

KIC 008264720

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})
008264720-01	OBS	No	0.701859	132.111300	35.1	2.738	9.7	9.9	1.19	6856	0.81	10344.80
008264720-02	OBS	No	116.643993	154.459528	234.9	5.559	12.1	4.2	1.19	6856	1.94	11.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264720-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008264720-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

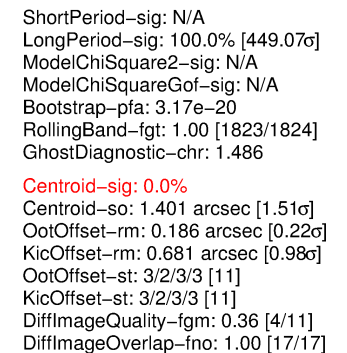
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 008264720-01

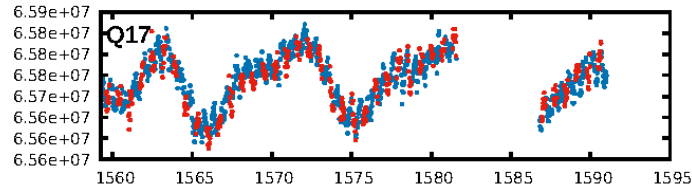
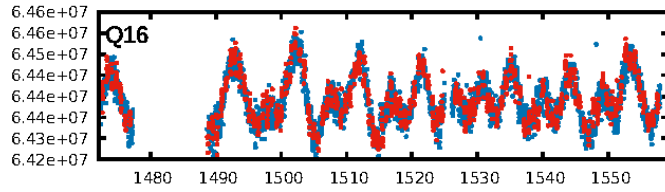
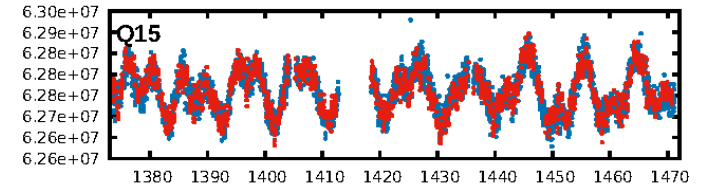
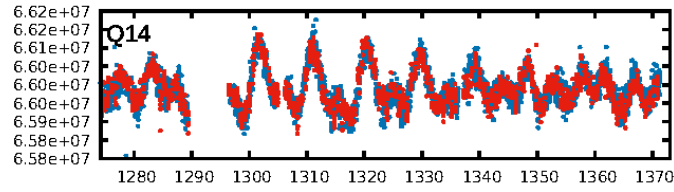
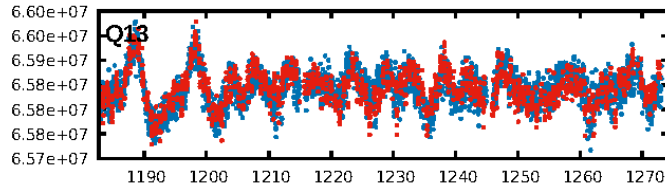
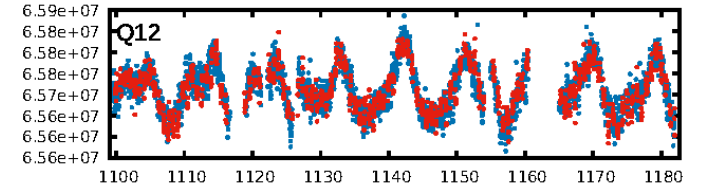
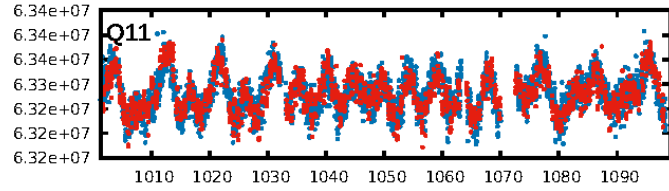
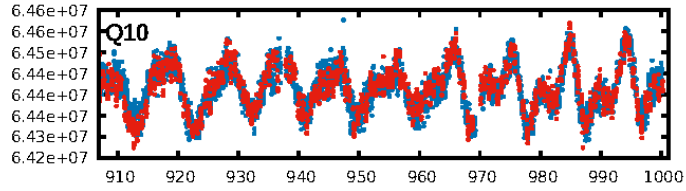
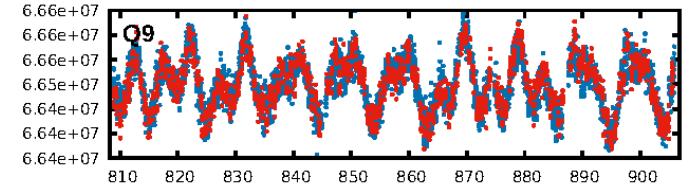
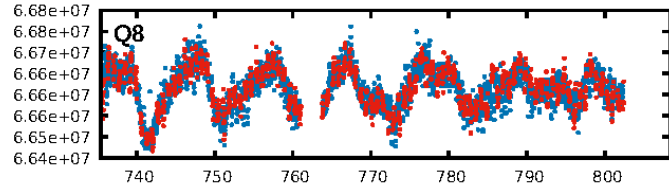
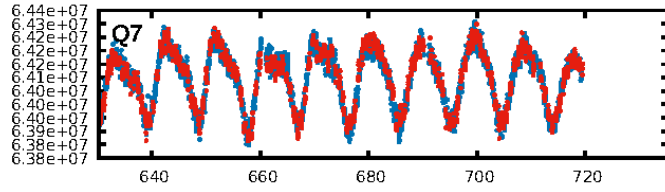
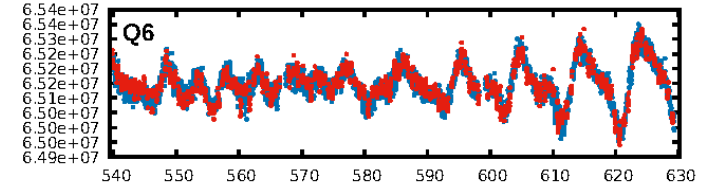
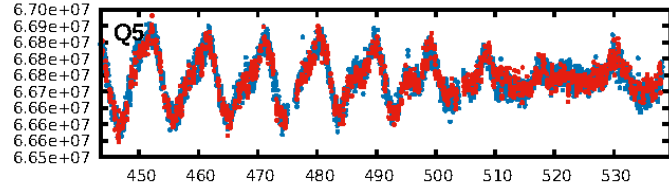
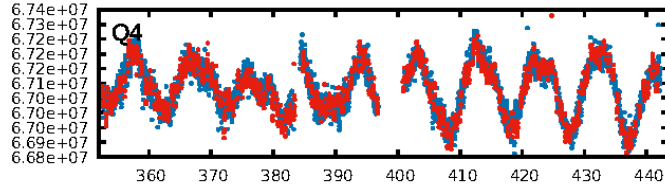
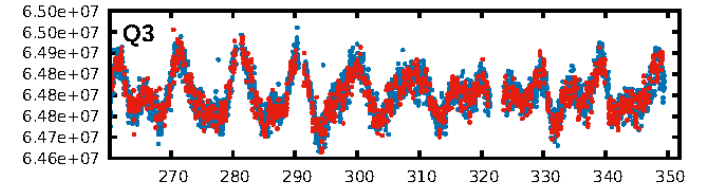
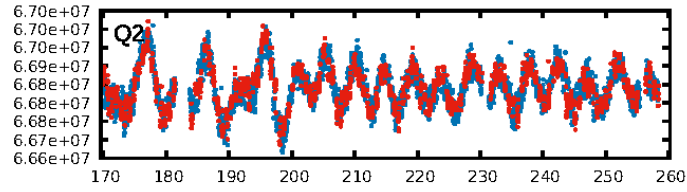
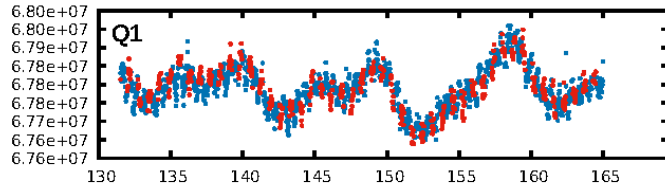
No Significant Match Found

KIC: 8264720 Candidate: 1 of 2 Period: 0.702 d

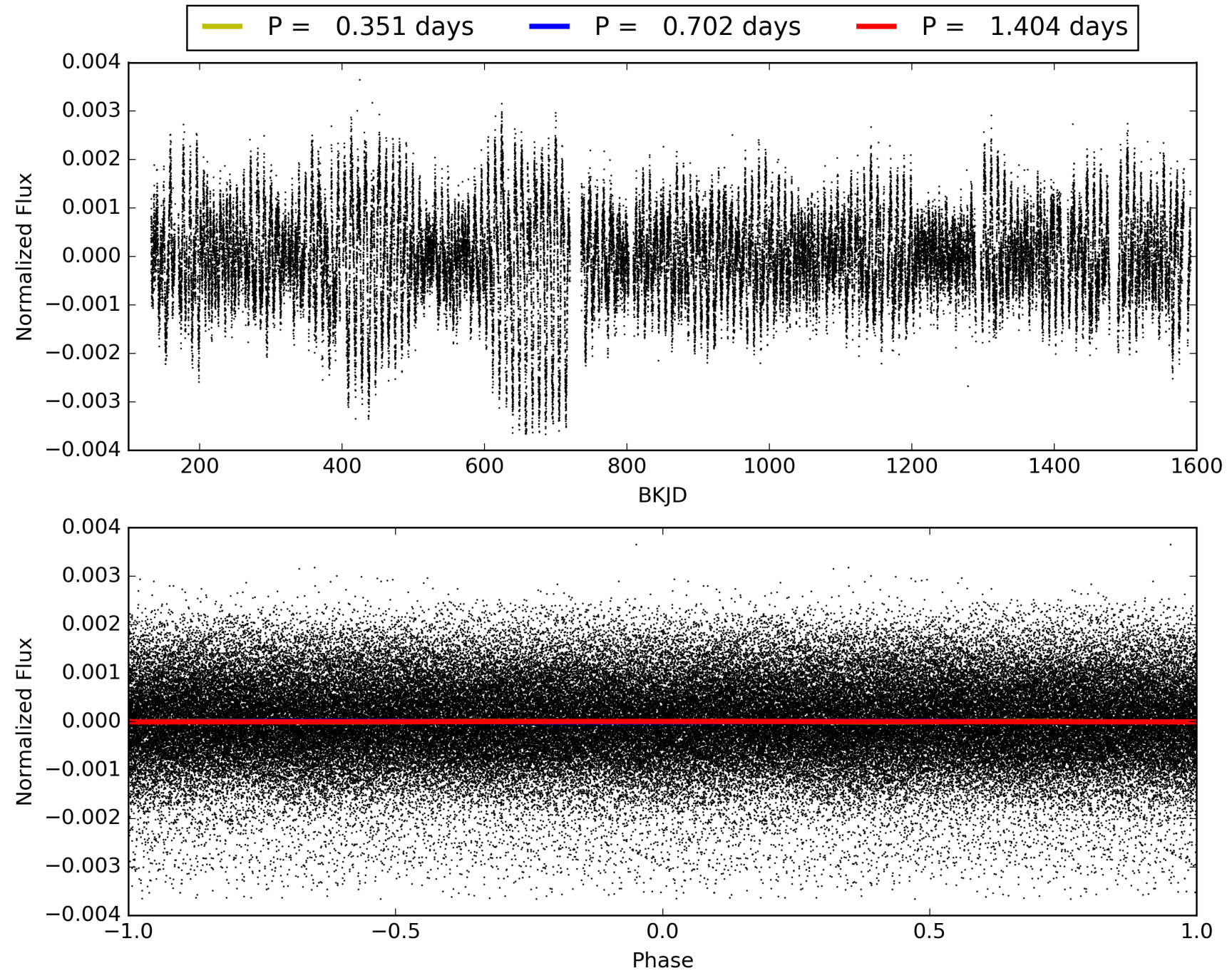


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008264720-01, PDC Light Curves

