

KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

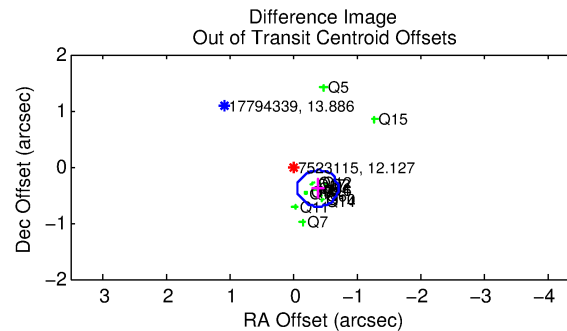
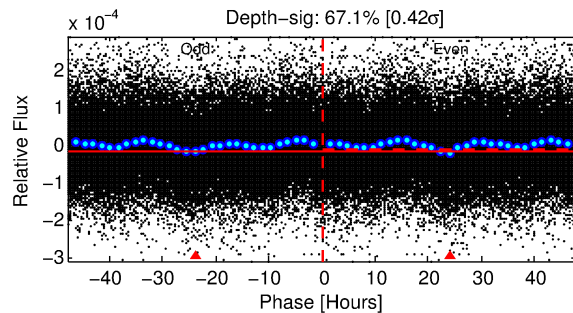
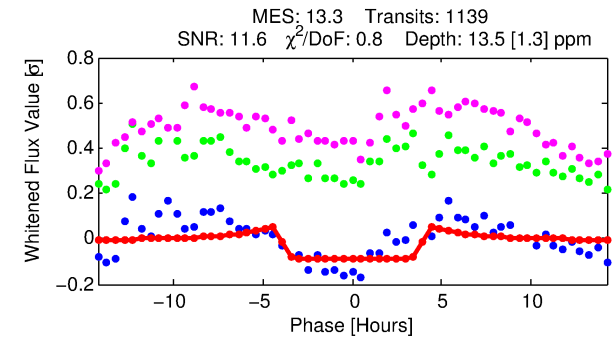
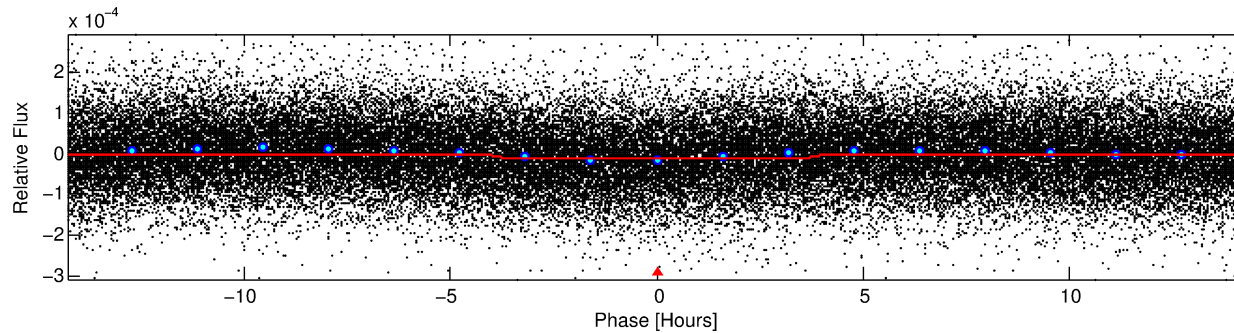
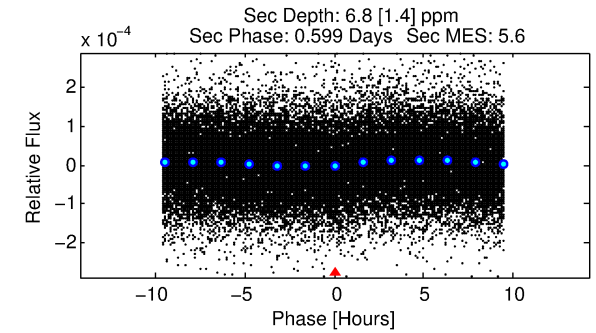
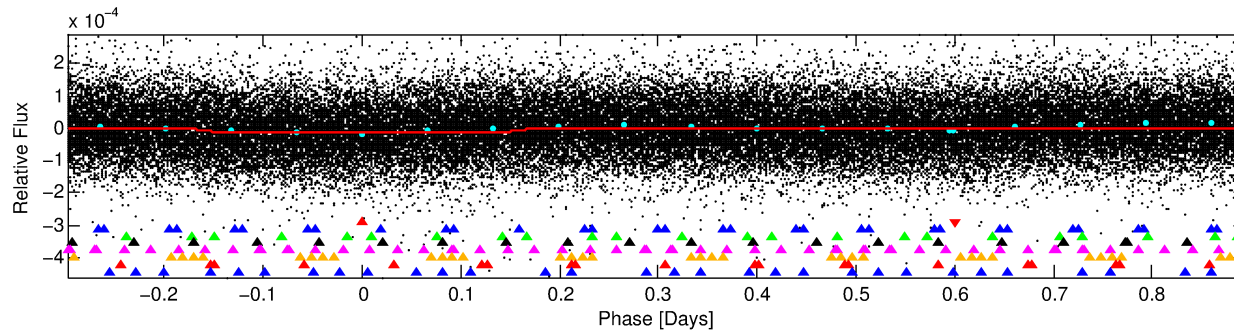
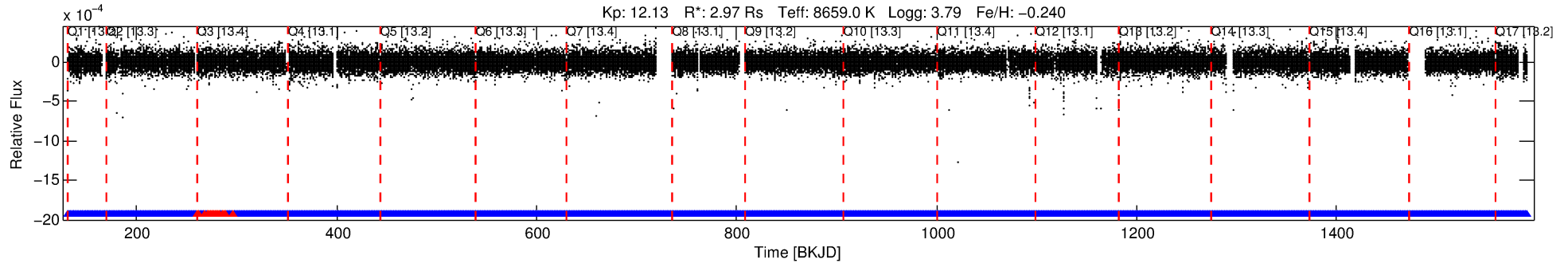
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-01

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 1 of 8 Period: 1.193 d



DV Fit Results:

Period = 1.19294 [0.00001] d
Epoch = 131.6627 [0.0034] BKJD
Rp/R* = 0.0034 [0.0016]
a/R* = 1.31 [1.54]
b = 0.02 [180.98]
Seff = 57996.48 [41002.99]
Teq = 3957 [699] K
Rp = 1.11 [0.70] Re
a = 0.0277 [0.0117] AU
Ag = 2.32 [2.71] [0.48σ]
Teffp = 7548 [1824] K [1.84σ]

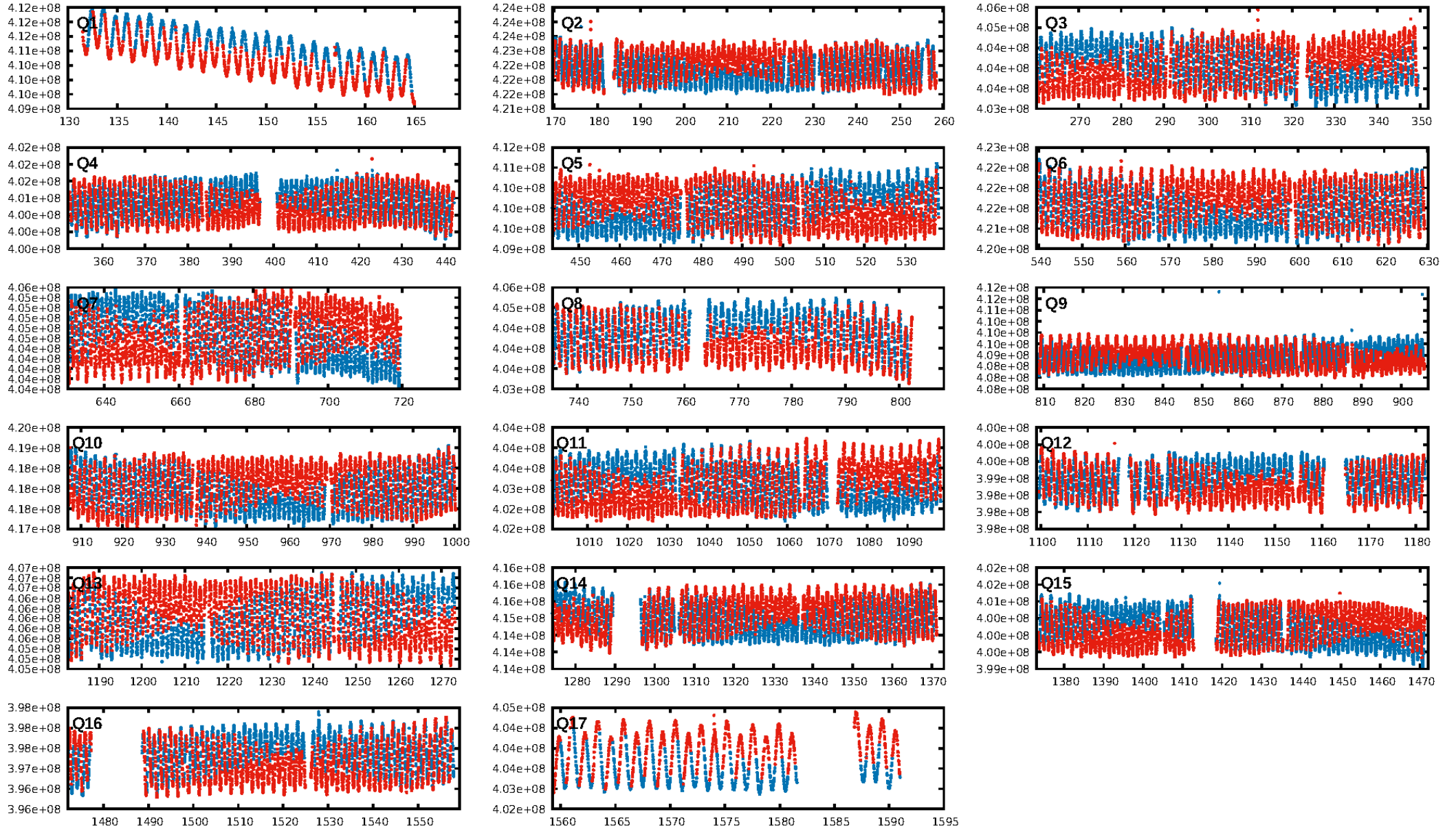
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [74.29σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.34e-19
RollingBand-fgt: 0.98 [1068/1087]
GhostDiagnostic-chr: 2.078
Centroid-sig: 0.0%
Centroid-so: 1.604 arcsec [2.38σ]
OotOffset-rm: 0.549 arcsec [5.12σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-rm: 0.278 arcsec [2.46σ]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

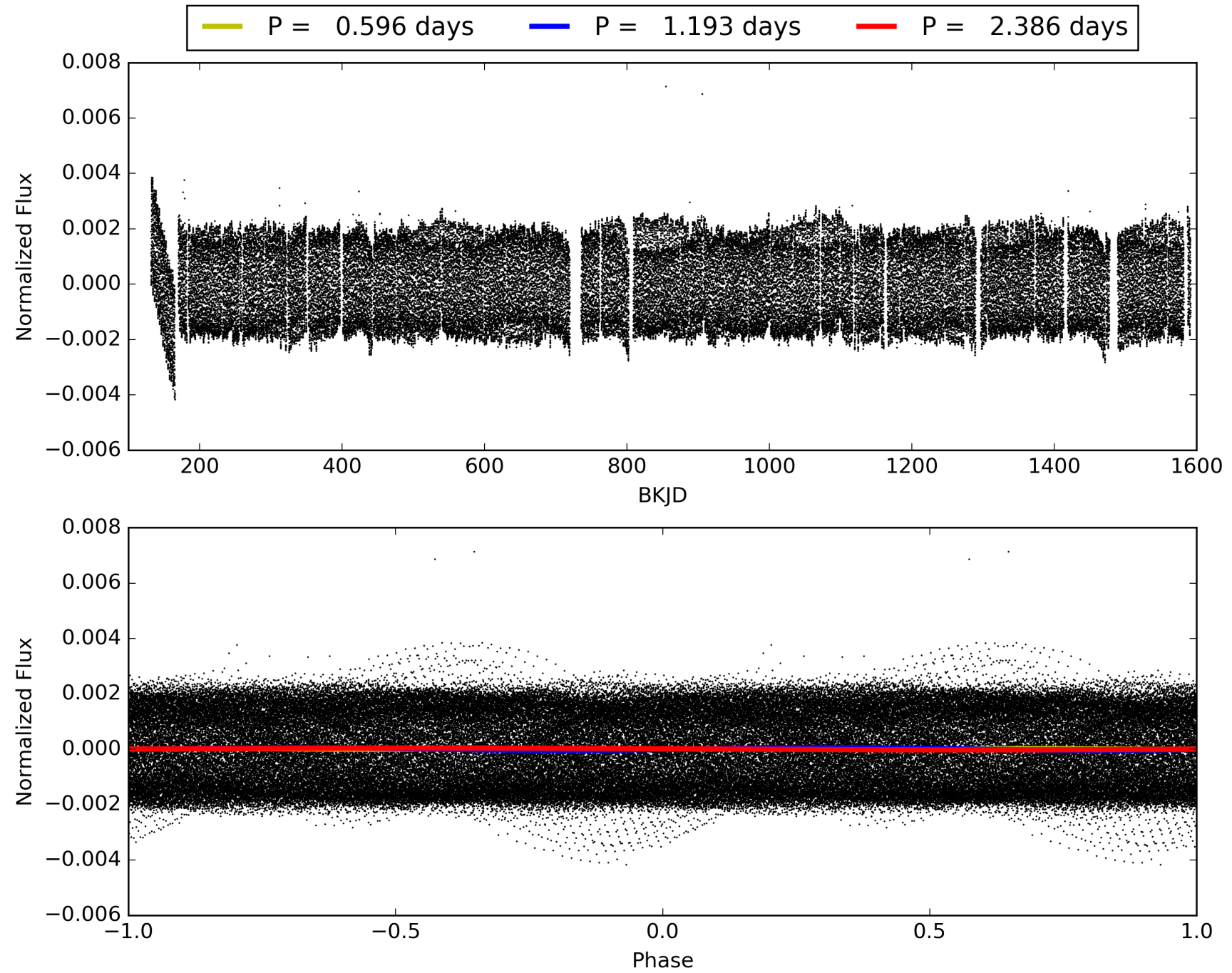
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:02 Z

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

TCE 007523115-01, PDC Light Curves

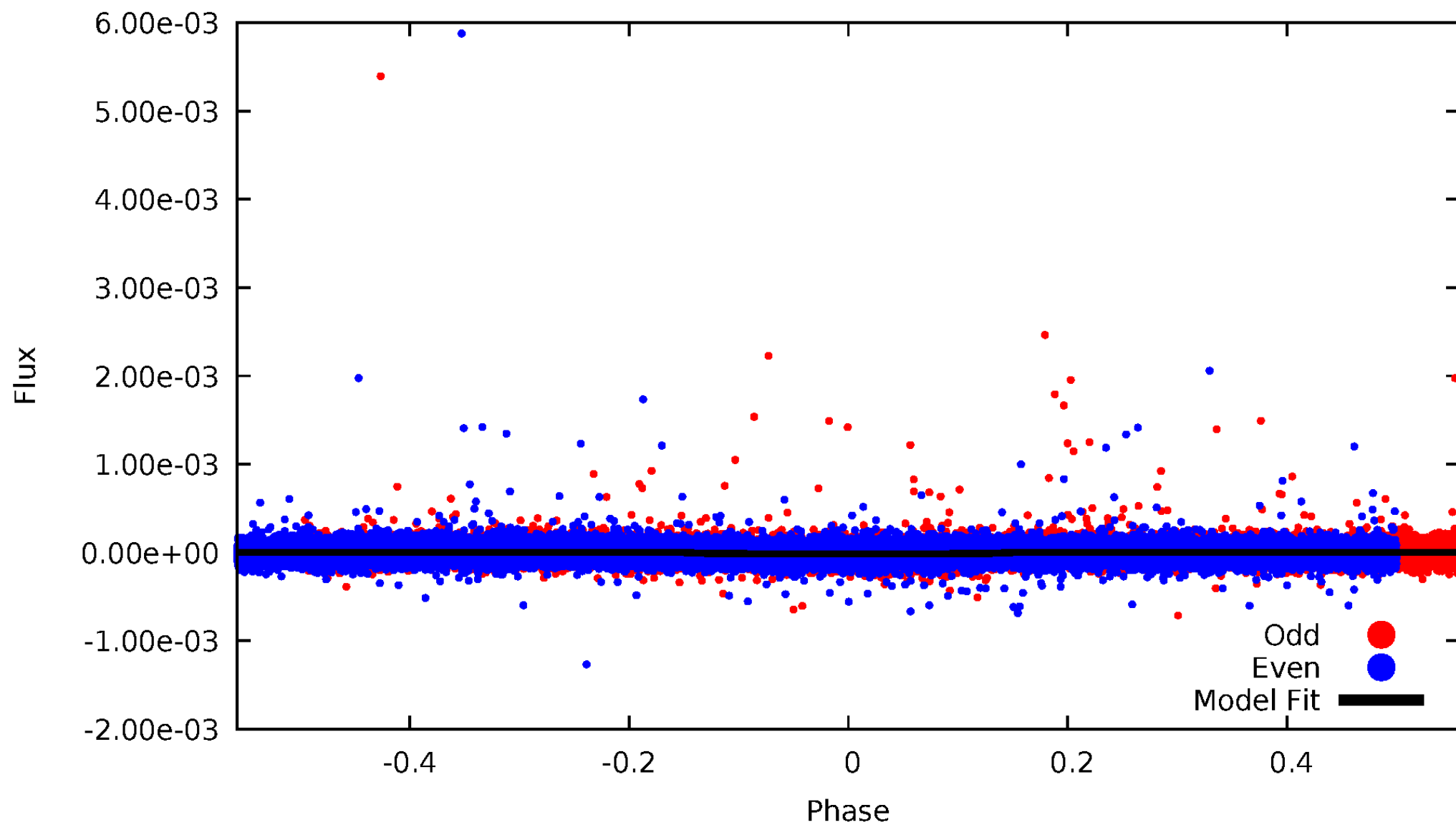


TCE 007523115-01



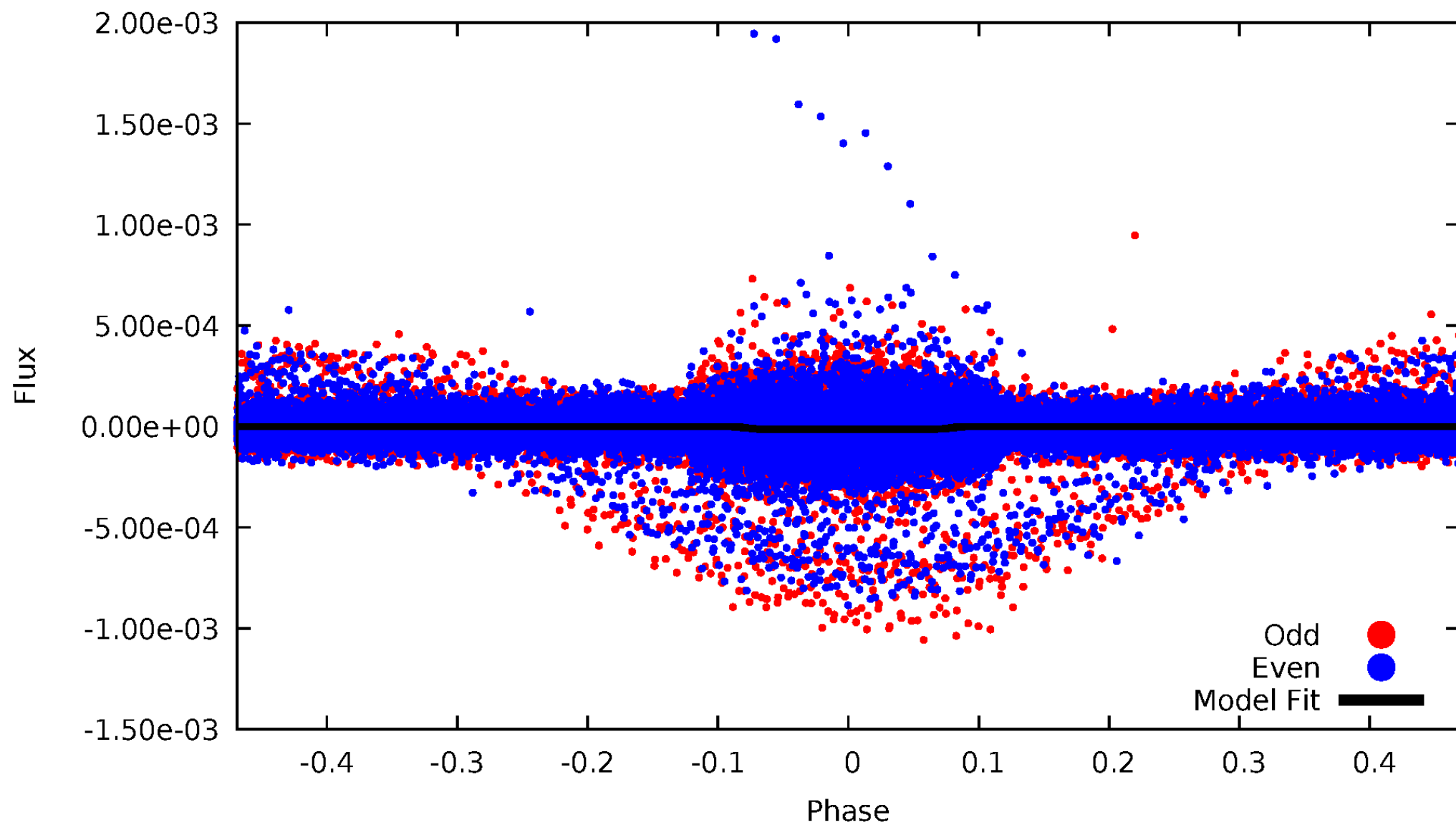
DV Odd/Even

TCE 007523115-01

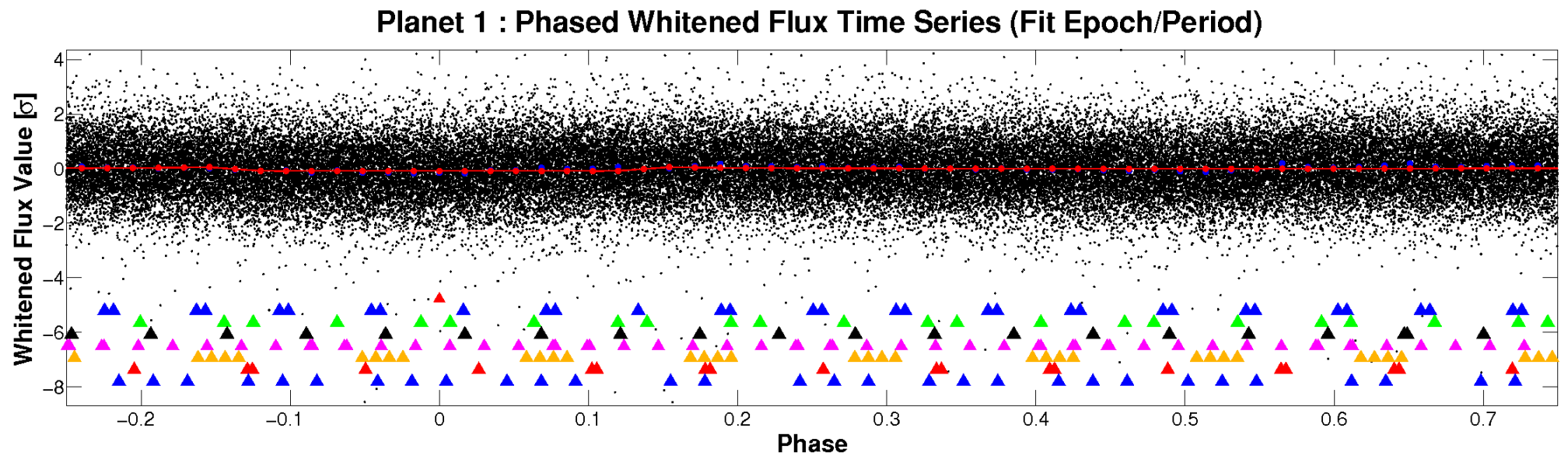
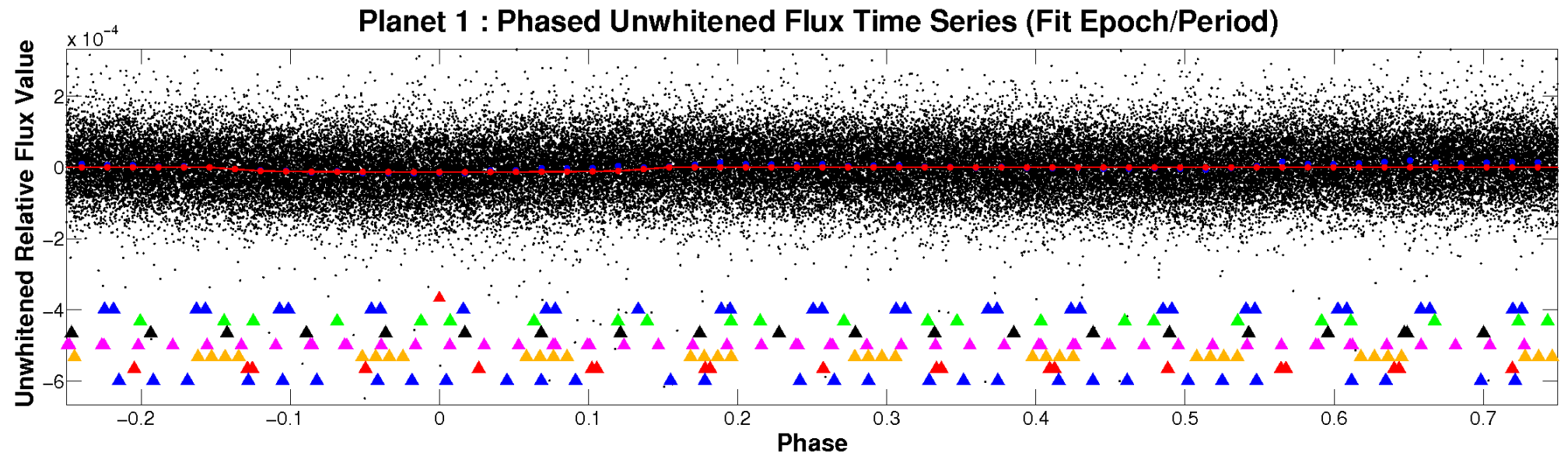


ALT Odd/Even

TCE 007523115-01

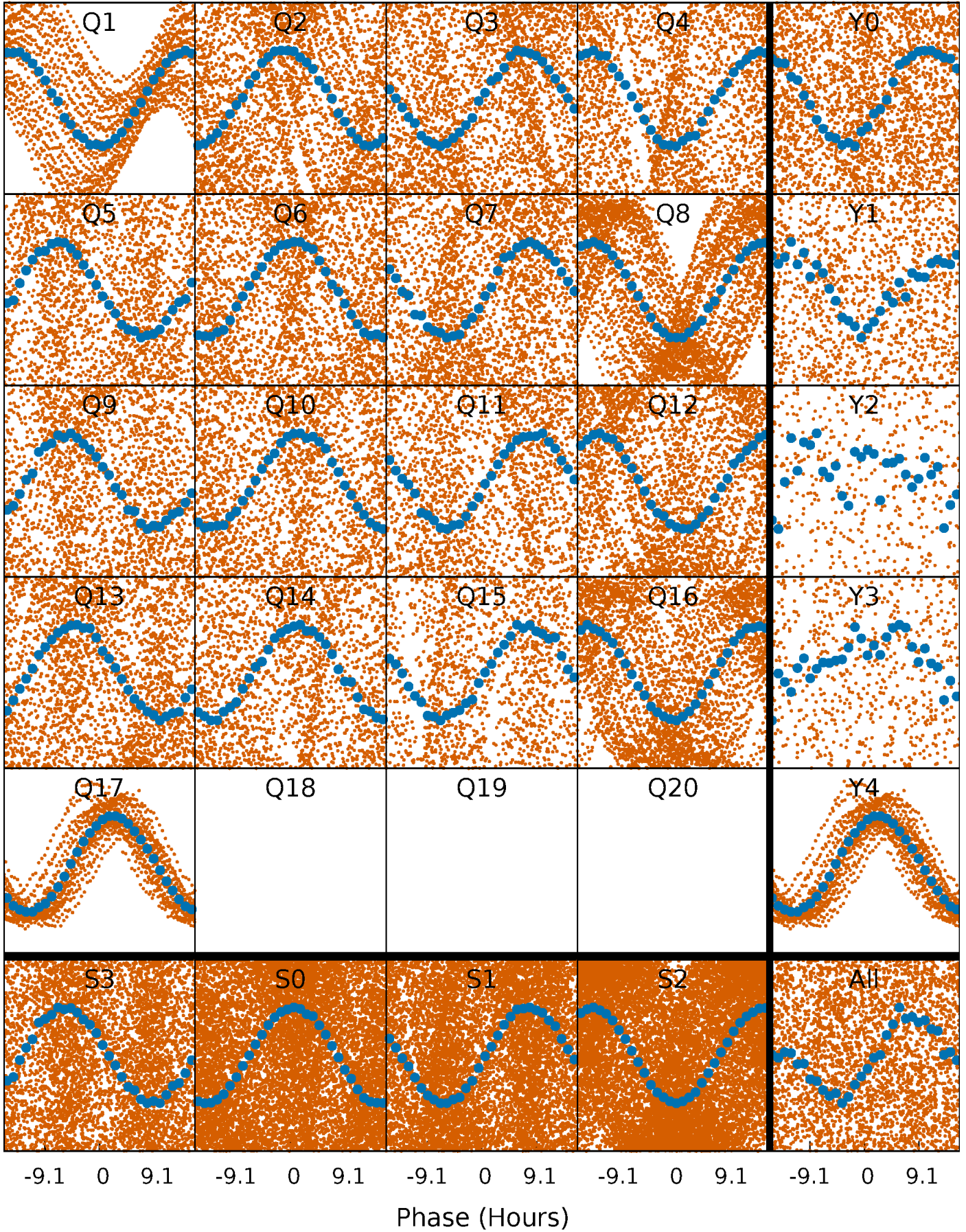


Non-Whitened Vs. Whitened Light Curve



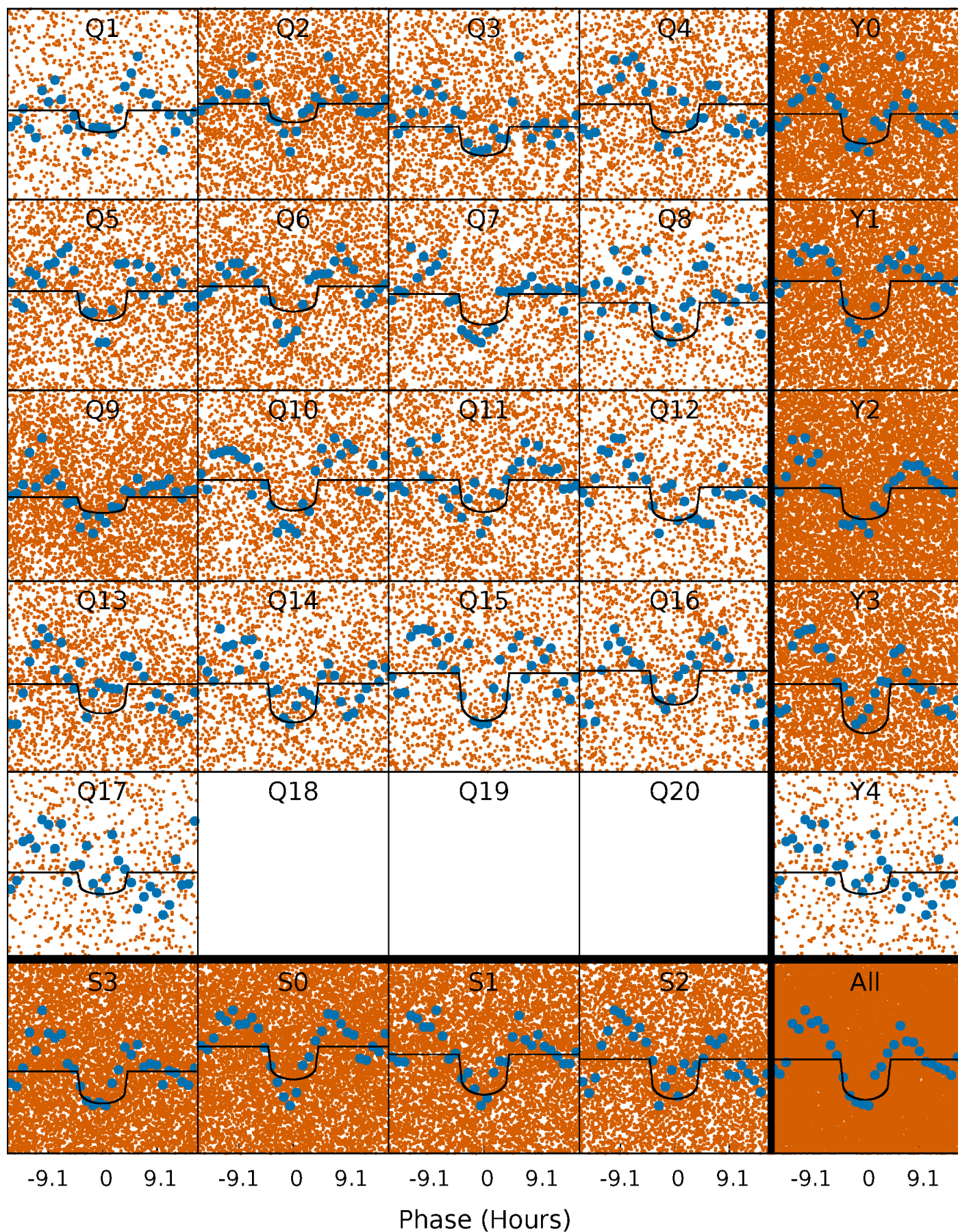
PDC Quarter-Phased Transit Curves

TCE 007523115-01 P= 1.192944 Days $T_0=131.662686$ (BKJD)



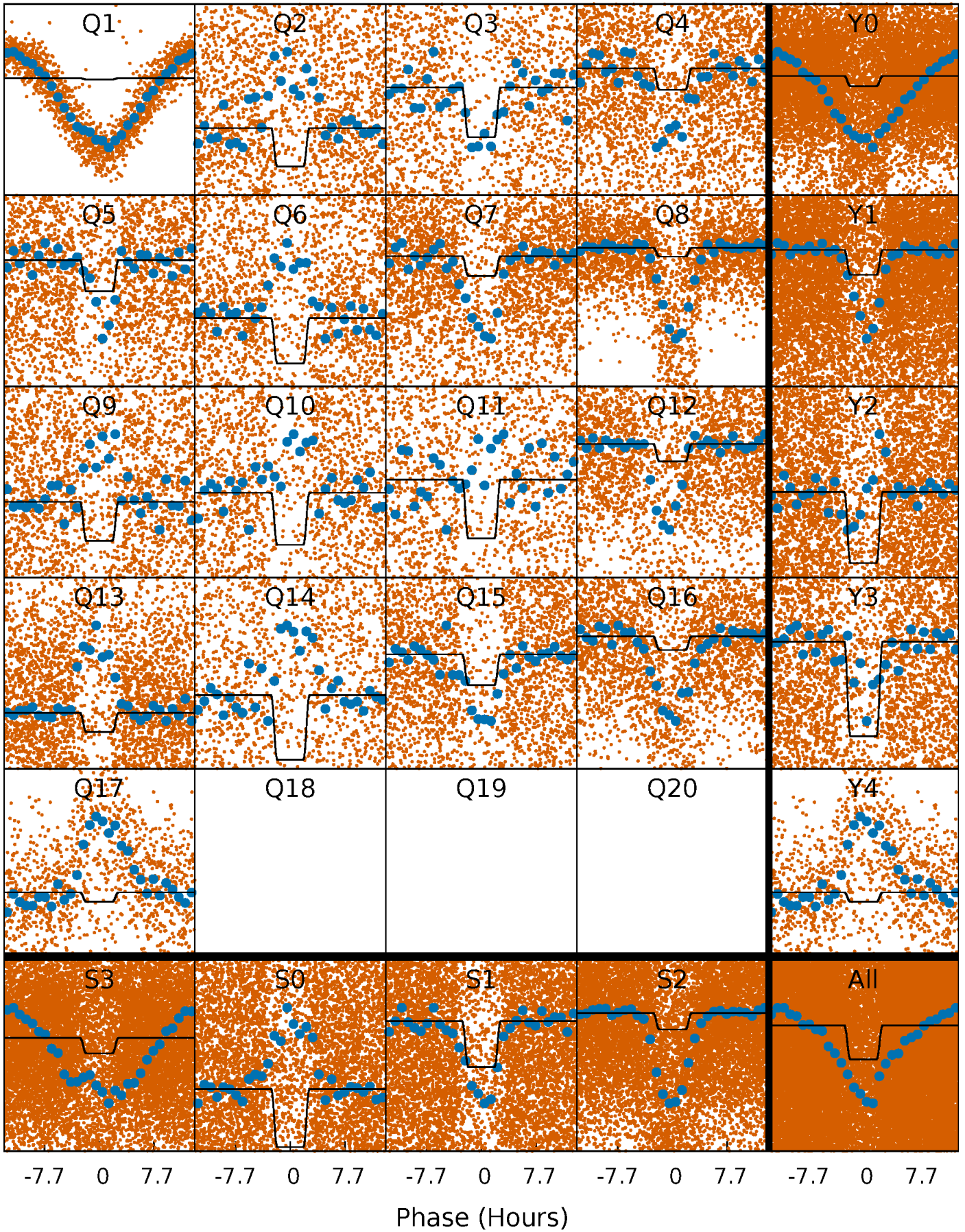
DV Quarter-Phased Transit Curves

TCE 007523115-01 P= 1.192944 Days $T_0=131.662686$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

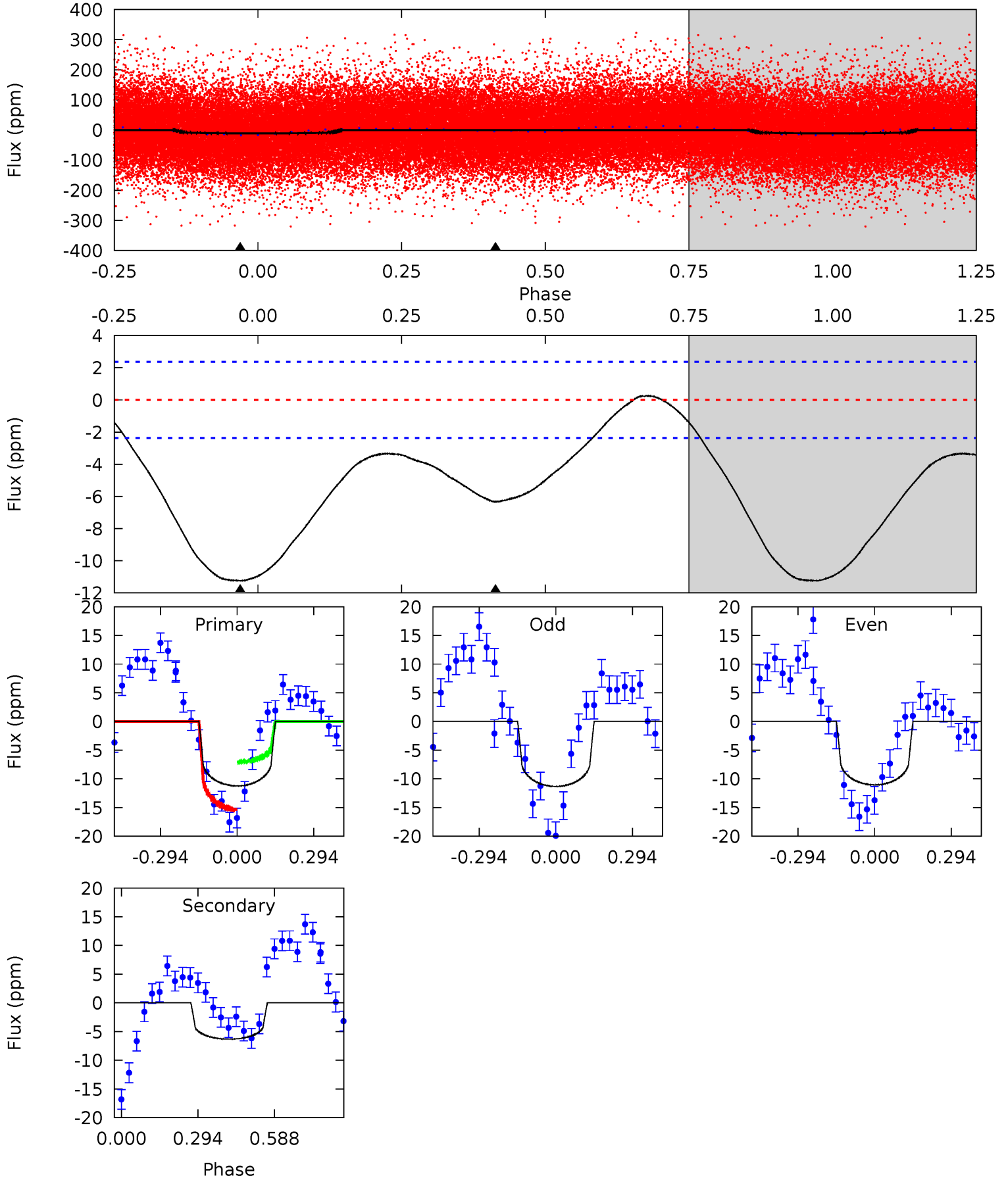
TCE 007523115-01 P= 1.192919 Days $T_0=131.639723$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-01, P = 1.192944 Days, E = 130.469742 Days

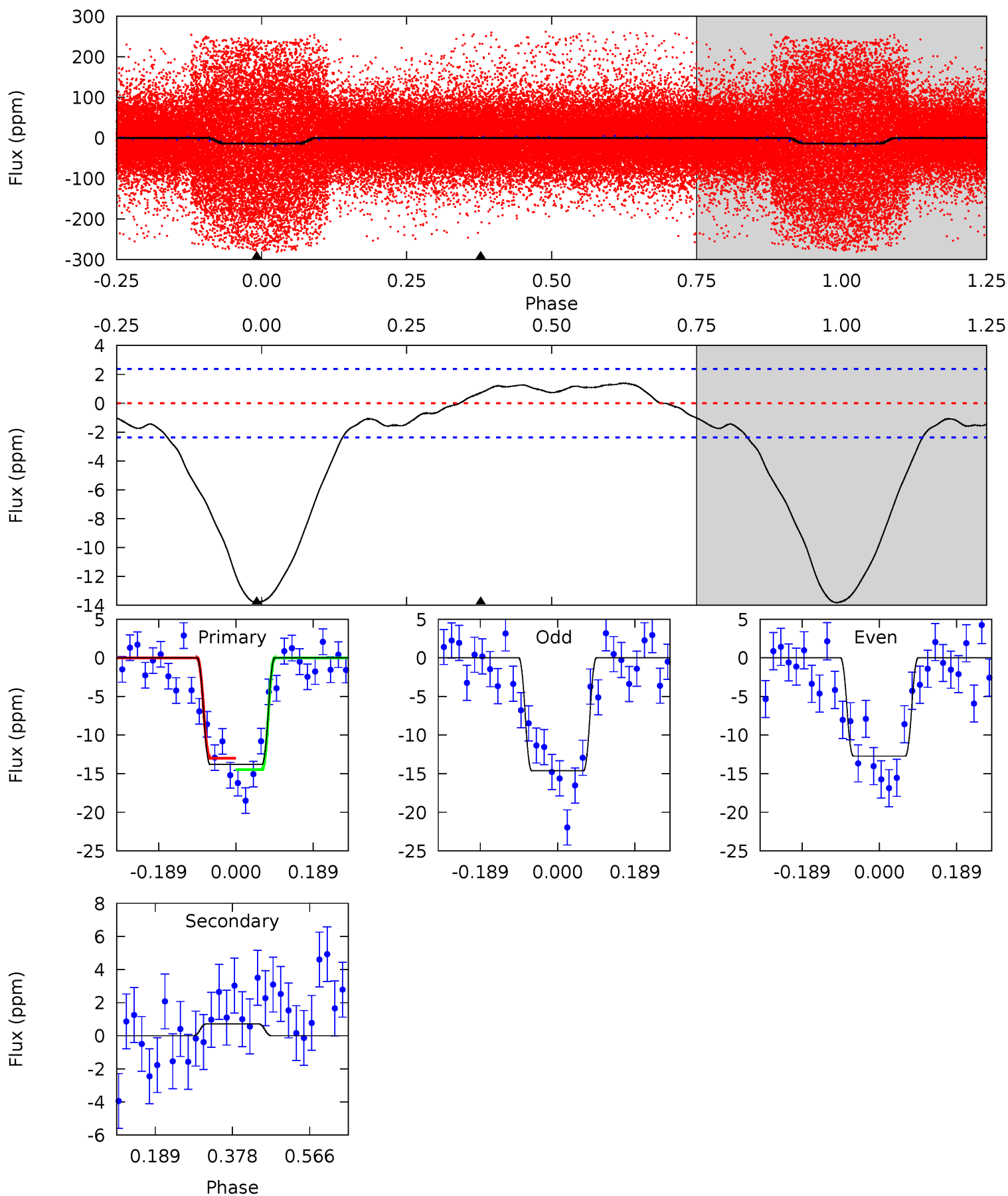
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	11.6	0	0	4.33	1.05	0.67	20.6	20.6	11.6	11.6	0.25	1.09	0.02	7.55



Alt Model-Shift Uniqueness Test

007523115-01, P = 1.192919 Days, E = 130.446804 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	-1.35	0	0	4.43	1.31	2.05	25.8	25.8	-1.35	-1.35	1.77	2.27	0.09	0



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6 ± 1	$1.05^{+0.55}_{-0.49}$	5351^{+468}_{-602}	6604^{+3394}_{-1213}	$2.419^{+5.492}_{-1.344}$
Alt.	1 ± 1	$1.10^{+0.58}_{-0.51}$	5390^{+445}_{-617}	-4992^{+518}_{-817}	$-0.228^{+0.174}_{-0.659}$

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

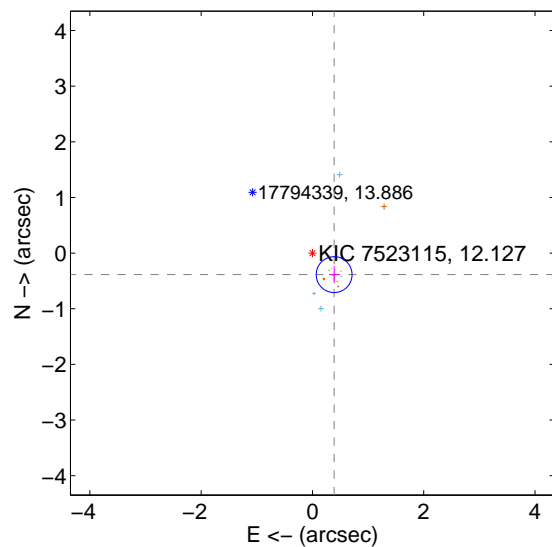
Supplemental centroid analysis for 007523115-01. Kepler magnitude: 12.13. Transit SNR 11.63

There are 8 quarters with good PRF difference image offsets

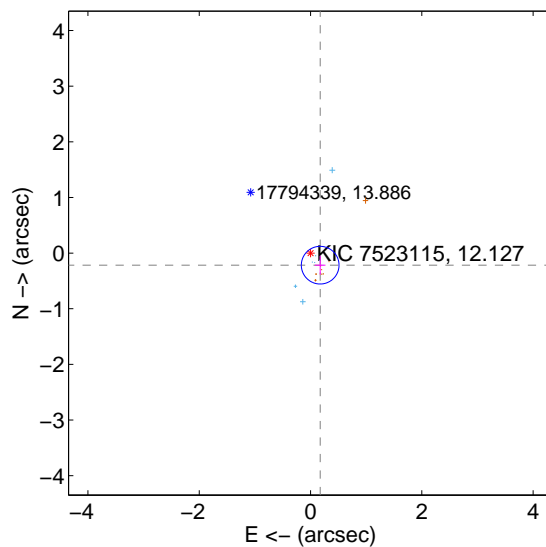
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.549 ± 0.107	5.12	-0.390 ± 0.093	-0.387 ± 0.155
PRF-fit source offset from KIC position	0.278 ± 0.113	2.46	-0.173 ± 0.096	-0.217 ± 0.169
photometric centroid source offset	1.60 ± 0.67	2.38	-0.29 ± 0.66	1.58 ± 0.67

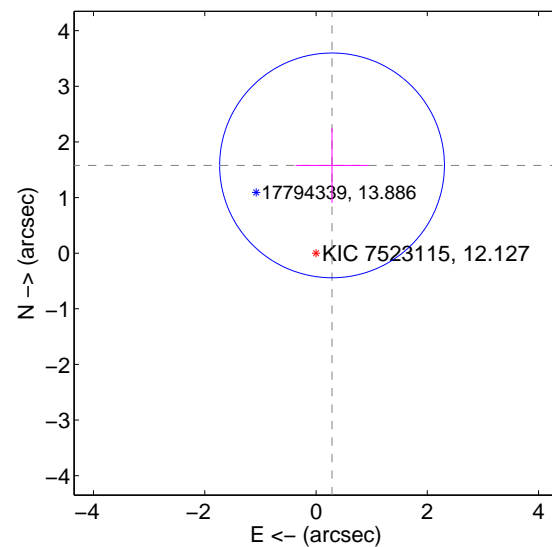
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

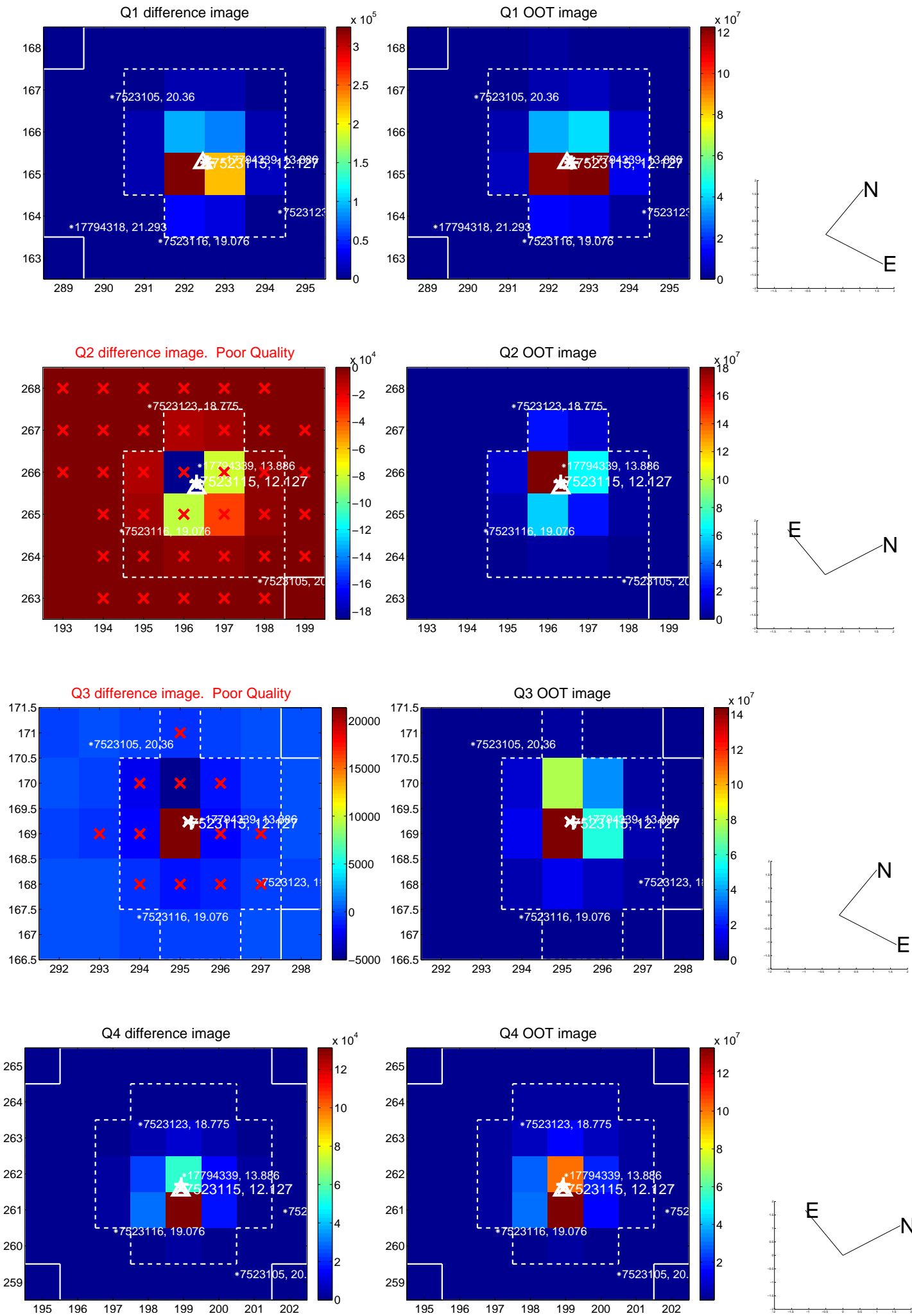


offset from photometric centroids

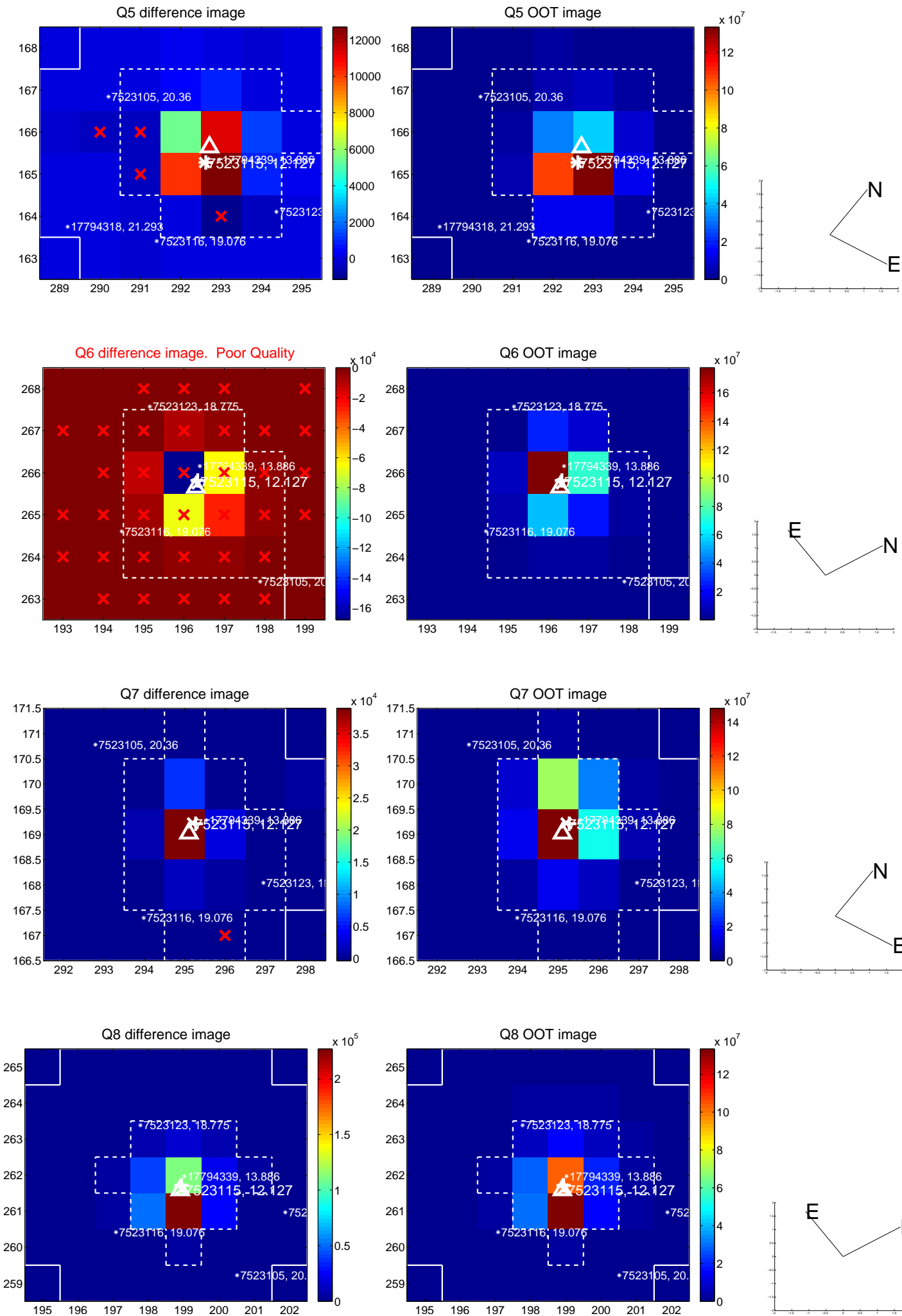


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

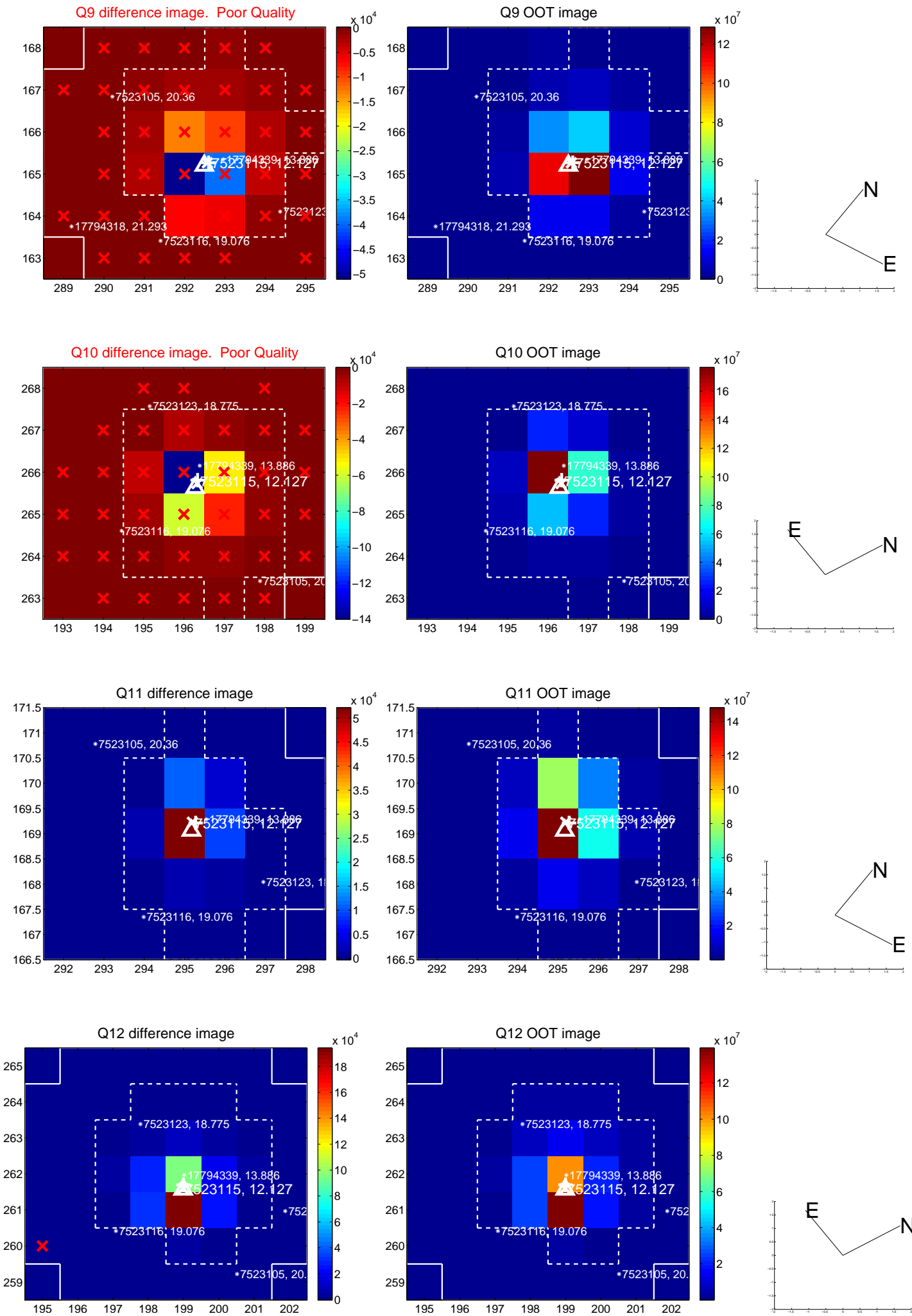
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



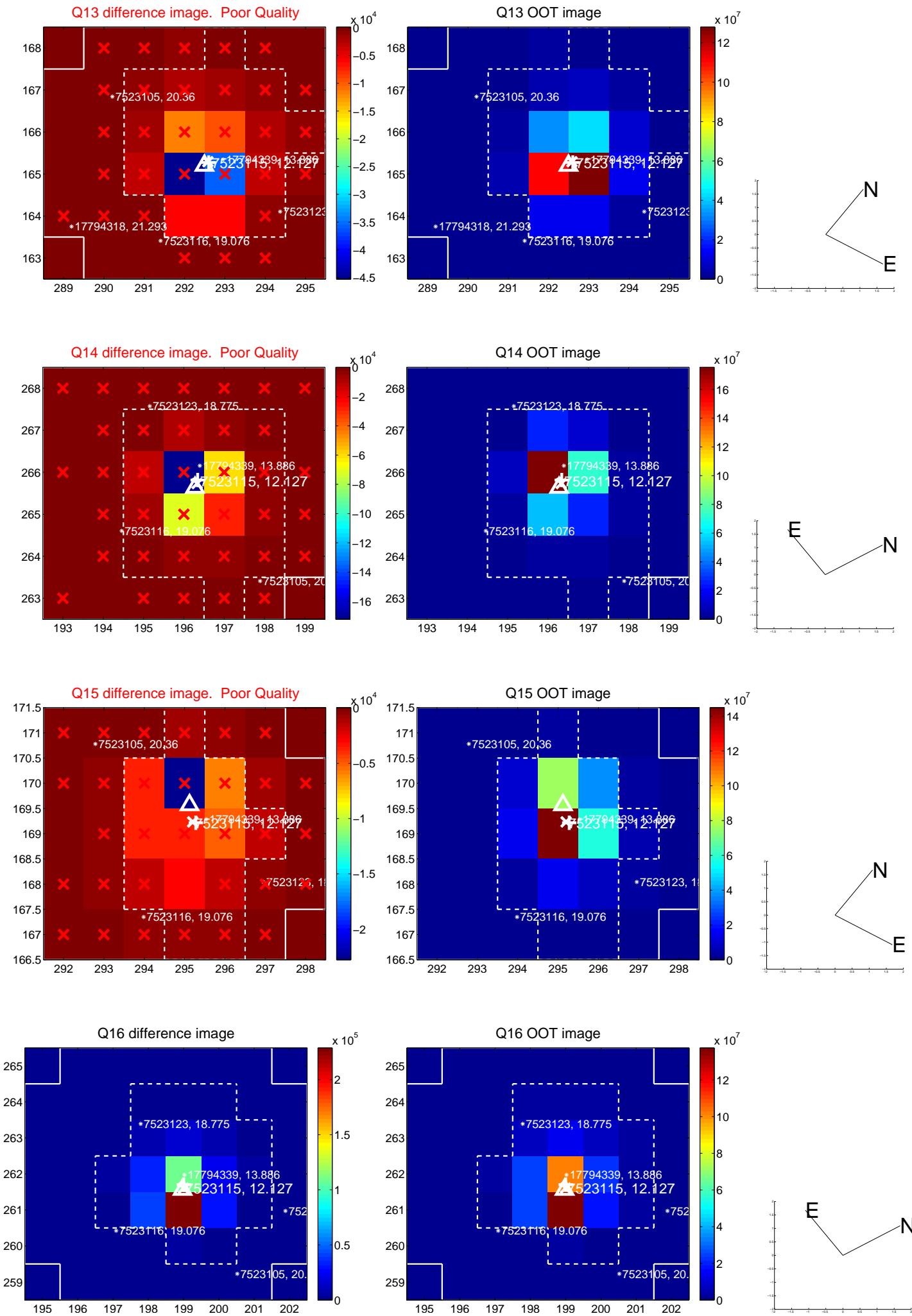
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



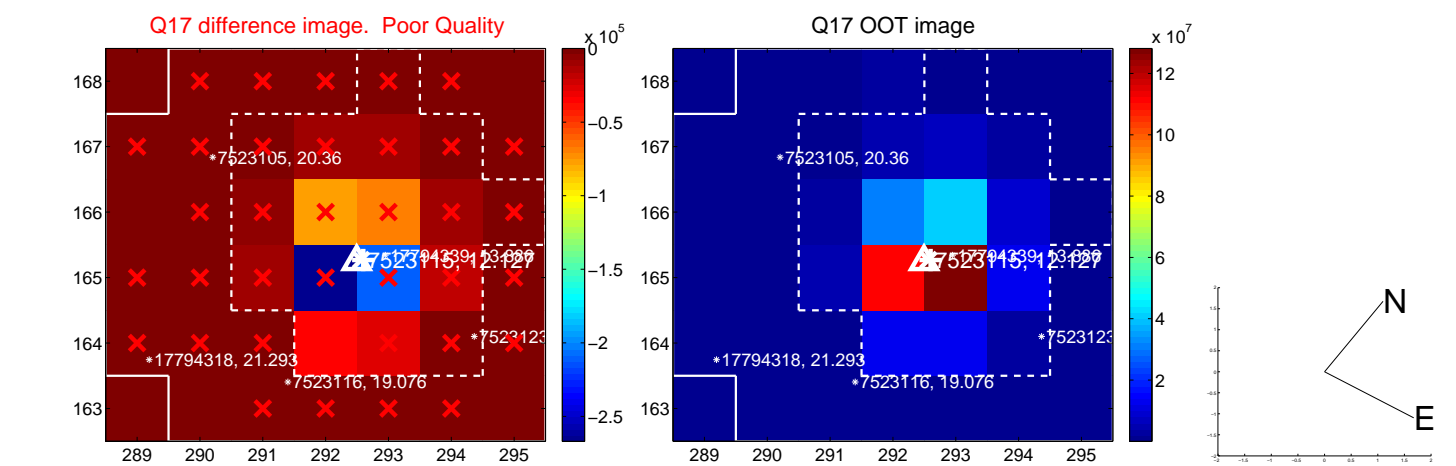
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



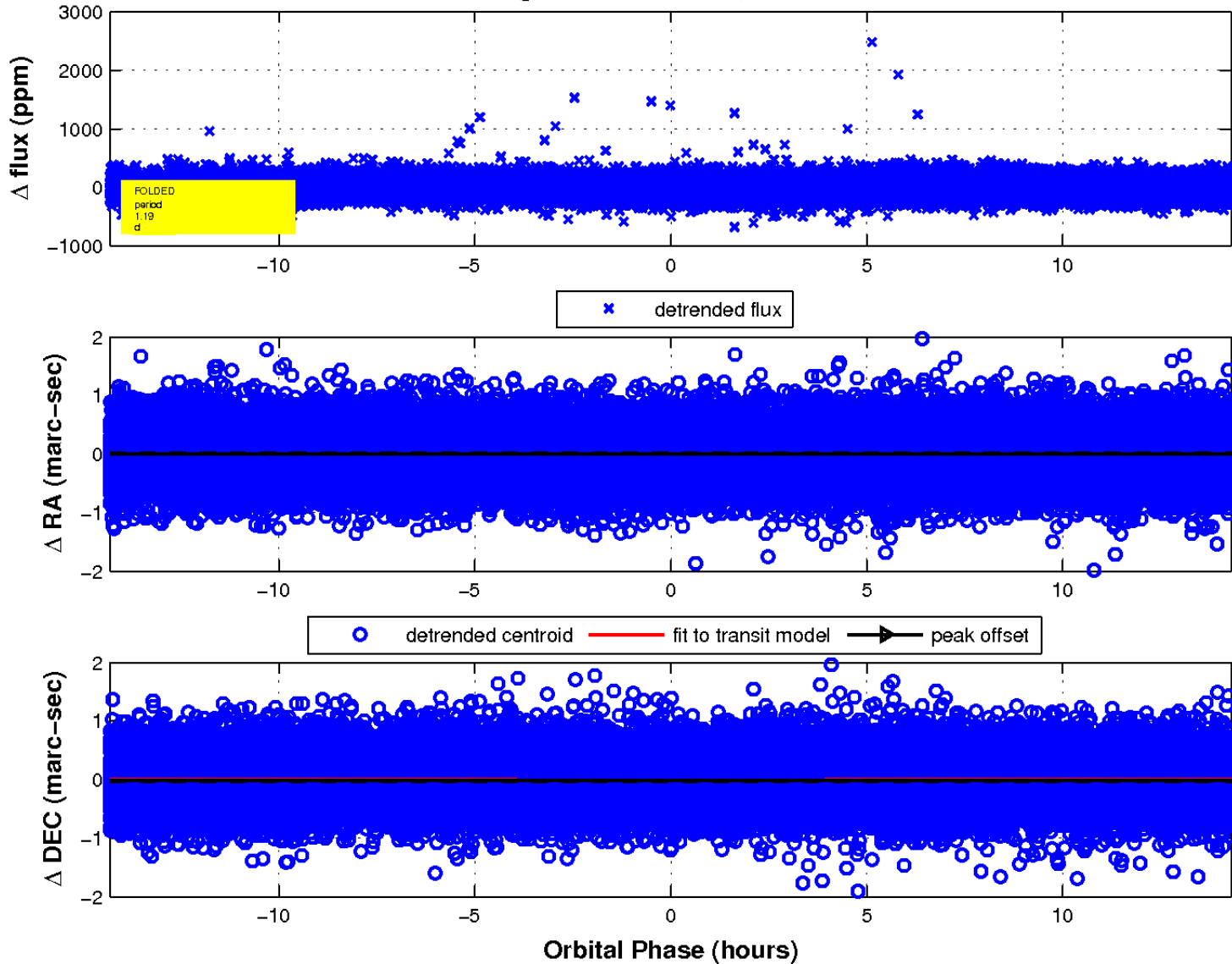
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

