

KIC 006392601

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})
006392601-01	OBS	No	1.221486	132.224243	24.1	4.218	9.2	8.1	1.81	7252	1.03	12218.18
006392601-02	OBS	No	1.221279	131.980795	25.6	12.759	9.1	9.2	1.81	7252	1.06	12220.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006392601-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006392601-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

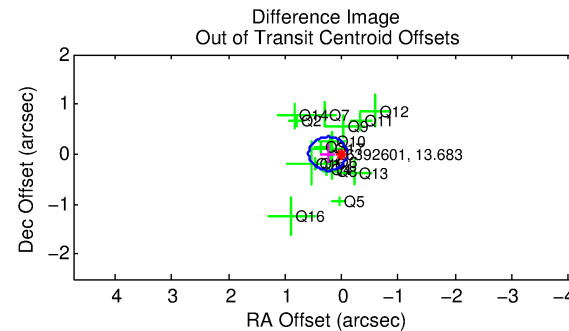
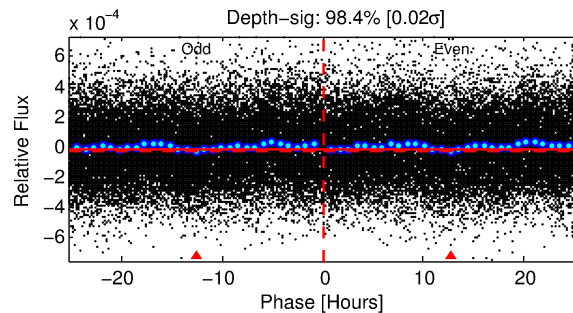
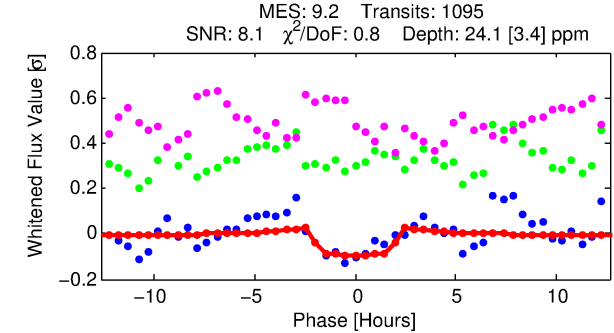
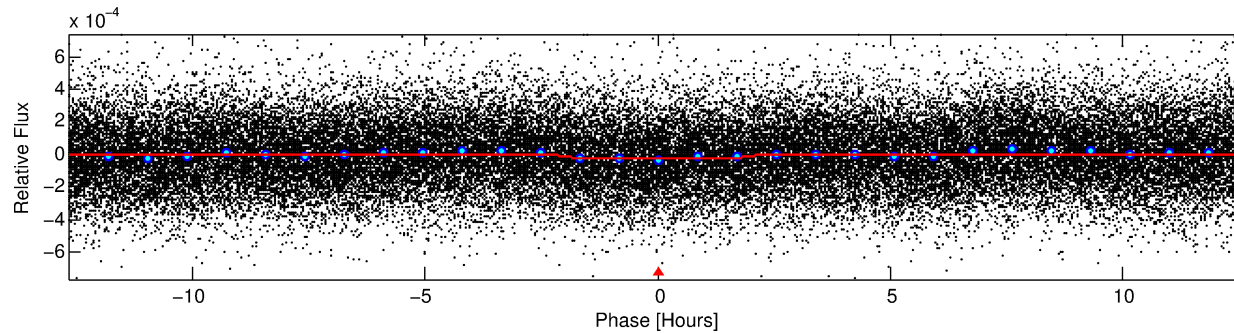
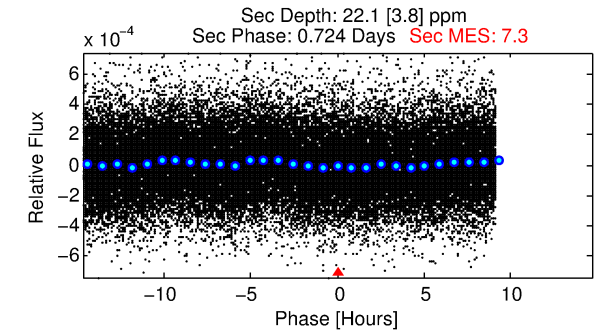
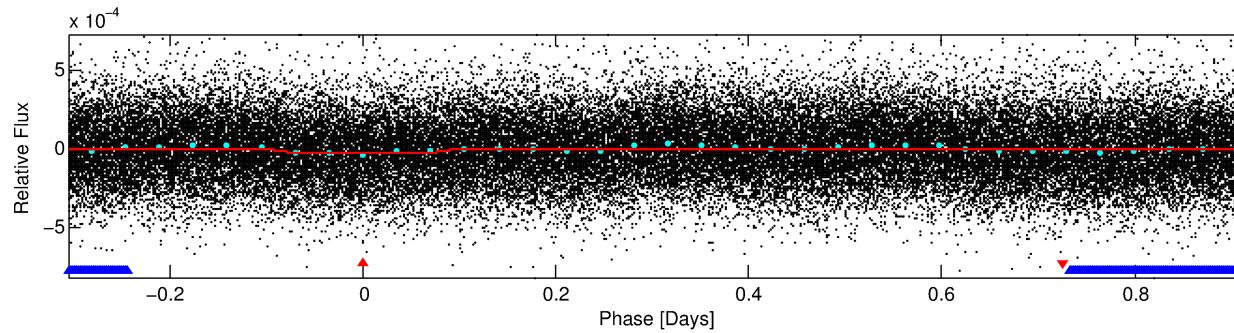
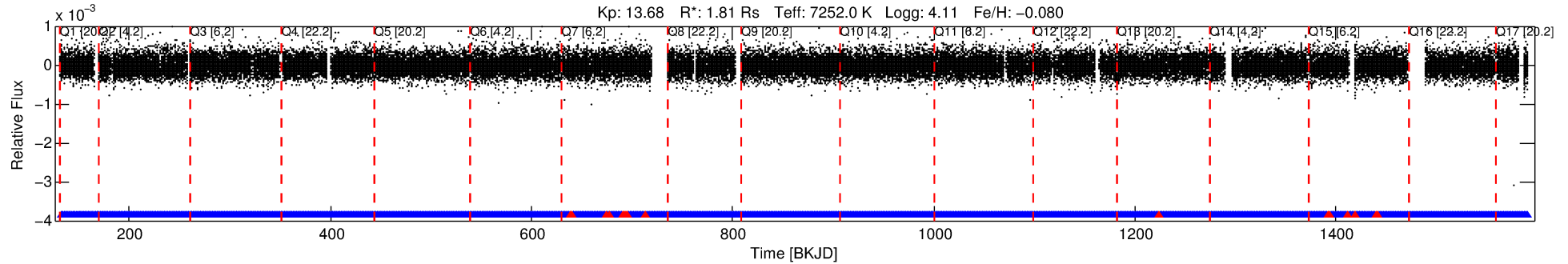
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006392601-01

No Significant Match Found

DV One-Page Summary

KIC: 6392601 Candidate: 1 of 2 Period: 1.221 d



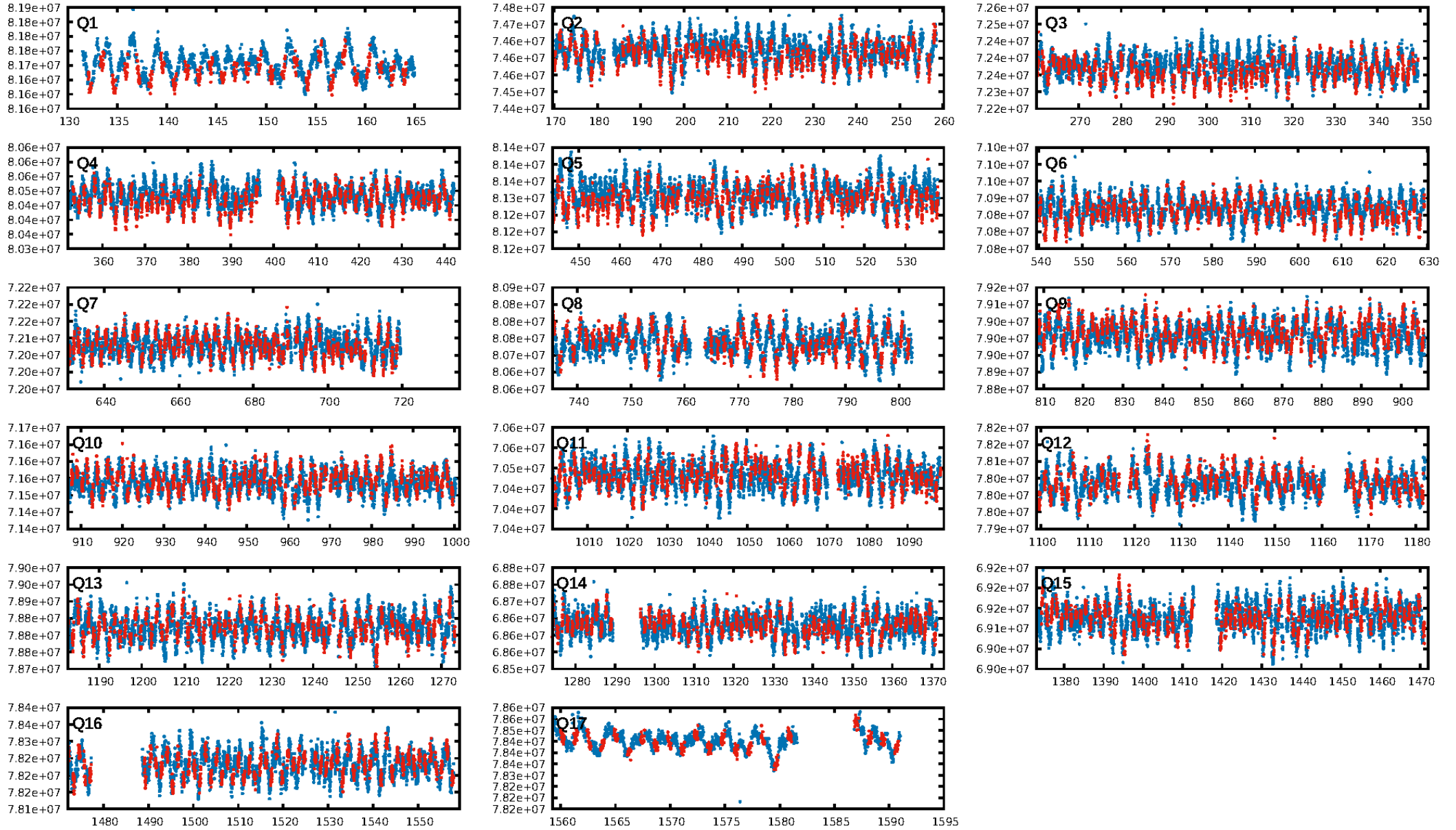
DV Fit Results:

Period = 1.22149 [0.00002] d
Epoch = 132.2242 [0.0047] BKJD
Rp/R* = 0.0052 [0.0019]
a/R* = 1.37 [1.46]
b = 0.90 [0.50]
Seff = 12218.19 [4789.79]
Teq = 2681 [263] K
Rp = 1.03 [0.49] Re
a = 0.0257 [0.0064] AU
Ag = 7.64 [6.31] [1.05σ]
Teffp = 6891 [1326] K [3.11σ]

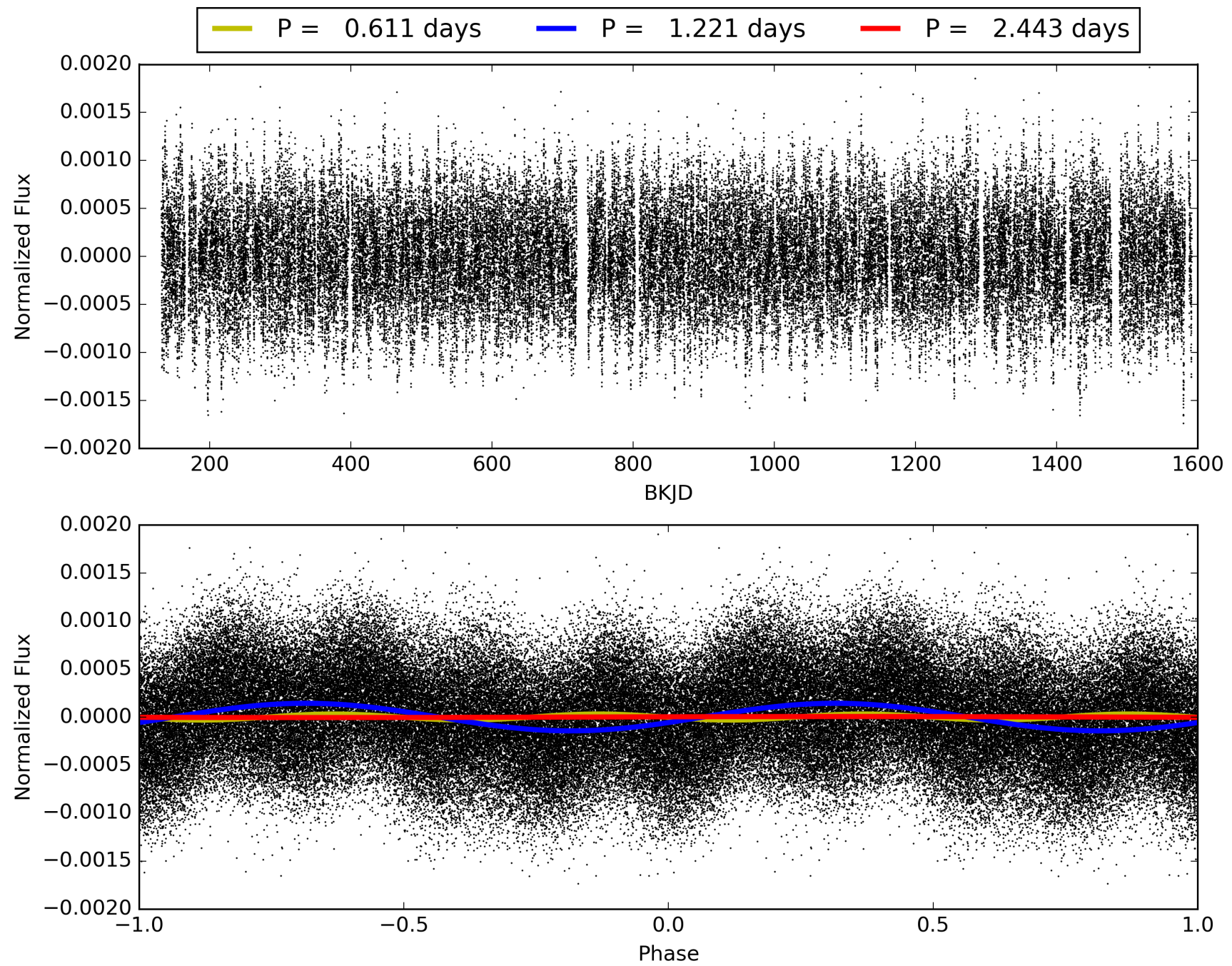
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1030/1046]
GhostDiagnostic-chr: 0.913
Centroid-sig: 30.1%
Centroid-so: 1.430 arcsec [1.07σ]
OotOffset-rm: 0.248 arcsec [2.19σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.255 arcsec [2.34σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 006392601-01, PDC Light Curves

