

KIC 001724719

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})
001724719-01	OBS	4212.01	5.791784	133.357954	115.6	3.526	13.6	14.9	1.32	6174	1.67	528.88
001724719-02	OBS	4212.02	10.098914	132.329617	99.3	3.093	8.9	8.8	1.32	6174	1.48	252.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001724719-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT
001724719-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

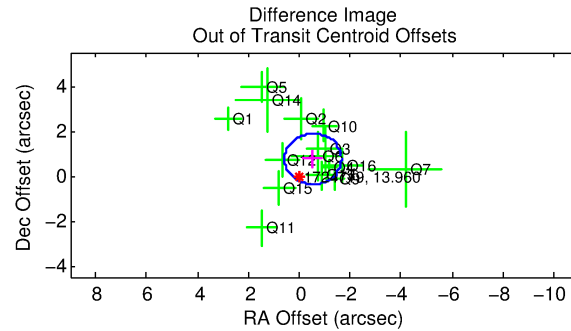
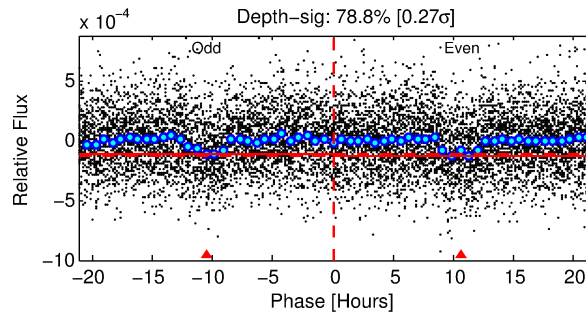
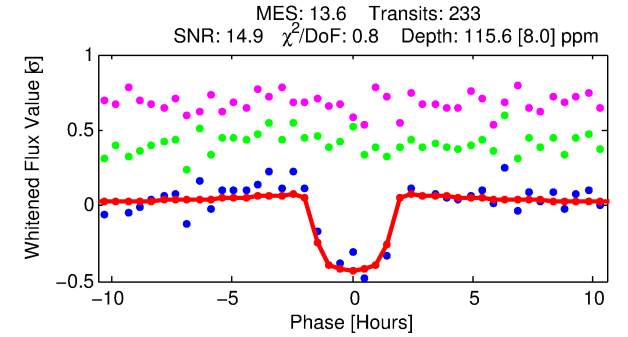
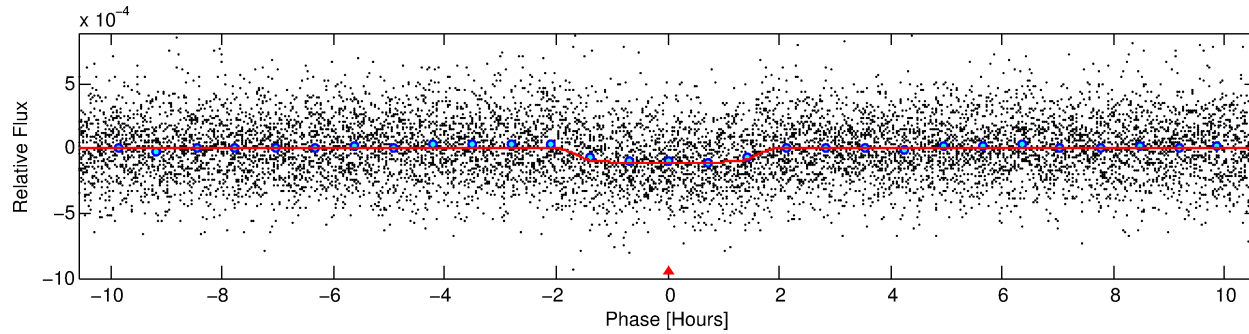
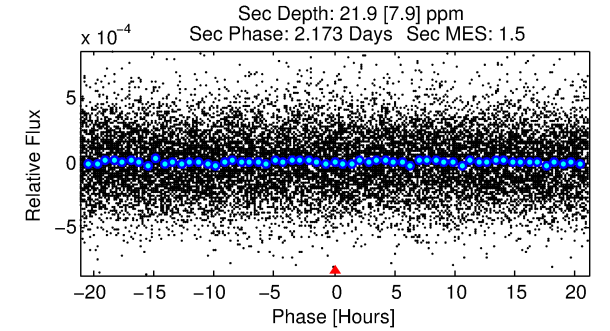
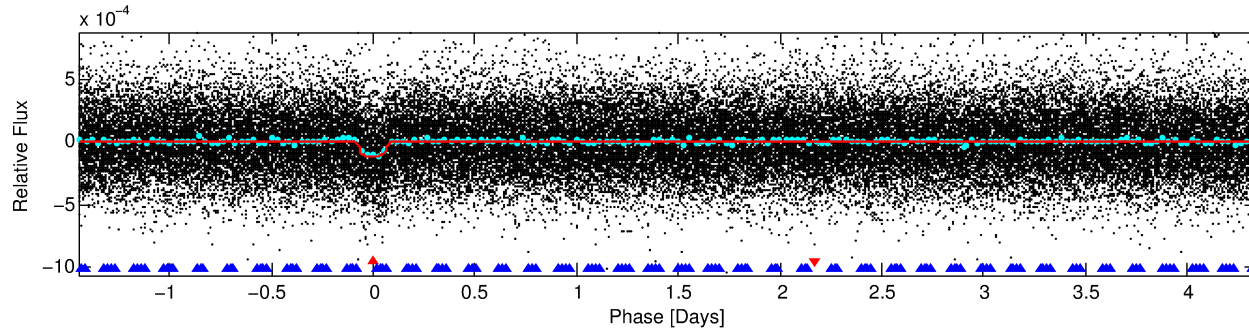
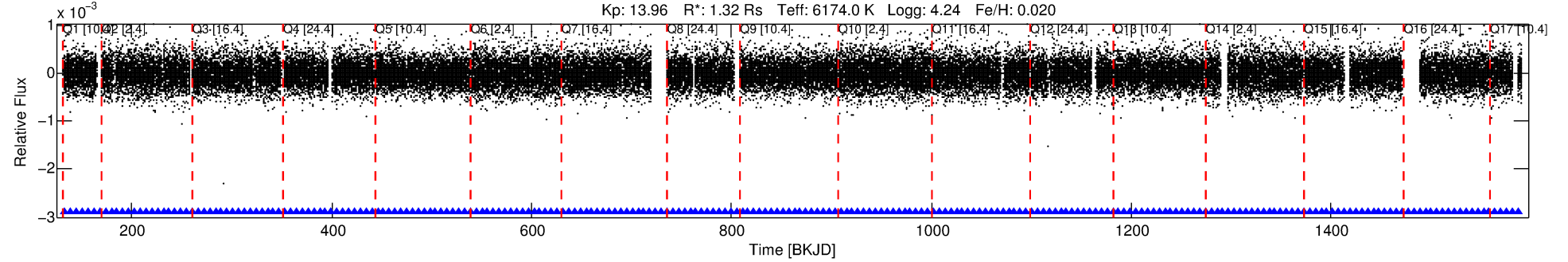
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001724719-01

No Significant Match Found

DV One-Page Summary

KIC: 1724719 Candidate: 1 of 2 Period: 5.792 d
KOI: K04212.01 Corr: 0.964



DV Fit Results:

Period = 5.79178 [0.00003] d
Epoch = 133.3580 [0.0038] BKJD
Rp/R* = 0.0116 [0.0039]
a/R* = 5.88 [10.10]
b = 0.90 [0.38]
Seff = 528.88 [124.07]
Teq = 1223 [72] K
Rp = 1.67 [0.64] Re
a = 0.0654 [0.0102] AU
Ag = 18.50 [14.68] [1.19σ]
Teffp = 3921 [747] K [3.60σ]

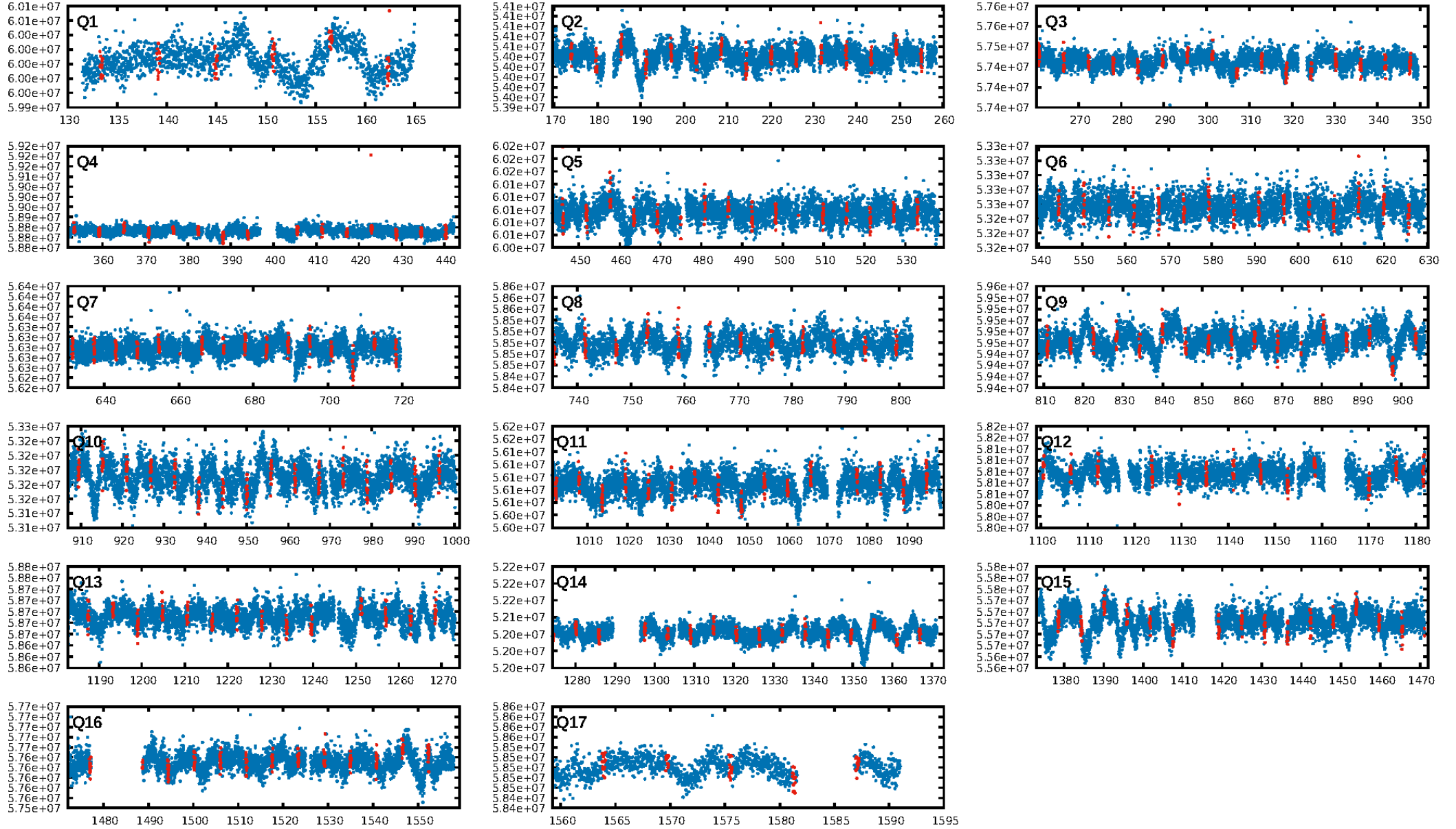
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [22.04σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.22e-42
RollingBand-fgt: 1.00 [222/222]
GhostDiagnostic-chr: 5.954
Centroid-sig: 1.8%
Centroid-so: 2.560 arcsec [2.84σ]
OotOffset-rm: 0.928 arcsec [2.48σ]
KicOffset-rm: 0.928 arcsec [2.48σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 1.00 [17/17]

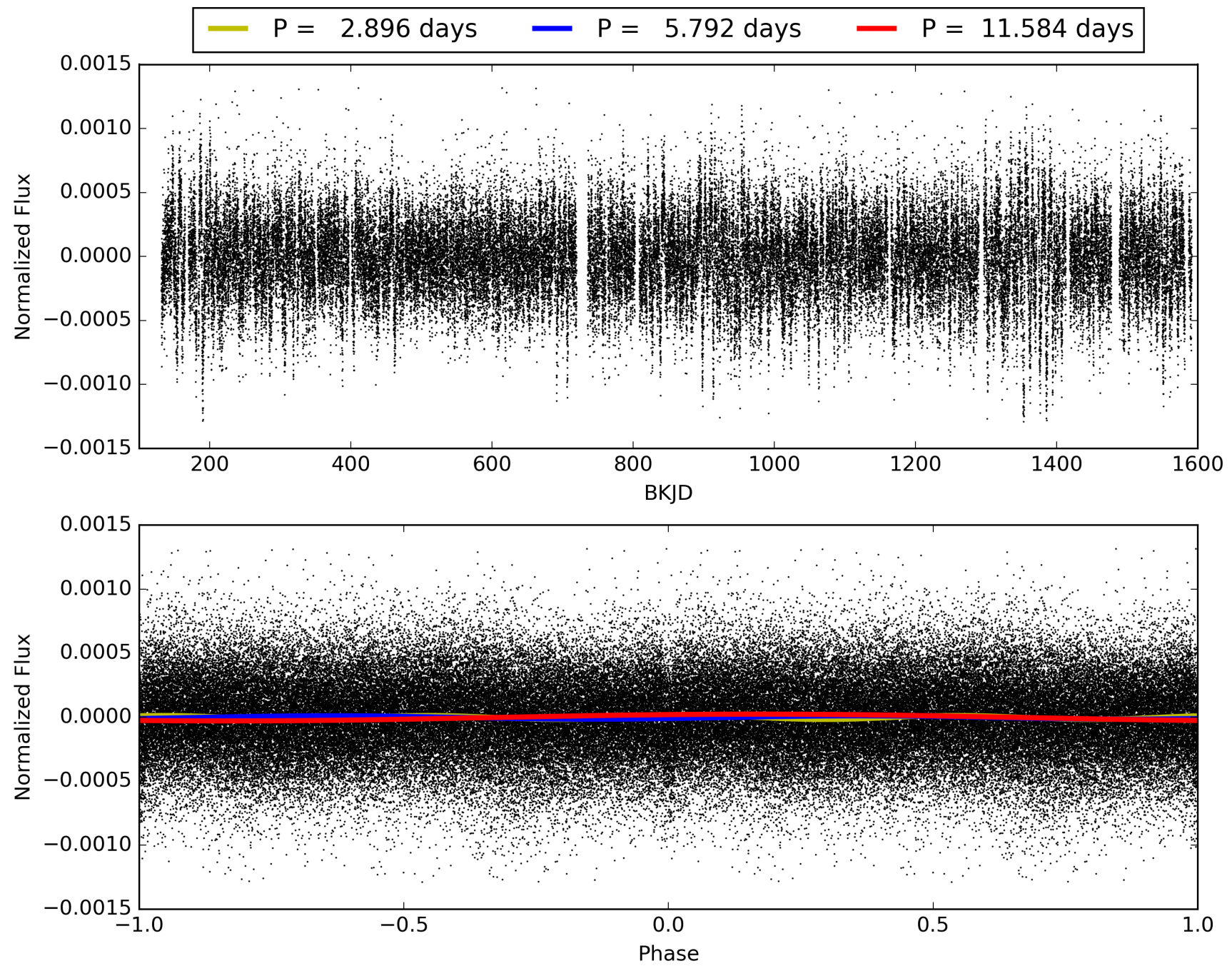
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:27:24 Z

