

KIC 005647008

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})
005647008-01	OBS	8103.01	0.799871	132.006304	278.0	0.606	41.6	27.7	0.88	5568	1.89	2578.16
005647008-02	OBS	No	5.598728	132.601736	38.2	5.640	59.4	3.3	0.88	5568	0.61	192.55
005647008-03	OBS	No	5.596465	132.729944	3224.9	2.000	52.8	-1.0	0.88	5568	4.95	192.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005647008-01	OBS	FP	0.49	0	1	0	0	HAS_SEC_TCE
005647008-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005647008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

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

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

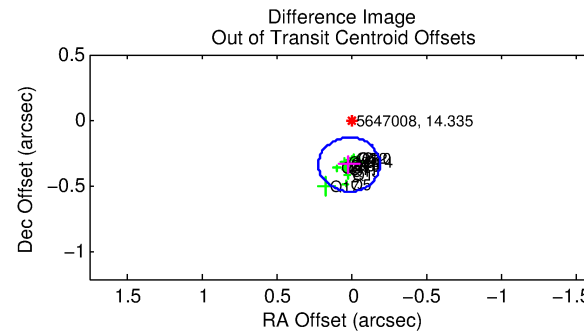
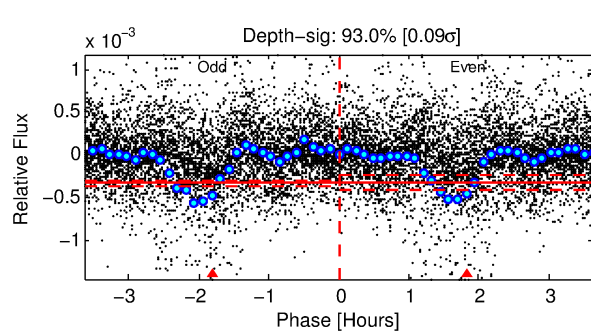
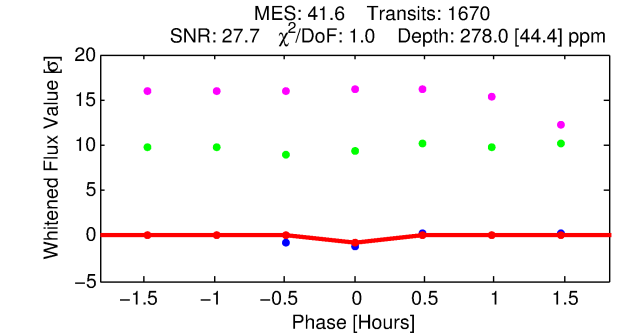
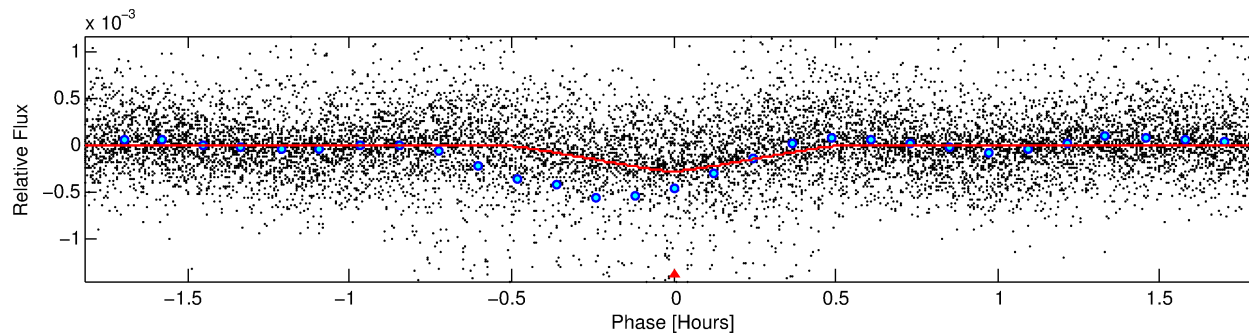
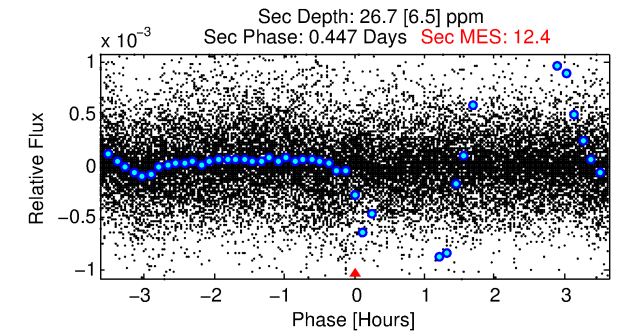
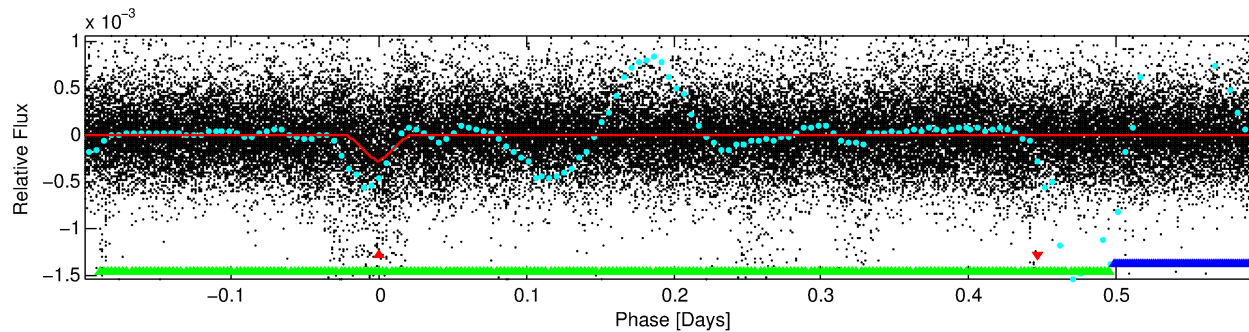
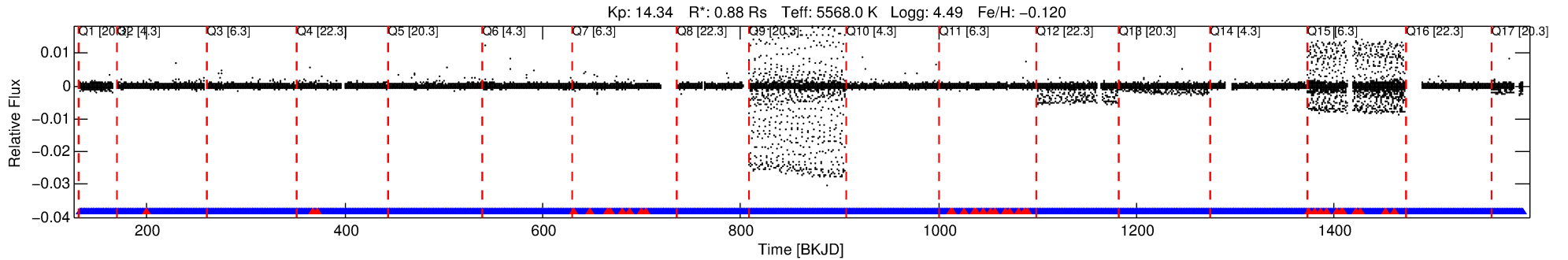
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005647008-01

No Significant Match Found

DV One-Page Summary

KIC: 5647008 Candidate: 1 of 3 Period: 0.800 d



DV Fit Results:

Period = 0.79987 [0.00000] d
Epoch = 132.0063 [0.0004] BKJD
Rp/R* = 0.0197 [0.0055]
a/R* = 4.31 [5.13]
b = 0.93 [0.19]
Seff = 2578.16 [829.26]
Teff = 1817 [146] K
Rp = 1.89 [0.71] Re
a = 0.0161 [0.0034] AU
Ag = 1.07 [0.73] [0.09σ]
Teffp = 2856 [447] K [2.21σ]

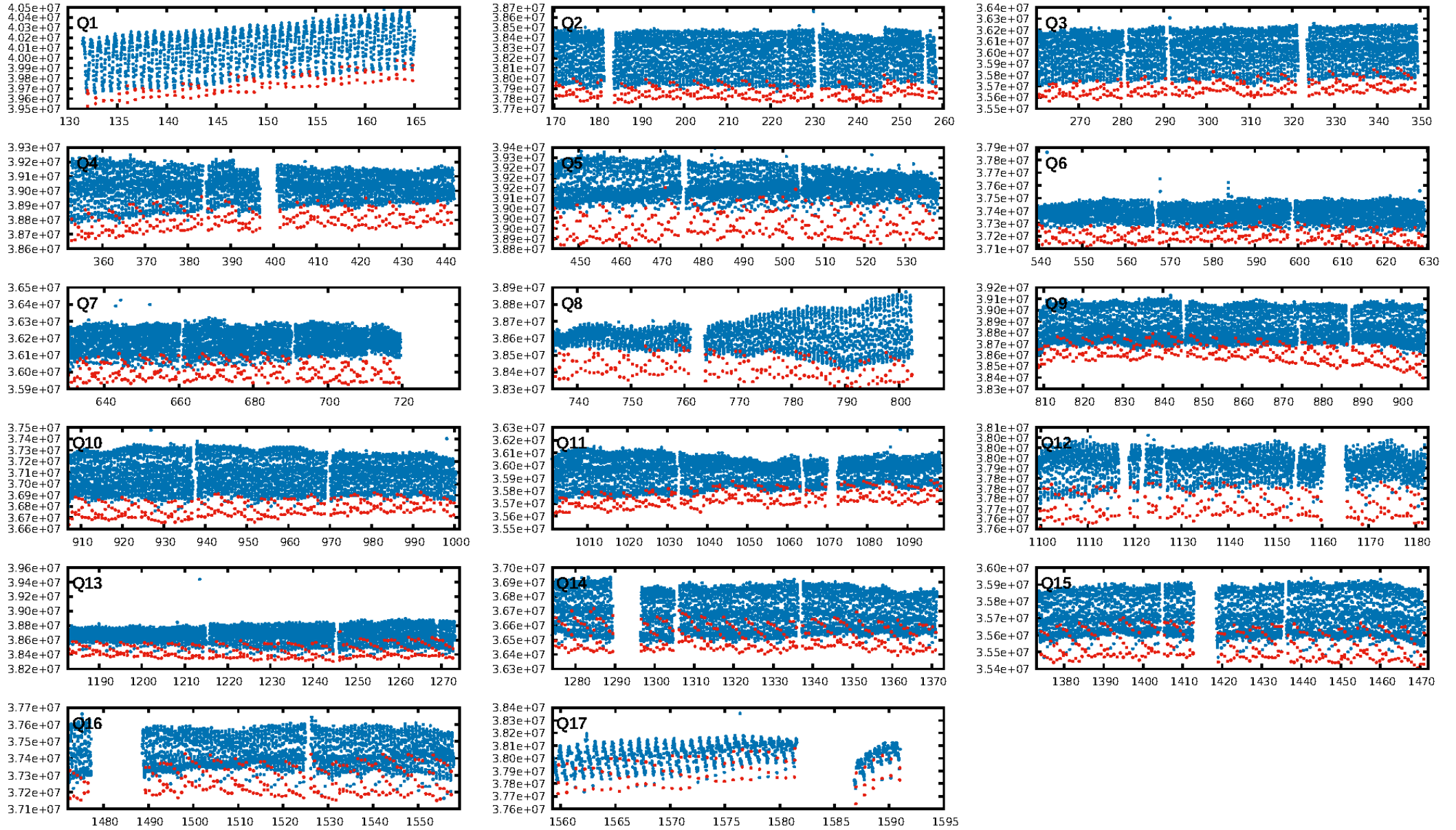
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [55.09σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1558/1594]
GhostDiagnostic-chr: 0.4557
Centroid-sig: 0.0%
Centroid-so: 3.423 arcsec [8.12σ]
OotOffset-rm: 0.334 arcsec [4.88σ]
KicOffset-rm: 0.452 arcsec [6.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

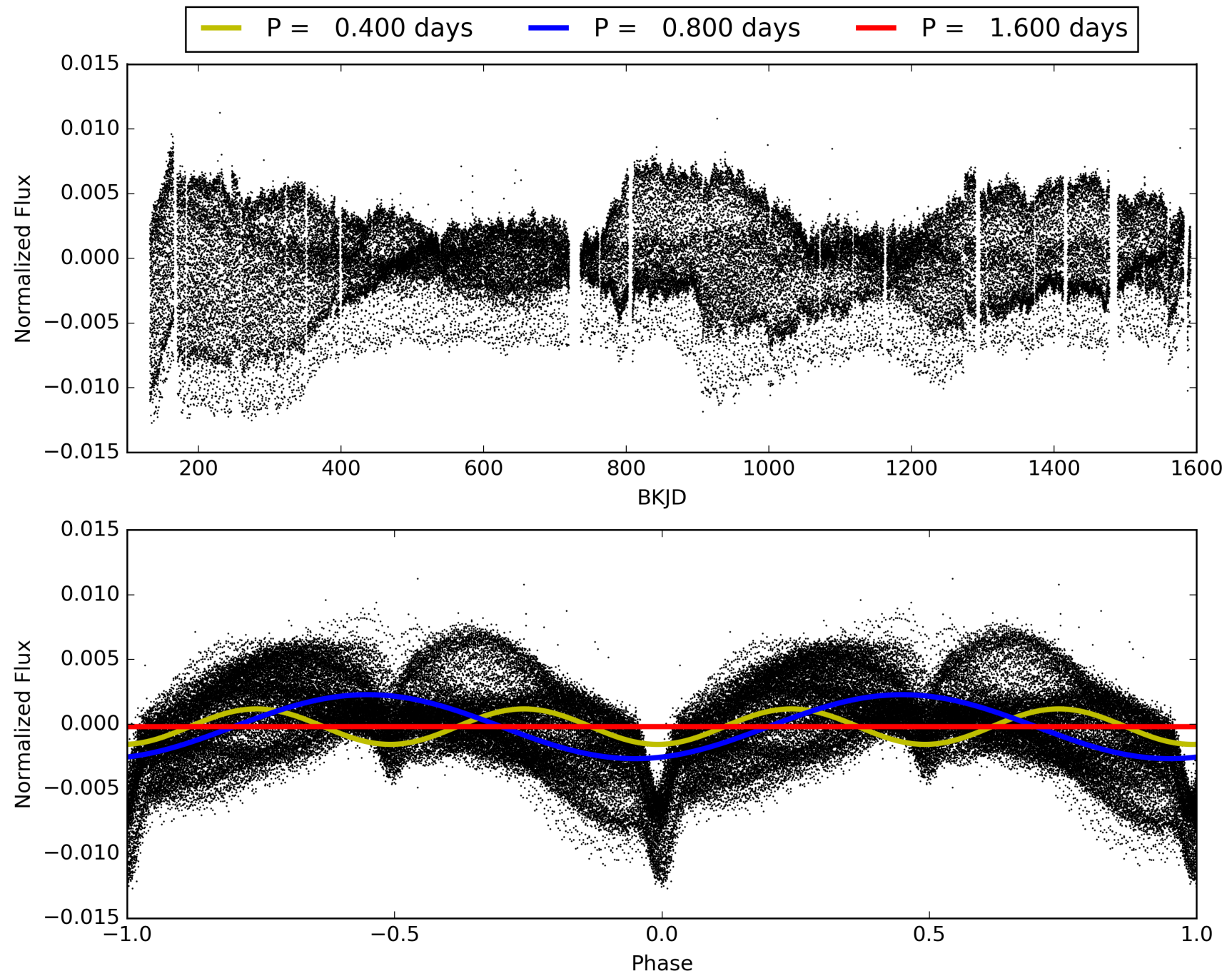
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:55:27 Z

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

TCE 005647008-01, PDC Light Curves

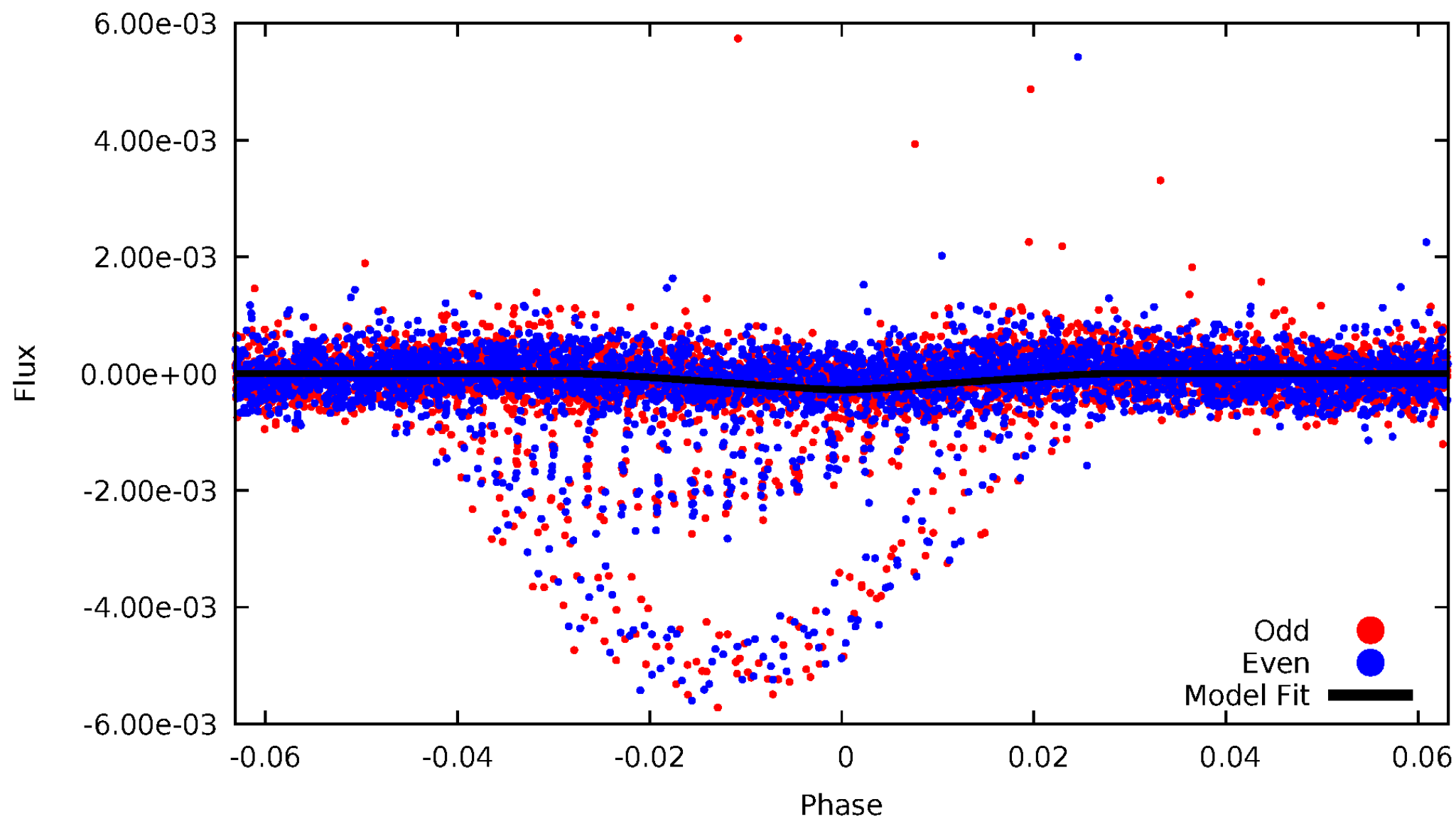


TCE 005647008-01



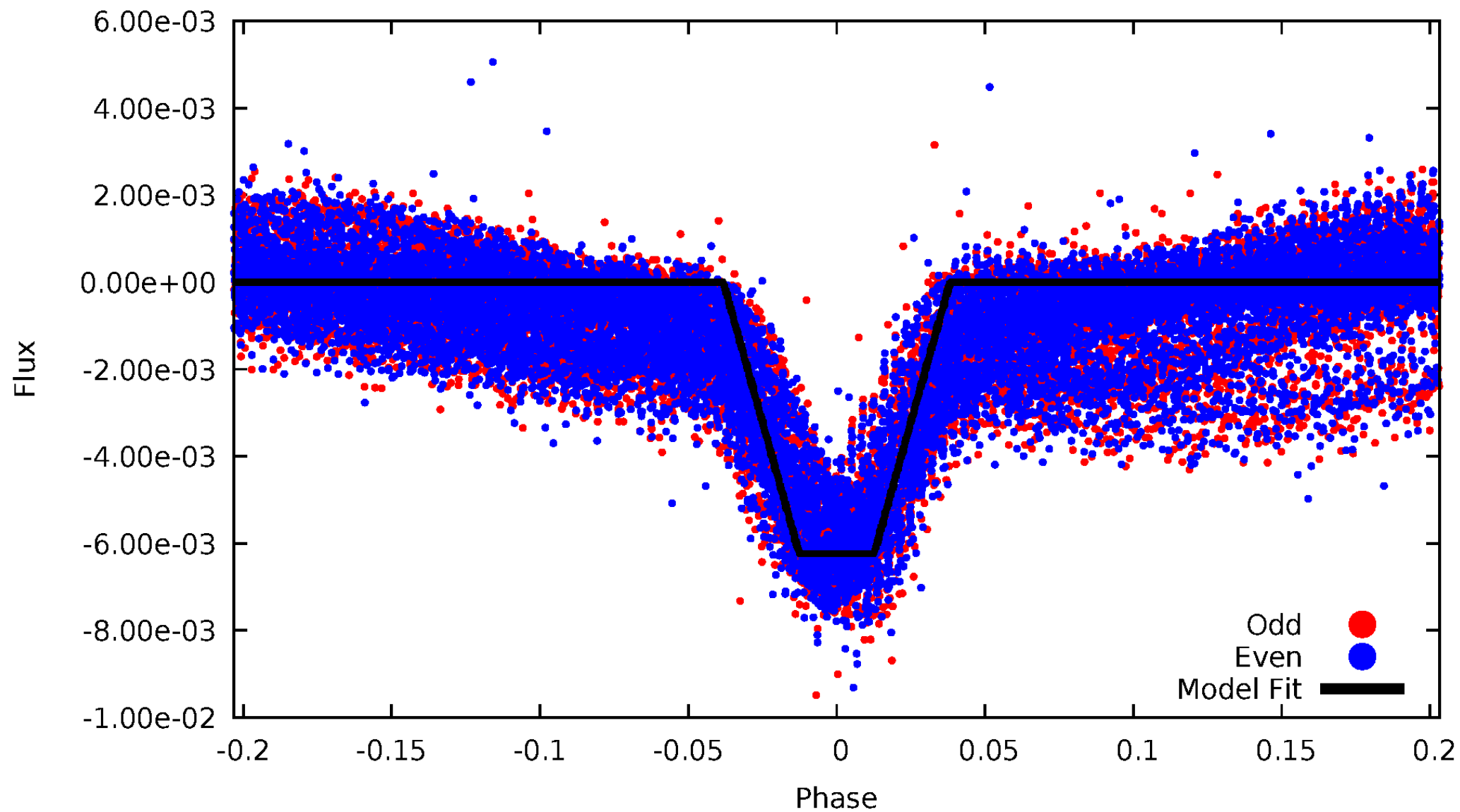
DV Odd/Even

TCE 005647008-01



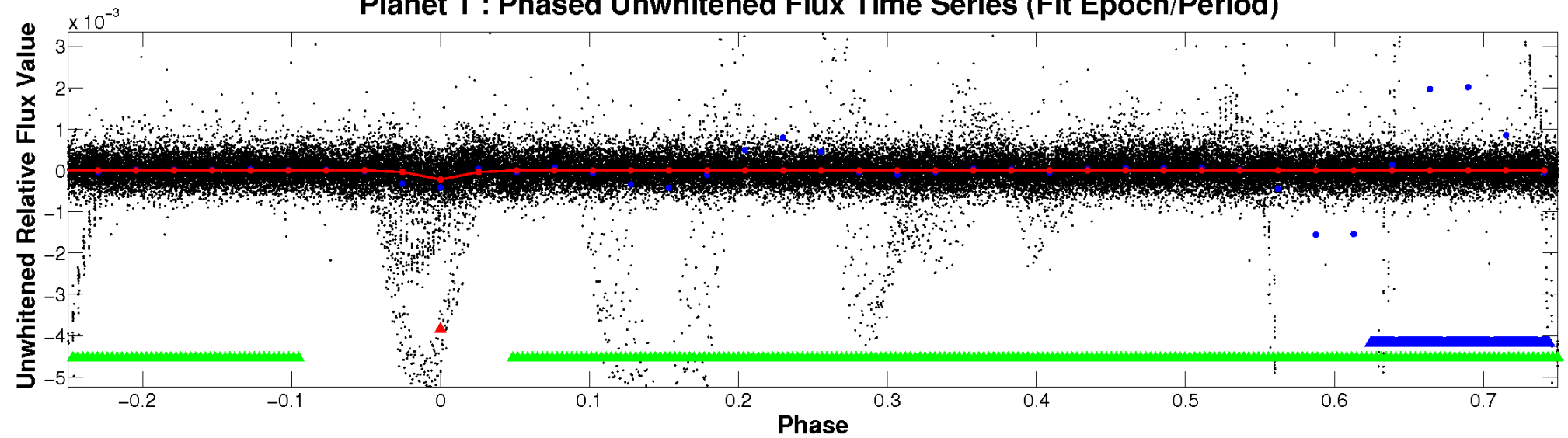
ALT Odd/Even

TCE 005647008-01

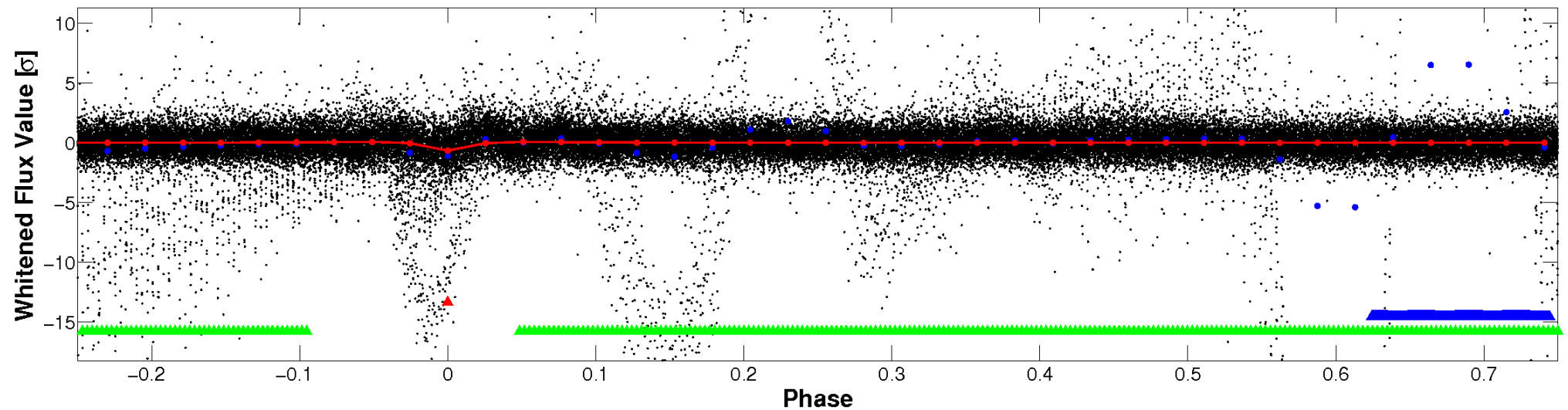


Non-Whitened Vs. Whitened Light Curve

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

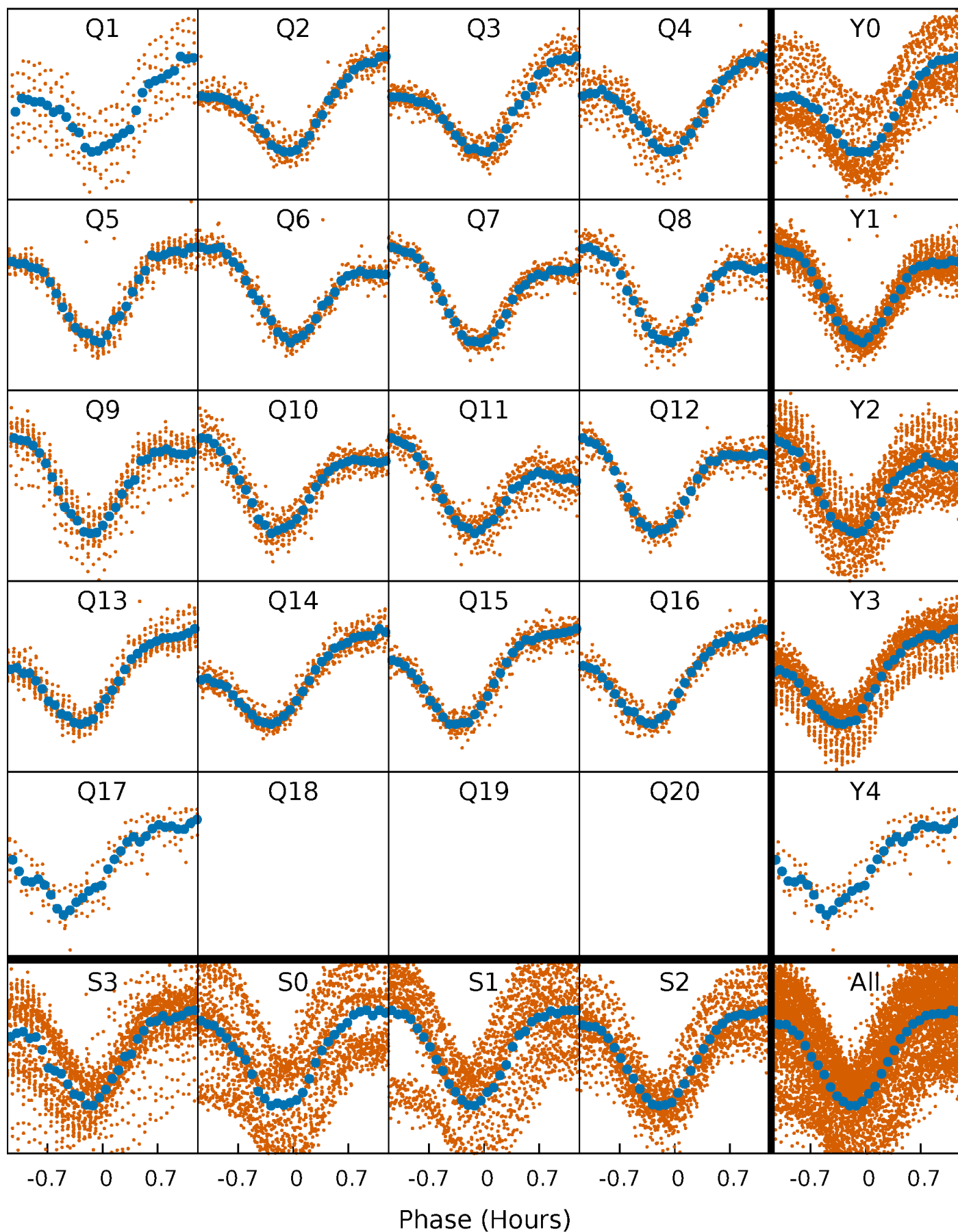


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



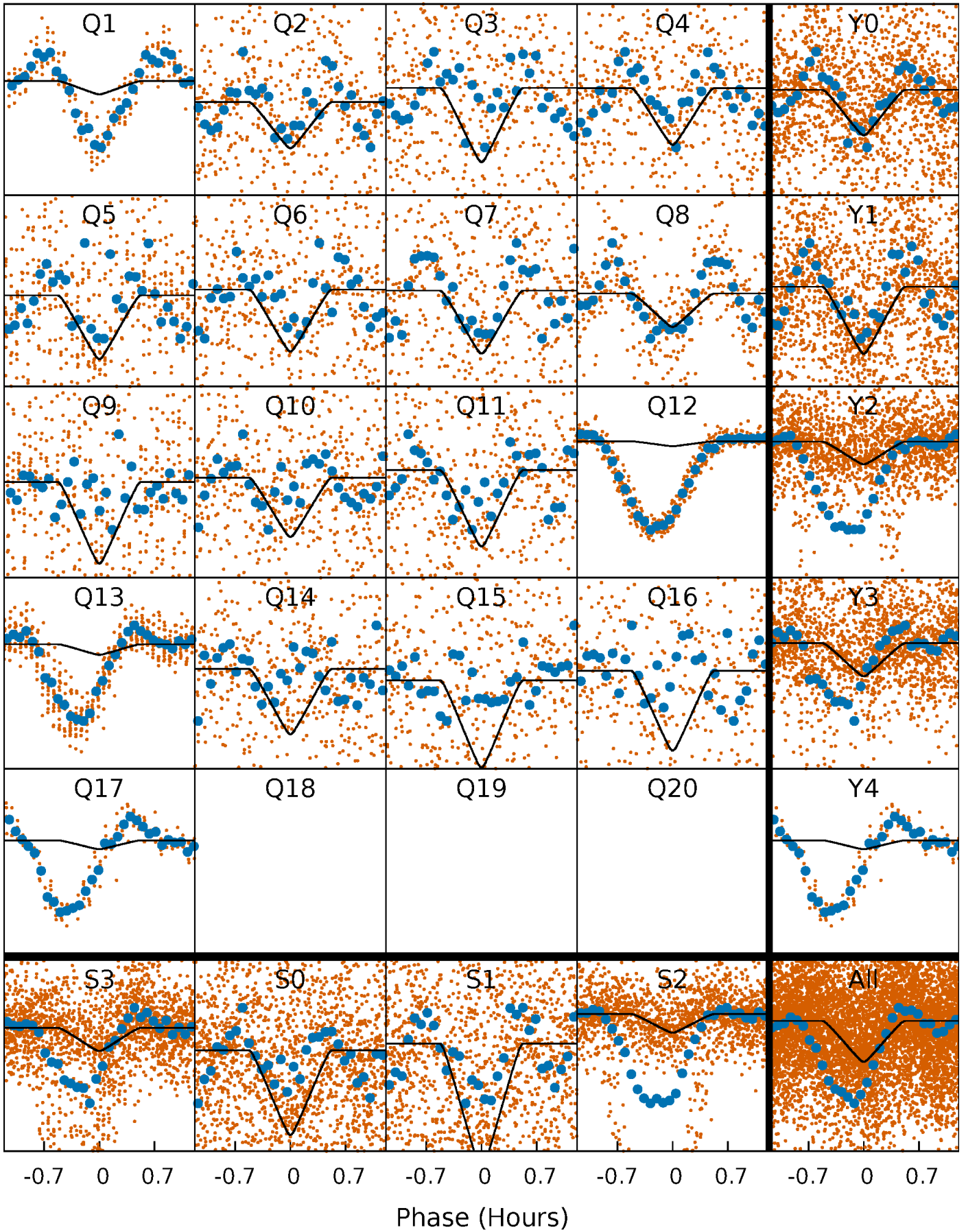
PDC Quarter-Phased Transit Curves

TCE 005647008-01 P= 0.799871 Days $T_0=132.006304$ (BKJD)



