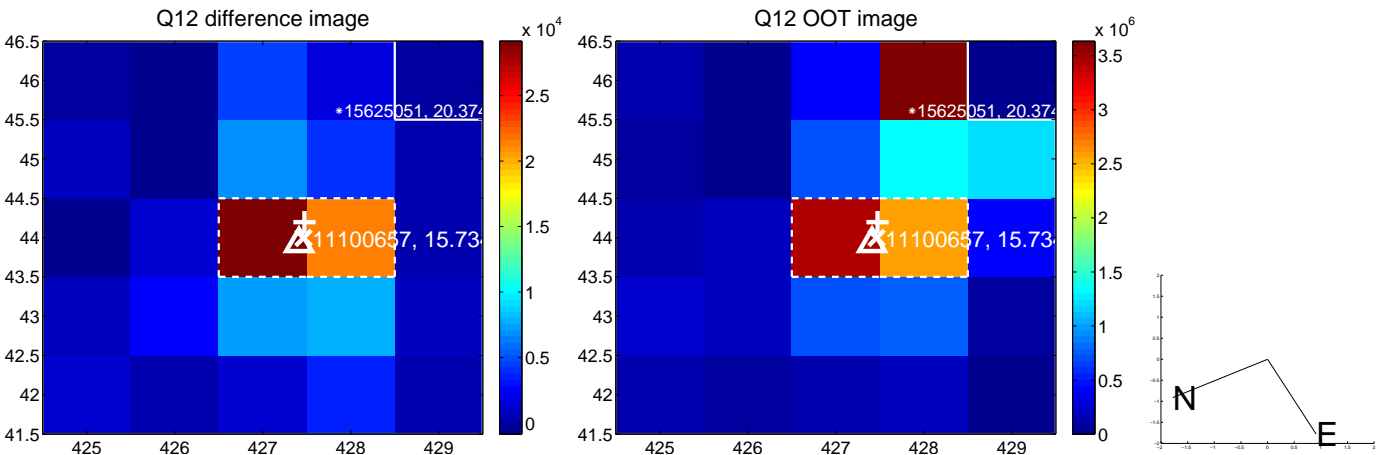
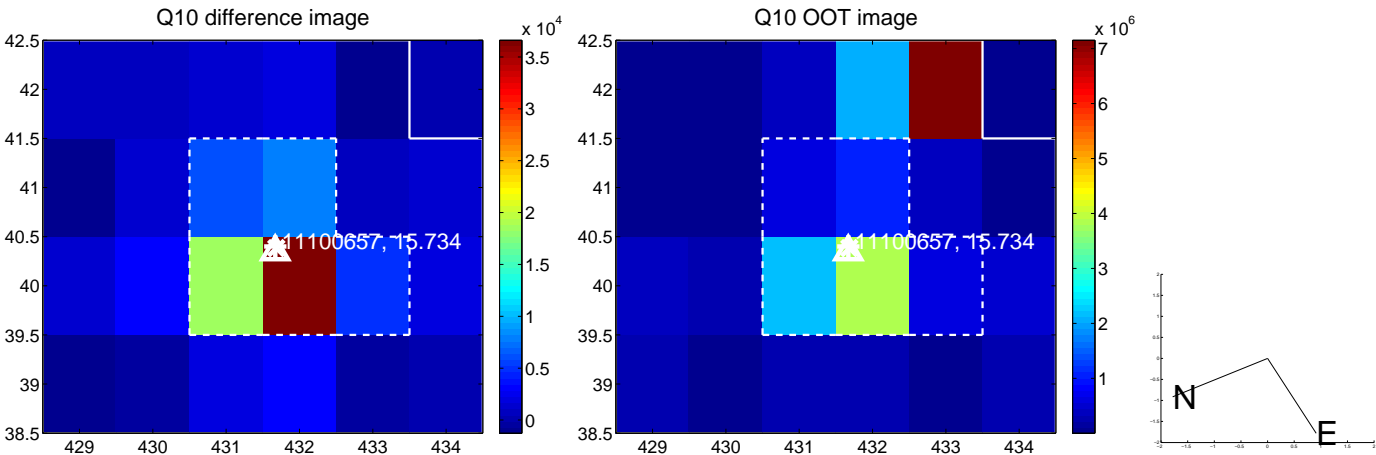
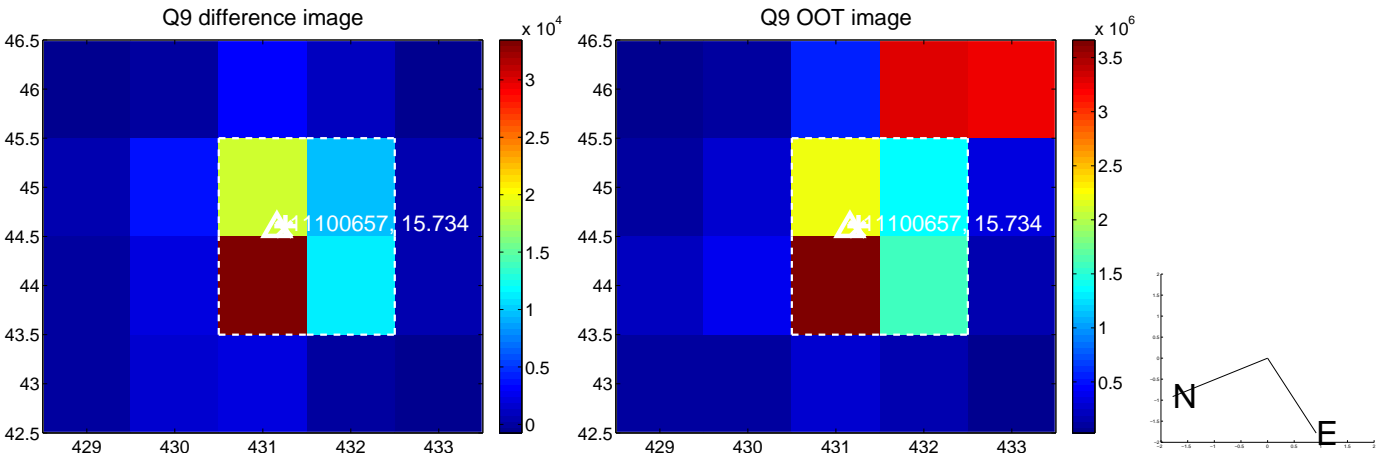
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



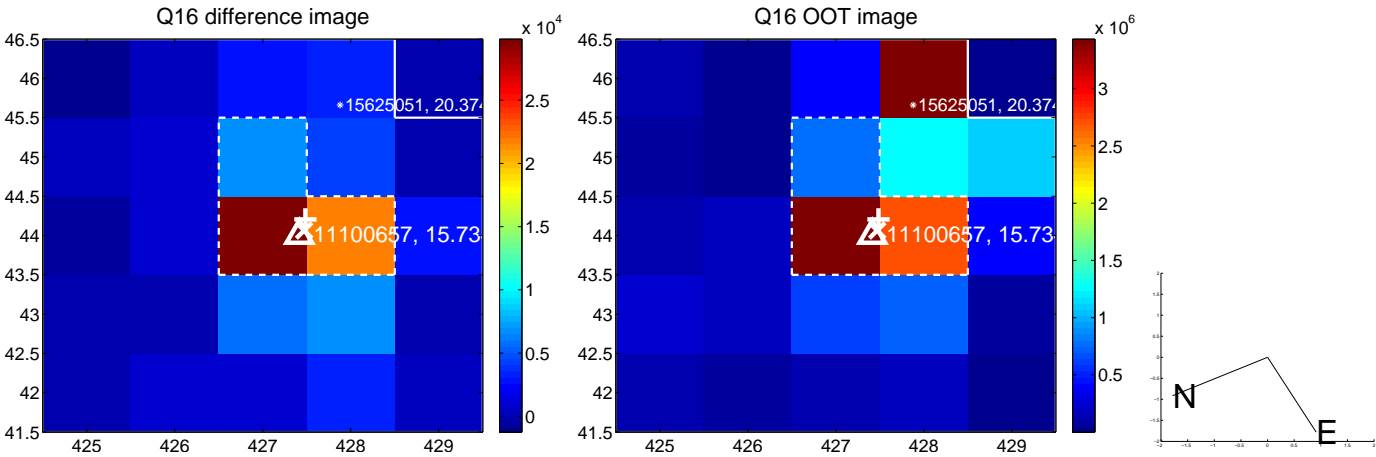
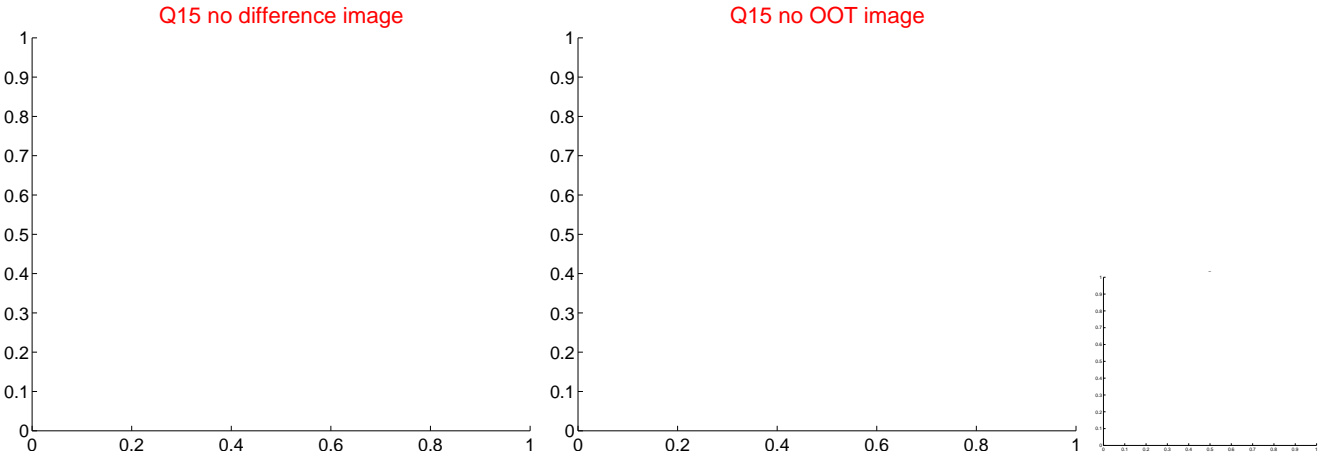
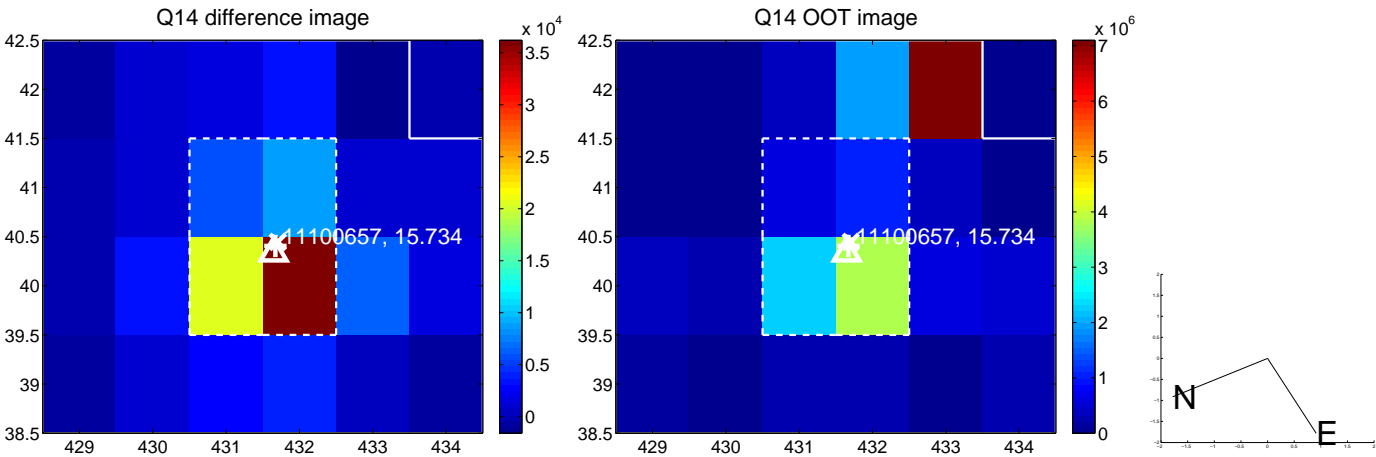
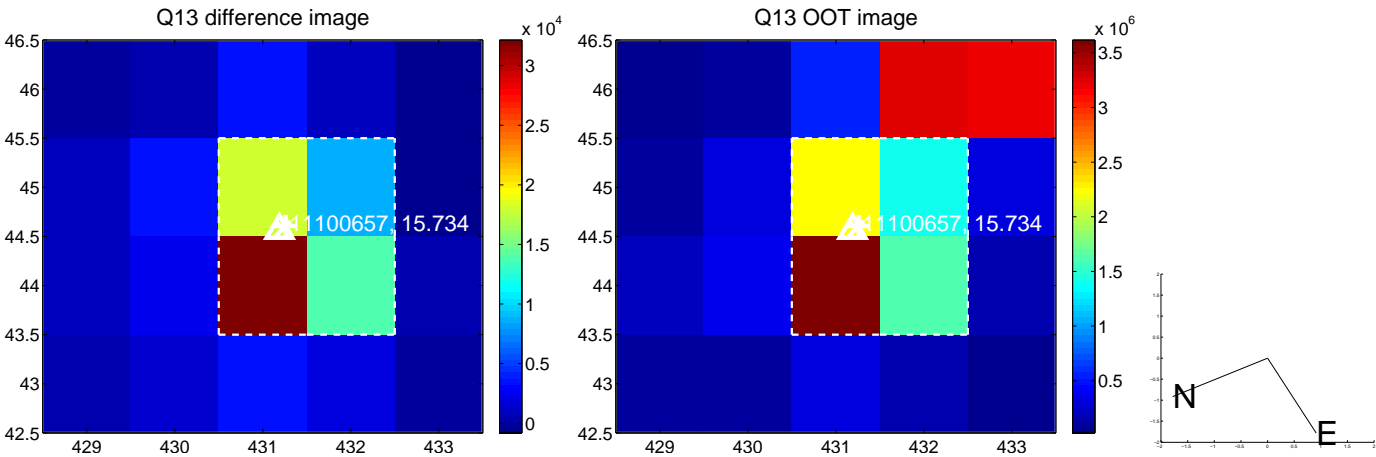
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