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

TCE 001724719-01, PDC Light Curves

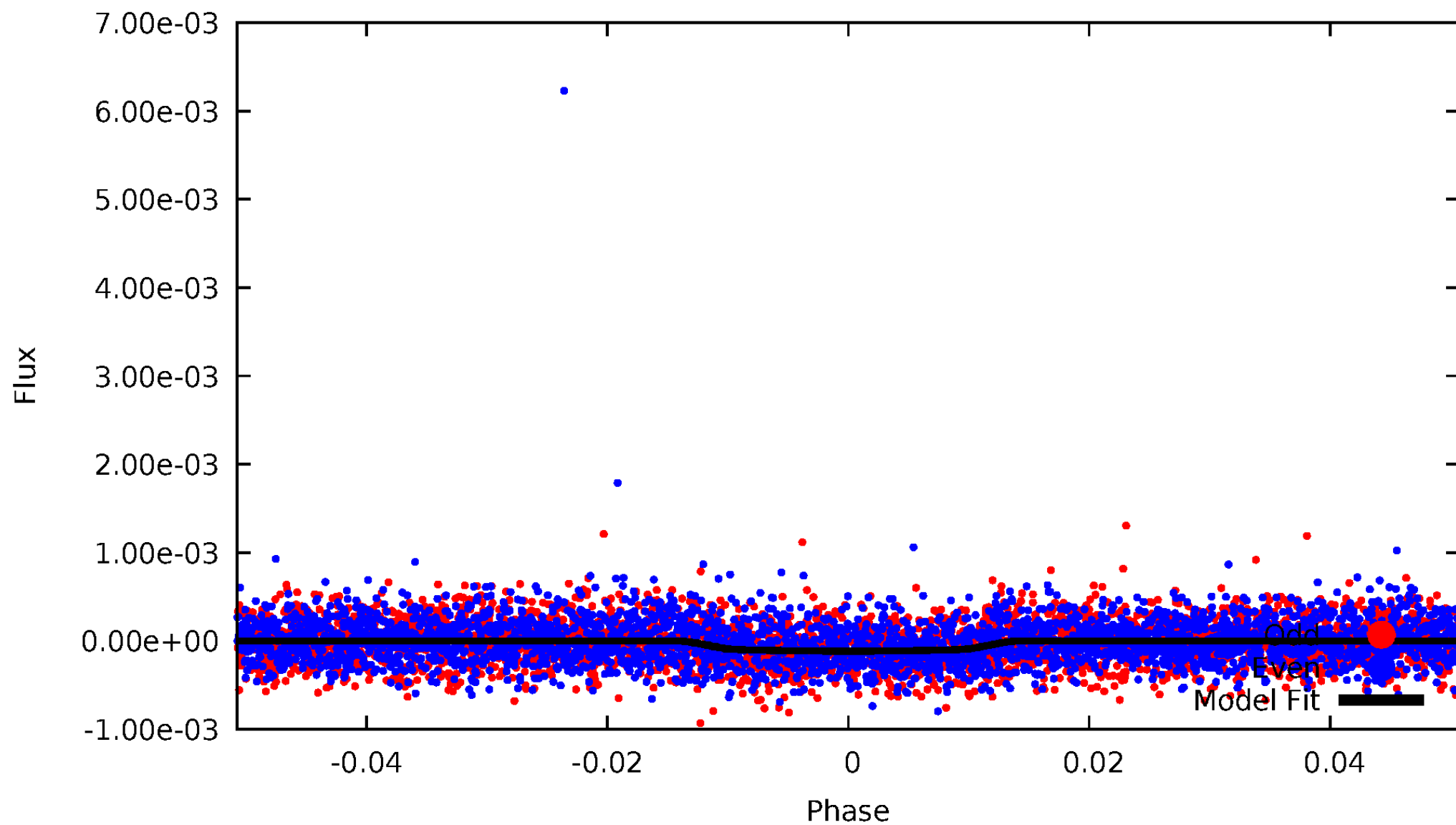


TCE 001724719-01



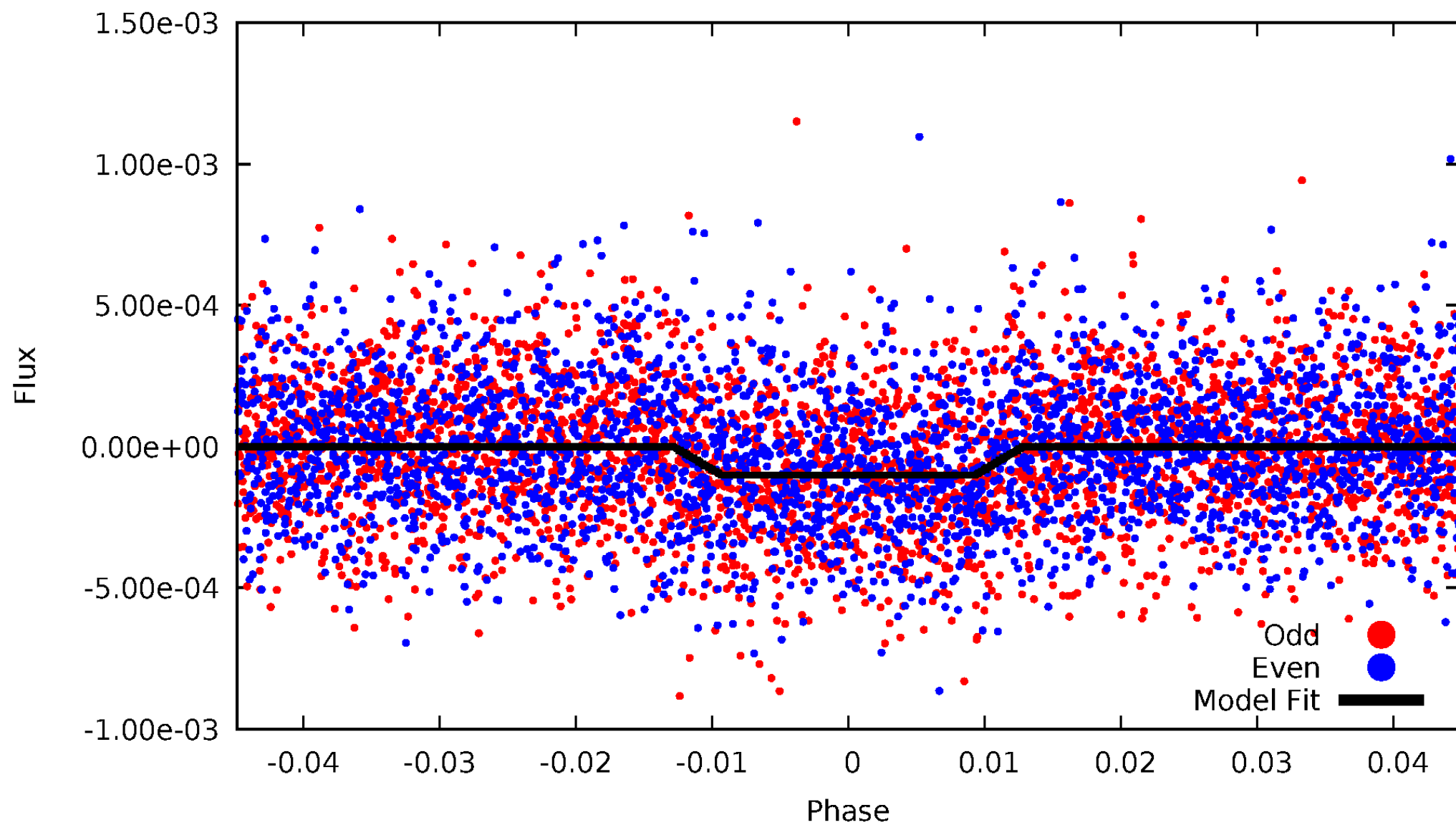
DV Odd/Even

TCE 001724719-01



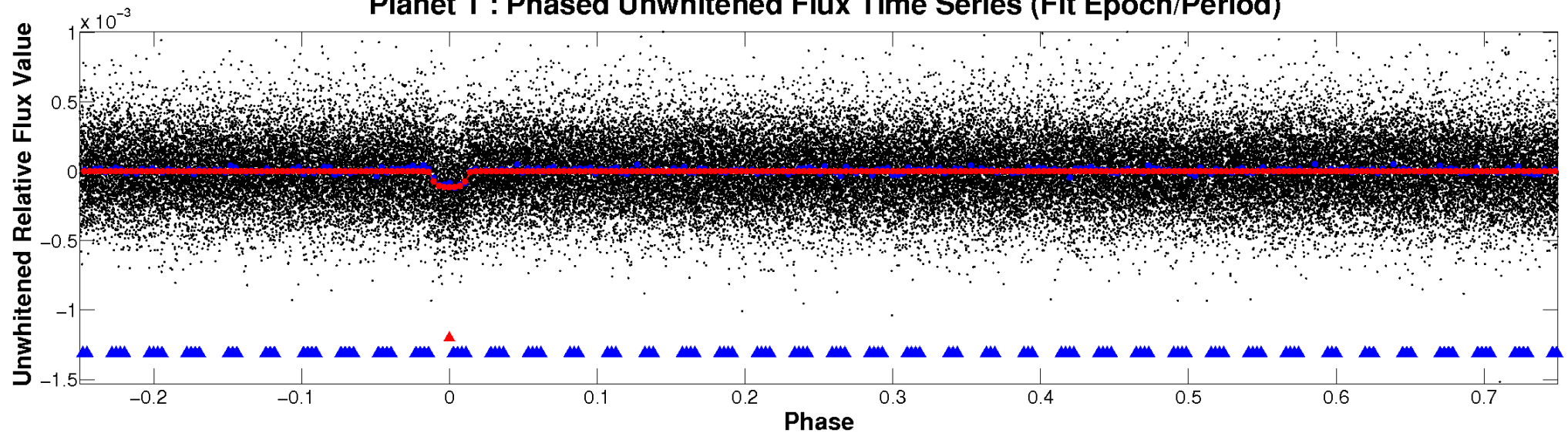
ALT Odd/Even

TCE 001724719-01

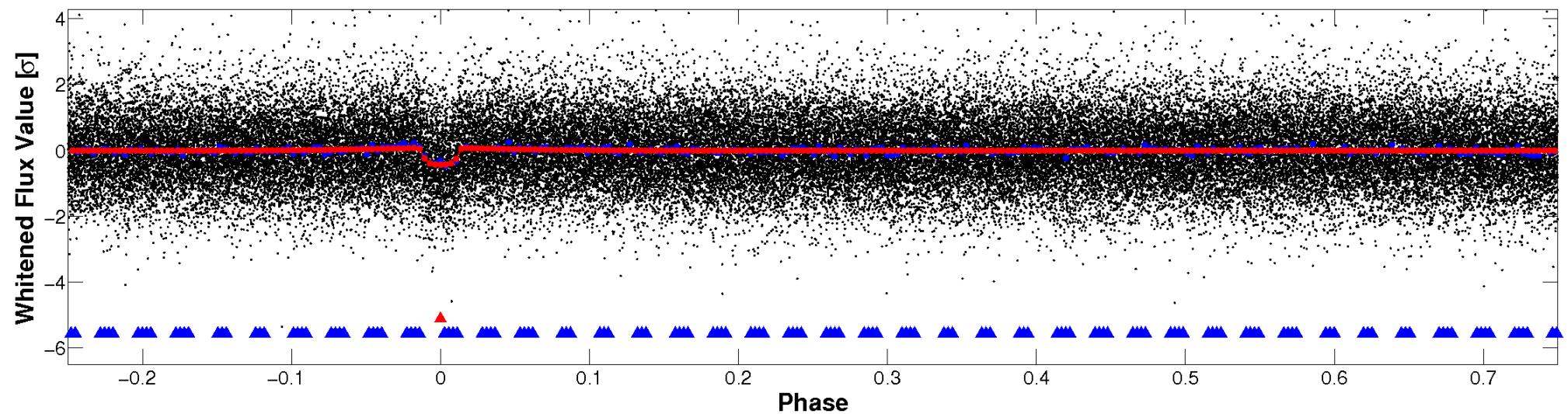


Non-Whitened Vs. Whitened Light Curve

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

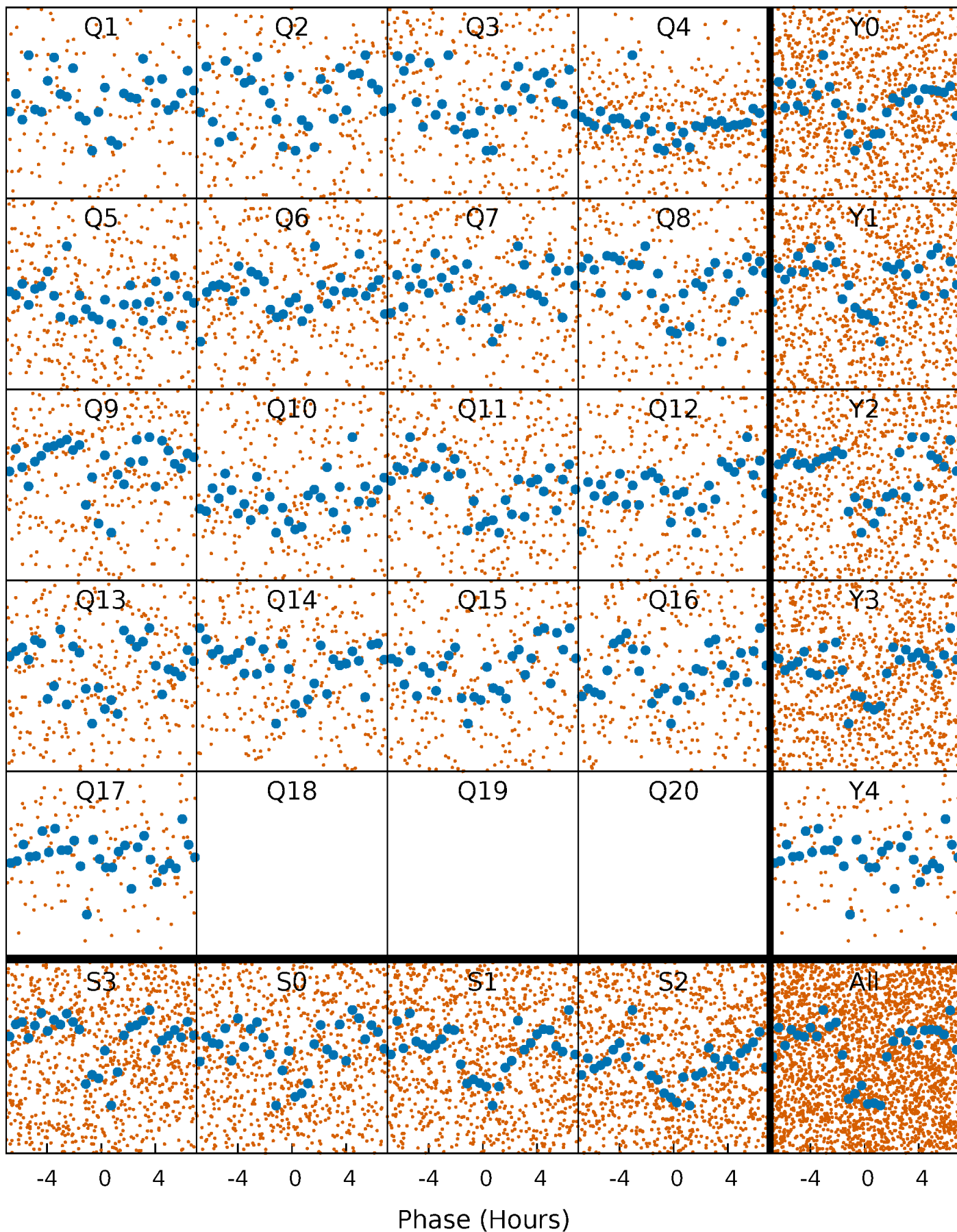


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



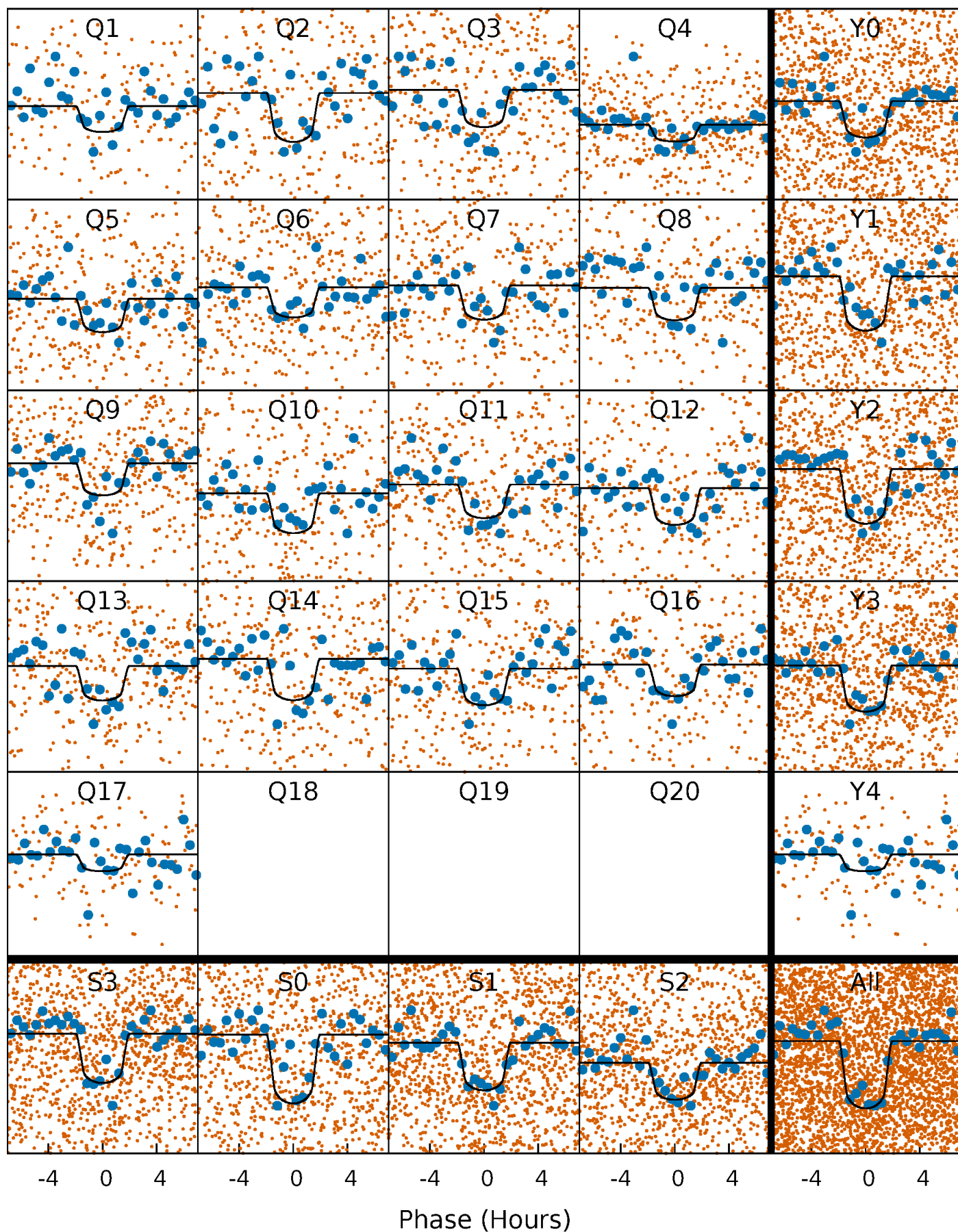
PDC Quarter-Phased Transit Curves

TCE 001724719-01 P= 5.791784 Days $T_0=133.357954$ (BKJD)



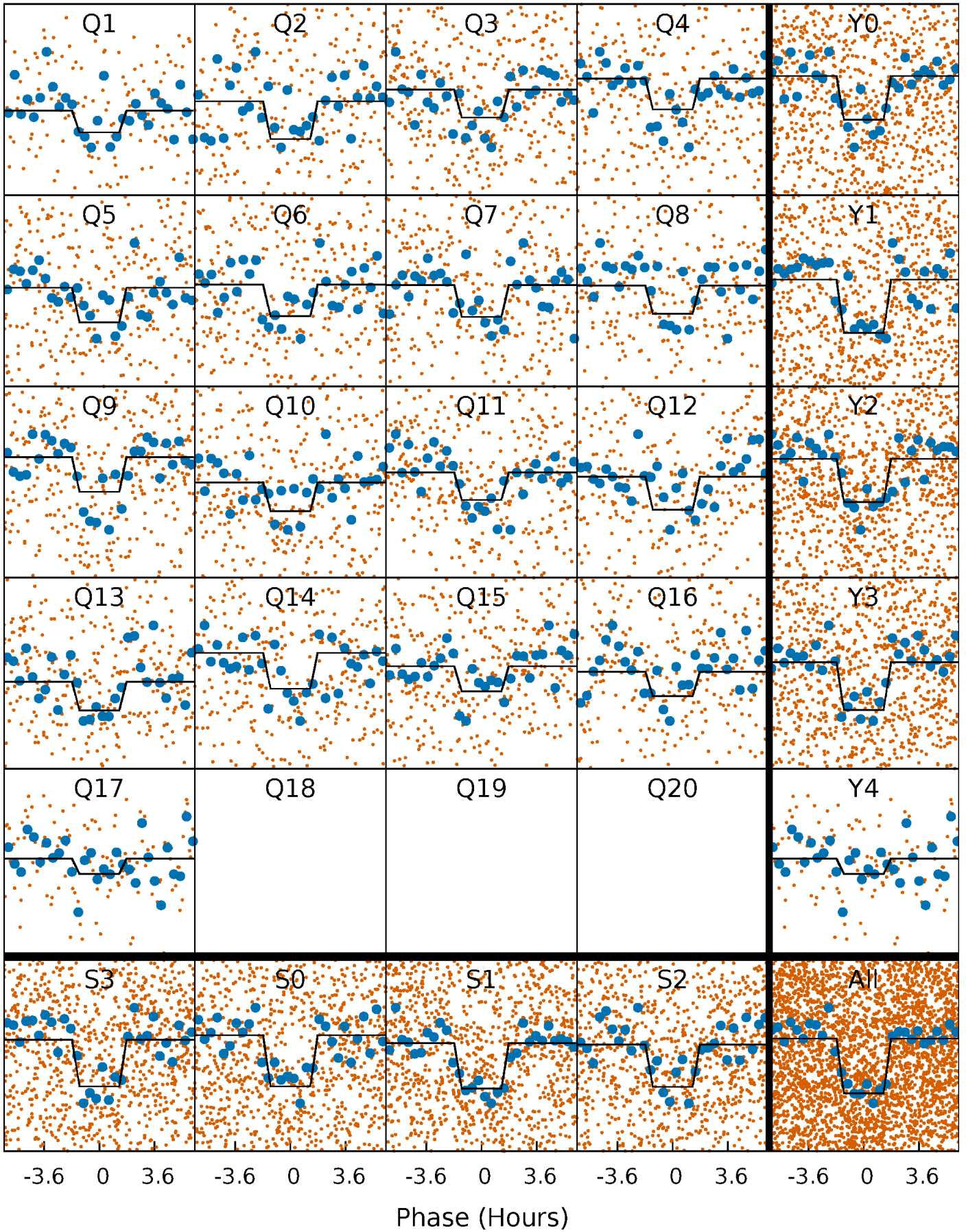
DV Quarter-Phased Transit Curves

TCE 001724719-01 P= 5.791784 Days $T_0=133.357954$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

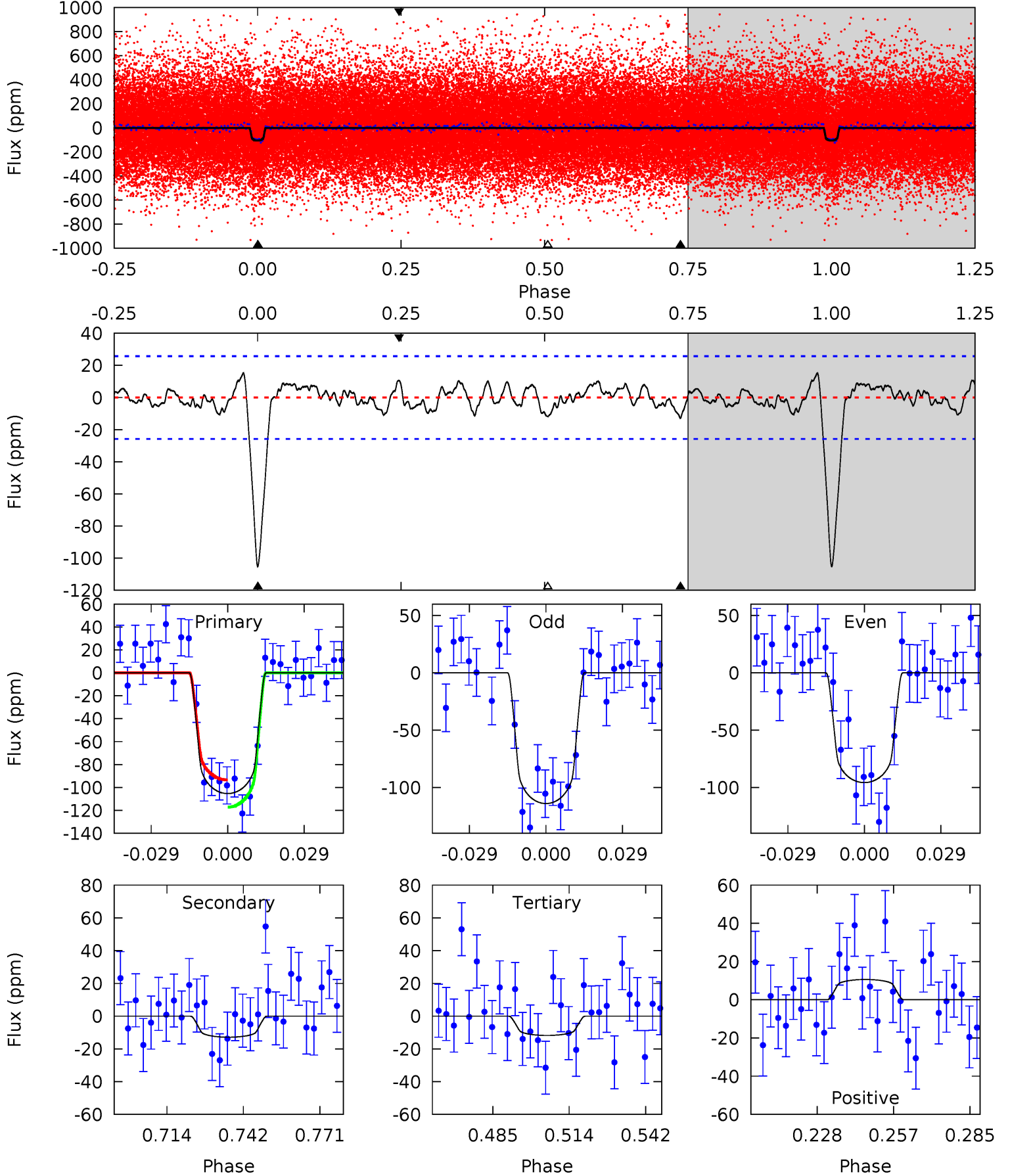
TCE 001724719-01 P= 5.791834 Days $T_0=133.353640$ (BKJD)