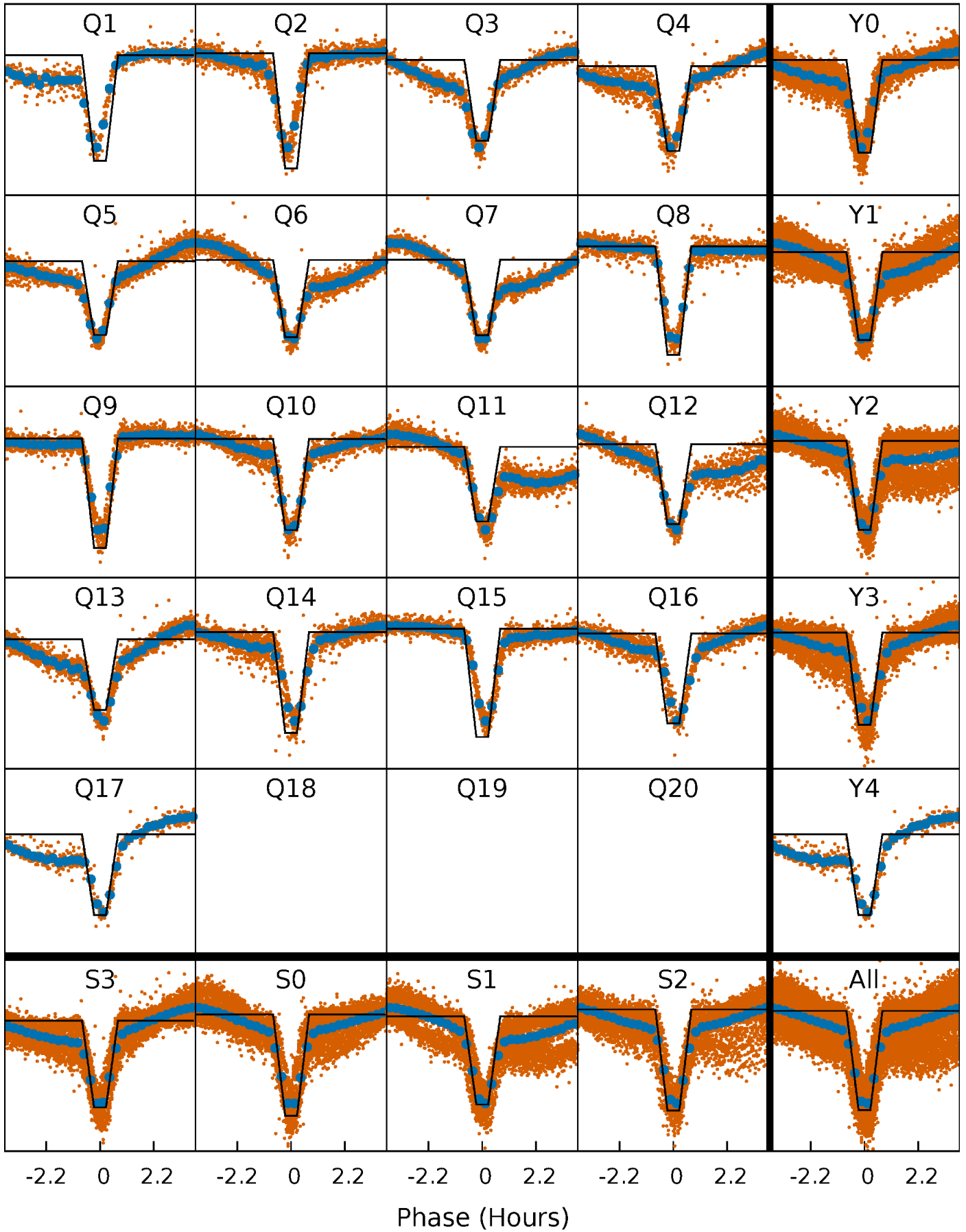
DV Quarter-Phased Transit Curves

TCE 005647008-01 P= 0.799871 Days $T_0=132.006304$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

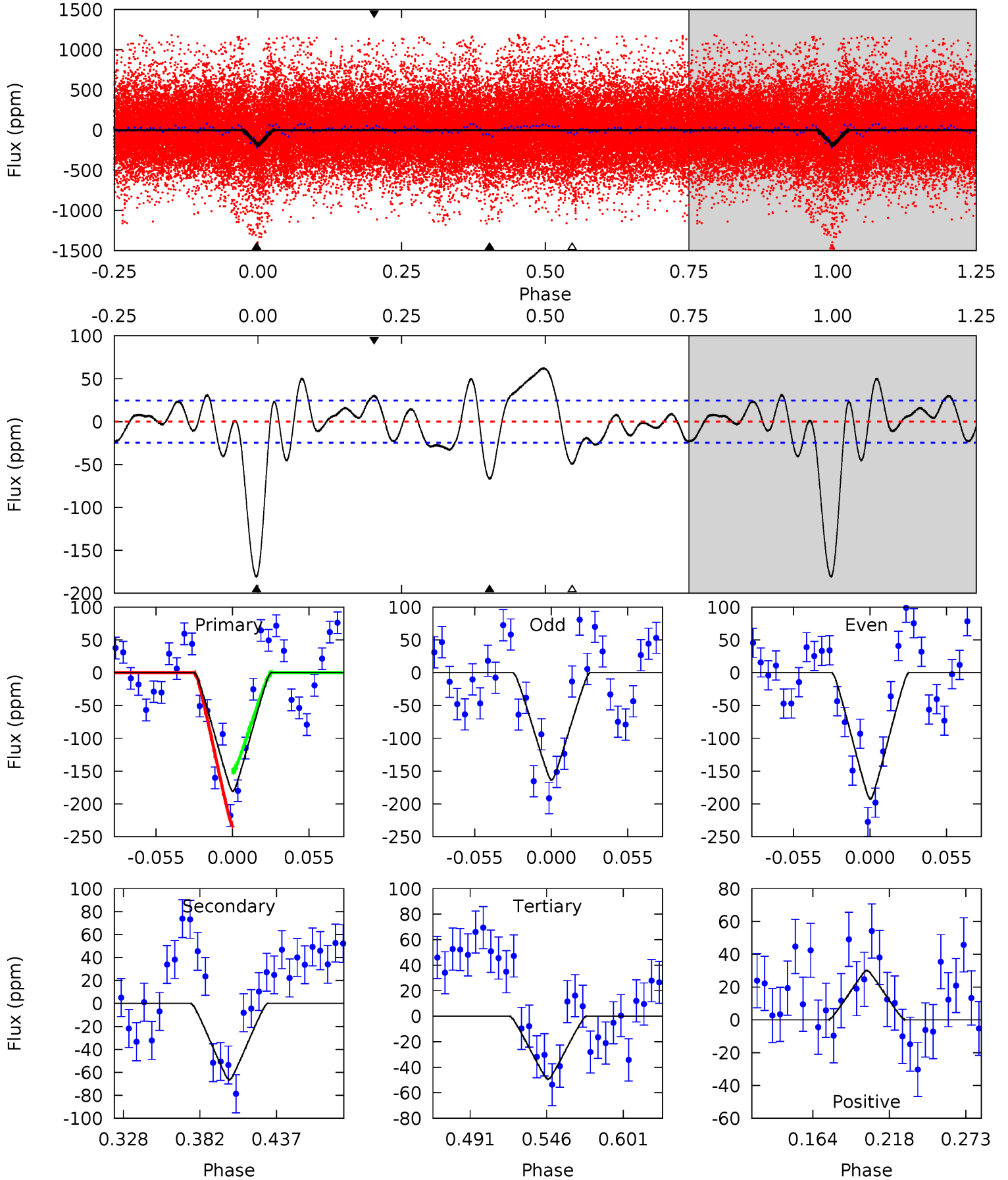
TCE 005647008-01 $P = 0.799855$ Days $T_0 = 132.013233$ (BKJD)



DV Model-Shift Uniqueness Test

005647008-01, P = 0.799871 Days, E = 131.206433 Days

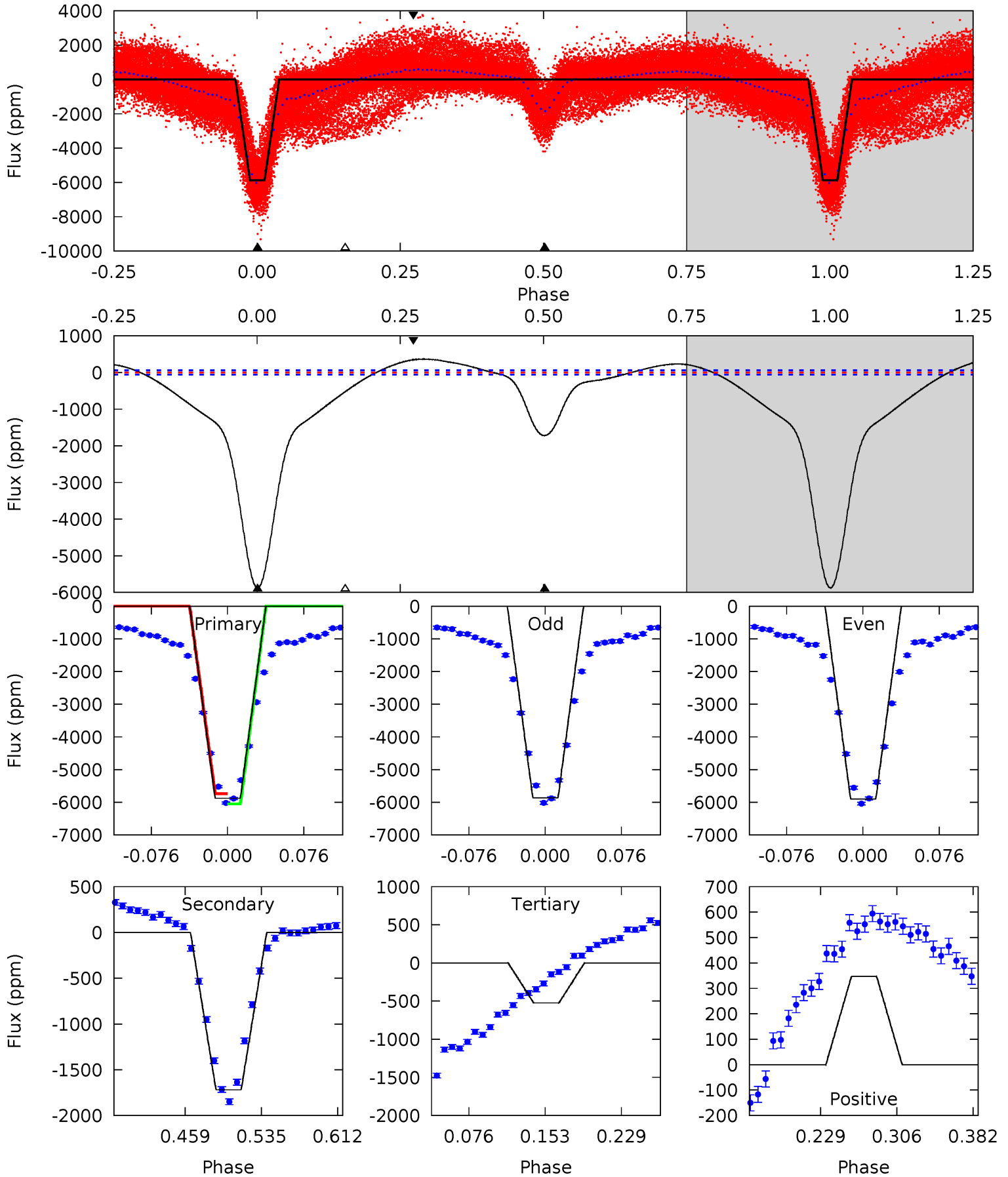
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.6	12.7	9.46	5.76	4.69	1.92	4.55	25.2	28.9	3.27	6.97	2.79	2.62	0.26	7.90



Alt Model-Shift Uniqueness Test

005647008-01, P = 0.799855 Days, E = 131.213378 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
455.8	133.3	40.7	26.9	4.62	1.77	36.5	415.2	428.9	92.7	106.4	1.36	1.00	0.06	12.2



Stellar Parameters For KIC 005647008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5568^{+166}_{-166}	$4.488^{+0.081}_{-0.161}$	$-0.120^{+0.300}_{-0.300}$	$0.882^{+0.222}_{-0.095}$	$0.873^{+0.112}_{-0.081}$	$1.791^{+0.542}_{-0.827}$
	+3%/-3%	+2%/-4%	+250%/-250%	+25%/-11%	+13%/-9%	+30%/-46%
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 005647008-01 / KOI 8103.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-66 ± 5	$1.95^{+0.63}_{-0.57}$	2561^{+161}_{-124}	3827^{+563}_{-381}	$2.517^{+2.490}_{-1.079}$
Alt.	-1719 ± 13	$7.76^{+1.13}_{-0.85}$	2571^{+146}_{-123}	4198^{+161}_{-141}	$4.067^{+0.990}_{-0.936}$

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 $A_{obs} \gg 1.0$

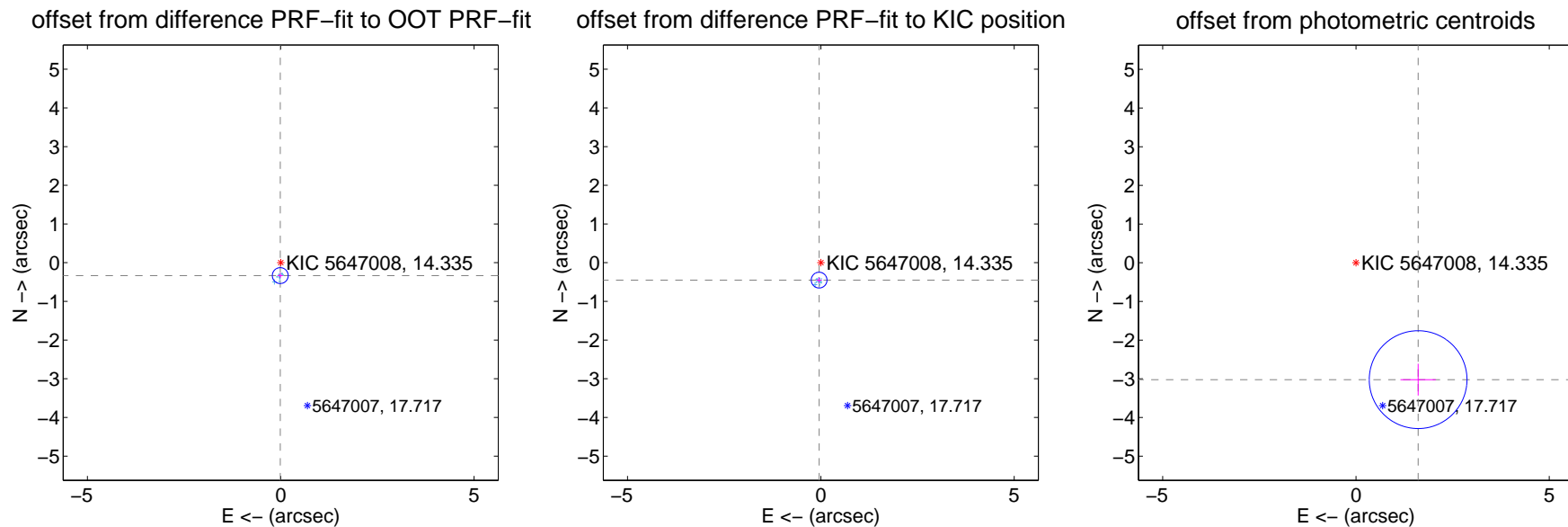
DV Centroid Data

Supplemental centroid analysis for 005647008-01. Kepler magnitude: 14.34. Transit SNR 27.69

There are 17 quarters with good PRF difference image offsets

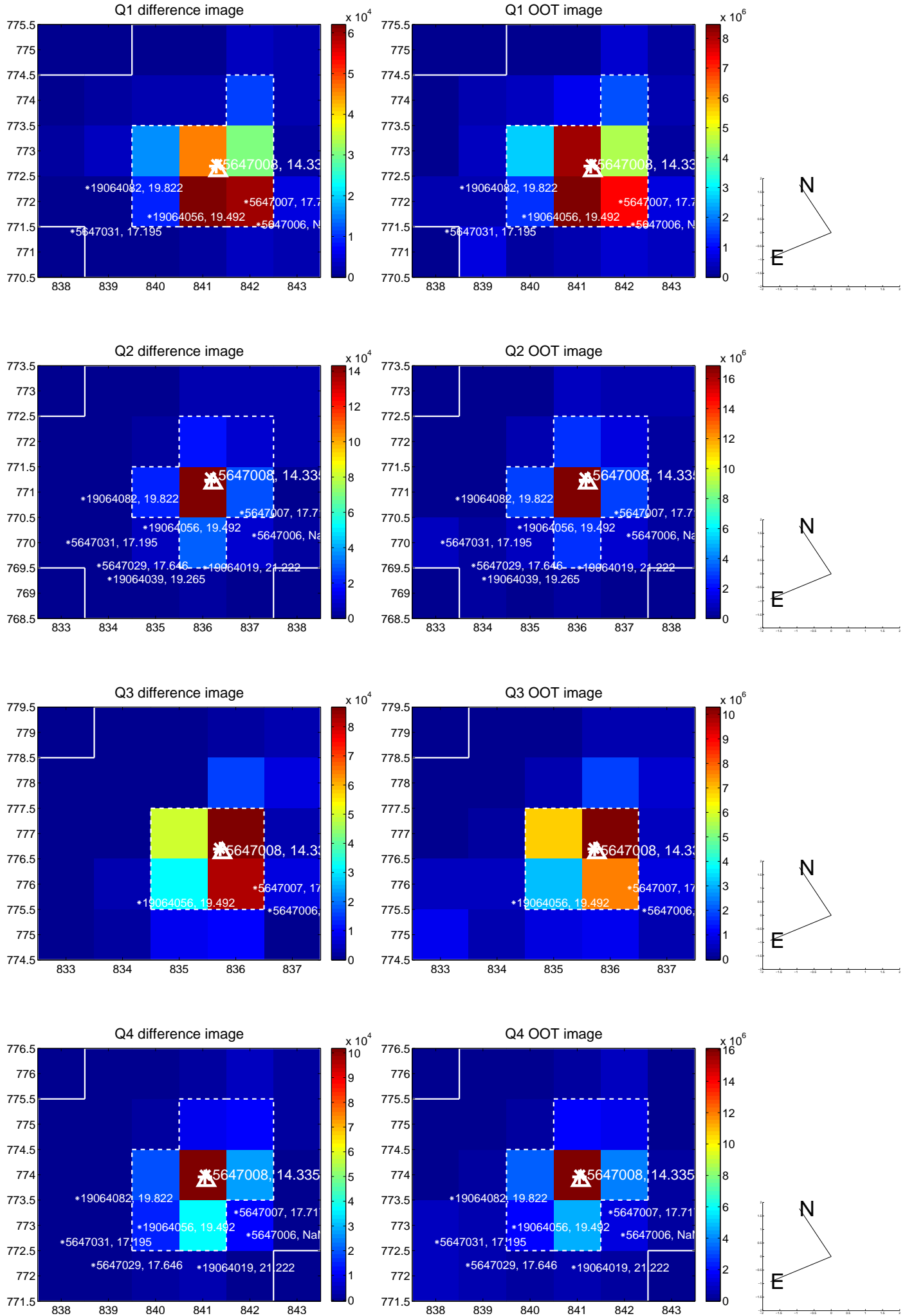
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.334 ± 0.068	4.88	0.013 ± 0.068	-0.334 ± 0.068
PRF-fit source offset from KIC position	0.452 ± 0.068	6.66	0.045 ± 0.068	-0.450 ± 0.068
photometric centroid source offset	3.42 ± 0.42	8.12	-1.61 ± 0.46	-3.02 ± 0.41

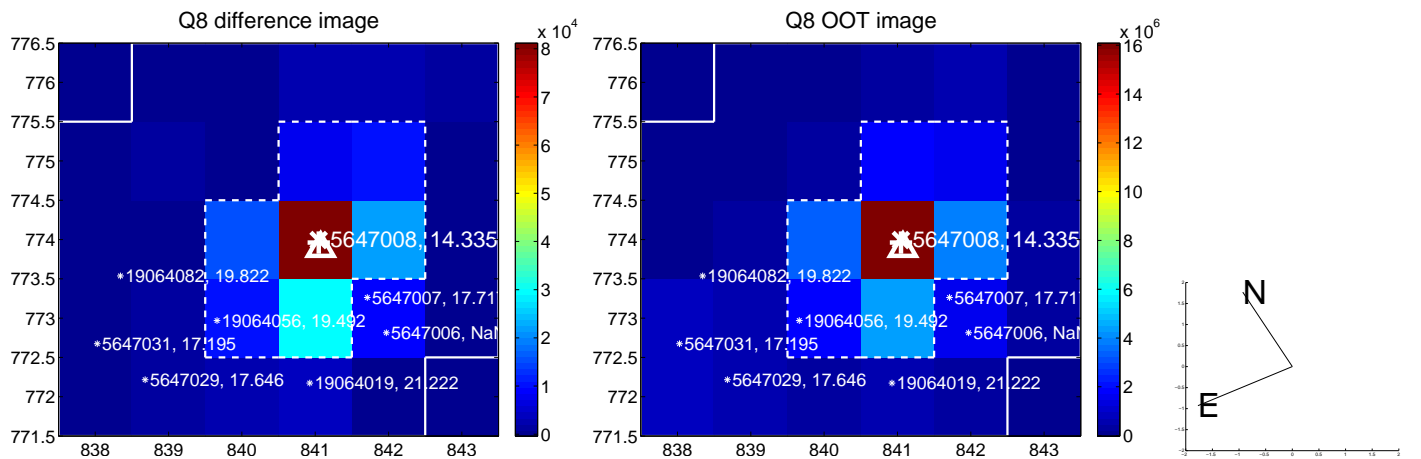
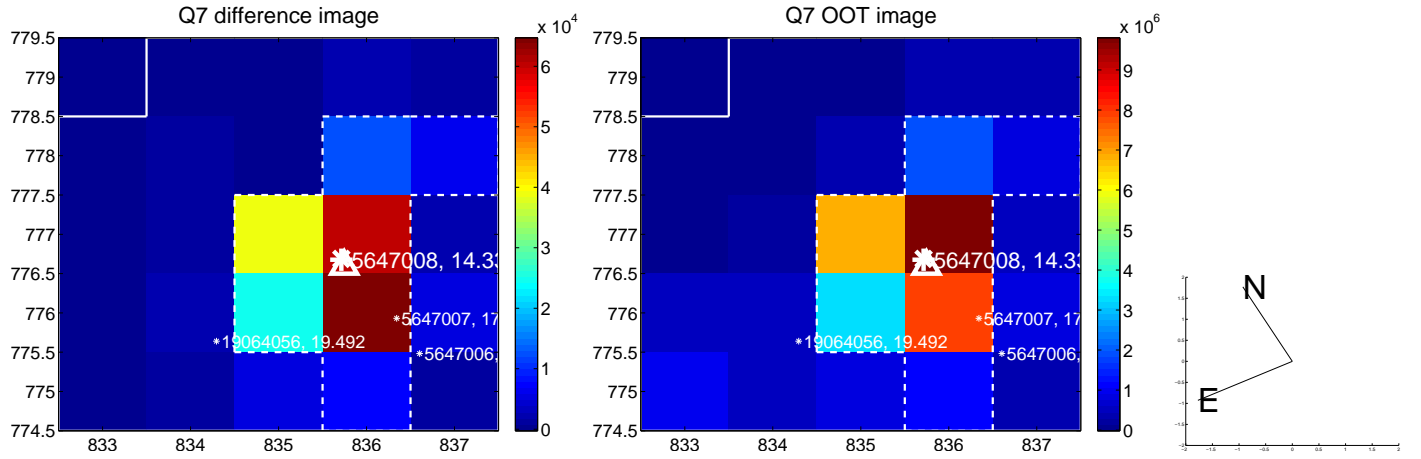
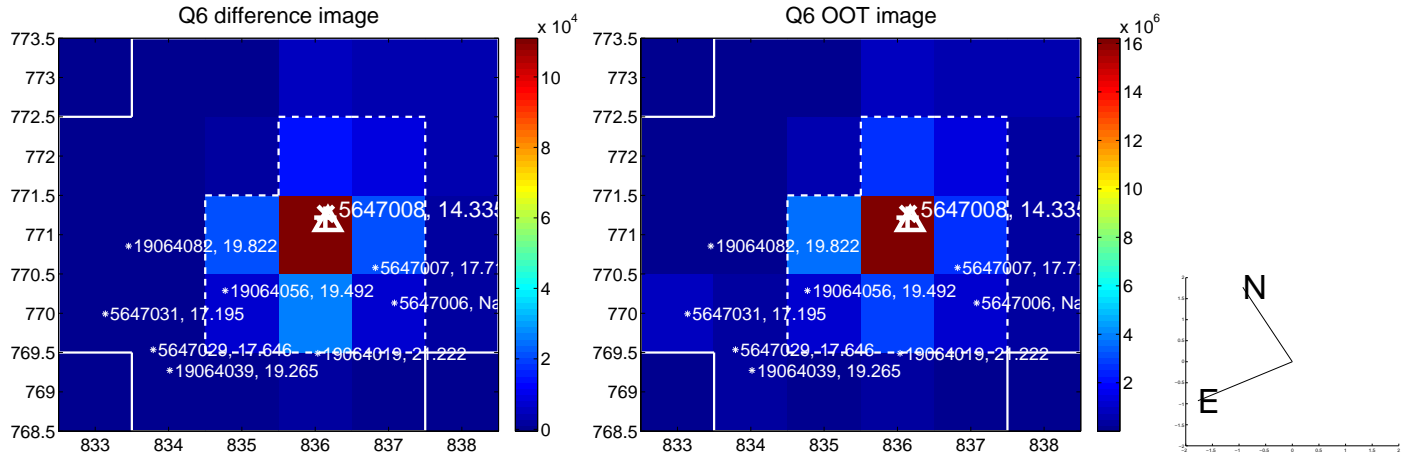
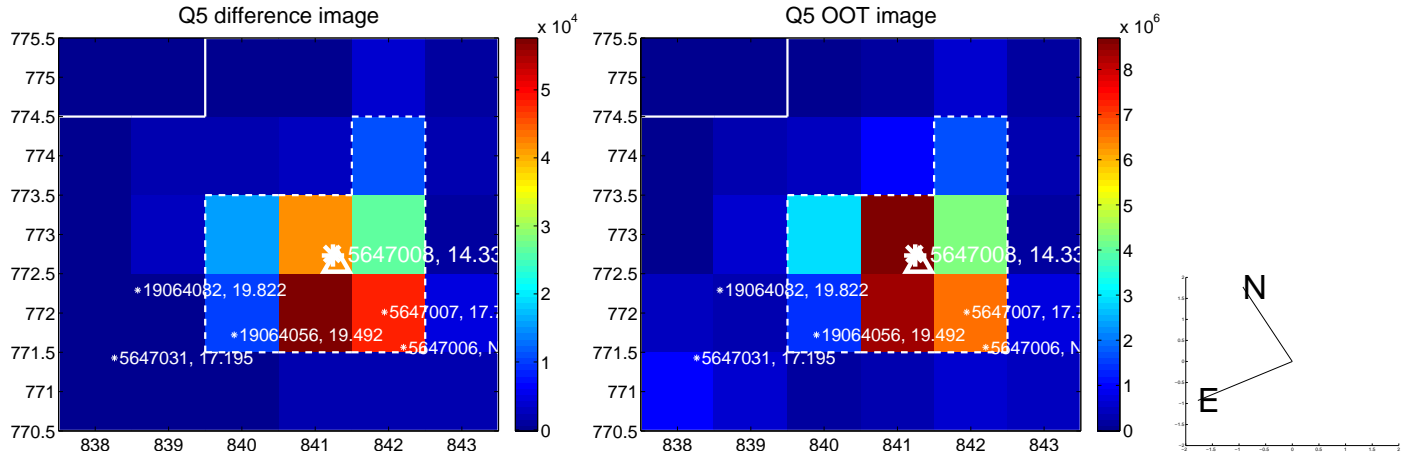