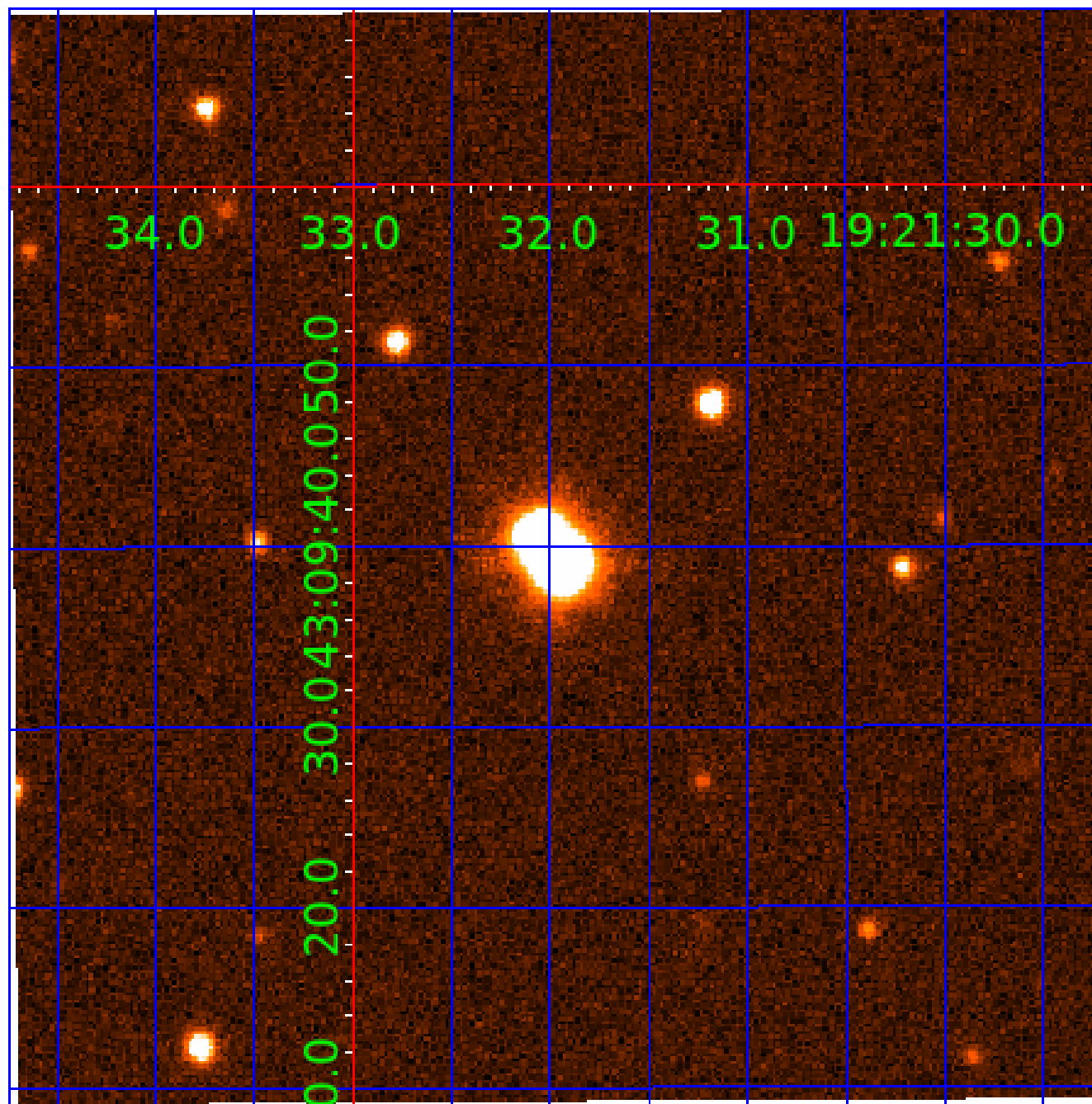


fluxWeightedCentroids, Planet 1 of 8



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

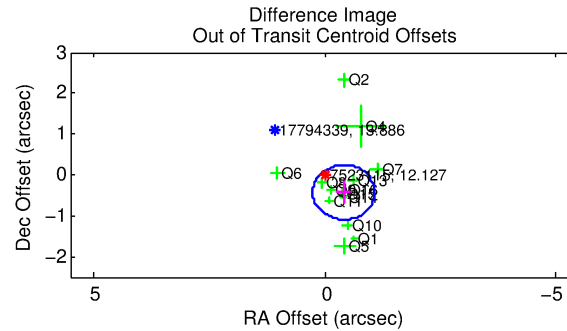
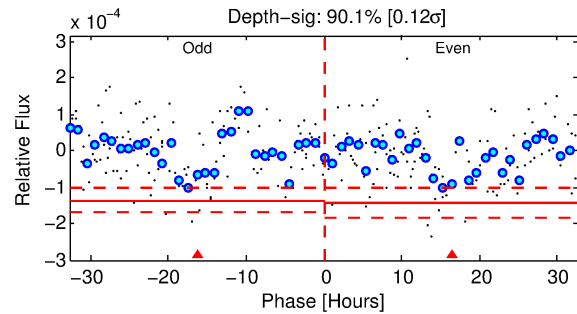
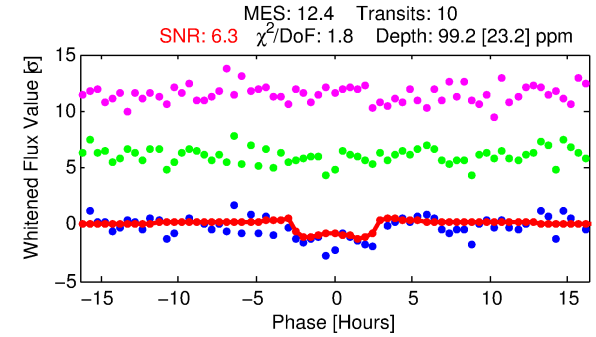
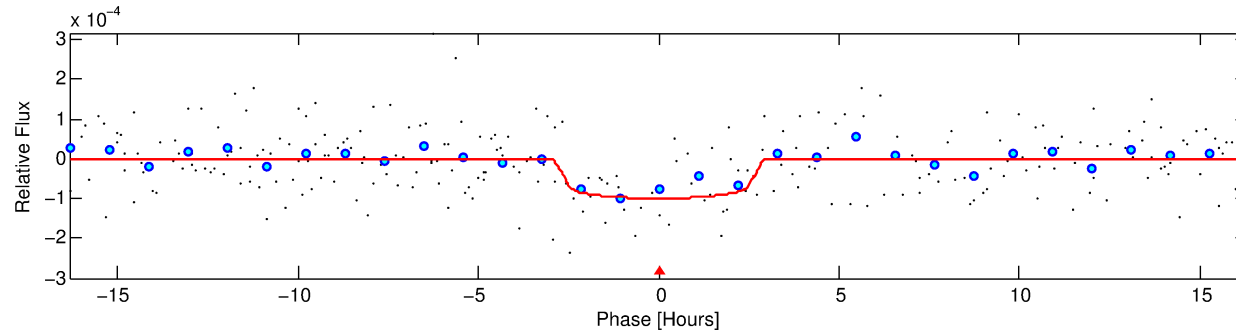
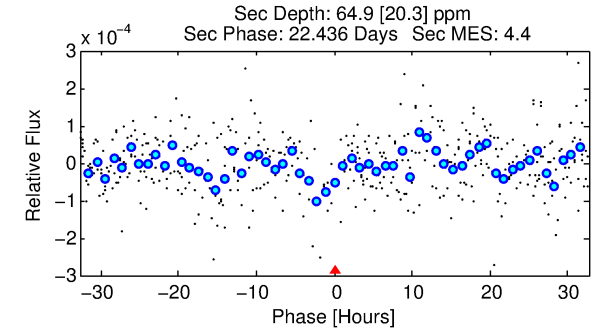
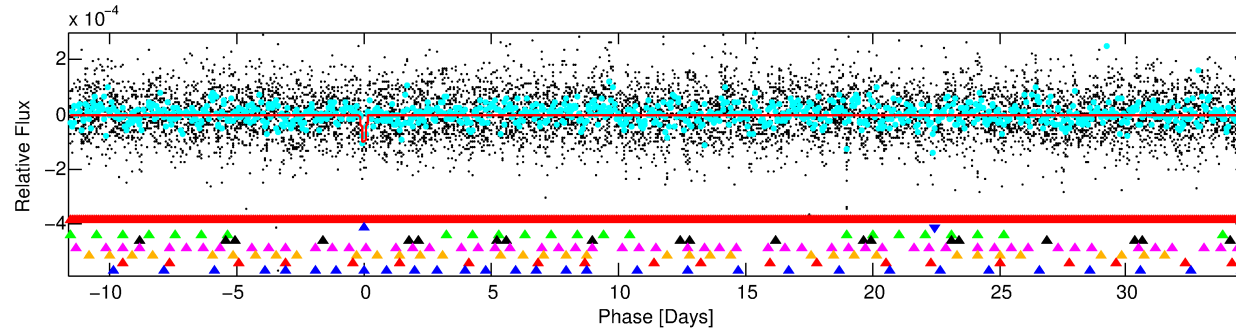
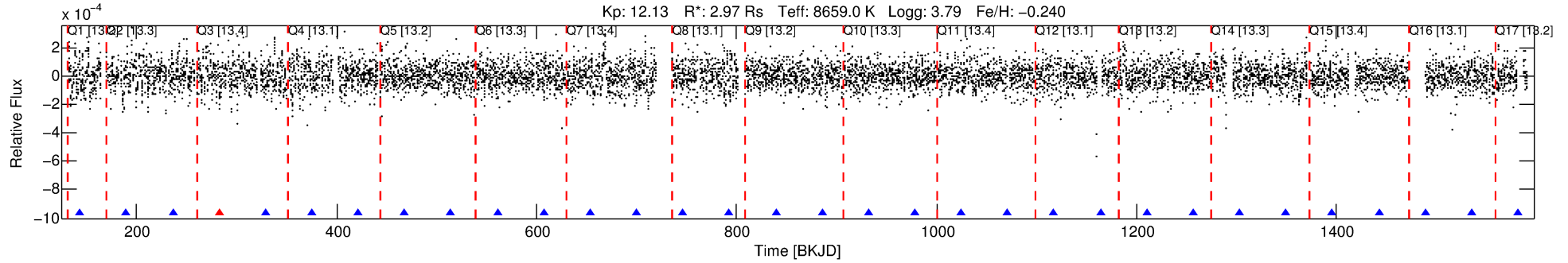
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-02

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 2 of 8 Period: 46.385 d



DV Fit Results:

Period = 46.38491 [0.00079] d
Epoch = 143.4642 [0.0144] BKJD
Rp/R* = 0.0093 [0.0174]
a/R* = 64.42 [735.19]
b = 0.20 [55.22]
Seff = 440.28 [311.27]
Teq = 1168 [206] K
Rp = 3.02 [5.80] Re
a = 0.3180 [0.1348] AU
Ag = 396.45 [1514.75] [0.26σ]
Teffp = 8058 [7581] K [0.91σ]

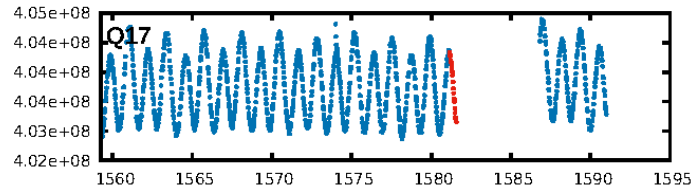
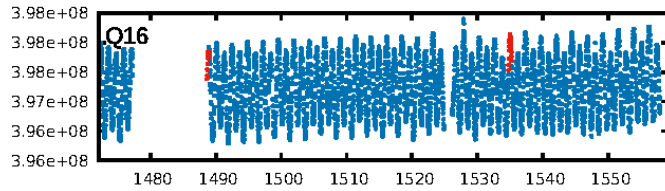
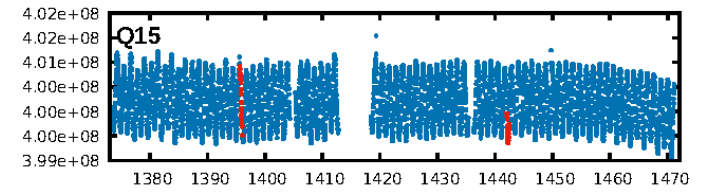
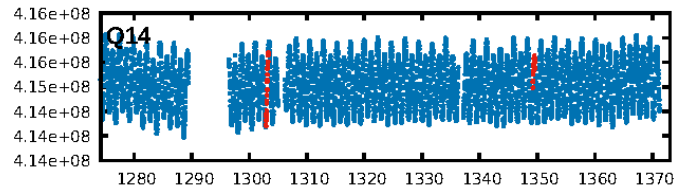
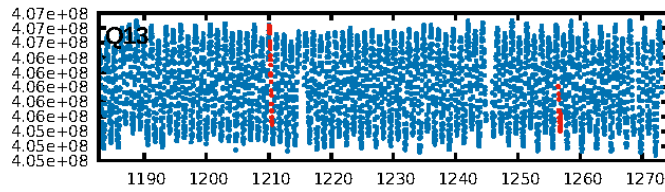
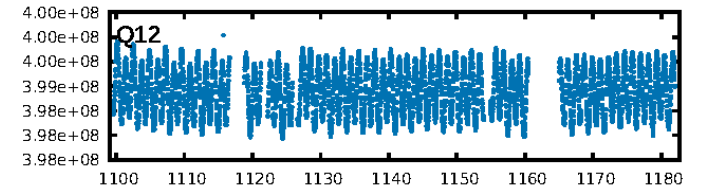
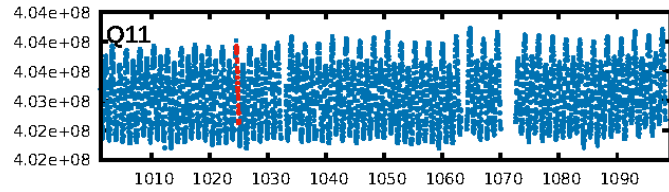
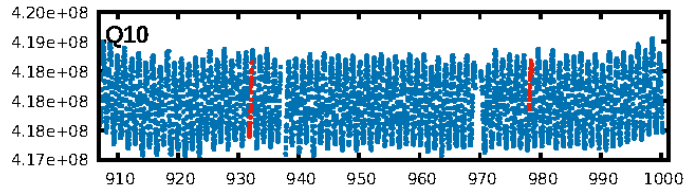
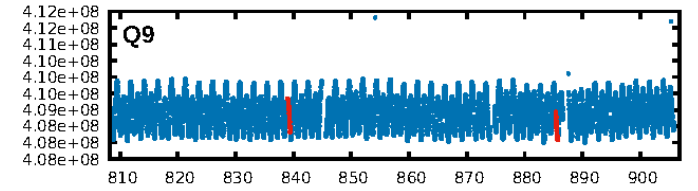
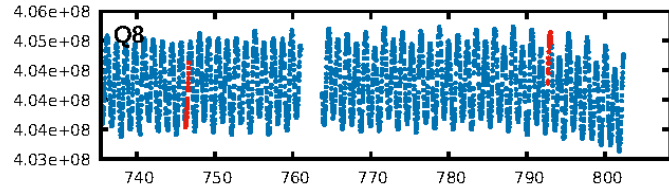
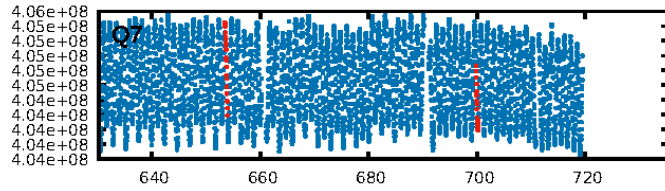
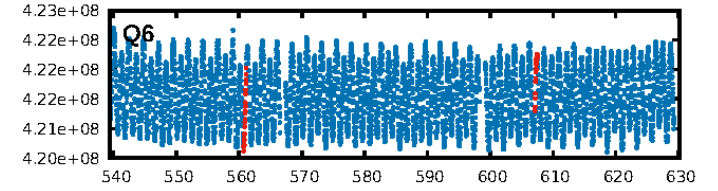
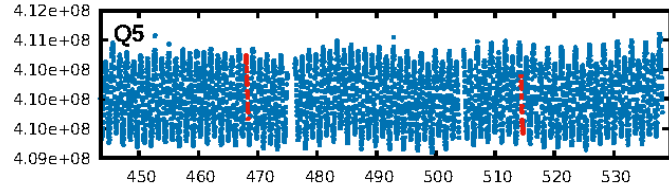
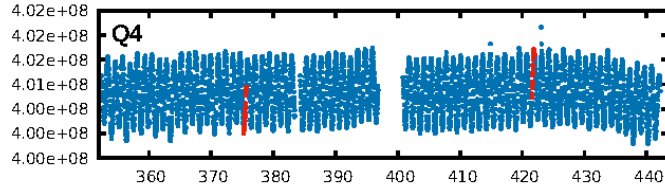
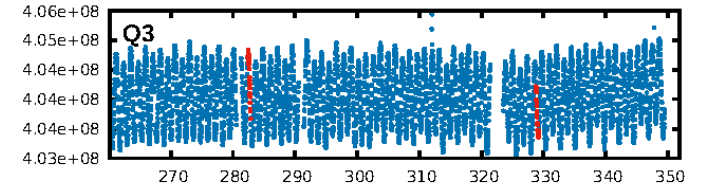
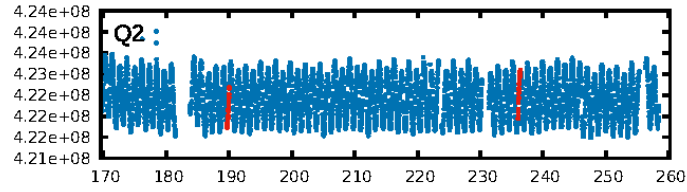
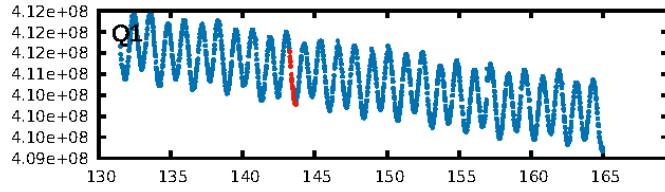
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.90σ]
LongPeriod-sig: 100.0% [7.56σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.31e-20
RollingBand-fgt: 0.90 [9/10]
GhostDiagnostic-chr: -2.995
Centroid-sig: 27.2%
Centroid-so: 0.685 arcsec [1.00σ]
OotOffset-rm: 0.591 arcsec [2.65σ]
KicOffset-rm: 0.287 arcsec [1.02σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/15]

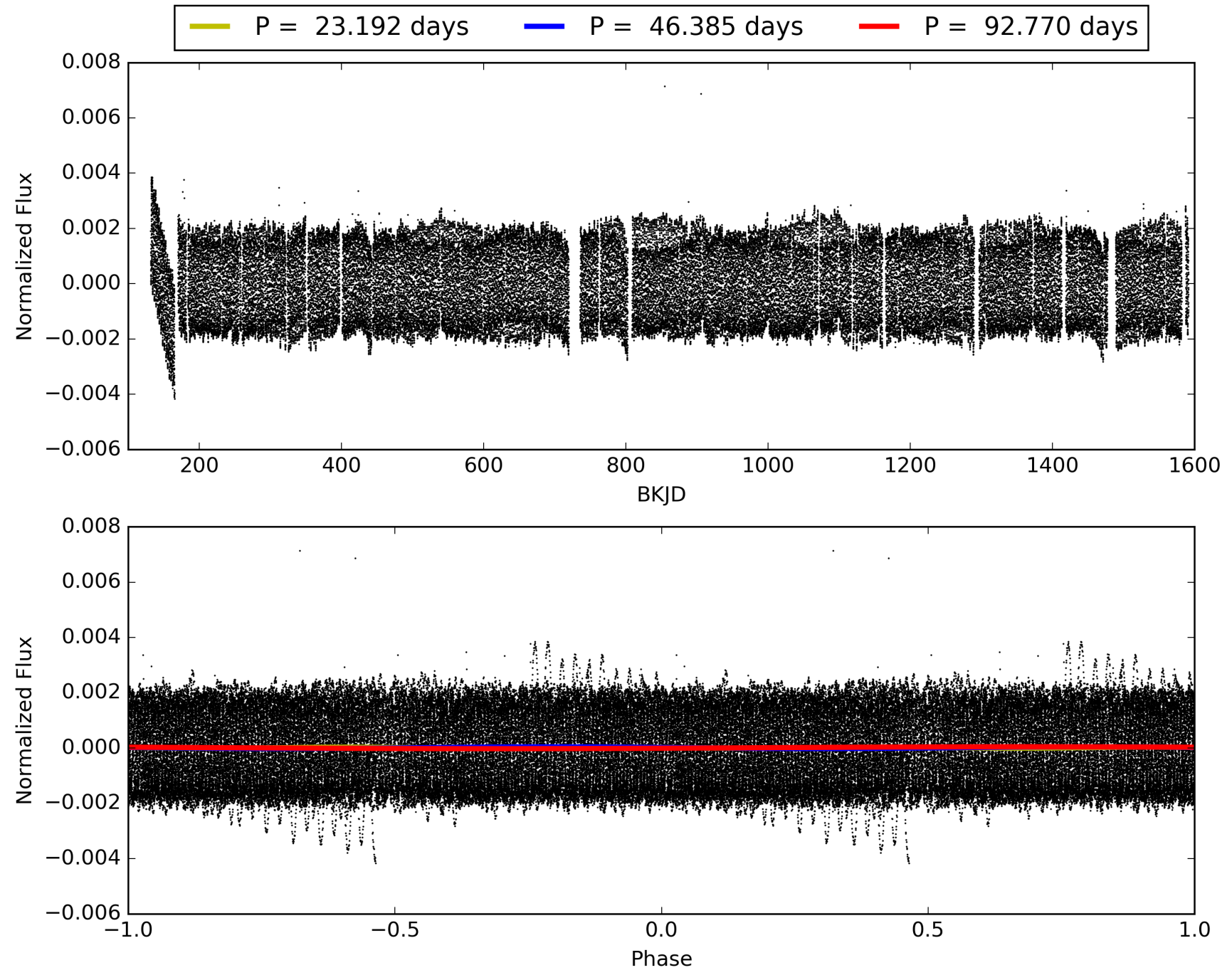
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:12 Z

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

TCE 007523115-02, PDC Light Curves

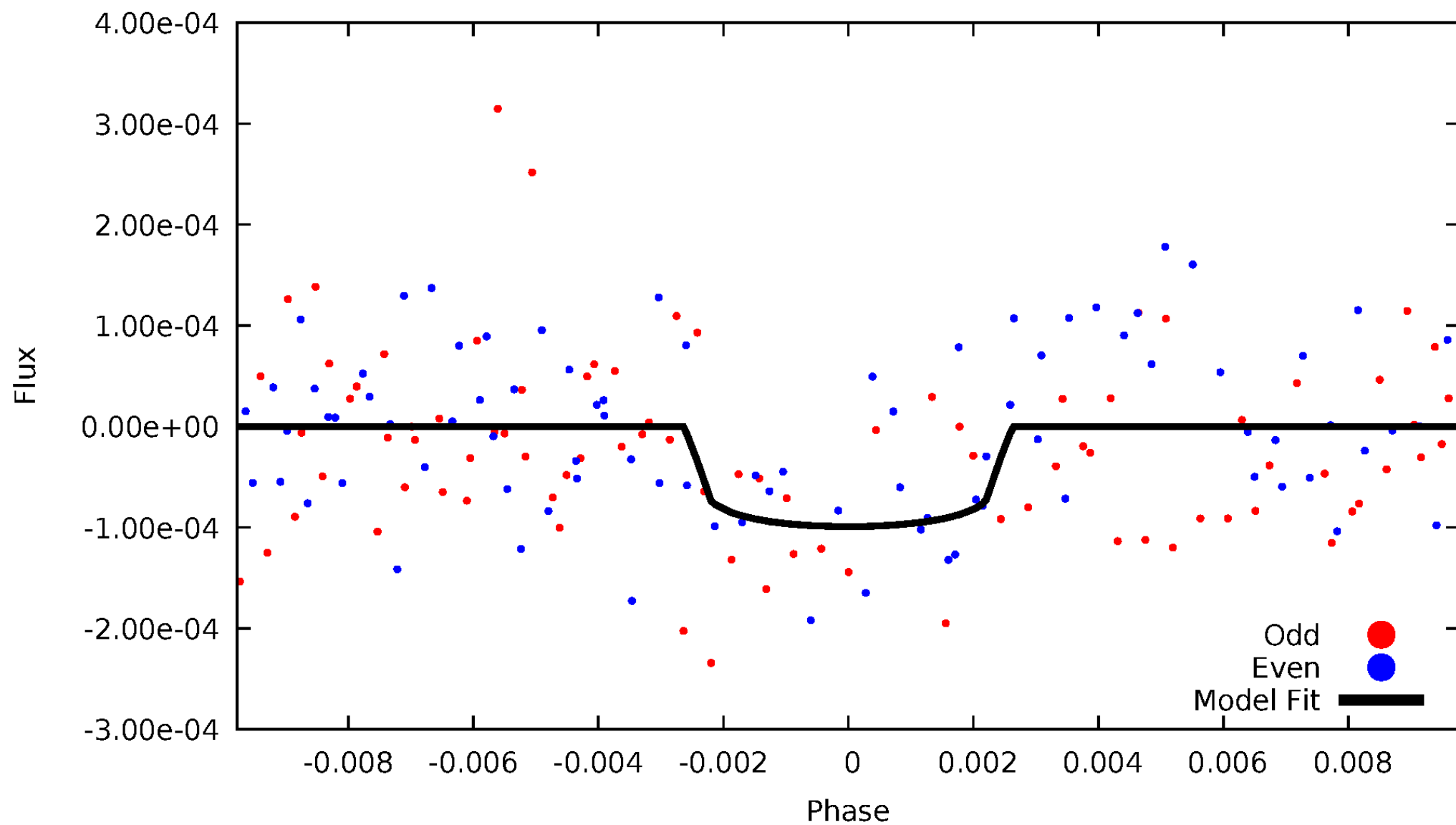


TCE 007523115-02



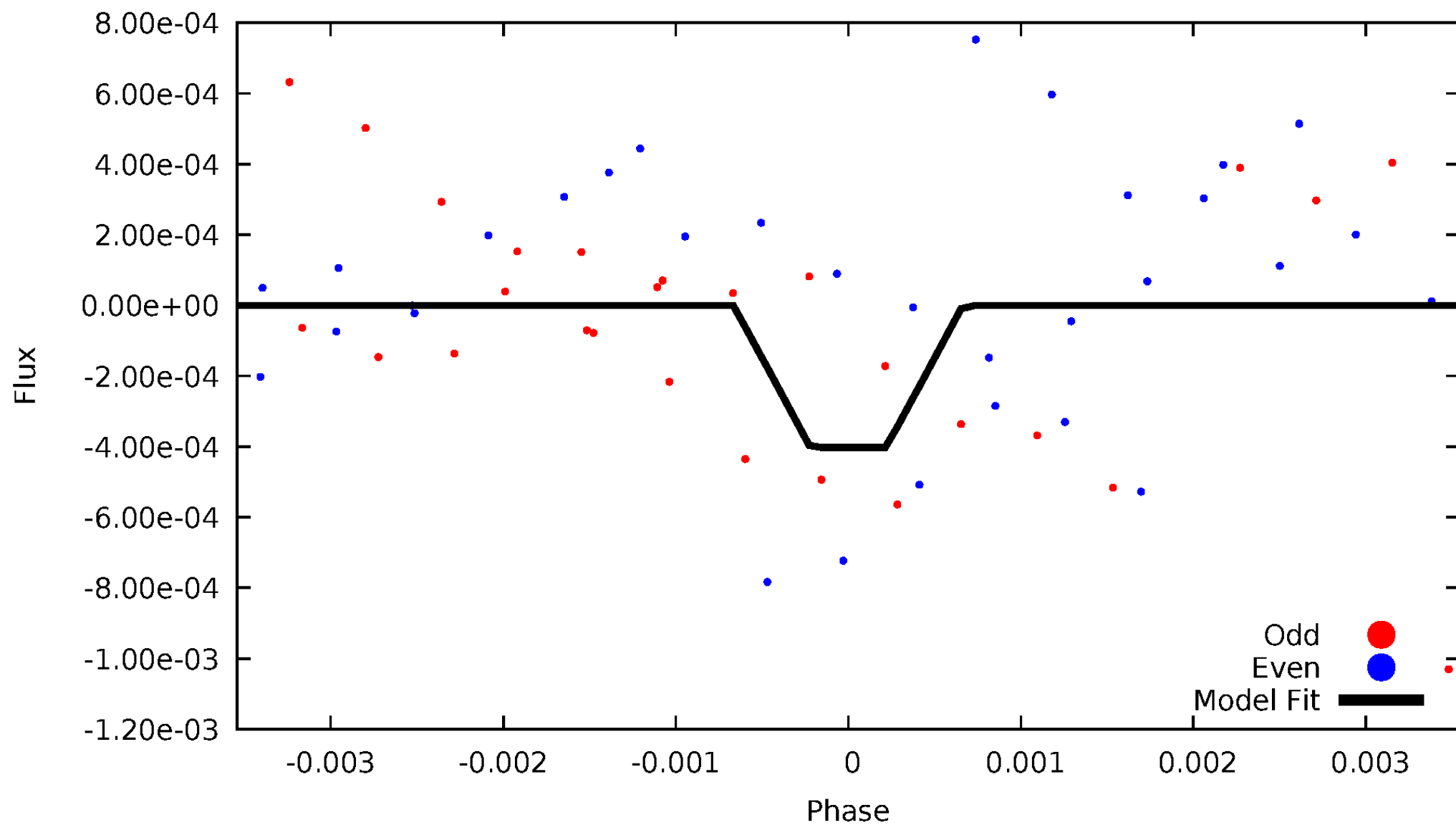
DV Odd/Even

TCE 007523115-02



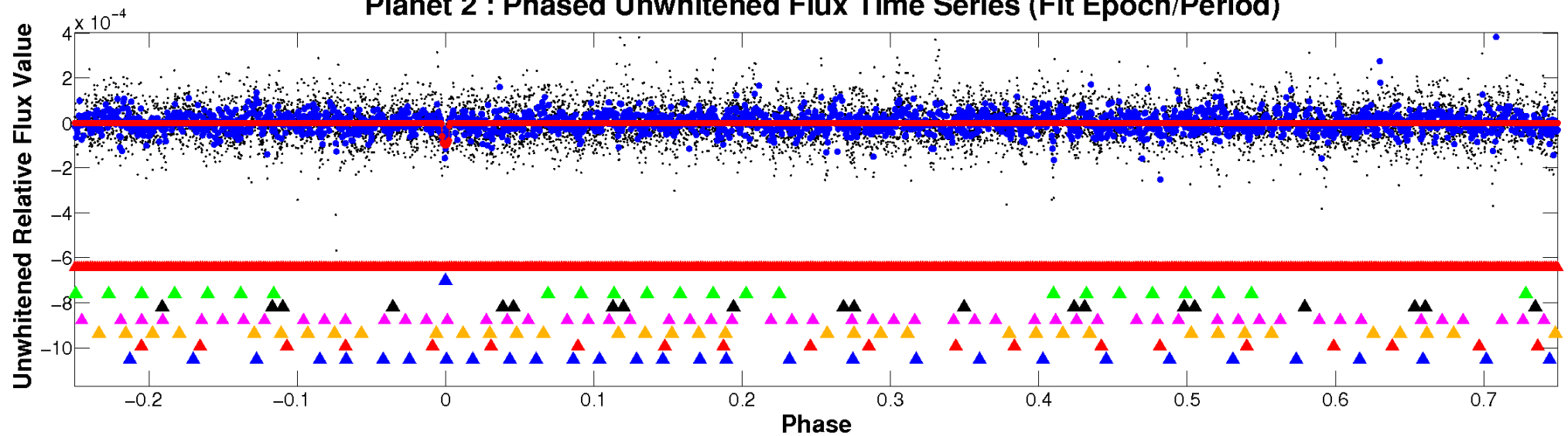
ALT Odd/Even

TCE 007523115-02

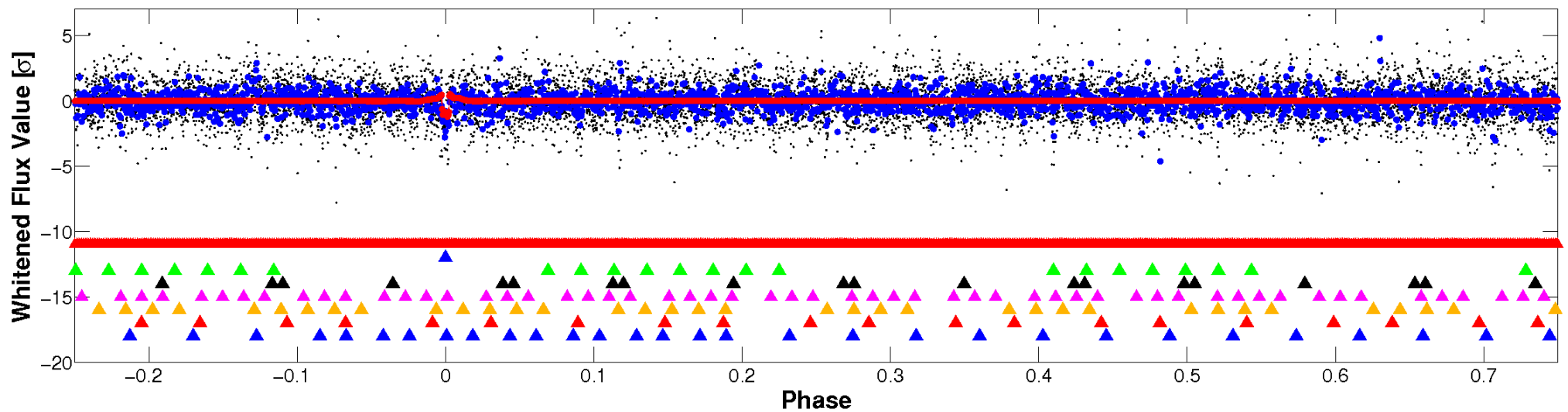


Non-Whitened Vs. Whitened Light Curve

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

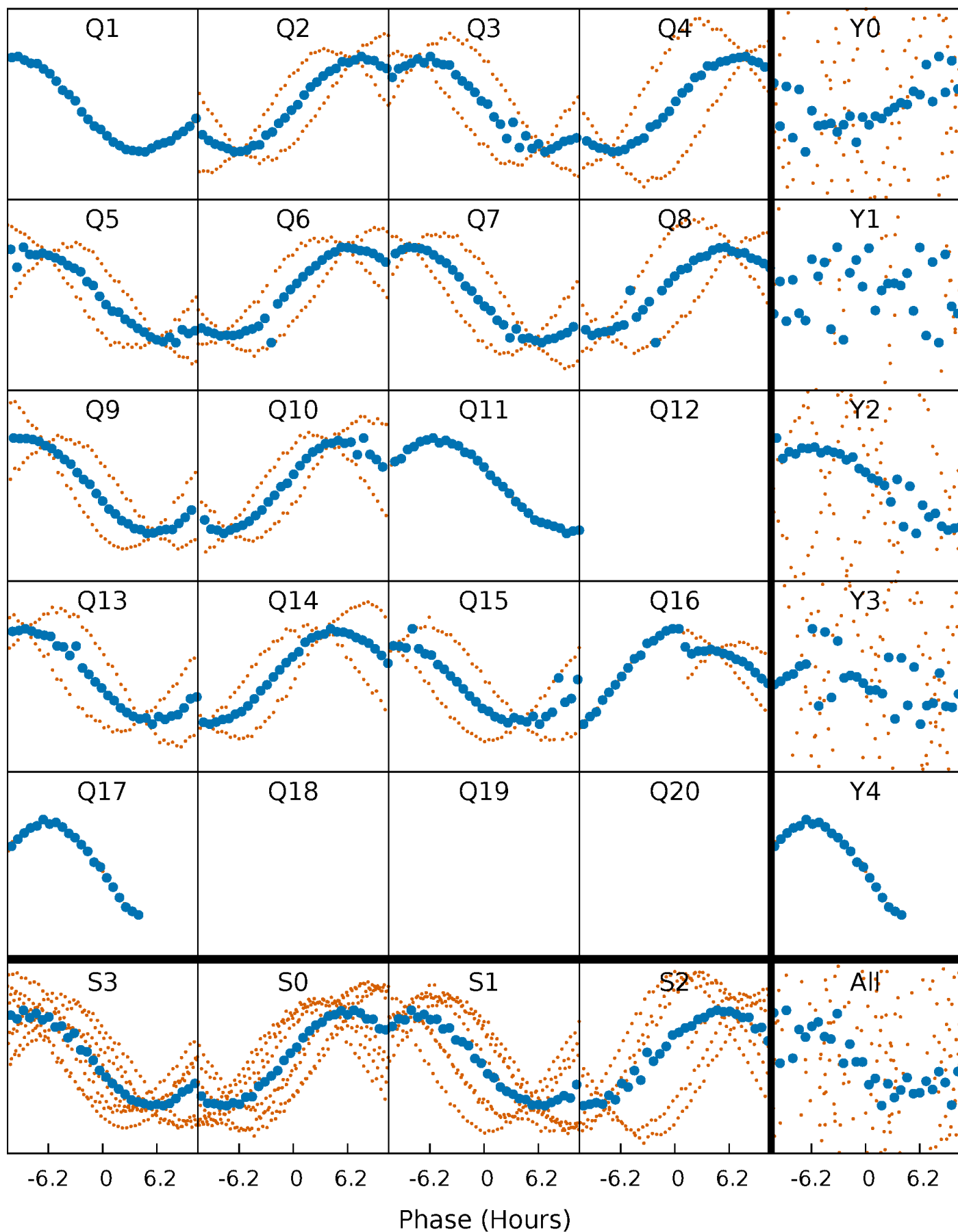


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



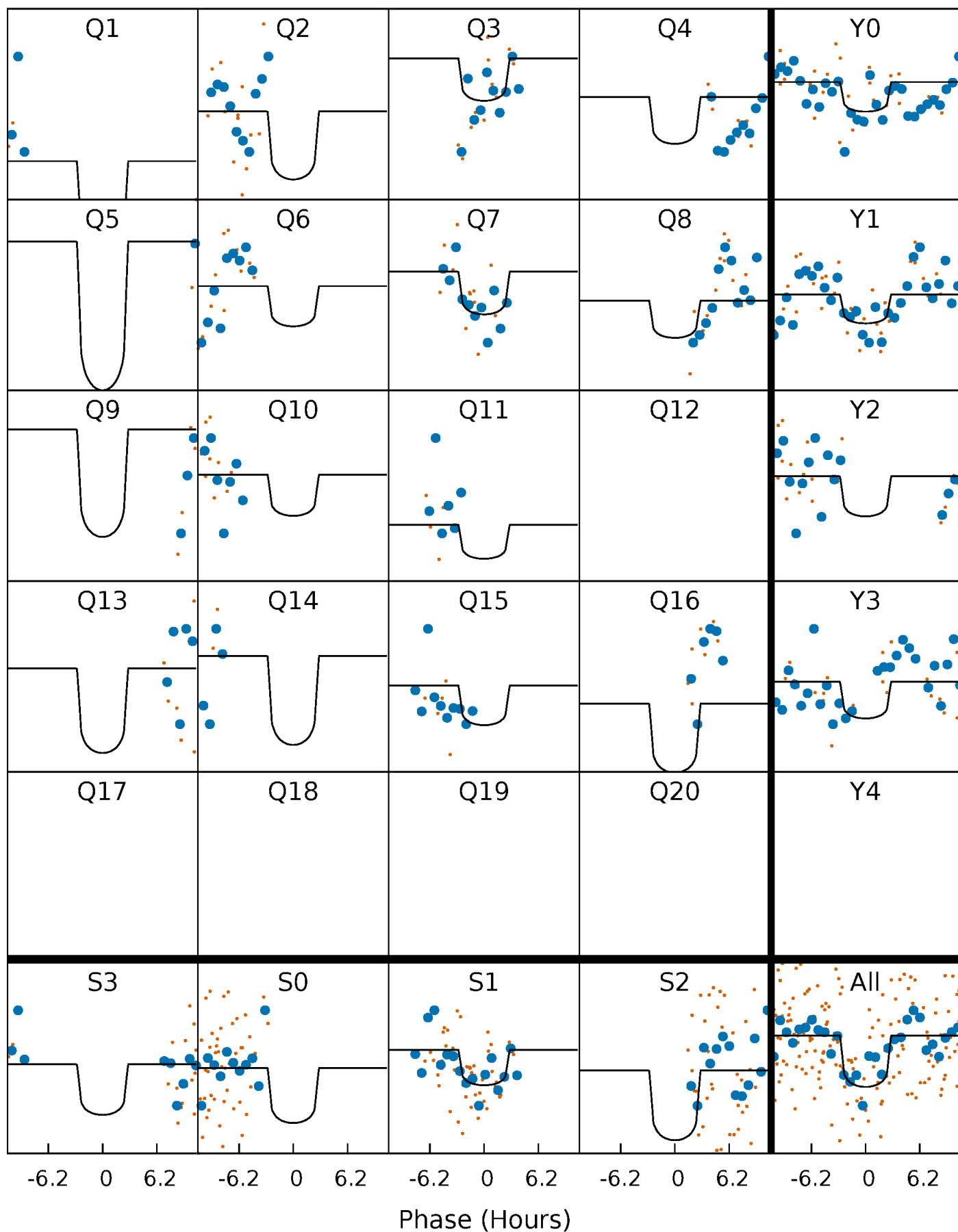
PDC Quarter-Phased Transit Curves

TCE 007523115-02 P= 46.384905 Days $T_0=143.464250$ (BKJD)



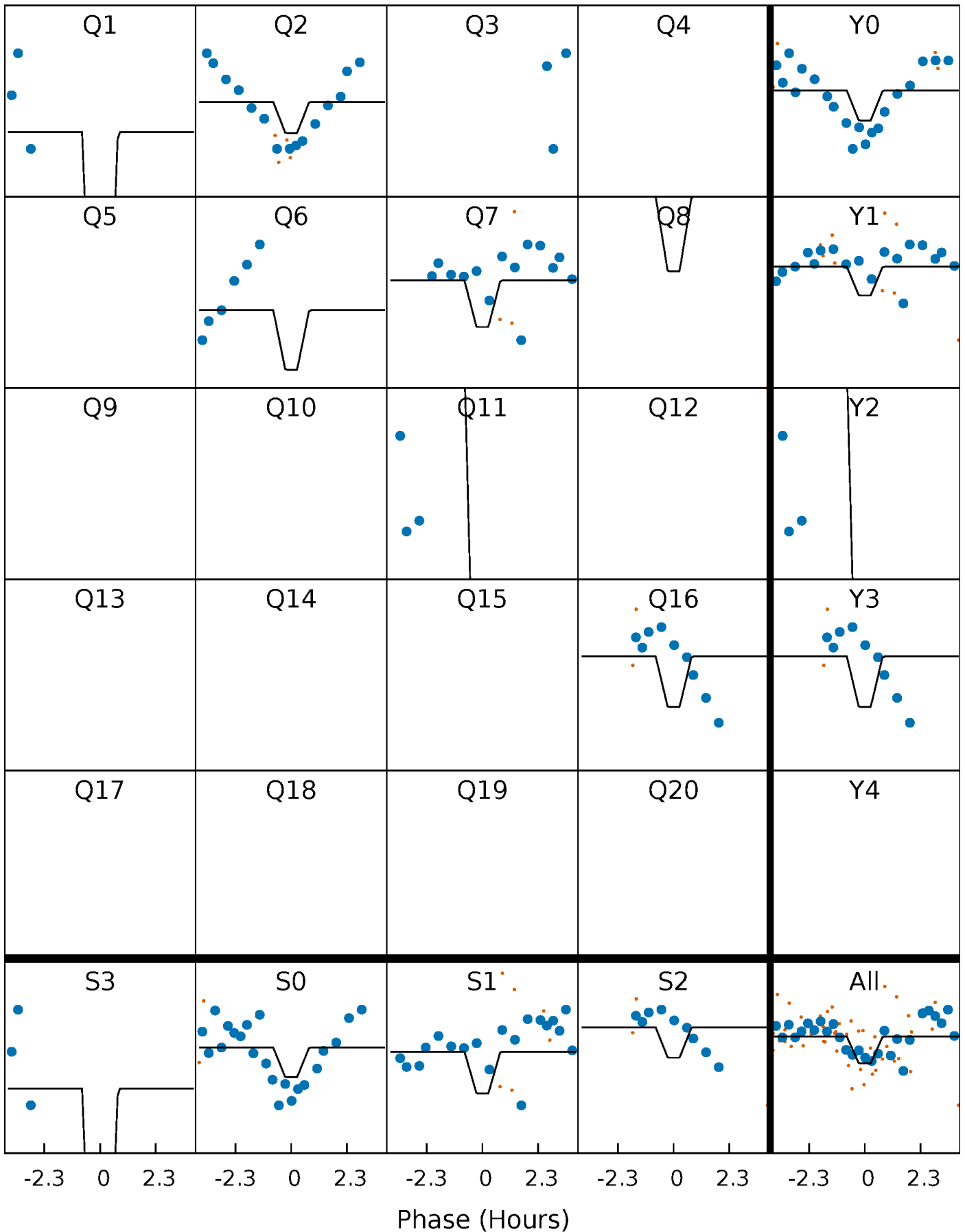
DV Quarter-Phased Transit Curves

TCE 007523115-02 P= 46.384905 Days $T_0=143.464250$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

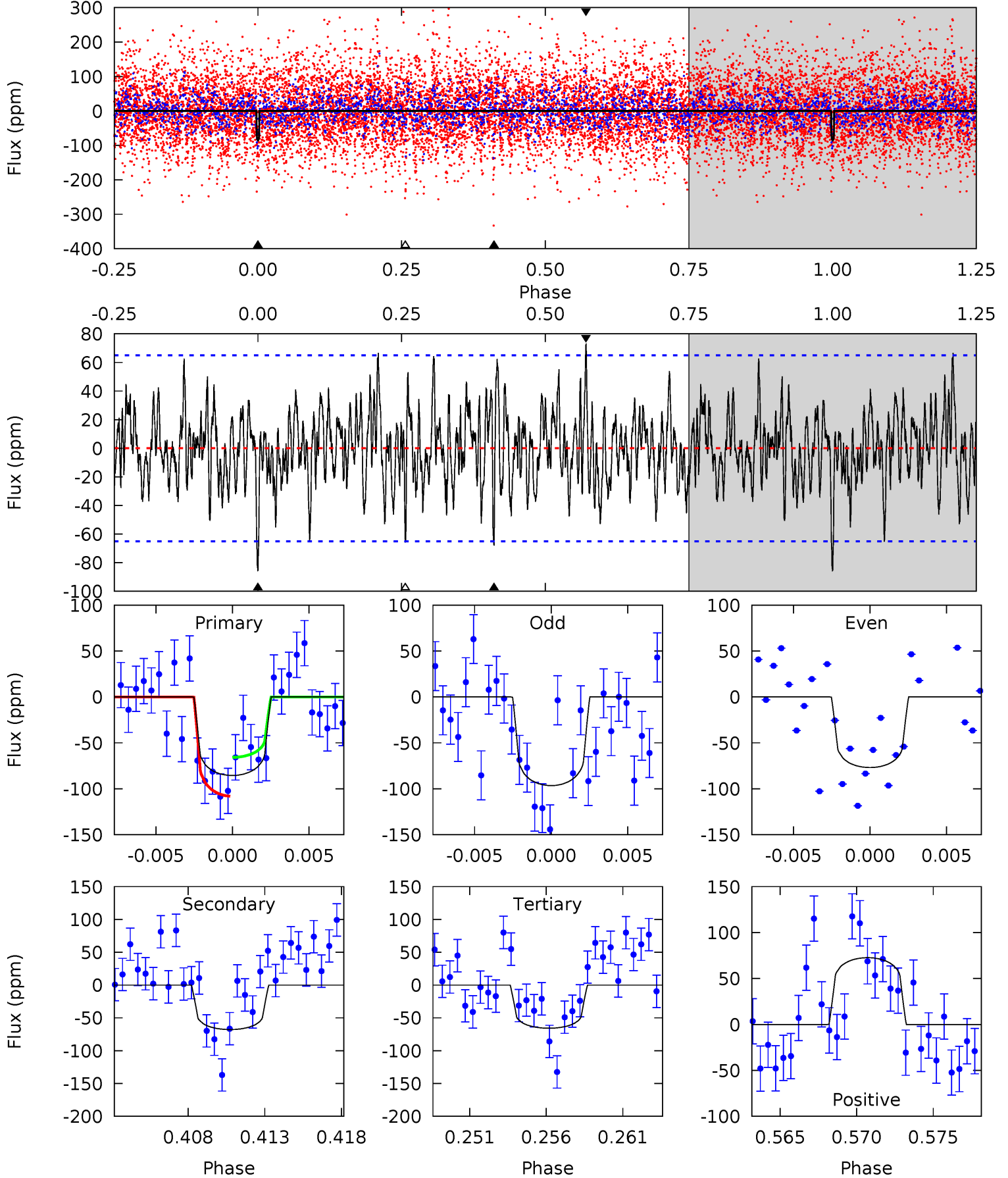
TCE 007523115-02 P= 46.398757 Days $T_0=143.194963$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-02, P = 46.384905 Days, E = 97.079345 Days

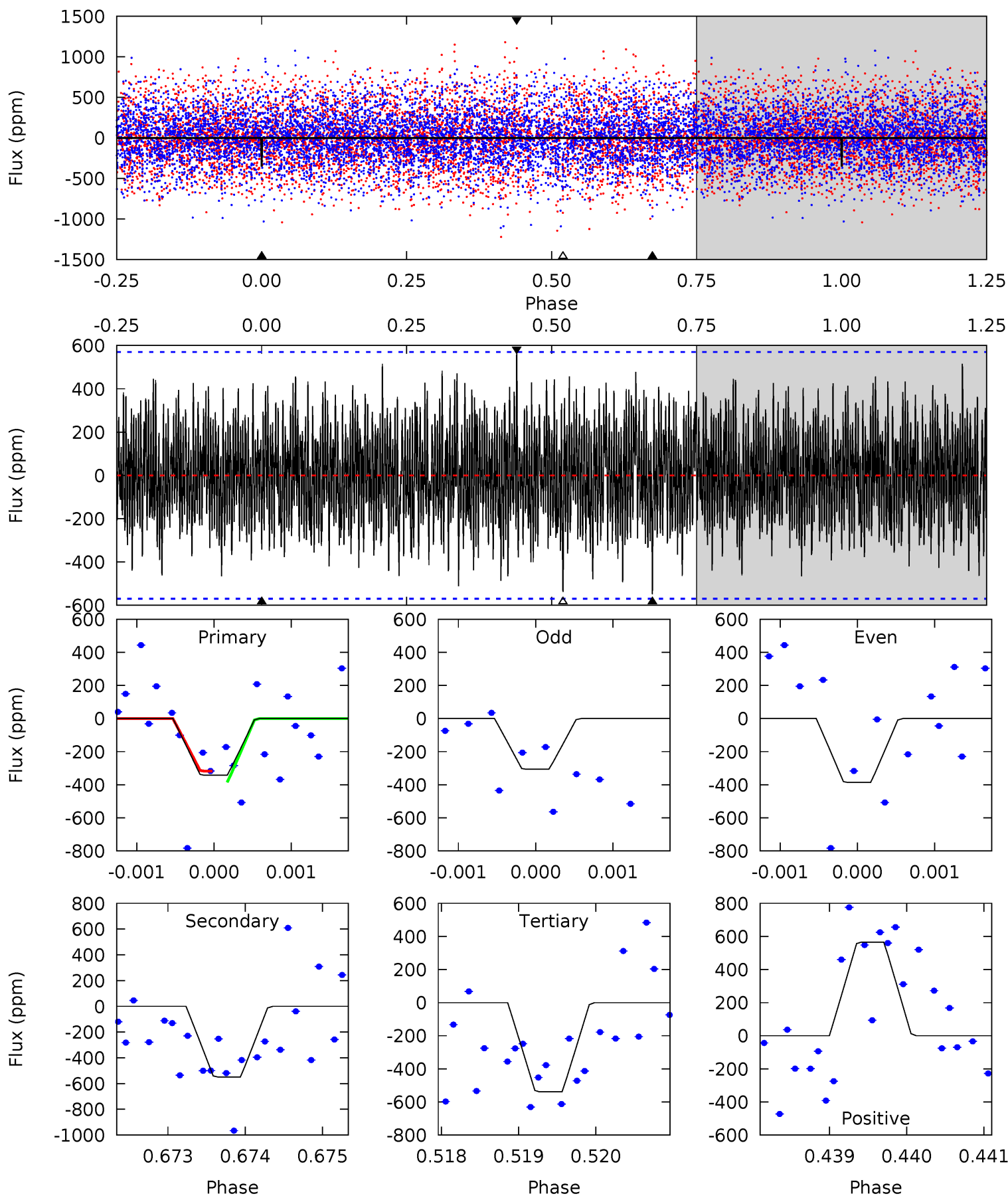
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.77	5.37	5.21	5.75	5.15	2.79	1.76	1.56	1.02	0.16	-0.38	0.77	0.74	0.46	1.68



Alt Model-Shift Uniqueness Test

007523115-02, P = 46.398757 Days, E = 96.796206 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.25	5.21	5.11	5.36	5.41	3.23	1.86	-1.86	-2.11	0.09	-0.16	0.37	1.11	0.51	0.31



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-68 ± 13	$4.72^{+4.80}_{-3.28}$	1580^{+126}_{-179}	5901^{+6265}_{-1458}	167^{+1460}_{-125}
Alt.	-548 ± 105	$6.63^{+5.15}_{-4.15}$	1573^{+146}_{-177}	8649^{+10881}_{-2293}	687^{+4339}_{-479}

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

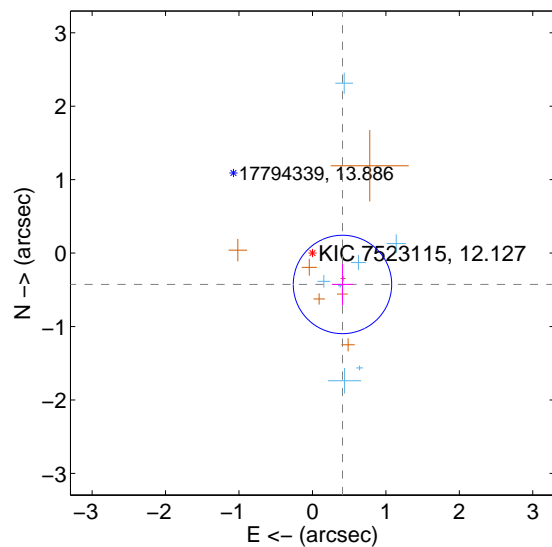
Supplemental centroid analysis for 007523115-02. Kepler magnitude: 12.13. Transit SNR 6.26

There are 7 quarters with good PRF difference image offsets

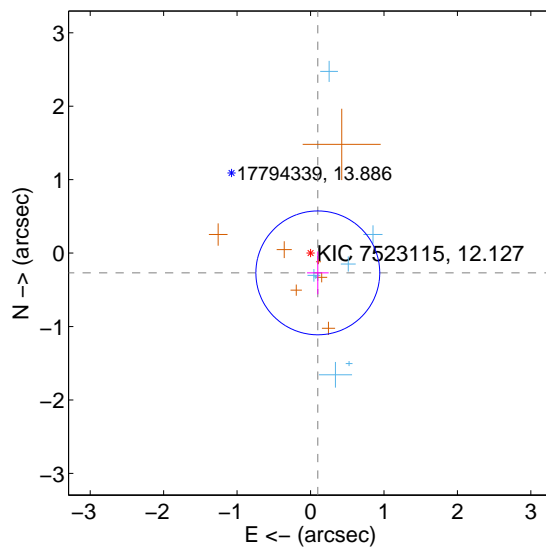
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.591 ± 0.223	2.65	-0.409 ± 0.142	-0.427 ± 0.284
PRF-fit source offset from KIC position	0.287 ± 0.281	1.02	-0.099 ± 0.147	-0.269 ± 0.291
photometric centroid source offset	0.68 ± 0.69	1.00	0.57 ± 0.68	-0.38 ± 0.70

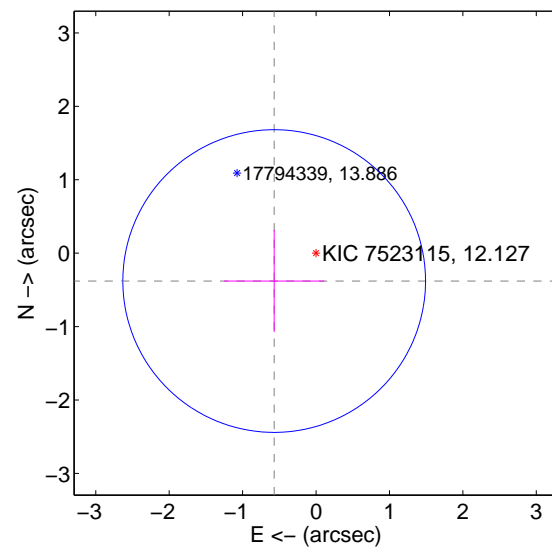
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

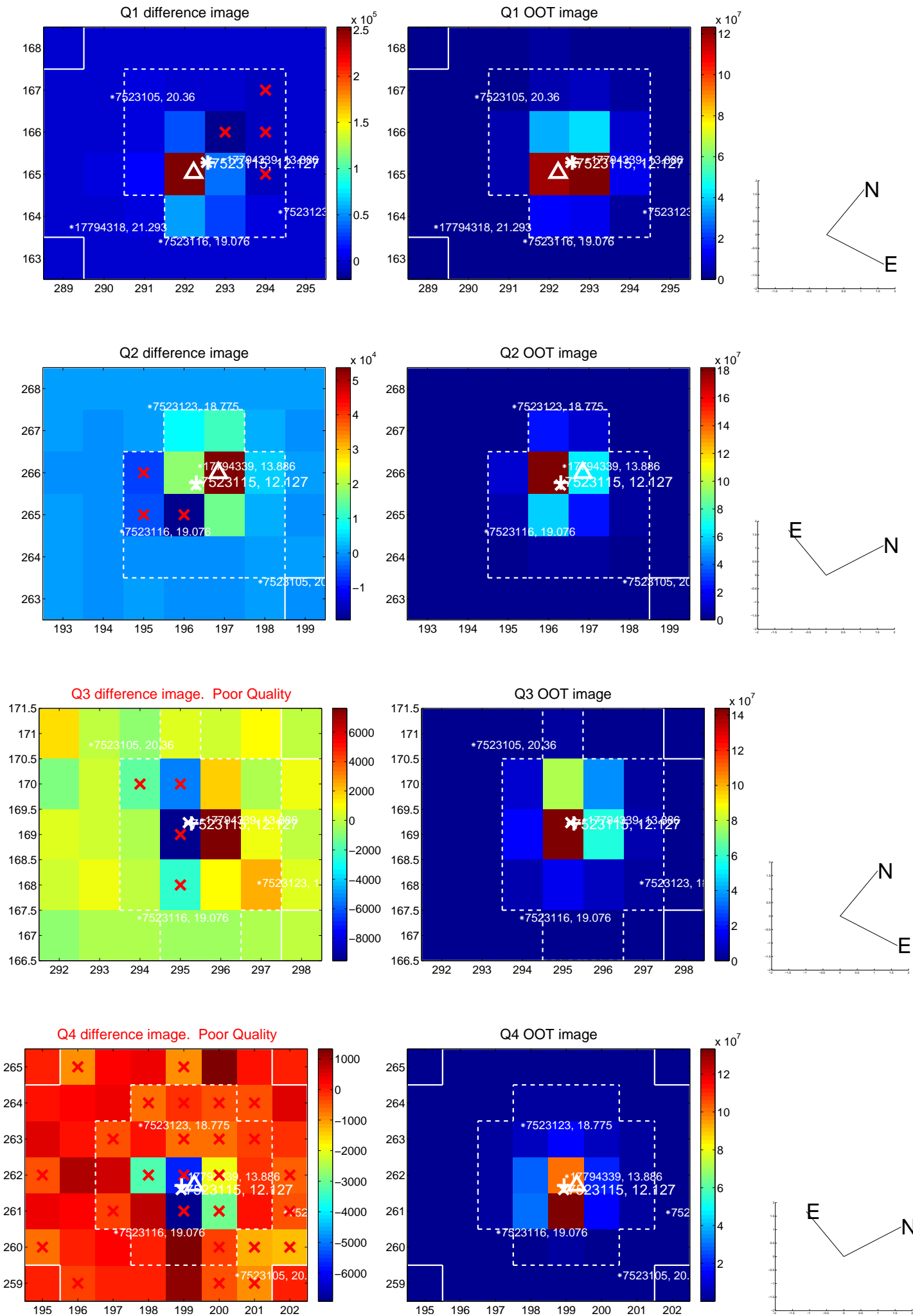


offset from photometric centroids

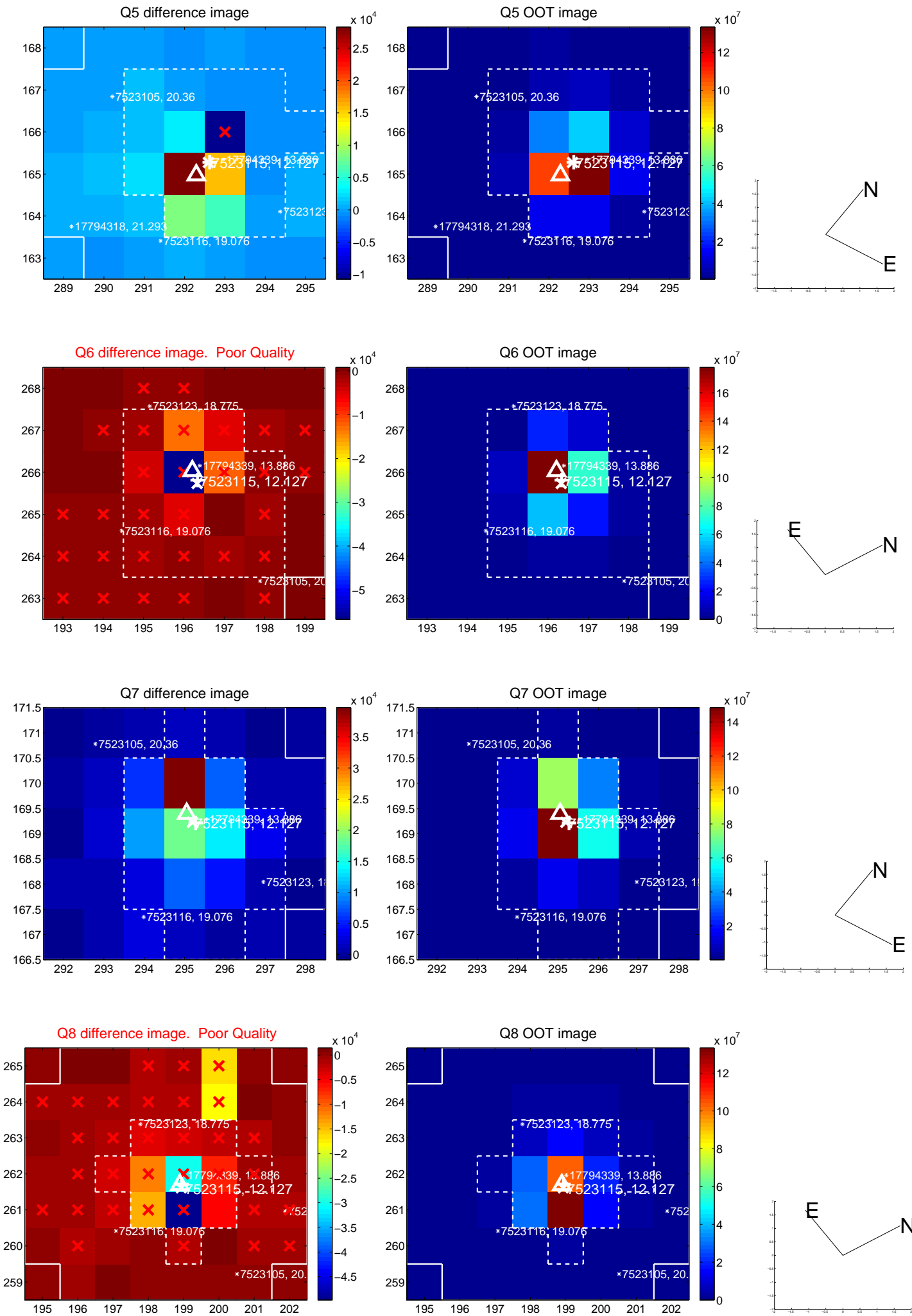


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

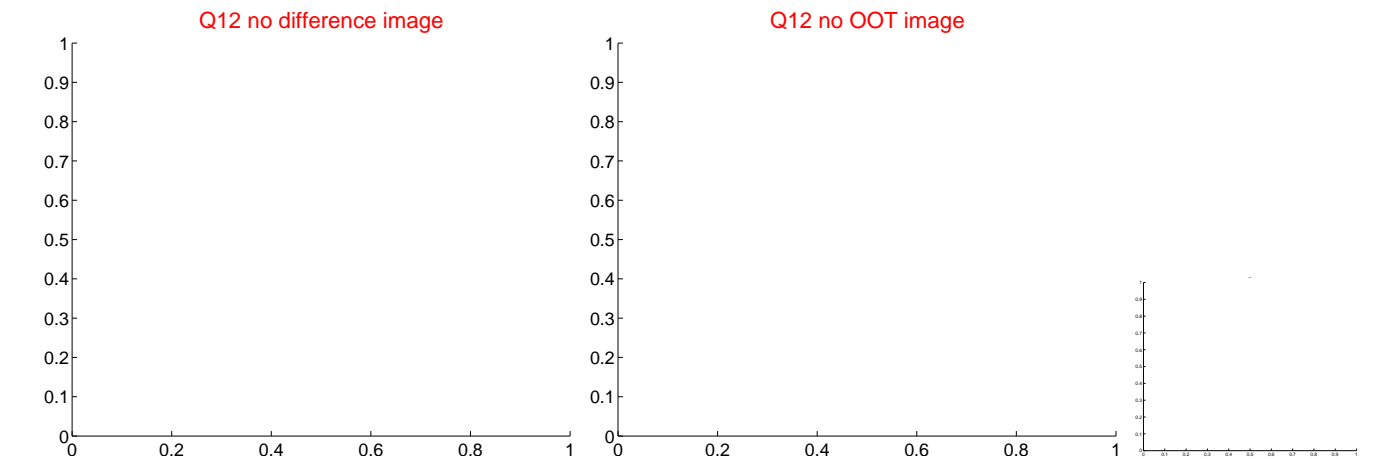
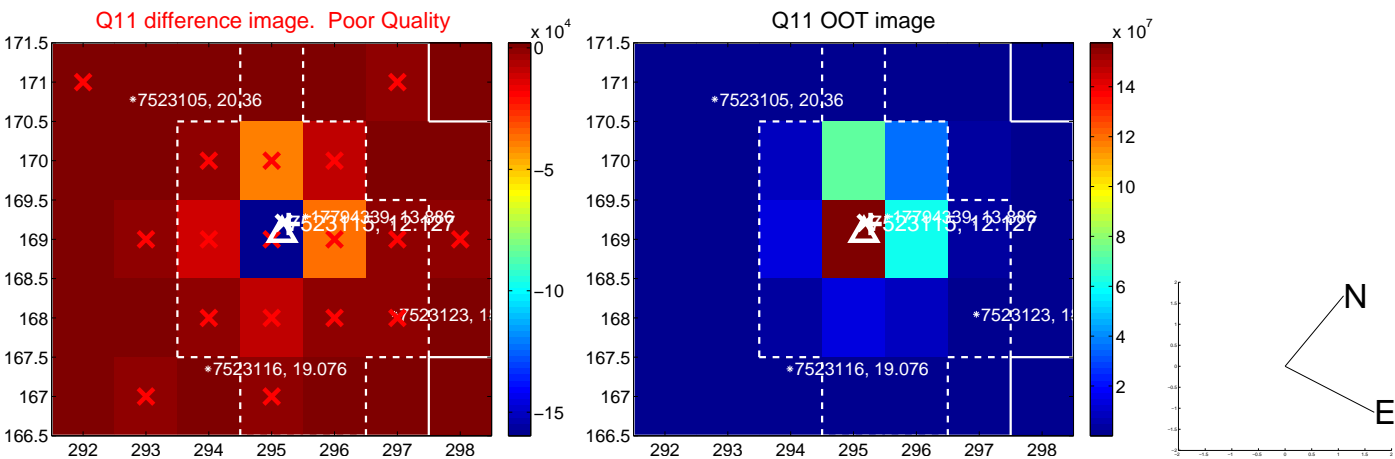
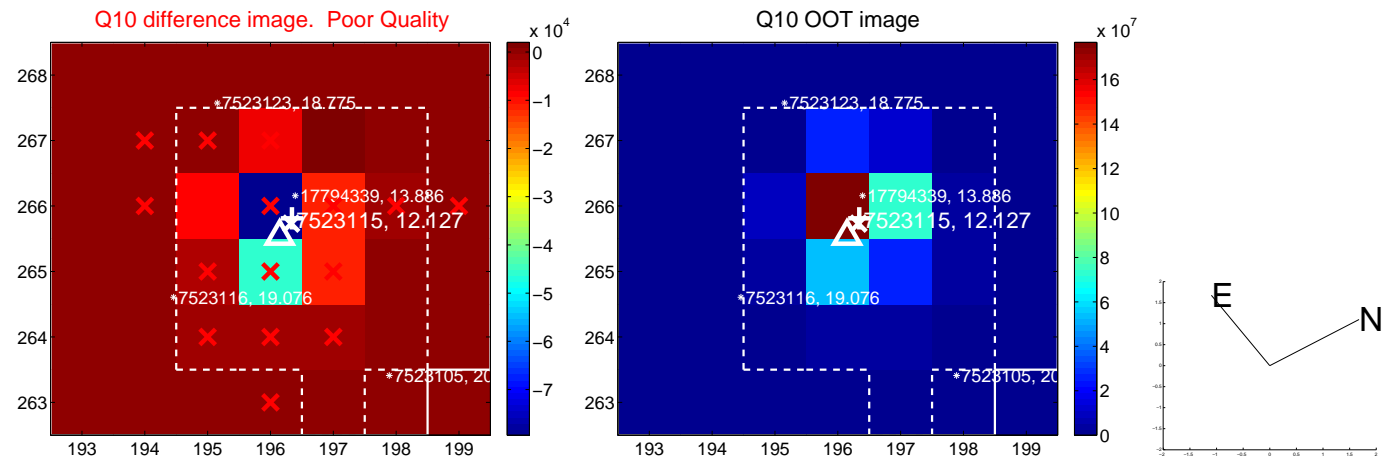
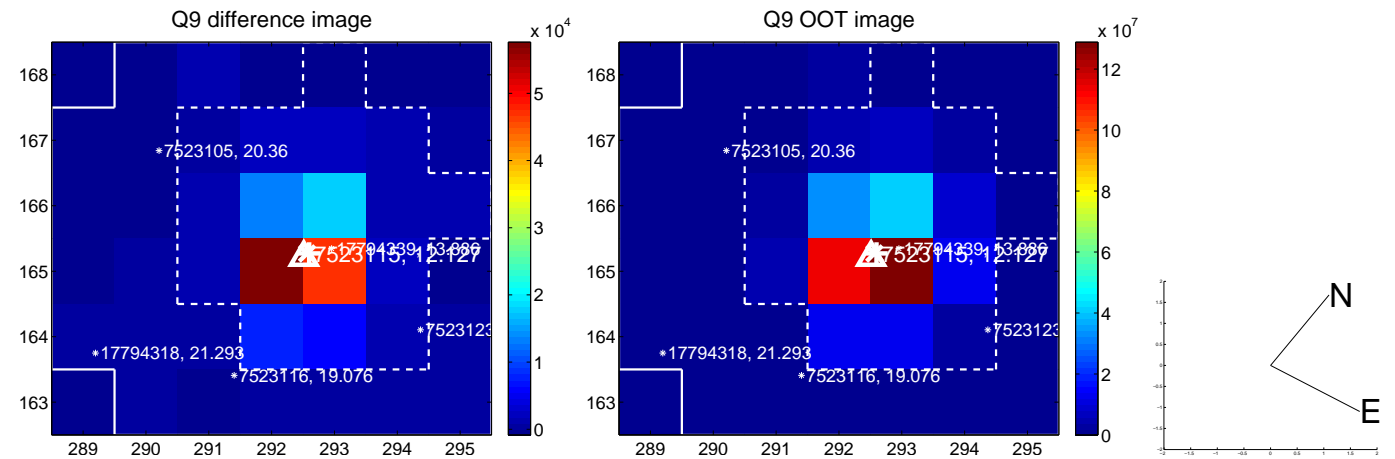
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