DV Model-Shift Uniqueness Test

001724719-01, P = 5.791784 Days, E = 127.566170 Days

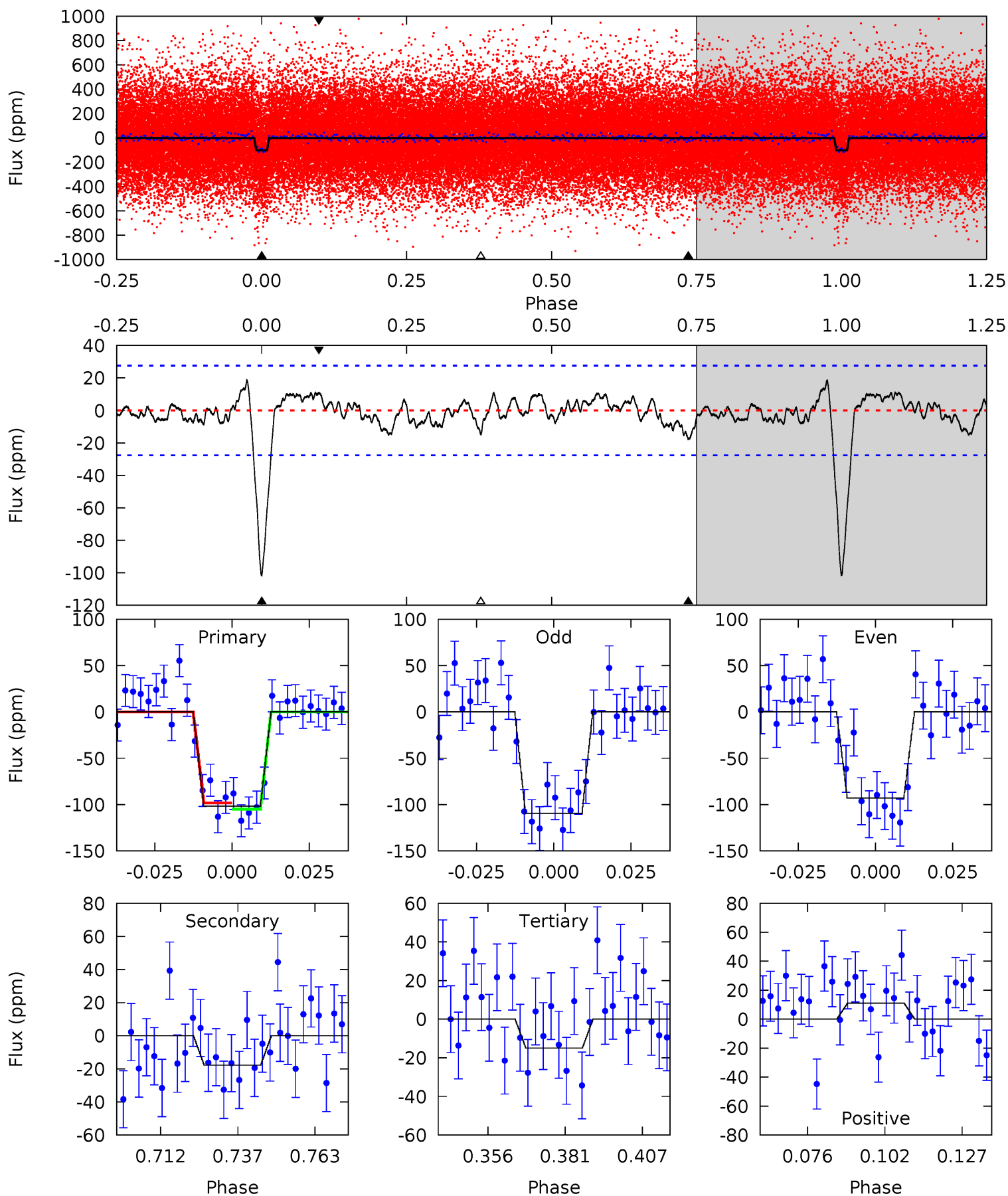
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	2.41	2.20	1.98	4.82	2.19	1.01	17.5	17.7	0.21	0.42	1.71	1.00	0.13	2.23



Alt Model-Shift Uniqueness Test

001724719-01, P = 5.791834 Days, E = 127.561806 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	3.12	2.62	1.95	4.84	2.23	1.07	15.2	15.9	0.49	1.17	1.45	1.00	0.15	0.59



Stellar Parameters For KIC 001724719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6174^{+74}_{-86}	$4.244^{+0.125}_{-0.125}$	$0.020^{+0.150}_{-0.150}$	$1.318^{+0.243}_{-0.199}$	$1.109^{+0.113}_{-0.066}$	$0.682^{+0.394}_{-0.251}$
	+1%/-1%	+3%/-3%	+750%/-750%	+18%/-15%	+10%/-6%	+58%/-37%
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 001724719-01 / KOI 4212.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 5	$1.66^{+0.61}_{-0.54}$	1705^{+88}_{-75}	3767^{+687}_{-464}	11^{+16}_{-6}
Alt.	-18 ± 6	$1.47^{+0.54}_{-0.54}$	1712^{+84}_{-79}	4227^{+898}_{-523}	19^{+33}_{-10}

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 $A_{obs} \gg 1.0$

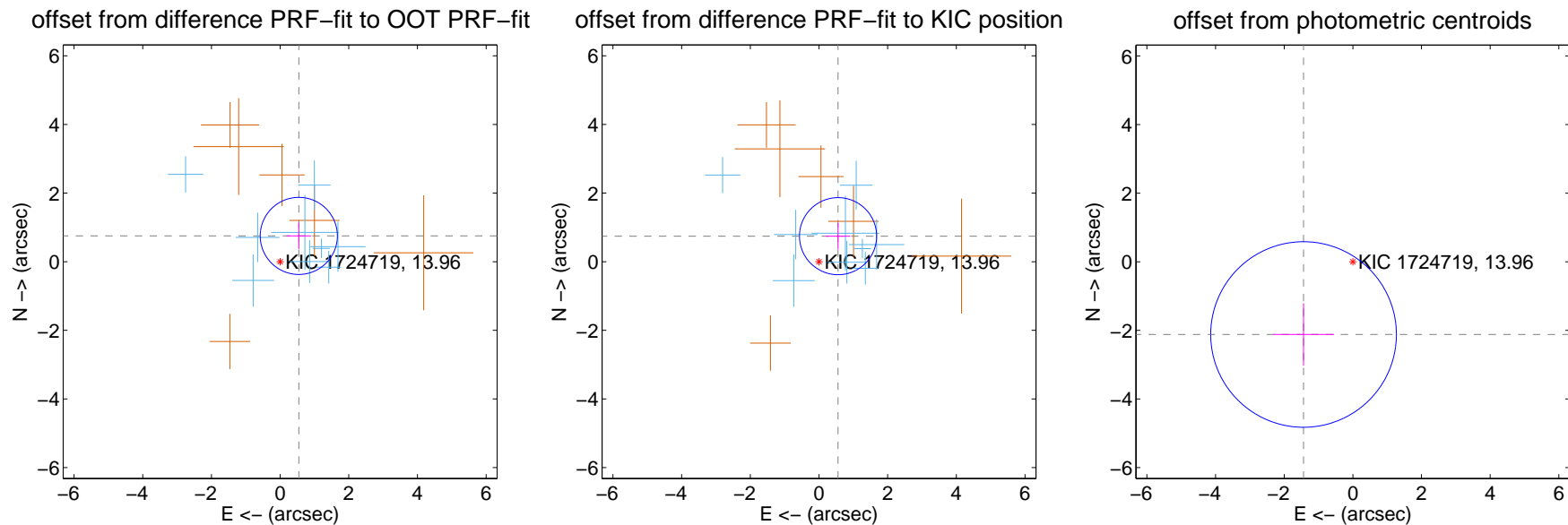
DV Centroid Data

Supplemental centroid analysis for 001724719-01. Kepler magnitude: 13.96. Transit SNR 14.94

There are 9 quarters with good PRF difference image offsets

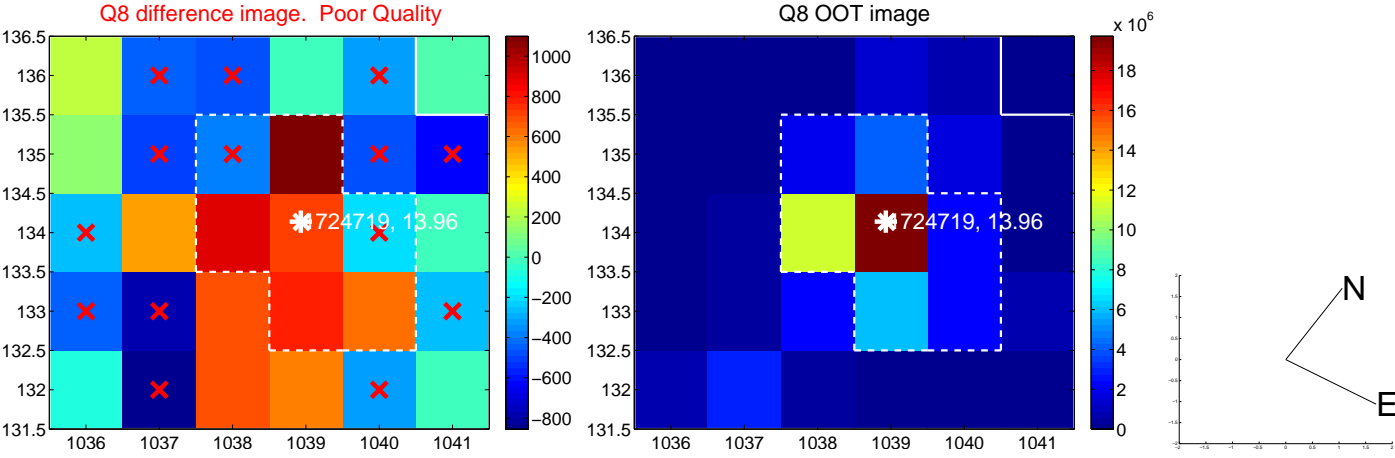
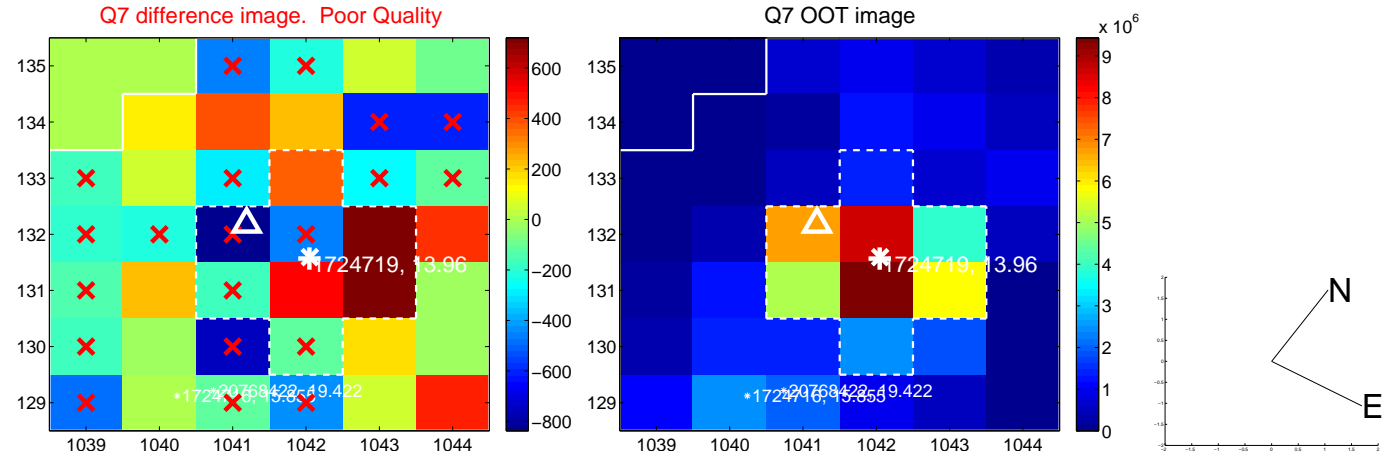
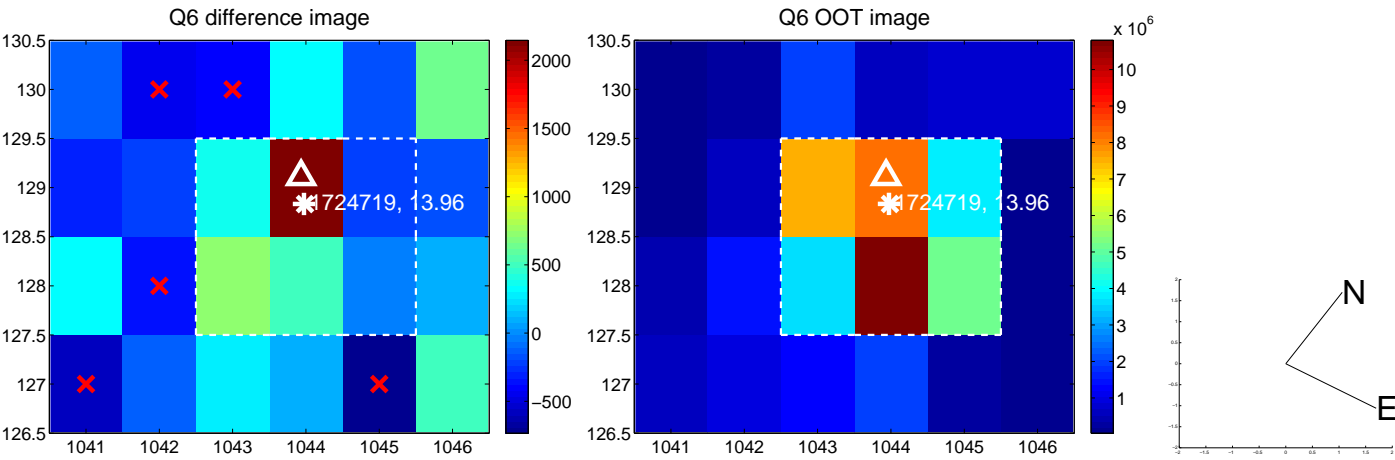
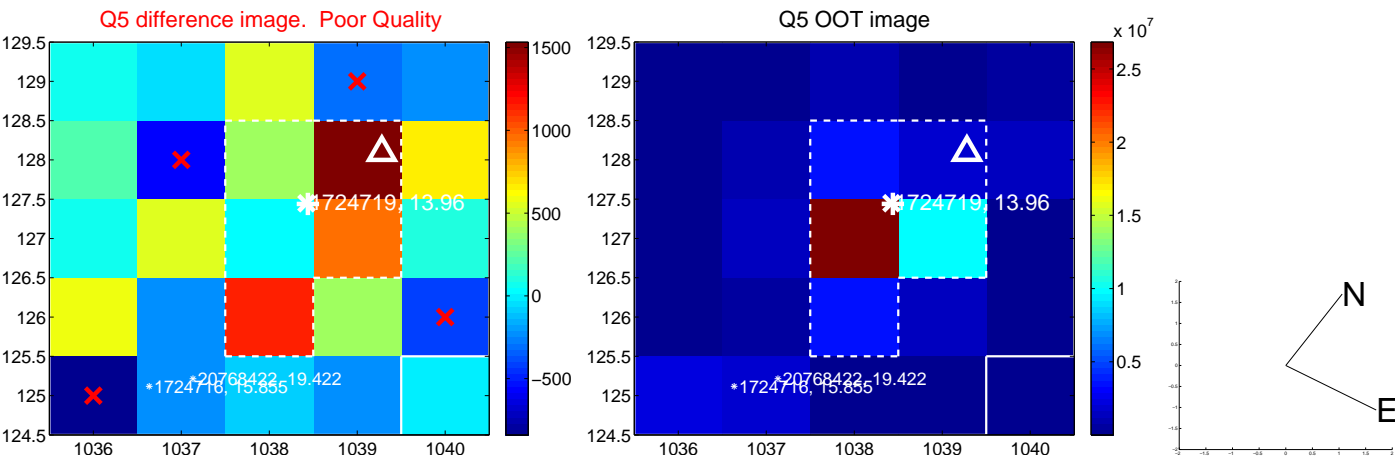
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.928 ± 0.374	2.48	-0.544 ± 0.358	0.752 ± 0.383
PRF-fit source offset from KIC position	0.928 ± 0.374	2.48	-0.555 ± 0.358	0.744 ± 0.383
photometric centroid source offset	2.56 ± 0.90	2.84	1.44 ± 0.88	-2.12 ± 0.91

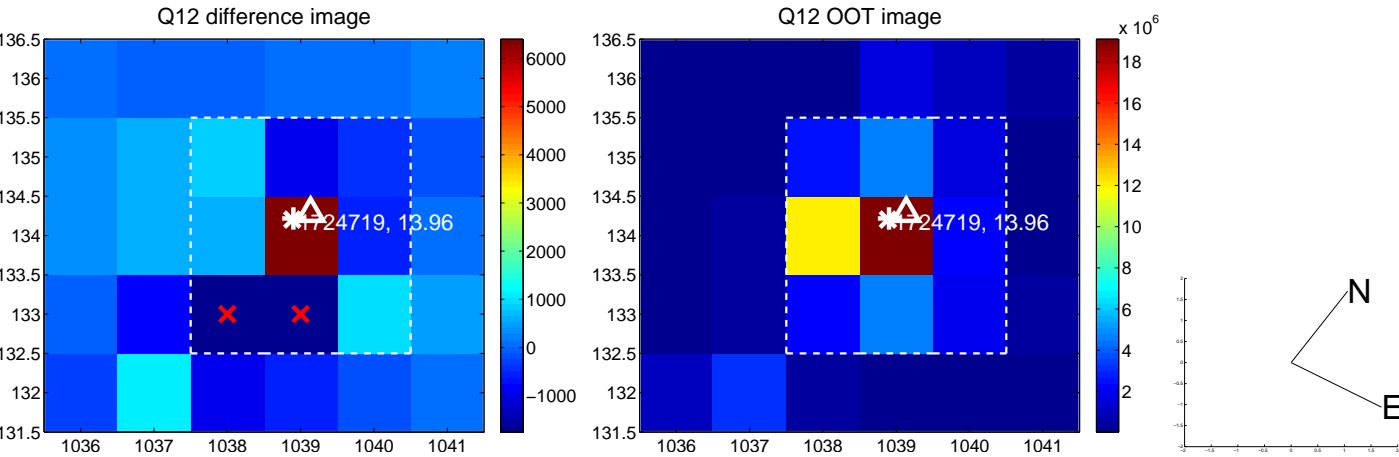
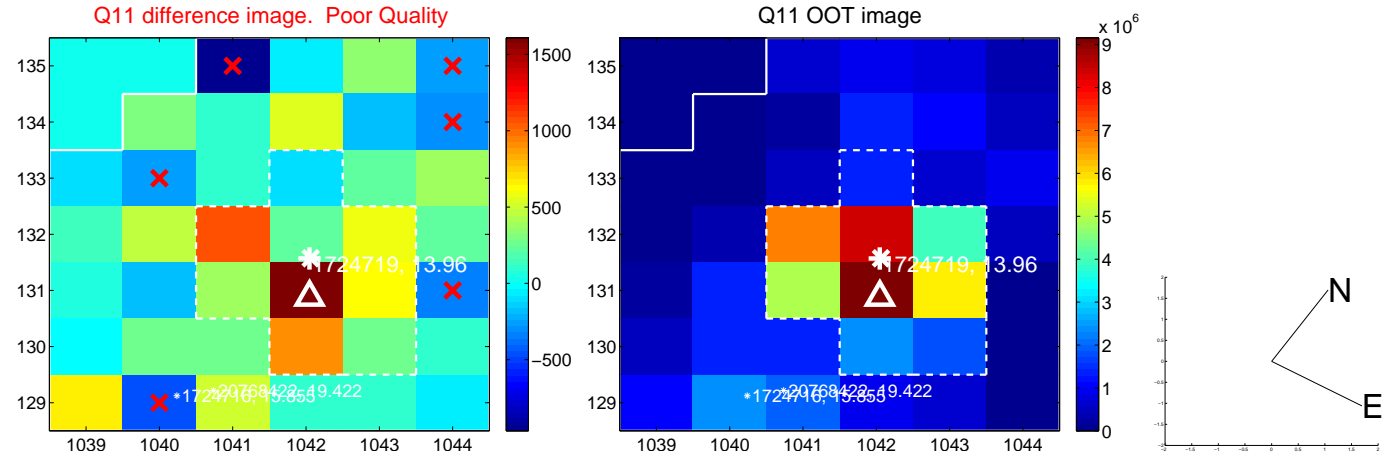
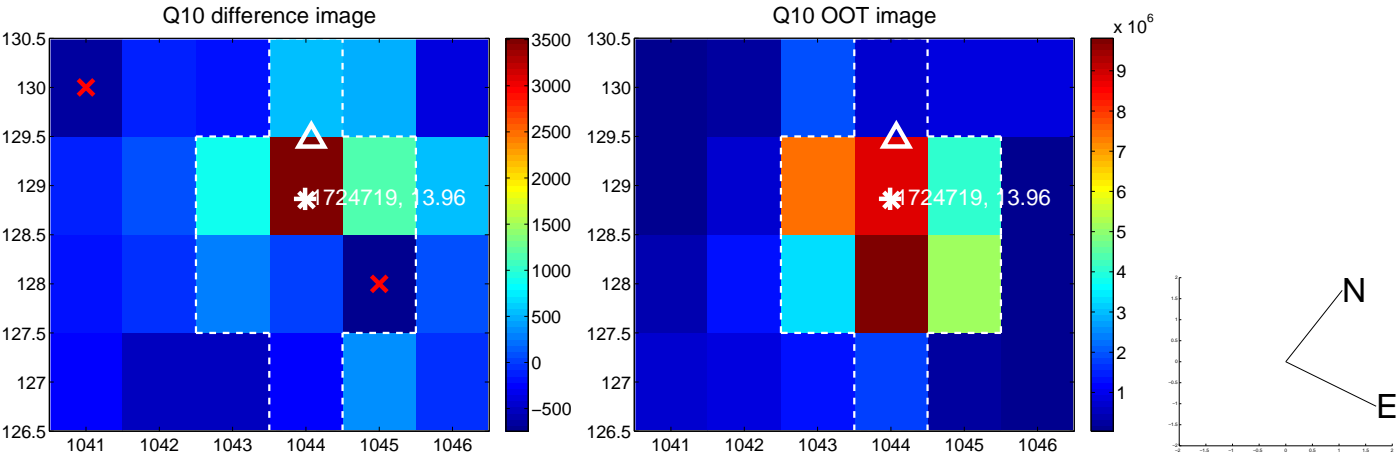
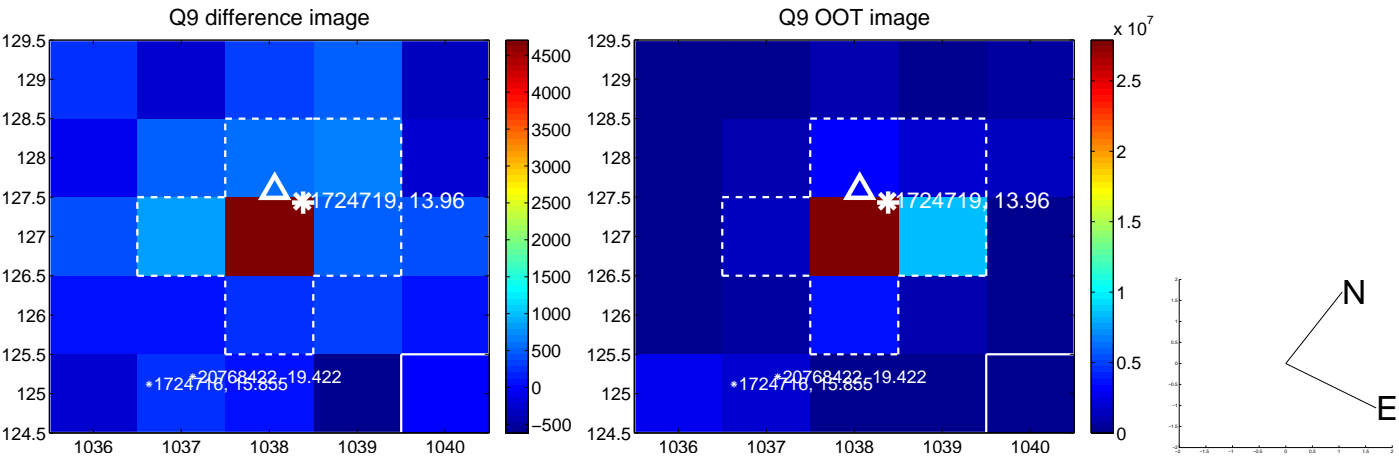


