

KIC 011717240

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})
011717240-01	OBS	No	3.744387	132.355153	8.6	14.672	9.5	8.4	3.21	7072	1.09	6279.93
011717240-02	OBS	No	3.744251	133.969188	9.7	19.422	10.1	11.4	3.21	7072	1.03	6280.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011717240-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011717240-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_MEAS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

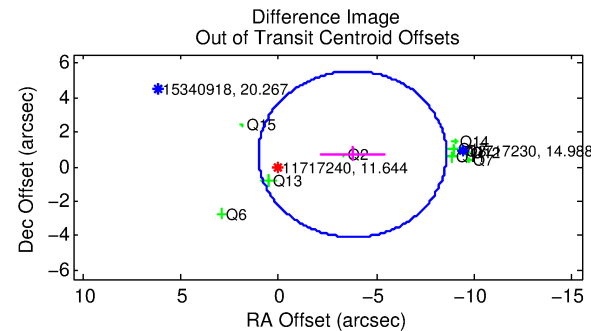
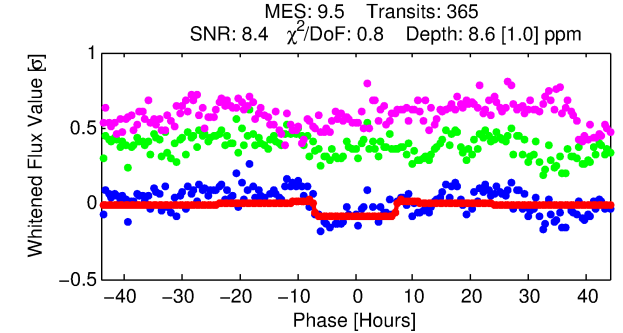
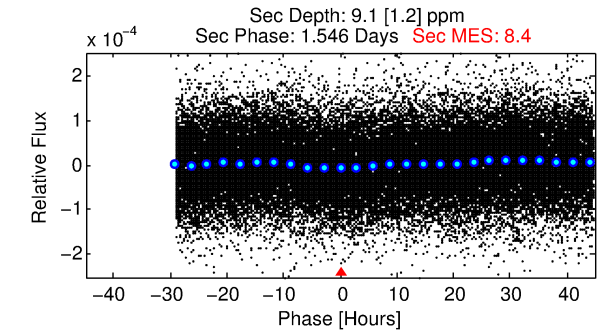
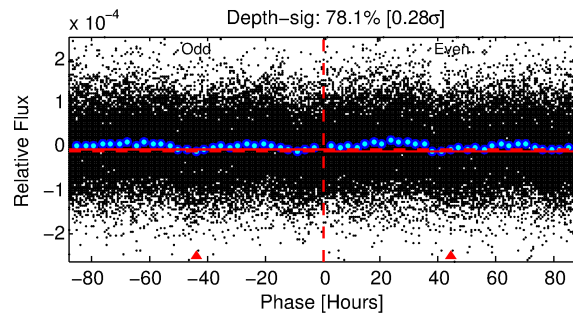
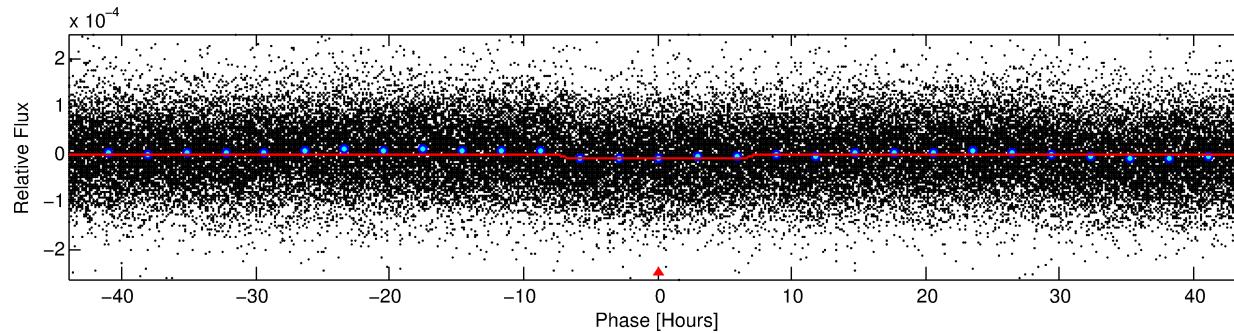
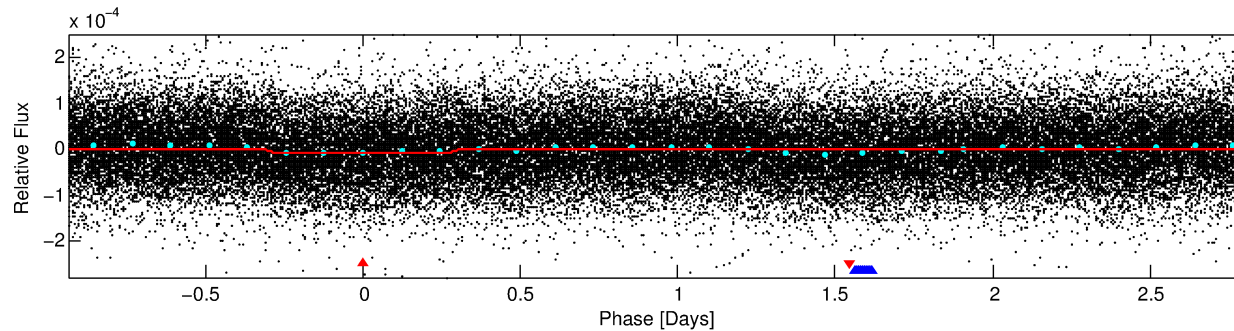
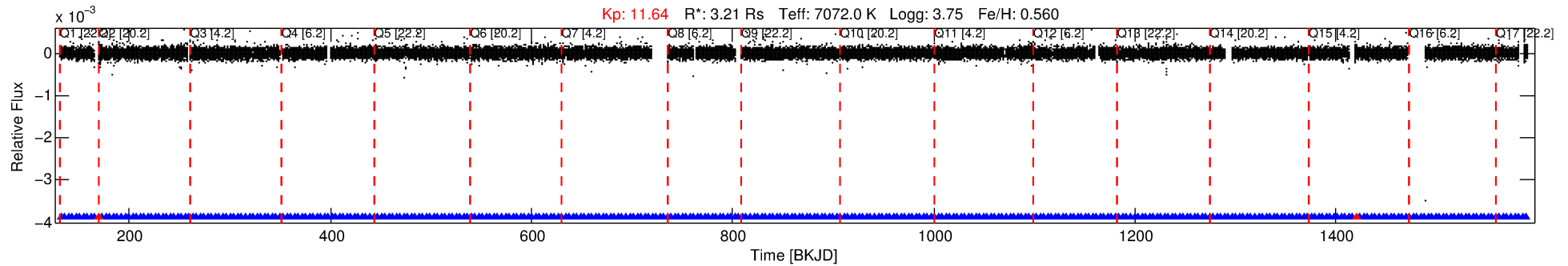
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011717240-01

No Significant Match Found

DV One-Page Summary

KIC: 11717240 Candidate: 1 of 2 Period: 3.744 d



DV Fit Results:

Period = 3.74439 [0.00007] d
Epoch = 132.3552 [0.0121] BKJD
Rp/R* = 0.0031 [0.0006]
a/R* = 1.28 [0.52]
b = 0.90 [0.23]
Seff = 6279.93 [1846.46]
Teq = 2270 [167] K
Rp = 1.09 [0.30] Re
a = 0.0606 [0.0115] AU
Ag = 15.55 [7.46] [1.95 σ]
Teffp = 6970 [670] K [6.80 σ]

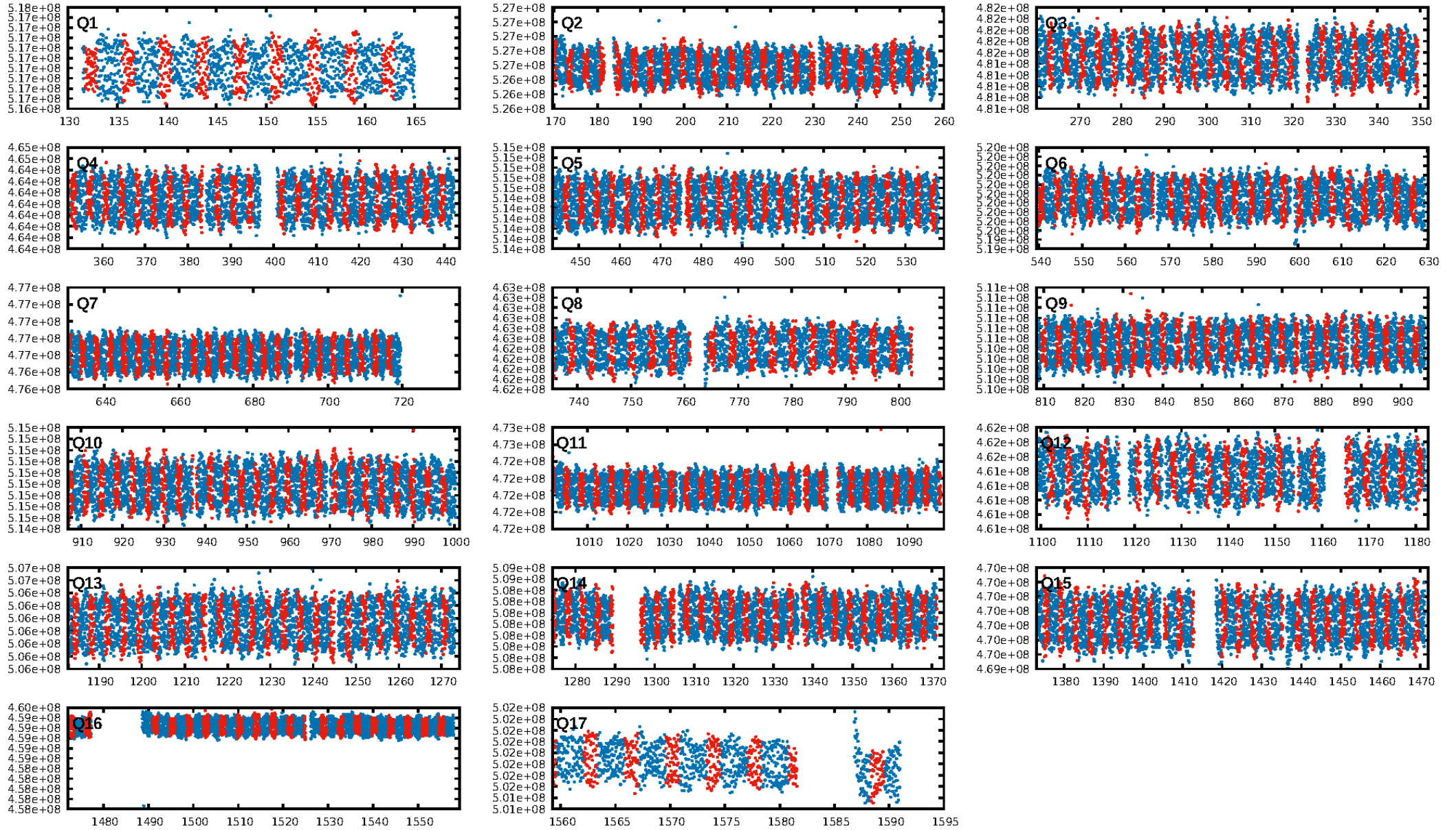
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [346/348]
GhostDiagnostic-chr: -10.27
Centroid-sig: 2.4%
Centroid-so: 2.621 arcsec [1.48 σ]
OotOffset-rm: 3.839 arcsec [2.40 σ]
OotOffset-st: 3/3/2/2 [10]
KicOffset-rm: 4.005 arcsec [2.75 σ]
KicOffset-st: 3/3/2/2 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 1.00 [17/17]

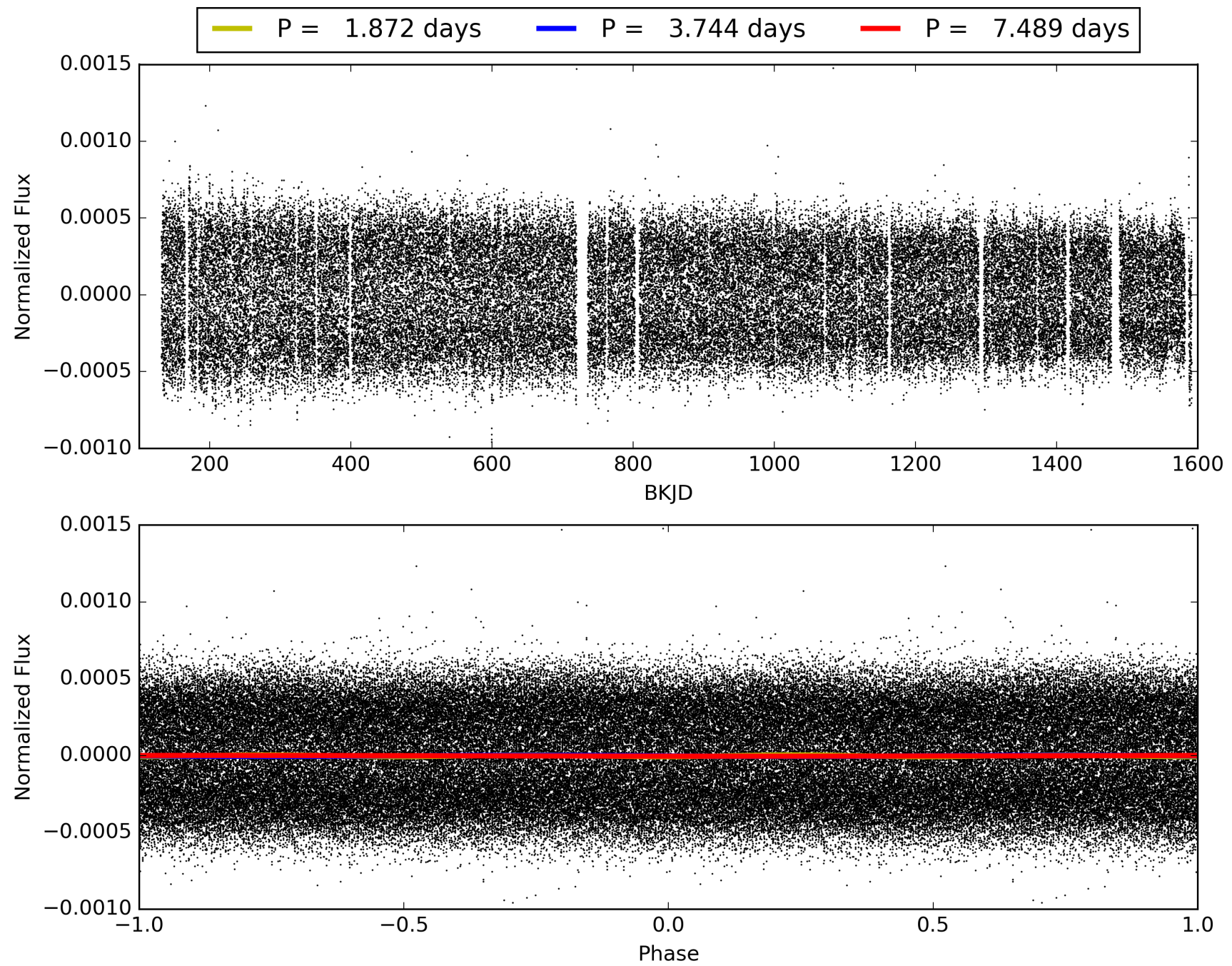
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:25:02 Z

