

KIC 011450414

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})
011450414-01	OBS	1992.01	12.798358	133.647033	323.7	6.333	31.2	33.8	1.45	5592	2.84	160.72
011450414-02	OBS	1992.02	27.321291	154.301195	239.1	3.745	11.9	12.9	1.45	5592	2.44	58.47
011450414-03	OBS	1992.03	85.516552	181.364968	265.7	8.663	11.2	11.9	1.45	5592	2.63	12.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011450414-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011450414-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
011450414-03	OBS	FP	0.02	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

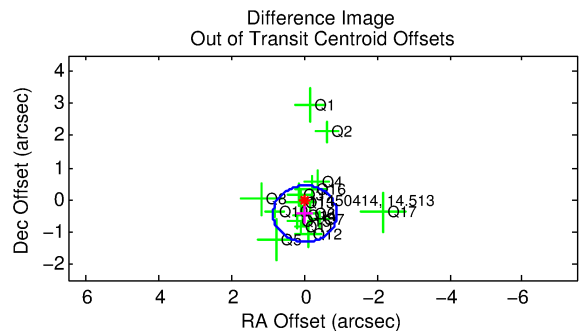
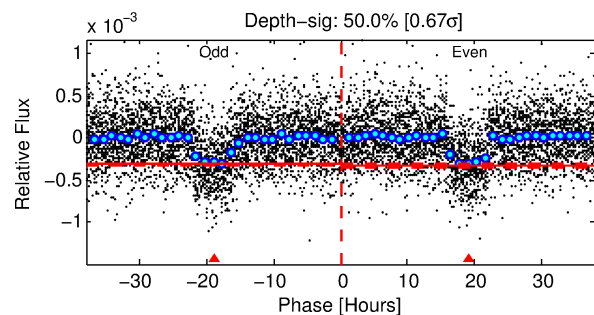
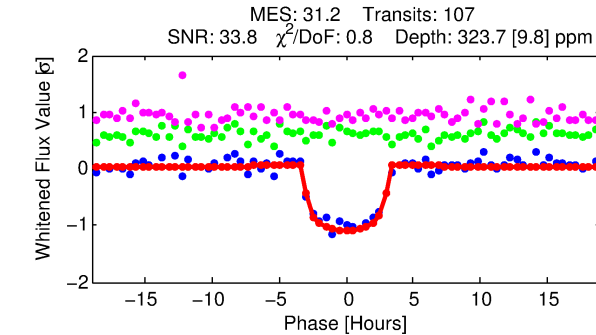
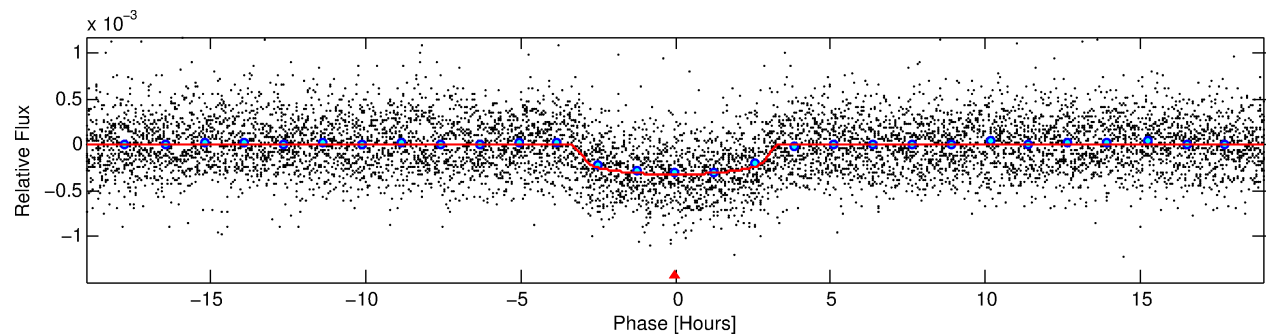
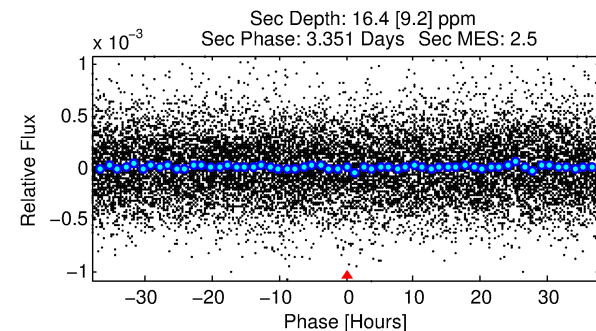
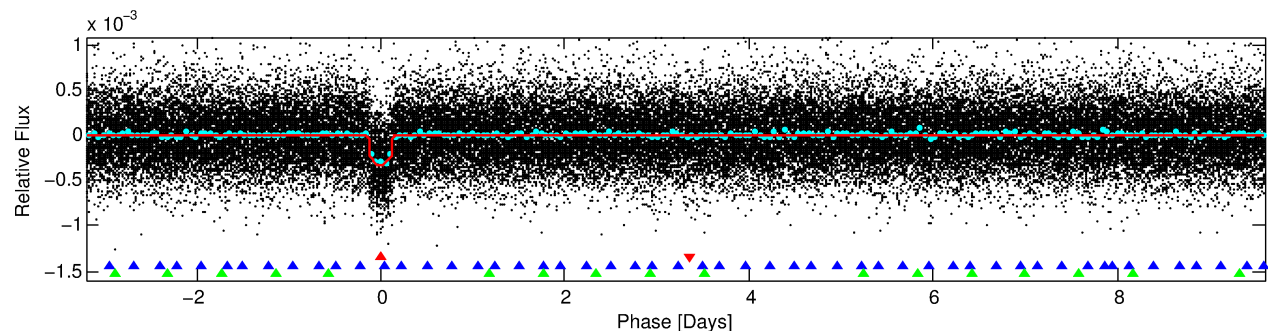
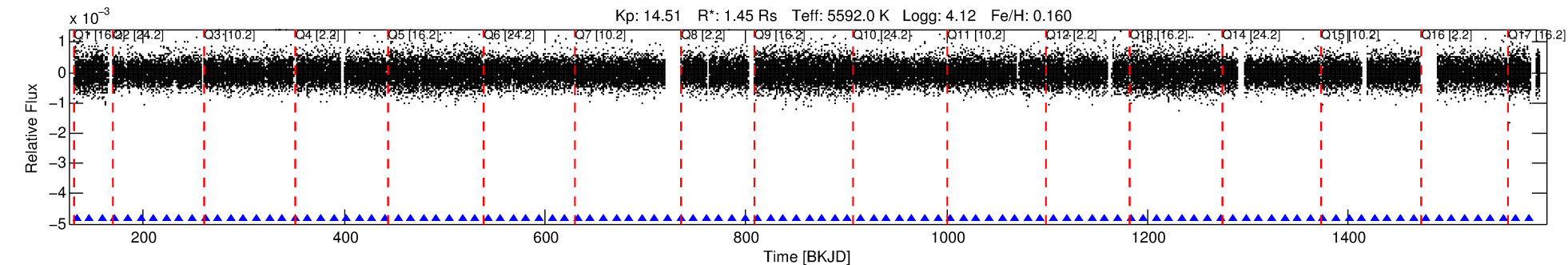
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011450414-01

No Significant Match Found

DV One-Page Summary

KIC: 11450414 Candidate: 1 of 3 Period: 12.798 d
KOI: K01992.01 Name: Kepler-347b Corr: 0.992



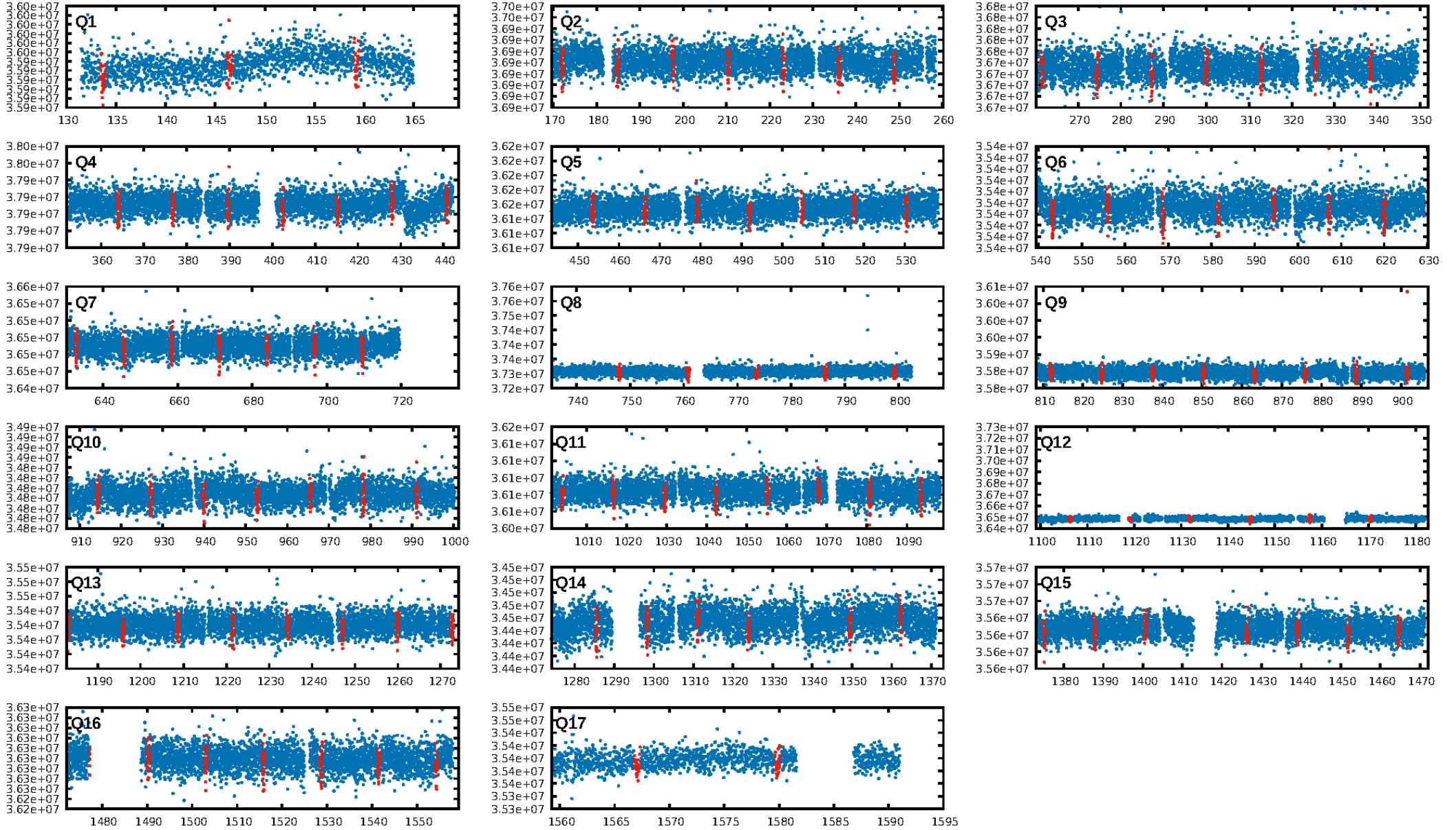
DV Fit Results:

Period = 12.79836 [0.00005] d
Epoch = 133.6470 [0.0035] BKJD
Rp/R* = 0.0179 [0.0044]
a/R* = 10.65 [10.72]
b = 0.75 [0.60]
Seff = 160.72 [55.01]
Teff = 908 [78] K
Rp = 2.84 [0.96] Re
a = 0.1071 [0.0232] AU
Ag = 12.86 [10.50] [1.13σ]
Teffp = 2658 [496] K [3.49σ]

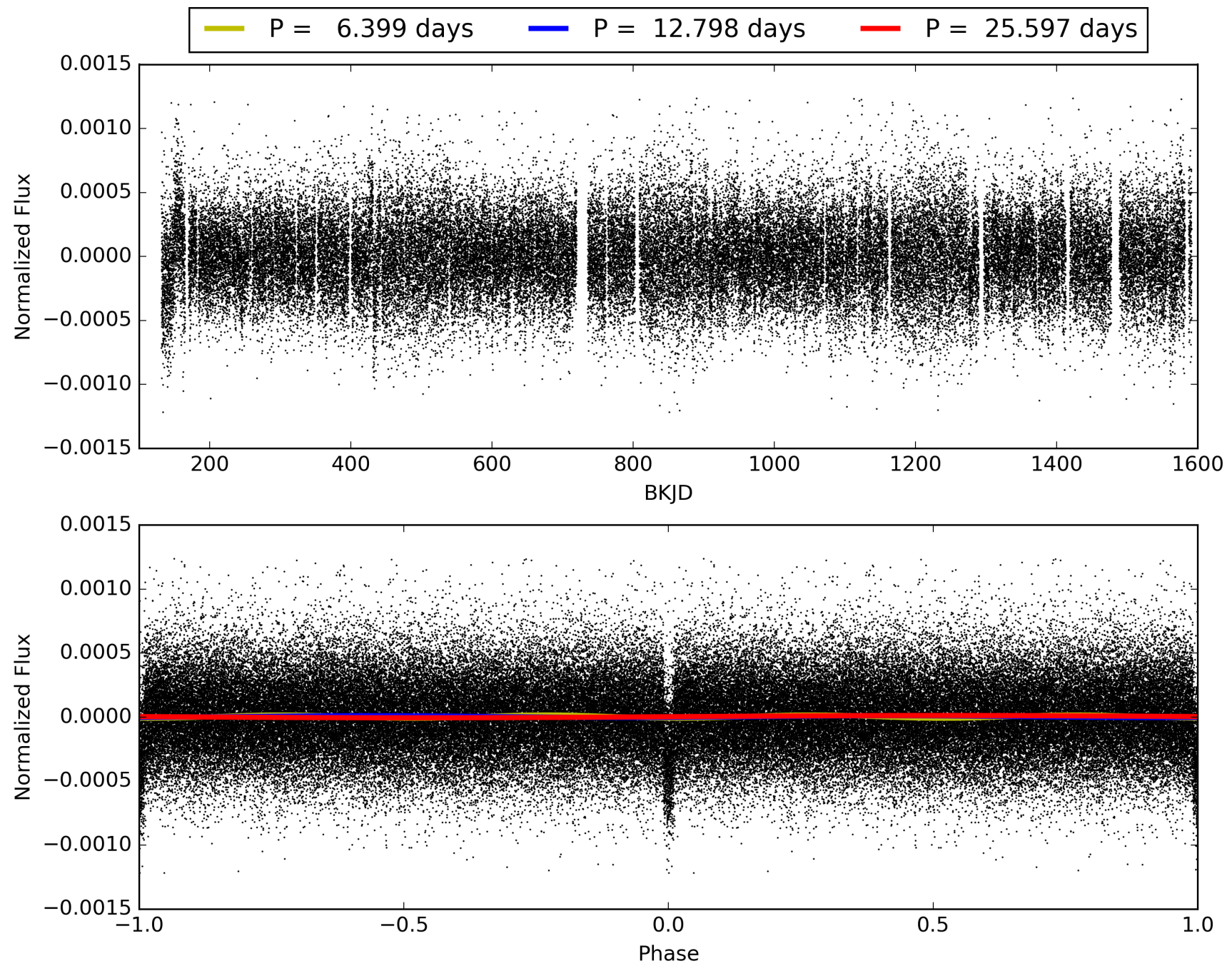
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [47.37σ]
ModelChiSquare2-sig: 54.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.93e-205
RollingBand-fgt: 1.00 [102/102]
GhostDiagnostic-chr: 5.185
Centroid-sig: 86.2%
Centroid-so: 0.315 arcsec [0.73σ]
OotOffset-rm: 0.440 arcsec [1.51σ]
KicOffset-rm: 0.914 arcsec [3.13σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011450414-01, PDC Light Curves

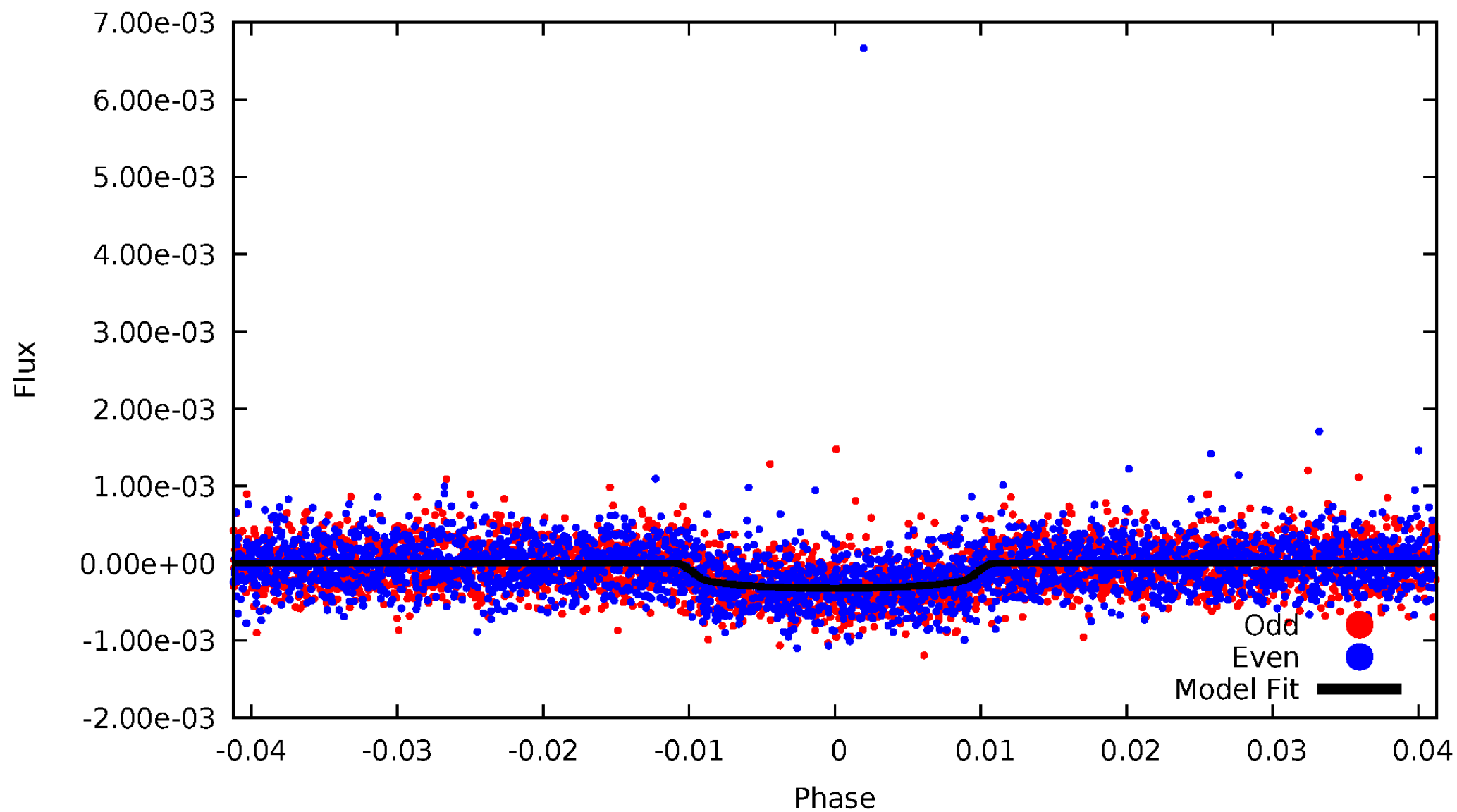


TCE 011450414-01



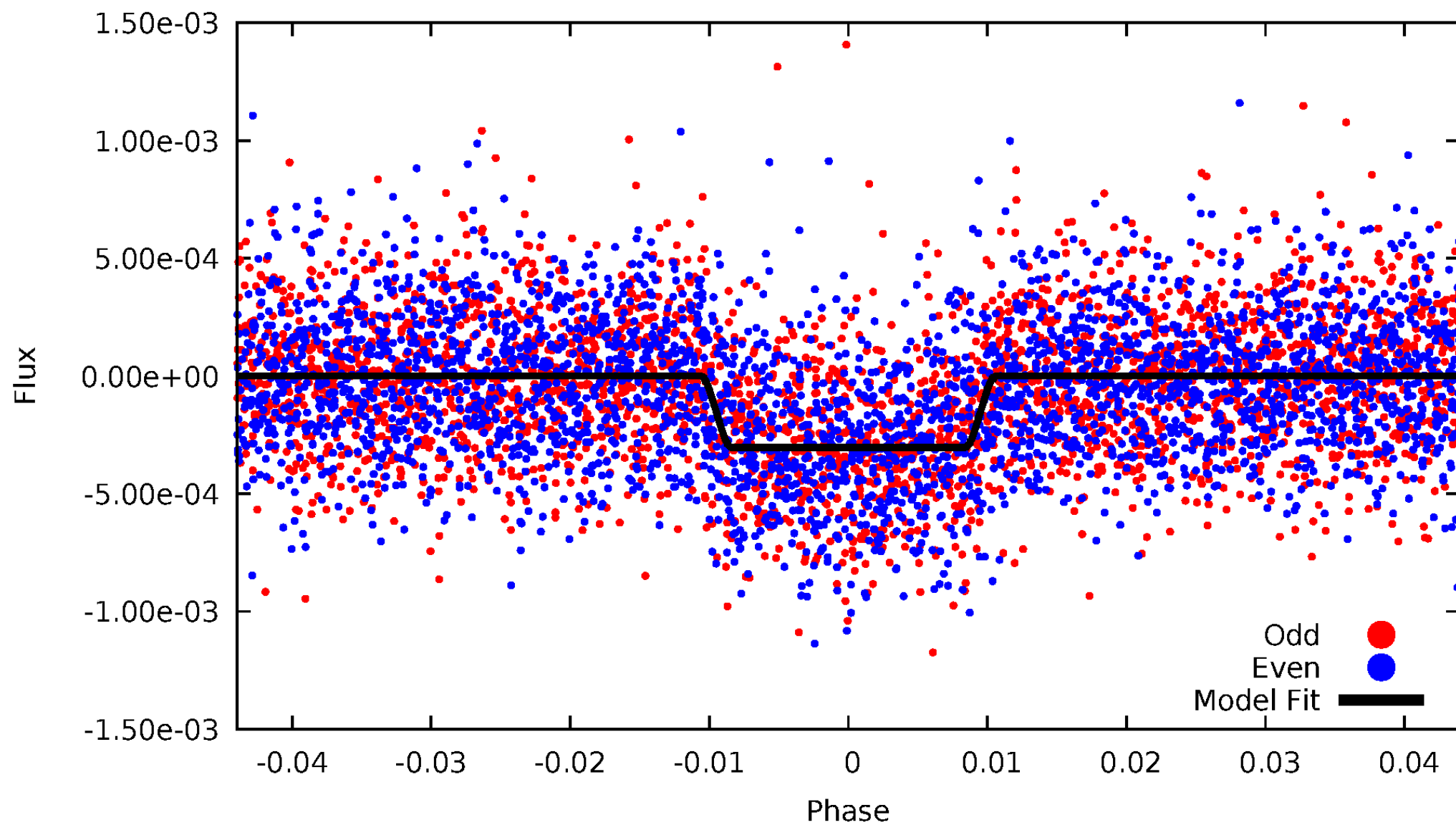
DV Odd/Even

TCE 011450414-01



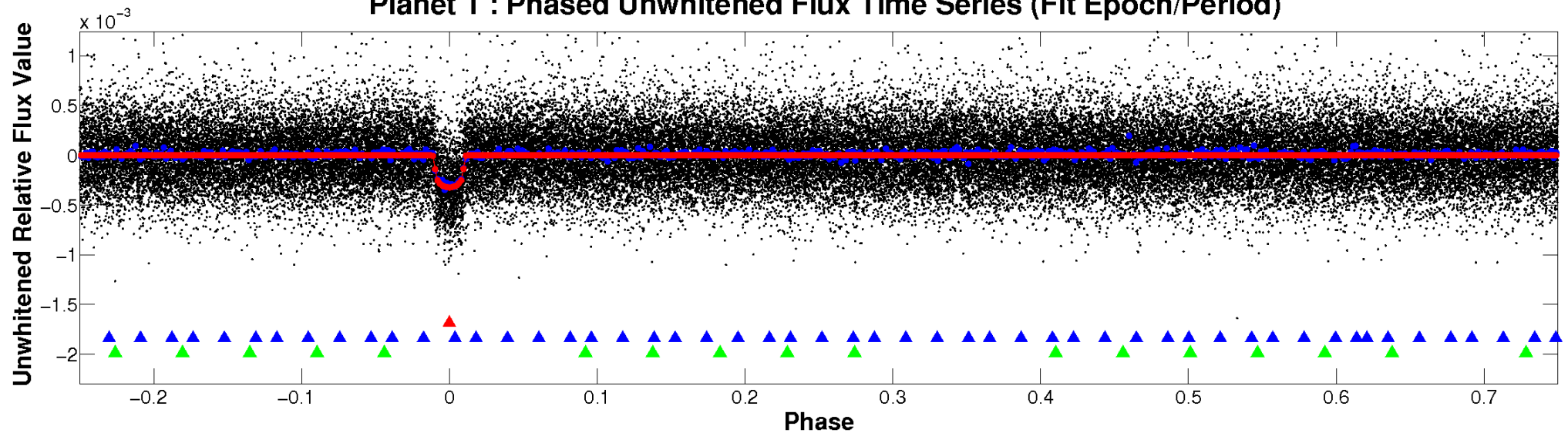
ALT Odd/Even

TCE 011450414-01

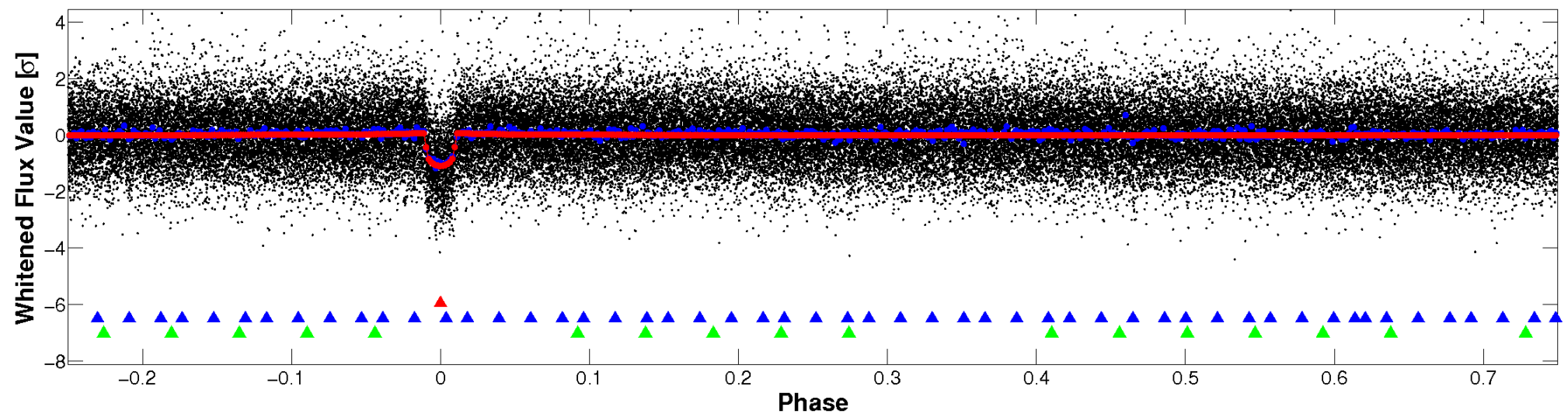


Non-Whitened Vs. Whitened Light Curve

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

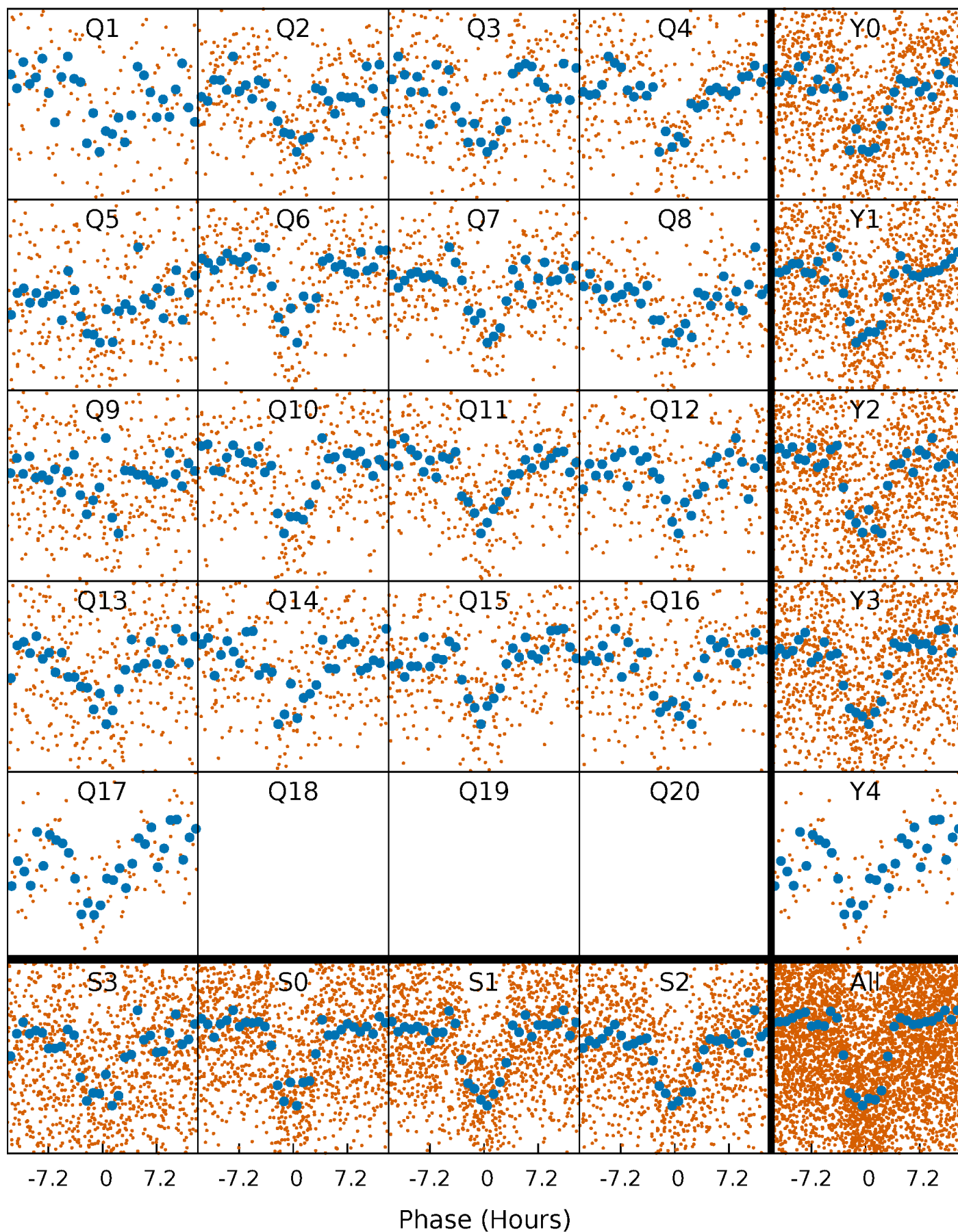


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



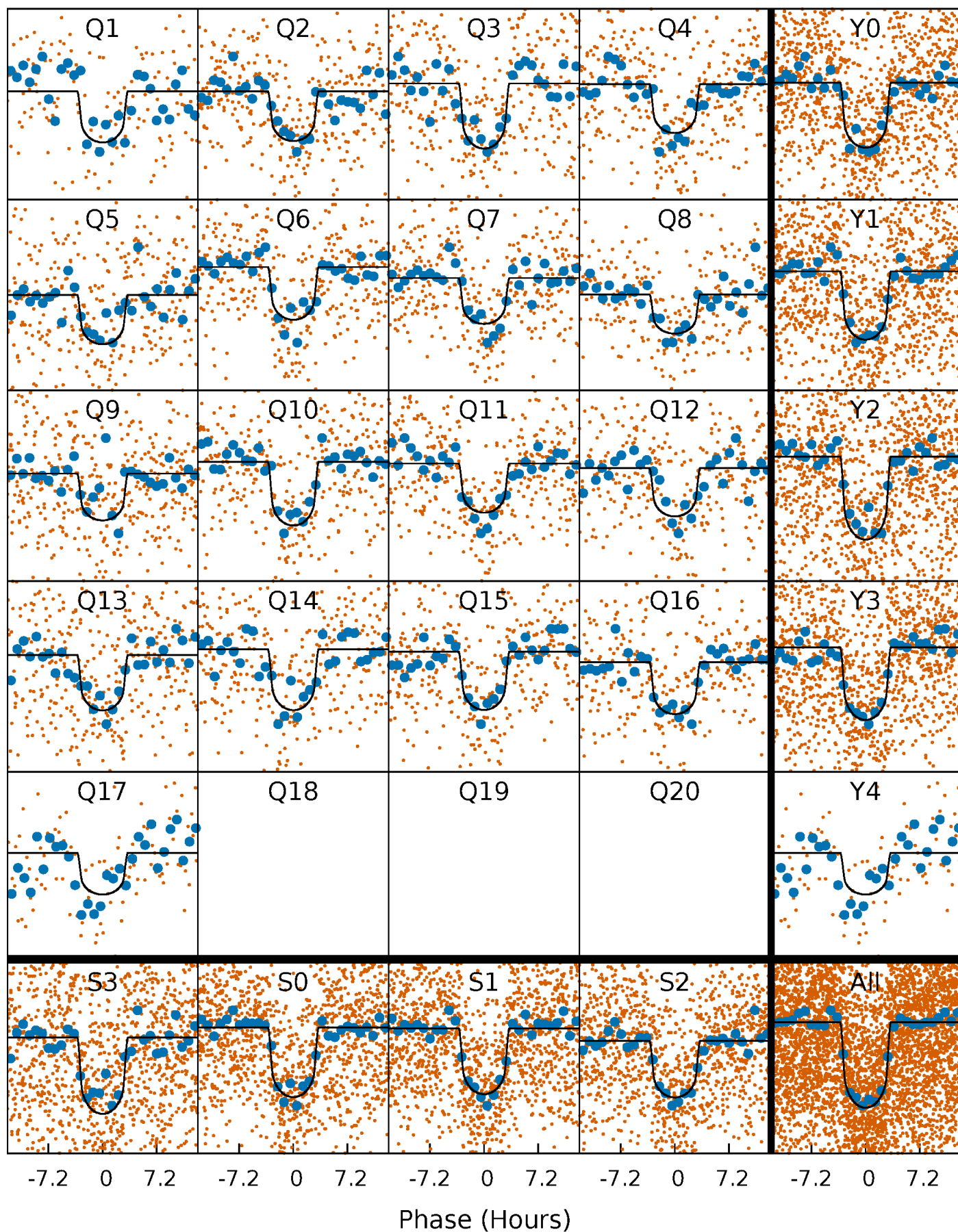
PDC Quarter-Phased Transit Curves

TCE 011450414-01 P= 12.798358 Days $T_0=133.647033$ (BKJD)