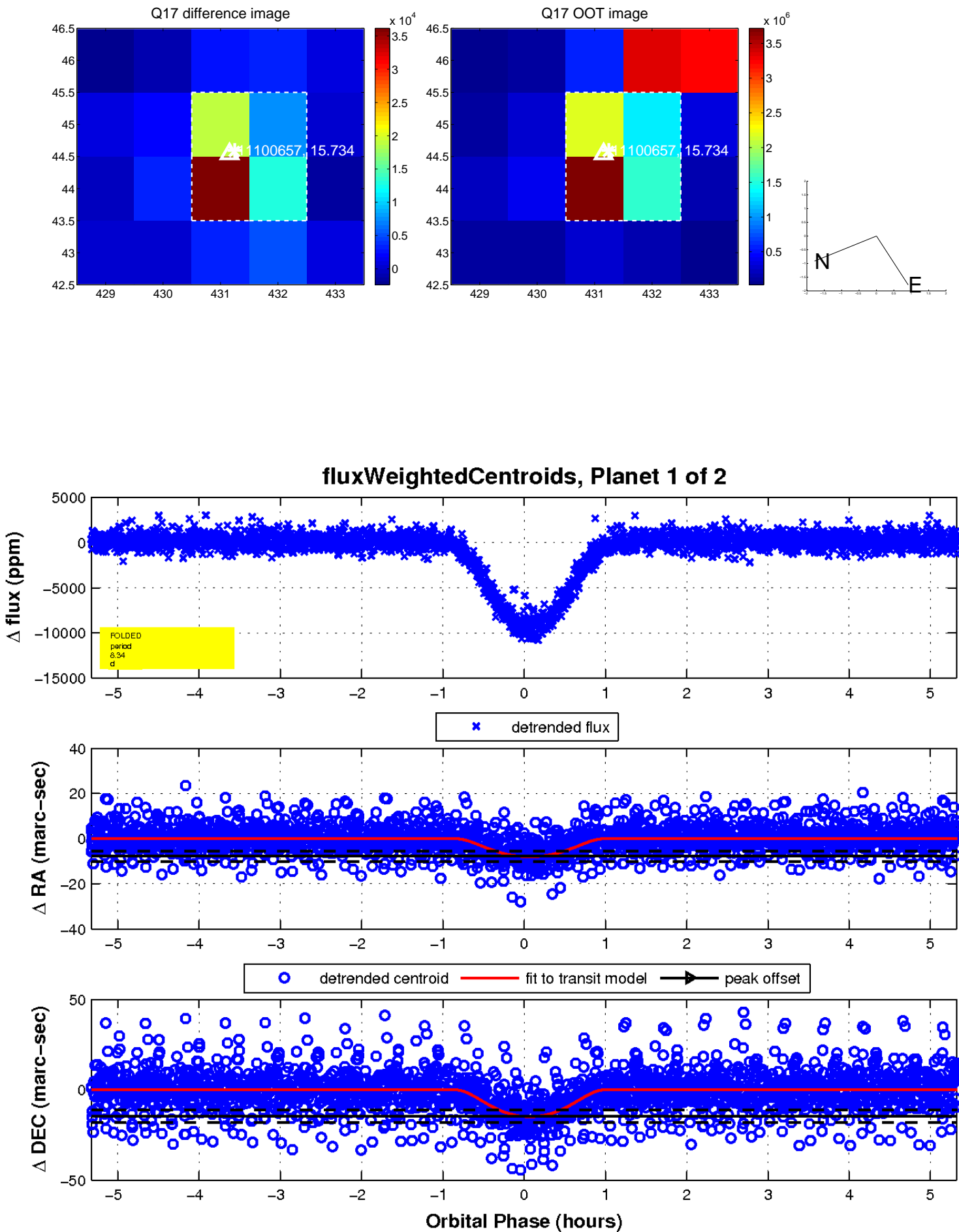
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

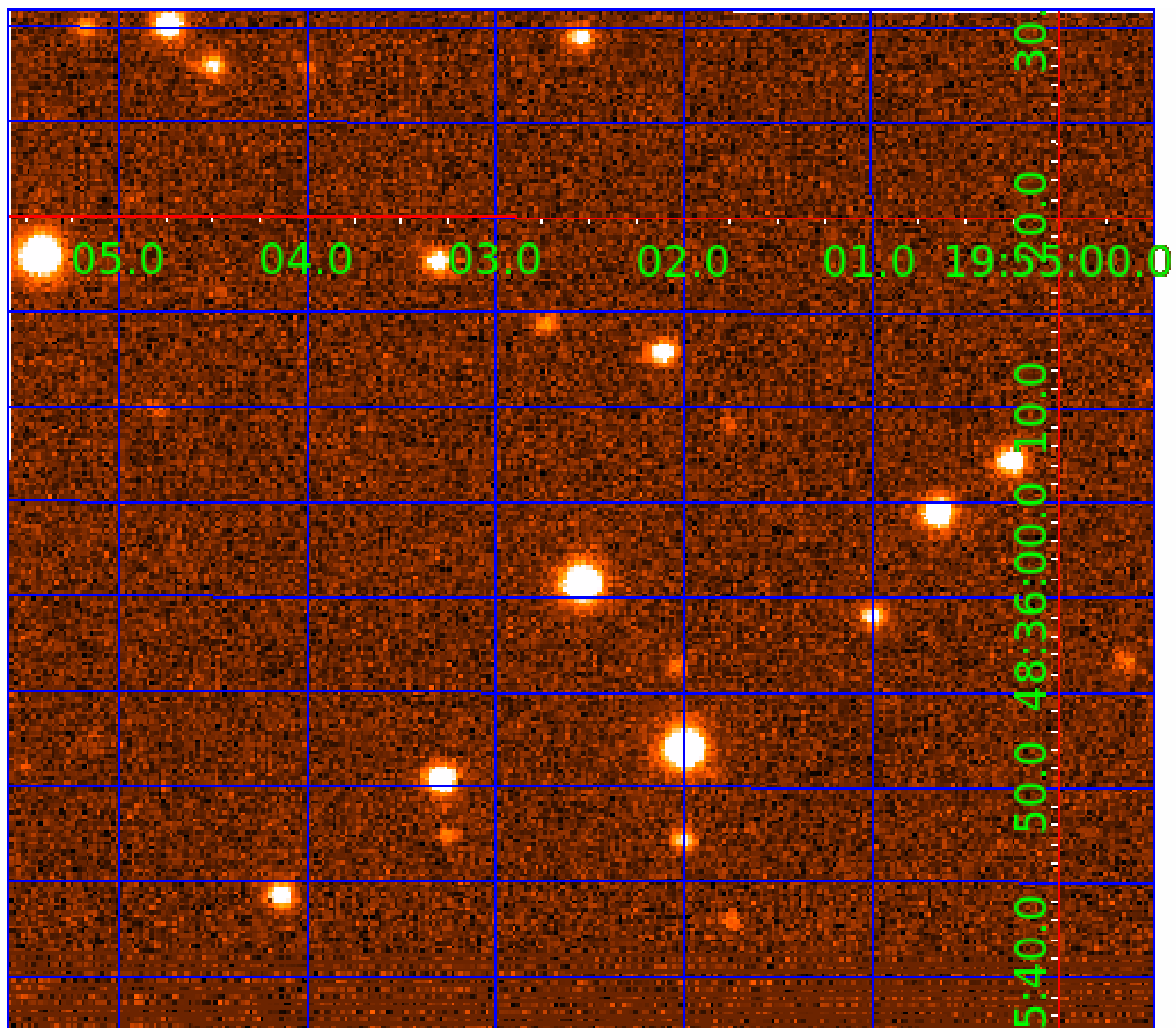


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011100657

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})
011100657-01	OBS	1418.01	8.344107	136.548097	9502.3	1.776	154.9	157.4	0.84	5447	10.69	89.78
011100657-02	OBS	No	8.344096	132.457688	1216.1	1.964	16.6	21.4	0.84	5447	4.48	89.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011100657-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011100657-02	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.

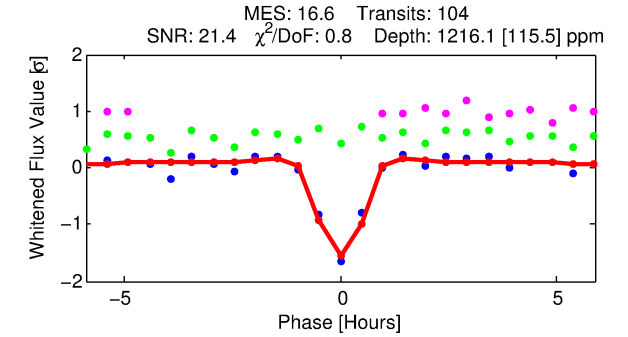
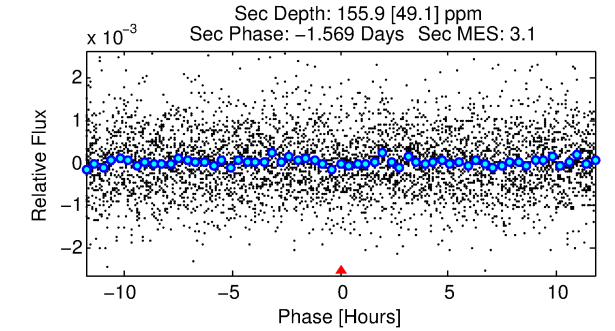
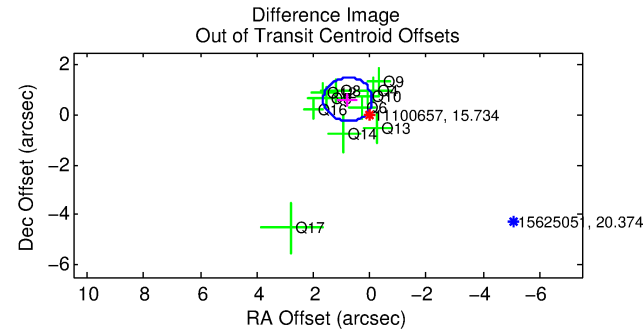
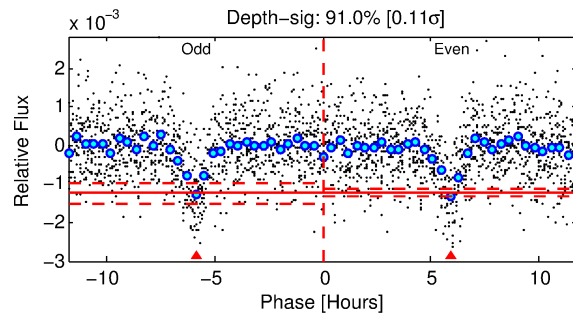
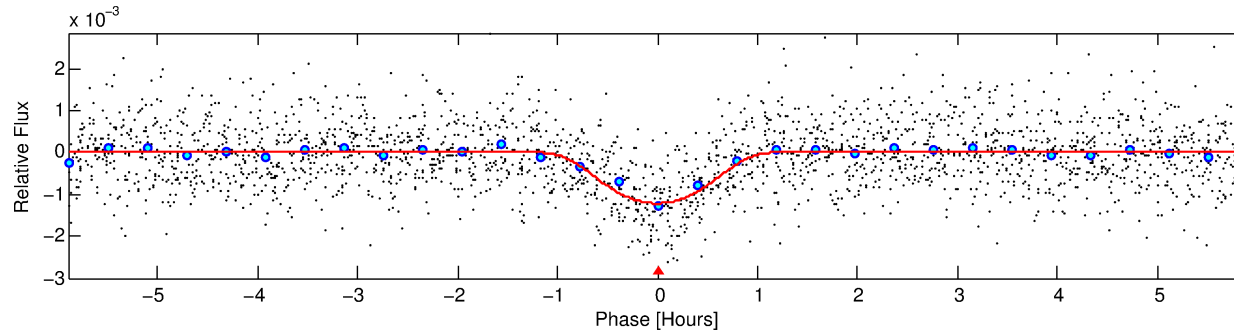
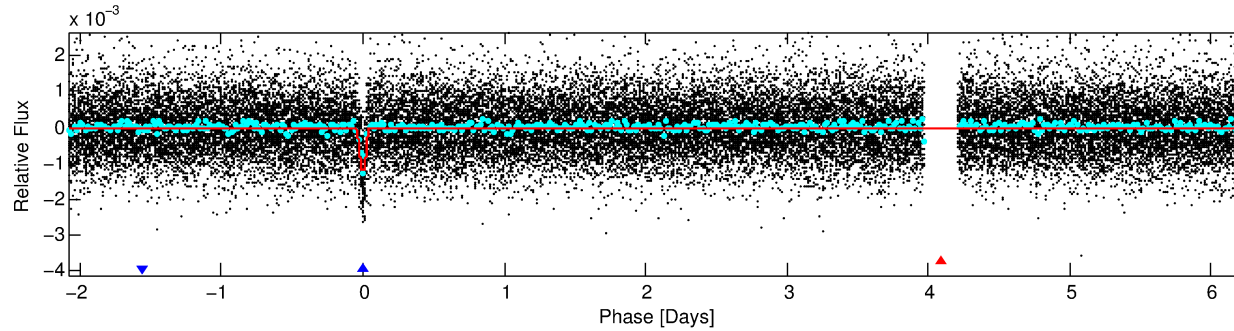
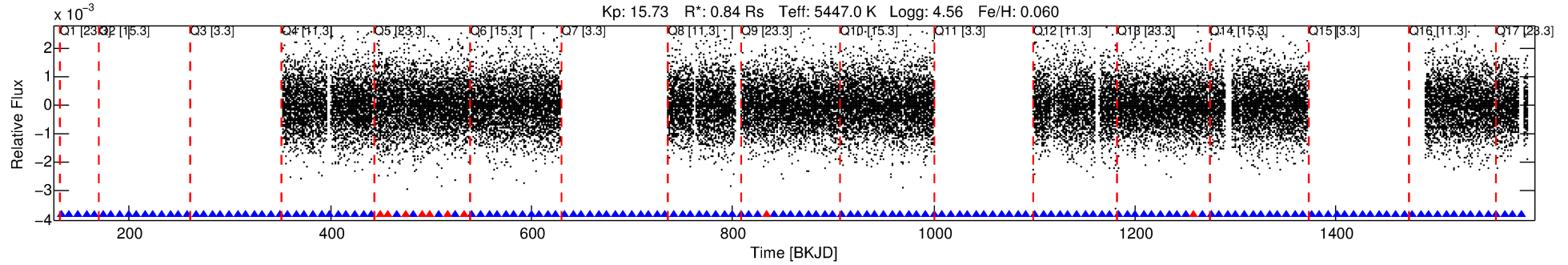
Ephemeris Match Information For 011100657-02

