

KIC 005390913

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})
005390913-01	OBS	No	1.680347	132.005565	116.3	2.676	27.1	14.4	1.25	6423	1.57	3752.55
005390913-02	OBS	No	1.682596	133.428377	19.9	4.243	15.7	1.8	1.25	6423	0.65	3745.86
005390913-03	OBS	No	1.680509	133.308275	67.4	20.166	11.4	2.0	1.25	6423	1.03	3752.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005390913-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL
005390913-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
005390913-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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 005390913-01

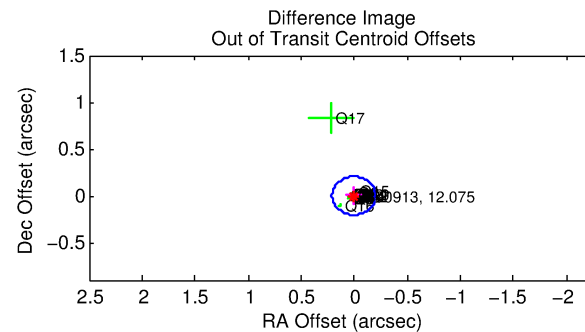
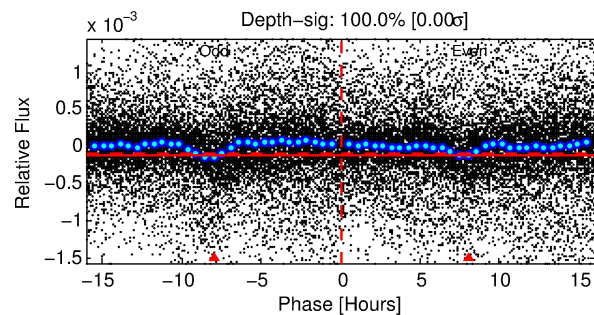
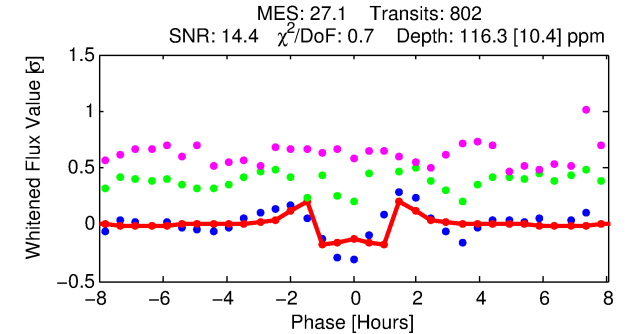
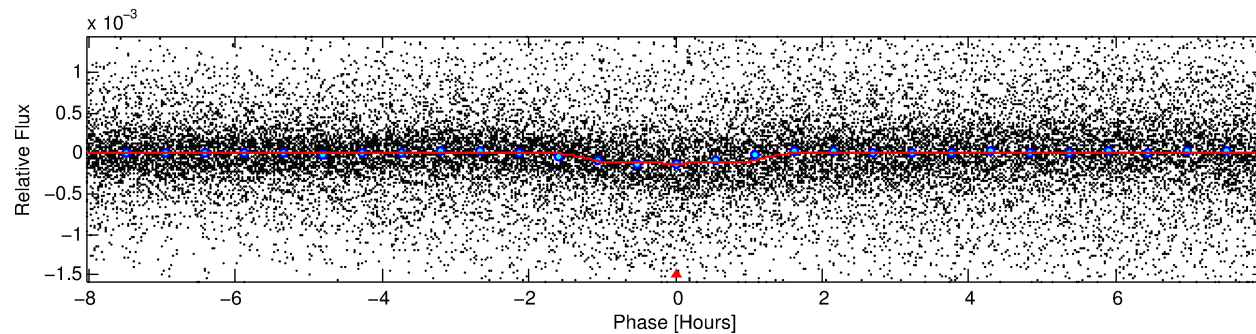
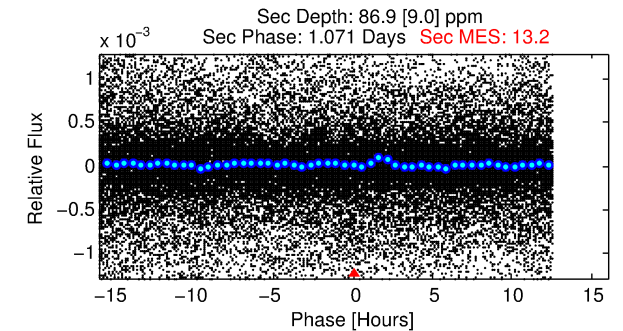
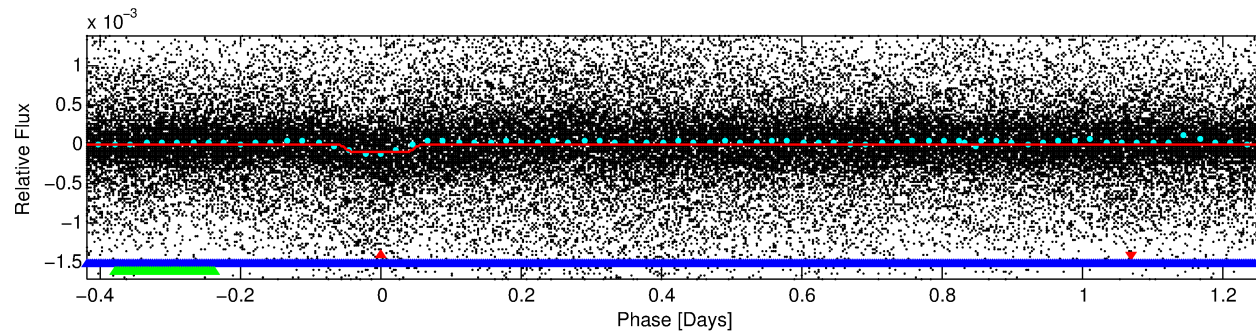
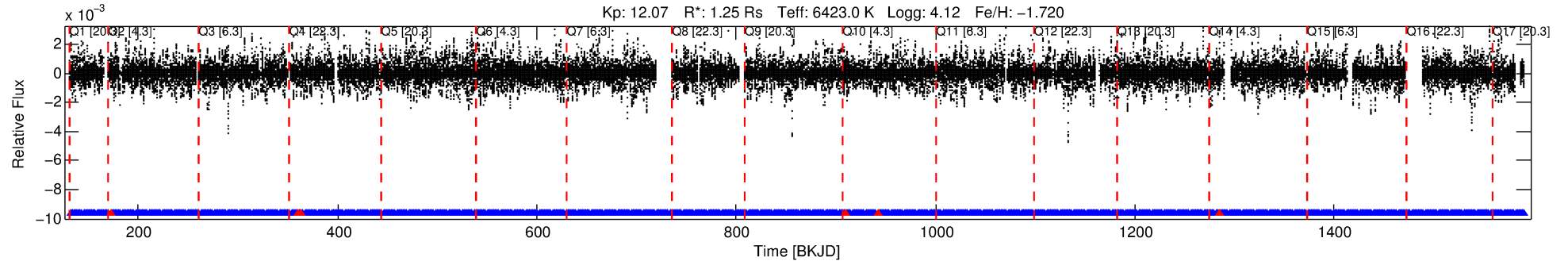
No Significant Match Found

DV One-Page Summary

KIC: 5390913 Candidate: 1 of 3 Period: 1.680 d

KOI: K05156 Corr: No Ephemeris Match

Kp: 12.07 R*: 1.25 Rs Teff: 6423.0 K Logg: 4.12 Fe/H: -1.720



DV Fit Results:

Period = 1.68035 [0.00001] d
Epoch = 132.0056 [0.0009] BKJD
Rp/R* = 0.0115 [0.0016]
a/R* = 2.41 [1.43]
b = 0.90 [0.15]
Seff = 3752.55 [2696.92]
Teff = 1996 [359] K
Rp = 1.57 [0.61] Re
a = 0.0251 [0.0103] AU
Ag = 12.28 [9.42] [1.20σ]
Teffp = 5776 [459] K [6.49σ]

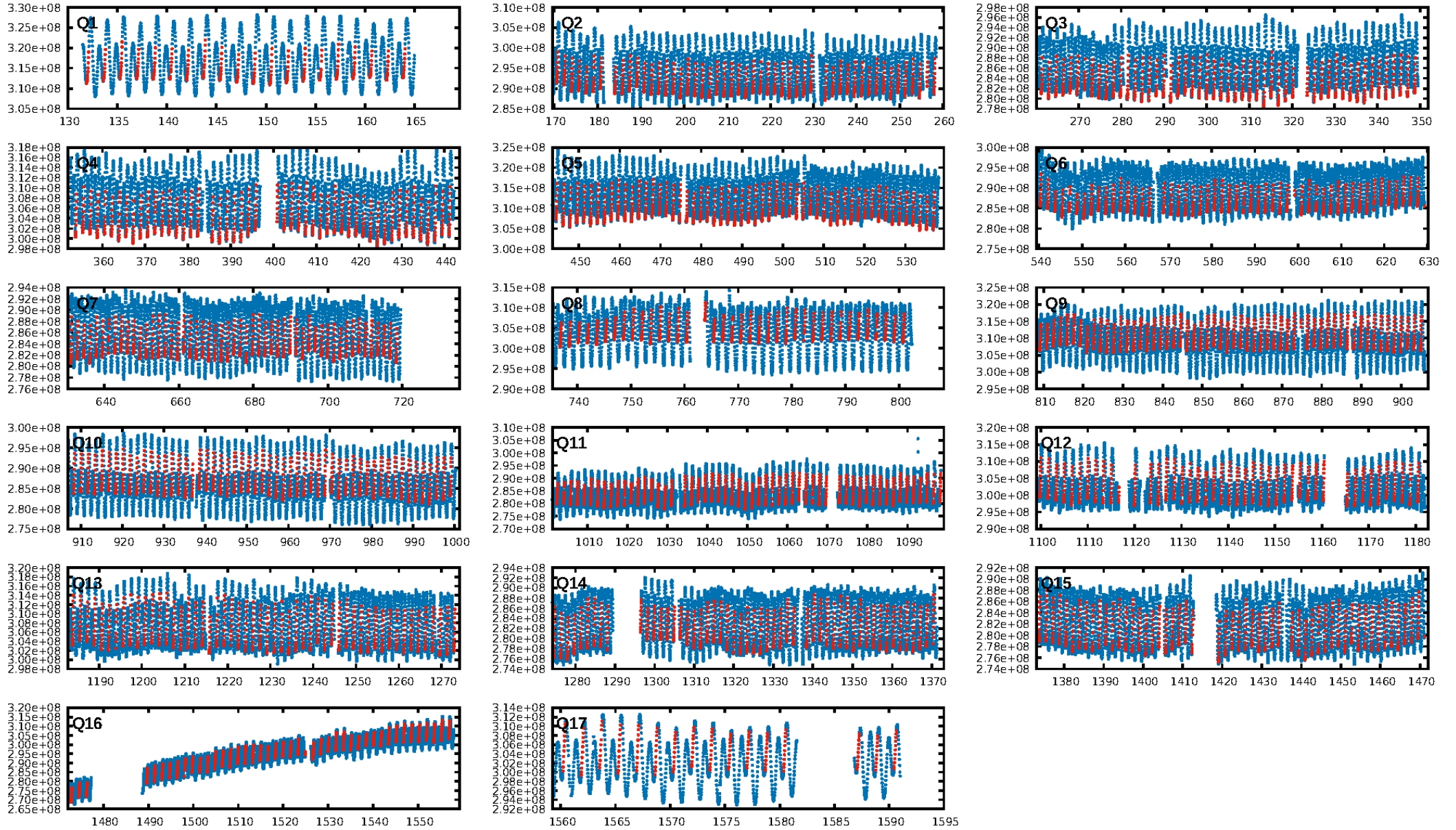
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [760/766]
GhostDiagnostic-chr: 0.7449
Centroid-sig: 0.0%
Centroid-so: 1.509 arcsec [3.09σ]
OotOffset-rm: 0.004 arcsec [0.06σ]
KicOffset-rm: 0.067 arcsec [0.81σ]
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]

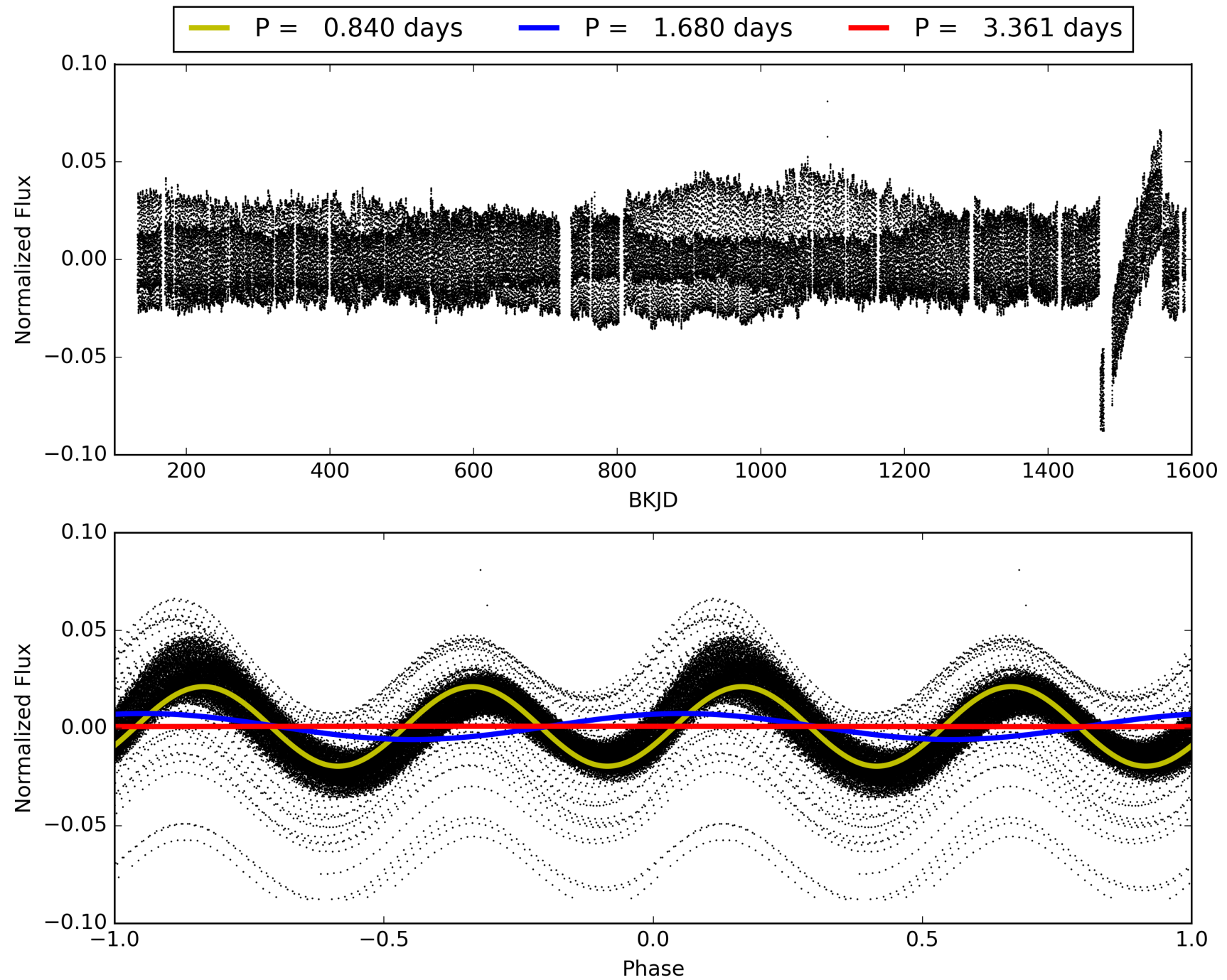
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:02:08 Z

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

TCE 005390913-01, PDC Light Curves

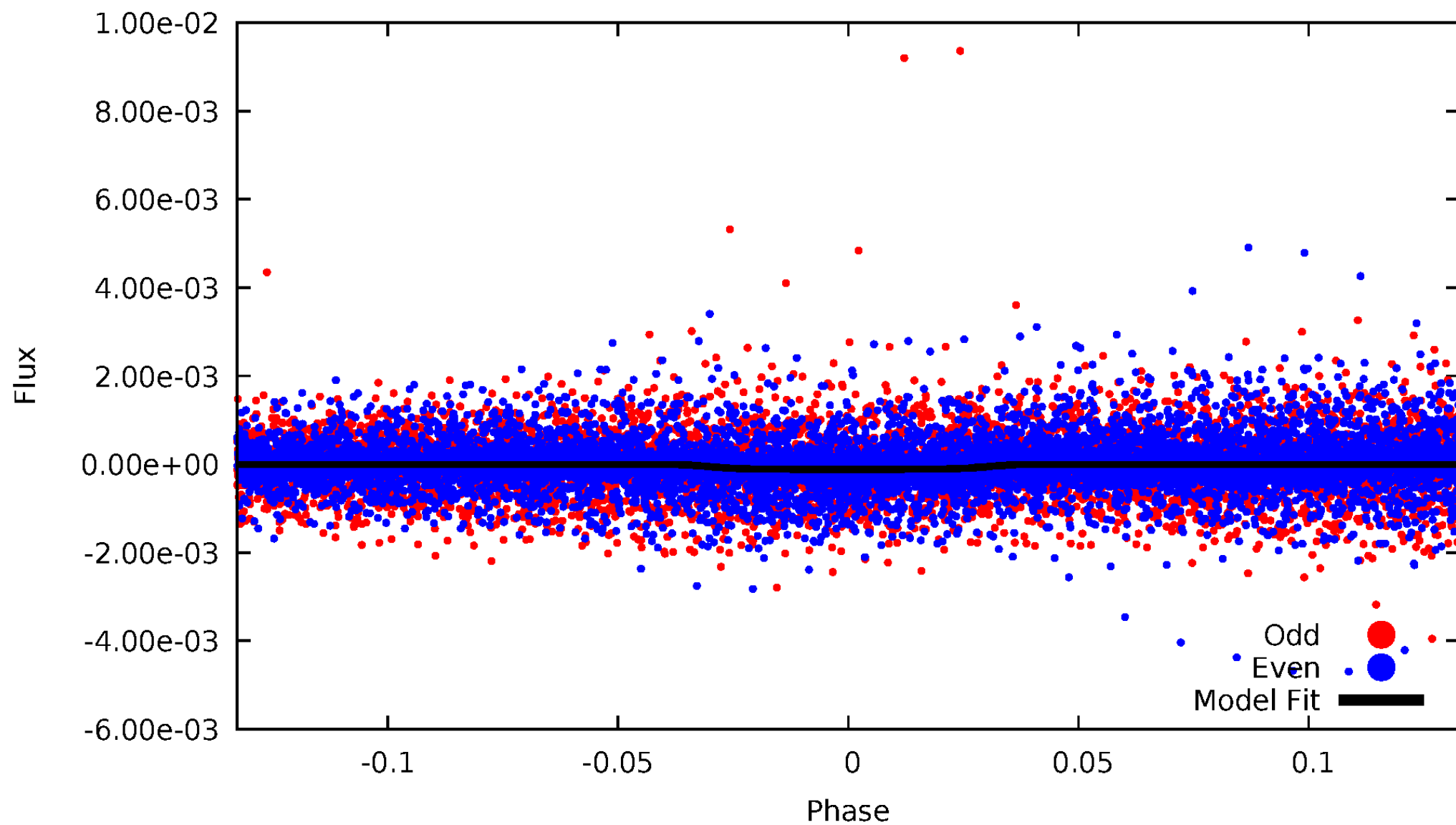


TCE 005390913-01



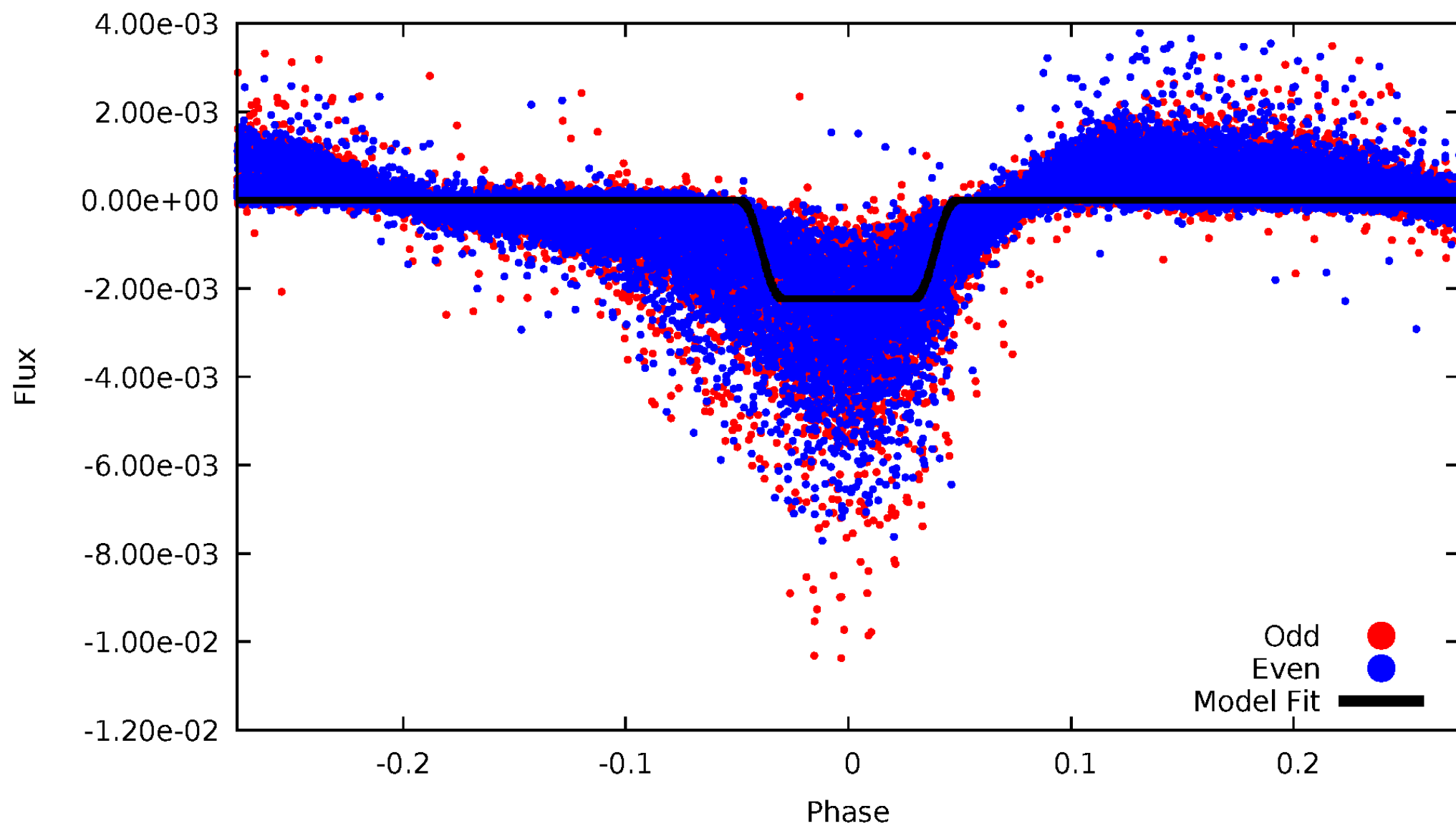
DV Odd/Even

TCE 005390913-01



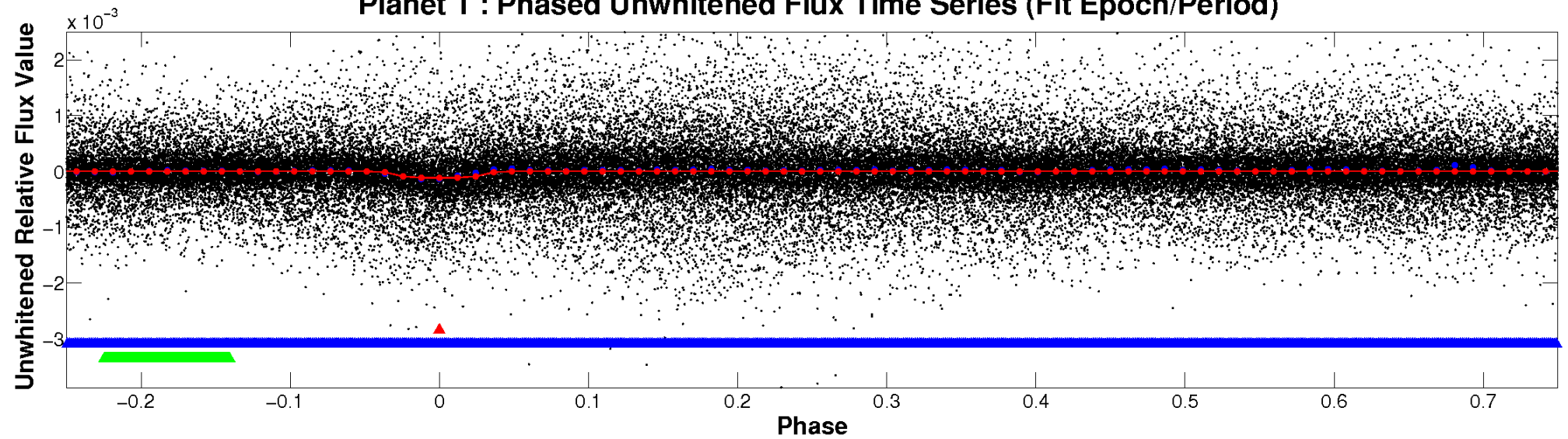
ALT Odd/Even

TCE 005390913-01

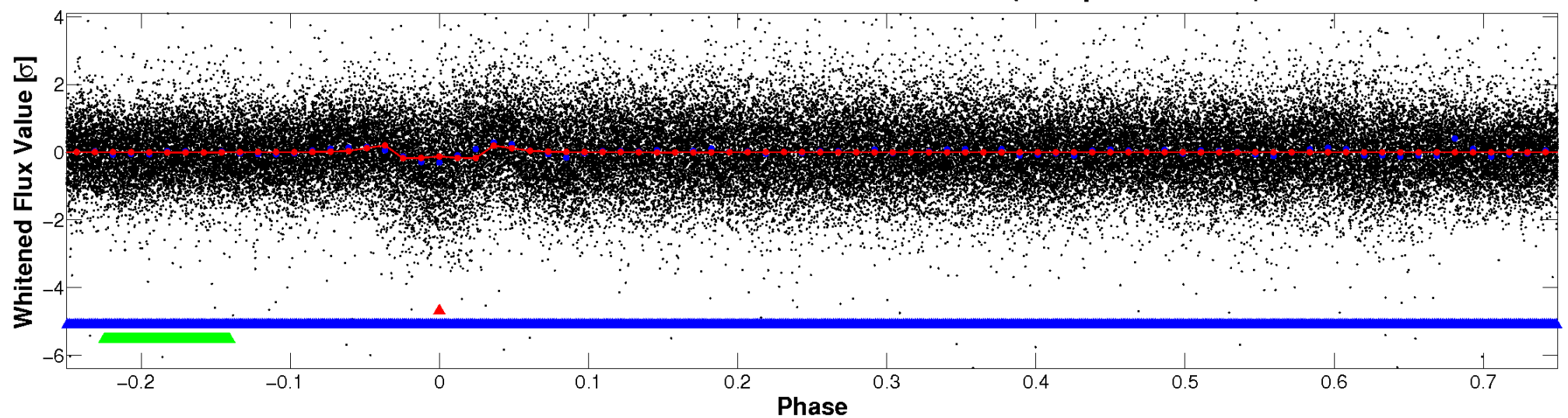


Non-Whitened Vs. Whitened Light Curve

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

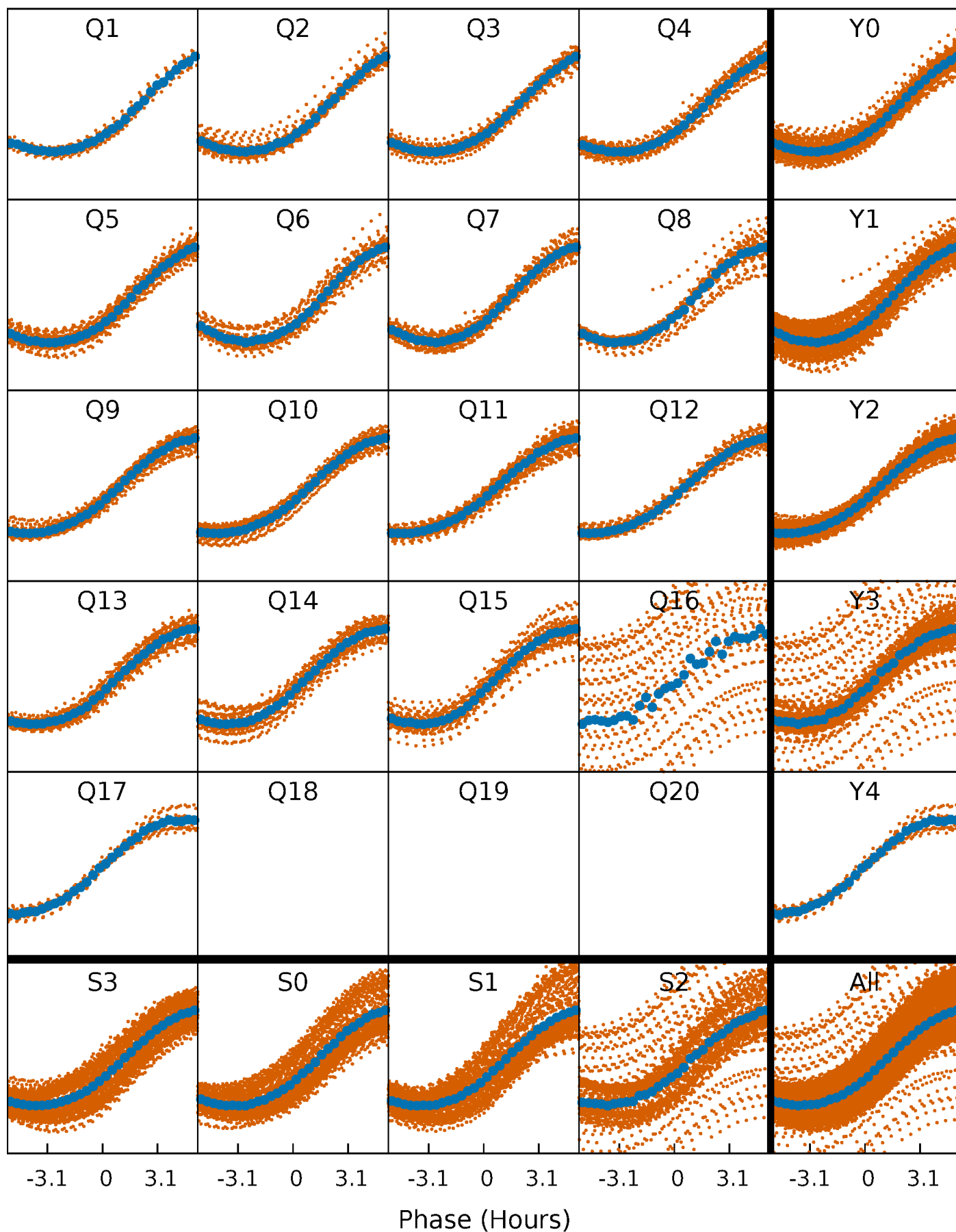


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



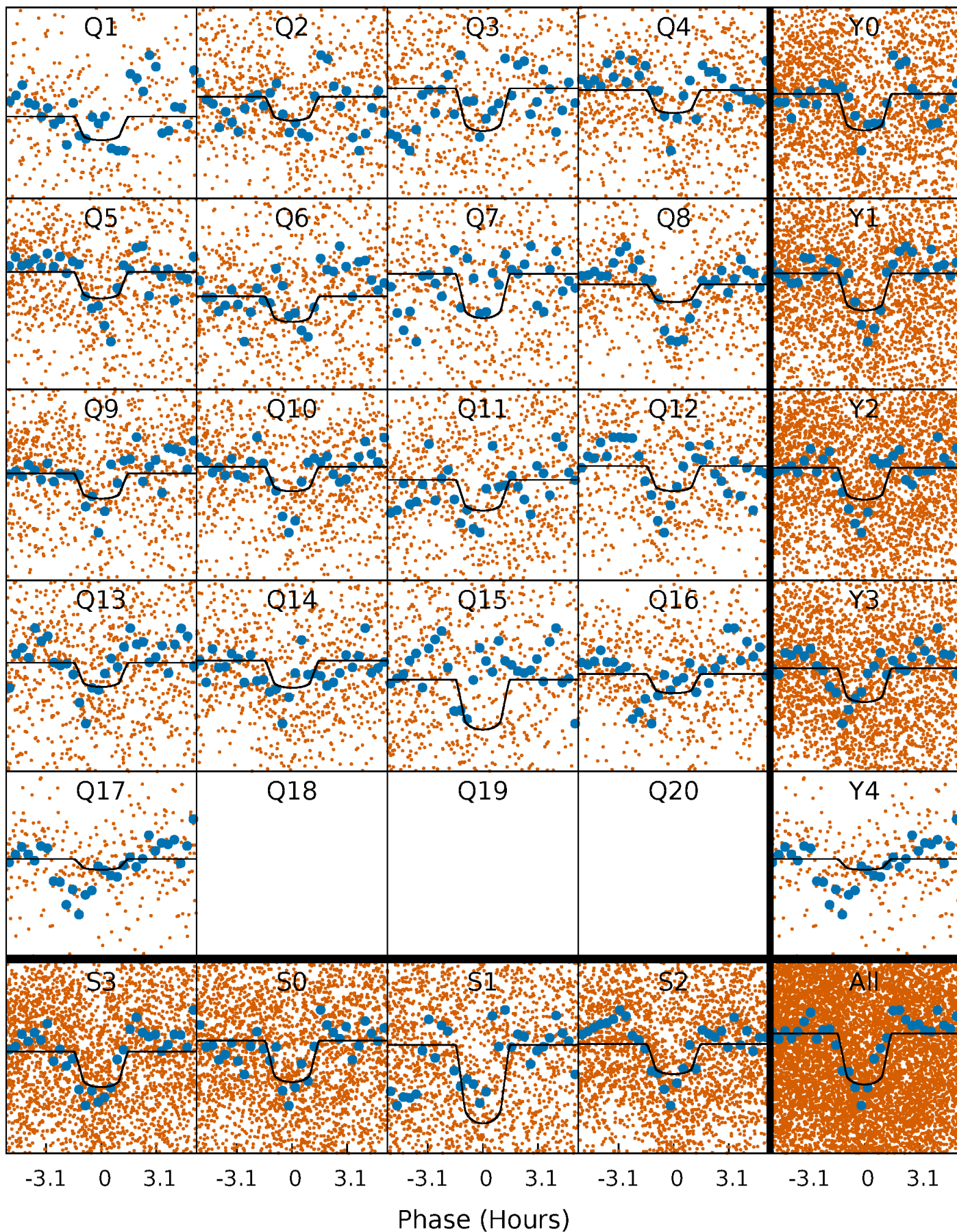
PDC Quarter-Phased Transit Curves

TCE 005390913-01 P= 1.680347 Days $T_0=132.005565$ (BKJD)