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

TCE 011717240-01, PDC Light Curves

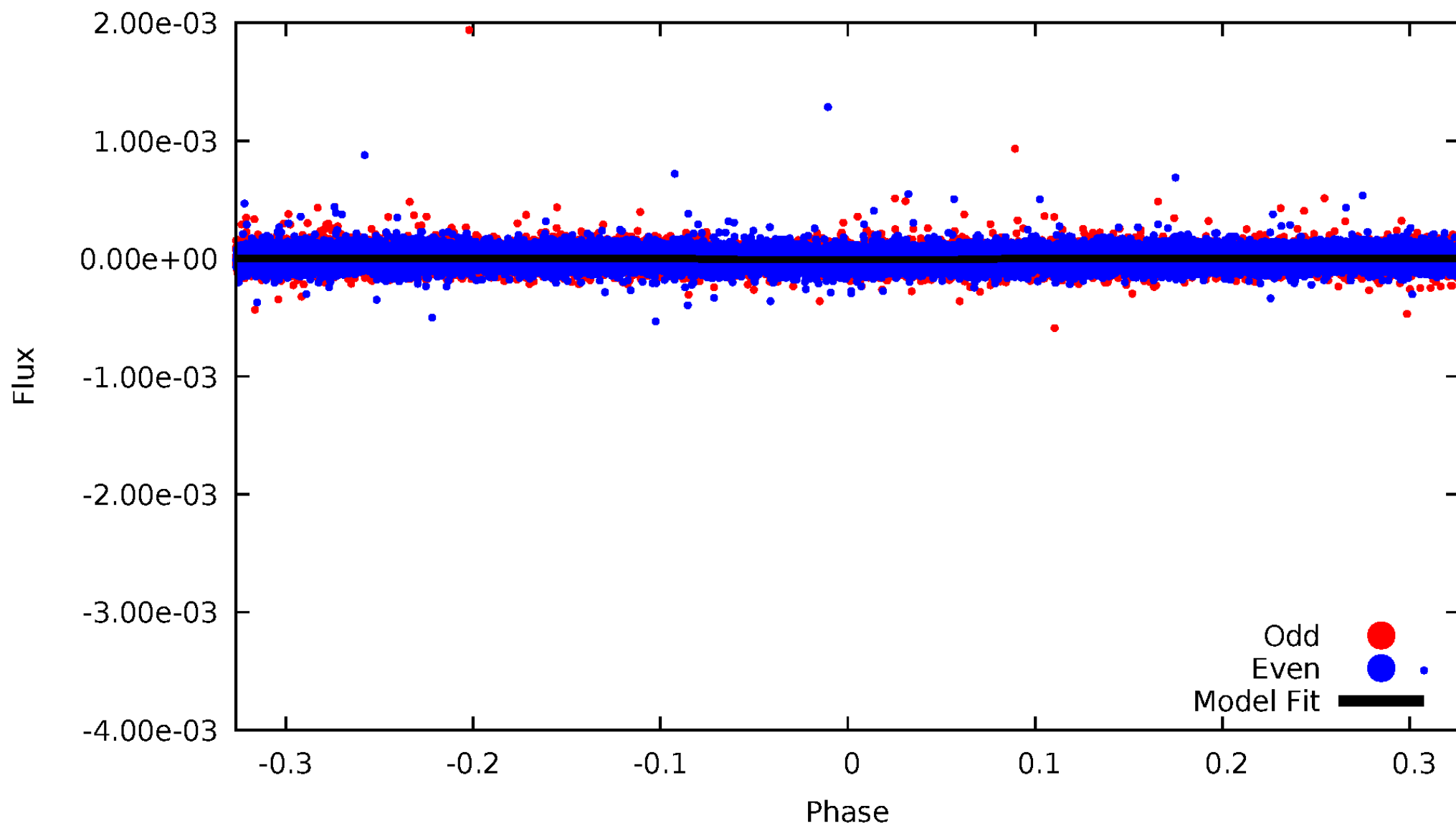


TCE 011717240-01



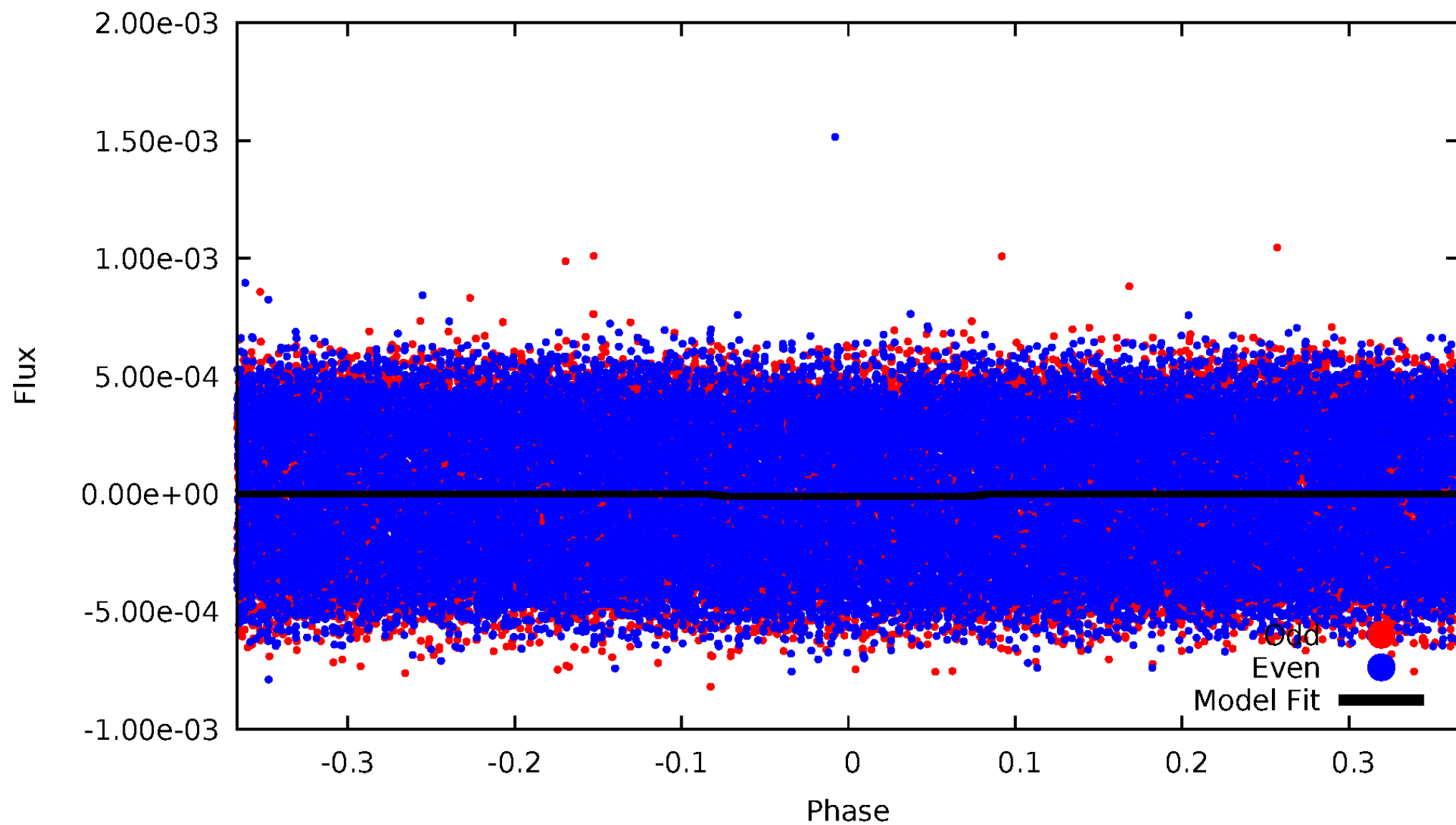
DV Odd/Even

TCE 011717240-01



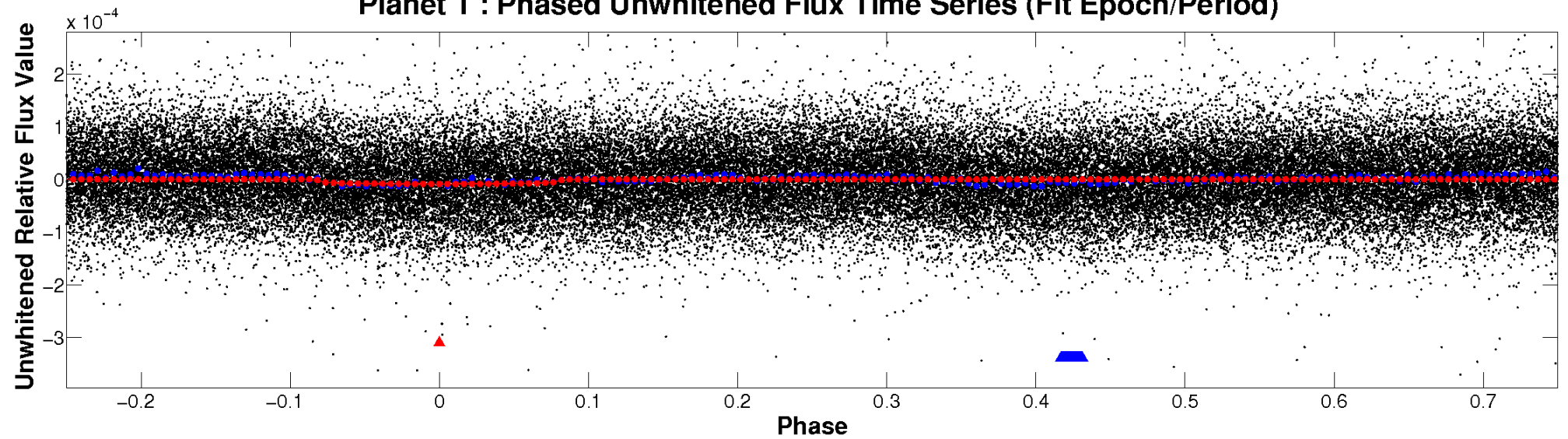
ALT Odd/Even

TCE 011717240-01

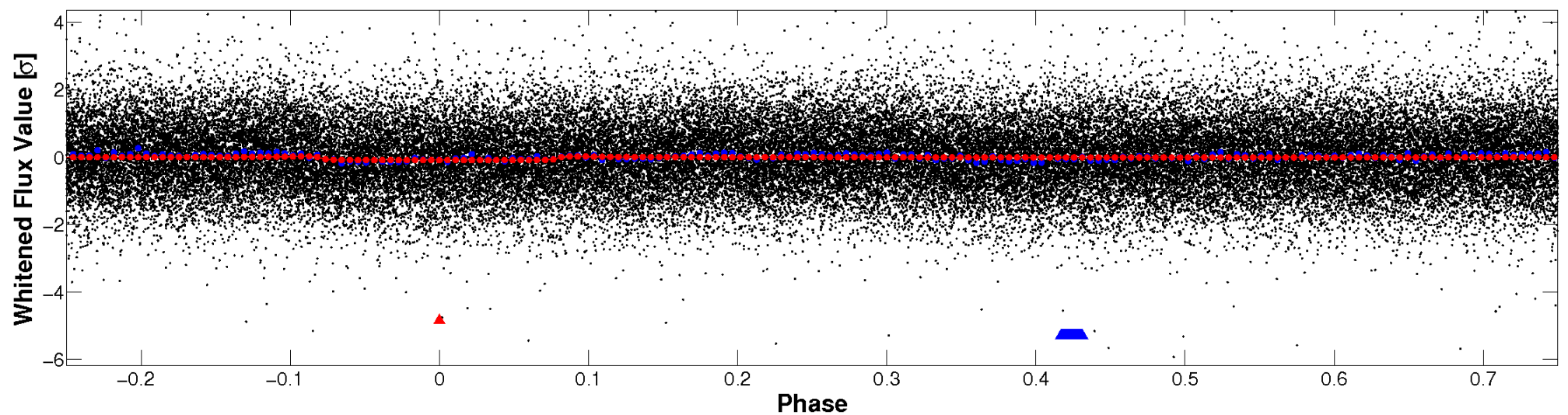


Non-Whitened Vs. Whitened Light Curve

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

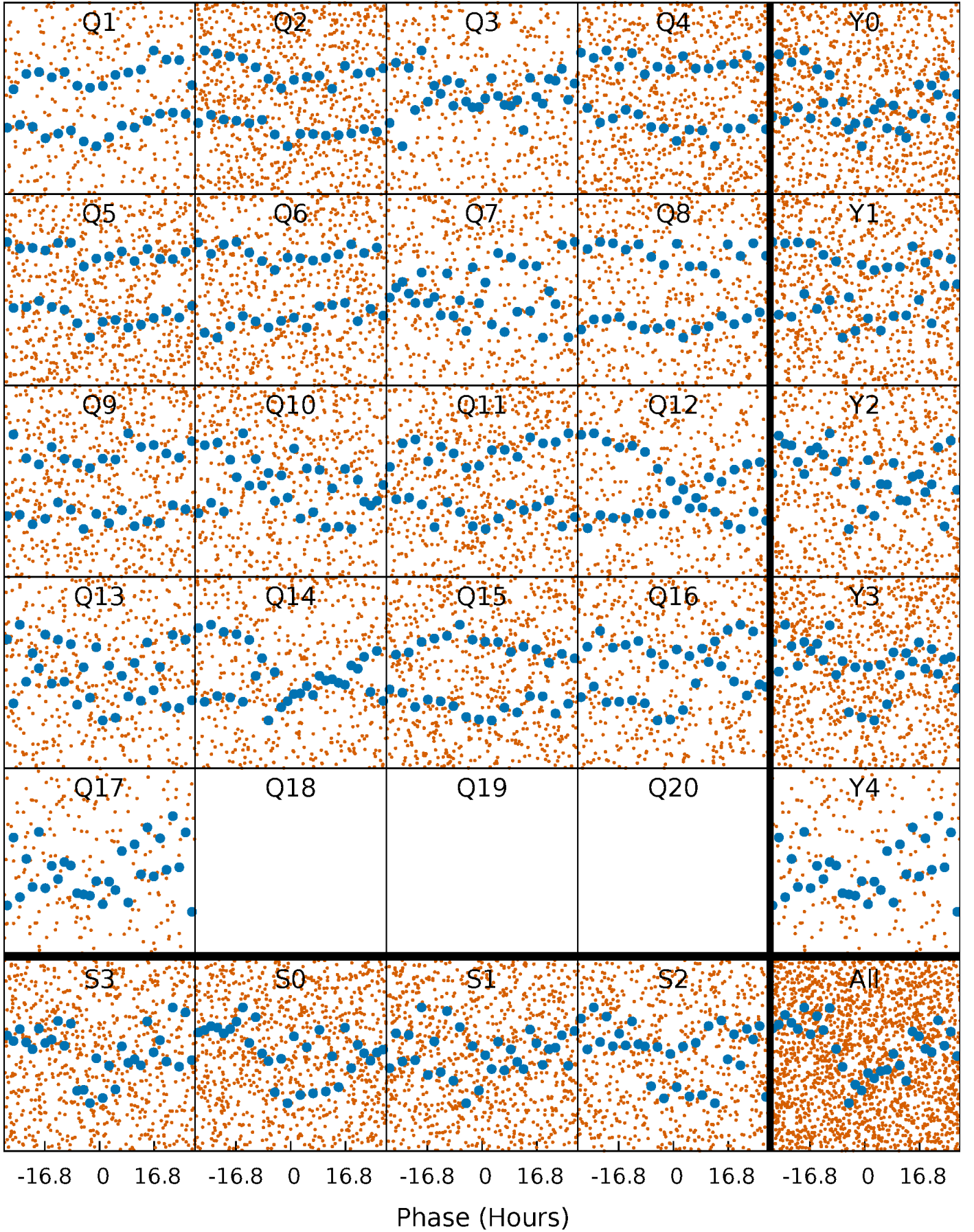


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



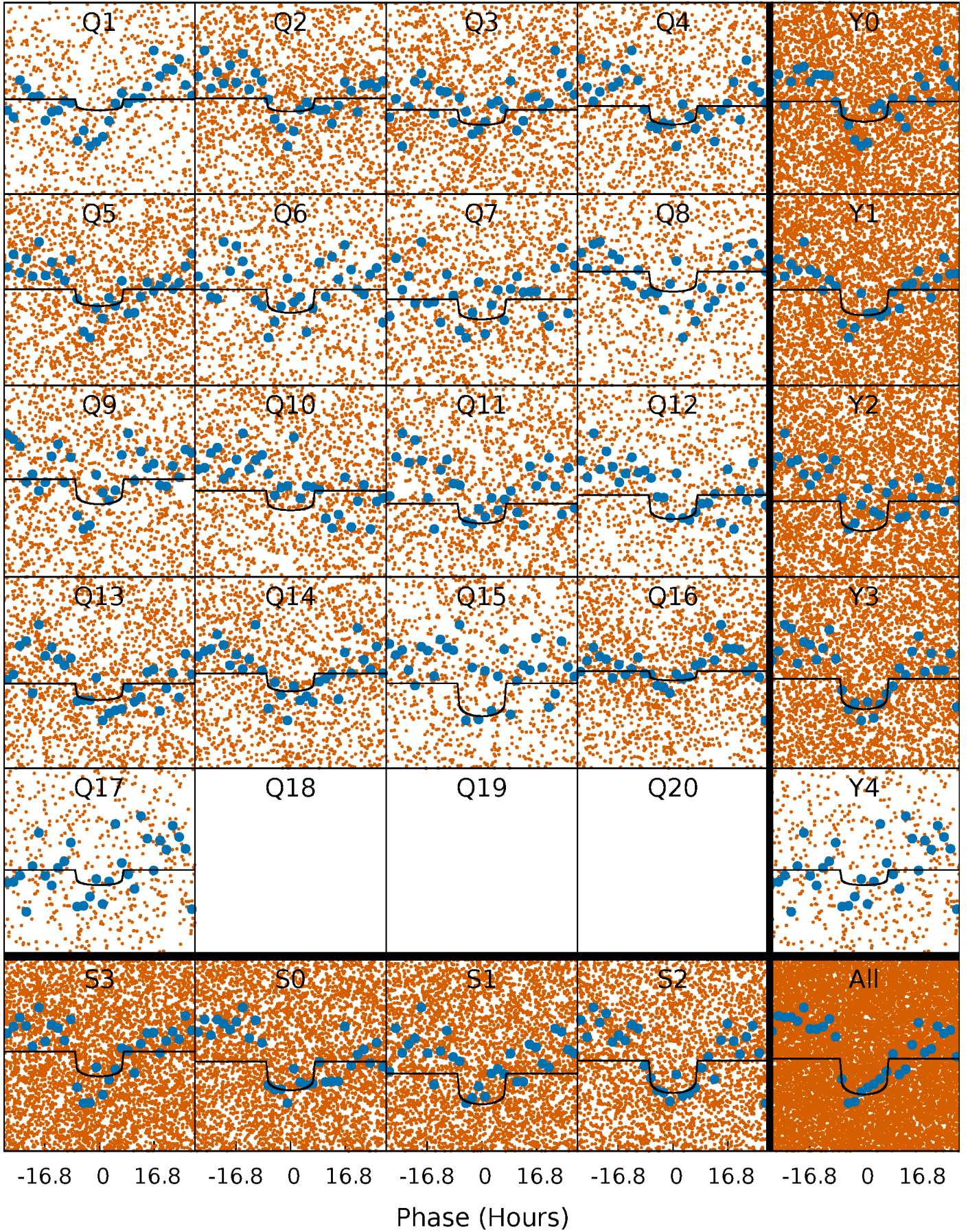
PDC Quarter-Phased Transit Curves

TCE 011717240-01 P= 3.744387 Days $T_0=132.355153$ (BKJD)



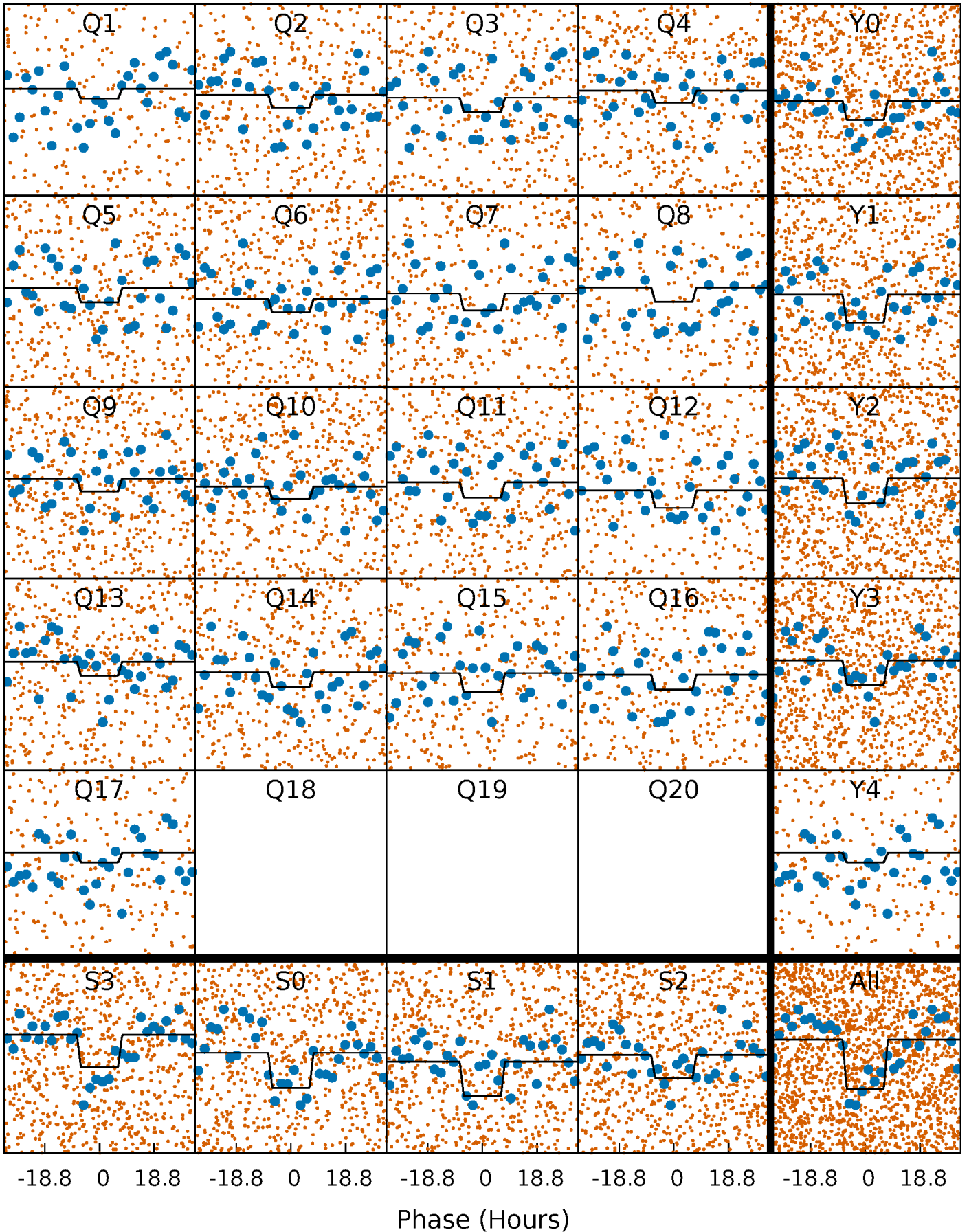
DV Quarter-Phased Transit Curves

TCE 011717240-01 P= 3.744387 Days $T_0=132.355153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

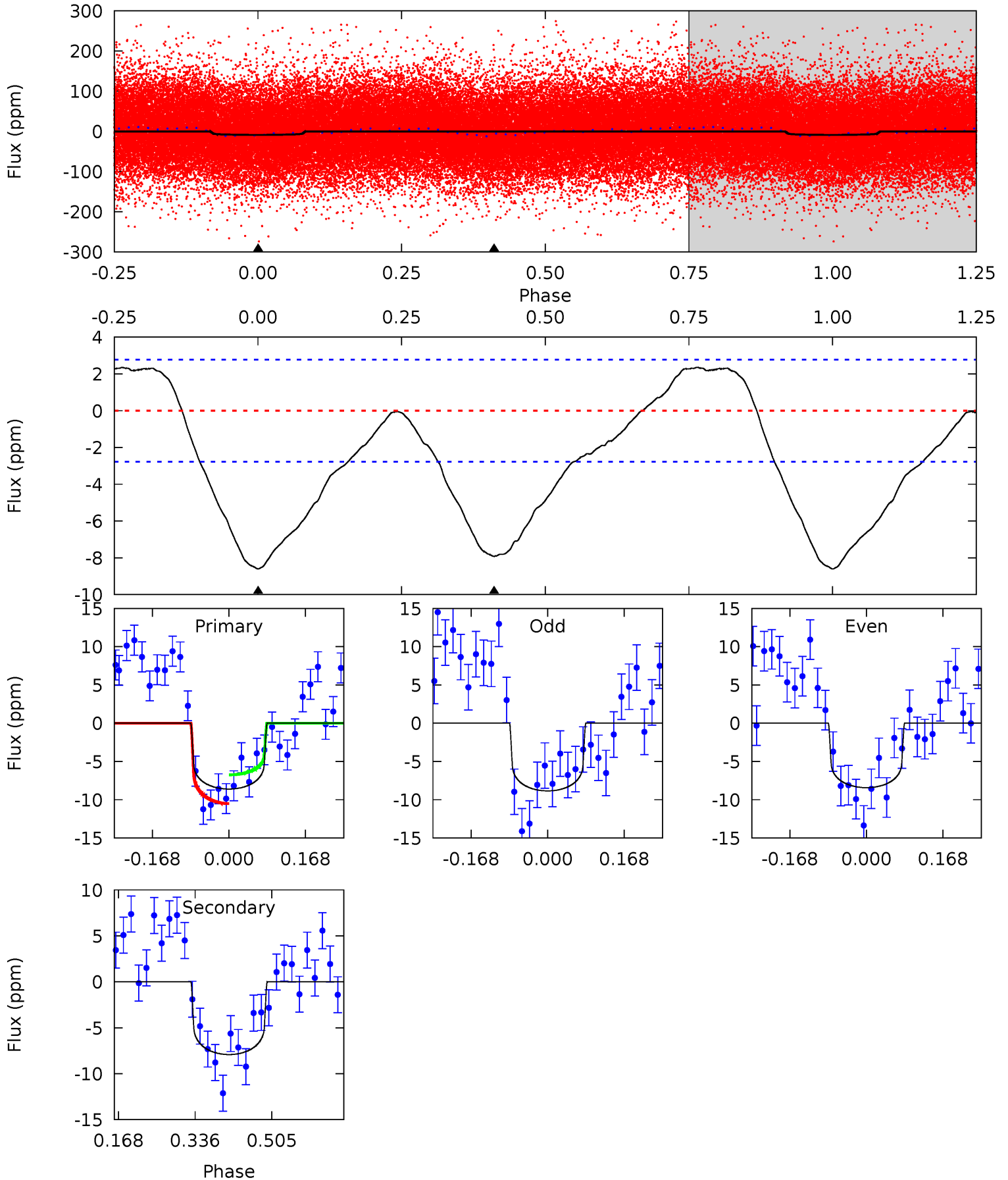
TCE 011717240-01 P= 3.744381 Days $T_0=132.346617$ (BKJD)



