

KIC 004255732

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})
004255732-01	OBS	No	1.475151	132.262139	22.3	11.174	7.6	9.9	0.94	5376	0.43	1075.72
004255732-03	OBS	No	33.393355	143.462292	320.8	3.191	13.5	12.7	0.94	5376	1.83	16.80
004255732-04	OBS	No	17.750217	147.562341	318.4	2.130	10.3	11.2	0.94	5376	1.72	39.01
004255732-05	OBS	No	24.301017	147.293386	437.1	1.061	12.0	12.9	0.94	5376	1.96	25.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004255732-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
004255732-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

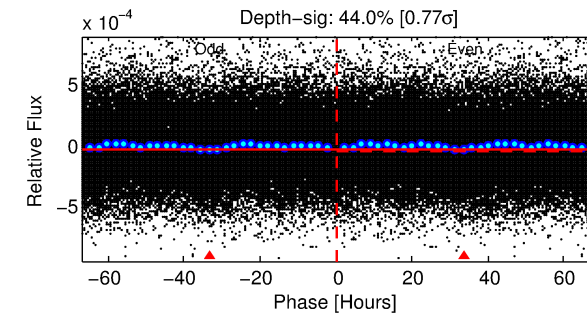
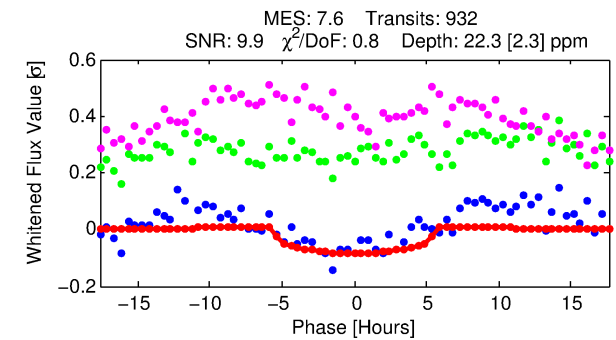
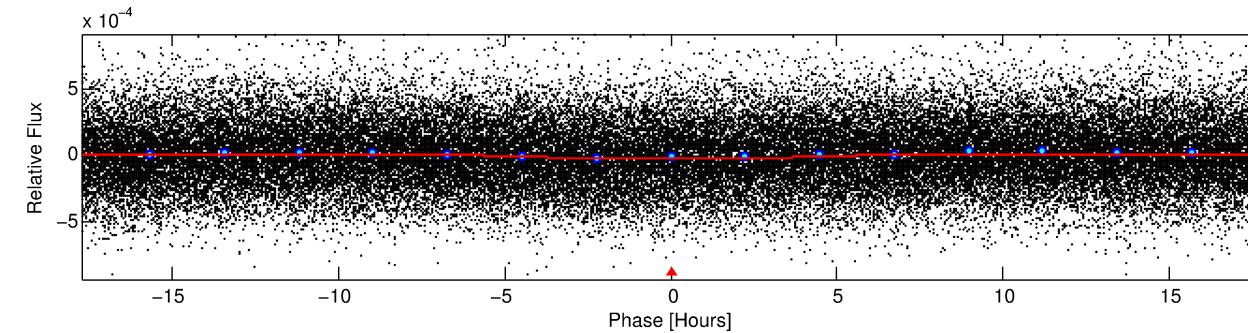
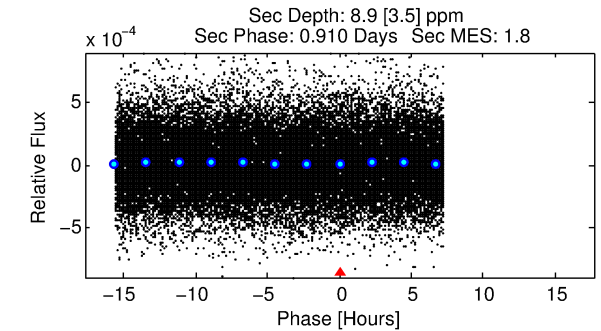
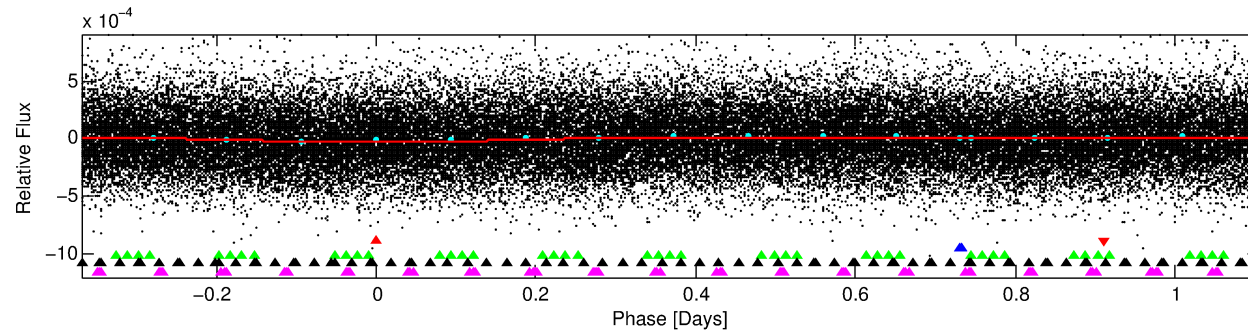
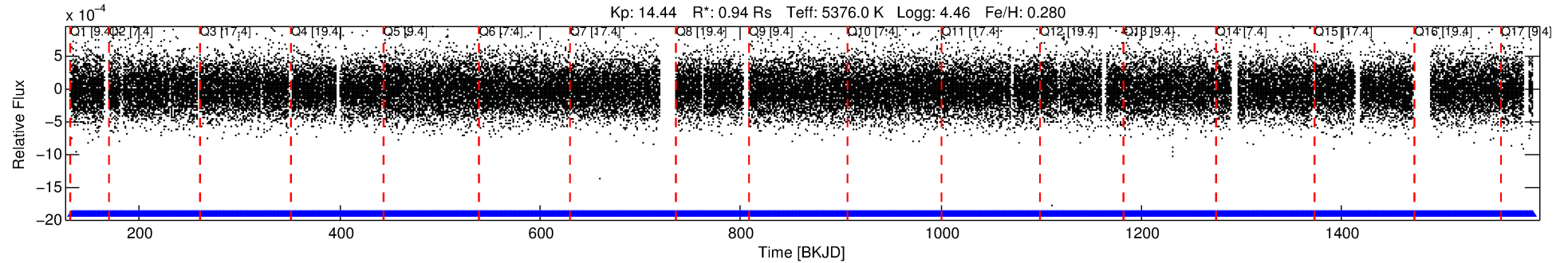
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004255732-01

No Significant Match Found

DV One-Page Summary

KIC: 4255732 Candidate: 1 of 5 Period: 1.475 d



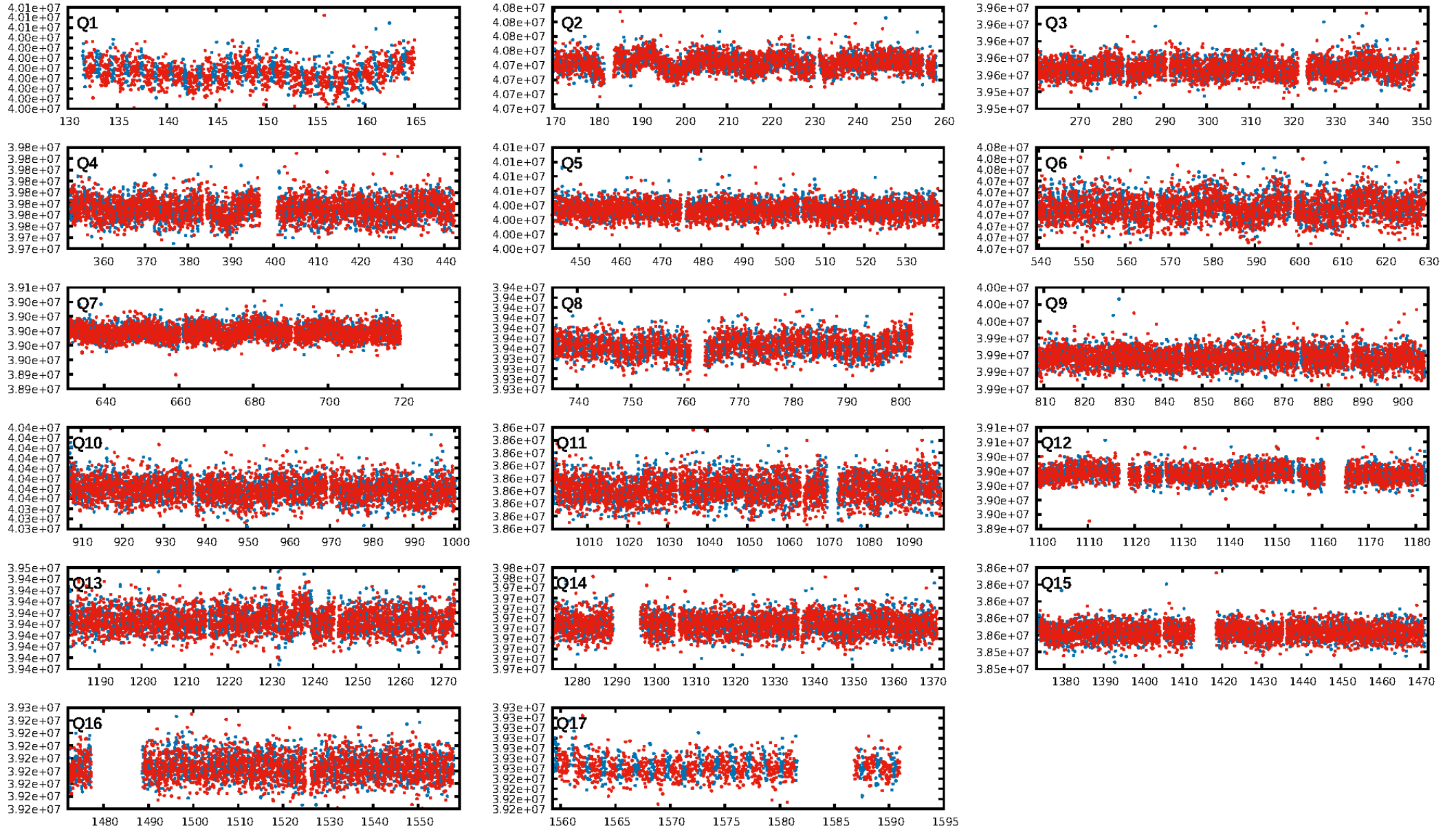
DV Fit Results:

Period = 1.47515 [0.00003] d
Epoch = 132.2621 [0.0113] BKJD
Rp/R* = 0.0042 [0.0047]
a/R* = 1.20 [1.49]
b = 0.00 [1188.98]
Seff = 1075.73 [180.92]
Teq = 1460 [61] K
Rp = 0.43 [0.48] Re
a = 0.0248 [0.0026] AU
Ag = 16.07 [36.20] [0.42σ]
Teffp = 4521 [2540] K [1.20σ]

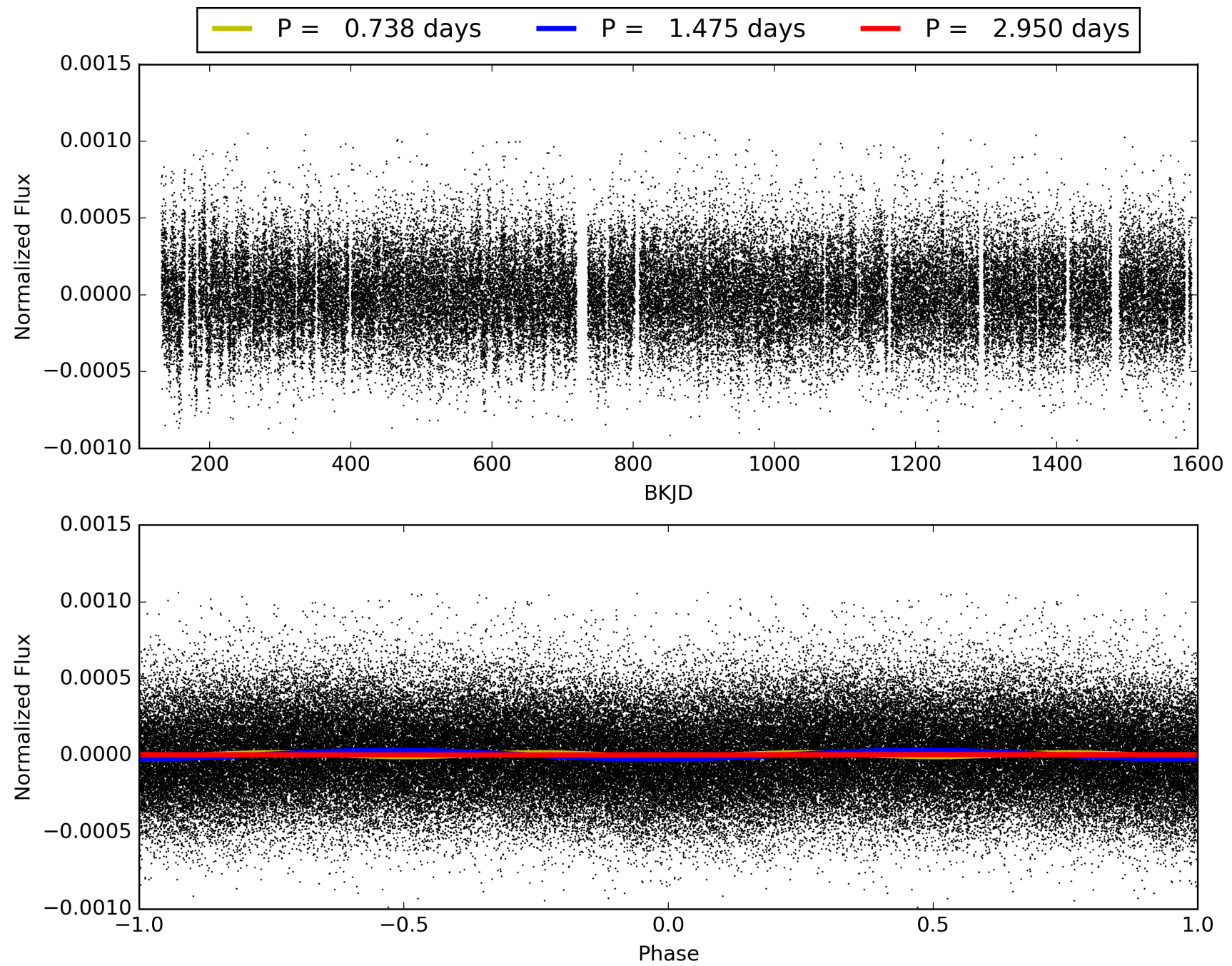
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [34.34σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.45e-93
RollingBand-fgt: 1.00 [890/890]
GhostDiagnostic-chr: -1.49
Centroid-sig: 0.0%
Centroid-so: 6.909 arcsec [3.84σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004255732-01, PDC Light Curves

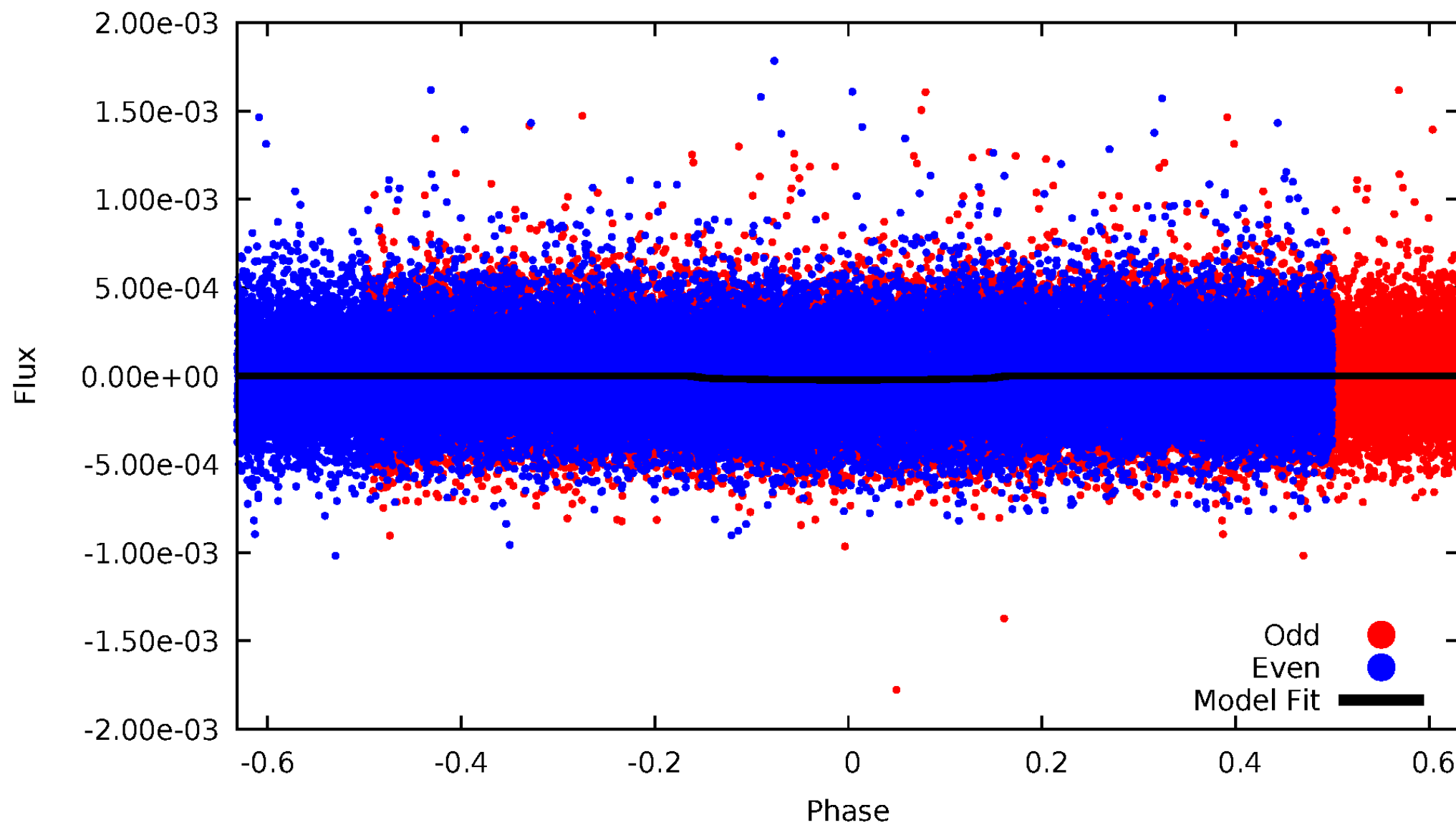


TCE 004255732-01



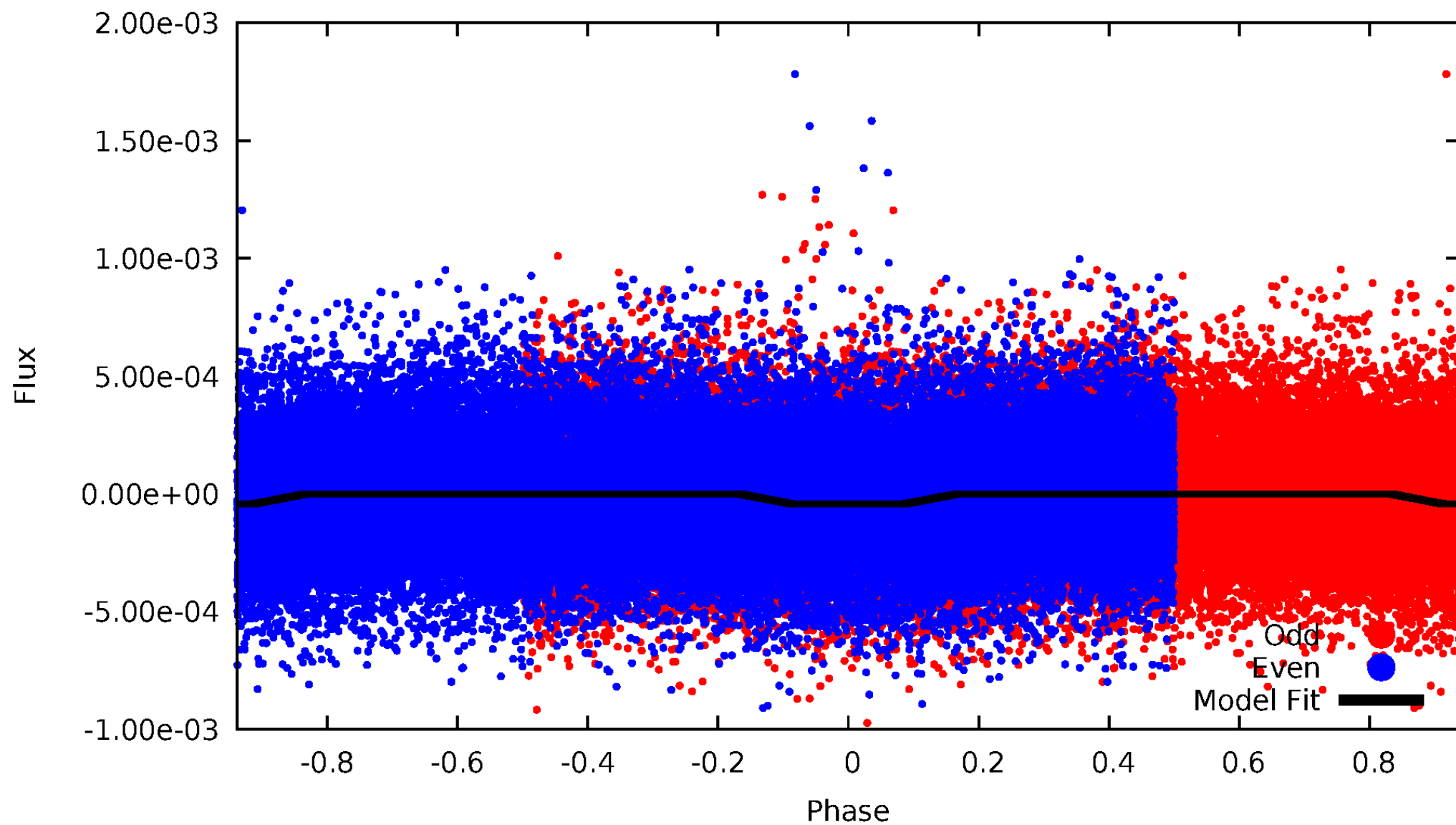
DV Odd/Even

TCE 004255732-01

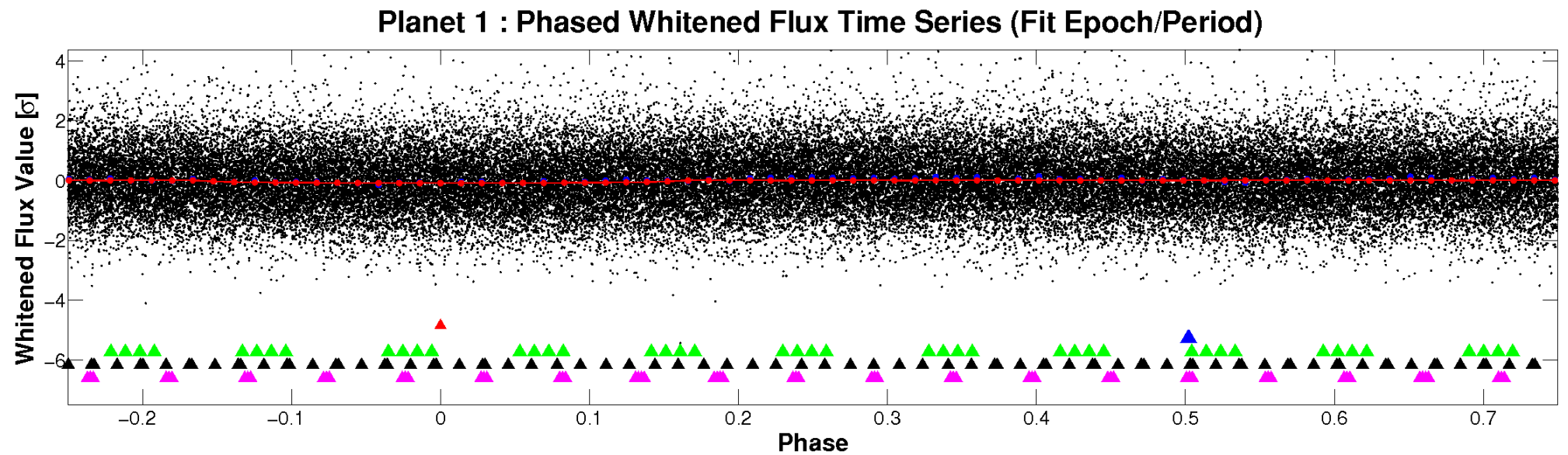
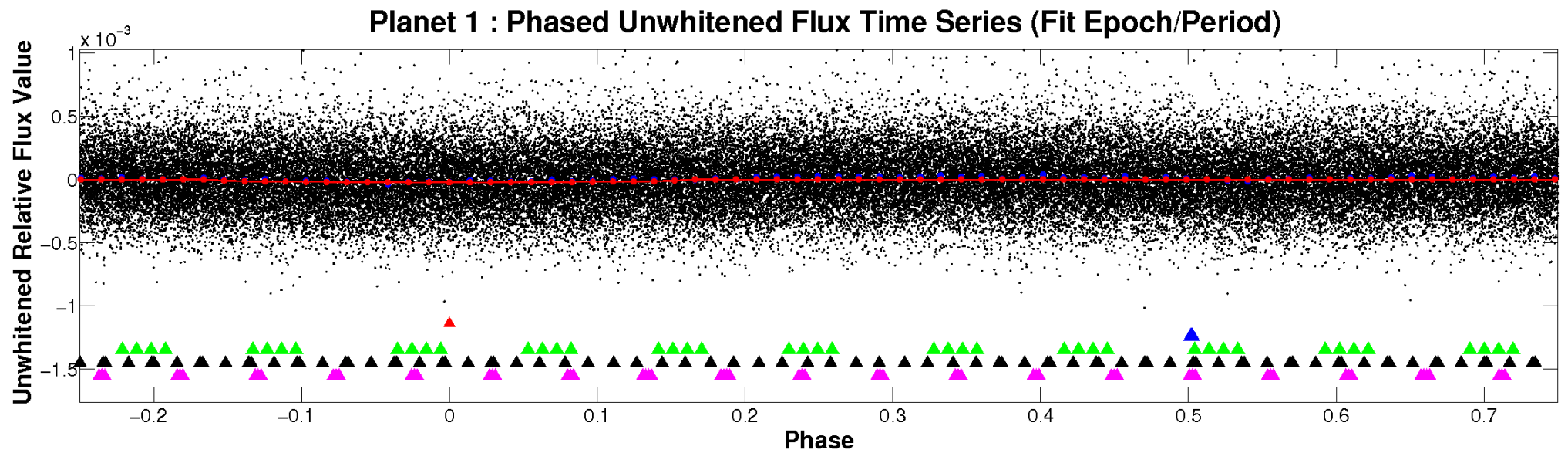