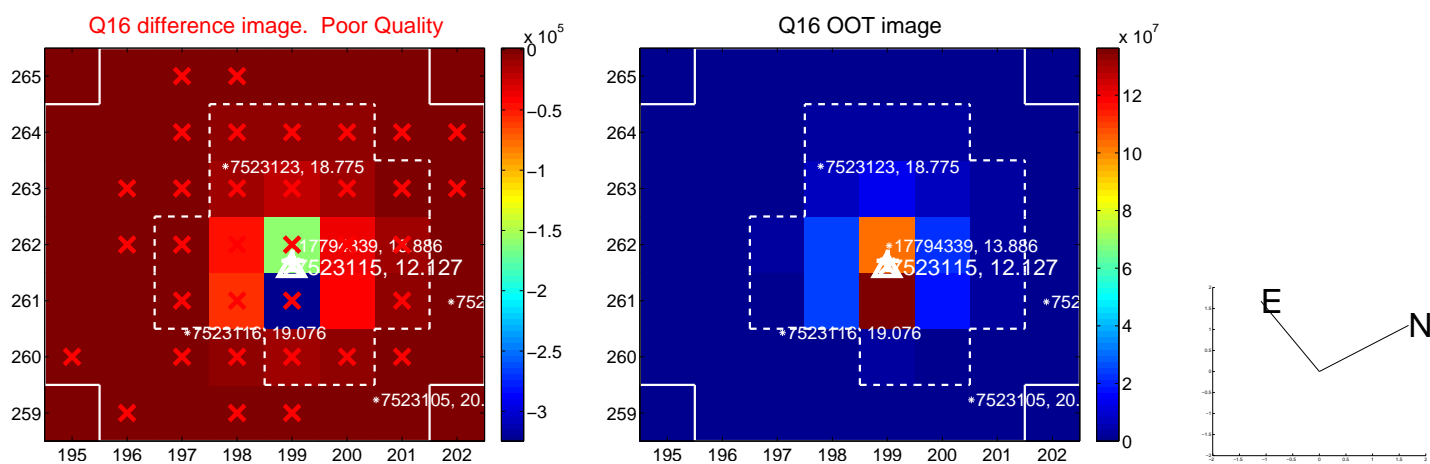
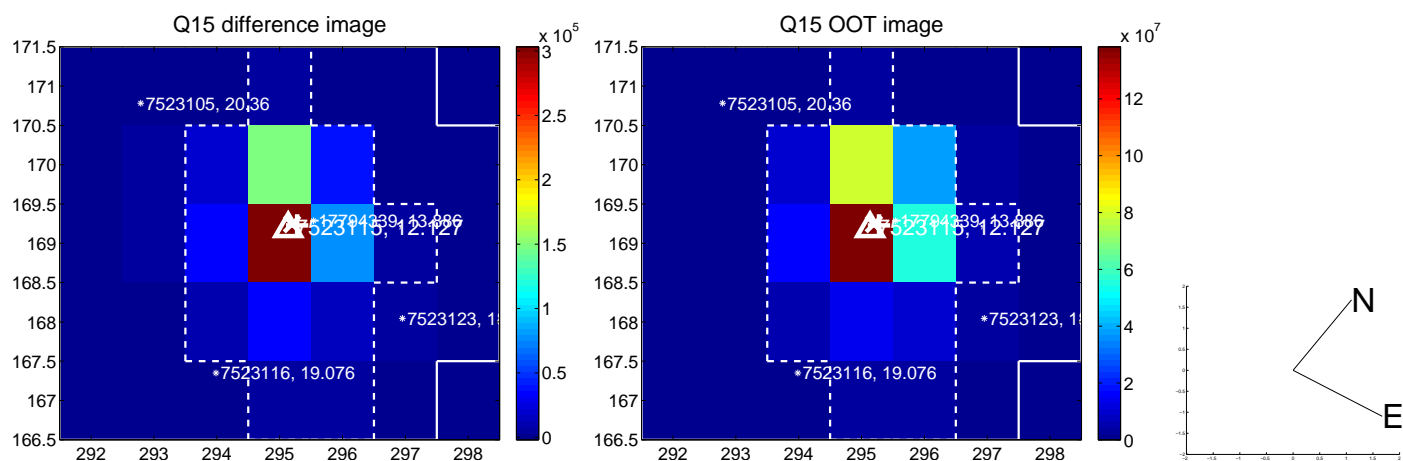
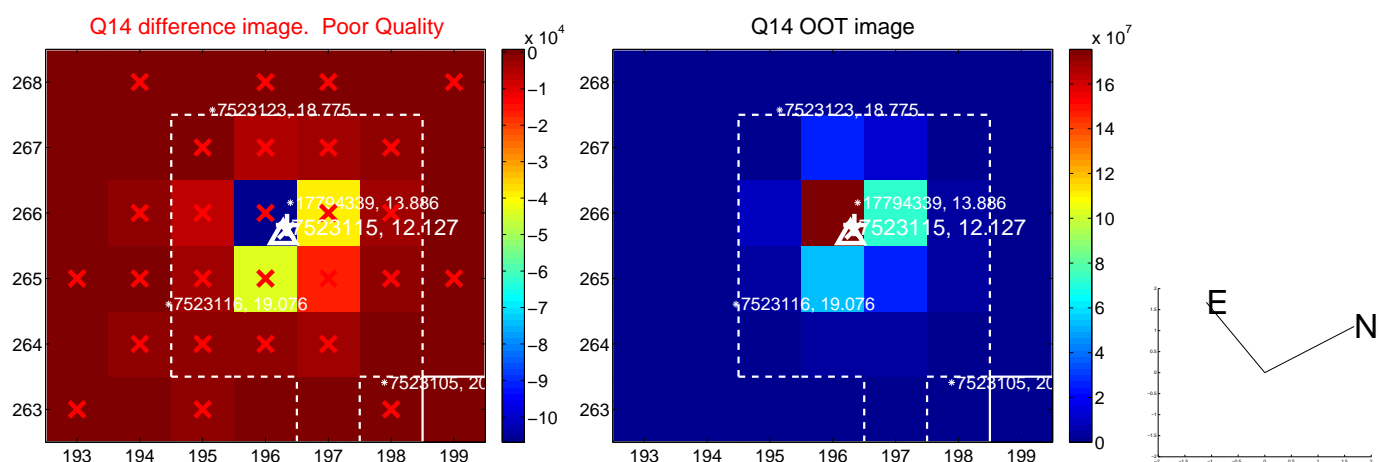
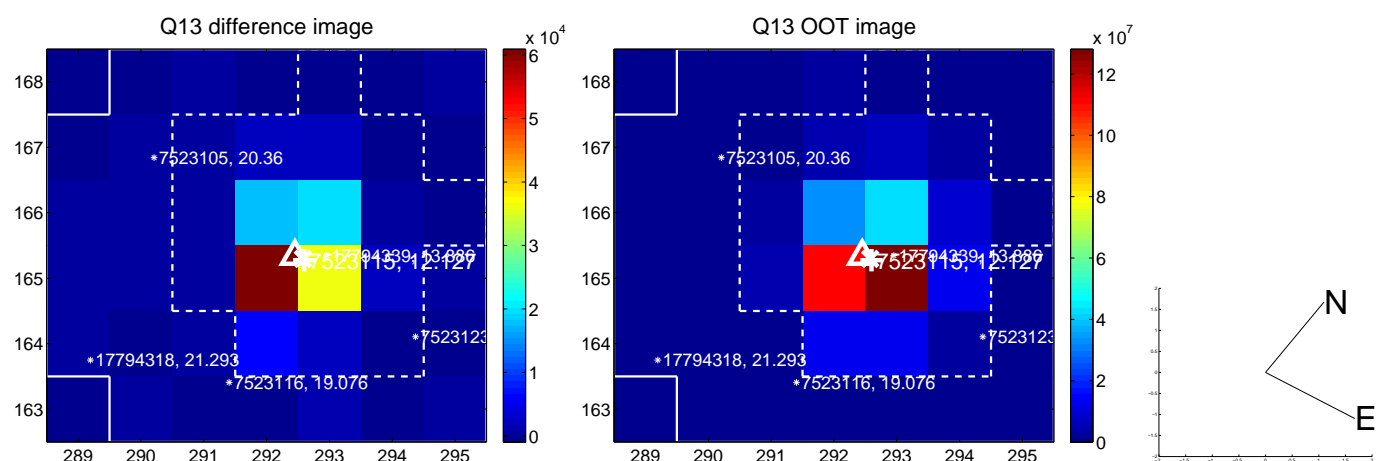
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



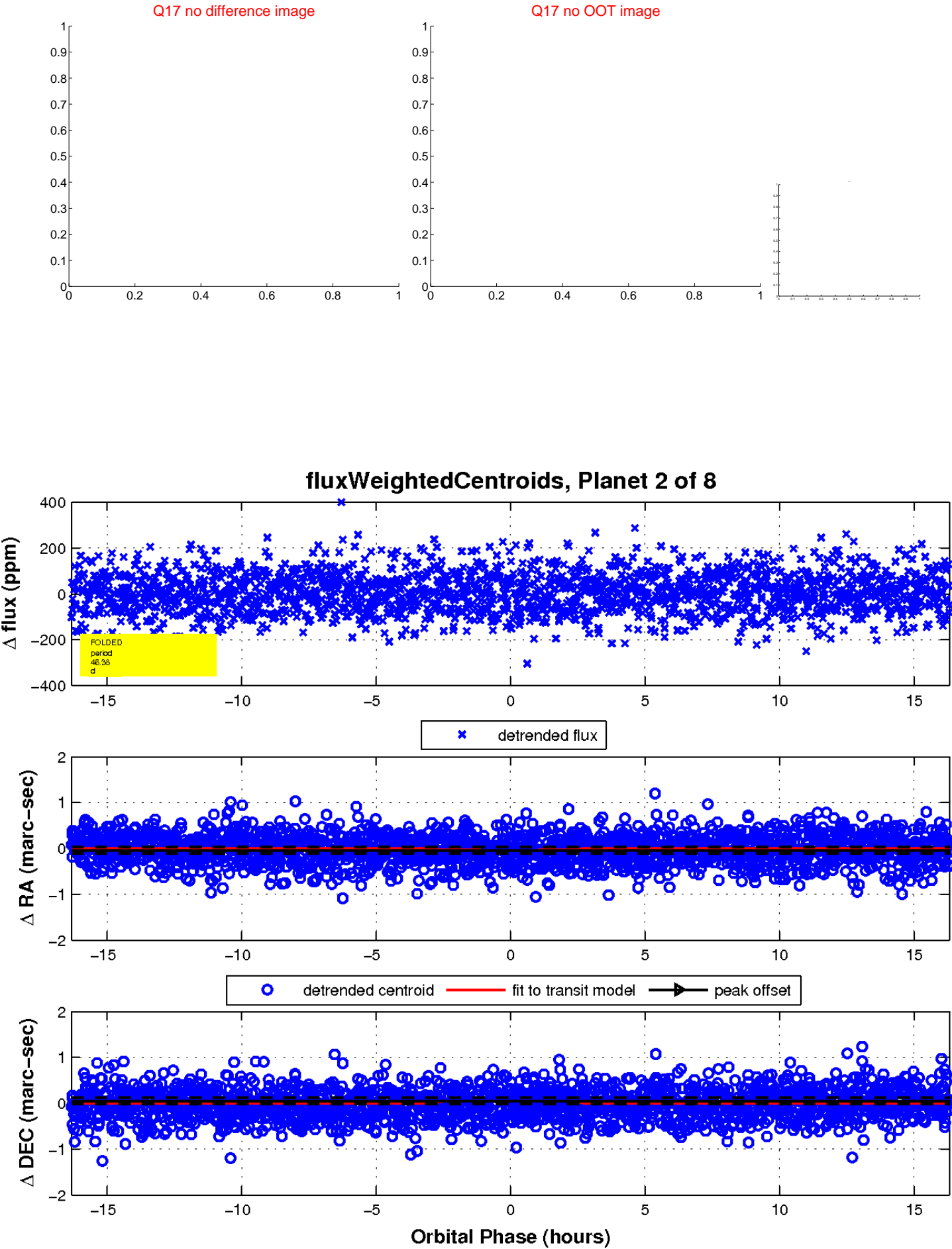
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

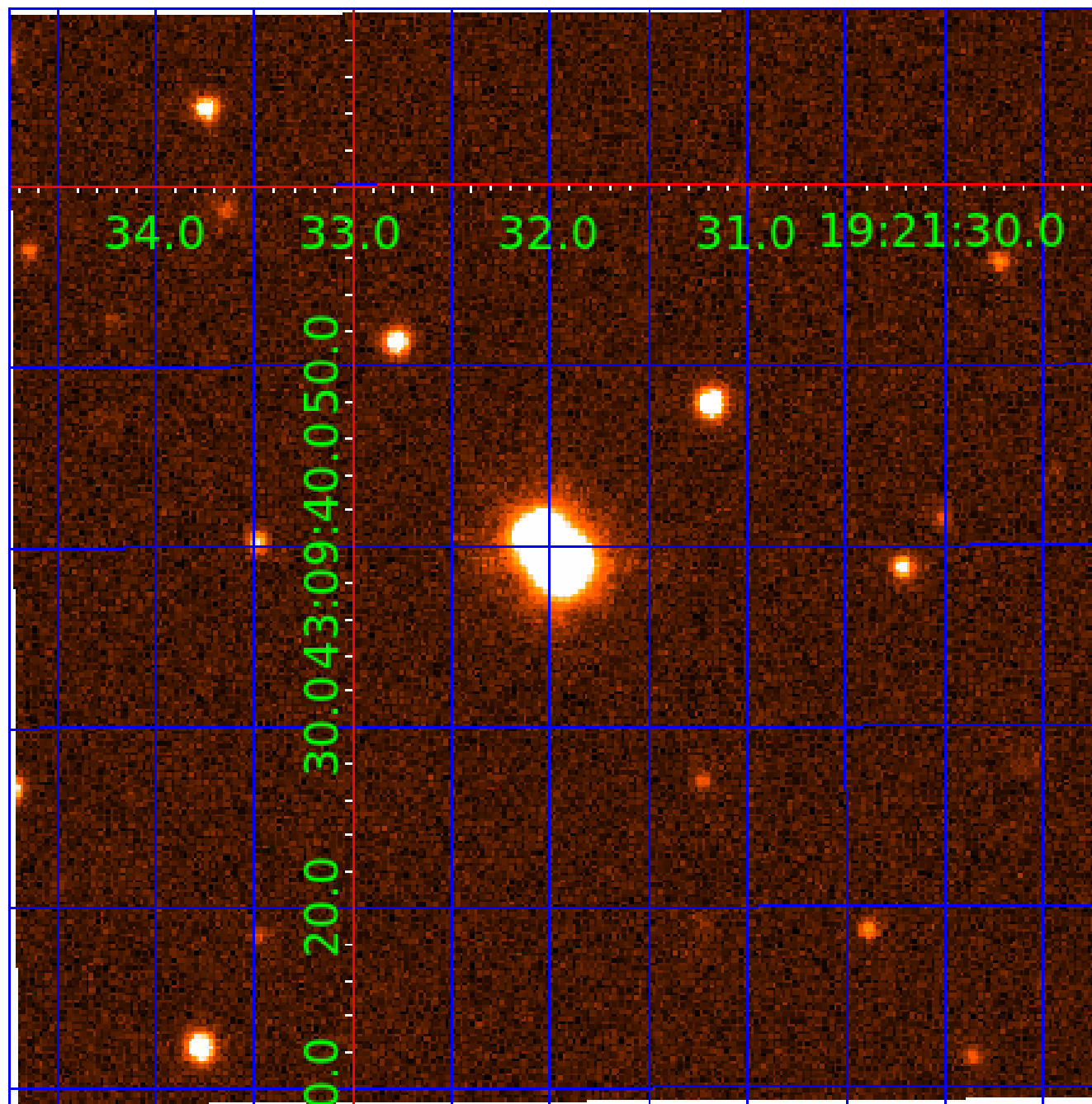


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

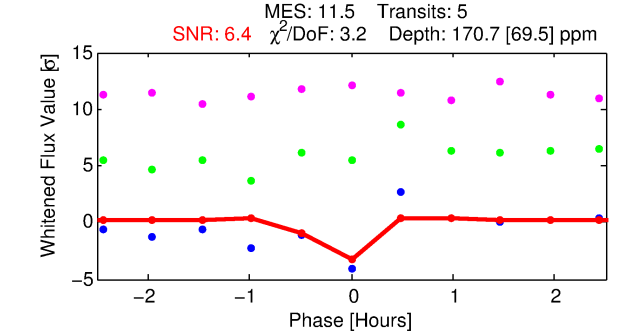
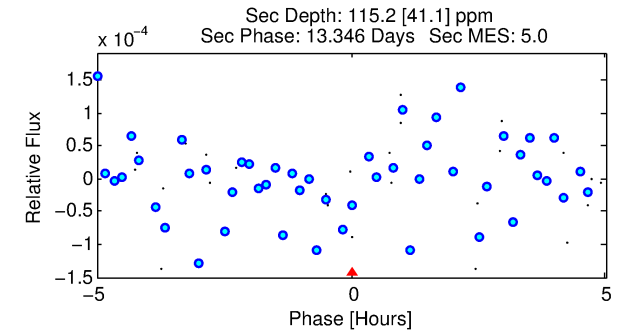
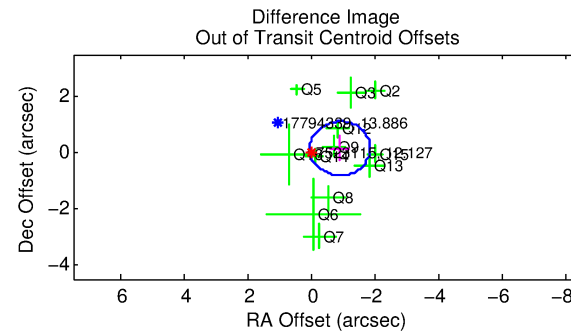
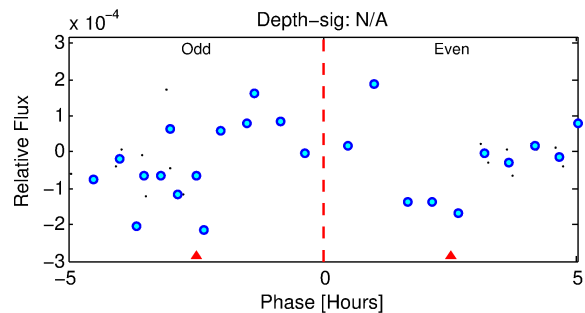
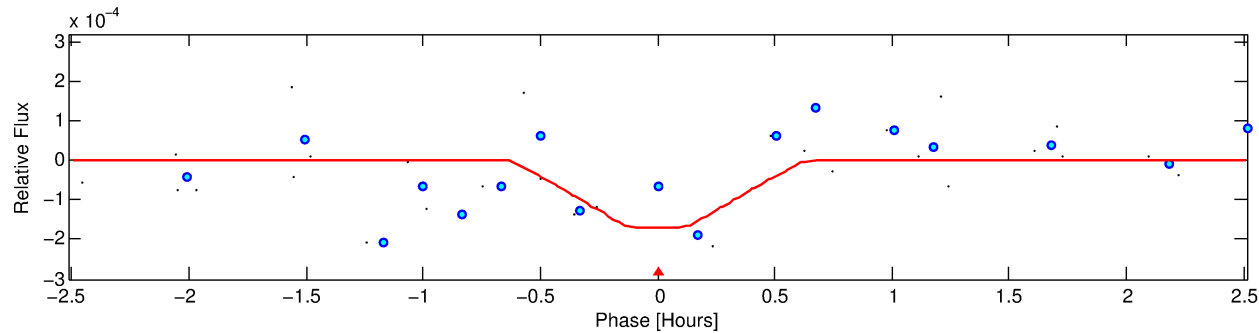
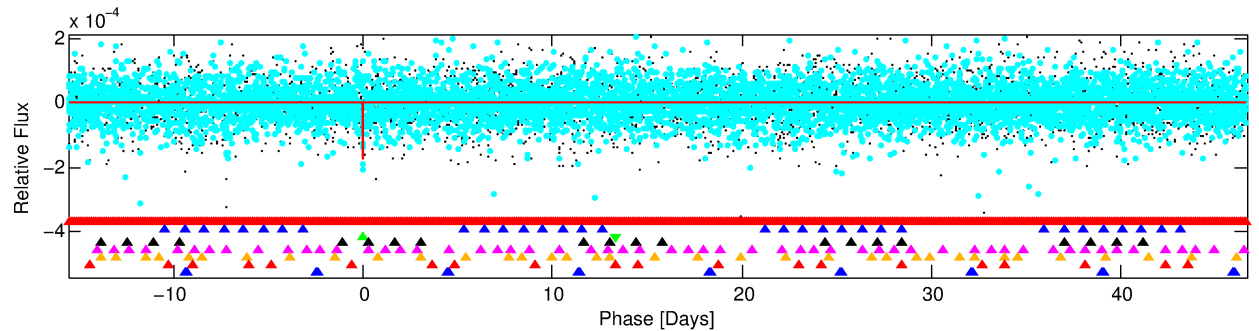
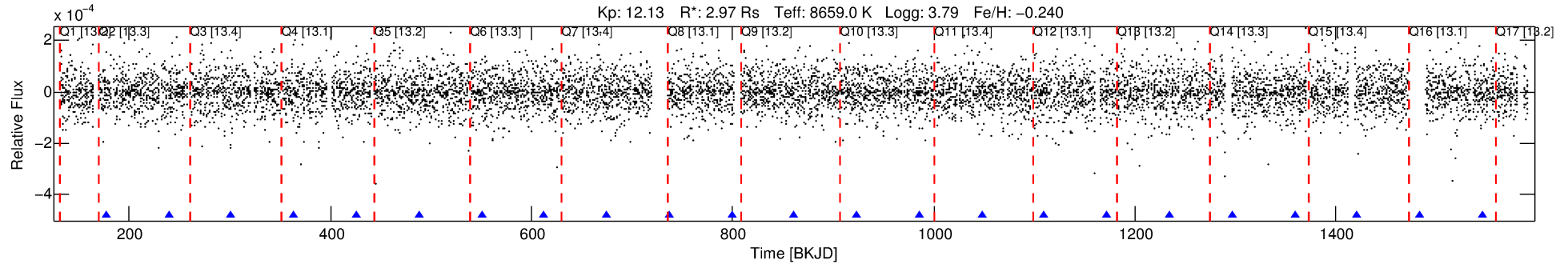
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-03

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 3 of 8 Period: 62.191 d



DV Fit Results:

Period = 62.19061 [0.00072] d
Epoch = 177.2512 [0.0100] BKJD
Rp/R* = 0.0140 [0.0258]
a/R* = 264.77 [3119.80]
b = 0.90 [2.61]
Seff = 297.80 [210.54]
Teq = 1059 [187] K
Rp = 4.54 [8.61] Re
a = 0.3866 [0.1639] AU
Ag = 459.30 [1731.58] [0.26σ]
Teffp = 7582 [7035] K [0.93σ]

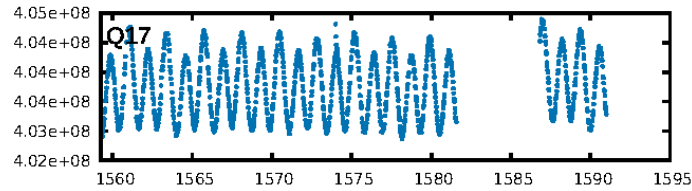
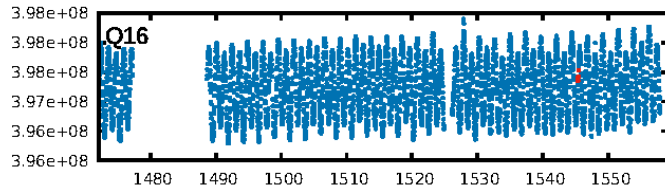
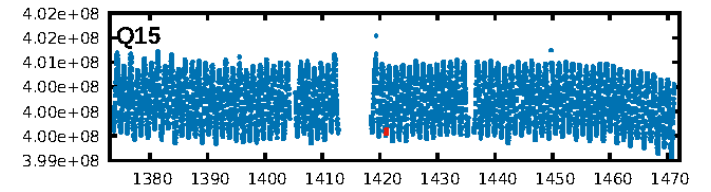
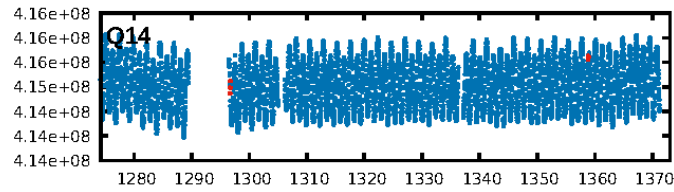
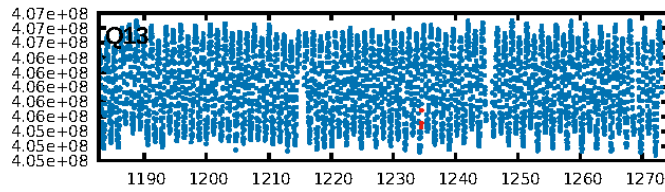
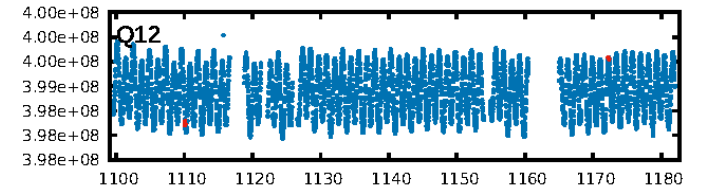
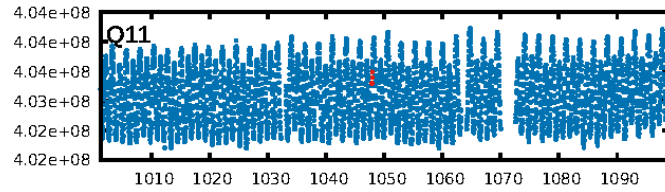
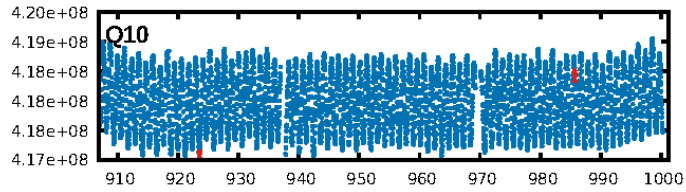
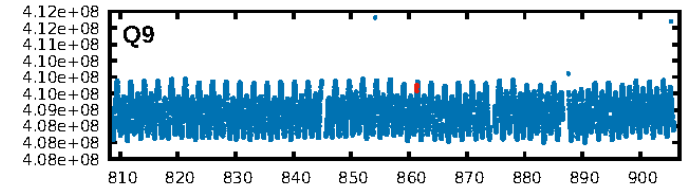
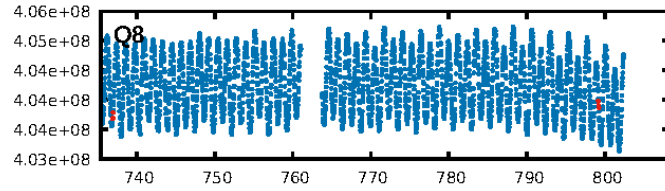
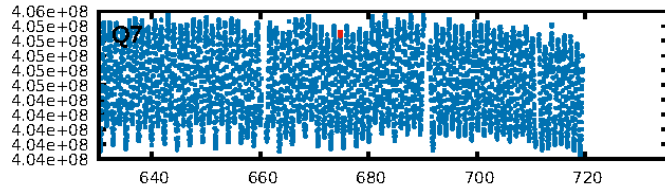
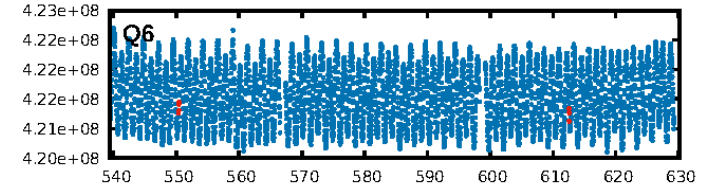
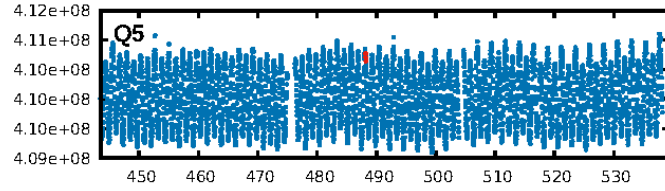
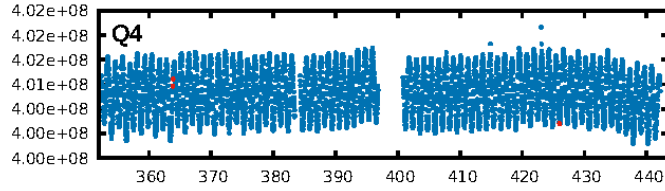
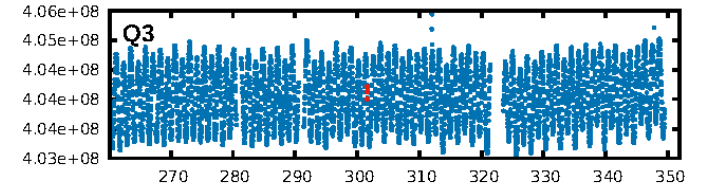
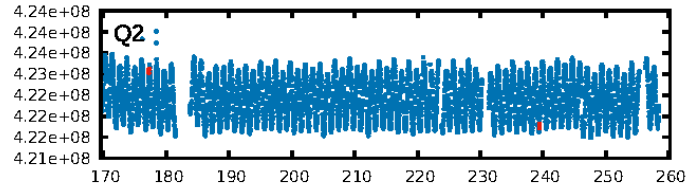
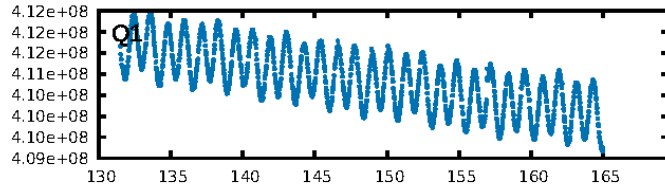
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [101.56σ]
LongPeriod-sig: 100.0% [33.94σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 10.0%
Bootstrap-pfa: 1.00e-14
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.141
Centroid-sig: 4.2%
Centroid-so: 1.428 arcsec [1.36σ]
OotOffset-rm: 0.901 arcsec [2.83σ]
KicOffset-rm: 0.726 arcsec [1.82σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.53 [8/15]

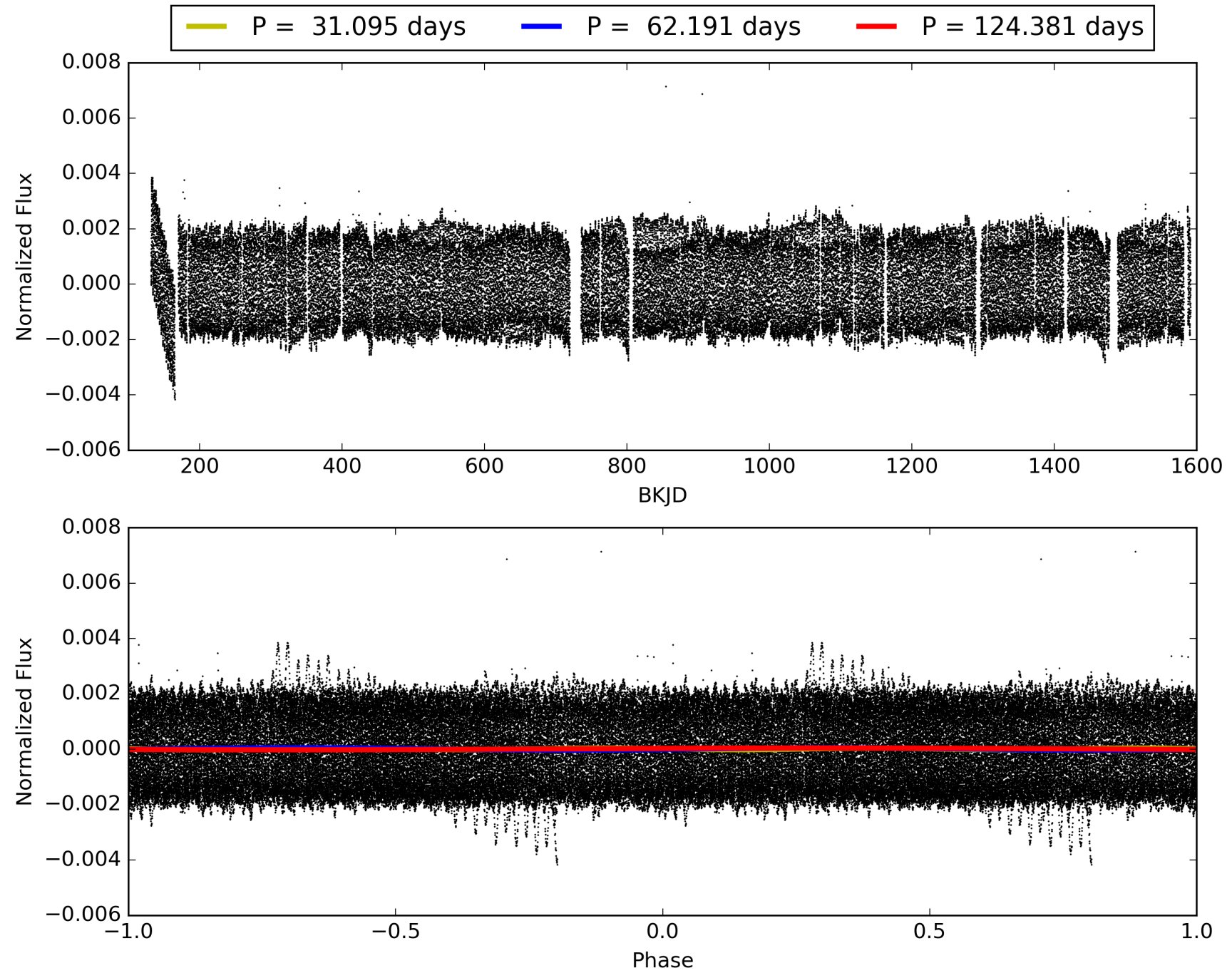
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:17 Z

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

TCE 007523115-03, PDC Light Curves

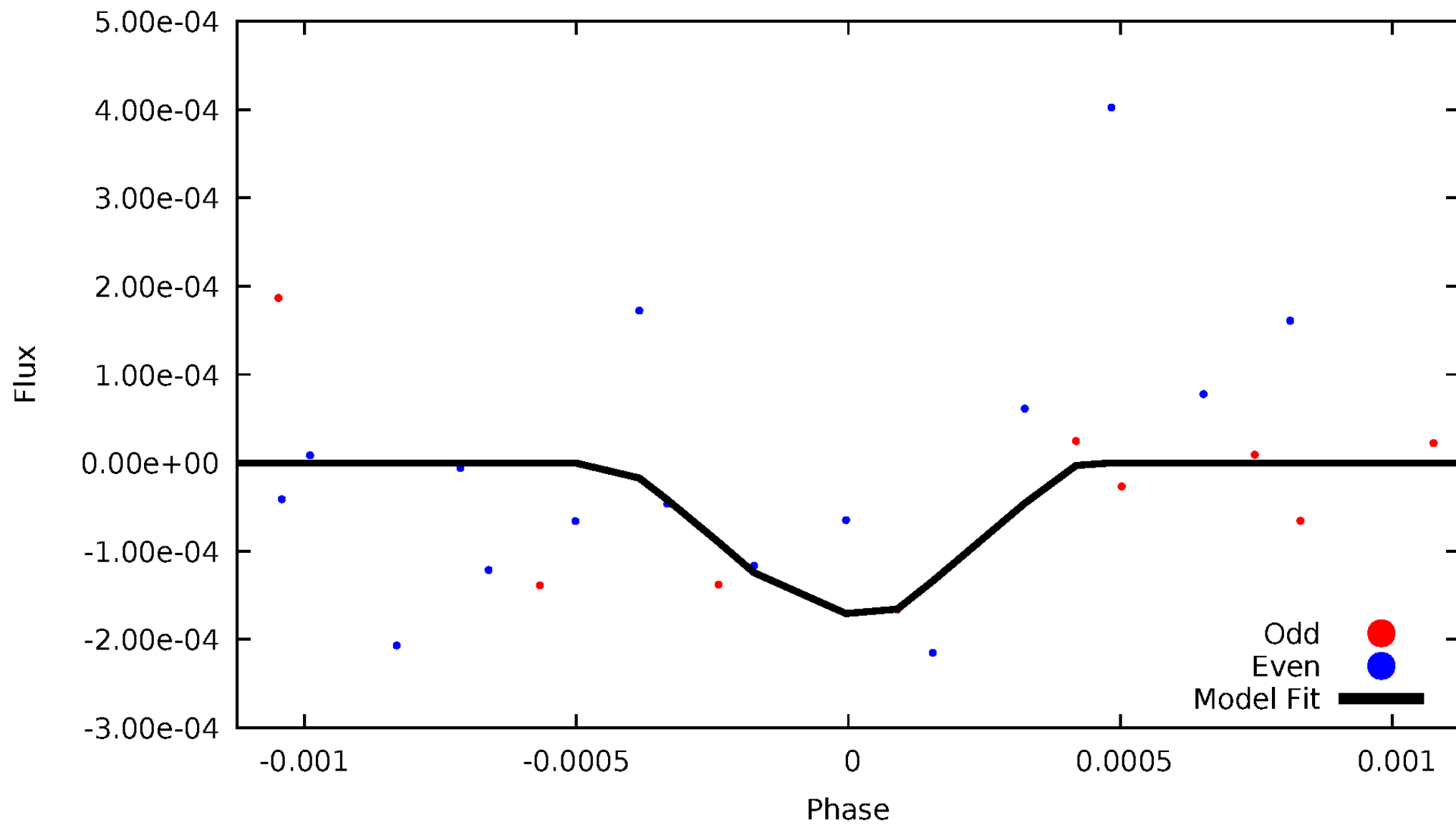


TCE 007523115-03



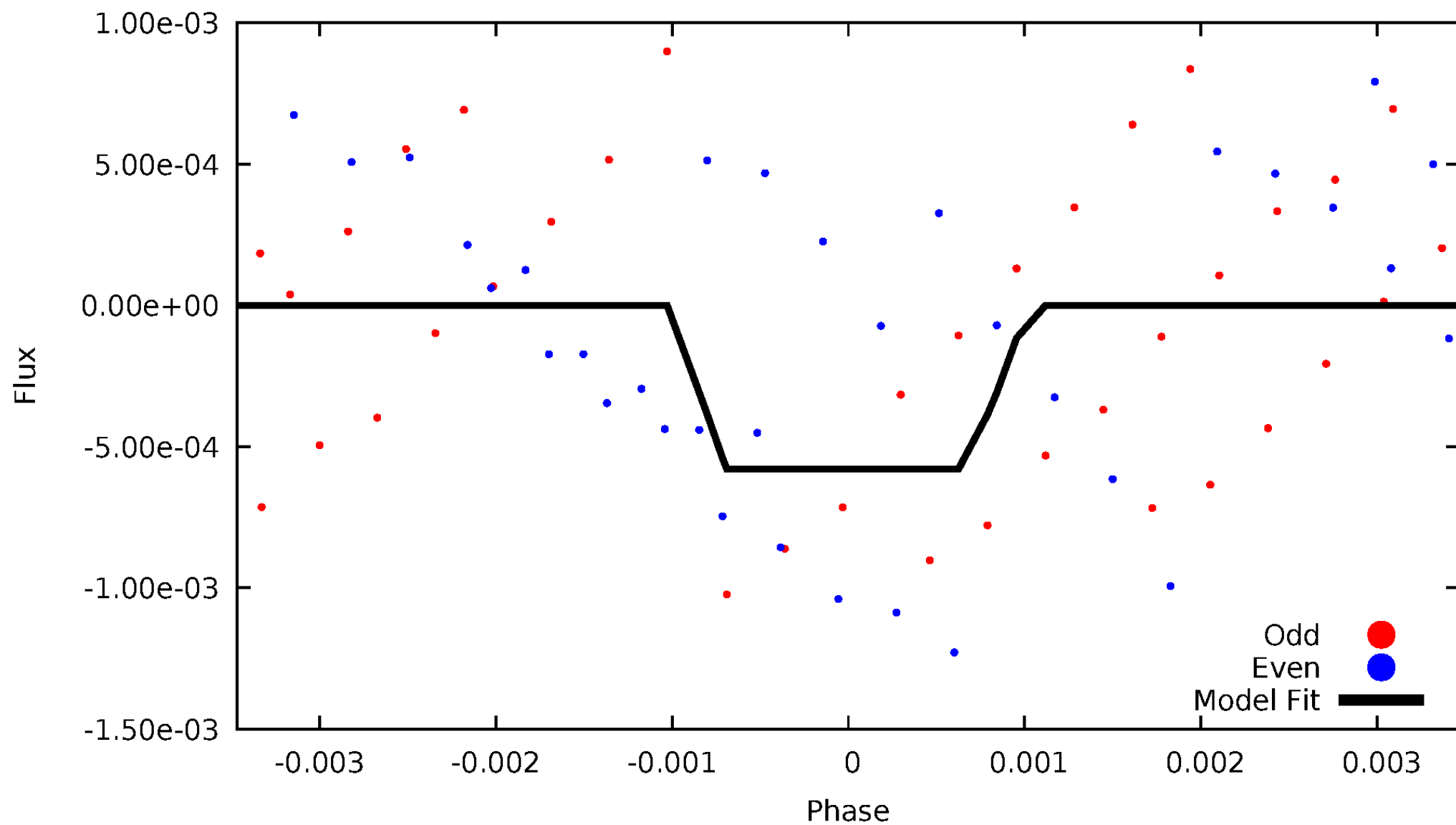
DV Odd/Even

TCE 007523115-03



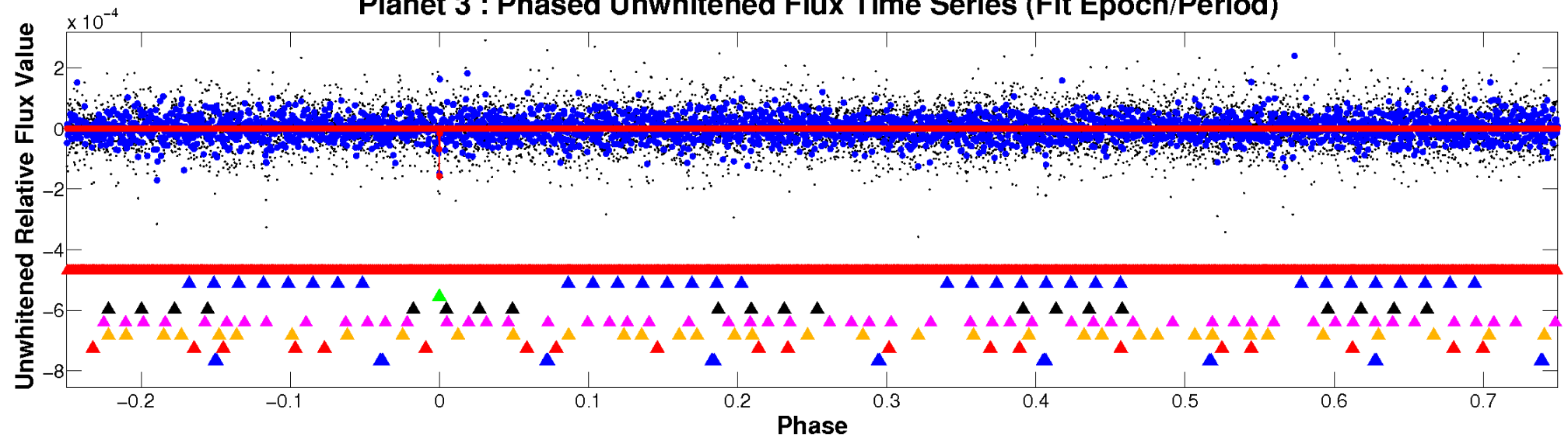
ALT Odd/Even

TCE 007523115-03

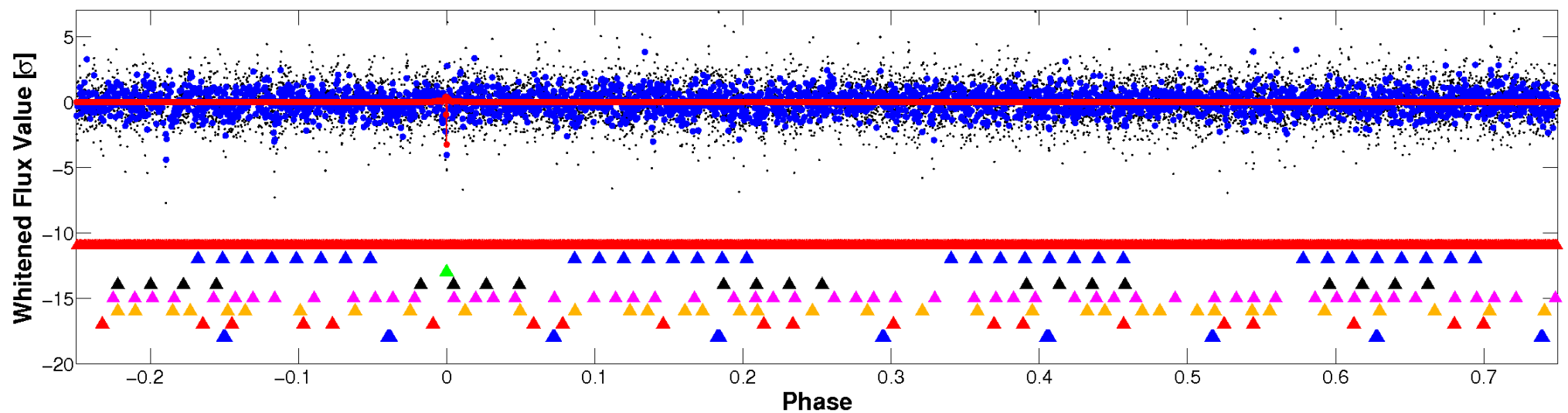


Non-Whitened Vs. Whitened Light Curve

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

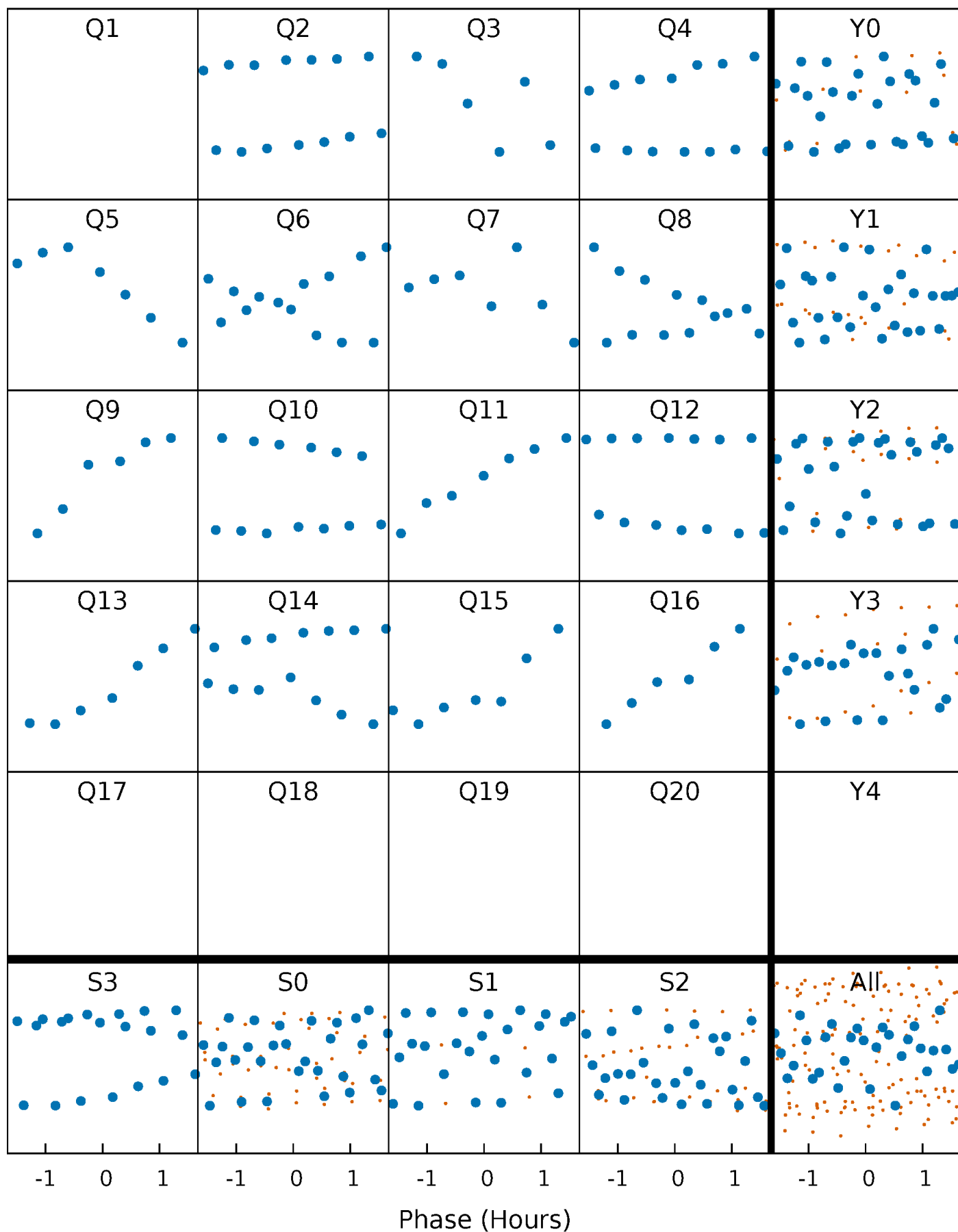


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



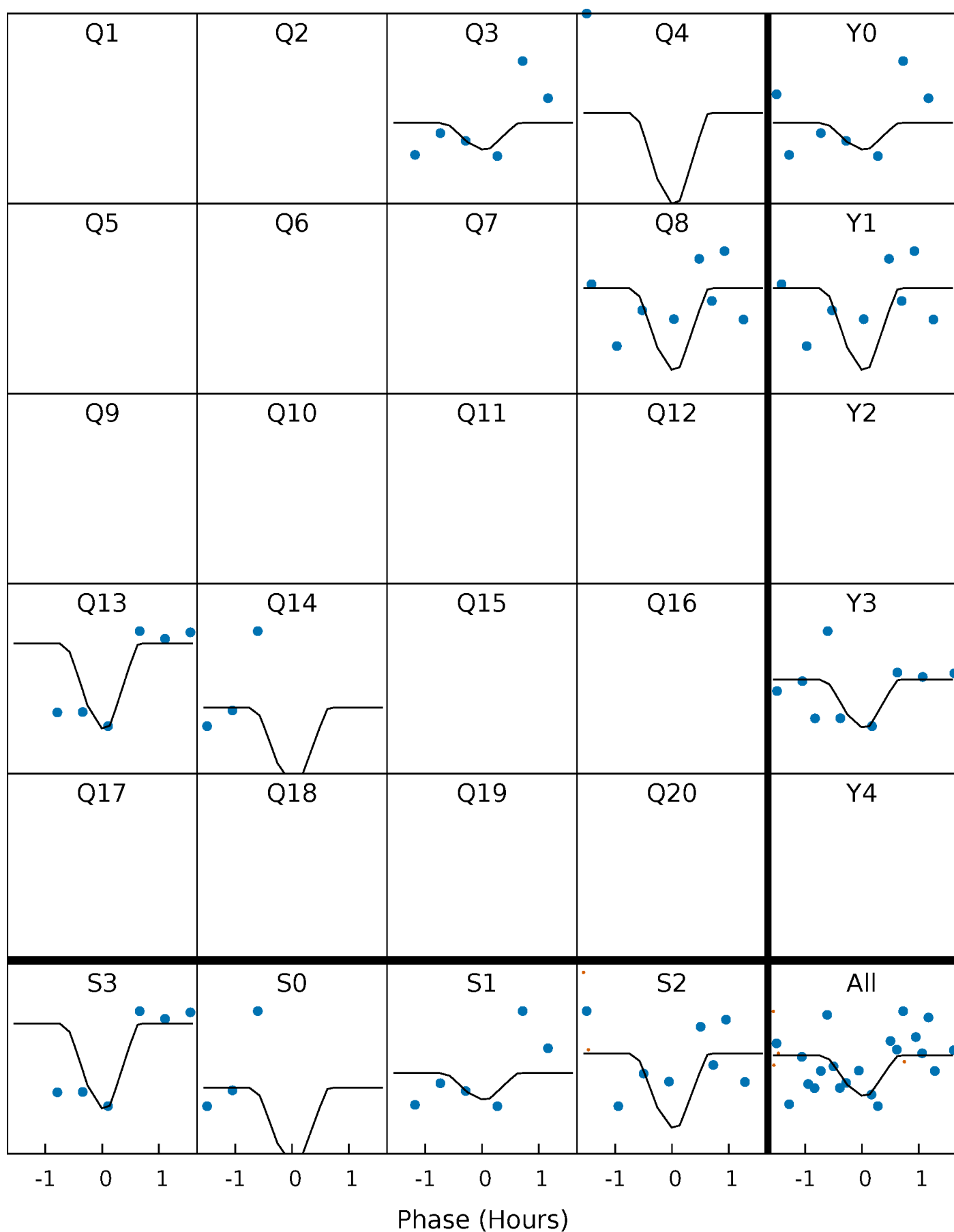
PDC Quarter-Phased Transit Curves

TCE 007523115-03 P= 62.190612 Days $T_0=177.251177$ (BKJD)



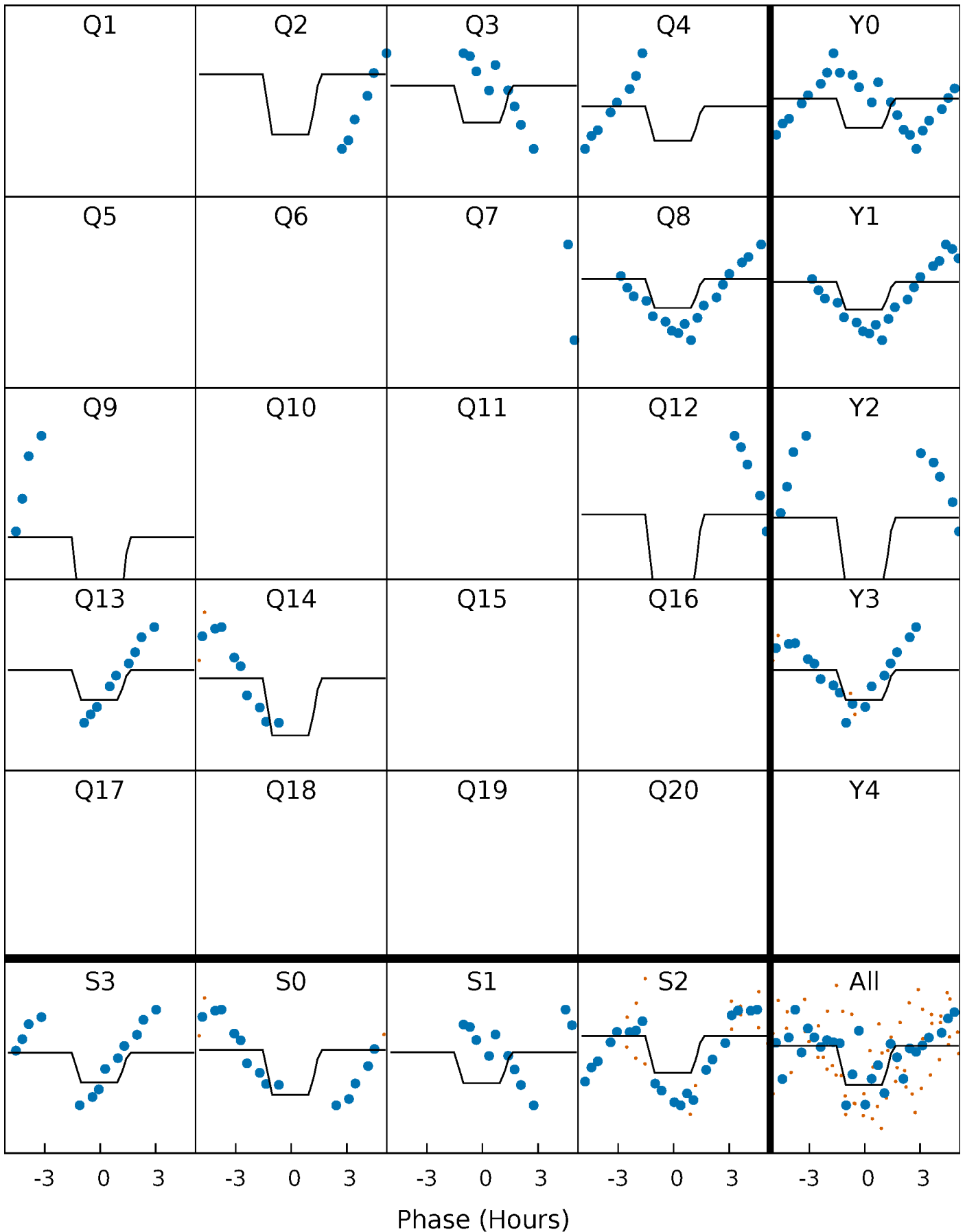
DV Quarter-Phased Transit Curves

TCE 007523115-03 P= 62.190612 Days $T_0=177.251177$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

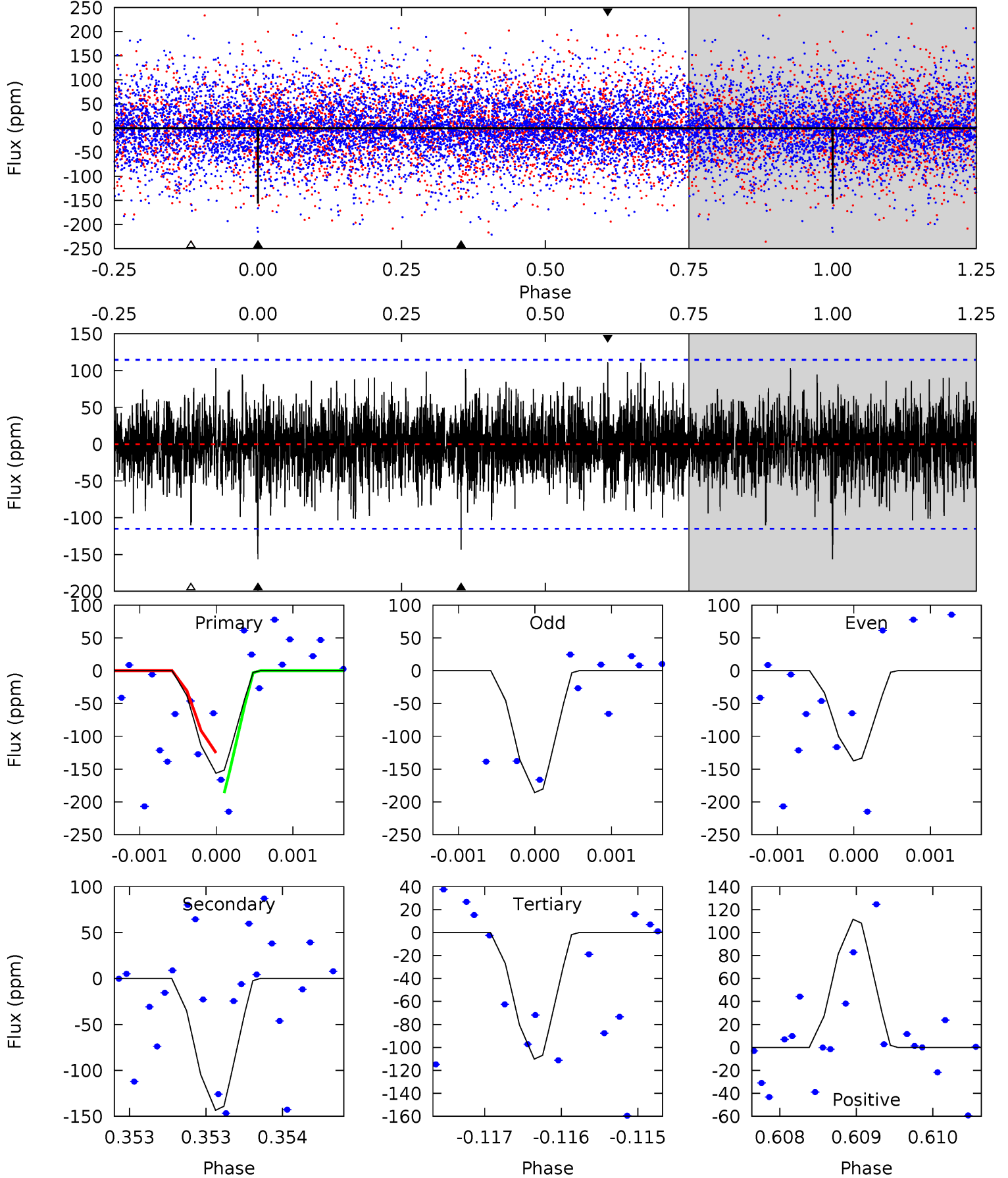
TCE 007523115-03 P= 62.191241 Days $T_0=177.248071$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-03, P = 62.190612 Days, E = 115.060565 Days

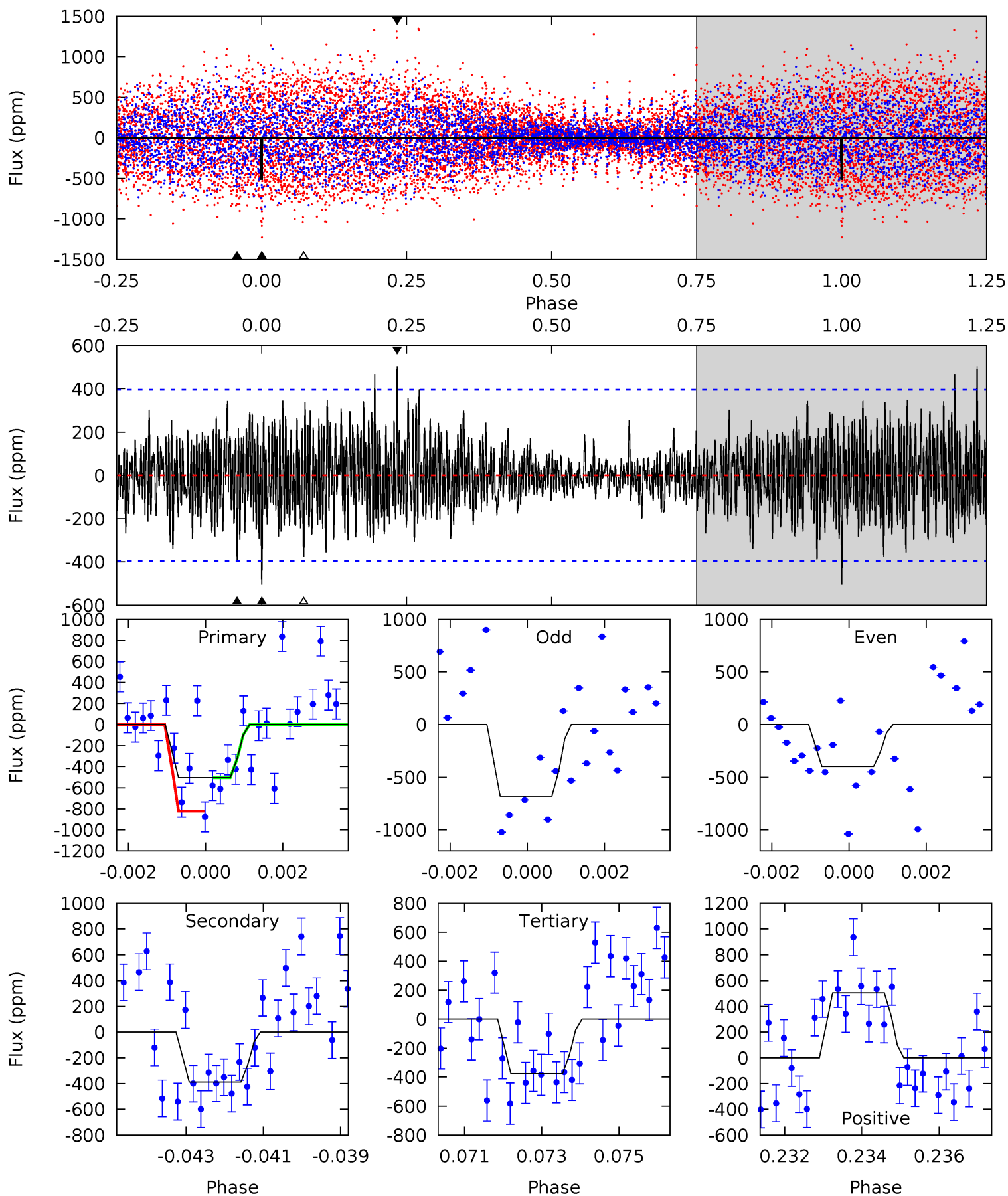
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.45	6.84	5.25	5.32	5.48	3.33	1.48	2.20	2.13	1.58	1.52	1.11	0.81	0.42	1.47



Alt Model-Shift Uniqueness Test

007523115-03, P = 62.191241 Days, E = 115.056830 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.81	5.25	5.08	6.79	5.33	3.10	1.64	1.73	0.01	0.18	-1.54	1.86	0.96	0.50	1.99



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-143 ± 21	$6.39^{+6.80}_{-4.26}$	1438^{+129}_{-164}	6115^{+6505}_{-1659}	293^{+2309}_{-224}
Alt.	-389 ± 74	$8.76^{+7.65}_{-5.77}$	1428^{+118}_{-153}	6678^{+7034}_{-1609}	427^{+3247}_{-316}

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

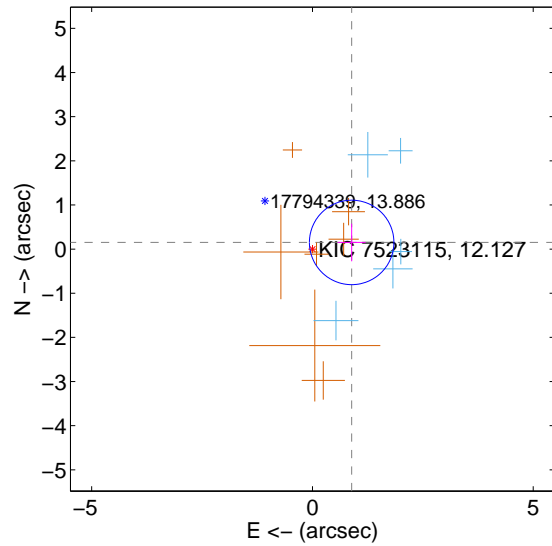
Supplemental centroid analysis for 007523115-03. Kepler magnitude: 12.13. Transit SNR 6.36

There are 5 quarters with good PRF difference image offsets

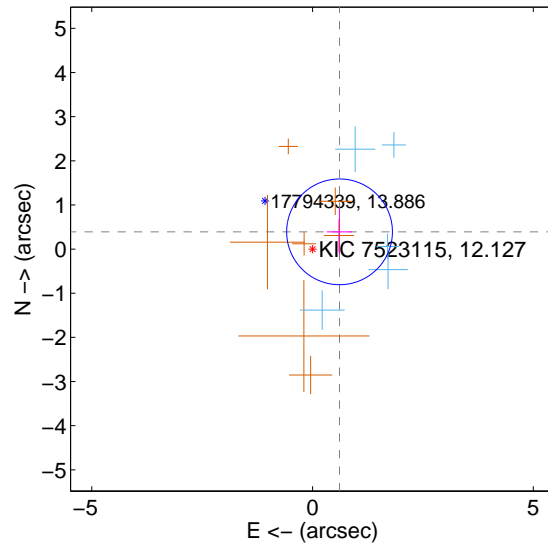
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.901 ± 0.319	2.83	-0.888 ± 0.315	0.151 ± 0.427
PRF-fit source offset from KIC position	0.726 ± 0.399	1.82	-0.612 ± 0.288	0.391 ± 0.516
photometric centroid source offset	1.43 ± 1.05	1.36	0.19 ± 1.09	1.42 ± 1.05

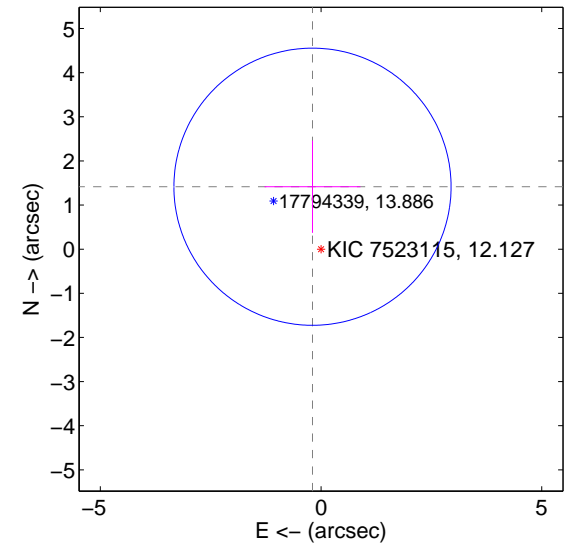
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

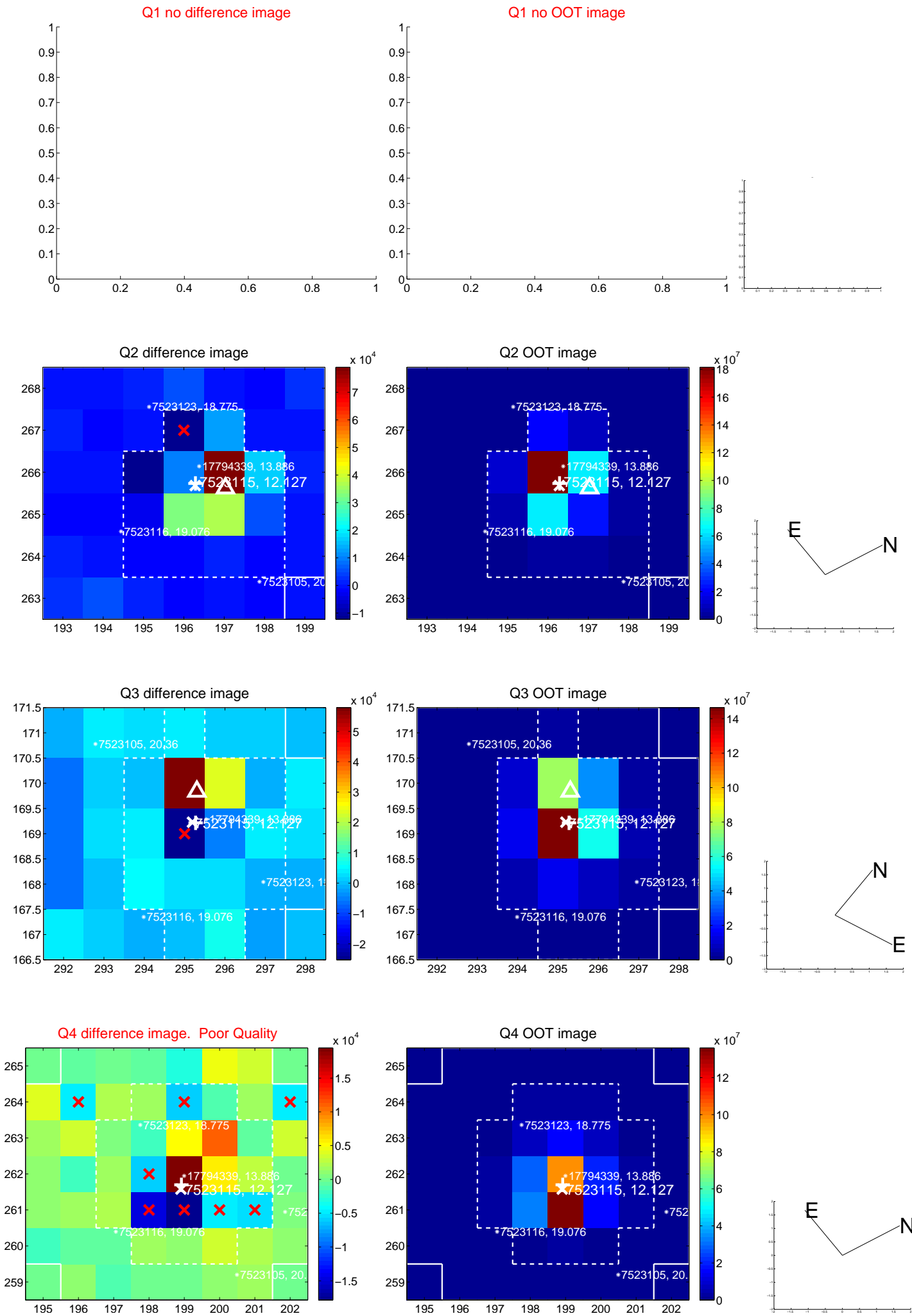


offset from photometric centroids

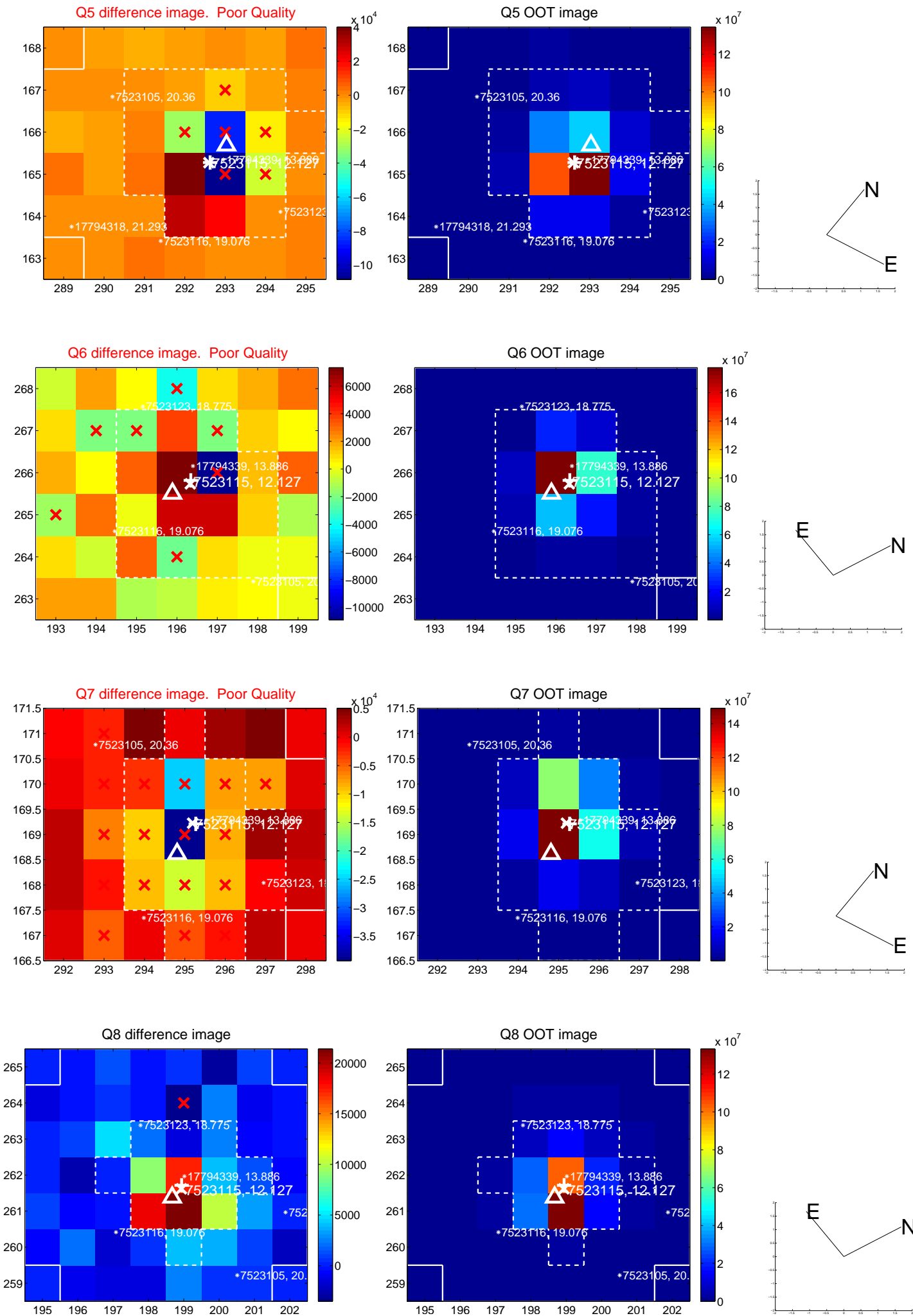


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

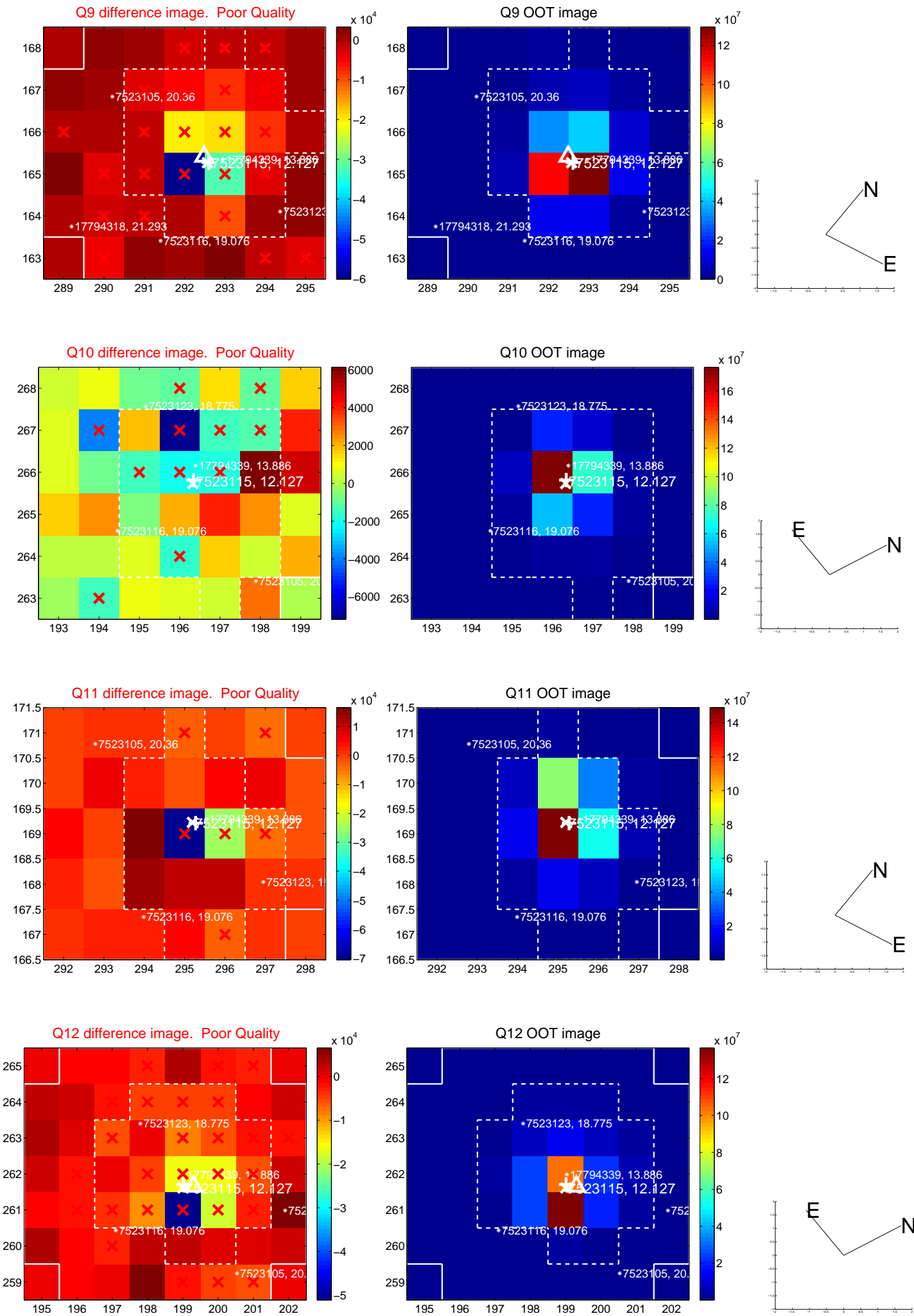
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