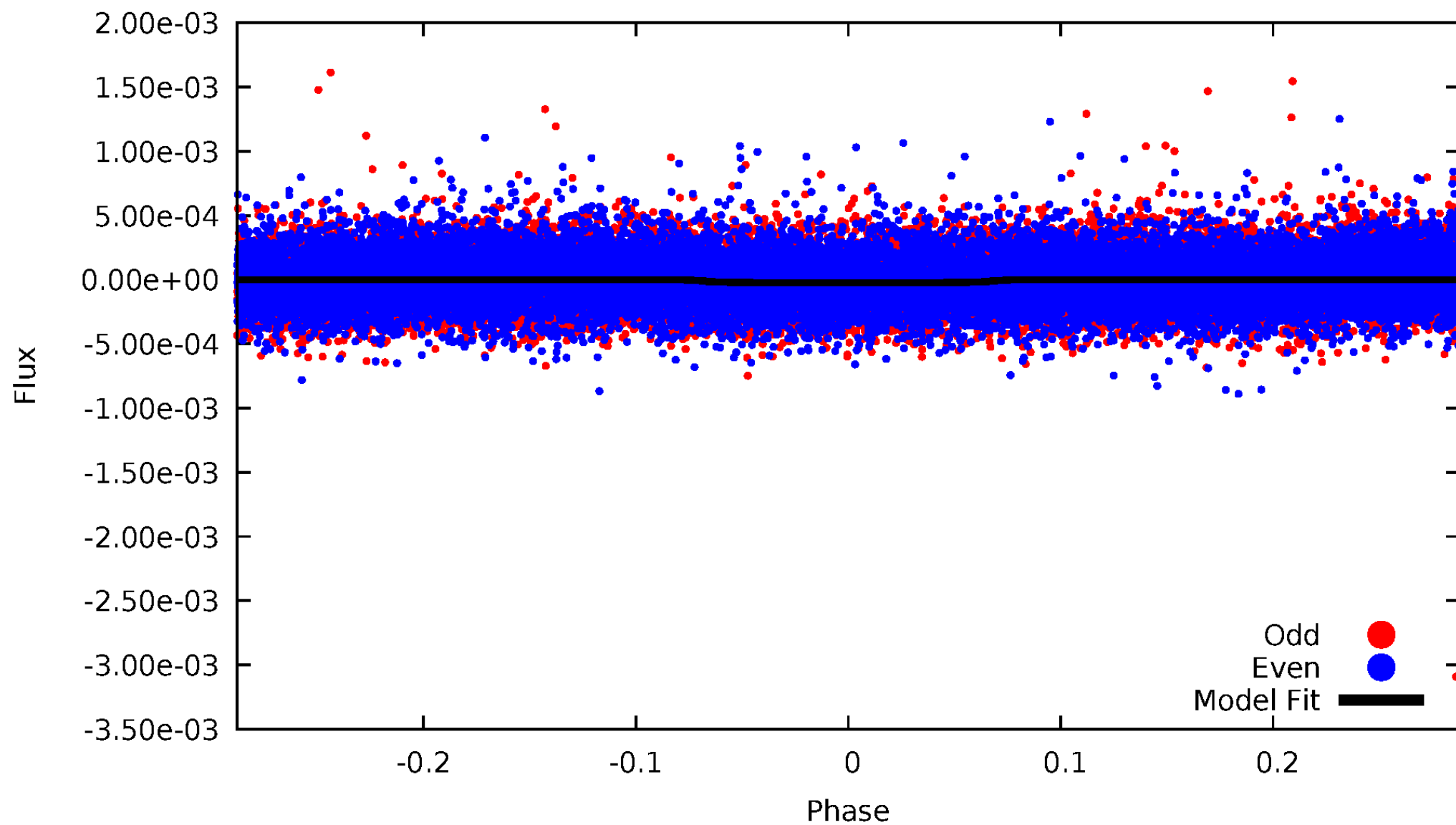


TCE 006392601-01



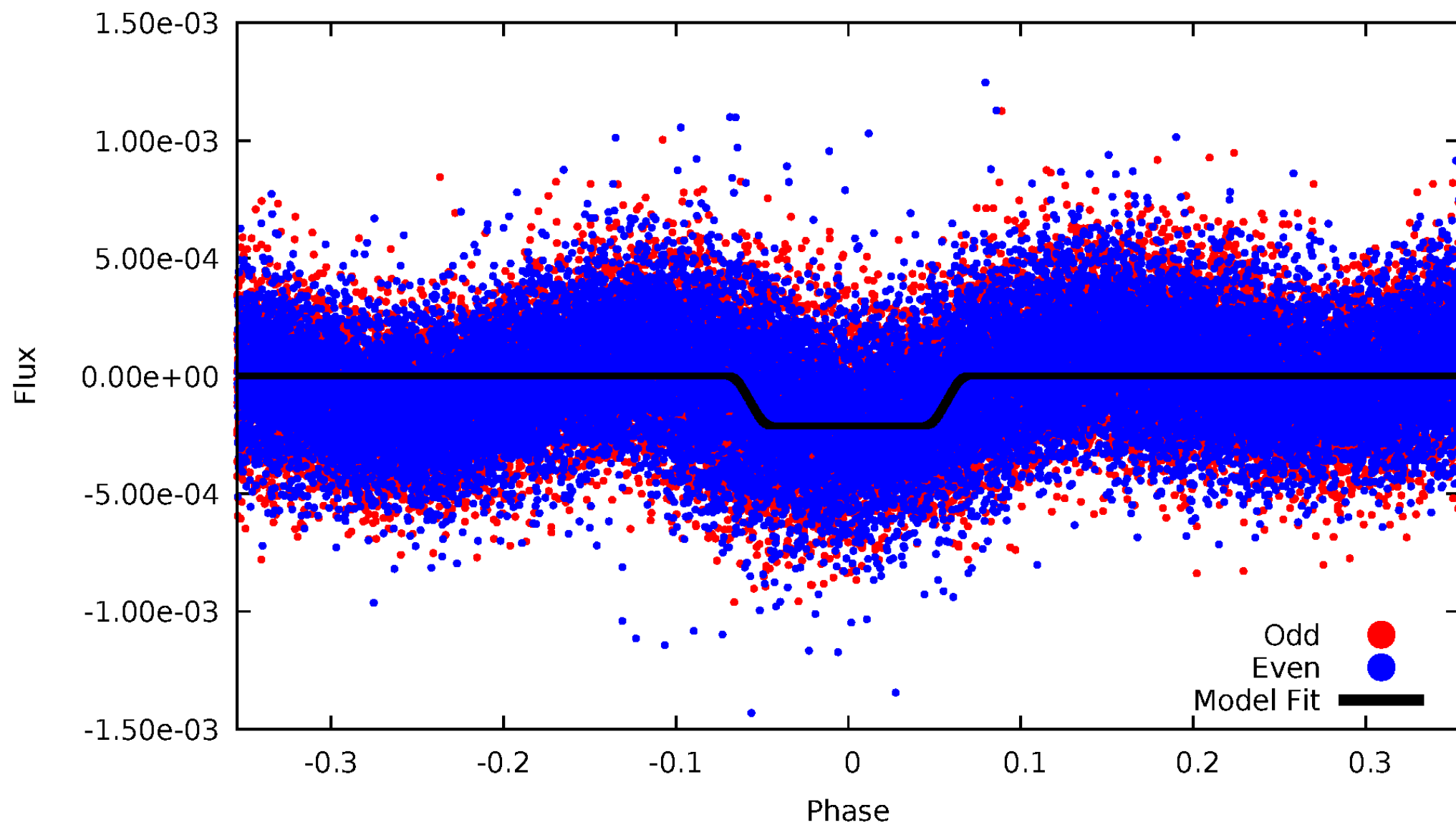
DV Odd/Even

TCE 006392601-01

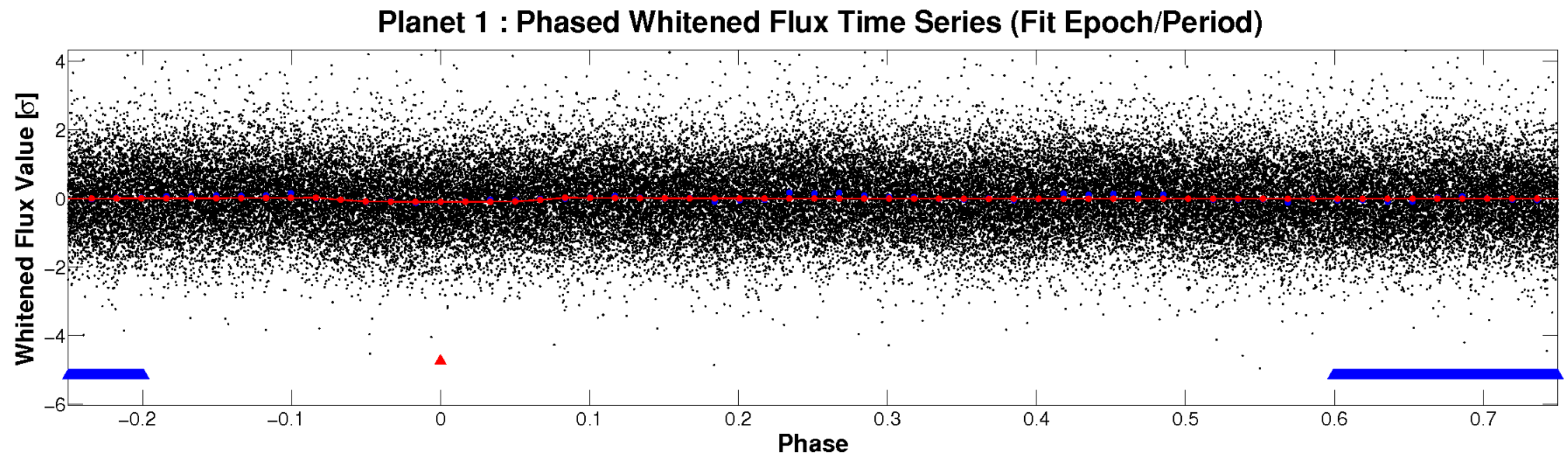
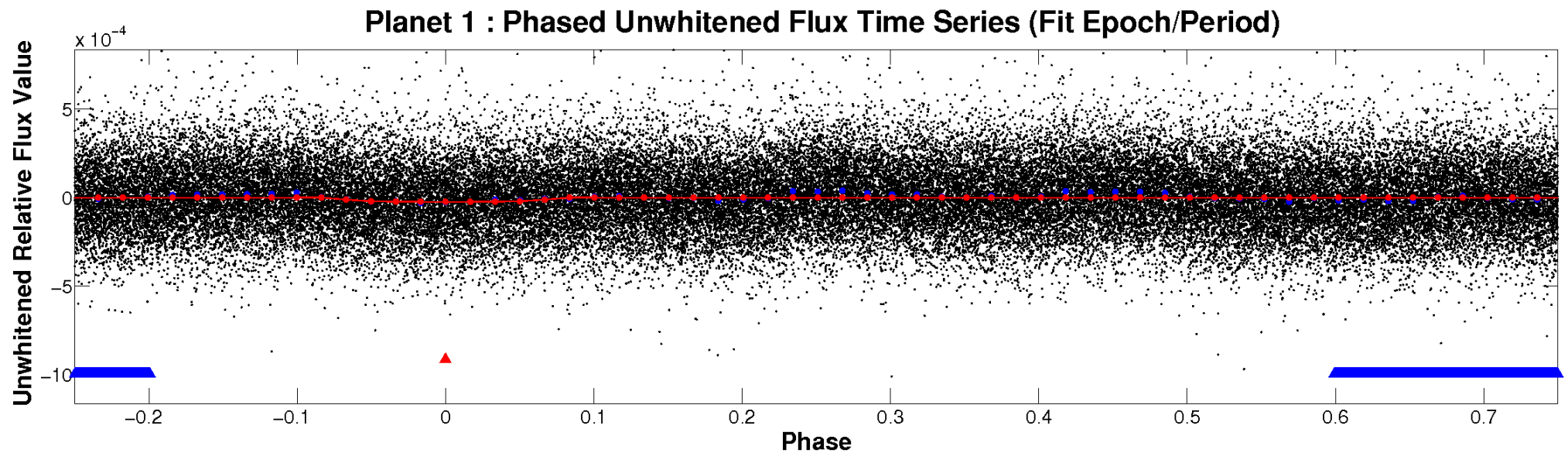


ALT Odd/Even

TCE 006392601-01

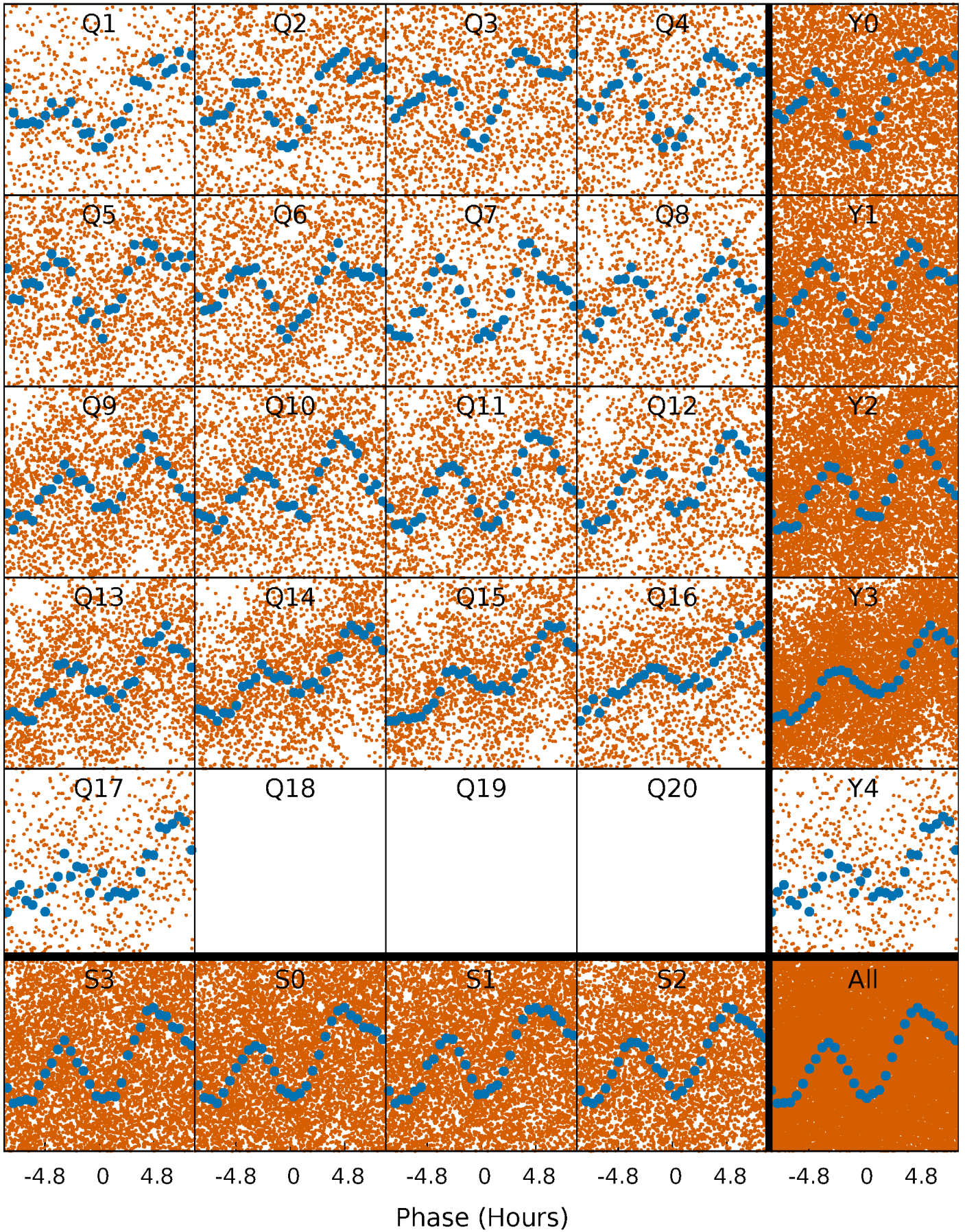


Non-Whitened Vs. Whitened Light Curve



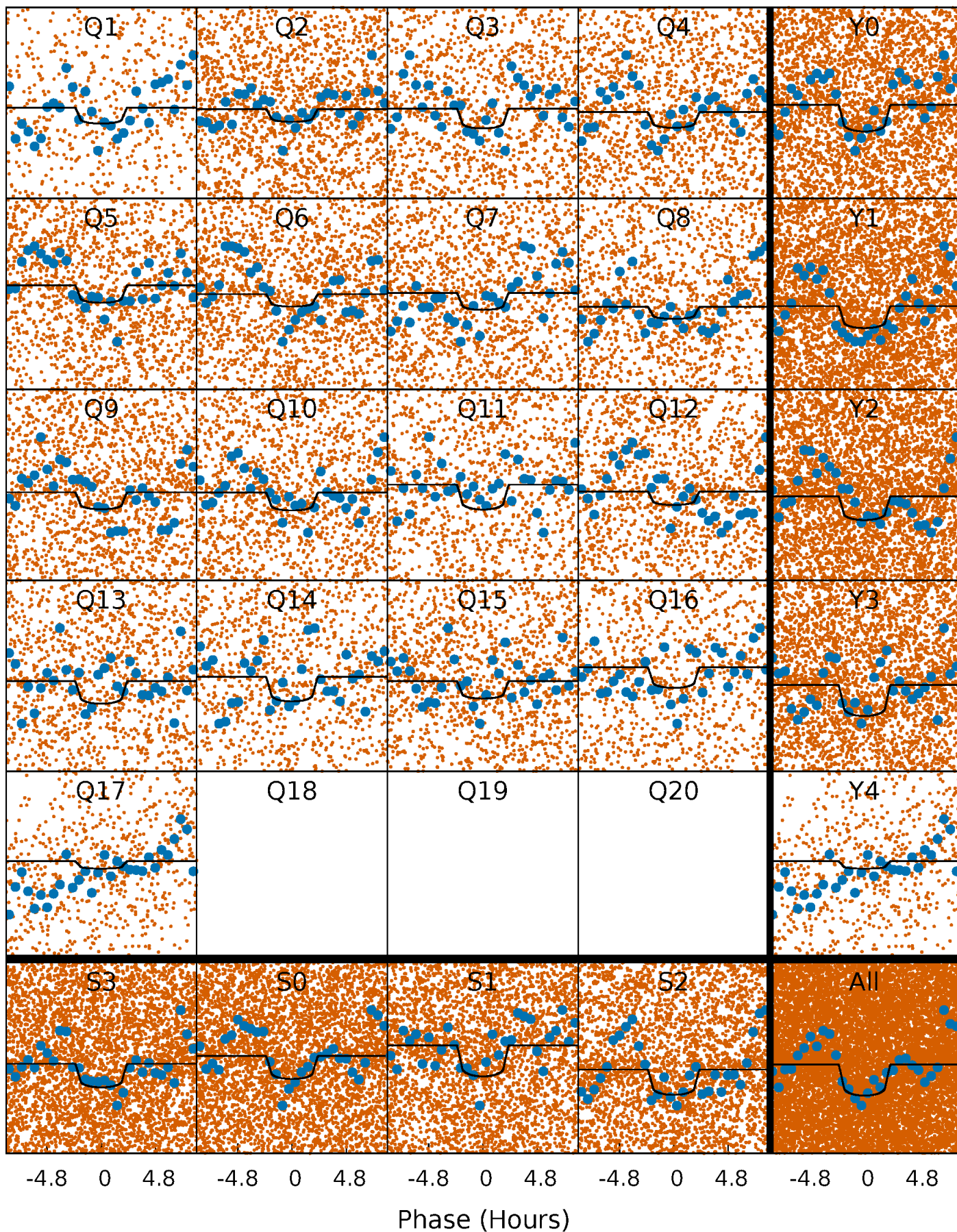
PDC Quarter-Phased Transit Curves

TCE 006392601-01 P= 1.221486 Days $T_0=132.224243$ (BKJD)



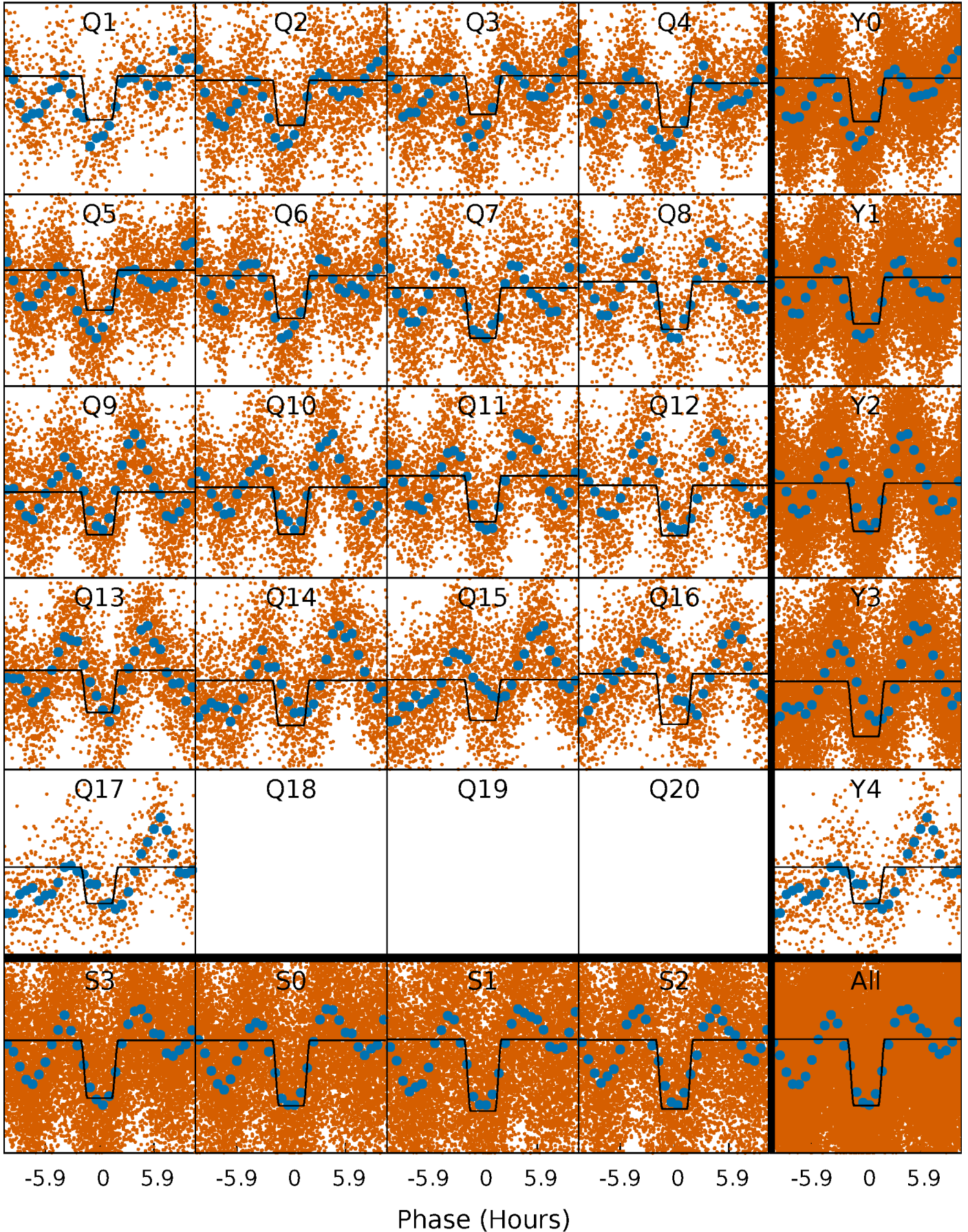
DV Quarter-Phased Transit Curves

TCE 006392601-01 P= 1.221486 Days $T_0=132.224243$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

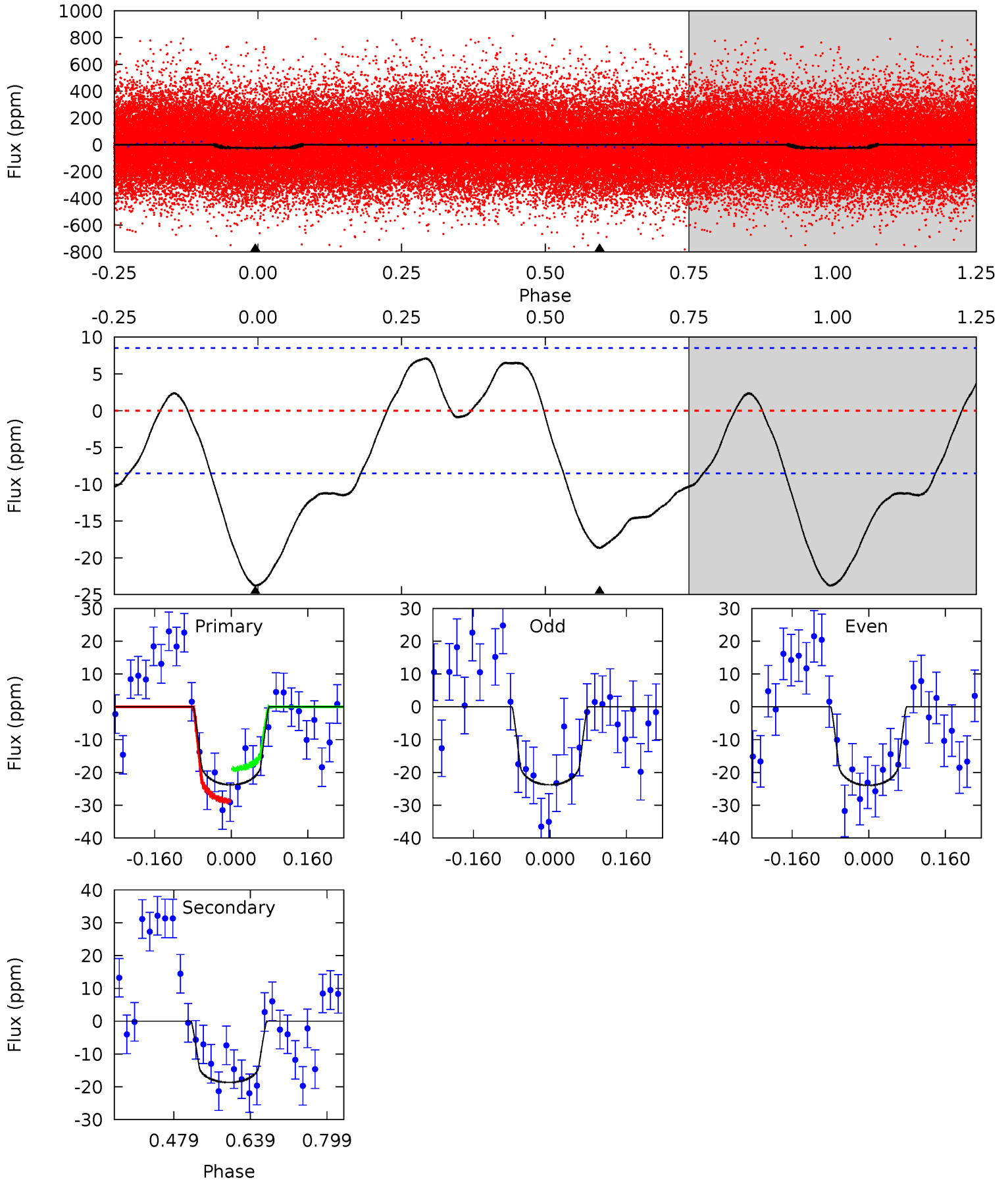
TCE 006392601-01 P= 1.221472 Days $T_0=132.254139$ (BKJD)