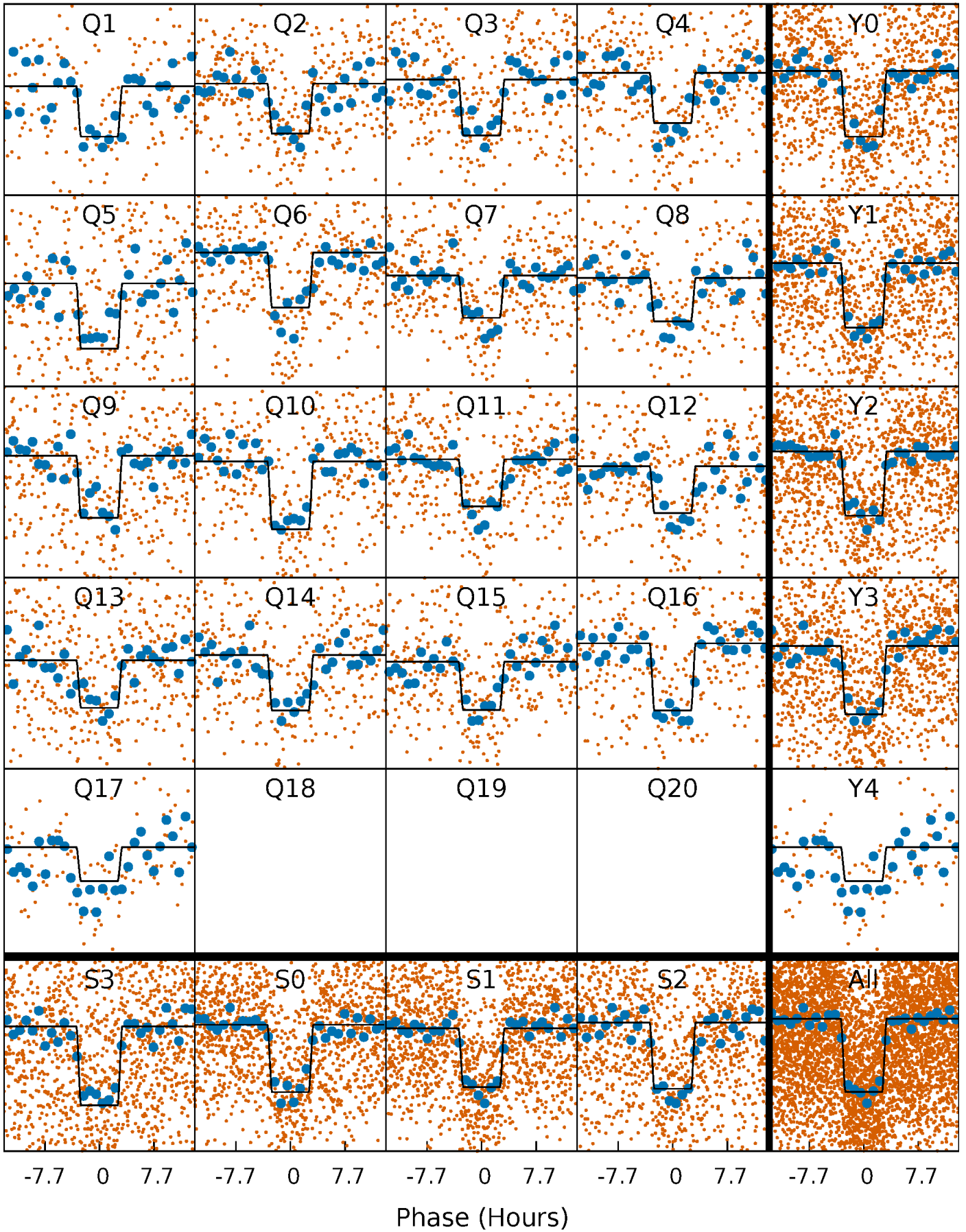
DV Quarter-Phased Transit Curves

TCE 011450414-01 P= 12.798358 Days $T_0=133.647033$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

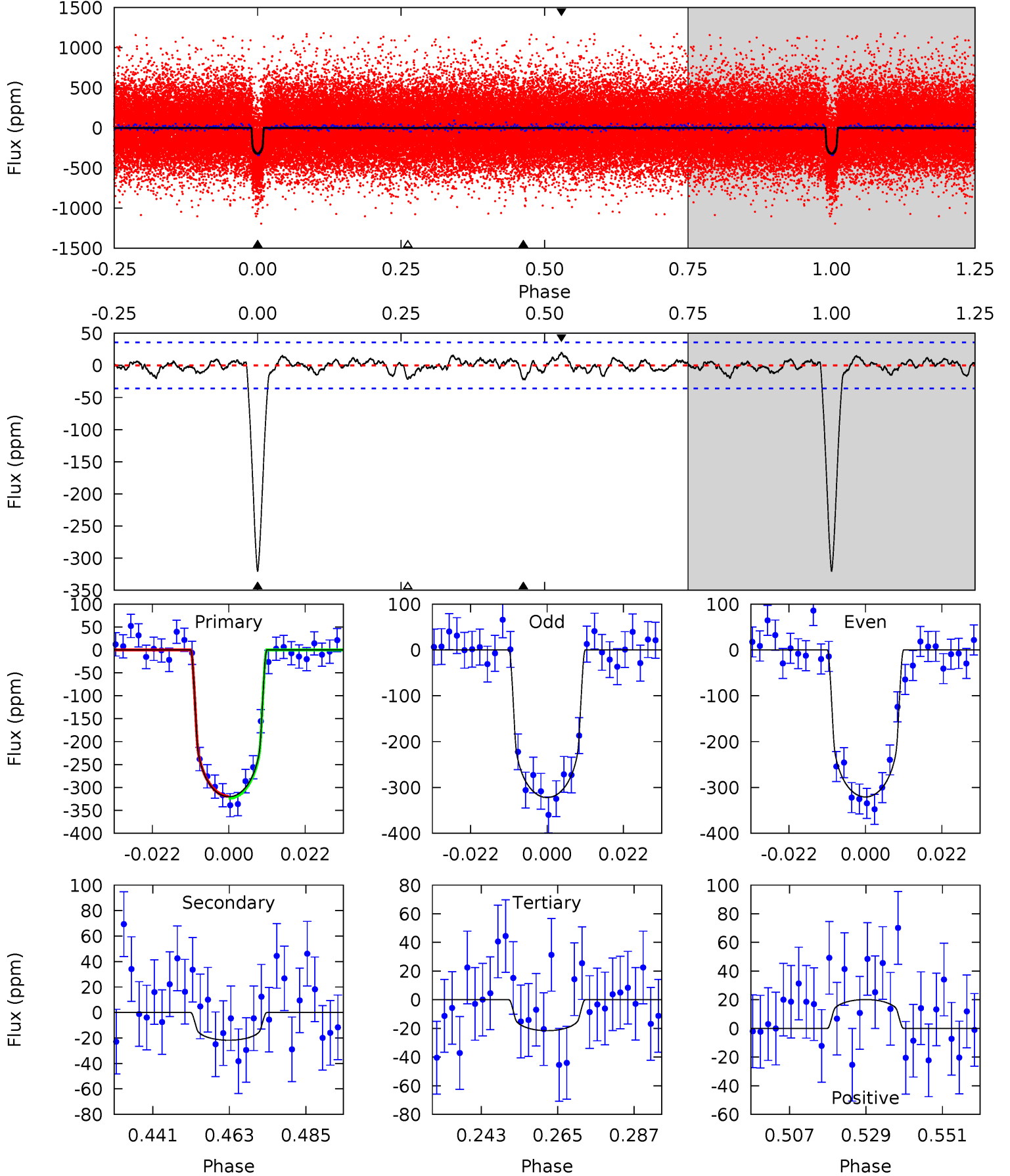
TCE 011450414-01 P= 12.798216 Days $T_0=133.655271$ (BKJD)



DV Model-Shift Uniqueness Test

011450414-01, P = 12.798358 Days, E = 120.848675 Days

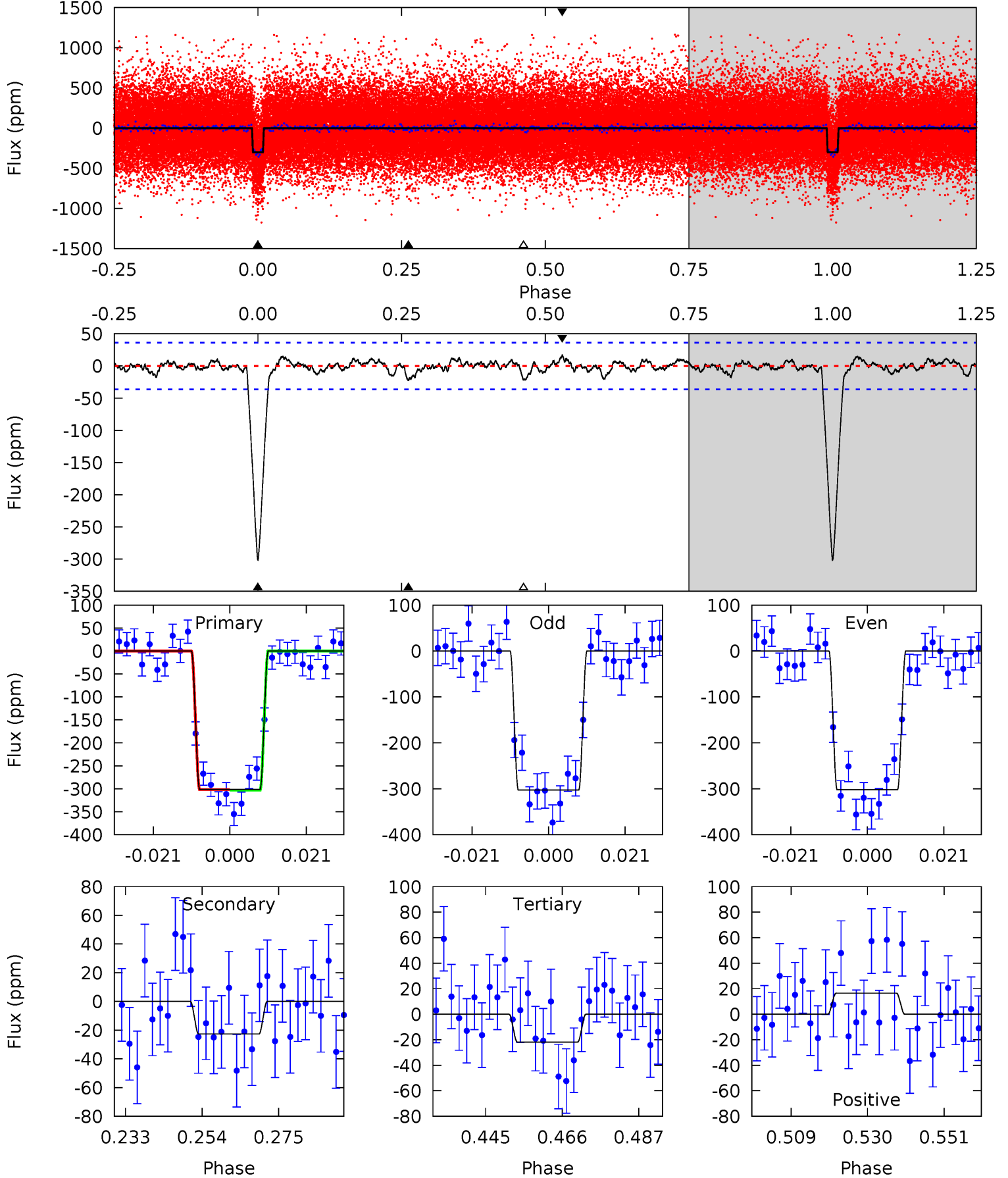
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.6	2.96	2.94	2.74	4.87	2.29	0.99	40.7	40.9	0.03	0.22	0.09	0.98	0.06	0.30



Alt Model-Shift Uniqueness Test

011450414-01, $P = 12.798216$ Days, $E = 120.857055$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	3.05	2.93	2.21	4.88	2.30	0.88	37.6	38.4	0.12	0.83	0.04	1.02	0.05	0.11



Stellar Parameters For KIC 011450414

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5592^{+75}_{-75}	$4.115^{+0.195}_{-0.090}$	$0.160^{+0.150}_{-0.150}$	$1.451^{+0.211}_{-0.342}$	$1.000^{+0.072}_{-0.072}$	$0.461^{+0.511}_{-0.142}$
	+1%/-1%	+5%/-2%	+94%/-94%	+15%/-24%	+7%/-7%	+111%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011450414-01 / KOI 1992.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 7	$2.75^{+0.74}_{-0.67}$	1260^{+59}_{-76}	3357^{+317}_{-293}	18^{+14}_{-8}
Alt.	-23 ± 7	$2.67^{+0.78}_{-0.75}$	1264^{+54}_{-75}	3425^{+395}_{-324}	20^{+21}_{-9}

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

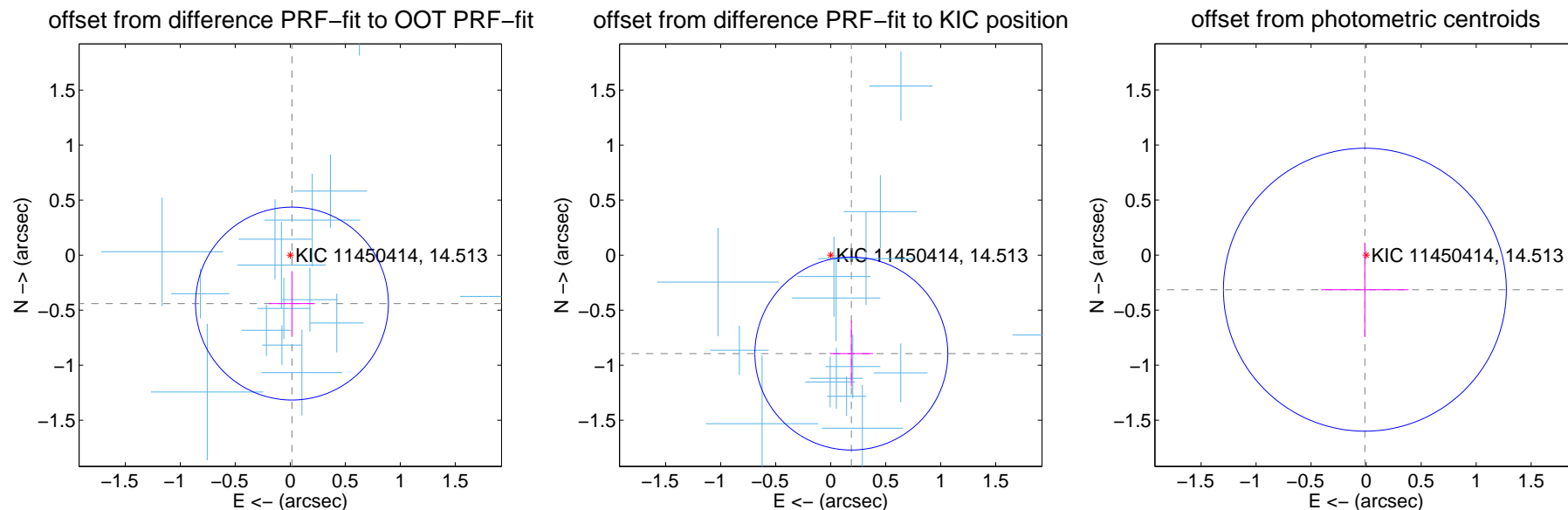
DV Centroid Data

Supplemental centroid analysis for 011450414-01. Kepler magnitude: 14.51. Transit SNR 33.77

There are 16 quarters with good PRF difference image offsets

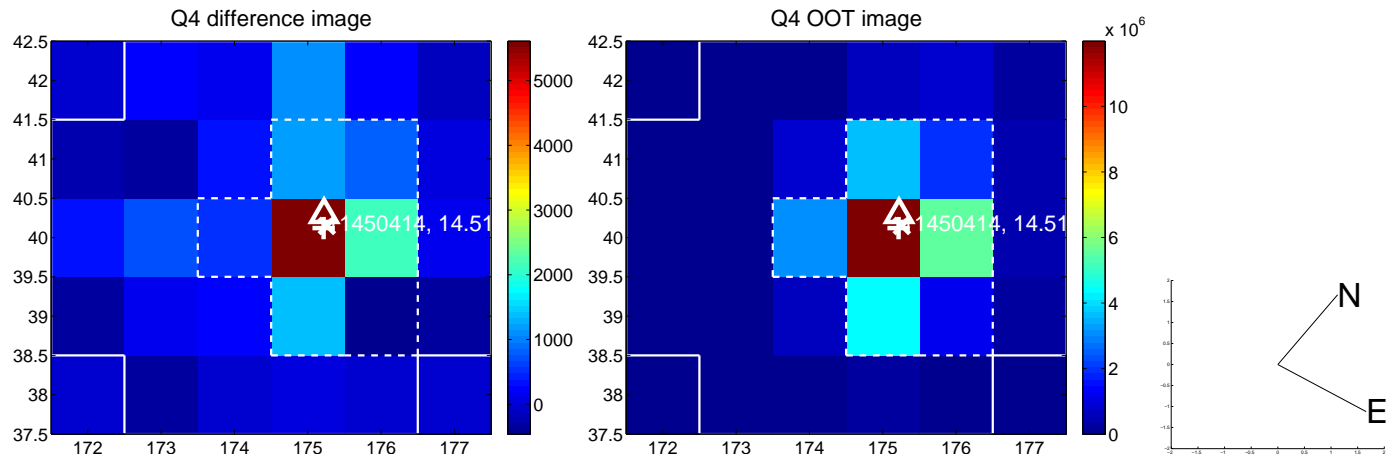
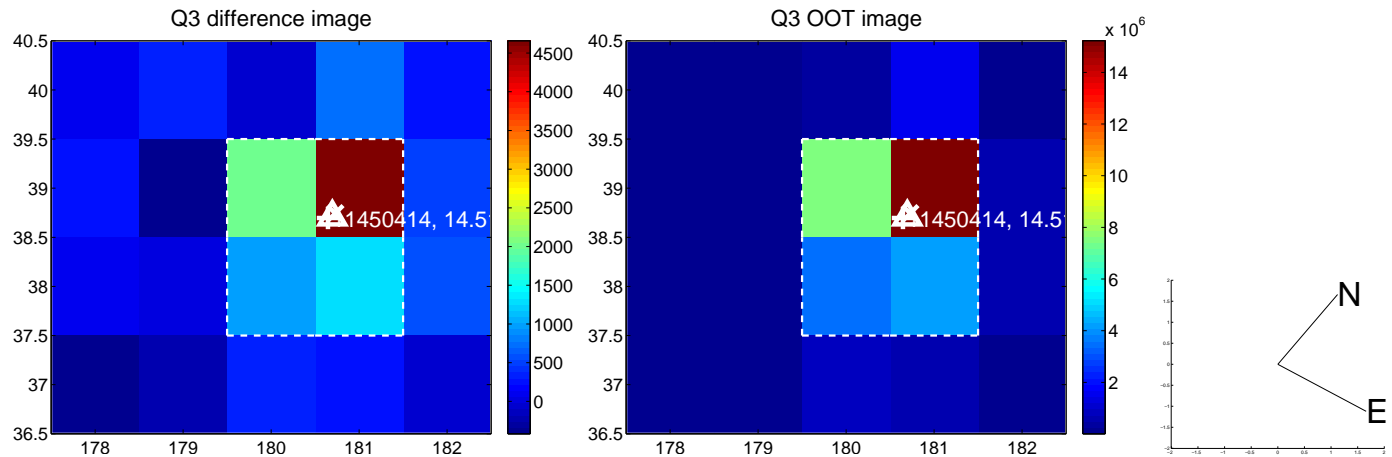
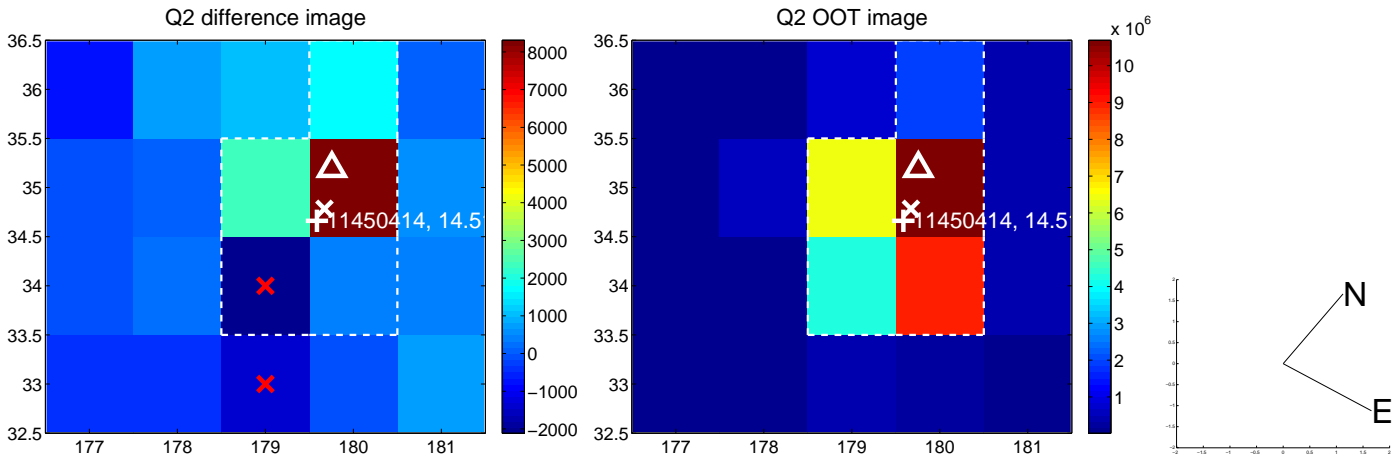
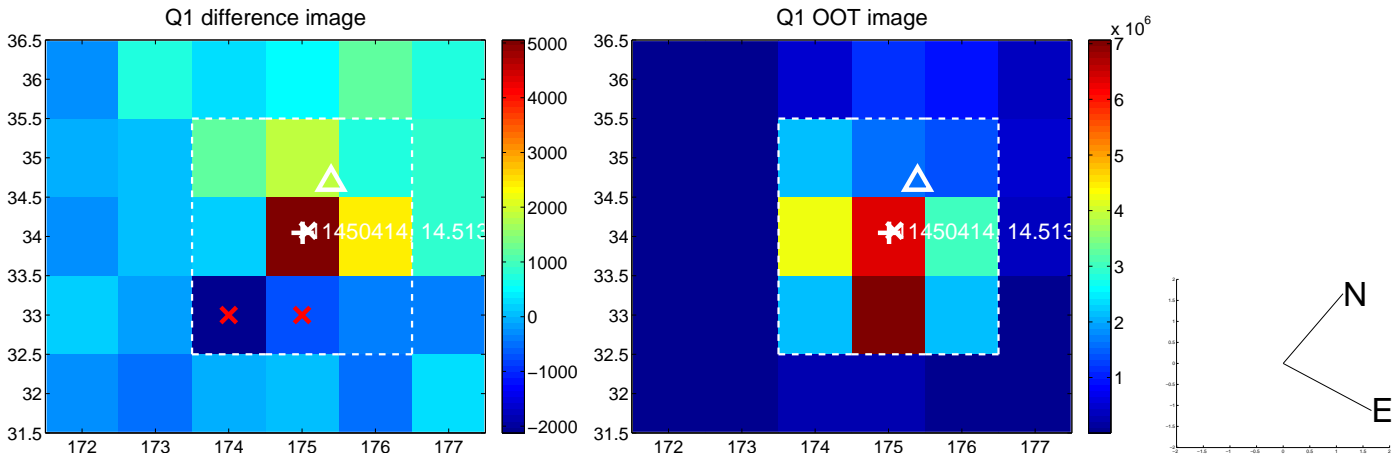
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.440 ± 0.292	1.51	-0.016 ± 0.208	-0.440 ± 0.294
PRF-fit source offset from KIC position	0.914 ± 0.292	3.13	-0.188 ± 0.197	-0.895 ± 0.298
photometric centroid source offset	0.31 ± 0.43	0.73	0.01 ± 0.40	-0.31 ± 0.43

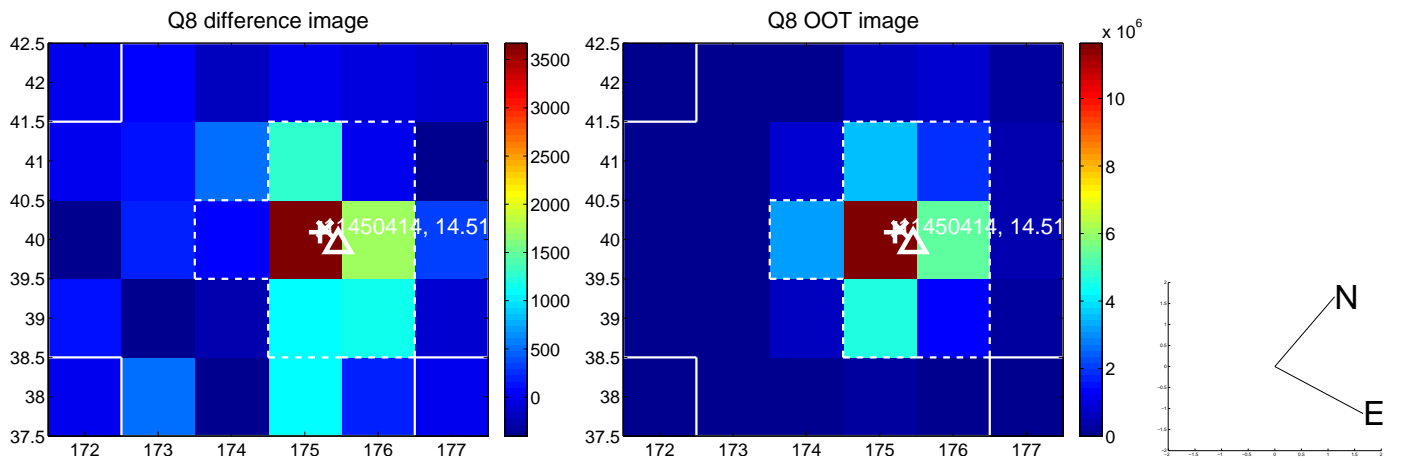
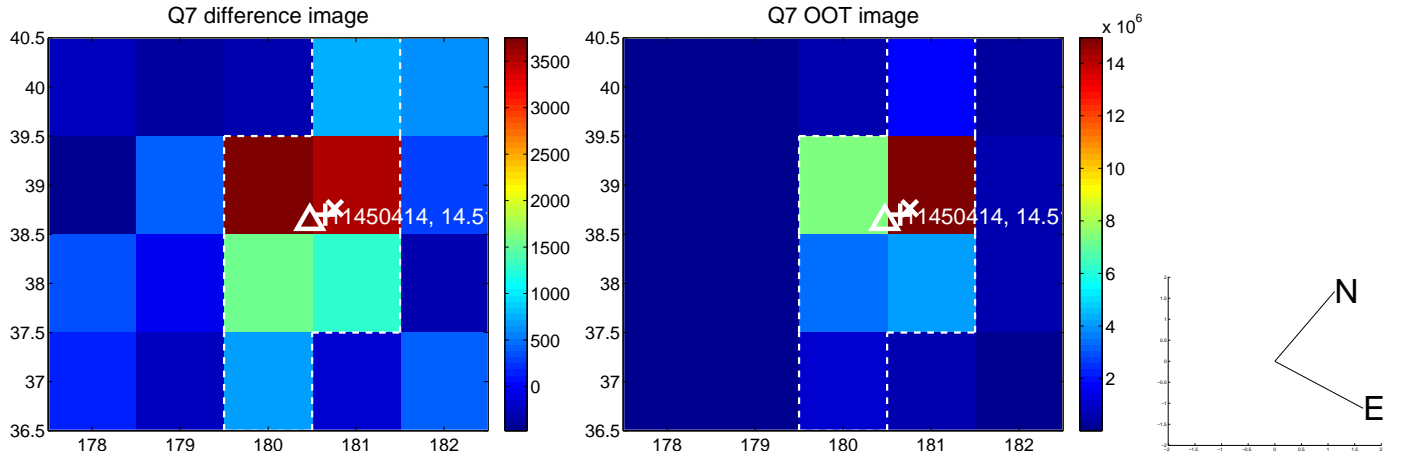
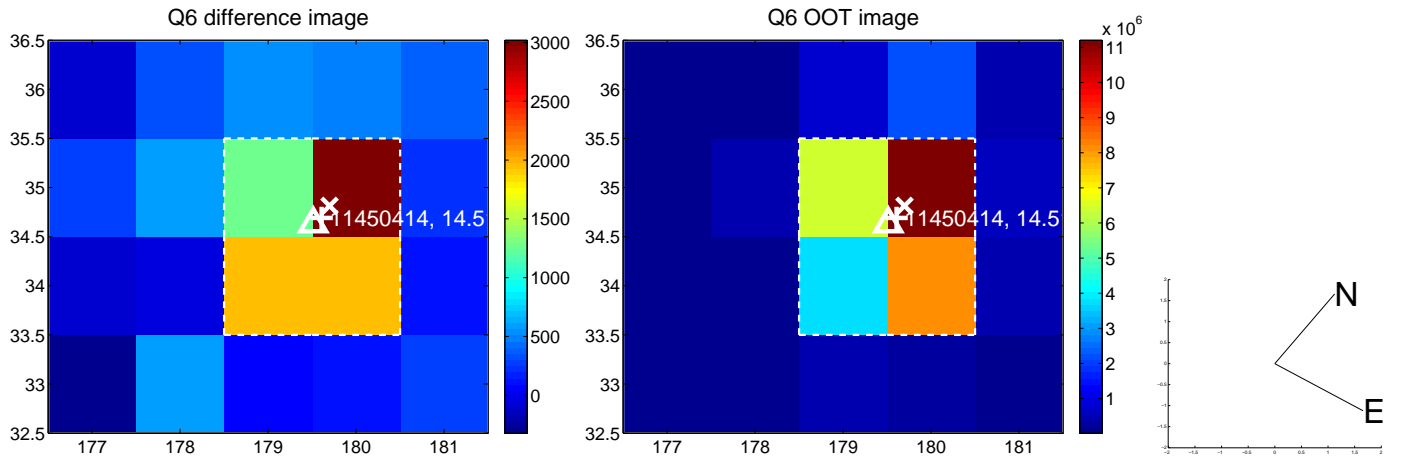
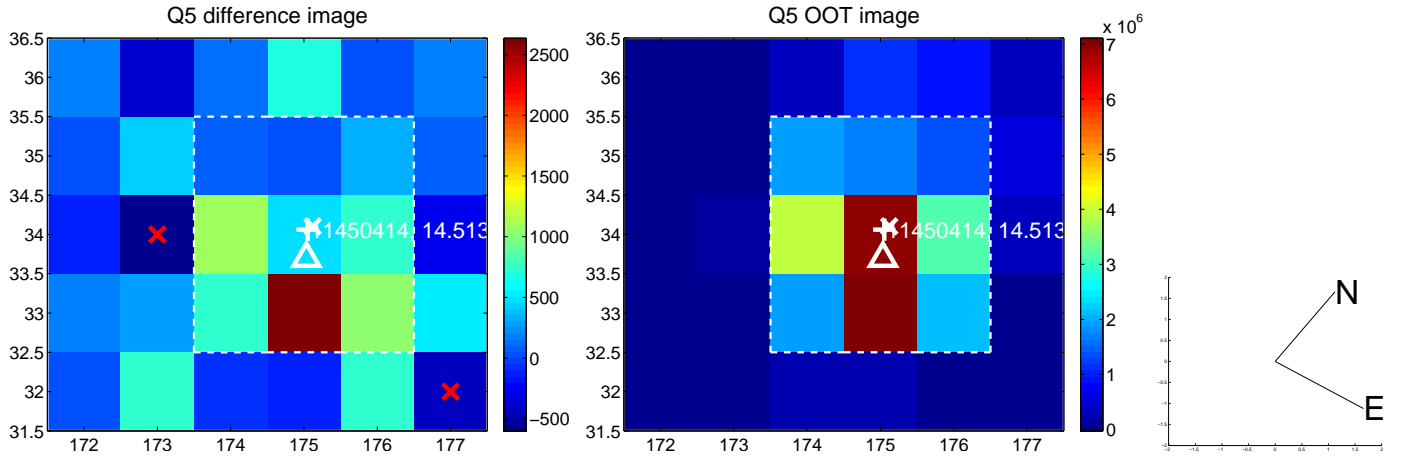