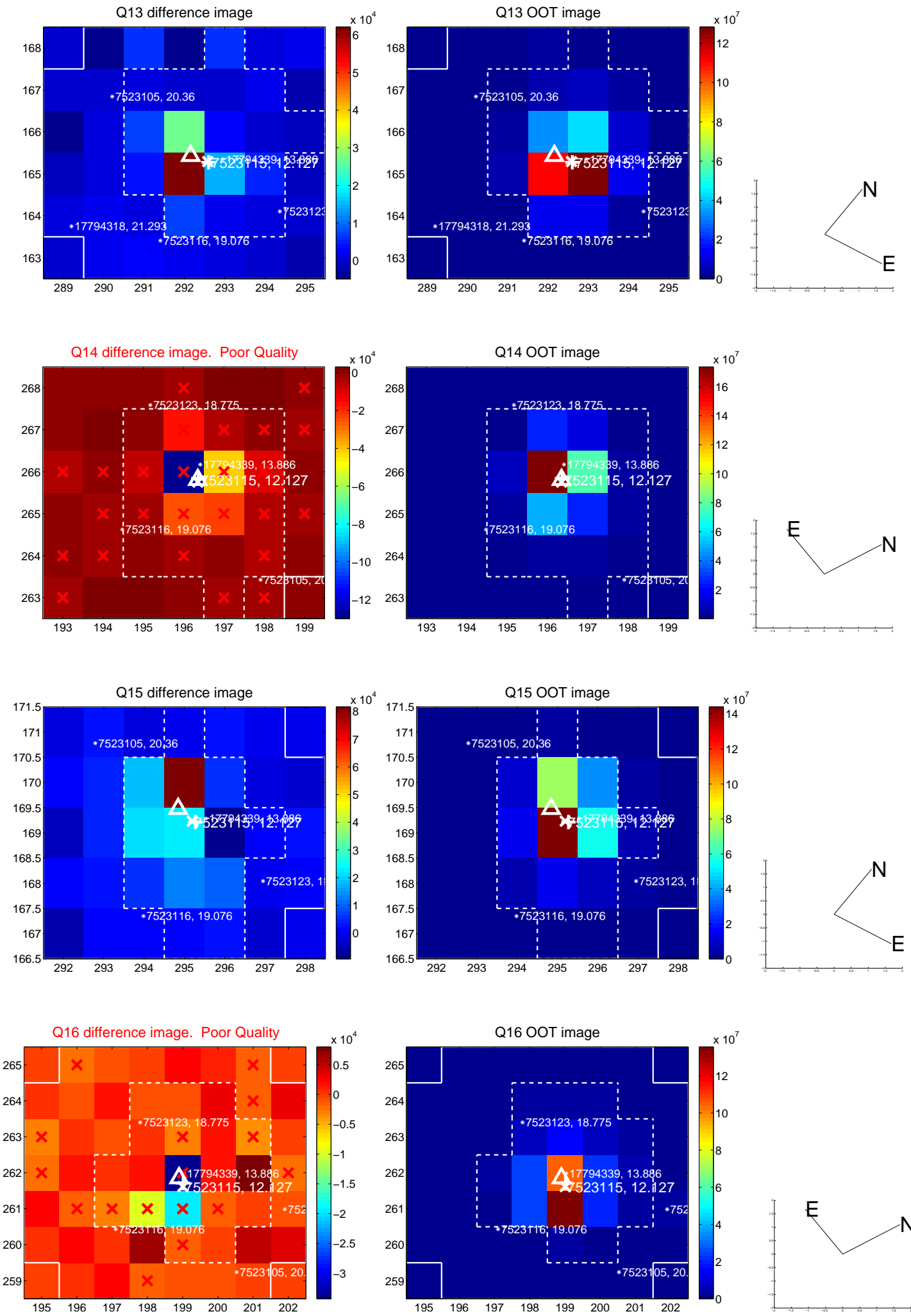
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



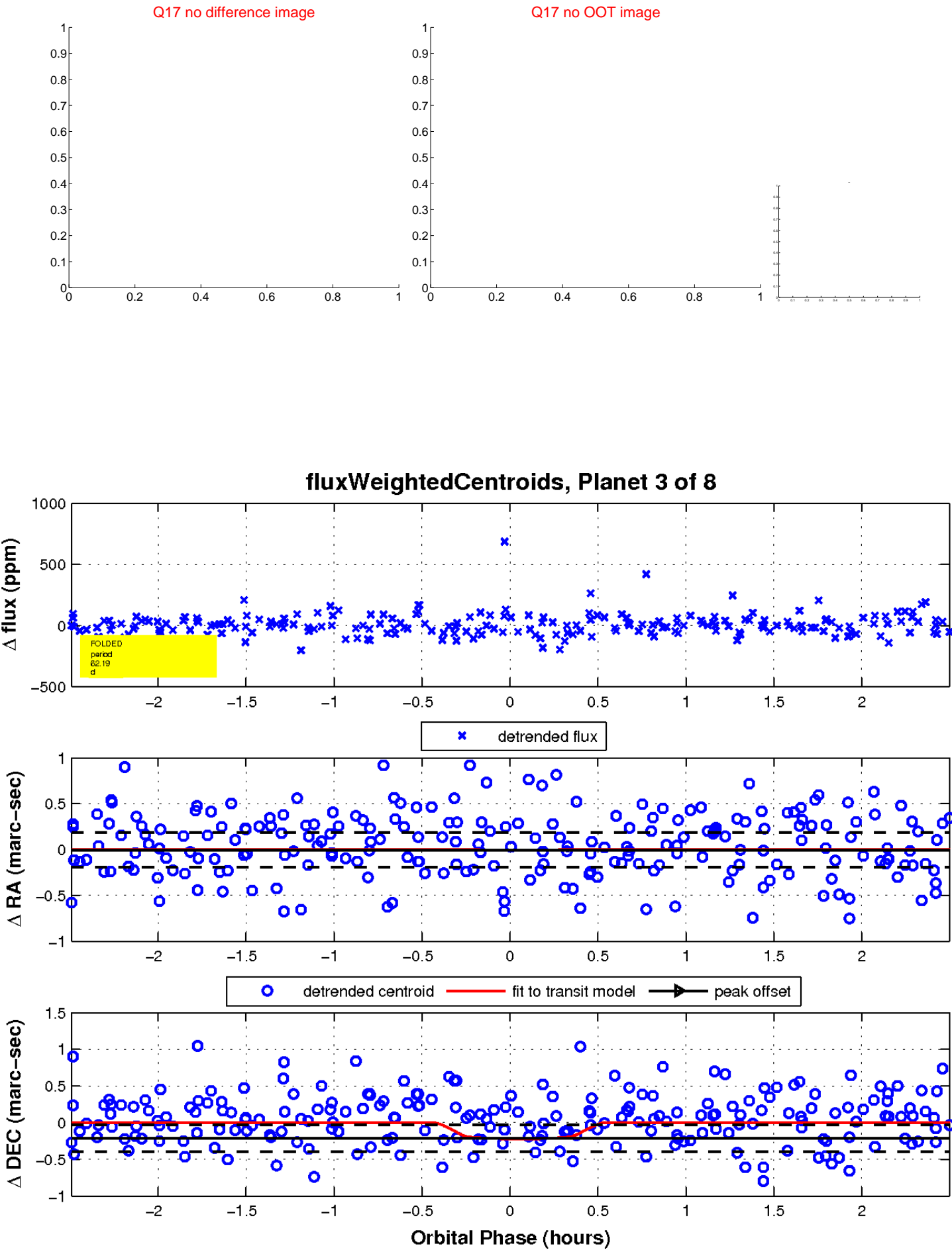
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

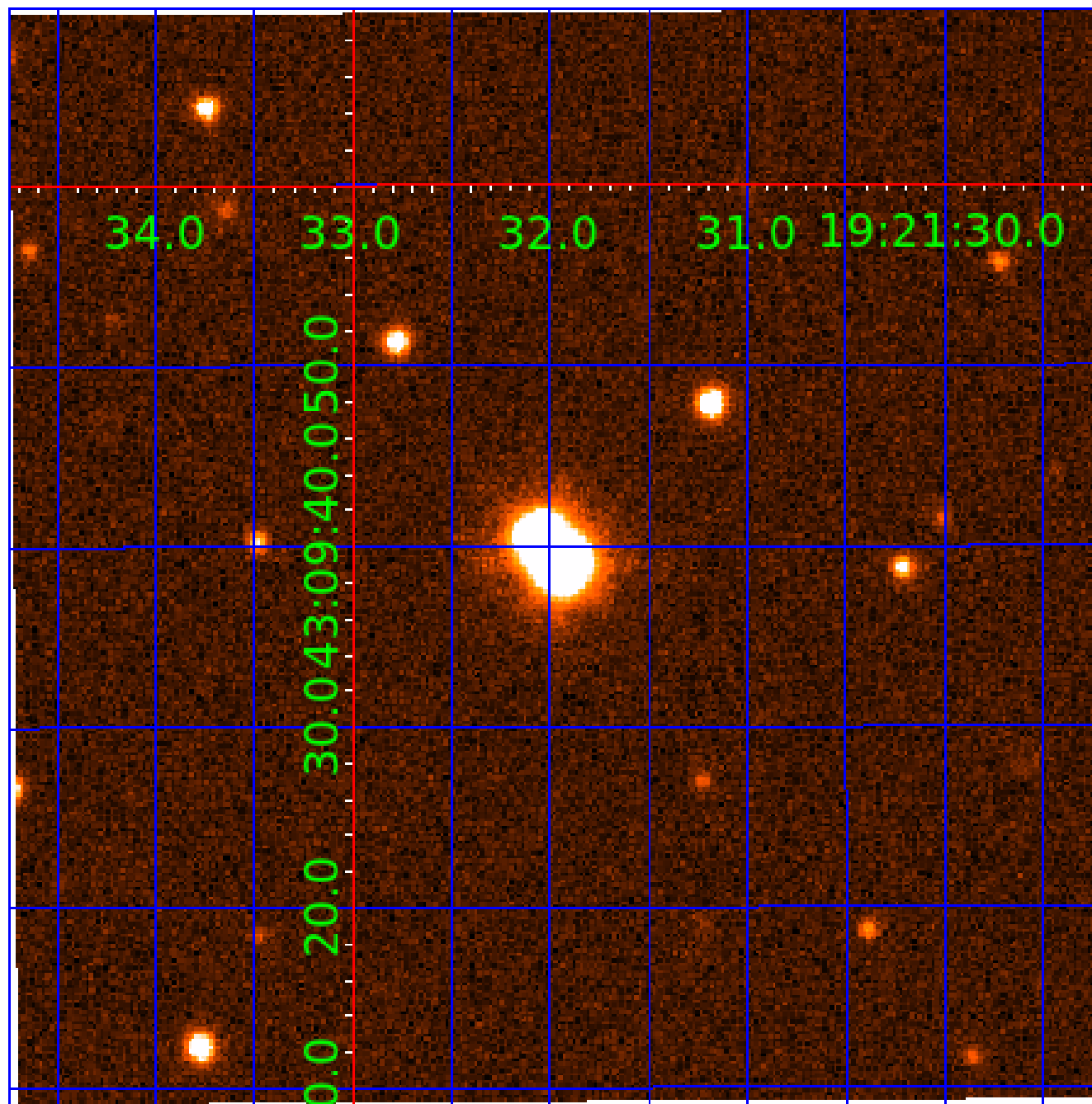


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

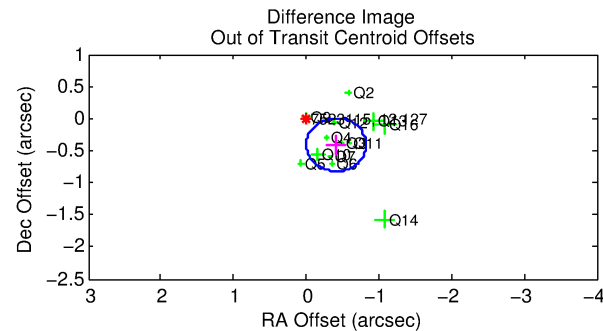
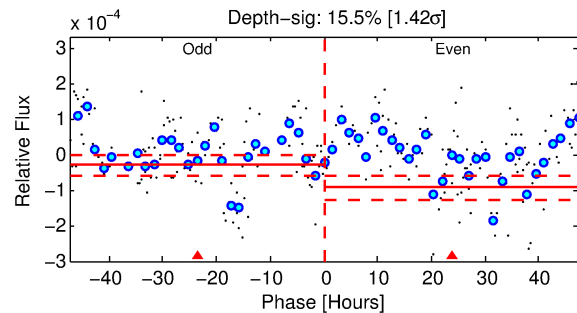
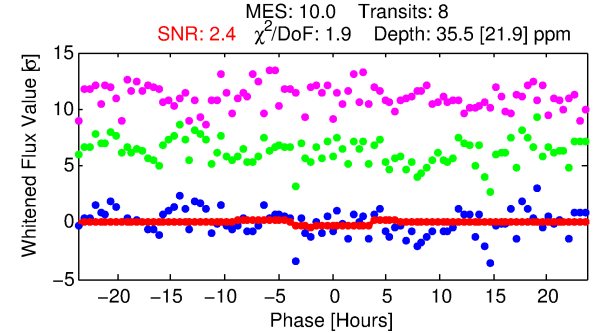
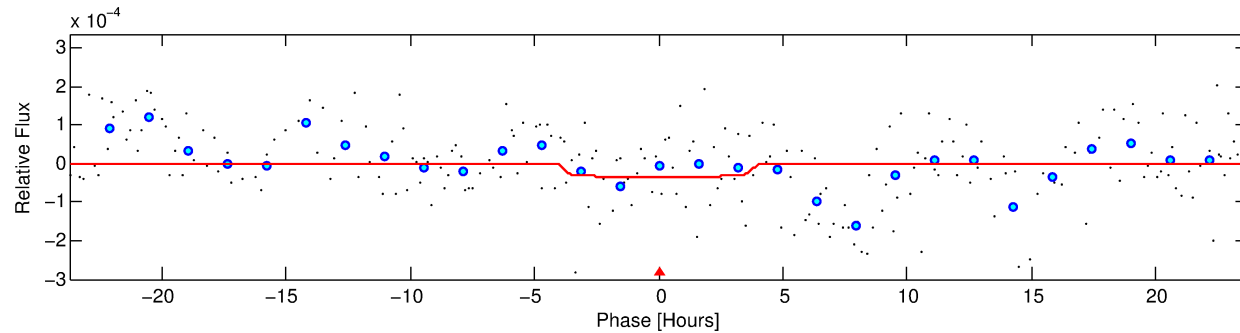
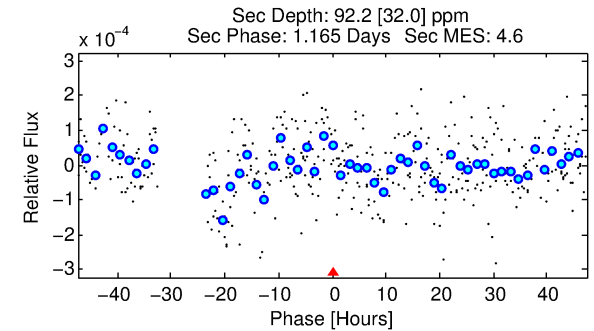
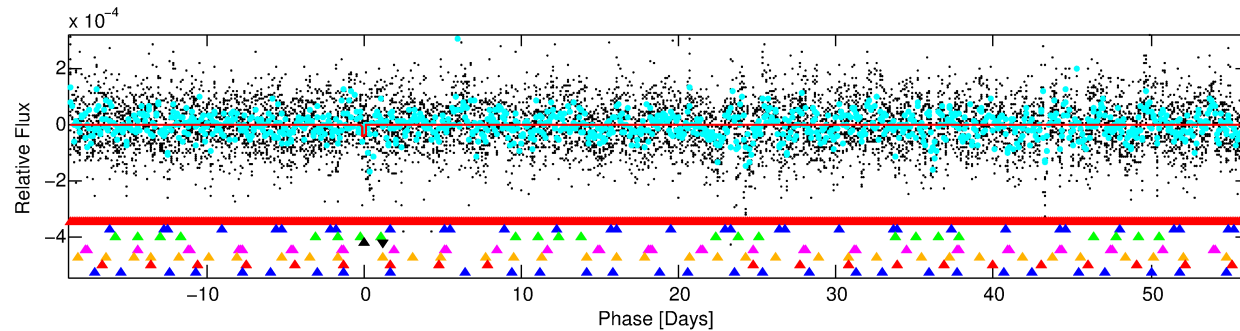
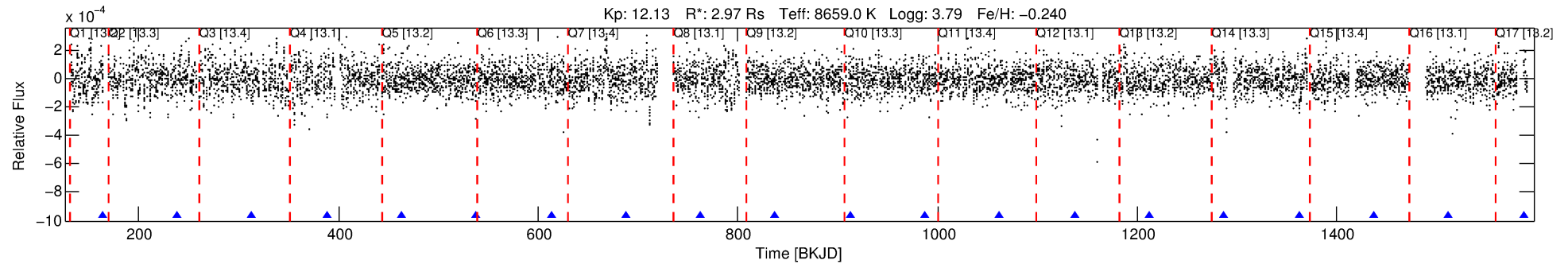
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-04

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 4 of 8 Period: 74.904 d



DV Fit Results:

Period = 74.90423 [0.00519] d
Epoch = 163.4535 [0.0510] BKJD
Rp/R* = 0.0063 [0.0058]
a/R* = 33.07 [191.04]
b = 0.90 [1.26]
Seff = 232.39 [164.30]
Teq = 996 [176] K
Rp = 2.04 [2.08] Re
a = 0.4377 [0.1856] AU
Ag = 2323.28 [4643.97] [0.50σ]
Teffp = 10687 [5038] K [1.92σ]

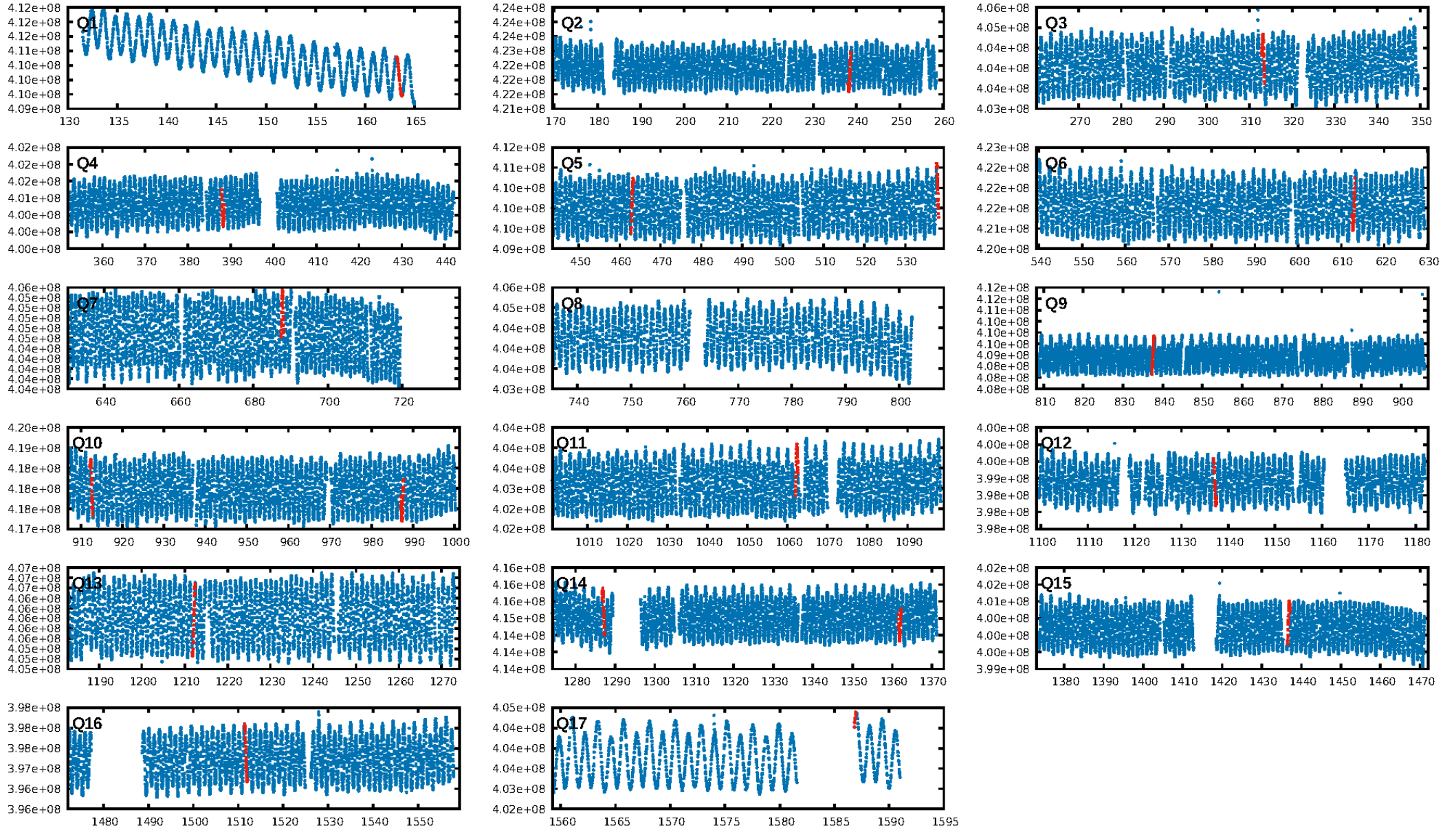
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.20e-15
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.115
Centroid-sig: 24.7%
Centroid-so: 1.820 arcsec [0.80σ]
OotOffset-rm: 0.580 arcsec [4.23σ]
KicOffset-rm: 0.275 arcsec [2.01σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 0.00 [0/14]

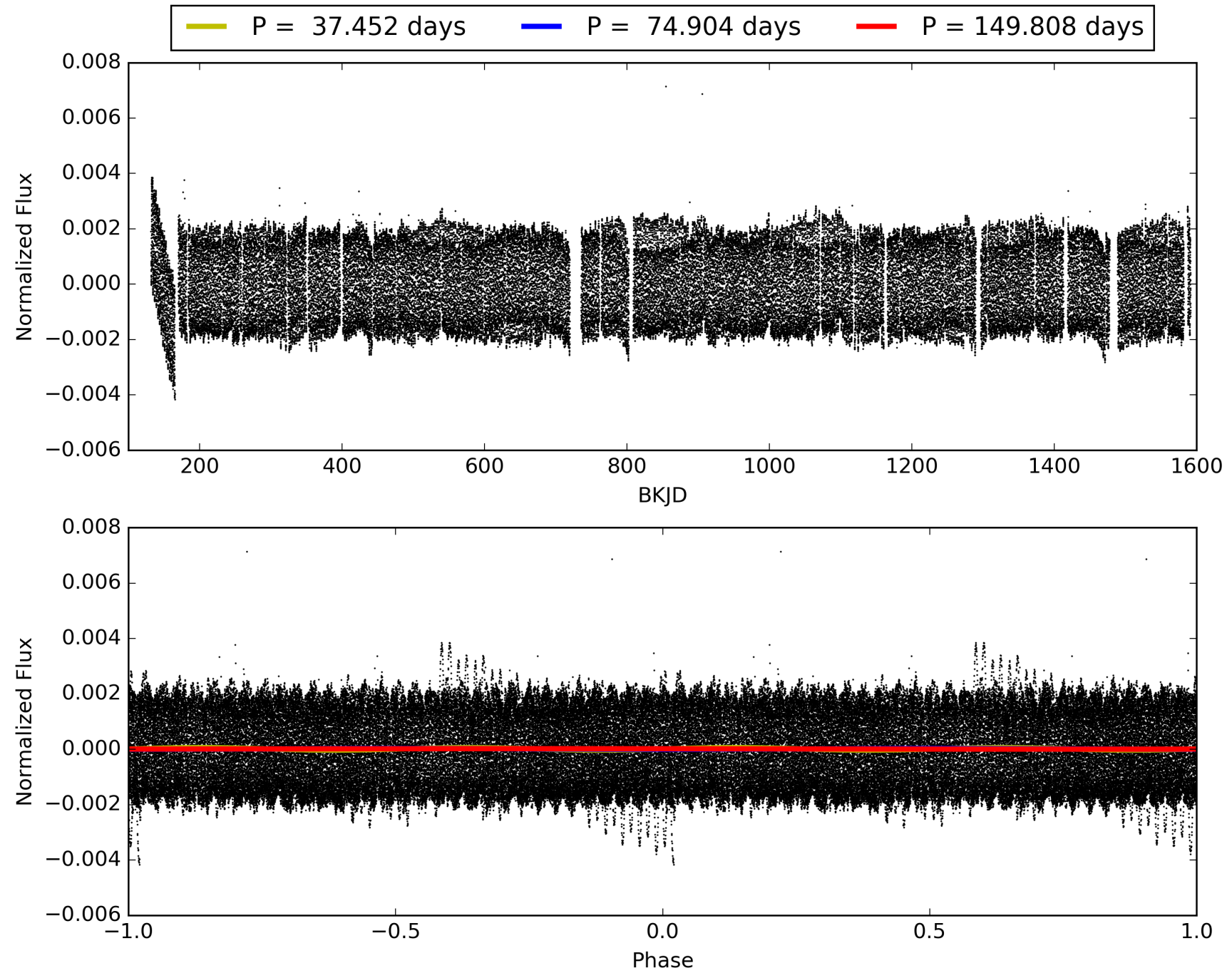
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:21 Z

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

TCE 007523115-04, PDC Light Curves

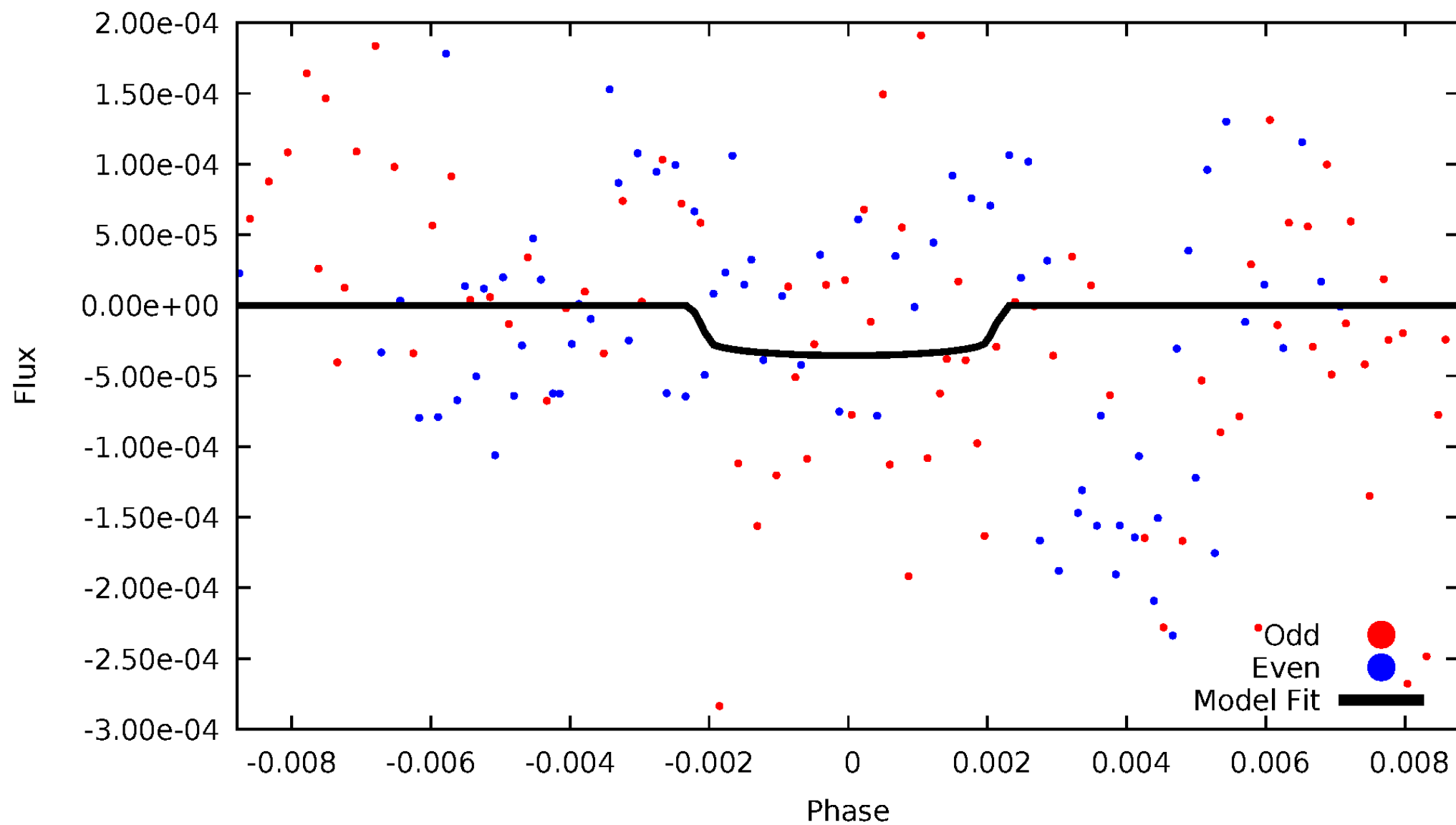


TCE 007523115-04



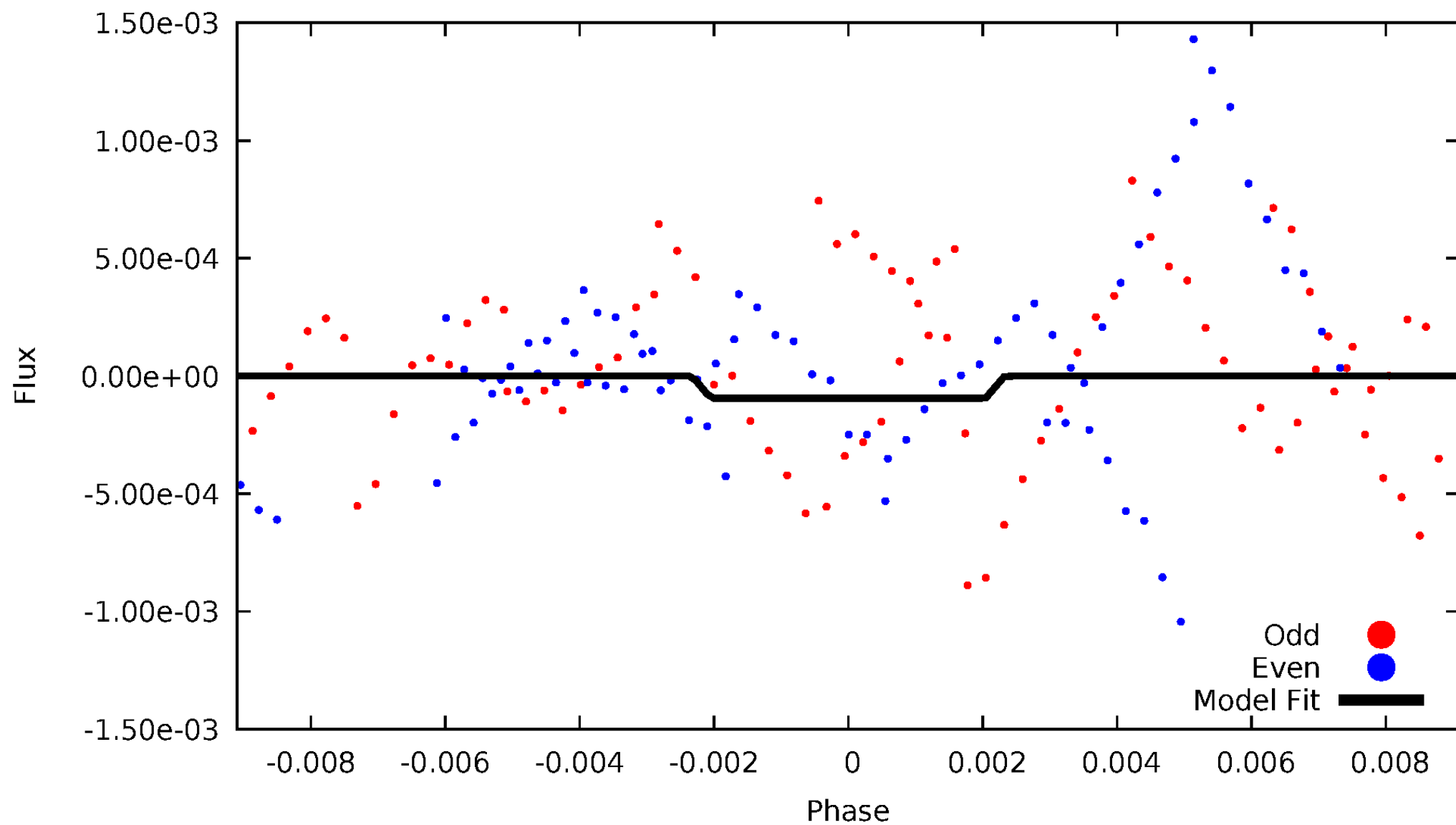
DV Odd/Even

TCE 007523115-04



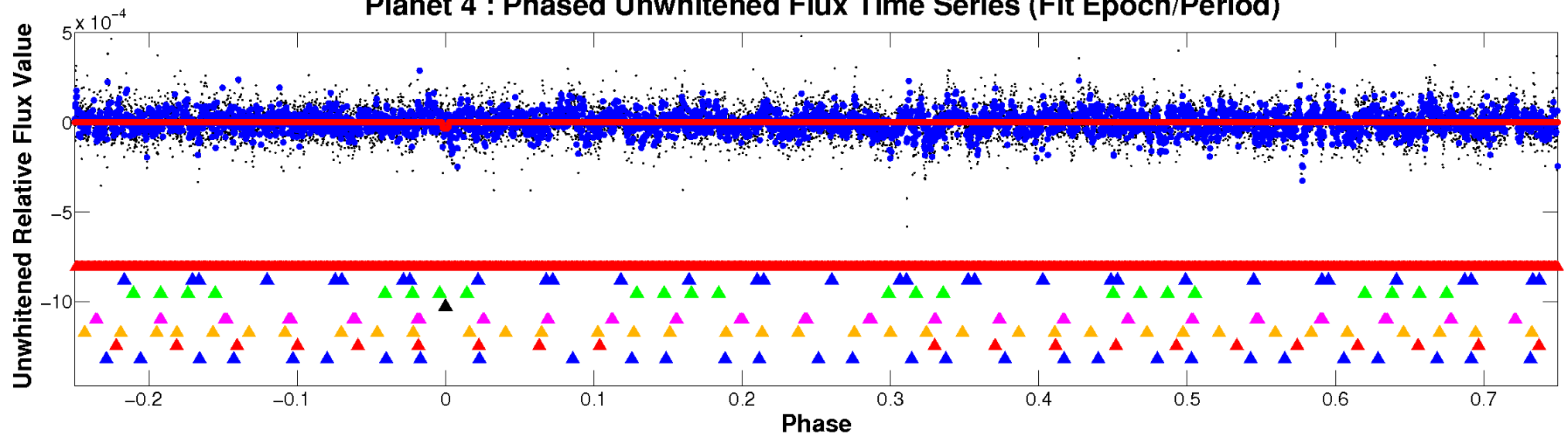
ALT Odd/Even

TCE 007523115-04

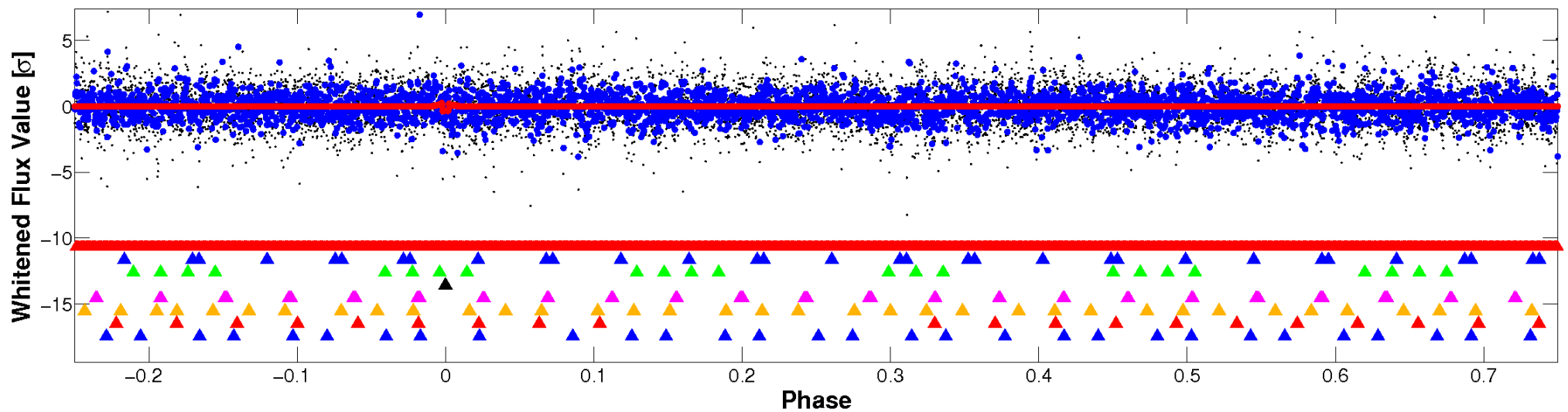


Non-Whitened Vs. Whitened Light Curve

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

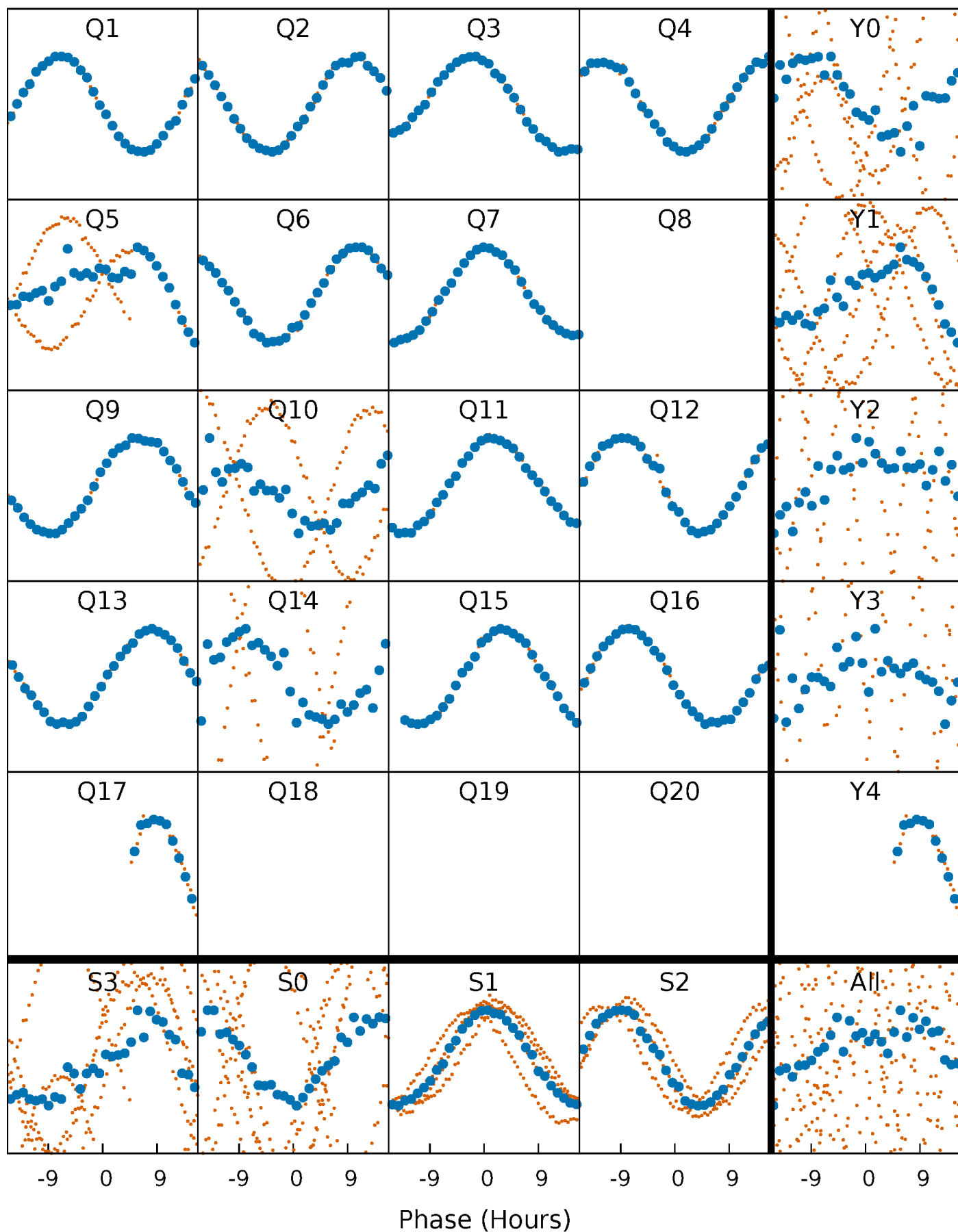


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



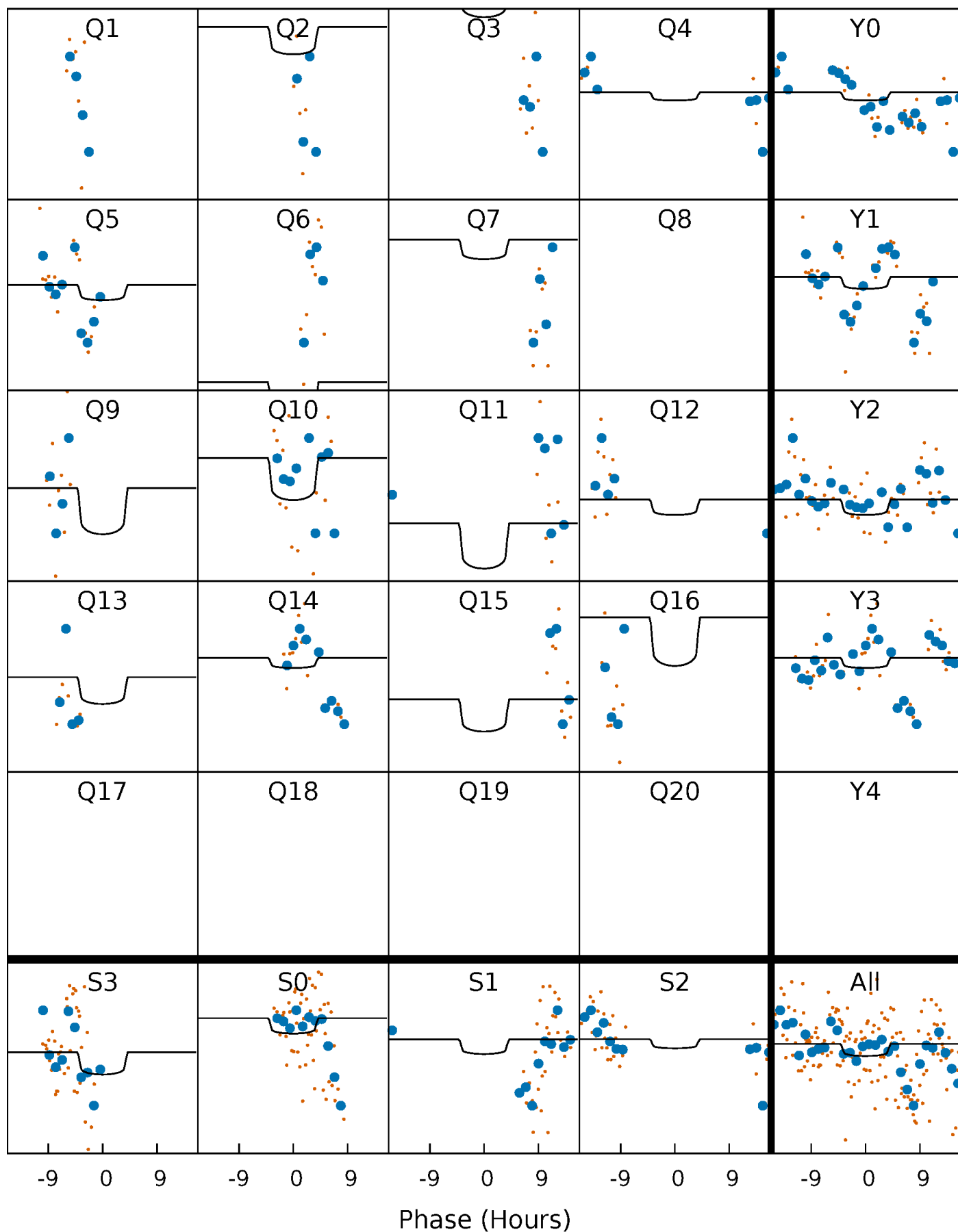
PDC Quarter-Phased Transit Curves

TCE 007523115-04 P= 74.904229 Days $T_0=163.453465$ (BKJD)



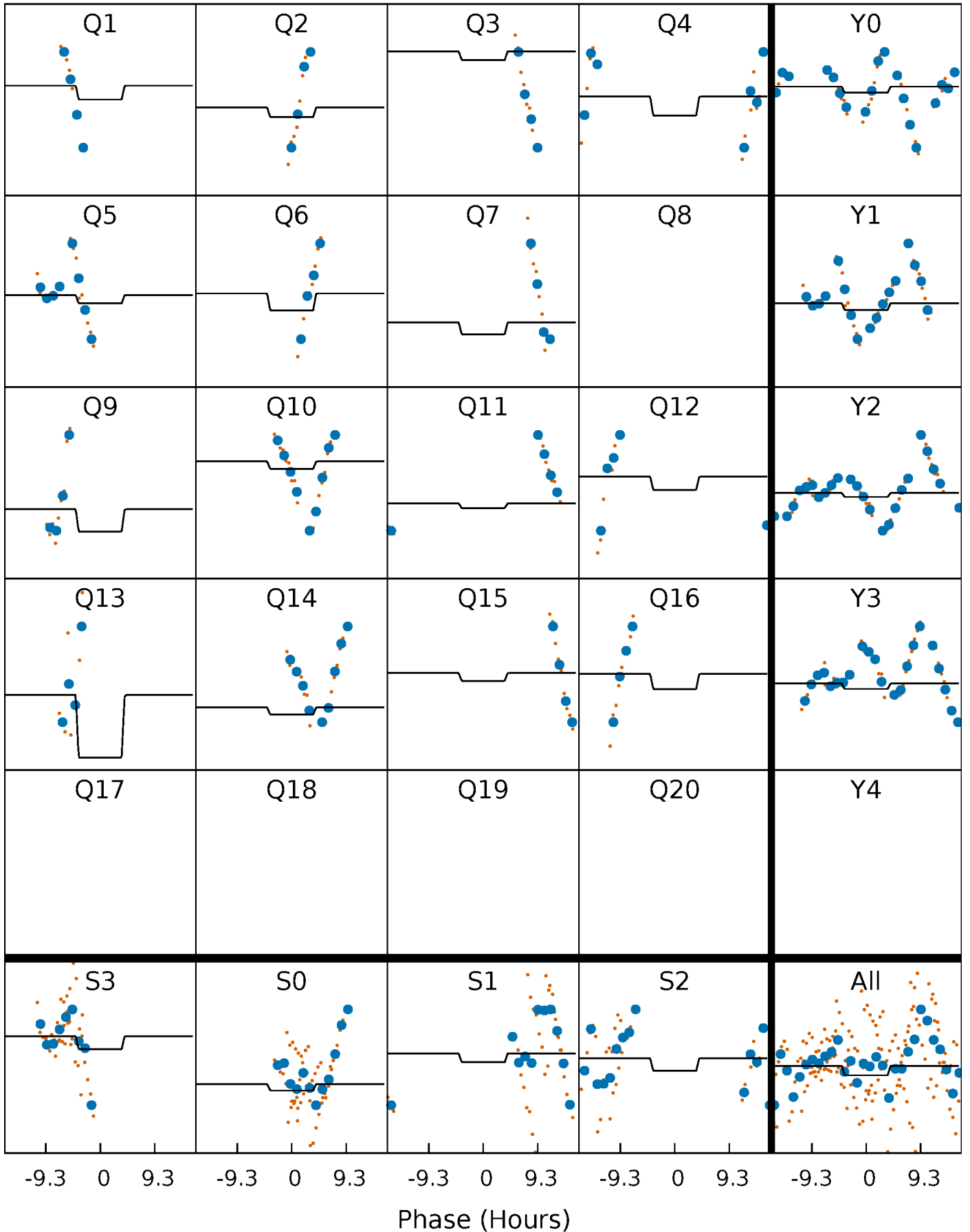
DV Quarter-Phased Transit Curves

TCE 007523115-04 P= 74.904229 Days $T_0=163.453465$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

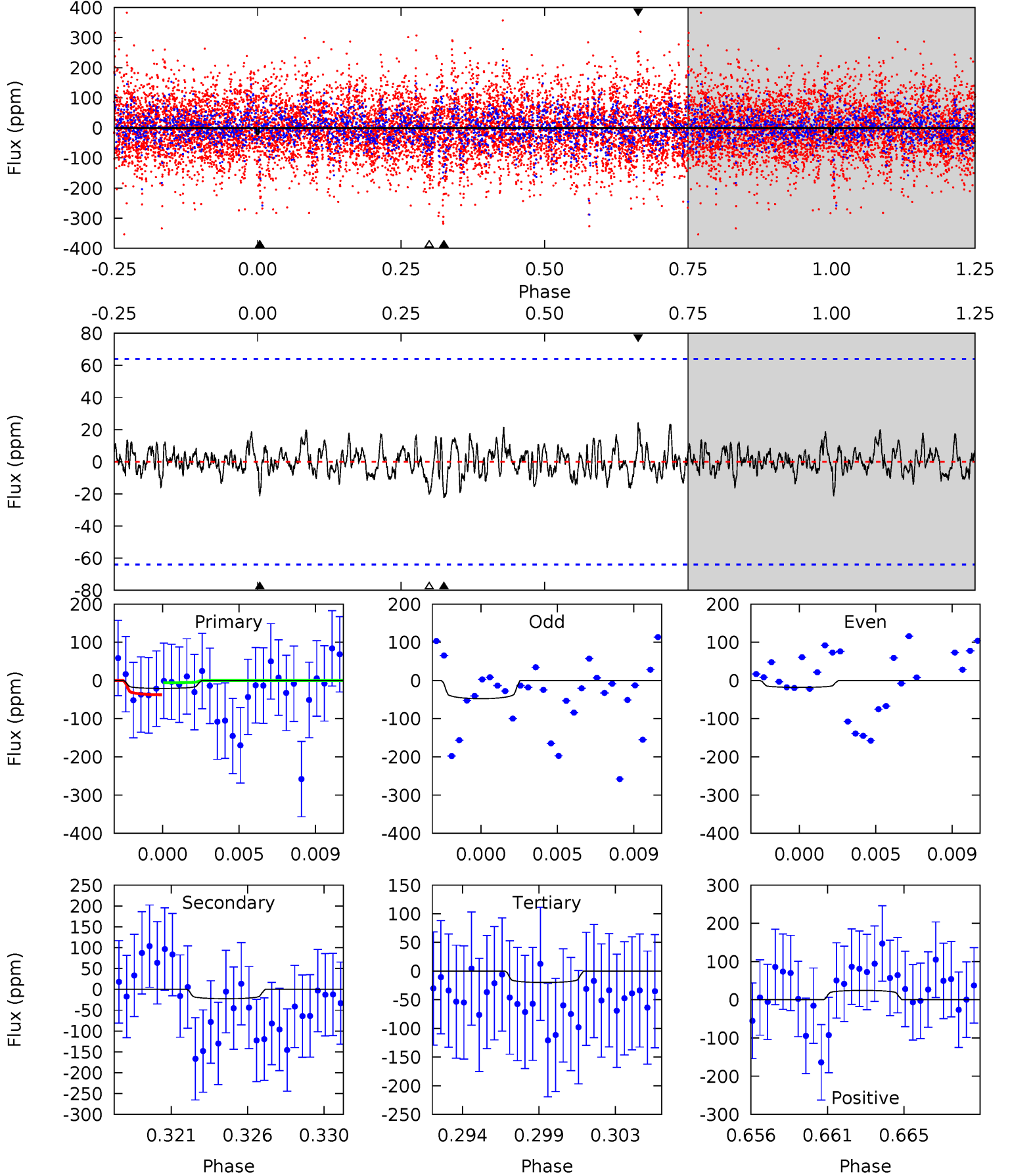
TCE 007523115-04 $P = 74.899958$ Days $T_0 = 163.485881$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-04, P = 74.904229 Days, E = 88.549236 Days

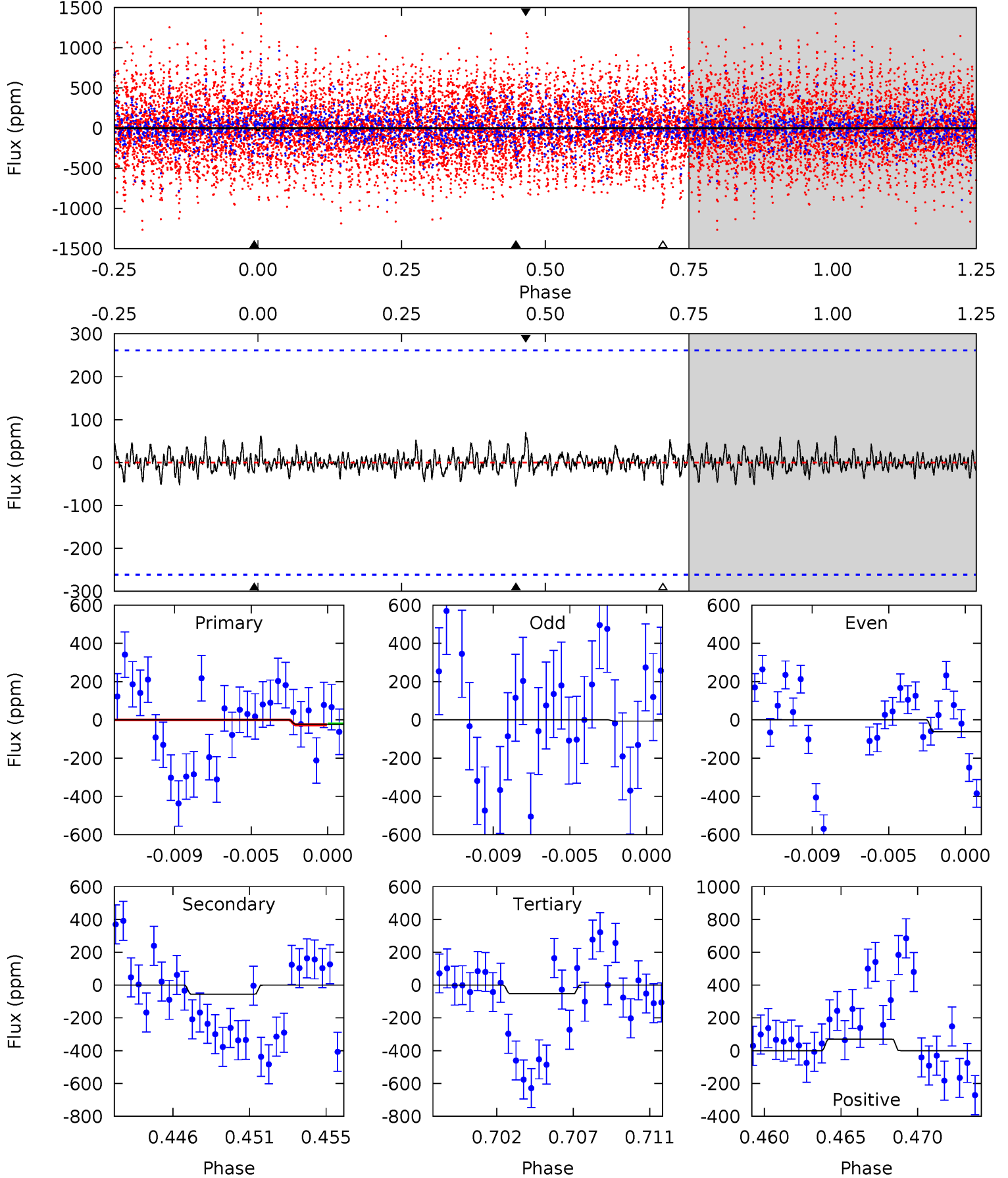
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.69	1.82	1.61	1.98	5.18	2.84	0.59	0.07	-0.29	0.21	-0.16	1.16	1.52	0.52	1.29



Alt Model-Shift Uniqueness Test

007523115-04, P = 74.899958 Days, E = 88.585923 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.45	1.09	1.04	1.38	5.17	2.82	0.35	-0.59	-0.93	0.04	-0.29	0.54	2.36	0.56	0.05



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 12	$2.25^{+1.61}_{-1.44}$	1347^{+120}_{-163}	6364^{+6329}_{-1688}	419^{+2918}_{-309}
Alt.	-55 ± 51	$3.08^{+1.99}_{-1.69}$	1352^{+113}_{-151}	6841^{+4479}_{-2846}	534^{+2170}_{-489}

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

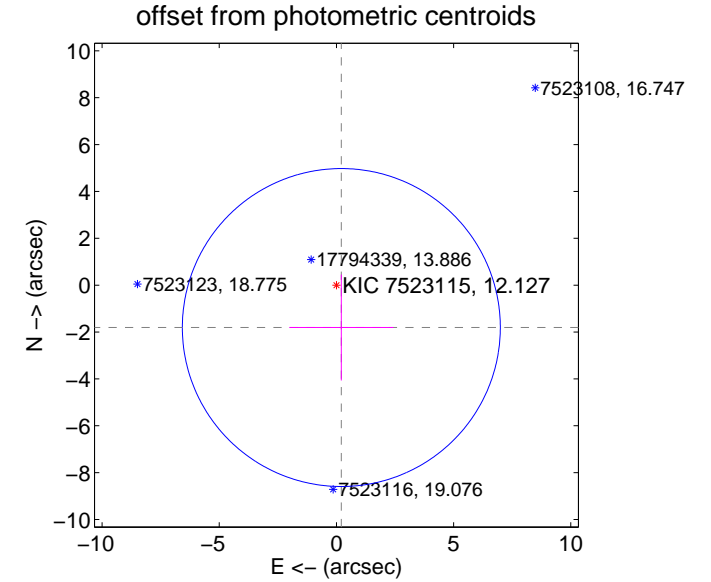
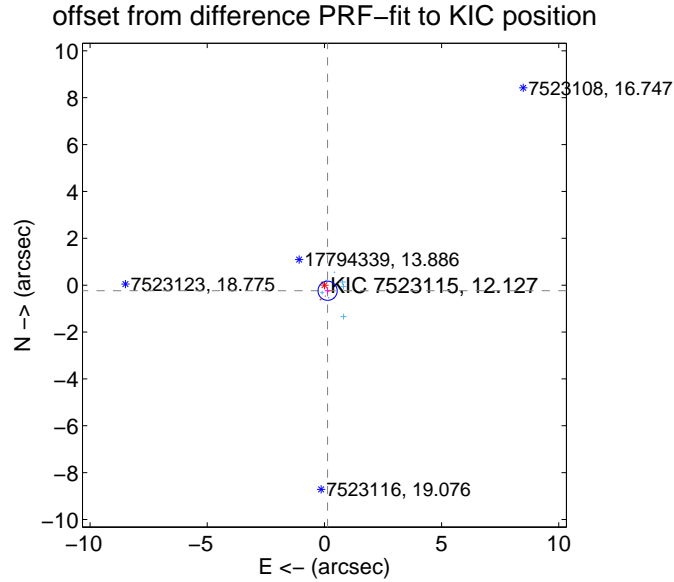
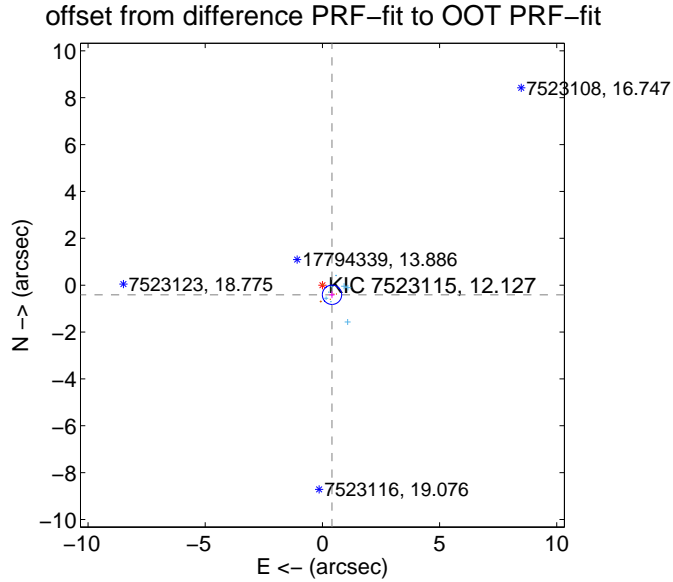
DV Centroid Data

Supplemental centroid analysis for 007523115-04. Kepler magnitude: 12.13. Transit SNR 2.41

There are 8 quarters with good PRF difference image offsets

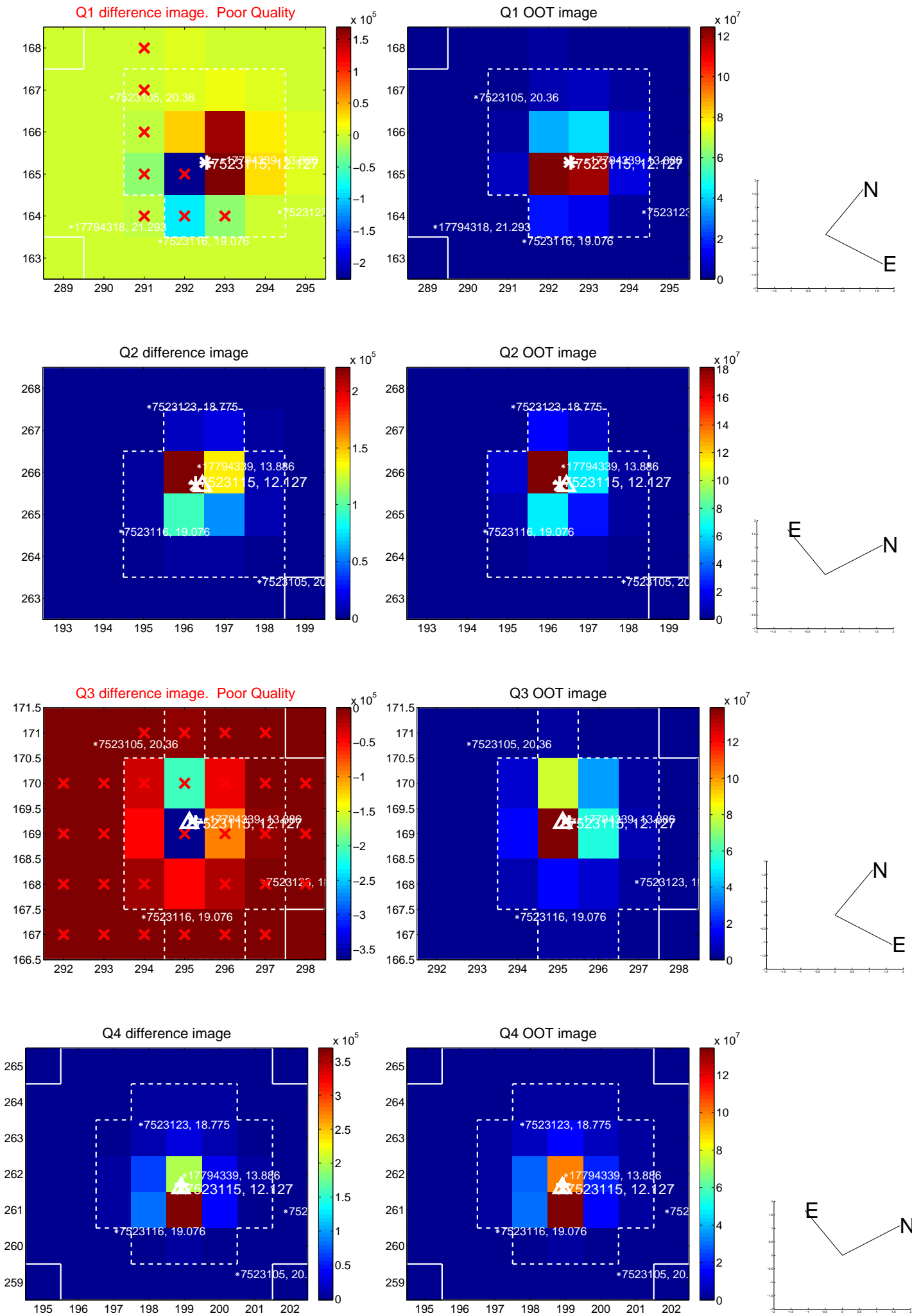
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.580 ± 0.137	4.23	-0.410 ± 0.117	-0.411 ± 0.142
PRF-fit source offset from KIC position	0.275 ± 0.136	2.01	-0.136 ± 0.120	-0.239 ± 0.141
photometric centroid source offset	1.82 ± 2.26	0.80	-0.21 ± 2.22	-1.81 ± 2.26

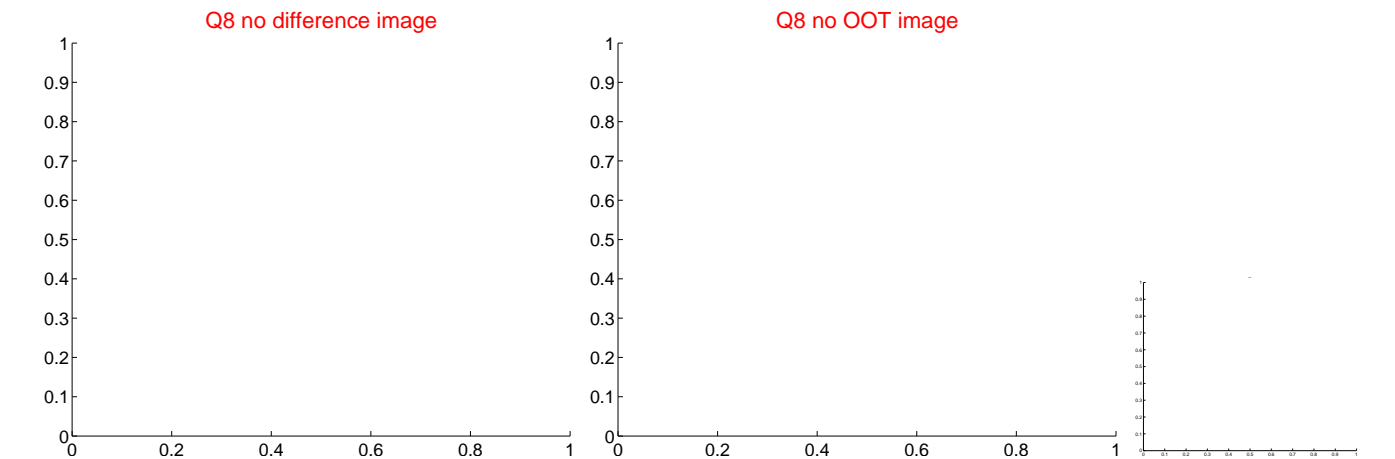
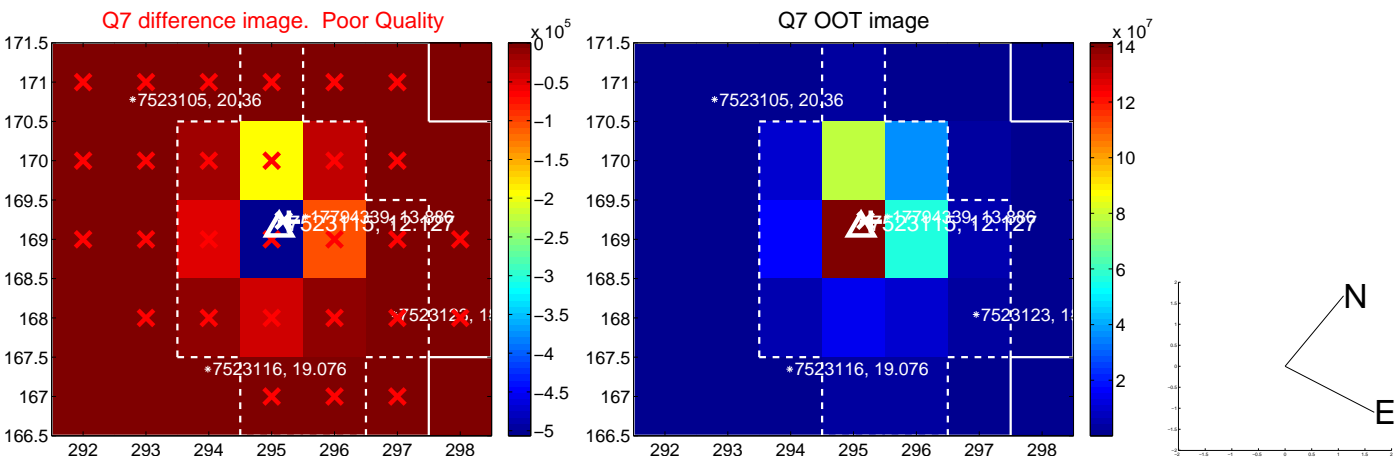
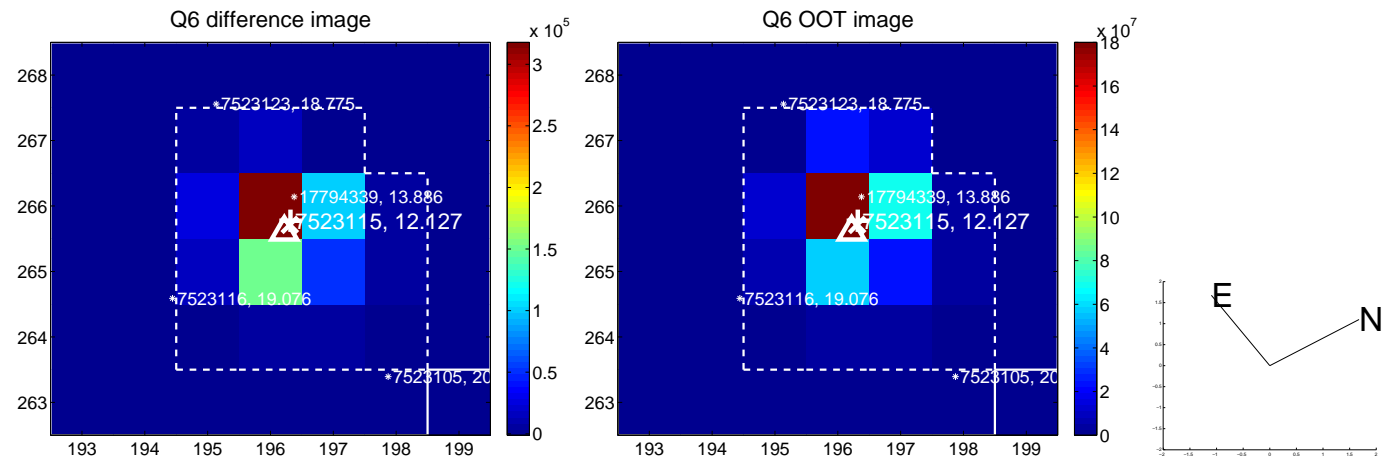
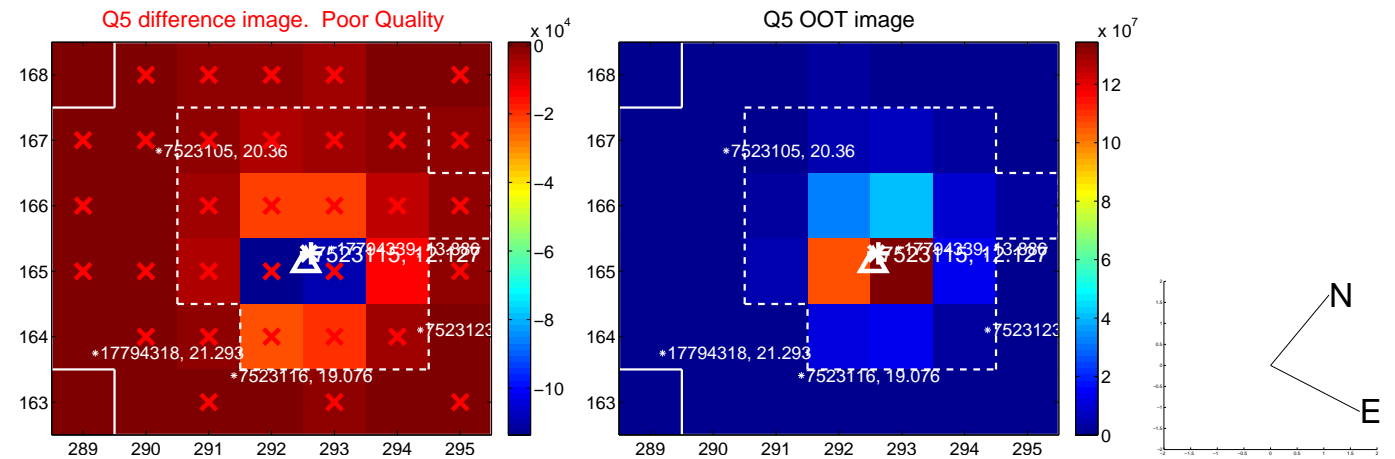