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

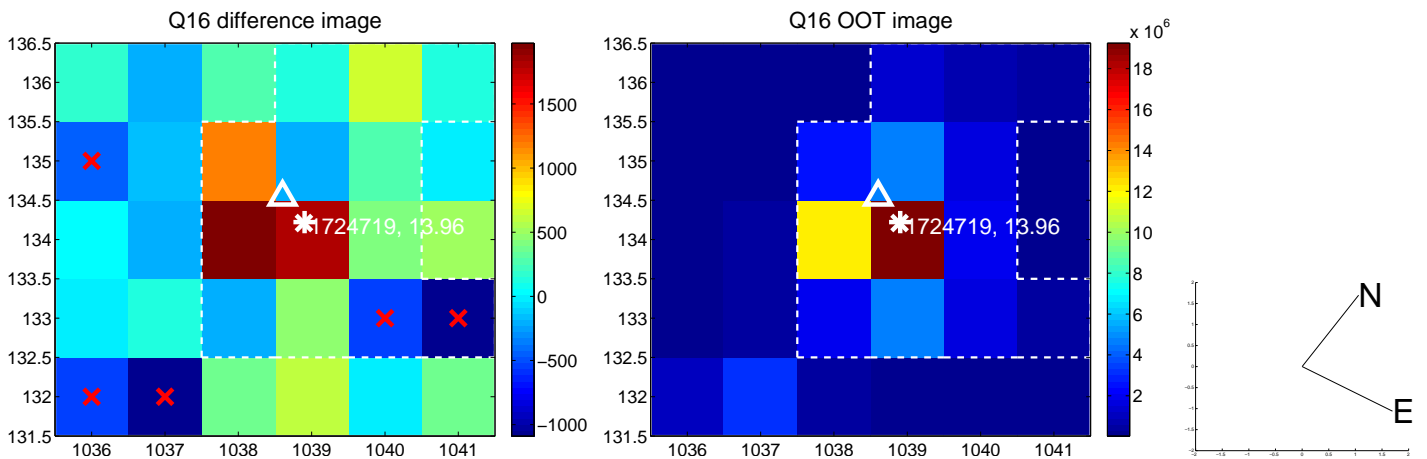
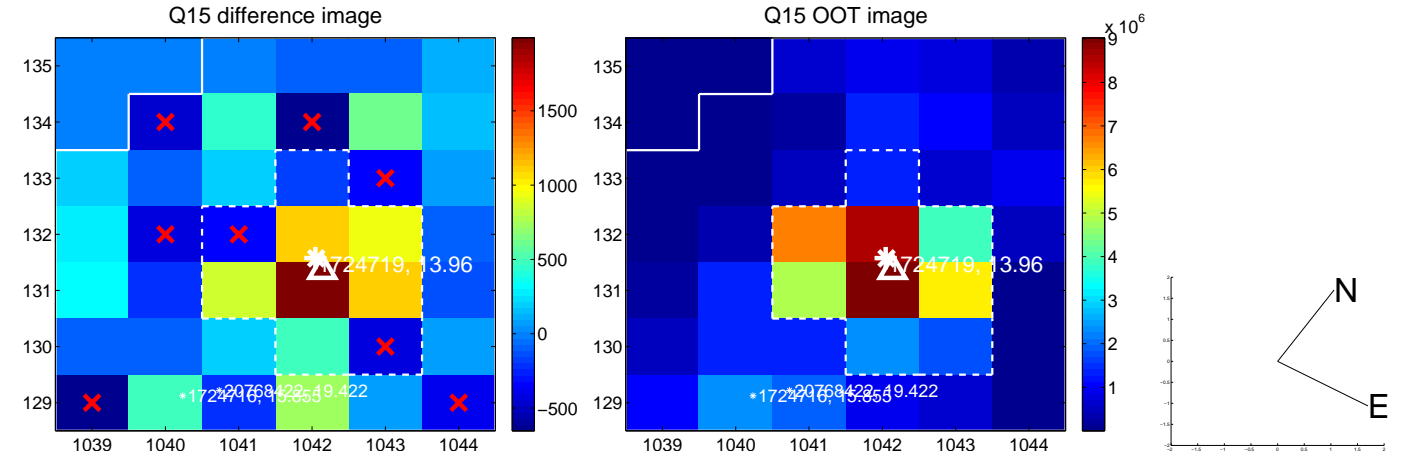
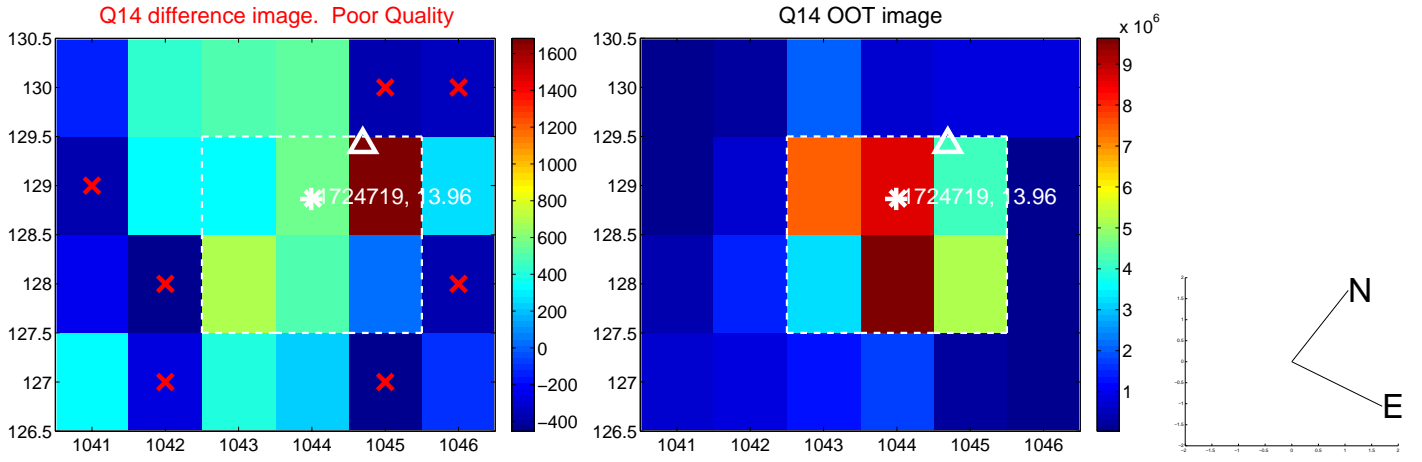
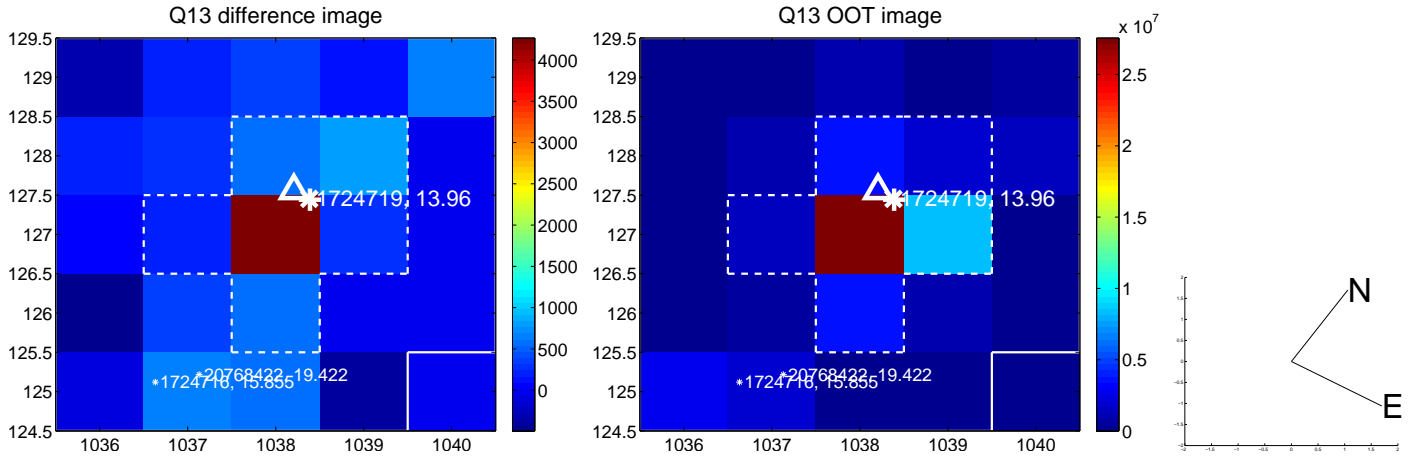
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

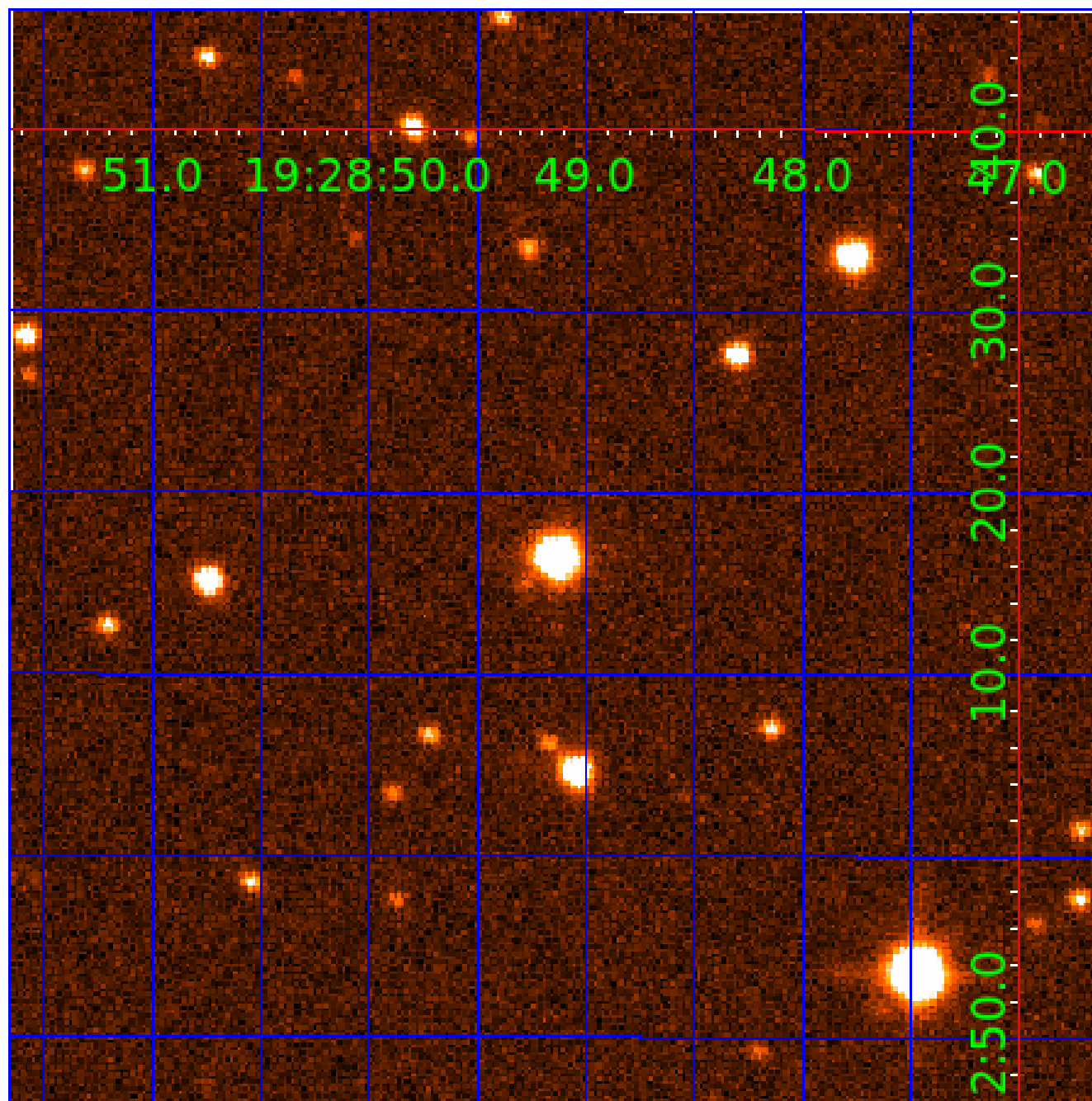


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001724719

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})
001724719-01	OBS	4212.01	5.791784	133.357954	115.6	3.526	13.6	14.9	1.32	6174	1.67	528.88
001724719-02	OBS	4212.02	10.098914	132.329617	99.3	3.093	8.9	8.8	1.32	6174	1.48	252.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001724719-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT
001724719-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

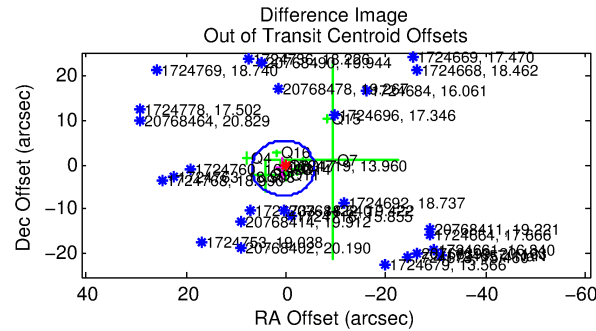
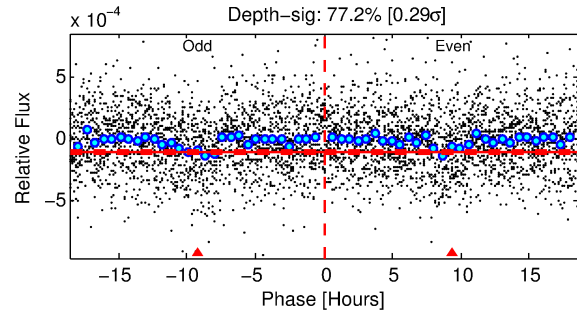
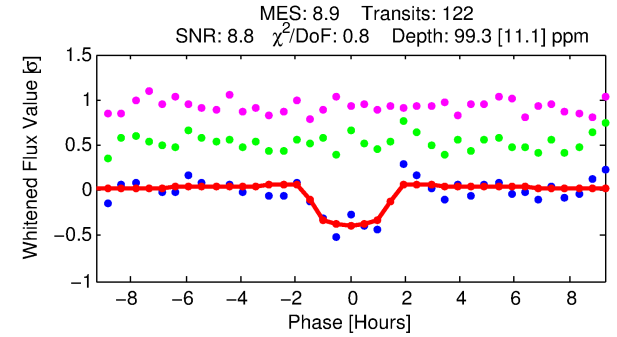
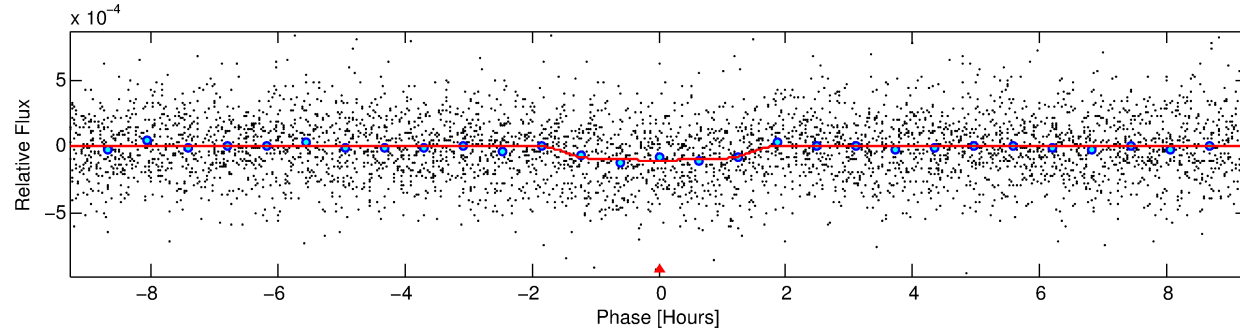
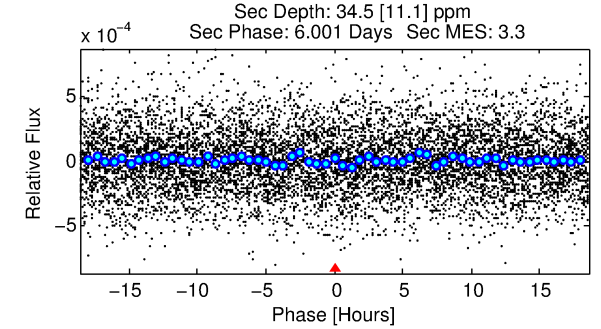
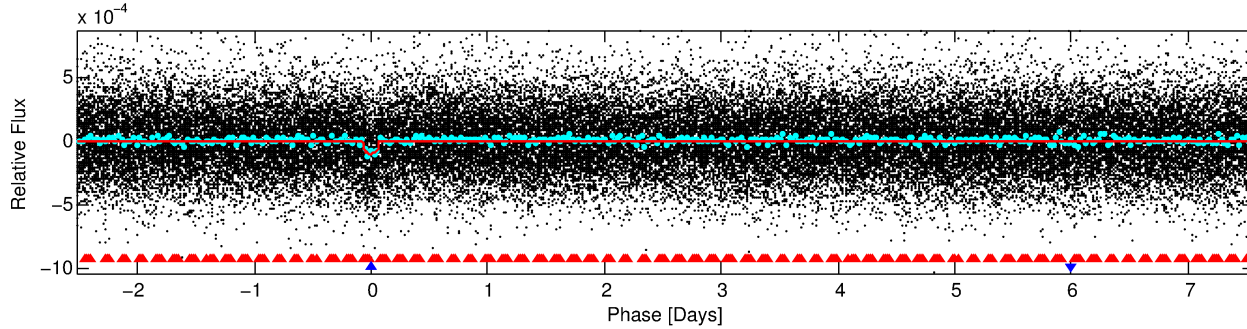
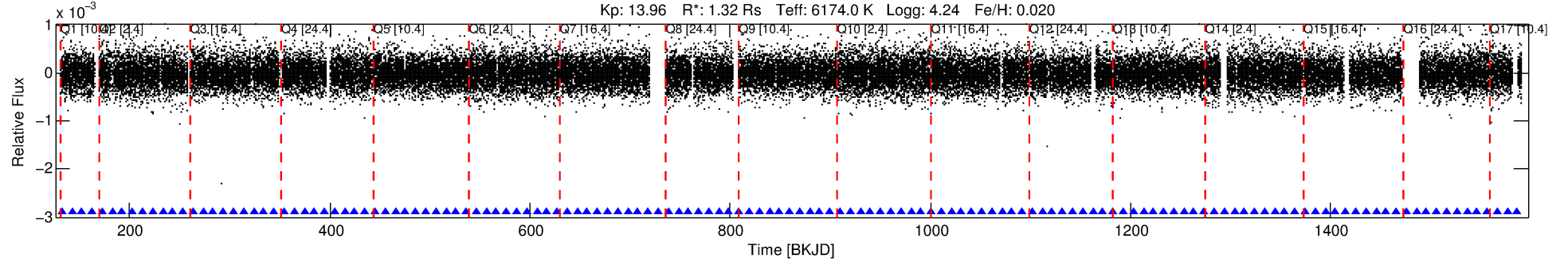
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001724719-02

