

KIC 012207432

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})
012207432-01	OBS	No	468.148662	147.089064	3653.3	4.273	13.8	7.6	0.46	3680	3.31	0.04
012207432-02	OBS	No	1.691741	133.160377	377.4	3.838	10.1	12.0	0.46	3680	1.23	74.64
012207432-03	OBS	No	279.766509	265.998218	2326.0	7.329	13.9	4.5	0.46	3680	2.21	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207432-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012207432-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
012207432-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

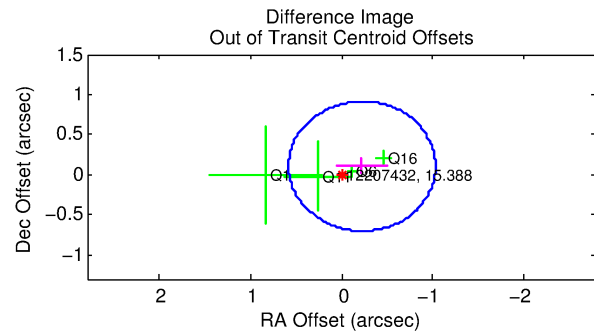
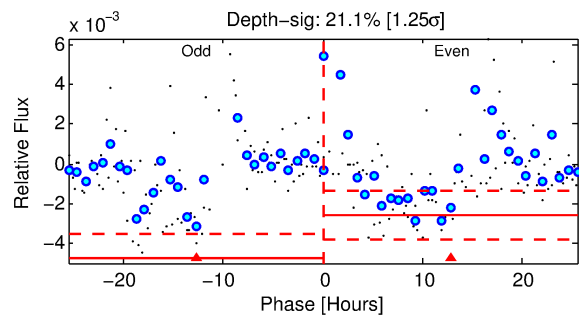
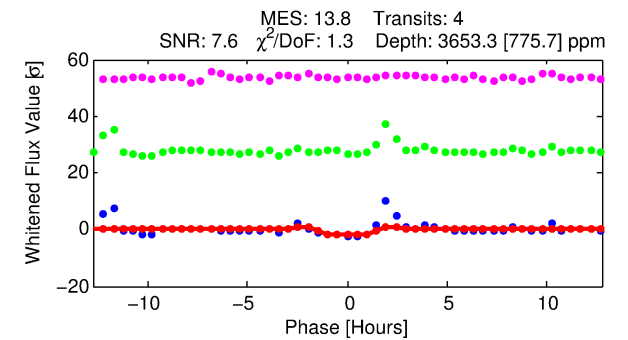
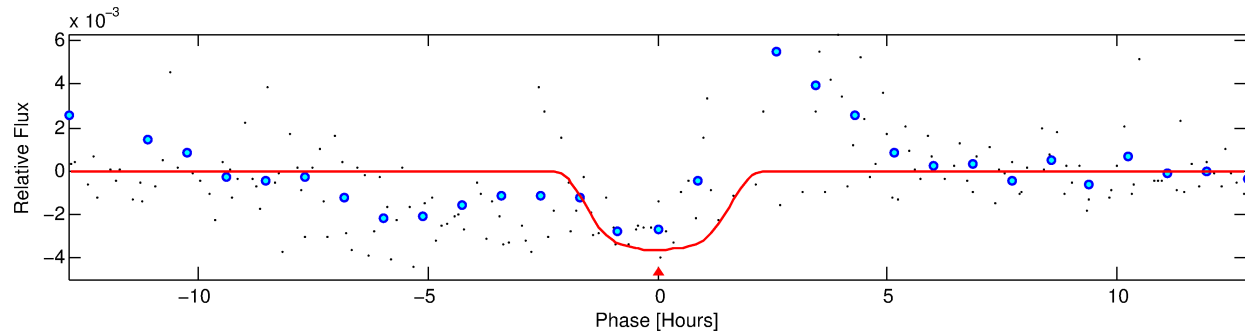
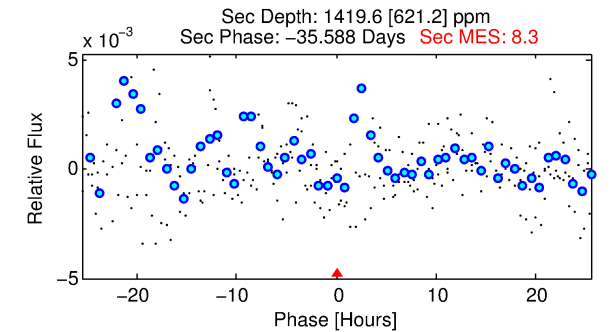
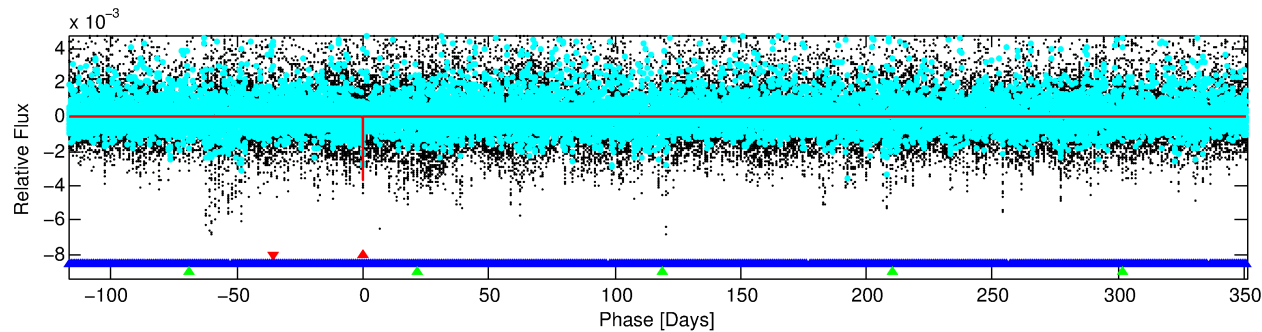
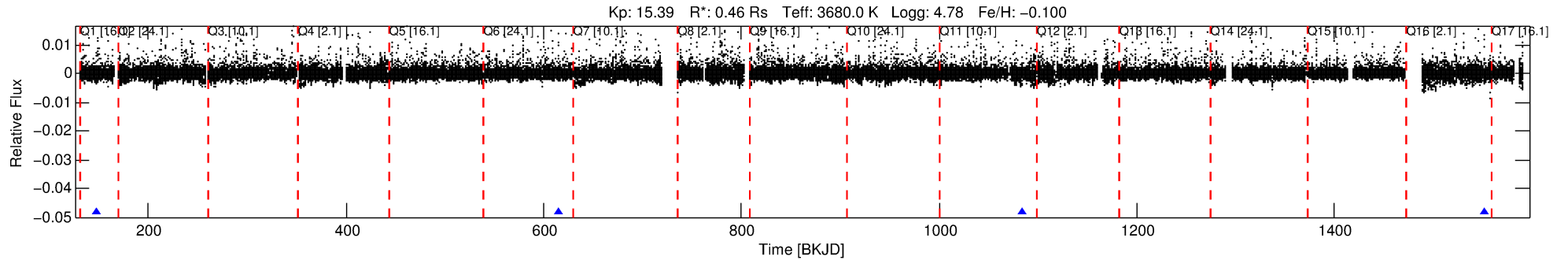
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207432-01

No Significant Match Found

DV One-Page Summary

KIC: 12207432 Candidate: 1 of 3 Period: 468.149 d



DV Fit Results:

Period = 468.14866 [0.00560] d
Epoch = 147.0891 [0.0104] BKJD
Rp/R* = 0.0658 [0.0094]
a/R* = 484.54 [136.81]
b = 0.89 [0.07]
Seff = 0.04 [0.00]
Teff = 115 [3] K
Rp = 3.31 [0.52] Re
a = 0.9185 [0.0472] AU
Ag = 60137.56 [31734.87] [1.89σ]
Teffp = 2785 [366] K [7.29σ]

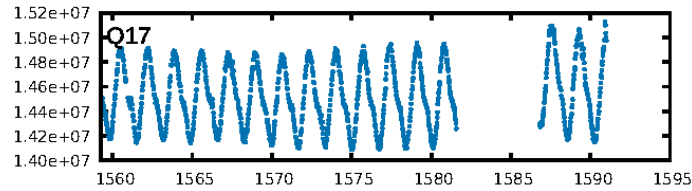
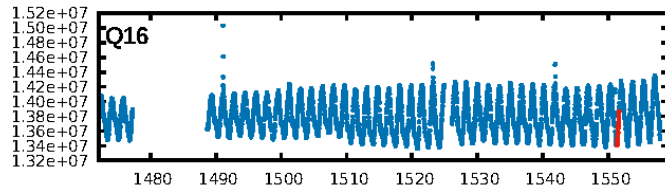
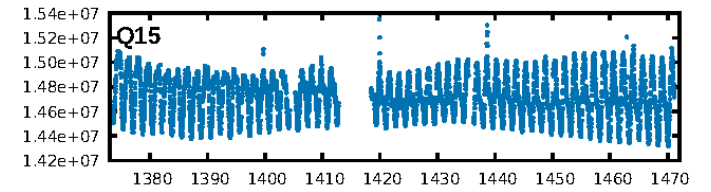
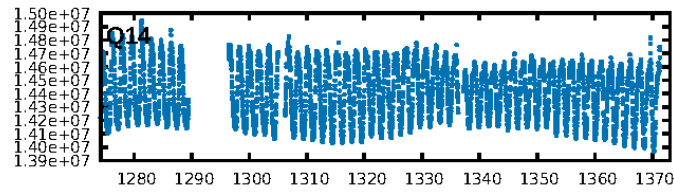
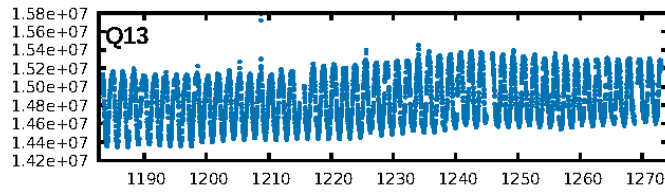
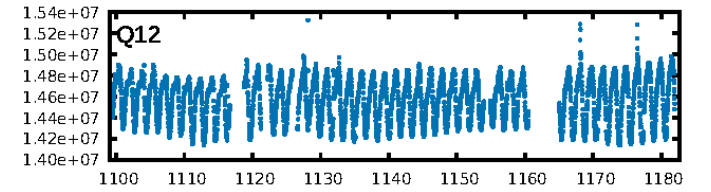
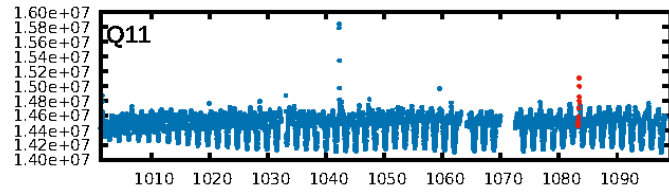
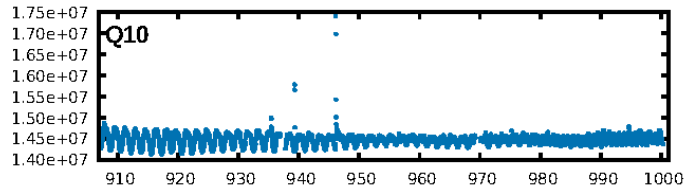
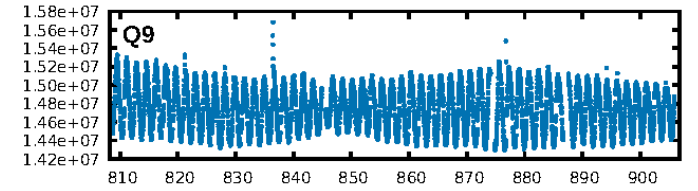
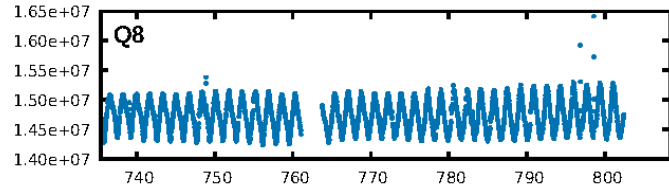
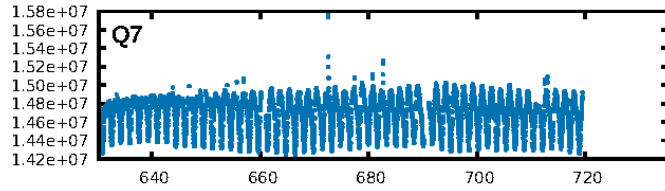
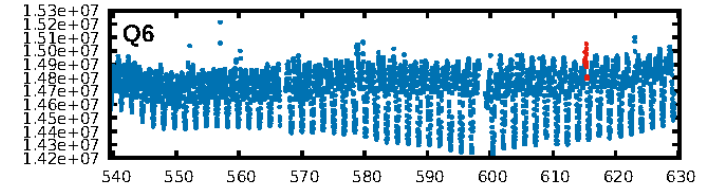
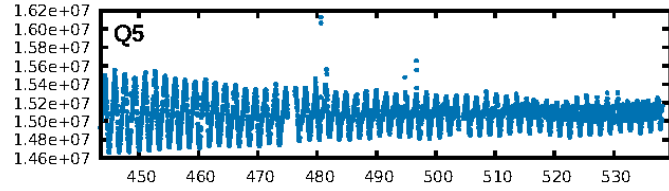
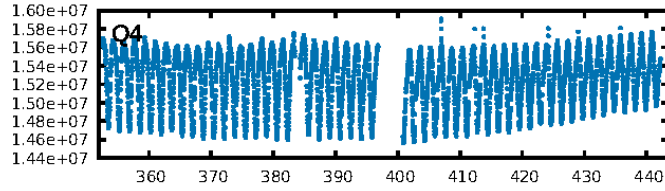
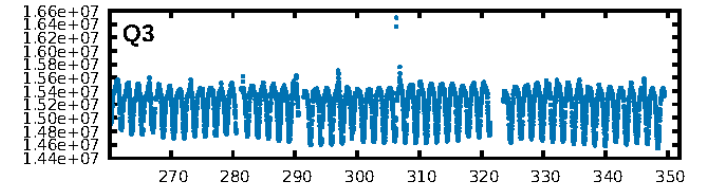
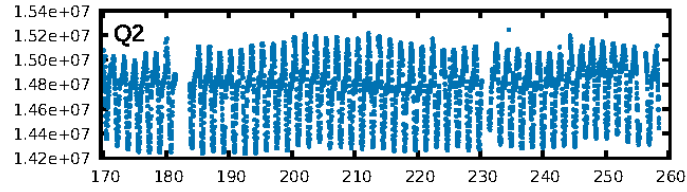
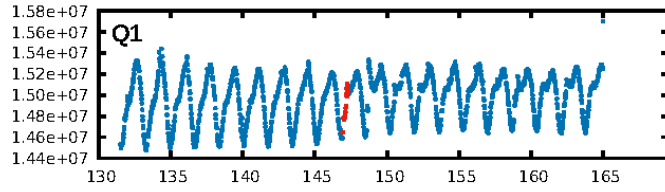
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [532.93σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.3%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.79e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19.85
Centroid-sig: 45.5%
Centroid-so: 0.383 arcsec [0.86σ]
OotOffset-rm: 0.249 arcsec [0.92σ]
KicOffset-rm: 0.099 arcsec [0.44σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.50 [2/4]

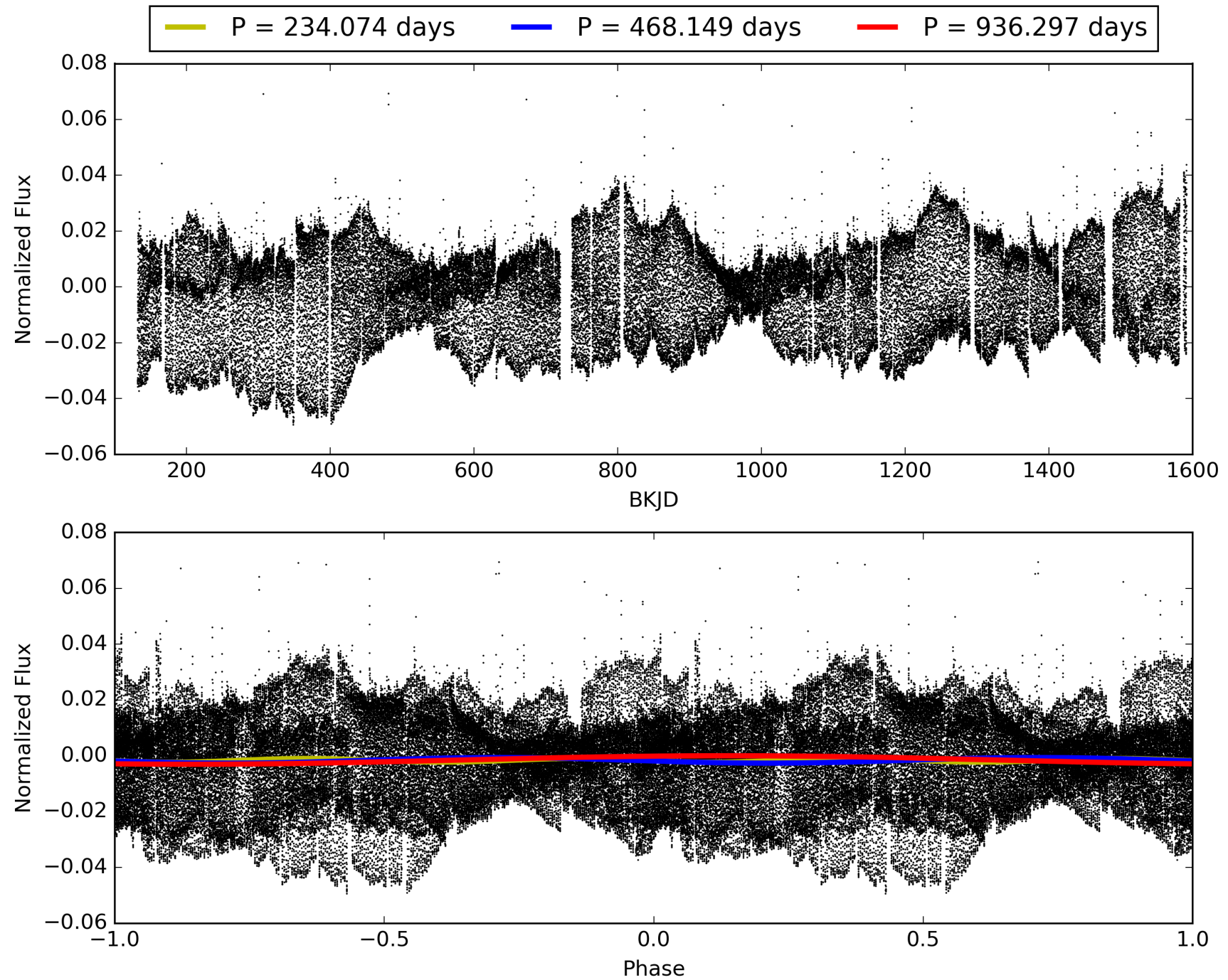
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:07:17 Z