ALT Odd/Even

TCE 004255732-01

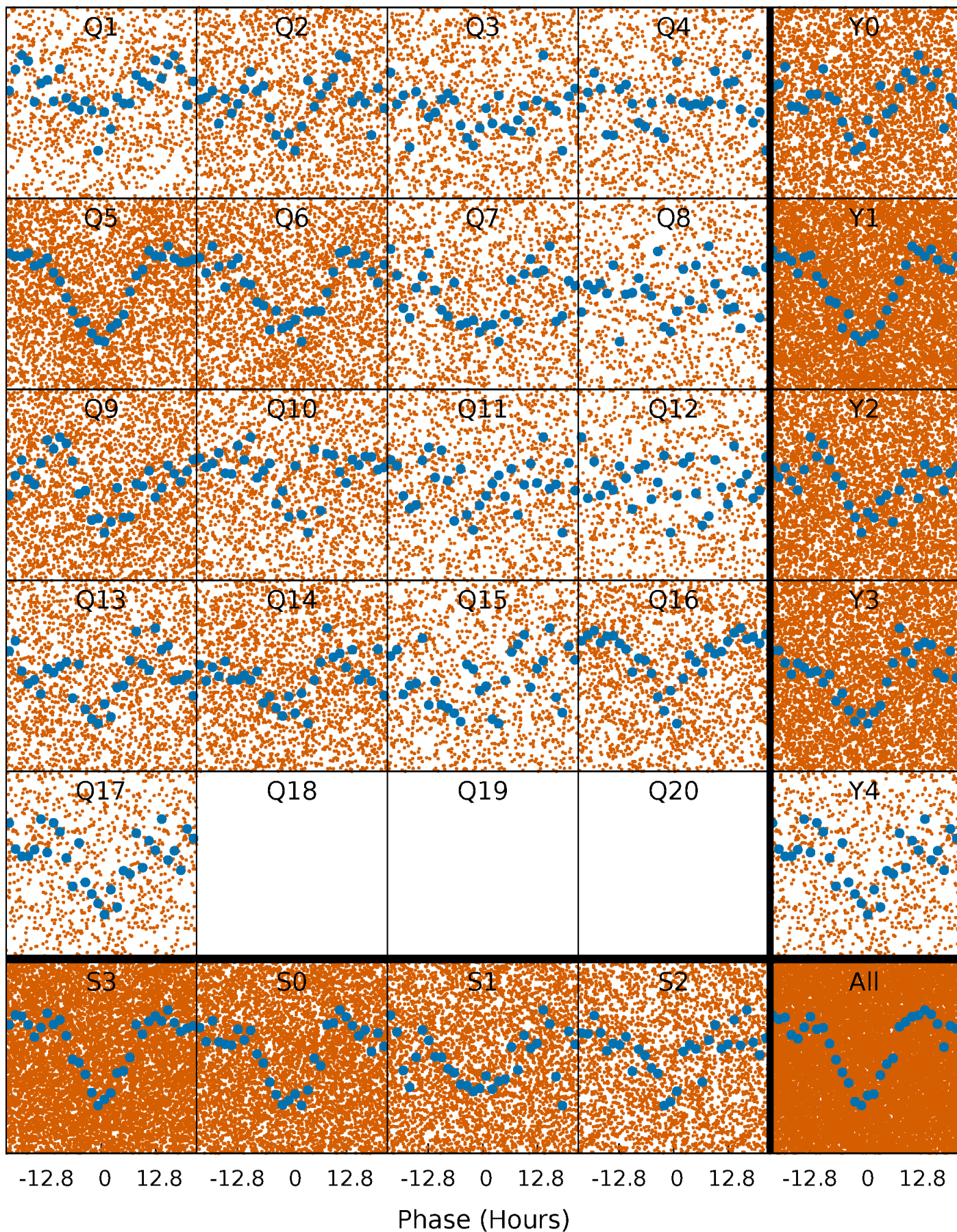


Non-Whitened Vs. Whitened Light Curve



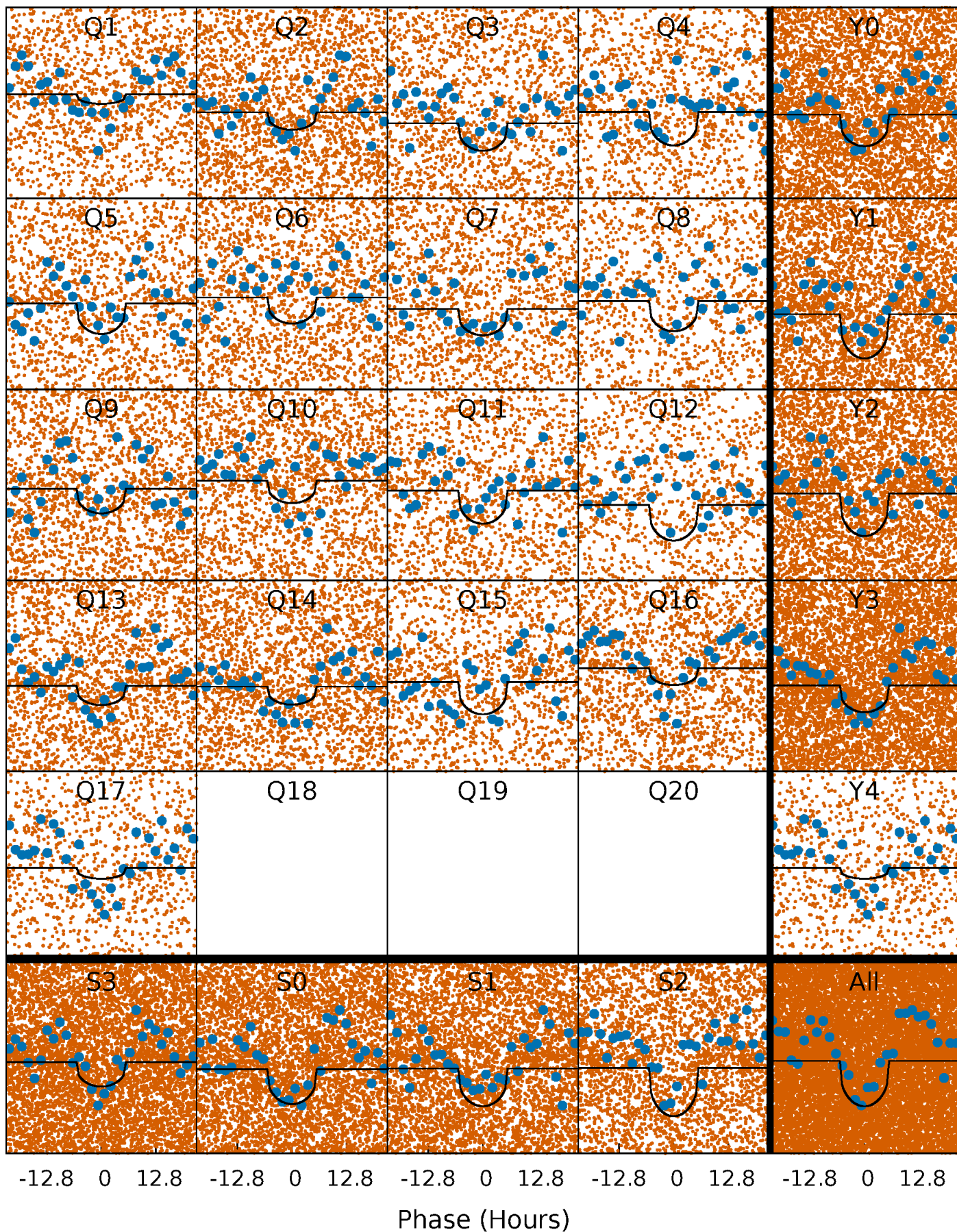
PDC Quarter-Phased Transit Curves

TCE 004255732-01 P= 1.475151 Days $T_0=132.262139$ (BKJD)



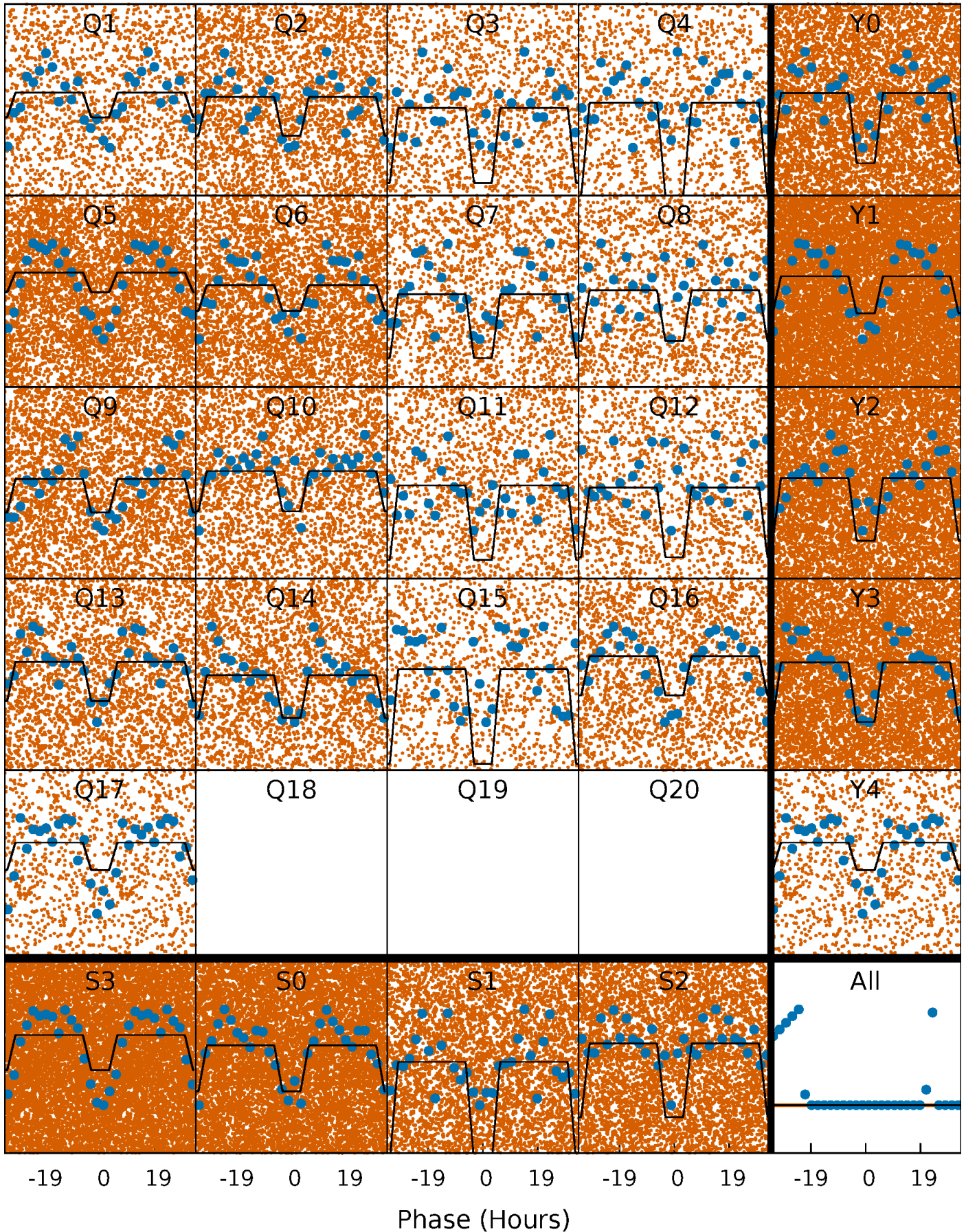
DV Quarter-Phased Transit Curves

TCE 004255732-01 P= 1.475151 Days $T_0=132.262139$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

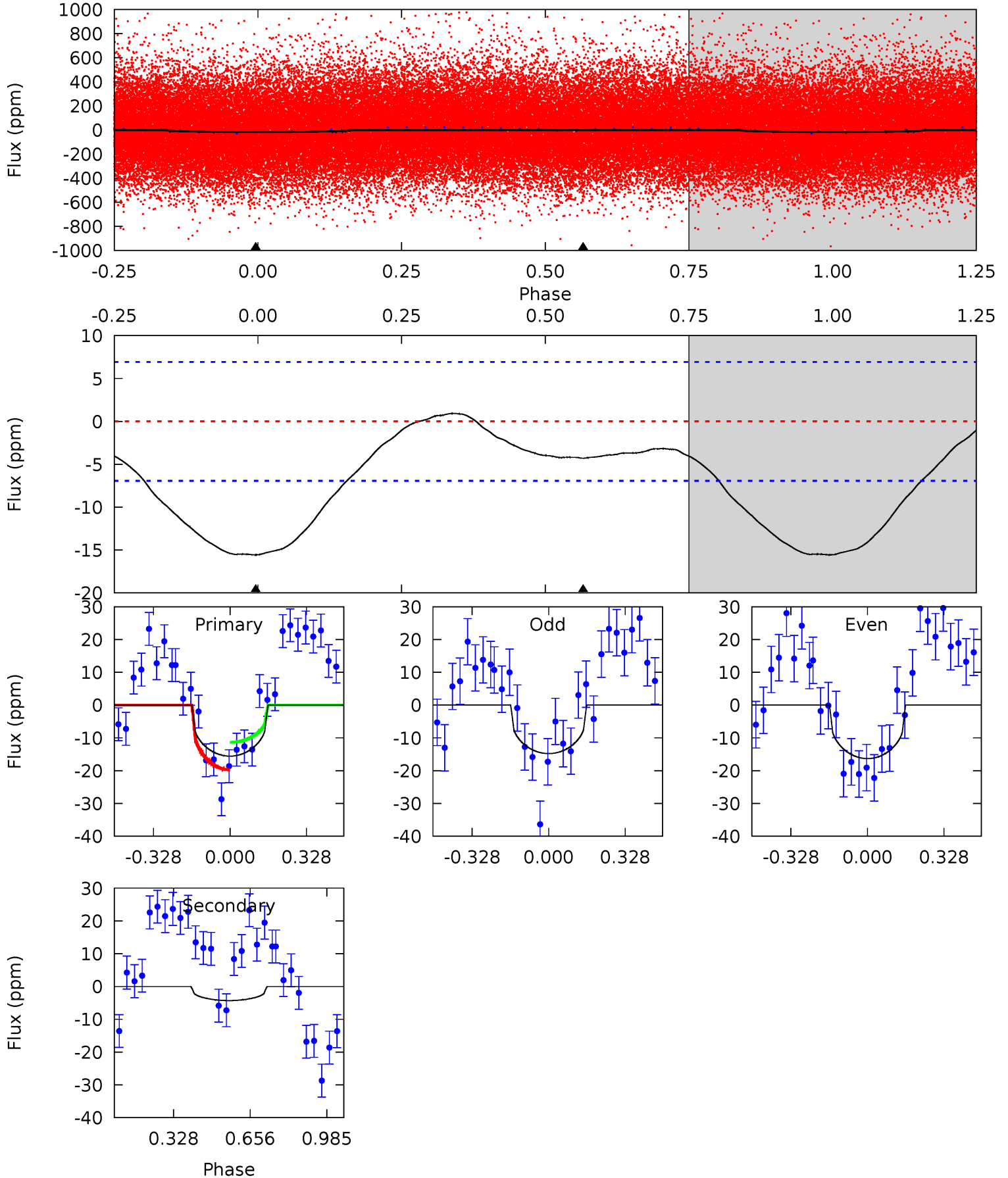
TCE 004255732-01 P= 1.475215 Days $T_0=132.214160$ (BKJD)



DV Model-Shift Uniqueness Test

004255732-01, P = 1.475151 Days, E = 130.786988 Days

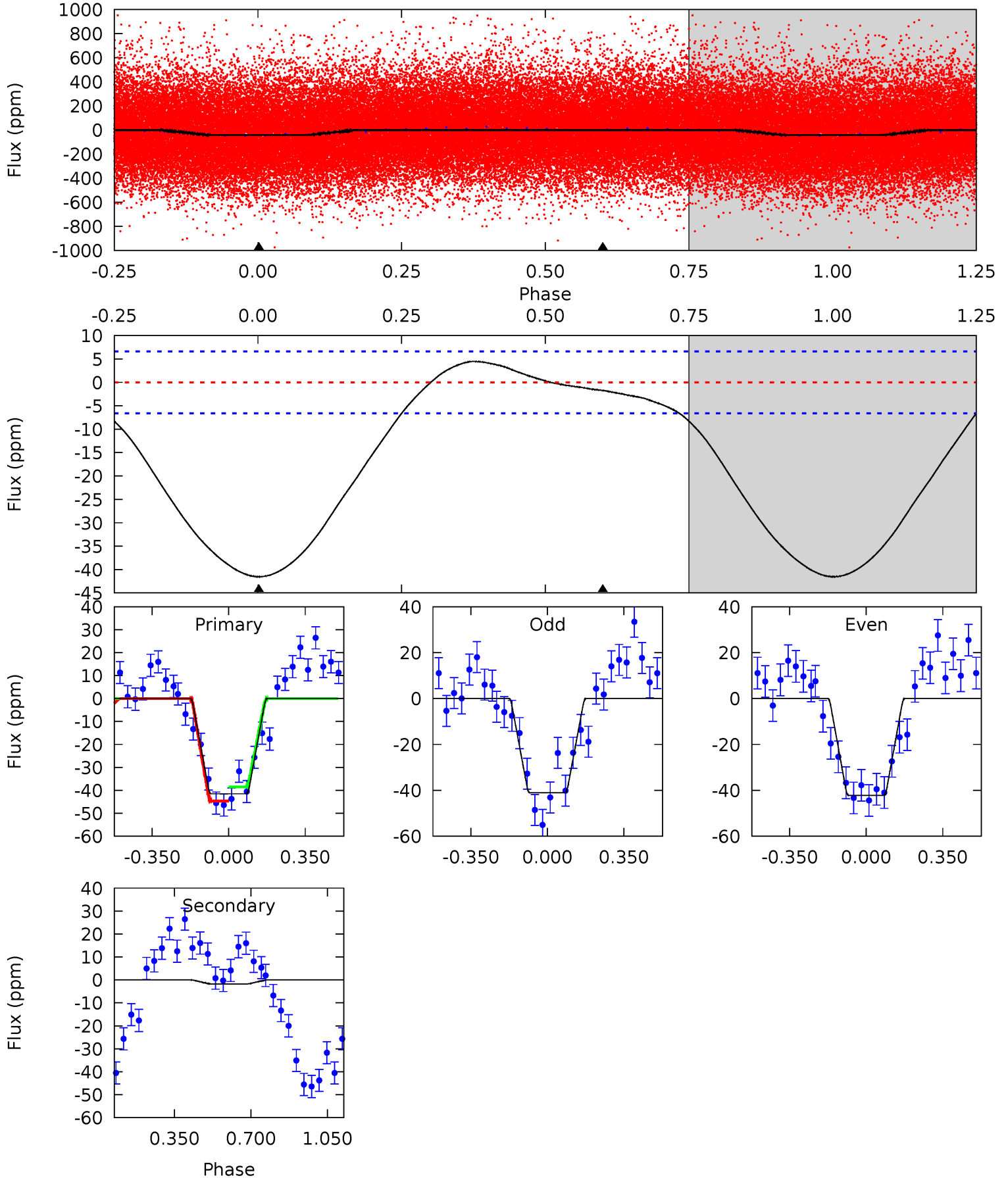
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.69	2.67	0	0	4.31	0.98	0.52	9.69	9.69	2.67	2.67	0.47	0.91	0.06	2.61



Alt Model-Shift Uniqueness Test

004255732-01, P = 1.475215 Days, E = 130.738945 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	1.13	0	0	4.29	0.93	2.00	26.9	26.9	1.13	1.13	0.38	1.00	0.10	2.00



Stellar Parameters For KIC 004255732

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5376^{+75}_{-75}	$4.462^{+0.067}_{-0.090}$	$0.280^{+0.150}_{-0.150}$	$0.940^{+0.110}_{-0.064}$	$0.934^{+0.044}_{-0.044}$	$1.582^{+0.375}_{-0.433}$
	+1%/-1%	+2%/-2%	+54%/-54%	+12%/-7%	+5%/-5%	+24%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004255732-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 2	$0.53^{+0.48}_{-0.33}$	2041^{+66}_{-58}	3704^{+1788}_{-745}	$4.888^{+28.865}_{-3.525}$
Alt.	-2 ± 2	$0.74^{+0.45}_{-0.41}$	2043^{+72}_{-55}	2724^{+1000}_{-5130}	$0.860^{+3.897}_{-0.776}$

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

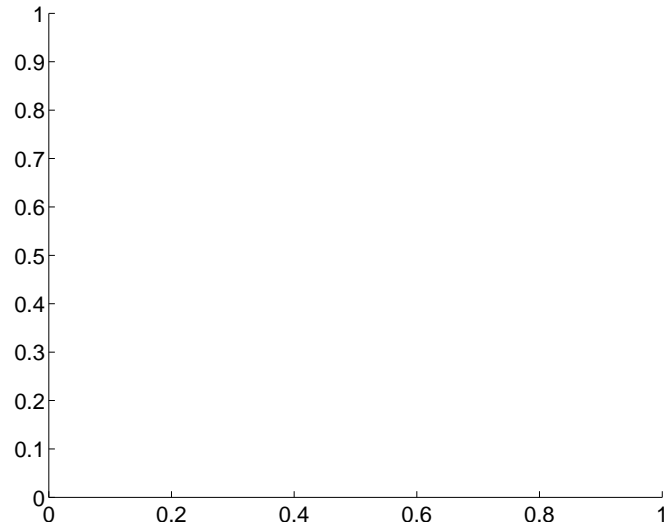
Supplemental centroid analysis for 004255732-01. Kepler magnitude: 14.44. Transit SNR 9.86