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

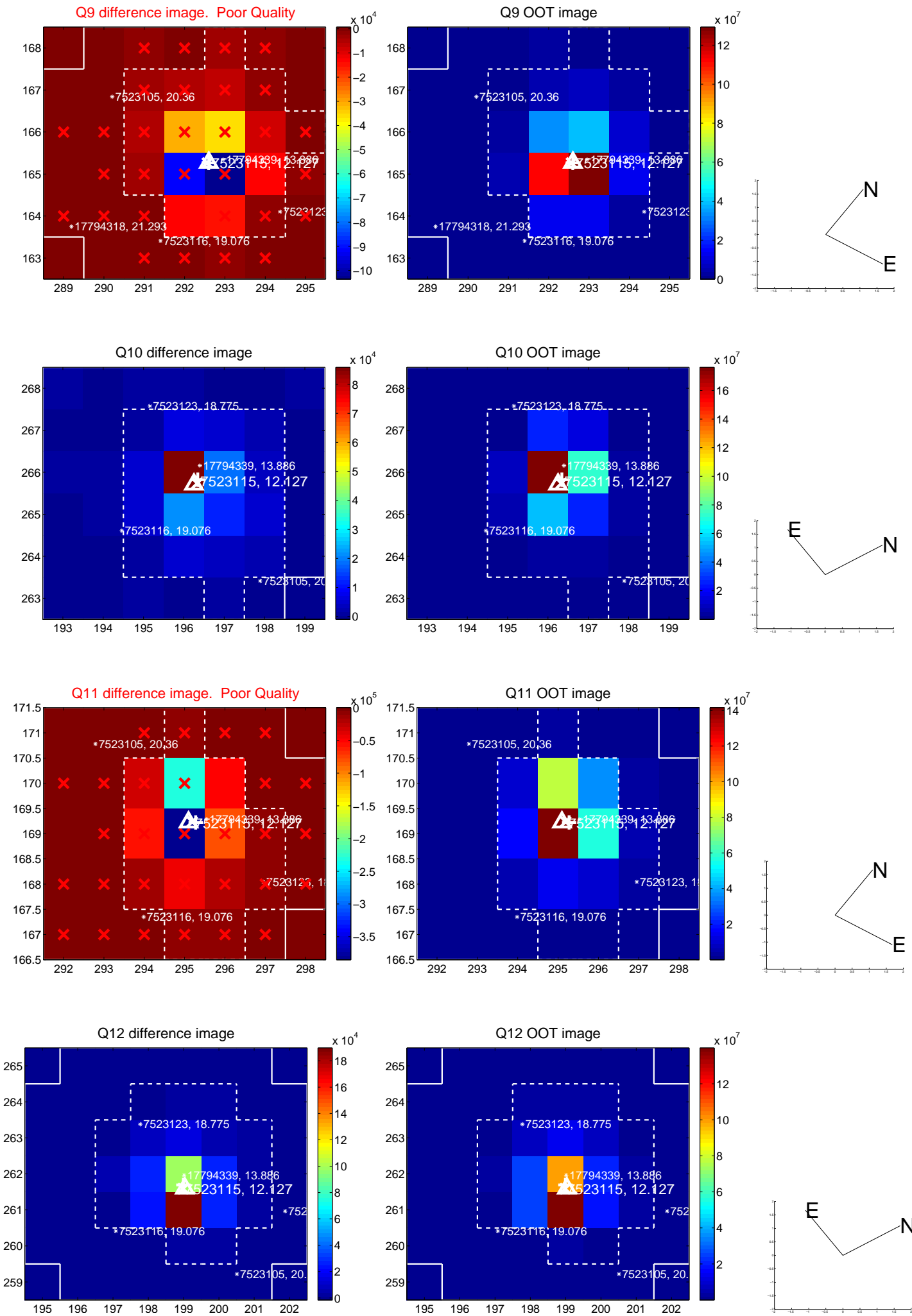
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



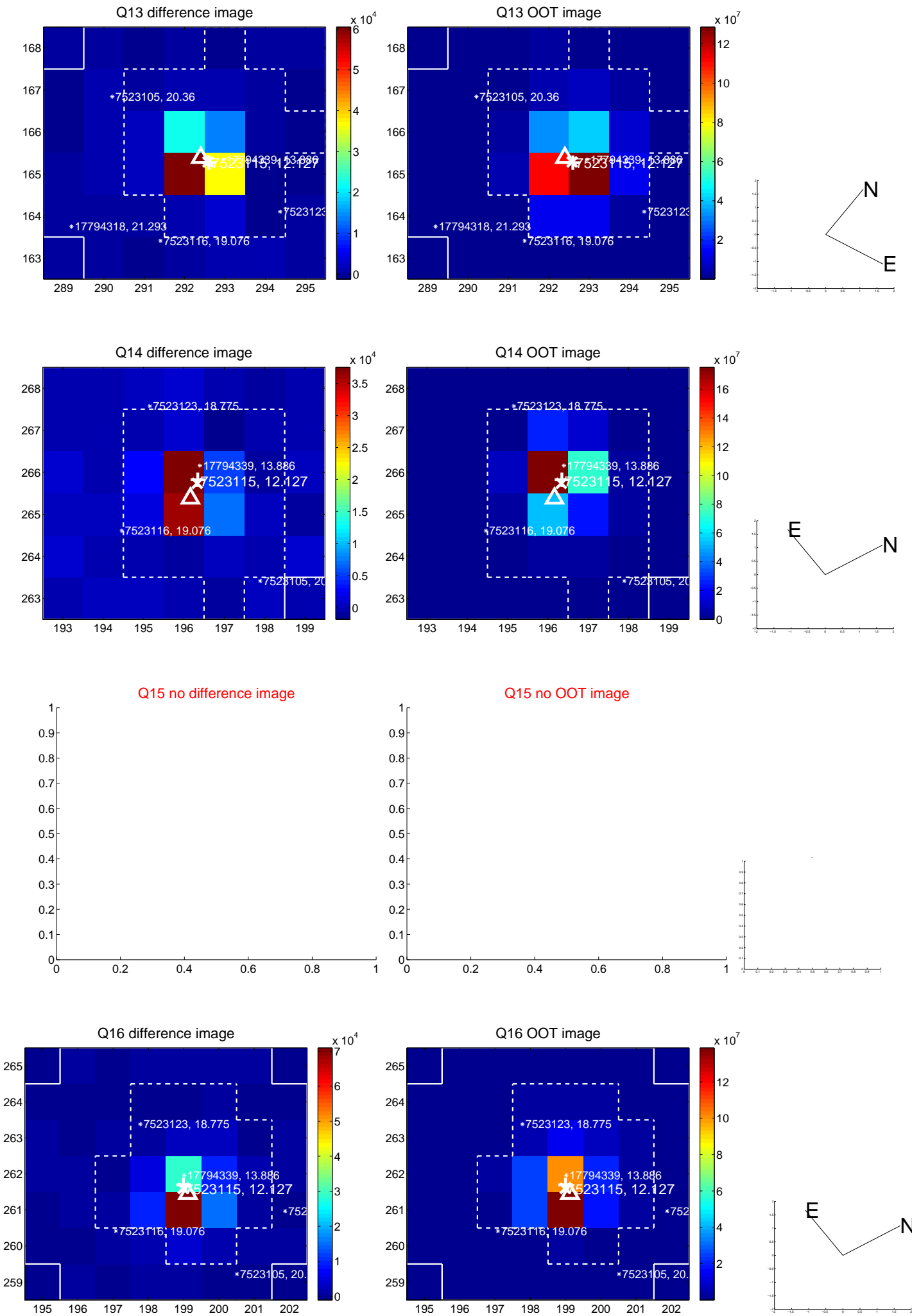
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



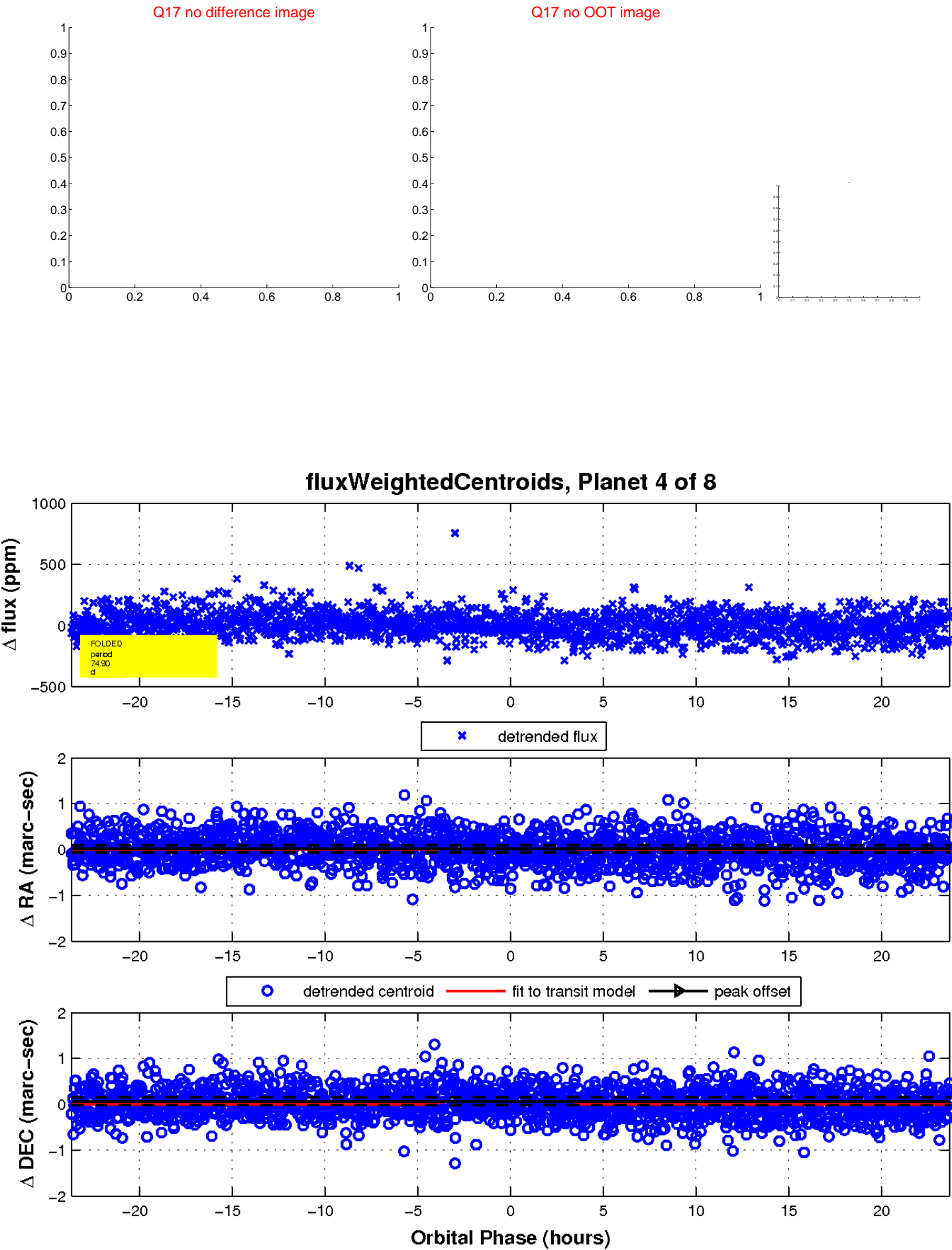
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

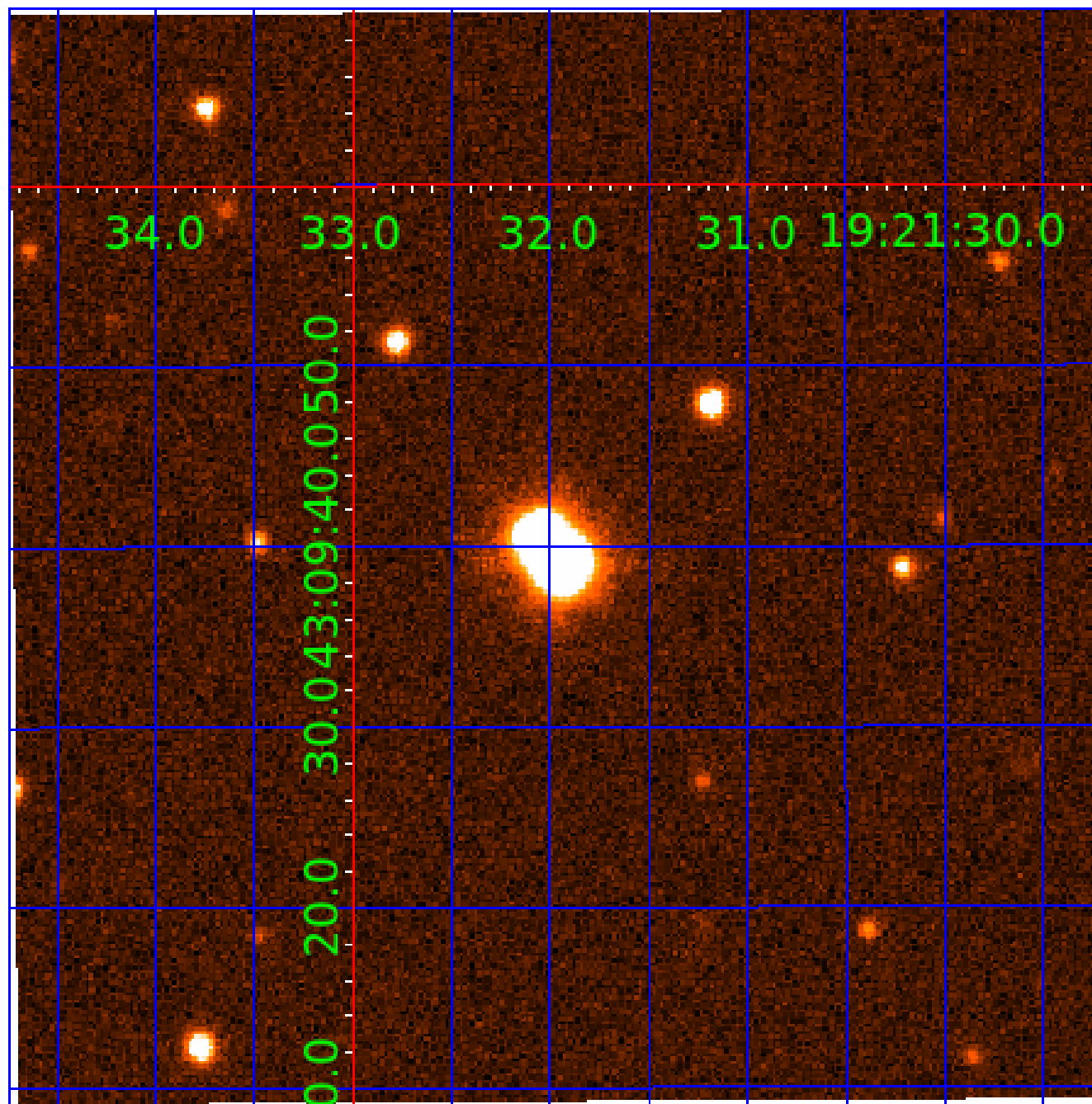


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

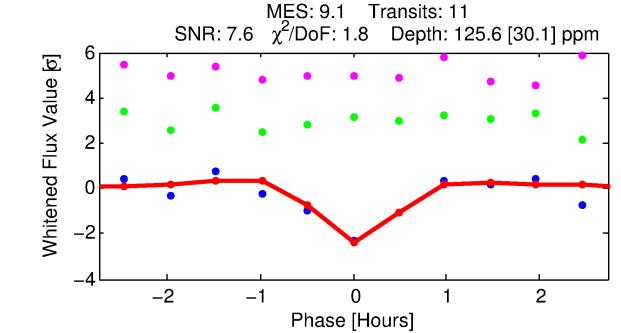
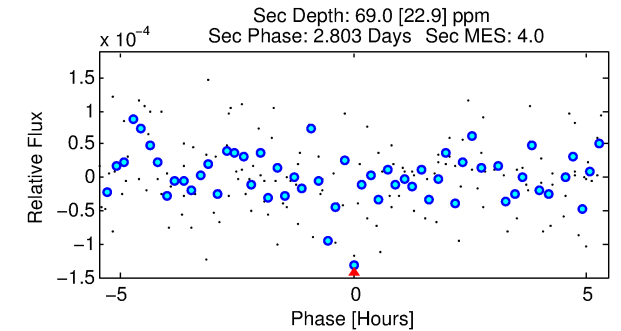
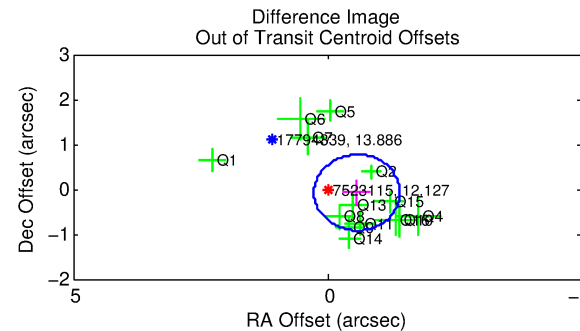
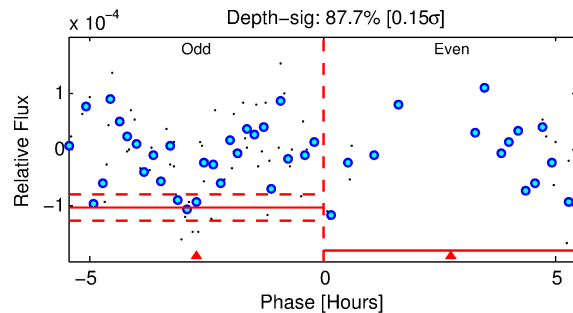
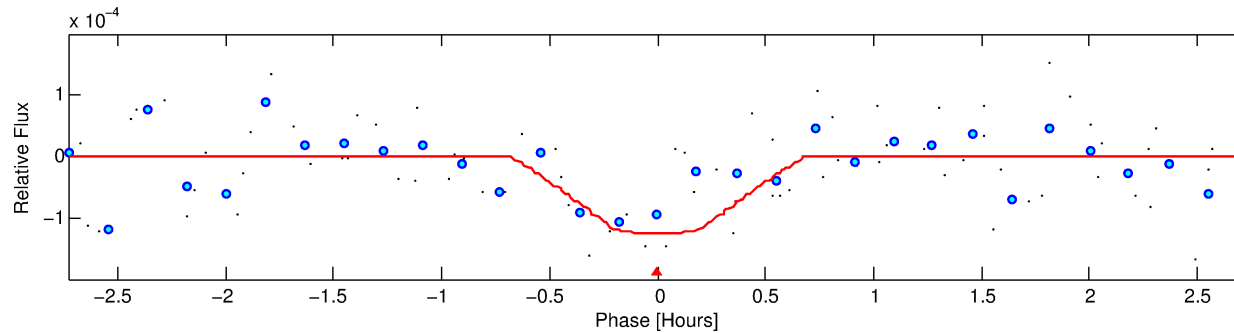
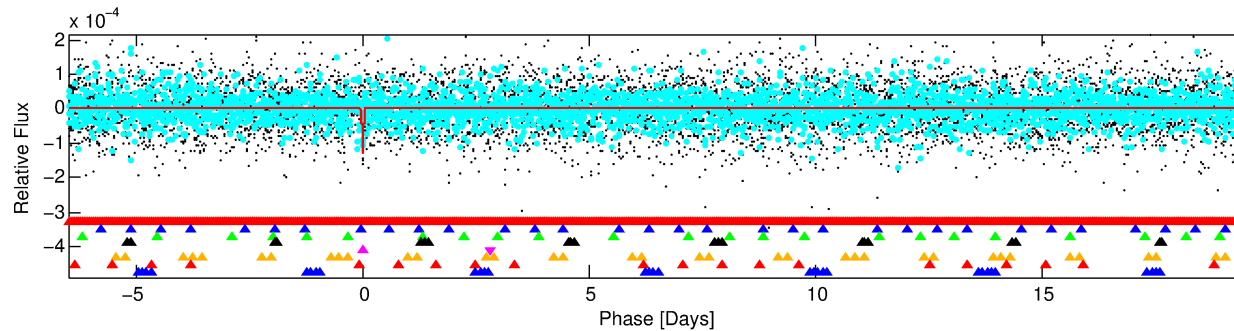
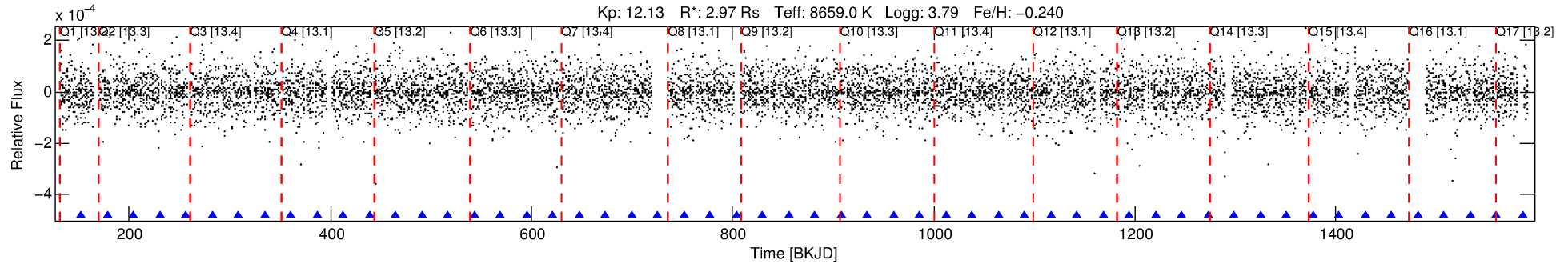
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-05

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 5 of 8 Period: 26.051 d



DV Fit Results:

Period = 26.05053 [0.00019] d
Epoch = 152.4239 [0.0064] BKJD
Rp/R* = 0.0110 [0.0061]
a/R* = 172.79 [587.28]
b = 0.63 [3.27]
Seff = 950.18 [671.77]
Teq = 1416 [250] K
Rp = 3.56 [2.51] Re
a = 0.2165 [0.0918] AU
Ag = 140.46 [189.70] [0.74 σ]
Teffp = 7535 [2217] K [2.74 σ]

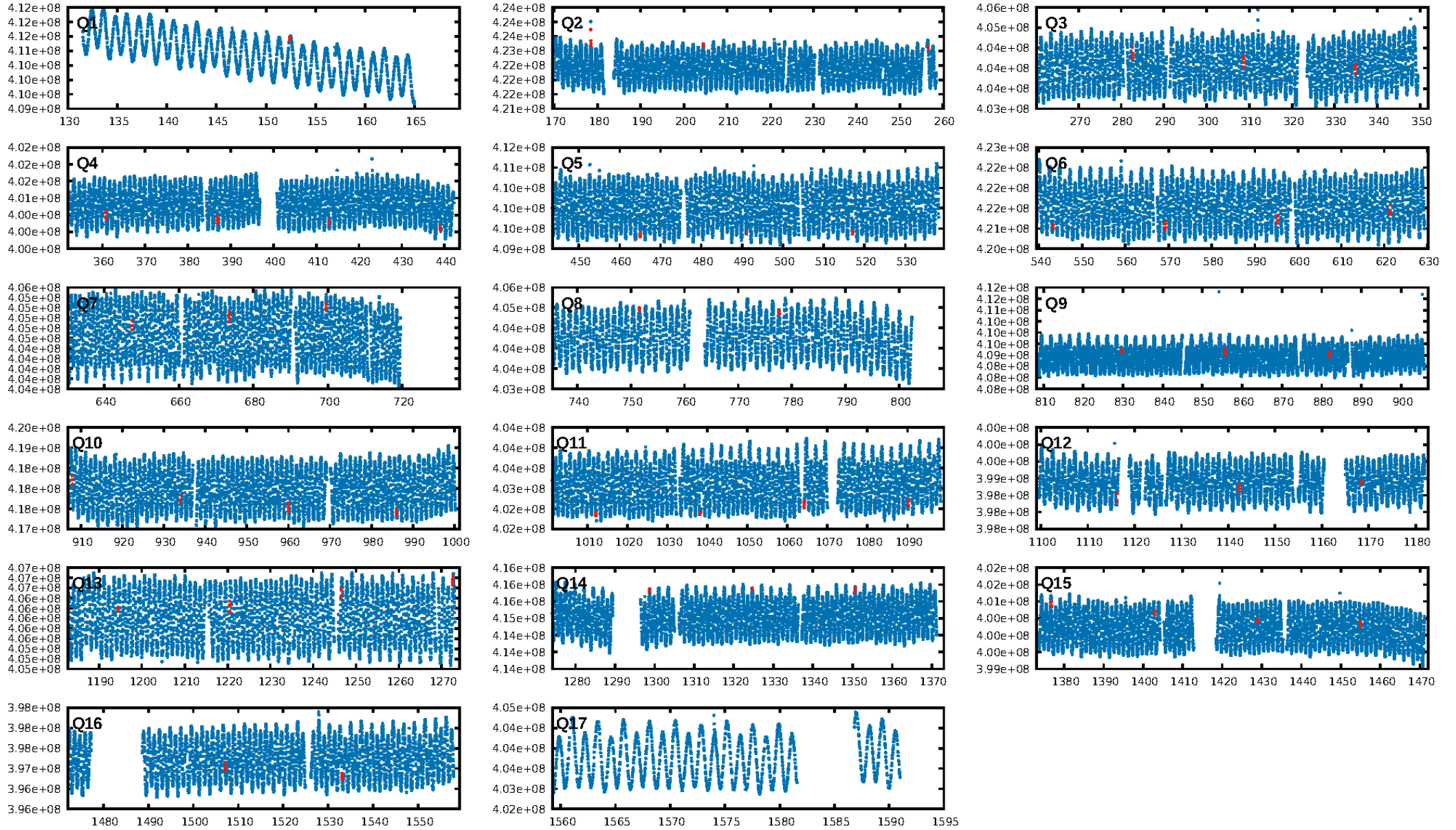
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [74.29 σ]
LongPeriod-sig: 100.0% [178.10 σ]
ModelChiSquare2-sig: 49.4%
ModelChiSquareGof-sig: 62.7%
Bootstrap-pfa: 1.33e-10
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -0.223
Centroid-sig: 20.4%
Centroid-so: 0.961 arcsec [1.10 σ]
OotOffset-rm: 0.582 arcsec [2.07 σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-rm: 0.387 arcsec [1.67 σ]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 0.69 [11/16]

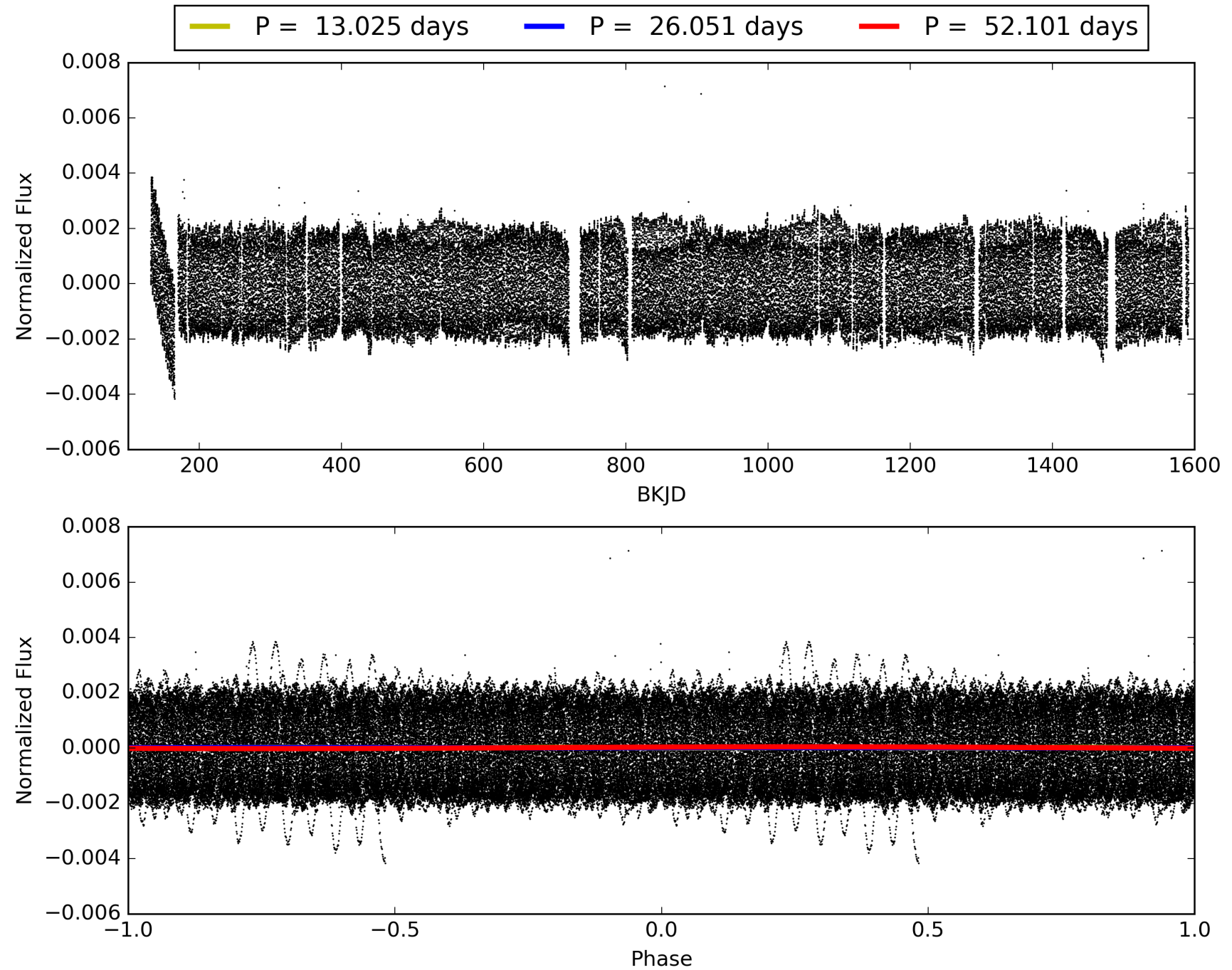
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:24 Z

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

TCE 007523115-05, PDC Light Curves

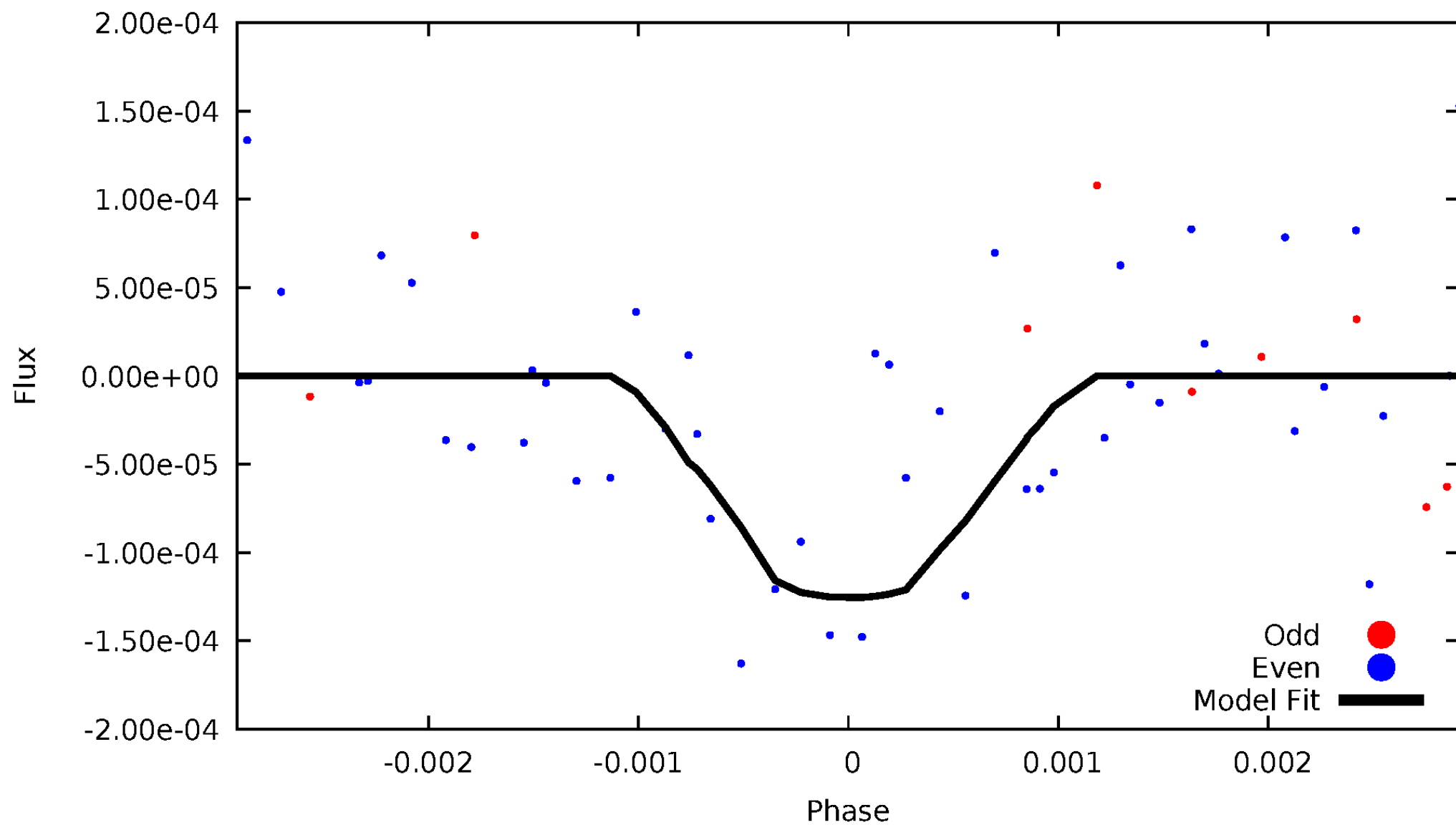


TCE 007523115-05



DV Odd/Even

TCE 007523115-05

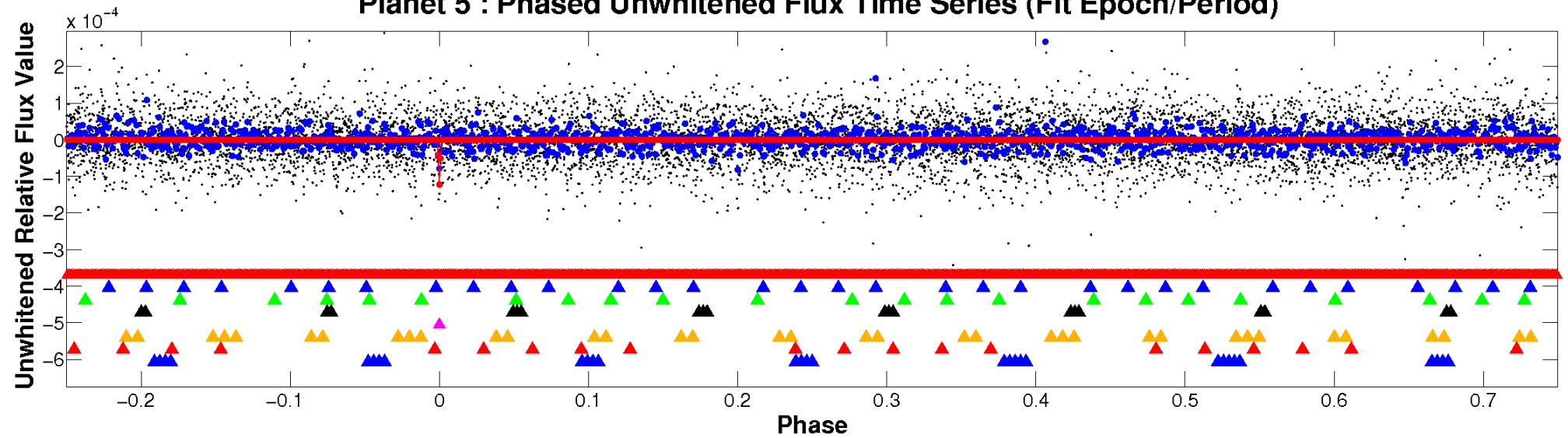


ALT Odd/Even

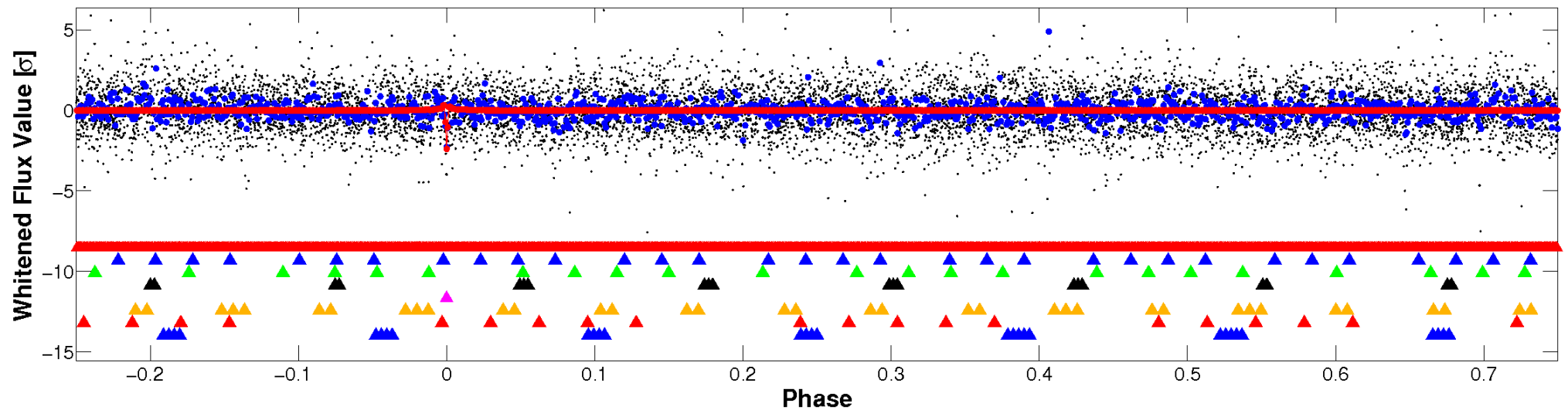
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

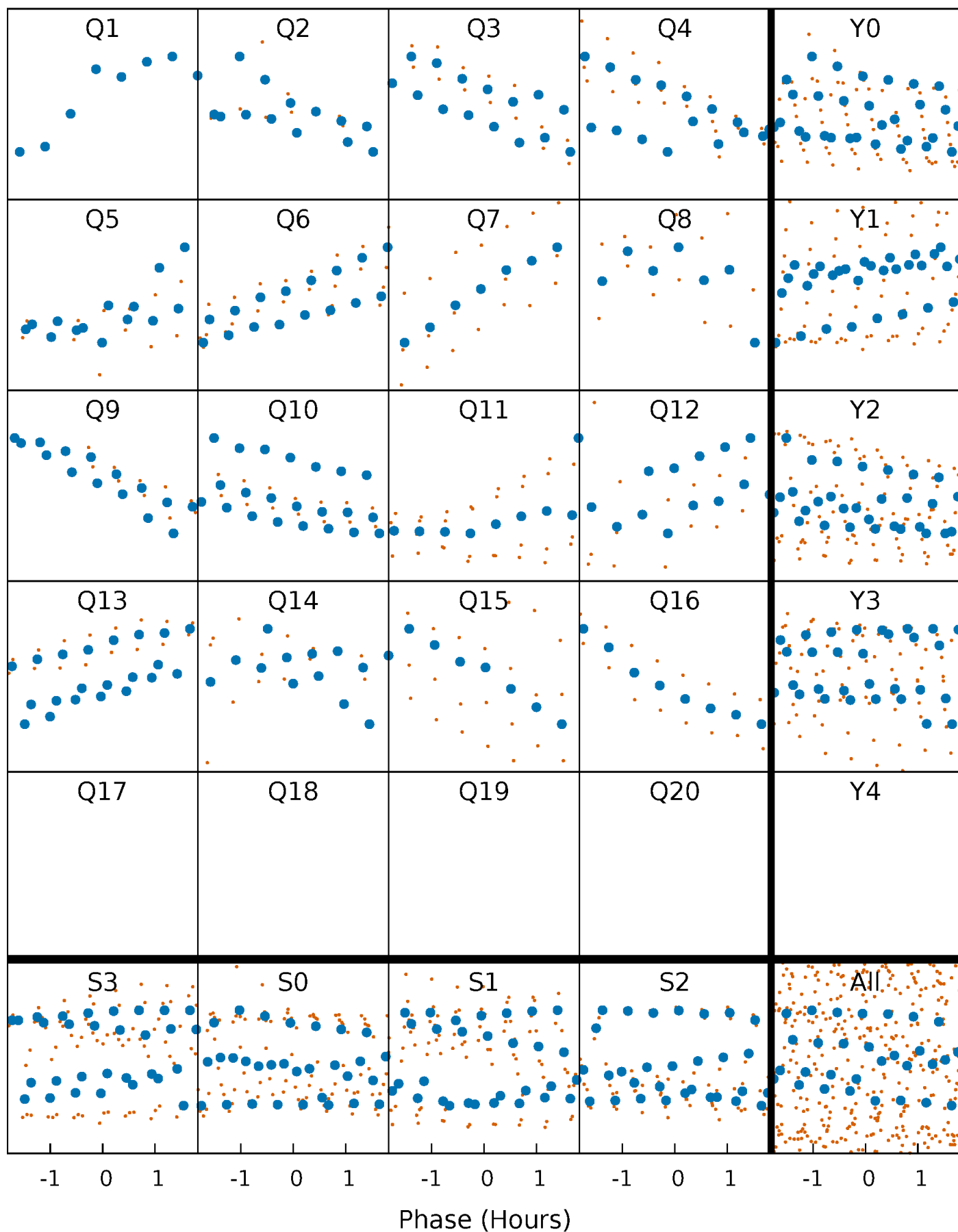


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



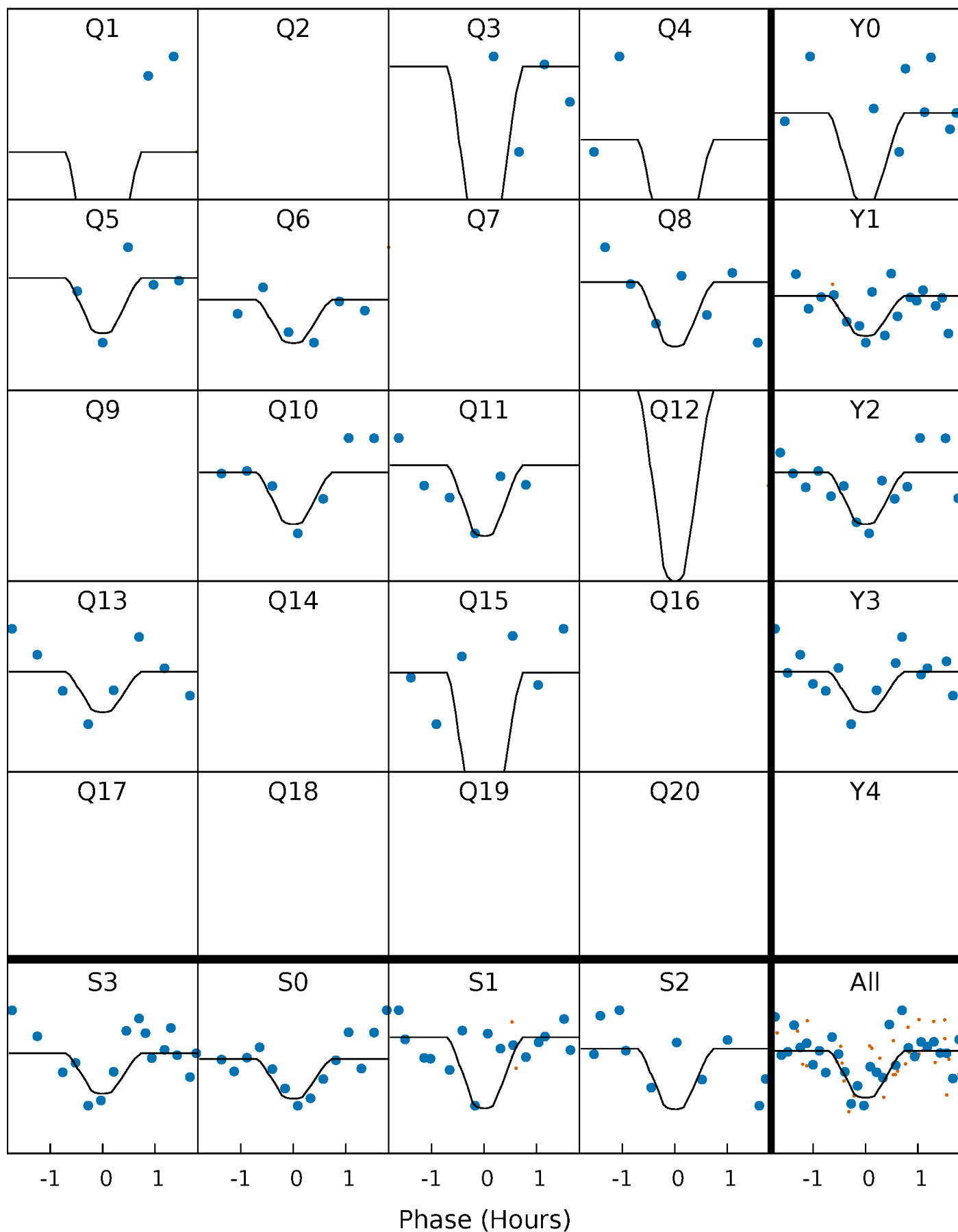
PDC Quarter-Phased Transit Curves

TCE 007523115-05 P= 26.050535 Days $T_0=152.423916$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007523115-05 P= 26.050535 Days $T_0=152.423916$ (BKJD)

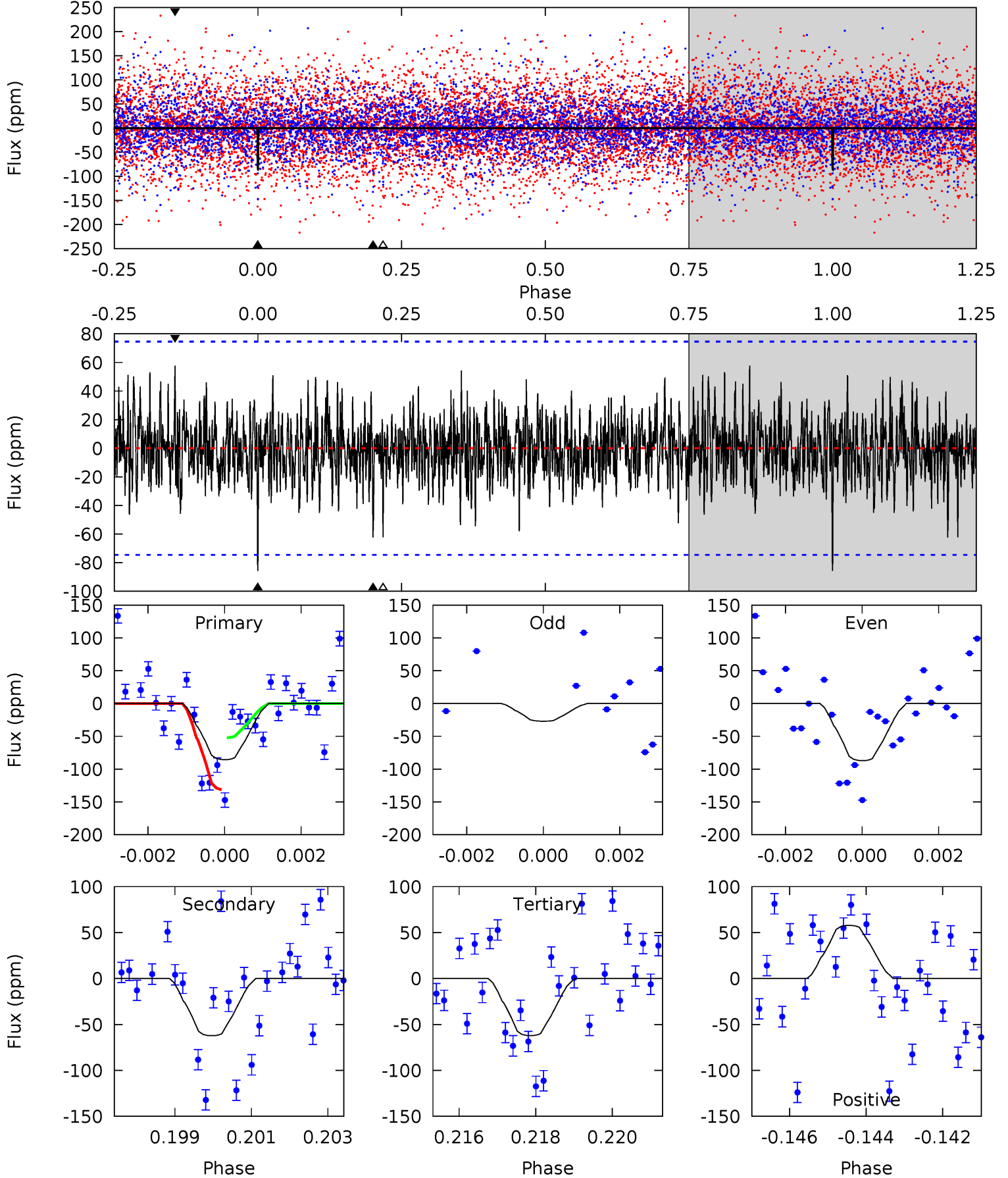


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007523115-05, P = 26.050535 Days, E = 126.373381 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.11	4.45	4.44	4.13	5.32	3.08	1.23	1.67	1.99	0.01	0.33	0.99	0.91	0.40	2.79



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 14	$3.38^{+2.00}_{-1.86}$	1919^{+161}_{-209}	6955^{+4190}_{-1366}	139^{+562}_{-86}
Alt.	N/A	N/A	N/A	N/A	N/A

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

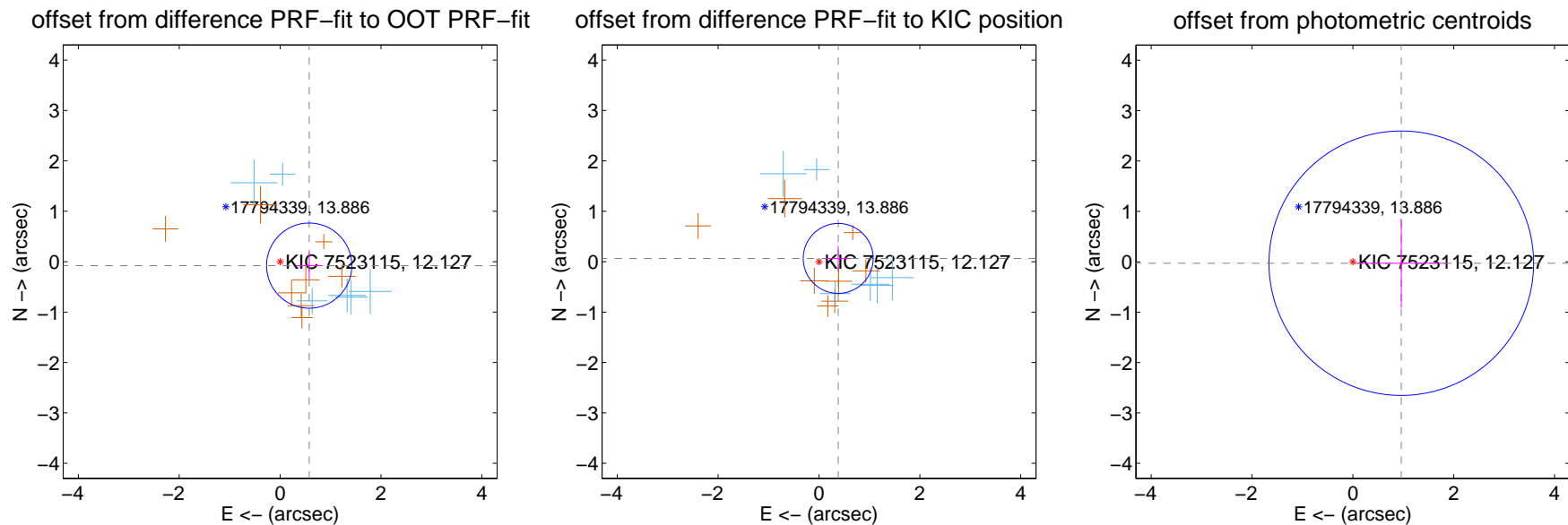
DV Centroid Data

Supplemental centroid analysis for 007523115-05. Kepler magnitude: 12.13. Transit SNR 7.61

There are 6 quarters with good PRF difference image offsets

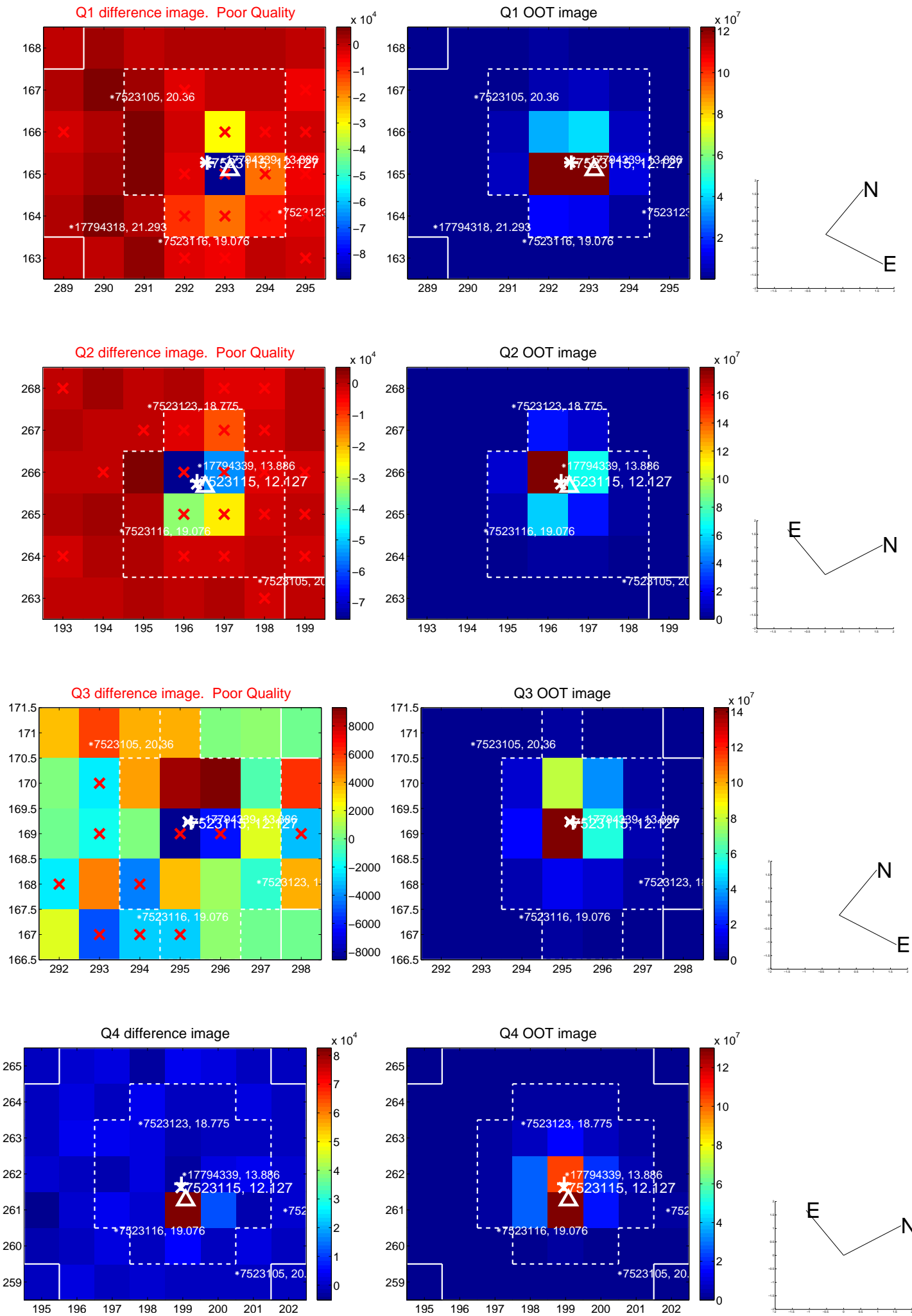
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.582 ± 0.282	2.07	-0.577 ± 0.264	-0.078 ± 0.263
PRF-fit source offset from KIC position	0.387 ± 0.231	1.67	-0.381 ± 0.252	0.065 ± 0.245
photometric centroid source offset	0.96 ± 0.87	1.10	-0.96 ± 0.87	-0.03 ± 0.88

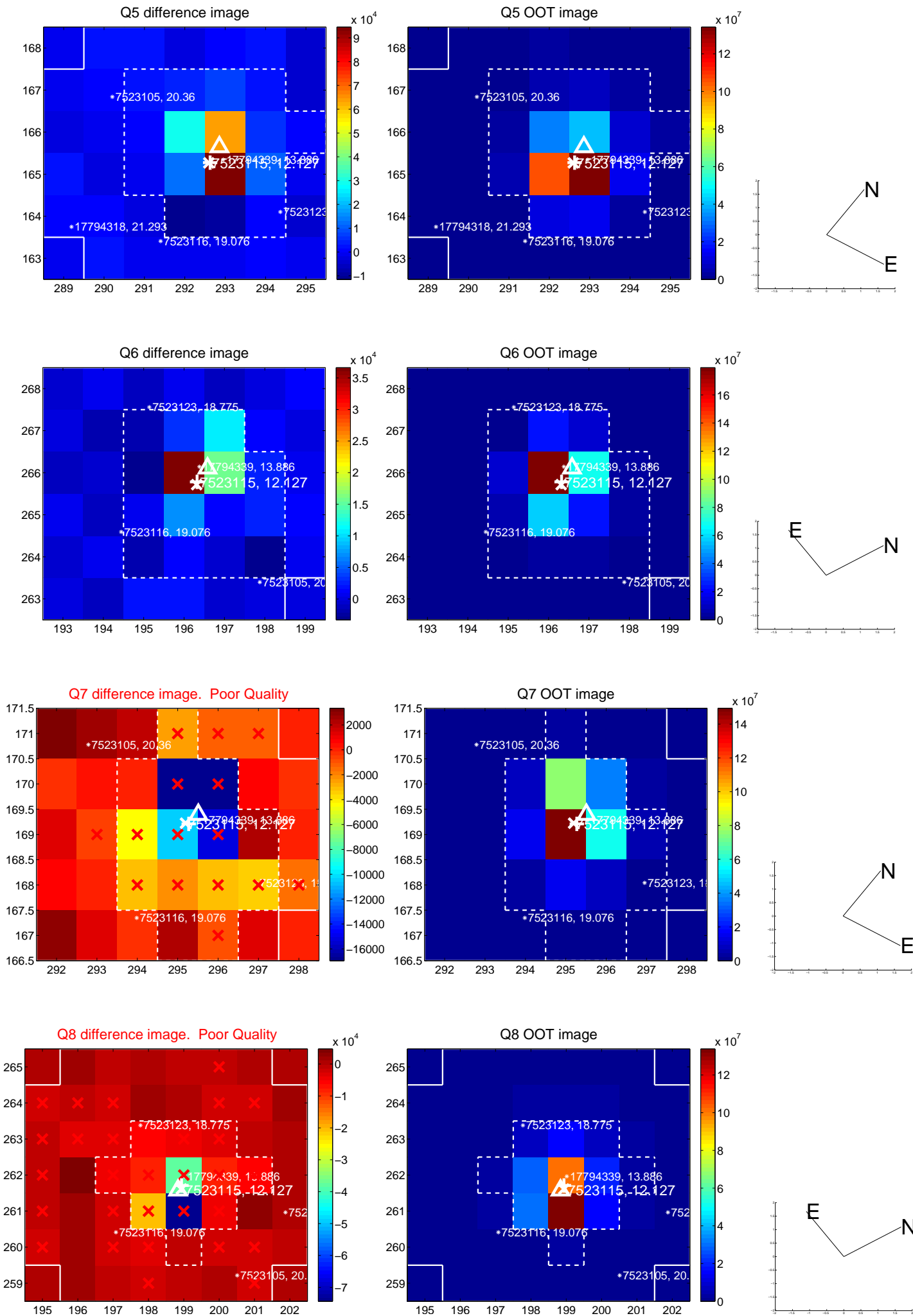


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

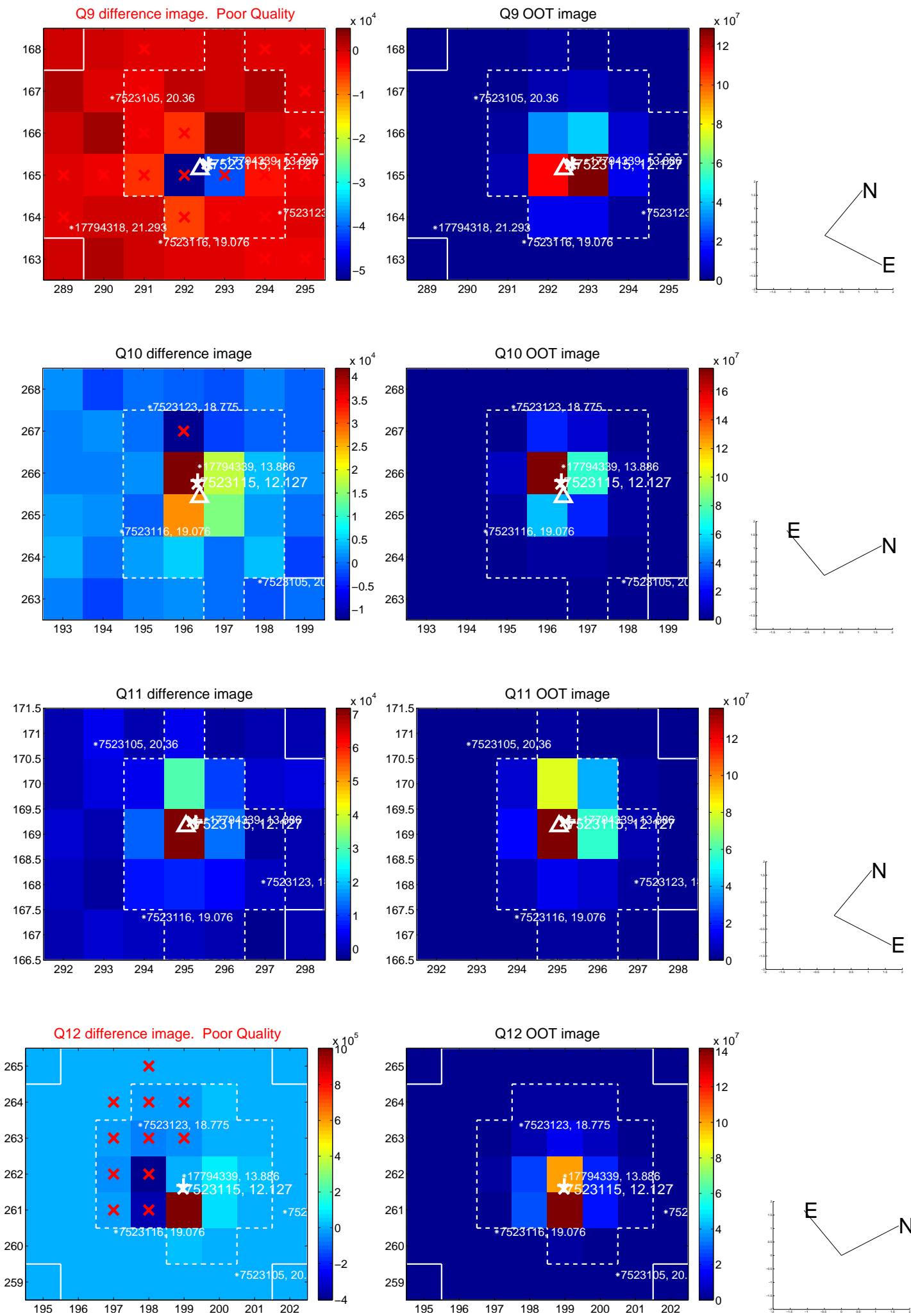
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



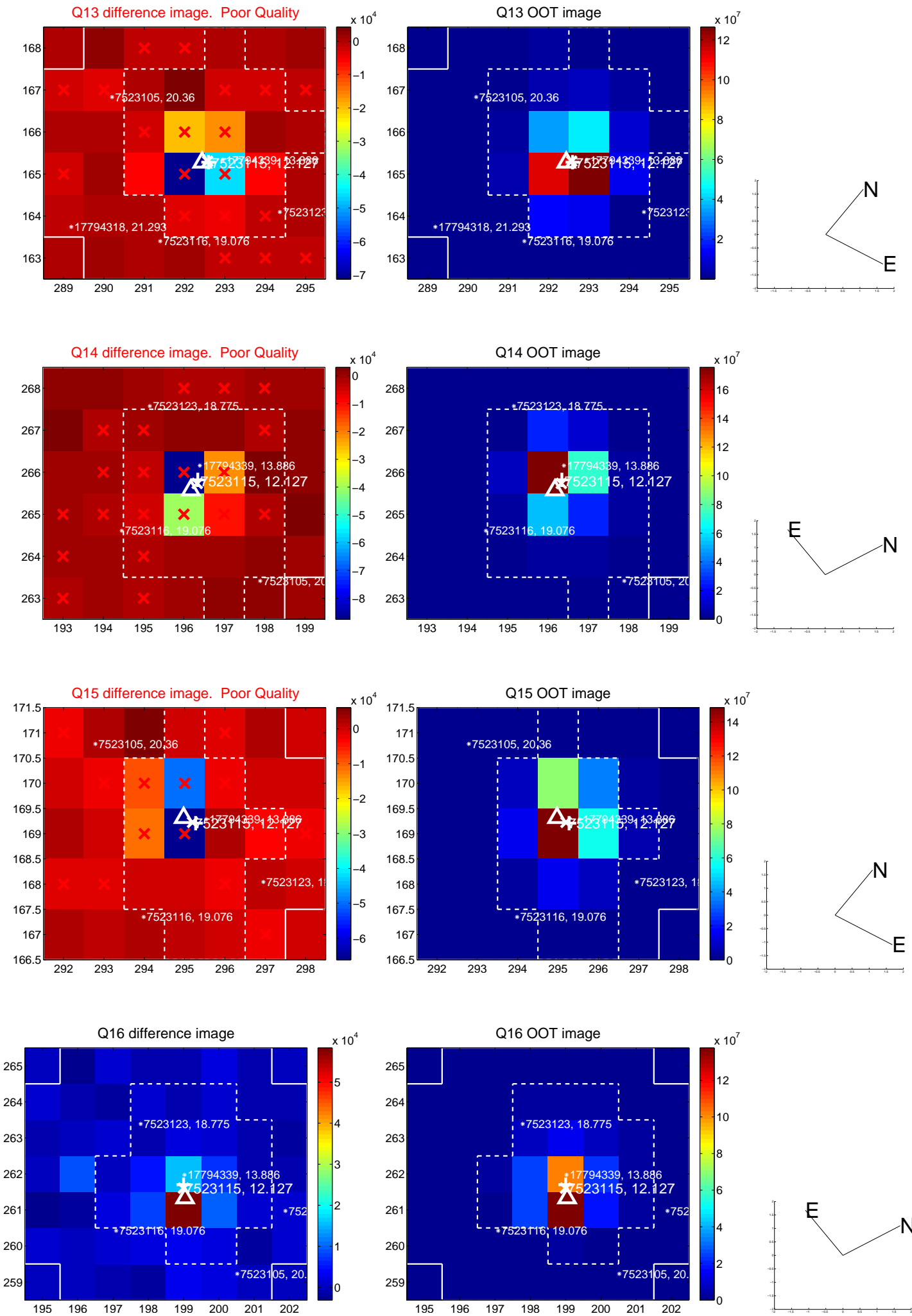
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



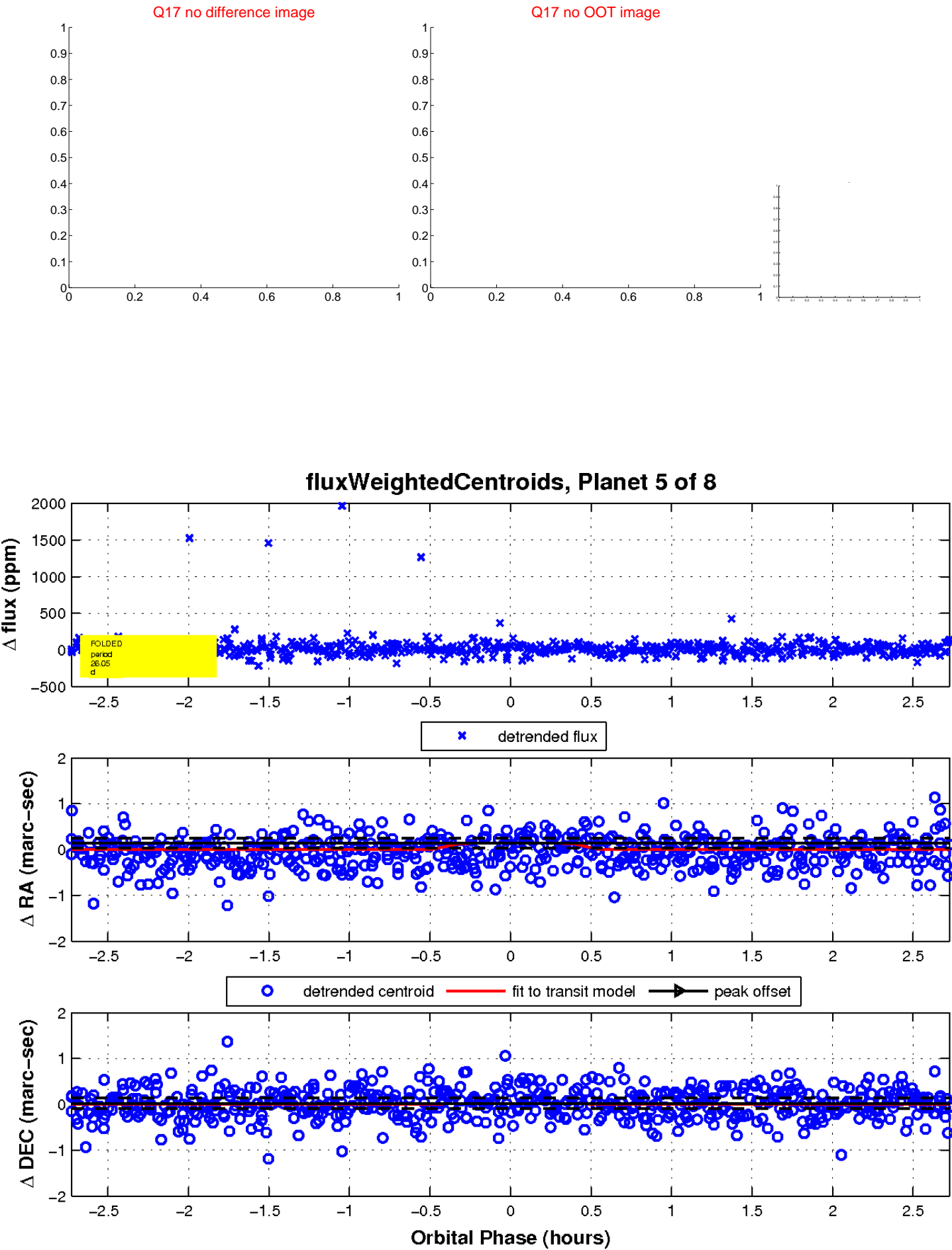
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