DV Model-Shift Uniqueness Test

011717240-01, P = 3.744387 Days, E = 128.610766 Days

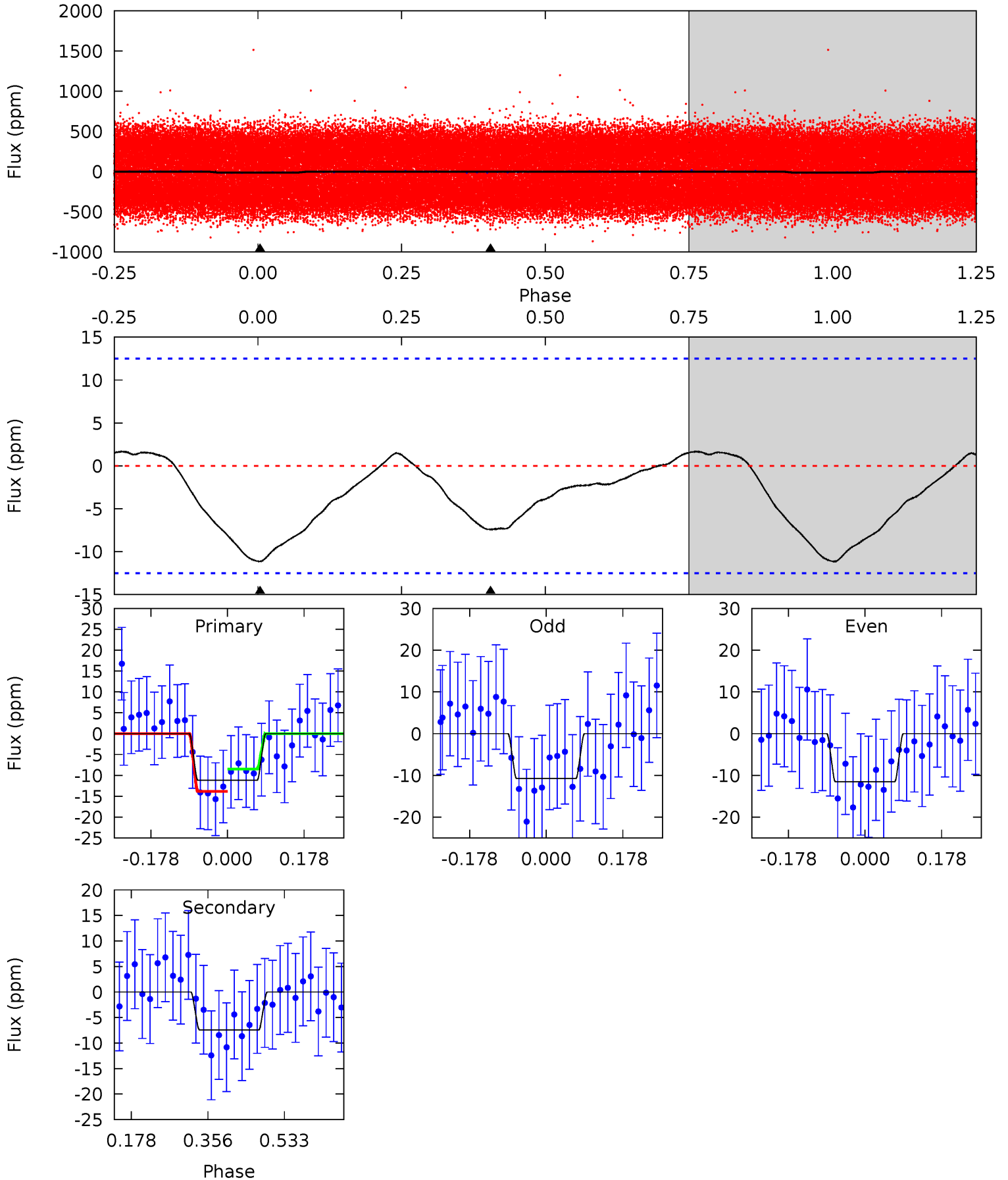
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	12.7	0	0	4.45	1.38	2.63	13.8	13.8	12.7	12.7	0.34	0.96	0.22	3.00



Alt Model-Shift Uniqueness Test

011717240-01, P = 3.744381 Days, E = 128.602236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.96	2.64	0	0	4.44	1.35	0.47	3.96	3.96	2.64	2.64	0.13	1.54	0.13	0.95



Stellar Parameters For KIC 011717240

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7072^{+73}_{-84}	$3.751^{+0.165}_{-0.135}$	$0.560^{+0.050}_{-0.100}$	$3.207^{+0.681}_{-0.681}$	$2.116^{+0.175}_{-0.233}$	$0.090^{+0.078}_{-0.036}$
	+1%/-1%	+4%/-4%	+9%/-18%	+21%/-21%	+8%/-11%	+86%/-40%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011717240-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 1	$1.09^{+0.23}_{-0.24}$	3169^{+166}_{-171}	6637^{+784}_{-580}	13^{+8}_{-4}
Alt.	-7 ± 3	$1.16^{+0.25}_{-0.24}$	3168^{+163}_{-187}	6205^{+899}_{-800}	11^{+8}_{-5}

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 $A_{obs} \gg 1.0$

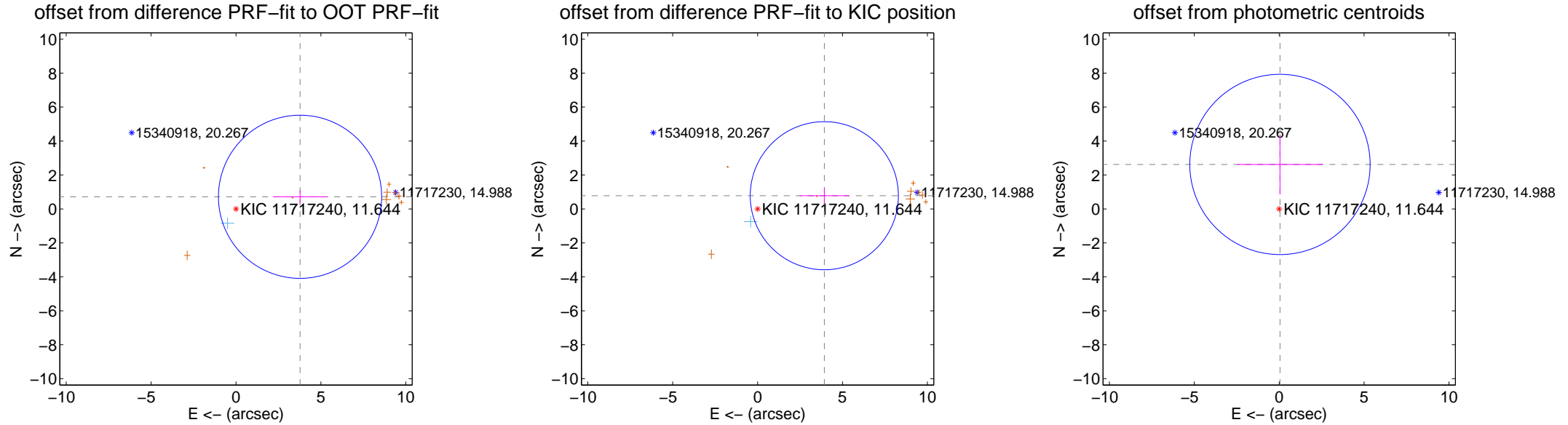
DV Centroid Data

Supplemental centroid analysis for 011717240-01. **Kepler magnitude: 11.64.** Transit SNR 8.41

There are 1 quarters with good PRF difference image offsets

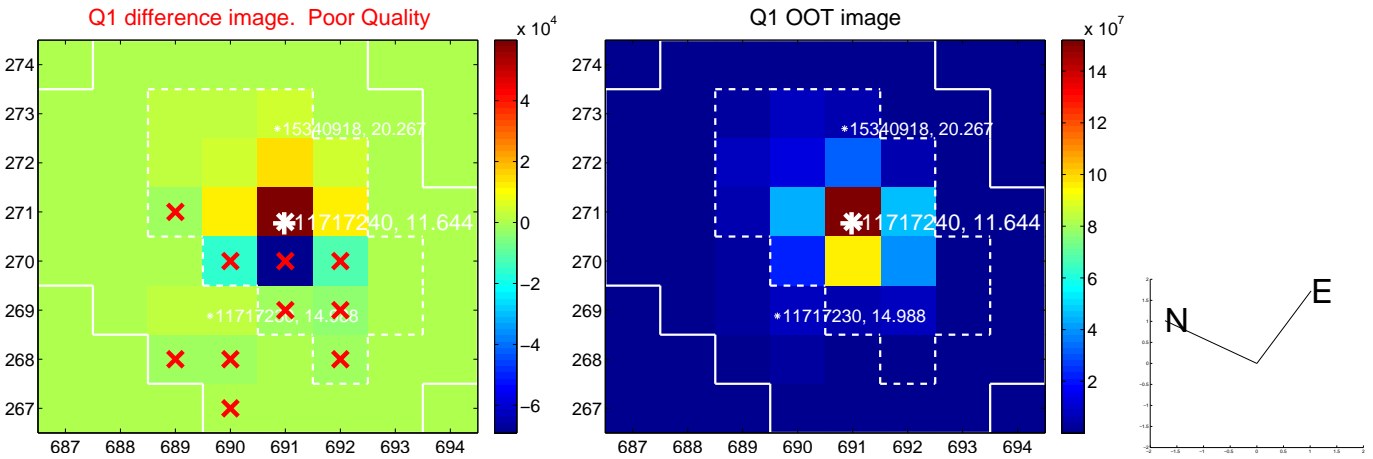
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.839 ± 1.602	2.40	-3.772 ± 1.602	0.716 ± 0.385
PRF-fit source offset from KIC position	4.005 ± 1.454	2.75	-3.929 ± 1.458	0.779 ± 0.467
photometric centroid source offset	2.62 ± 1.77	1.48	-0.05 ± 2.53	2.62 ± 1.77

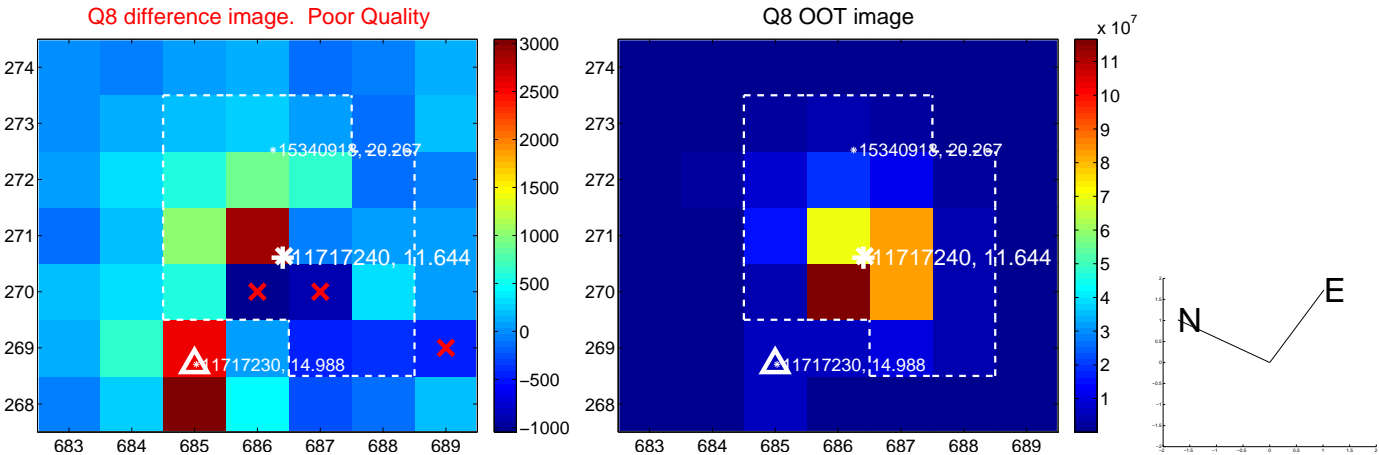
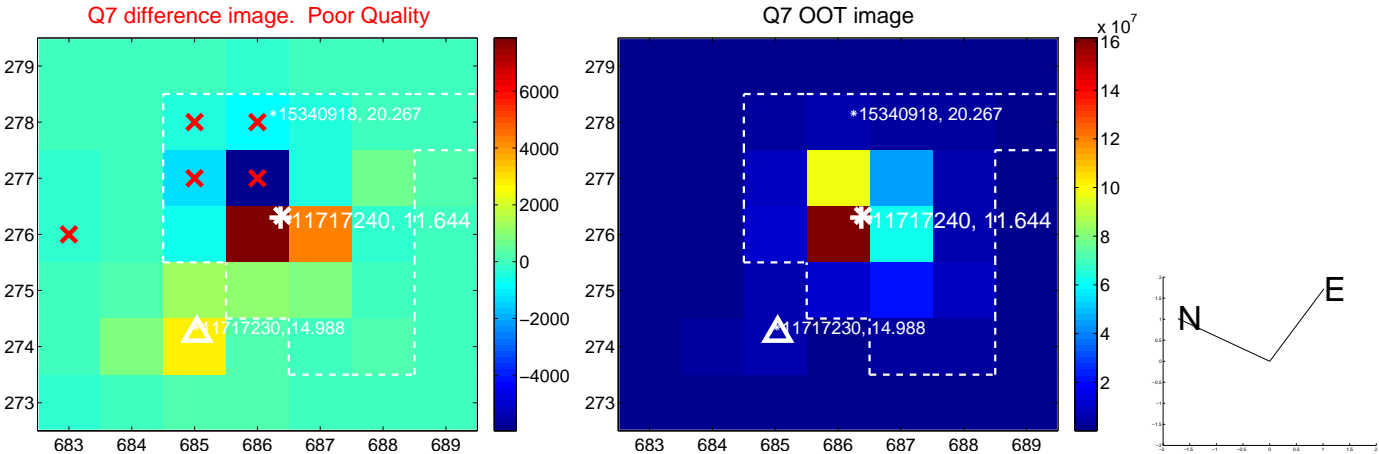
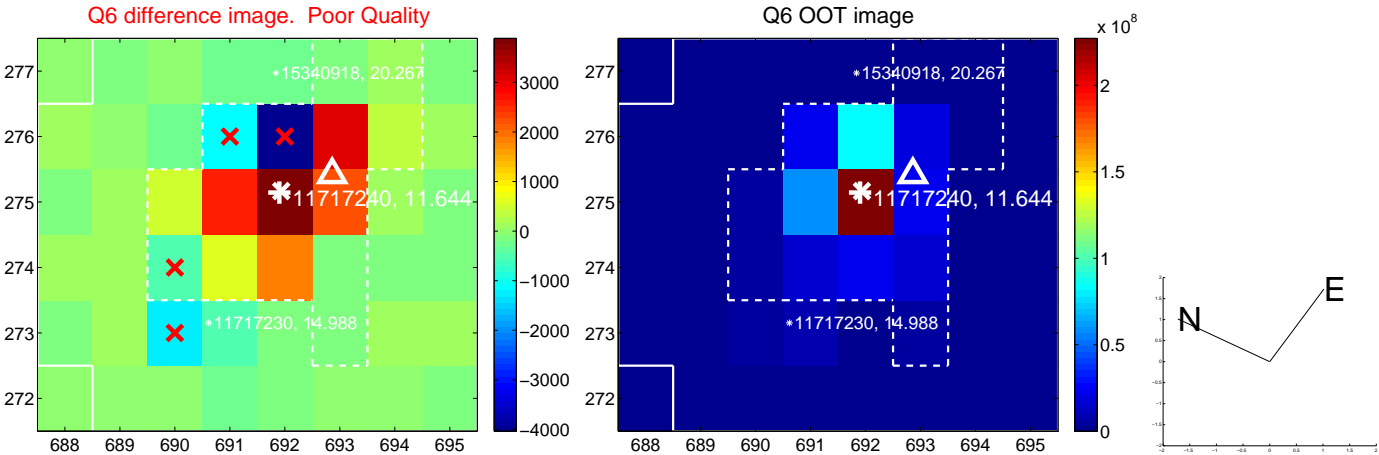
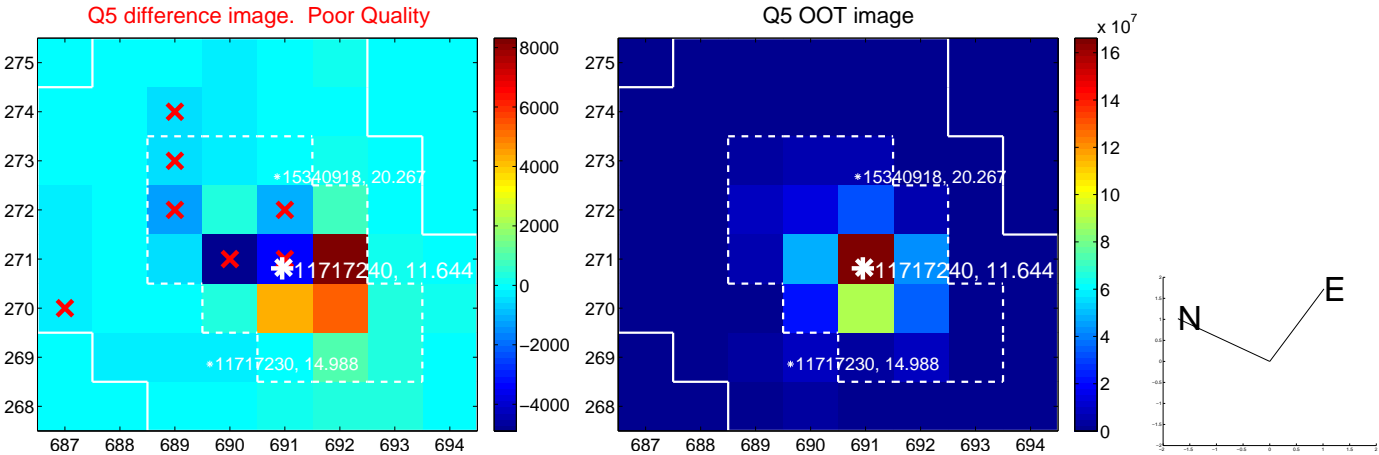