No Significant Match Found

DV One-Page Summary

KIC: 1724719 Candidate: 2 of 2 Period: 10.099 d
KOI: K04212.02 Corr: 0.968



DV Fit Results:

Period = 10.09891 [0.00009] d
Epoch = 132.3296 [0.0068] BKJD
Rp/R* = 0.0103 [0.0077]
a/R* = 13.97 [52.92]
b = 0.84 [1.34]
Seff = 252.00 [59.12]
Teq = 1016 [60] K
Rp = 1.48 [1.13] Re
a = 0.0947 [0.0148] AU
Ag = 77.21 [118.57] [0.64σ]
Teff = 4656 [1769] K [2.06σ]

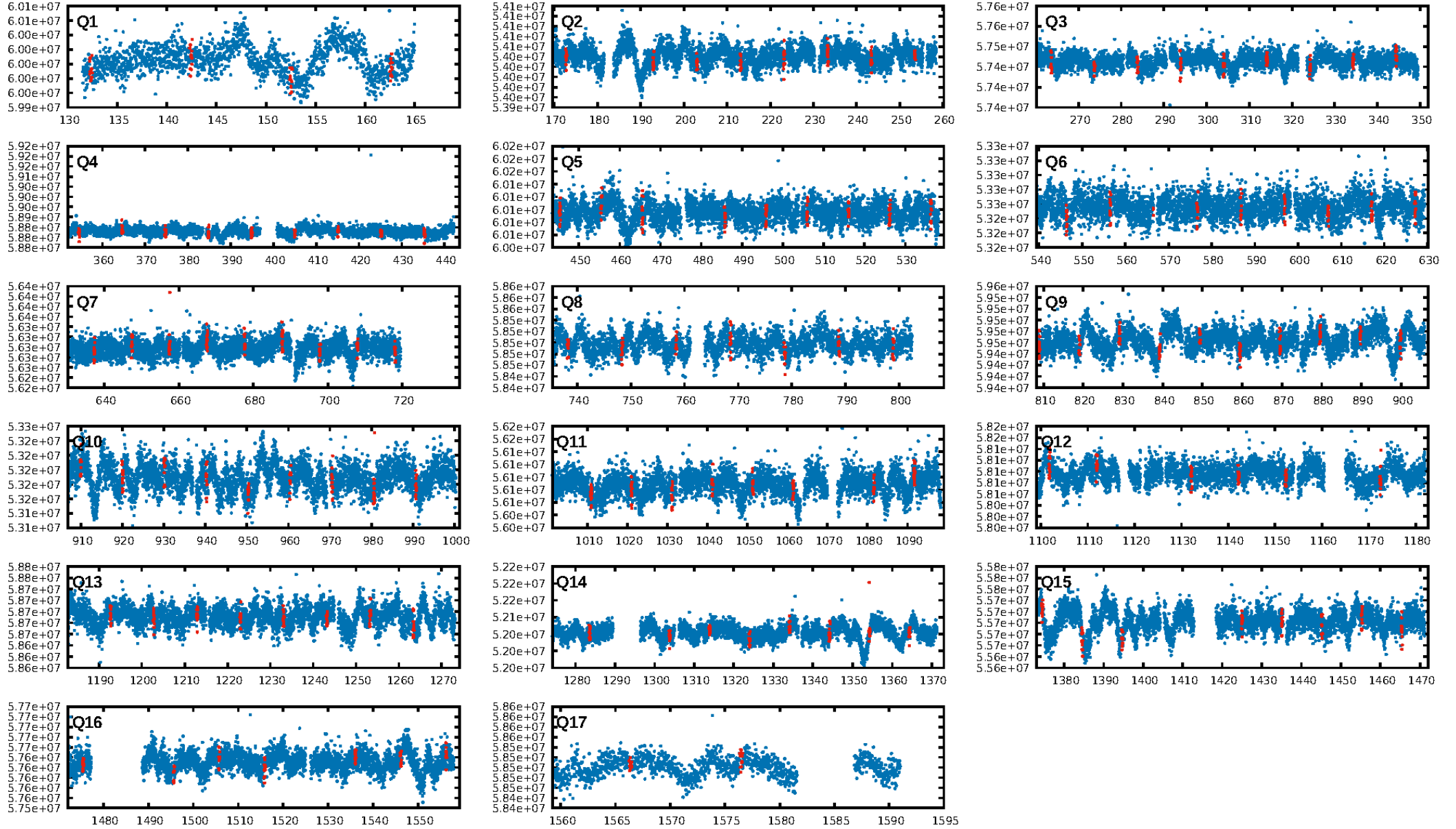
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.01e-19
RollingBand-fgt: 1.00 [116/116]
GhostDiagnostic-chr: 4.661
Centroid-sig: 21.3%
Centroid-so: 1.314 arcsec [0.92σ]
OotOffset-rm: 0.956 arcsec [0.46σ]
KicOffset-rm: 0.955 arcsec [0.46σ]
OotOffset-st: 2/3/3/2 [10]
KicOffset-st: 2/3/3/2 [10]
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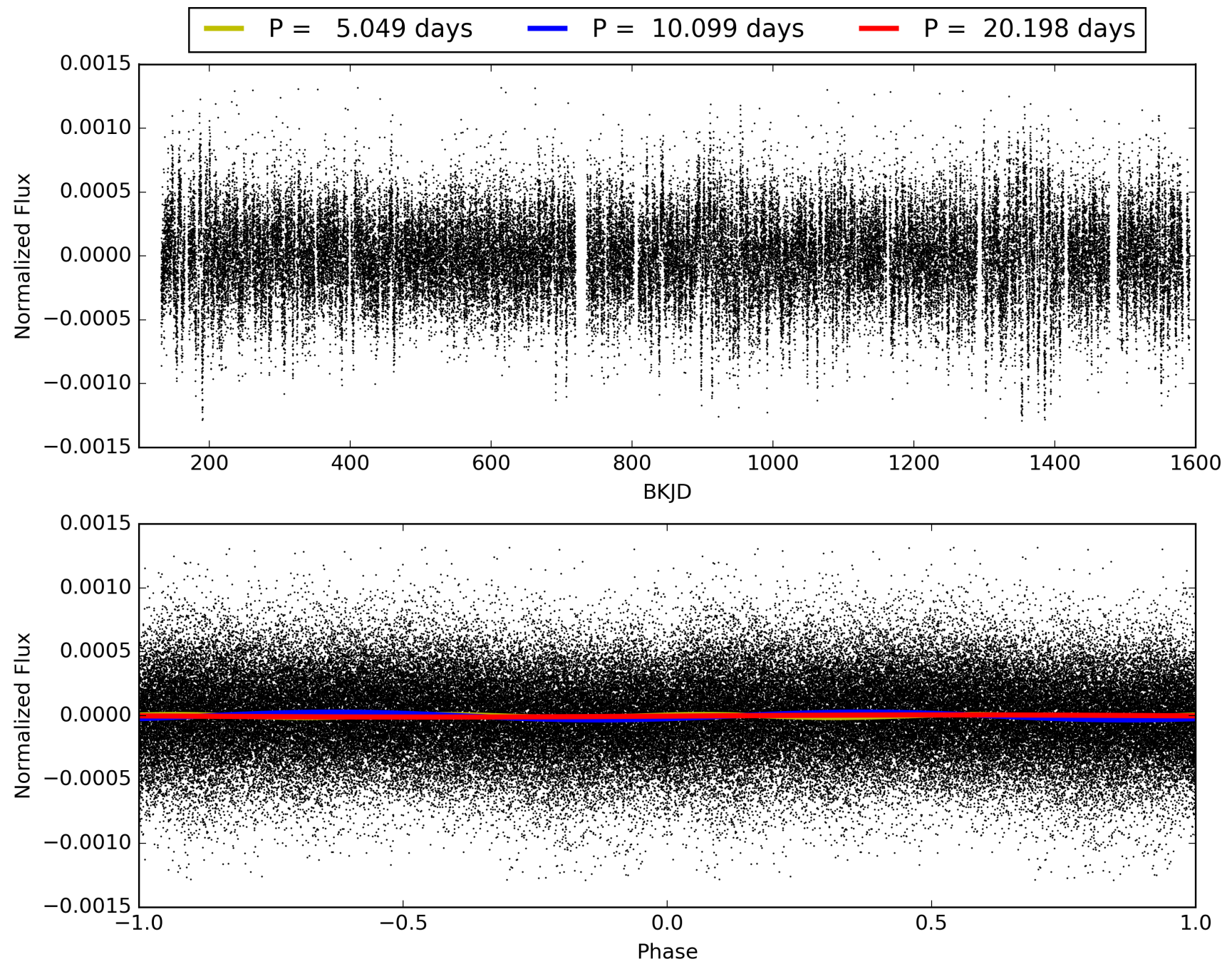
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:27:32 Z