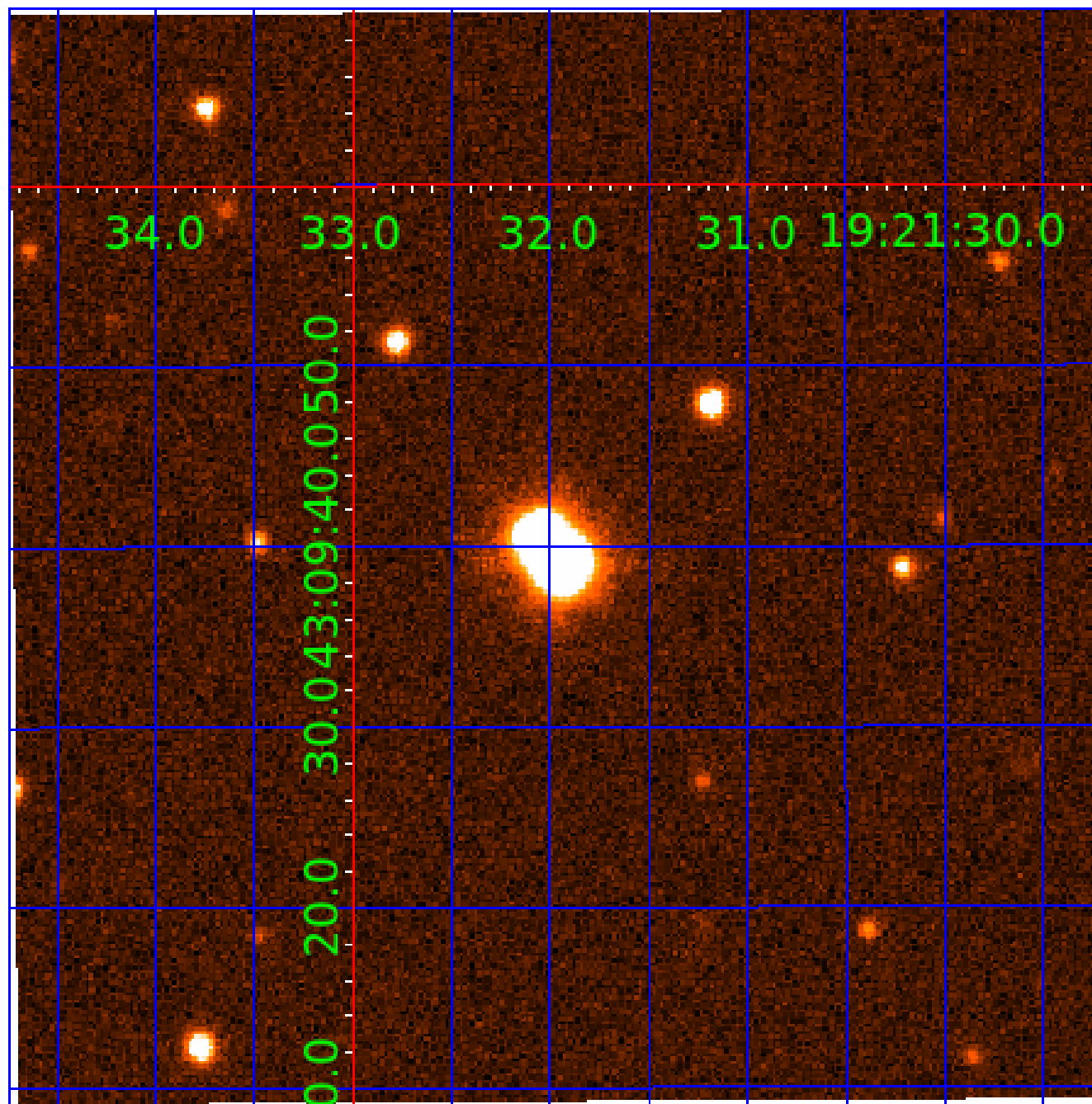


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

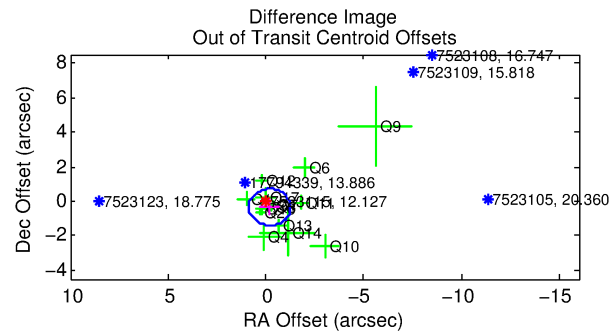
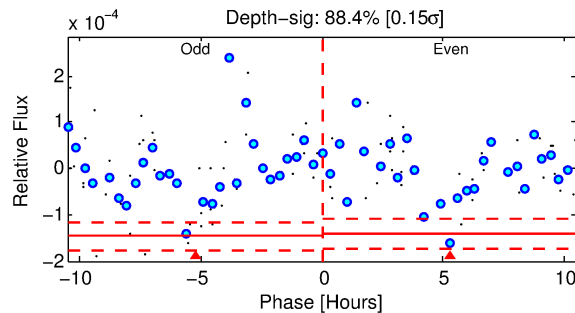
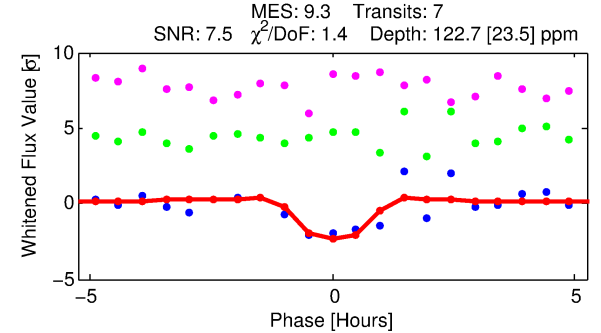
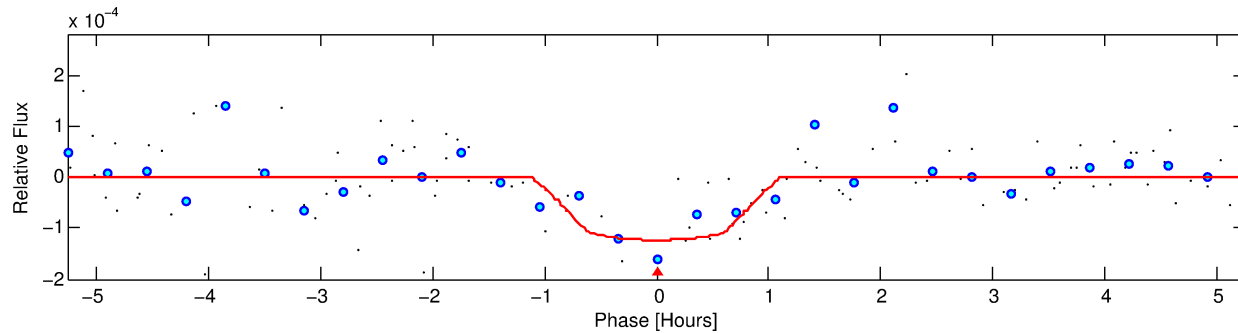
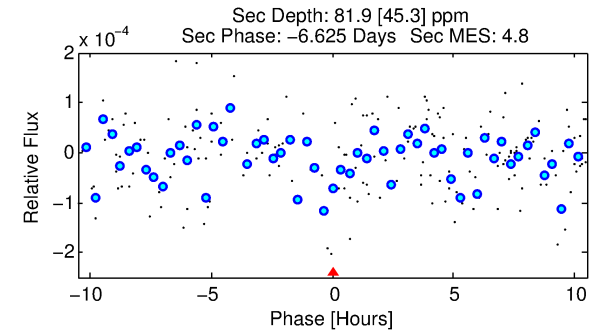
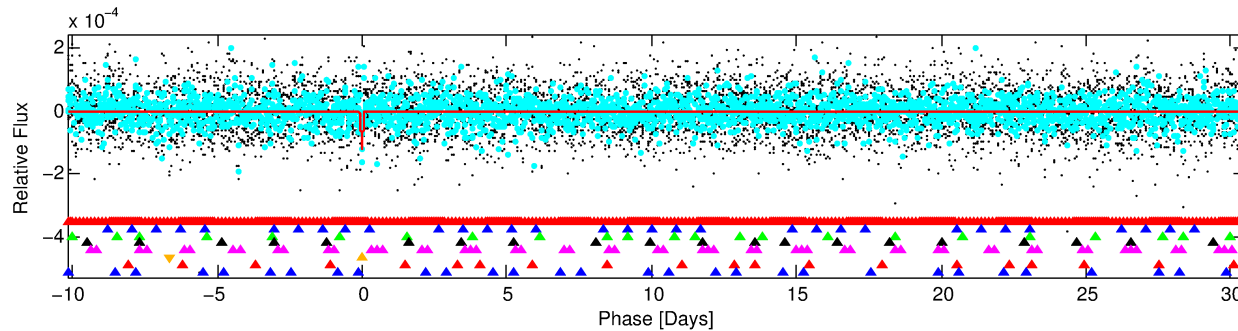
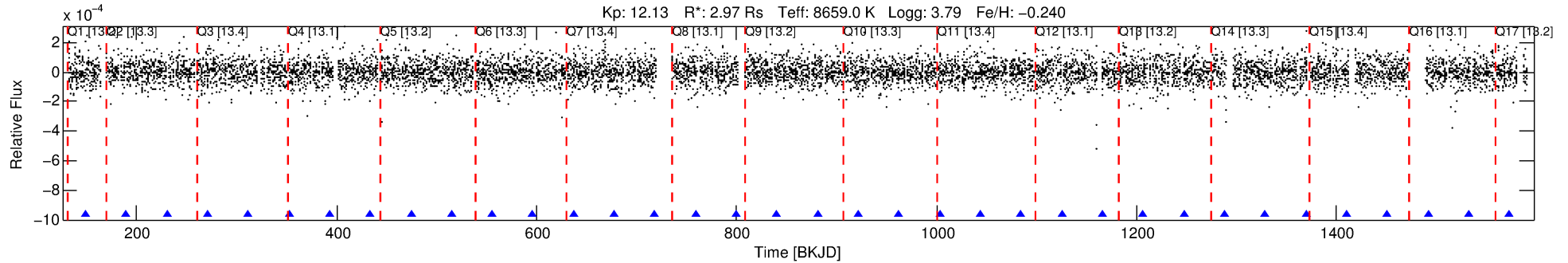
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-06

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 6 of 8 Period: 40.691 d



DV Fit Results:

Period = 40.69146 [0.00033] d
Epoch = 148.8709 [0.0060] BKJD
Rp/R* = 0.0104 [0.0131]
a/R* = 173.05 [1343.53]
b = 0.27 [27.16]
Seff = 524.27 [370.66]
Teq = 1220 [216] K
Rp = 3.37 [4.50] Re
a = 0.2914 [0.1236] AU
Ag = 336.58 [901.11] [0.37σ]
Teffp = 8080 [5240] K [1.31σ]

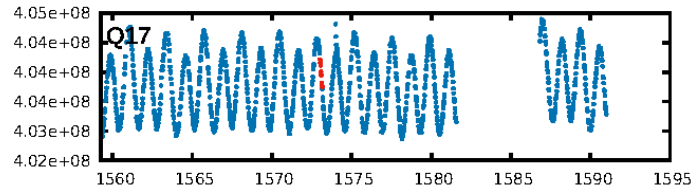
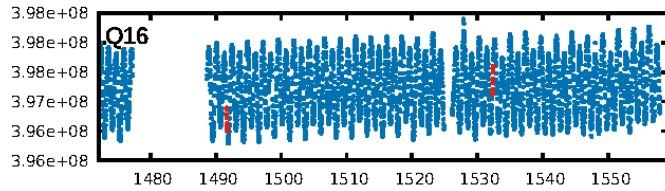
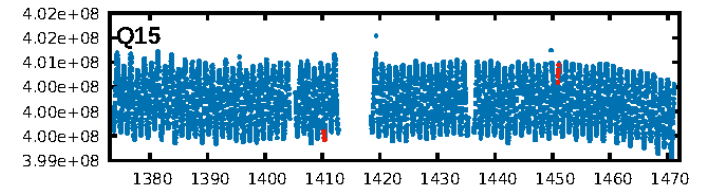
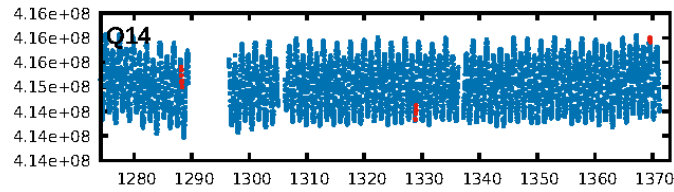
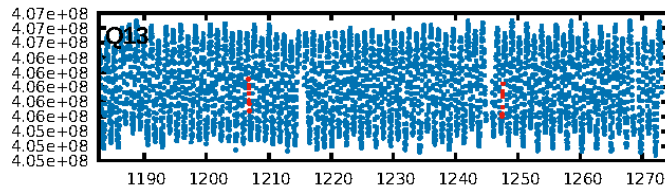
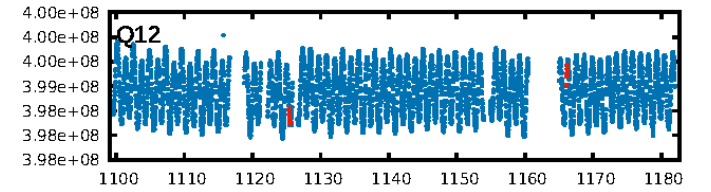
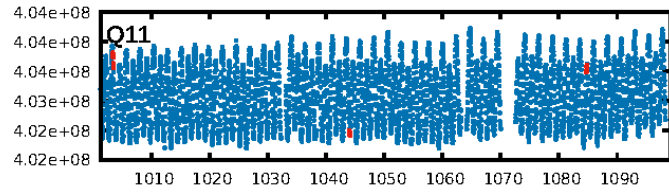
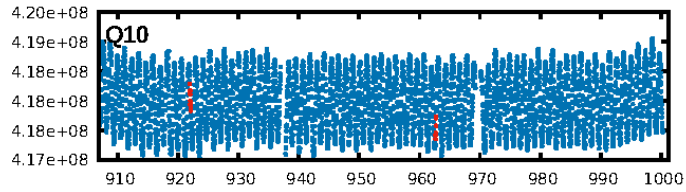
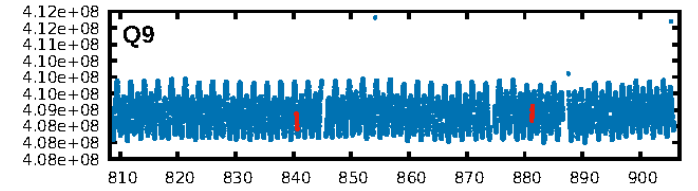
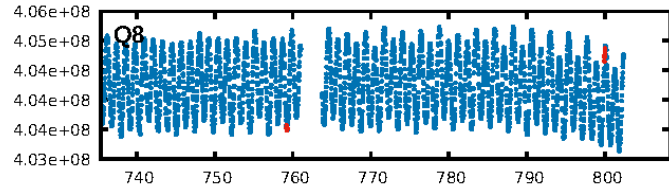
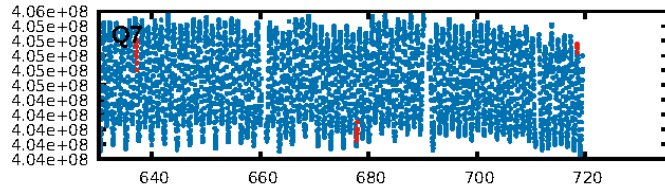
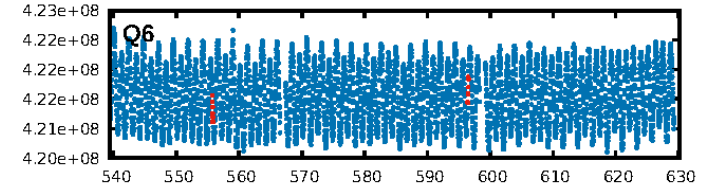
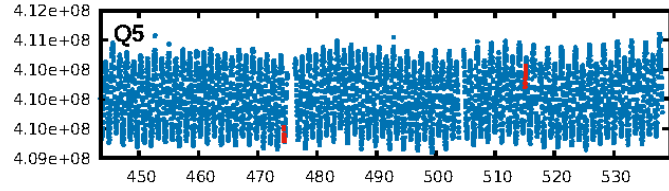
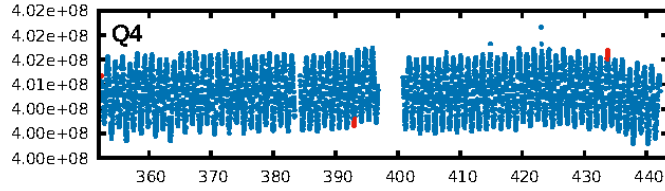
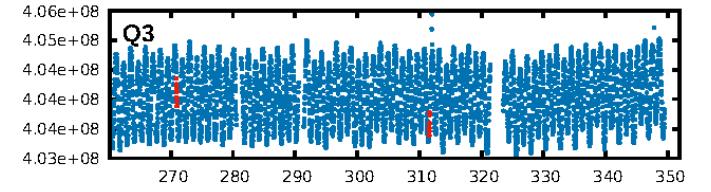
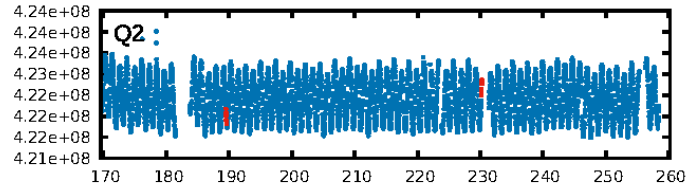
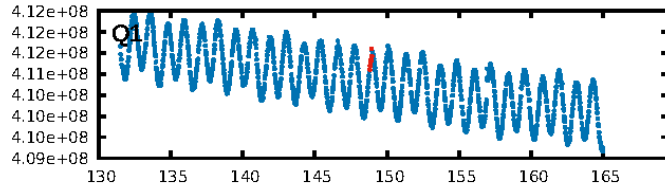
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [178.10σ]
LongPeriod-sig: 100.0% [23.90σ]
ModelChiSquare2-sig: 13.1%
ModelChiSquareGof-sig: 95.3%
Bootstrap-pfa: 2.59e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.9983
Centroid-sig: 0.0%
Centroid-so: 2.345 arcsec [3.01σ]
OotOffset-rm: 0.396 arcsec [1.12σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-rm: 0.258 arcsec [0.47σ]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.41 [7/17]

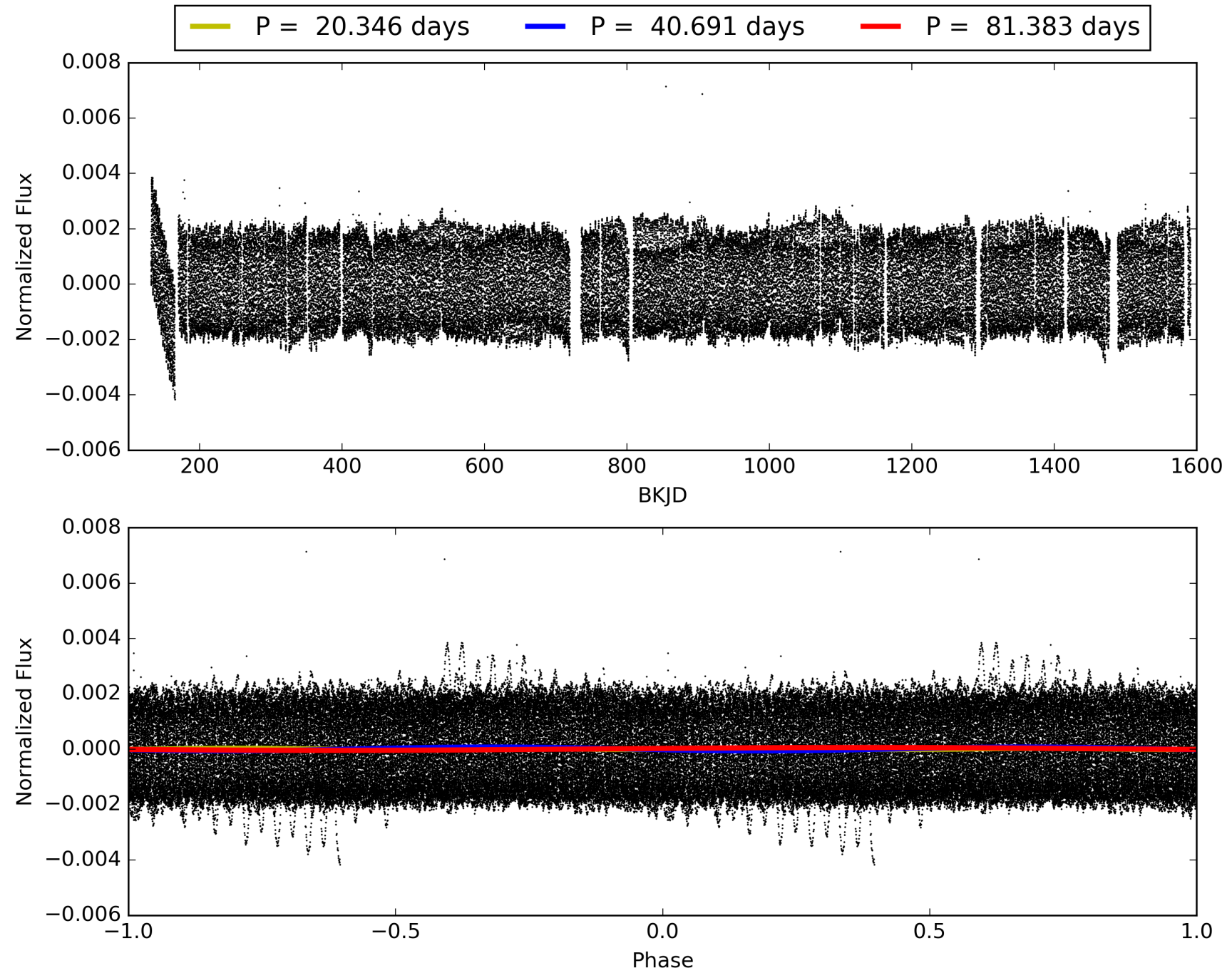
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:28 Z

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

TCE 007523115-06, PDC Light Curves

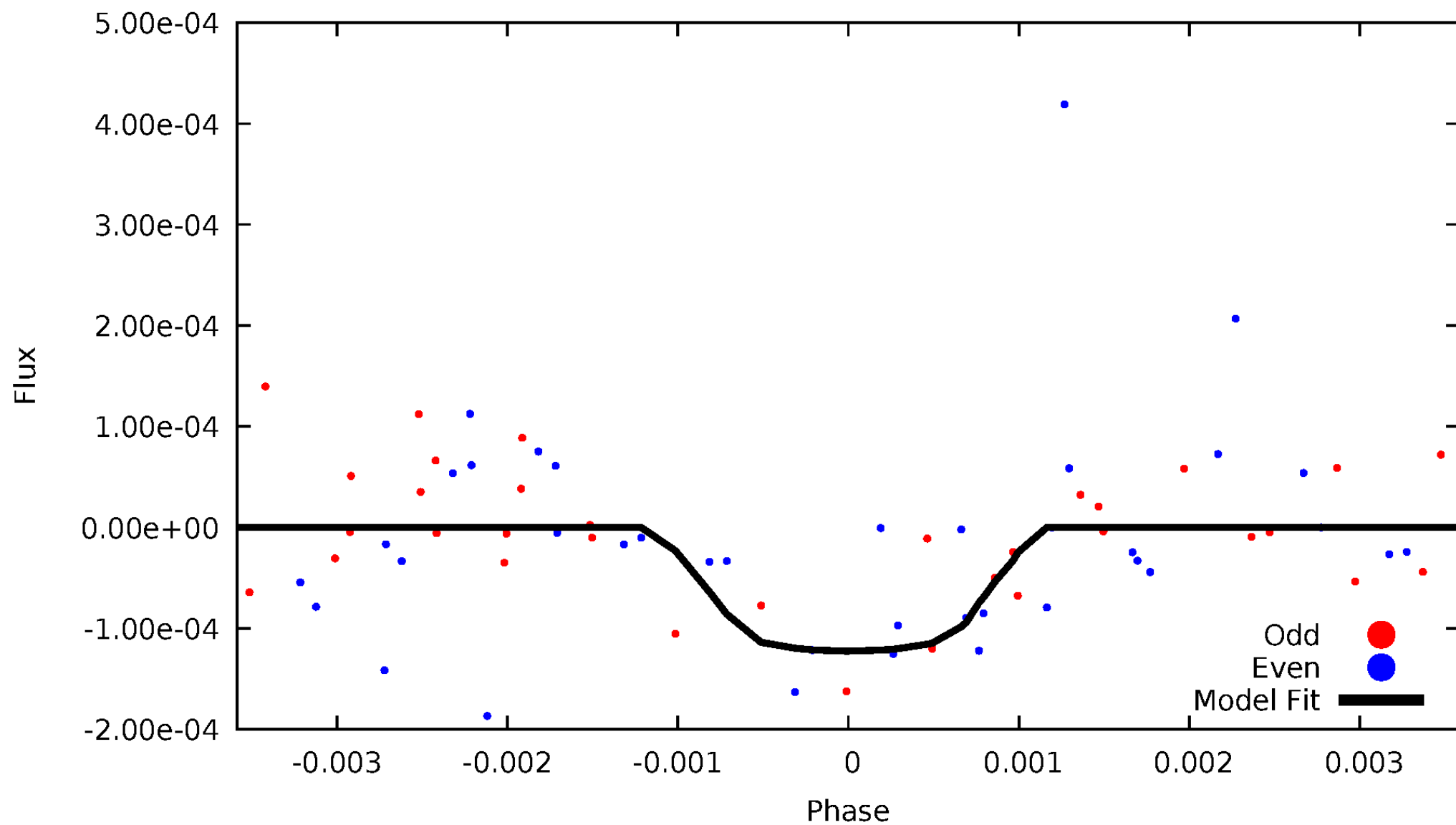


TCE 007523115-06



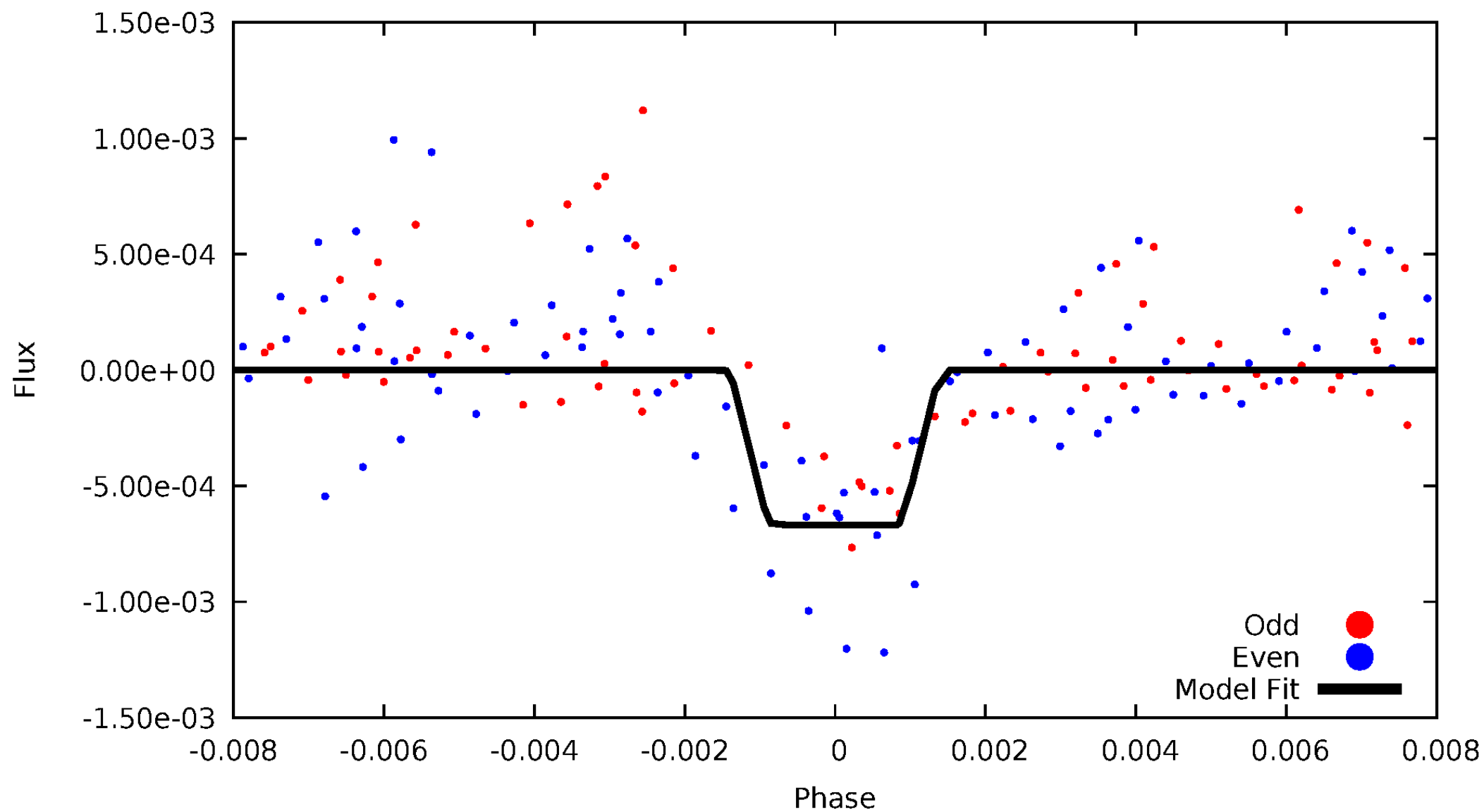
DV Odd/Even

TCE 007523115-06



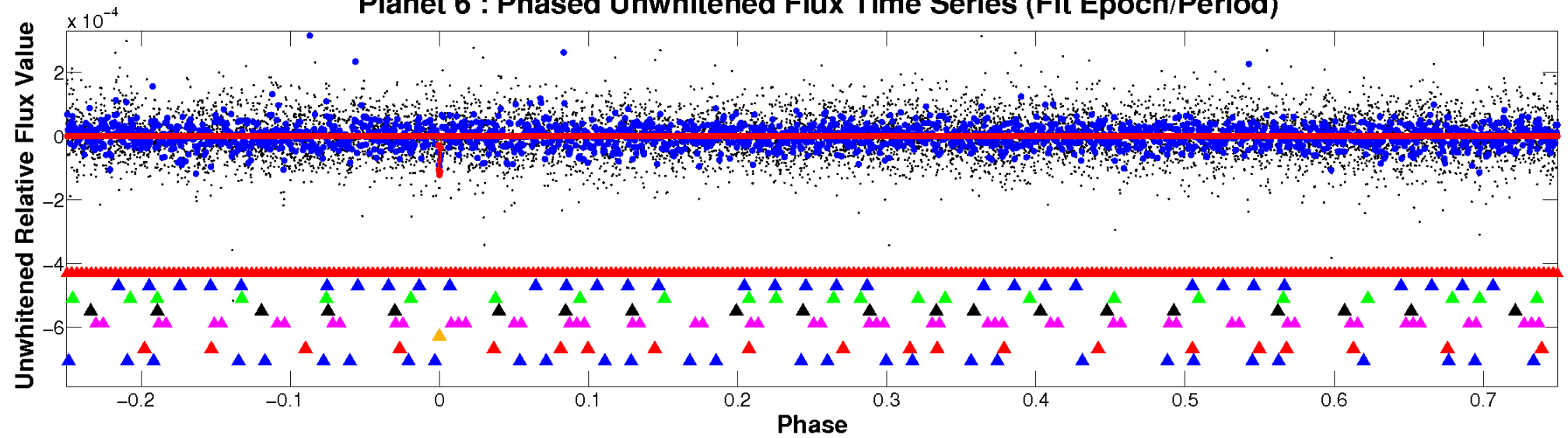
ALT Odd/Even

TCE 007523115-06

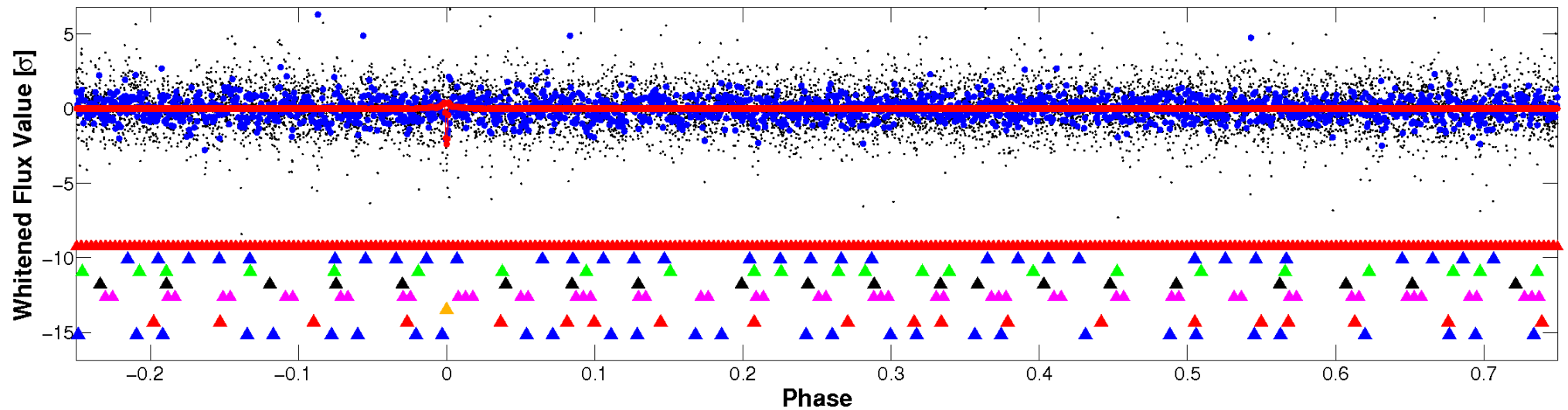


Non-Whitened Vs. Whitened Light Curve

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

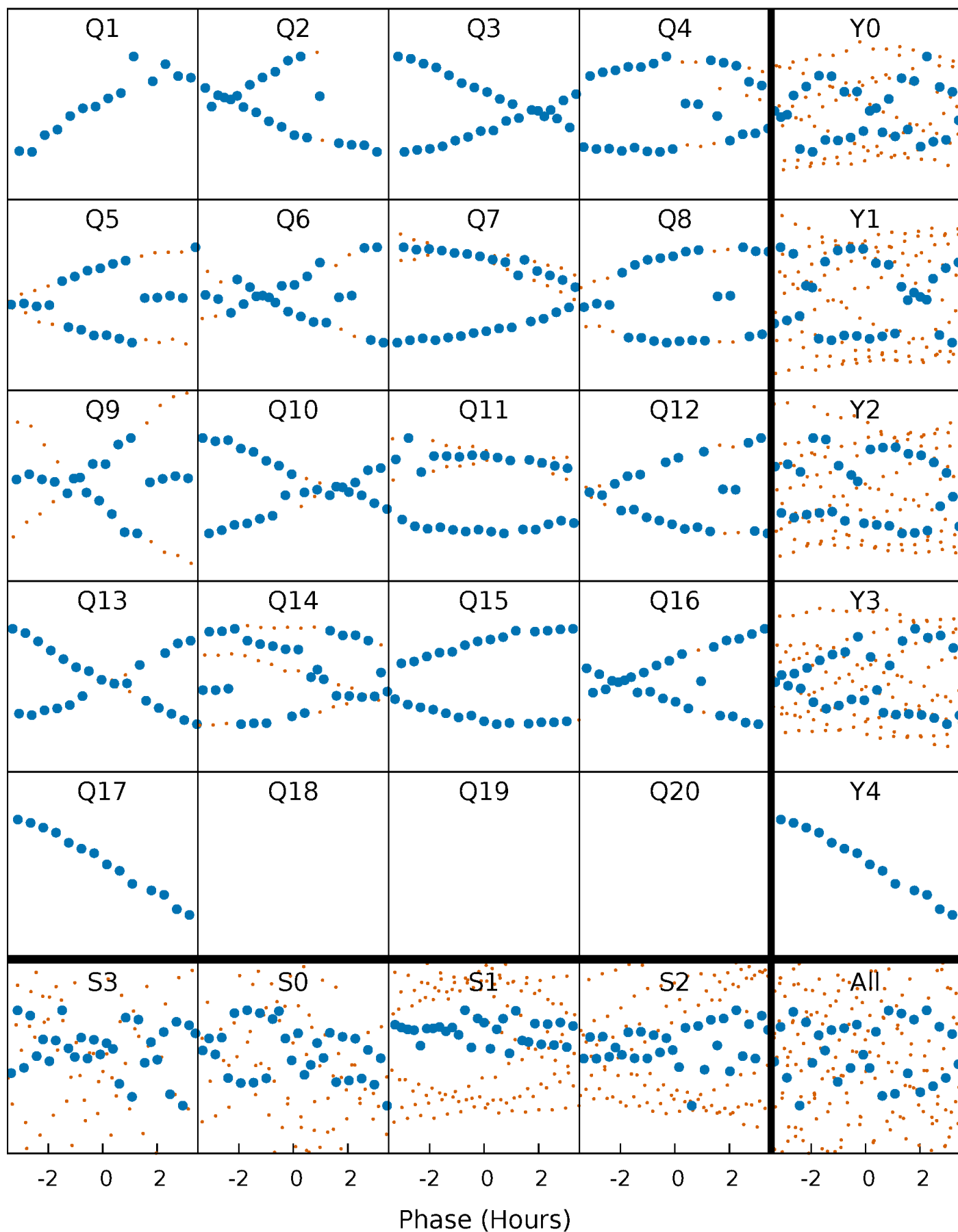


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



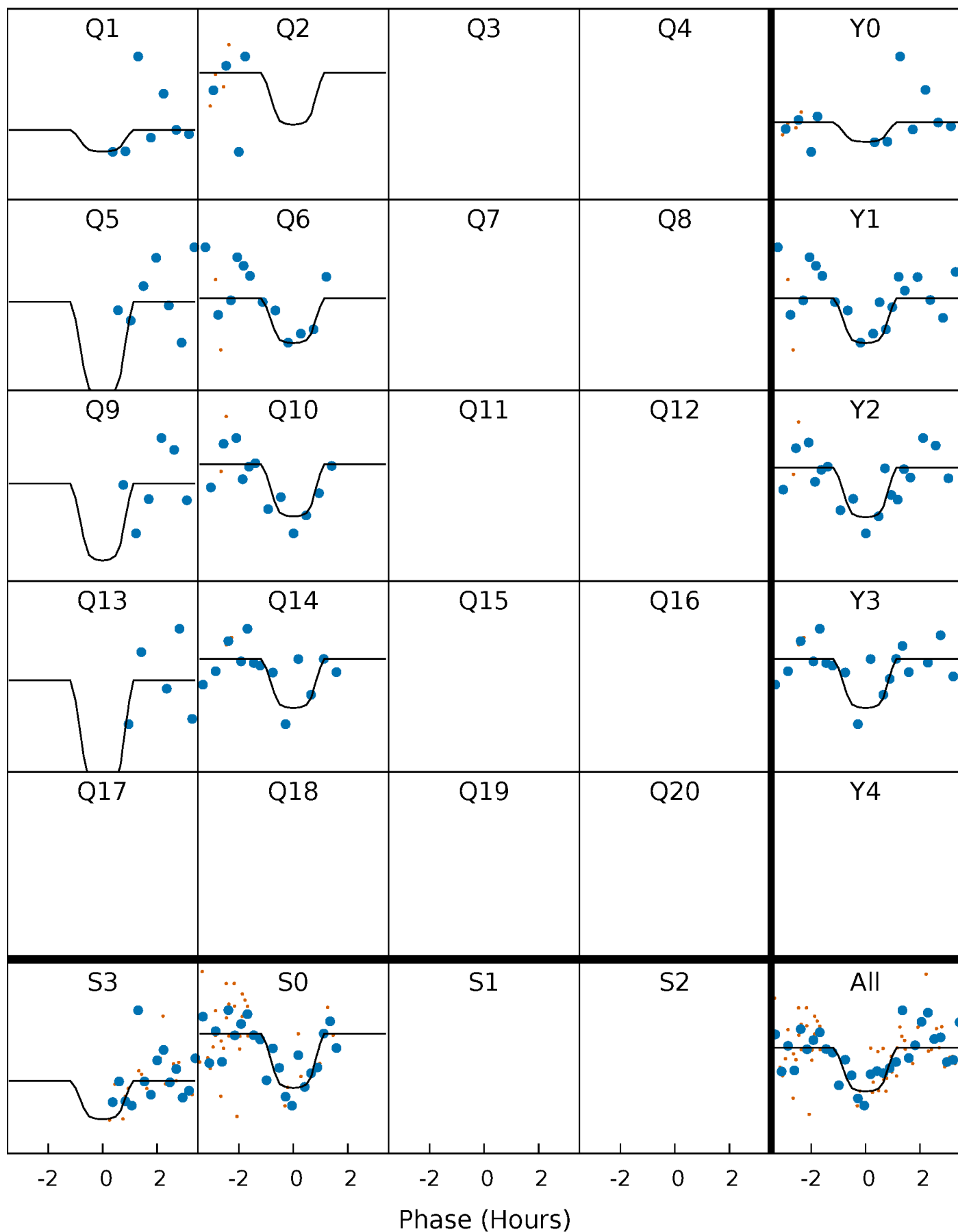
PDC Quarter-Phased Transit Curves

TCE 007523115-06 P= 40.691456 Days $T_0=148.870942$ (BKJD)



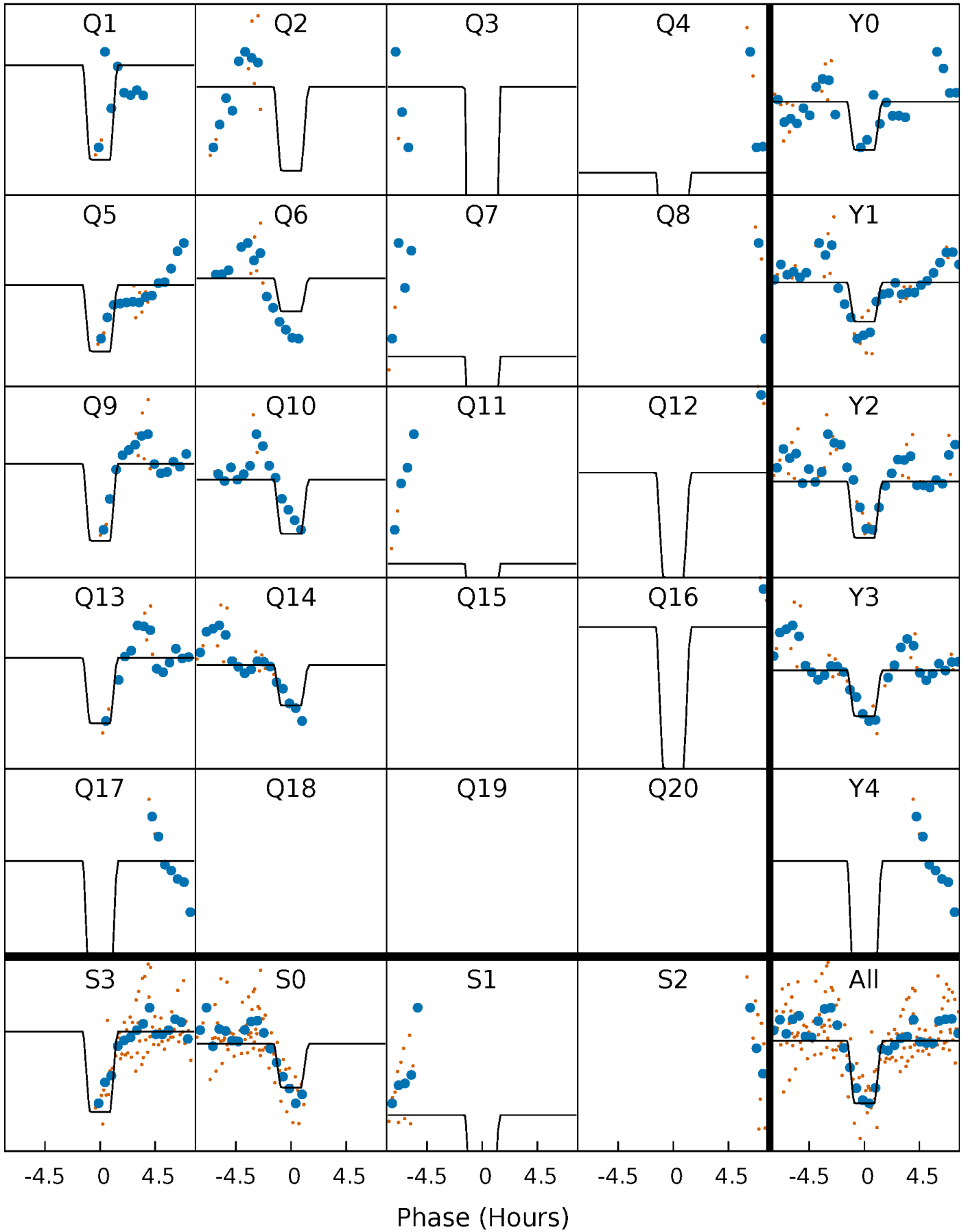
DV Quarter-Phased Transit Curves

TCE 007523115-06 P= 40.691456 Days $T_0=148.870942$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

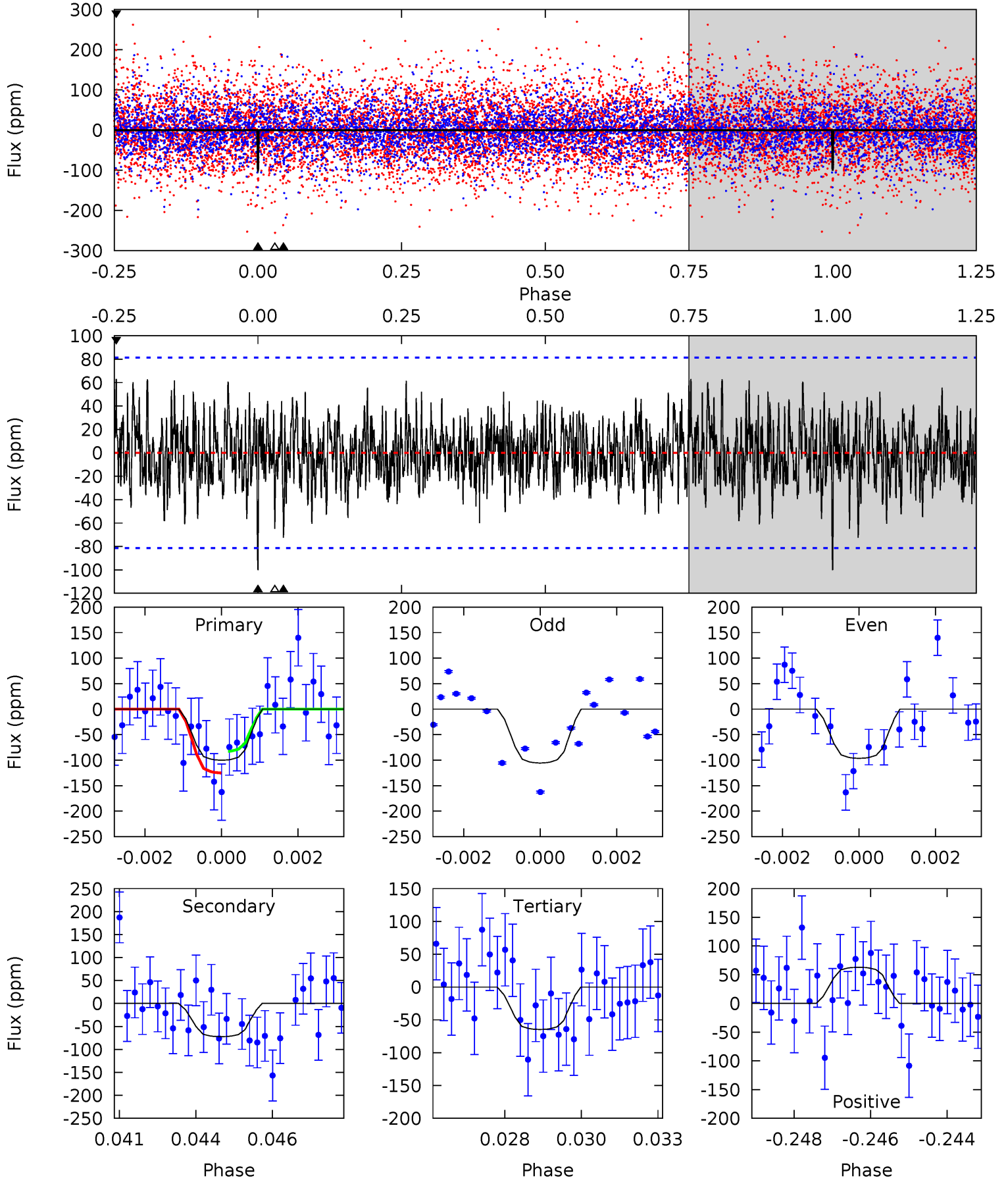
TCE 007523115-06 P= 40.691440 Days $T_0=148.897257$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-06, P = 40.691456 Days, E = 108.179486 Days

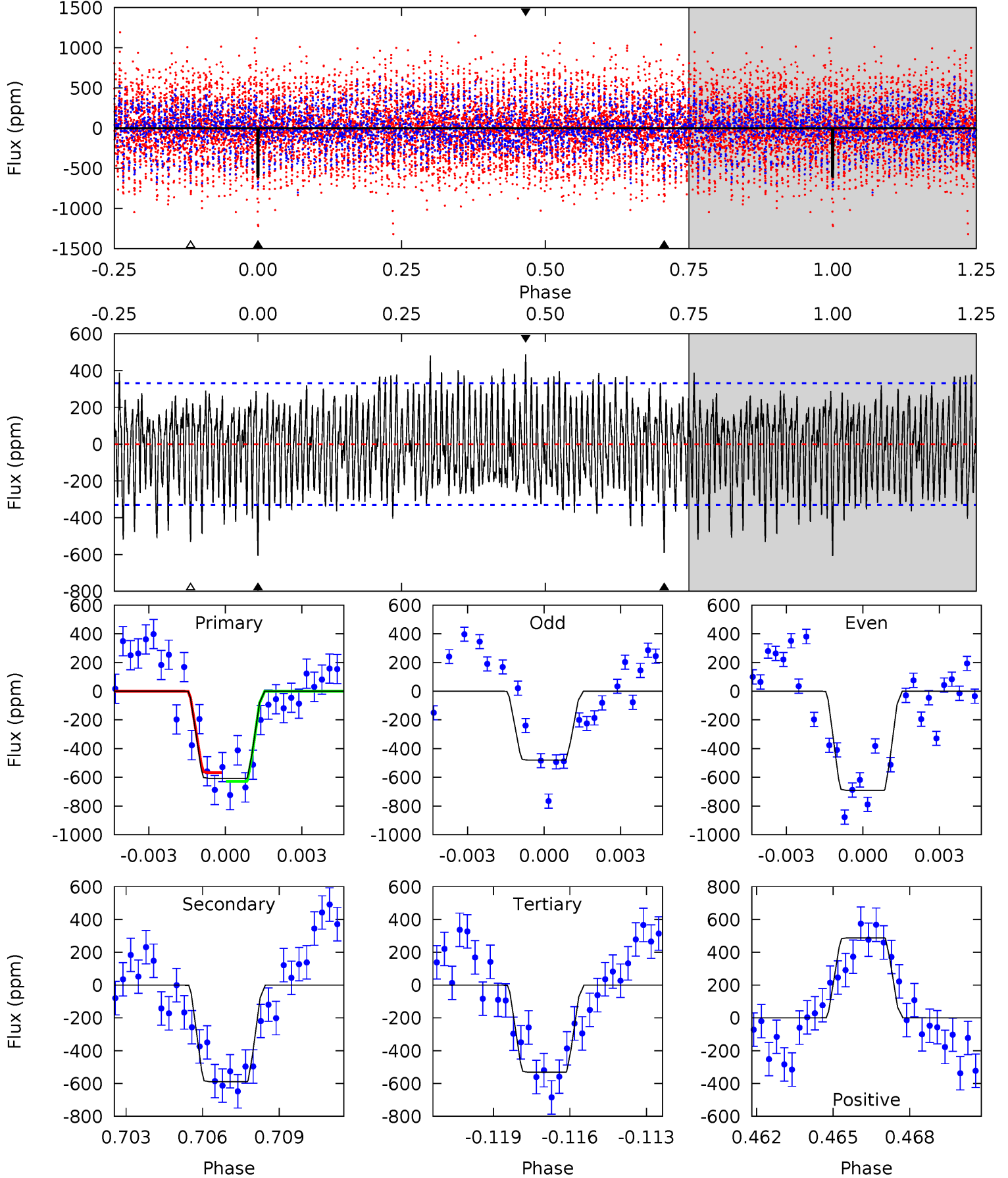
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.54	4.72	4.22	4.12	5.31	3.06	1.37	2.32	2.42	0.50	0.61	0.30	0.95	0.39	1.30



Alt Model-Shift Uniqueness Test

007523115-06, P = 40.691440 Days, E = 108.205817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.66	9.37	8.44	7.75	5.25	2.97	2.99	1.21	1.90	0.92	1.62	1.63	1.11	0.45	0.46



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-72 ± 15	$3.88^{+3.84}_{-2.69}$	1659^{+128}_{-202}	6570^{+9447}_{-1666}	222^{+2192}_{-167}
Alt.	-589 ± 63	$7.80^{+4.65}_{-3.96}$	1651^{+143}_{-176}	8046^{+5777}_{-1663}	453^{+1414}_{-271}

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

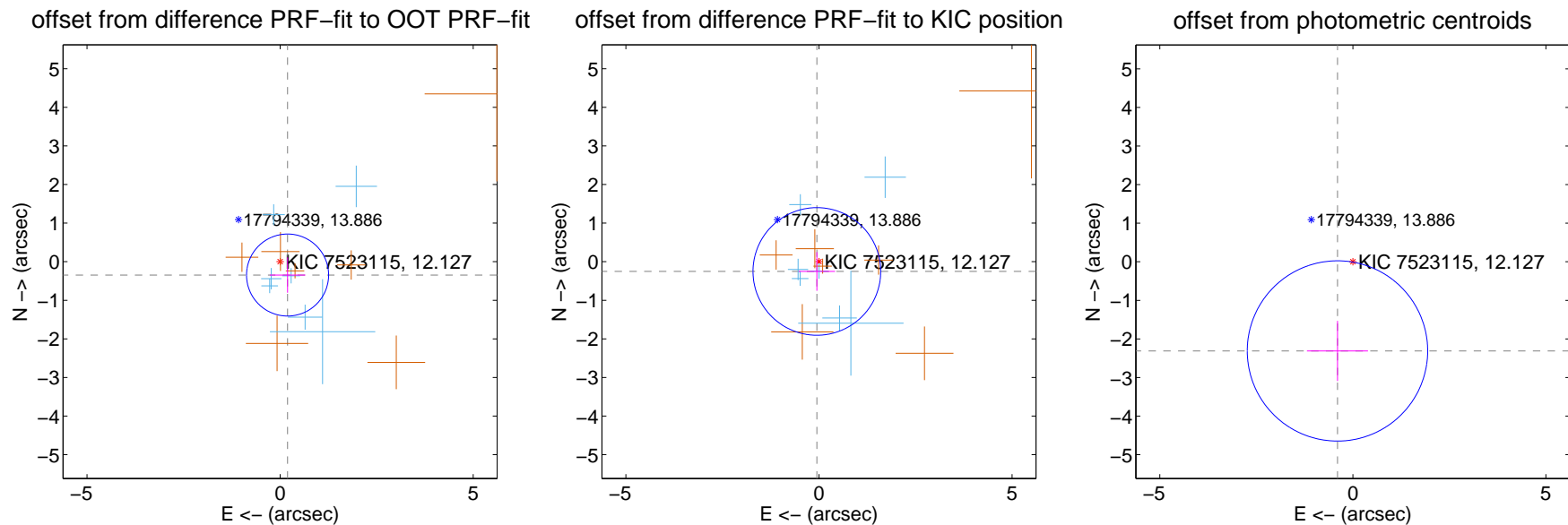
DV Centroid Data

Supplemental centroid analysis for 007523115-06. Kepler magnitude: 12.13. Transit SNR 7.53

There are 7 quarters with good PRF difference image offsets

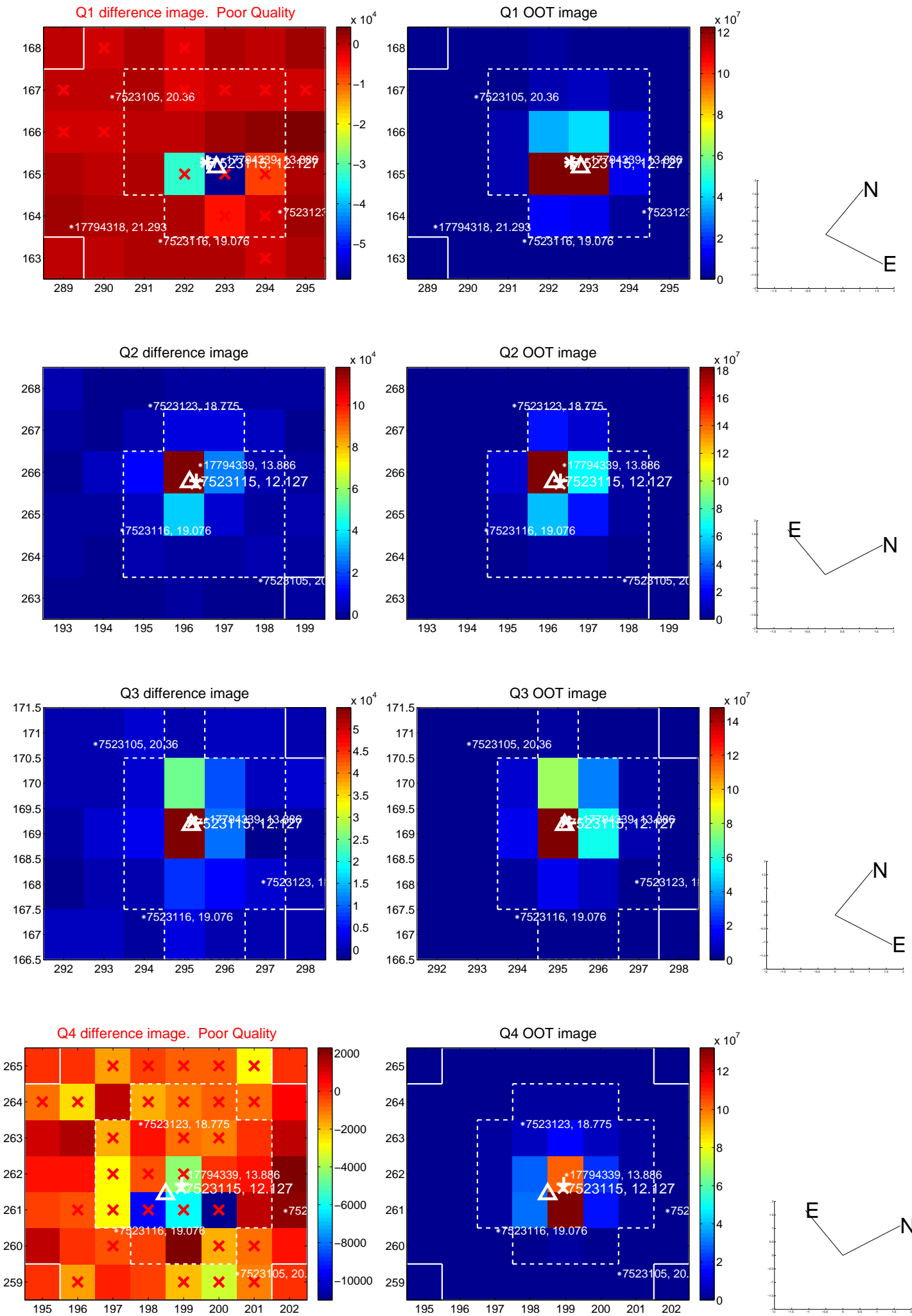
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.396 ± 0.354	1.12	-0.193 ± 0.459	-0.346 ± 0.457
PRF-fit source offset from KIC position	0.258 ± 0.551	0.47	0.055 ± 0.471	-0.252 ± 0.500
photometric centroid source offset	2.34 ± 0.78	3.01	0.40 ± 0.79	-2.31 ± 0.78

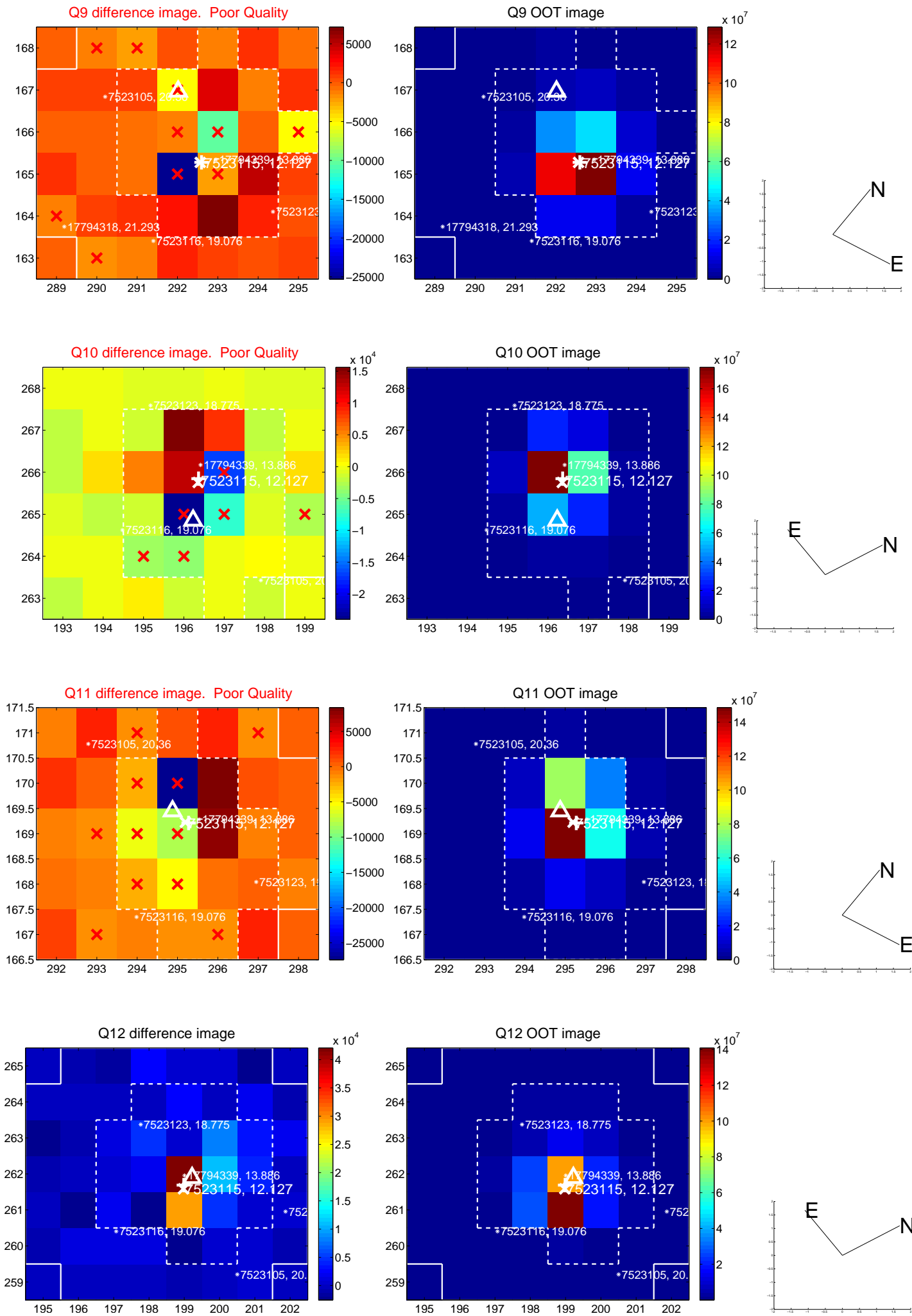


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

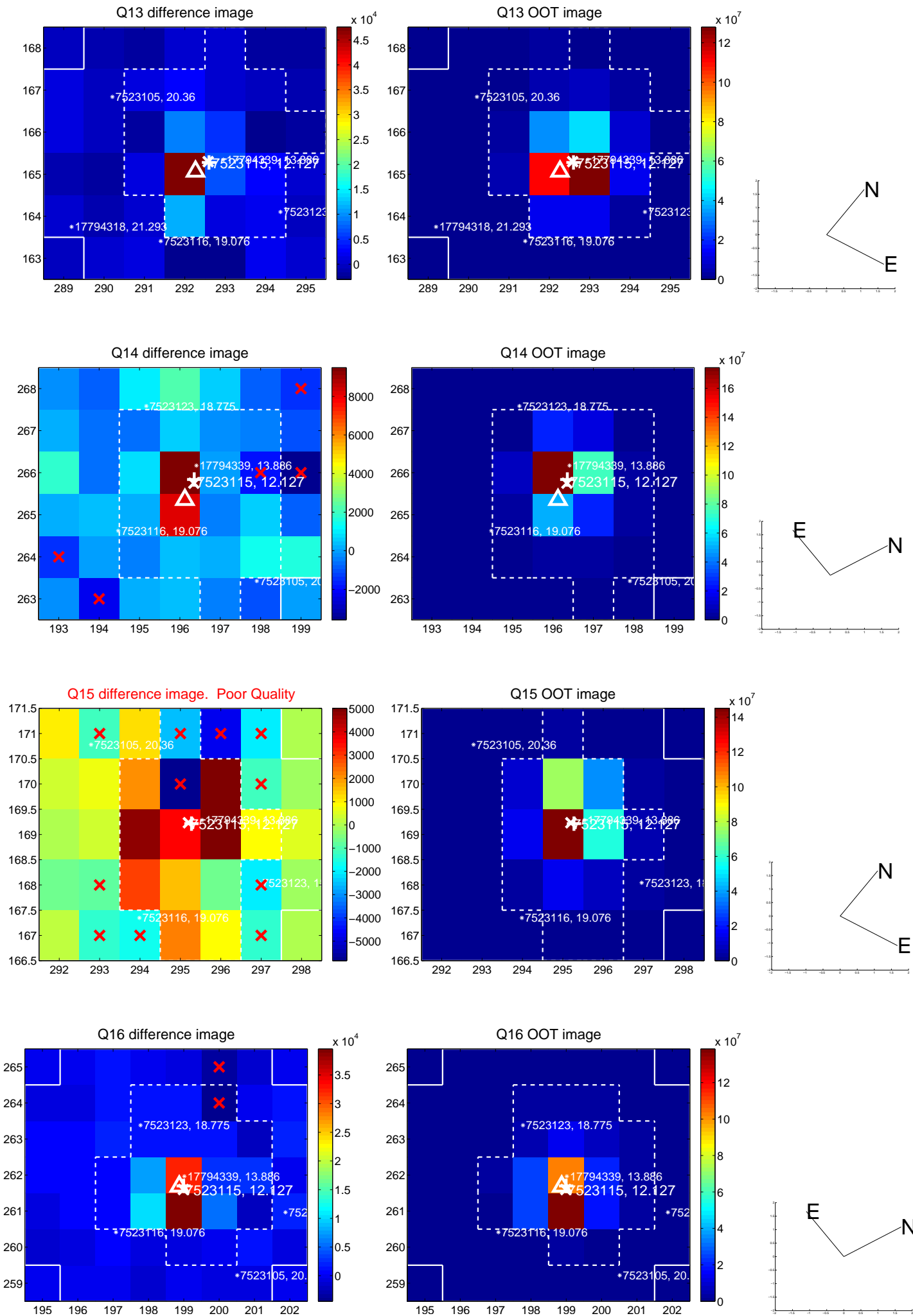
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



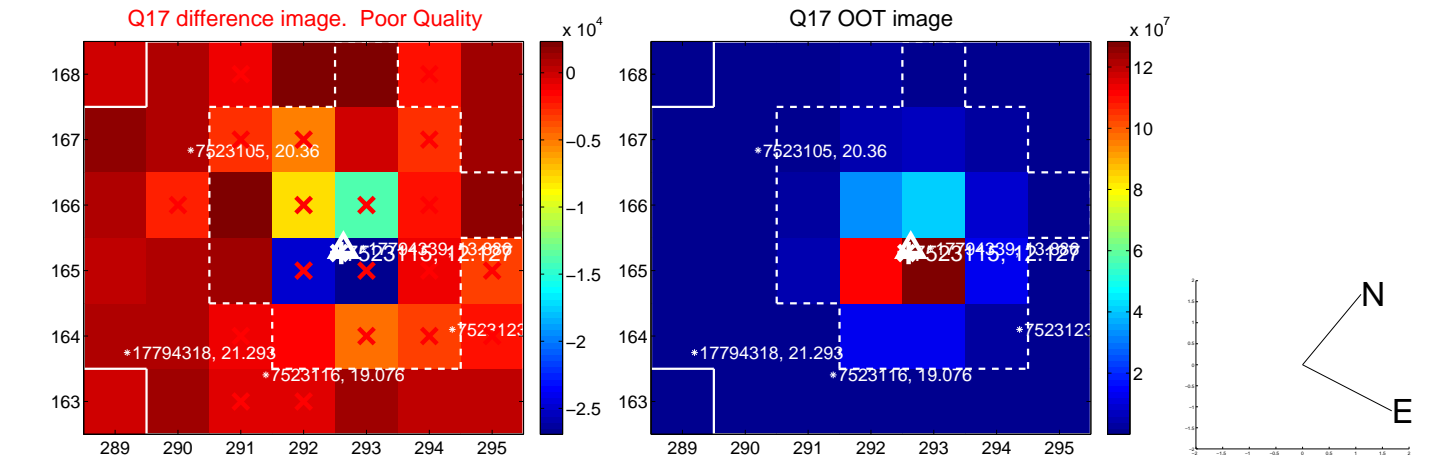
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



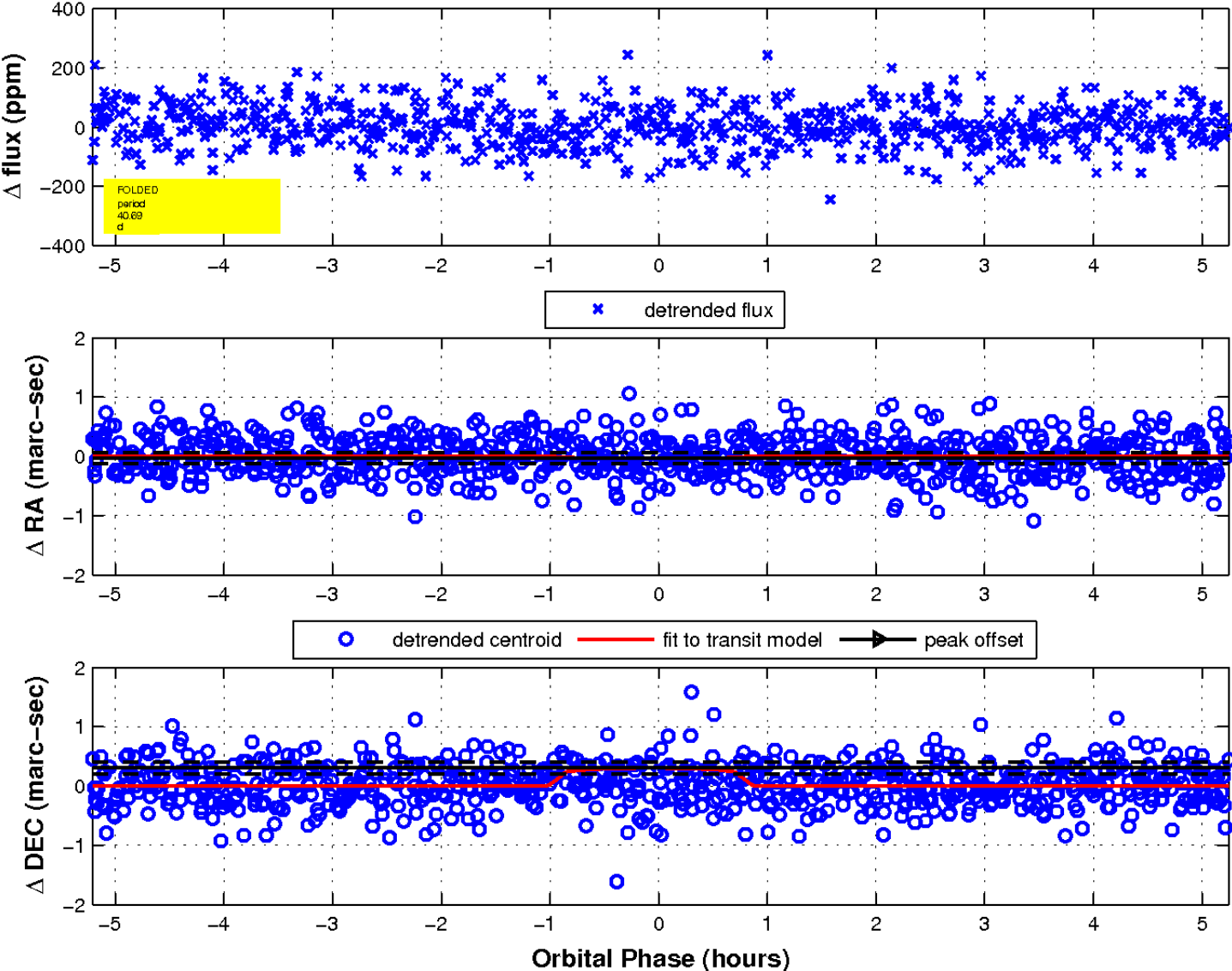
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

