

KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

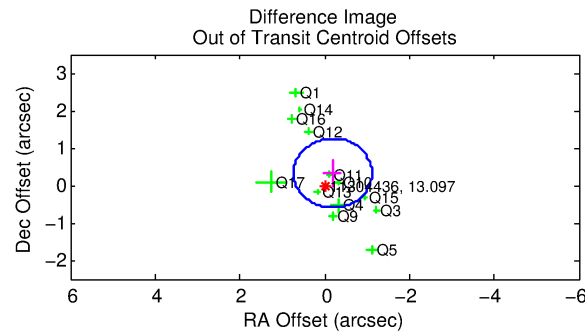
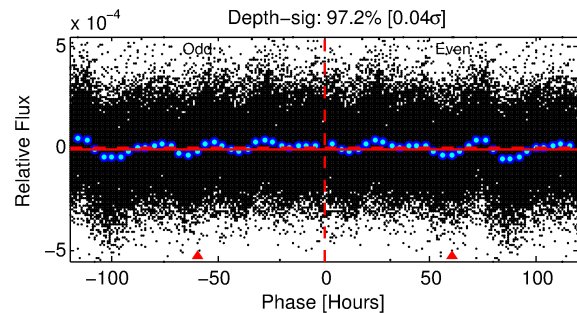
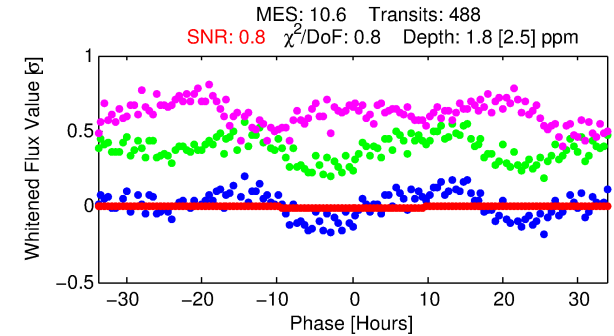
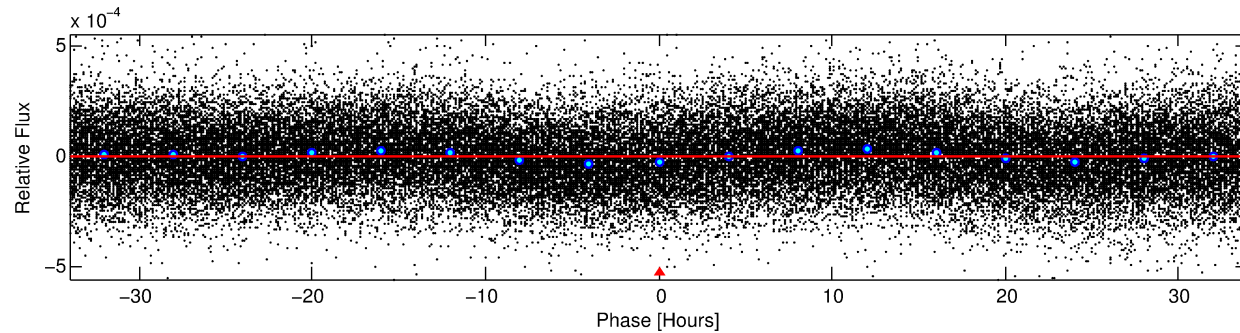
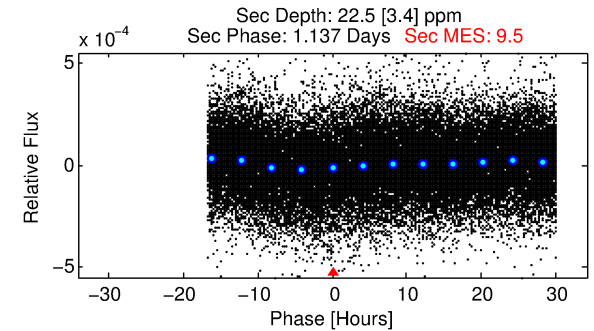
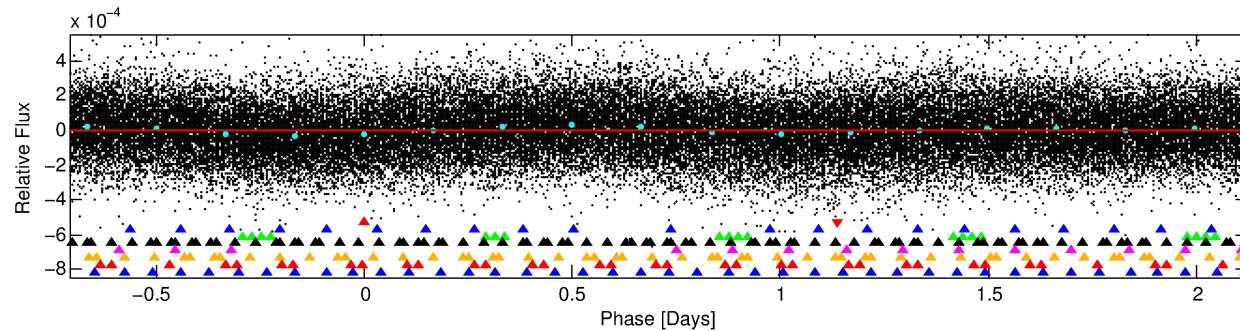
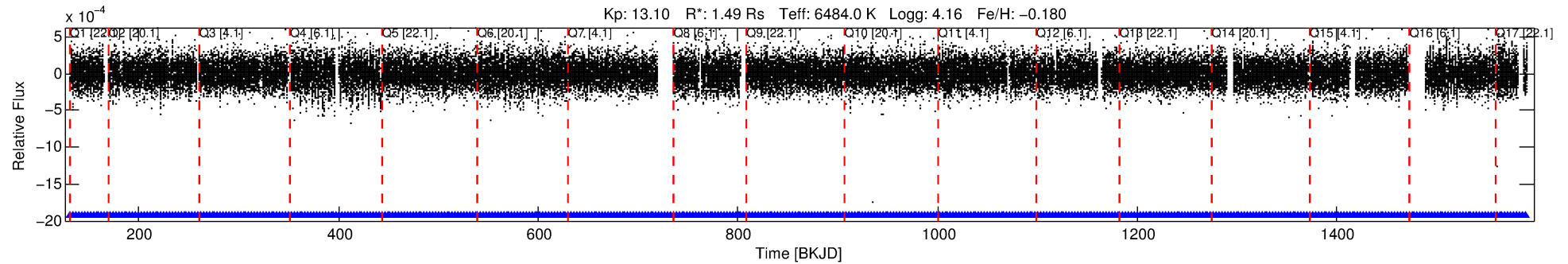
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-01

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 1 of 8 Period: 2.834 d



DV Fit Results:

Period = 2.83352 [0.00051] d
Epoch = 131.8541 [0.1013] BKJD
Rp/R* = 0.0012 [0.0078]
a/R* = 1.25 [15.43]
b = 0.01 [2569.17]
Seff = 2072.71 [843.64]
Teq = 1721 [175] K
Rp = 0.20 [1.27] Re
a = 0.0413 [0.0105] AU
Ag = 523.26 [6597.52] [0.08σ]
Teffp = 12723 [40089] K [0.27σ]

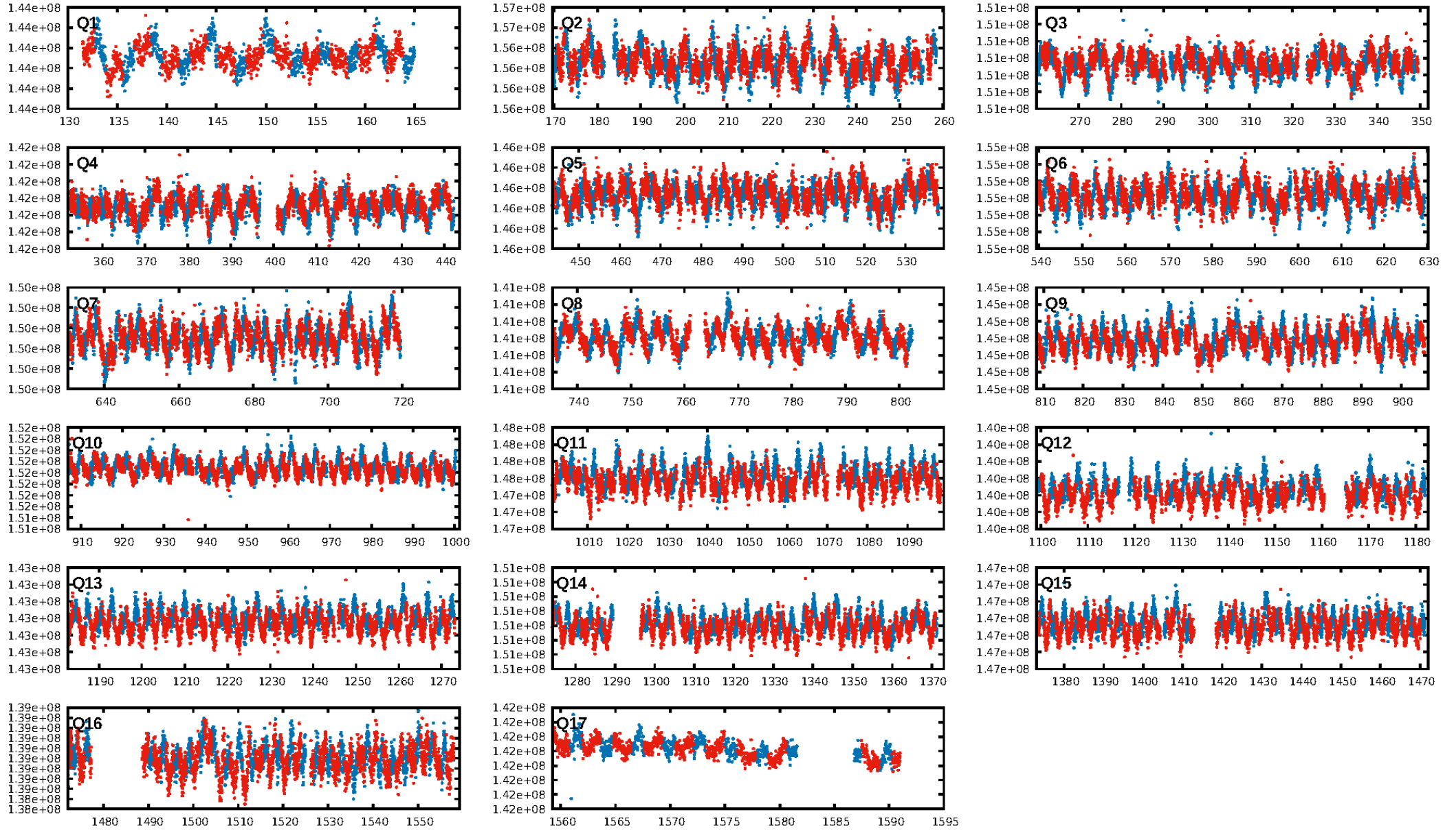
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [15.80σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [466/466]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.377 arcsec [1.22σ]
KicOffset-rm: 0.438 arcsec [1.32σ]
OotOffset-st: 2/3/3/5 [13]
KicOffset-st: 2/3/3/5 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [17/17]

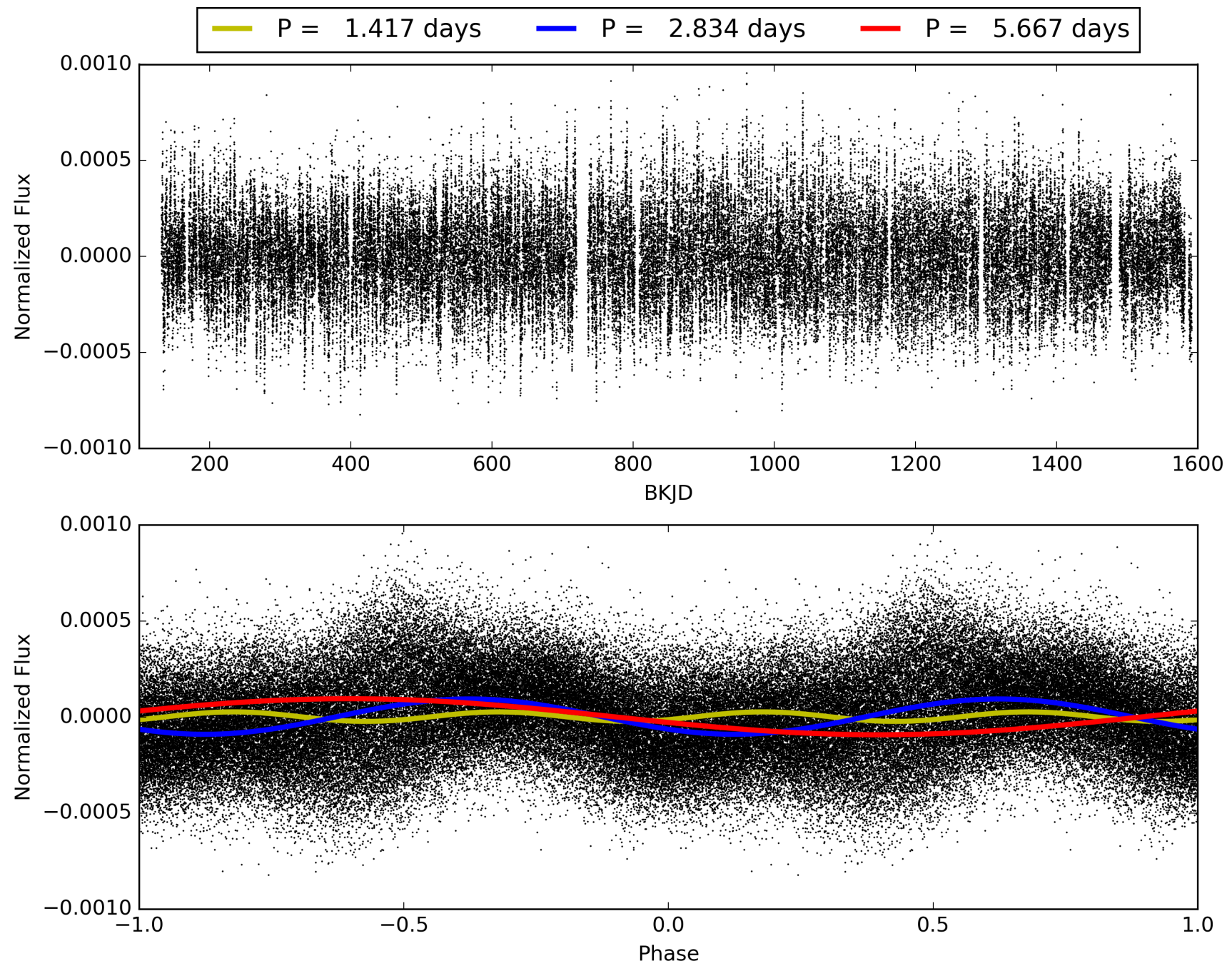
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011304436-01, PDC Light Curves

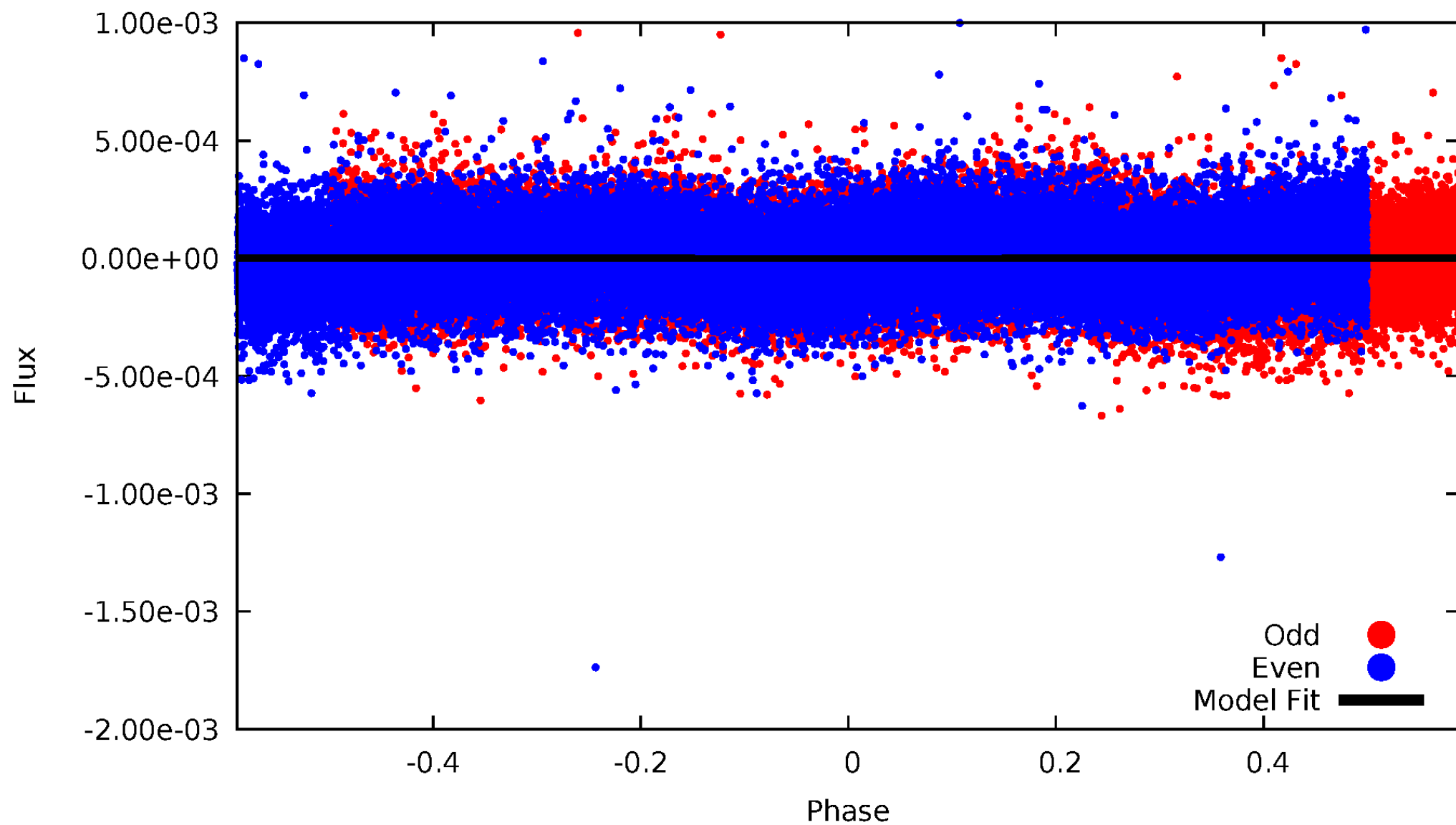


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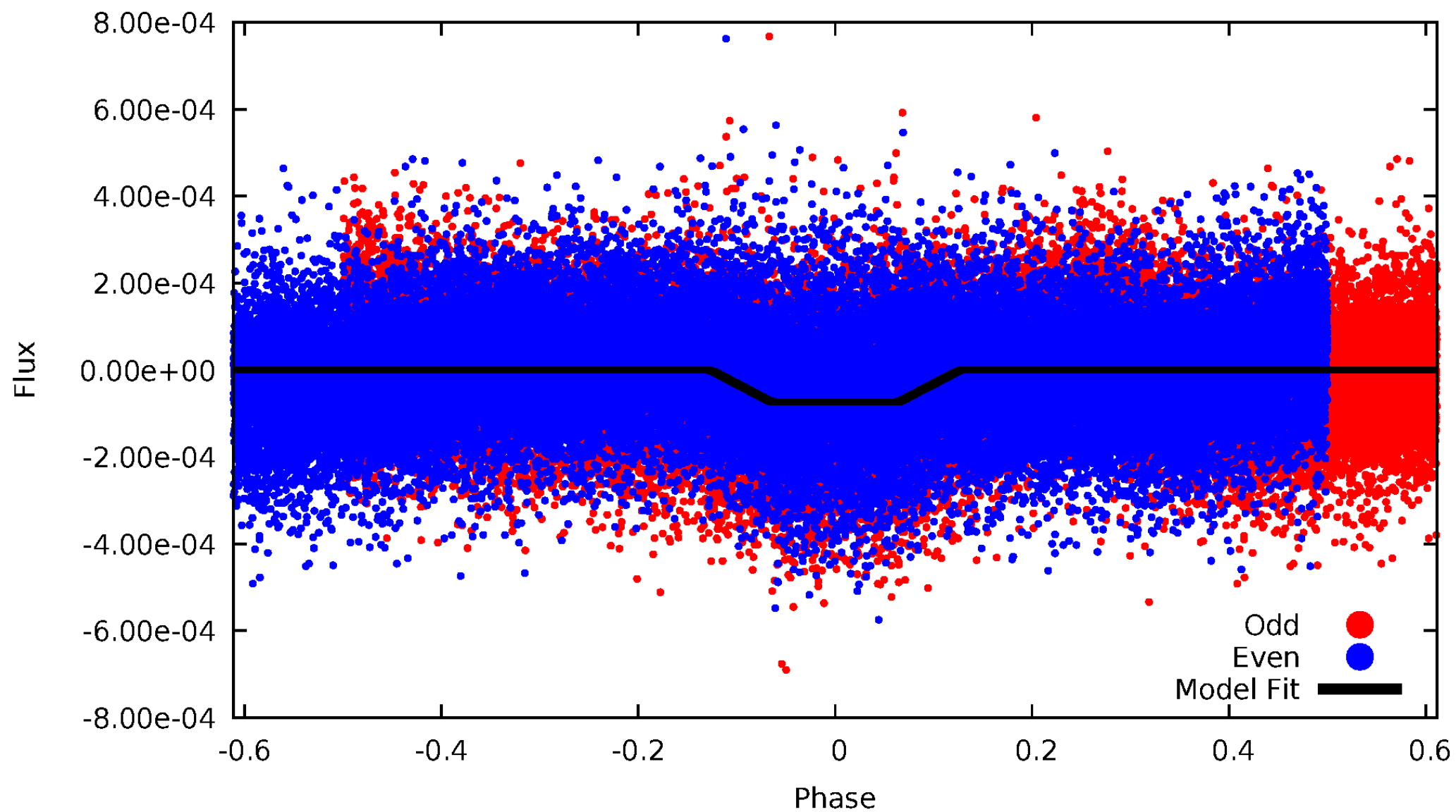
DV Odd/Even

TCE 011304436-01

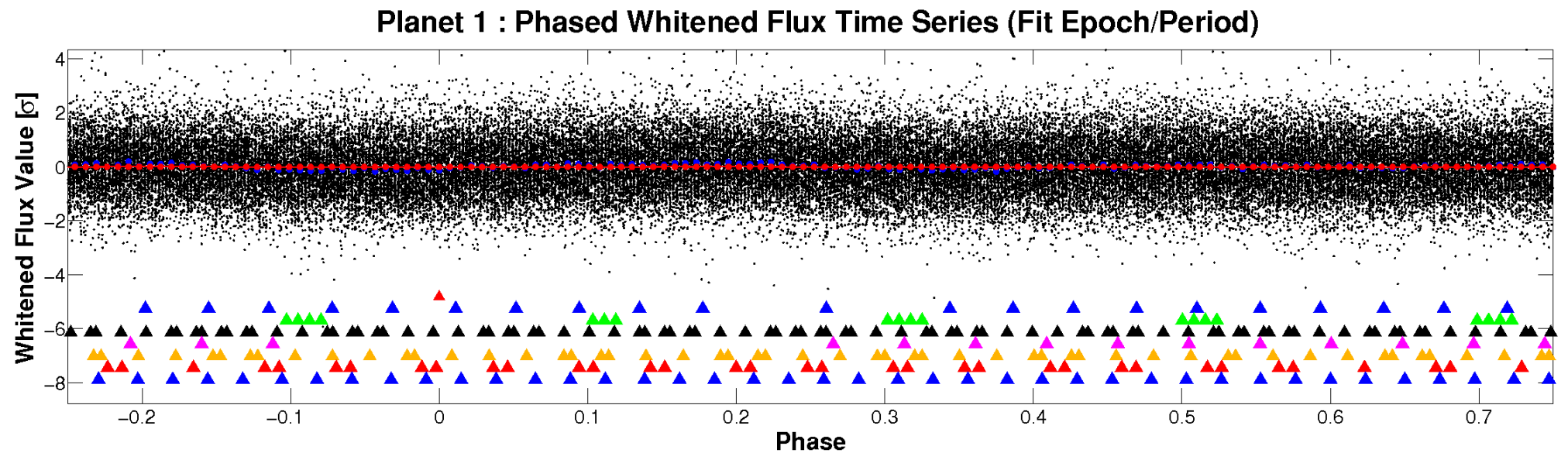
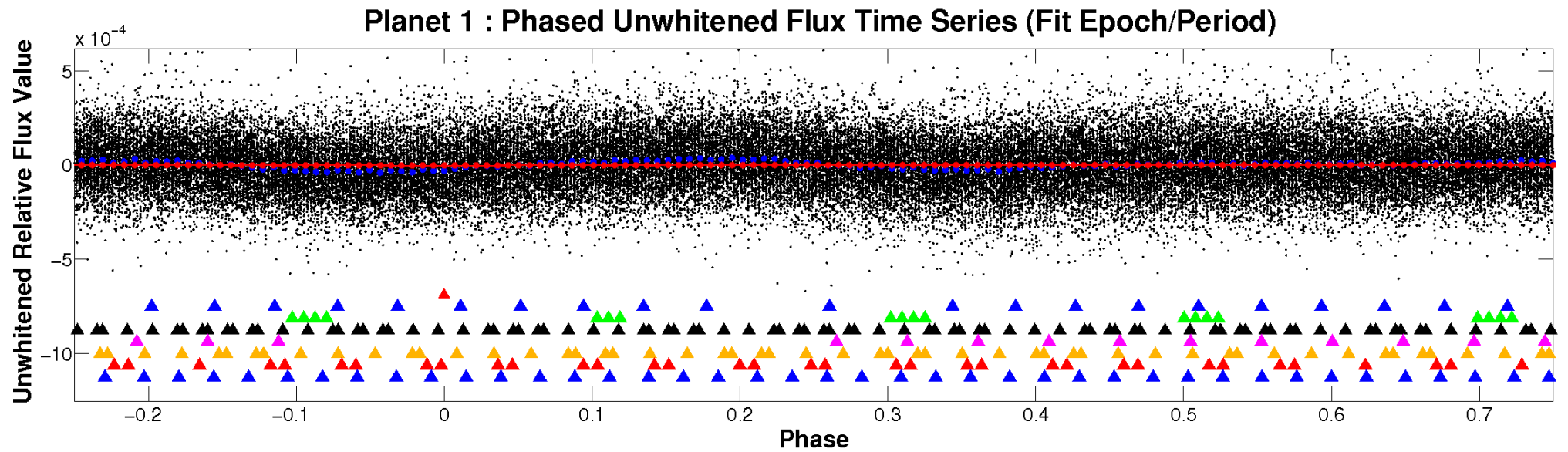


ALT Odd/Even

TCE 011304436-01

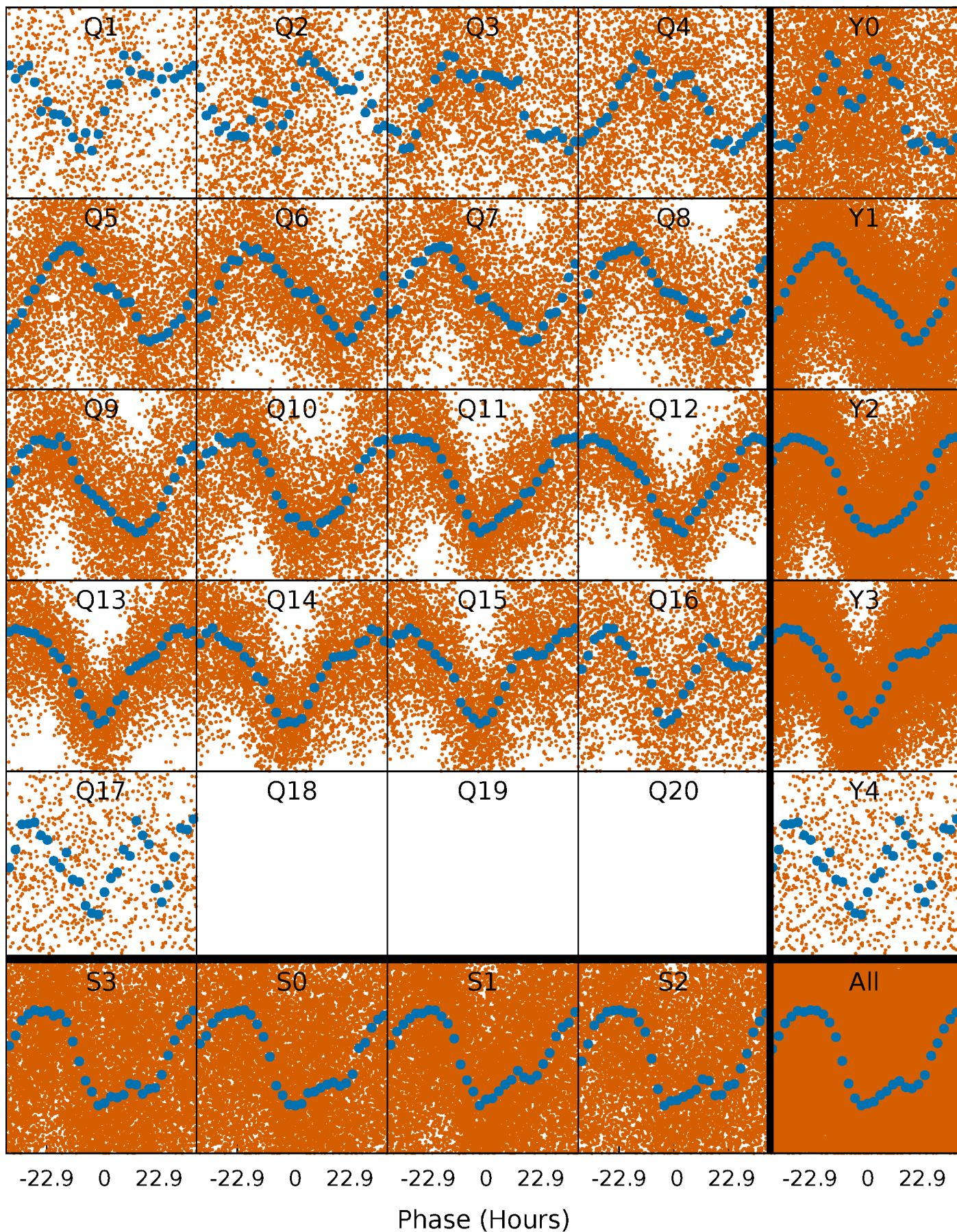


Non-Whitened Vs. Whitened Light Curve



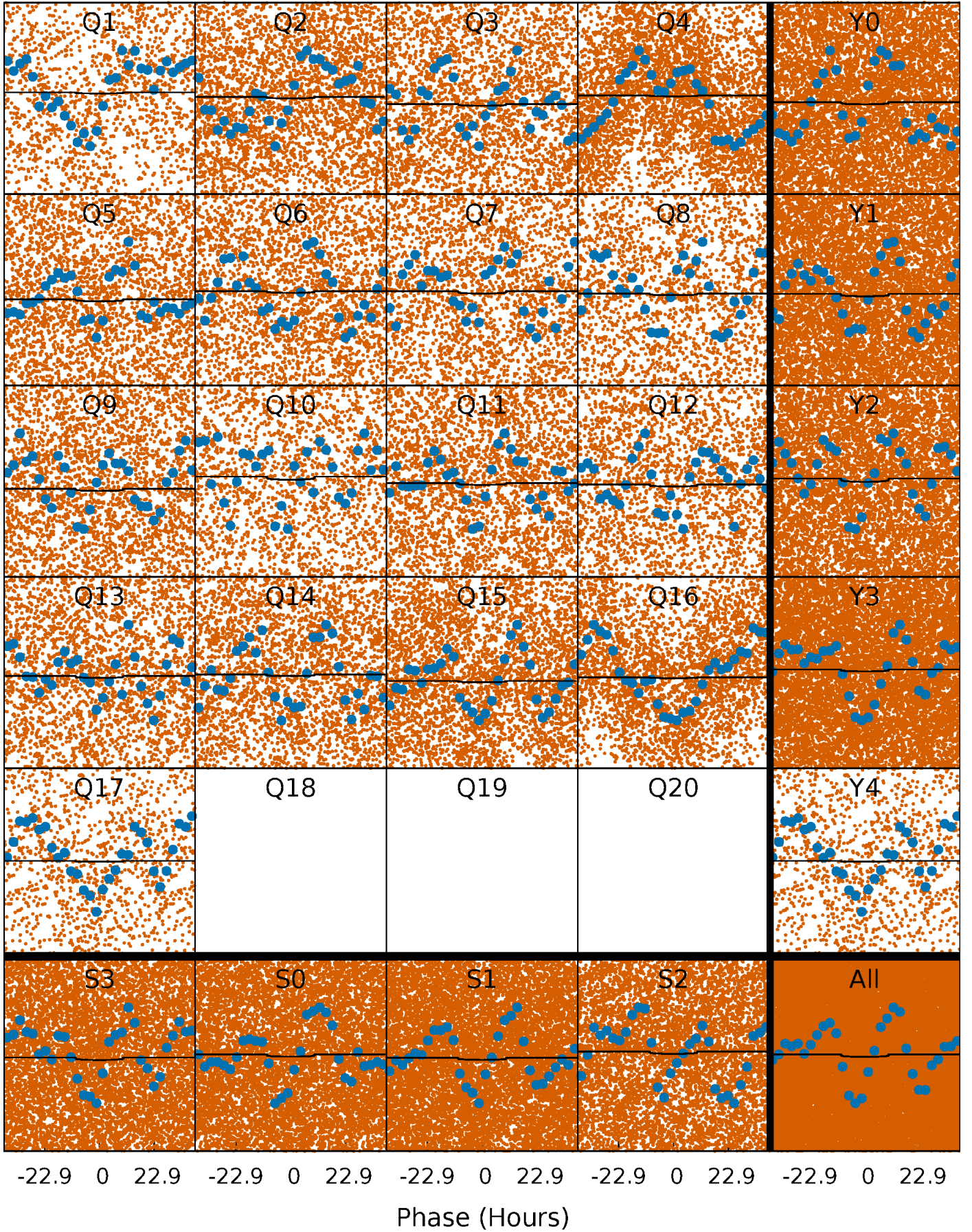
PDC Quarter-Phased Transit Curves

TCE 011304436-01 P= 2.833515 Days $T_0=131.854094$ (BKJD)



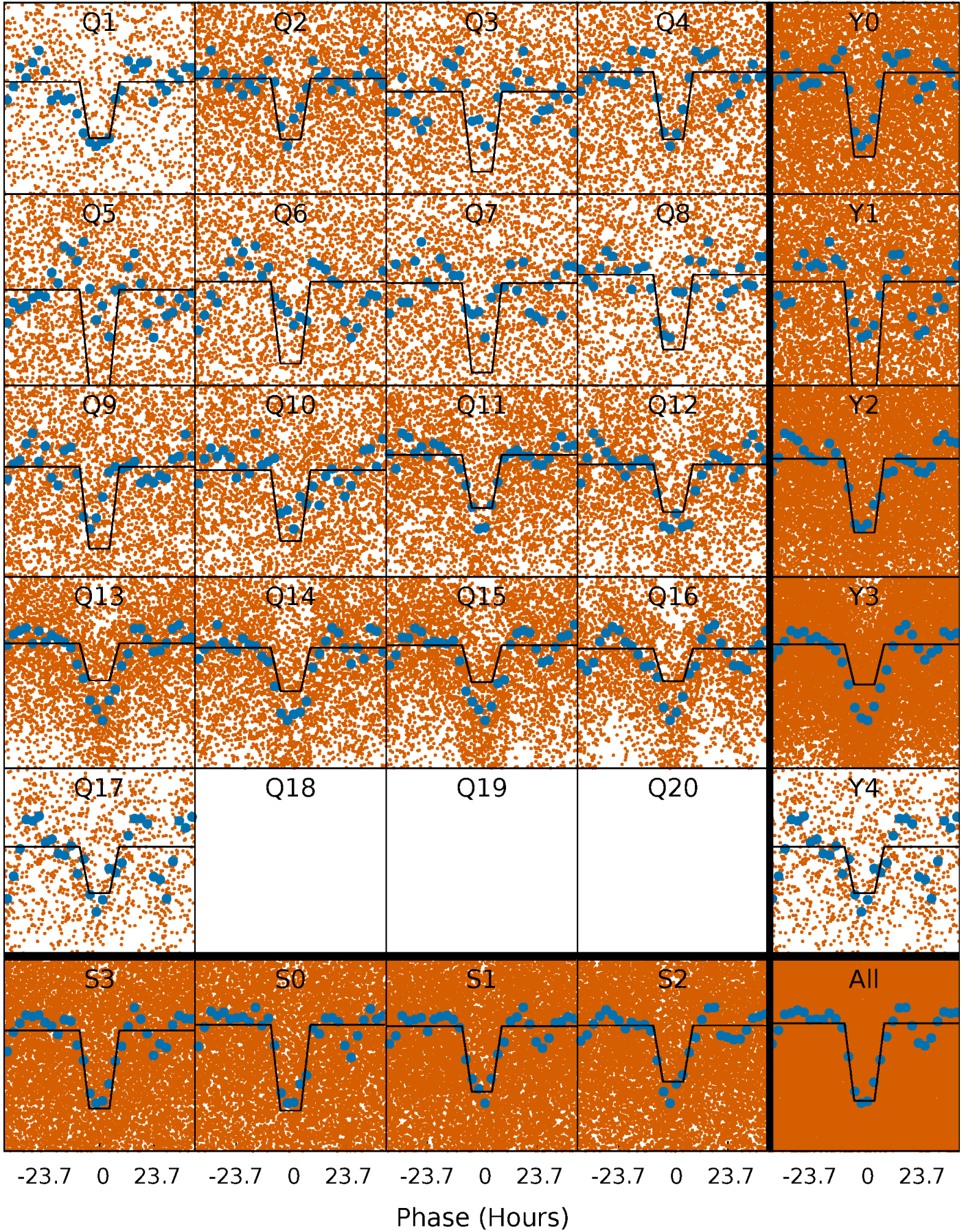
DV Quarter-Phased Transit Curves

TCE 011304436-01 P= 2.833515 Days $T_0=131.854094$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

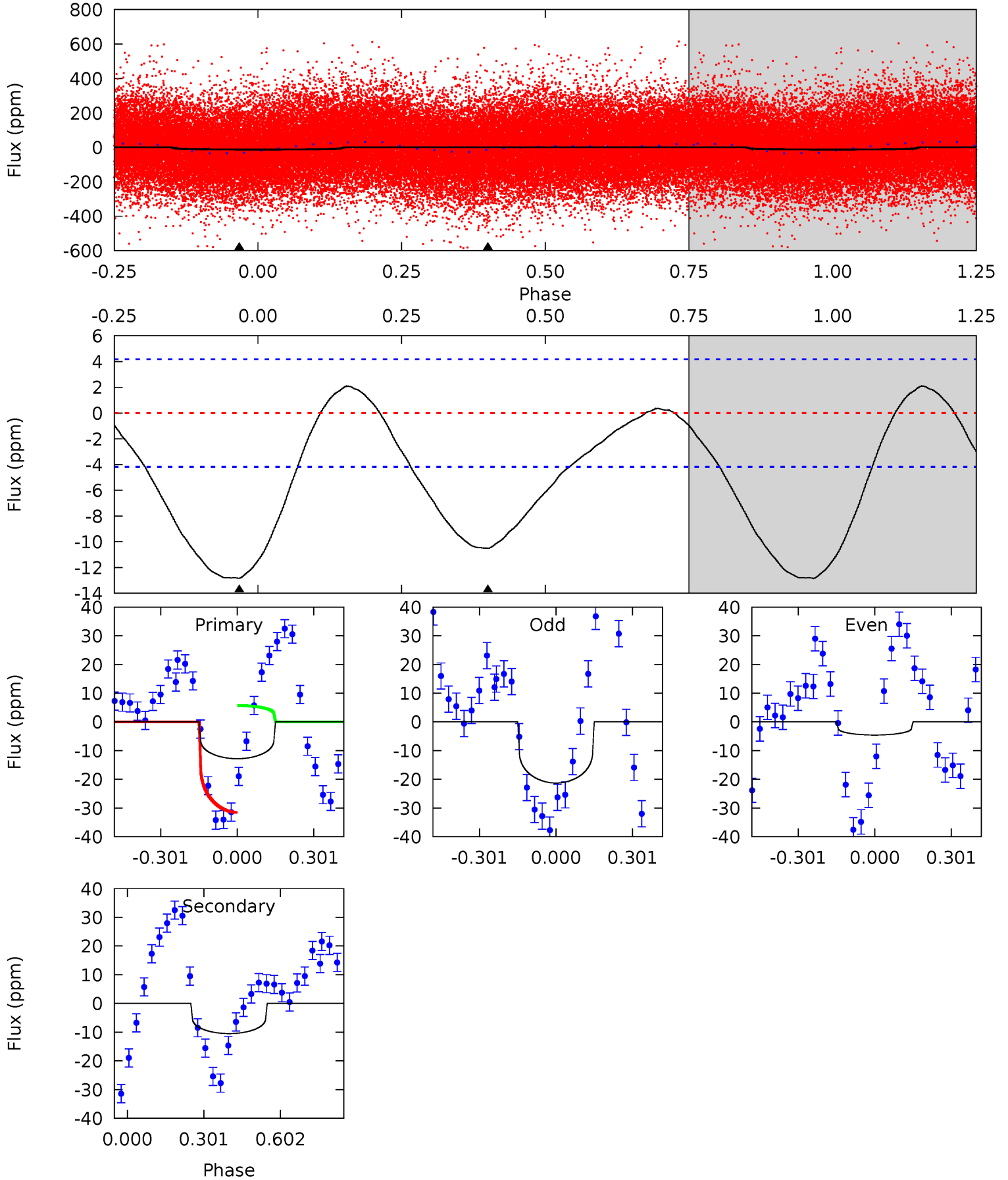
TCE 011304436-01 P= 2.833743 Days $T_0=131.674558$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-01, P = 2.833515 Days, E = 129.020579 Days

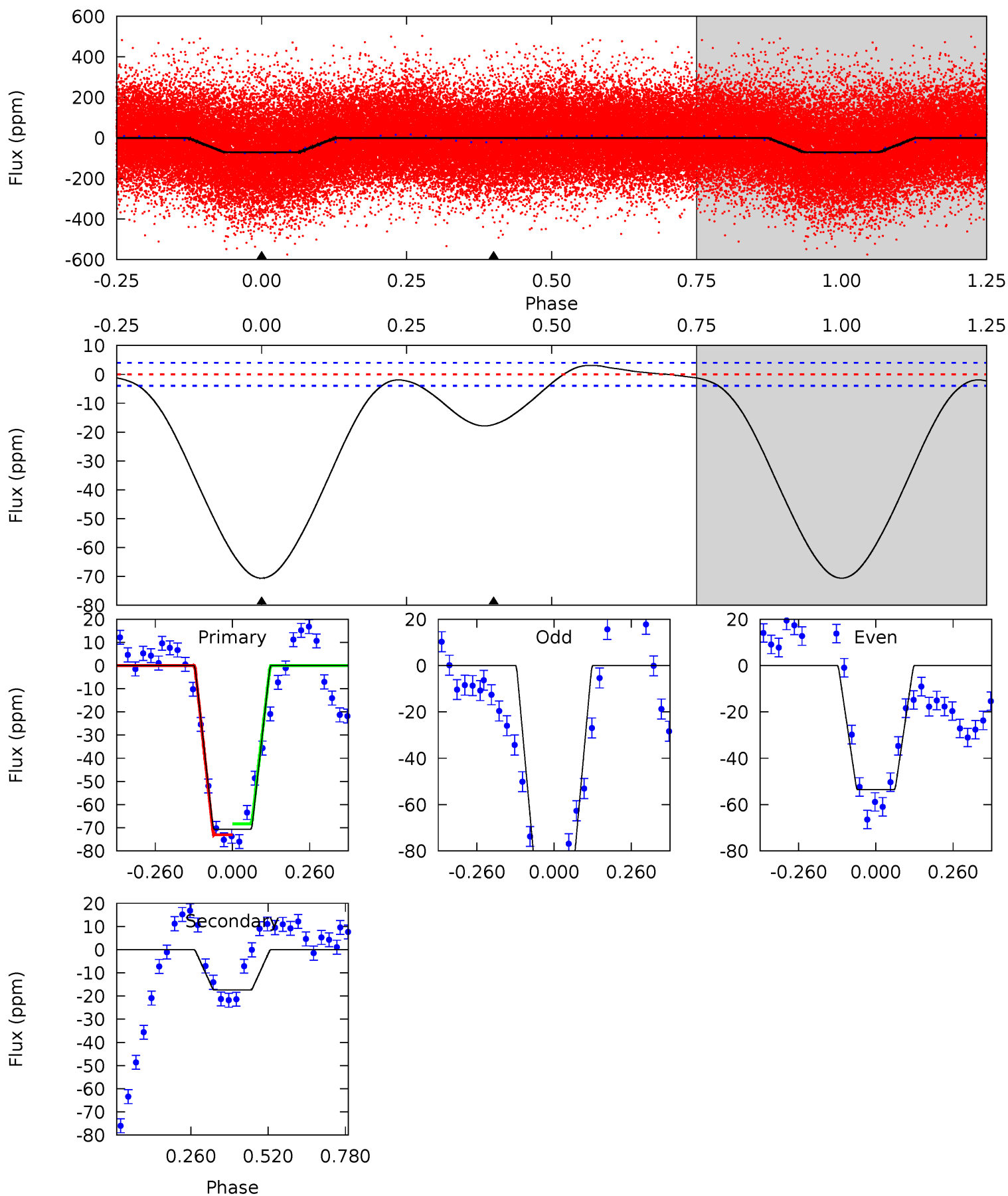
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	10.9	0	0	4.33	1.03	0.43	13.3	13.3	10.9	10.9	8.50	0.98	0.14	13.0



Alt Model-Shift Uniqueness Test

011304436-01, P = 2.833743 Days, E = 128.840815 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.3	19.0	0	0	4.36	1.13	0.65	77.3	77.3	19.0	19.0	18.6	0.93	0.04	2.53



Stellar Parameters For KIC 011304436

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 1	$0.90^{+1.02}_{-0.60}$	2379^{+183}_{-163}	4940^{+4012}_{-1259}	12^{+100}_{-9}
Alt.	-17 ± 1	$1.58^{+1.25}_{-0.95}$	2388^{+189}_{-187}	4385^{+2120}_{-832}	$6.515^{+33.711}_{-4.467}$

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 $A_{obs} \gg 1.0$

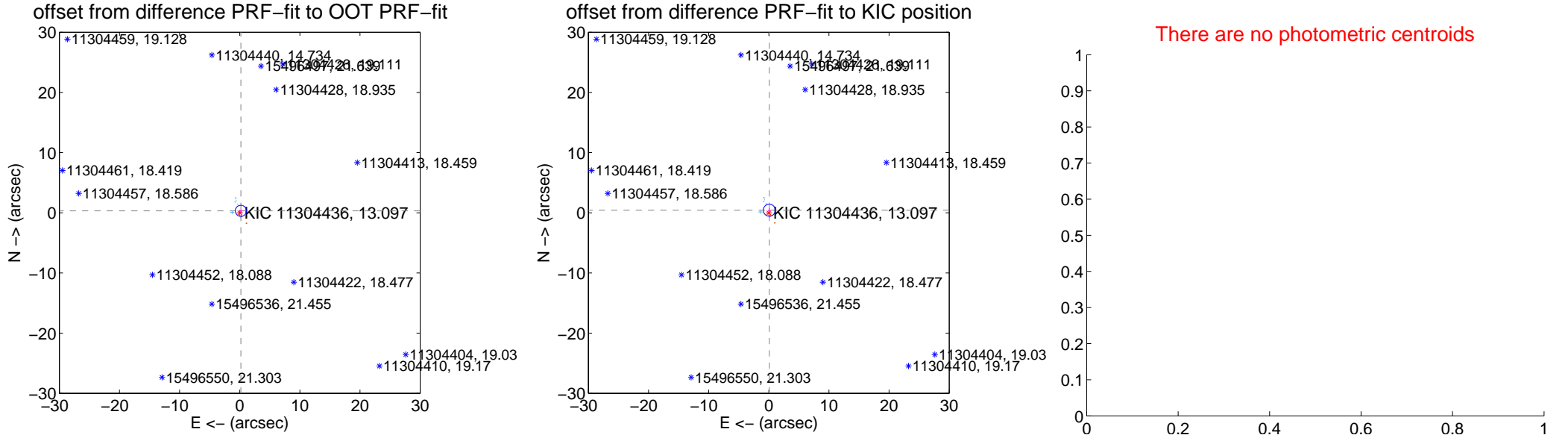
DV Centroid Data

Supplemental centroid analysis for 011304436-01. Kepler magnitude: 13.10. Transit SNR 0.79

There are 10 quarters with good PRF difference image offsets

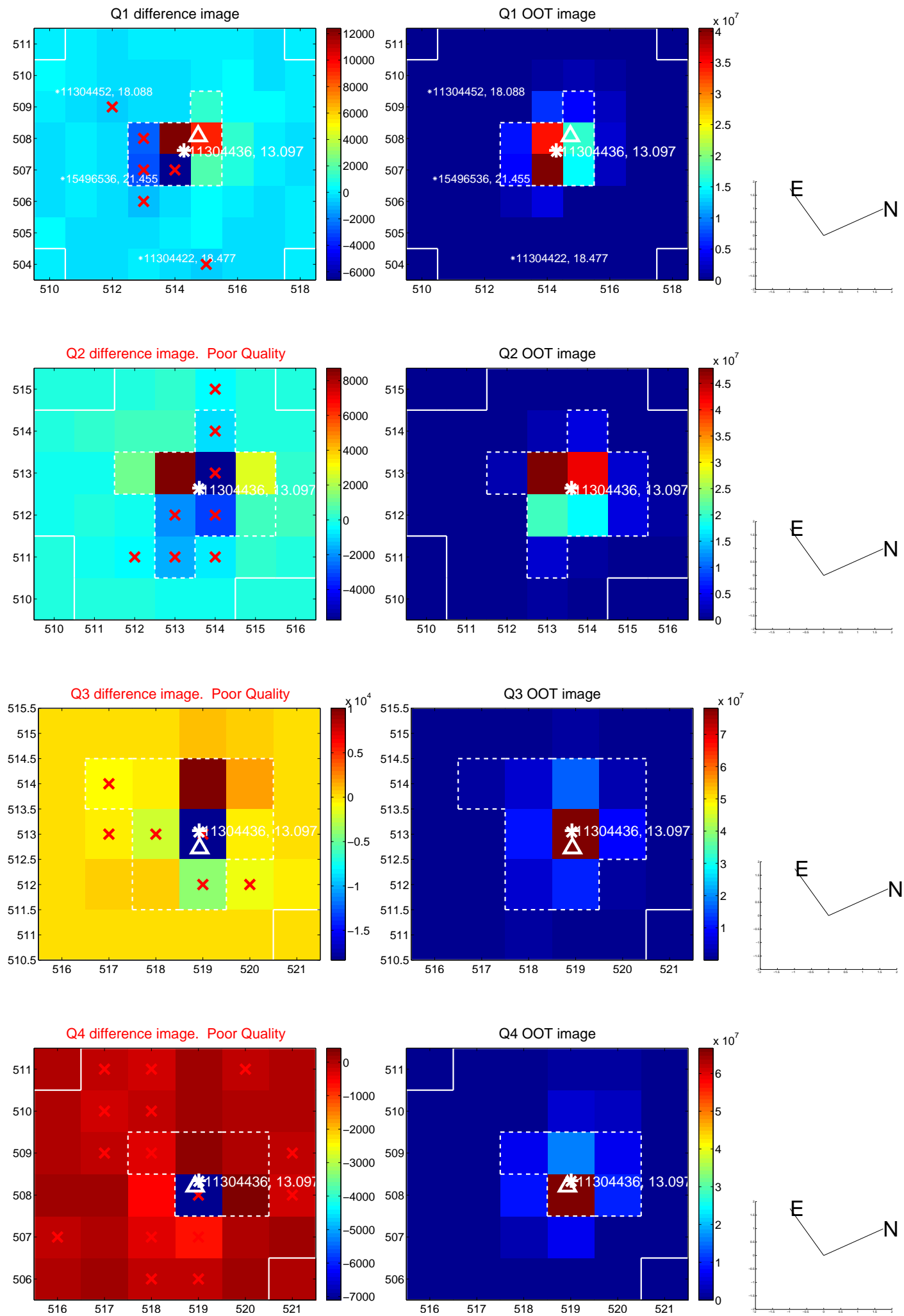
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.377 ± 0.308	1.22	-0.190 ± 0.203	0.326 ± 0.336
PRF-fit source offset from KIC position	0.438 ± 0.333	1.32	-0.086 ± 0.205	0.430 ± 0.337
photometric centroid source offset	—	—	—	—

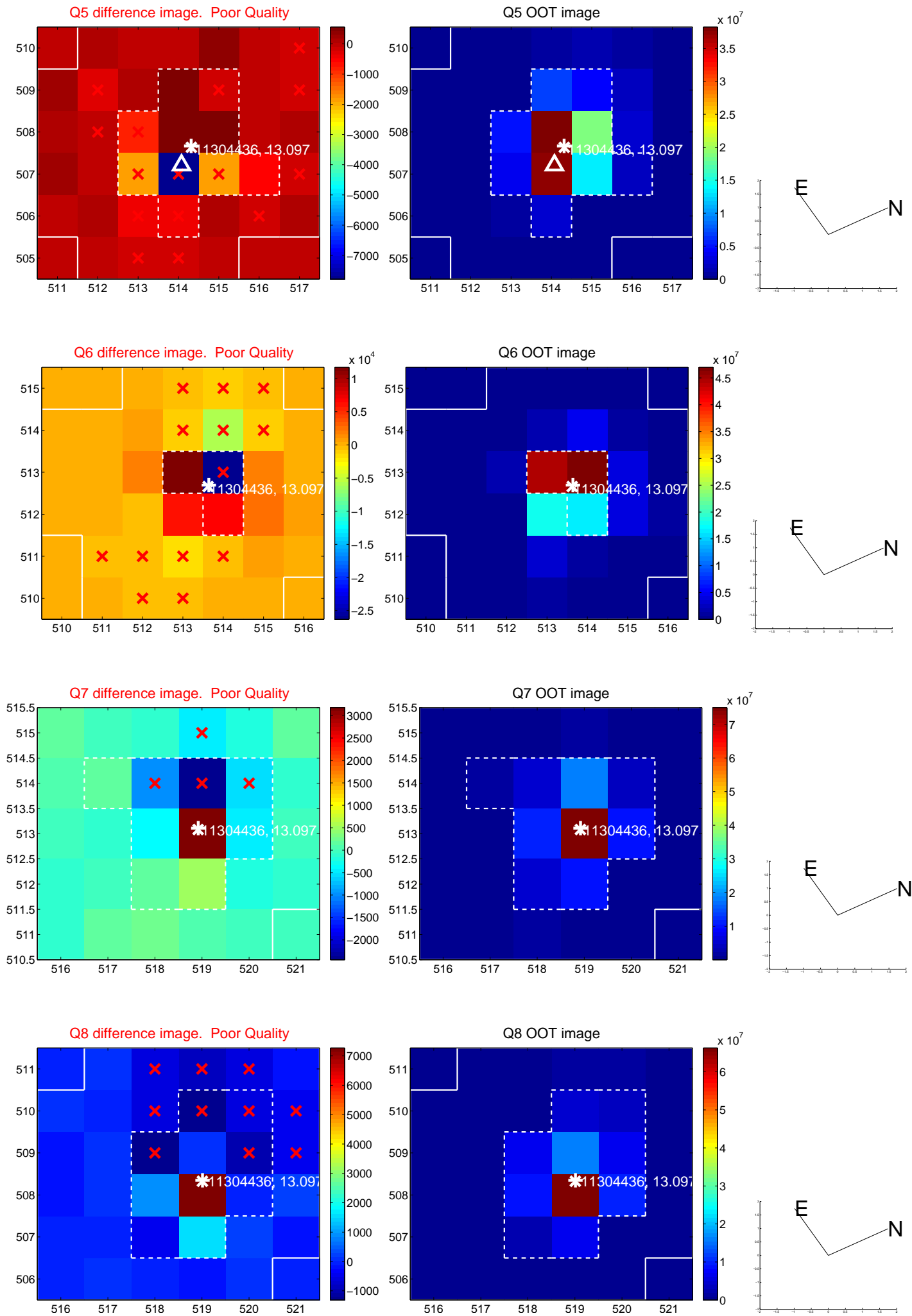


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

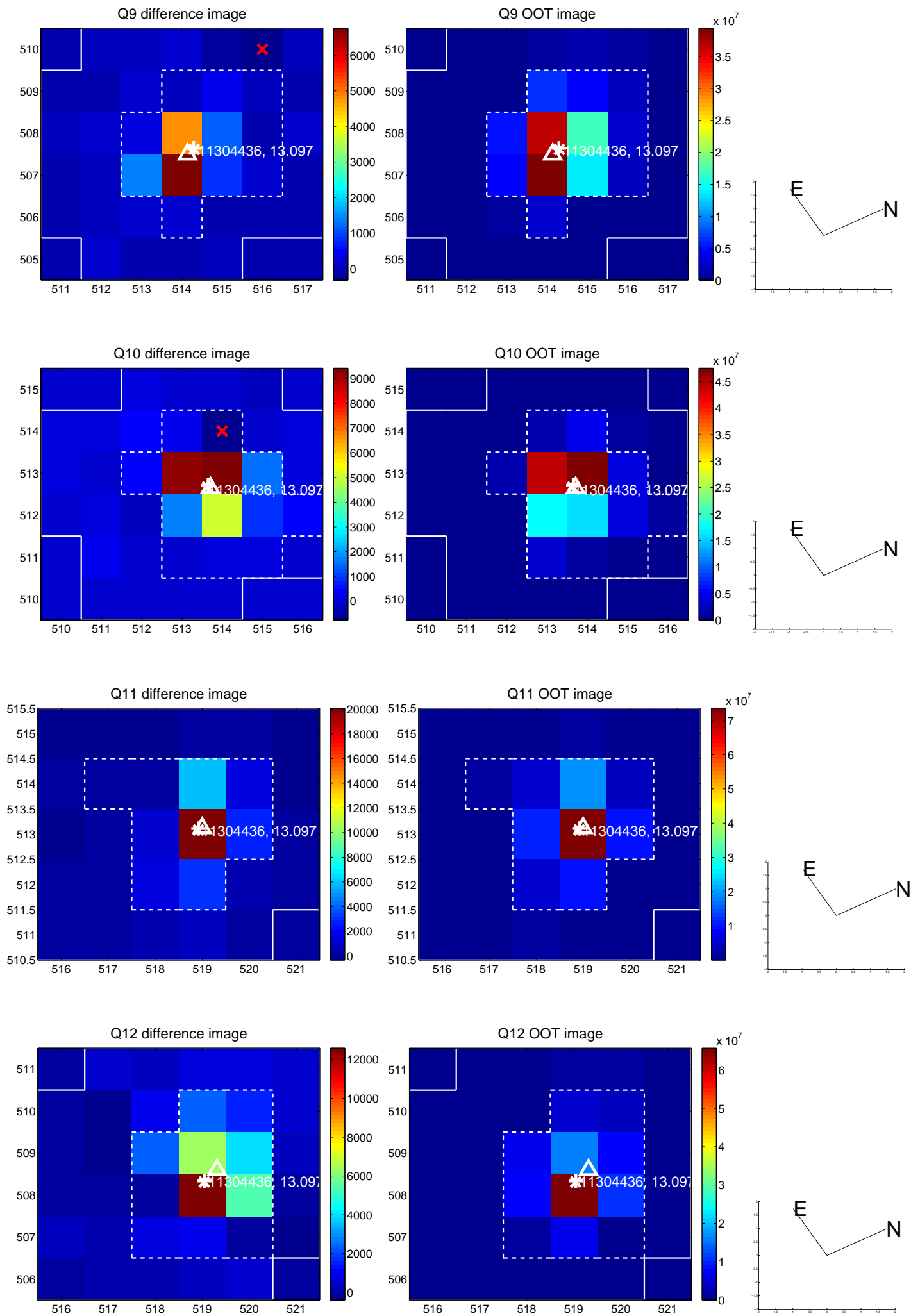
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



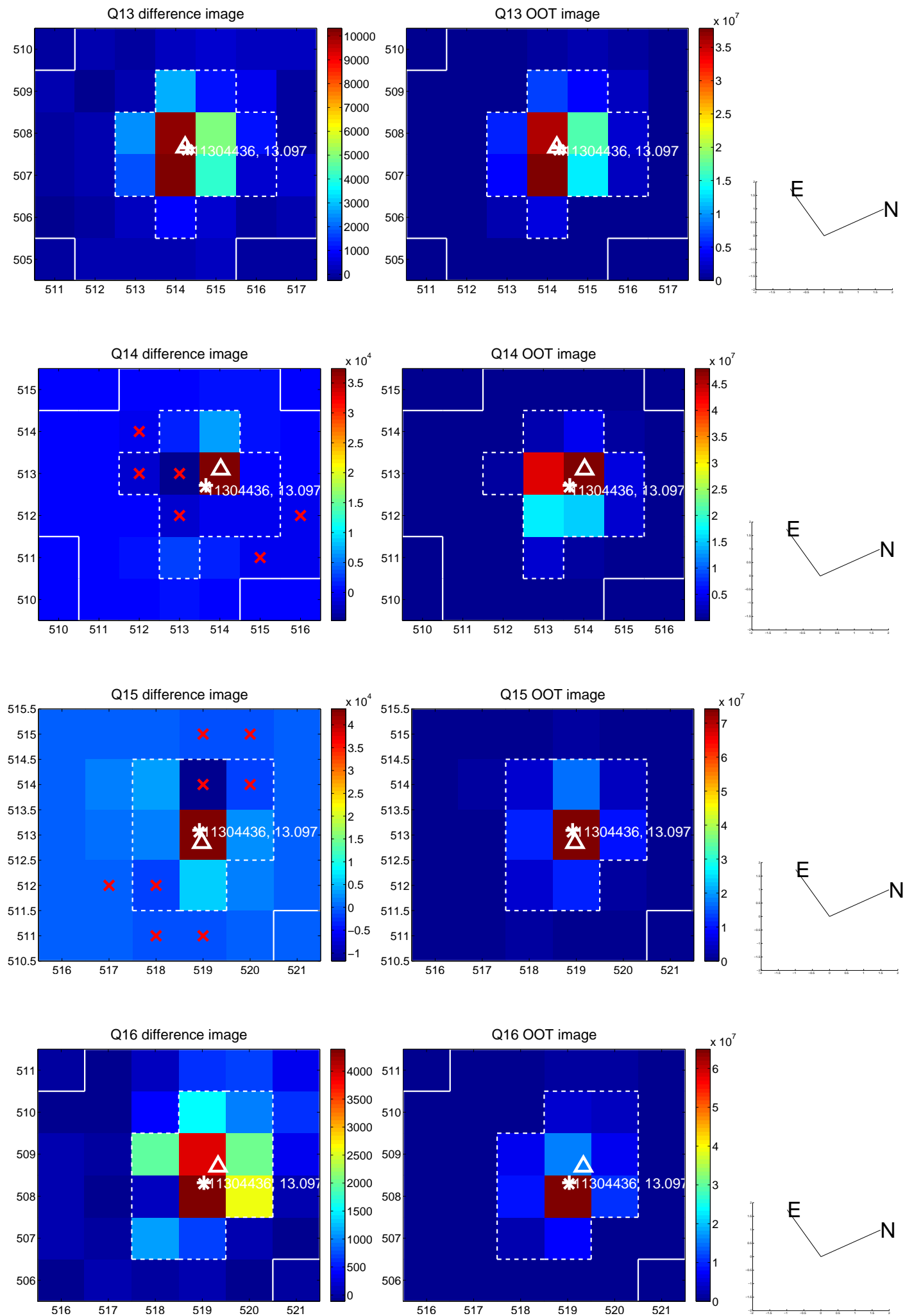
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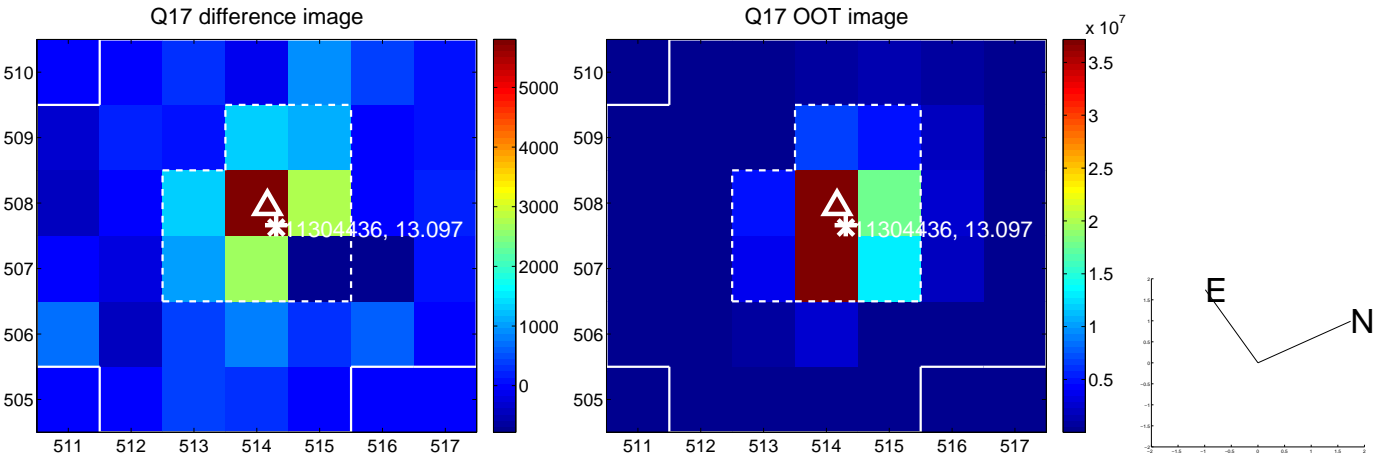
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



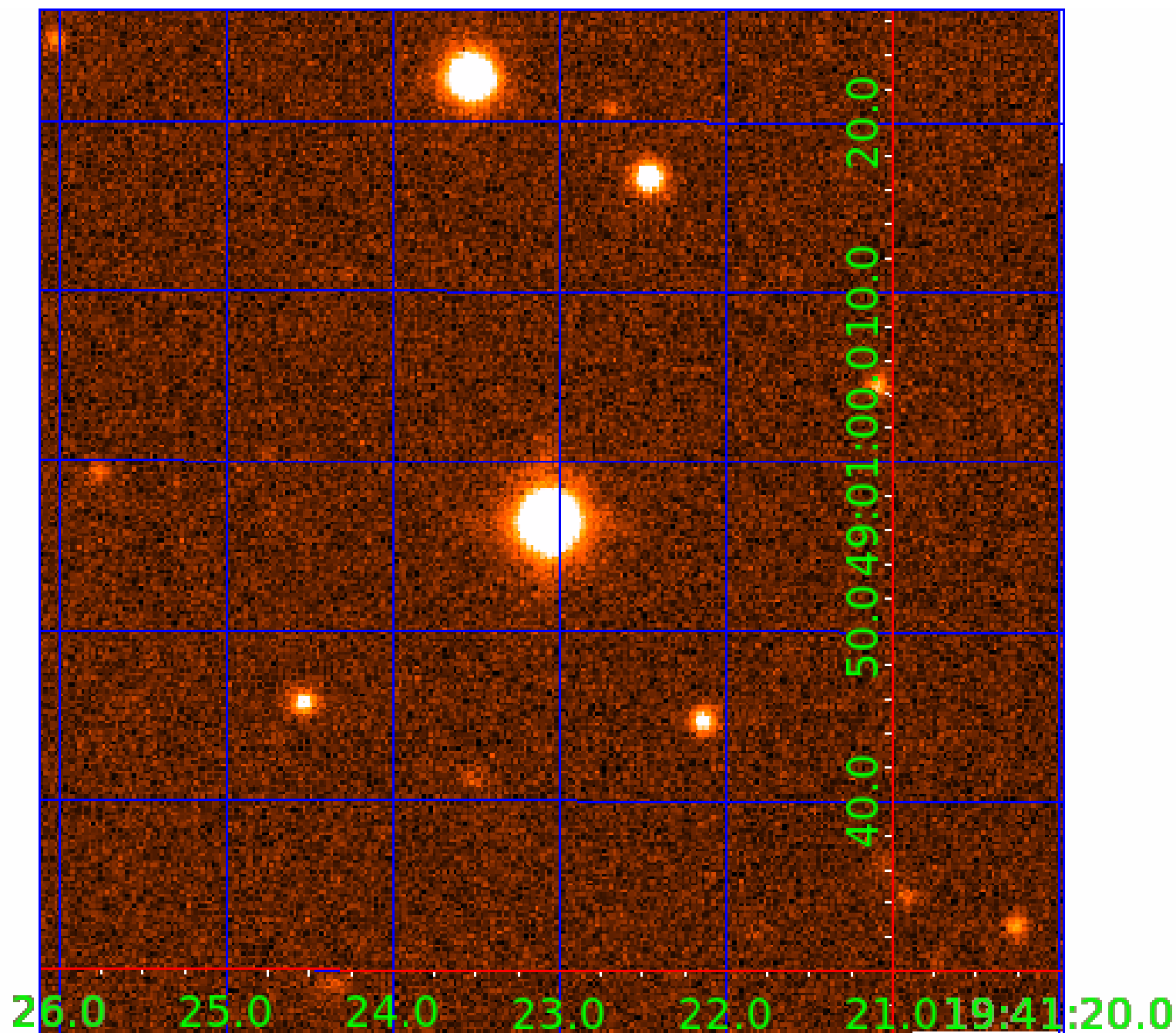
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011304436

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})
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Robovetter Results

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011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

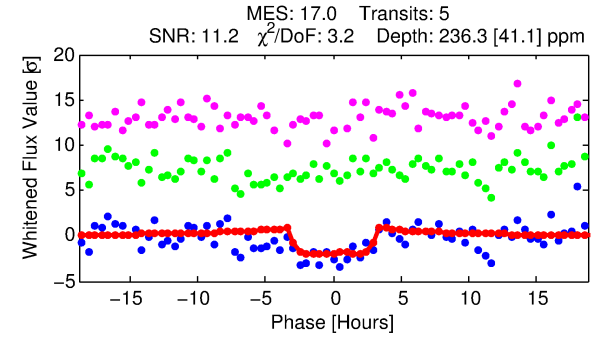
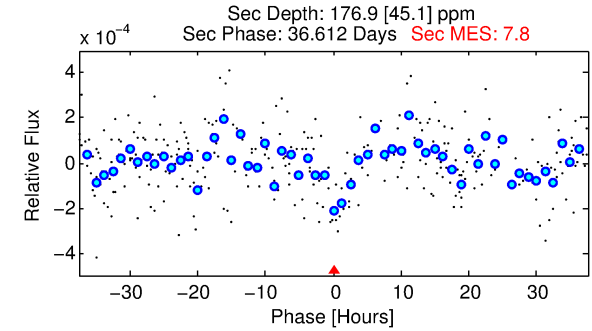
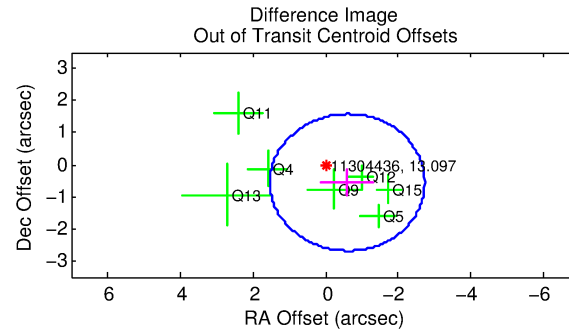
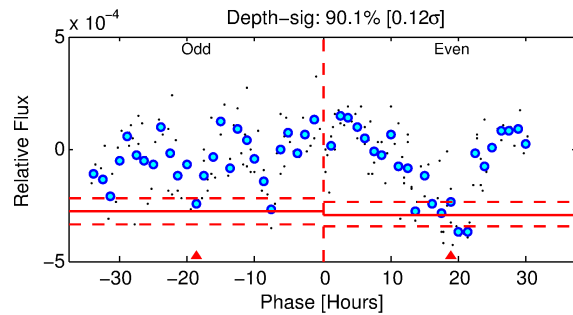
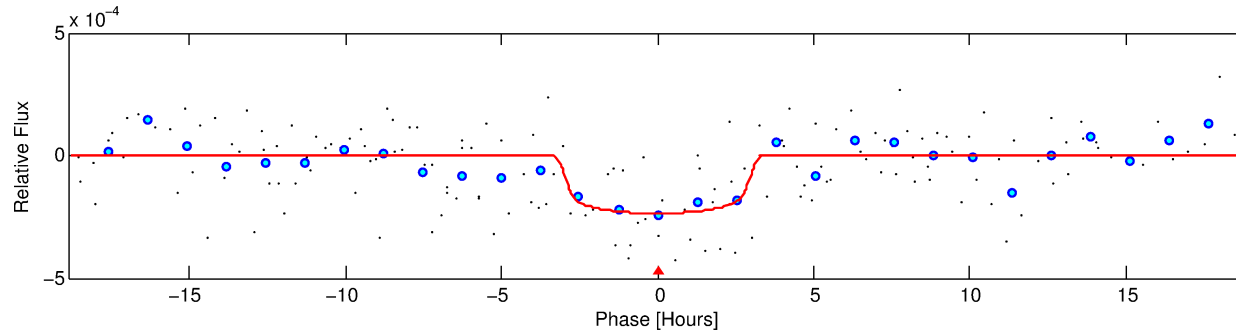
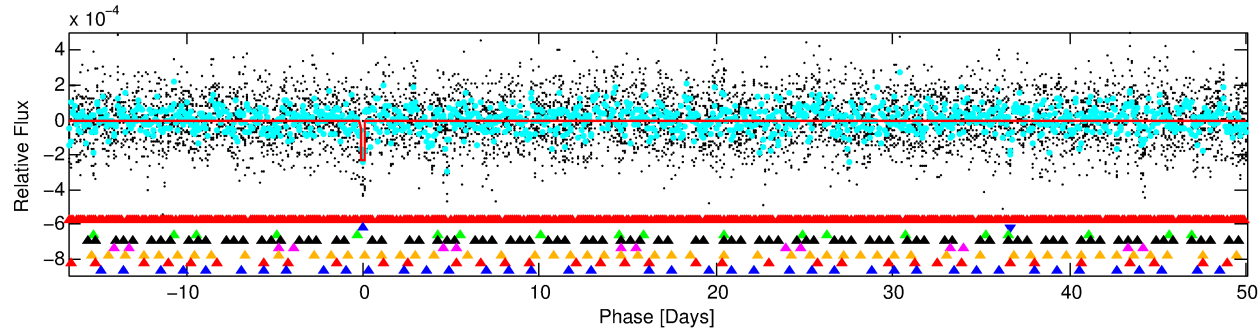
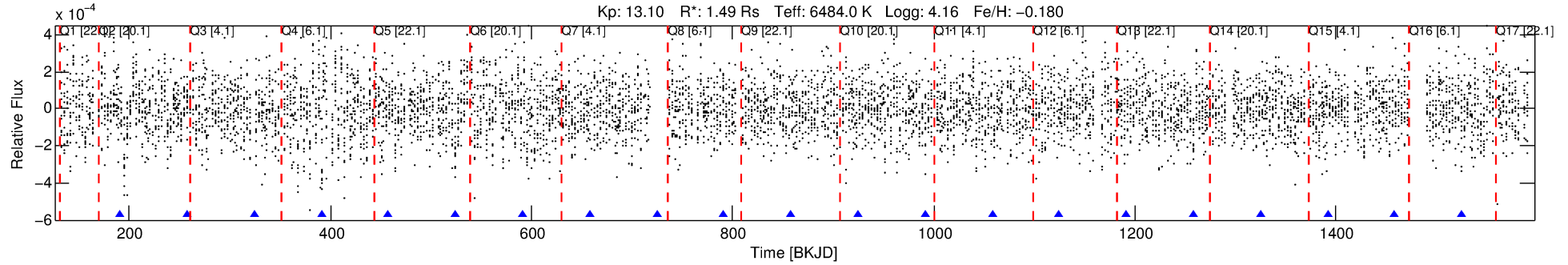
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-02

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 2 of 8 Period: 66.705 d



DV Fit Results:

Period = 66.70543 [0.00135] d
Epoch = 190.9182 [0.0172] BKJD
Rp/R* = 0.0158 [0.0098]
a/R* = 46.54 [161.29]
b = 0.84 [1.24]
Seff = 30.72 [12.50]
Teq = 600 [61] K
Rp = 2.58 [1.78] Re
a = 0.3390 [0.0862] AU
Ag = 1682.78 [2230.04] [0.75 σ]
Teffp = 5945 [1902] K [2.81 σ]

