

KIC 005384653

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})
005384653-01	OBS	No	0.611237	132.081649	129.4	2.475	10.0	9.2	1.51	7293	1.98	21975.63
005384653-02	OBS	No	0.805237	132.119527	524.6	3.000	15.4	-1.0	1.51	7293	3.51	15216.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005384653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005384653-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

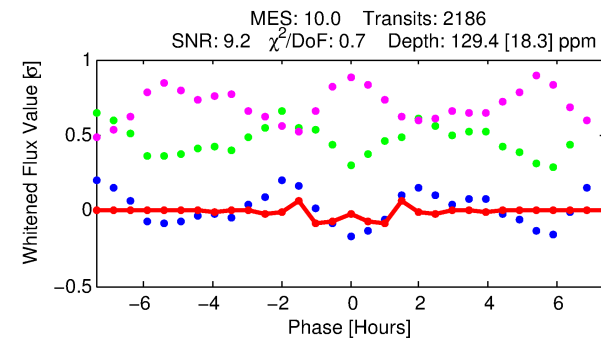
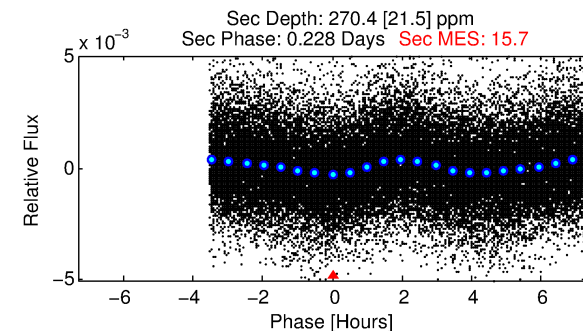
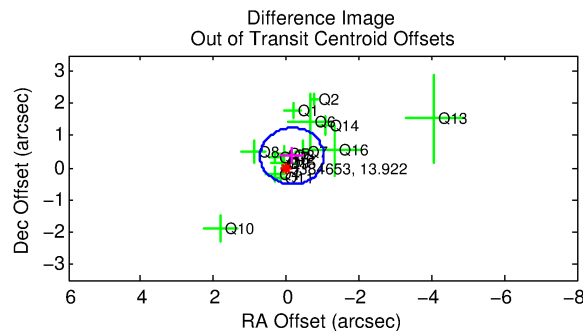
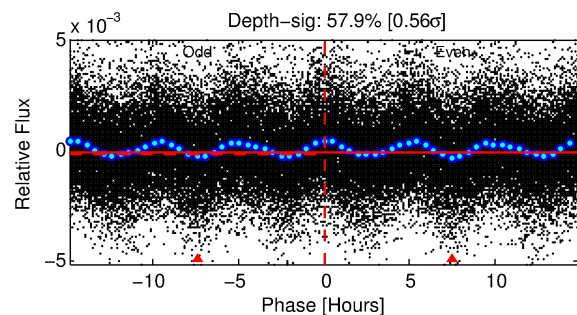
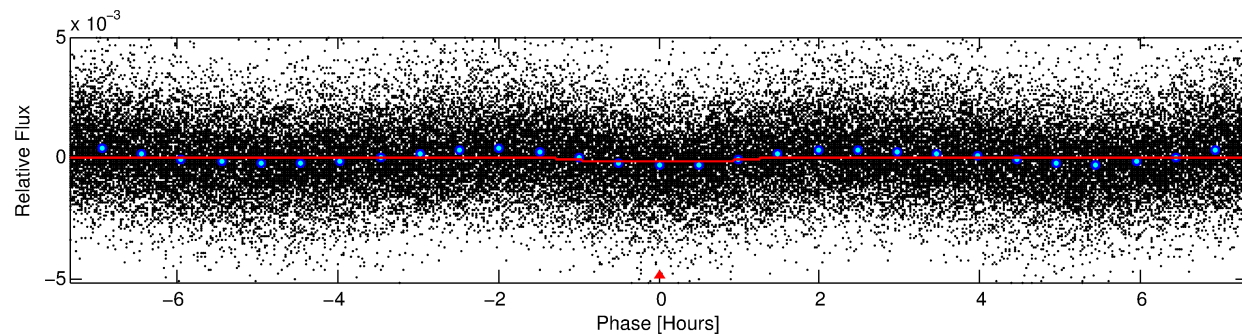
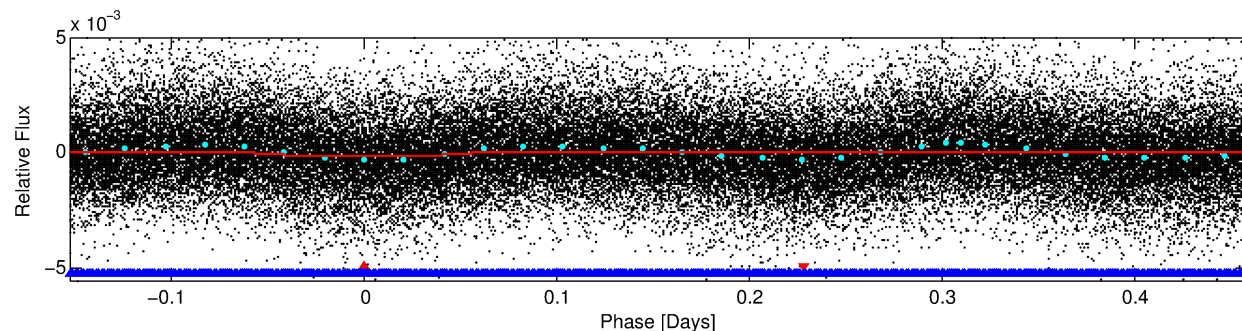
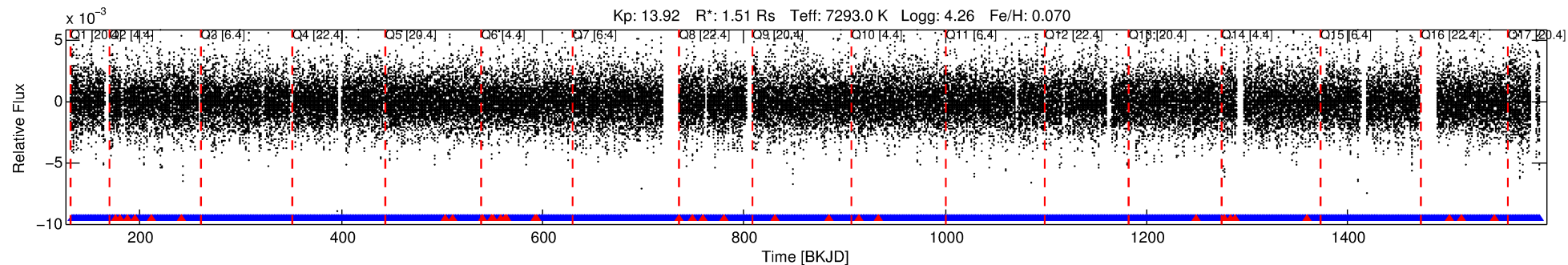
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005384653-01

No Significant Match Found

DV One-Page Summary

KIC: 5384653 Candidate: 1 of 2 Period: 0.611 d



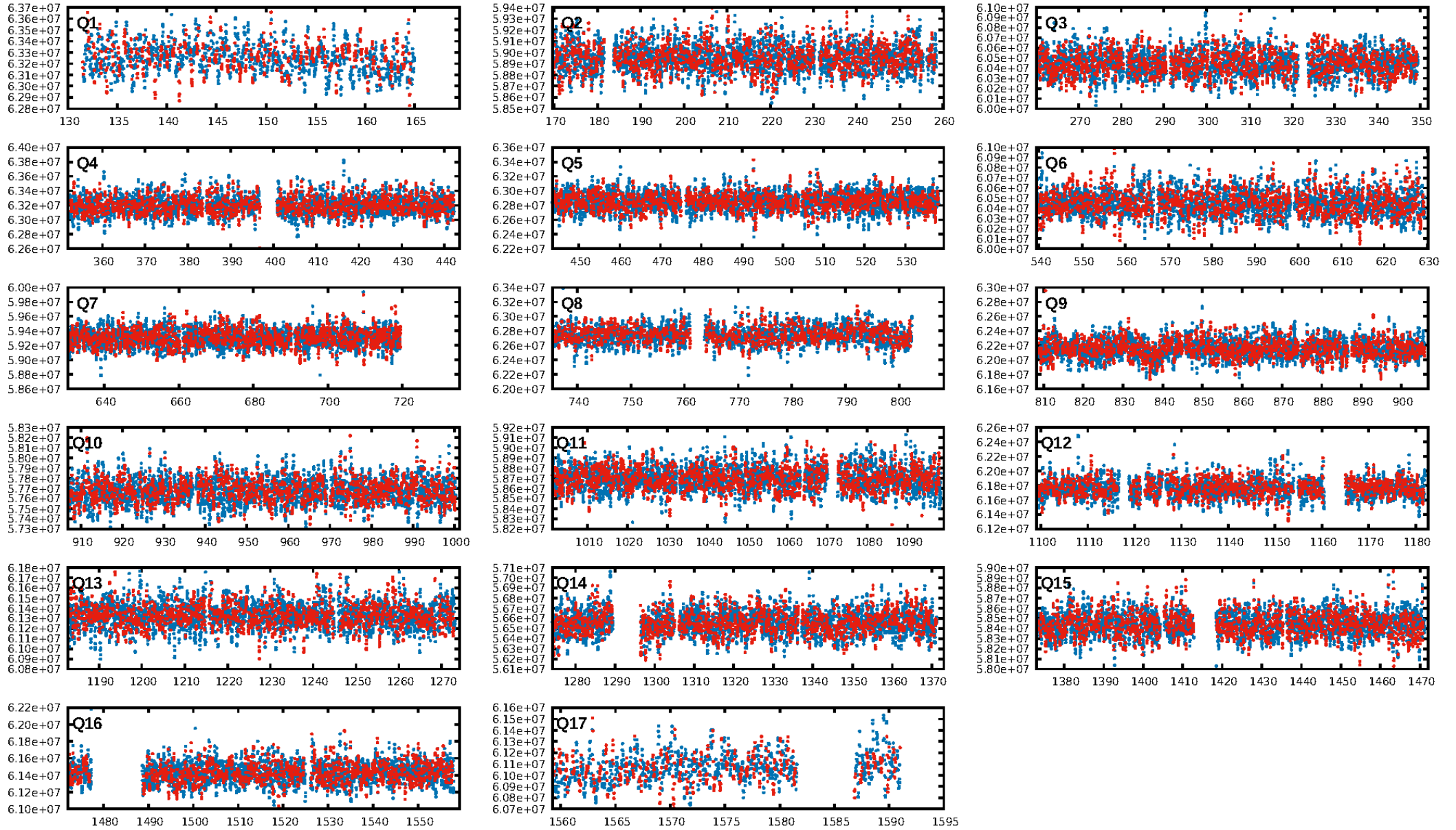
DV Fit Results:

Period = 0.61124 [0.00001] d
Epoch = 132.0816 [0.0011] BKJD
Rp/R* = 0.0120 [0.0023]
a/R* = 1.31 [0.59]
b = 0.89 [0.26]
Seff = 21975.63 [10600.61]
Teq = 3105 [374] K
Rp = 1.98 [0.82] Re
a = 0.0162 [0.0050] AU
Ag = 10.04 [5.96] [1.52 σ]
Teffp = 8545 [939] K [5.38 σ]

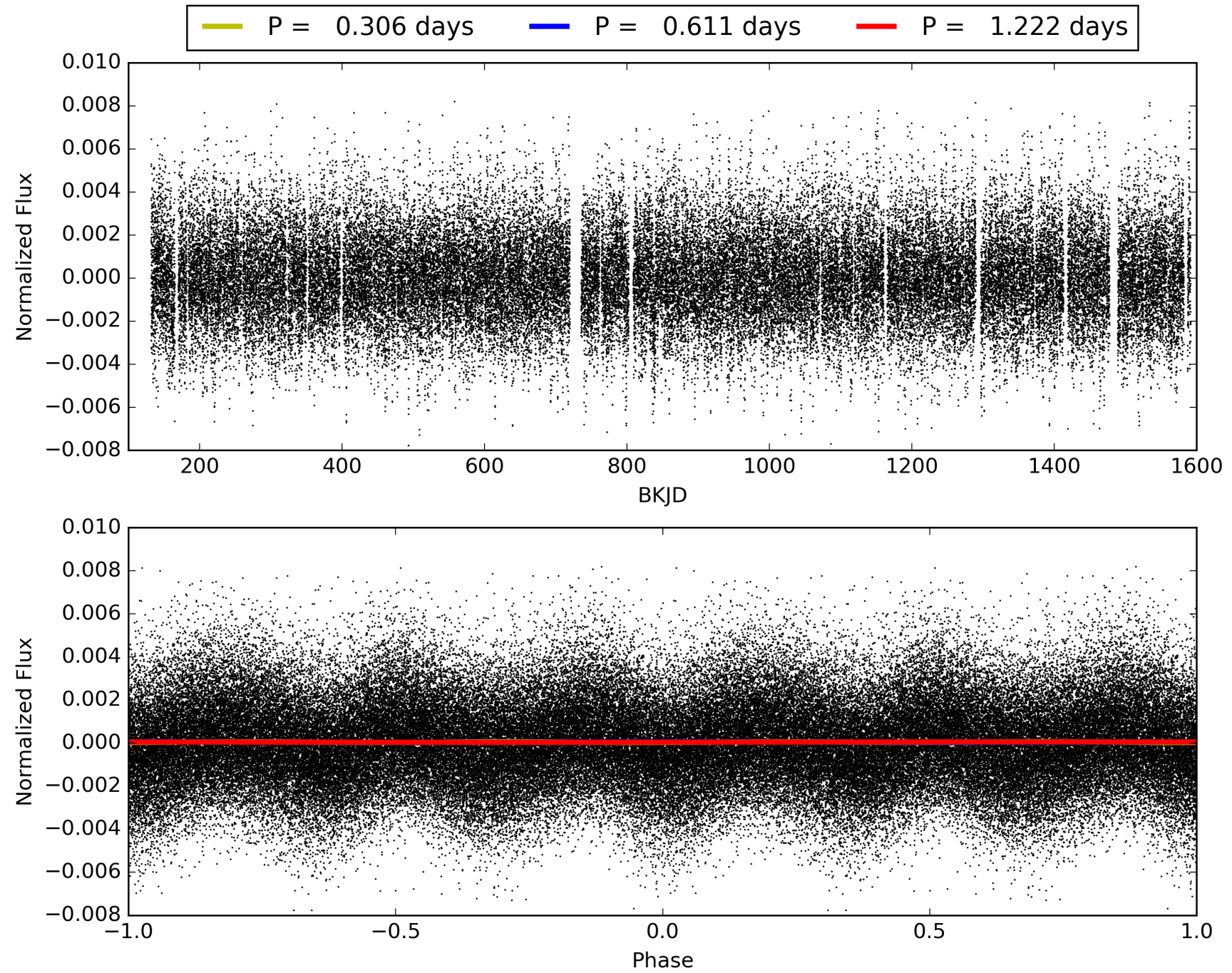
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 76.9% [1.20 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [2054/2087]
GhostDiagnostic-chr: 1.358
Centroid-sig: 0.0%
Centroid-so: 0.683 arcsec [1.96 σ]
OotOffset-rm: 0.389 arcsec [1.33 σ]
KicOffset-rm: 0.399 arcsec [1.37 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005384653-01, PDC Light Curves