There are 0 quarters with good PRF difference image offsets

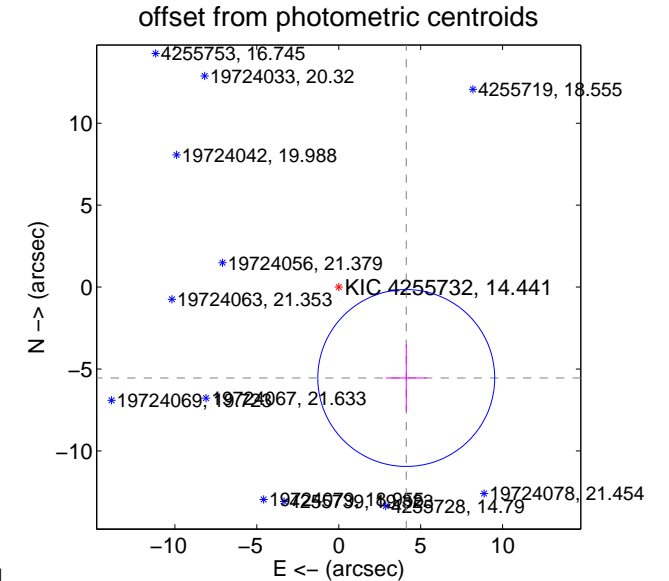
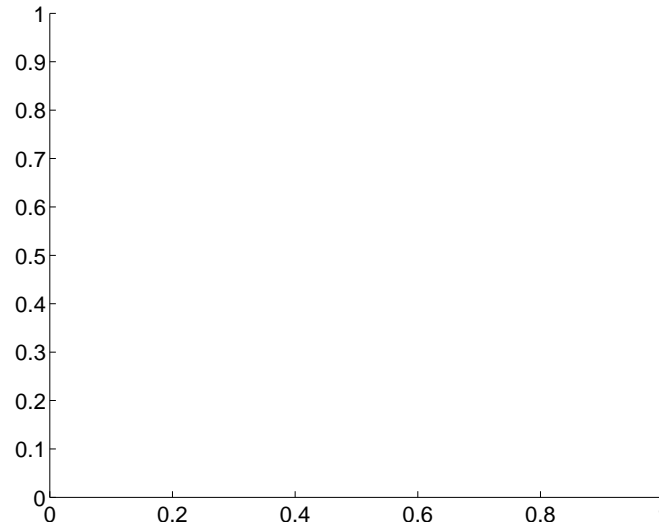
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	6.91 ± 1.80	3.84	-4.12 ± 1.24	-5.55 ± 2.04

There is no PRF-fit offset from OOT-fit

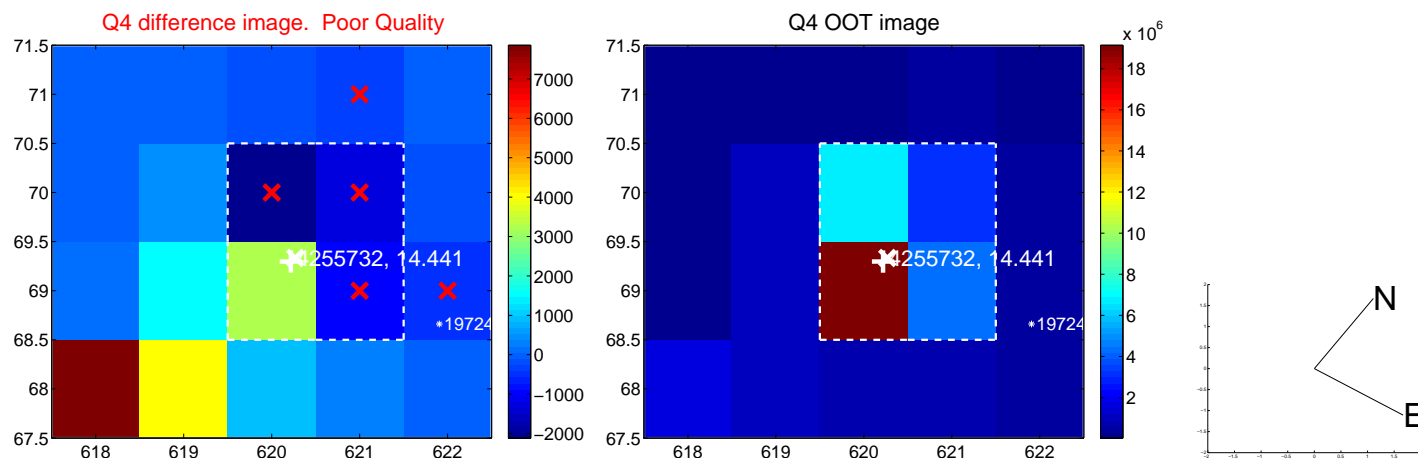
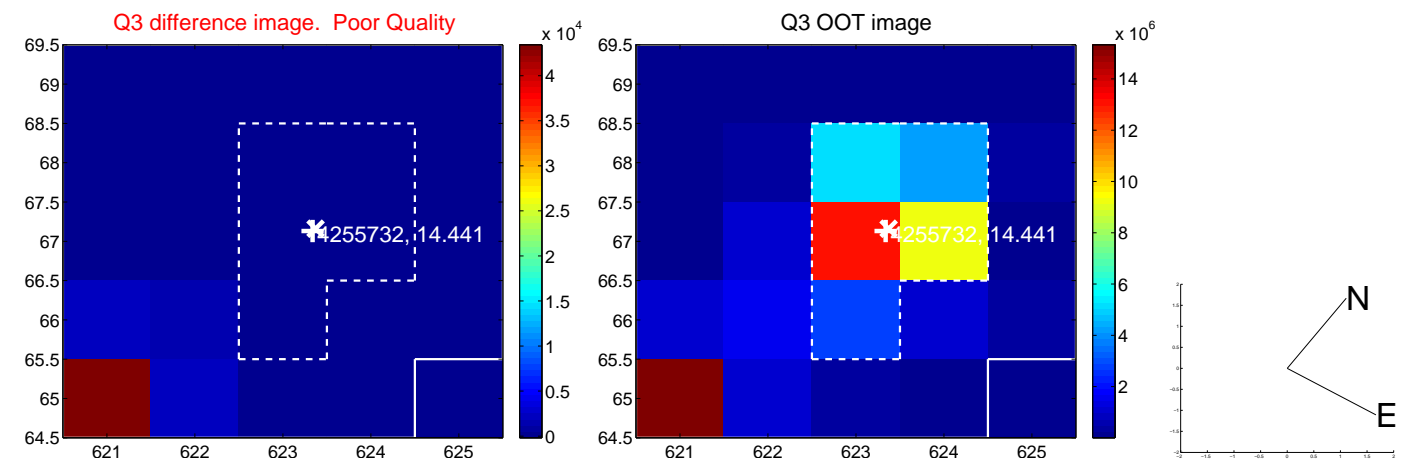
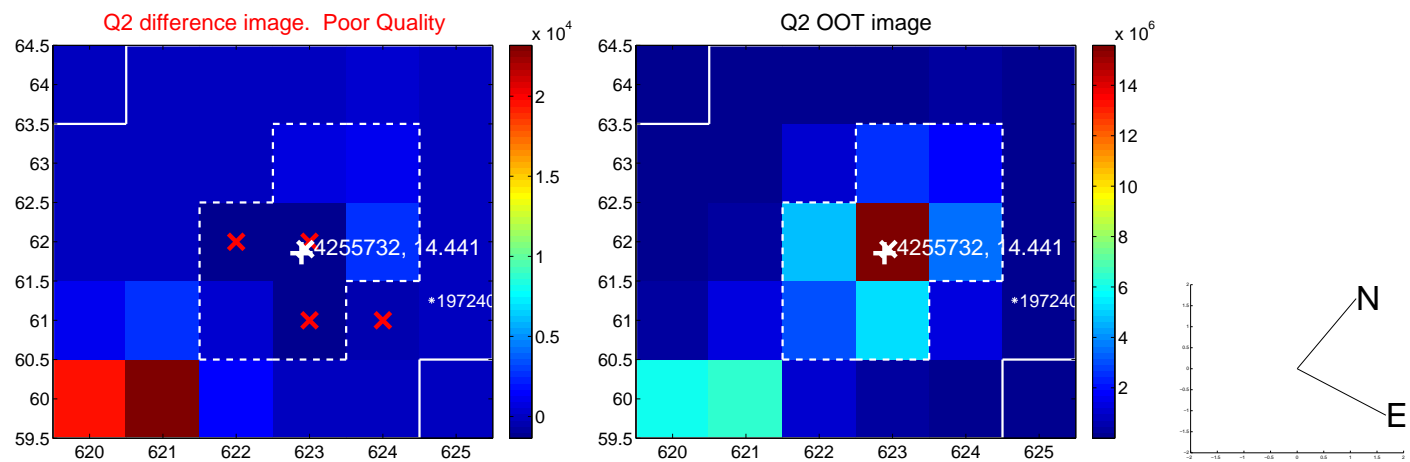
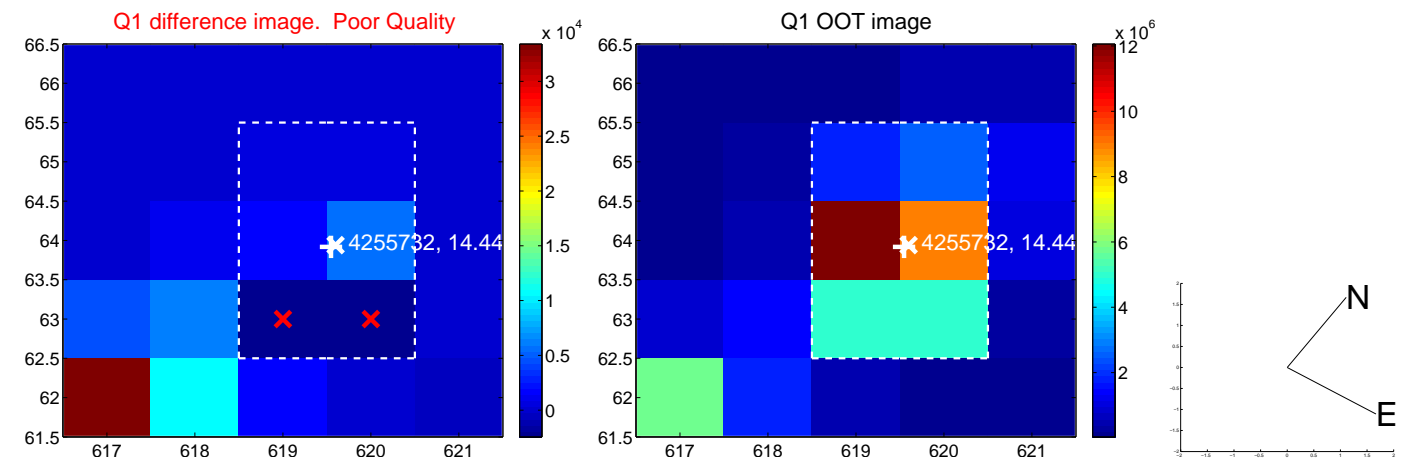


There is no PRF-fit offset from KIC

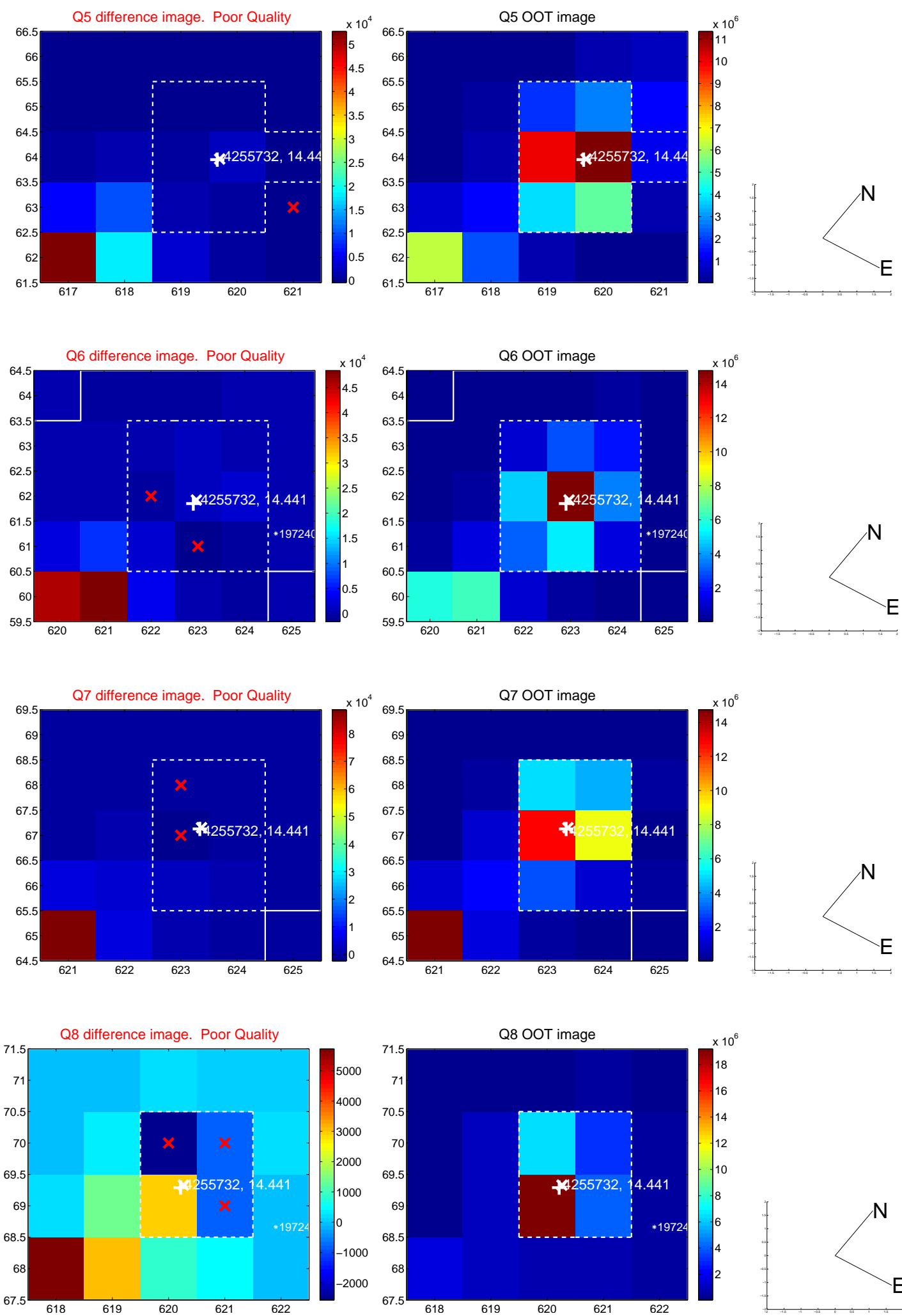


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

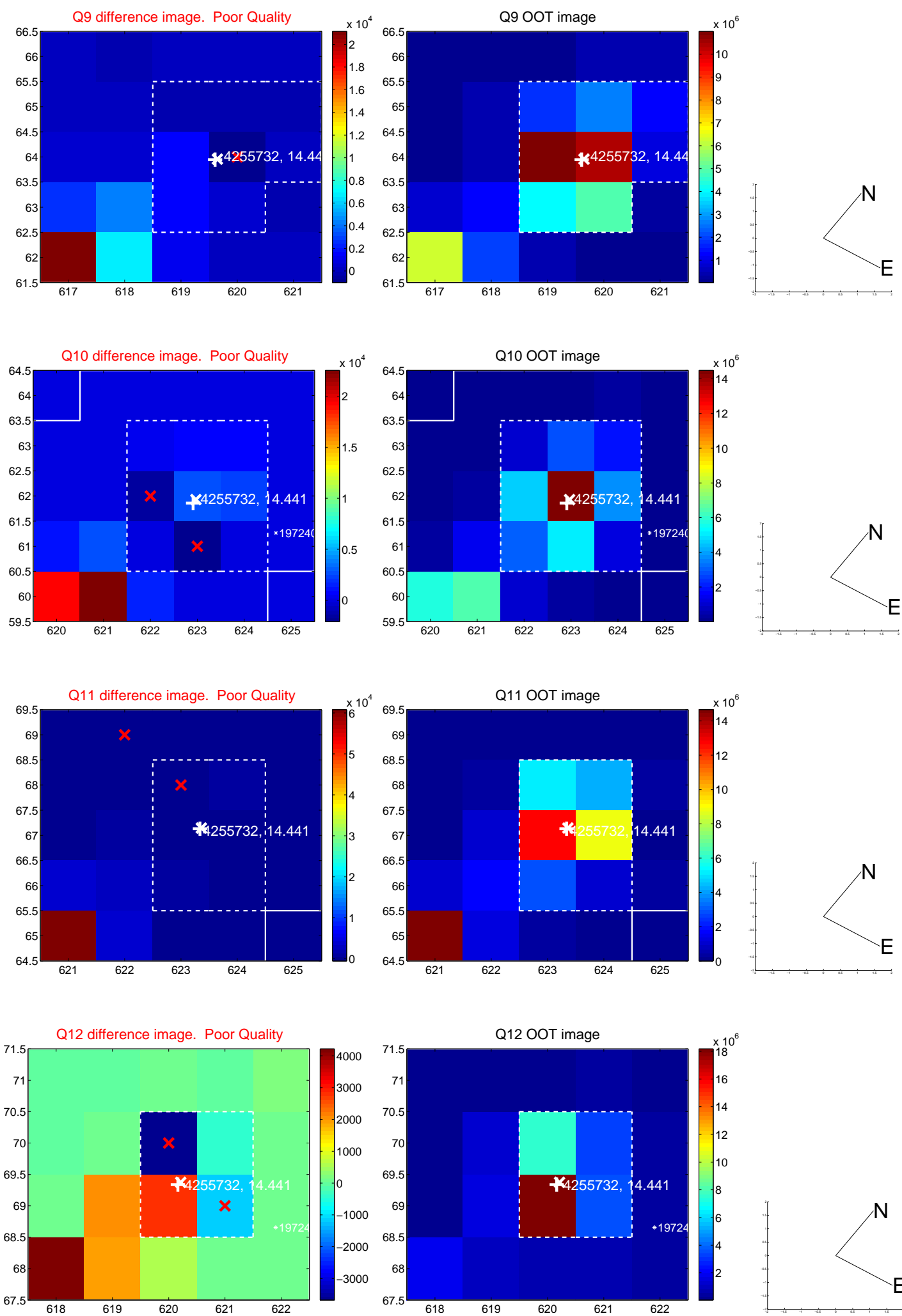
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



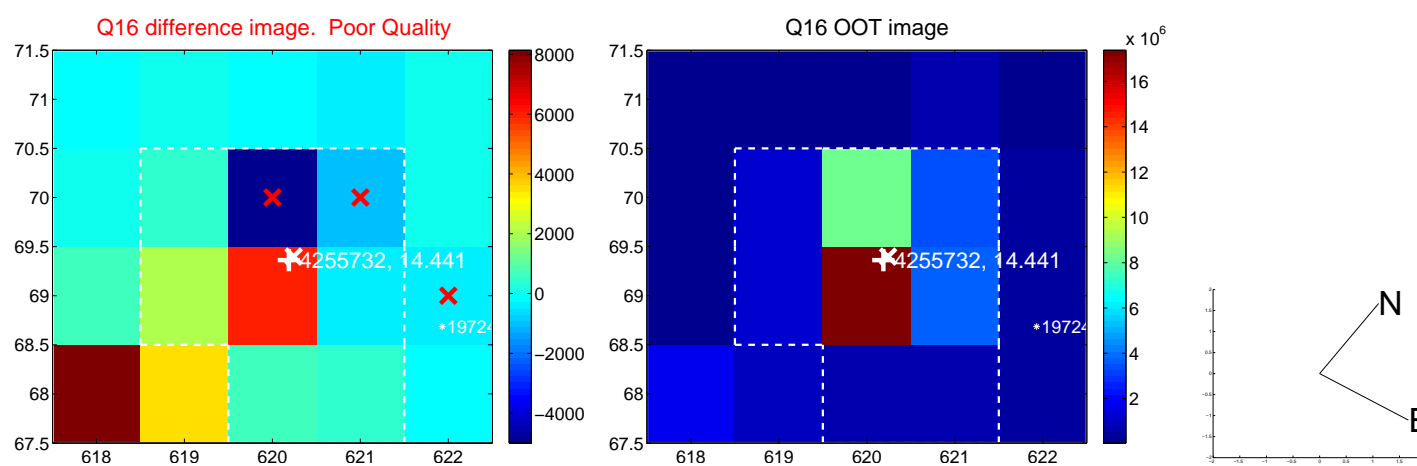
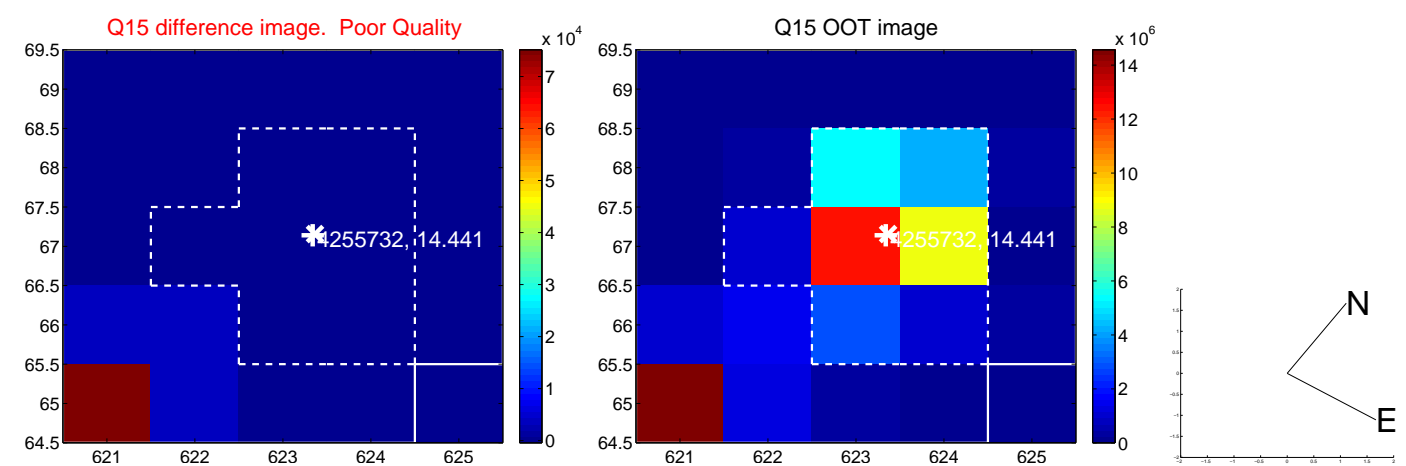
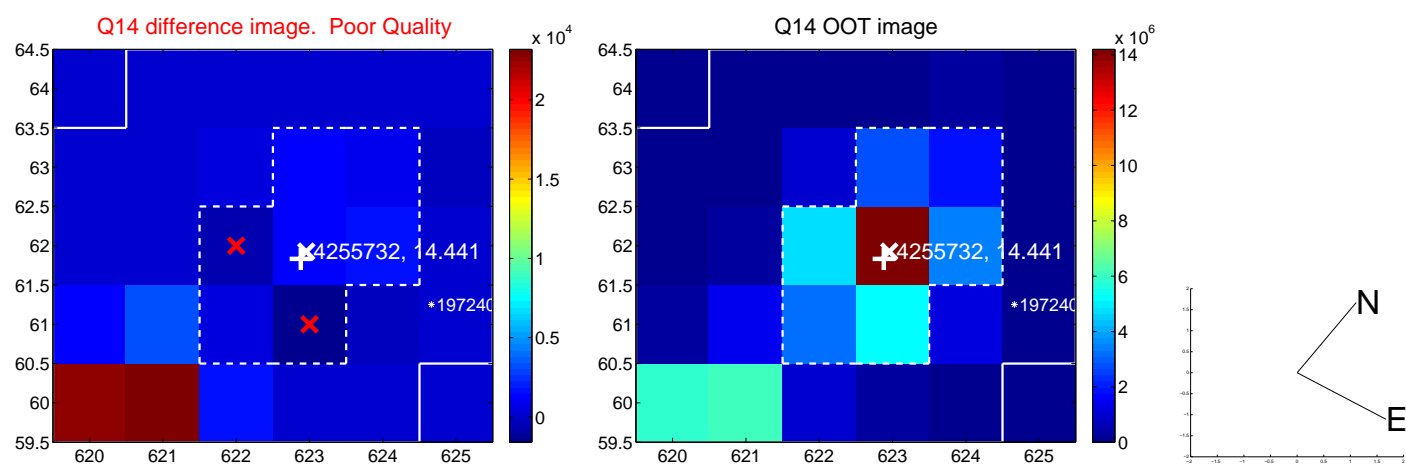
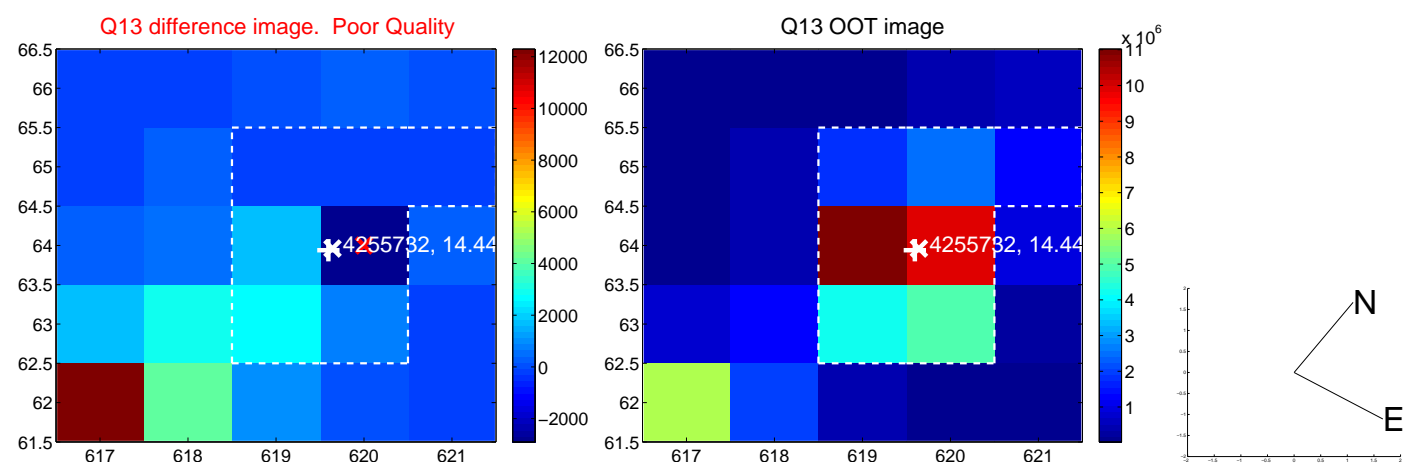
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