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

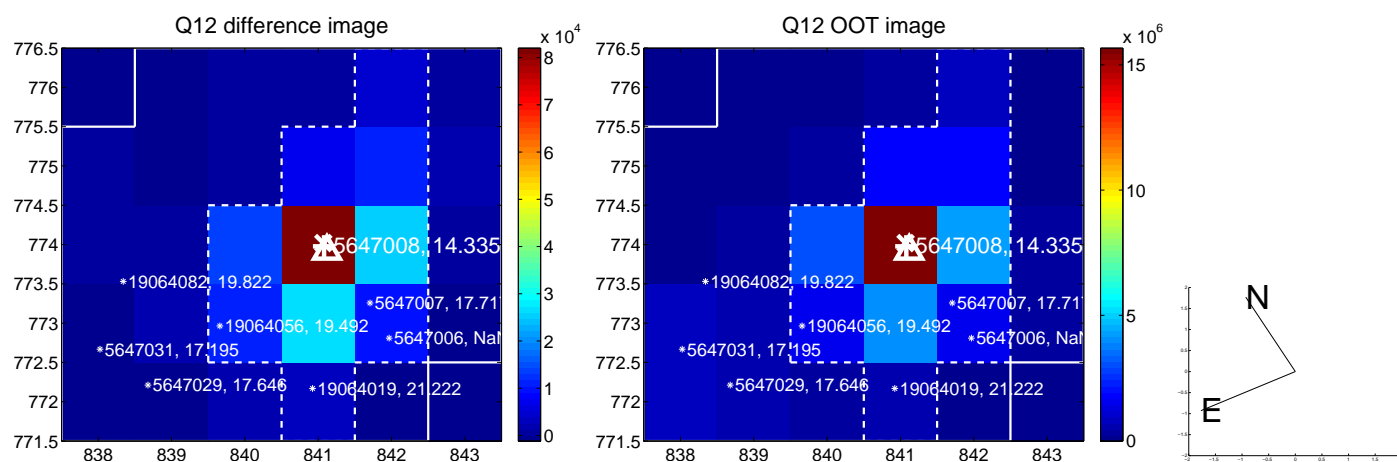
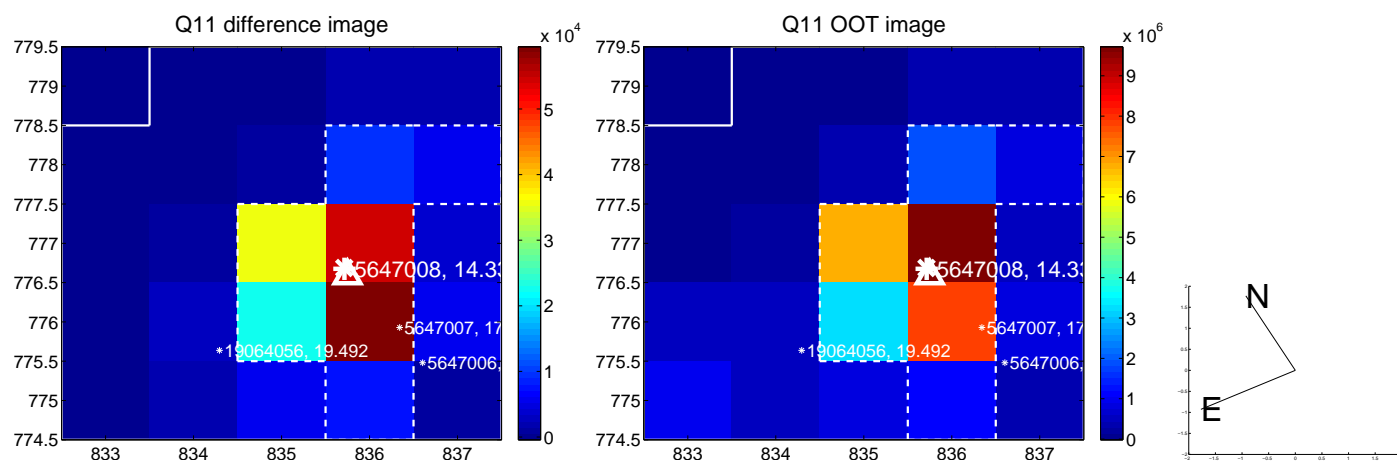
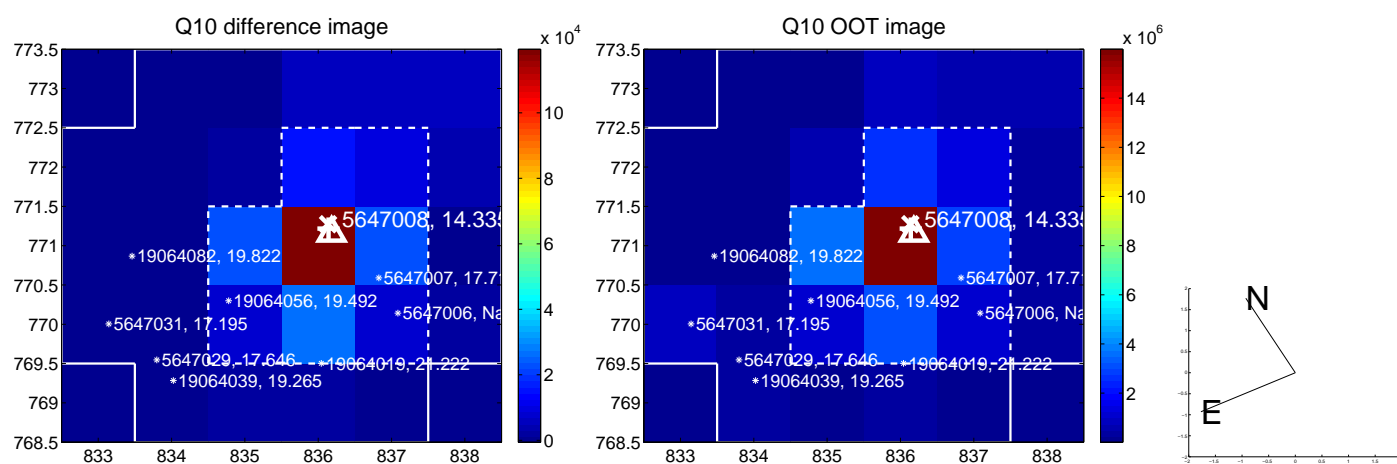
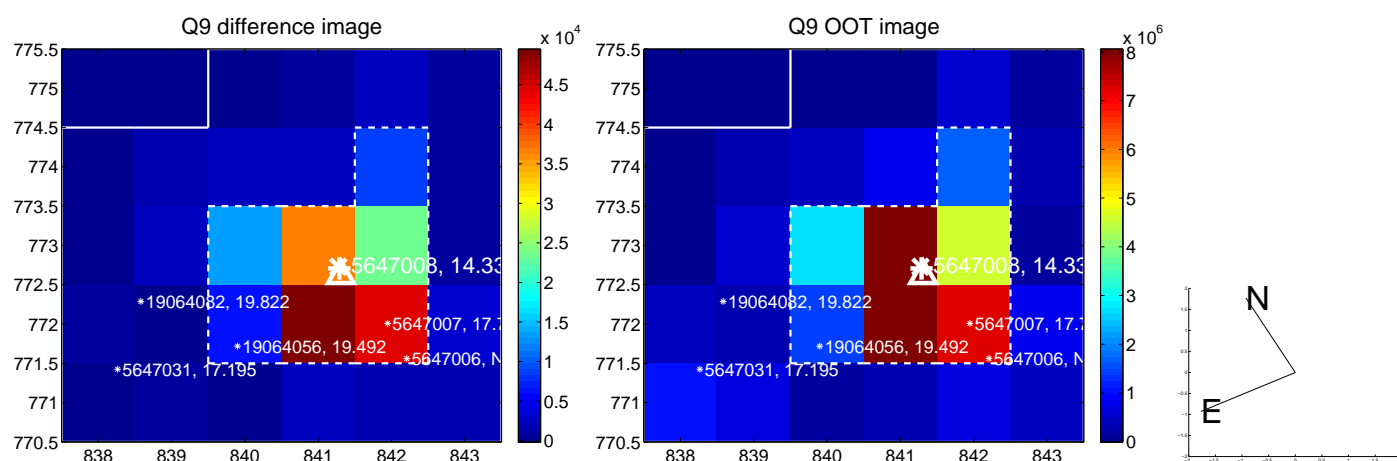
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



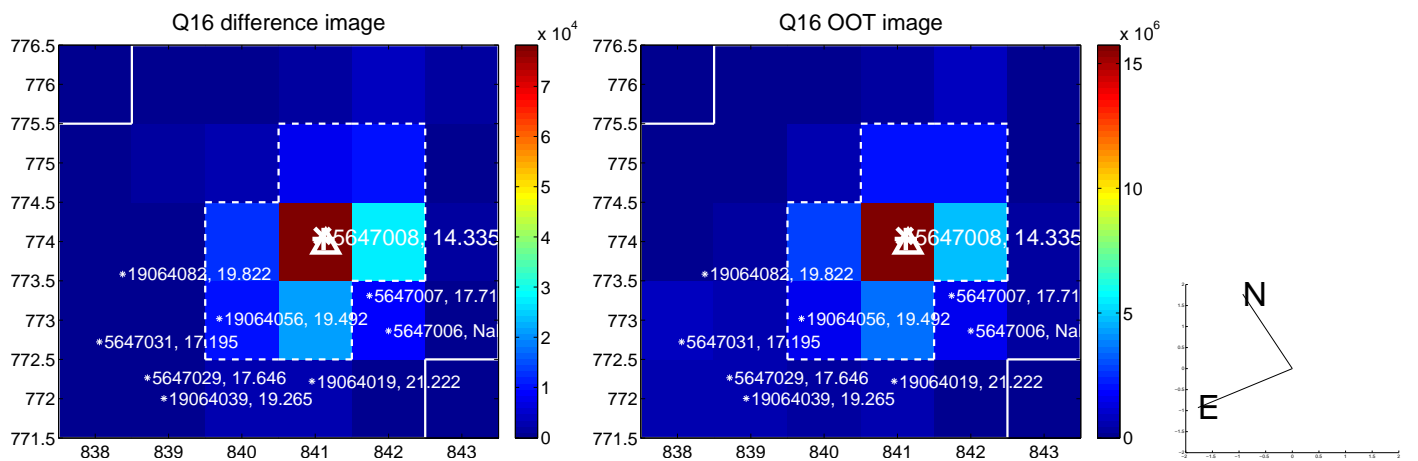
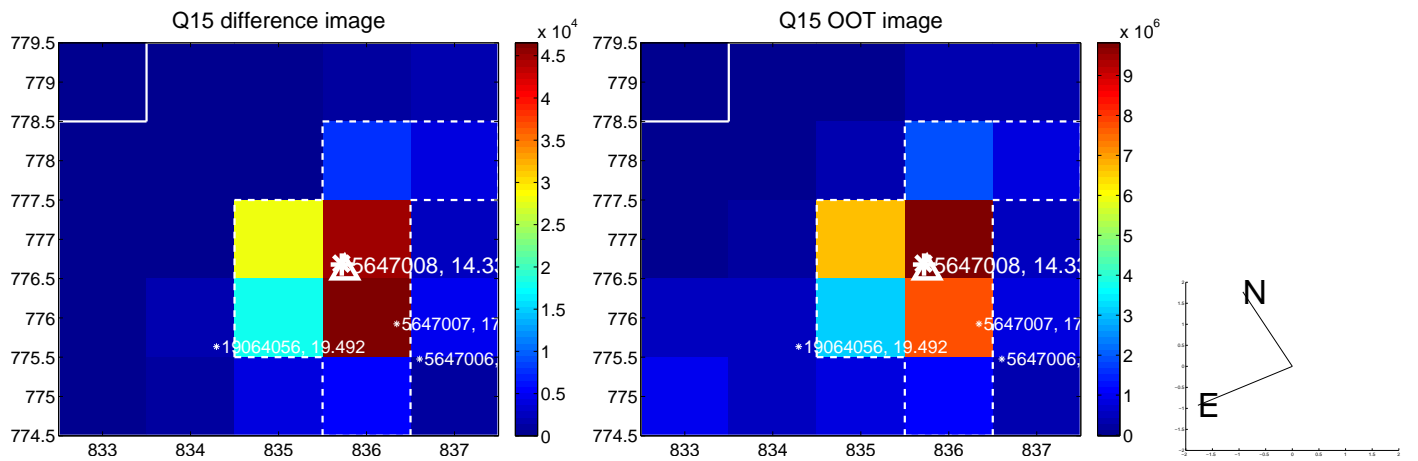
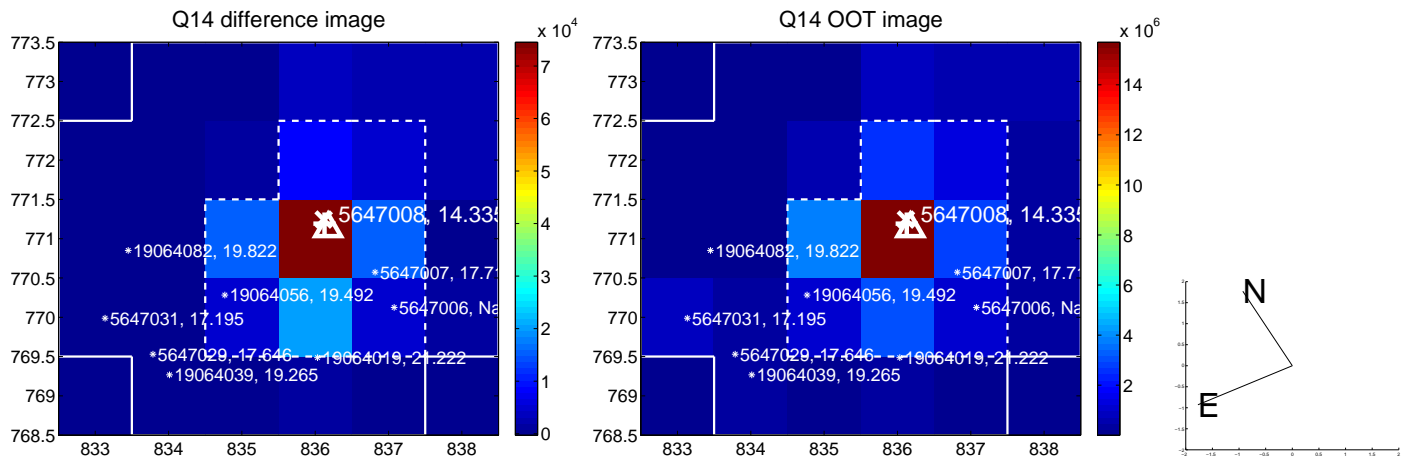
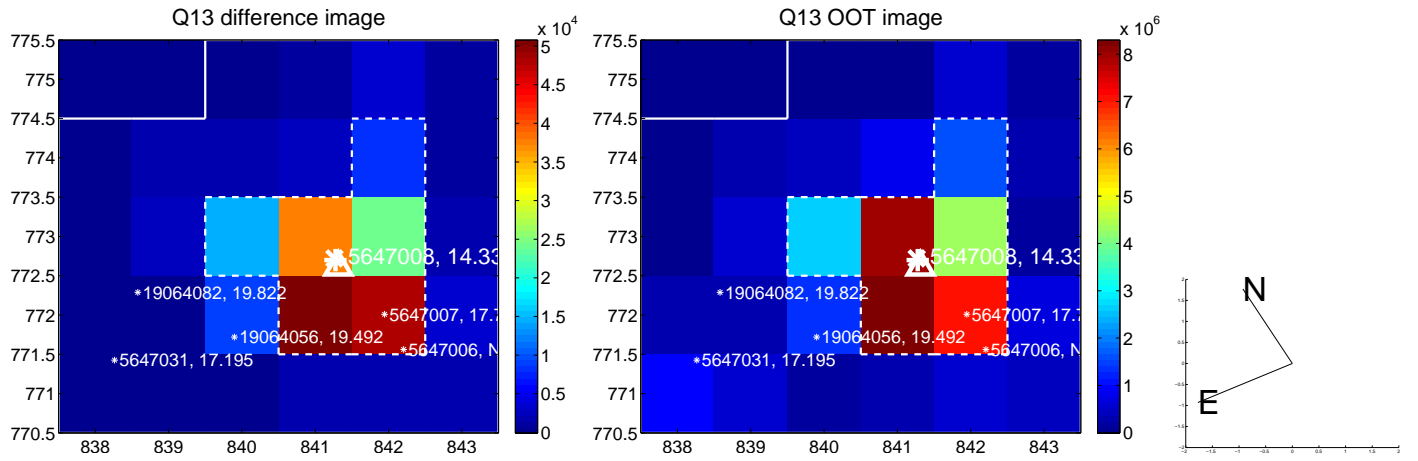
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



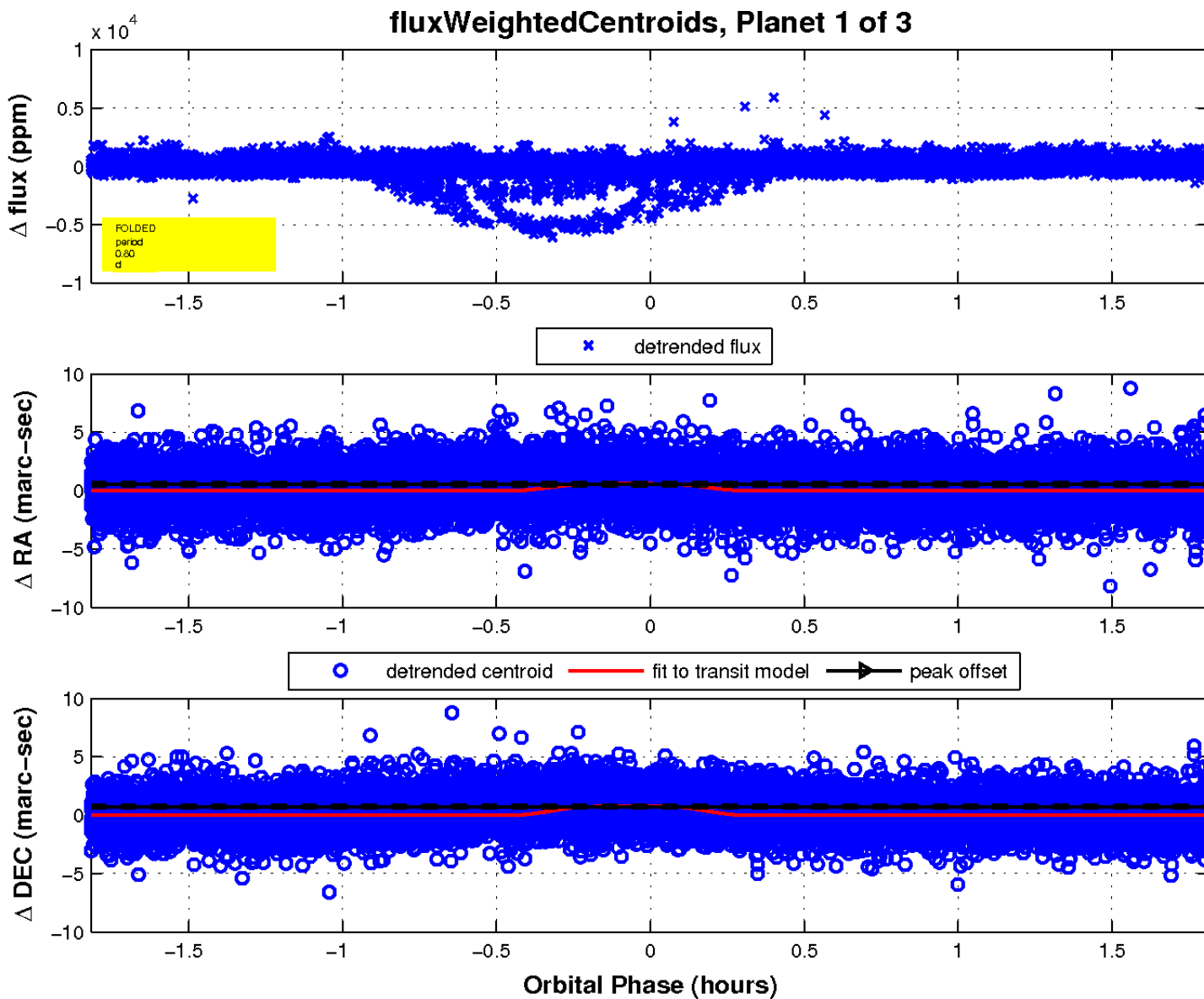
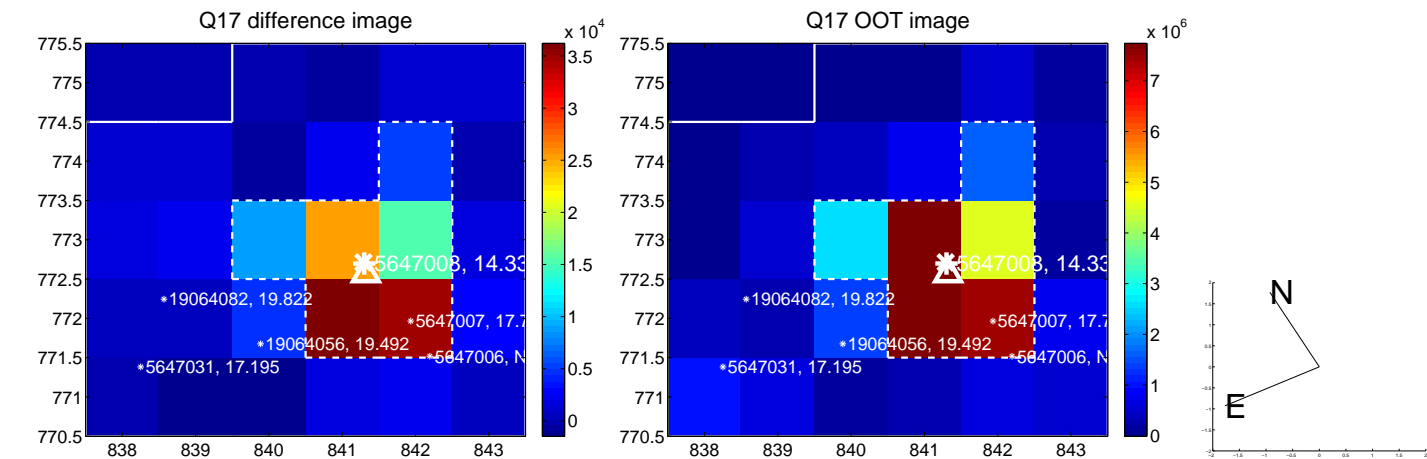
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



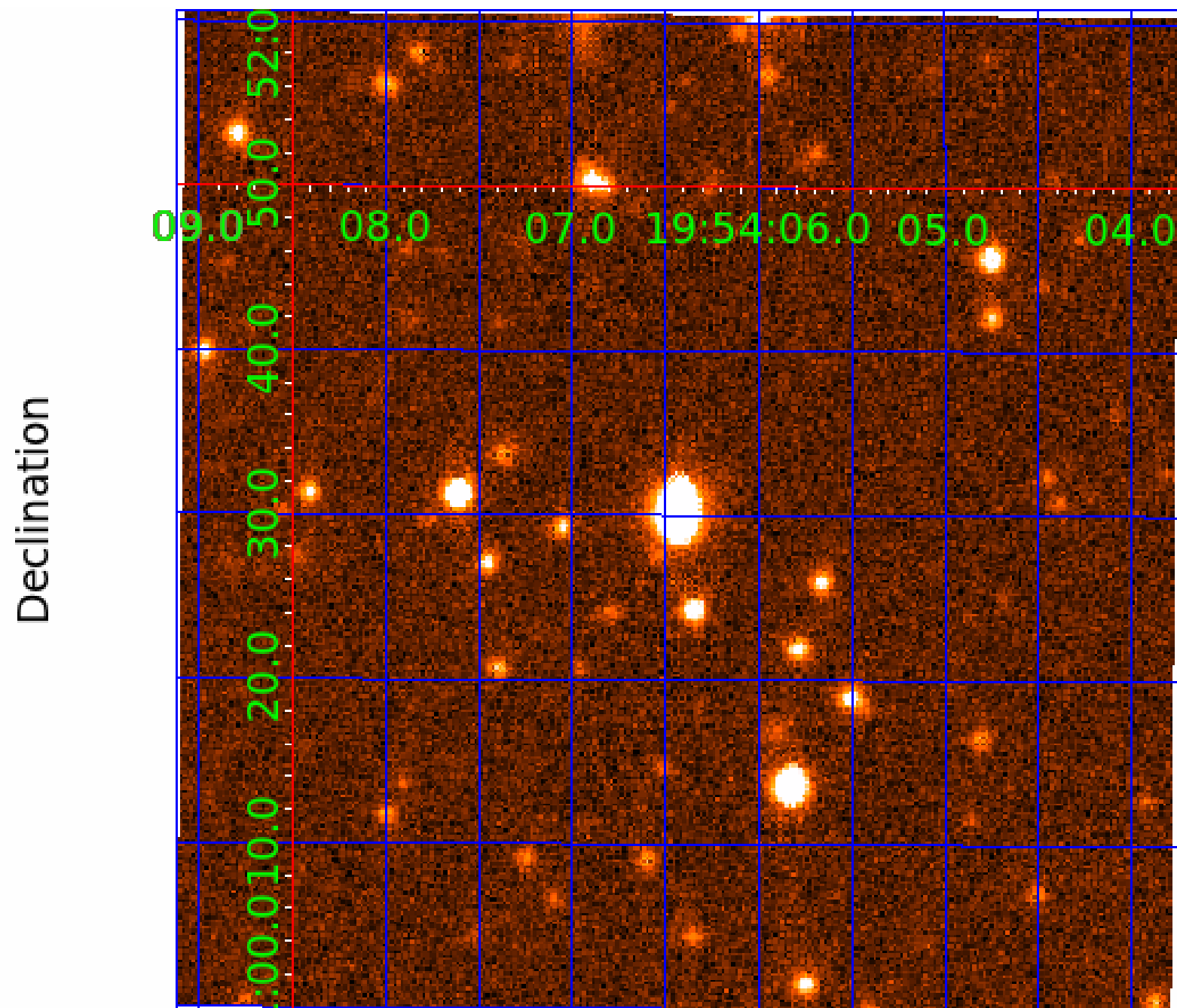
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005647008

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})
005647008-01	OBS	8103.01	0.799871	132.006304	278.0	0.606	41.6	27.7	0.88	5568	1.89	2578.16
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005647008-03	OBS	No	5.596465	132.729944	3224.9	2.000	52.8	-1.0	0.88	5568	4.95	192.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005647008-01	OBS	FP	0.49	0	1	0	0	HAS_SEC_TCE
005647008-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005647008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

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

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

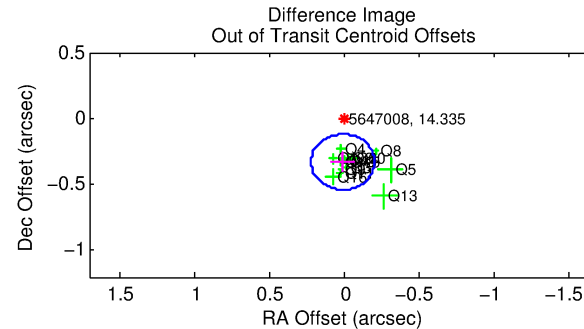
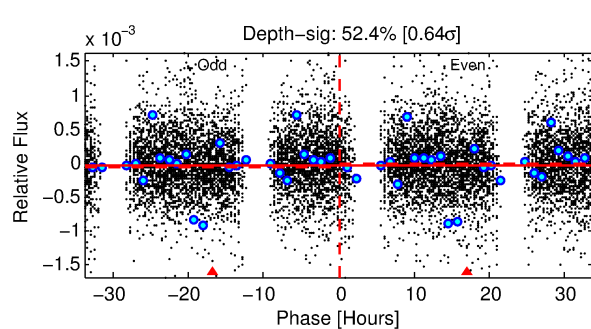
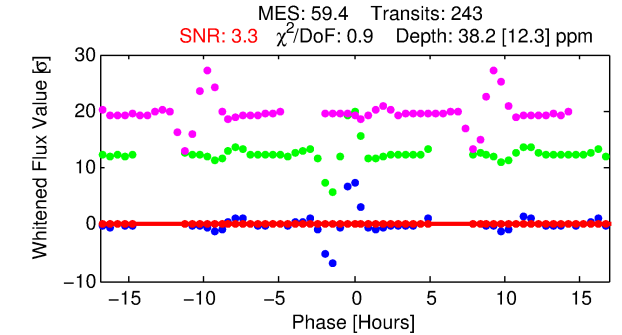
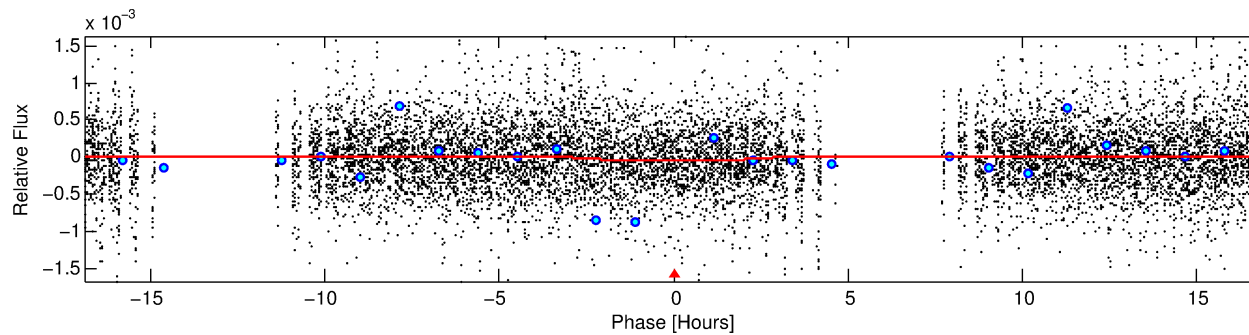
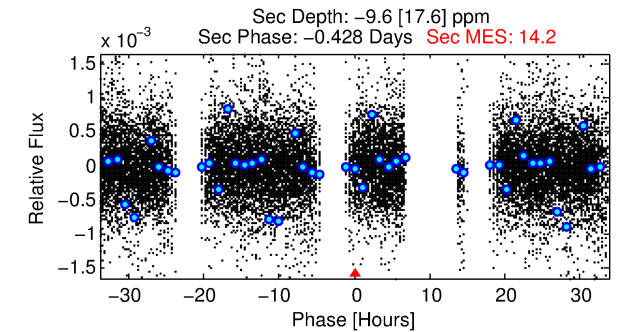
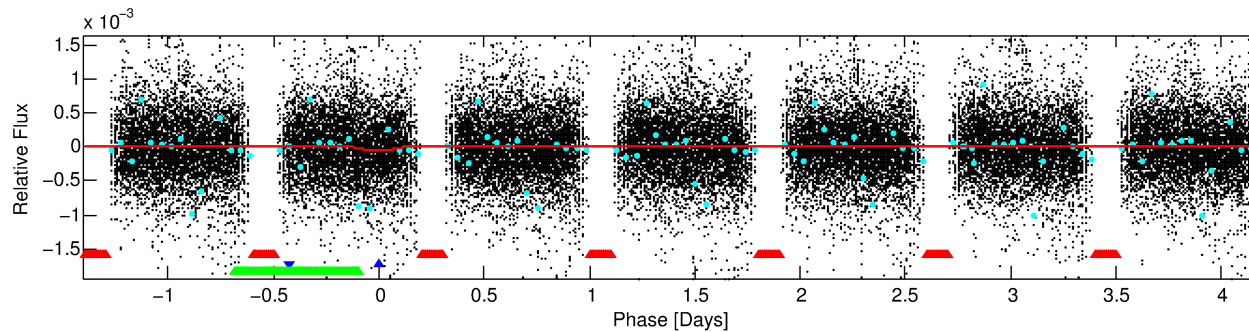
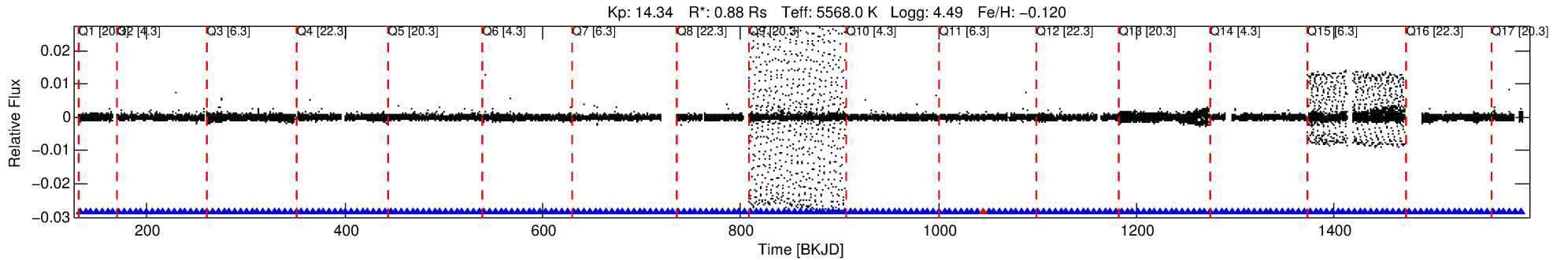
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005647008-02

No Significant Match Found

DV One-Page Summary

KIC: 5647008 Candidate: 2 of 3 Period: 5.599 d



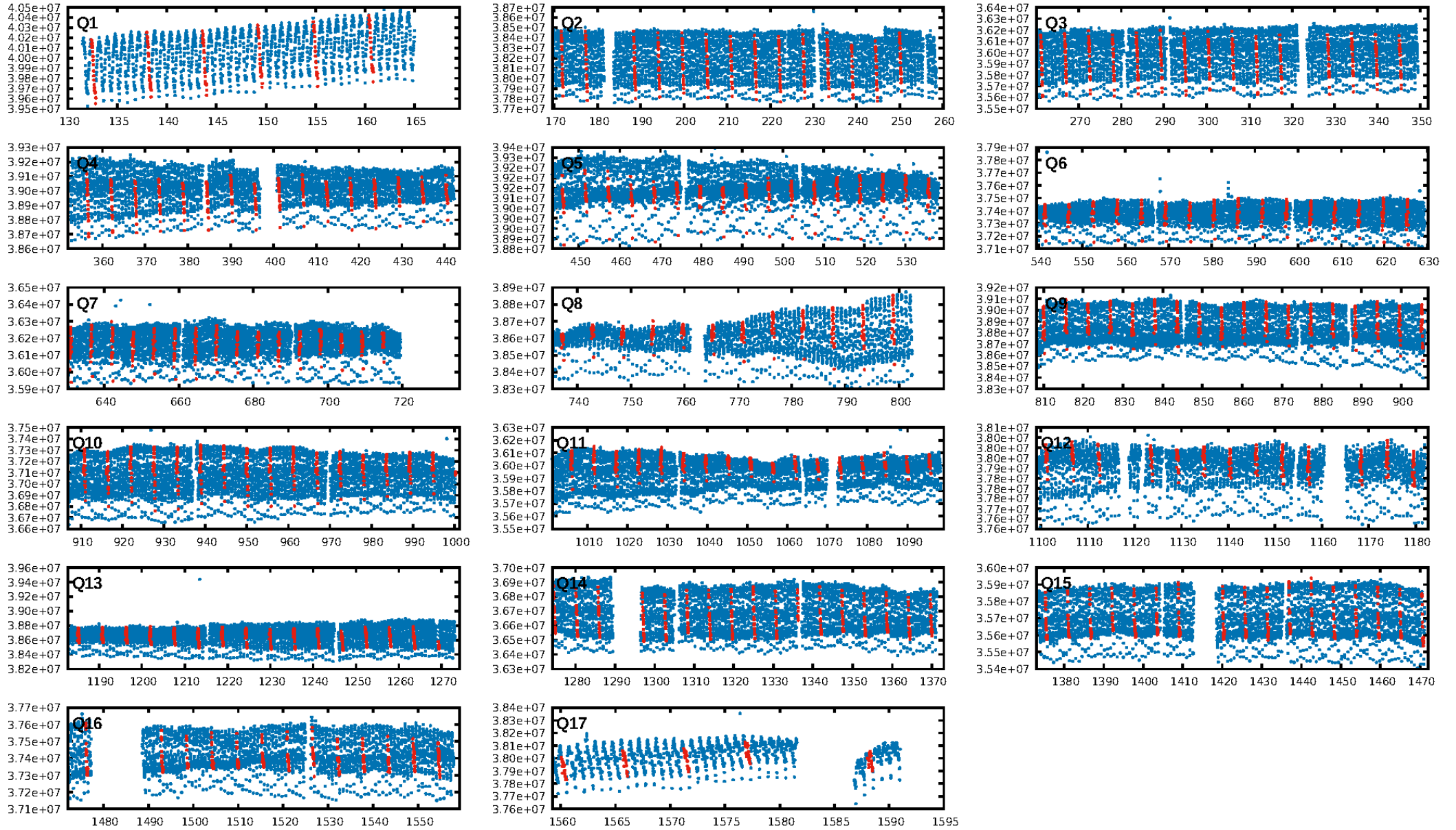
DV Fit Results:

Period = 5.59873 [0.00016] d
Epoch = 132.6017 [0.0188] BKJD
Rp/R* = 0.0063 [0.0076]
a/R* = 4.71 [23.76]
b = 0.80 [2.41]
Seff = 192.55 [61.93]
Teq = 950 [76] K
Rp = 0.61 [0.75] Re
a = 0.0590 [0.0123] AU
Ag = N/A
Teffp = N/A

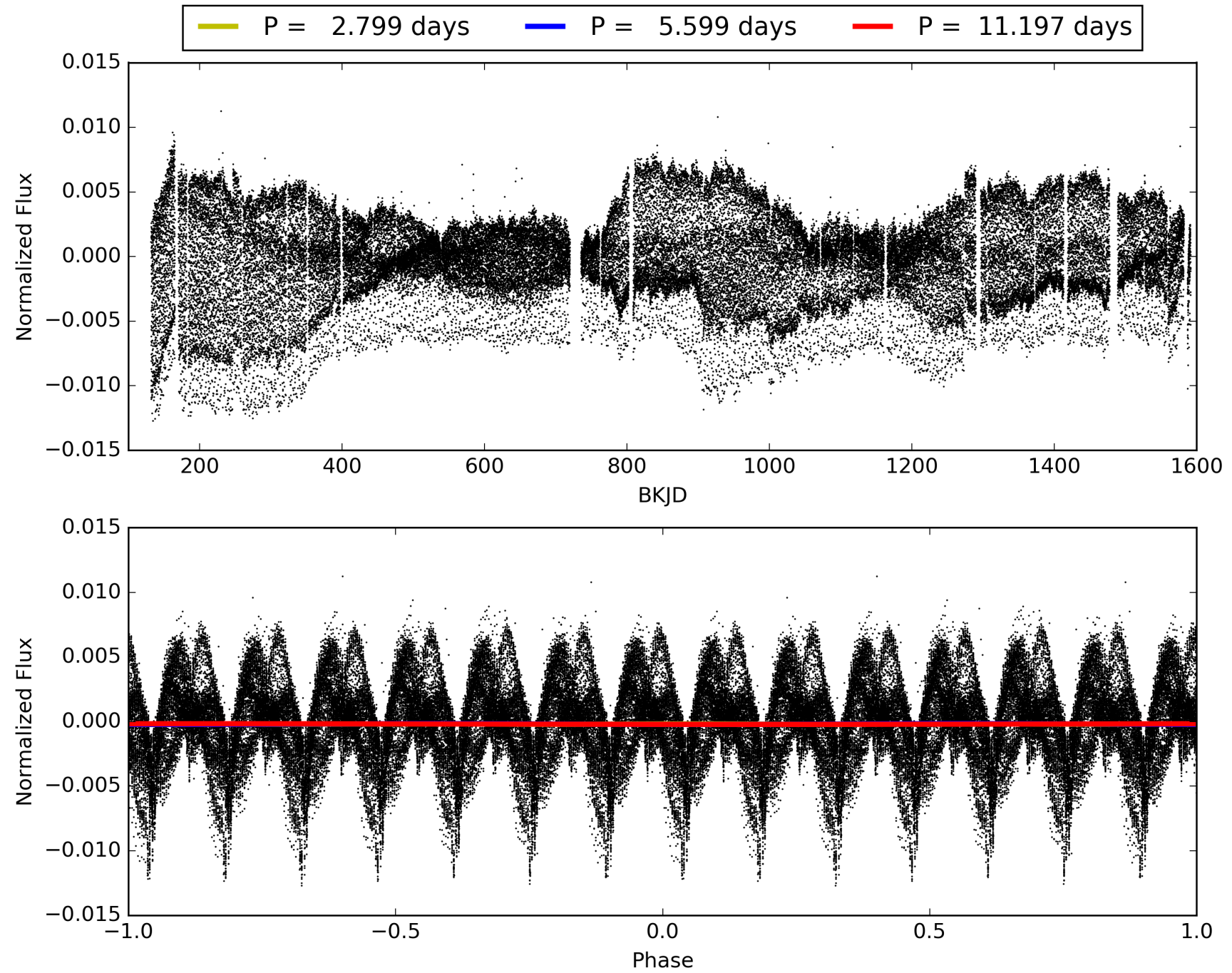
DV Diagnostic Results:

ShortPeriod-sig: 0.7% [0.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [231/232]
GhostDiagnostic-chr: 0.6884
Centroid-sig: 6.8%
Centroid-so: 3.170 arcsec [1.24σ]
OotOffset-rm: 0.330 arcsec [4.69σ]
KicOffset-rm: 0.475 arcsec [6.77σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 005647008-02, PDC Light Curves

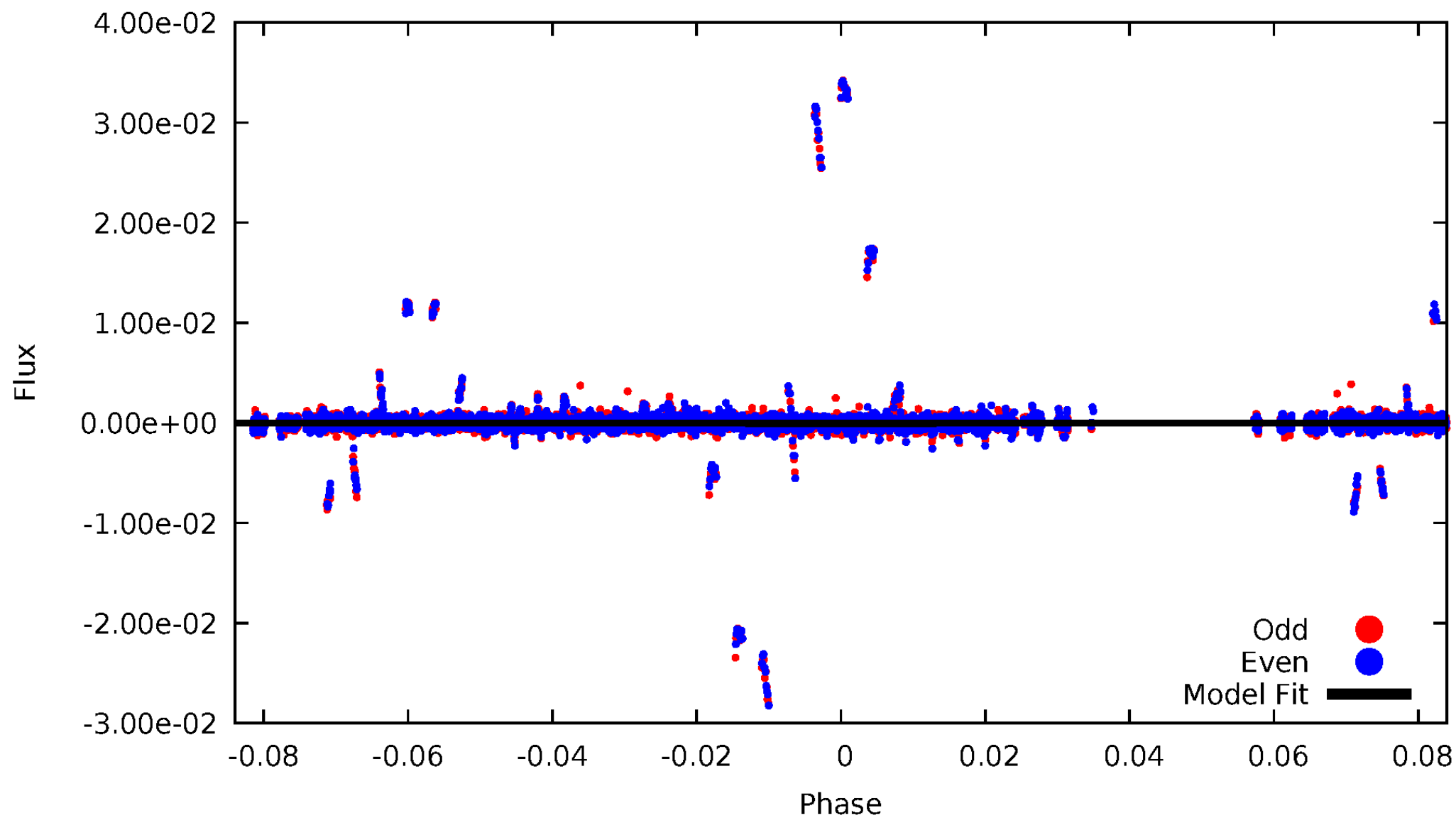


TCE 005647008-02



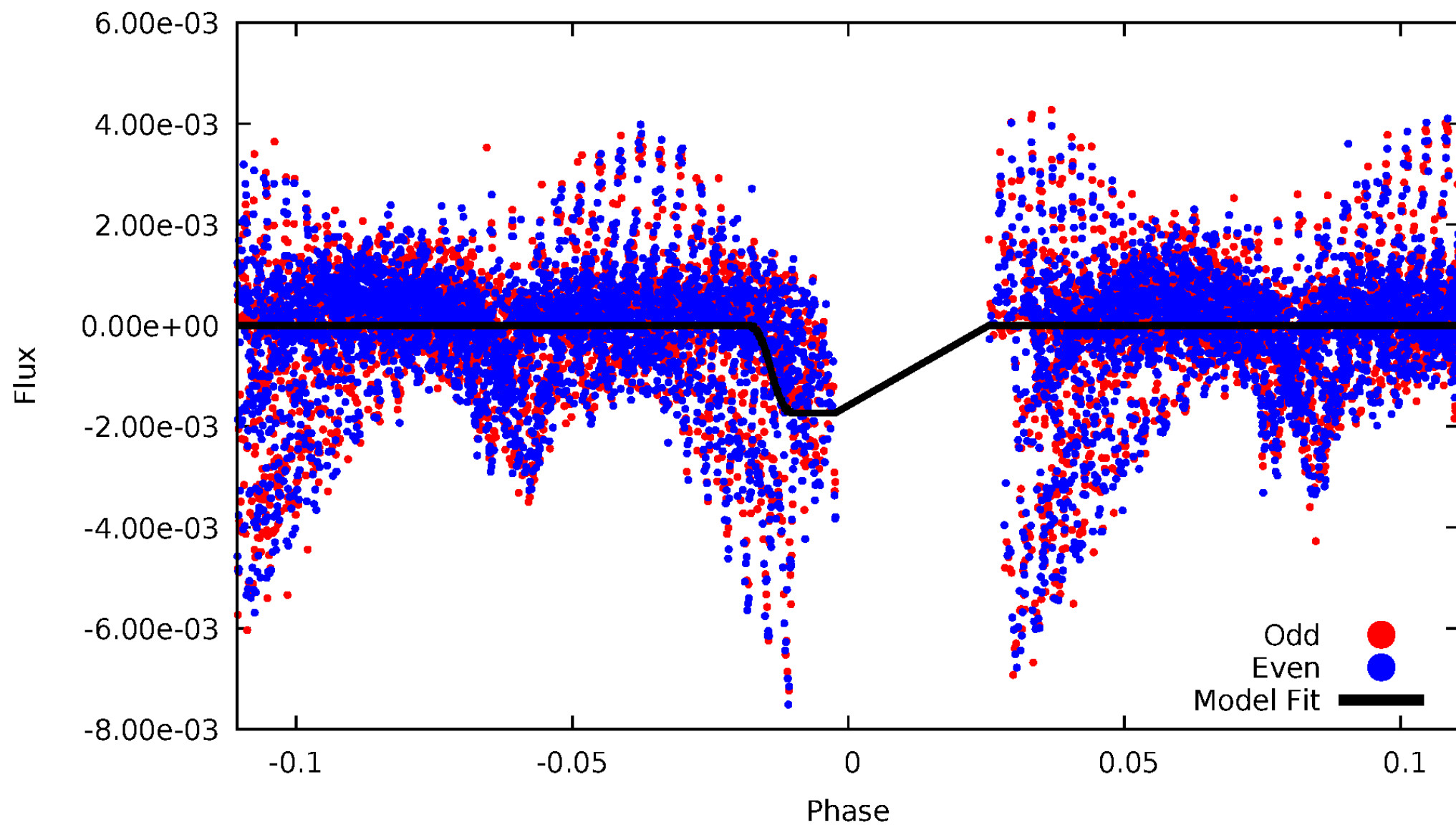
DV Odd/Even

TCE 005647008-02



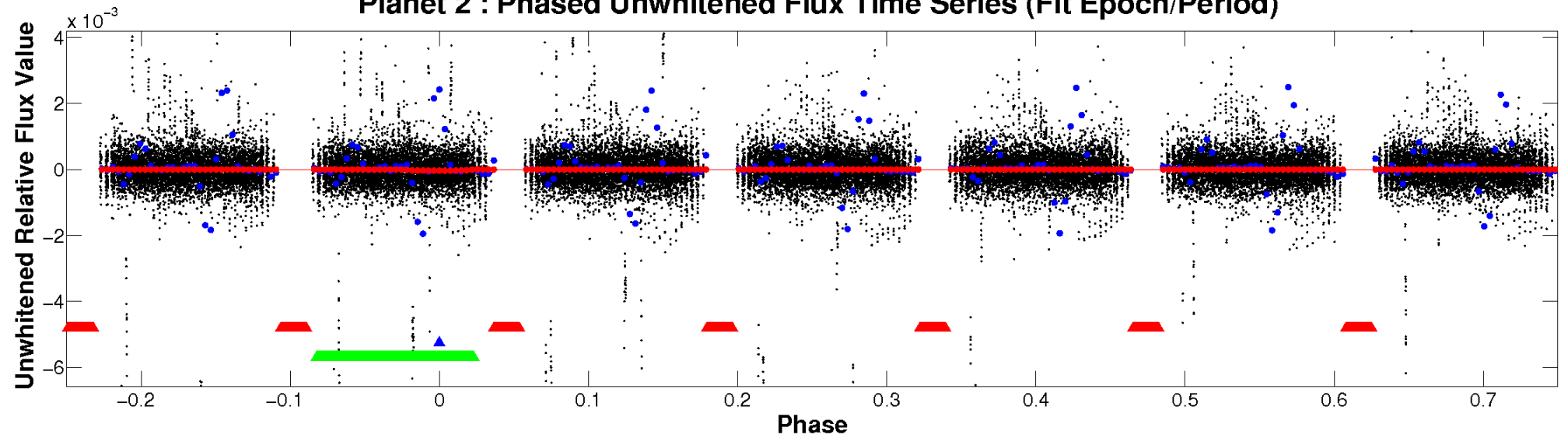
ALT Odd/Even

TCE 005647008-02

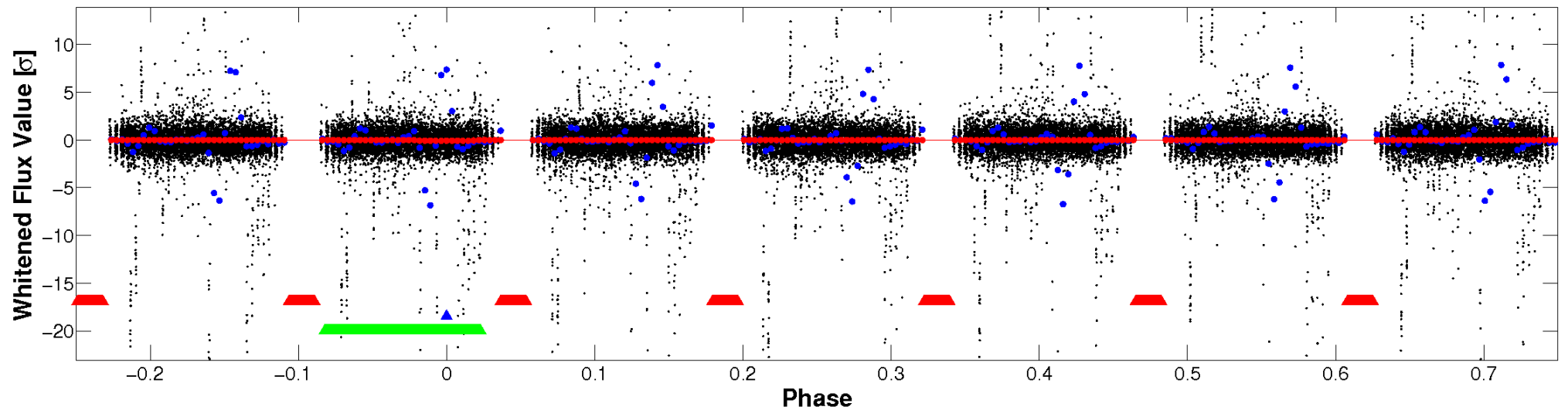


Non-Whitened Vs. Whitened Light Curve

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

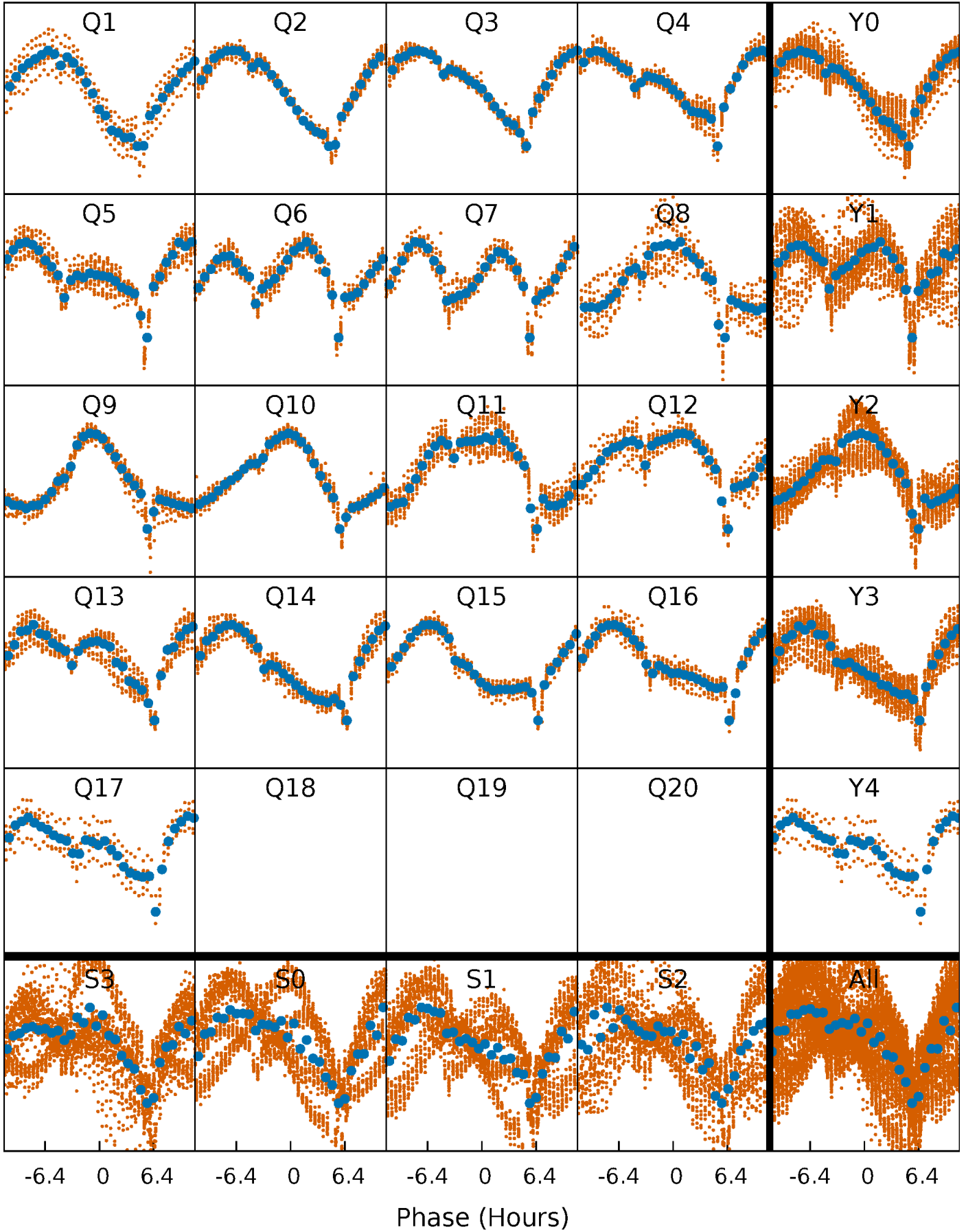


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



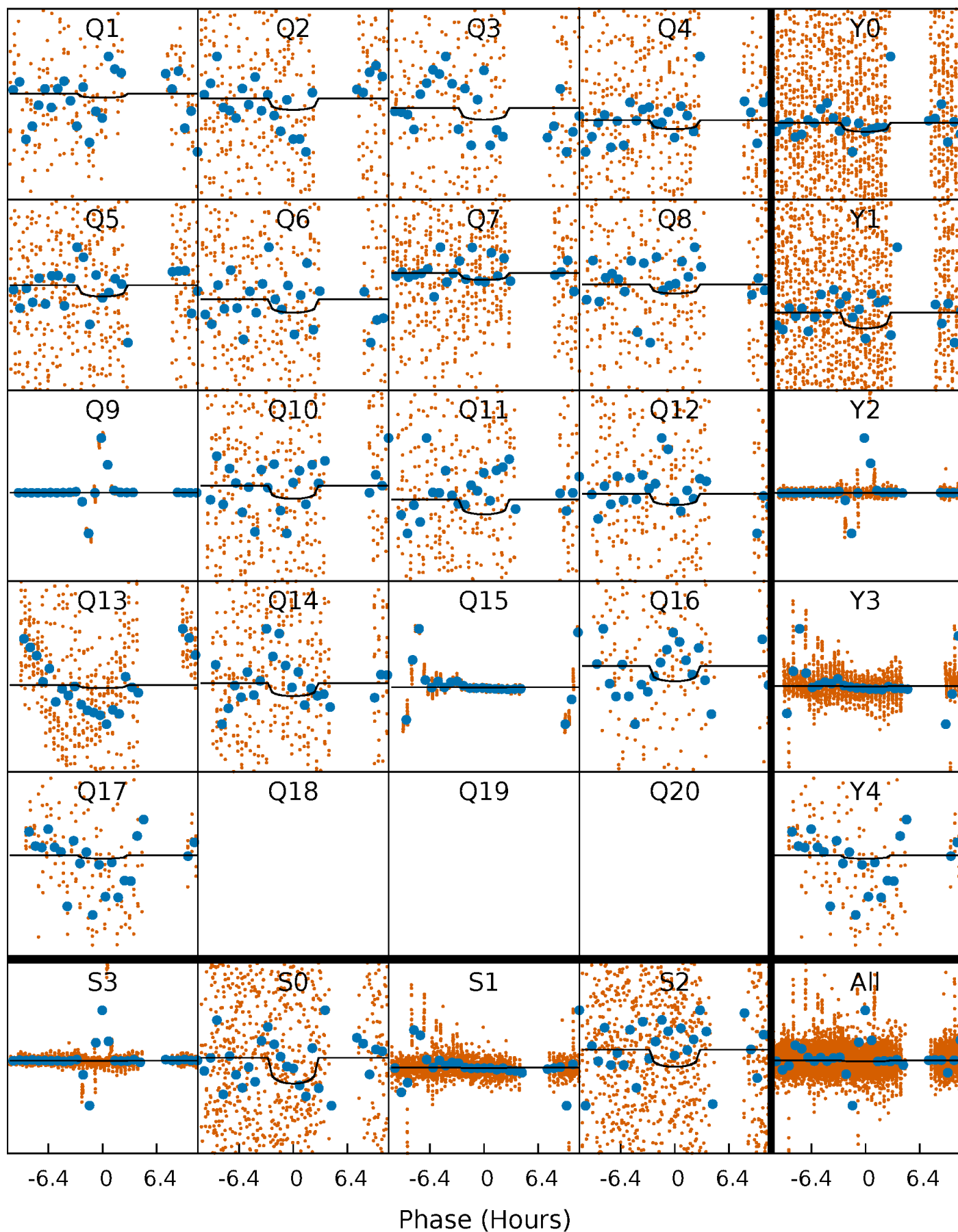
PDC Quarter-Phased Transit Curves

TCE 005647008-02 P= 5.598728 Days $T_0=132.601736$ (BKJD)



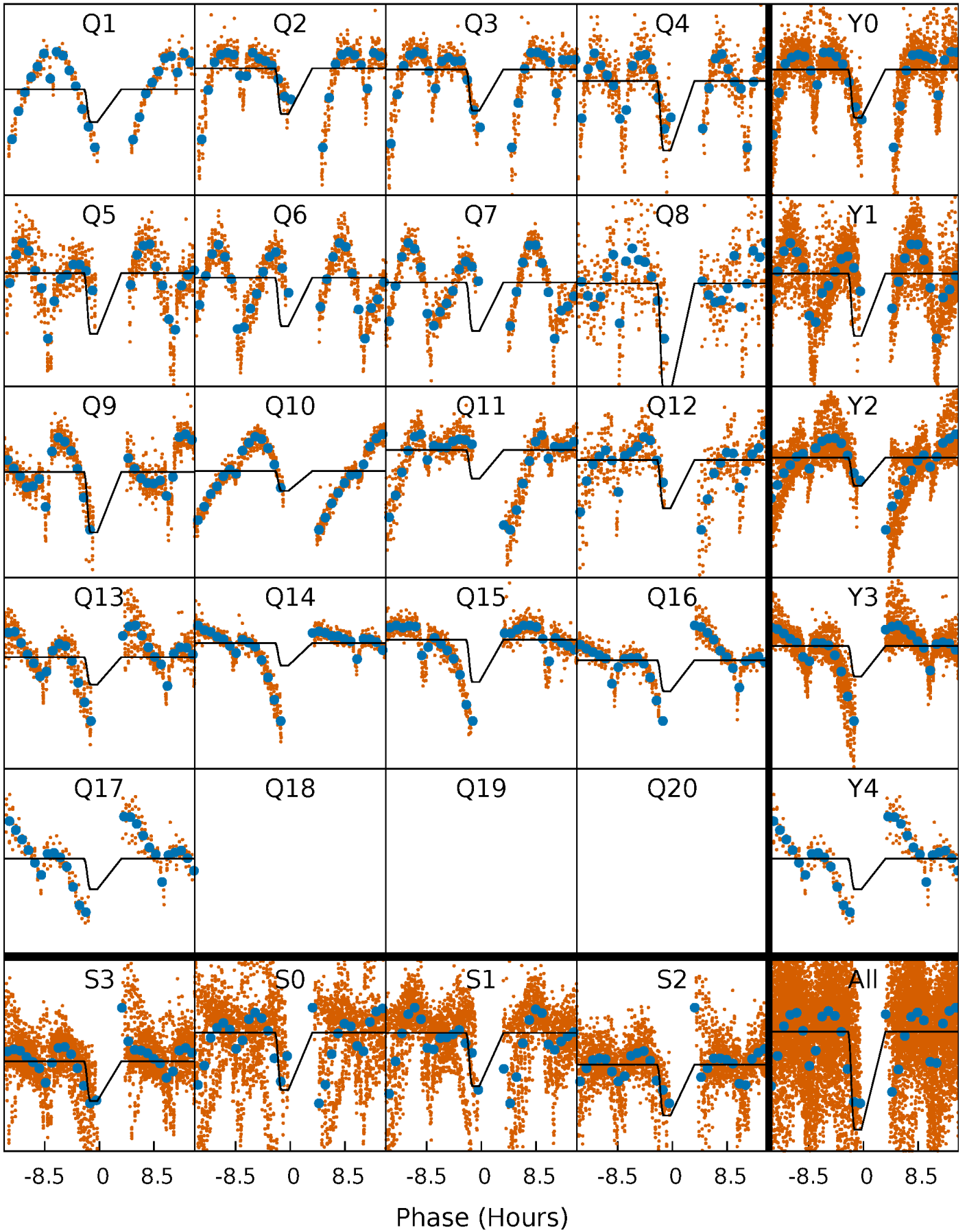
DV Quarter-Phased Transit Curves

TCE 005647008-02 P= 5.598728 Days $T_0=132.601736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

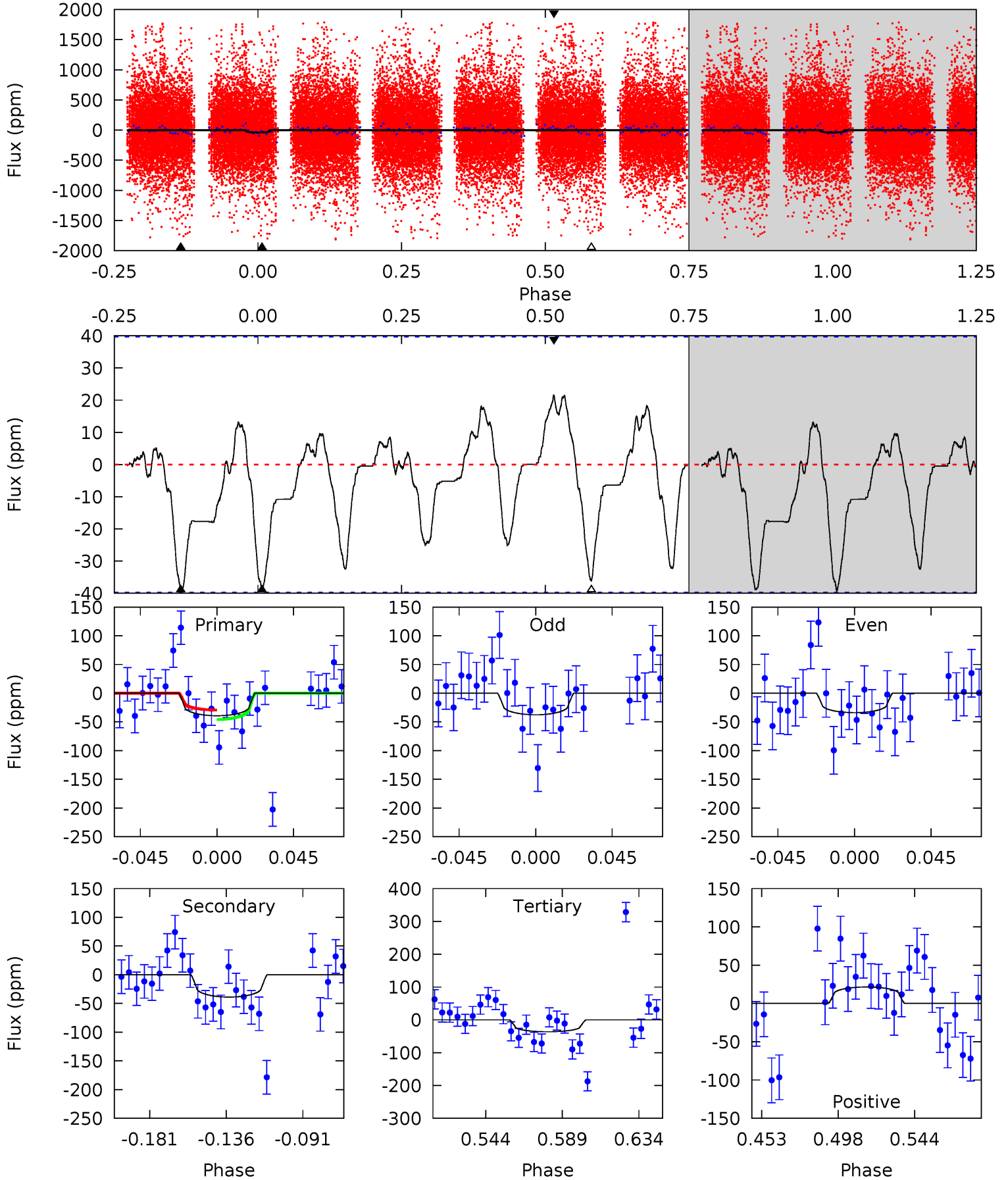
TCE 005647008-02 P= 5.599344 Days $T_0=132.710167$ (BKJD)