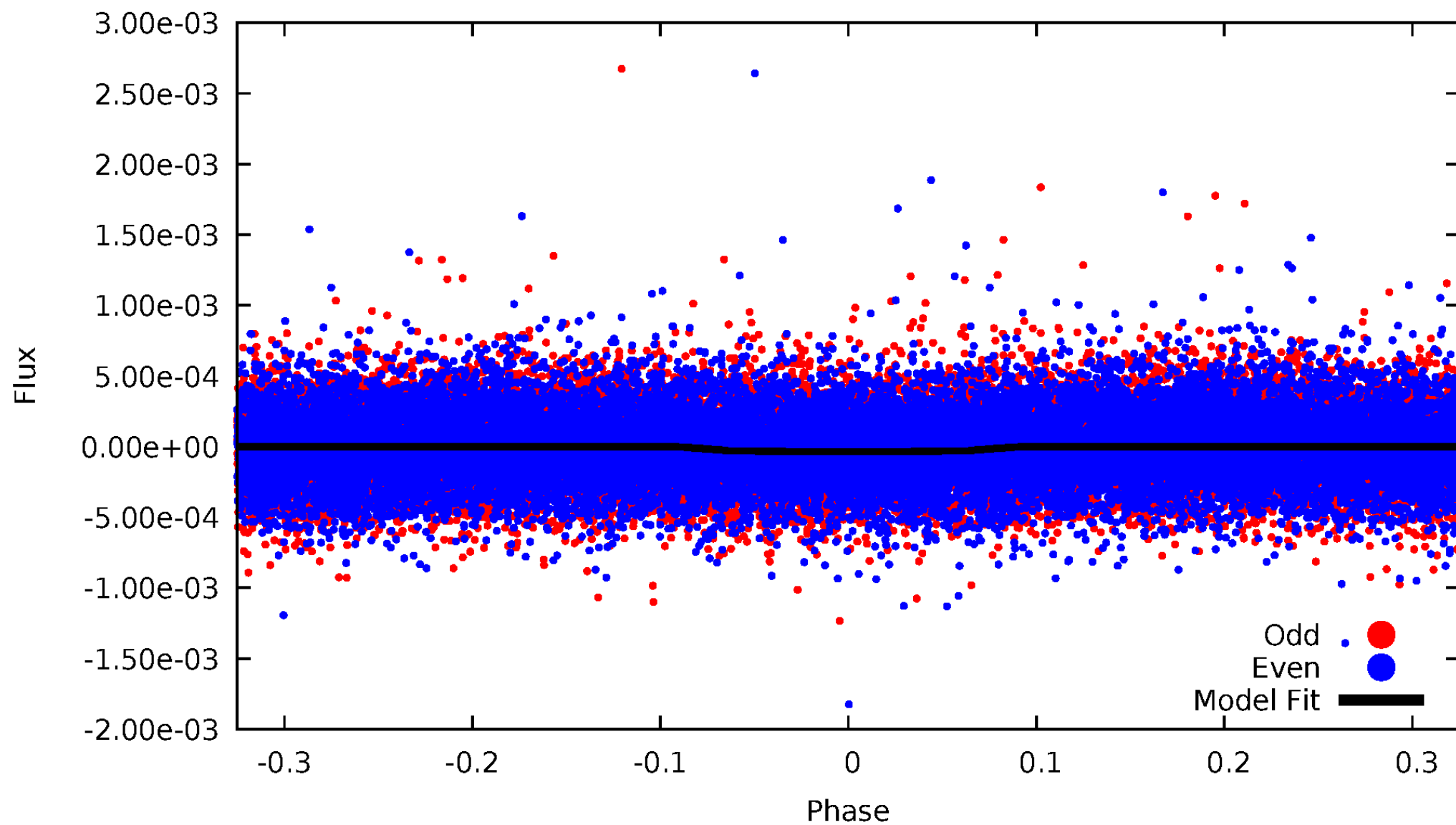


TCE 008264720-01



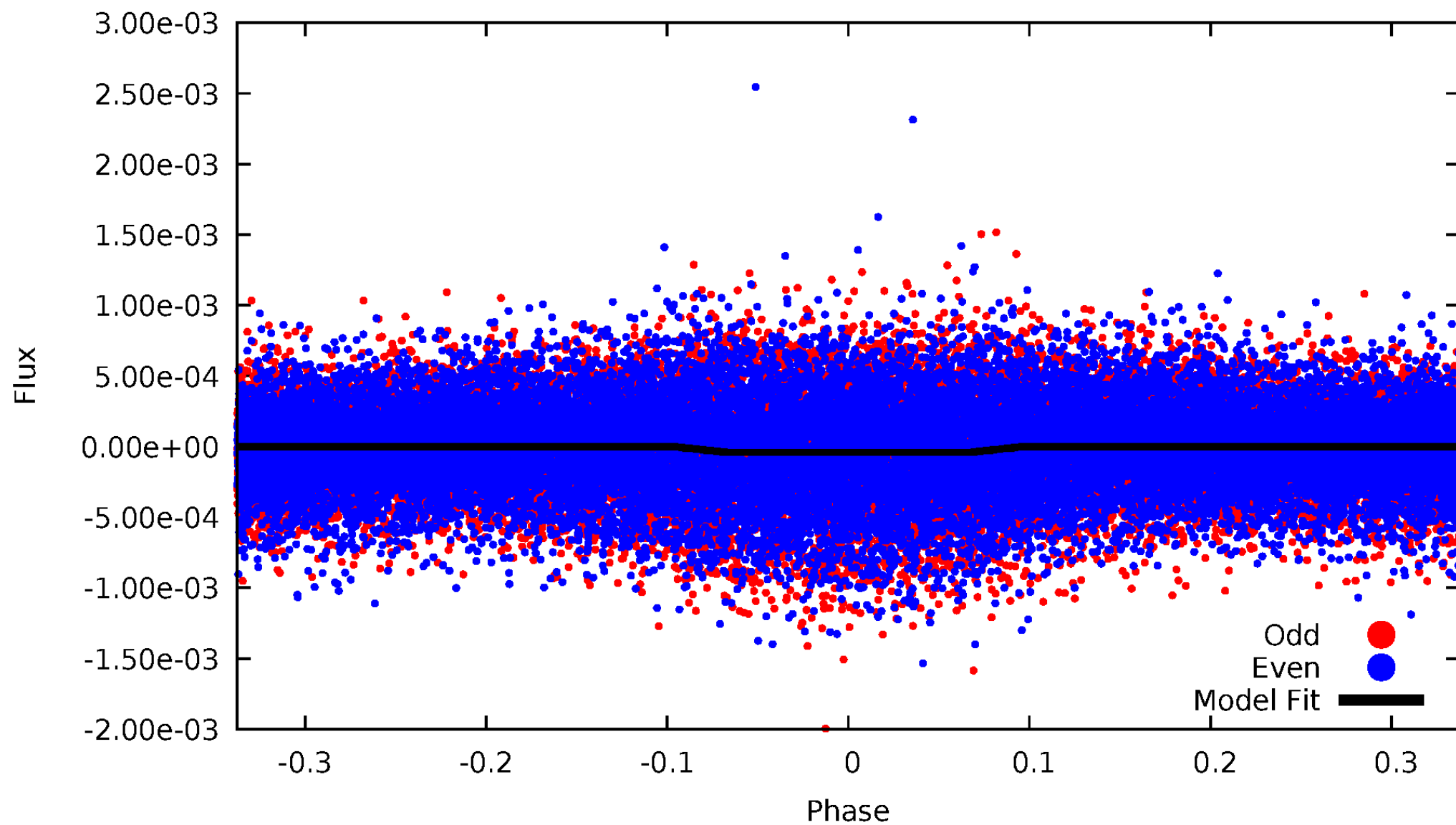
DV Odd/Even

TCE 008264720-01



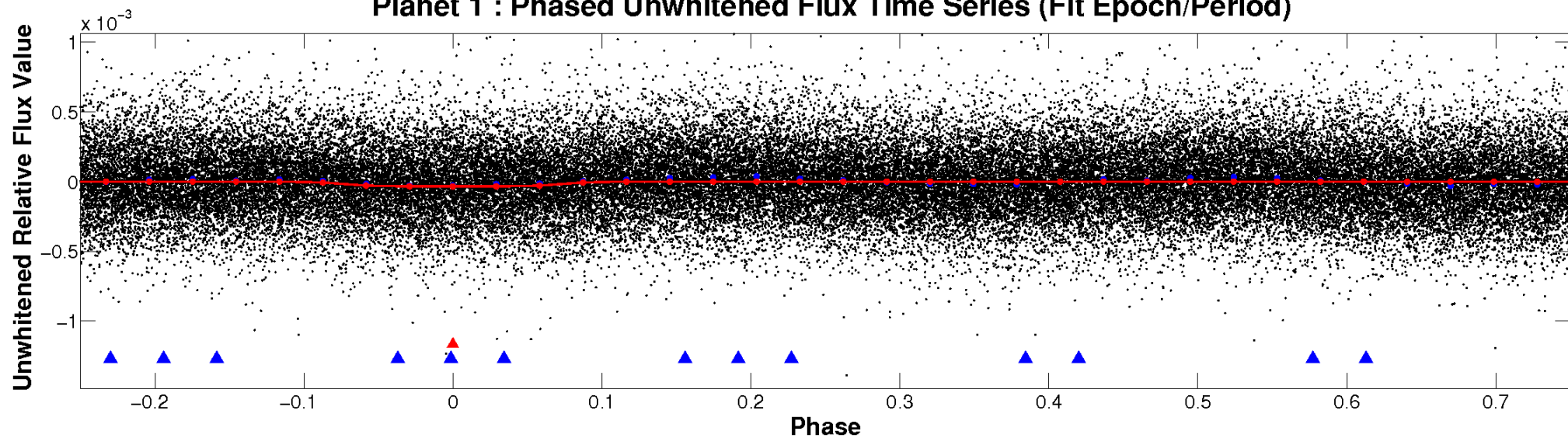
ALT Odd/Even

TCE 008264720-01

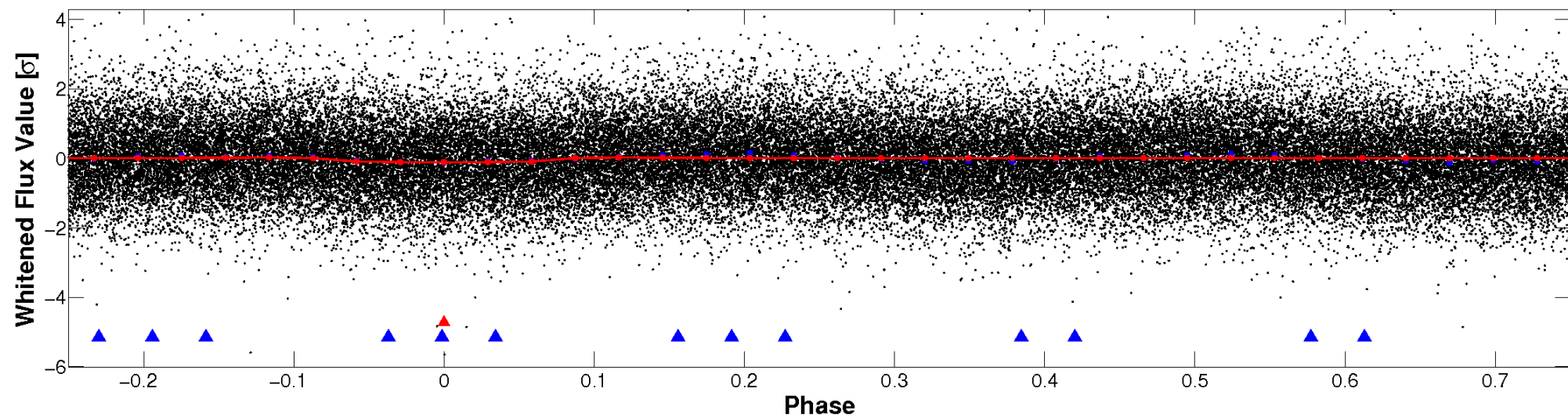


Non-Whitened Vs. Whitened Light Curve

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

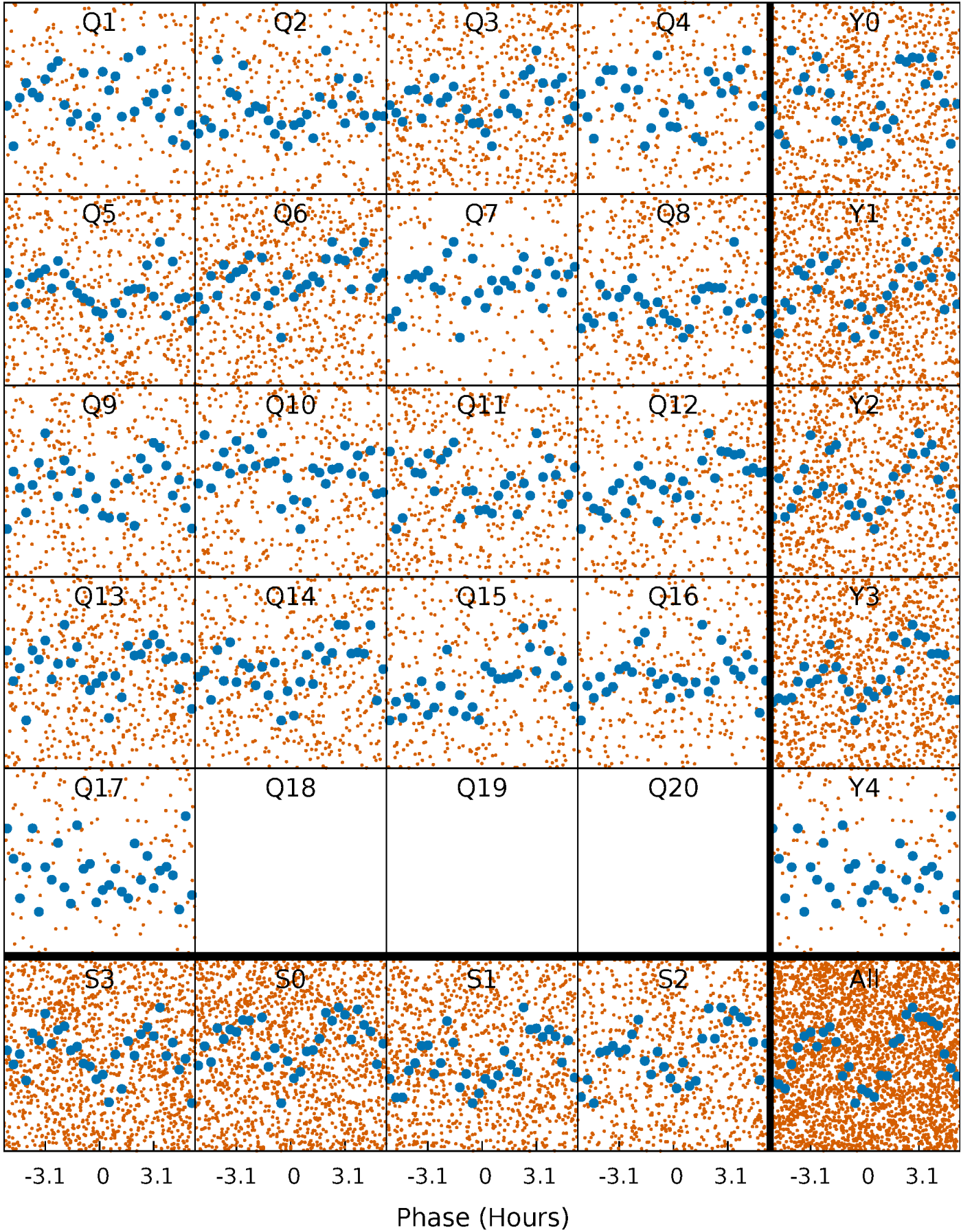


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



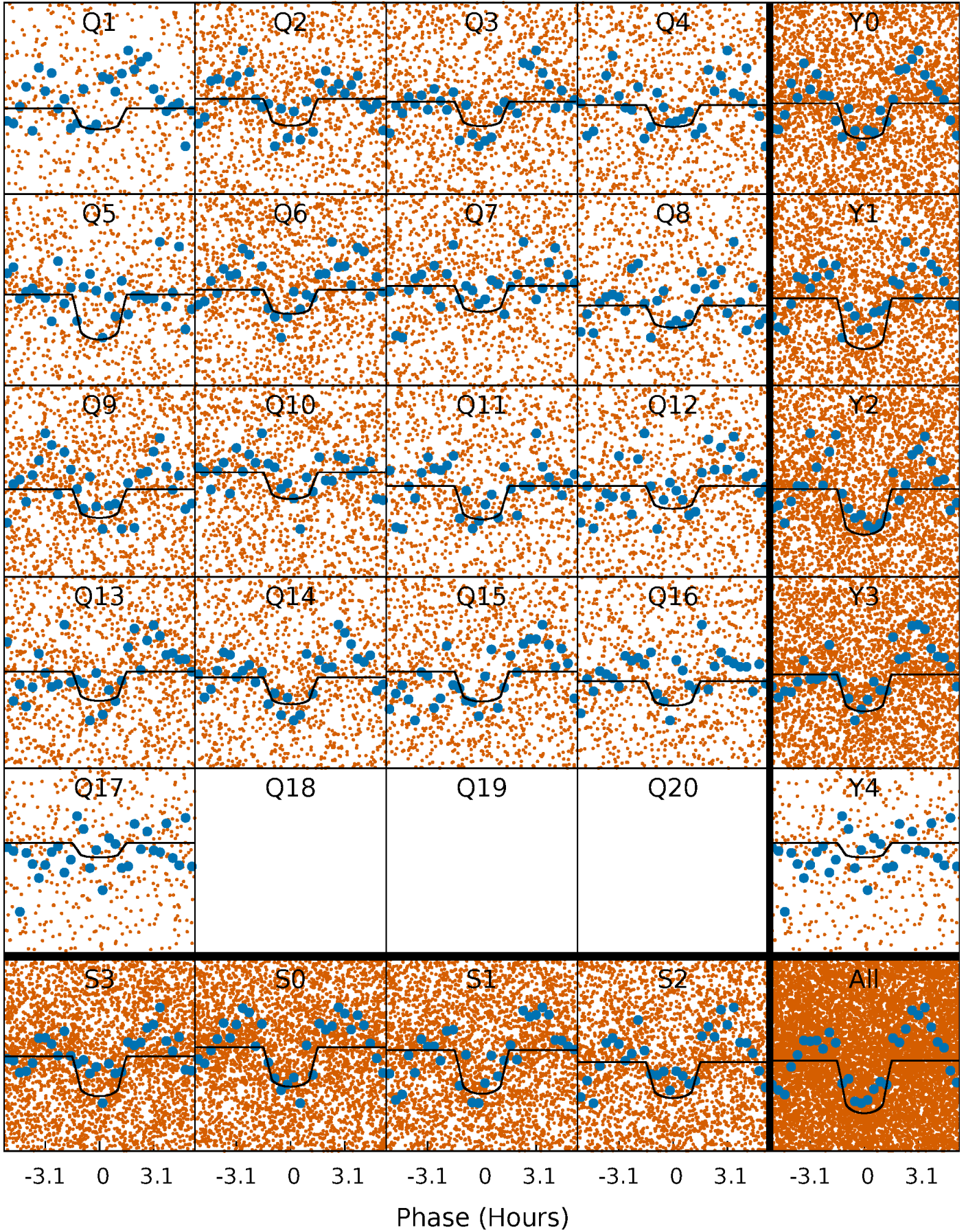
PDC Quarter-Phased Transit Curves

TCE 008264720-01 P= 0.701859 Days $T_0=132.111300$ (BKJD)



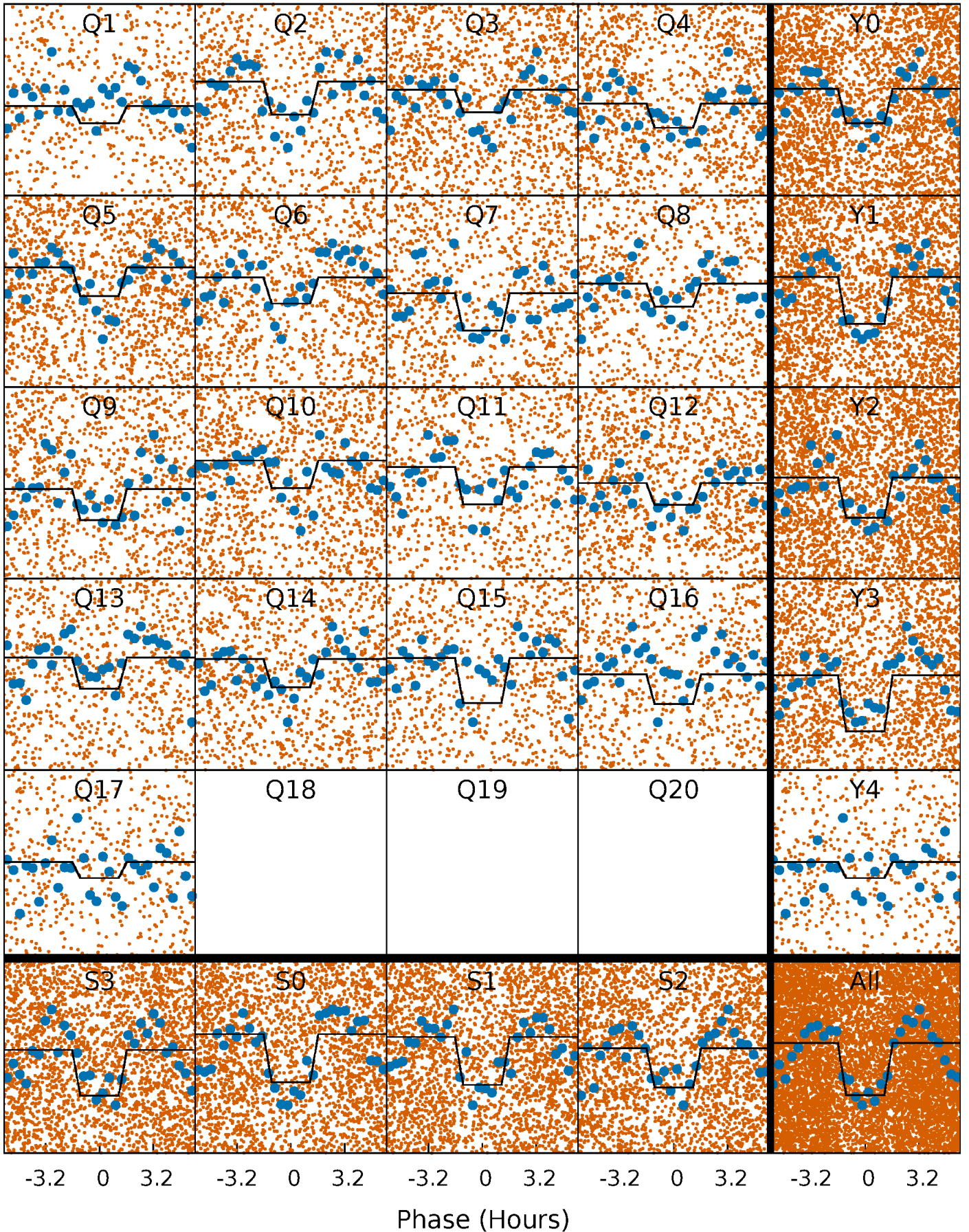
DV Quarter-Phased Transit Curves

TCE 008264720-01 P= 0.701859 Days $T_0=132.111300$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

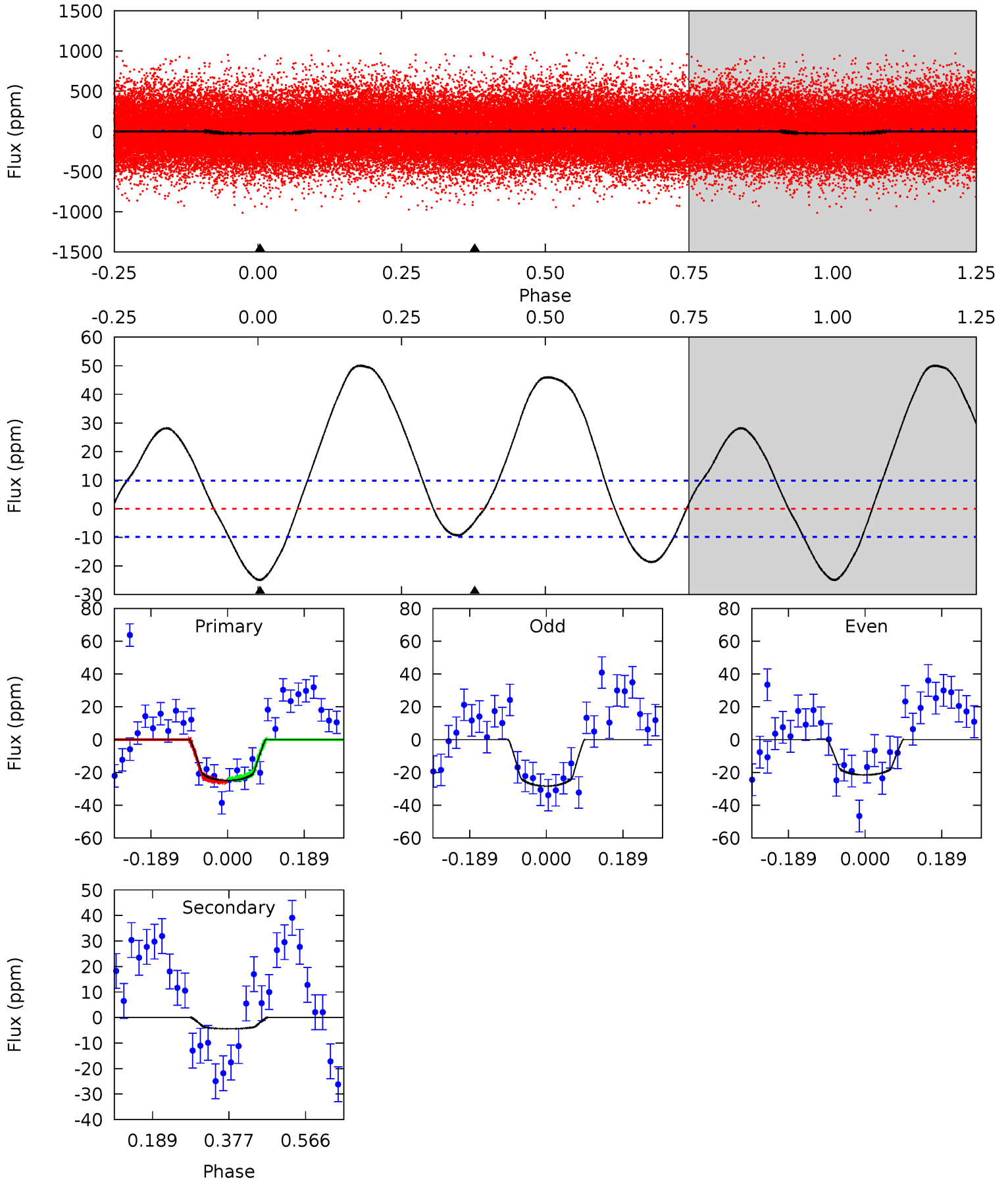
TCE 008264720-01 P= 0.701863 Days $T_0=132.110721$ (BKJD)



DV Model-Shift Uniqueness Test

008264720-01, P = 0.701859 Days, E = 131.409441 Days

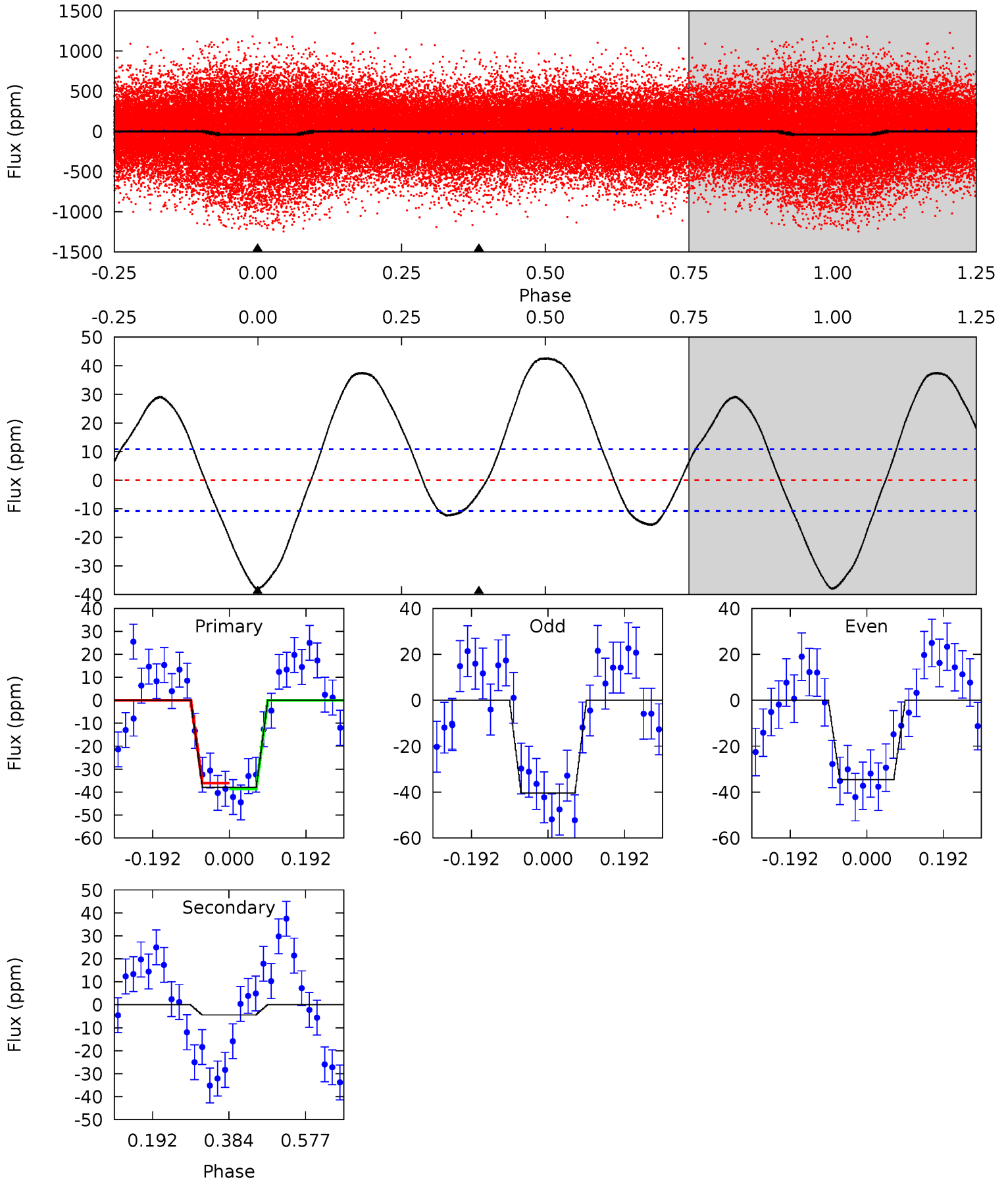
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	1.99	0	0	4.43	1.31	6.78	11.2	11.2	1.99	1.99	1.56	0.96	0.67	0.42