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

TCE 012207432-01, PDC Light Curves

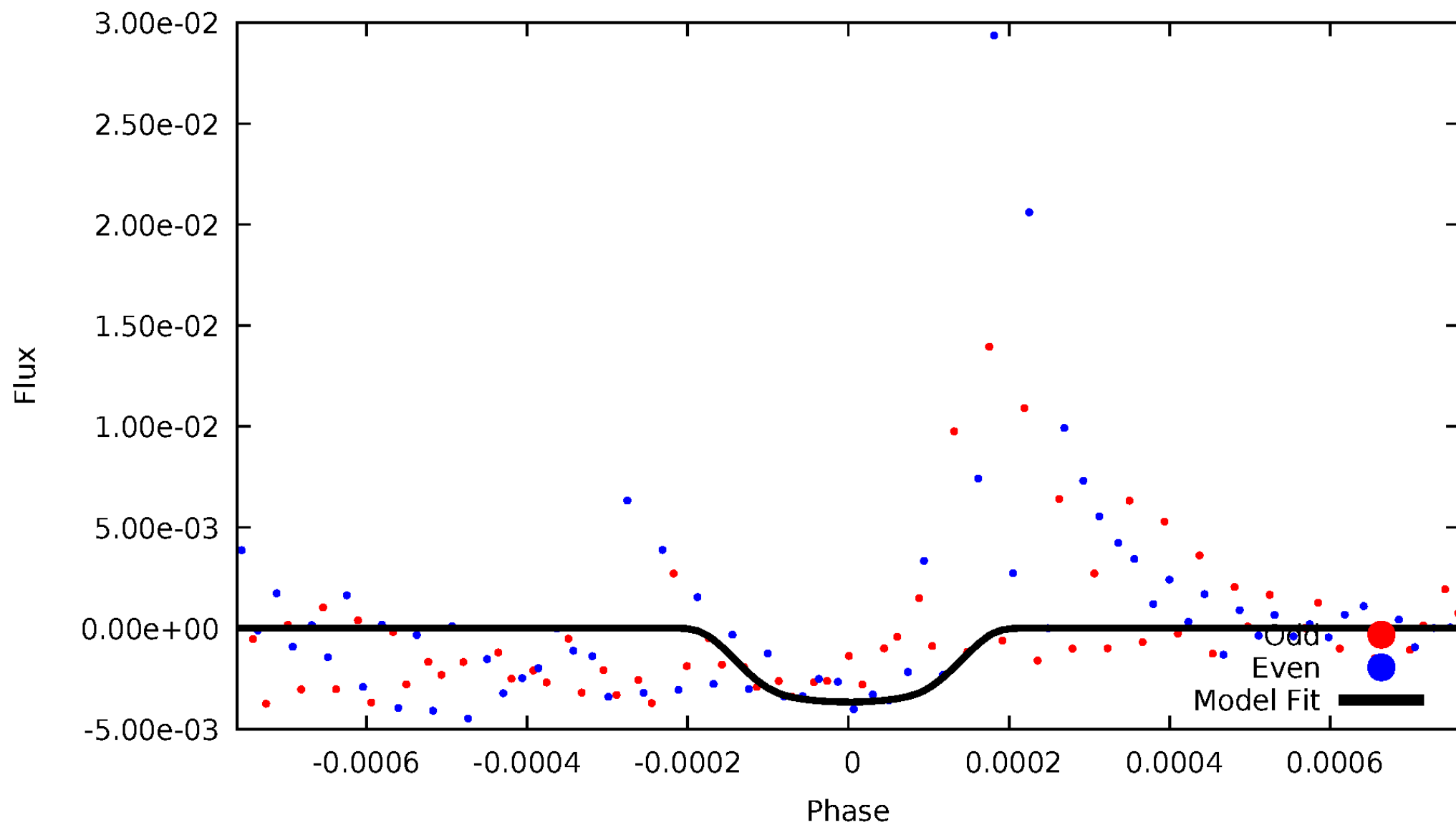


TCE 012207432-01



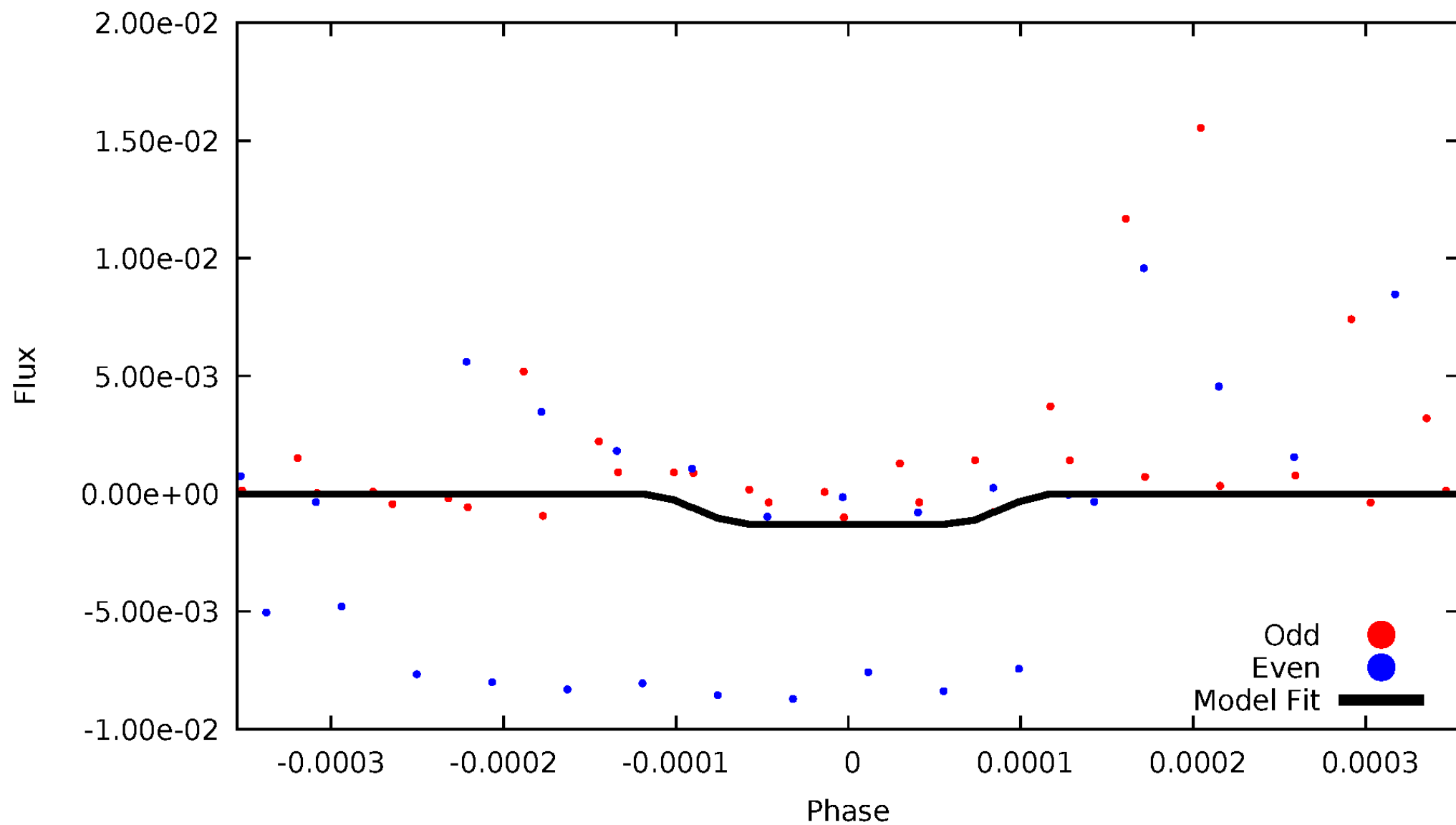
DV Odd/Even

TCE 012207432-01



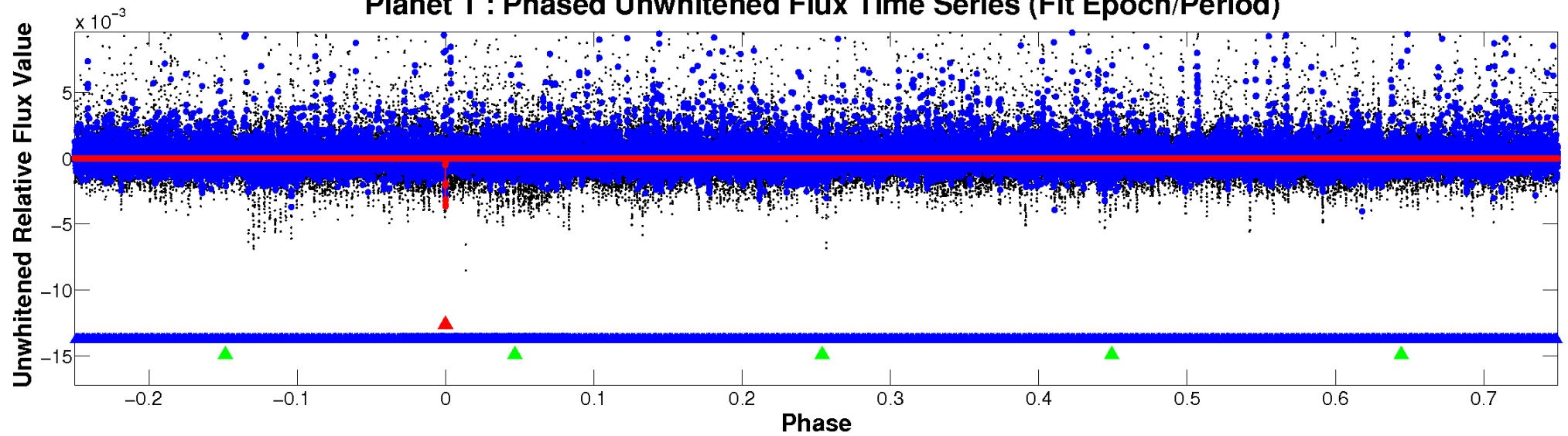
ALT Odd/Even

TCE 012207432-01

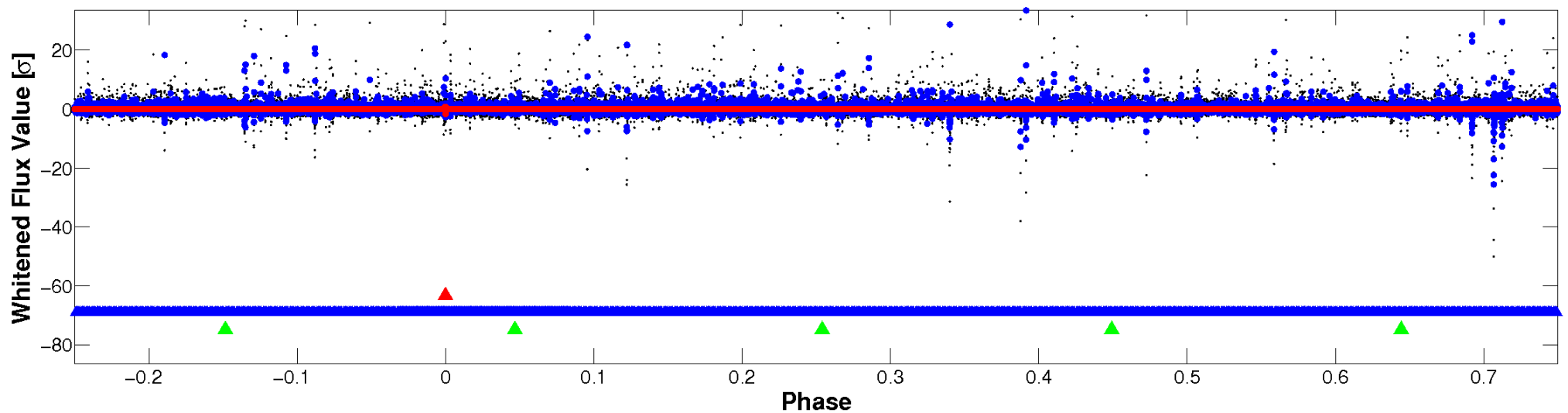


Non-Whitened Vs. Whitened Light Curve

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

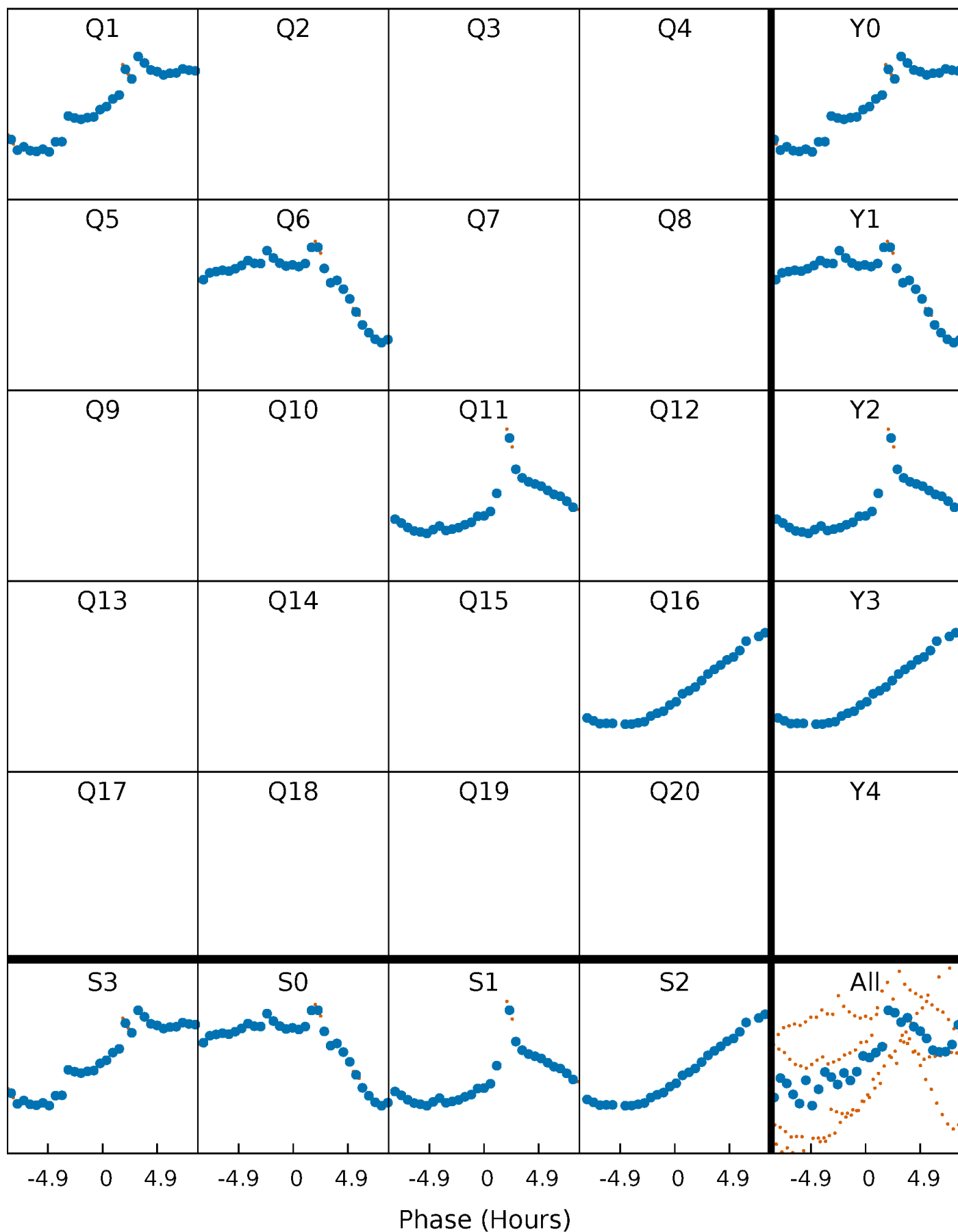


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



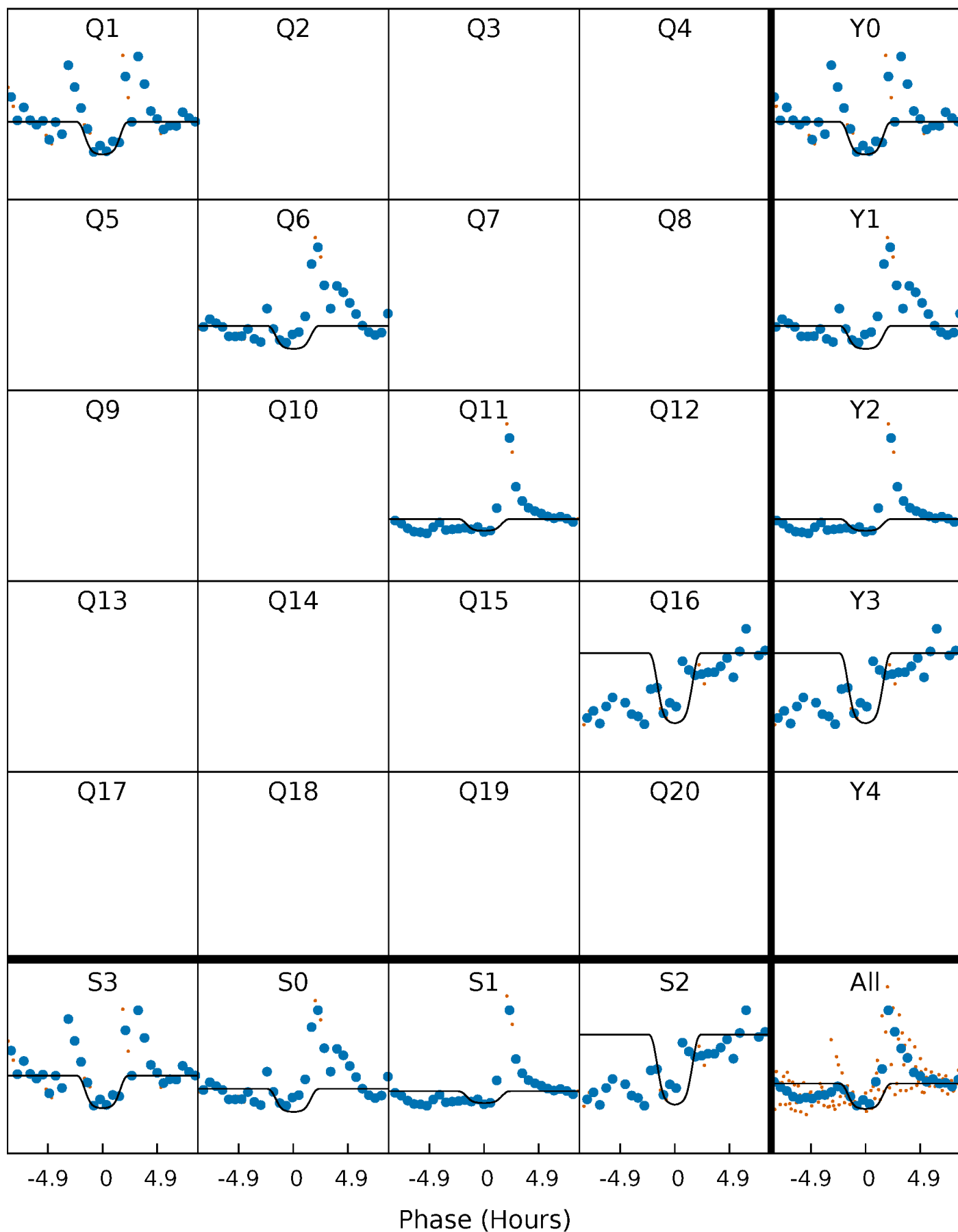
PDC Quarter-Phased Transit Curves

TCE 012207432-01 P=468.148662 Days $T_0=147.089064$ (BKJD)



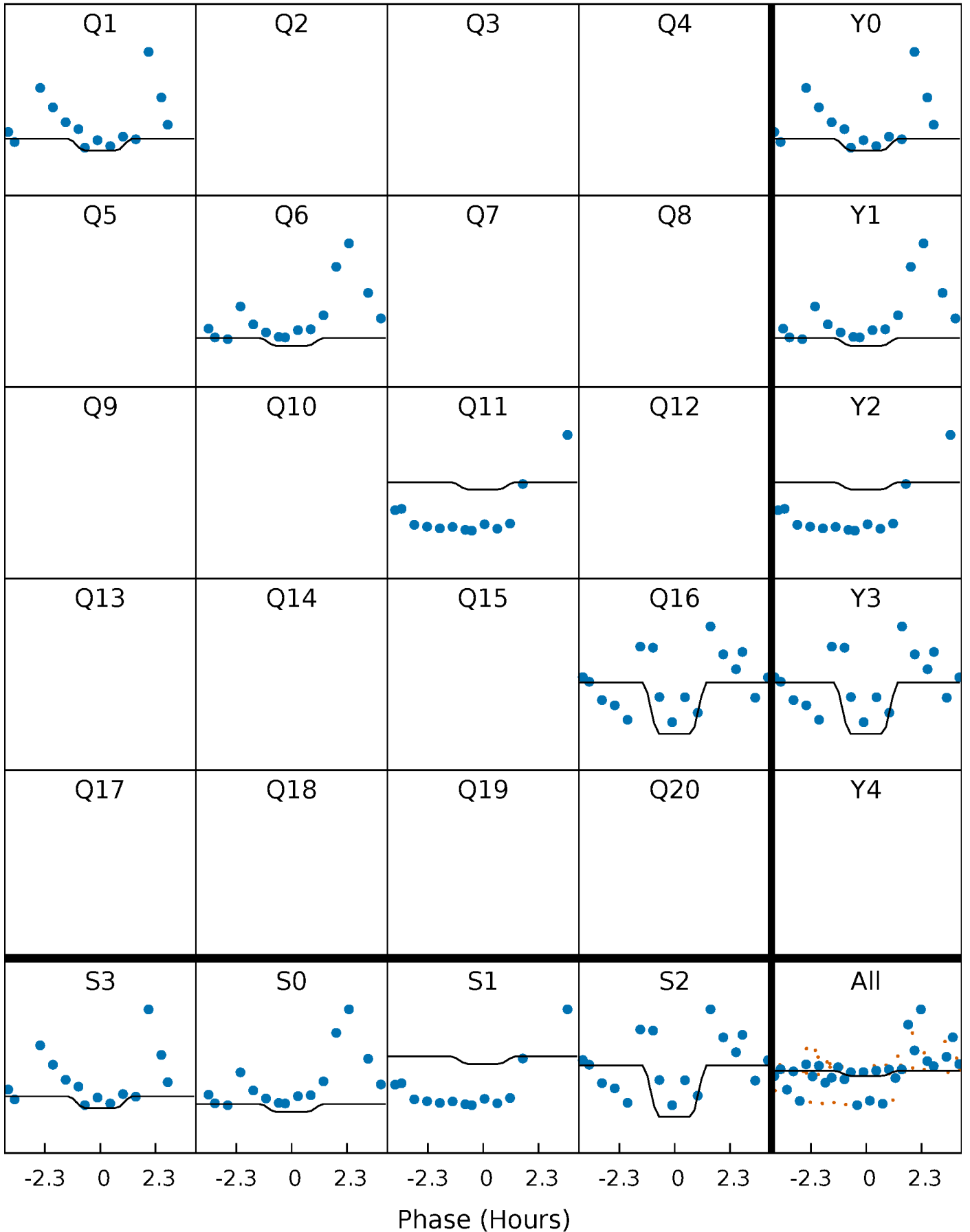
DV Quarter-Phased Transit Curves

TCE 012207432-01 P=468.148662 Days $T_0=147.089064$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

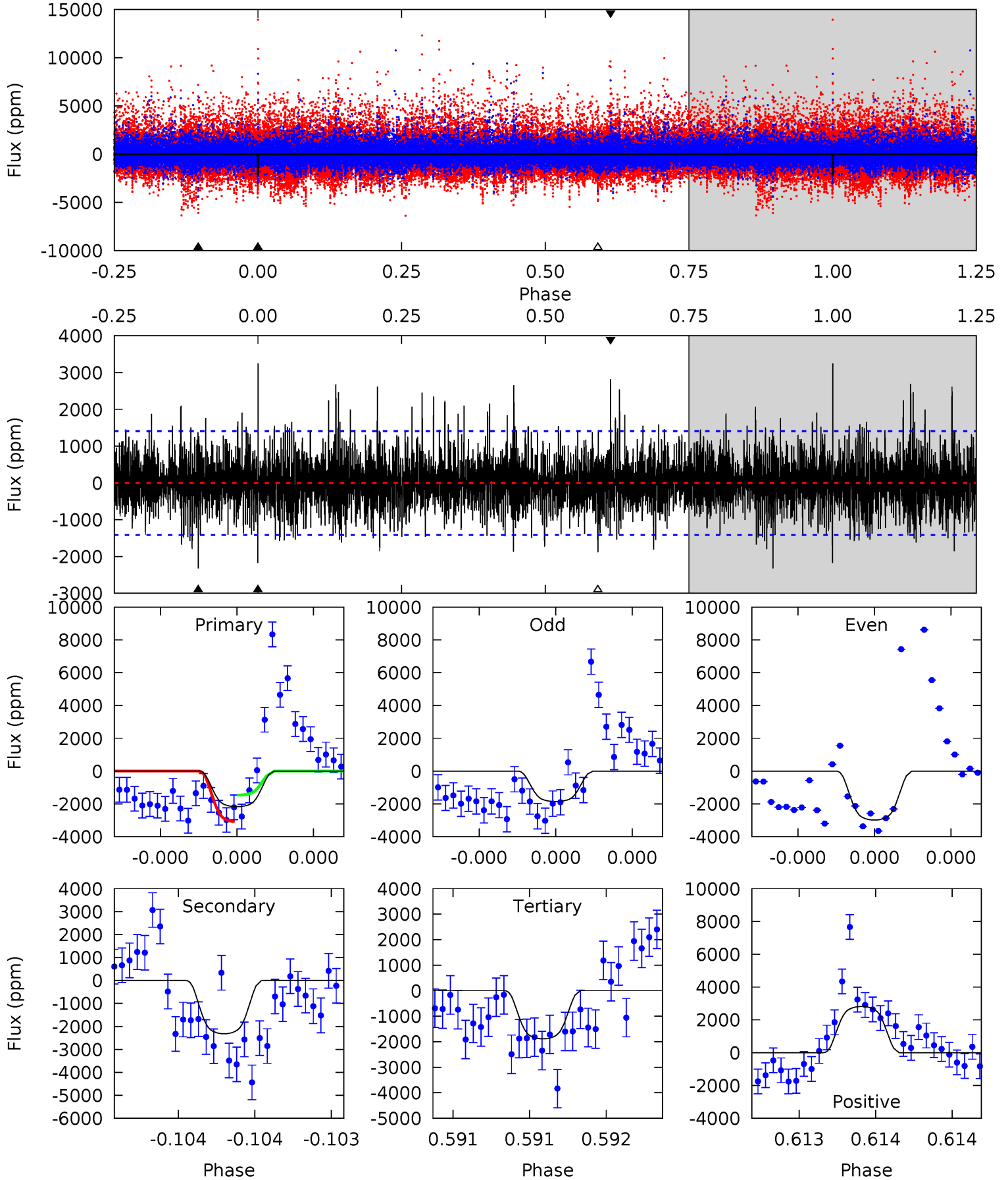
TCE 012207432-01 P=468.139671 Days $T_0=147.084423$ (BKJD)



DV Model-Shift Uniqueness Test

012207432-01, P = 468.148662 Days, E = 147.089064 Days

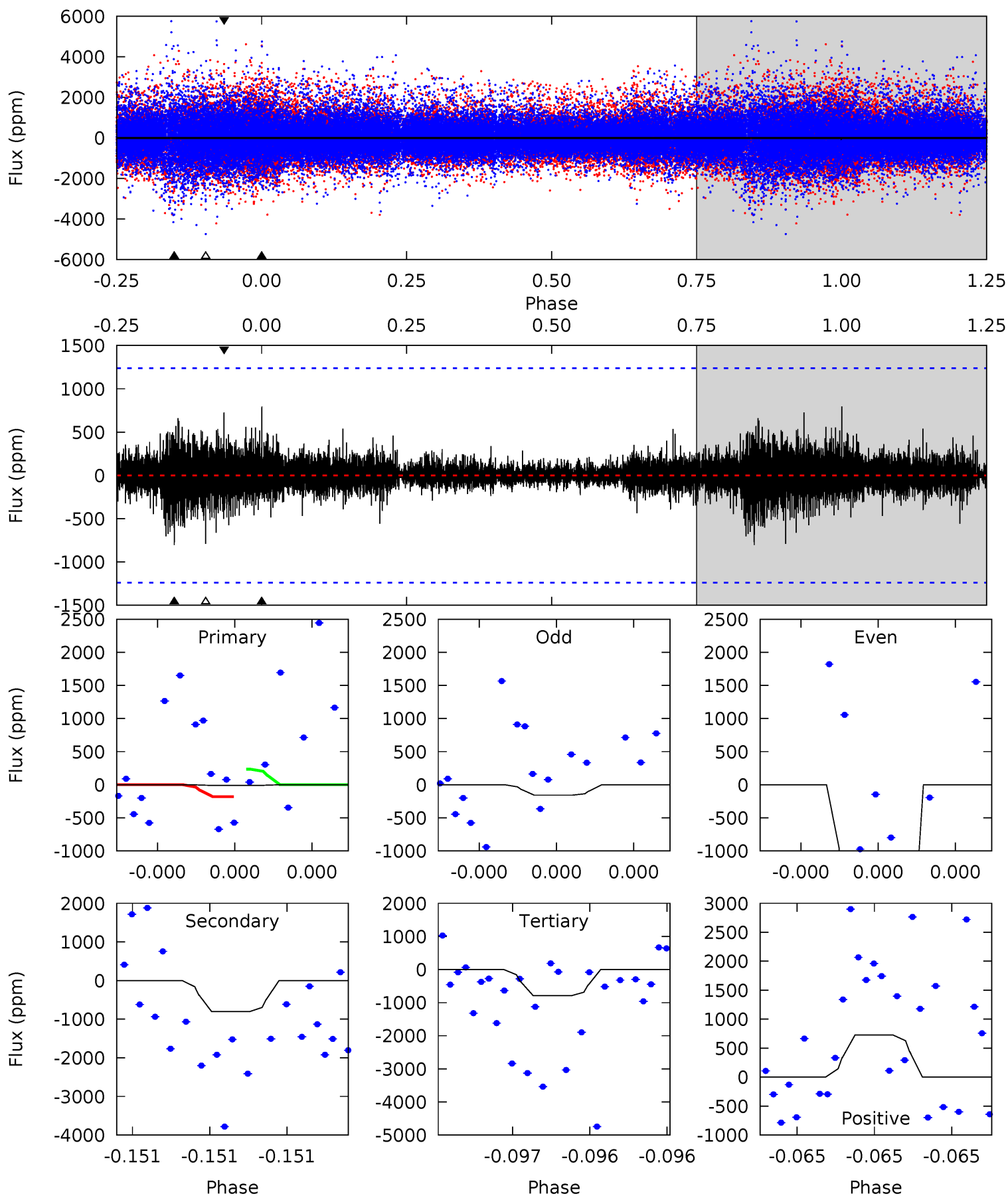
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.63	9.22	7.49	11.2	5.60	3.53	2.24	1.13	-2.57	1.73	-1.98	1.49	0.78	0.58	3.17



Alt Model-Shift Uniqueness Test

012207432-01, P = 468.139671 Days, E = 147.084423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.05	3.72	3.66	3.36	5.73	3.72	0.58	-3.61	-3.31	0.06	0.36	11.0	5.32	0.50	0.13



Stellar Parameters For KIC 012207432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3680^{+44}_{-49}	$4.784^{+0.036}_{-0.021}$	$-0.100^{+0.100}_{-0.100}$	$0.461^{+0.025}_{-0.030}$	$0.472^{+0.029}_{-0.026}$	$6.772^{+1.112}_{-0.653}$
	+1%/-1%	+1%/-0%	+100%/-100%	+5%/-7%	+6%/-6%	+16%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 012207432-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2322 ± 252	$3.31^{+0.47}_{-0.49}$	160^{+3}_{-3}	3335^{+179}_{-147}	98980^{+39866}_{-24481}
Alt.	-804 ± 216	$1.82^{+0.45}_{-0.49}$	160^{+3}_{-3}	3404^{+364}_{-275}	$114452^{+102901}_{-48279}$

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

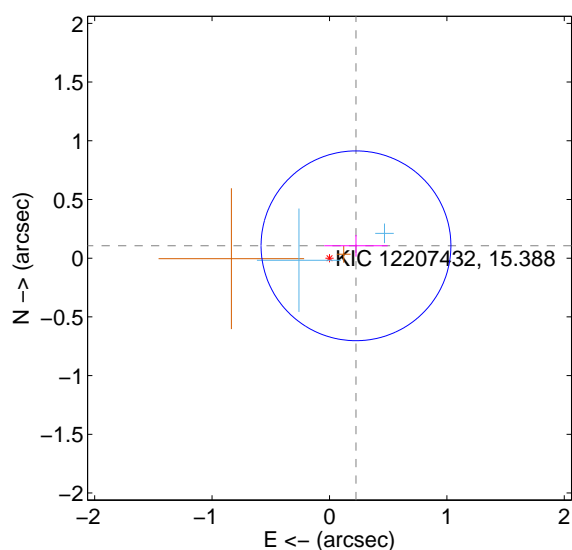
Supplemental centroid analysis for 012207432-01. Kepler magnitude: 15.39. Transit SNR 7.59

There are 2 quarters with good PRF difference image offsets

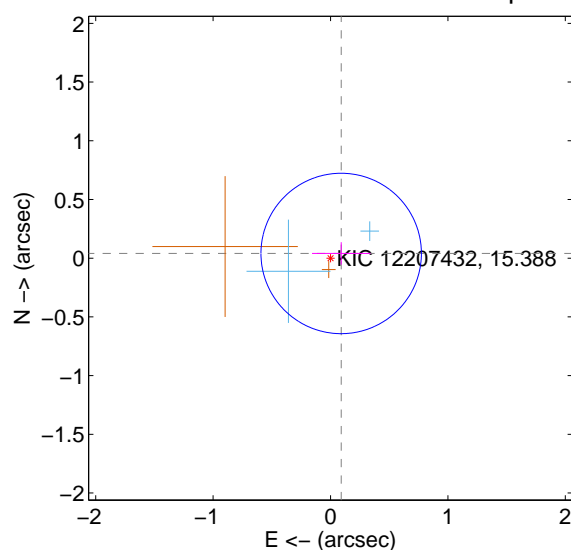
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.249 ± 0.269	0.92	-0.226 ± 0.270	0.105 ± 0.092
PRF-fit source offset from KIC position	0.099 ± 0.228	0.44	-0.091 ± 0.249	0.040 ± 0.096
photometric centroid source offset	0.38 ± 0.44	0.86	-0.31 ± 0.44	0.22 ± 0.45

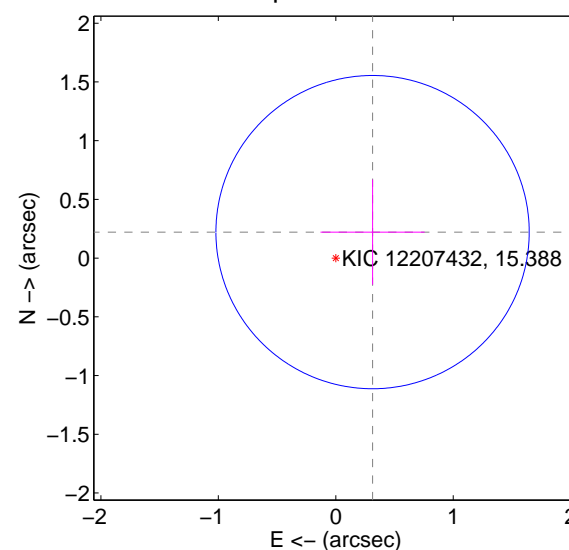
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

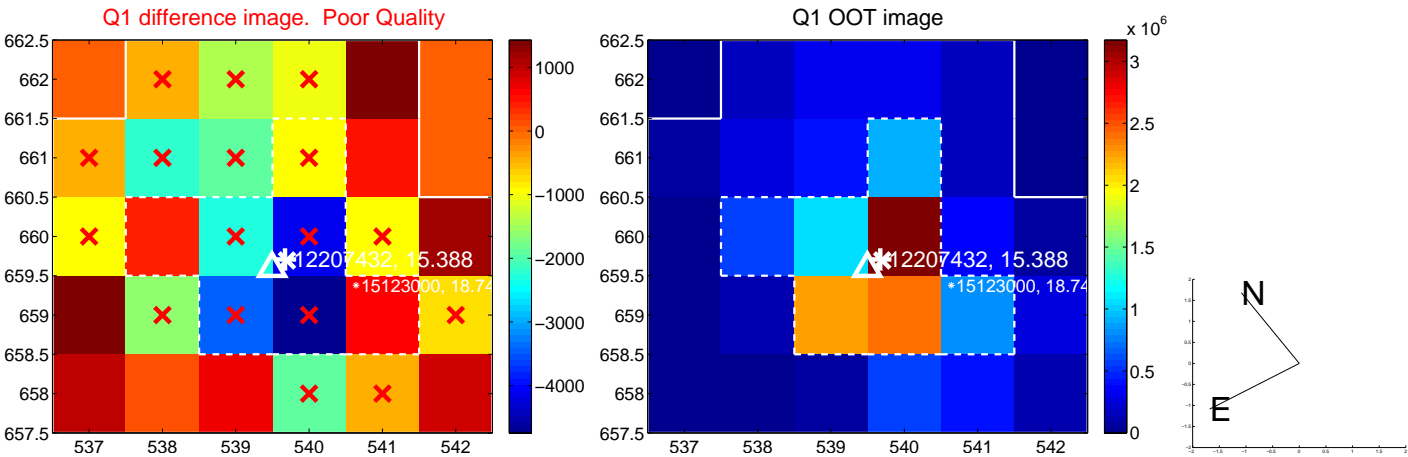


offset from photometric centroids

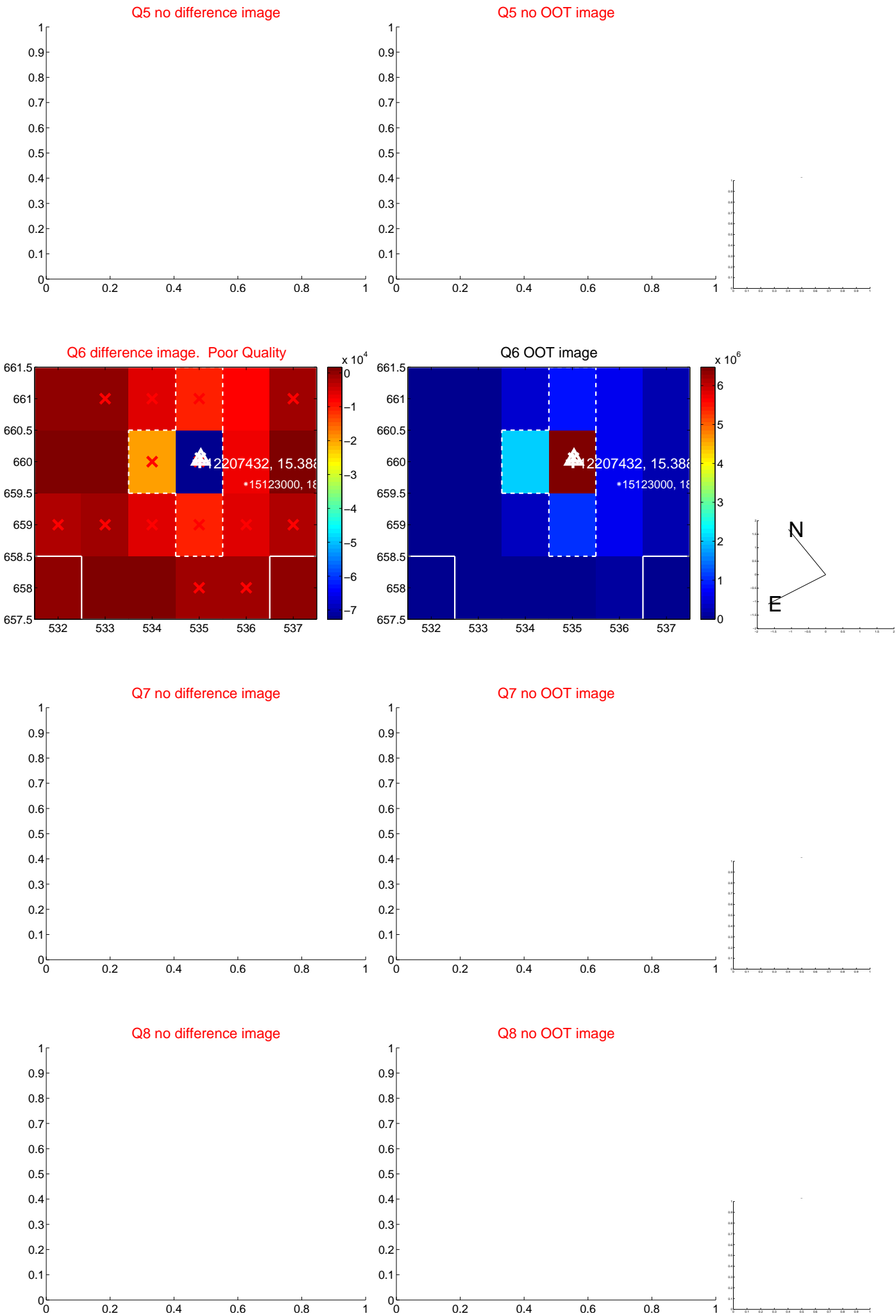


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

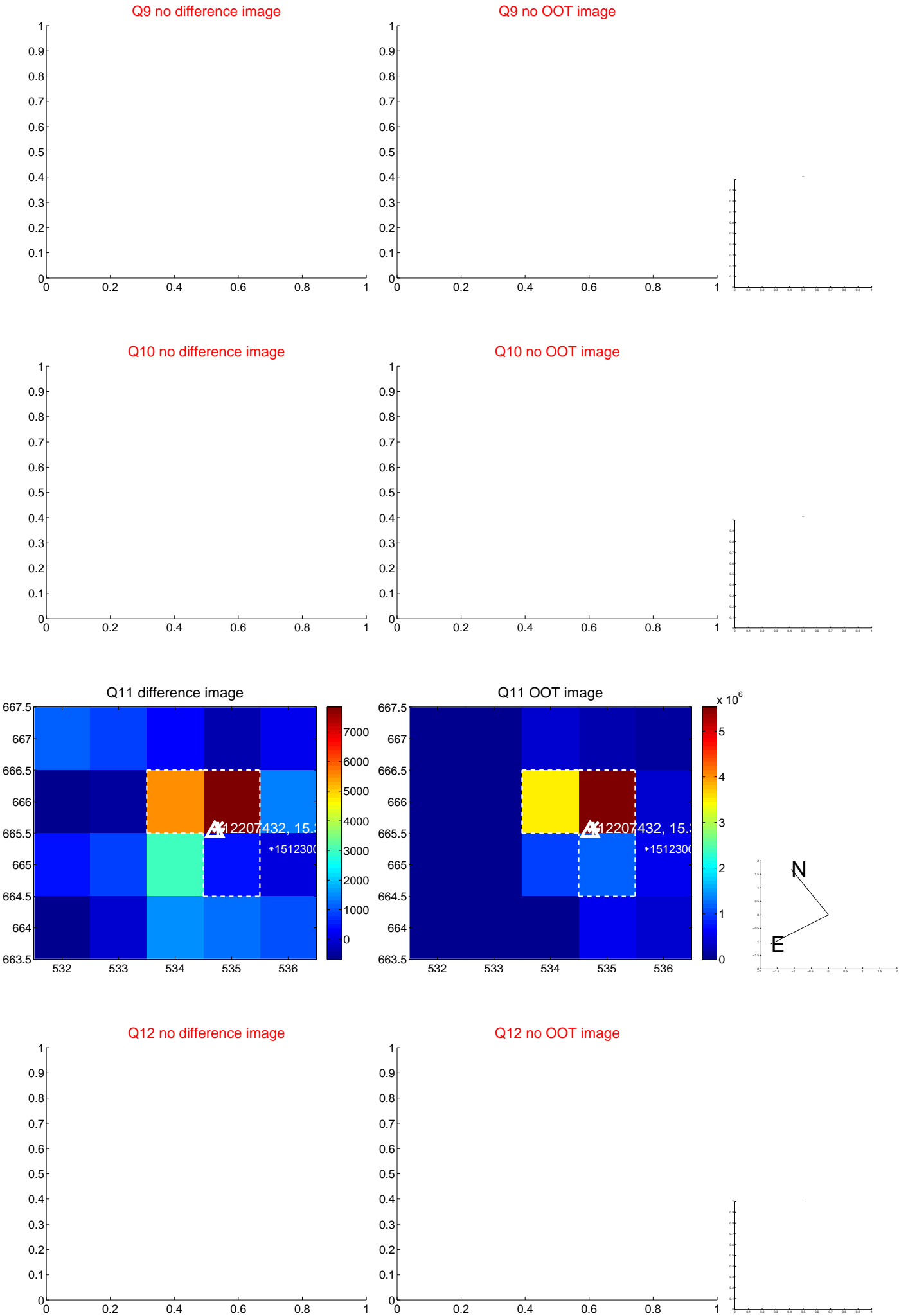
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