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

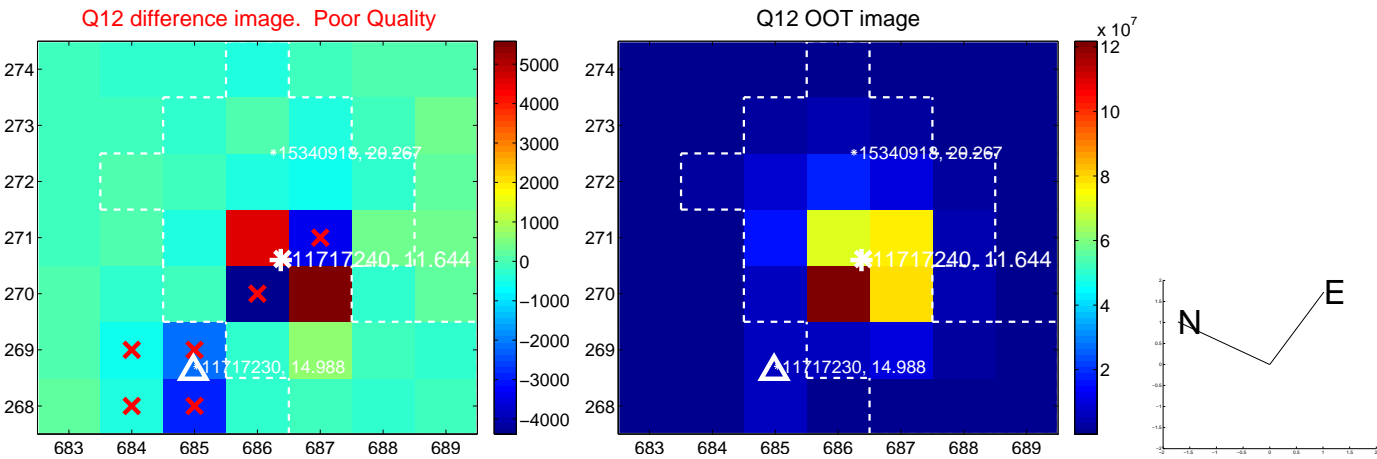
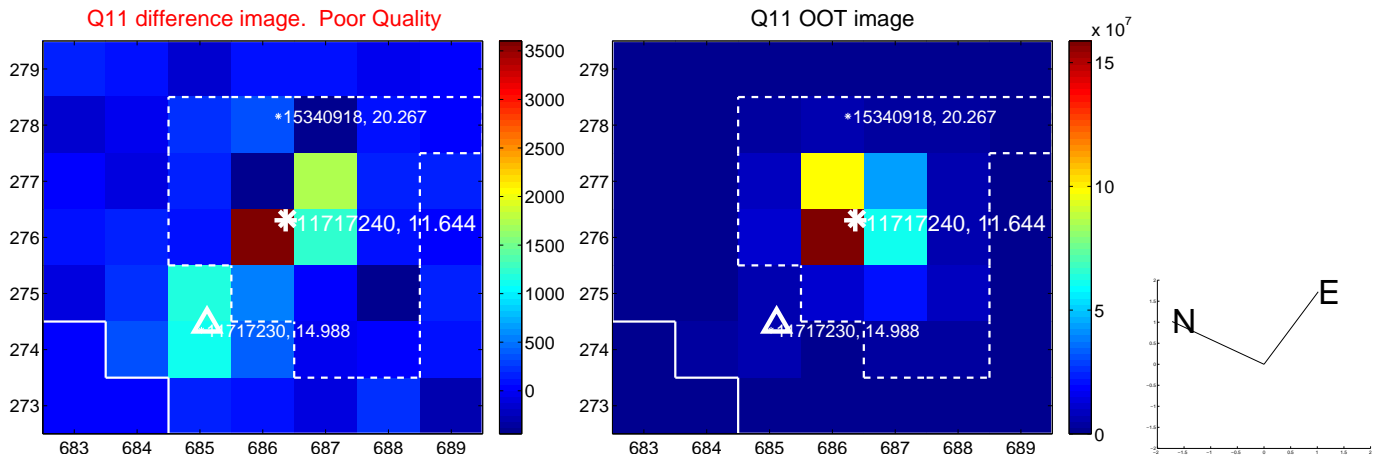
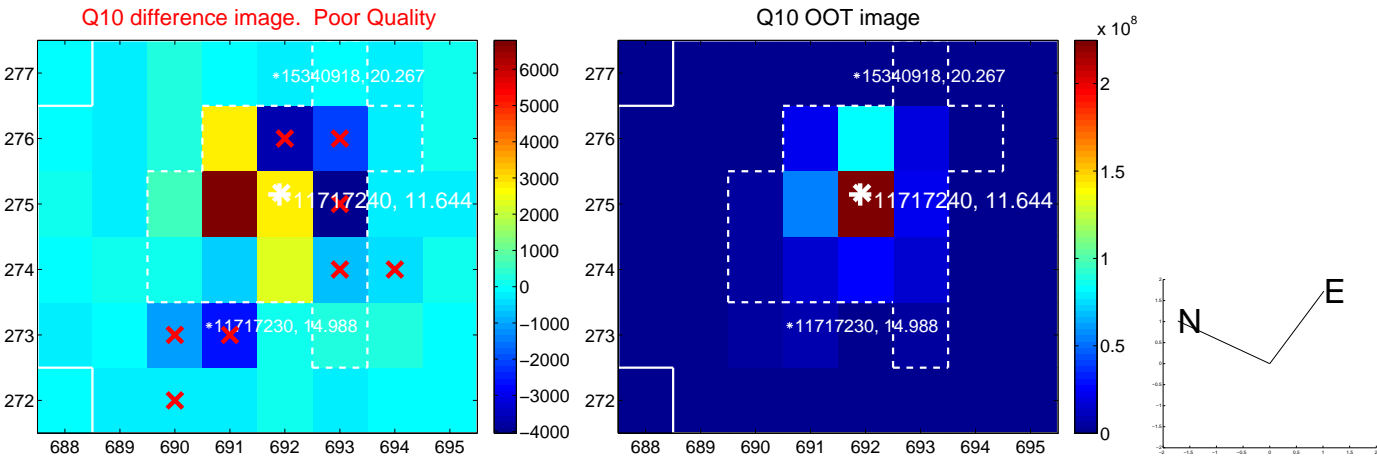
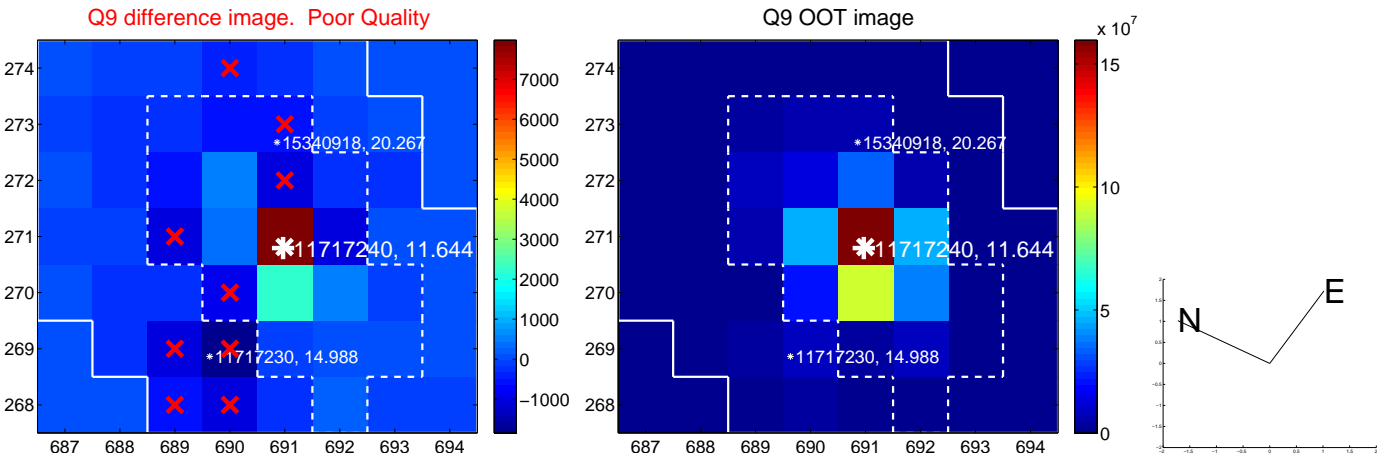
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



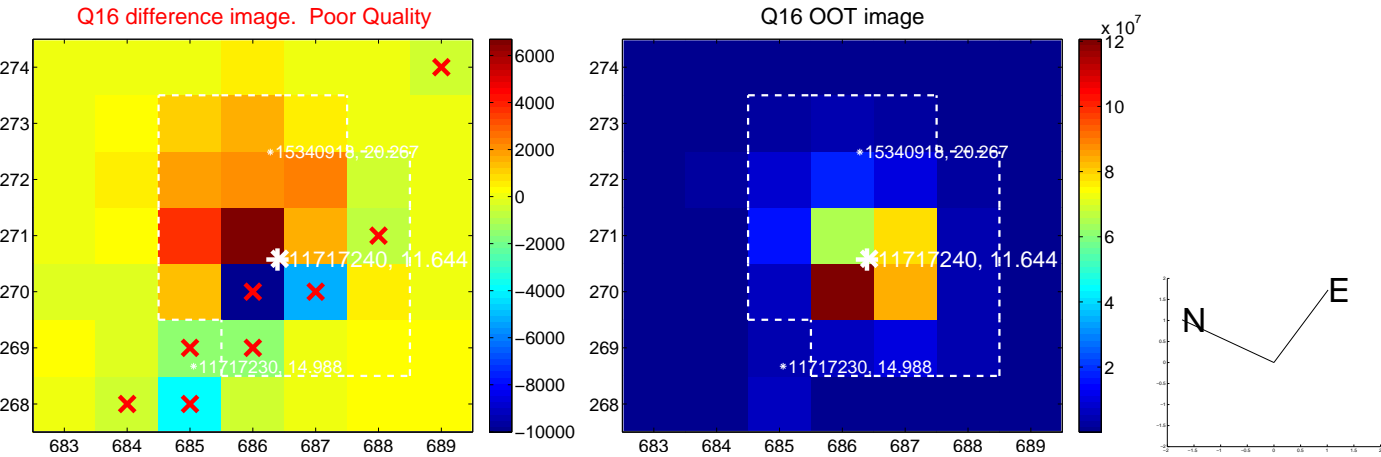
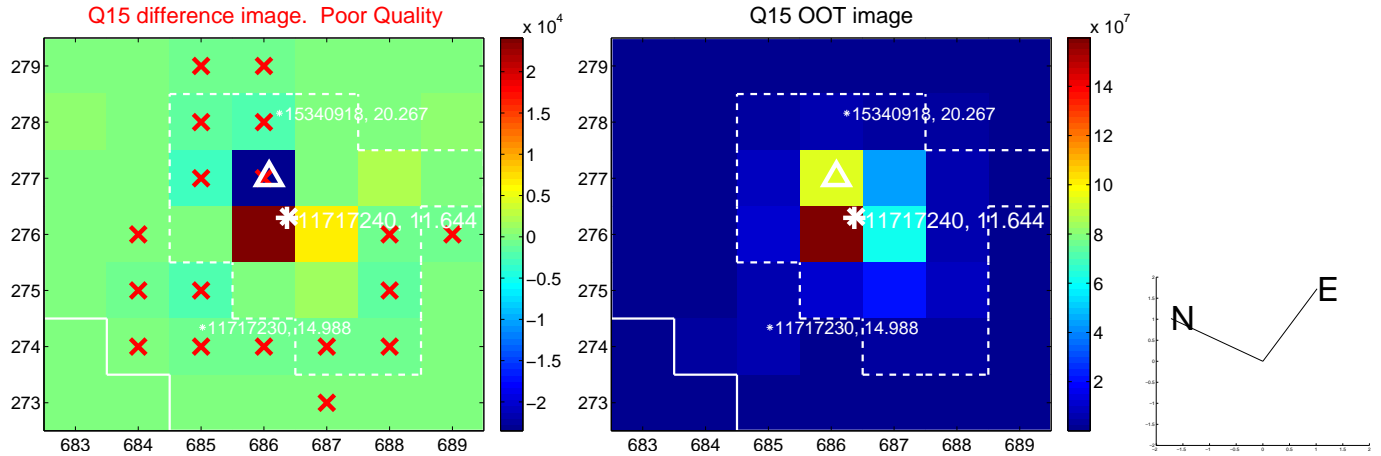
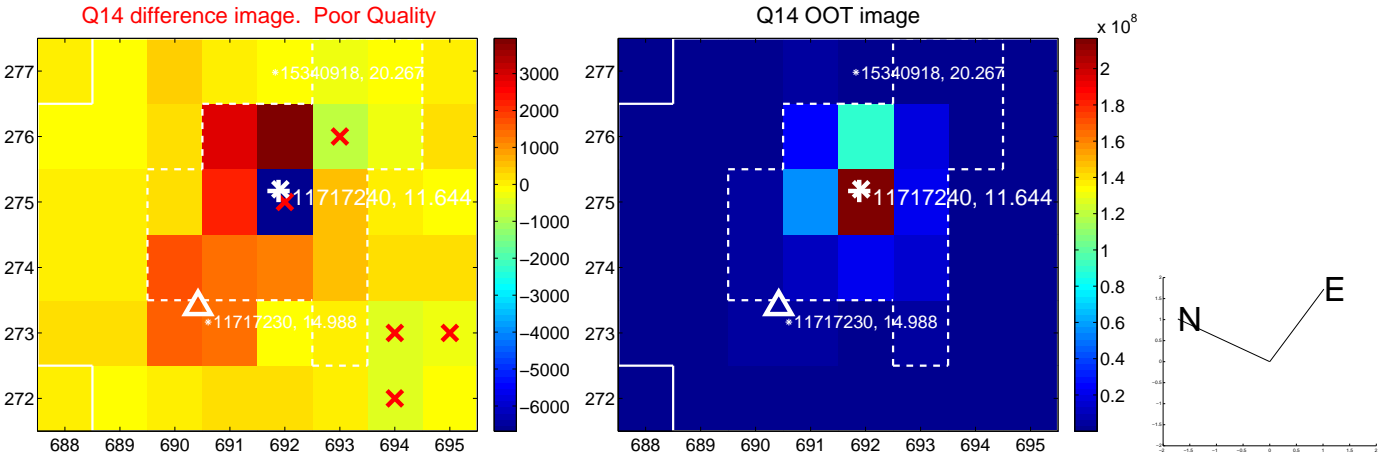
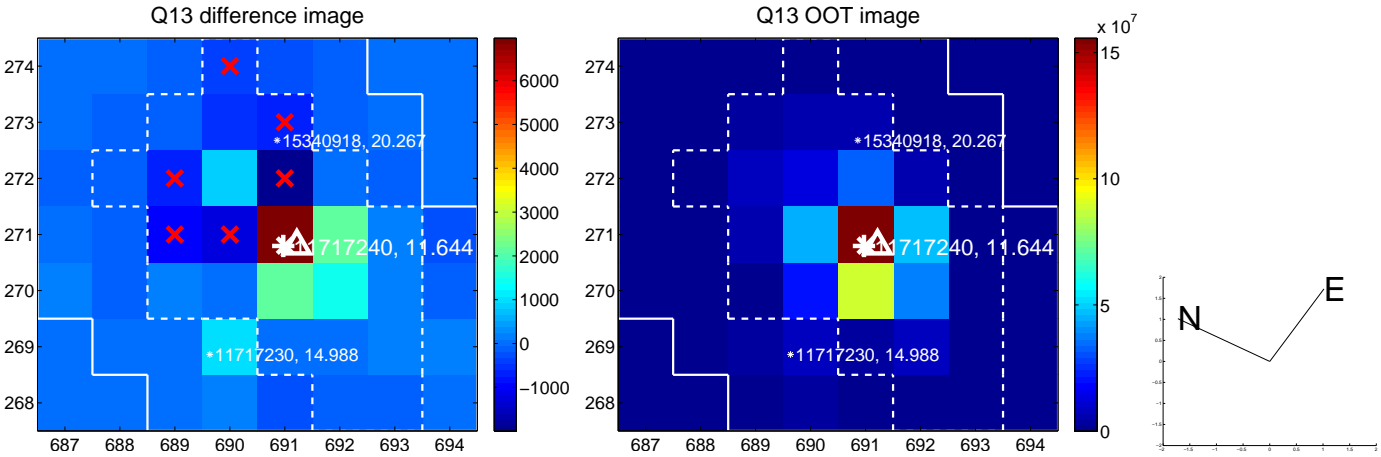
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

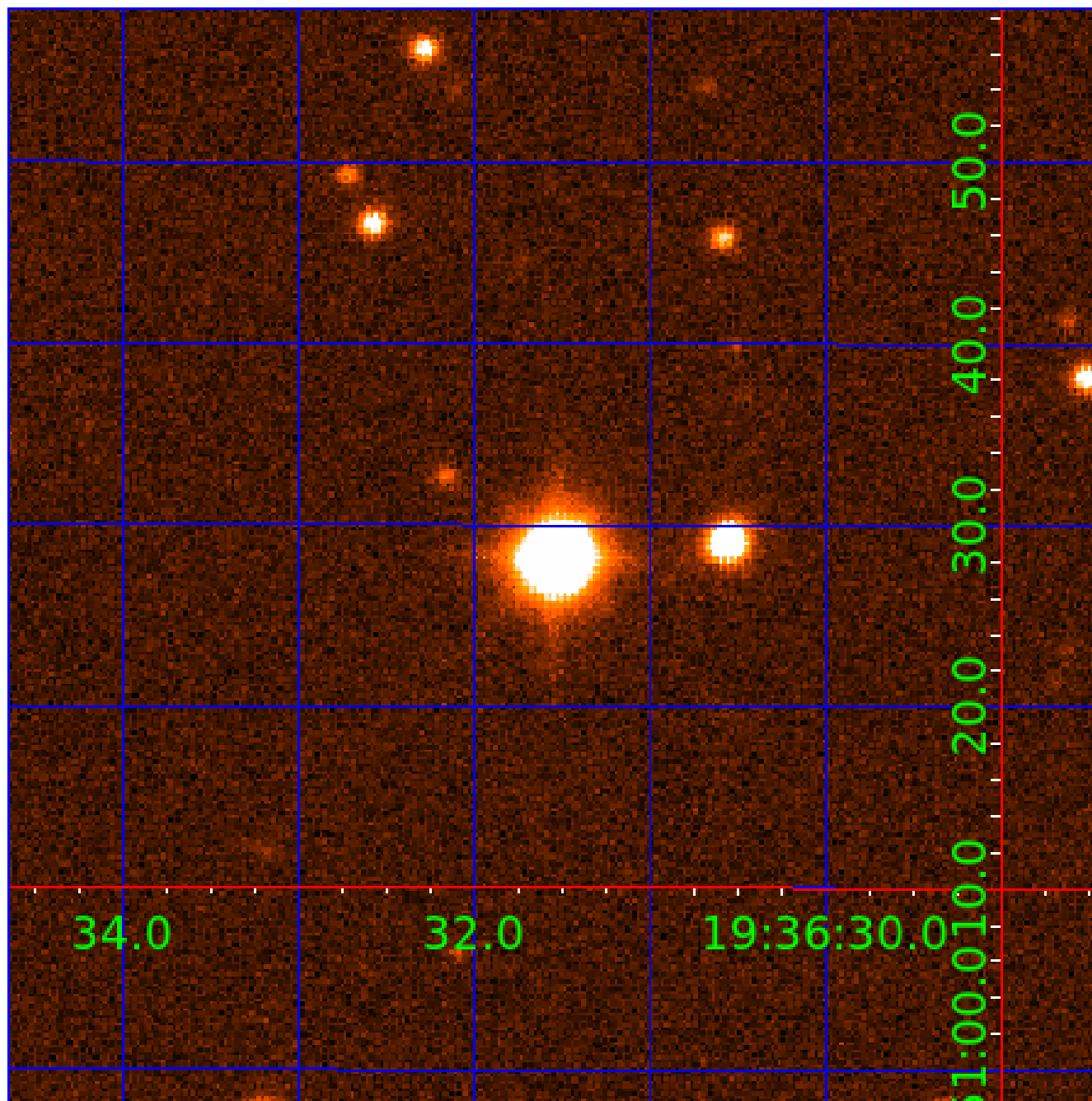


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011717240

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})
011717240-01	OBS	No	3.744387	132.355153	8.6	14.672	9.5	8.4	3.21	7072	1.09	6279.93
011717240-02	OBS	No	3.744251	133.969188	9.7	19.422	10.1	11.4	3.21	7072	1.03	6280.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011717240-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011717240-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_MEAS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