DV Model-Shift Uniqueness Test

005647008-02, P = 5.598728 Days, E = 127.003008 Days

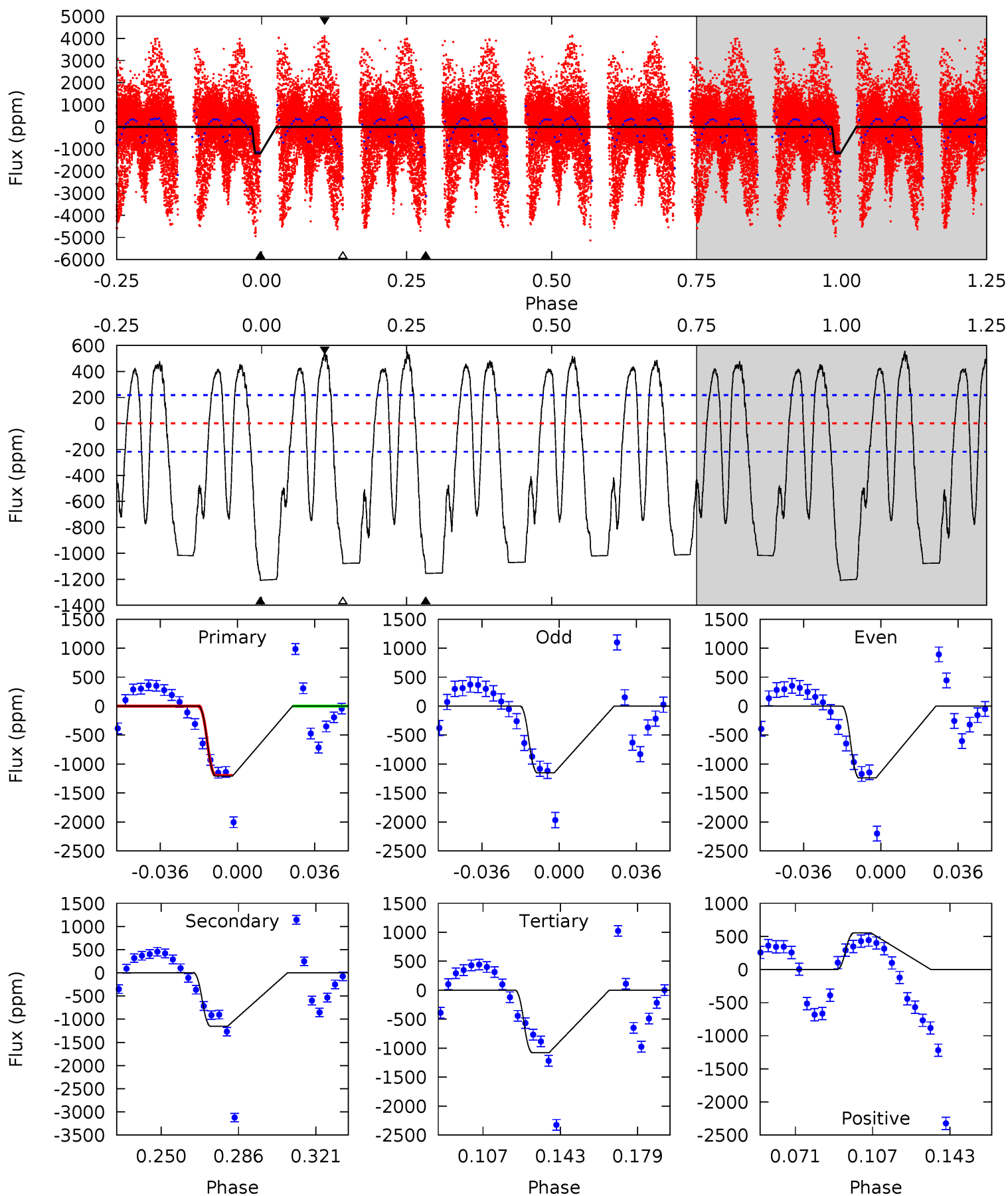
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.67	4.62	4.30	2.56	4.73	2.00	1.61	0.36	2.11	0.31	2.06	0.22	-13.1	0.35	0



Alt Model-Shift Uniqueness Test

005647008-02, P = 5.599344 Days, E = 127.110823 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	25.4	23.7	12.2	4.78	2.10	9.86	2.84	14.3	1.70	13.2	0.97	0	0.31	0



Stellar Parameters For KIC 005647008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5568^{+166}_{-166}	$4.488^{+0.081}_{-0.161}$	$-0.120^{+0.300}_{-0.300}$	$0.882^{+0.222}_{-0.095}$	$0.873^{+0.112}_{-0.081}$	$1.791^{+0.542}_{-0.827}$
	+3%/-3%	+2%/-4%	+250%/-250%	+25%/-11%	+13%/-9%	+30%/-46%
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 005647008-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 8	$0.80^{+0.68}_{-0.51}$	1340^{+85}_{-62}	4902^{+3399}_{-979}	116^{+703}_{-83}
Alt.	-1155 ± 46	$4.11^{+0.91}_{-0.84}$	1341^{+79}_{-62}	5078^{+496}_{-379}	130^{+75}_{-42}

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 $A_{obs} \gg 1.0$

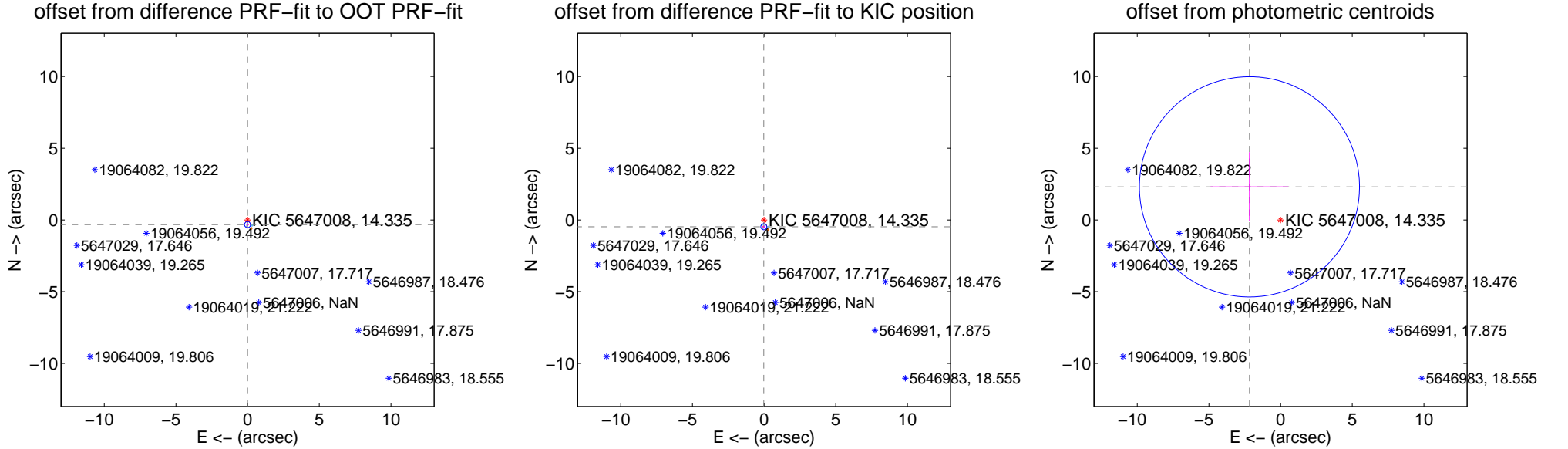
DV Centroid Data

Supplemental centroid analysis for 005647008-02. Kepler magnitude: 14.34. Transit SNR 3.33

There are 8 quarters with good PRF difference image offsets

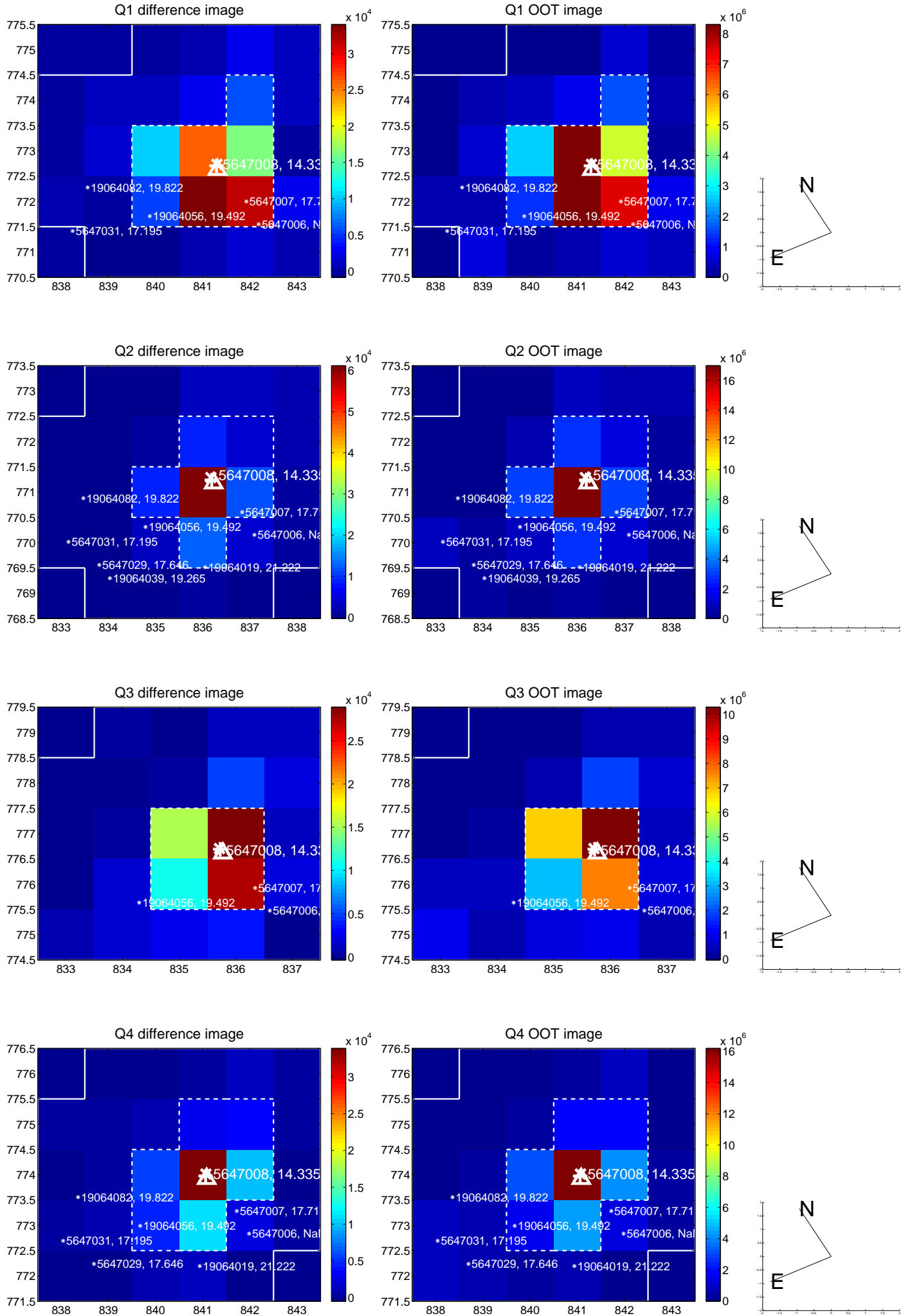
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.330 ± 0.070	4.69	0.006 ± 0.074	-0.330 ± 0.070
PRF-fit source offset from KIC position	0.475 ± 0.070	6.77	0.020 ± 0.075	-0.475 ± 0.070
photometric centroid source offset	3.17 ± 2.56	1.24	2.17 ± 2.72	2.31 ± 2.41

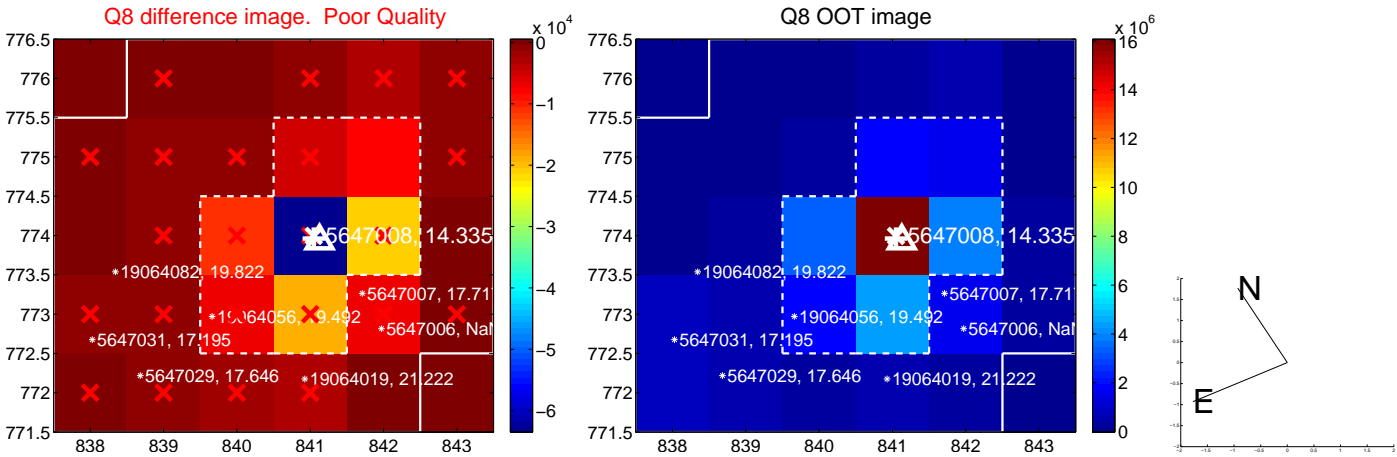
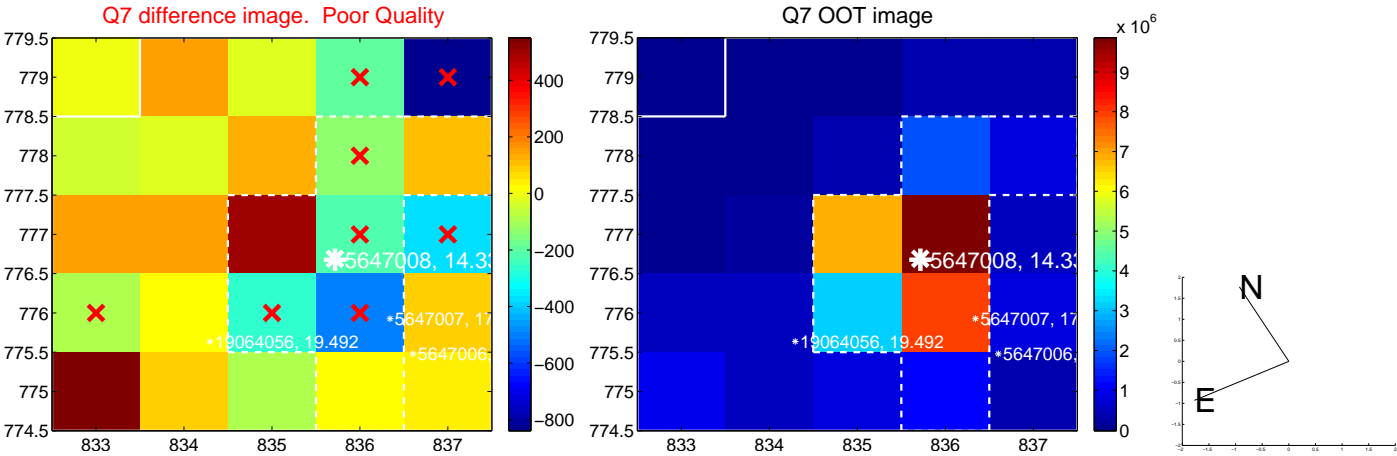
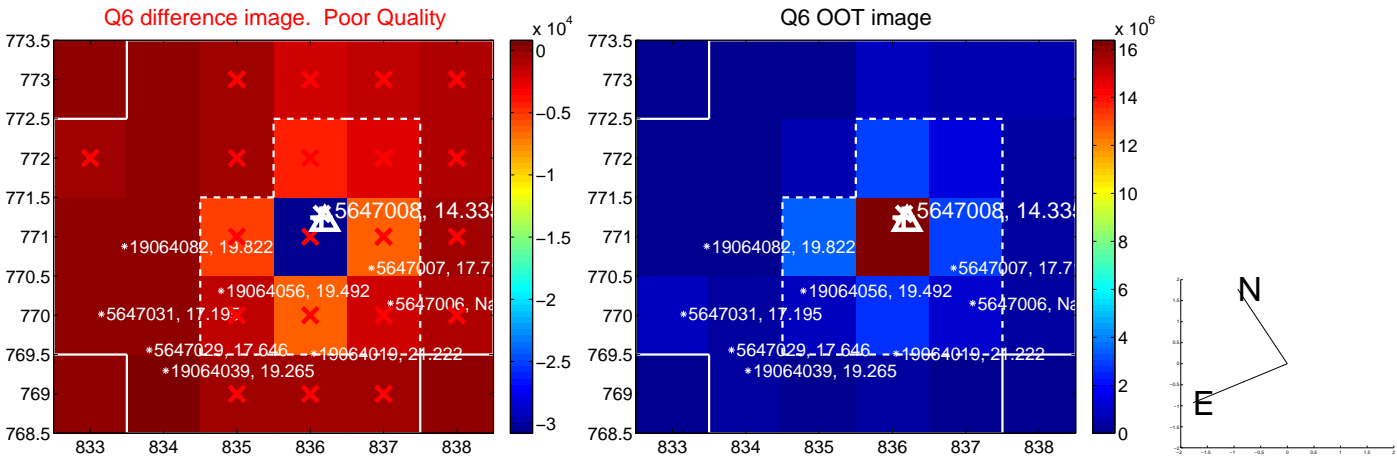
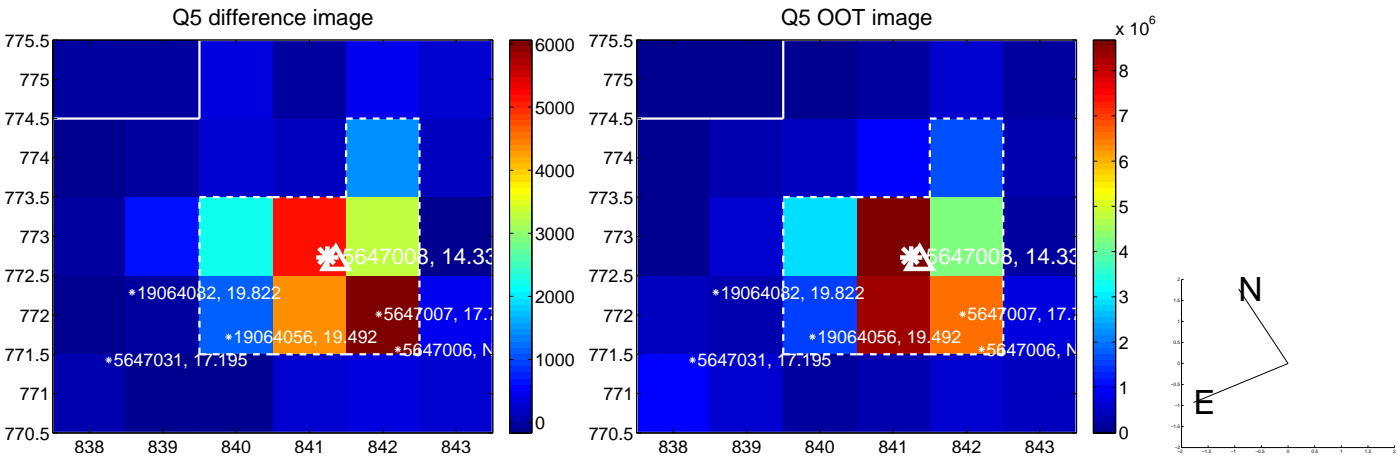


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

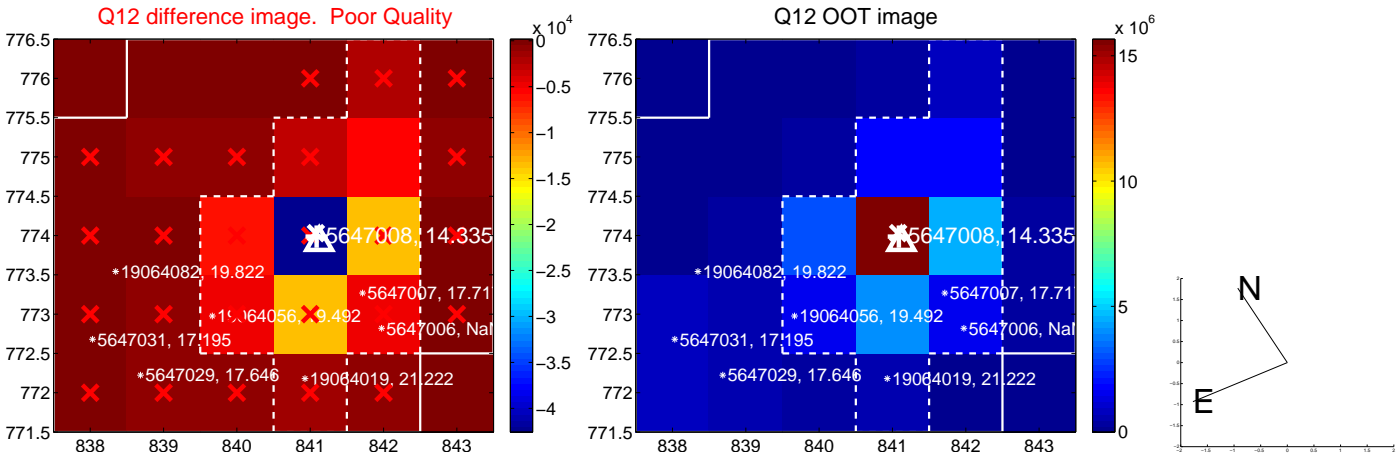
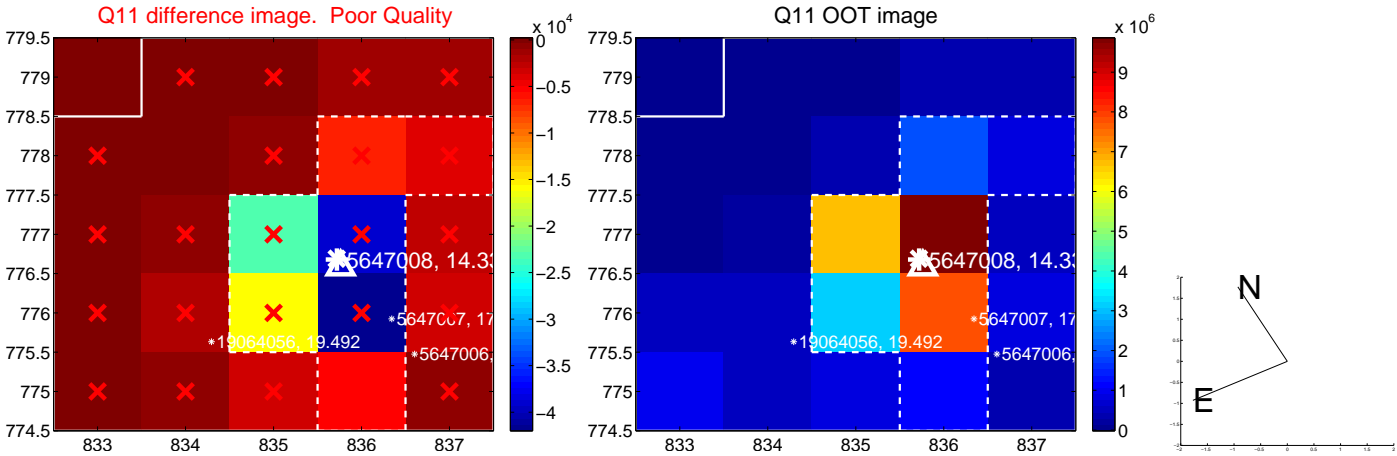
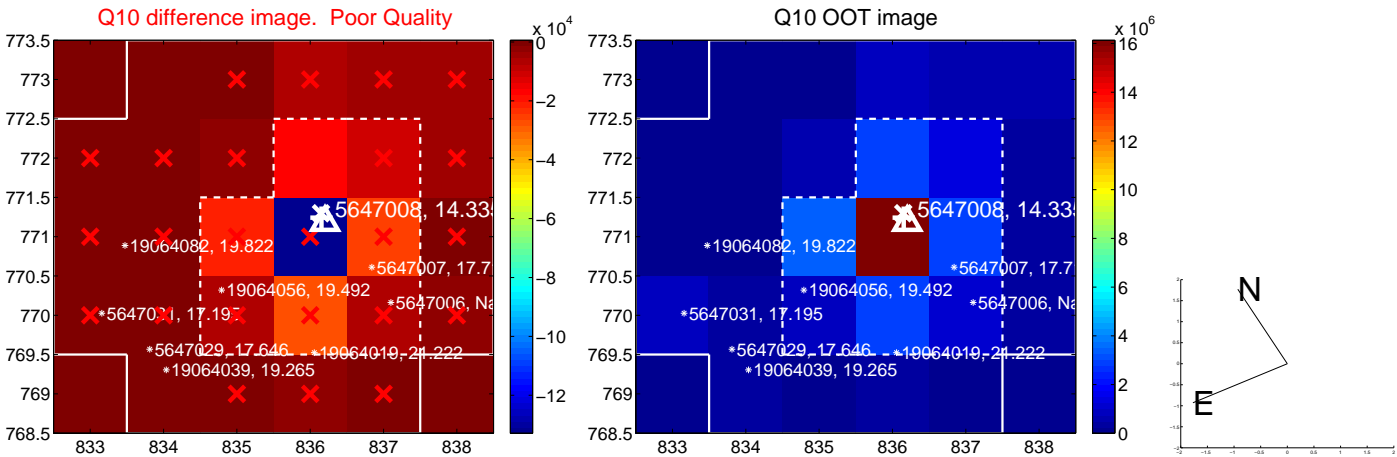
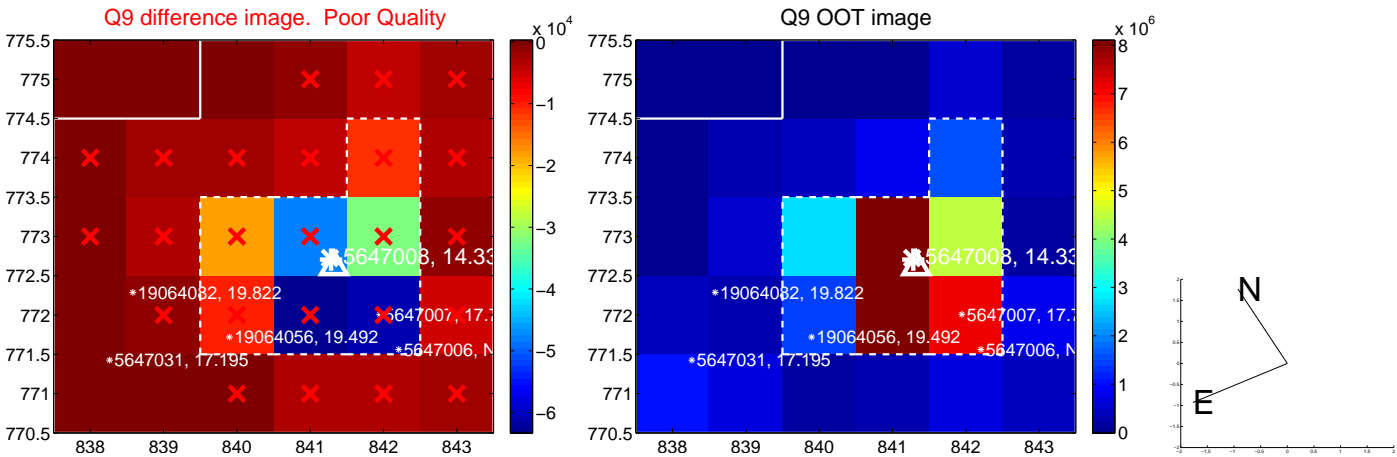
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



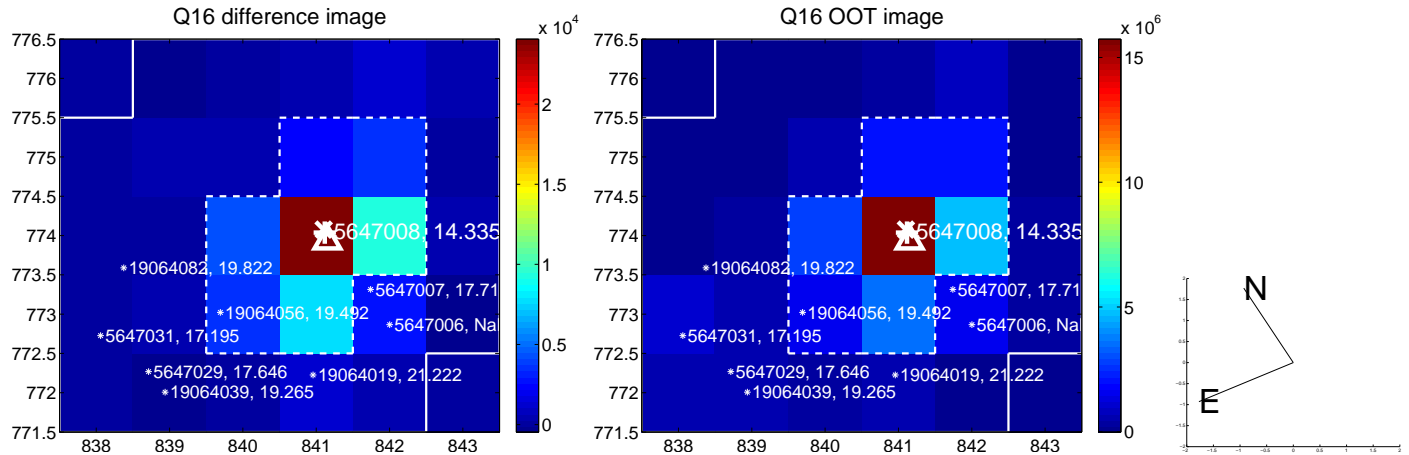
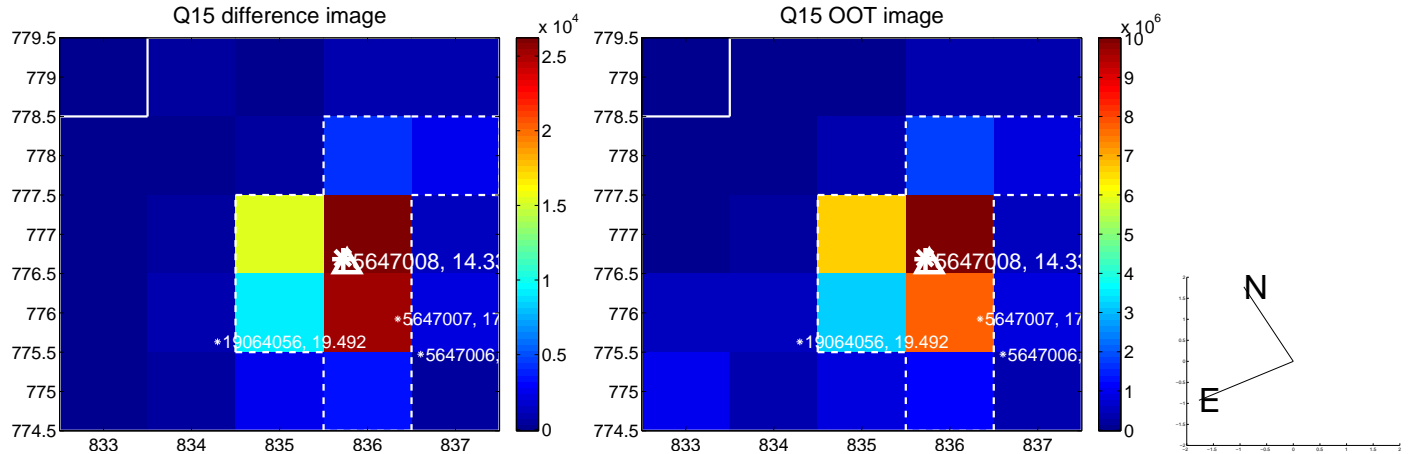
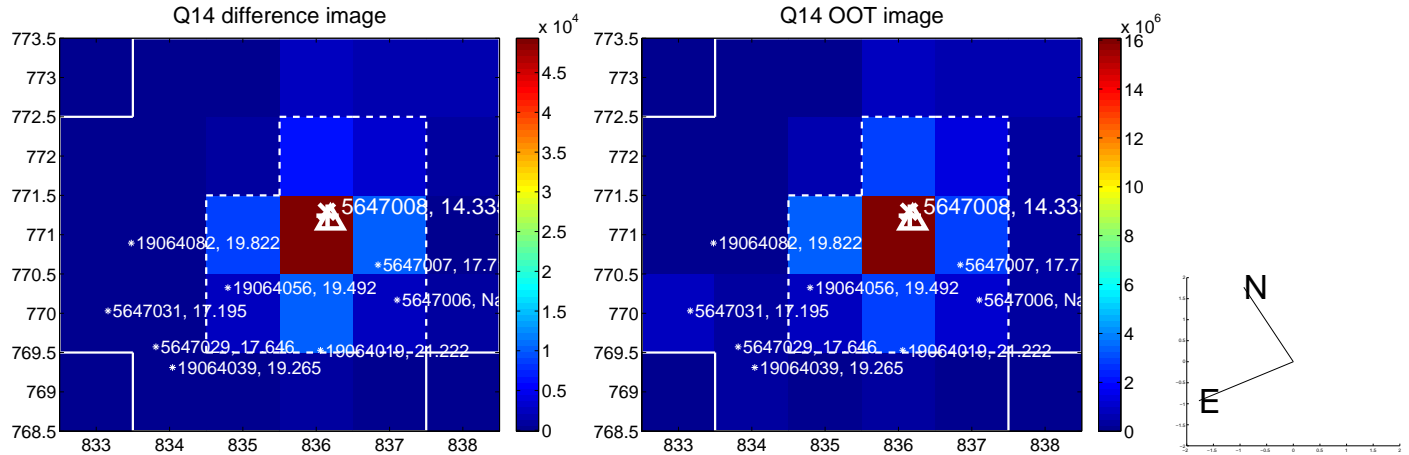
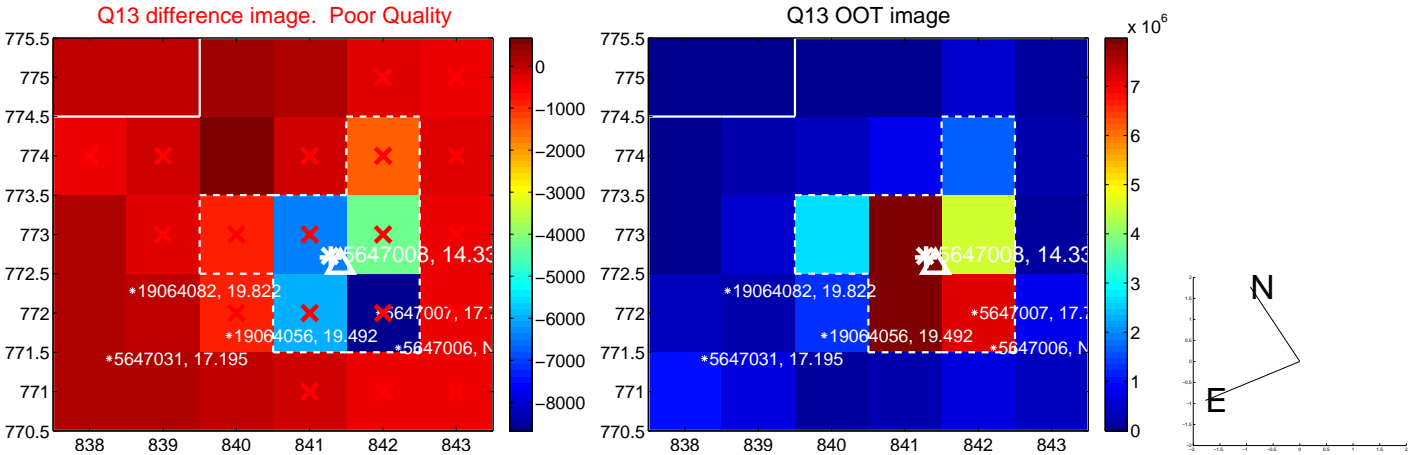
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