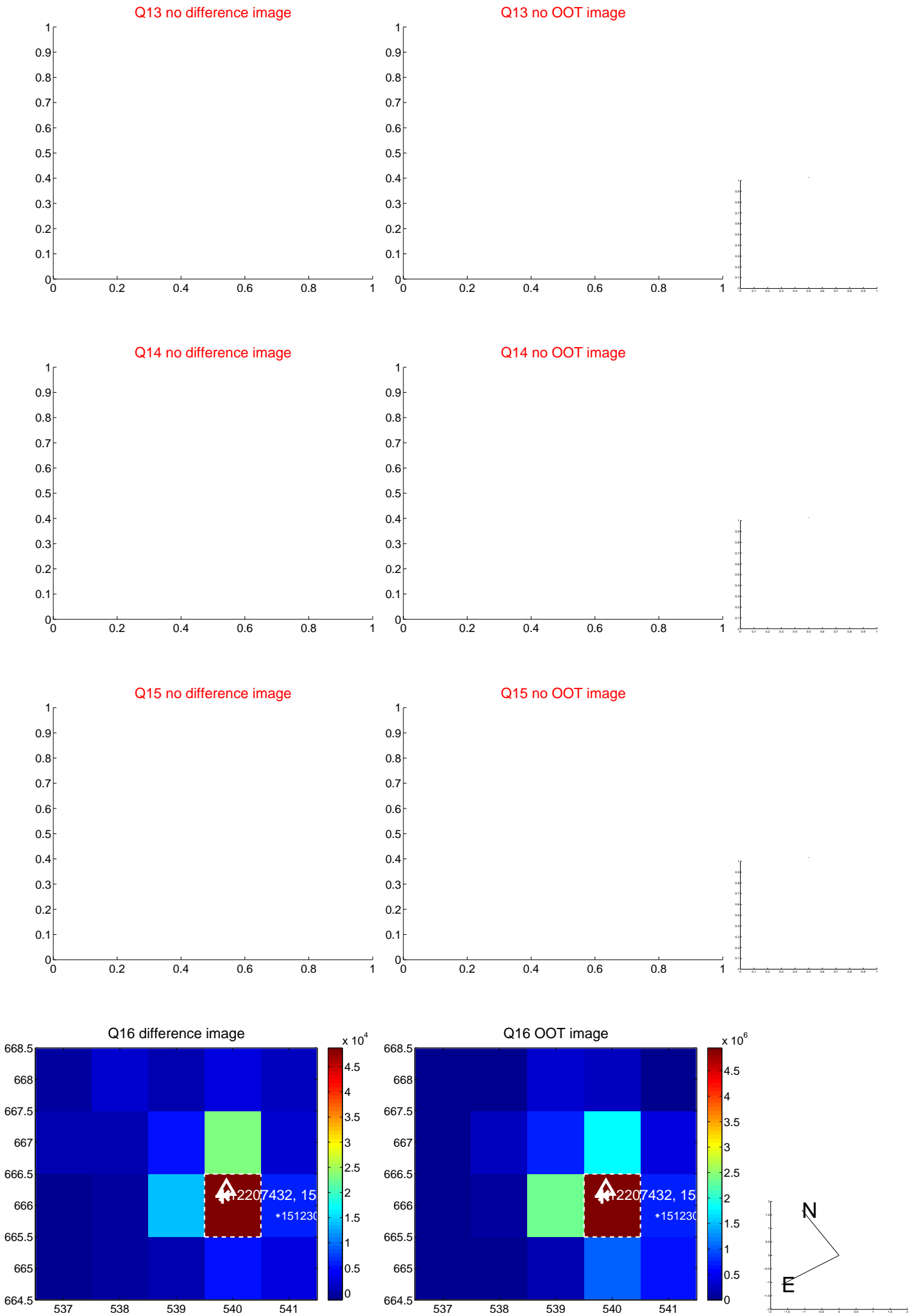
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



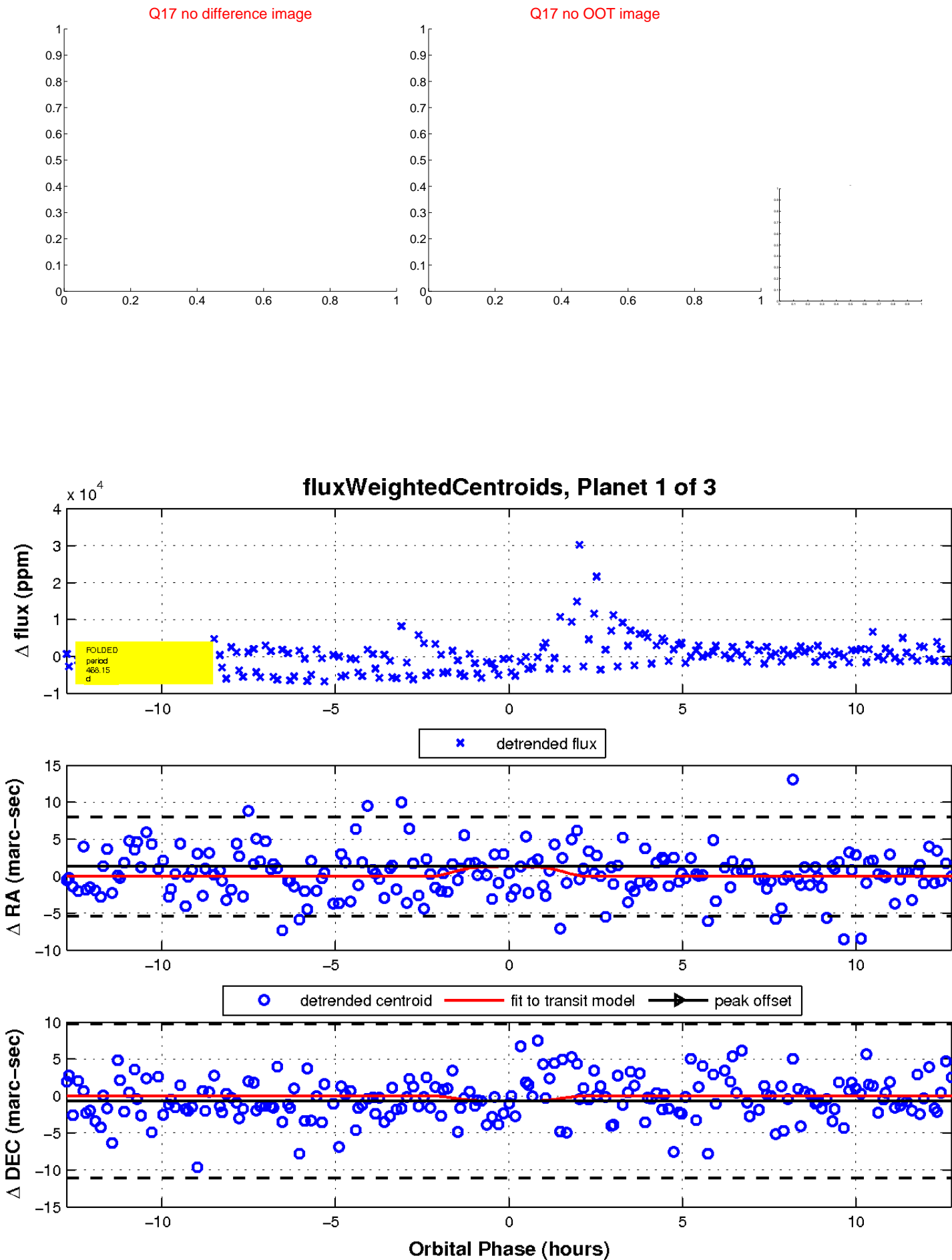
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



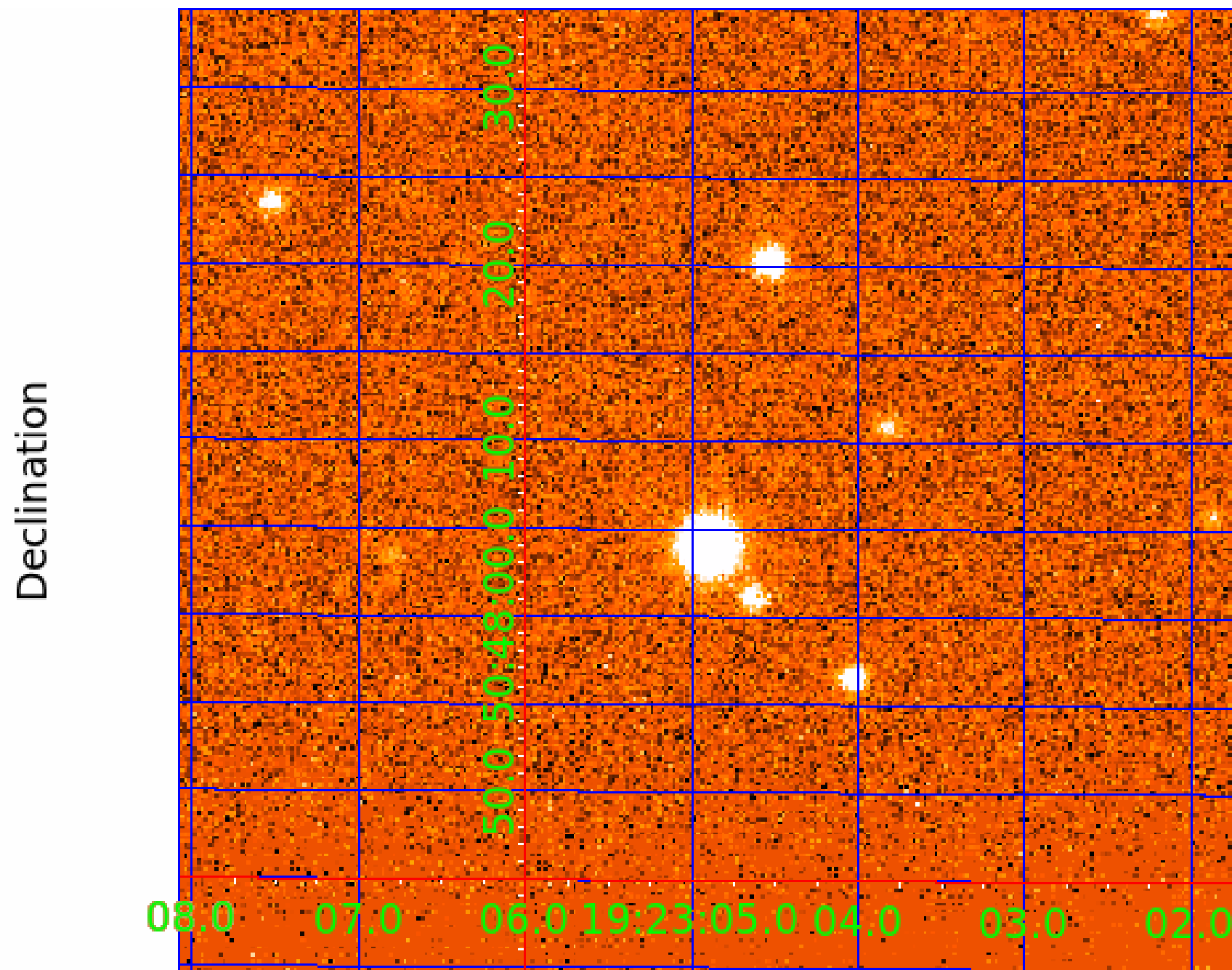
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 012207432

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})
012207432-01	OBS	No	468.148662	147.089064	3653.3	4.273	13.8	7.6	0.46	3680	3.31	0.04
012207432-02	OBS	No	1.691741	133.160377	377.4	3.838	10.1	12.0	0.46	3680	1.23	74.64
012207432-03	OBS	No	279.766509	265.998218	2326.0	7.329	13.9	4.5	0.46	3680	2.21	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207432-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012207432-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
012207432-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

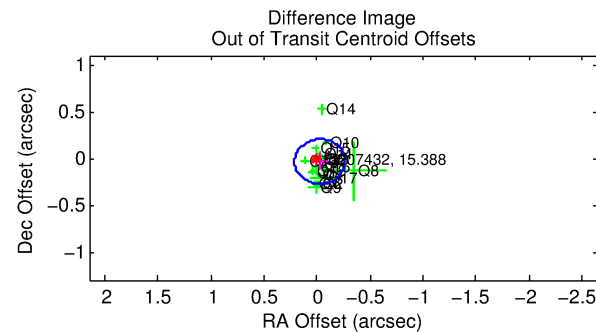
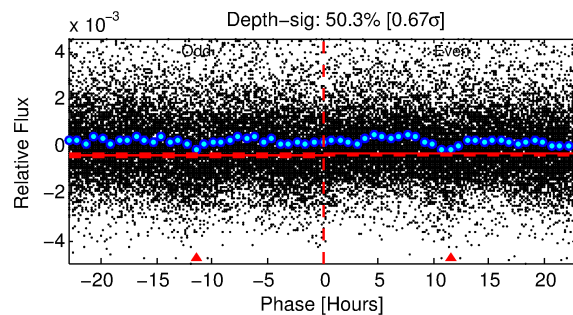
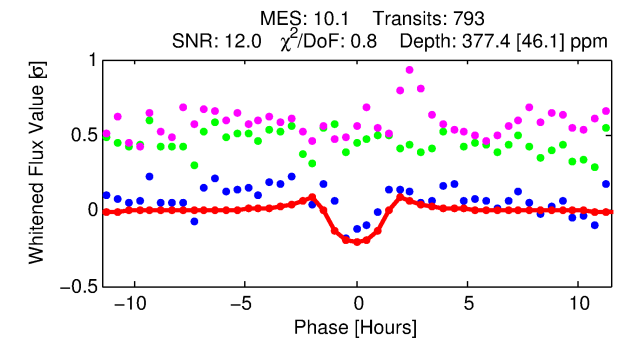
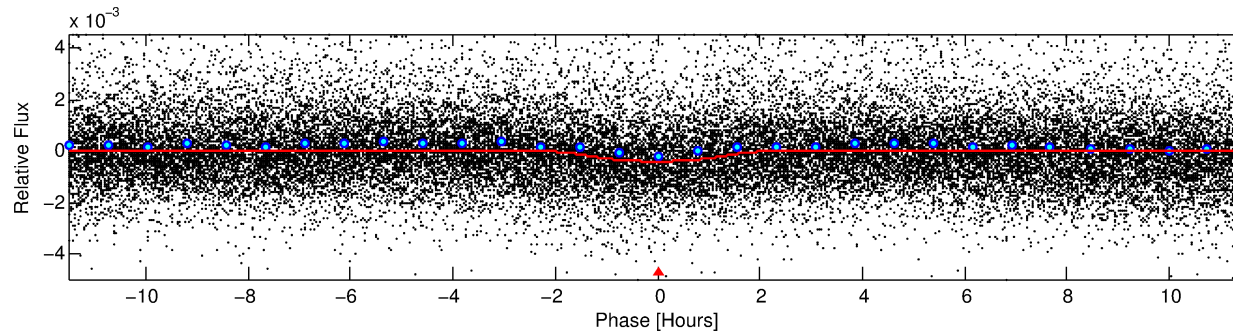
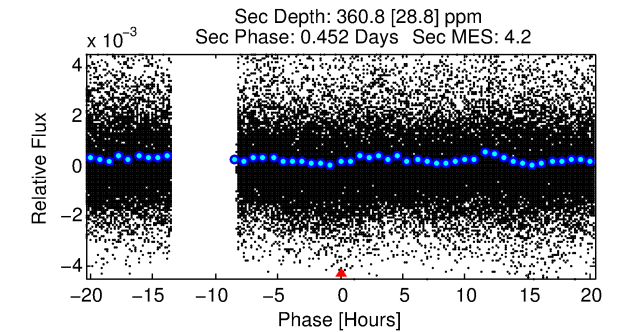
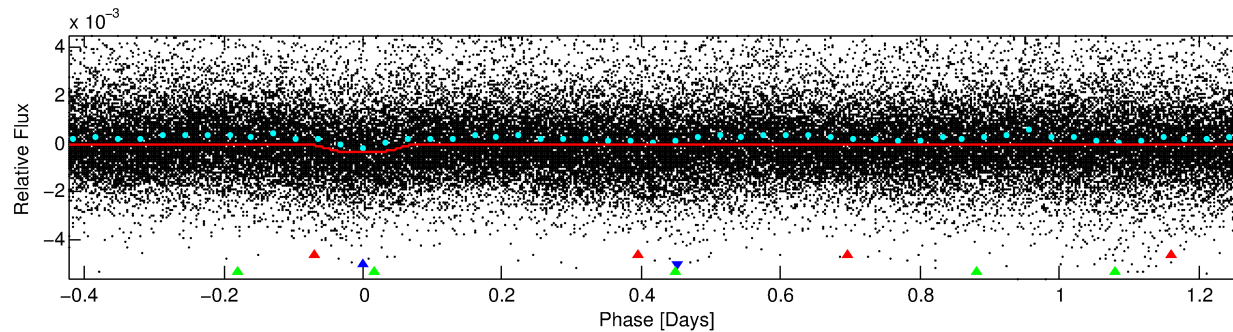
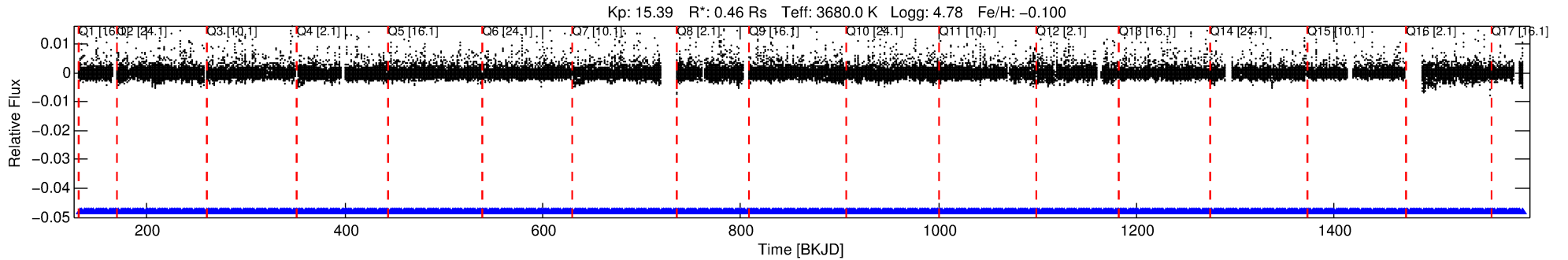
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207432-02

No Significant Match Found

DV One-Page Summary

KIC: 12207432 Candidate: 2 of 3 Period: 1.692 d



DV Fit Results:

Period = 1.69174 [0.00001] d
Epoch = 133.1604 [0.0032] BKJD
Rp/R* = 0.0245 [0.0019]
a/R* = 1.46 [0.08]
b = 0.97 [0.01]
Seff = 74.64 [6.58]
Teq = 749 [17] K
Rp = 1.23 [0.13] Re
a = 0.0216 [0.0011] AU
Ag = 61.22 [11.57] [5.20 σ]
Teffp = 3241 [149] K [16.67 σ]

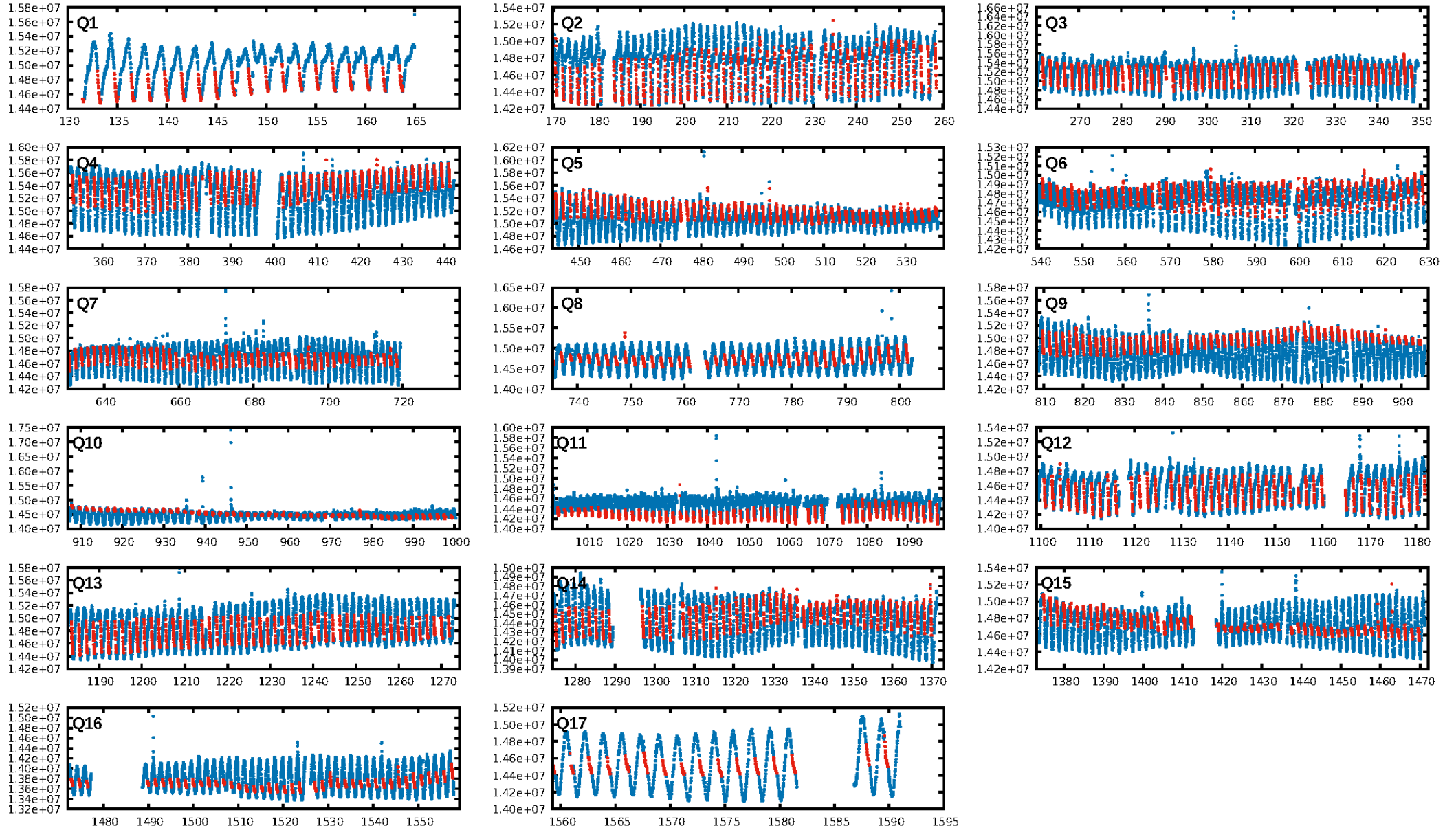
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [806.71 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.40e-14
RollingBand-fgt: 1.00 [757/757]
GhostDiagnostic-chr: 1.532
Centroid-sig: 18.8%
Centroid-so: 0.562 arcsec [1.39 σ]
OotOffset-rm: 0.043 arcsec [0.54 σ]
KicOffset-rm: 0.112 arcsec [1.50 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 1.00 [17/17]