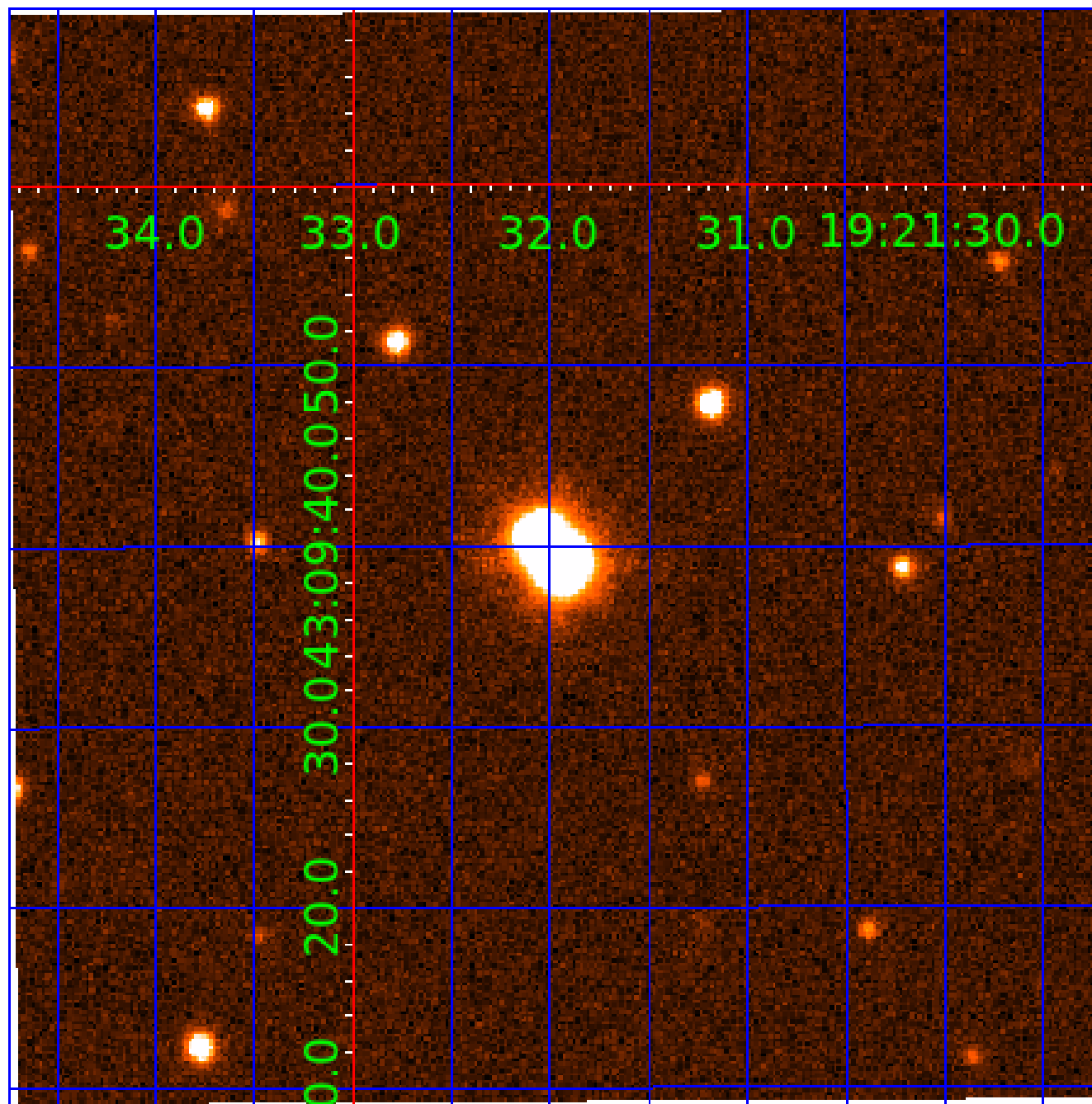


fluxWeightedCentroids, Planet 6 of 8



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

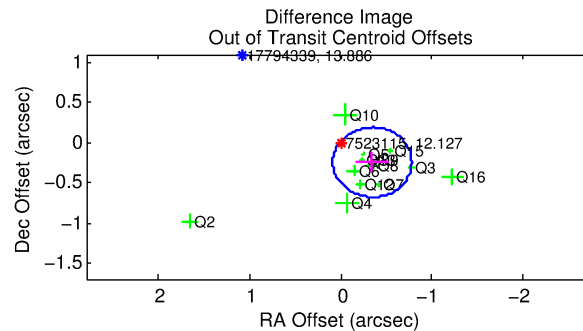
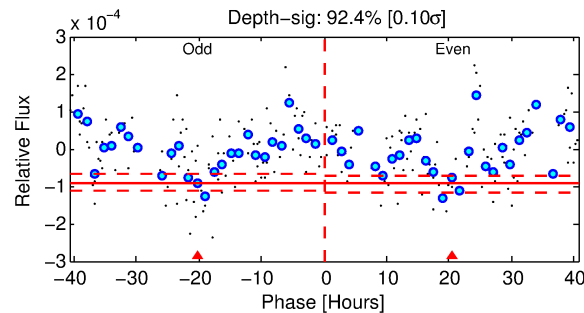
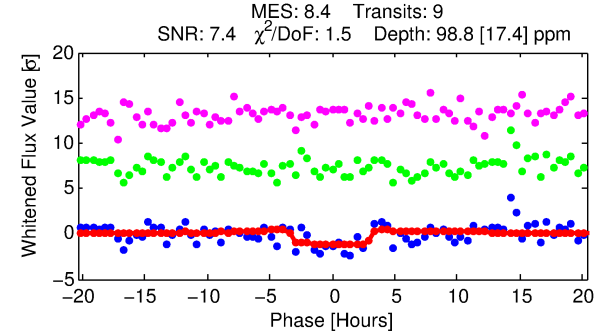
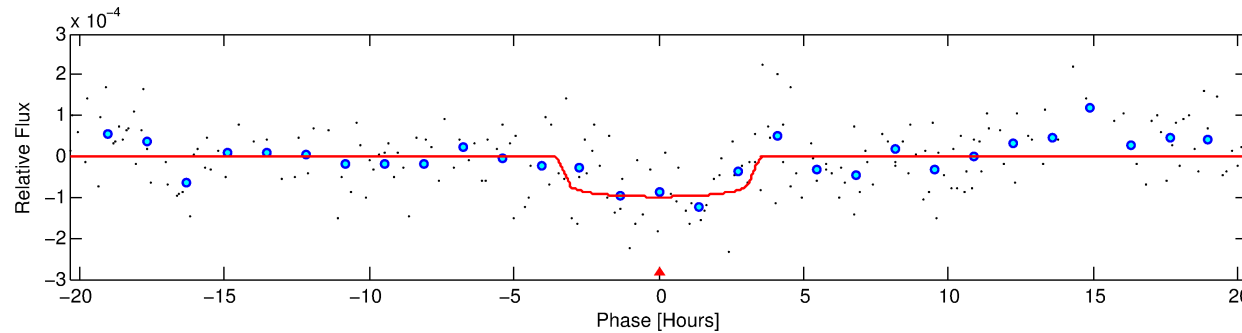
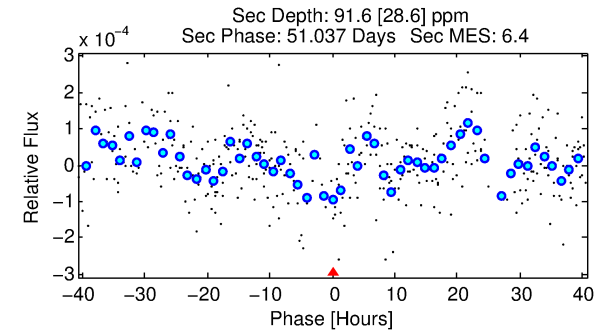
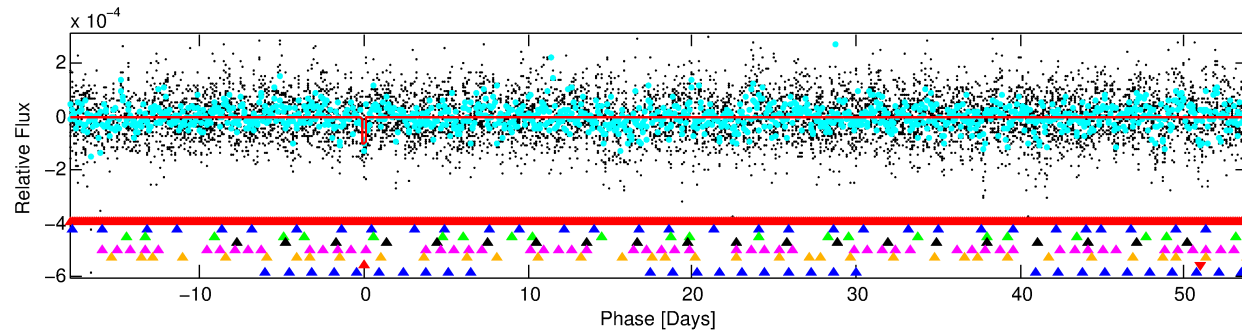
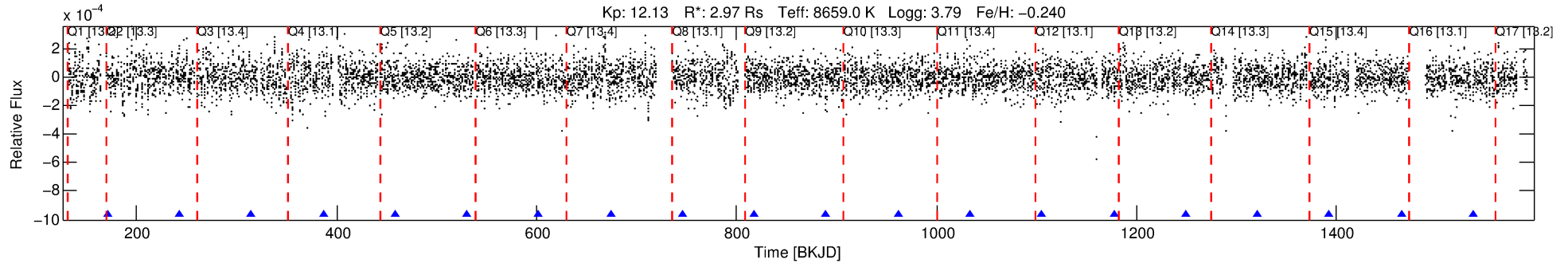
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-07

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 7 of 8 Period: 71.852 d



DV Fit Results:

Period = 71.85226 [0.00099] d
Epoch = 171.2425 [0.0128] BKJD
Rp/R* = 0.0101 [0.0041]
a/R* = 47.17 [119.54]
b = 0.83 [0.99]
Seff = 245.65 [173.67]
Teq = 1009 [178] K
Rp = 3.29 [1.95] Re
a = 0.4257 [0.1805] AU
Ag = 844.09 [934.02] [0.90σ]
Teffp = 8413 [1863] K [3.95σ]

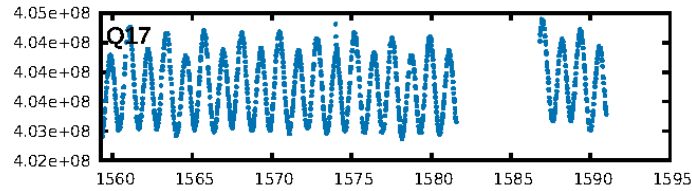
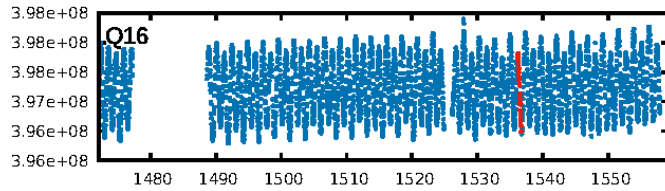
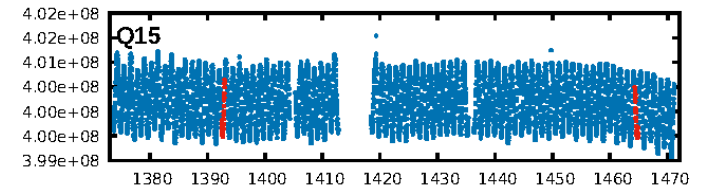
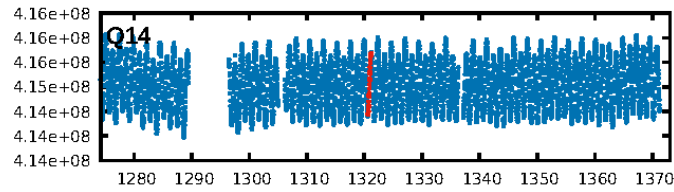
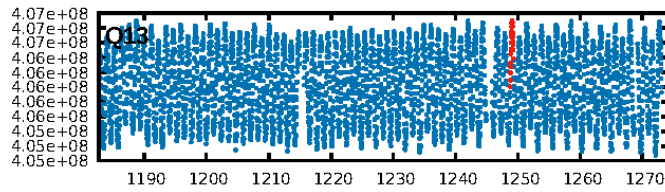
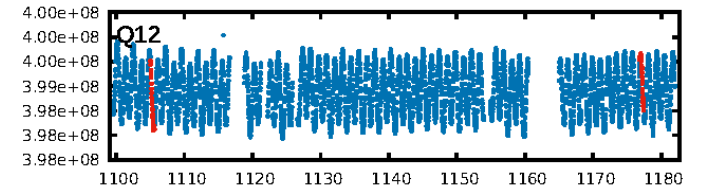
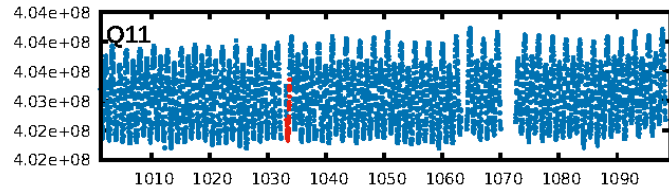
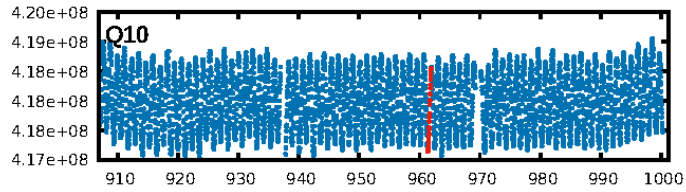
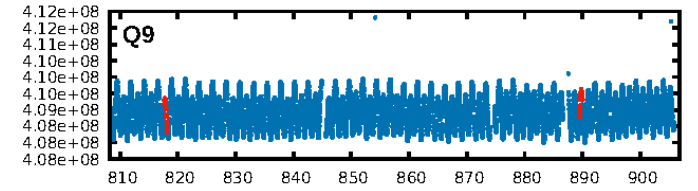
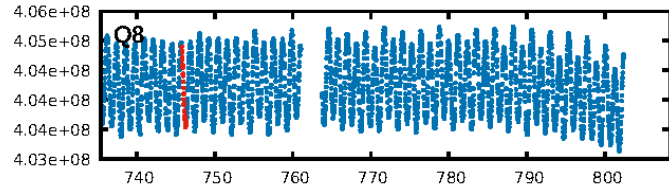
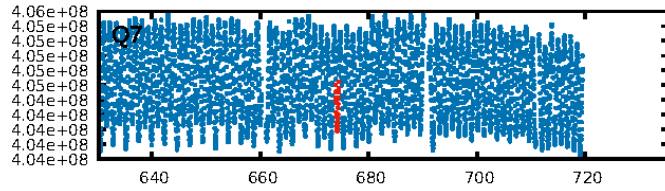
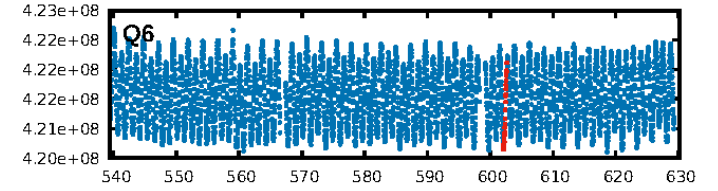
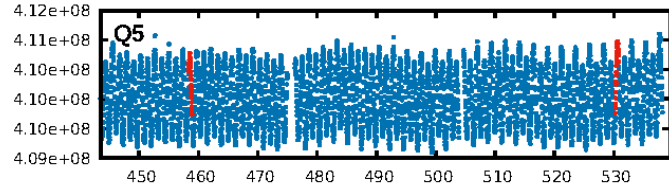
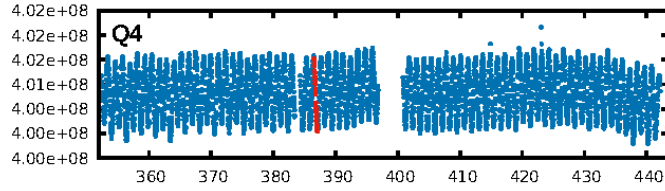
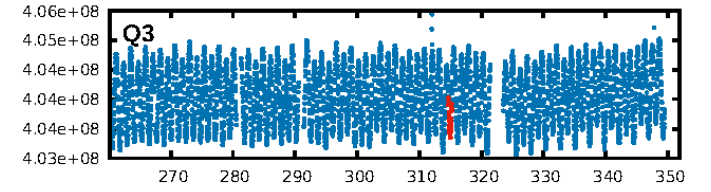
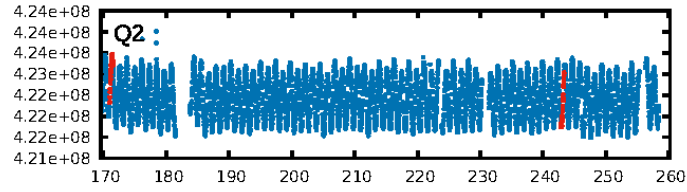
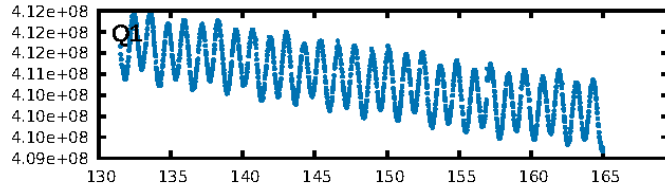
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.94σ]
LongPeriod-sig: 100.0% [7.04σ]
ModelChiSquare2-sig: 14.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.18e-10
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5466
Centroid-sig: 37.6%
Centroid-so: 0.667 arcsec [0.84σ]
OotOffset-rm: 0.426 arcsec [2.93σ]
KicOffset-rm: 0.237 arcsec [1.64σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 0.00 [0/14]

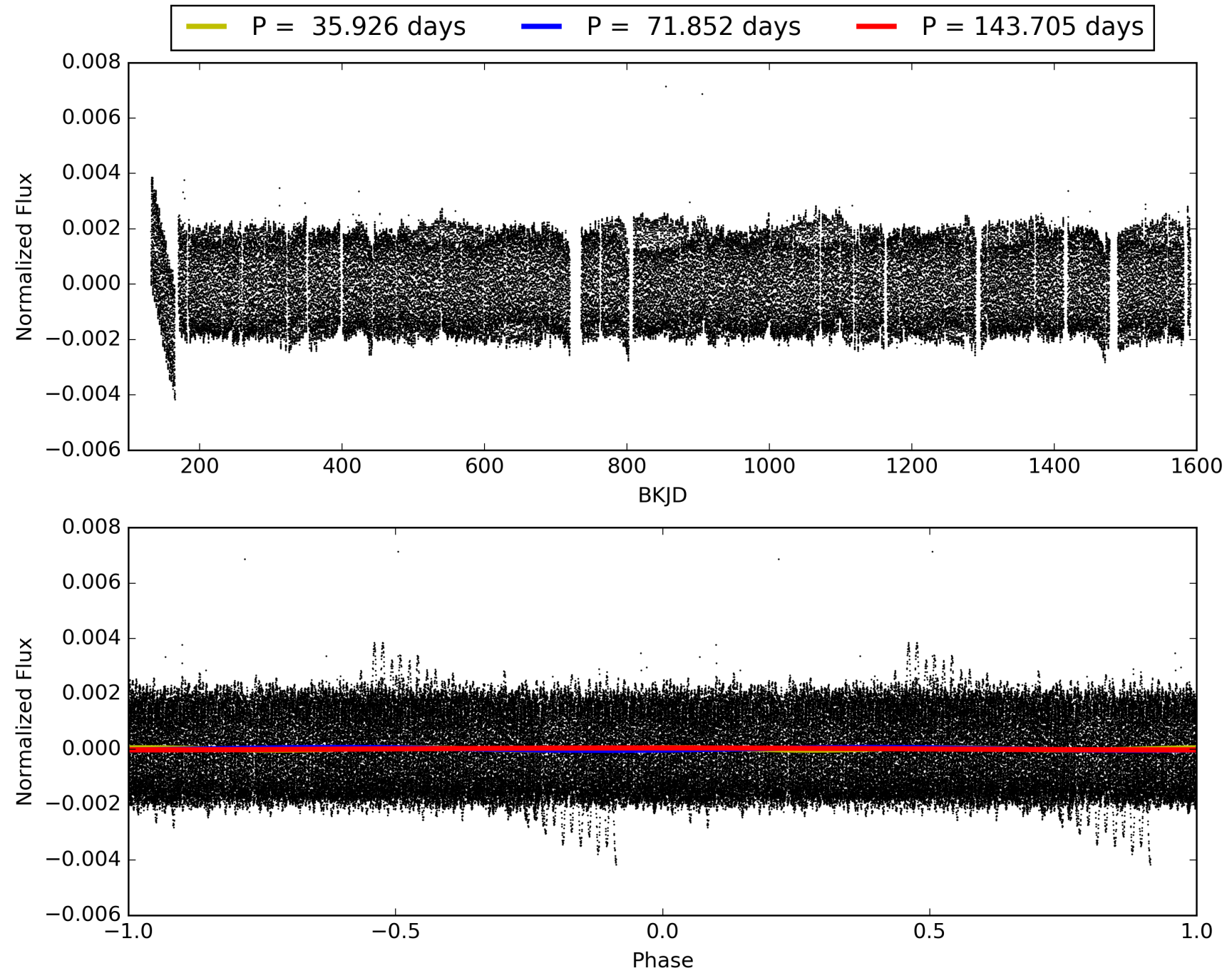
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:32 Z

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

TCE 007523115-07, PDC Light Curves

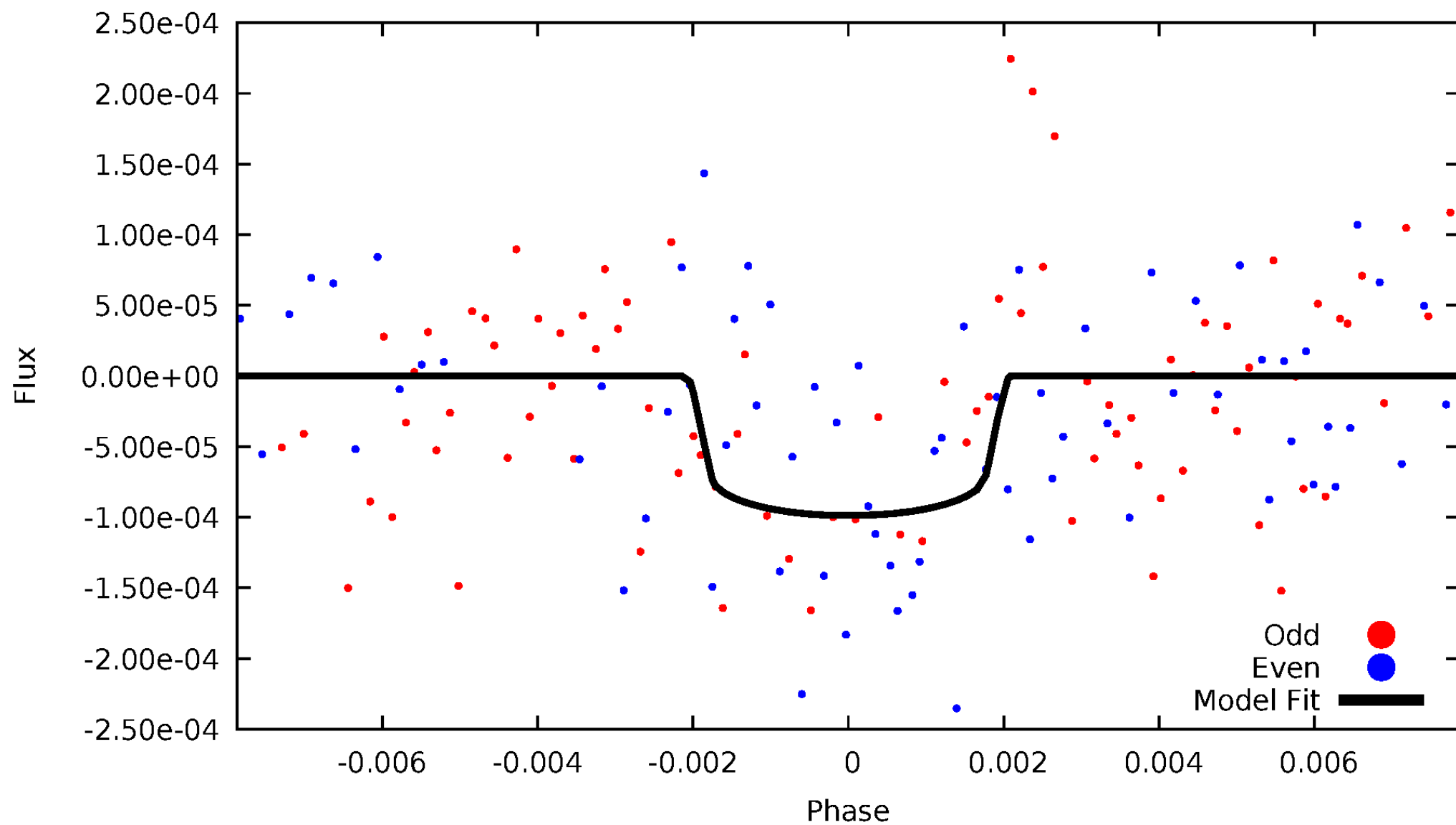


TCE 007523115-07



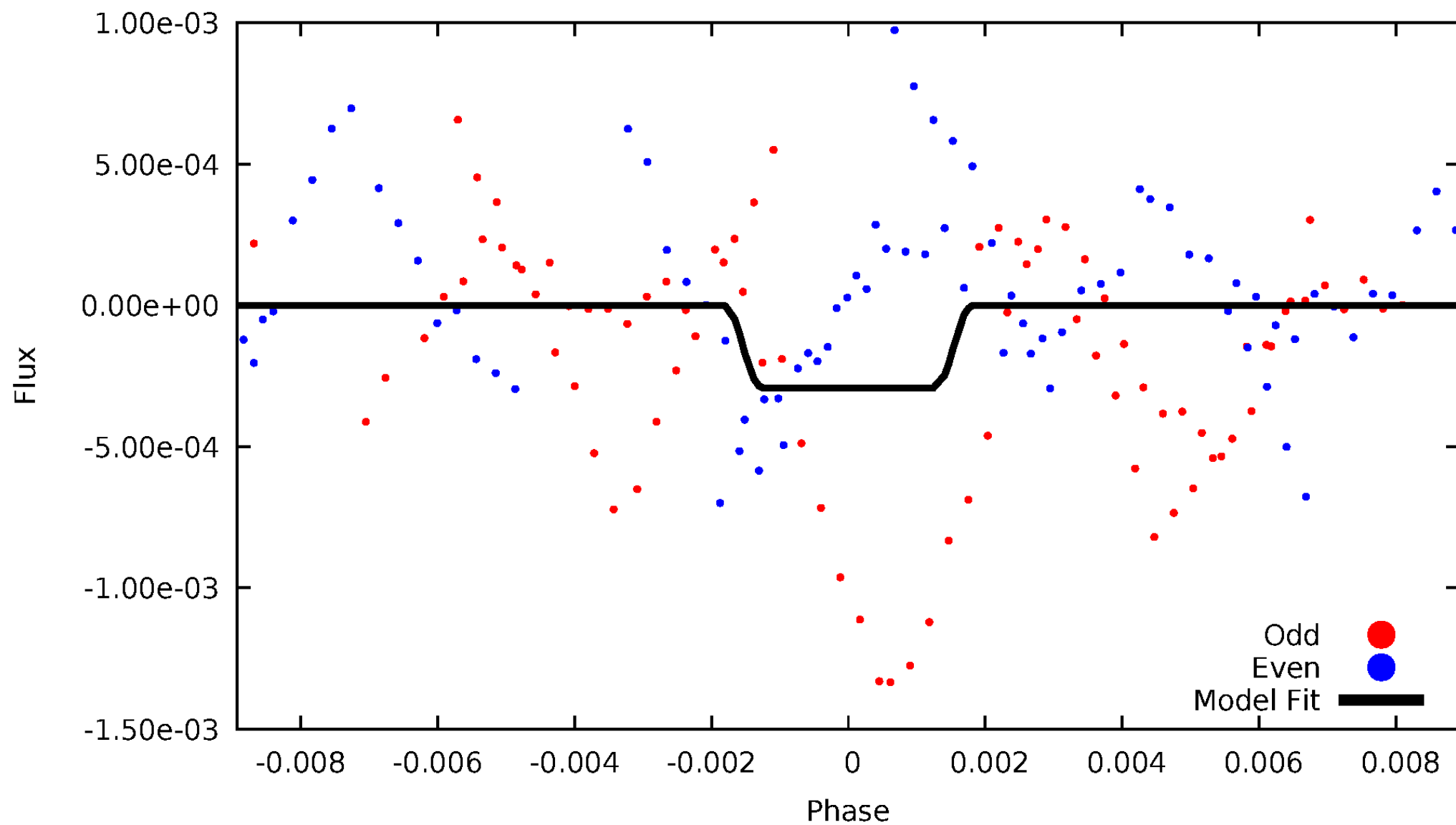
DV Odd/Even

TCE 007523115-07



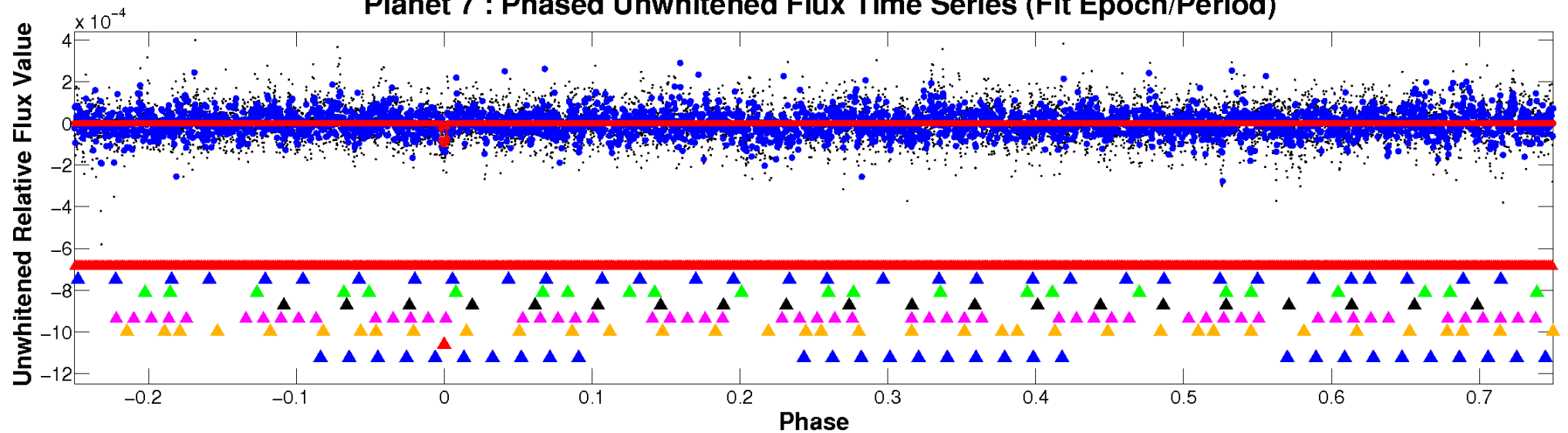
ALT Odd/Even

TCE 007523115-07

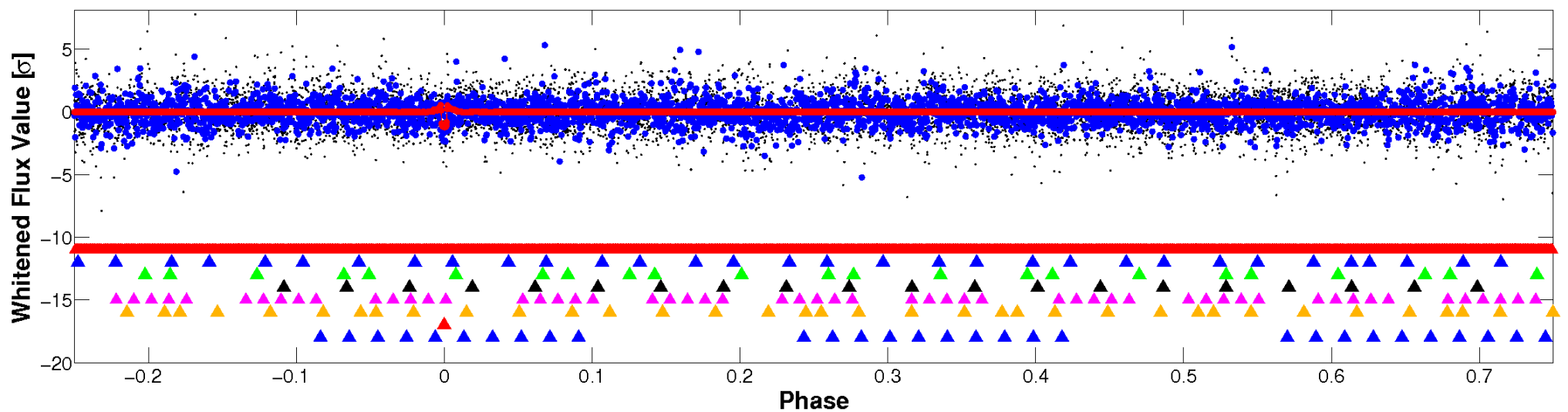


Non-Whitened Vs. Whitened Light Curve

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

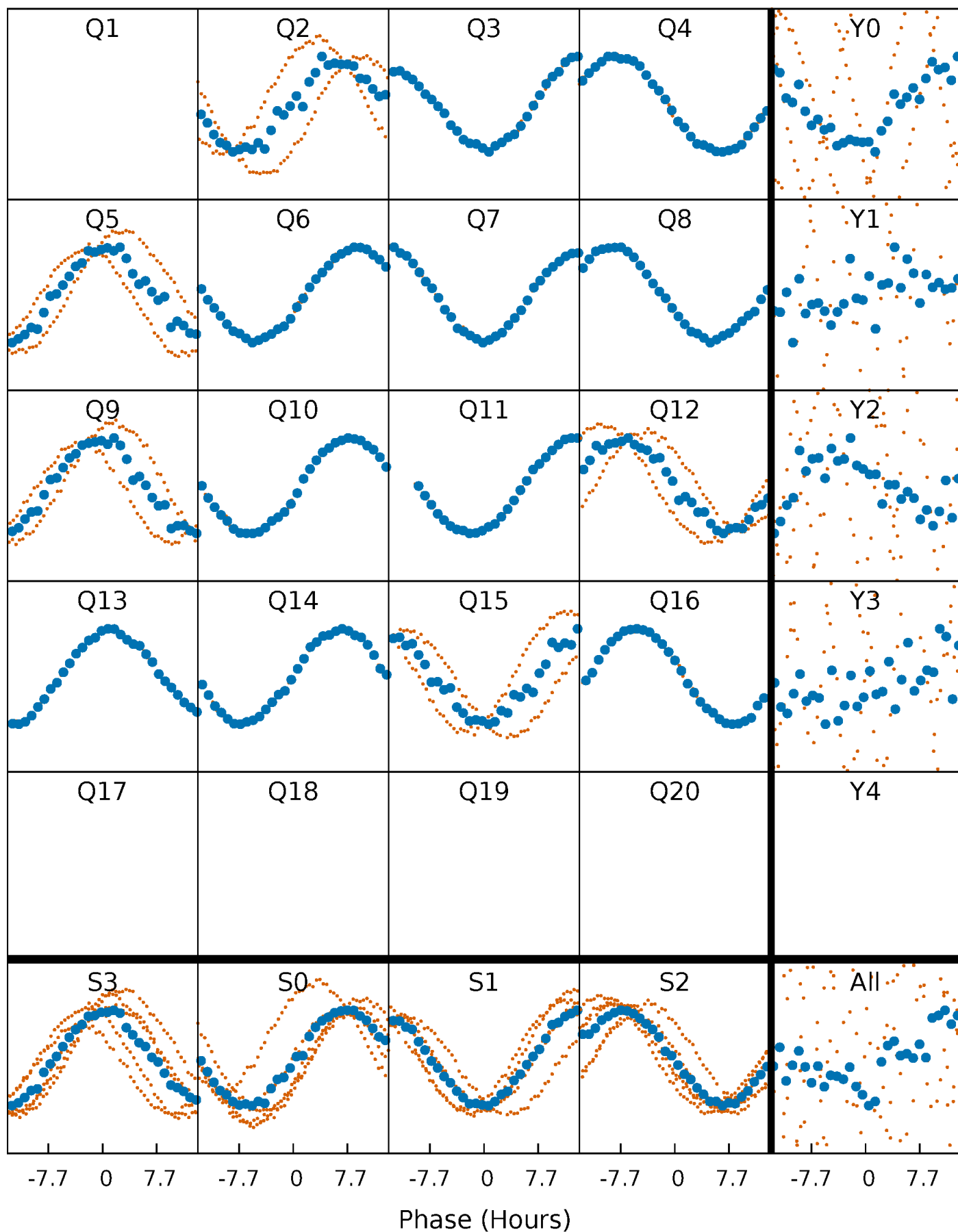


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



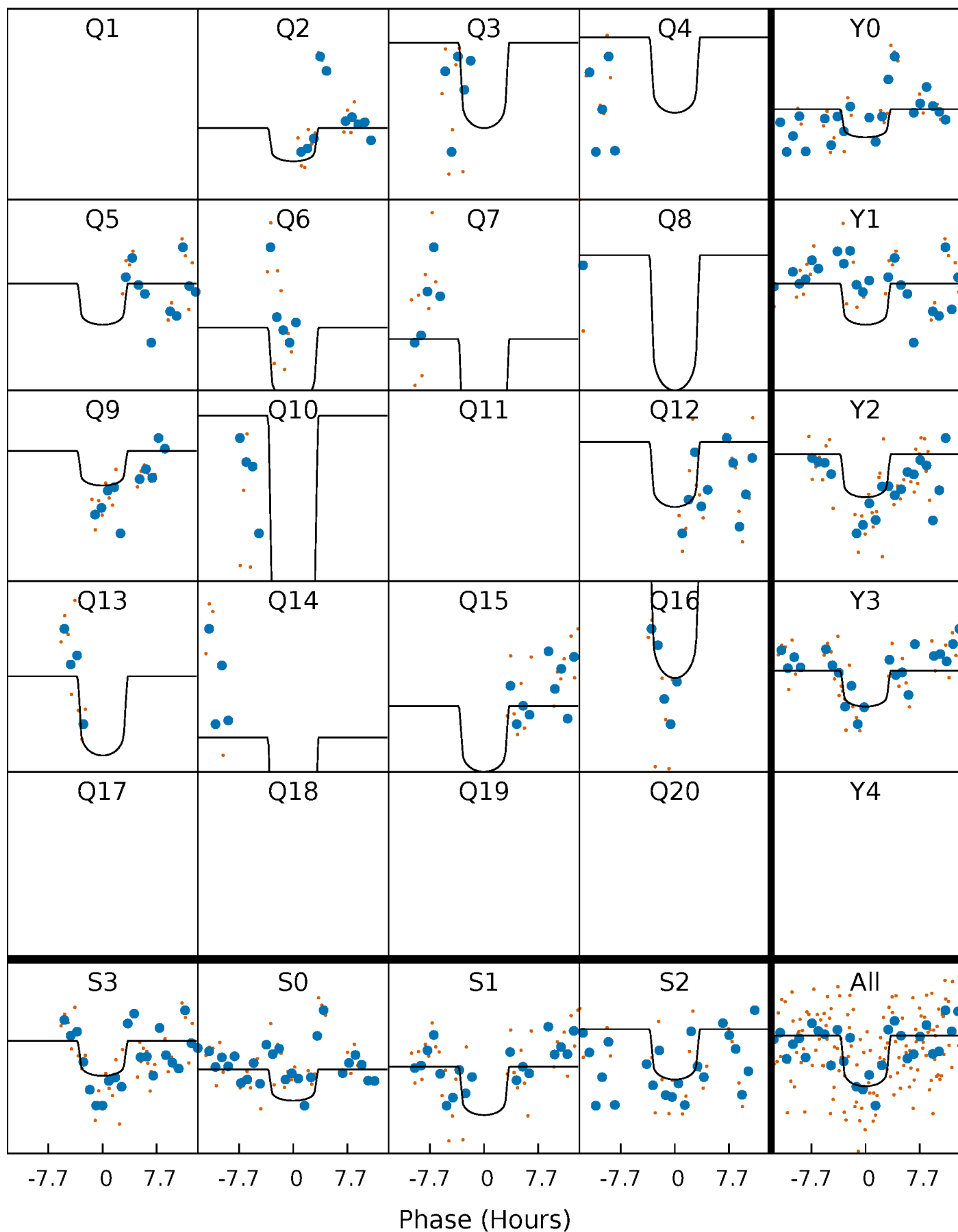
PDC Quarter-Phased Transit Curves

TCE 007523115-07 P= 71.852262 Days $T_0=171.242490$ (BKJD)



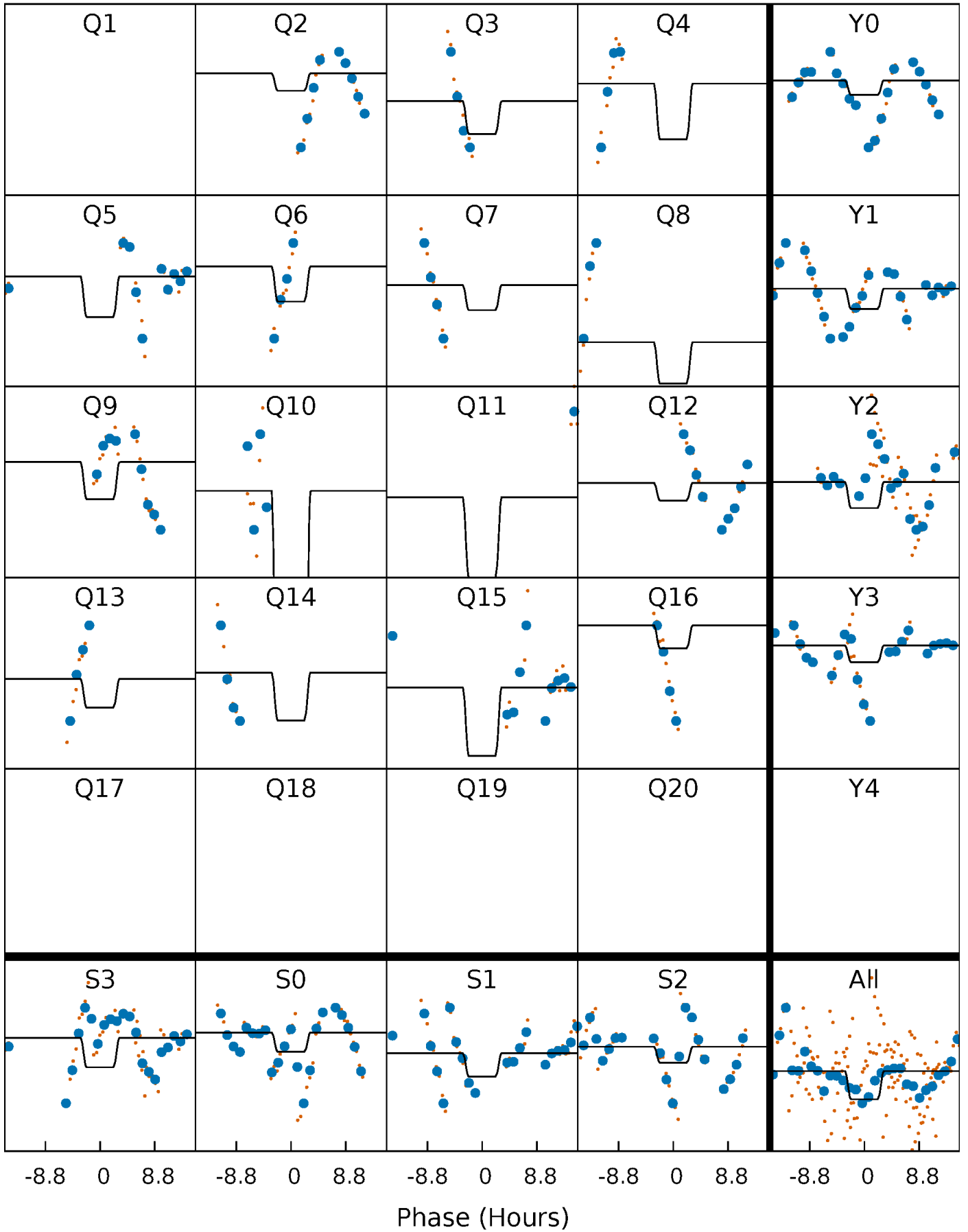
DV Quarter-Phased Transit Curves

TCE 007523115-07 P= 71.852262 Days $T_0=171.242490$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

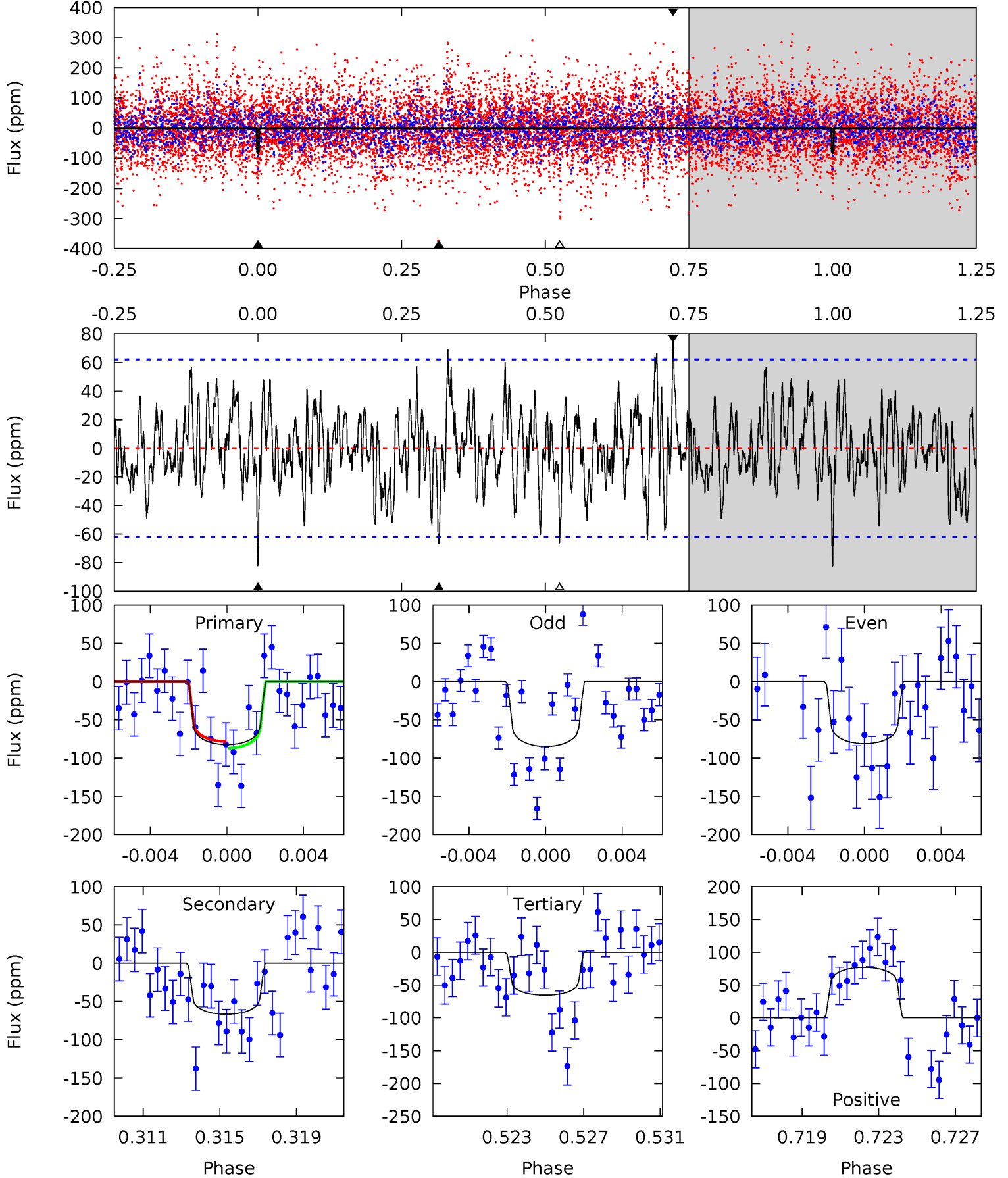
TCE 007523115-07 P= 71.851741 Days $T_0=171.226387$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-07, P = 71.852262 Days, E = 99.390228 Days

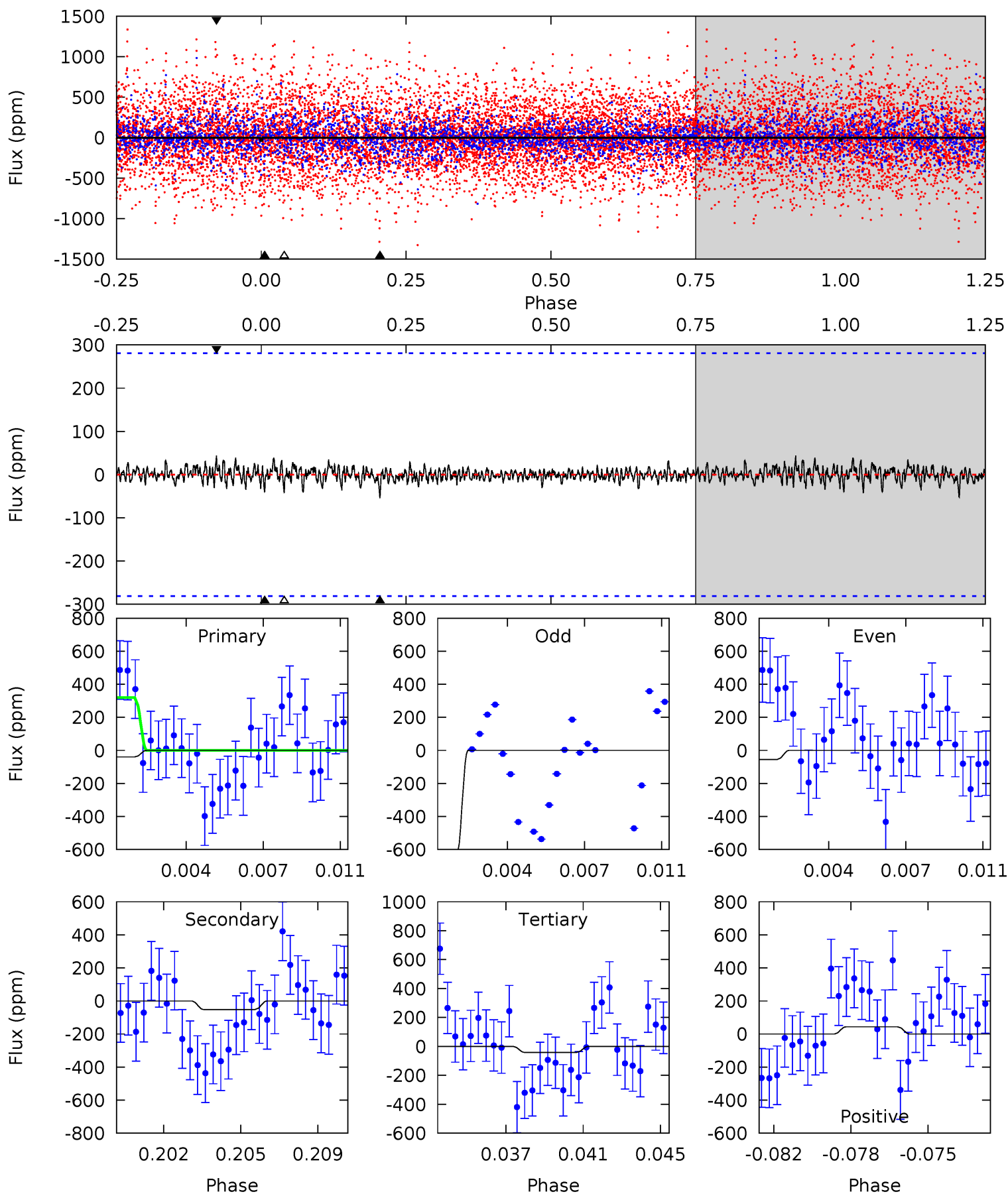
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.91	5.59	5.48	6.45	5.20	2.87	1.90	1.42	0.45	0.10	-0.87	0.15	0.99	0.48	0.37



Alt Model-Shift Uniqueness Test

007523115-07, P = 71.851741 Days, E = 99.374646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.74	0.96	0.77	0.81	5.21	2.90	0.22	-0.03	-0.07	0.19	0.15	5.79	1.03	0.46	0.58



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-67 ± 12	$2.95^{+1.54}_{-1.32}$	1371^{+119}_{-163}	7599^{+3519}_{-1329}	776^{+1729}_{-451}
Alt.	-52 ± 54	$5.12^{+1.83}_{-1.53}$	1367^{+118}_{-154}	5308^{+1382}_{-8458}	171^{+343}_{-180}

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

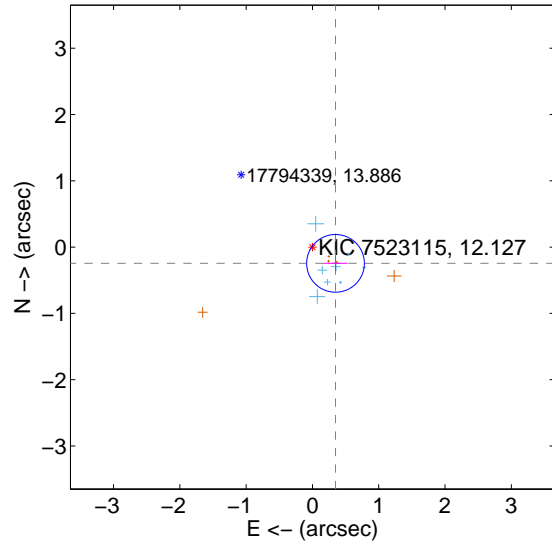
Supplemental centroid analysis for 007523115-07. Kepler magnitude: 12.13. Transit SNR 7.43

There are 8 quarters with good PRF difference image offsets

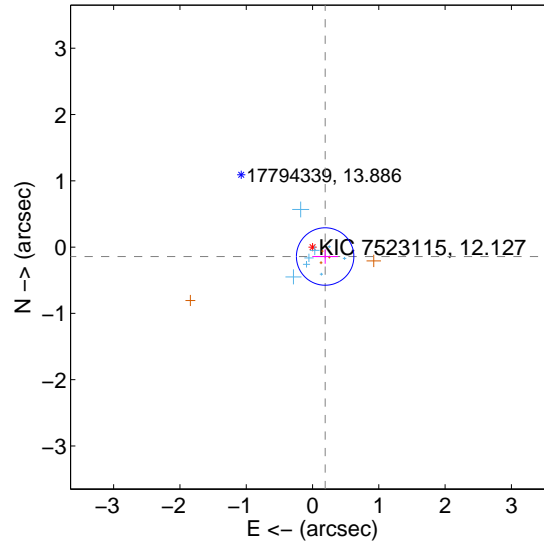
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.426 ± 0.145	2.93	-0.348 ± 0.183	-0.245 ± 0.116
PRF-fit source offset from KIC position	0.237 ± 0.144	1.64	-0.190 ± 0.194	-0.142 ± 0.110
photometric centroid source offset	0.67 ± 0.79	0.84	-0.45 ± 0.79	0.49 ± 0.79

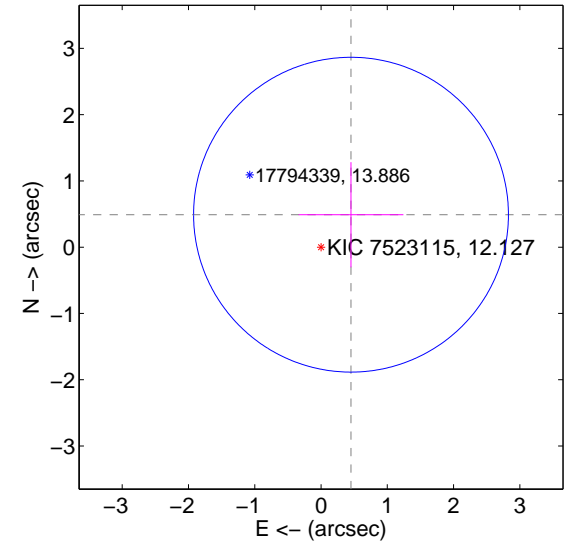
offset from difference PRF-fit to OOT PRF-fit



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.

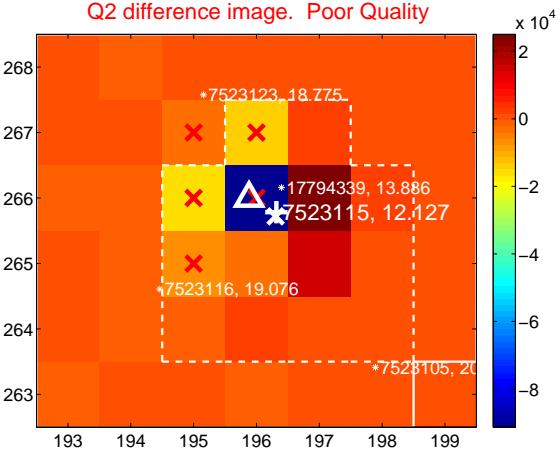
Q1 no difference image



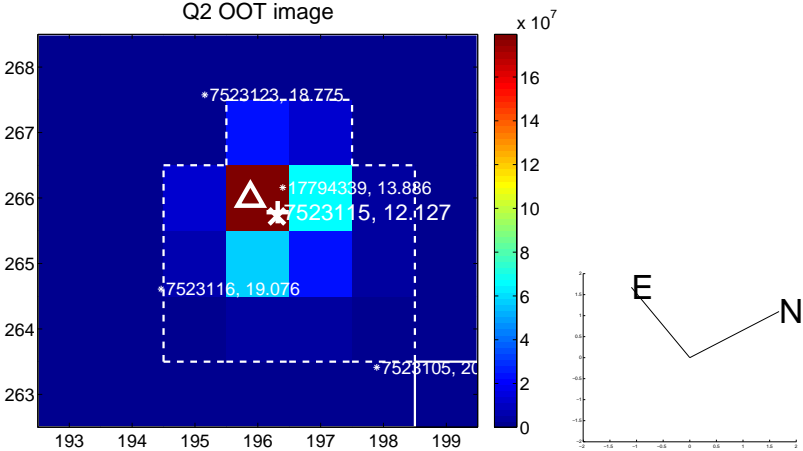
Q1 no OOT image



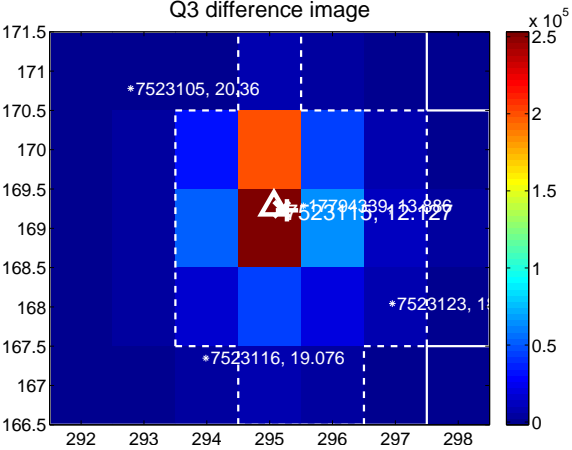
Q2 difference image. Poor Quality



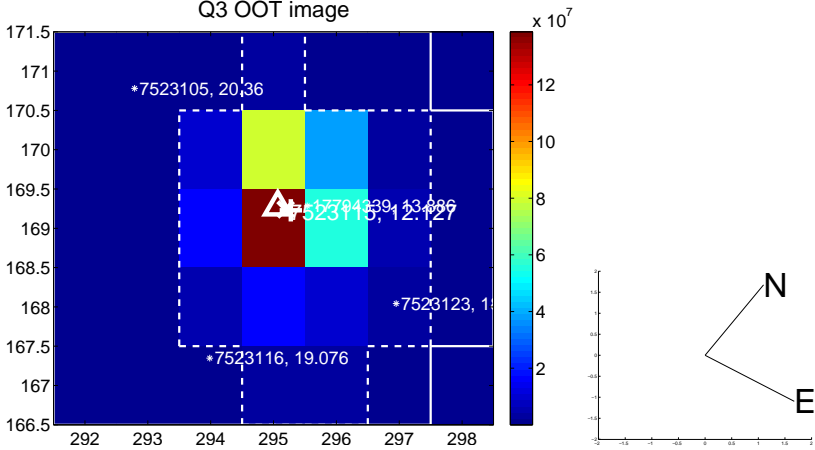
Q2 OOT image



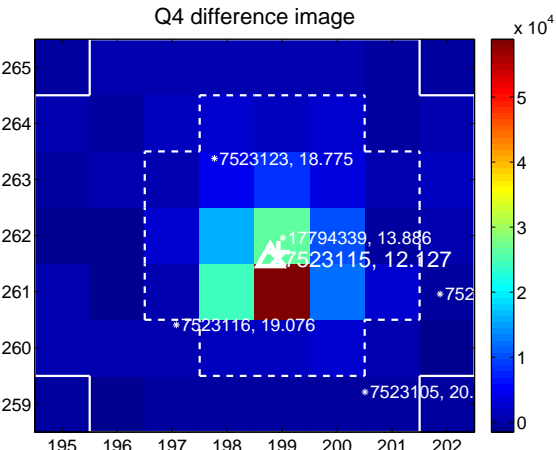
Q3 difference image



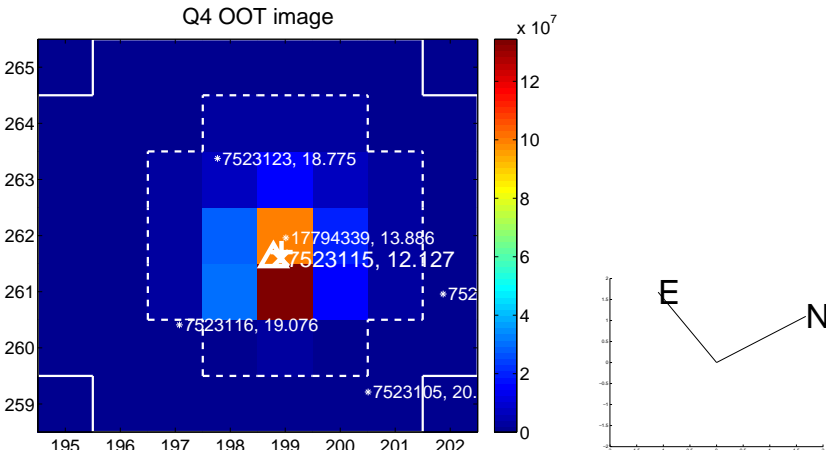
Q3 OOT image



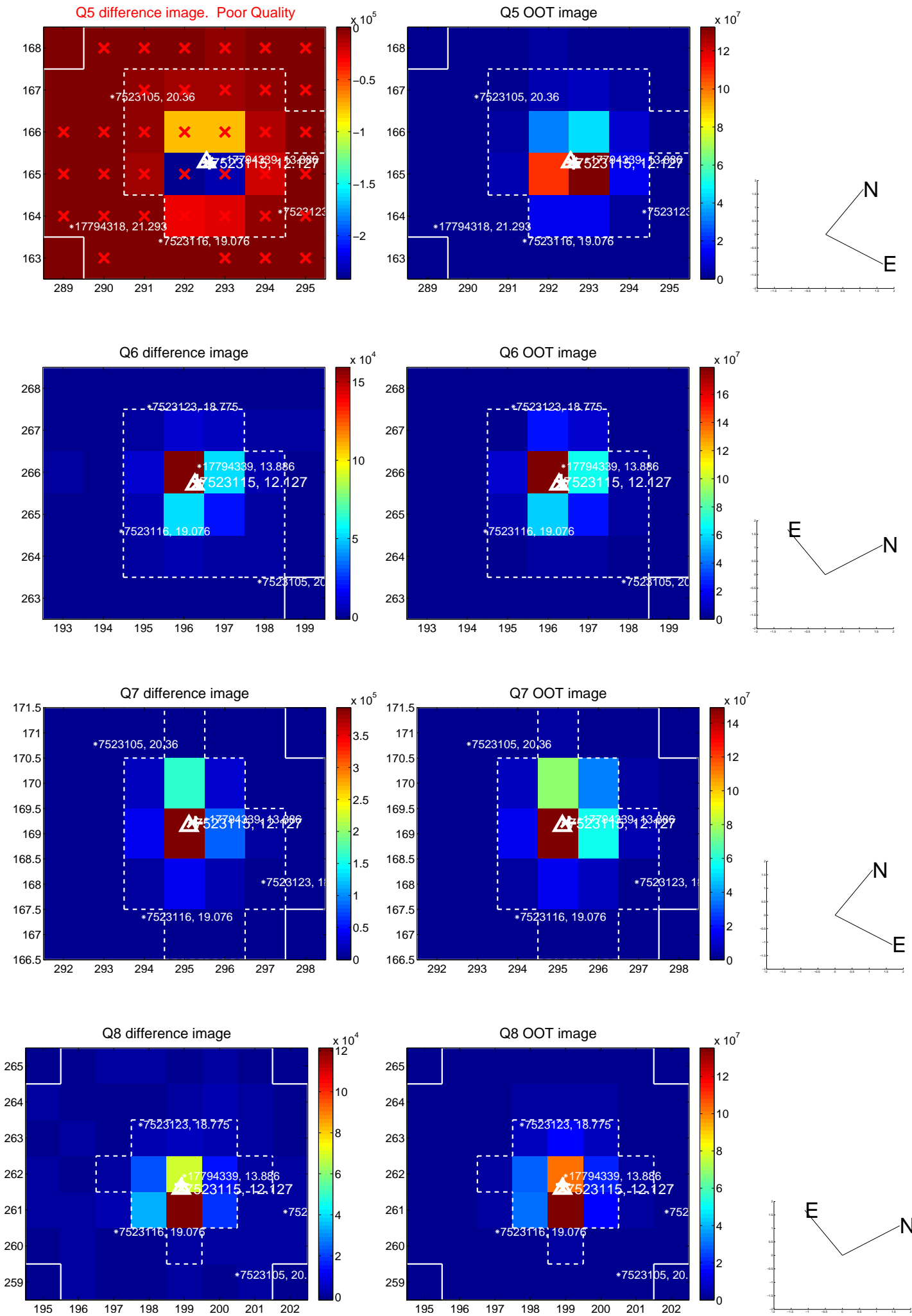
Q4 difference image



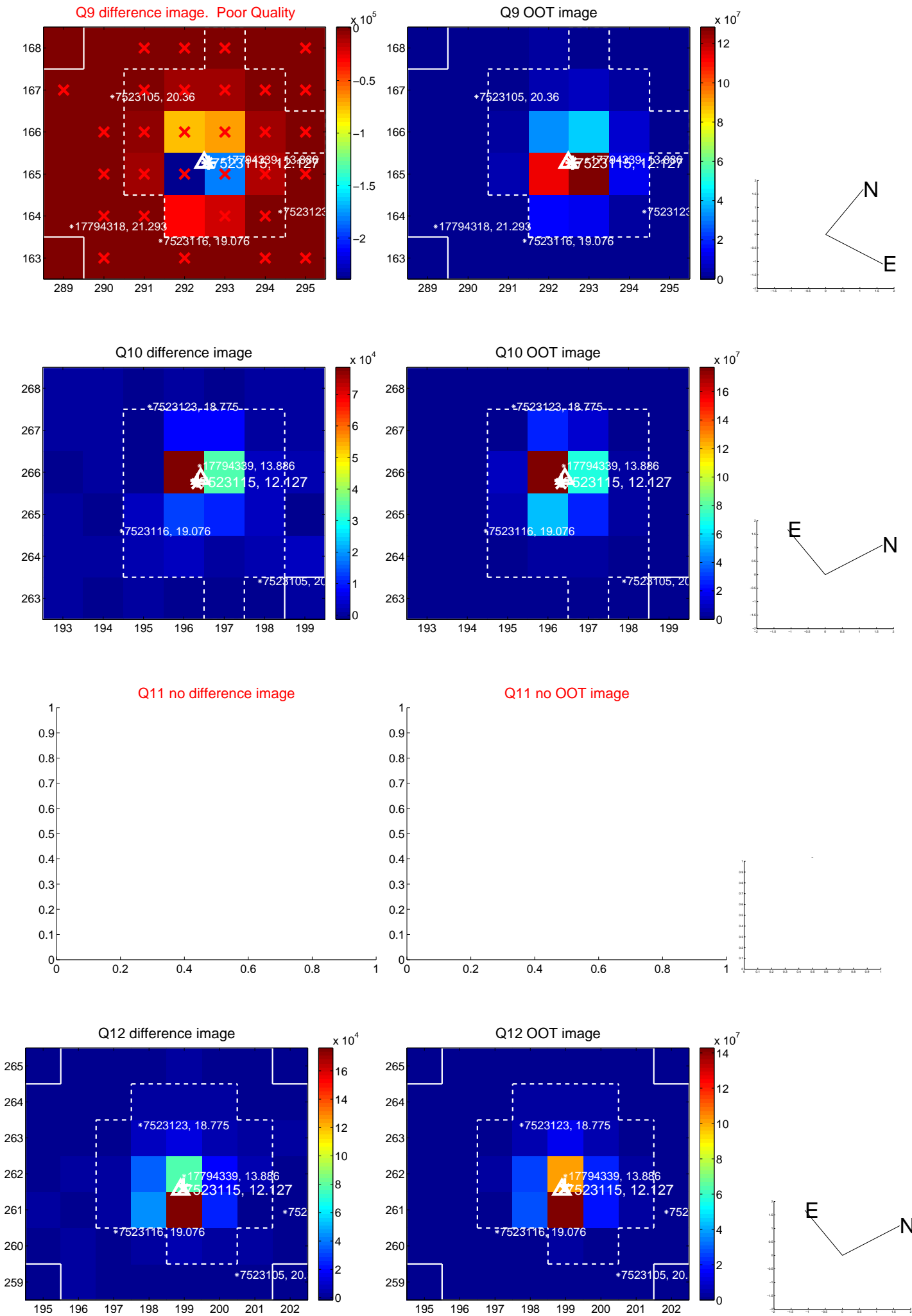
Q4 OOT image



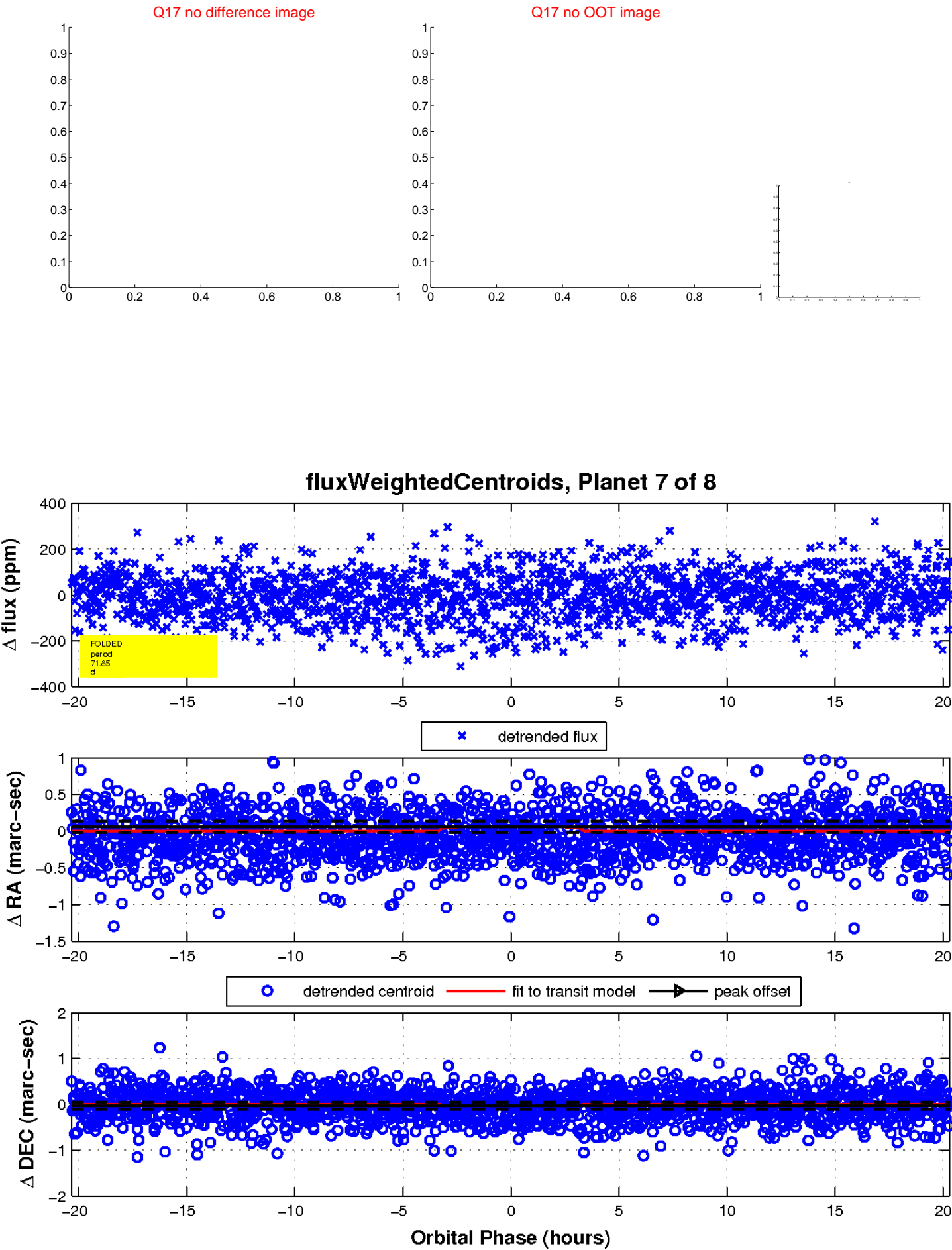
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