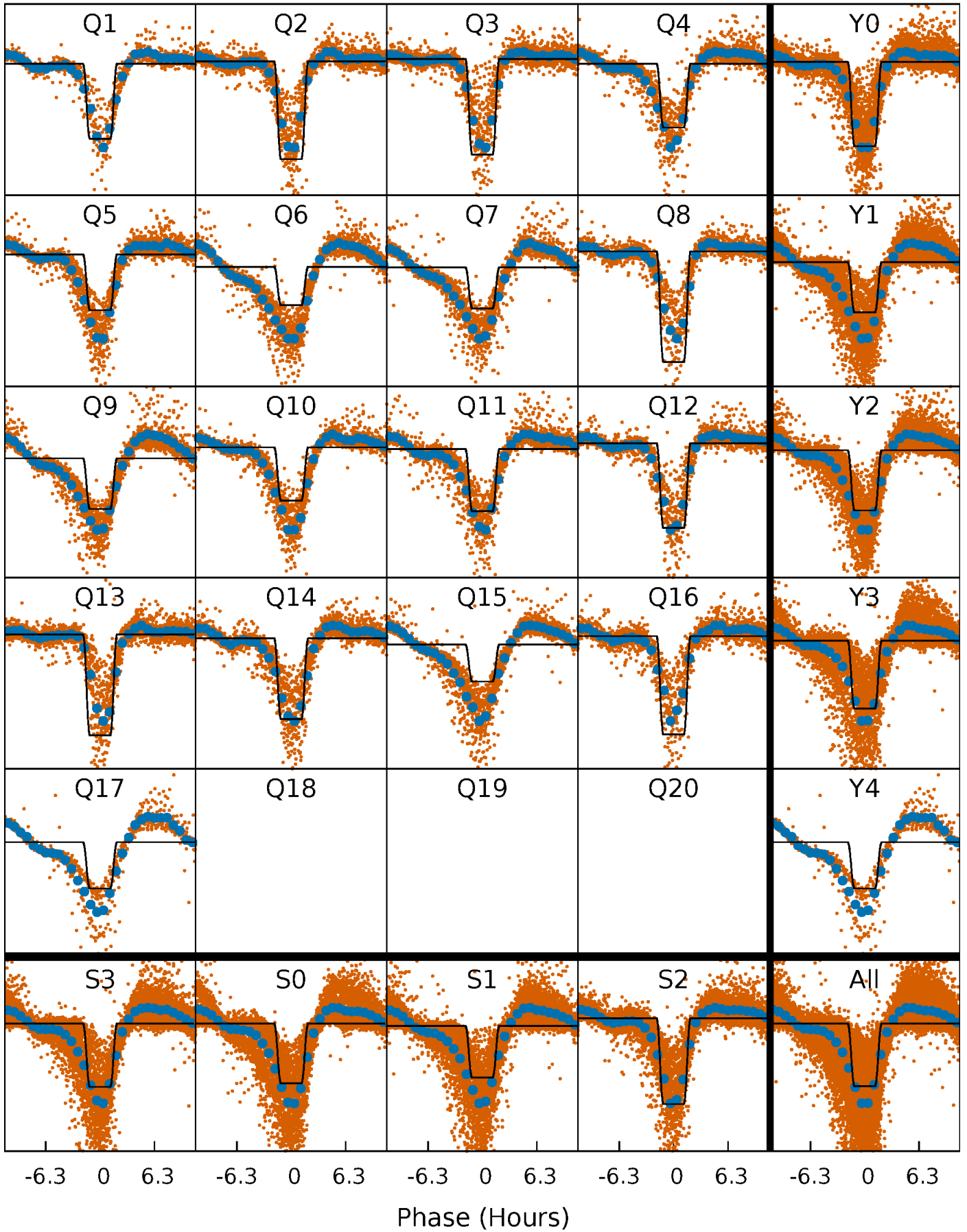
DV Quarter-Phased Transit Curves

TCE 005390913-01 P= 1.680347 Days $T_0=132.005565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

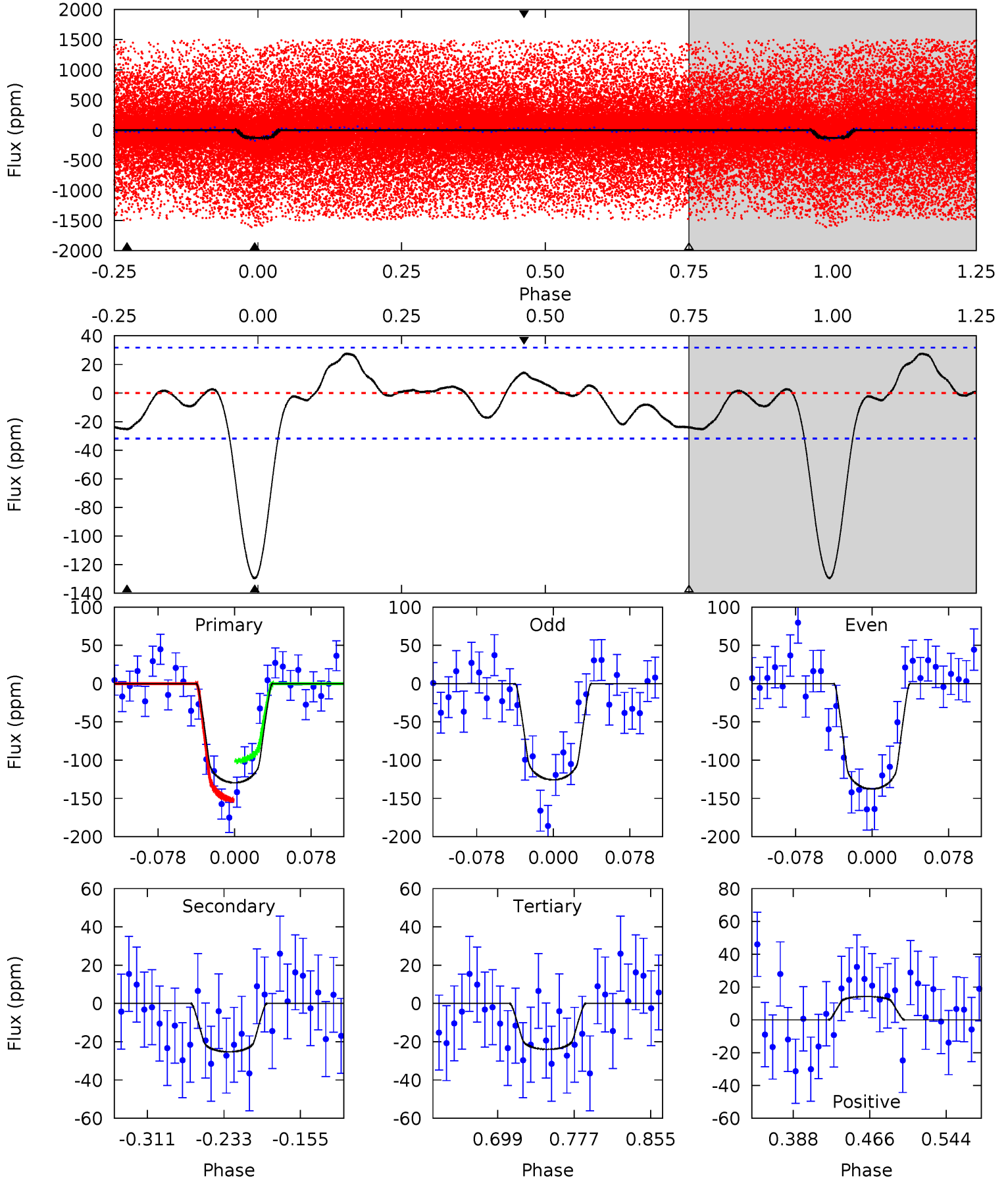
TCE 005390913-01 P= 1.680235 Days $T_0=132.026422$ (BKJD)



DV Model-Shift Uniqueness Test

005390913-01, P = 1.680347 Days, E = 130.325218 Days

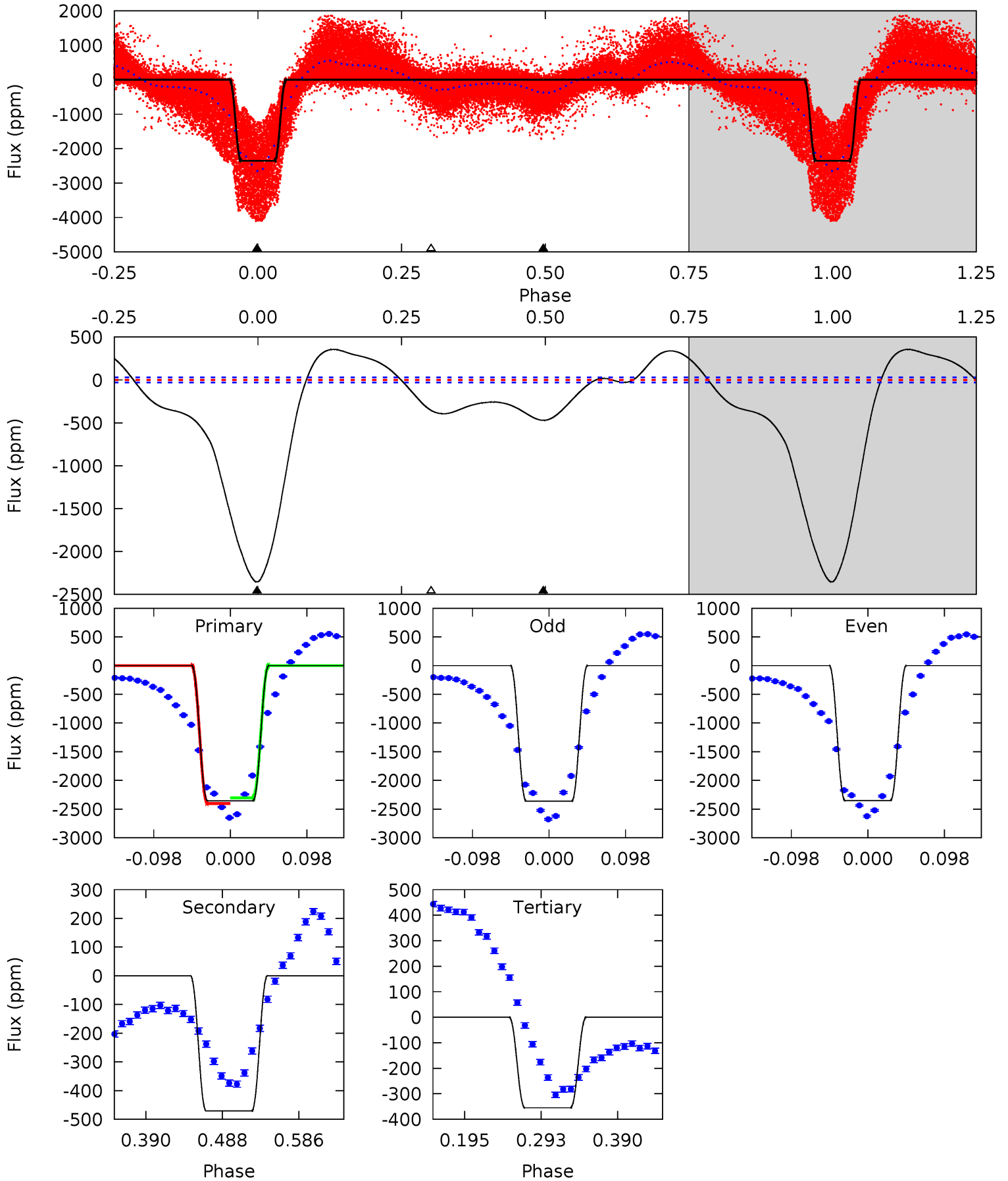
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	3.67	3.48	2.07	4.62	1.76	1.69	15.3	16.7	0.18	1.60	0.88	0.83	0.18	3.65



Alt Model-Shift Uniqueness Test

005390913-01, P = 1.680235 Days, E = 130.346187 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
362.4	72.5	54.6	0	4.57	1.66	41.7	307.8	362.4	17.8	72.5	0.97	1.12	0.13	7.52



Stellar Parameters For KIC 005390913

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6423^{+193}_{-193}	$4.121^{+0.434}_{-0.186}$	$-1.720^{+0.300}_{-0.150}$	$1.246^{+0.369}_{-0.451}$	$0.747^{+0.078}_{-0.022}$	$0.544^{+1.723}_{-0.301}$
	+3%/-3%	+11%/-5%	+17%/-9%	+30%/-36%	+10%/-3%	+317%/-55%
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 005390913-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 7	$1.53^{+0.38}_{-0.38}$	2759^{+227}_{-313}	4359^{+383}_{-375}	$3.819^{+3.100}_{-1.646}$
Alt.	-471 ± 6	$6.27^{+1.17}_{-1.39}$	2735^{+260}_{-318}	4461^{+131}_{-116}	$4.252^{+2.656}_{-1.233}$

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

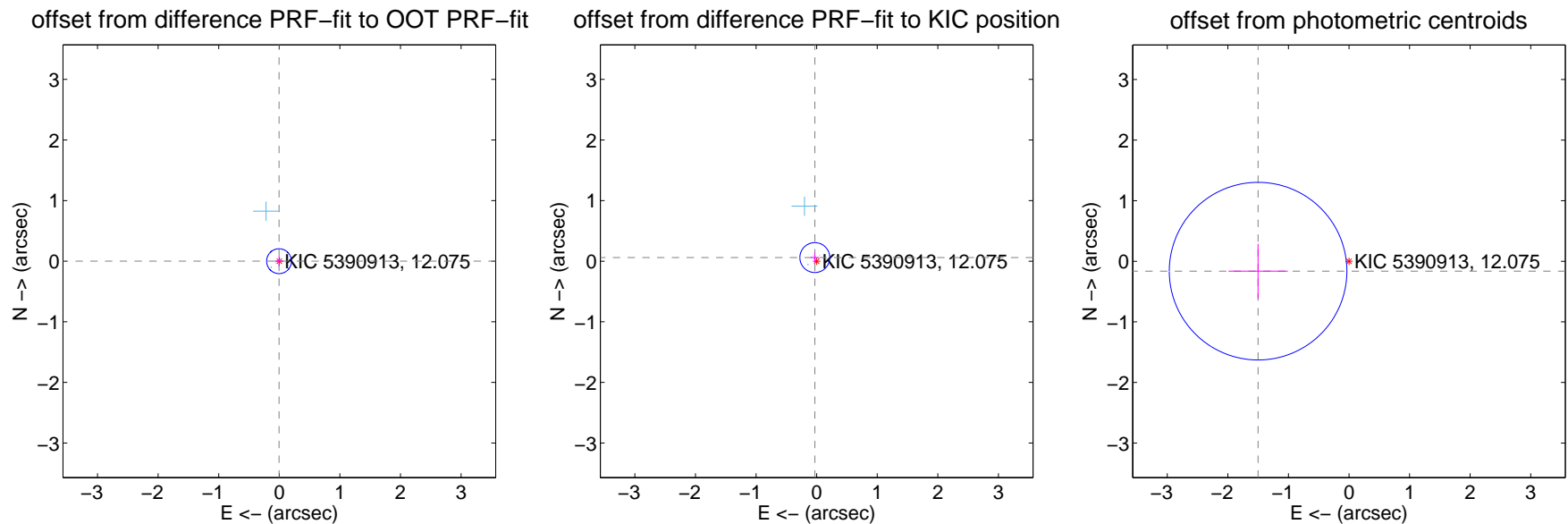
DV Centroid Data

Supplemental centroid analysis for 005390913-01. Kepler magnitude: 12.07. Transit SNR 14.42

There are 17 quarters with good PRF difference image offsets

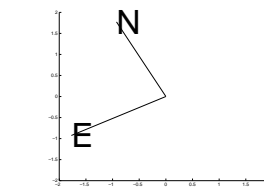
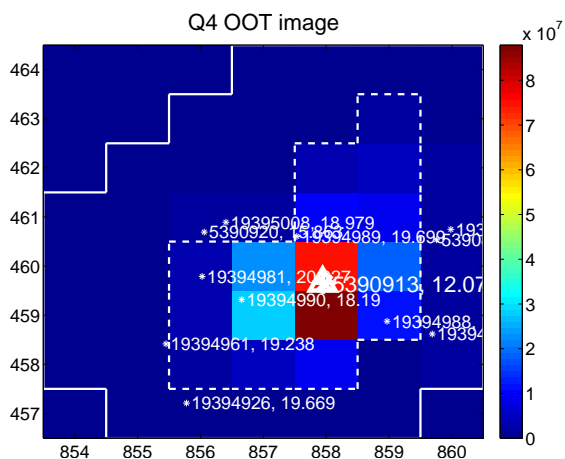
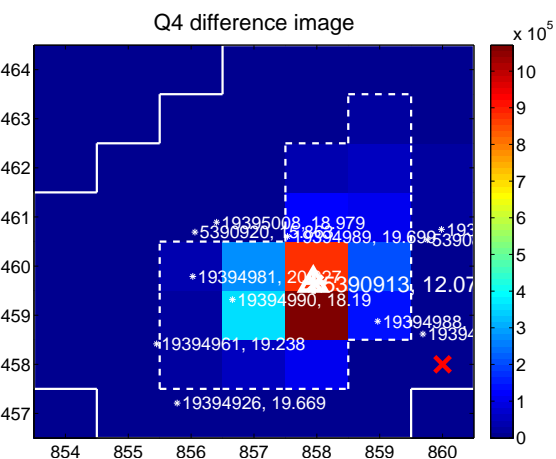
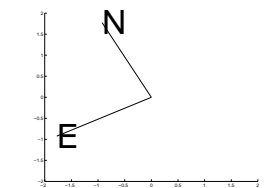
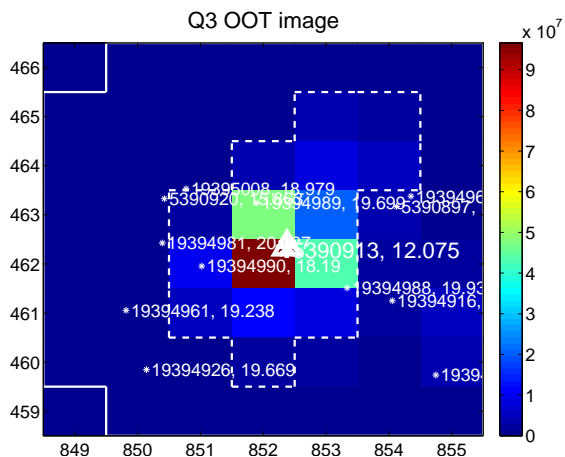
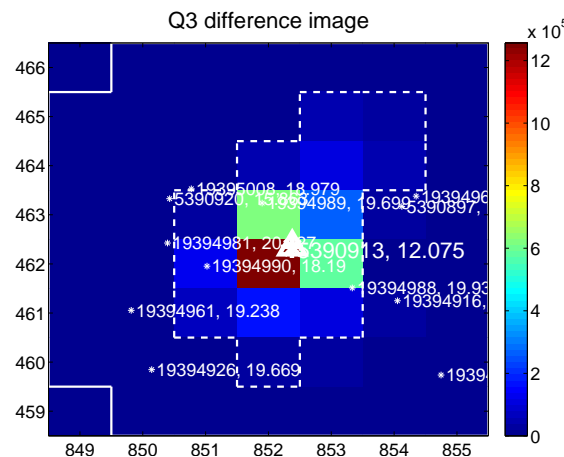
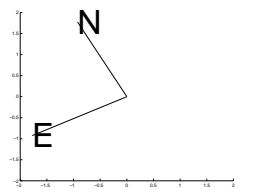
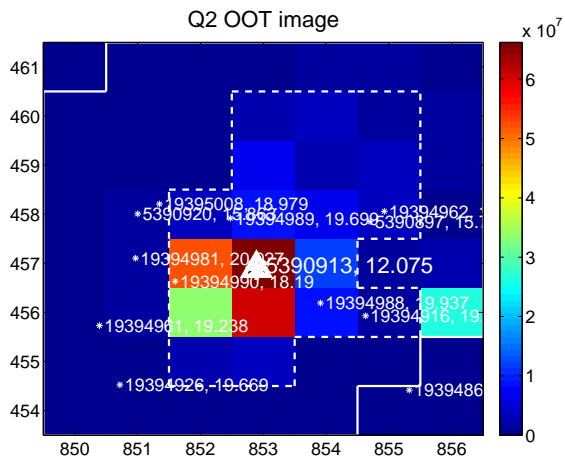
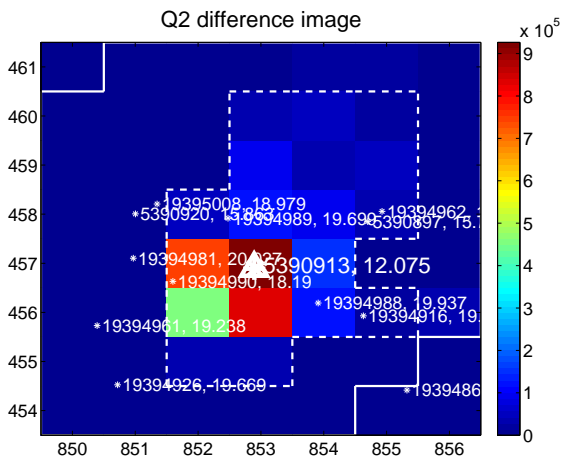
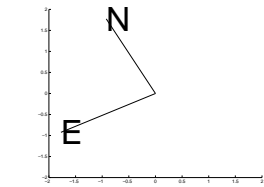
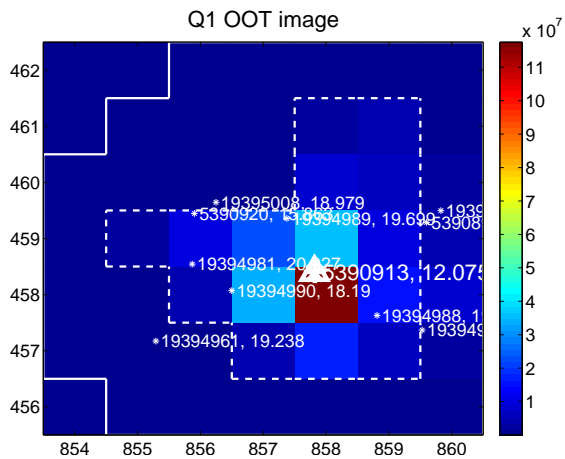
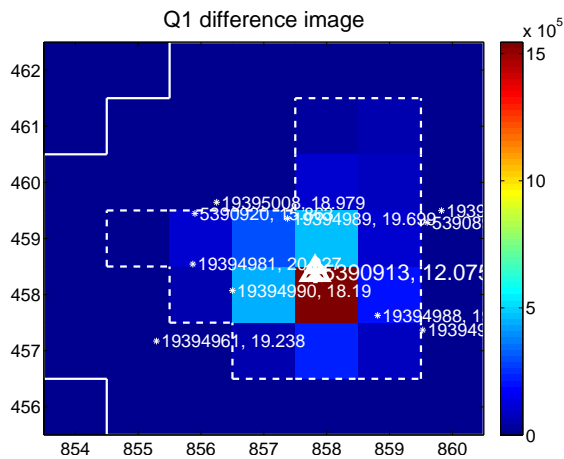
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.068	0.06	0.004 ± 0.068	0.000 ± 0.083
PRF-fit source offset from KIC position	0.067 ± 0.082	0.81	0.030 ± 0.068	0.060 ± 0.083
photometric centroid source offset	1.51 ± 0.49	3.09	1.50 ± 0.49	-0.16 ± 0.45

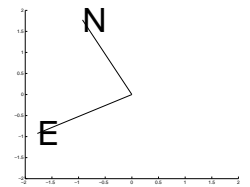
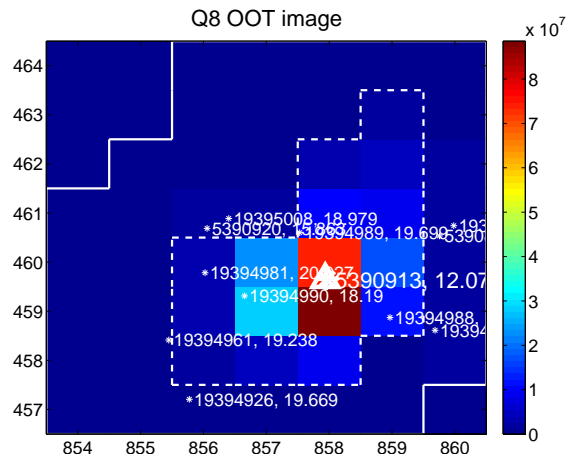
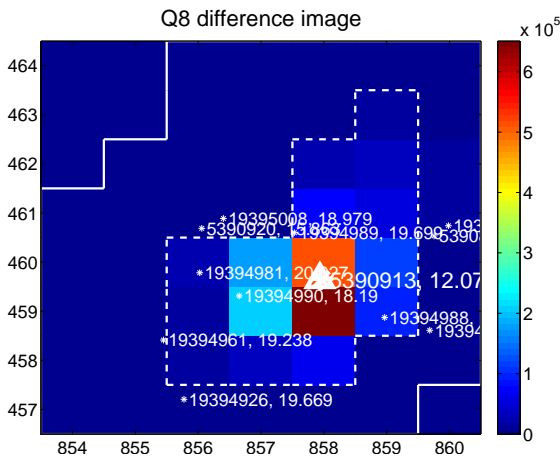
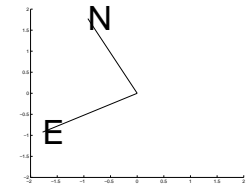
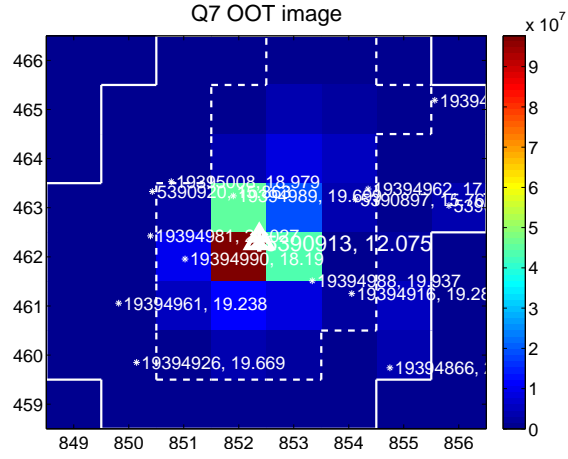
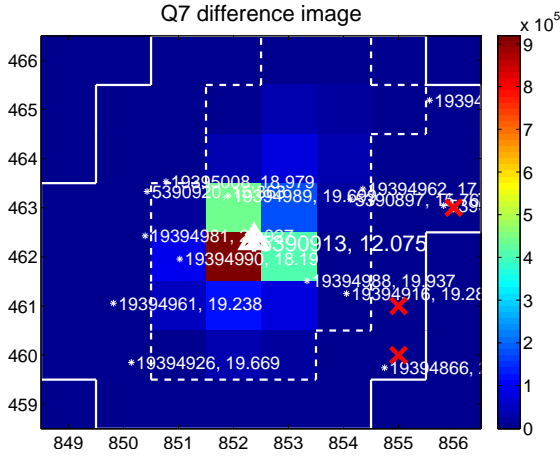
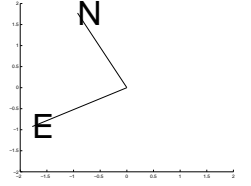
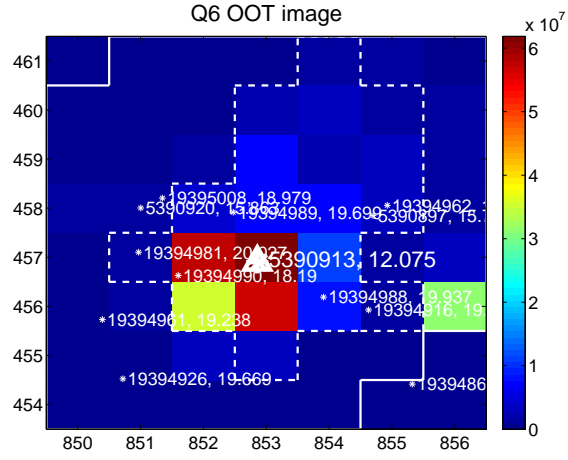
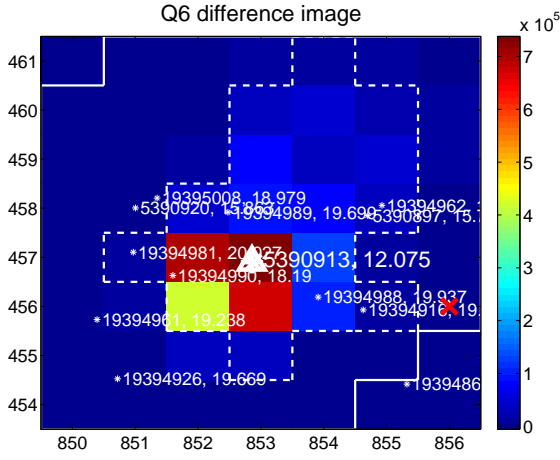
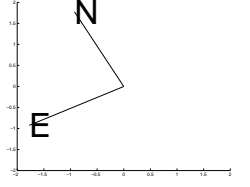
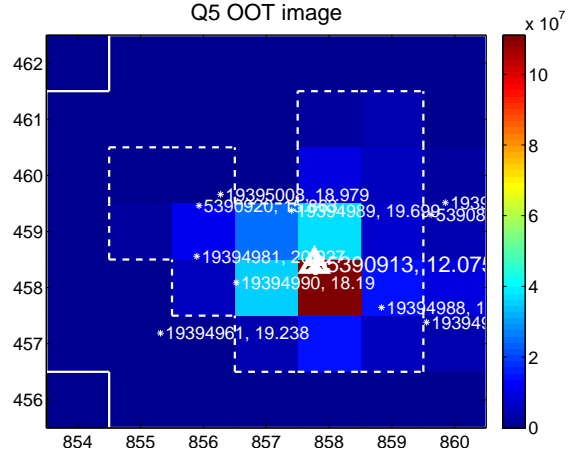
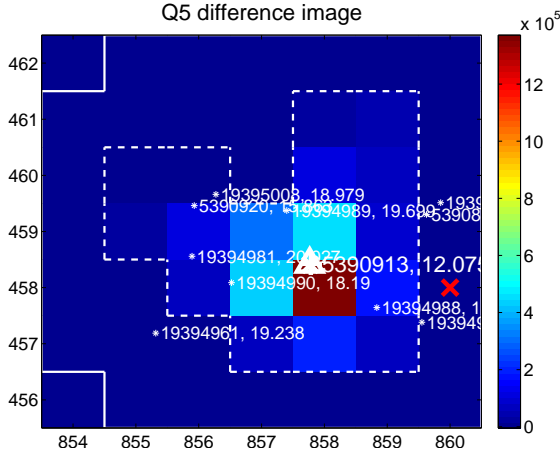