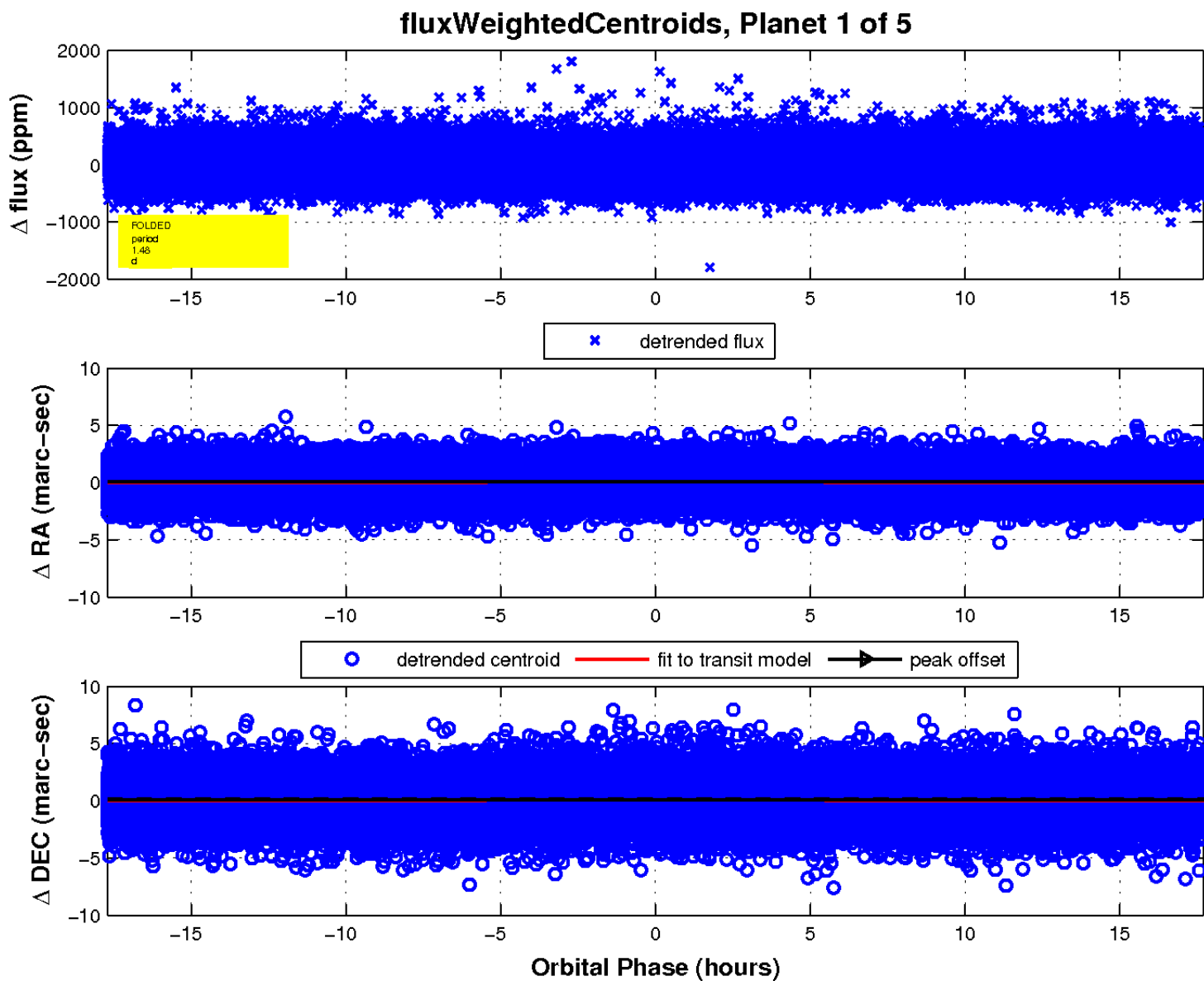
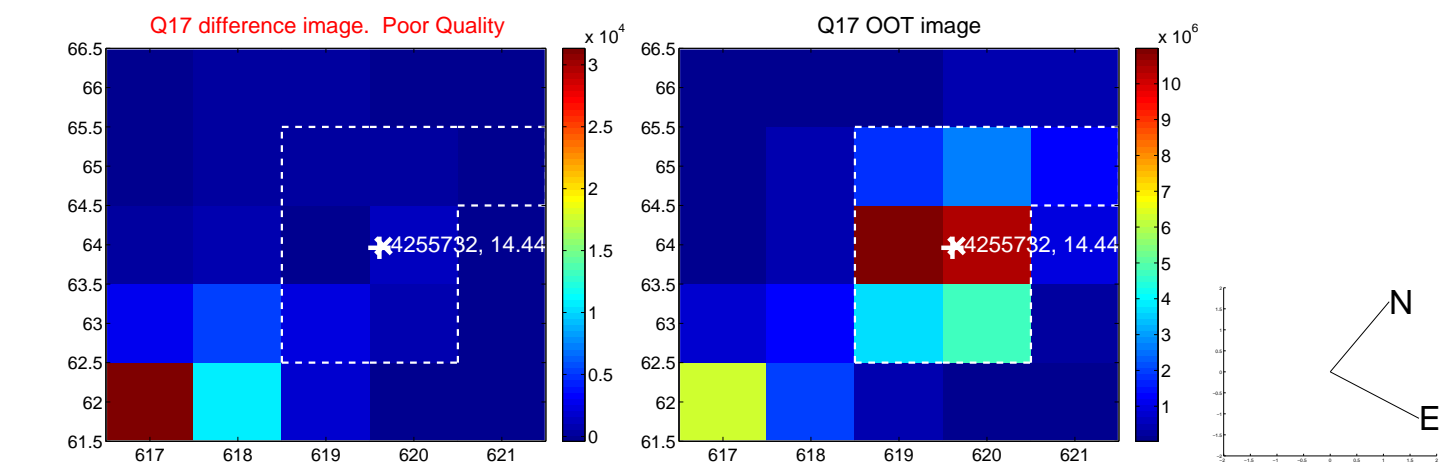
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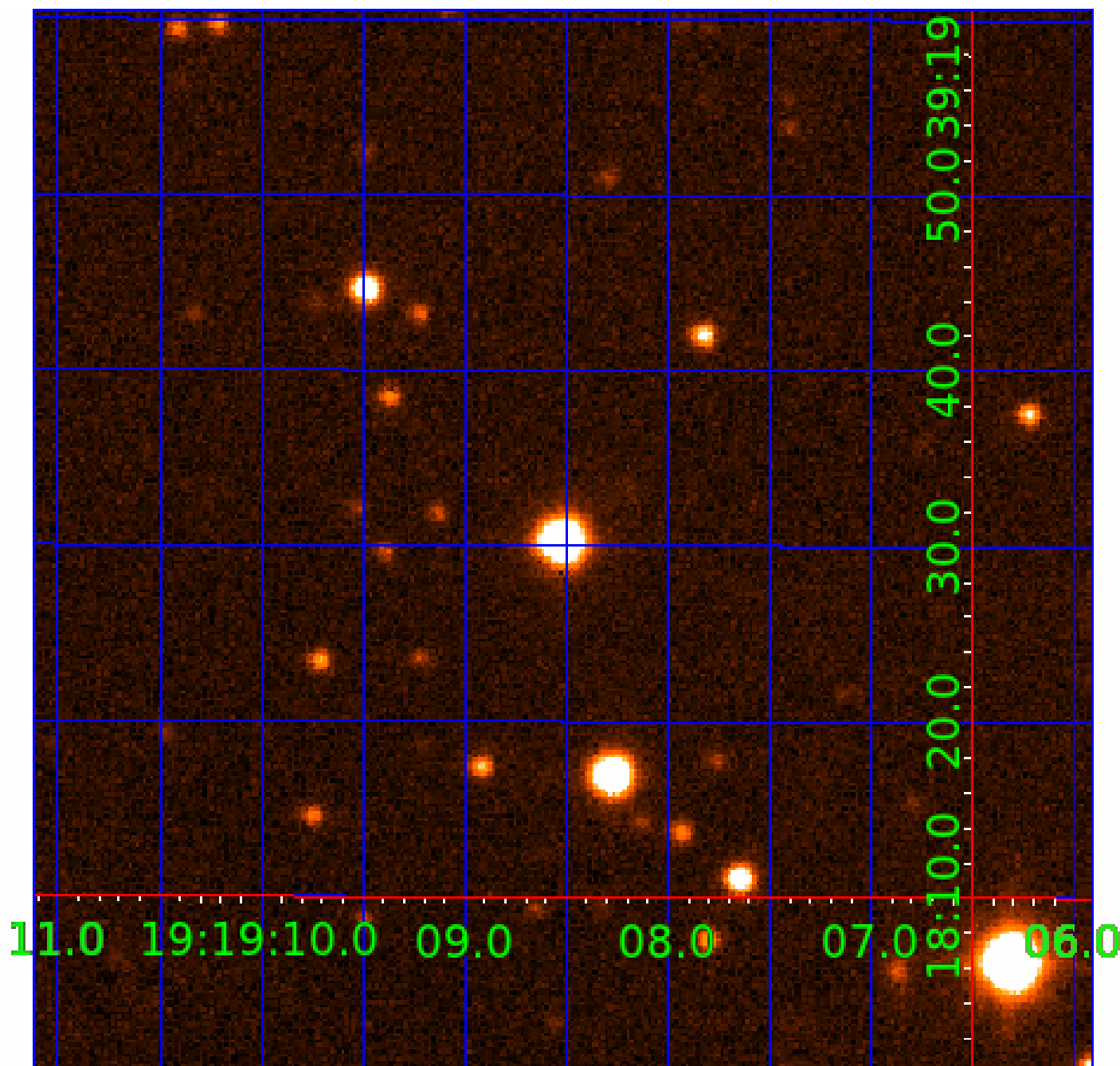


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UKIRT Image

Declination



KIC 004255732

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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004255732-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

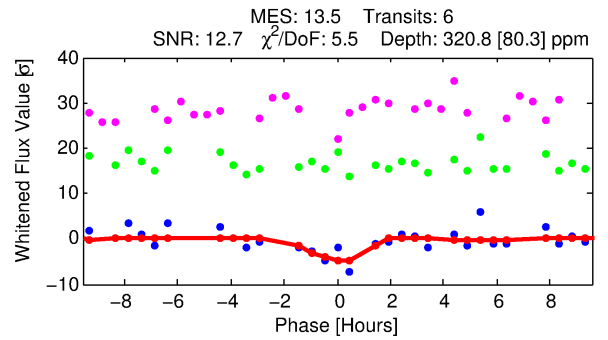
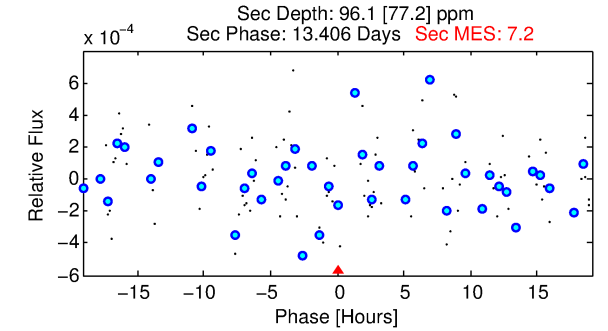
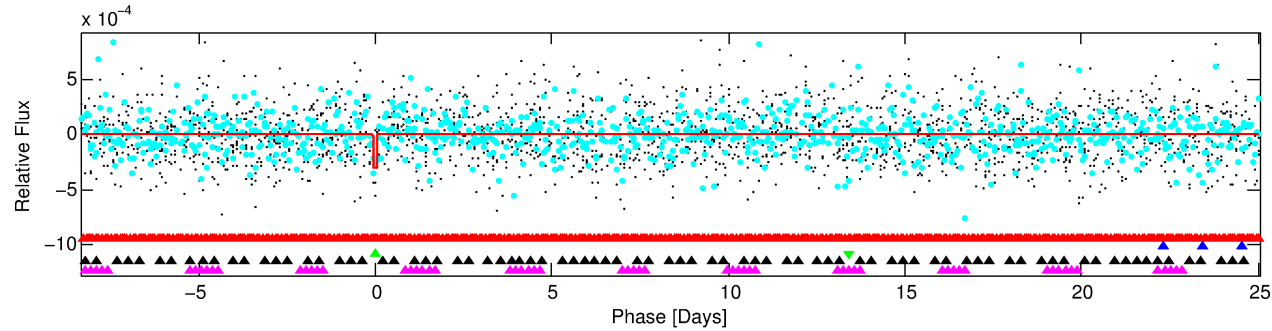
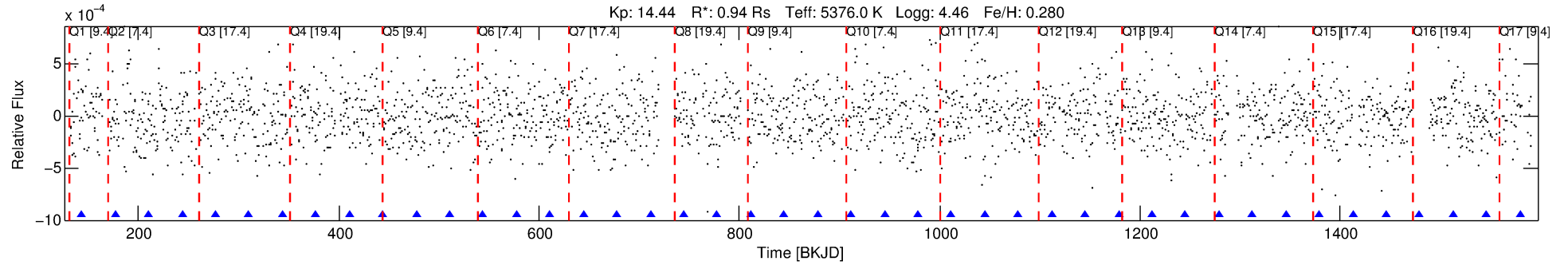
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004255732-03

No Significant Match Found

DV One-Page Summary

KIC: 4255732 Candidate: 3 of 5 Period: 33.393 d

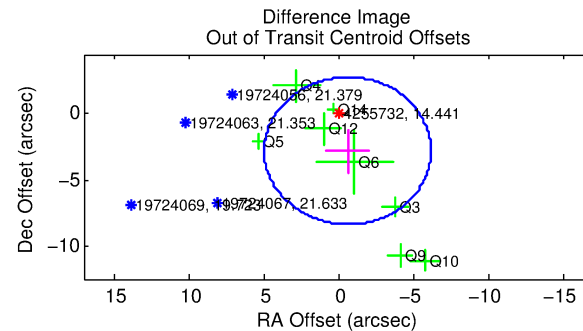
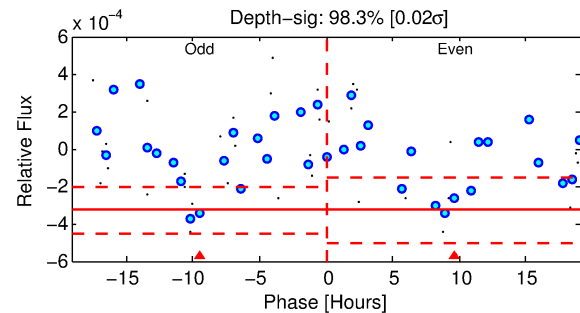
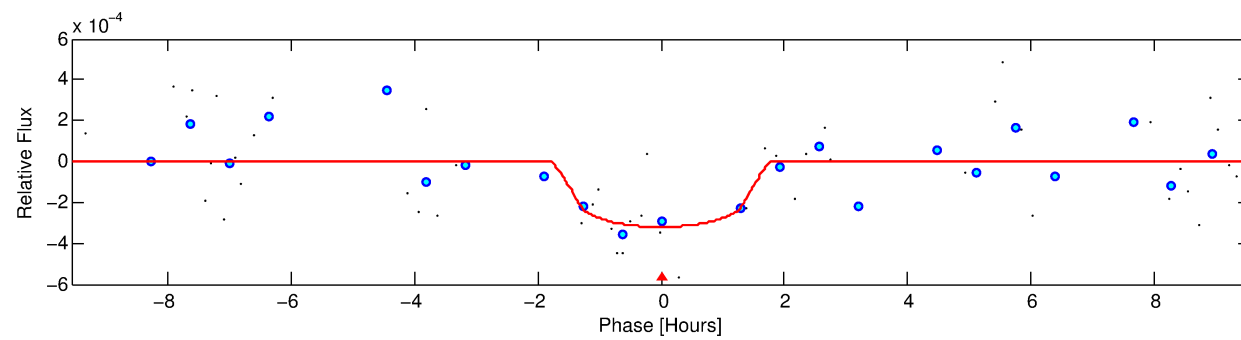


DV Fit Results:

Period = 33.39336 [0.00133] d
Epoch = 143.4623 [0.0444] BKJD
Rp/R* = 0.0179 [0.0658]
a/R* = 54.97 [776.67]
b = 0.75 [8.36]
Seff = 16.80 [2.83]
Teq = 516 [22] K
Rp = 1.83 [6.75] Re
a = 0.1984 [0.0207] AU
Ag = 618.40 [4579.50] [0.13σ]
Teffp = 3980 [7367] K [0.47σ]

DV Diagnostic Results:

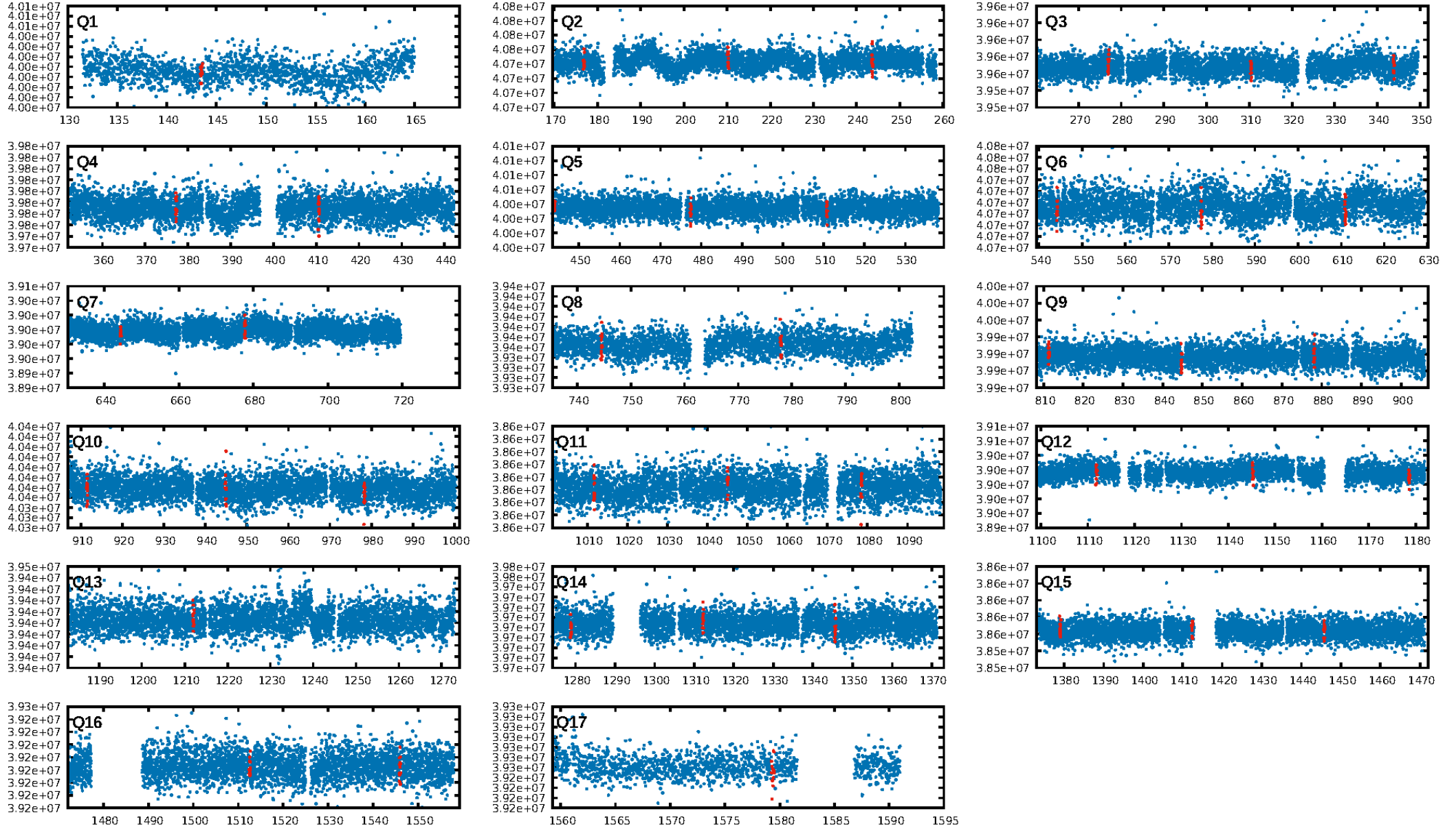
ShortPeriod-sig: 100.0% [64.90σ]
LongPeriod-sig: 100.0% [1385.17σ]
ModelChiSquare2-sig: 60.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 2.40e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.2844
Centroid-sig: 0.1%
Centroid-so: 1.288 arcsec [1.56σ]
OotOffset-rm: 2.871 arcsec [1.55σ]
KicOffset-rm: 3.212 arcsec [1.35σ]
OotOffset-st: 3/1/2/2 [8]
KicOffset-st: 3/1/2/2 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.59 [10/17]