No Significant Match Found

DV One-Page Summary

KIC: 11100657 Candidate: 2 of 2 Period: 8.344 d
KOI: K01418 Corr: No Ephemeris Match

Kp: 15.73 R*: 0.84 Rs Teff: 5447.0 K Logg: 4.56 Fe/H: 0.060



DV Fit Results:

Period = 8.34410 [0.00002] d
Epoch = 132.4577 [0.0025] BKJD
Rp/R* = 0.0490 [0.0432]
a/R* = 12.61 [4.64]
b = 0.97 [0.09]
Seff = 89.78 [28.98]
Teff = 785 [63] K
Rp = 4.48 [4.09] Re
a = 0.0785 [0.0158] AU
Ag = 26.38 [47.89] [0.53σ]
Teffp = 2750 [1235] K [1.59σ]

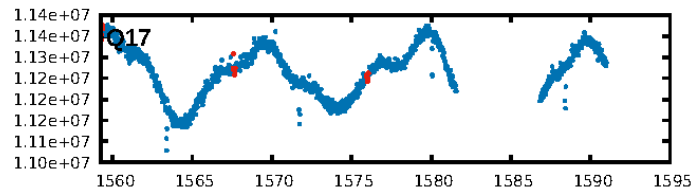
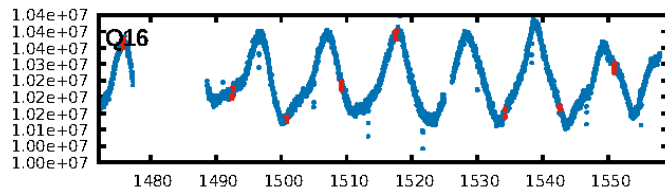
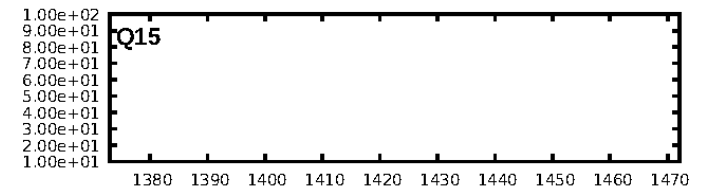
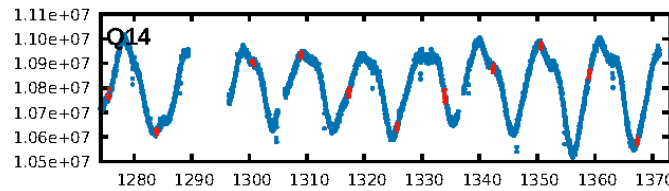
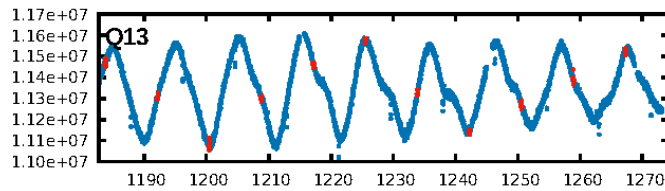
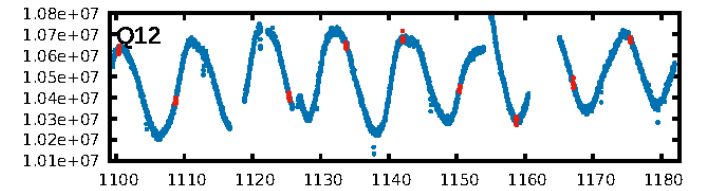
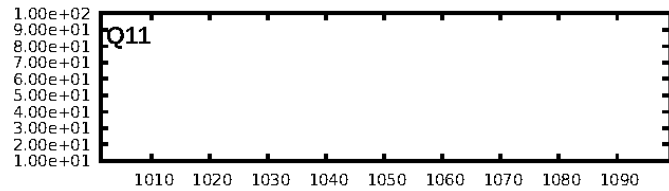
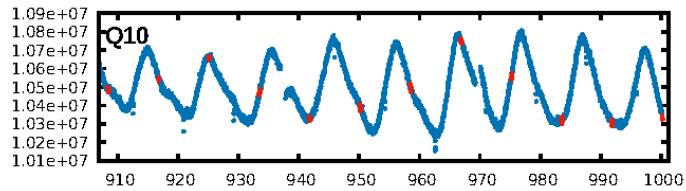
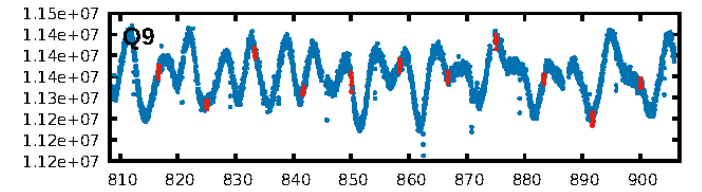
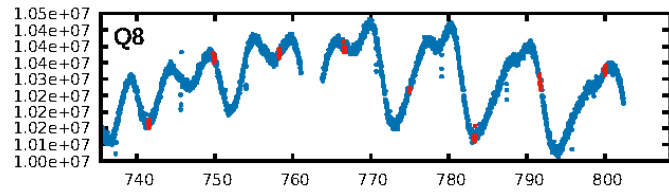
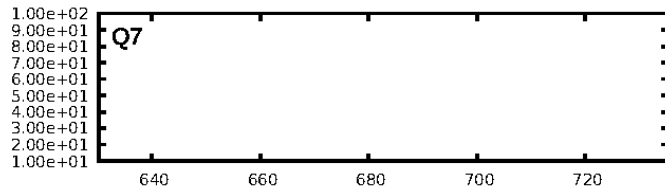
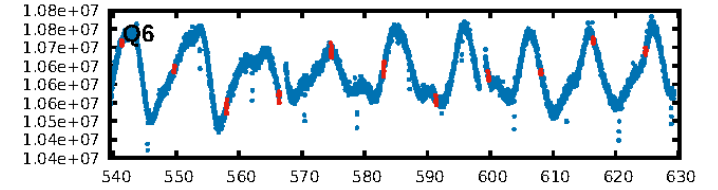
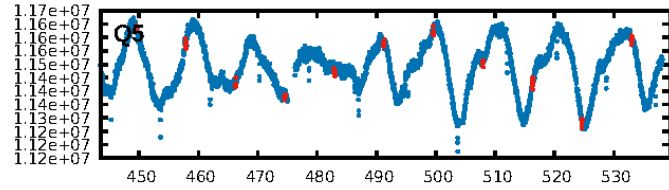
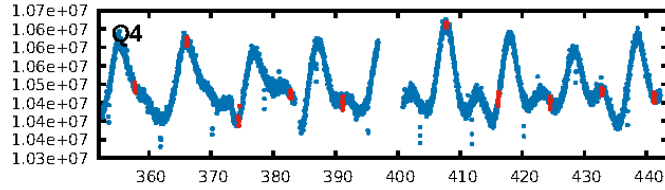
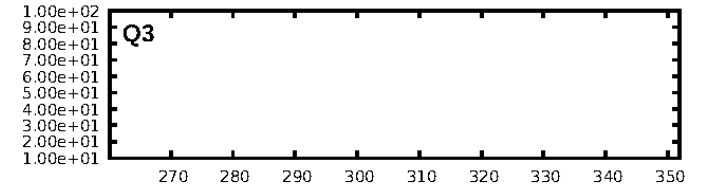
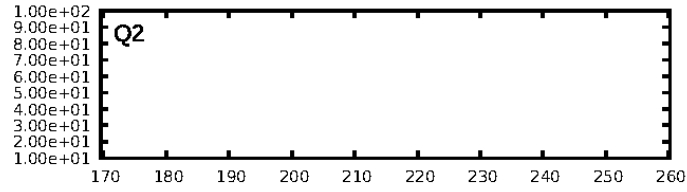
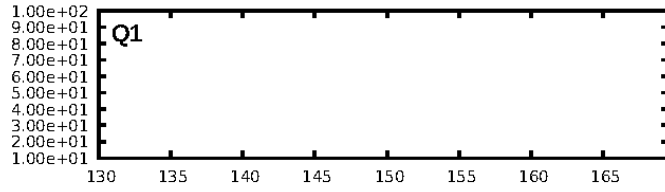
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 99.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.37e-60
RollingBand-fgt: 0.91 [92/101]
GhostDiagnostic-chr: 12.09
Centroid-sig: 0.0%
Centroid-so: 1.194 arcsec [2.25σ]
OotOffset-rm: 1.003 arcsec [3.46σ]
KicOffset-rm: 0.661 arcsec [2.46σ]
OotOffset-st: 3/0/4/4 [11]
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DiffImageQuality-fgm: 0.91 [10/11]
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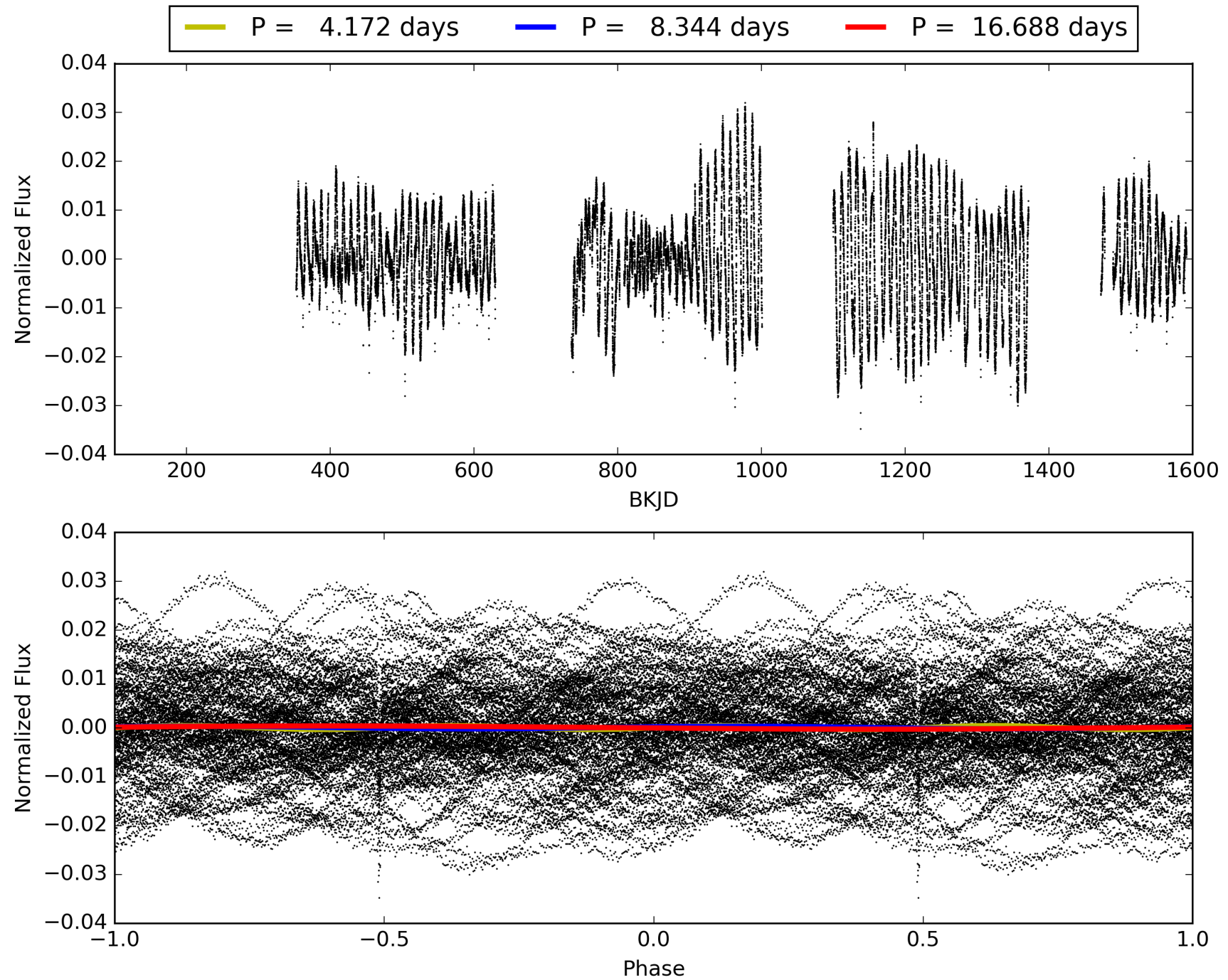
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:07:11 Z