DV Model-Shift Uniqueness Test

006392601-01, P = 1.221486 Days, E = 131.002757 Days

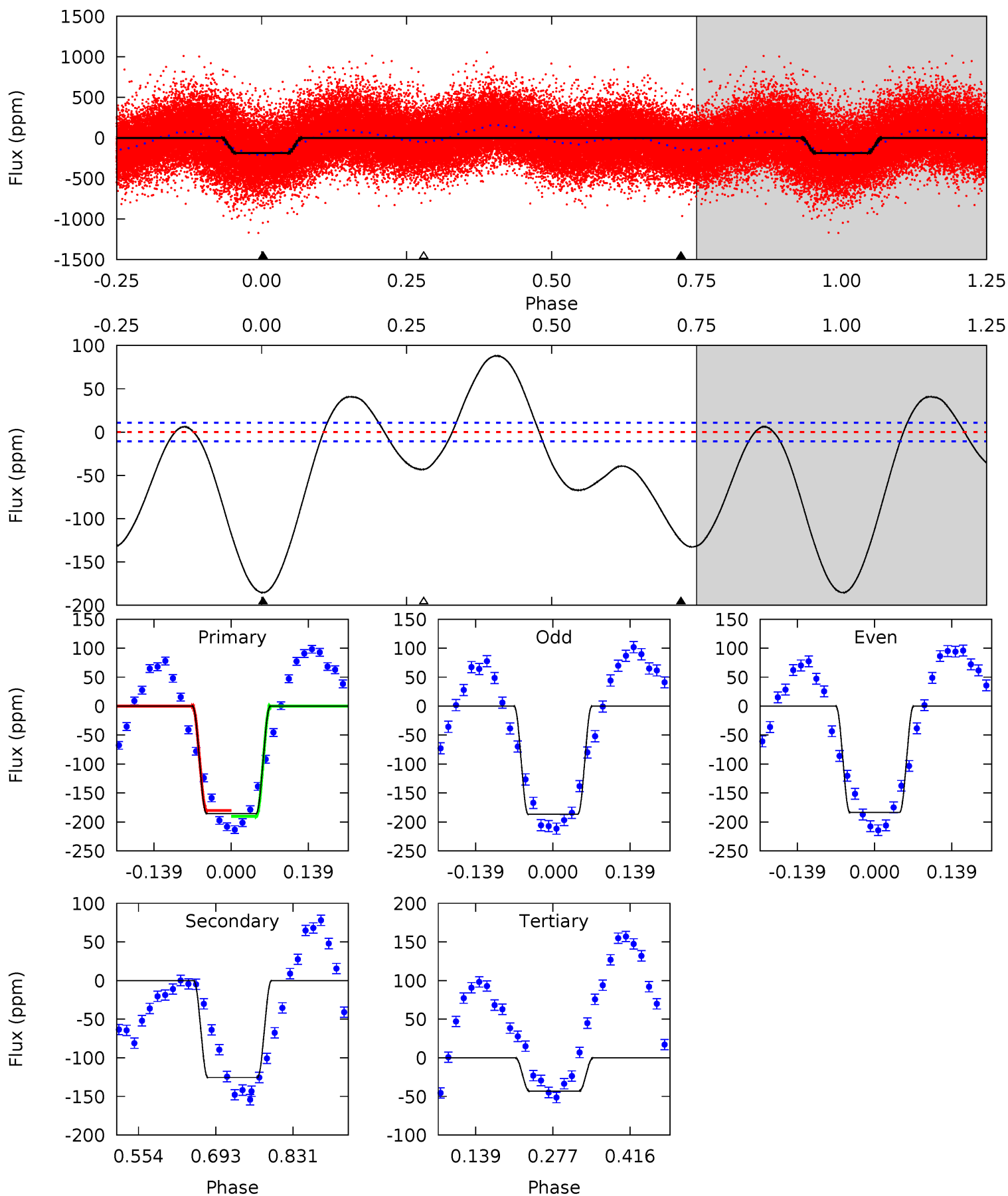
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	9.79	0	0	4.47	1.41	2.87	12.5	12.5	9.79	9.79	0.05	0.95	0.23	2.60



Alt Model-Shift Uniqueness Test

006392601-01, P = 1.221472 Days, E = 131.032667 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.4	52.4	18.0	0	4.50	1.48	20.4	59.4	77.4	34.4	52.4	0.59	1.03	0.32	2.15



Stellar Parameters For KIC 006392601

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7252^{+226}_{-327}	$4.107^{+0.149}_{-0.182}$	$-0.080^{+0.200}_{-0.350}$	$1.808^{+0.563}_{-0.422}$	$1.522^{+0.212}_{-0.236}$	$0.362^{+0.279}_{-0.182}$
	+3%/-5%	+4%/-4%	+250%/-438%	+31%/-23%	+14%/-16%	+77%/-50%
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 006392601-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 2	$1.03^{+0.41}_{-0.40}$	3739^{+275}_{-259}	6431^{+1942}_{-1007}	$6.218^{+10.311}_{-2.984}$
Alt.	-125 ± 2	$2.89^{+0.62}_{-0.56}$	3757^{+287}_{-275}	6162^{+565}_{-423}	$5.399^{+2.801}_{-1.734}$

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 $A_{obs} \gg 1.0$

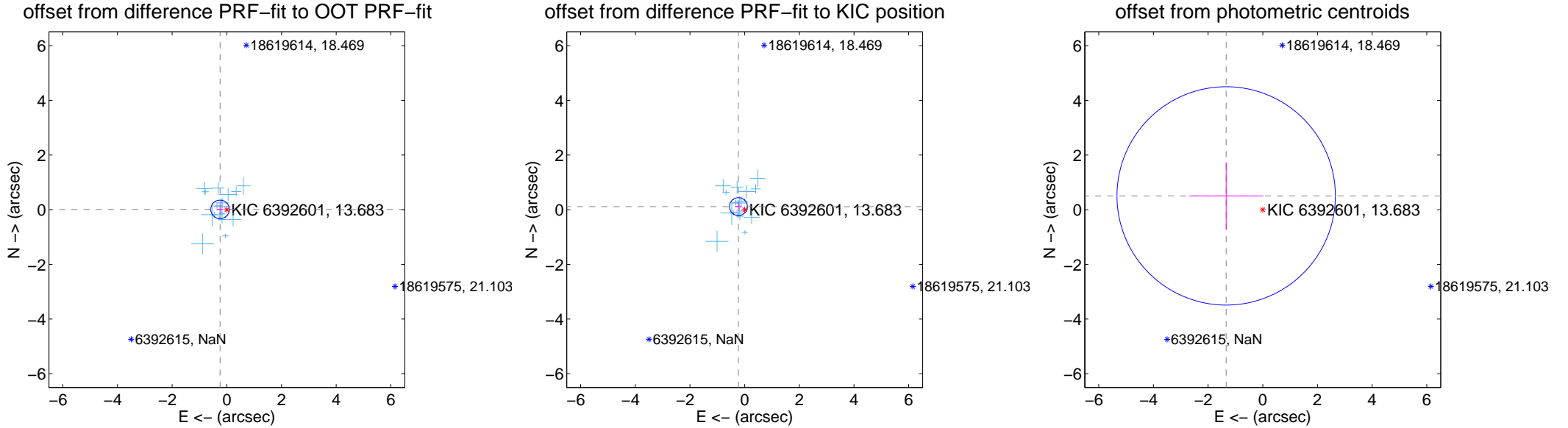
DV Centroid Data

Supplemental centroid analysis for 006392601-01. Kepler magnitude: 13.68. Transit SNR 8.10

There are 17 quarters with good PRF difference image offsets

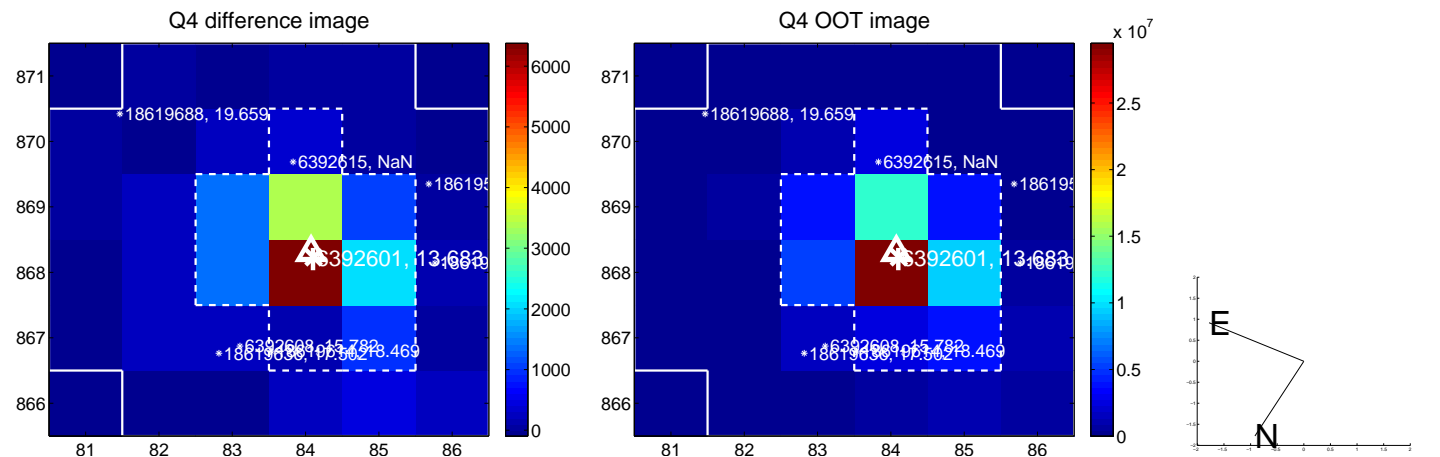
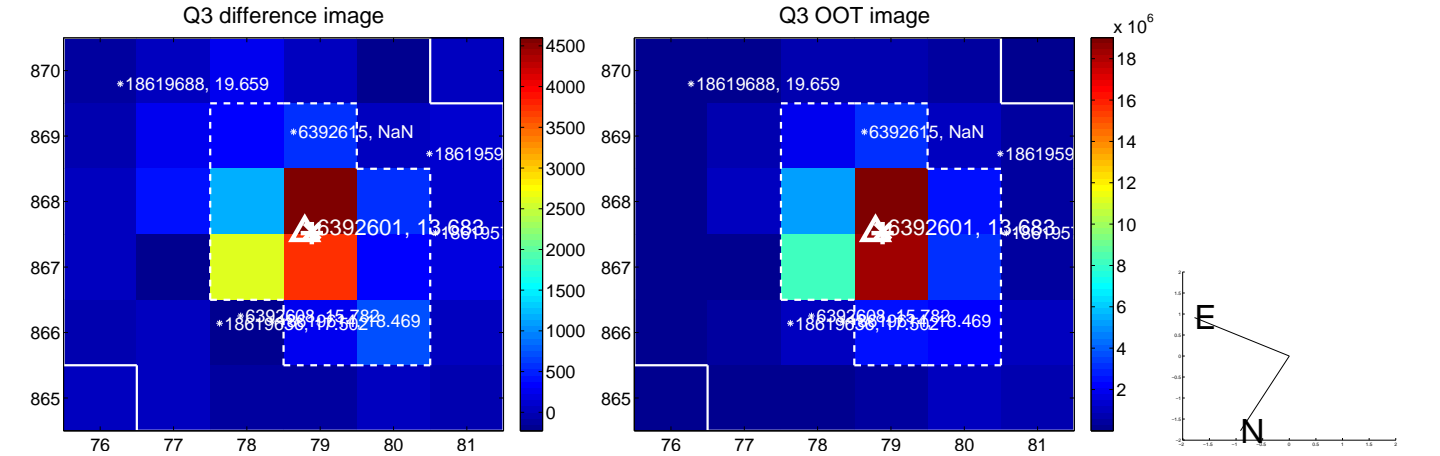
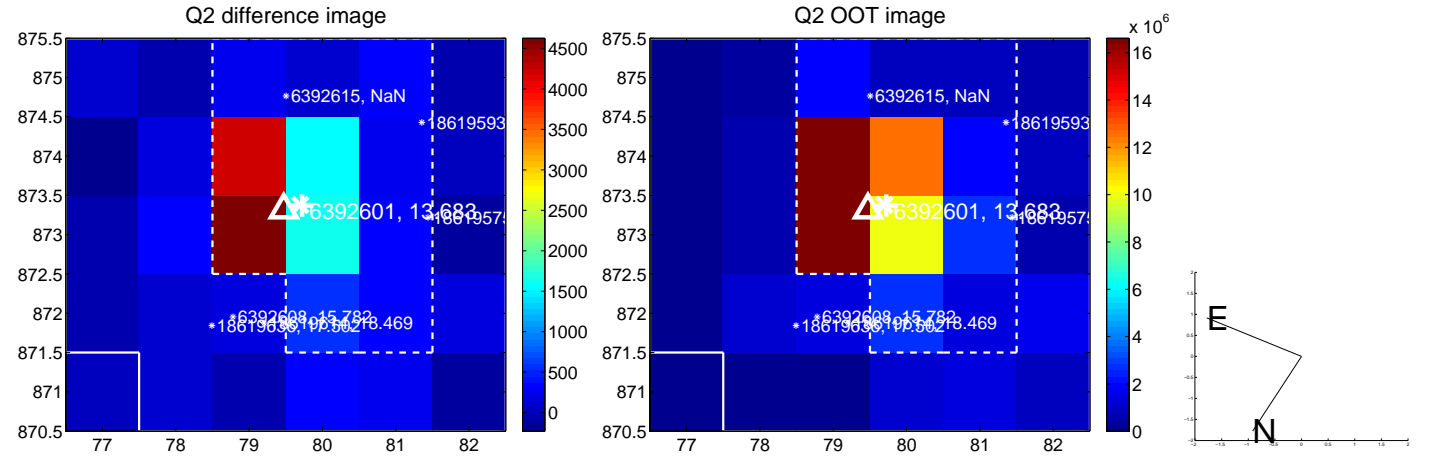
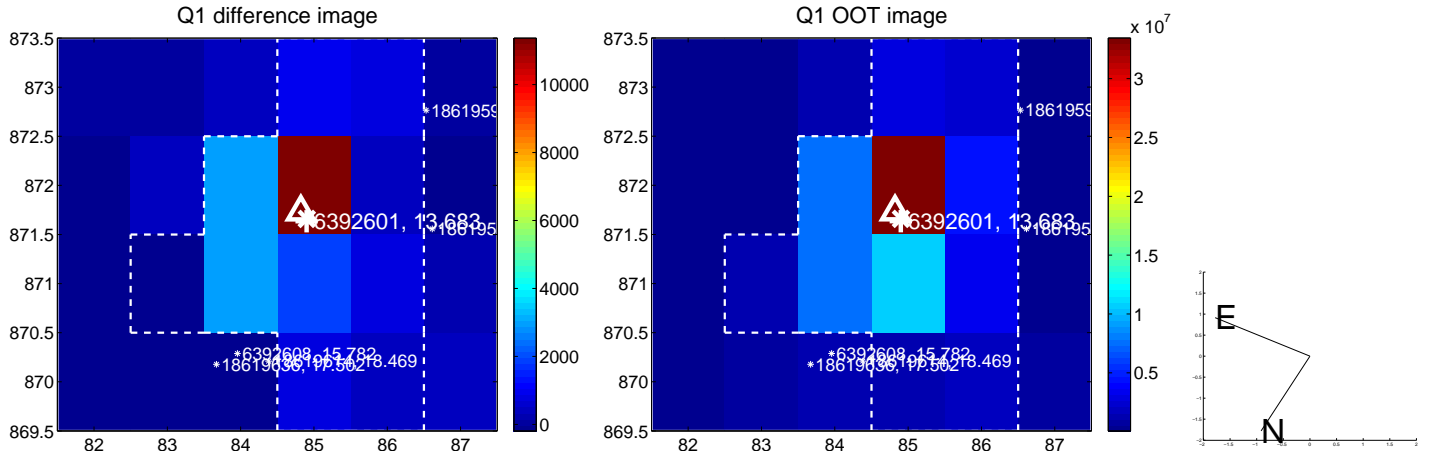
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.248 ± 0.113	2.19	0.248 ± 0.114	0.012 ± 0.153
PRF-fit source offset from KIC position	0.255 ± 0.109	2.34	0.228 ± 0.117	0.114 ± 0.161
photometric centroid source offset	1.43 ± 1.33	1.07	1.34 ± 1.35	0.51 ± 1.23