Alt Model-Shift Uniqueness Test

008264720-01, P = 0.701863 Days, E = 131.408858 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	1.81	0	0	4.43	1.30	5.32	15.5	15.5	1.81	1.81	1.17	3.34	0.53	0.53



Stellar Parameters For KIC 008264720

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6856^{+191}_{-262}	$4.368^{+0.056}_{-0.210}$	$-0.280^{+0.250}_{-0.350}$	$1.188^{+0.422}_{-0.113}$	$1.217^{+0.195}_{-0.160}$	$1.022^{+0.297}_{-0.542}$
	+3%/-4%	+1%/-5%	+89%/-125%	+36%/-10%	+16%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008264720-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 2	$0.86^{+0.33}_{-0.30}$	3657^{+263}_{-175}	3800^{+978}_{-1248}	$0.829^{+1.213}_{-0.497}$
Alt.	-4 ± 2	$0.85^{+0.33}_{-0.30}$	3653^{+269}_{-190}	3874^{+917}_{-6348}	$0.874^{+1.290}_{-0.598}$

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 $A_{obs} \gg 1.0$

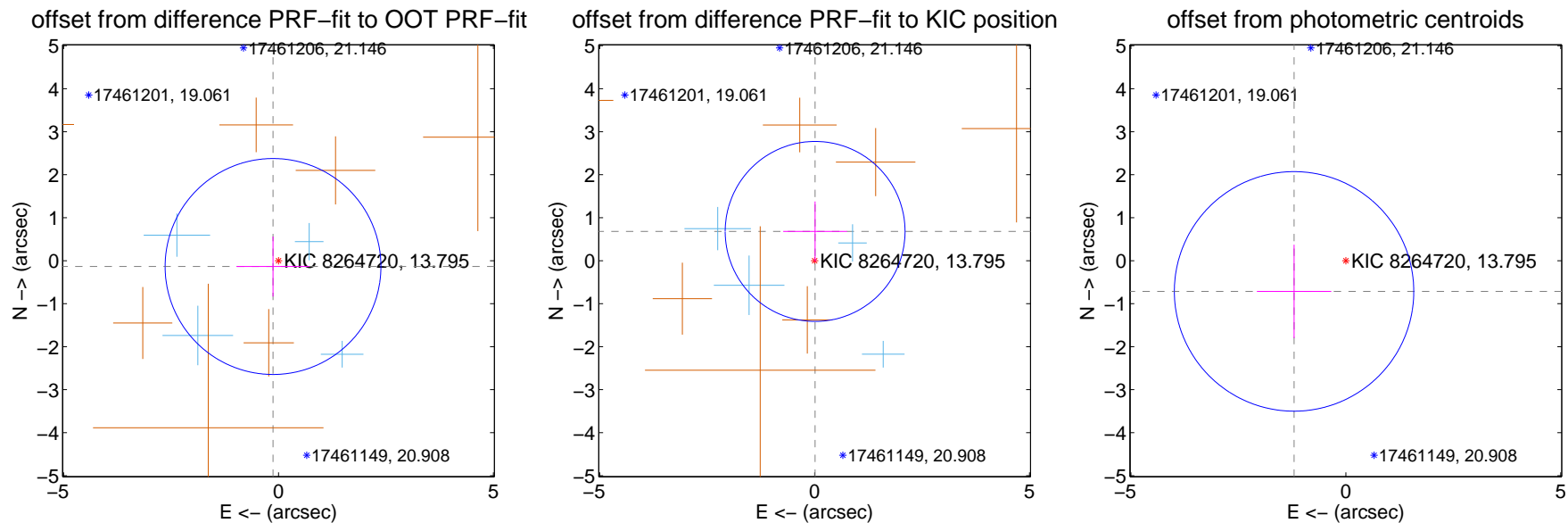
DV Centroid Data

Supplemental centroid analysis for 008264720-01. Kepler magnitude: 13.79. Transit SNR 9.90

There are 4 quarters with good PRF difference image offsets

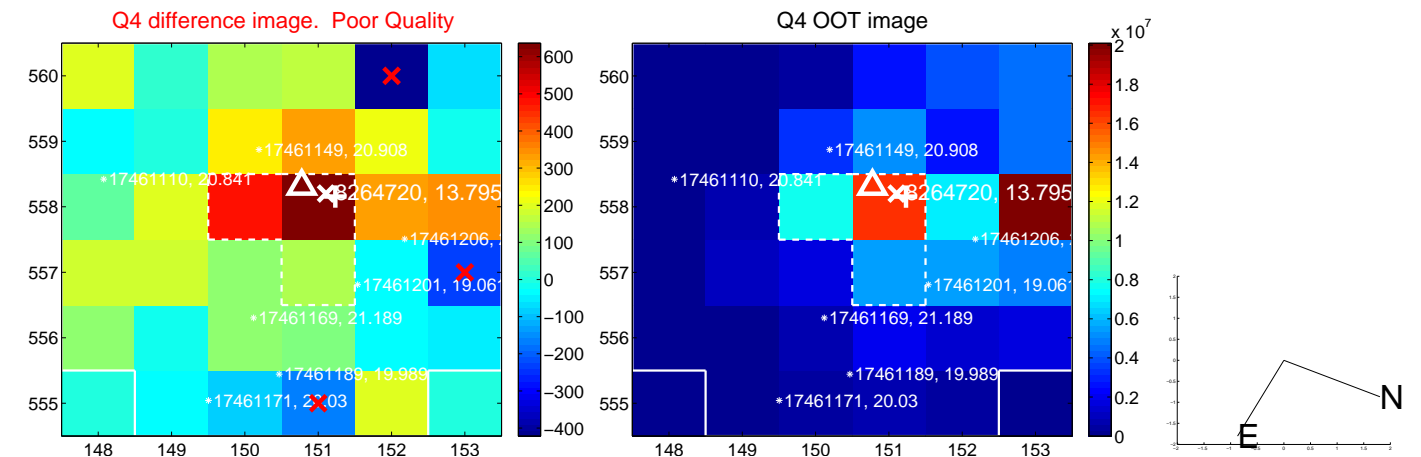
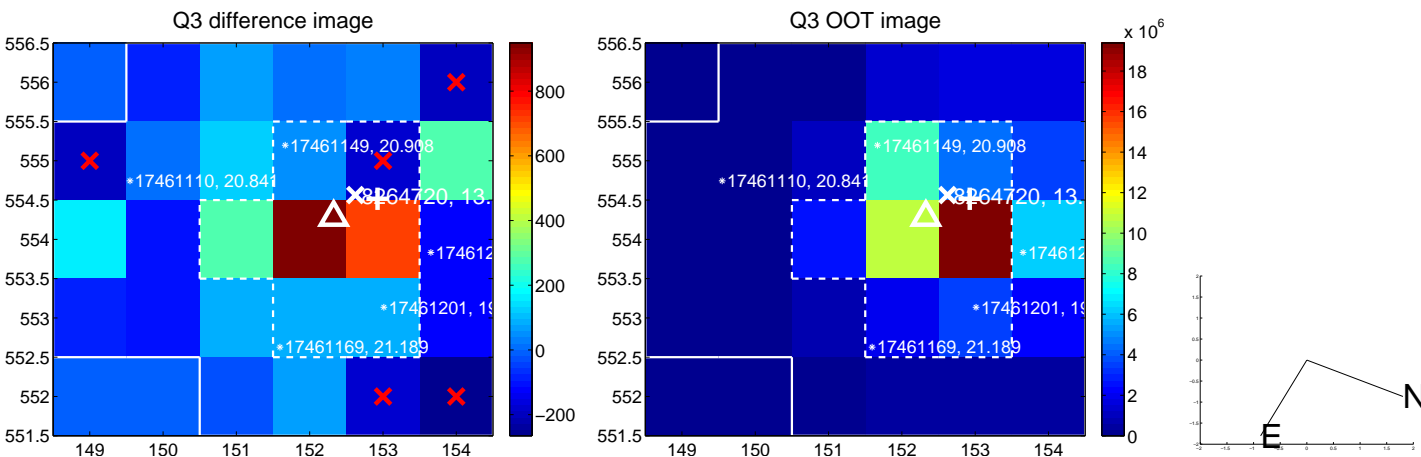
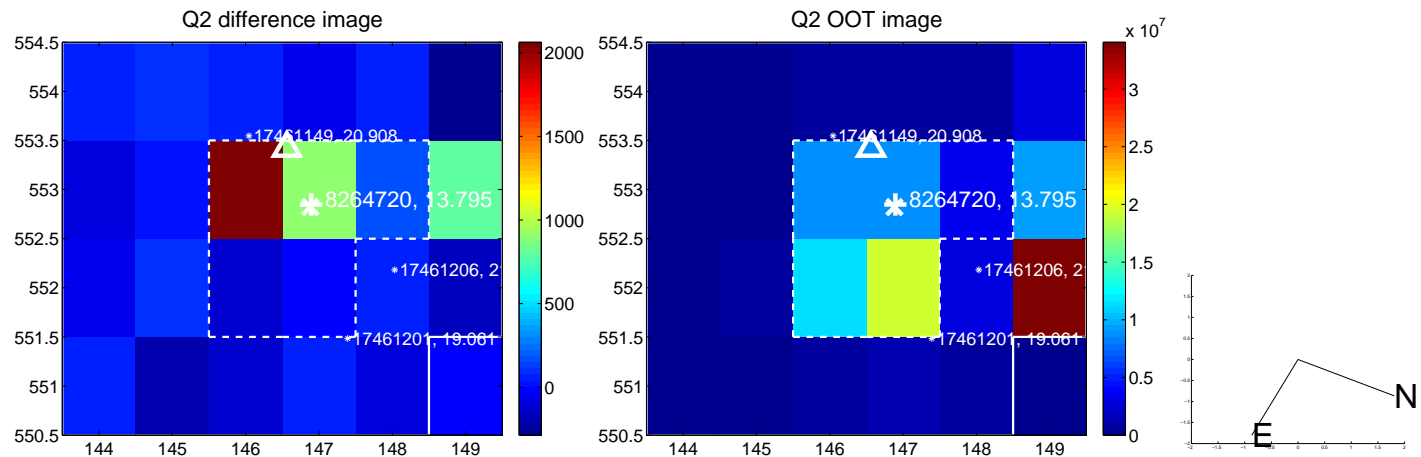
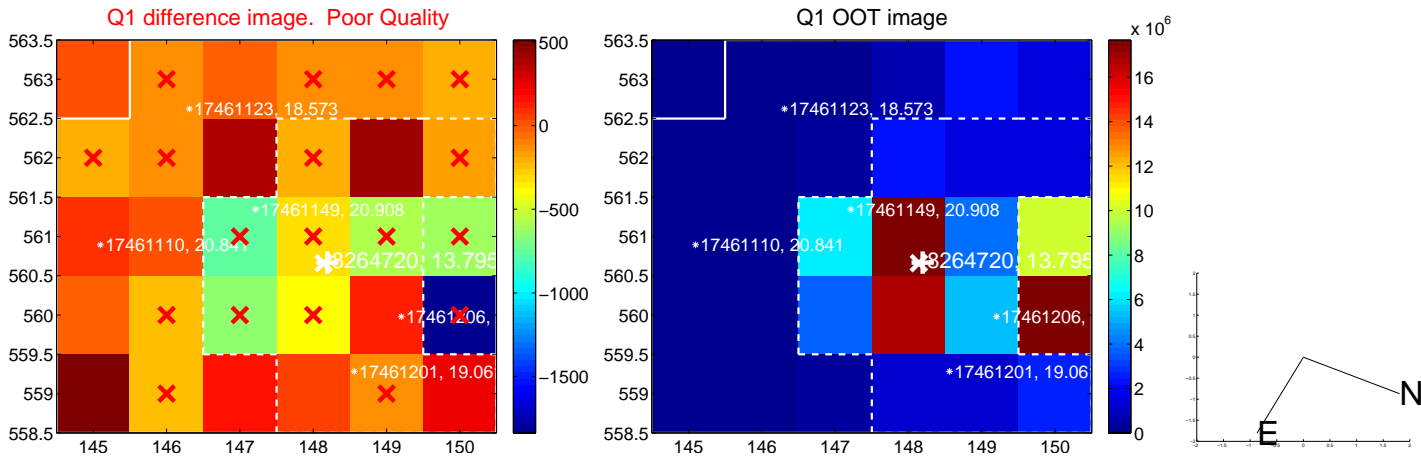
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.186 ± 0.837	0.22	0.127 ± 0.851	-0.135 ± 0.697
PRF-fit source offset from KIC position	0.681 ± 0.698	0.98	-0.012 ± 0.744	0.681 ± 0.697
photometric centroid source offset	1.40 ± 0.93	1.51	1.20 ± 0.87	-0.71 ± 1.09

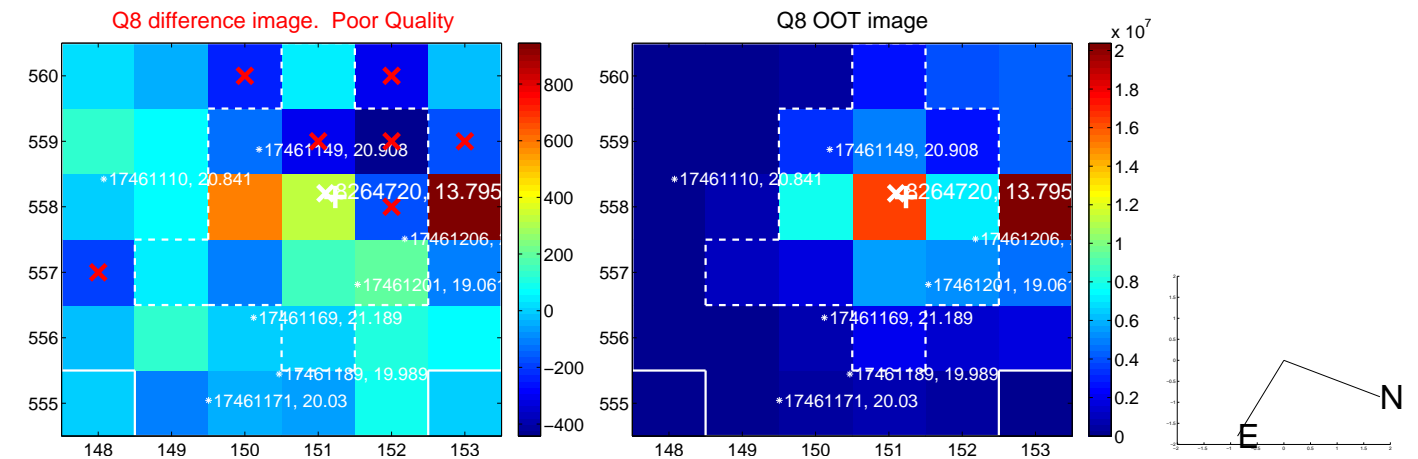
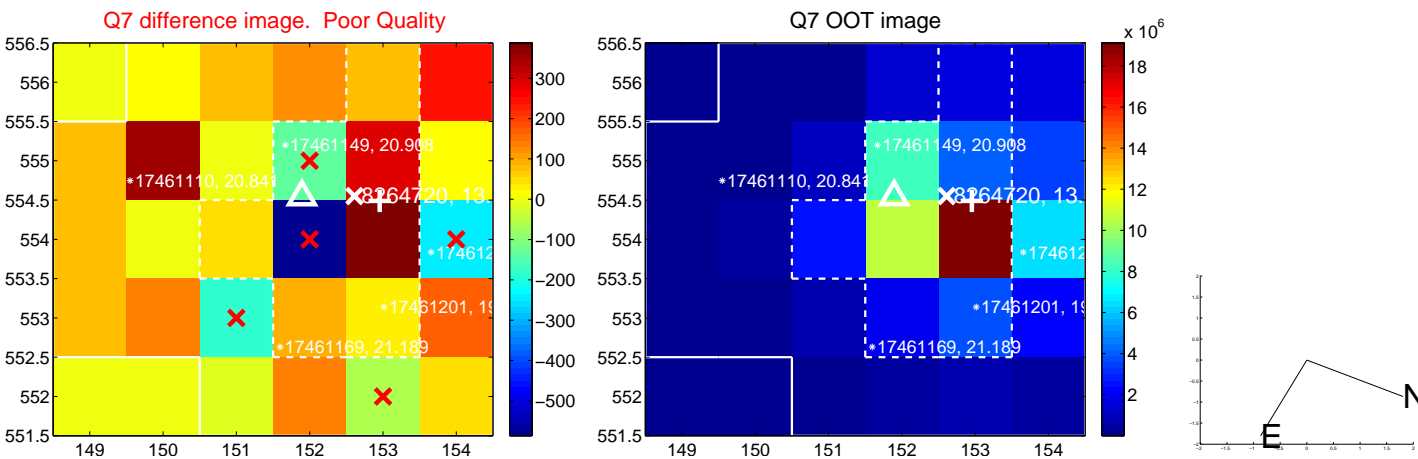
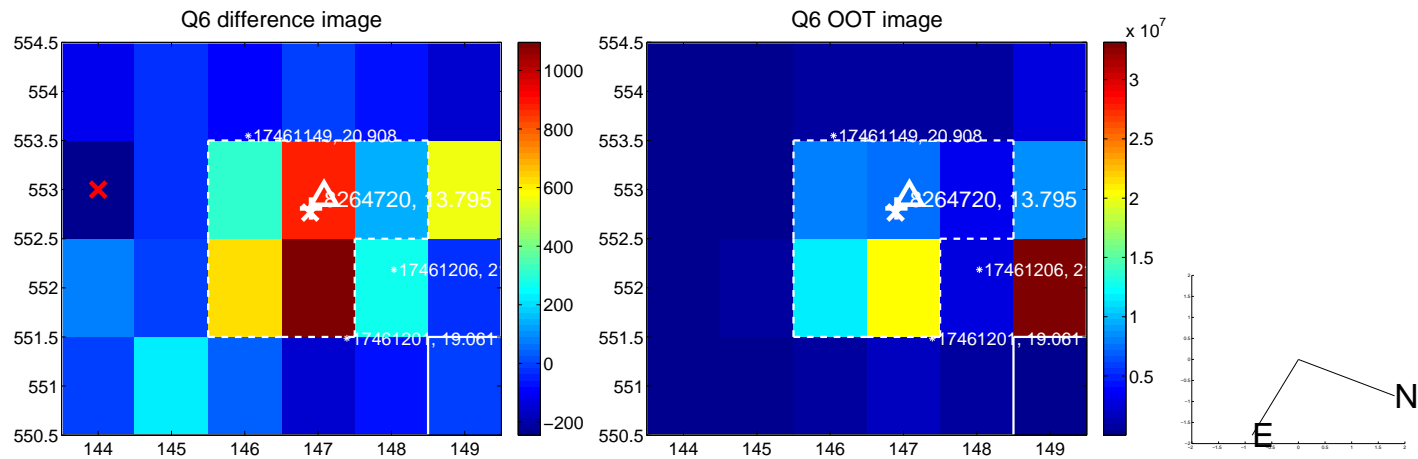
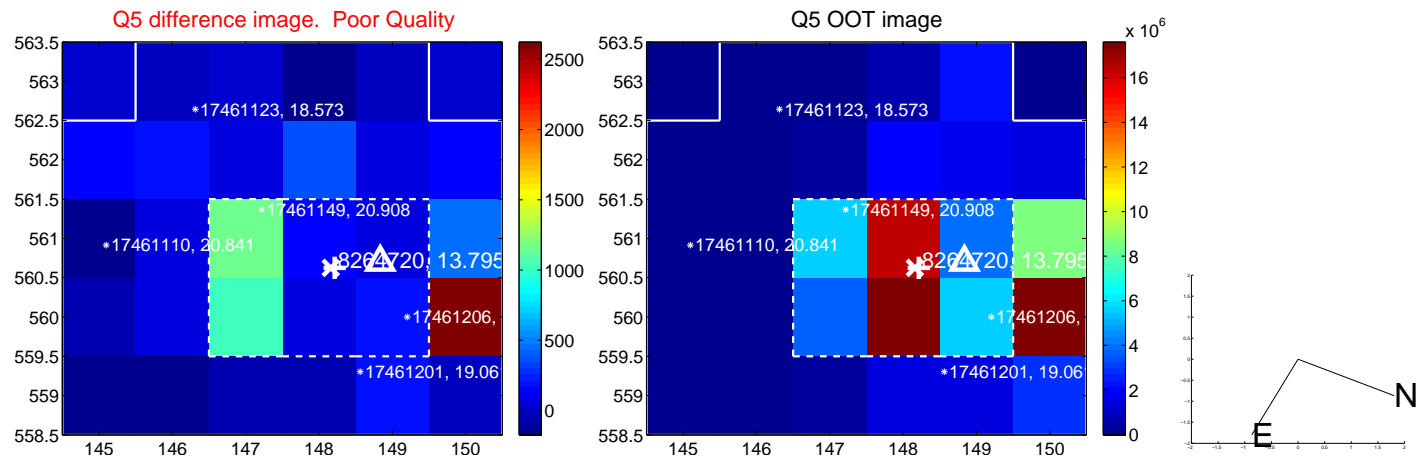