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

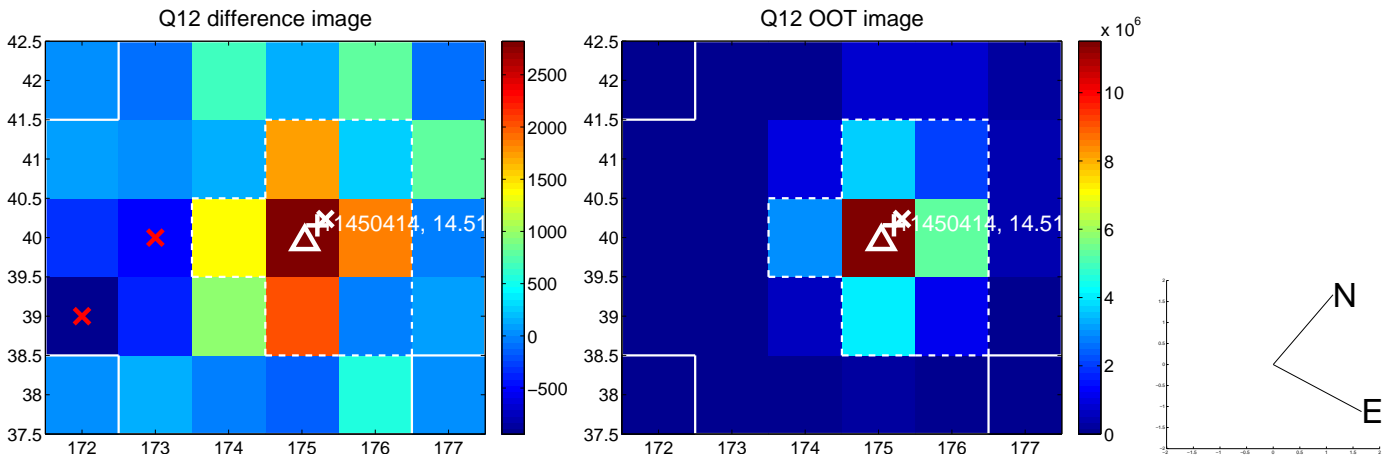
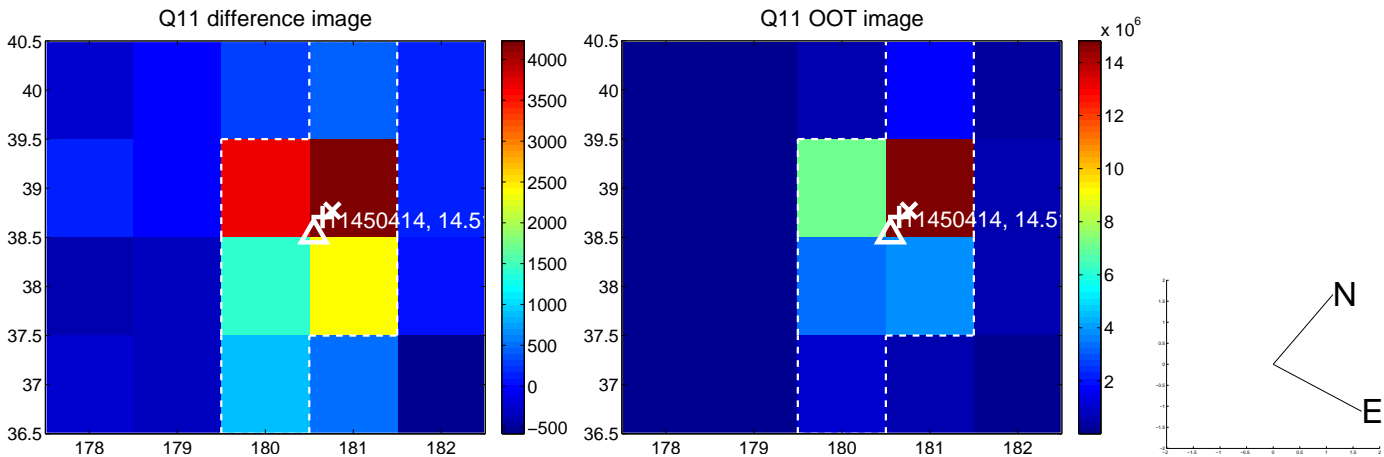
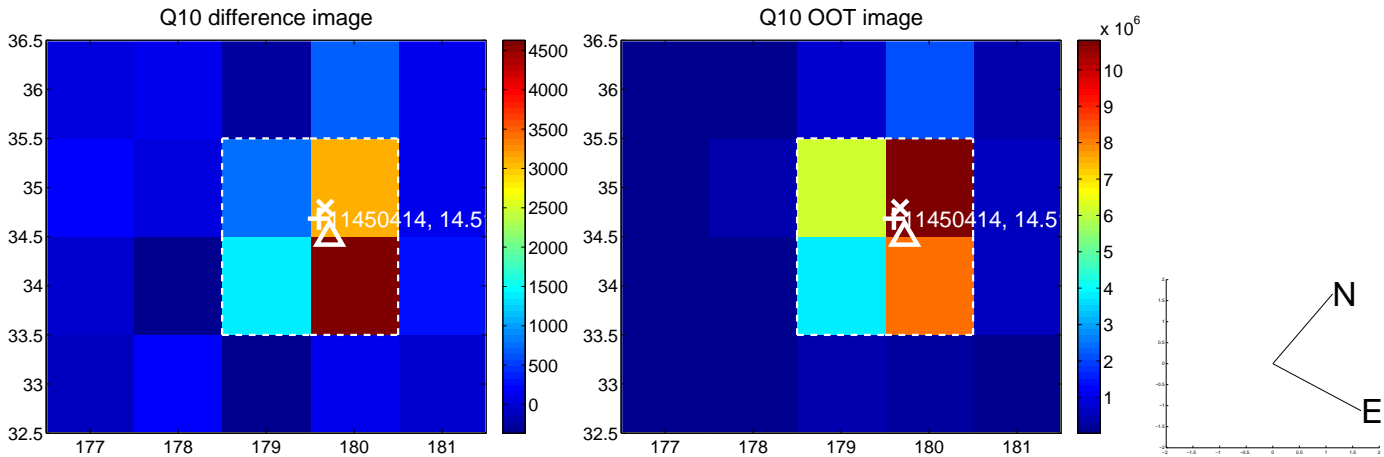
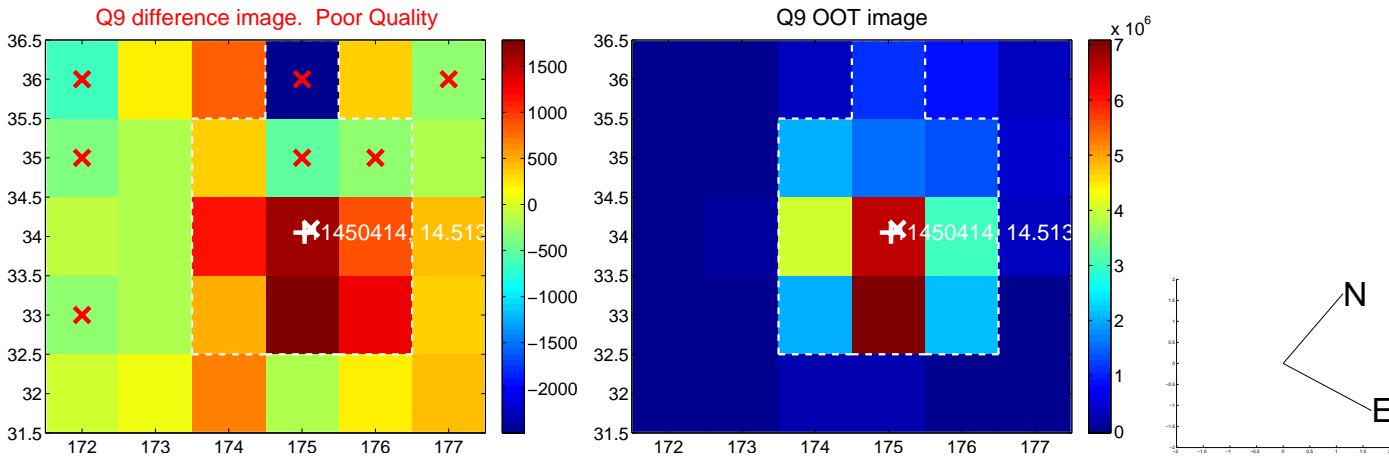
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



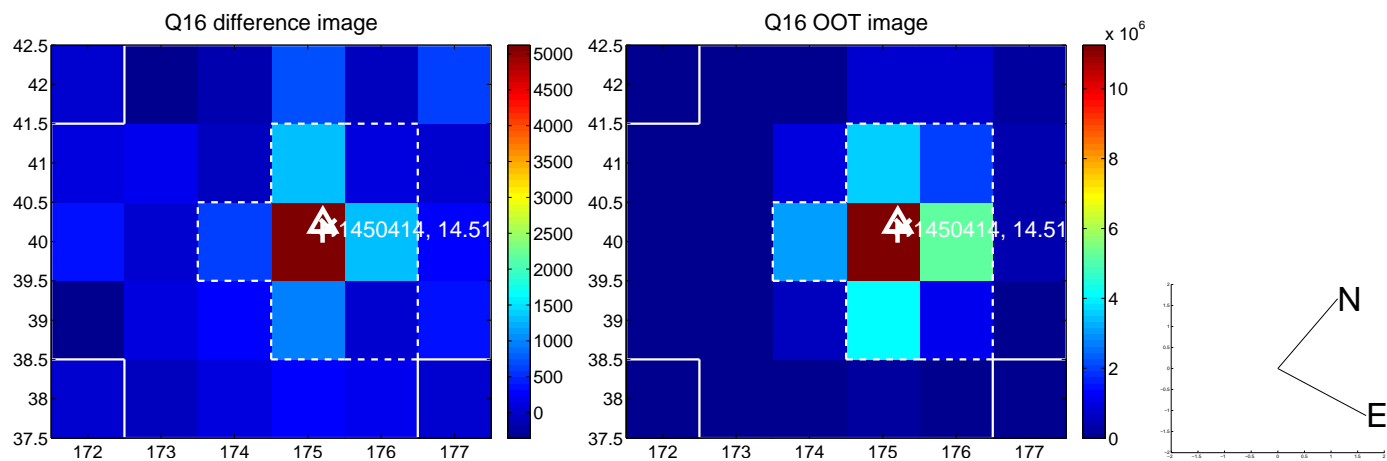
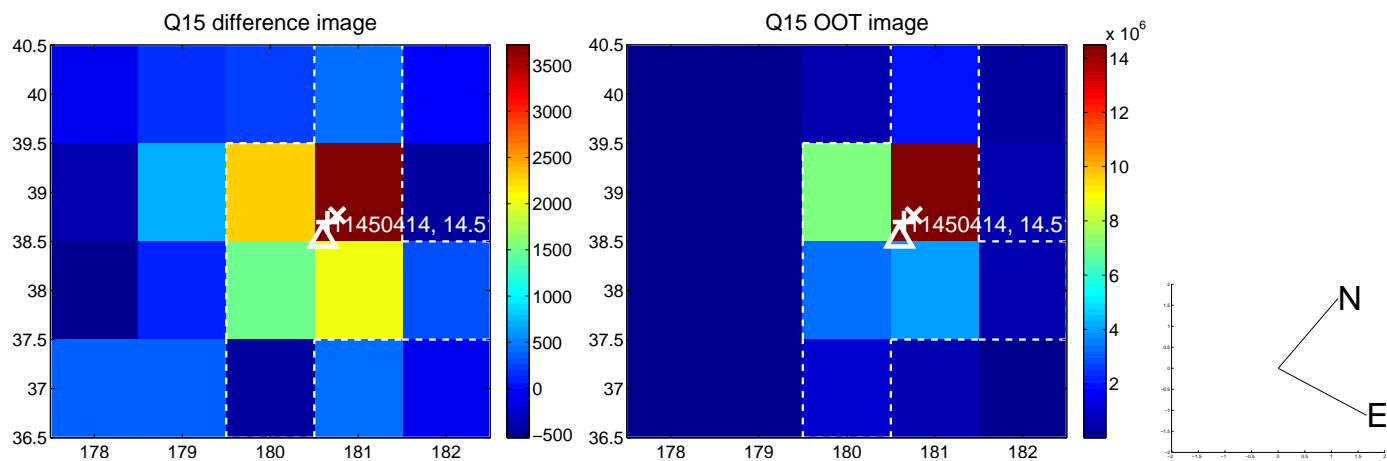
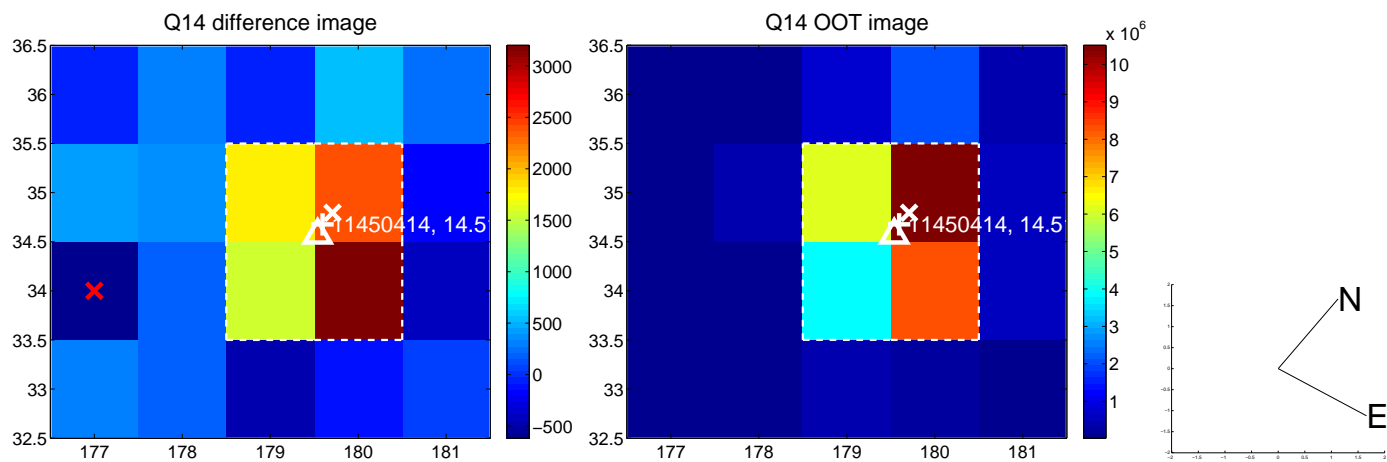
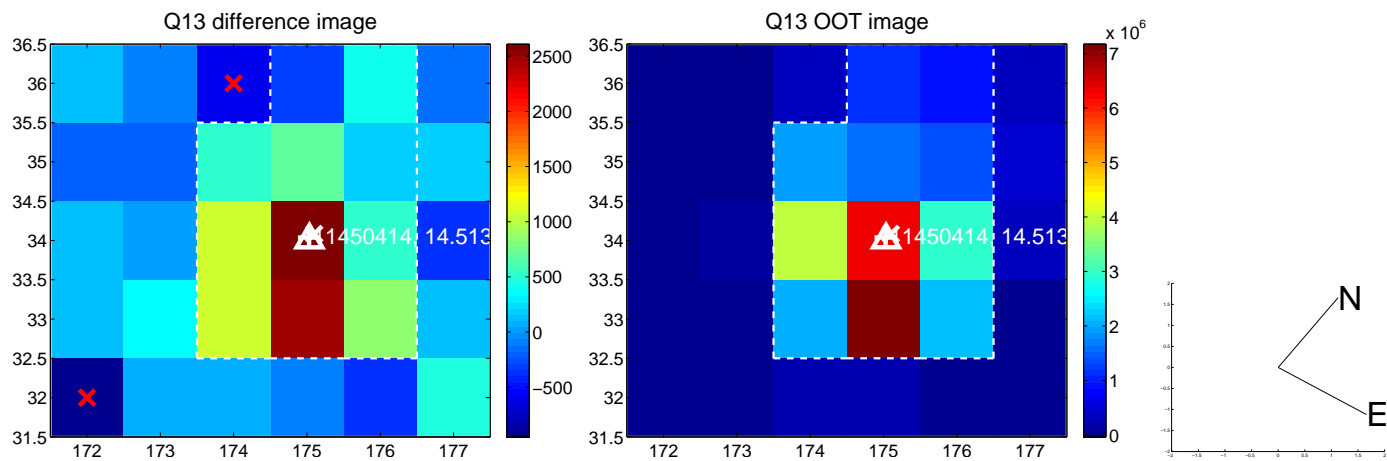
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



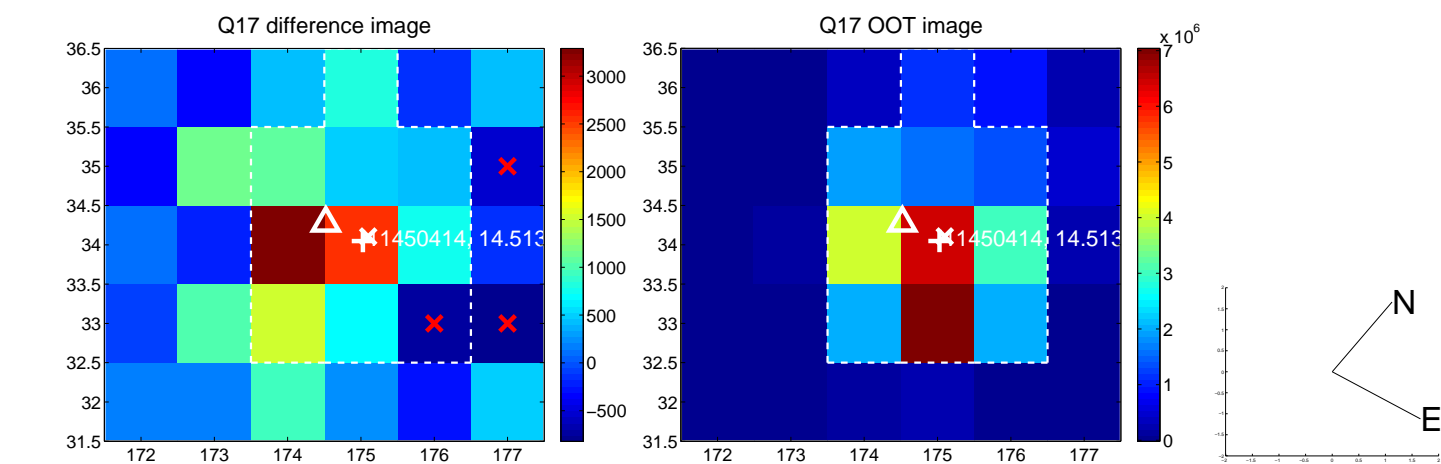
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



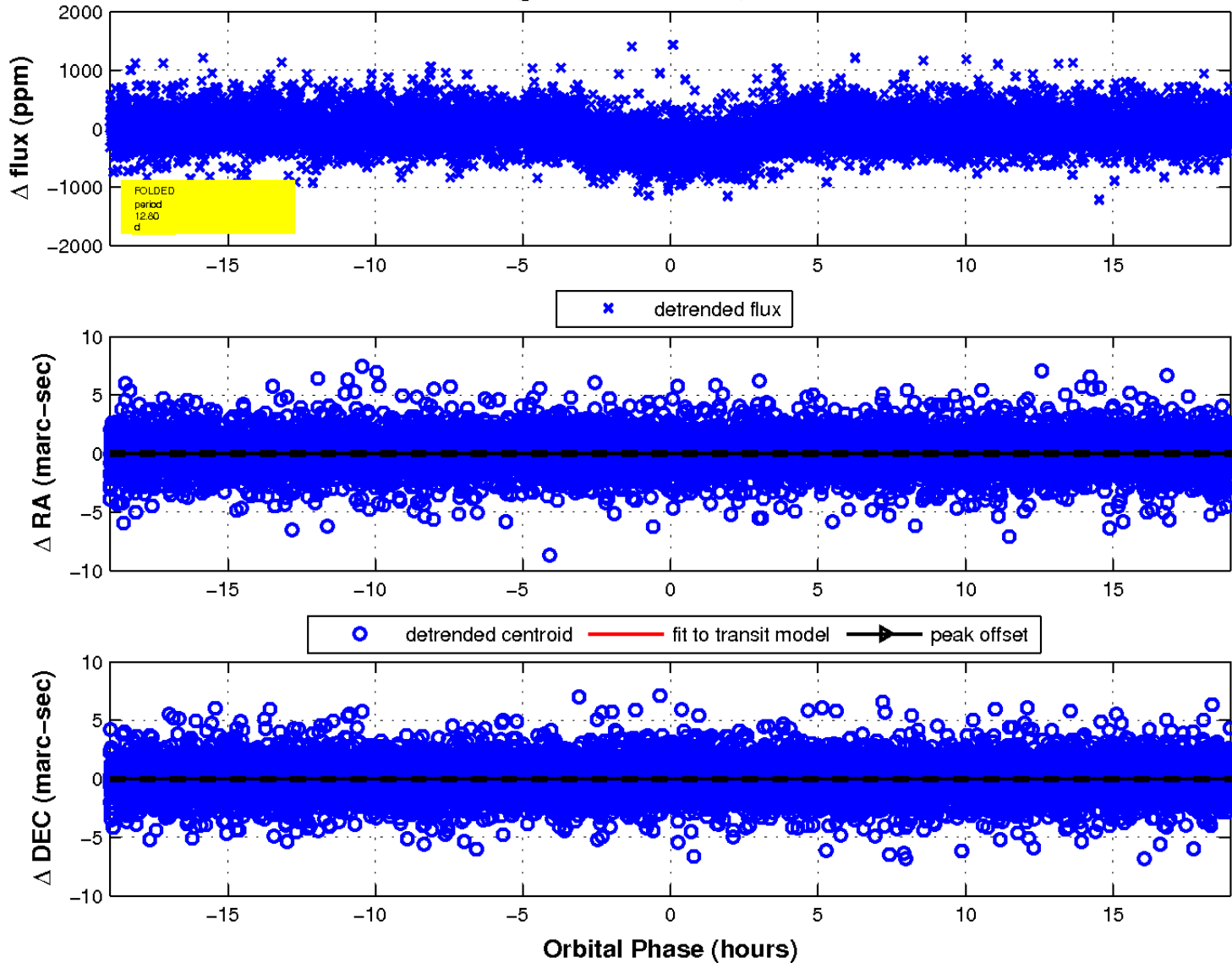
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

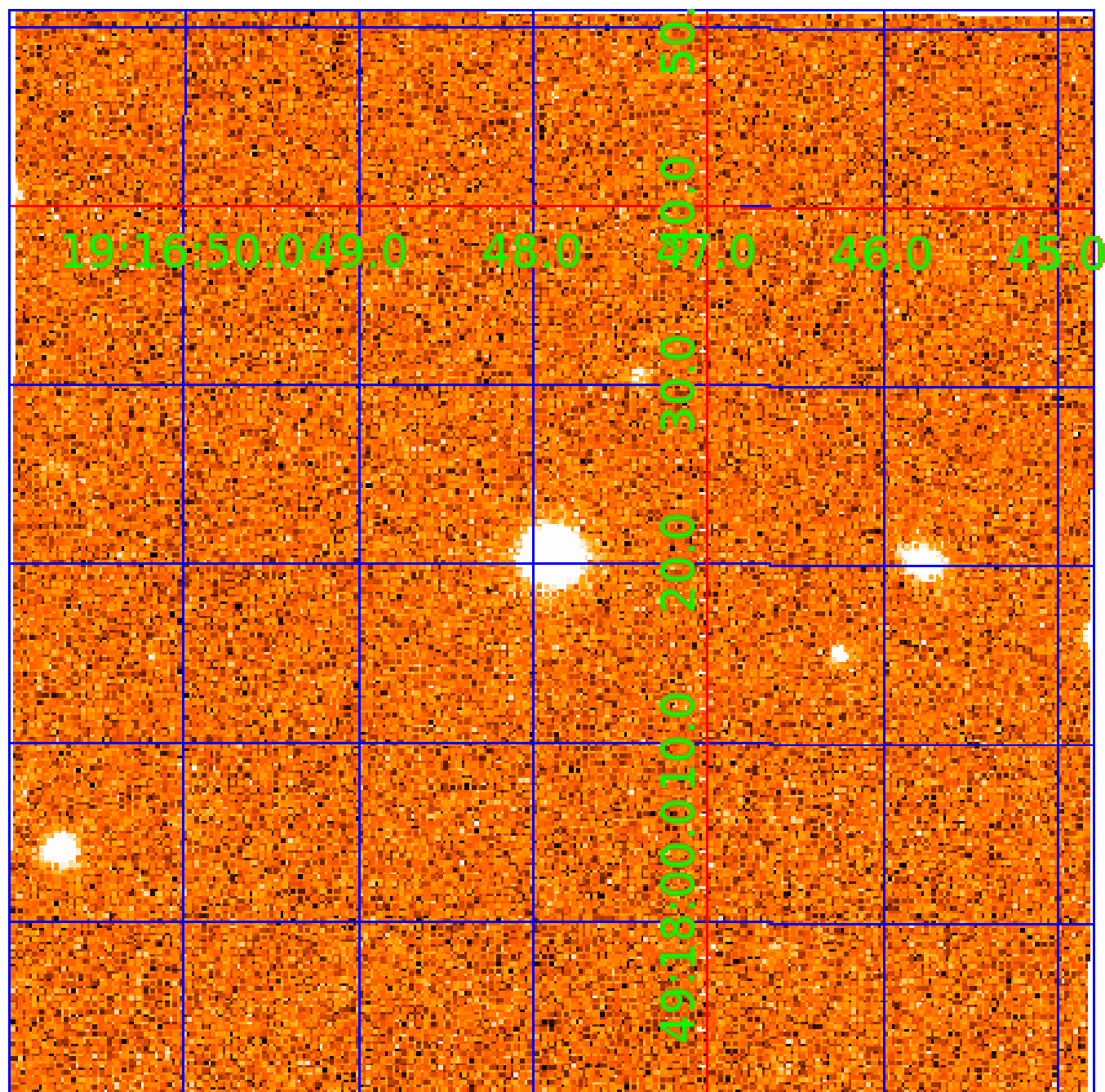


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 011450414

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})
011450414-01	OBS	1992.01	12.798358	133.647033	323.7	6.333	31.2	33.8	1.45	5592	2.84	160.72
011450414-02	OBS	1992.02	27.321291	154.301195	239.1	3.745	11.9	12.9	1.45	5592	2.44	58.47
011450414-03	OBS	1992.03	85.516552	181.364968	265.7	8.663	11.2	11.9	1.45	5592	2.63	12.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011450414-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011450414-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
011450414-03	OBS	FP	0.02	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

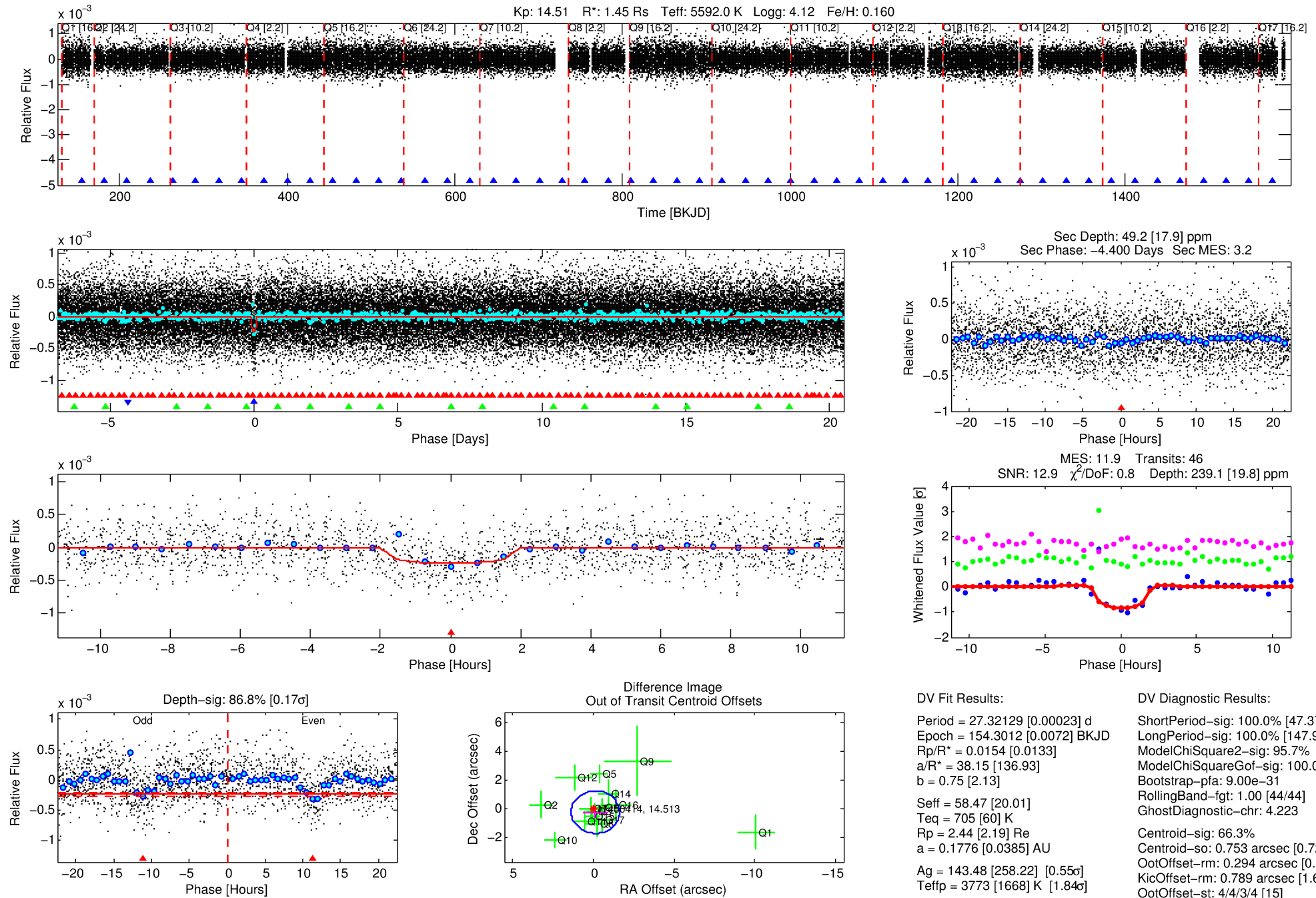
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011450414-02

No Significant Match Found

DV One-Page Summary

KIC: 11450414 Candidate: 2 of 3 Period: 27.321 d
KOI: K01992.02 Name: Kepler-347c Corr: 0.971