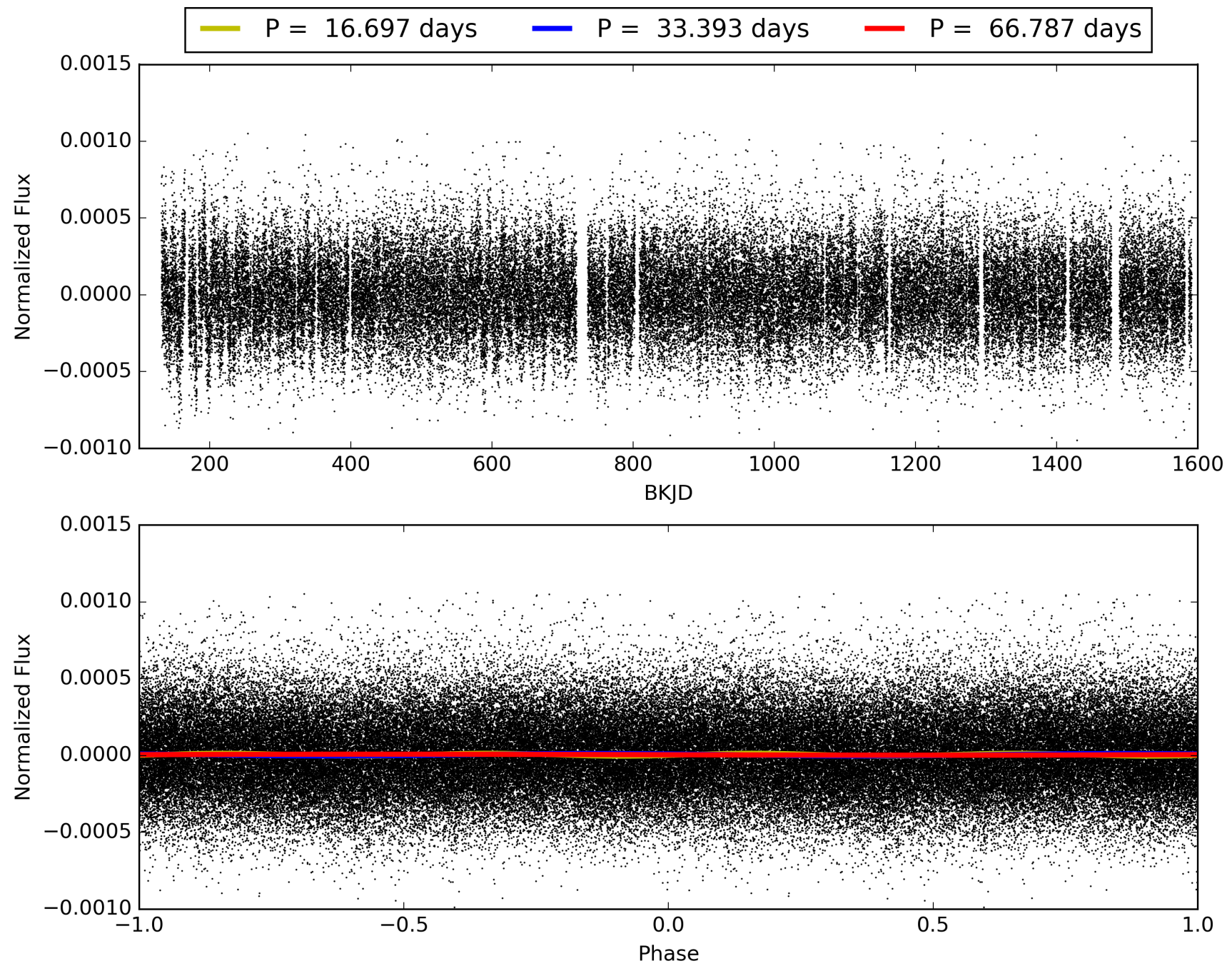
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:33:12 Z

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

TCE 004255732-03, PDC Light Curves

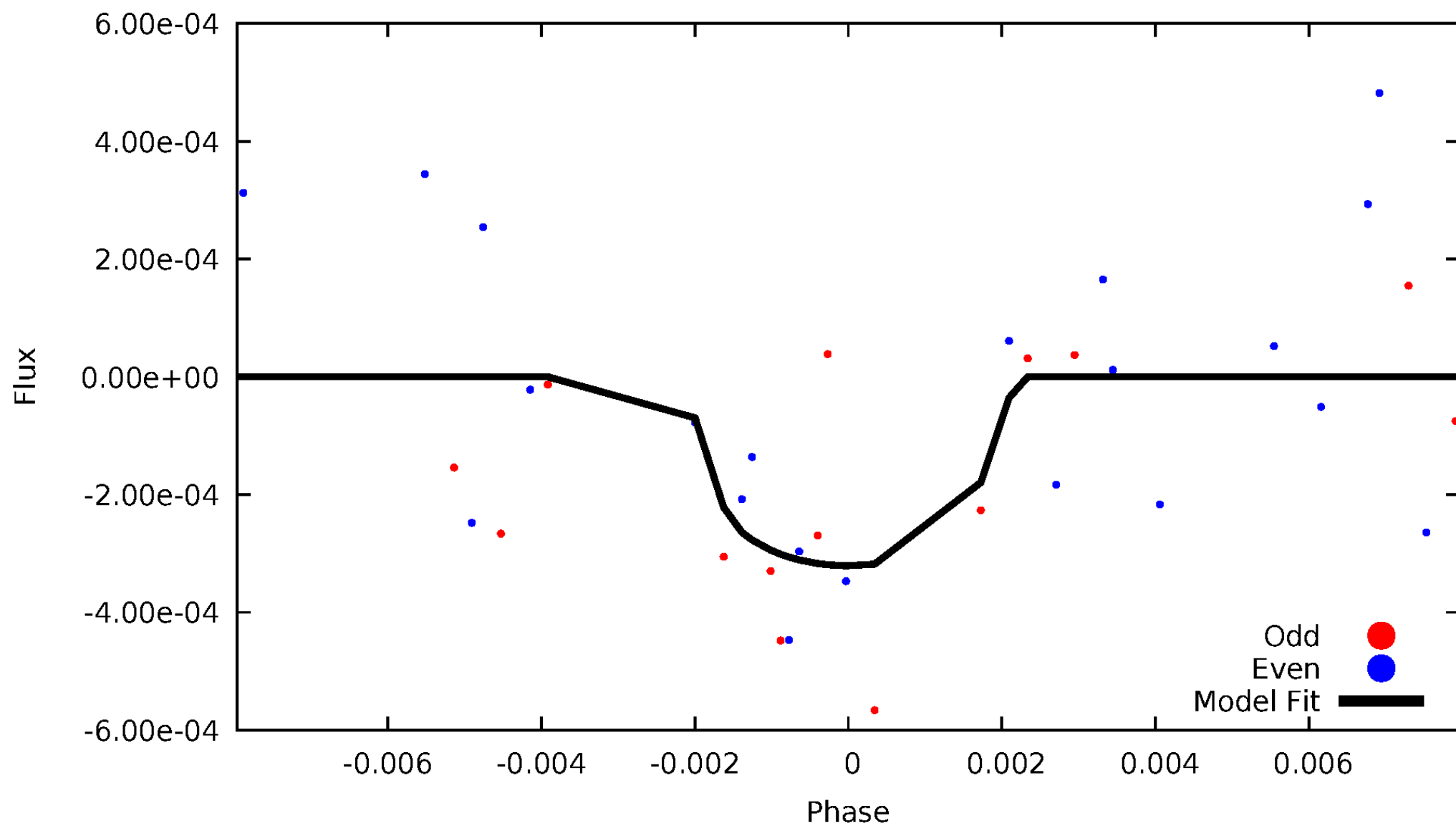


TCE 004255732-03



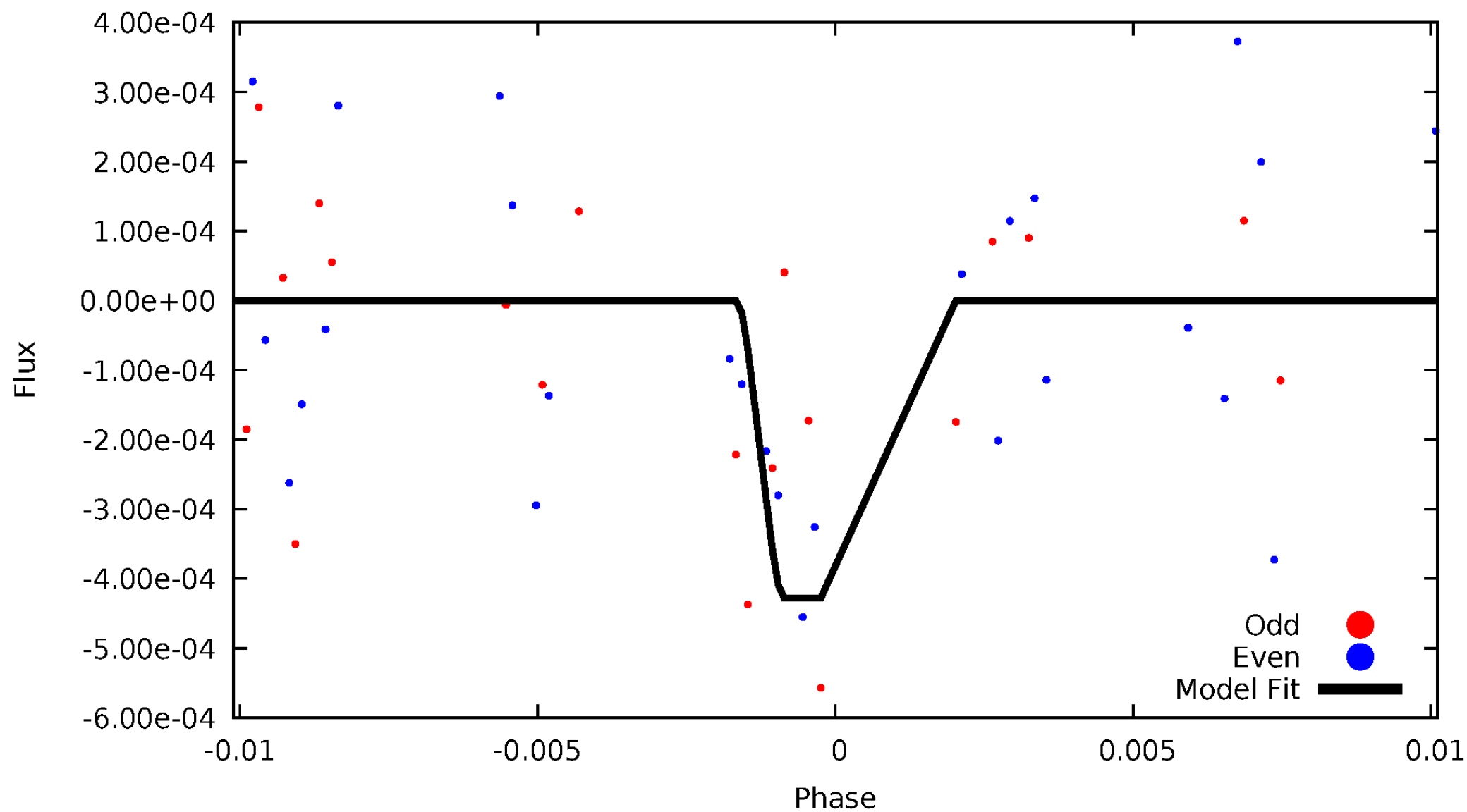
DV Odd/Even

TCE 004255732-03



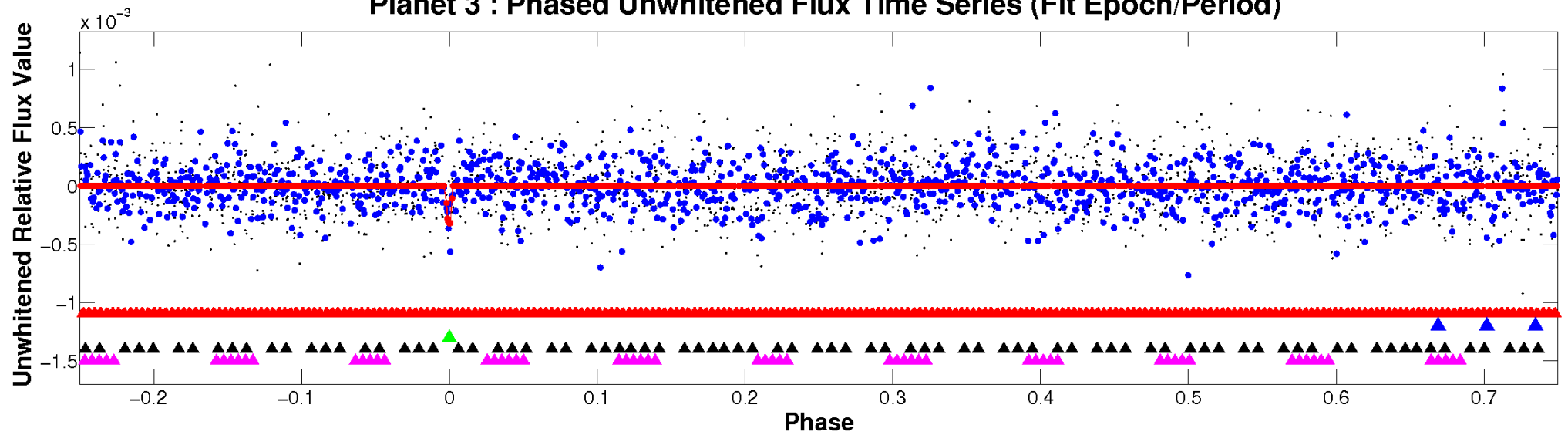
ALT Odd/Even

TCE 004255732-03

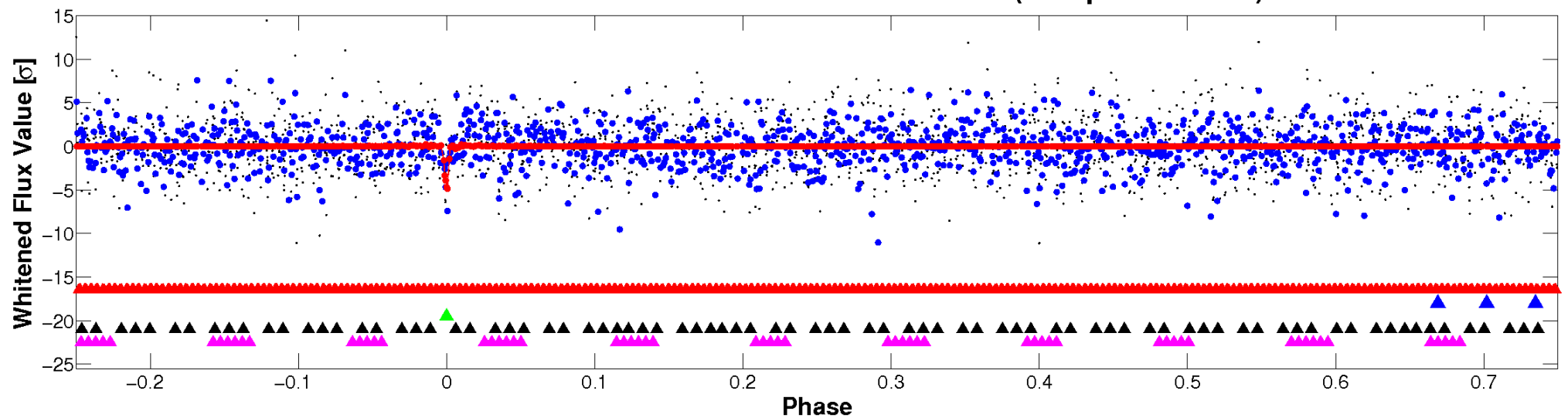


Non-Whitened Vs. Whitened Light Curve

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

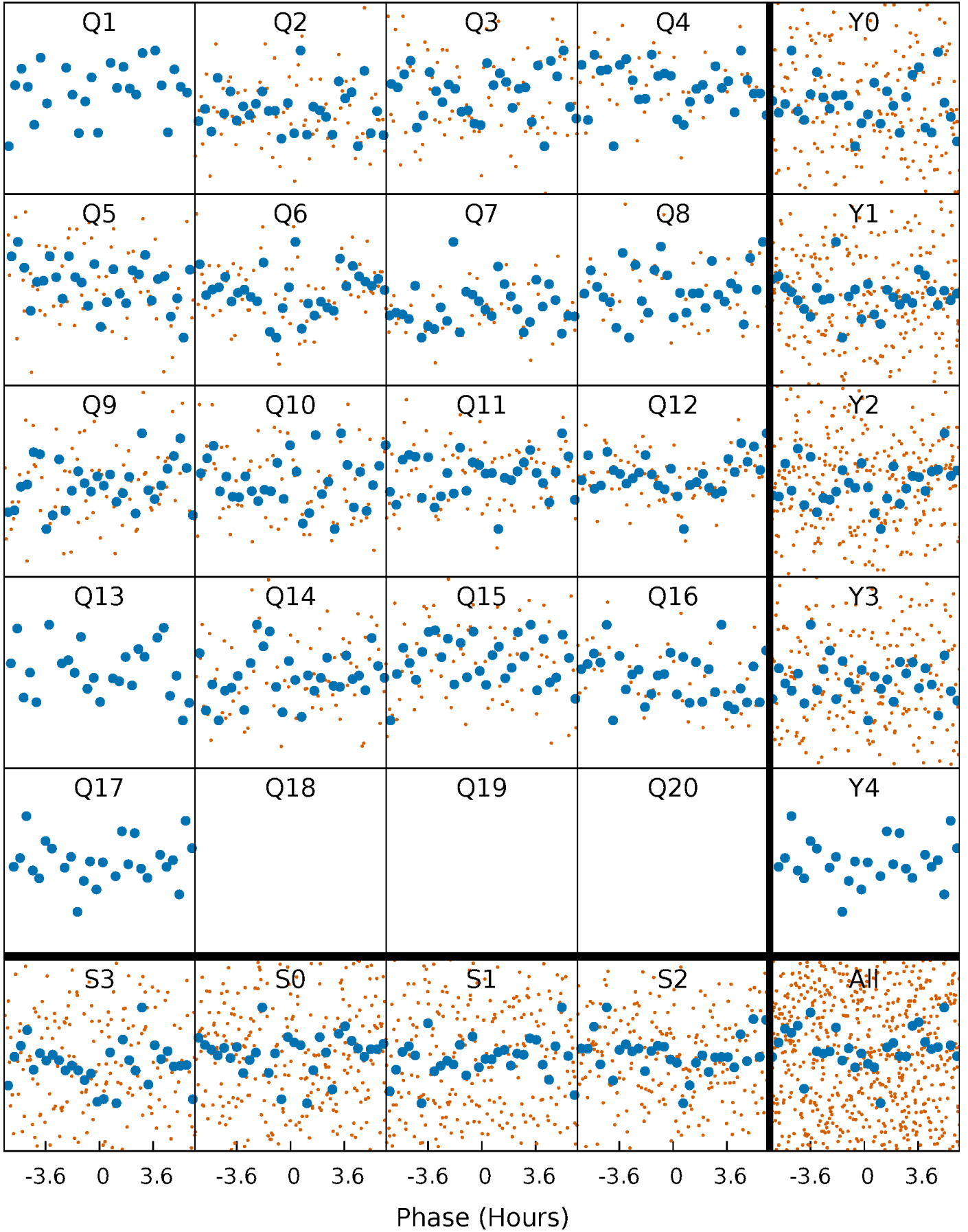


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



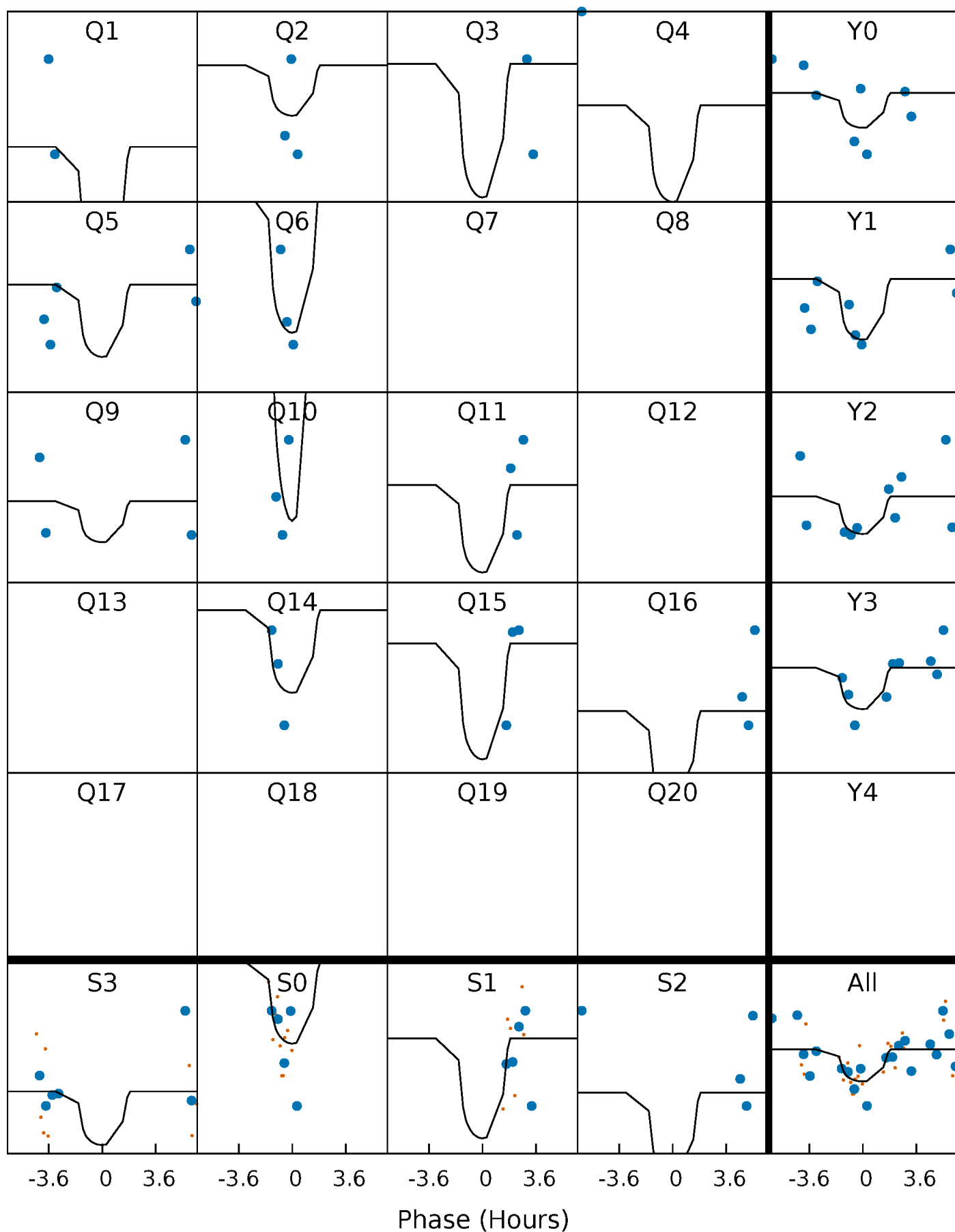
PDC Quarter-Phased Transit Curves

TCE 004255732-03 P= 33.393355 Days $T_0=143.462292$ (BKJD)