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

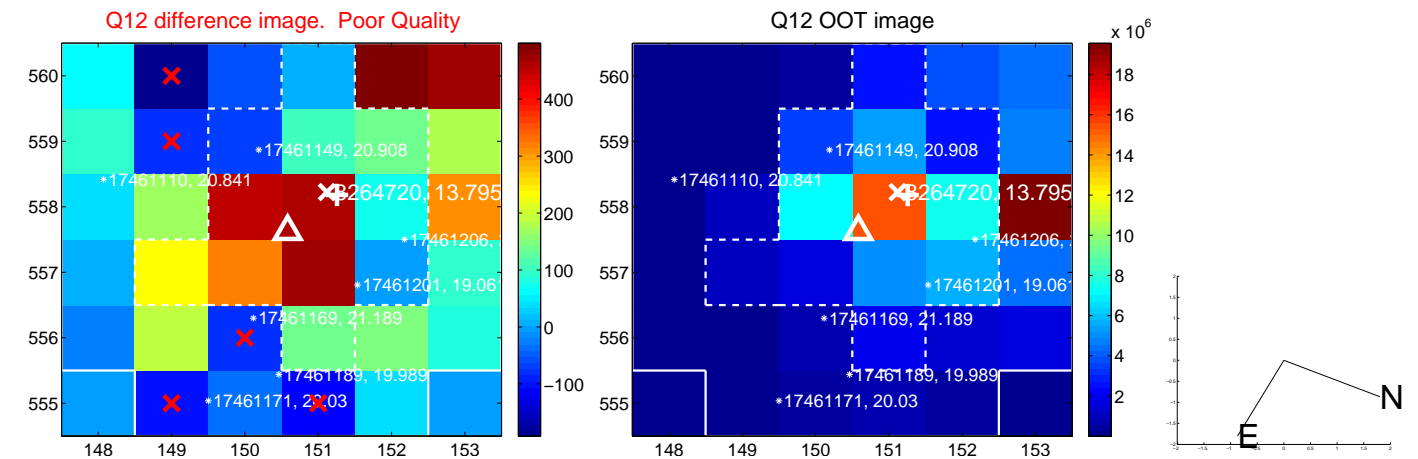
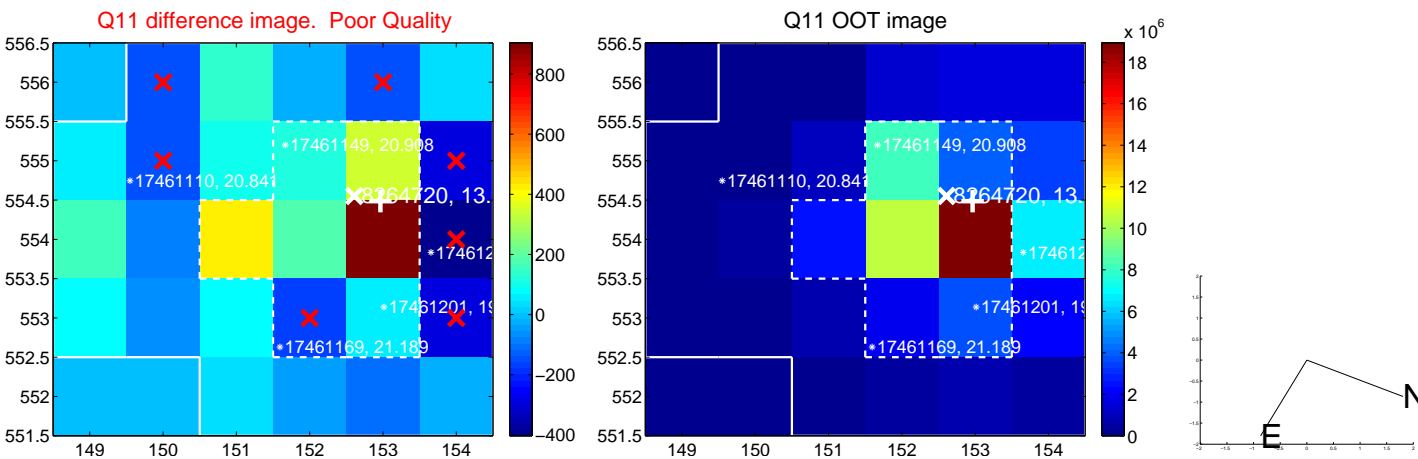
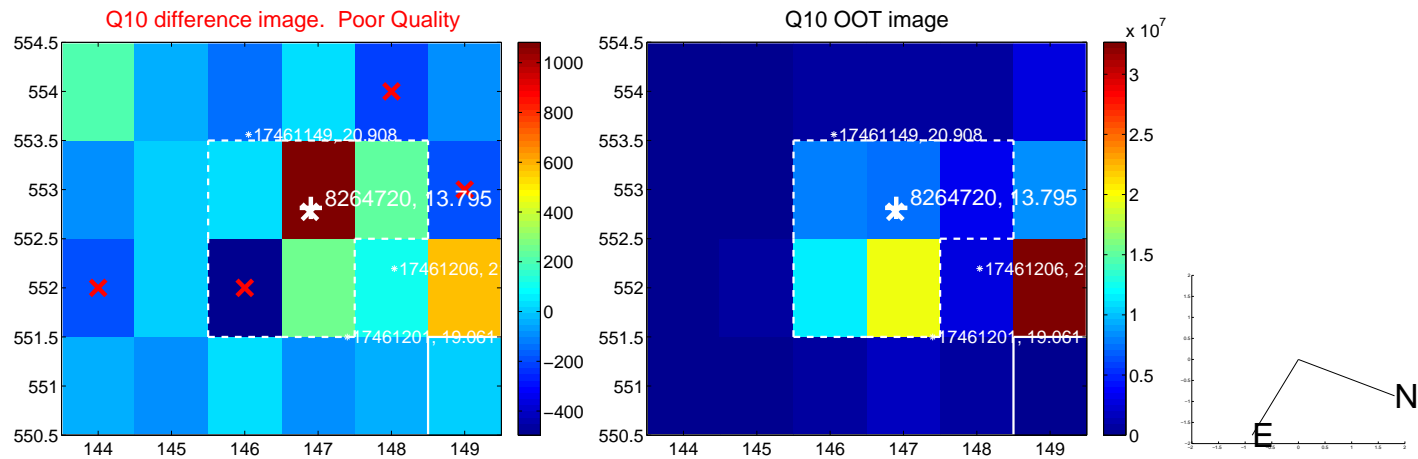
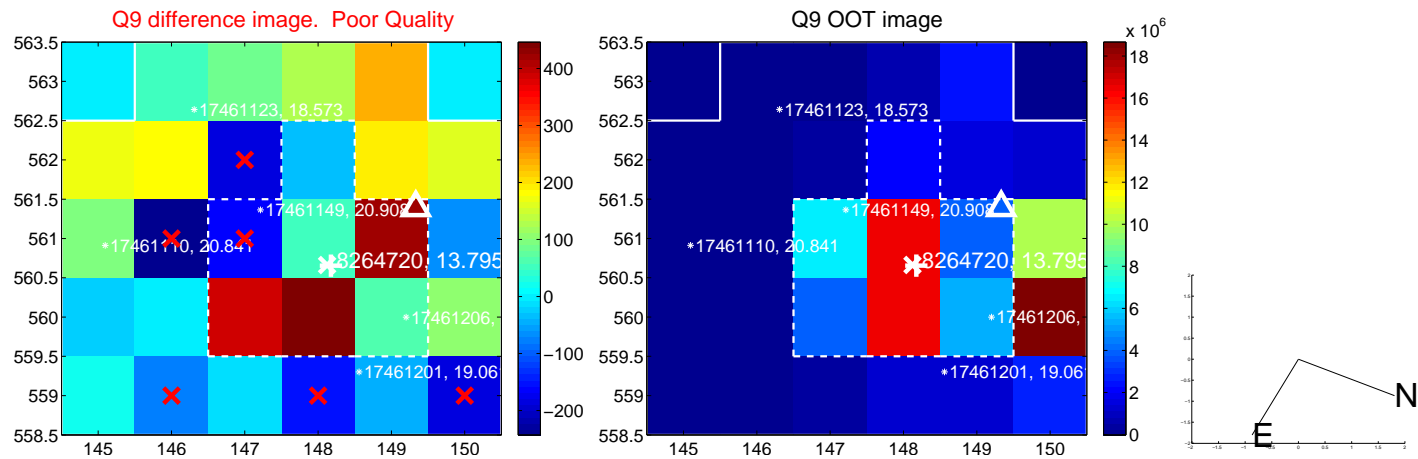
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



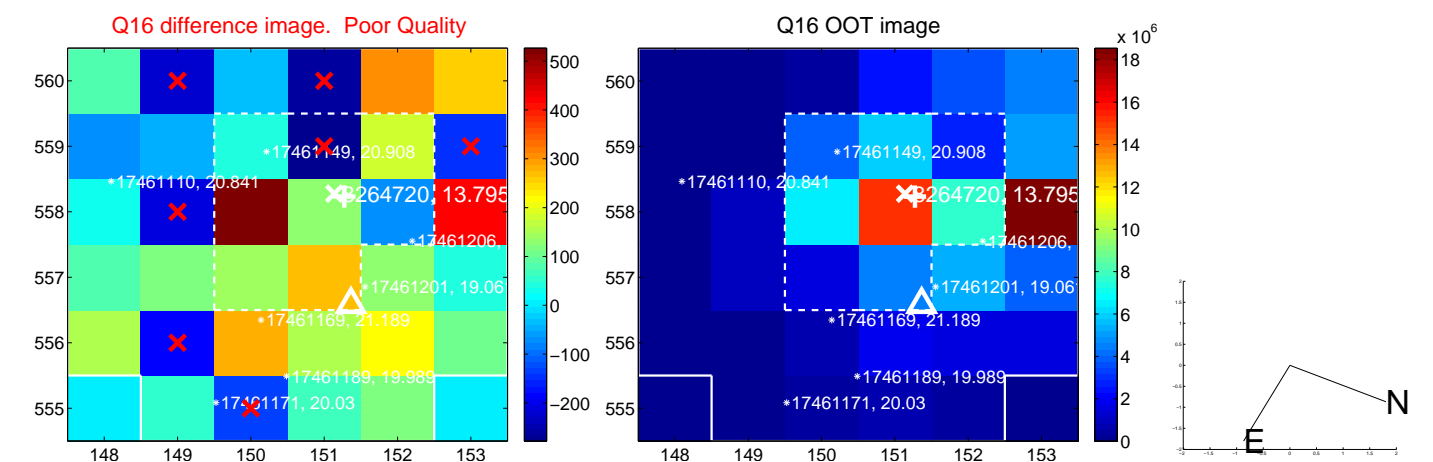
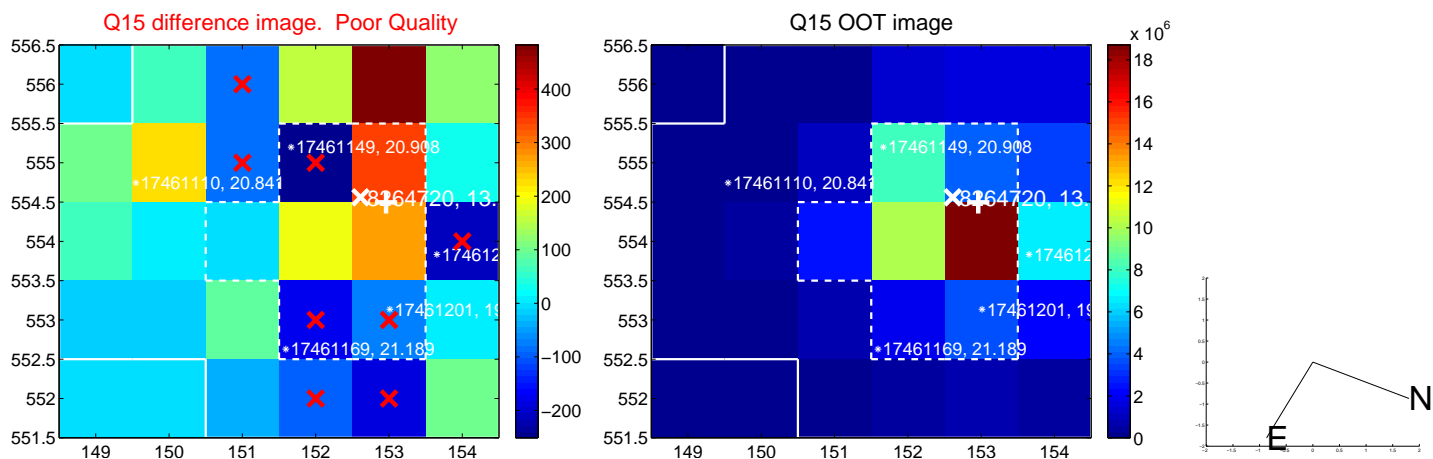
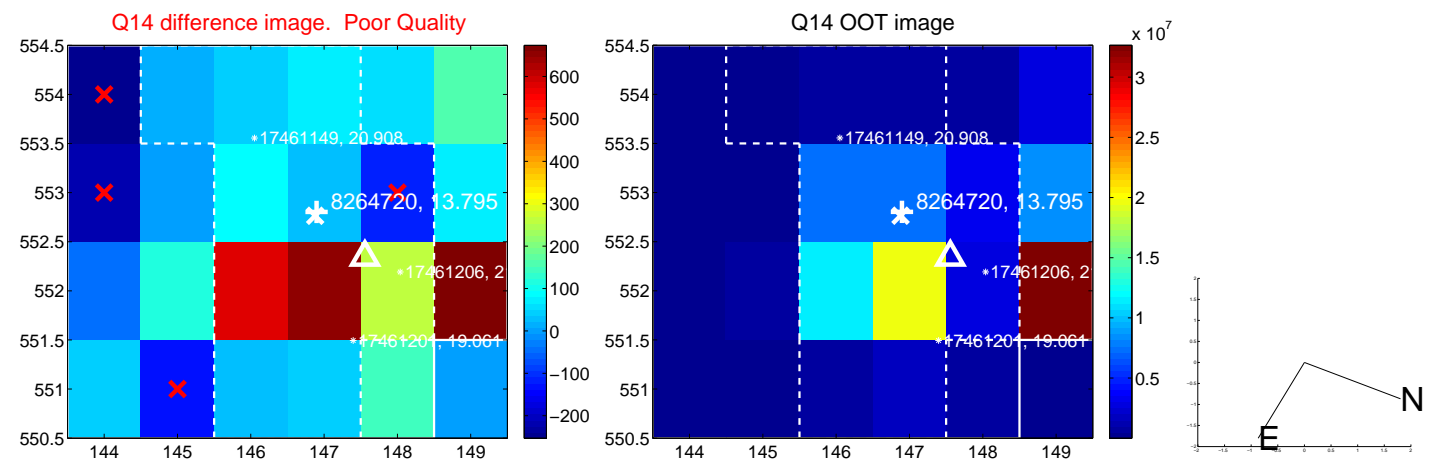
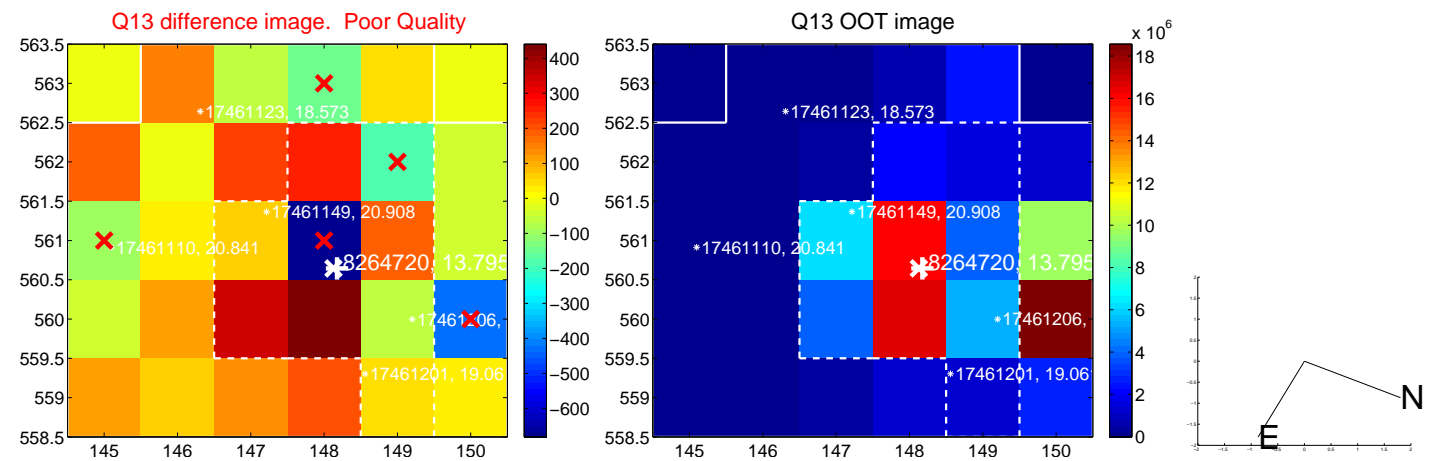
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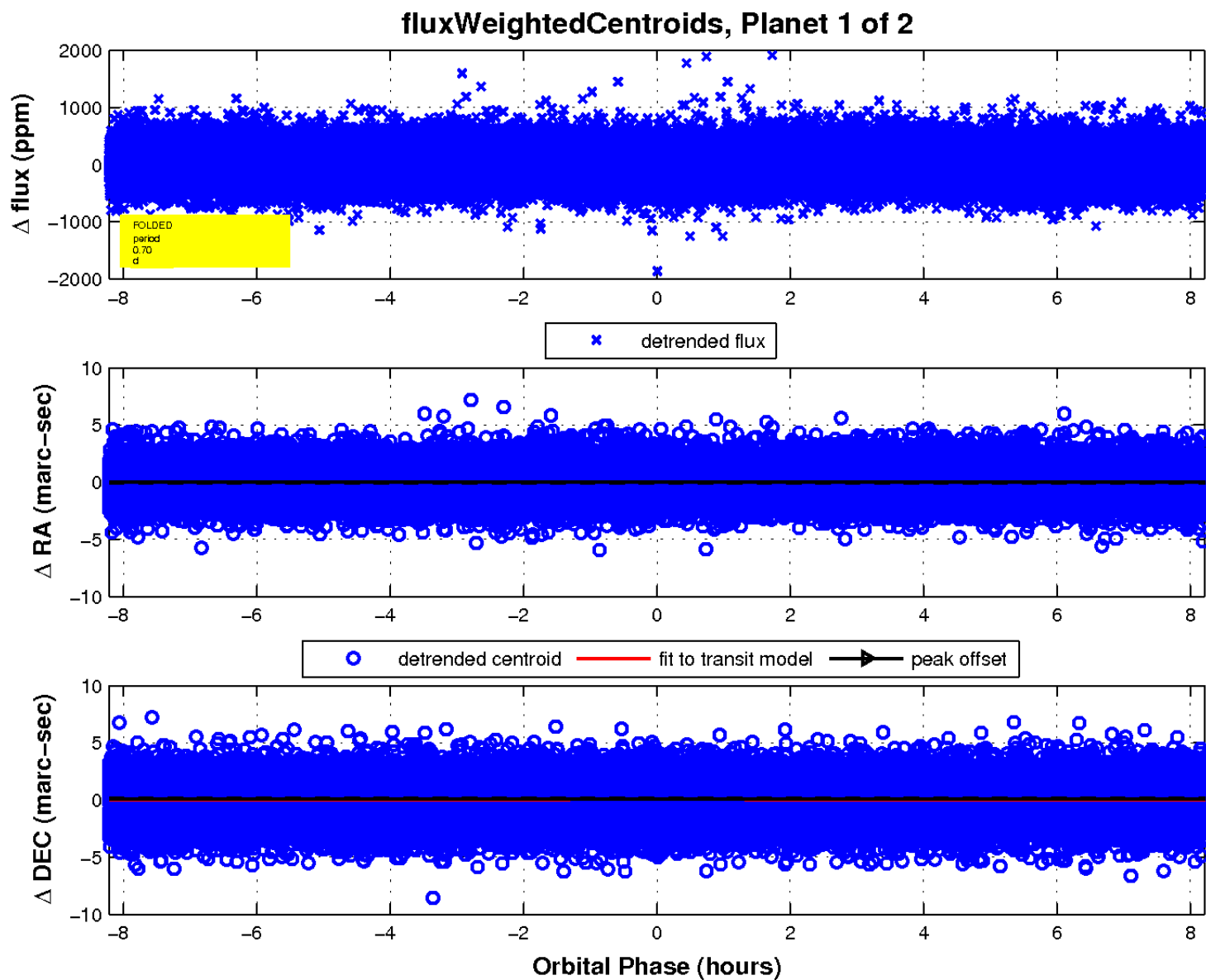
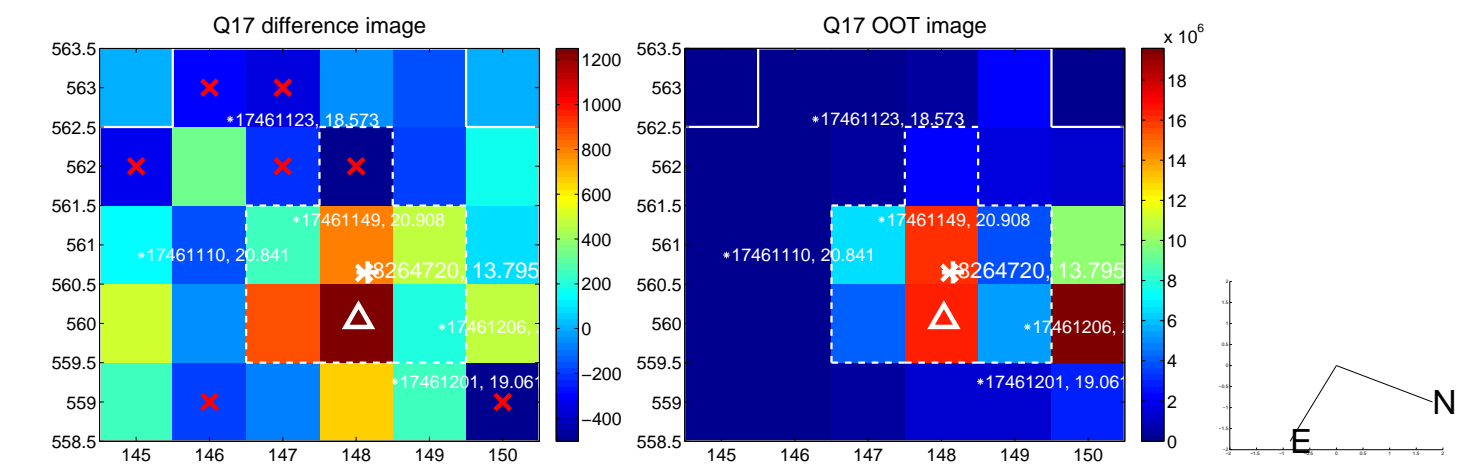
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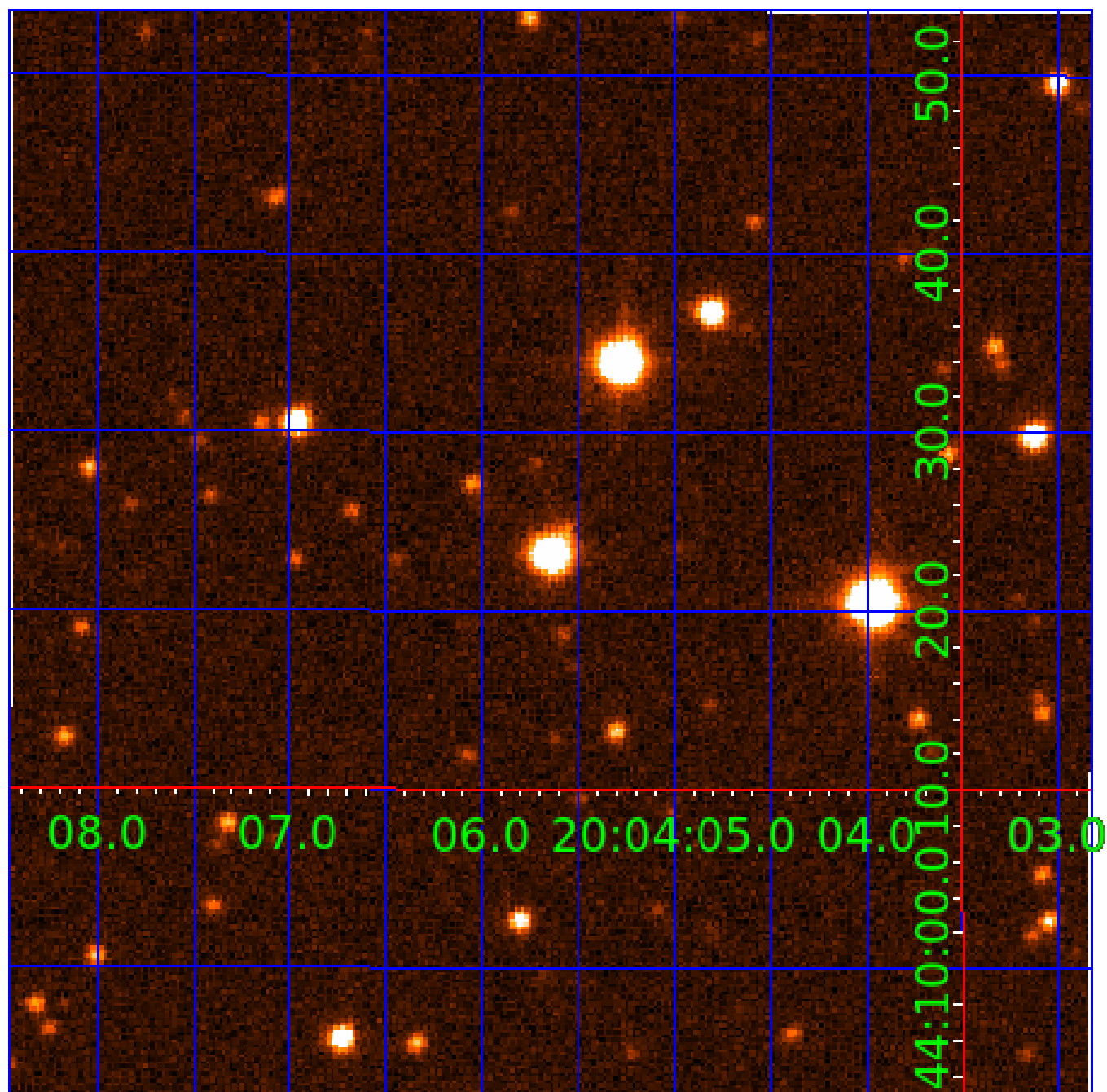