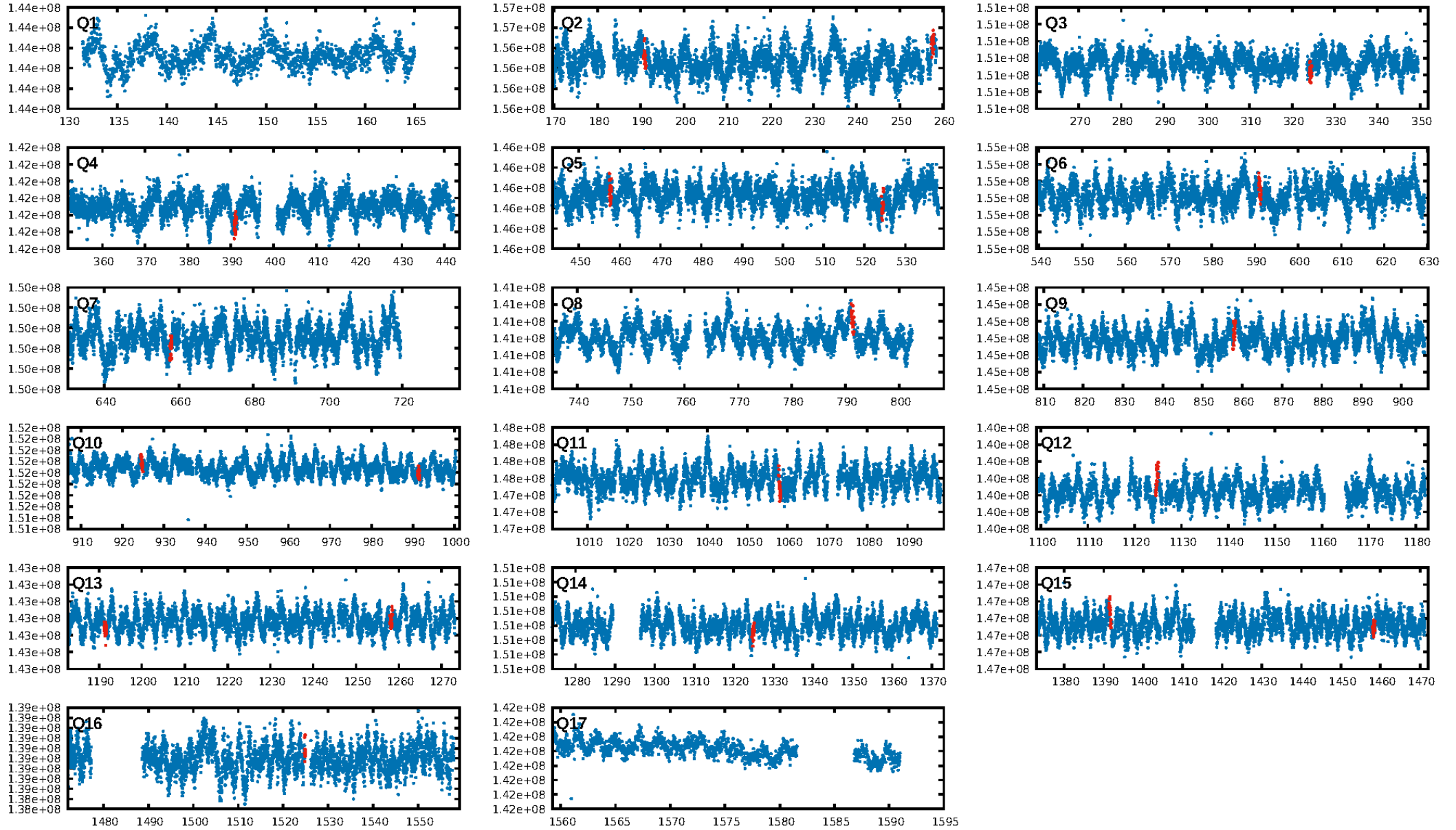
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.79 σ]
LongPeriod-sig: 100.0% [24.66 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 39.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -2.098
Centroid-sig: 67.3%
Centroid-so: 0.434 arcsec [1.02 σ]
OotOffset-rm: 0.819 arcsec [1.15 σ]
KicOffset-rm: 0.697 arcsec [1.00 σ]
OotOffset-st: 0/2/2/3 [7]
KicOffset-st: 0/2/2/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.38 [5/13]

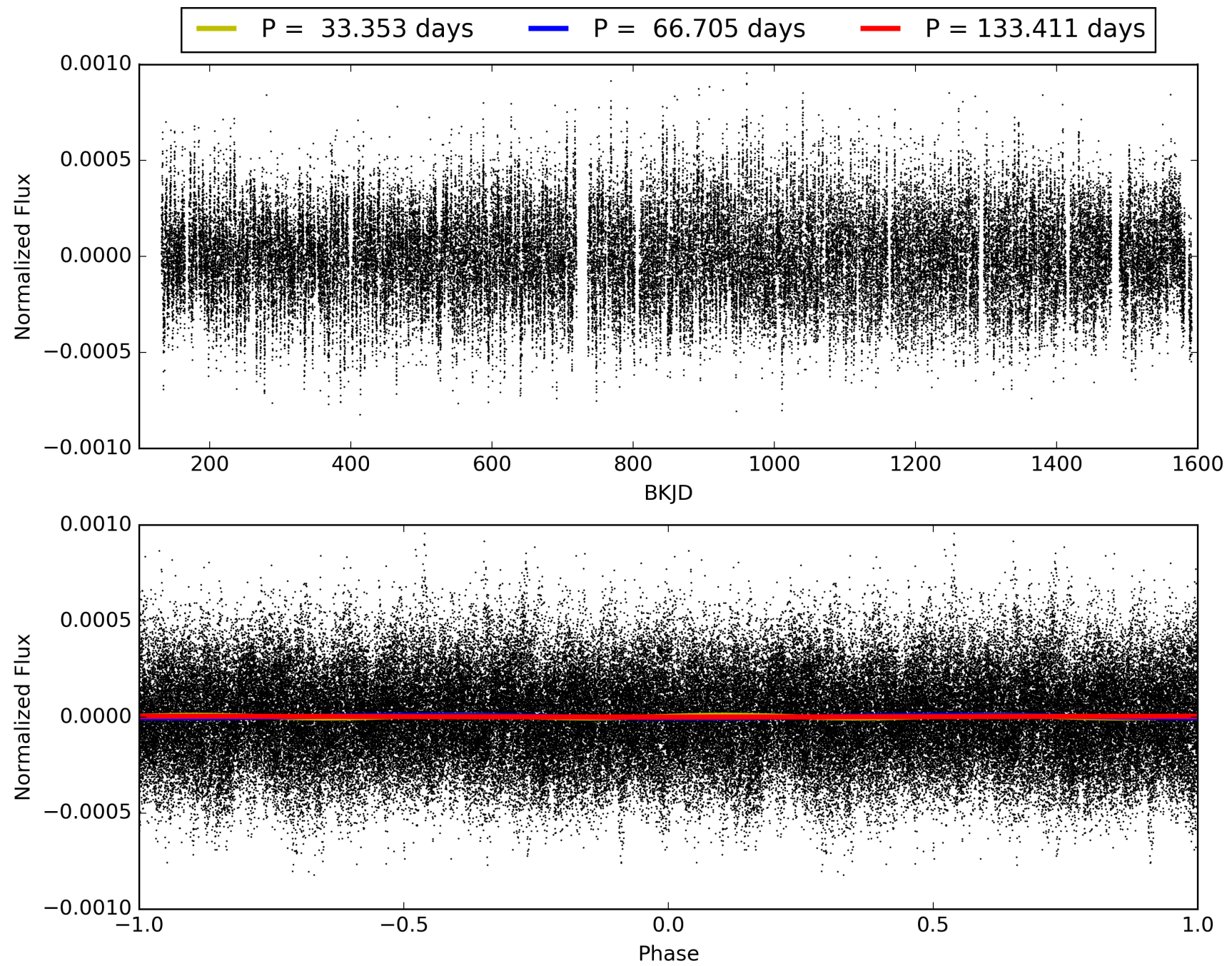
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011304436-02, PDC Light Curves

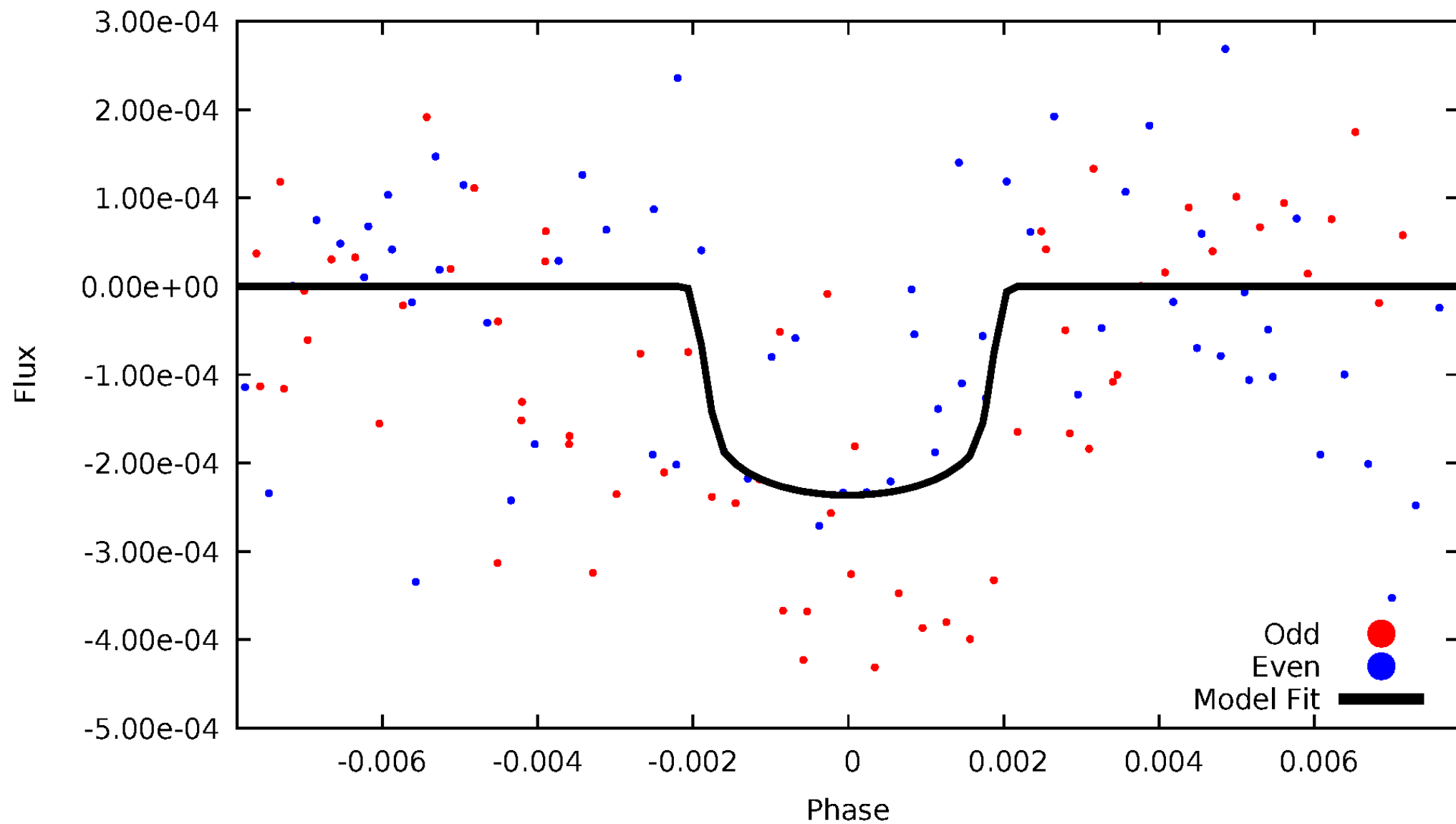


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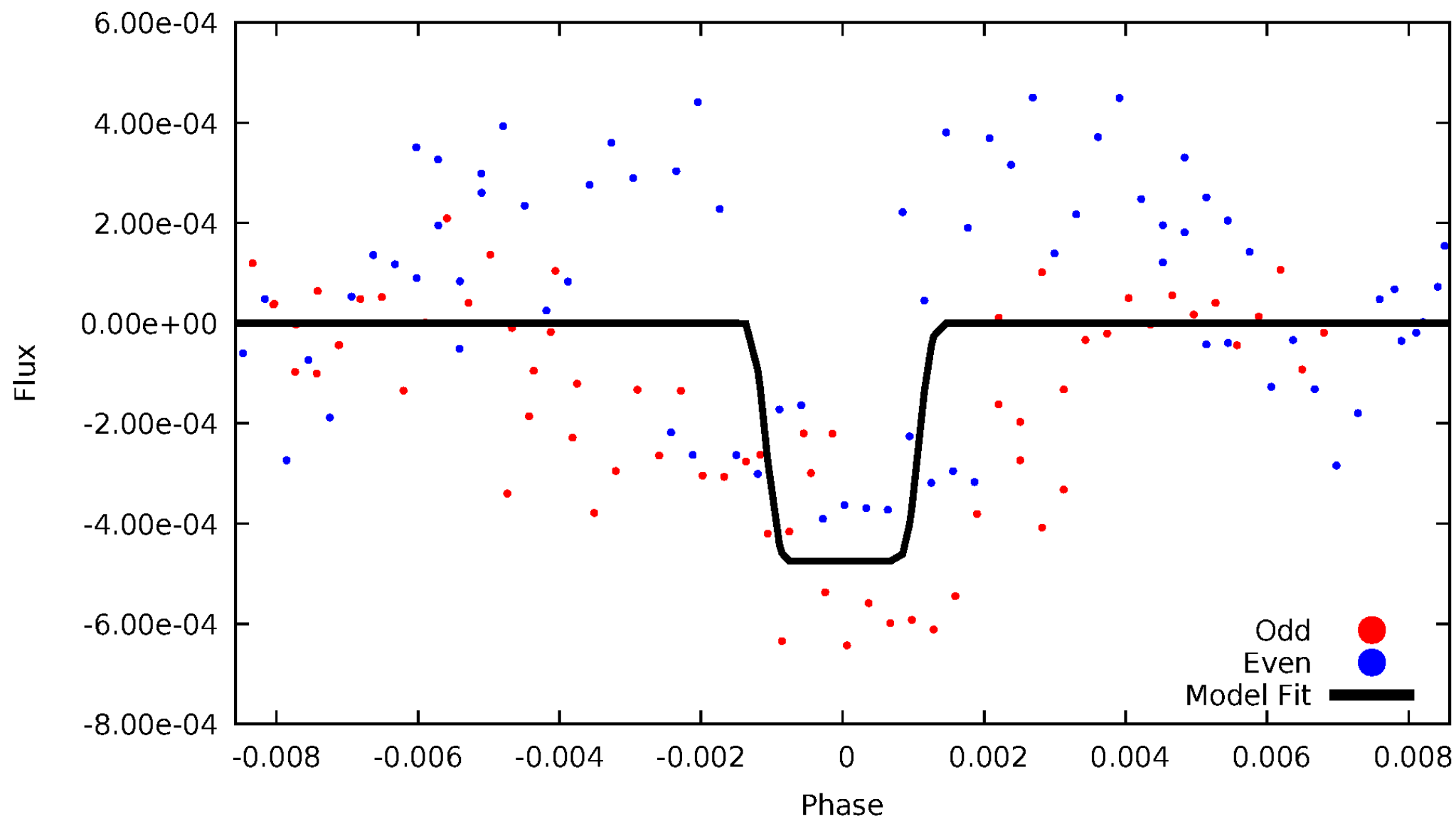
DV Odd/Even

TCE 011304436-02



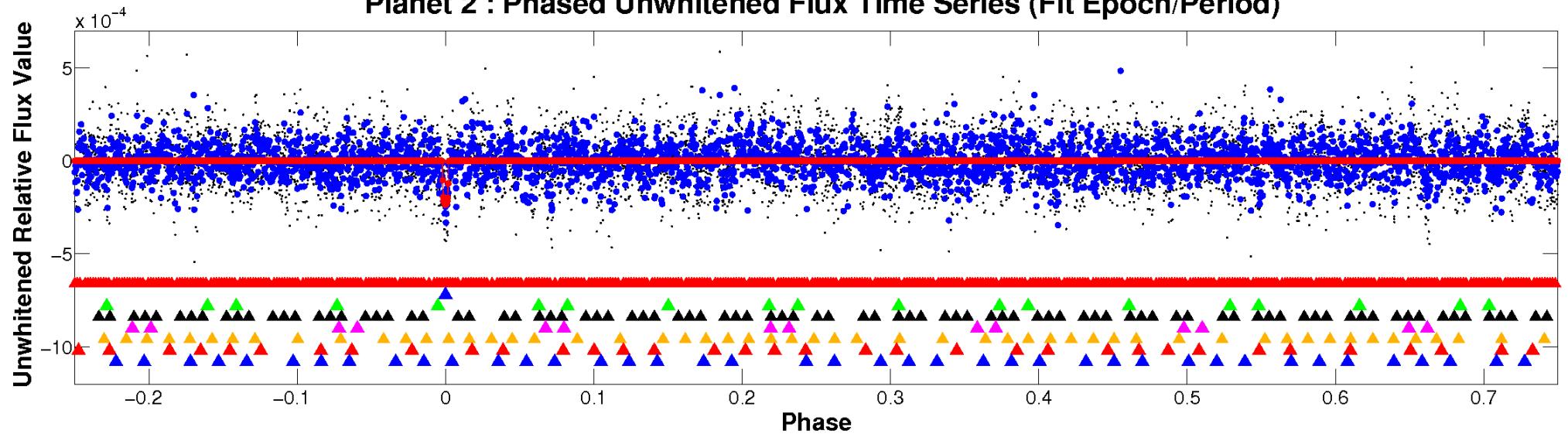
ALT Odd/Even

TCE 011304436-02

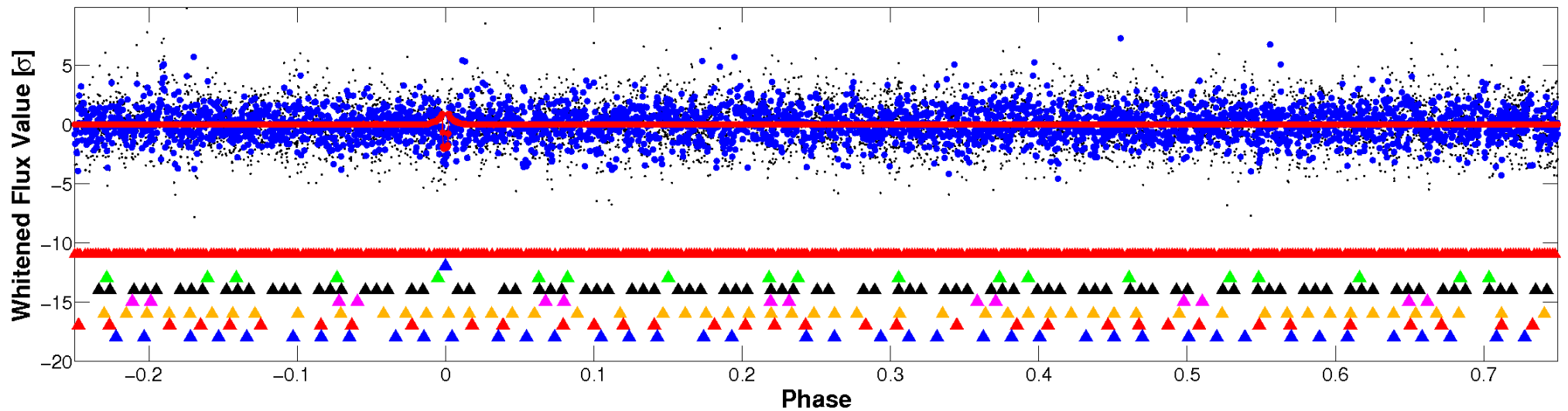


Non-Whitened Vs. Whitened Light Curve

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

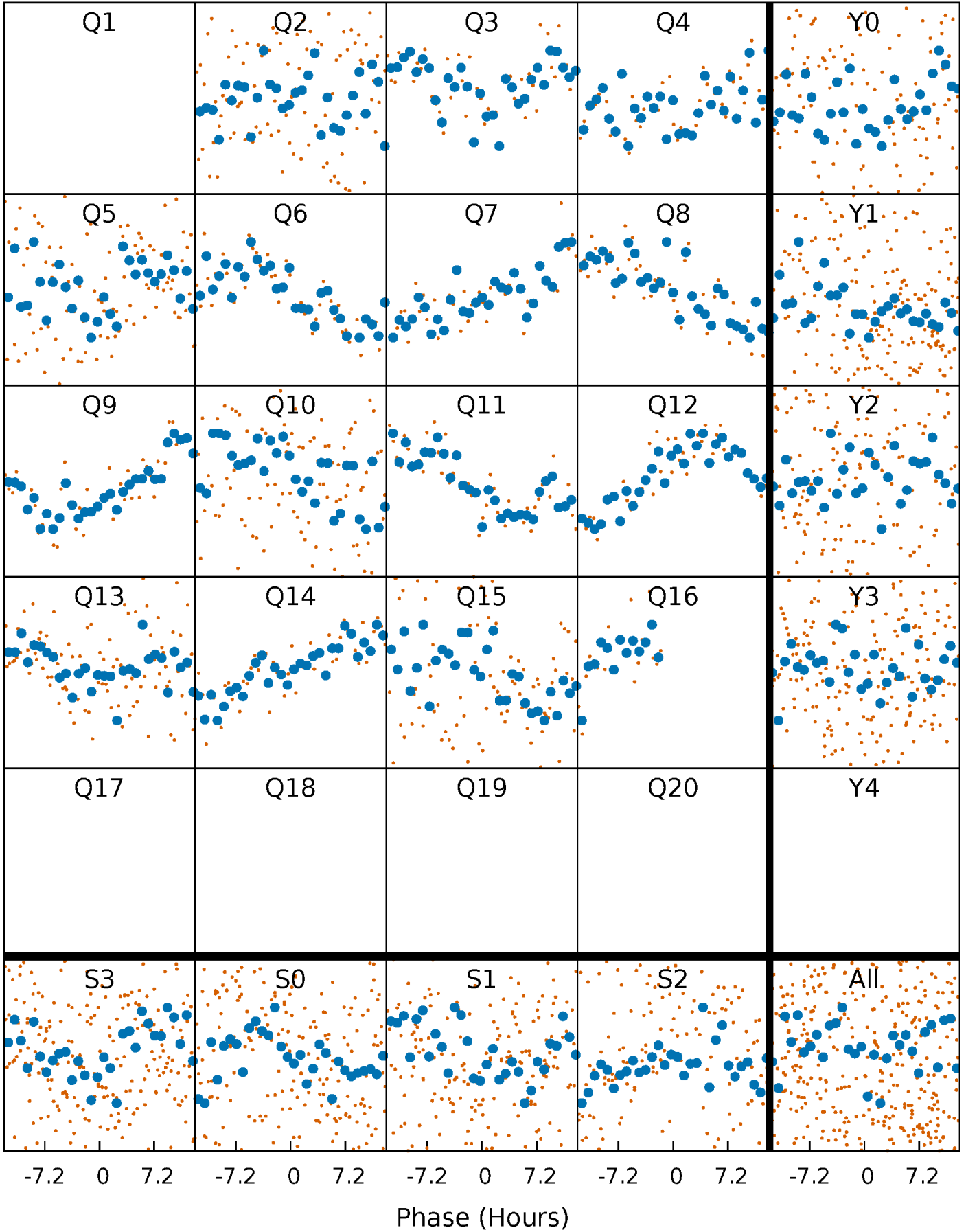


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



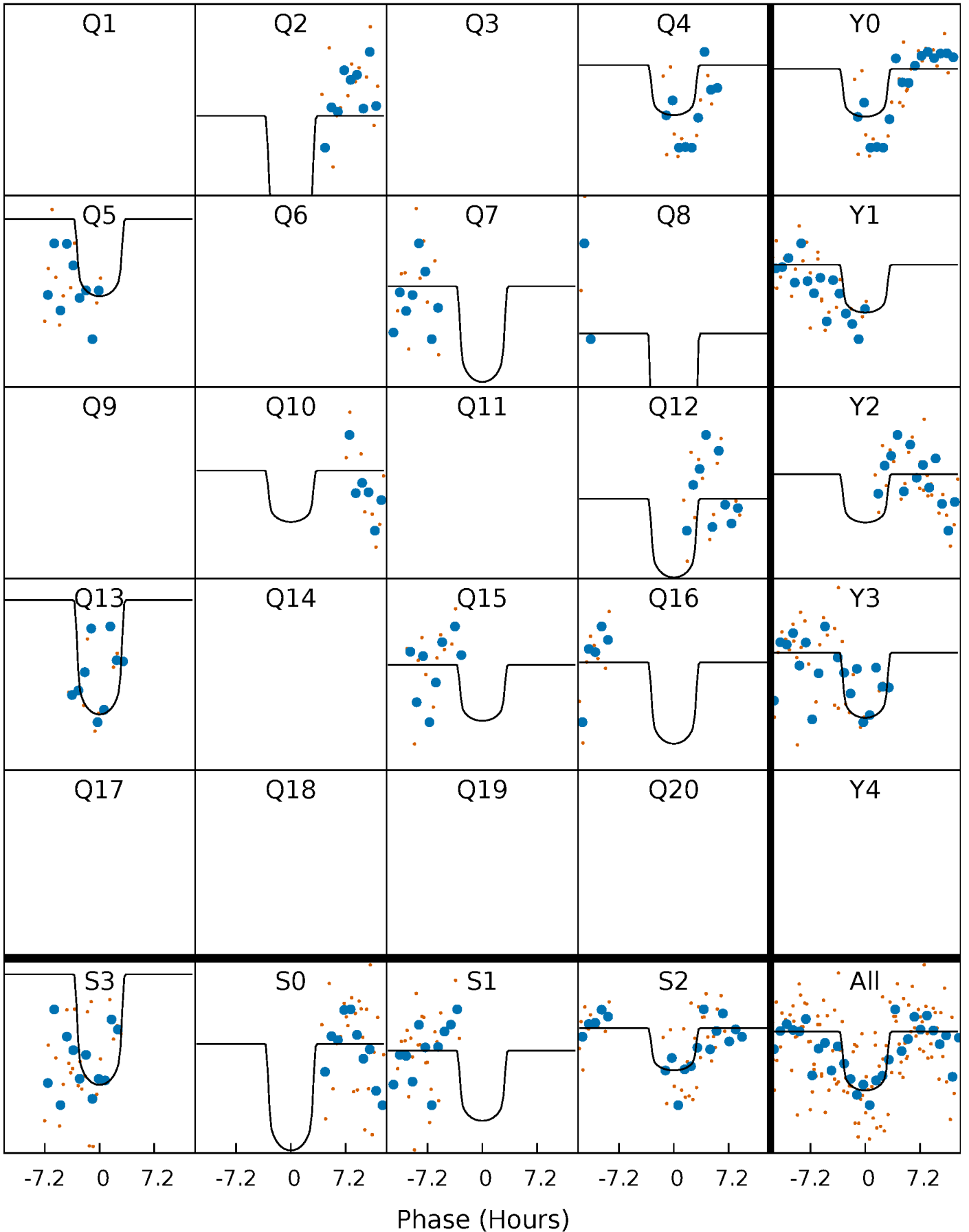
PDC Quarter-Phased Transit Curves

TCE 011304436-02 P= 66.705431 Days $T_0=190.918154$ (BKJD)



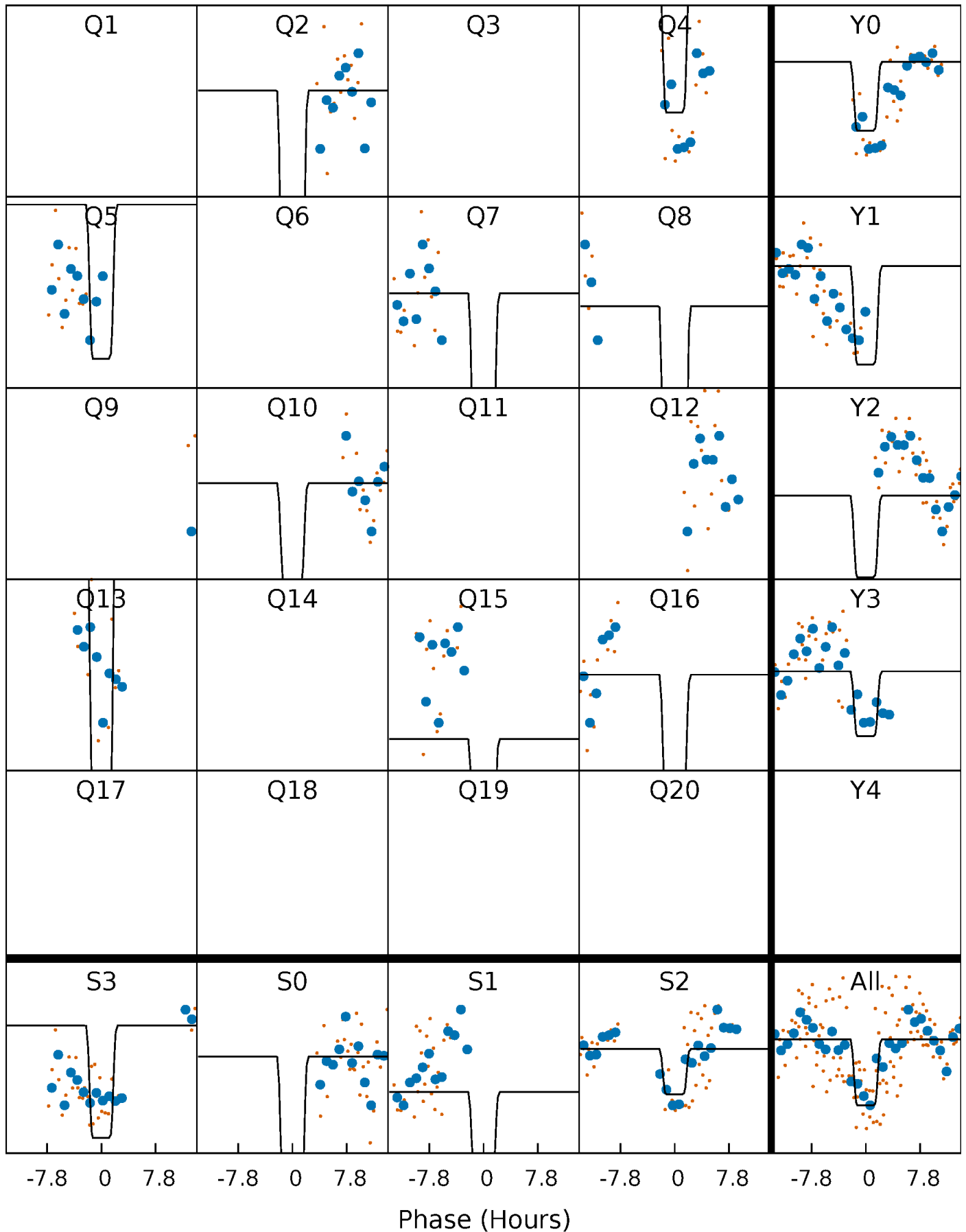
DV Quarter-Phased Transit Curves

TCE 011304436-02 P= 66.705431 Days $T_0=190.918154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

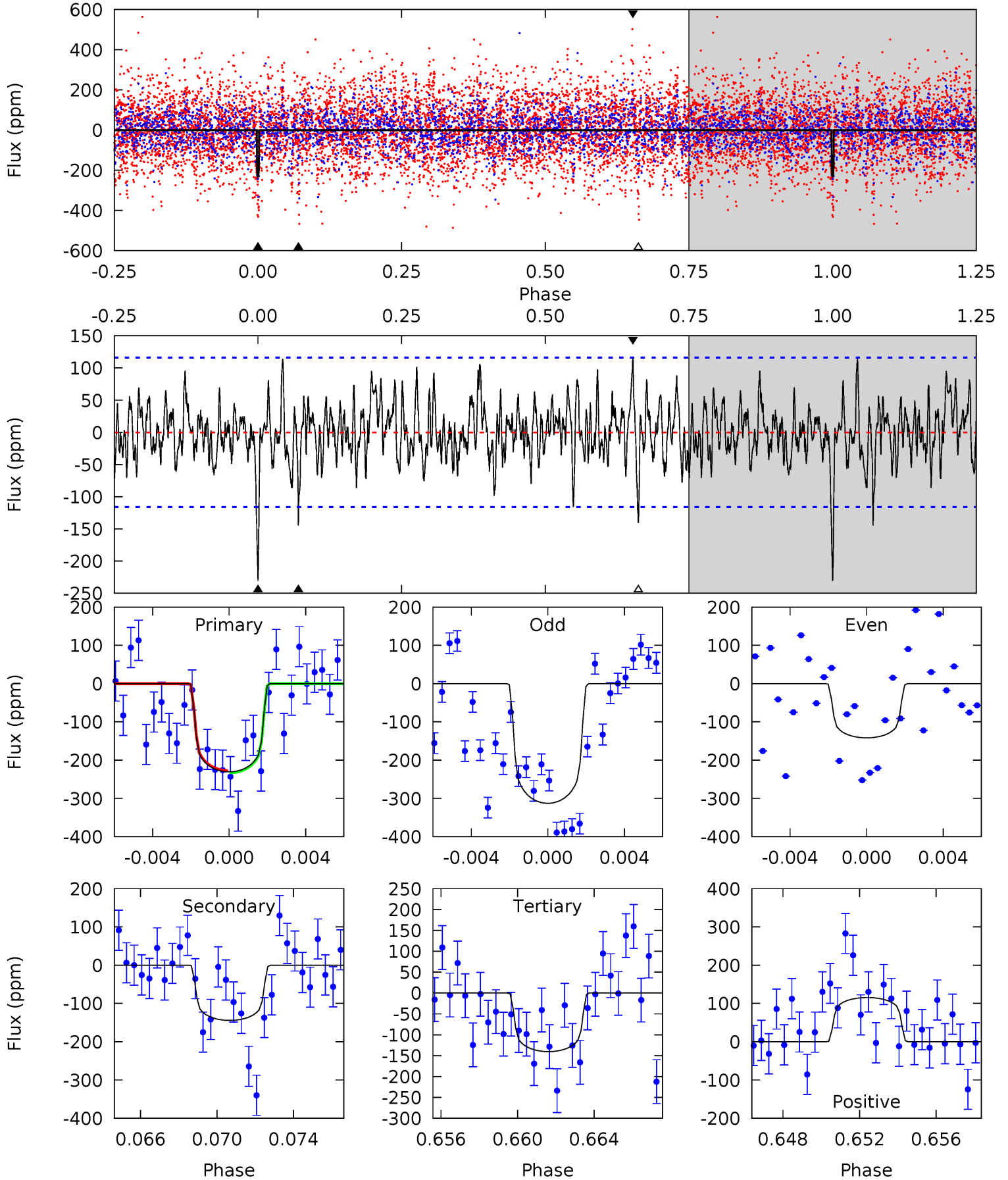
TCE 011304436-02 P= 66.703497 Days $T_0=190.942588$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-02, P = 66.705431 Days, E = 124.212723 Days

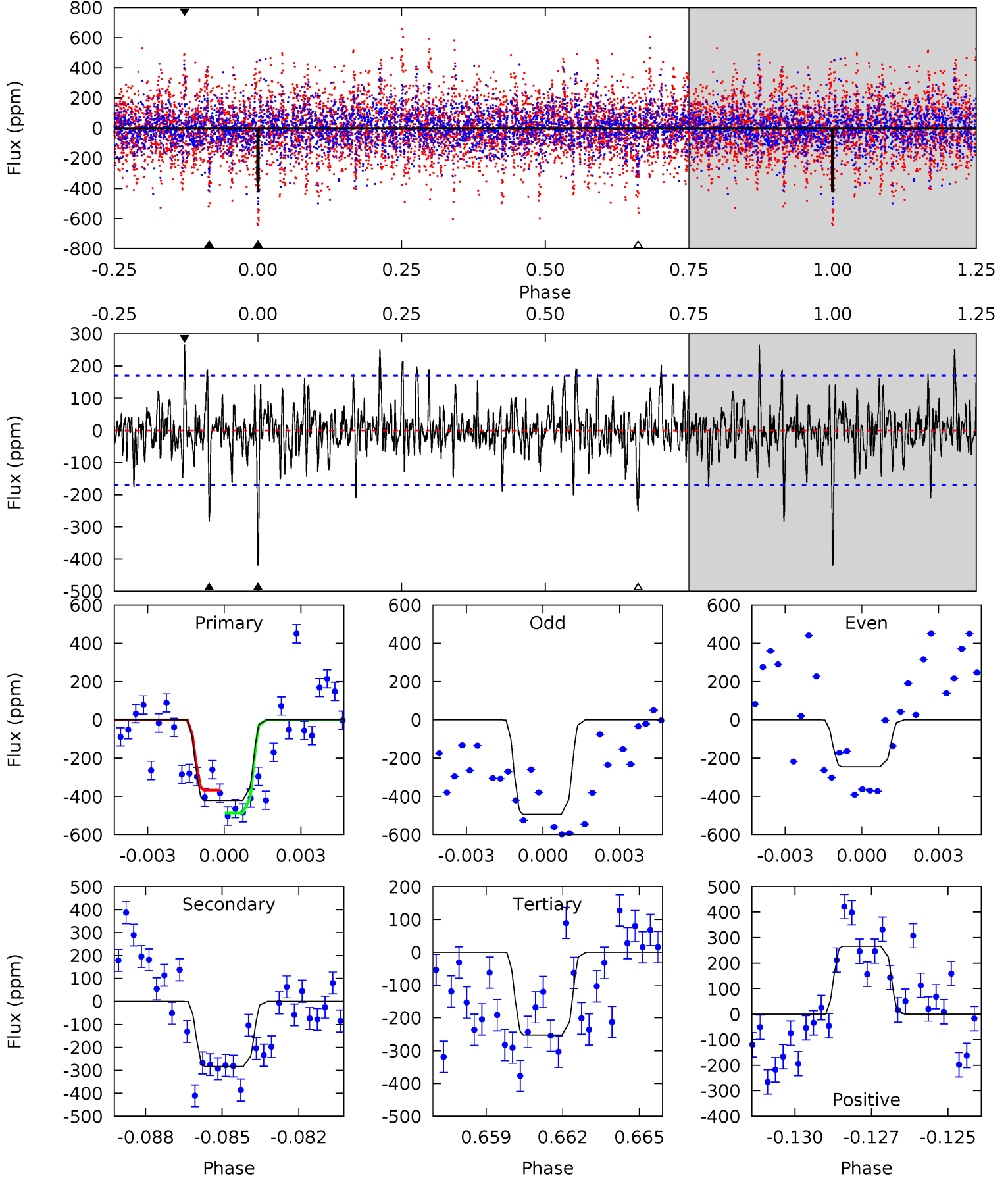
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.46	6.28	5.17	5.19	2.87	1.68	4.04	5.15	0.18	1.29	3.83	0.88	0.33	0.13



Alt Model-Shift Uniqueness Test

011304436-02, P = 66.703497 Days, E = 124.239091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	8.77	7.83	8.26	5.26	2.99	1.96	5.23	4.80	0.94	0.51	3.94	0.76	0.39	1.85



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-144 ± 22	$2.59^{+1.70}_{-1.36}$	834^{+63}_{-66}	5499^{+2757}_{-943}	1332^{+4958}_{-832}
Alt.	-282 ± 32	$3.65^{+1.80}_{-1.65}$	830^{+67}_{-62}	5546^{+2106}_{-832}	1297^{+3260}_{-703}

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

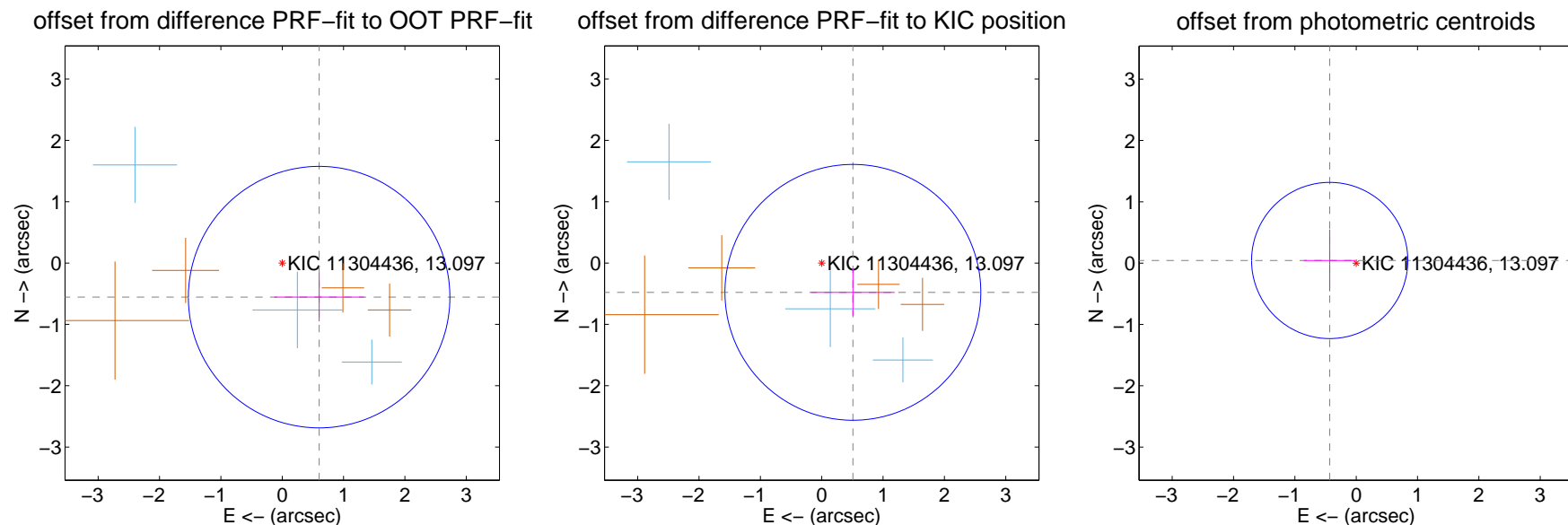
DV Centroid Data

Supplemental centroid analysis for 011304436-02. Kepler magnitude: 13.10. Transit SNR 11.20

There are 3 quarters with good PRF difference image offsets

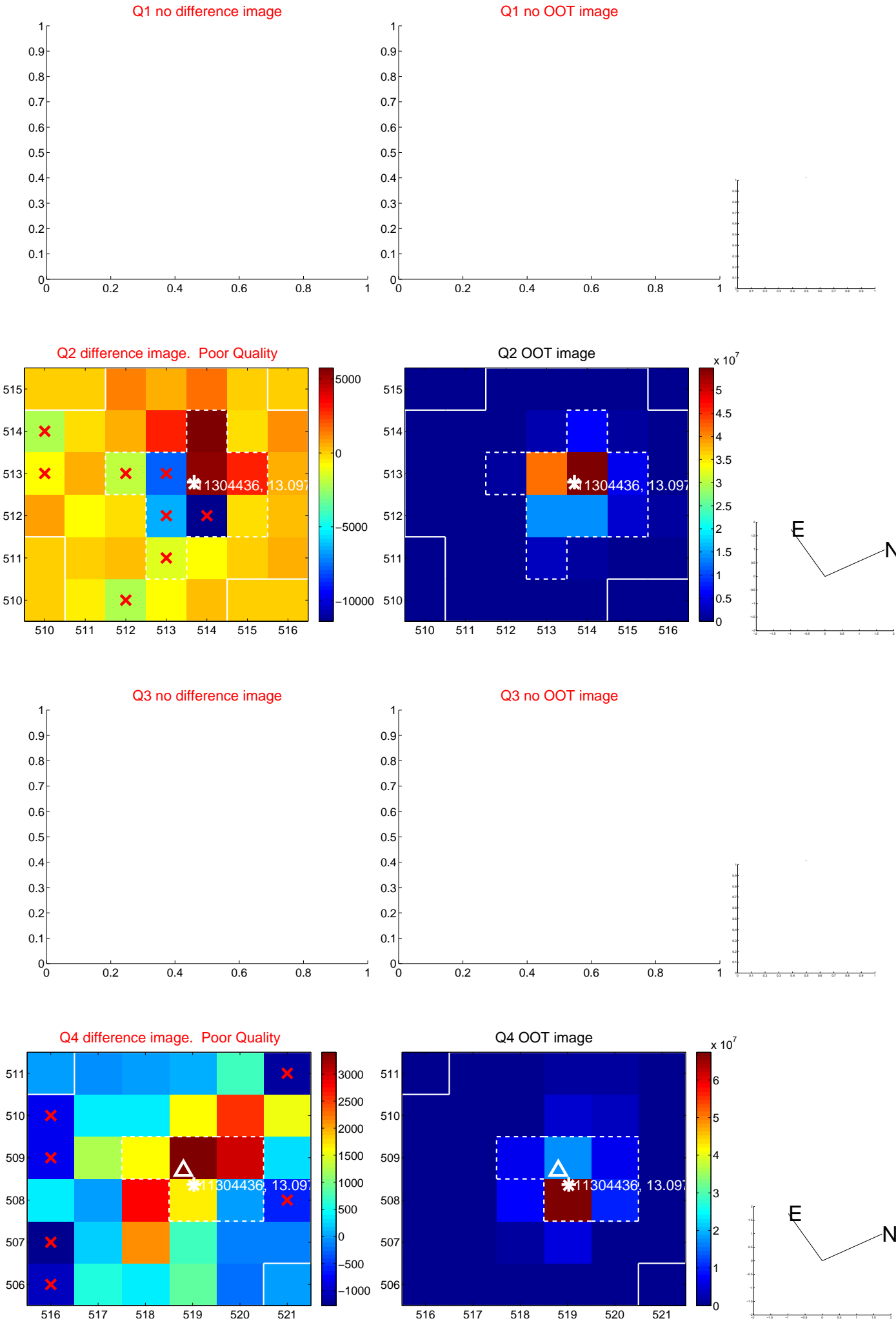
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.819 ± 0.711	1.15	-0.602 ± 0.733	-0.556 ± 0.394
PRF-fit source offset from KIC position	0.697 ± 0.695	1.00	-0.508 ± 0.681	-0.478 ± 0.382
photometric centroid source offset	0.43 ± 0.42	1.02	0.43 ± 0.42	0.04 ± 0.50

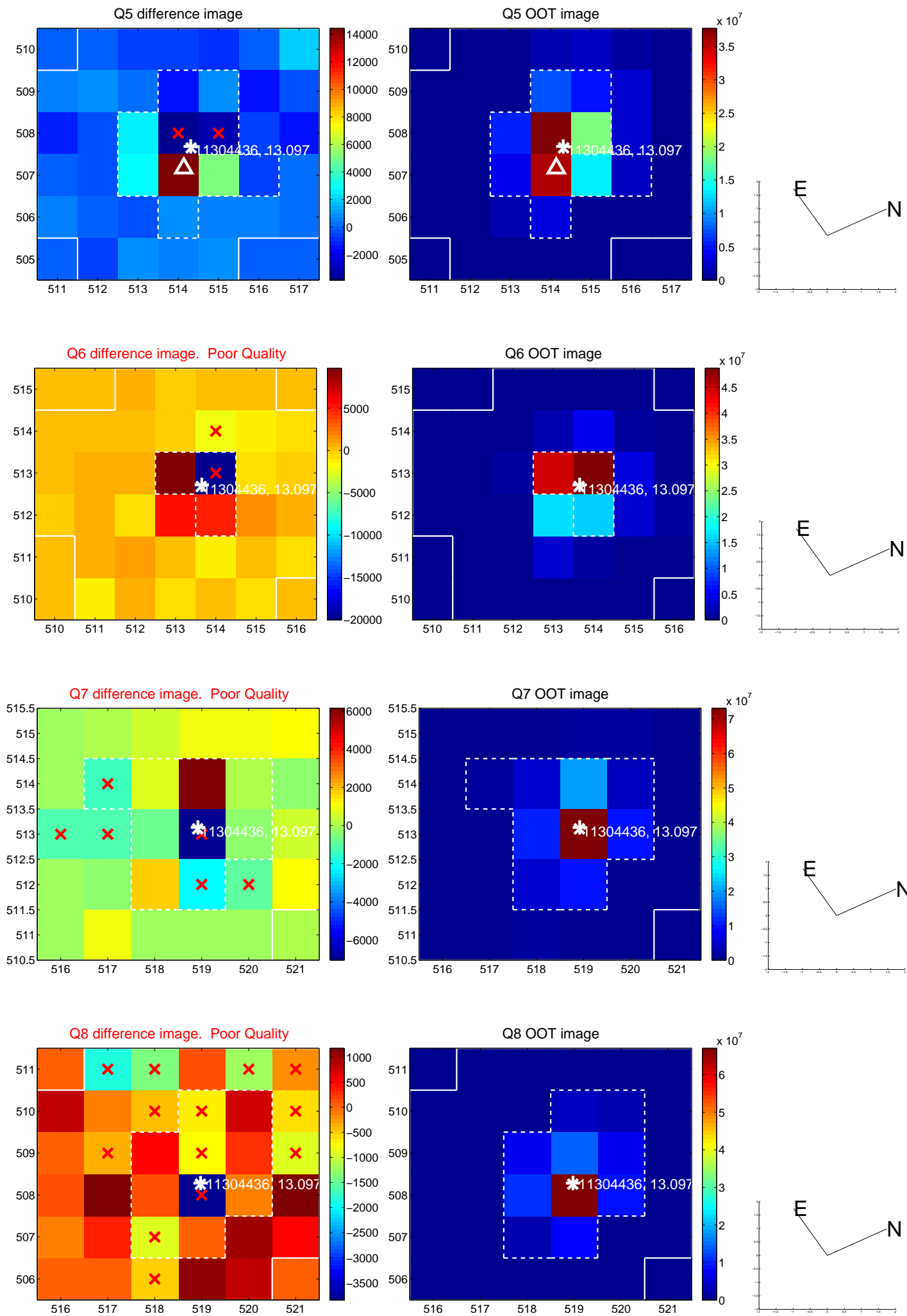


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

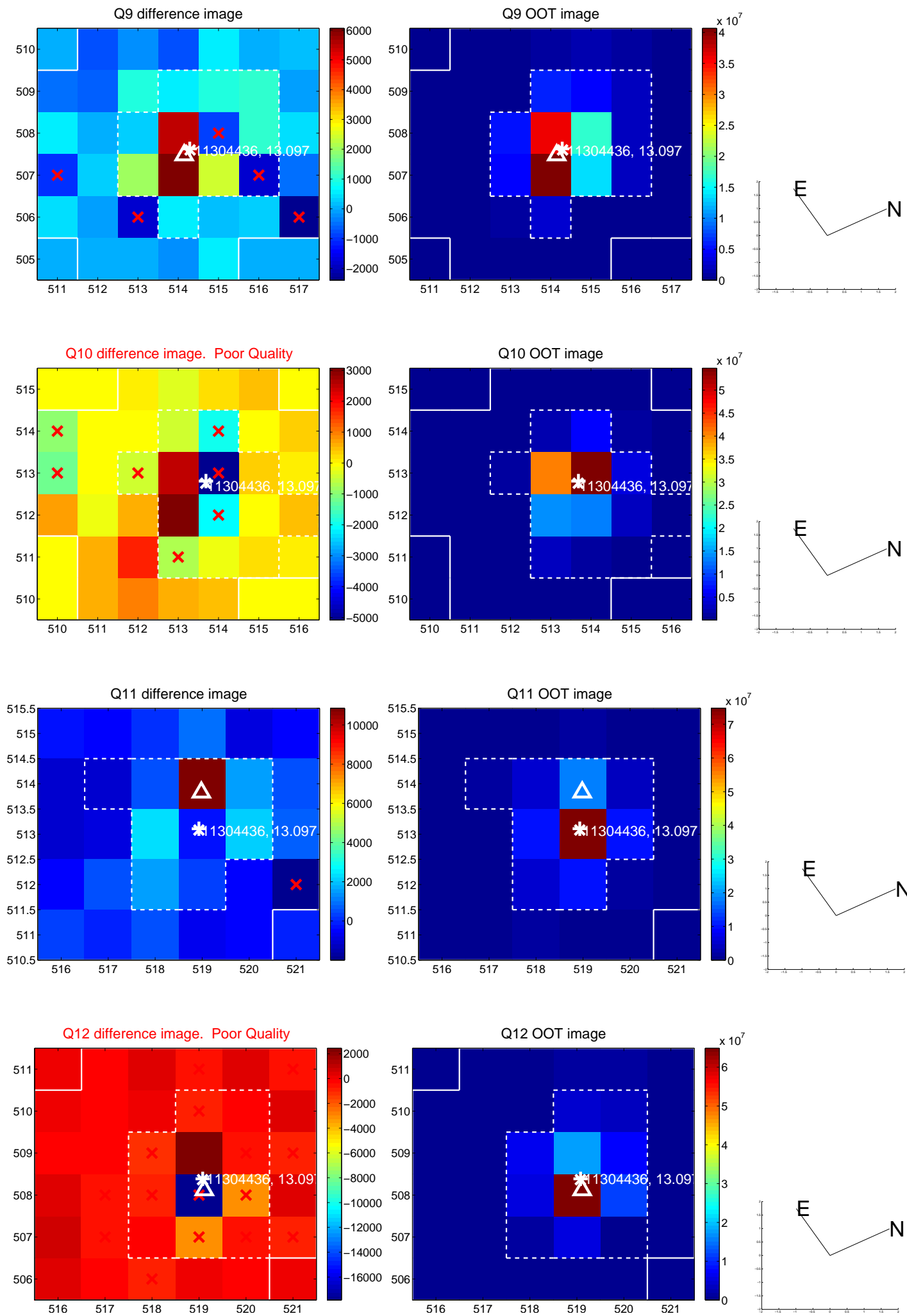
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



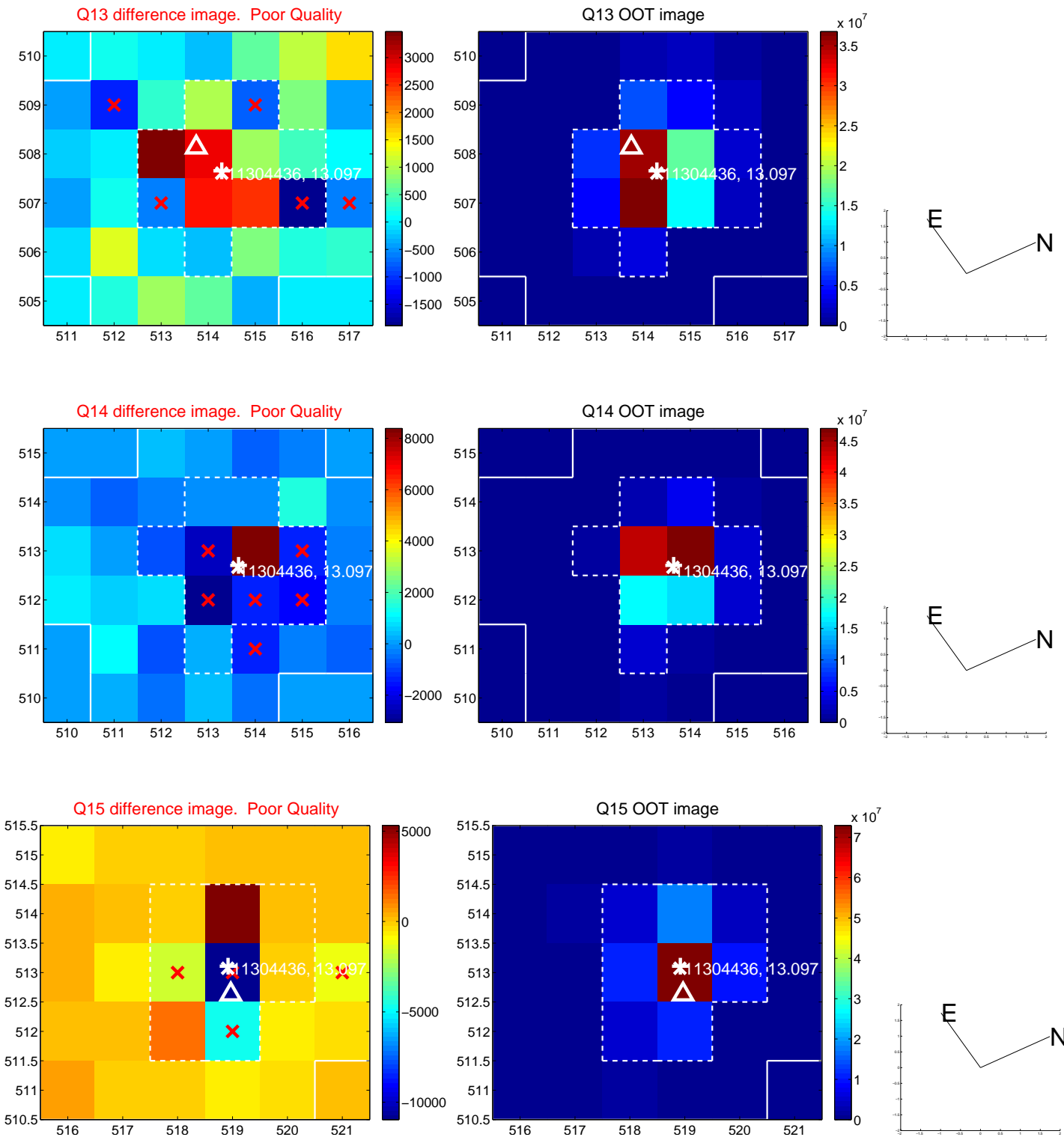
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



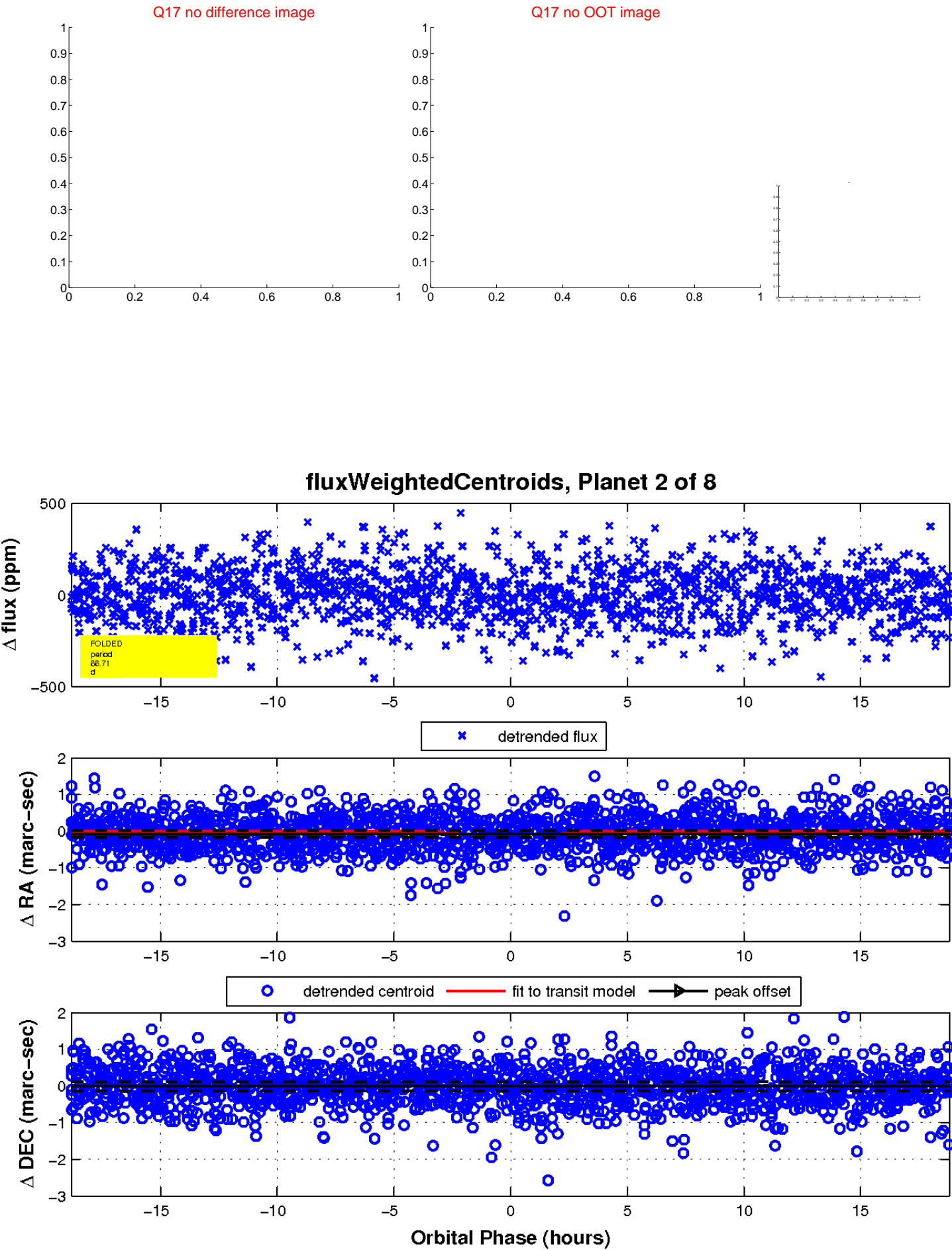
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

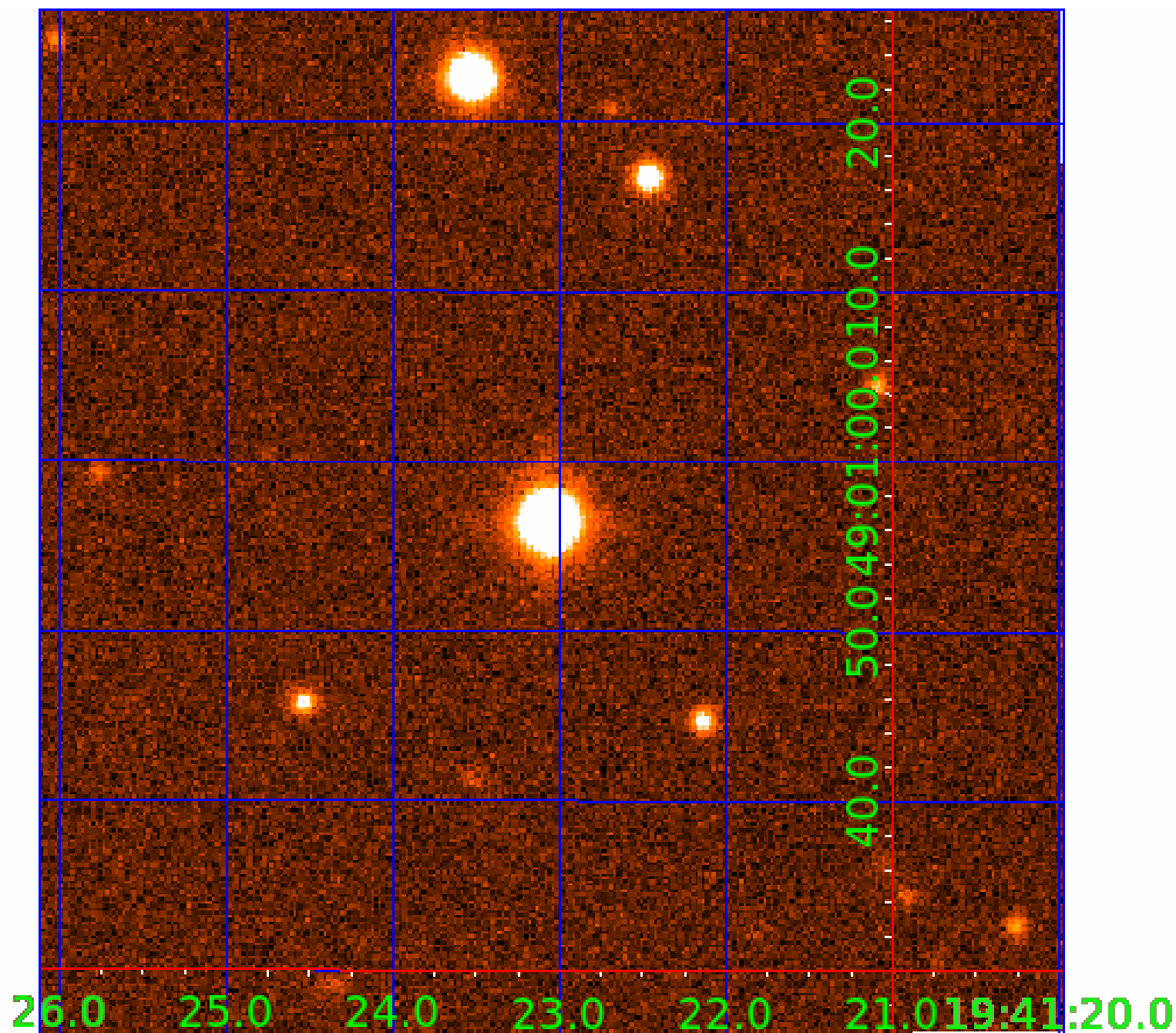


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

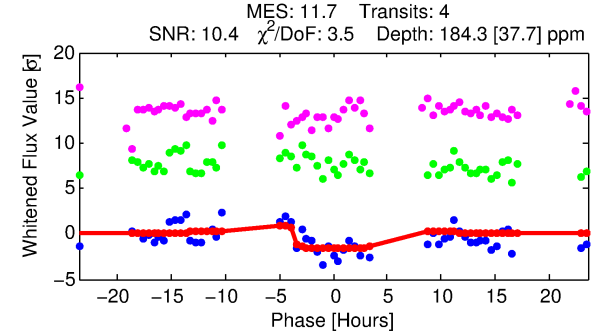
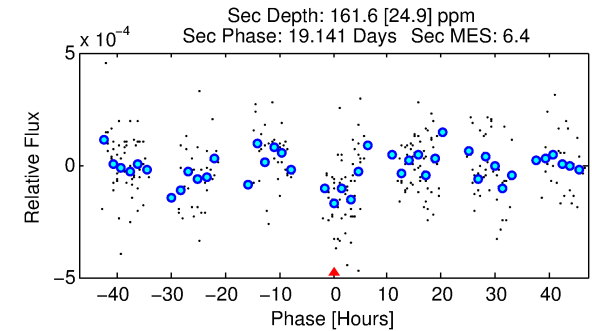
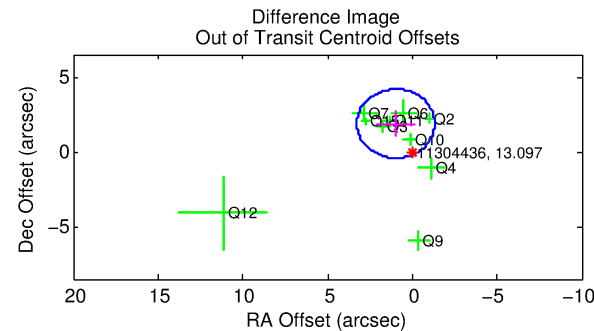
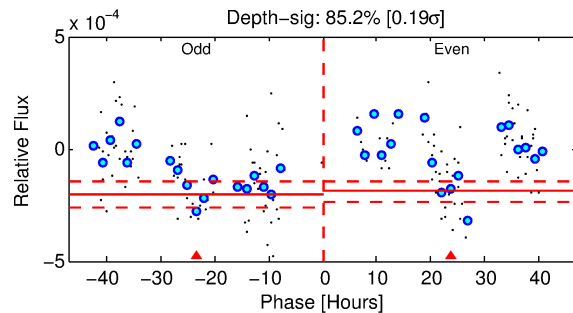
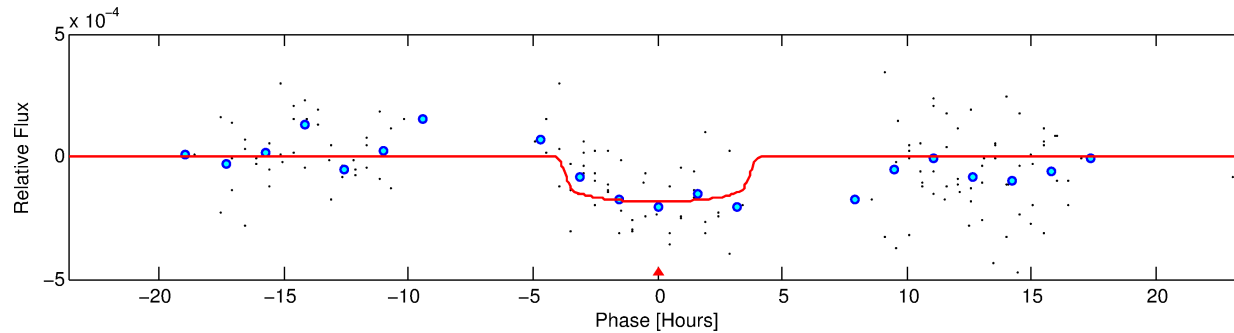
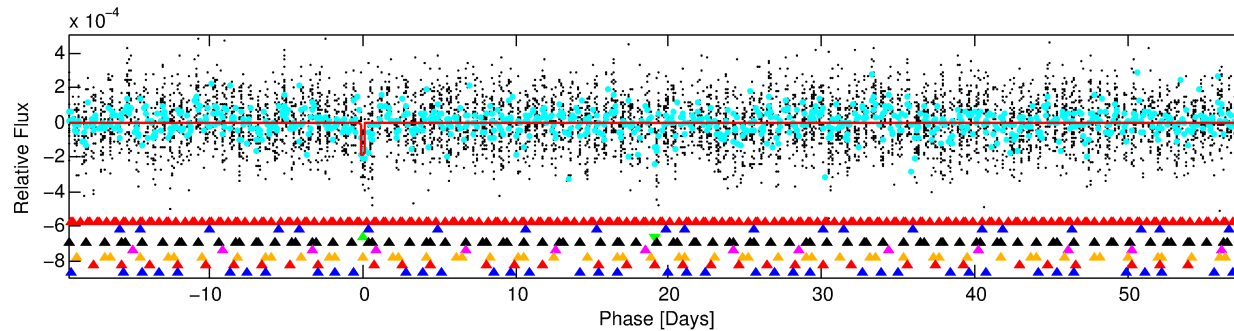
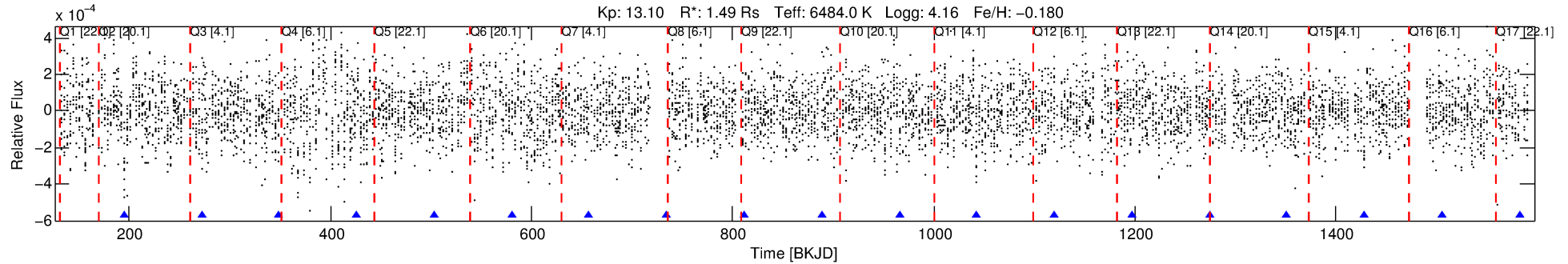
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-03

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 3 of 8 Period: 77.067 d



DV Fit Results:

Period = 77.06723 [0.00260] d
Epoch = 195.1126 [0.0398] BKJD
Rp/R* = 0.0141 [0.0052]
a/R* = 40.77 [78.21]
b = 0.85 [0.62]
Seff = 25.34 [10.31]
Teq = 572 [58] K
Rp = 2.30 [1.09] Re
a = 0.3732 [0.0949] AU
Ag = 2346.67 [1976.20] [1.19 σ]
Teffp = 6156 [1183] K [4.71 σ]

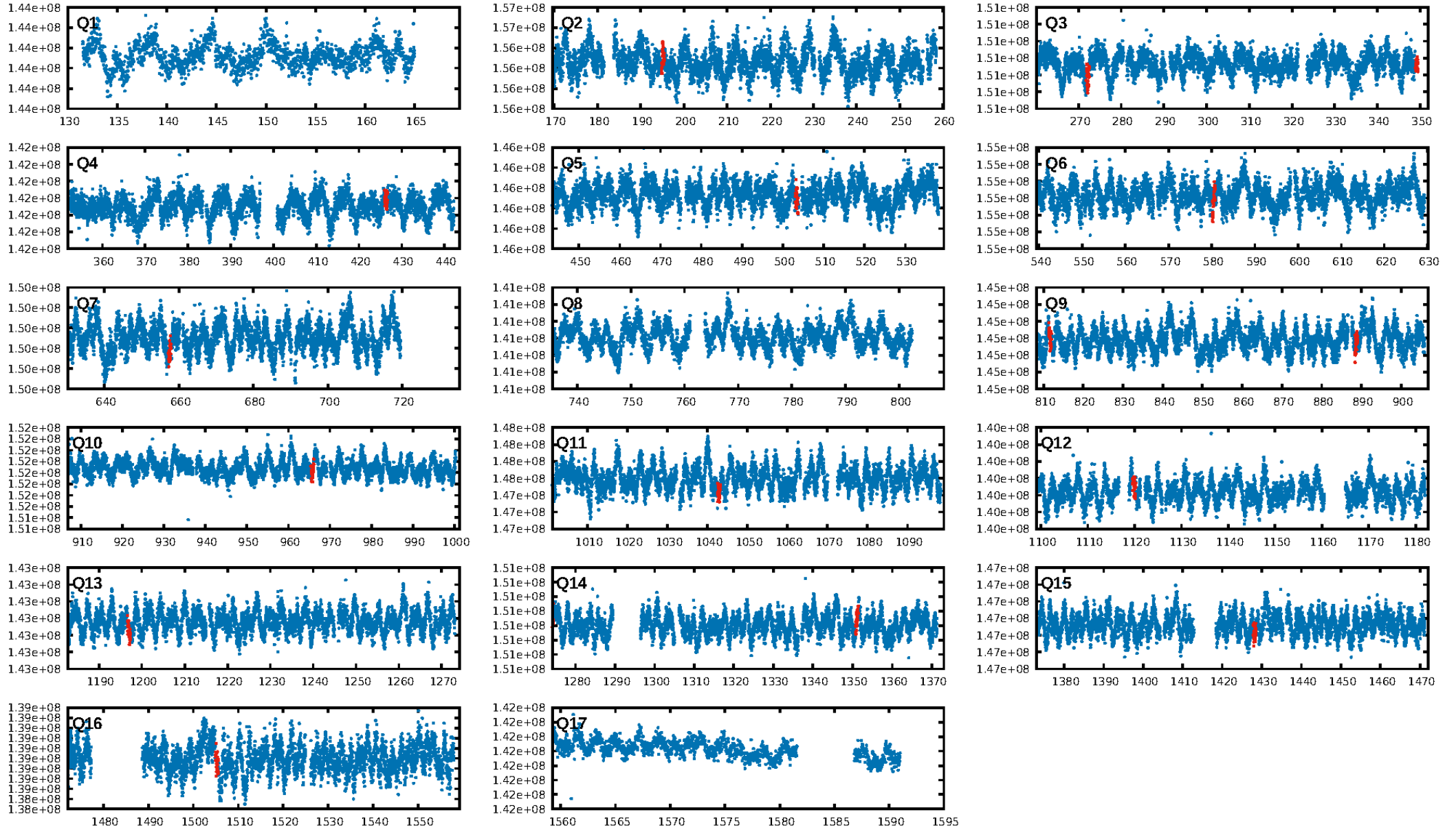
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [24.66 σ]
LongPeriod-sig: 100.0% [77.95 σ]
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 0.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.244
Centroid-sig: 0.0%
Centroid-so: 1.568 arcsec [2.44 σ]
OotOffset-rm: 2.110 arcsec [2.75 σ]
KicOffset-rm: 2.244 arcsec [2.50 σ]
OotOffset-st: 3/4/2/1 [10]
KicOffset-st: 3/4/2/1 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.18 [2/11]