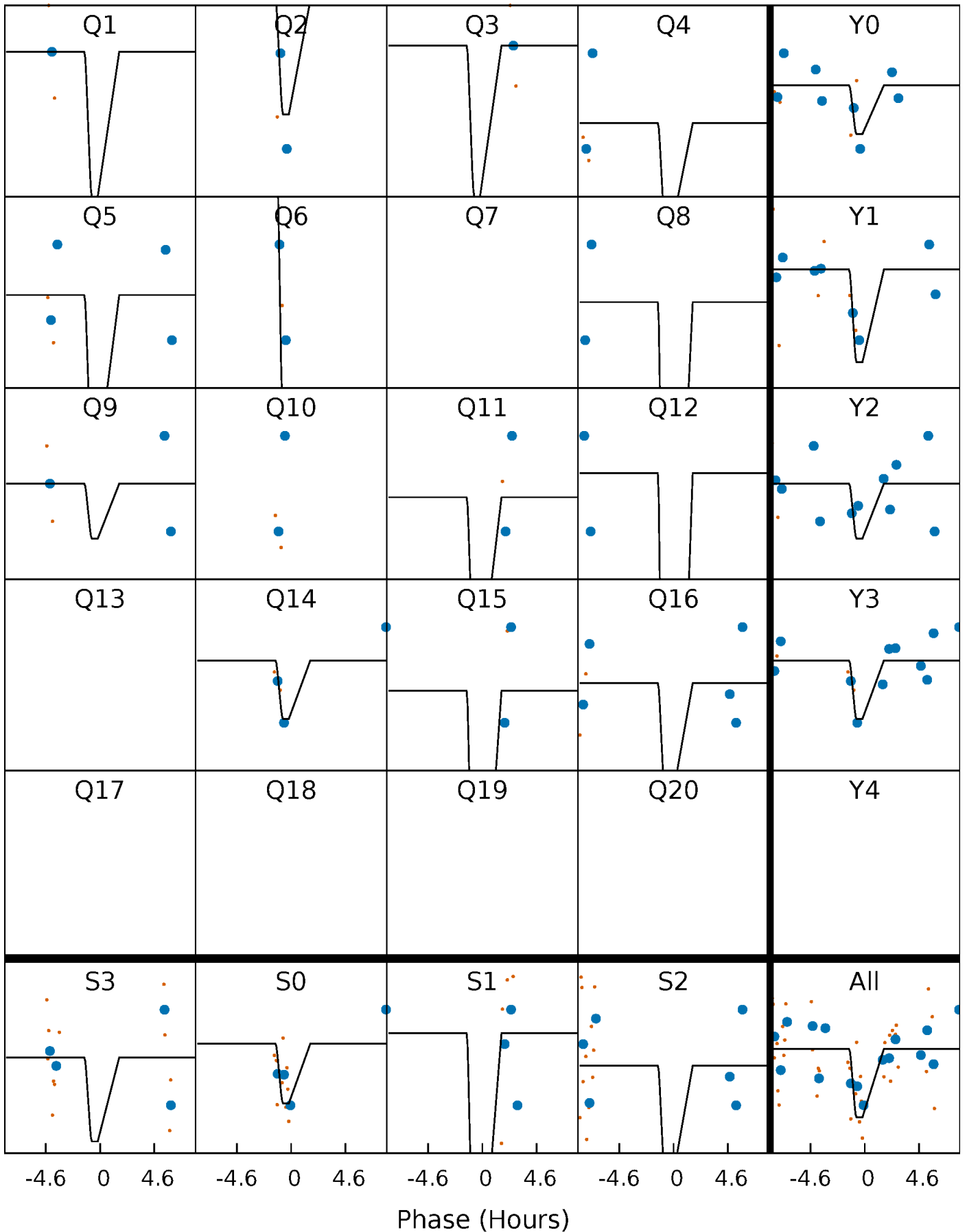
DV Quarter-Phased Transit Curves

TCE 004255732-03 P= 33.393355 Days $T_0=143.462292$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

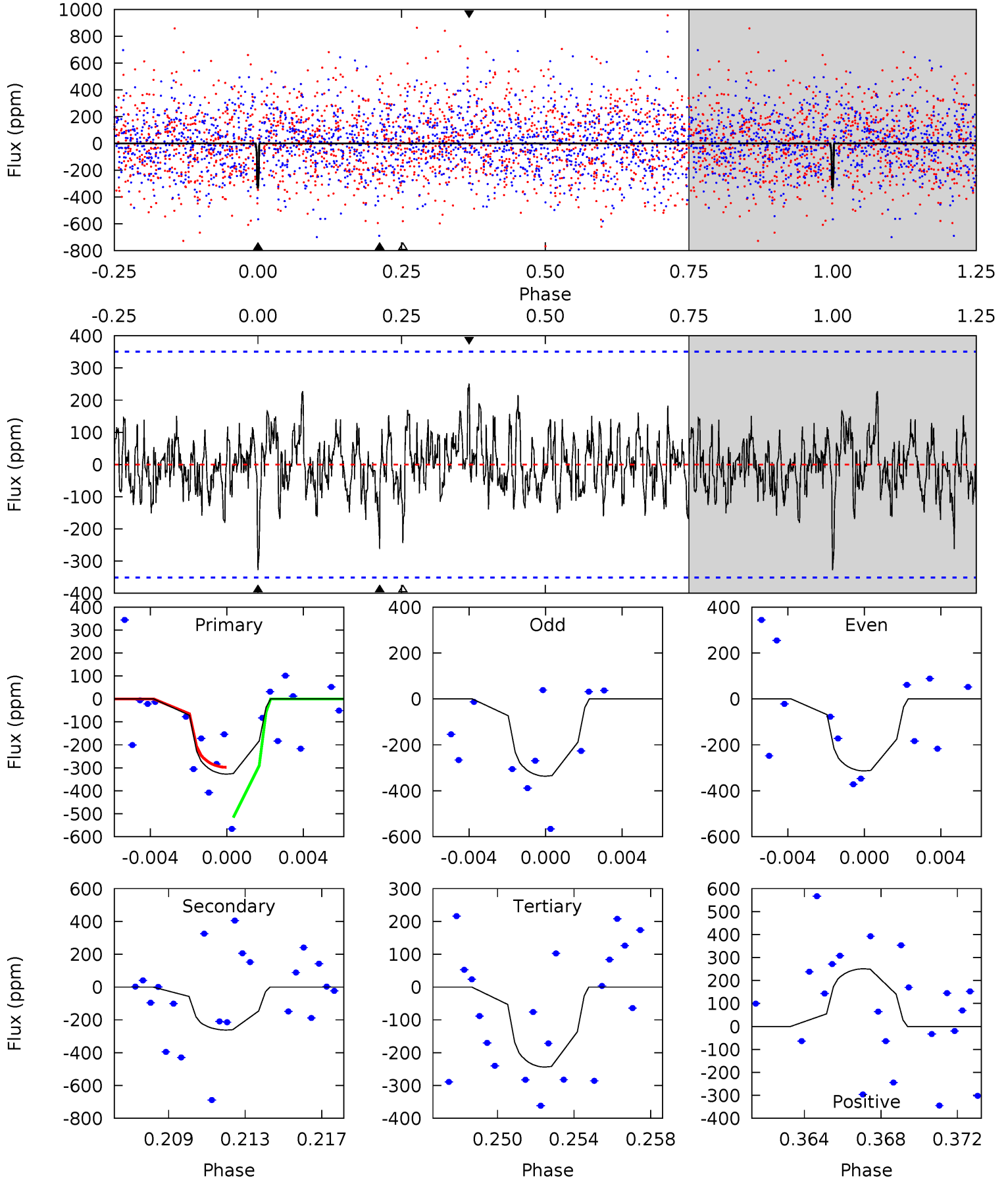
TCE 004255732-03 $P = 33.392532$ Days $T_0 = 143.484436$ (BKJD)



DV Model-Shift Uniqueness Test

004255732-03, P = 33.393355 Days, E = 110.068937 Days

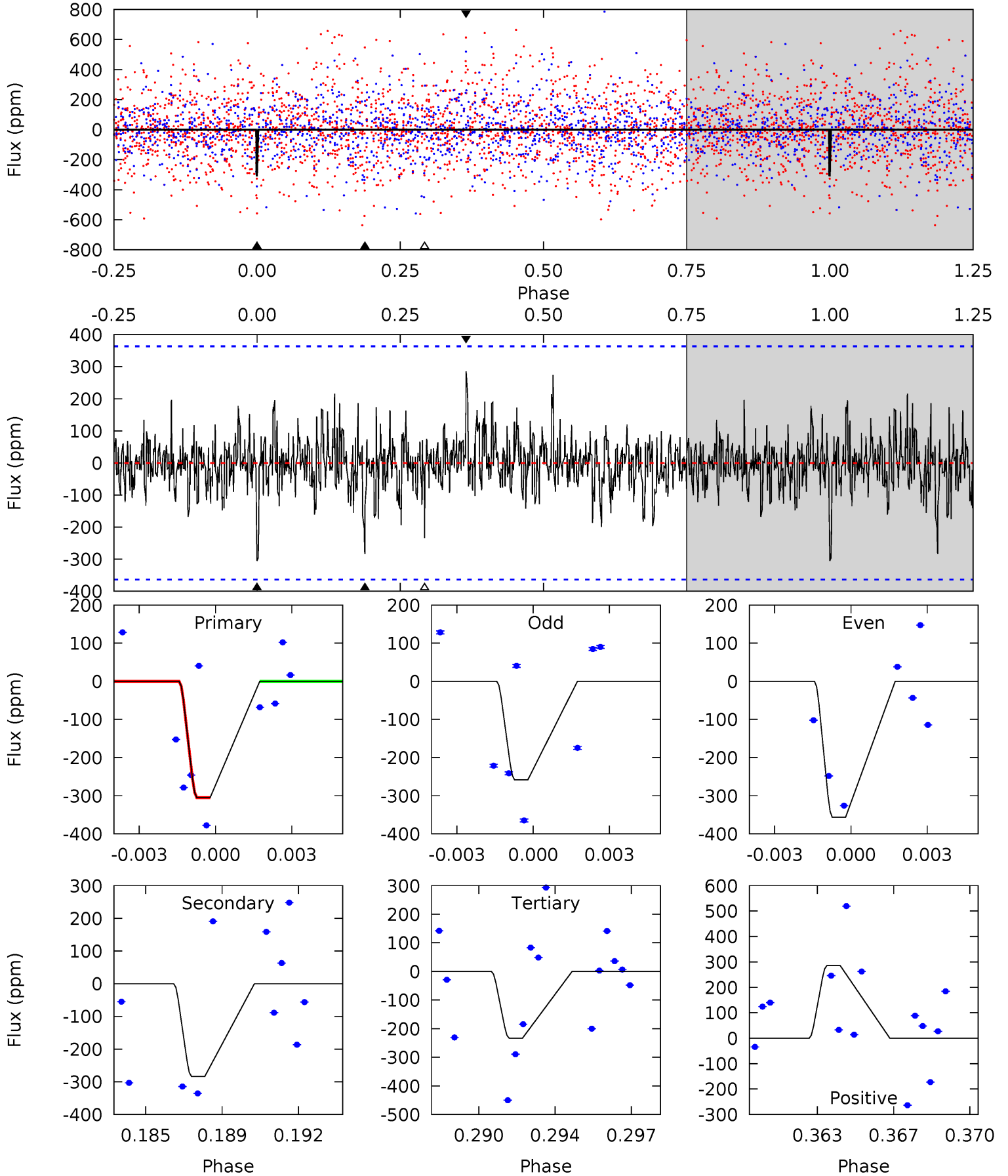
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.85	3.88	3.61	3.72	5.20	2.87	1.11	1.24	1.13	0.27	0.16	0.17	0.99	0.43	1.22



Alt Model-Shift Uniqueness Test

004255732-03, P = 33.392532 Days, E = 110.091904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.38	4.07	3.35	4.10	5.22	2.92	0.95	1.03	0.28	0.72	-0.03	0.71	0	0.48	0



Stellar Parameters For KIC 004255732

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5376^{+75}_{-75}	$4.462^{+0.067}_{-0.090}$	$0.280^{+0.150}_{-0.150}$	$0.940^{+0.110}_{-0.064}$	$0.934^{+0.044}_{-0.044}$	$1.582^{+0.375}_{-0.433}$
	+1%/-1%	+2%/-2%	+54%/-54%	+12%/-7%	+5%/-5%	+24%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004255732-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-262 ± 68	$5.59^{+5.31}_{-3.90}$	722^{+23}_{-19}	3433^{+1872}_{-624}	177^{+1782}_{-131}
Alt.	-284 ± 70	$5.66^{+5.43}_{-3.72}$	722^{+24}_{-20}	3474^{+1636}_{-651}	197^{+1463}_{-149}

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 $A_{obs} \gg 1.0$

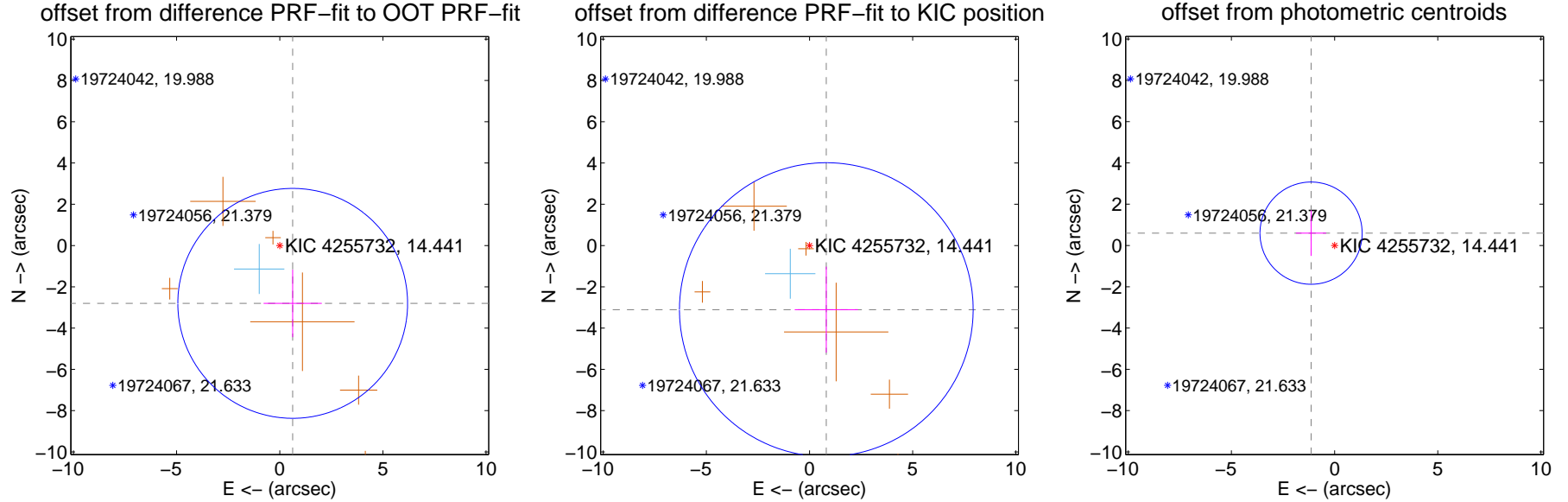
DV Centroid Data

Supplemental centroid analysis for 004255732-03. Kepler magnitude: 14.44. Transit SNR 12.74

There are 1 quarters with good PRF difference image offsets

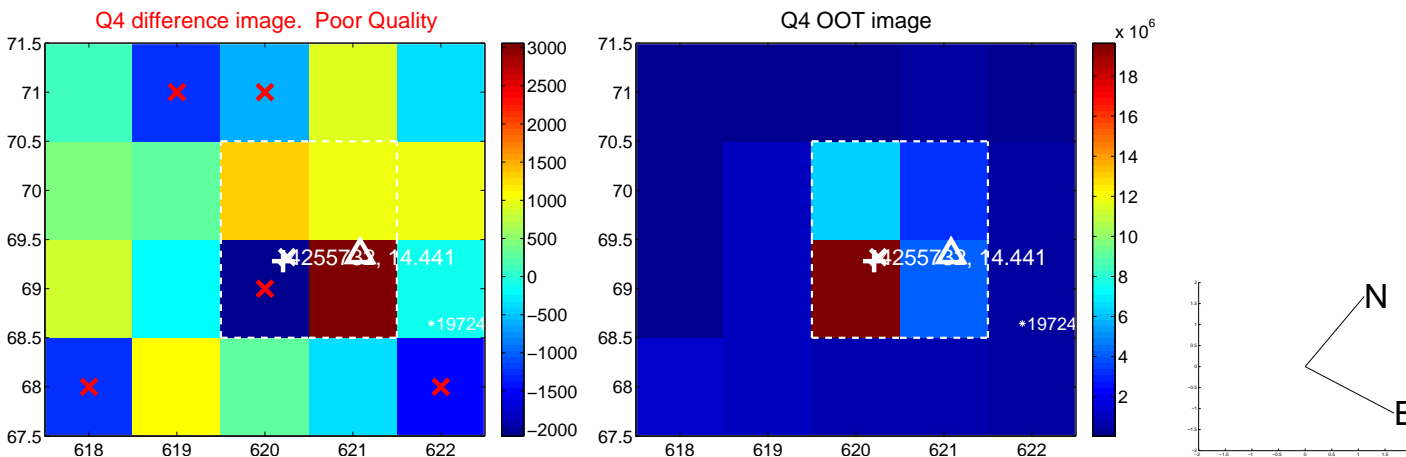
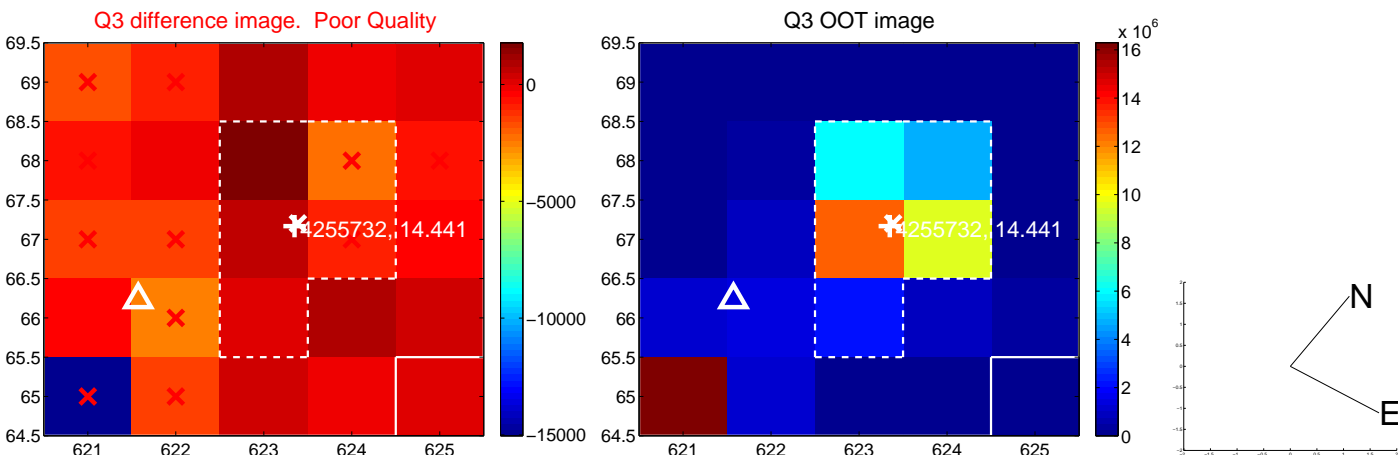
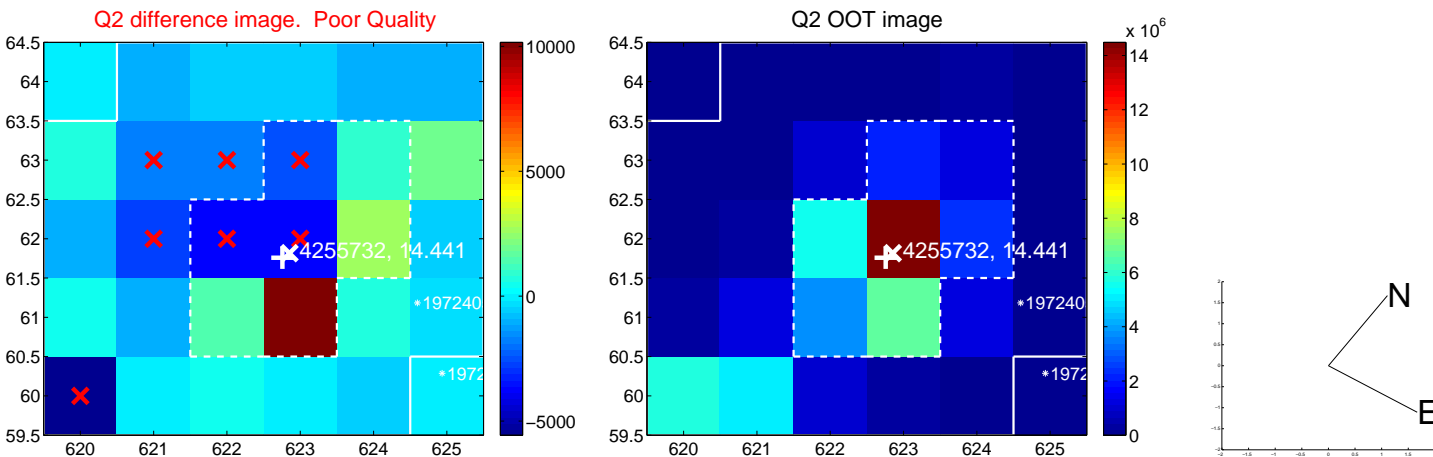
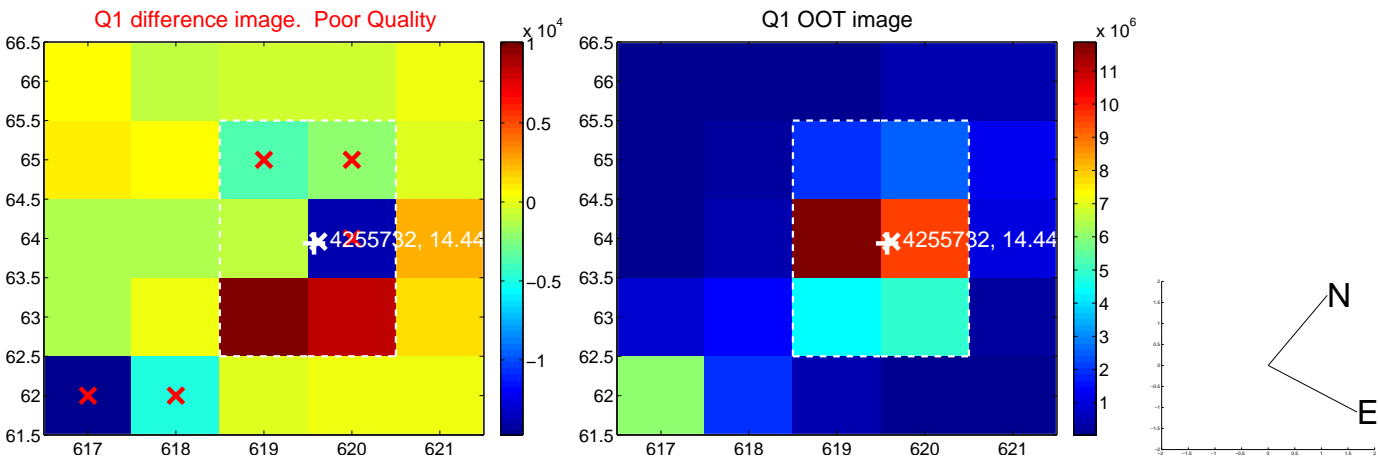
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.871 ± 1.857	1.55	-0.628 ± 1.410	-2.802 ± 1.633
PRF-fit source offset from KIC position	3.212 ± 2.373	1.35	-0.814 ± 1.531	-3.107 ± 2.083
photometric centroid source offset	1.29 ± 0.83	1.56	1.14 ± 0.73	0.60 ± 1.10