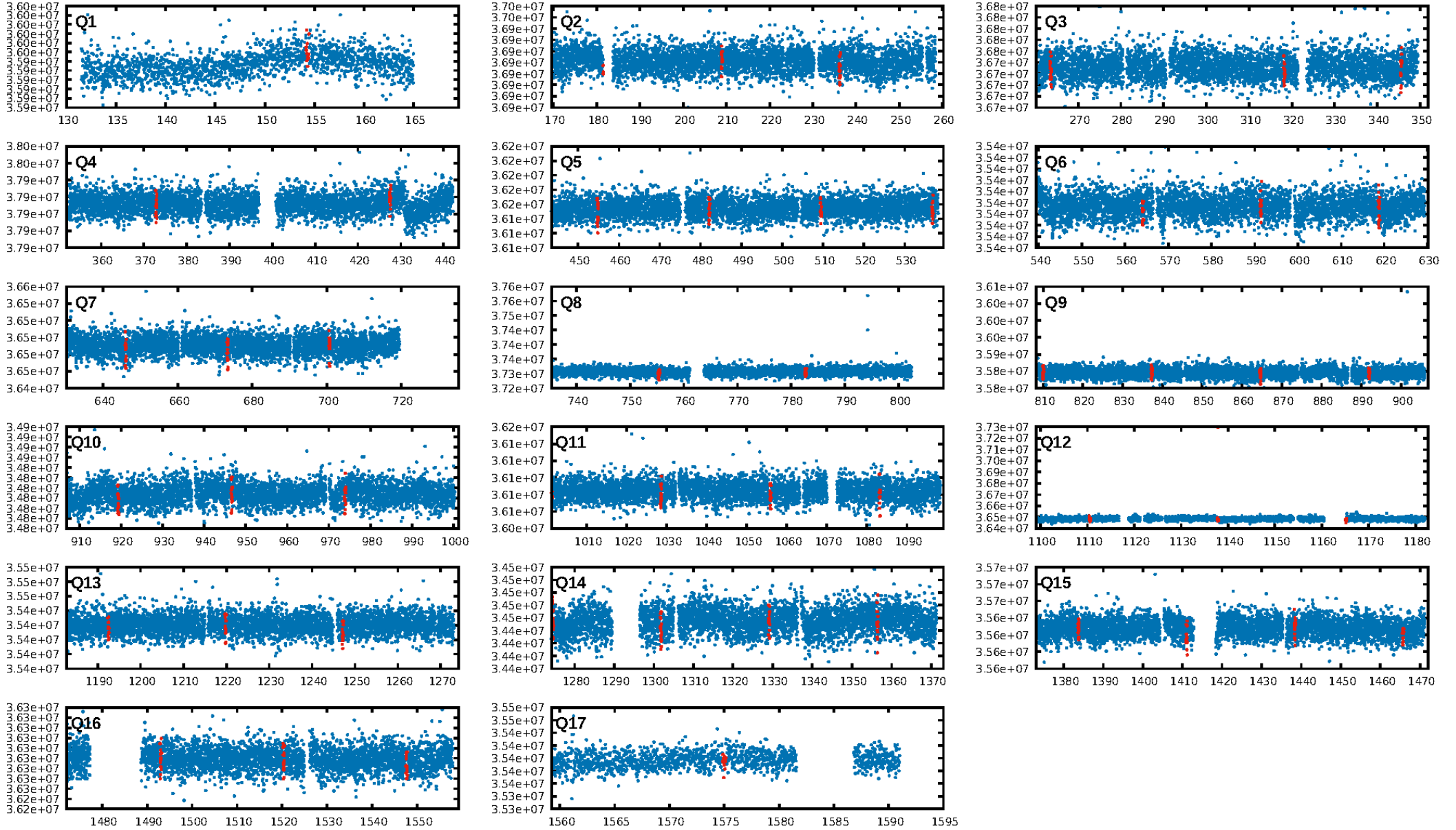
DV Fit Results:

Period = 27.32129 [0.00023] d
Epoch = 154.3012 [0.0072] BKJD
Rp/R* = 0.0154 [0.0133]
a/R* = 38.15 [136.93]
b = 0.75 [2.13]
Seff = 58.47 [20.01]
Teff = 705 [60] K
Rp = 2.44 [2.19] Re
a = 0.1776 [0.0385] AU
Ag = 143.48 [258.22] [0.55 σ]
Teffp = 3773 [1668] K [1.84 σ]

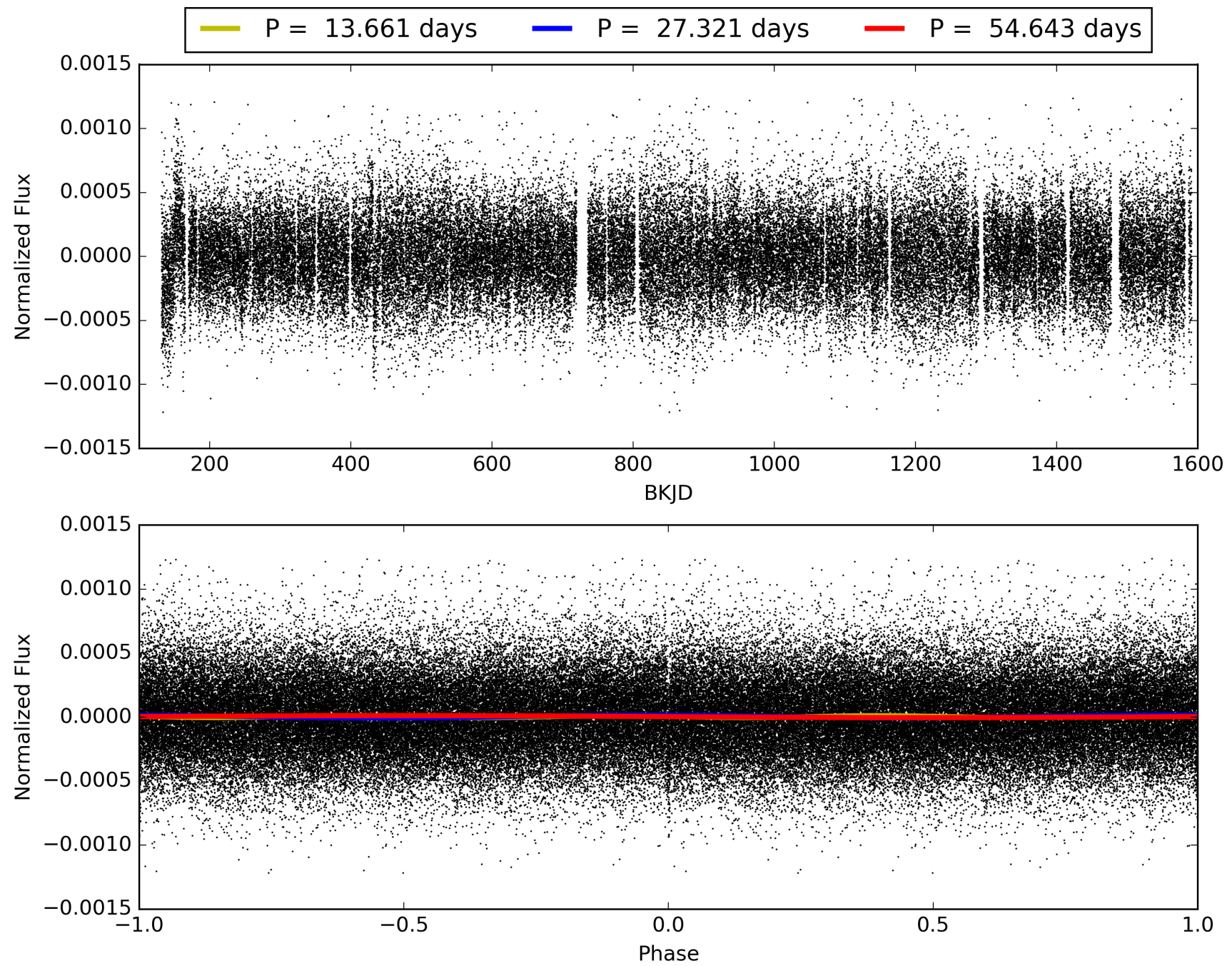
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [47.37 σ]
LongPeriod-sig: 100.0% [147.98 σ]
ModelChiSquare2-sig: 95.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.00e-31
RollingBand-fgt: 1.00 [44/44]
GhostDiagnostic-chr: 4.223
Centroid-sig: 66.3%
Centroid-so: 0.753 arcsec [0.72 σ]
OotOffset-rm: 0.294 arcsec [0.59 σ]
KicOffset-rm: 0.789 arcsec [1.68 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011450414-02, PDC Light Curves

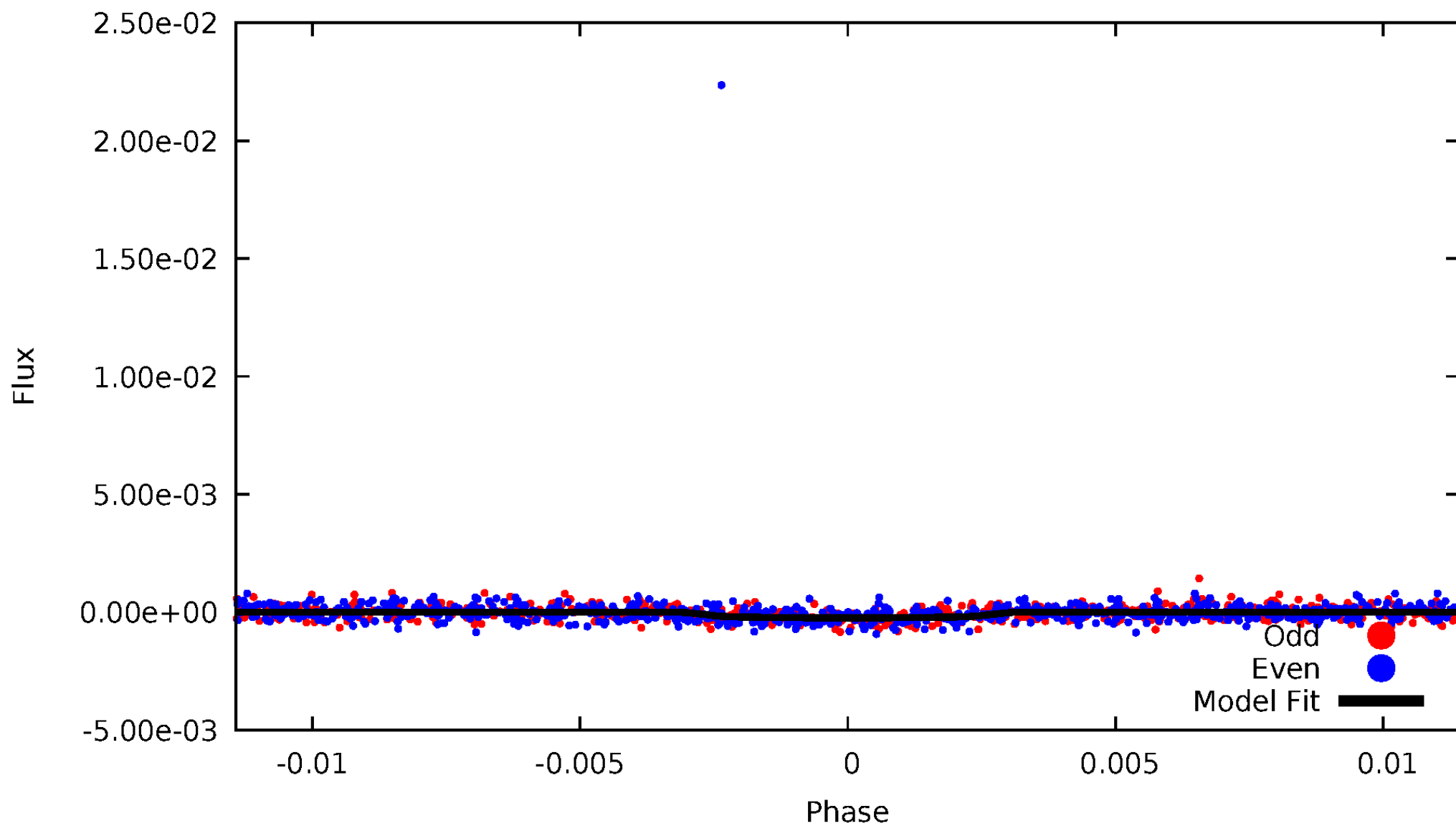


TCE 011450414-02



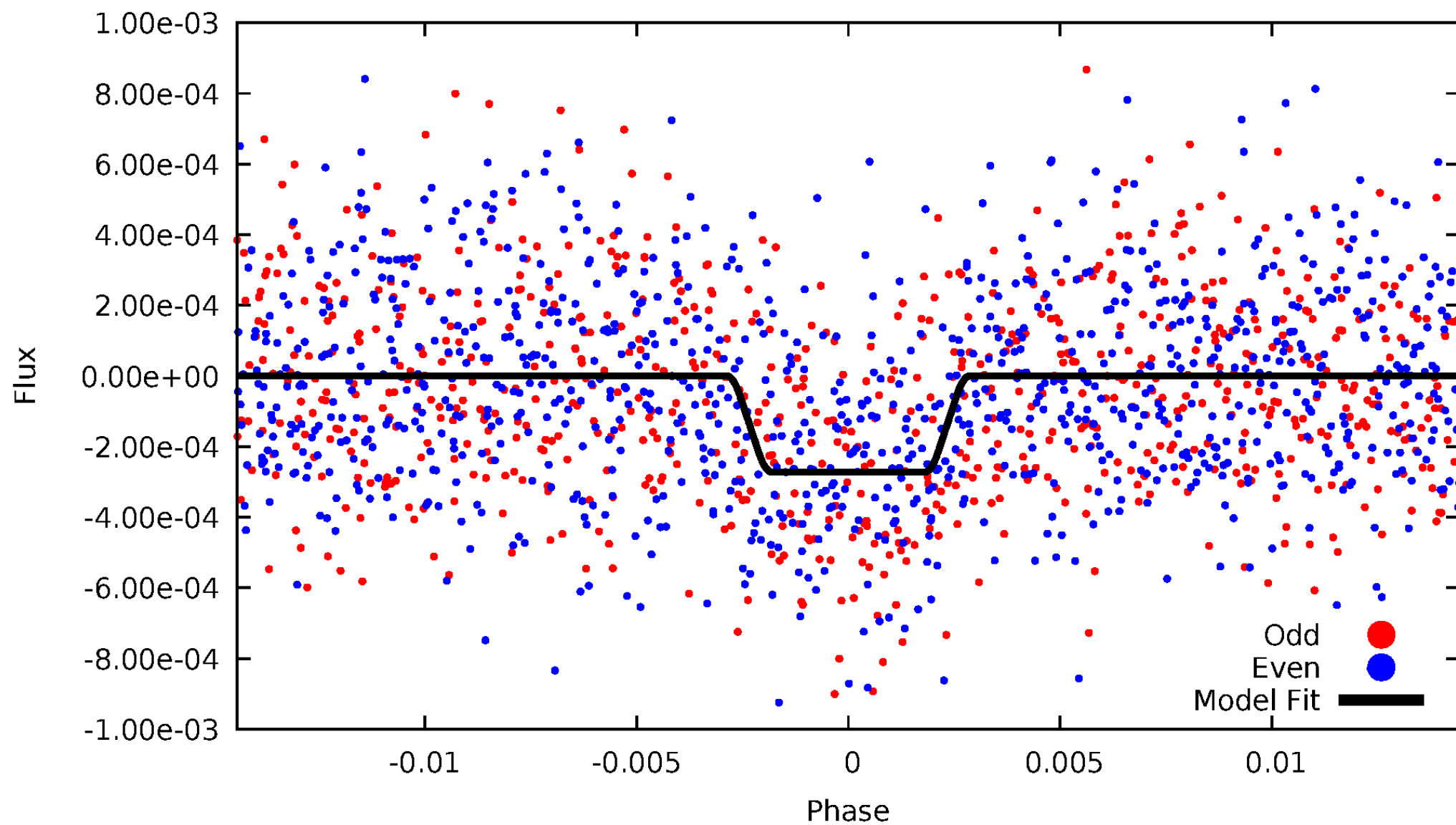
DV Odd/Even

TCE 011450414-02



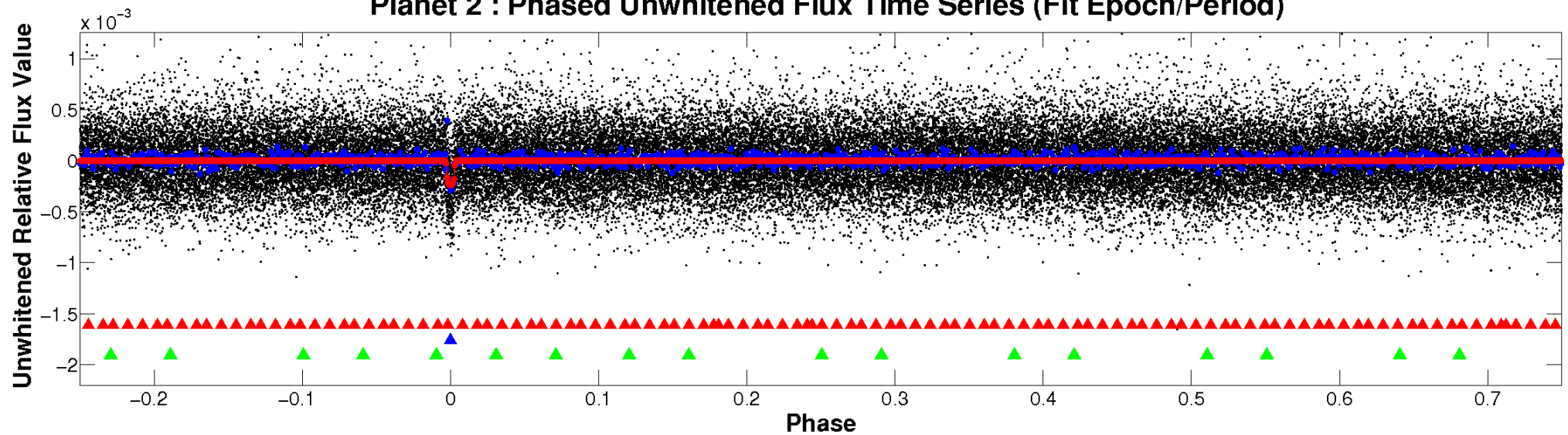
ALT Odd/Even

TCE 011450414-02

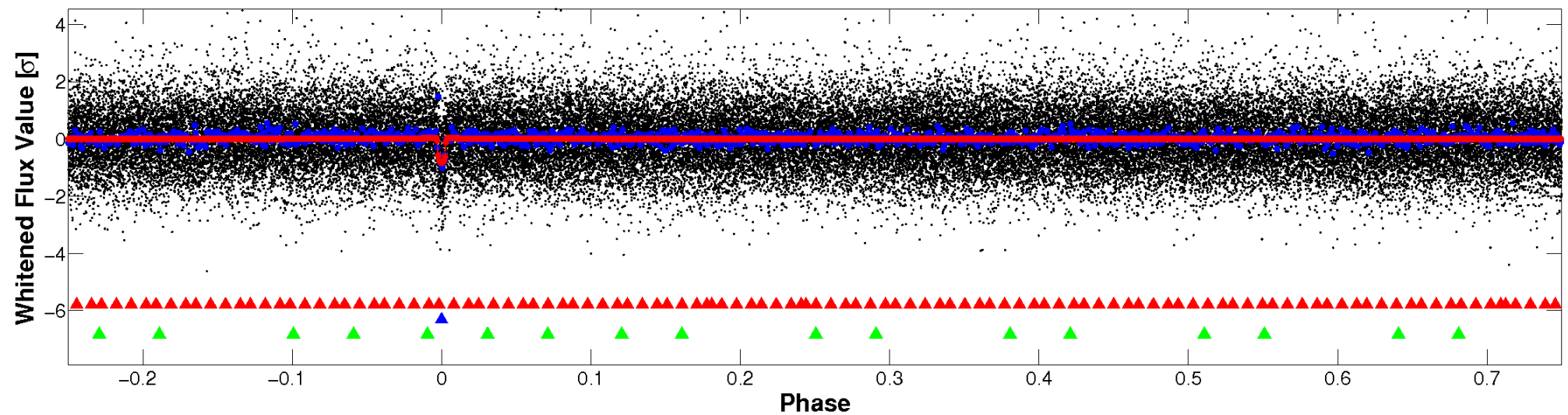


Non-Whitened Vs. Whitened Light Curve

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

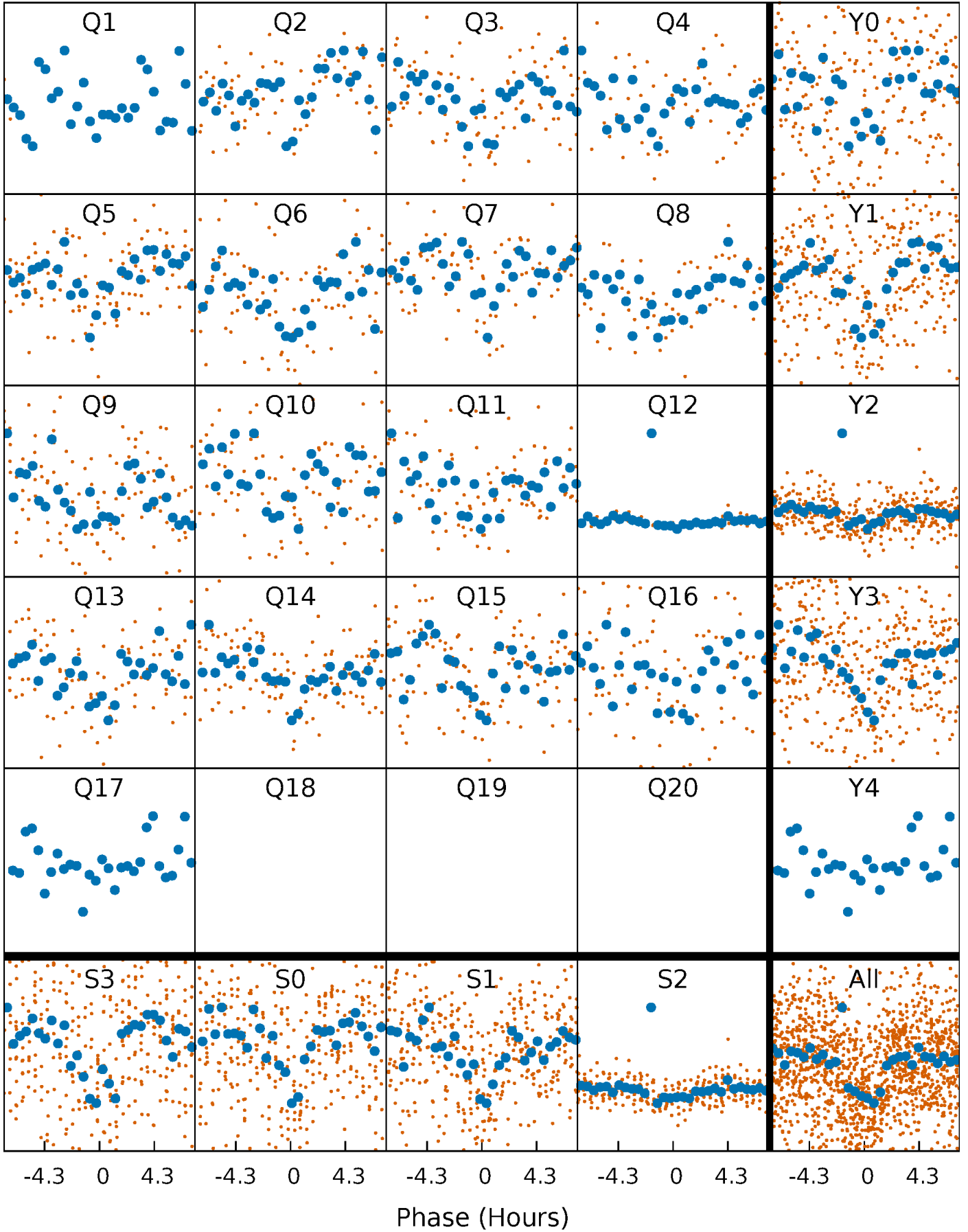


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



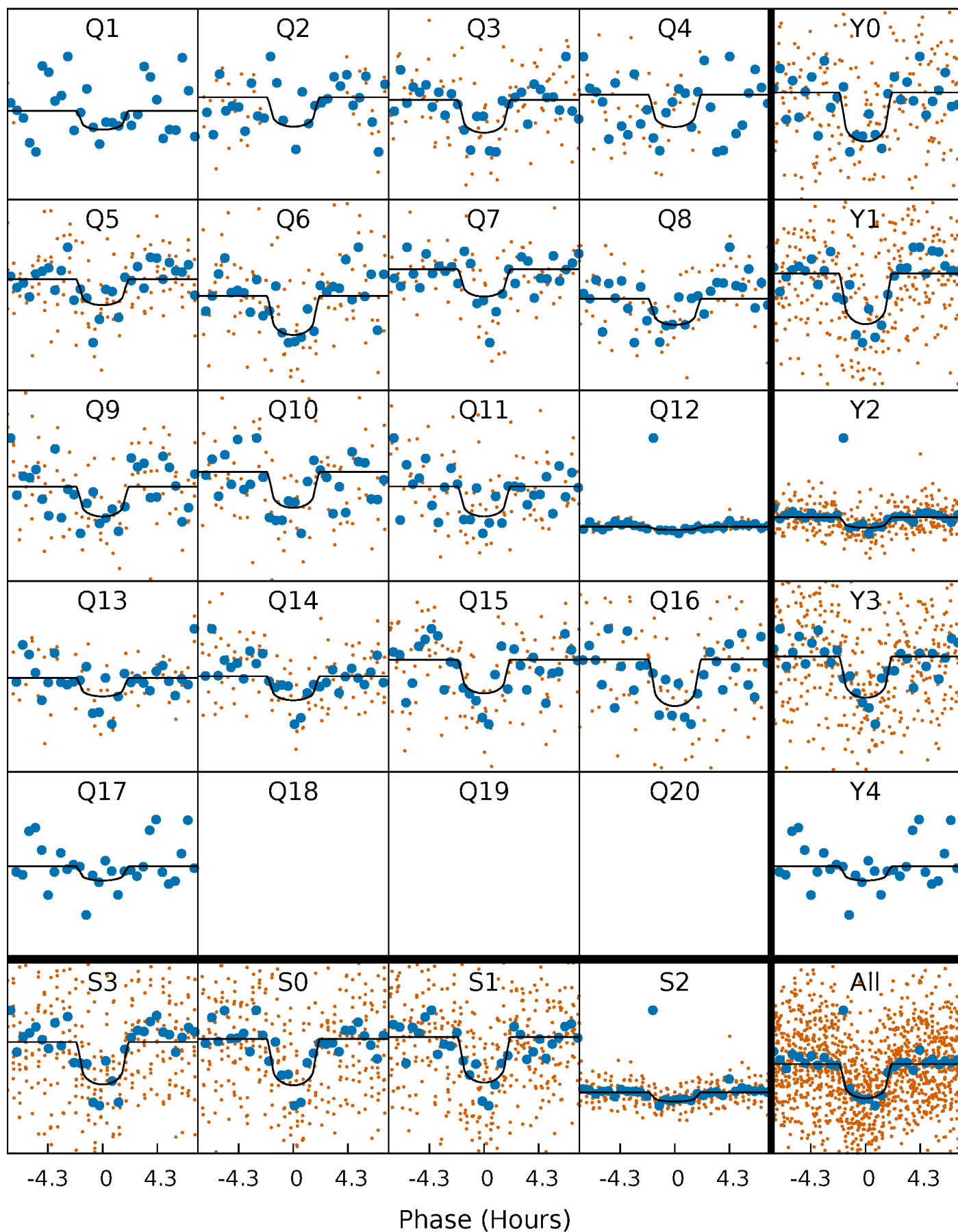
PDC Quarter-Phased Transit Curves

TCE 011450414-02 P= 27.321291 Days $T_0=154.301195$ (BKJD)



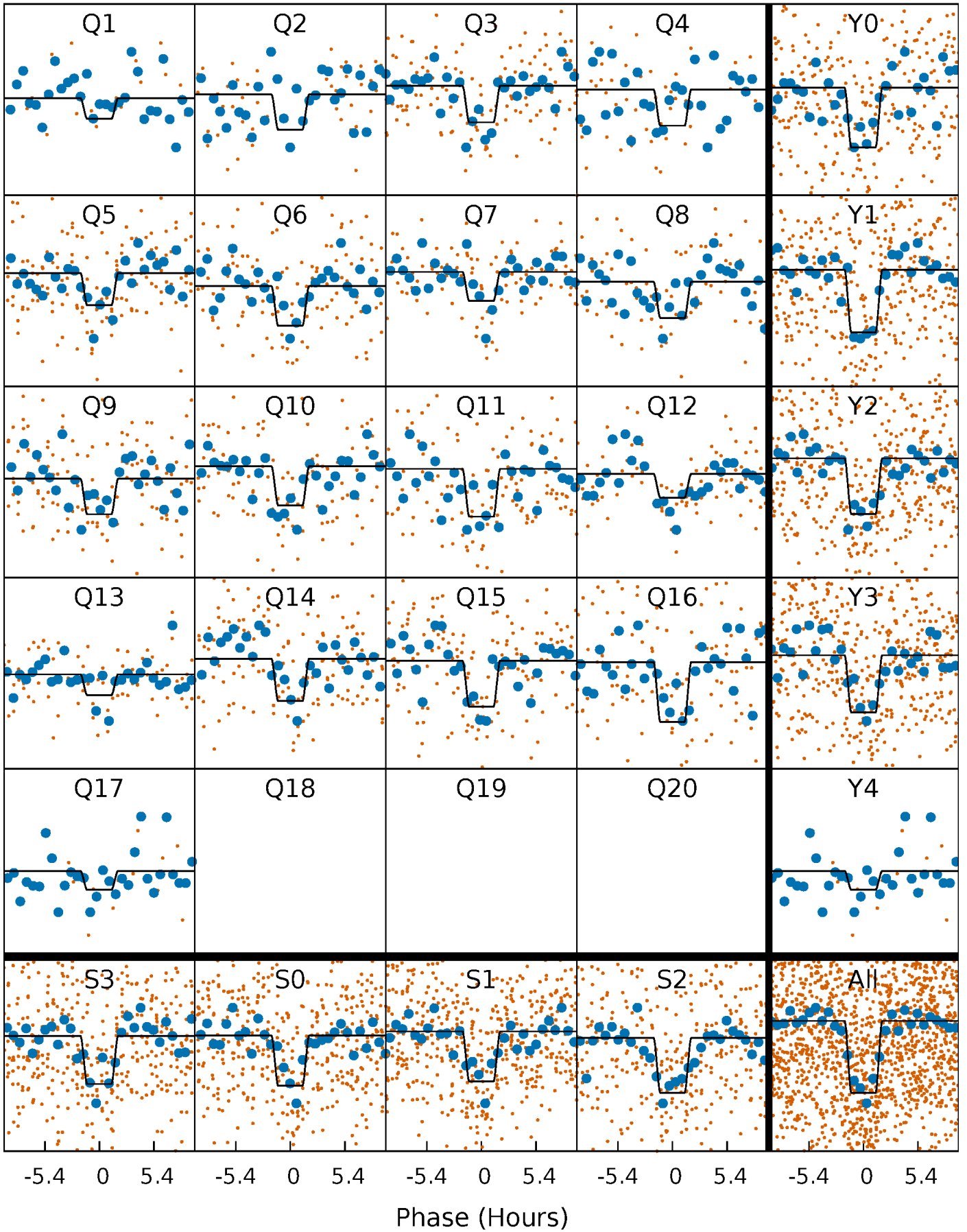
DV Quarter-Phased Transit Curves

TCE 011450414-02 P= 27.321291 Days $T_0=154.301195$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

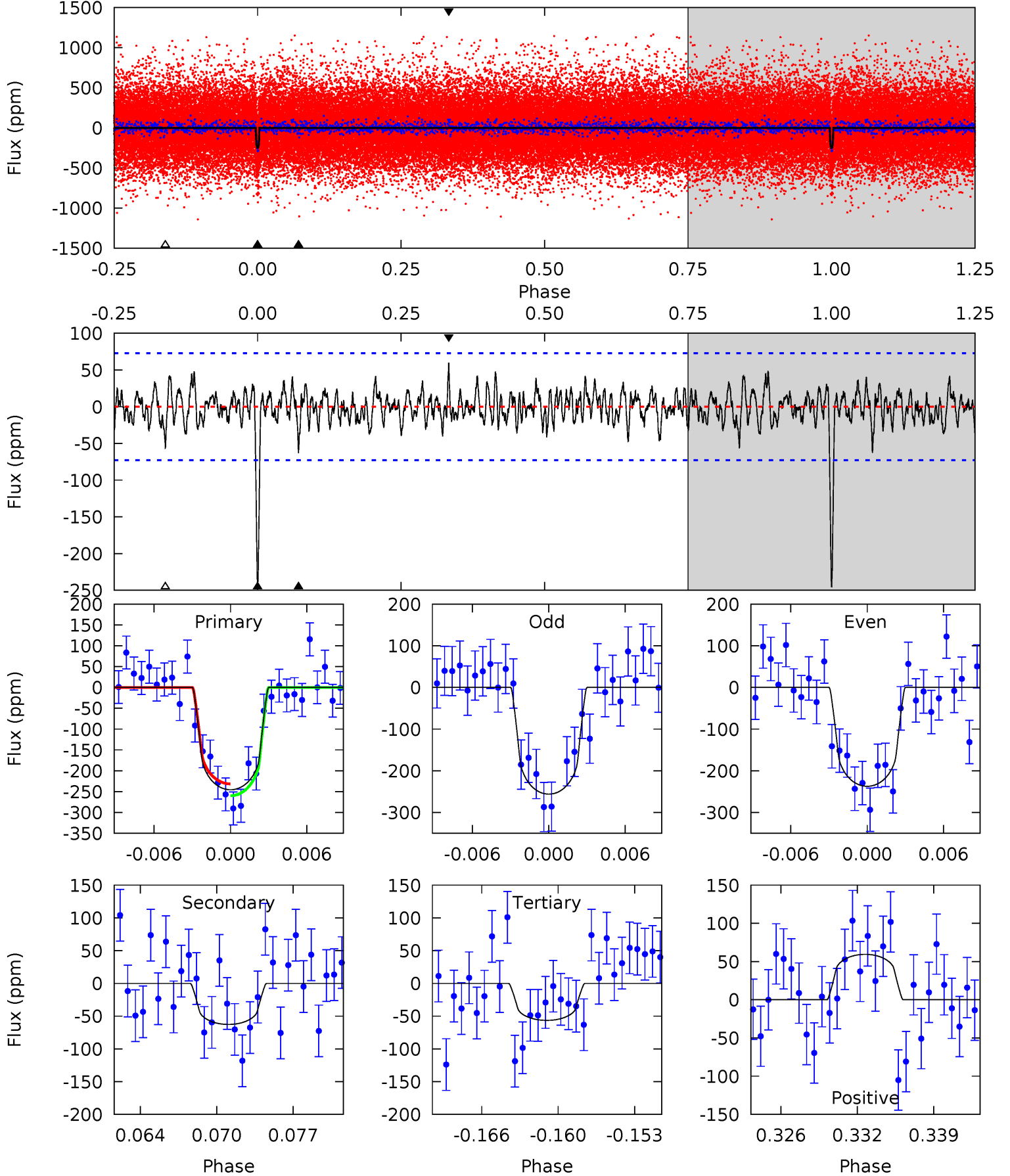
TCE 011450414-02 P= 27.321098 Days $T_0=154.308239$ (BKJD)