white \times : KIC target position; +: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008264720

Q1-17 DR25 TCE Parameters

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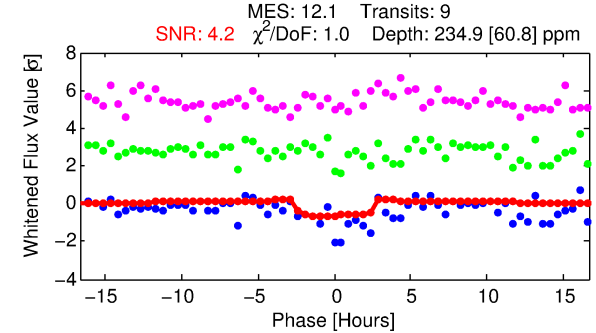
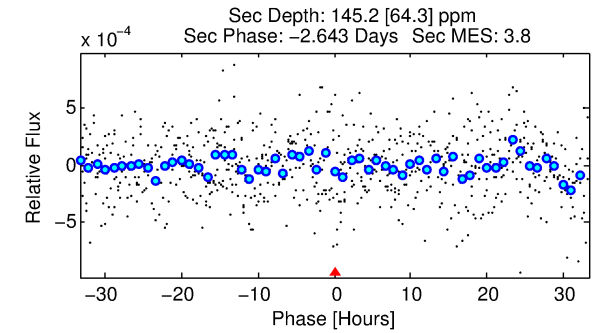
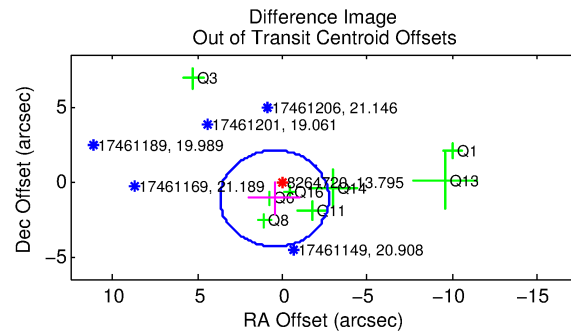
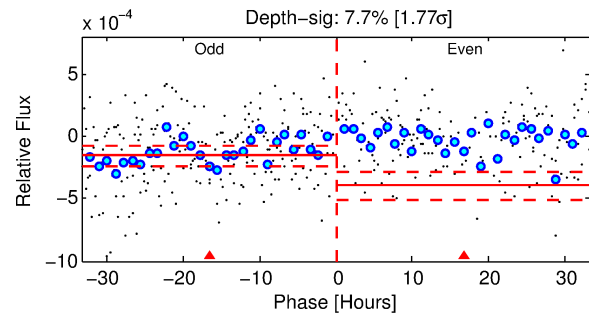
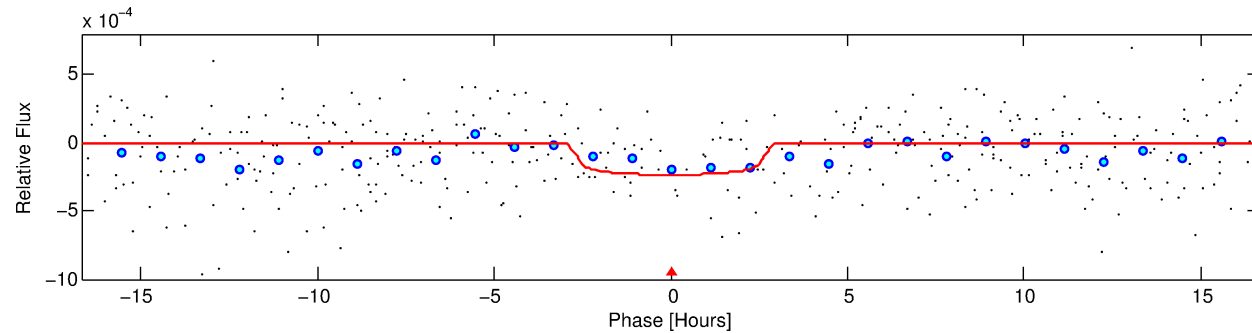
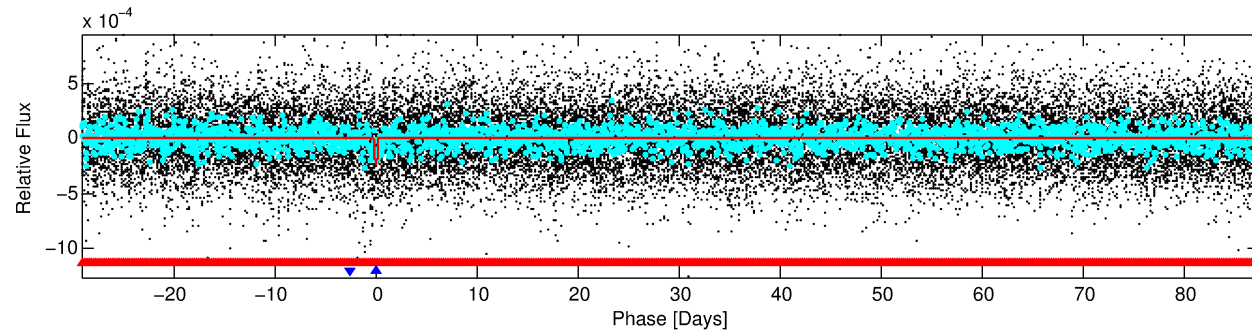
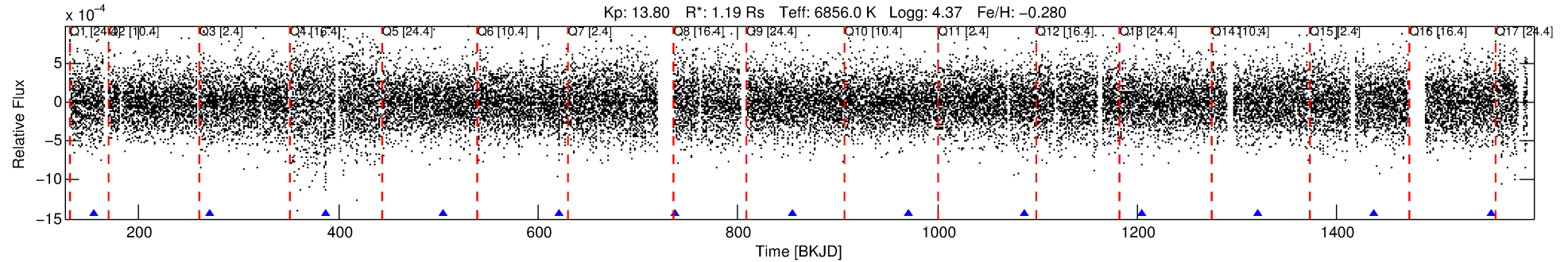
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008264720-02

No Significant Match Found

DV One-Page Summary

KIC: 8264720 Candidate: 2 of 2 Period: 116.644 d



DV Fit Results:

Period = 116.64399 [0.00311] d
Epoch = 154.4595 [0.0255] BKJD
Rp/R* = 0.0149 [0.0139]
a/R* = 121.93 [657.42]
b = 0.67 [4.40]
Seff = 11.32 [4.85]
Teff = 468 [50] K
Rp = 1.94 [1.93] Re
a = 0.4968 [0.1423] AU
Ag = 5247.11 [10229.85] [0.51 σ]
Teffp = 6155 [2946] K [1.93 σ]

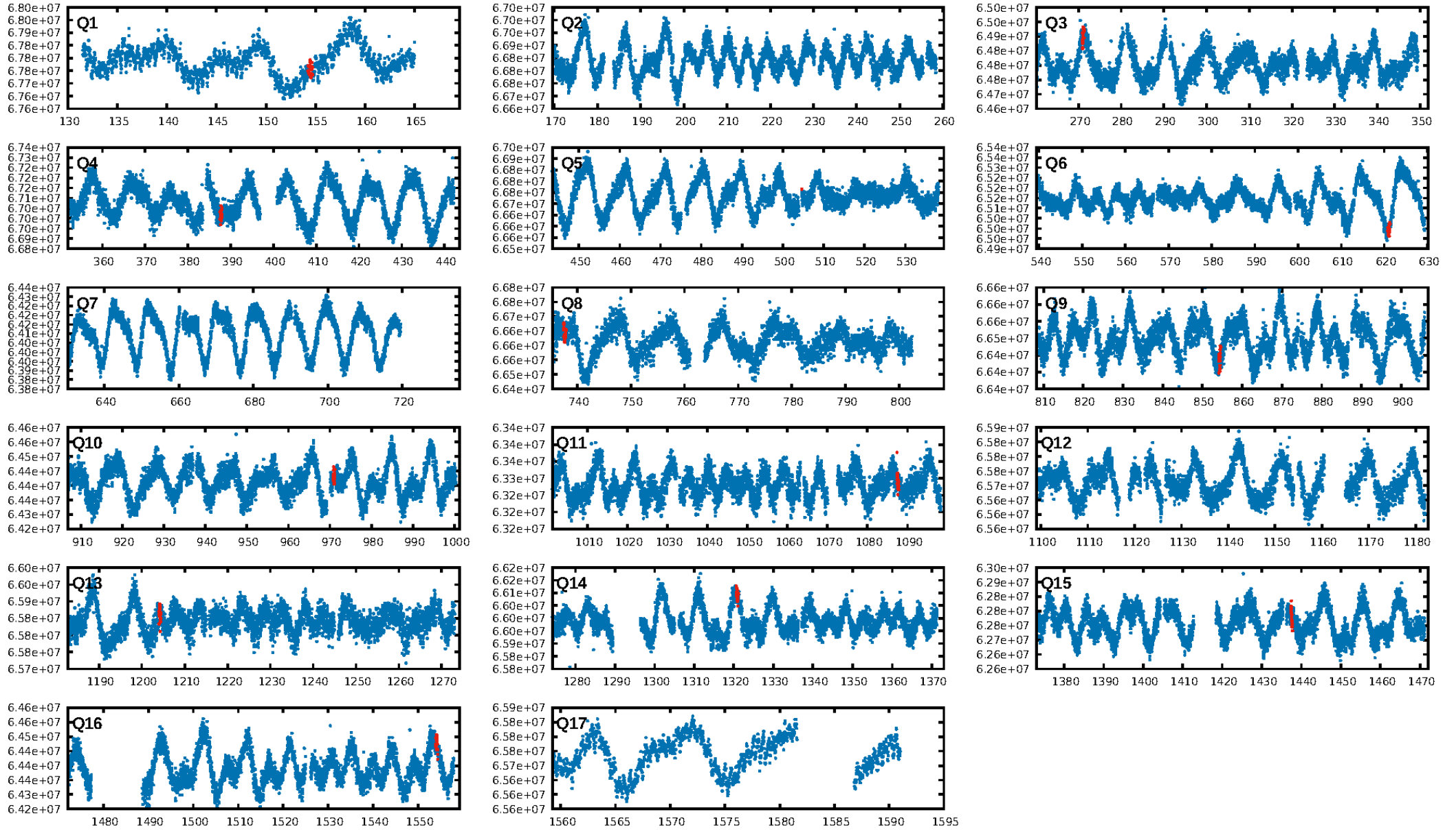
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [449.07 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.18e-26
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -1.197
Centroid-sig: 16.2%
Centroid-so: 3.836 arcsec [2.20 σ]
OotOffset-rm: 1.214 arcsec [1.13 σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-rm: 0.766 arcsec [0.69 σ]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/10]

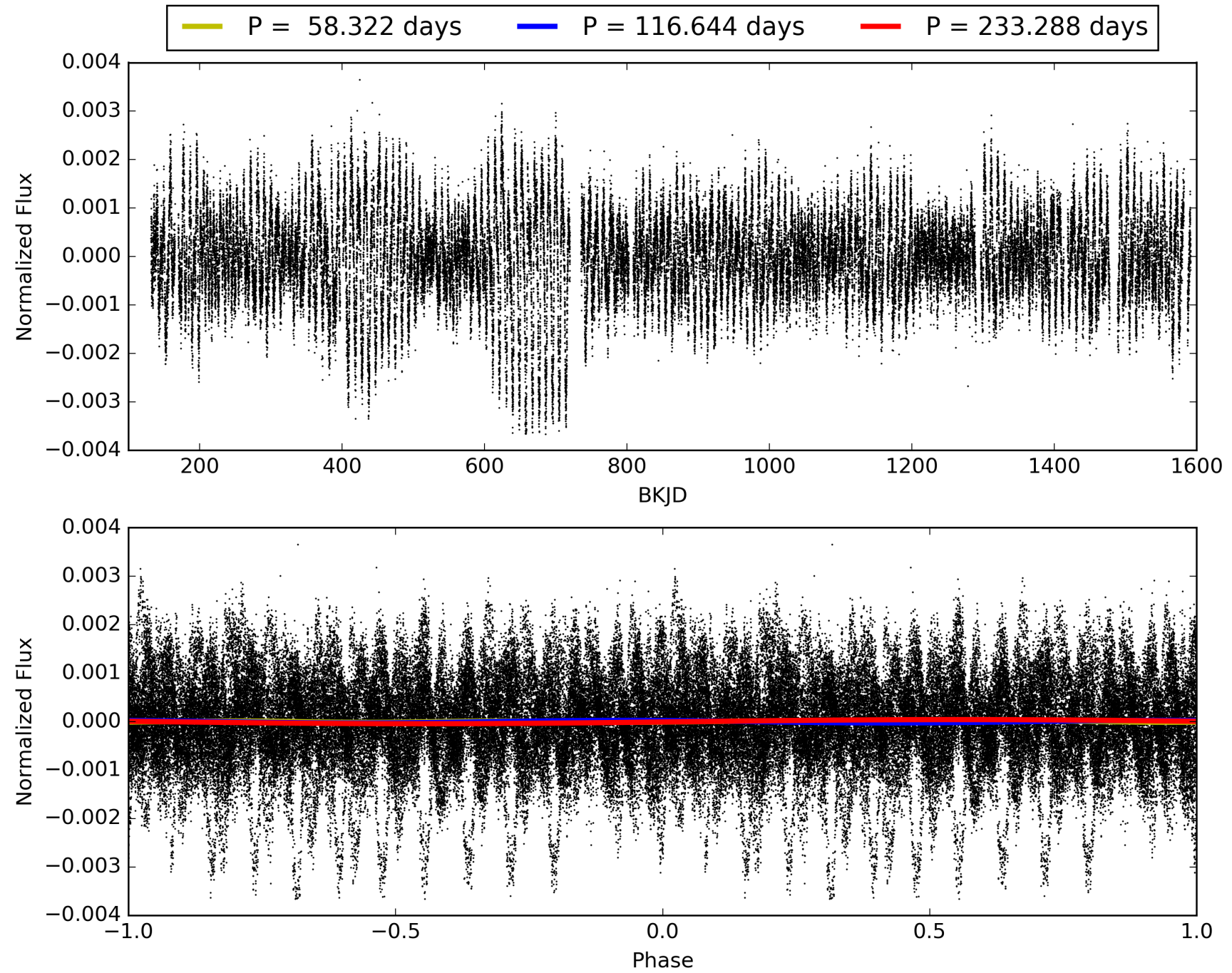
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:22:04 Z