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

TCE 011100657-02, PDC Light Curves

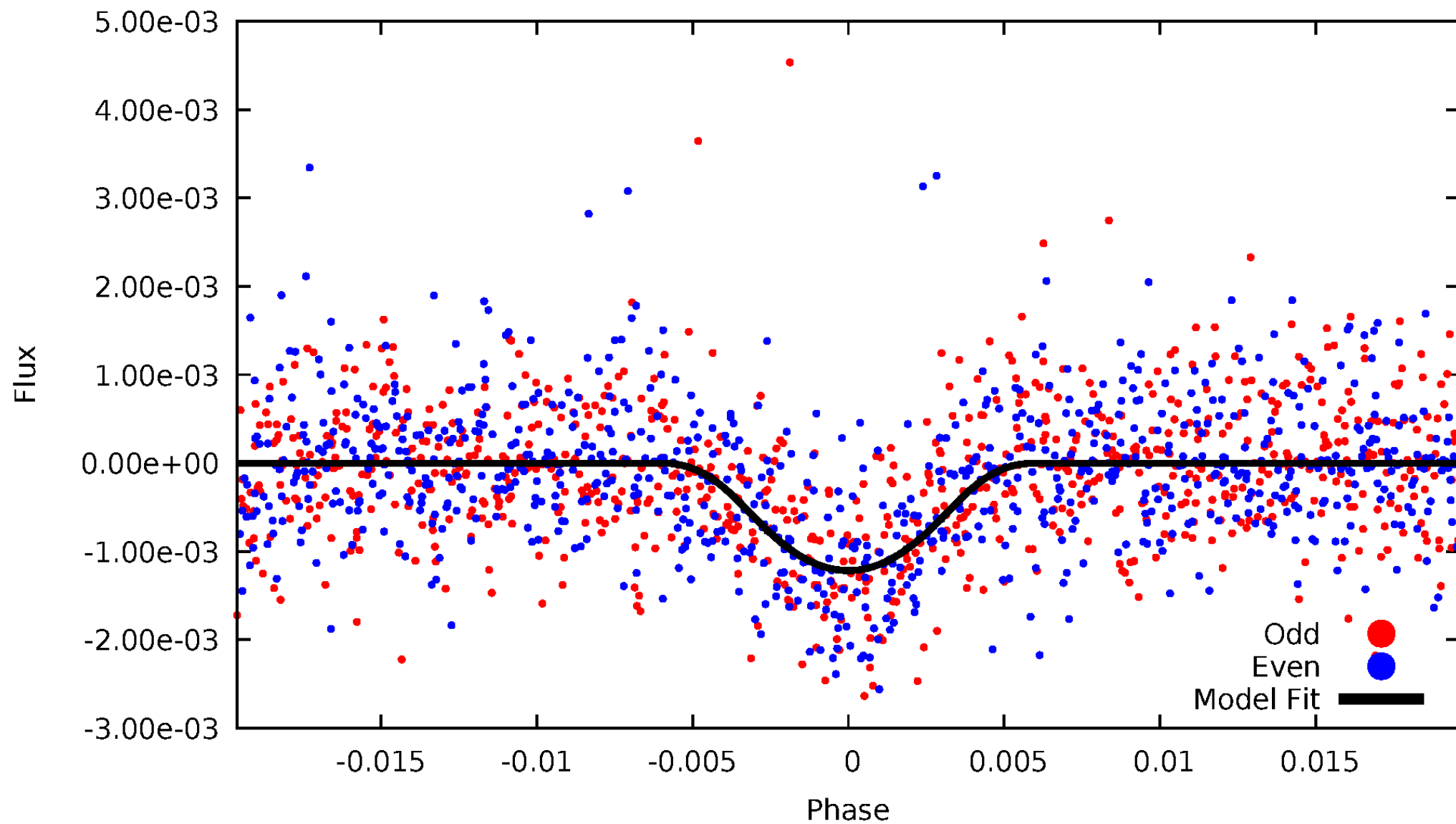


TCE 011100657-02



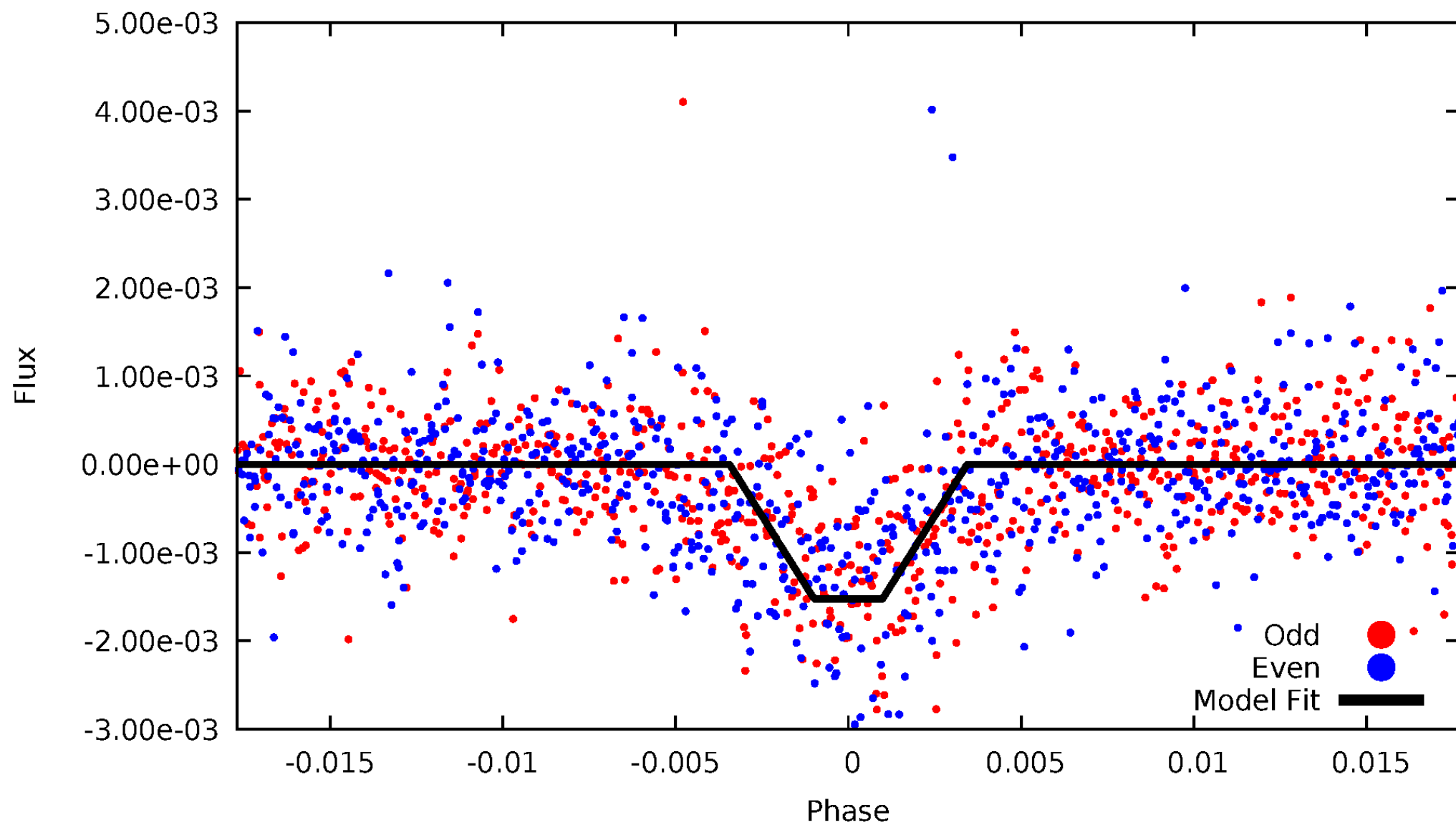
DV Odd/Even

TCE 011100657-02



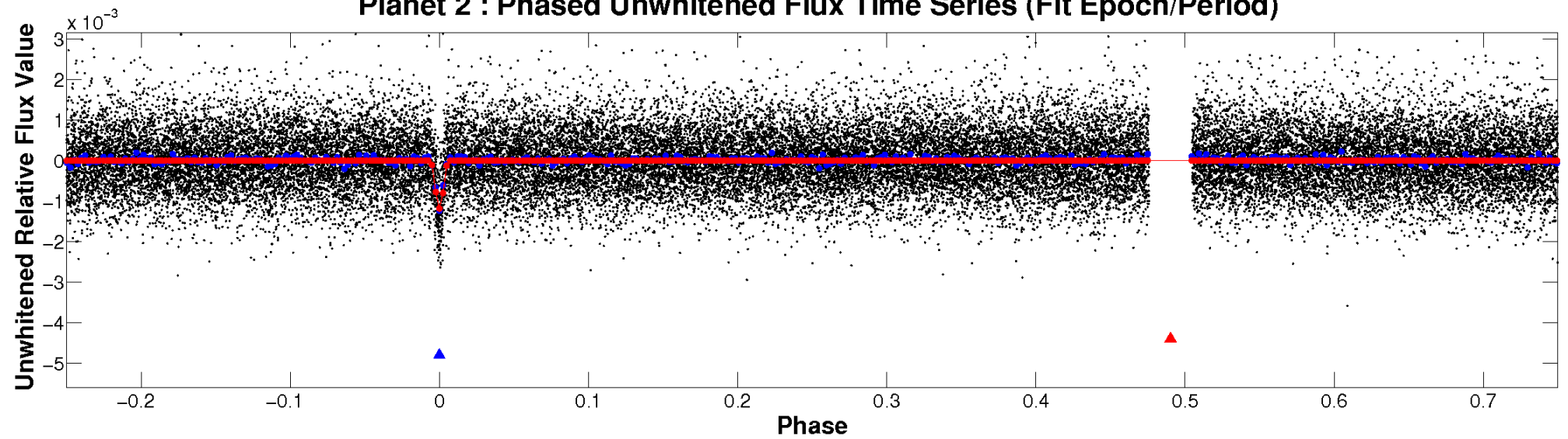
ALT Odd/Even

TCE 011100657-02

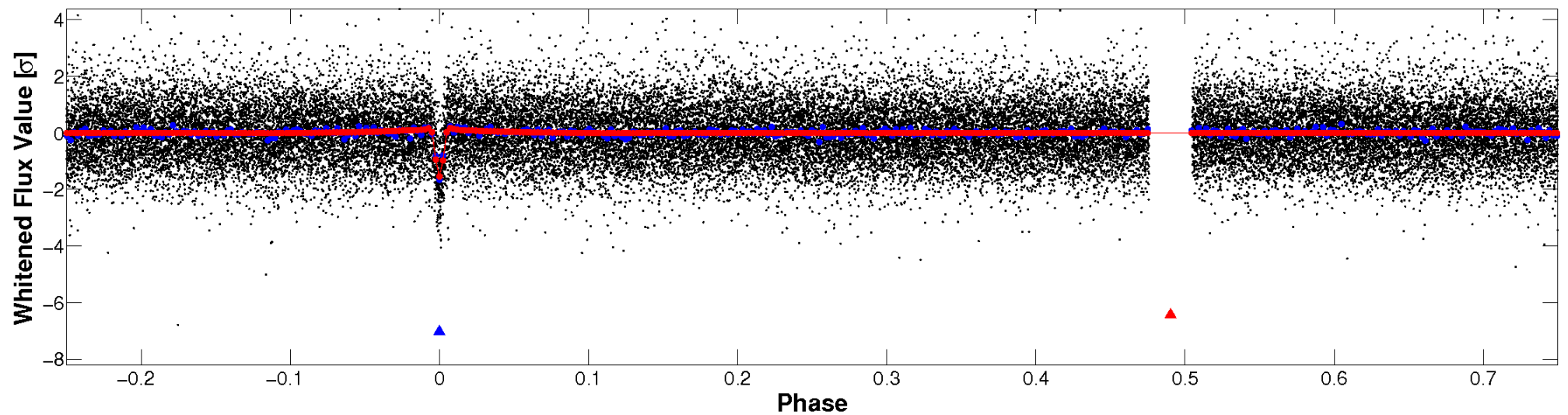


Non-Whitened Vs. Whitened Light Curve

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

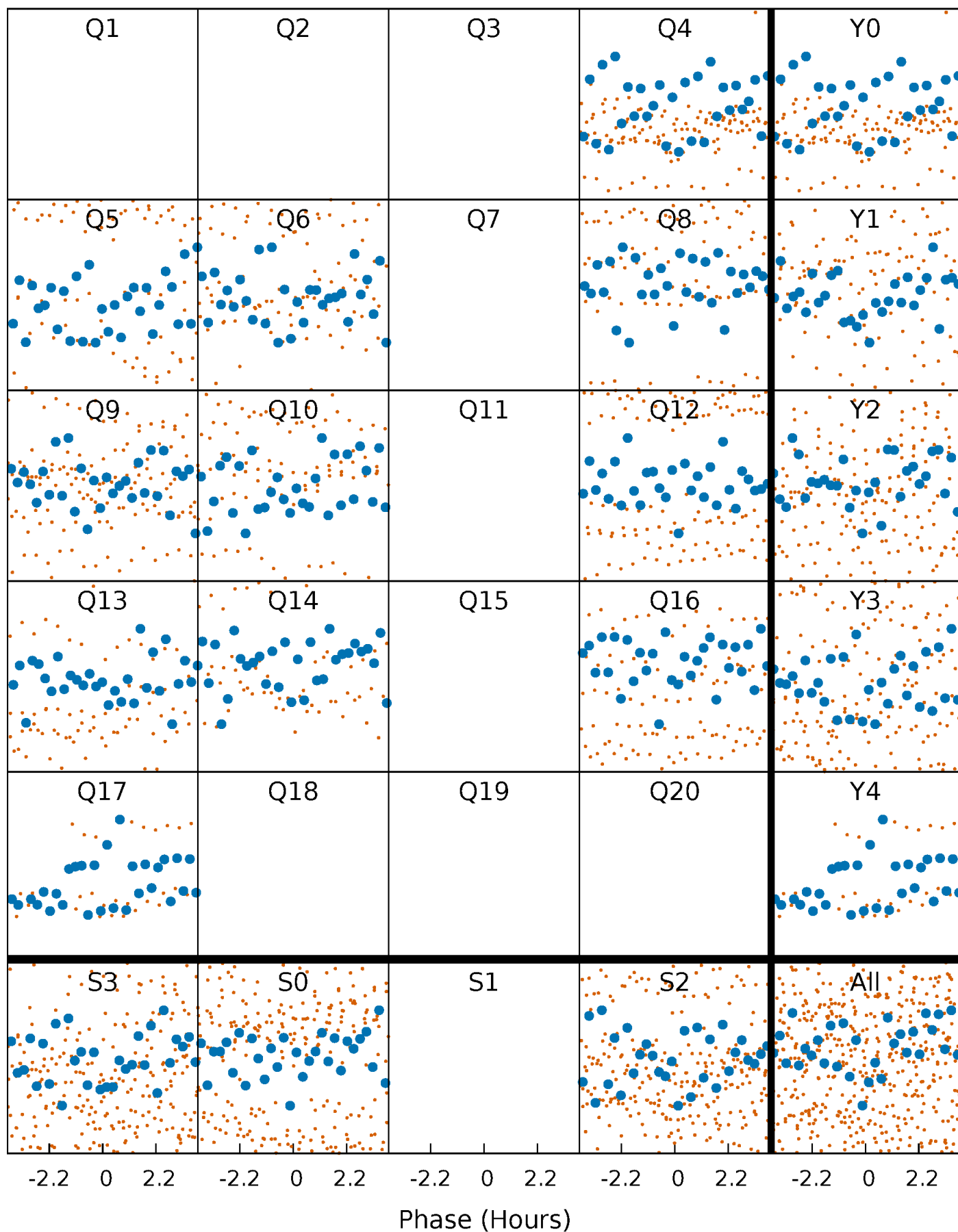


