

KIC 008546792

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})
008546792-01	OBS	No	0.826165	131.899512	72.1	5.136	40.0	9.3	0.76	5198	0.63	1428.82
008546792-02	OBS	No	218.852044	254.101171	1177.7	6.159	11.4	7.9	0.76	5198	2.81	0.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008546792-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—CENT_UNRESOLVED_OFFSET
008546792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

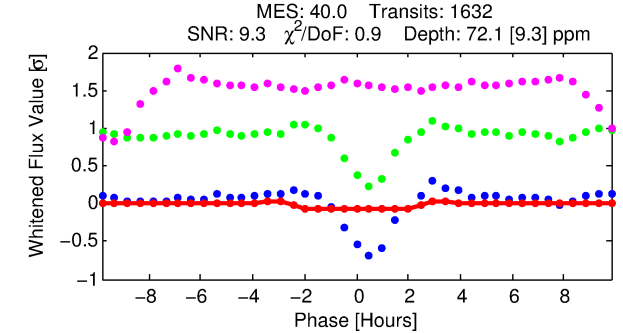
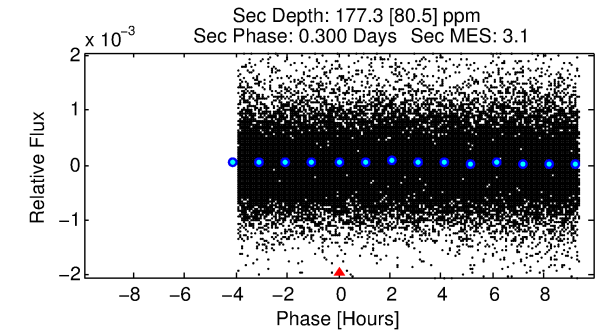
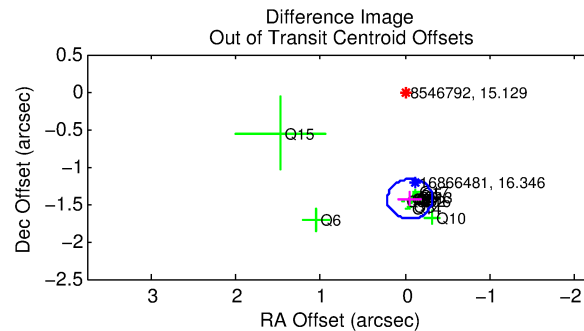
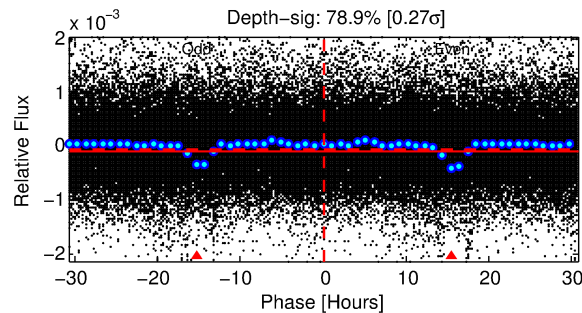
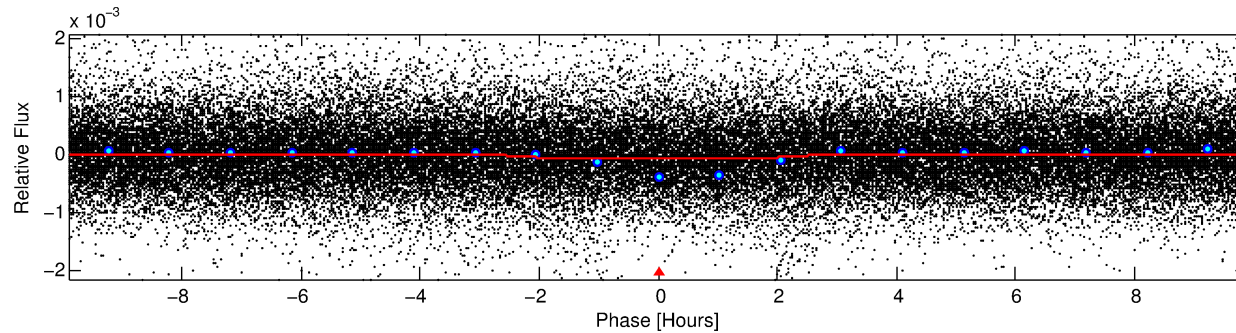
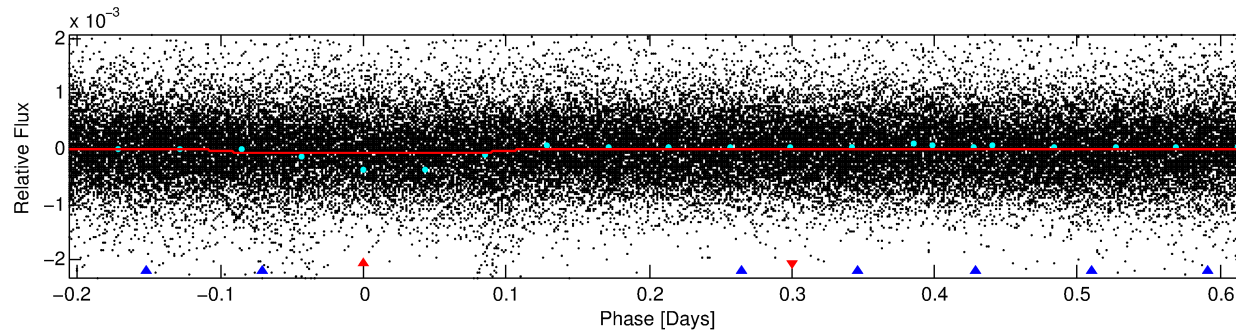
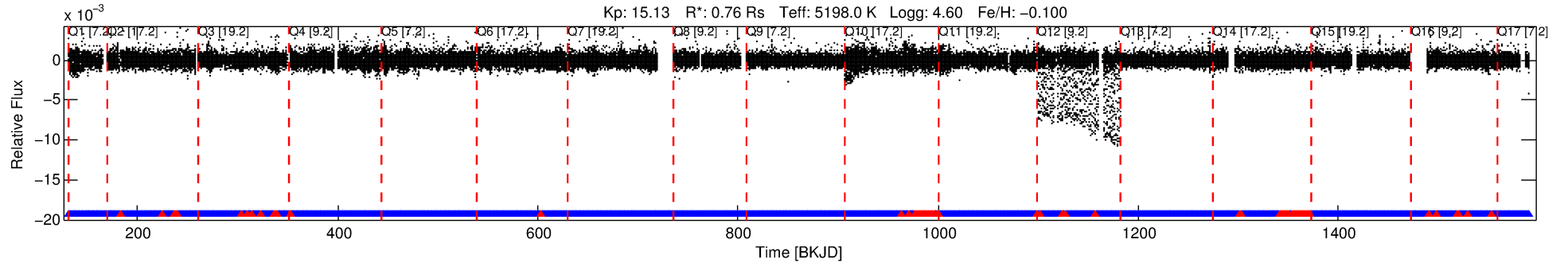
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008546792-01

No Significant Match Found

DV One-Page Summary

KIC: 8546792 Candidate: 1 of 2 Period: 0.826 d



DV Fit Results:

Period = 0.82617 [0.00001] d
Epoch = 131.8995 [0.0039] BKJD
Rp/R* = 0.0076 [0.0075]
a/R* = 1.39 [2.42]
b = 0.03 [143.59]
Seff = 1428.82 [294.49]
Teq = 1568 [81] K
Rp = 0.63 [0.63] Re
a = 0.0162 [0.0019] AU
Ag = 65.21 [133.32] [0.48 σ]
Teffp = 6888 [3515] K [1.51 σ]

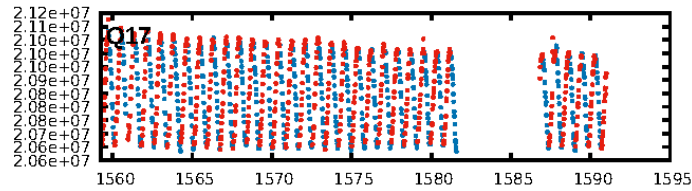
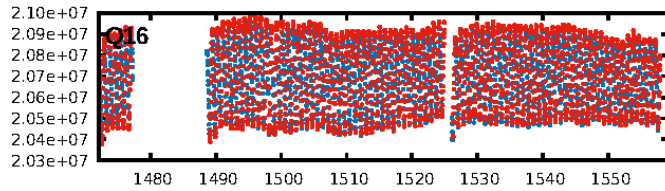
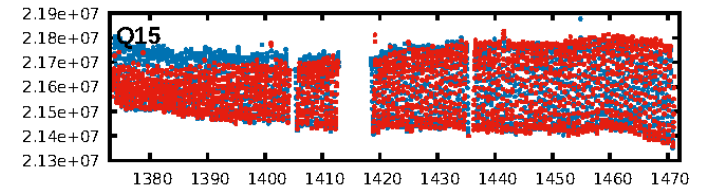
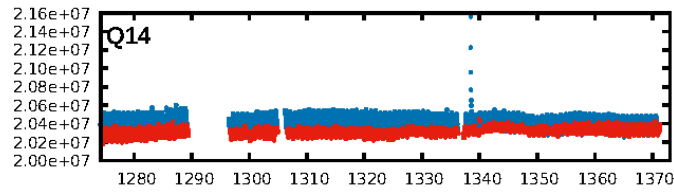
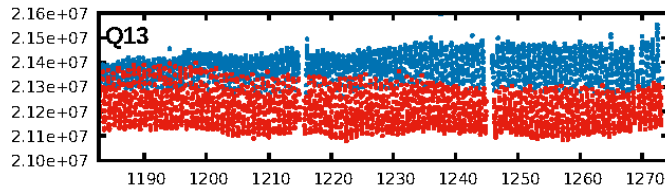
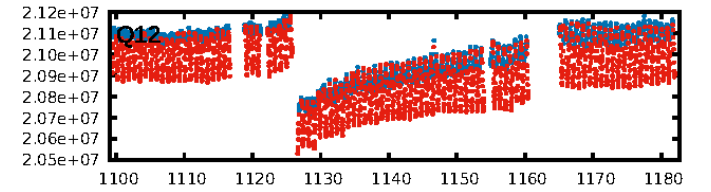
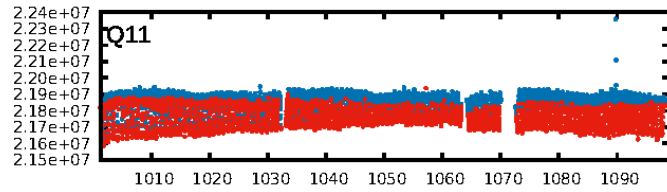
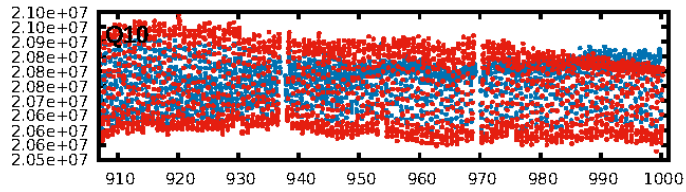
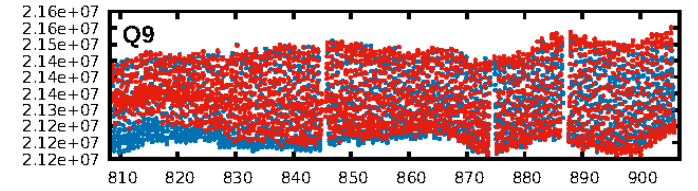
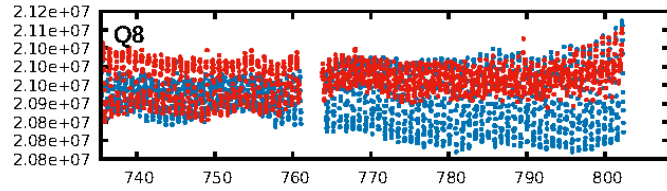
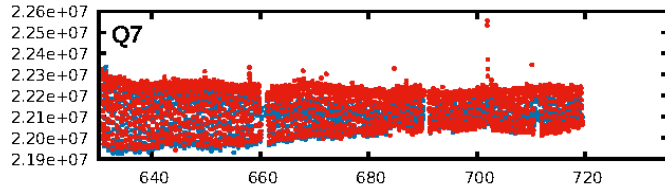
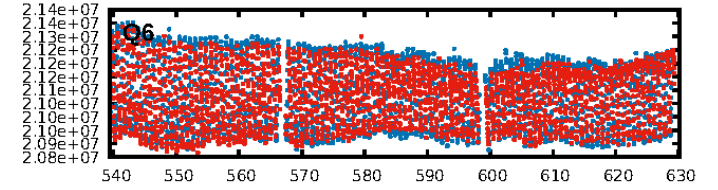
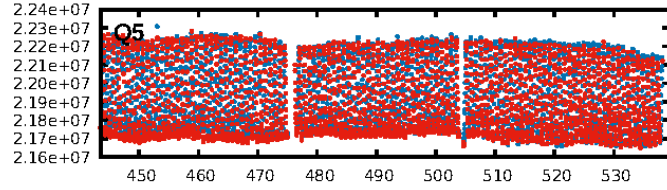
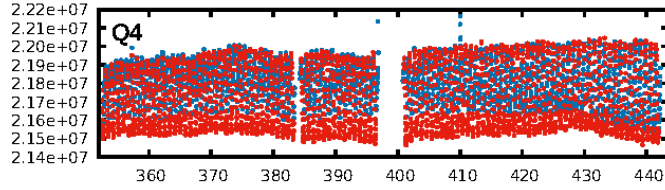
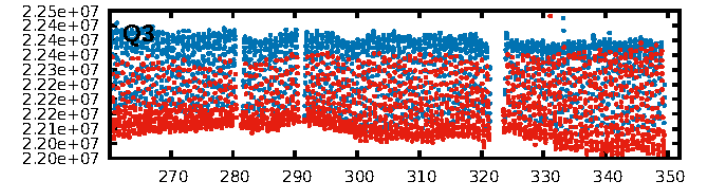
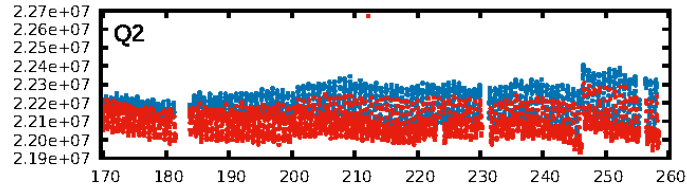
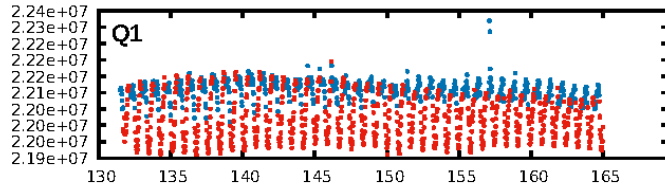
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [652.52 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1473/1558]
GhostDiagnostic-chr: 3.552
Centroid-sig: 0.0%
Centroid-so: 2.578 arcsec [2.63 σ]
OotOffset-rm: 1.433 arcsec [16.12 σ]
KicOffset-rm: 1.250 arcsec [12.79 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 1.00 [17/17]

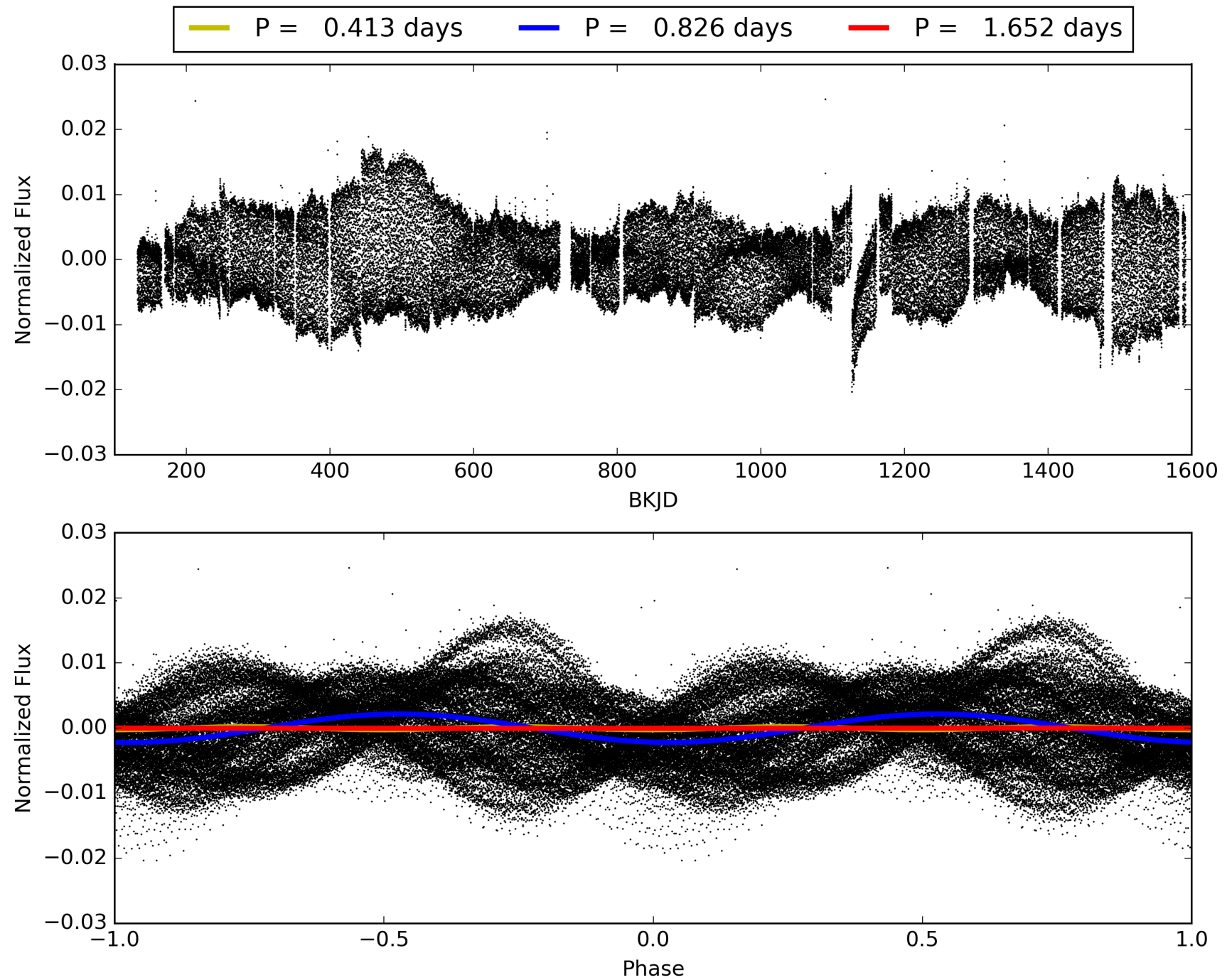
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:59:13 Z