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

TCE 008264720-02, PDC Light Curves

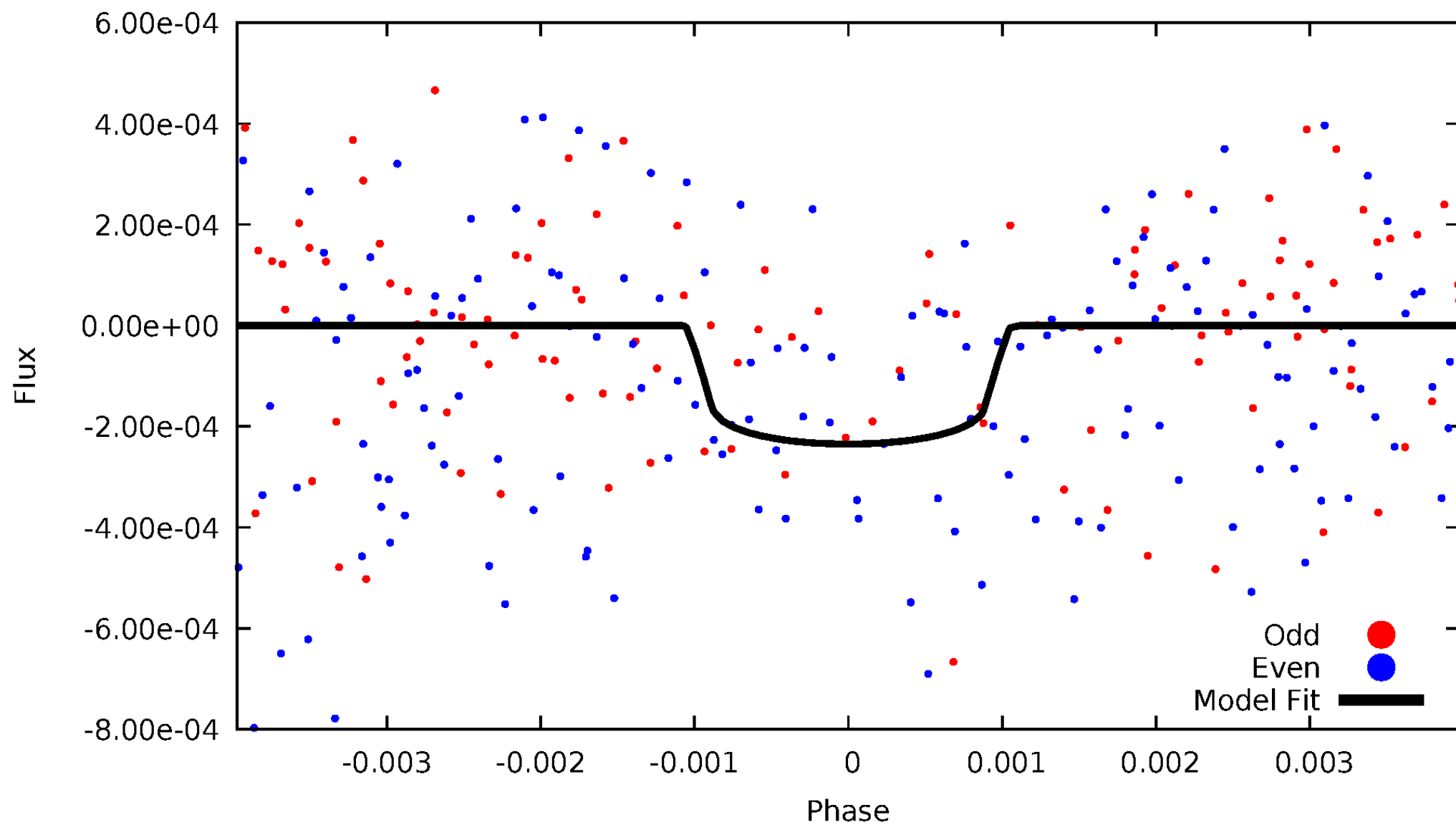


TCE 008264720-02



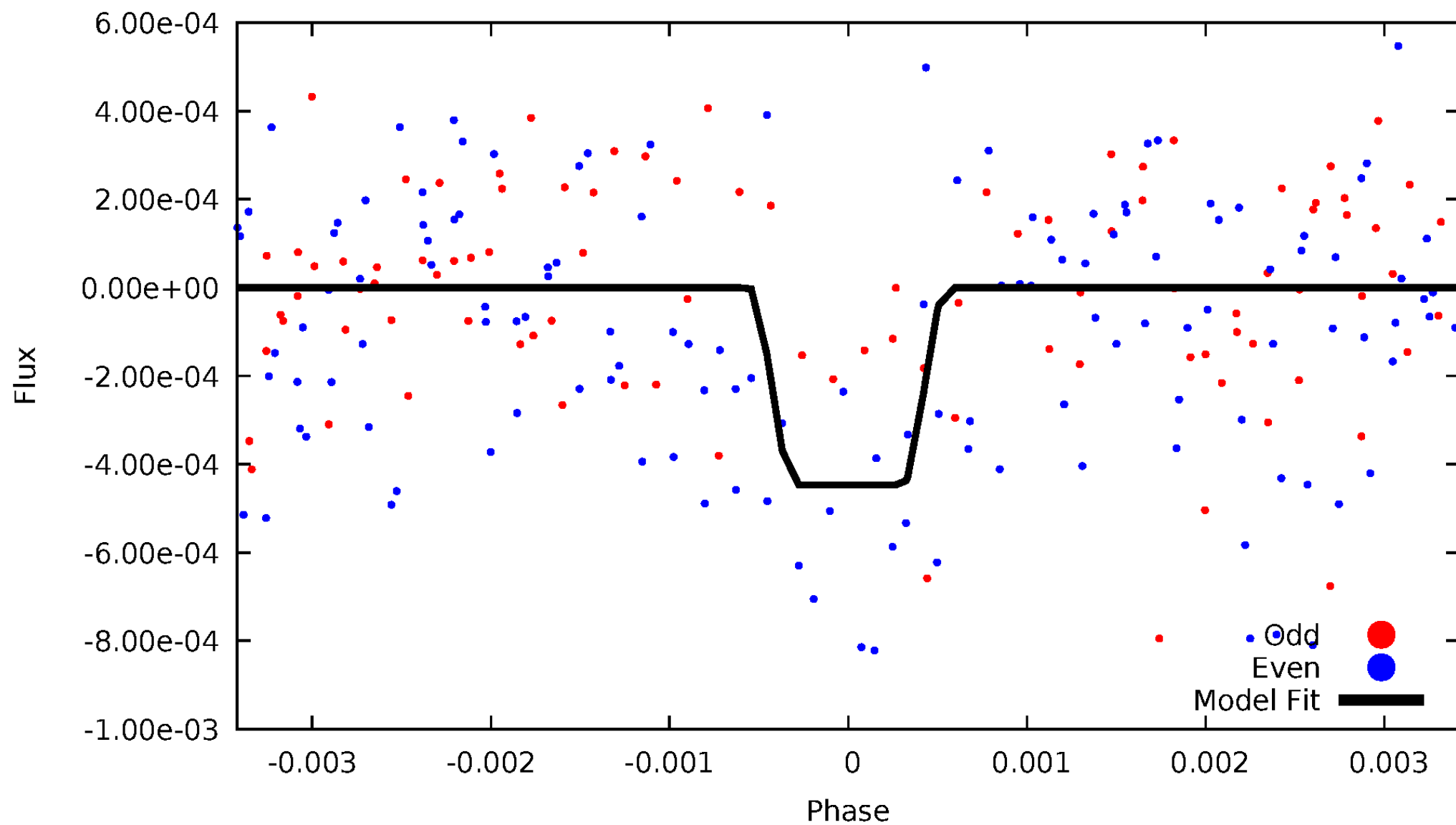
DV Odd/Even

TCE 008264720-02



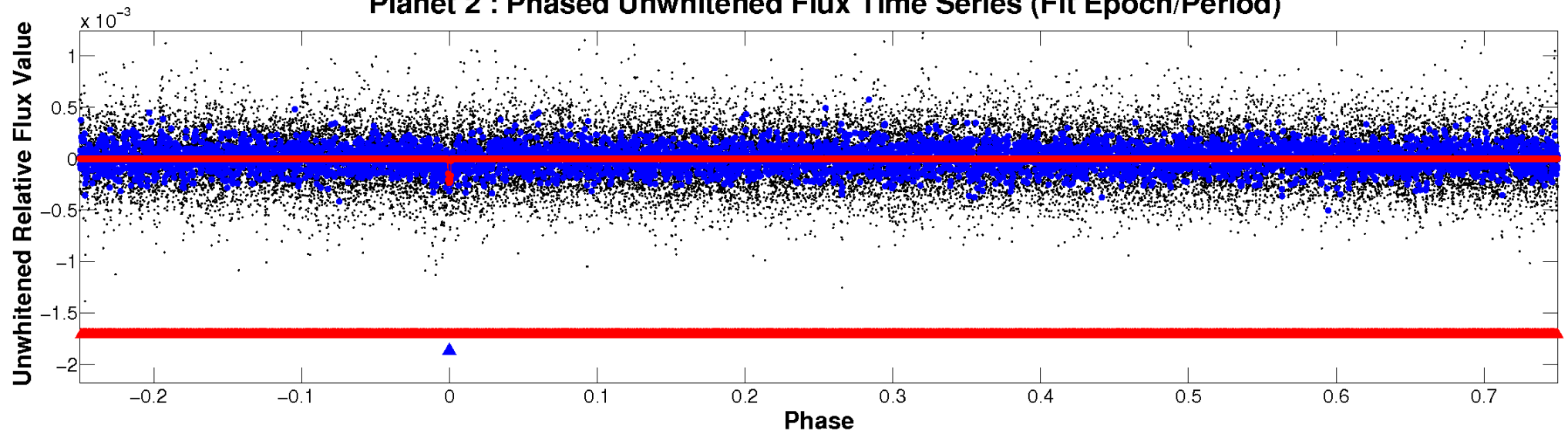
ALT Odd/Even

TCE 008264720-02

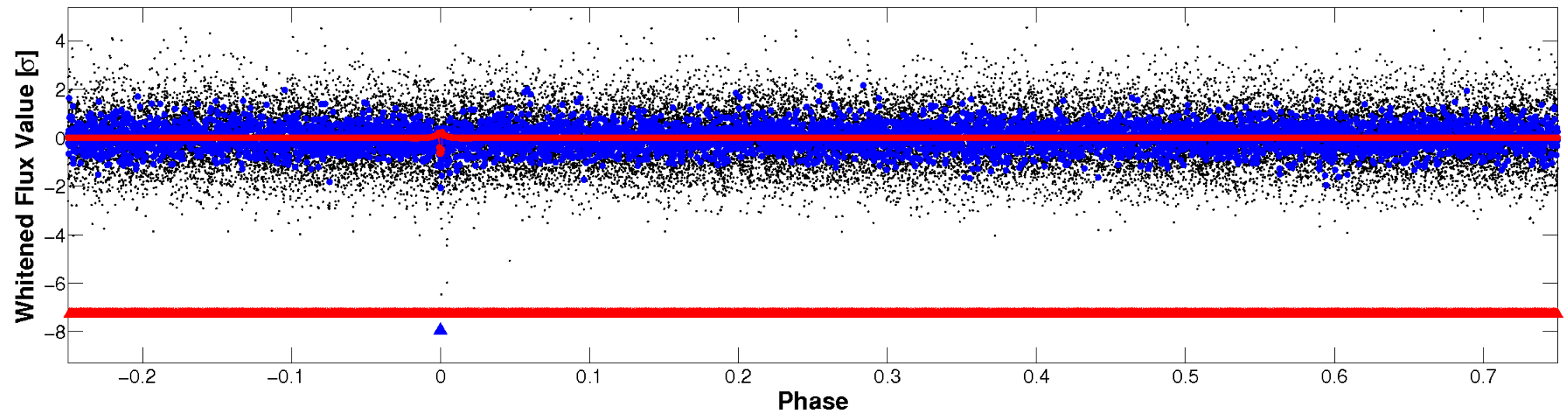


Non-Whitened Vs. Whitened Light Curve

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

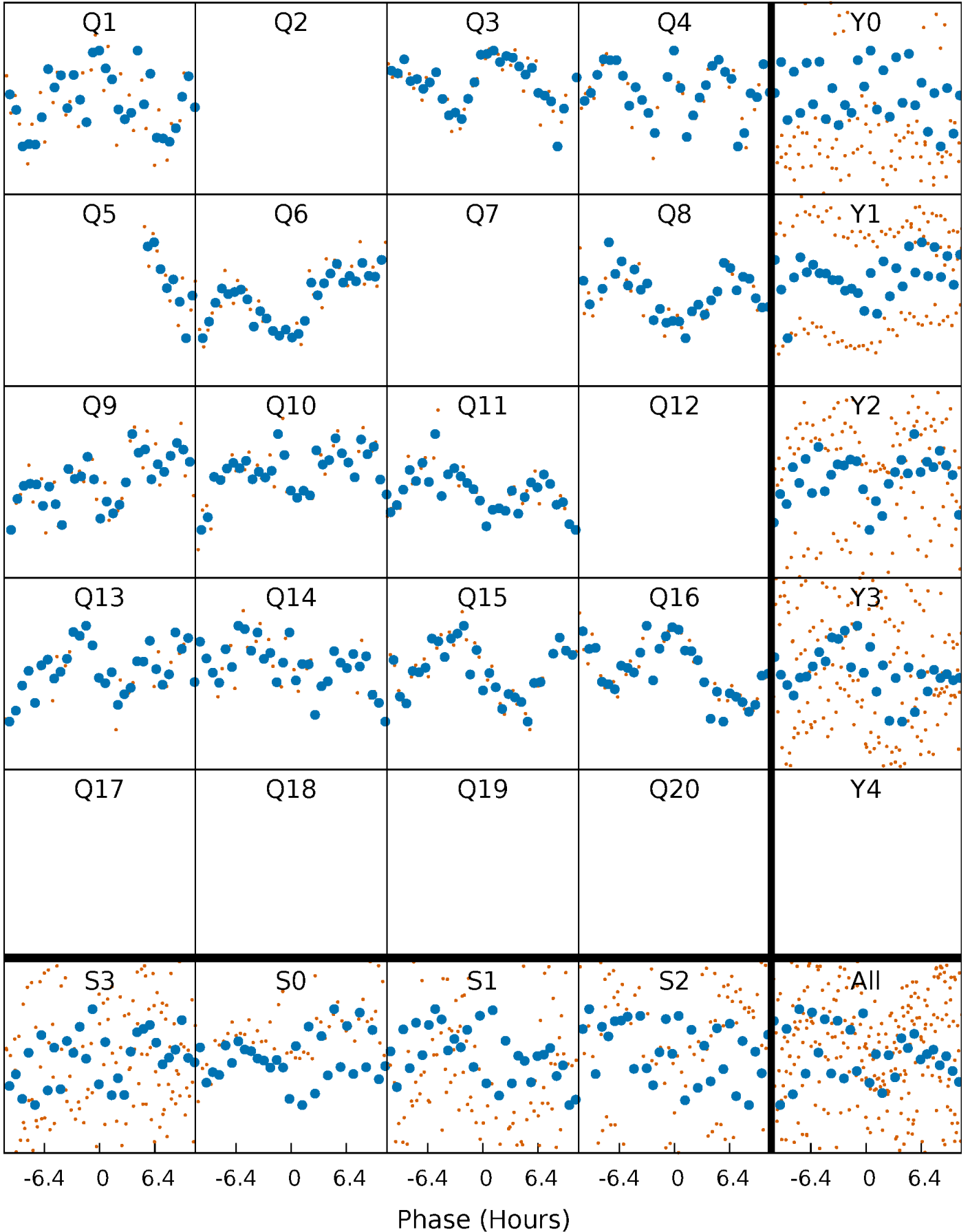


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



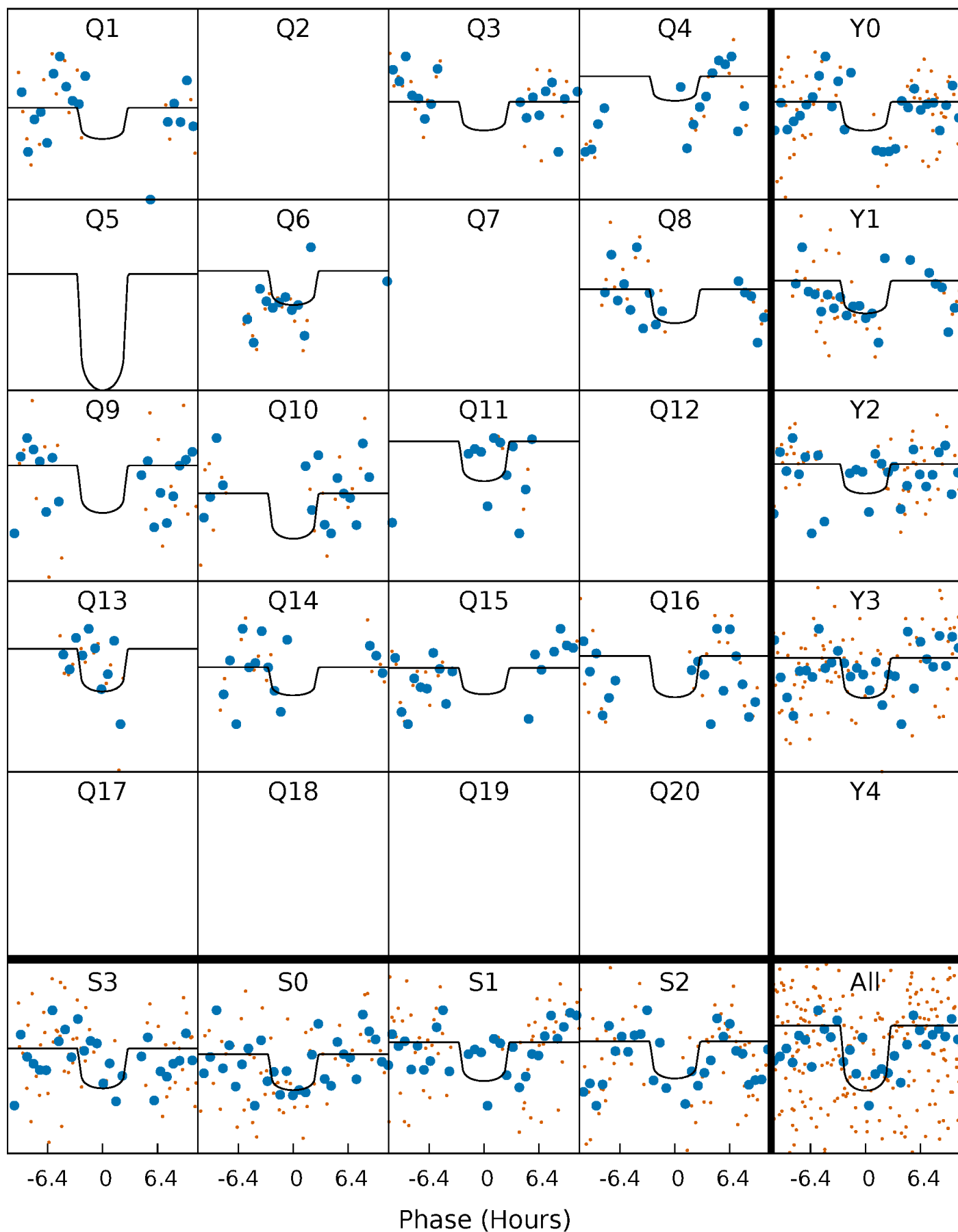
PDC Quarter-Phased Transit Curves

TCE 008264720-02 P=116.643993 Days $T_0=154.459528$ (BKJD)



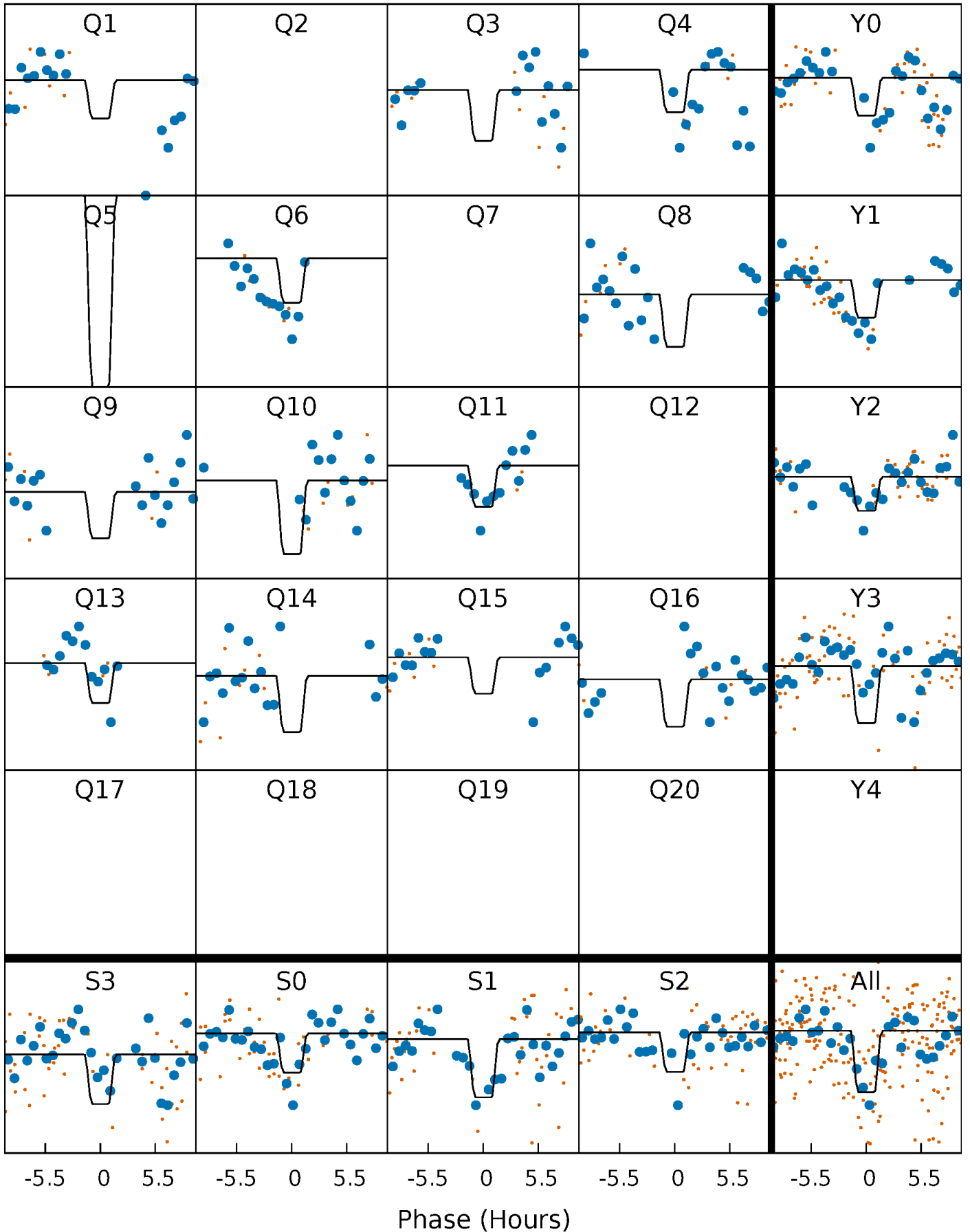
DV Quarter-Phased Transit Curves

TCE 008264720-02 P=116.643993 Days $T_0=154.459528$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