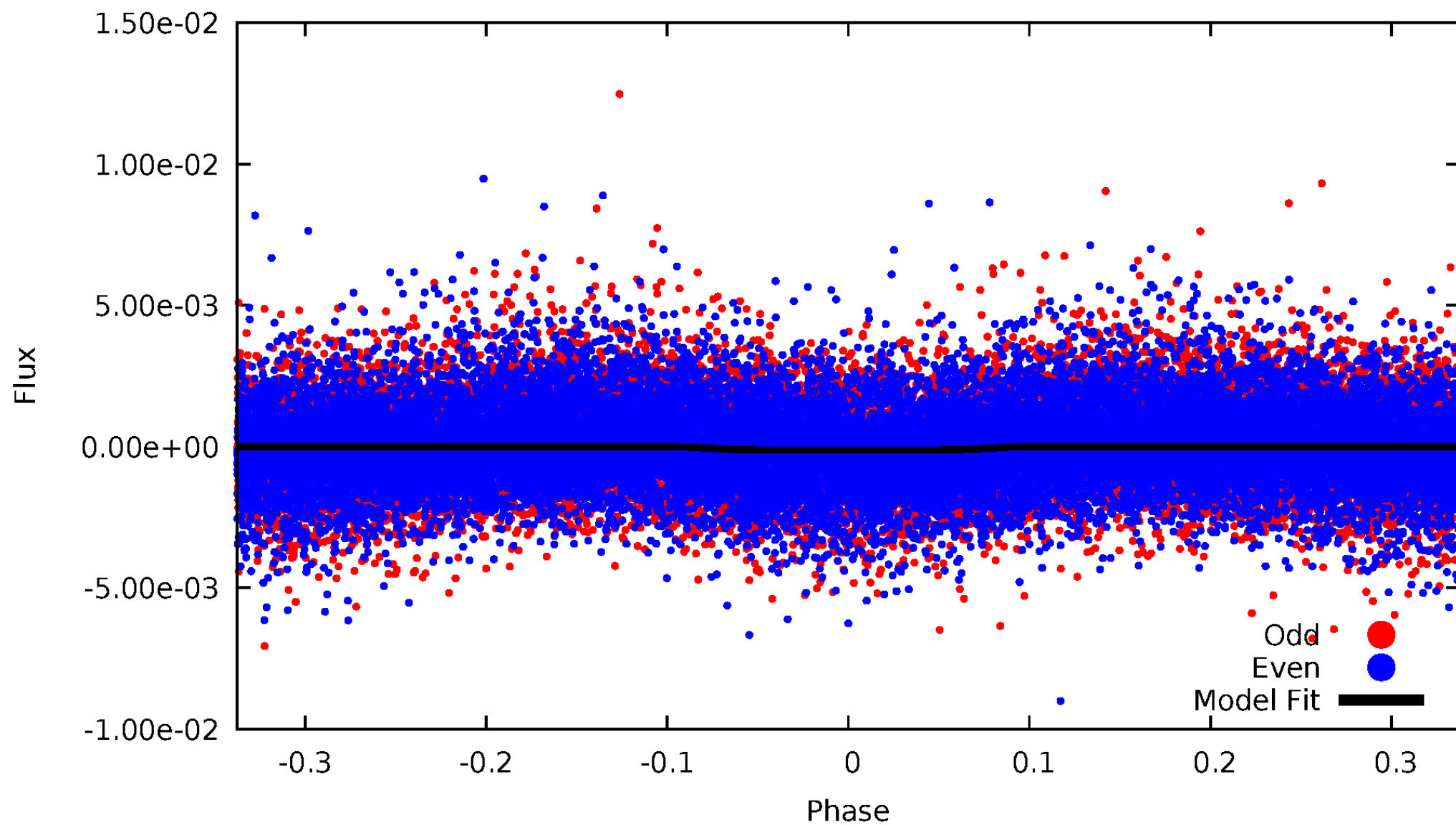


TCE 005384653-01



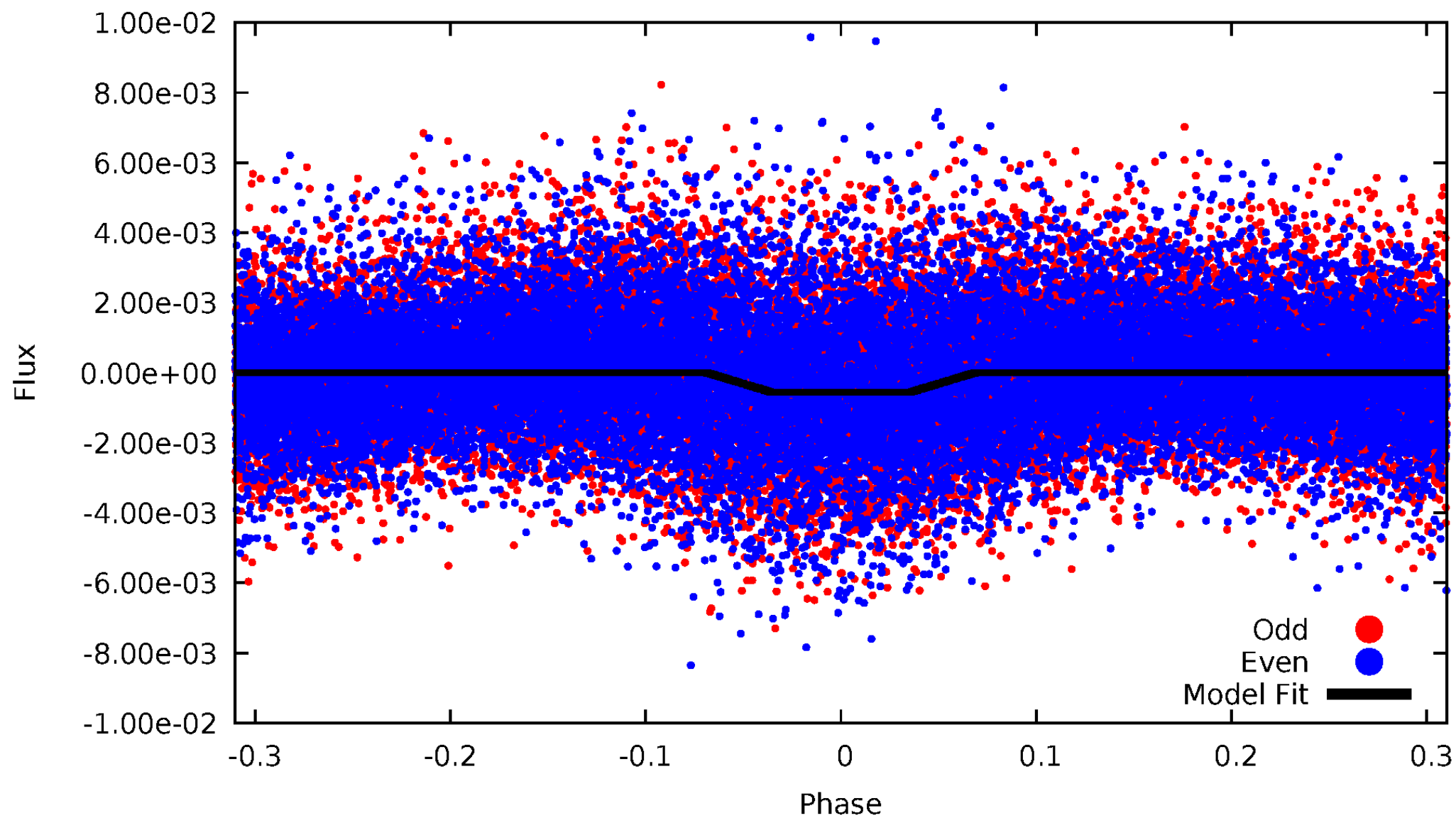
DV Odd/Even

TCE 005384653-01



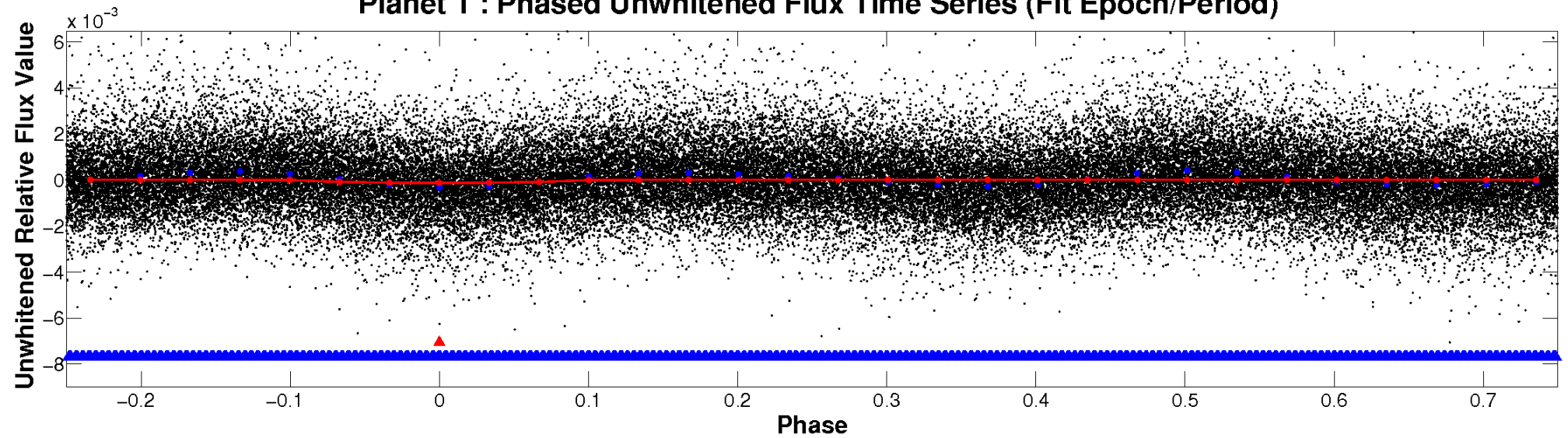
ALT Odd/Even

TCE 005384653-01

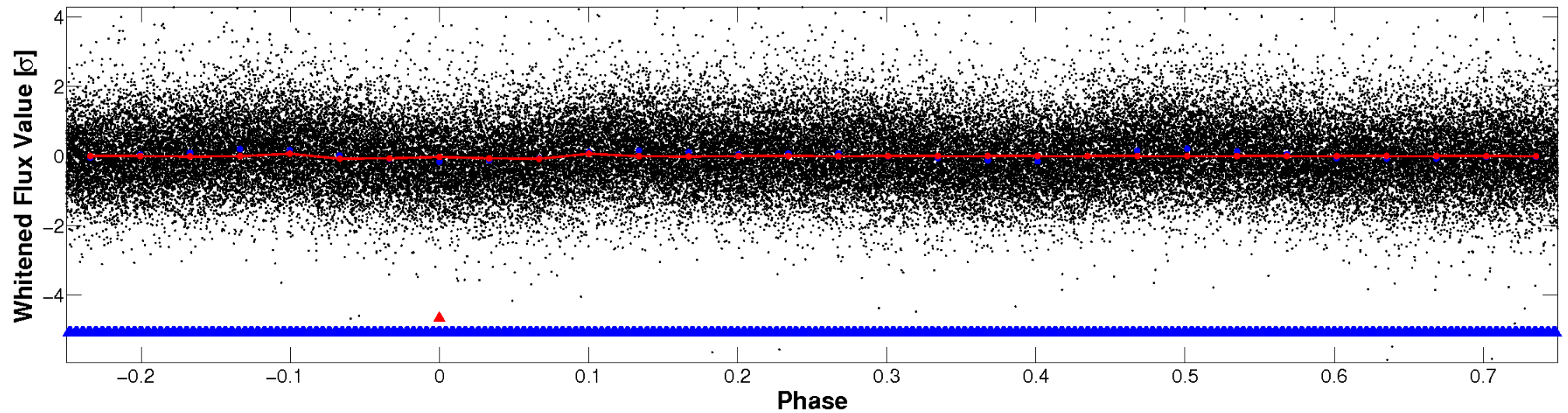


Non-Whitened Vs. Whitened Light Curve

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

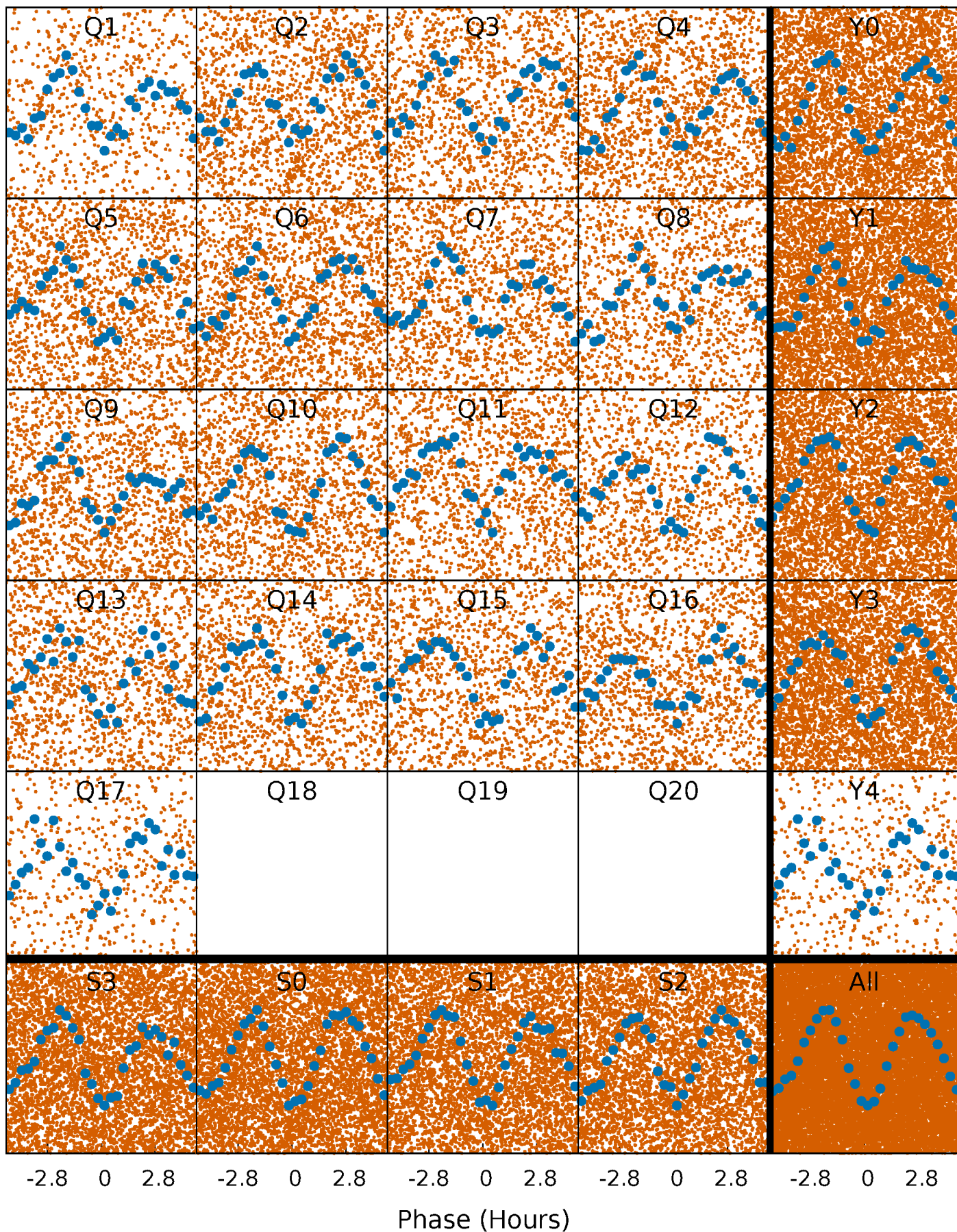


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



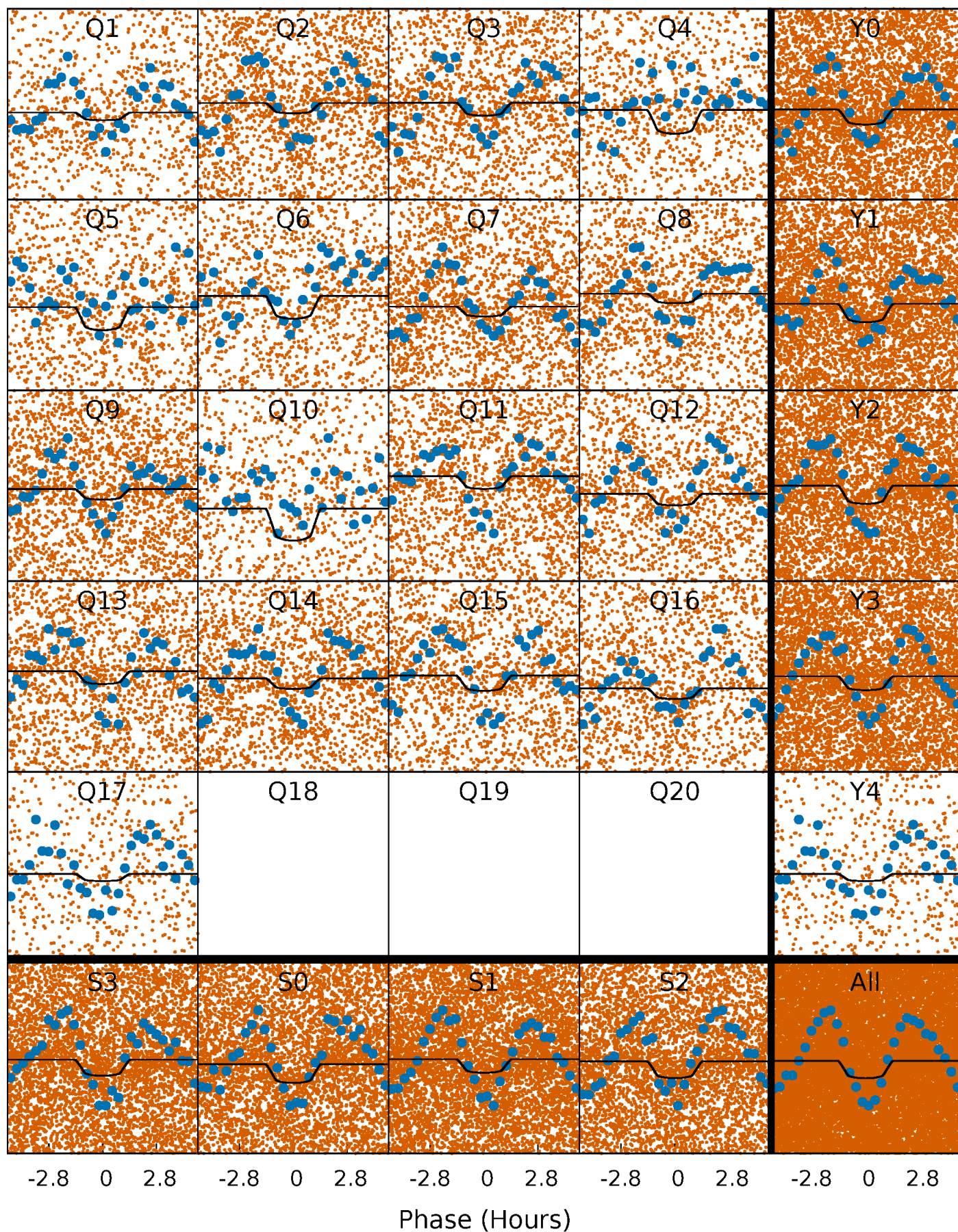
PDC Quarter-Phased Transit Curves

TCE 005384653-01 P= 0.611237 Days $T_0=132.081649$ (BKJD)



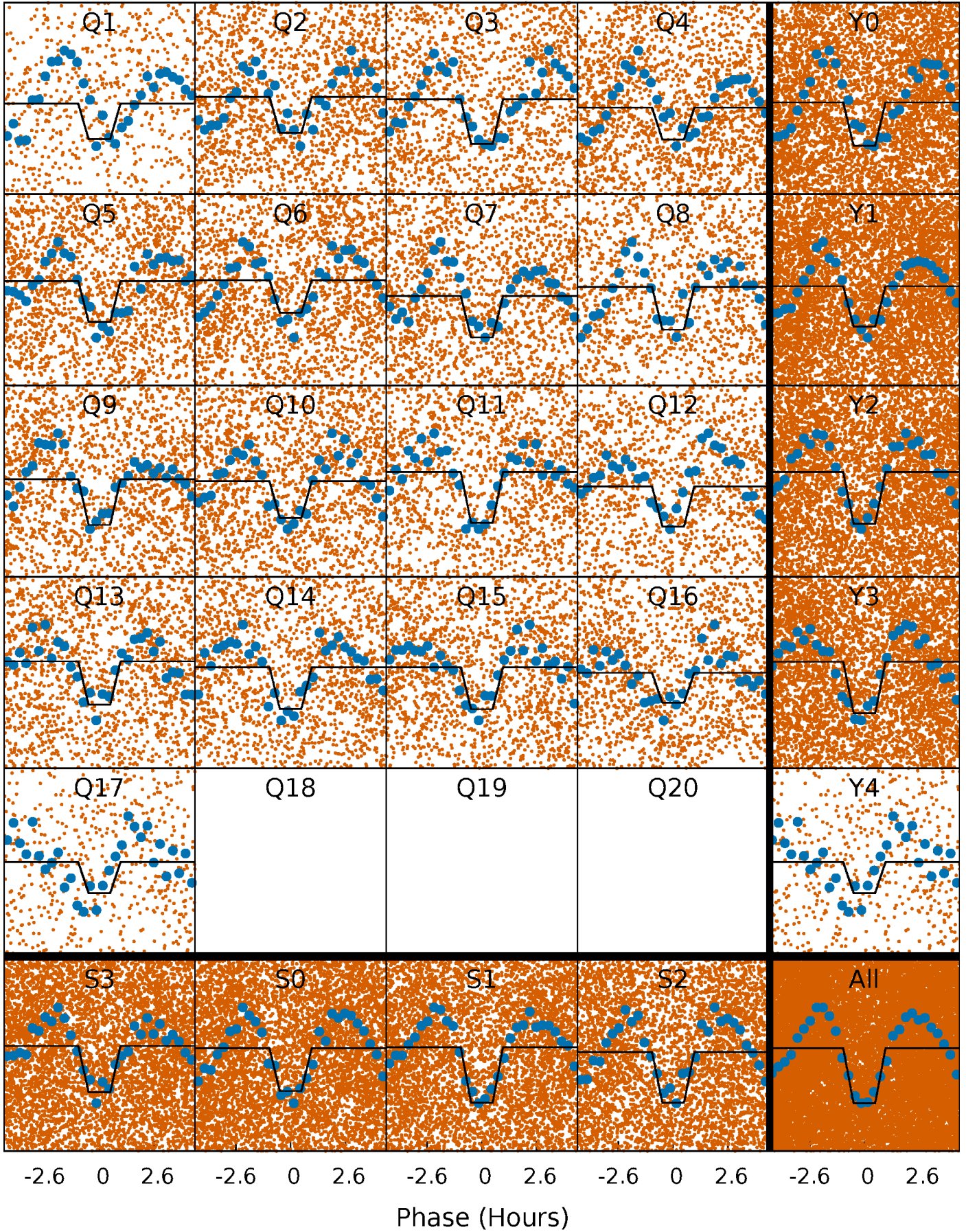
DV Quarter-Phased Transit Curves

TCE 005384653-01 P= 0.611237 Days $T_0=132.081649$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

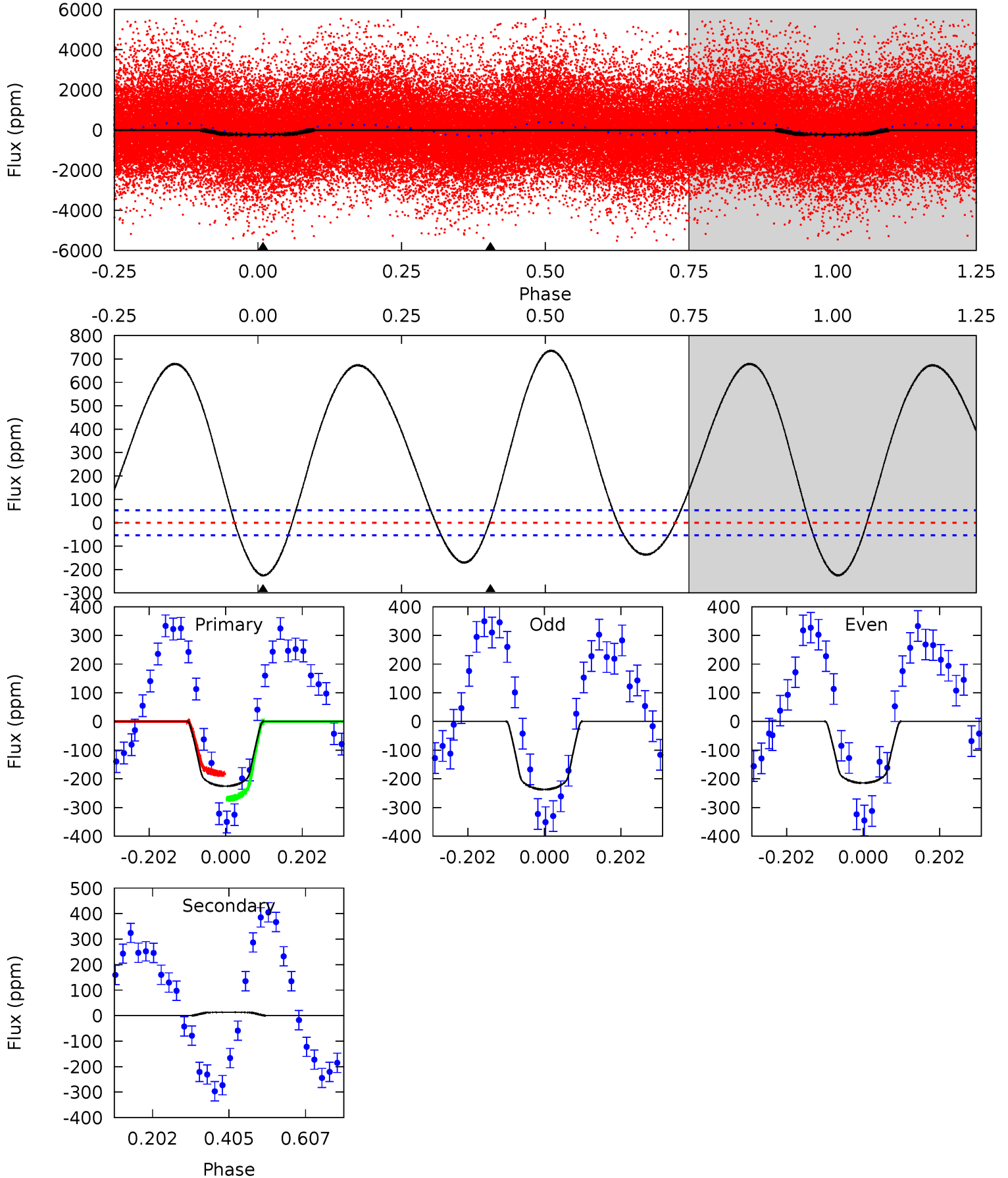
TCE 005384653-01 P= 0.611252 Days $T_0=132.071096$ (BKJD)



DV Model-Shift Uniqueness Test

005384653-01, P = 0.611237 Days, E = 131.470412 Days

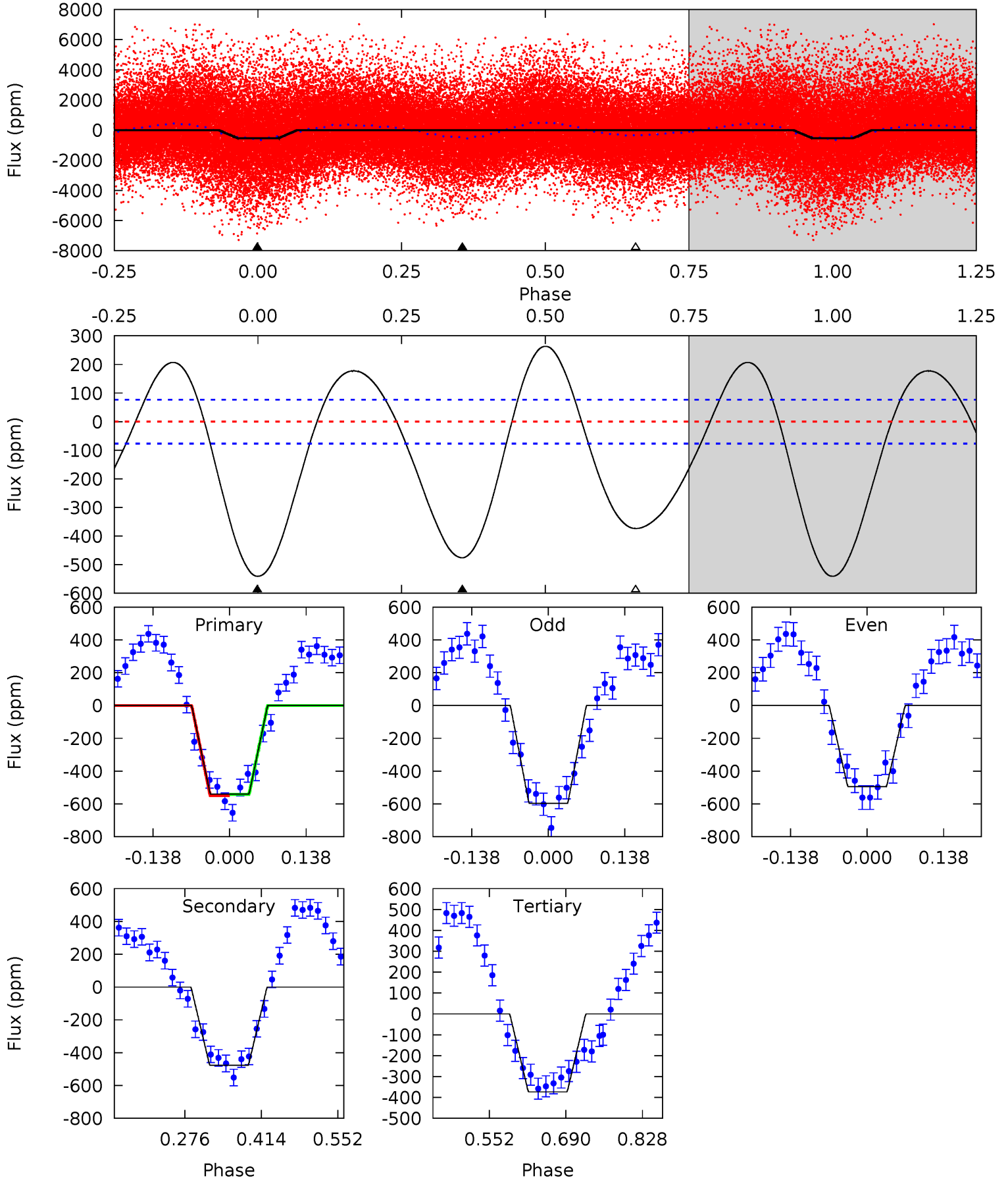
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	-1.10	0	0	4.41	1.28	15.8	18.5	18.5	-1.10	-1.10	0.93	1.10	0.77	3.61