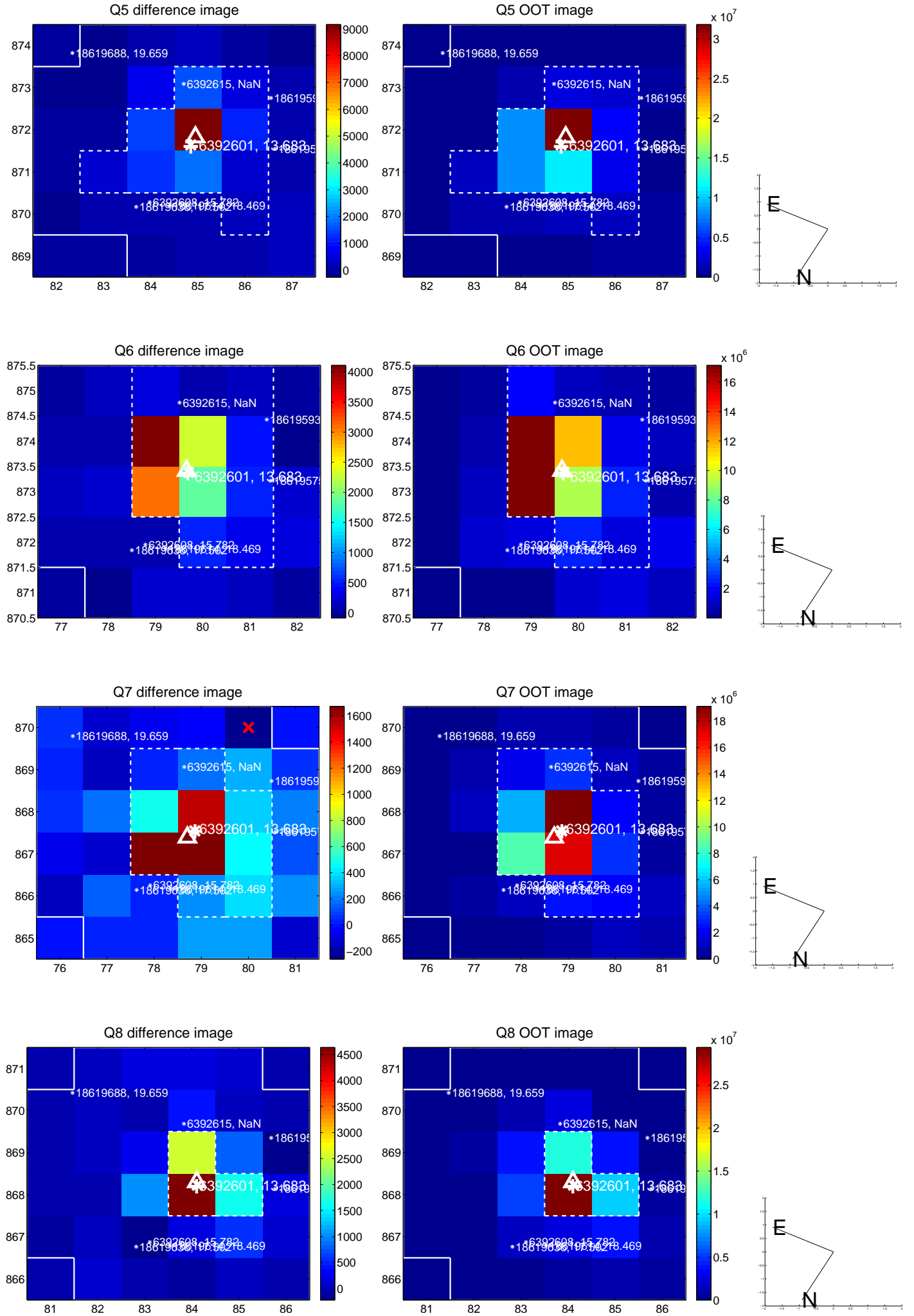


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

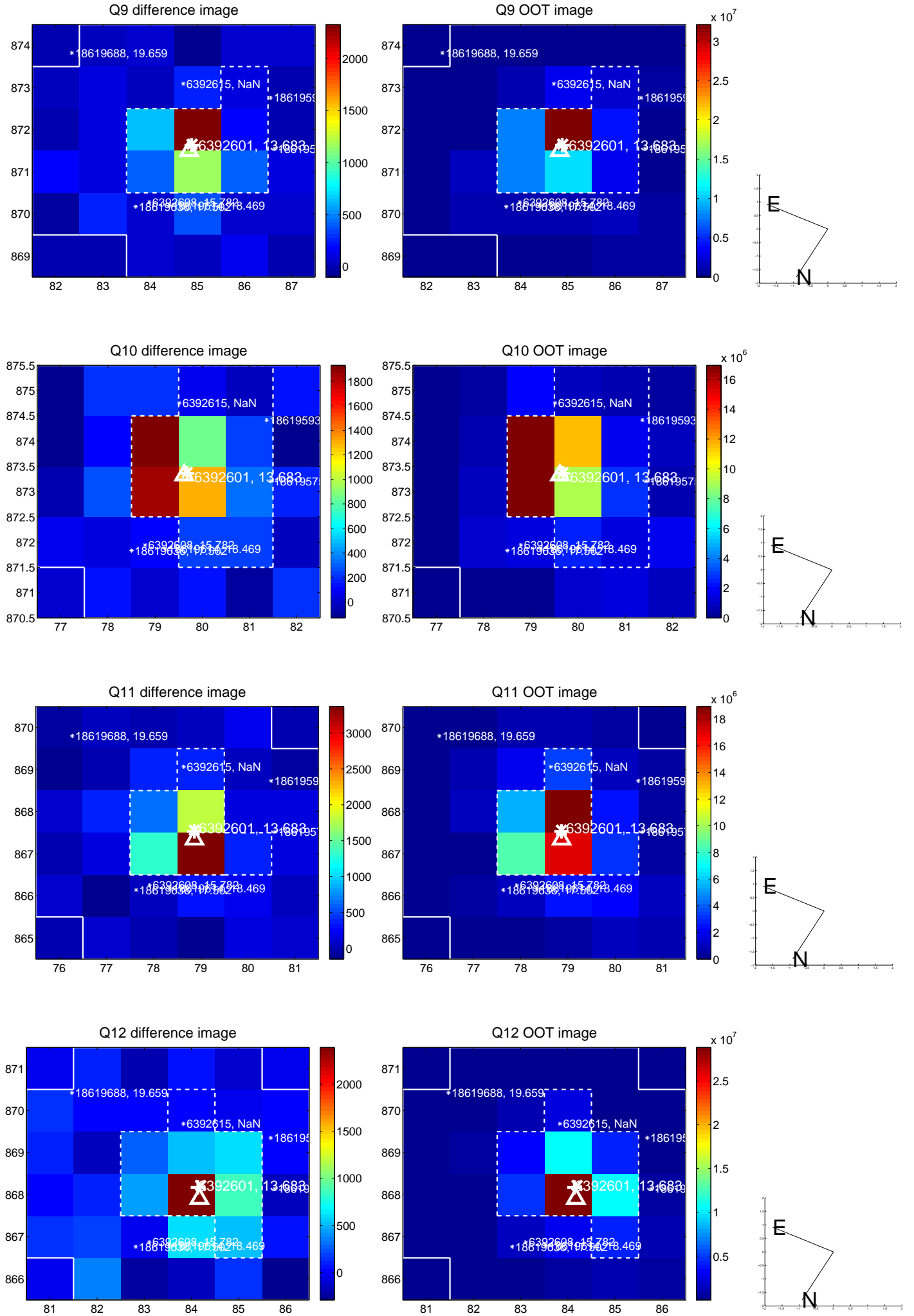
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



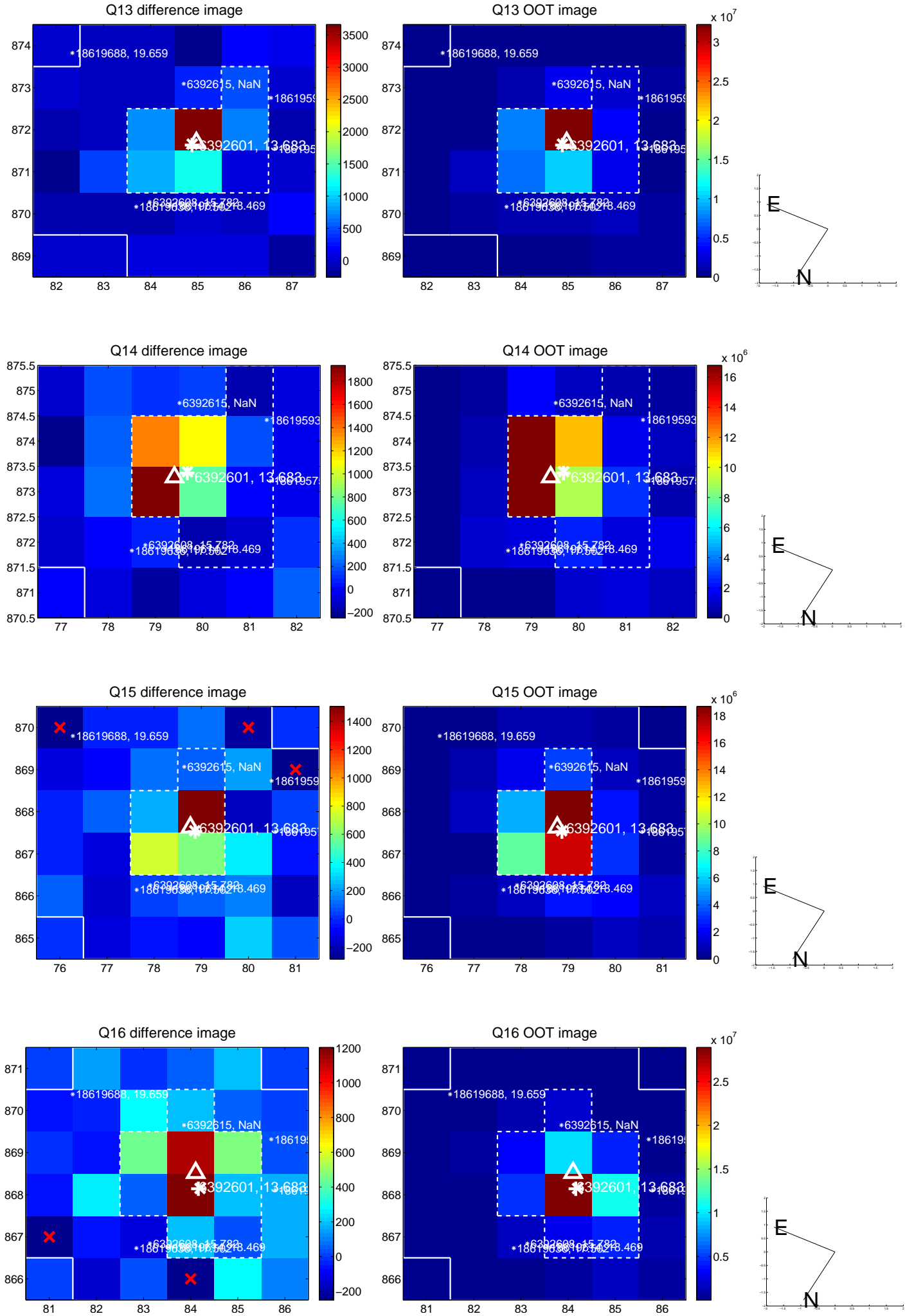
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



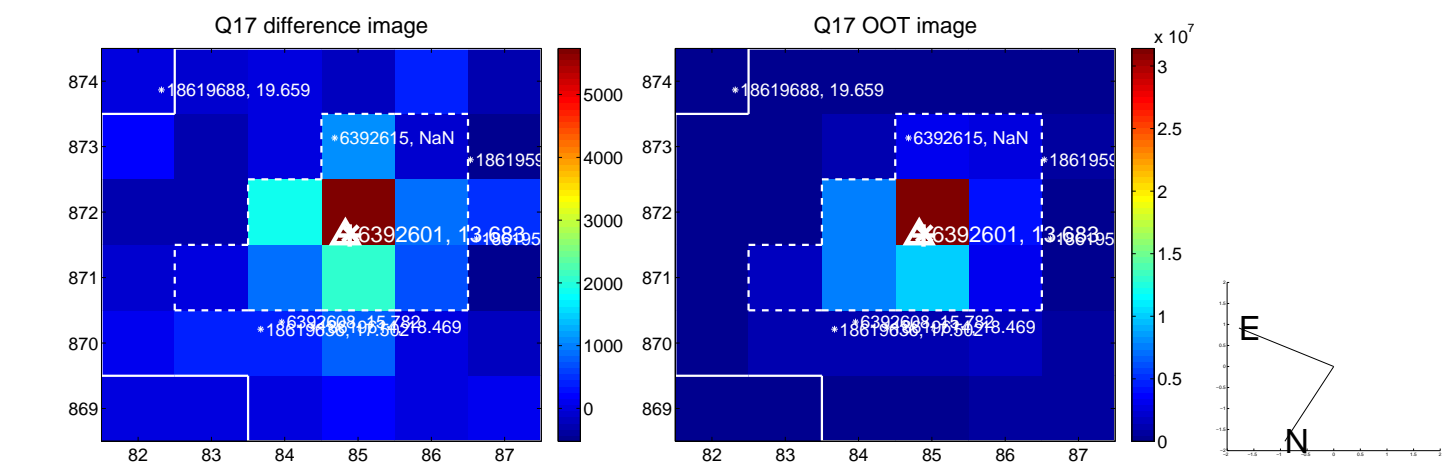
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



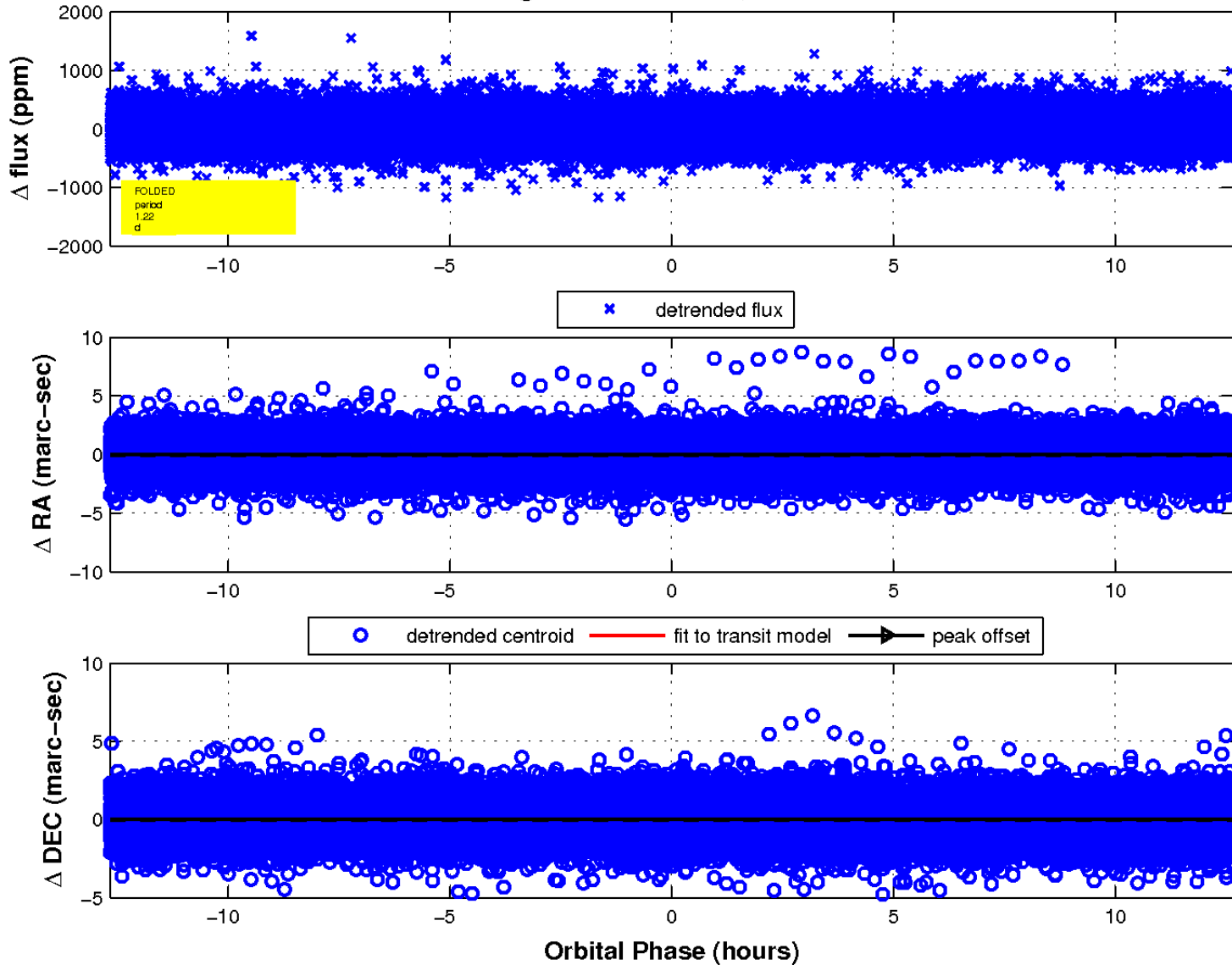
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

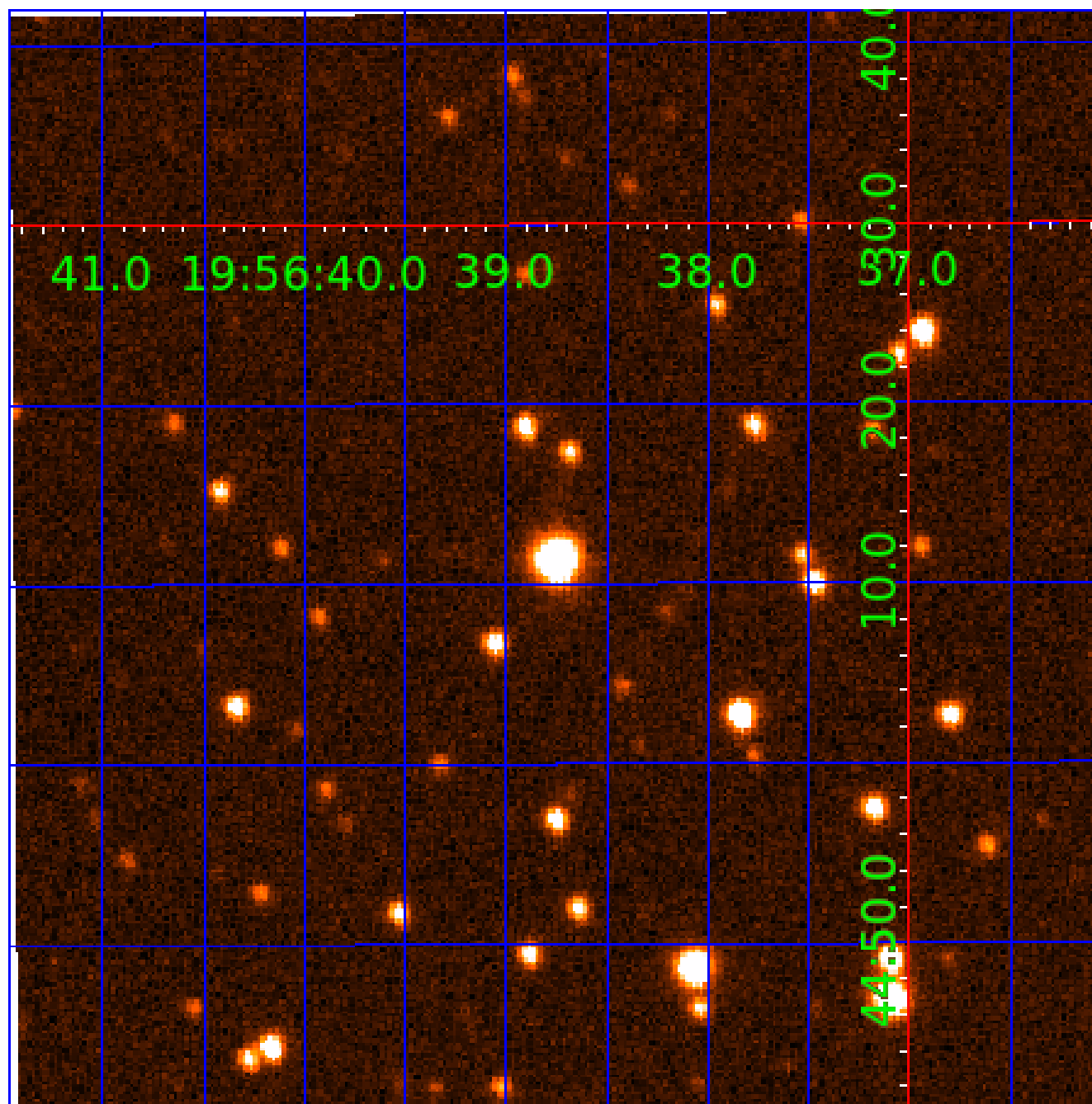


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 006392601

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})
006392601-01	OBS	No	1.221486	132.224243	24.1	4.218	9.2	8.1	1.81	7252	1.03	12218.18
006392601-02	OBS	No	1.221279	131.980795	25.6	12.759	9.1	9.2	1.81	7252	1.06	12220.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006392601-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006392601-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