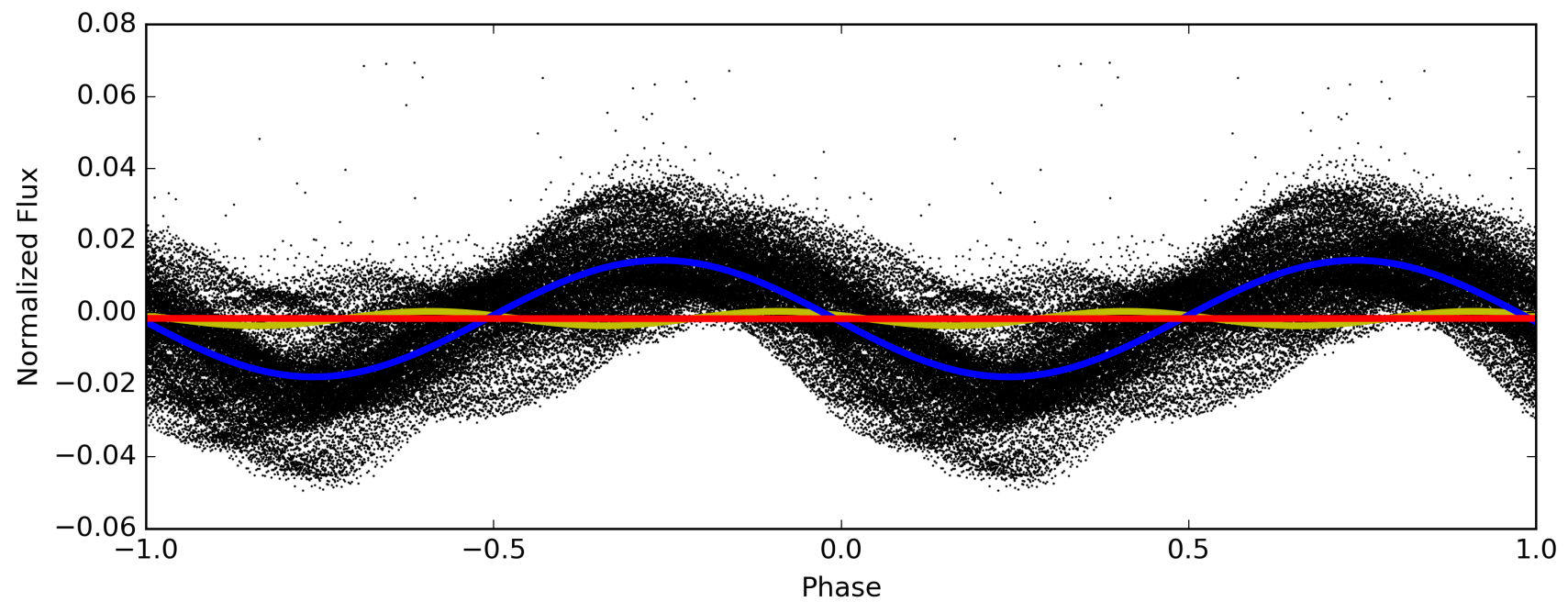
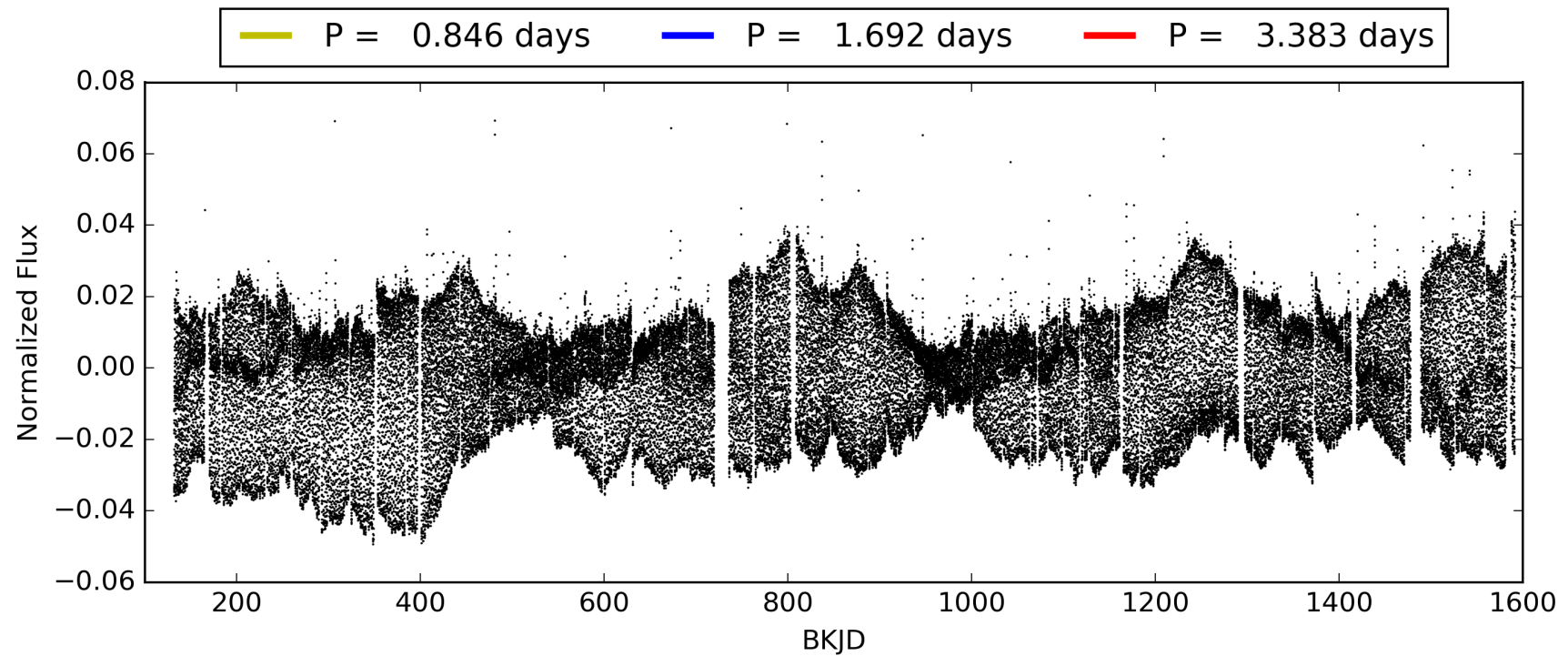
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:07:25 Z

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

TCE 012207432-02, PDC Light Curves

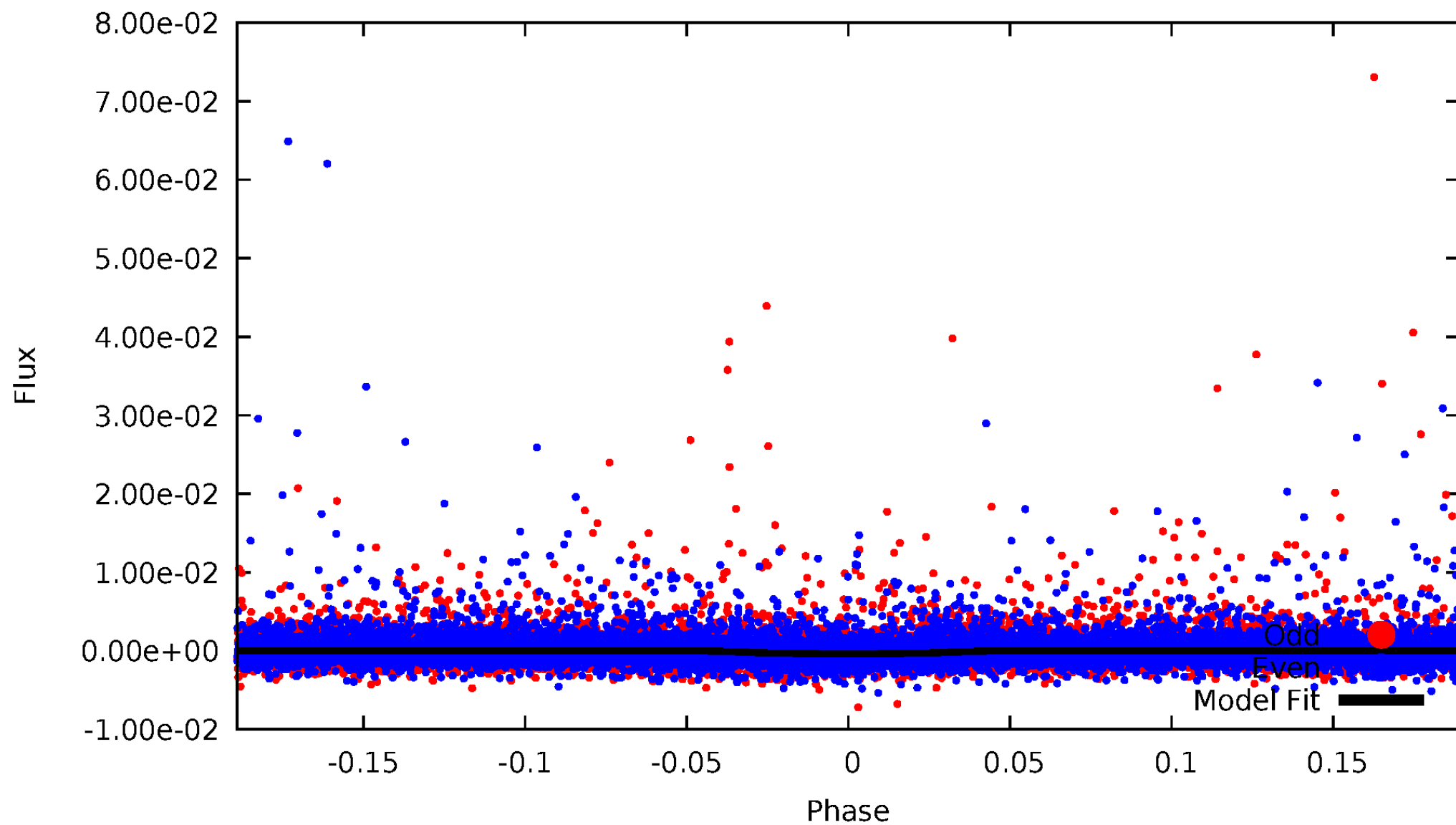


TCE 012207432-02



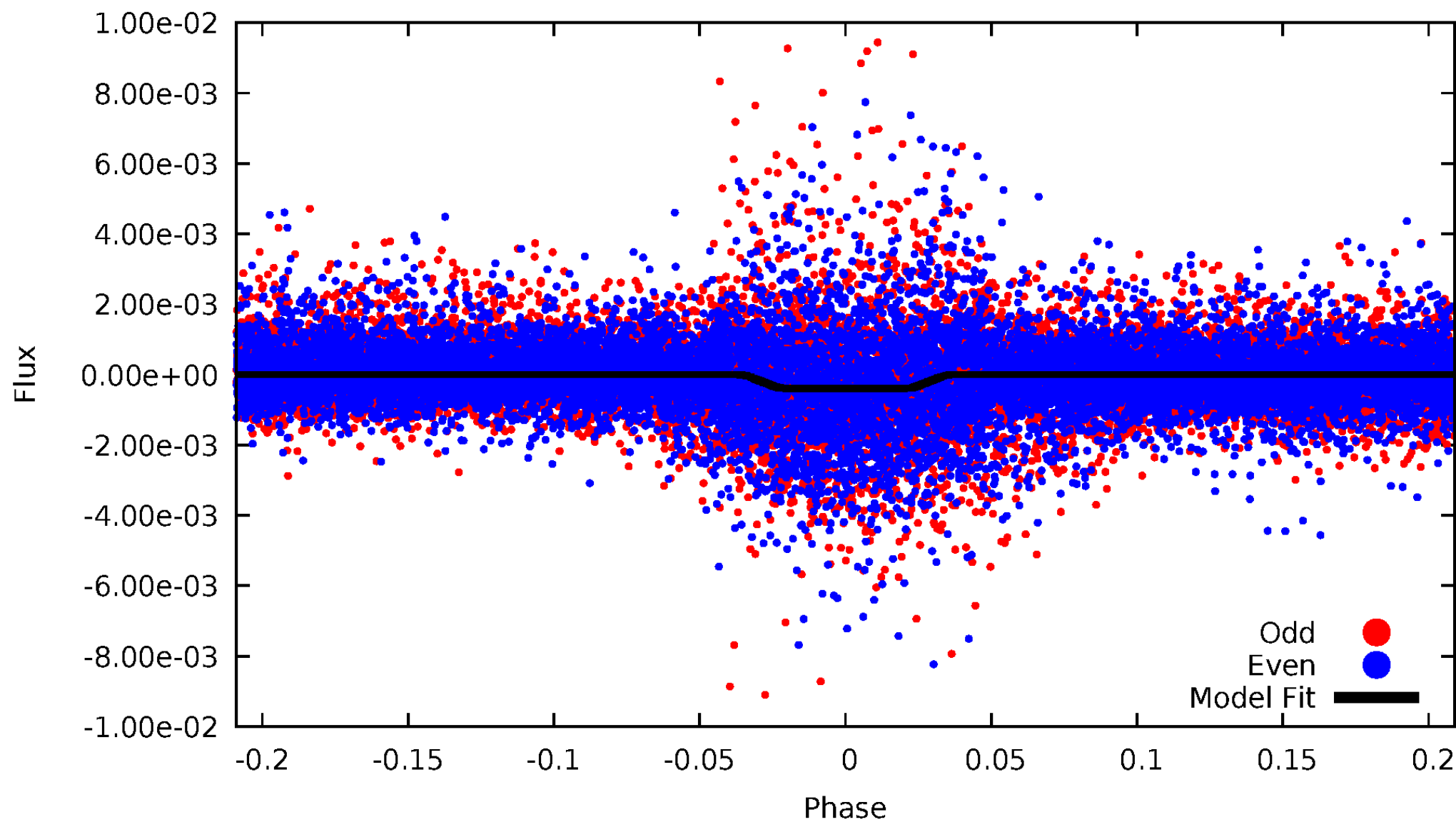
DV Odd/Even

TCE 012207432-02



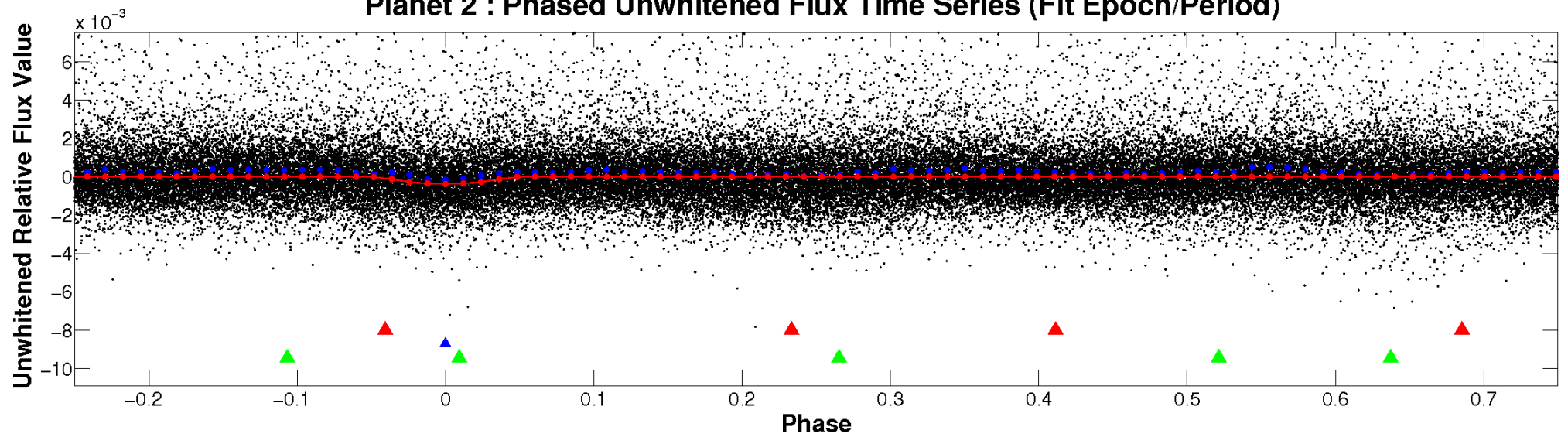
ALT Odd/Even

TCE 012207432-02

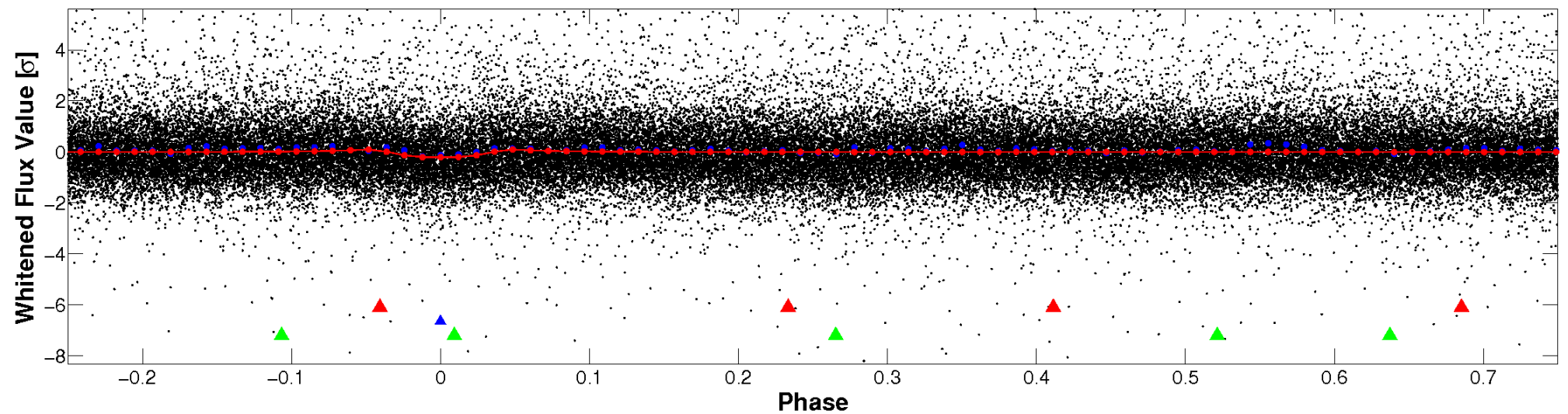


Non-Whitened Vs. Whitened Light Curve

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

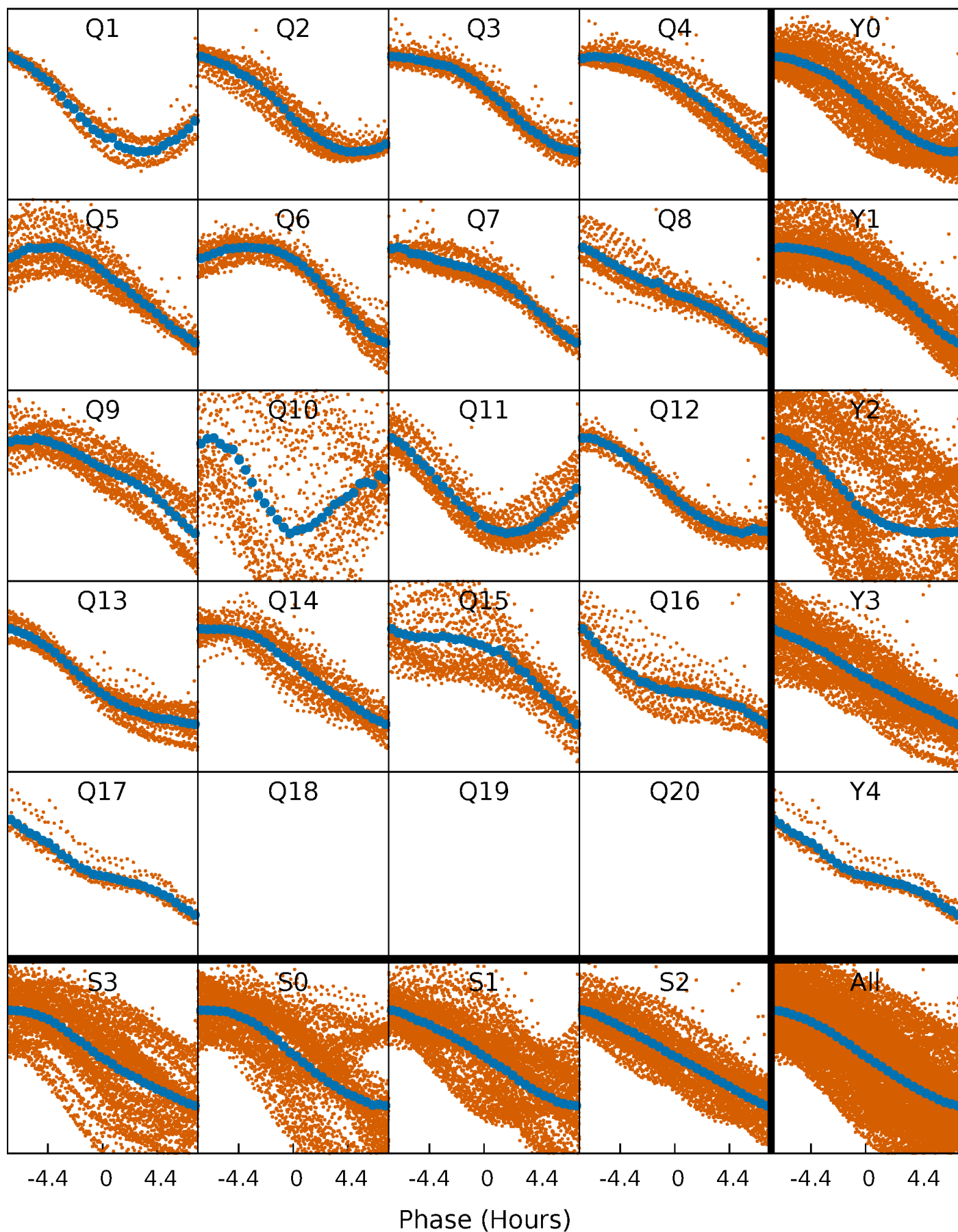


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



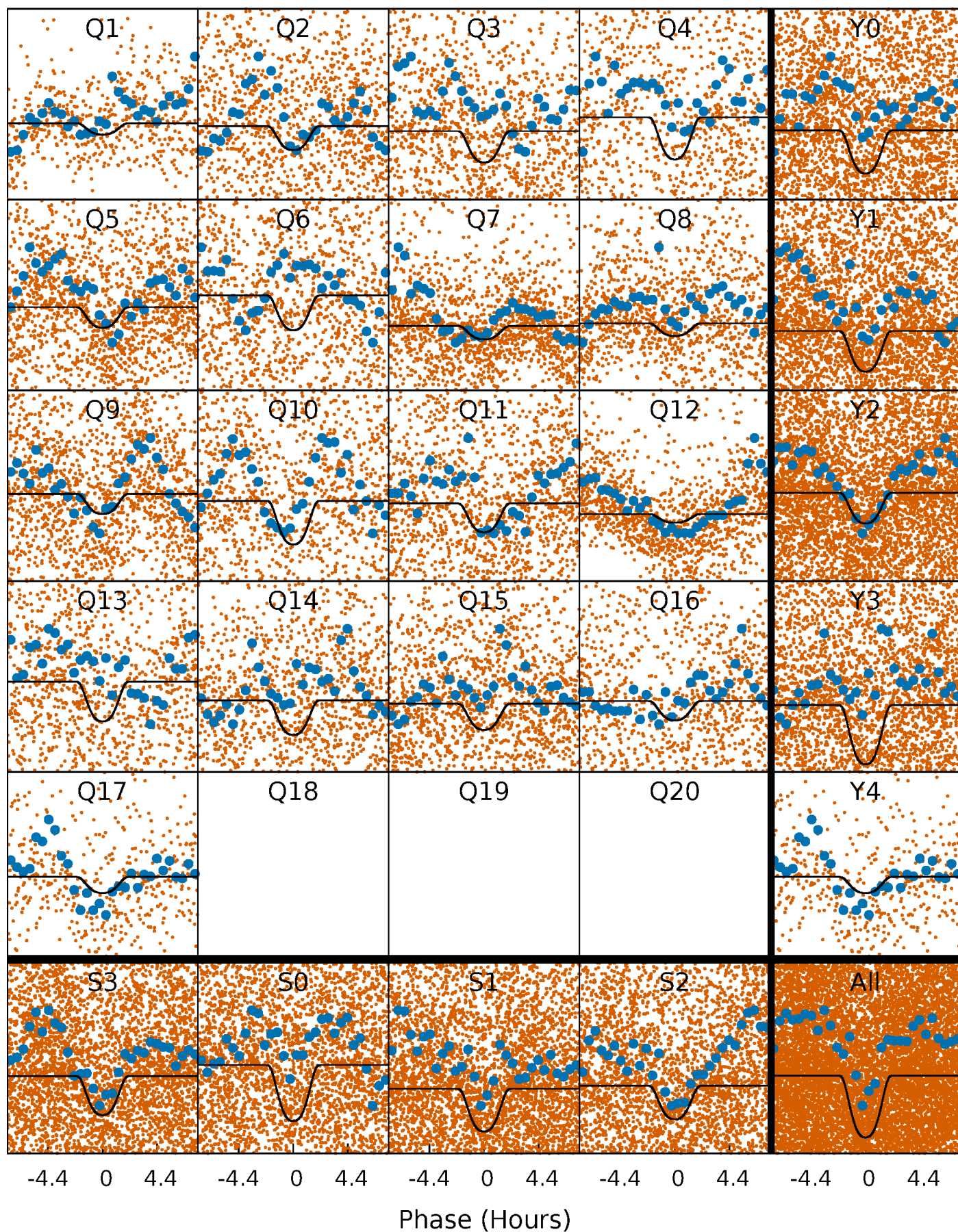
PDC Quarter-Phased Transit Curves

TCE 012207432-02 P= 1.691741 Days $T_0=133.160377$ (BKJD)



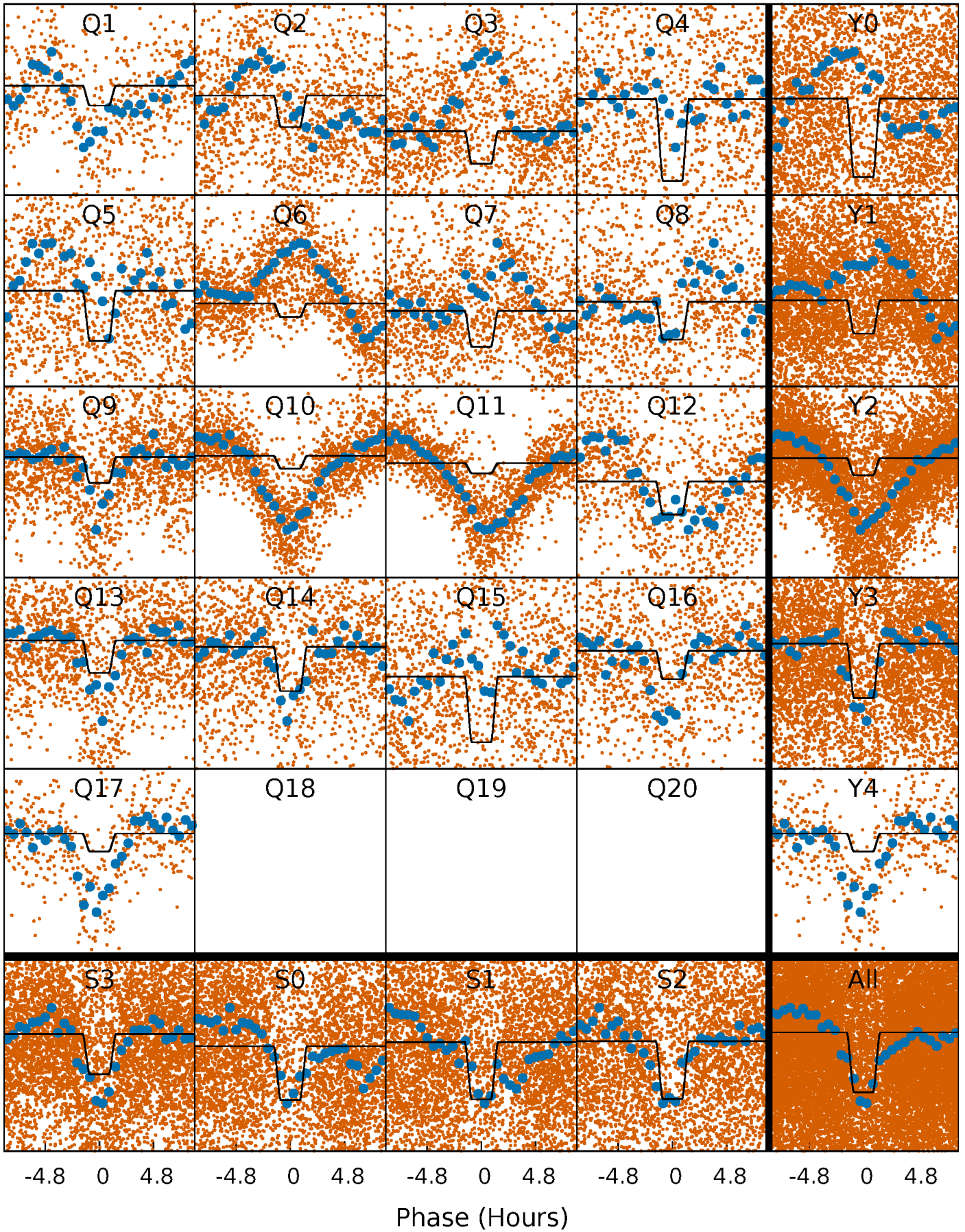
DV Quarter-Phased Transit Curves

TCE 012207432-02 P= 1.691741 Days $T_0=133.160377$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

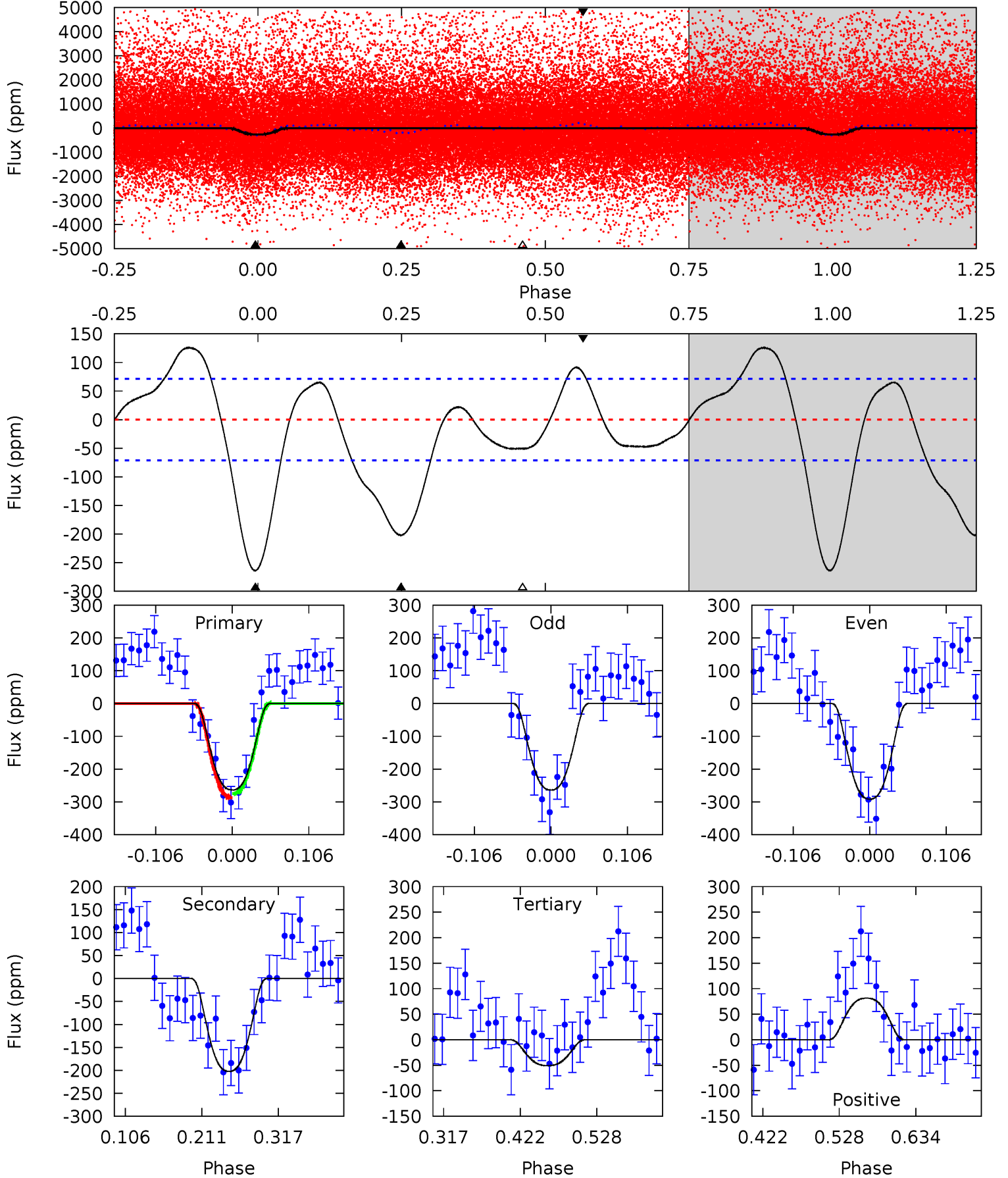
TCE 012207432-02 P= 1.691715 Days $T_0=133.164071$ (BKJD)