Alt Model-Shift Uniqueness Test

005384653-01, P = 0.611252 Days, E = 131.459844 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.8	28.0	22.0	0	4.50	1.48	12.8	9.80	31.8	6.02	28.0	3.01	0.96	0.33	0.24



Stellar Parameters For KIC 005384653

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7293^{+203}_{-348}	$4.263^{+0.060}_{-0.240}$	$0.070^{+0.200}_{-0.350}$	$1.512^{+0.558}_{-0.199}$	$1.528^{+0.232}_{-0.211}$	$0.623^{+0.212}_{-0.368}$
	+3%/-5%	+1%/-6%	+286%/-500%	+37%/-13%	+15%/-14%	+34%/-59%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005384653-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	13 ± 12	$2.09^{+0.55}_{-0.43}$	4434^{+354}_{-273}	-4641^{+596}_{-591}	$-0.385^{+0.342}_{-0.552}$
Alt.	-476 ± 17	$4.07^{+0.79}_{-0.56}$	4428^{+362}_{-261}	6776^{+497}_{-425}	$4.093^{+1.257}_{-1.170}$

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 $A_{obs} \gg 1.0$

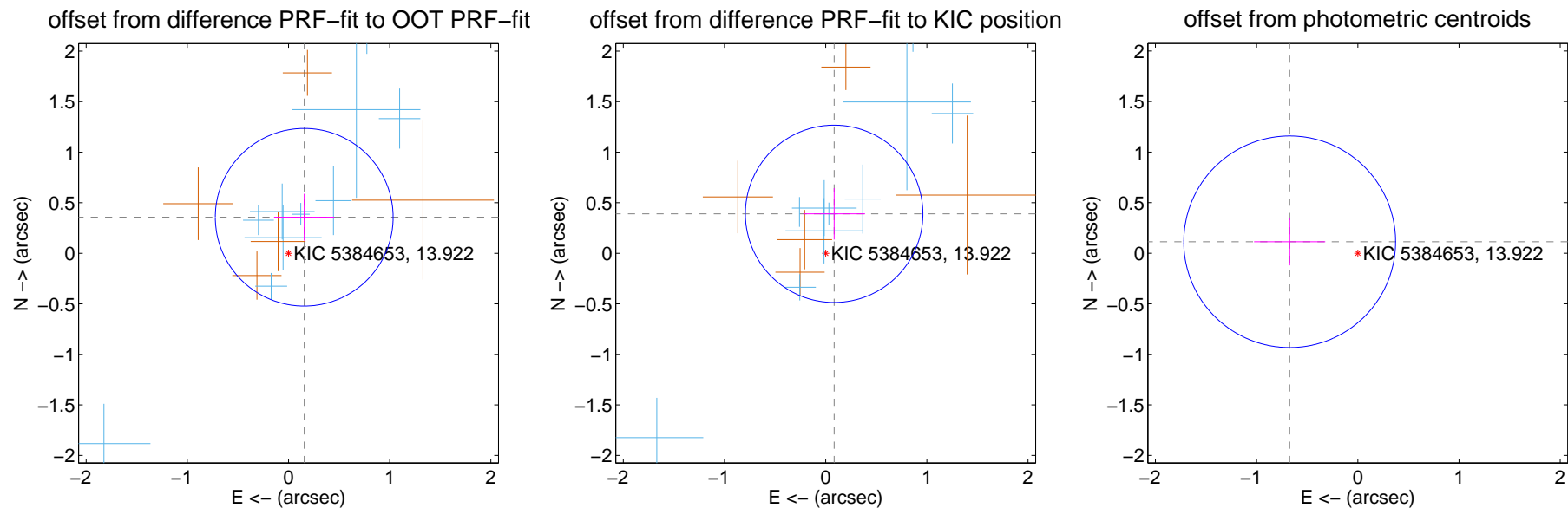
DV Centroid Data

Supplemental centroid analysis for 005384653-01. Kepler magnitude: 13.92. Transit SNR 9.20

There are 10 quarters with good PRF difference image offsets

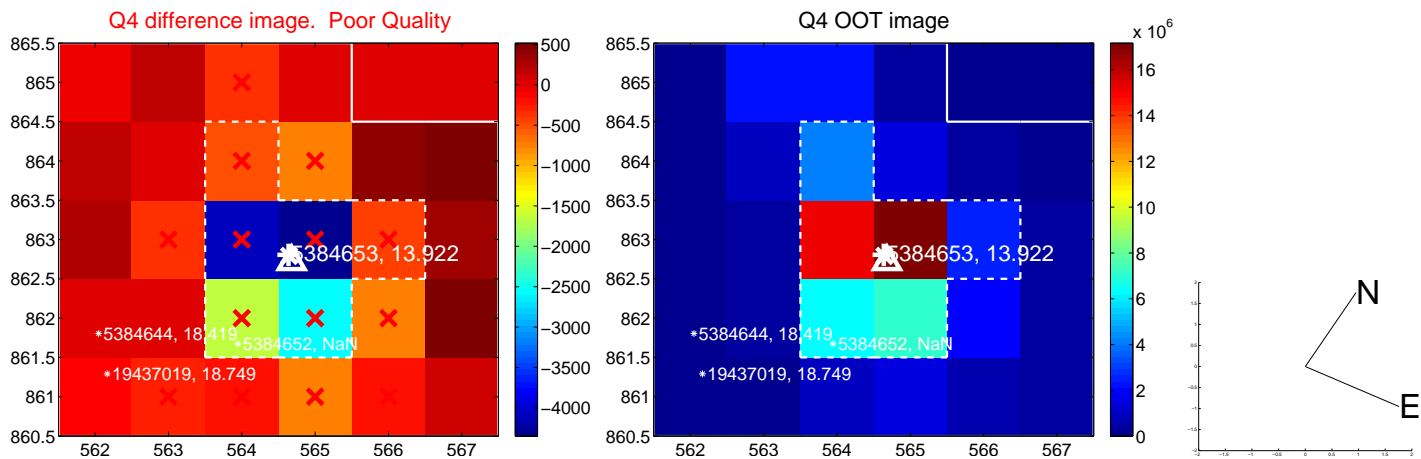
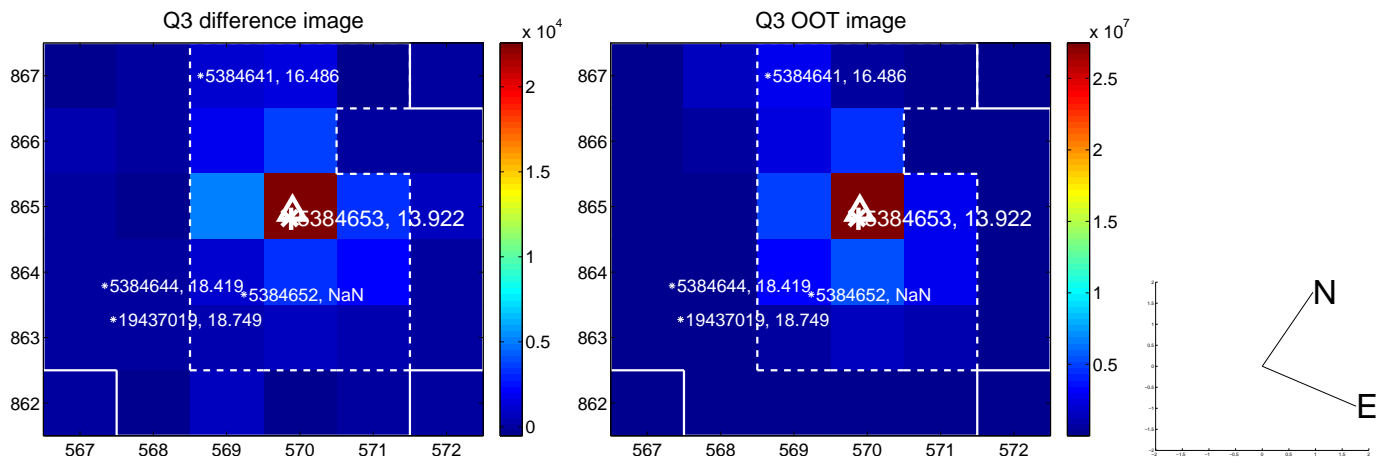
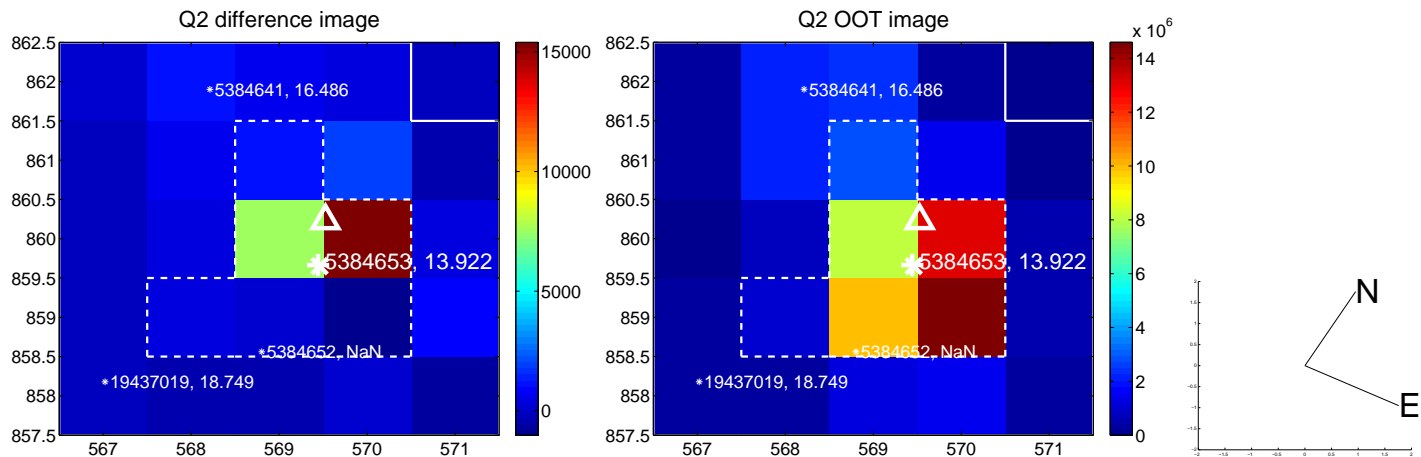
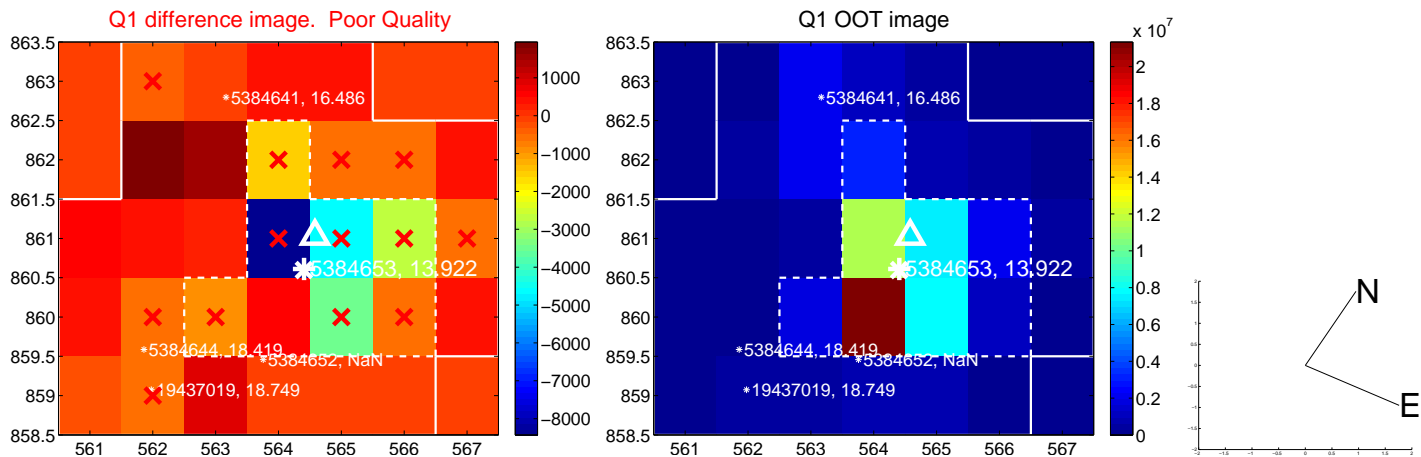
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.389 ± 0.293	1.33	-0.155 ± 0.298	0.356 ± 0.232
PRF-fit source offset from KIC position	0.399 ± 0.292	1.37	-0.084 ± 0.305	0.390 ± 0.254
photometric centroid source offset	0.68 ± 0.35	1.96	0.67 ± 0.35	0.11 ± 0.23

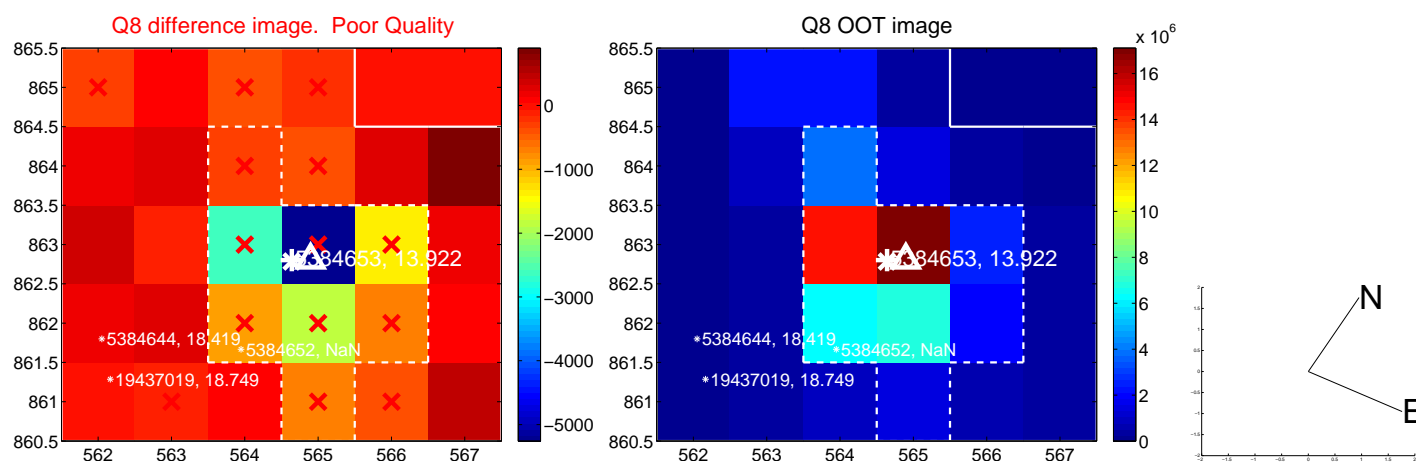
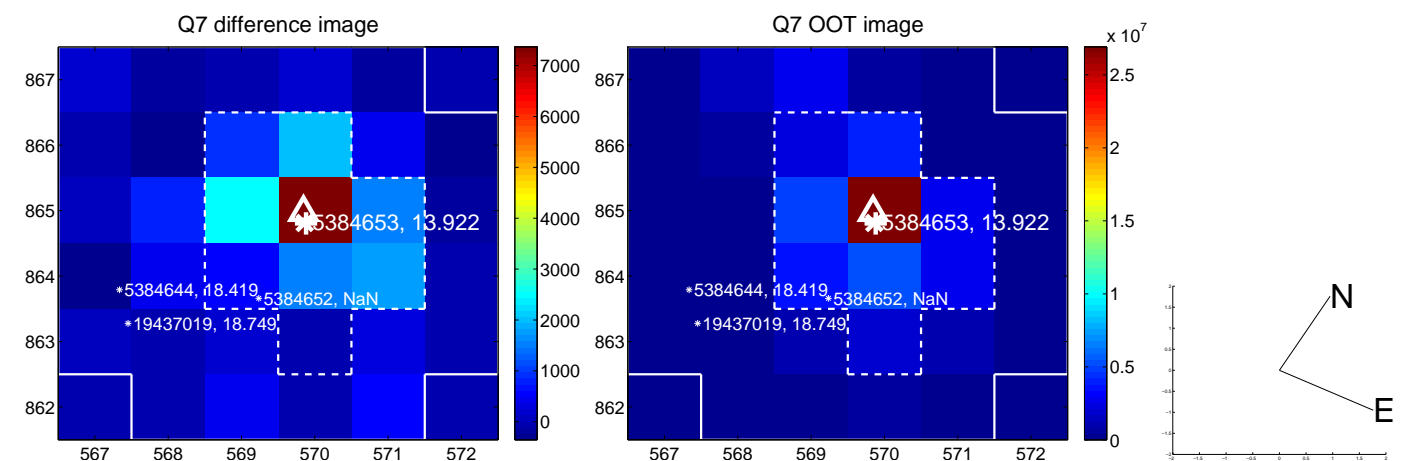
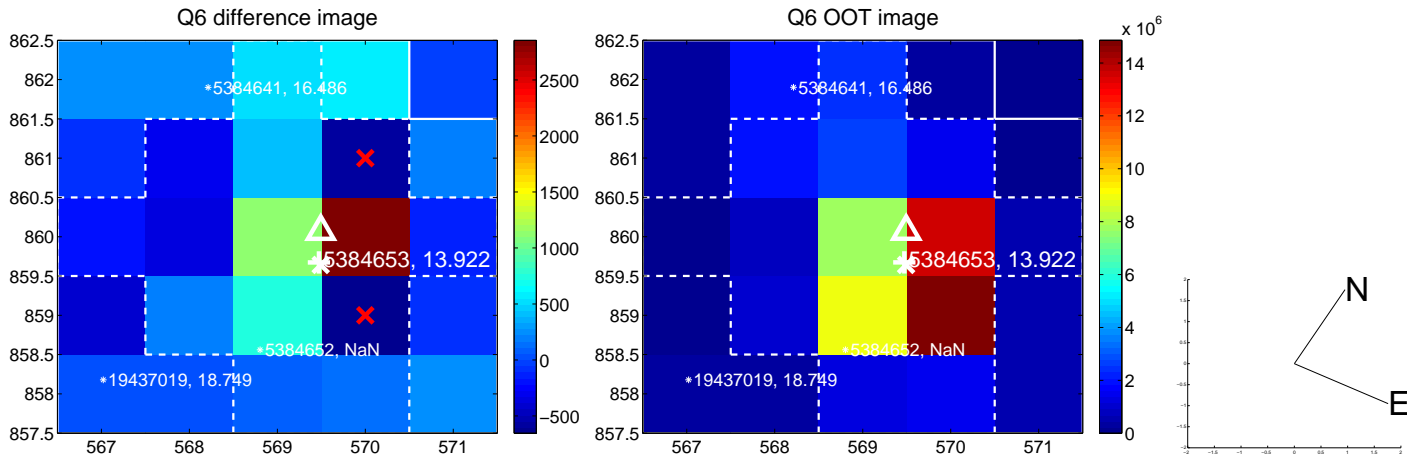
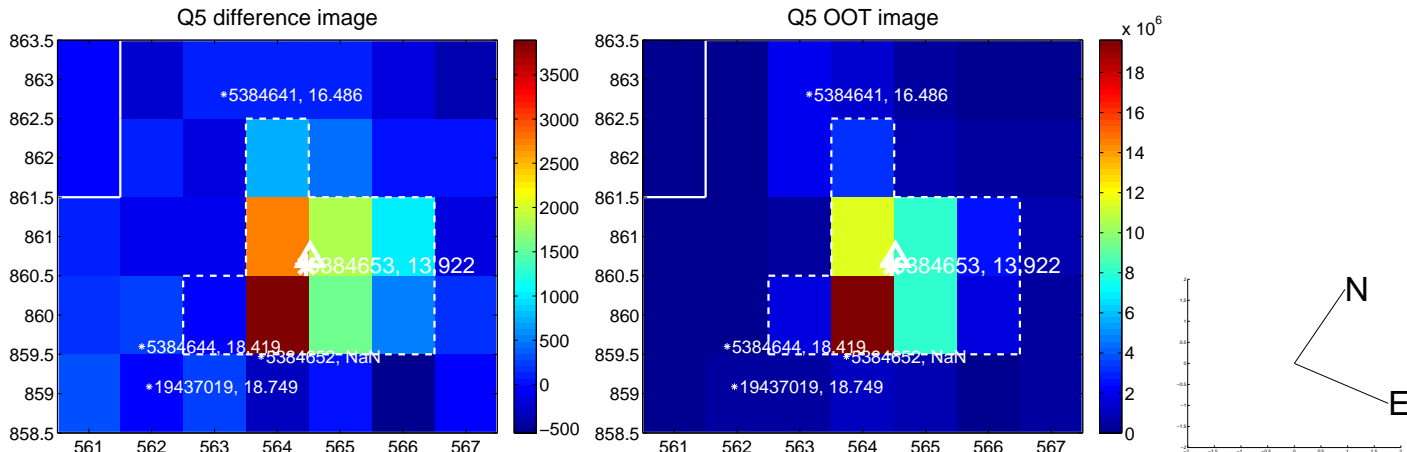