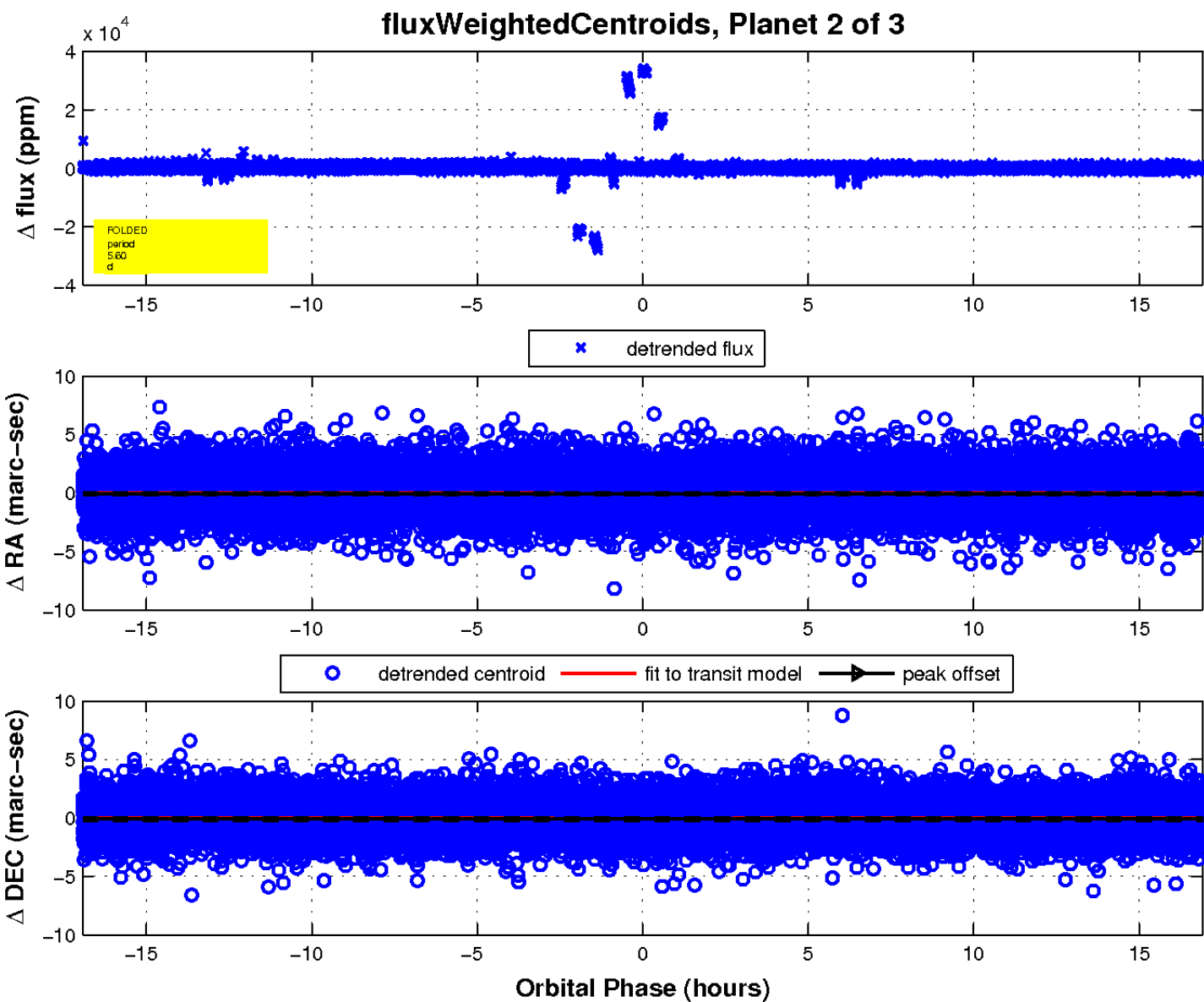
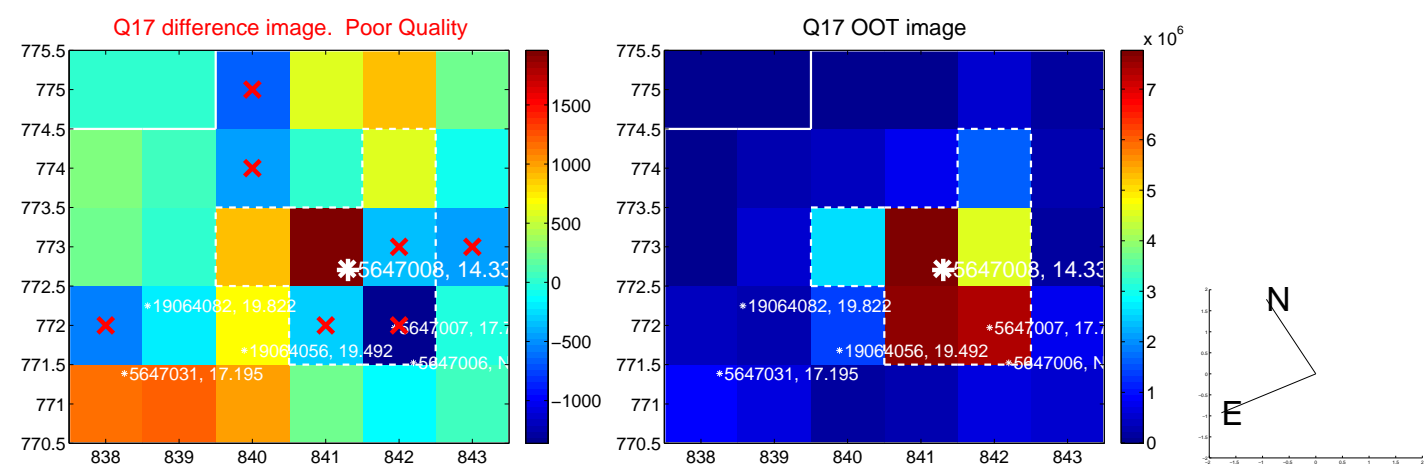
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

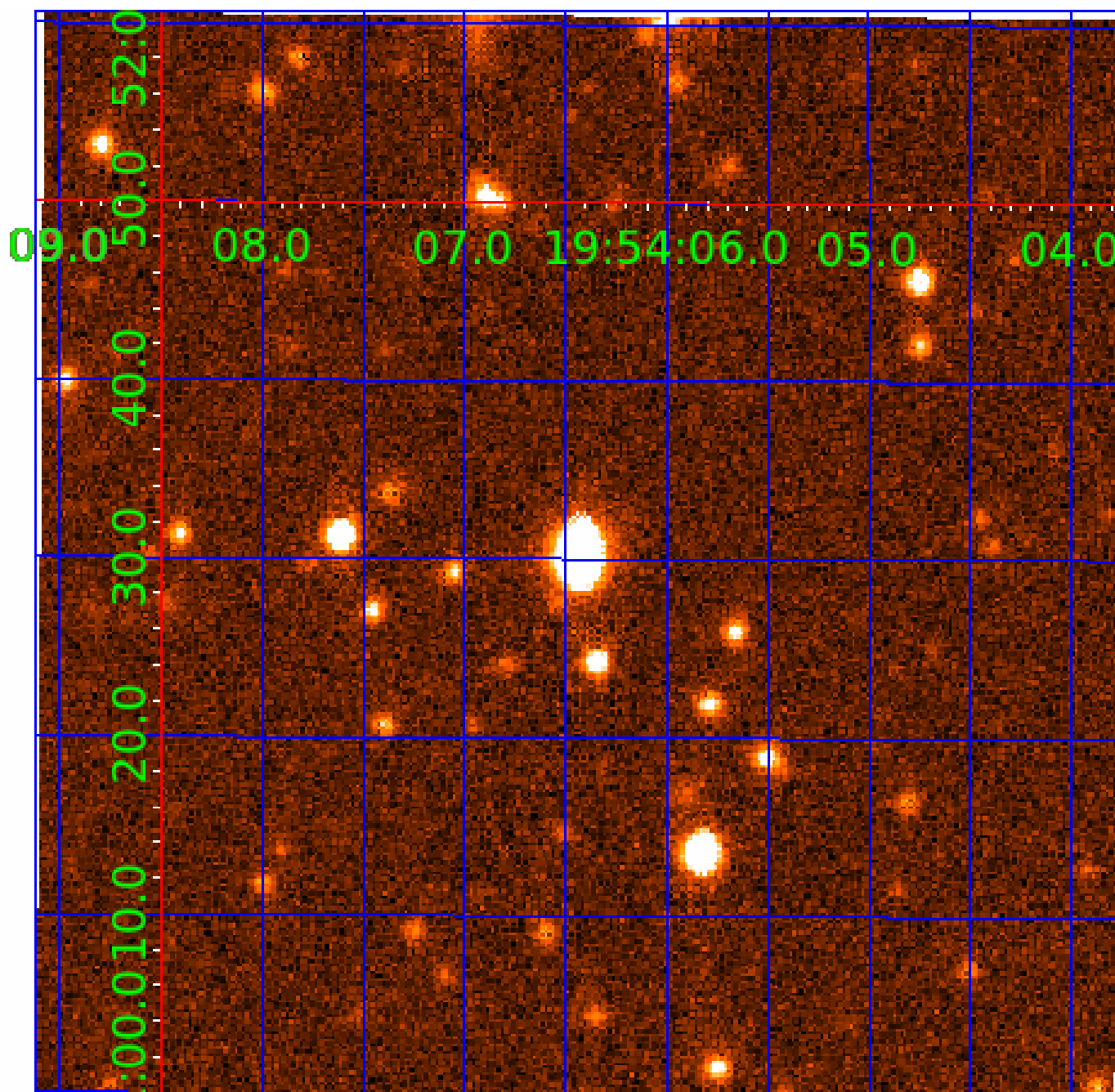


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005647008

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})
005647008-01	OBS	8103.01	0.799871	132.006304	278.0	0.606	41.6	27.7	0.88	5568	1.89	2578.16
005647008-02	OBS	No	5.598728	132.601736	38.2	5.640	59.4	3.3	0.88	5568	0.61	192.55
005647008-03	OBS	No	5.596465	132.729944	3224.9	2.000	52.8	-1.0	0.88	5568	4.95	192.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005647008-01	OBS	FP	0.49	0	1	0	0	HAS_SEC_TCE
005647008-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
005647008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

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

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

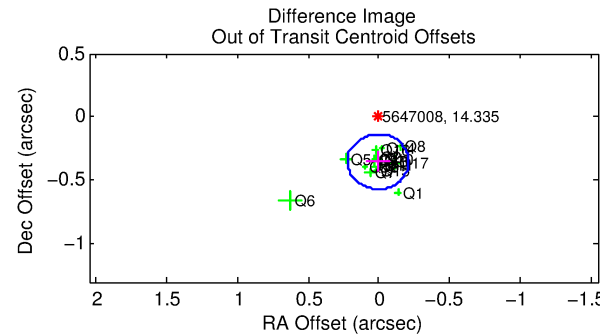
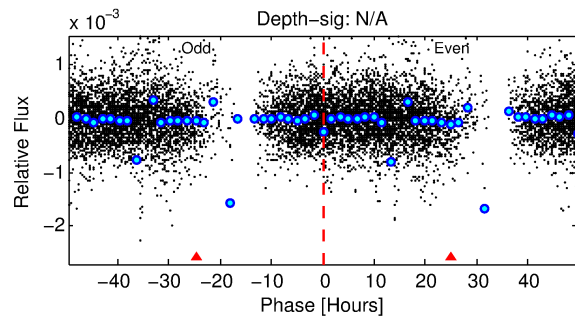
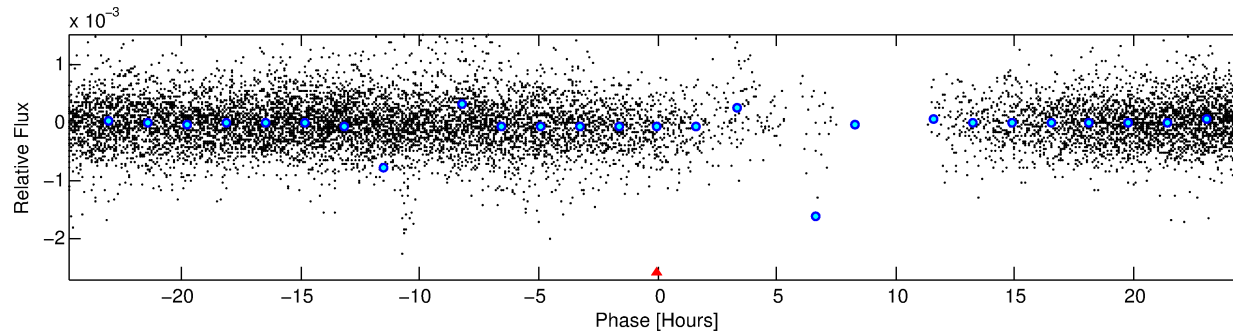
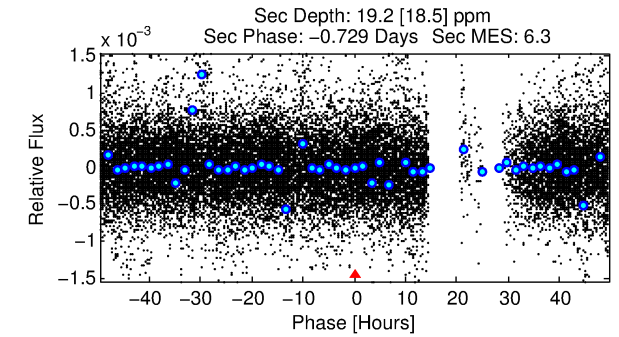
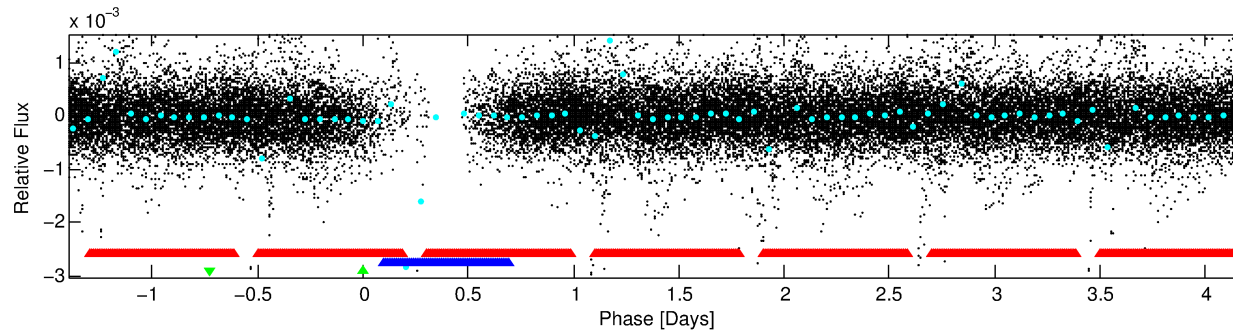
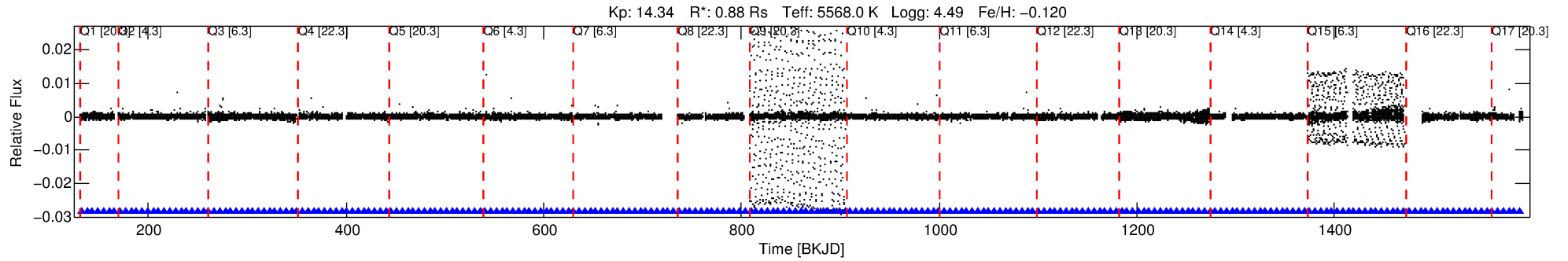
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005647008-03

No Significant Match Found

DV One-Page Summary

KIC: 5647008 Candidate: 3 of 3 Period: 5.596 d



TPS TCE Results:

Period = 5.59646 d
Epoch = 132.7299 BKJD

DV fit results are unavailable

DV Diagnostic Results:

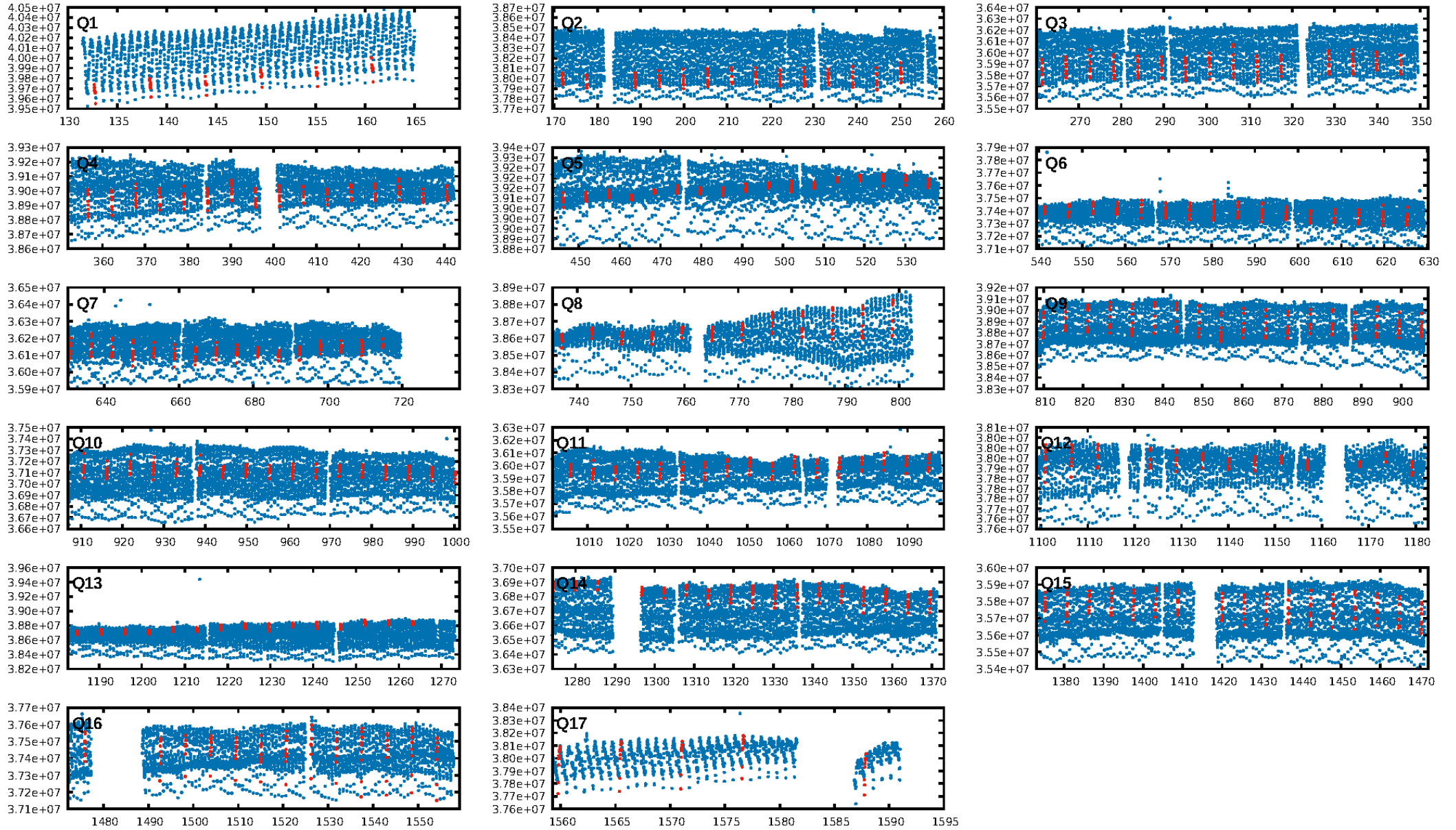
ShortPeriod-sig: 100.0% [55.09 σ]
LongPeriod-sig: 0.7% [0.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [201/201]
GhostDiagnostic-chr: 0.002514

Centroid-sig: 77.1%
Centroid-so: 0.592 arcsec [6.67 σ]
OotOffset-rm: 0.352 arcsec [4.87 σ]
KicOffset-rm: 0.474 arcsec [6.53 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

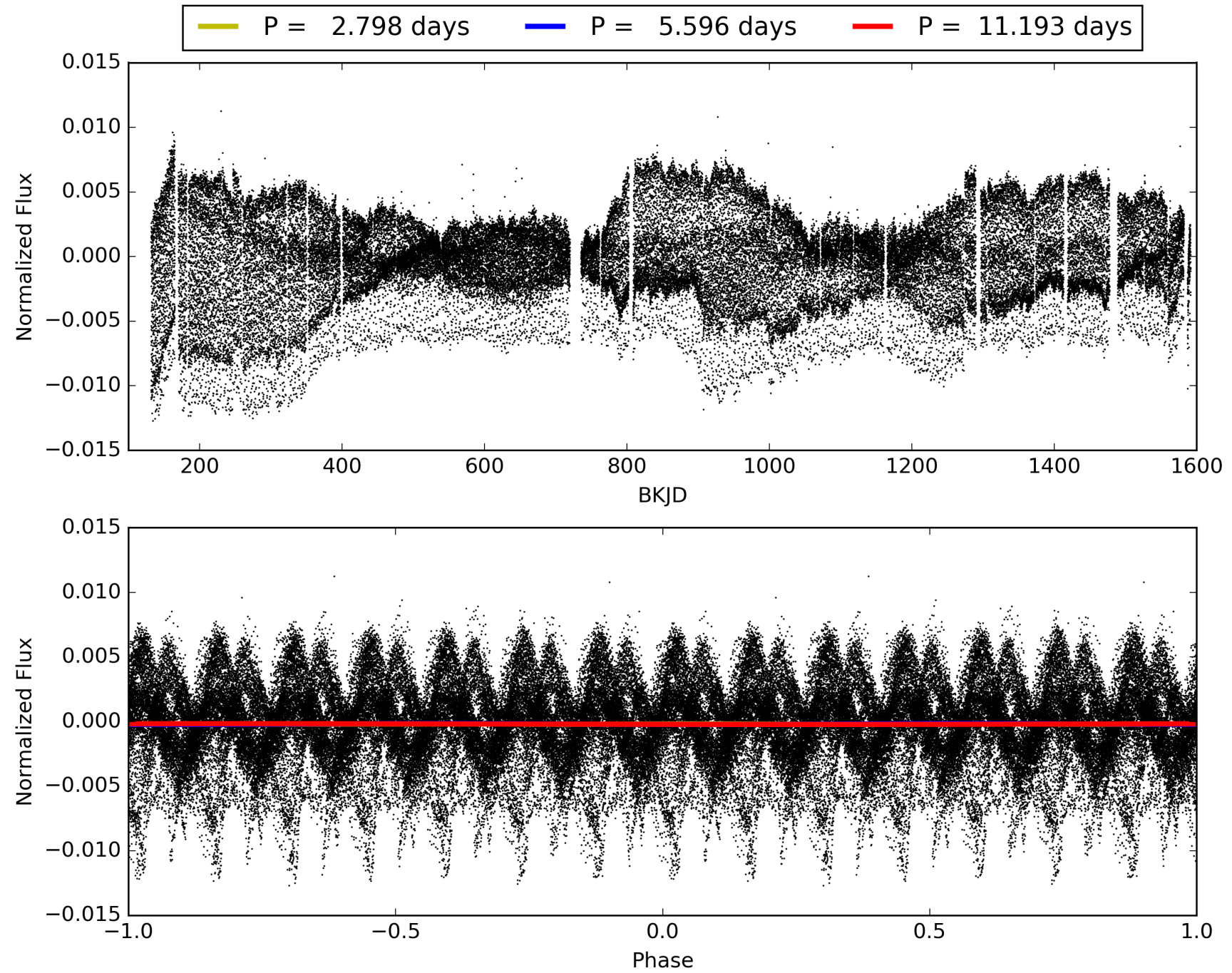
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:55:40 Z

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

TCE 005647008-03, PDC Light Curves

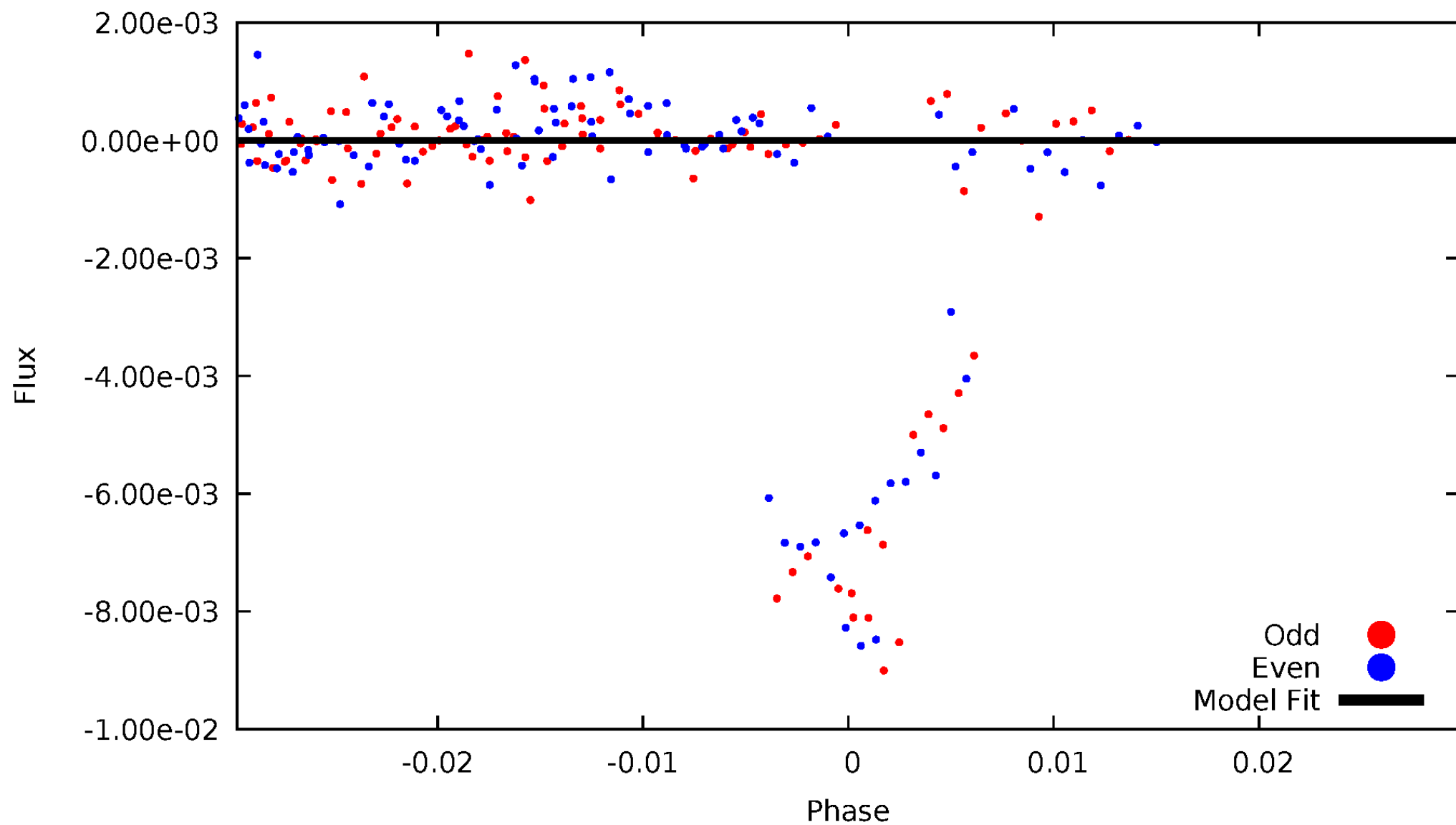


TCE 005647008-03



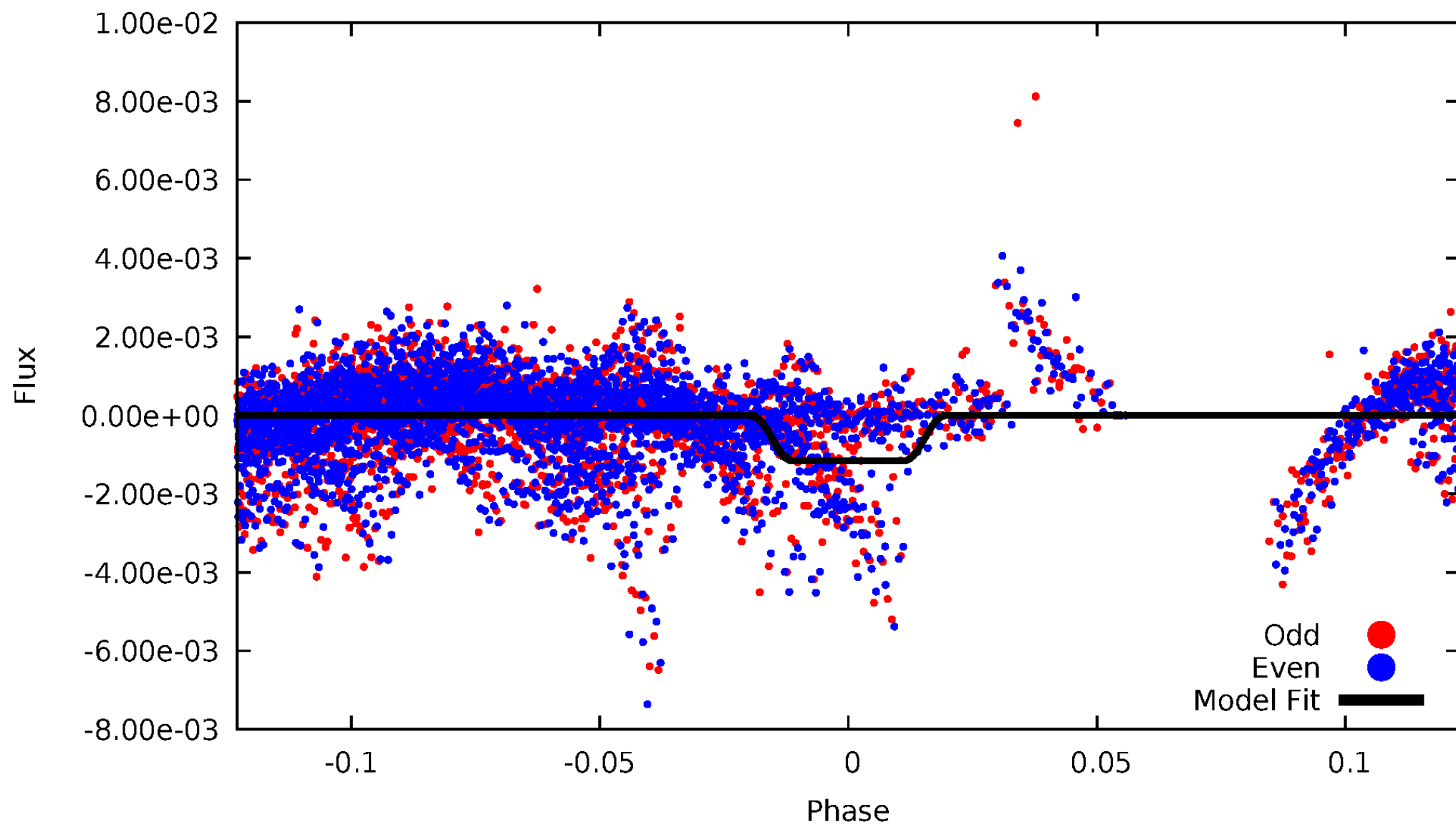
DV Odd/Even

TCE 005647008-03

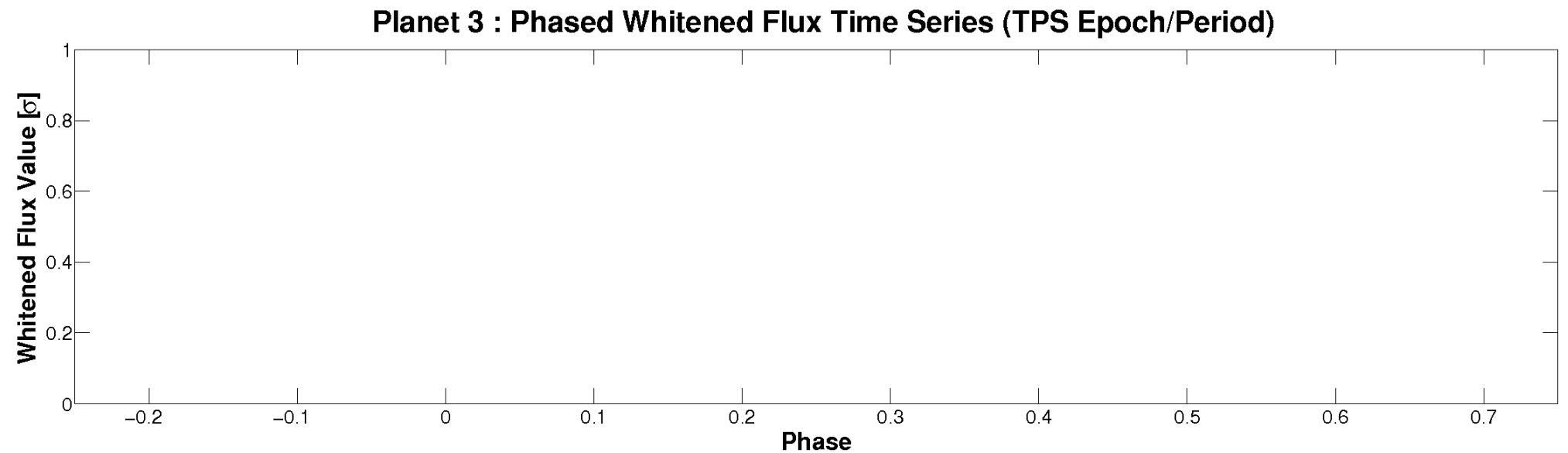
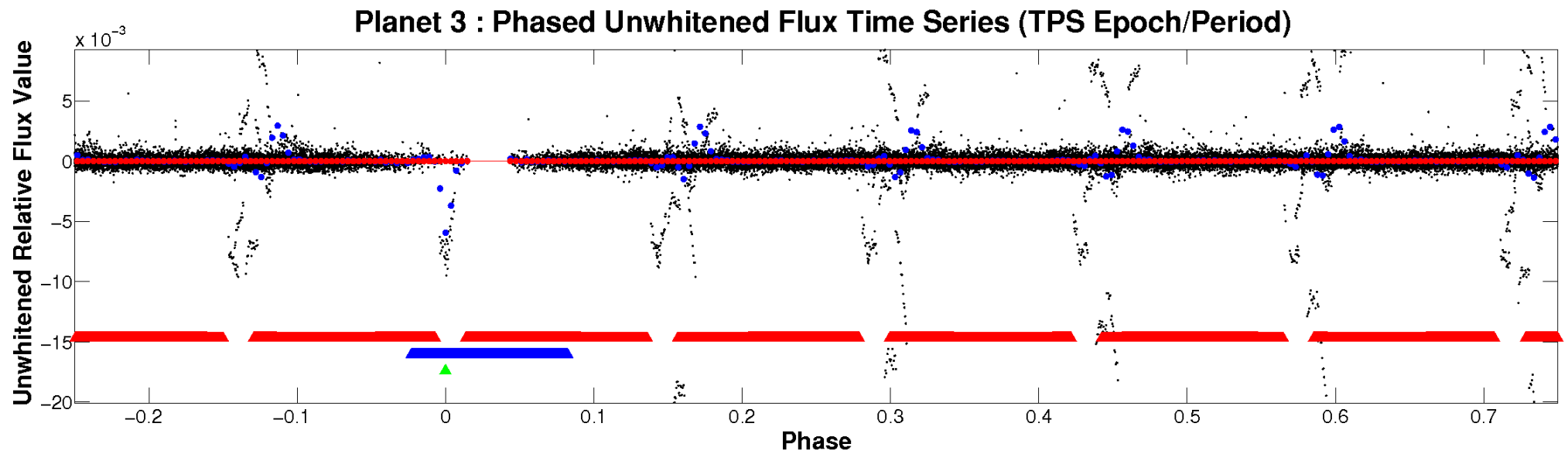