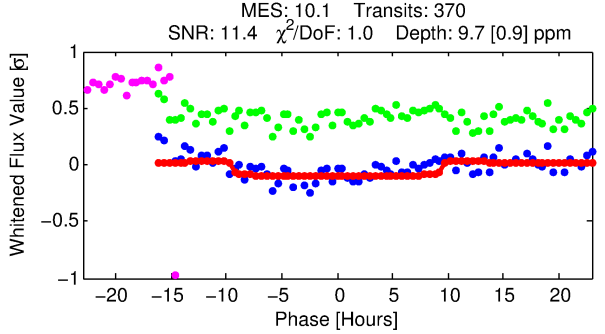
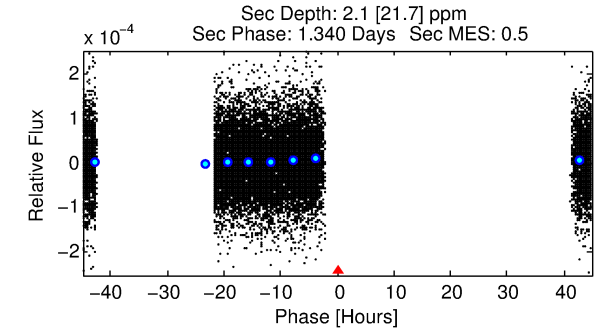
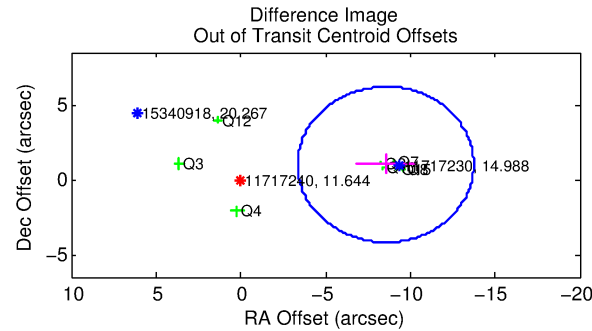
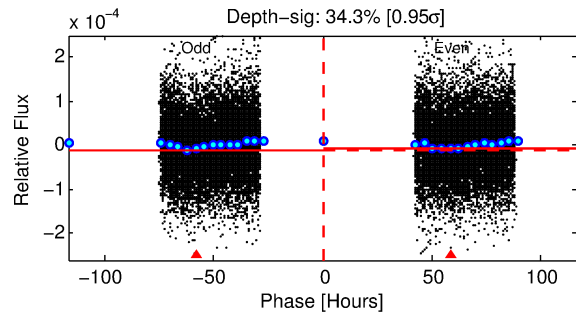
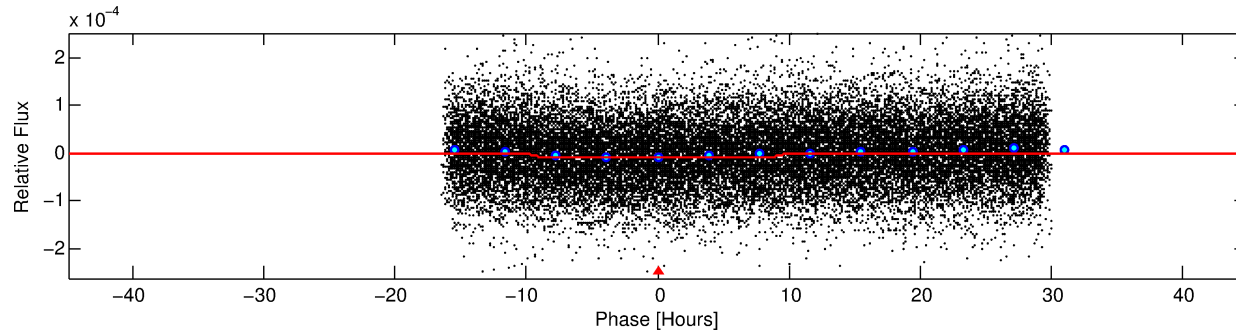
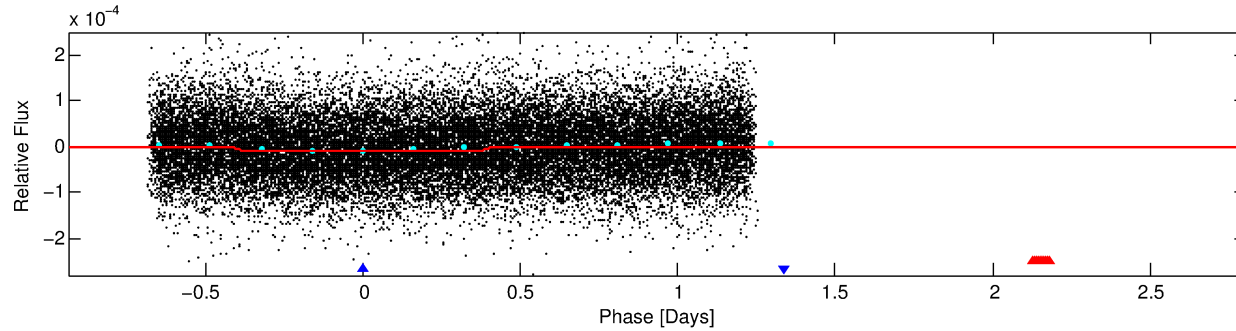
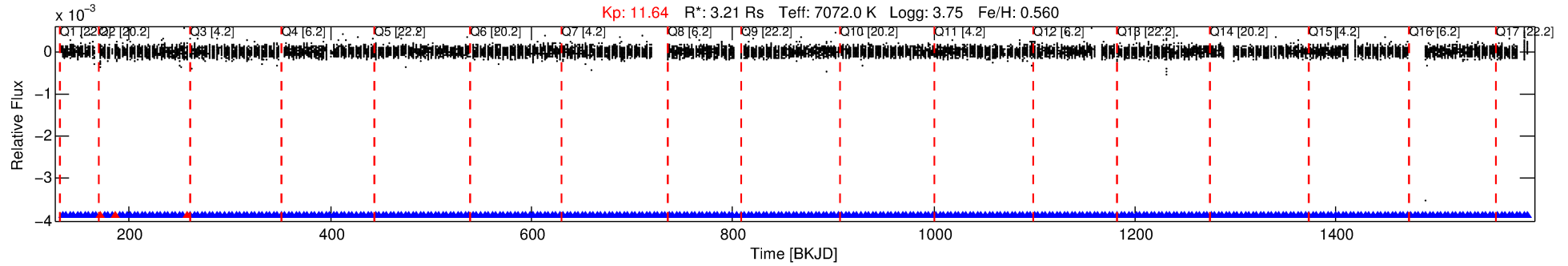
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011717240-02

No Significant Match Found

DV One-Page Summary

KIC: 11717240 Candidate: 2 of 2 Period: 3.744 d



DV Fit Results:

Period = 3.74425 [0.00006] d
Epoch = 133.9692 [0.0112] BKJD
Rp/R* = 0.0030 [0.0008]
a/R* = 1.48 [1.29]
b = 0.48 [2.59]
Seff = 6280.24 [1846.55]
Teq = 2270 [167] K
Rp = 1.03 [0.36] Re
a = 0.0606 [0.0115] AU
Ag = 4.02 [41.23] [0.07 σ]
Teff = 4970 [12734] K [0.21 σ]

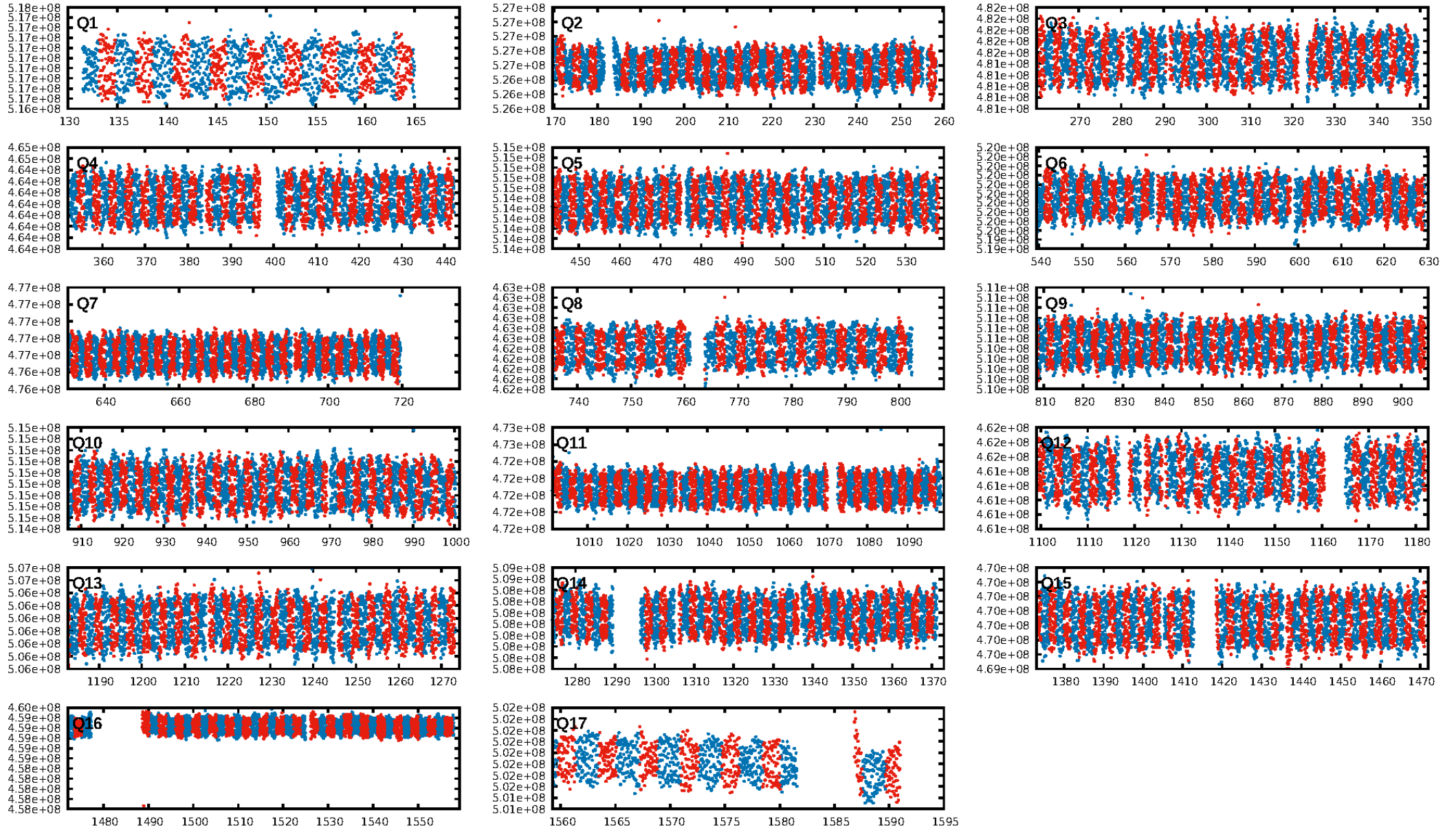
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [350/353]
GhostDiagnostic-chr: 1.424
Centroid-sig: 1.5%
Centroid-so: 2.553 arcsec [1.51 σ]
OotOffset-rm: 8.604 arcsec [4.97 σ]
KicOffset-rm: 8.764 arcsec [5.25 σ]
OotOffset-st: 2/3/3/0 [8]
KicOffset-st: 2/3/3/0 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/17]

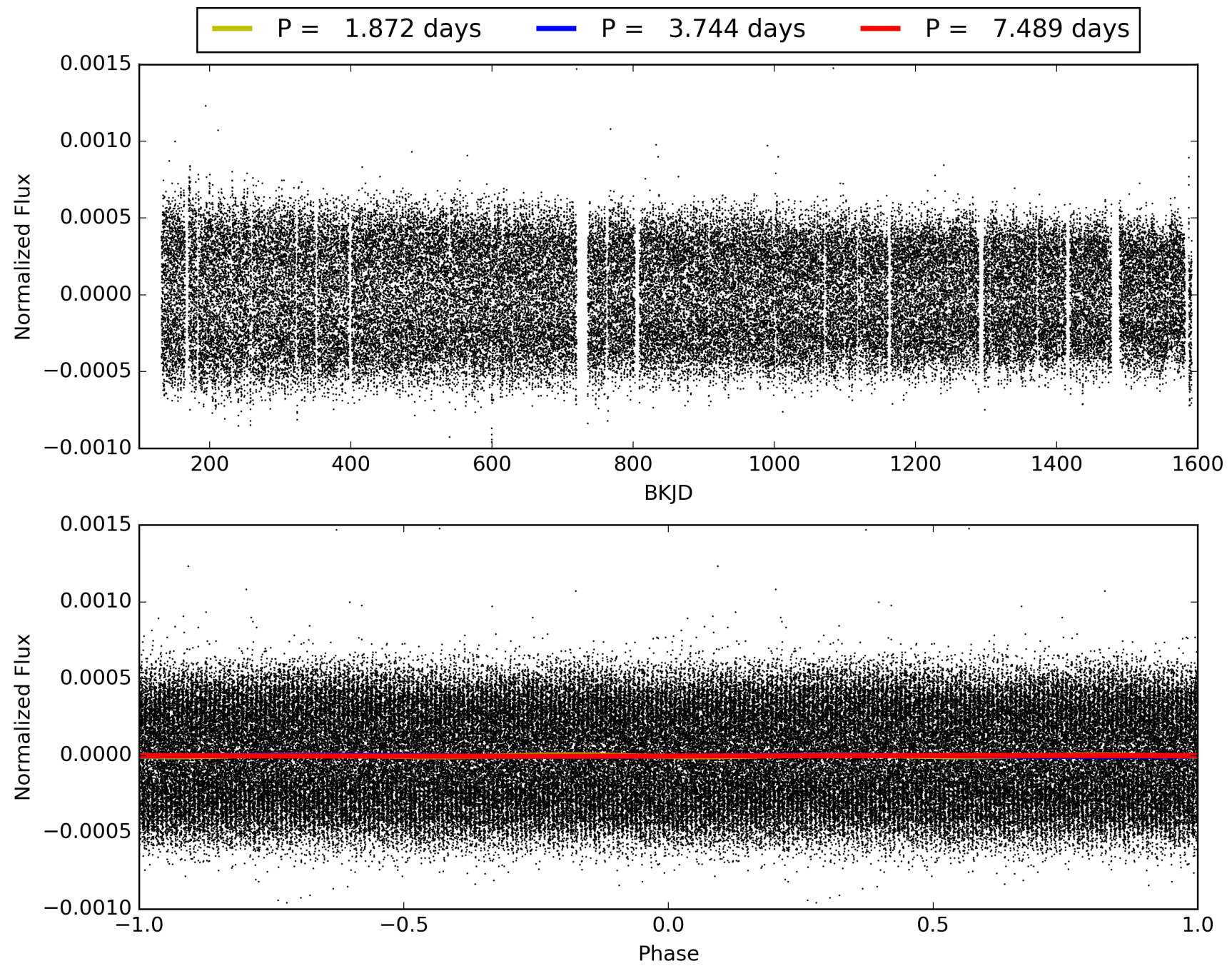
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:25:15 Z