DV Model-Shift Uniqueness Test

011450414-02, P = 27.321291 Days, E = 126.979904 Days

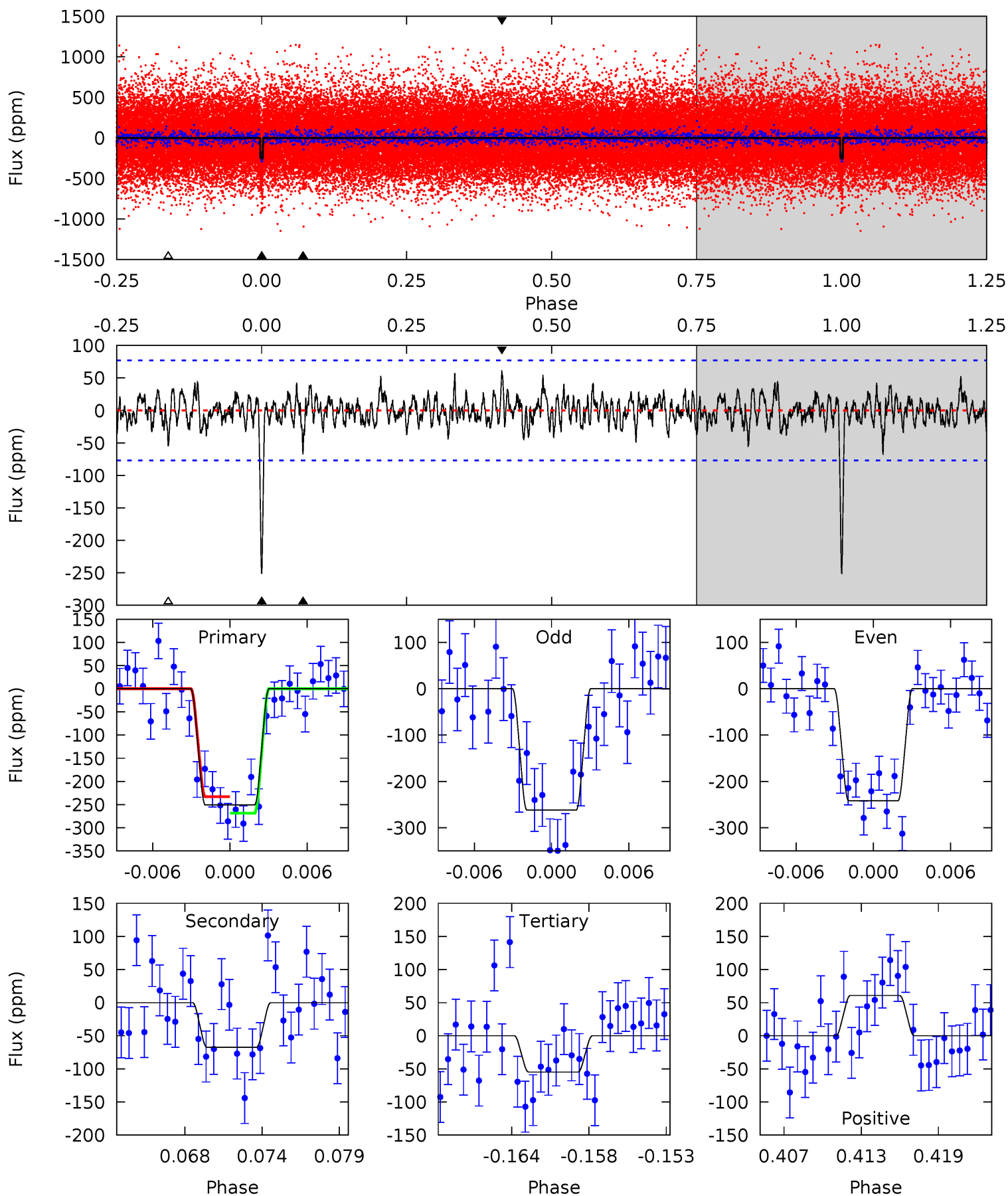
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	4.40	3.97	4.17	5.11	2.73	1.19	13.3	13.1	0.43	0.23	0.66	0.68	0.19	1.00



Alt Model-Shift Uniqueness Test

011450414-02, P = 27.321098 Days, E = 126.987141 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	4.51	3.66	4.05	5.13	2.77	1.14	13.1	12.7	0.85	0.45	0.66	0.98	0.20	1.18



Stellar Parameters For KIC 011450414

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5592^{+75}_{-75}	$4.115^{+0.195}_{-0.090}$	$0.160^{+0.150}_{-0.150}$	$1.451^{+0.211}_{-0.342}$	$1.000^{+0.072}_{-0.072}$	$0.461^{+0.511}_{-0.142}$
	+1%/-1%	+5%/-2%	+94%/-94%	+15%/-24%	+7%/-7%	+111%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011450414-02 / KOI 1992.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 14	$2.74^{+1.99}_{-1.70}$	982^{+38}_{-61}	4001^{+1979}_{-644}	144^{+807}_{-96}
Alt.	-68 ± 15	$2.78^{+1.96}_{-1.65}$	977^{+45}_{-56}	4035^{+1810}_{-675}	149^{+706}_{-99}

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 $A_{obs} \gg 1.0$

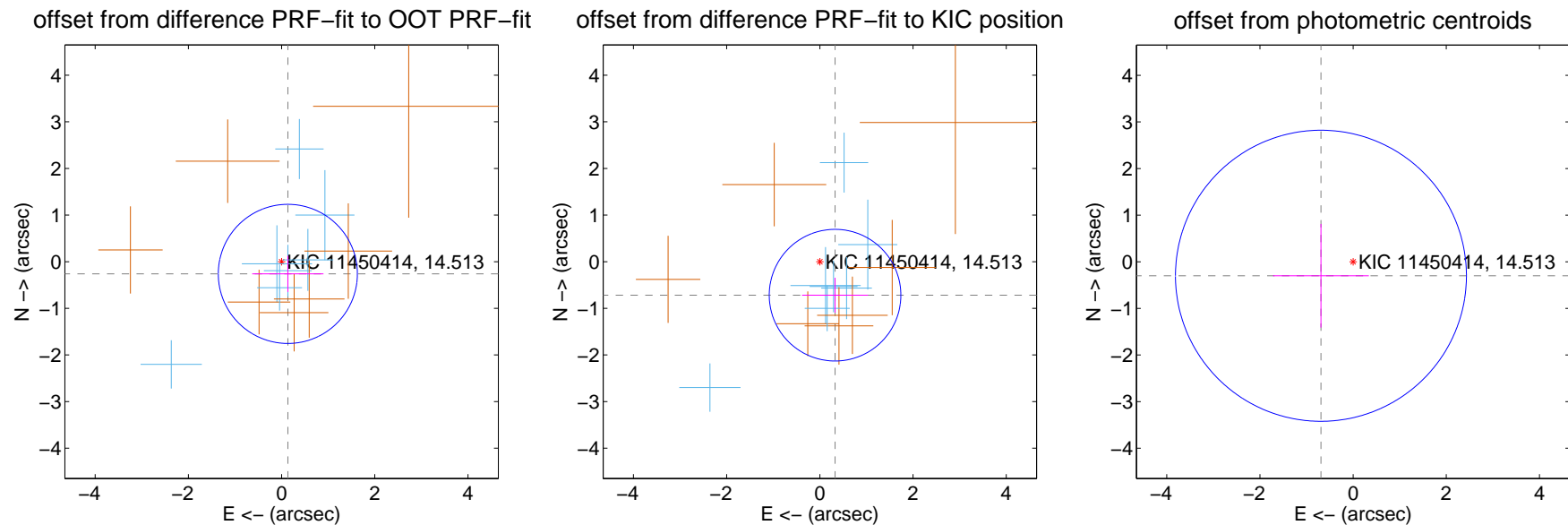
DV Centroid Data

Supplemental centroid analysis for 011450414-02. Kepler magnitude: 14.51. Transit SNR 12.95

There are 7 quarters with good PRF difference image offsets

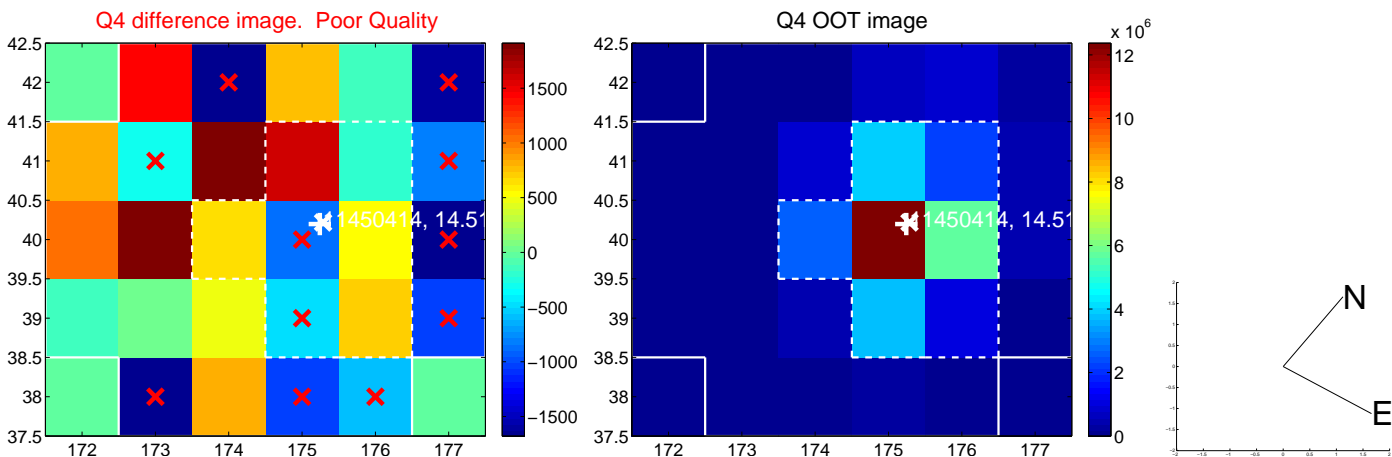
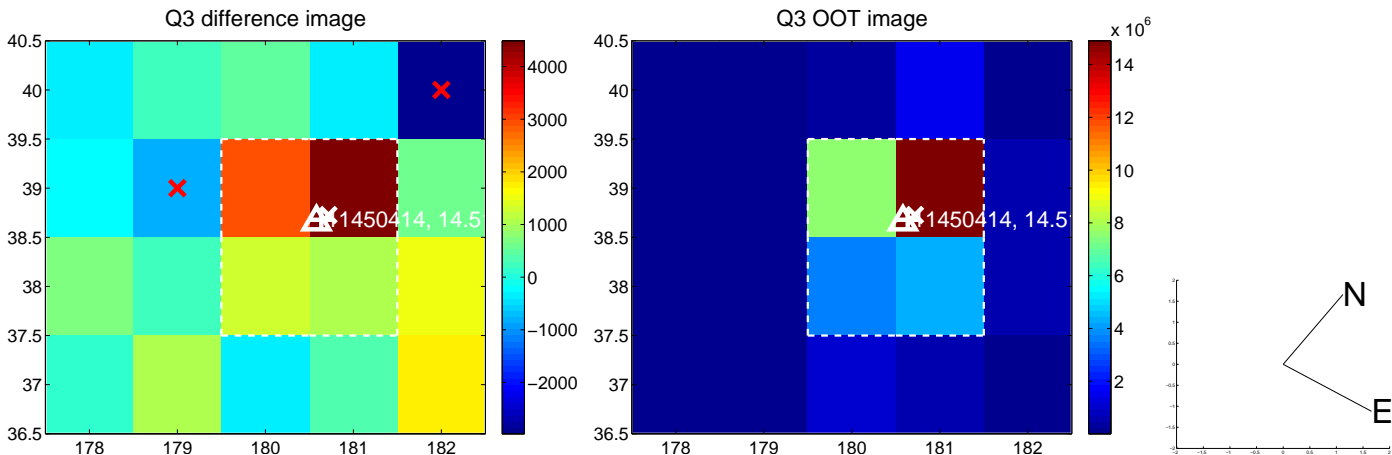
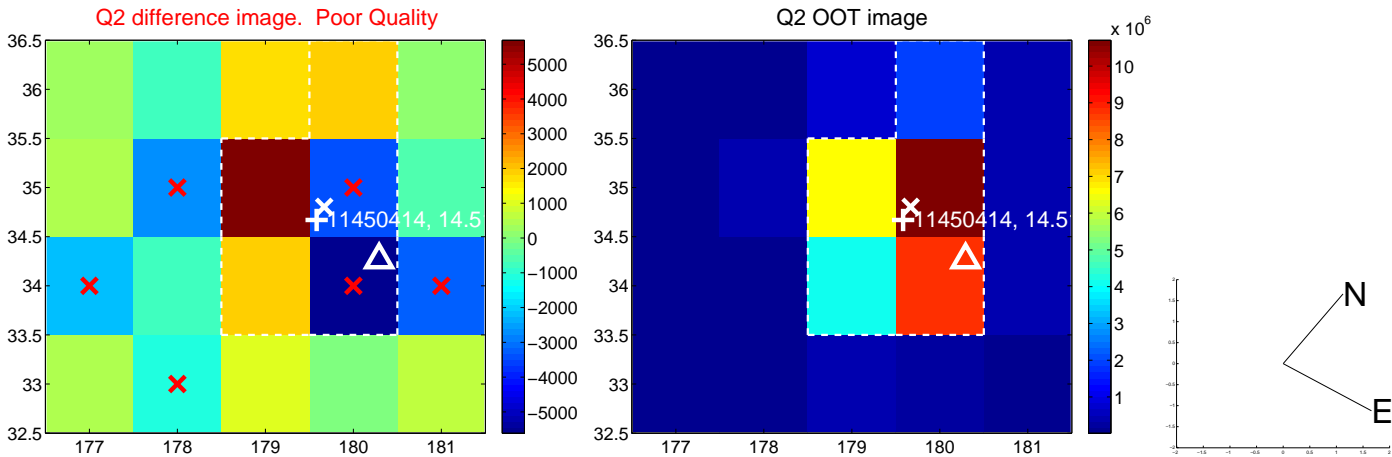
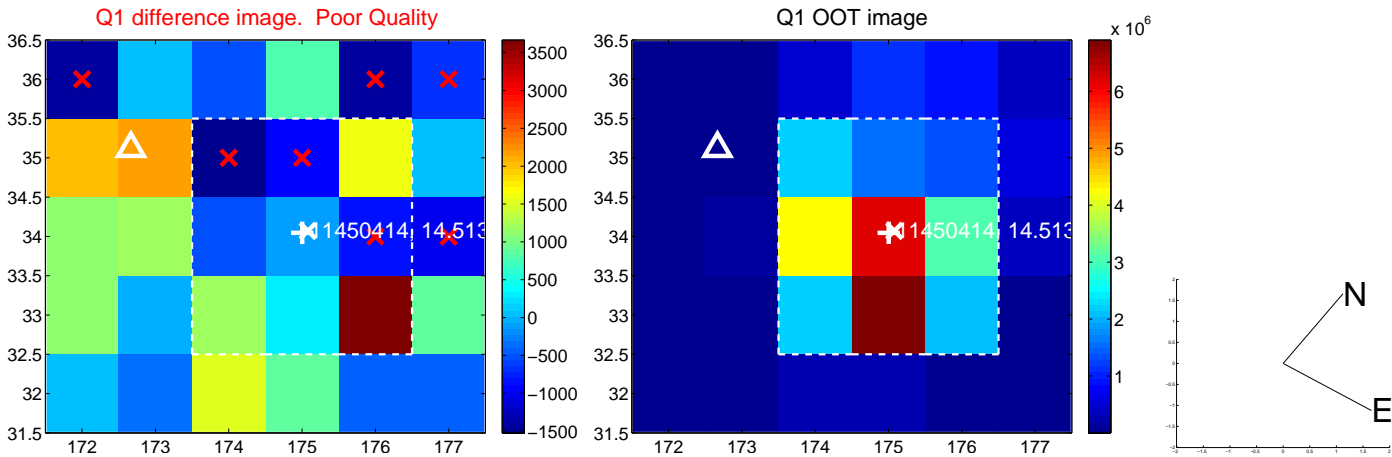
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.294 ± 0.497	0.59	-0.134 ± 0.765	-0.262 ± 0.389
PRF-fit source offset from KIC position	0.789 ± 0.471	1.68	-0.326 ± 0.707	-0.718 ± 0.374
photometric centroid source offset	0.75 ± 1.04	0.72	0.69 ± 1.03	-0.30 ± 1.11

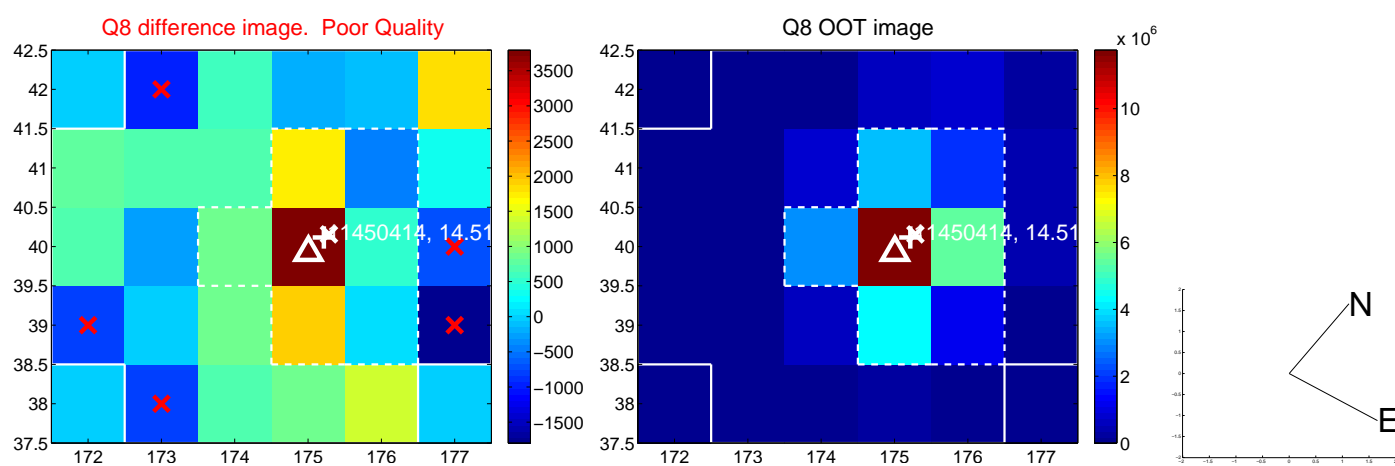
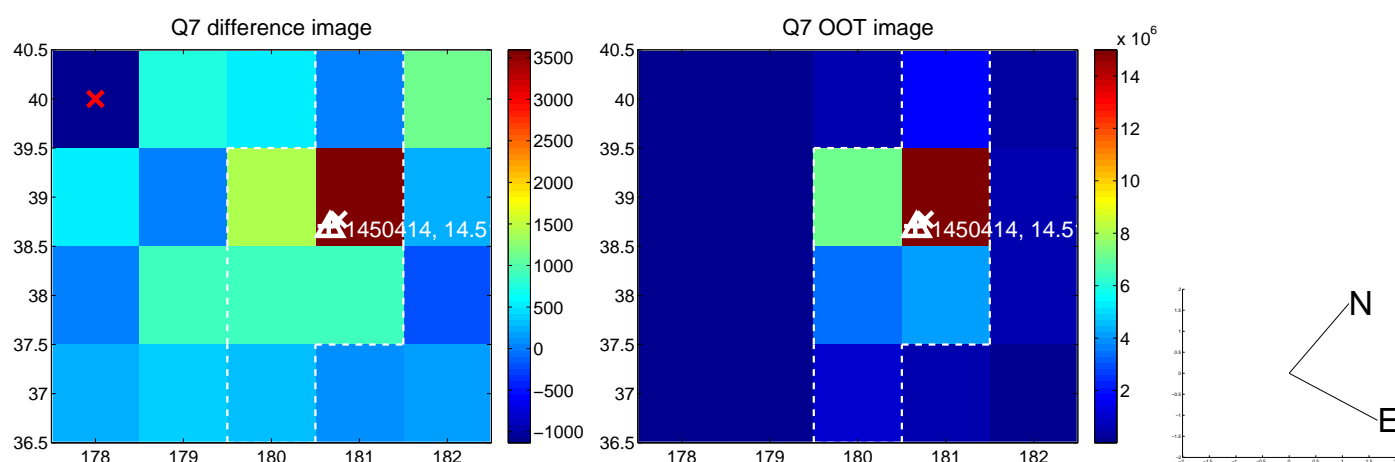
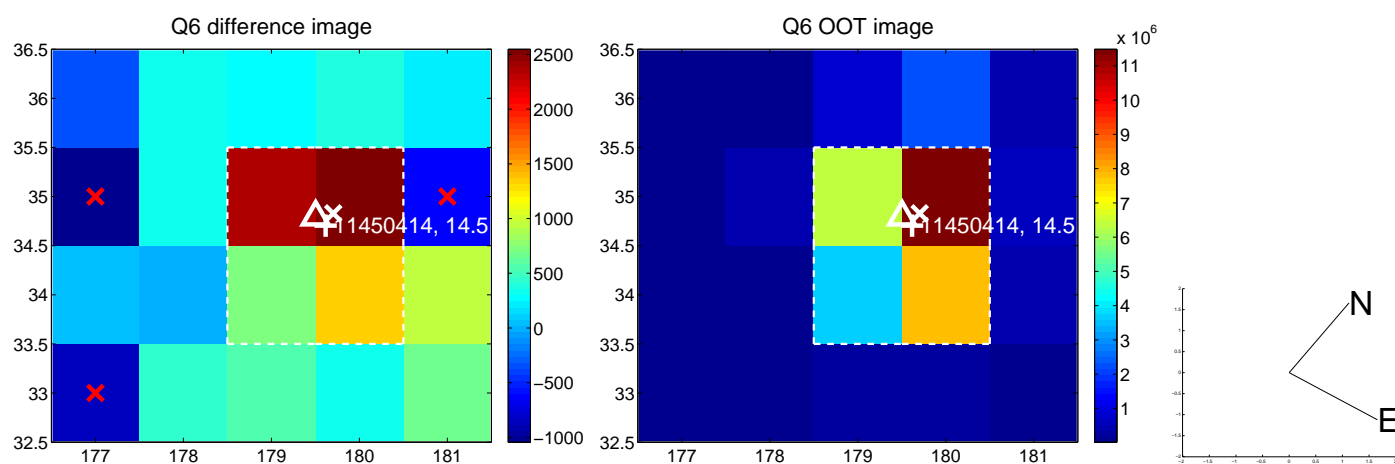
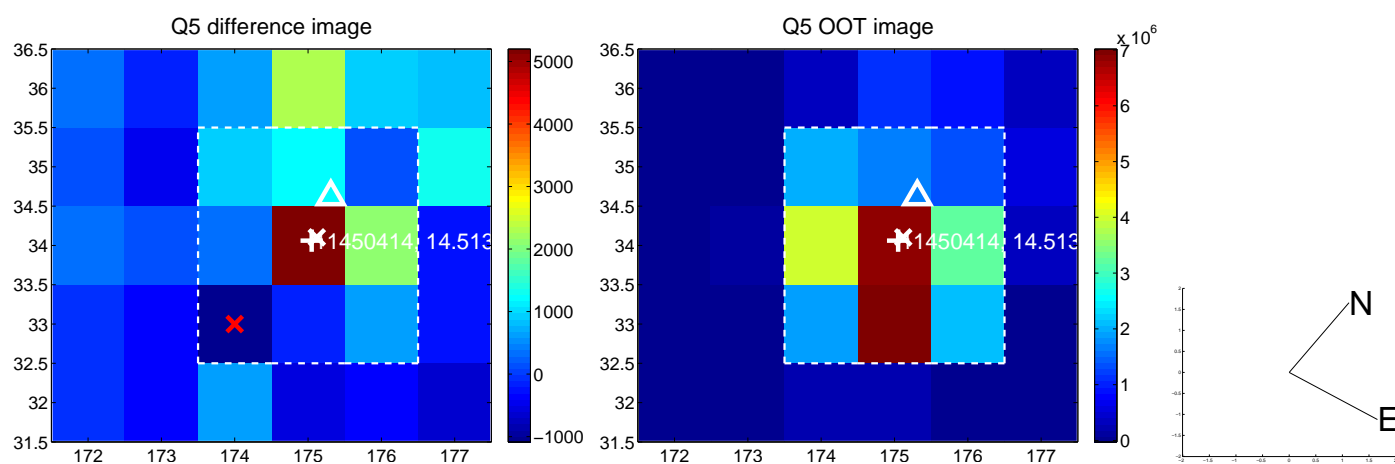


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

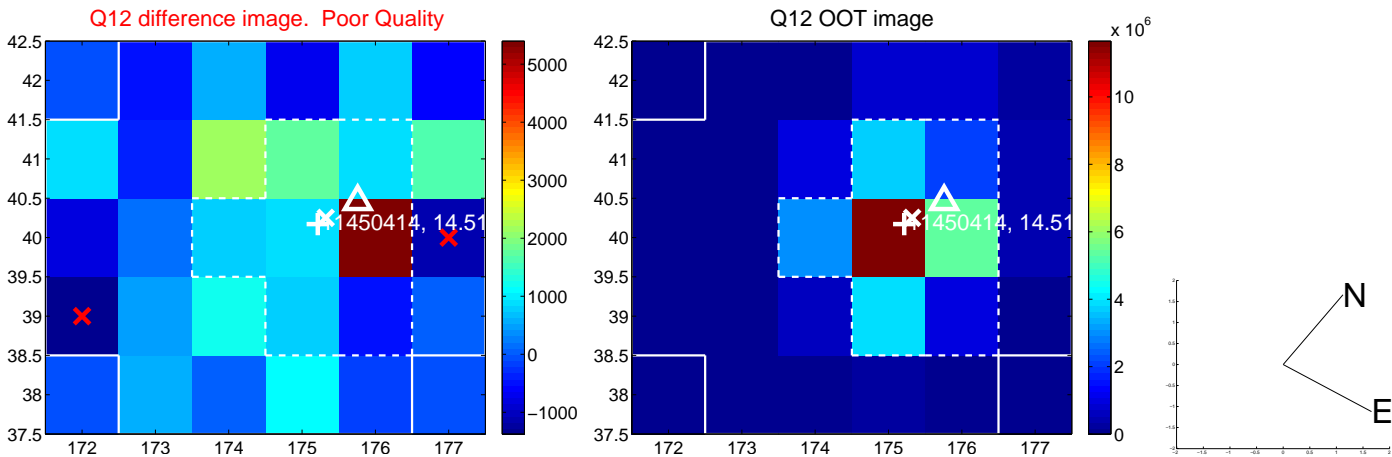
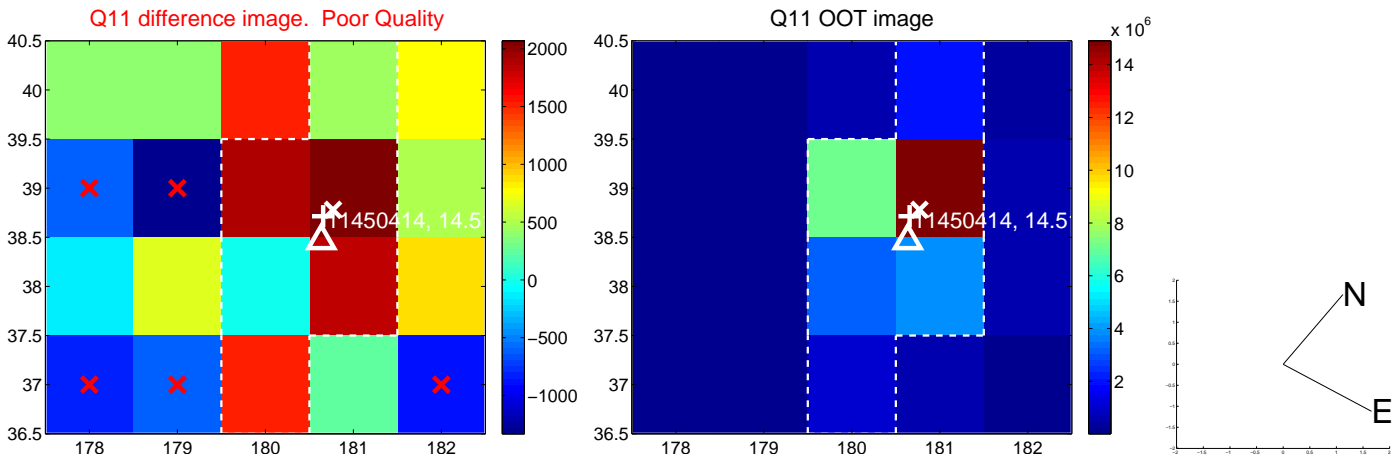
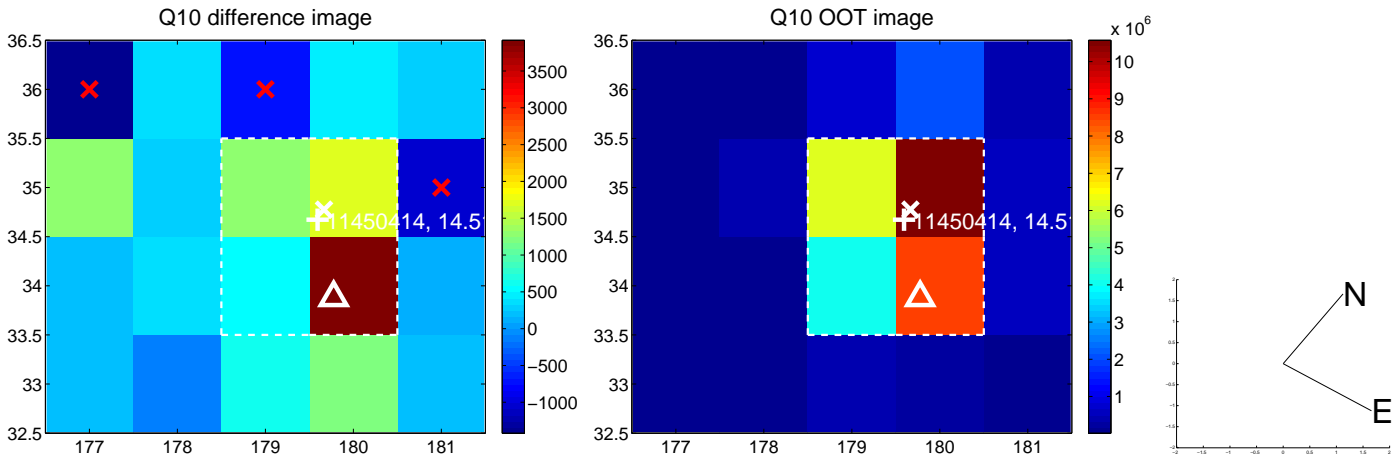
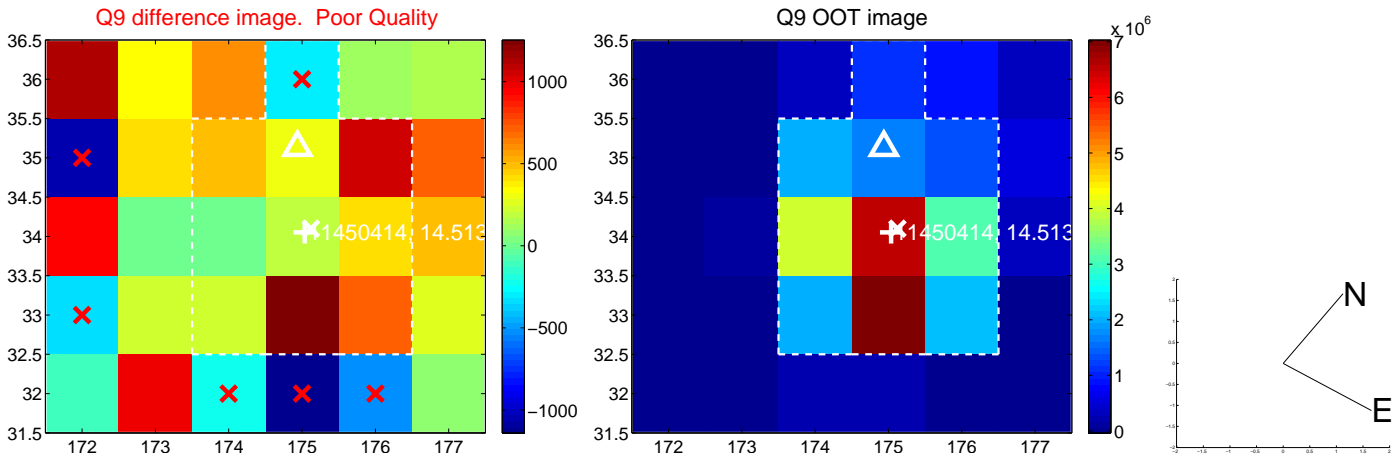
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