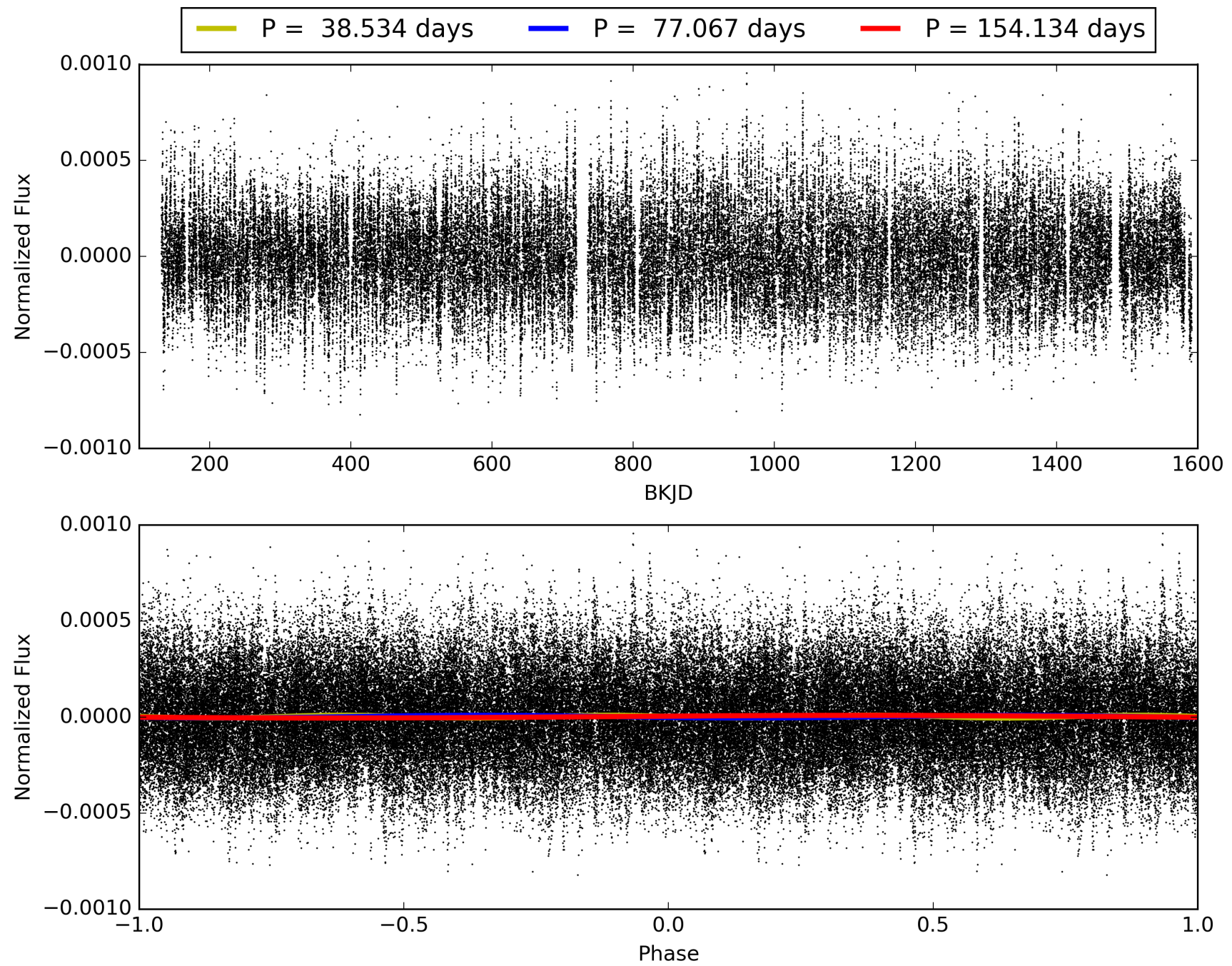
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:22:27 Z

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

TCE 011304436-03, PDC Light Curves

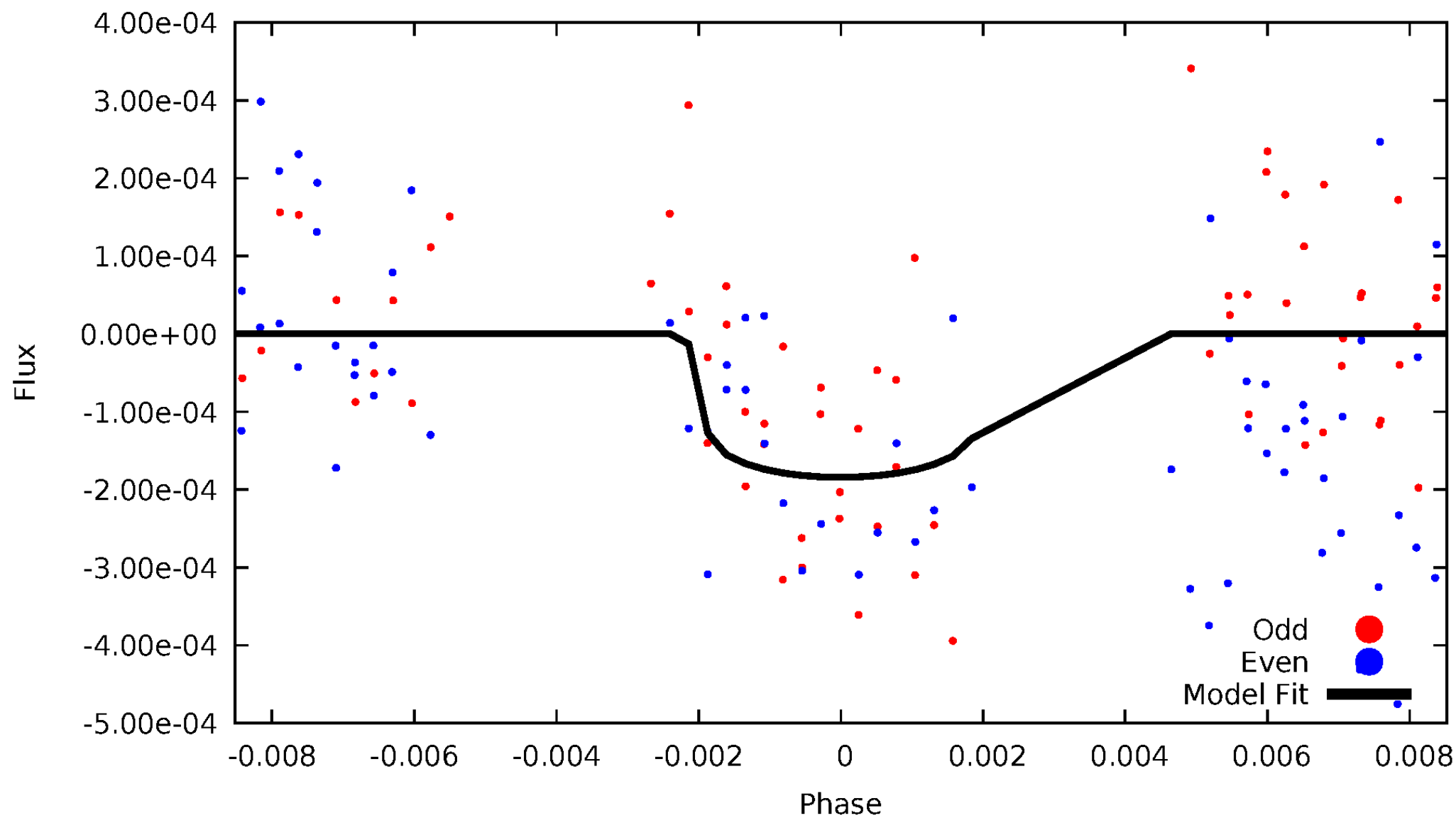


TCE 011304436-03



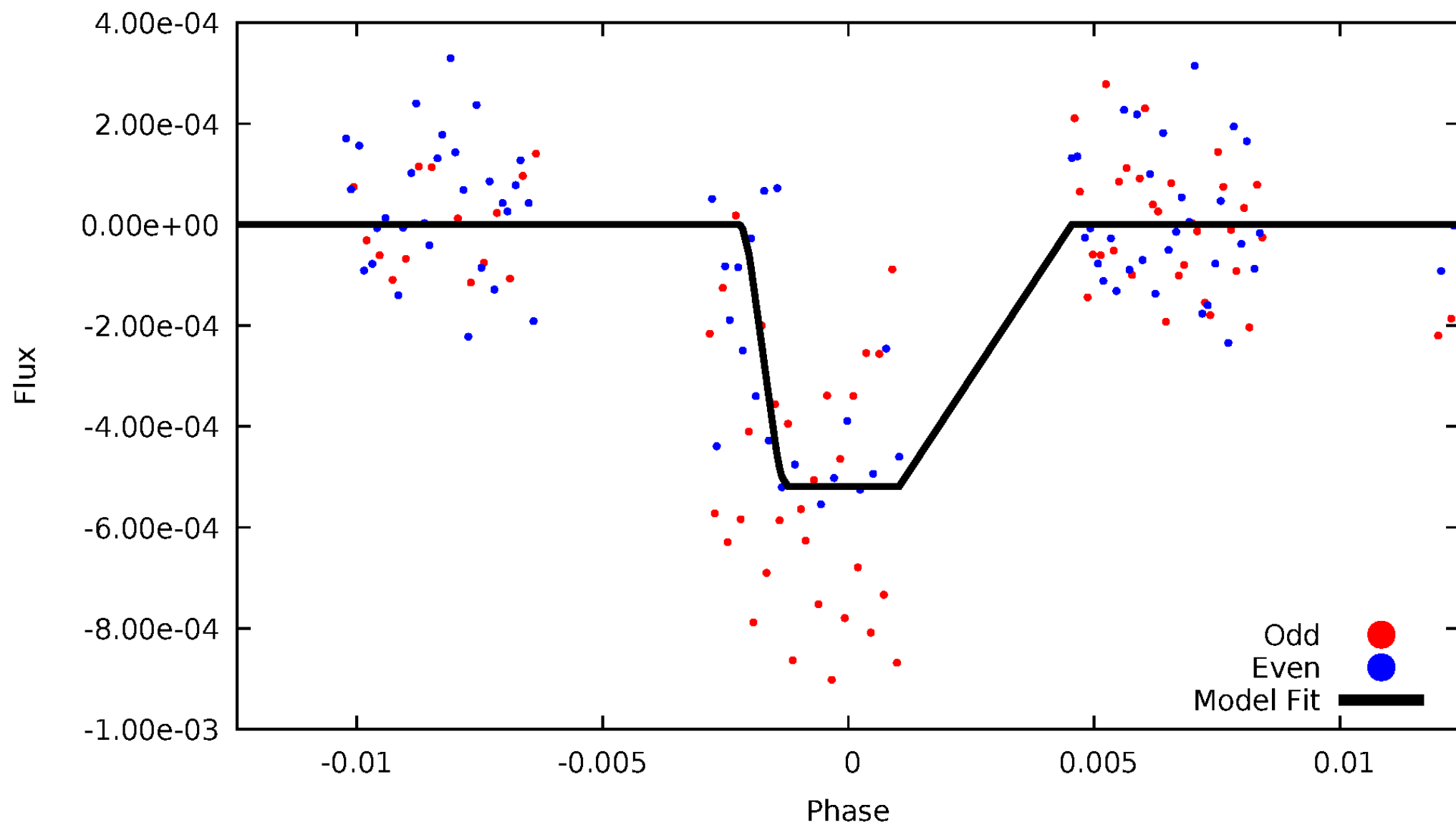
DV Odd/Even

TCE 011304436-03



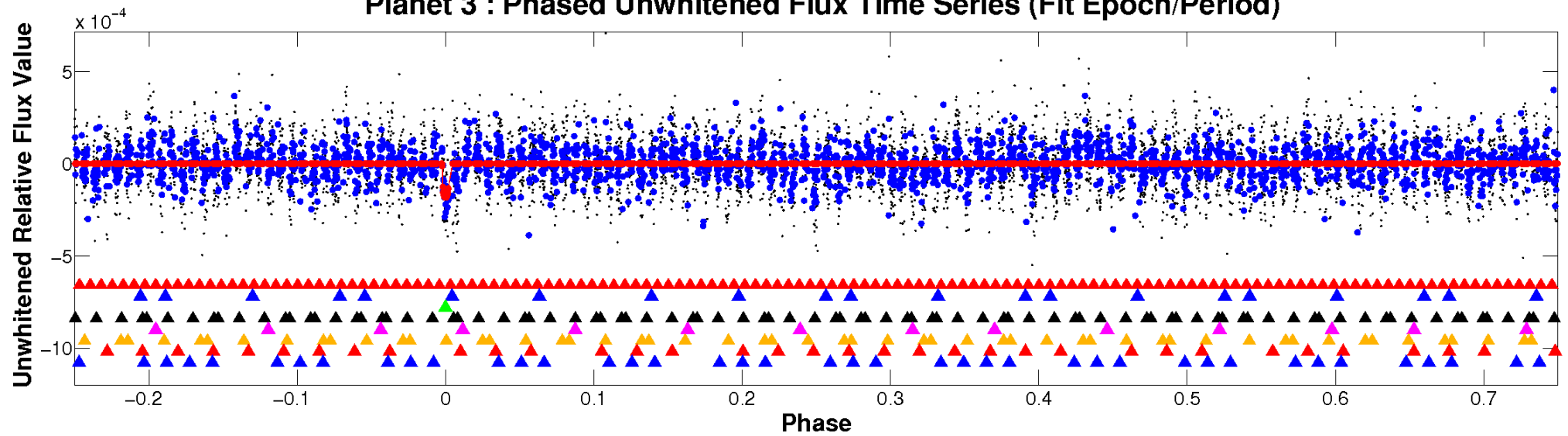
ALT Odd/Even

TCE 011304436-03

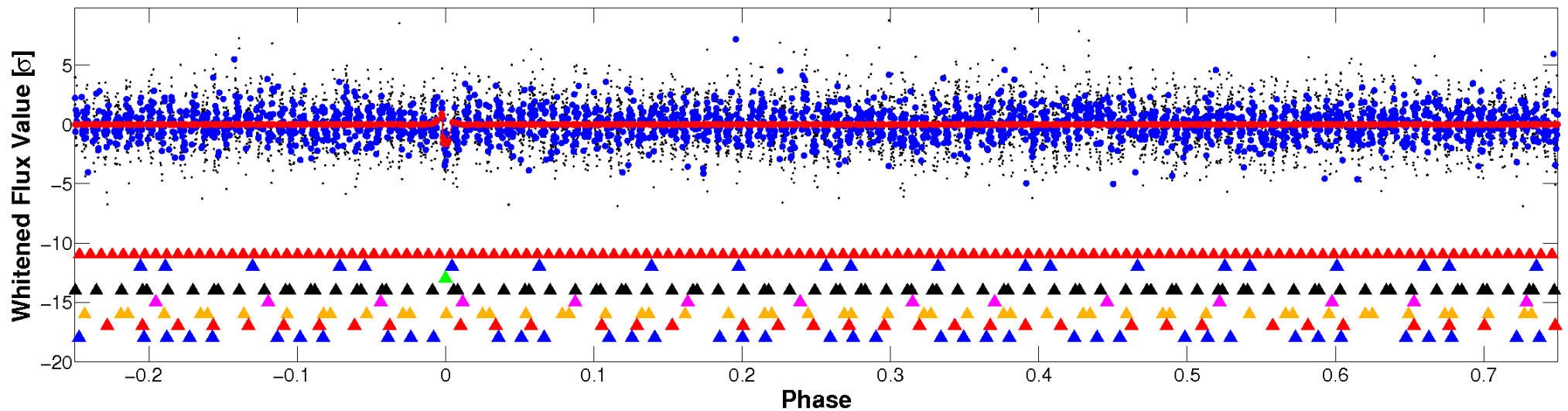


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

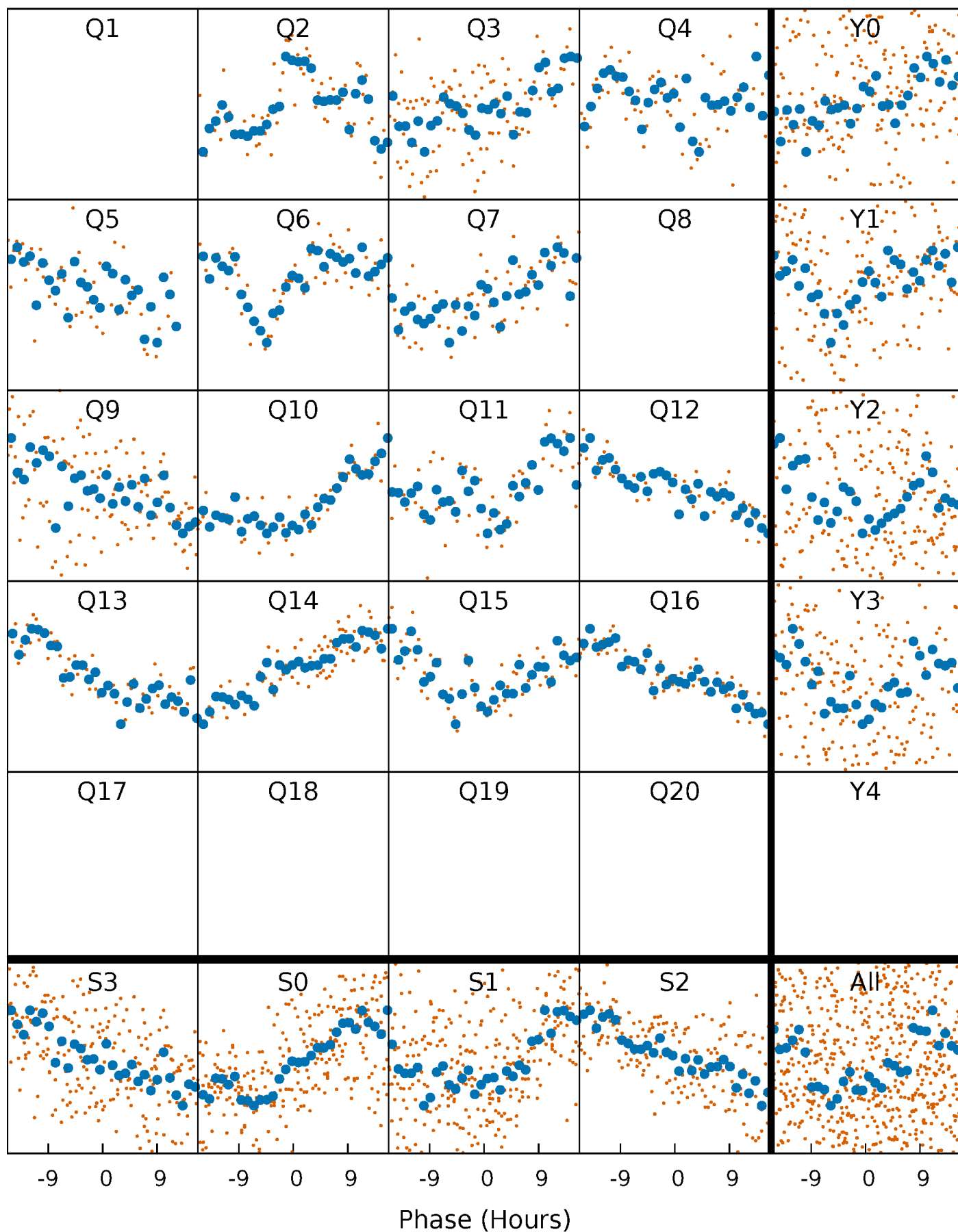


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



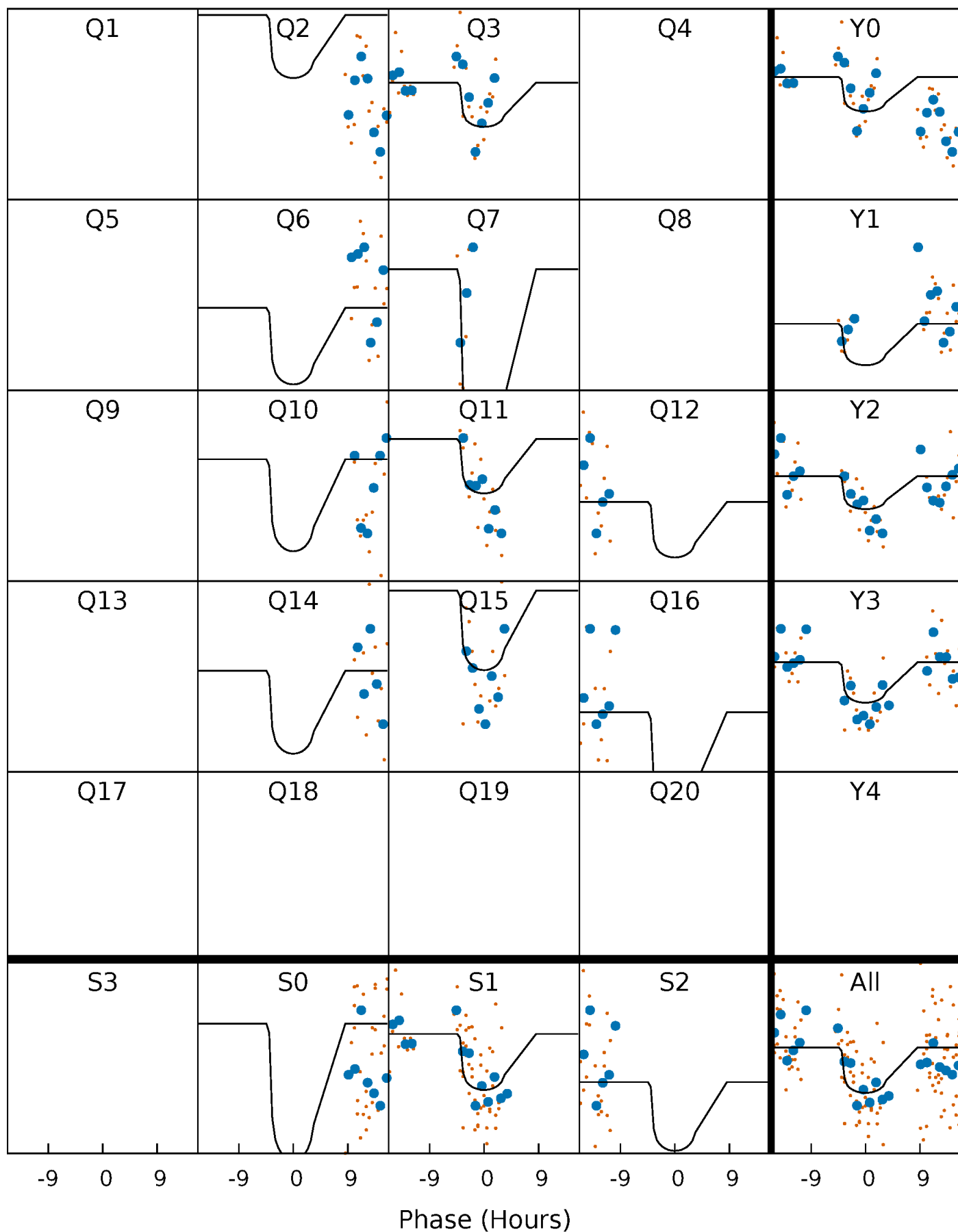
PDC Quarter-Phased Transit Curves

TCE 011304436-03 P= 77.067234 Days $T_0=195.112592$ (BKJD)



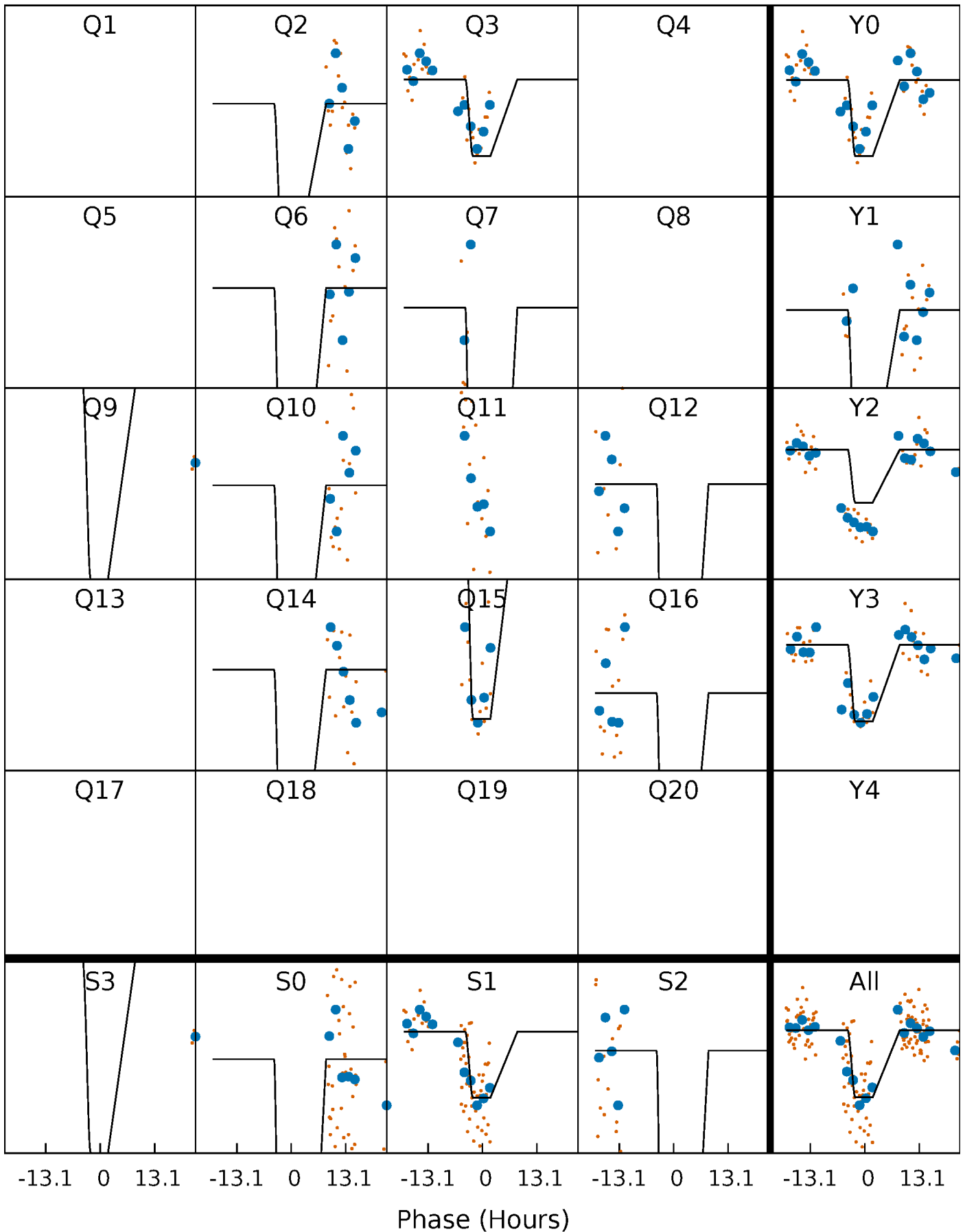
DV Quarter-Phased Transit Curves

TCE 011304436-03 P= 77.067234 Days $T_0=195.112592$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

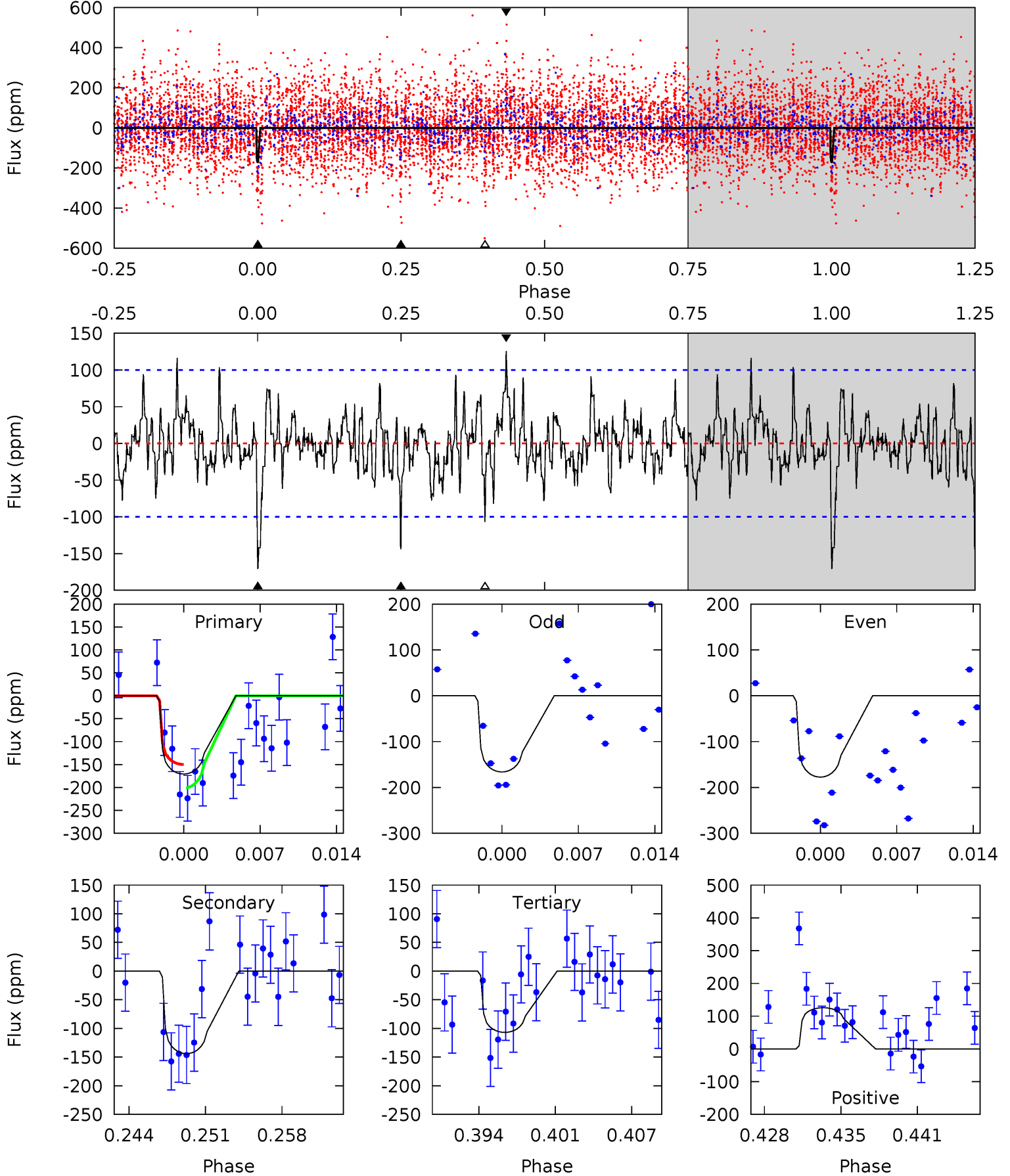
TCE 011304436-03 P= 77.070630 Days $T_0=195.120356$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-03, $P = 77.067234$ Days, $E = 118.045358$ Days

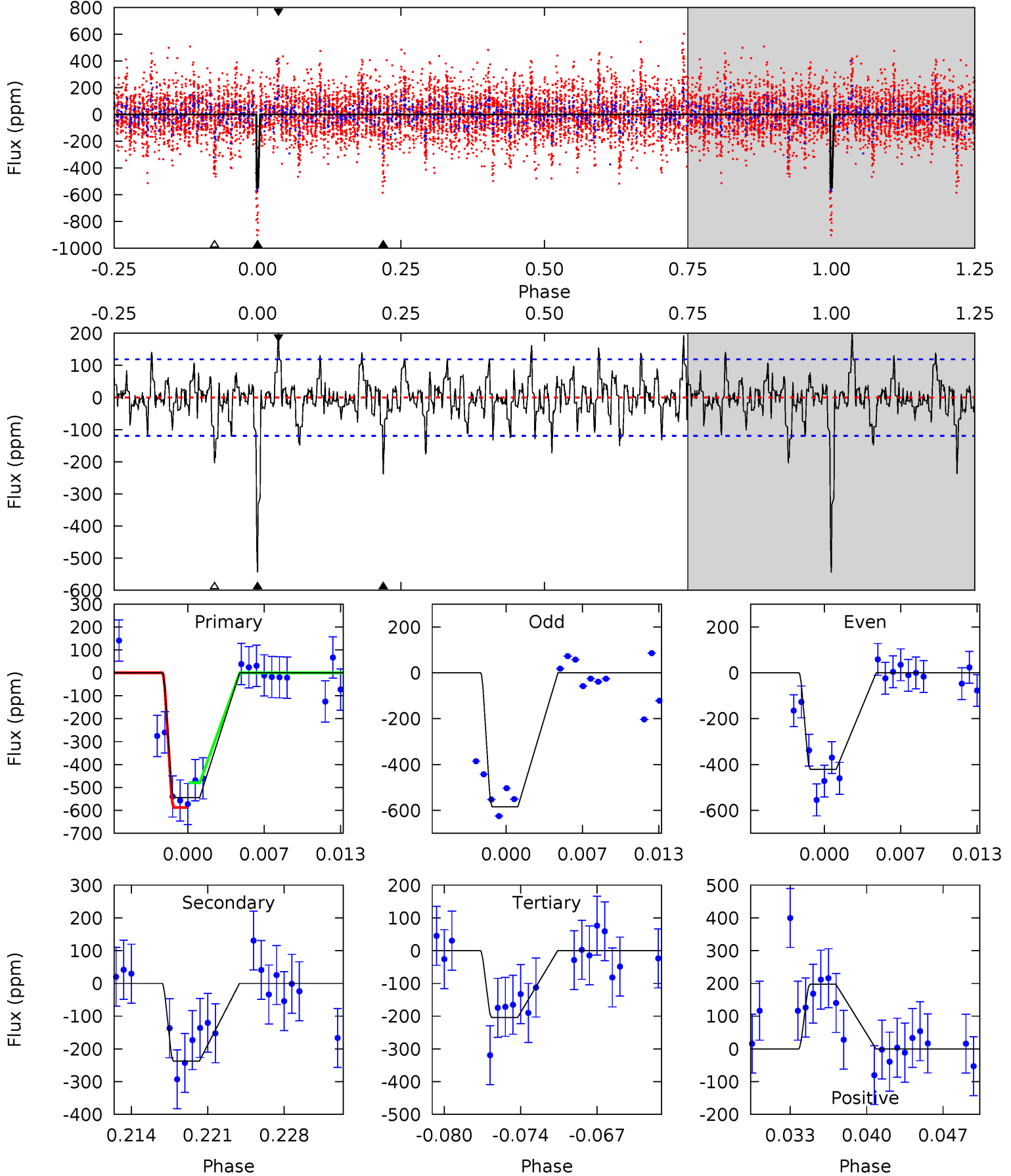
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.72	7.35	5.46	6.42	5.10	2.71	1.75	3.26	2.30	1.89	0.94	0.28	0.89	0.42	1.25



Alt Model-Shift Uniqueness Test

011304436-03, $P = 77.070630$ Days, $E = 118.049726$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	10.2	8.75	8.46	5.10	2.71	2.47	14.6	14.9	1.42	1.71	3.45	0.92	0.27	2.16



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-144 ± 20	$2.29^{+0.95}_{-0.86}$	792^{+64}_{-58}	5897^{+1599}_{-801}	2134^{+3141}_{-1115}
Alt.	-237 ± 23	$3.66^{+1.06}_{-0.97}$	793^{+62}_{-59}	5356^{+771}_{-489}	1350^{+1152}_{-542}

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

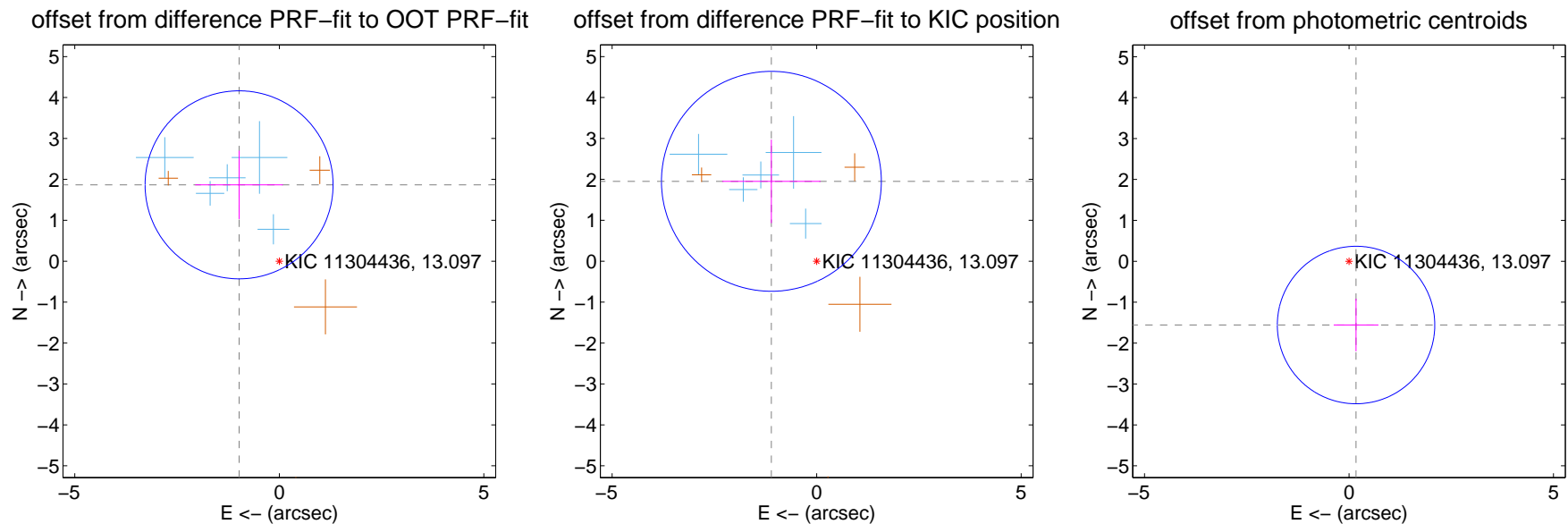
DV Centroid Data

Supplemental centroid analysis for 011304436-03. Kepler magnitude: 13.10. Transit SNR 10.38

There are 5 quarters with good PRF difference image offsets

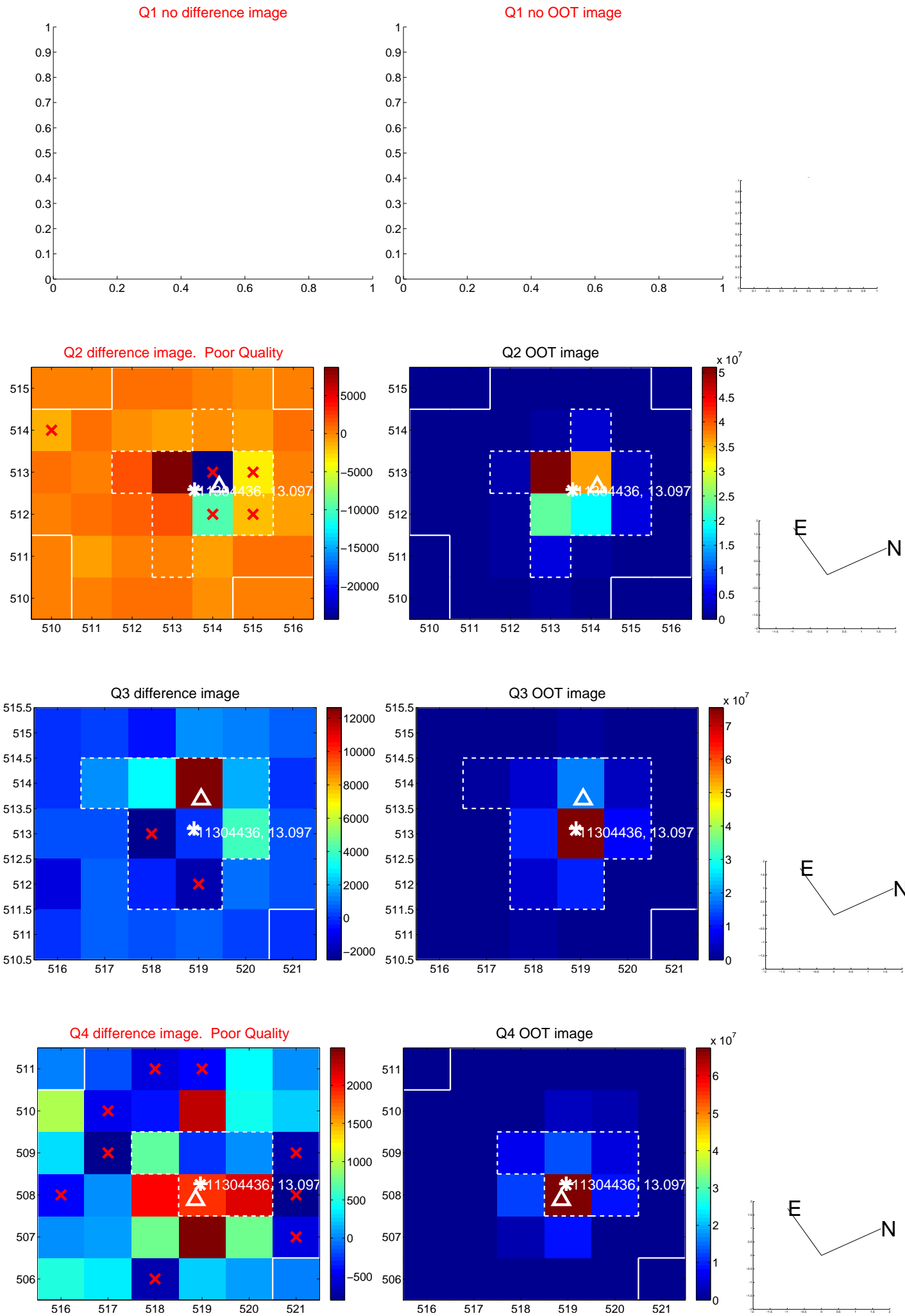
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.110 ± 0.766	2.75	0.984 ± 1.072	1.866 ± 0.836
PRF-fit source offset from KIC position	2.244 ± 0.896	2.50	1.106 ± 1.203	1.952 ± 1.021
photometric centroid source offset	1.57 ± 0.64	2.44	-0.17 ± 0.55	-1.56 ± 0.64



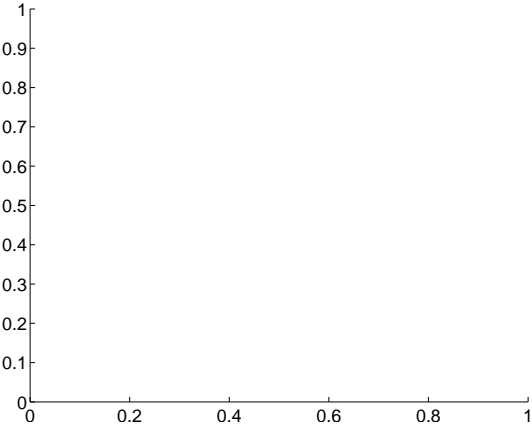
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

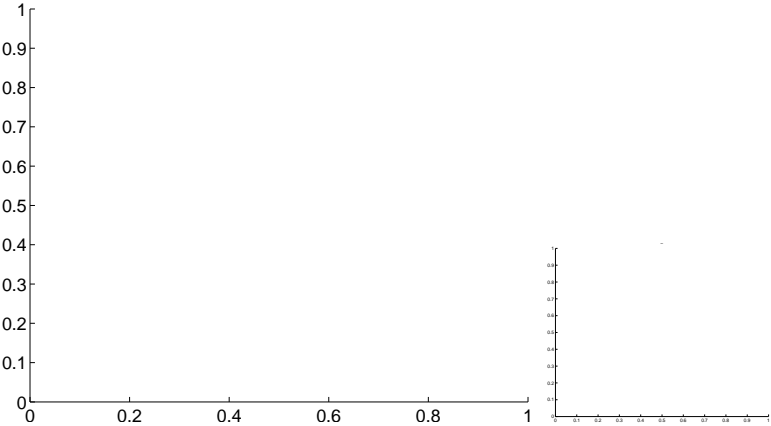


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

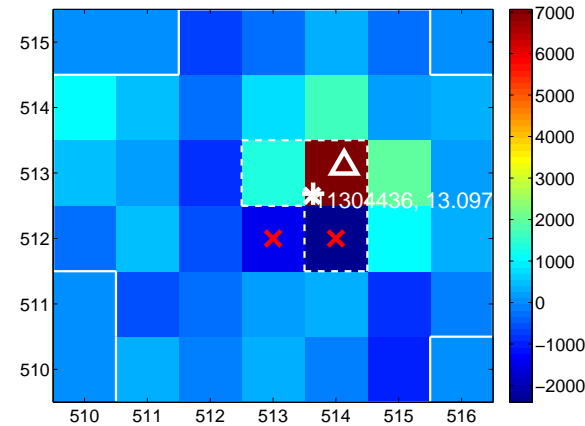
Q5 no difference image



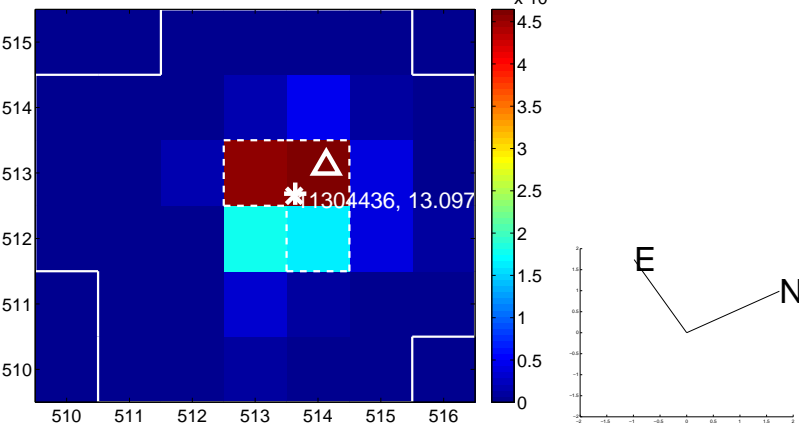
Q5 no OOT image



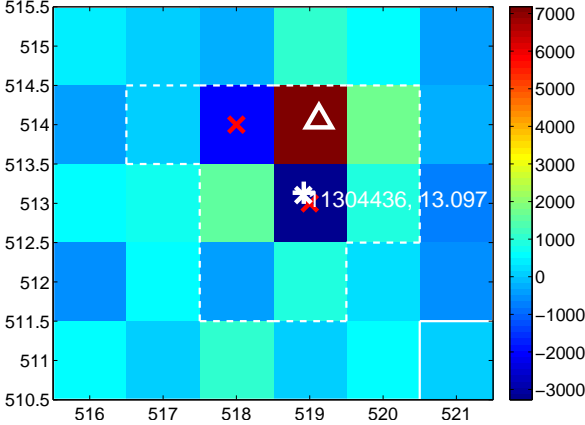
Q6 difference image



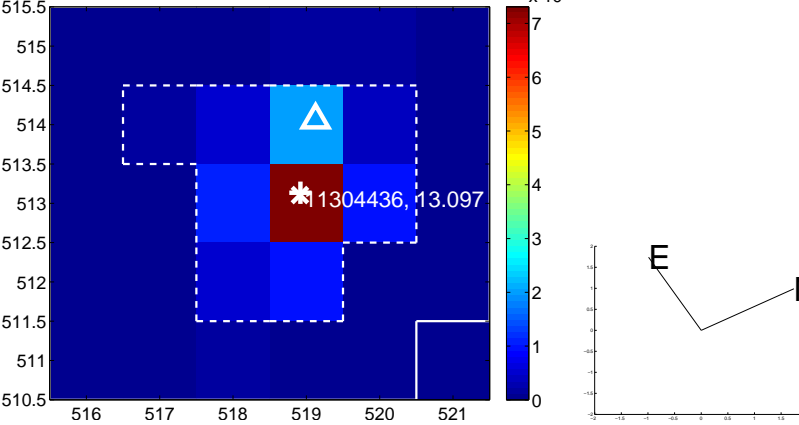
Q6 OOT image



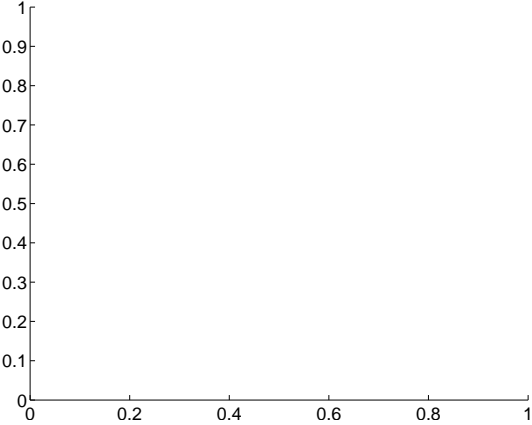
Q7 difference image



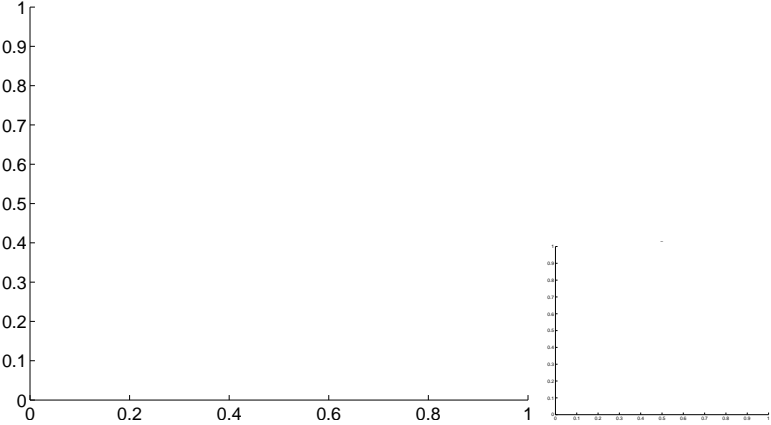
Q7 OOT image



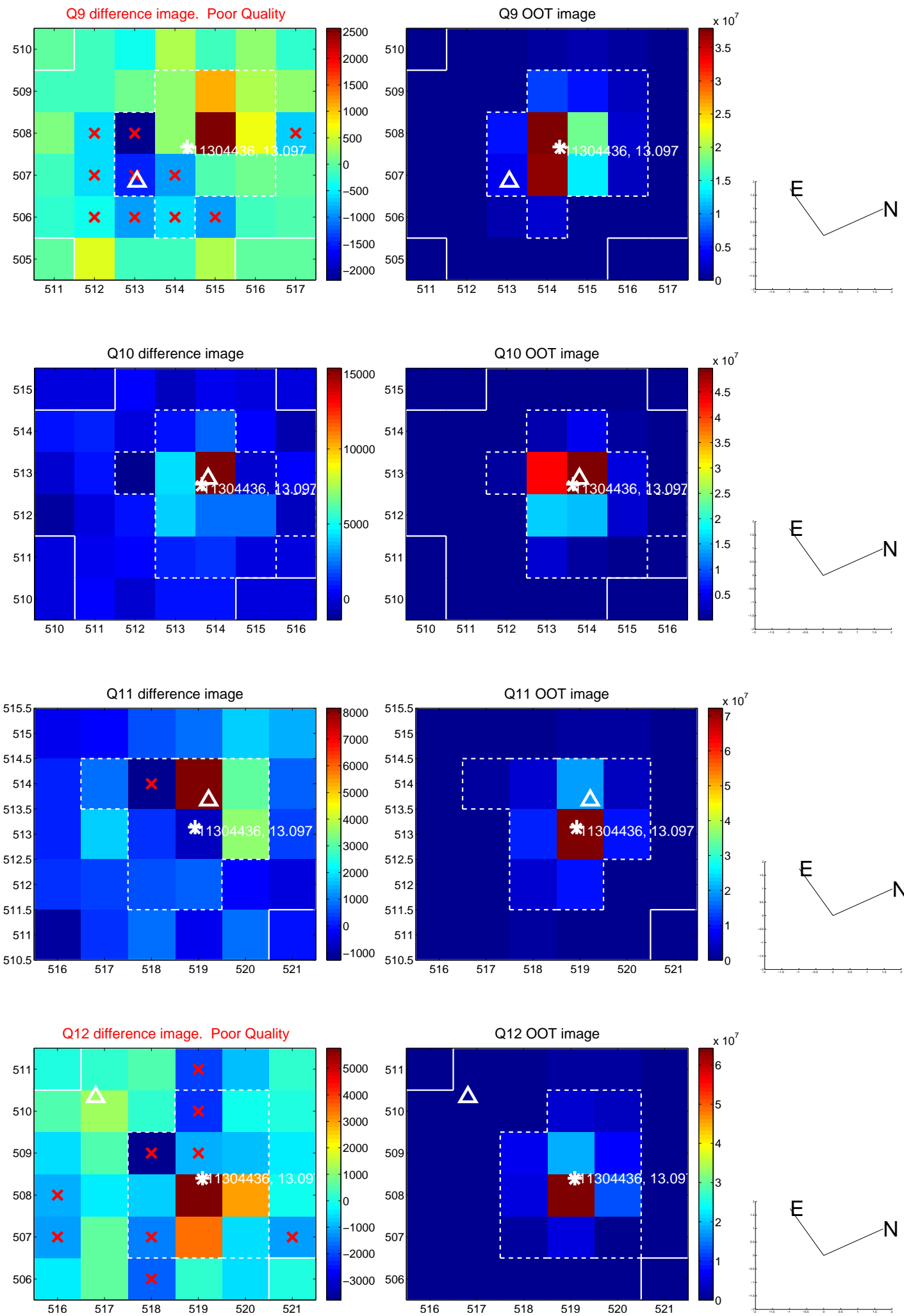
Q8 no difference image



Q8 no OOT image



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.

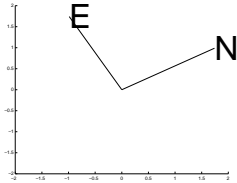
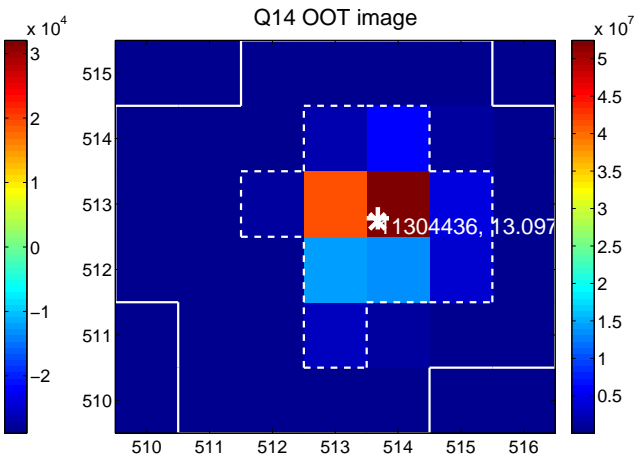
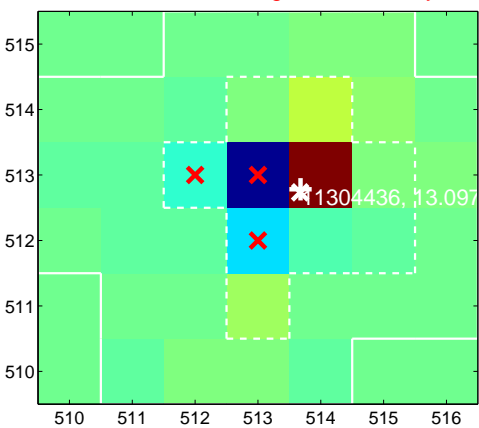
Q13 no difference image



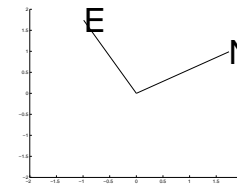
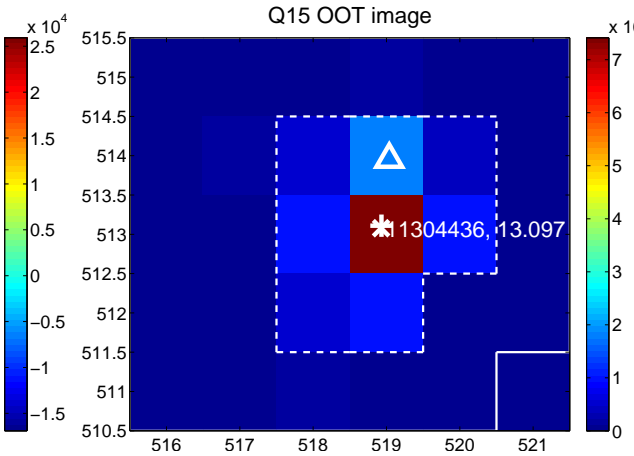
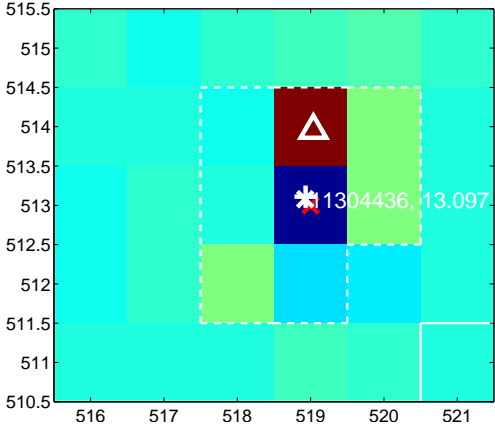
Q13 no OOT image



Q14 difference image. Poor Quality



Q15 difference image. Poor Quality



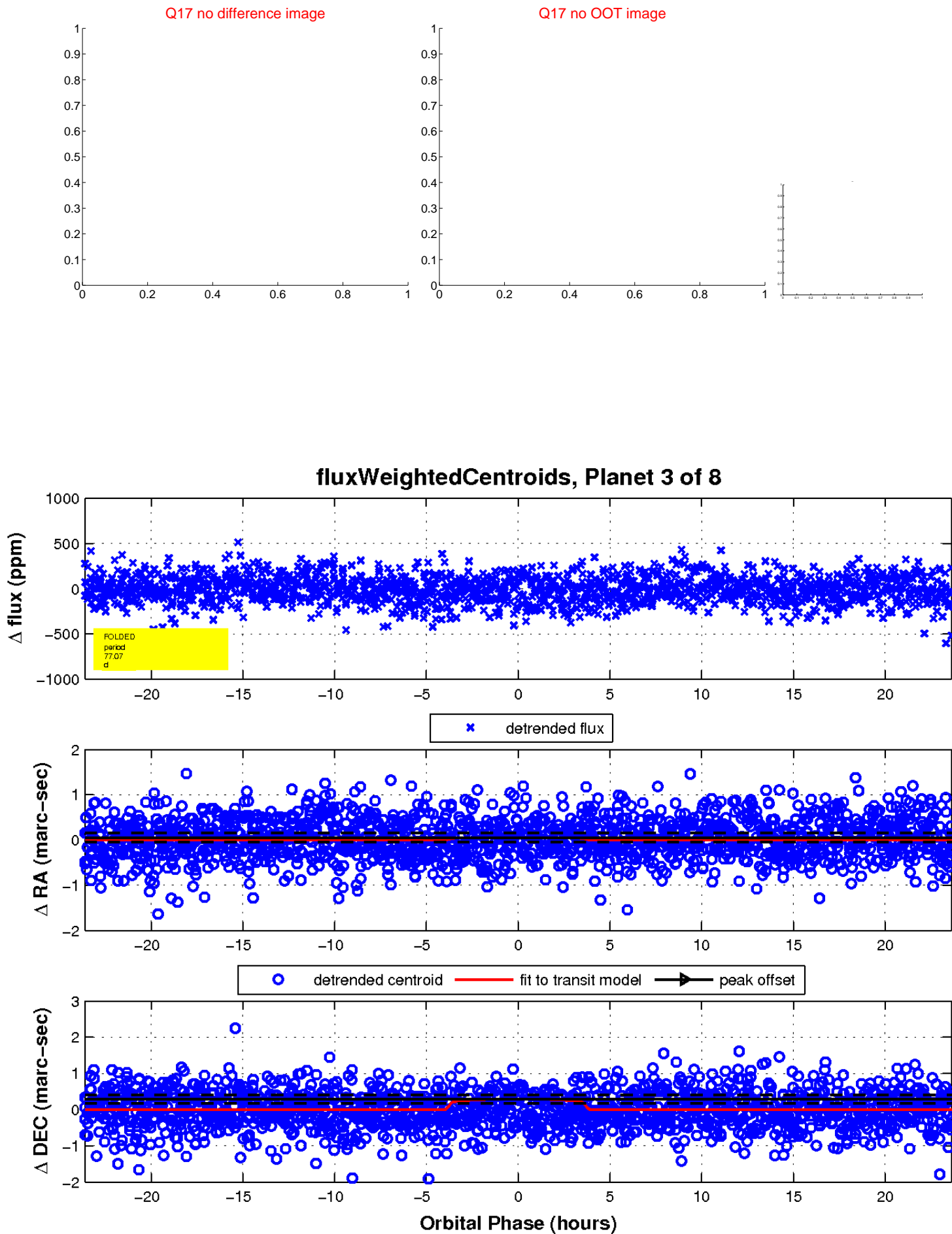
Q16 no difference image



Q16 no OOT image

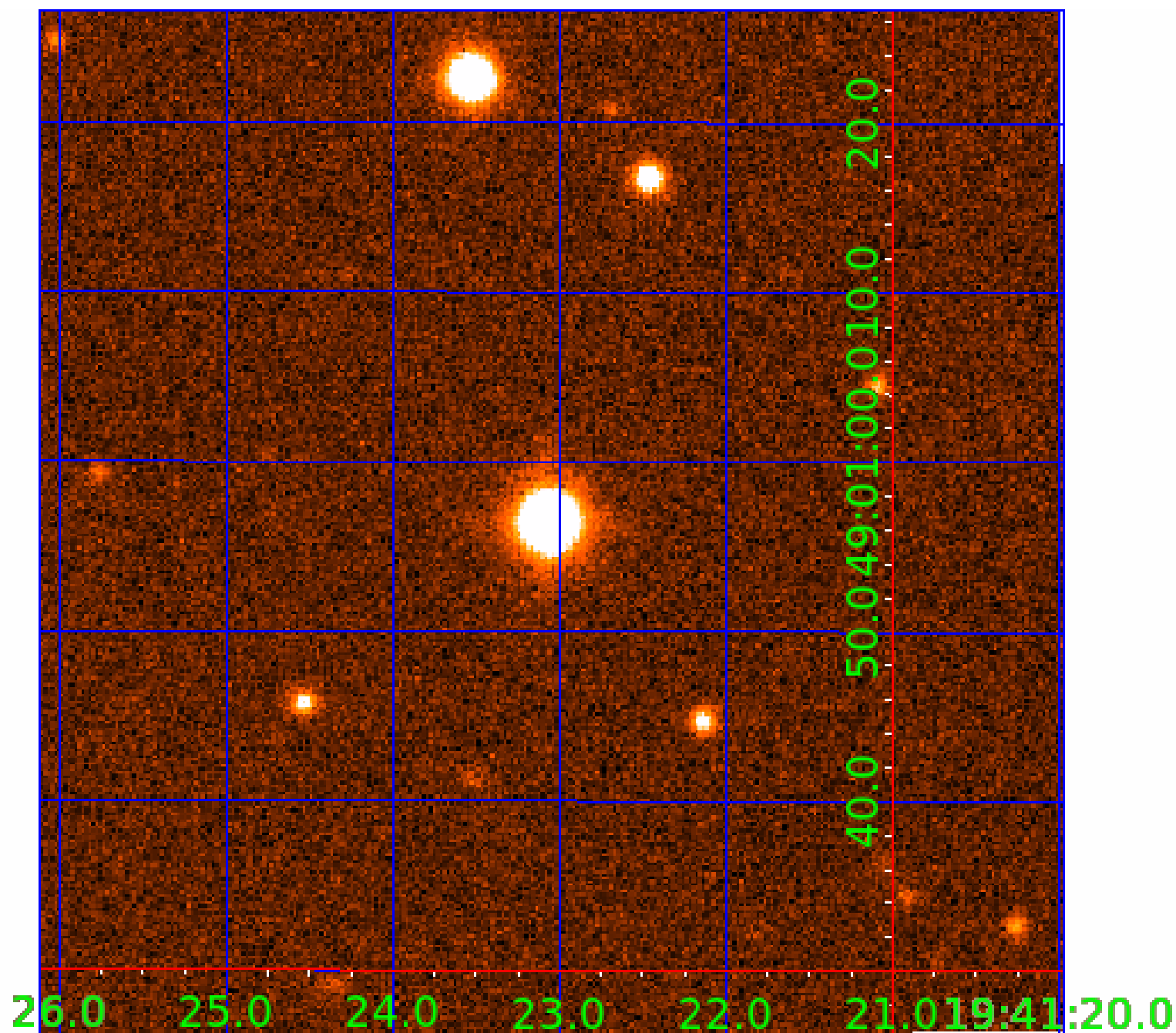


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

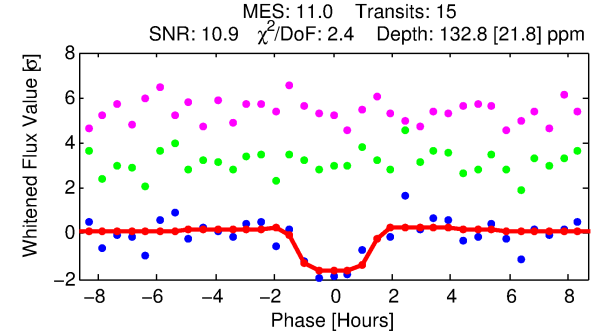
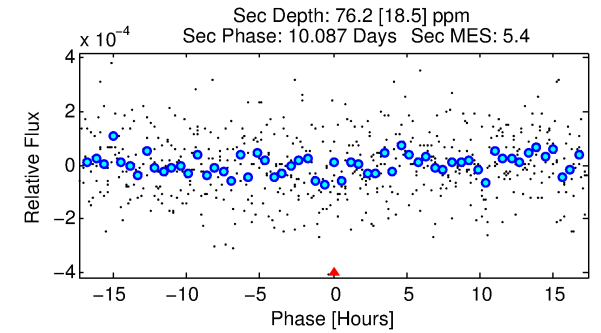
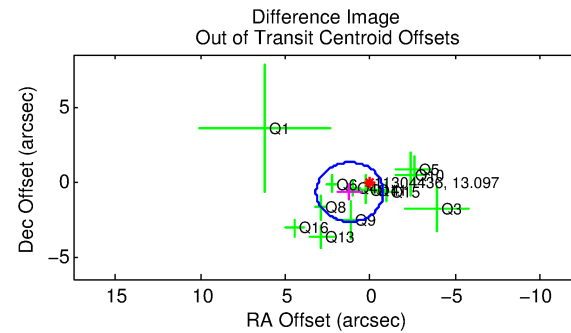
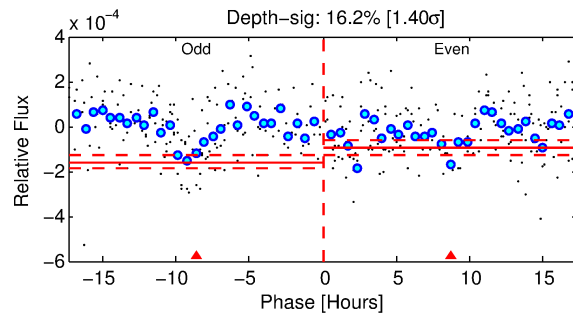
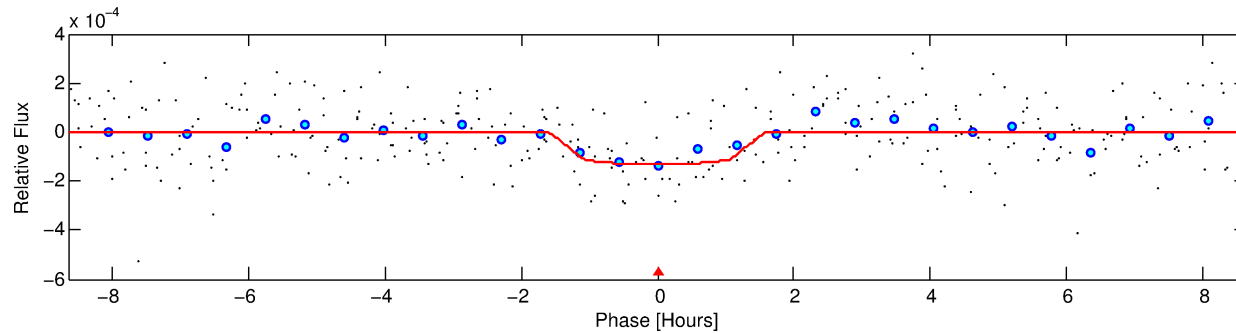
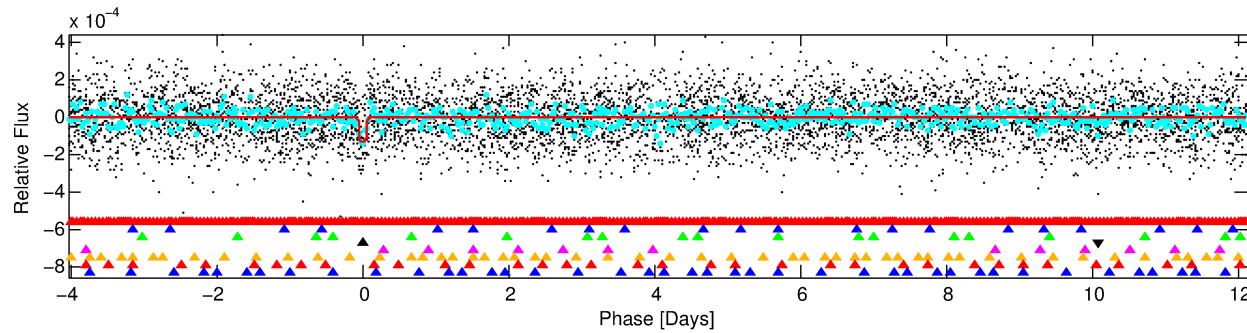
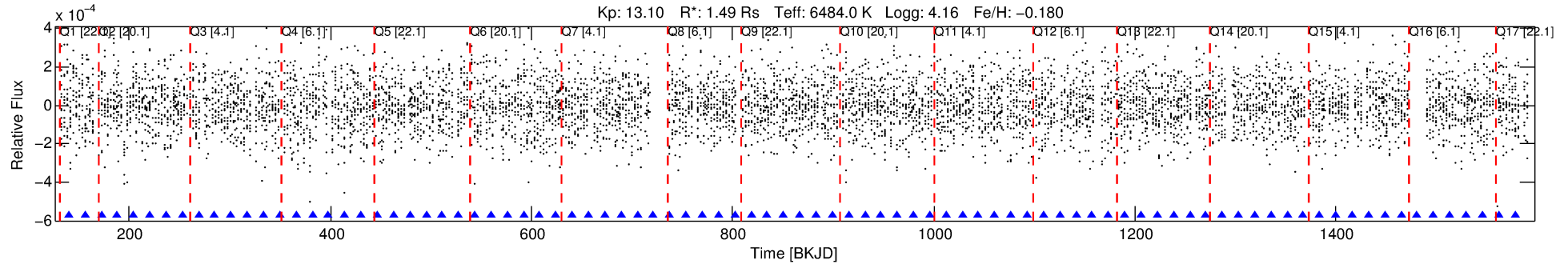
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-04

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 4 of 8 Period: 16.156 d



DV Fit Results:

Period = 16.15583 [0.00019] d
Epoch = 139.8538 [0.0091] BKJD
Rp/R* = 0.0124 [0.0127]
a/R* = 19.80 [117.43]
b = 0.90 [1.26]
Seff = 203.49 [82.82]
Teq = 963 [98] K
Rp = 2.01 [2.15] Re
a = 0.1317 [0.0335] AU
Ag = 179.55 [376.56] [0.47 σ]
Teffp = 5451 [2819] K [1.59 σ]

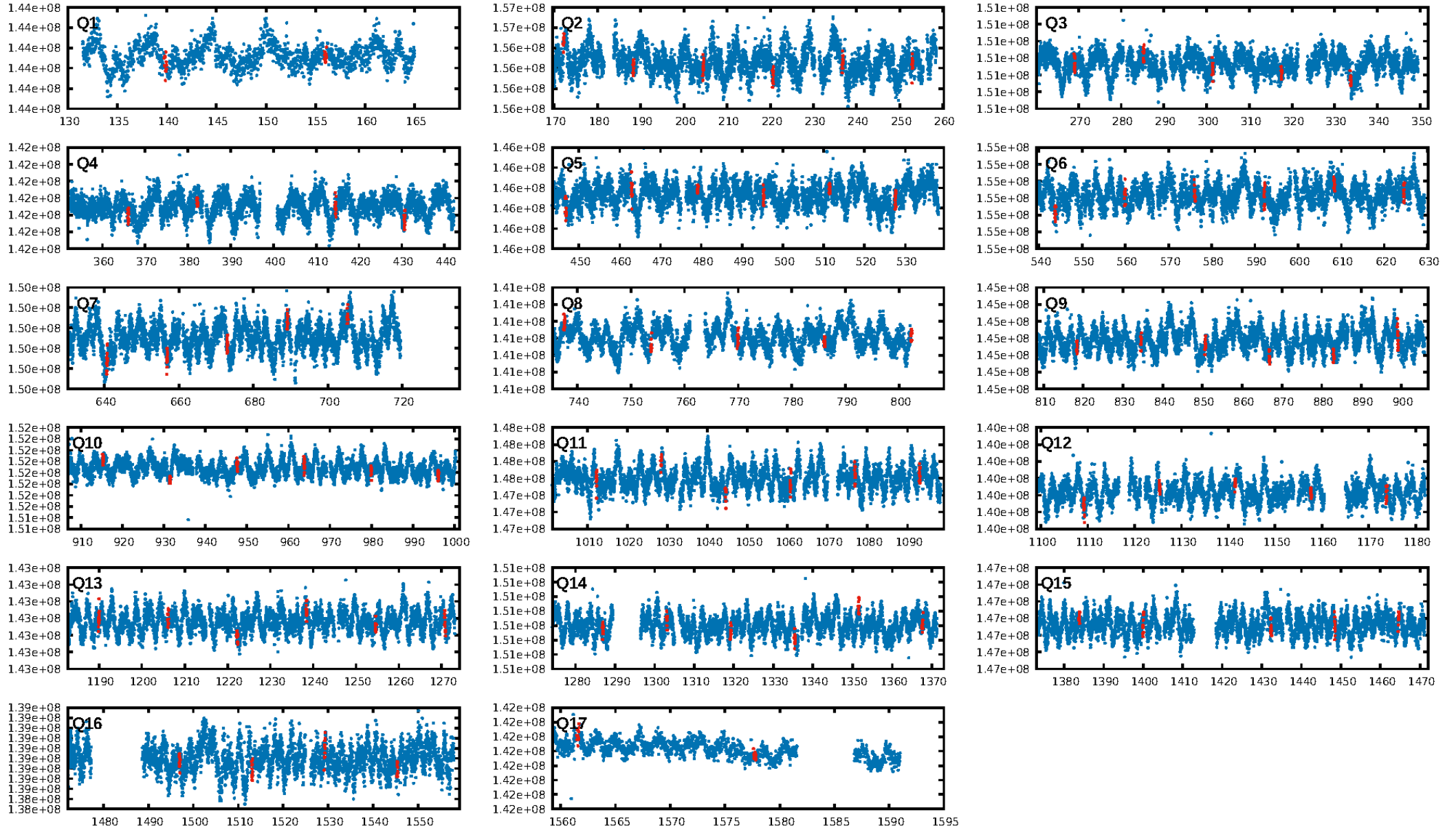
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.80 σ]
LongPeriod-sig: 100.0% [80.65 σ]
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 26.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.707
Centroid-sig: 15.0%
Centroid-so: 0.793 arcsec [1.46 σ]
OotOffset-rm: 1.382 arcsec [2.10 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-rm: 1.436 arcsec [1.98 σ]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

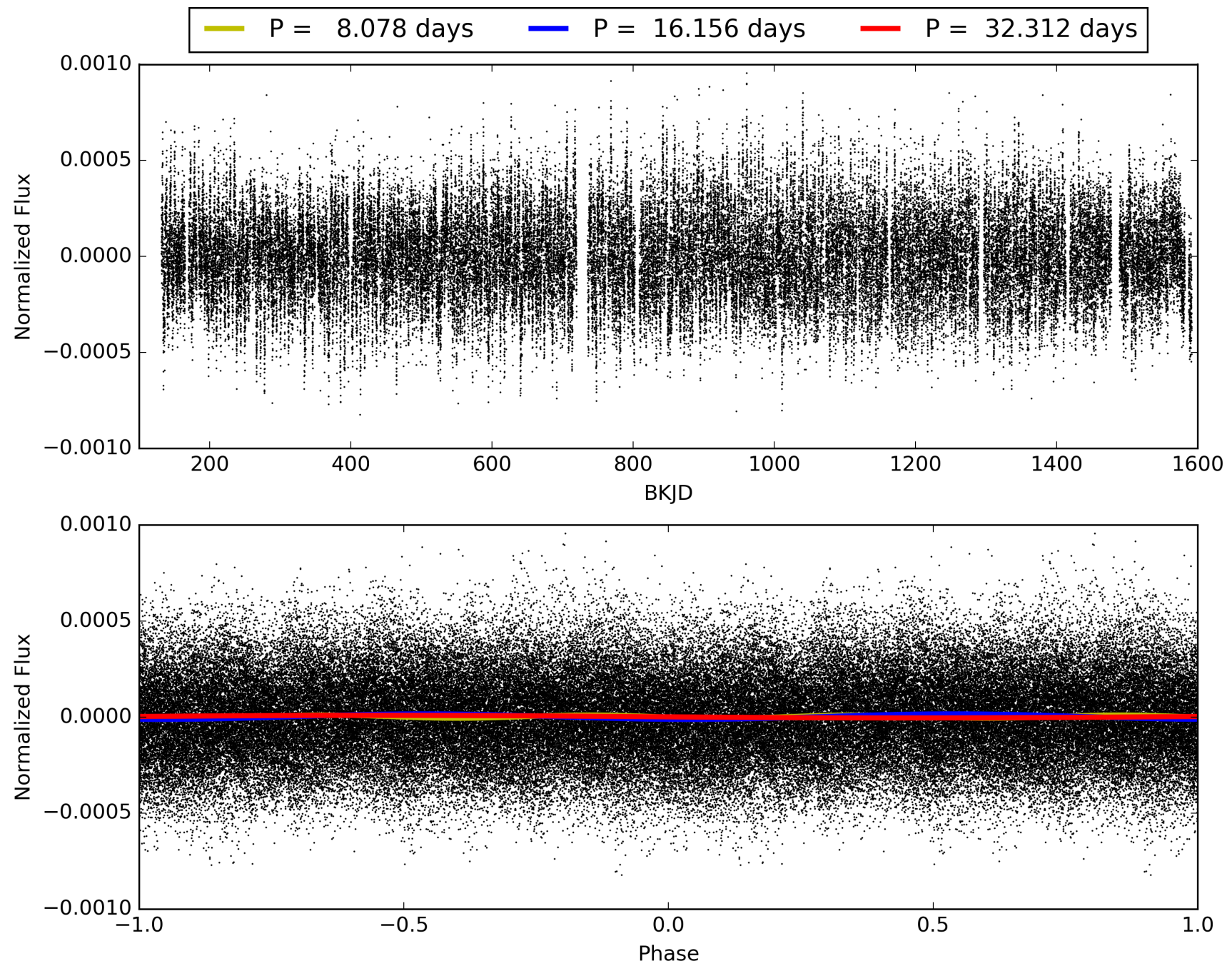
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:22:30 Z