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

TCE 008546792-01, PDC Light Curves

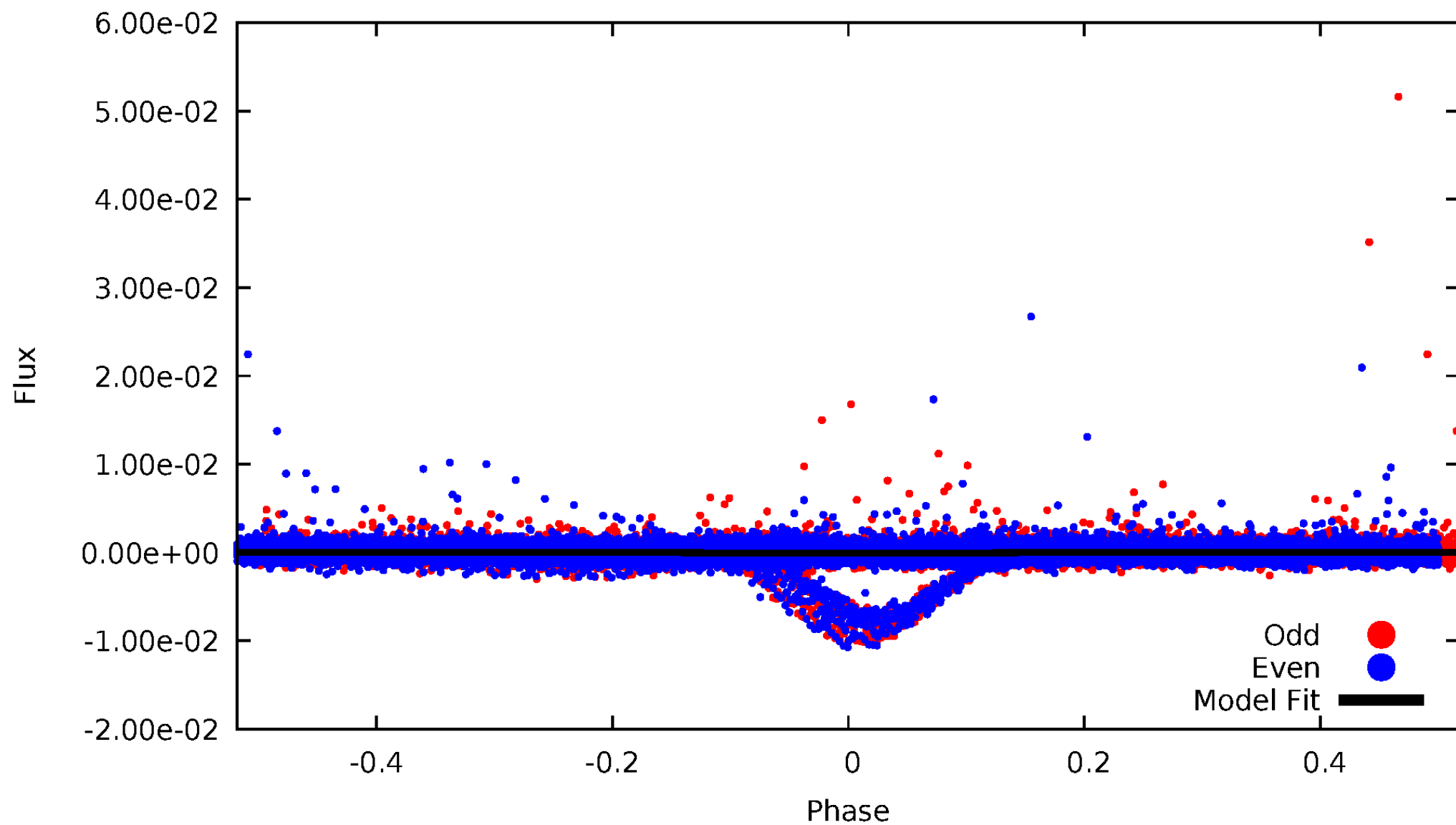


TCE 008546792-01



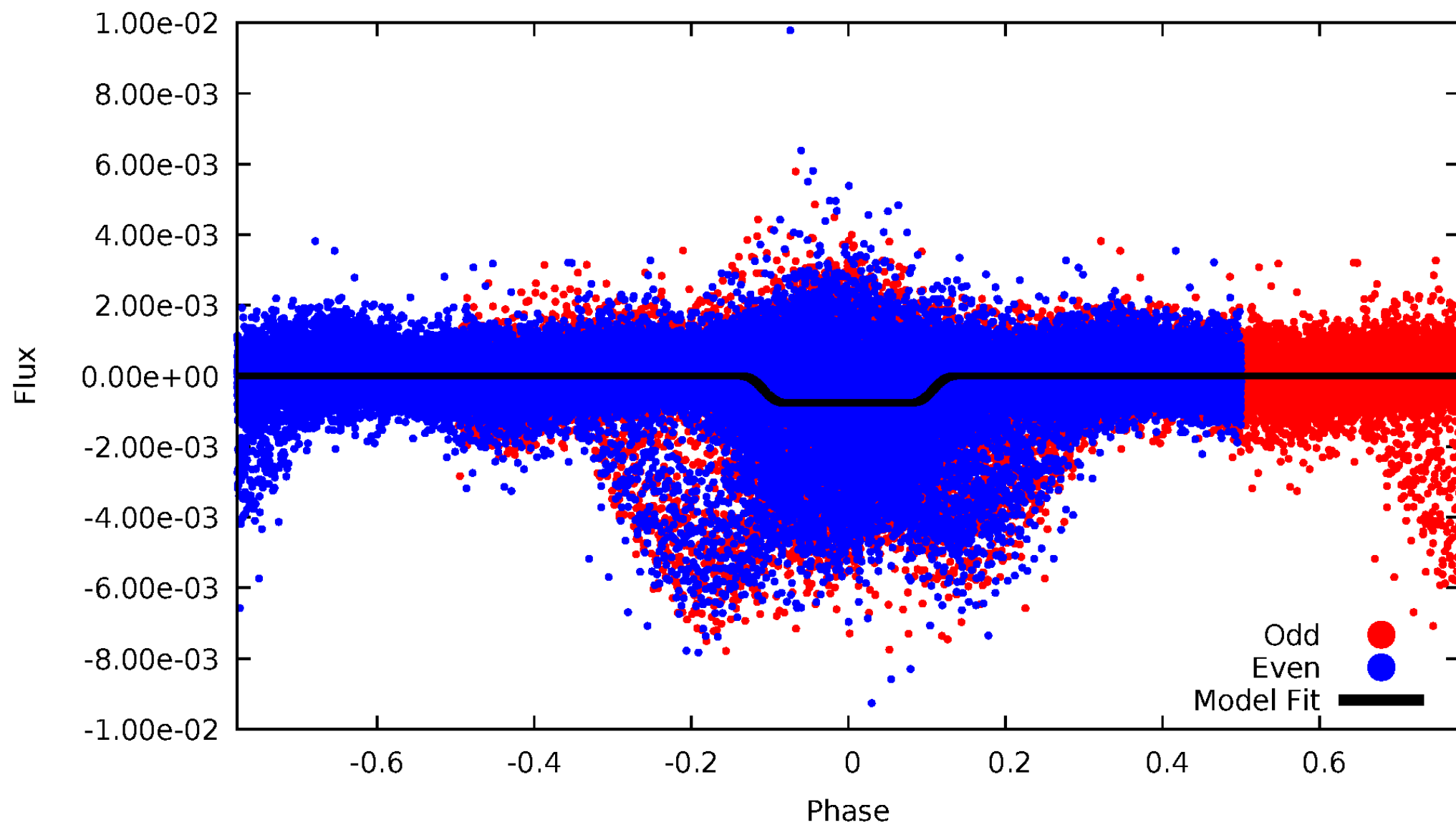
DV Odd/Even

TCE 008546792-01



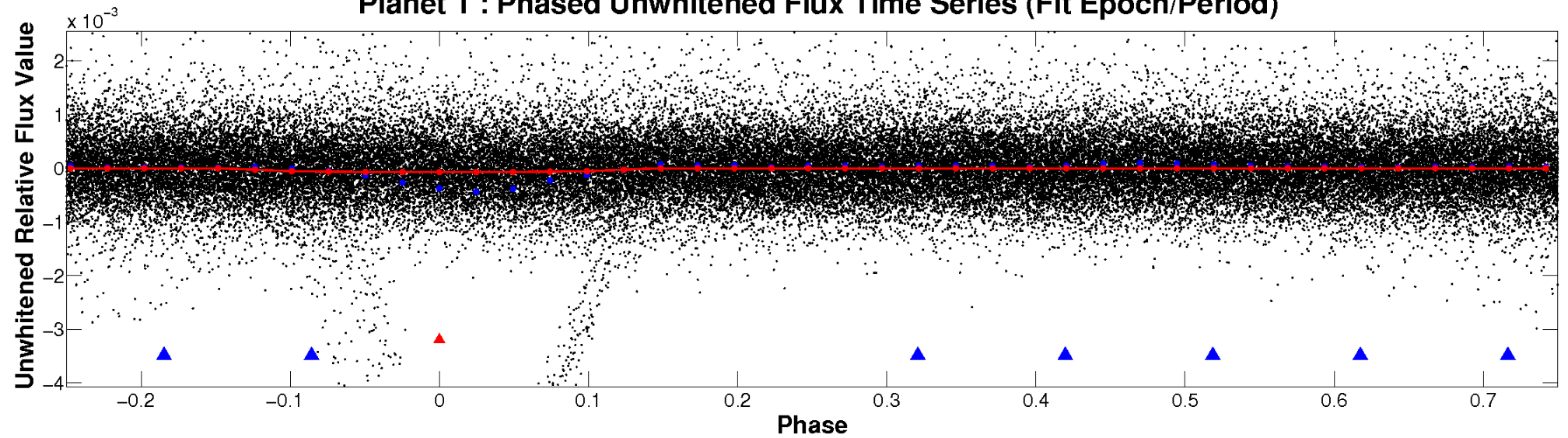
ALT Odd/Even

TCE 008546792-01

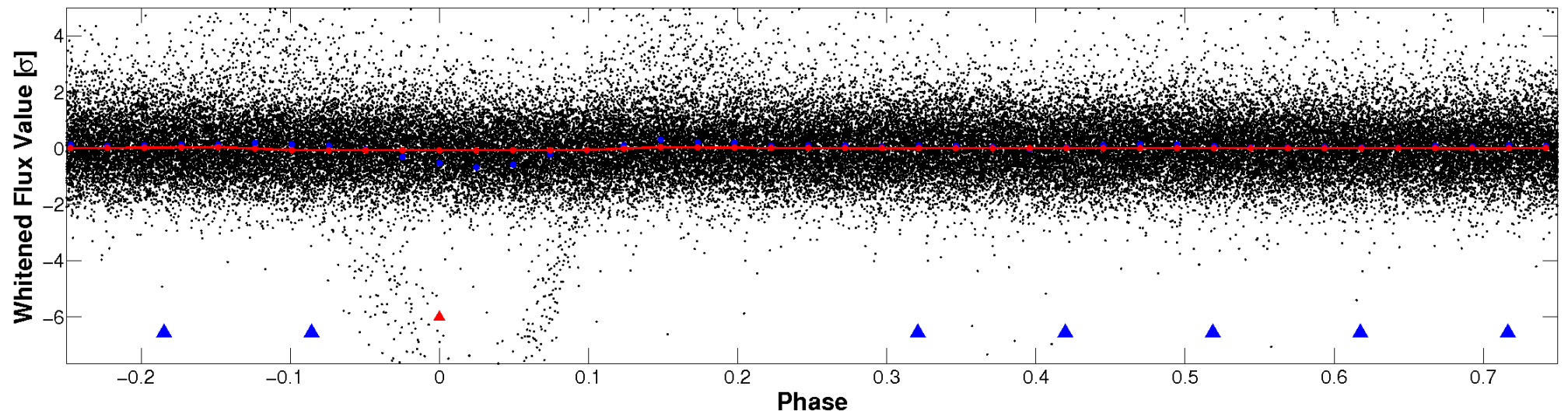


Non-Whitened Vs. Whitened Light Curve

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

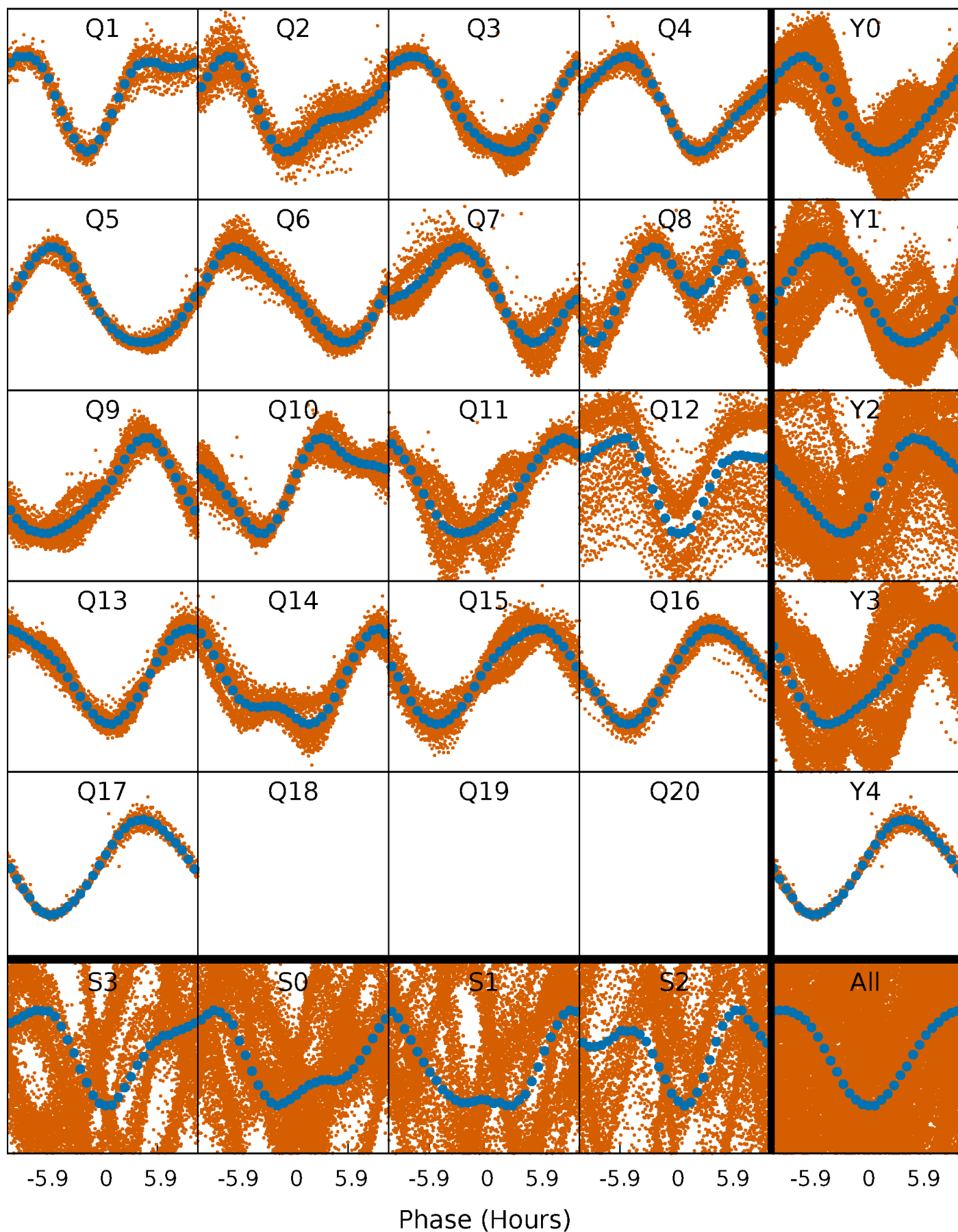


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



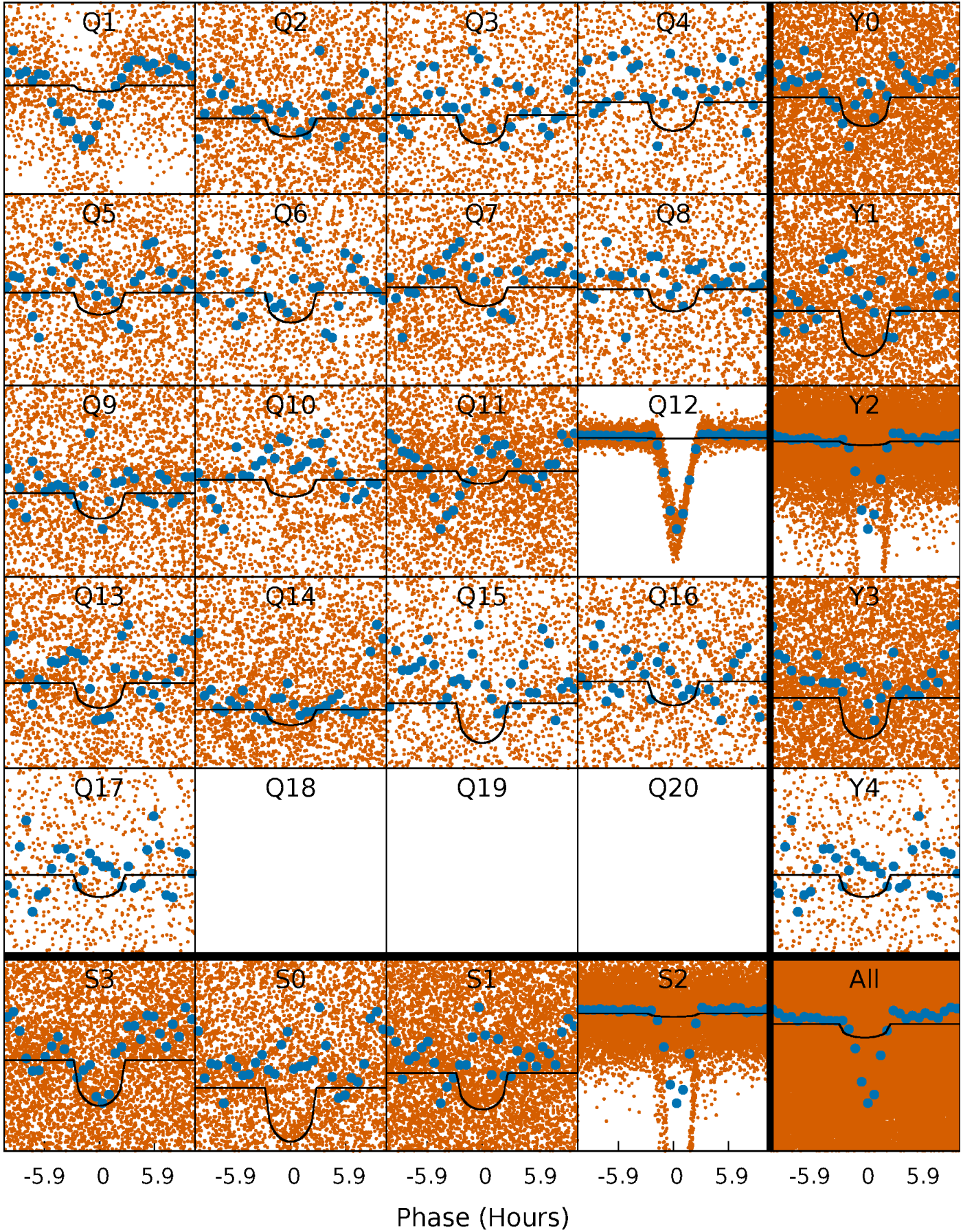
PDC Quarter-Phased Transit Curves

TCE 008546792-01 P= 0.826165 Days $T_0=131.899512$ (BKJD)



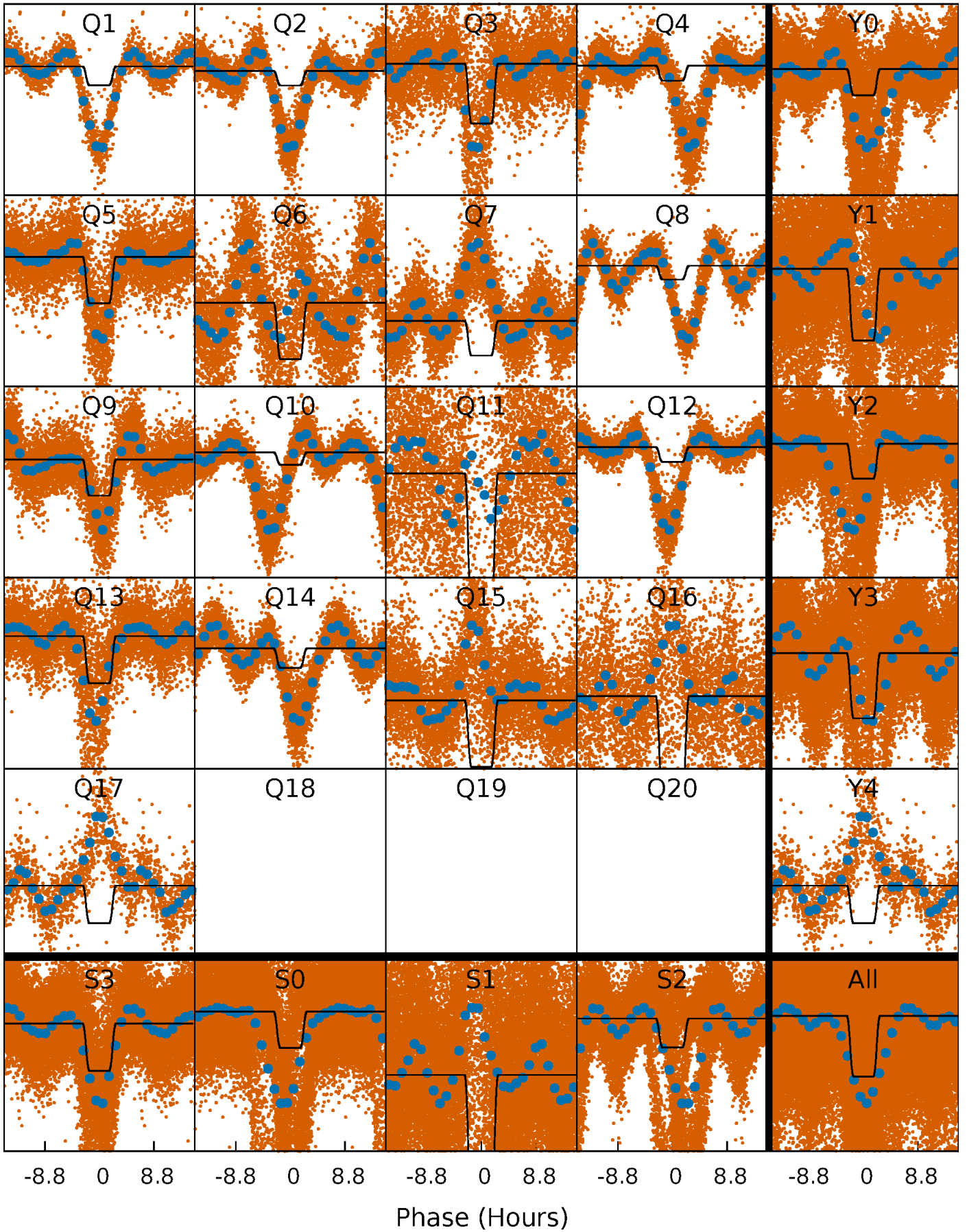
DV Quarter-Phased Transit Curves

TCE 008546792-01 P= 0.826165 Days $T_0=131.899512$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

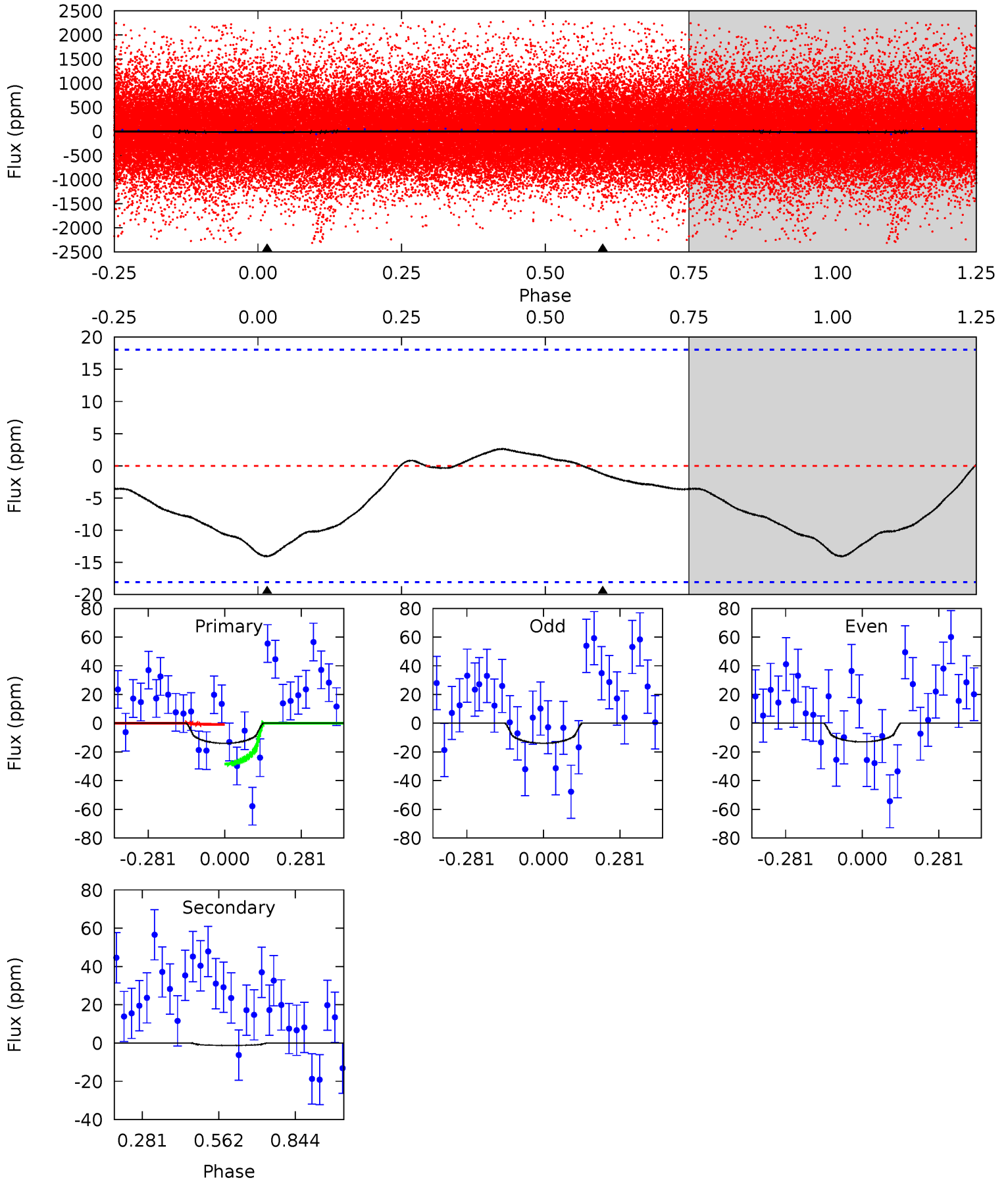
TCE 008546792-01 P= 0.826259 Days $T_0=131.824382$ (BKJD)