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

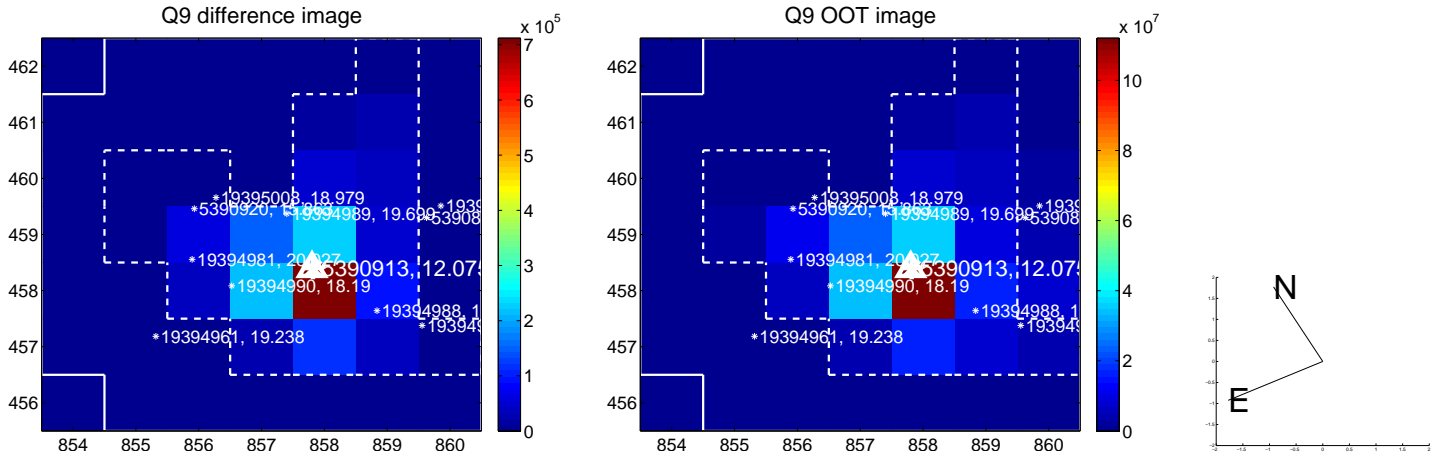
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



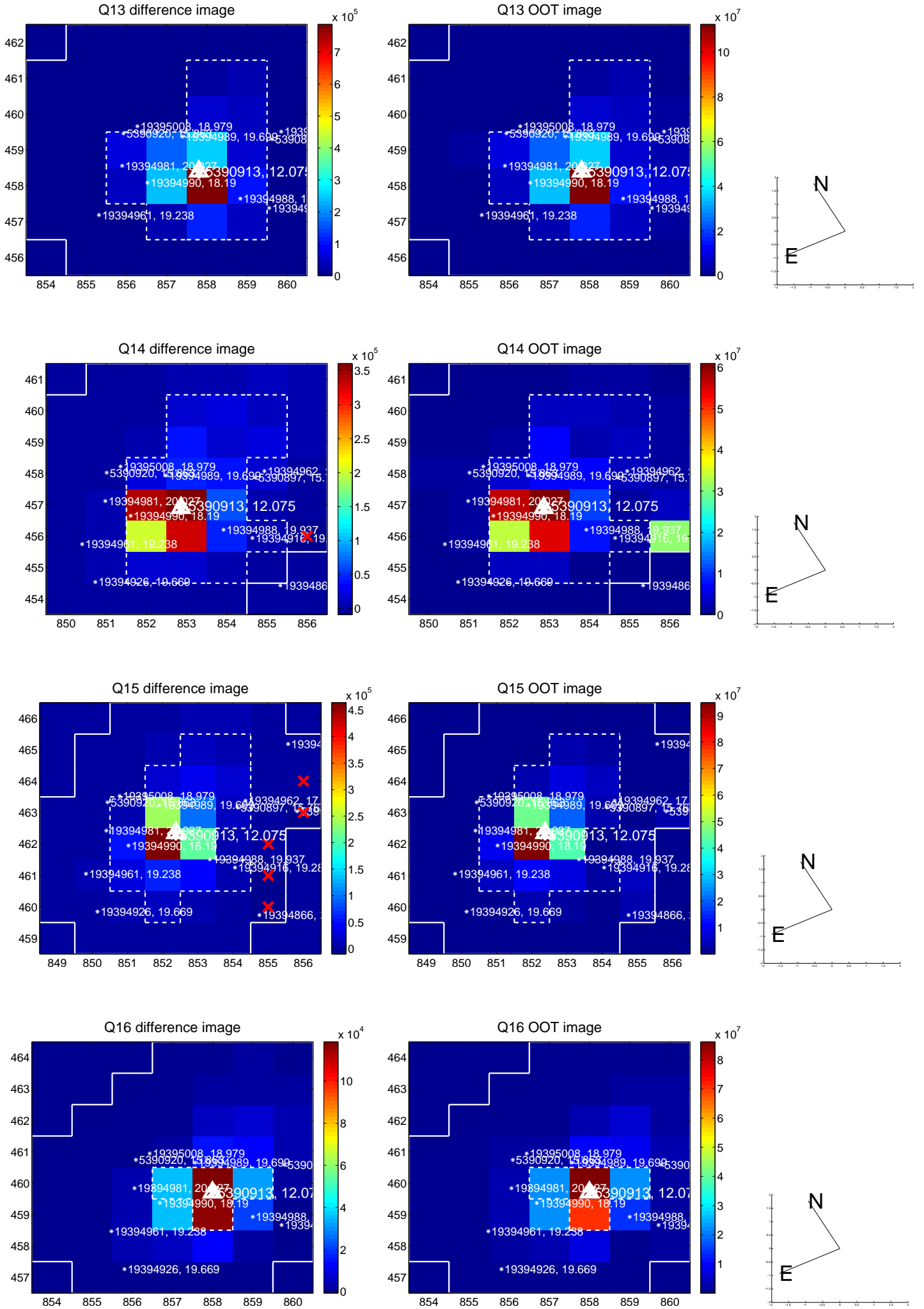
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



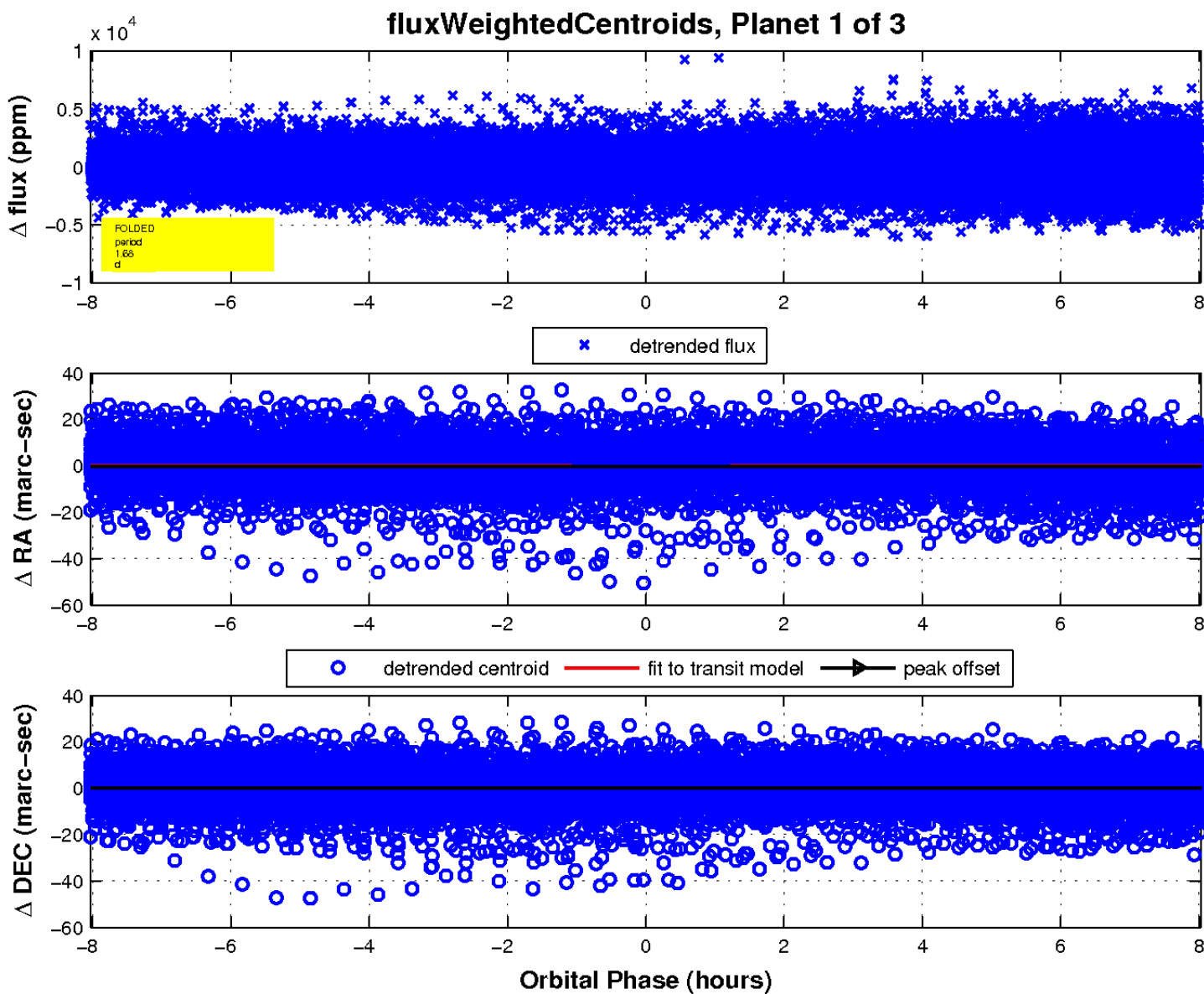
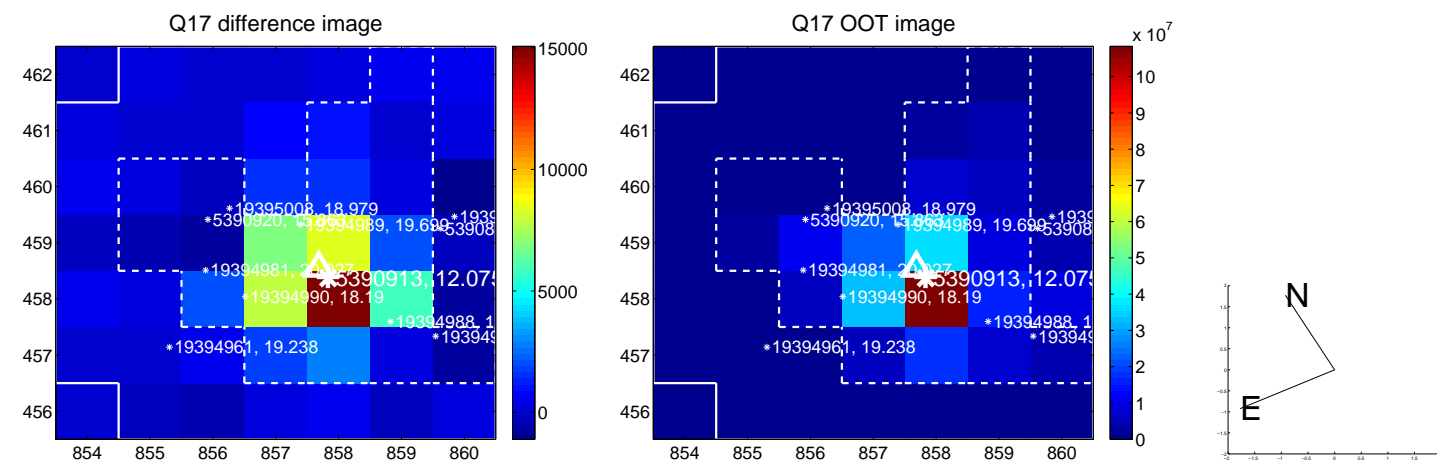
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



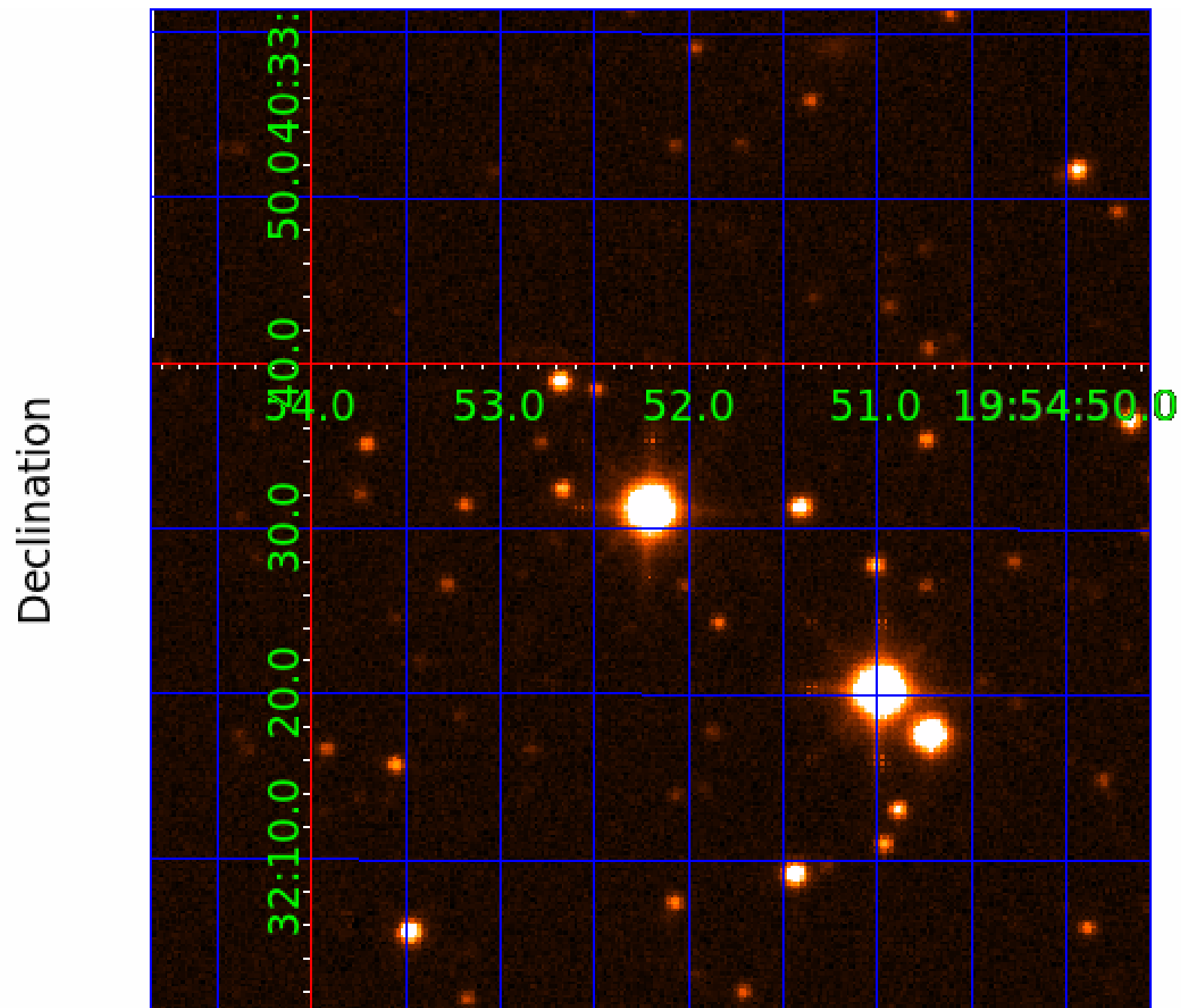
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005390913

Q1-17 DR25 TCE Parameters

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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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005390913-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
005390913-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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.

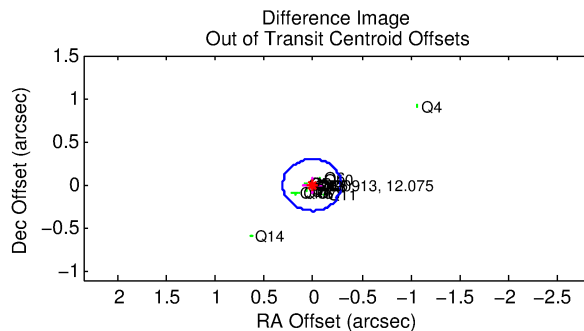
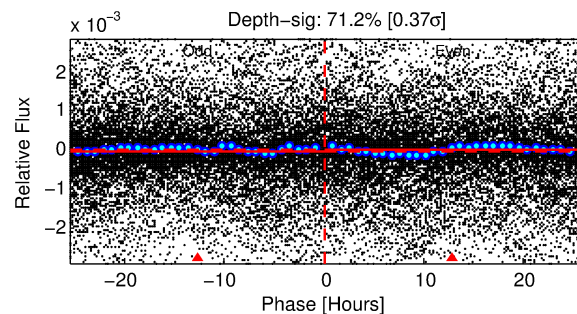
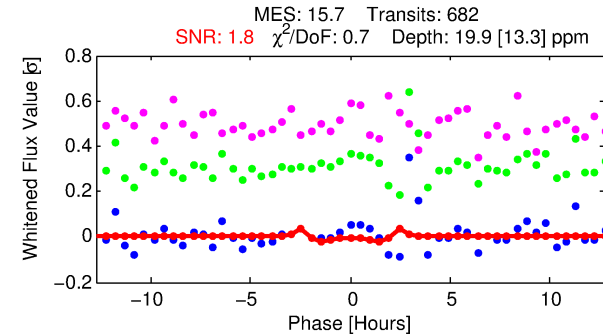
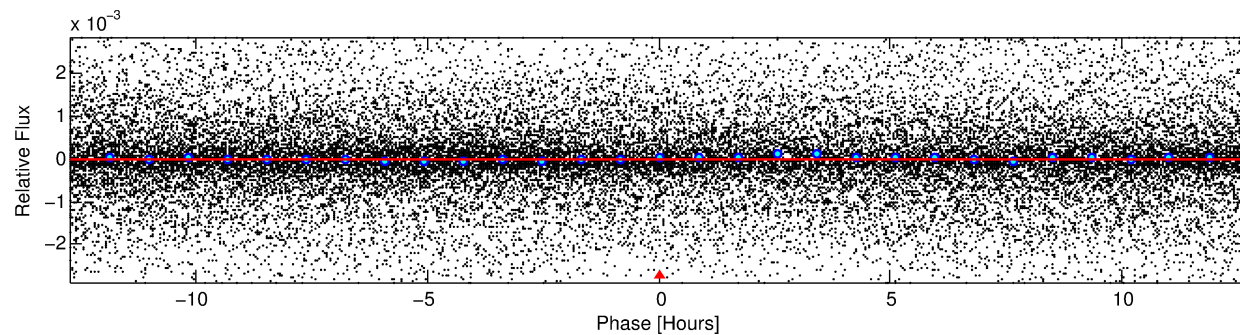
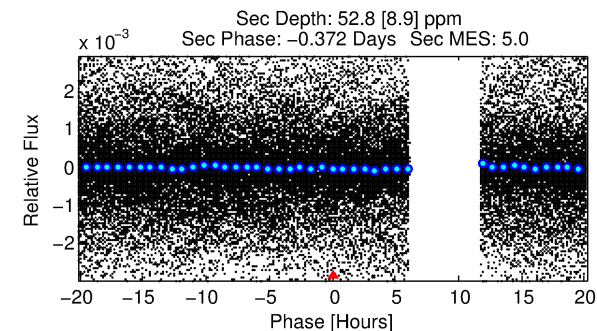
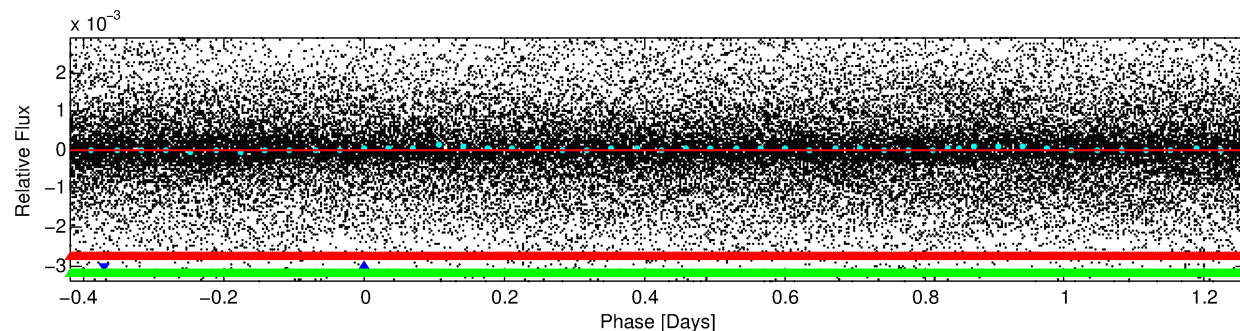
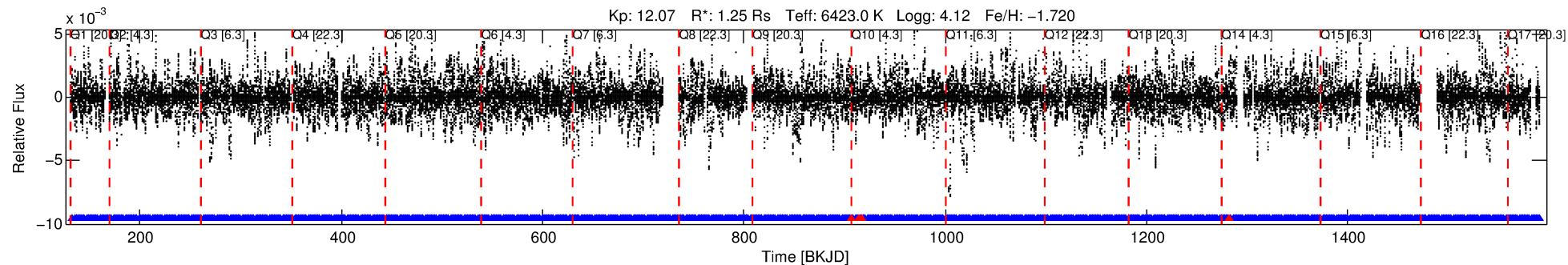
Ephemeris Match Information For 005390913-02

No Significant Match Found

DV One-Page Summary

KIC: 5390913 Candidate: 2 of 3 Period: 1.683 d
KOI: K05156 Corr: No Ephemeris Match

Kp: 12.07 R*: 1.25 Rs Teff: 6423.0 K Logg: 4.12 Fe/H: -1.720



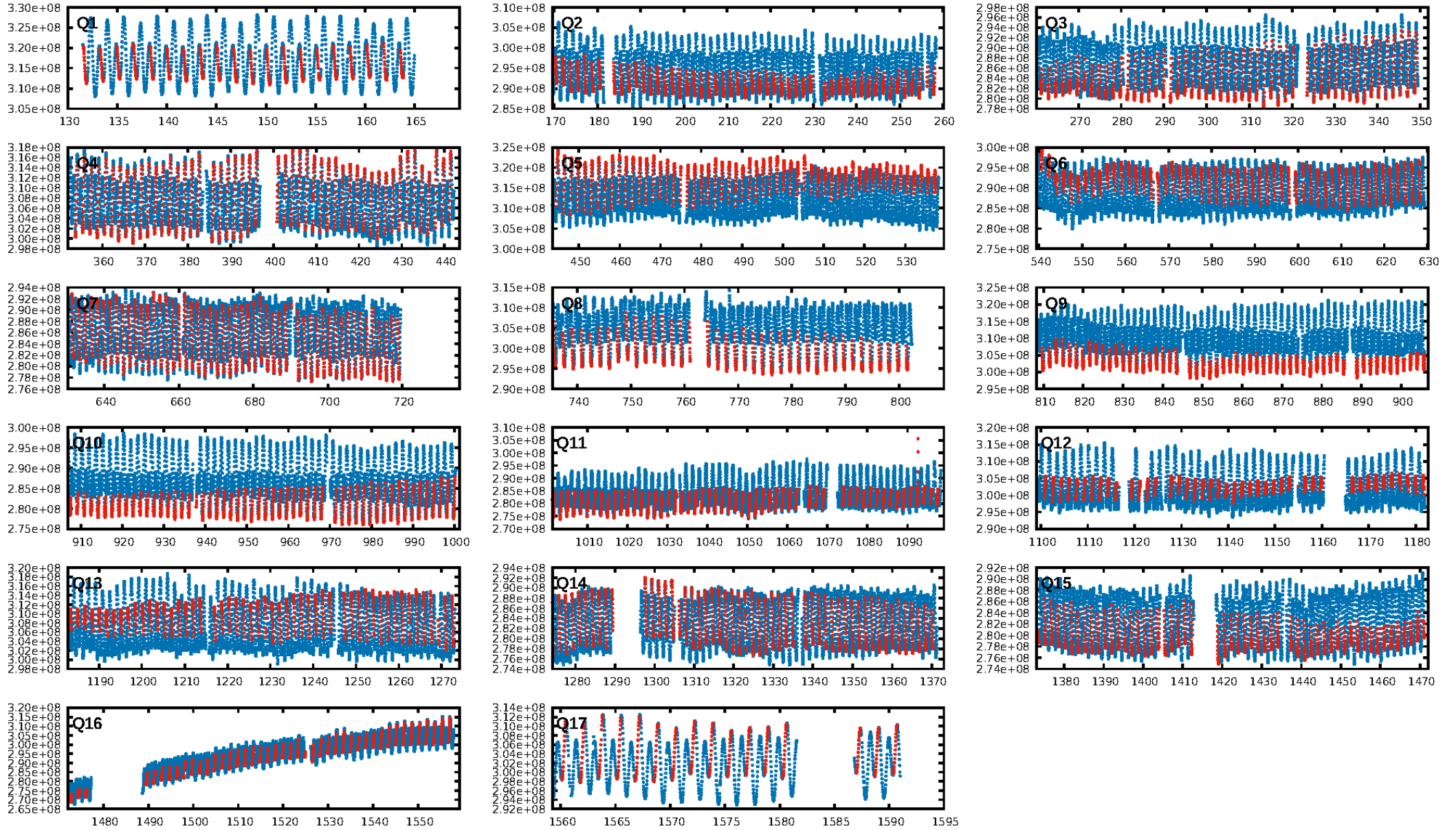
DV Fit Results:

Period = 1.68260 [0.00005] d
Epoch = 133.4284 [0.0063] BKJD
Rp/R* = 0.0047 [0.0027]
a/R* = 1.66 [2.68]
b = 0.90 [0.56]
Seff = 3745.86 [2692.12]
Teq = 1995 [358] K
Rp = 0.65 [0.43] Re
a = 0.0251 [0.0103] AU
Ag = 44.09 [59.09] [0.73σ]
Teffp = 7947 [2273] K [2.59σ]

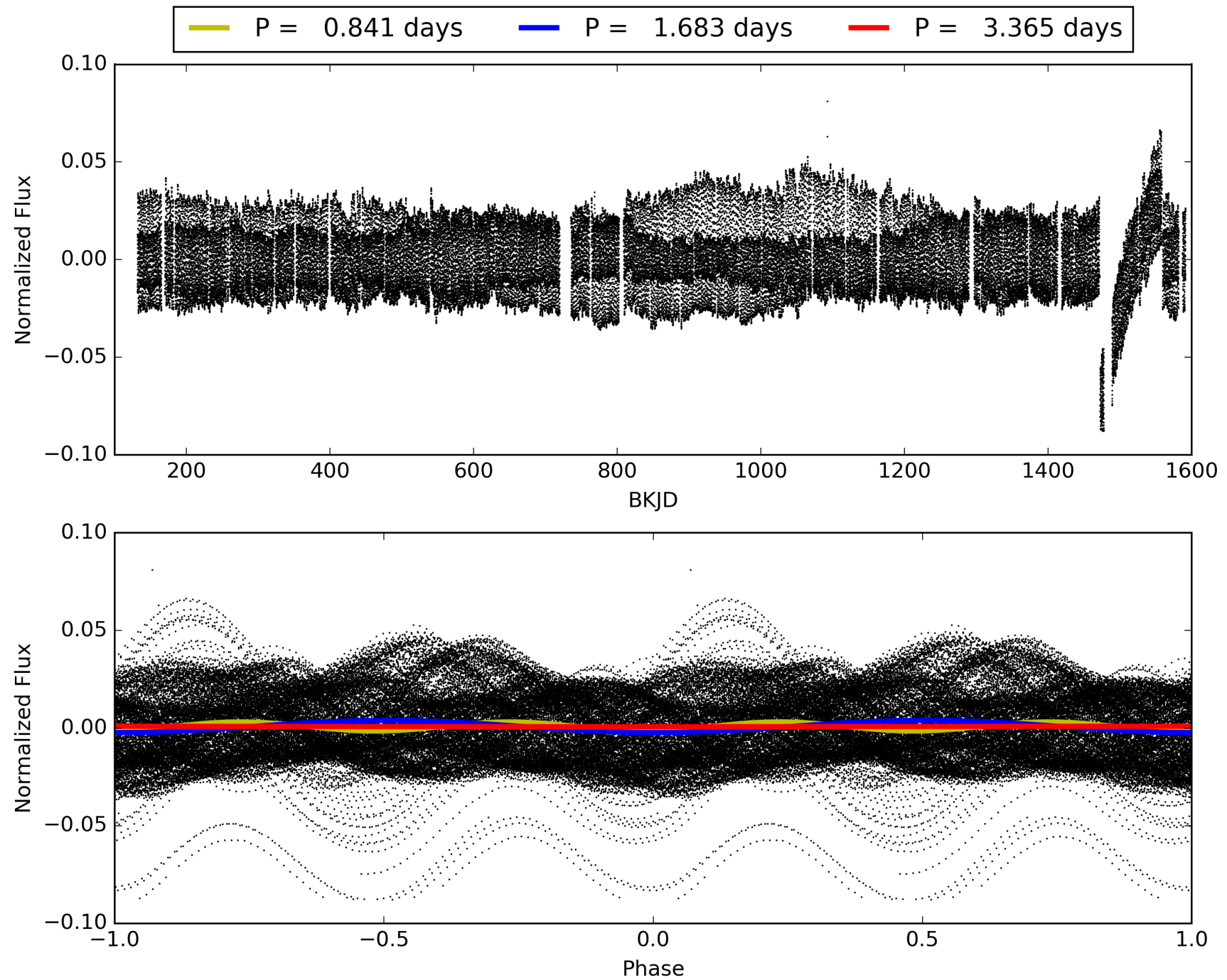
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [658/662]
GhostDiagnostic-chr: 0.6918
Centroid-sig: 14.5%
Centroid-so: 3.523 arcsec [1.23σ]
OotOffset-rm: 0.014 arcsec [0.14σ]
KicOffset-rm: 0.065 arcsec [0.72σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.06 [1/17]