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

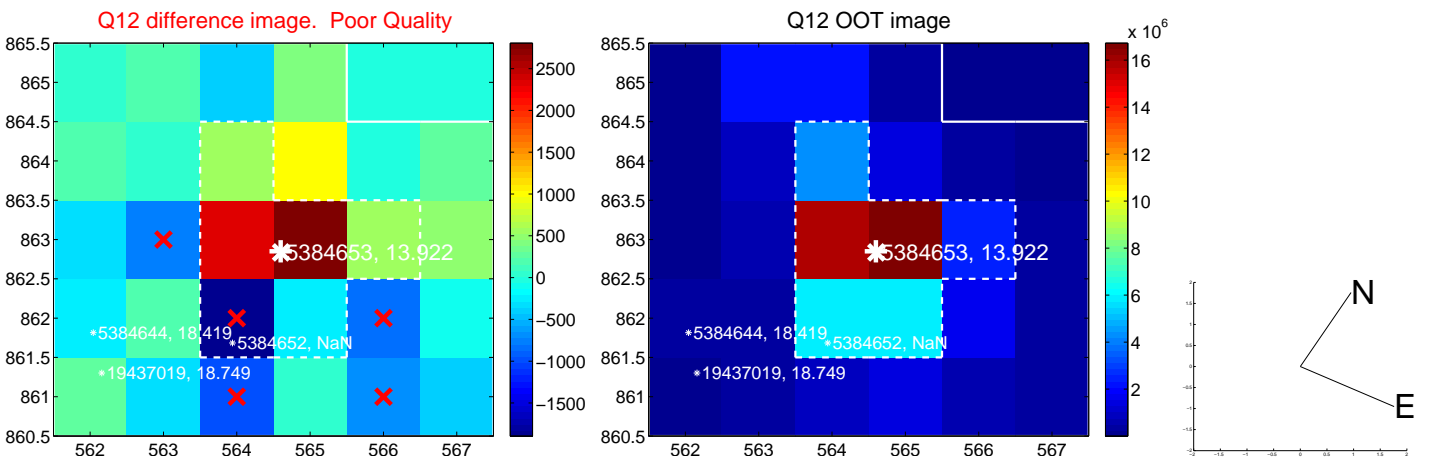
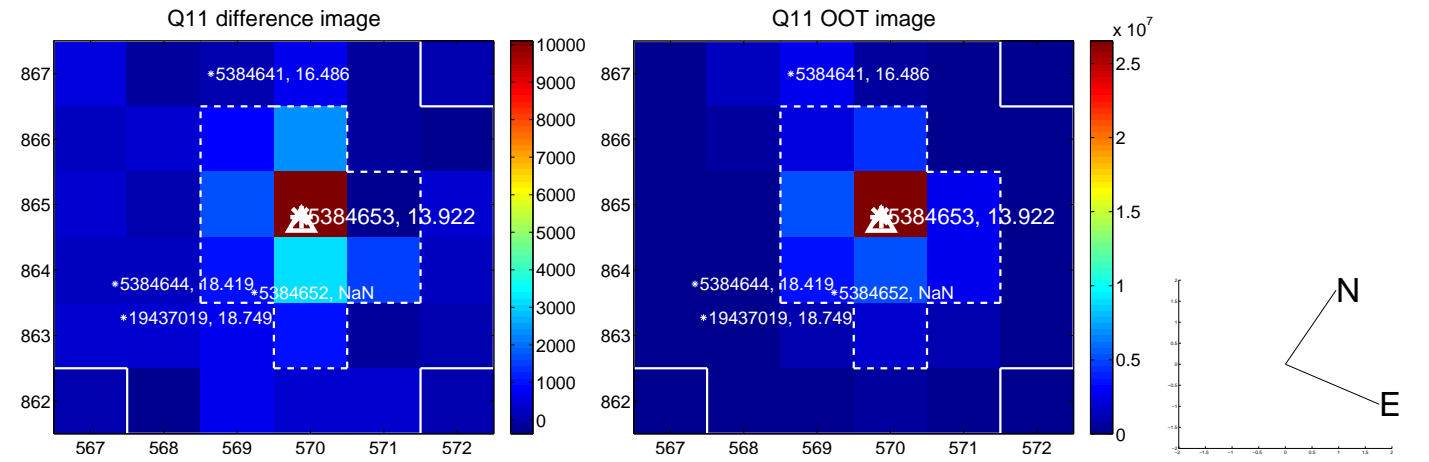
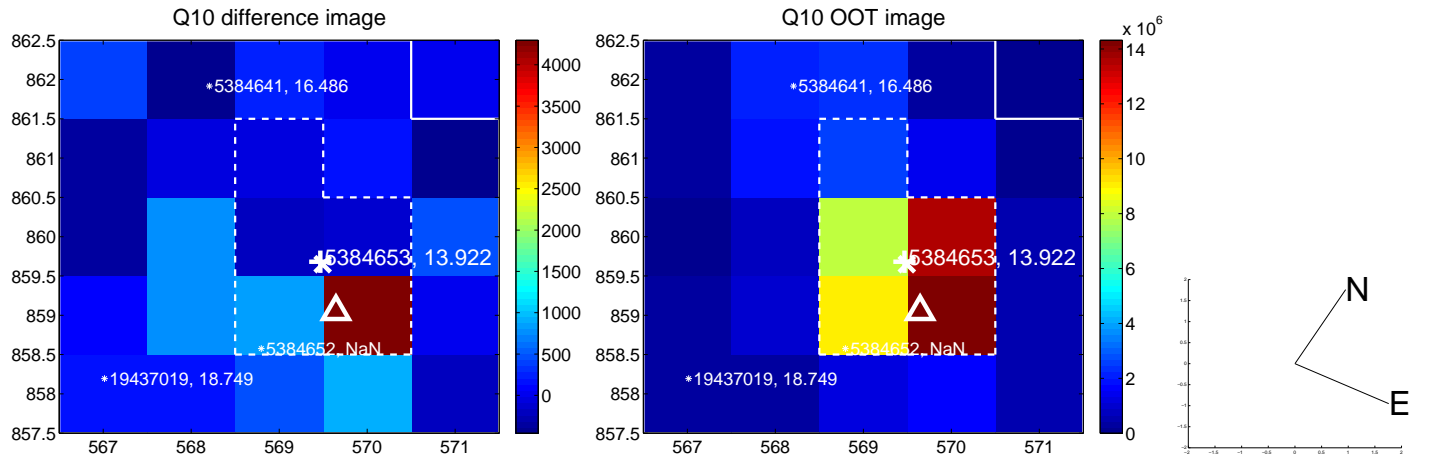
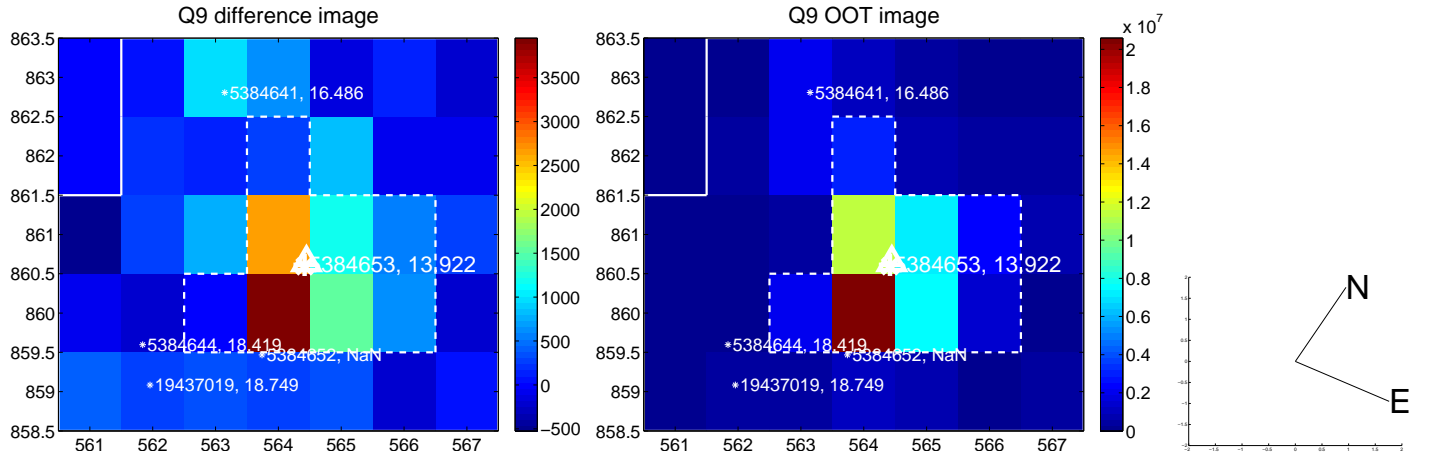
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



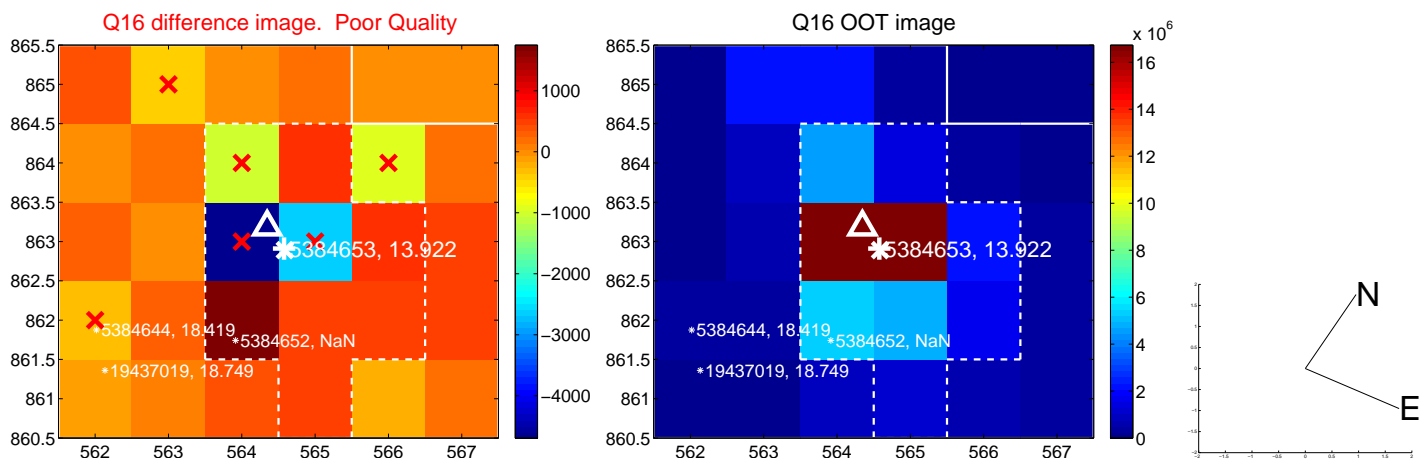
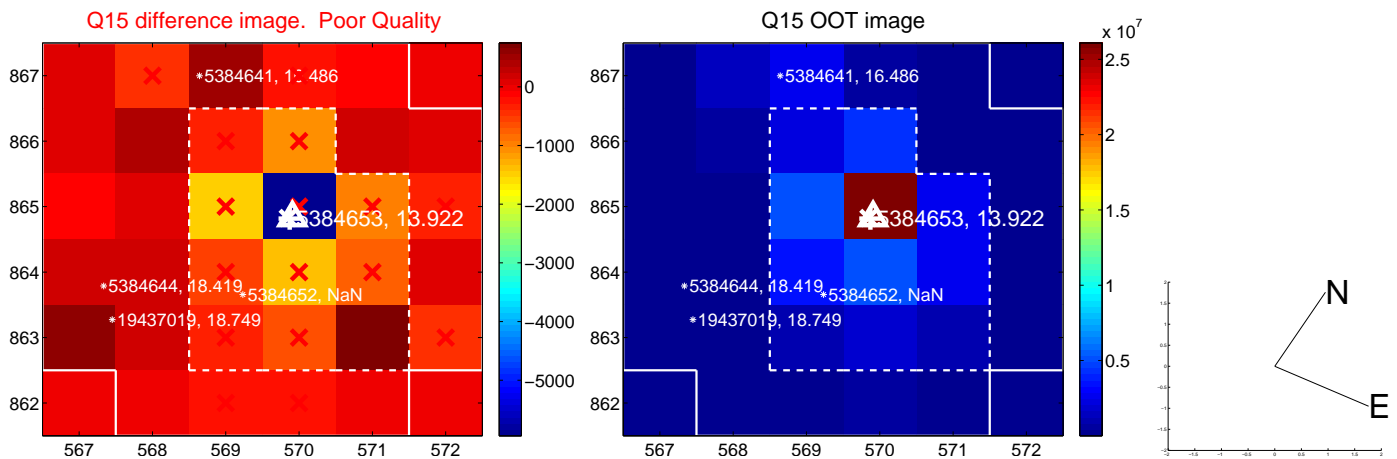
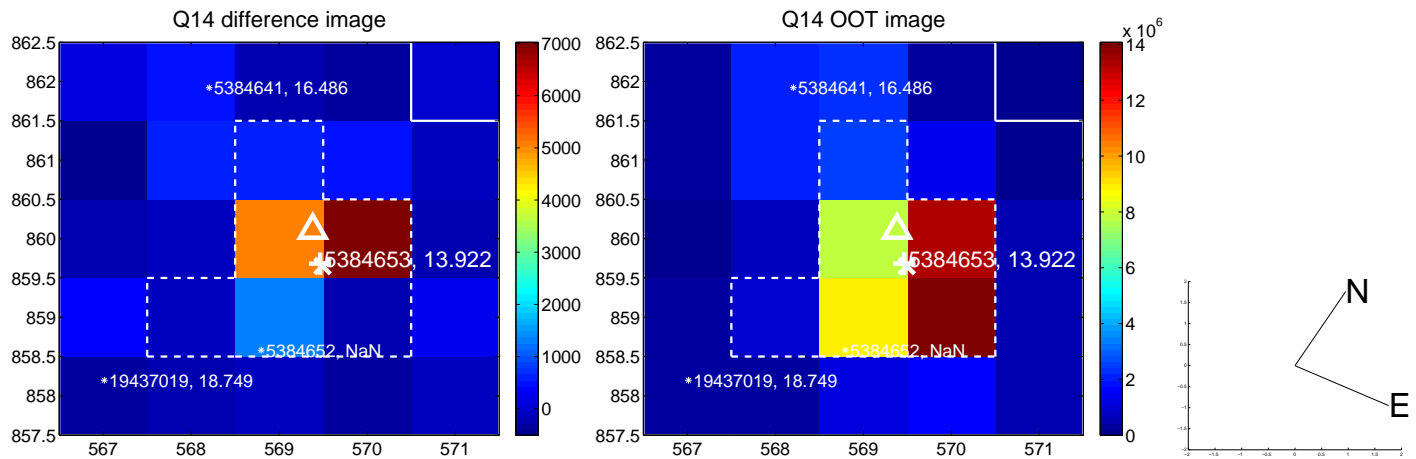
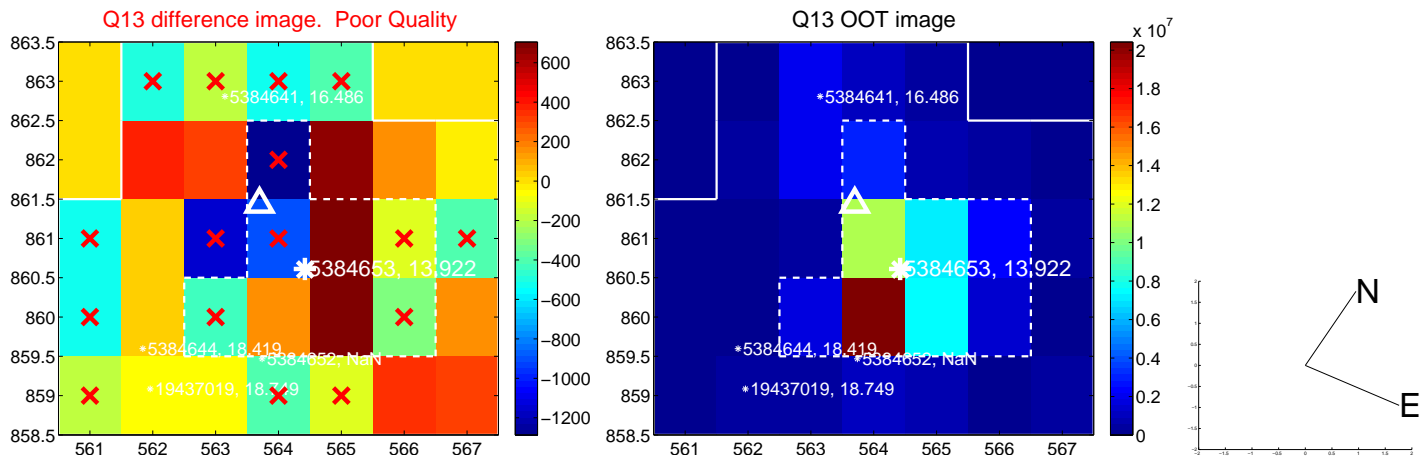
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



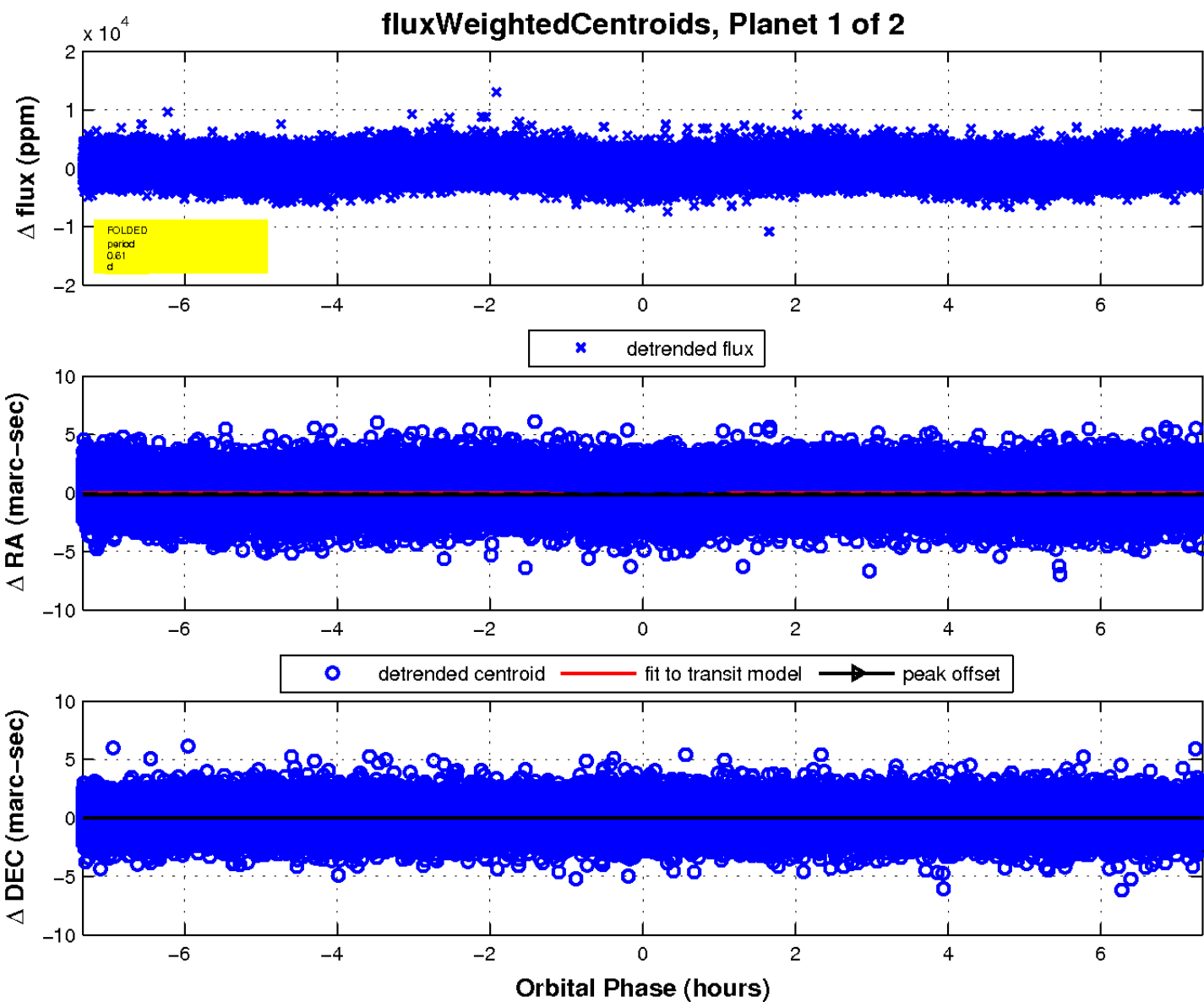
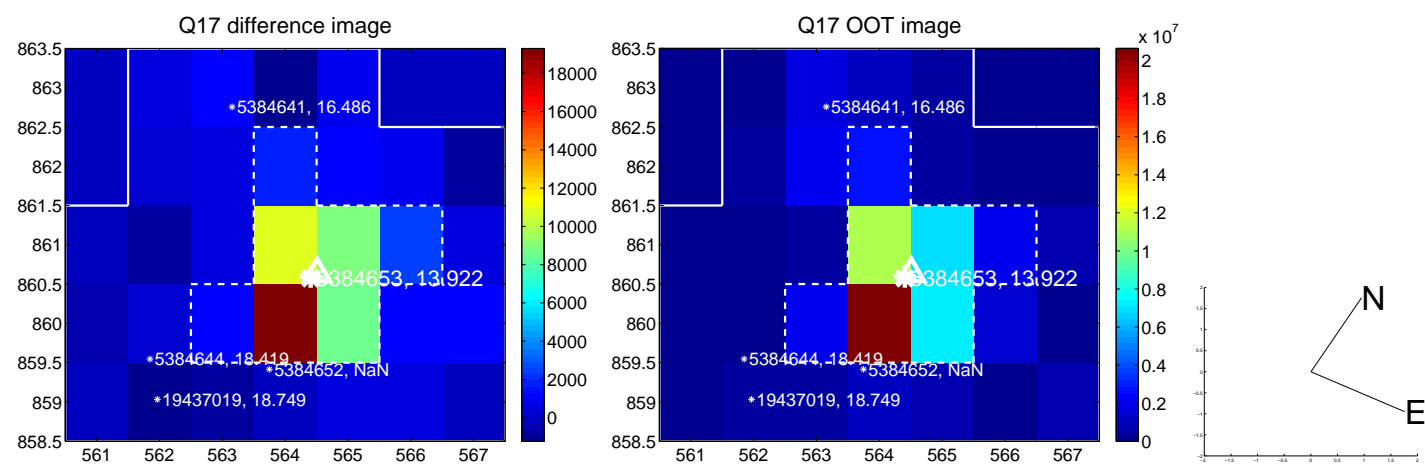
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