DV Model-Shift Uniqueness Test

008546792-01, P = 0.826165 Days, E = 131.073347 Days

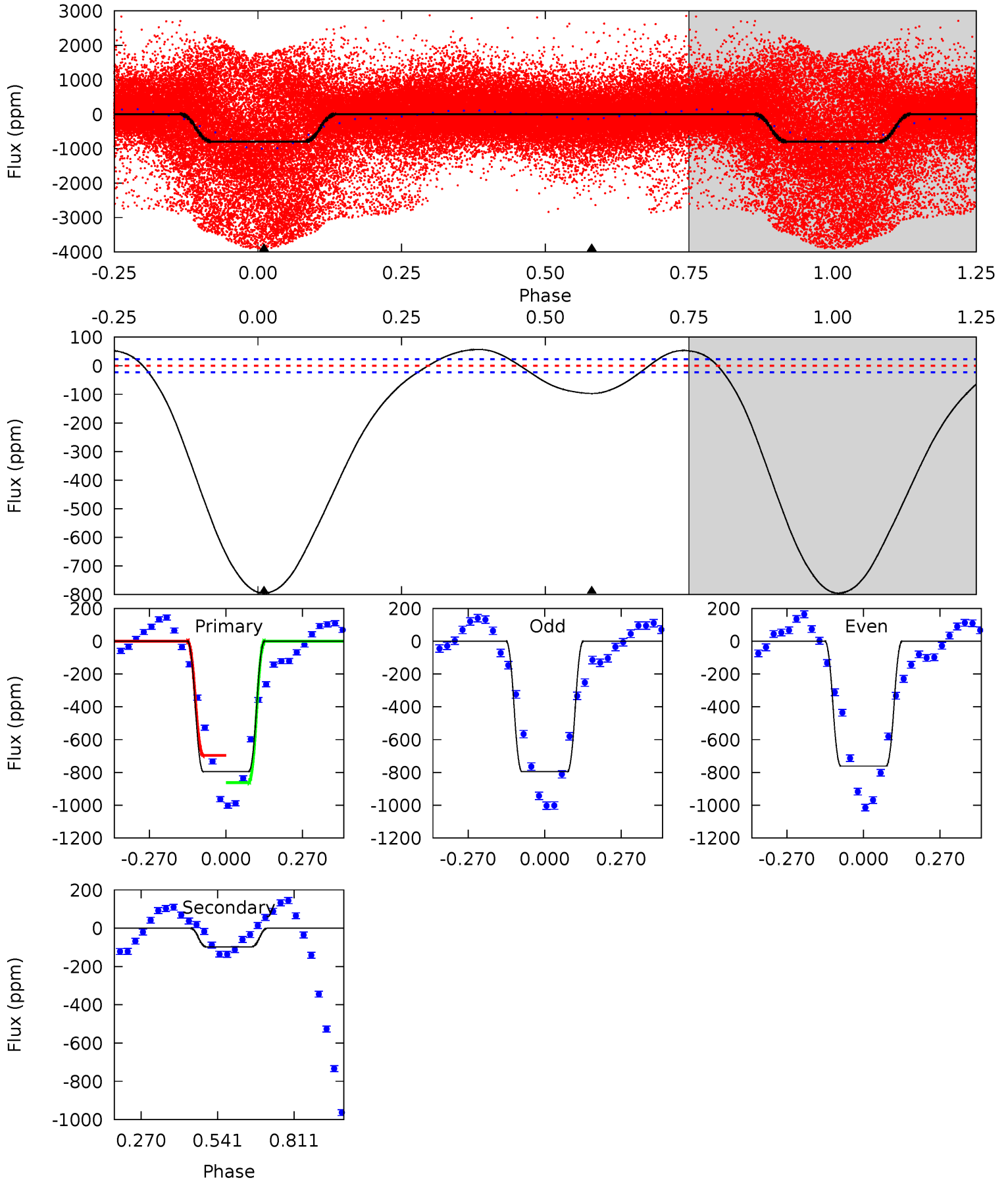
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.38	0.30	0	0	4.34	1.08	0.10	3.38	3.38	0.30	0.30	0.12	7.45	0.16	3.24



Alt Model-Shift Uniqueness Test

008546792-01, P = 0.826259 Days, E = 130.998123 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
152.1	18.6	0	0	4.35	1.10	6.34	152.1	152.1	18.6	18.6	3.29	0.99	0.07	15.6



Stellar Parameters For KIC 008546792

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+155}_{-155}	$4.600^{+0.030}_{-0.090}$	$-0.100^{+0.300}_{-0.300}$	$0.759^{+0.109}_{-0.067}$	$0.843^{+0.068}_{-0.093}$	$2.720^{+0.450}_{-0.818}$
	+3%/-3%	+1%/-2%	+300%/-300%	+14%/-9%	+8%/-11%	+17%/-30%
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 008546792-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 4	$0.81^{+0.60}_{-0.49}$	2221^{+92}_{-86}	-2398^{+5775}_{-656}	$0.159^{+1.945}_{-0.788}$
Alt.	-97 ± 5	$2.32^{+0.66}_{-0.67}$	2219^{+95}_{-79}	3489^{+450}_{-309}	$2.594^{+2.572}_{-1.016}$

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

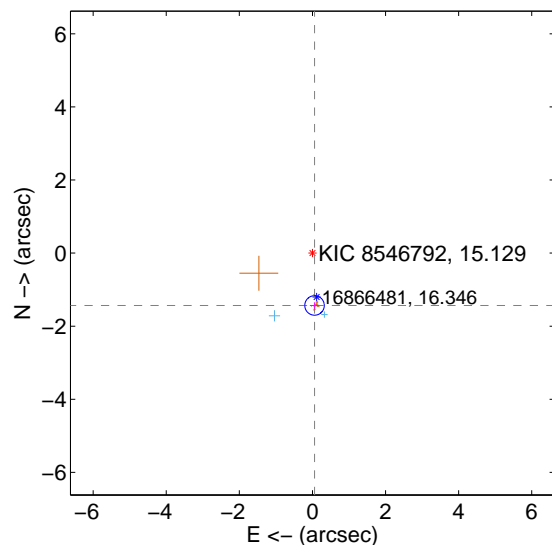
Supplemental centroid analysis for 008546792-01. Kepler magnitude: 15.13. Transit SNR 9.29

There are 11 quarters with good PRF difference image offsets

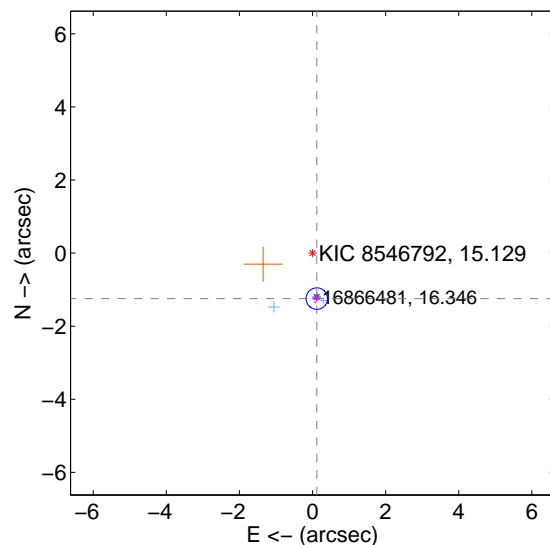
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.433 ± 0.089	16.12	-0.057 ± 0.127	-1.432 ± 0.087
PRF-fit source offset from KIC position	1.250 ± 0.098	12.79	-0.117 ± 0.135	-1.245 ± 0.092
photometric centroid source offset	2.58 ± 0.98	2.63	0.75 ± 0.75	2.46 ± 1.00

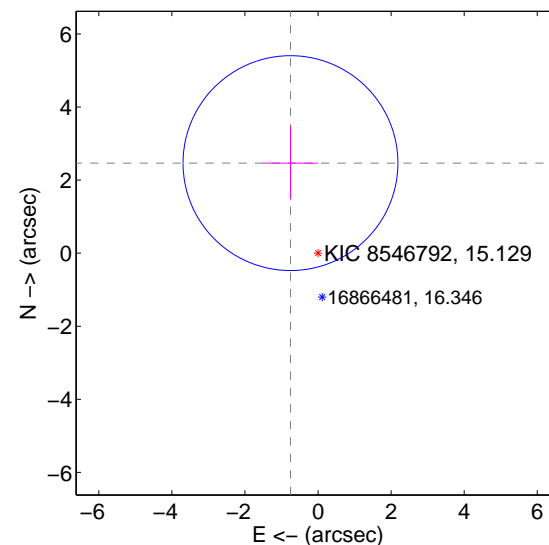
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

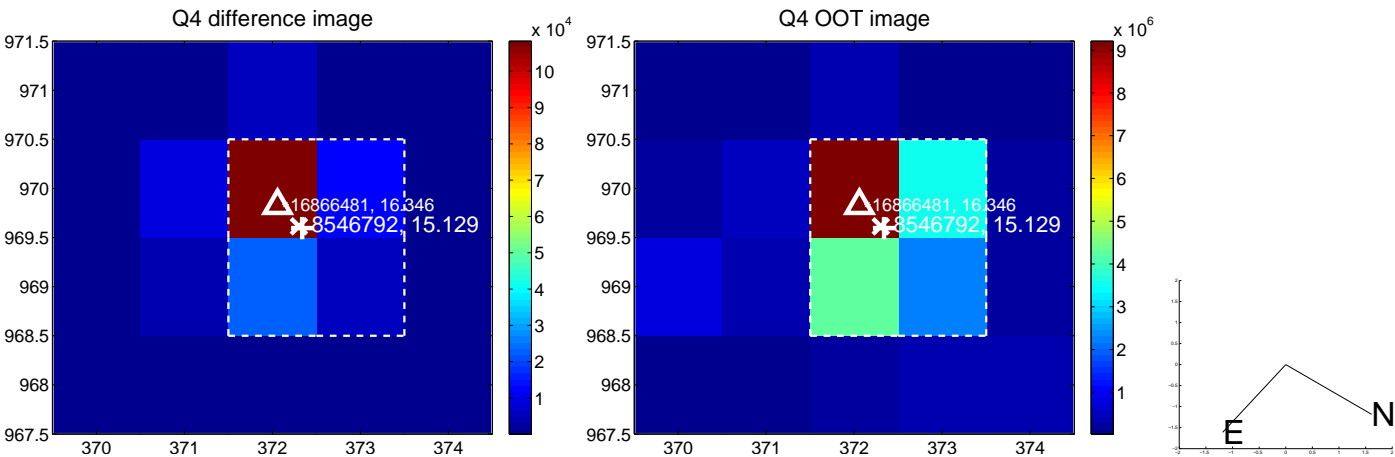
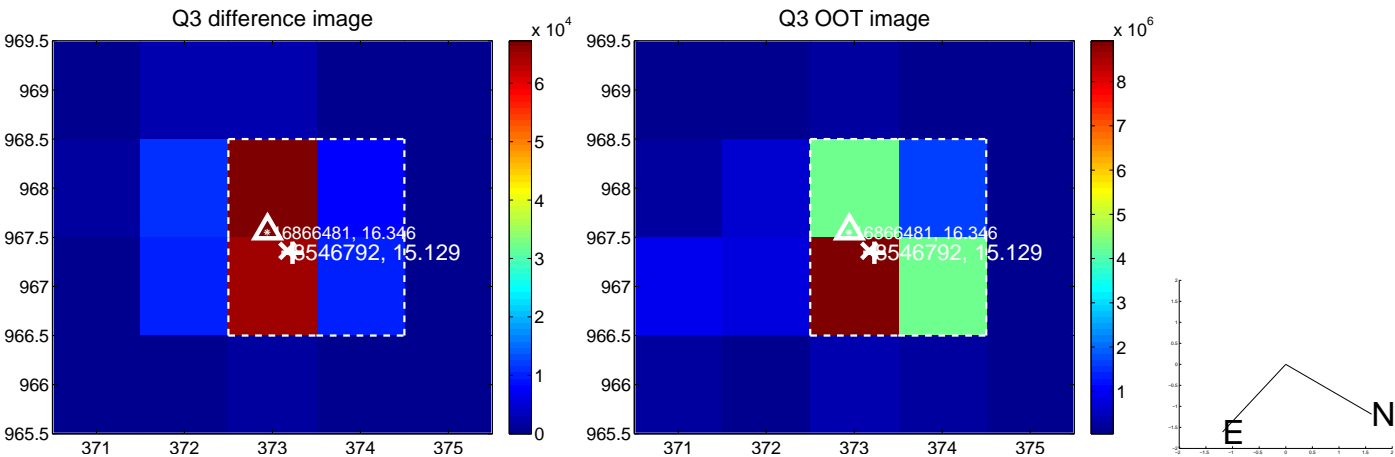
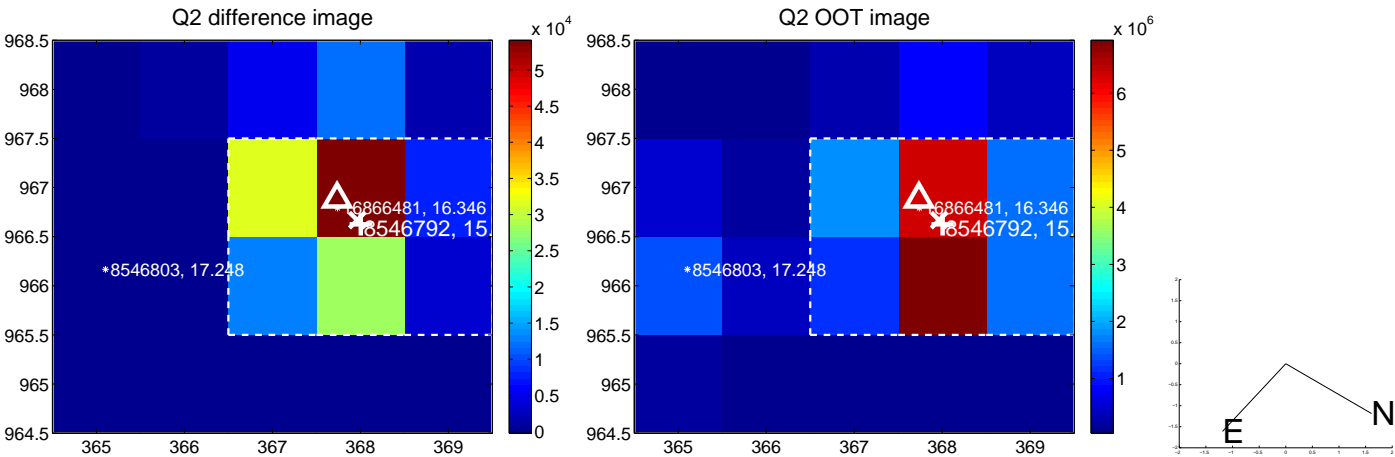
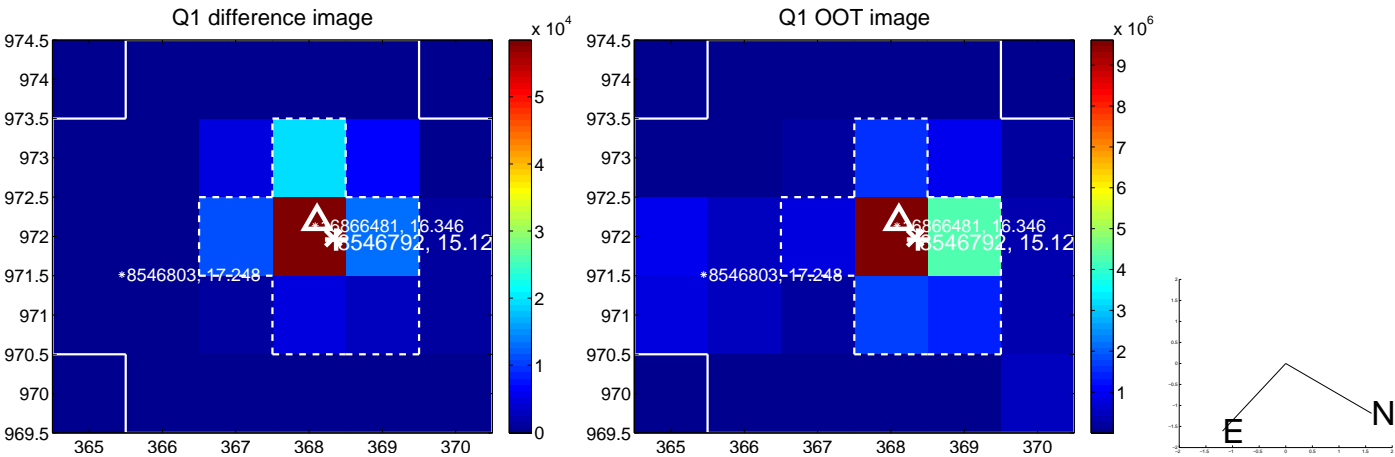


offset from photometric centroids

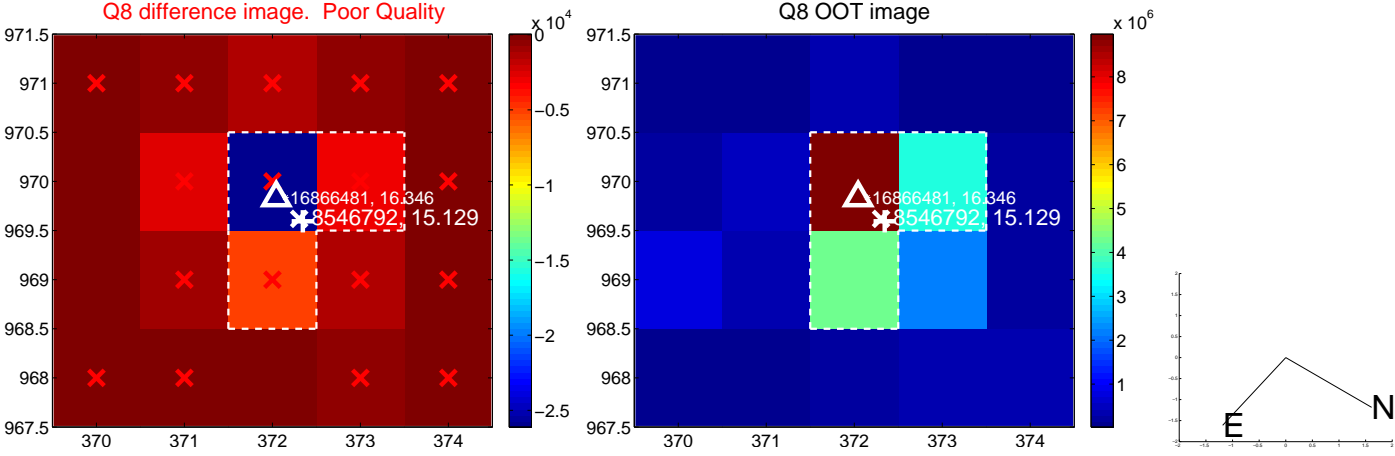
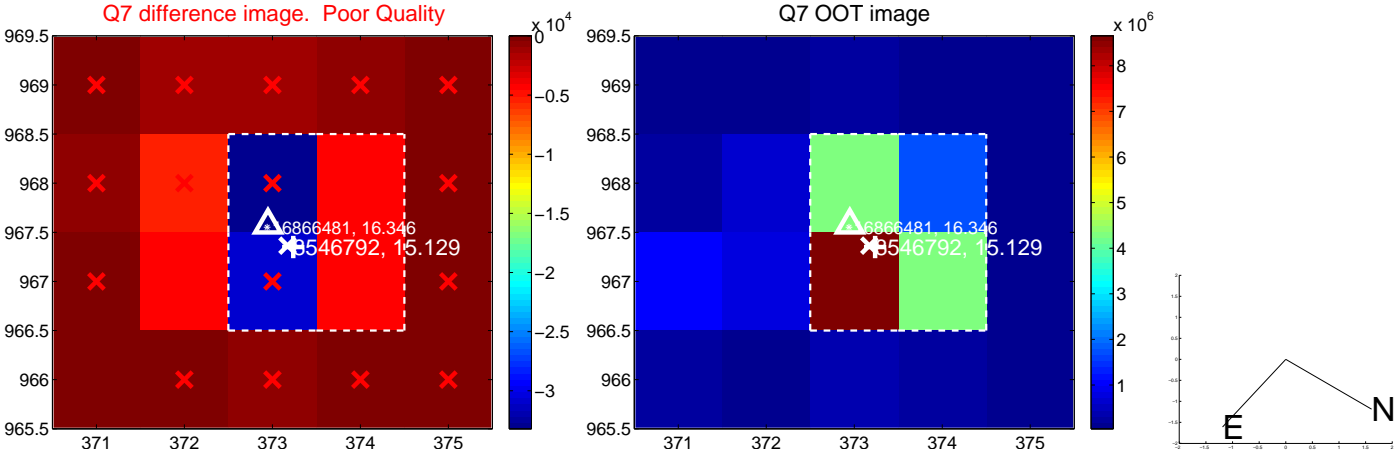
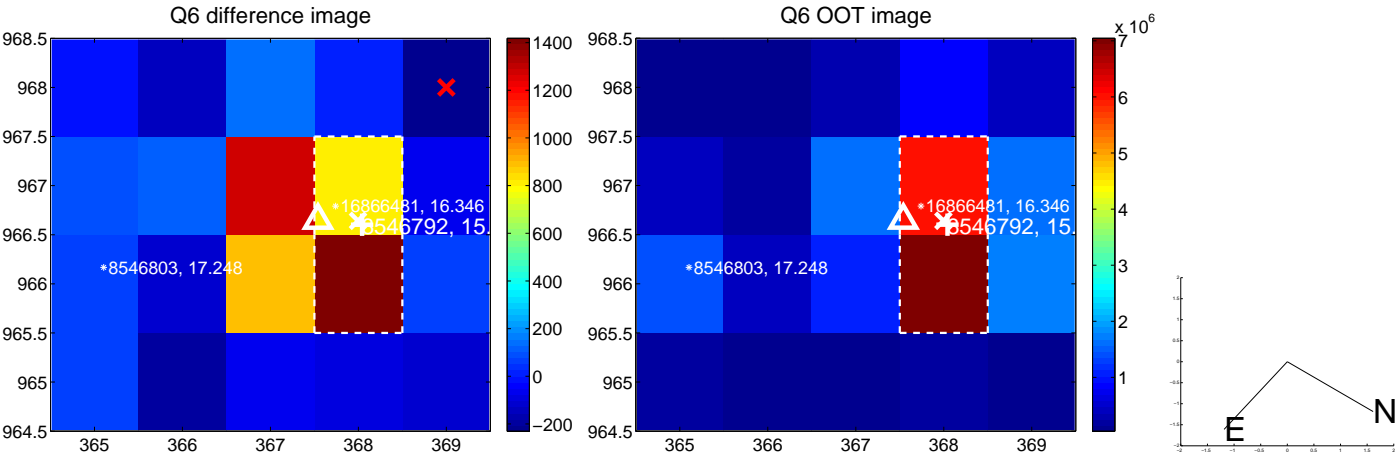
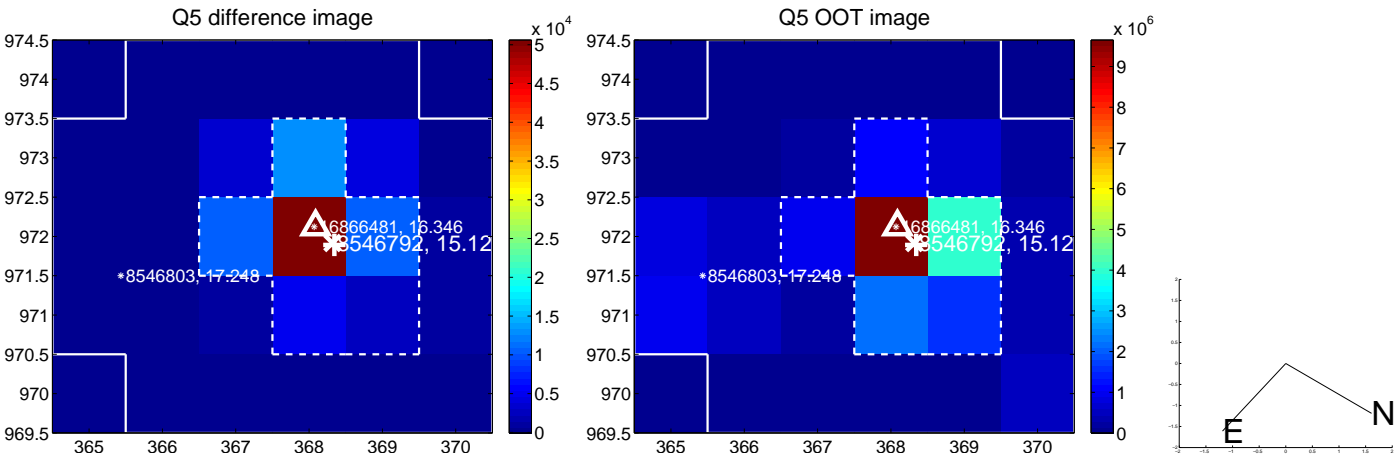