TCE 005390913-02, PDC Light Curves

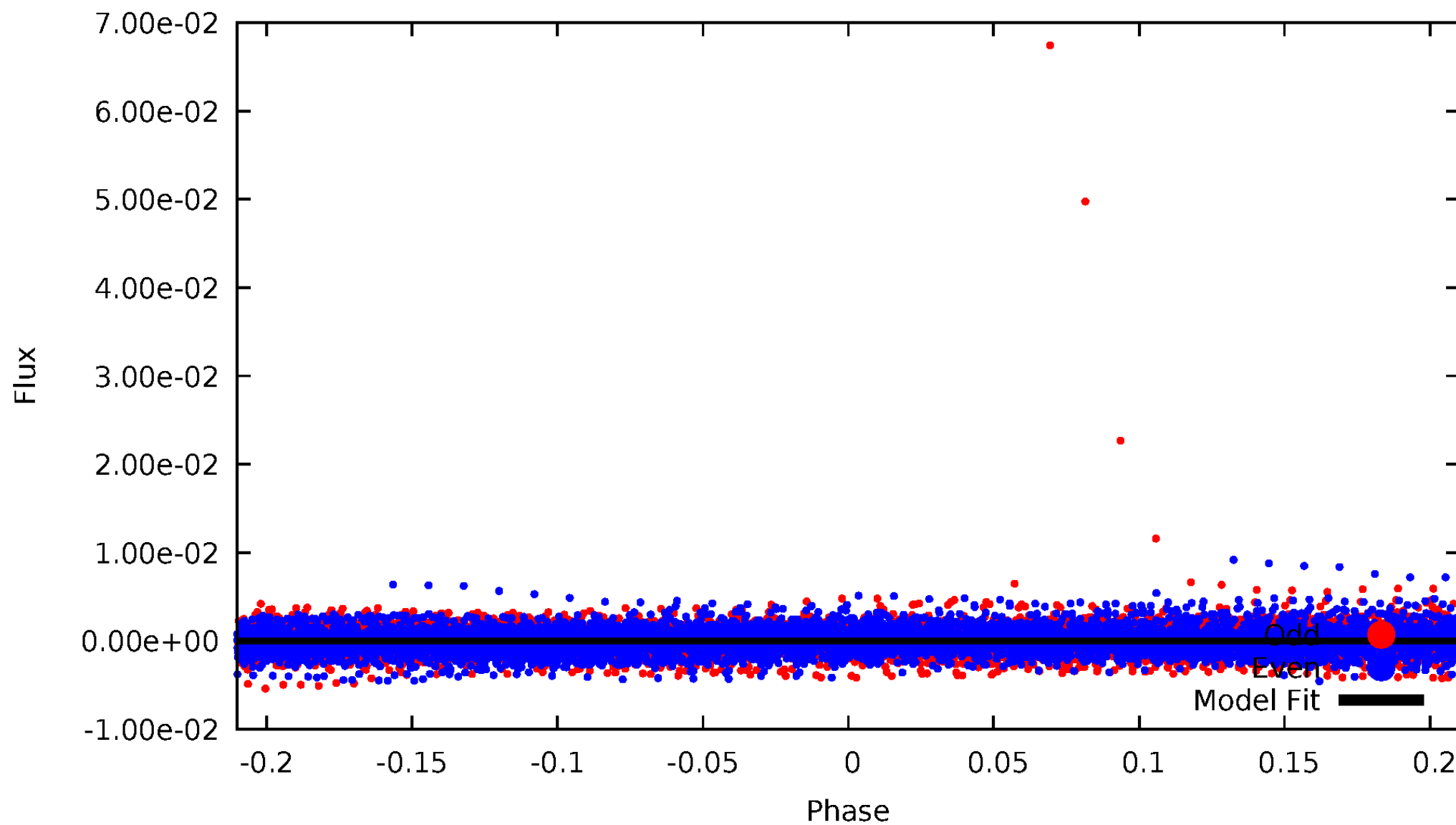


TCE 005390913-02



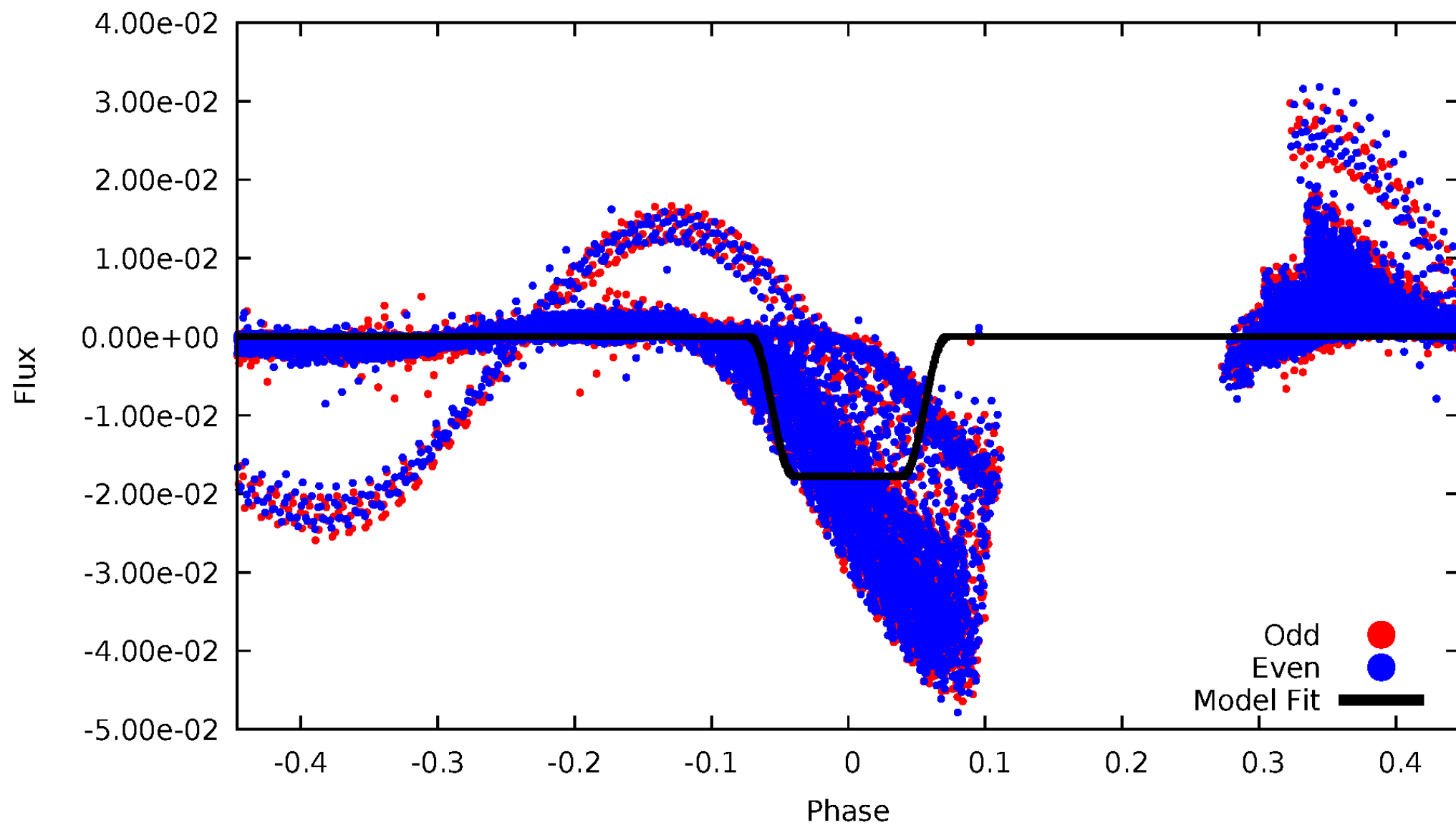
DV Odd/Even

TCE 005390913-02



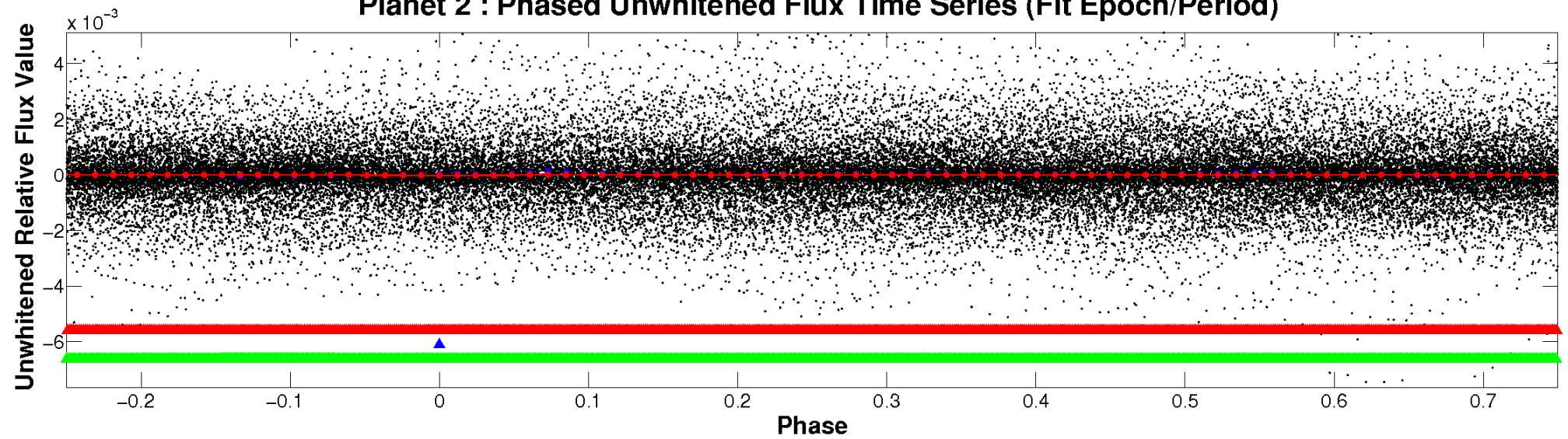
ALT Odd/Even

TCE 005390913-02

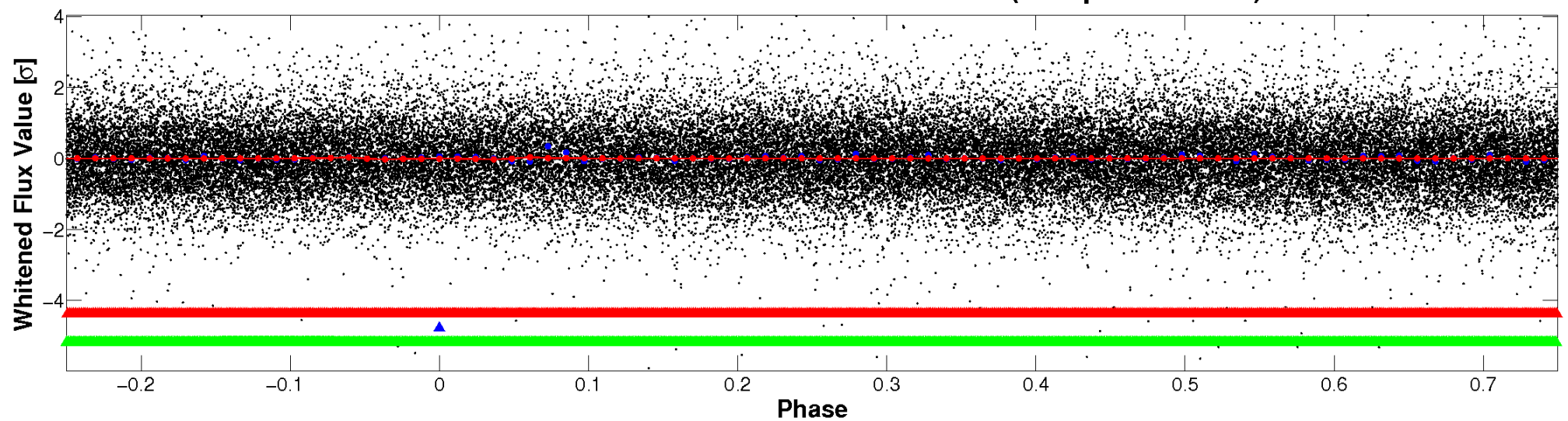


Non-Whitened Vs. Whitened Light Curve

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

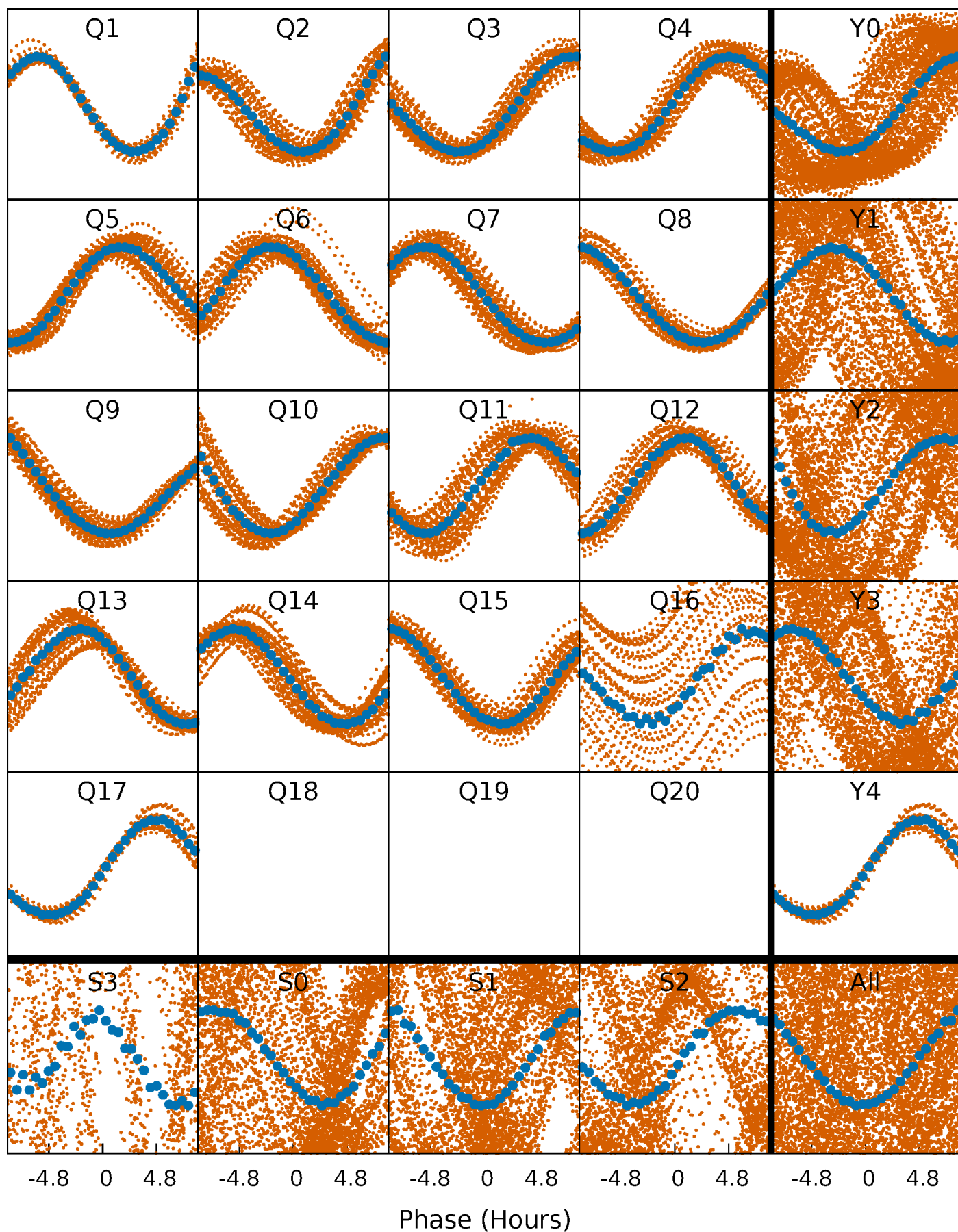


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



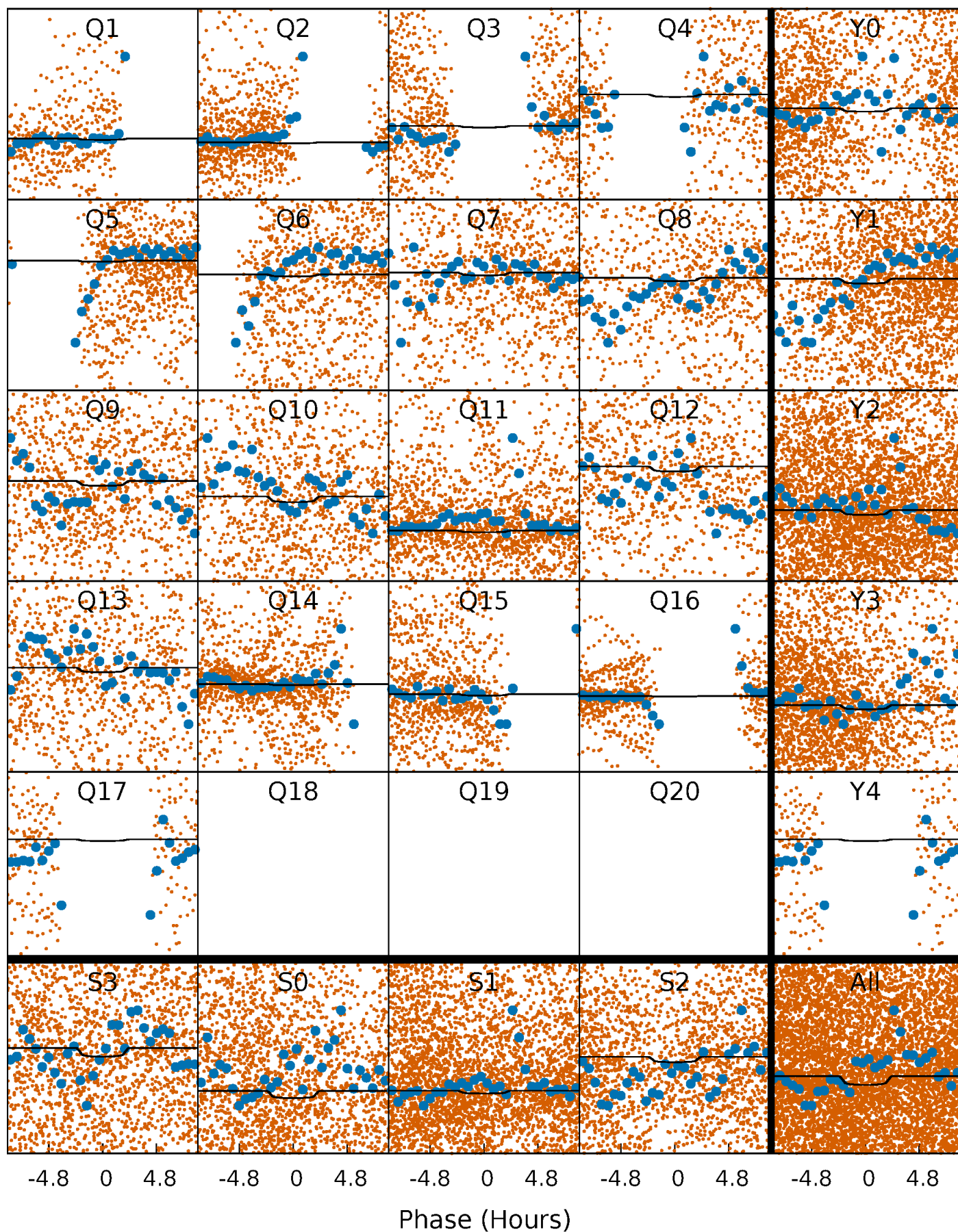
PDC Quarter-Phased Transit Curves

TCE 005390913-02 P= 1.682596 Days $T_0=133.428377$ (BKJD)



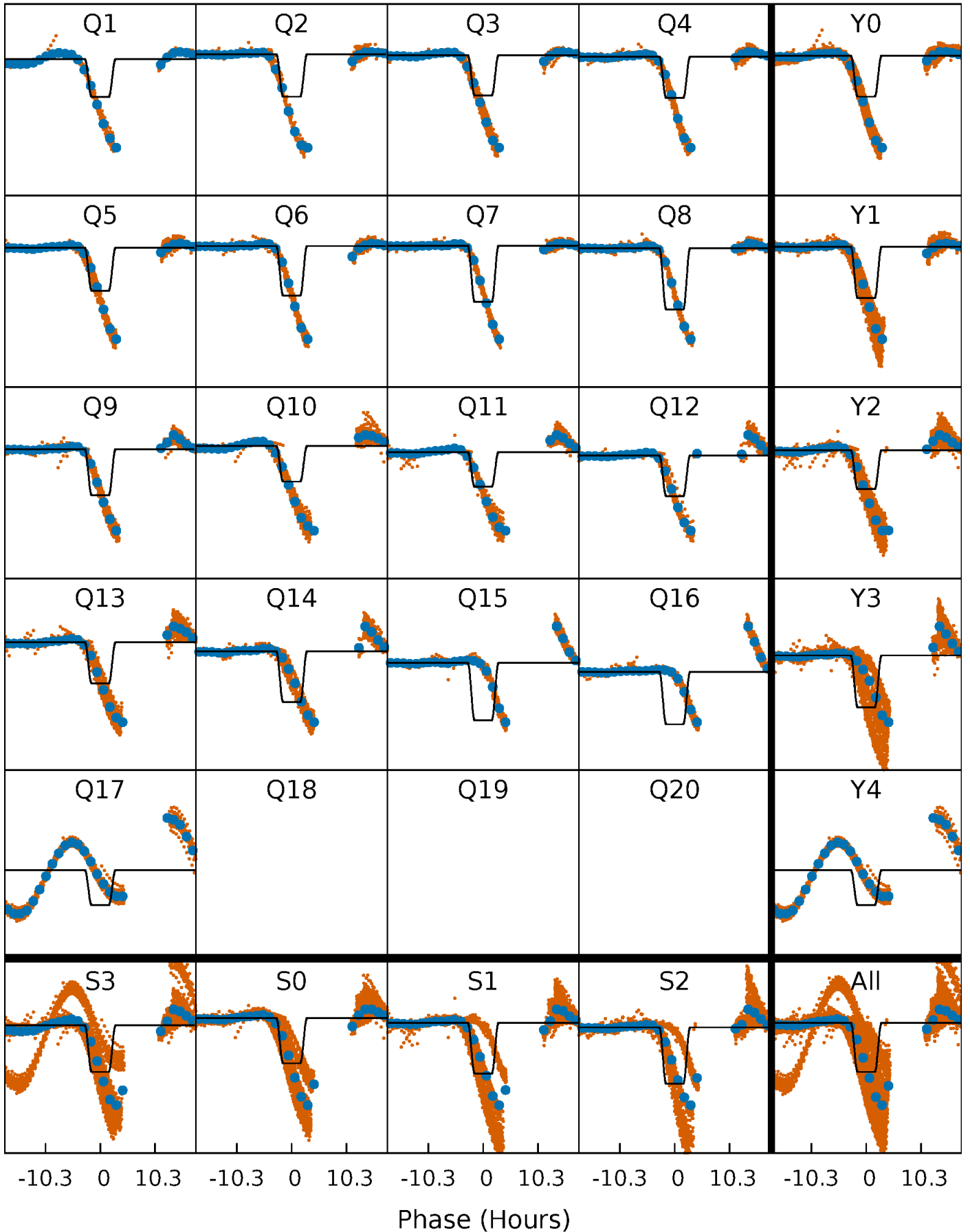
DV Quarter-Phased Transit Curves

TCE 005390913-02 P= 1.682596 Days $T_0=133.428377$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

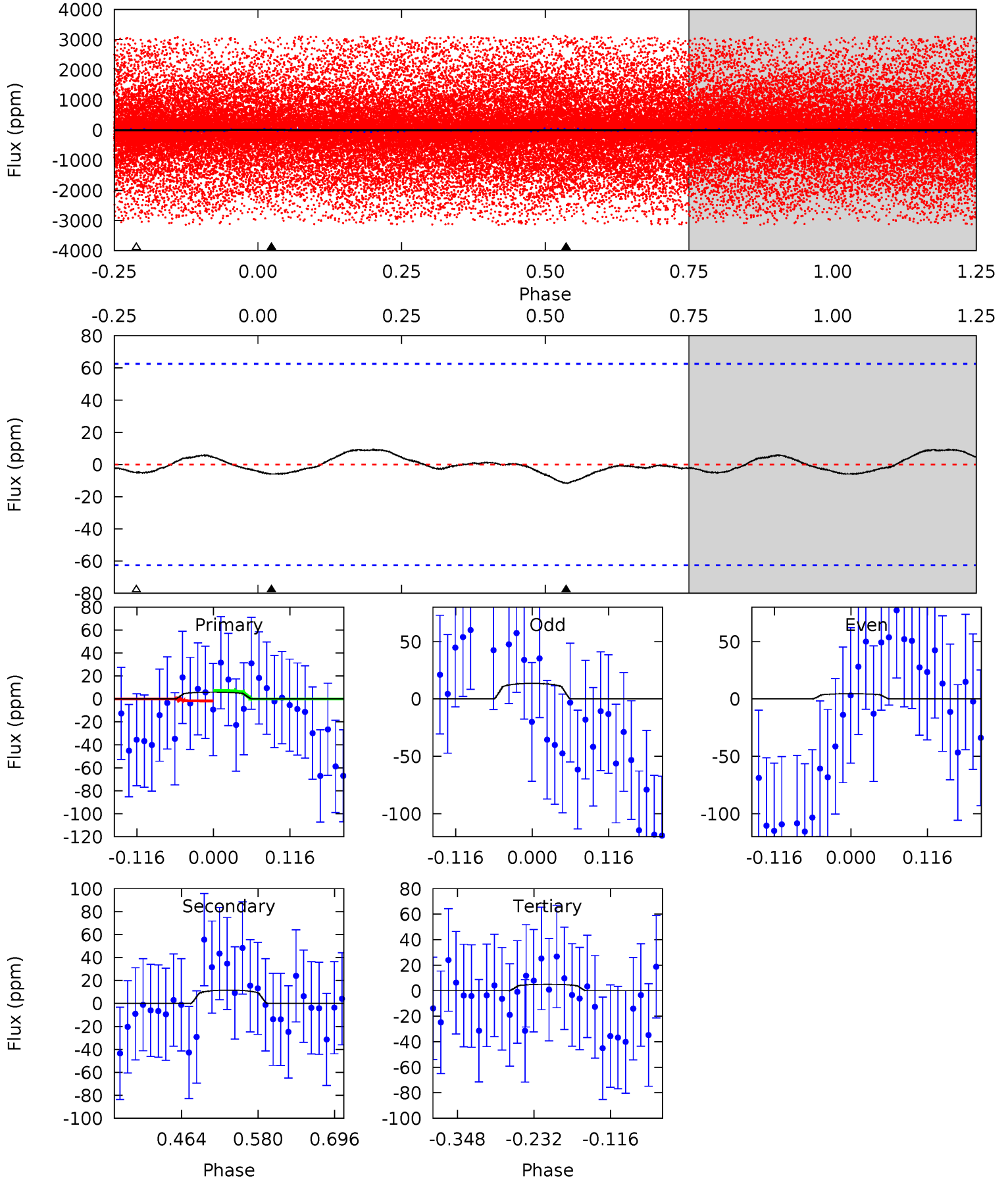
TCE 005390913-02 P= 1.680248 Days $T_0=133.405444$ (BKJD)



DV Model-Shift Uniqueness Test

005390913-02, P = 1.682596 Days, E = 130.063185 Days

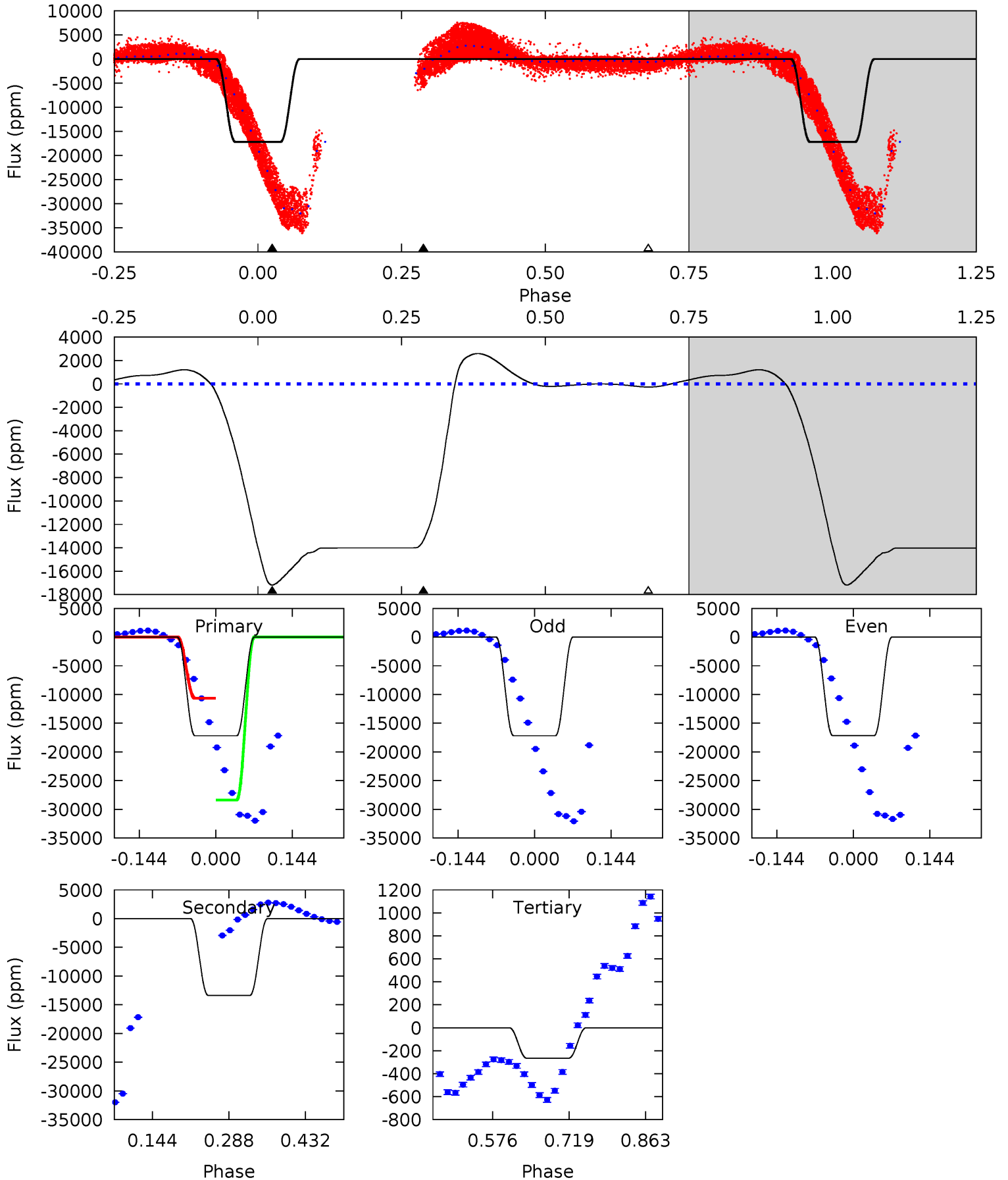
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.43	0.84	0.36	0	4.53	1.57	0.30	0.07	0.43	0.48	0.84	0.33	-1.12	0.44	0.21