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

TCE 011717240-02, PDC Light Curves

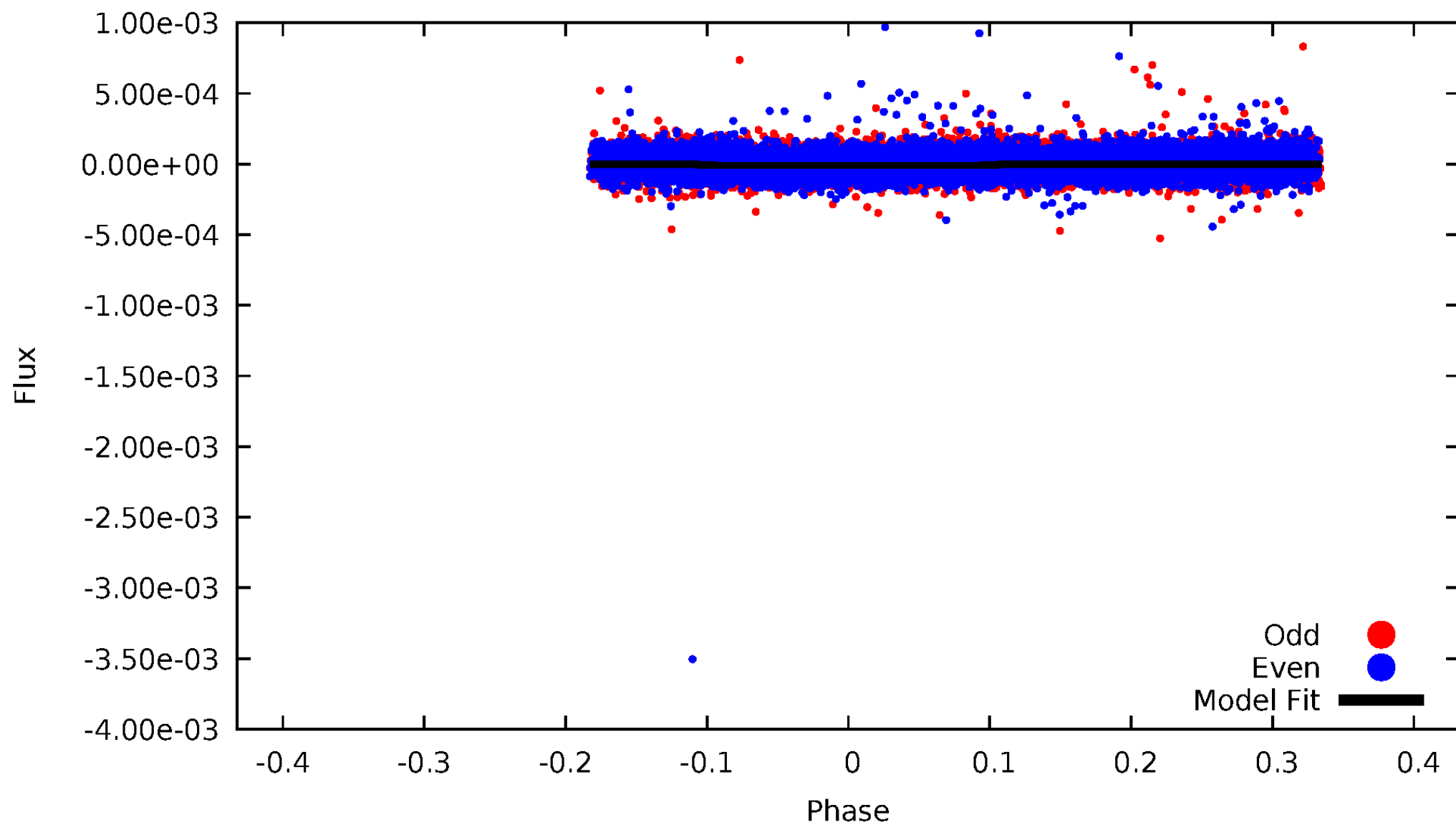


TCE 011717240-02



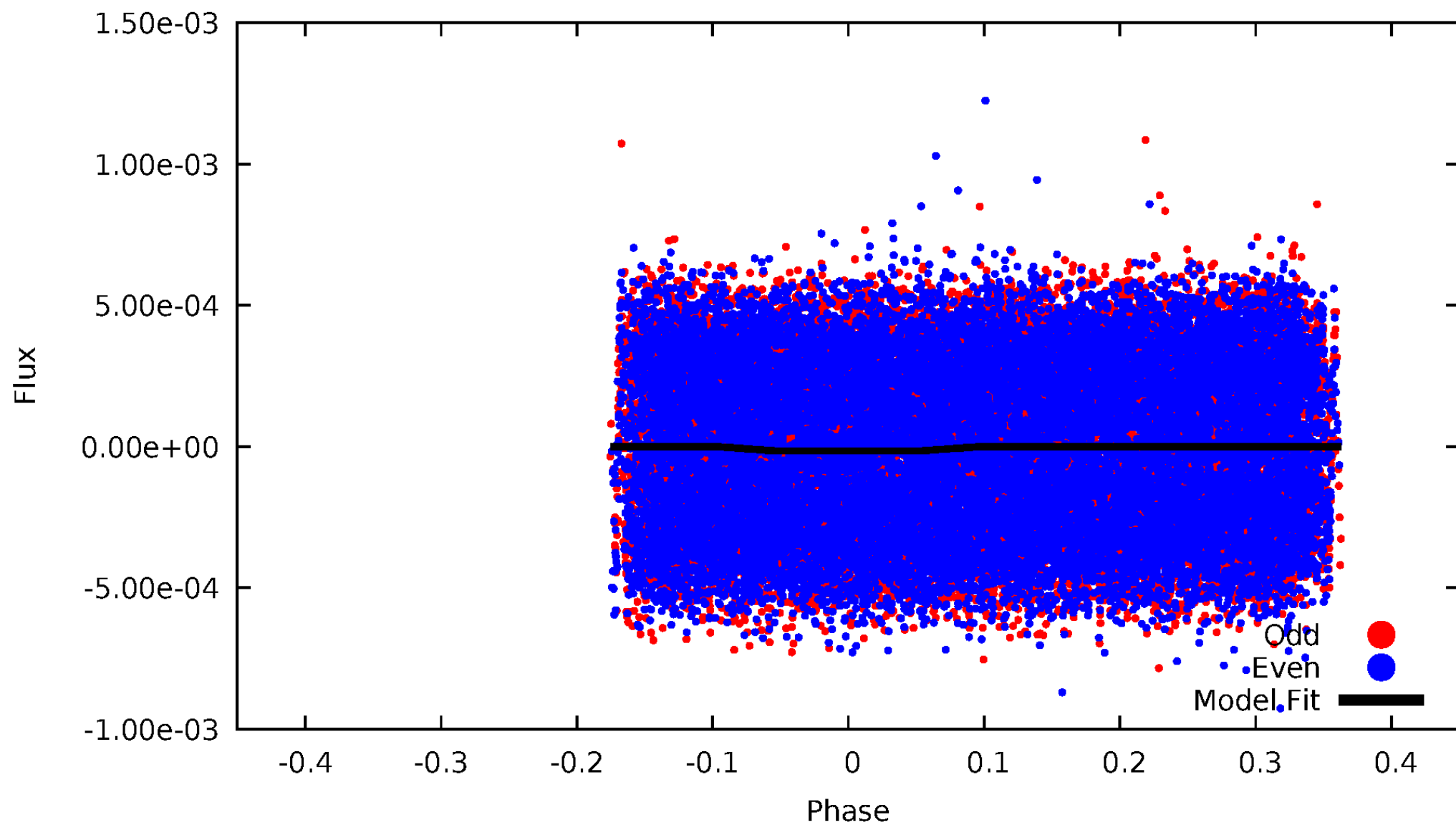
DV Odd/Even

TCE 011717240-02



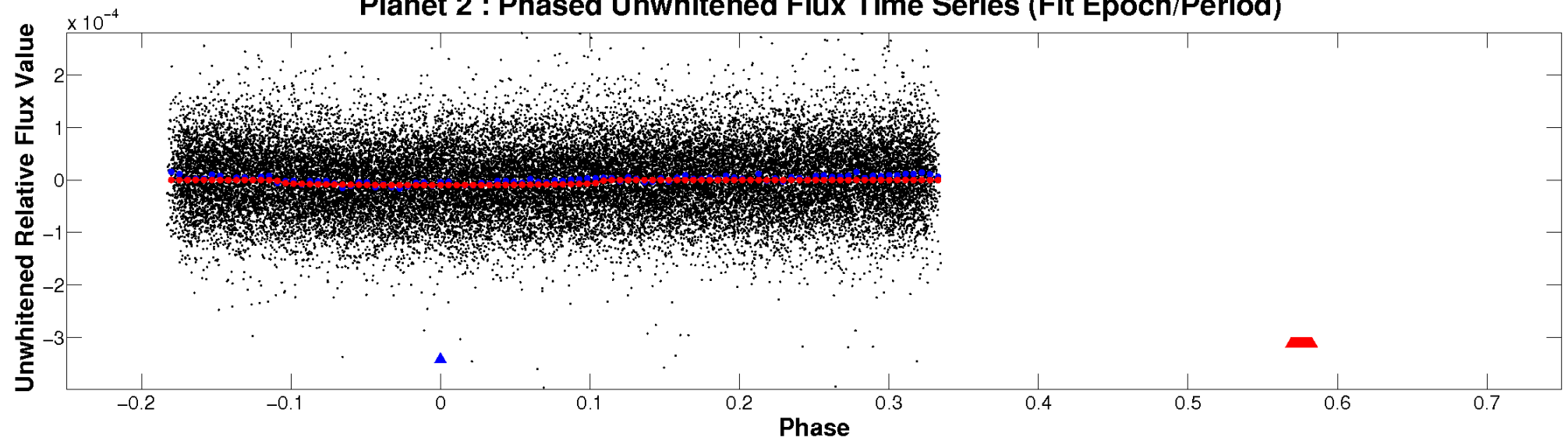
ALT Odd/Even

TCE 011717240-02

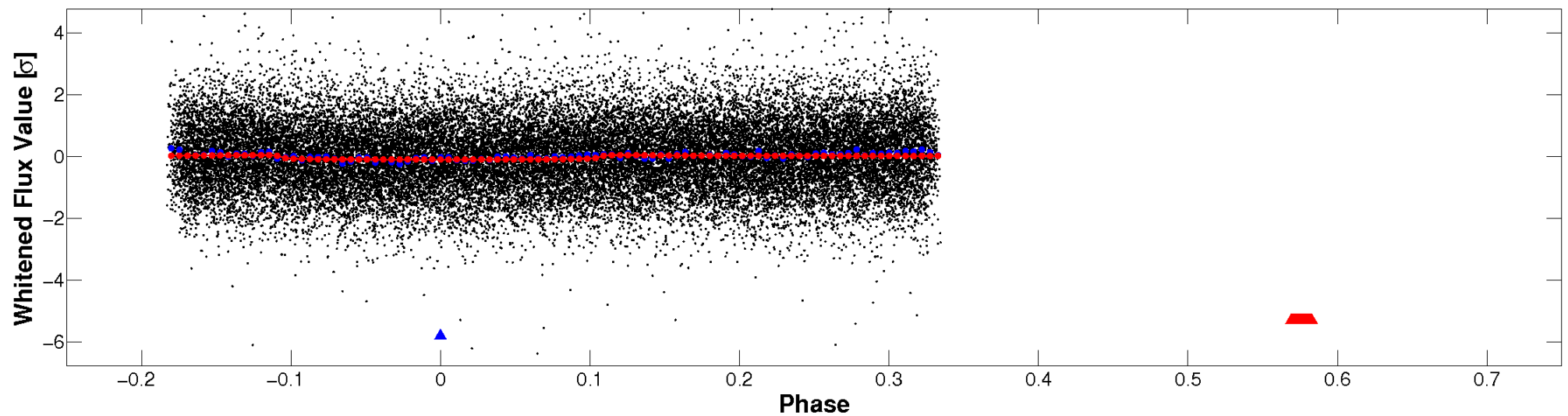


Non-Whitened Vs. Whitened Light Curve

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

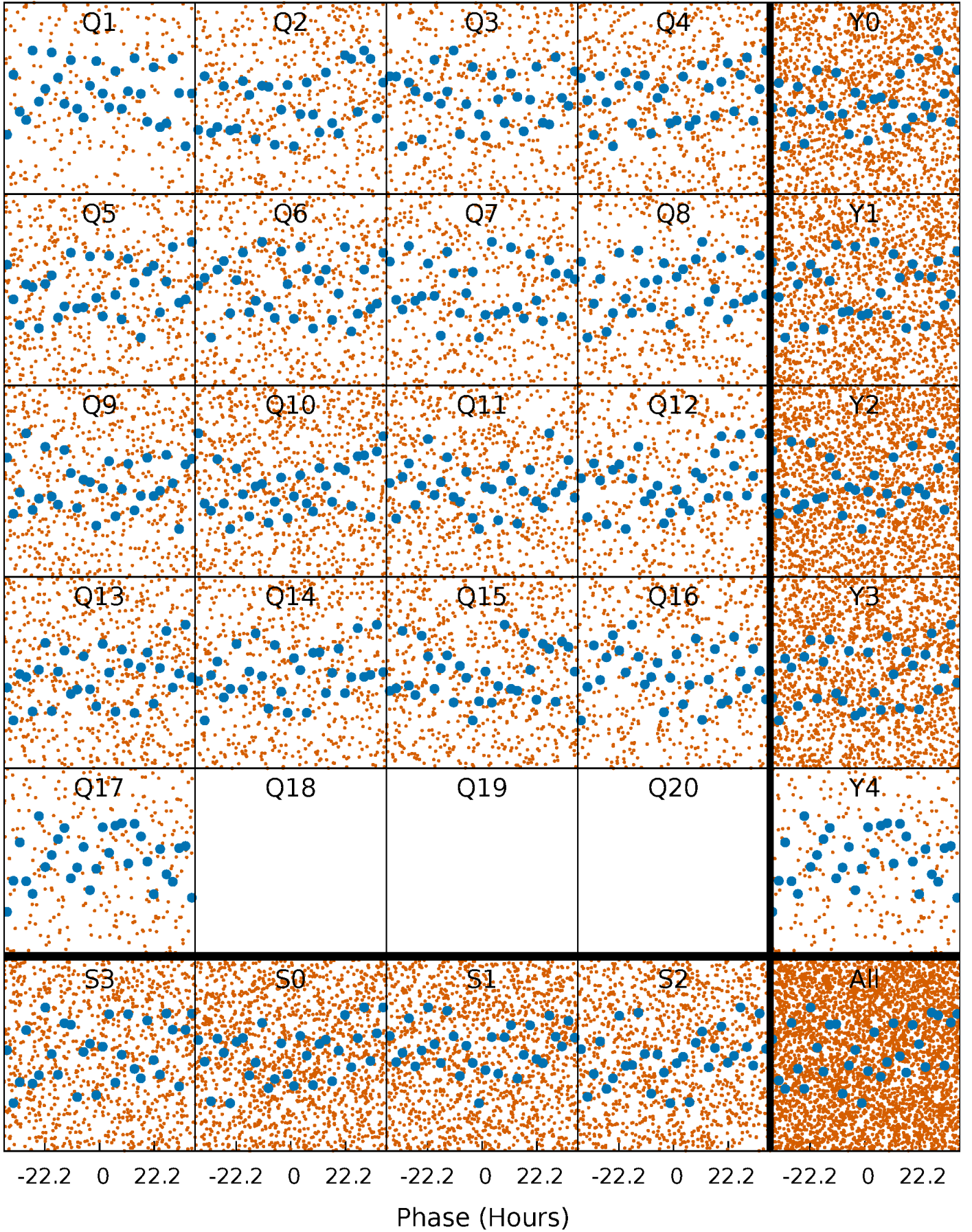


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



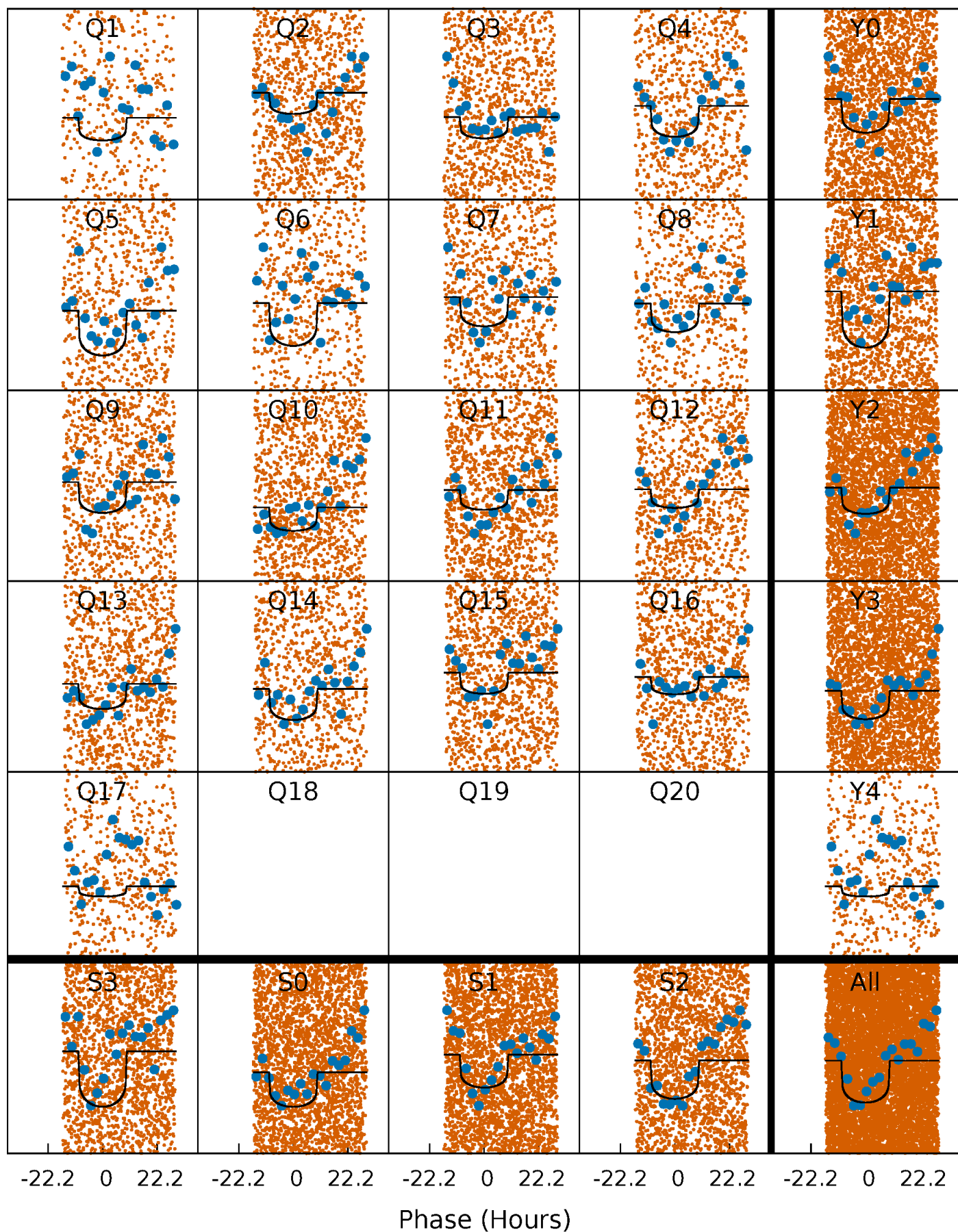
PDC Quarter-Phased Transit Curves

TCE 011717240-02 $P = 3.744251$ Days $T_0 = 133.969188$ (BKJD)



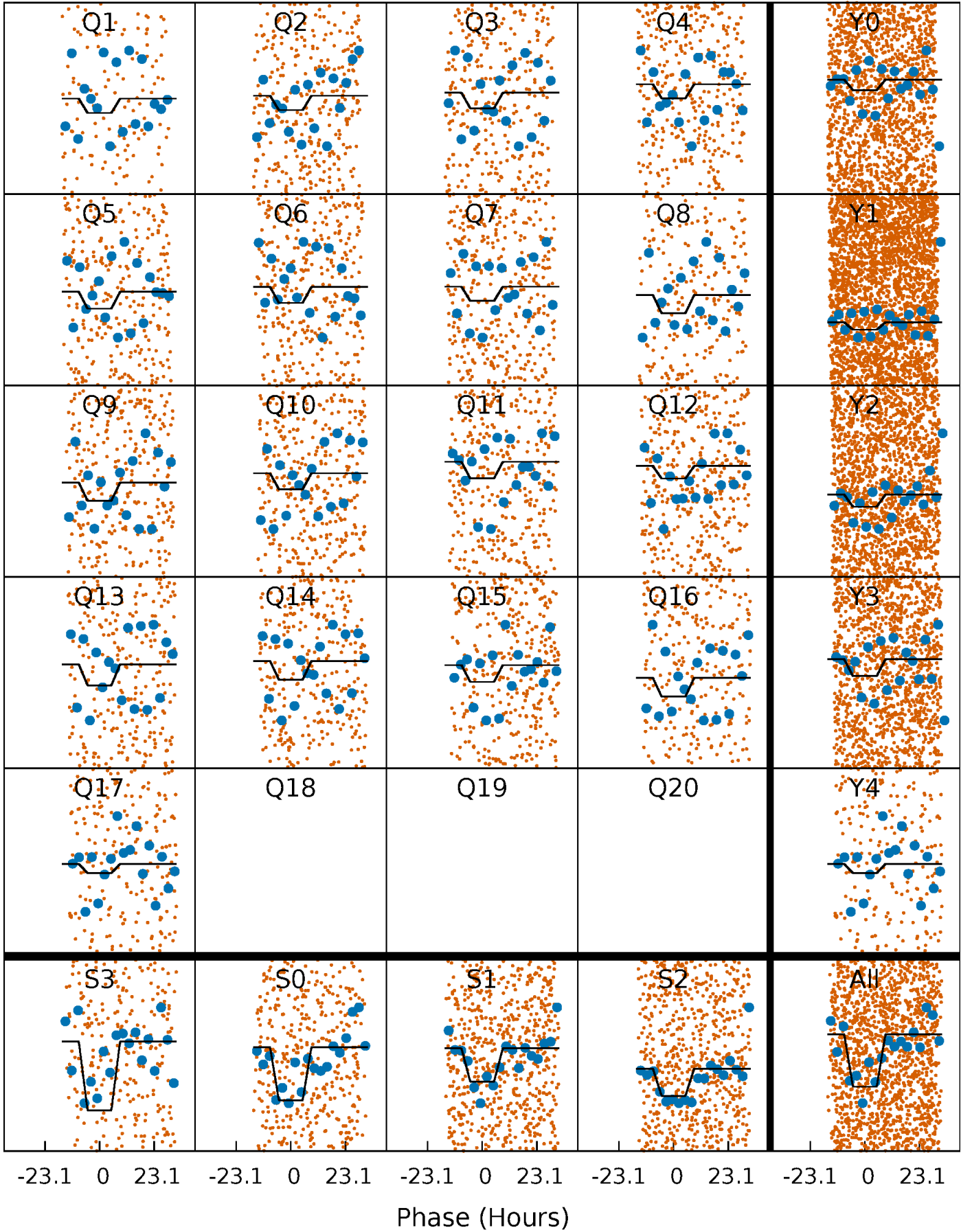
DV Quarter-Phased Transit Curves

TCE 011717240-02 $P = 3.744251$ Days $T_0 = 133.969188$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

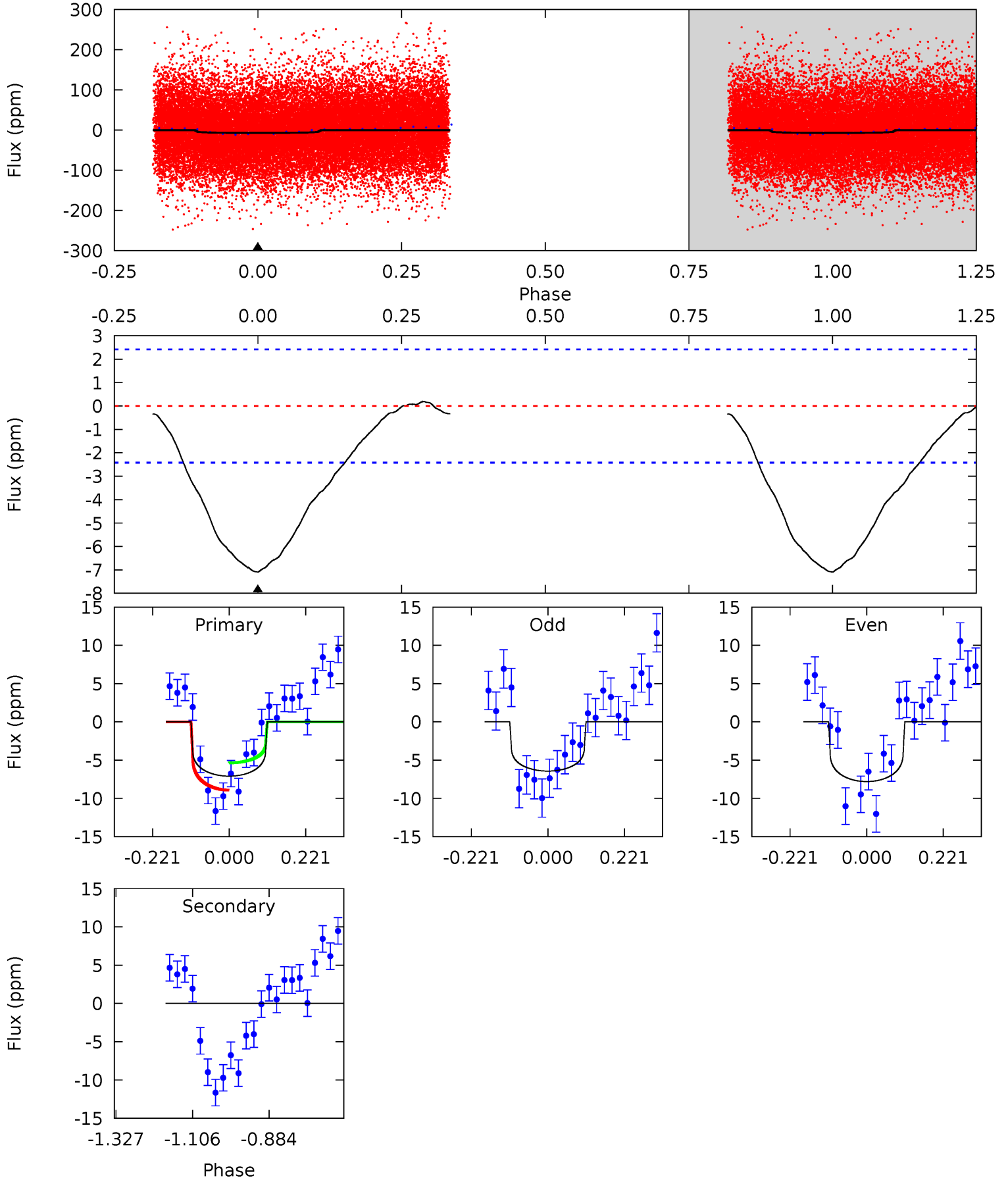
TCE 011717240-02 P= 3.744048 Days $T_0=133.941284$ (BKJD)