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

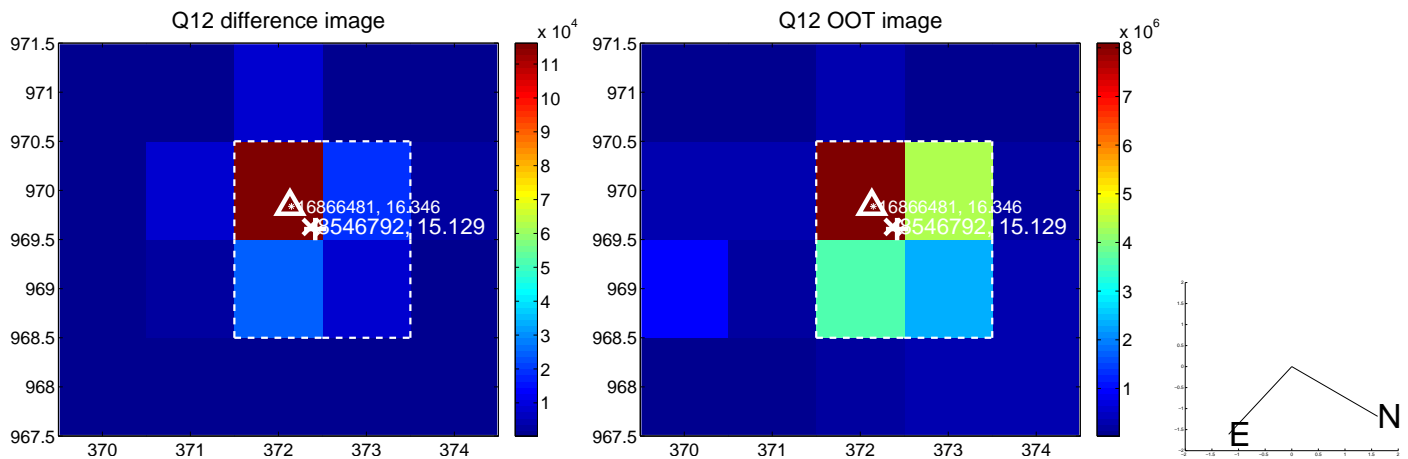
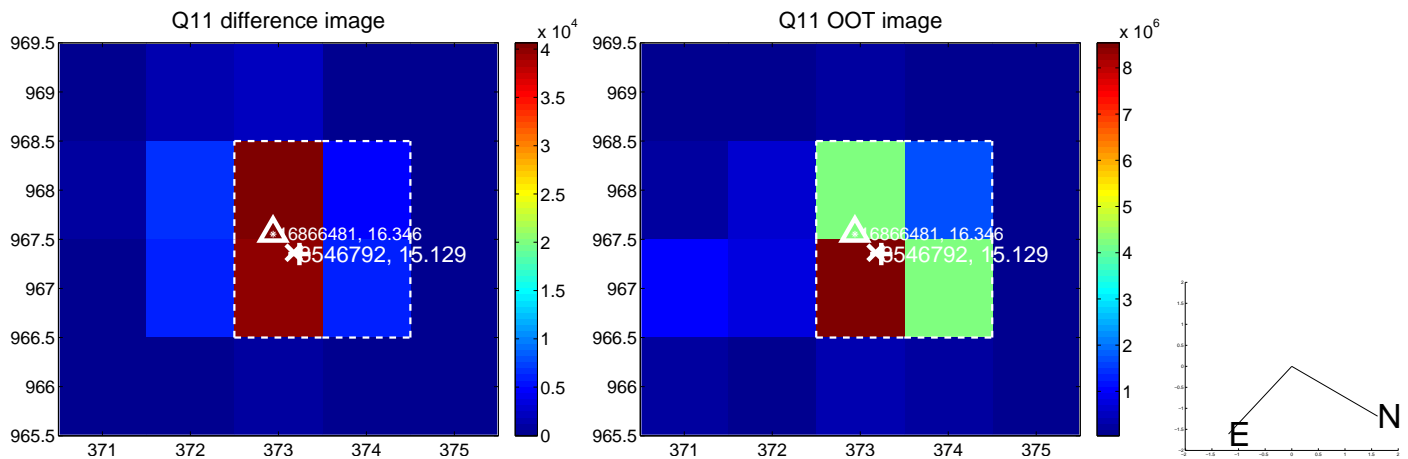
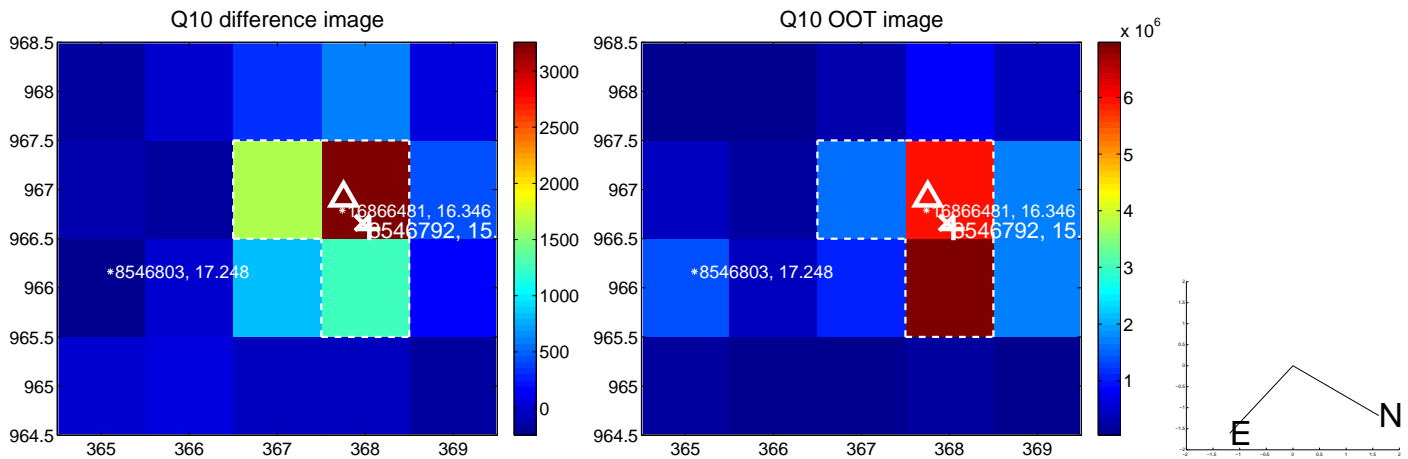
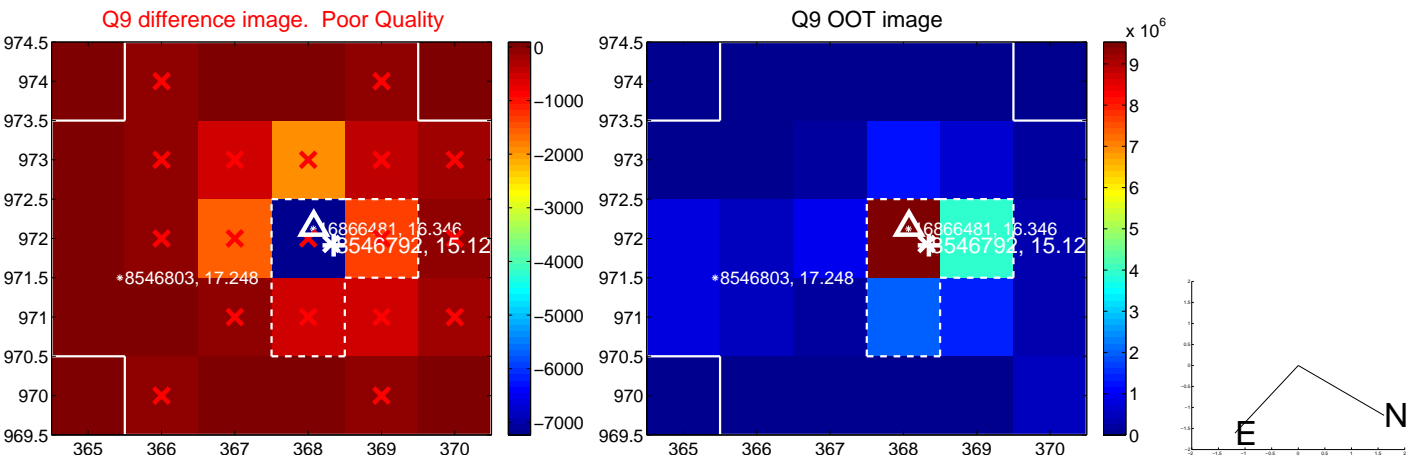
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



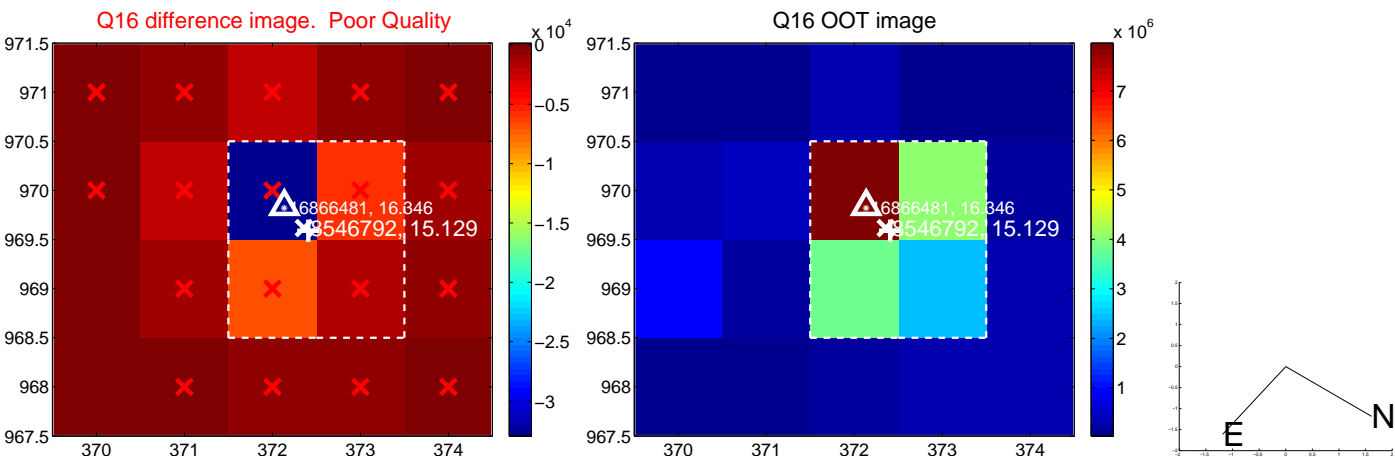
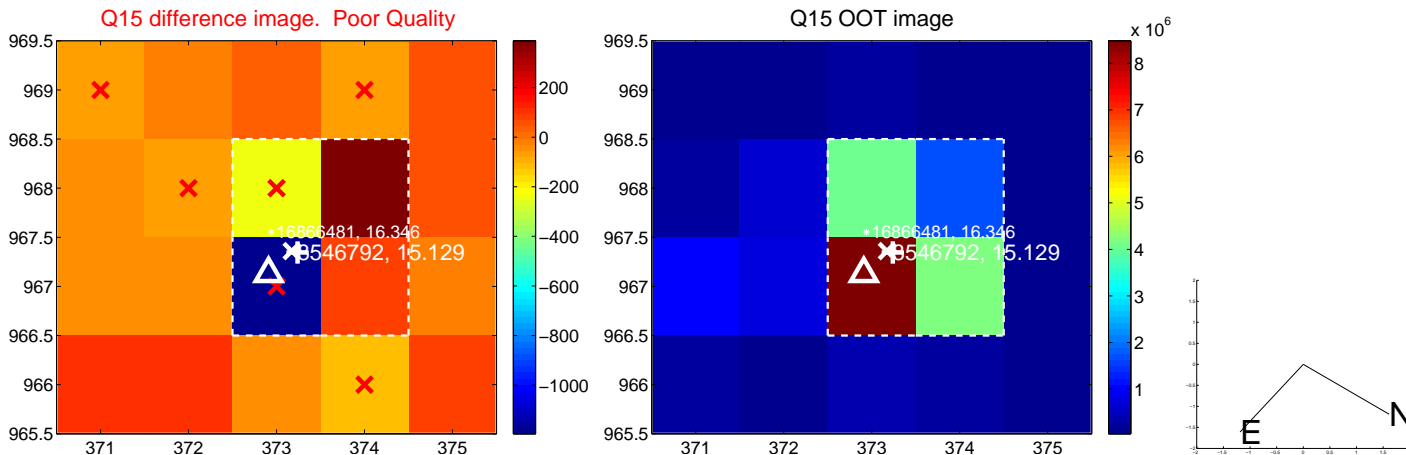
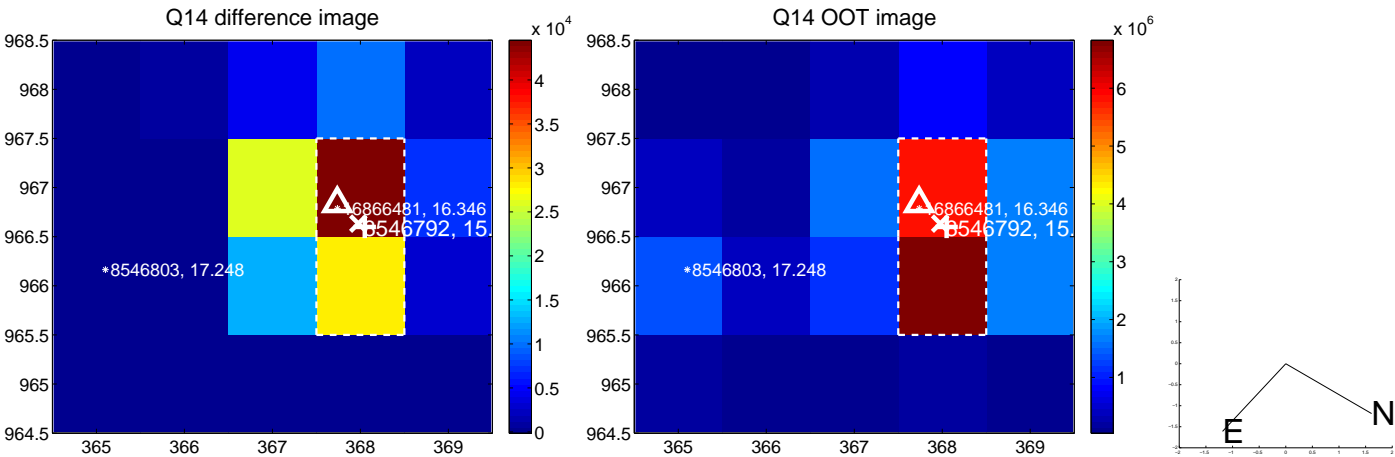
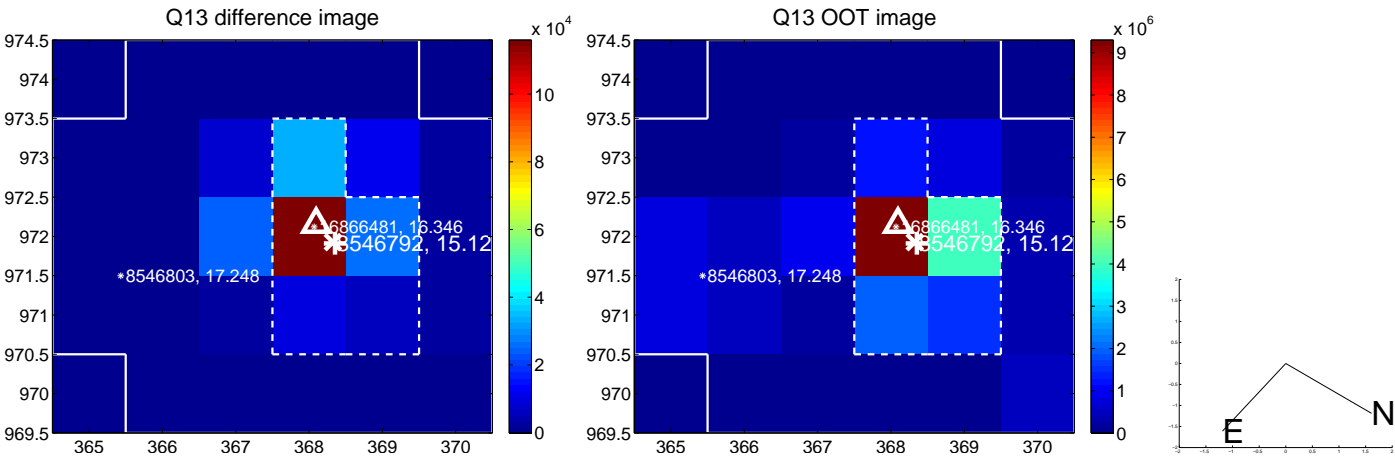
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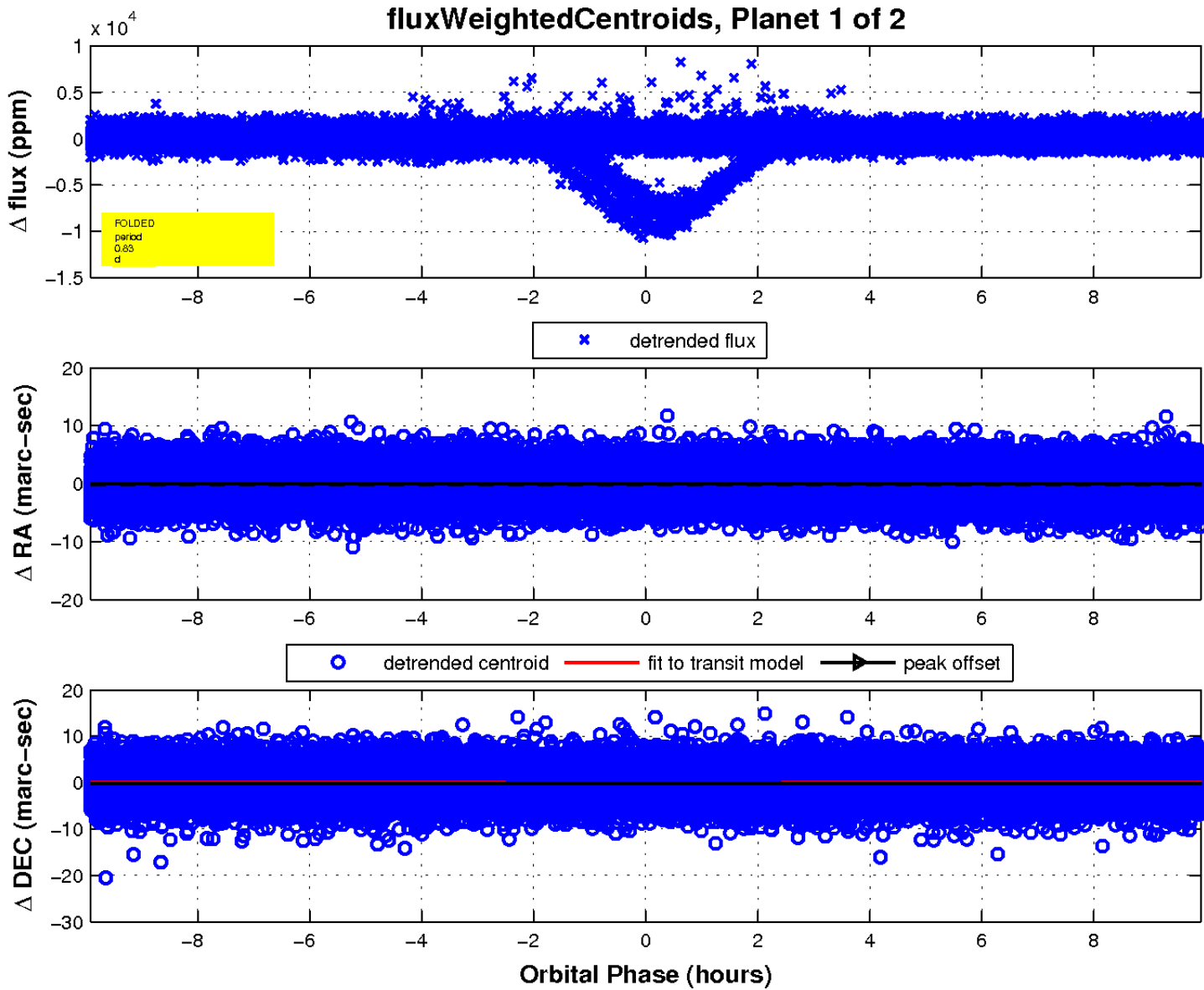
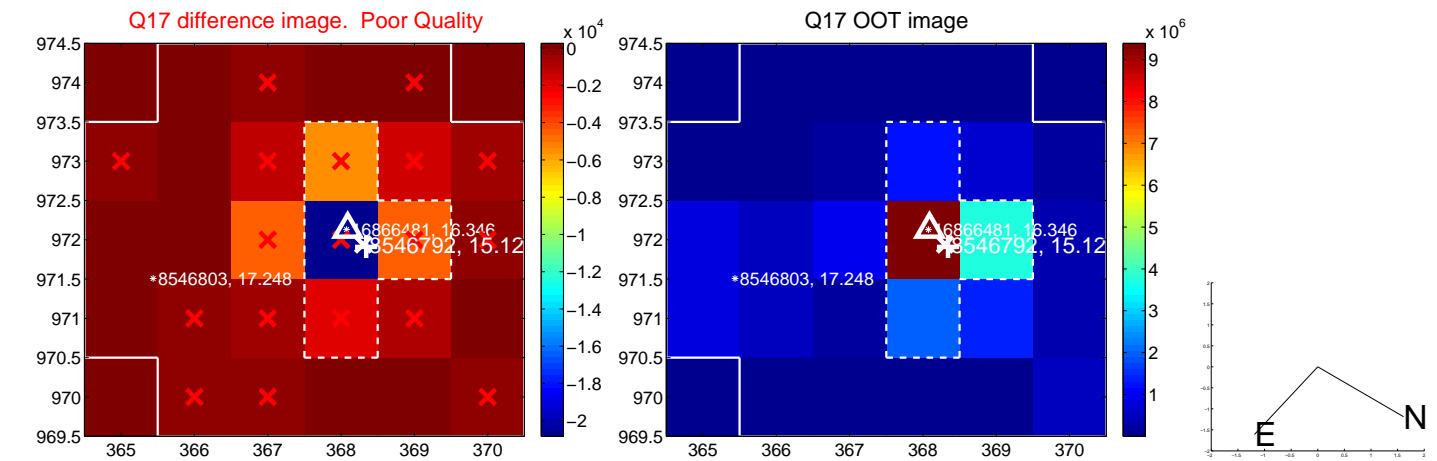
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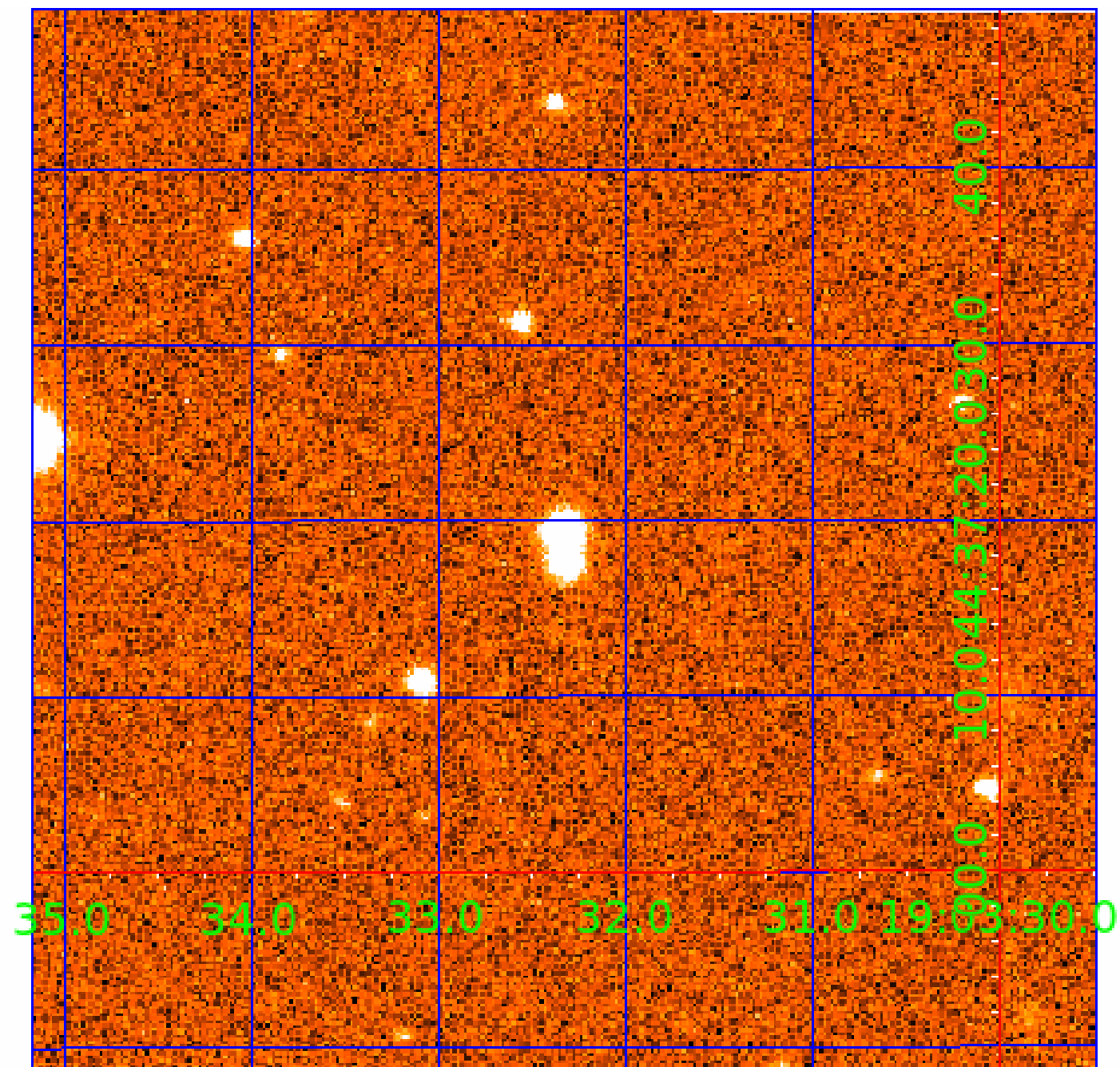