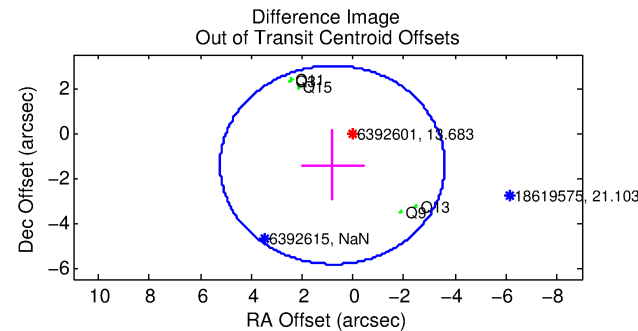
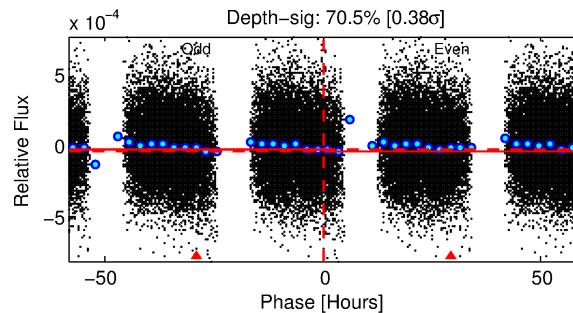
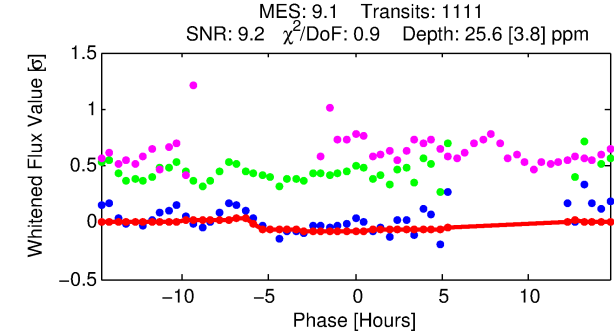
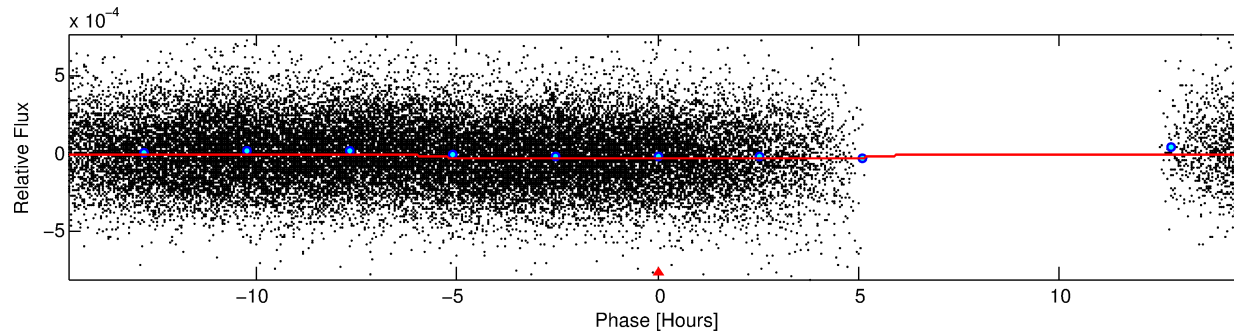
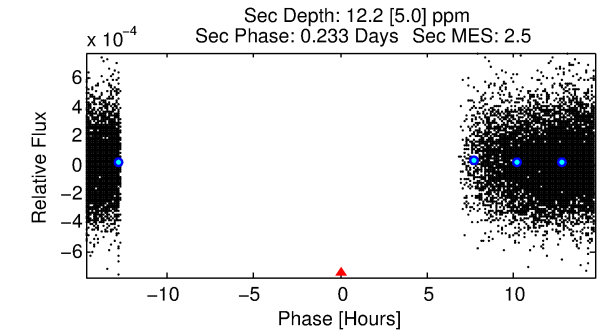
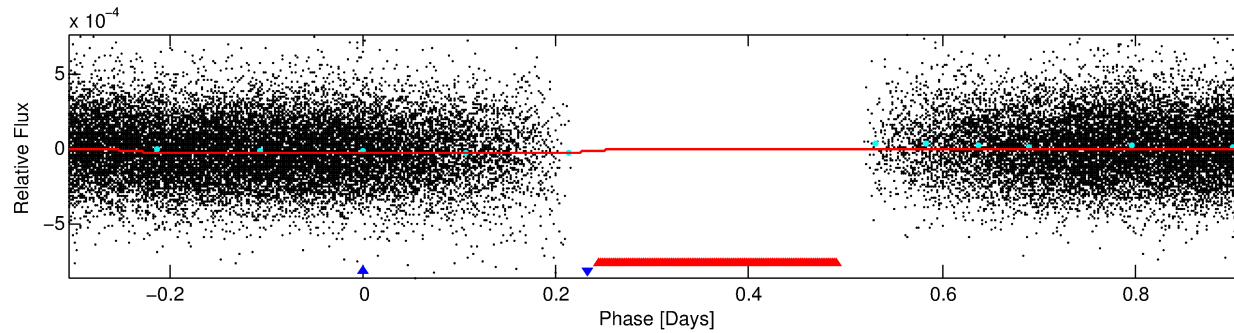
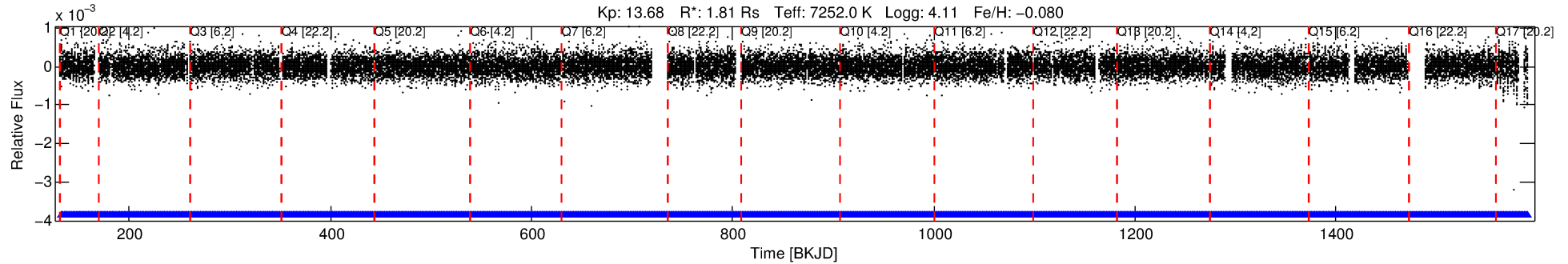
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006392601-02

No Significant Match Found

DV One-Page Summary

KIC: 6392601 Candidate: 2 of 2 Period: 1.221 d



DV Fit Results:

Period = 1.22128 [0.00003] d
Epoch = 131.9808 [0.0647] BKJD
Rp/R* = 0.0054 [0.0010]
a/R* = 1.01 [0.01]
b = 0.90 [0.29]
Seff = 12220.93 [4790.86]
Teq = 2681 [263] K
Rp = 1.06 [0.39] Re
a = 0.0257 [0.0064] AU
Ag = 3.98 [2.62] [1.14σ]
Teffp = 5856 [857] K [3.54σ]

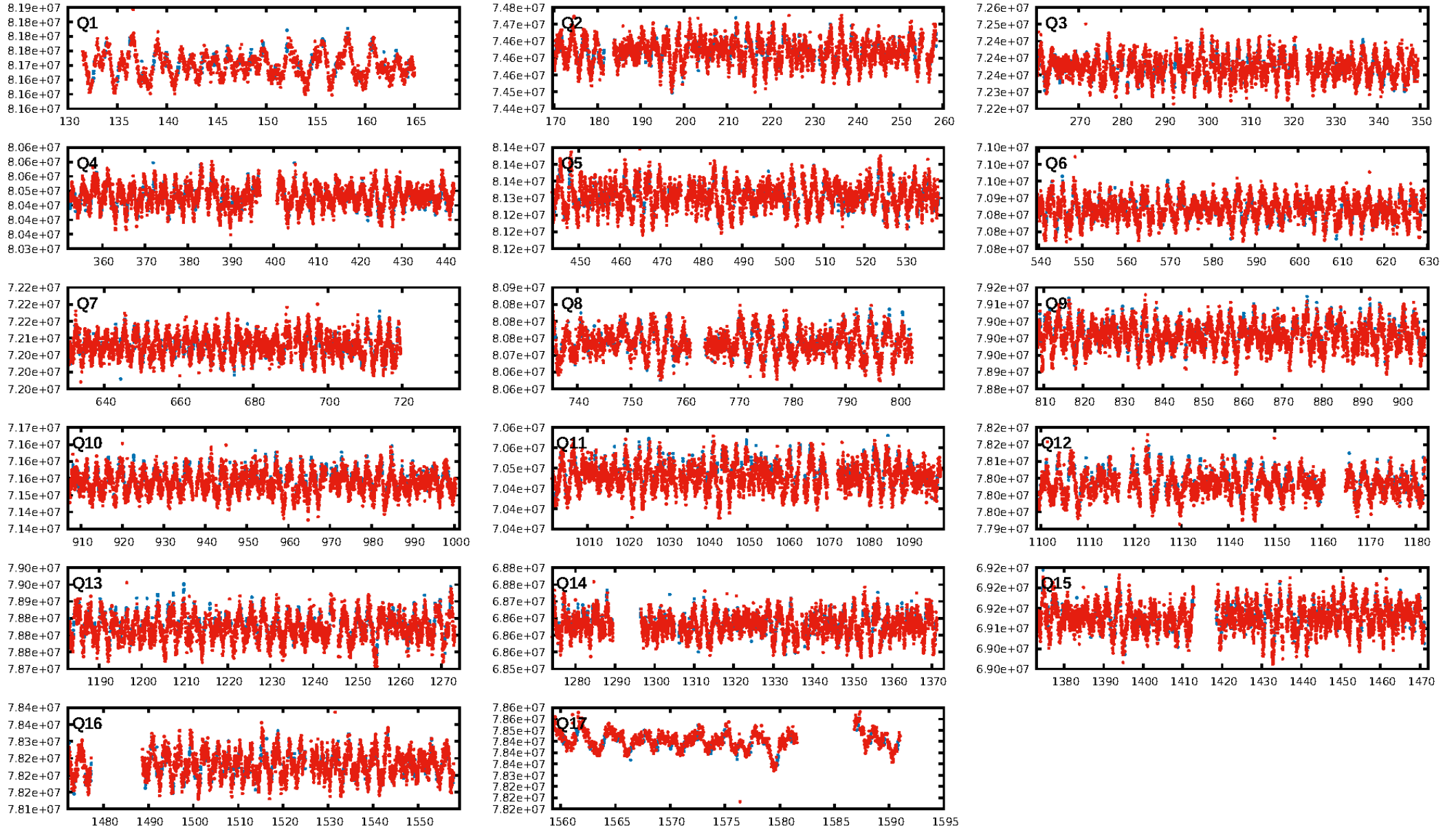
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1061/1061]
GhostDiagnostic-chr: 0.9617
Centroid-sig: 37.4%
Centroid-so: 0.756 arcsec [0.96σ]
OotOffset-rm: 1.635 arcsec [1.11σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-rm: 1.534 arcsec [1.04σ]
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DiffImageOverlap-fno: 0.00 [0/17]

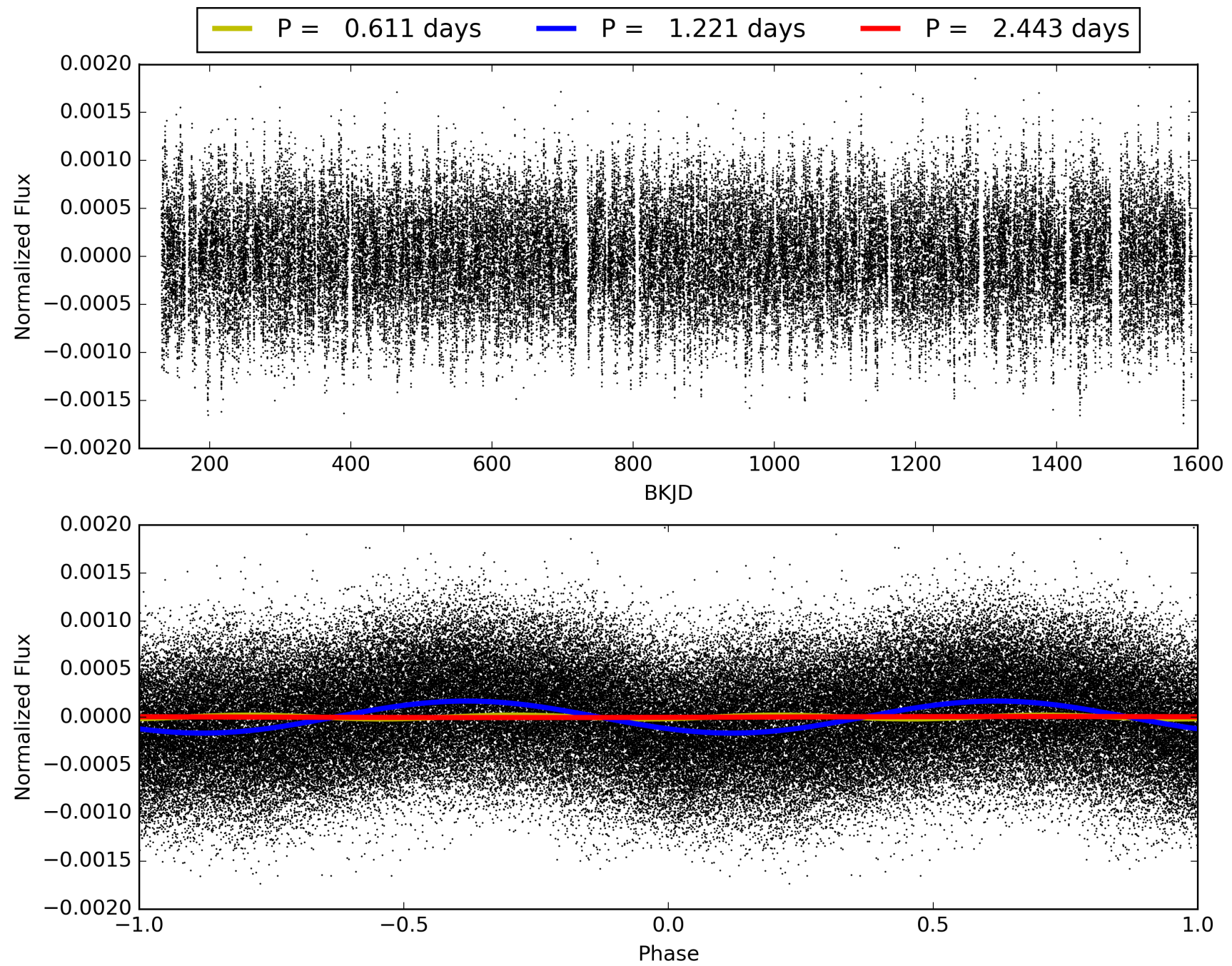
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:44:34 Z