DV Model-Shift Uniqueness Test

011717240-02, P = 3.744251 Days, E = 130.224937 Days

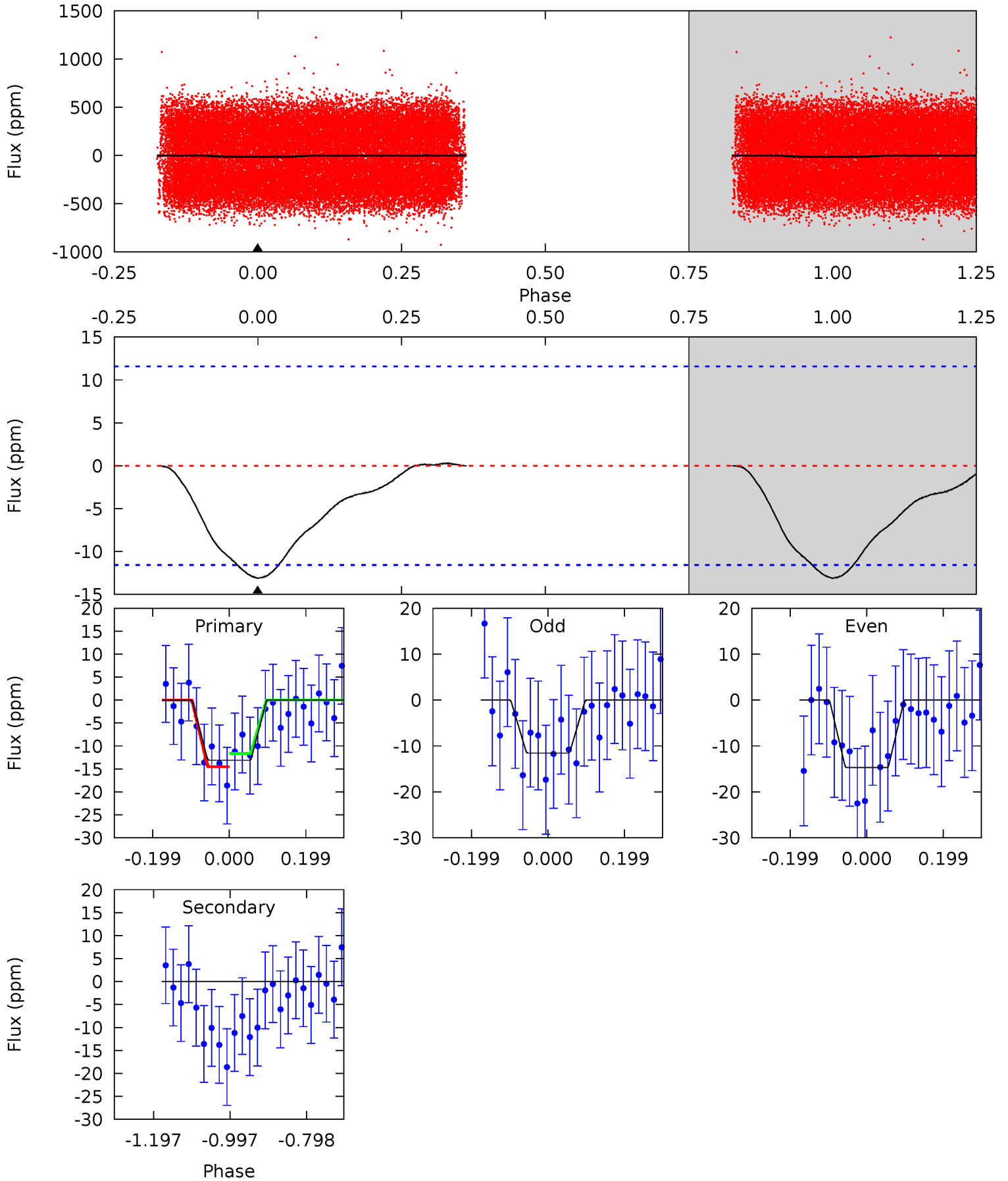
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	0	0	0	4.40	1.22	0.33	12.9	12.9	0	0	1.25	0.77	0.03	3.35



Alt Model-Shift Uniqueness Test

011717240-02, P = 3.744048 Days, E = 130.197236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.00	0	0	0	4.42	1.28	0.41	5.00	5.00	0	0	0.60	1.14	0.02	0.55



Stellar Parameters For KIC 011717240

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7072^{+73}_{-84}	$3.751^{+0.165}_{-0.135}$	$0.560^{+0.050}_{-0.100}$	$3.207^{+0.681}_{-0.681}$	$2.116^{+0.175}_{-0.233}$	$0.090^{+0.078}_{-0.036}$
	+1%/-1%	+4%/-4%	+9%/-18%	+21%/-21%	+8%/-11%	+86%/-40%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011717240-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$1.02^{+0.32}_{-0.28}$	3179^{+164}_{-181}	-3157^{+6885}_{-964}	$0.027^{+1.147}_{-1.196}$
Alt.	0 ± 3	$1.30^{+0.35}_{-0.30}$	3172^{+172}_{-162}	-3107^{+7795}_{-1809}	$0.054^{+3.080}_{-3.382}$

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 $A_{obs} \gg 1.0$

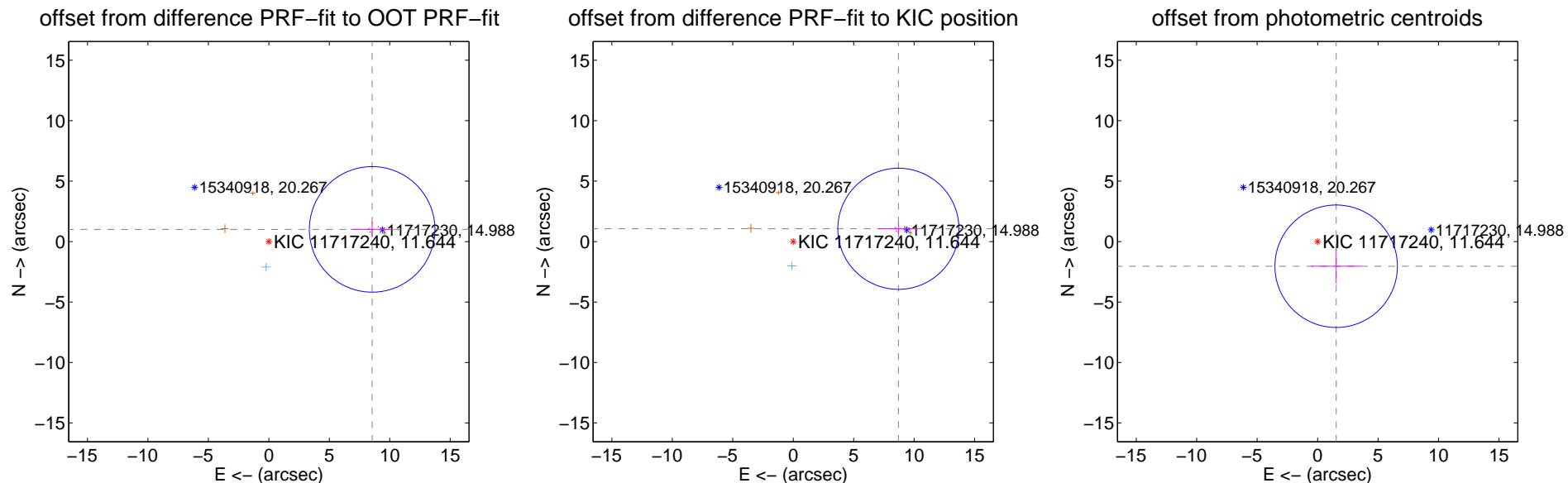
DV Centroid Data

Supplemental centroid analysis for 011717240-02. **Kepler magnitude: 11.64.** Transit SNR 11.44

There are 2 quarters with good PRF difference image offsets

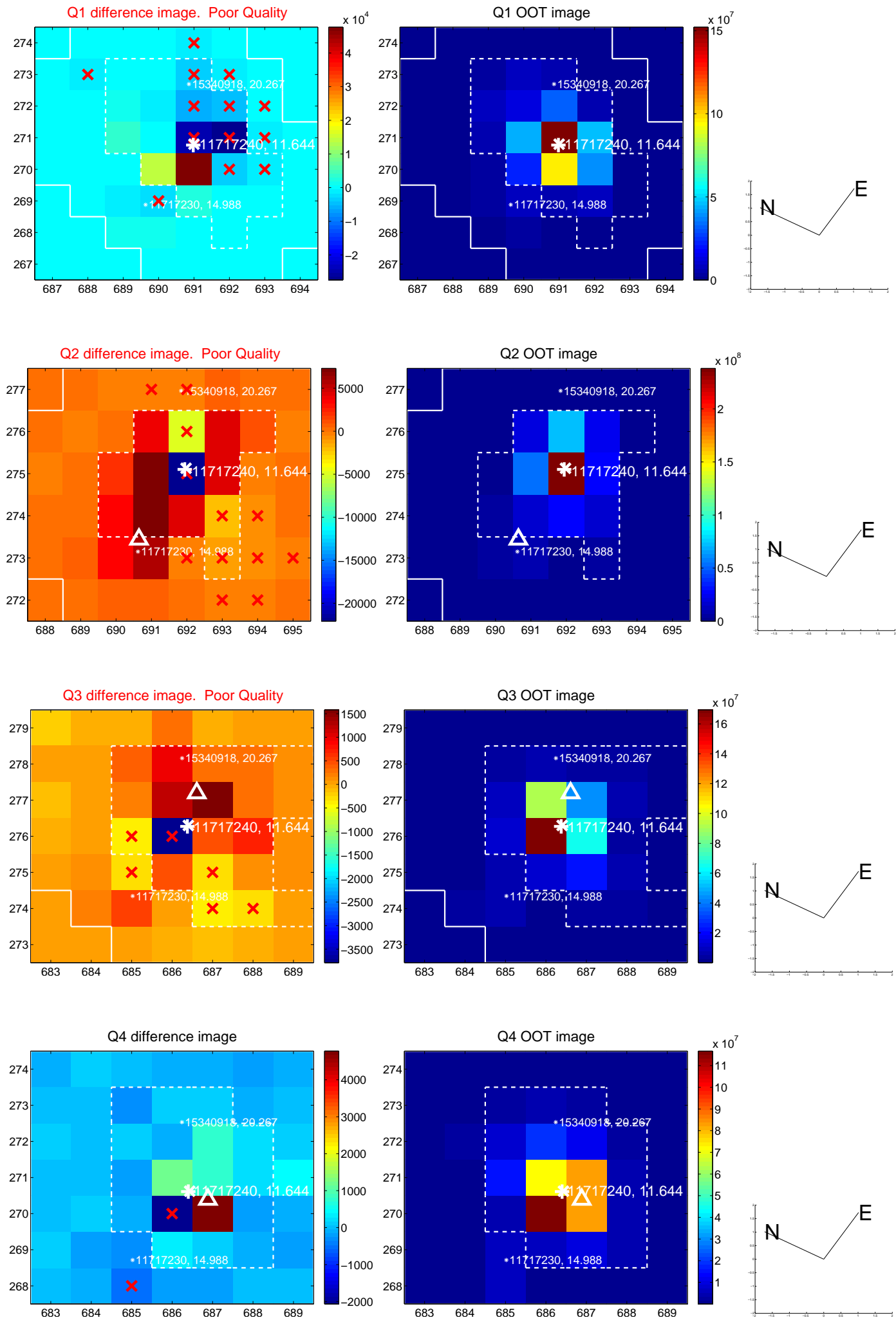
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.604 ± 1.731	4.97	-8.545 ± 1.745	1.009 ± 0.628
PRF-fit source offset from KIC position	8.764 ± 1.670	5.25	-8.699 ± 1.687	1.059 ± 0.471
photometric centroid source offset	2.55 ± 1.69	1.51	-1.54 ± 2.06	-2.04 ± 1.43

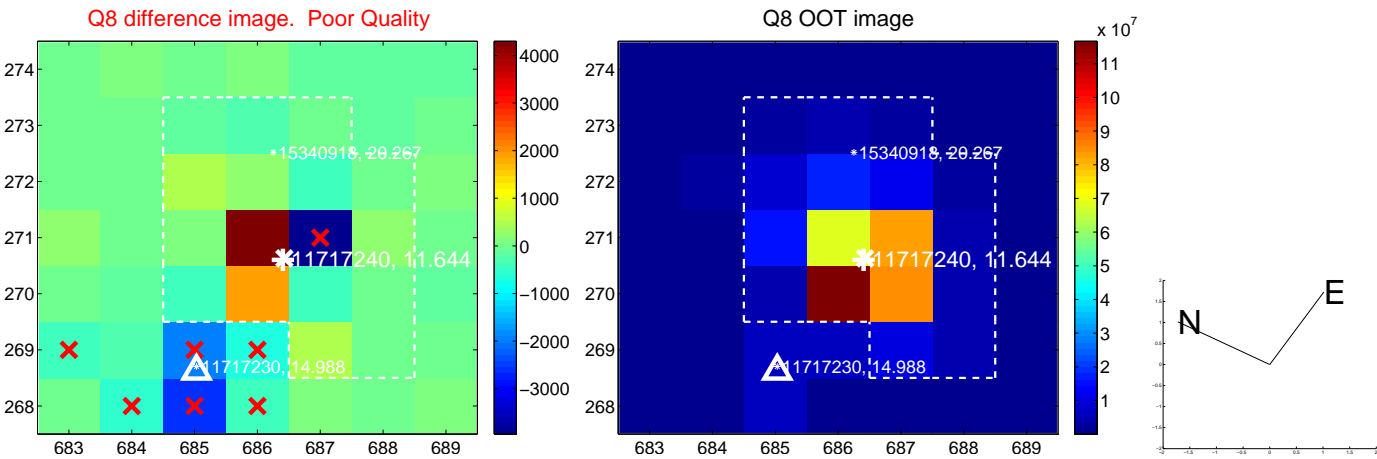
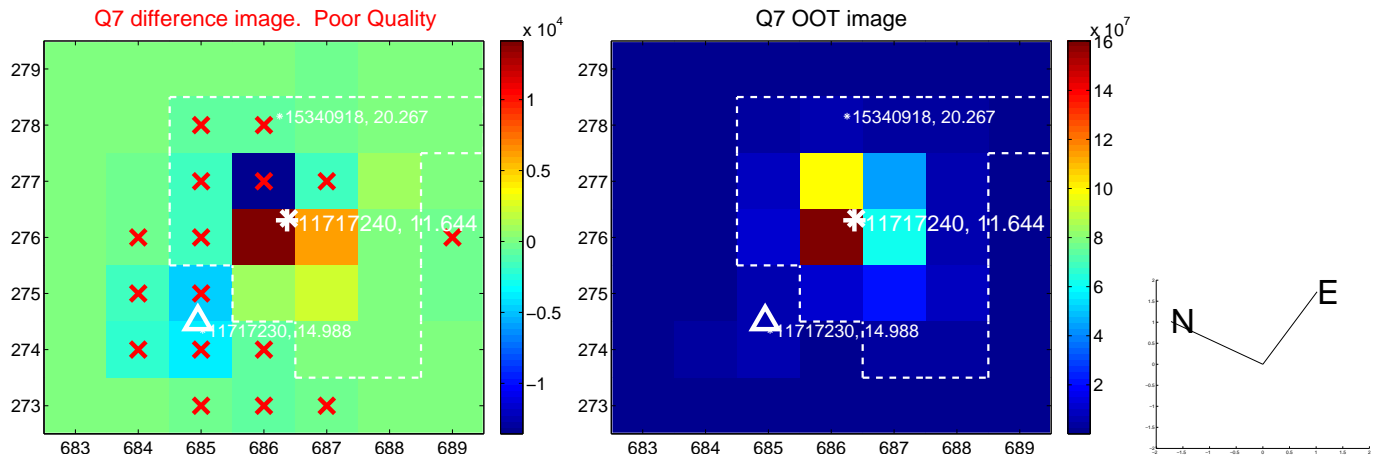
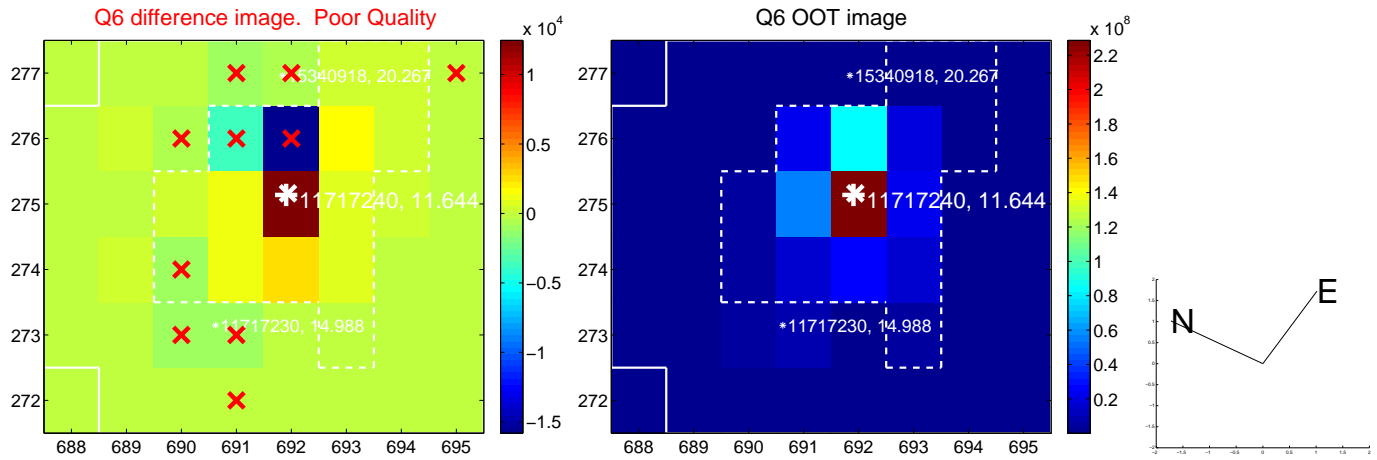
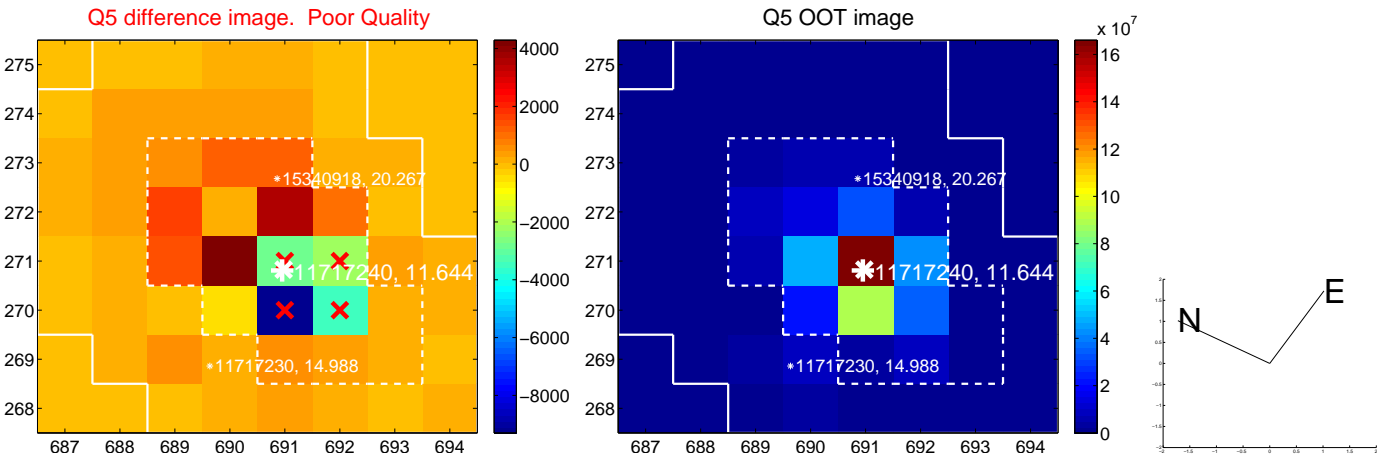