Alt Model-Shift Uniqueness Test

005390913-02, P = 1.680248 Days, E = 130.044948 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1391	1081	21.5	0	4.49	1.46	37.5	1369	1391	1060	1081	1.29	0.93	0.13	0



Stellar Parameters For KIC 005390913

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6423^{+193}_{-193}	$4.121^{+0.434}_{-0.186}$	$-1.720^{+0.300}_{-0.150}$	$1.246^{+0.369}_{-0.451}$	$0.747^{+0.078}_{-0.022}$	$0.544^{+1.723}_{-0.301}$
	+3%/-3%	+11%/-5%	+17%/-9%	+30%/-36%	+10%/-3%	+317%/-55%
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 005390913-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 14	$0.61^{+0.38}_{-0.31}$	2720^{+254}_{-306}	5135^{+2715}_{-8885}	$9.244^{+37.168}_{-10.612}$
Alt.	-13360 ± 12	$17.64^{+3.37}_{-3.56}$	2739^{+260}_{-302}	5968^{+180}_{-181}	15^{+9}_{-4}

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

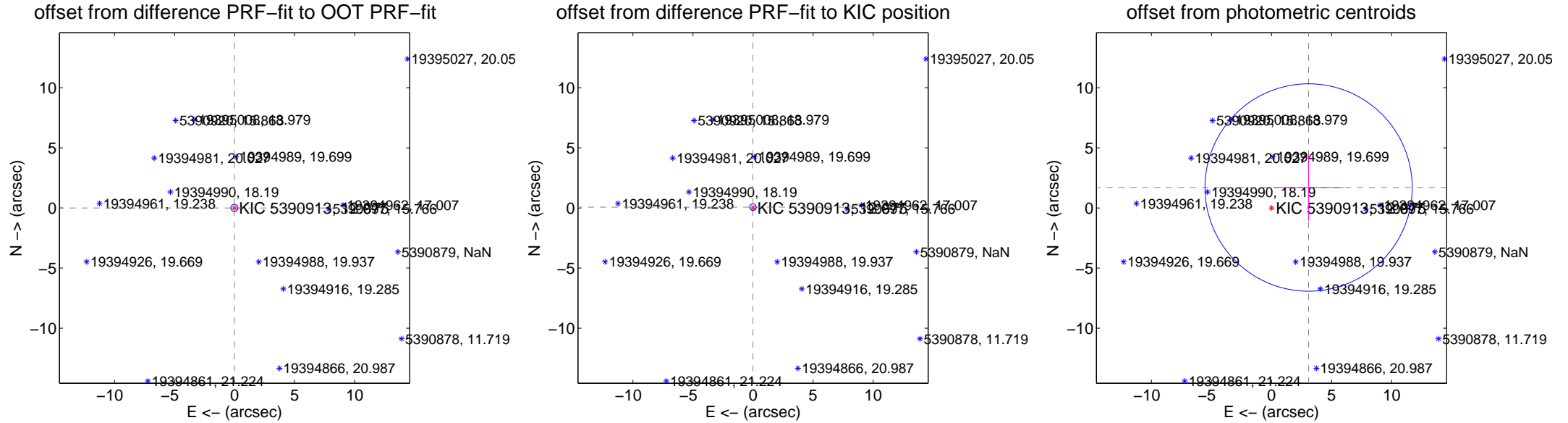
DV Centroid Data

Supplemental centroid analysis for 005390913-02. Kepler magnitude: 12.07. Transit SNR 1.85

There are 11 quarters with good PRF difference image offsets

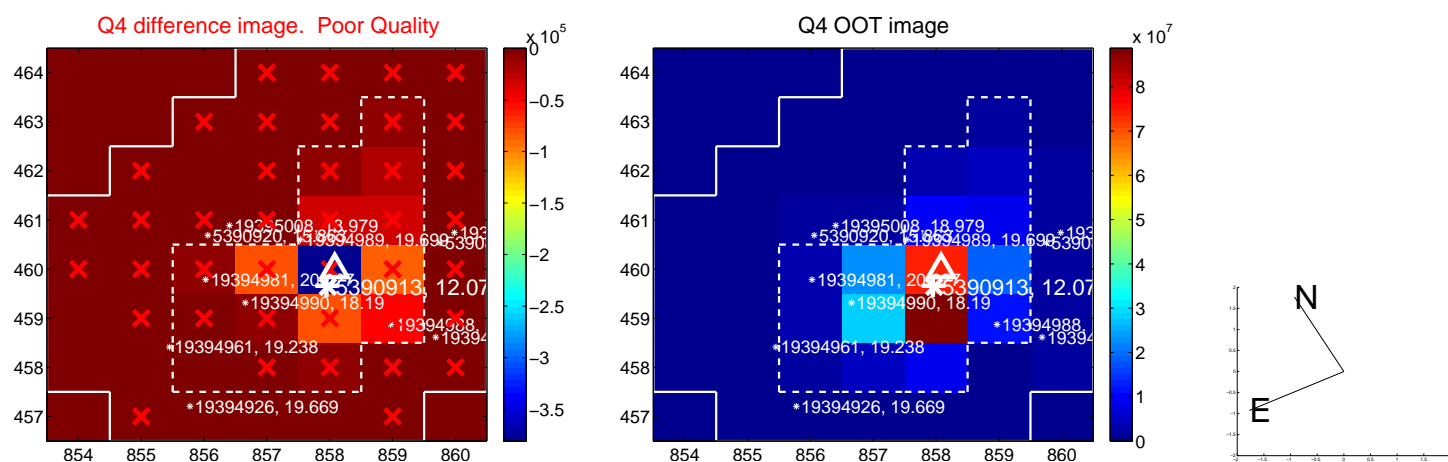
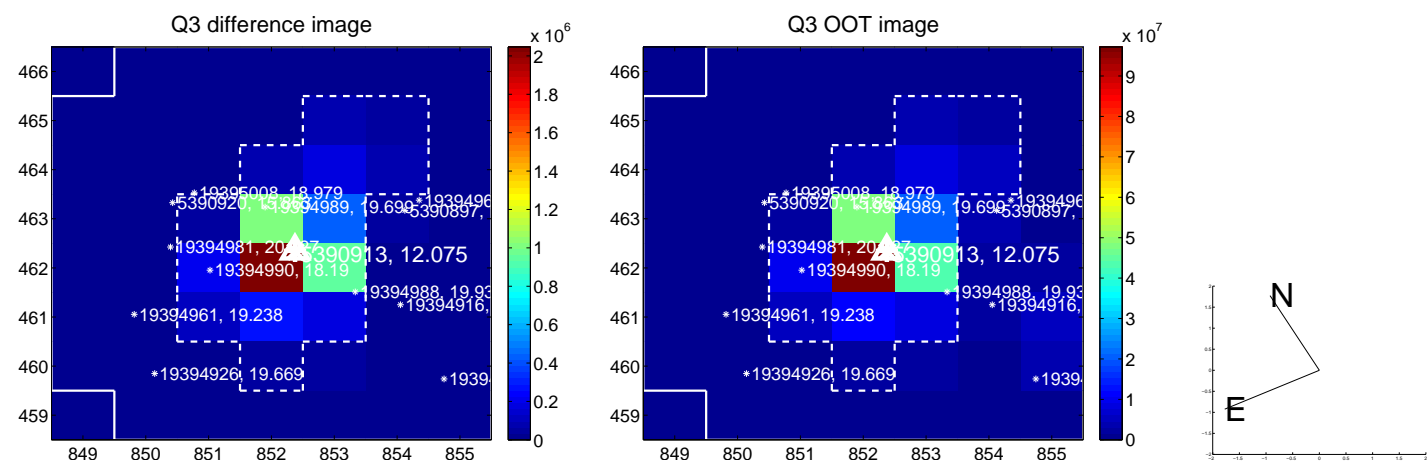
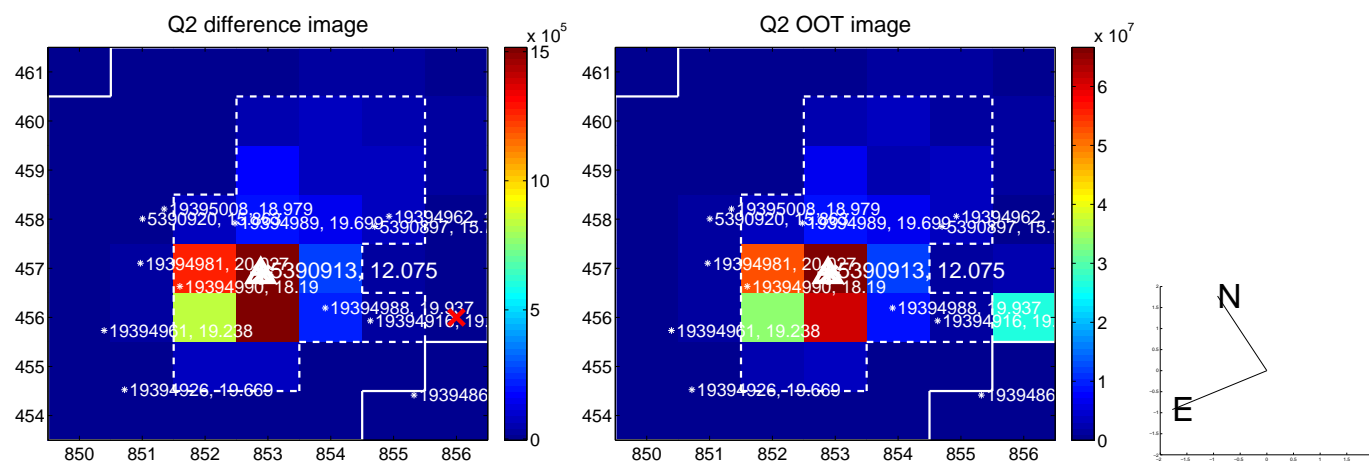
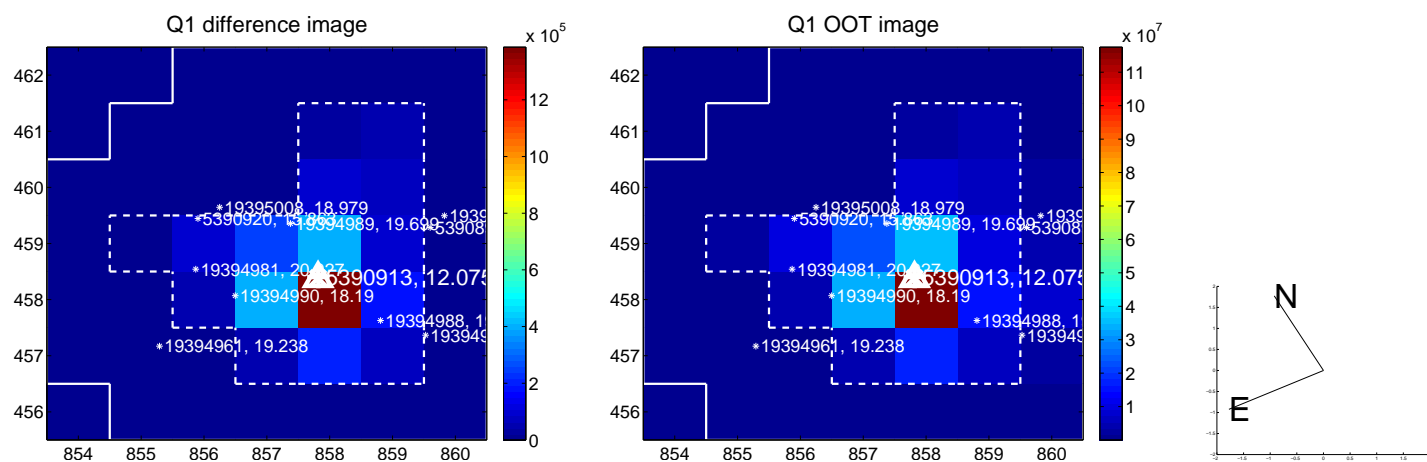
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.100	0.14	0.014 ± 0.098	-0.001 ± 0.091
PRF-fit source offset from KIC position	0.065 ± 0.091	0.72	0.009 ± 0.102	0.064 ± 0.098
photometric centroid source offset	3.52 ± 2.87	1.23	-3.08 ± 2.91	1.70 ± 2.75

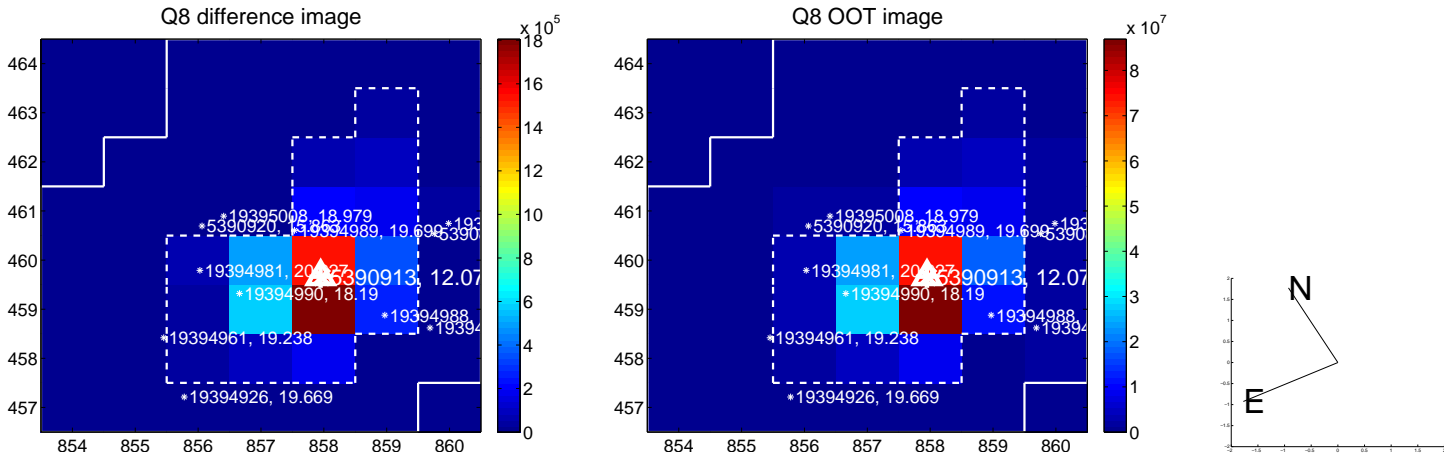
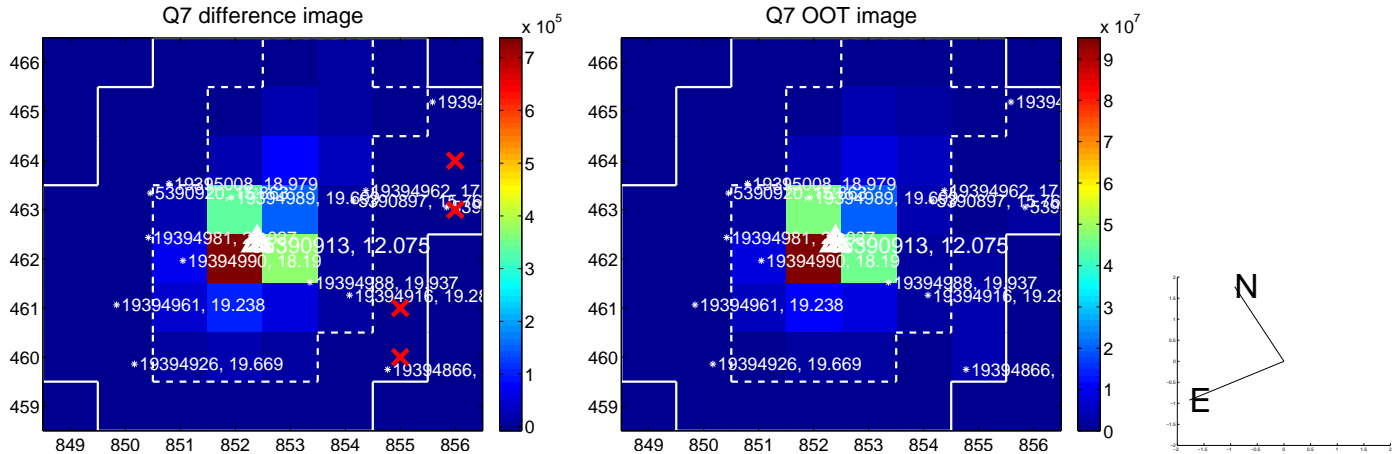
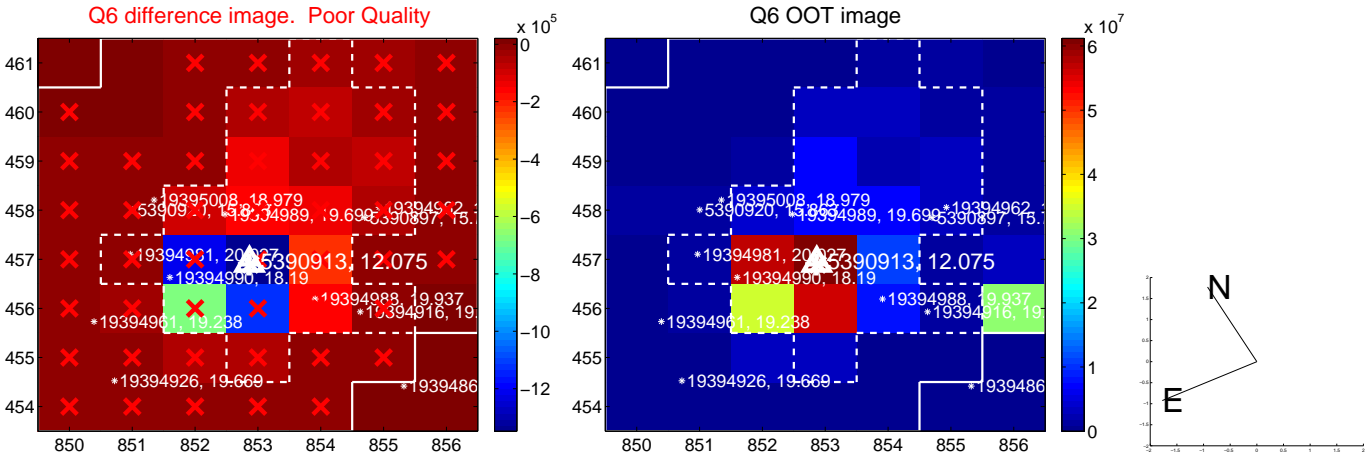
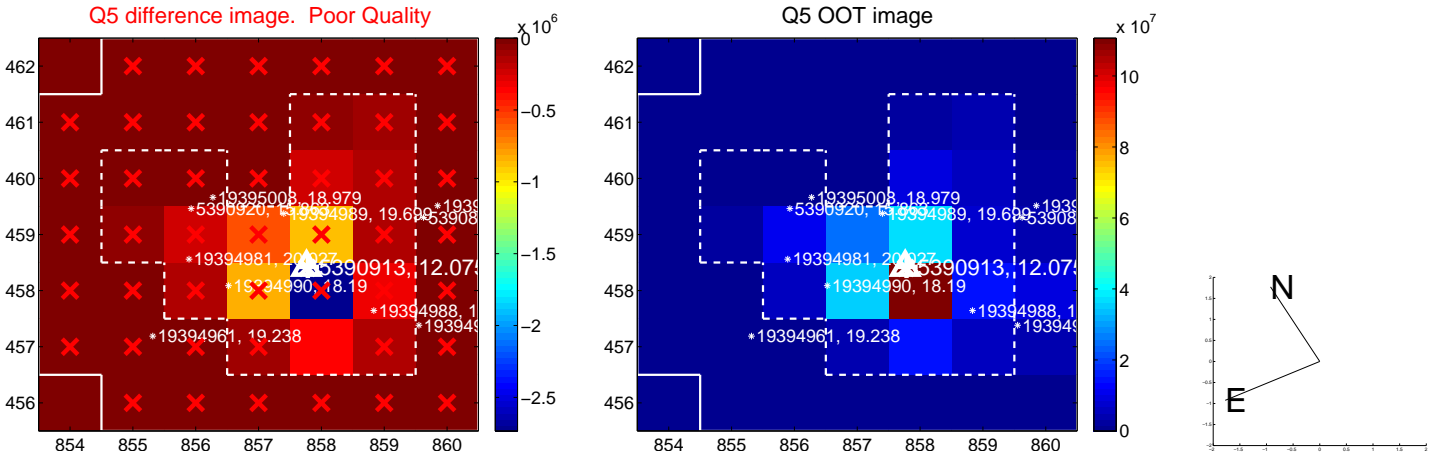


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

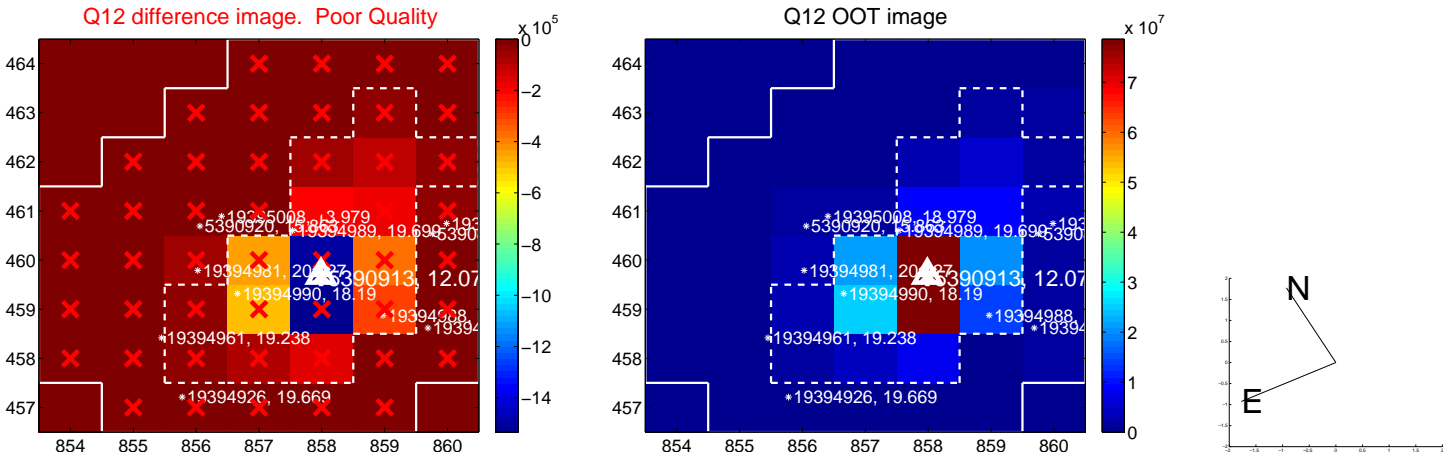
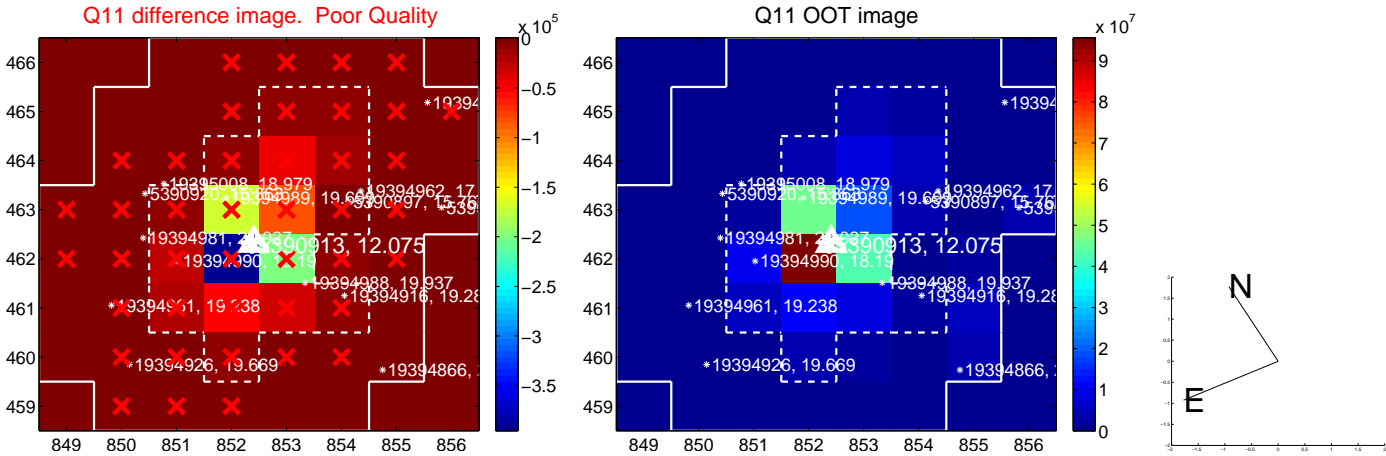
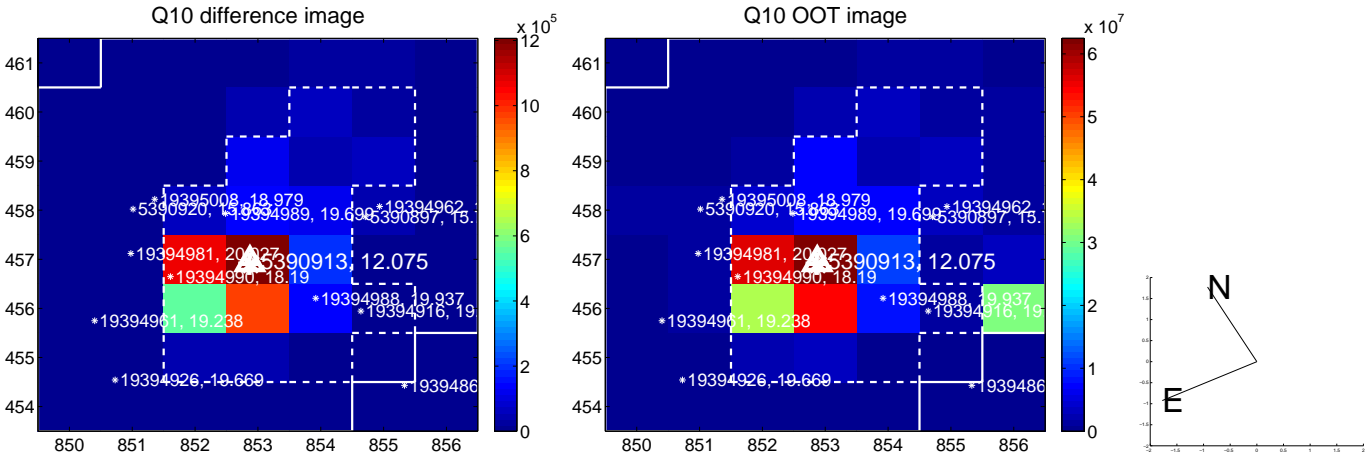
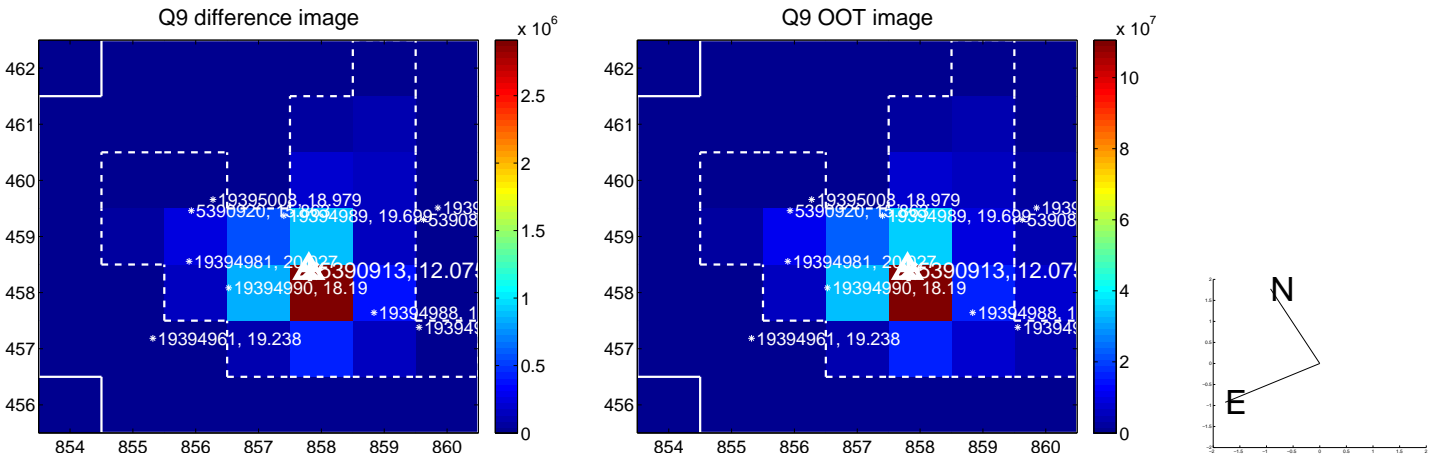
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