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

TCE 006392601-02, PDC Light Curves

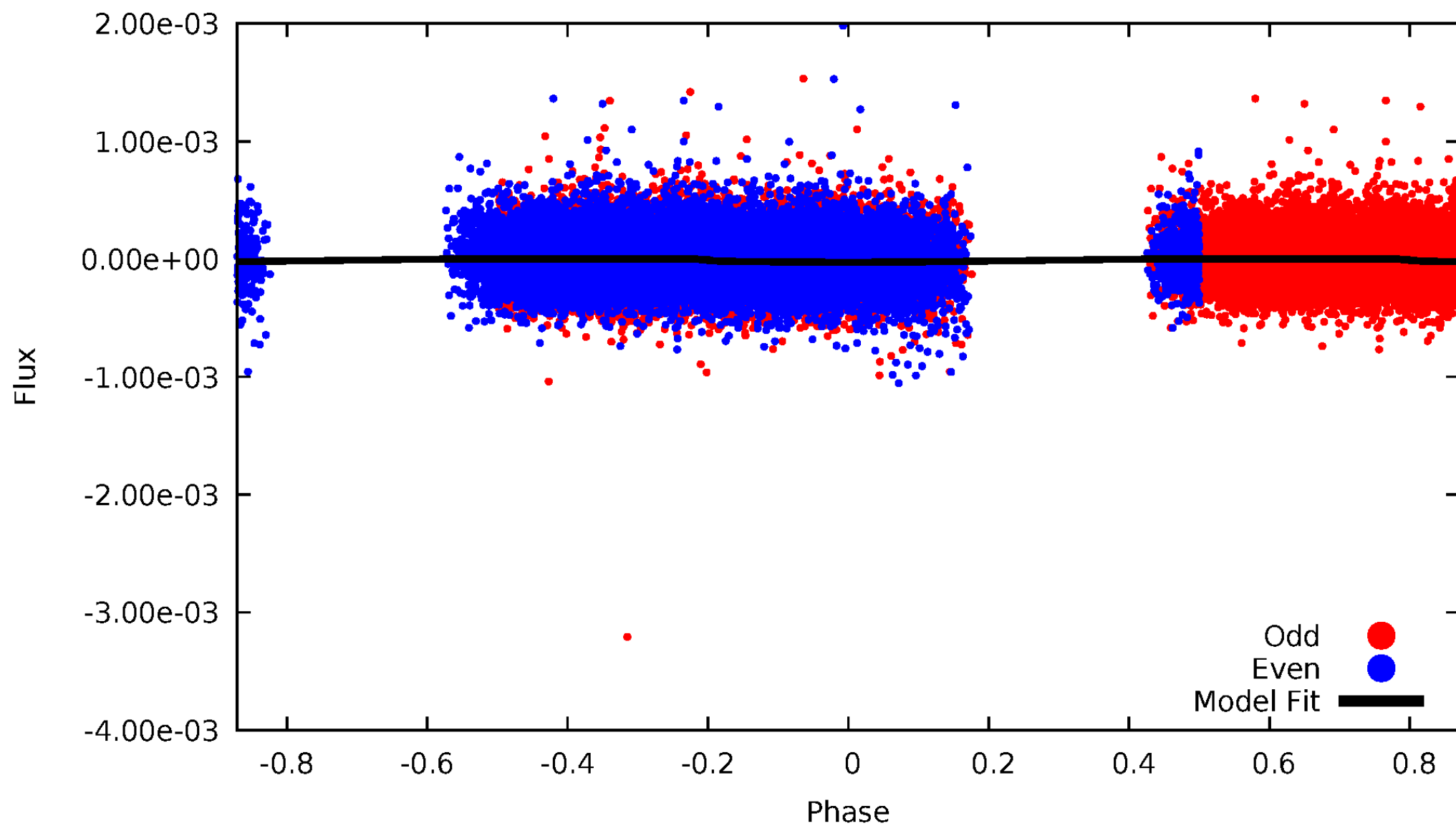


TCE 006392601-02



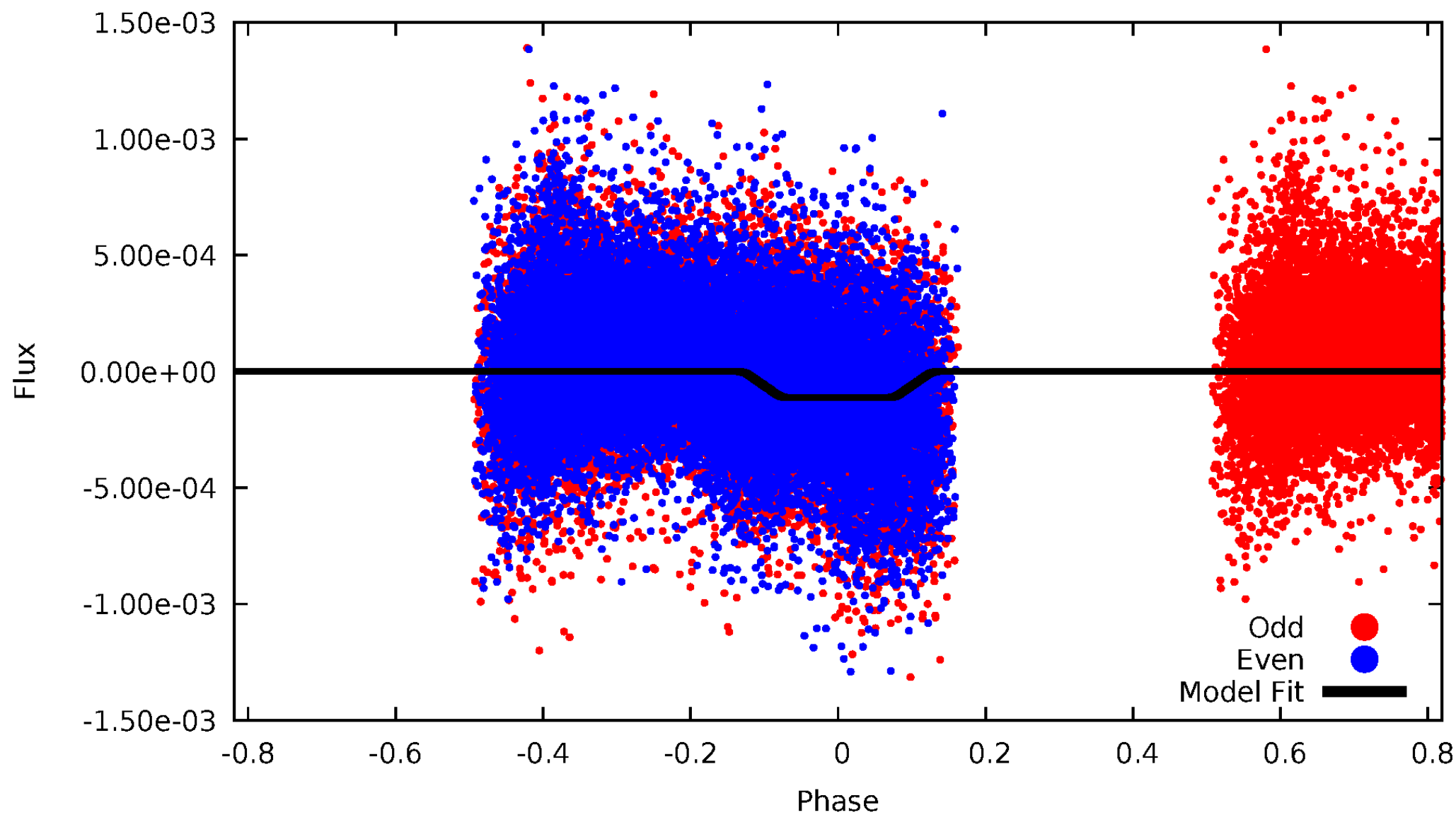
DV Odd/Even

TCE 006392601-02



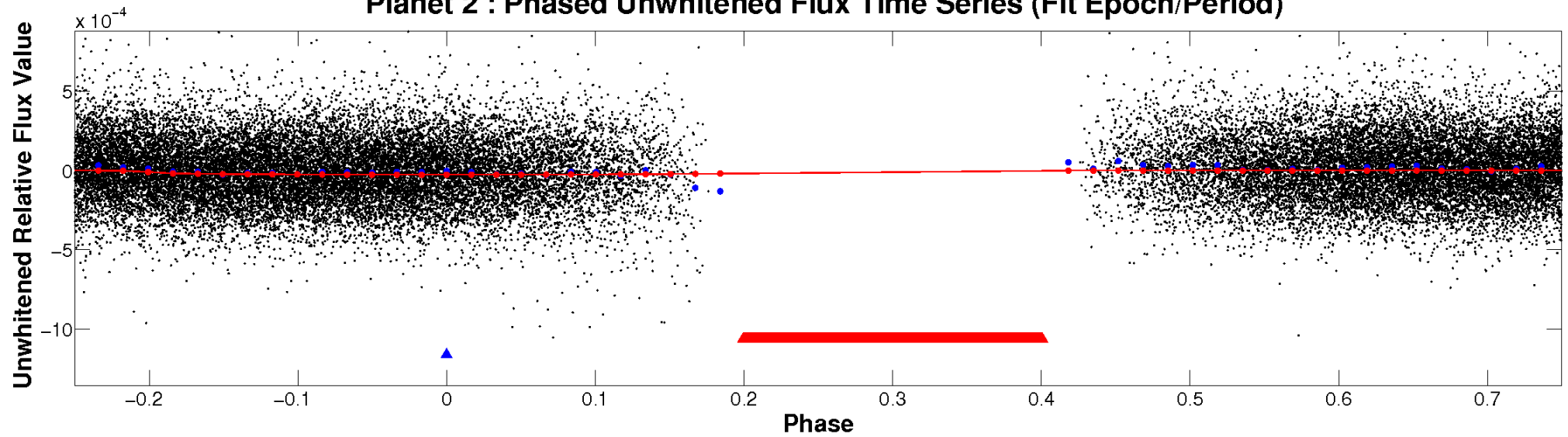
ALT Odd/Even

TCE 006392601-02

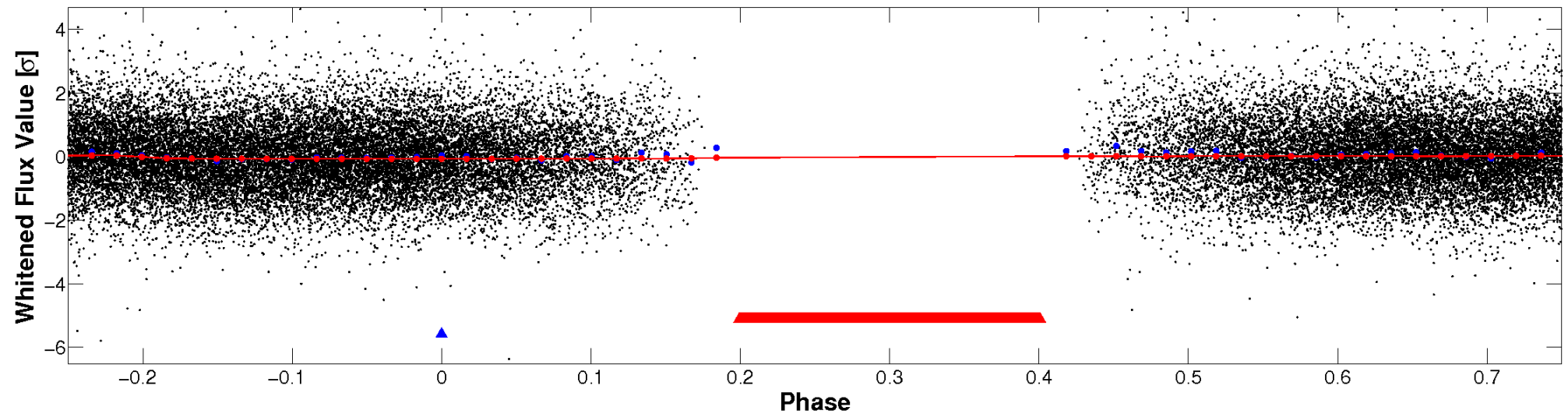


Non-Whitened Vs. Whitened Light Curve

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

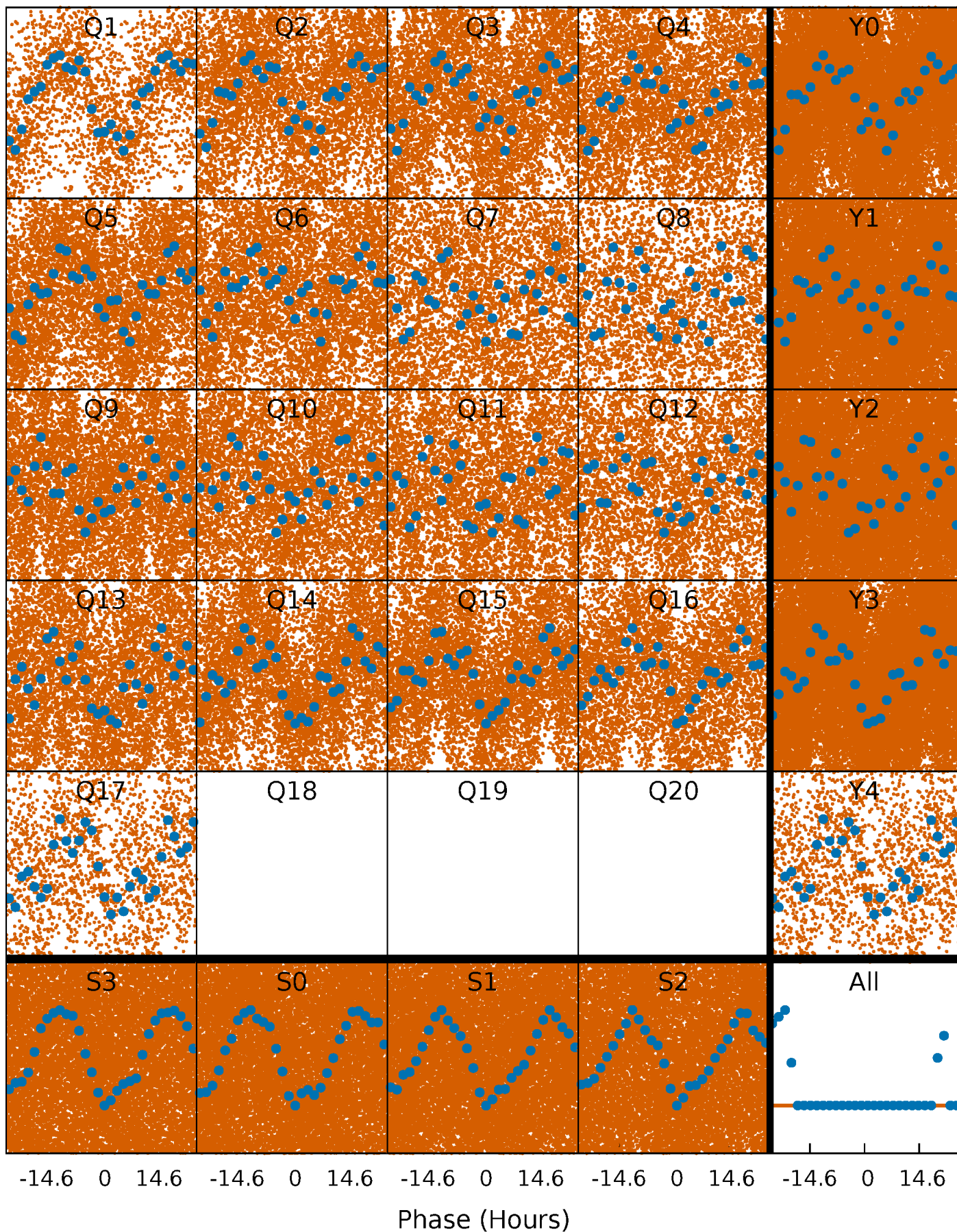


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



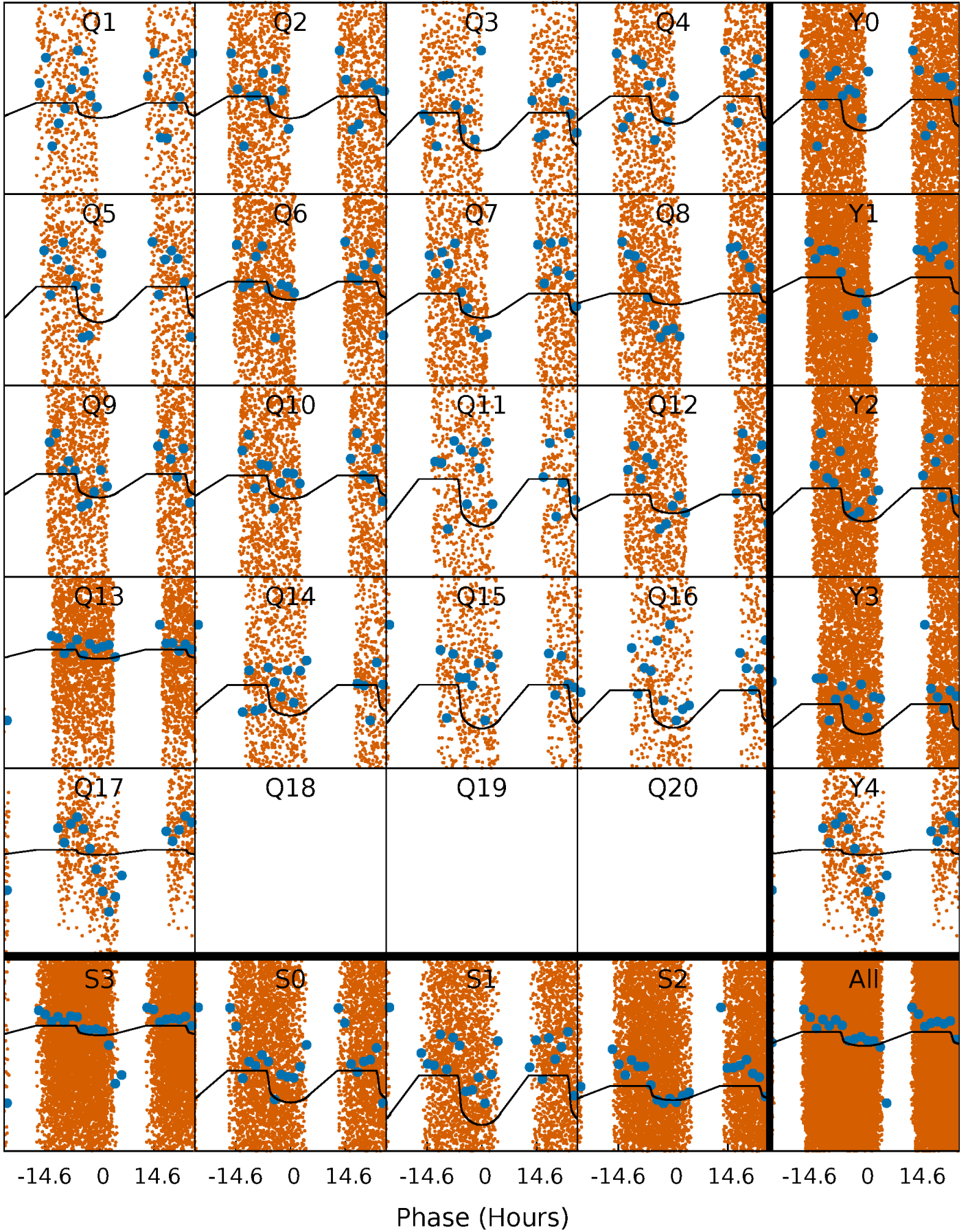
PDC Quarter-Phased Transit Curves

TCE 006392601-02 P= 1.221279 Days $T_0=131.980795$ (BKJD)



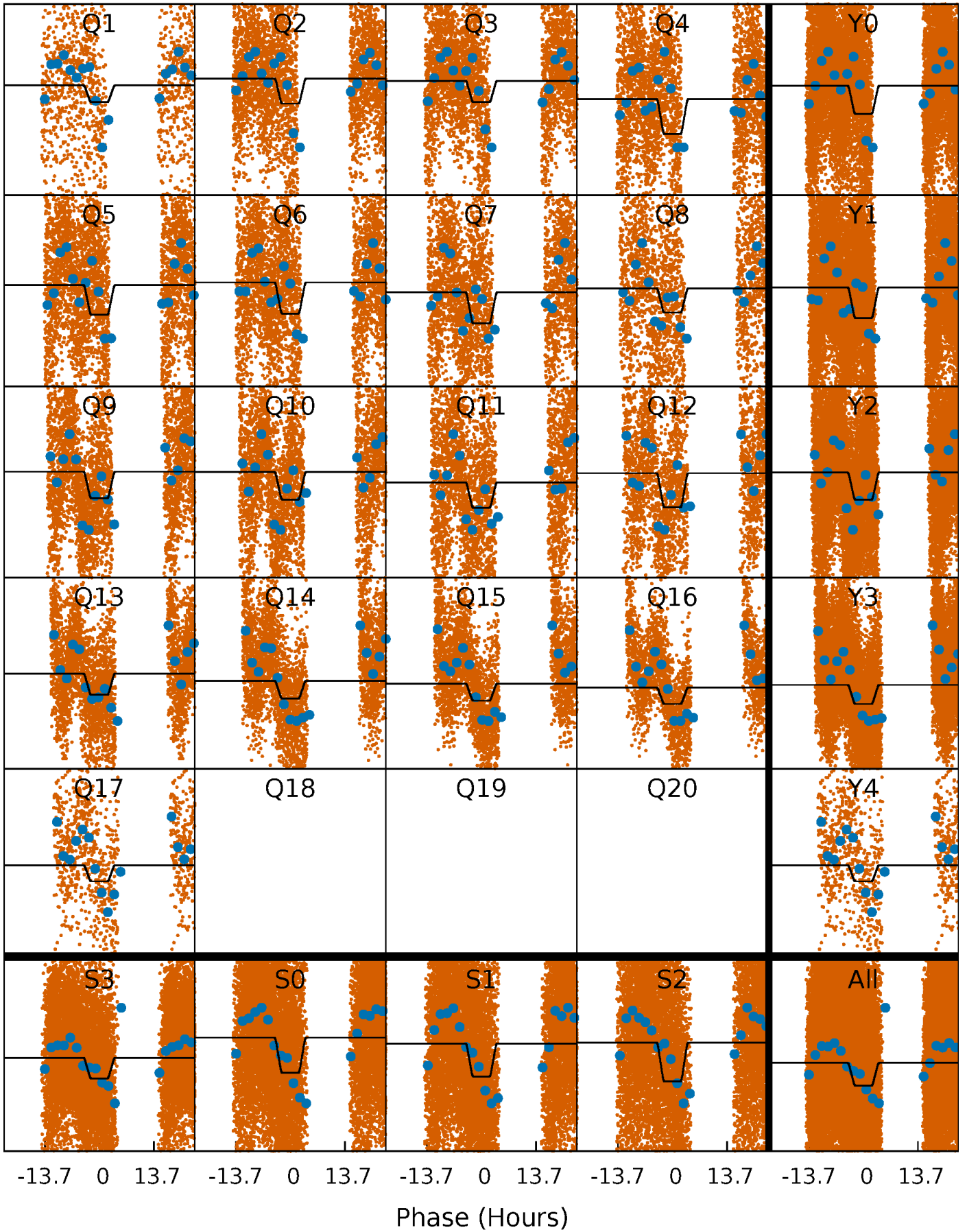
DV Quarter-Phased Transit Curves

TCE 006392601-02 $P = 1.221279$ Days $T_0 = 131.980795$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

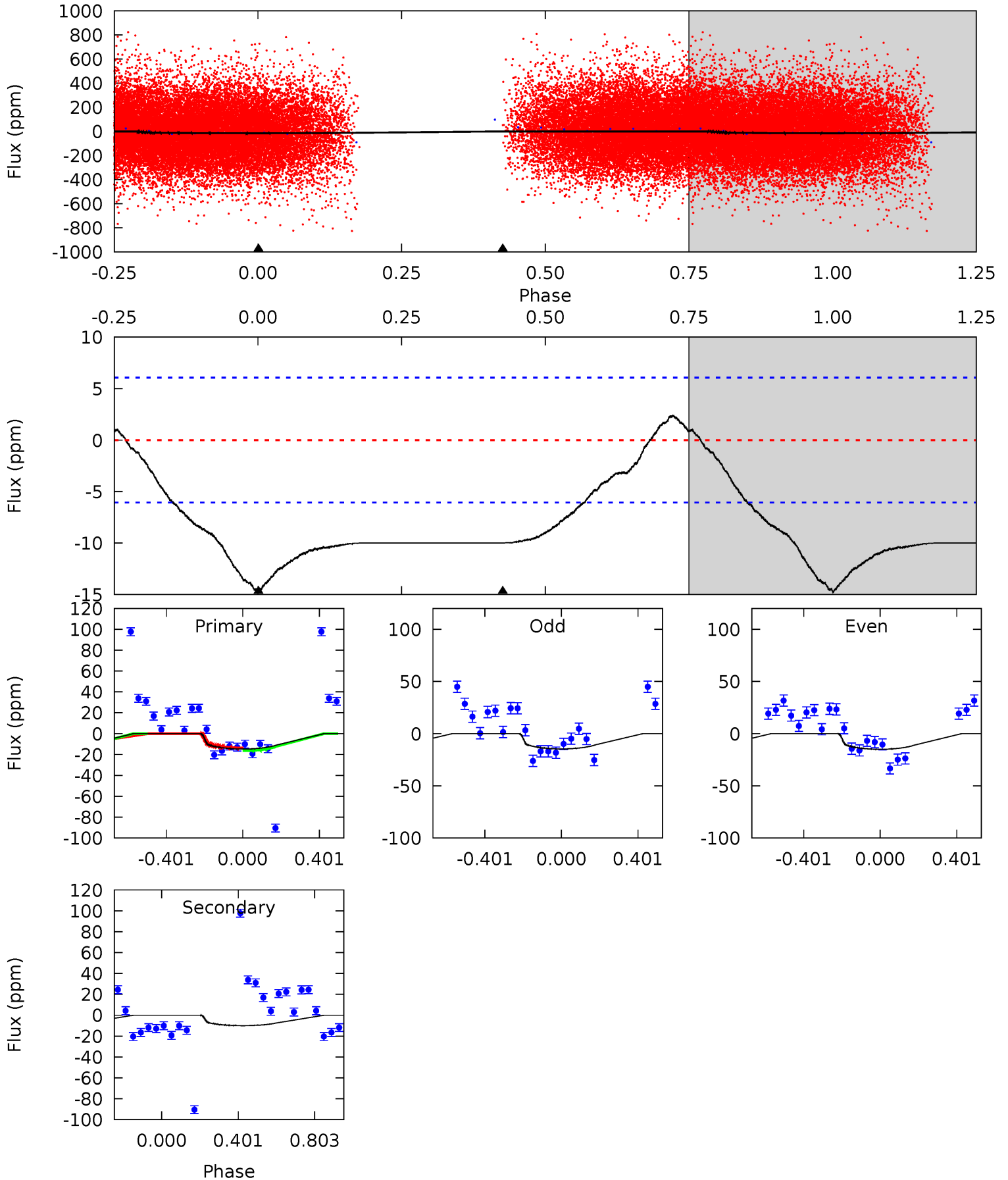
TCE 006392601-02 $P = 1.221376$ Days $T_0 = 131.882124$ (BKJD)