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008546792

Q1-17 DR25 TCE Parameters

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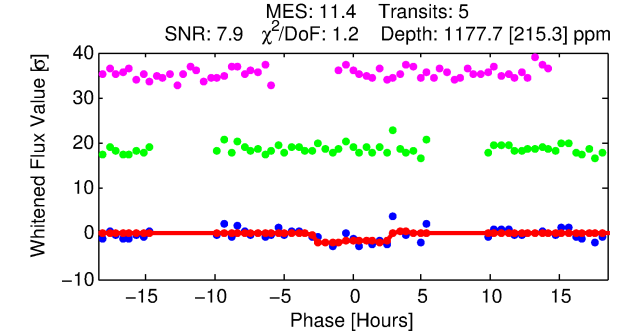
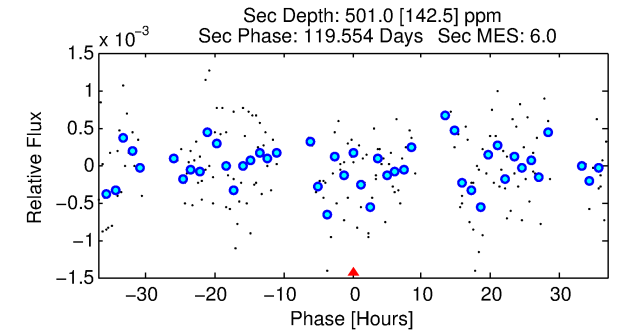
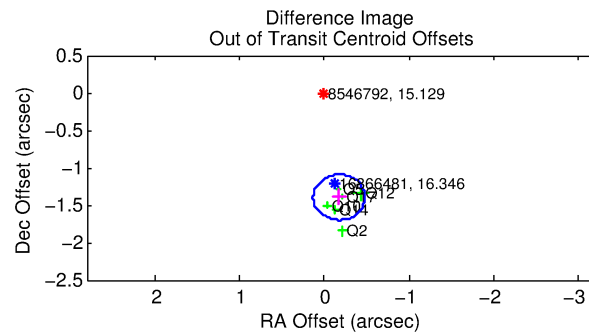
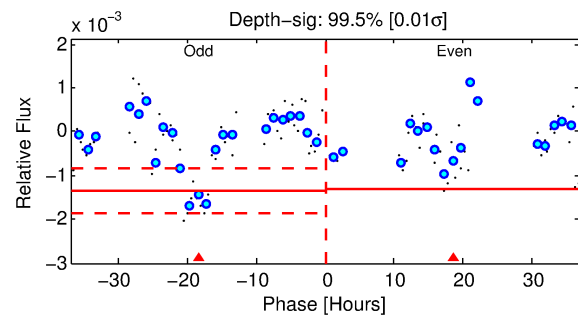
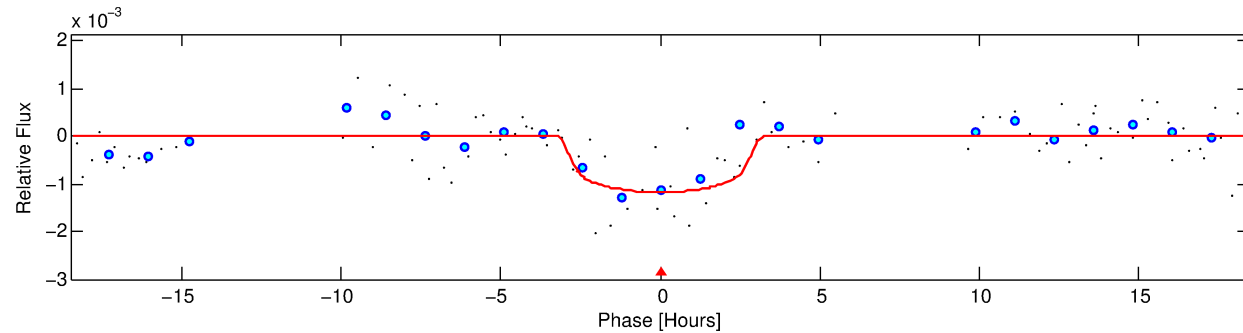
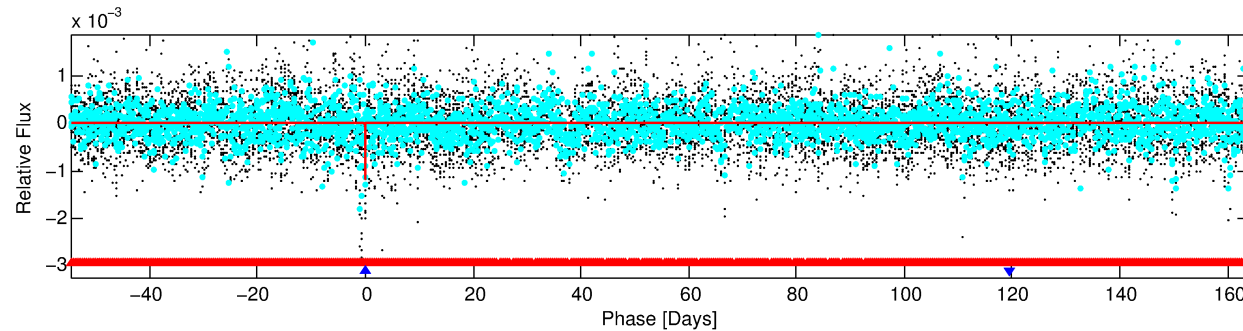
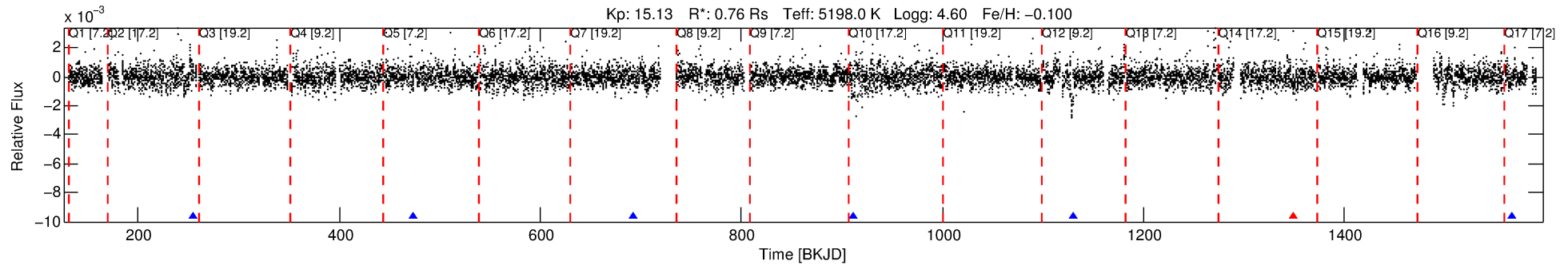
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008546792-02

No Significant Match Found

DV One-Page Summary

KIC: 8546792 Candidate: 2 of 2 Period: 218.852 d



DV Fit Results:

Period = 218.85204 [0.01360] d
Epoch = 254.1012 [0.0556] BKJD
Rp/R* = 0.0339 [0.0223]
a/R* = 199.40 [473.04]
b = 0.73 [1.66]
Seff = 0.84 [0.17]
Teq = 244 [13] K
Rp = 2.81 [1.89] Re
a = 0.6698 [0.0791] AU
Ag = 15682.42 [21284.15] [0.74 σ]
Teffp = 4223 [1428] K [2.79 σ]

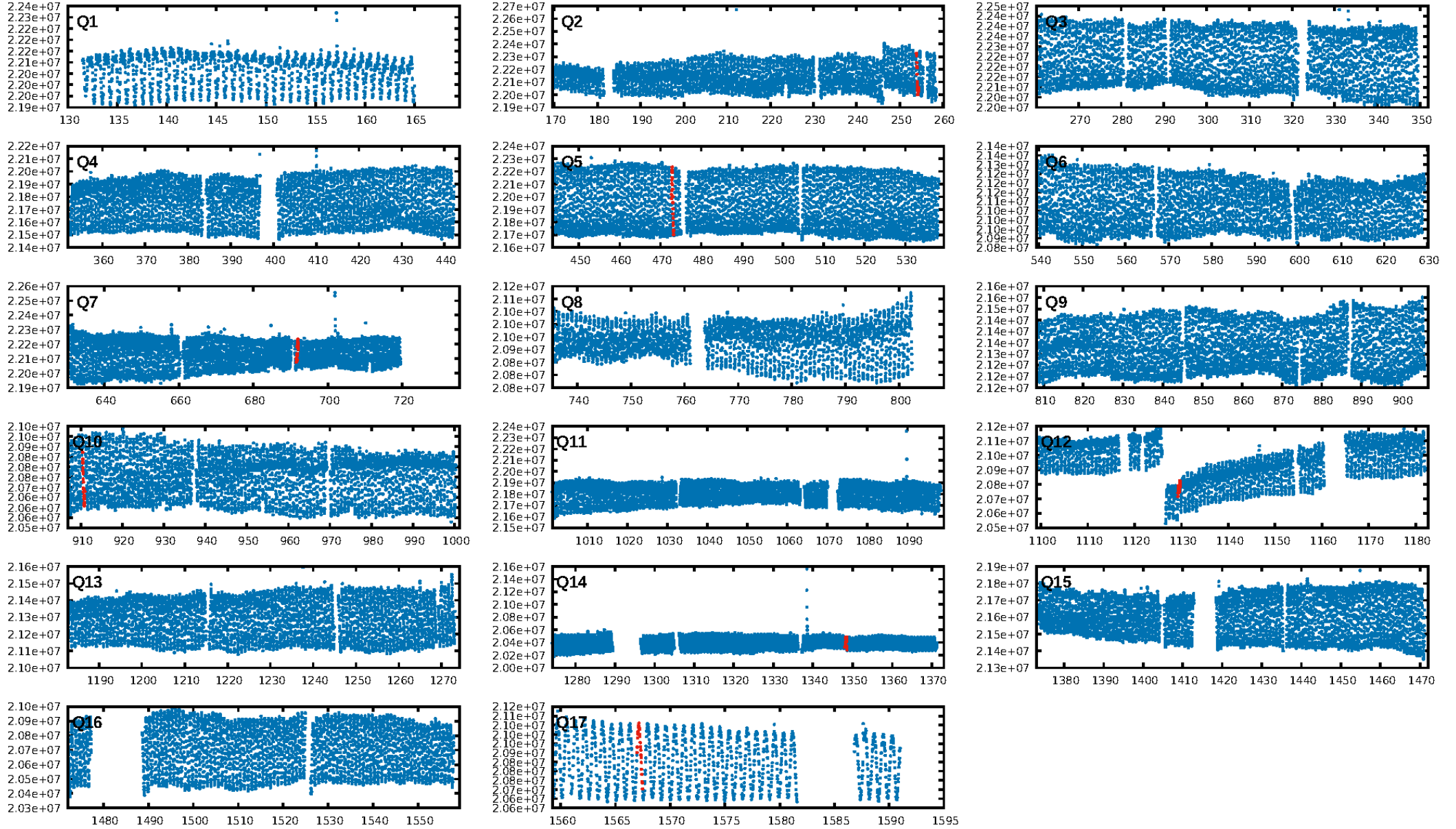
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [652.52 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 67.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 2.72
Centroid-sig: 17.6%
Centroid-so: 1.389 arcsec [1.83 σ]
OotOffset-rm: 1.408 arcsec [13.92 σ]
KicOffset-rm: 1.189 arcsec [14.30 σ]
OotOffset-st: 3/0/1/2 [6]
KicOffset-st: 3/0/1/2 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.00 [0/6]

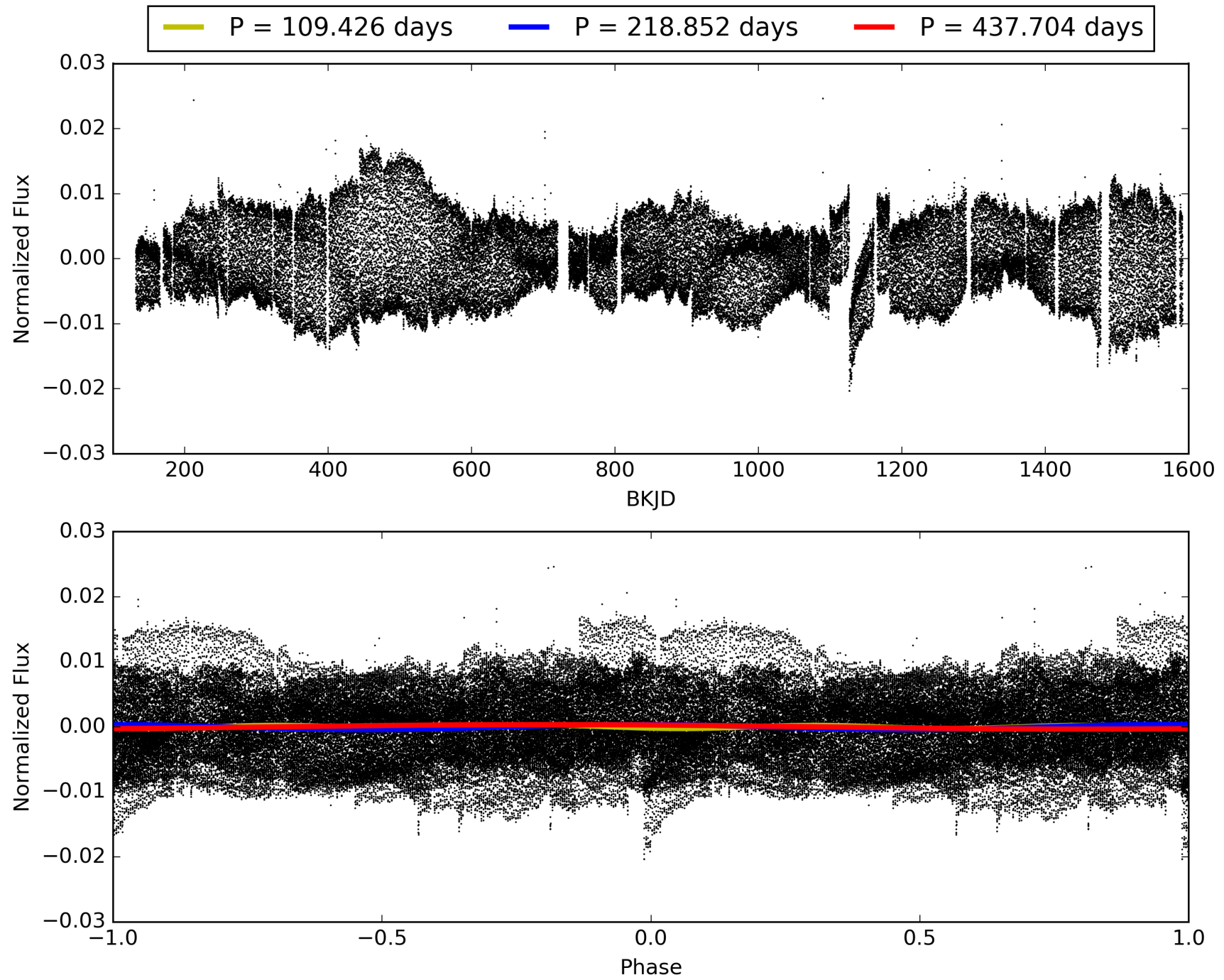
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:59:24 Z