DV Model-Shift Uniqueness Test

012207432-02, P = 1.691741 Days, E = 131.468636 Days

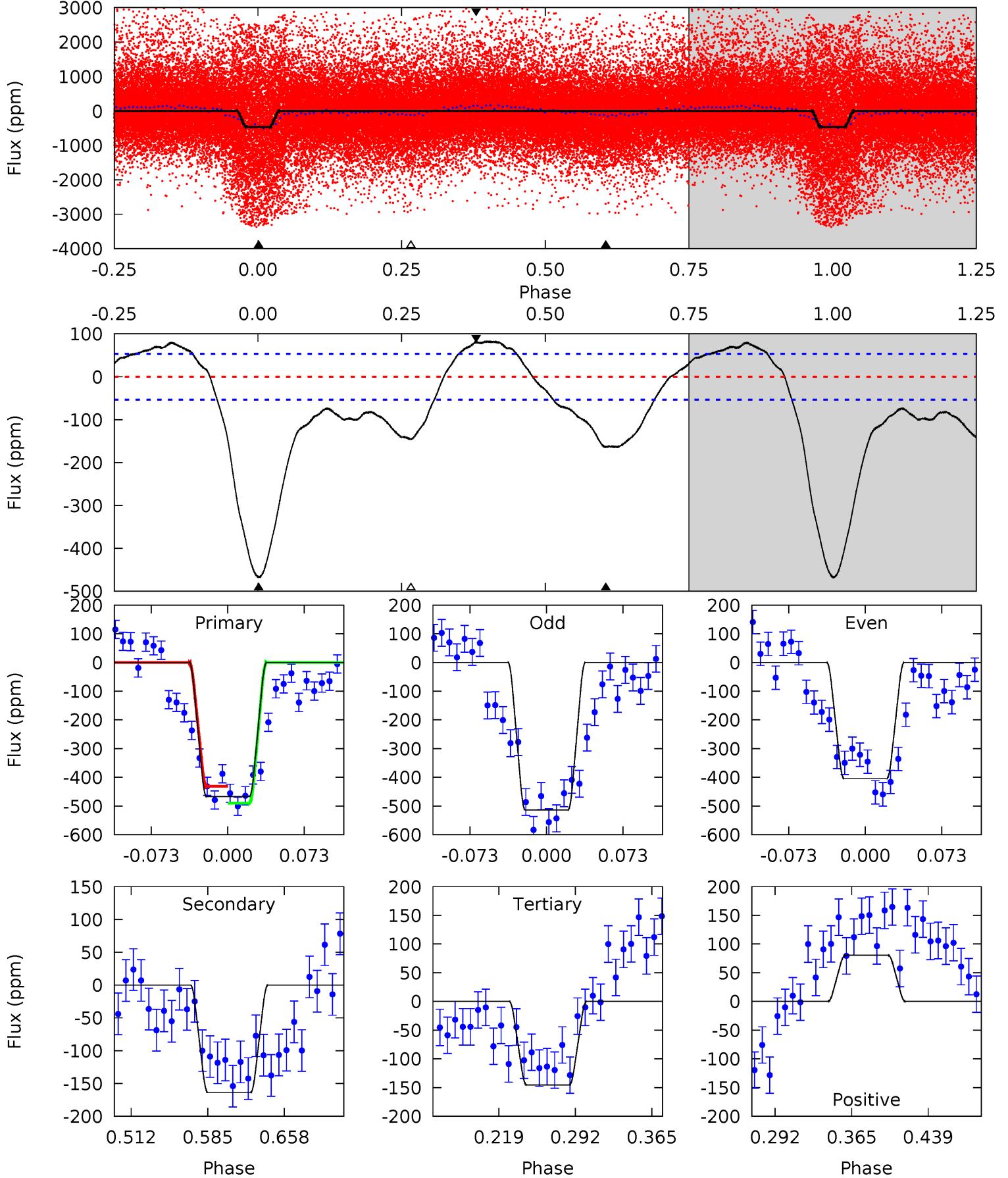
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	12.9	3.25	5.21	4.55	1.62	3.36	13.6	11.7	9.68	7.71	0.89	0.10	0.32	0.41



Alt Model-Shift Uniqueness Test

012207432-02, P = 1.691715 Days, E = 131.472356 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	14.1	12.6	6.95	4.63	1.79	6.31	27.8	33.4	1.57	7.20	4.75	1.16	0.15	2.54



Stellar Parameters For KIC 012207432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	3680^{+44}_{-49}	$4.784^{+0.036}_{-0.021}$	$-0.100^{+0.100}_{-0.100}$	$0.461^{+0.025}_{-0.030}$	$0.472^{+0.029}_{-0.026}$	$6.772^{+1.112}_{-0.653}$
	+1%/-1%	+1%/-0%	+100%/-100%	+5%/-7%	+6%/-6%	+16%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 012207432-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-202 ± 16	$1.24^{+0.10}_{-0.11}$	1044^{+18}_{-21}	3107^{+89}_{-86}	34^{+7}_{-5}
Alt.	-164 ± 12	$1.00^{+0.10}_{-0.11}$	1044^{+17}_{-19}	3203^{+109}_{-101}	43^{+11}_{-8}

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 $A_{obs} \gg 1.0$

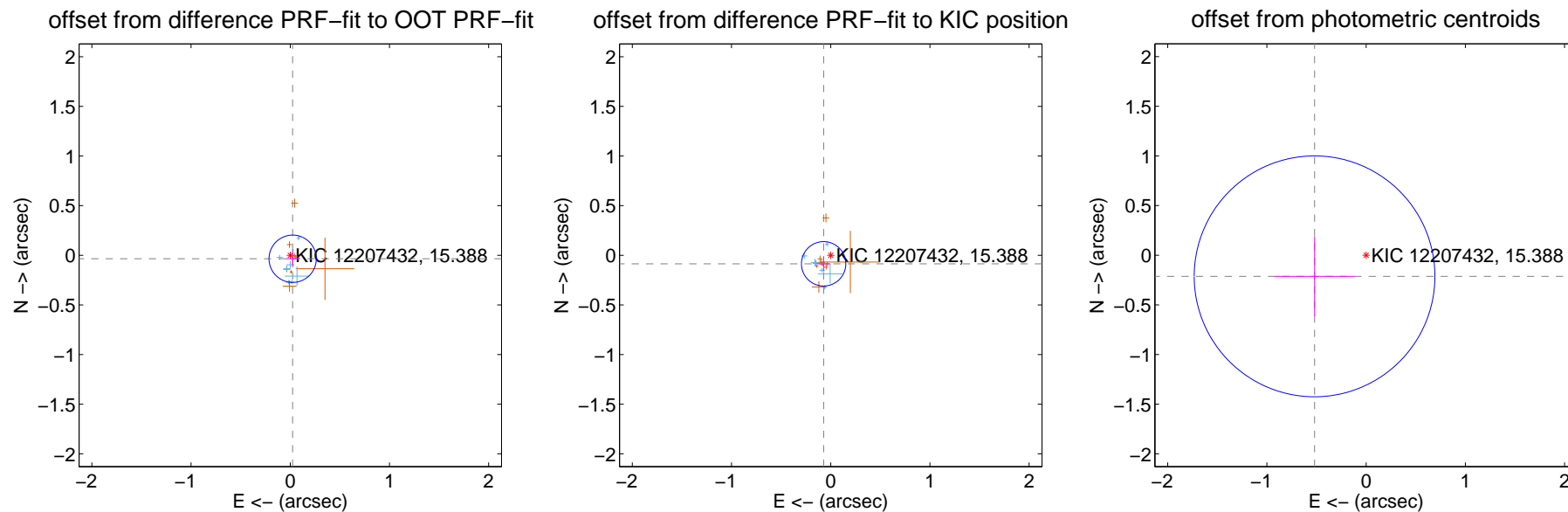
DV Centroid Data

Supplemental centroid analysis for 012207432-02. Kepler magnitude: 15.39. Transit SNR 11.96

There are 8 quarters with good PRF difference image offsets

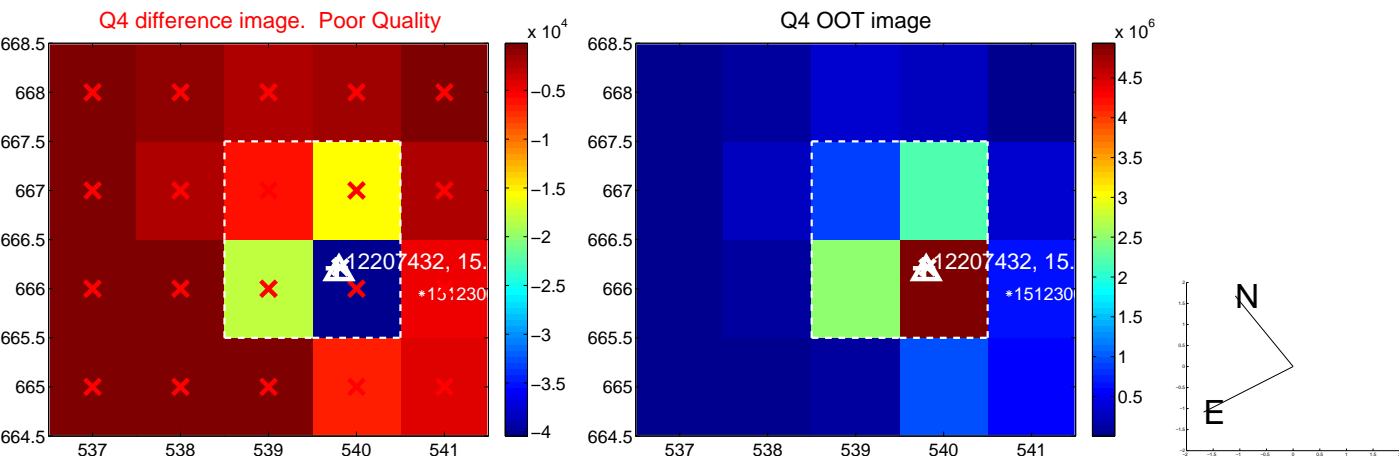
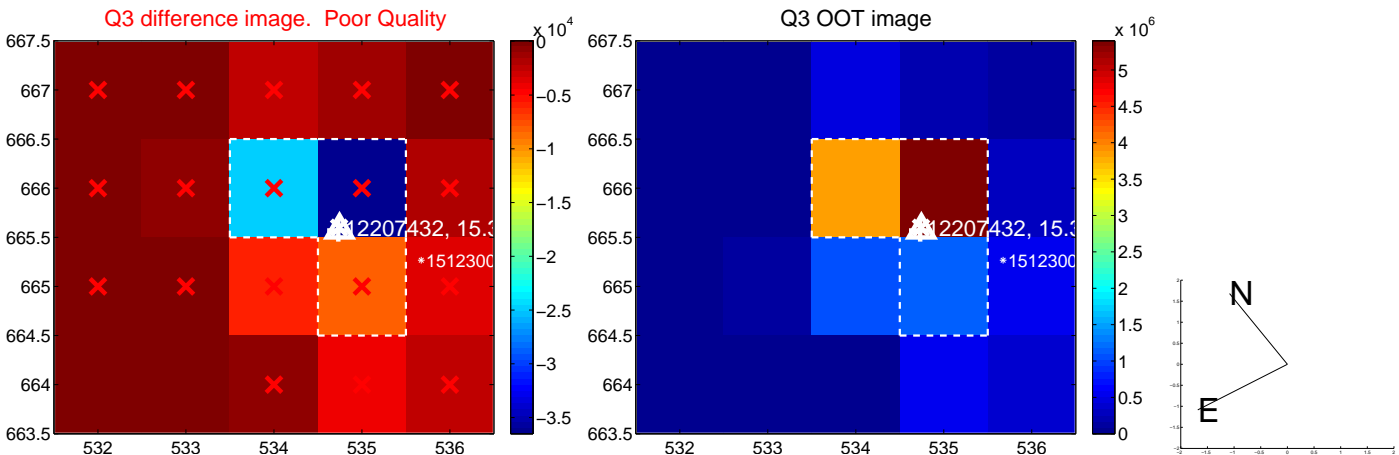
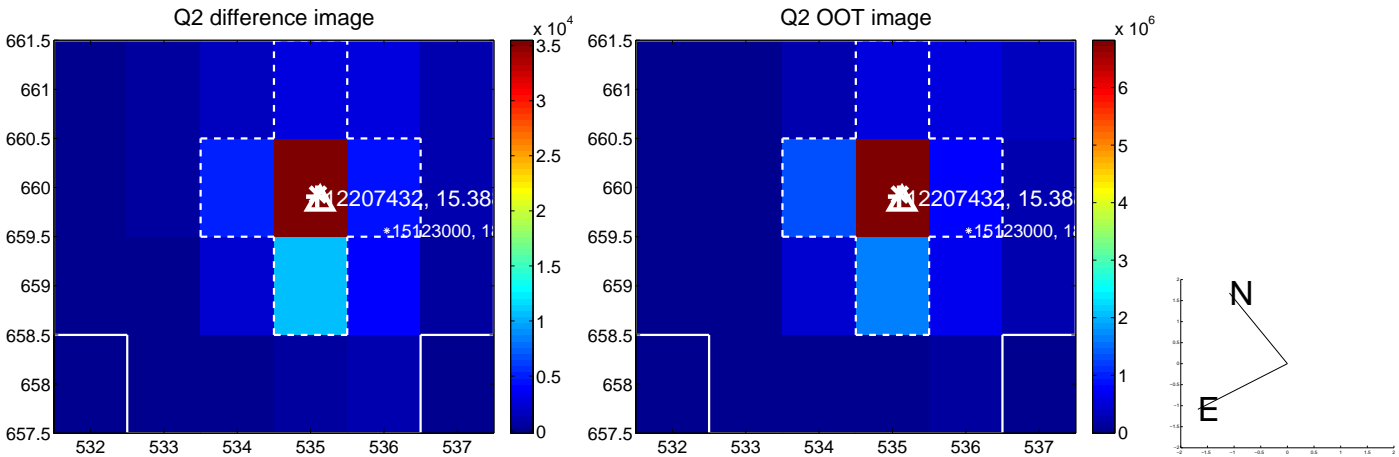
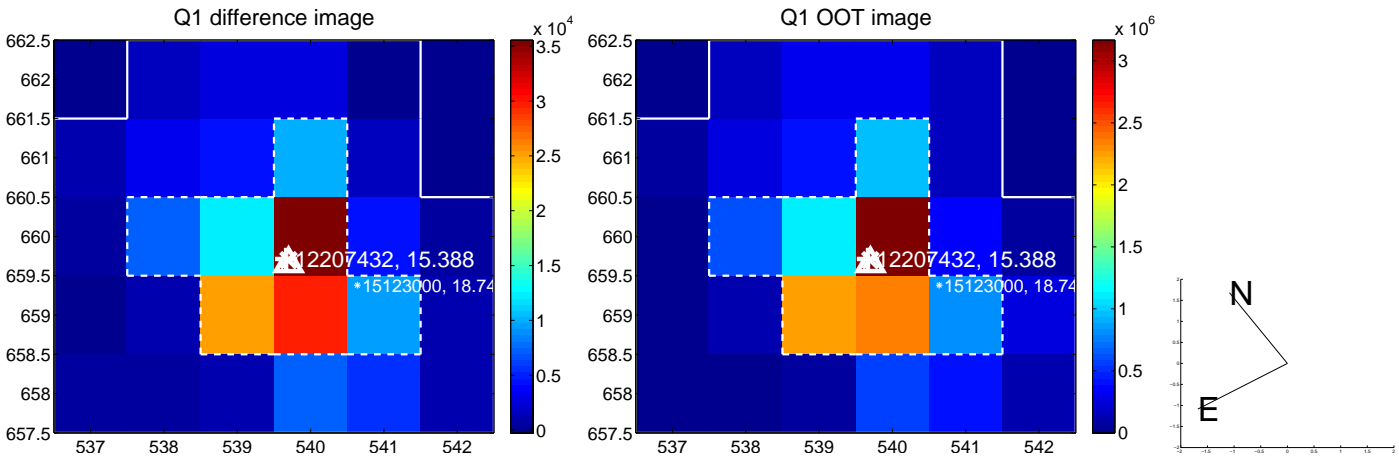
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.079	0.54	-0.024 ± 0.071	-0.035 ± 0.084
PRF-fit source offset from KIC position	0.112 ± 0.075	1.50	0.071 ± 0.070	-0.086 ± 0.077
photometric centroid source offset	0.56 ± 0.40	1.39	0.52 ± 0.40	-0.21 ± 0.40

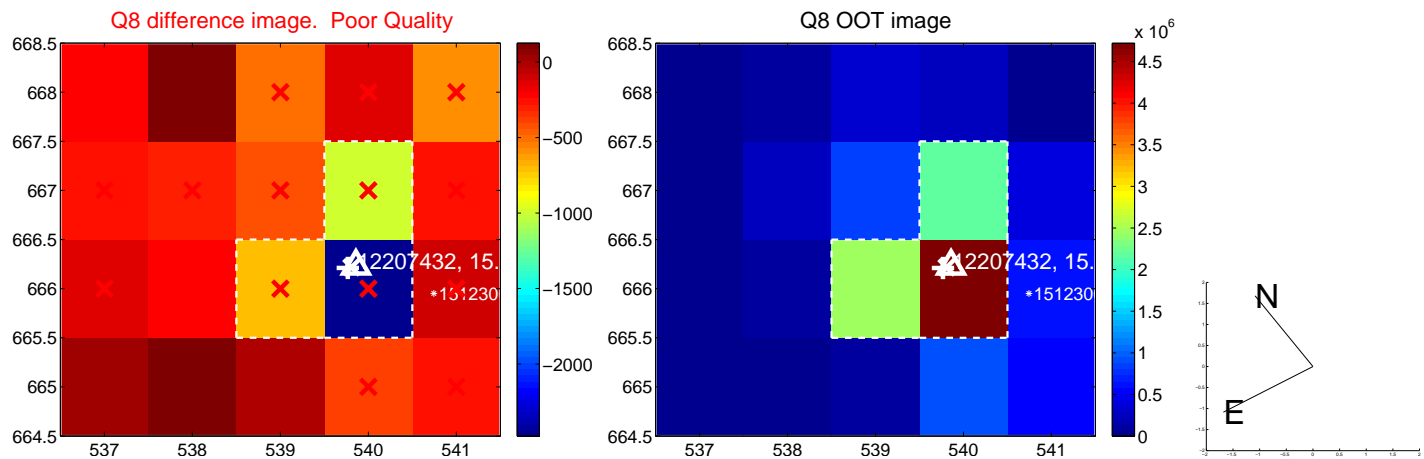
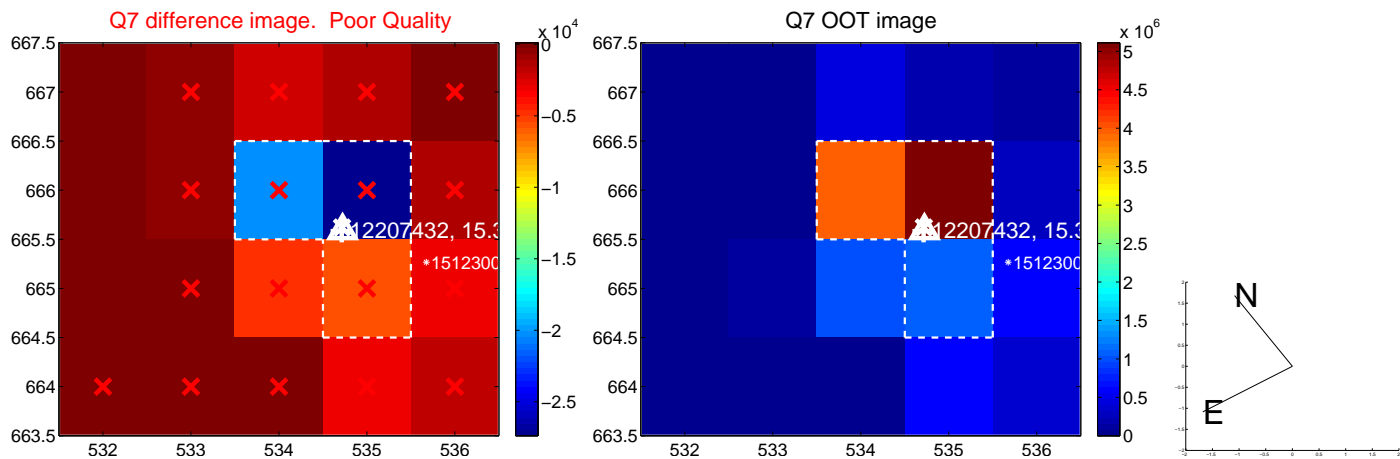
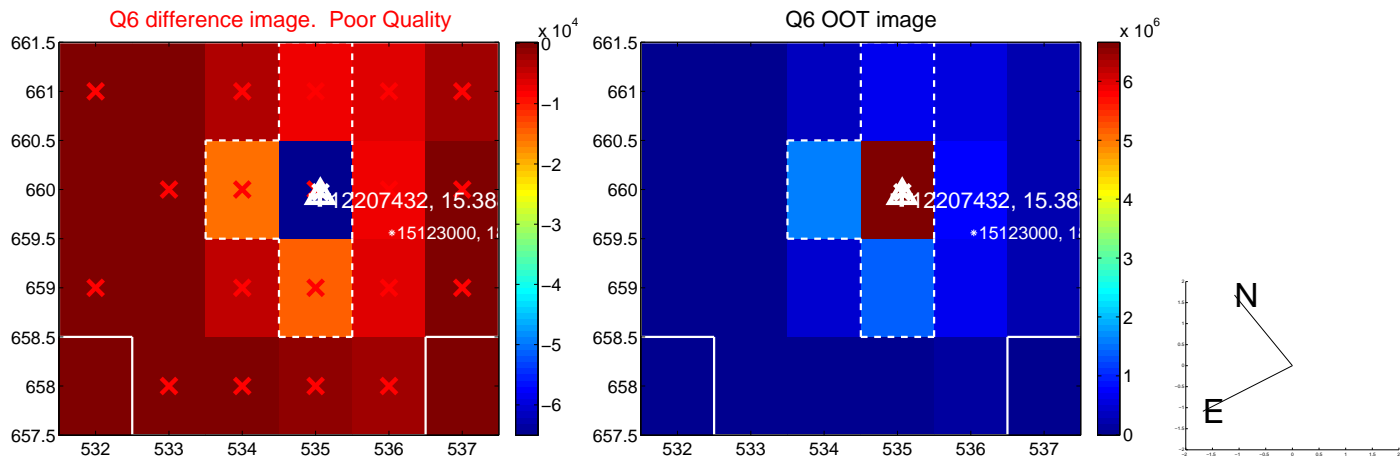
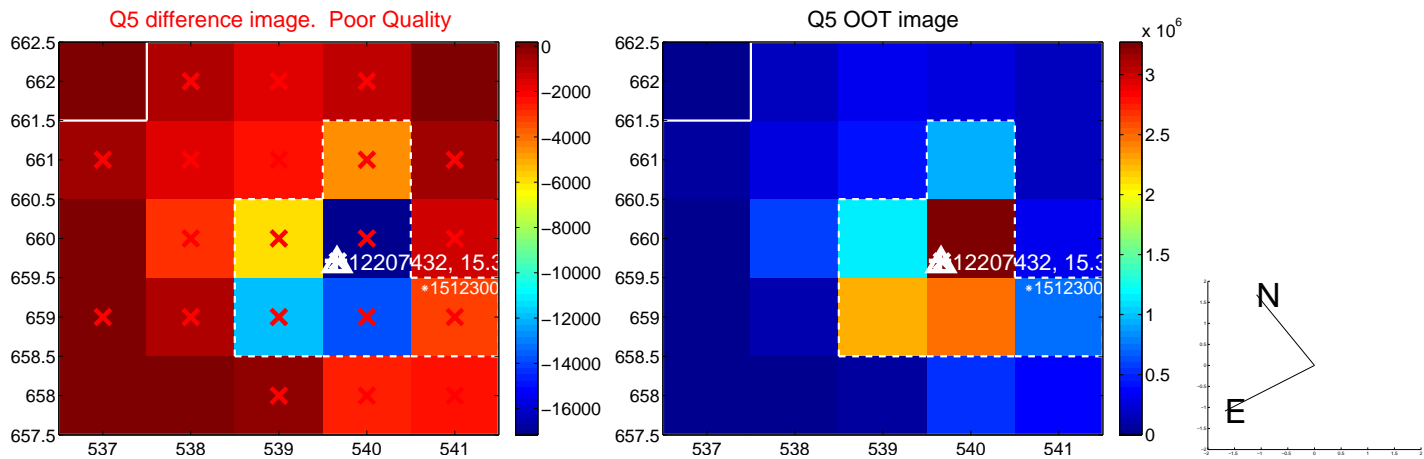


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

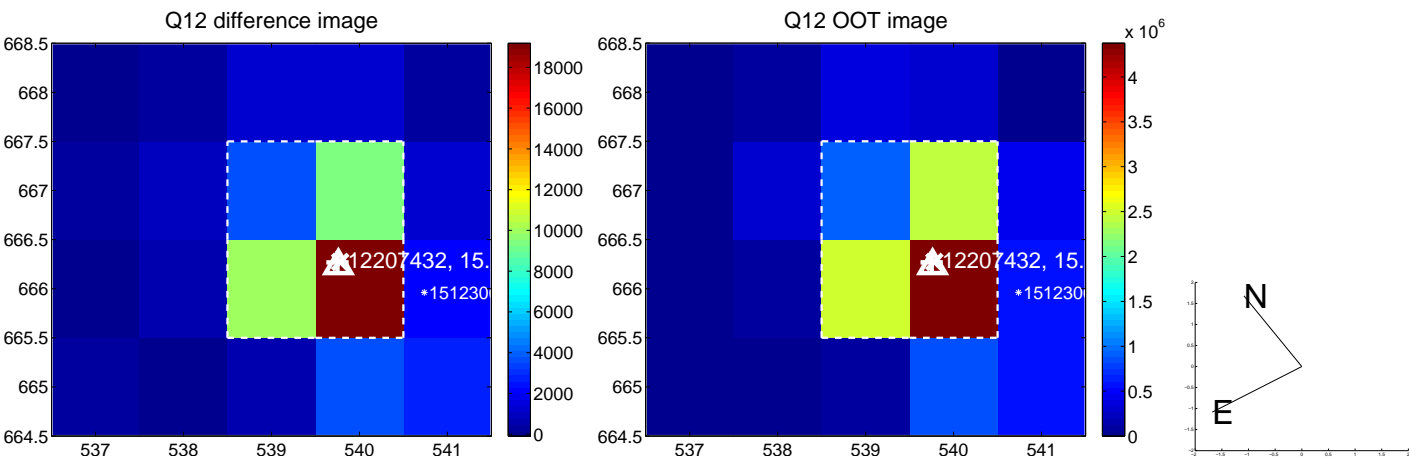
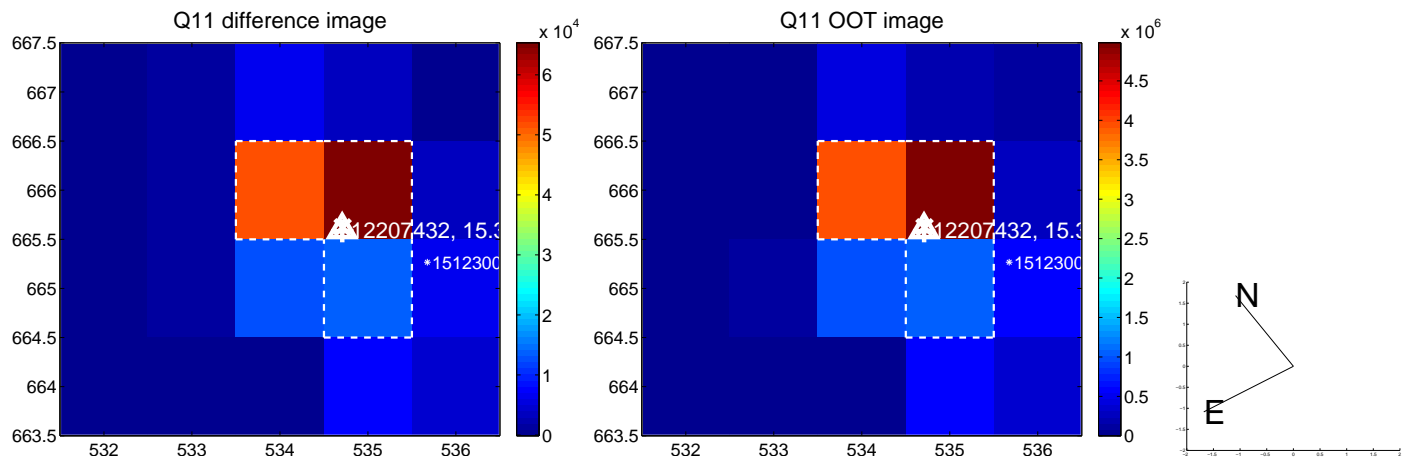
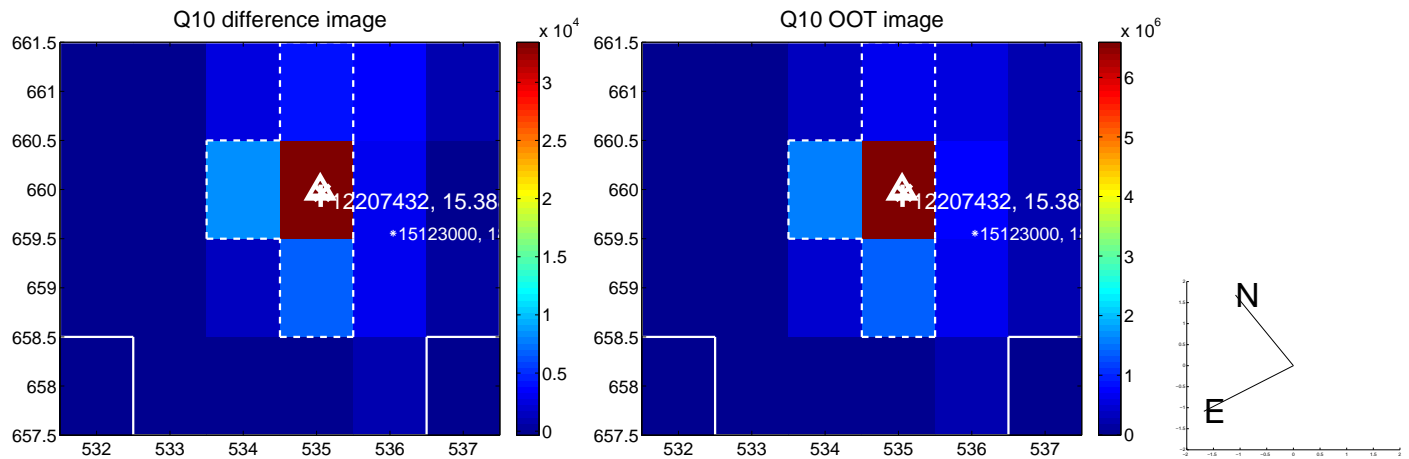
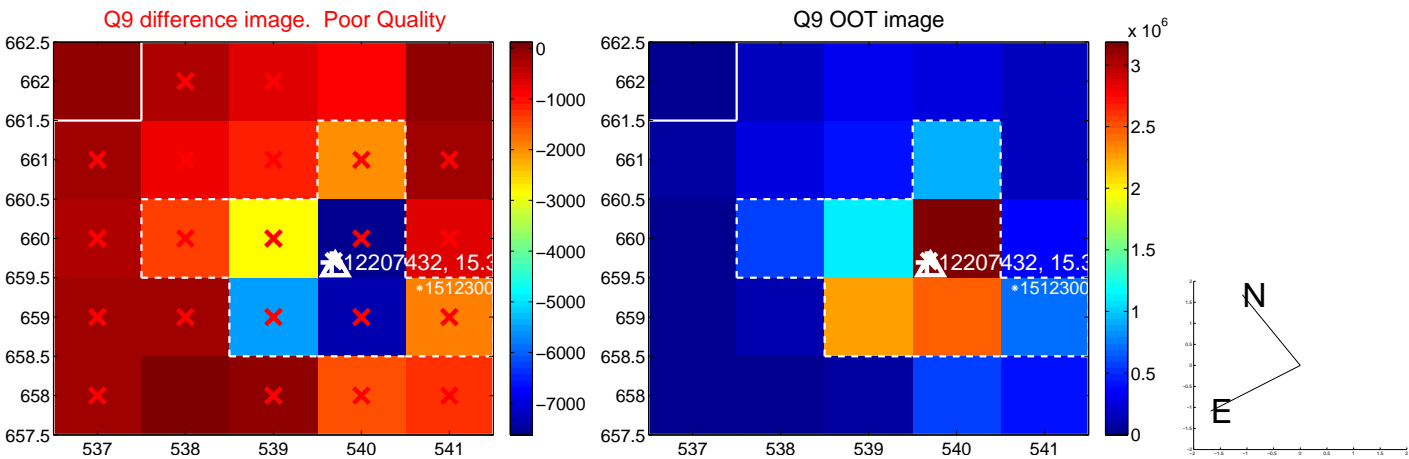
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