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

TCE 011304436-04, PDC Light Curves

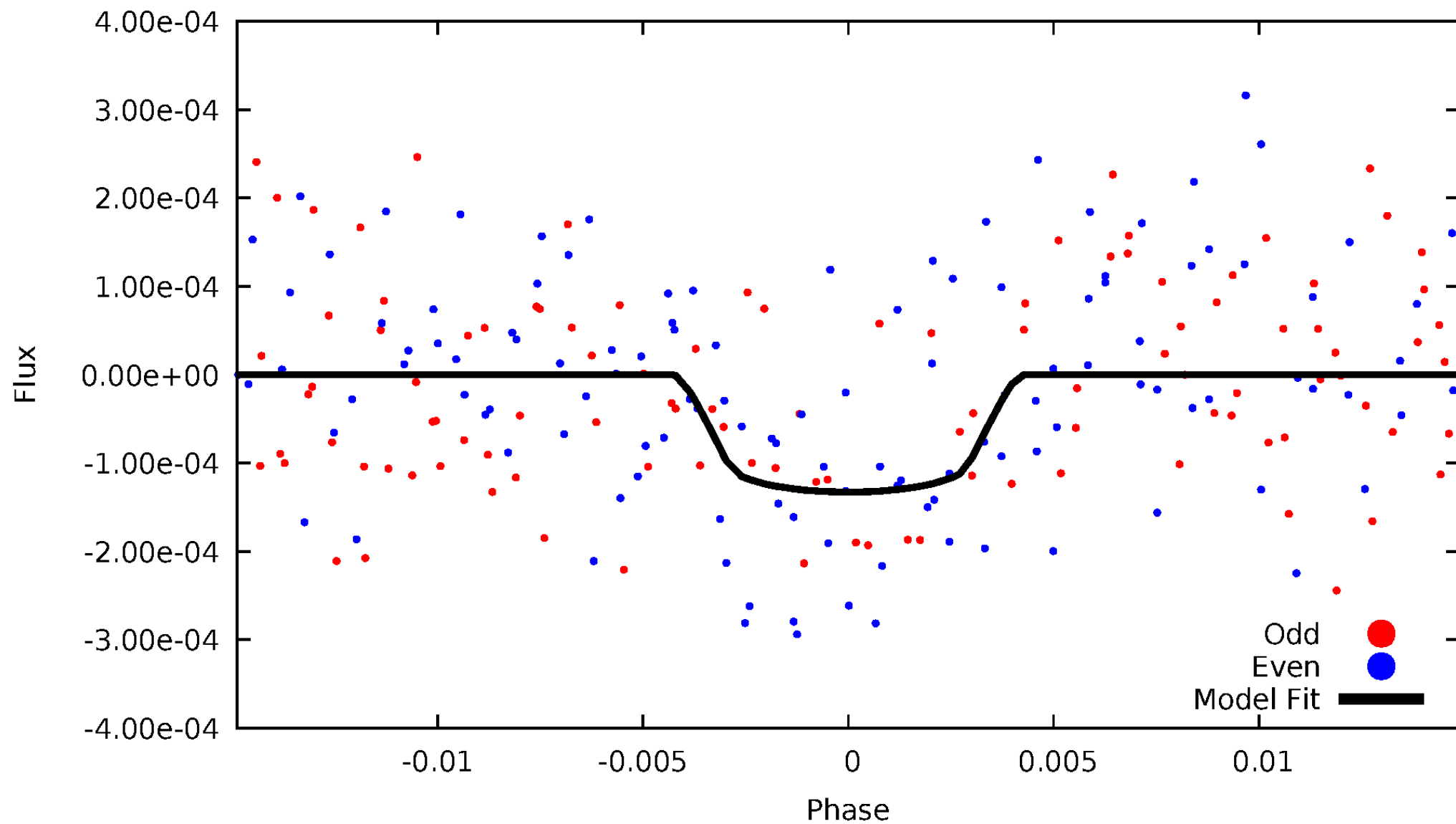


TCE 011304436-04



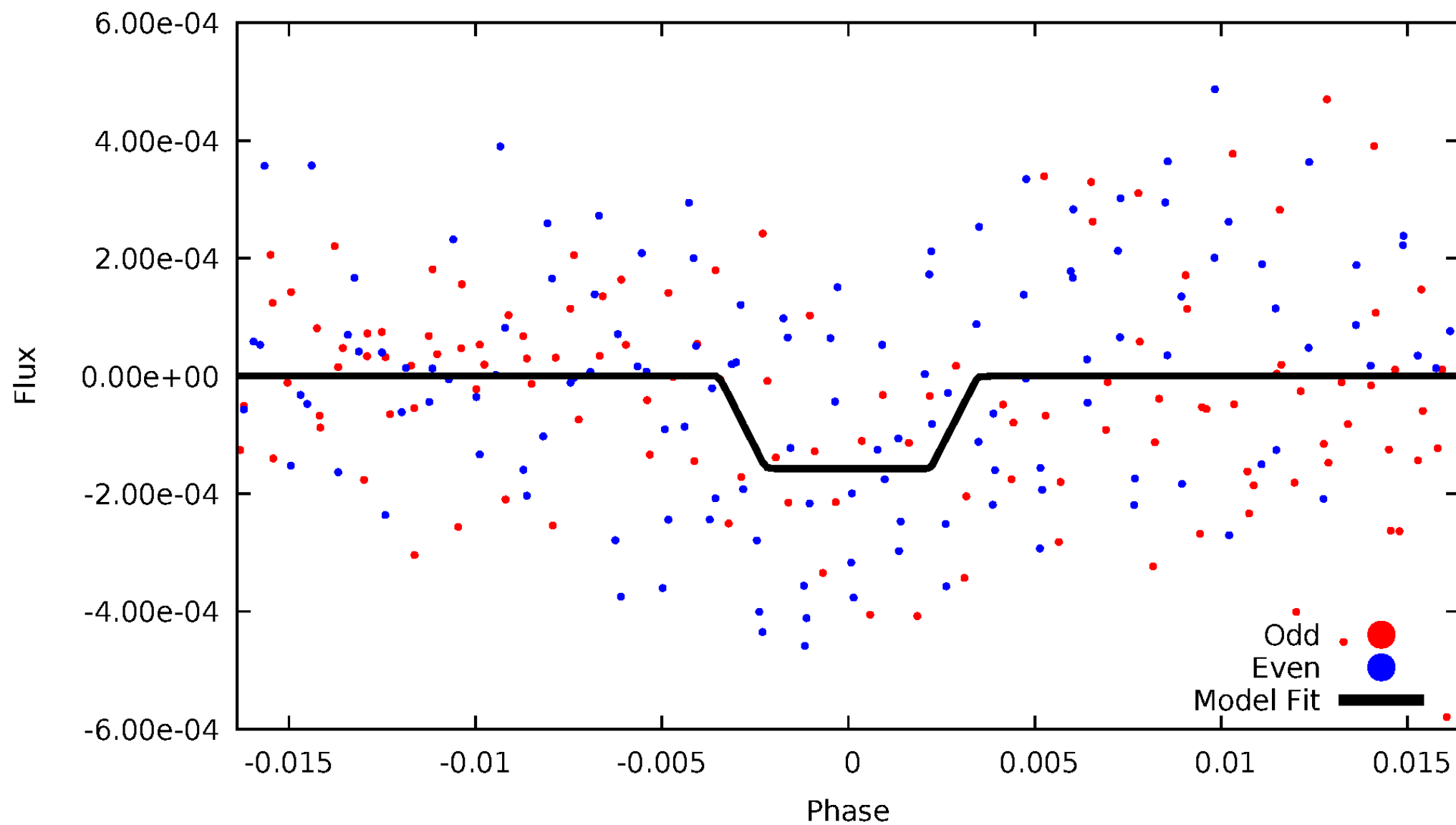
DV Odd/Even

TCE 011304436-04



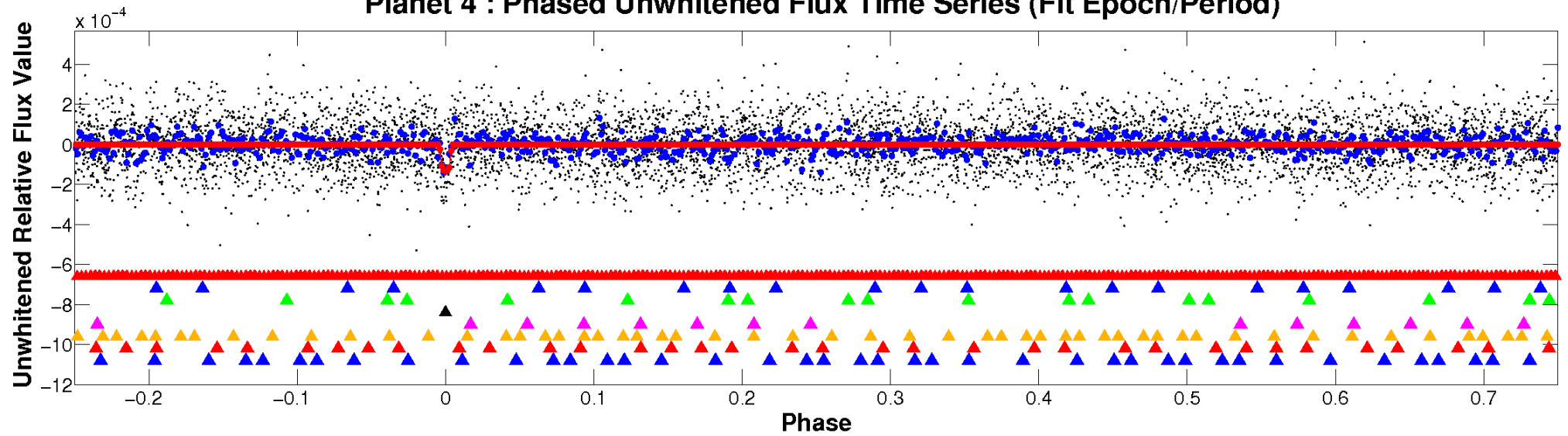
ALT Odd/Even

TCE 011304436-04

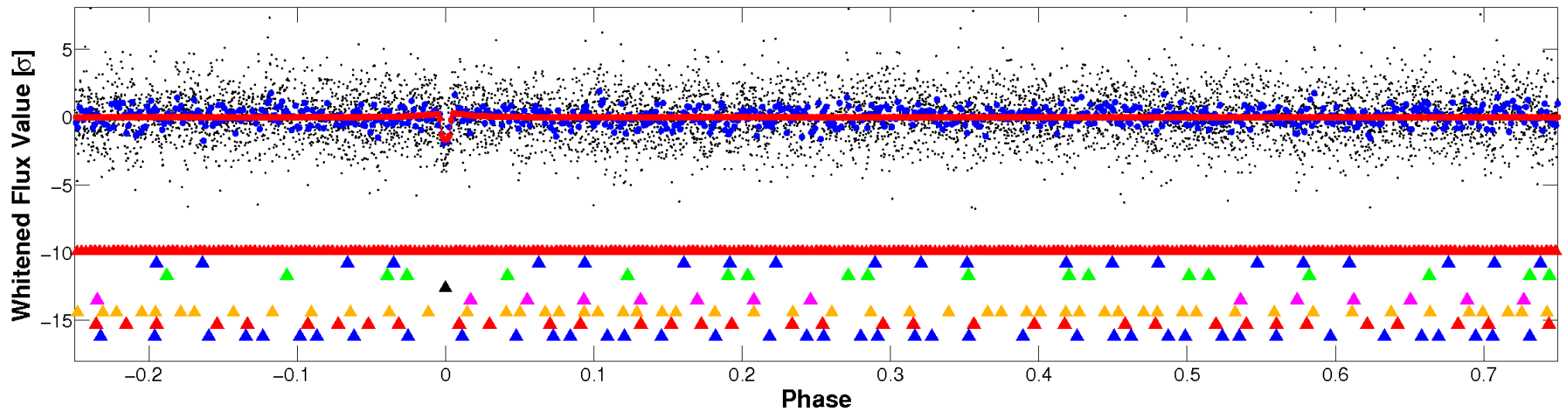


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

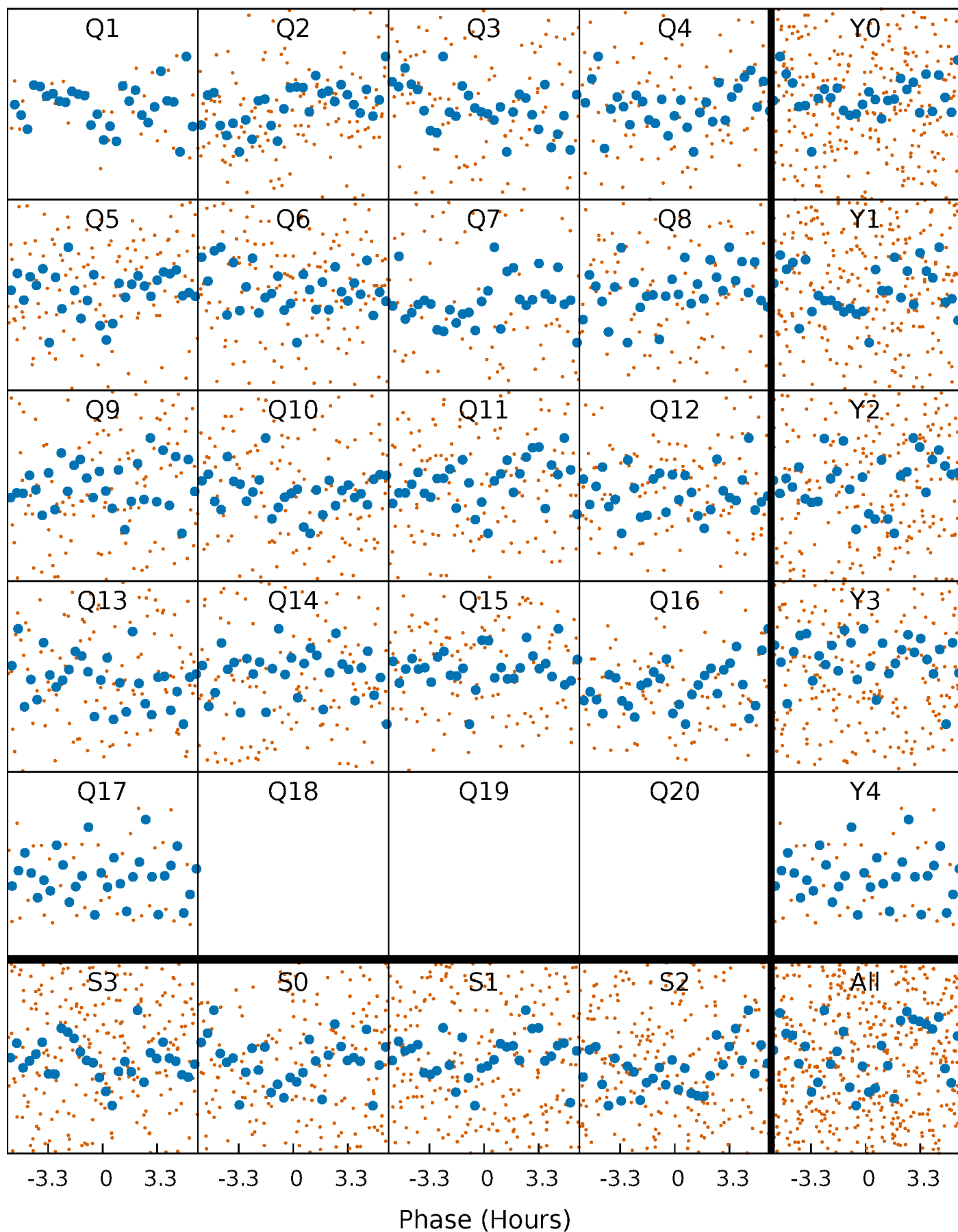


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



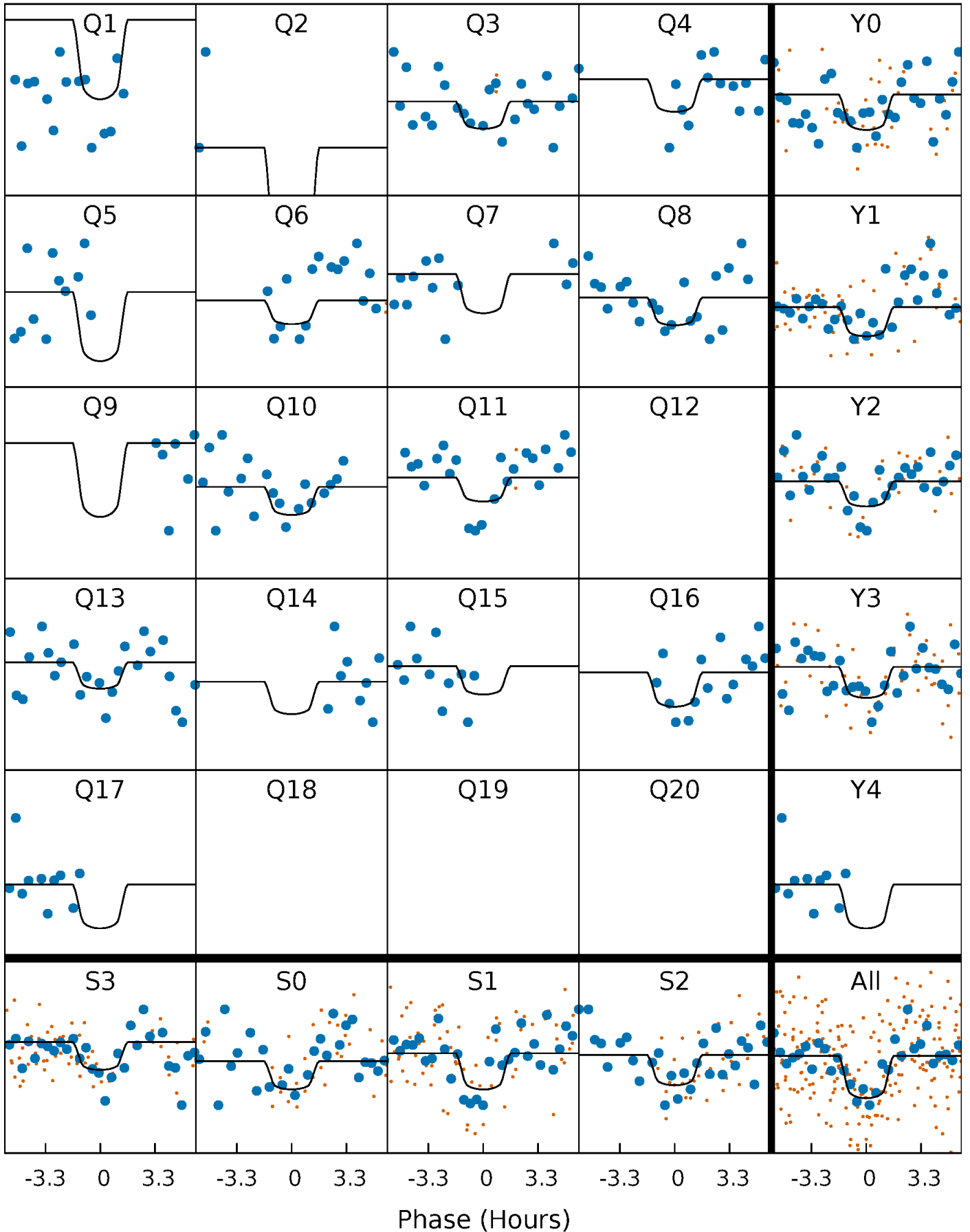
PDC Quarter-Phased Transit Curves

TCE 011304436-04 P= 16.155828 Days $T_0=139.853765$ (BKJD)



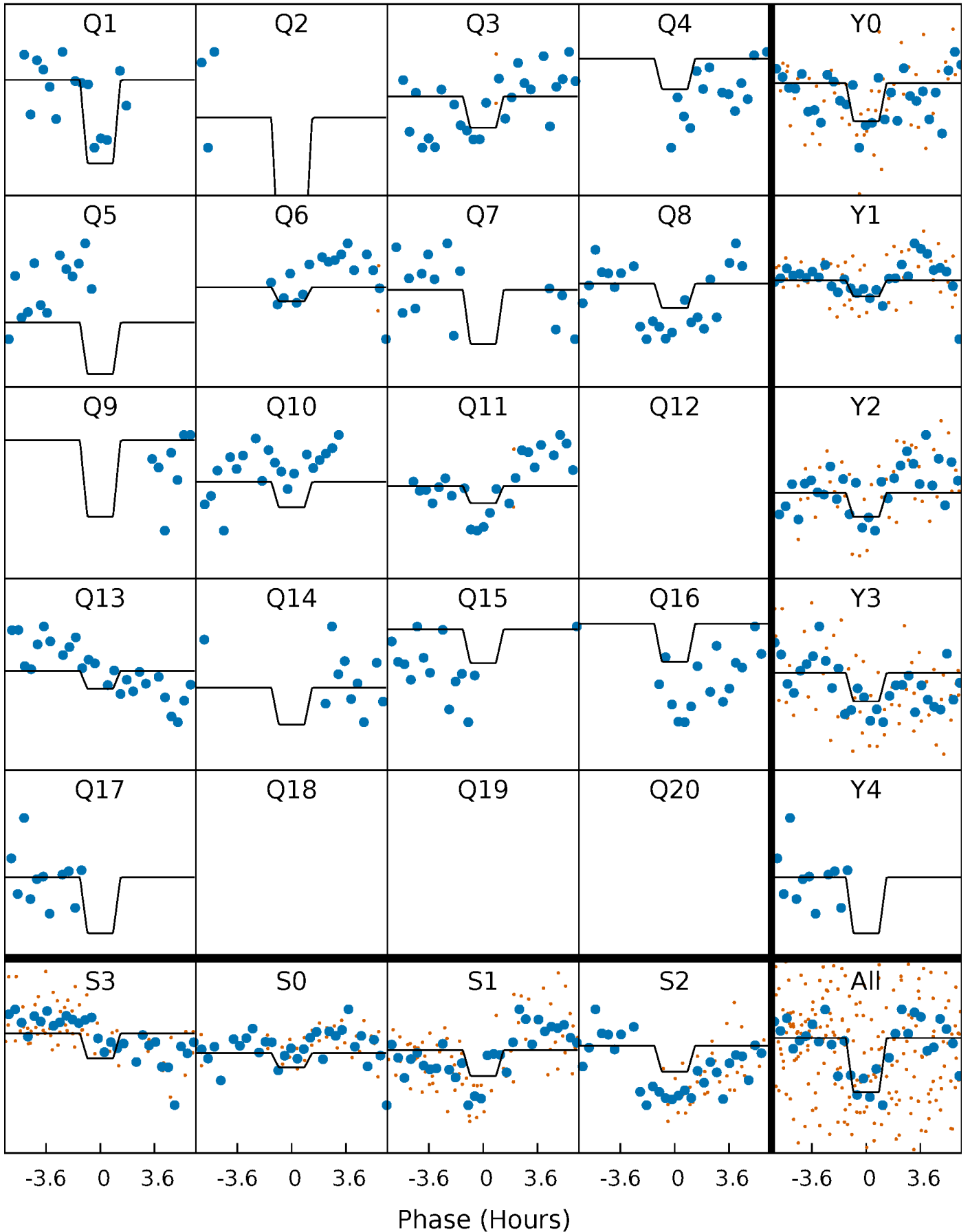
DV Quarter-Phased Transit Curves

TCE 011304436-04 P= 16.155828 Days $T_0=139.853765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

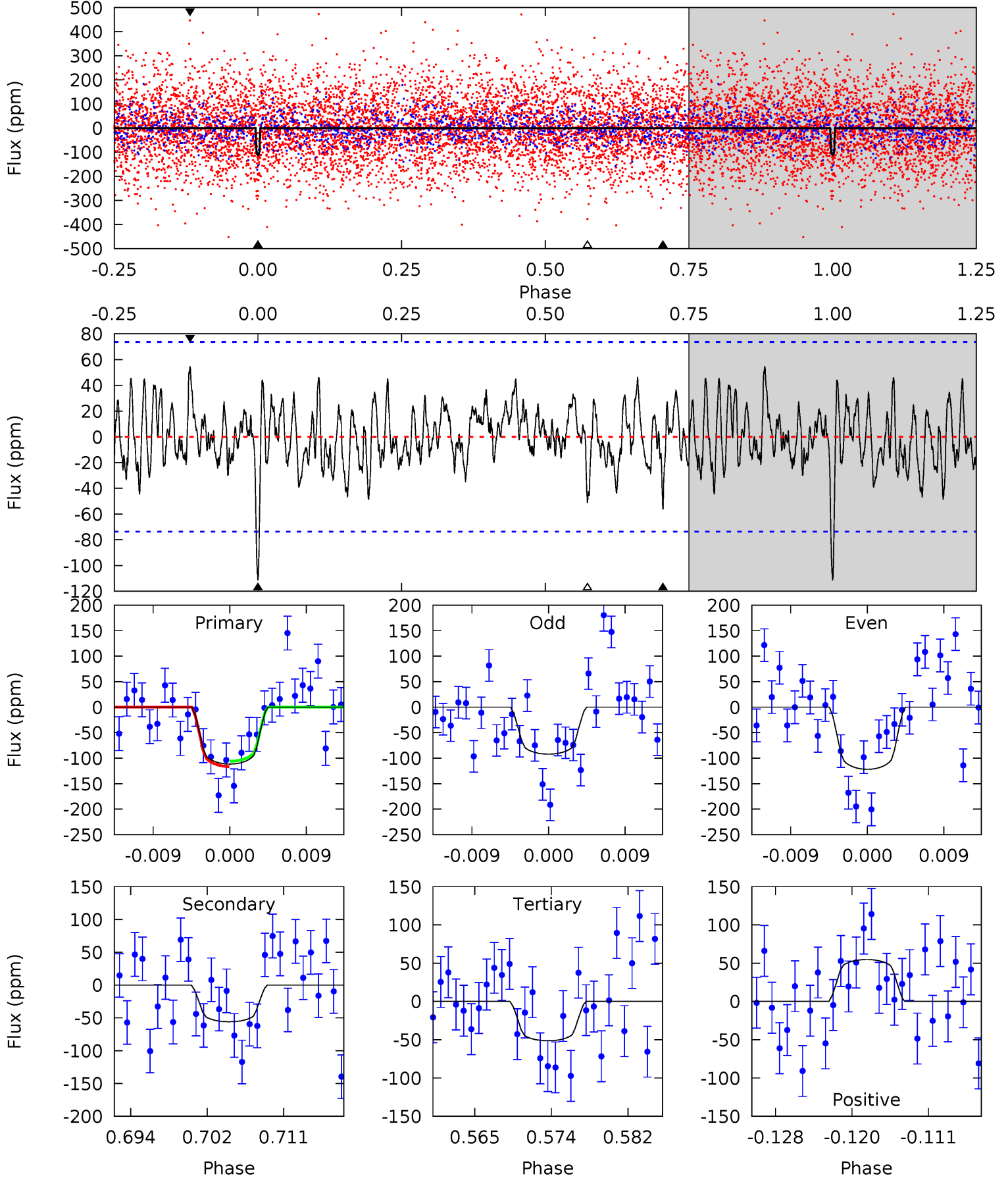
TCE 011304436-04 P= 16.155842 Days $T_0=139.850923$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-04, P = 16.155828 Days, E = 123.697937 Days

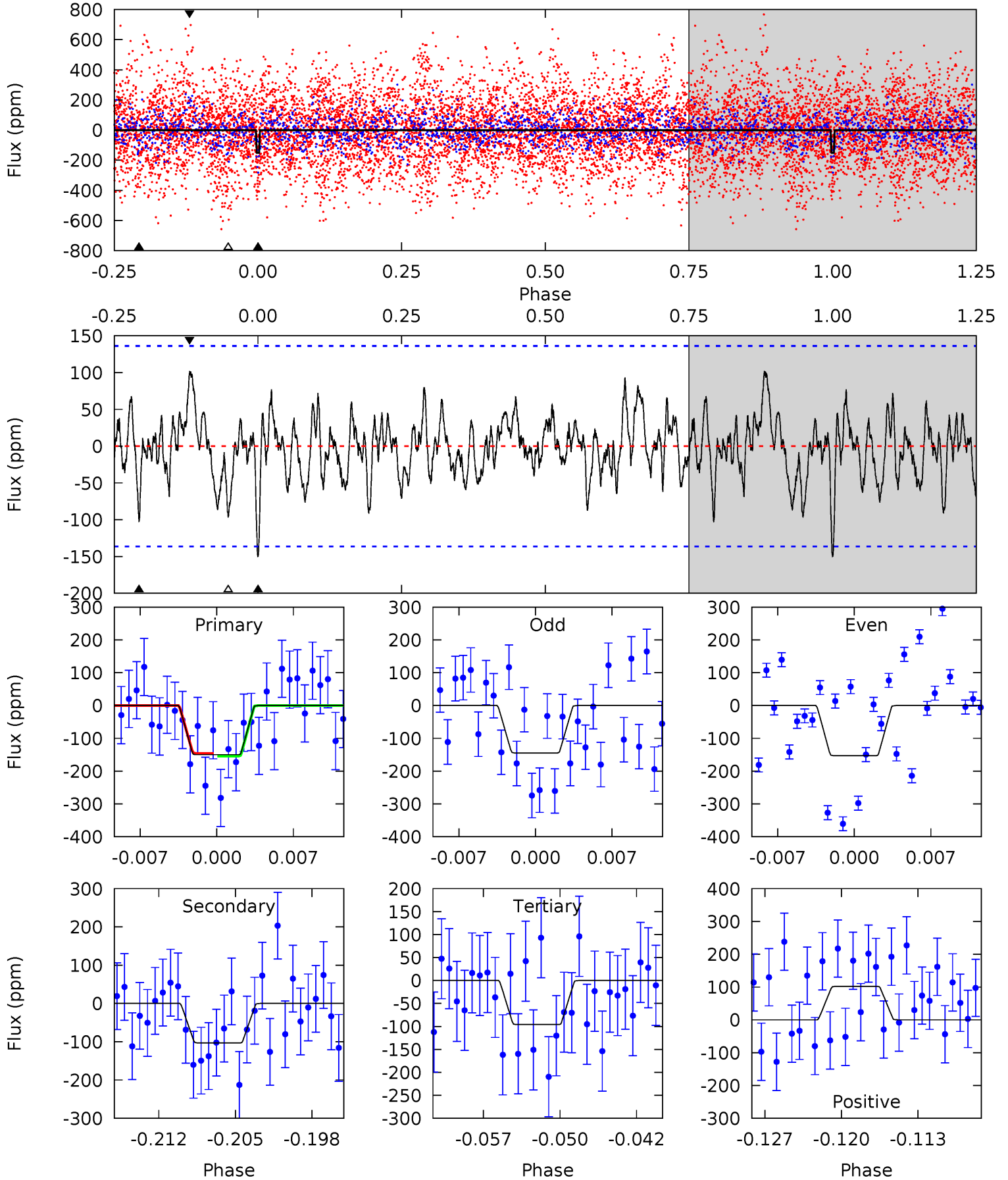
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.65	3.84	3.52	3.76	5.06	2.63	1.29	4.13	3.90	0.31	0.08	0.98	0.94	0.33	0.36



Alt Model-Shift Uniqueness Test

011304436-04, P = 16.155842 Days, E = 123.695081 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.61	3.85	3.59	3.81	5.09	2.69	1.29	2.02	1.80	0.27	0.04	0.15	1.11	0.40	0.15



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-56 ± 15	$2.32^{+2.00}_{-1.49}$	1339^{+101}_{-102}	4704^{+3247}_{-939}	93^{+680}_{-67}
Alt.	-103 ± 27	$2.42^{+1.92}_{-1.45}$	1338^{+105}_{-107}	5296^{+3606}_{-1097}	168^{+966}_{-121}

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

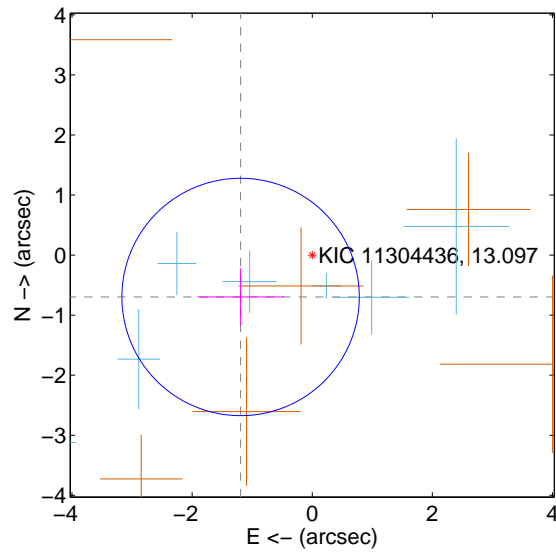
Supplemental centroid analysis for 011304436-04. Kepler magnitude: 13.10. Transit SNR 10.87

There are 7 quarters with good PRF difference image offsets

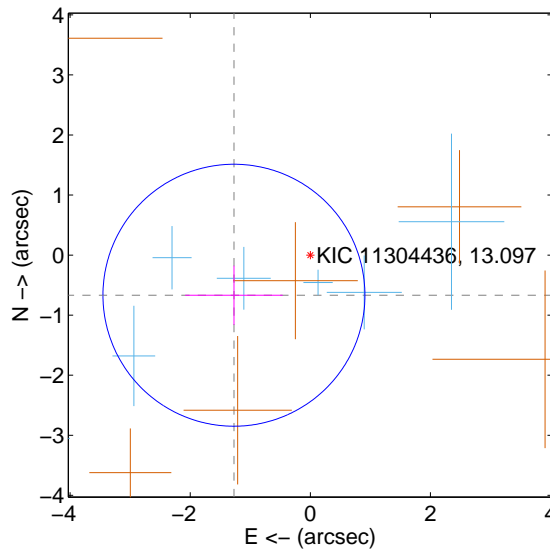
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.382 ± 0.659	2.10	1.193 ± 0.720	-0.697 ± 0.476
PRF-fit source offset from KIC position	1.436 ± 0.727	1.98	1.272 ± 0.812	-0.668 ± 0.492
photometric centroid source offset	0.79 ± 0.54	1.46	0.60 ± 0.51	0.52 ± 0.59

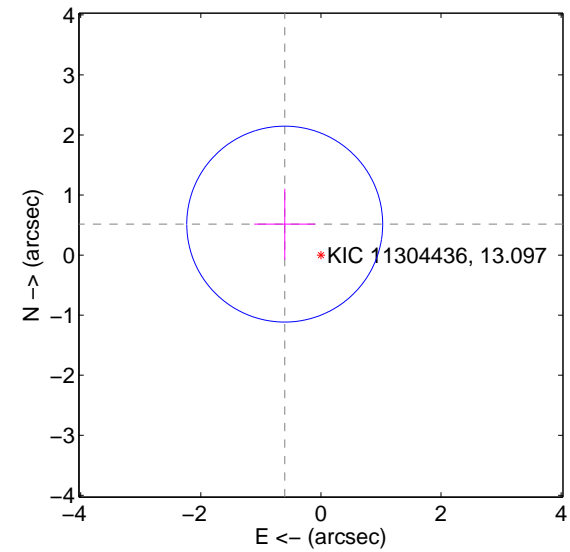
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

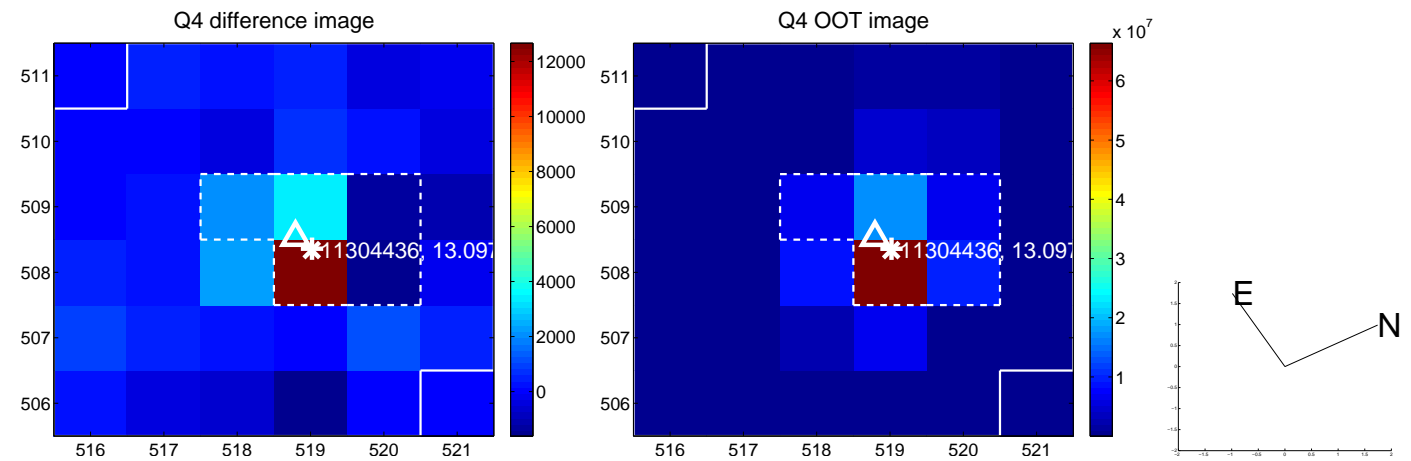
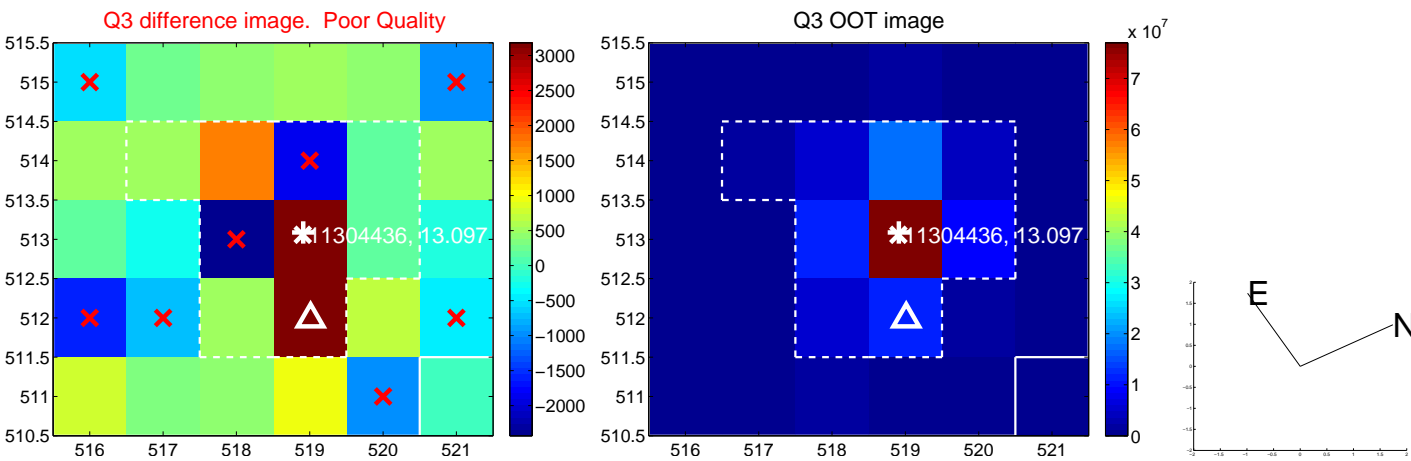
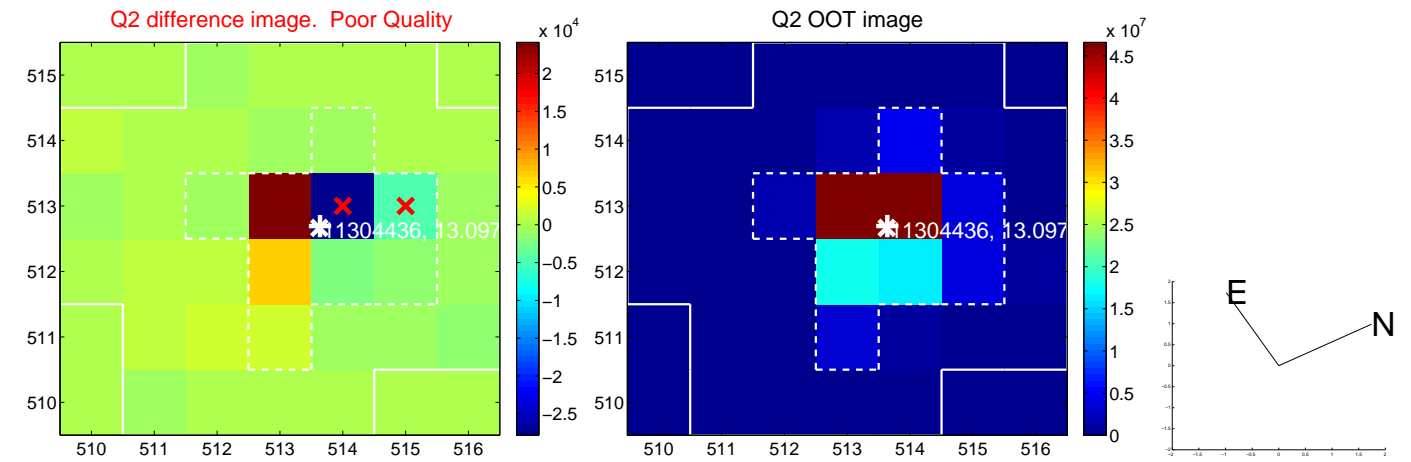
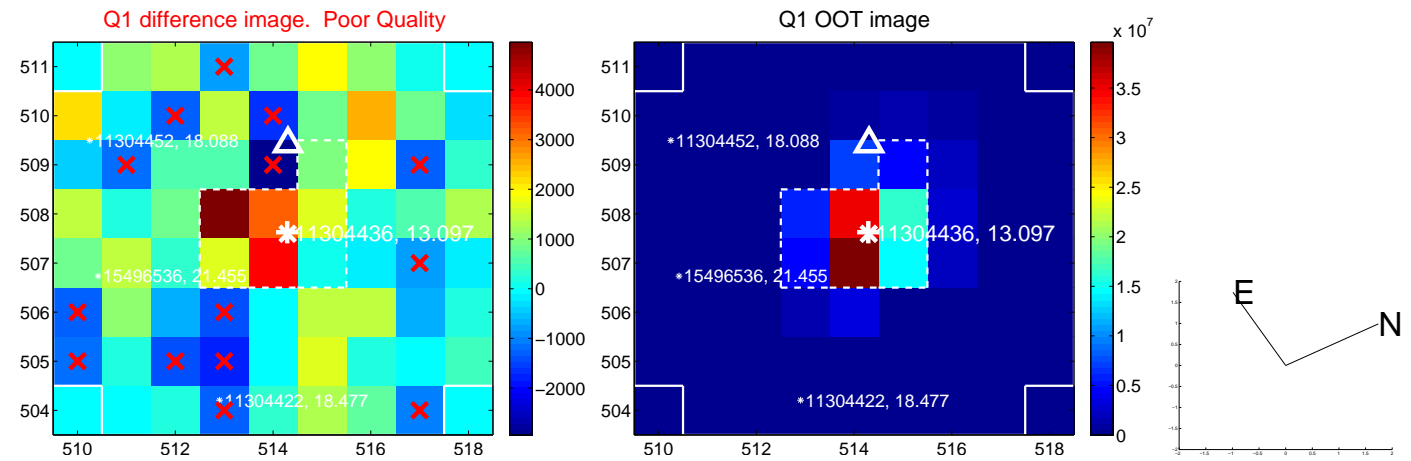


offset from photometric centroids

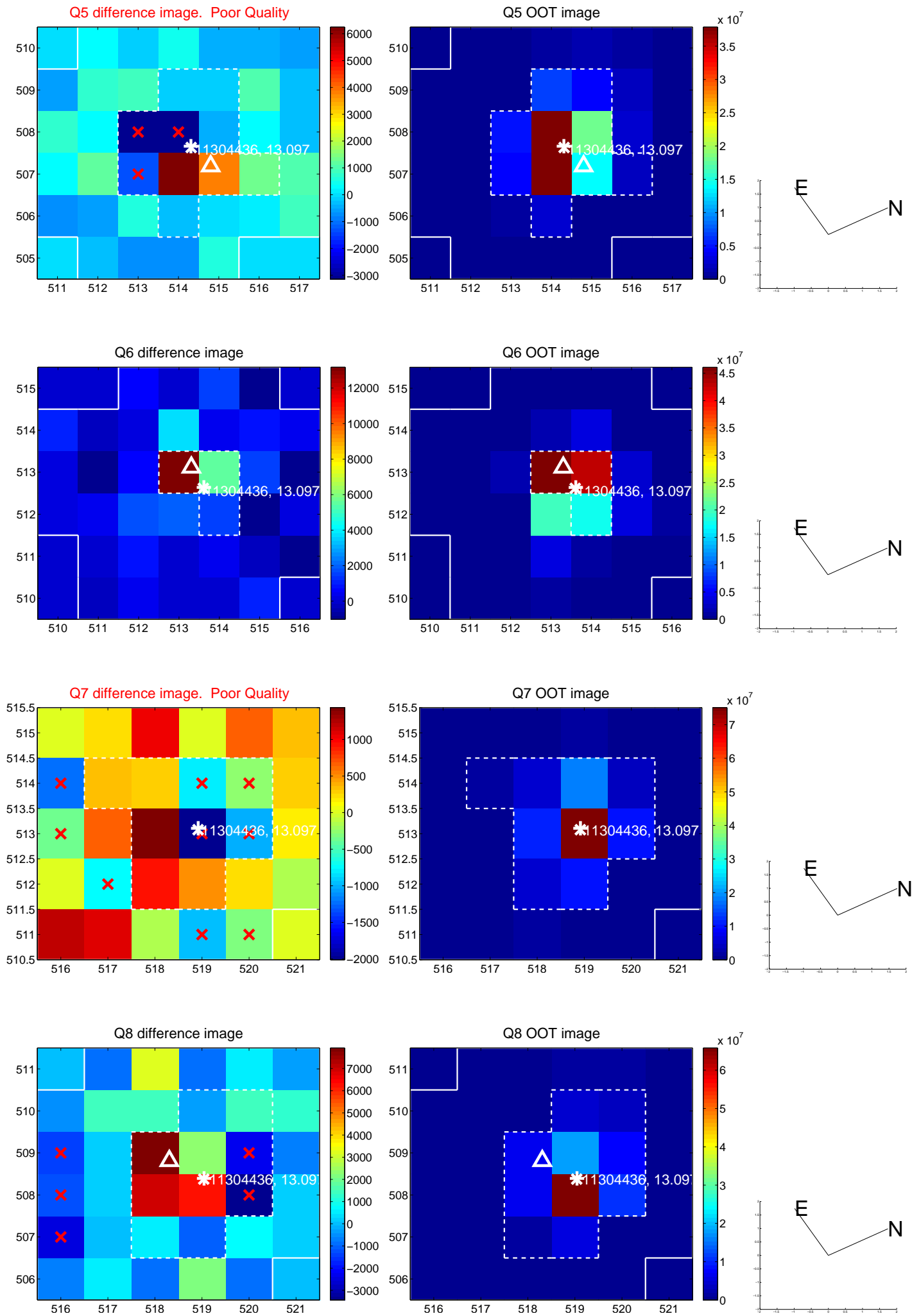


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

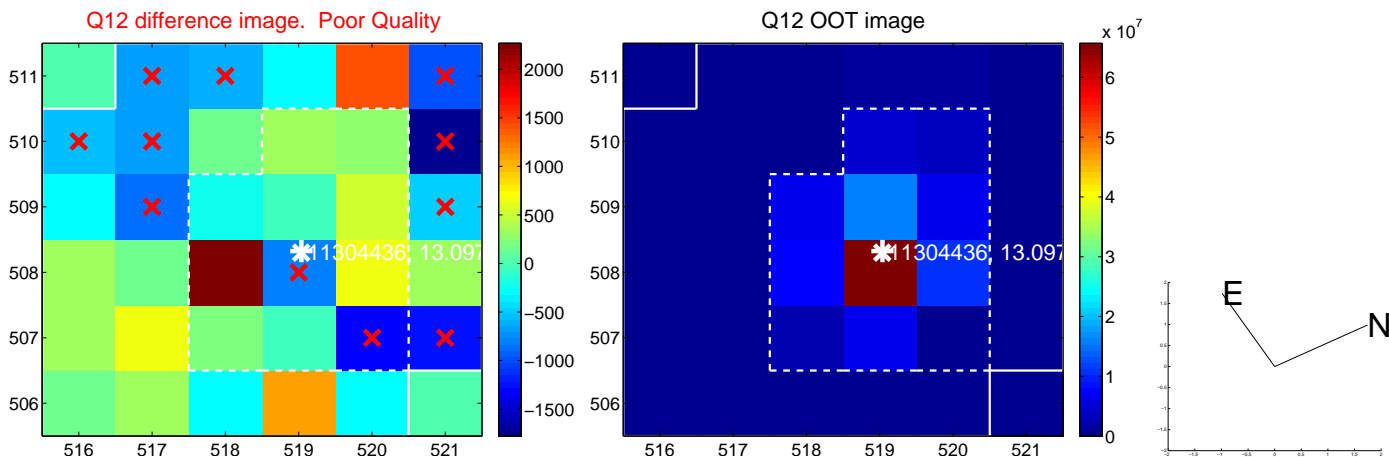
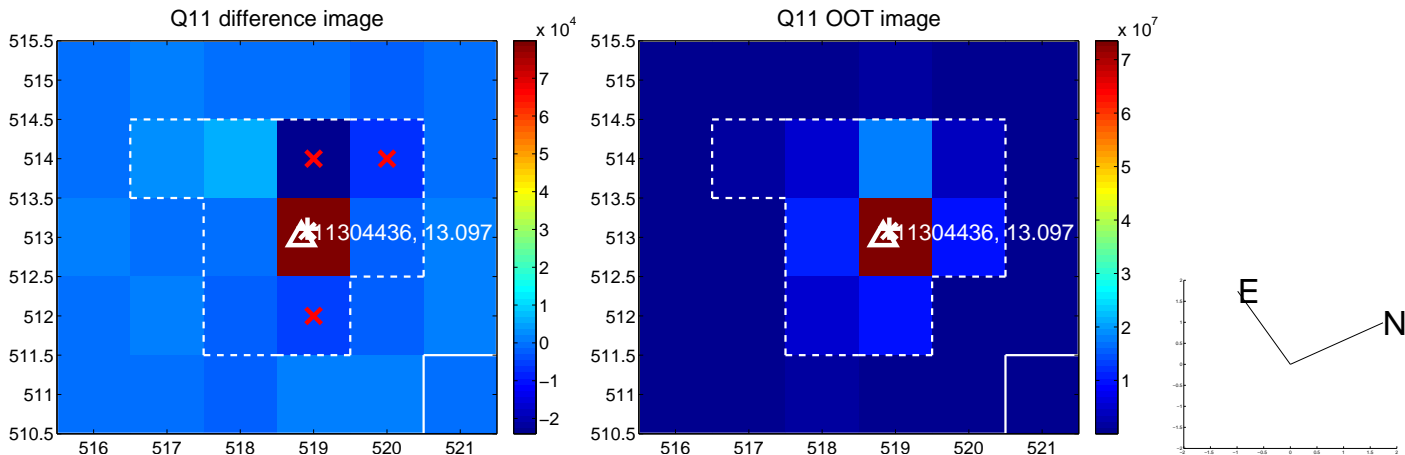
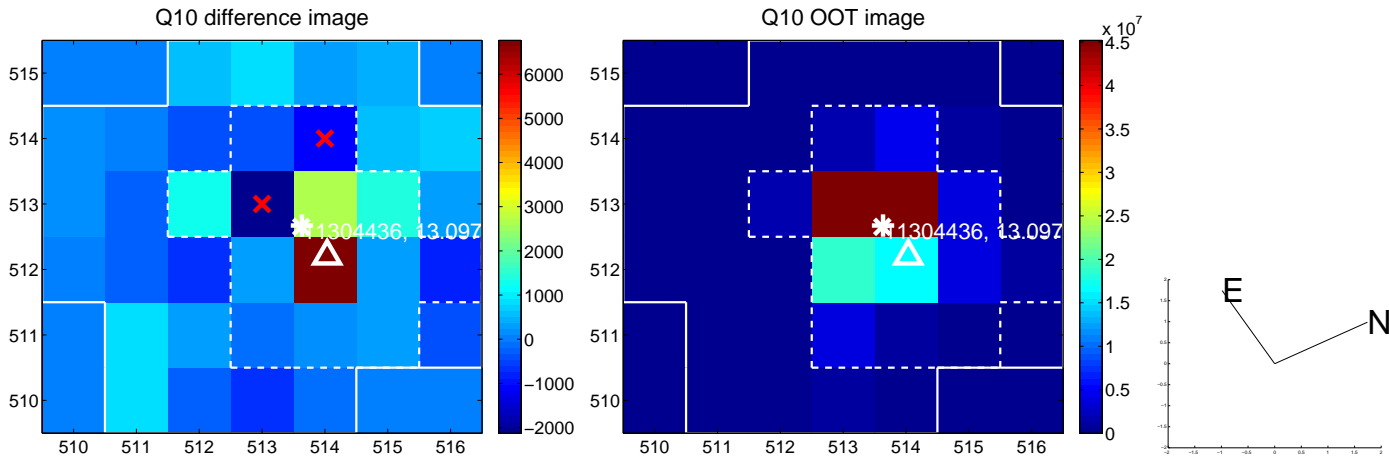
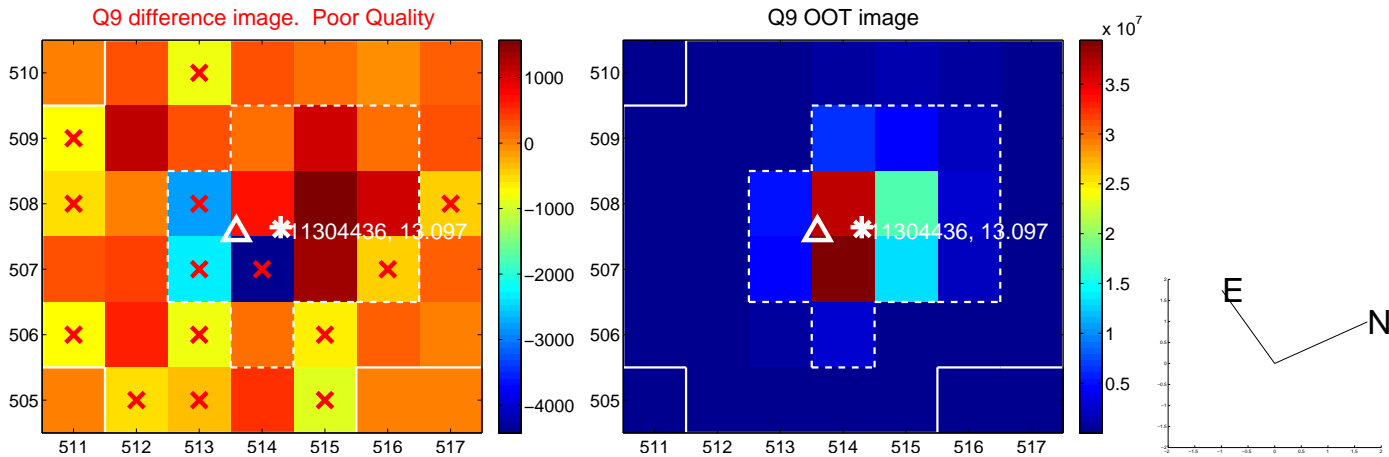
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



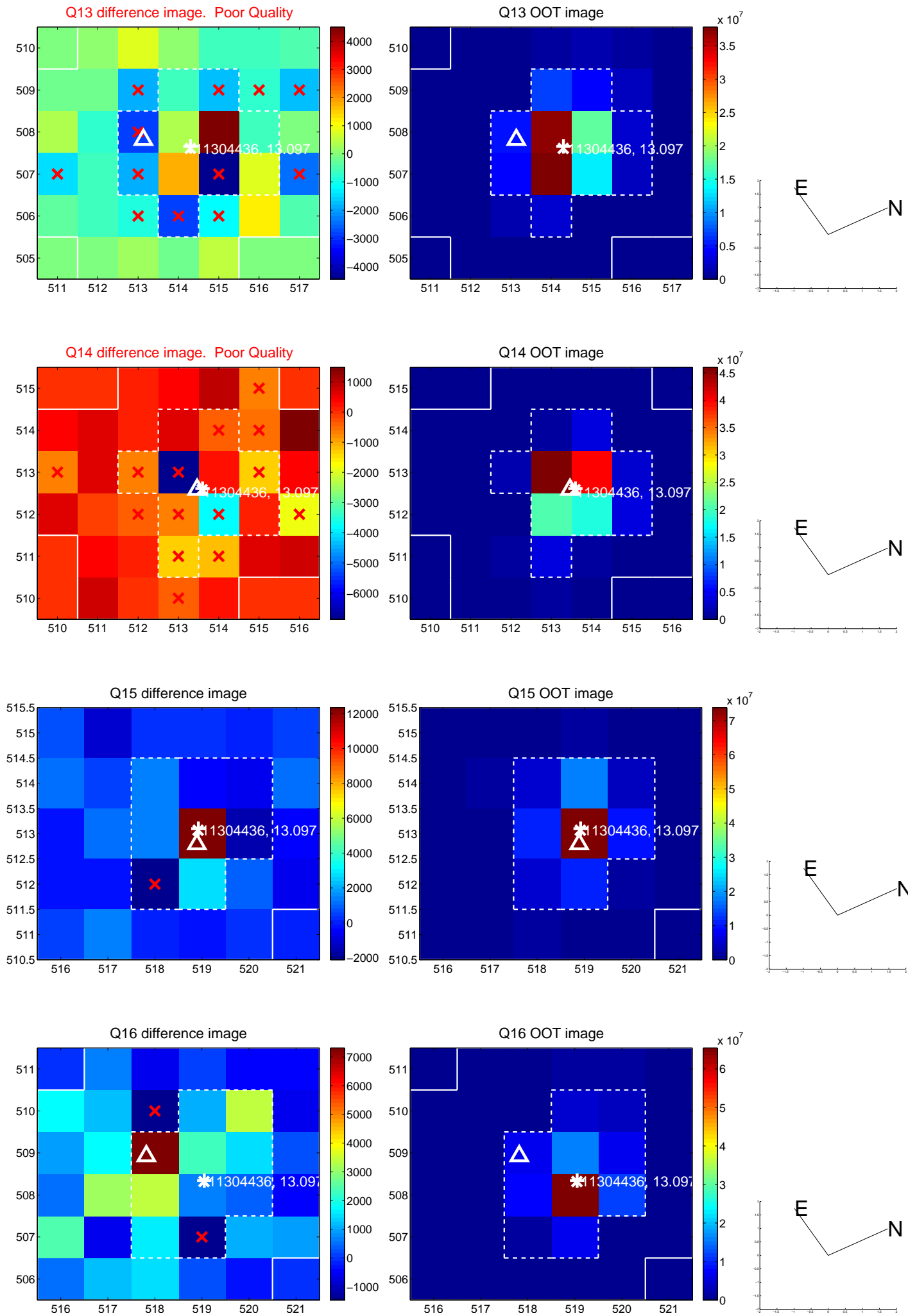
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



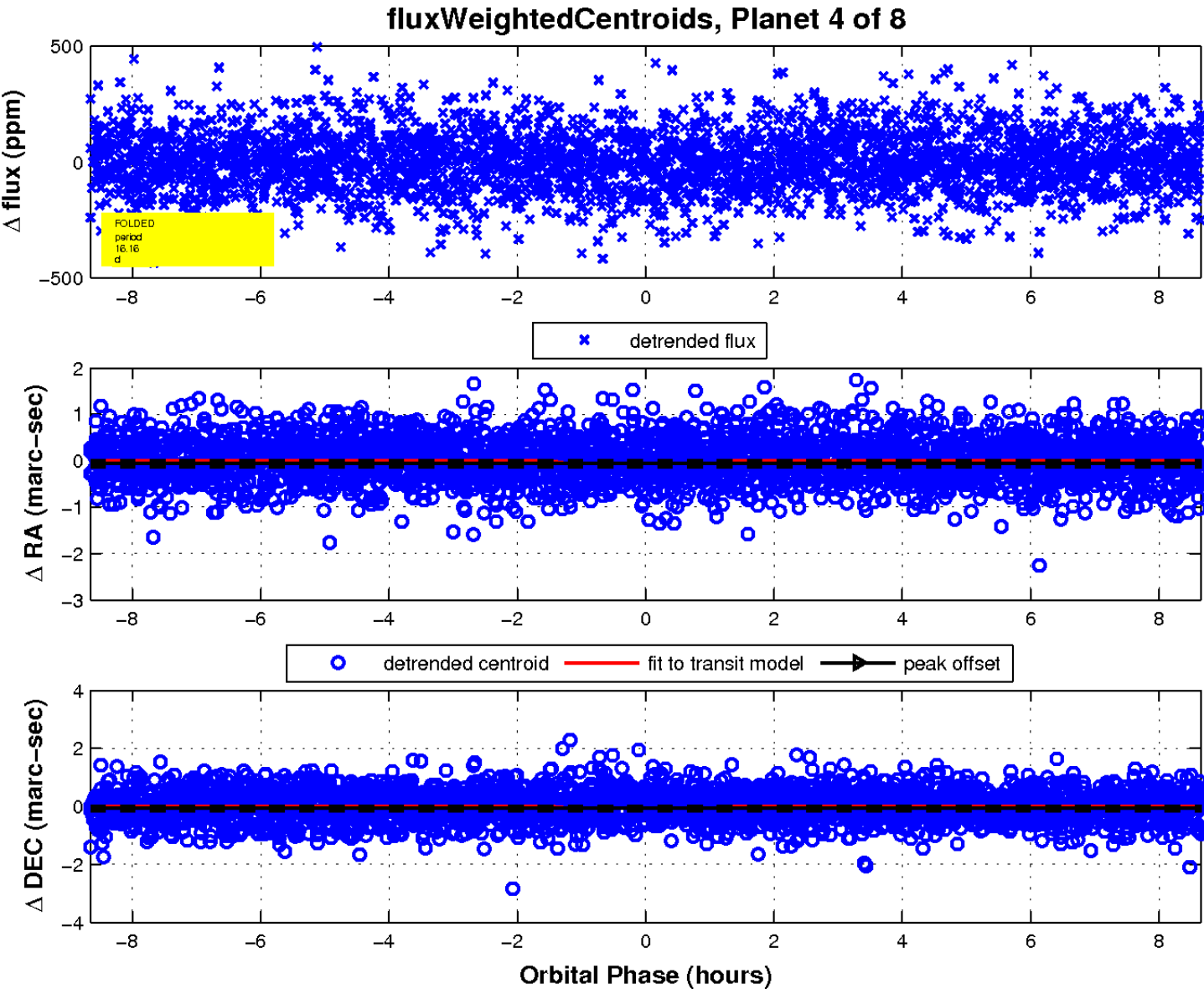
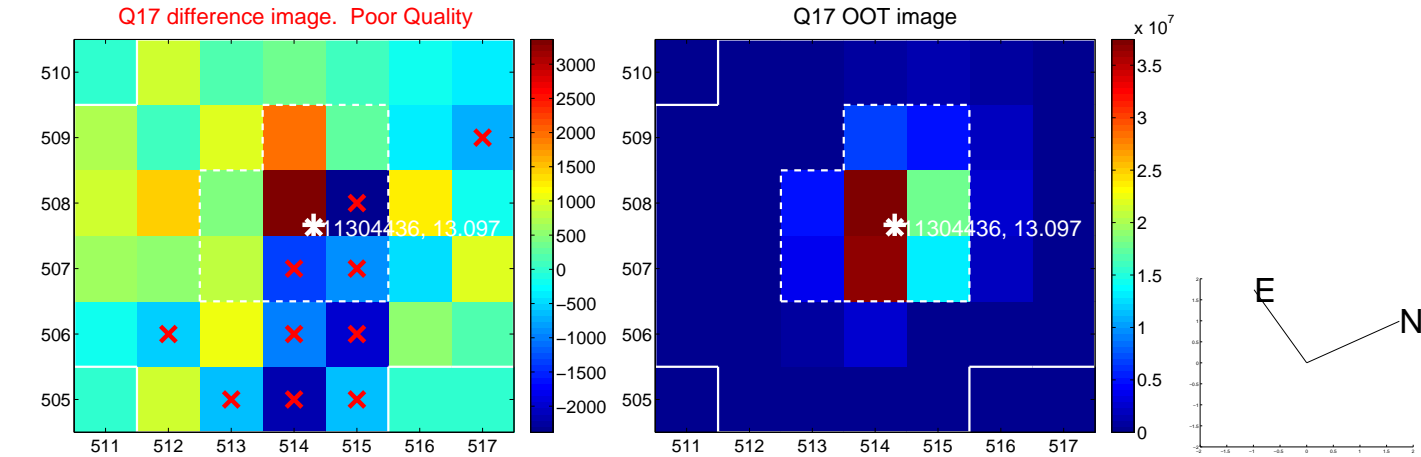
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

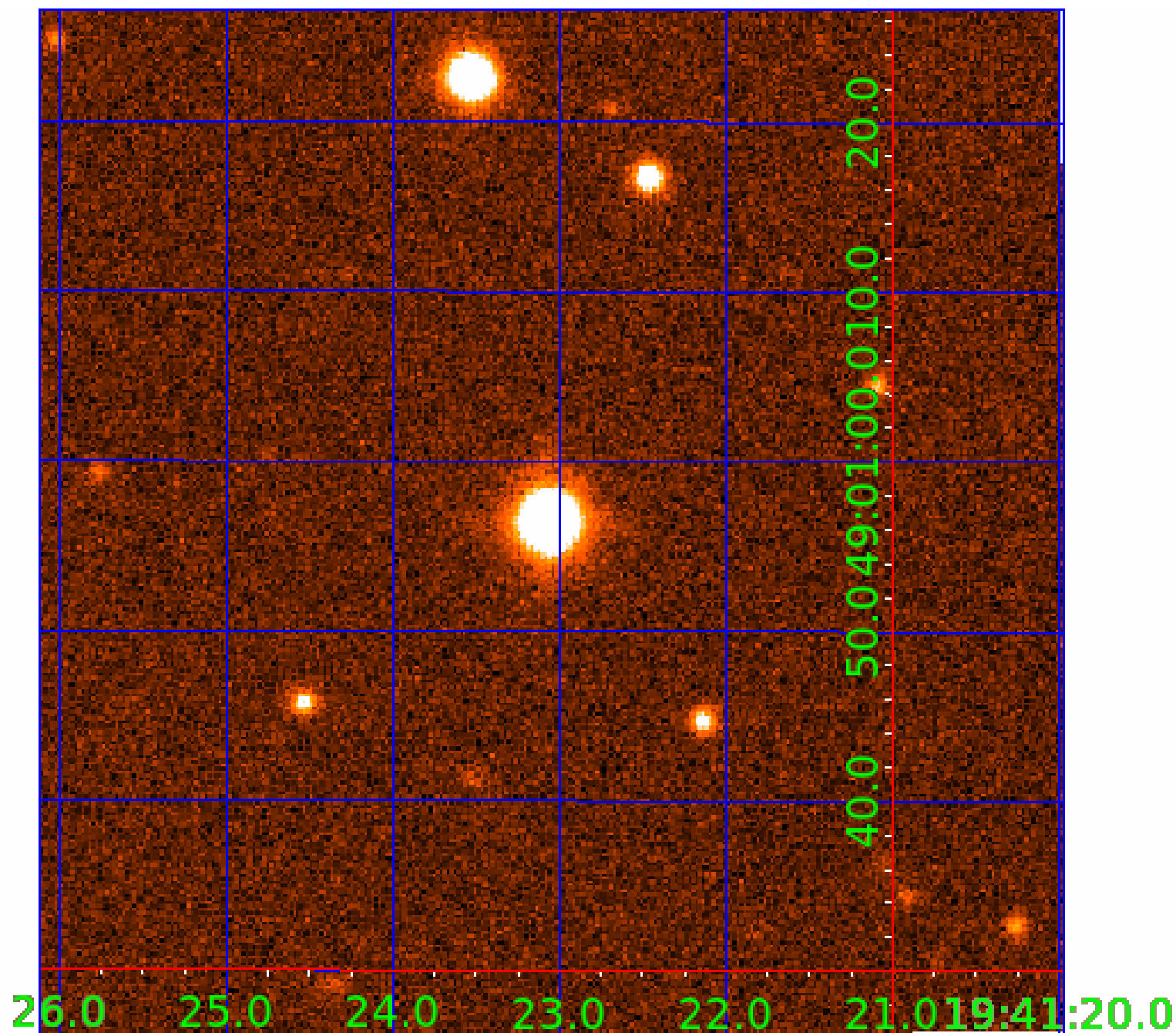


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

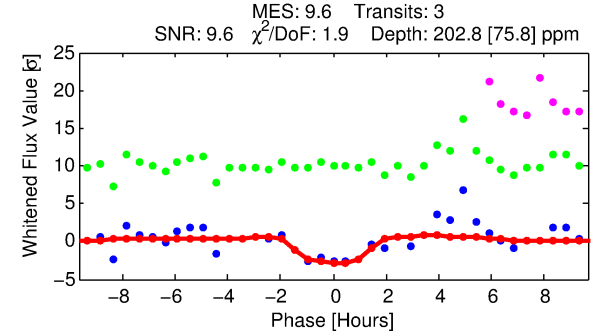
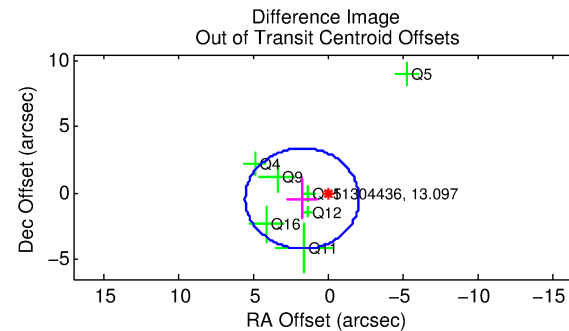
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 011304436-05

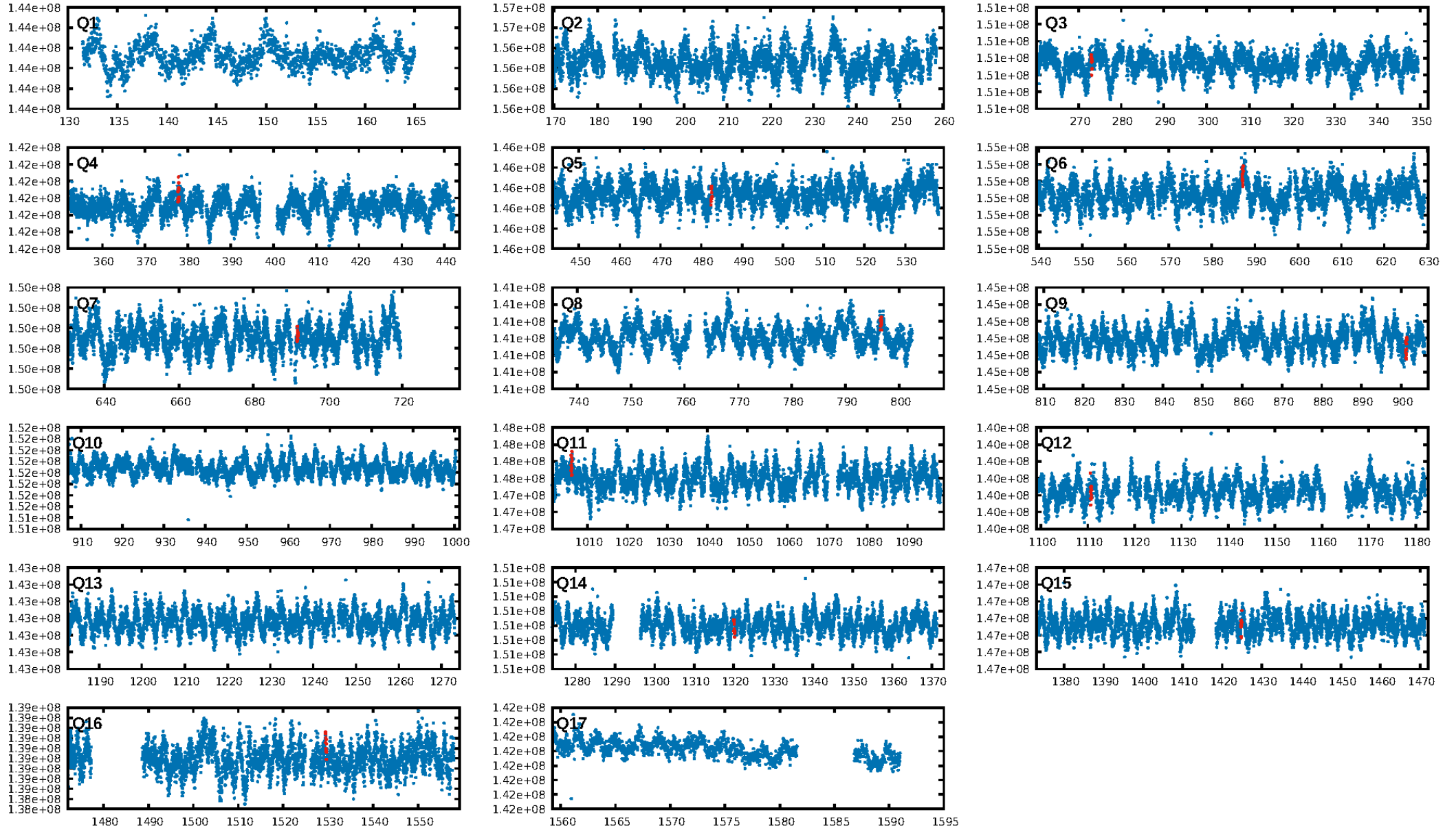
No Significant Match Found

KIC: 11304436 Candidate: 5 of 8 Period: 104.704 d

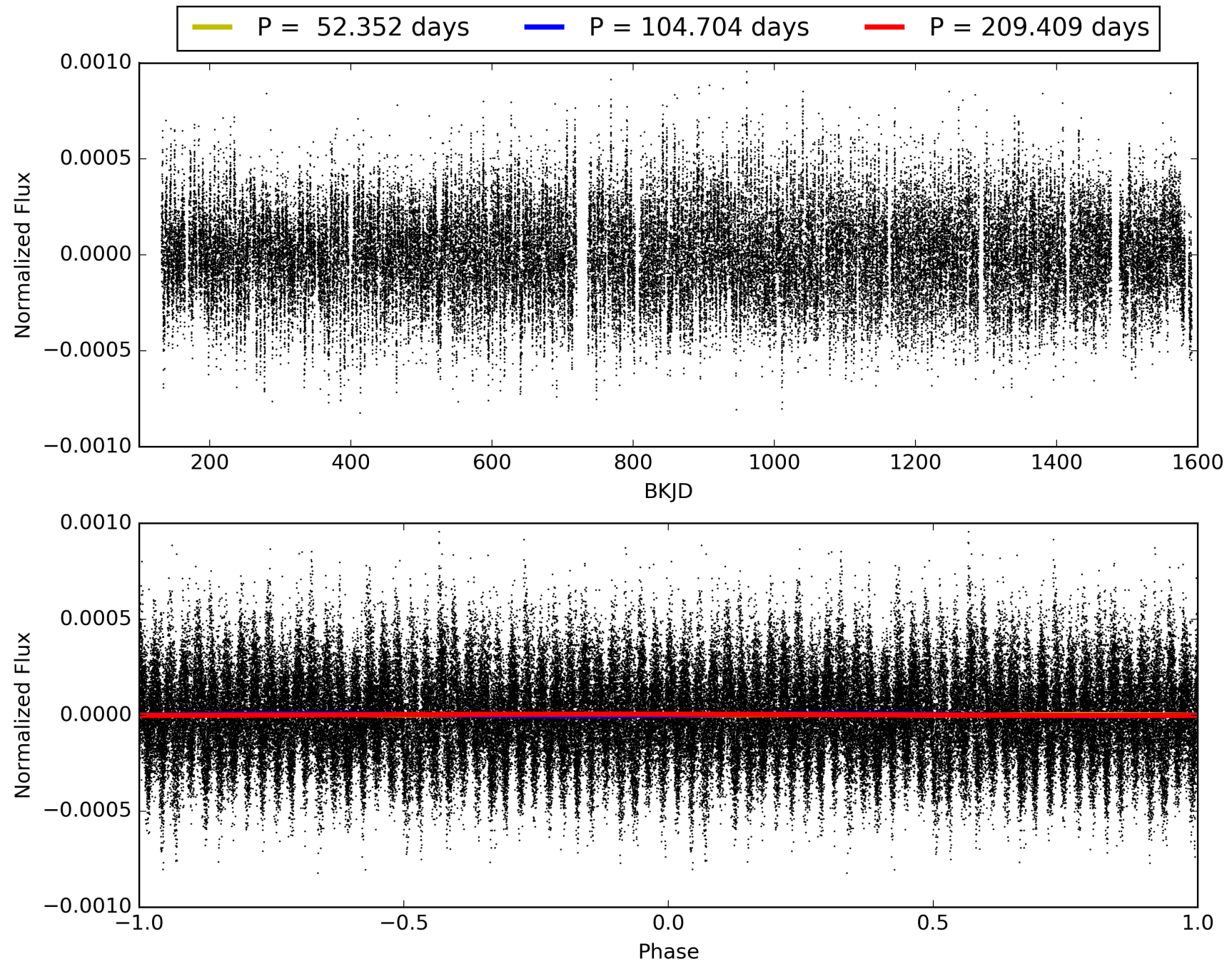


Centroid-sig: 47.9%
Centroid-so: 0.667 arcsec [0.71σ]
OotOffset-rm: 1.749 arcsec [1.38σ]
KicOffset-rm: 1.799 arcsec [1.37σ]
OotOffset-st: 0/2/3/2 [7]
KicOffset-st: 0/2/3/2 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.64 [7/11]