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

TCE 008546792-02, PDC Light Curves

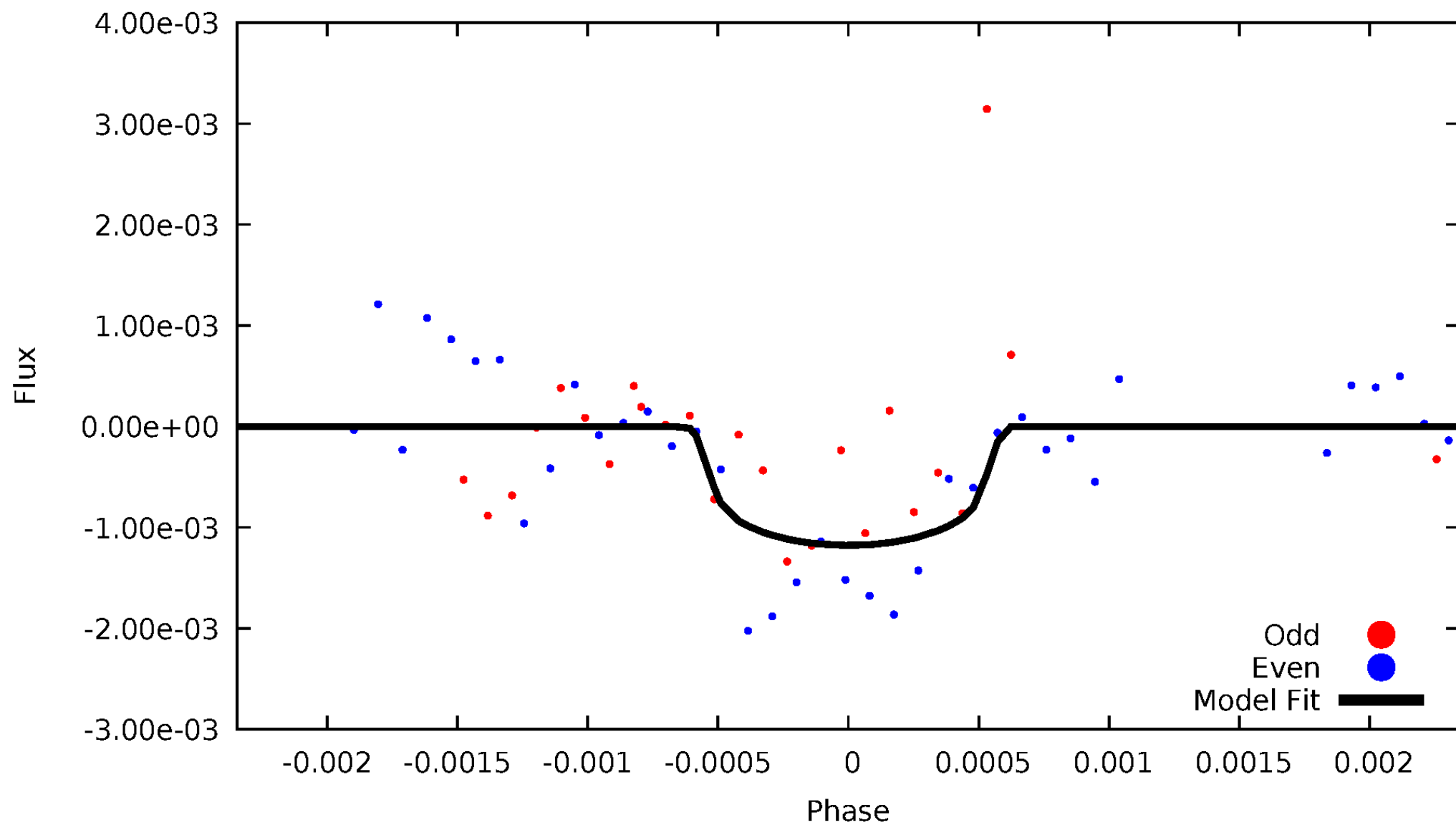


TCE 008546792-02



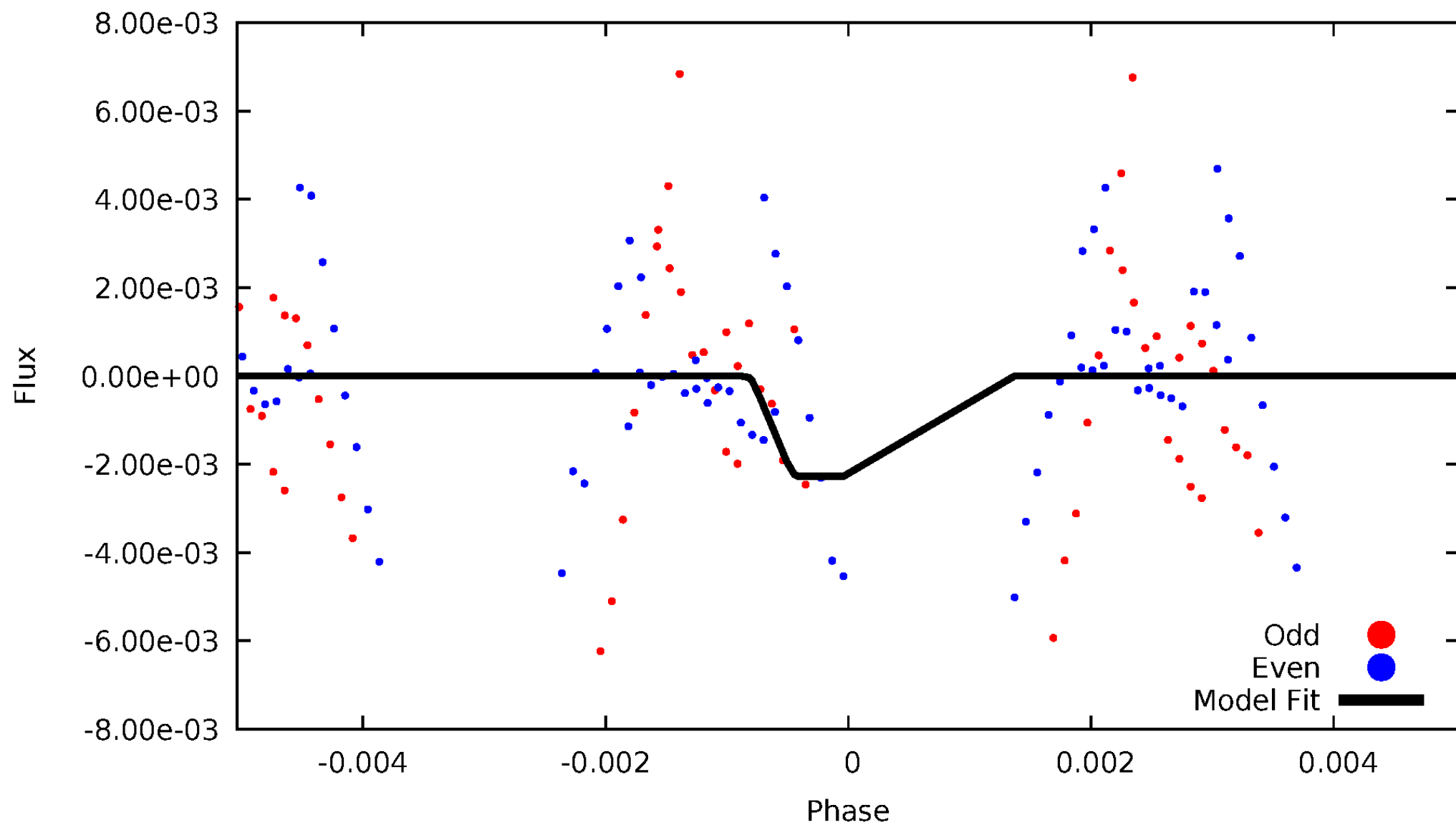
DV Odd/Even

TCE 008546792-02



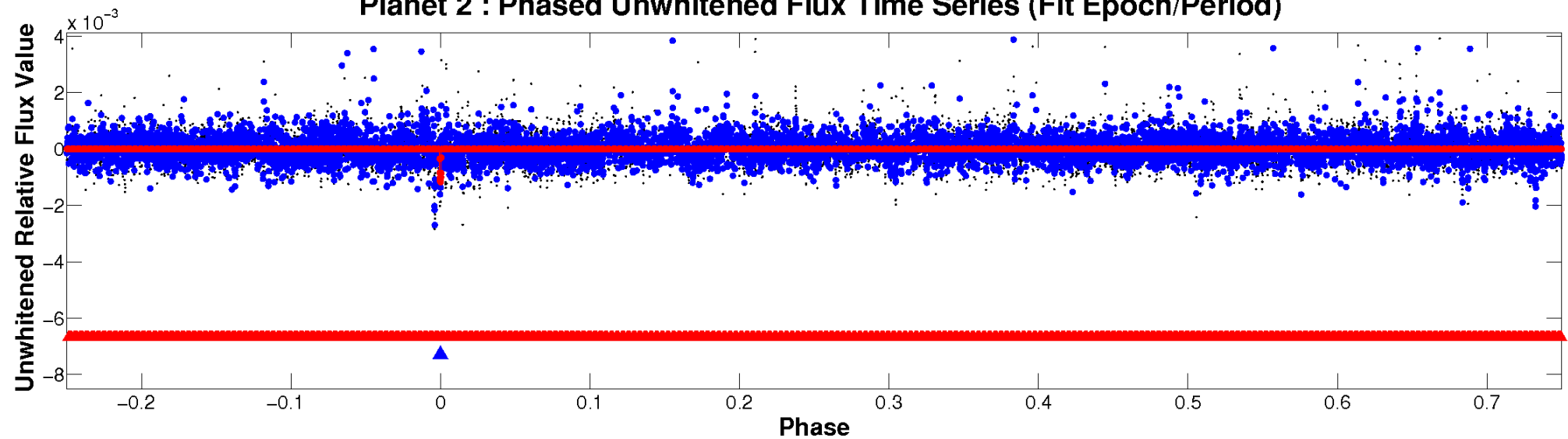
ALT Odd/Even

TCE 008546792-02

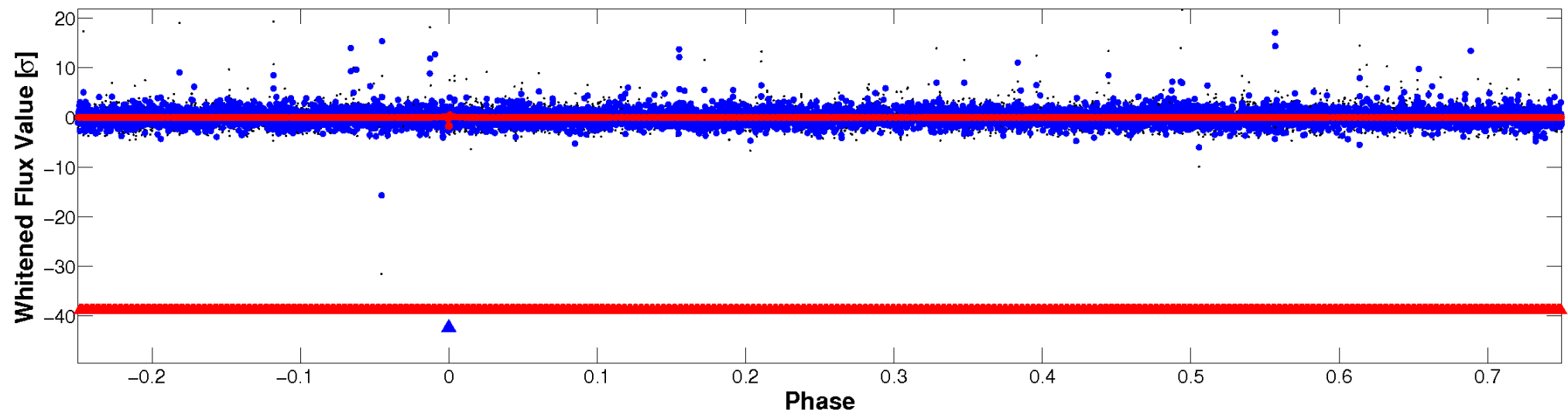


Non-Whitened Vs. Whitened Light Curve

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

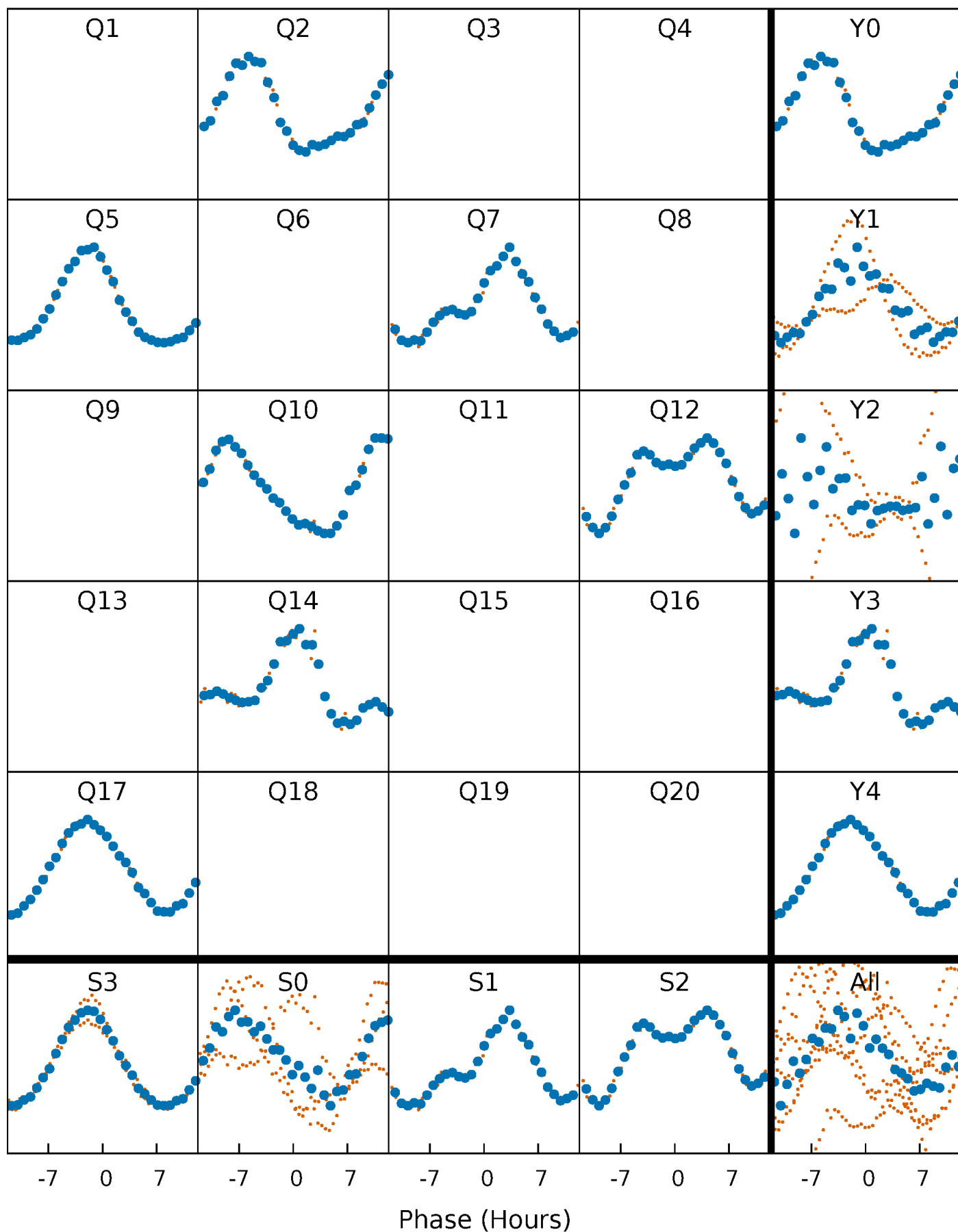


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



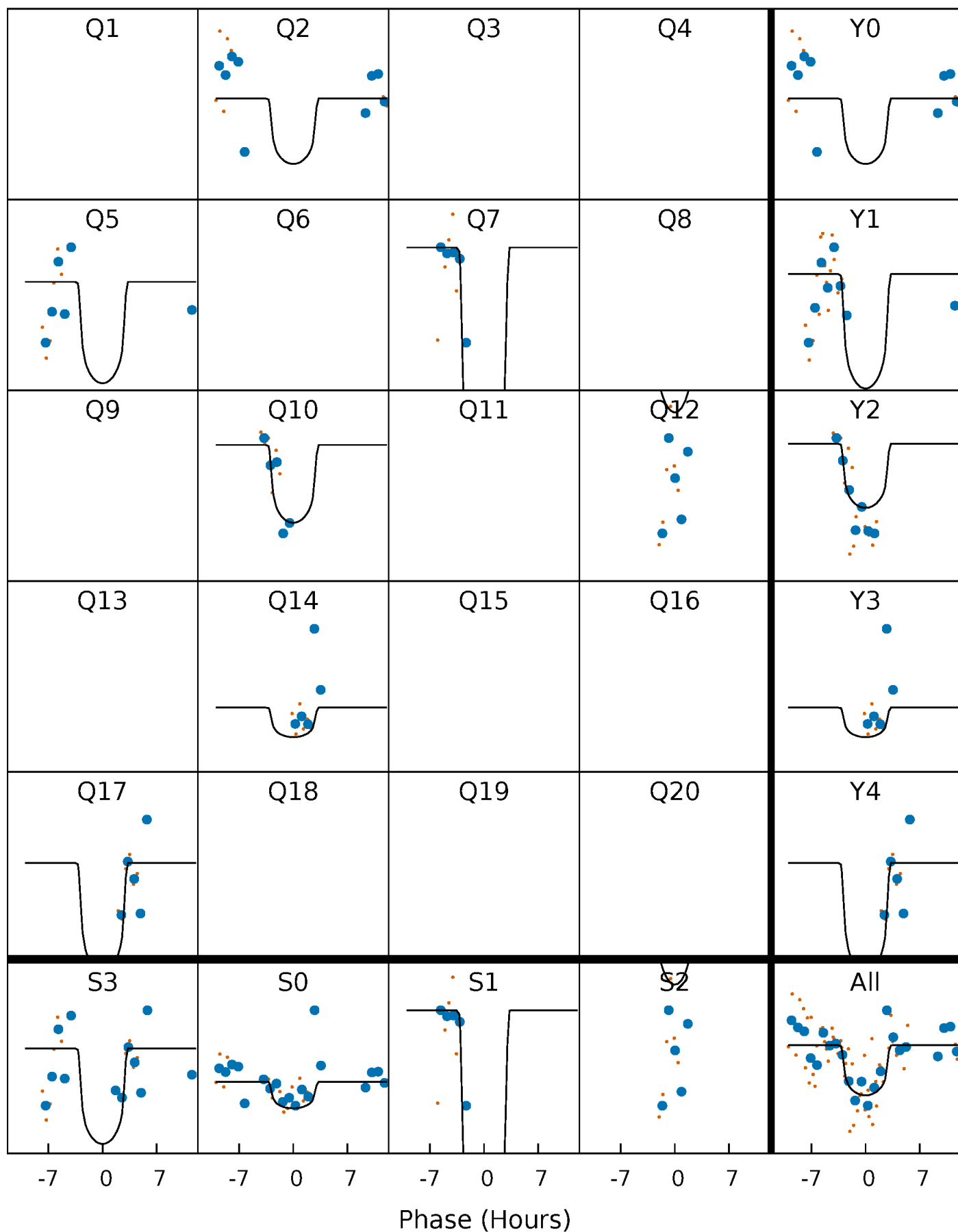
PDC Quarter-Phased Transit Curves

TCE 008546792-02 P=218.852045 Days $T_0=254.101171$ (BKJD)



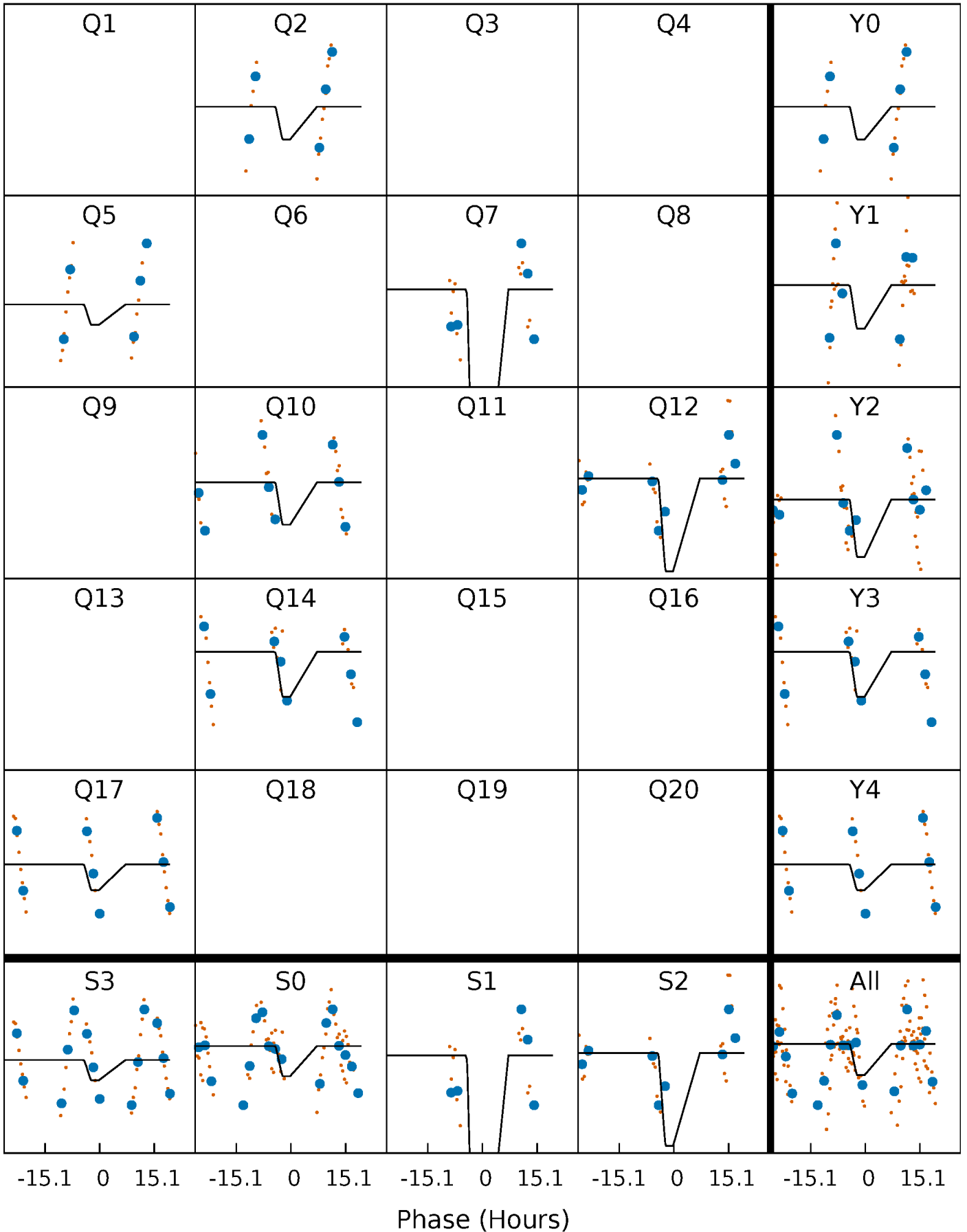
DV Quarter-Phased Transit Curves

TCE 008546792-02 P=218.852045 Days $T_0=254.101171$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