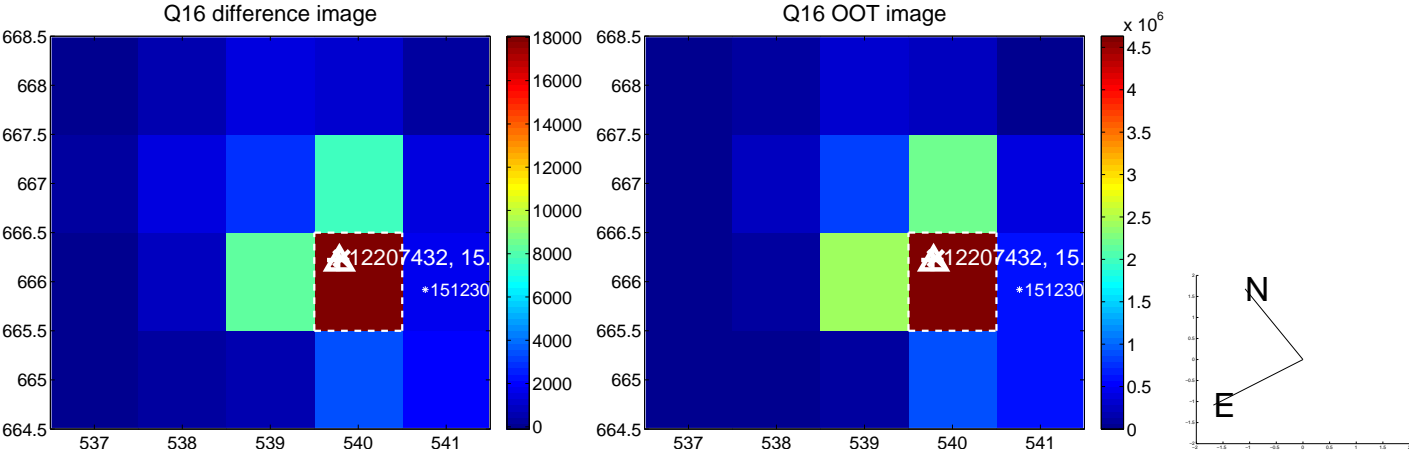
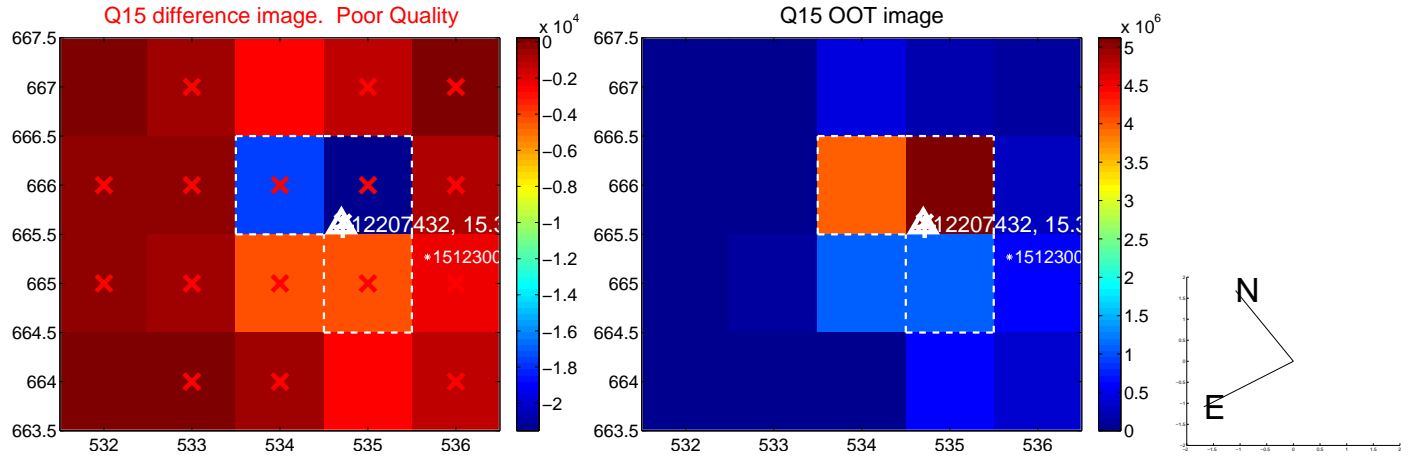
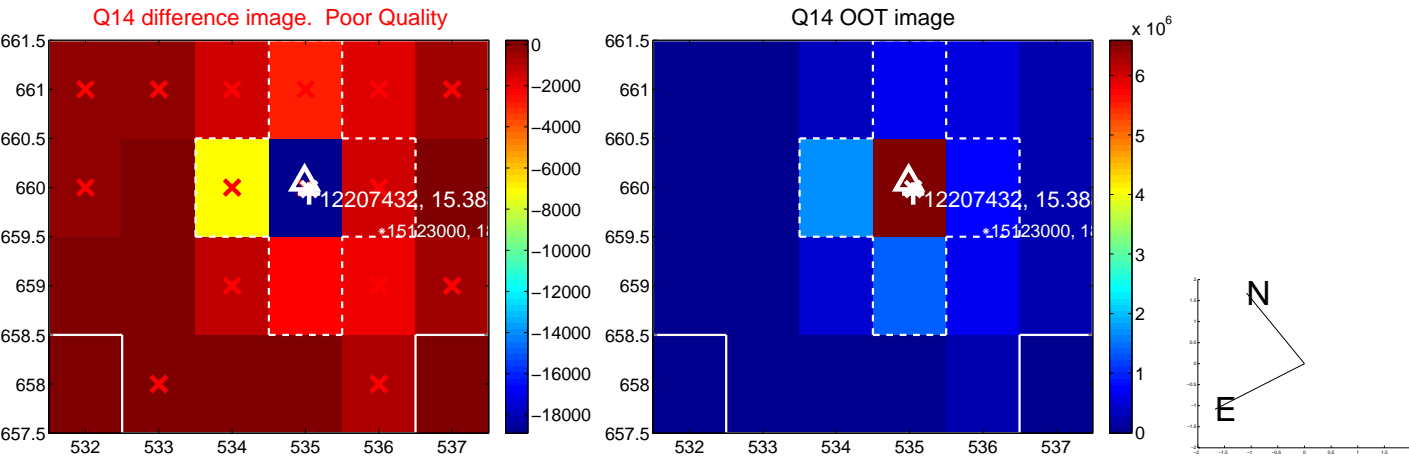
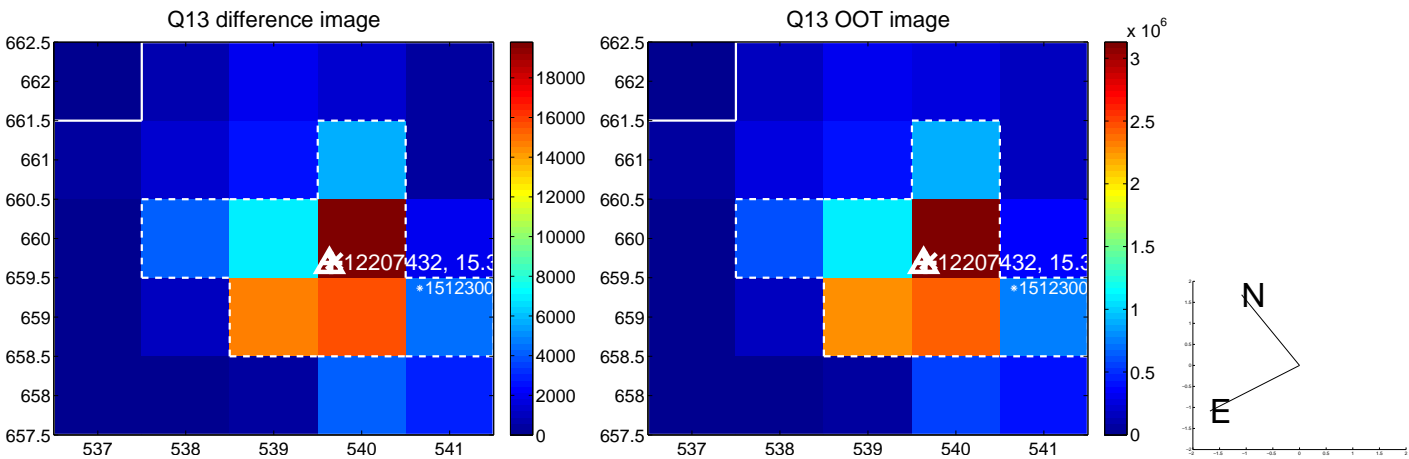
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



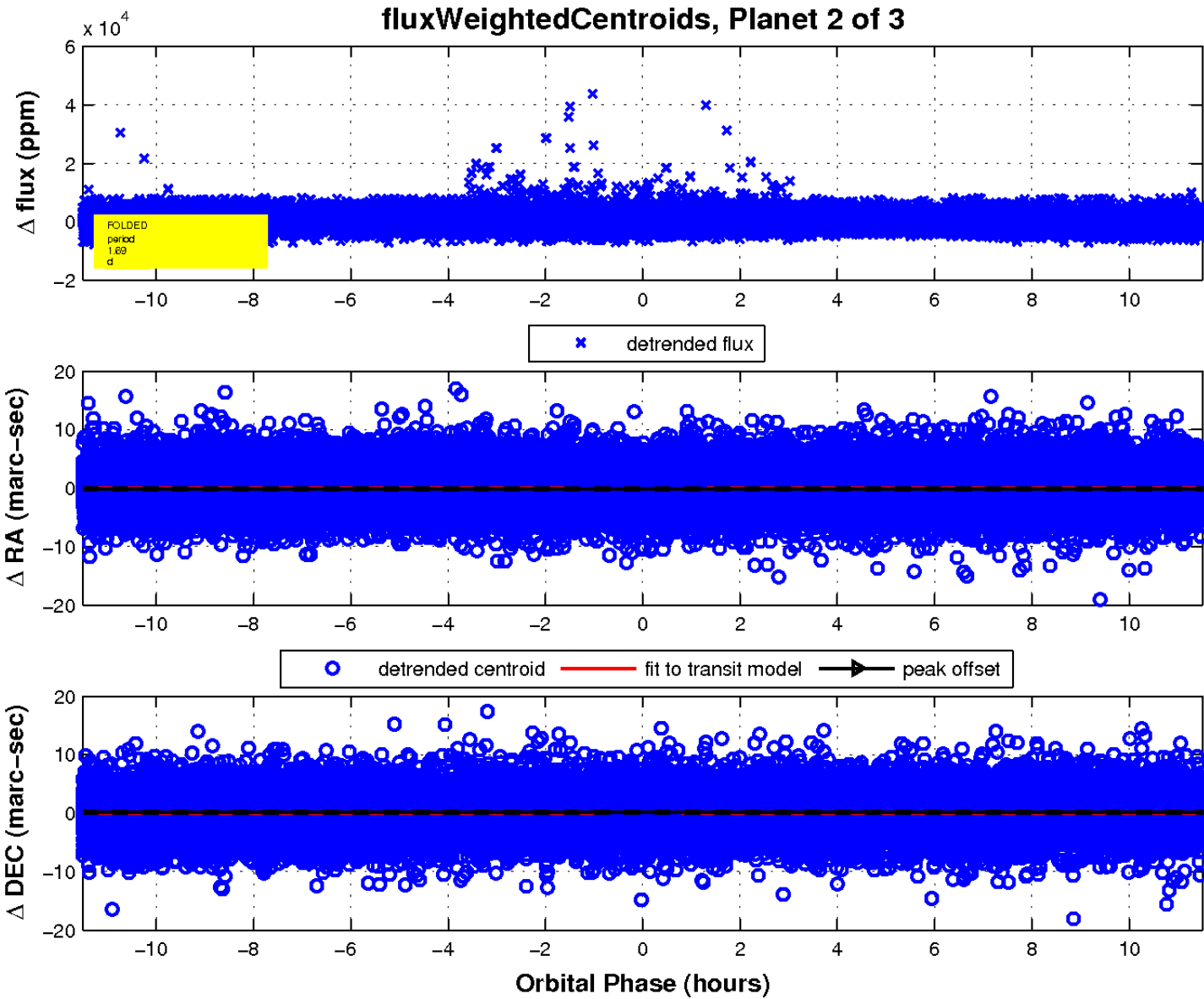
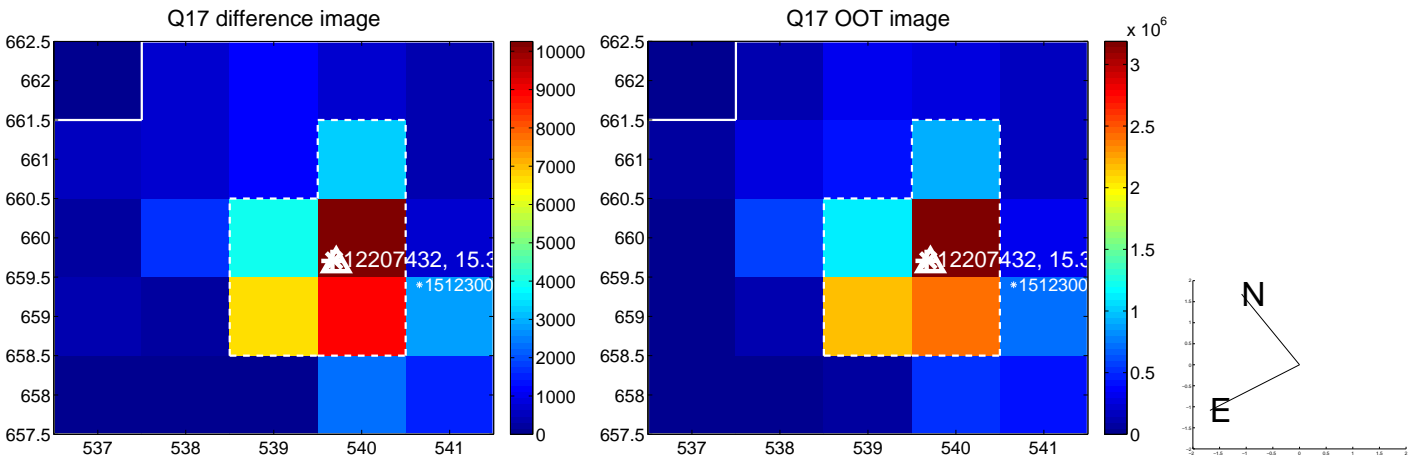
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



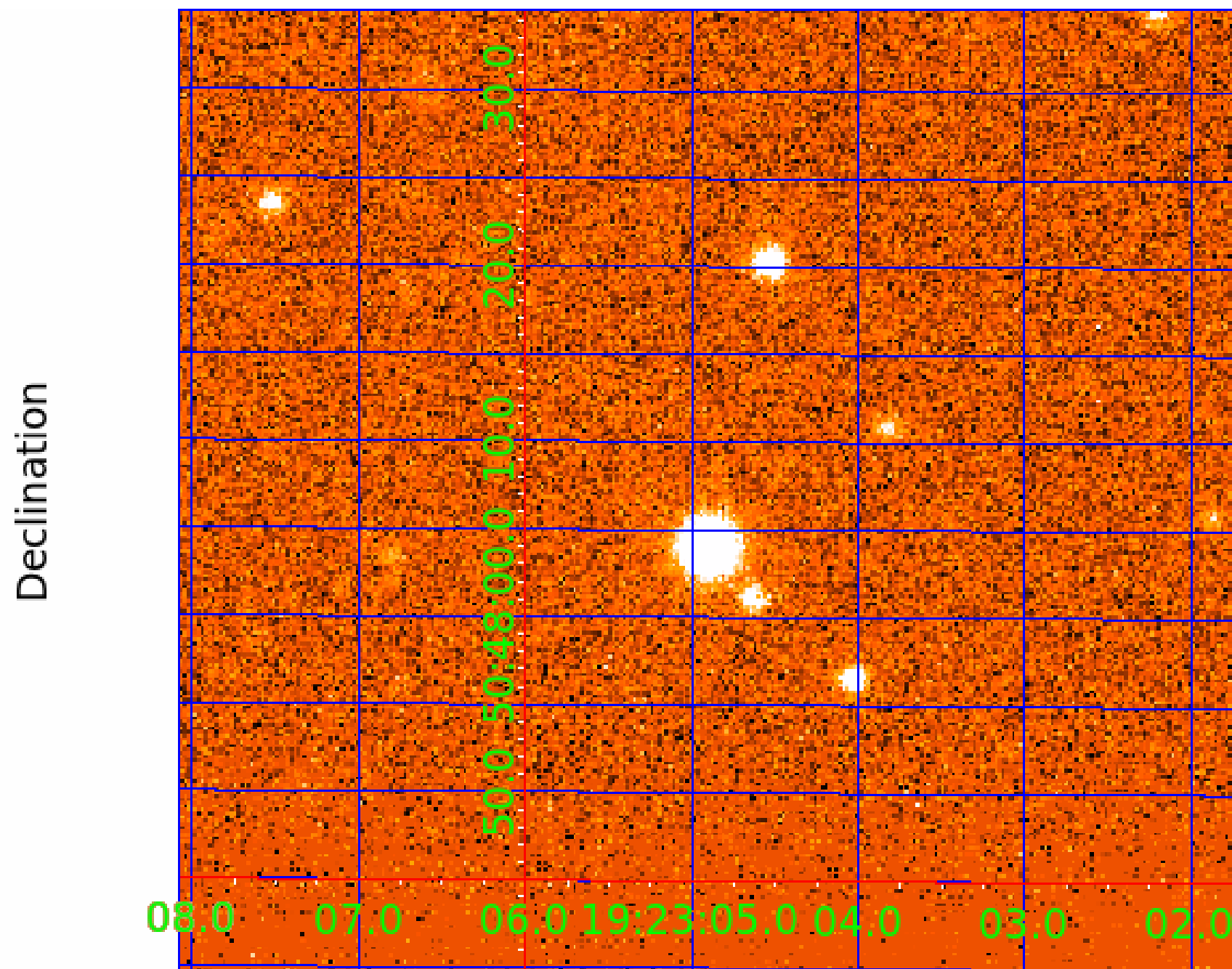
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 012207432

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})
012207432-01	OBS	No	468.148662	147.089064	3653.3	4.273	13.8	7.6	0.46	3680	3.31	0.04
012207432-02	OBS	No	1.691741	133.160377	377.4	3.838	10.1	12.0	0.46	3680	1.23	74.64
012207432-03	OBS	No	279.766509	265.998218	2326.0	7.329	13.9	4.5	0.46	3680	2.21	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207432-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012207432-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
012207432-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

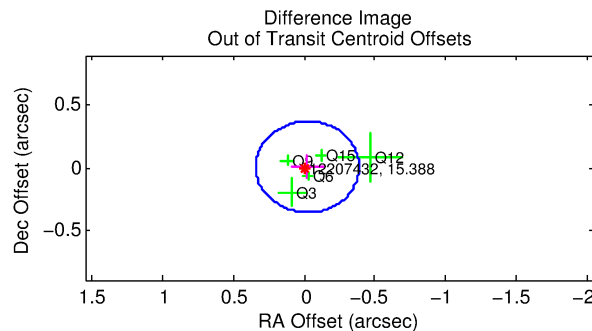
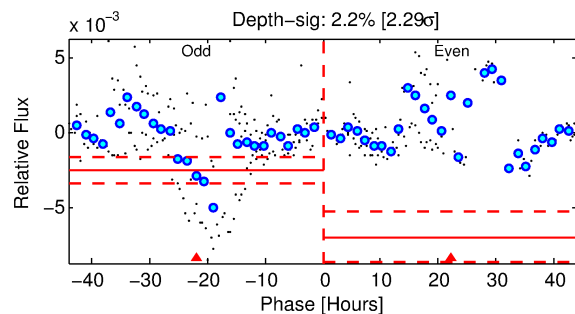
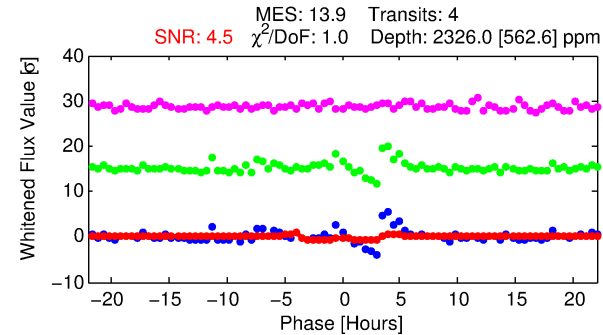
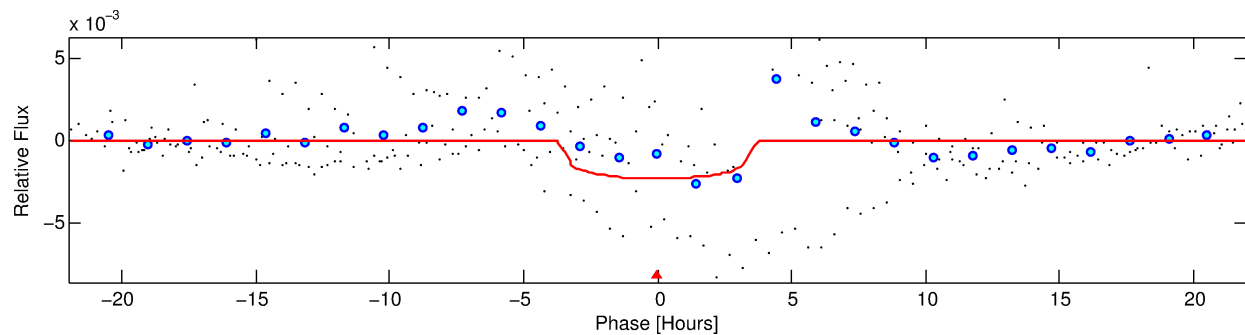
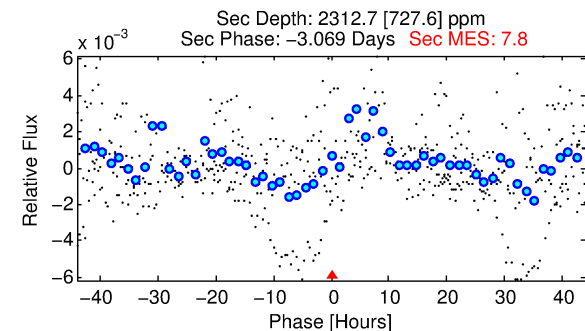
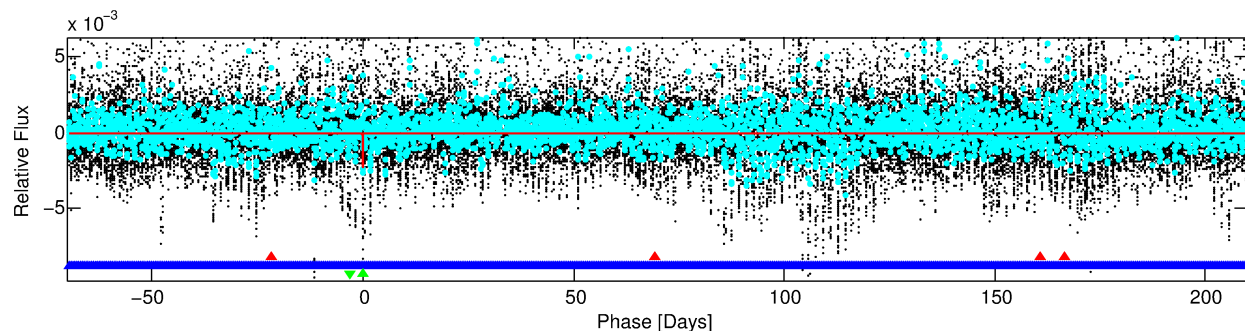
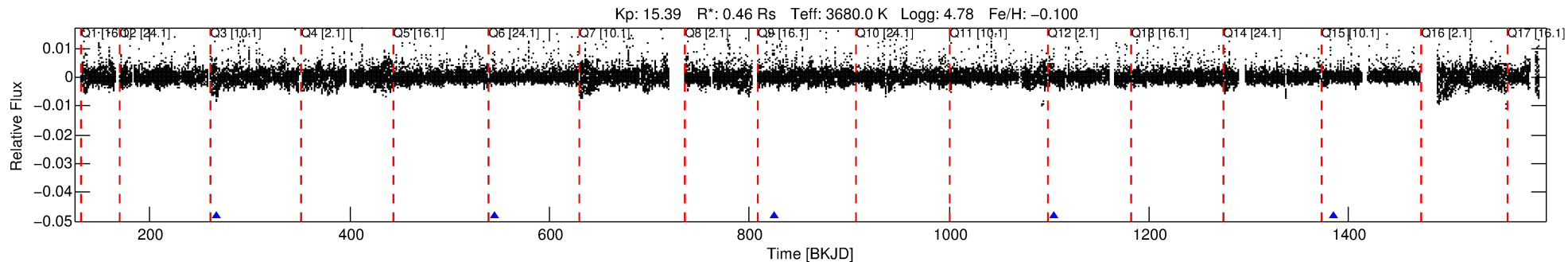
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207432-03

No Significant Match Found

DV One-Page Summary

KIC: 12207432 Candidate: 3 of 3 Period: 279.767 d



DV Fit Results:

Period = 279.76651 [0.00550] d
Epoch = 265.9982 [0.0137] BKJD
Rp/R* = 0.0440 [0.0338]
a/R* = 295.48 [955.76]
b = 0.25 [12.08]
Seff = 0.08 [0.01]
Teq = 137 [3] K
Rp = 2.21 [1.70] Re
a = 0.6517 [0.0335] AU
Ag = 110217.21 [172741.84] [0.64σ]
Teffp = 3847 [1507] K [2.46σ]