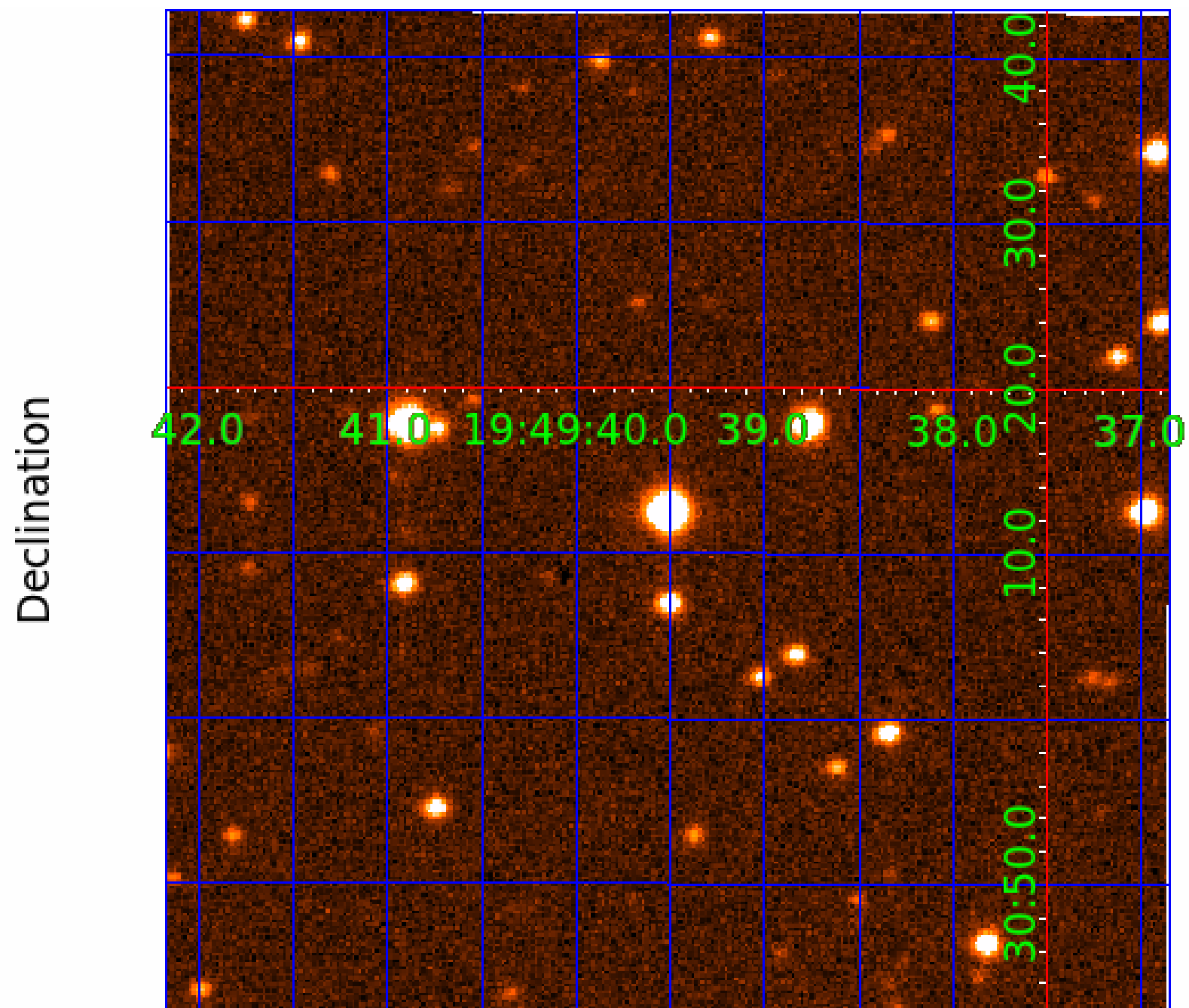
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005384653

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})
005384653-01	OBS	No	0.611237	132.081649	129.4	2.475	10.0	9.2	1.51	7293	1.98	21975.63
005384653-02	OBS	No	0.805237	132.119527	524.6	3.000	15.4	-1.0	1.51	7293	3.51	15216.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005384653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005384653-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

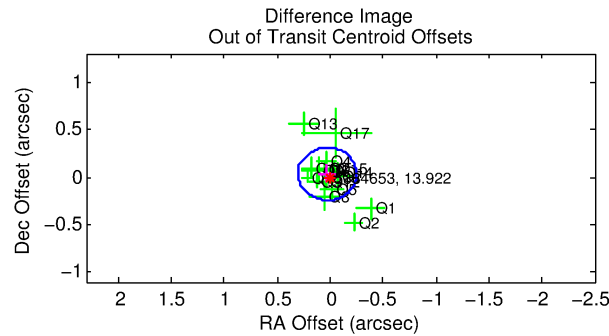
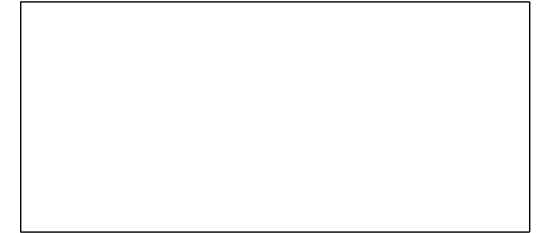
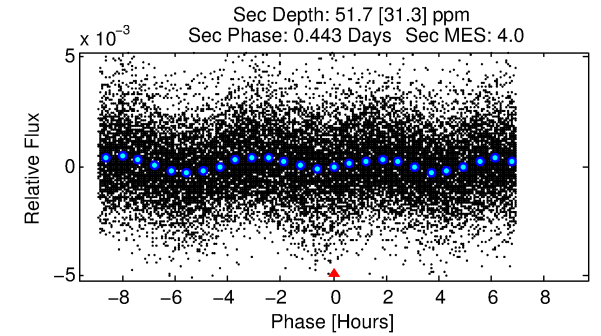
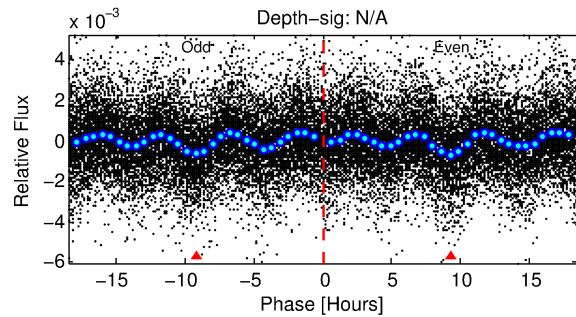
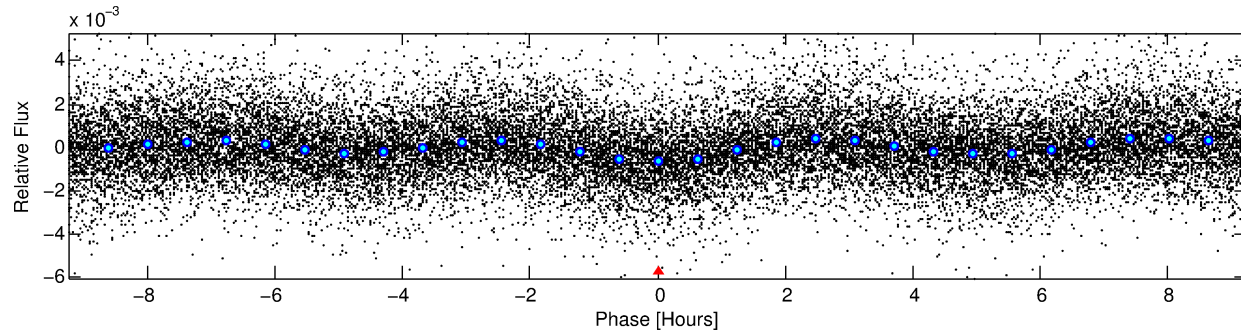
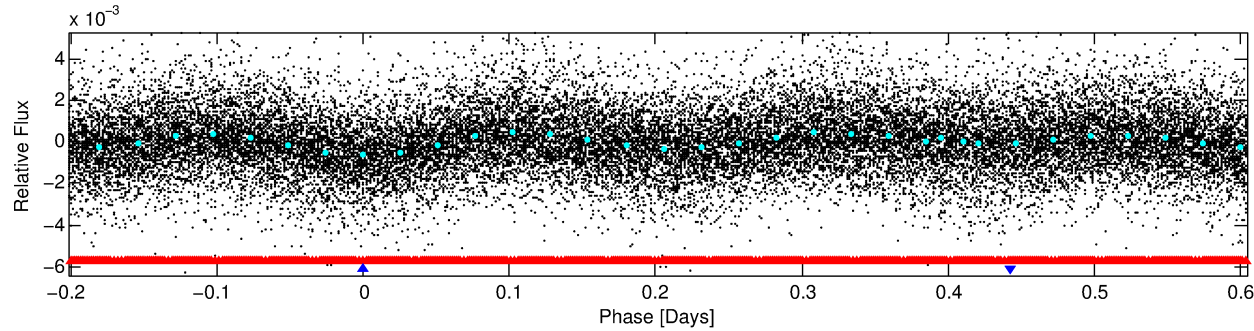
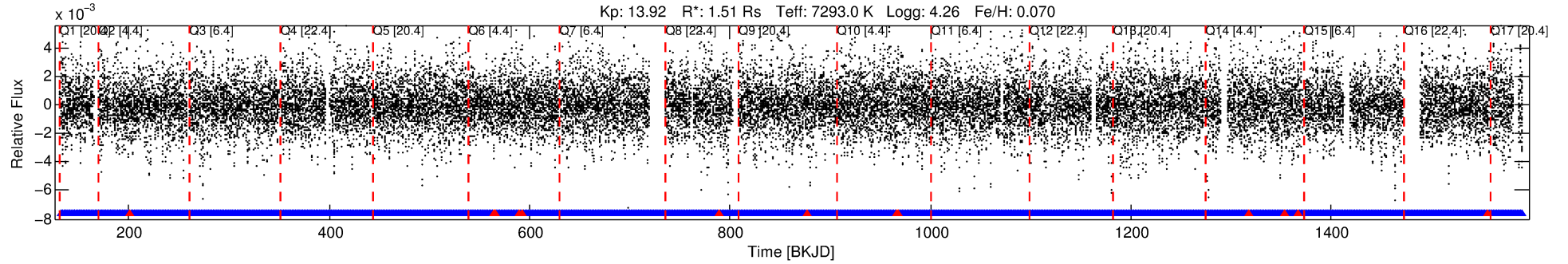
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005384653-02

No Significant Match Found

DV One-Page Summary

KIC: 5384653 Candidate: 2 of 2 Period: 0.805 d



TPS TCE Results:

Period = 0.80524 d
Epoch = 132.1195 BKJD

DV fit results are unavailable

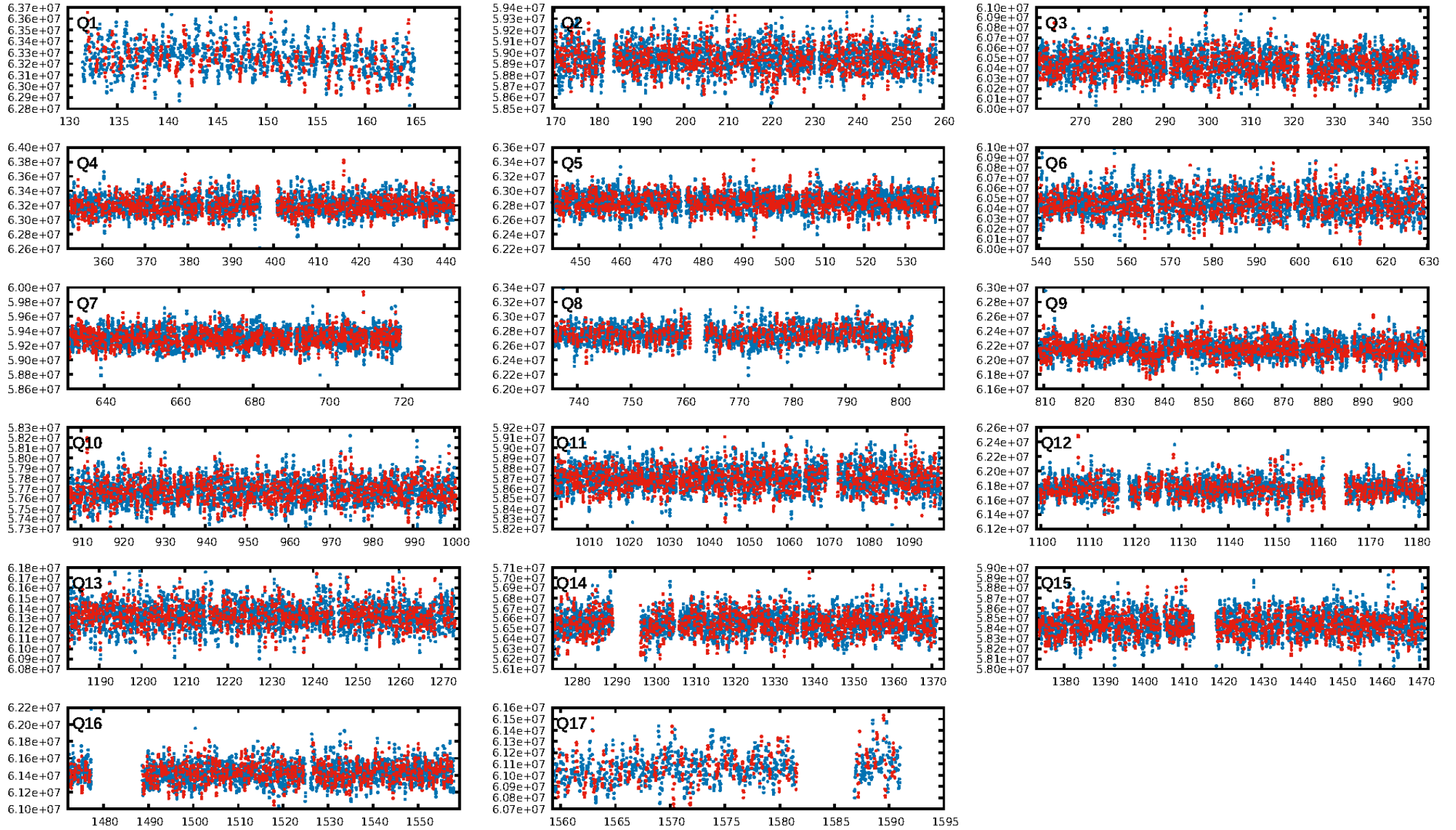
DV Diagnostic Results:

ShortPeriod-sig: 76.9% [1.20 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1044/1057]
GhostDiagnostic-chr: 0.948
Centroid-sig: 0.7%
Centroid-so: 0.276 arcsec [3.84 σ]
OotOffset-rm: 0.044 arcsec [0.48 σ]
KicOffset-rm: 0.084 arcsec [0.89 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

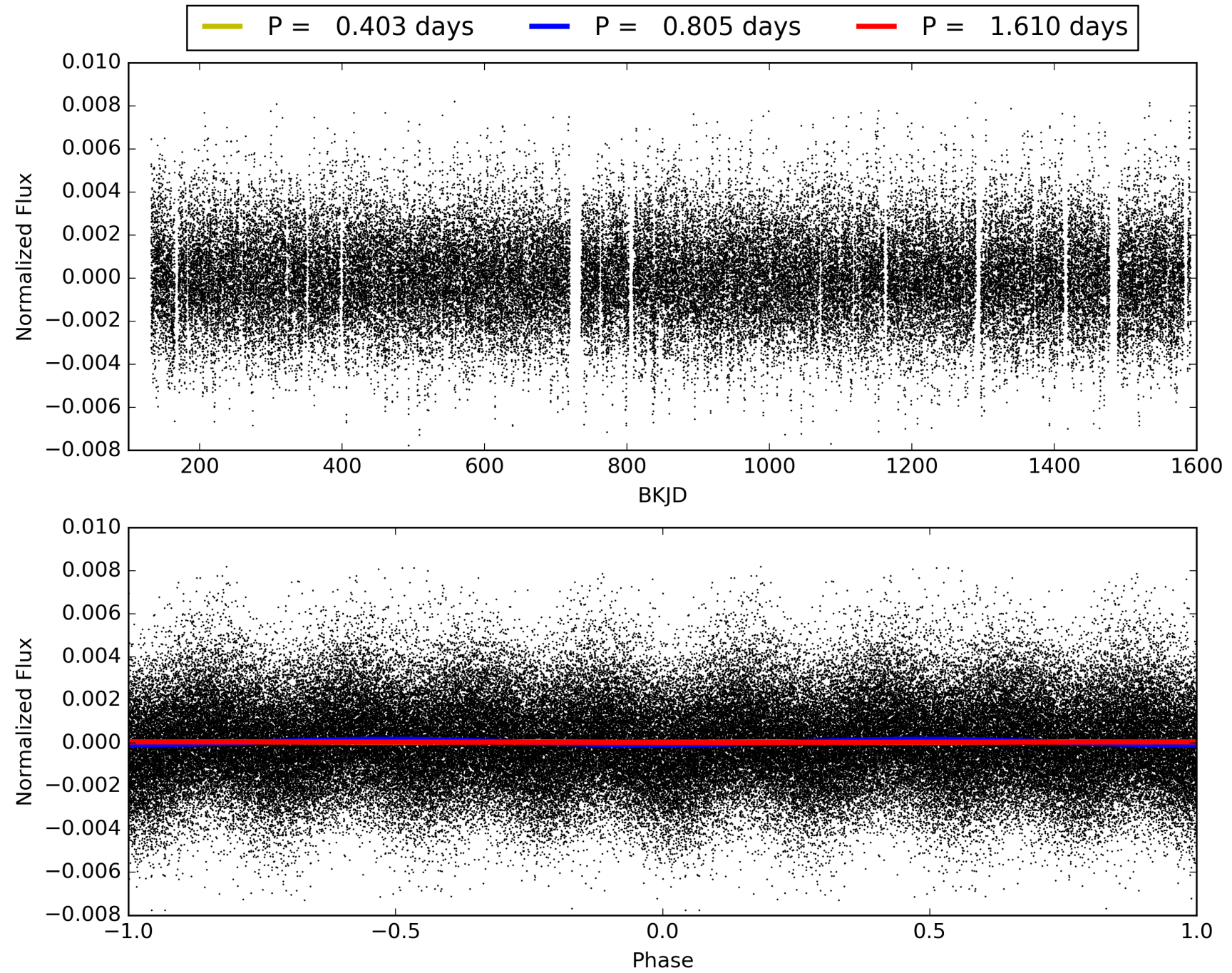
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:01:58 Z