ALT Odd/Even

TCE 005647008-03

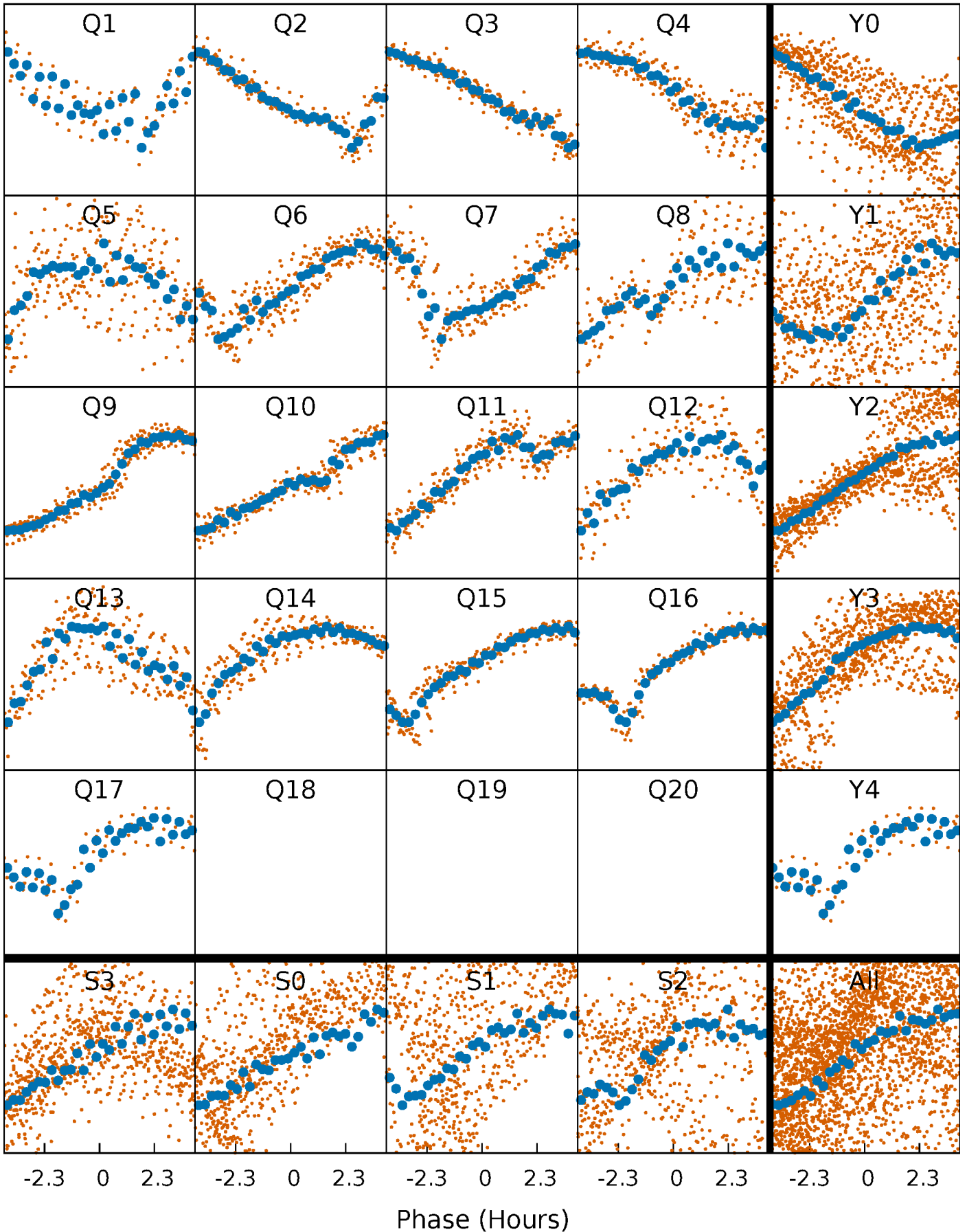


Non-Whitened Vs. Whitened Light Curve



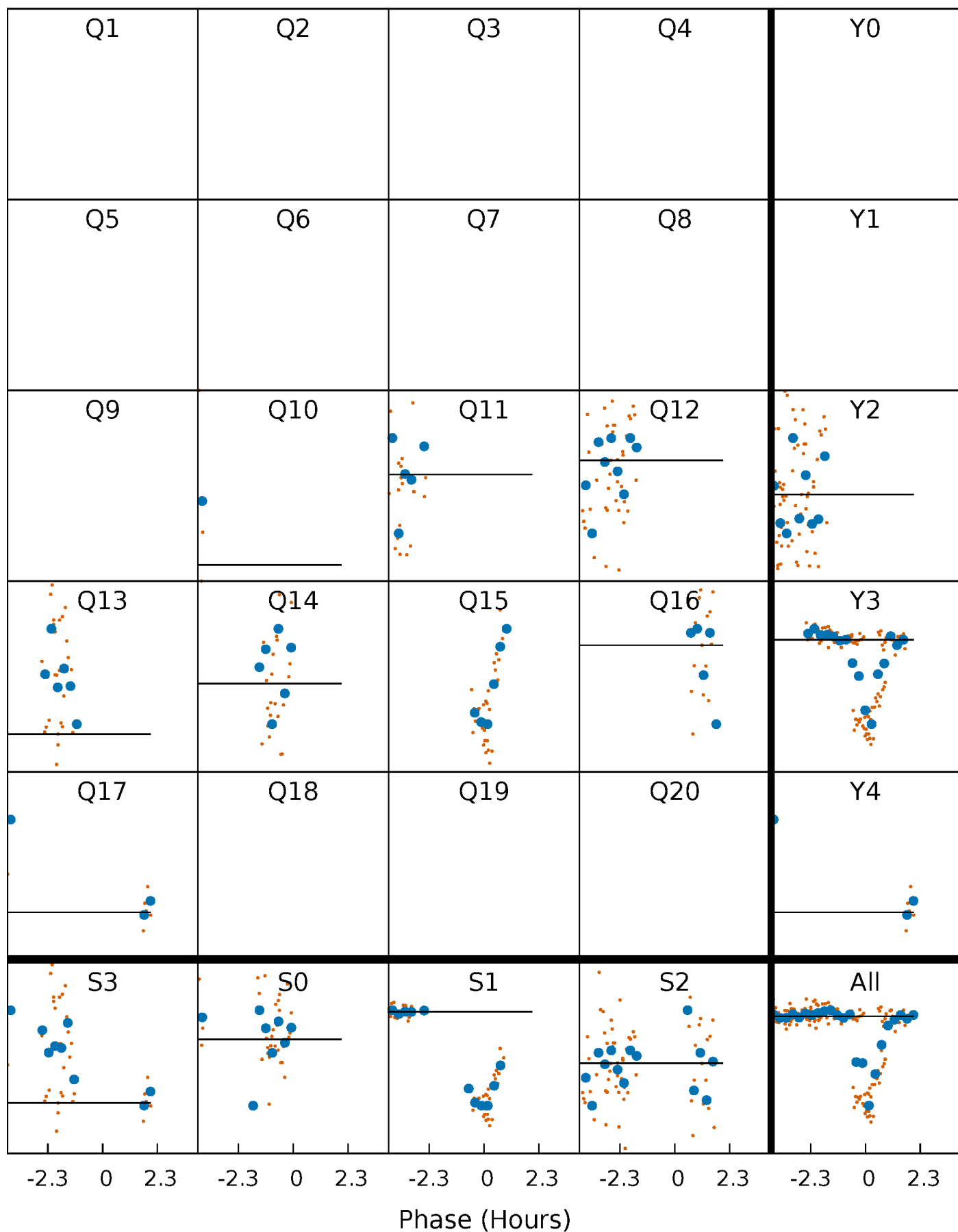
PDC Quarter-Phased Transit Curves

TCE 005647008-03 P= 5.596465 Days $T_0=132.729944$ (BKJD)



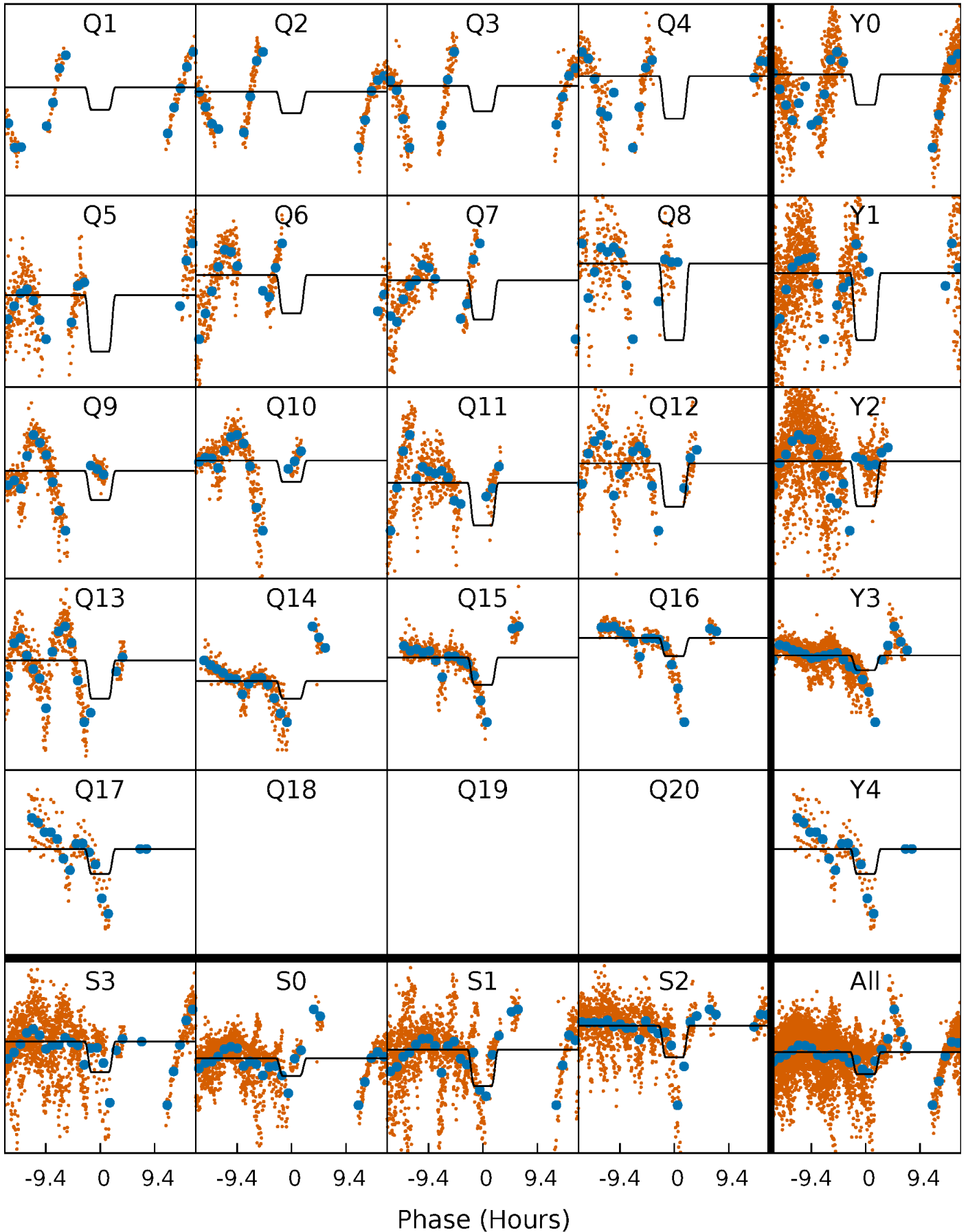
DV Quarter-Phased Transit Curves

TCE 005647008-03 P= 5.596465 Days $T_0=132.729944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

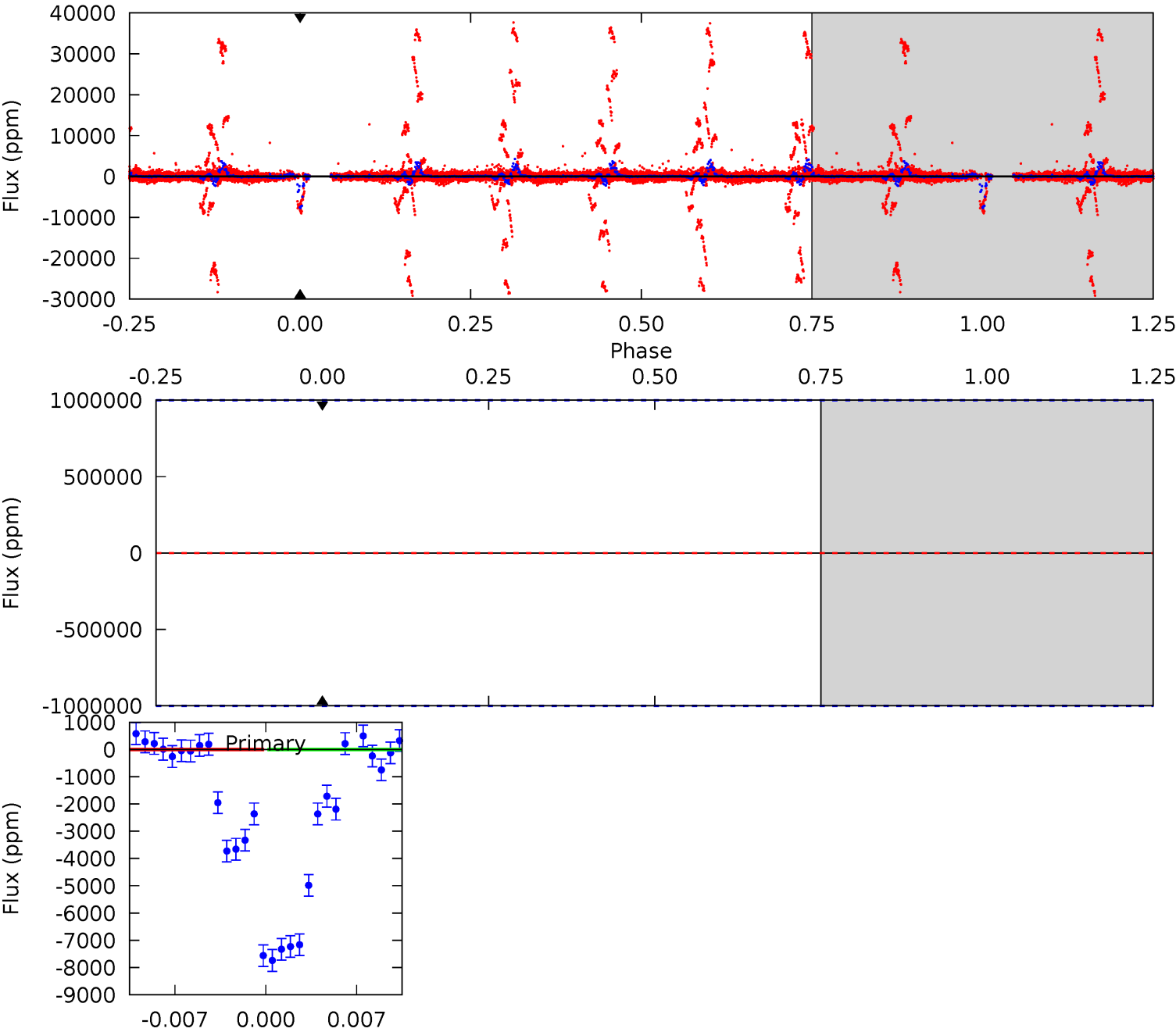
TCE 005647008-03 P= 5.596465 Days $T_0=132.501795$ (BKJD)



DV Model-Shift Uniqueness Test

005647008-03, P = 5.596465 Days, E = 127.133479 Days

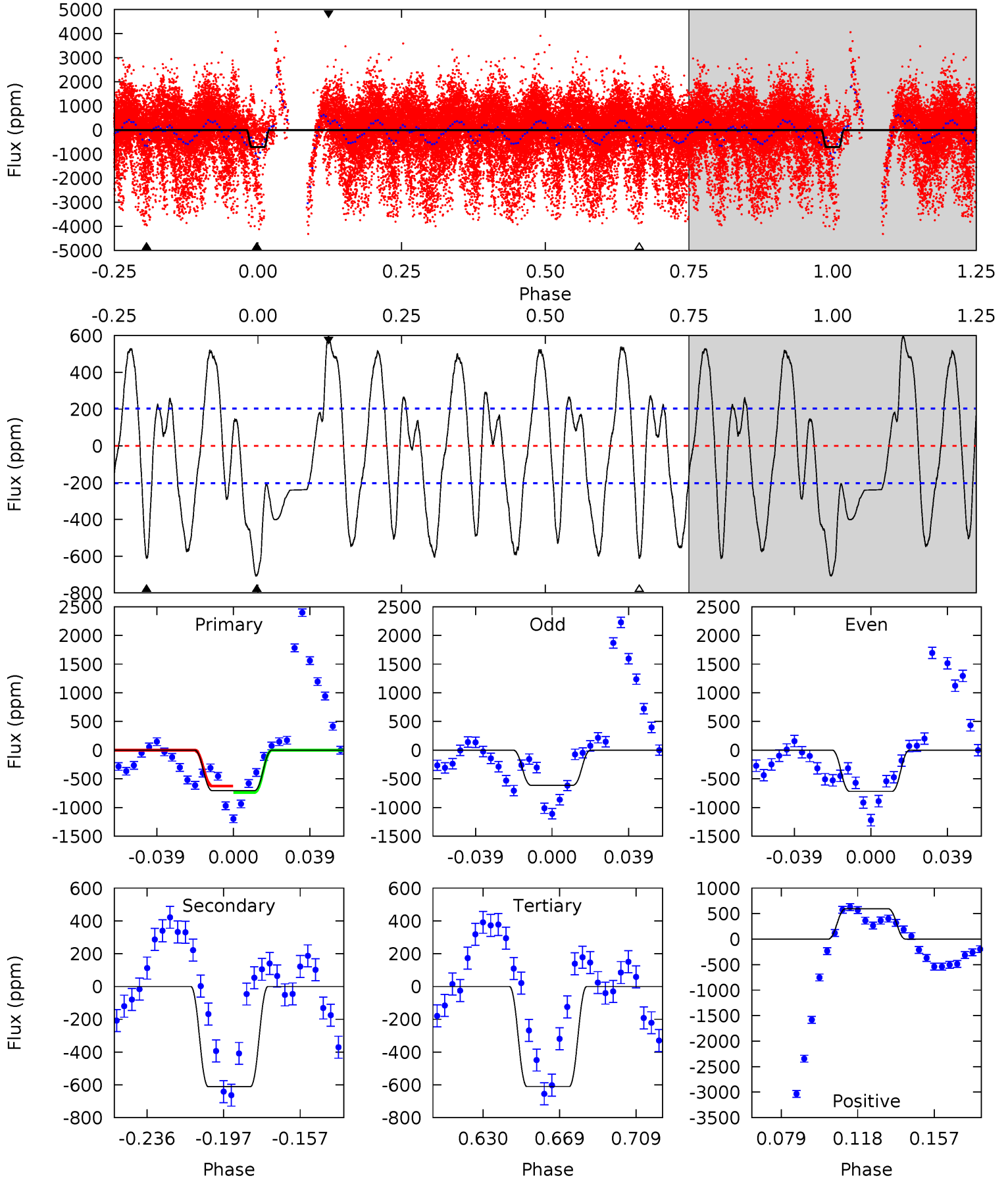
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005647008-03, P = 5.596465 Days, E = 126.905330 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	14.3	14.3	14.0	4.76	2.06	7.78	2.23	2.54	0.01	0.32	1.29	16.0	0.46	1.23



Stellar Parameters For KIC 005647008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5568^{+166}_{-166}	$4.488^{+0.081}_{-0.161}$	$-0.120^{+0.300}_{-0.300}$	$0.882^{+0.222}_{-0.095}$	$0.873^{+0.112}_{-0.081}$	$1.791^{+0.542}_{-0.827}$
	+3%/-3%	+2%/-4%	+250%/-250%	+25%/-11%	+13%/-9%	+30%/-46%
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 005647008-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$9.20^{+8.43}_{-6.17}$	1337^{+82}_{-63}	-3506^{+18274}_{-10534}	$-16.230^{+3960.307}_{-3638.577}$
Alt.	-611 ± 43	$8.58^{+7.56}_{-6.08}$	1336^{+88}_{-65}	3455^{+2056}_{-595}	16^{+167}_{-11}

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 $A_{\text{obs}} \gg 1.0$

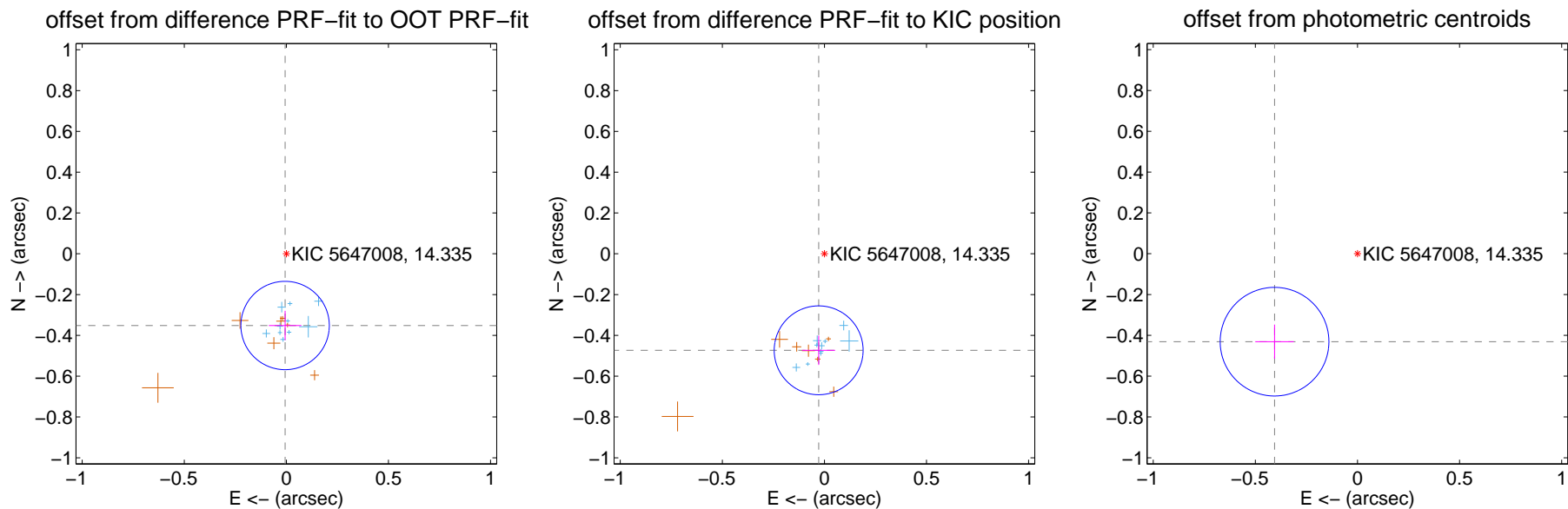
DV Centroid Data

Supplemental centroid analysis for 005647008-03. Kepler magnitude: 14.34. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

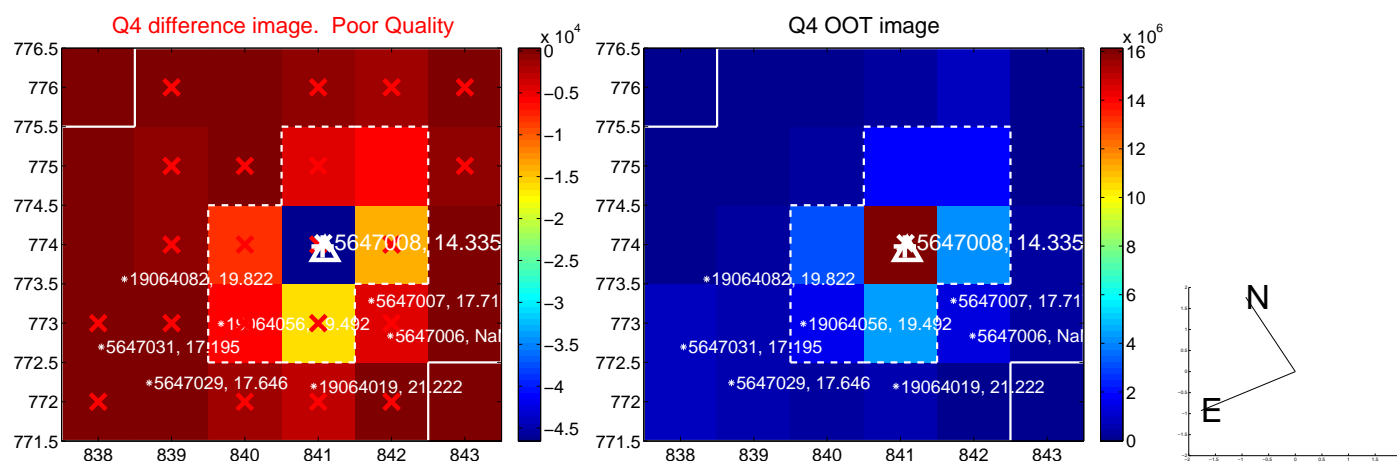
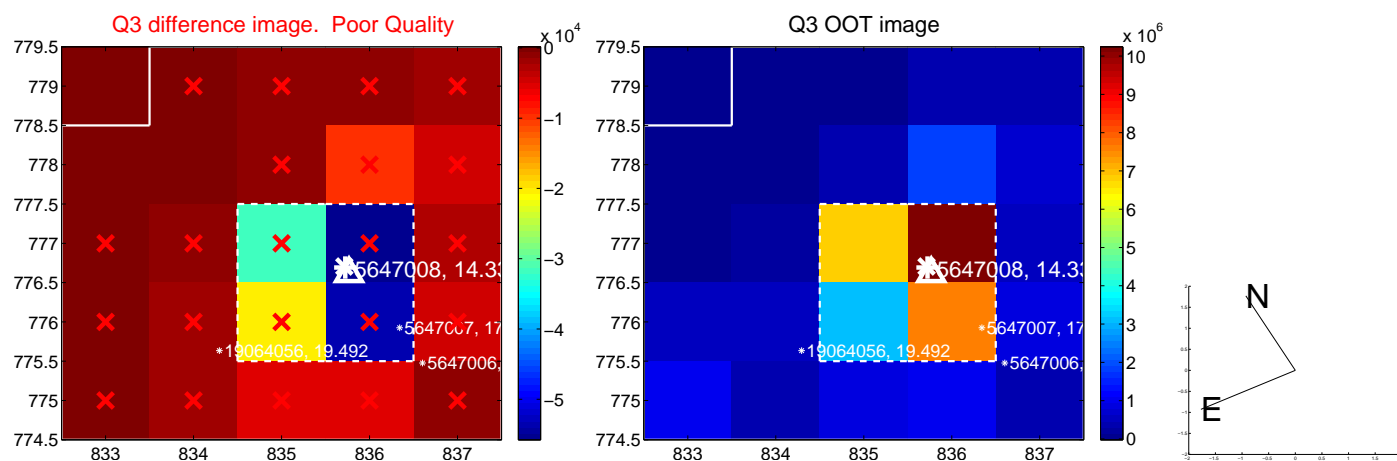
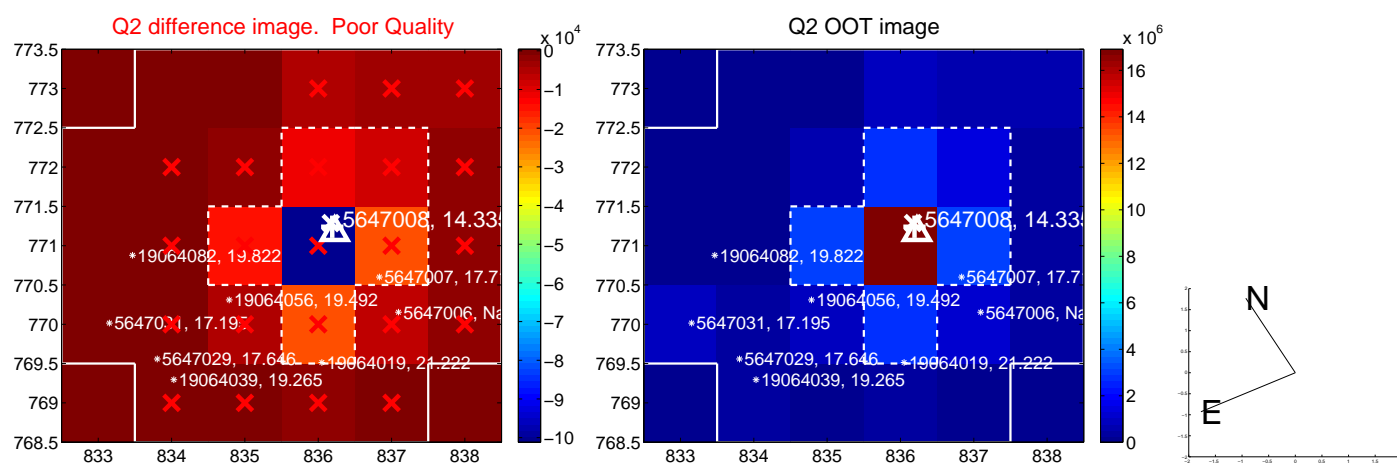
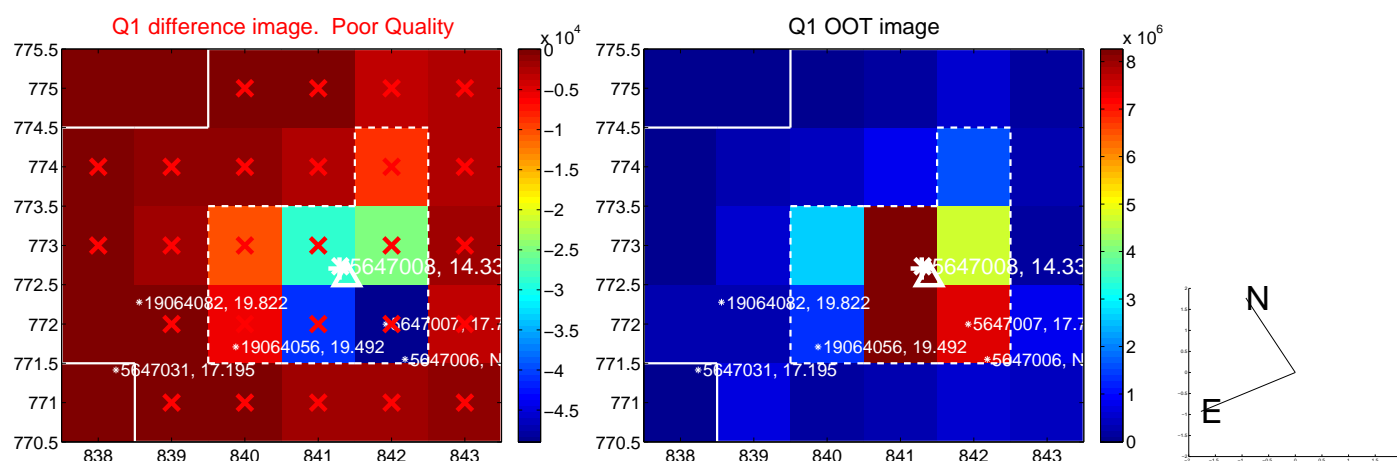
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.352 ± 0.072	4.87	0.006 ± 0.080	-0.352 ± 0.072
PRF-fit source offset from KIC position	0.474 ± 0.073	6.53	0.028 ± 0.081	-0.473 ± 0.072
photometric centroid source offset	0.59 ± 0.09	6.67	0.41 ± 0.09	-0.43 ± 0.08