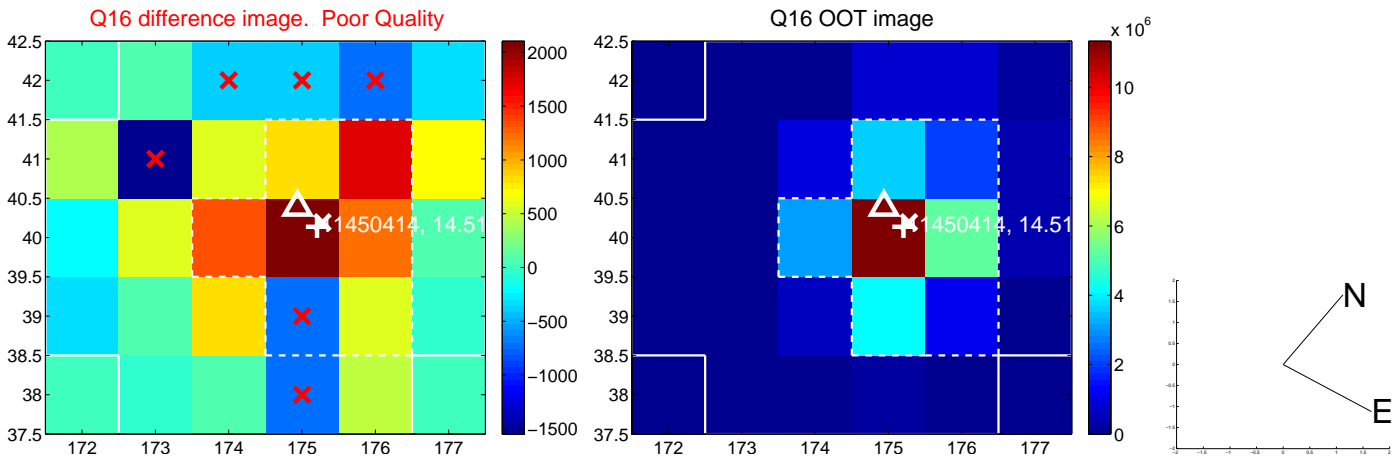
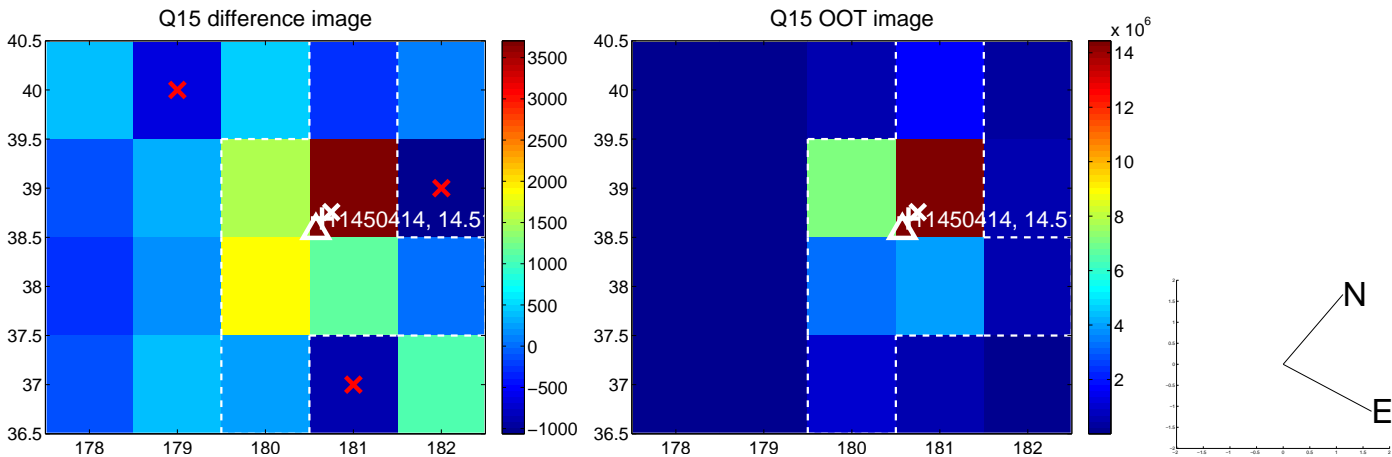
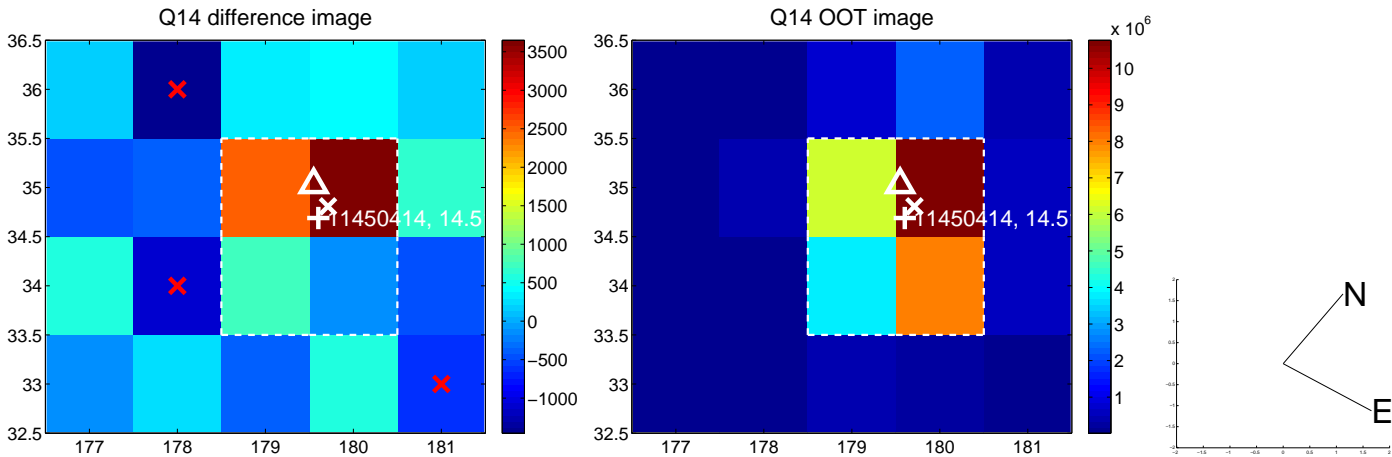
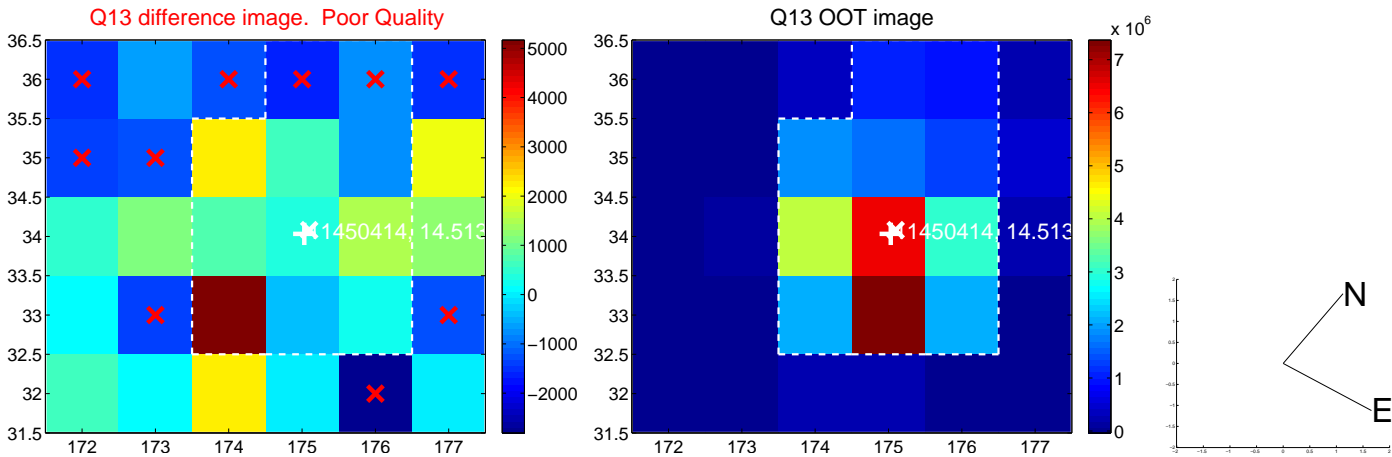
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



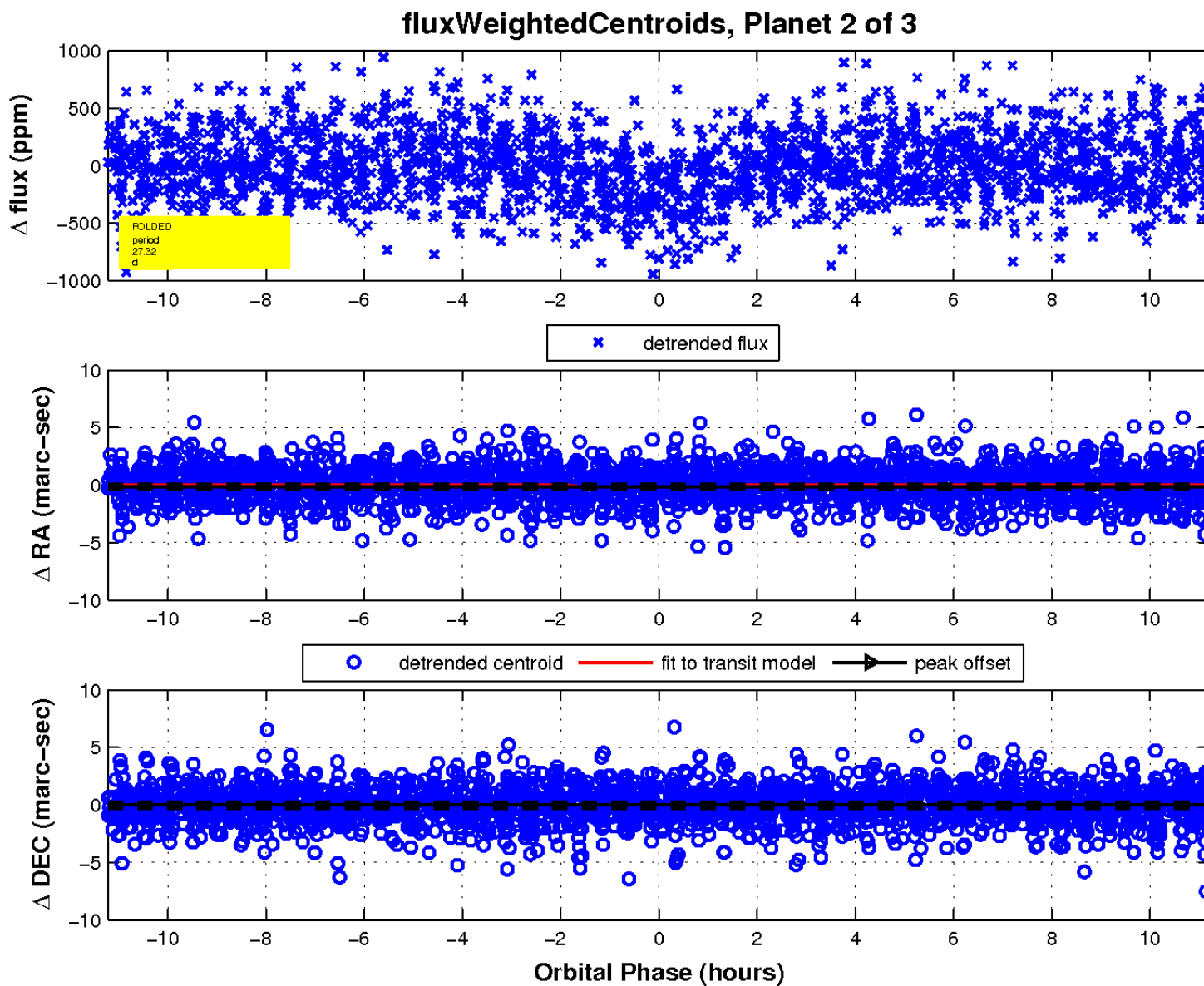
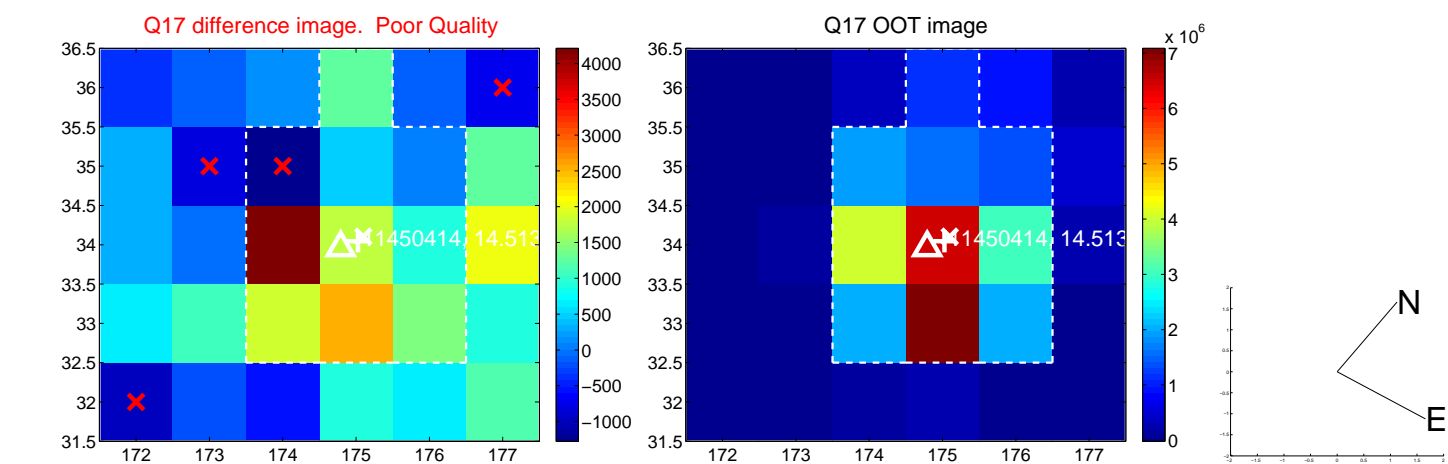
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

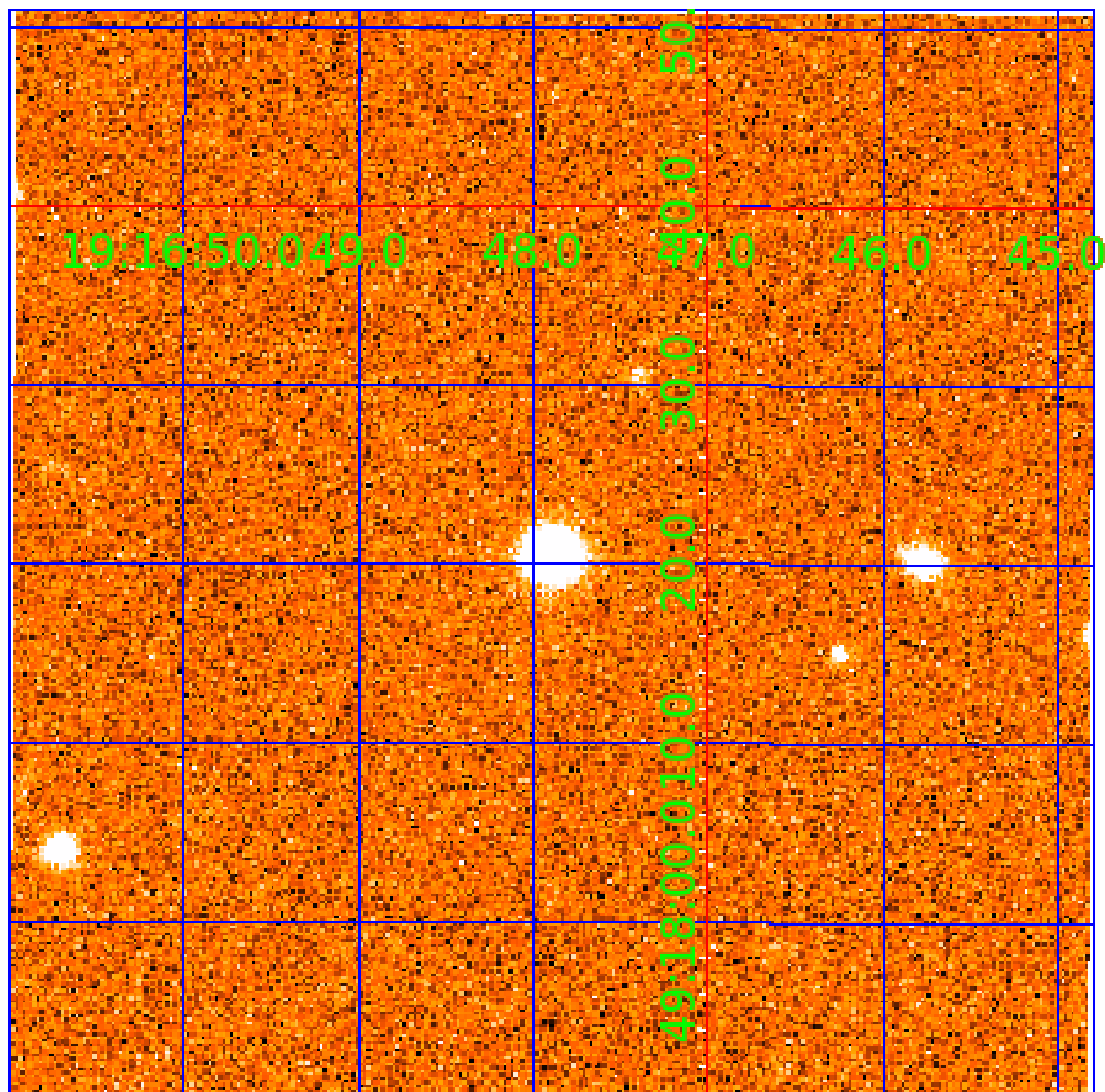


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011450414

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})
011450414-01	OBS	1992.01	12.798358	133.647033	323.7	6.333	31.2	33.8	1.45	5592	2.84	160.72
011450414-02	OBS	1992.02	27.321291	154.301195	239.1	3.745	11.9	12.9	1.45	5592	2.44	58.47
011450414-03	OBS	1992.03	85.516552	181.364968	265.7	8.663	11.2	11.9	1.45	5592	2.63	12.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011450414-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011450414-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
011450414-03	OBS	FP	0.02	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

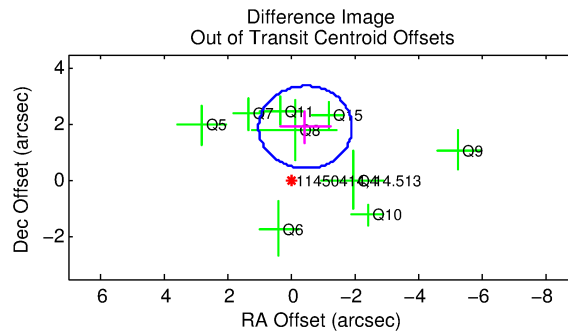
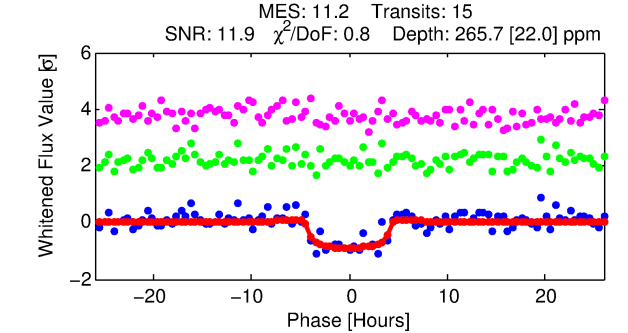
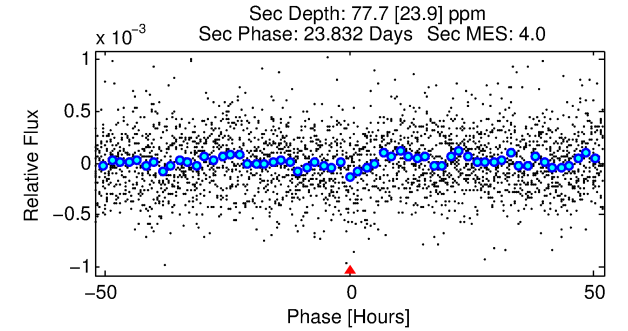
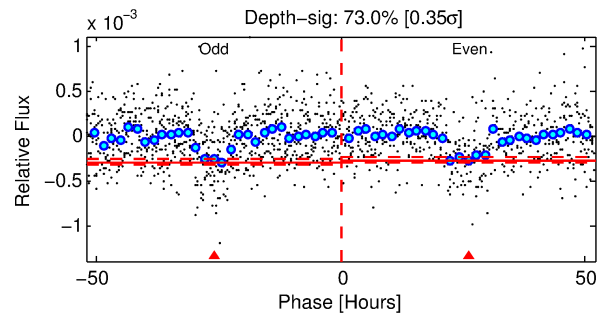
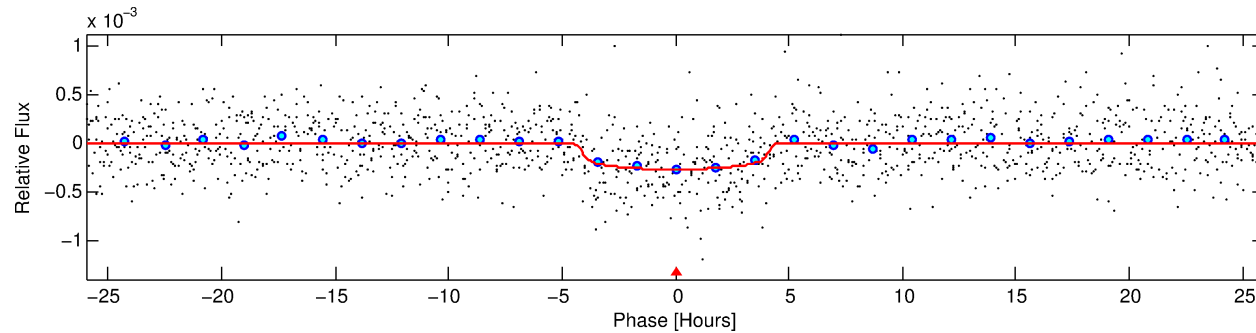
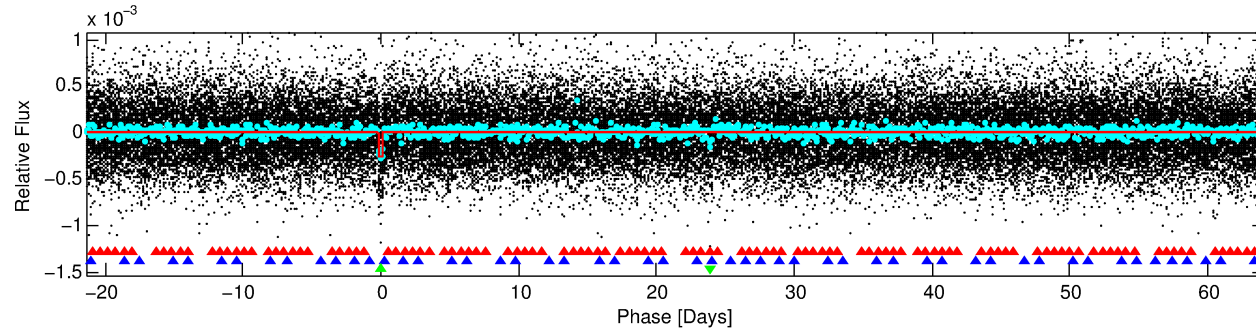
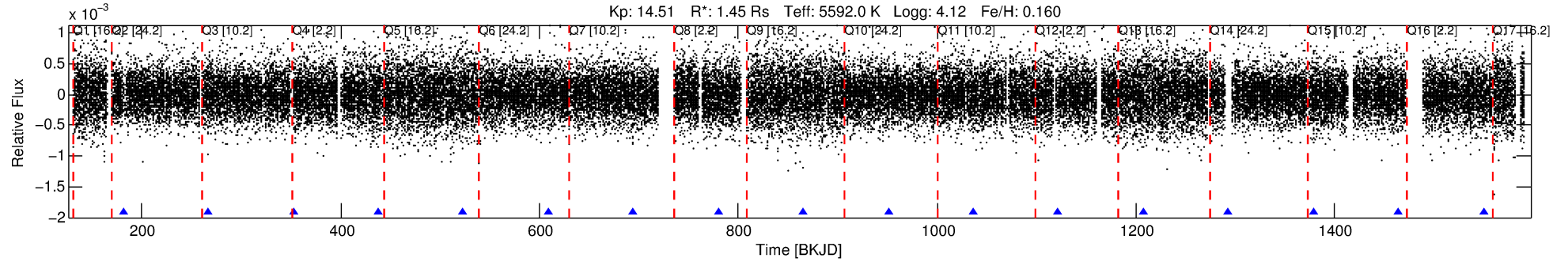
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011450414-03

No Significant Match Found

DV One-Page Summary

KIC: 11450414 Candidate: 3 of 3 Period: 85.517 d
KOI: K01992.03 Corr: 0.941



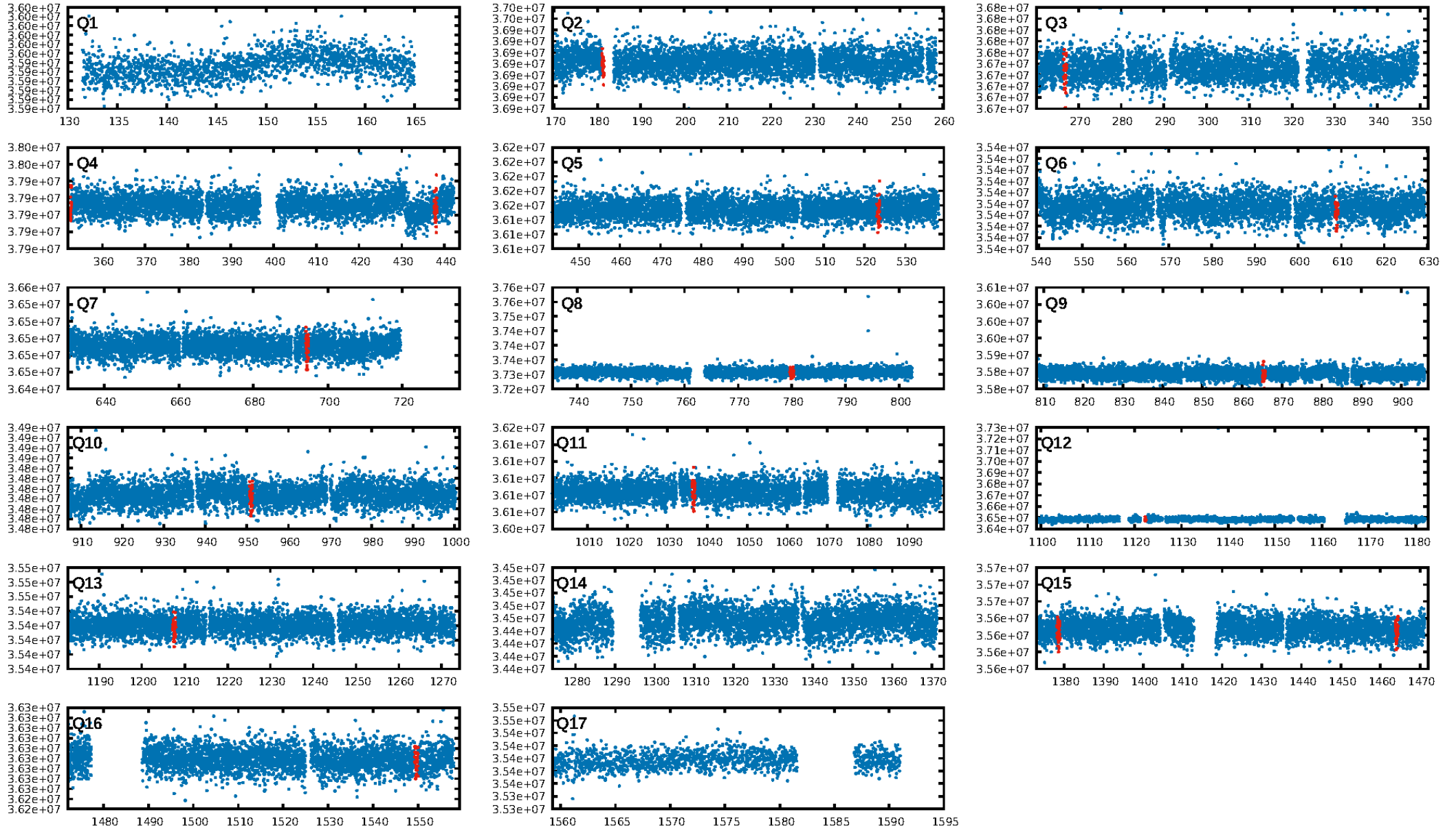
DV Fit Results:

Period = 85.51655 [0.00140] d
Epoch = 181.3650 [0.0129] BKJD
Rp/R* = 0.0166 [0.0069]
a/R* = 47.41 [83.45]
b = 0.80 [0.81]
Seff = 12.77 [4.37]
Teff = 482 [41] K
Rp = 2.63 [1.26] Re
a = 0.3801 [0.0825] AU
Ag = 892.55 [848.53] [1.05 σ]
Teffp = 4074 [907] K [3.96 σ]