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

TCE 001724719-02, PDC Light Curves

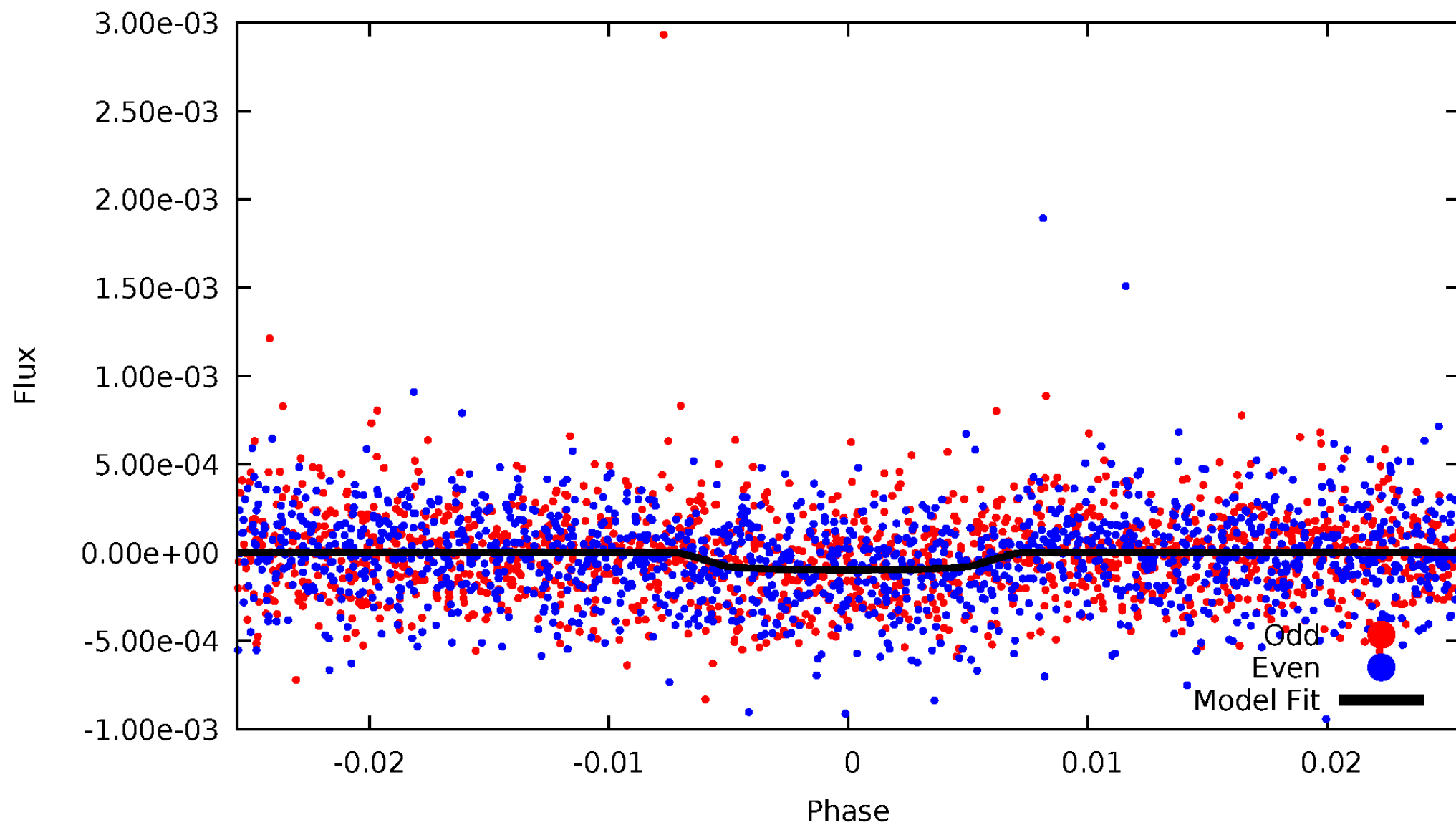


TCE 001724719-02



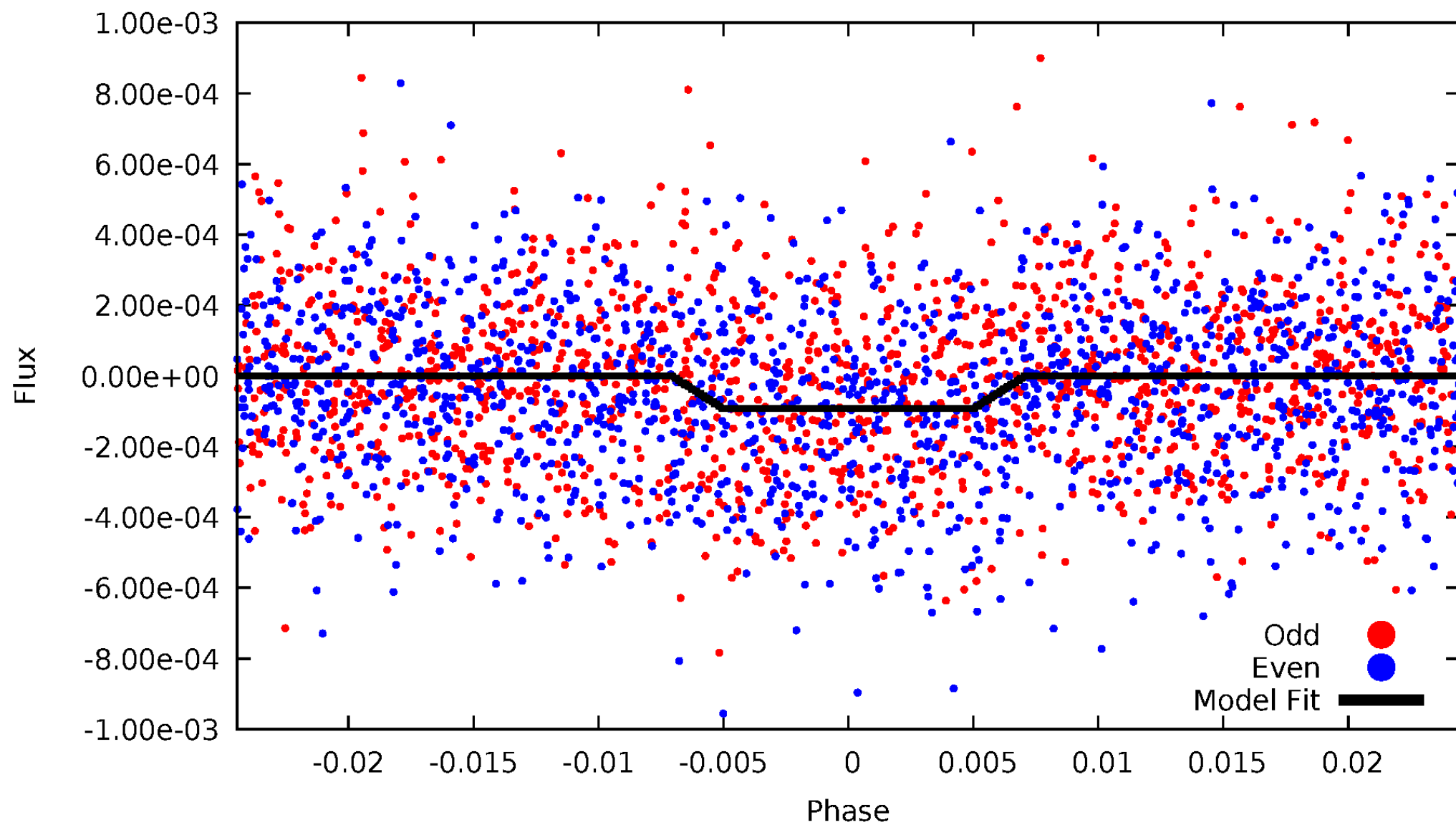
DV Odd/Even

TCE 001724719-02



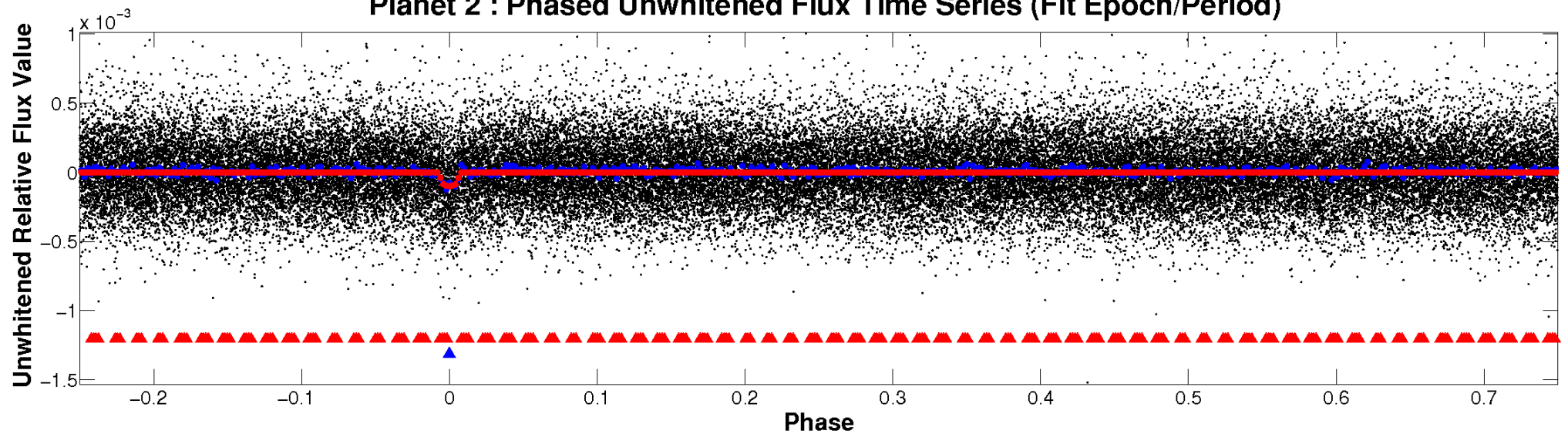
ALT Odd/Even

TCE 001724719-02

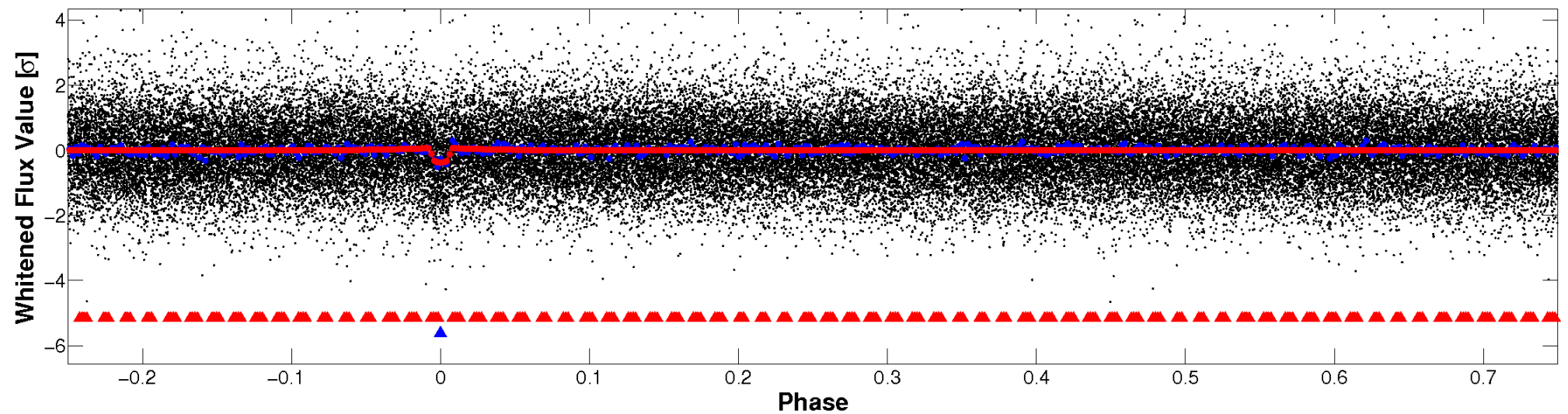


Non-Whitened Vs. Whitened Light Curve

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

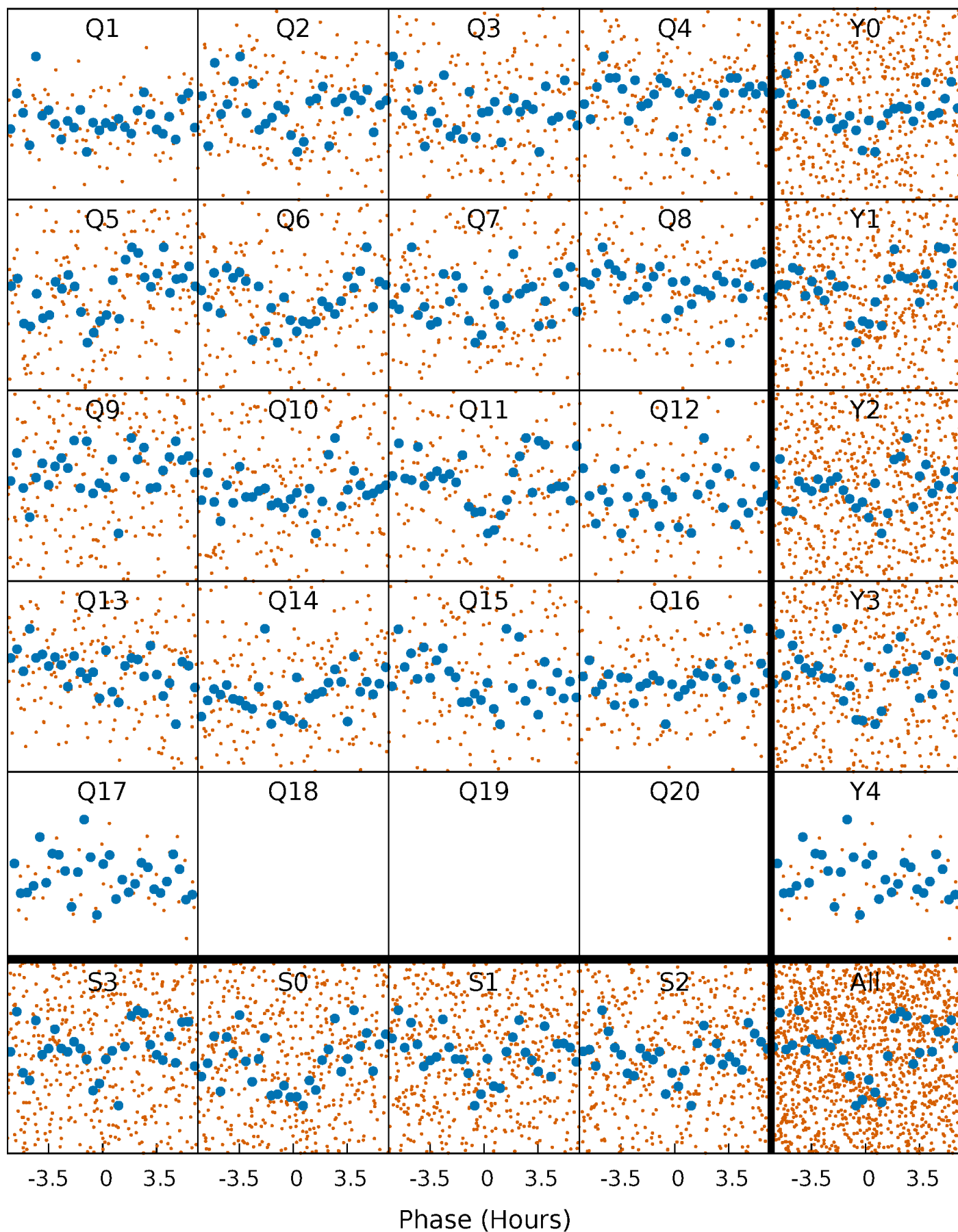


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



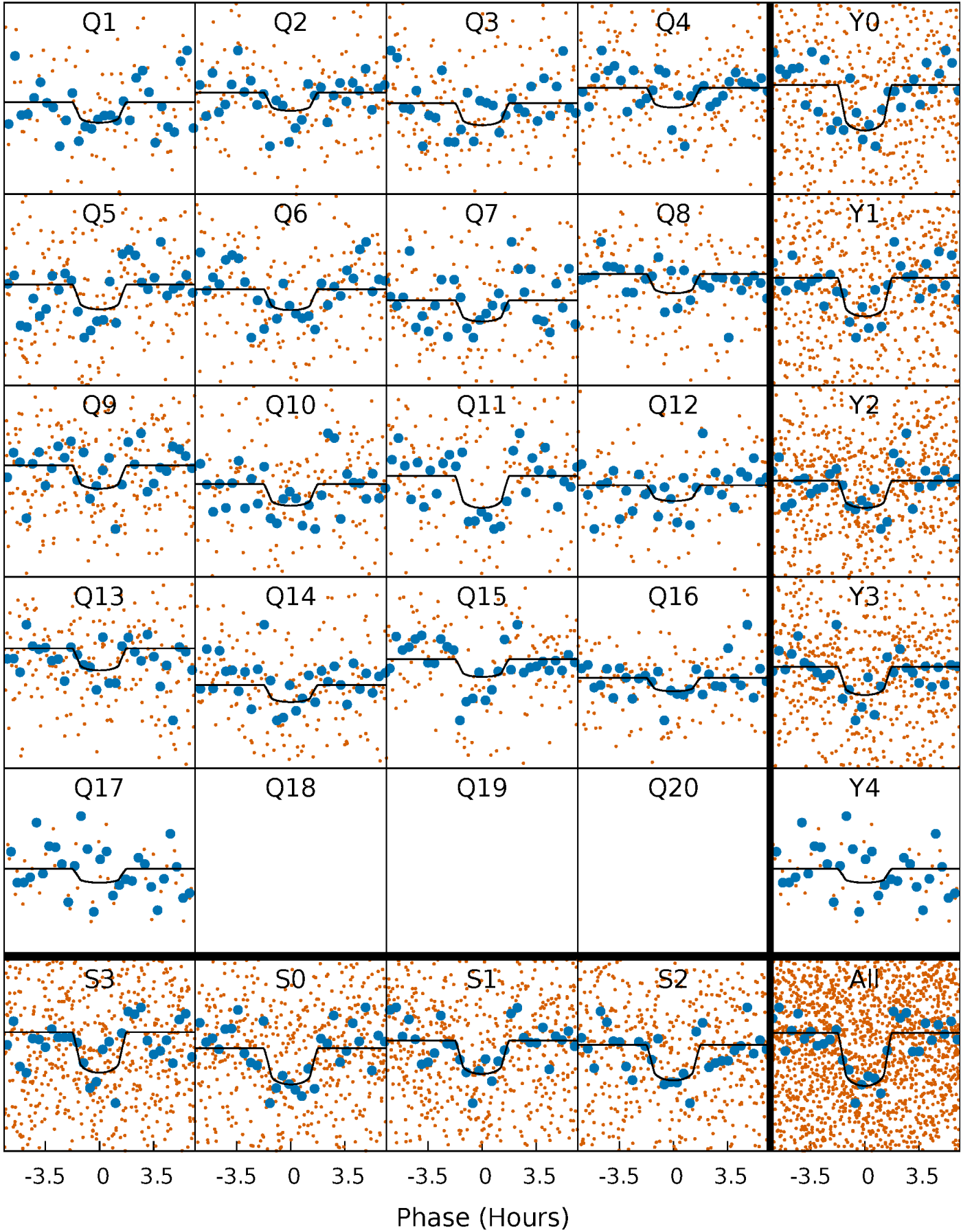
PDC Quarter-Phased Transit Curves

TCE 001724719-02 P= 10.098914 Days $T_0=132.329617$ (BKJD)



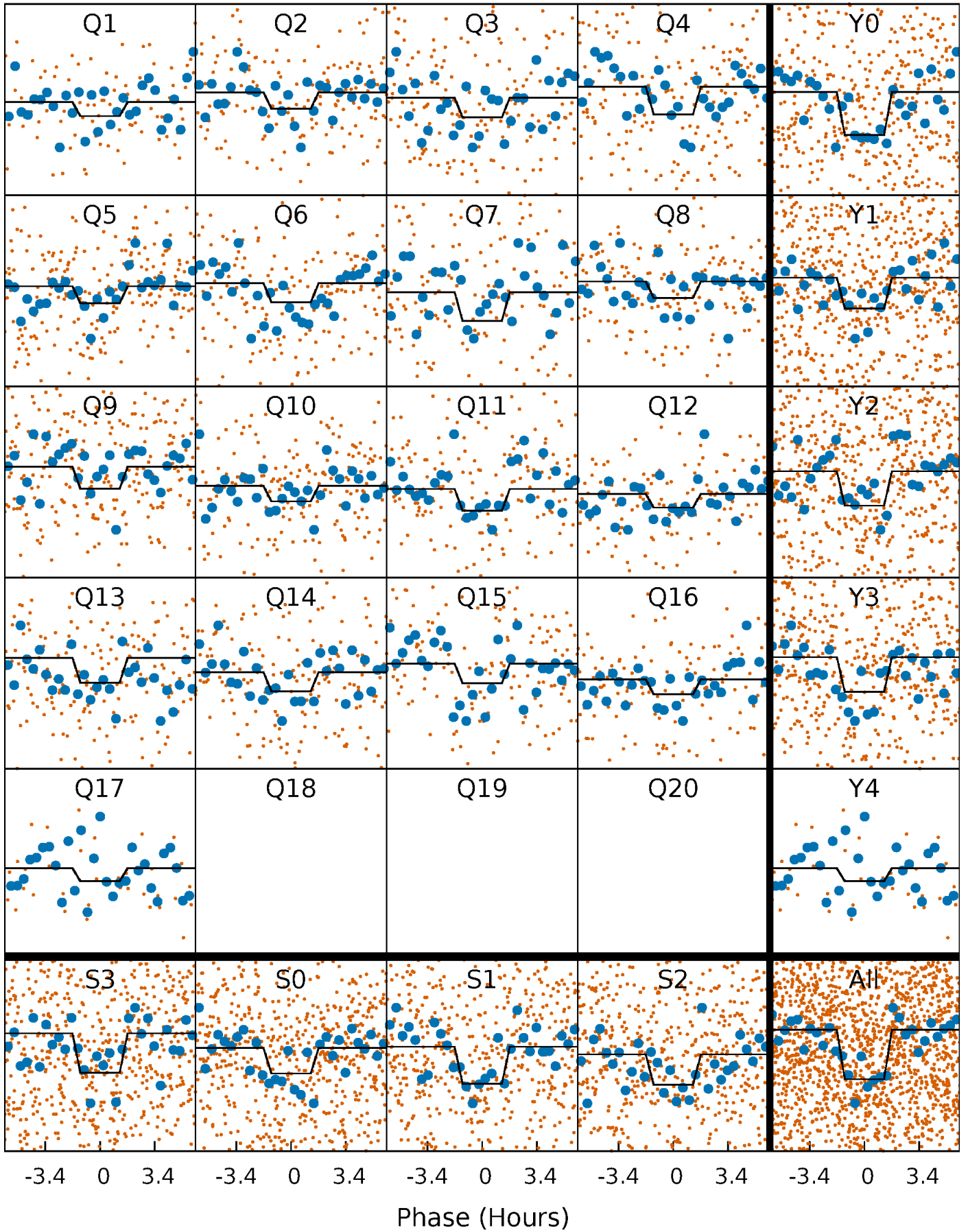
DV Quarter-Phased Transit Curves

TCE 001724719-02 P= 10.098914 Days $T_0=132.329617$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

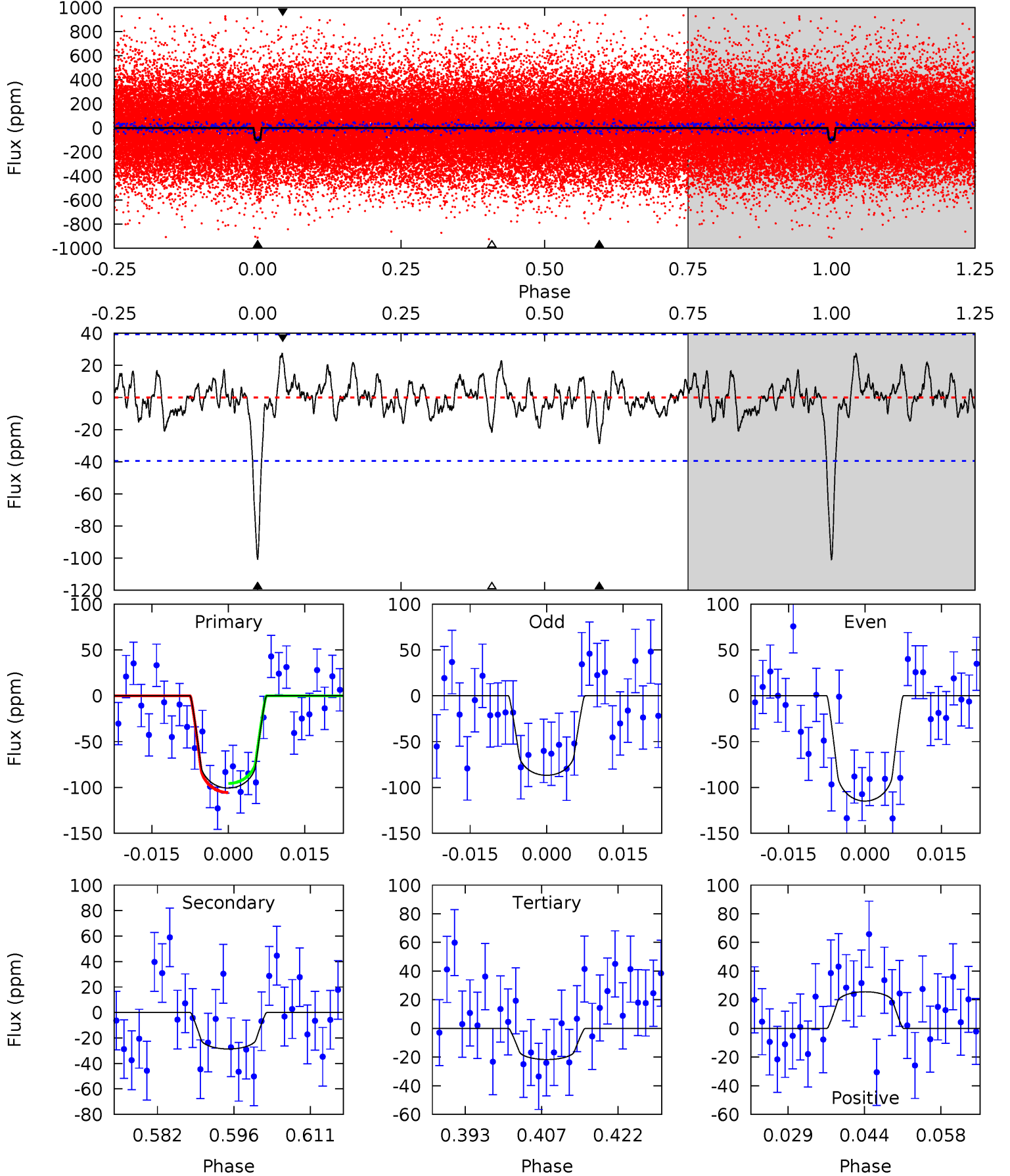
TCE 001724719-02 P= 10.099061 Days $T_0=132.320202$ (BKJD)



DV Model-Shift Uniqueness Test

001724719-02, P = 10.098914 Days, E = 122.230703 Days

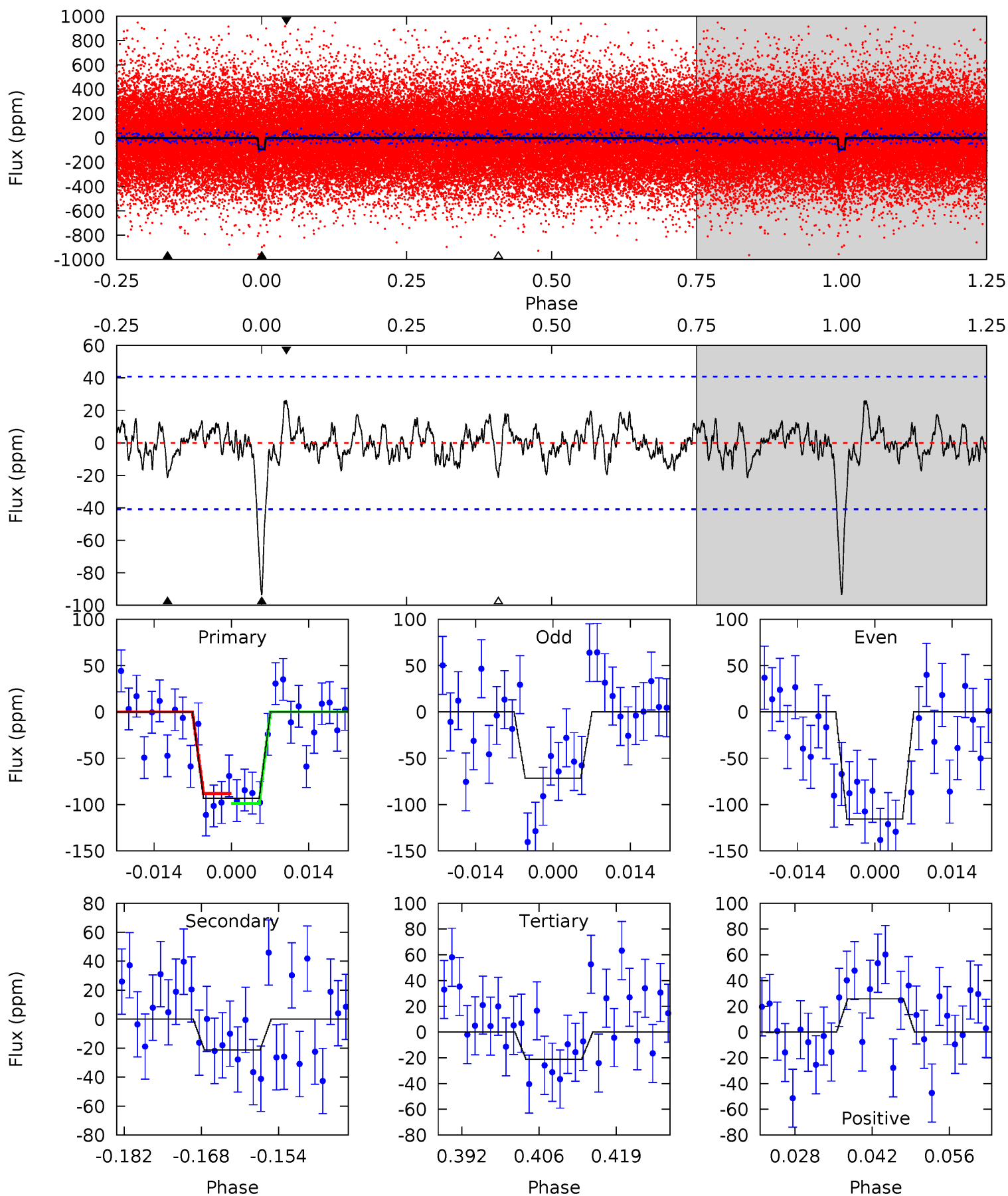
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	3.60	2.73	3.21	4.95	2.44	1.05	9.92	9.44	0.87	0.39	1.77	0.86	0.21	0.62



Alt Model-Shift Uniqueness Test

001724719-02, $P = 10.099061$ Days, $E = 122.221141$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	2.59	2.57	3.14	4.96	2.46	0.99	8.77	8.21	0.02	-0.55	2.68	0.95	0.22	0.66



Stellar Parameters For KIC 001724719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6174^{+74}_{-86}	$4.244^{+0.125}_{-0.125}$	$0.020^{+0.150}_{-0.150}$	$1.318^{+0.243}_{-0.199}$	$1.109^{+0.113}_{-0.066}$	$0.682^{+0.394}_{-0.251}$
	+1%/-1%	+3%/-3%	+750%/-750%	+18%/-15%	+10%/-6%	+58%/-37%
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 001724719-02 / KOI 4212.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 8	$1.62^{+1.07}_{-0.90}$	1421^{+62}_{-63}	4399^{+2002}_{-704}	51^{+230}_{-33}
Alt.	-21 ± 8	$1.46^{+1.11}_{-0.84}$	1419^{+65}_{-64}	4271^{+2105}_{-767}	45^{+226}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