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



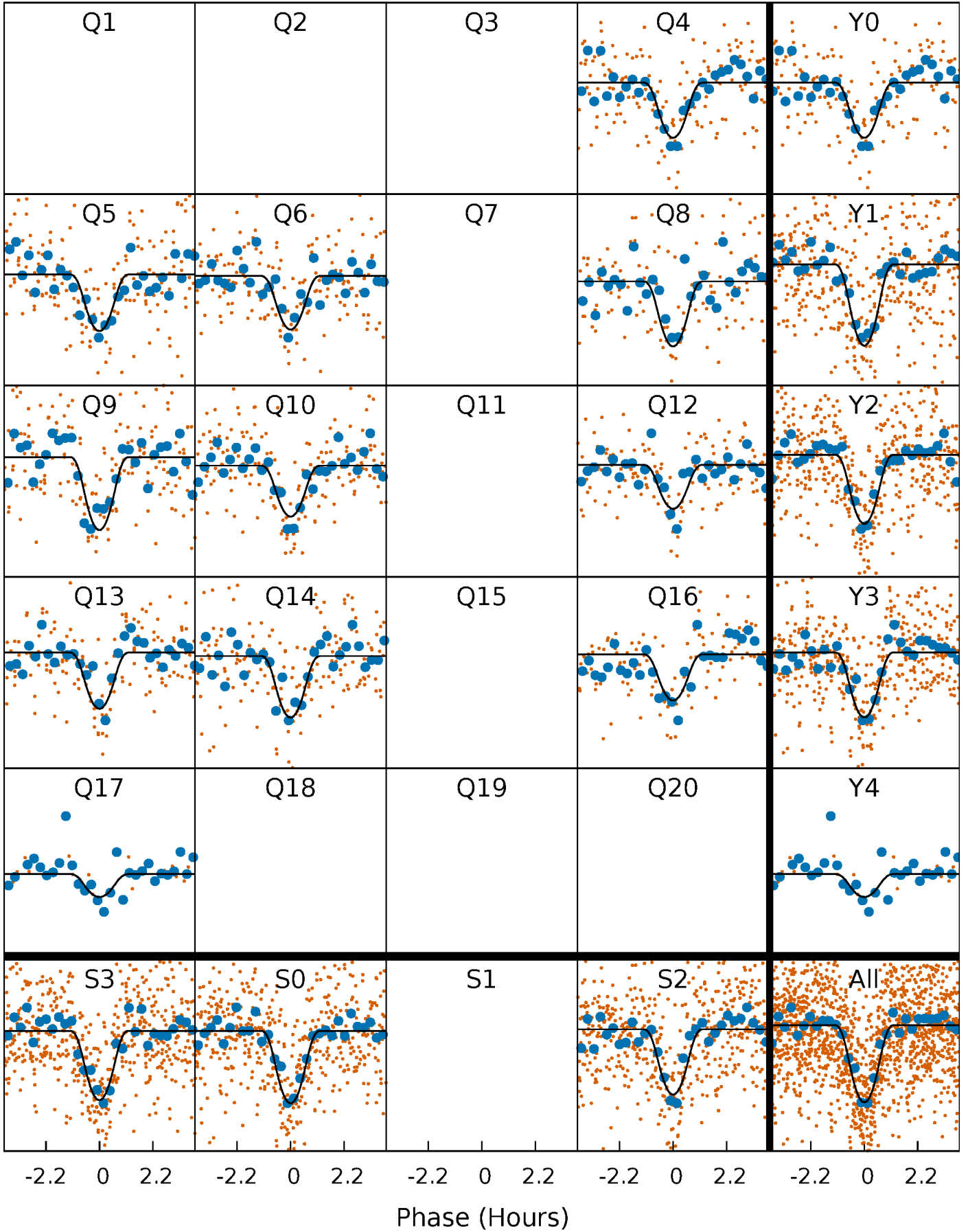
PDC Quarter-Phased Transit Curves

TCE 011100657-02 P= 8.344096 Days $T_0=132.457688$ (BKJD)



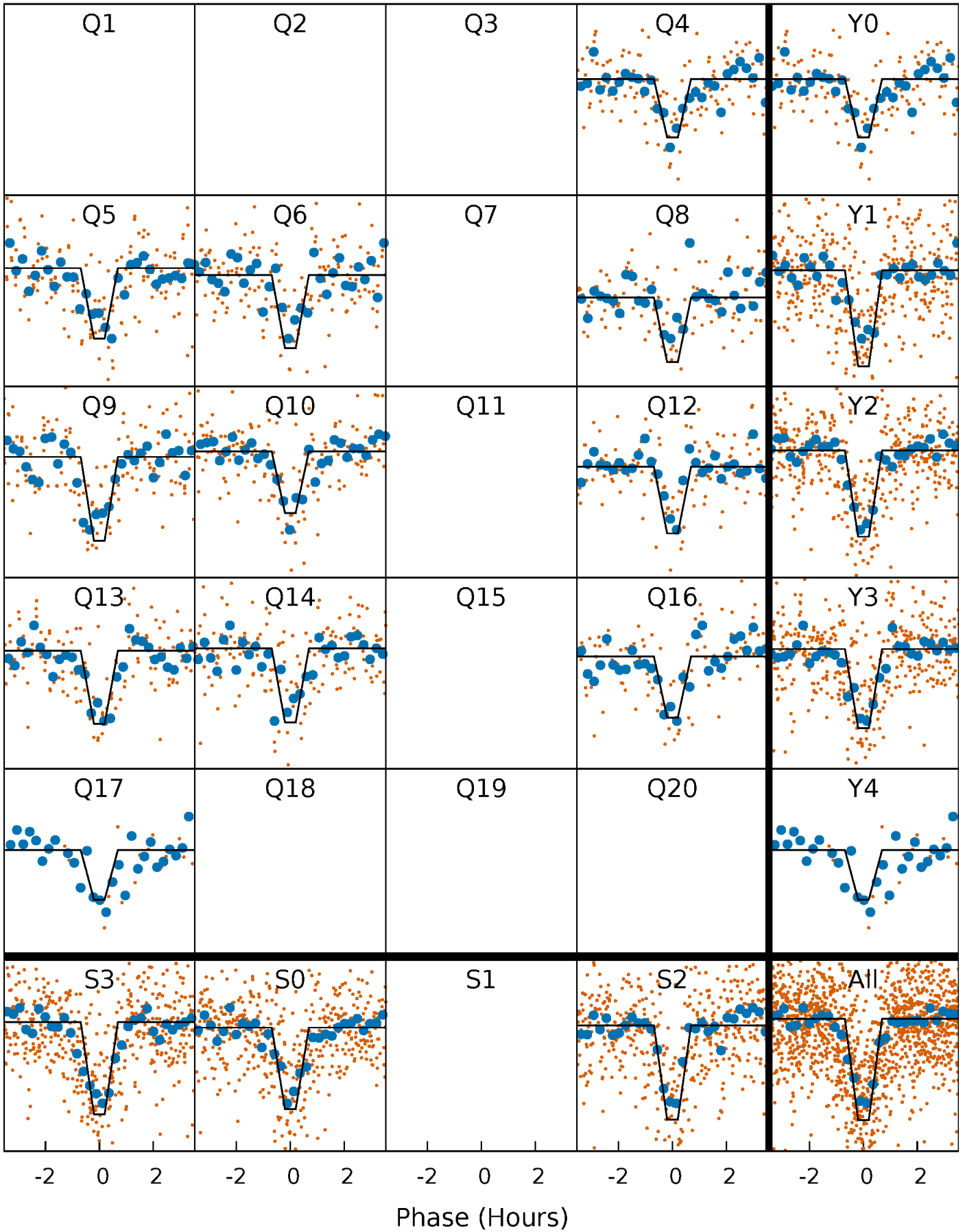
DV Quarter-Phased Transit Curves

TCE 011100657-02 P= 8.344096 Days $T_0=132.457688$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

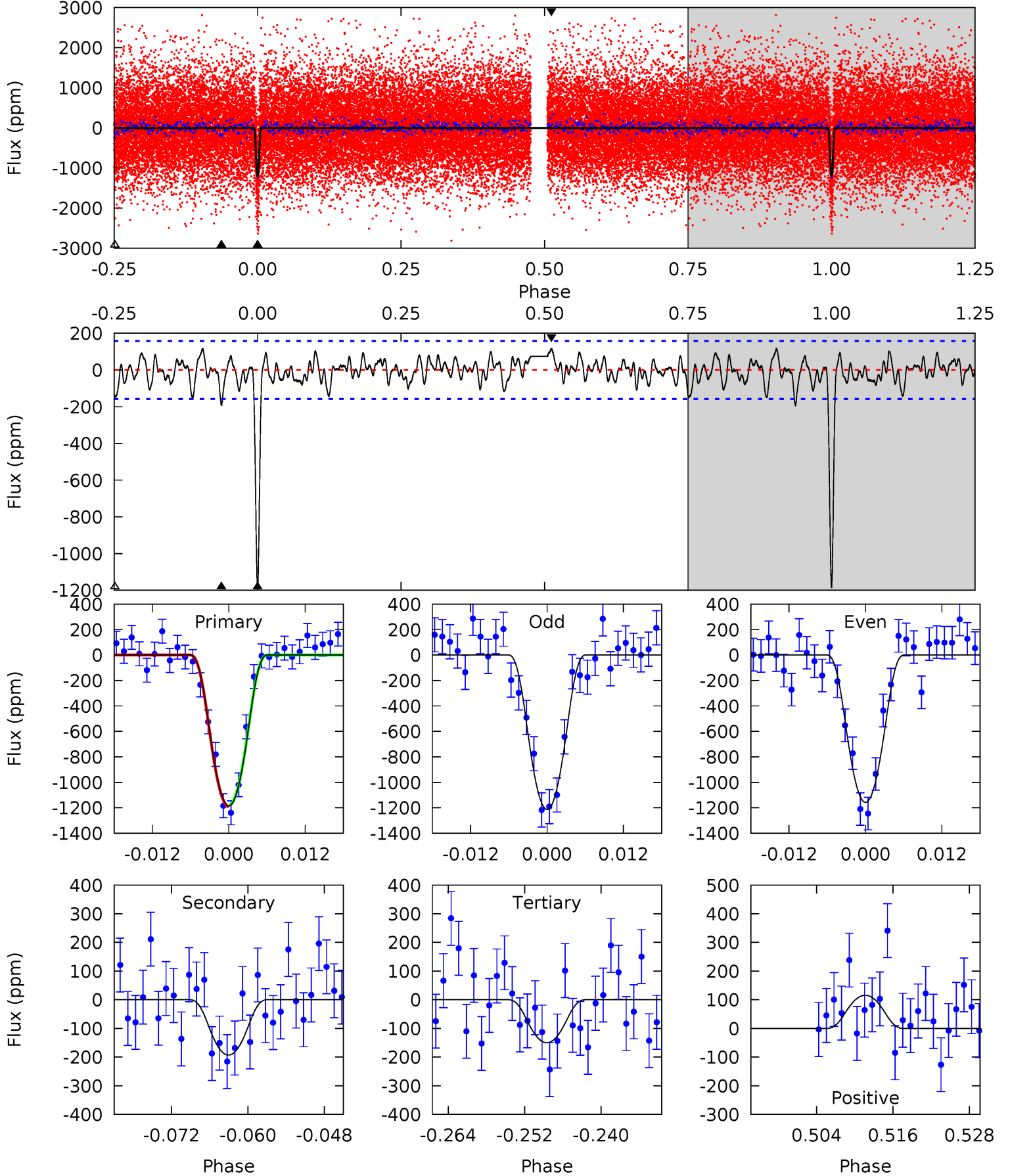
TCE 011100657-02 $P = 8.344126$ Days $T_0 = 132.453797$ (BKJD)