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

TCE 005384653-02, PDC Light Curves

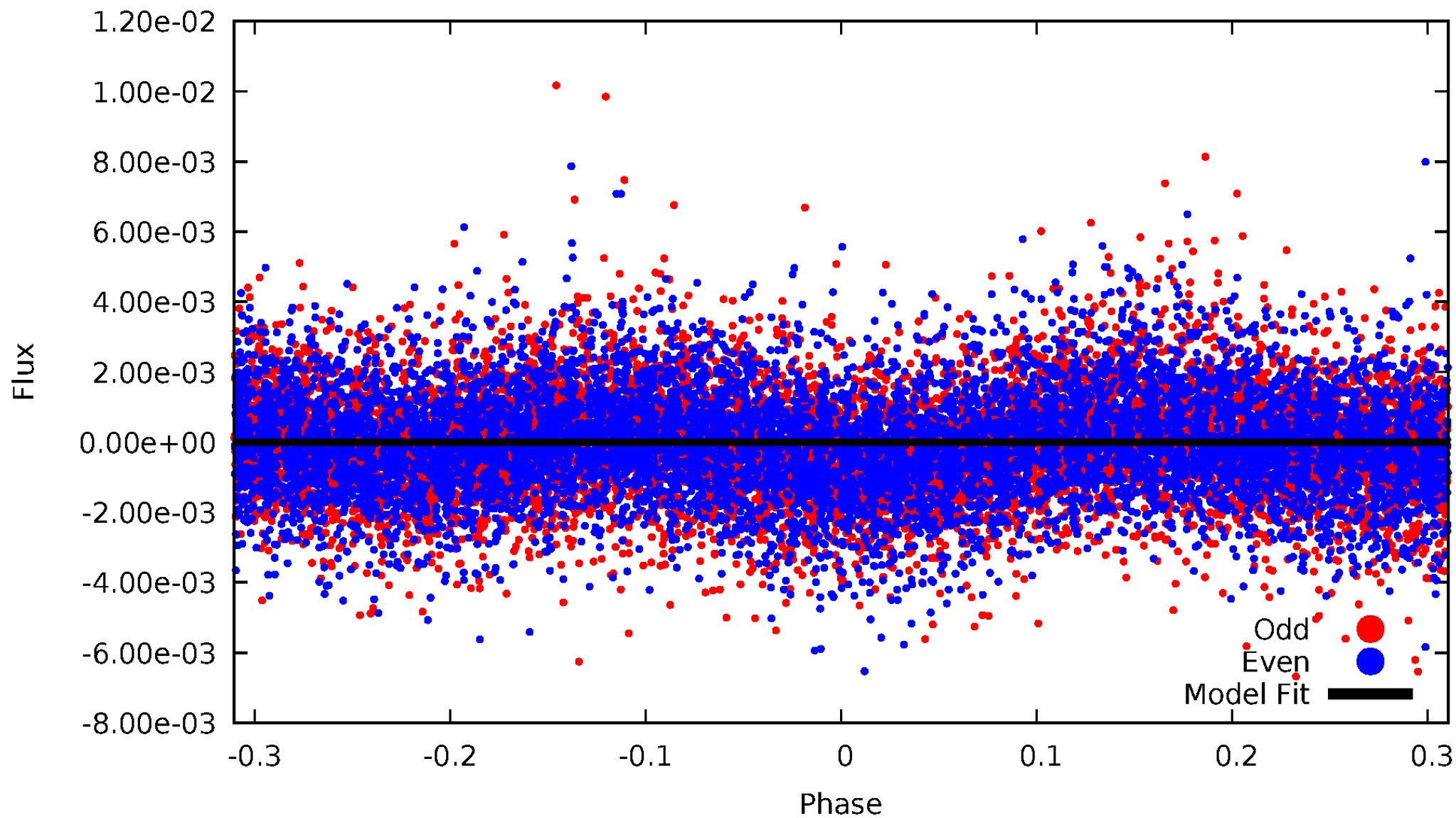


TCE 005384653-02



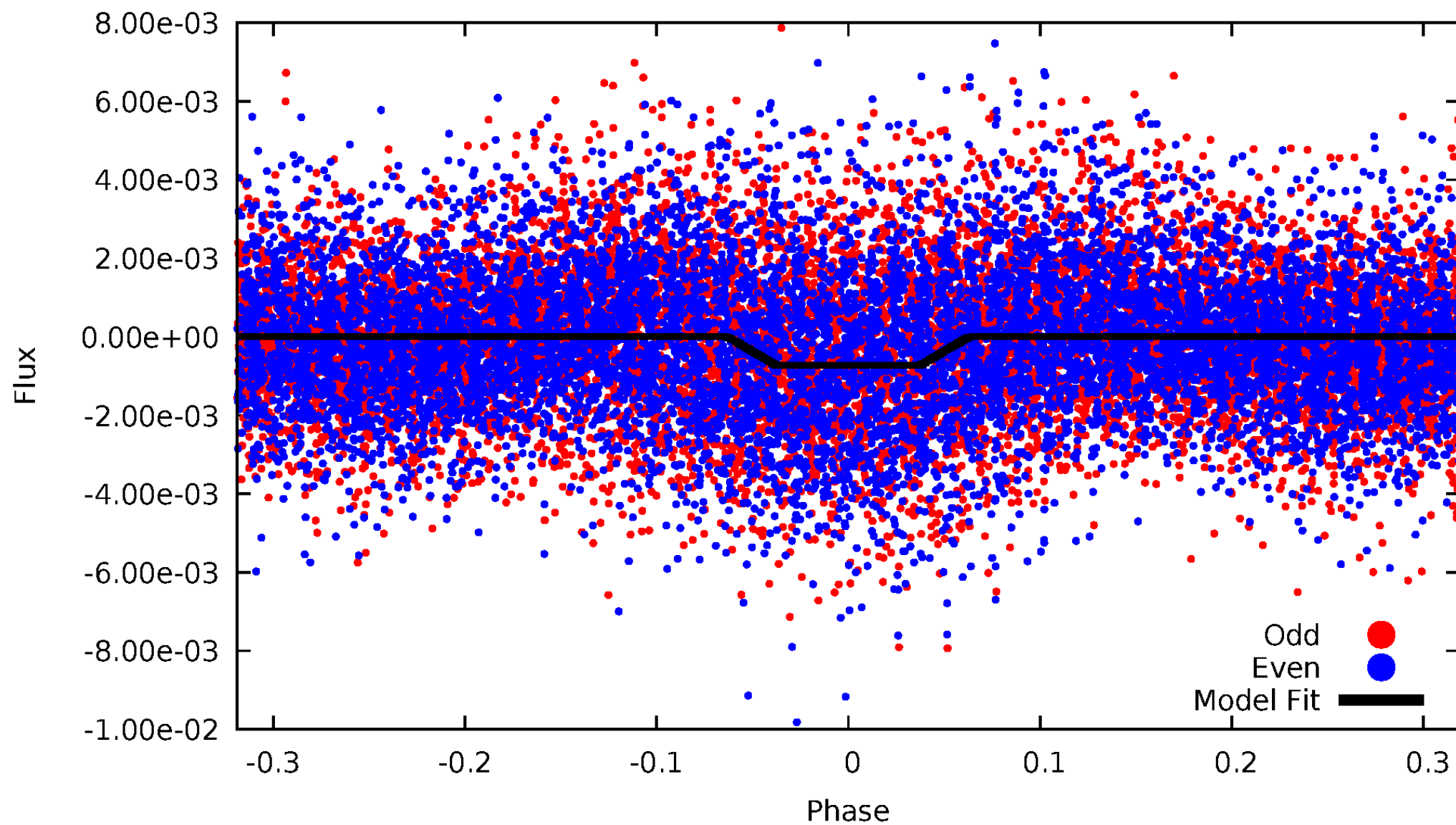
DV Odd/Even

TCE 005384653-02



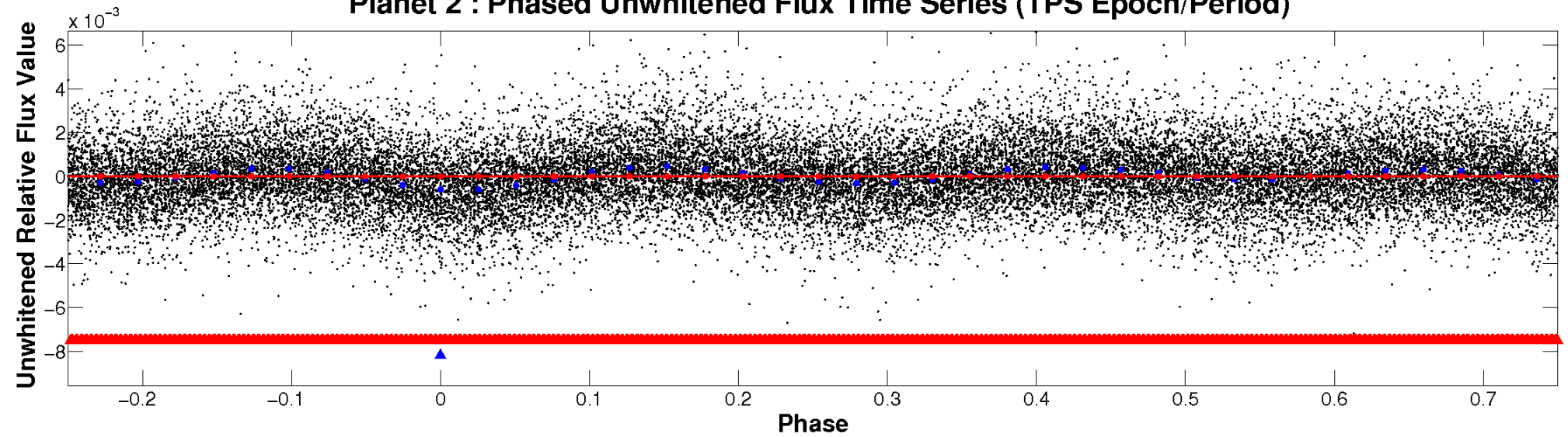
ALT Odd/Even

TCE 005384653-02

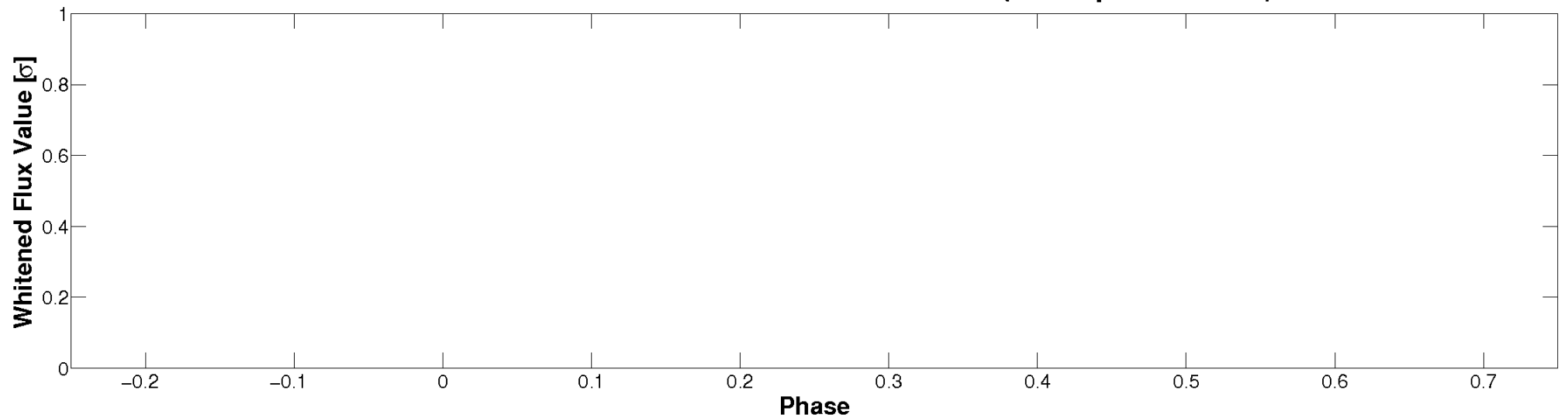


Non-Whitened Vs. Whitened Light Curve

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

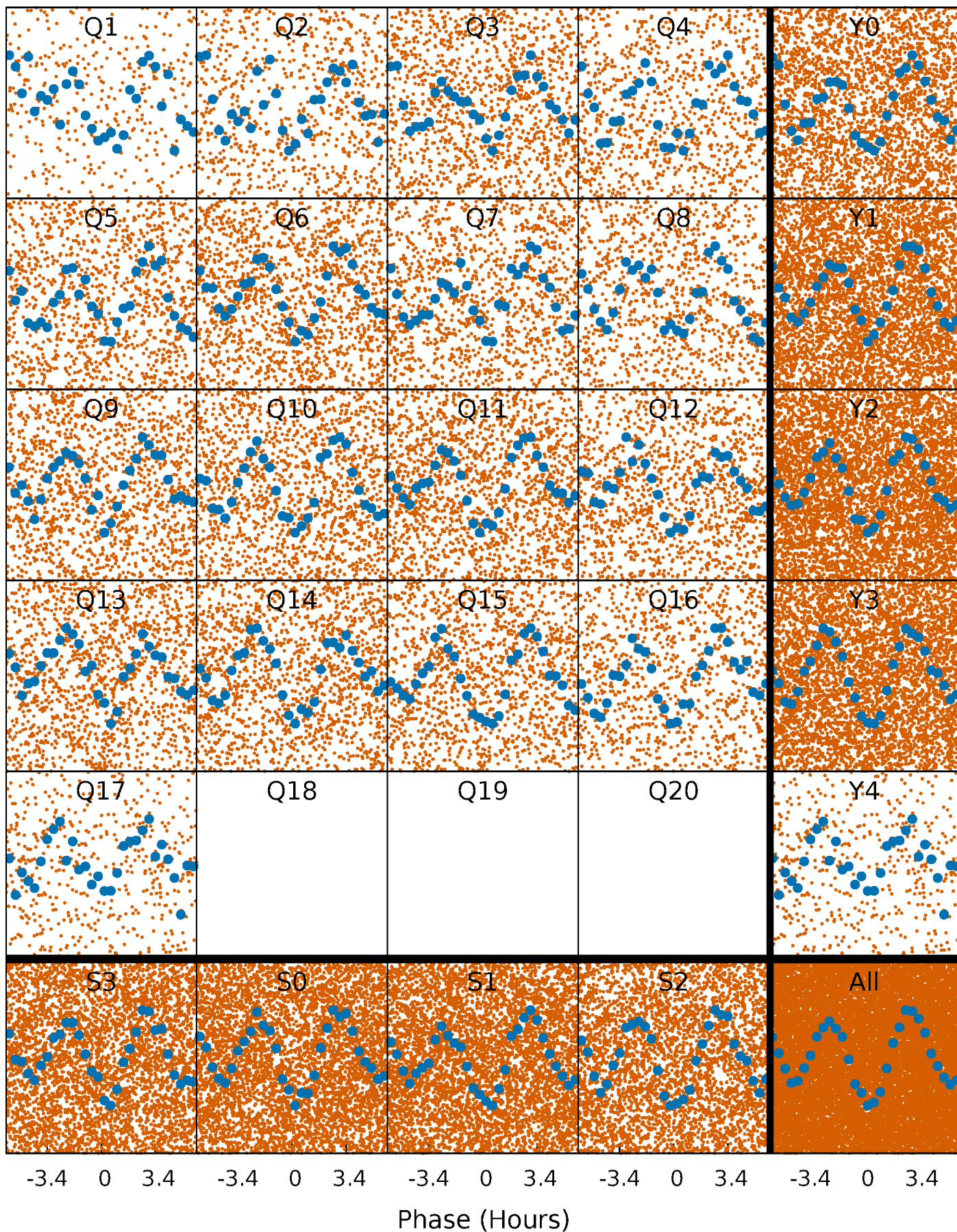


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



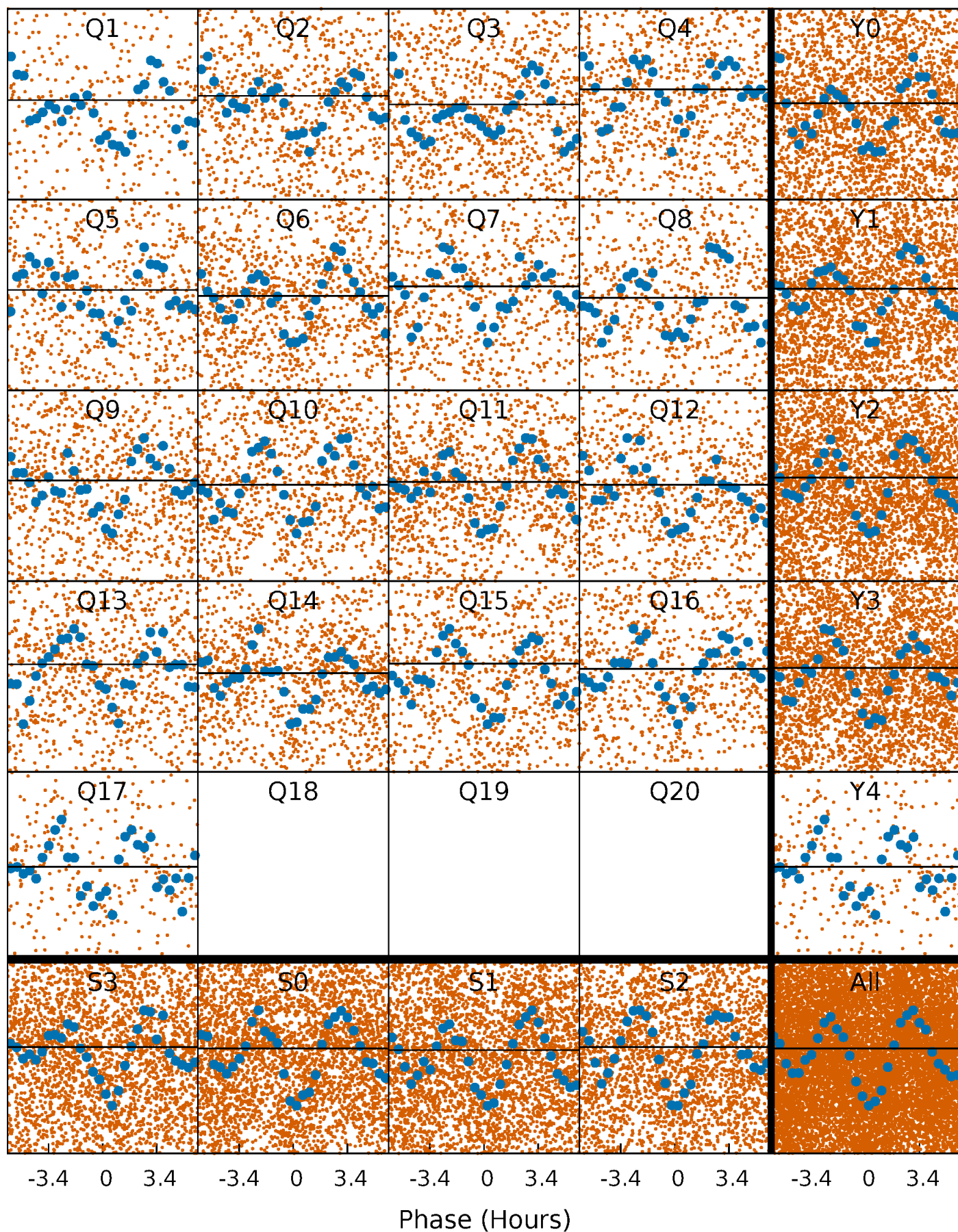
PDC Quarter-Phased Transit Curves

TCE 005384653-02 P= 0.805237 Days $T_0=132.119527$ (BKJD)



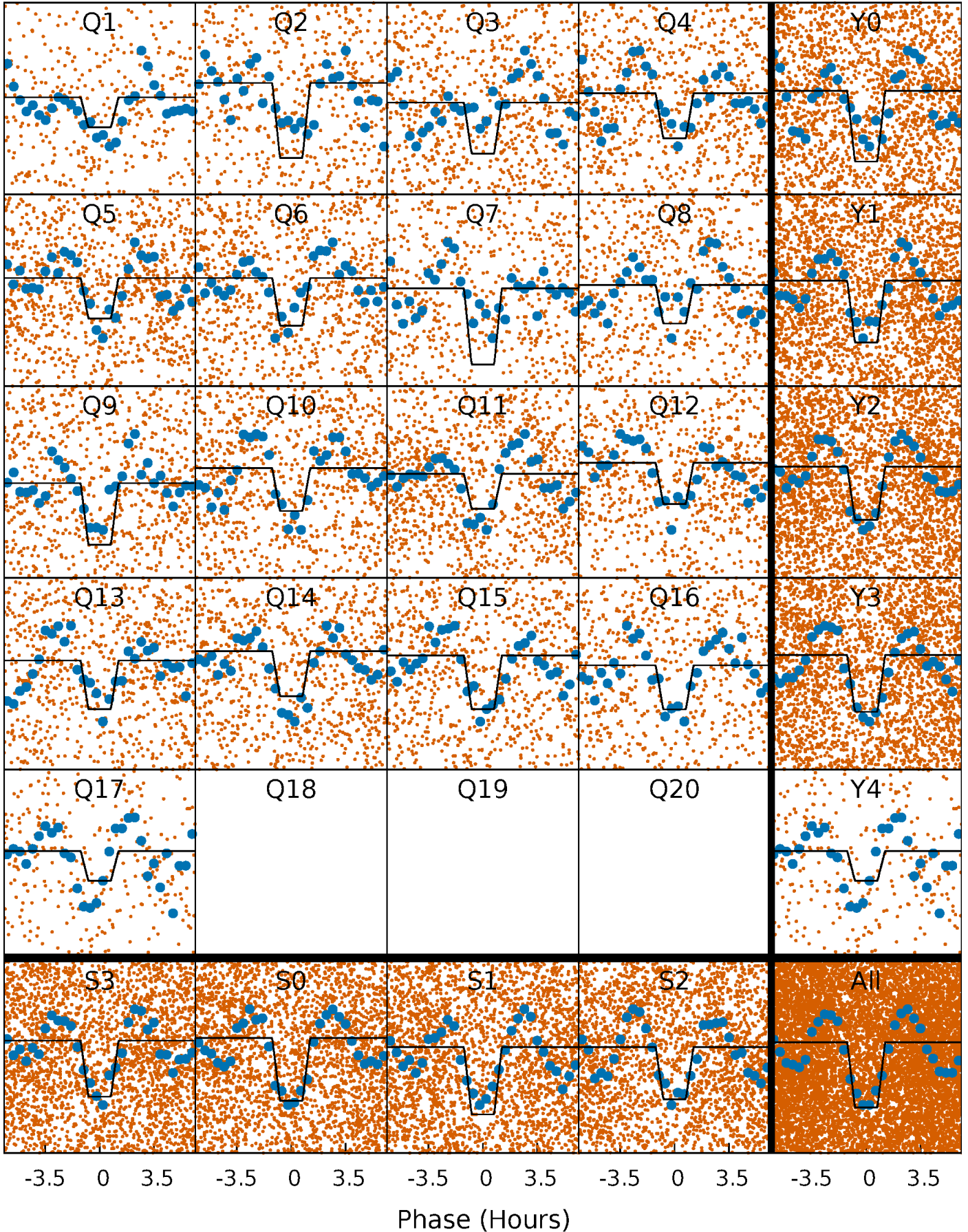
DV Quarter-Phased Transit Curves

TCE 005384653-02 P= 0.805237 Days $T_0=132.119527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

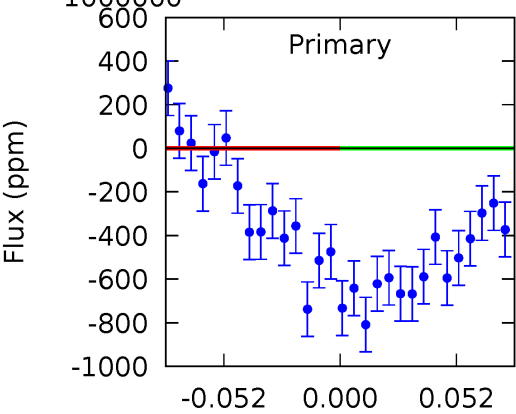
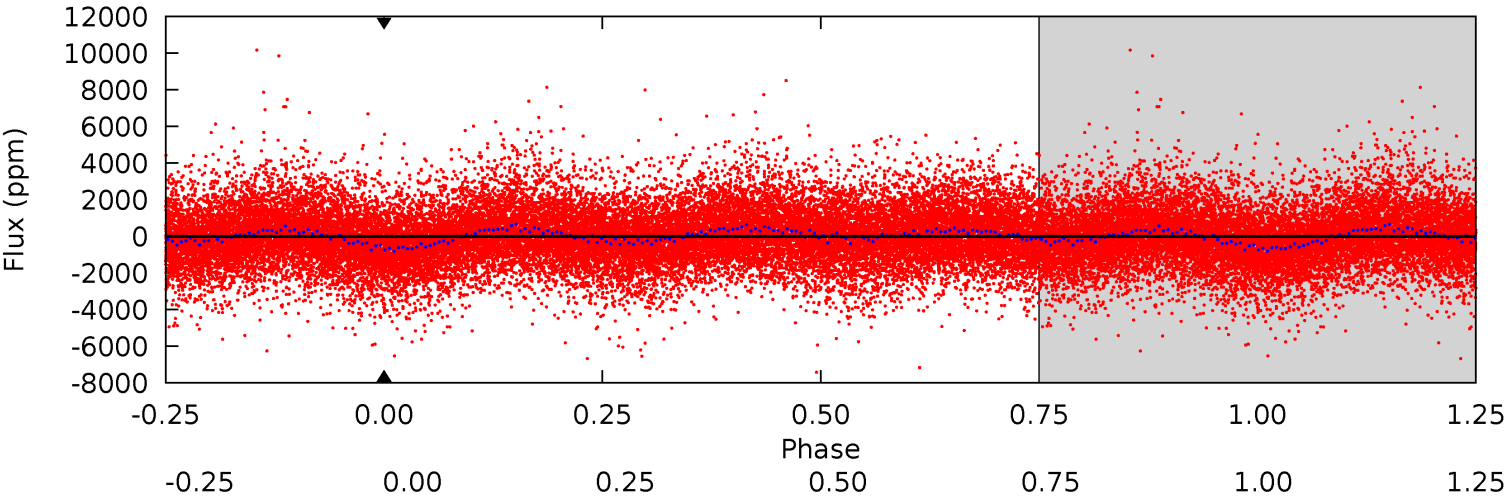
TCE 005384653-02 P= 0.805237 Days $T_0=132.132802$ (BKJD)



DV Model-Shift Uniqueness Test

005384653-02, P = 0.805237 Days, E = 131.314290 Days

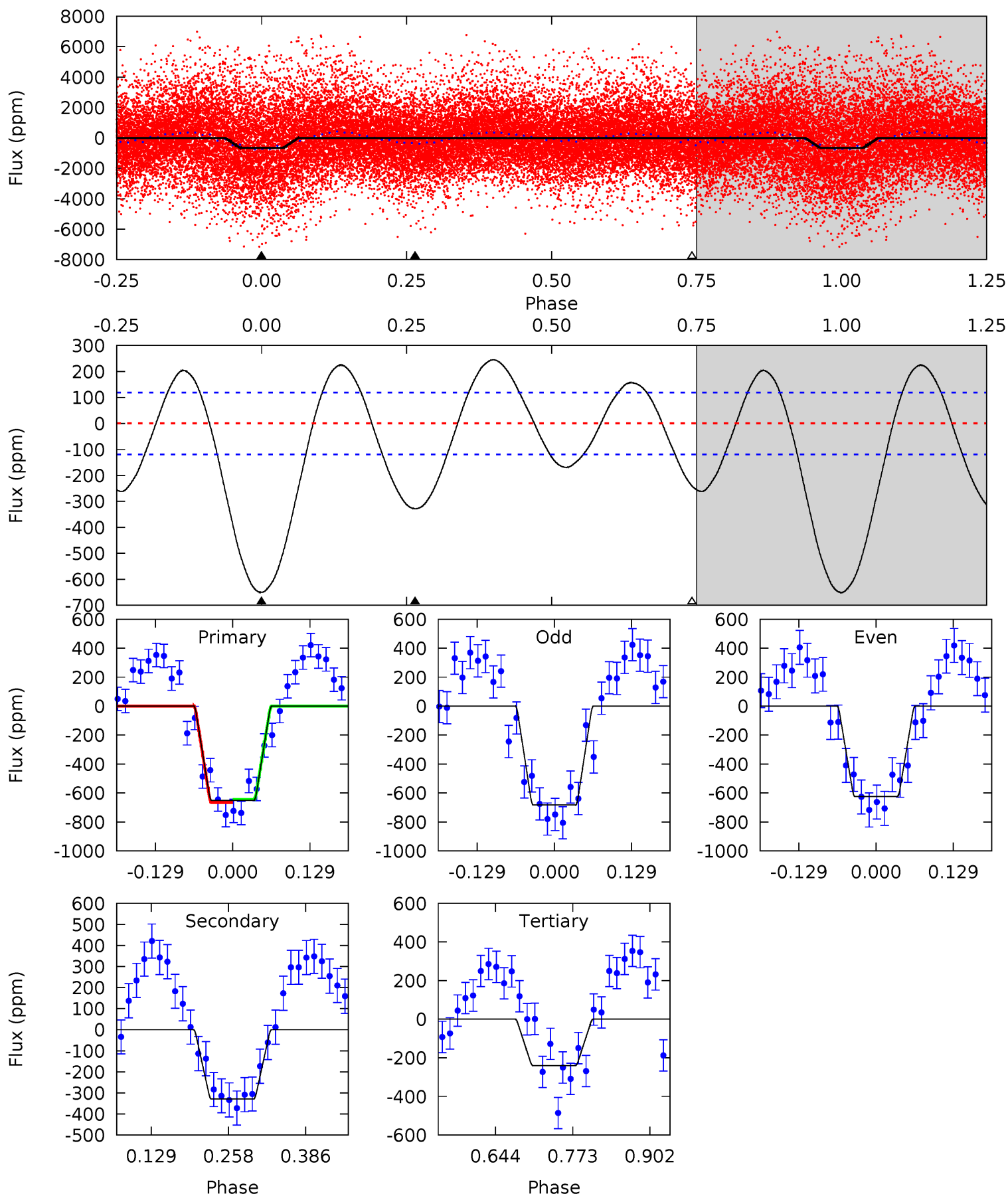
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005384653-02, P = 0.805237 Days, E = 131.327565 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	12.4	9.10	0	4.51	1.52	5.71	15.6	24.7	3.35	12.4	1.10	0.97	0.27	0.39