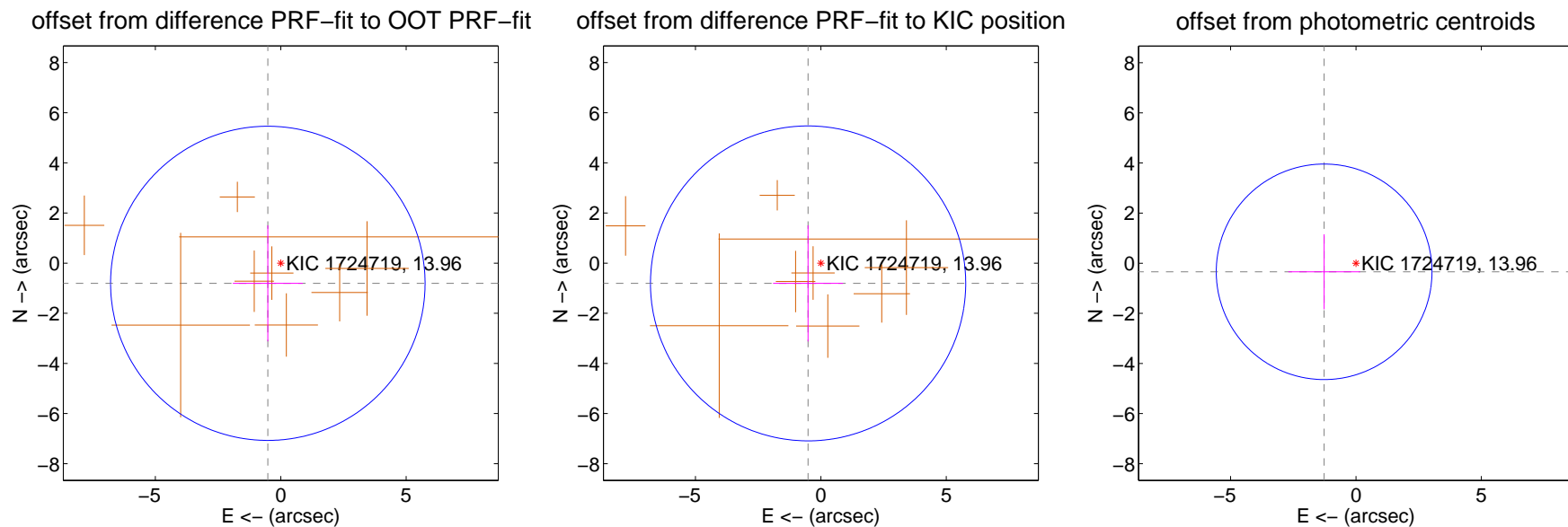
DV Centroid Data

Supplemental centroid analysis for 001724719-02. Kepler magnitude: 13.96. Transit SNR 8.75

There are 0 quarters with good PRF difference image offsets

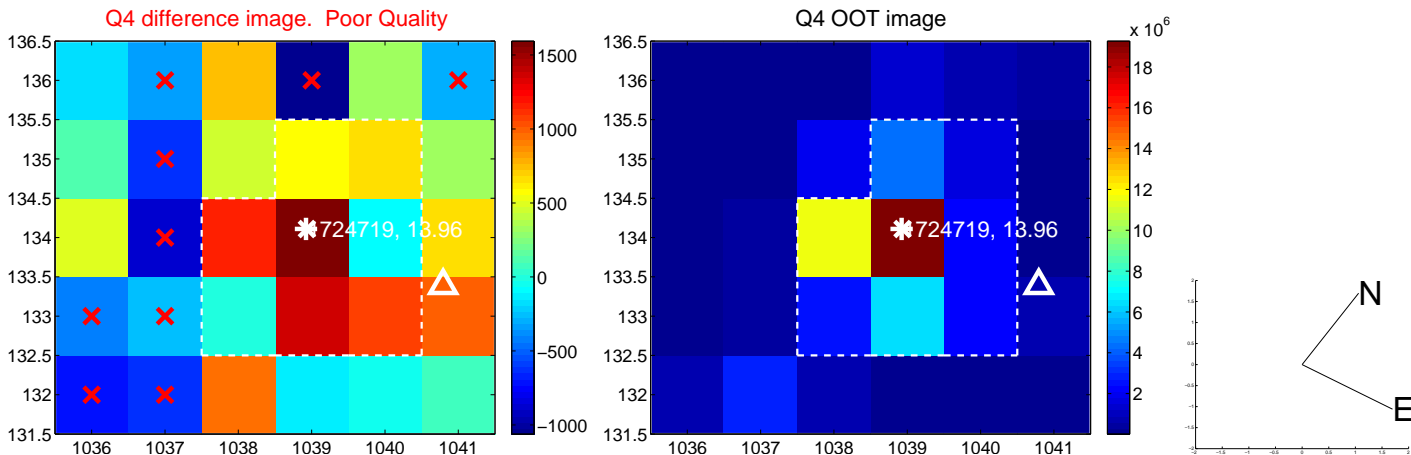
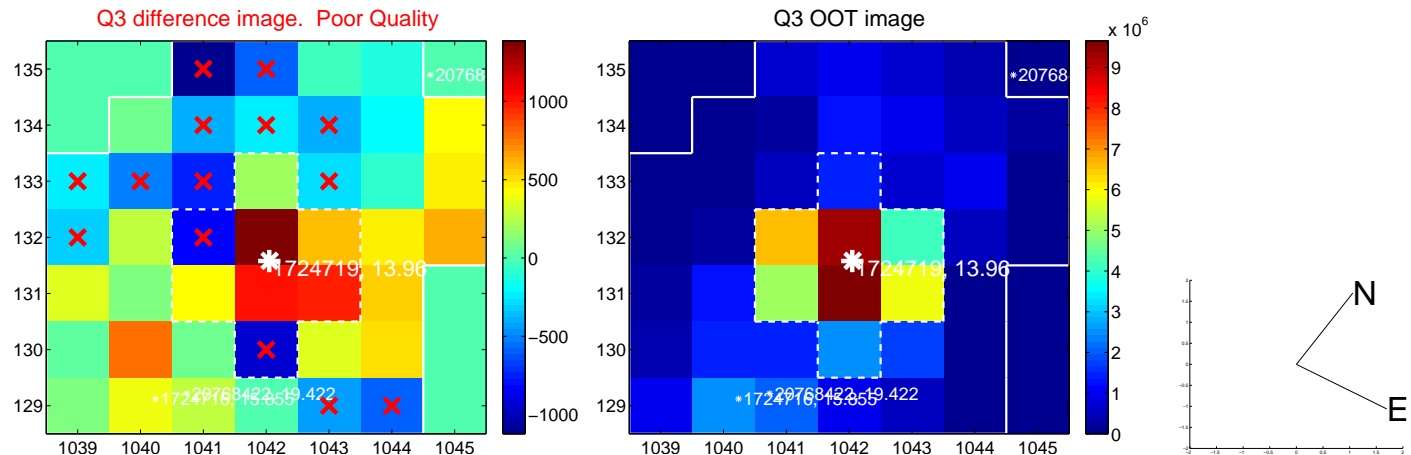
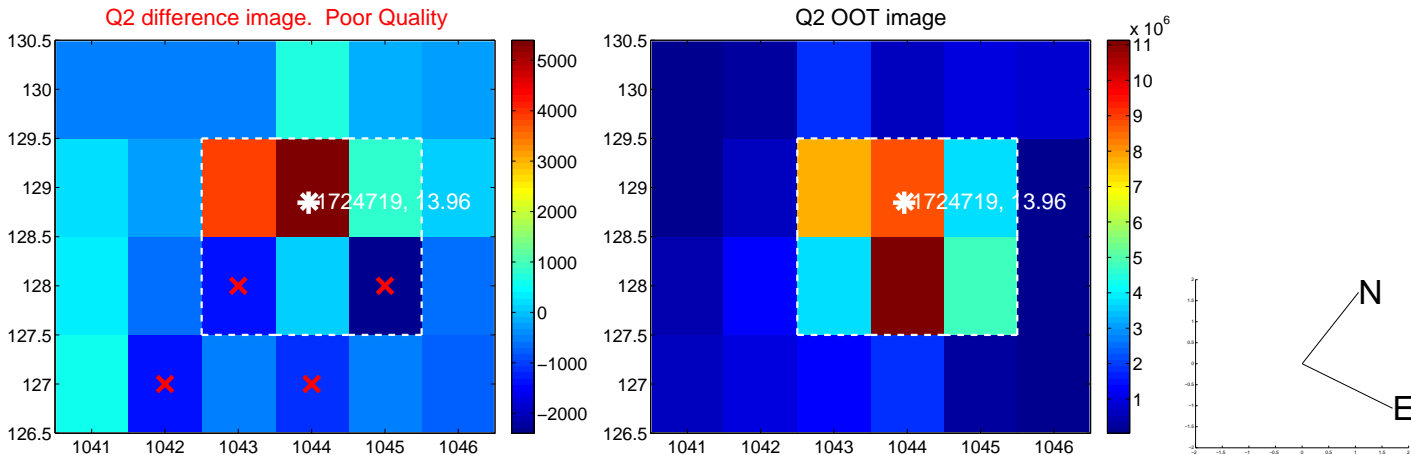
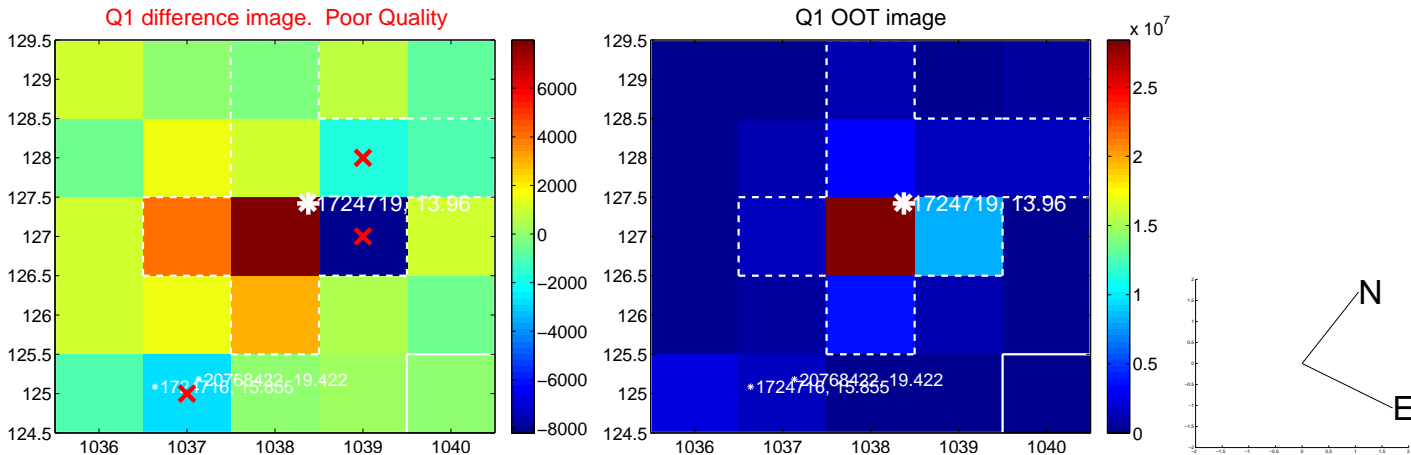
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.956 ± 2.089	0.46	0.515 ± 1.395	-0.805 ± 2.314
PRF-fit source offset from KIC position	0.955 ± 2.094	0.46	0.509 ± 1.395	-0.808 ± 2.314
photometric centroid source offset	1.31 ± 1.43	0.92	1.27 ± 1.43	-0.34 ± 1.50

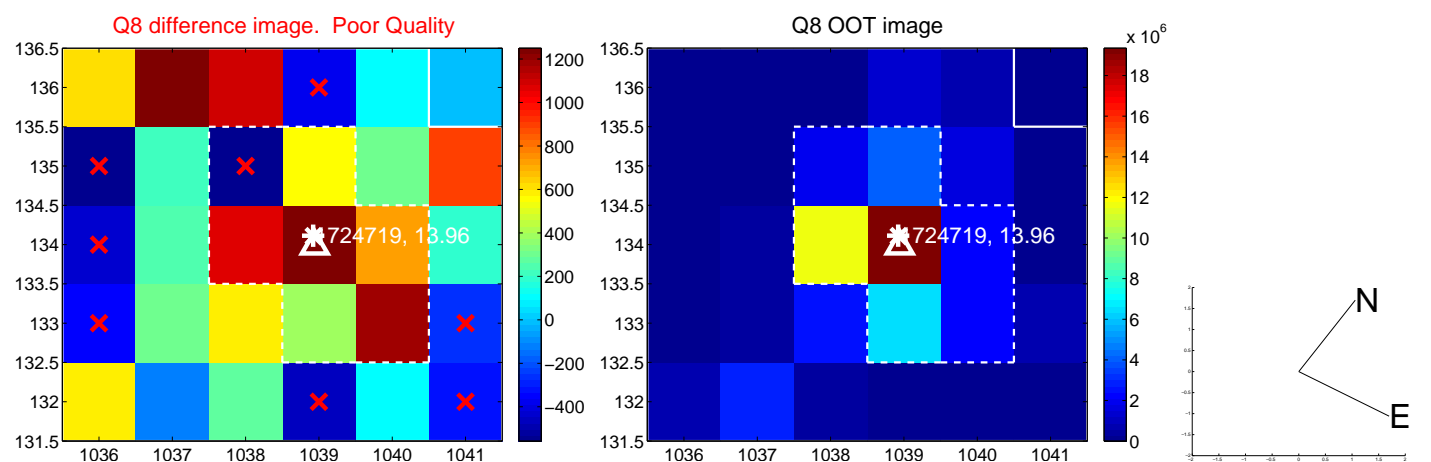
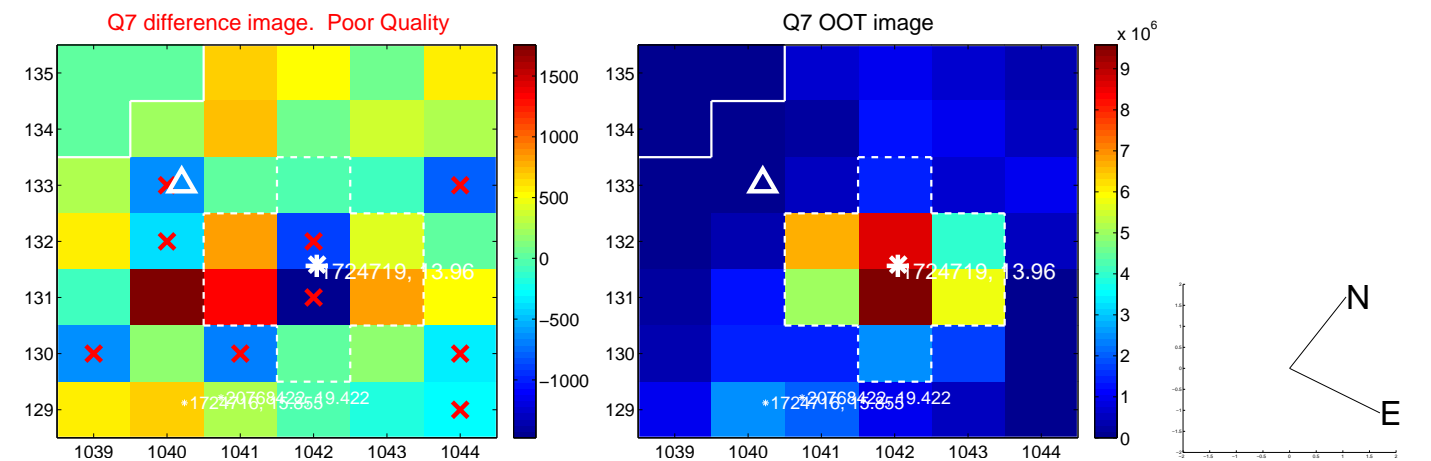
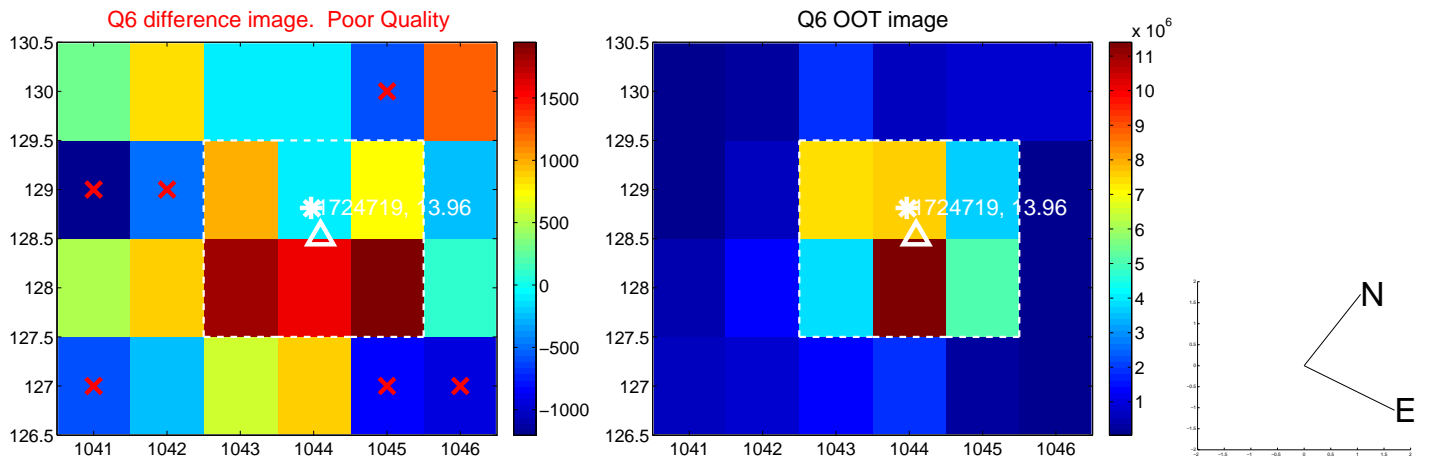
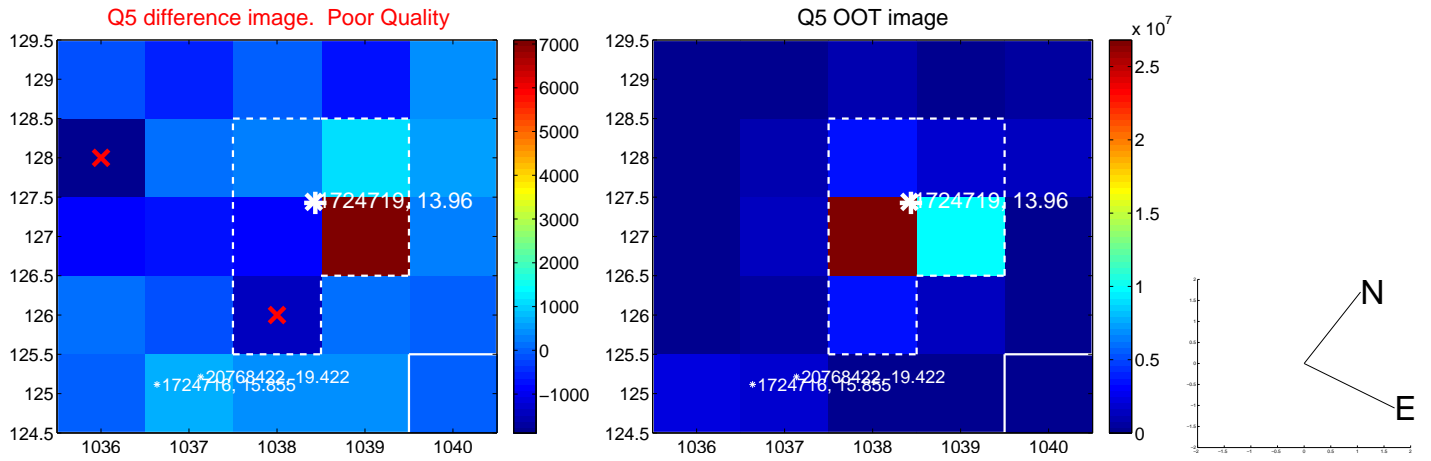