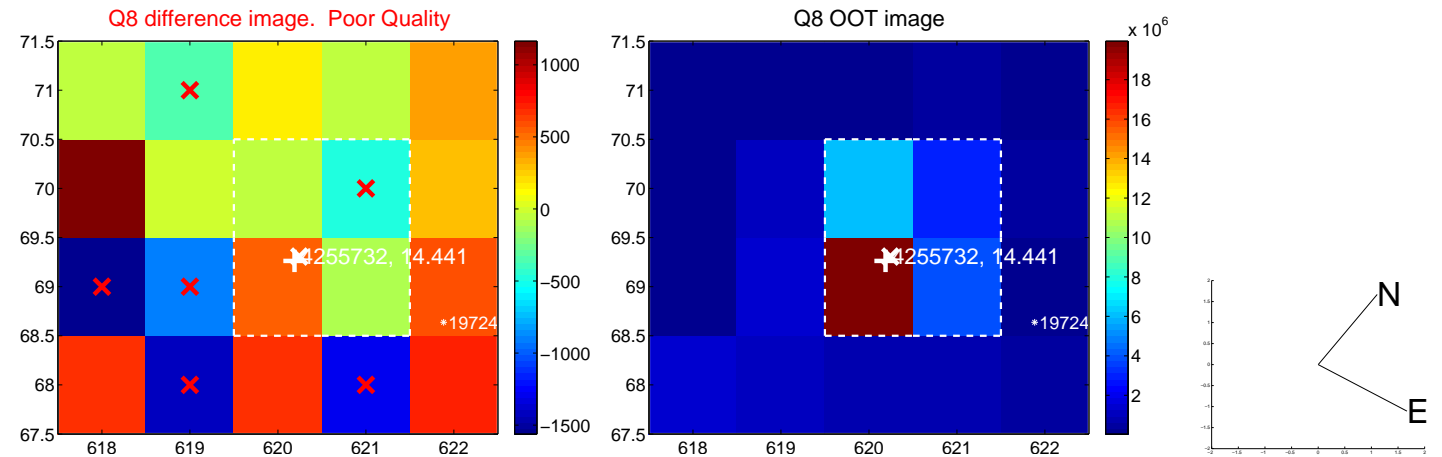
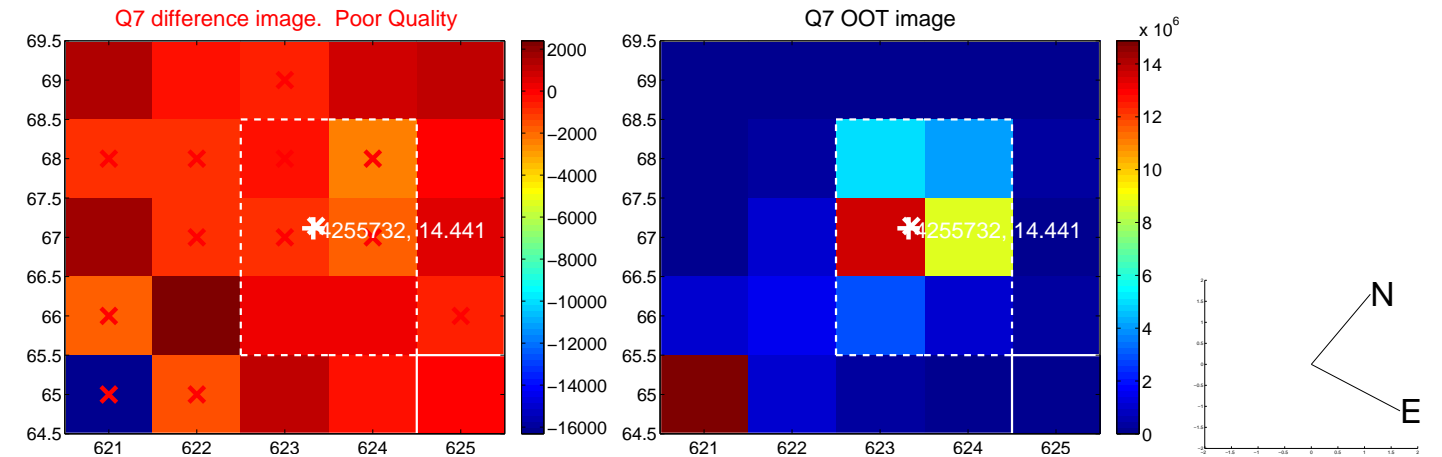
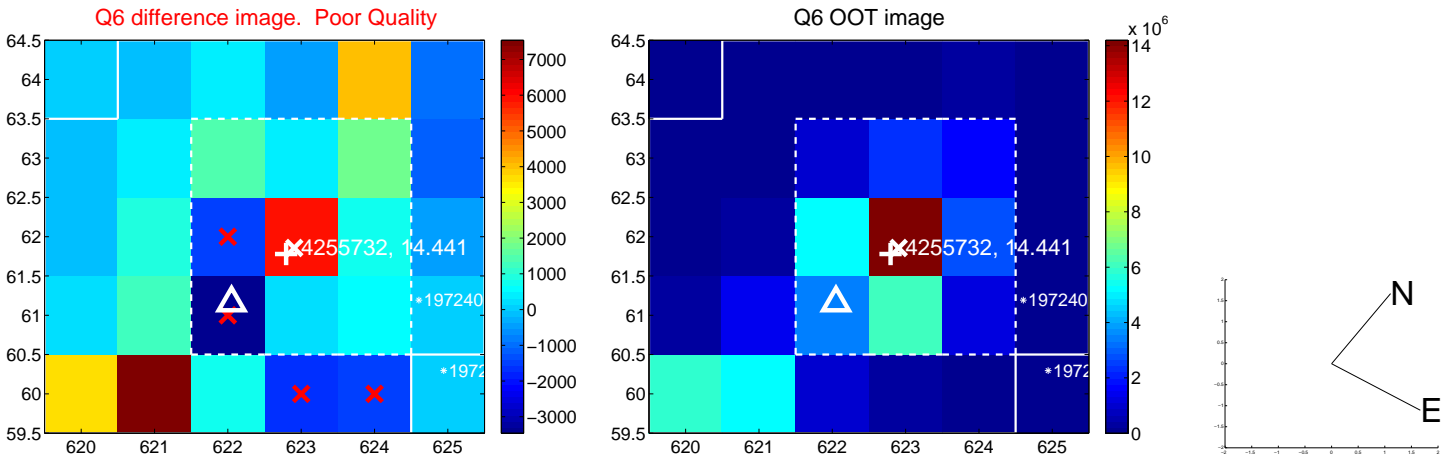
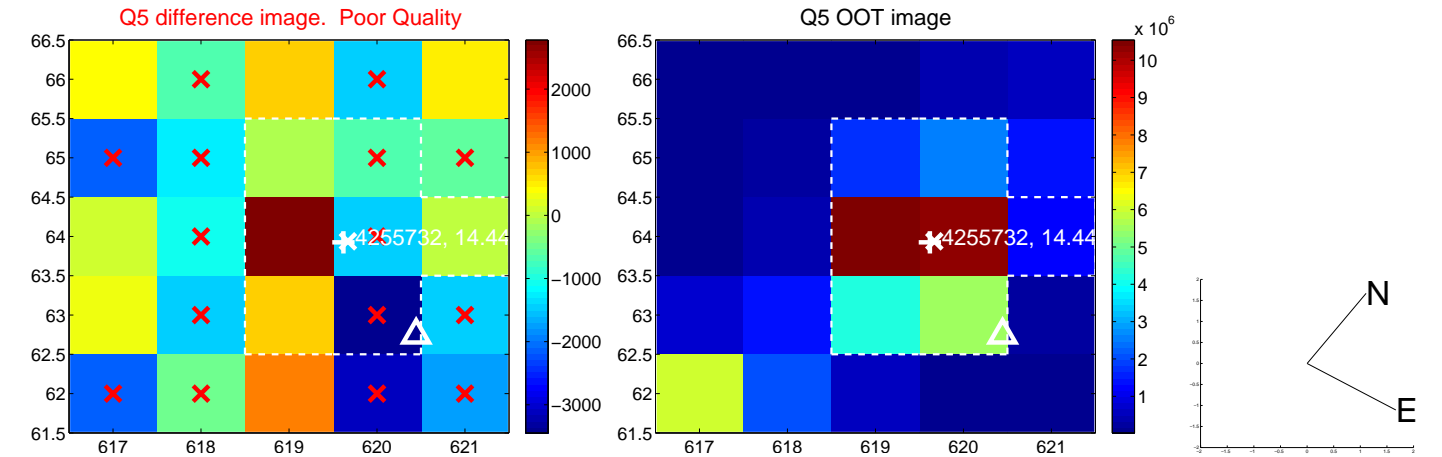


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

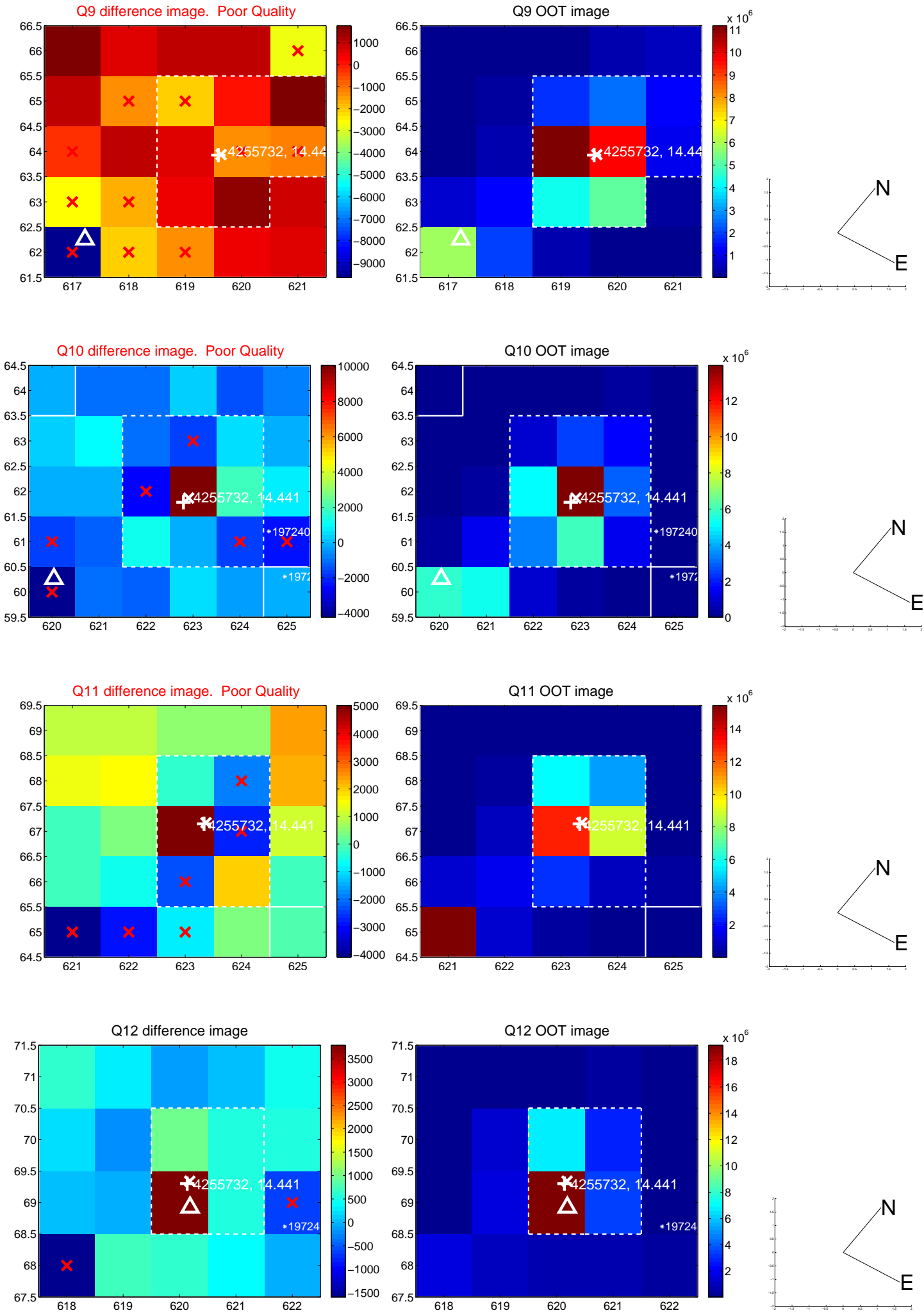
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



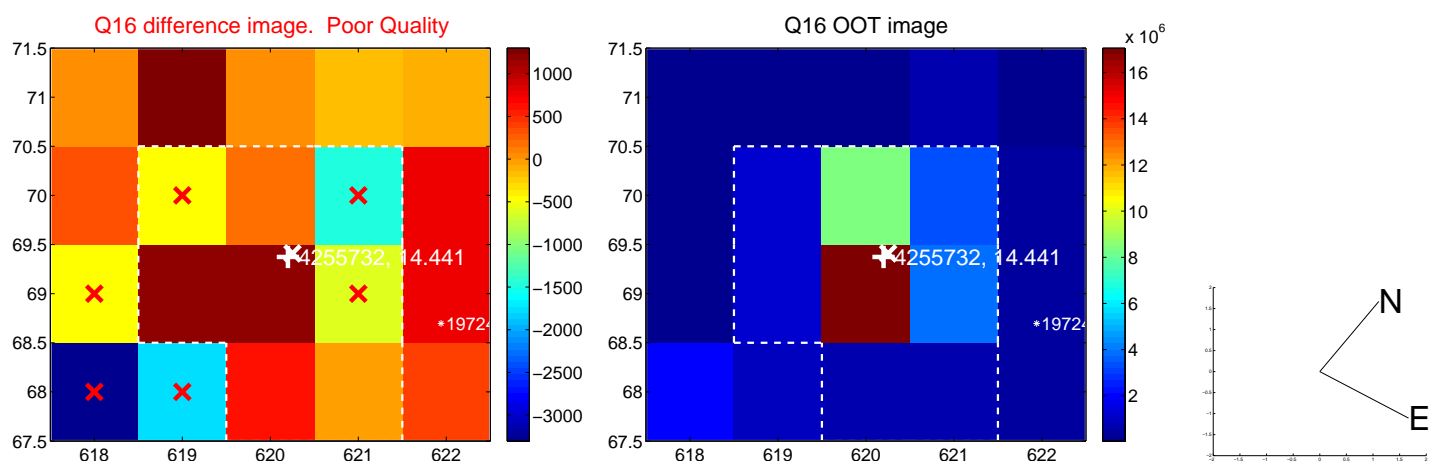
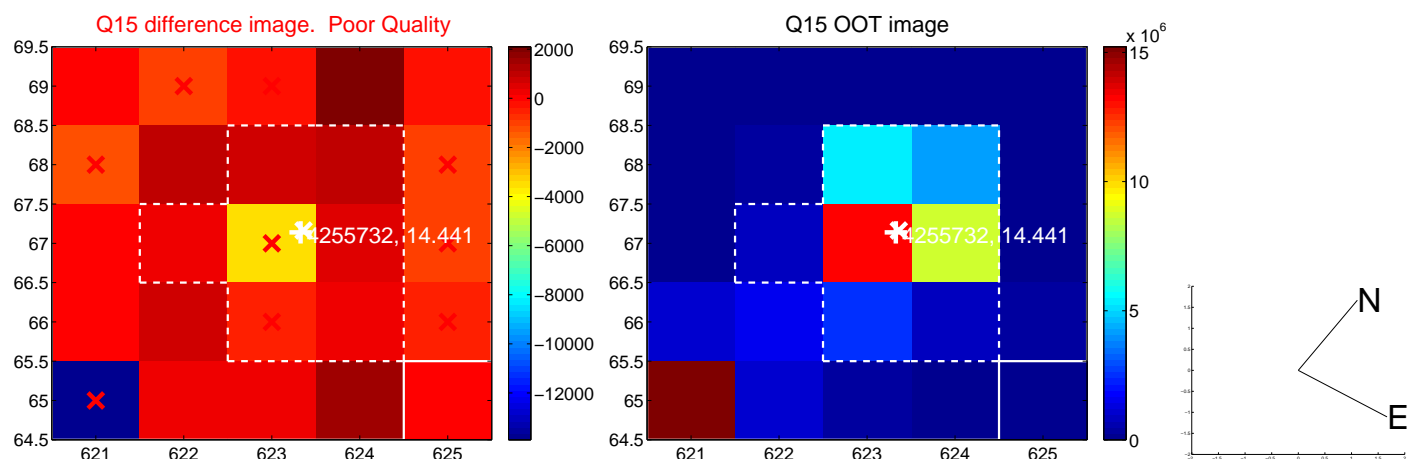
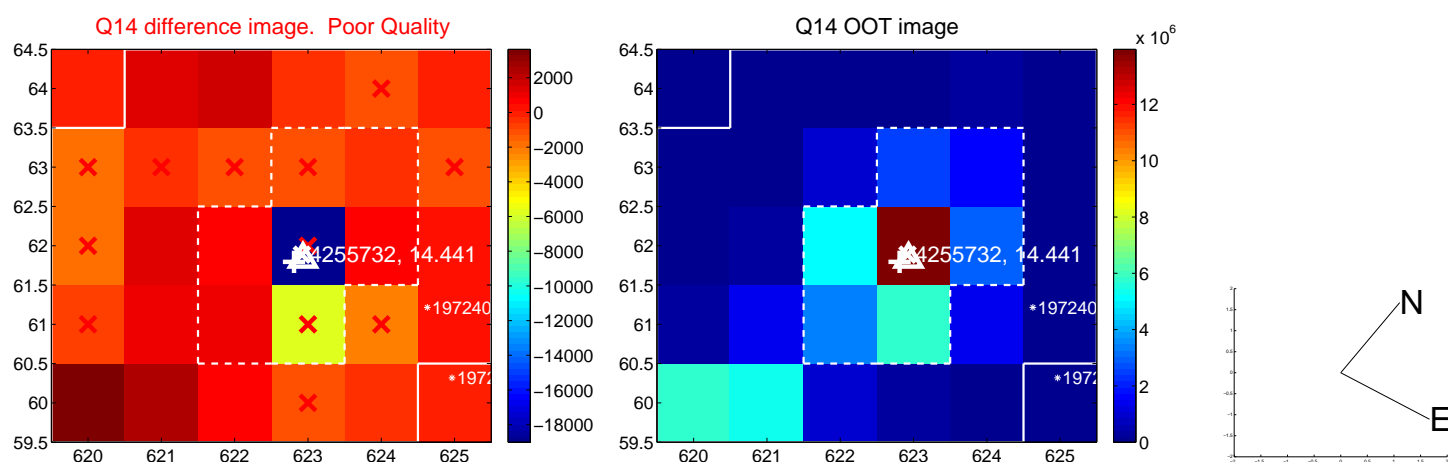
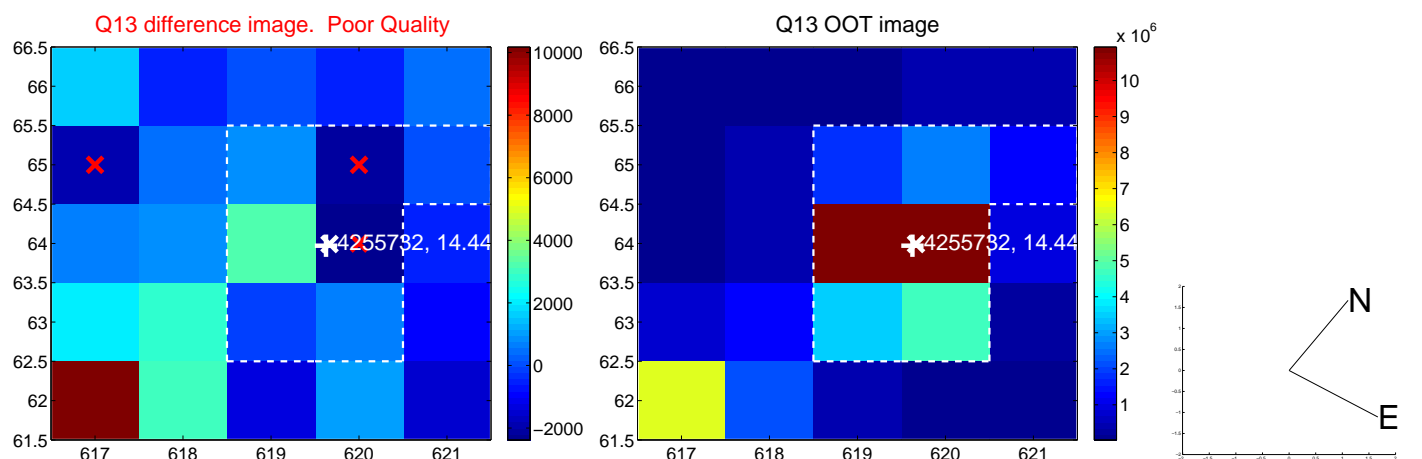
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



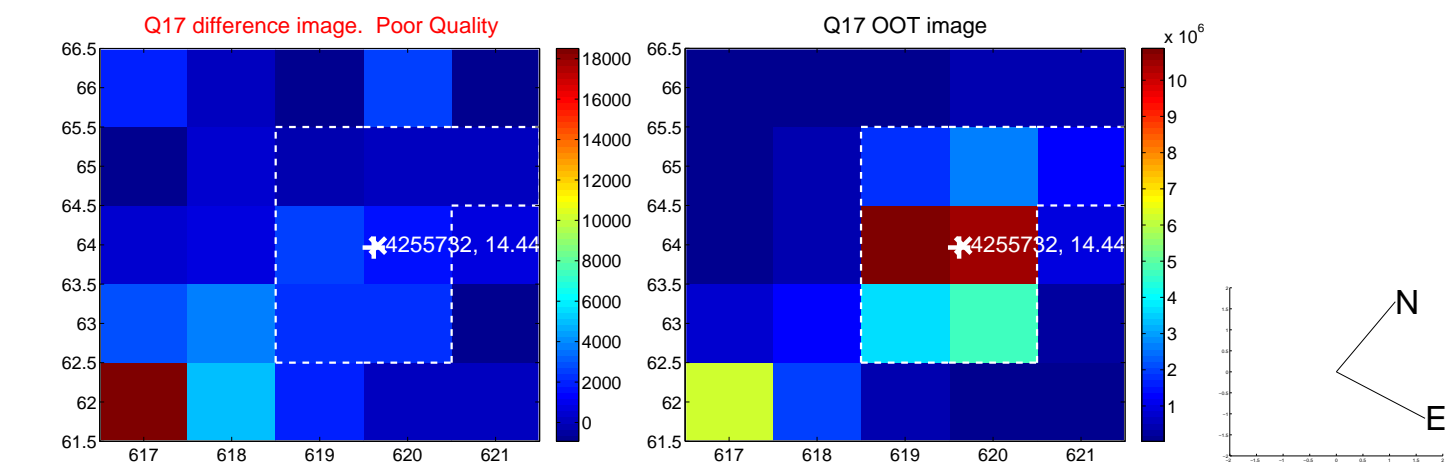
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



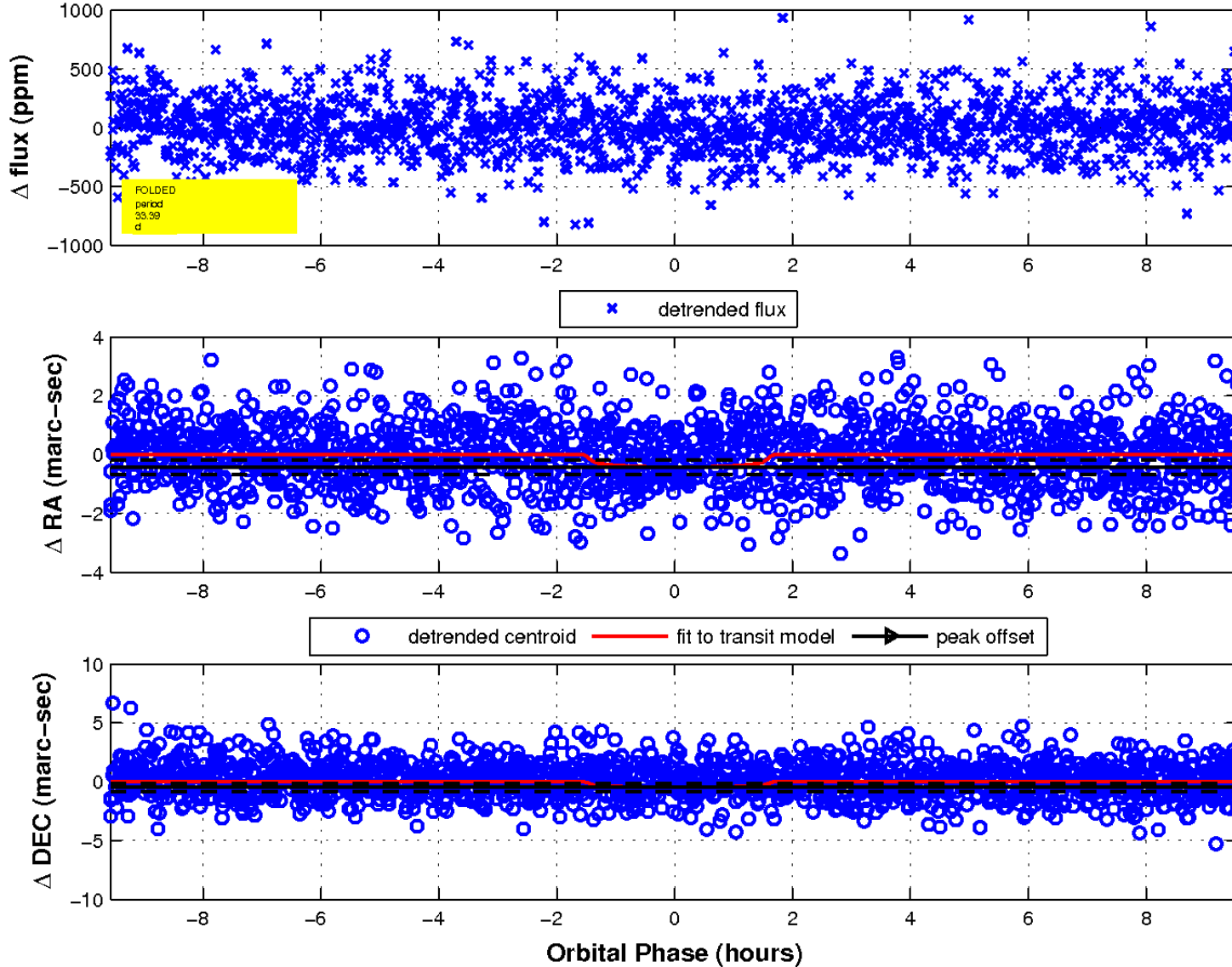
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