Stellar Parameters For KIC 005384653

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7293^{+203}_{-348}	$4.263^{+0.060}_{-0.240}$	$0.070^{+0.200}_{-0.350}$	$1.512^{+0.558}_{-0.199}$	$1.528^{+0.232}_{-0.211}$	$0.623^{+0.212}_{-0.368}$
	+3%/-5%	+1%/-6%	+286%/-500%	+37%/-13%	+15%/-14%	+34%/-59%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005384653-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.79^{+13.92}_{-9.20}$	4049^{+343}_{-232}	-4701^{+46320}_{-32932}	$-0.872^{+266.762}_{-219.618}$
Alt.	-328 ± 26	$14.20^{+14.26}_{-9.59}$	4044^{+357}_{-248}	2711^{+3148}_{-6230}	$0.337^{+2.886}_{-0.254}$

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 $A_{obs} \gg 1.0$

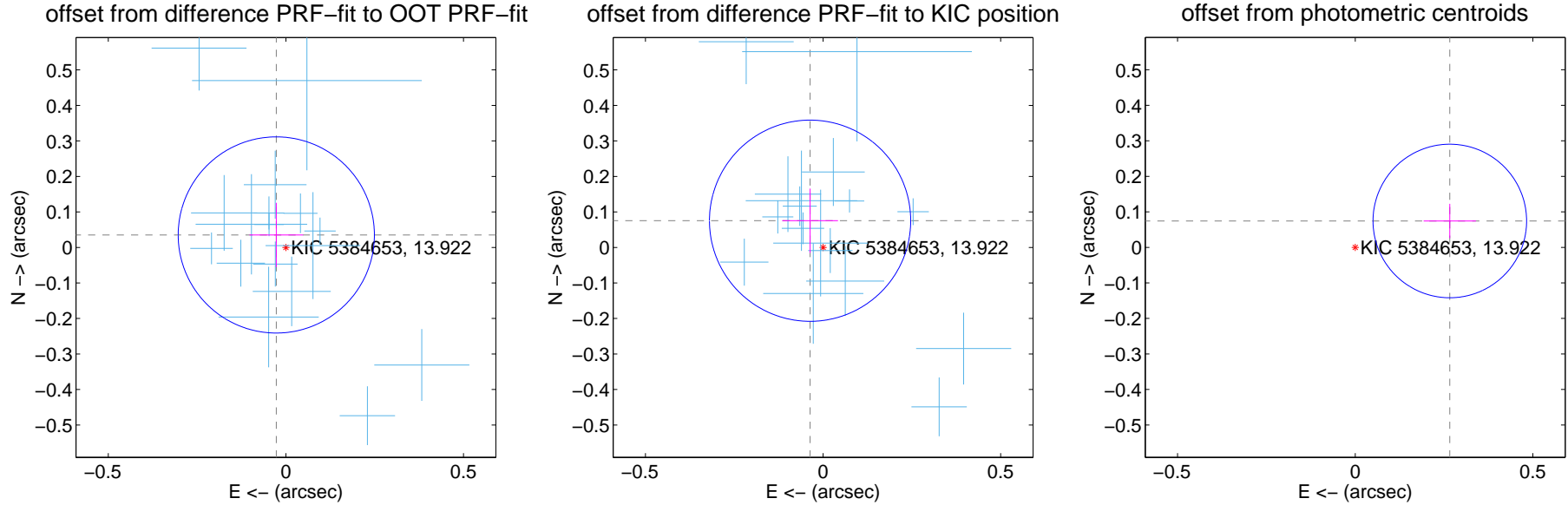
DV Centroid Data

Supplemental centroid analysis for 005384653-02. Kepler magnitude: 13.92. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

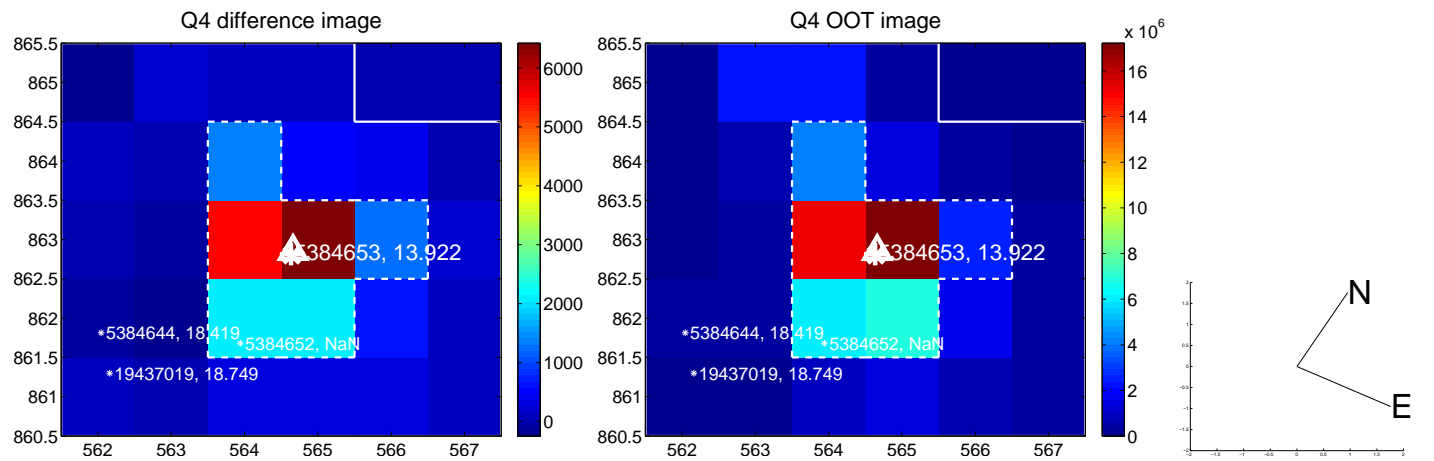
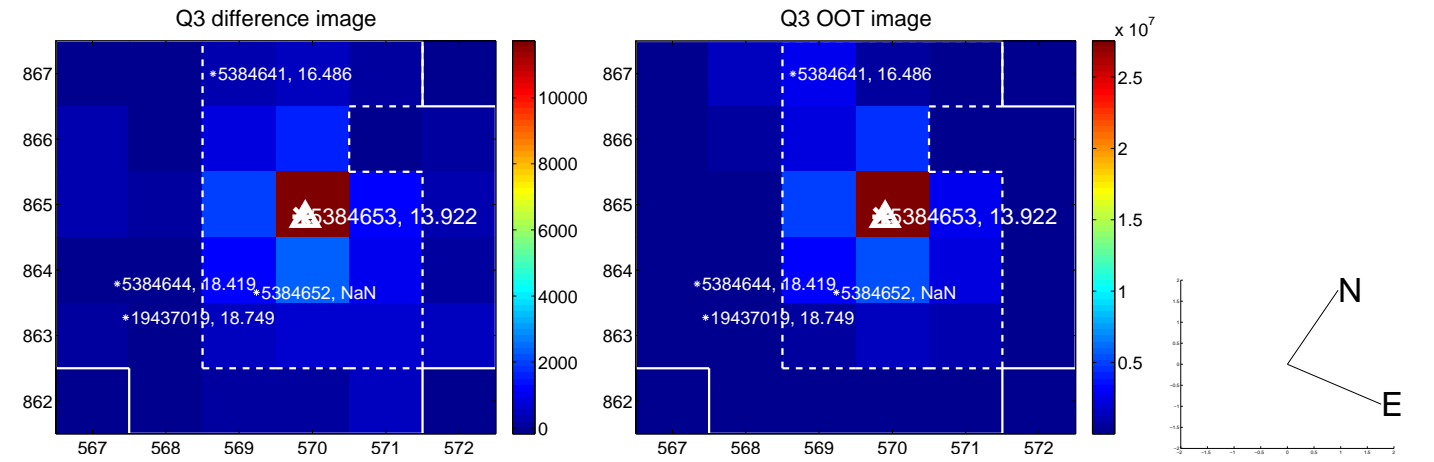
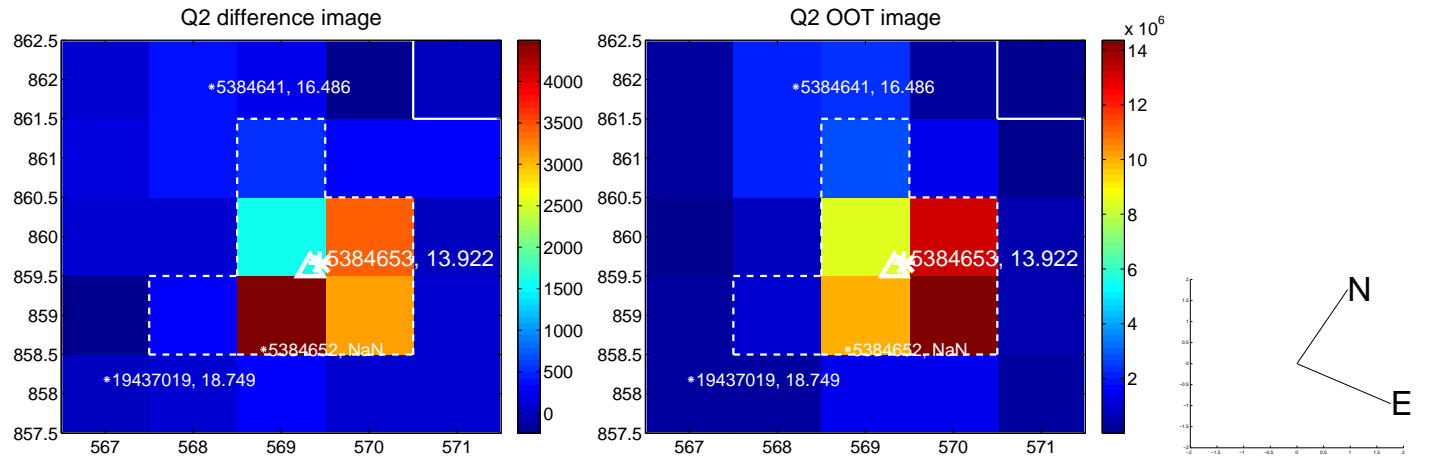
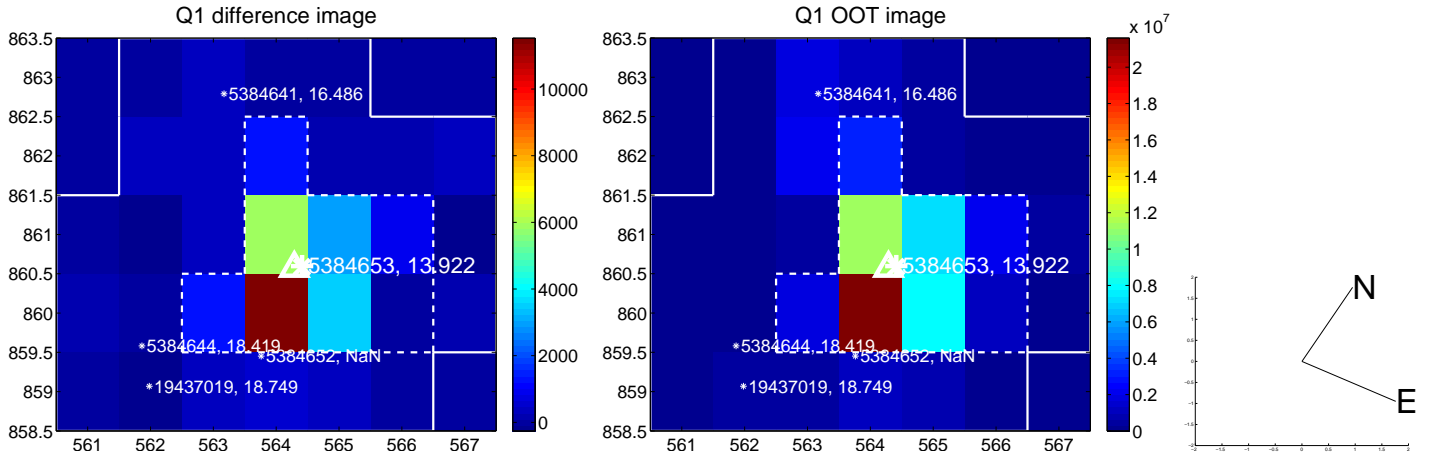
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.092	0.48	0.027 ± 0.076	0.035 ± 0.090
PRF-fit source offset from KIC position	0.084 ± 0.094	0.89	0.037 ± 0.079	0.075 ± 0.091
photometric centroid source offset	0.28 ± 0.07	3.84	-0.27 ± 0.07	0.07 ± 0.05

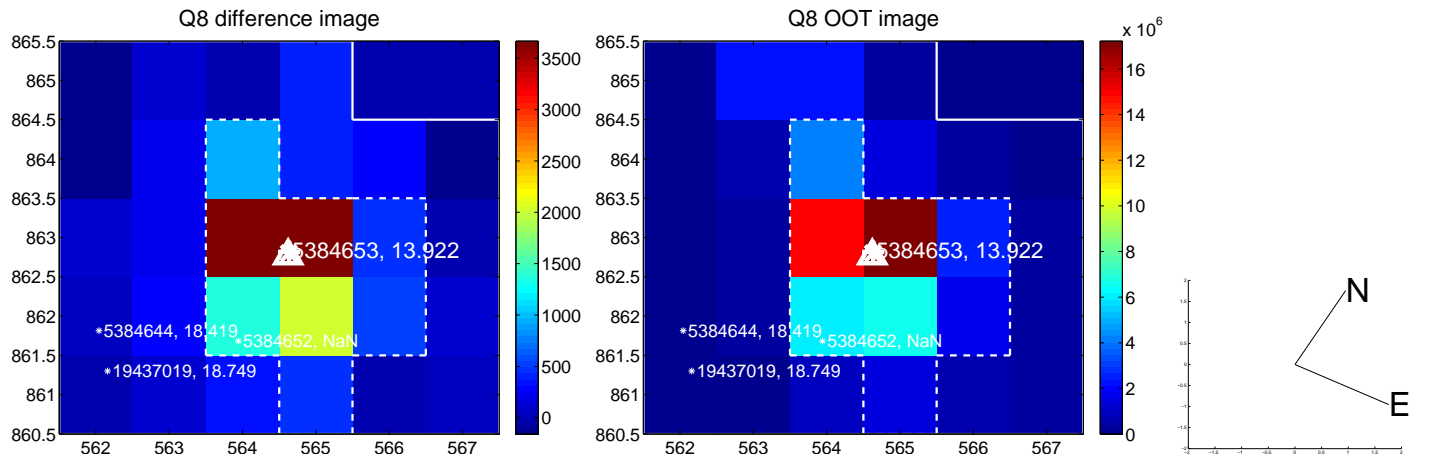
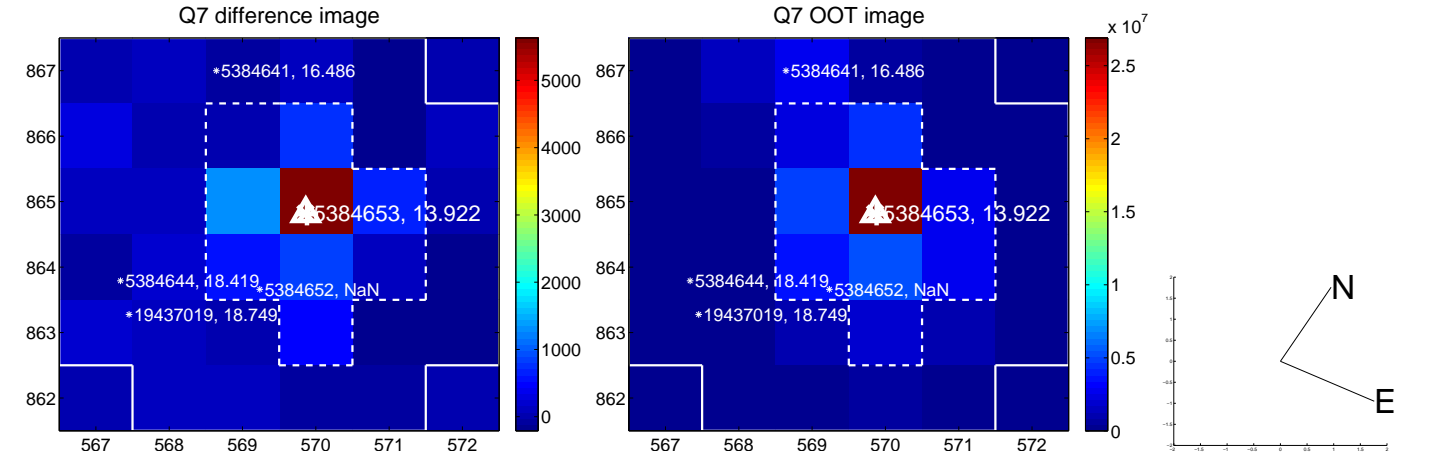
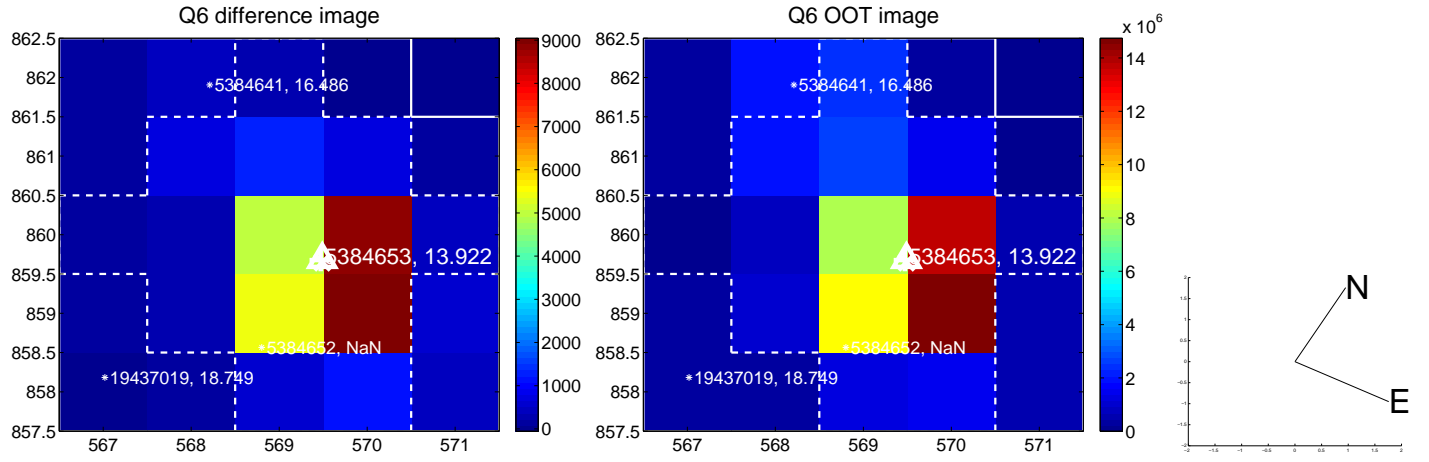
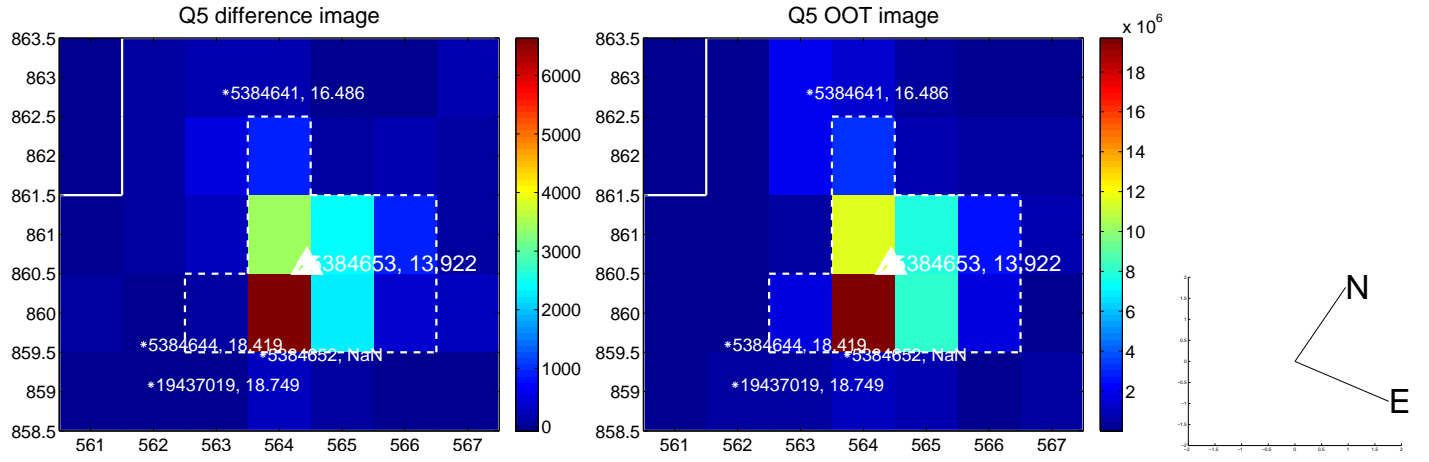