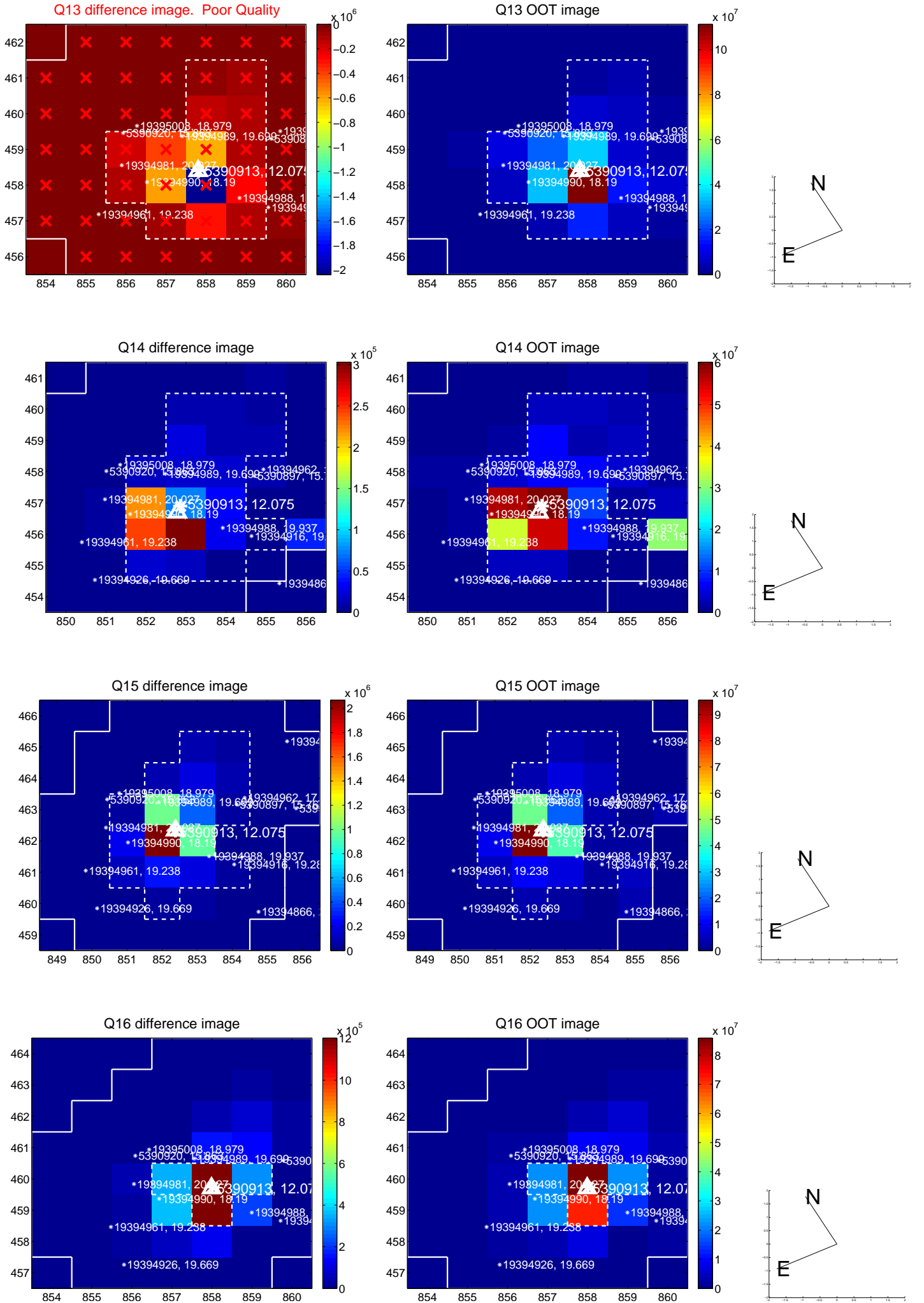
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



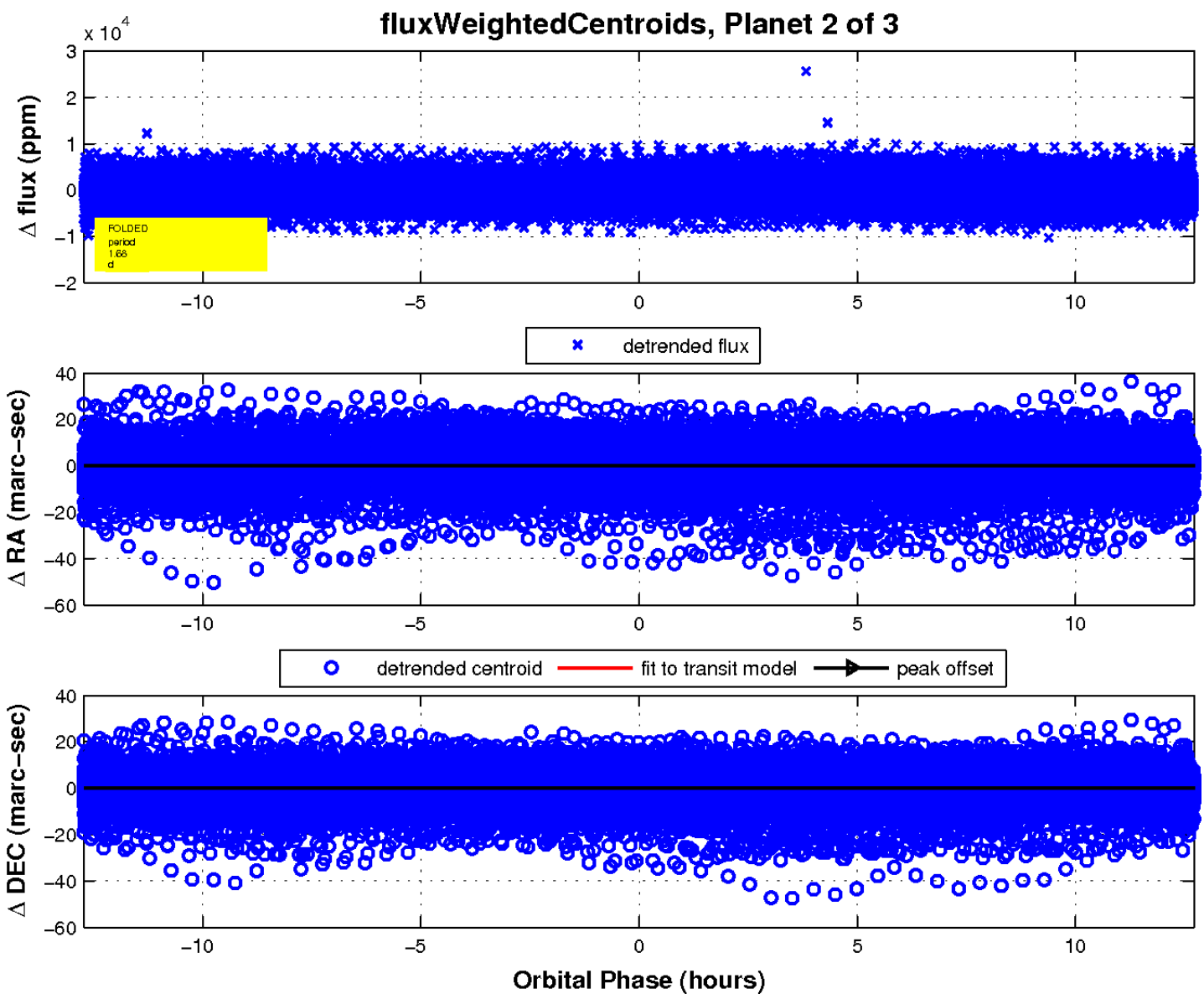
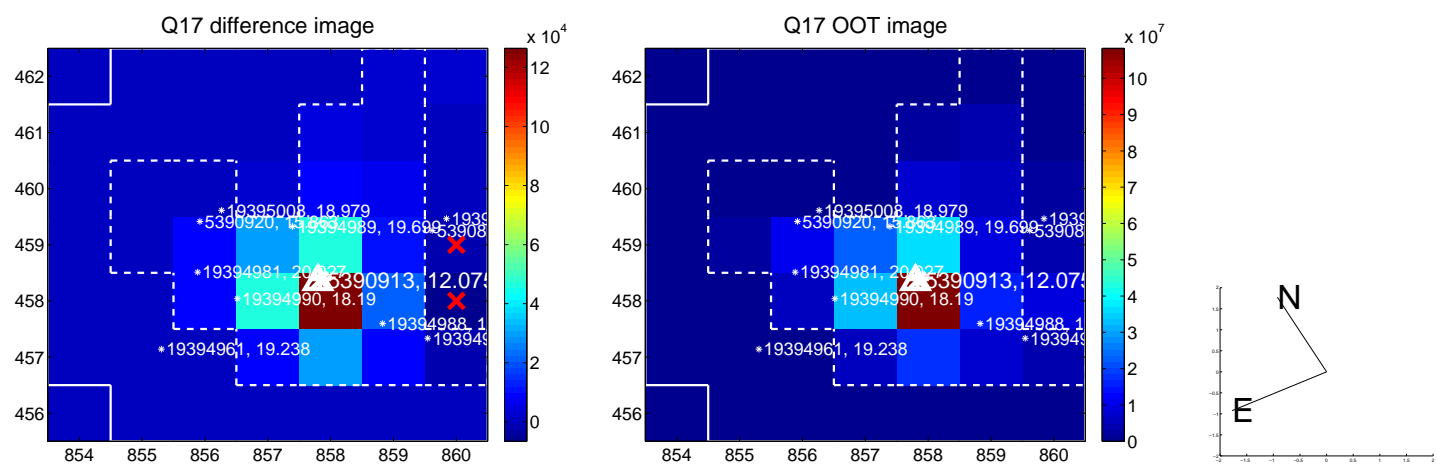
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



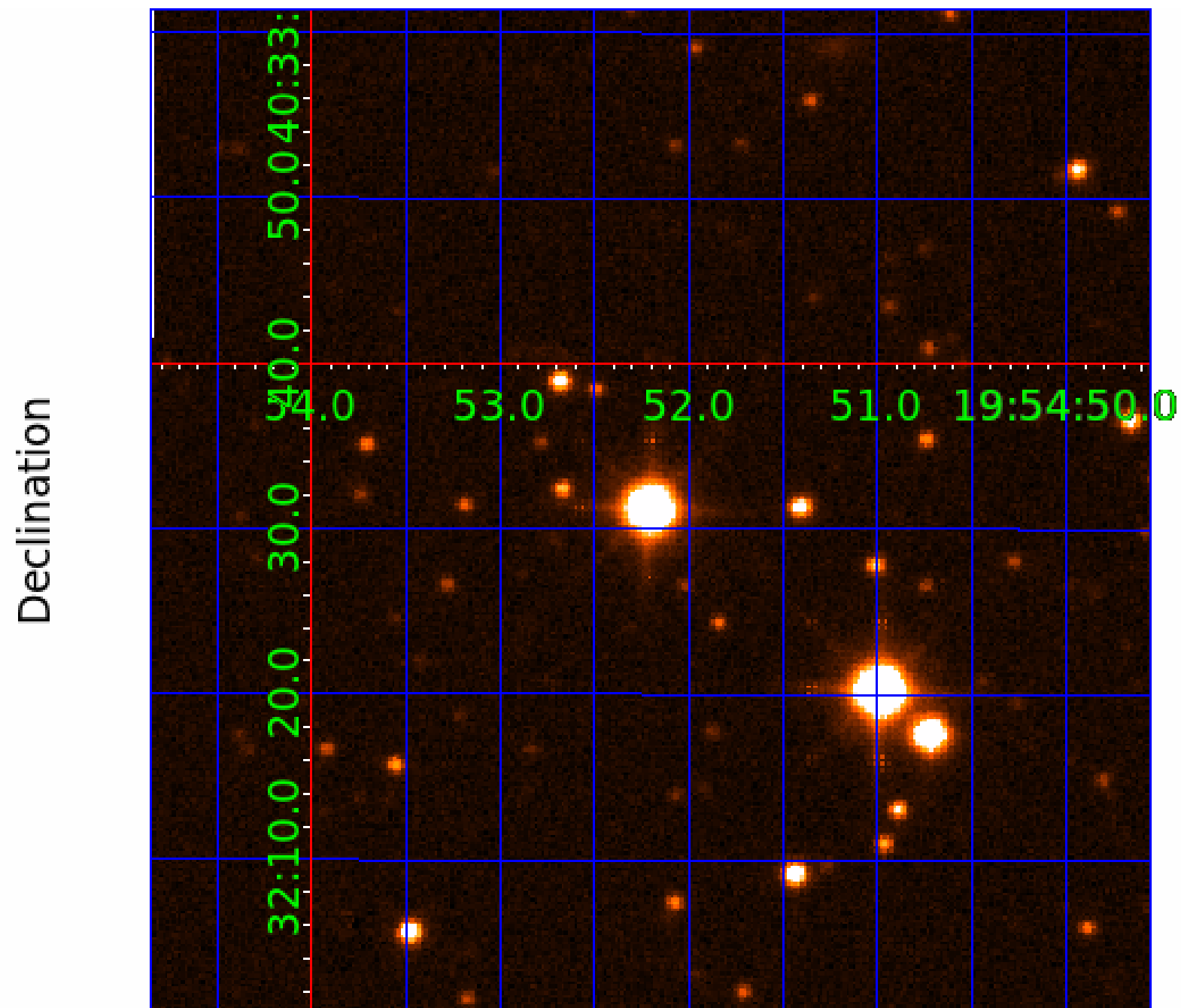
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005390913

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})
005390913-01	OBS	No	1.680347	132.005565	116.3	2.676	27.1	14.4	1.25	6423	1.57	3752.55
005390913-02	OBS	No	1.682596	133.428377	19.9	4.243	15.7	1.8	1.25	6423	0.65	3745.86
005390913-03	OBS	No	1.680509	133.308275	67.4	20.166	11.4	2.0	1.25	6423	1.03	3752.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005390913-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL
005390913-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
005390913-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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.

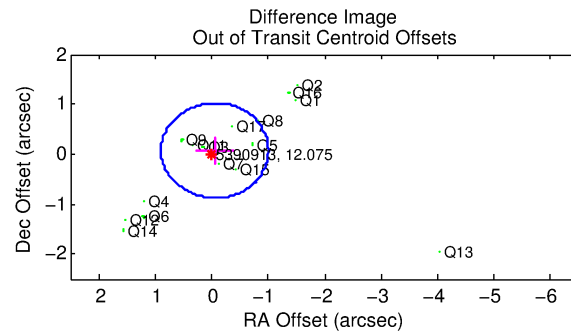
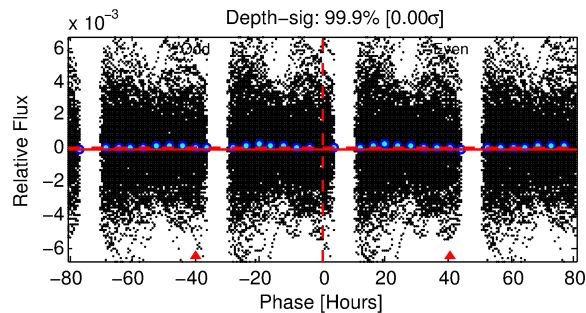
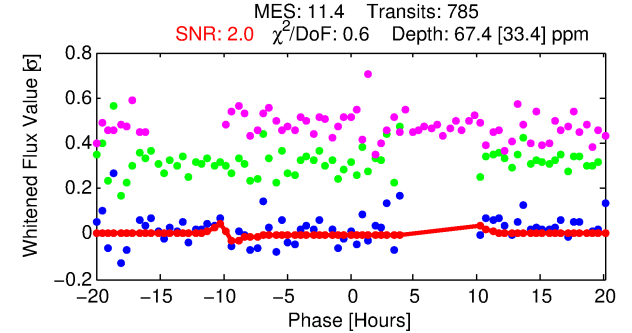
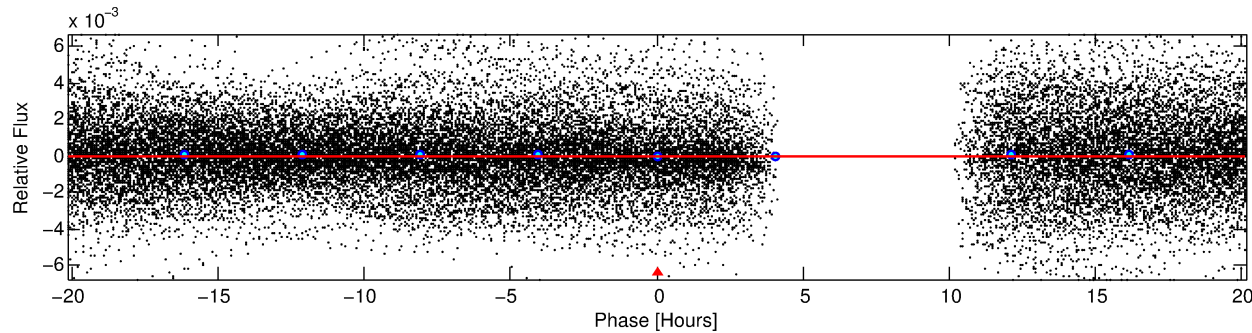
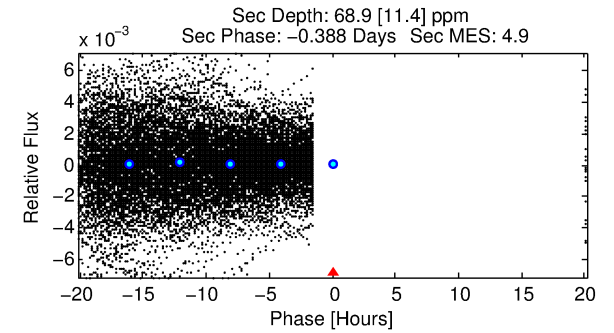
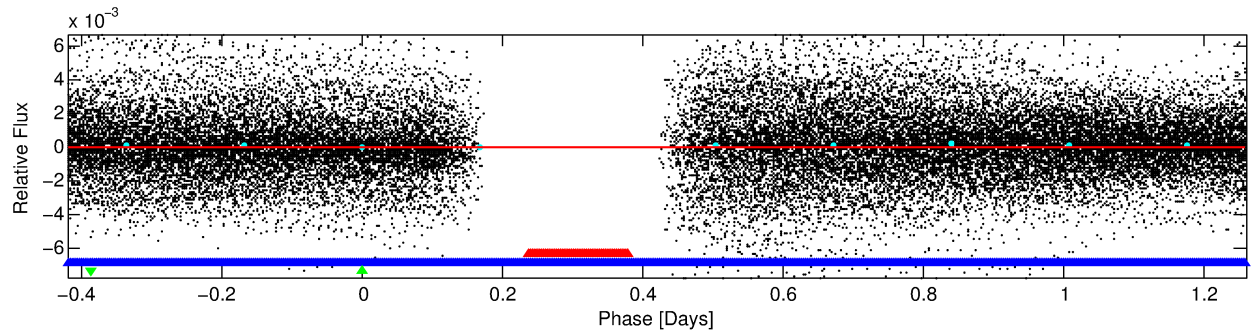
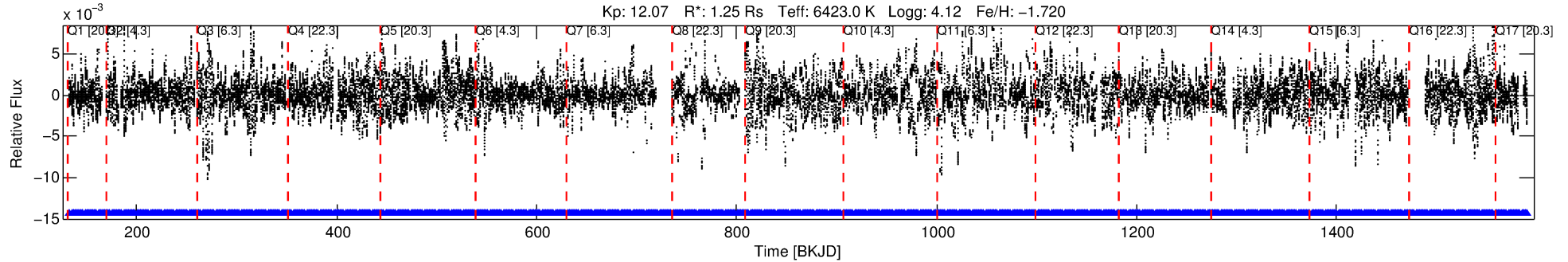
Ephemeris Match Information For 005390913-03

No Significant Match Found

DV One-Page Summary

KIC: 5390913 Candidate: 3 of 3 Period: 1.681 d
KOI: K05156 Corr: No Ephemeris Match

Kp: 12.07 R*: 1.25 Rs Teff: 6423.0 K Logg: 4.12 Fe/H: -1.720



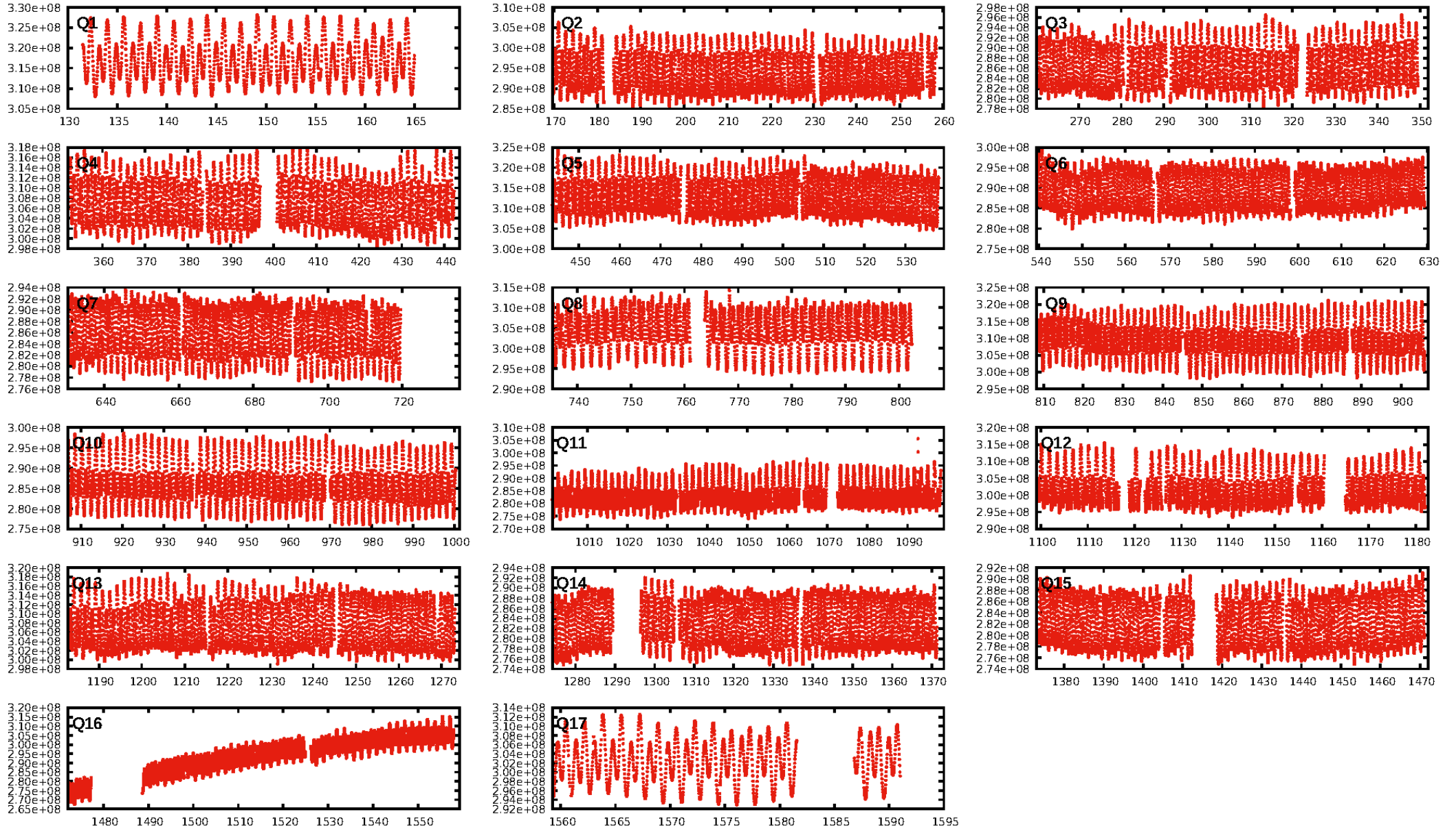
DV Fit Results:

Period = 1.68051 [0.00005] d
Epoch = 133.3083 [0.0143] BKJD
Rp/R* = 0.0076 [0.0020]
a/R* = 1.00 [0.00]
b = 0.05 [12.30]
Seff = 3752.06 [2696.57]
Teq = 1996 [359] K
Rp = 1.03 [0.46] Re
a = 0.0251 [0.0103] AU
Ag = 22.57 [20.28] [1.06σ]
Teffp = 6725 [951] K [4.65σ]

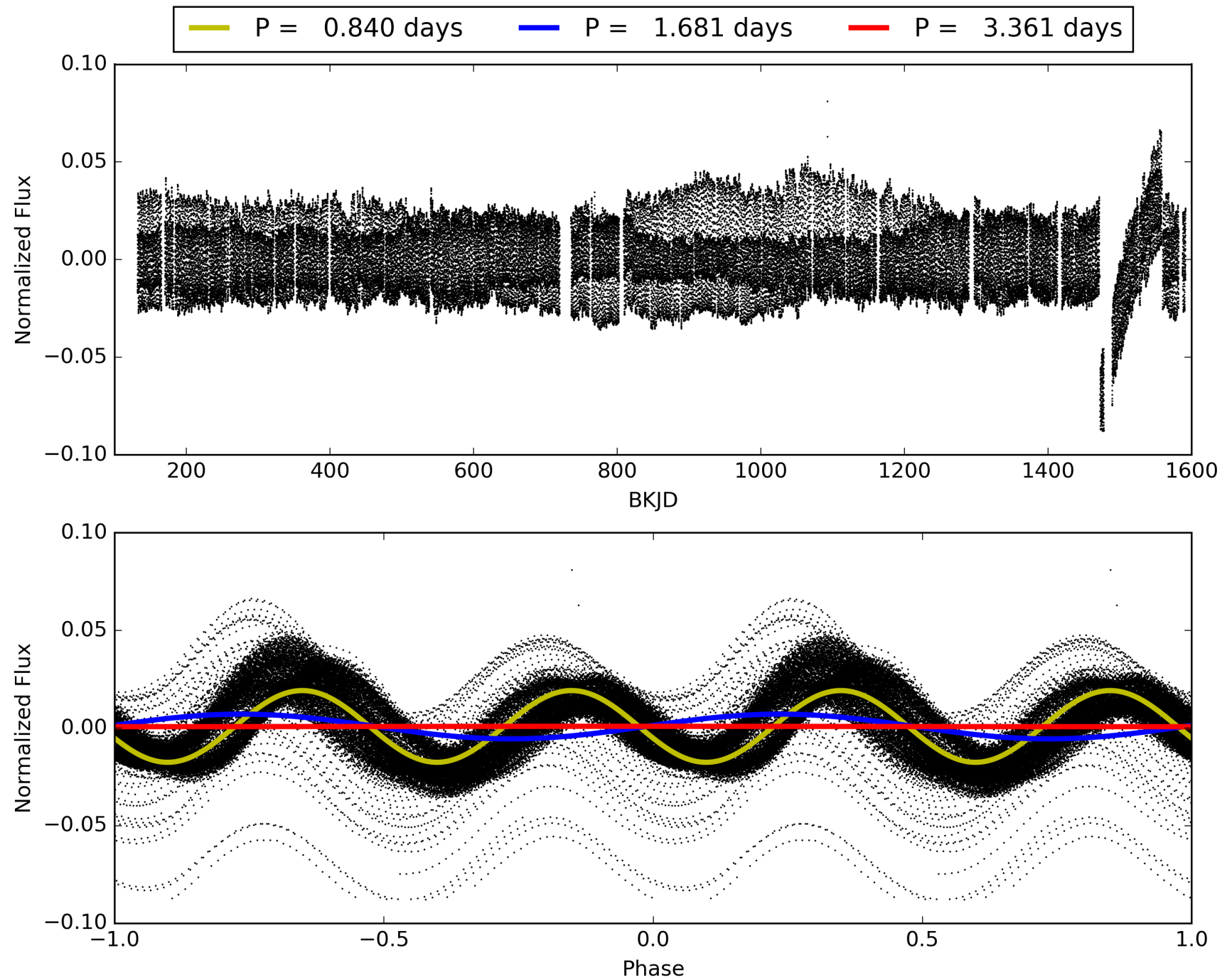
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [748/748]
GhostDiagnostic-chr: -0.355
Centroid-sig: 0.0%
Centroid-so: 8.374 arcsec [21.58σ]
OotOffset-rm: 0.093 arcsec [0.29σ]
KicOffset-rm: 0.135 arcsec [0.46σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 005390913-03, PDC Light Curves