DV Model-Shift Uniqueness Test

006392601-02, P = 1.221279 Days, E = 130.759516 Days

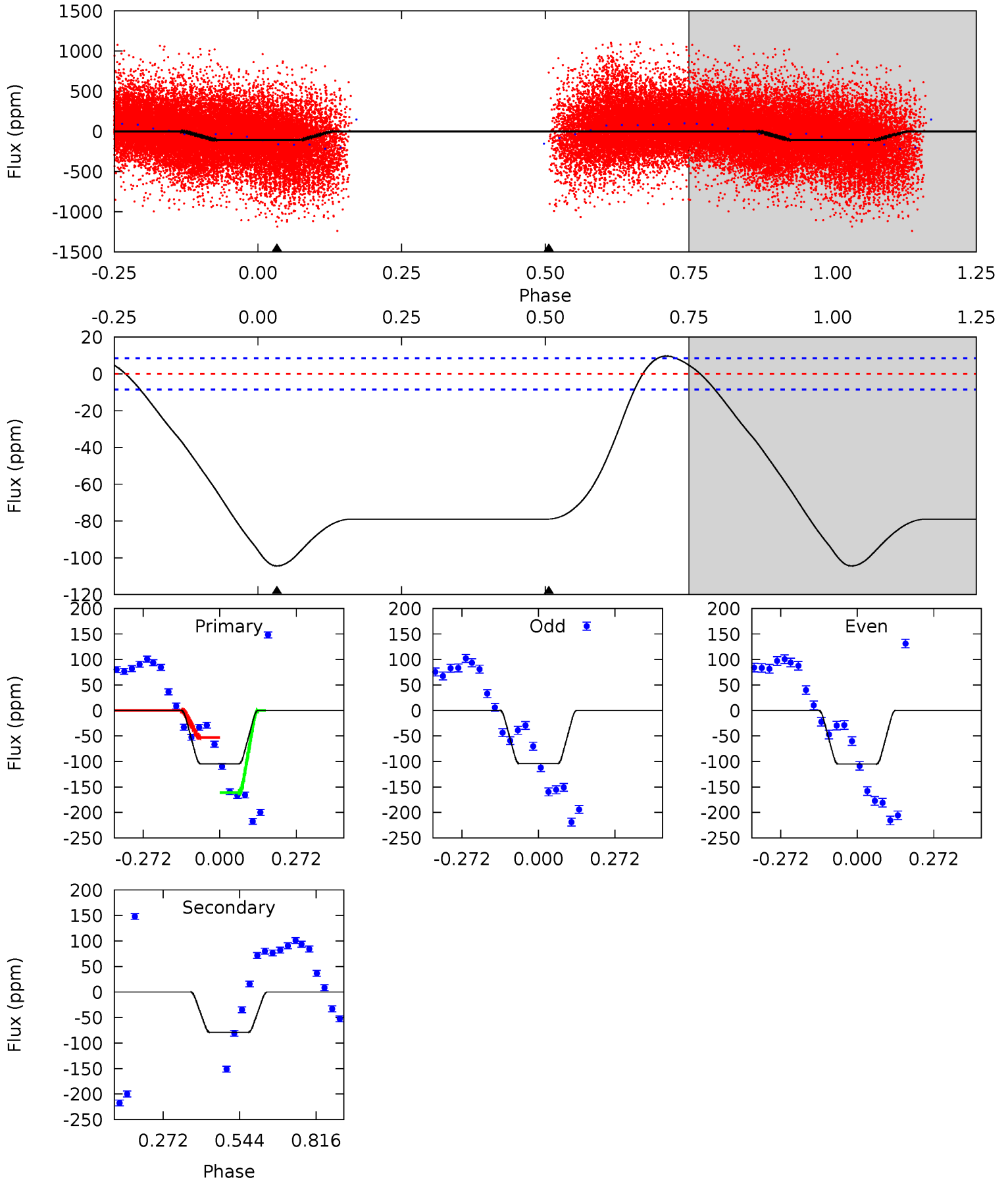
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.03	0	0	4.26	0.84	0.94	10.4	10.4	7.03	7.03	0.12	1.06	0.14	0.68



Alt Model-Shift Uniqueness Test

006392601-02, P = 1.221376 Days, E = 130.660748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.5	40.5	0	0	4.35	1.10	2.38	53.5	53.5	40.5	40.5	0.23	1.11	0.09	20.1



Stellar Parameters For KIC 006392601

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7252^{+226}_{-327}	$4.107^{+0.149}_{-0.182}$	$-0.080^{+0.200}_{-0.350}$	$1.808^{+0.563}_{-0.422}$	$1.522^{+0.212}_{-0.236}$	$0.362^{+0.279}_{-0.182}$
	+3%/-5%	+4%/-4%	+250%/-438%	+31%/-23%	+14%/-16%	+77%/-50%
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 006392601-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 1	$1.04^{+0.27}_{-0.23}$	3768^{+273}_{-258}	5429^{+720}_{-588}	$3.297^{+1.949}_{-1.300}$
Alt.	-79 ± 2	$2.11^{+0.38}_{-0.35}$	3753^{+297}_{-263}	6480^{+452}_{-401}	$6.392^{+2.499}_{-1.696}$

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

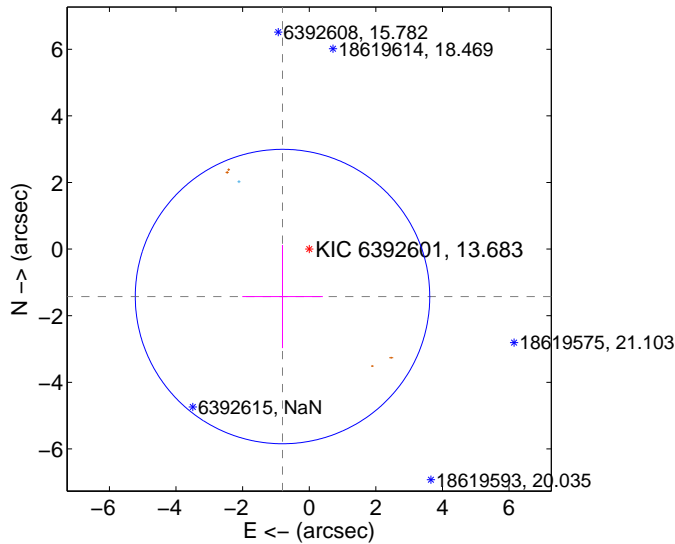
Supplemental centroid analysis for 006392601-02. Kepler magnitude: 13.68. Transit SNR 9.22

There are 1 quarters with good PRF difference image offsets

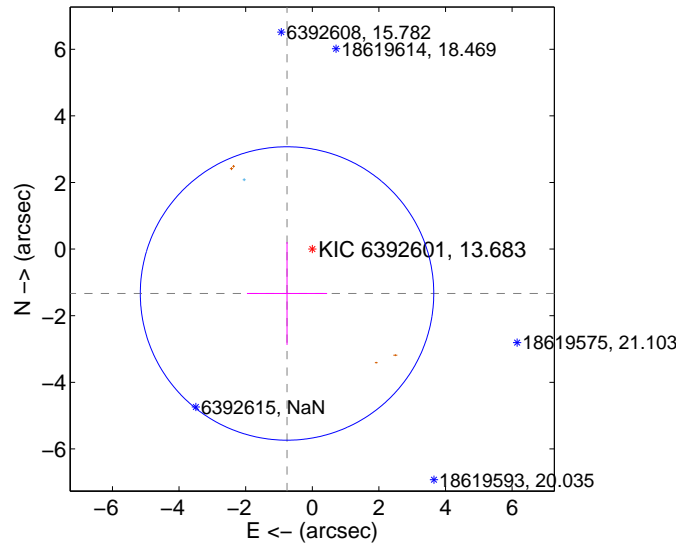
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.635 ± 1.474	1.11	0.802 ± 1.209	-1.425 ± 1.548
PRF-fit source offset from KIC position	1.534 ± 1.469	1.04	0.758 ± 1.203	-1.333 ± 1.545
photometric centroid source offset	0.76 ± 0.79	0.96	0.65 ± 0.80	0.39 ± 0.74

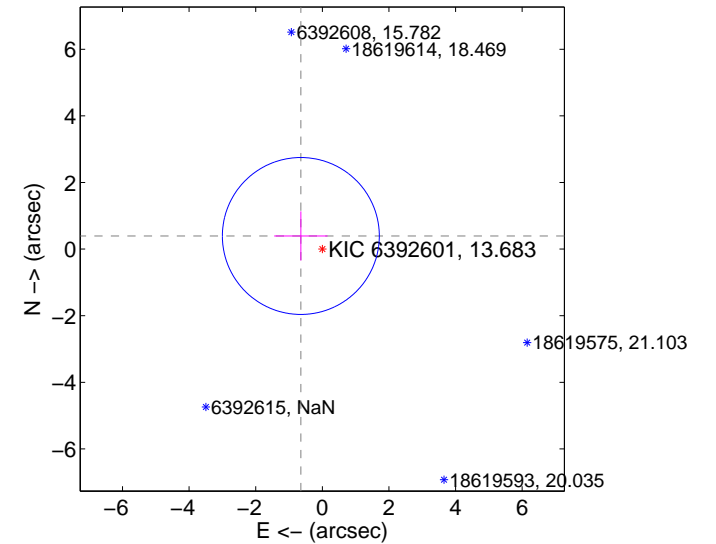
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

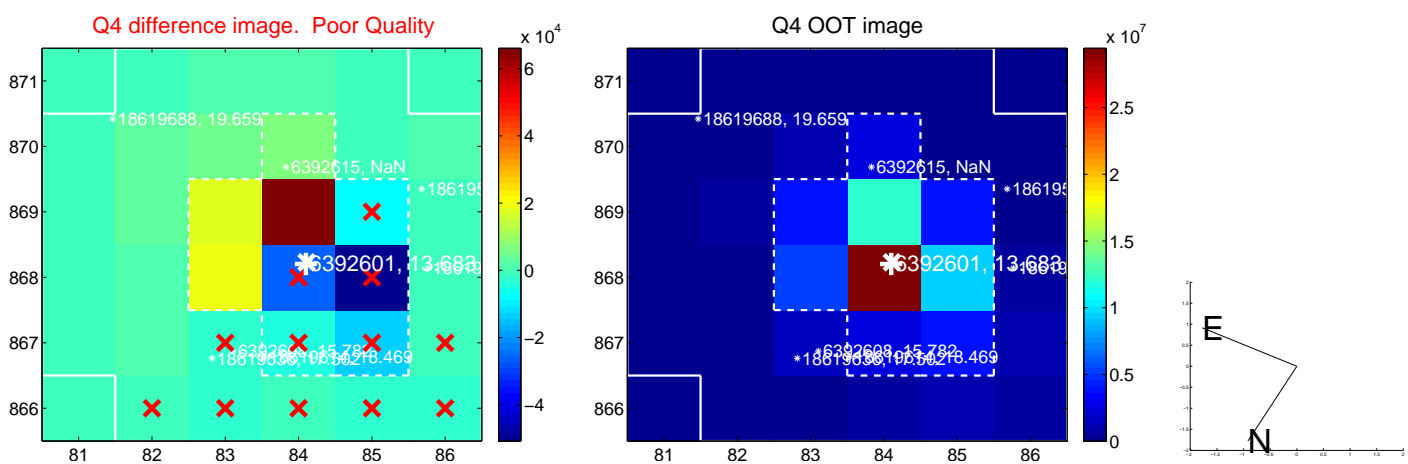
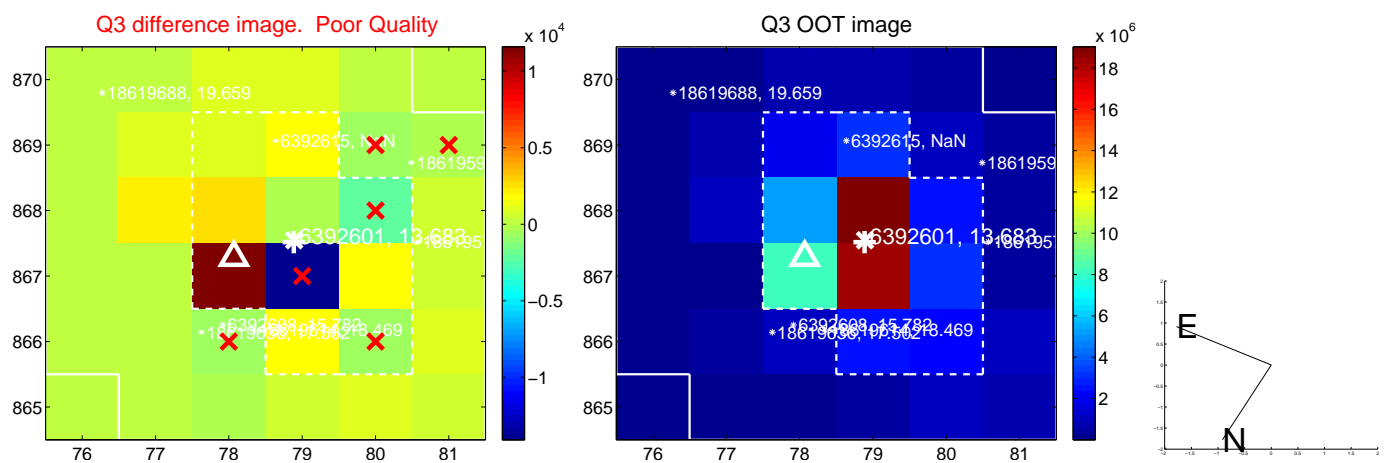
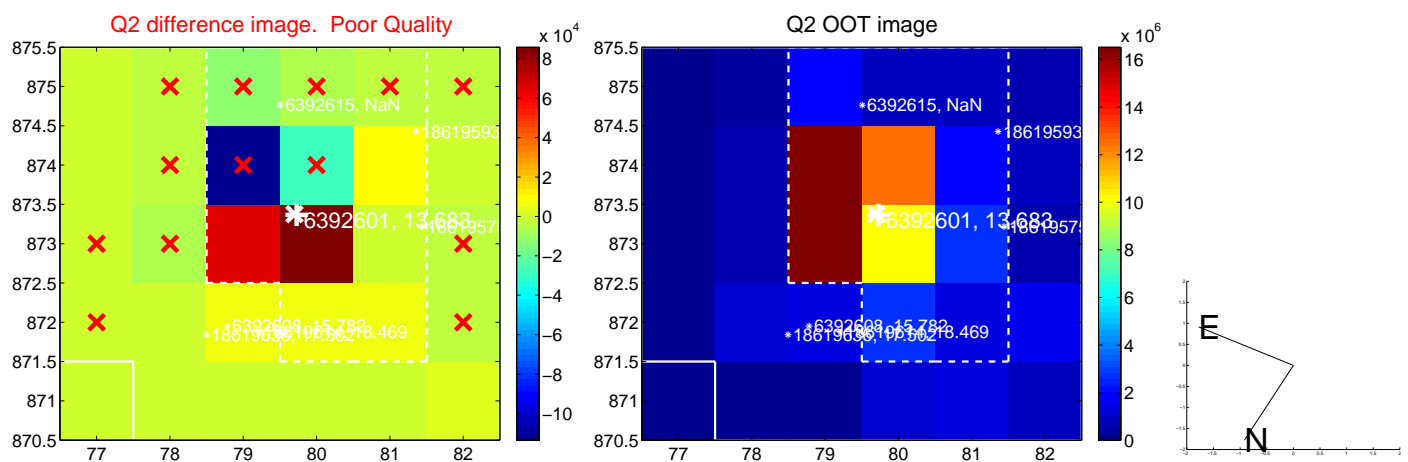
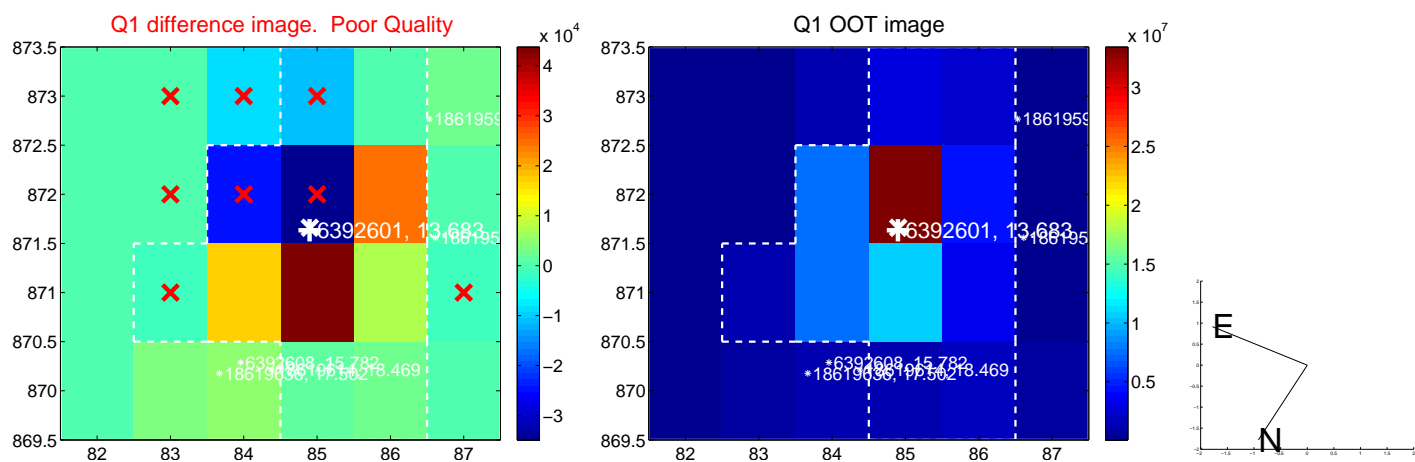


offset from photometric centroids

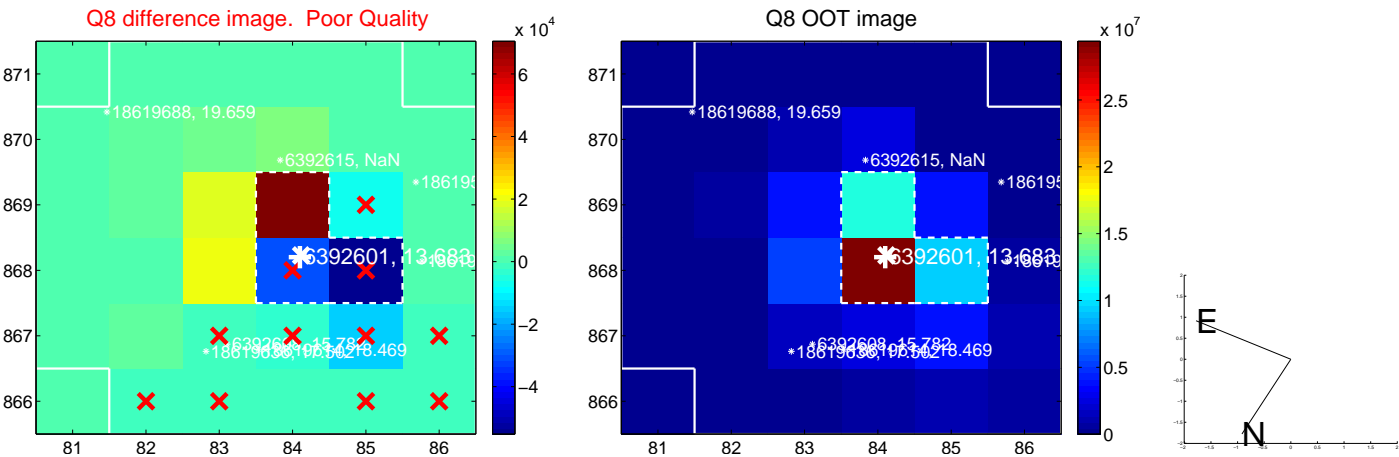
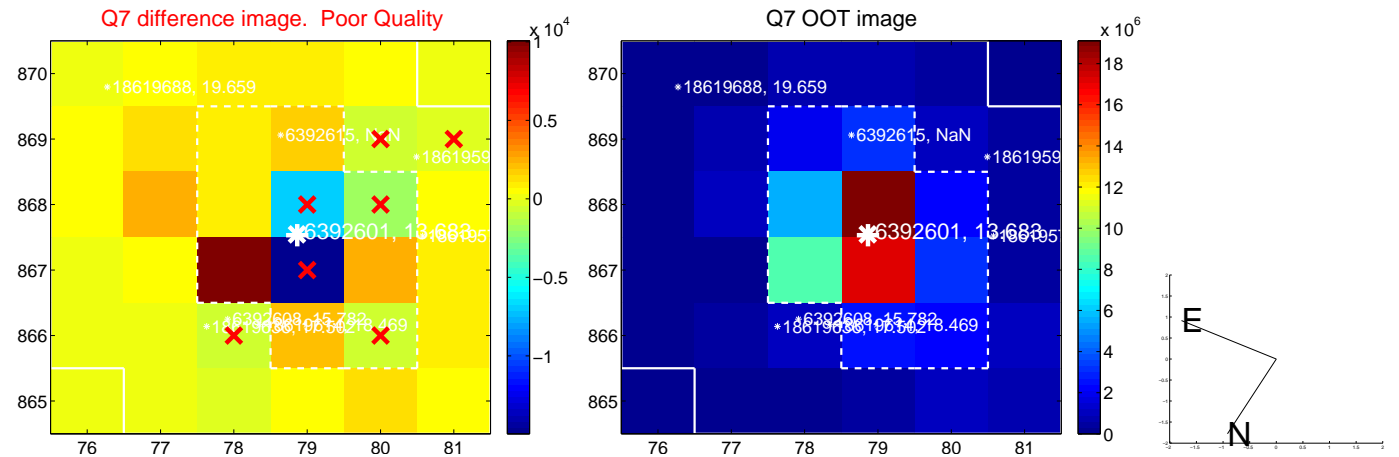
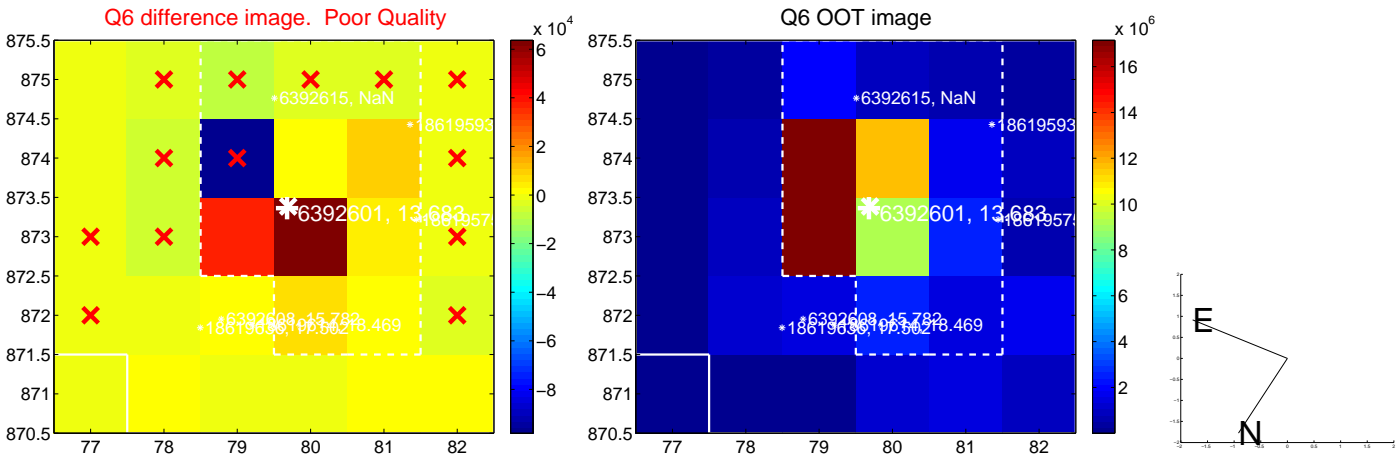
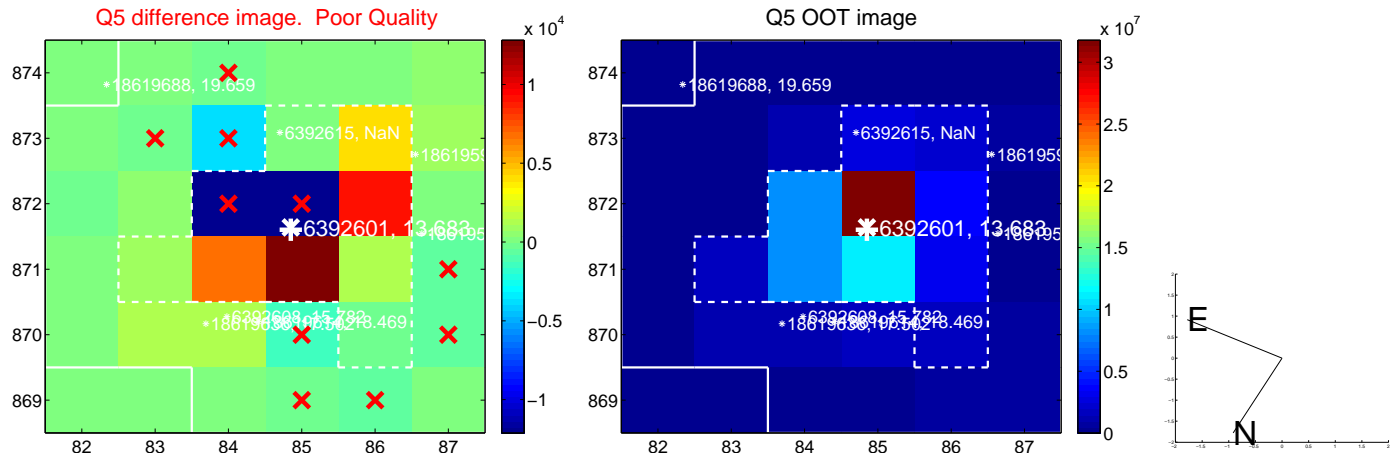