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

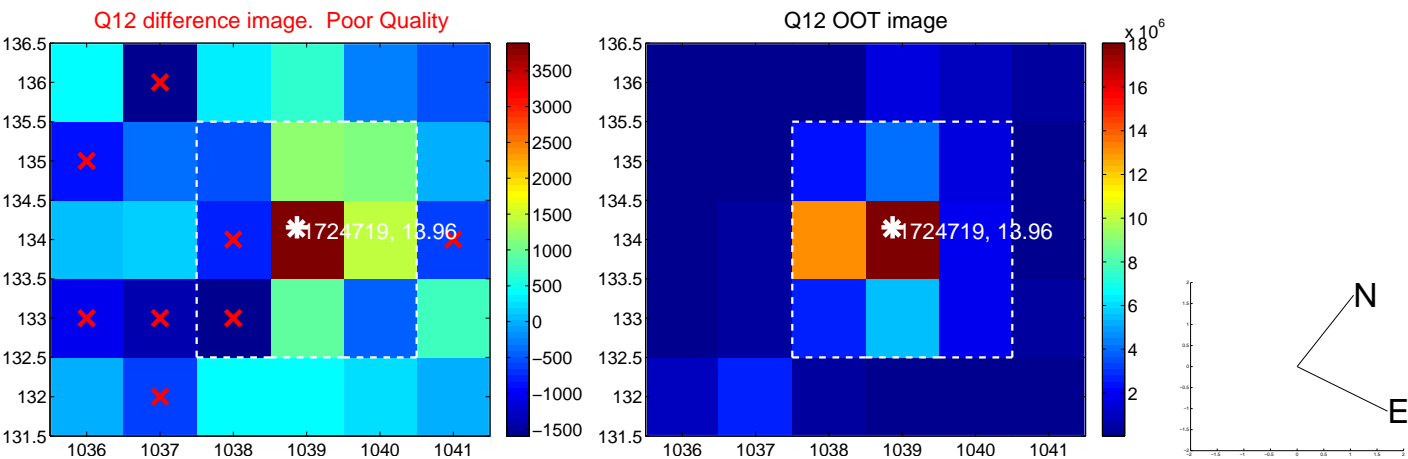
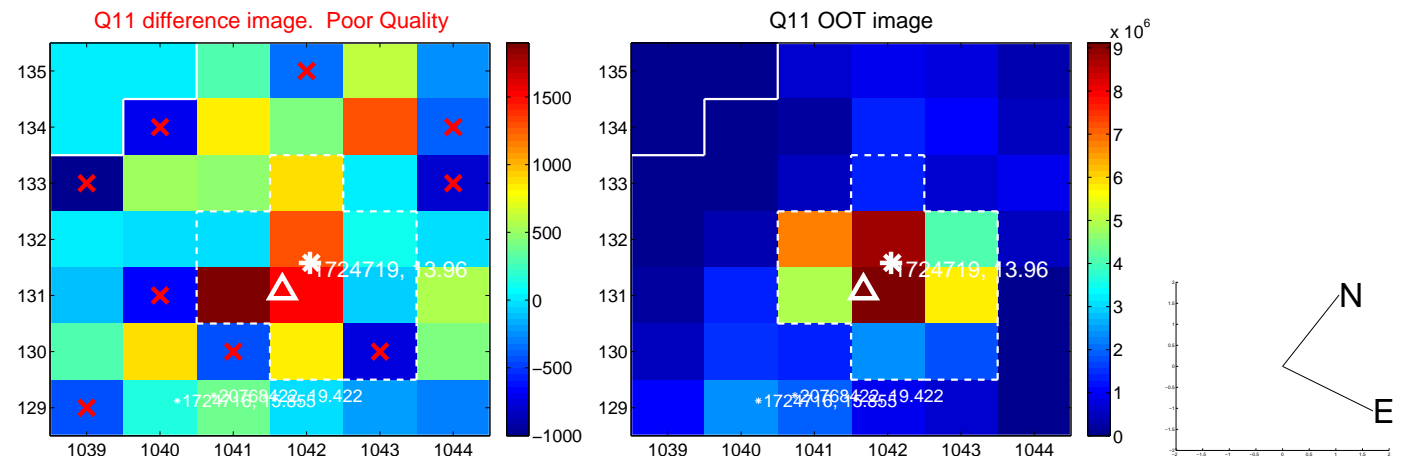
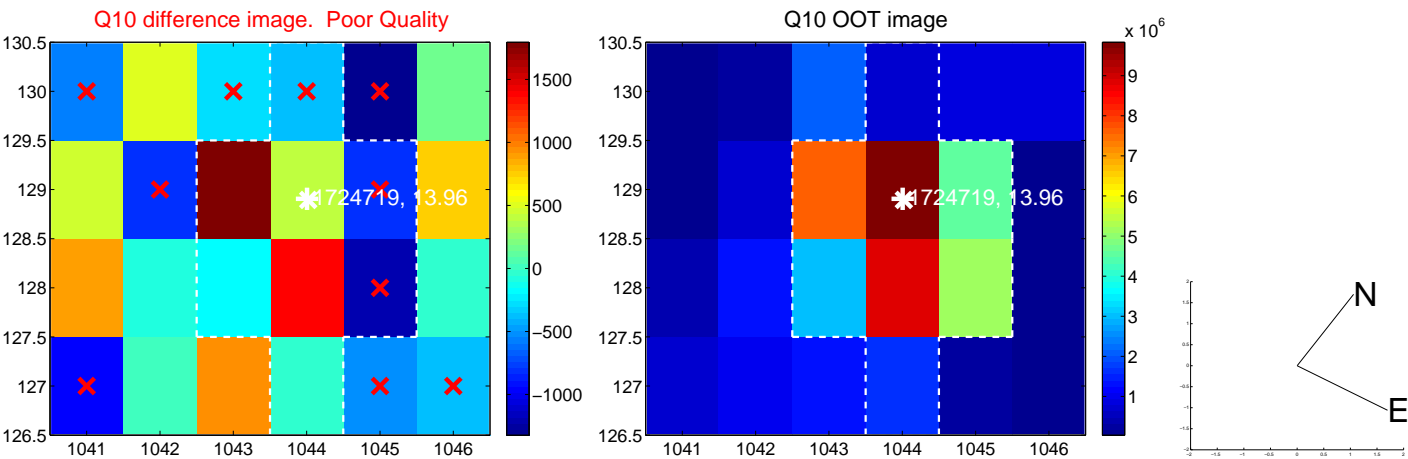
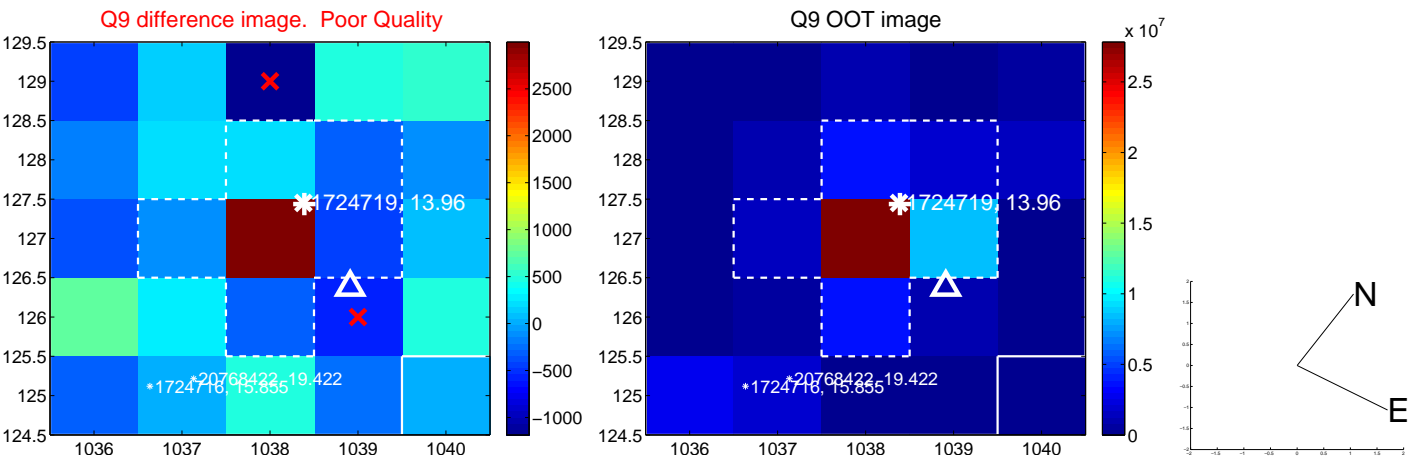
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



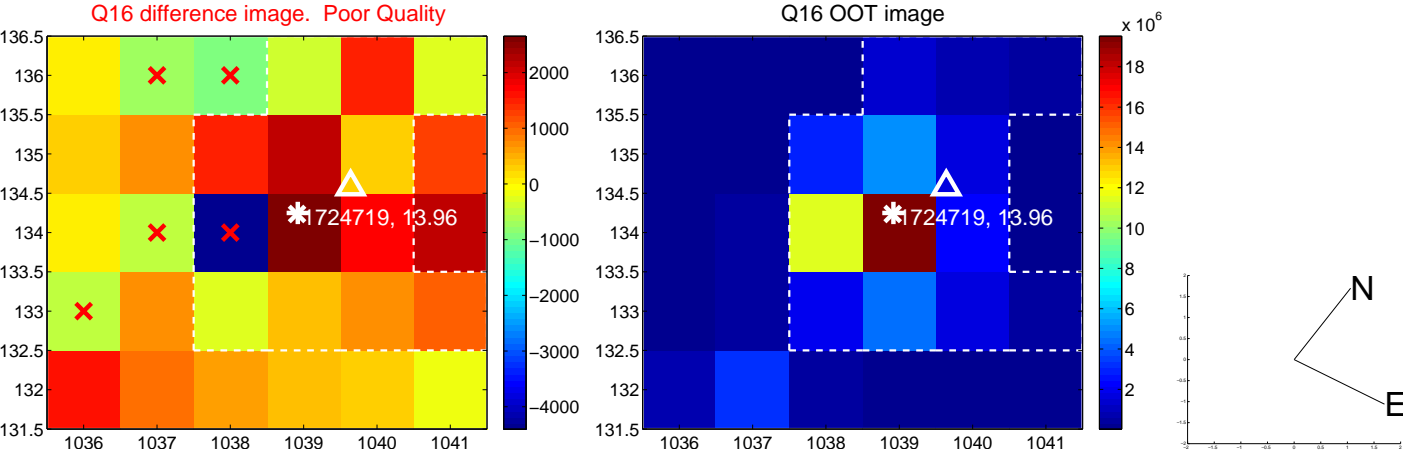
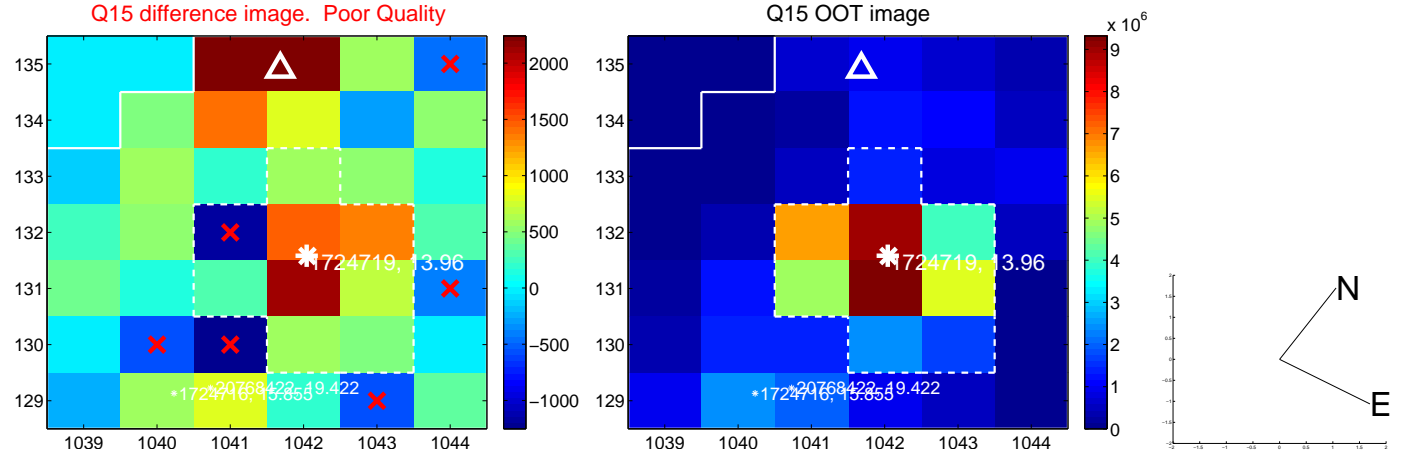
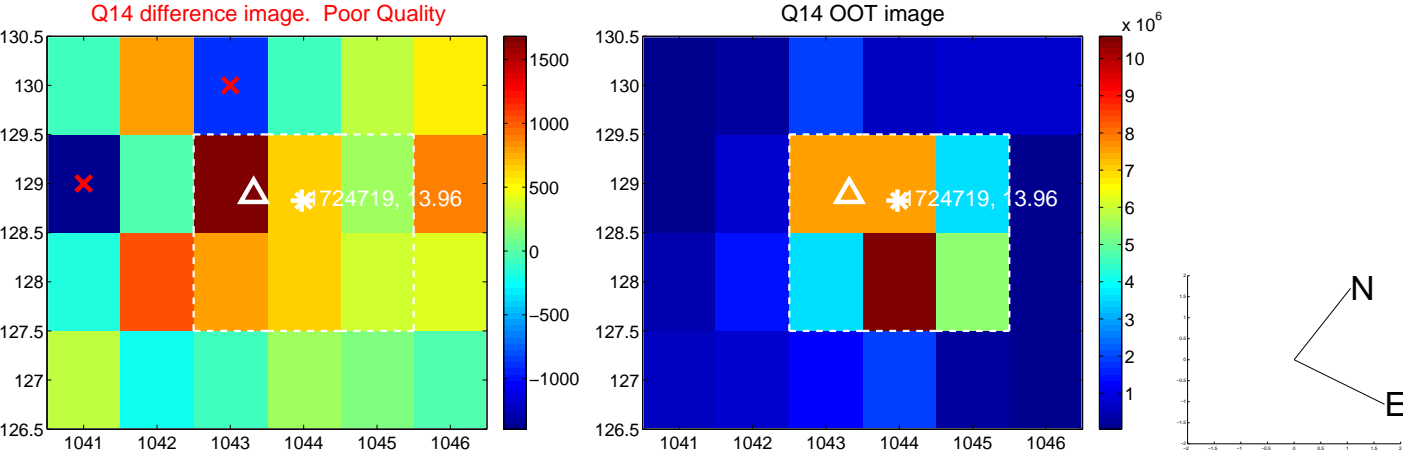
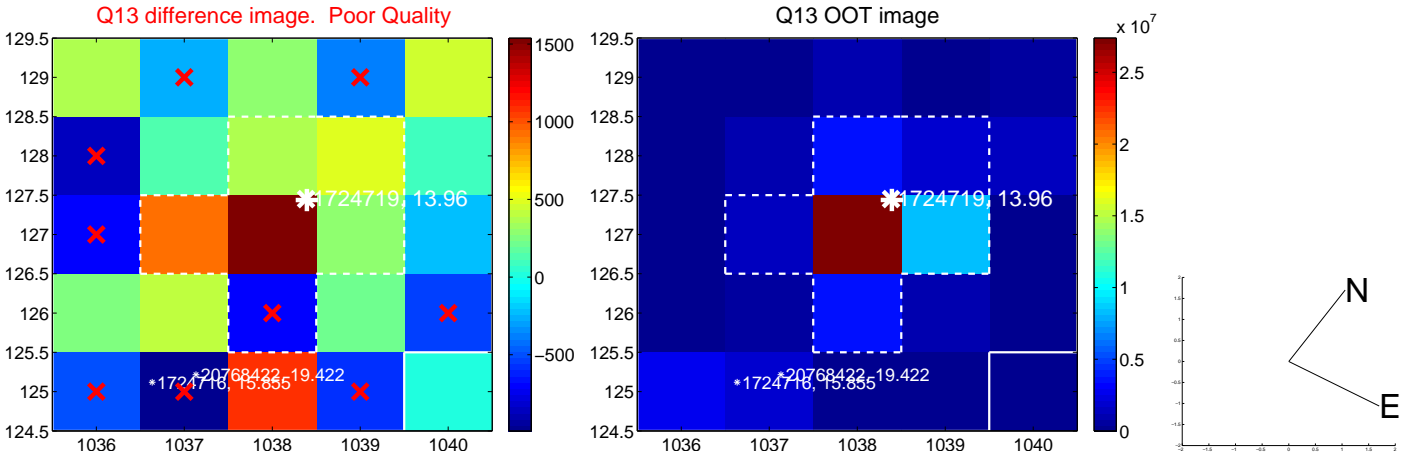
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



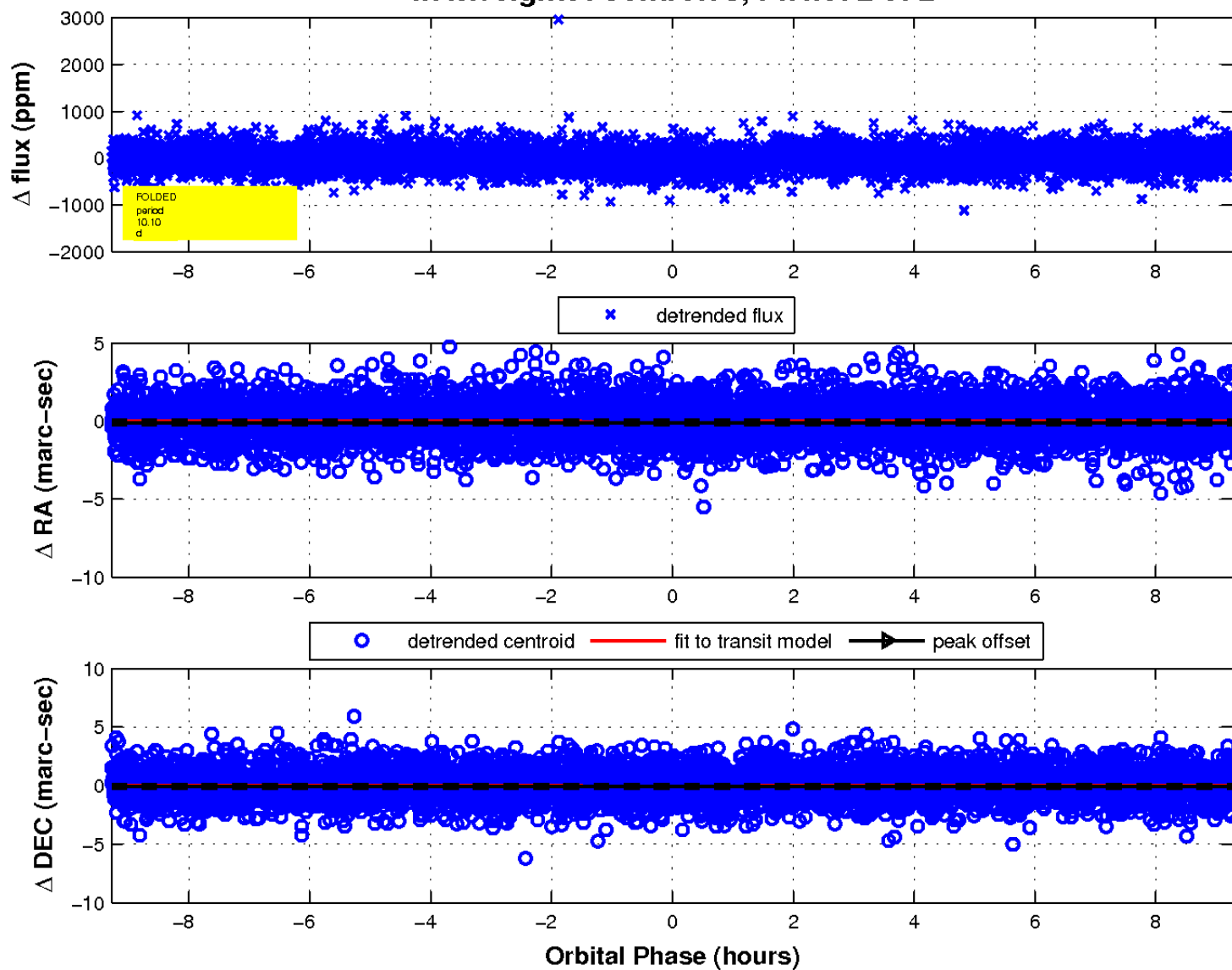
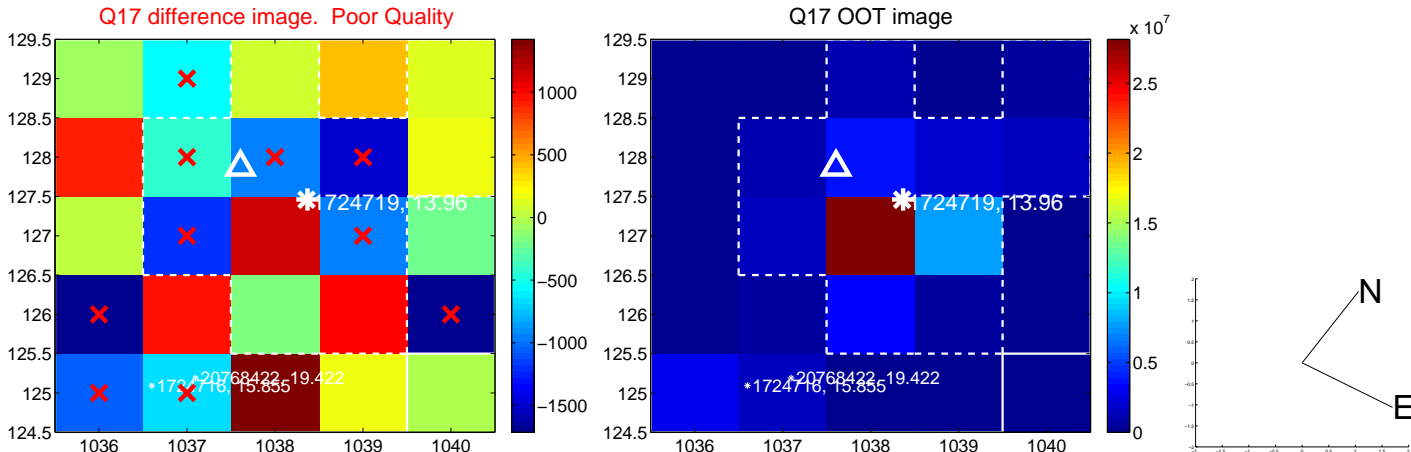
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