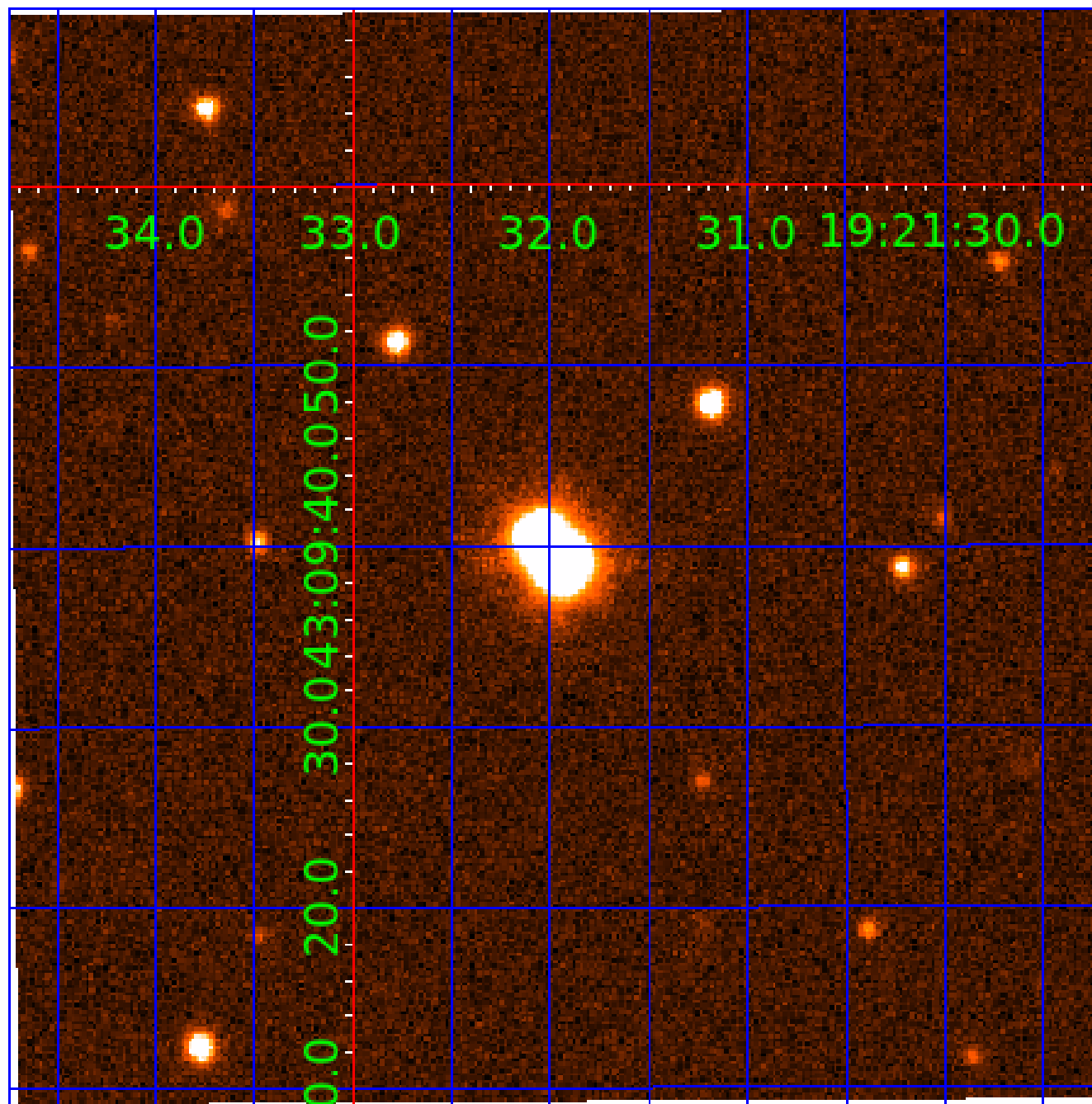


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007523115

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})
007523115-01	OBS	No	1.192944	131.662686	13.5	7.979	13.3	11.6	2.97	8659	1.11	57996.48
007523115-02	OBS	No	46.384905	143.464250	99.2	5.442	12.4	6.3	2.97	8659	3.02	440.28
007523115-03	OBS	No	62.190612	177.251177	170.7	0.838	11.5	6.4	2.97	8659	4.54	297.80
007523115-04	OBS	No	74.904229	163.453465	35.5	7.895	10.0	2.4	2.97	8659	2.04	232.39
007523115-05	OBS	No	26.050535	152.423916	125.6	0.910	9.1	7.6	2.97	8659	3.56	950.18
007523115-06	OBS	No	40.691456	148.870942	122.7	1.751	9.3	7.5	2.97	8659	3.37	524.27
007523115-07	OBS	No	71.852262	171.242489	98.8	6.781	8.4	7.4	2.97	8659	3.29	245.65
007523115-08	OBS	No	48.365982	140.356581	27.0	3.158	8.4	1.9	2.97	8659	1.62	416.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007523115-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007523115-02	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
007523115-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007523115-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
007523115-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
007523115-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007523115-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

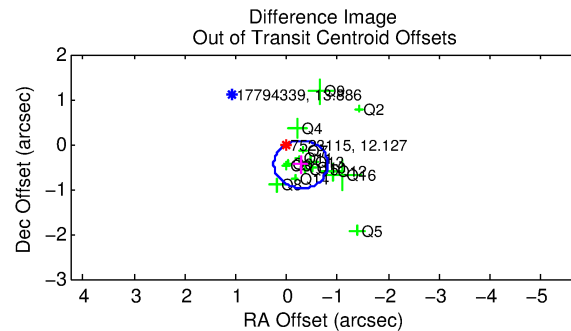
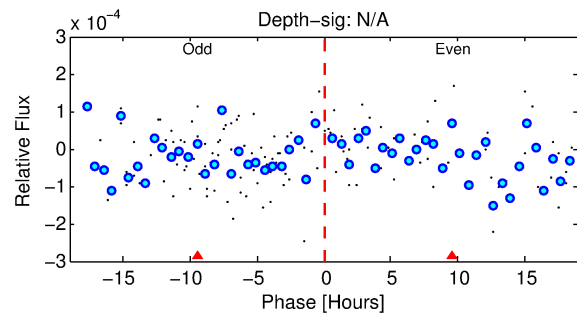
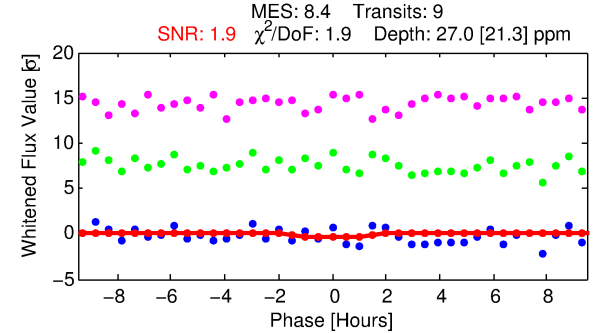
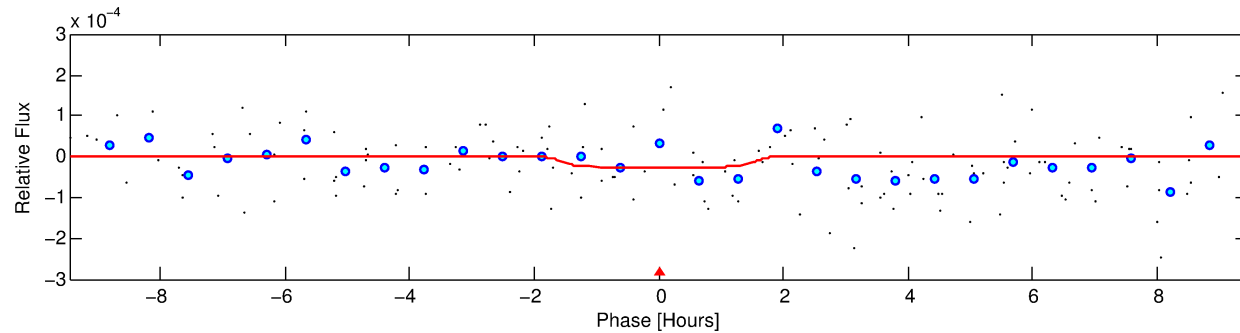
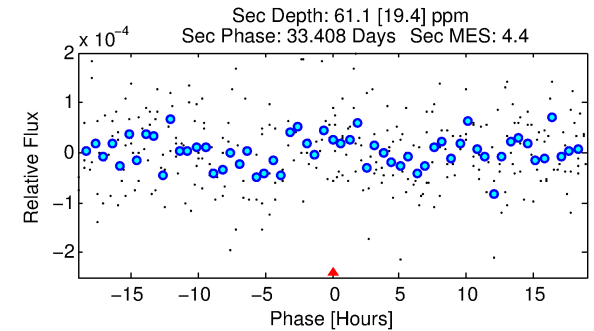
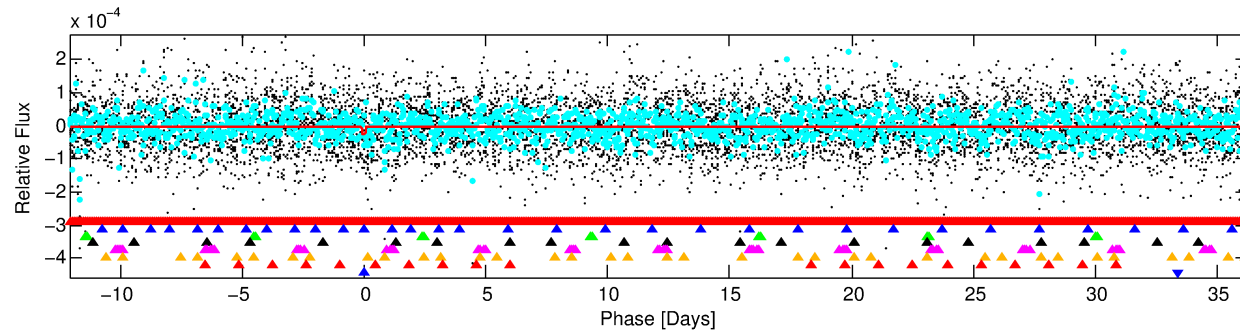
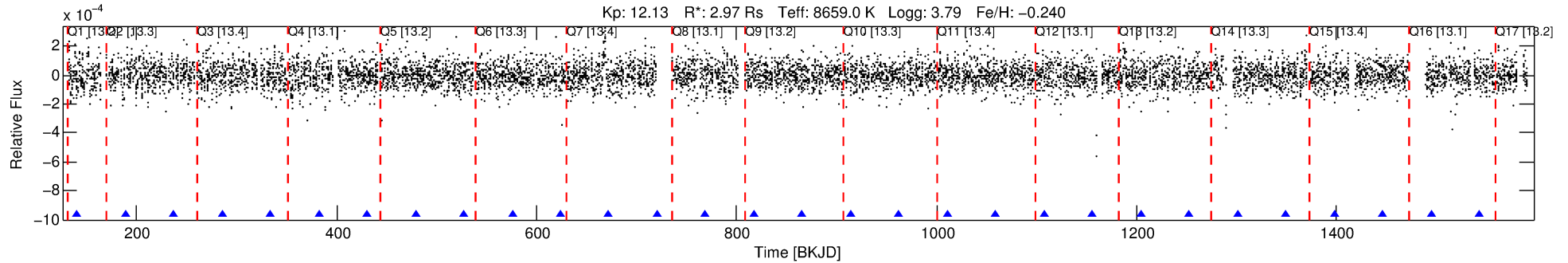
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007523115-08

No Significant Match Found

DV One-Page Summary

KIC: 7523115 Candidate: 8 of 8 Period: 48.366 d



DV Fit Results:

Period = 48.36598 [0.00226] d
Epoch = 140.3566 [0.0368] BKJD
Rp/R* = 0.0050 [0.0107]
a/R* = 97.15 [1304.14]
b = 0.57 [16.03]
Seff = 416.40 [294.39]
Teq = 1152 [204] K
Rp = 1.62 [3.54] Re
a = 0.3270 [0.1386] AU
Ag = 1369.54 [5966.35] [0.23σ]
Teffp = 10834 [11662] K [0.83σ]

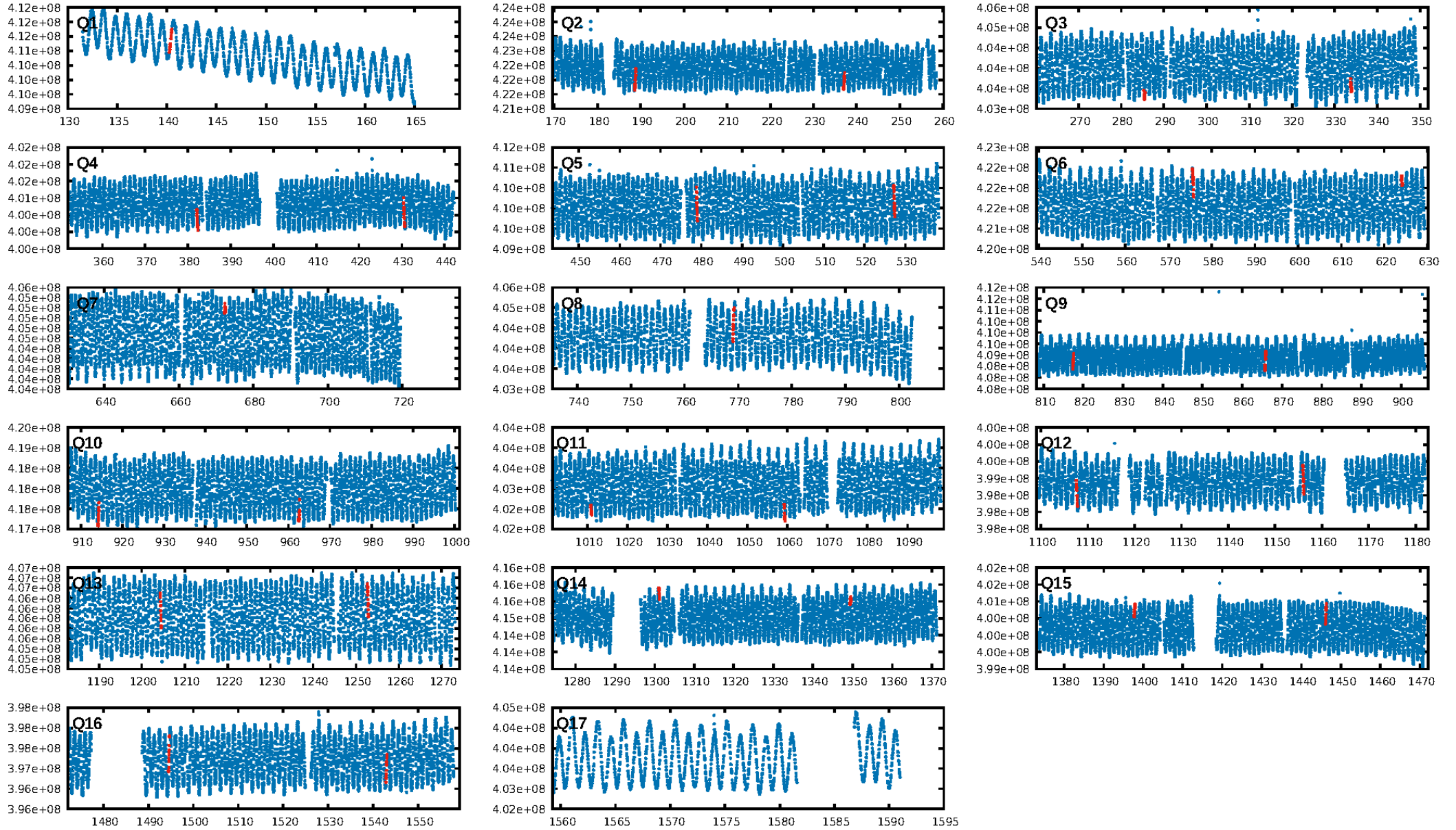
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.56σ]
LongPeriod-sig: 100.0% [101.56σ]
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 1.05e-08
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.5515
Centroid-sig: 3.4%
Centroid-so: 5.226 arcsec [1.70σ]
OotOffset-rm: 0.531 arcsec [3.00σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-rm: 0.279 arcsec [1.45σ]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.31 [5/16]

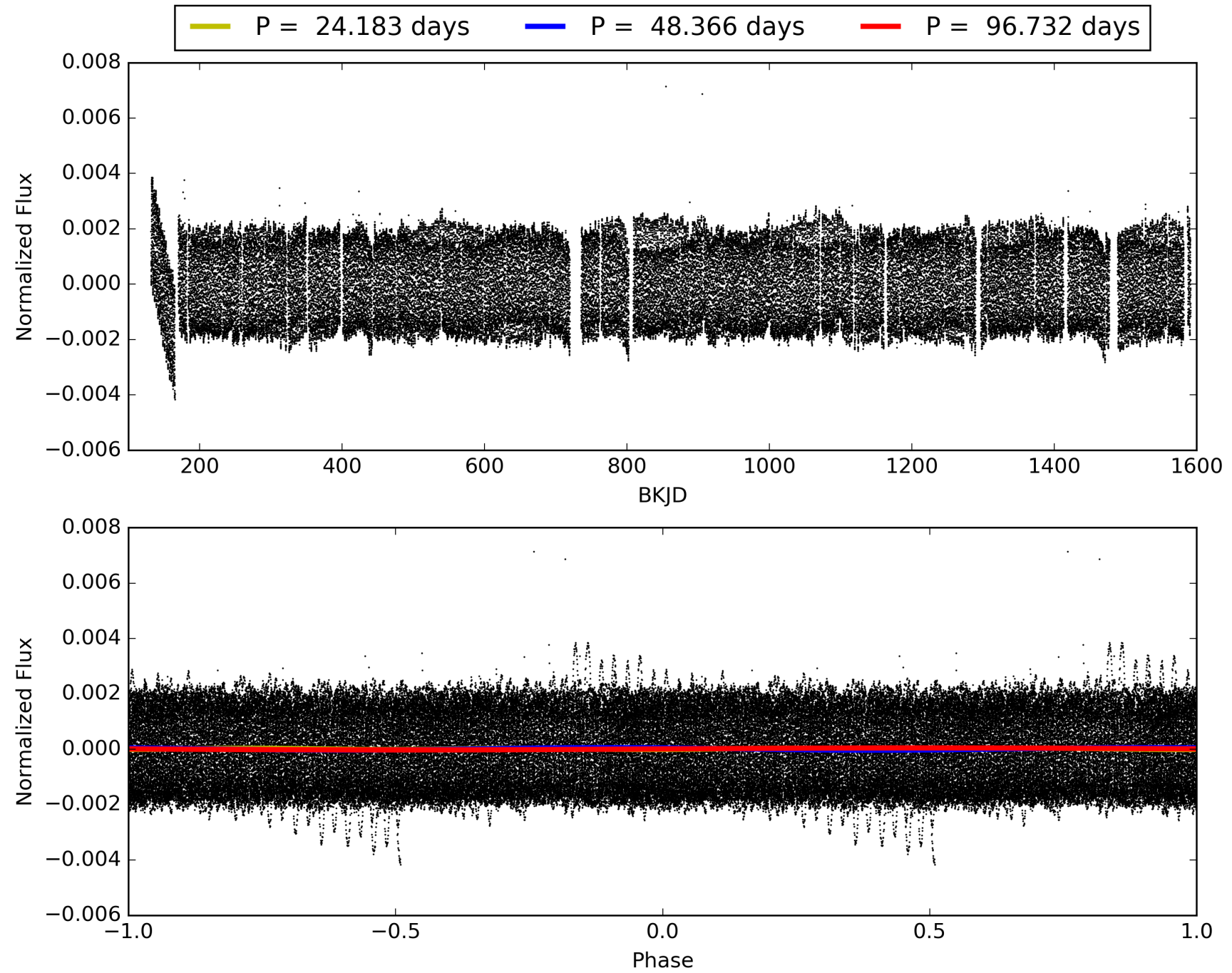
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:05:35 Z

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

TCE 007523115-08, PDC Light Curves

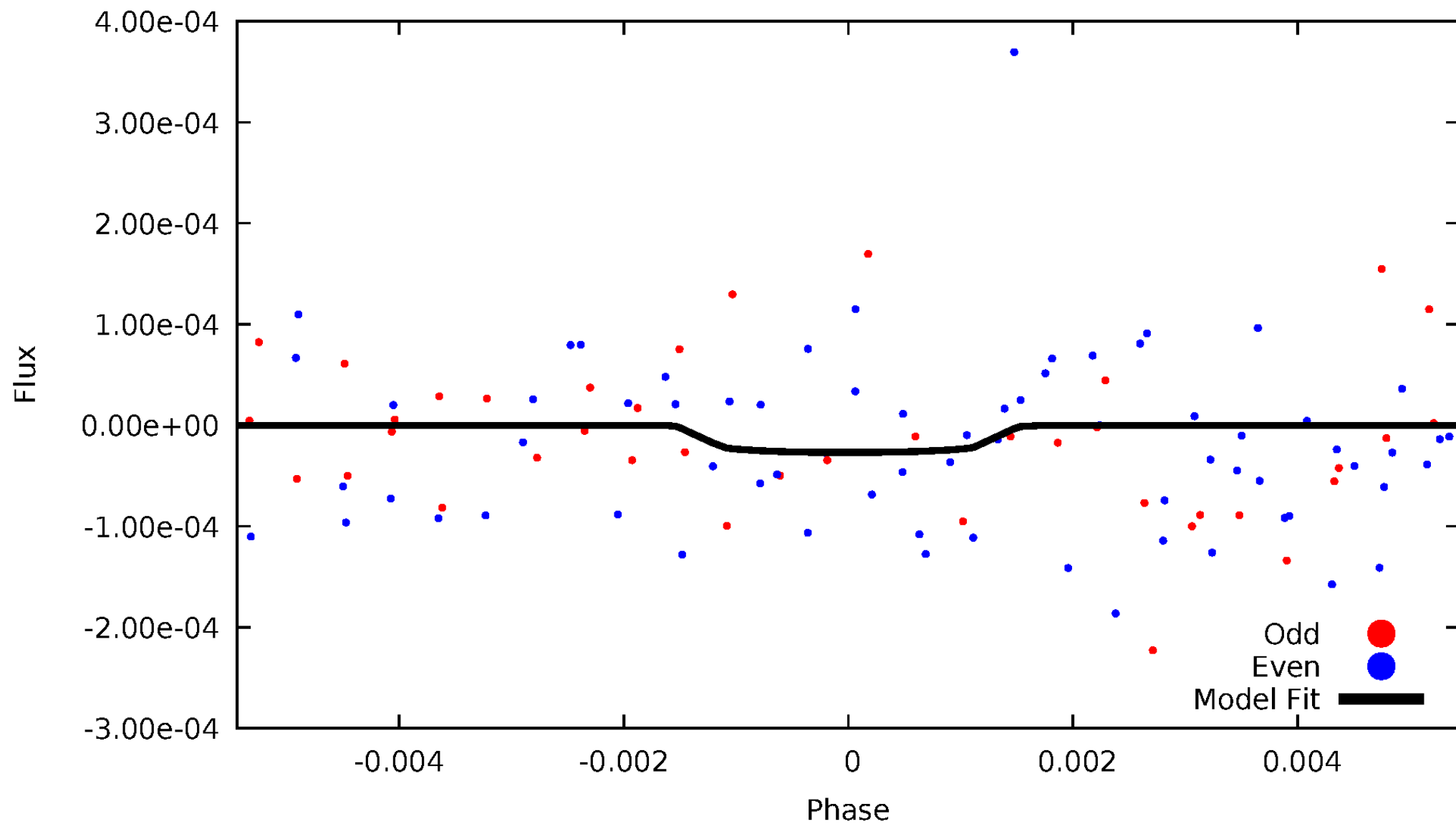


TCE 007523115-08



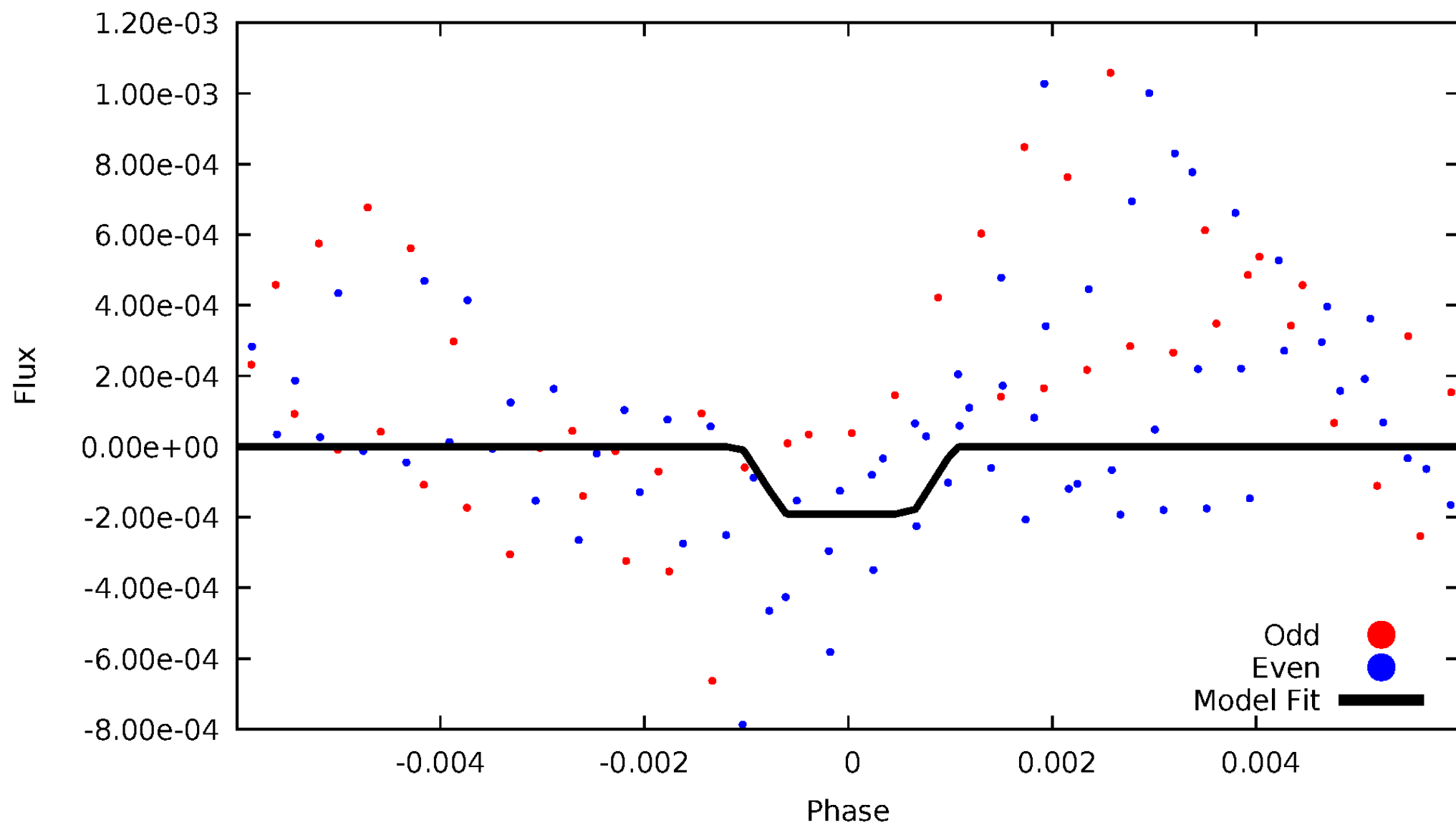
DV Odd/Even

TCE 007523115-08



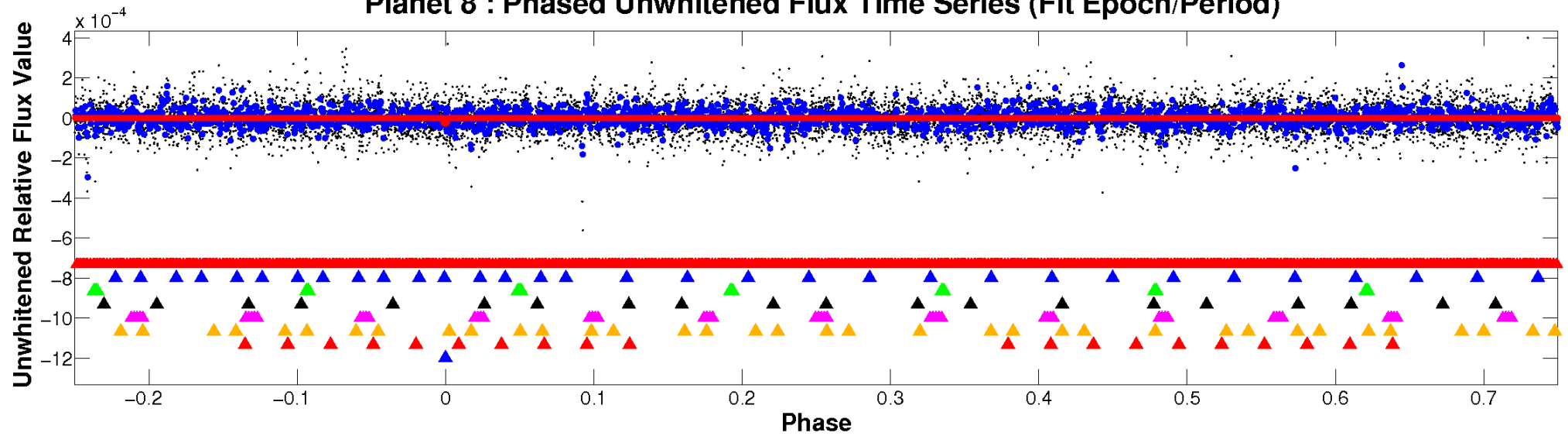
ALT Odd/Even

TCE 007523115-08

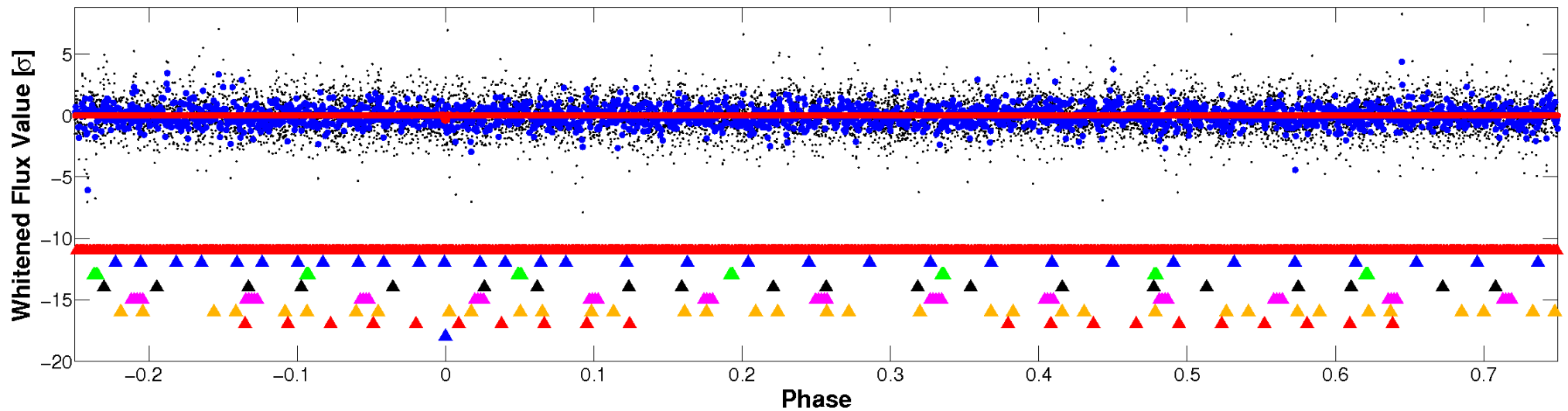


Non-Whitened Vs. Whitened Light Curve

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

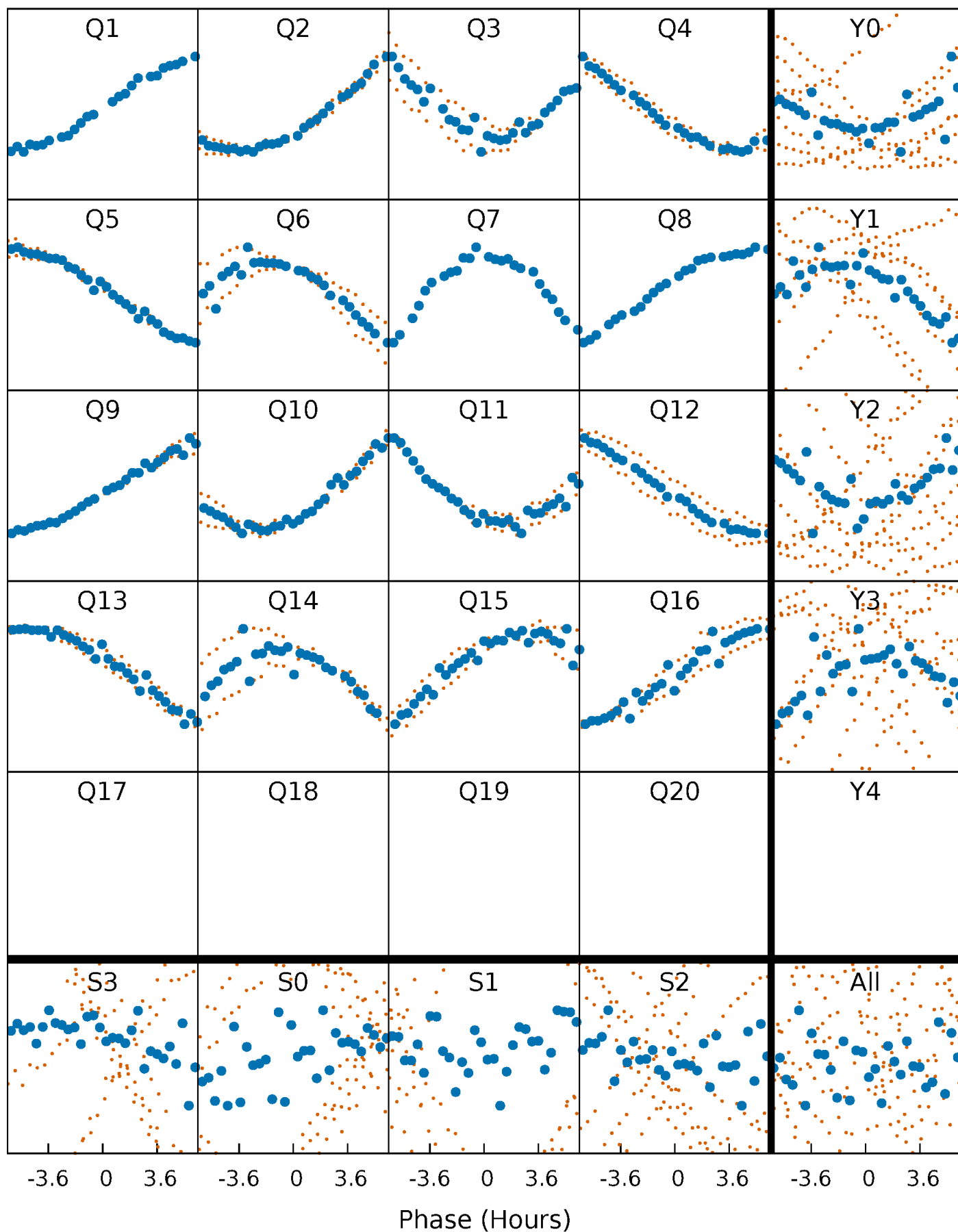


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



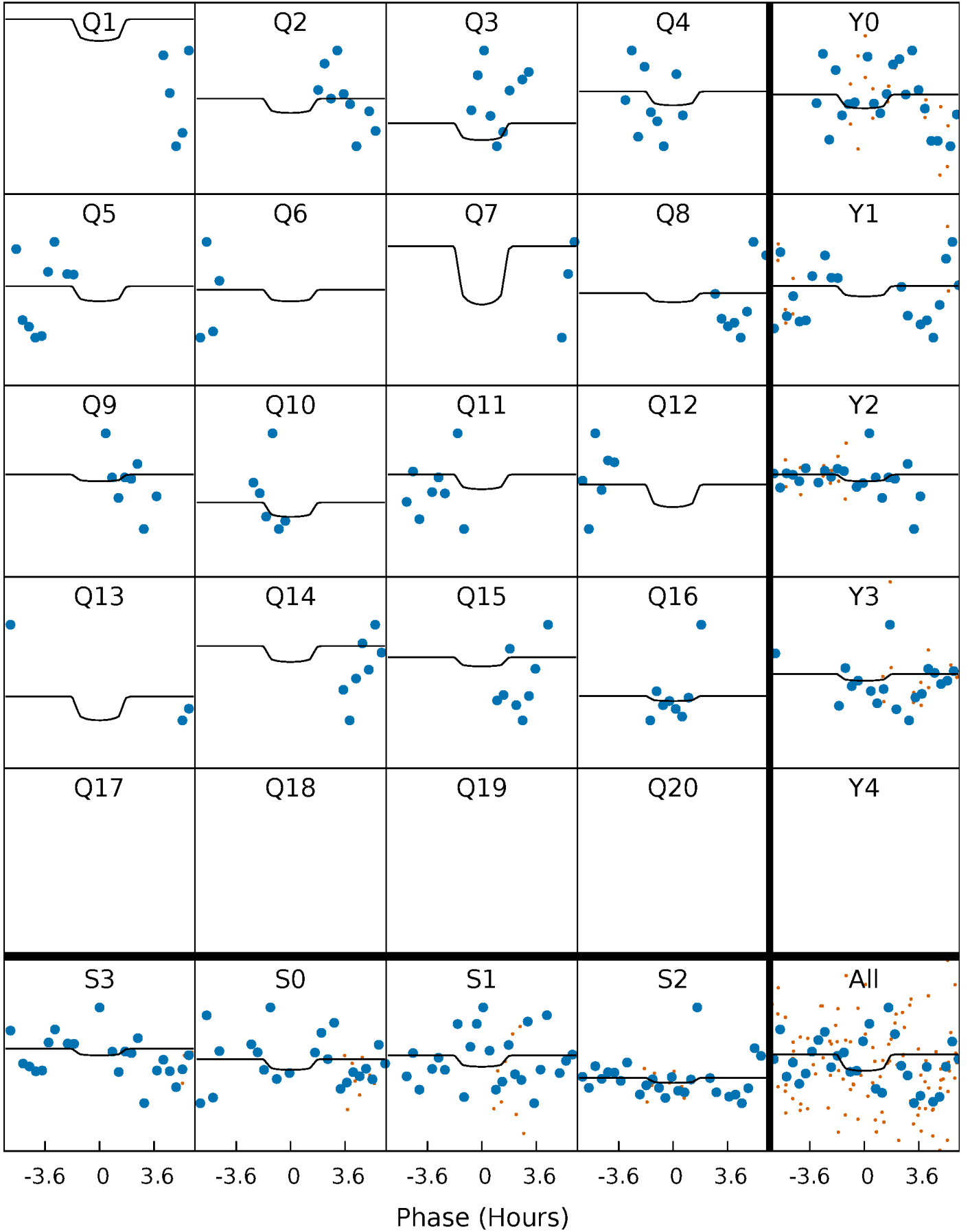
PDC Quarter-Phased Transit Curves

TCE 007523115-08 P= 48.365982 Days $T_0=140.356581$ (BKJD)



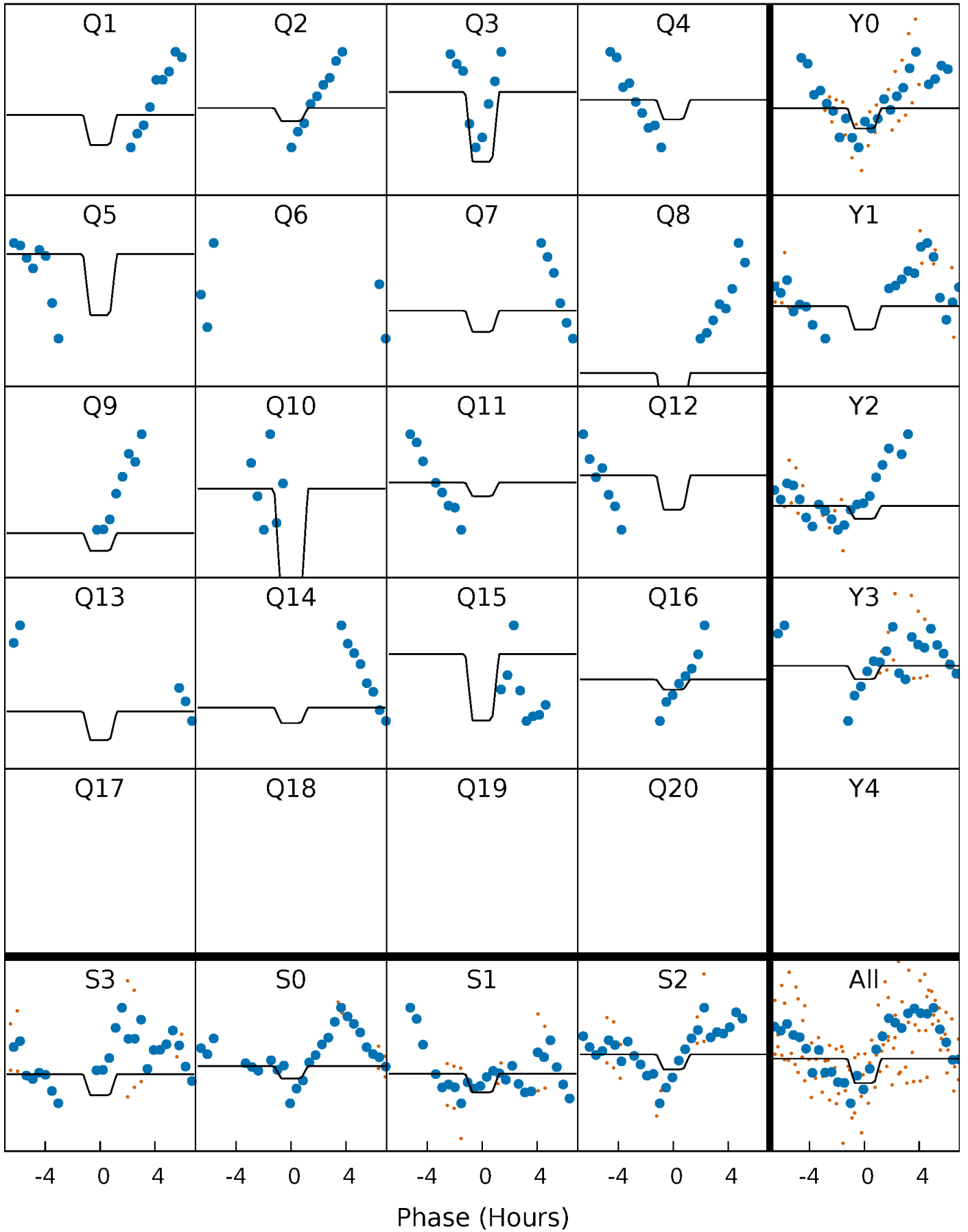
DV Quarter-Phased Transit Curves

TCE 007523115-08 P= 48.365982 Days $T_0=140.356581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

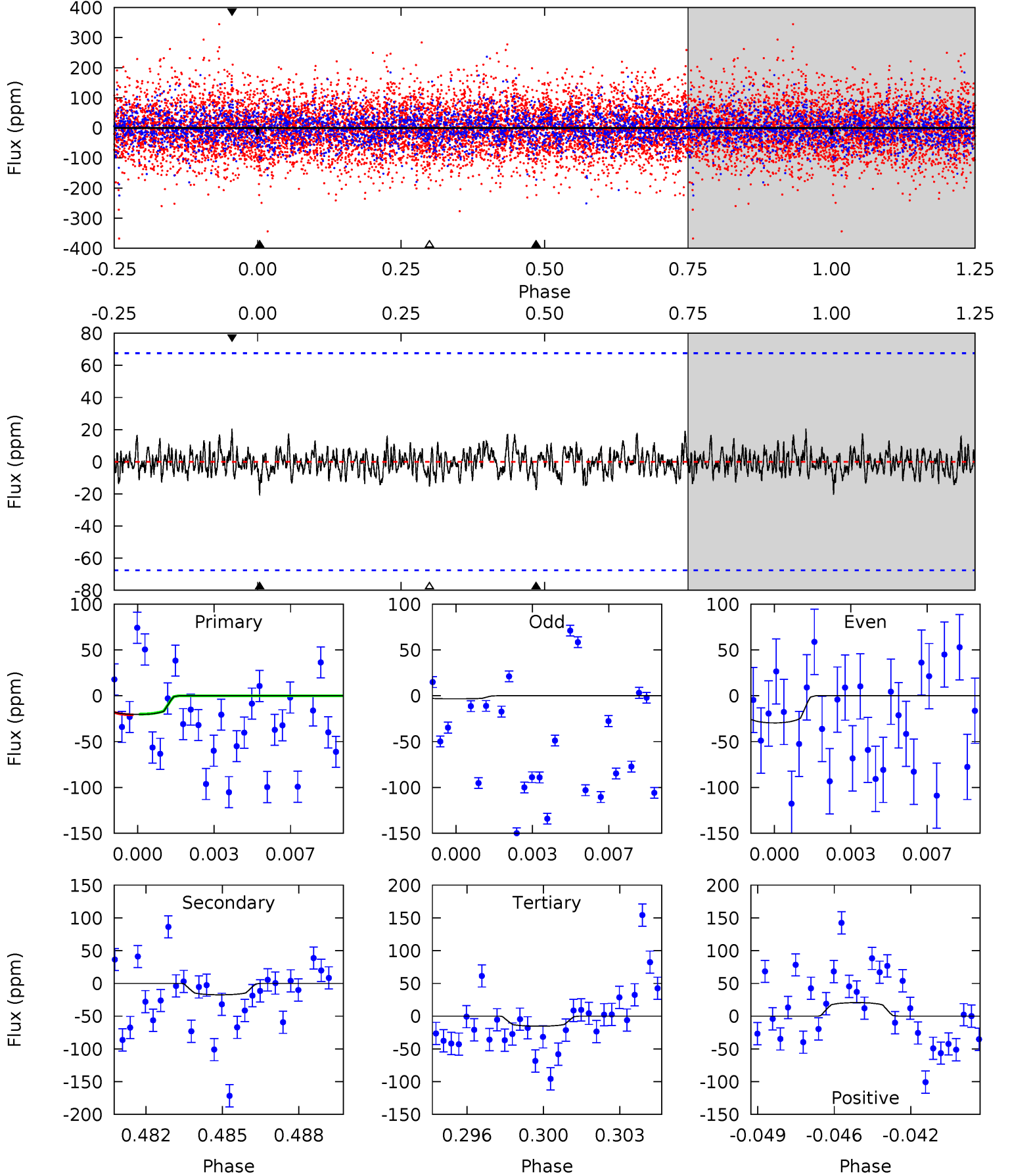
TCE 007523115-08 P= 48.362240 Days $T_0=140.439935$ (BKJD)



DV Model-Shift Uniqueness Test

007523115-08, P = 48.365982 Days, E = 91.990599 Days

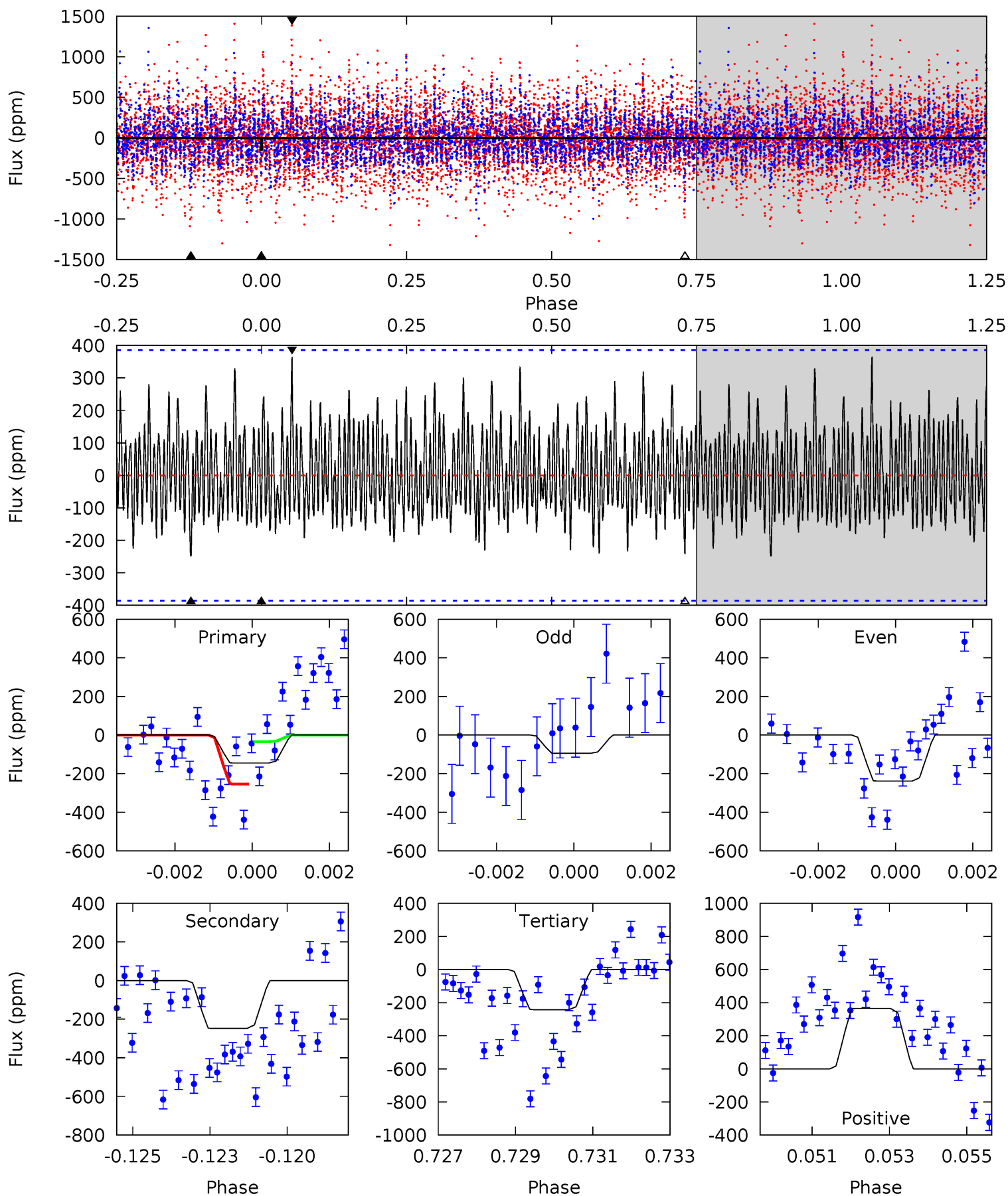
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.59	1.35	1.19	1.60	5.24	2.94	0.47	0.40	-0.01	0.16	-0.25	0.92	0.94	0.50	0.03



Alt Model-Shift Uniqueness Test

007523115-08, P = 48.362240 Days, E = 92.077695 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.00	3.41	3.34	5.03	5.32	3.07	1.55	-1.34	-3.03	0.07	-1.62	0.90	1.27	0.60	1.52



Stellar Parameters For KIC 007523115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8659^{+239}_{-376}	$3.791^{+0.405}_{-0.135}$	$-0.240^{+0.350}_{-0.350}$	$2.973^{+0.858}_{-1.286}$	$1.994^{+0.384}_{-0.426}$	$0.107^{+0.392}_{-0.043}$
	+3%/-4%	+11%/-4%	+146%/-146%	+29%/-43%	+19%/-21%	+367%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007523115-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 13	$2.86^{+2.73}_{-1.99}$	1559^{+140}_{-177}	5236^{+5722}_{-1607}	101^{+1163}_{-87}
Alt.	-248 ± 73	$4.21^{+3.59}_{-2.51}$	1562^{+136}_{-172}	8738^{+12306}_{-2374}	739^{+4248}_{-521}

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

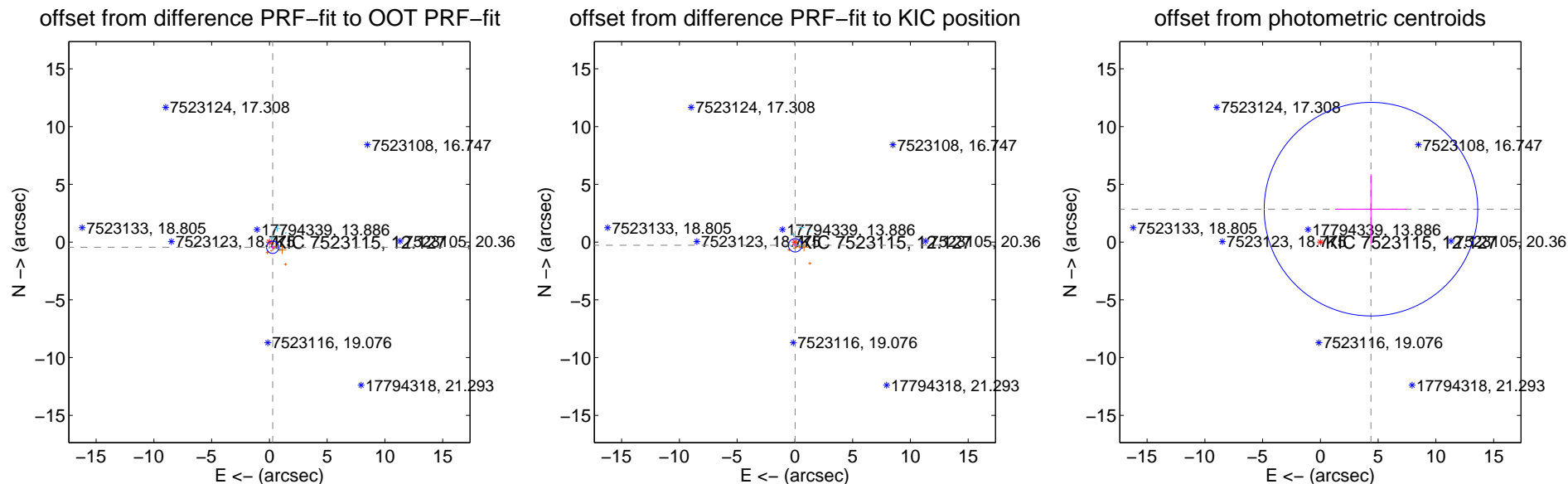
DV Centroid Data

Supplemental centroid analysis for 007523115-08. Kepler magnitude: 12.13. Transit SNR 1.85

There are 7 quarters with good PRF difference image offsets

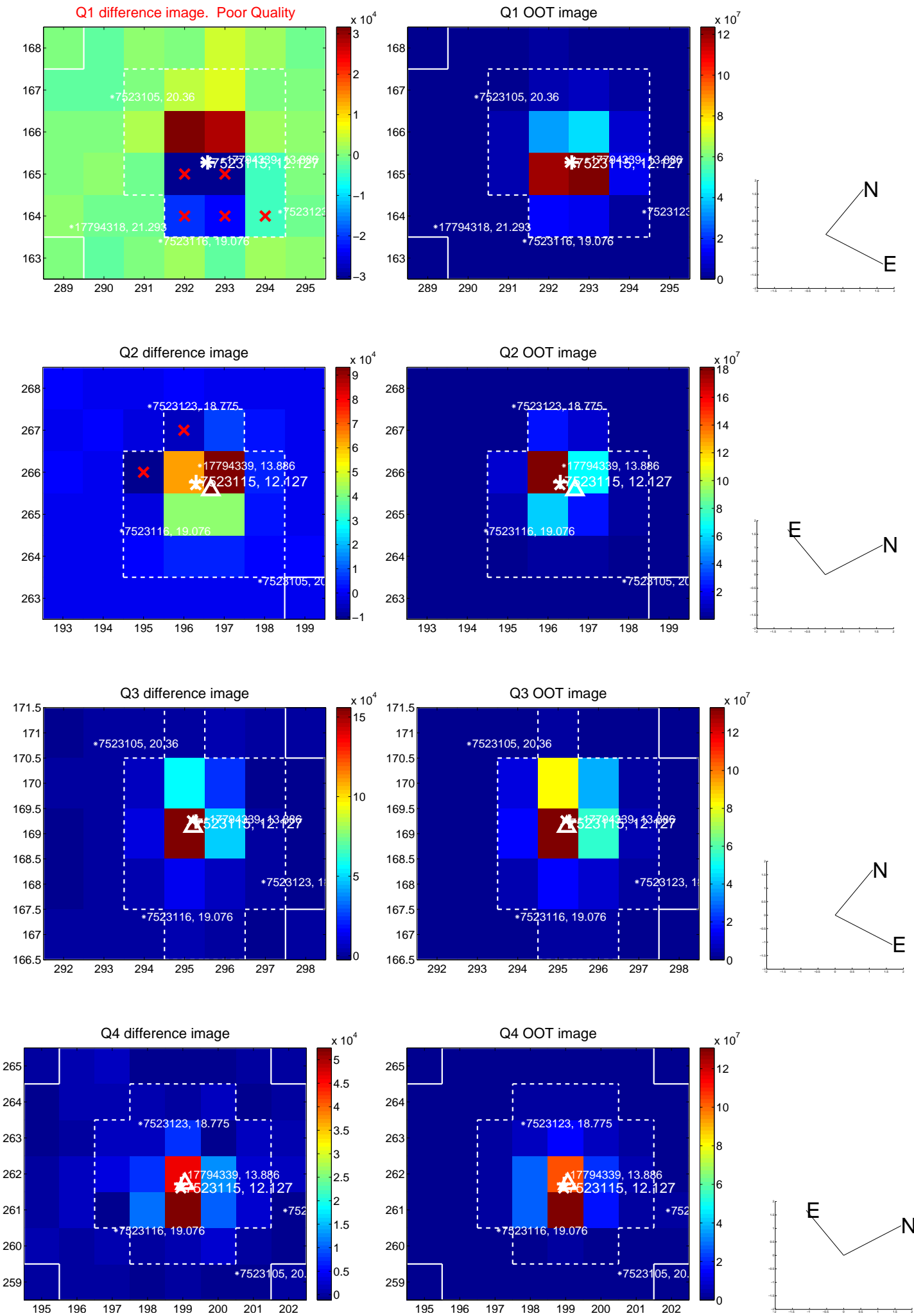
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.531 ± 0.177	3.00	-0.281 ± 0.133	-0.451 ± 0.181
PRF-fit source offset from KIC position	0.279 ± 0.193	1.45	-0.020 ± 0.150	-0.279 ± 0.193
photometric centroid source offset	5.23 ± 3.08	1.70	-4.38 ± 3.11	2.85 ± 3.02

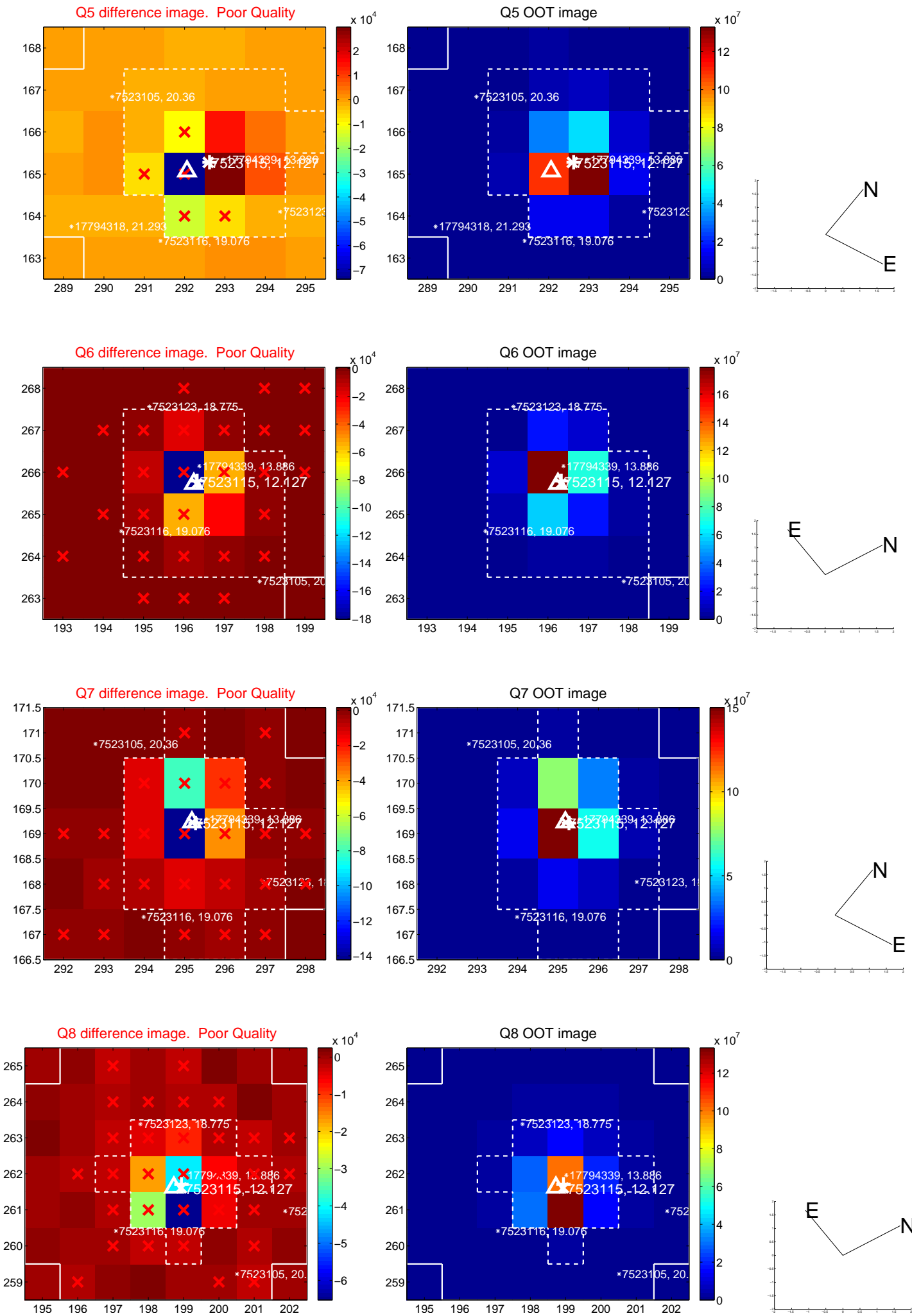


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

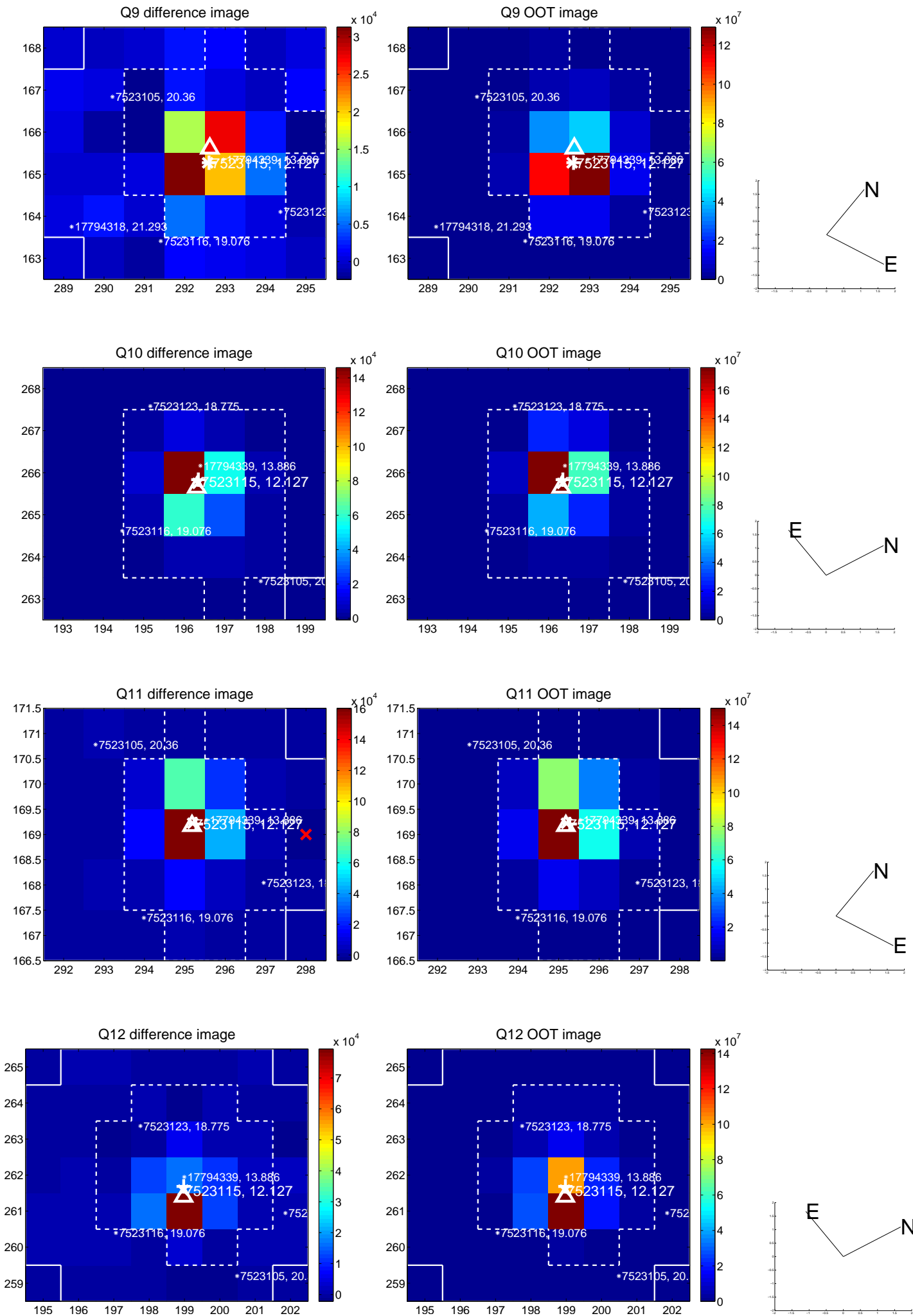
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



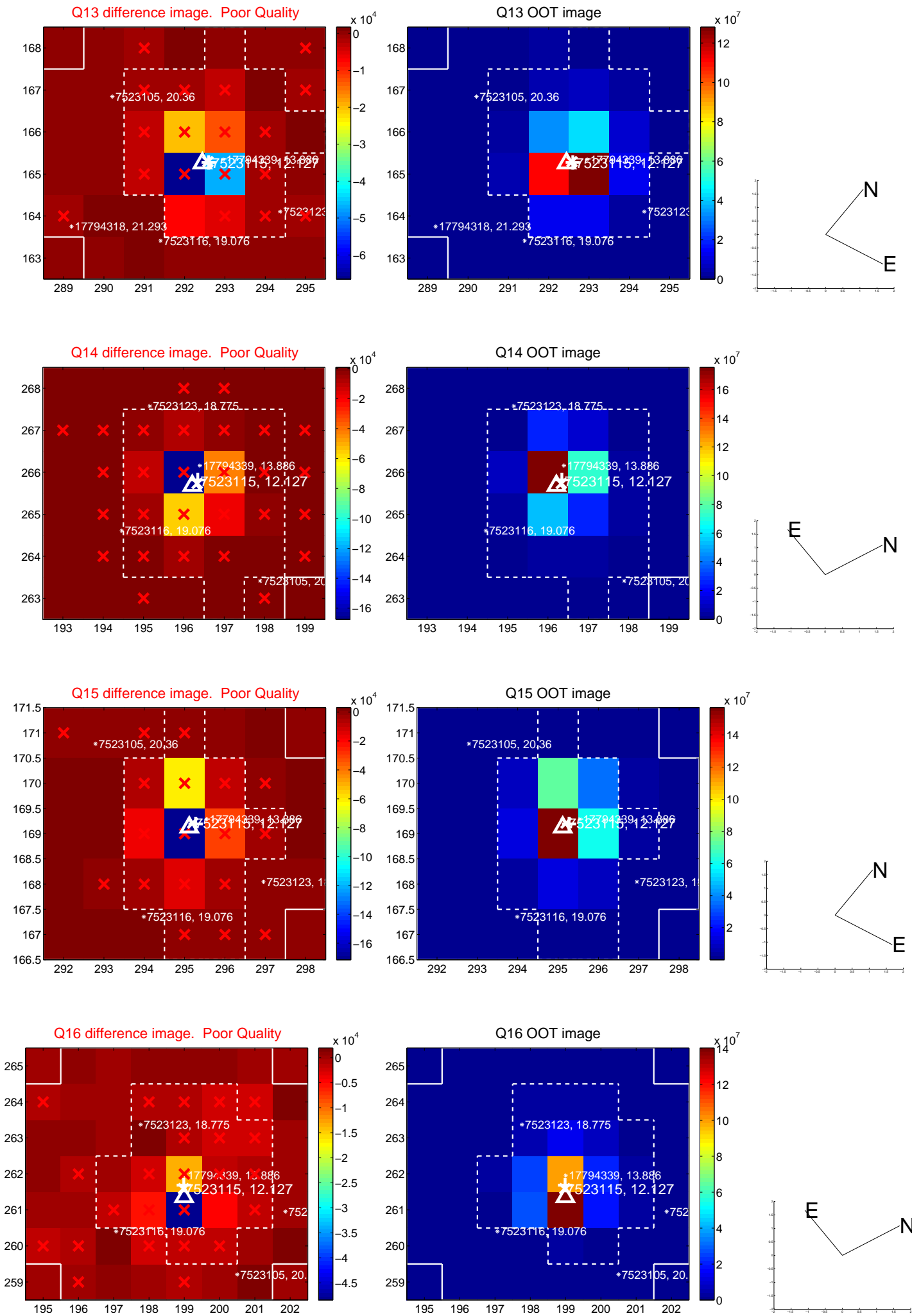
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



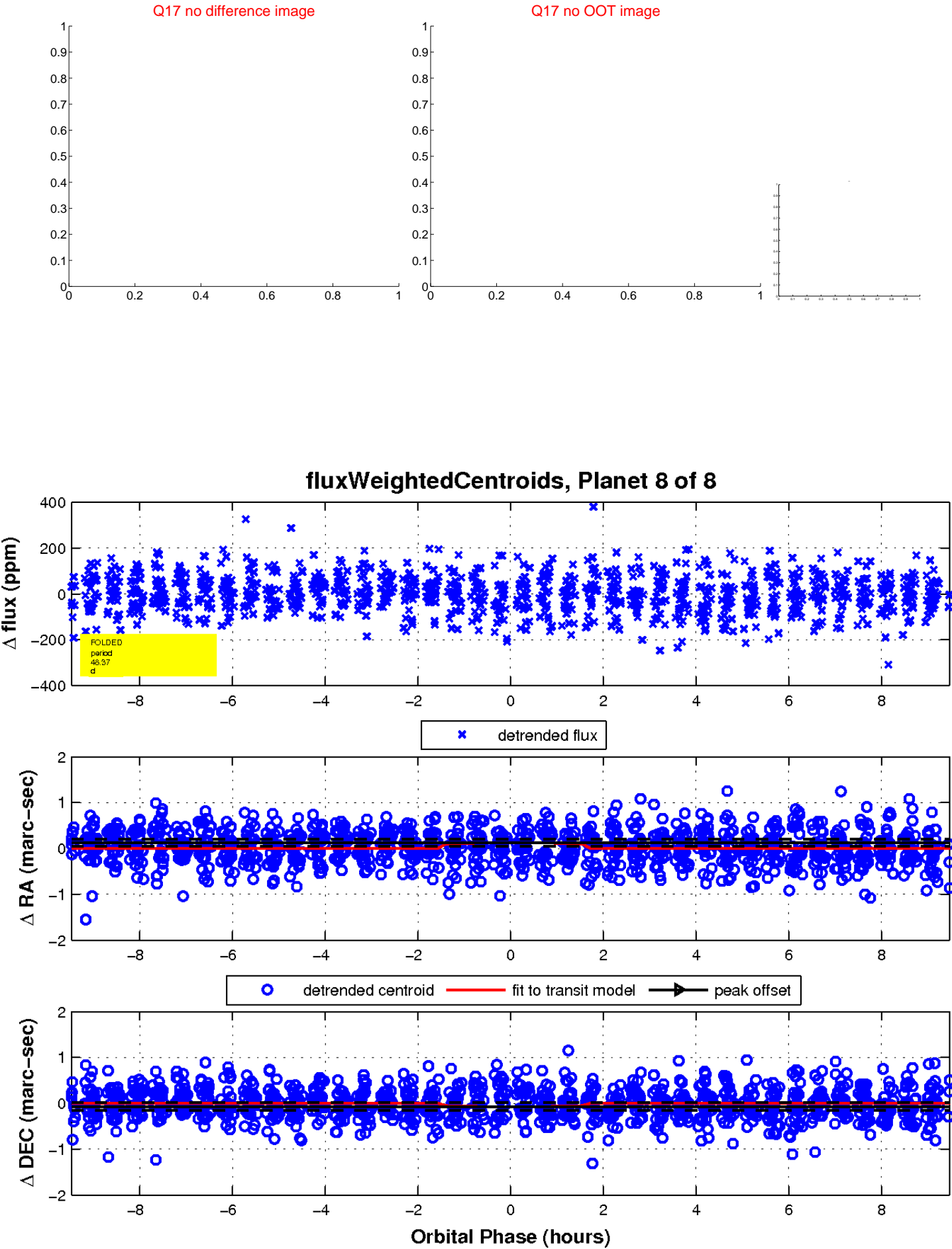
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