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

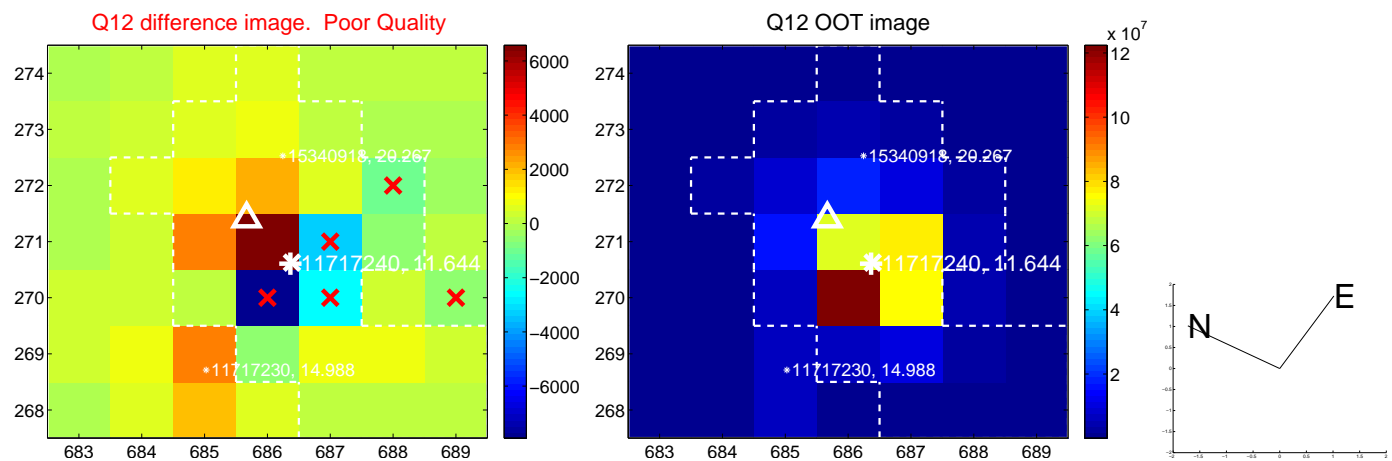
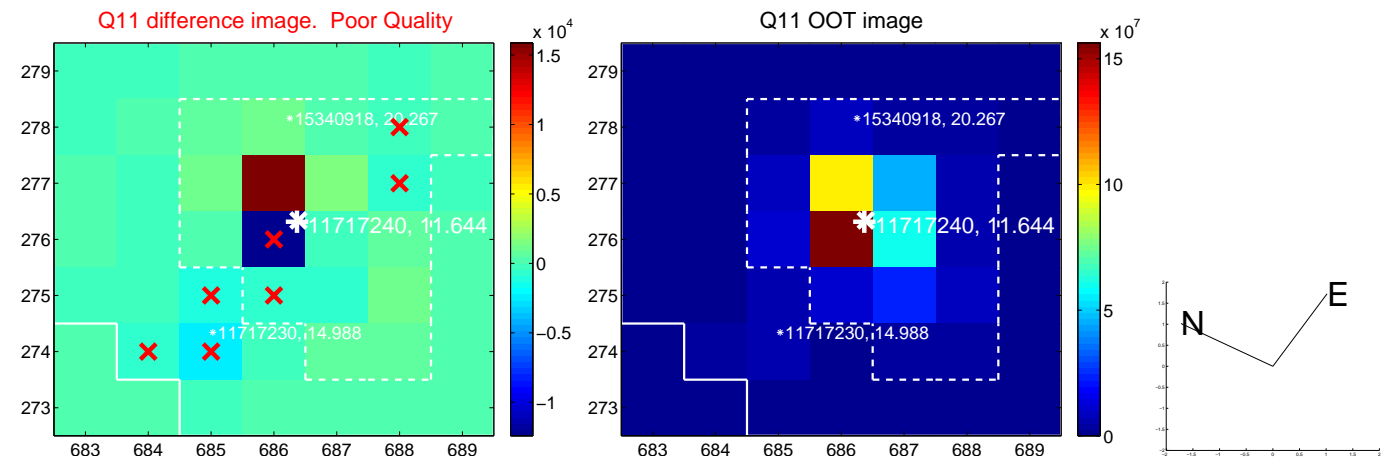
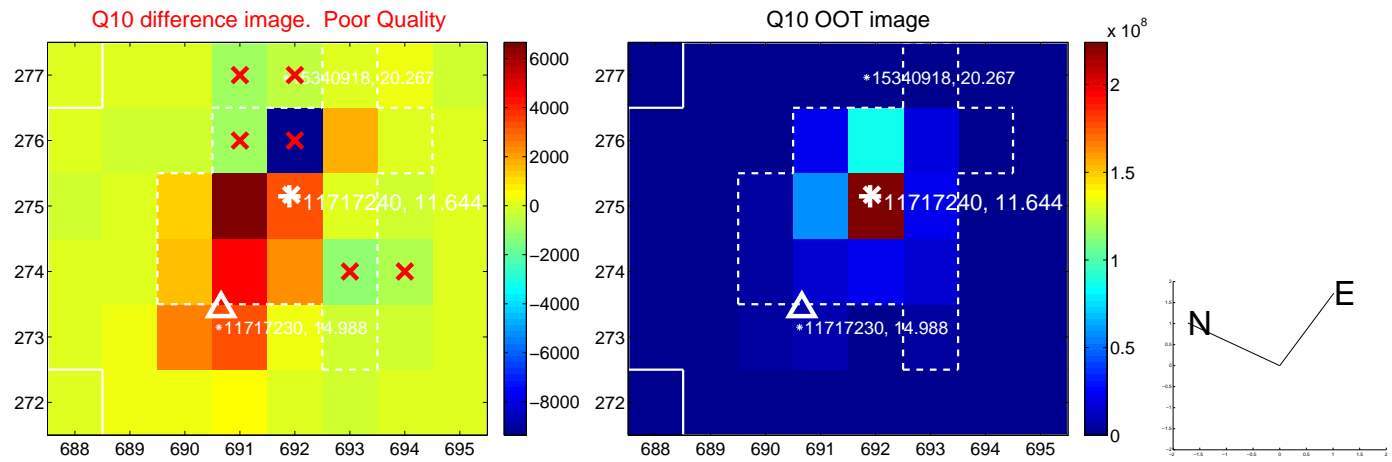
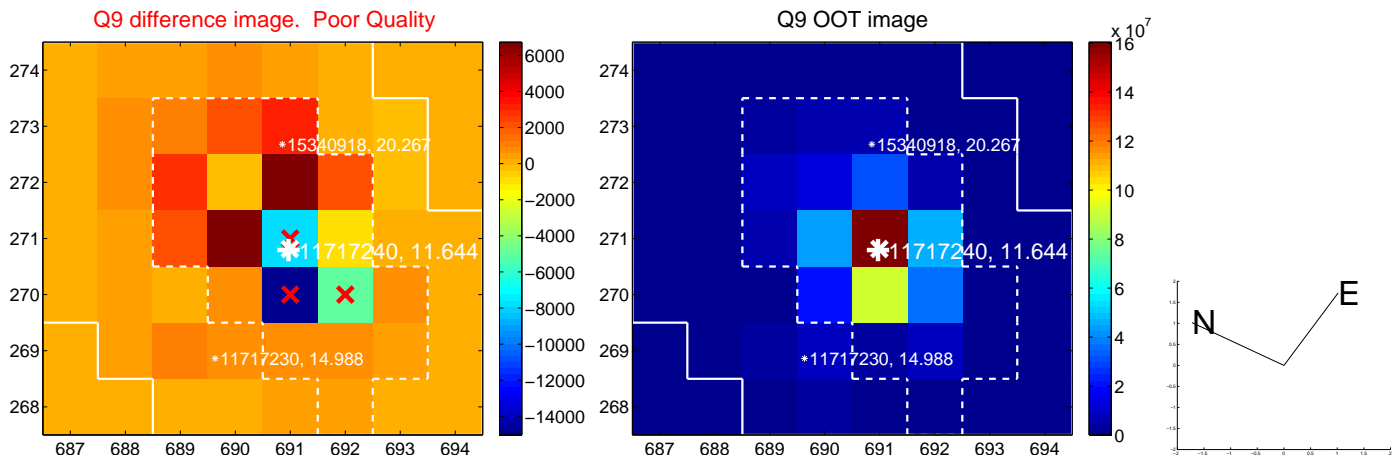
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



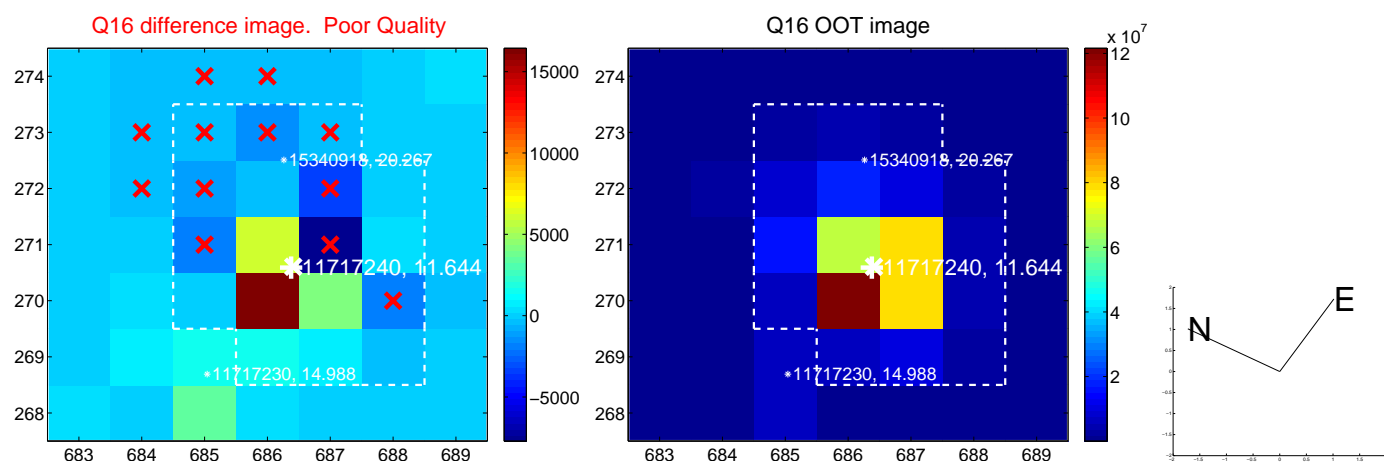
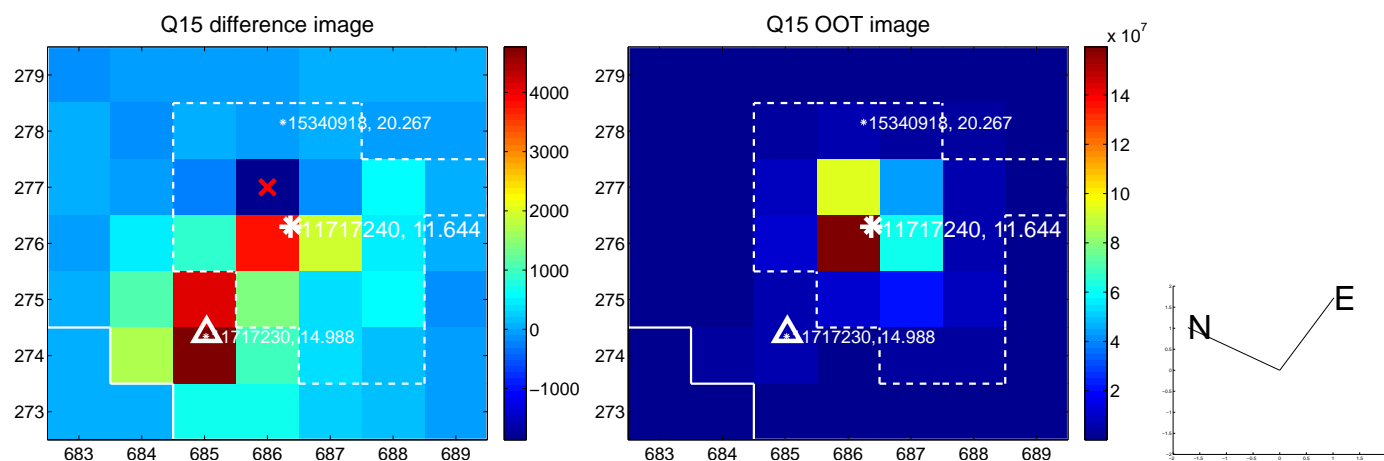
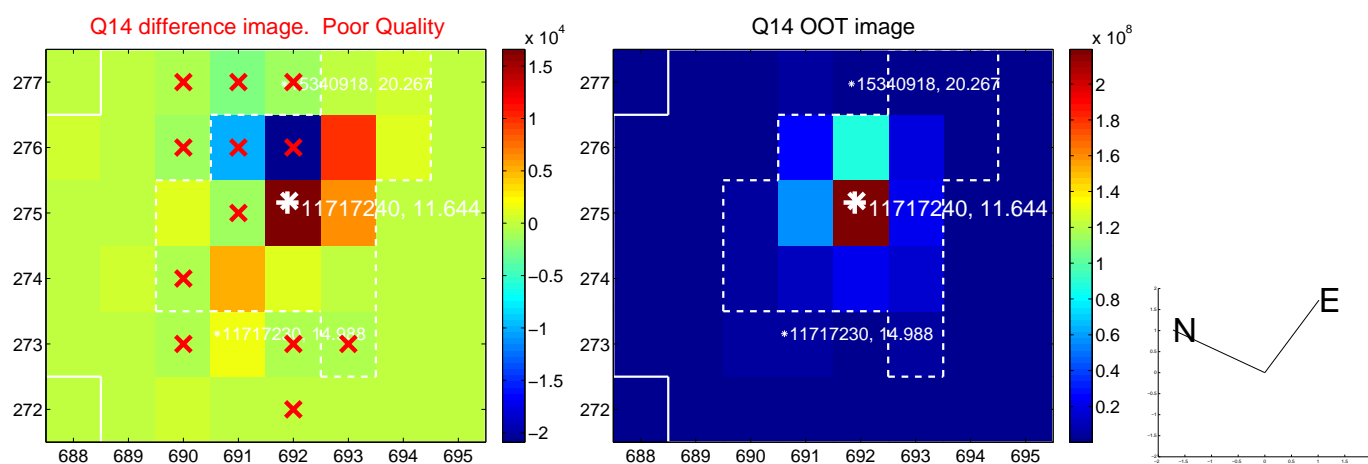
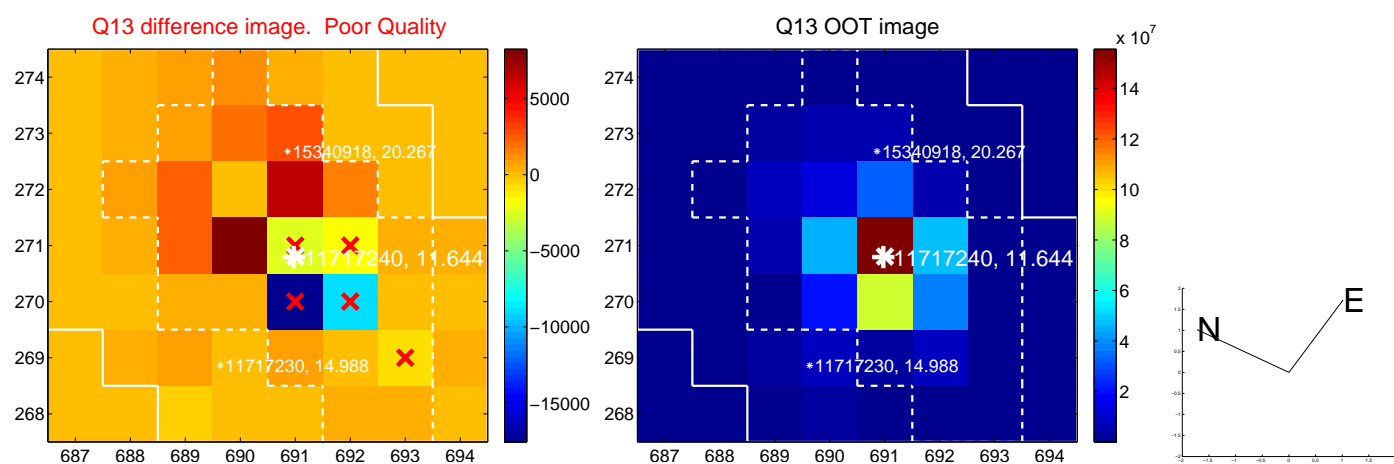
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



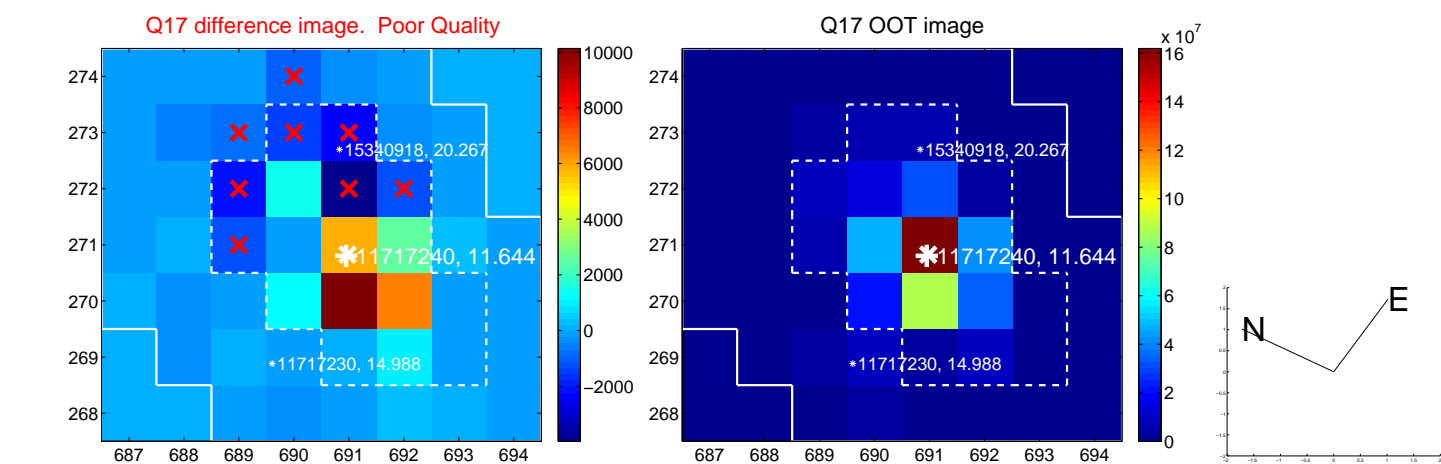
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



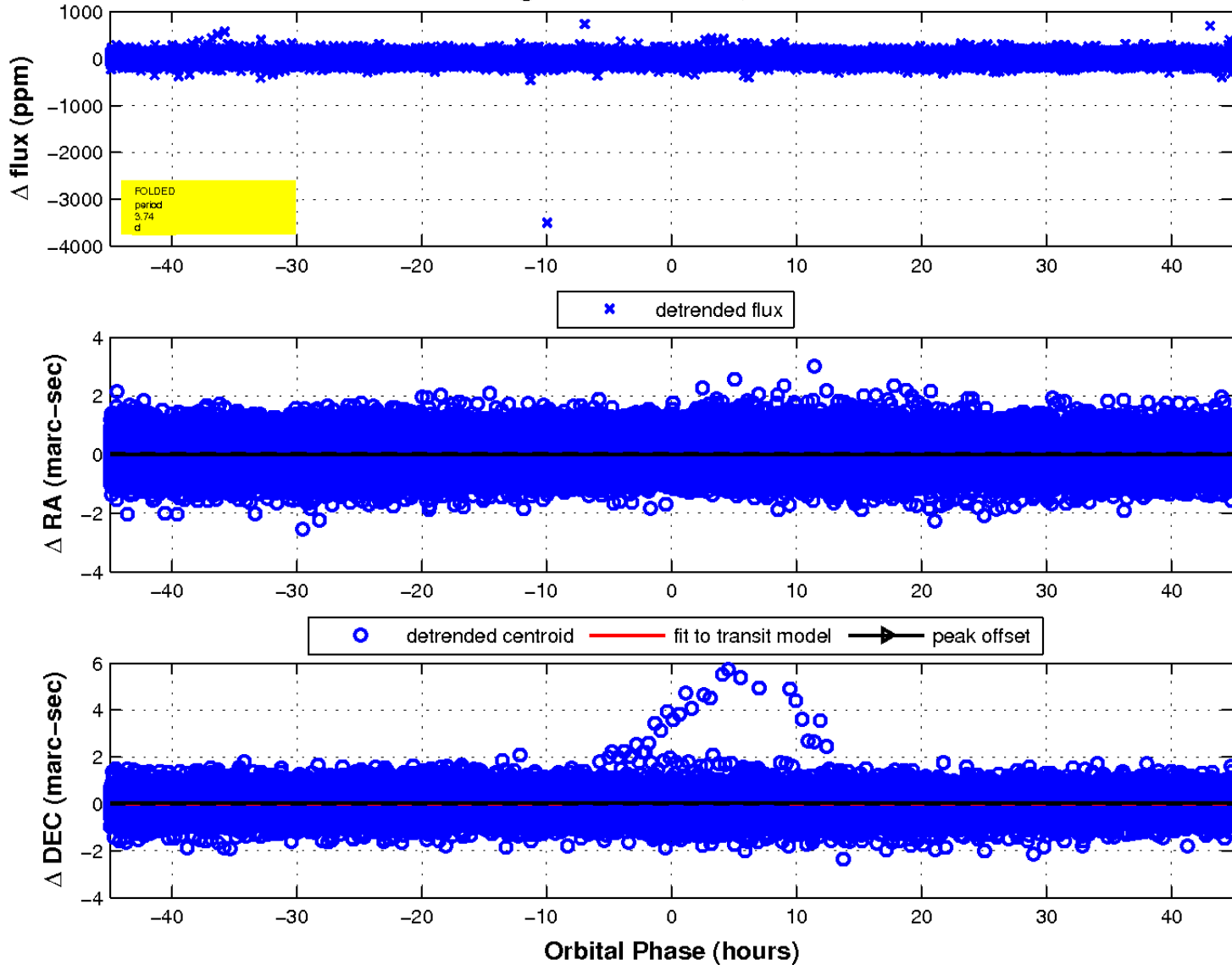
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fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