TCE 011304436-05, PDC Light Curves

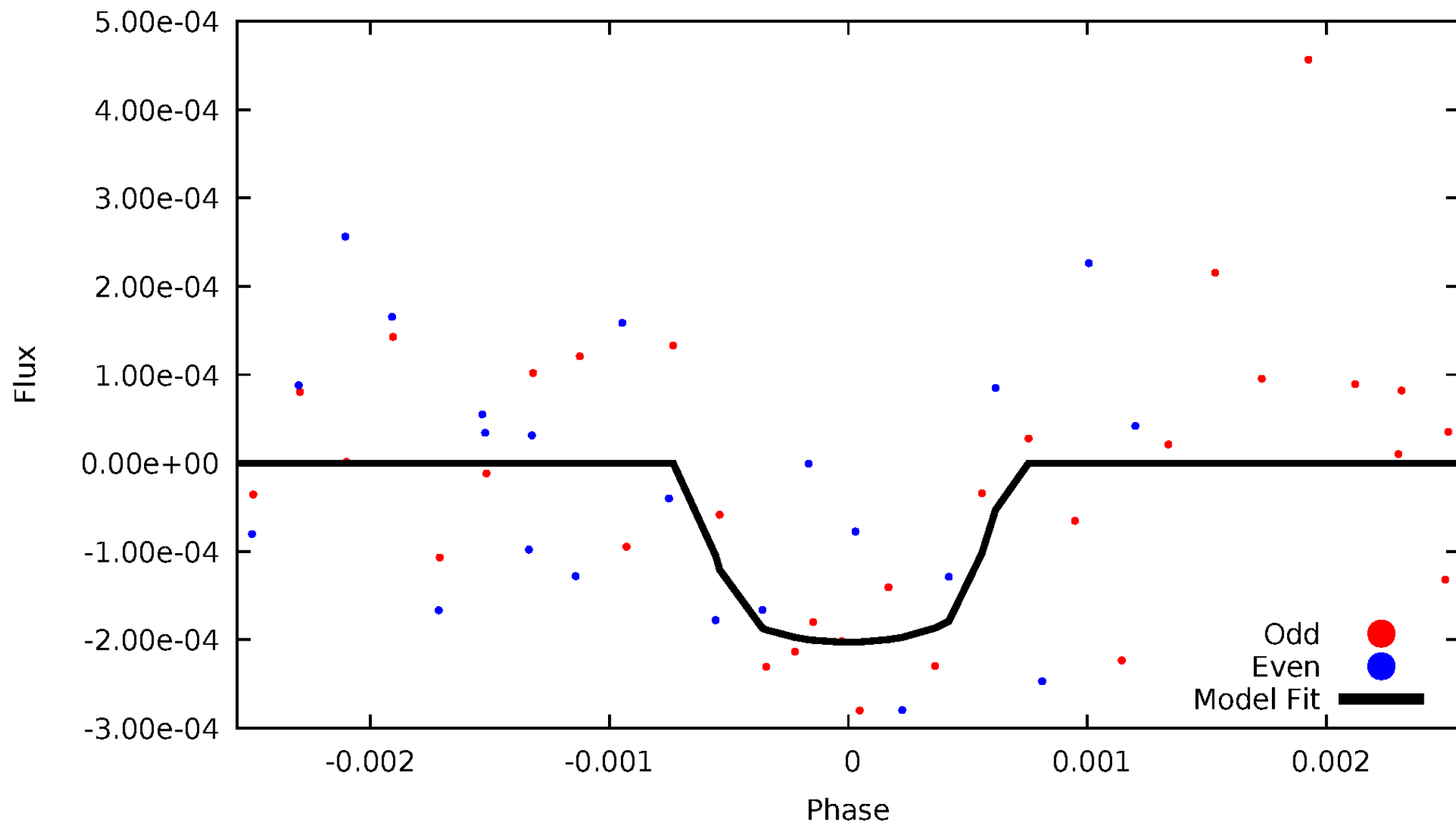


TCE 011304436-05



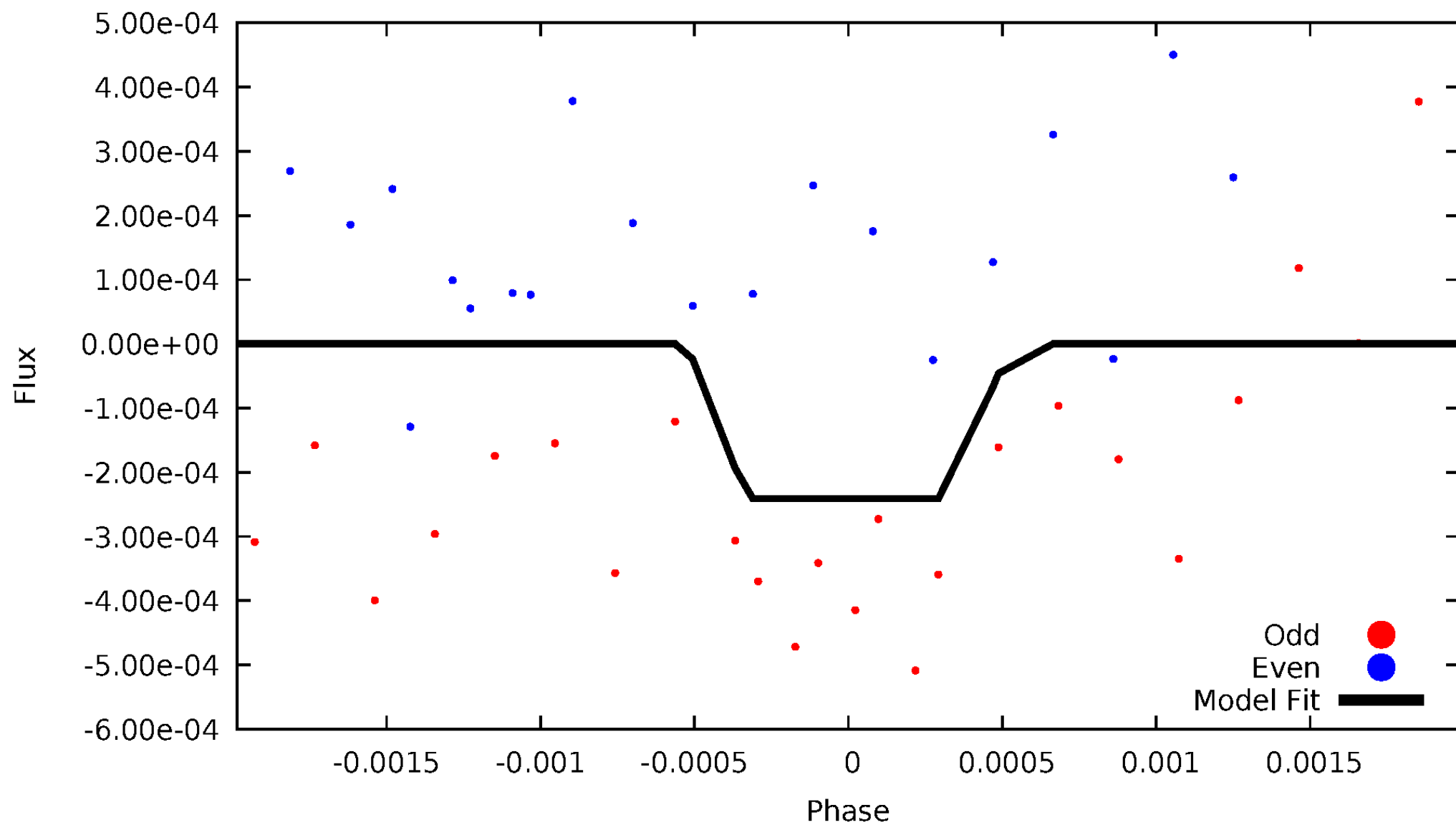
DV Odd/Even

TCE 011304436-05



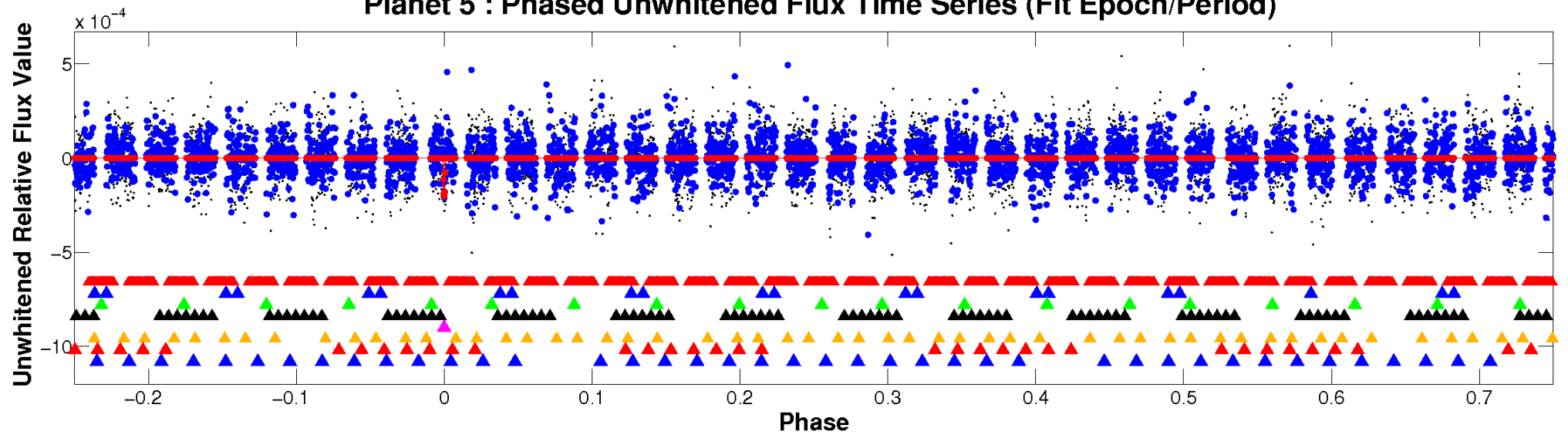
ALT Odd/Even

TCE 011304436-05

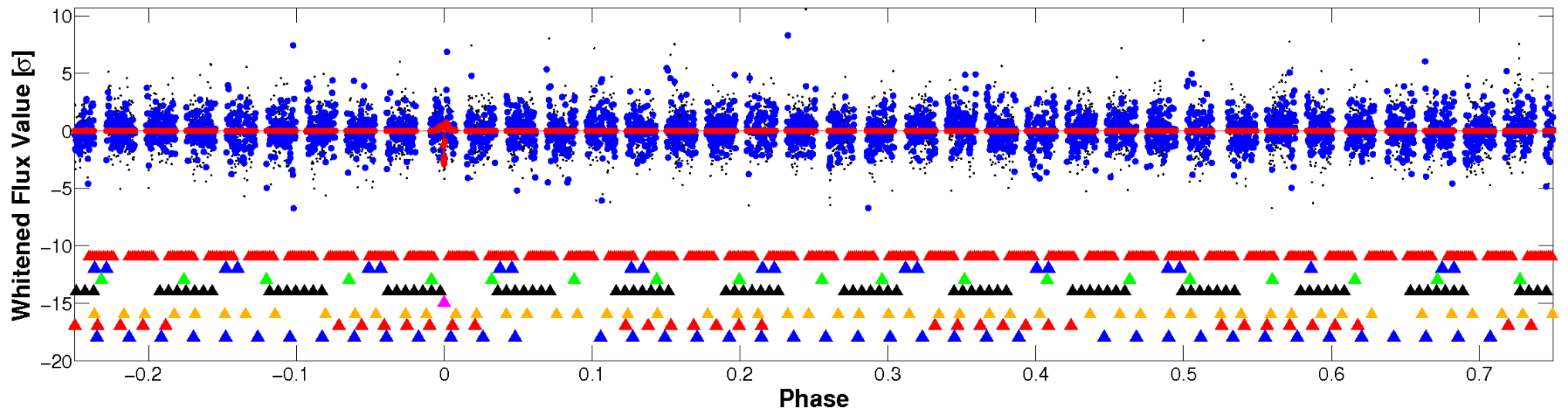


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

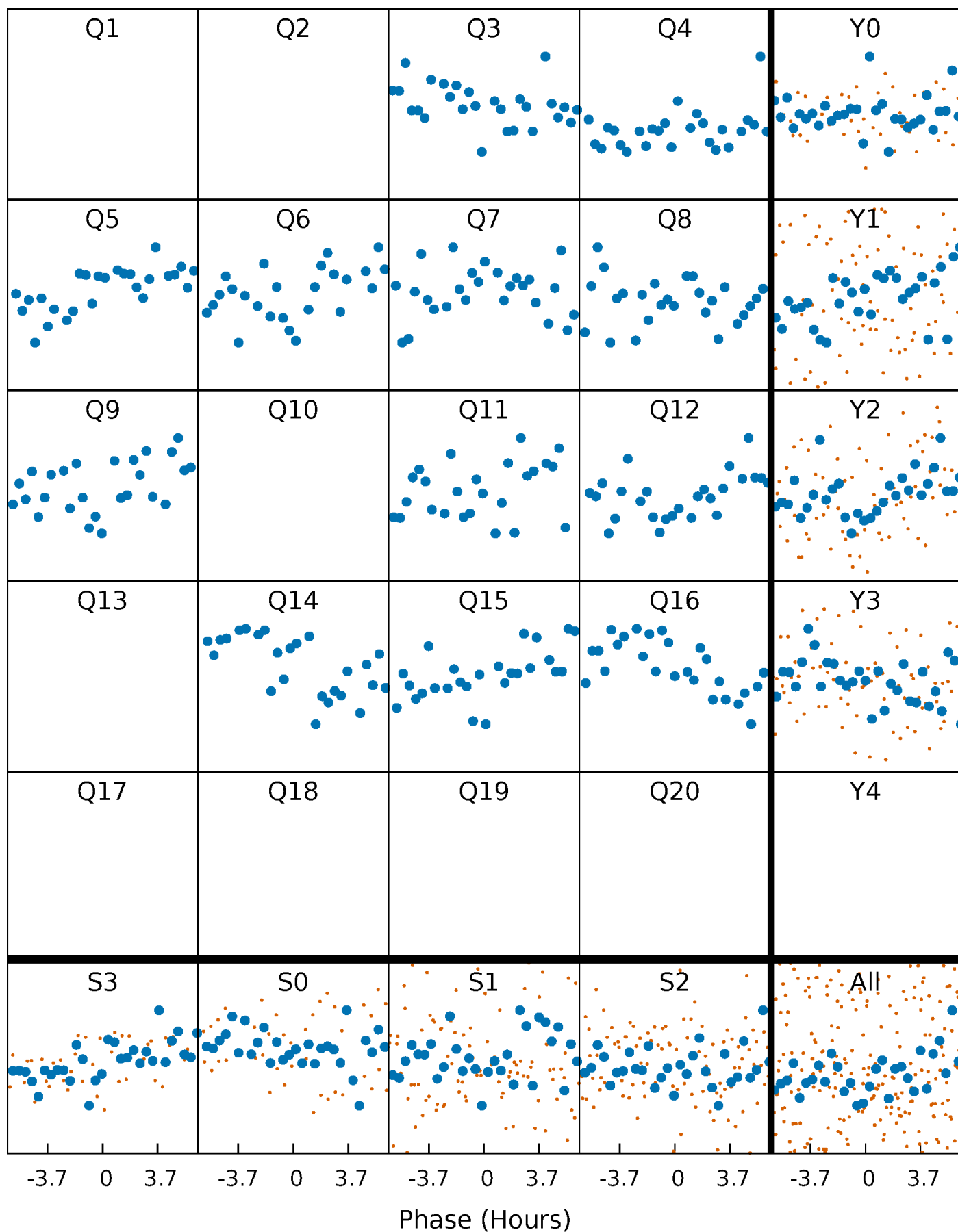


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



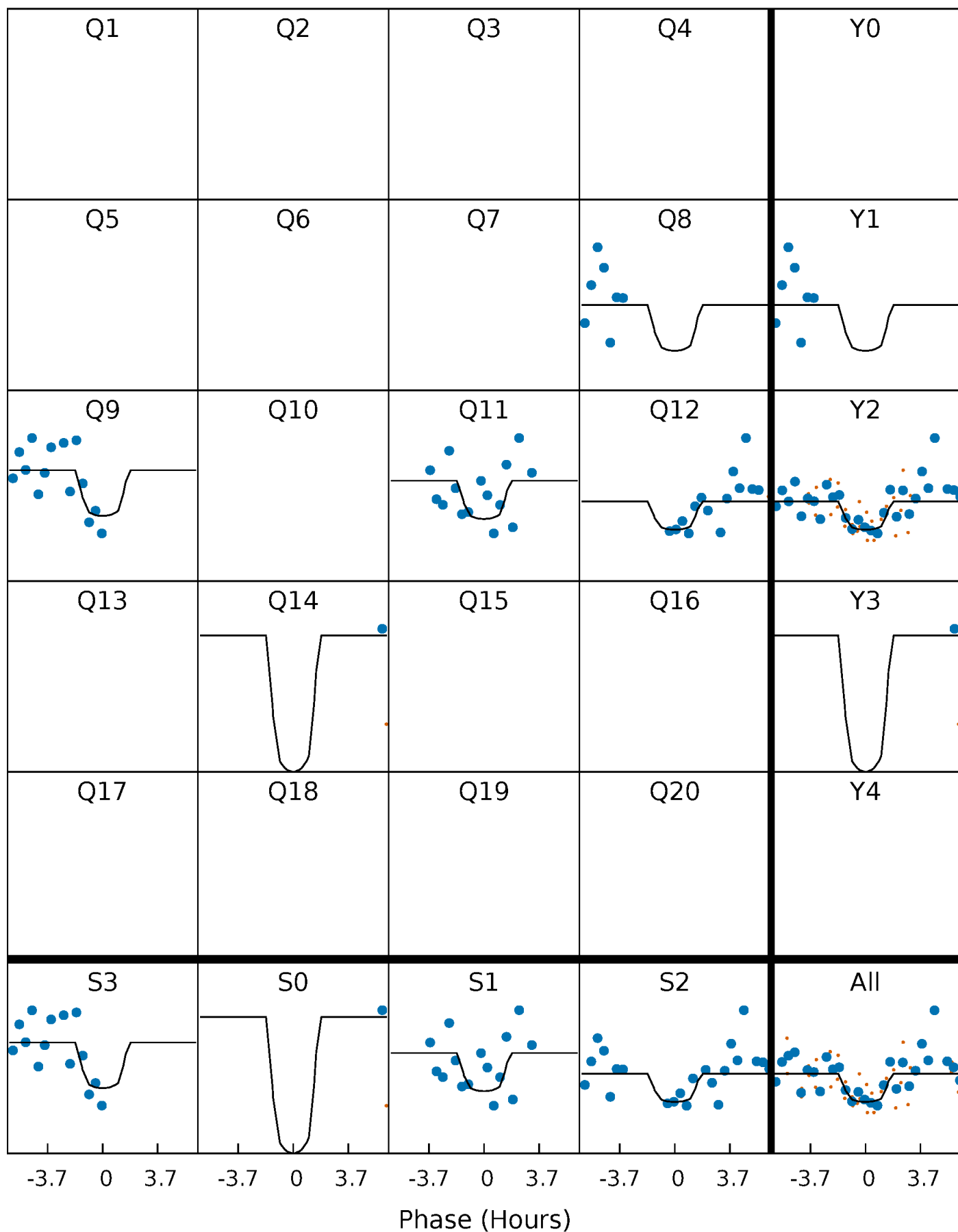
PDC Quarter-Phased Transit Curves

TCE 011304436-05 $P=104.704329$ Days $T_0=168.372461$ (BKJD)



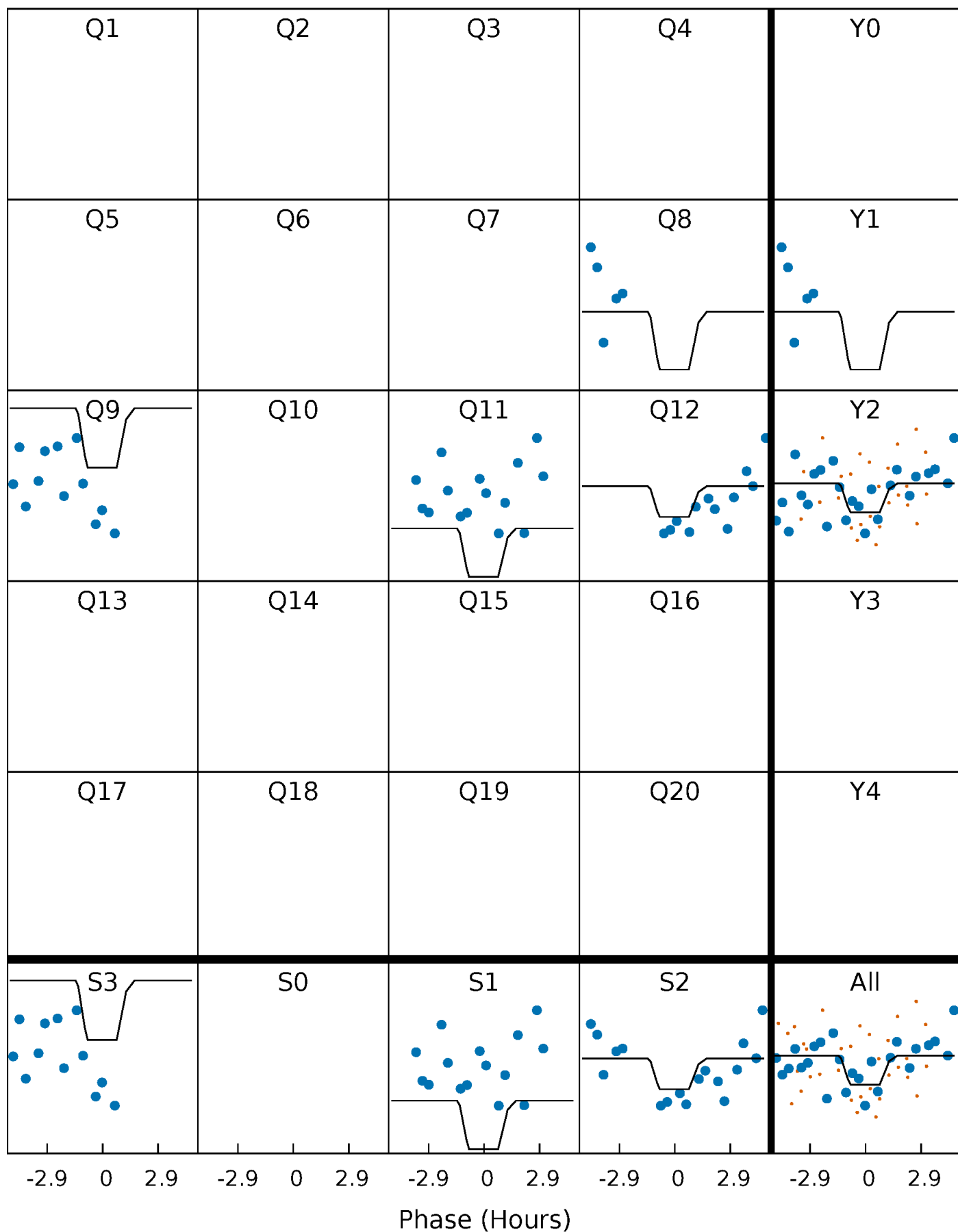
DV Quarter-Phased Transit Curves

TCE 011304436-05 $P=104.704329$ Days $T_0=168.372461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

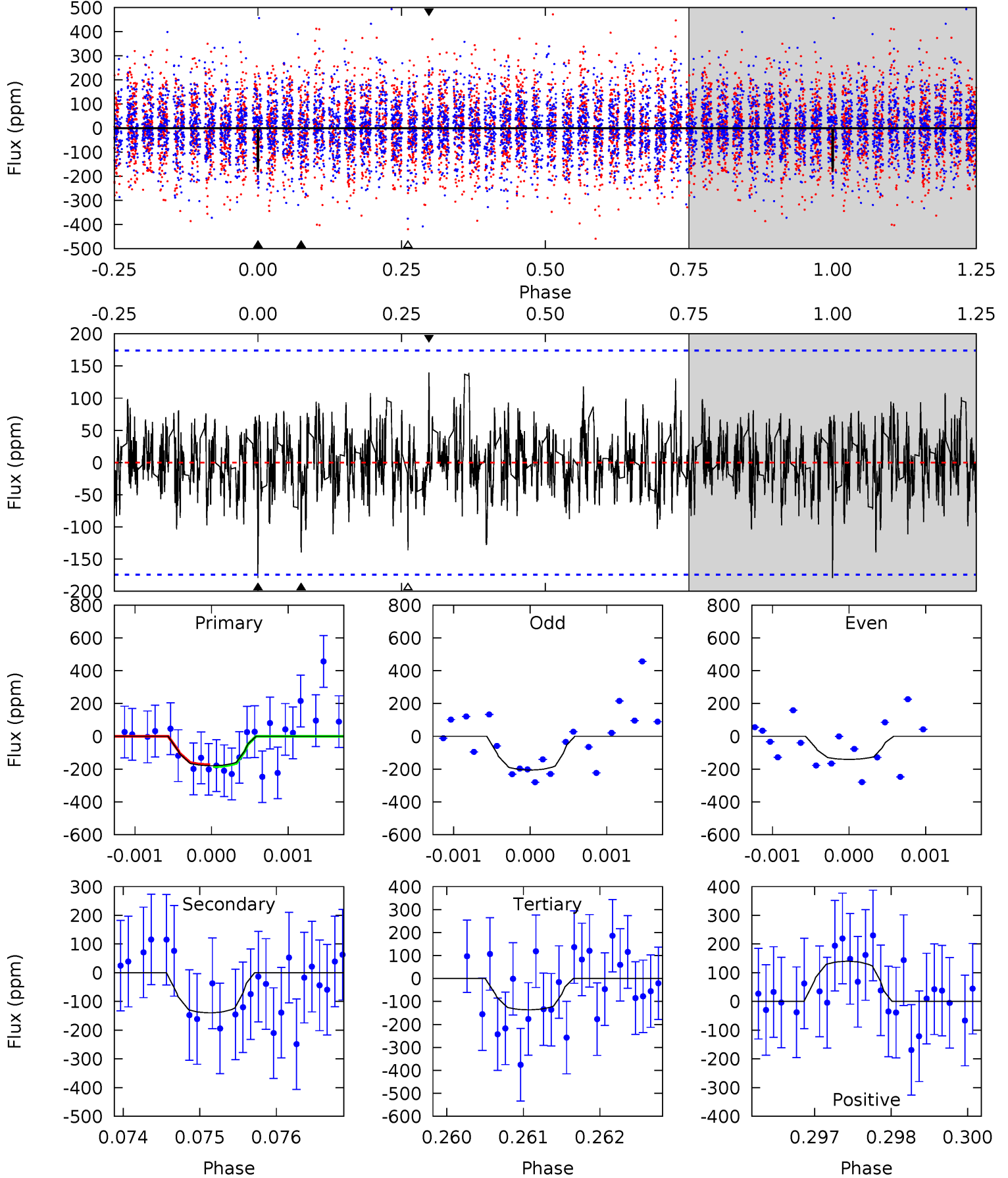
TCE 011304436-05 $P=104.716948$ Days $T_0=168.266287$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-05, P = 104.704329 Days, E = 63.668132 Days

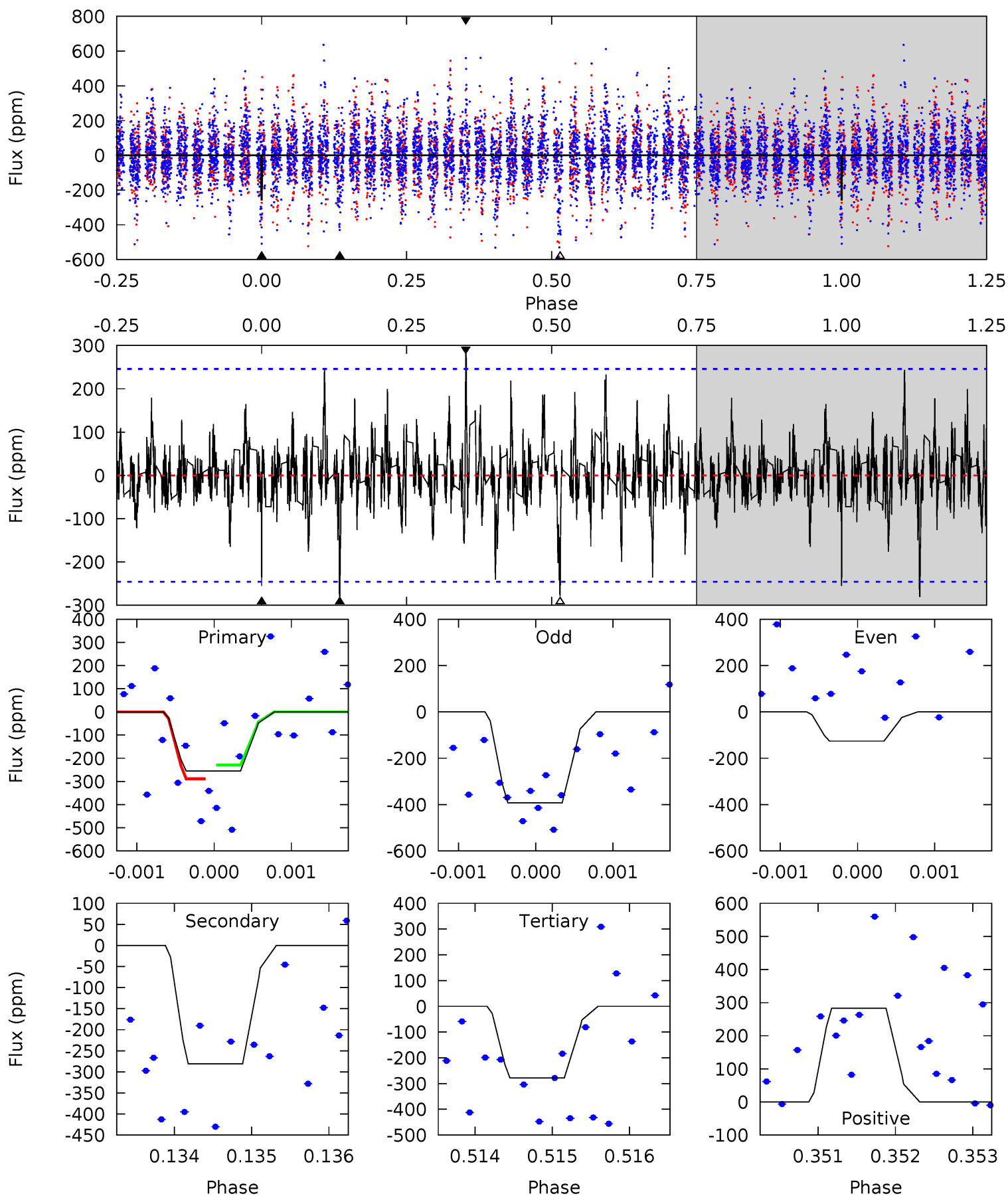
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.57	4.33	4.23	4.34	5.41	3.22	1.22	1.34	1.23	0.10	-0.01	1.00	0.96	0.44	0.18



Alt Model-Shift Uniqueness Test

011304436-05, P = 104.716948 Days, E = 63.549339 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.69	6.27	6.21	6.32	5.48	3.33	1.46	-0.53	-0.63	0.06	-0.05	3.06	0.65	0.50	0.65



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-140 ± 32	$12.80^{+14.12}_{-9.09}$	715^{+57}_{-58}	3089^{+1686}_{-542}	99^{+1161}_{-78}
Alt.	-281 ± 45	$12.67^{+12.58}_{-8.99}$	718^{+57}_{-55}	3498^{+2120}_{-672}	204^{+2171}_{-154}

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

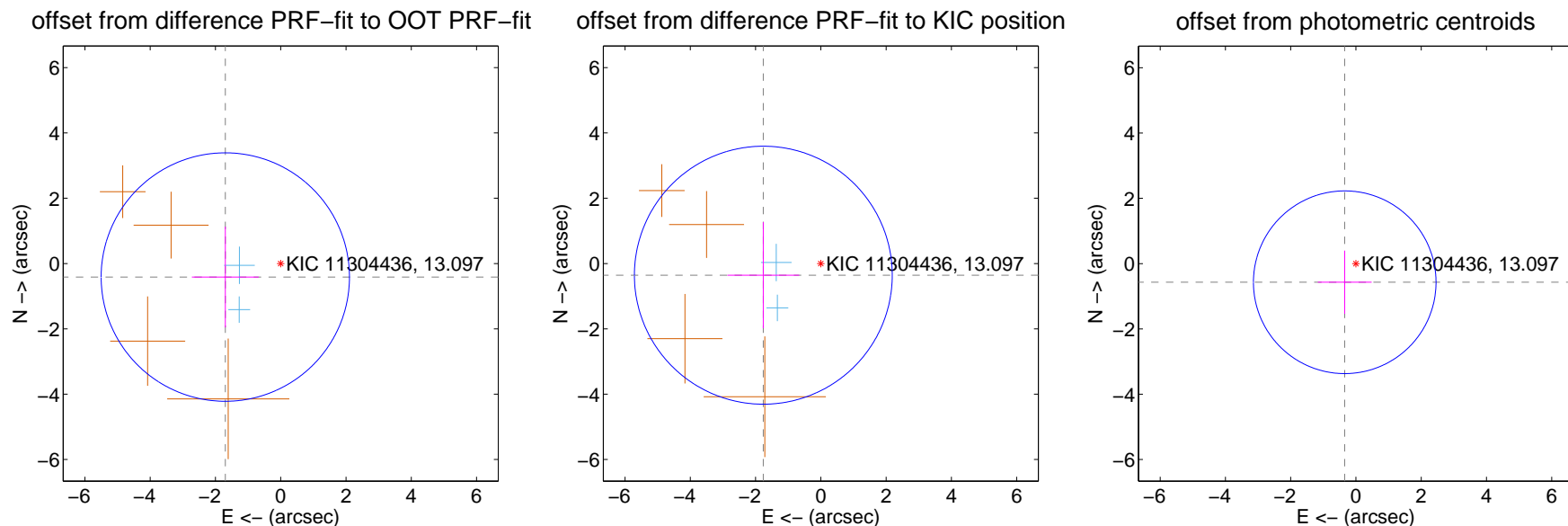
DV Centroid Data

Supplemental centroid analysis for 011304436-05. Kepler magnitude: 13.10. Transit SNR 9.64

There are 2 quarters with good PRF difference image offsets

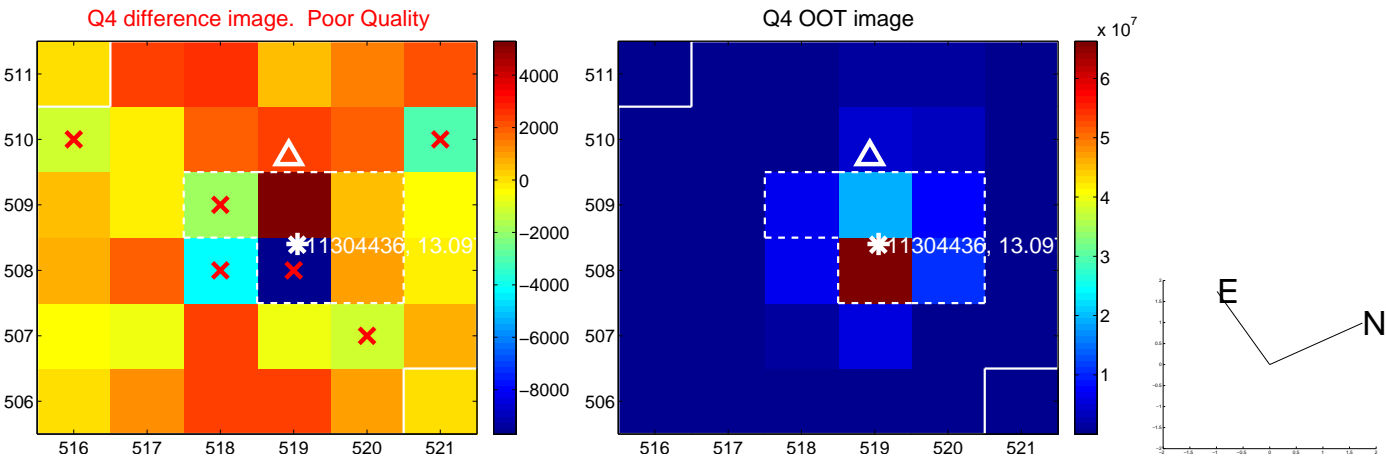
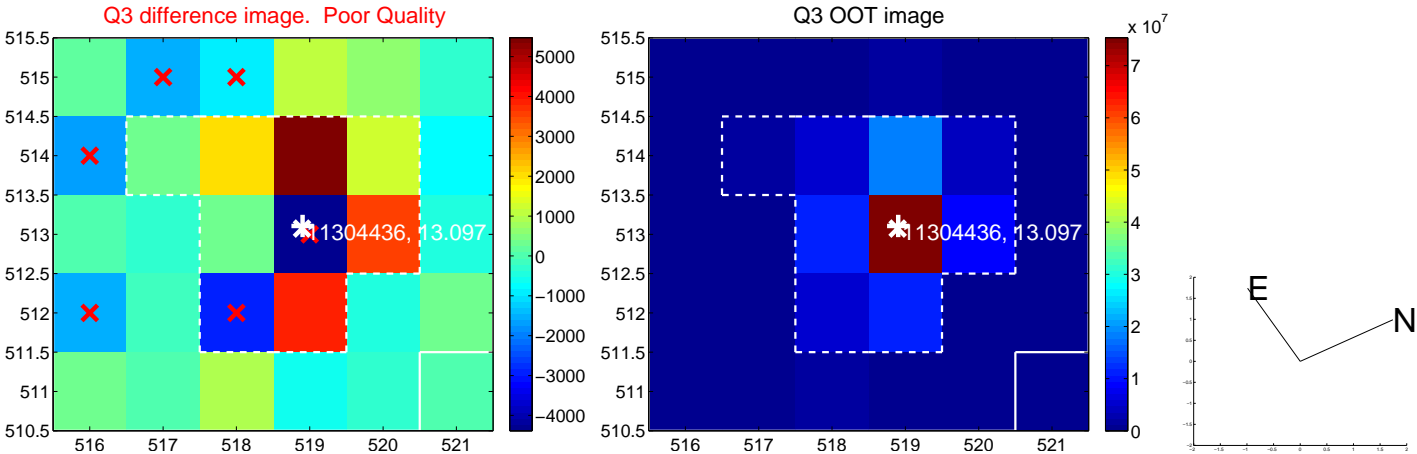
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.749 ± 1.268	1.38	1.700 ± 1.024	-0.414 ± 1.544
PRF-fit source offset from KIC position	1.799 ± 1.317	1.37	1.764 ± 1.099	-0.357 ± 1.625
photometric centroid source offset	0.67 ± 0.93	0.71	0.34 ± 0.83	-0.57 ± 0.97

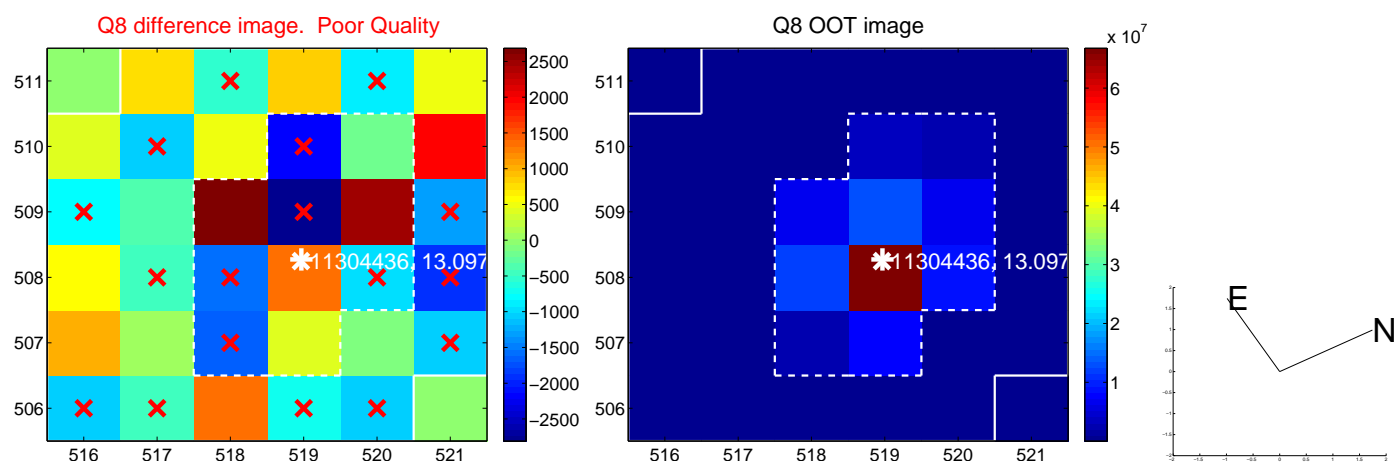
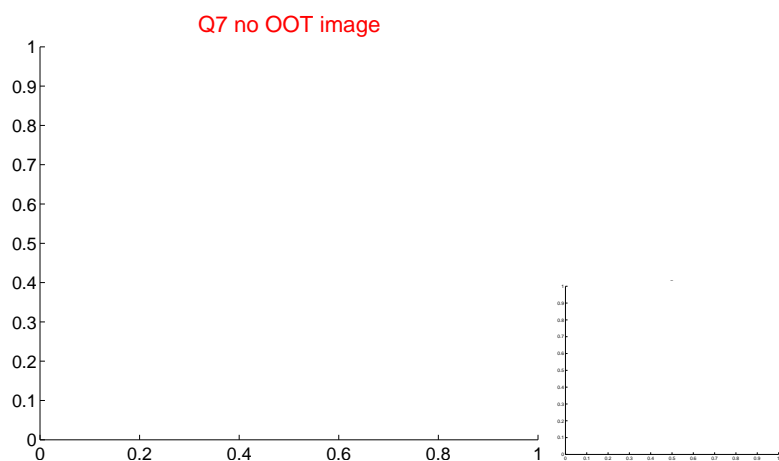
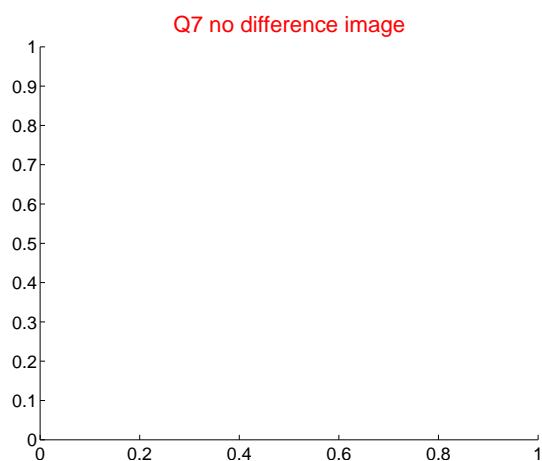
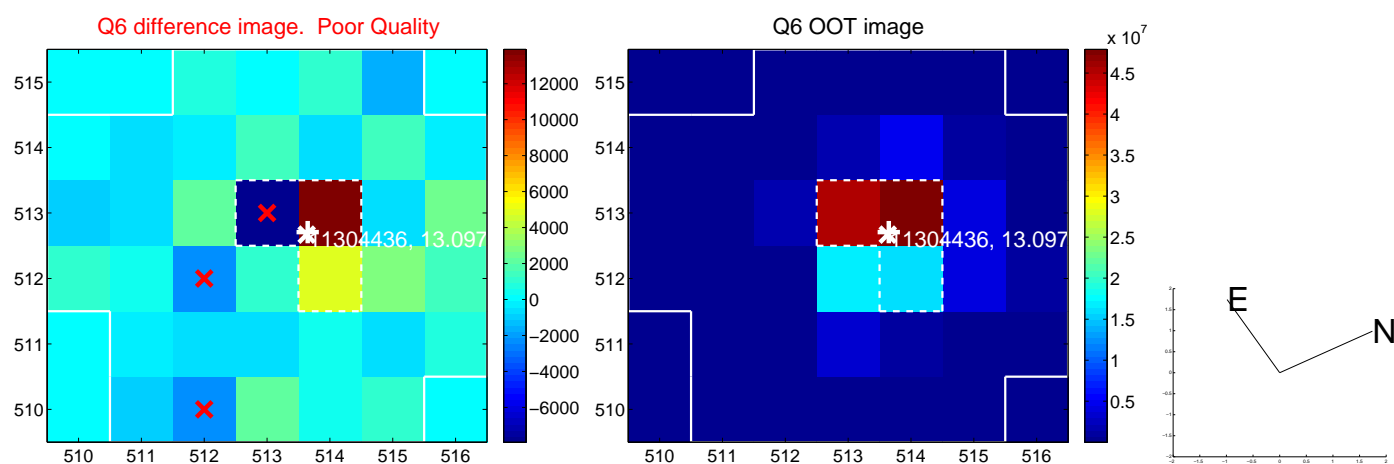
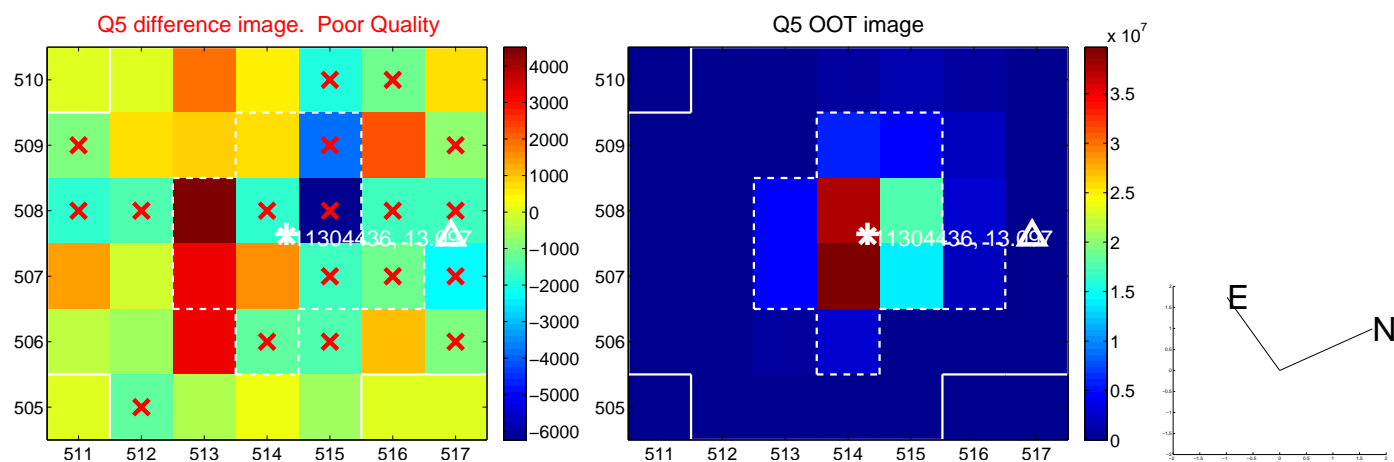


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

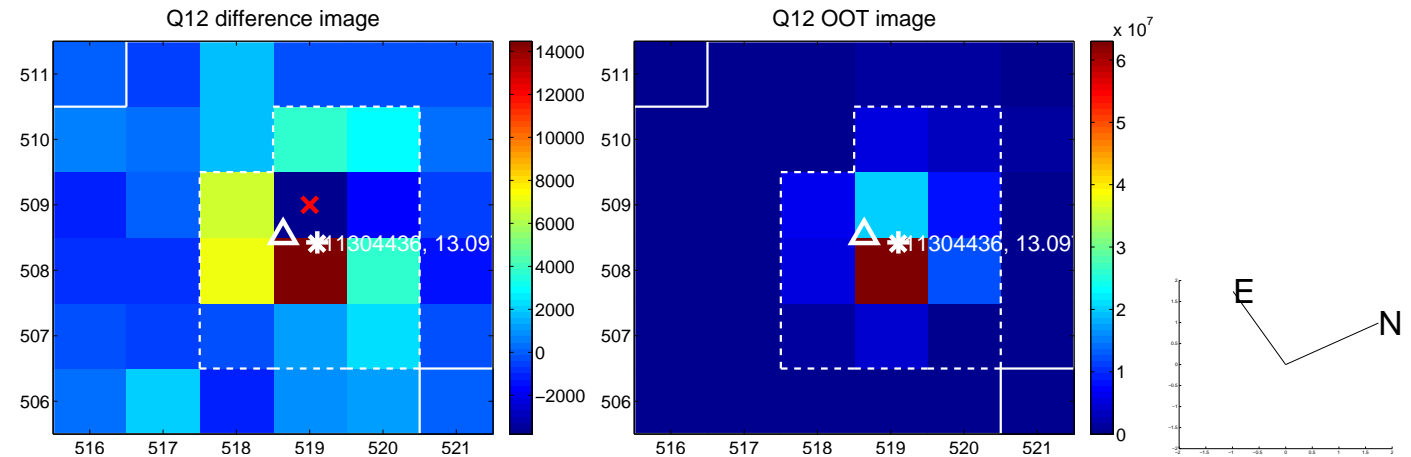
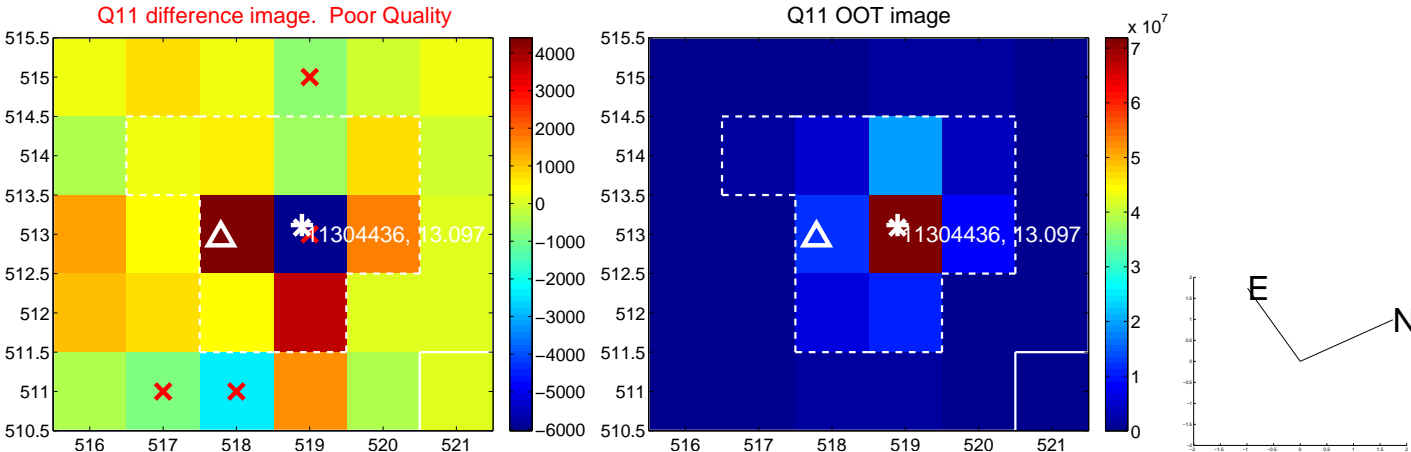
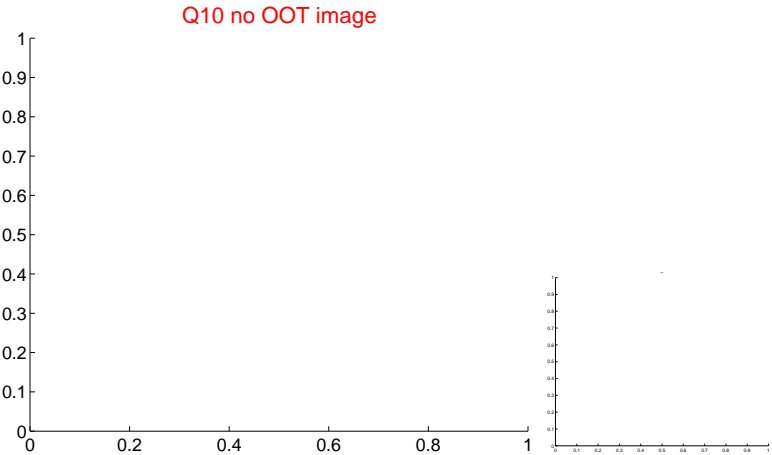
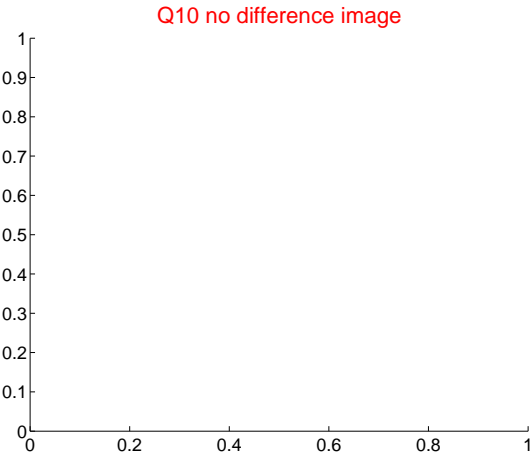
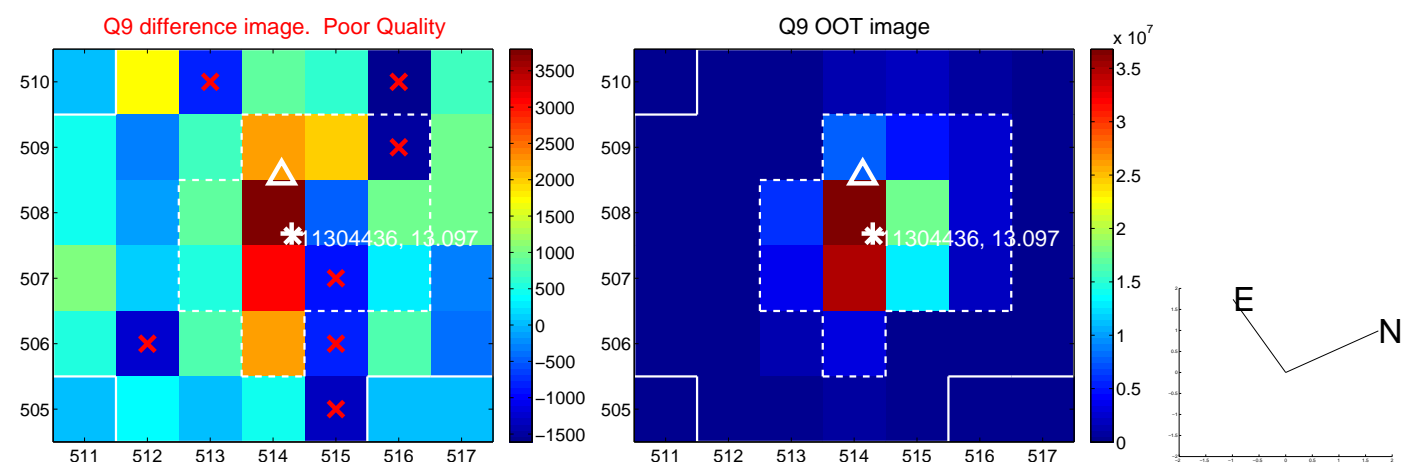
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



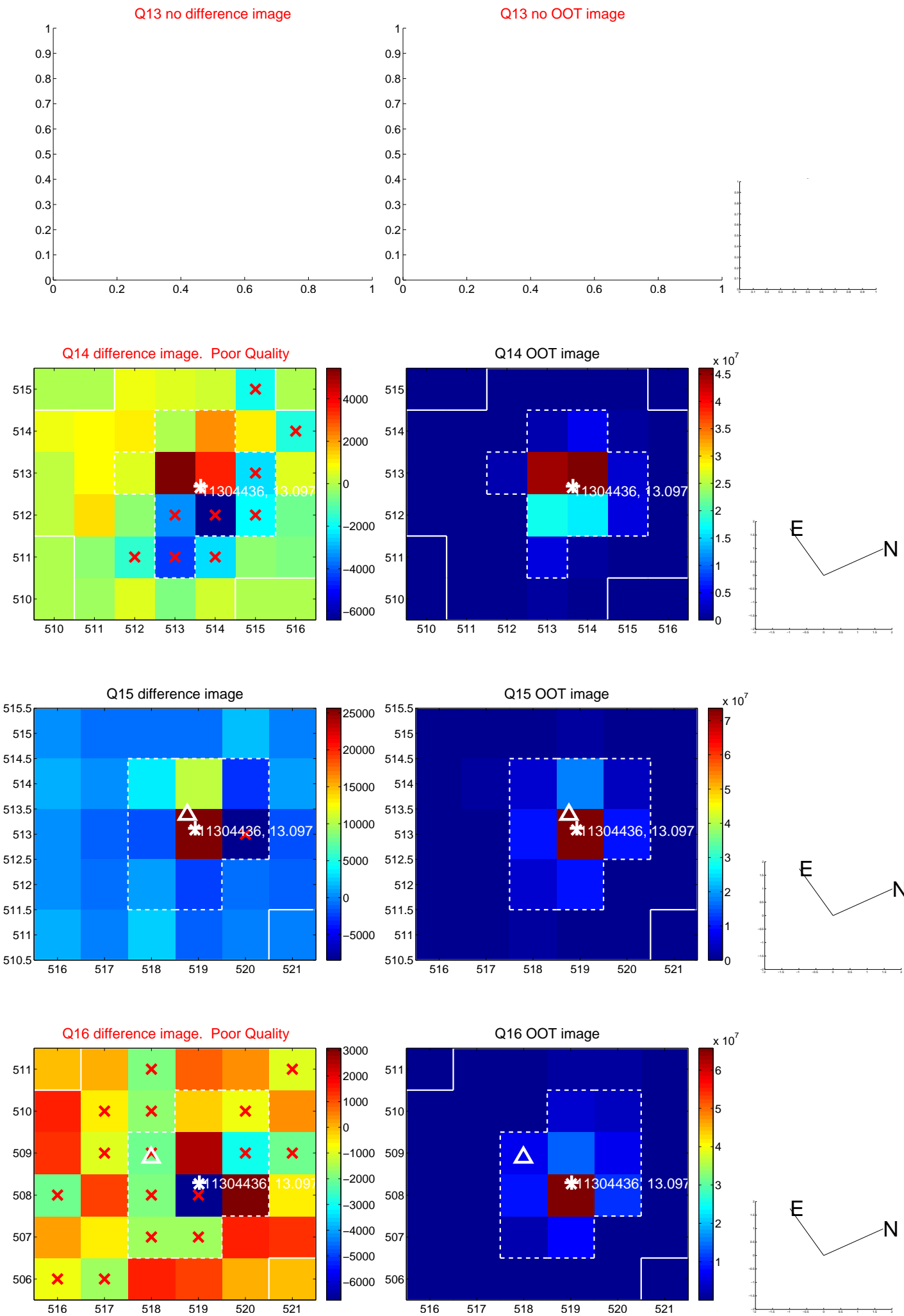
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



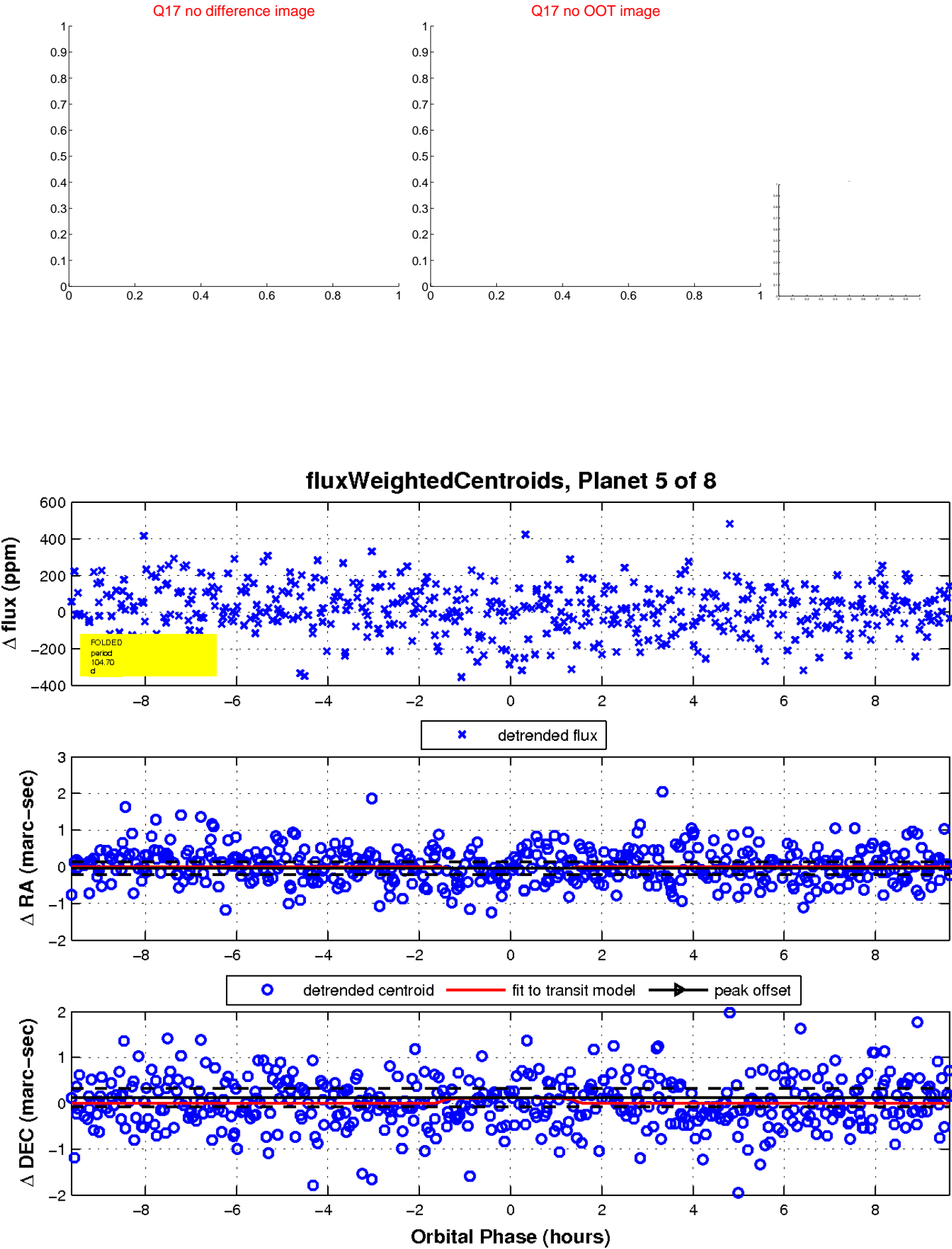
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

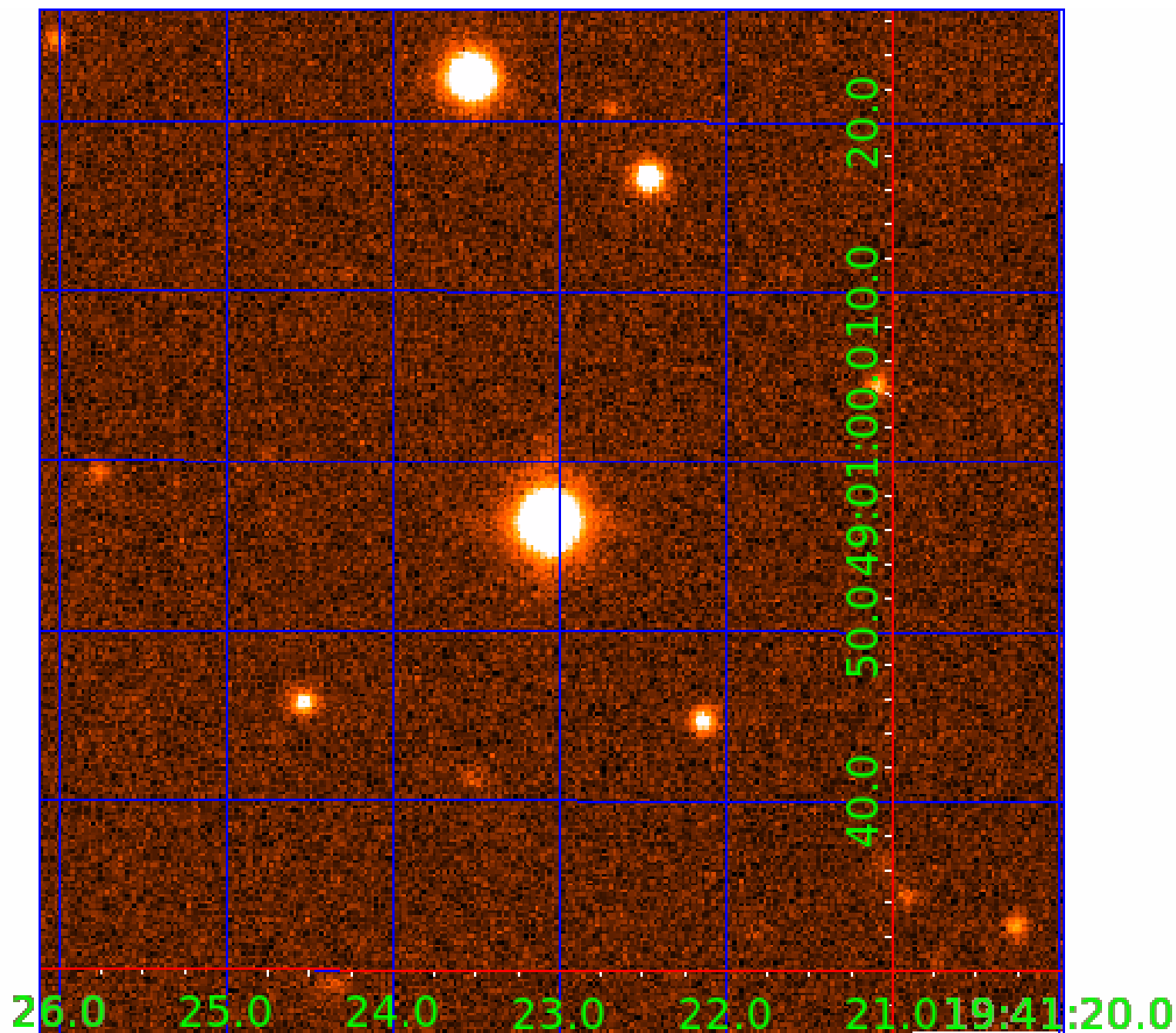


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

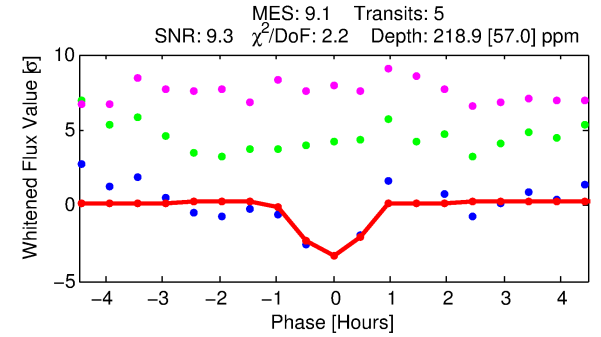
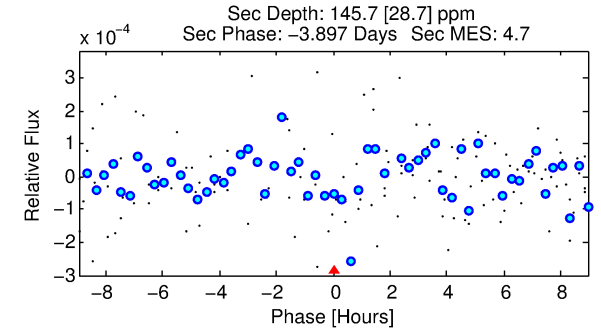
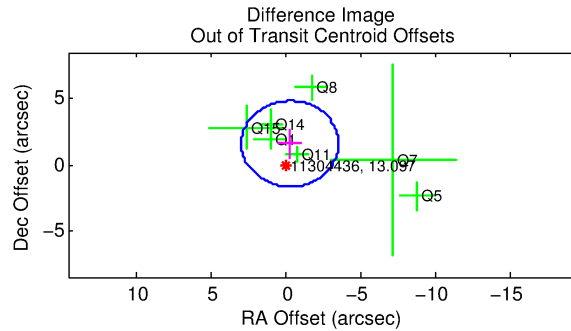
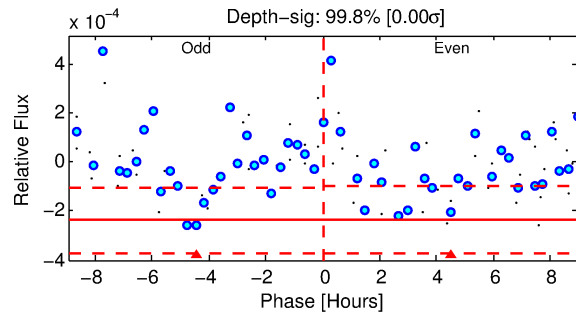
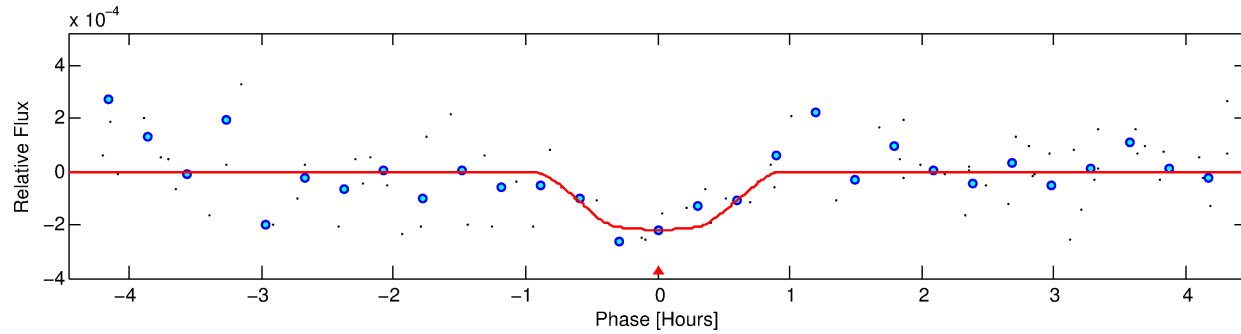
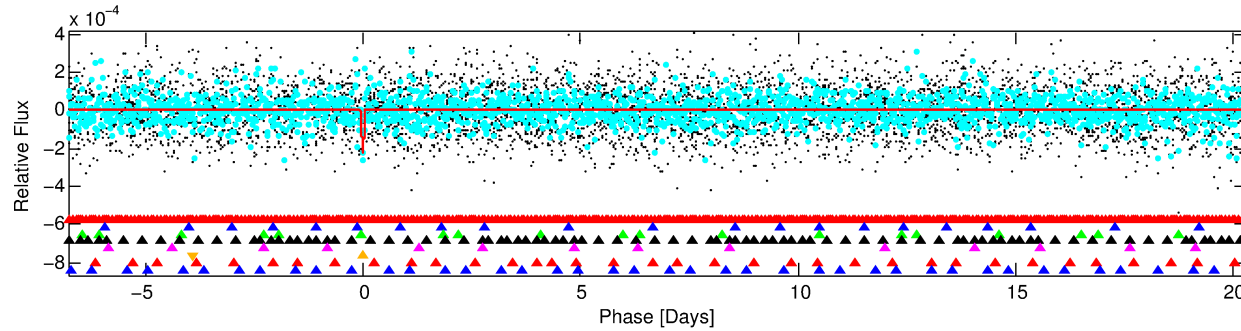
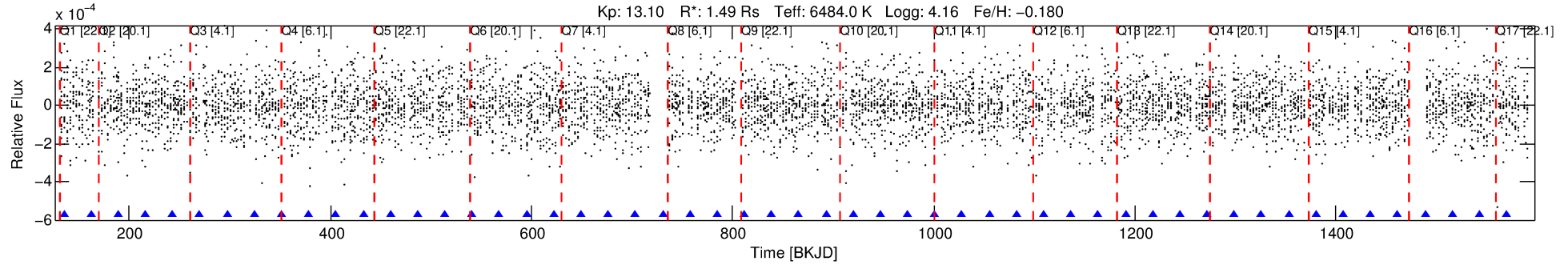
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-06

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 6 of 8 Period: 27.068 d



DV Fit Results:

Period = 27.06790 [0.00040] d
Epoch = 134.9968 [0.0144] BKJD
Rp/R* = 0.0168 [0.0103]
a/R* = 50.31 [170.43]
b = 0.95 [0.35]
Seff = 102.26 [41.62]
Teq = 811 [83] K
Rp = 2.74 [1.87] Re
a = 0.1858 [0.0473] AU
Ag = 368.15 [478.16] [0.77σ]
Teffp = 5492 [1720] K [2.72σ]

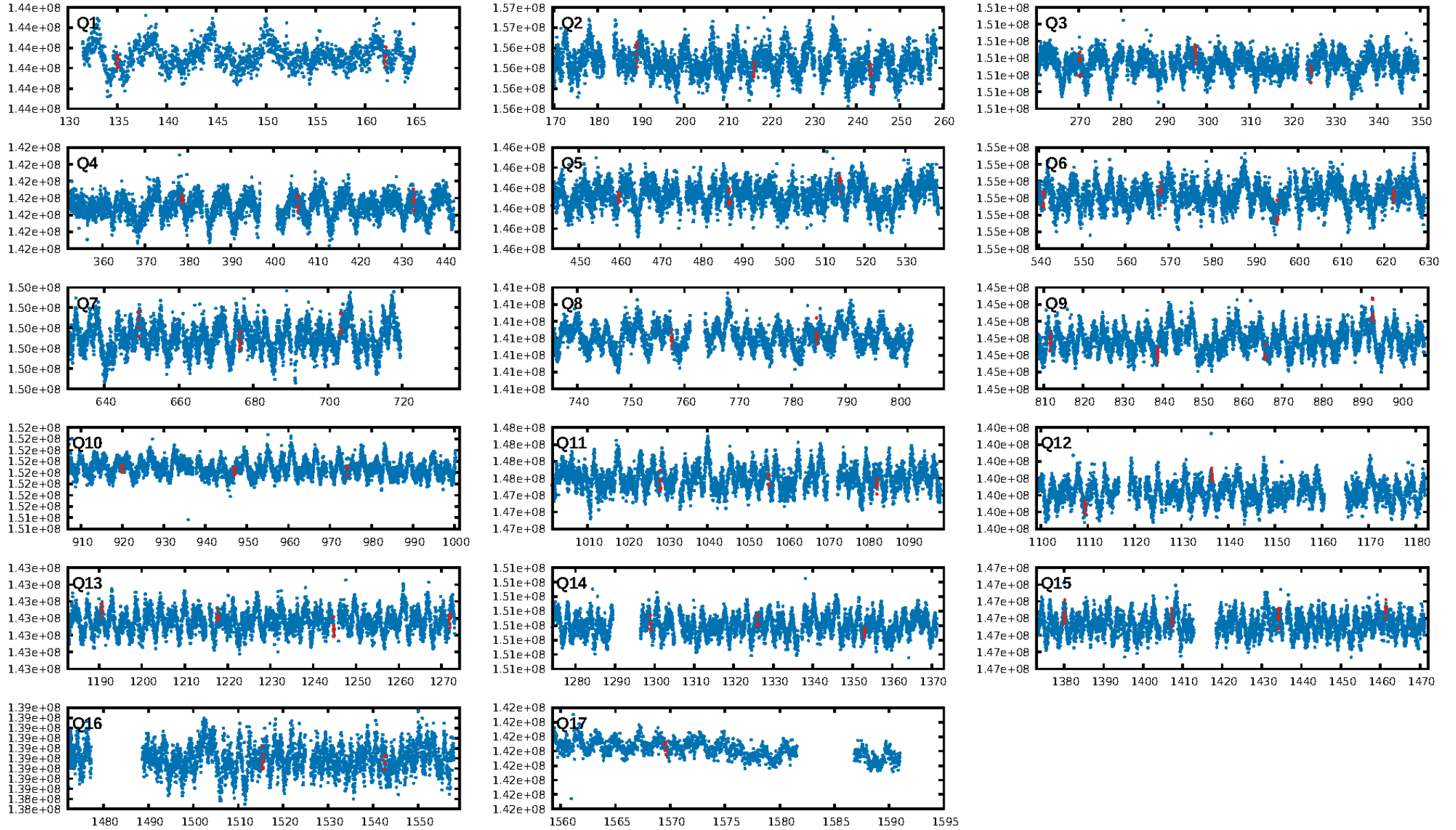
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.65σ]
LongPeriod-sig: 100.0% [63.81σ]
ModelChiSquare2-sig: 57.6%
ModelChiSquareGof-sig: 80.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.3411
Centroid-sig: 55.5%
Centroid-so: 0.510 arcsec [0.81σ]
OotOffset-rm: 1.613 arcsec [1.49σ]
OotOffset-st: 1/3/1/2 [7]
KicOffset-rm: 1.666 arcsec [1.53σ]
KicOffset-st: 1/3/1/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [17/17]