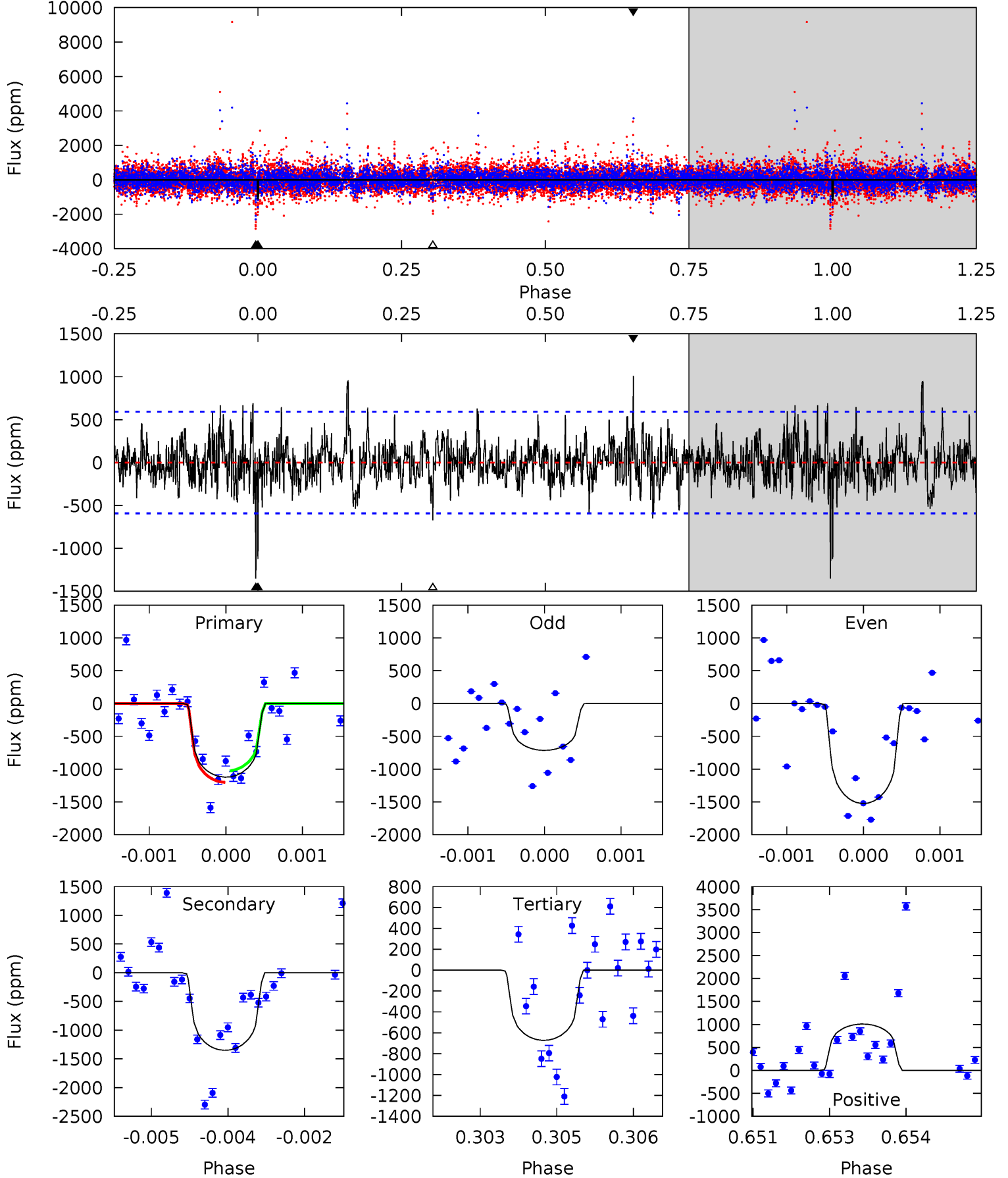
TCE 008546792-02 P=218.874431 Days $T_0=254.202996$ (BKJD)



DV Model-Shift Uniqueness Test

008546792-02, $P = 218.852045$ Days, $E = 35.249126$ Days

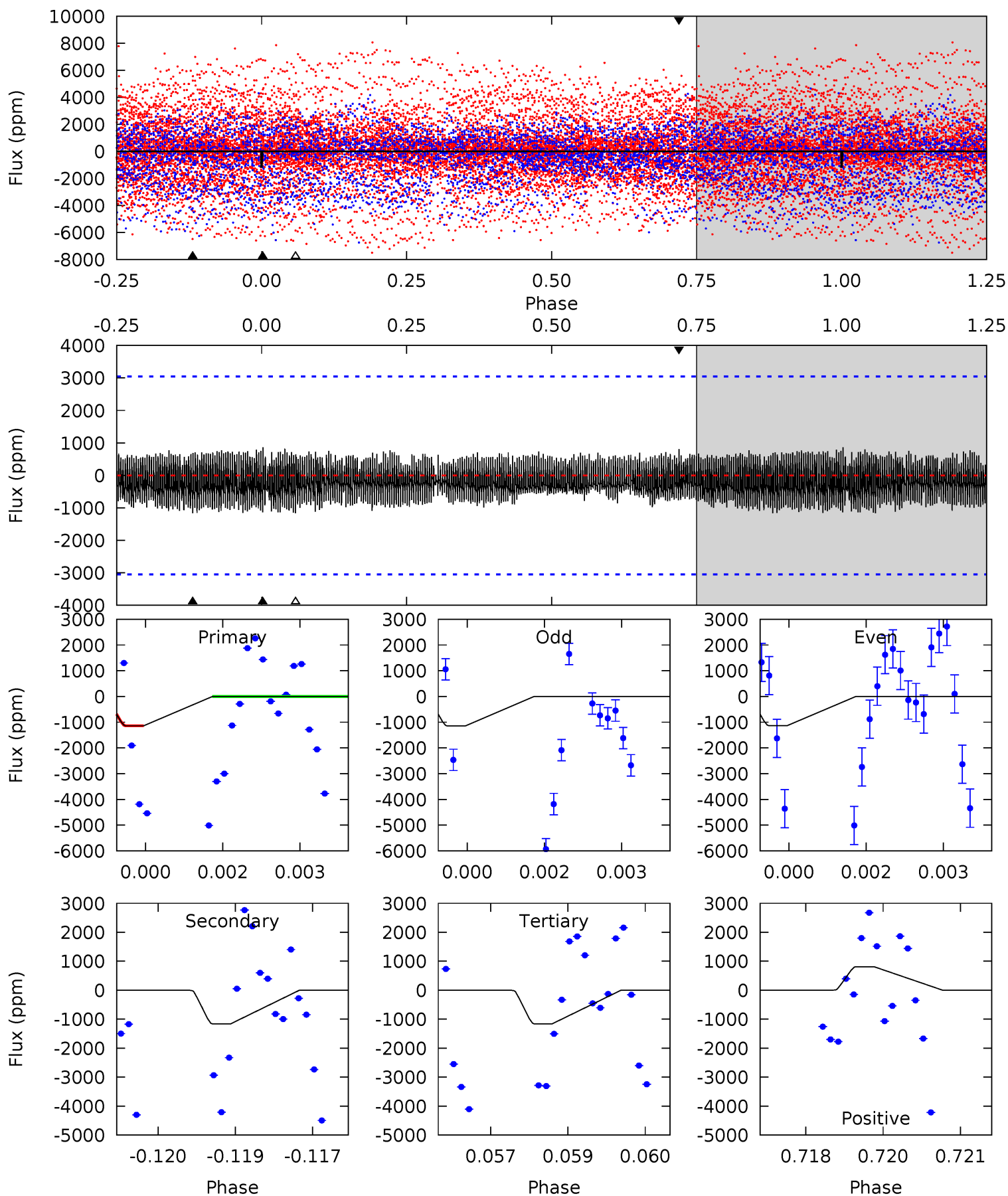
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	12.4	6.15	9.22	5.42	3.24	1.77	4.12	1.04	6.20	3.13	2.77	1.20	0.43	0.80



Alt Model-Shift Uniqueness Test

008546792-02, P = 218.874431 Days, E = 35.328565 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.01	2.05	2.04	1.43	5.37	3.16	0.73	-0.04	0.58	0.01	0.62	0.01	0	0.43	0



Stellar Parameters For KIC 008546792

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+155}_{-155}	$4.600^{+0.030}_{-0.090}$	$-0.100^{+0.300}_{-0.300}$	$0.759^{+0.109}_{-0.067}$	$0.843^{+0.068}_{-0.093}$	$2.720^{+0.450}_{-0.818}$
	+3%/-3%	+1%/-2%	+300%/-300%	+14%/-9%	+8%/-11%	+17%/-30%
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 008546792-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1351 ± 109	$3.06^{+1.81}_{-1.71}$	345^{+14}_{-13}	5262^{+2832}_{-920}	$35713^{+148344}_{-21699}$
Alt.	-1163 ± 567	$4.14^{+1.69}_{-1.92}$	346^{+14}_{-12}	4453^{+1373}_{-731}	15508^{+39287}_{-9774}

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

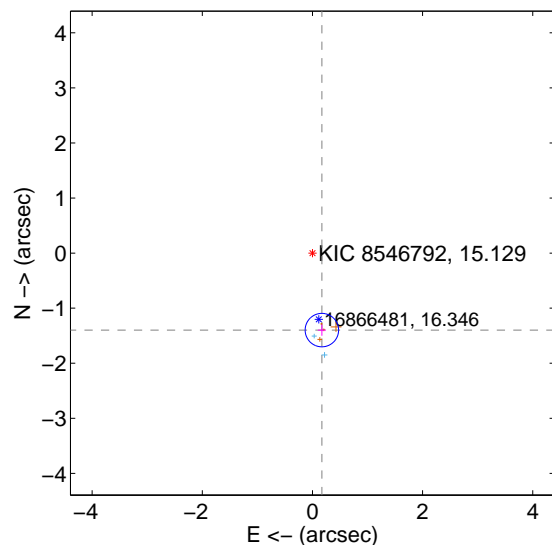
Supplemental centroid analysis for 008546792-02. Kepler magnitude: 15.13. Transit SNR 7.86

There are 2 quarters with good PRF difference image offsets

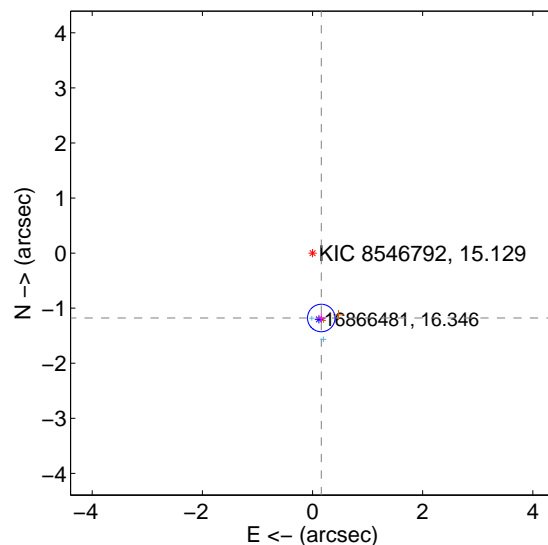
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.408 ± 0.101	13.92	-0.171 ± 0.073	-1.398 ± 0.102
PRF-fit source offset from KIC position	1.189 ± 0.083	14.30	-0.159 ± 0.085	-1.178 ± 0.084
photometric centroid source offset	1.39 ± 0.76	1.83	1.37 ± 0.74	0.22 ± 1.23

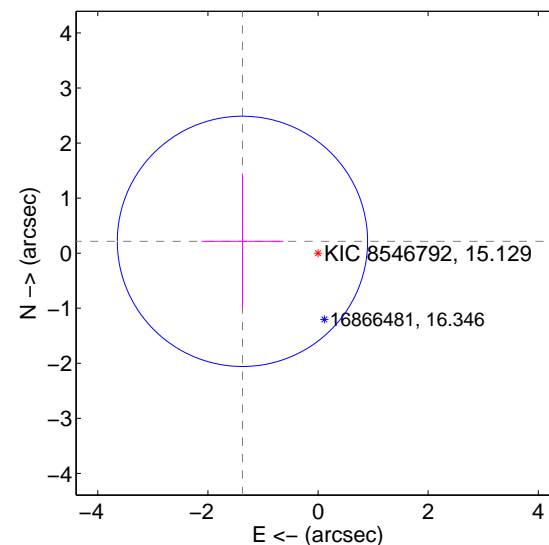
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

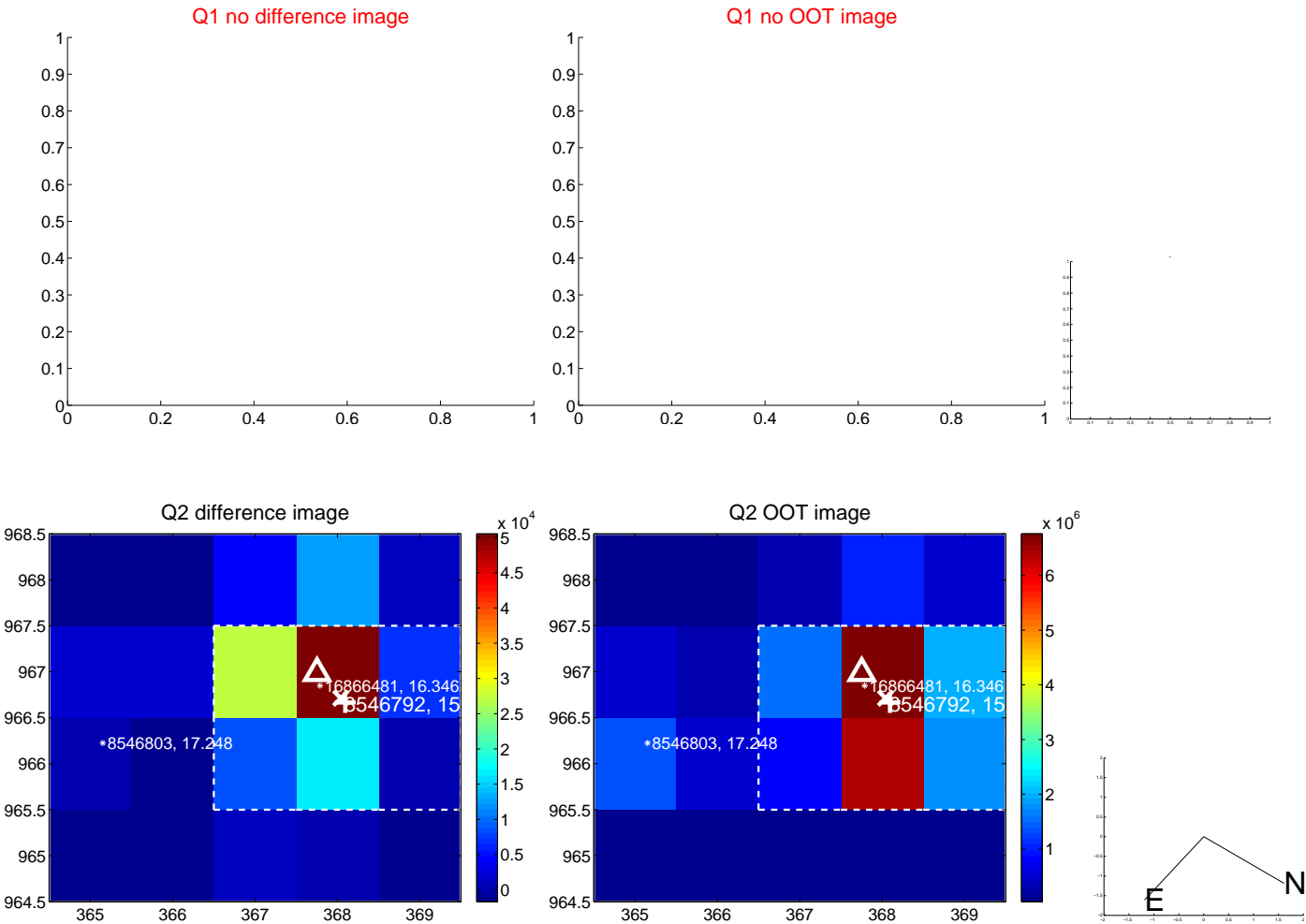


offset from photometric centroids

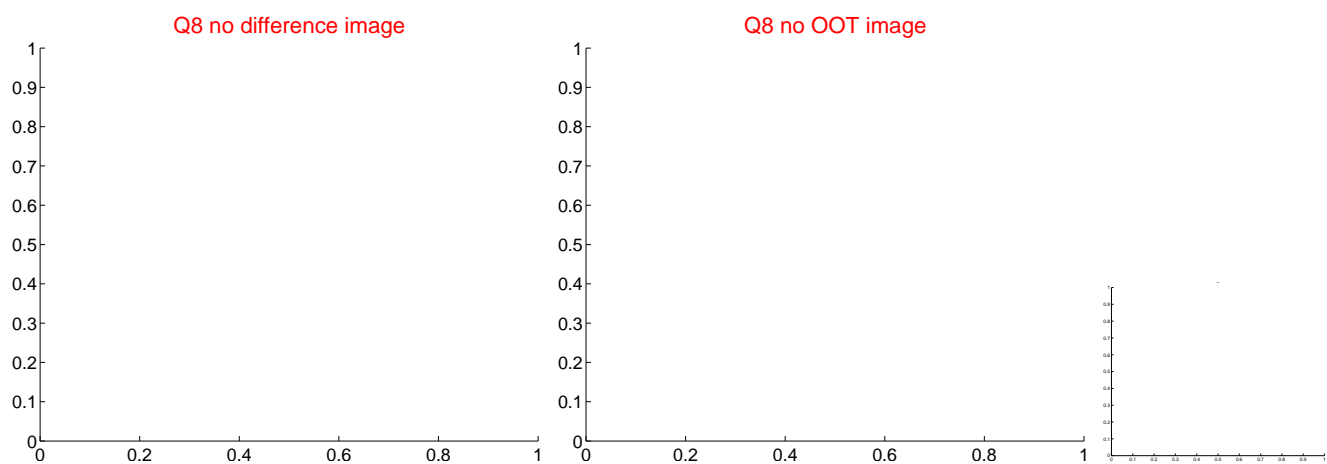
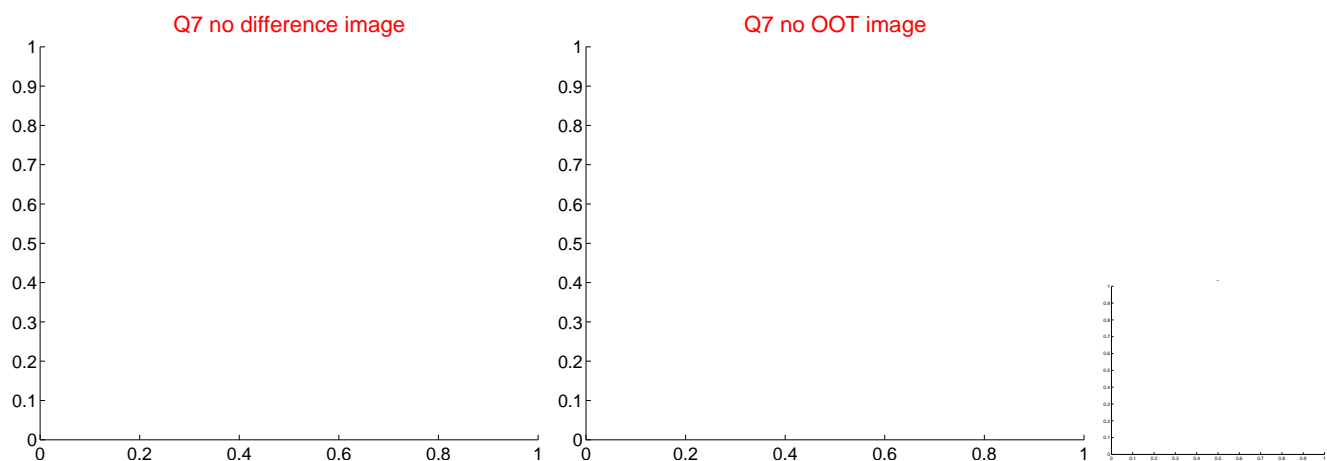
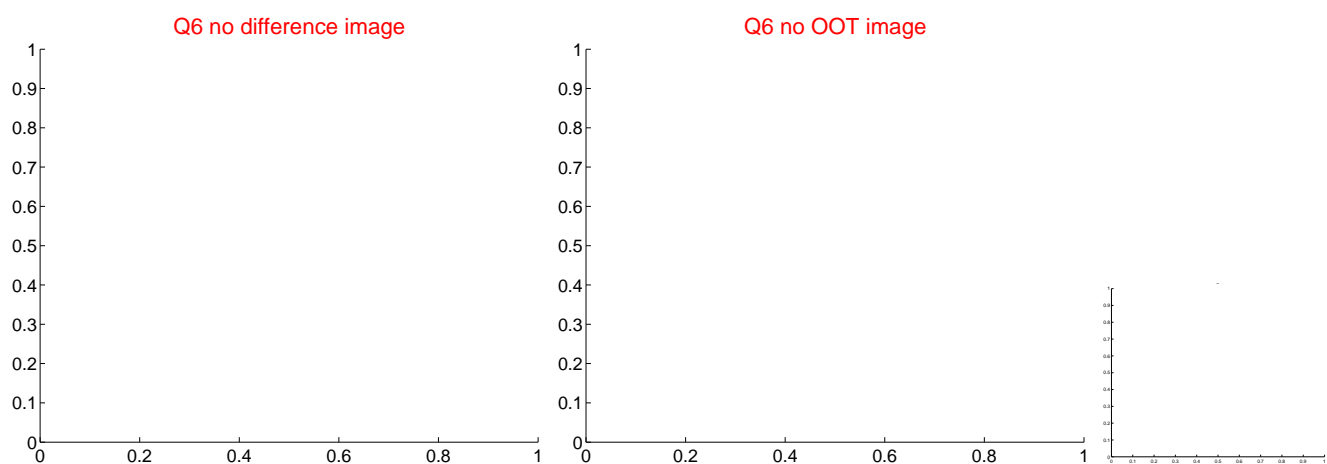
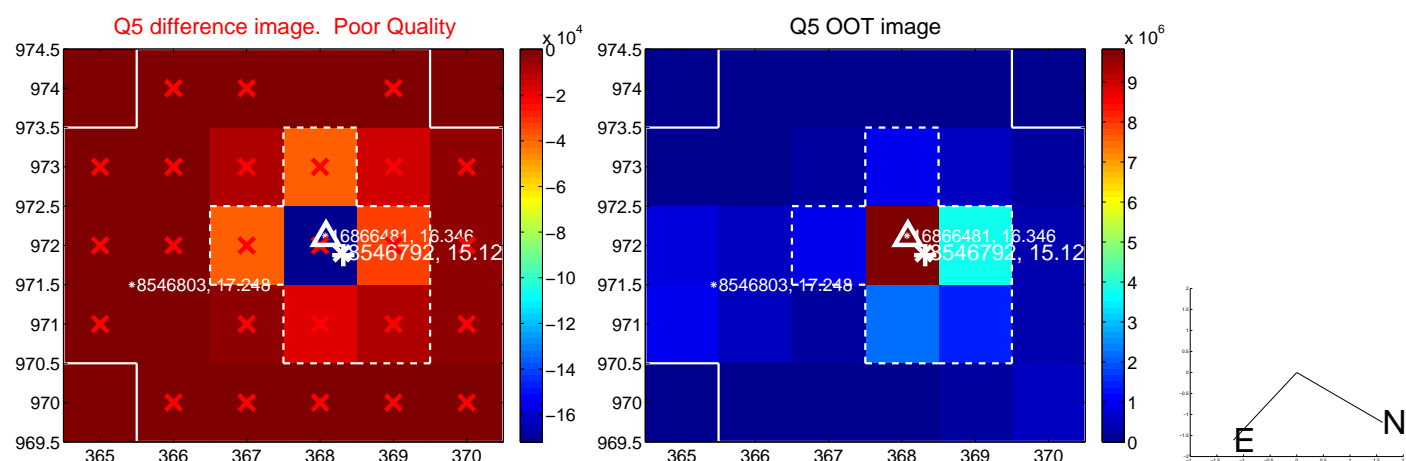