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

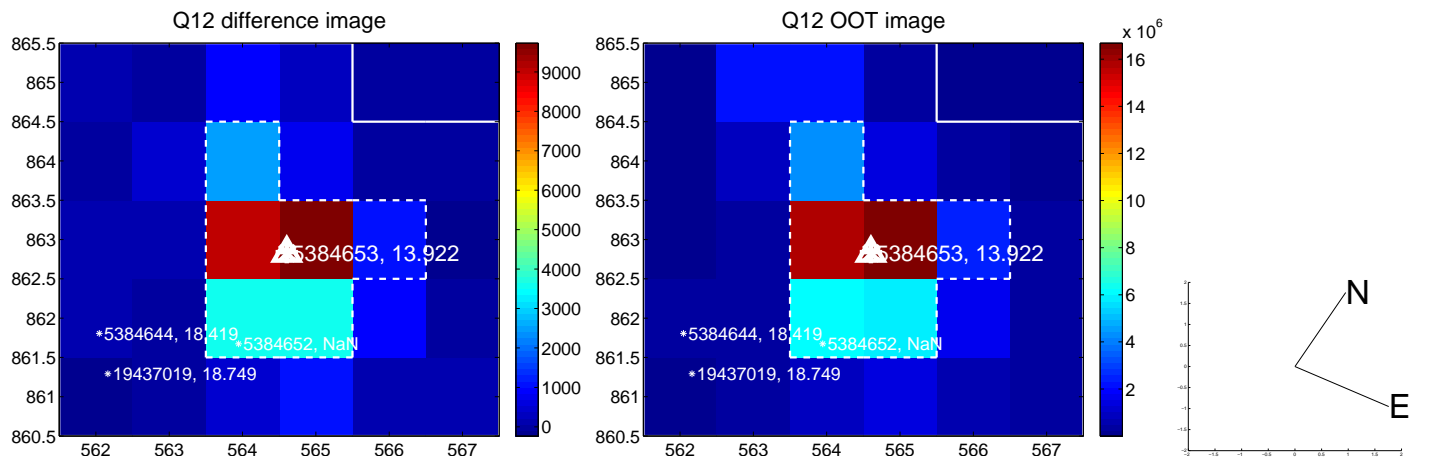
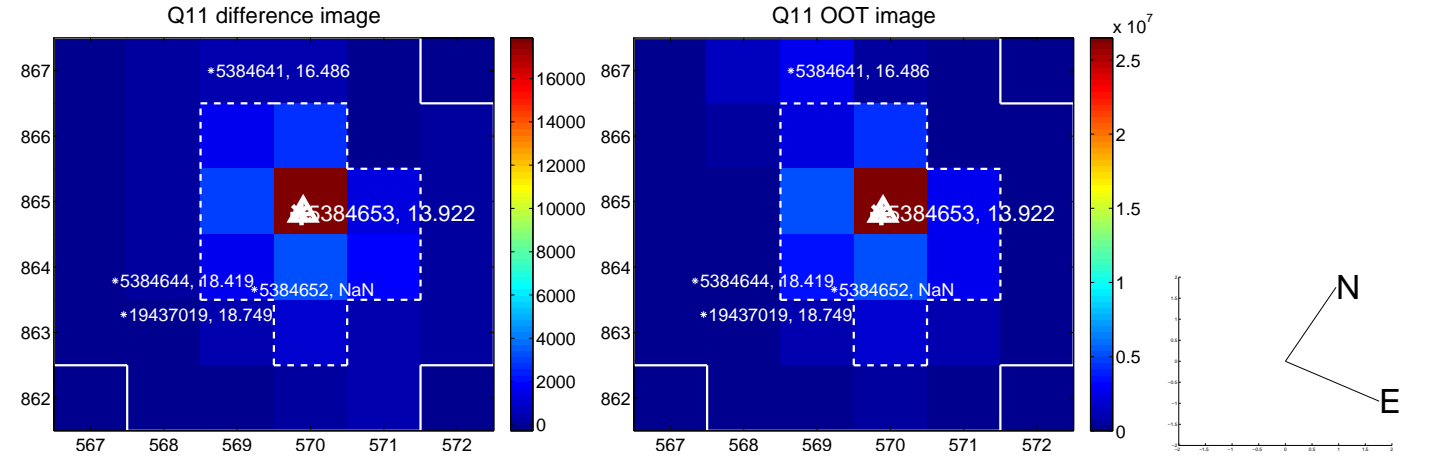
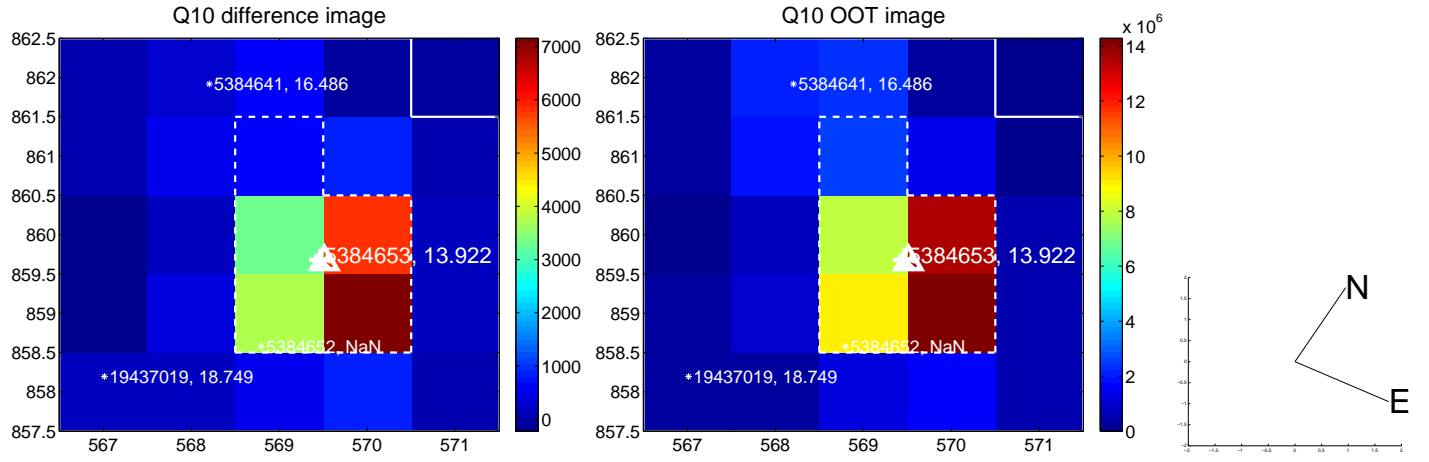
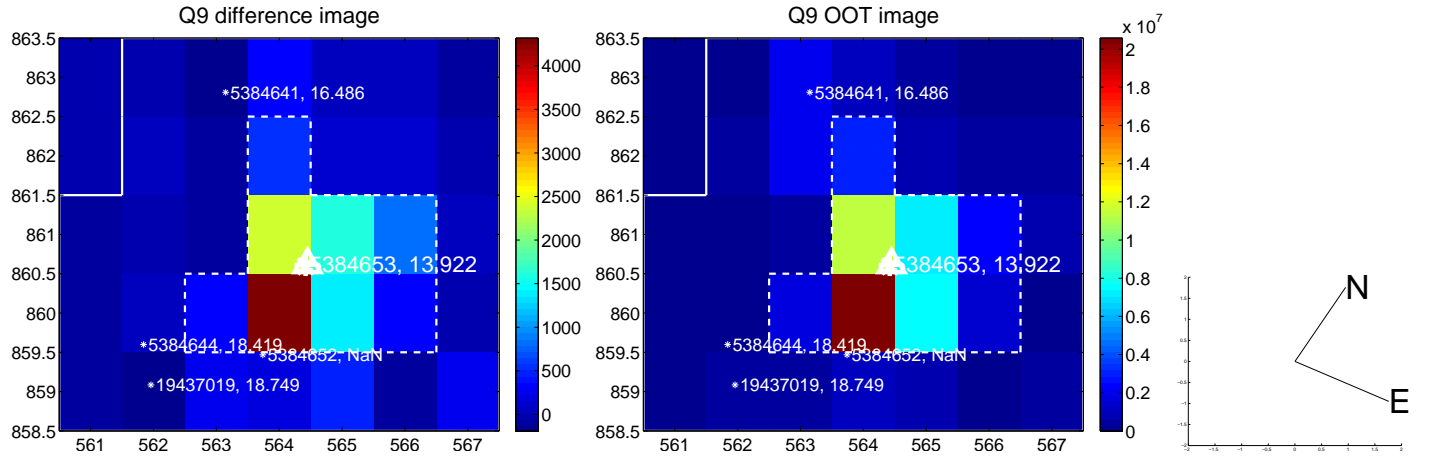
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



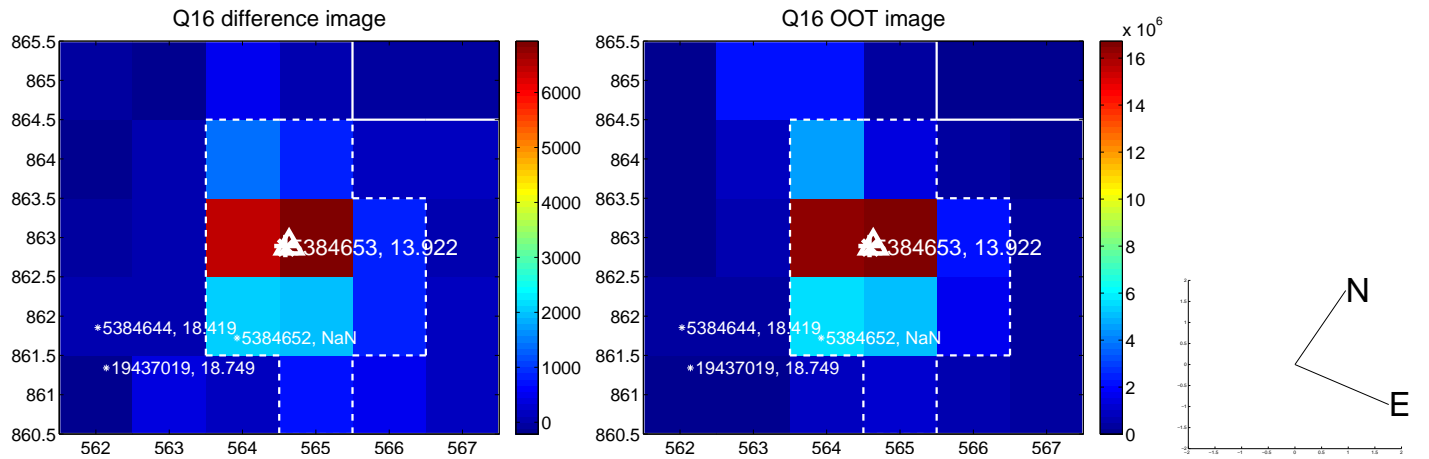
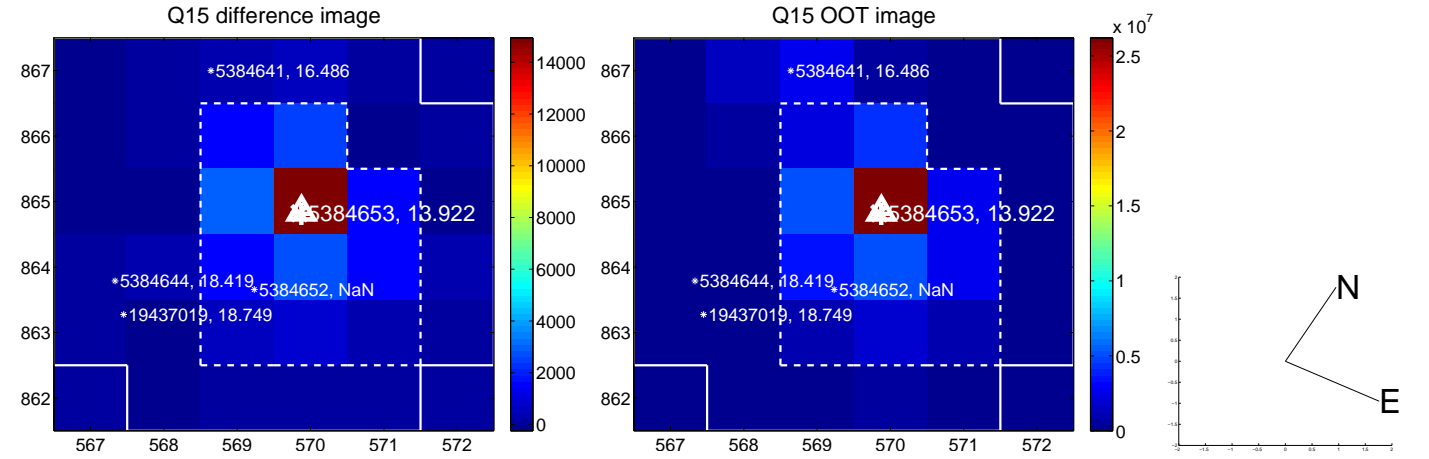
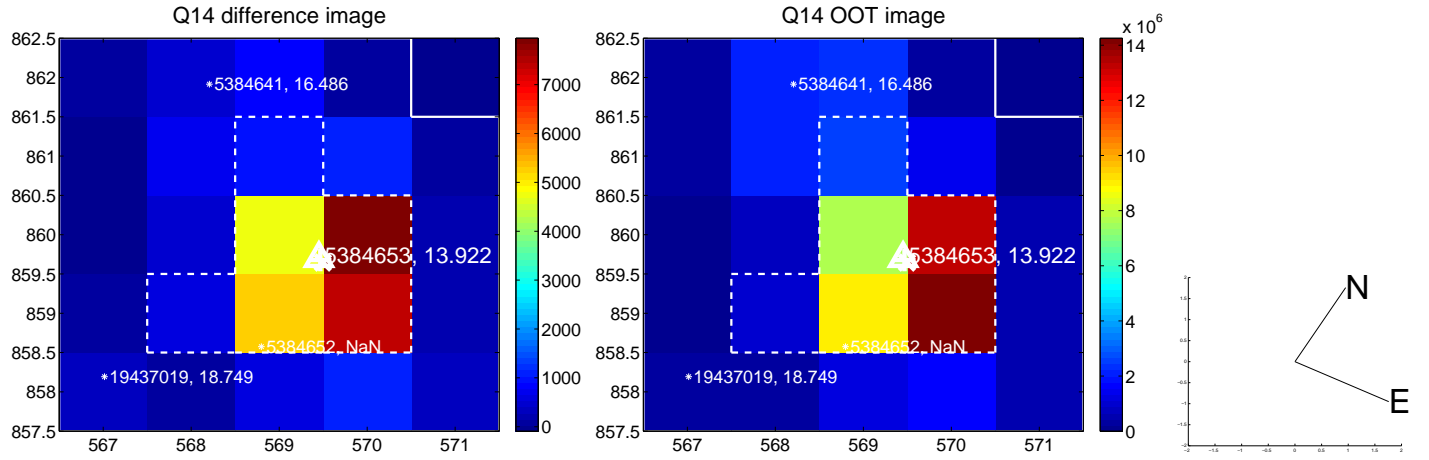
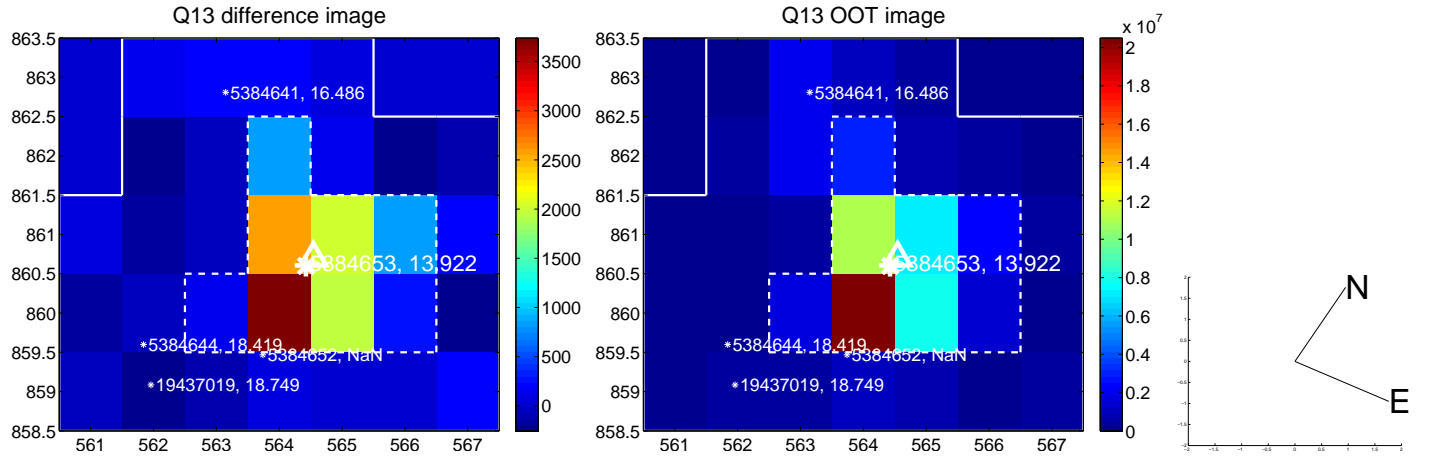
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



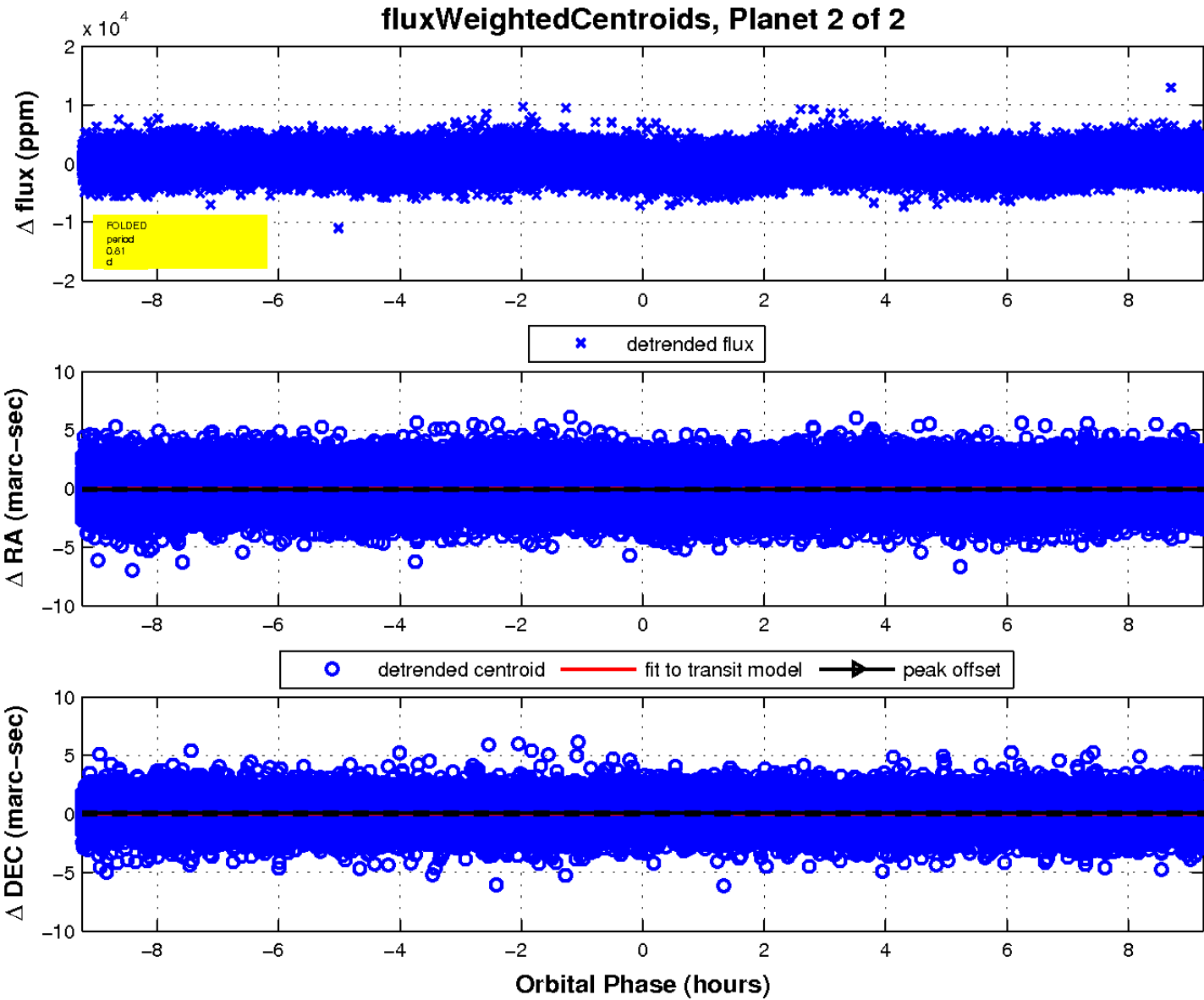
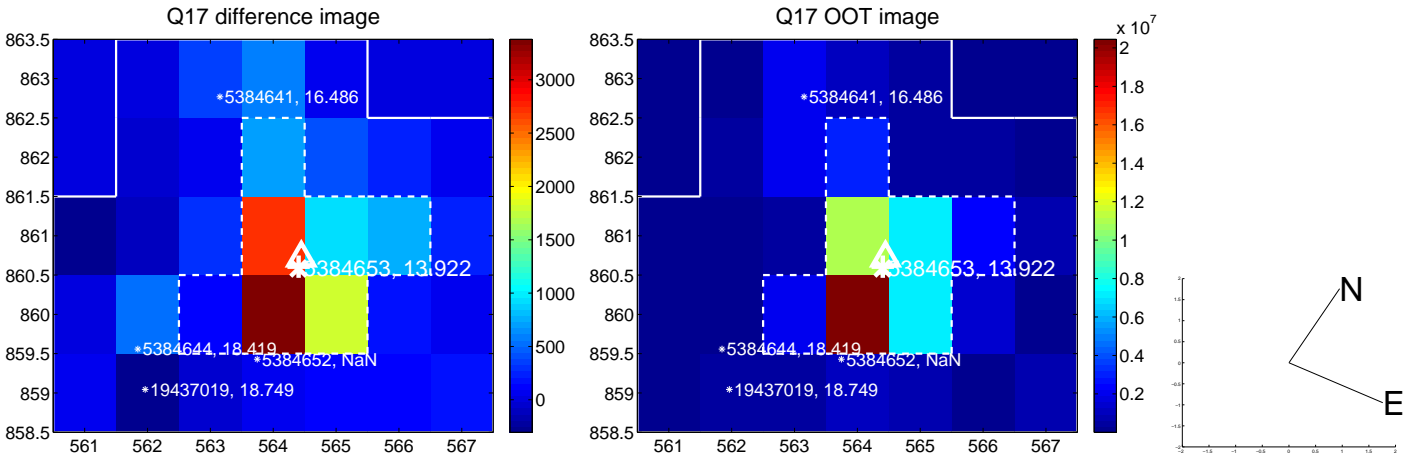
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