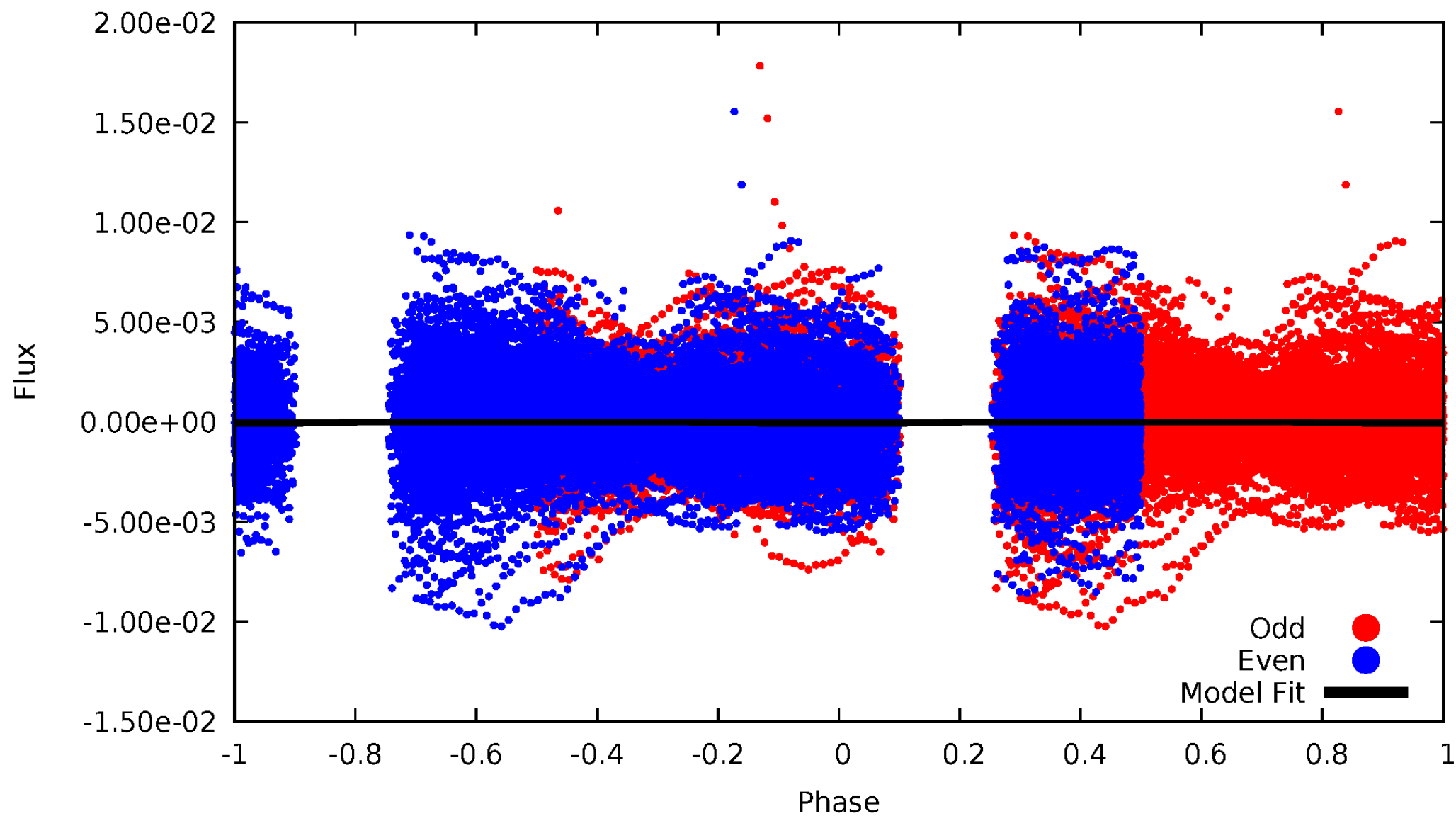


TCE 005390913-03



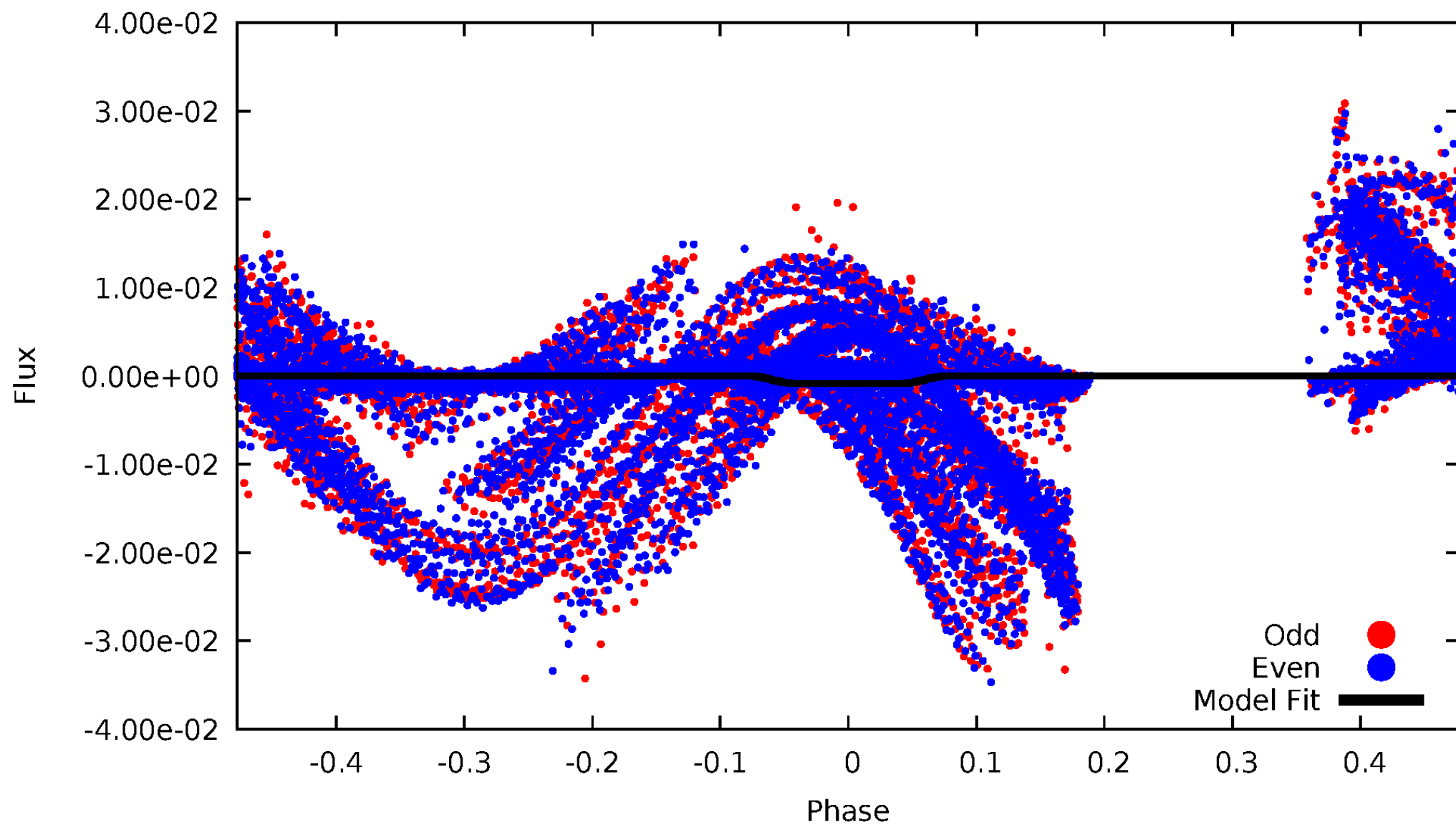
DV Odd/Even

TCE 005390913-03

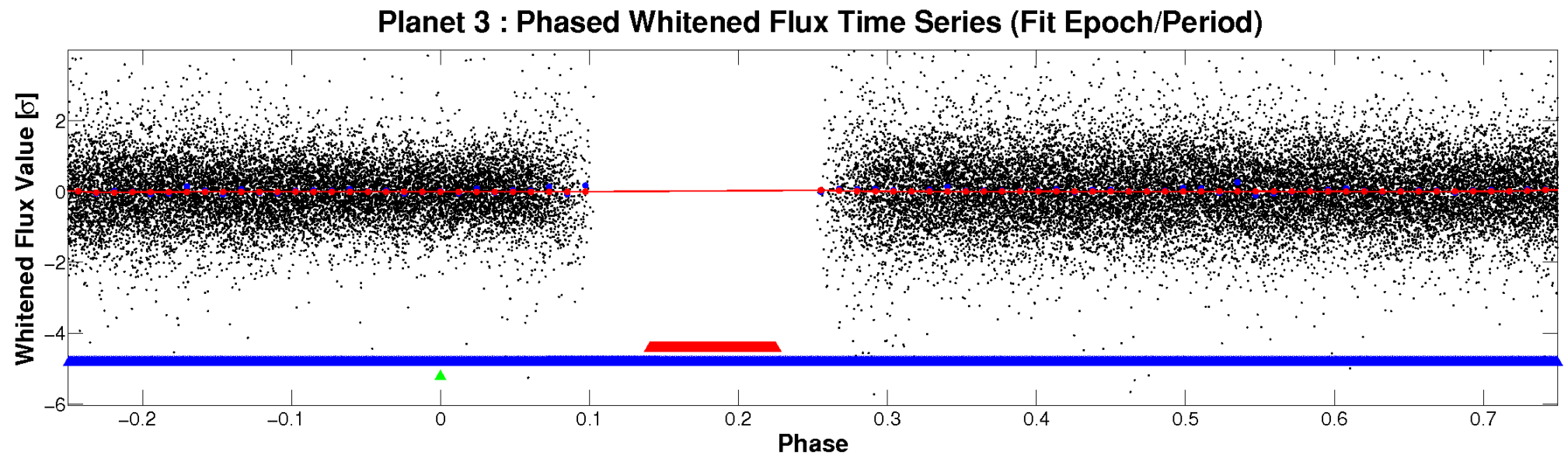
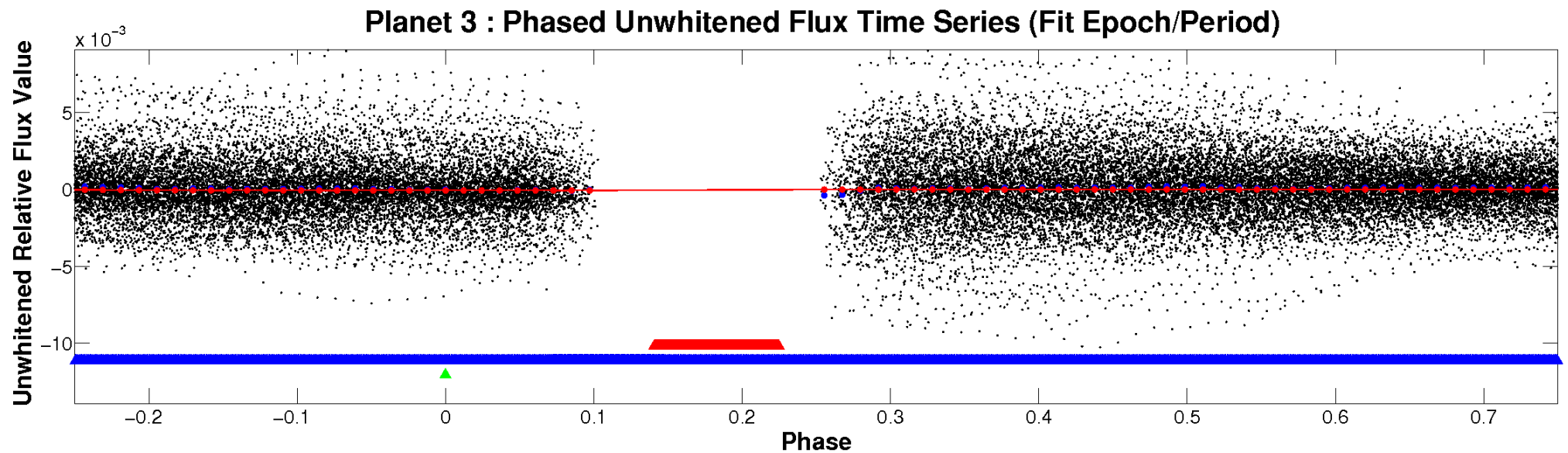


ALT Odd/Even

TCE 005390913-03

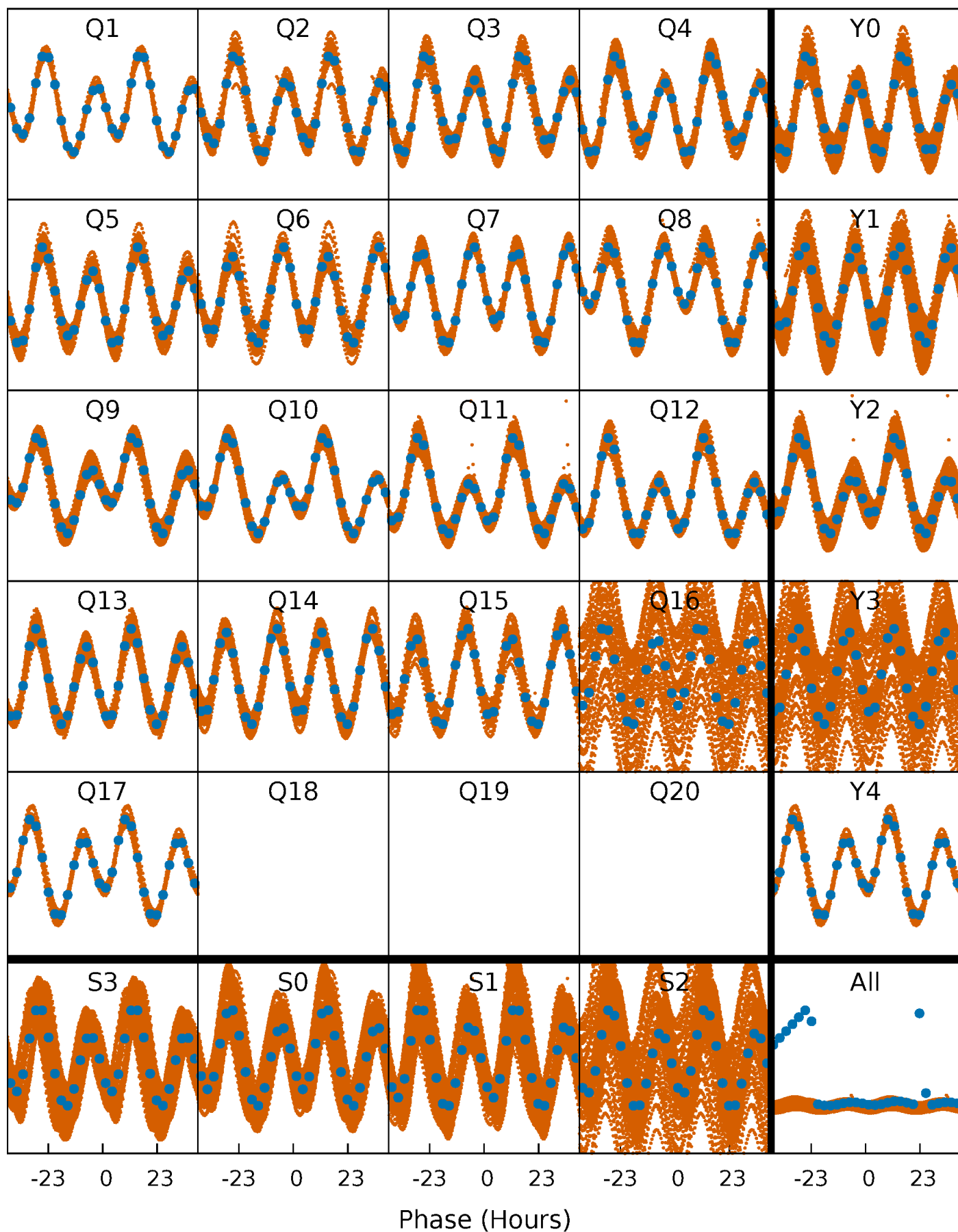


Non-Whitened Vs. Whitened Light Curve



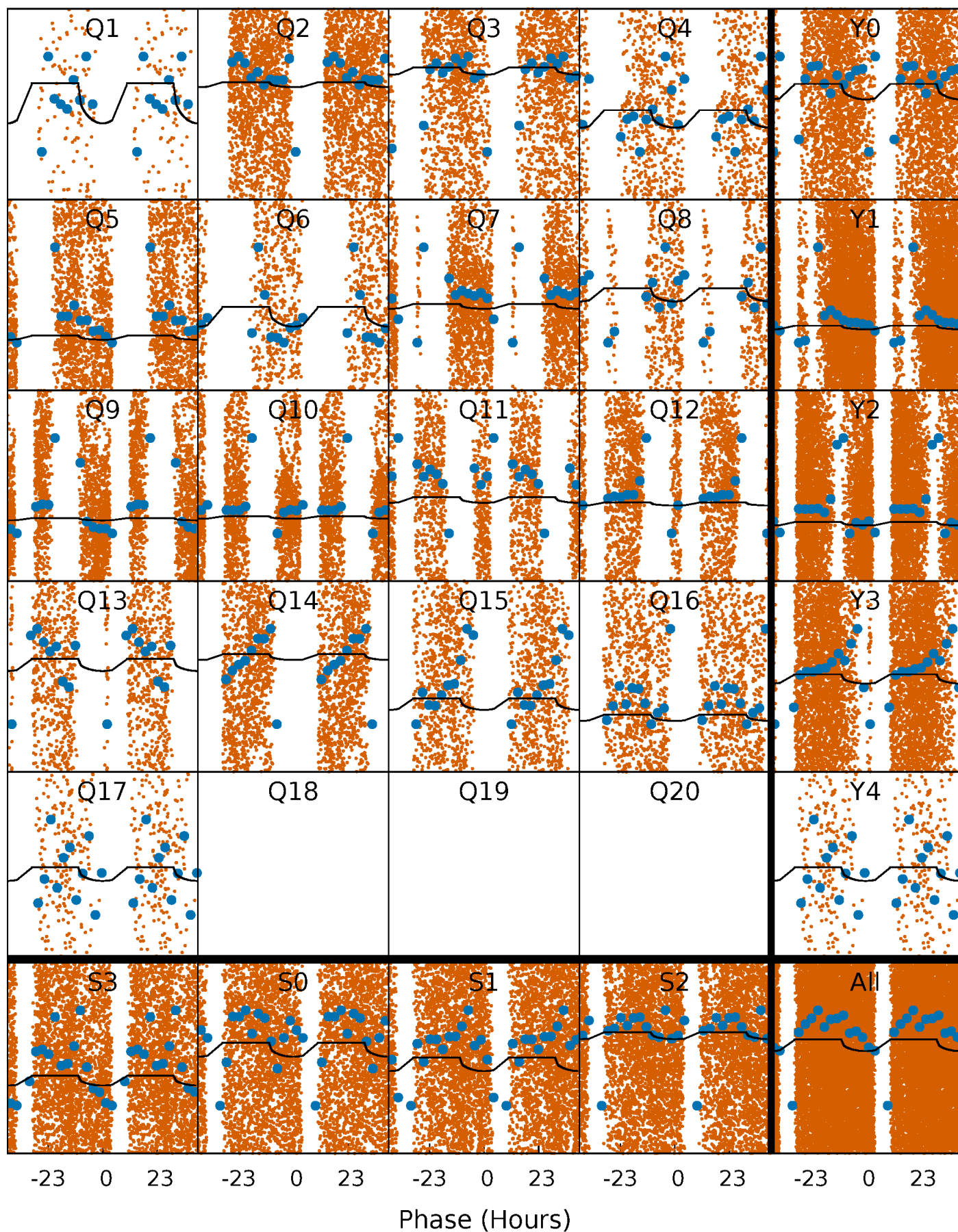
PDC Quarter-Phased Transit Curves

TCE 005390913-03 P= 1.680509 Days $T_0=133.308275$ (BKJD)



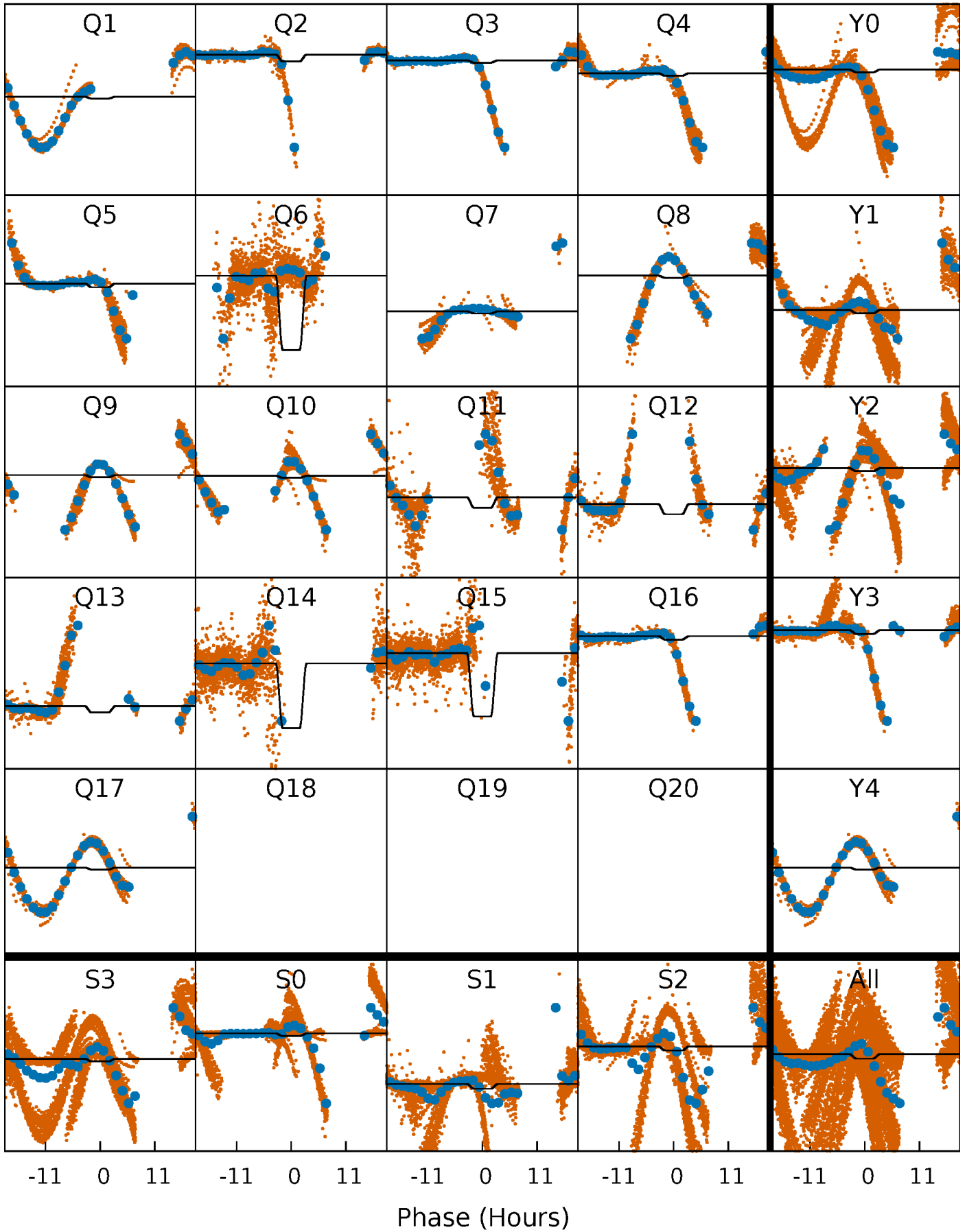
DV Quarter-Phased Transit Curves

TCE 005390913-03 P= 1.680509 Days $T_0=133.308275$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

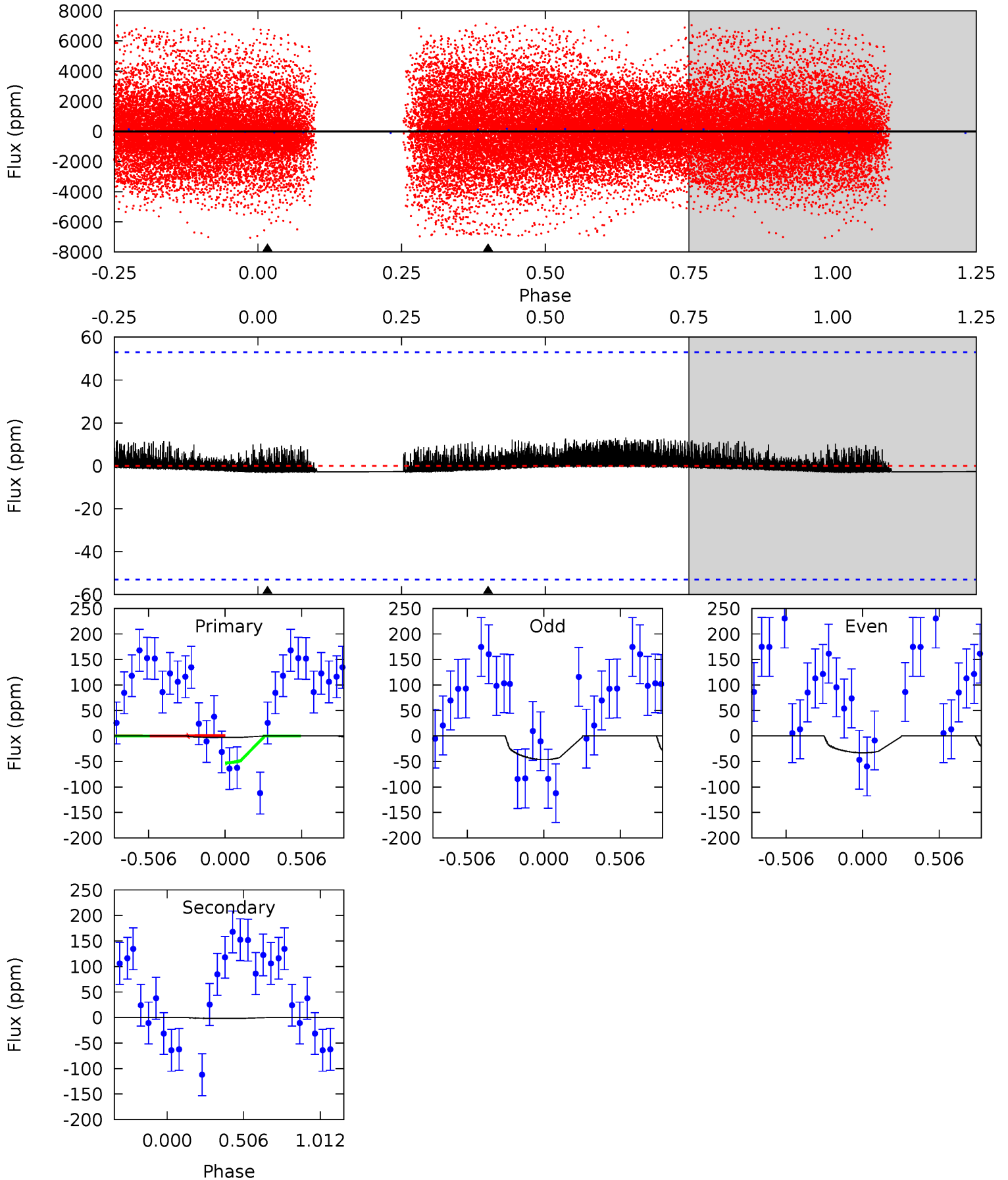
TCE 005390913-03 P= 1.680235 Days $T_0=133.262110$ (BKJD)



DV Model-Shift Uniqueness Test

005390913-03, P = 1.680509 Days, E = 131.627766 Days

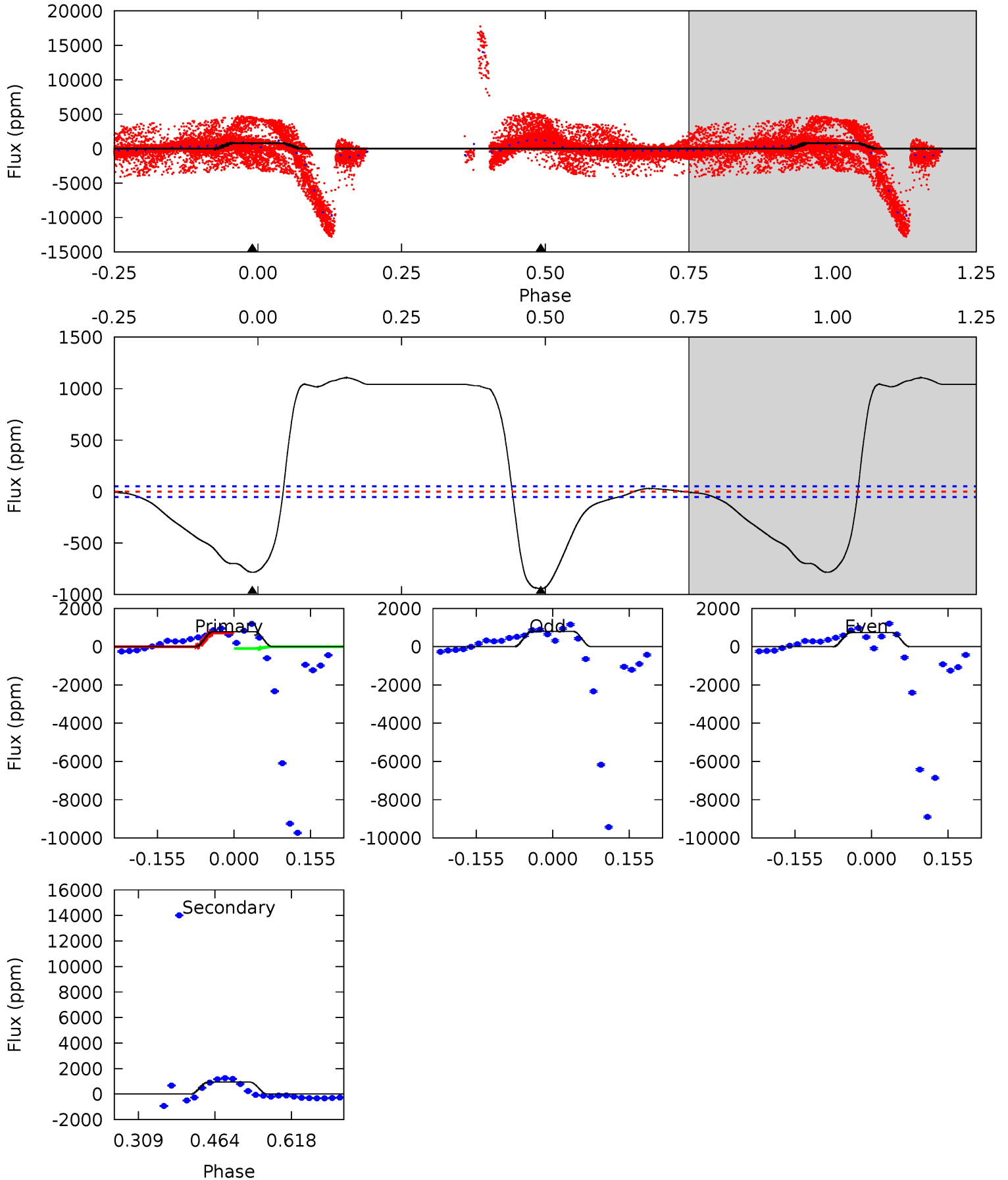
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.24	0.13	0	0	4.21	0.66	0.15	0.24	0.24	0.13	0.13	0.47	0.08	0.81	1.09



Alt Model-Shift Uniqueness Test

005390913-03, P = 1.680235 Days, E = 131.581875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.0	81.6	0	0	4.47	1.42	24.3	68.0	68.0	81.6	81.6	2.59	6.14	0.54	3.36



Stellar Parameters For KIC 005390913

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6423^{+193}_{-193}	$4.121^{+0.434}_{-0.186}$	$-1.720^{+0.300}_{-0.150}$	$1.246^{+0.369}_{-0.451}$	$0.747^{+0.078}_{-0.022}$	$0.544^{+1.723}_{-0.301}$
	+3%/-3%	+11%/-5%	+17%/-9%	+30%/-36%	+10%/-3%	+317%/-55%
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 005390913-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 13	$0.99^{+0.37}_{-0.33}$	2755^{+257}_{-309}	3314^{+1500}_{-7720}	$0.924^{+5.446}_{-4.219}$
Alt.	-941 ± 12	$3.83^{+0.77}_{-0.84}$	2729^{+258}_{-309}	6595^{+320}_{-306}	23^{+14}_{-7}

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

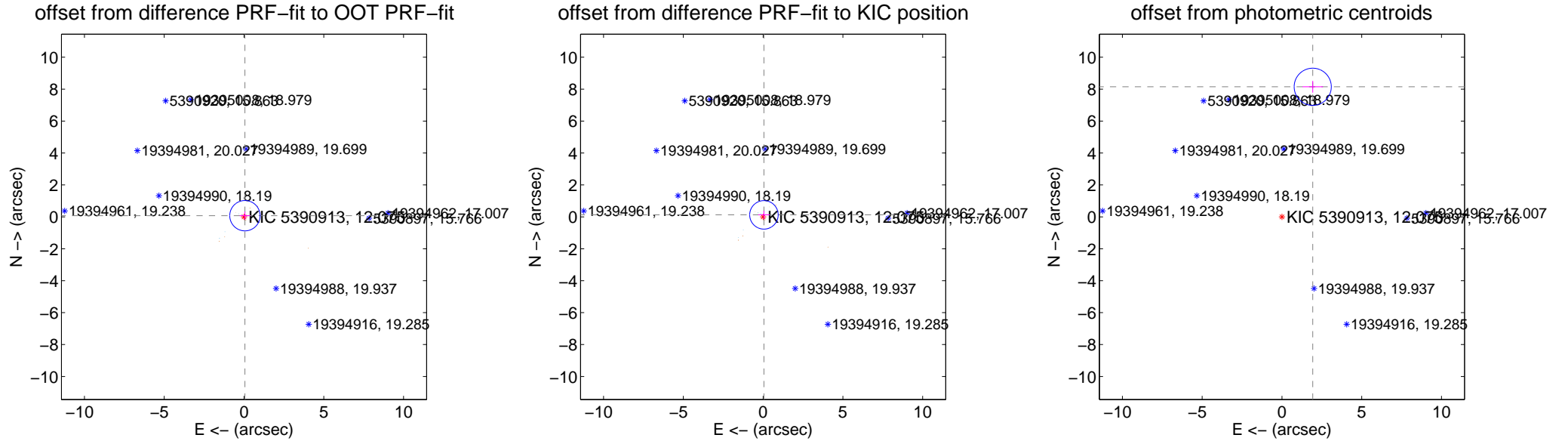
DV Centroid Data

Supplemental centroid analysis for 005390913-03. Kepler magnitude: 12.07. Transit SNR 1.96