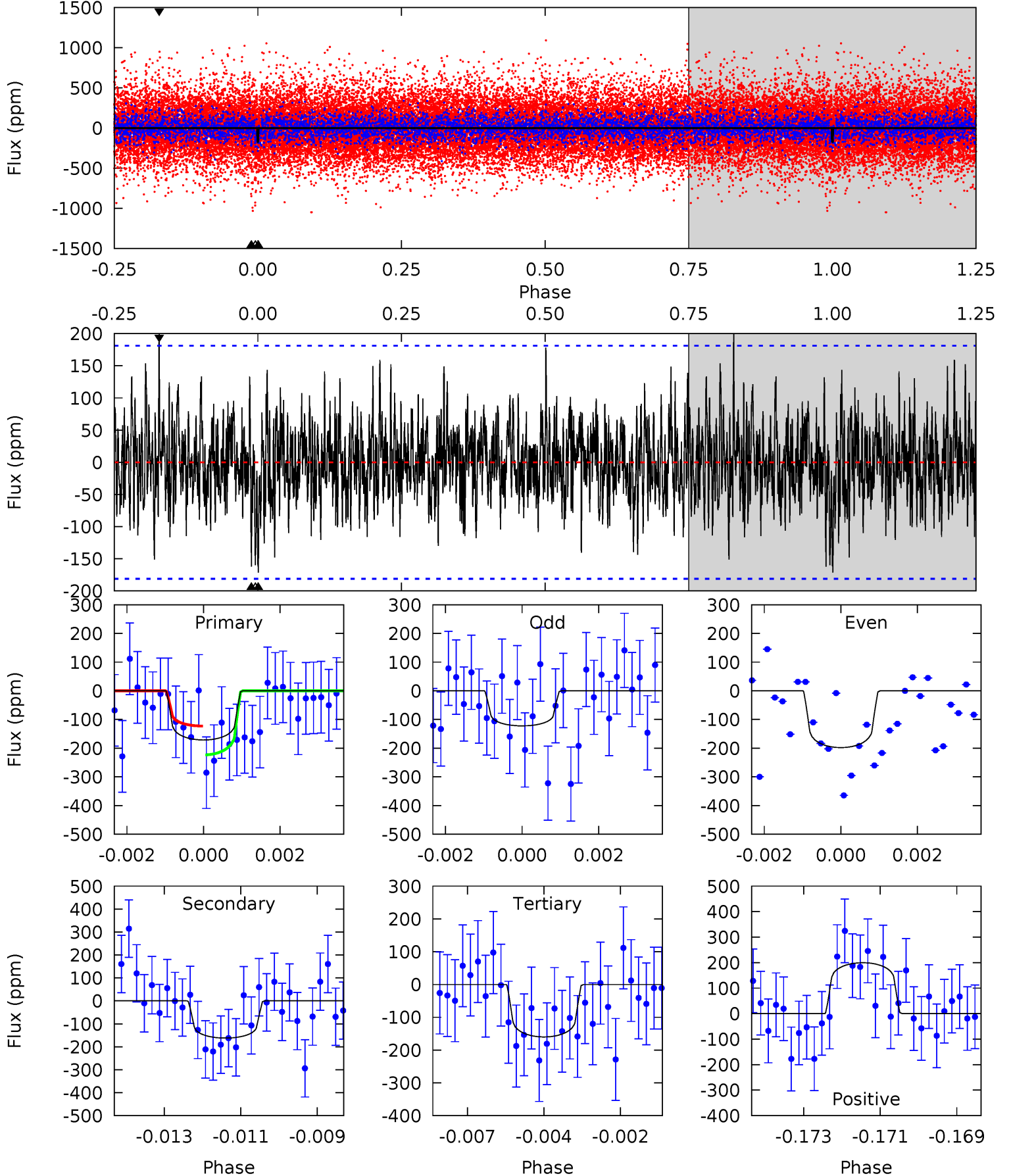
TCE 008264720-02 P=116.641847 Days $T_0=154.507069$ (BKJD)



DV Model-Shift Uniqueness Test

008264720-02, P = 116.643993 Days, E = 37.815535 Days

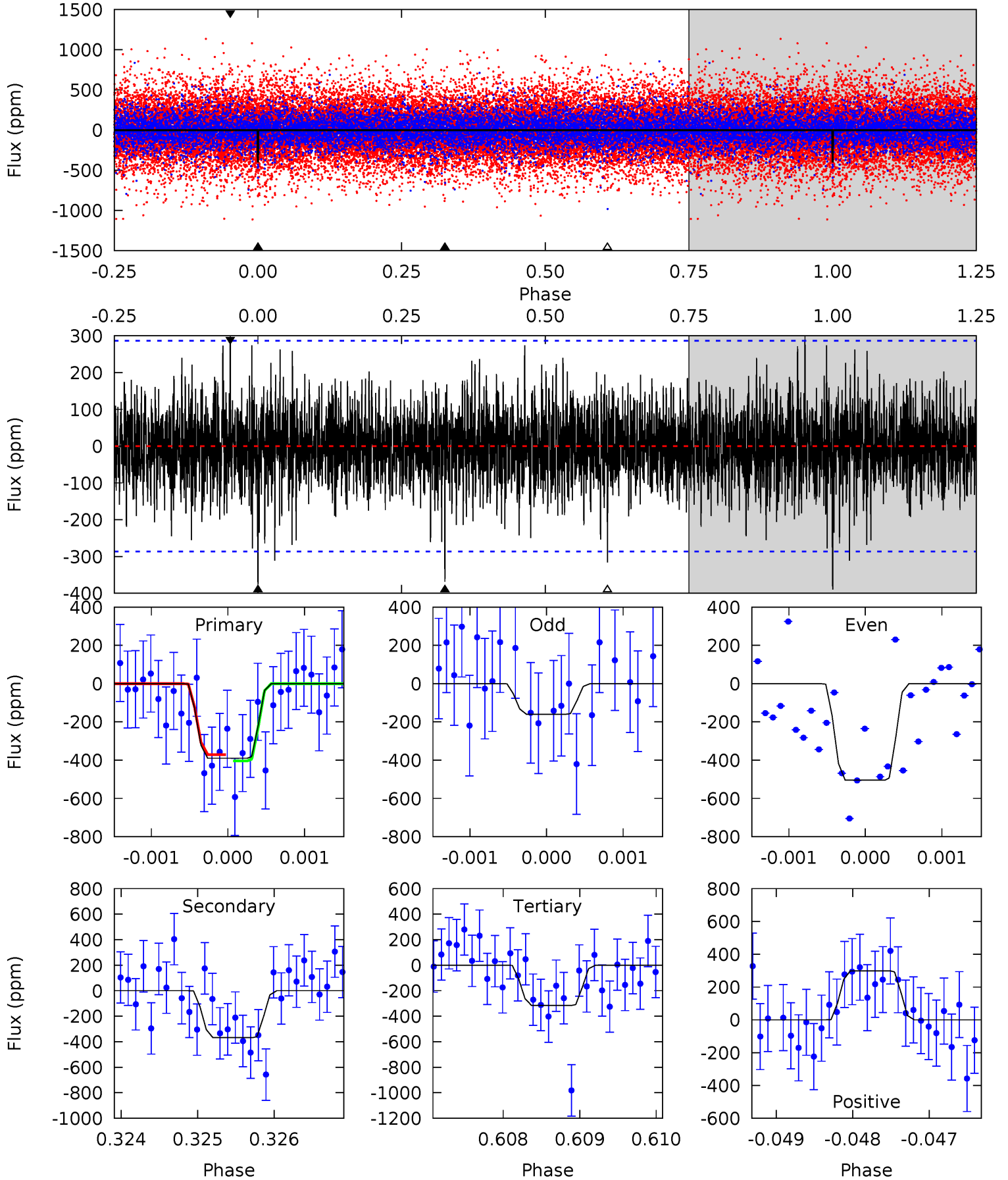
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.03	4.75	4.69	5.85	5.31	3.07	1.47	0.34	-0.82	0.06	-1.10	1.07	1.25	0.54	1.48



Alt Model-Shift Uniqueness Test

008264720-02, $P = 116.641847$ Days, $E = 37.865222$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.41	7.00	6.01	5.68	5.44	3.28	1.47	1.40	1.73	0.99	1.32	3.16	0.84	0.43	0.31



Stellar Parameters For KIC 008264720

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6856^{+191}_{-262}	$4.368^{+0.056}_{-0.210}$	$-0.280^{+0.250}_{-0.350}$	$1.188^{+0.422}_{-0.113}$	$1.217^{+0.195}_{-0.160}$	$1.022^{+0.297}_{-0.542}$
	+3%/-4%	+1%/-5%	+89%/-125%	+36%/-10%	+16%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008264720-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-162 ± 34	$2.33^{+1.88}_{-1.35}$	668^{+51}_{-33}	5893^{+4097}_{-1393}	4046^{+19174}_{-2859}
Alt.	-368 ± 53	$3.06^{+1.86}_{-1.68}$	667^{+52}_{-33}	6292^{+3723}_{-1210}	5339^{+18855}_{-3297}

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 $A_{obs} \gg 1.0$

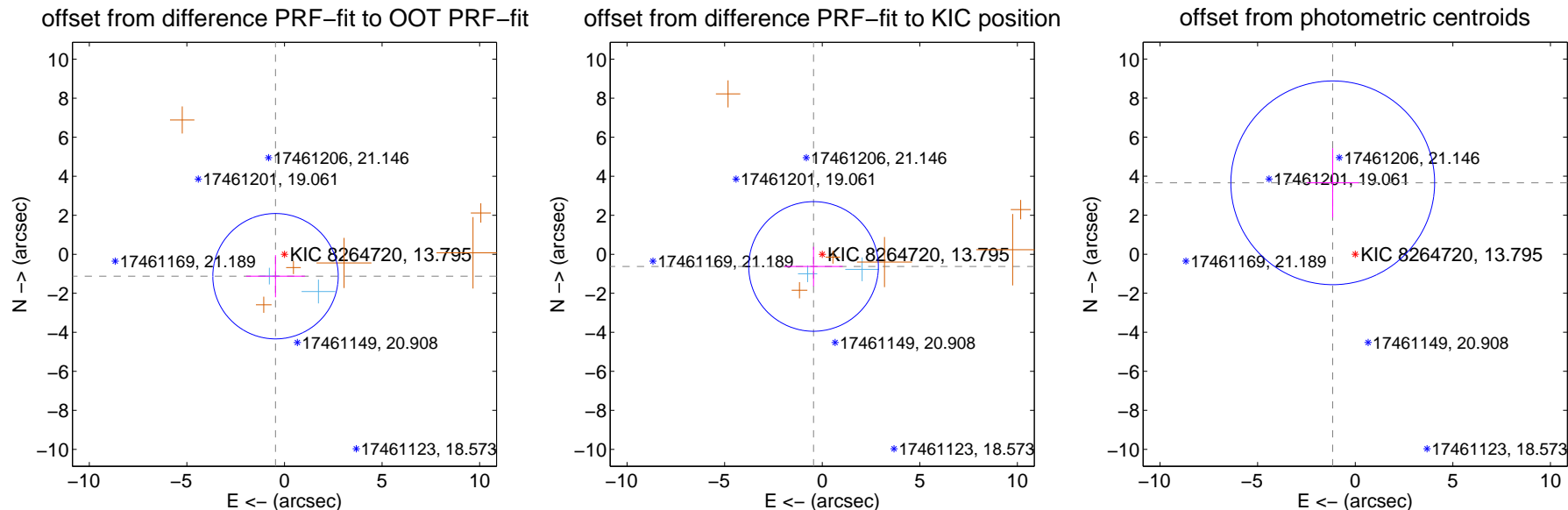
DV Centroid Data

Supplemental centroid analysis for 008264720-02. Kepler magnitude: 13.79. Transit SNR 4.25

There are 2 quarters with good PRF difference image offsets

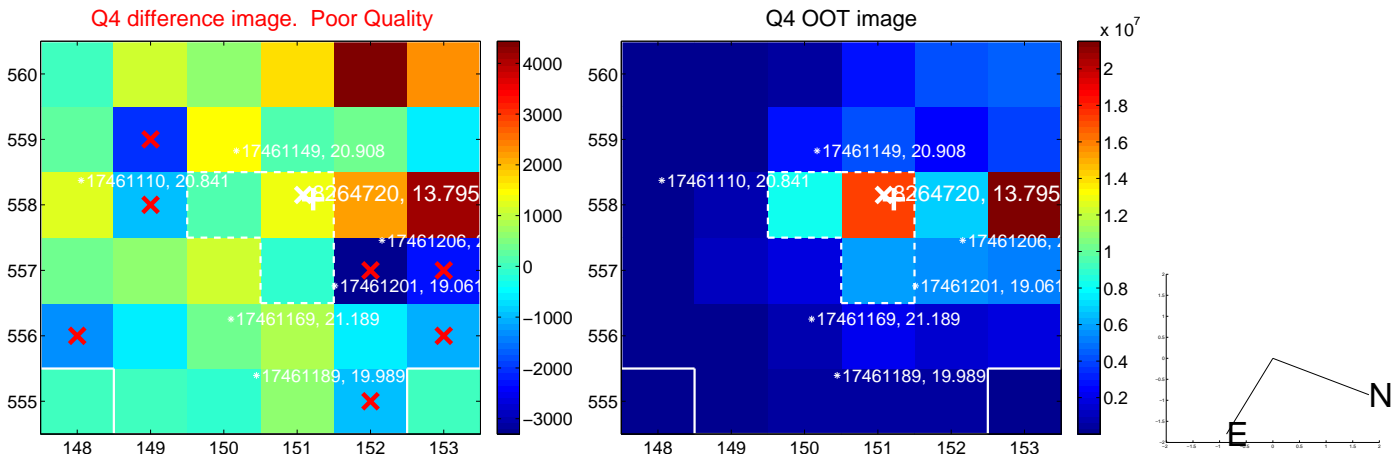
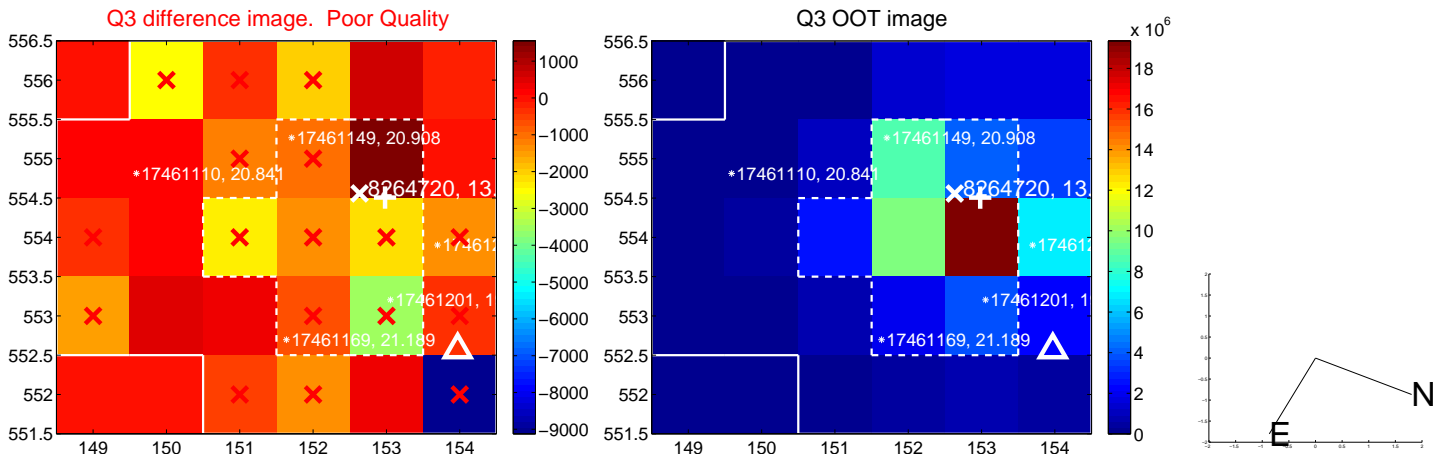
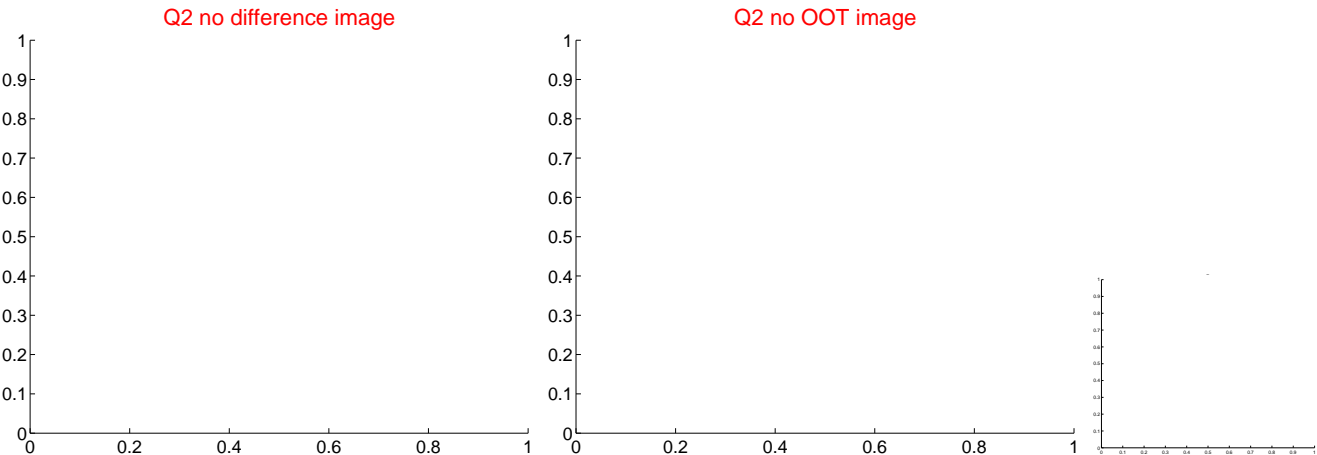
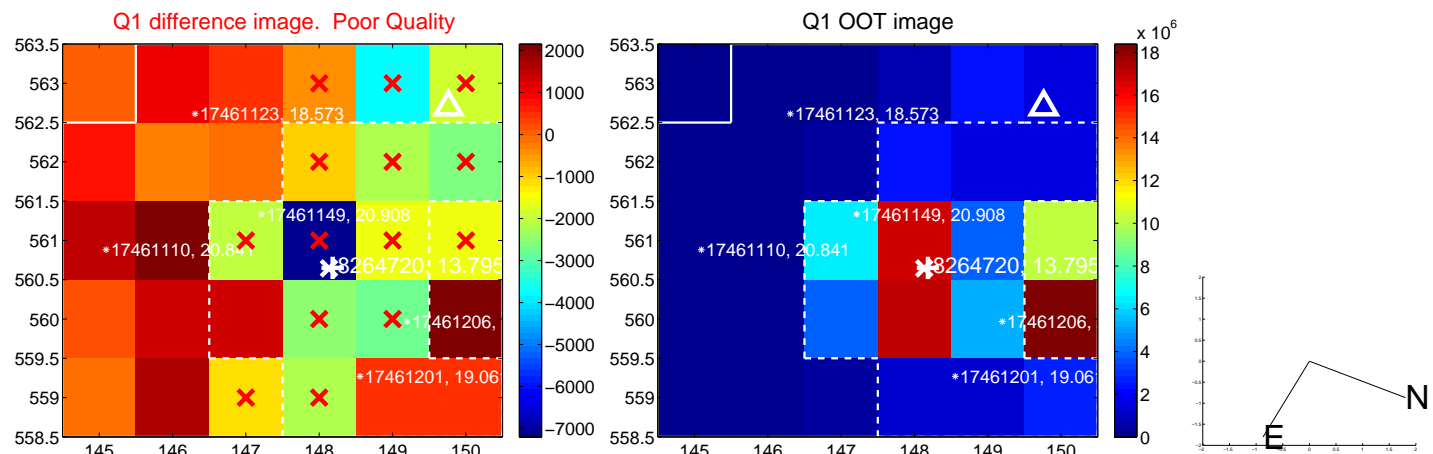
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.214 ± 1.071	1.13	0.458 ± 1.508	-1.124 ± 1.078
PRF-fit source offset from KIC position	0.766 ± 1.107	0.69	0.444 ± 1.491	-0.624 ± 1.009
photometric centroid source offset	3.84 ± 1.74	2.20	1.15 ± 1.33	3.66 ± 1.78



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.