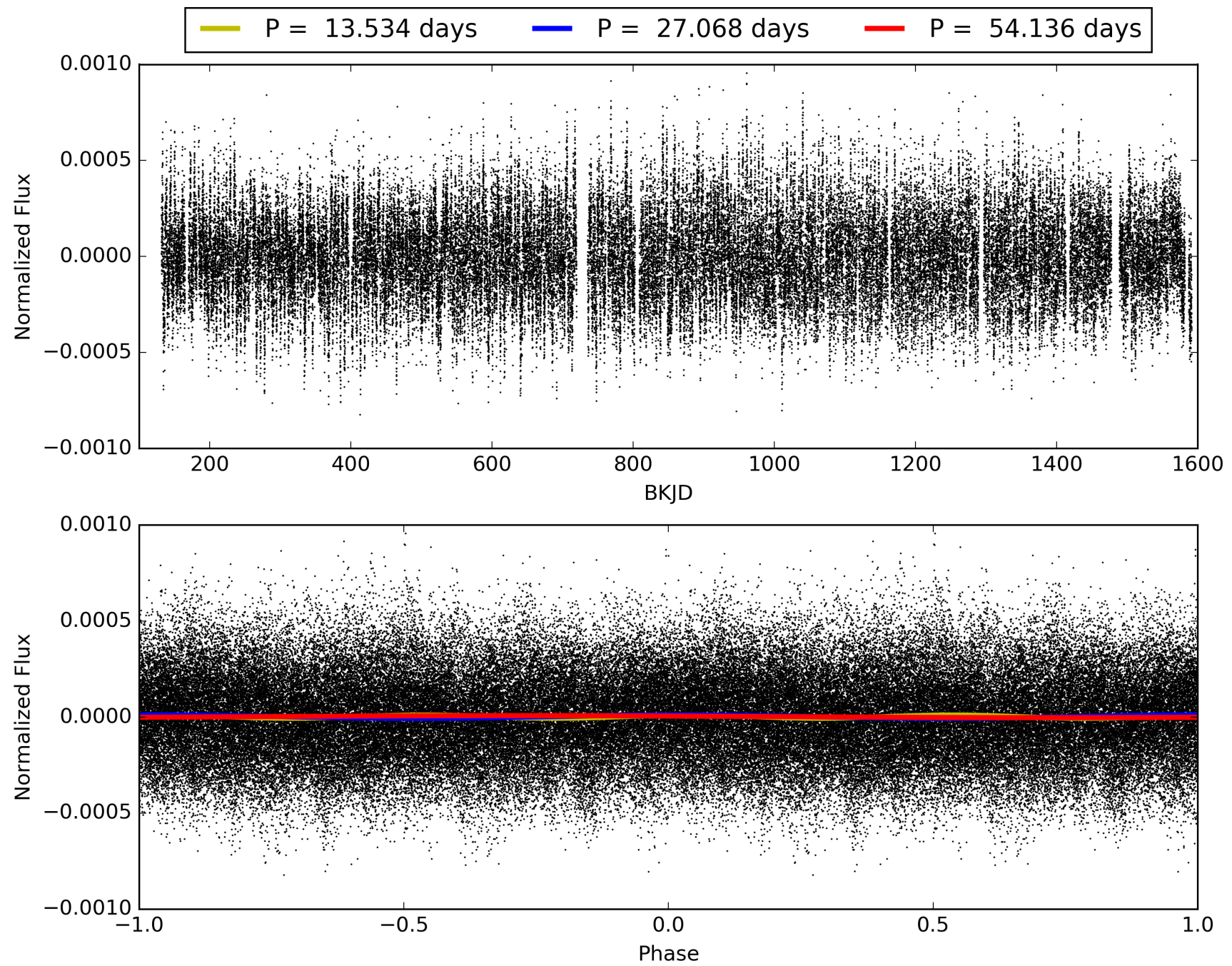
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:22:37 Z

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

TCE 011304436-06, PDC Light Curves

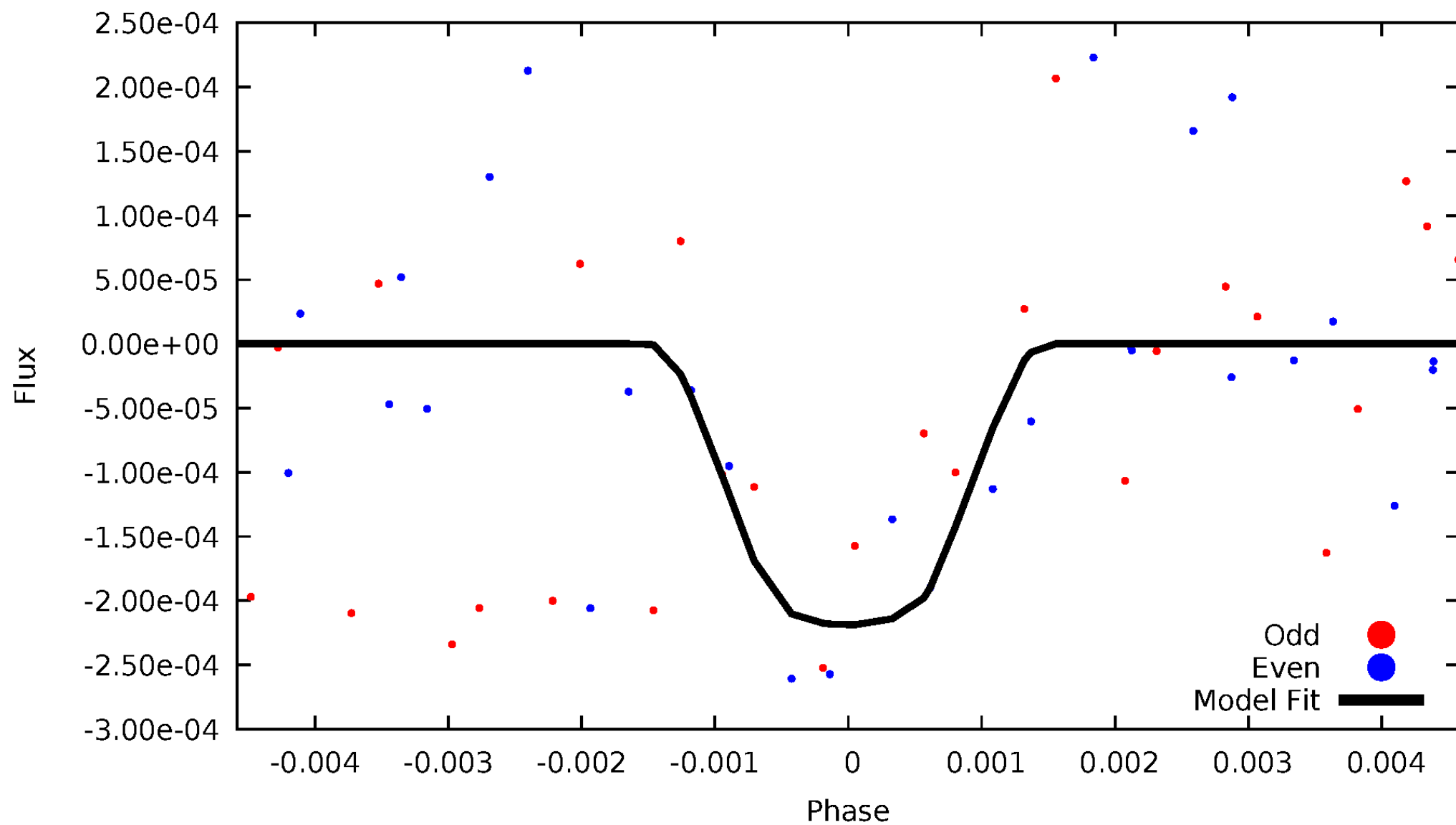


TCE 011304436-06



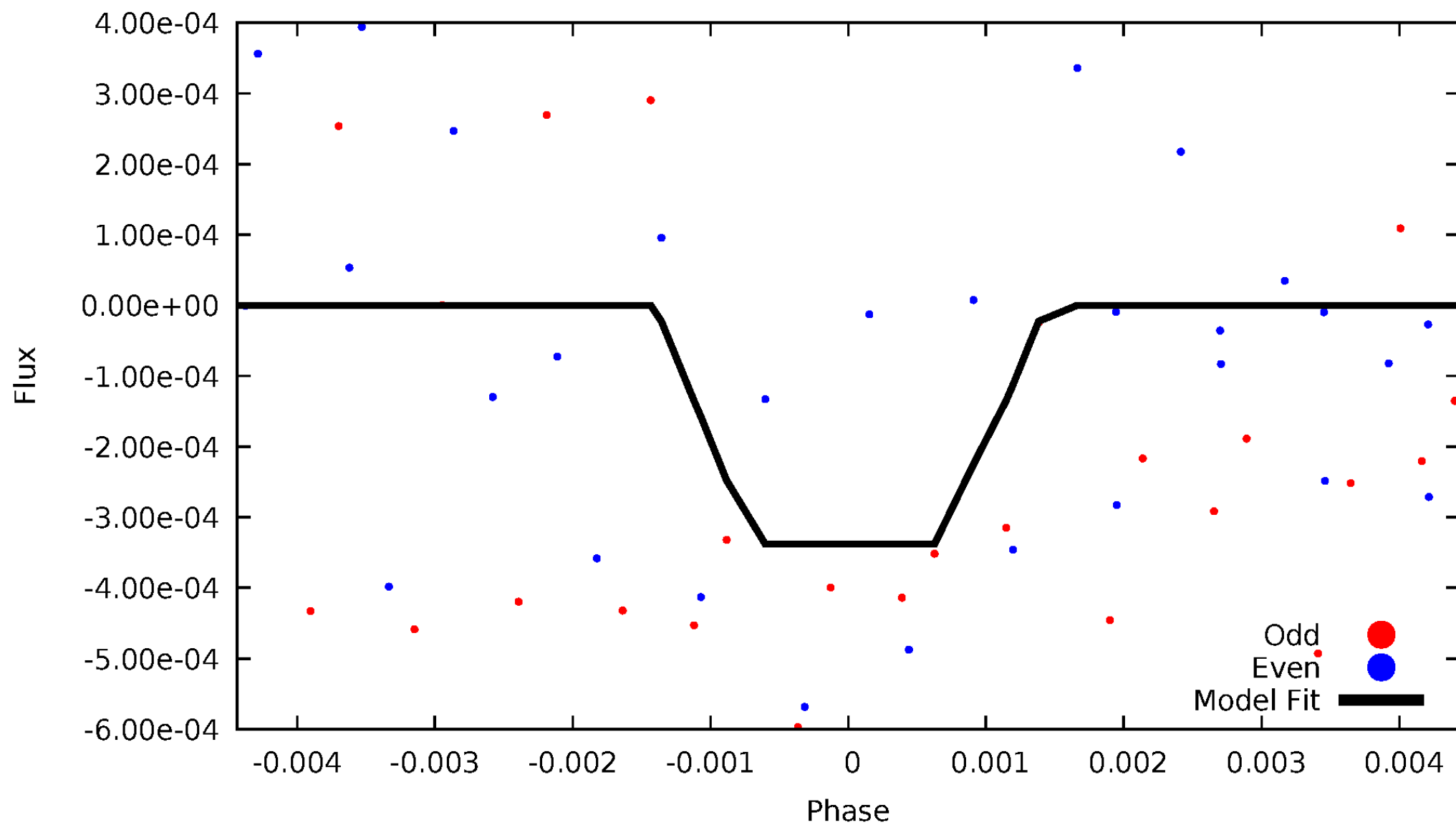
DV Odd/Even

TCE 011304436-06



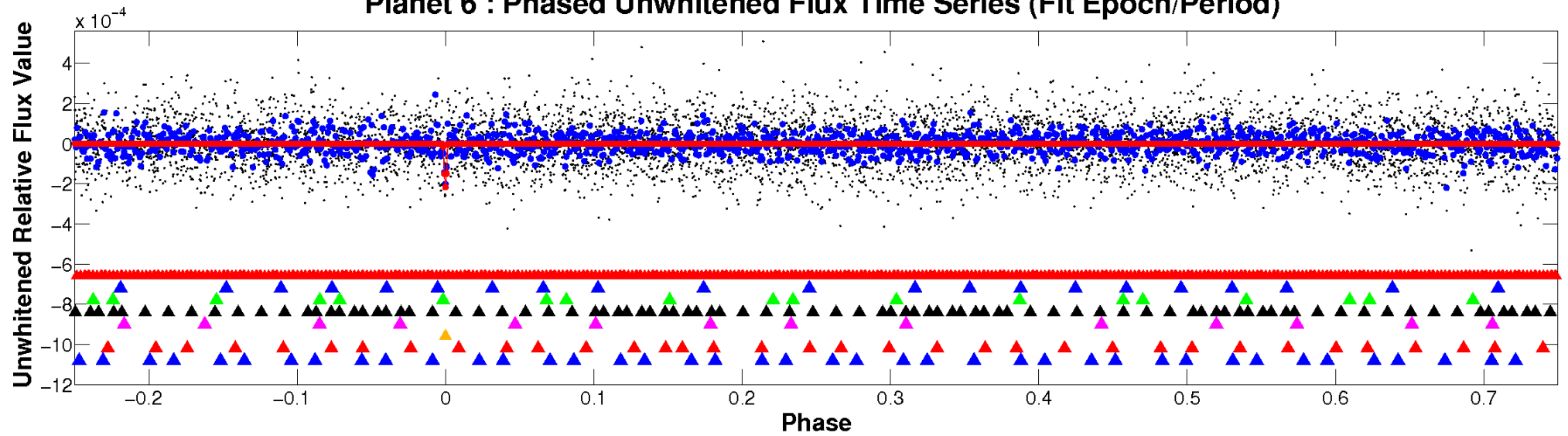
ALT Odd/Even

TCE 011304436-06

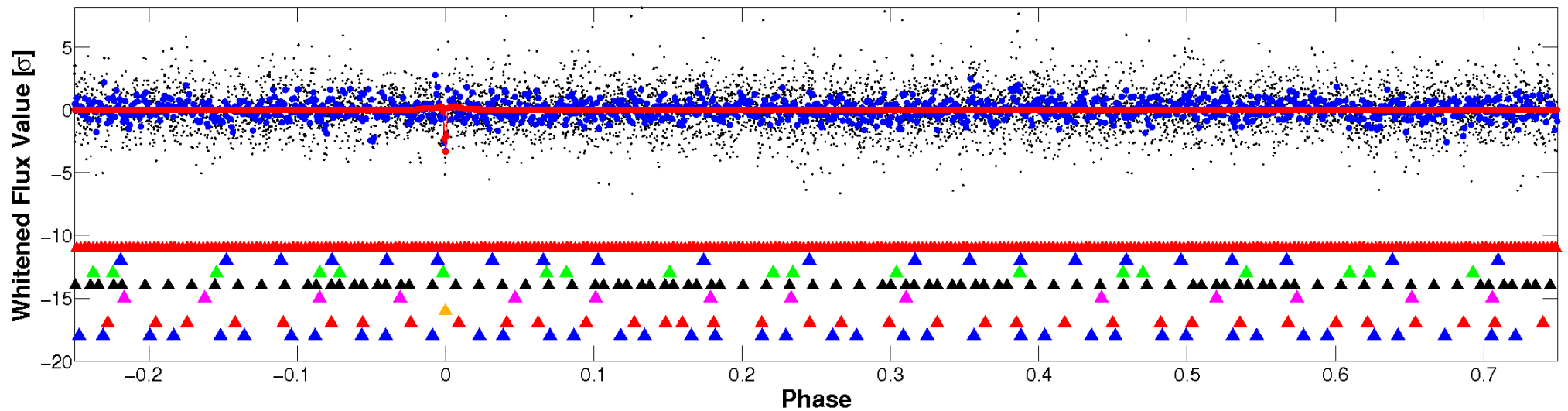


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

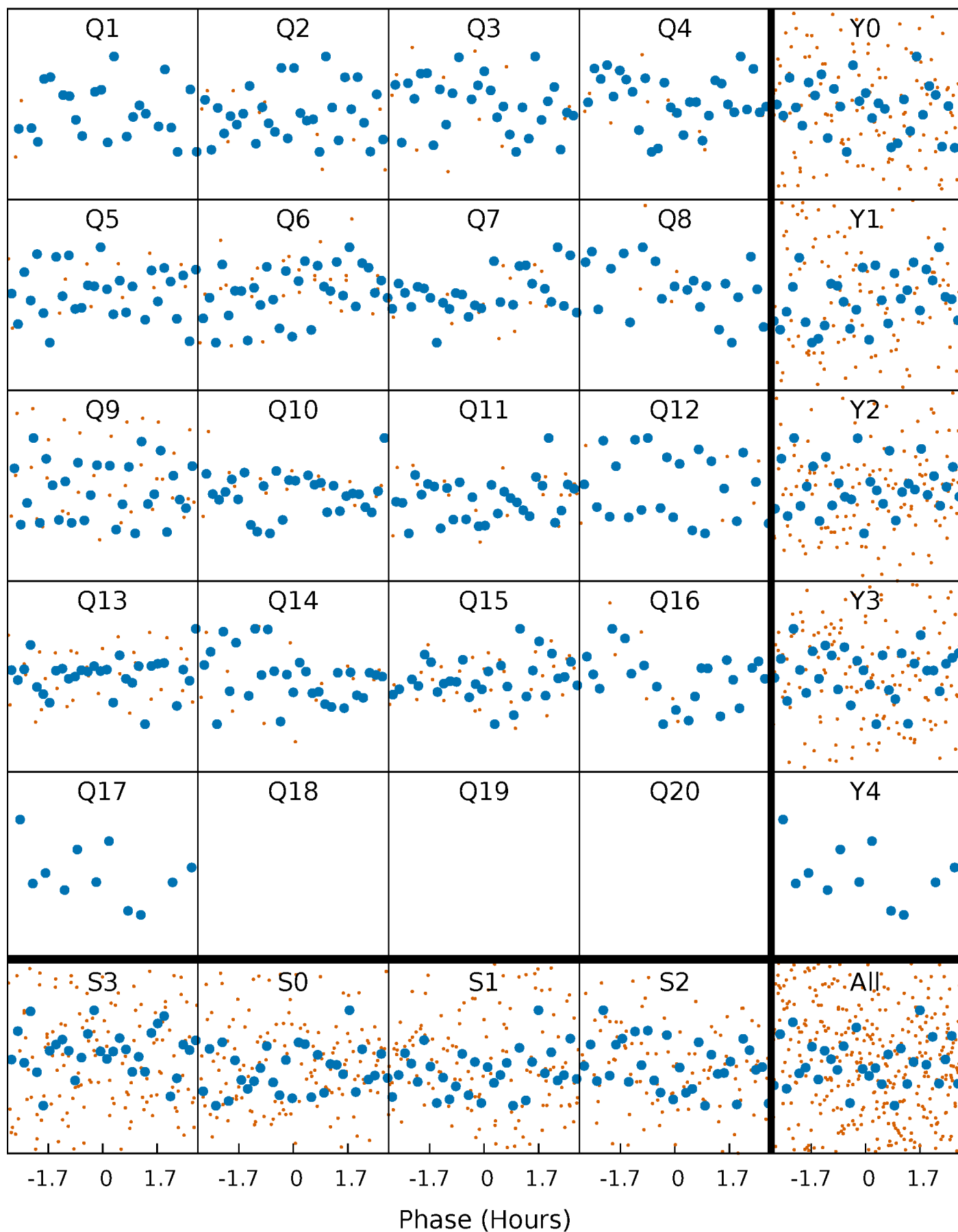


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



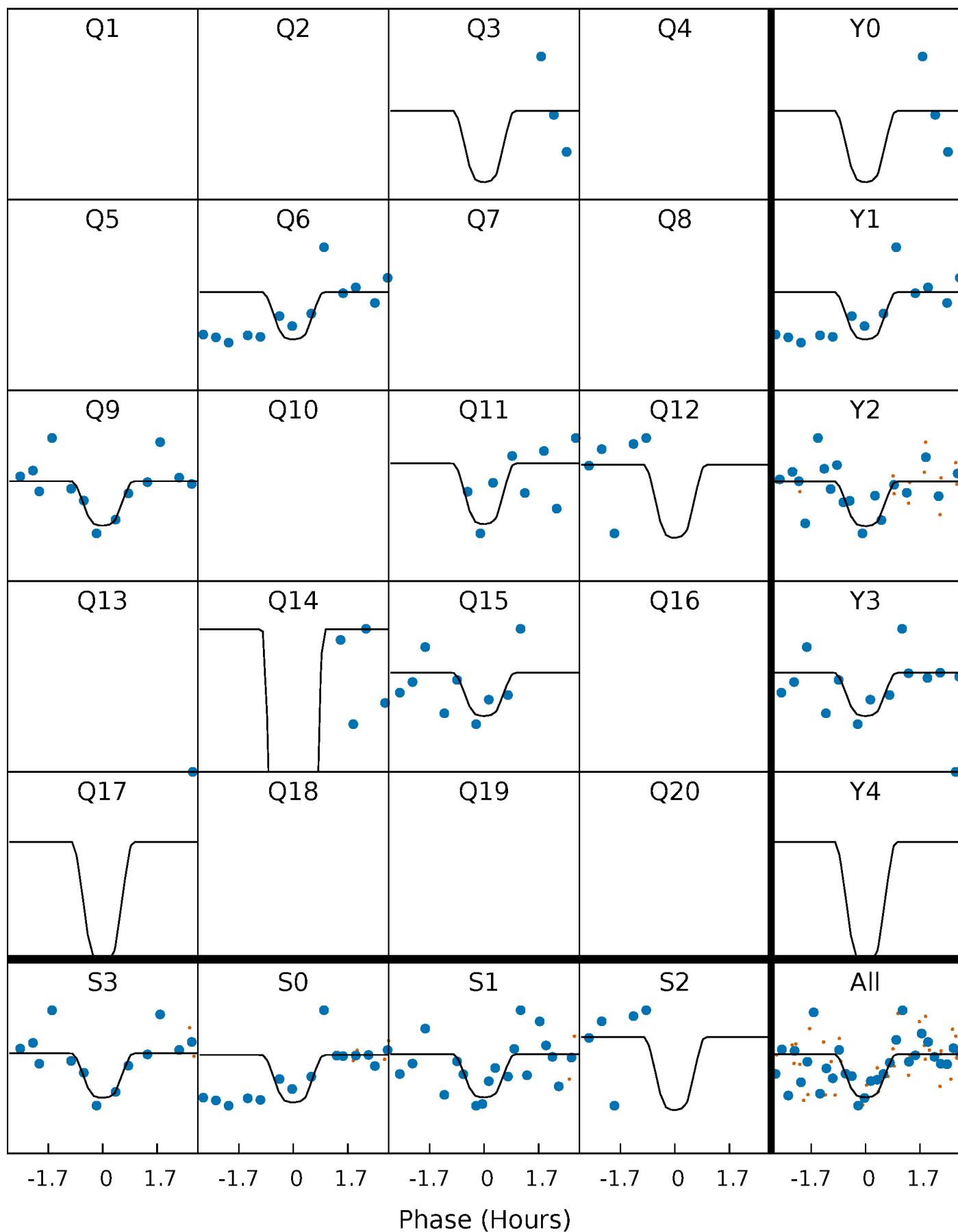
PDC Quarter-Phased Transit Curves

TCE 011304436-06 P= 27.067898 Days $T_0=134.996755$ (BKJD)



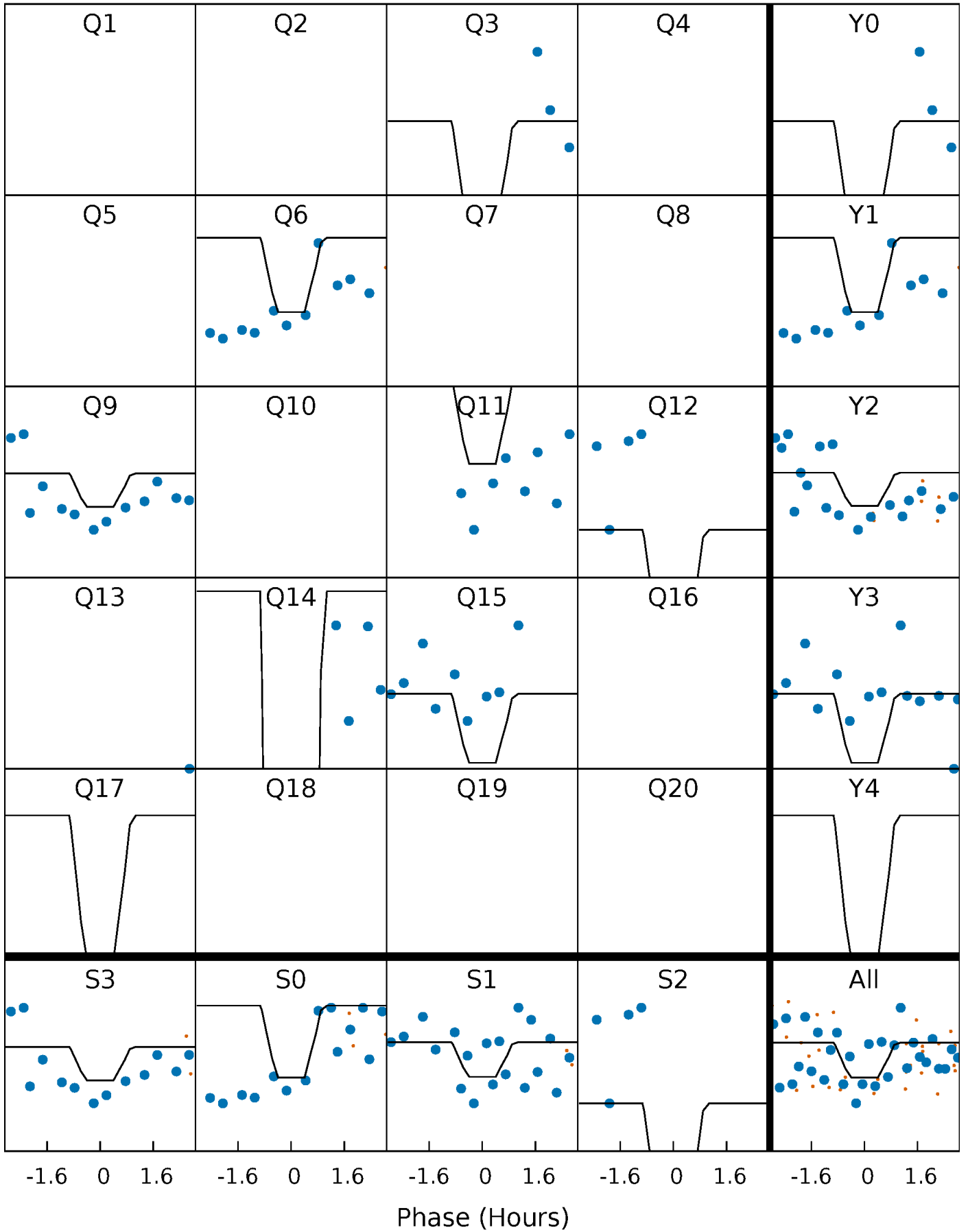
DV Quarter-Phased Transit Curves

TCE 011304436-06 P= 27.067898 Days $T_0=134.996755$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

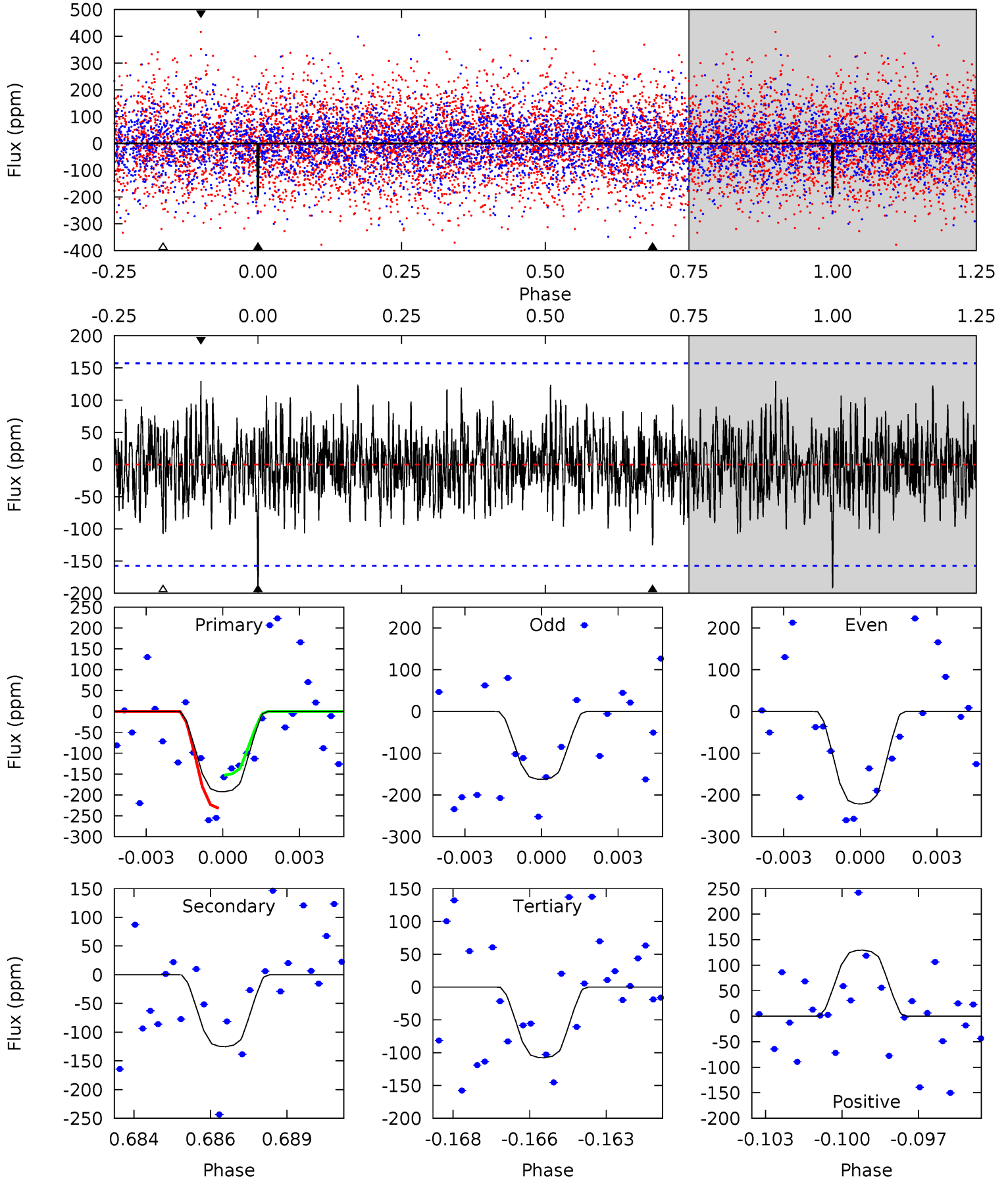
TCE 011304436-06 $P = 27.067898$ Days $T_0 = 135.001508$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-06, $P = 27.067898$ Days, $E = 107.928857$ Days

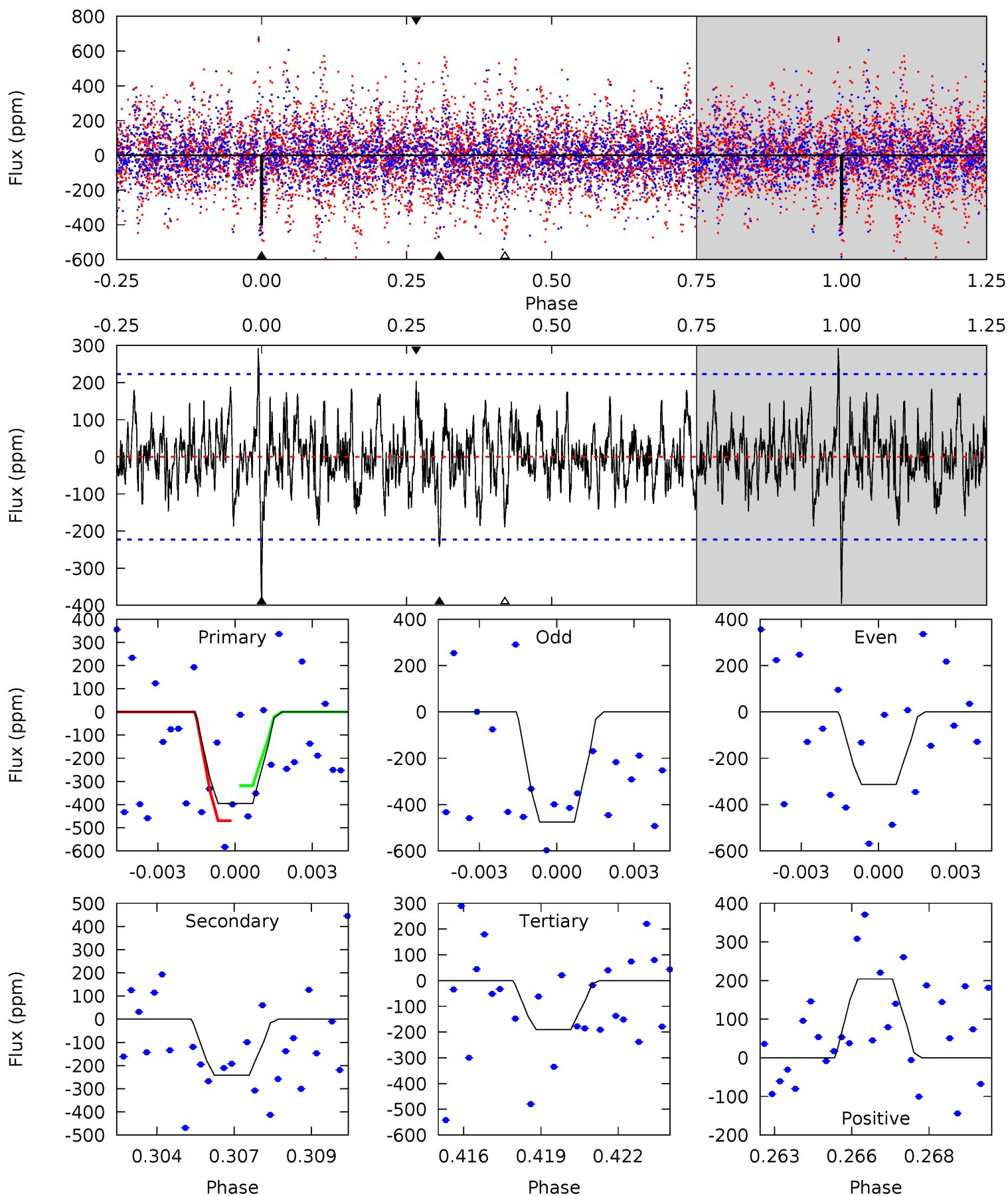
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.45	4.20	3.61	4.34	5.28	3.01	1.31	2.84	2.11	0.59	-0.14	0.99	1.00	0.40	1.33



Alt Model-Shift Uniqueness Test

011304436-06, $P = 27.067898$ Days, $E = 107.933610$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.34	5.72	4.49	4.83	5.27	3.00	1.58	4.85	4.52	1.23	0.89	1.99	0.83	0.43	1.79



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-125 ± 30	$2.78^{+1.70}_{-1.40}$	1129^{+77}_{-81}	5192^{+2406}_{-928}	312^{+1013}_{-203}
Alt.	-242 ± 42	$3.11^{+1.67}_{-1.48}$	1127^{+88}_{-92}	5840^{+2405}_{-1030}	471^{+1311}_{-278}

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

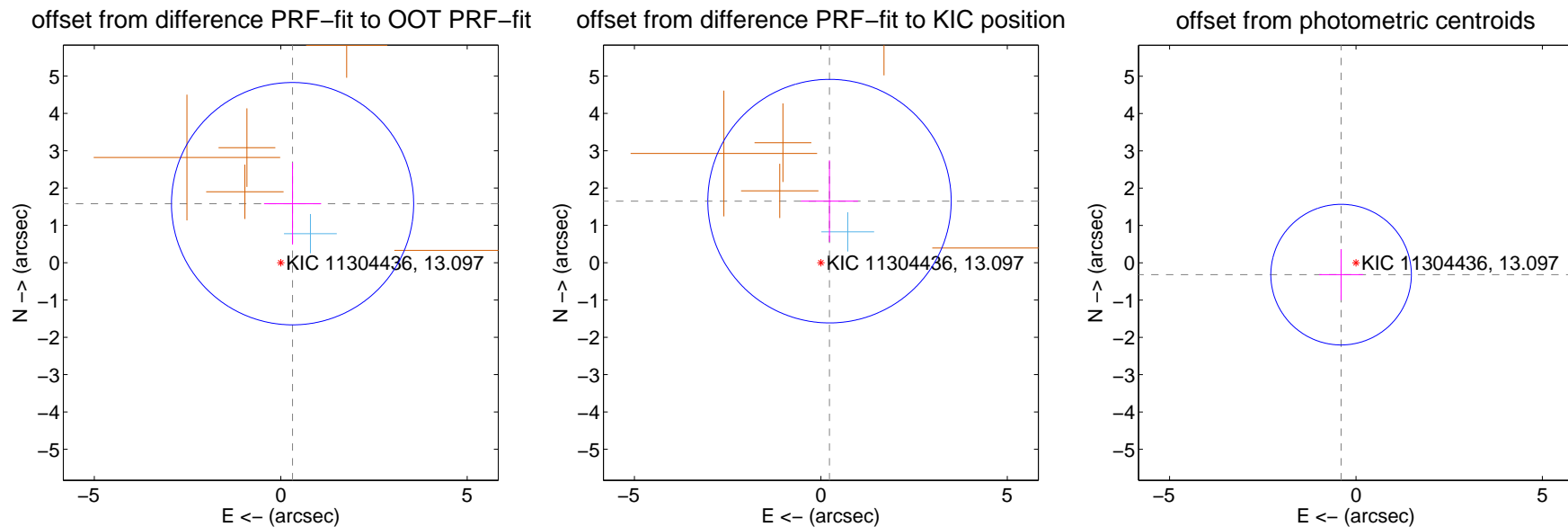
DV Centroid Data

Supplemental centroid analysis for 011304436-06. Kepler magnitude: 13.10. Transit SNR 9.27

There are 1 quarters with good PRF difference image offsets

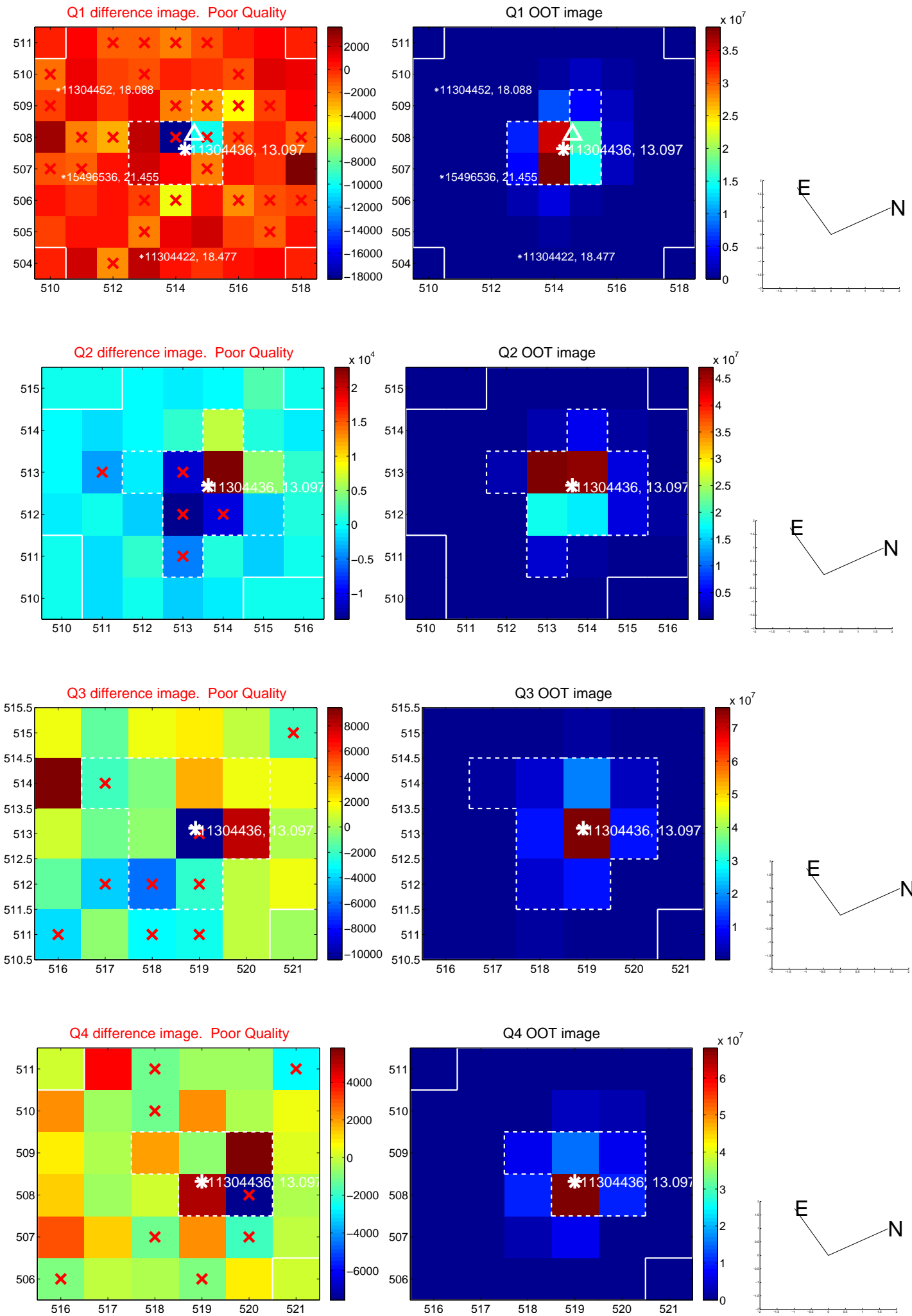
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.613 ± 1.082	1.49	-0.317 ± 0.765	1.582 ± 1.093
PRF-fit source offset from KIC position	1.666 ± 1.088	1.53	-0.232 ± 0.765	1.650 ± 1.093
photometric centroid source offset	0.51 ± 0.63	0.81	0.40 ± 0.59	-0.32 ± 0.68

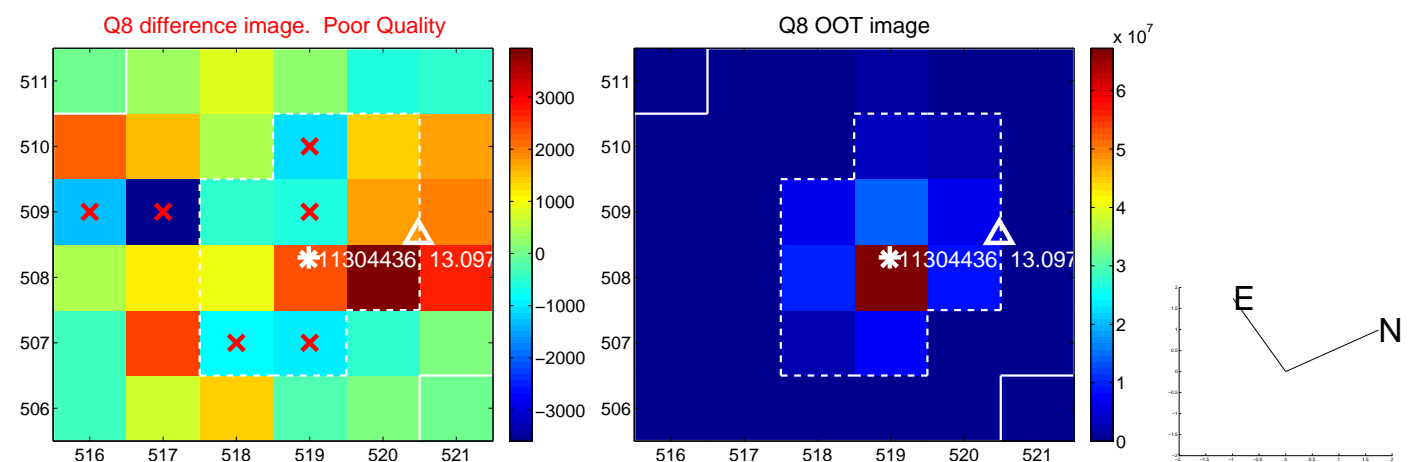
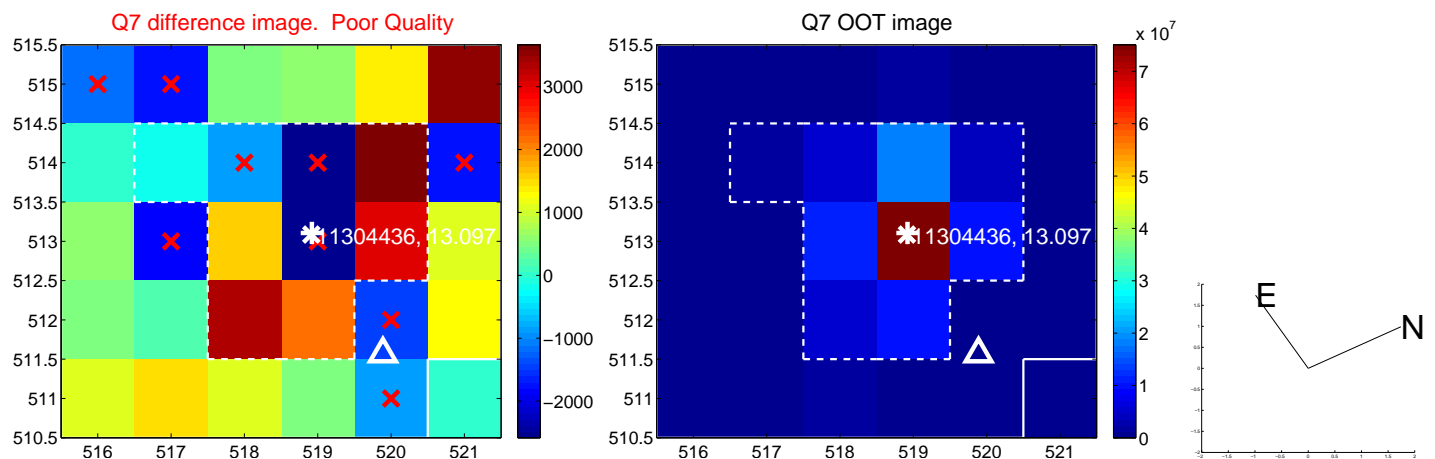
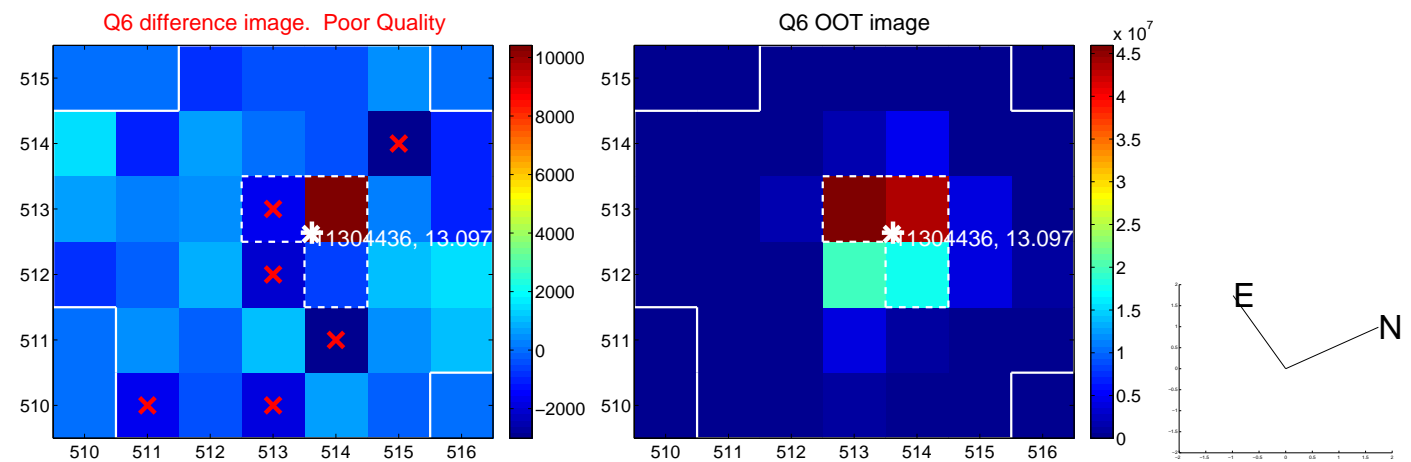
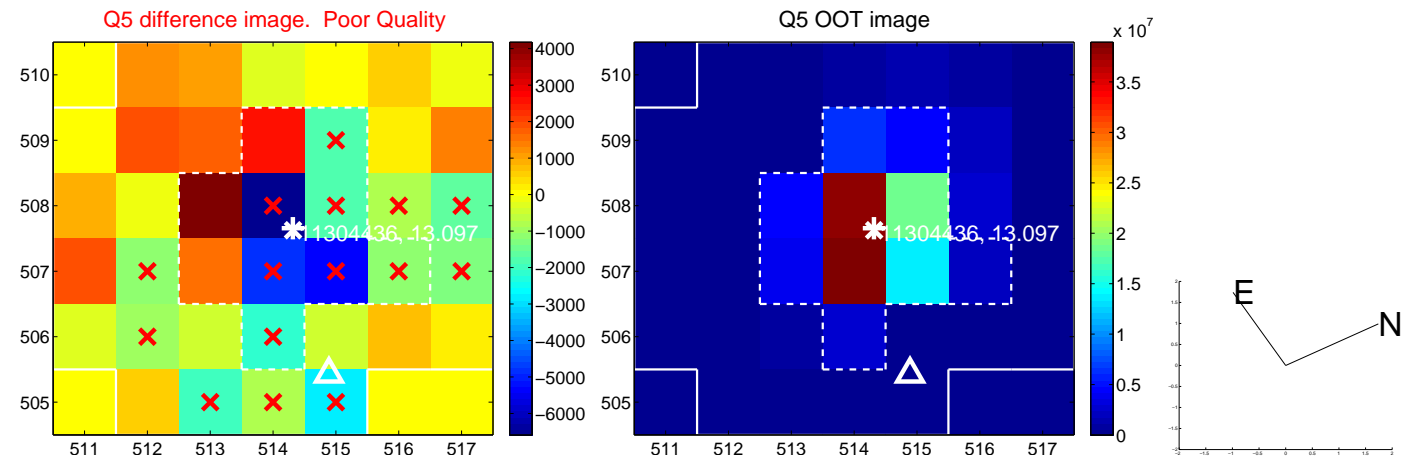


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

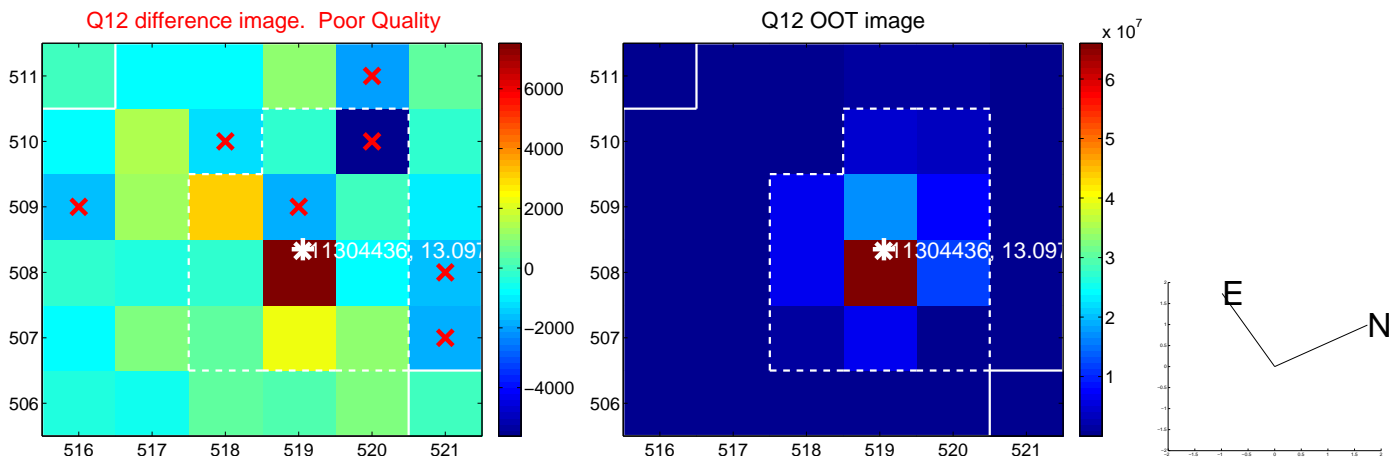
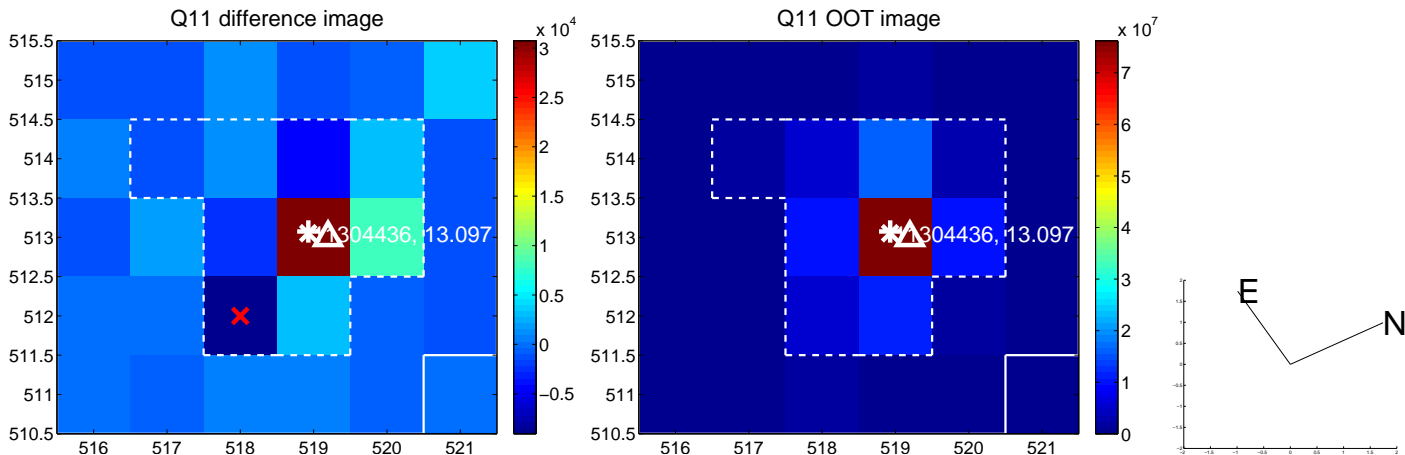
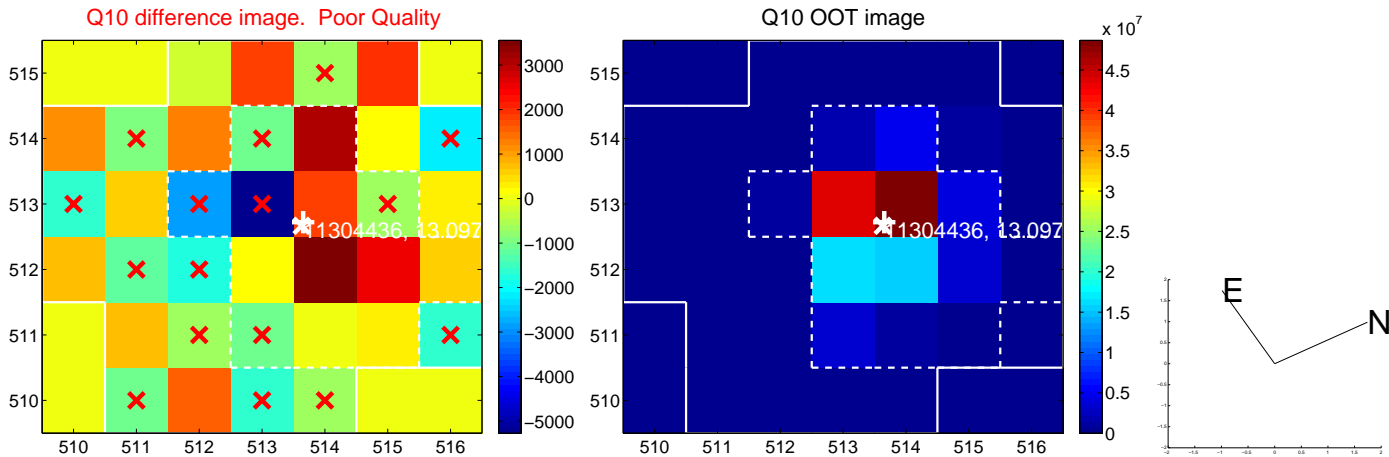
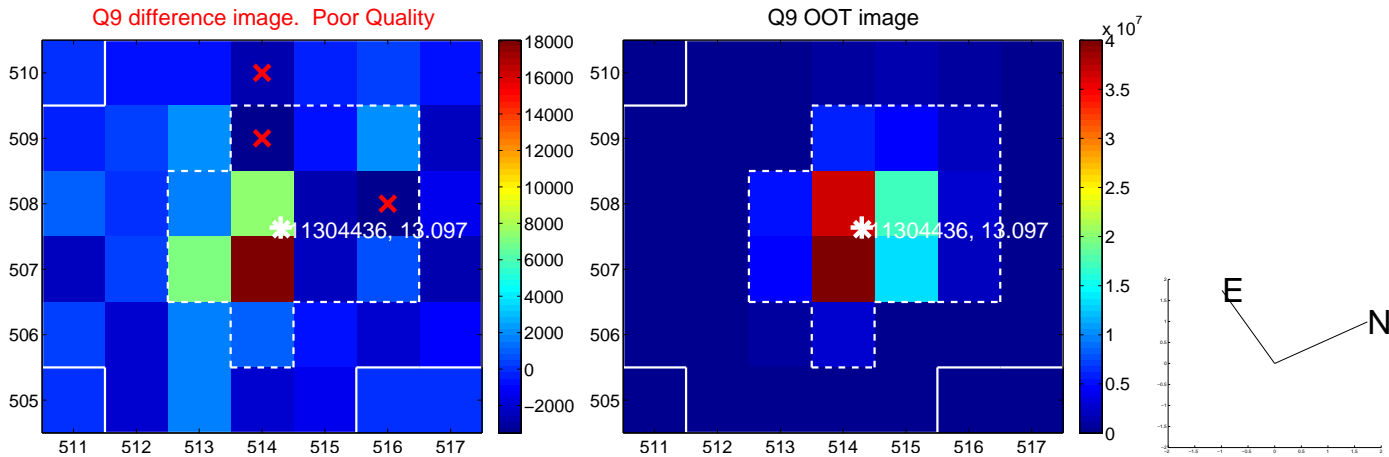
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



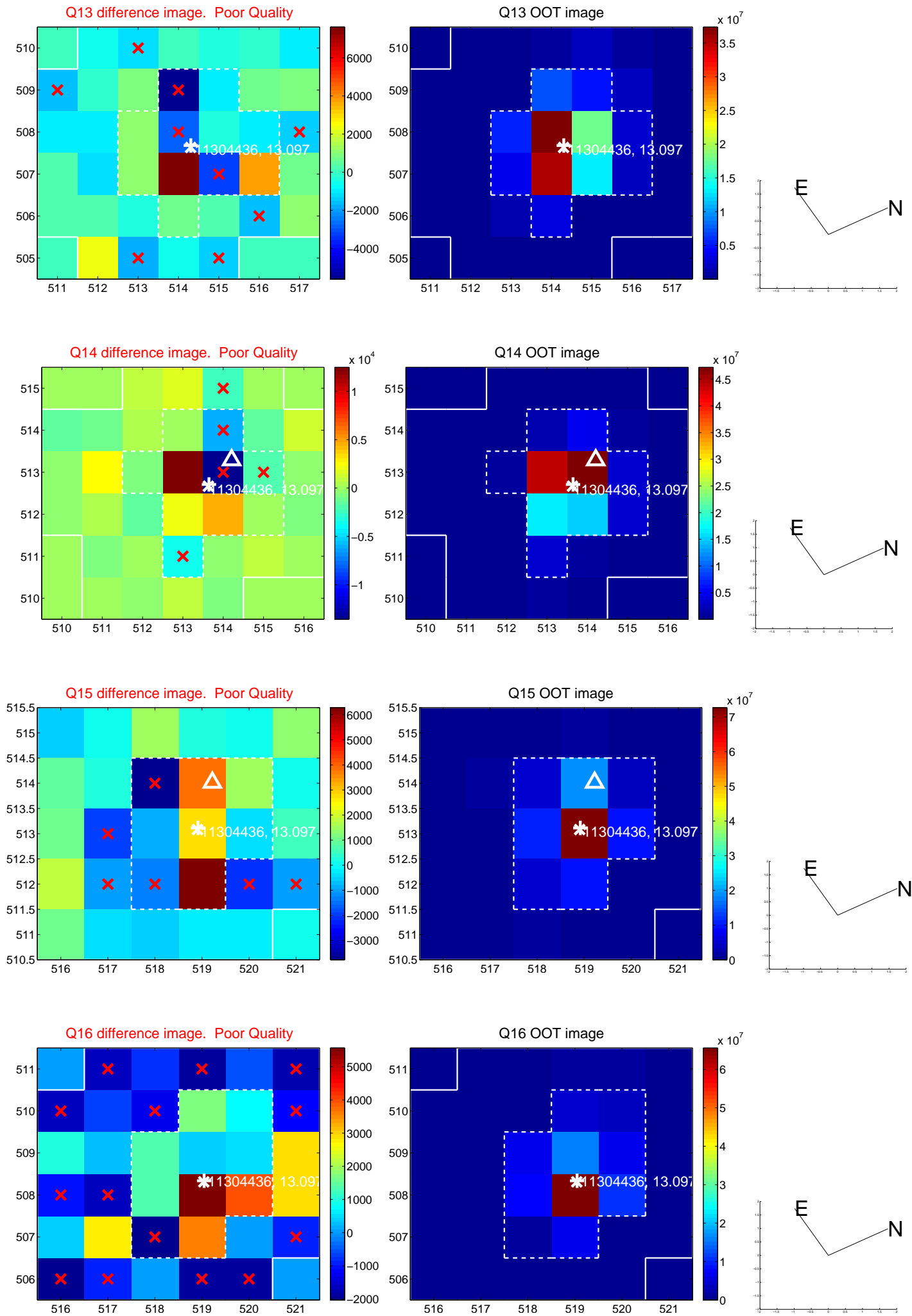
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



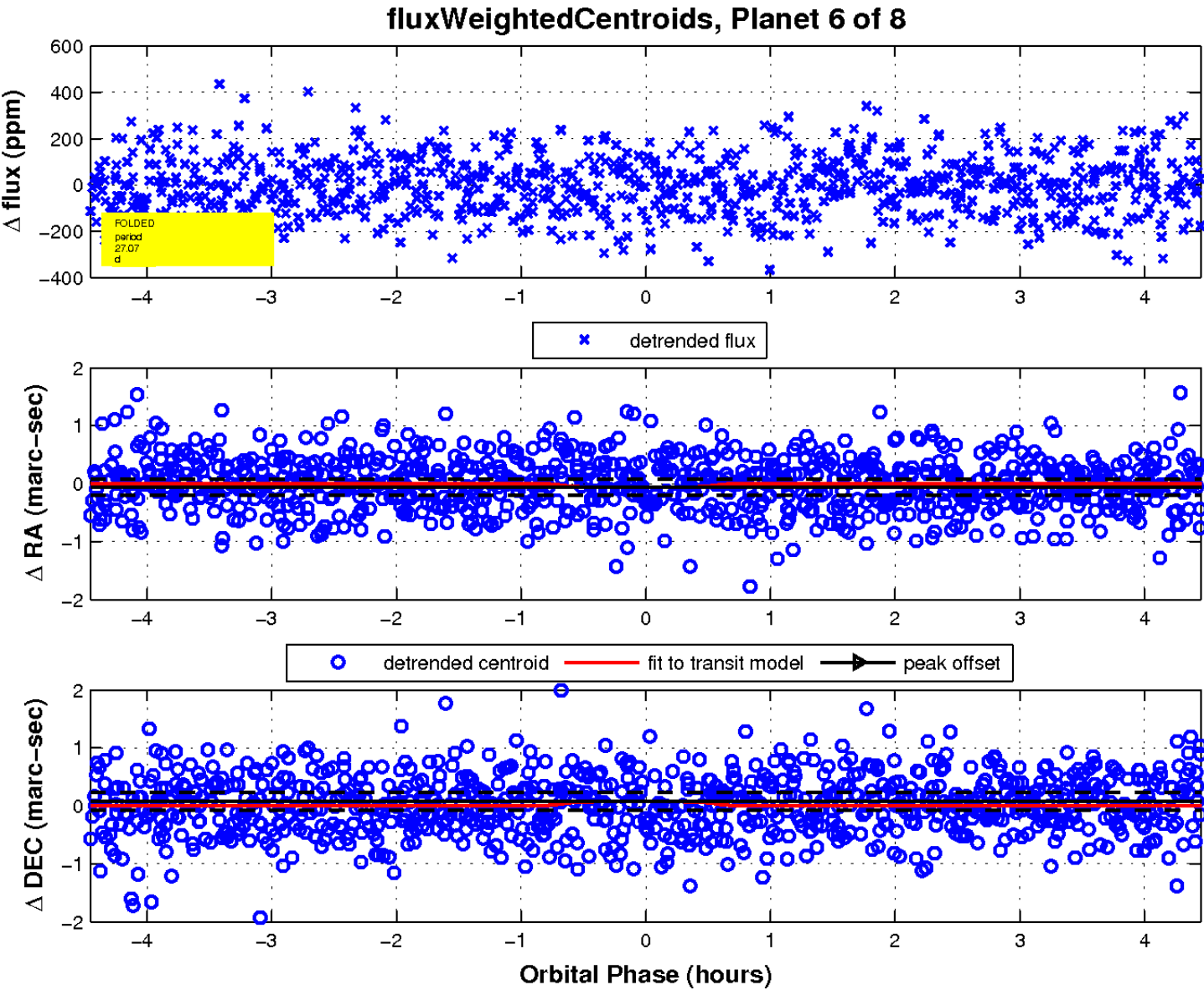
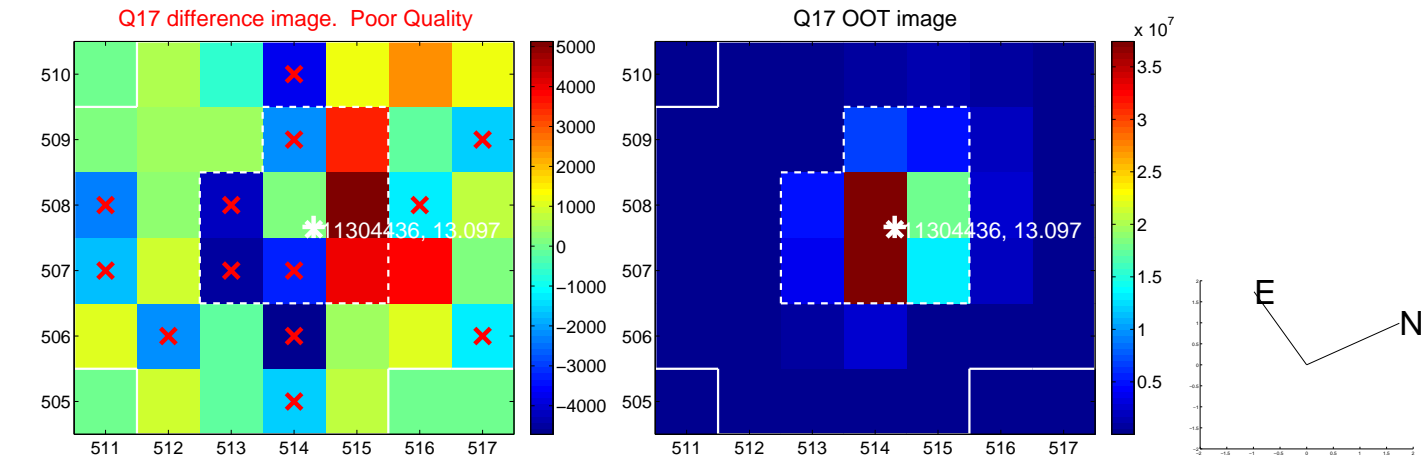
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

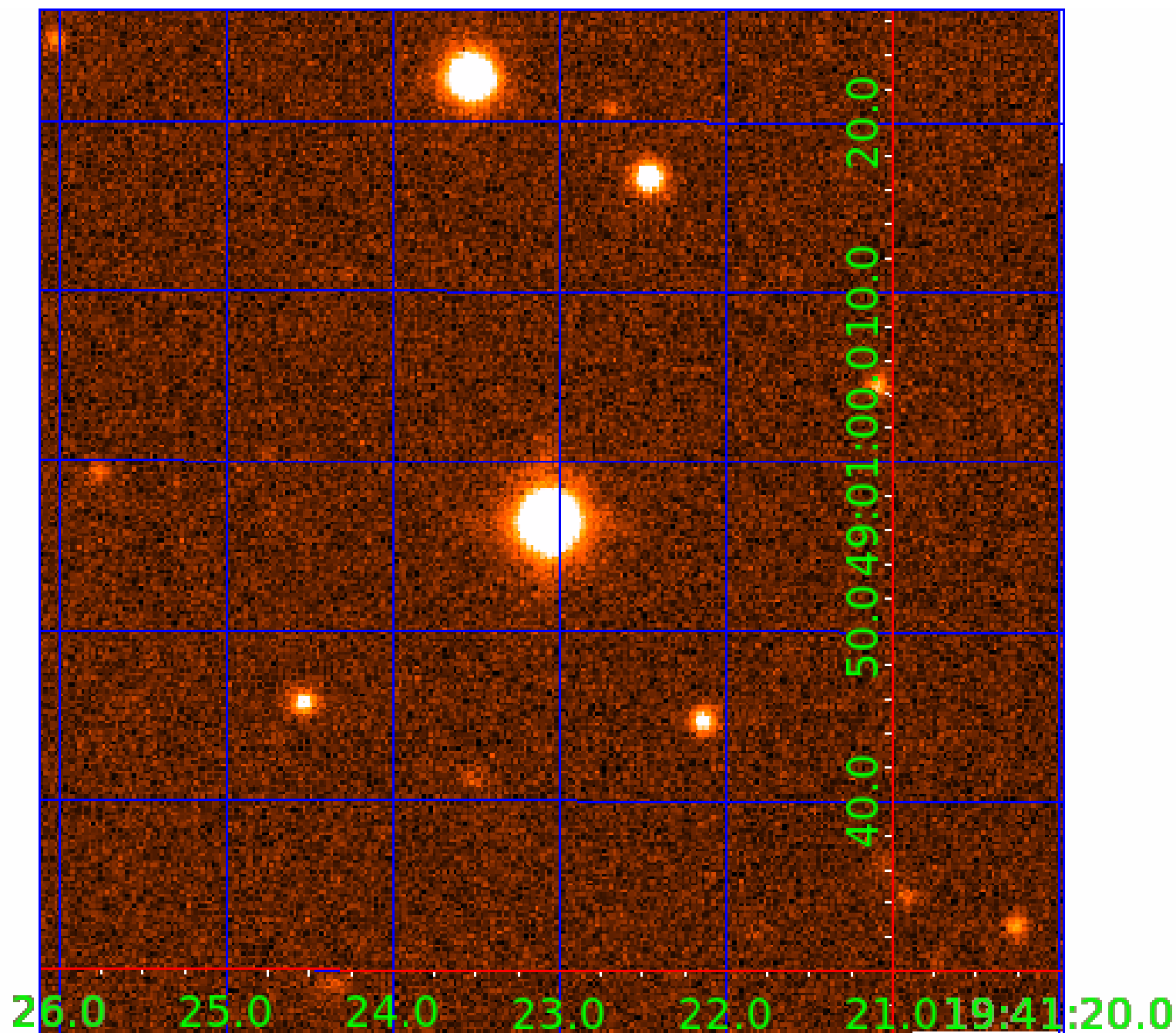


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

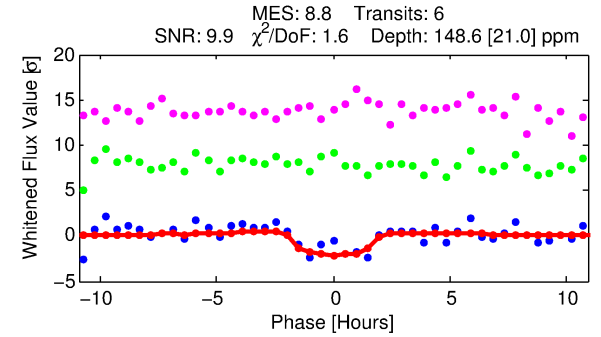
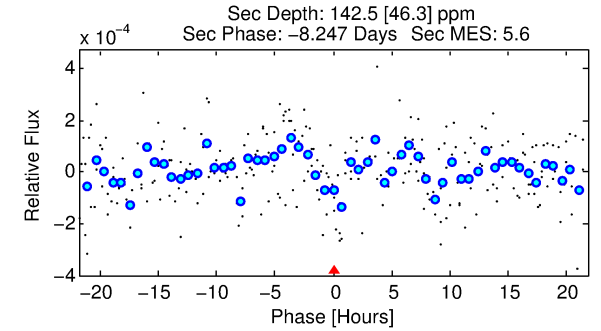
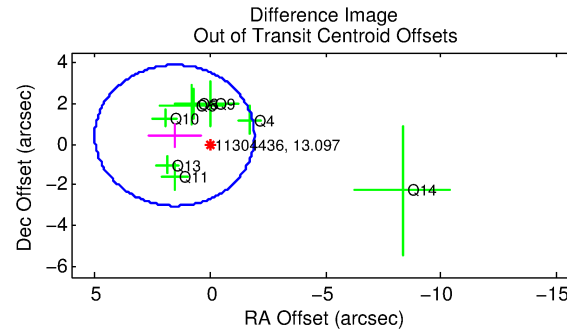
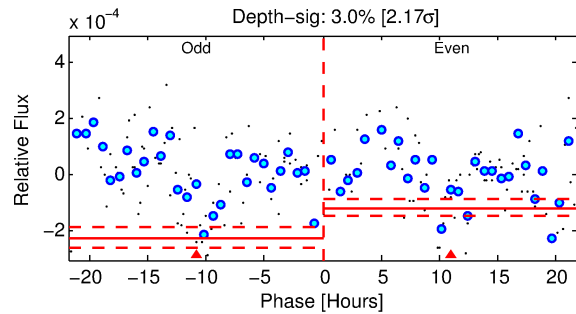
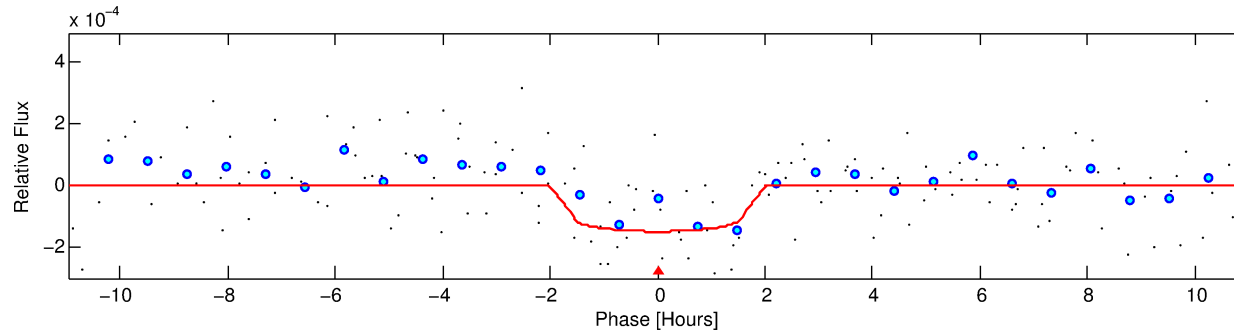
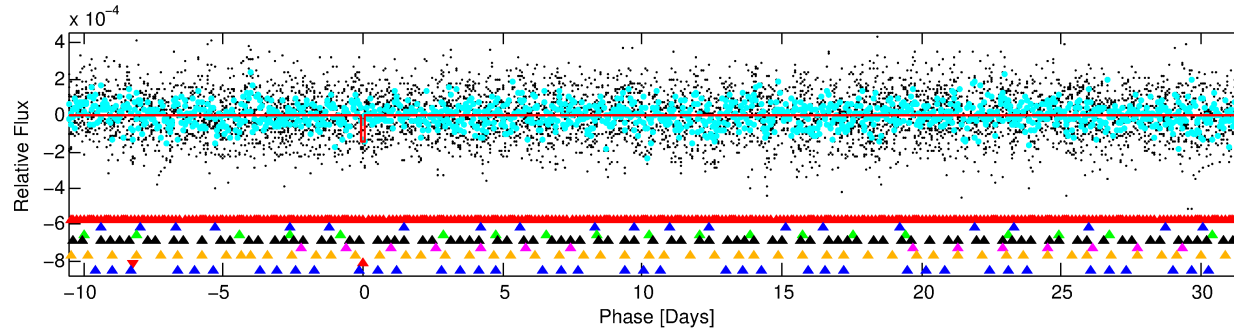
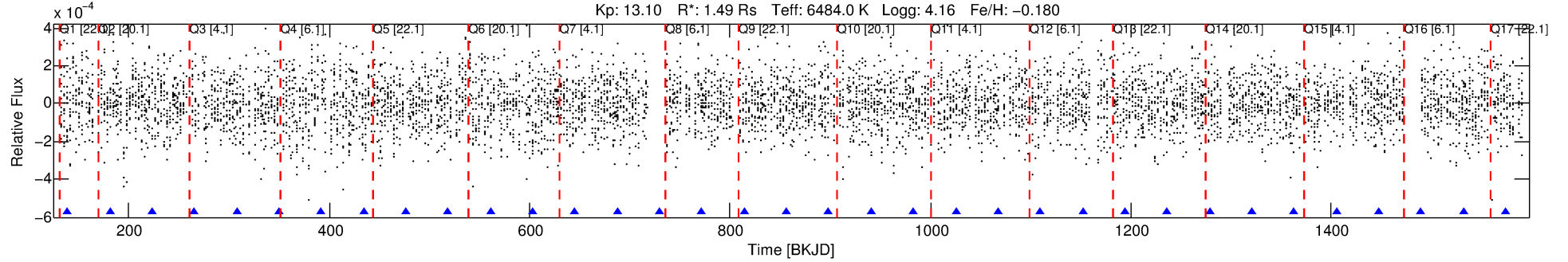
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011304436-07