There are 7 quarters with good PRF difference image offsets

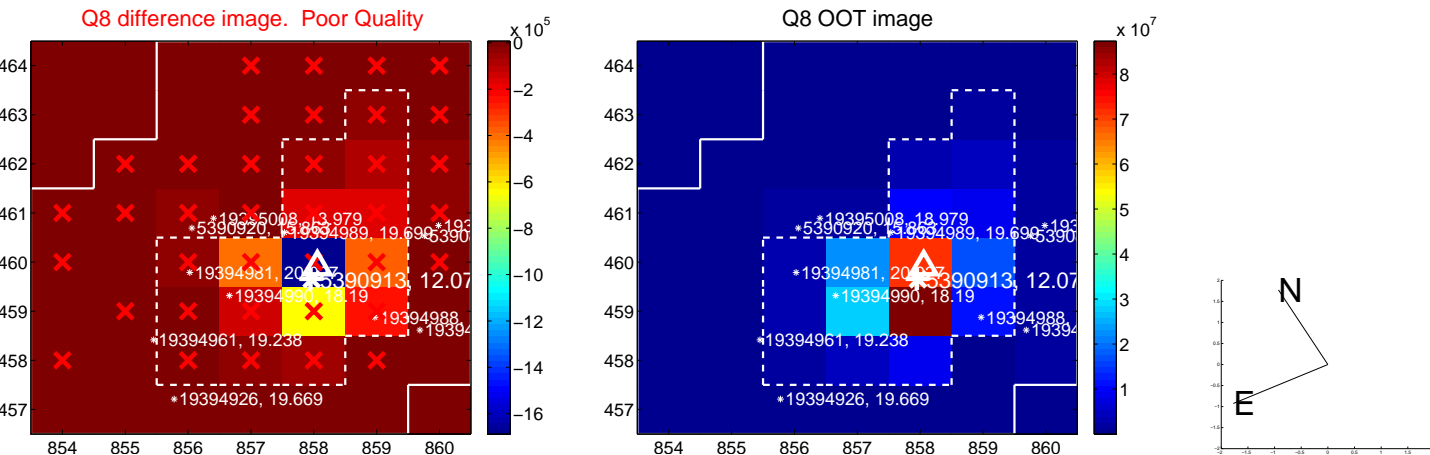
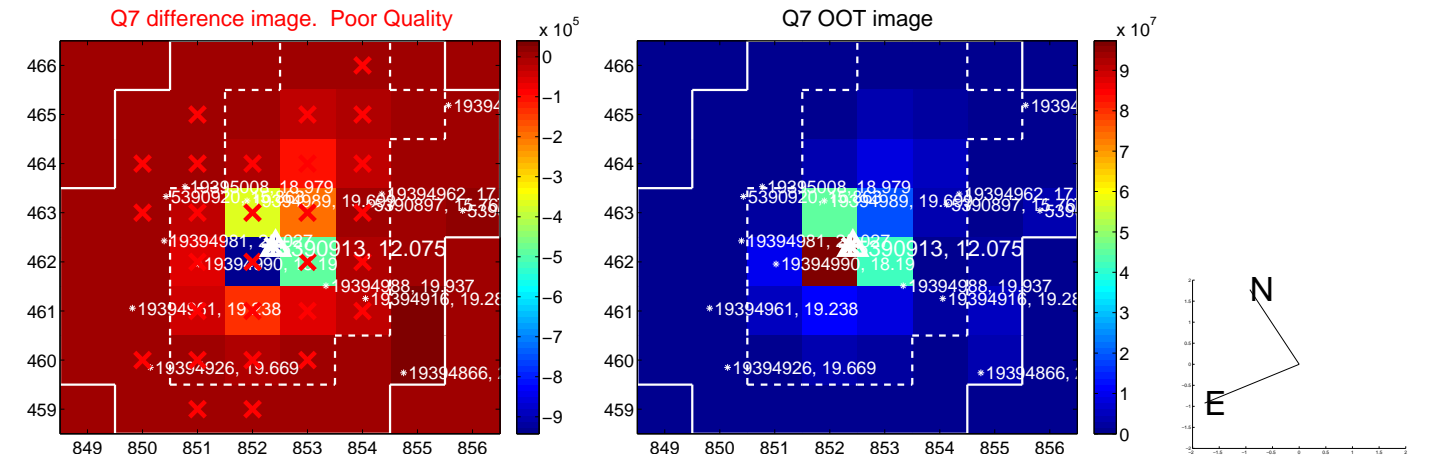
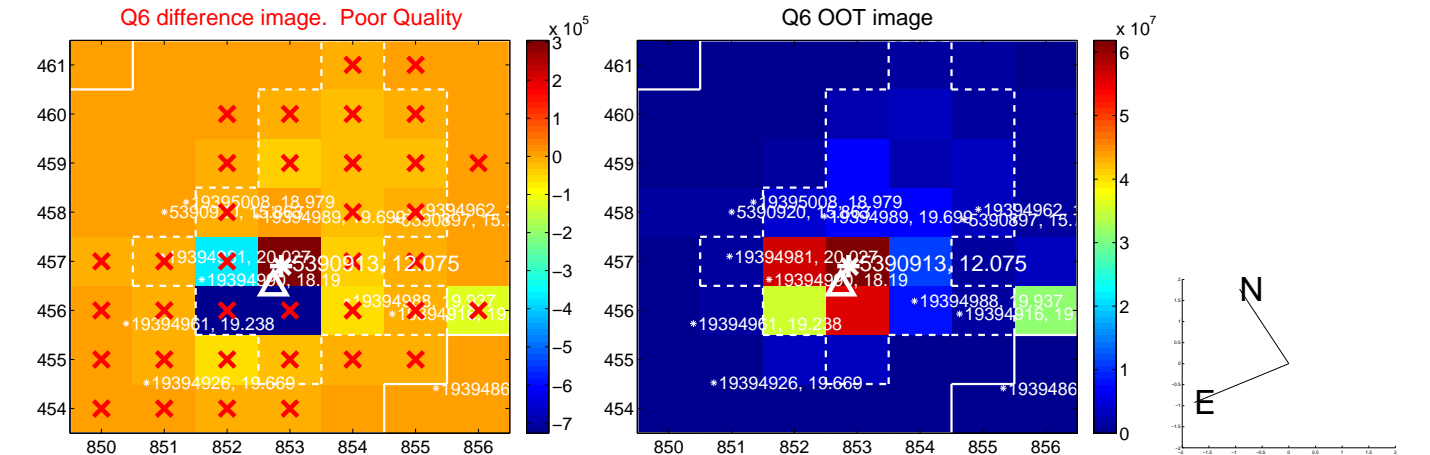
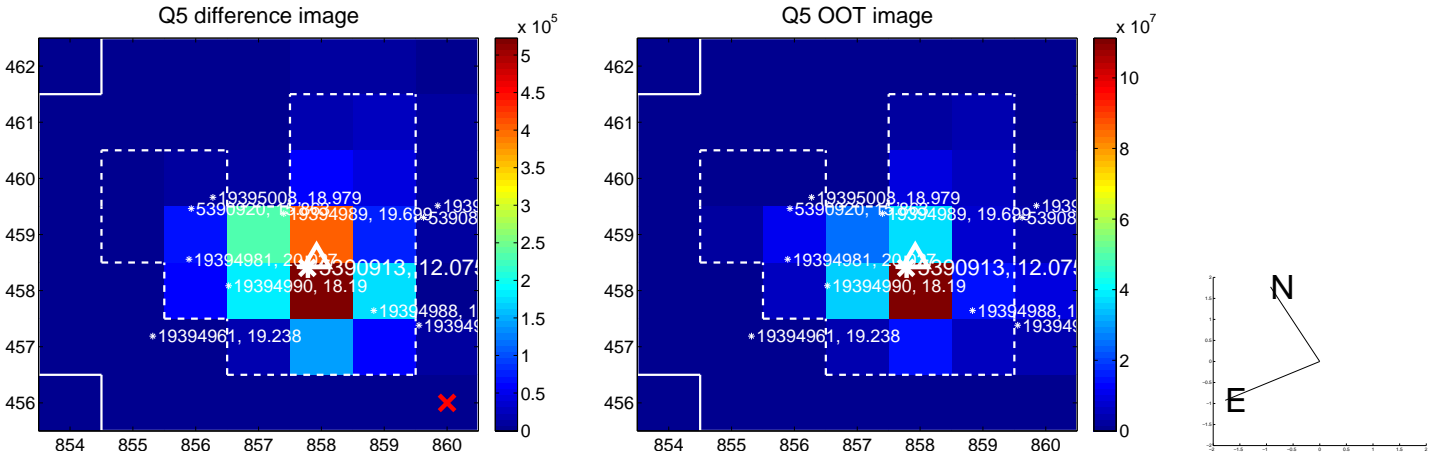
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.093 ± 0.317	0.29	-0.057 ± 0.334	0.073 ± 0.256
PRF-fit source offset from KIC position	0.135 ± 0.298	0.46	-0.052 ± 0.356	0.125 ± 0.253
photometric centroid source offset	8.37 ± 0.39	21.58	-1.93 ± 0.64	8.15 ± 0.37

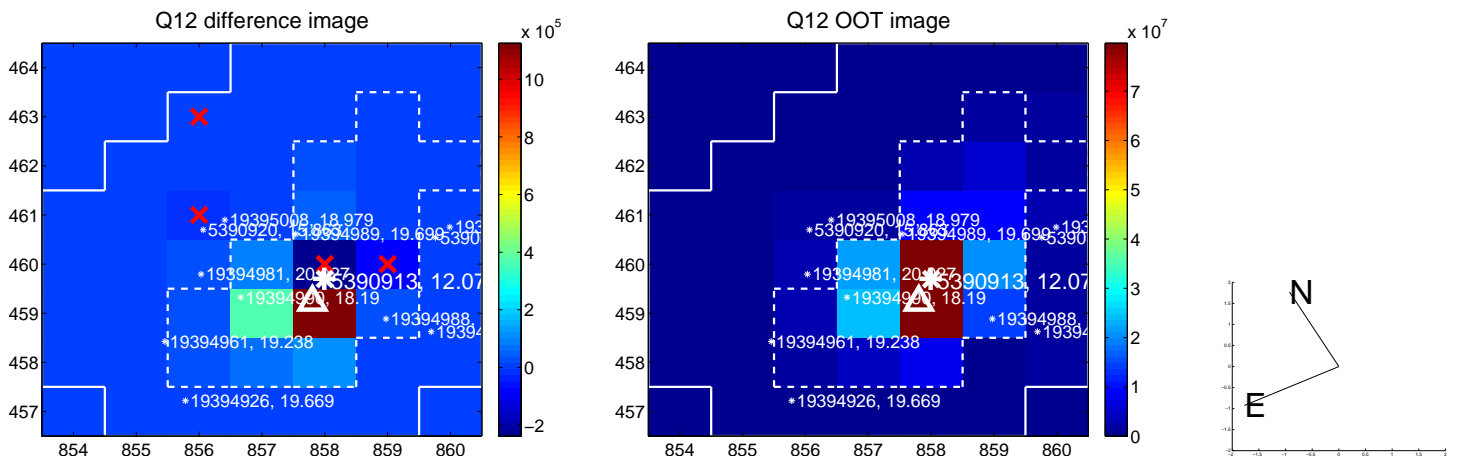
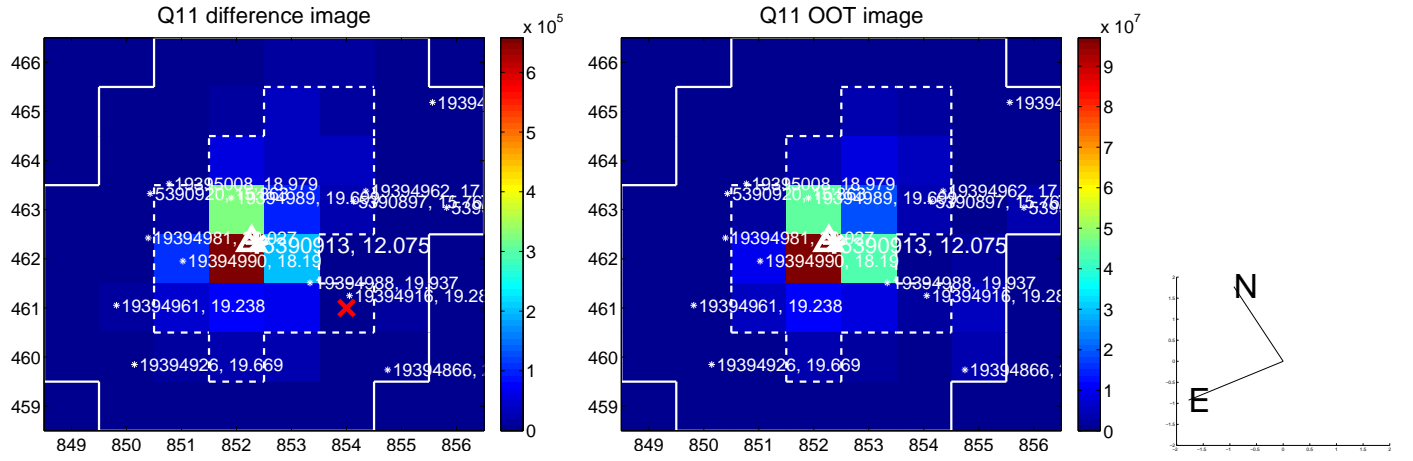
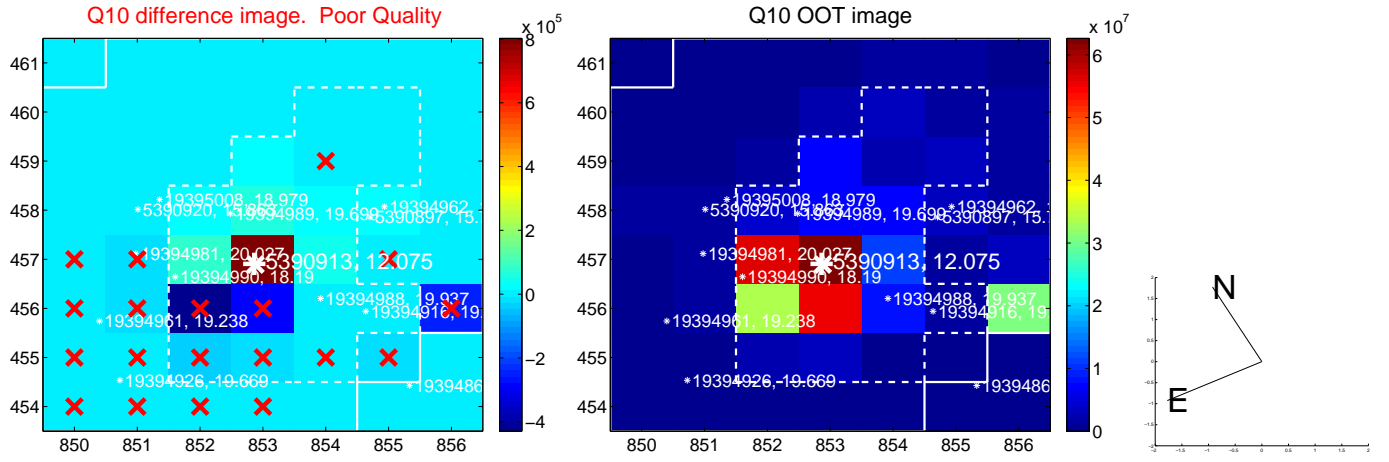
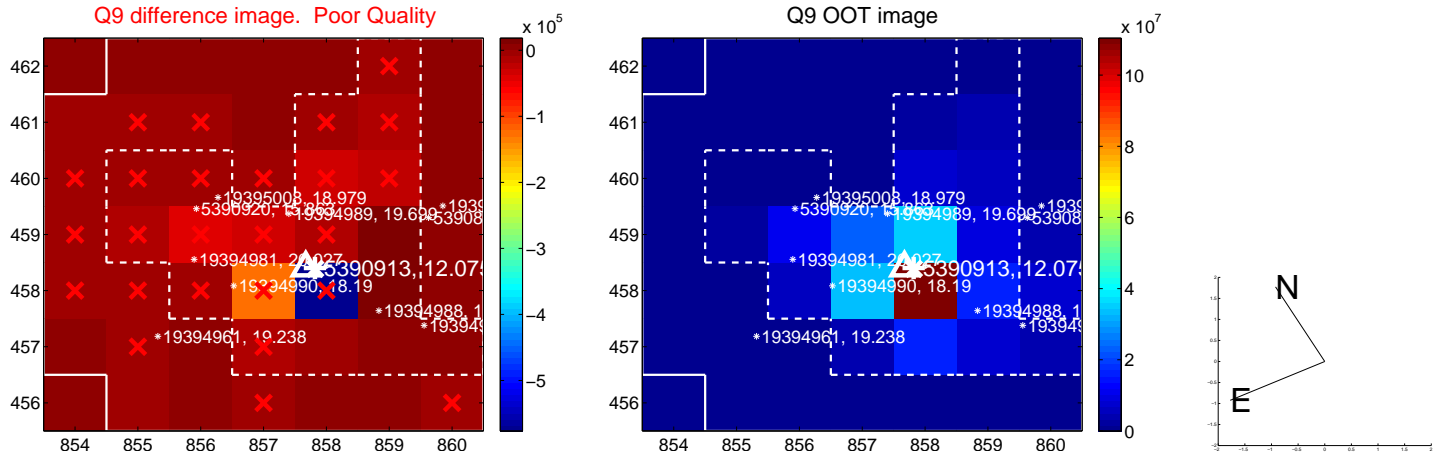


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

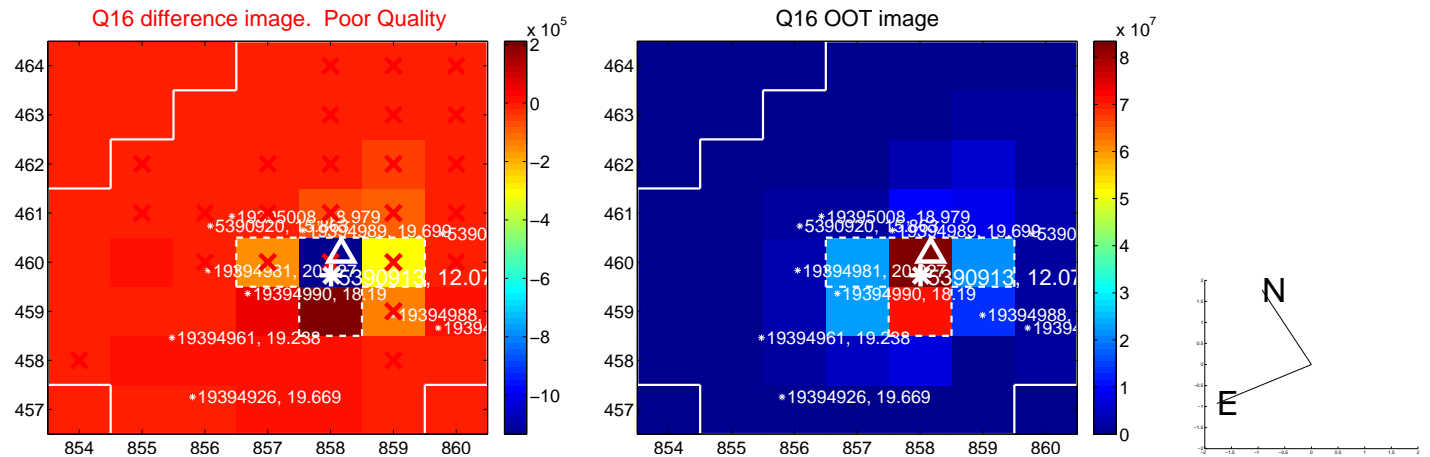
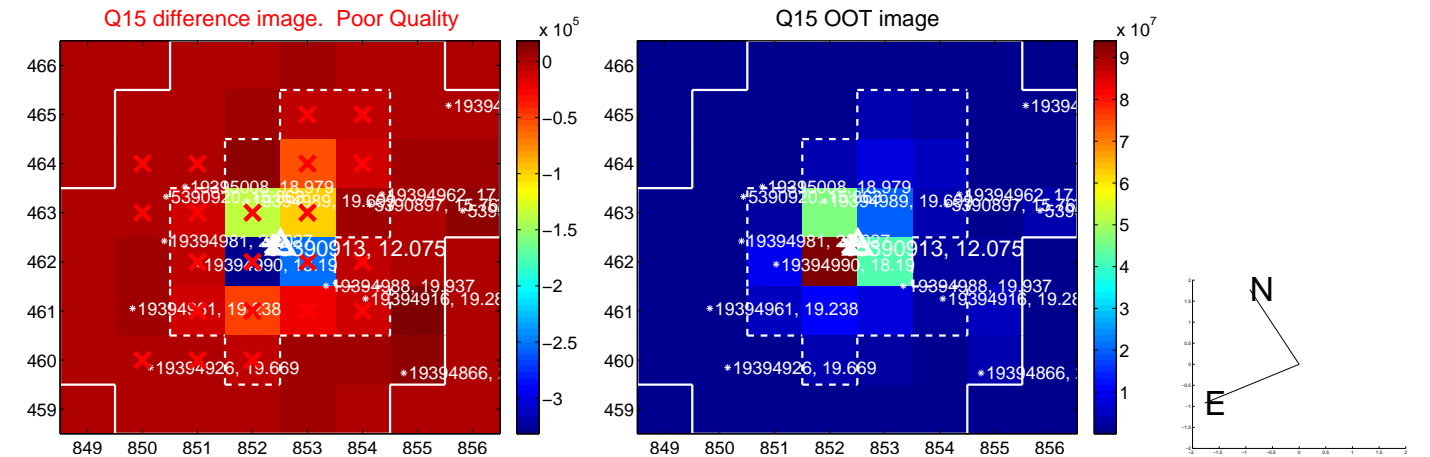
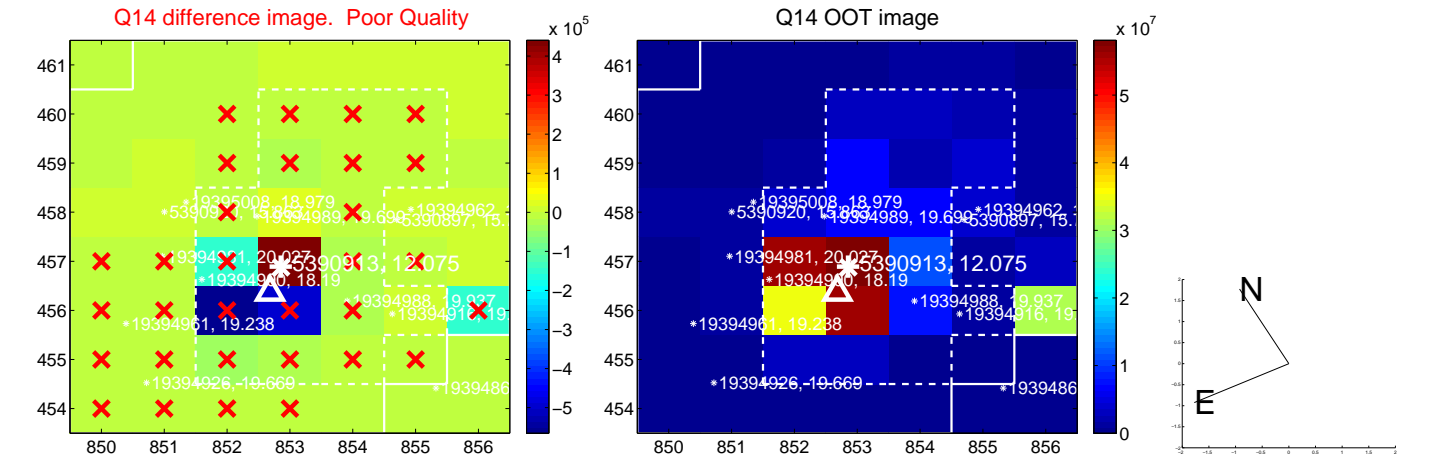
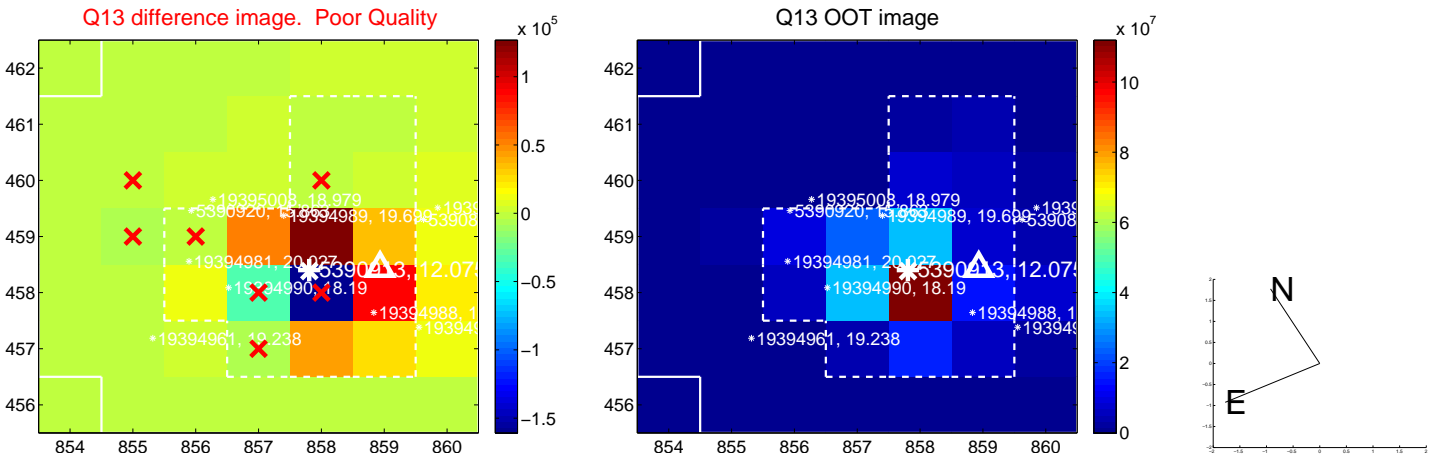
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



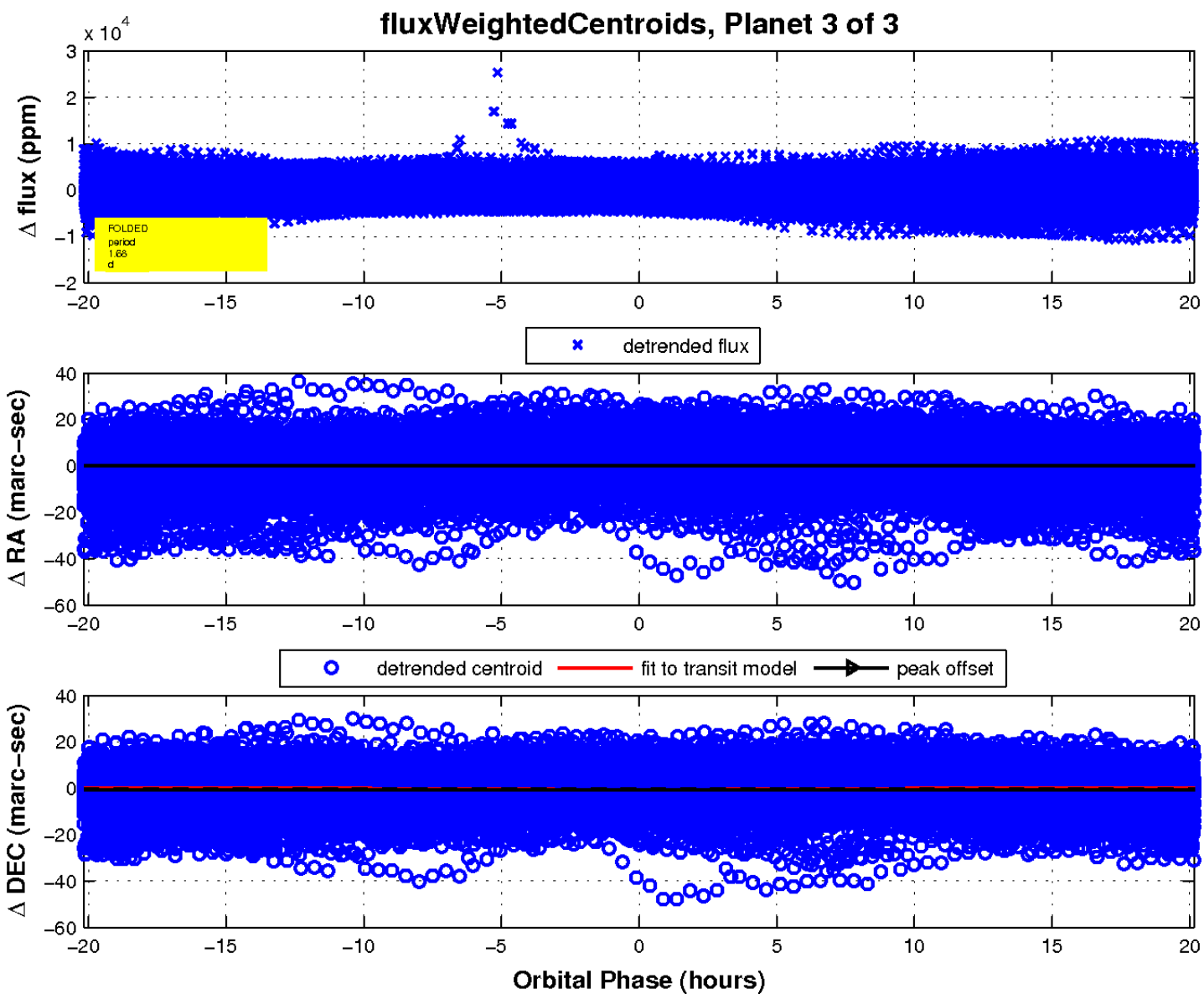
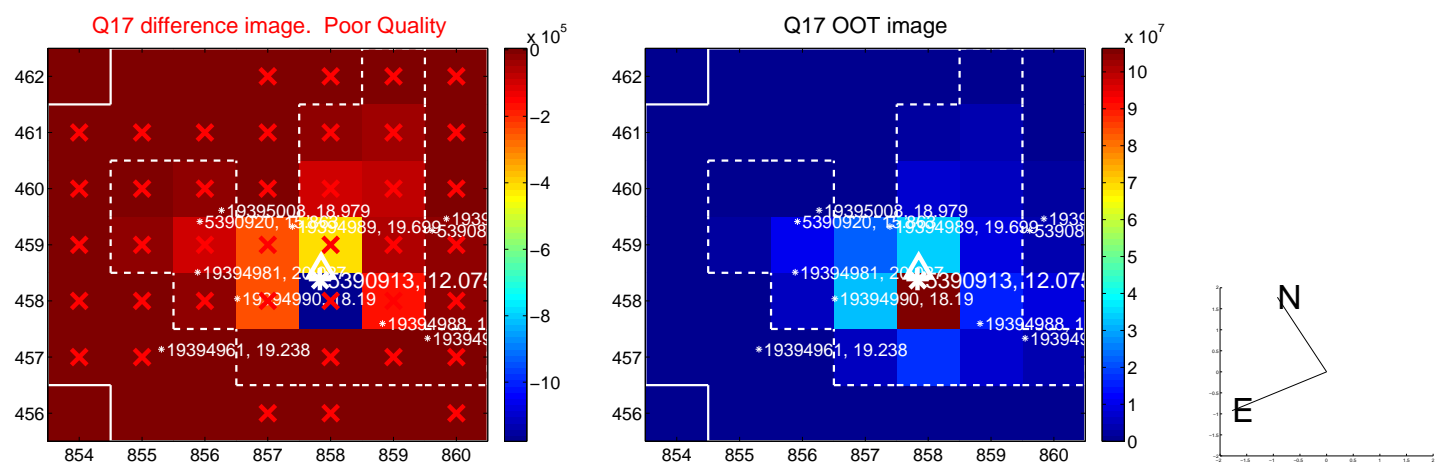
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