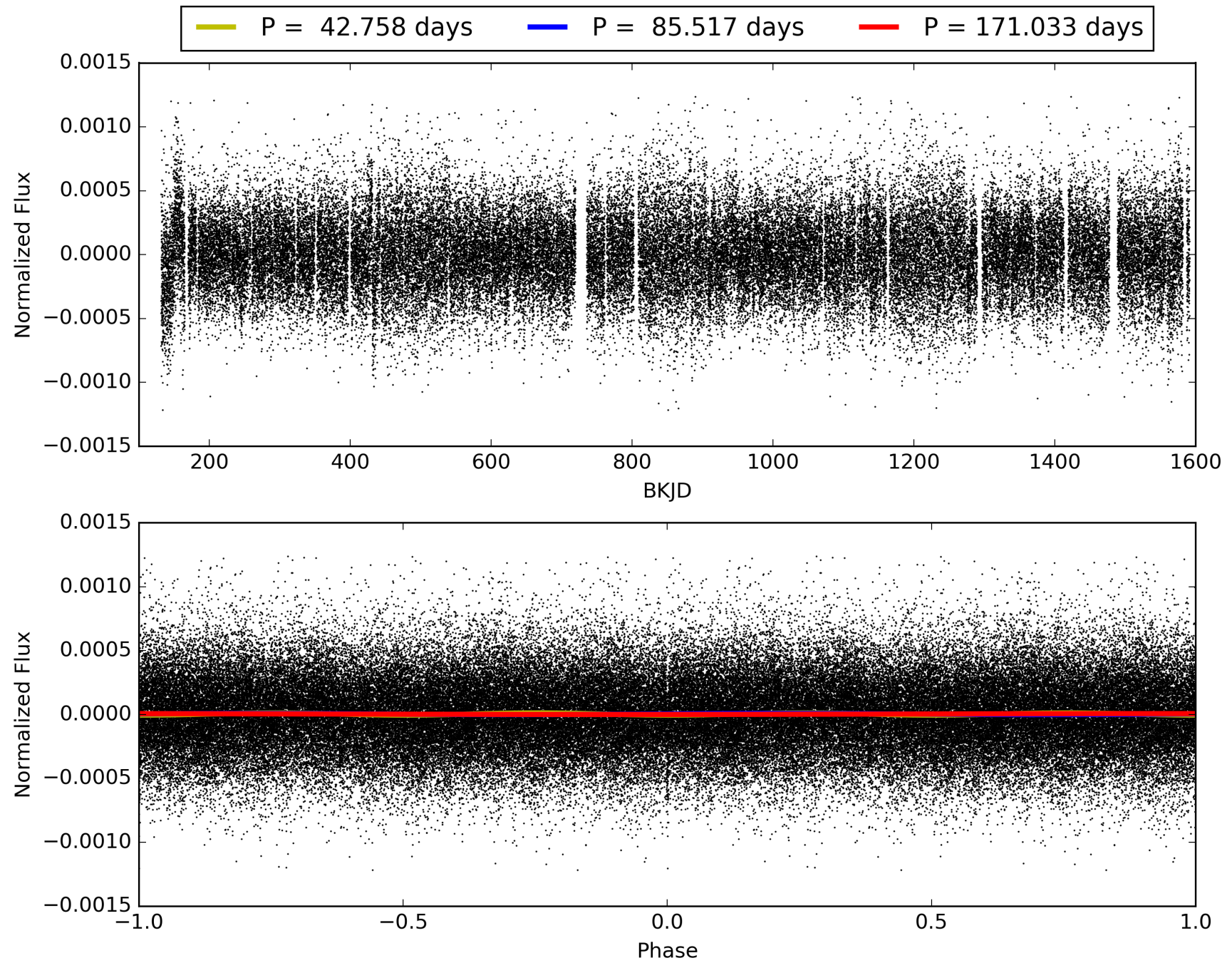
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [147.98 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 48.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.77e-28
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 58.38
Centroid-sig: 0.1%
Centroid-so: 1.843 arcsec [1.54 σ]
OotOffset-rm: 1.960 arcsec [4.00 σ]
KicOffset-rm: 1.628 arcsec [3.34 σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 011450414-03, PDC Light Curves

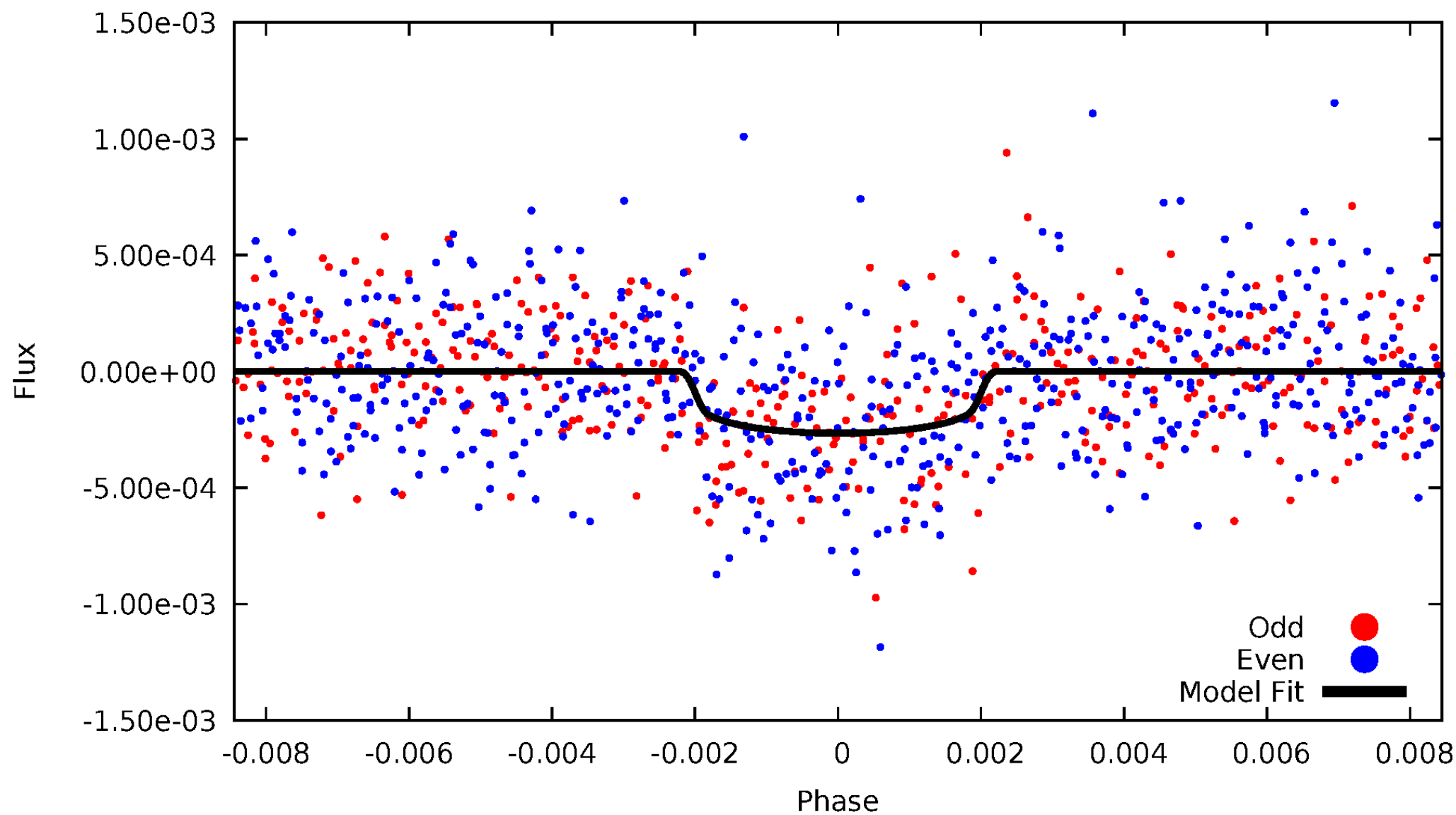


TCE 011450414-03



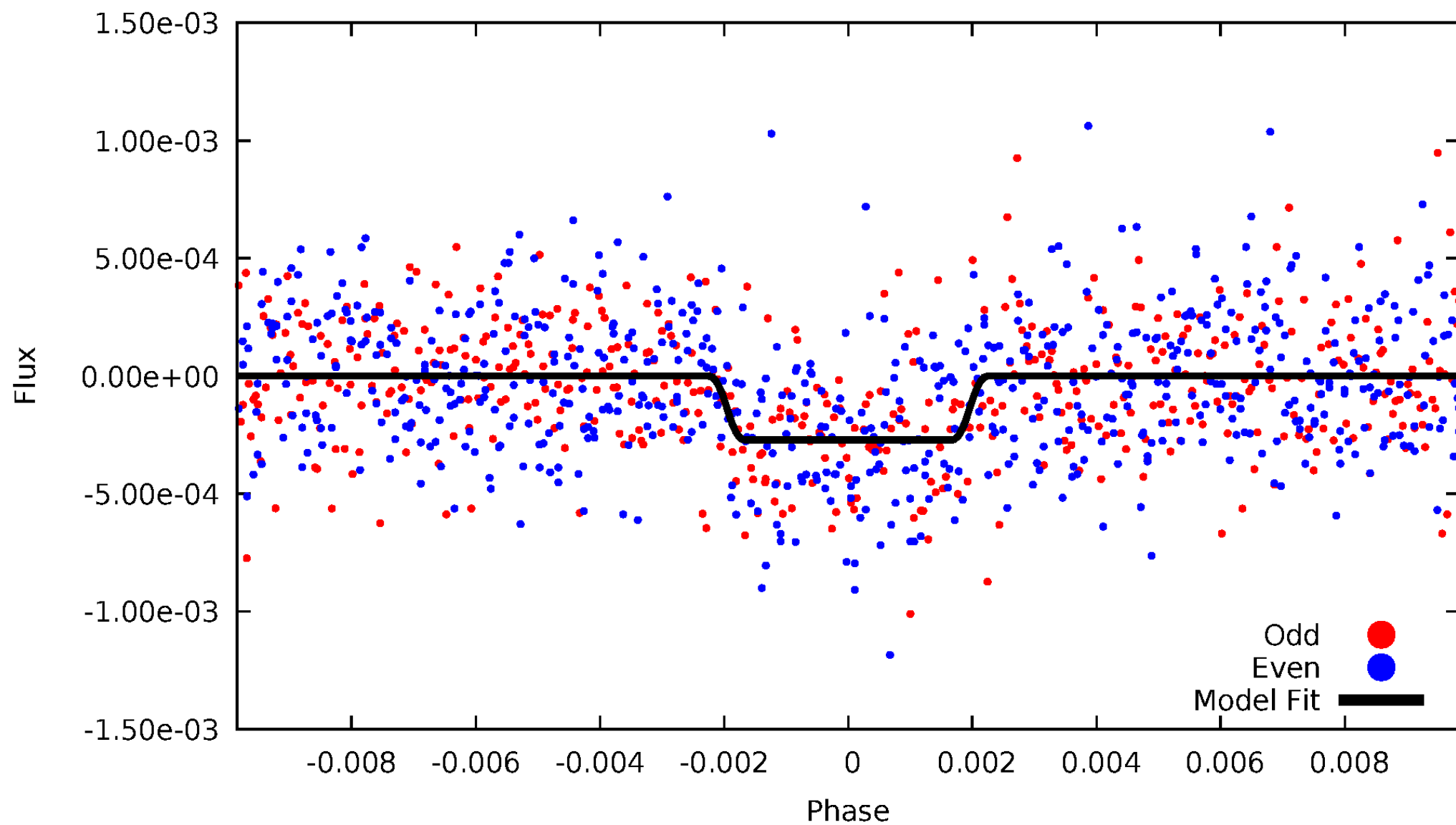
DV Odd/Even

TCE 011450414-03

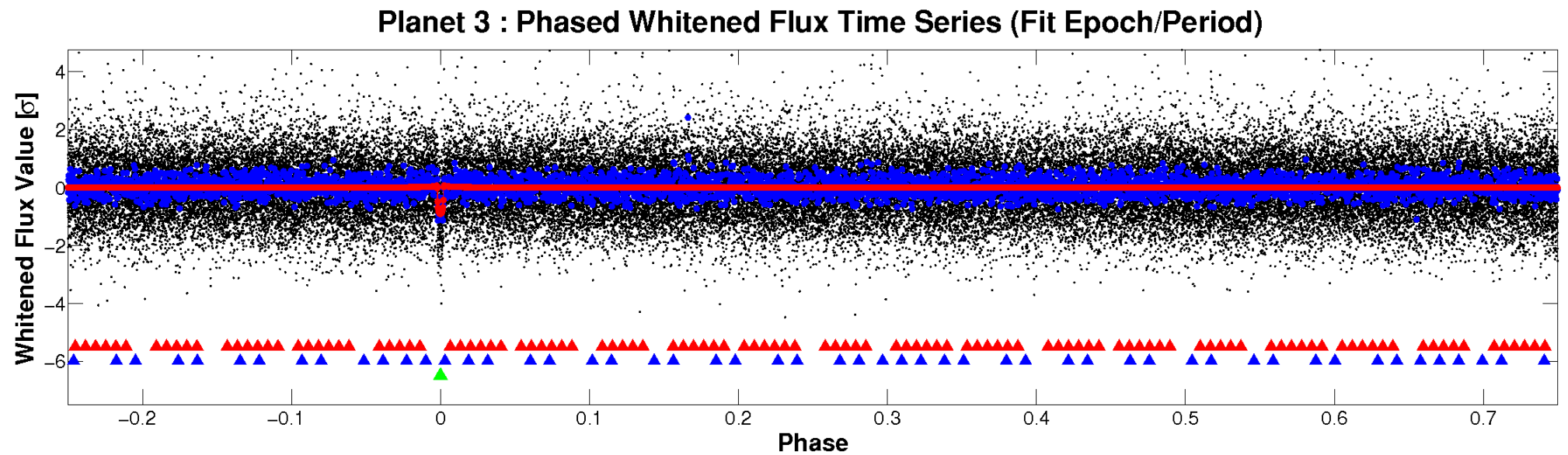
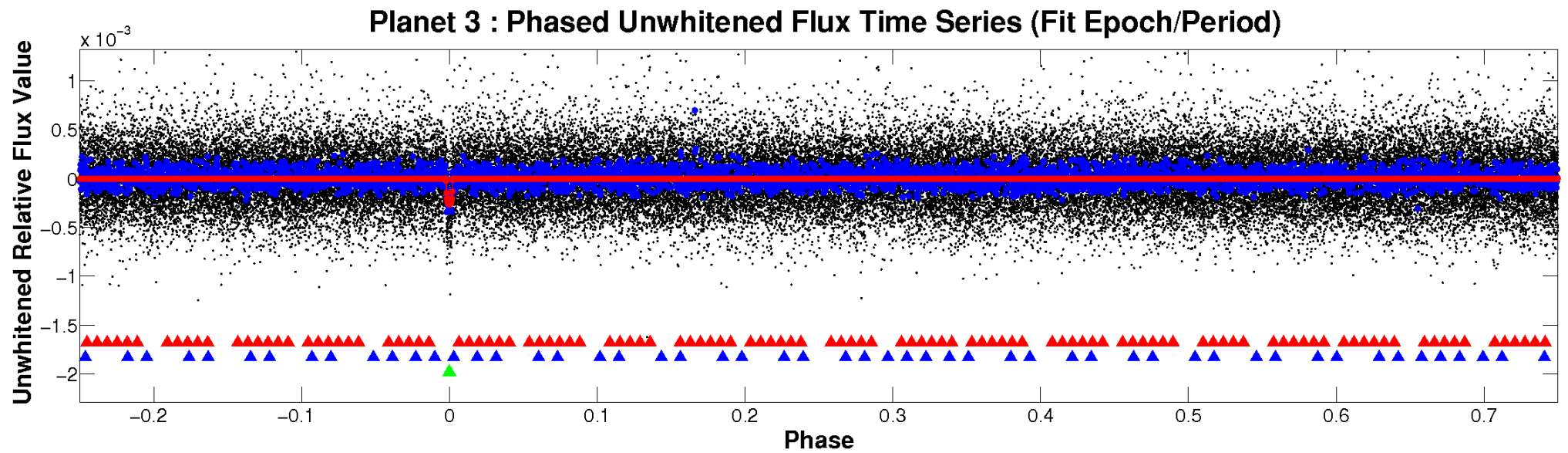


ALT Odd/Even

TCE 011450414-03

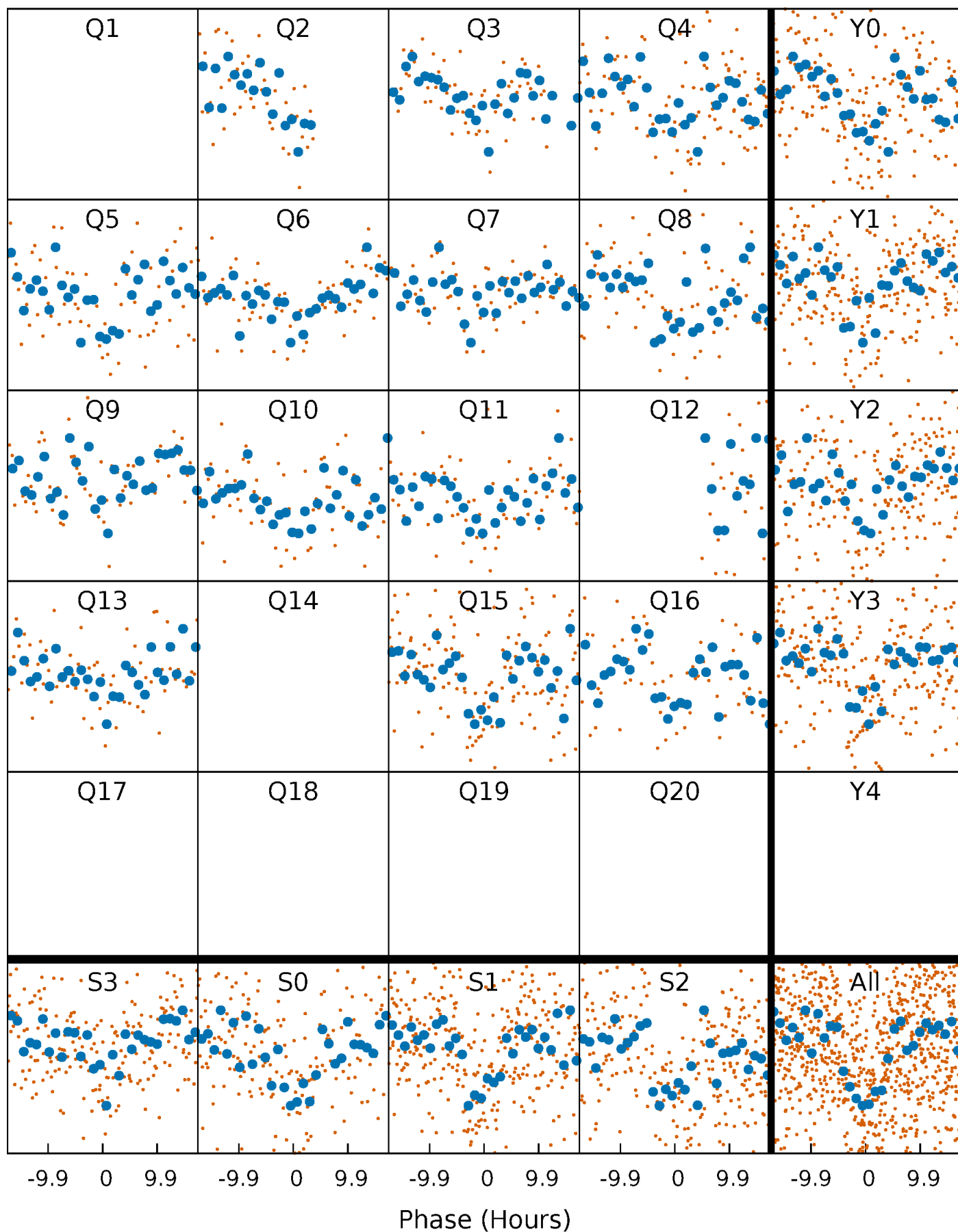


Non-Whitened Vs. Whitened Light Curve



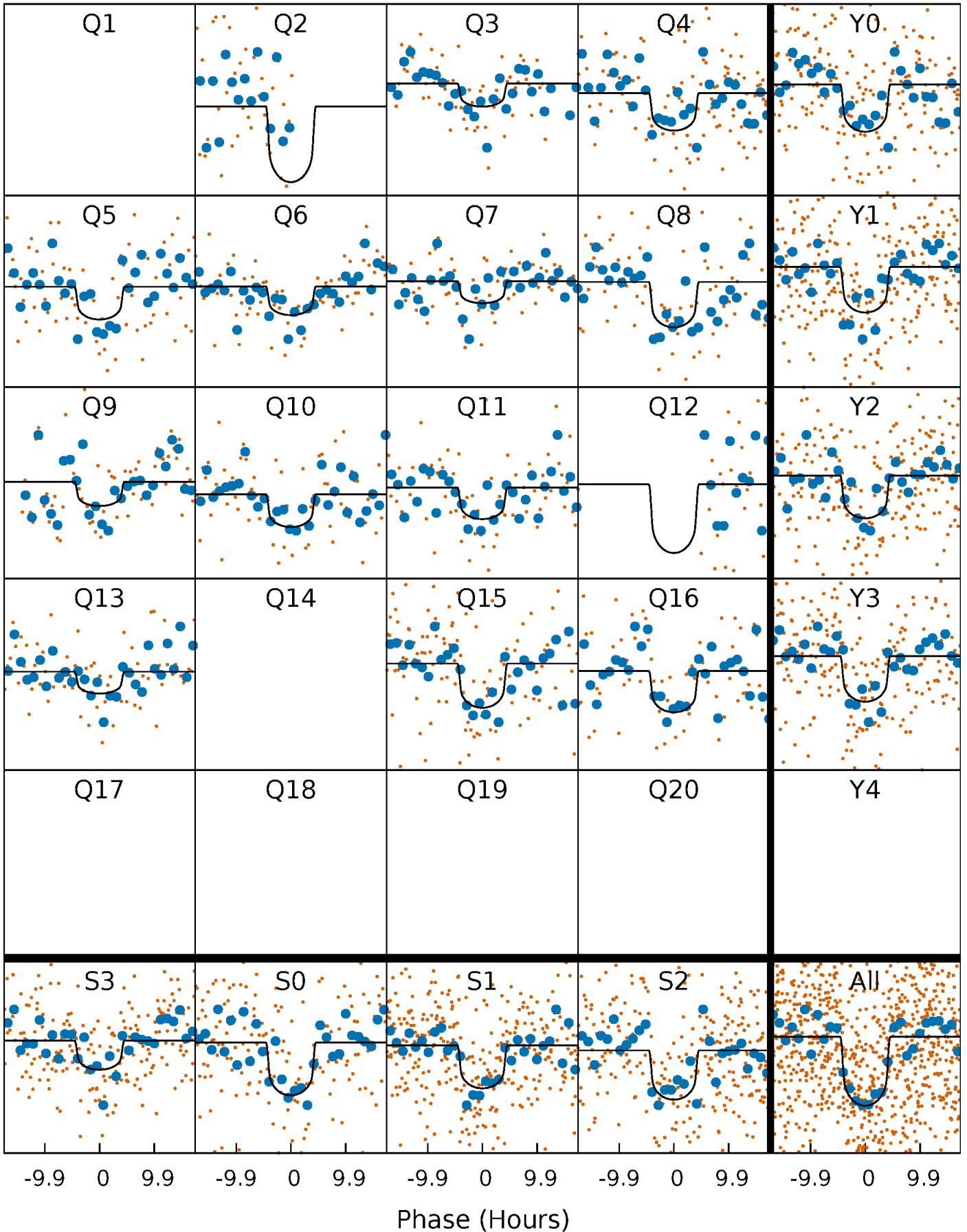
PDC Quarter-Phased Transit Curves

TCE 011450414-03 P= 85.516552 Days $T_0=181.364968$ (BKJD)



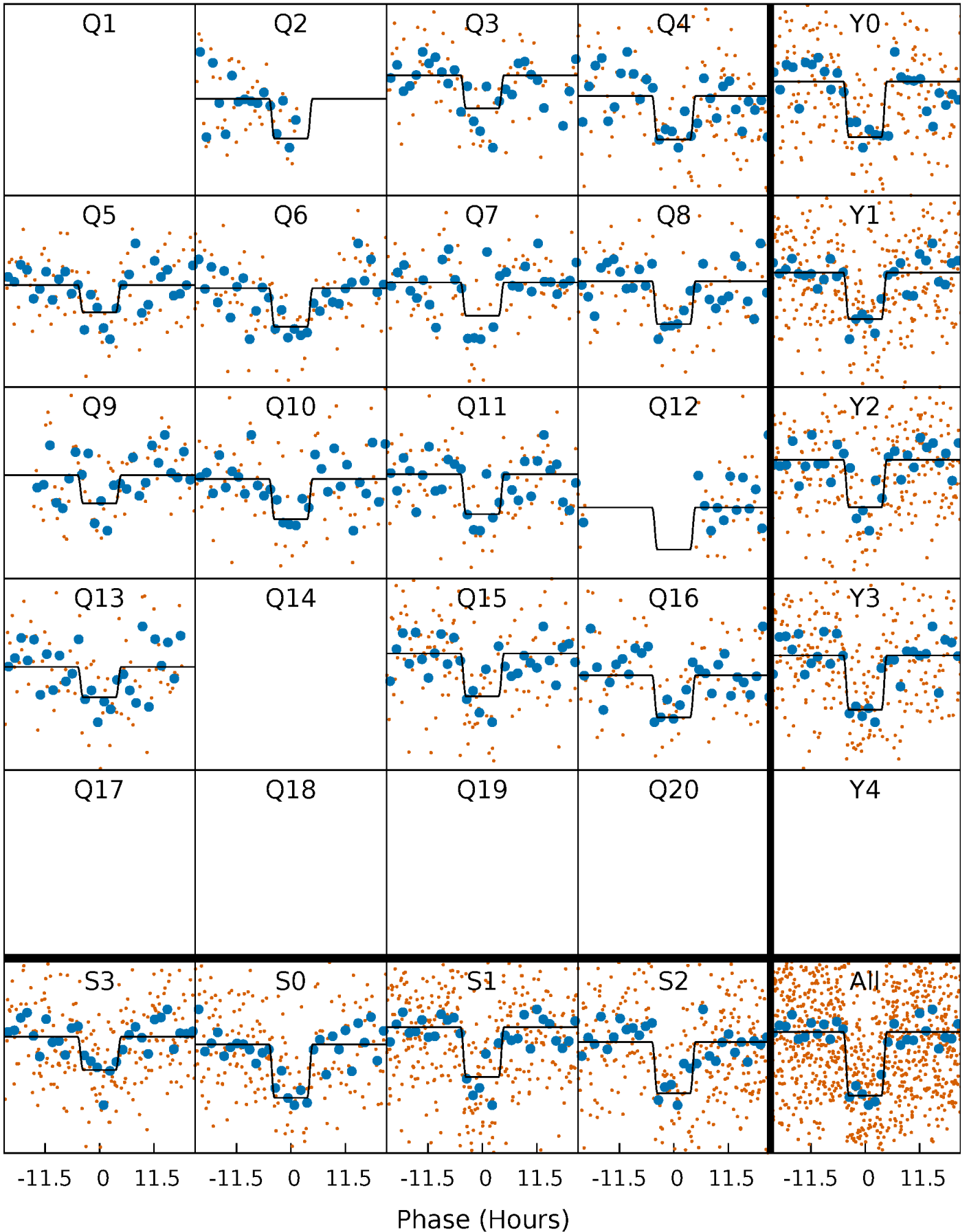
DV Quarter-Phased Transit Curves

TCE 011450414-03 P= 85.516552 Days $T_0=181.364968$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

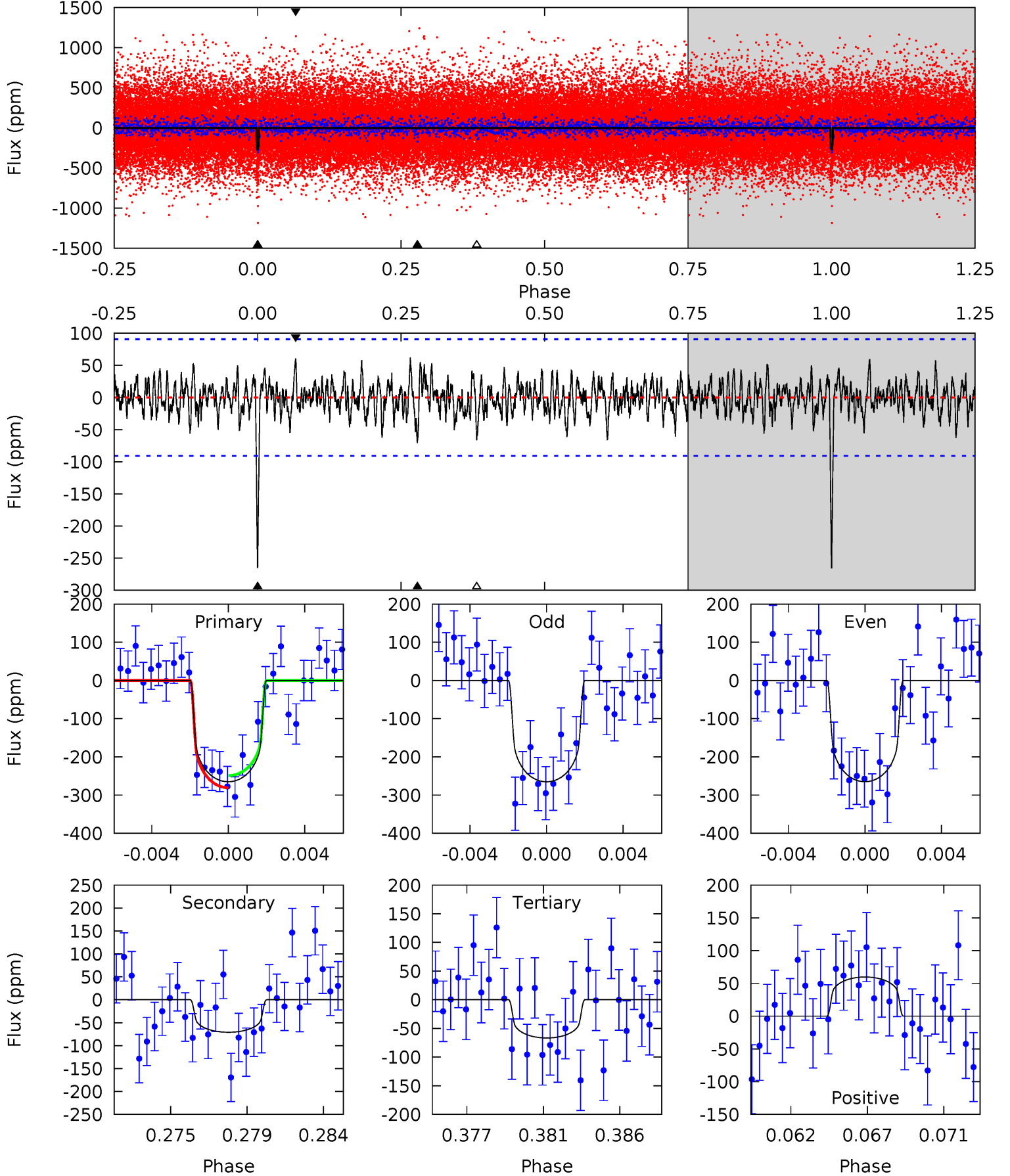
TCE 011450414-03 P= 85.521359 Days $T_0=181.319716$ (BKJD)



DV Model-Shift Uniqueness Test

011450414-03, P = 85.516552 Days, E = 95.848416 Days

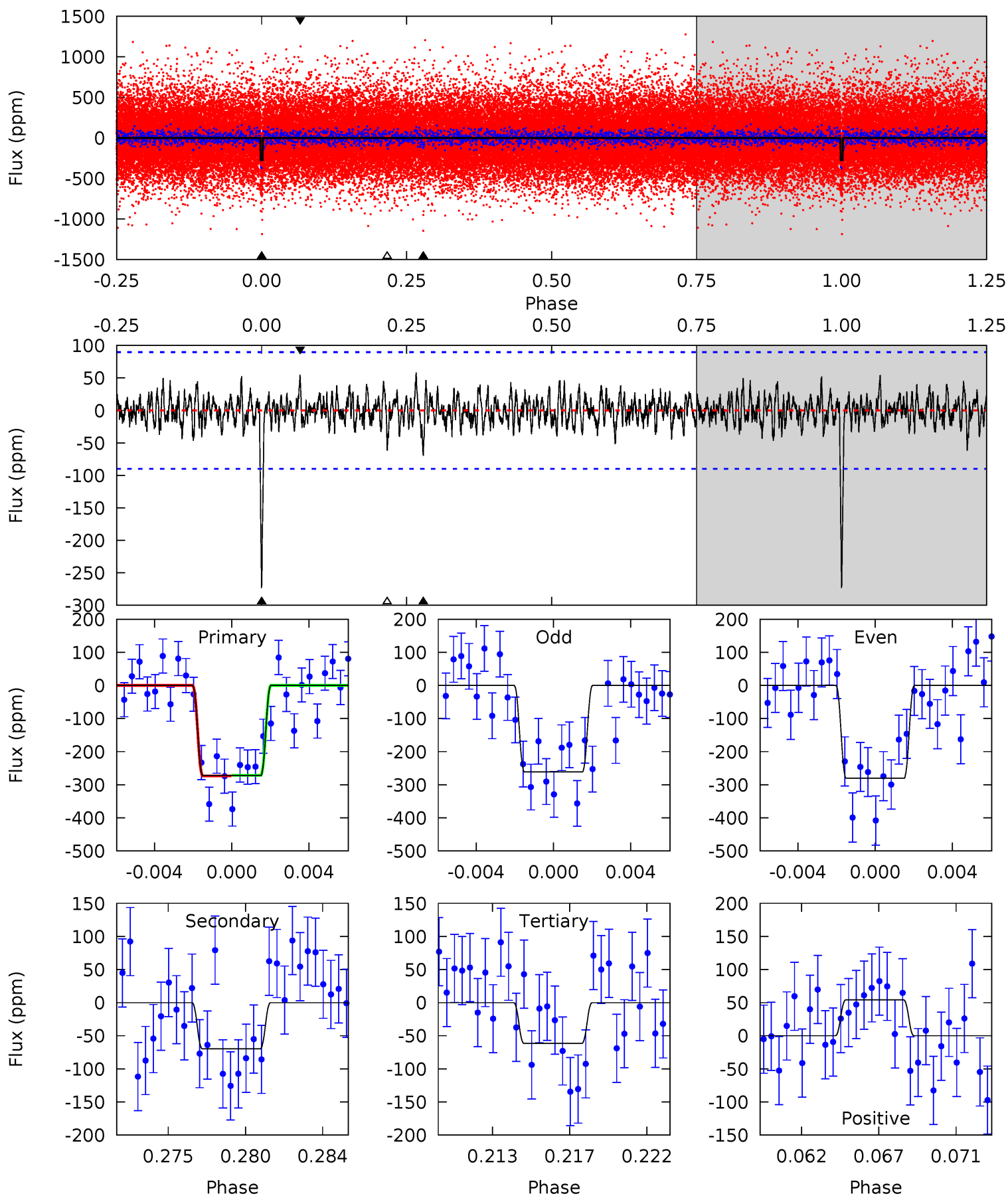
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	4.05	3.81	3.41	5.18	2.85	1.19	11.3	11.7	0.24	0.64	0.01	0.94	0.19	0.91