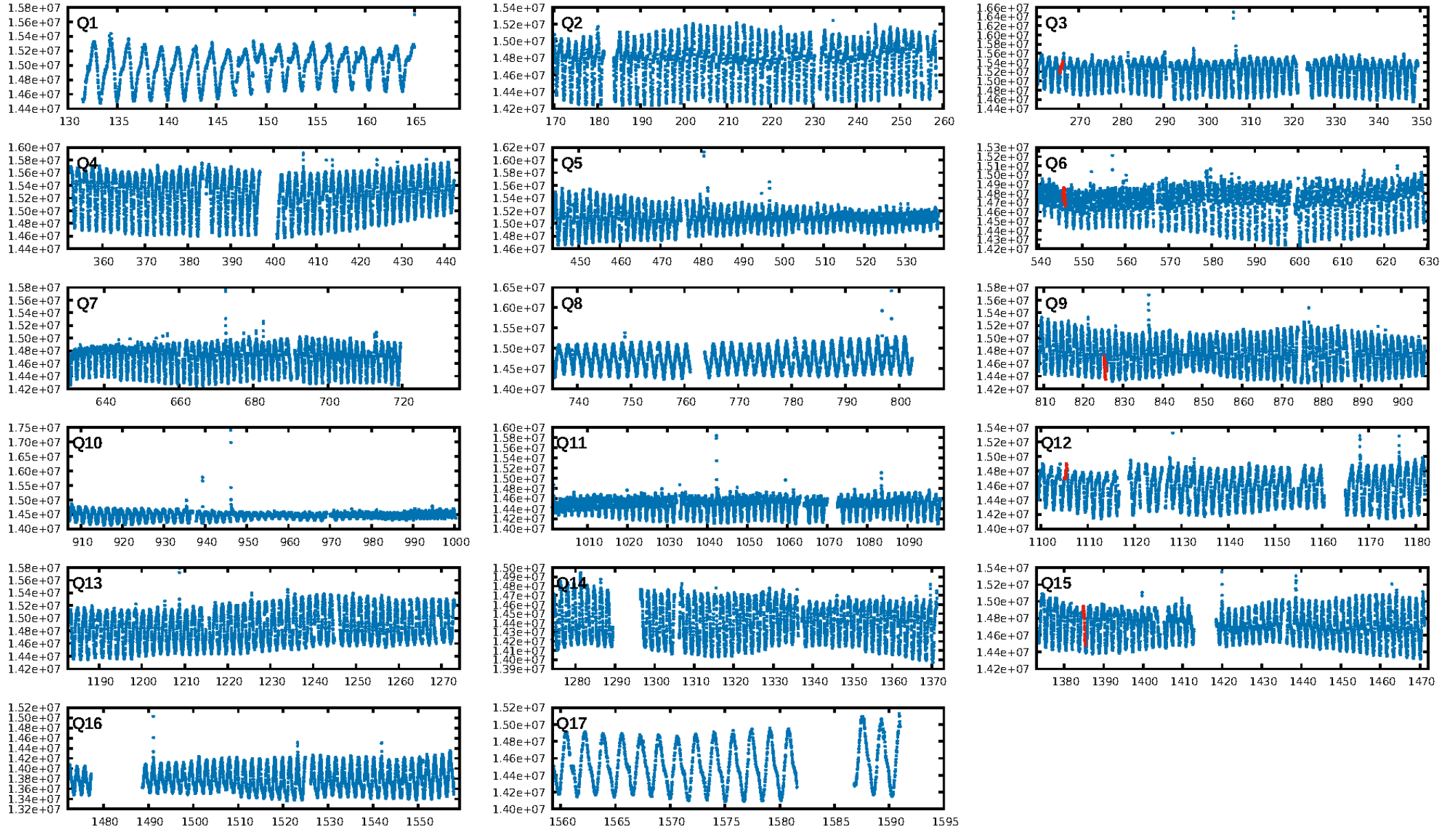
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [806.71σ]
LongPeriod-sig: 100.0% [532.93σ]
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.67e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.179
Centroid-sig: 3.6%
Centroid-so: 0.781 arcsec [1.55σ]
OotOffset-rm: 0.023 arcsec [0.19σ]
KicOffset-rm: 0.075 arcsec [0.65σ]
OotOffset-st: 1/2/1/1 [5]
KicOffset-st: 1/2/1/1 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.20 [1/5]

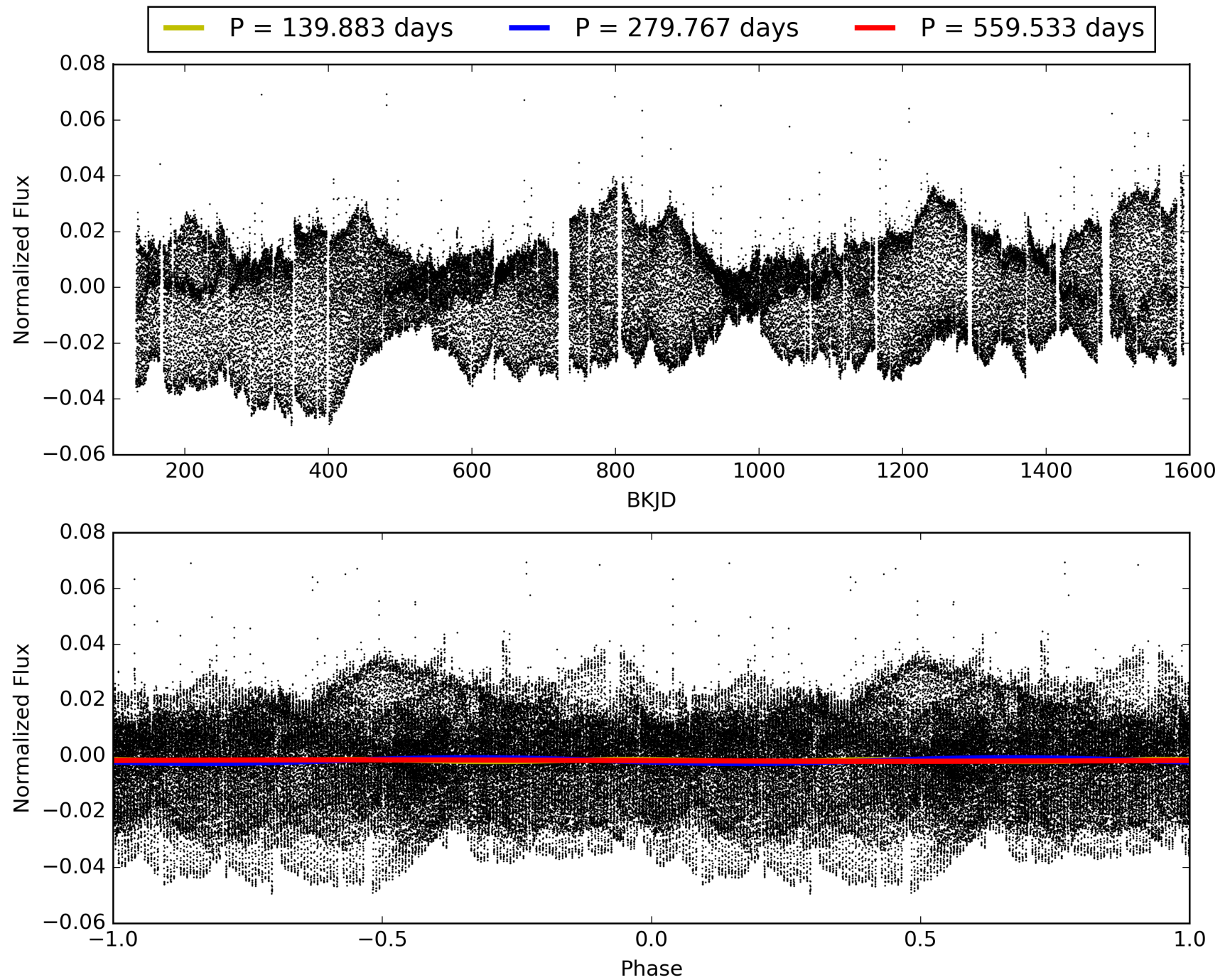
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:07:36 Z

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

TCE 012207432-03, PDC Light Curves

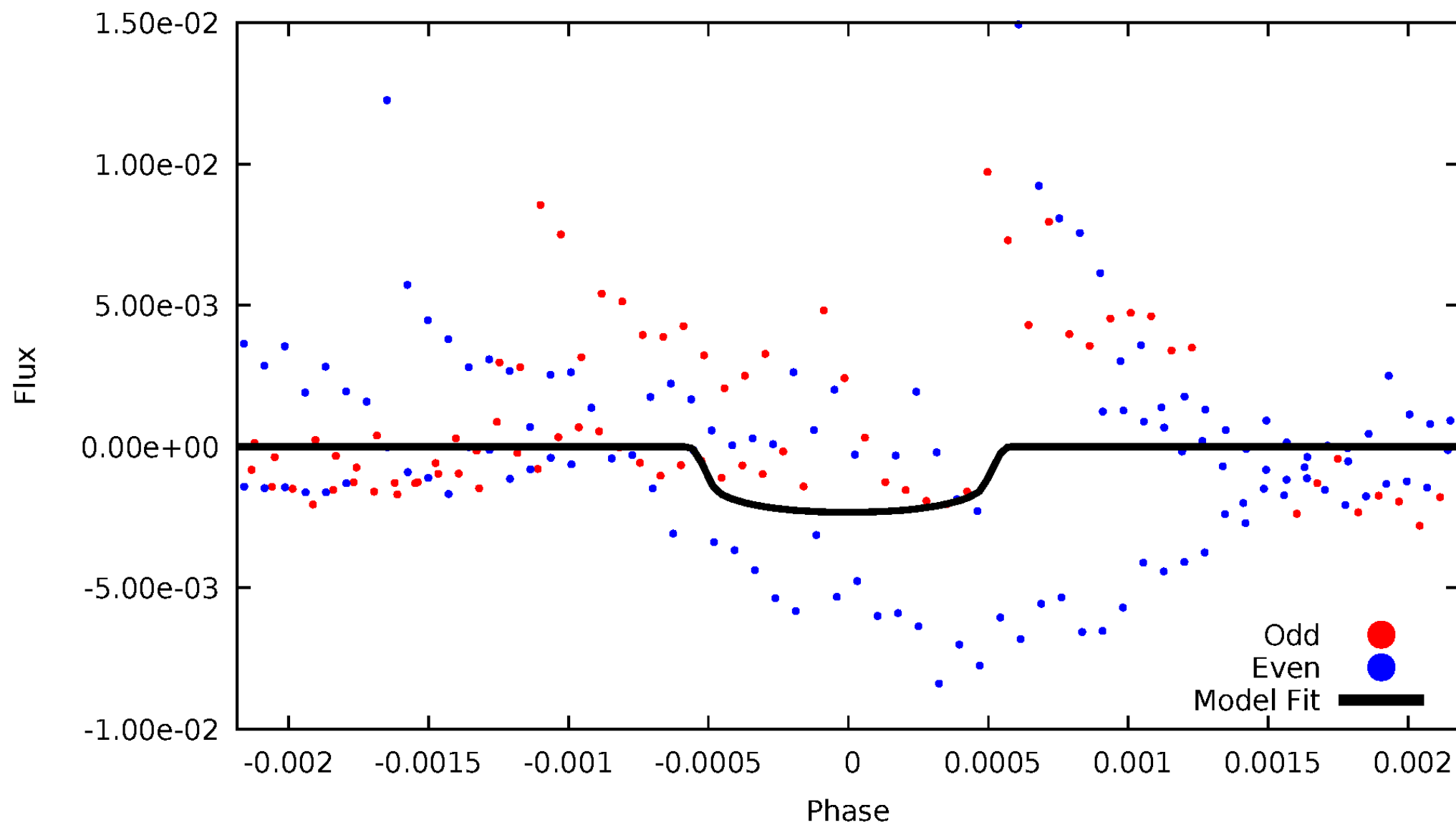


TCE 012207432-03



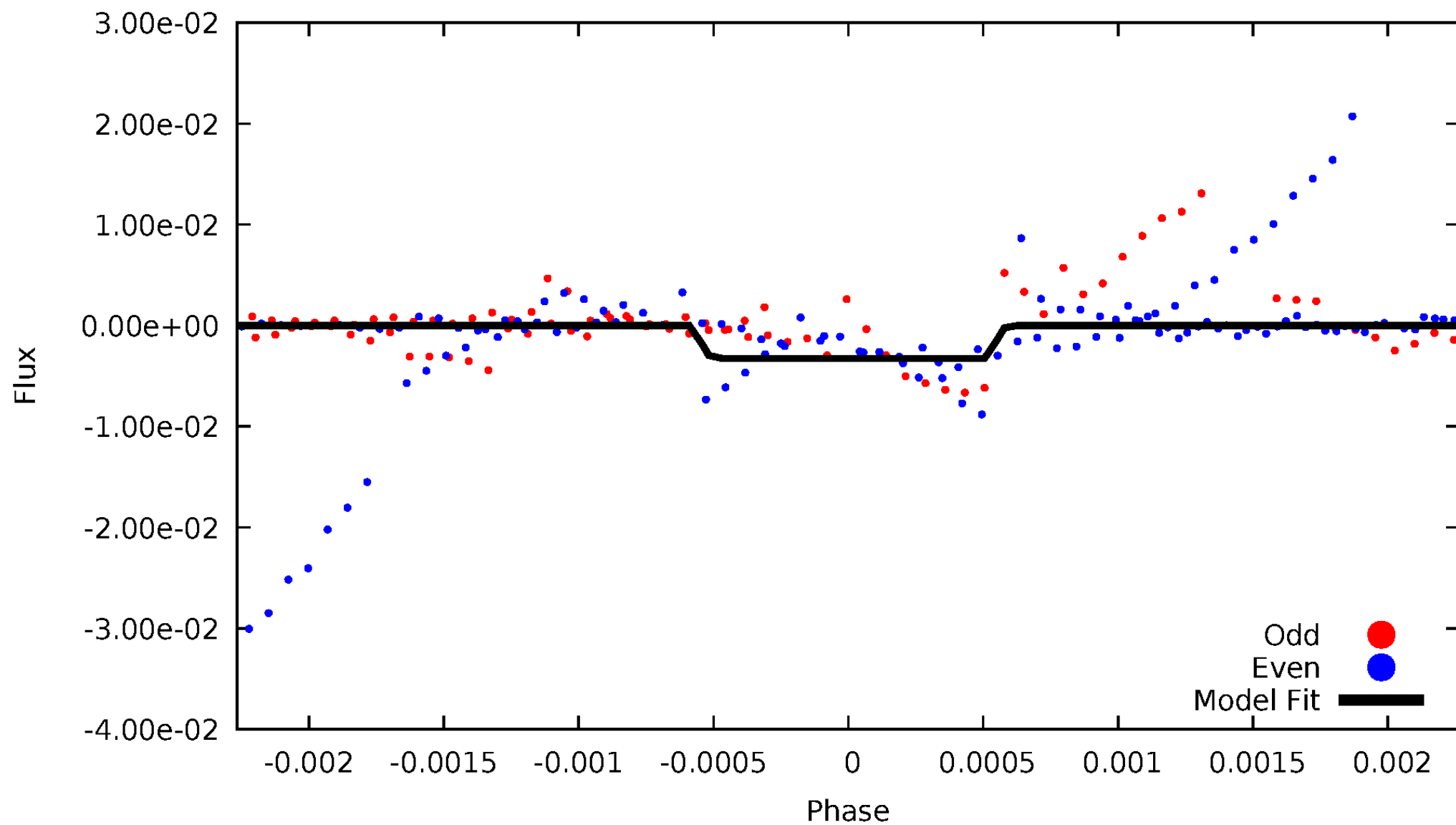
DV Odd/Even

TCE 012207432-03



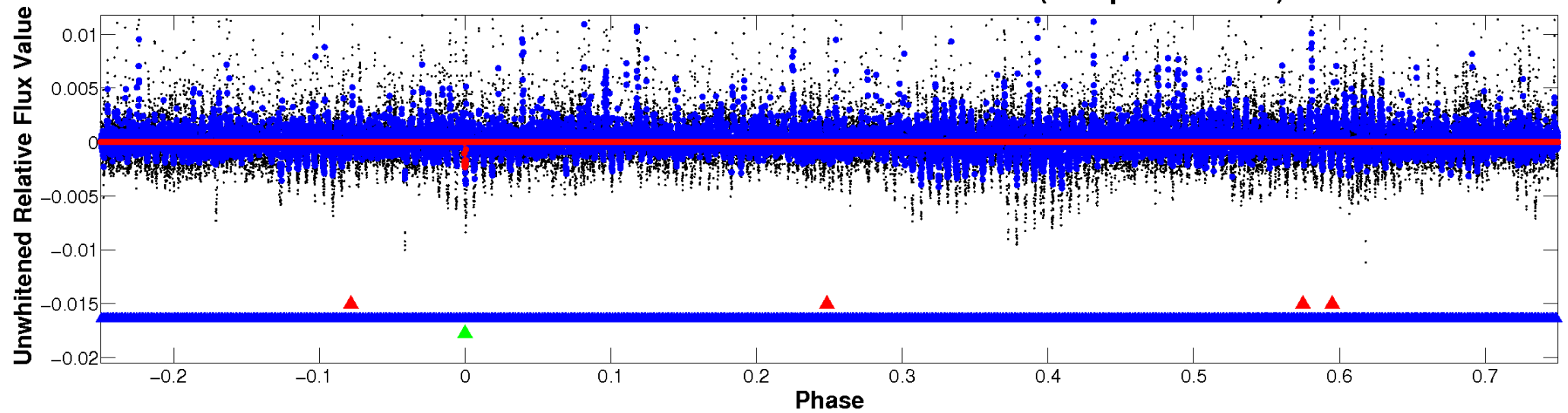
ALT Odd/Even

TCE 012207432-03

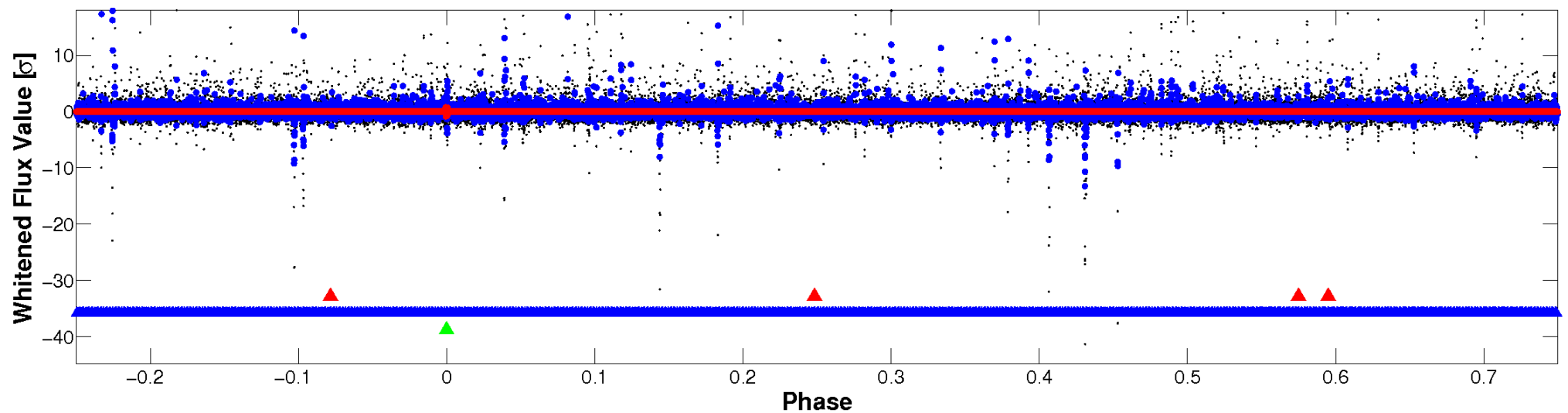


Non-Whitened Vs. Whitened Light Curve

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

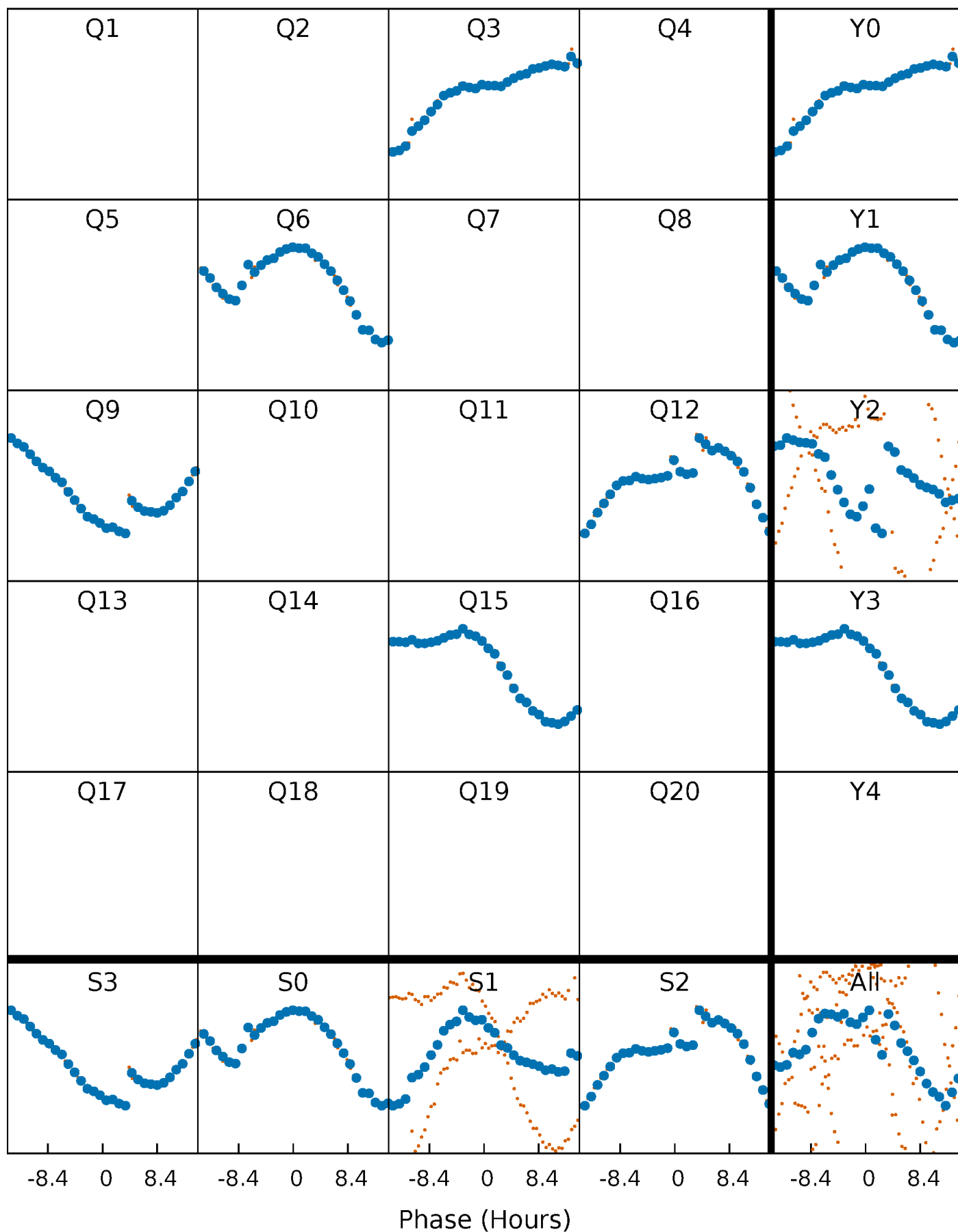


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



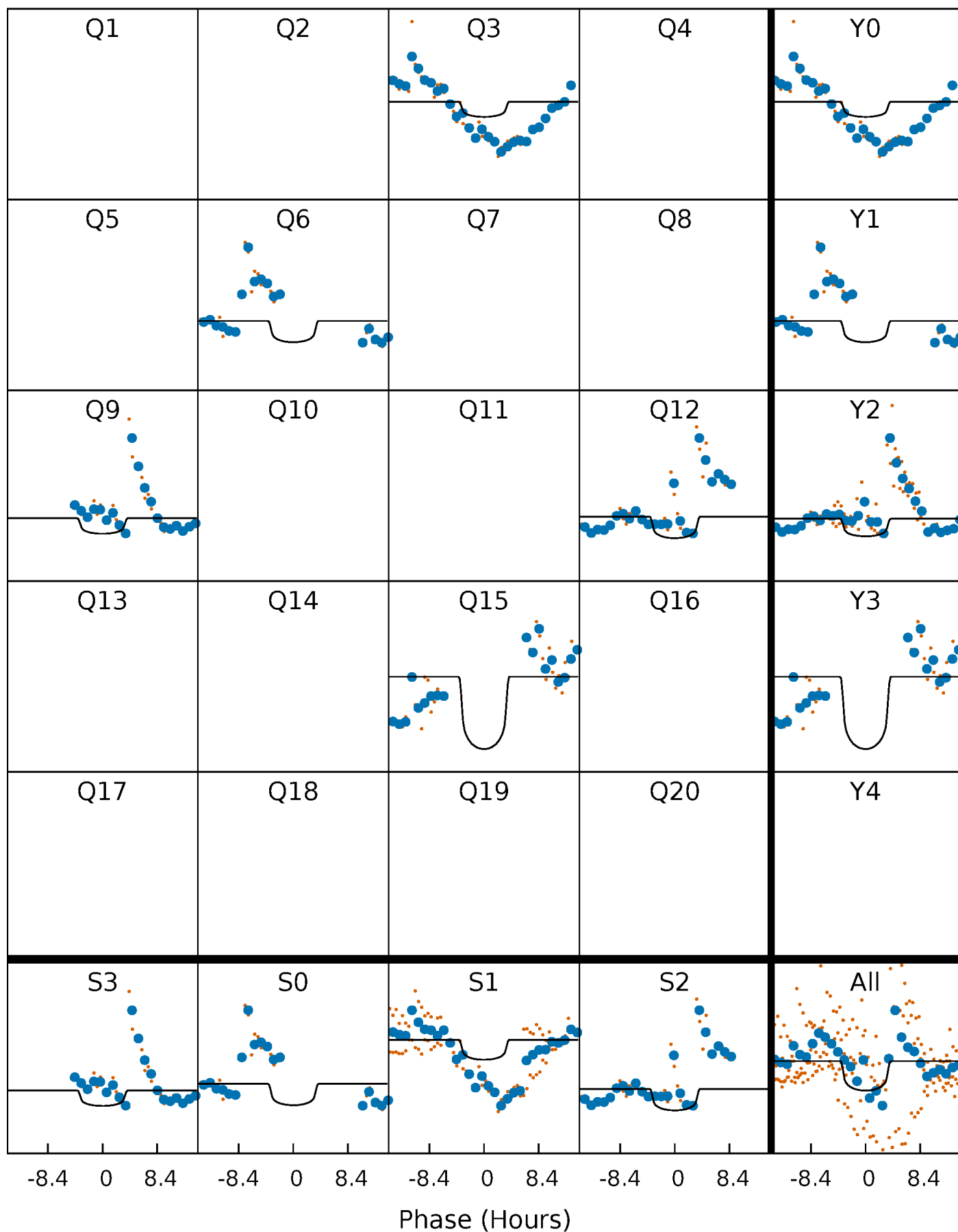
PDC Quarter-Phased Transit Curves

TCE 012207432-03 P=279.766509 Days $T_0=265.998218$ (BKJD)



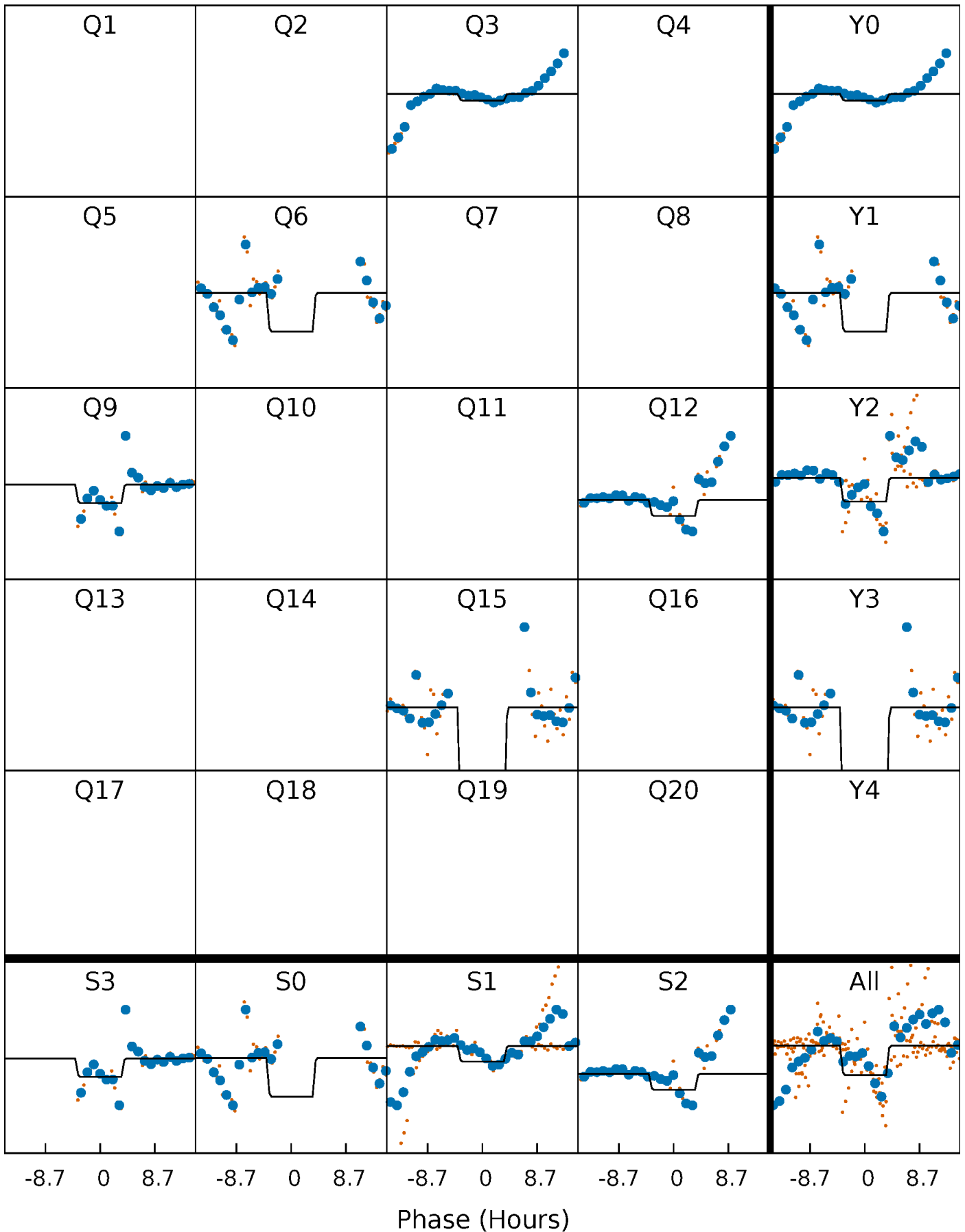
DV Quarter-Phased Transit Curves

TCE 012207432-03 $P=279.766509$ Days $T_0=265.998218$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