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

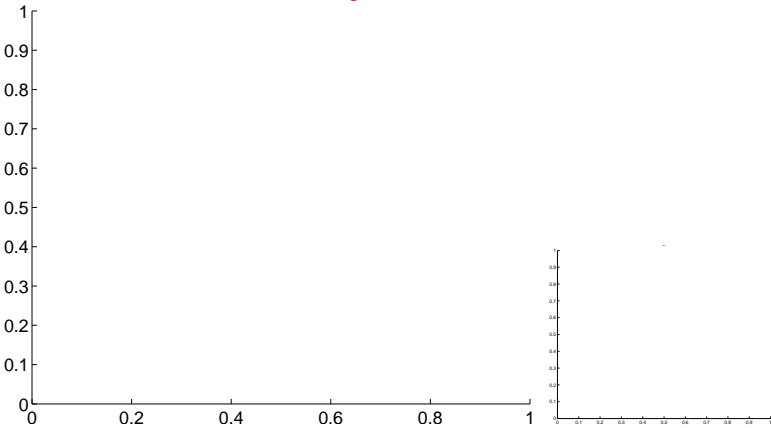


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

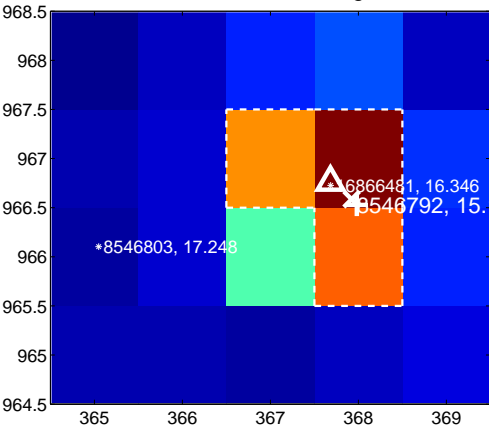
Q9 no difference image



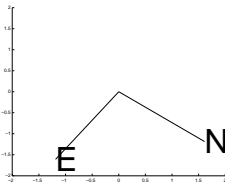
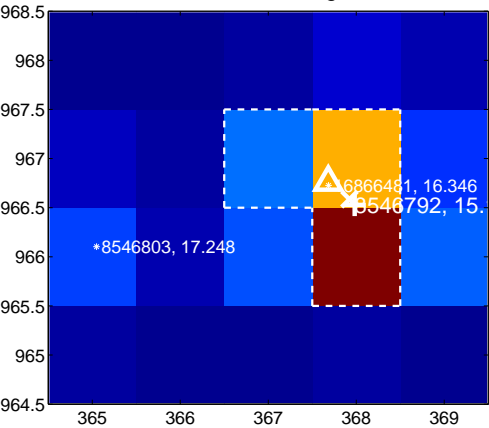
Q9 no OOT image



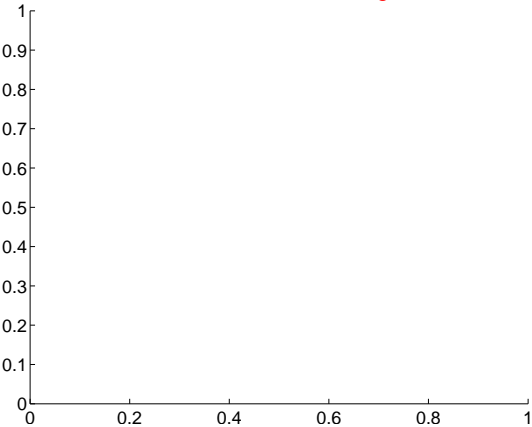
Q10 difference image



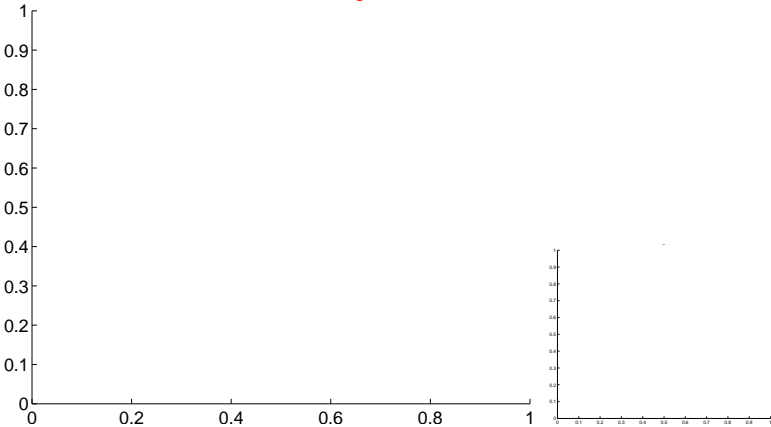
Q10 OOT image



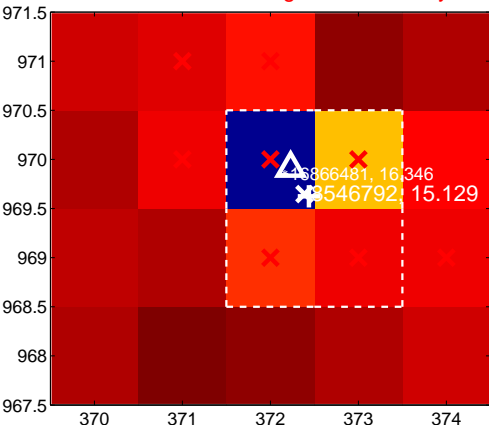
Q11 no difference image



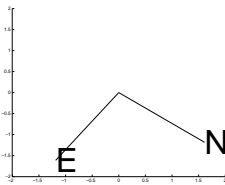
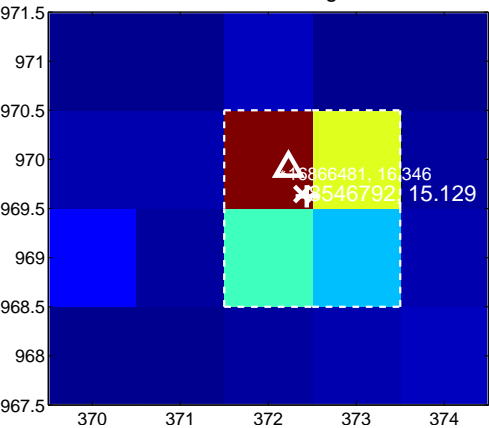
Q11 no OOT image



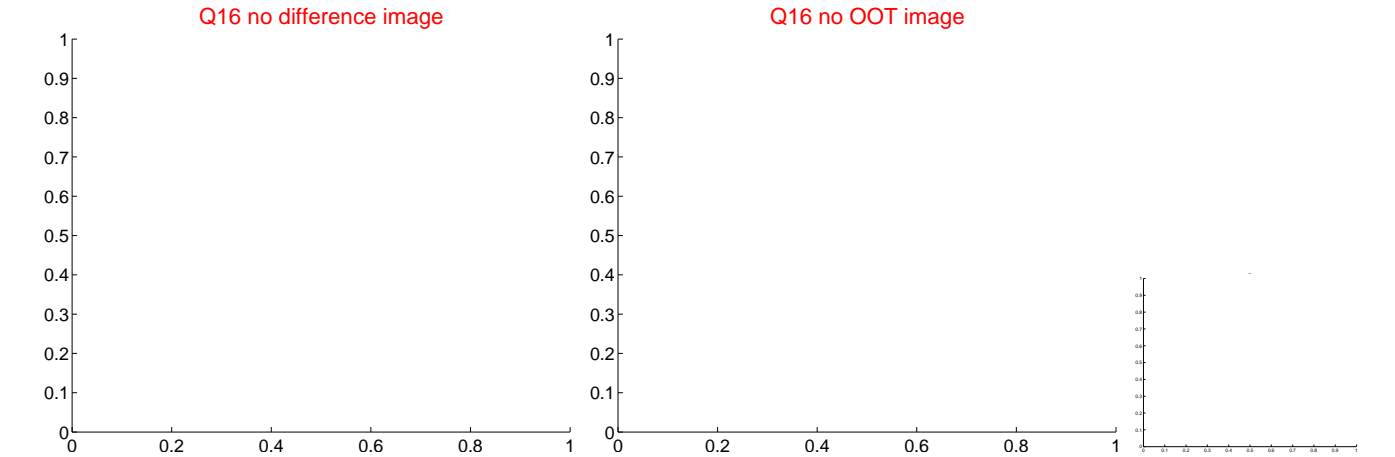
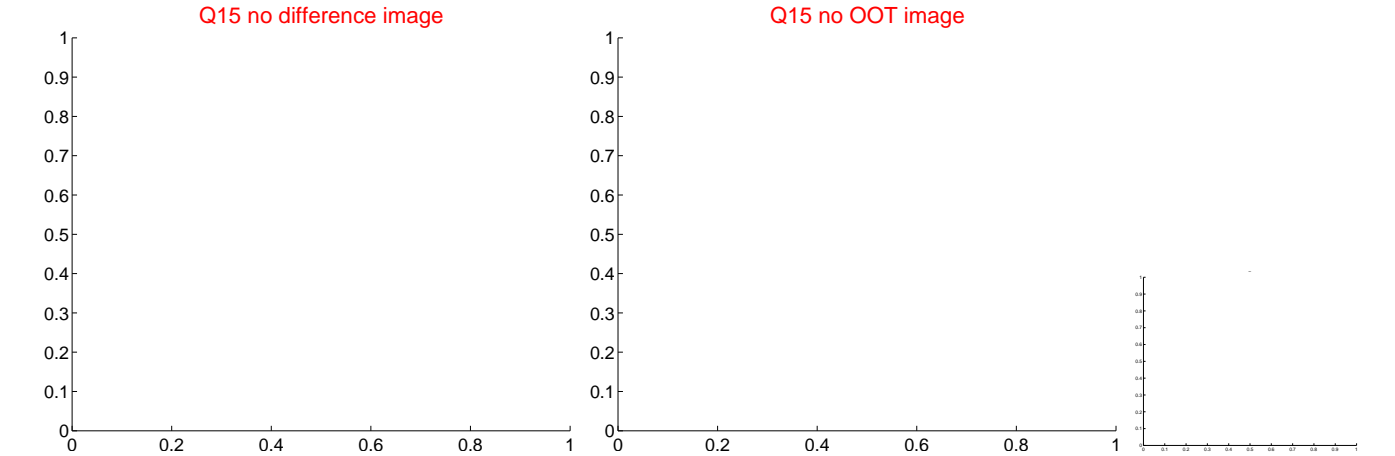
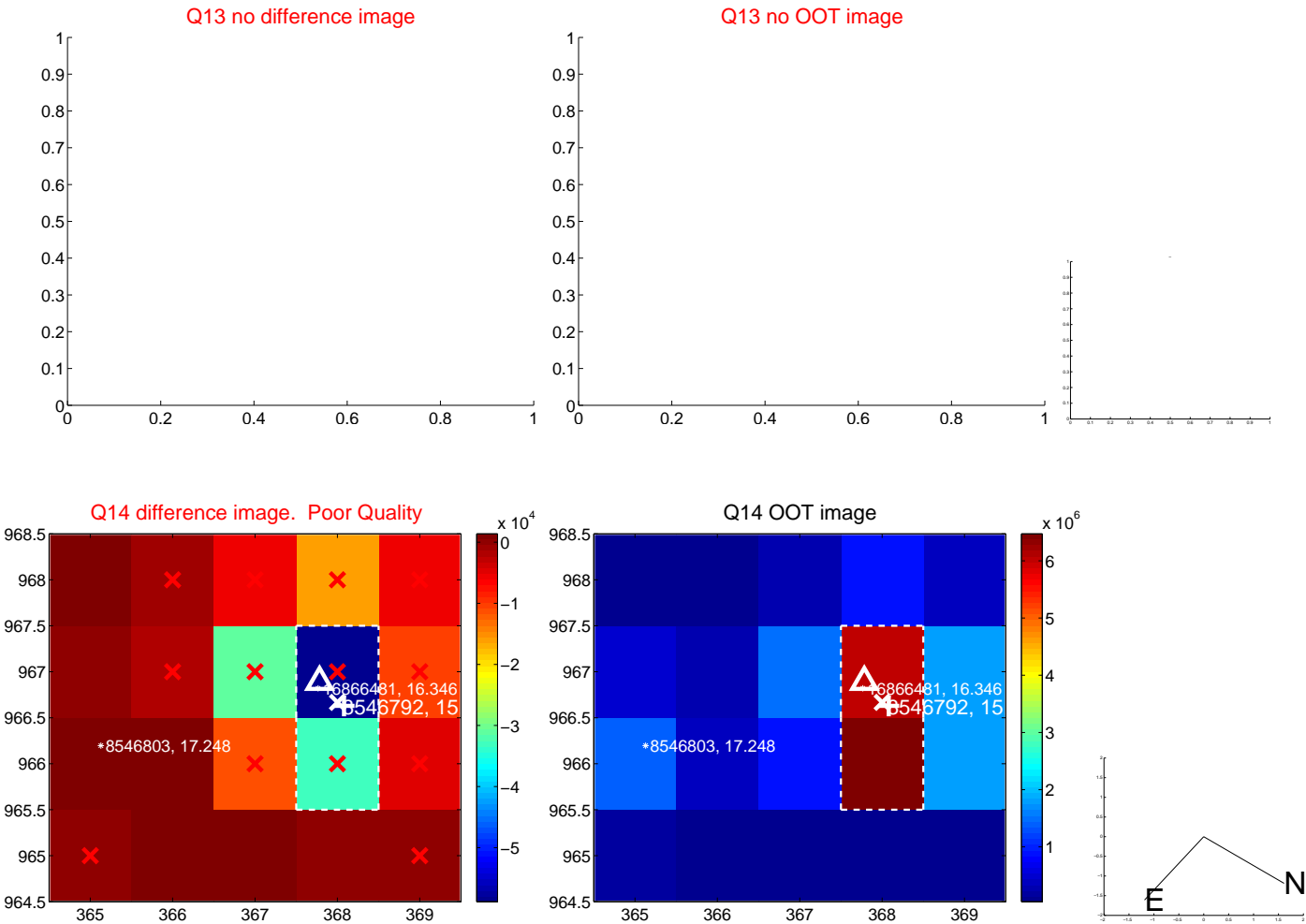
Q12 difference image. Poor Quality



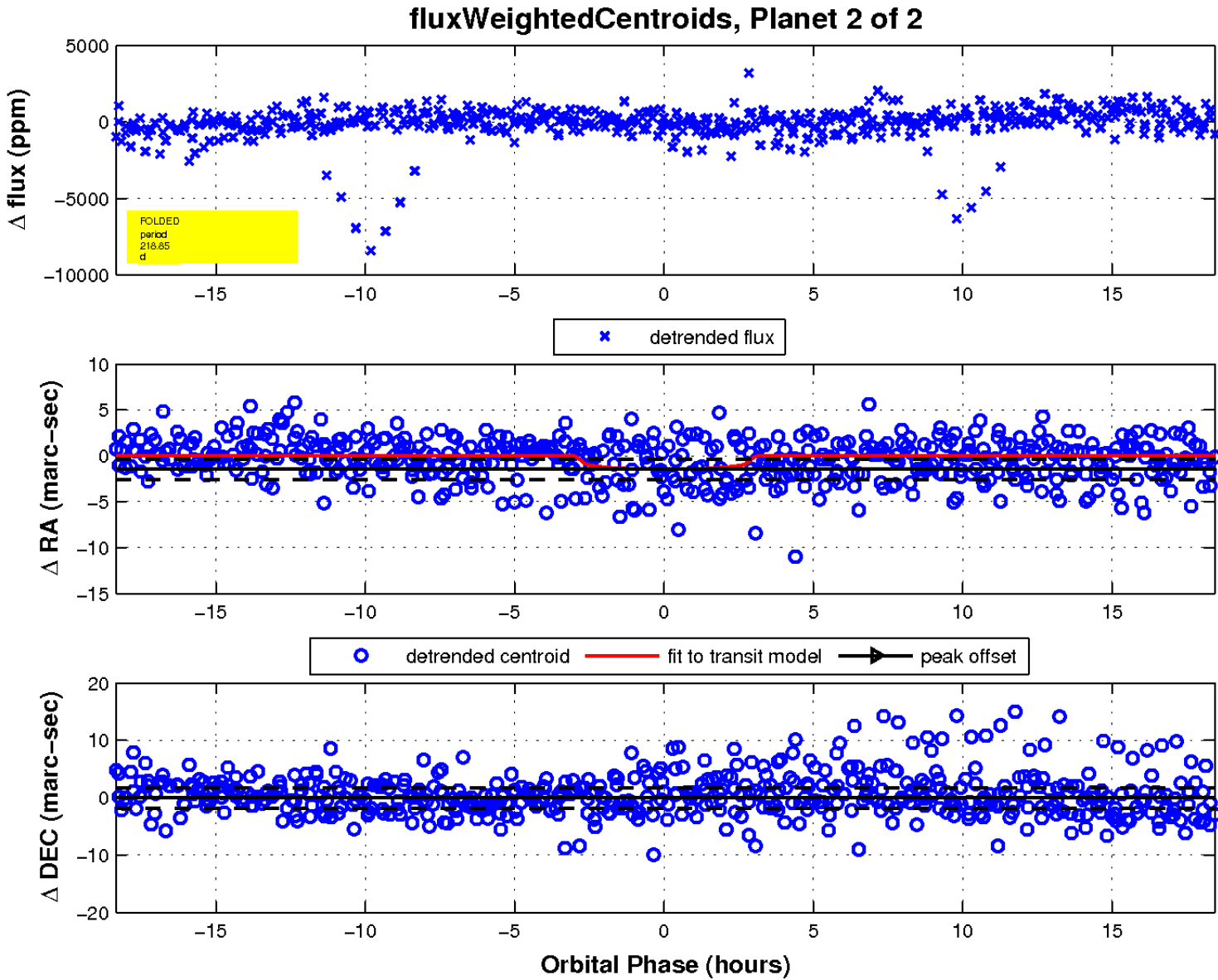
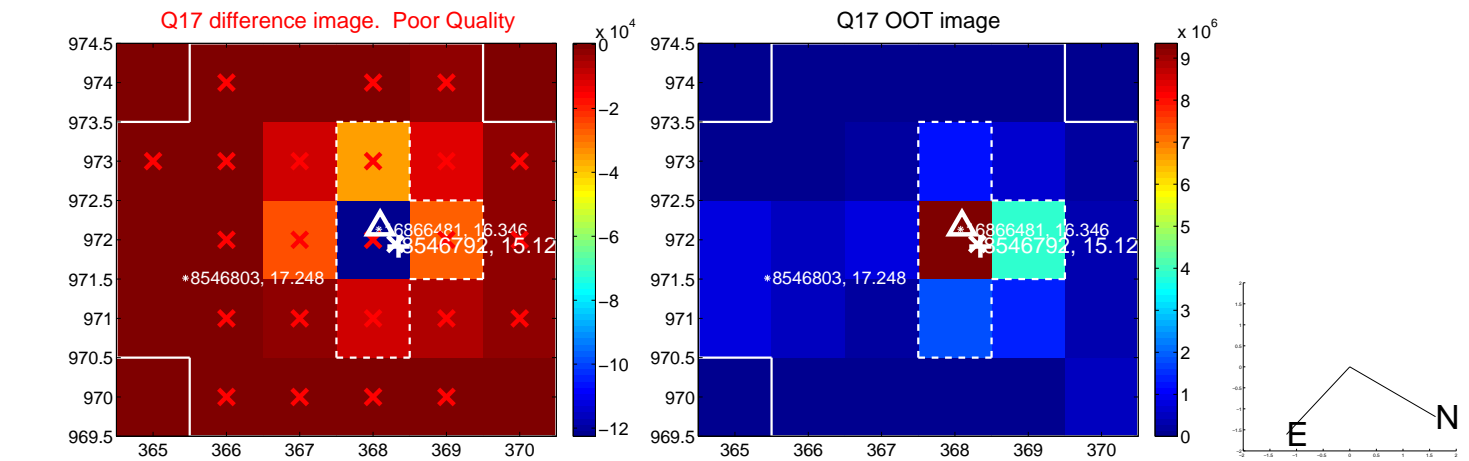
Q12 OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