DV Model-Shift Uniqueness Test

011100657-02, P = 8.344096 Days, E = 132.457688 Days

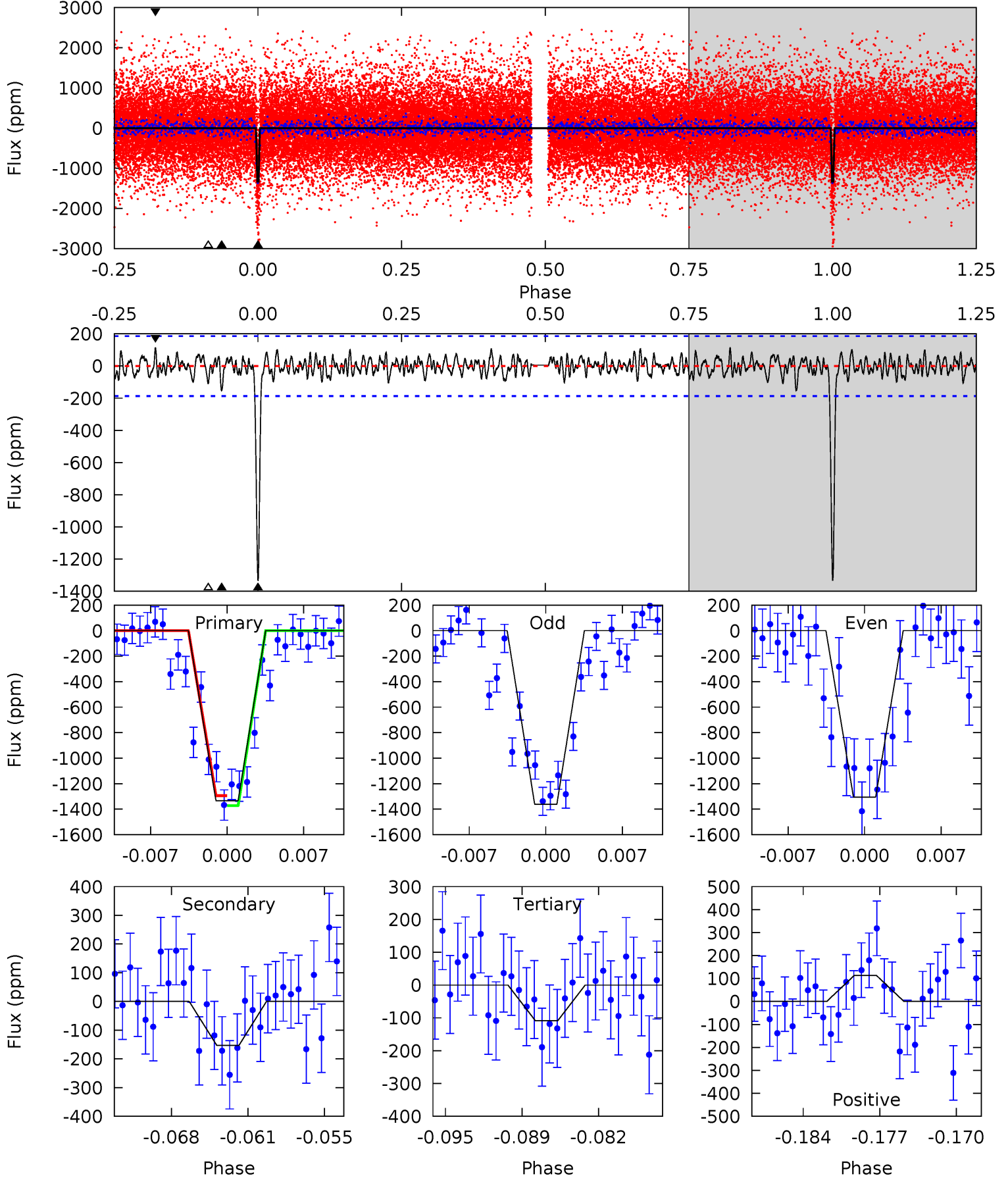
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.5	6.11	4.74	3.66	4.99	2.51	1.57	32.7	33.8	1.37	2.45	0.89	0.93	0.09	0.19



Alt Model-Shift Uniqueness Test

011100657-02, P = 8.344126 Days, E = 132.453797 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.5	4.18	2.98	3.10	5.10	2.71	1.13	33.5	33.4	1.20	1.09	0.77	1.01	0.08	1.07



Stellar Parameters For KIC 011100657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5447^{+179}_{-179}	$4.559^{+0.038}_{-0.162}$	$0.060^{+0.250}_{-0.300}$	$0.838^{+0.199}_{-0.080}$	$0.928^{+0.083}_{-0.101}$	$2.221^{+0.446}_{-0.936}$
	+3%/-3%	+1%/-4%	+417%/-500%	+24%/-10%	+9%/-11%	+20%/-42%
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 011100657-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-193 ± 32	$5.37^{+3.86}_{-3.14}$	1119^{+66}_{-49}	3244^{+1197}_{-465}	23^{+110}_{-15}
Alt.	-153 ± 37	$4.75^{+3.95}_{-3.20}$	1122^{+61}_{-51}	3254^{+1504}_{-532}	22^{+162}_{-16}

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 $A_{obs} \gg 1.0$

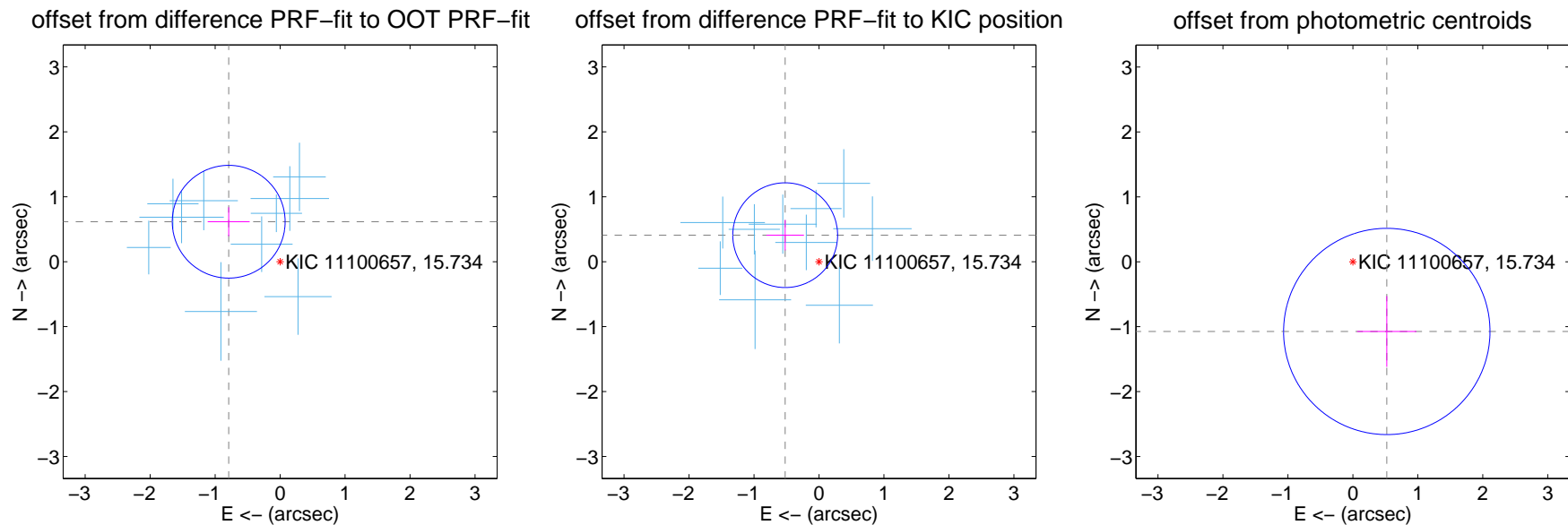
DV Centroid Data

Supplemental centroid analysis for 011100657-02. Kepler magnitude: 15.73. Transit SNR 21.38

There are 10 quarters with good PRF difference image offsets

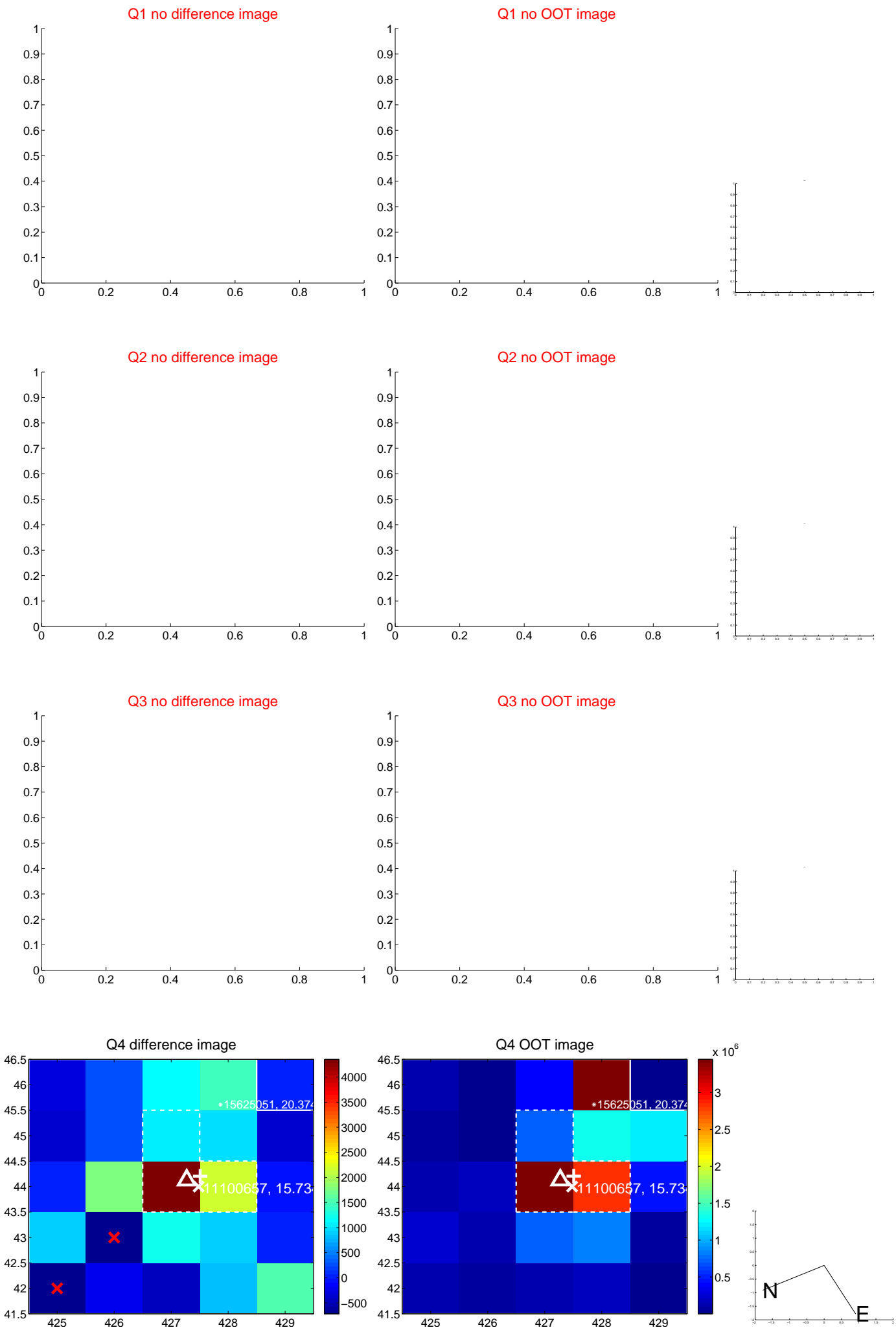
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.003 \pm 0.289	3.46	0.791 \pm 0.323	0.616 \pm 0.223
PRF-fit source offset from KIC position	0.661 \pm 0.269	2.46	0.520 \pm 0.289	0.409 \pm 0.233
photometric centroid source offset	1.19 \pm 0.53	2.25	-0.52 \pm 0.46	-1.07 \pm 0.55