Alt Model-Shift Uniqueness Test

011450414-03, P = 85.521359 Days, E = 95.798357 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	4.02	3.55	3.12	5.18	2.85	1.00	12.2	12.6	0.47	0.90	0.55	0.98	0.17	0.05



Stellar Parameters For KIC 011450414

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5592^{+75}_{-75}	$4.115^{+0.195}_{-0.090}$	$0.160^{+0.150}_{-0.150}$	$1.451^{+0.211}_{-0.342}$	$1.000^{+0.072}_{-0.072}$	$0.461^{+0.511}_{-0.142}$
	+1%/-1%	+5%/-2%	+94%/-94%	+15%/-24%	+7%/-7%	+111%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011450414-03 / KOI 1992.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 18	$2.52^{+1.16}_{-0.94}$	669^{+29}_{-37}	4229^{+921}_{-520}	870^{+1557}_{-484}
Alt.	-70 ± 17	$2.56^{+1.16}_{-1.07}$	669^{+30}_{-40}	4167^{+1029}_{-497}	836^{+1596}_{-452}

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 $A_{obs} \gg 1.0$

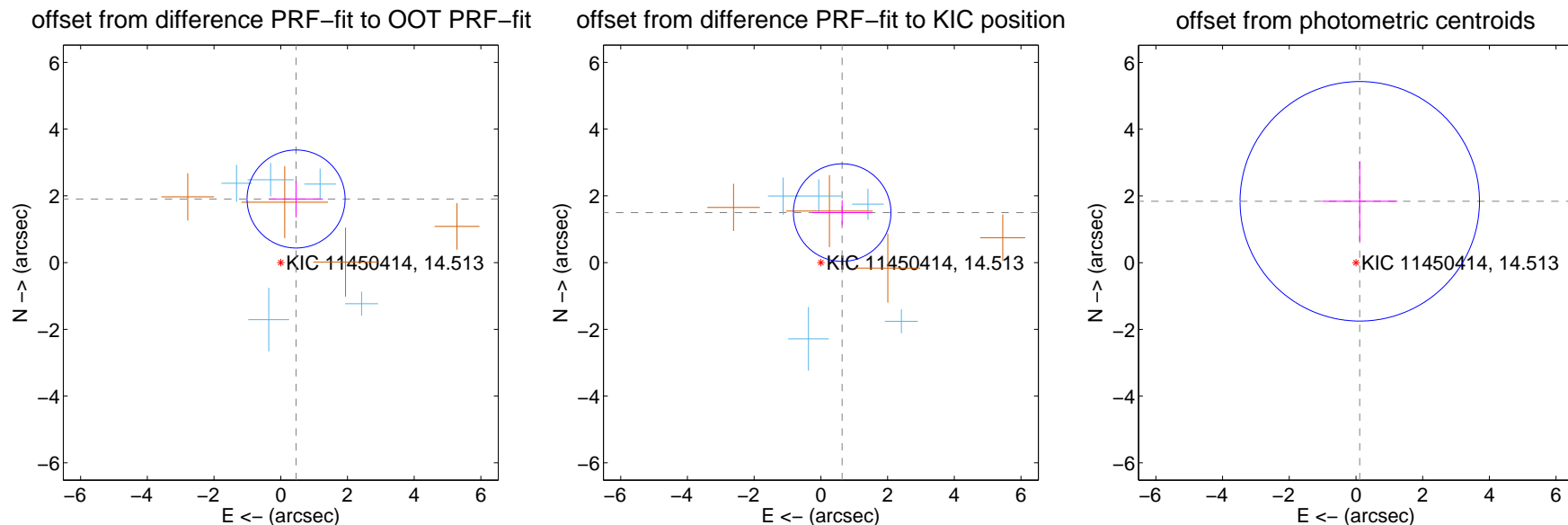
DV Centroid Data

Supplemental centroid analysis for 011450414-03. Kepler magnitude: 14.51. Transit SNR 11.91

There are 5 quarters with good PRF difference image offsets

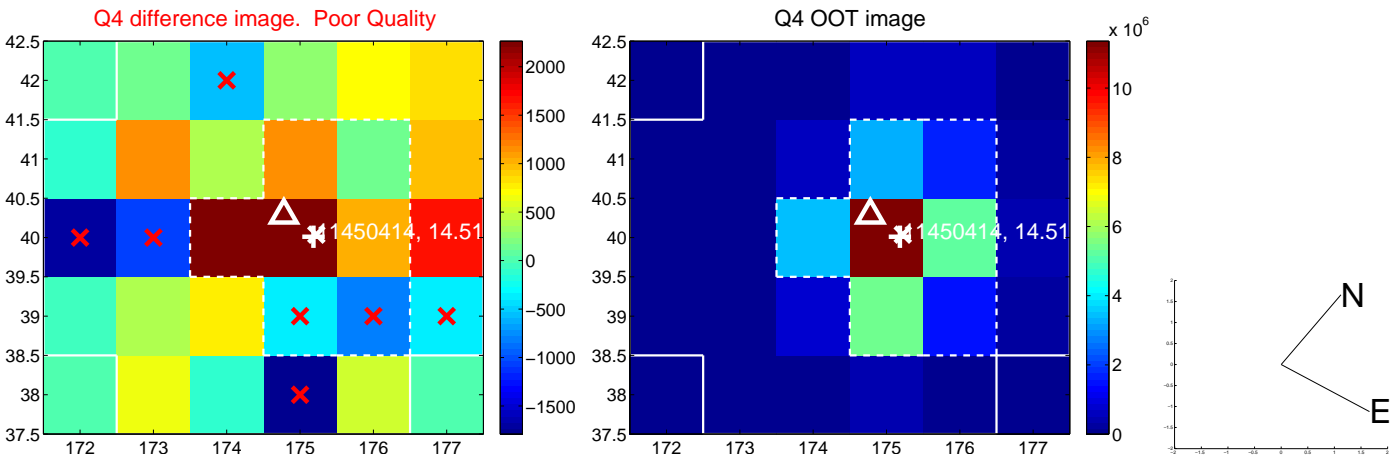
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.960 ± 0.490	4.00	-0.460 ± 0.808	1.906 ± 0.549
PRF-fit source offset from KIC position	1.628 ± 0.487	3.34	-0.639 ± 0.891	1.498 ± 0.370
photometric centroid source offset	1.84 ± 1.20	1.54	-0.11 ± 1.13	1.84 ± 1.20

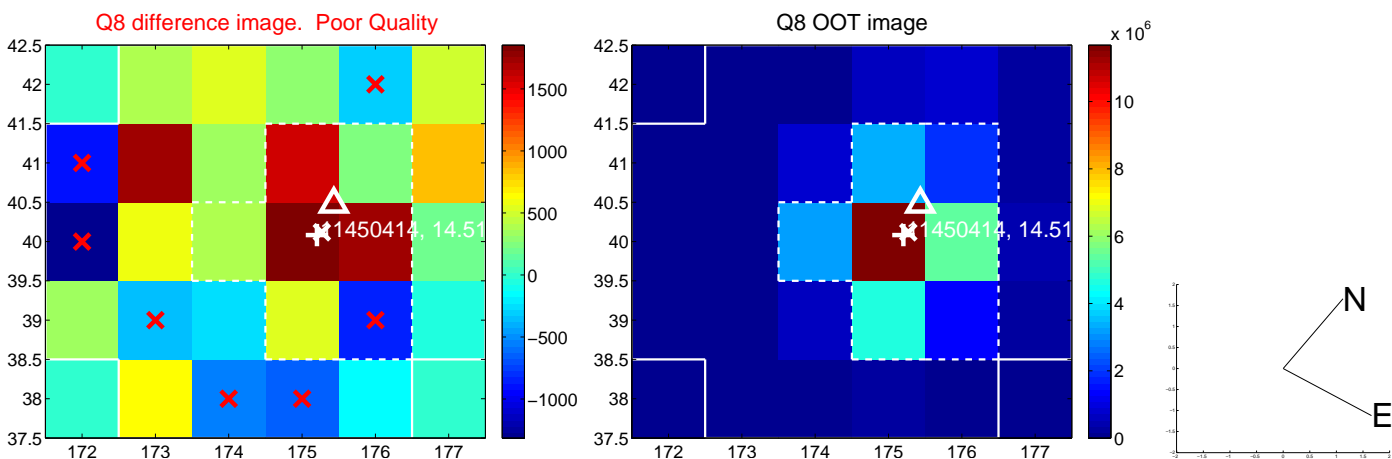
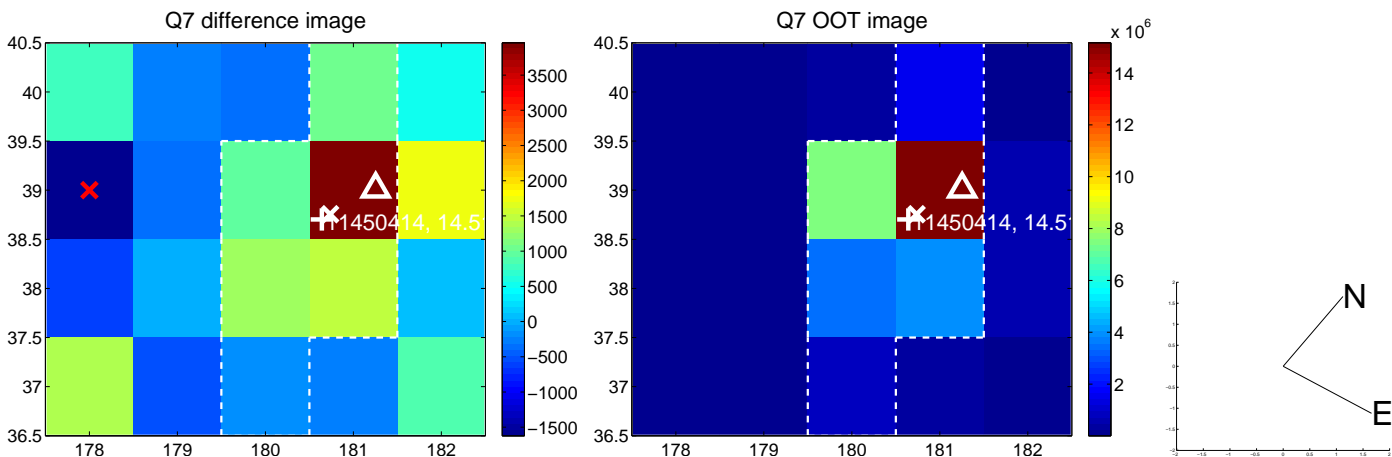
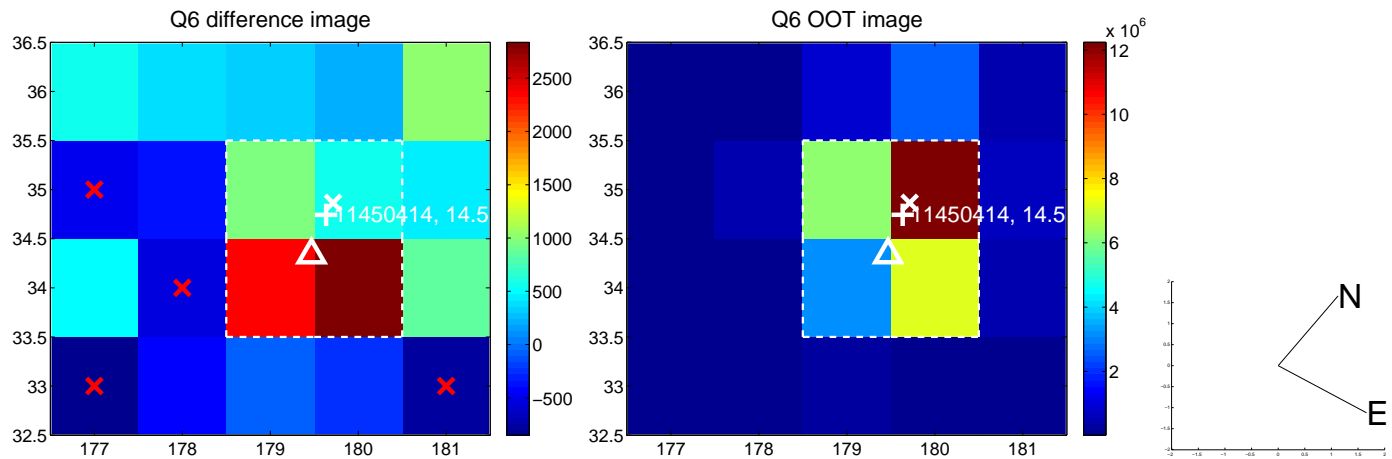
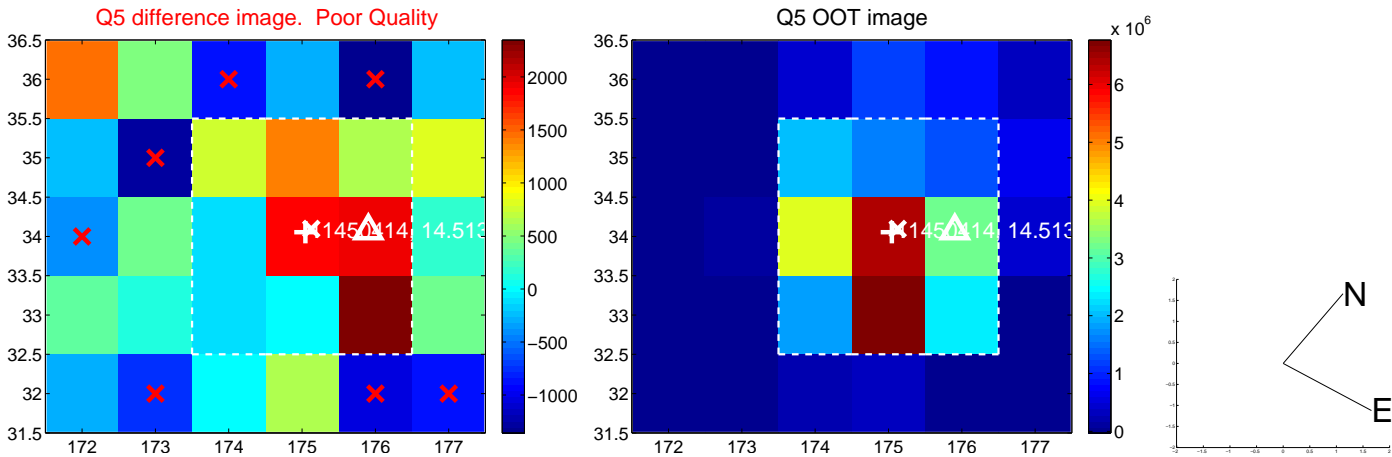


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

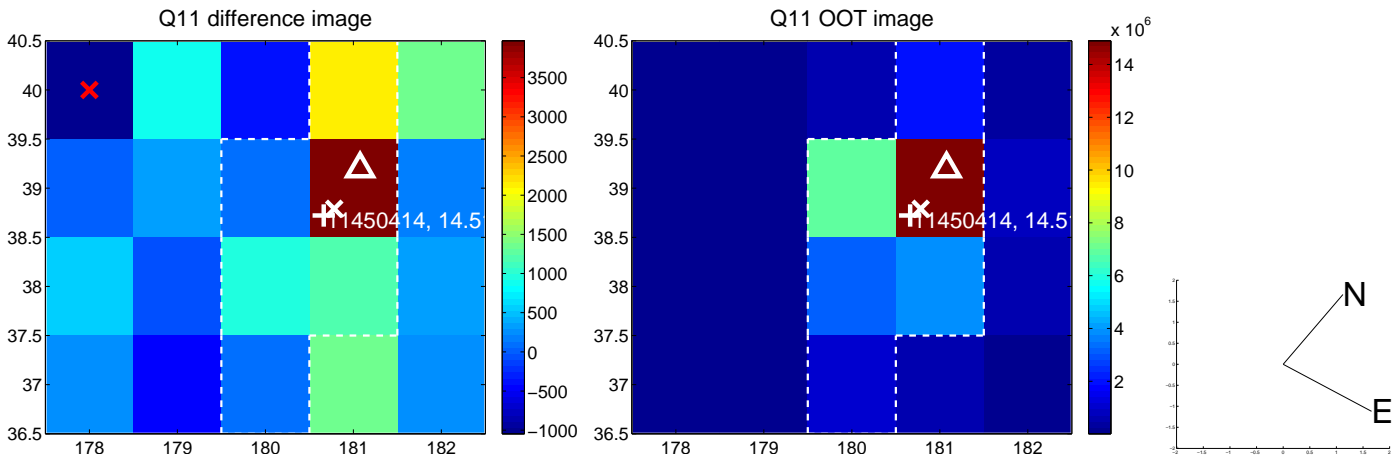
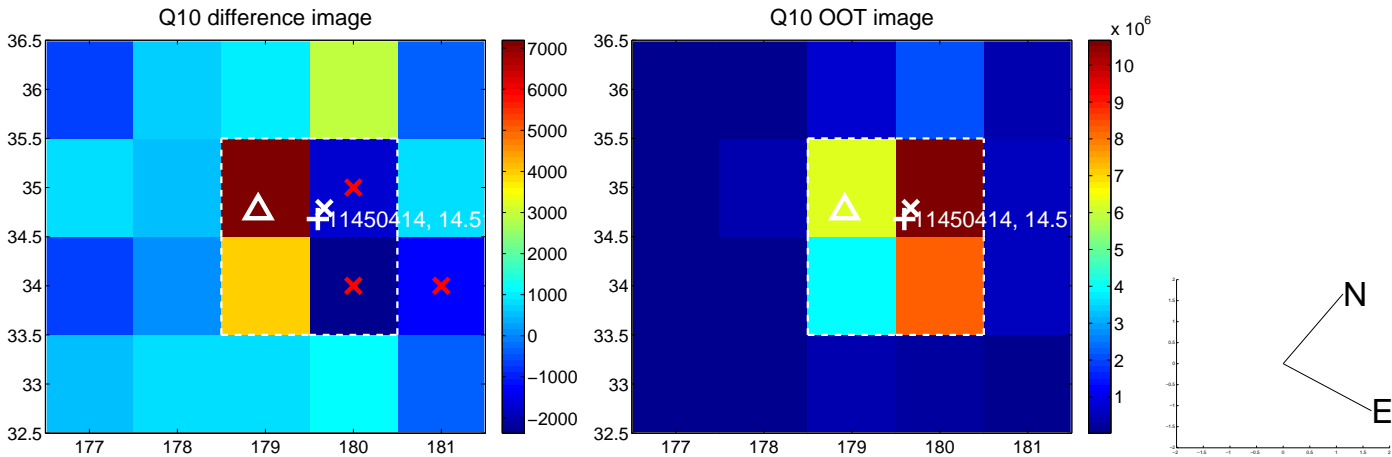
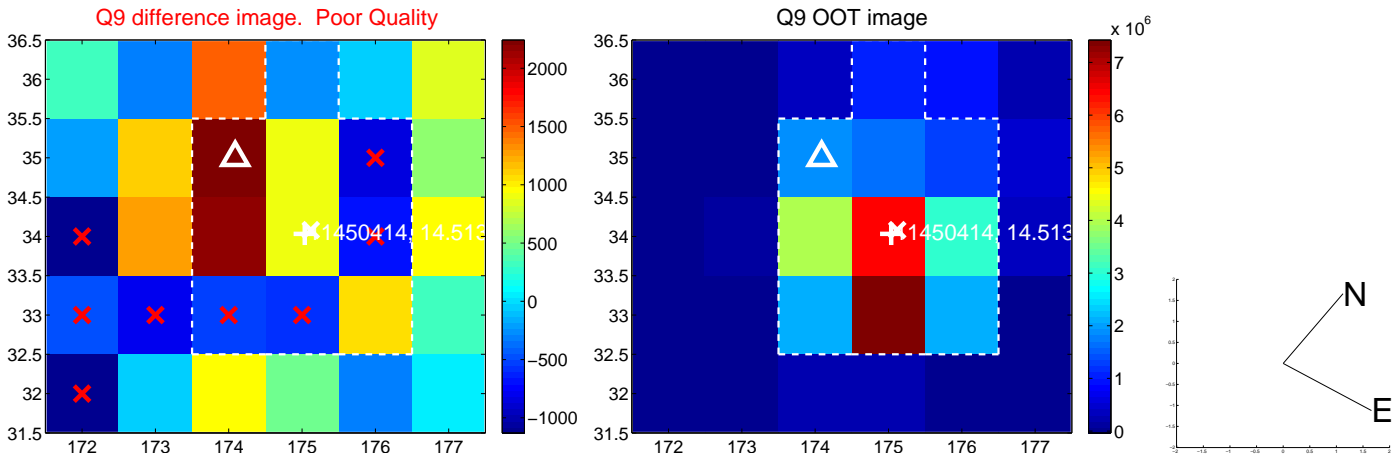
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



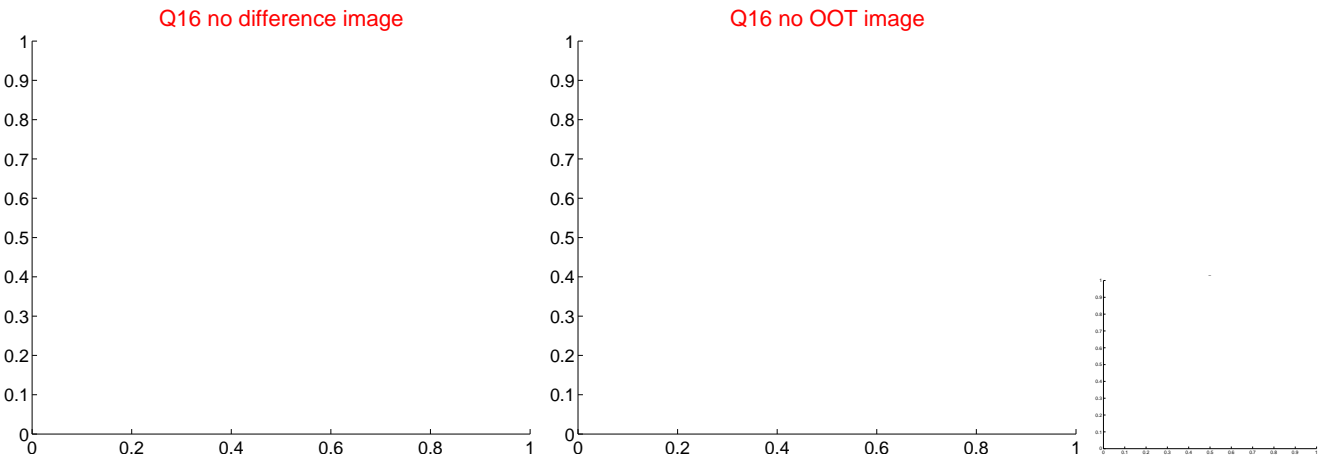
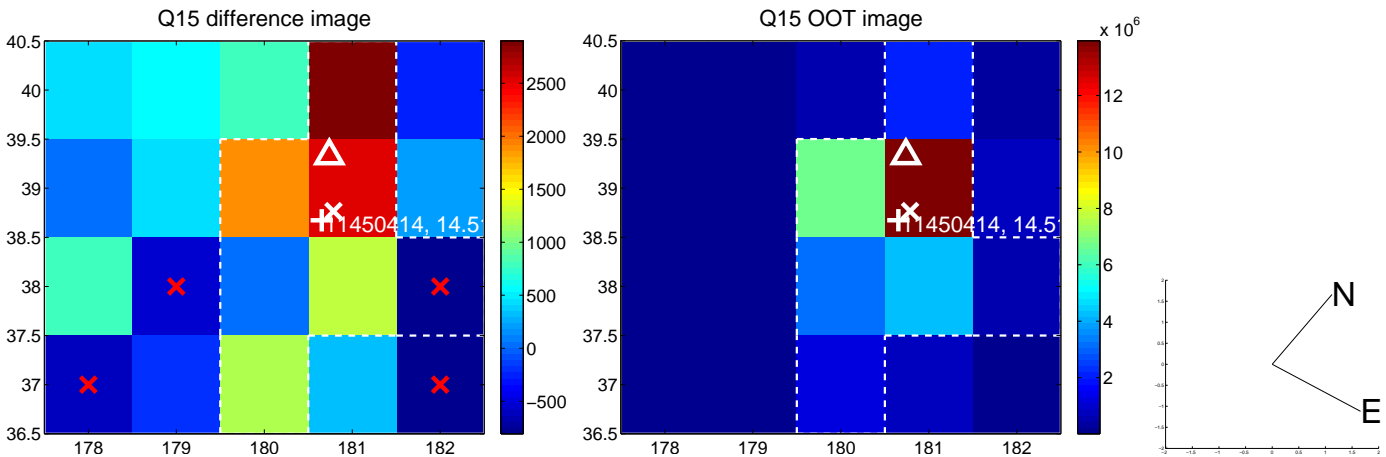
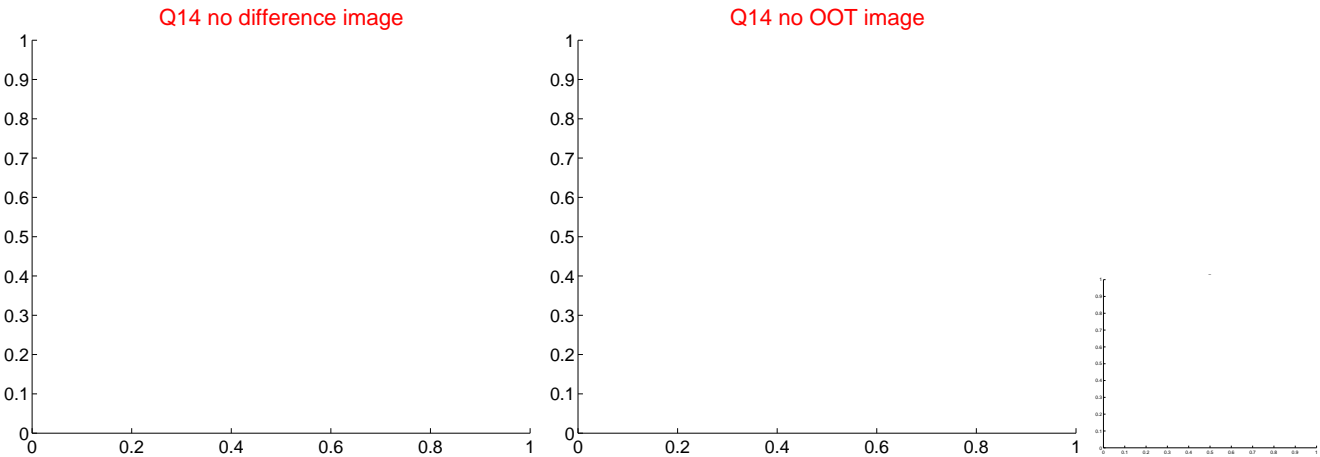
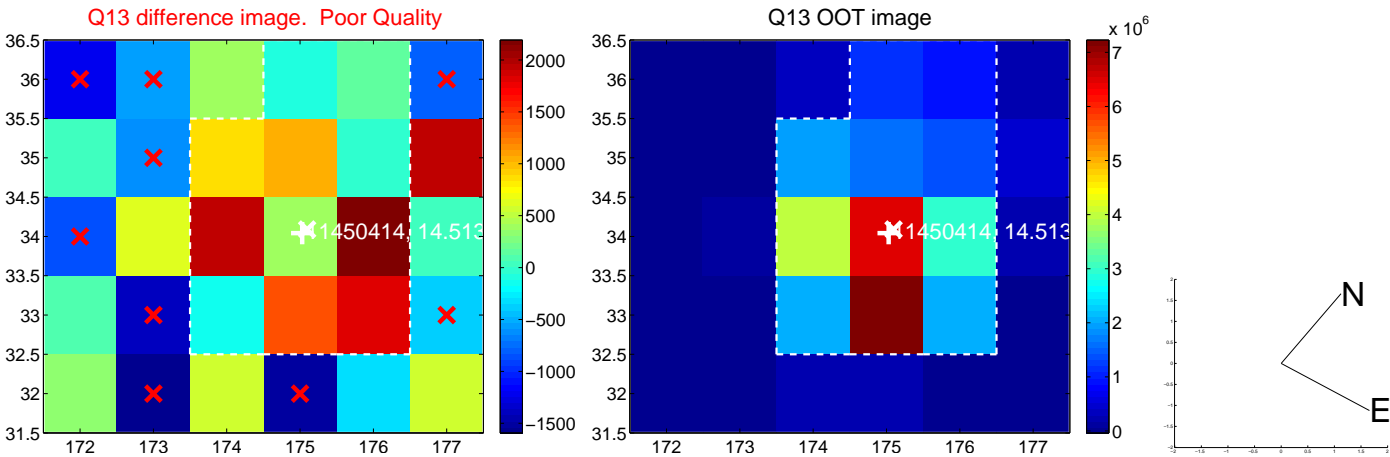
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



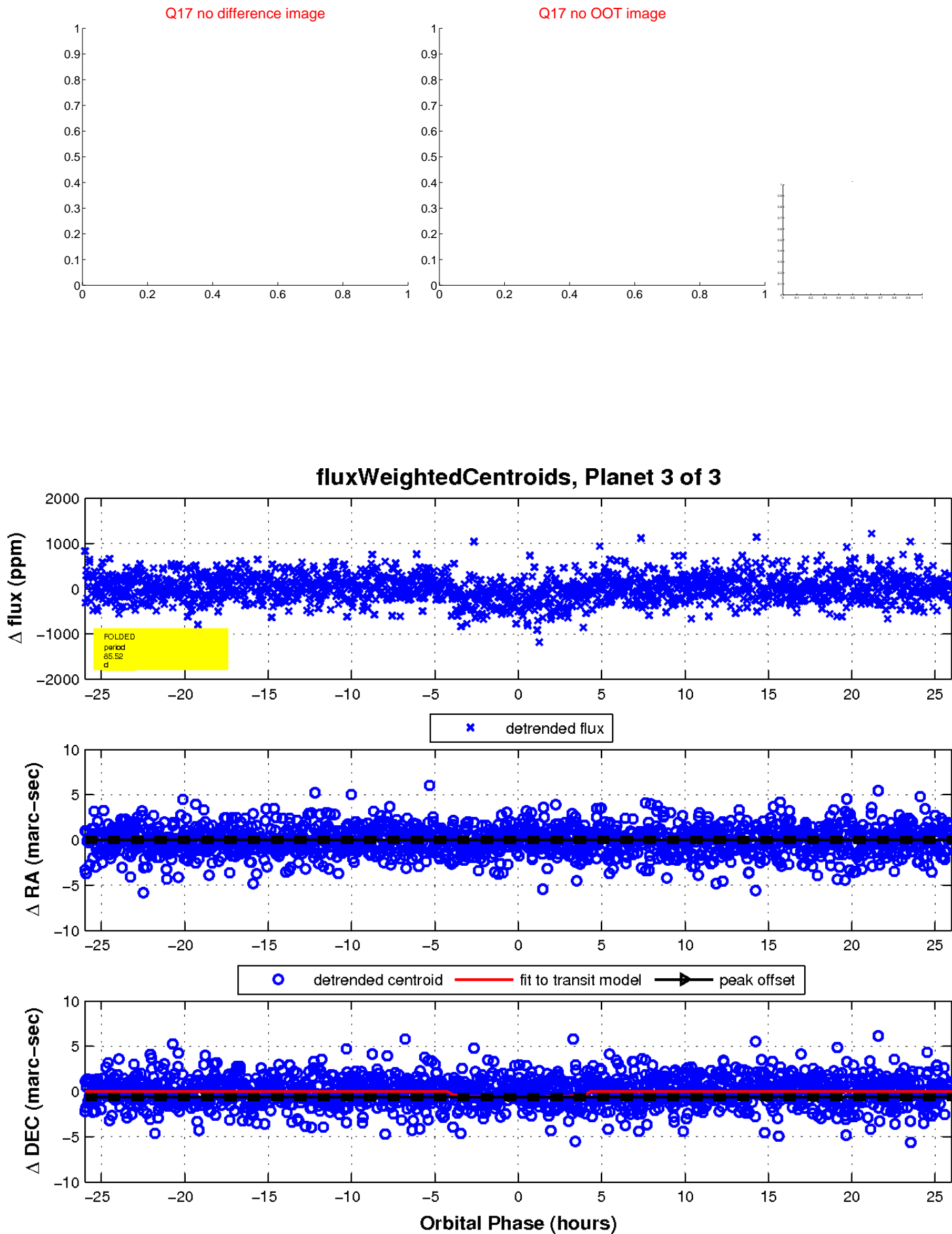
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