No Significant Match Found

DV One-Page Summary

KIC: 11304436 Candidate: 7 of 8 Period: 42.203 d



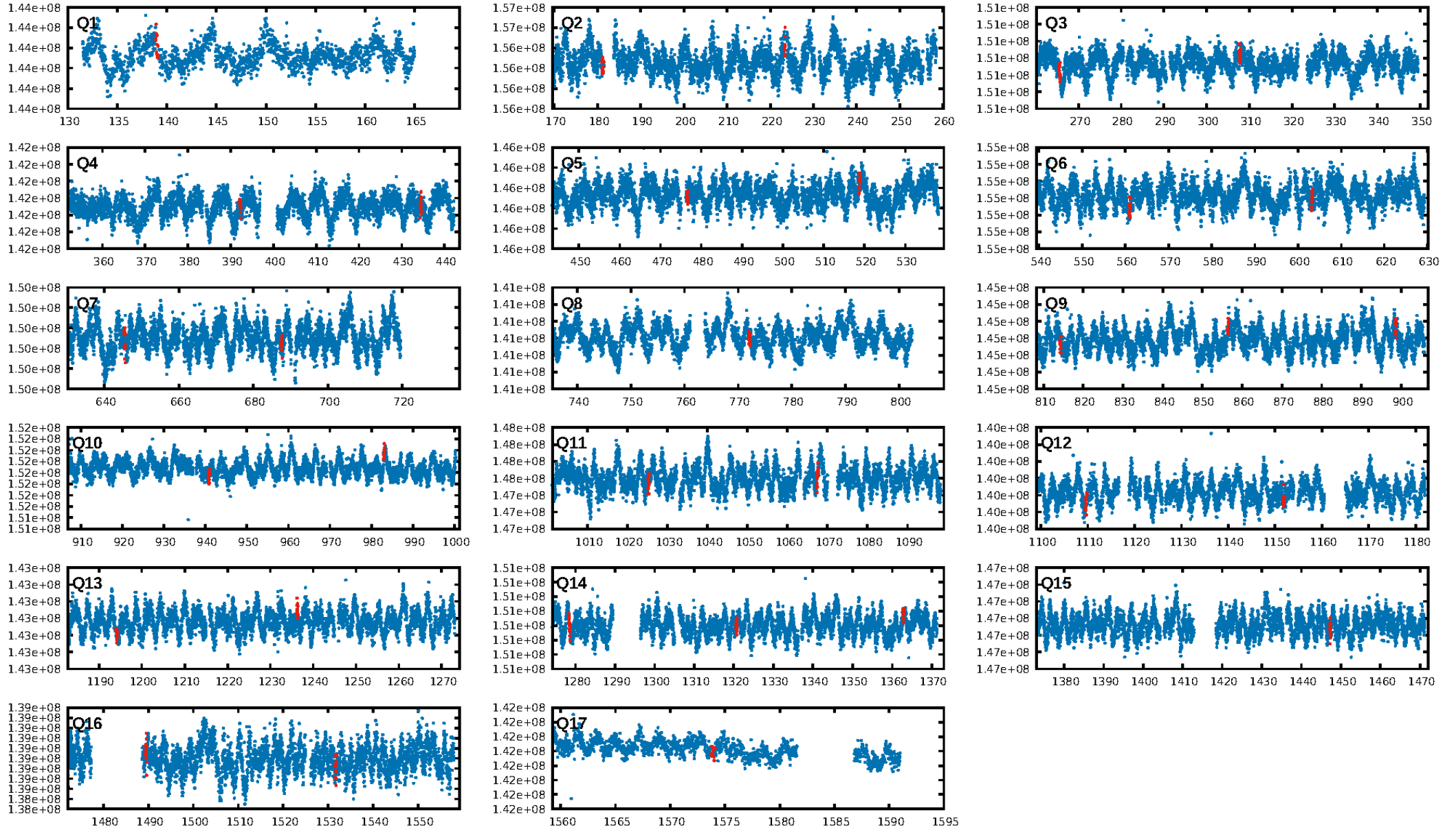
DV Fit Results:

Period = 42.20303 [0.00056] d
Epoch = 139.0139 [0.0095] BKJD
Rp/R* = 0.0122 [0.0177]
a/R* = 57.75 [458.12]
b = 0.77 [4.18]
Seff = 56.56 [23.02]
Teq = 699 [71] K
Rp = 1.99 [2.94] Re
a = 0.2498 [0.0635] AU
Ag = 1234.93 [3622.84] [0.34 σ]
Teffp = 6409 [4668] K [1.22 σ]

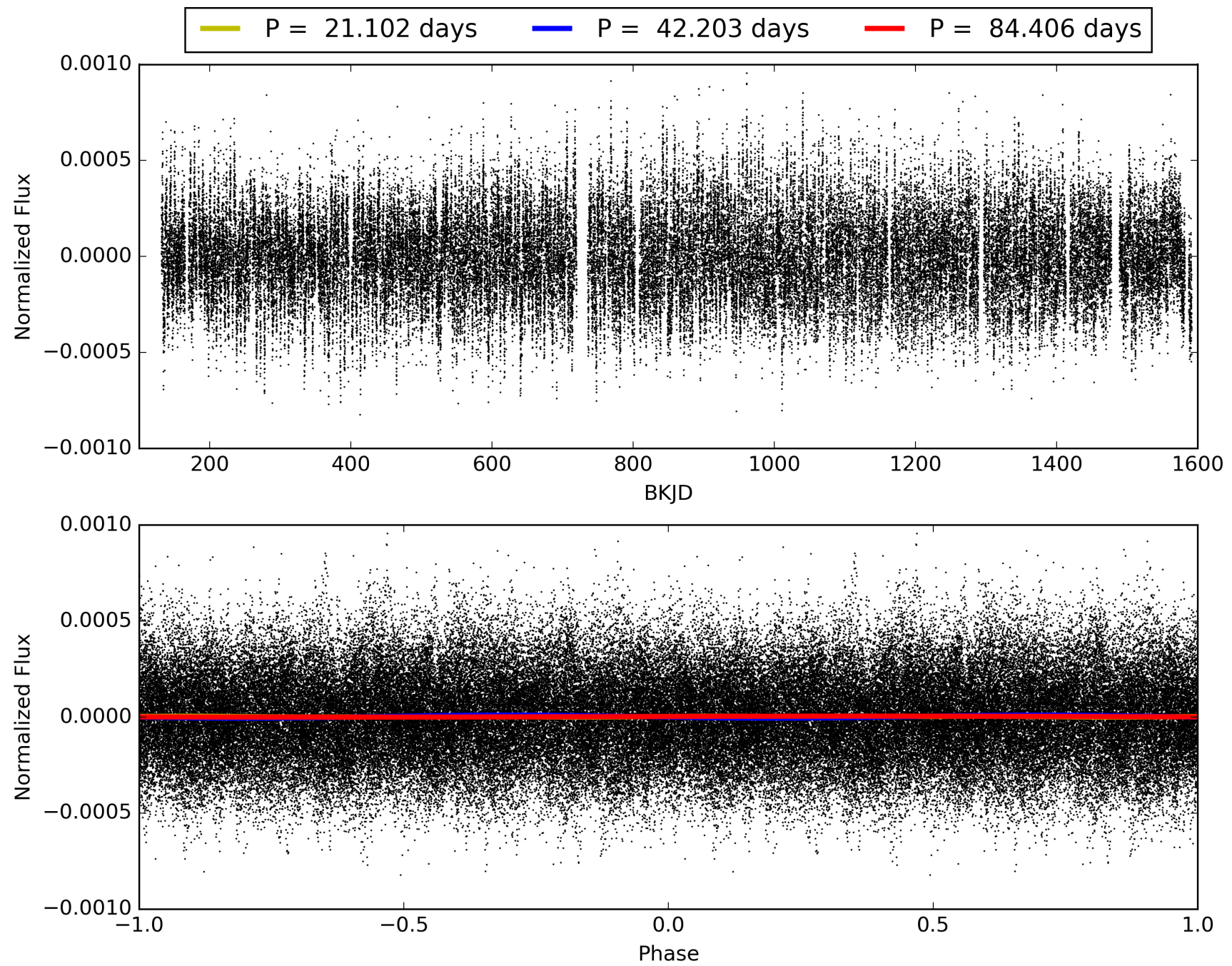
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.81 σ]
LongPeriod-sig: 100.0% [80.79 σ]
ModelChiSquare2-sig: 68.1%
ModelChiSquareGof-sig: 76.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -1.622
Centroid-sig: 19.5%
Centroid-so: 0.707 arcsec [0.91 σ]
OotOffset-rm: 1.580 arcsec [1.37 σ]
KicOffset-rm: 1.717 arcsec [1.67 σ]
OotOffset-st: 2/1/2/3 [8]
KicOffset-st: 2/1/2/3 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.47 [8/17]

TCE 011304436-07, PDC Light Curves

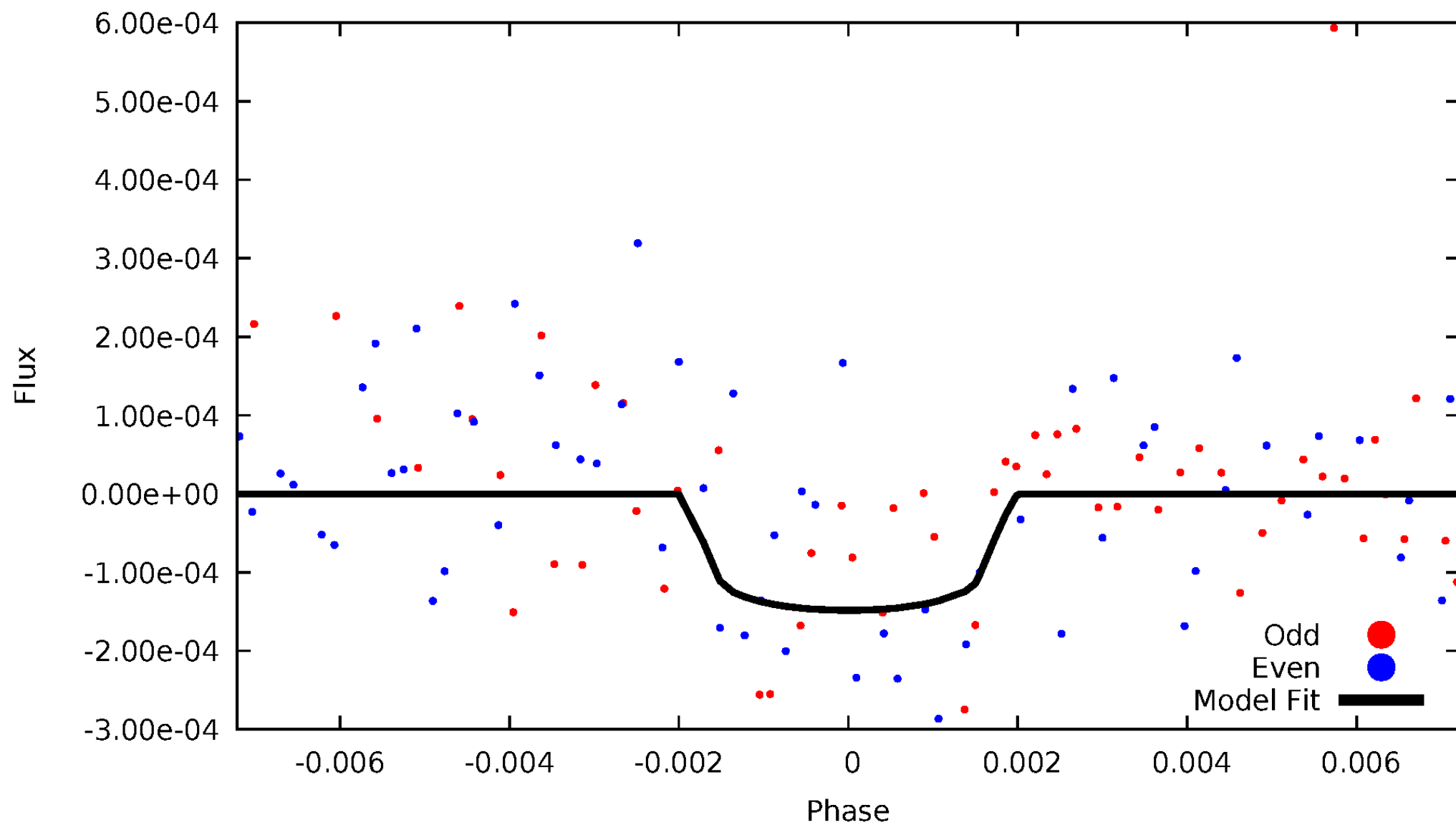


TCE 011304436-07



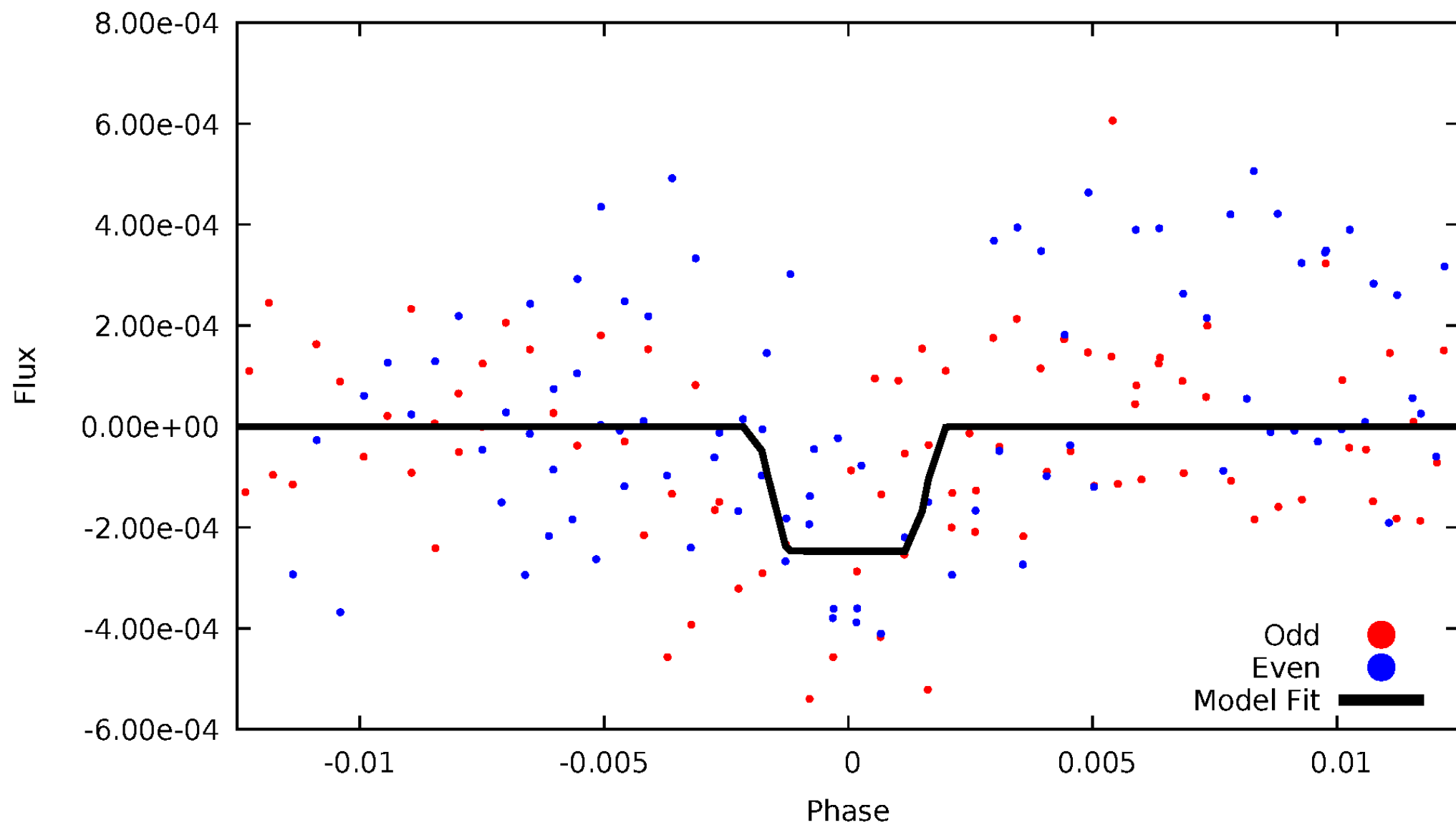
DV Odd/Even

TCE 011304436-07



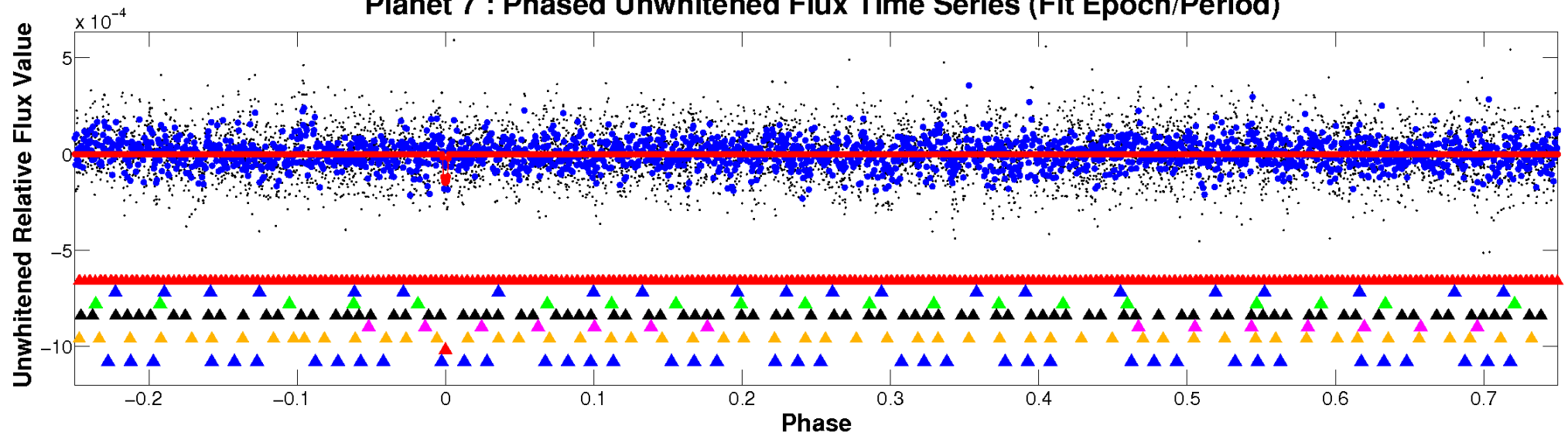
ALT Odd/Even

TCE 011304436-07

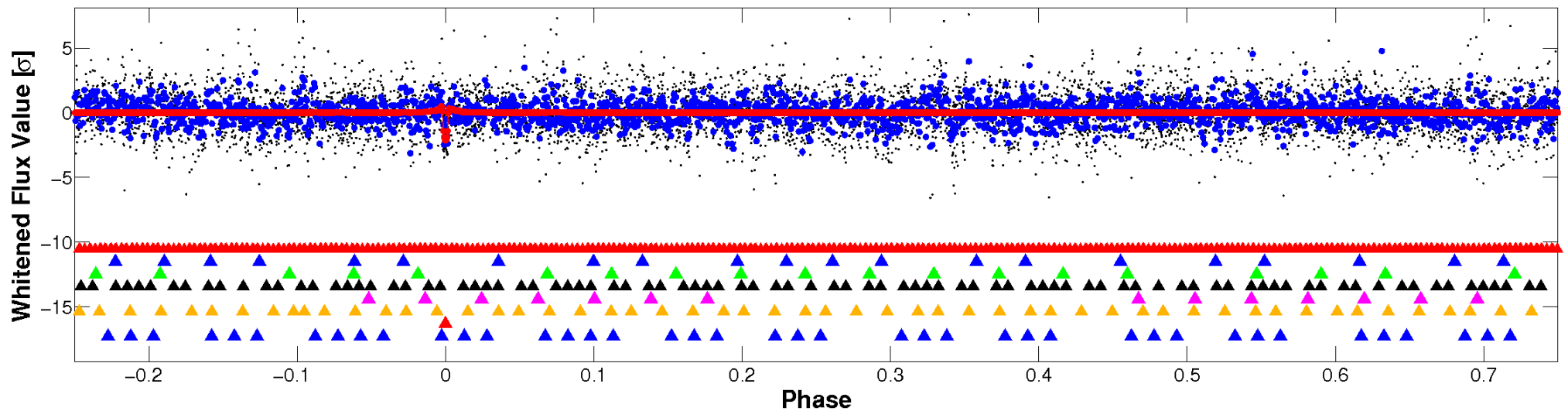


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

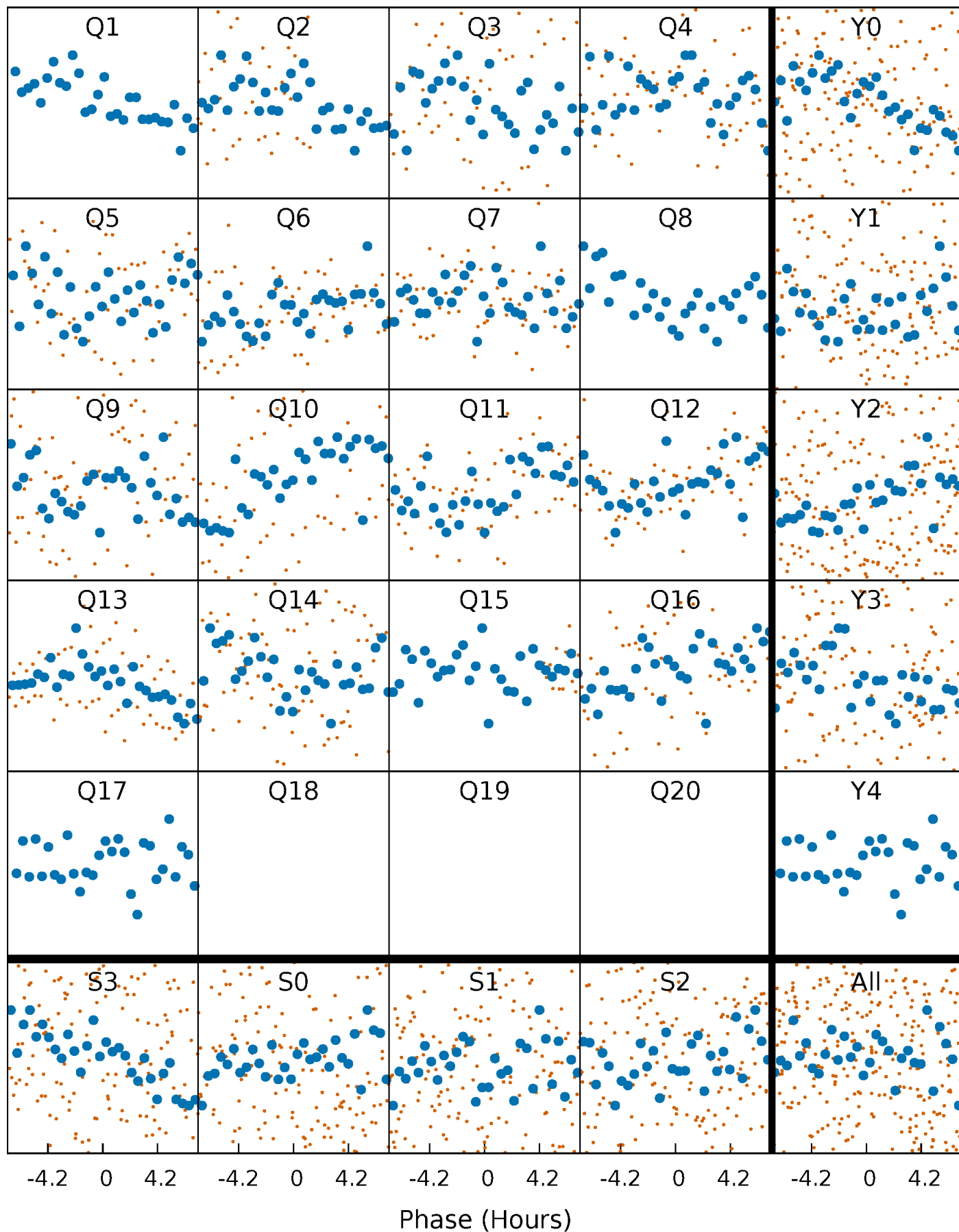


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



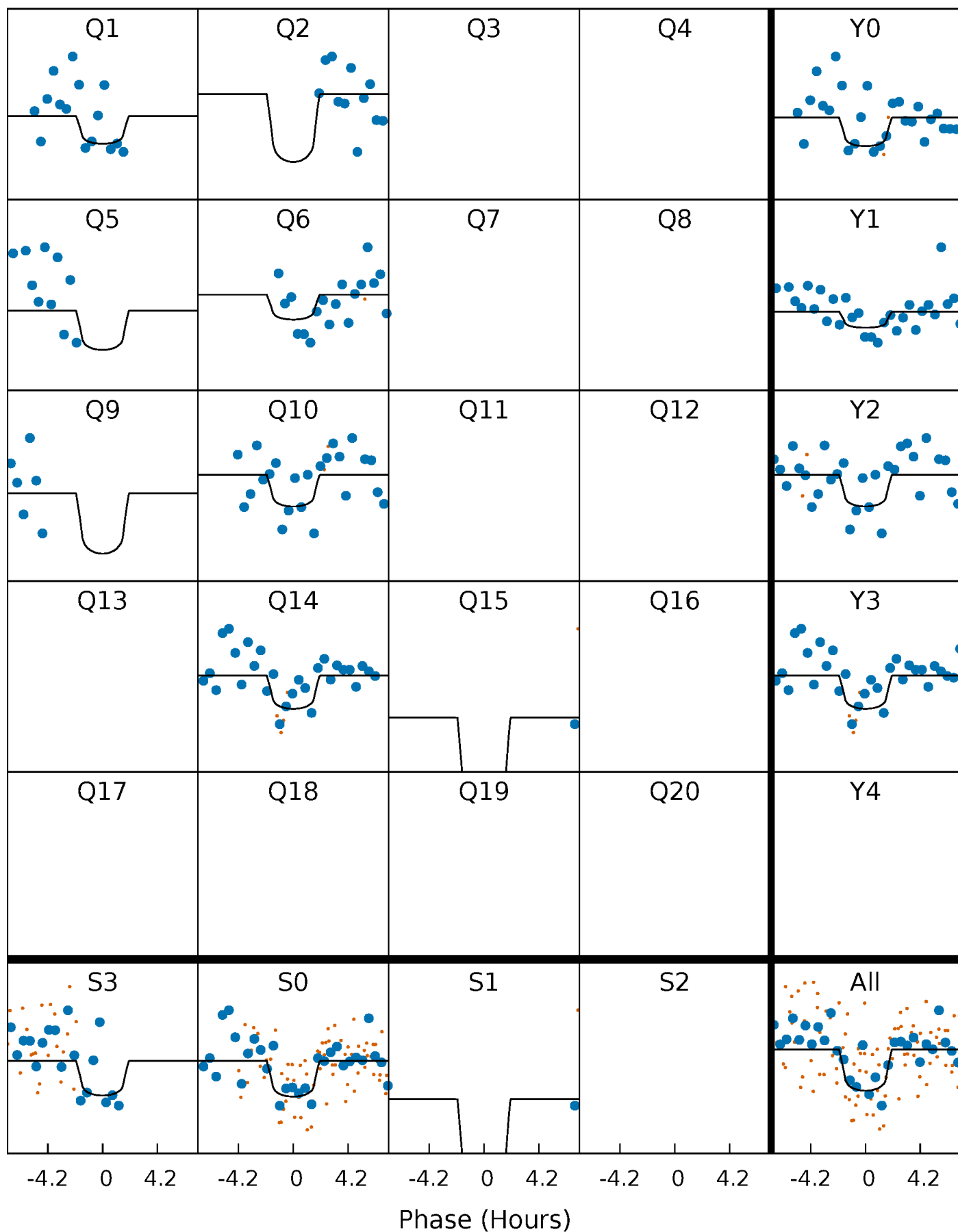
PDC Quarter-Phased Transit Curves

TCE 011304436-07 P= 42.203032 Days $T_0=139.013905$ (BKJD)



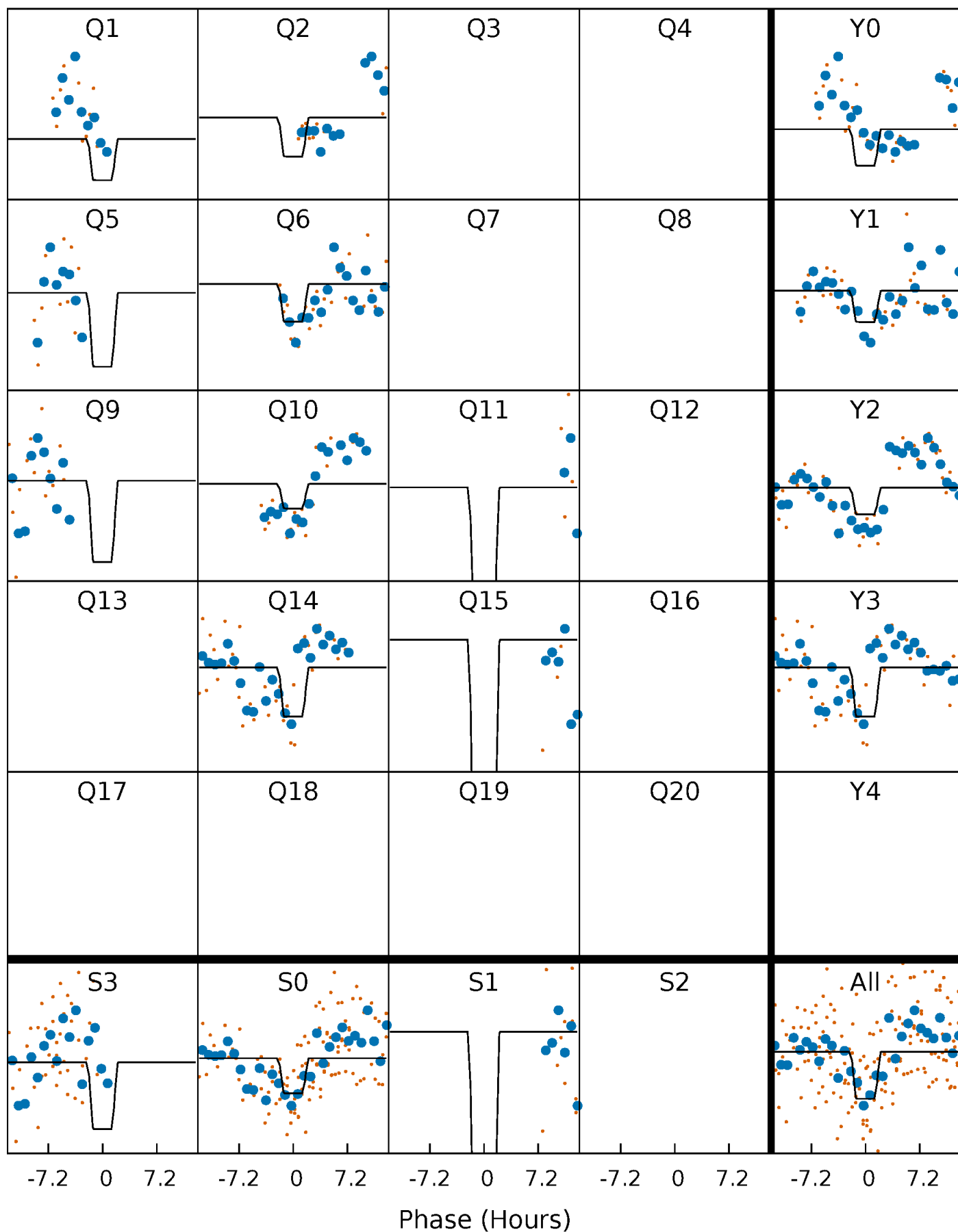
DV Quarter-Phased Transit Curves

TCE 011304436-07 P= 42.203032 Days $T_0=139.013905$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

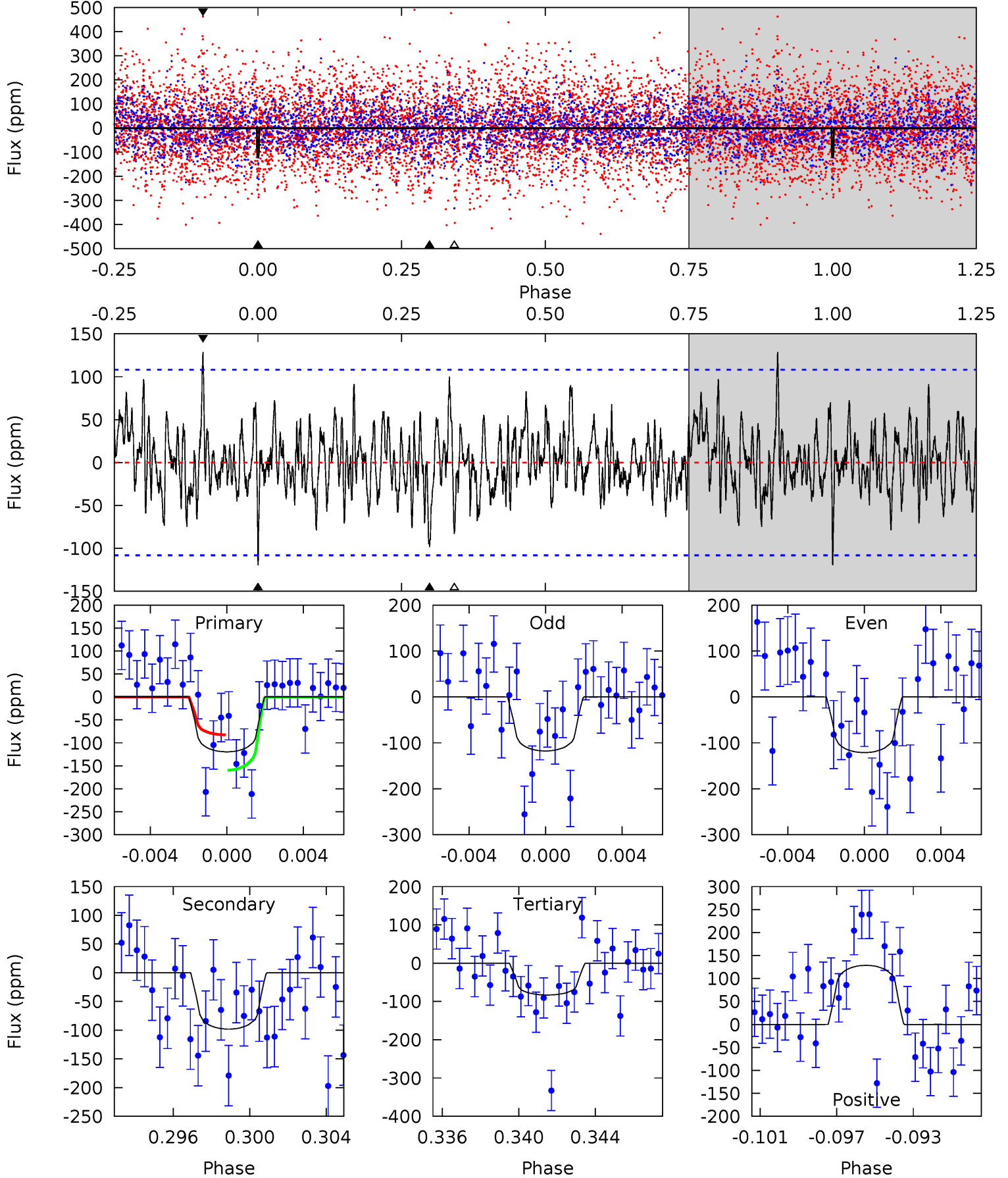
TCE 011304436-07 P= 42.199974 Days $T_0=139.061244$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-07, P = 42.203032 Days, E = 96.810873 Days

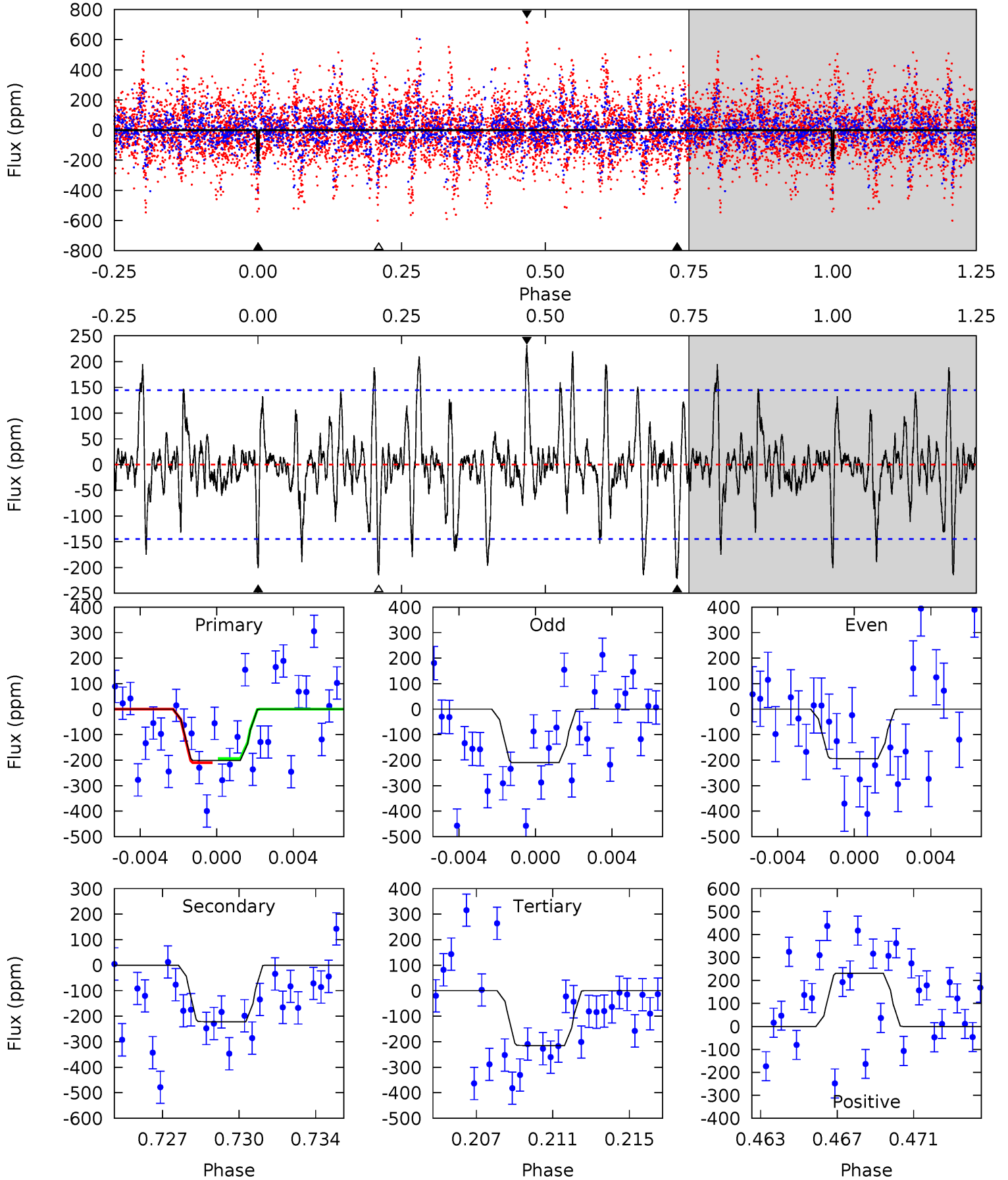
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	4.72	3.99	6.18	5.20	2.87	1.52	1.75	-0.43	0.72	-1.46	0.08	1.03	0.52	1.85



Alt Model-Shift Uniqueness Test

011304436-07, P = 42.199974 Days, E = 96.861270 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.25	7.99	7.75	8.36	5.21	2.90	2.29	-0.51	-1.12	0.24	-0.37	0.28	0.87	0.51	0.30



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-98 ± 21	$2.76^{+2.47}_{-1.84}$	969^{+71}_{-76}	4976^{+3930}_{-1071}	431^{+3660}_{-308}
Alt.	-222 ± 28	$3.18^{+2.70}_{-2.09}$	963^{+80}_{-68}	5524^{+4850}_{-1164}	739^{+5443}_{-519}

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

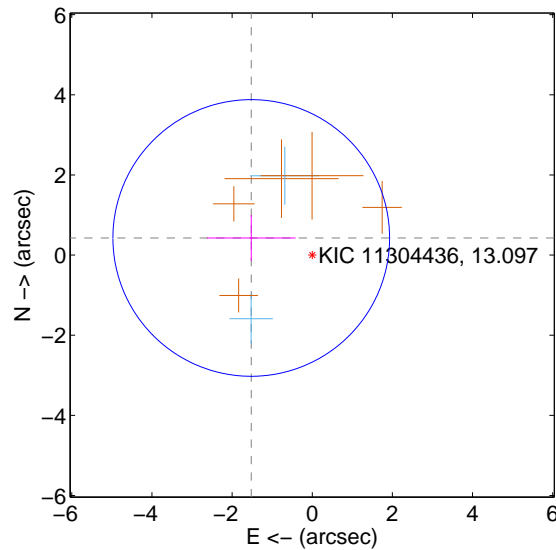
Supplemental centroid analysis for 011304436-07. Kepler magnitude: 13.10. Transit SNR 9.95

There are 2 quarters with good PRF difference image offsets

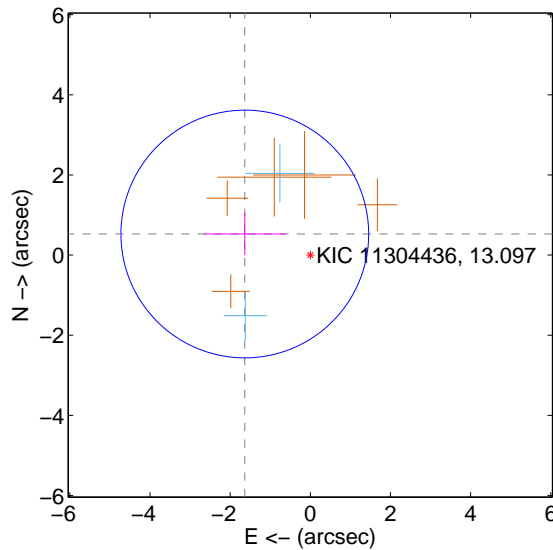
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.580 ± 1.150	1.37	1.522 ± 1.106	0.427 ± 0.572
PRF-fit source offset from KIC position	1.717 ± 1.030	1.67	1.635 ± 1.024	0.526 ± 0.529
photometric centroid source offset	0.71 ± 0.77	0.91	-0.01 ± 0.66	-0.71 ± 0.77

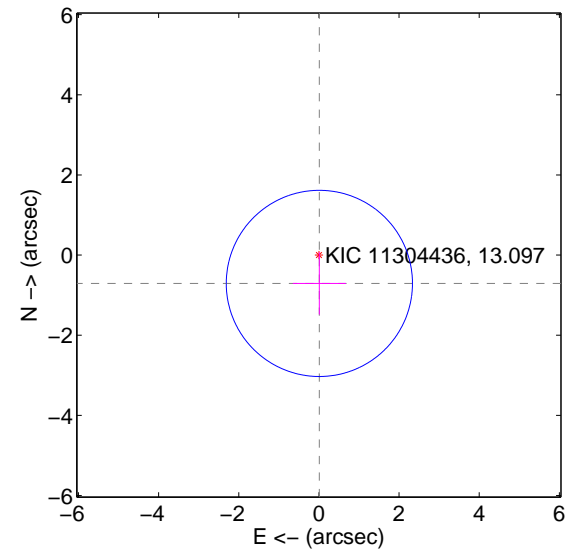
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

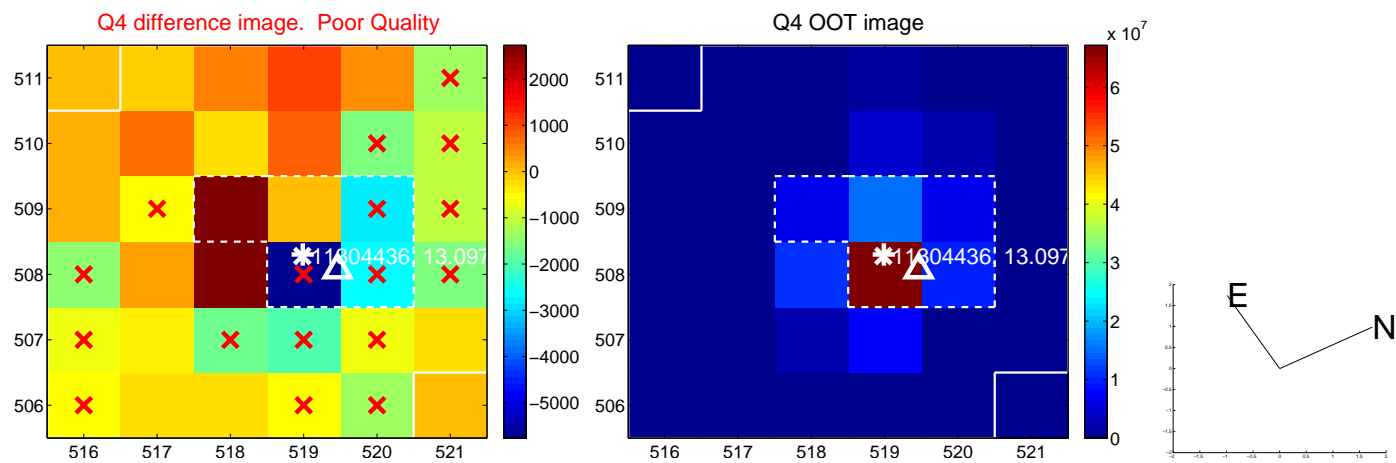
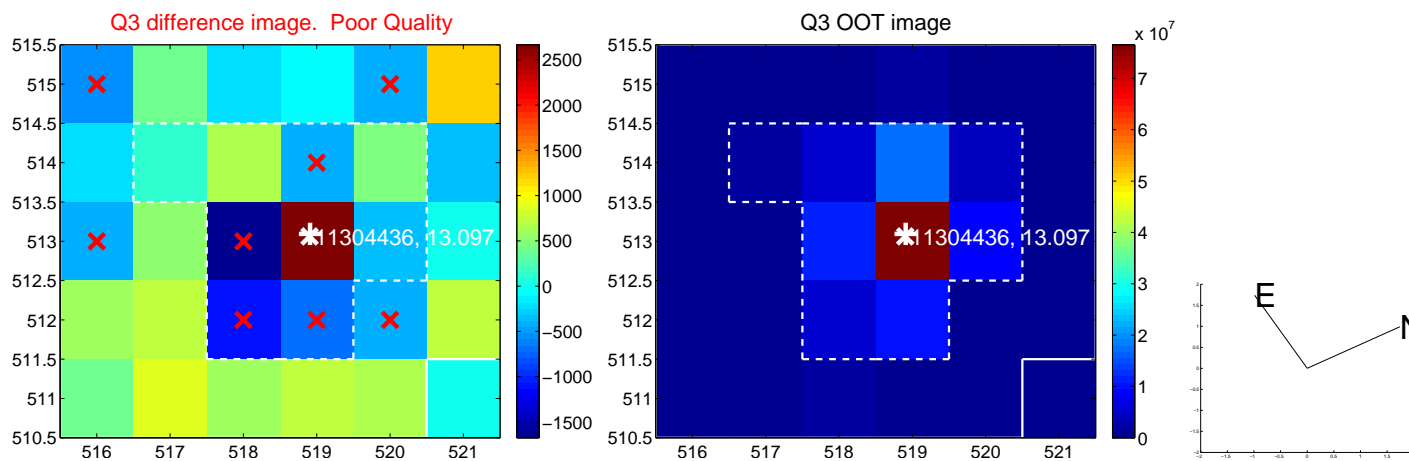
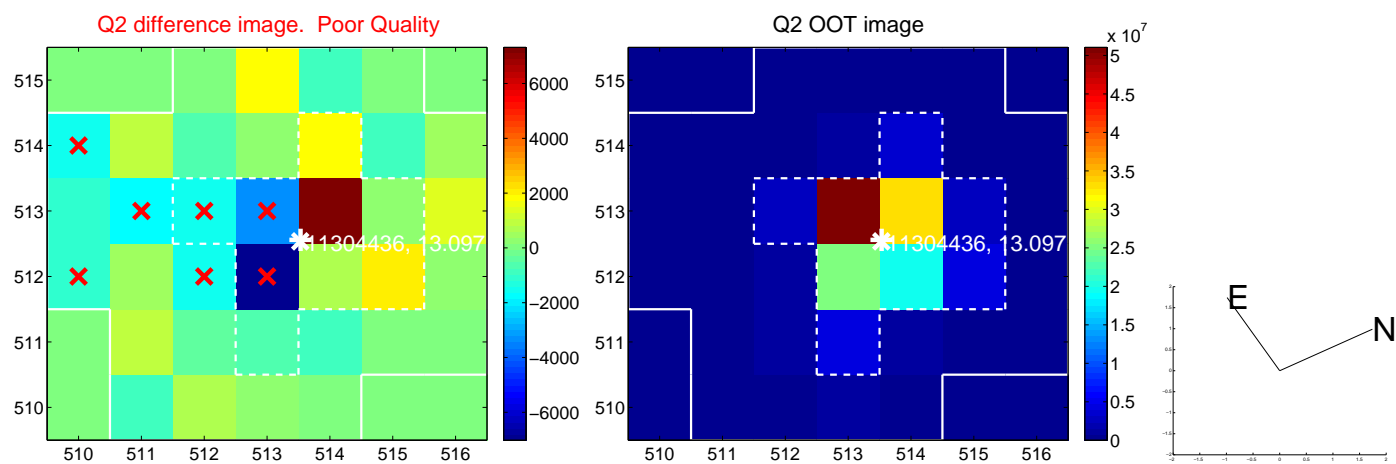
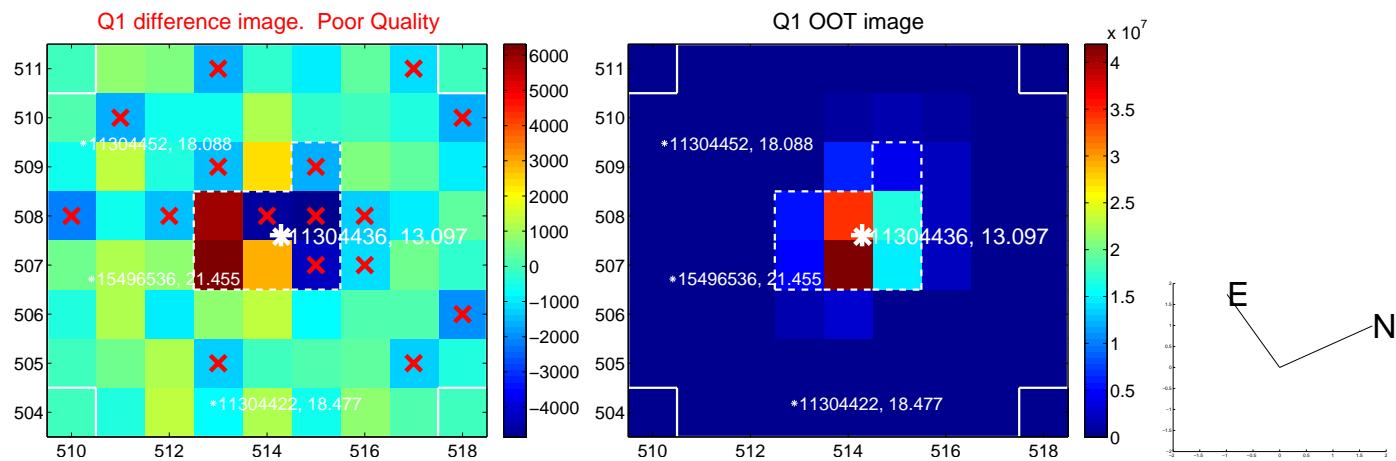


offset from photometric centroids

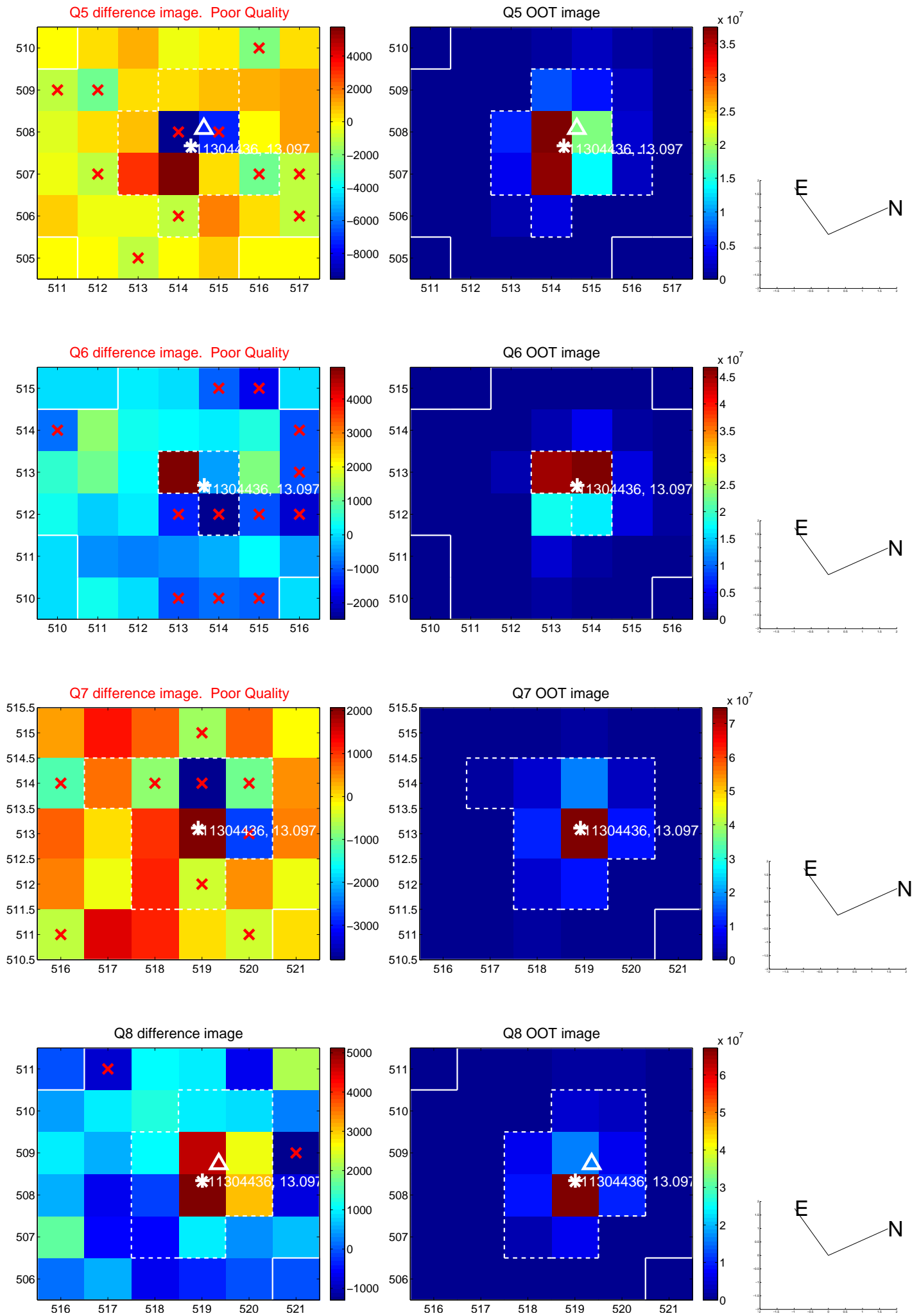


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

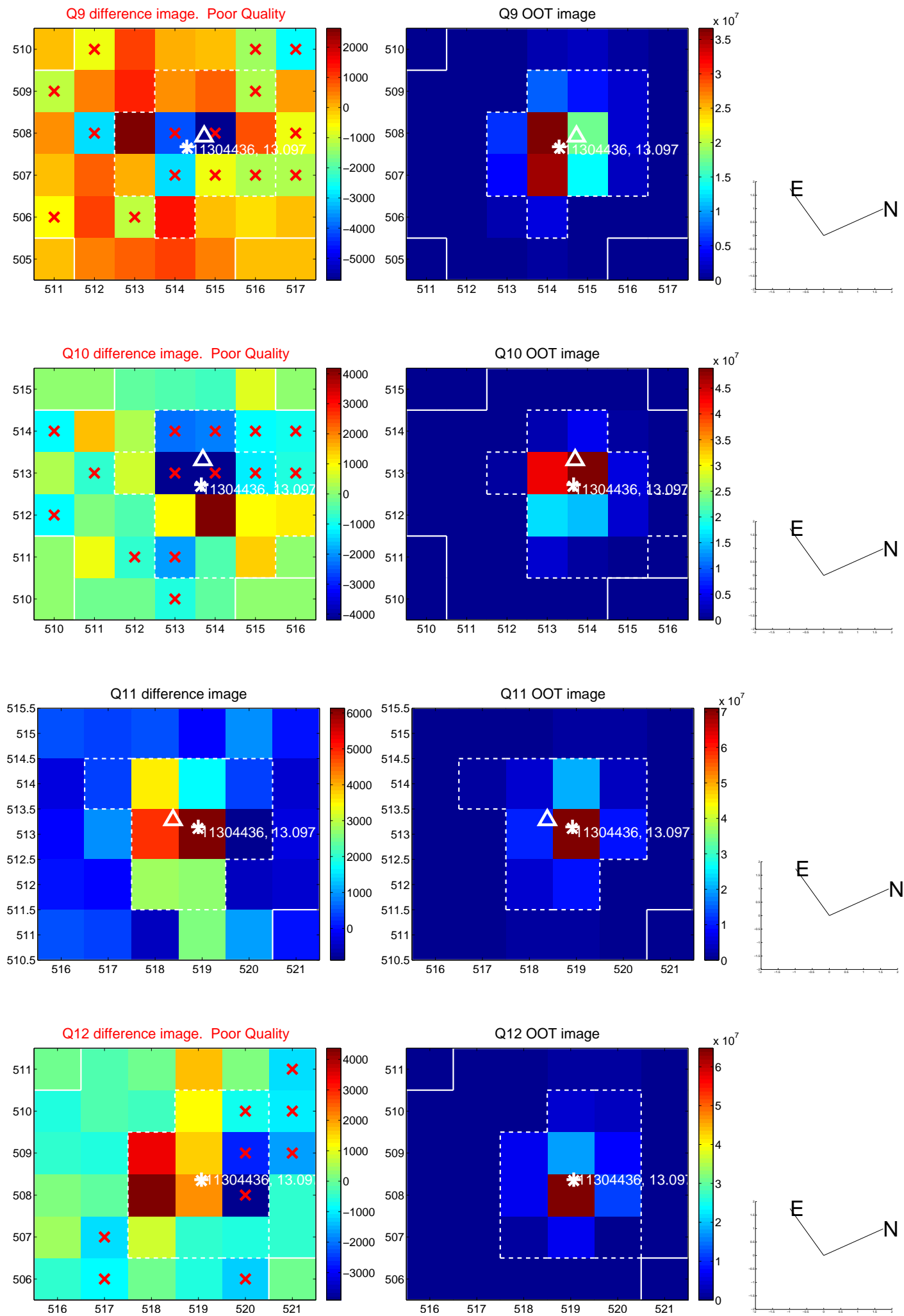
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



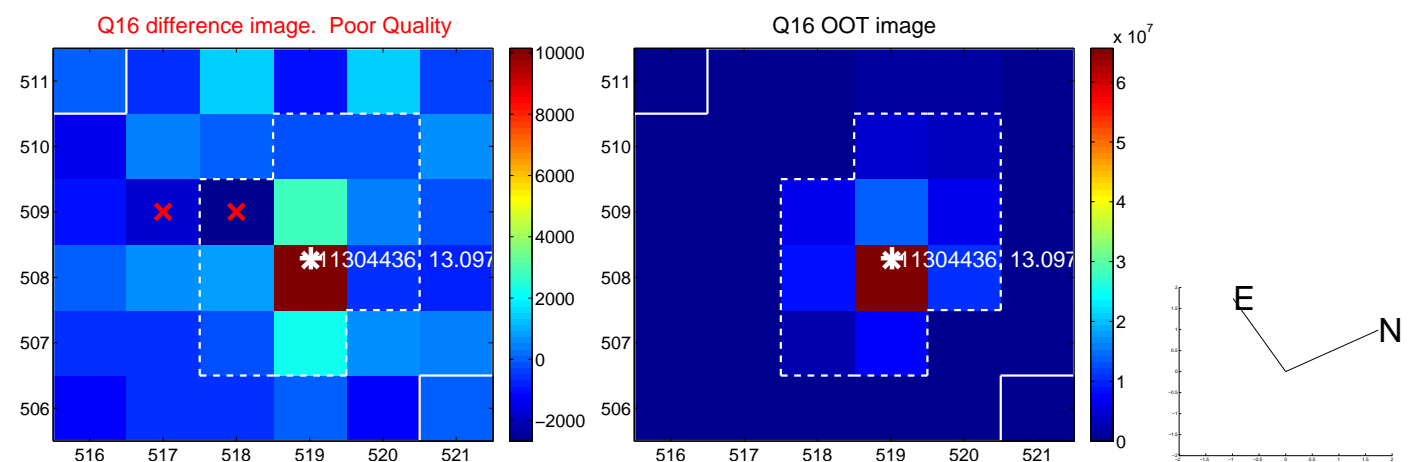
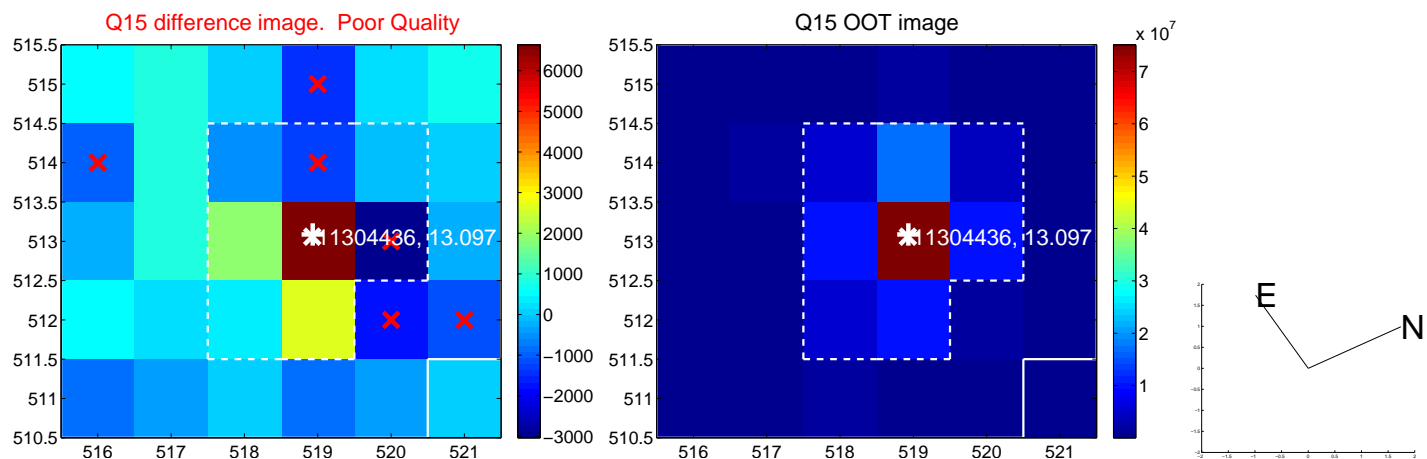
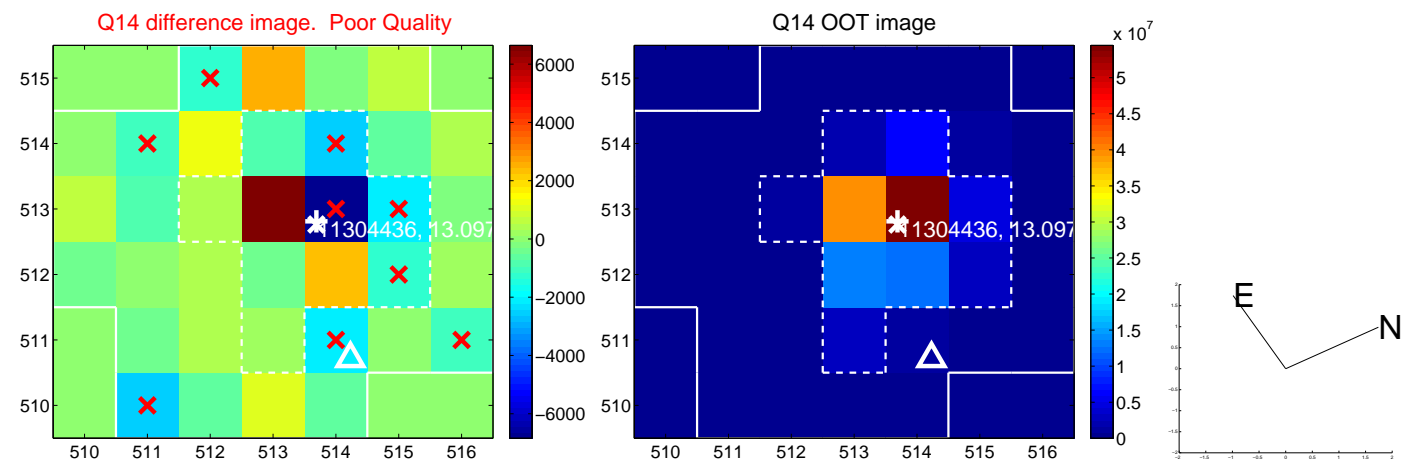
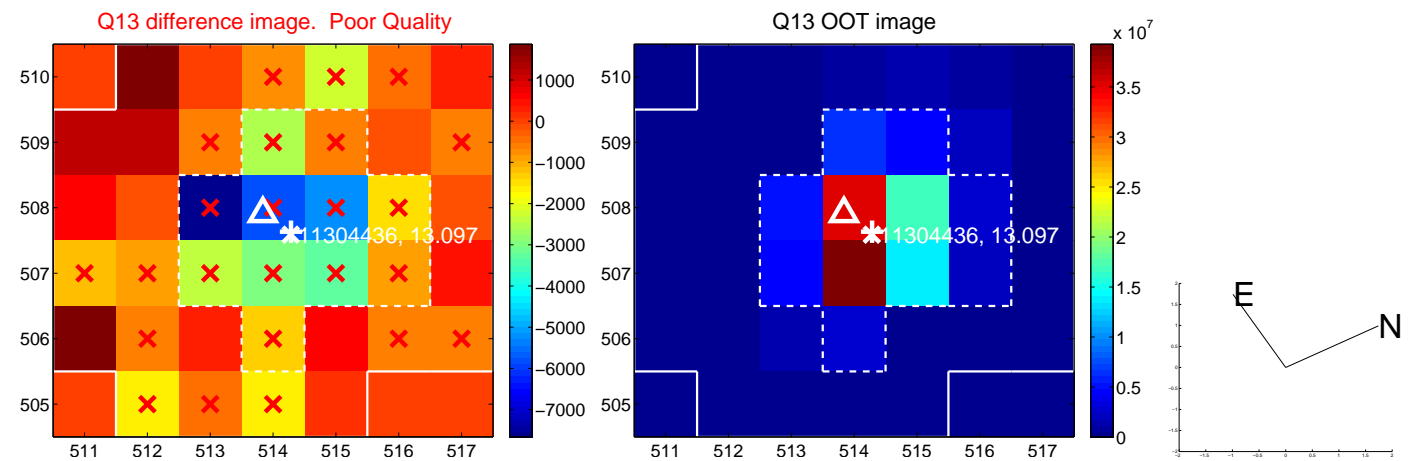
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



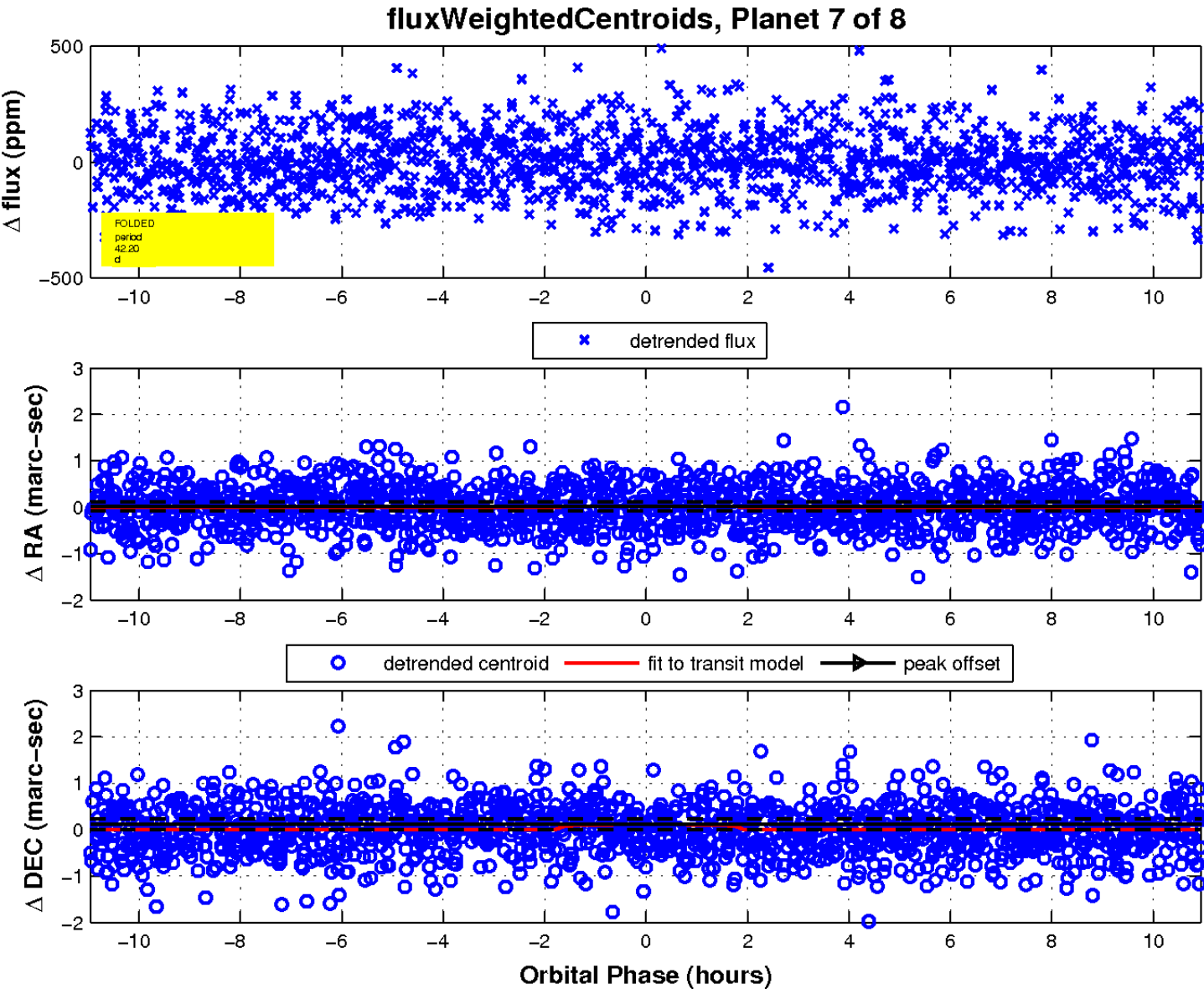
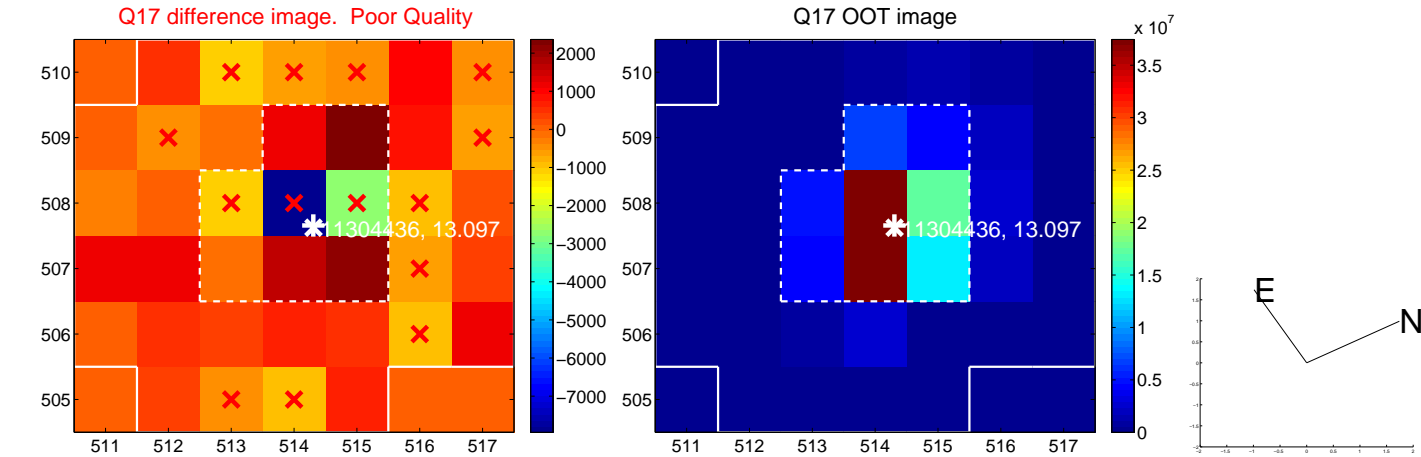
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

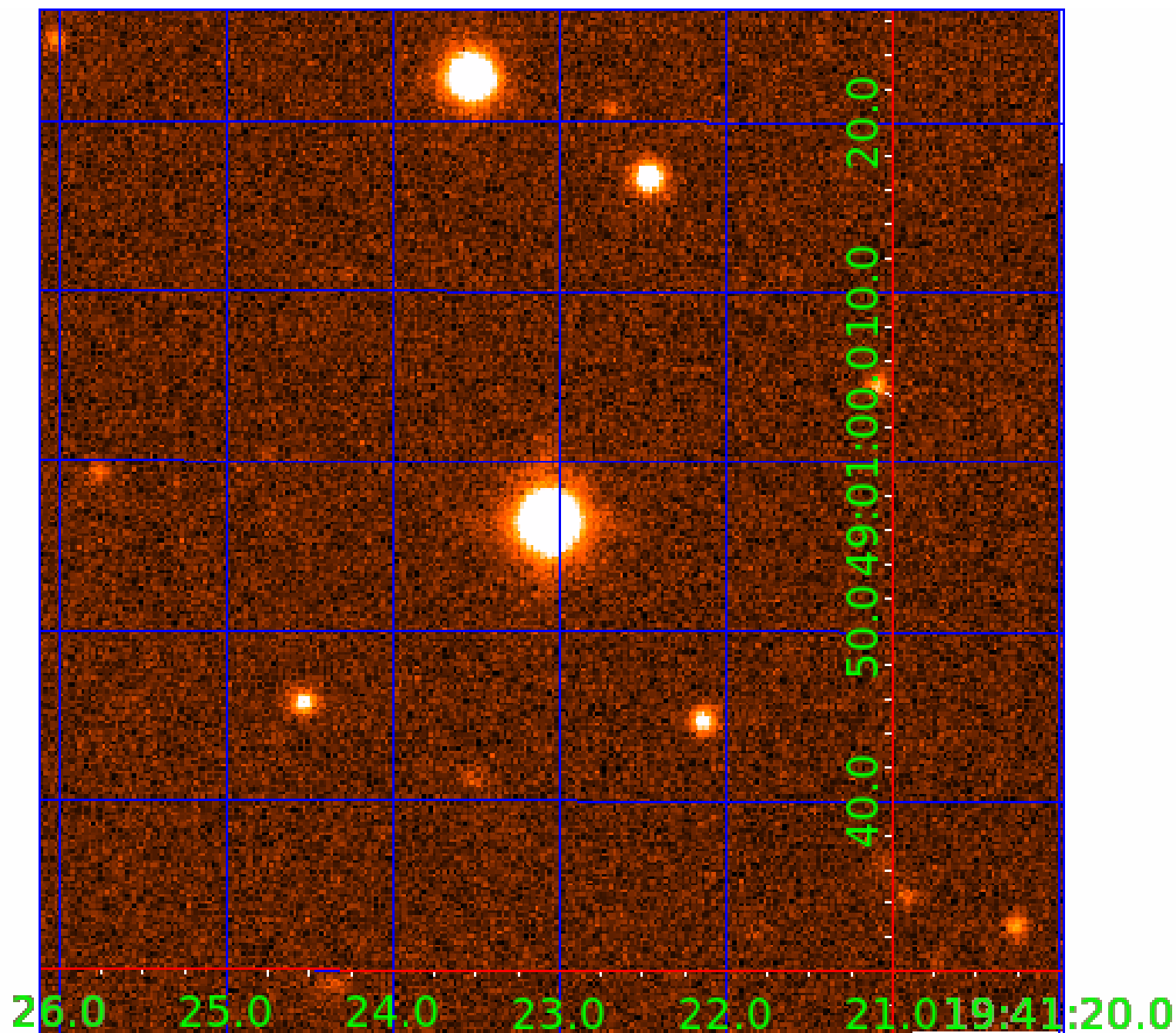


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011304436

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})
011304436-01	OBS	No	2.833515	131.854094	1.8	20.027	10.6	0.8	1.49	6484	0.20	2072.71
011304436-02	OBS	No	66.705431	190.918154	236.3	6.296	17.0	11.2	1.49	6484	2.58	30.72
011304436-03	OBS	No	77.067234	195.112592	184.3	7.880	11.7	10.4	1.49	6484	2.30	25.34
011304436-04	OBS	No	16.155828	139.853765	132.8	2.886	11.0	10.9	1.49	6484	2.01	203.49
011304436-05	OBS	No	104.704329	168.372461	202.8	3.212	9.6	9.6	1.49	6484	2.50	16.84
011304436-06	OBS	No	27.067898	134.996755	218.9	1.489	9.1	9.3	1.49	6484	2.74	102.26
011304436-07	OBS	No	42.203032	139.013905	148.6	3.653	8.8	9.9	1.49	6484	1.99	56.56
011304436-08	OBS	No	35.660627	143.788307	186.5	2.869	8.8	8.5	1.49	6484	3.92	70.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011304436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011304436-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011304436-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011304436-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011304436-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—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.