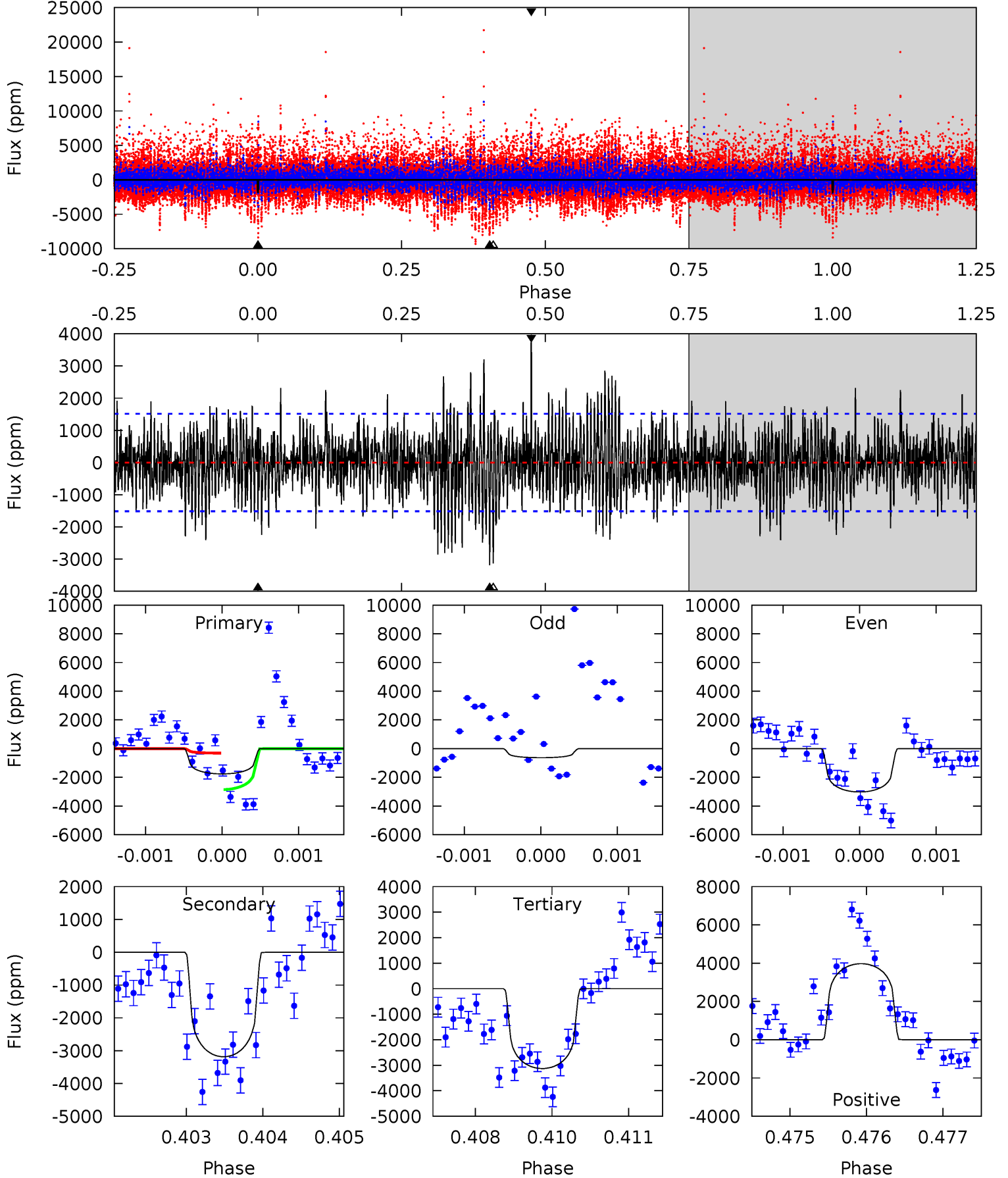
TCE 012207432-03 P=279.753167 Days $T_0=266.015648$ (BKJD)



DV Model-Shift Uniqueness Test

012207432-03, P = 279.766509 Days, E = 265.998218 Days

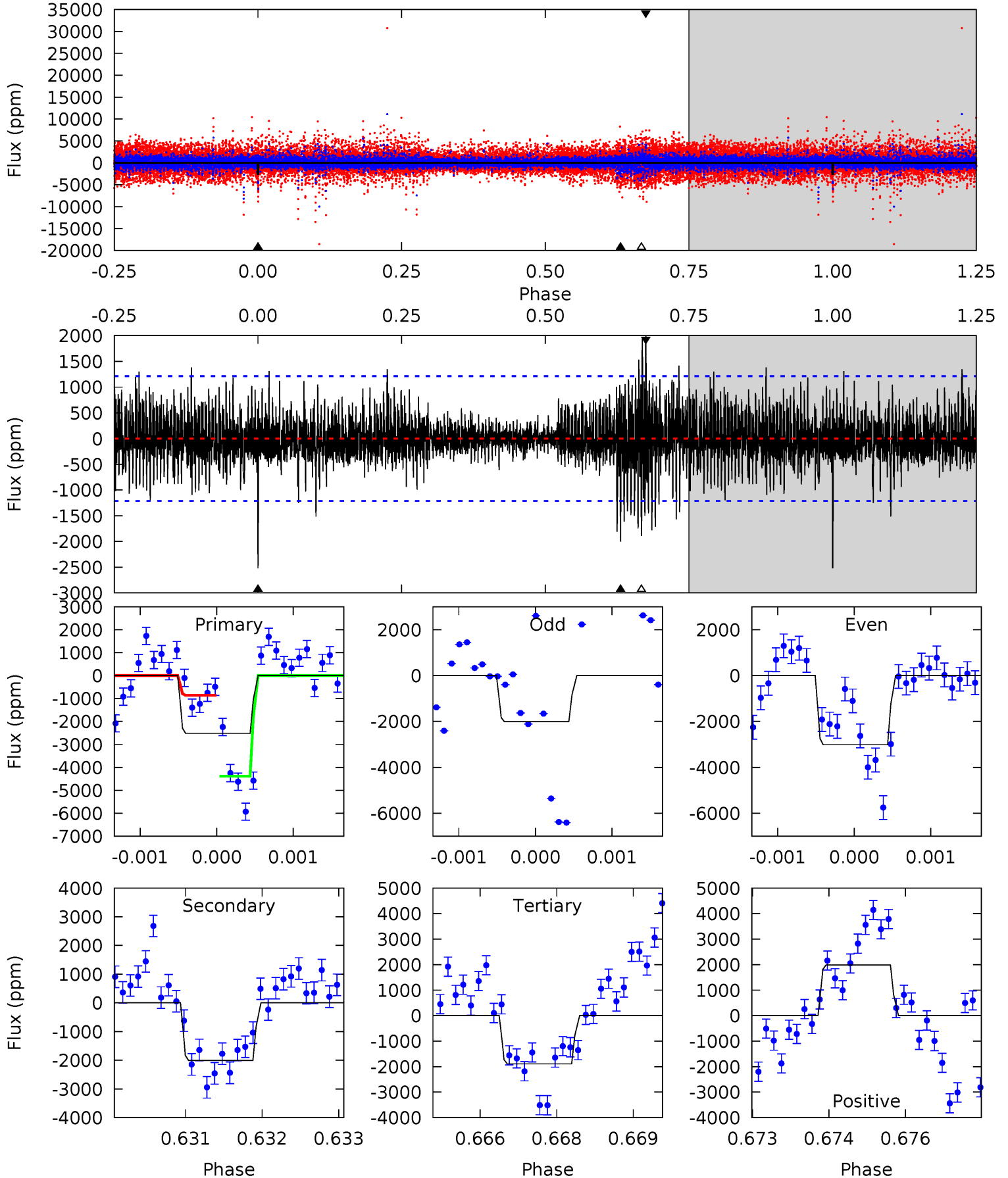
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.31	11.4	11.2	14.2	5.42	3.25	2.90	-4.88	-7.90	0.20	-2.82	3.88	-2.46	0.56	4.41



Alt Model-Shift Uniqueness Test

012207432-03, P = 279.753167 Days, E = 266.015648 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	8.97	8.47	8.90	5.43	3.25	1.78	2.82	2.39	0.51	0.08	1.38	0.92	0.44	7.99



Stellar Parameters For KIC 012207432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3680^{+44}_{-49}	$4.784^{+0.036}_{-0.021}$	$-0.100^{+0.100}_{-0.100}$	$0.461^{+0.025}_{-0.030}$	$0.472^{+0.029}_{-0.026}$	$6.772^{+1.112}_{-0.653}$
	+1%/-1%	+1%/-0%	+100%/-100%	+5%/-7%	+6%/-6%	+16%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 012207432-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3185 ± 280	$2.40^{+1.59}_{-1.40}$	190^{+3}_{-3}	3883^{+1615}_{-583}	$131628^{+605613}_{-85024}$
Alt.	-2004 ± 223	$2.89^{+1.66}_{-1.50}$	190^{+3}_{-4}	3396^{+956}_{-433}	$56786^{+192404}_{-34409}$

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

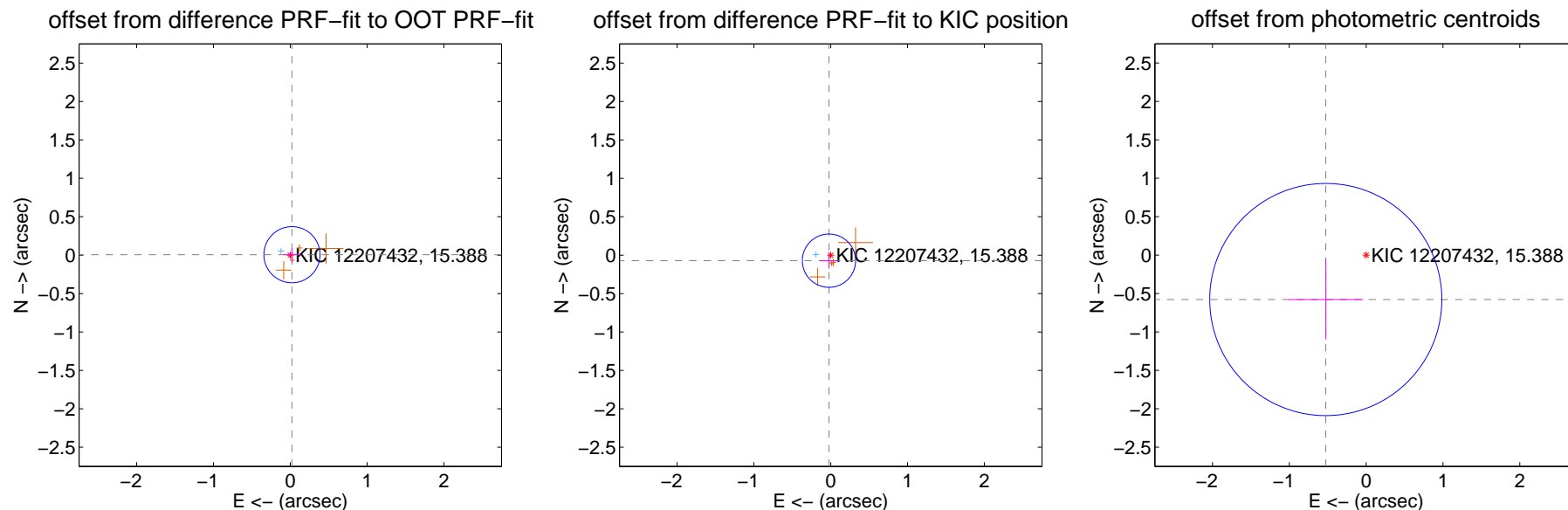
DV Centroid Data

Supplemental centroid analysis for 012207432-03. Kepler magnitude: 15.39. Transit SNR 4.52

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.023 ± 0.122	0.19	-0.022 ± 0.116	0.006 ± 0.085
PRF-fit source offset from KIC position	0.075 ± 0.116	0.65	0.023 ± 0.121	-0.072 ± 0.101
photometric centroid source offset	0.78 ± 0.50	1.55	0.53 ± 0.48	-0.58 ± 0.52



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.

Q1 no difference image



Q1 no OOT image



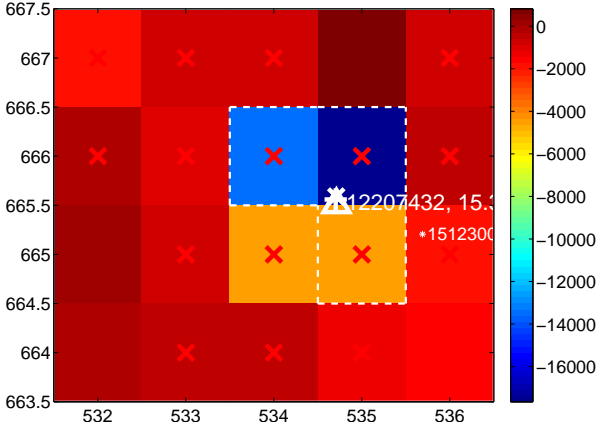
Q2 no difference image



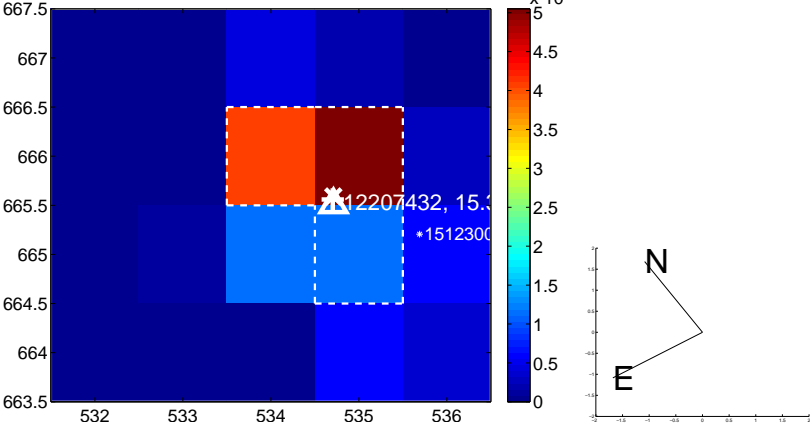
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



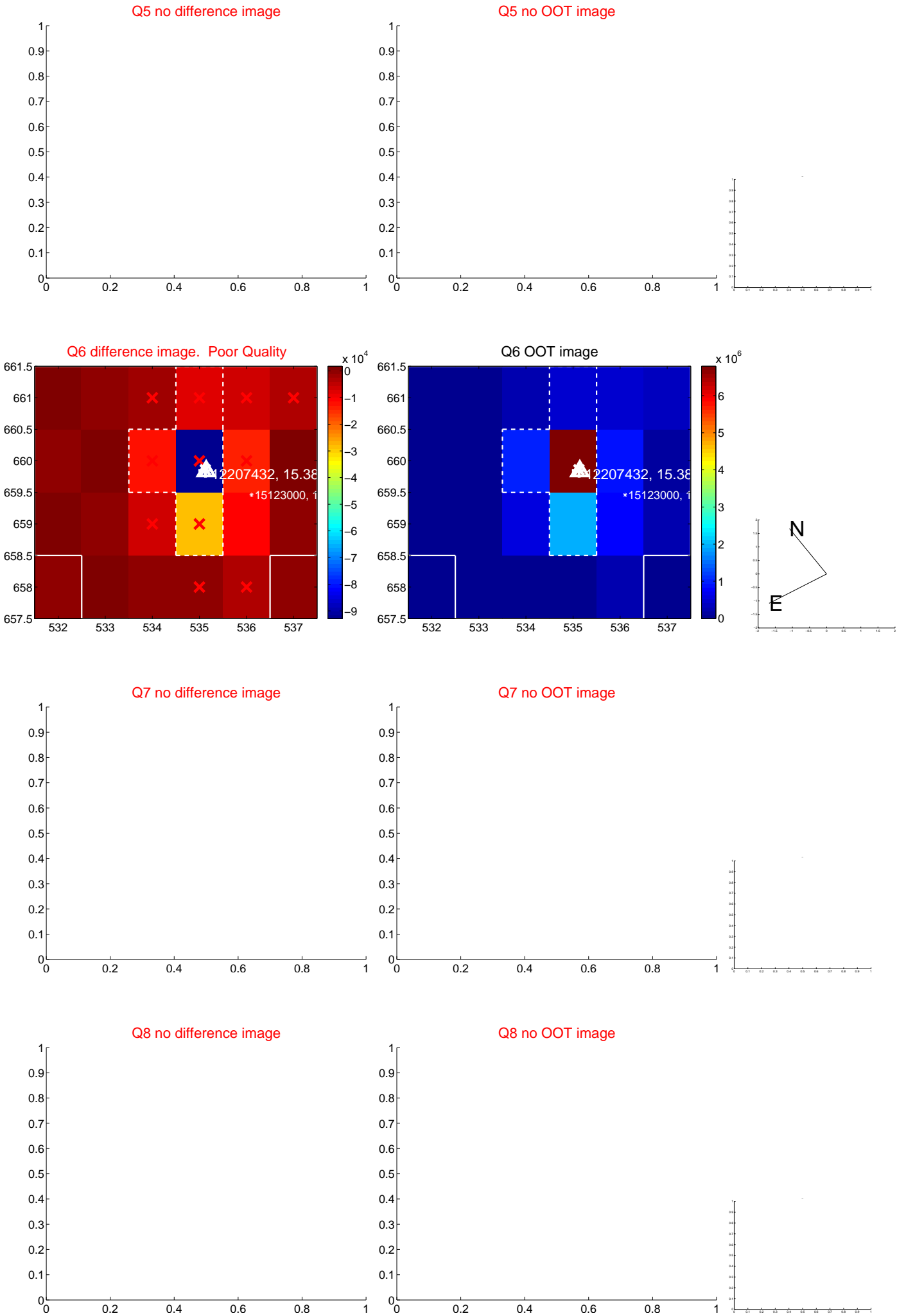
Q4 no difference image



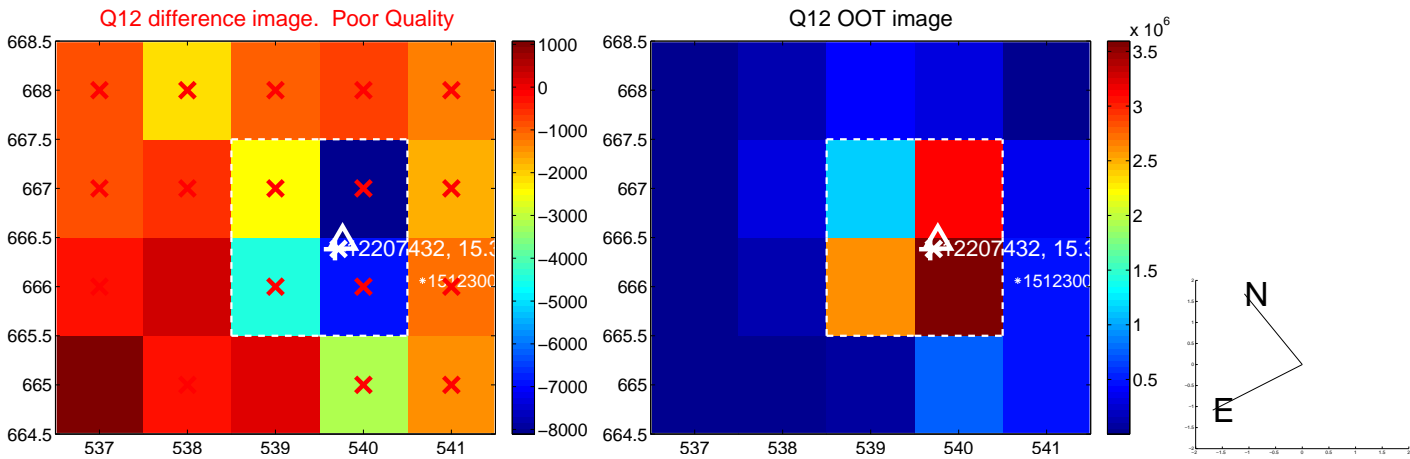
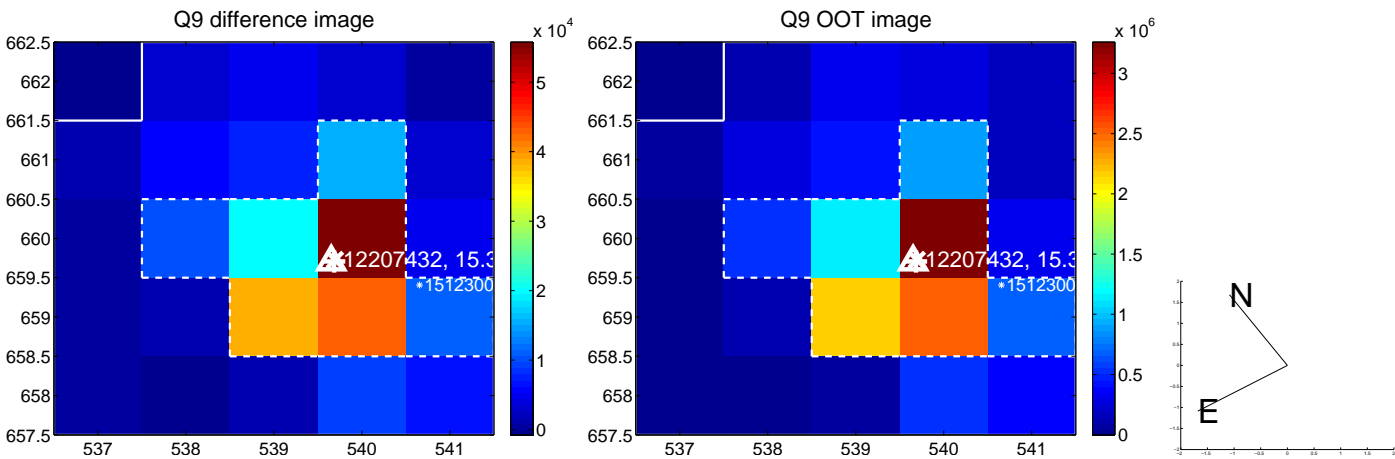
Q4 no OOT image



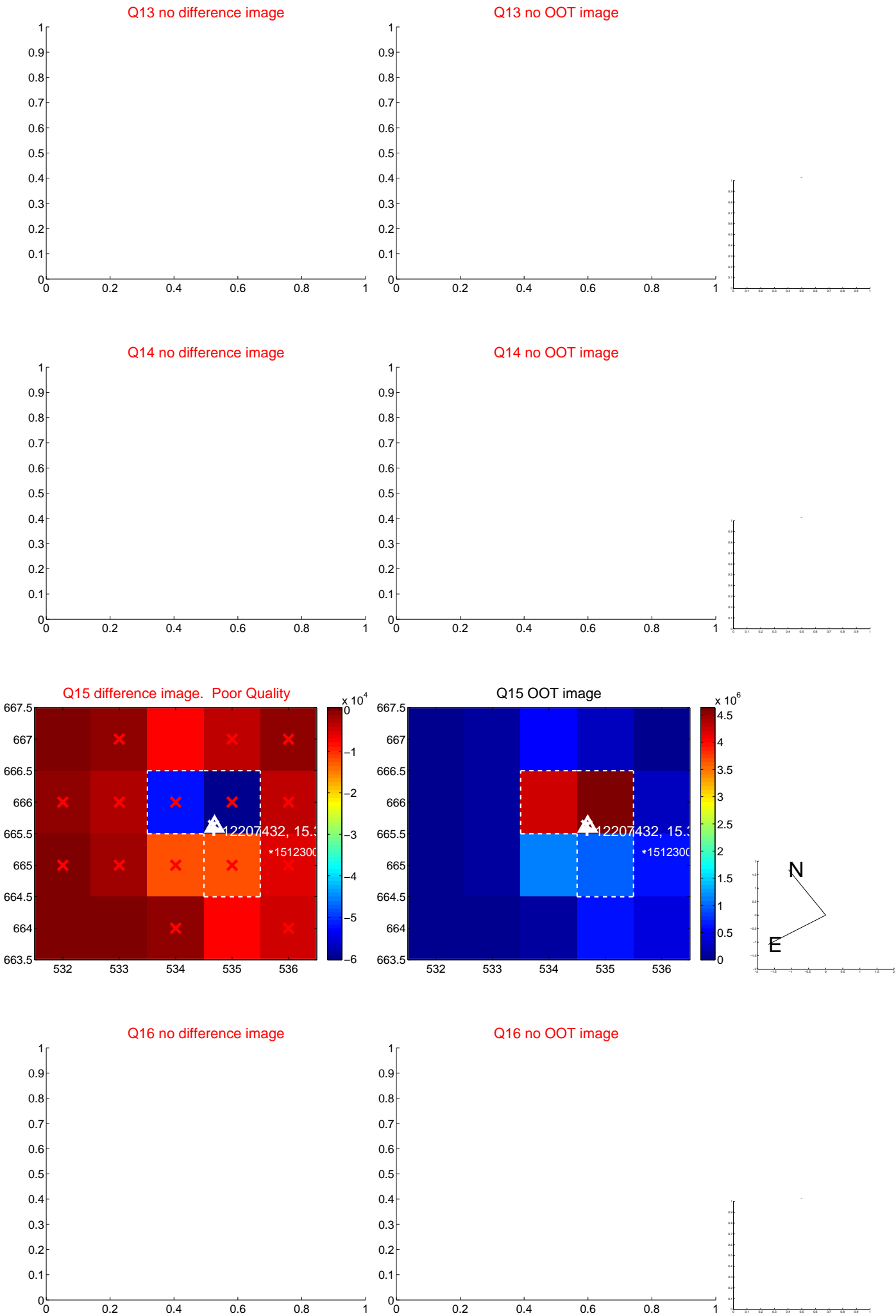
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



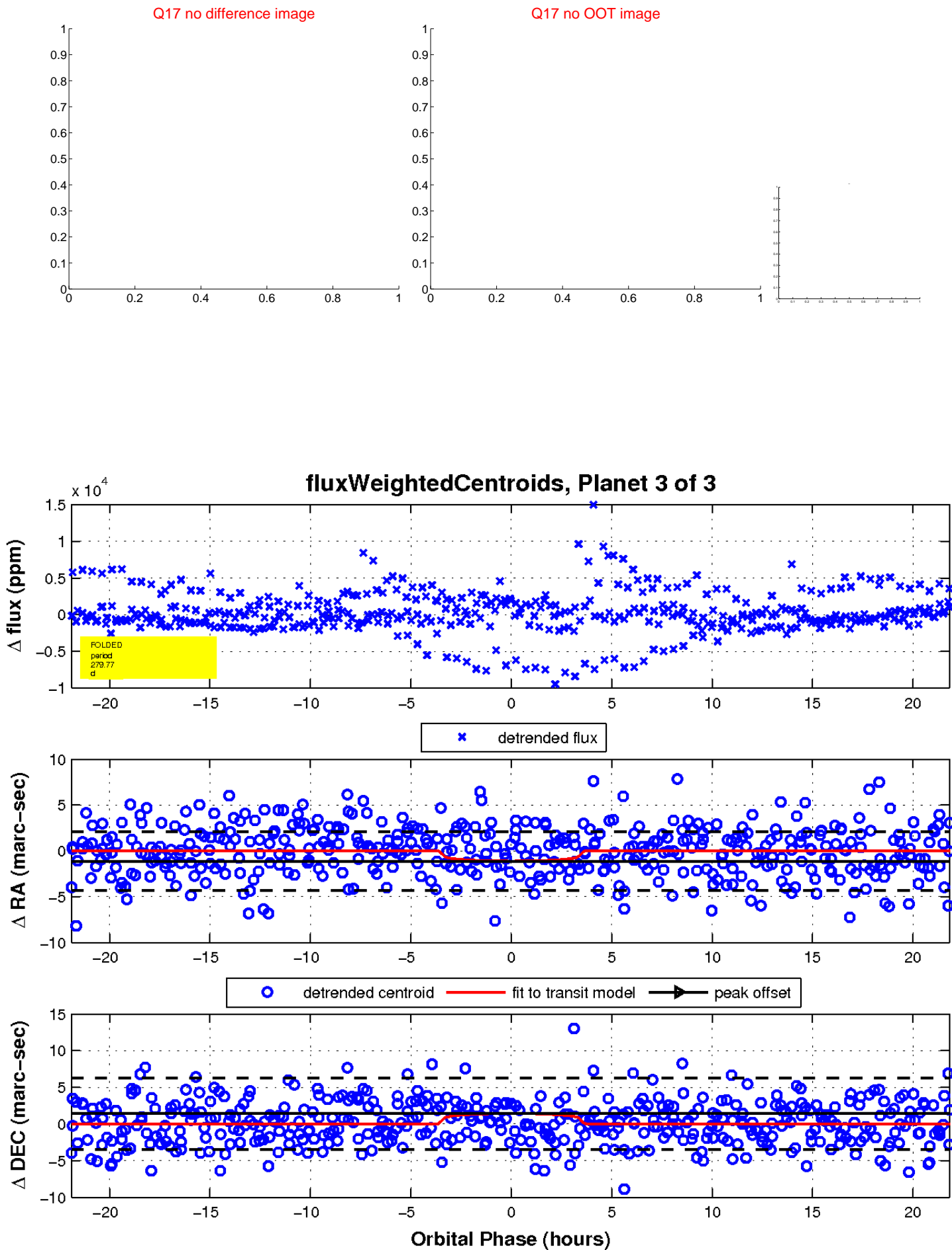
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