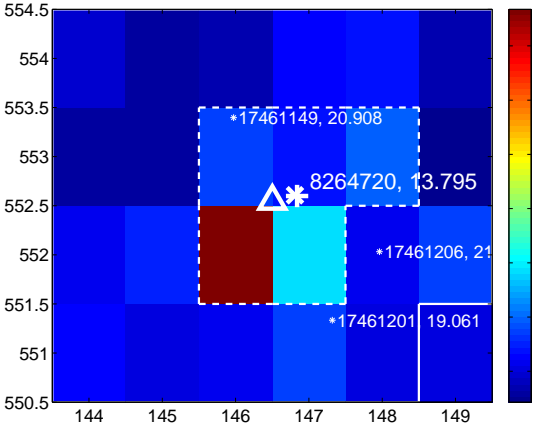
Q5 no difference image



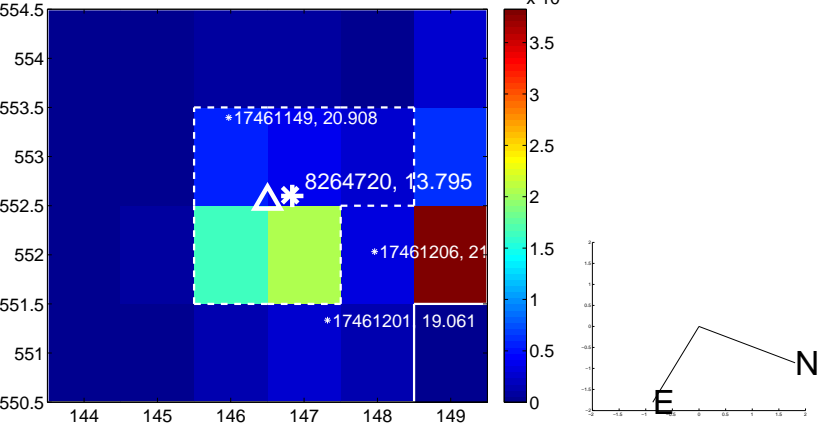
Q5 no OOT image



Q6 difference image



Q6 OOT image



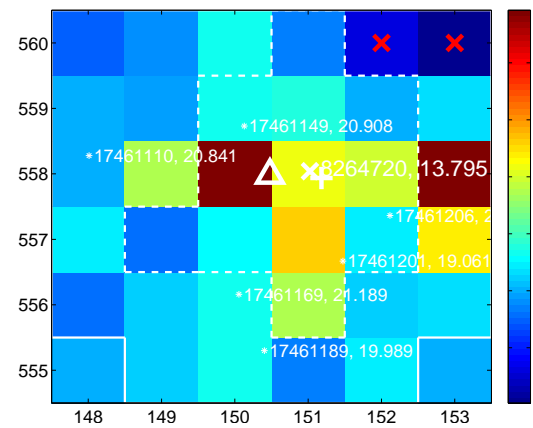
Q7 no difference image



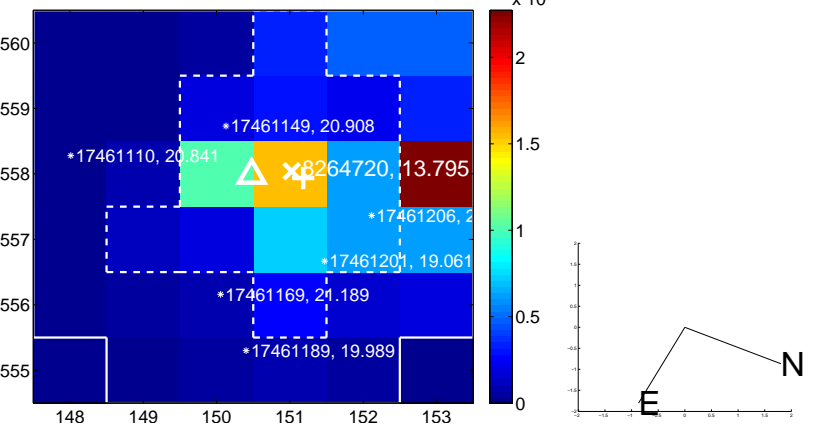
Q7 no OOT image



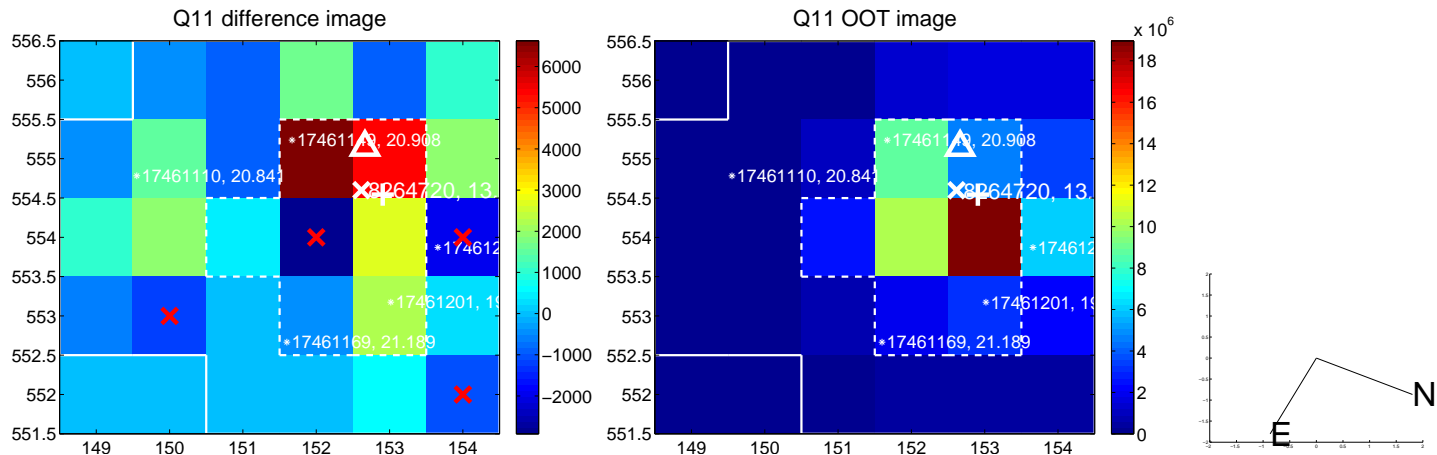
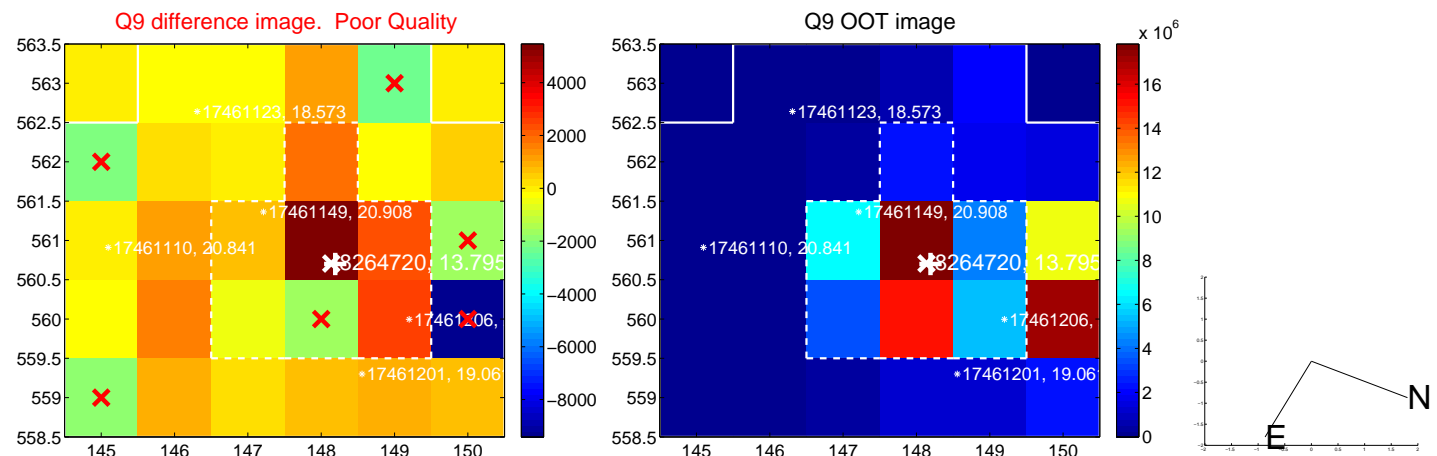
Q8 difference image. Poor Quality



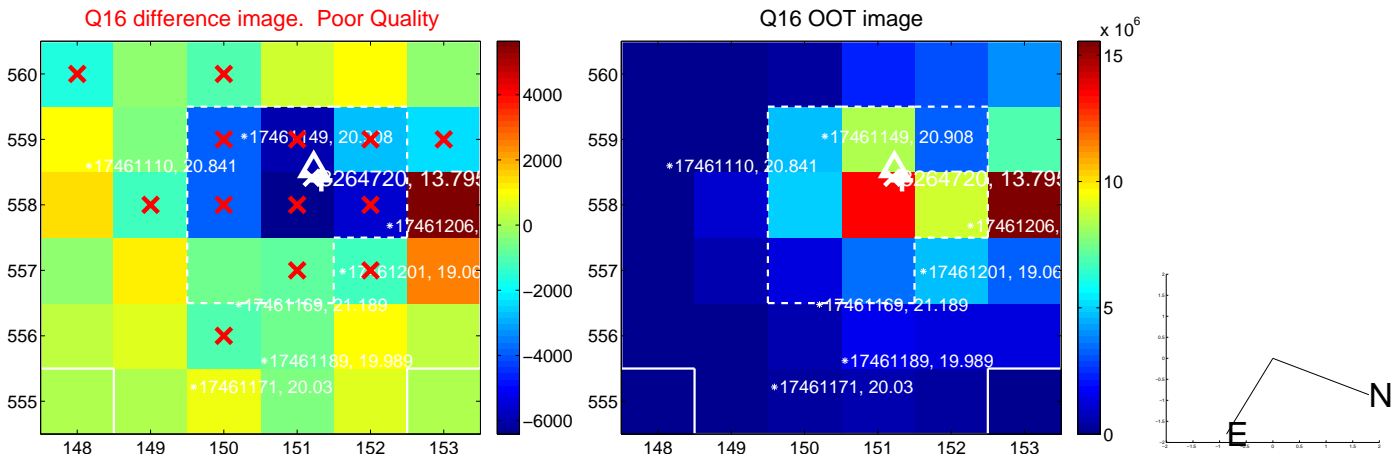
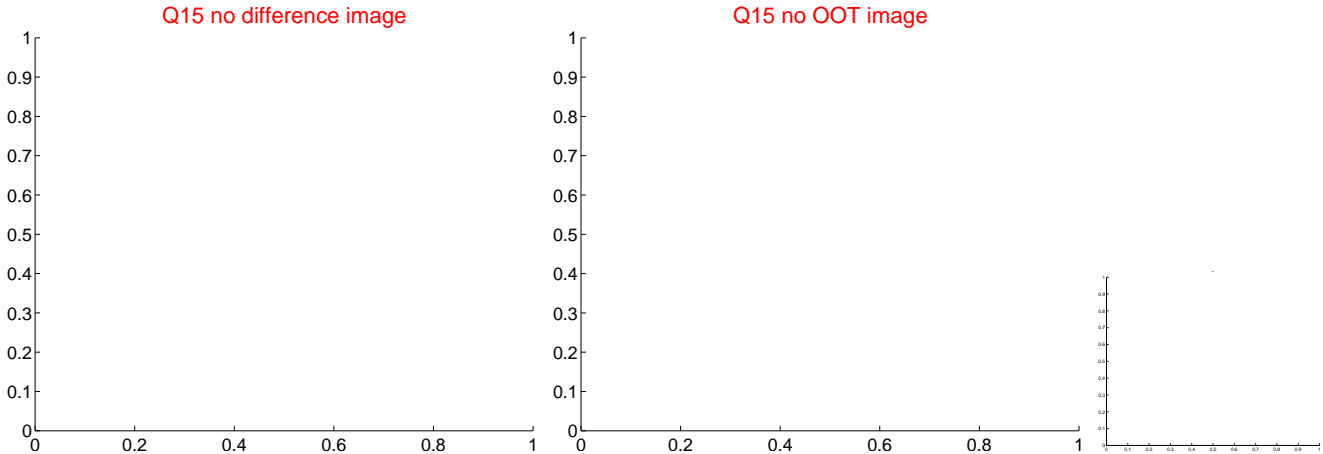
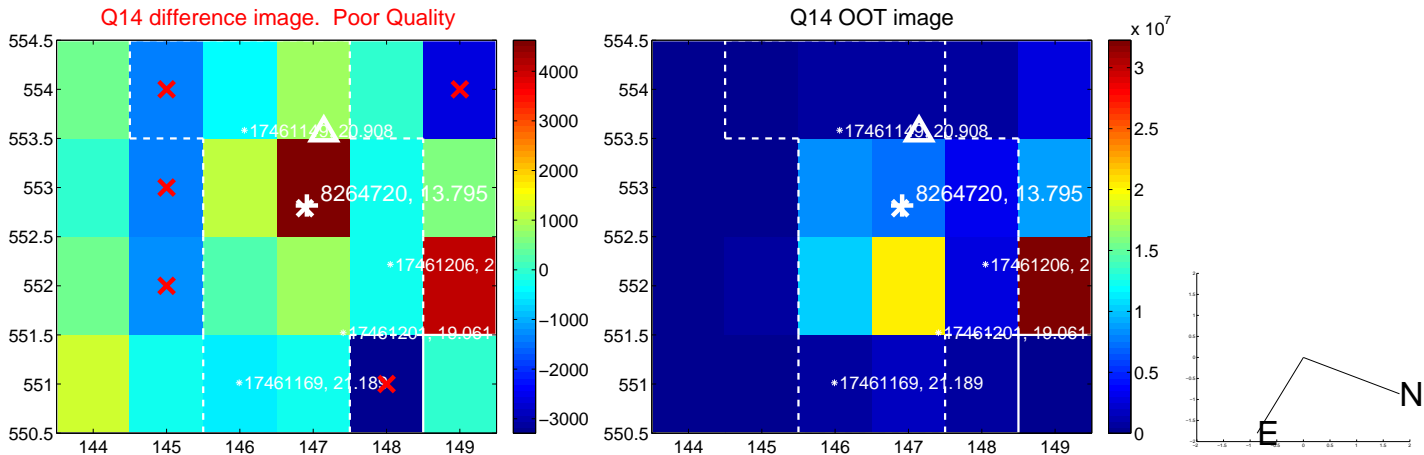
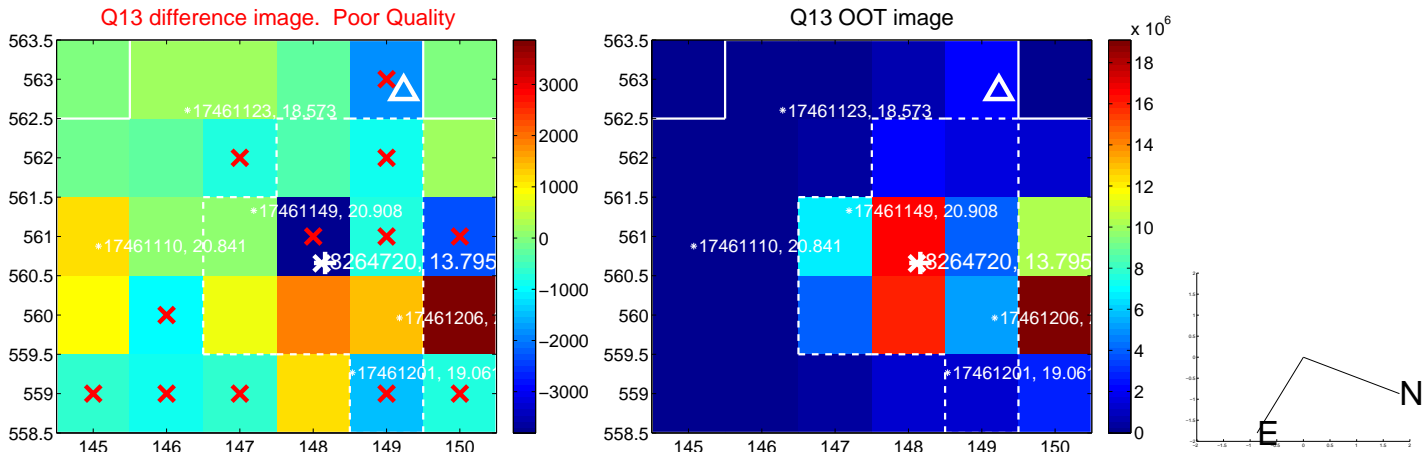
Q8 OOT image



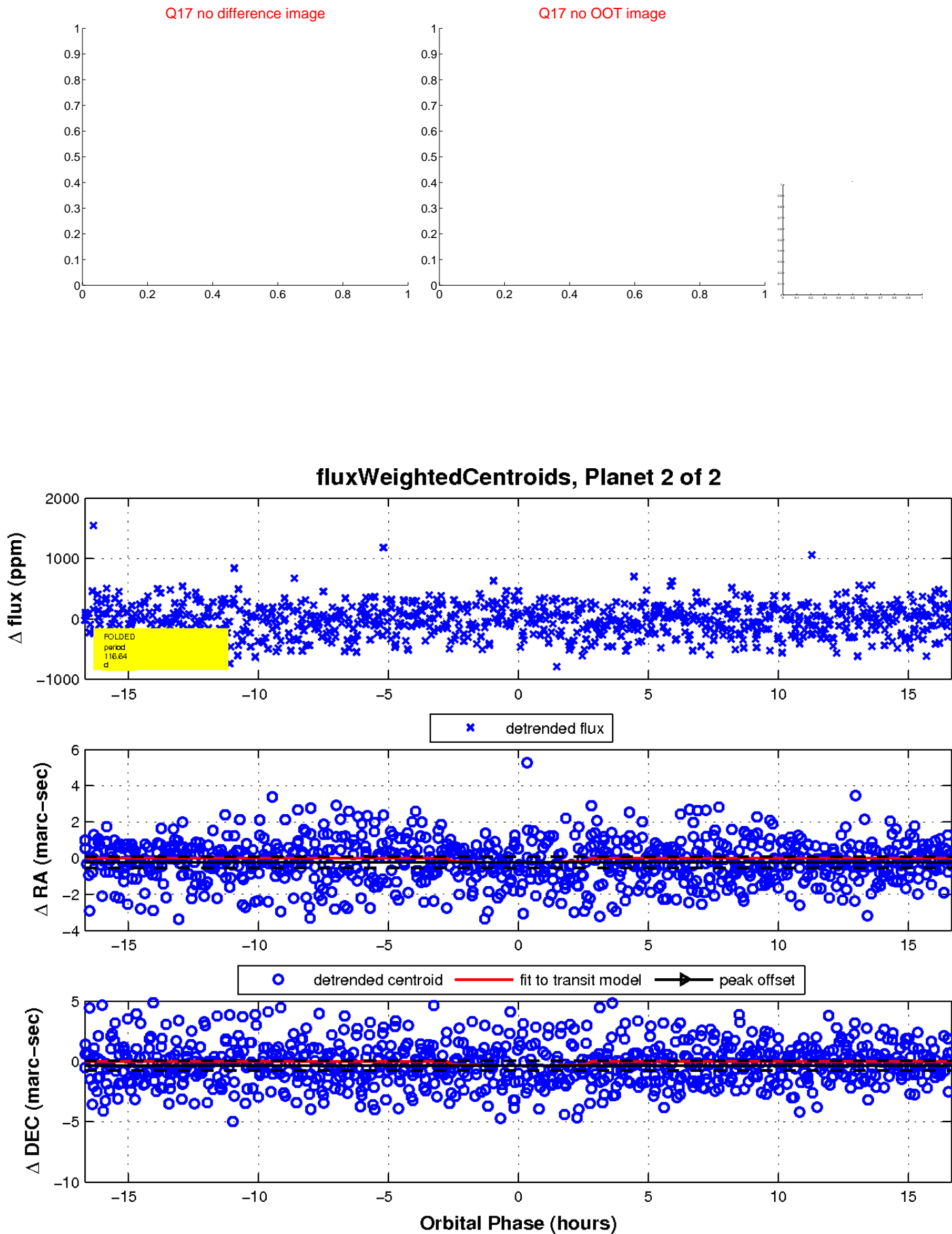
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