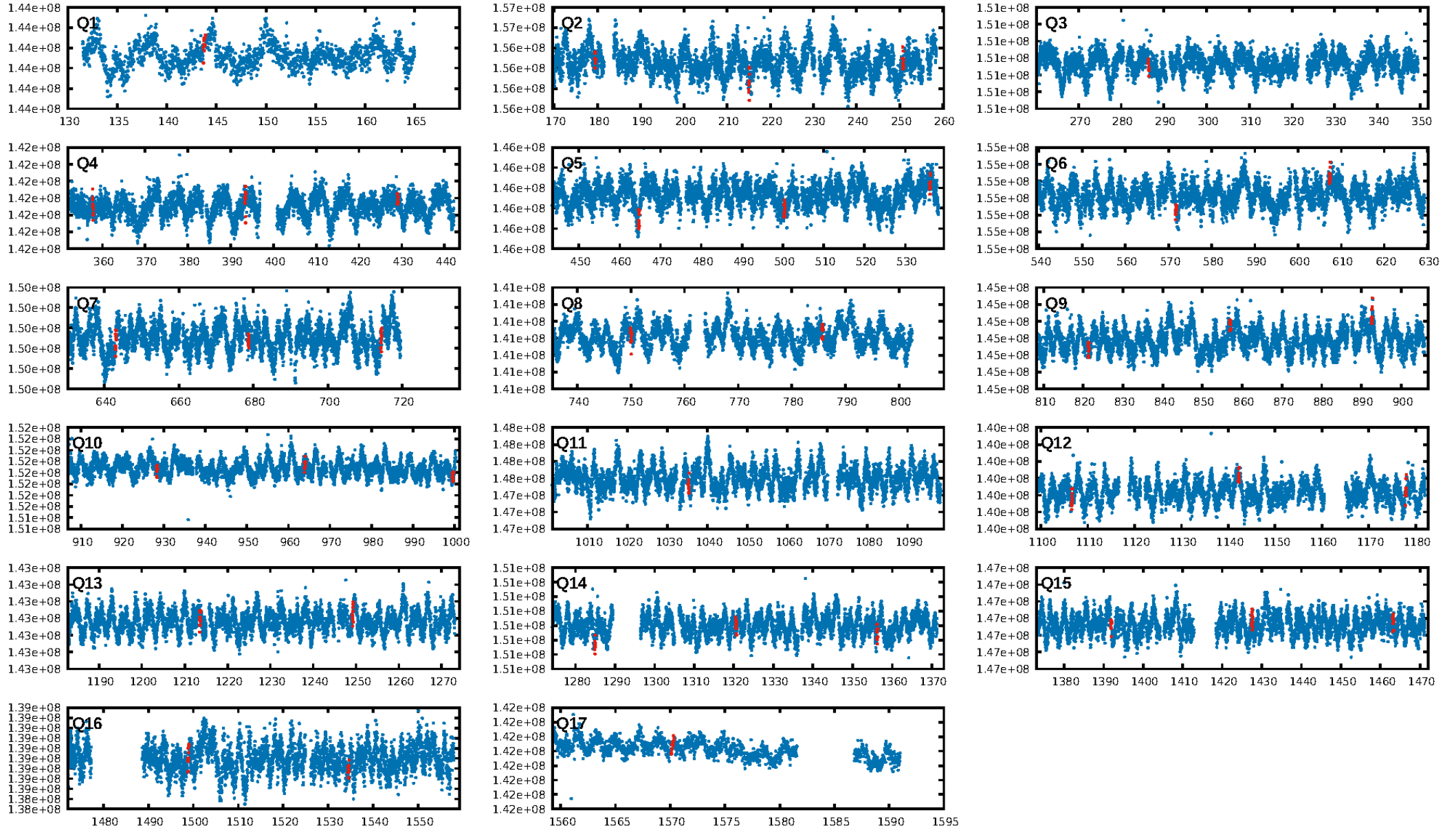
Ephemeris Match Information For 011304436-08

No Significant Match Found

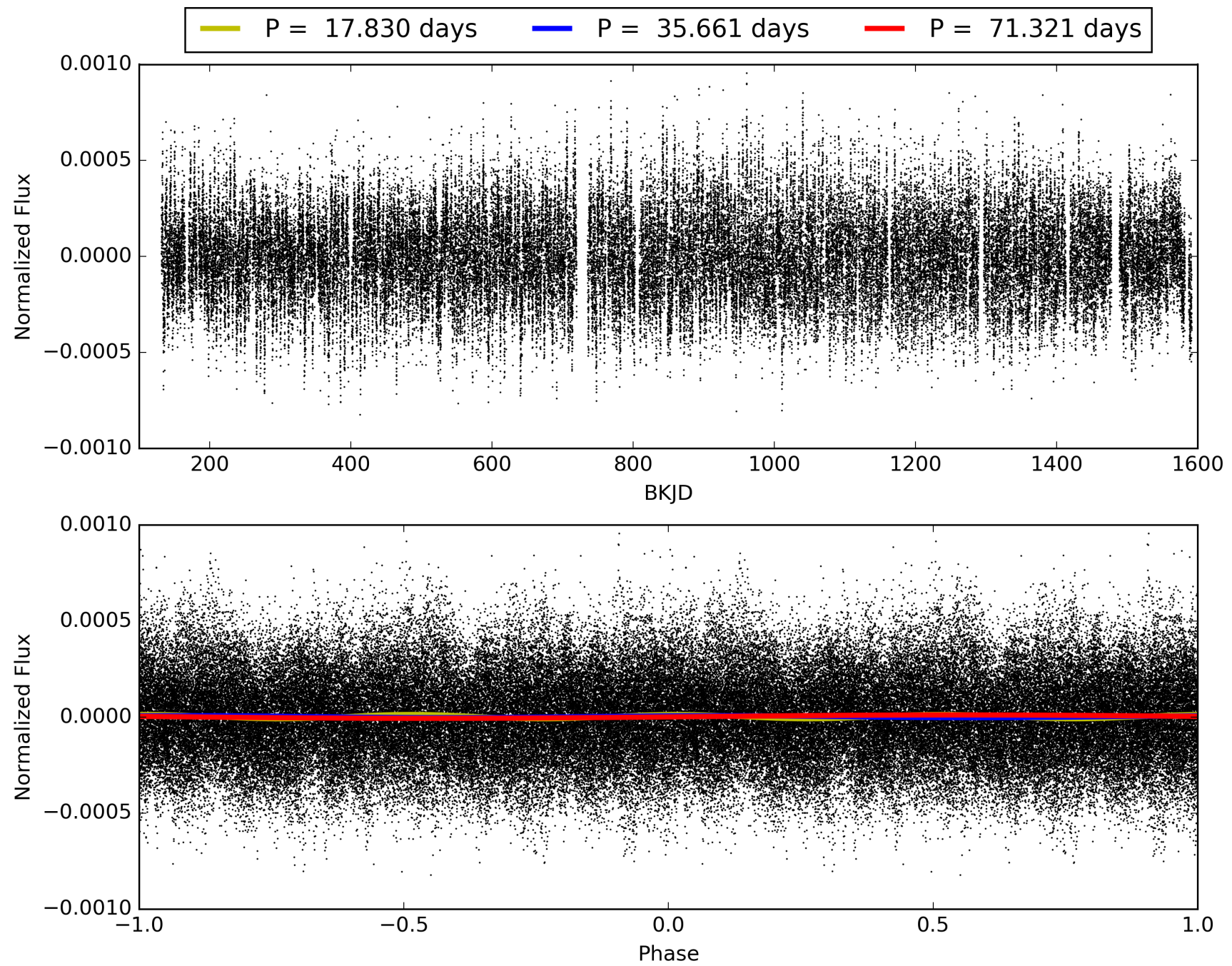
KIC: 11304436 Candidate: 8 of 8 Period: 35.661 d



TCE 011304436-08, PDC Light Curves

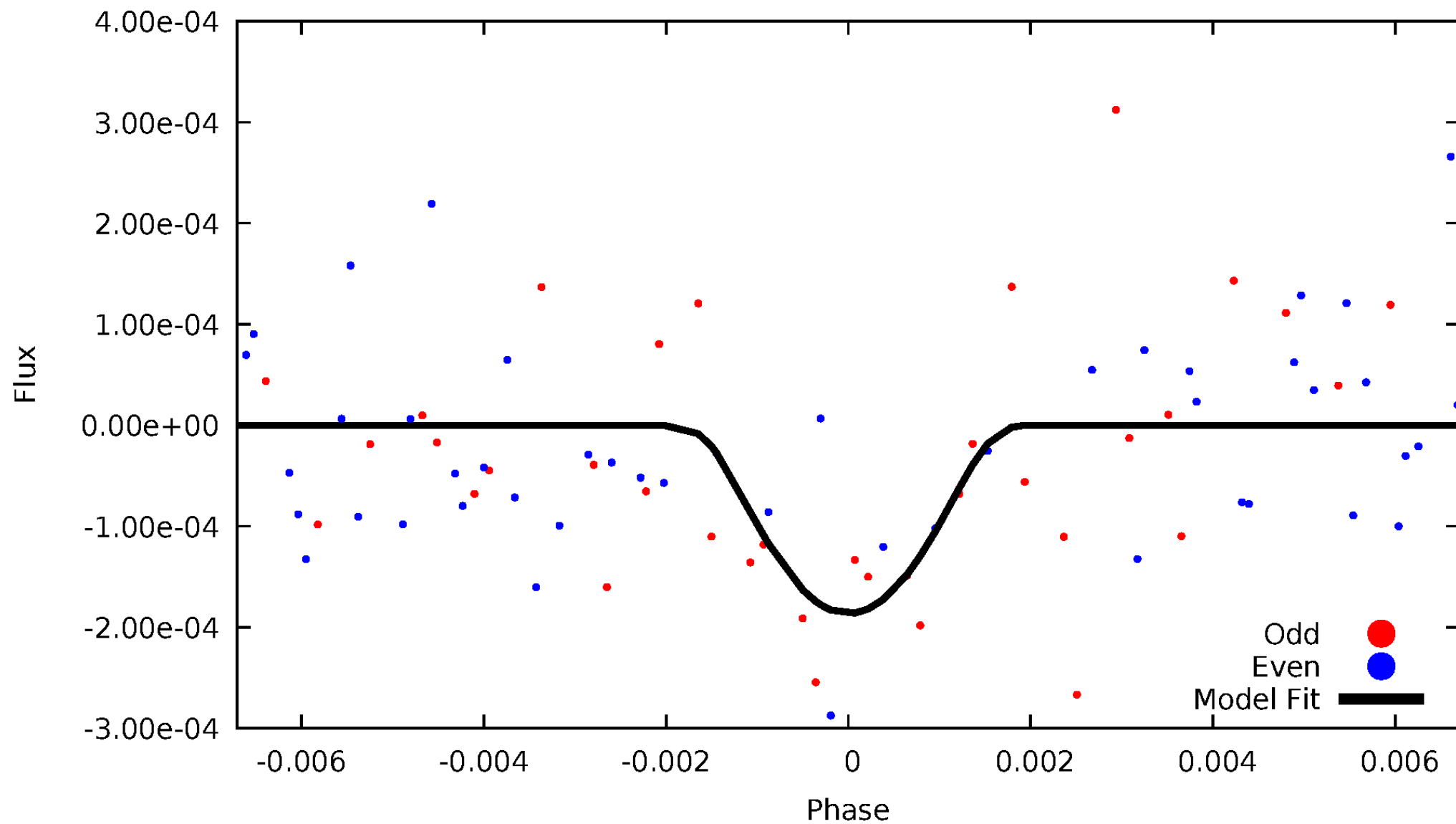


TCE 011304436-08



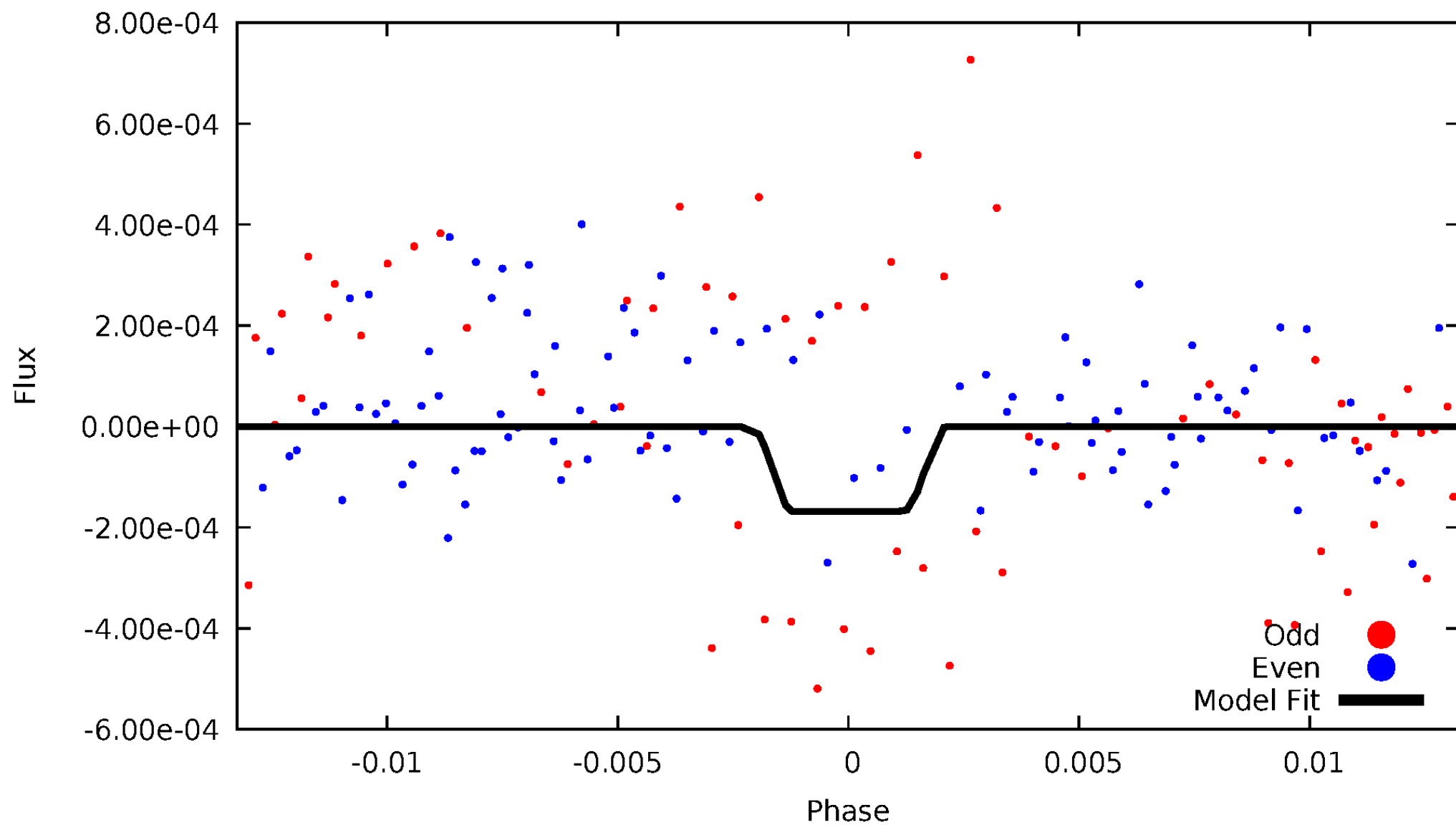
DV Odd/Even

TCE 011304436-08



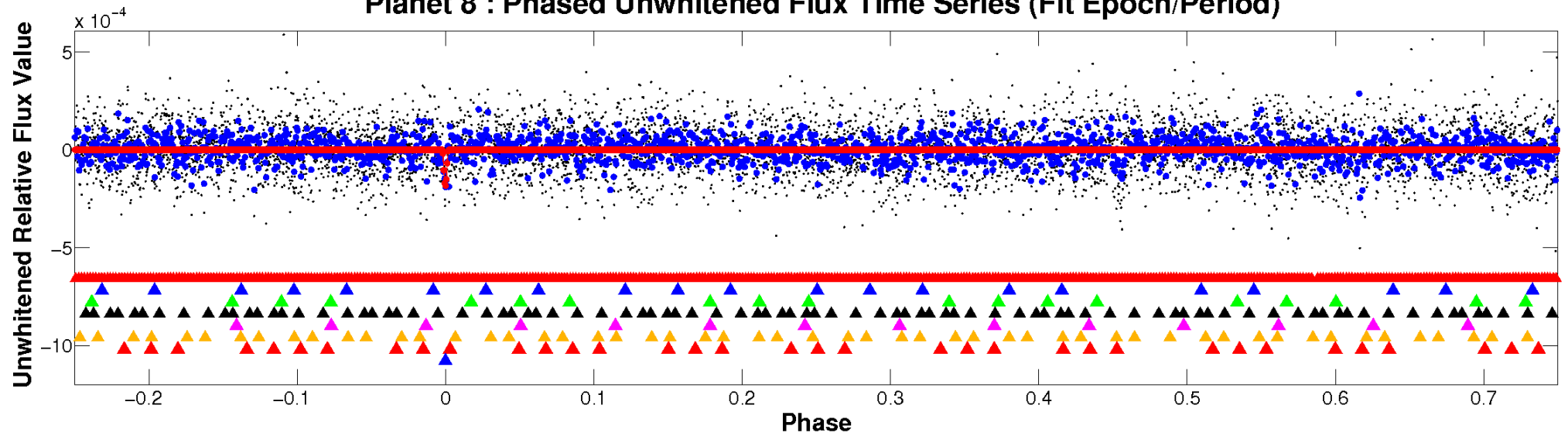
ALT Odd/Even

TCE 011304436-08

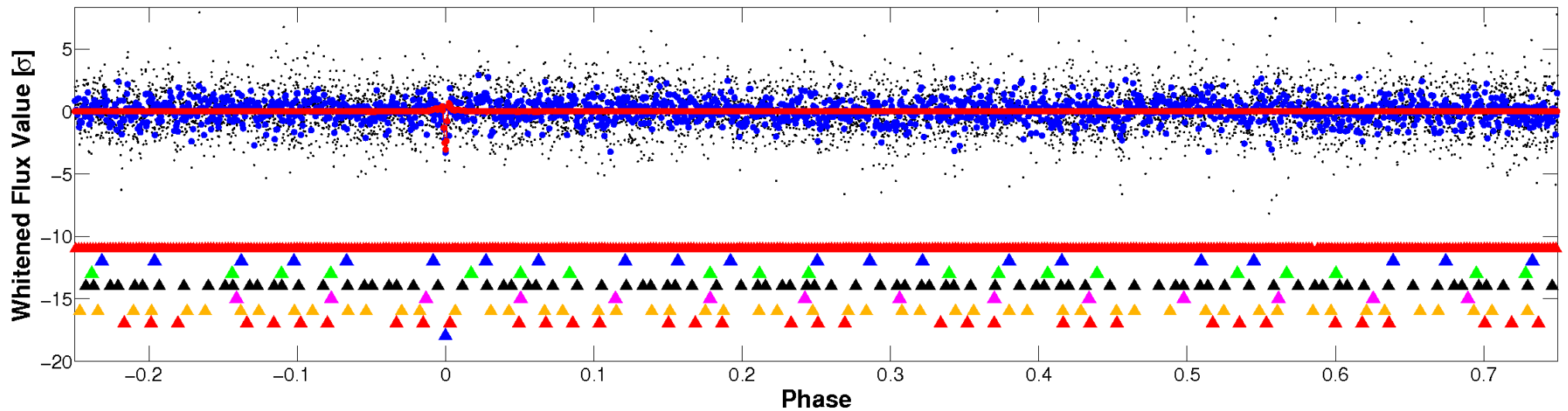


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

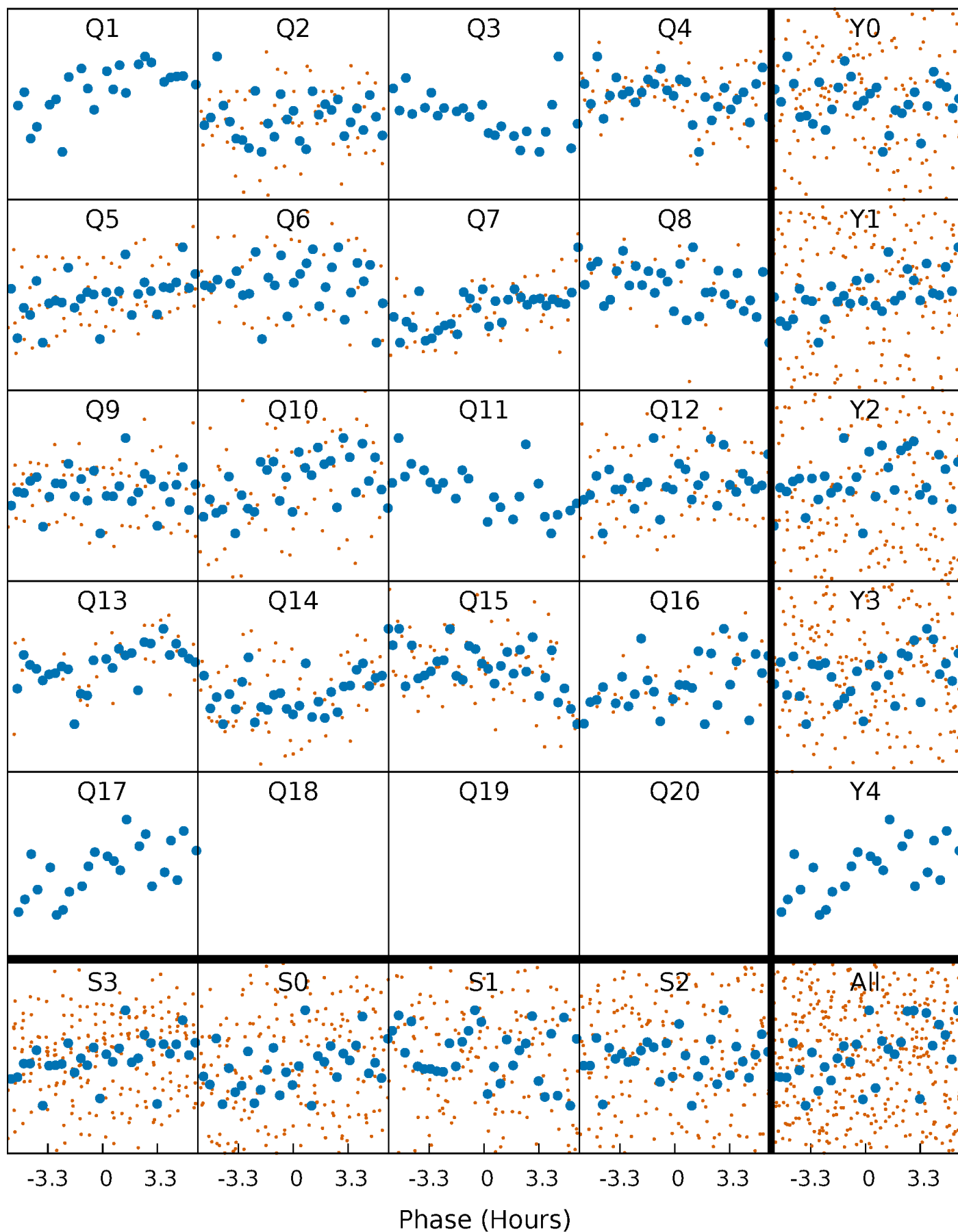


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



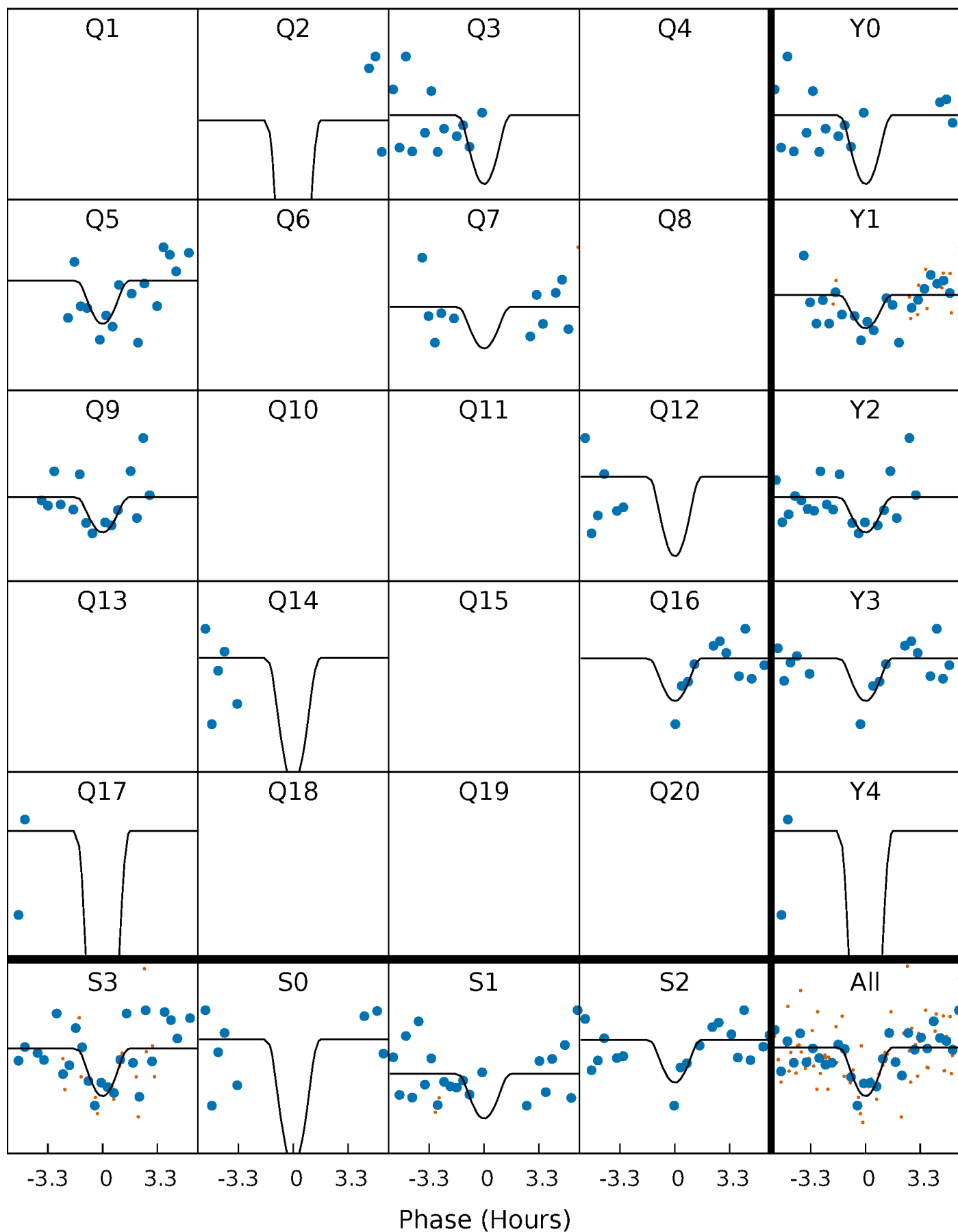
PDC Quarter-Phased Transit Curves

TCE 011304436-08 P= 35.660627 Days $T_0=143.788307$ (BKJD)



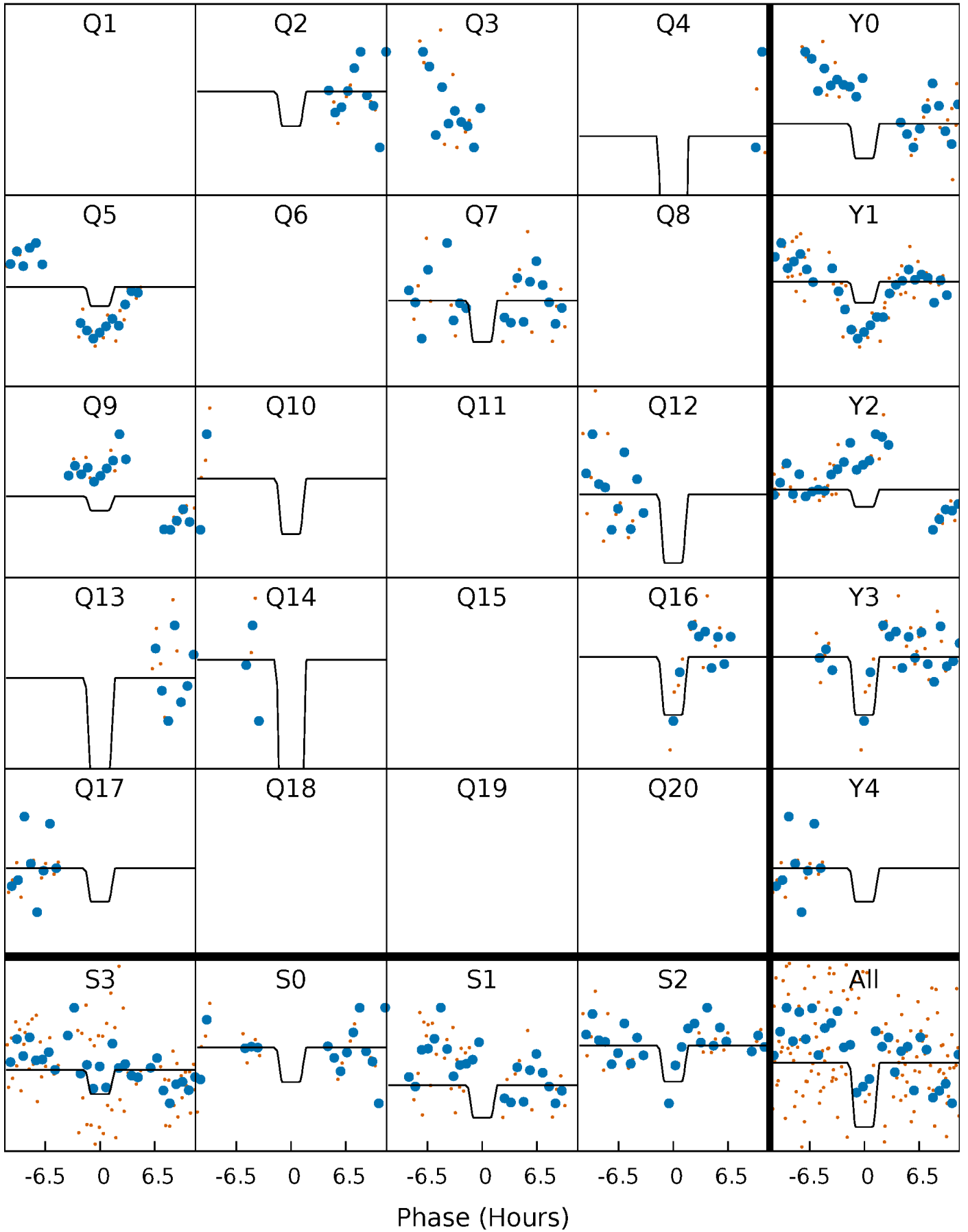
DV Quarter-Phased Transit Curves

TCE 011304436-08 P= 35.660627 Days $T_0=143.788307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

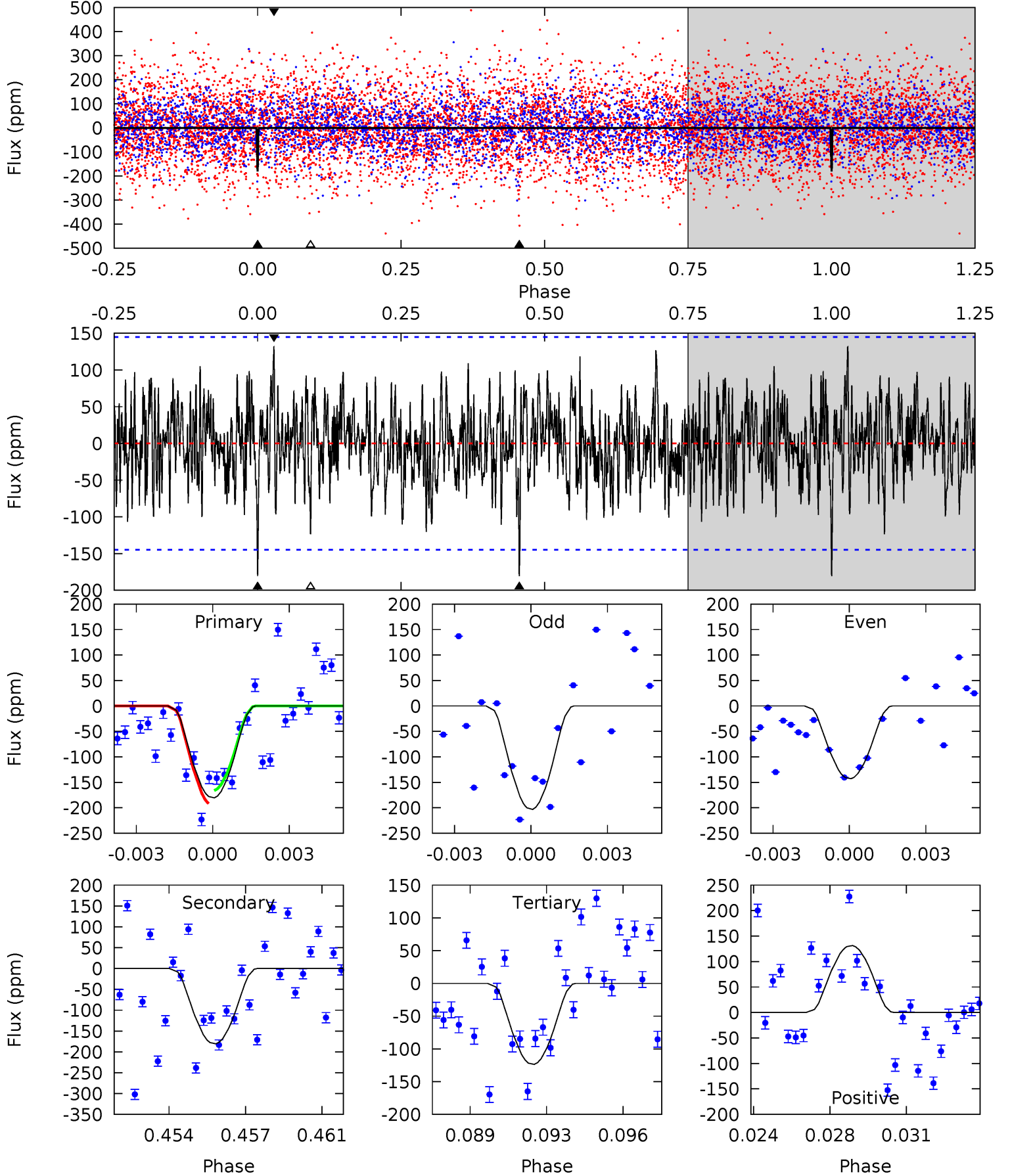
TCE 011304436-08 P= 35.660563 Days $T_0=143.799980$ (BKJD)



DV Model-Shift Uniqueness Test

011304436-08, P = 35.660627 Days, E = 108.127680 Days

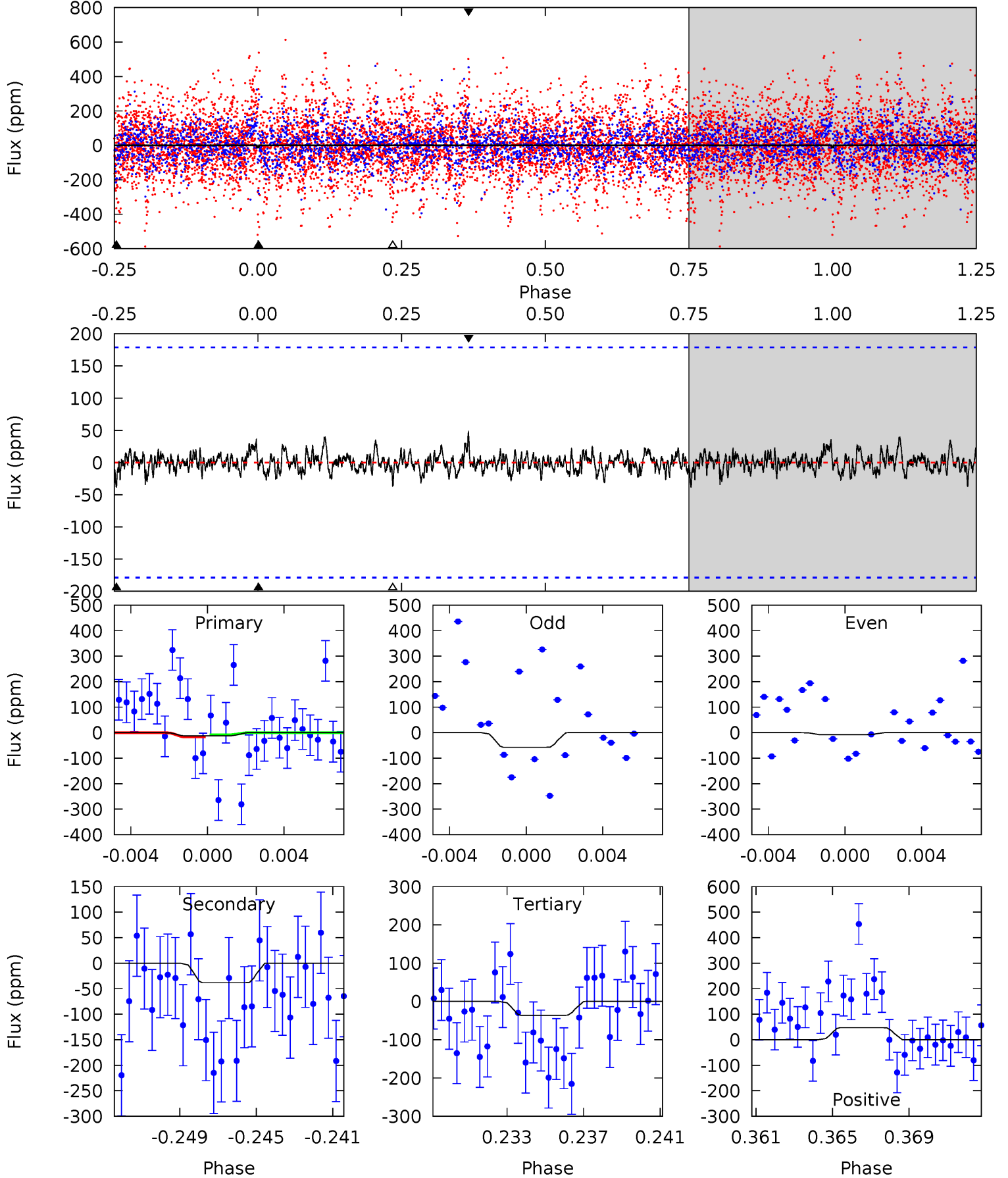
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.52	6.52	4.46	4.74	5.23	2.93	1.54	2.05	1.77	2.06	1.78	1.07	0.83	0.42	0.46



Alt Model-Shift Uniqueness Test

011304436-08, P = 35.660563 Days, E = 108.139417 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.36	1.12	1.06	1.38	5.20	2.88	0.34	-0.70	-1.02	0.06	-0.26	0.73	-0.25	0.55	0.12



Stellar Parameters For KIC 011304436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+181}_{-250}	$4.157^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.493^{+0.442}_{-0.362}$	$1.166^{+0.192}_{-0.157}$	$0.493^{+0.585}_{-0.235}$
	+3%/-4%	+5%/-4%	+139%/-167%	+30%/-24%	+16%/-13%	+118%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011304436-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-181 ± 28	$25.41^{+26.97}_{-18.31}$	1025^{+76}_{-72}	2661^{+1186}_{-464}	$7.886^{+89.278}_{-6.202}$
Alt.	-38 ± 34	$24.80^{+25.61}_{-17.97}$	1026^{+79}_{-78}	2079^{+861}_{-3895}	$1.165^{+15.515}_{-1.066}$

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

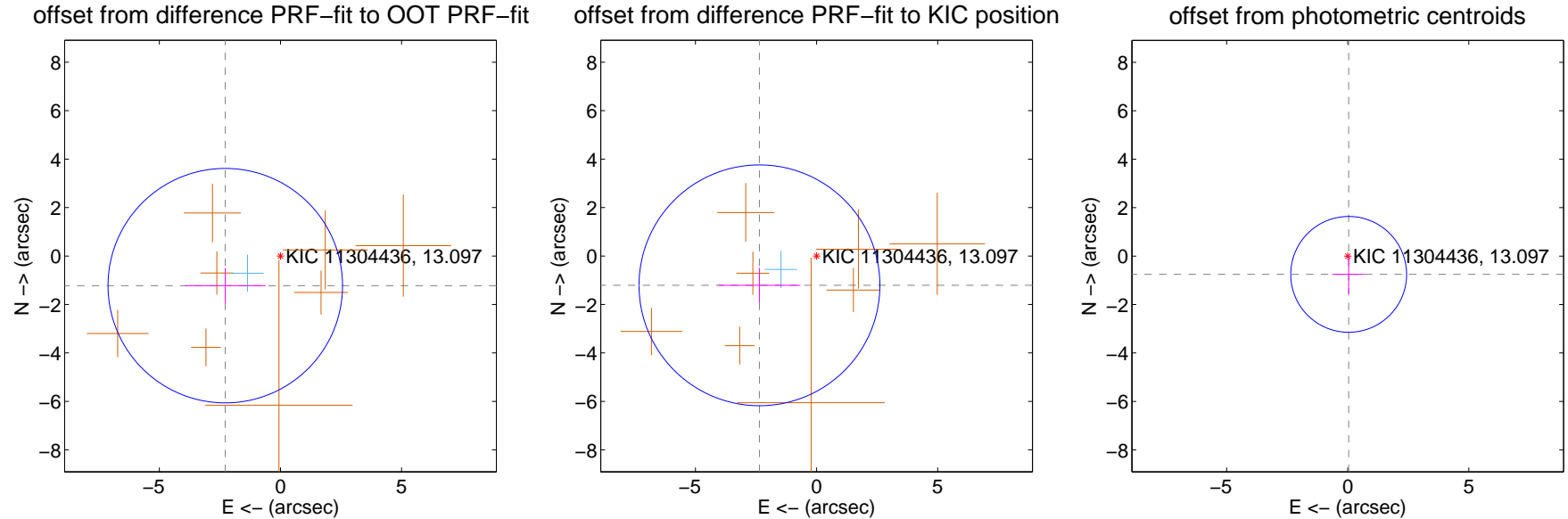
DV Centroid Data

Supplemental centroid analysis for 011304436-08. Kepler magnitude: 13.10. Transit SNR 8.54

There are 1 quarters with good PRF difference image offsets

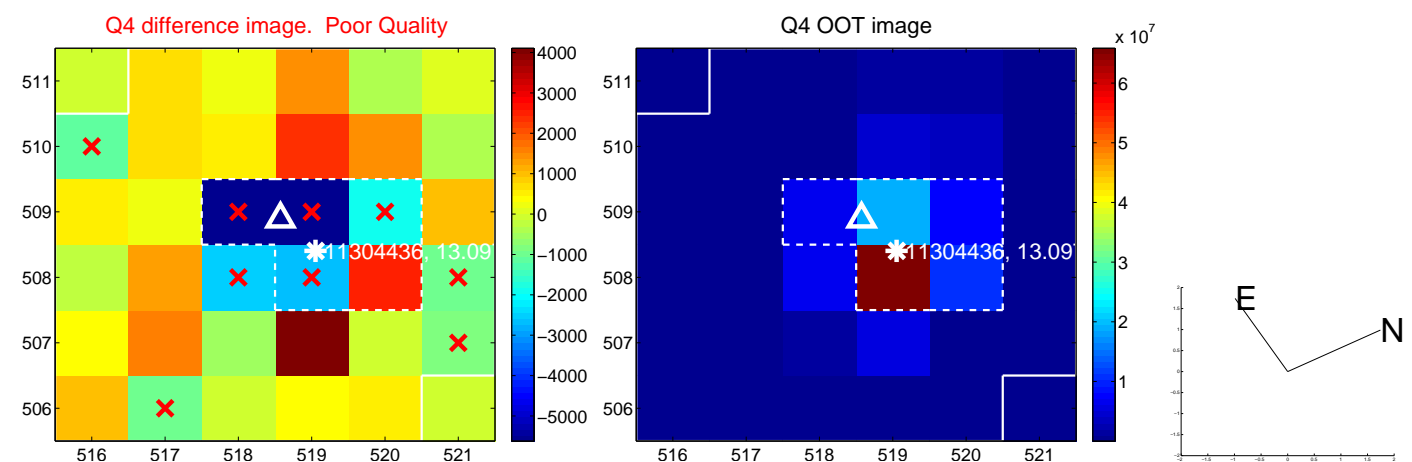
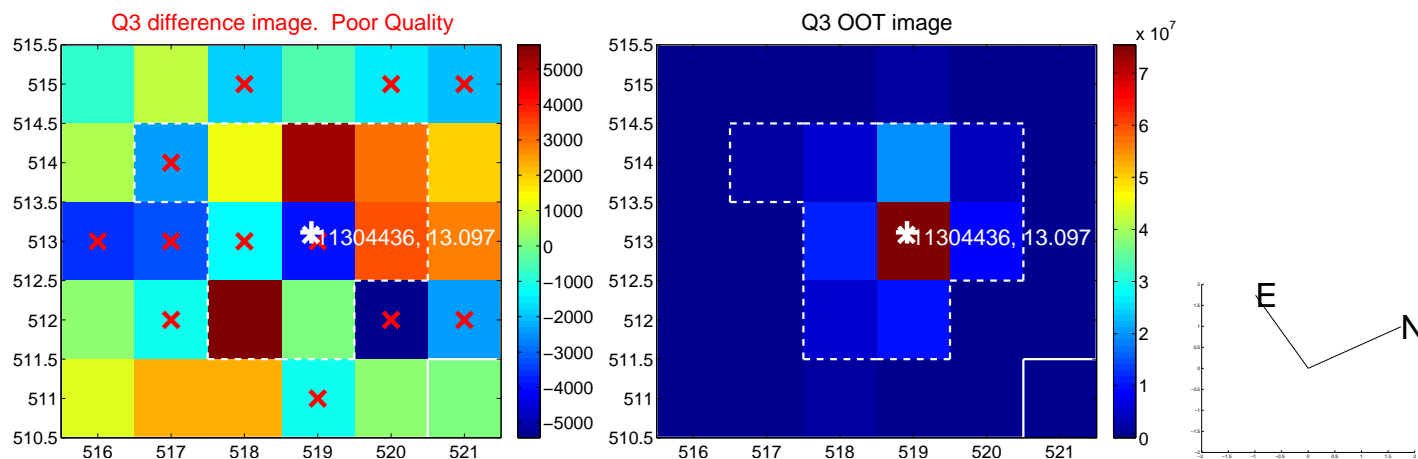
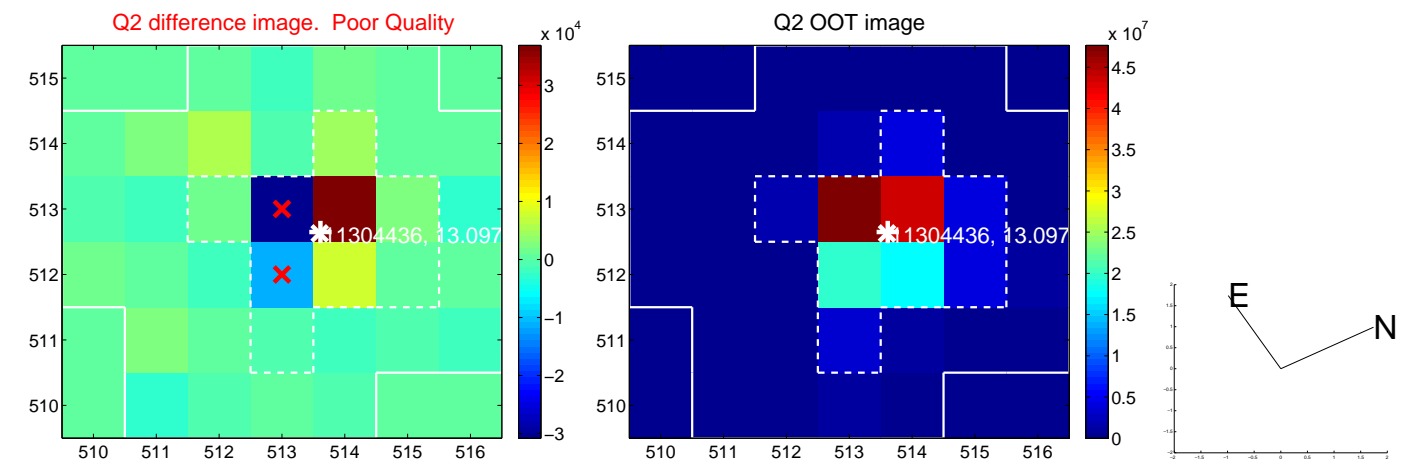
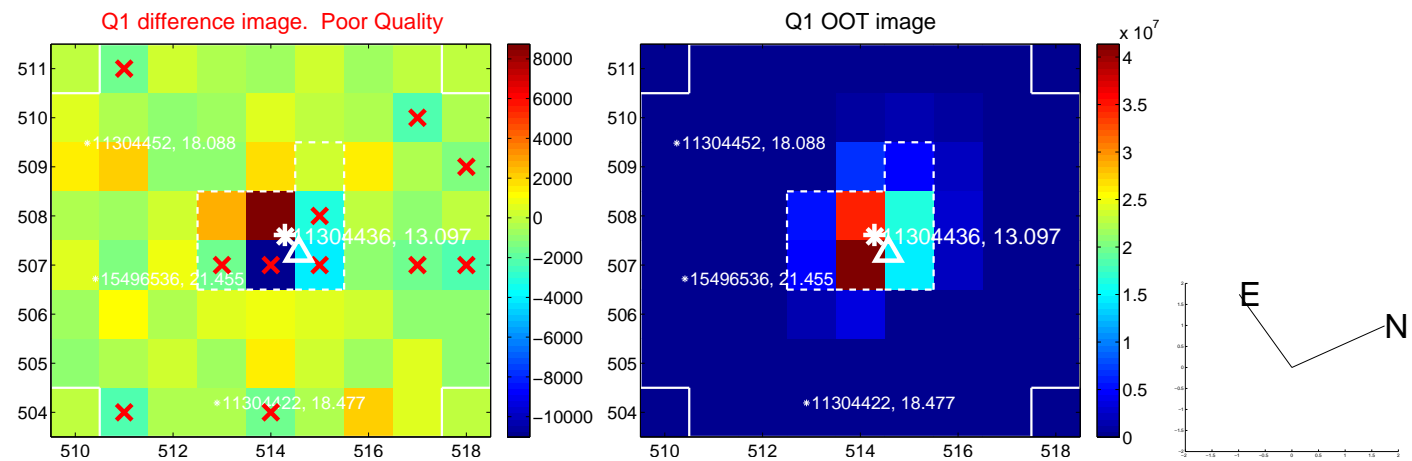
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.585 ± 1.613	1.60	2.277 ± 1.659	-1.223 ± 0.733
PRF-fit source offset from KIC position	2.650 ± 1.657	1.60	2.358 ± 1.692	-1.209 ± 0.723
photometric centroid source offset	0.76 ± 0.80	0.95	-0.04 ± 0.68	-0.75 ± 0.80

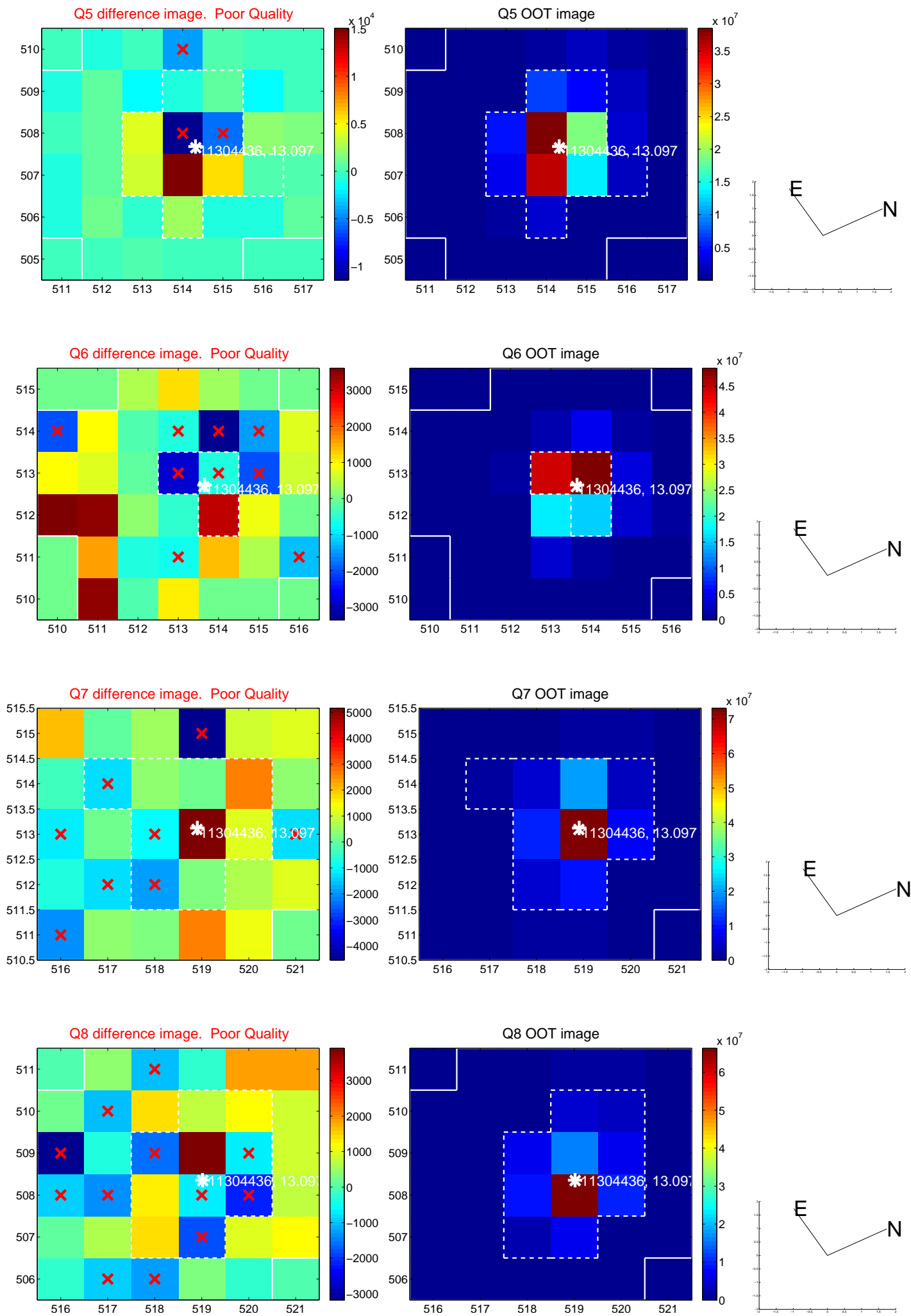


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

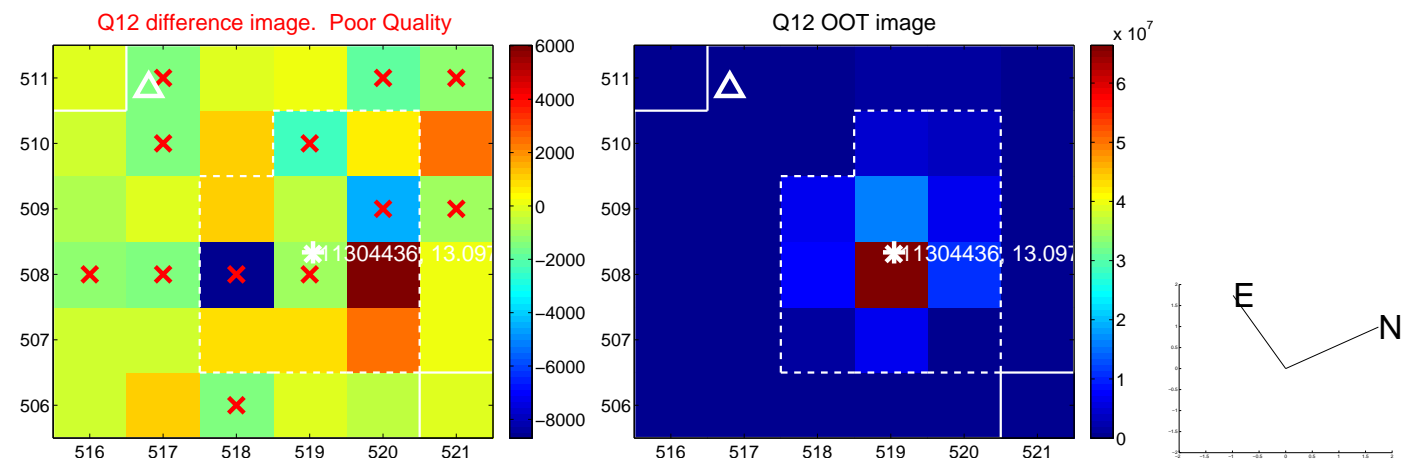
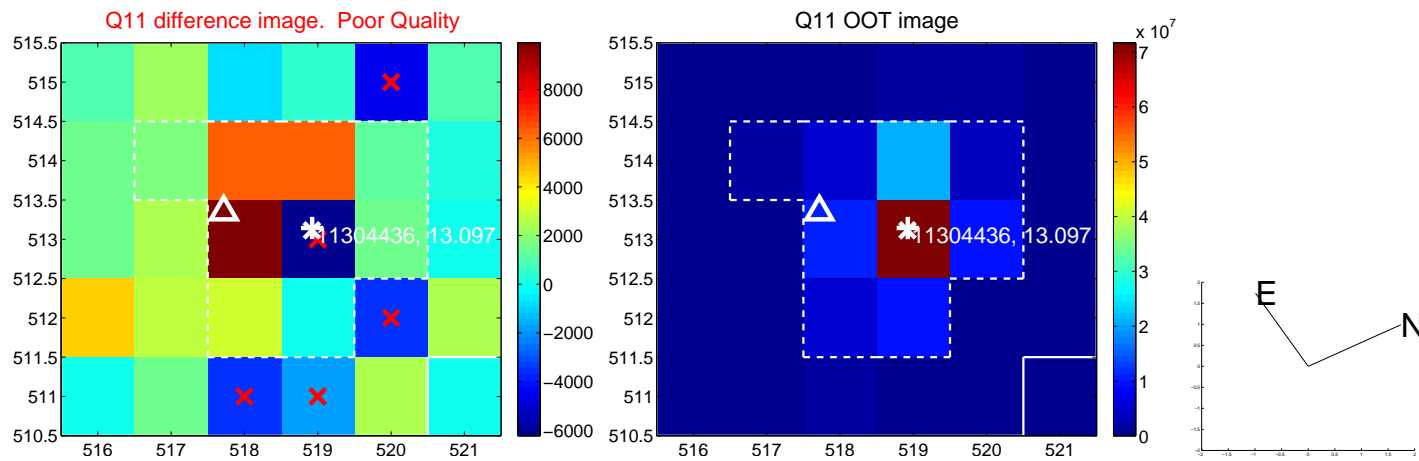
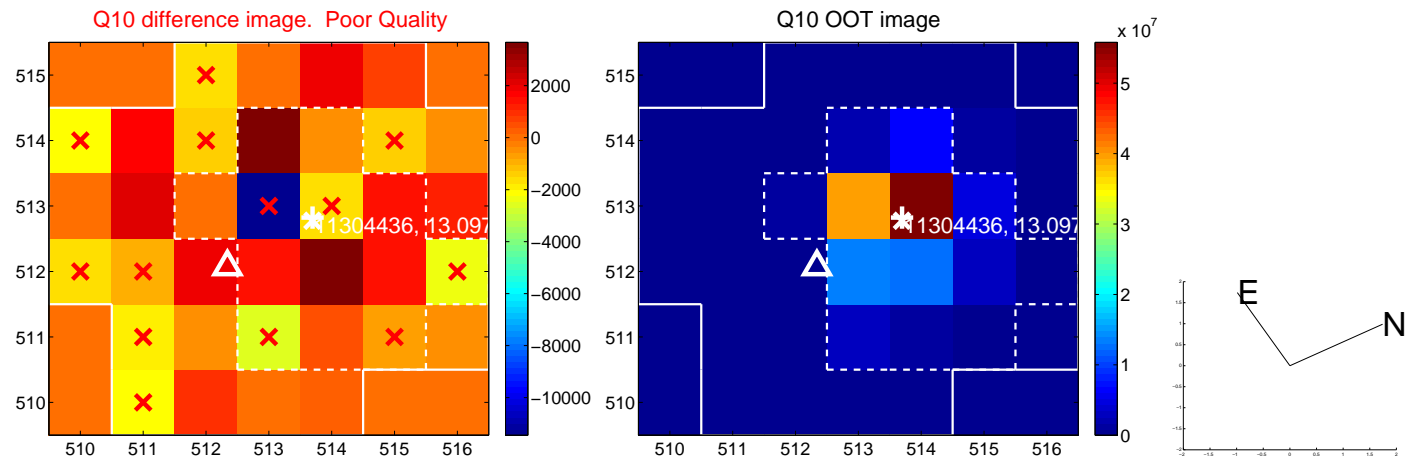
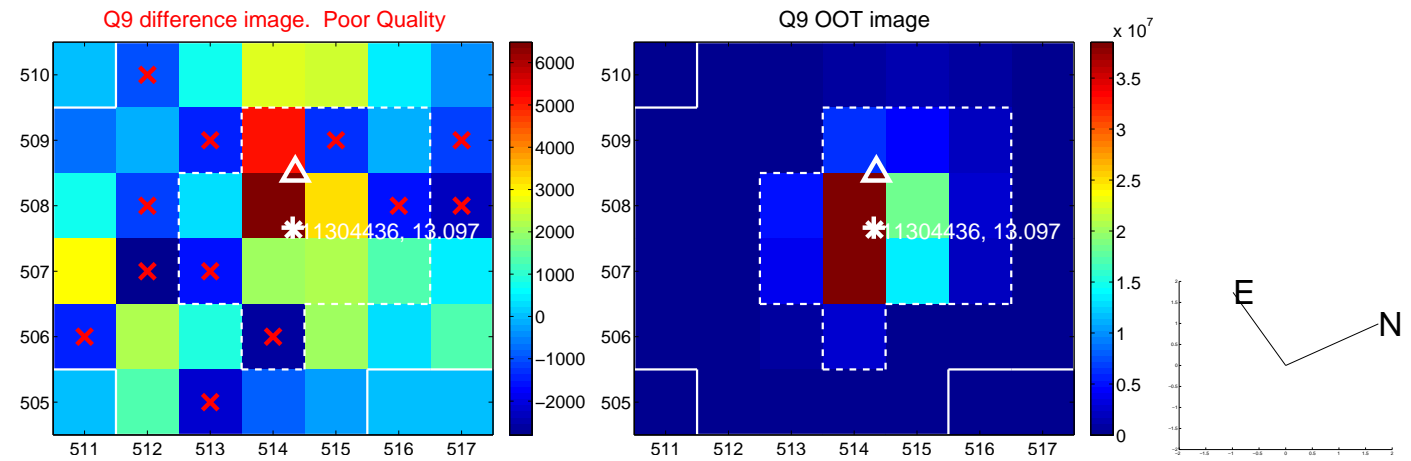
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



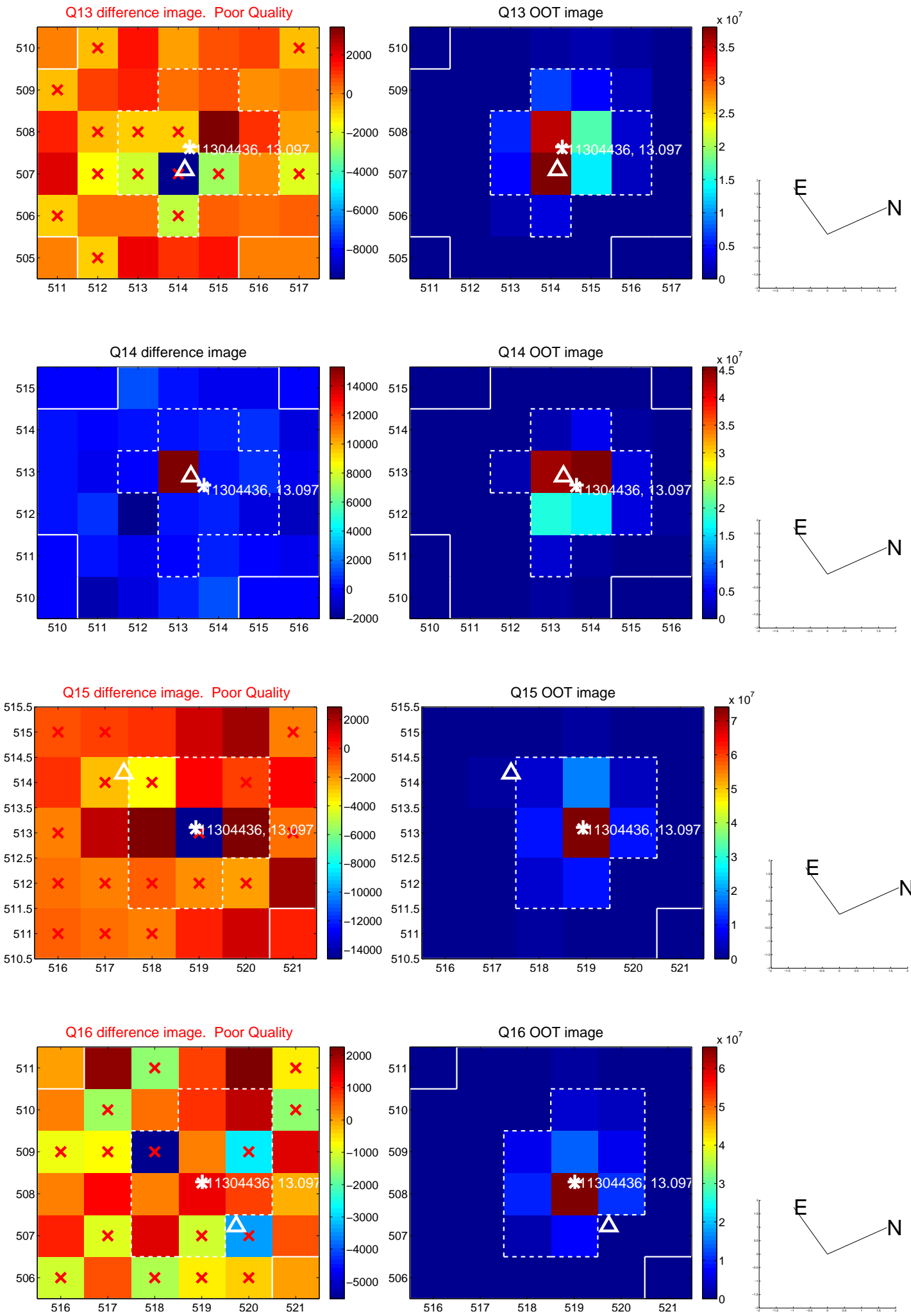
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



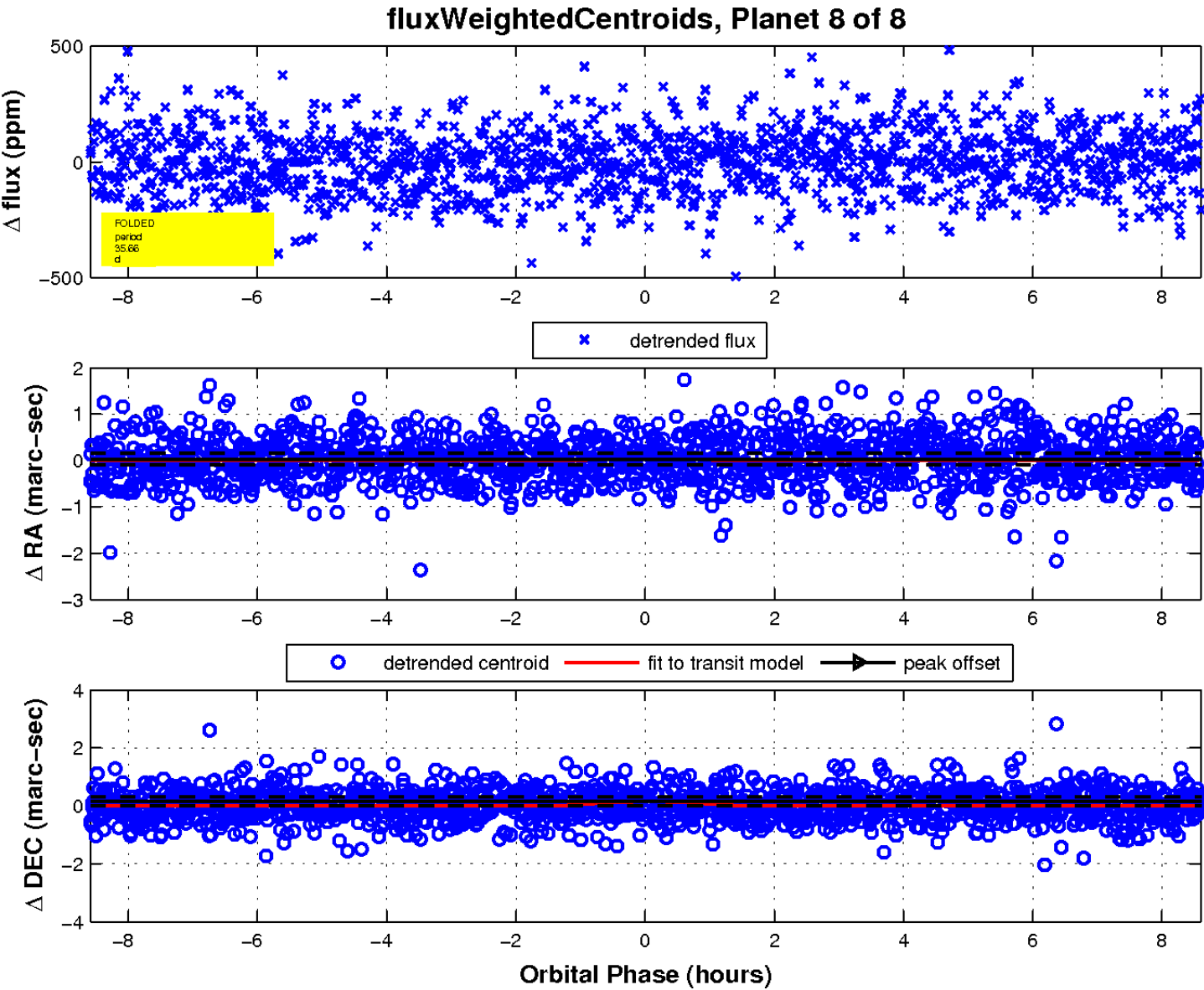
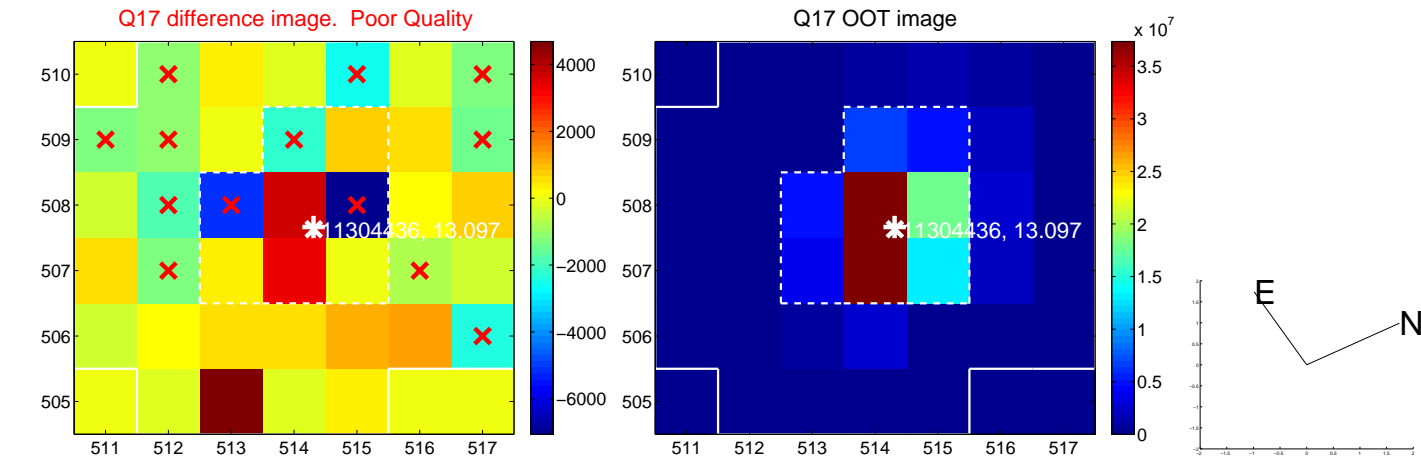
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