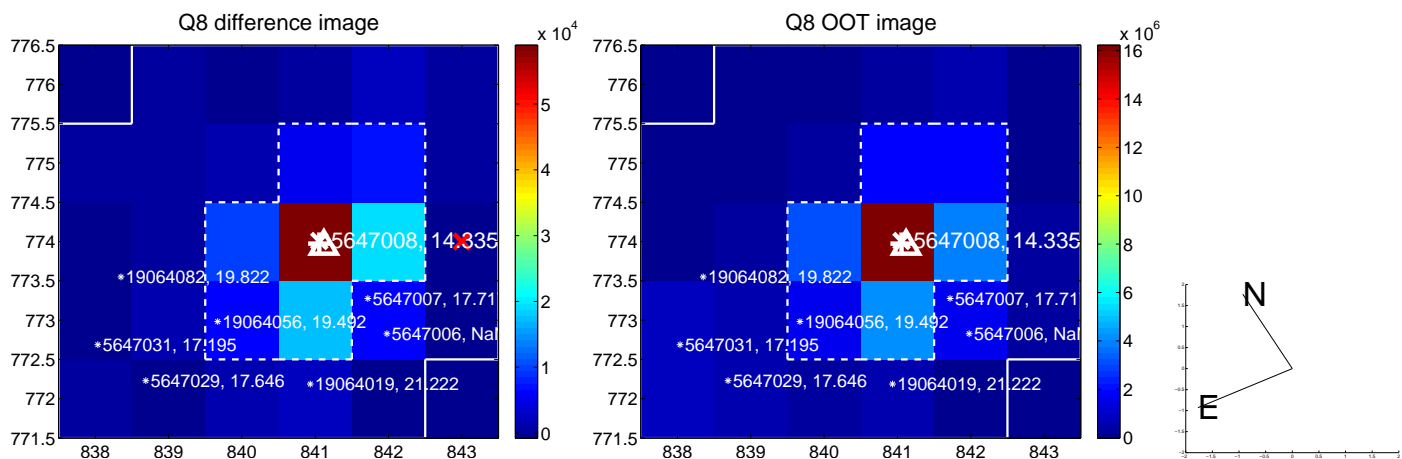
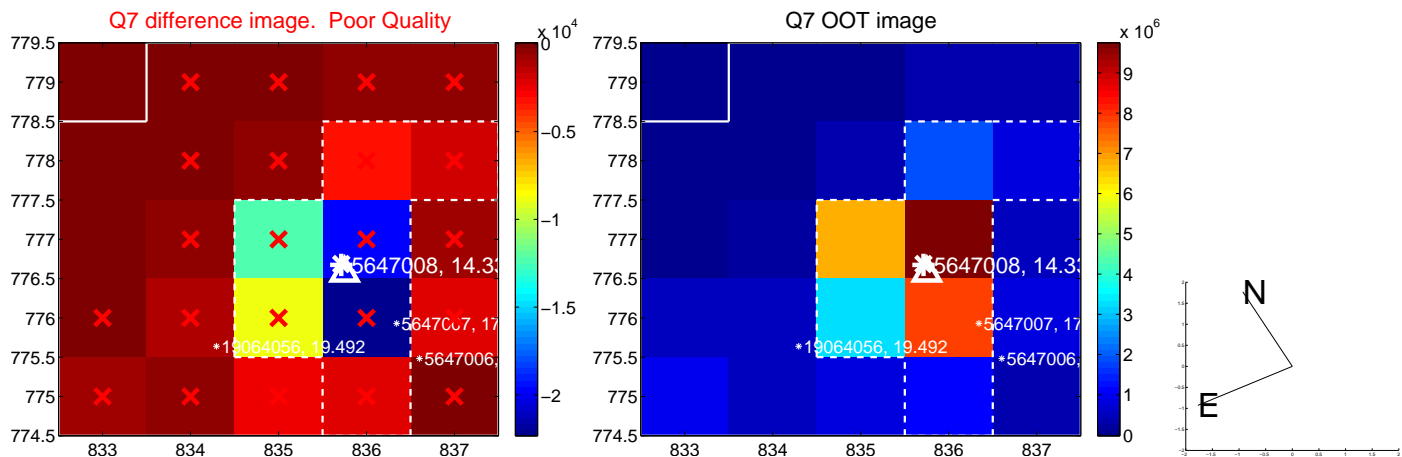
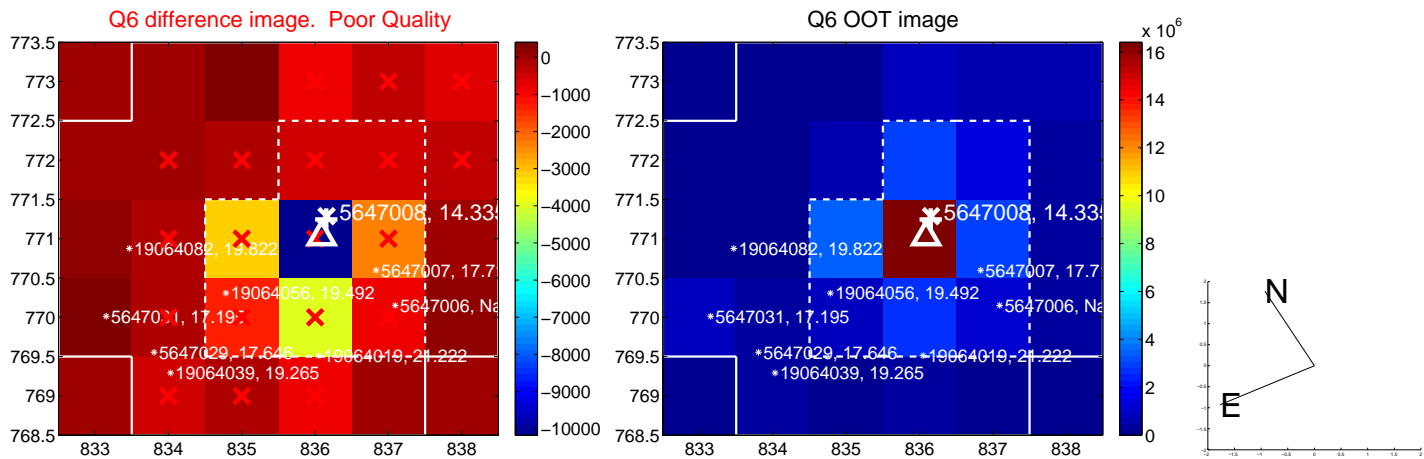
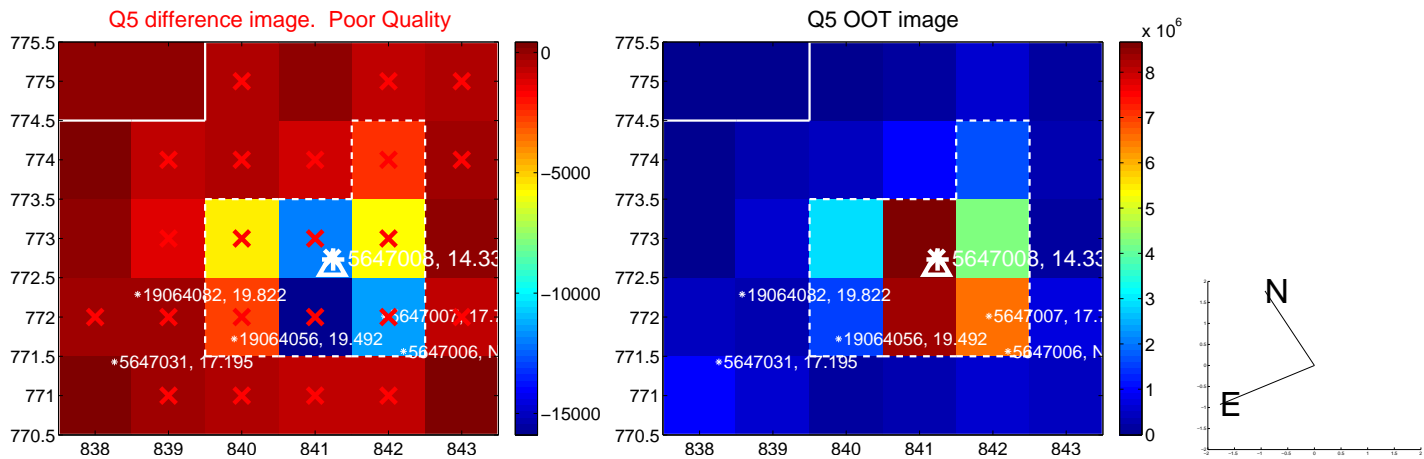


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

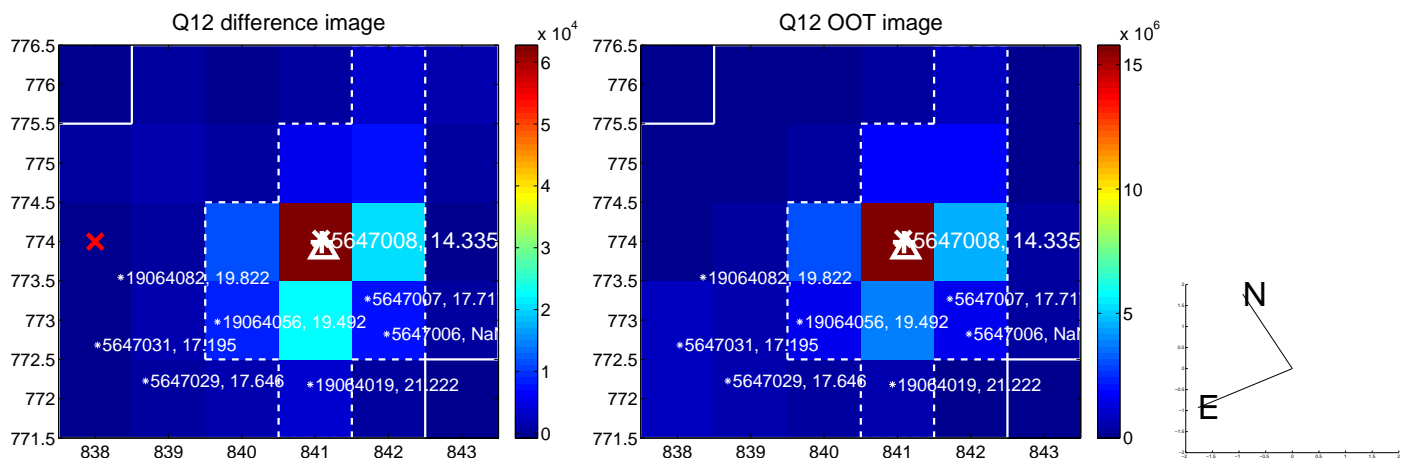
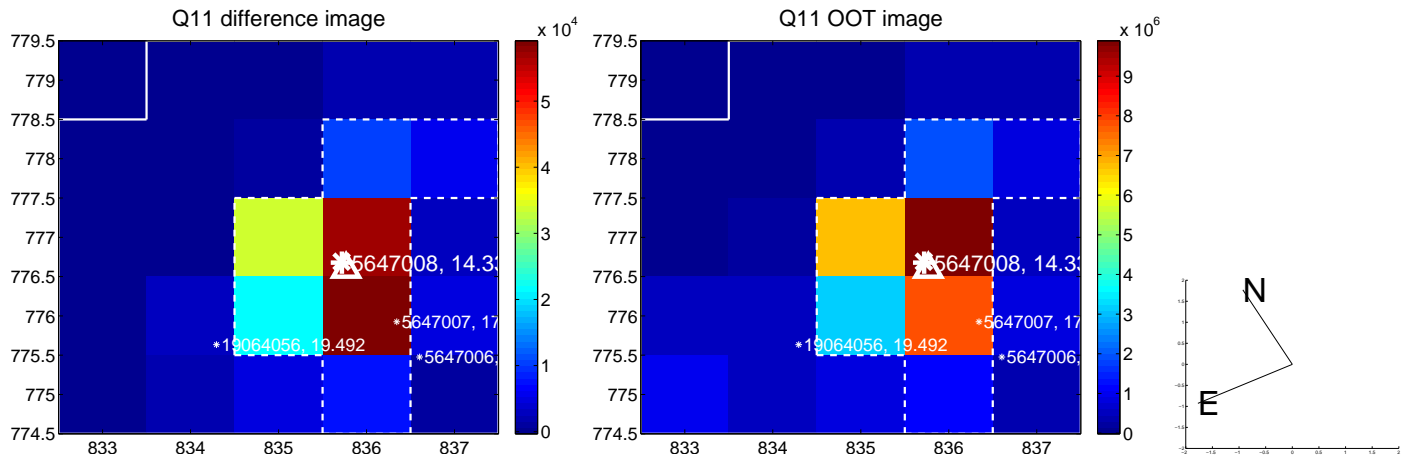
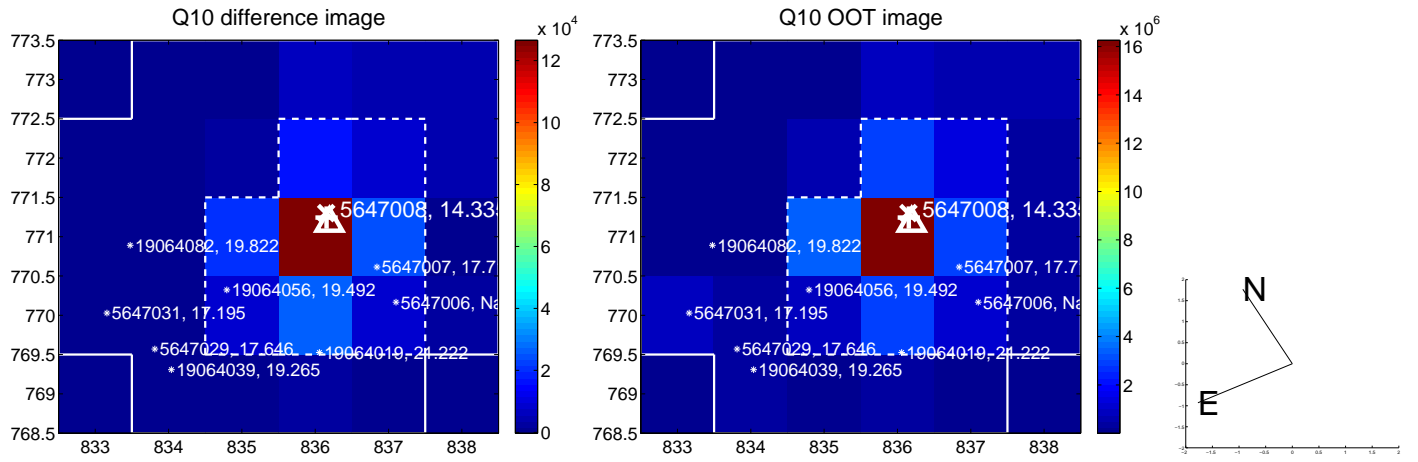
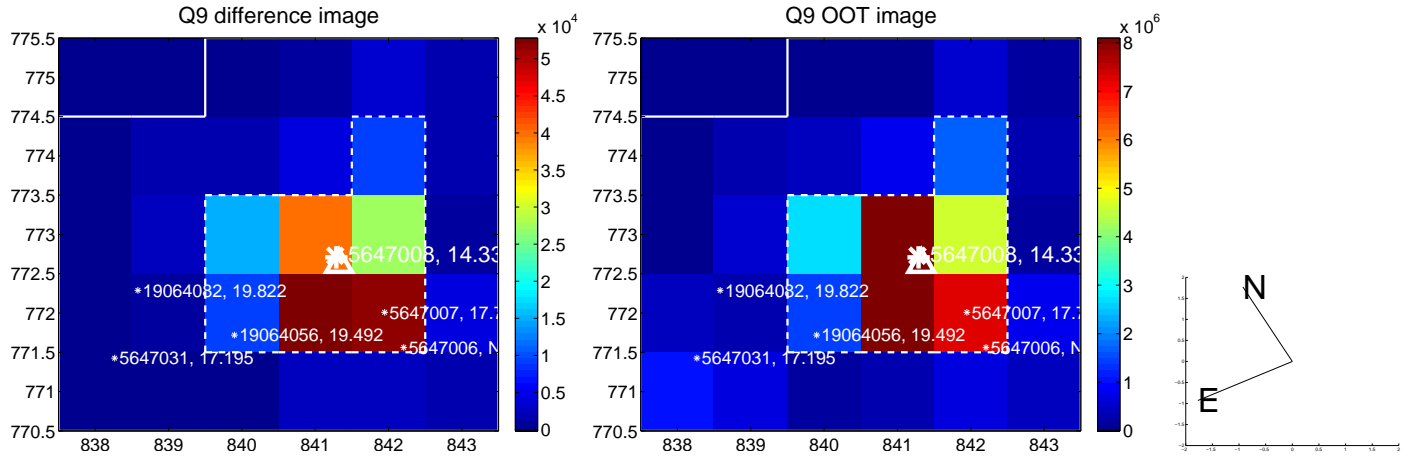
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



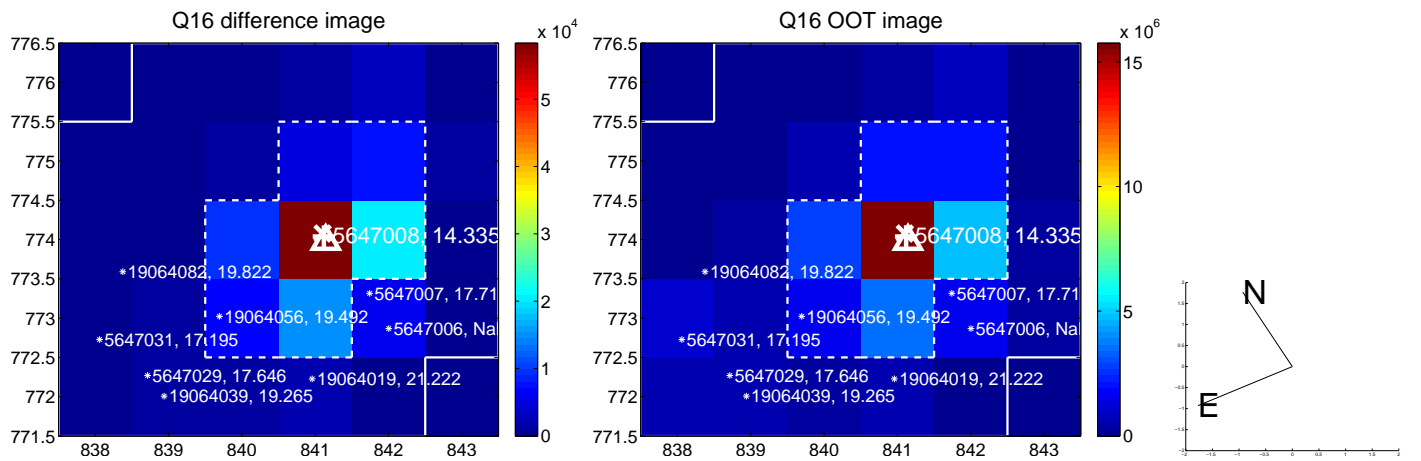
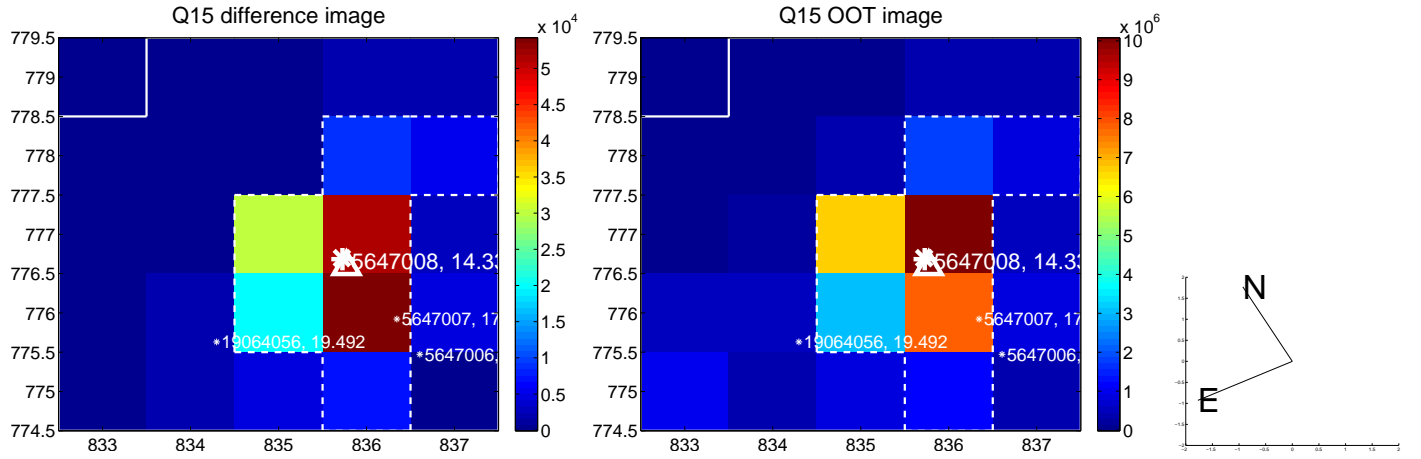
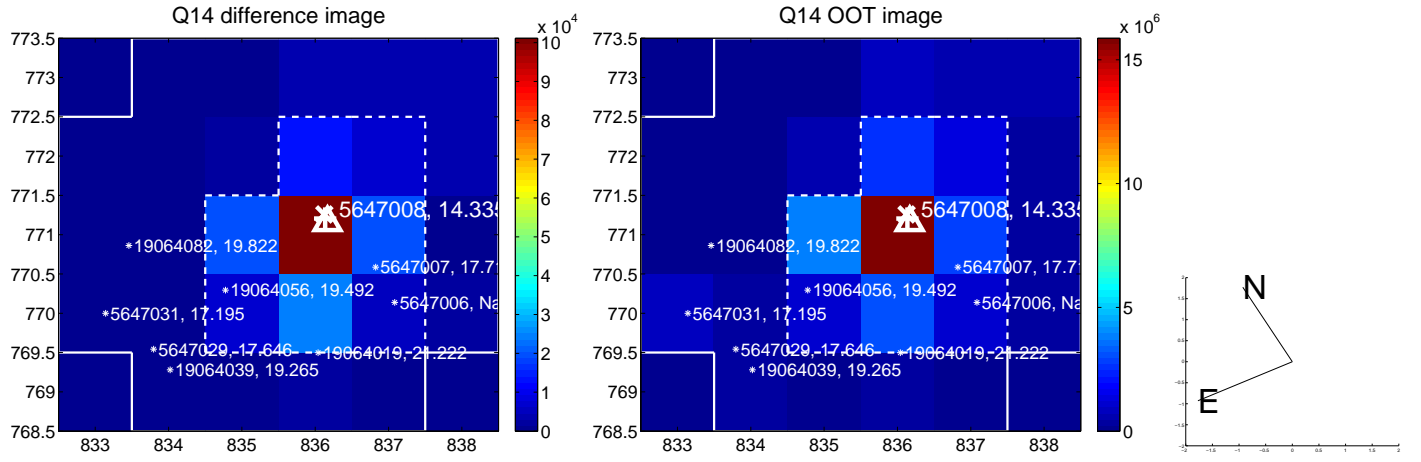
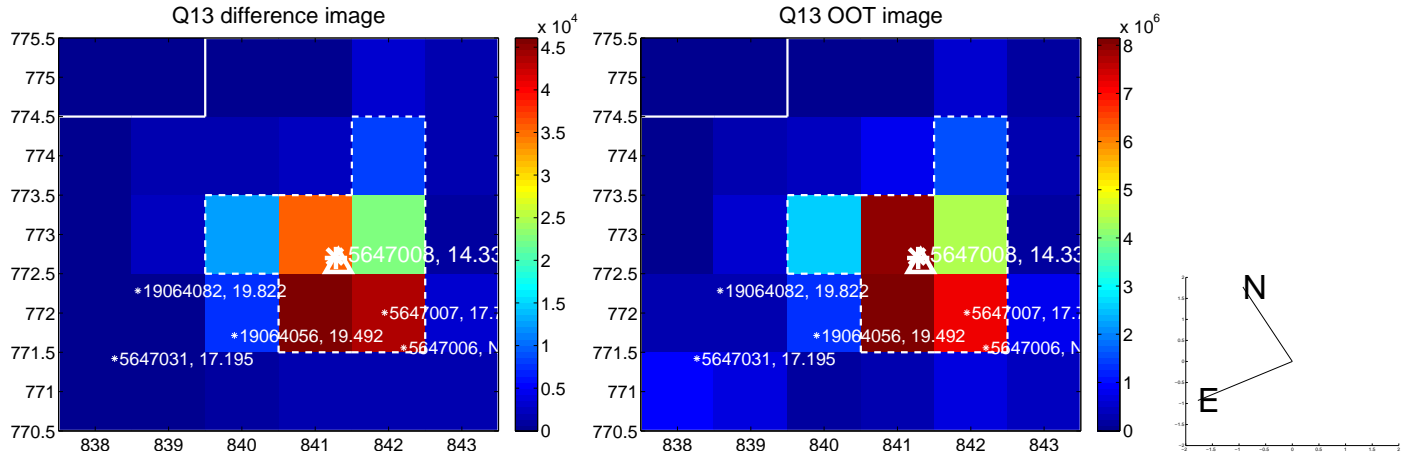
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



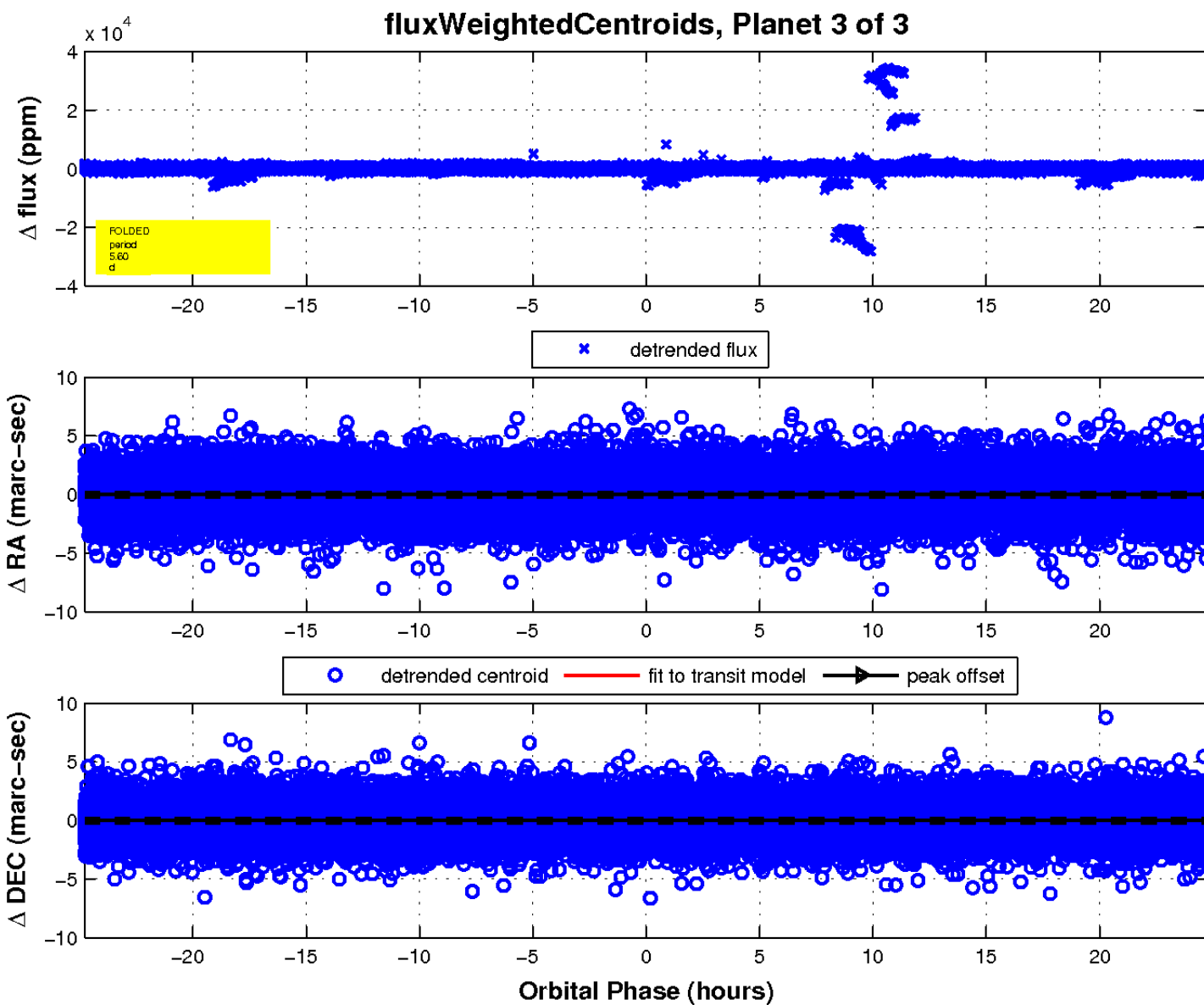
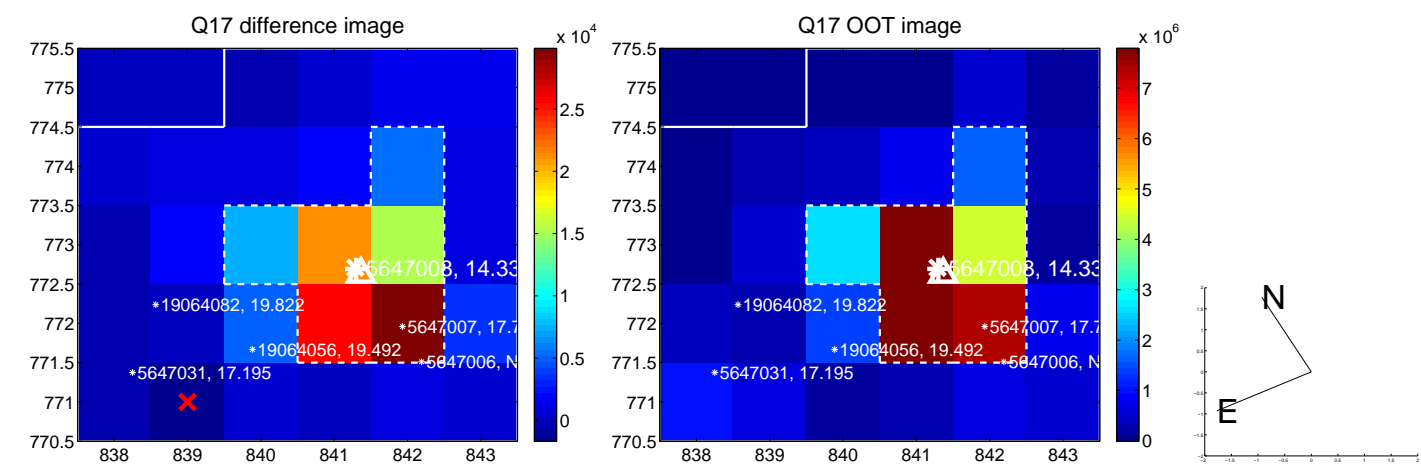
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