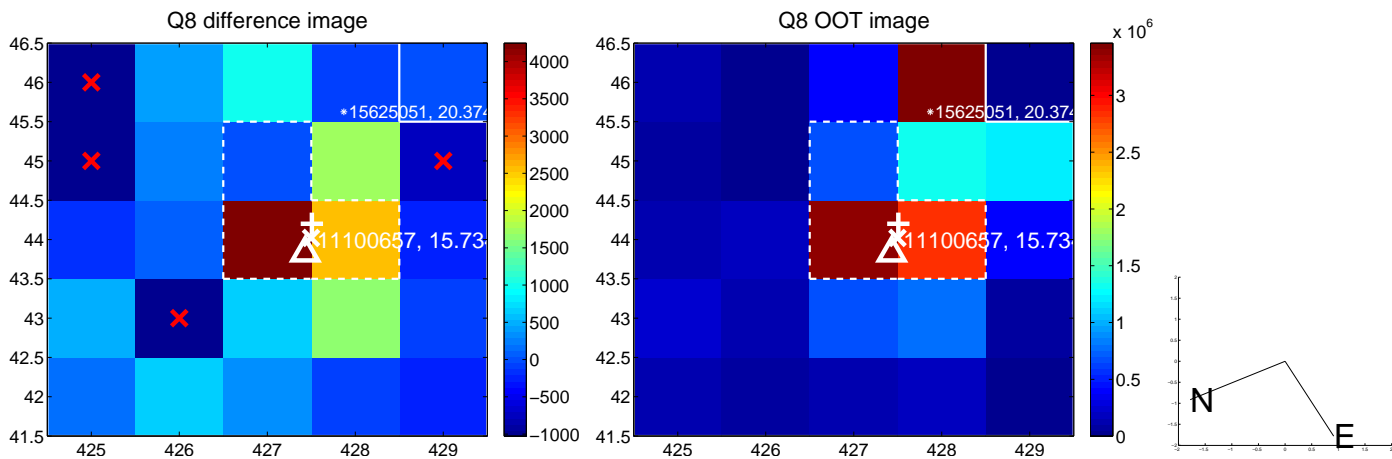
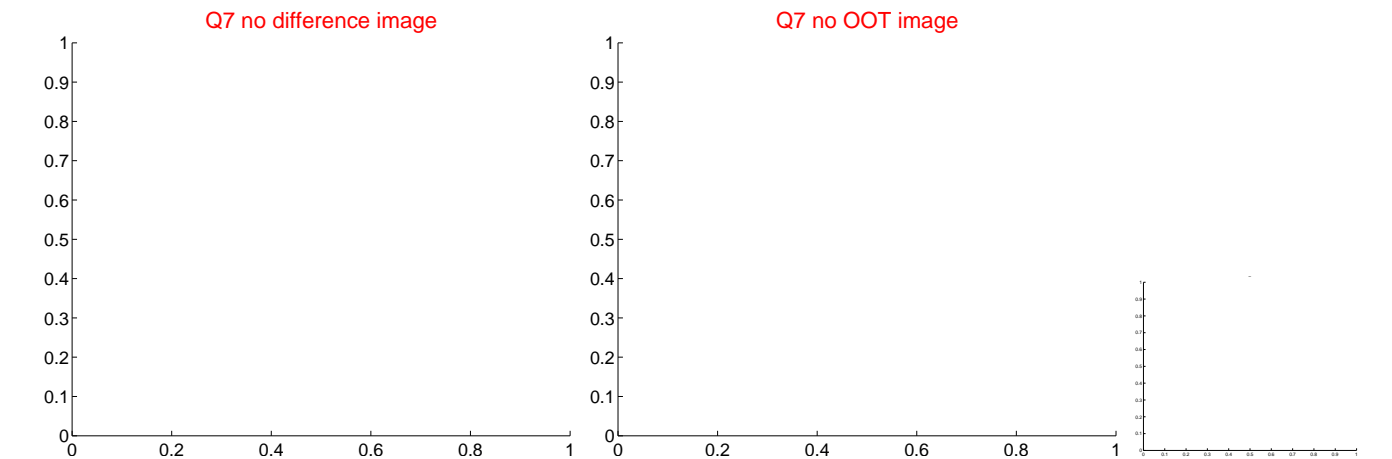
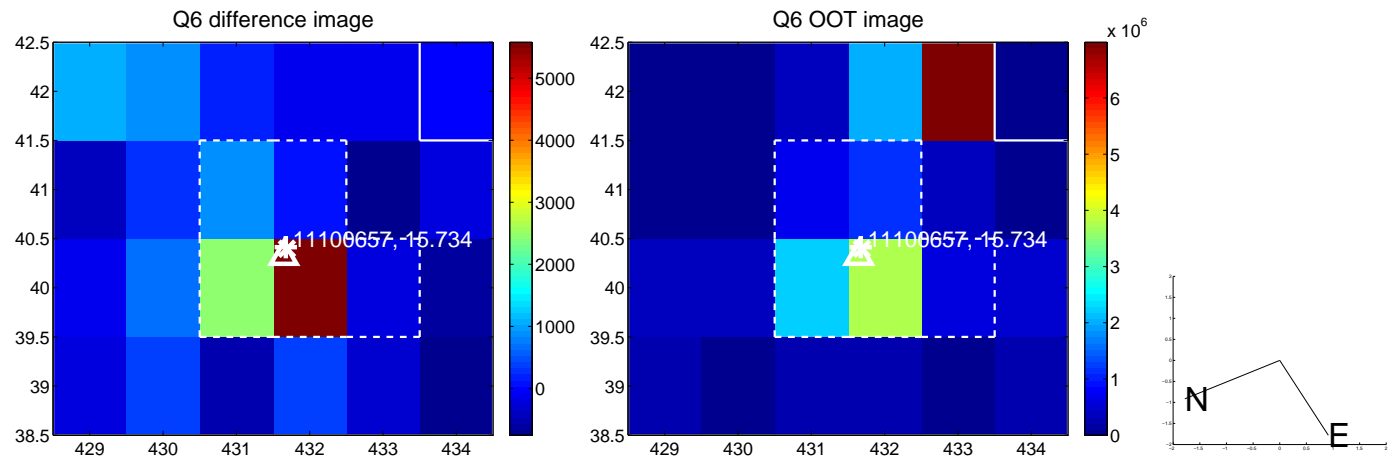
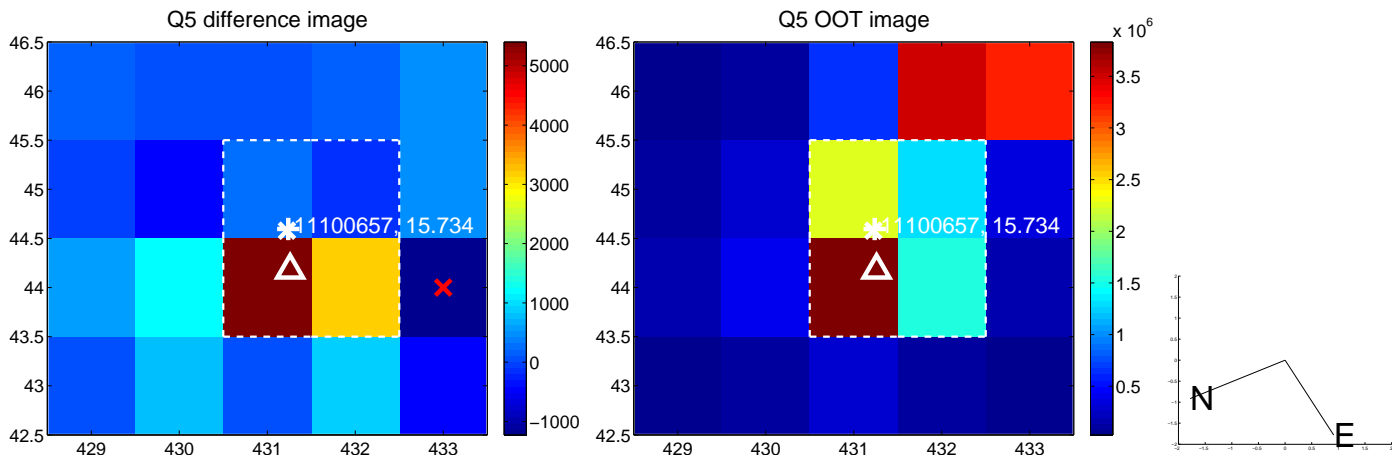


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

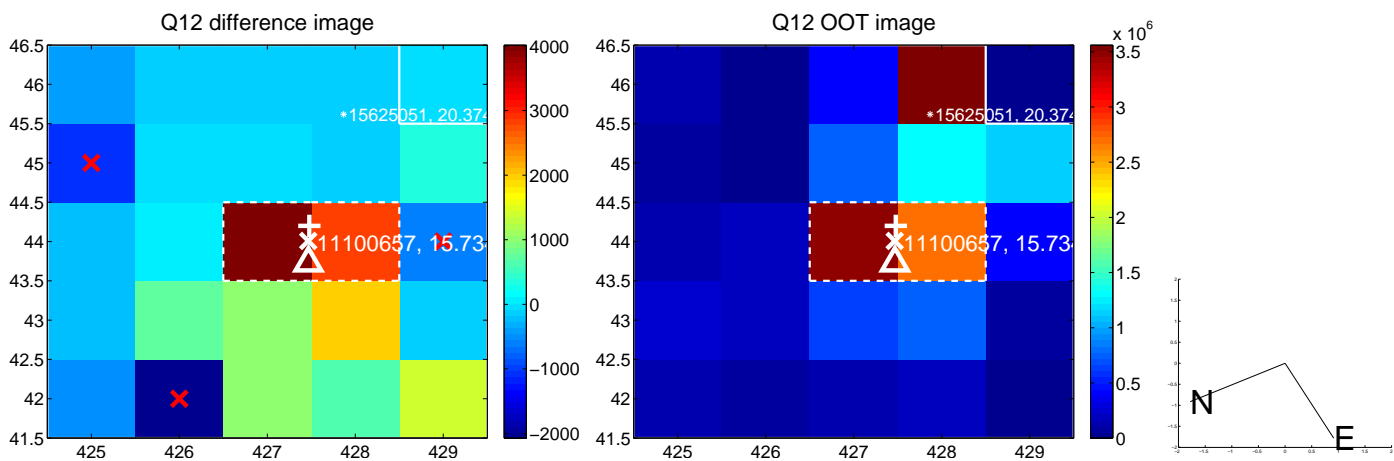
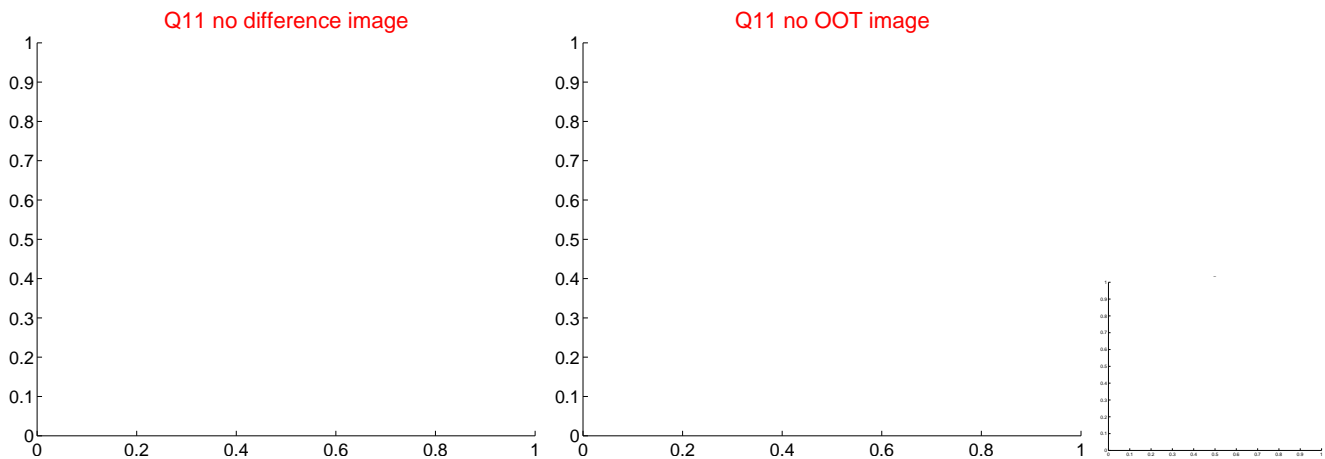
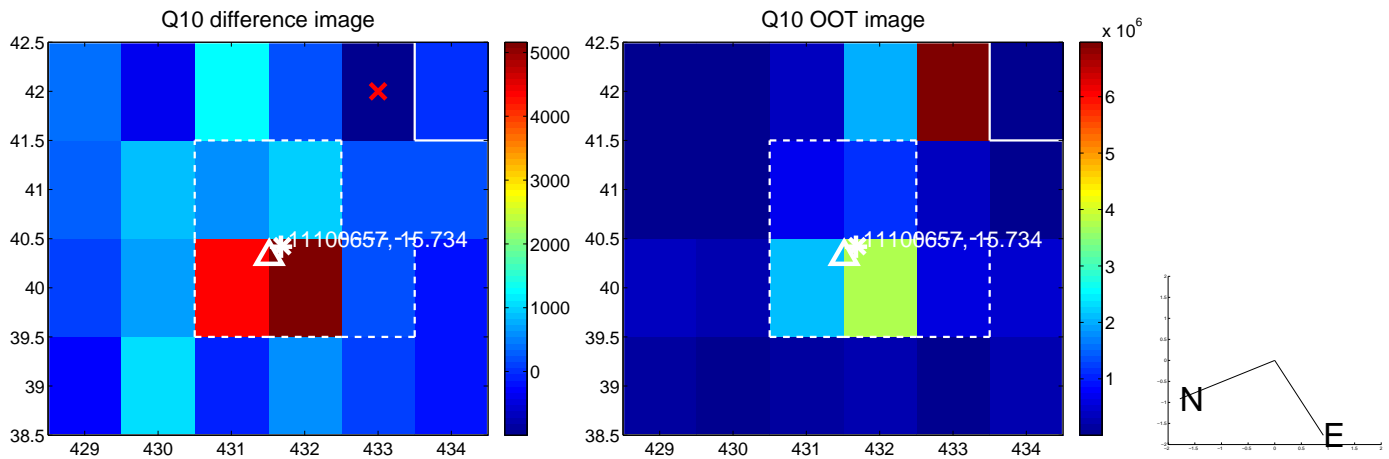
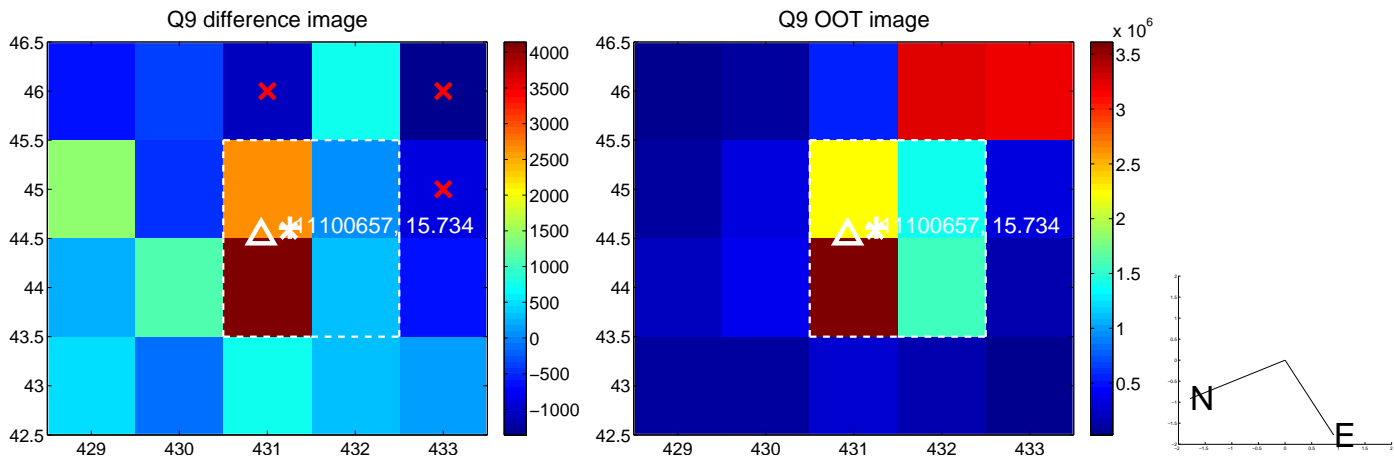
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