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

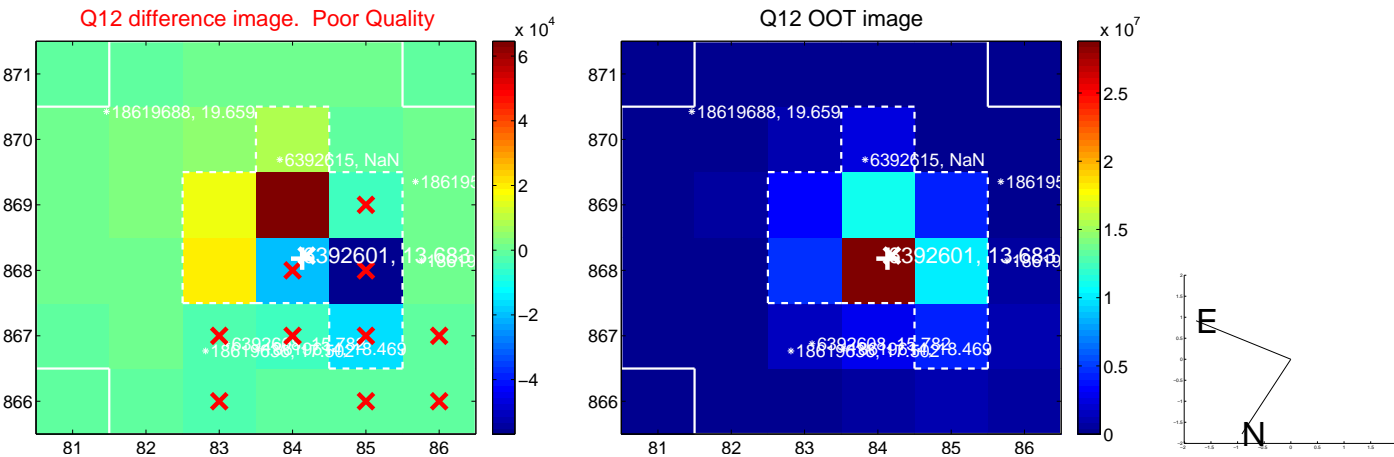
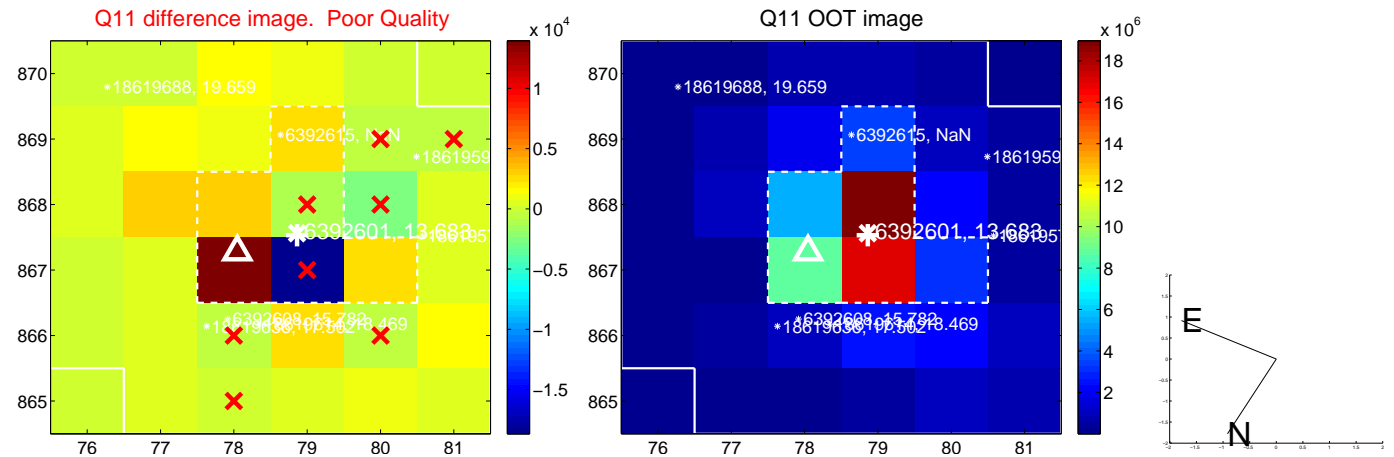
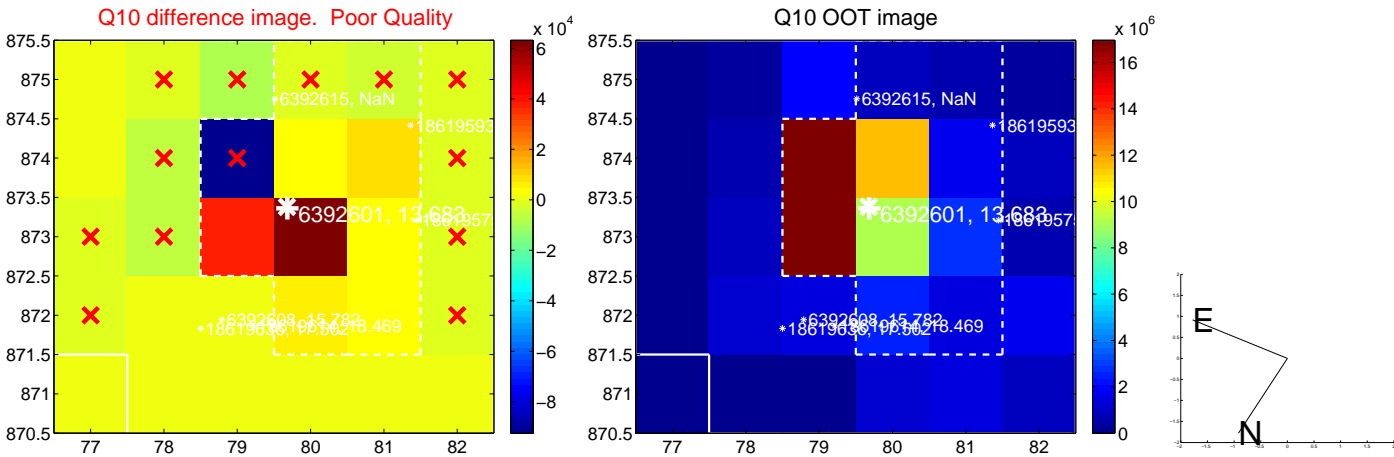
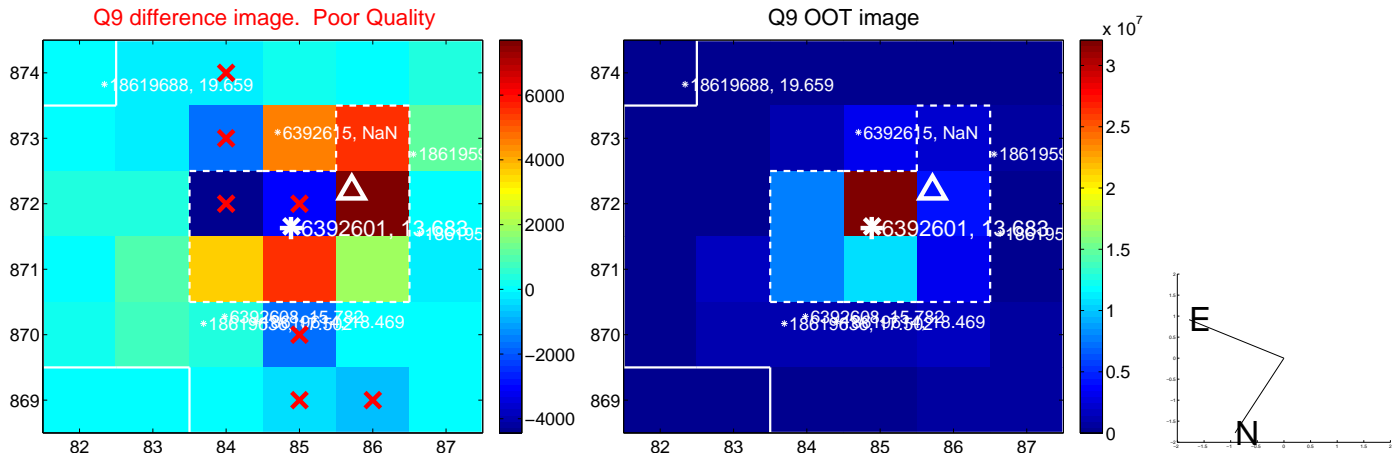
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



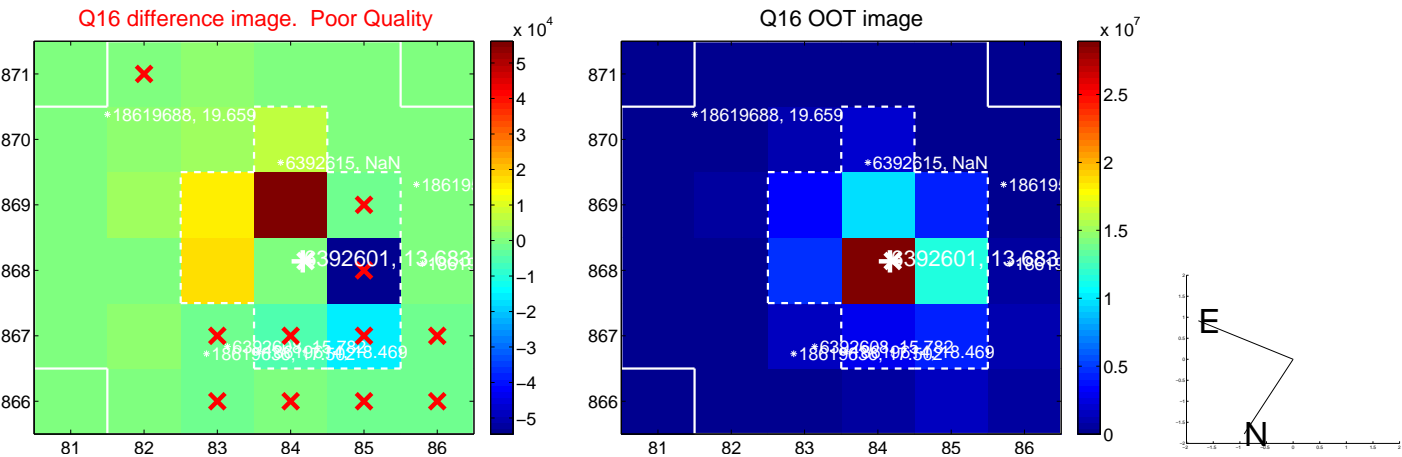
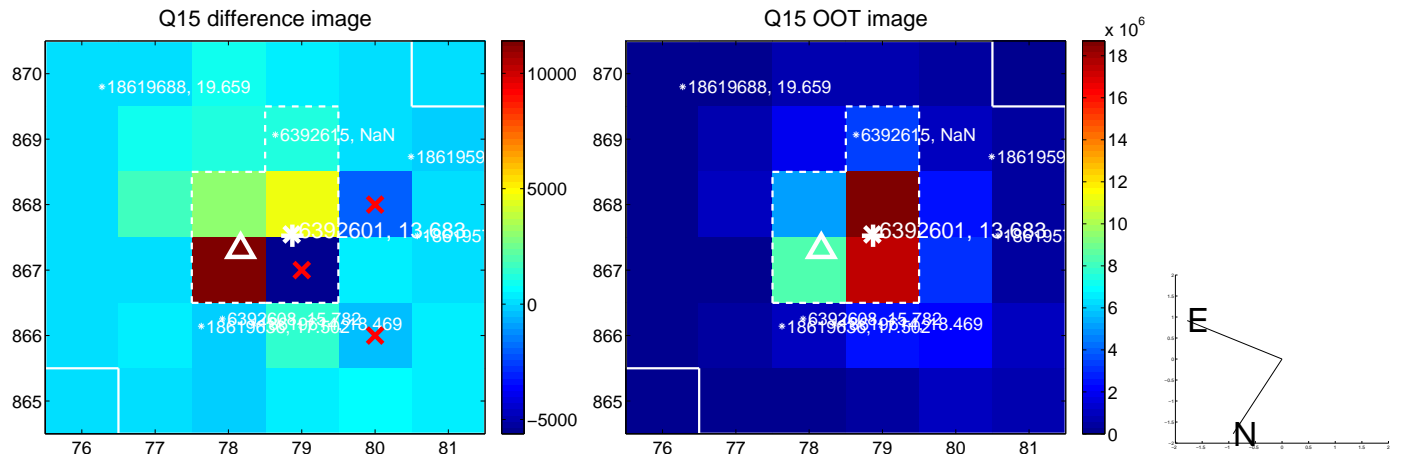
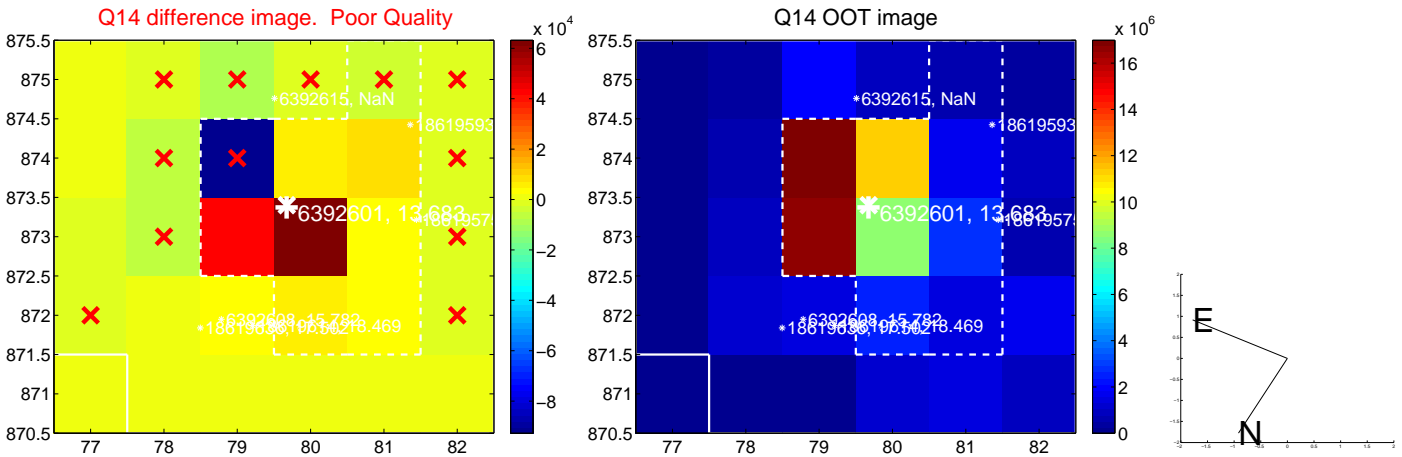
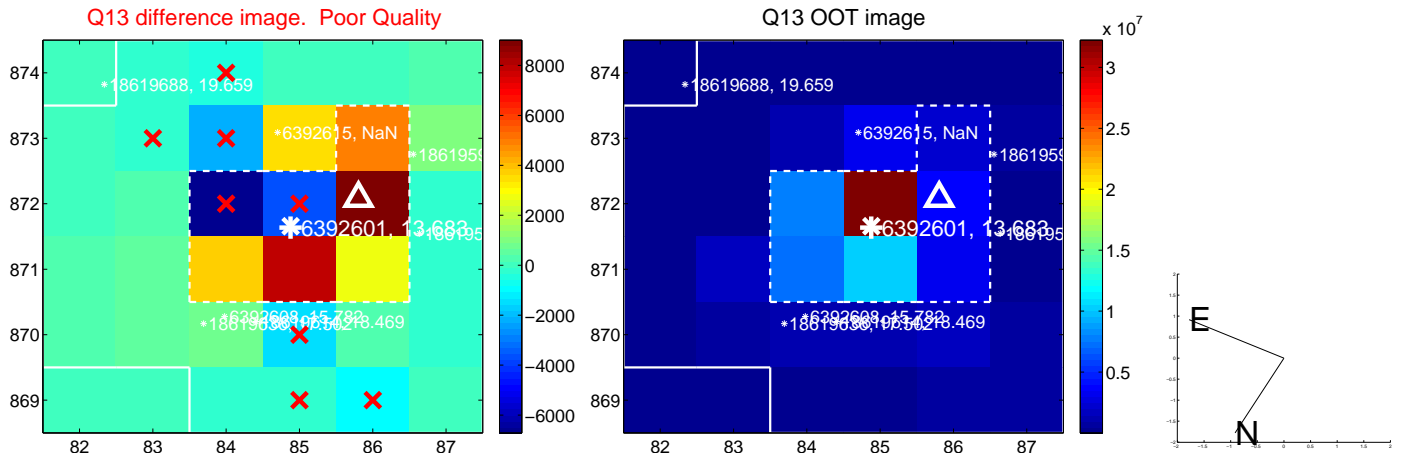
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