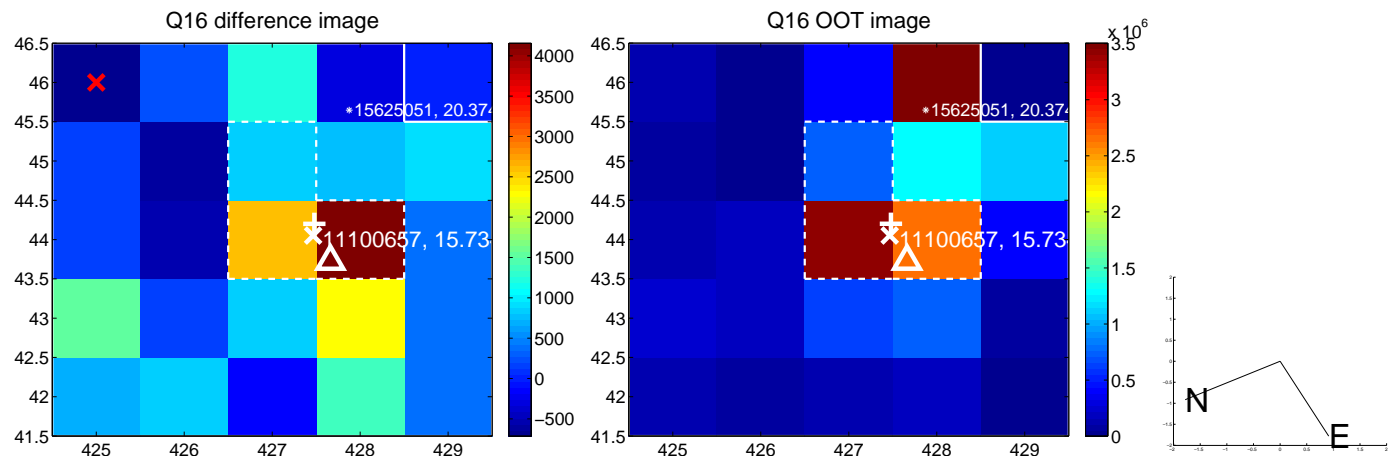
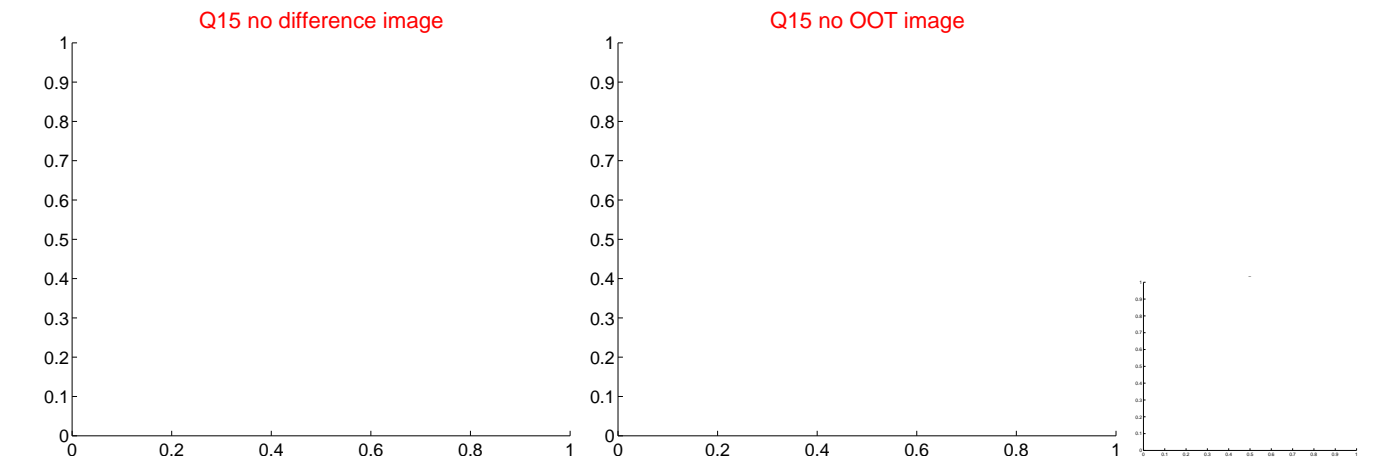
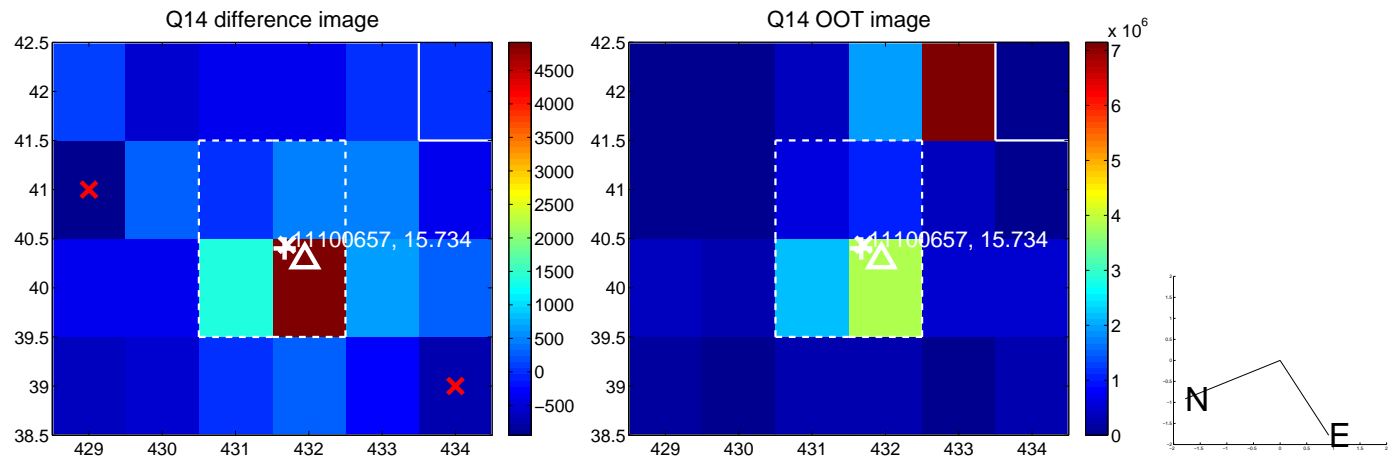
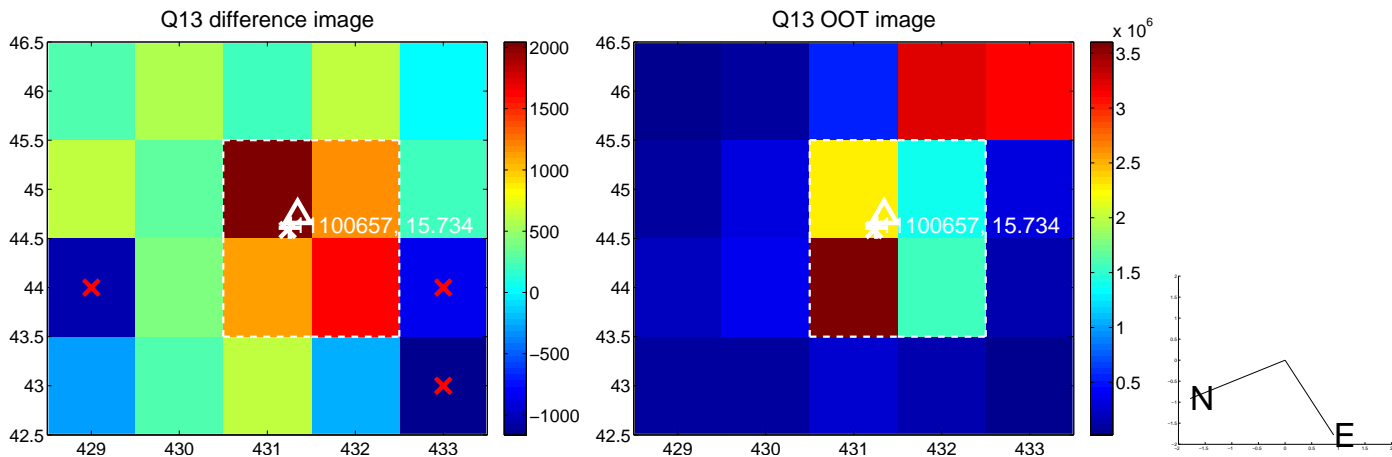
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



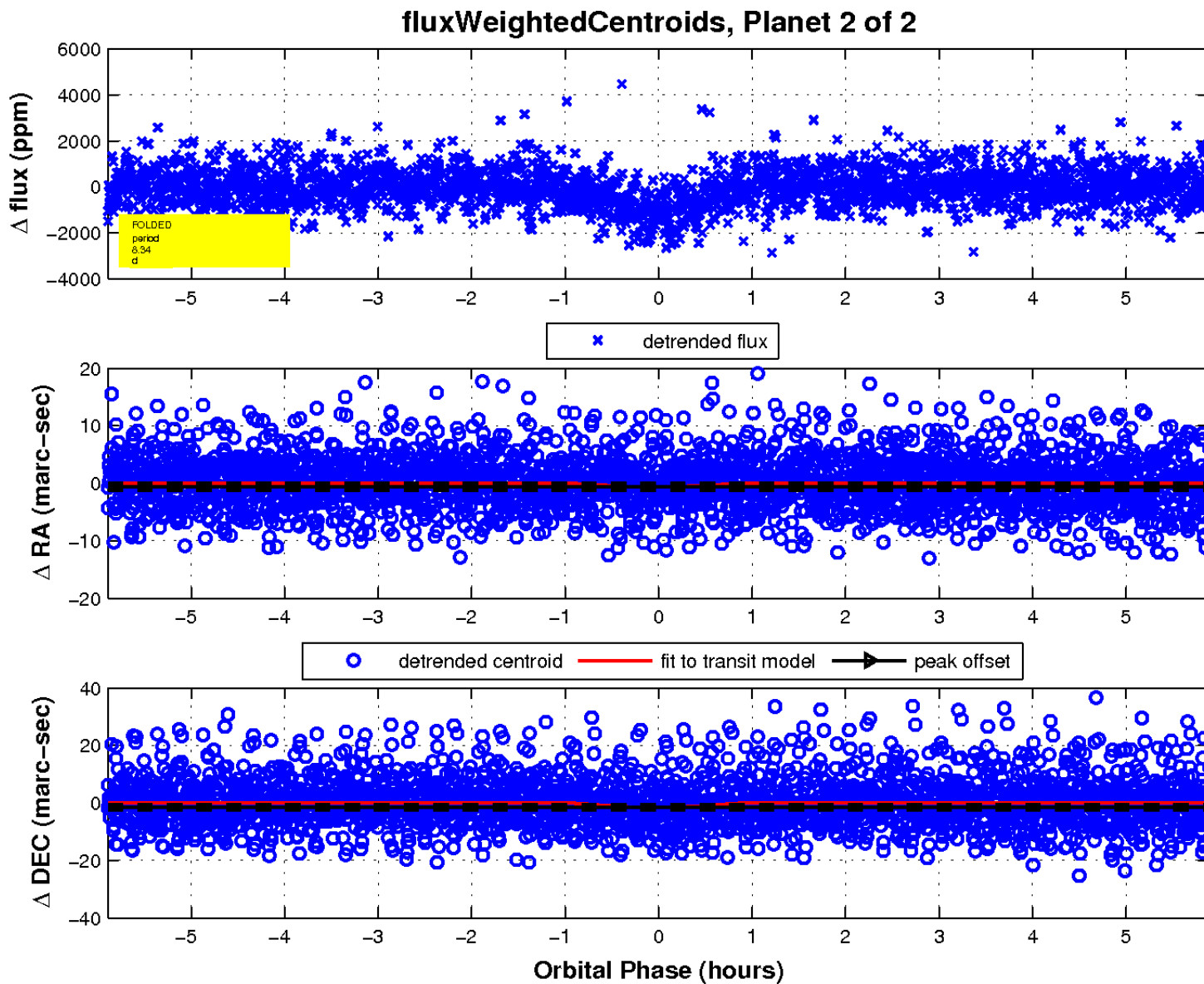
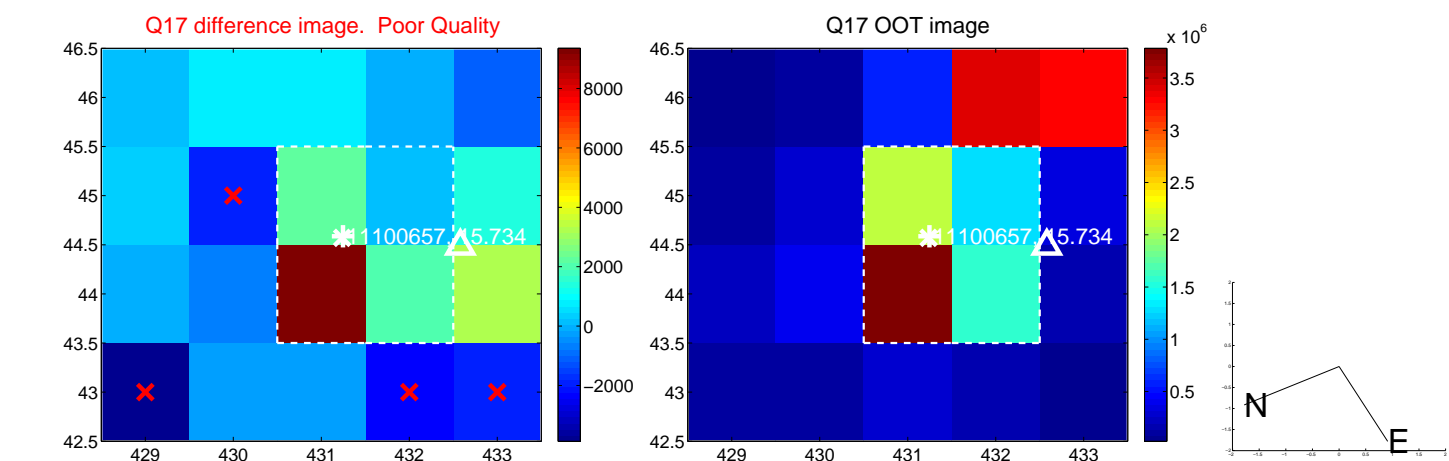
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UKIRT Image

Declination