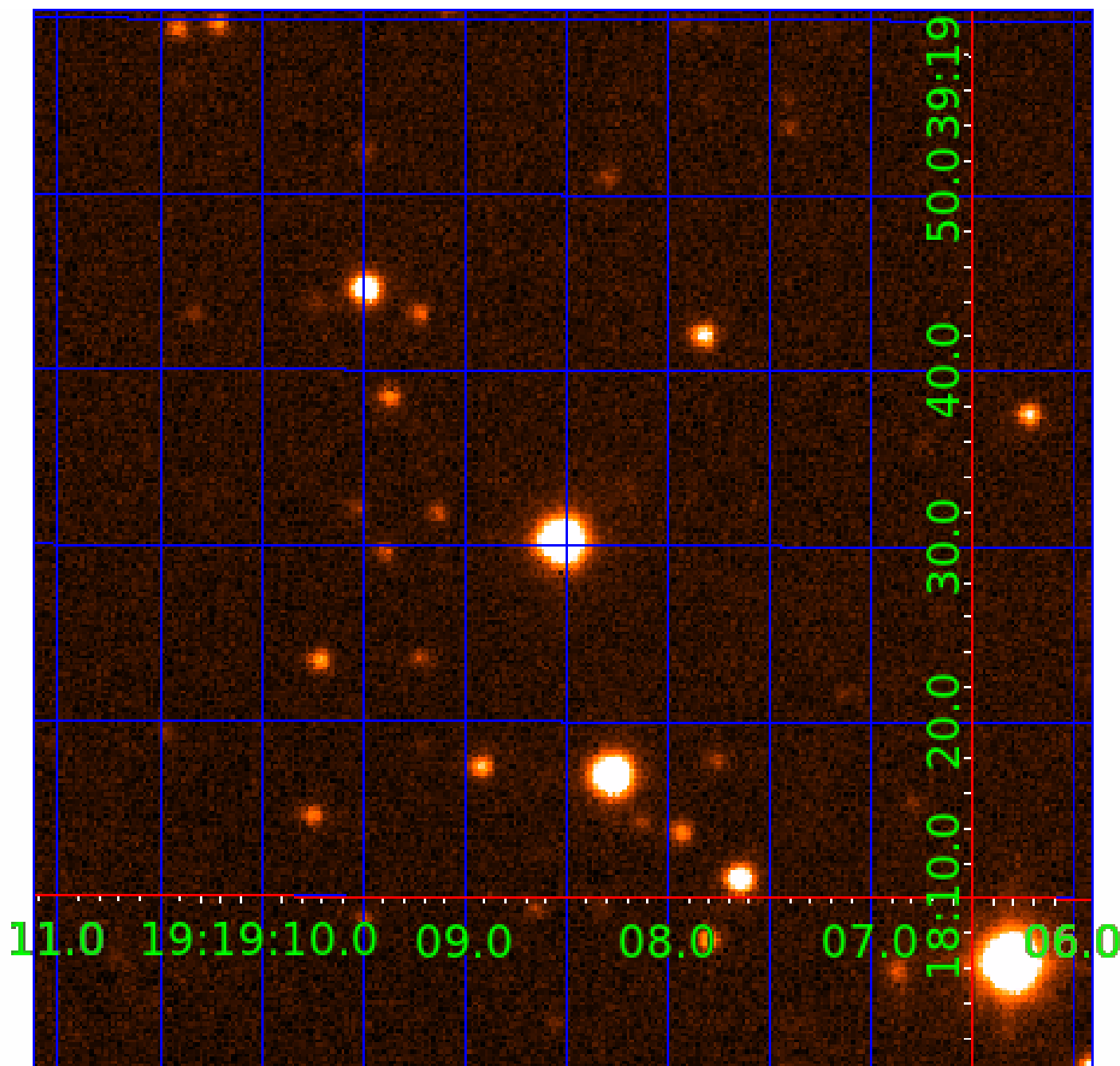


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 004255732

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})
004255732-01	OBS	No	1.475151	132.262139	22.3	11.174	7.6	9.9	0.94	5376	0.43	1075.72
004255732-03	OBS	No	33.393355	143.462292	320.8	3.191	13.5	12.7	0.94	5376	1.83	16.80
004255732-04	OBS	No	17.750217	147.562341	318.4	2.130	10.3	11.2	0.94	5376	1.72	39.01
004255732-05	OBS	No	24.301017	147.293386	437.1	1.061	12.0	12.9	0.94	5376	1.96	25.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004255732-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
004255732-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

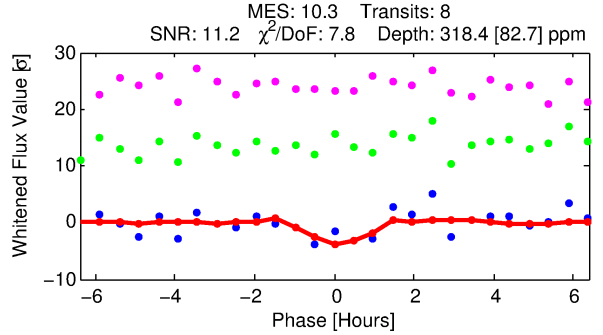
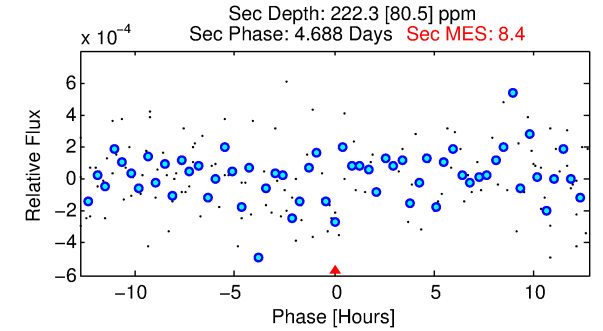
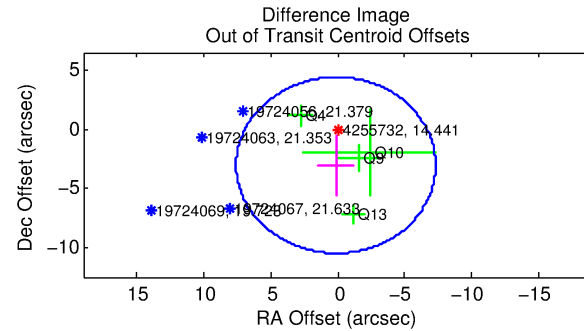
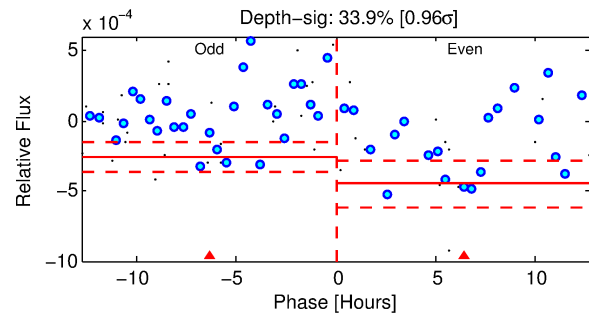
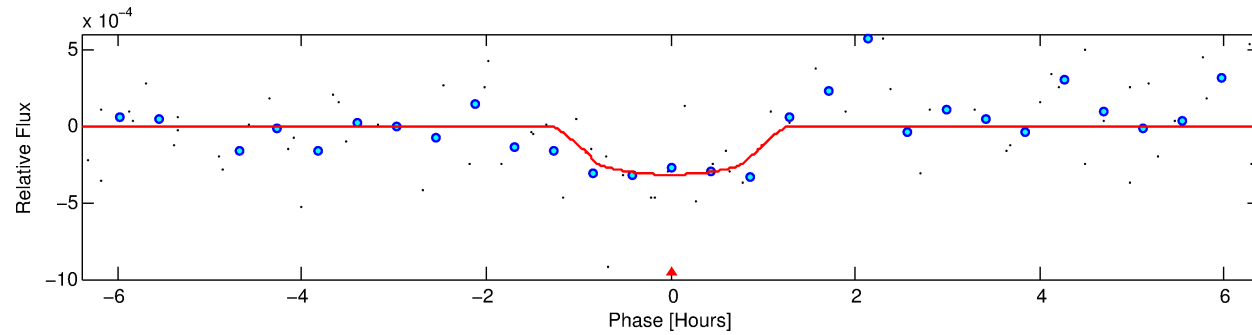
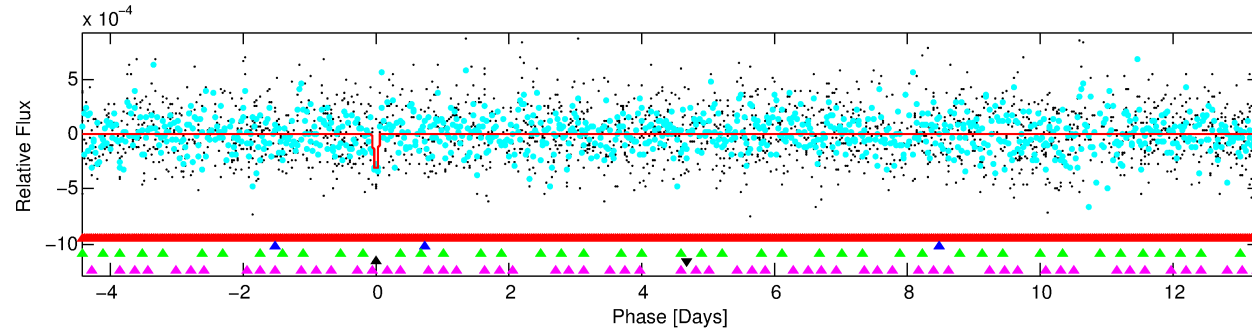
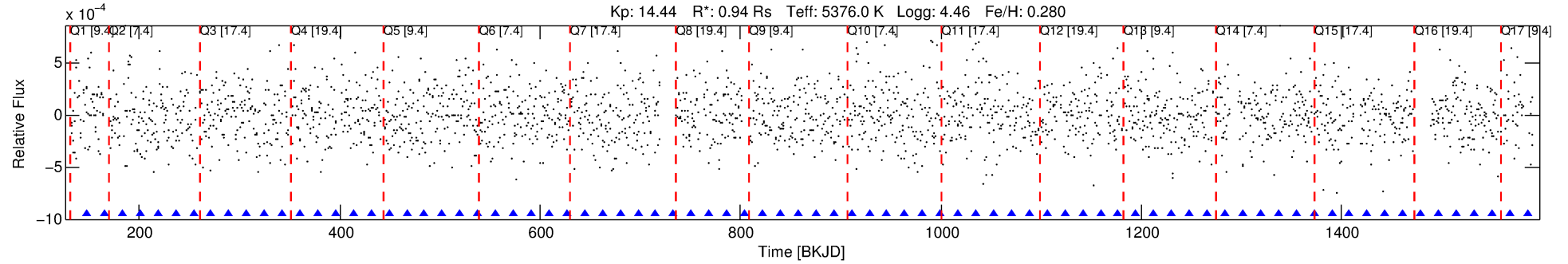
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004255732-04

No Significant Match Found

DV One-Page Summary

KIC: 4255732 Candidate: 4 of 5 Period: 17.750 d



DV Fit Results:

Period = 17.75022 [0.00029] d
Epoch = 147.5623 [0.0131] BKJD
Rp/R* = 0.0168 [0.0879]
a/R* = 53.99 [1031.60]
b = 0.56 [23.92]
Seff = 39.01 [6.56]
Teq = 637 [27] K
Rp = 1.72 [9.01] Re
a = 0.1302 [0.0136] AU
Ag = 697.88 [7304.12] [0.10σ]
Teffp = 5064 [13249] K [0.33σ]

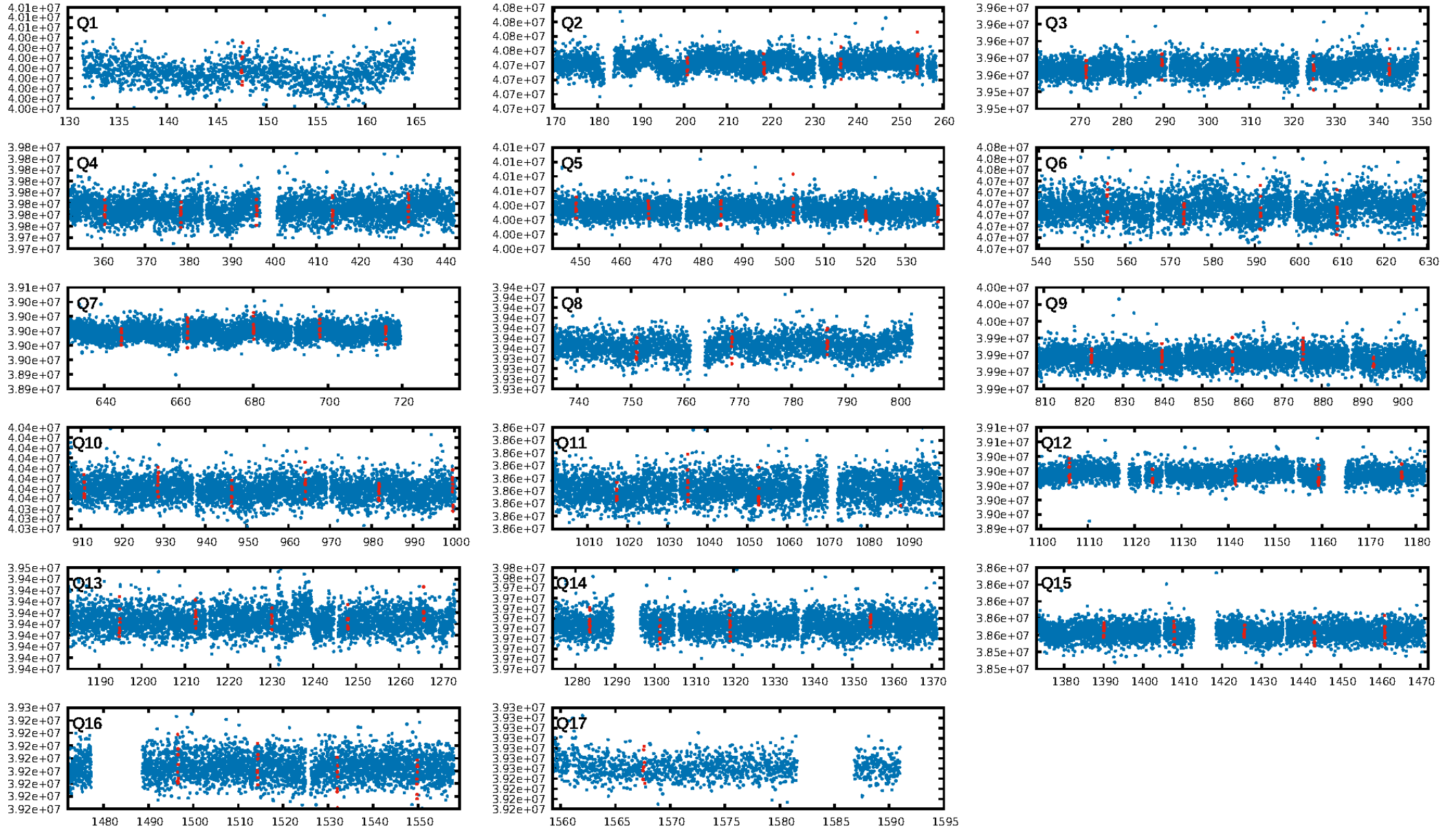
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.34σ]
LongPeriod-sig: 100.0% [66.06σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 61.9%
Bootstrap-pfa: 1.45e-06
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.6168
Centroid-sig: 54.3%
Centroid-so: 1.404 arcsec [1.55σ]
OotOffset-rm: 3.053 arcsec [1.23σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-rm: 3.242 arcsec [1.32σ]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.41 [7/17]

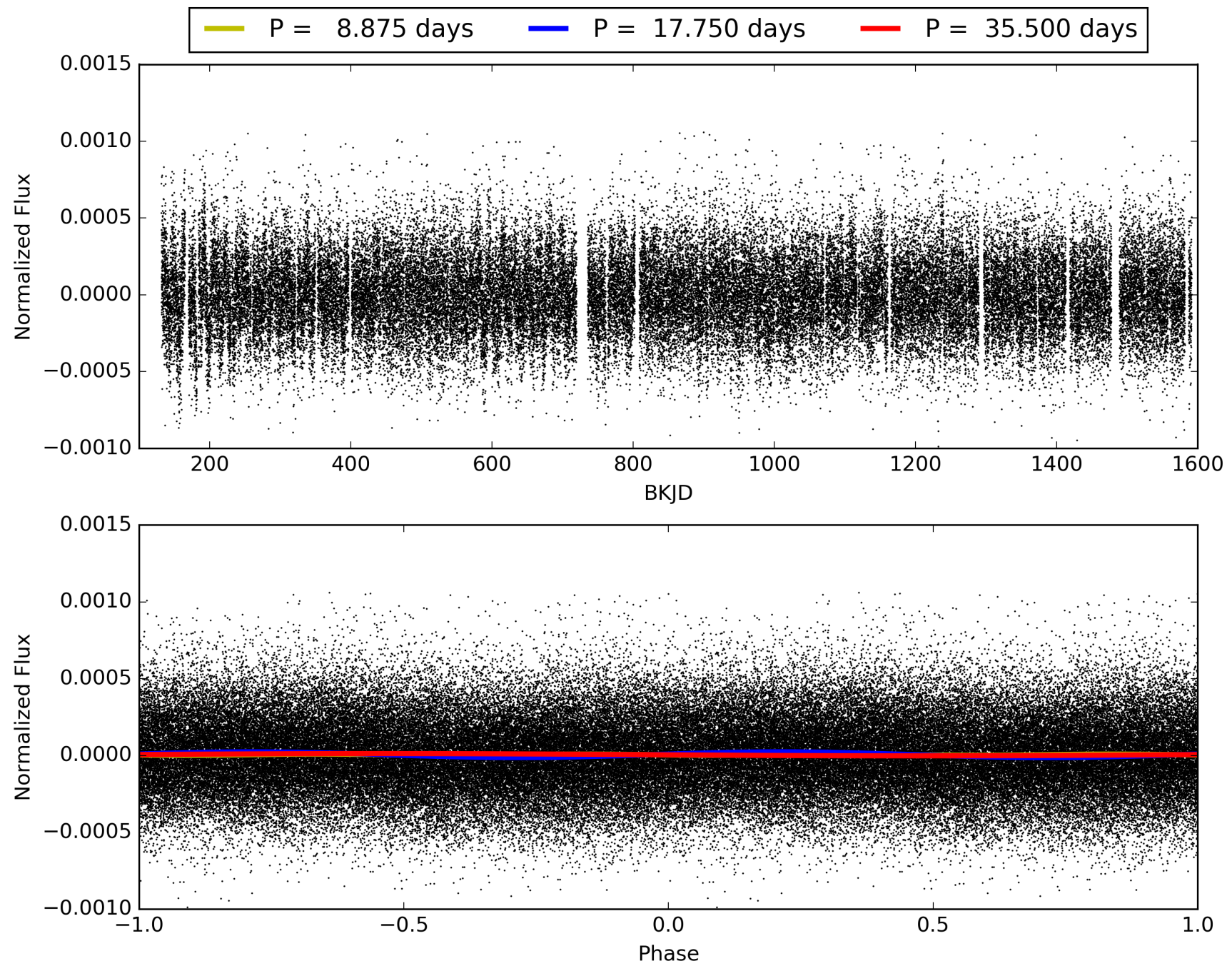
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:33:14 Z

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

TCE 004255732-04, PDC Light Curves

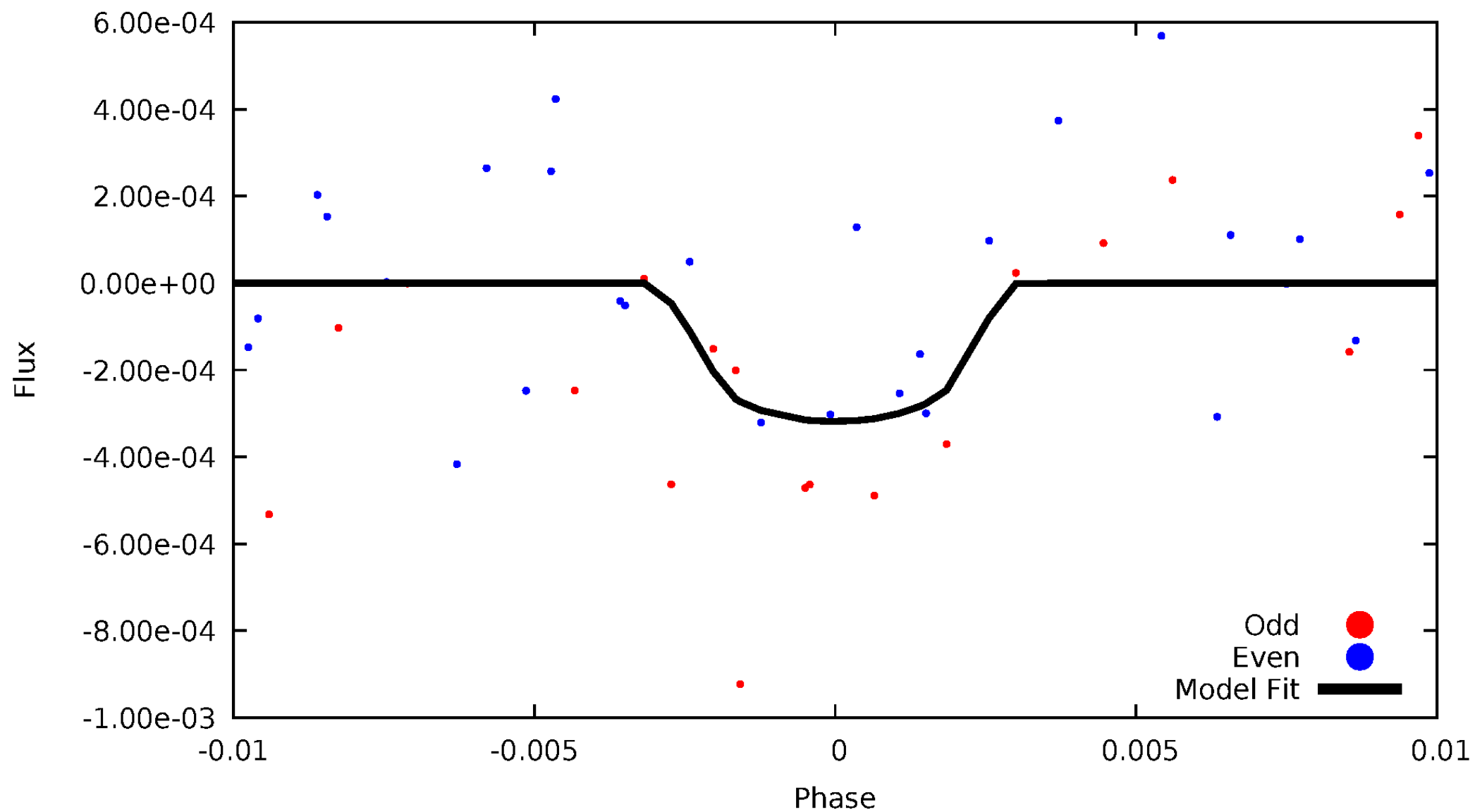


TCE 004255732-04



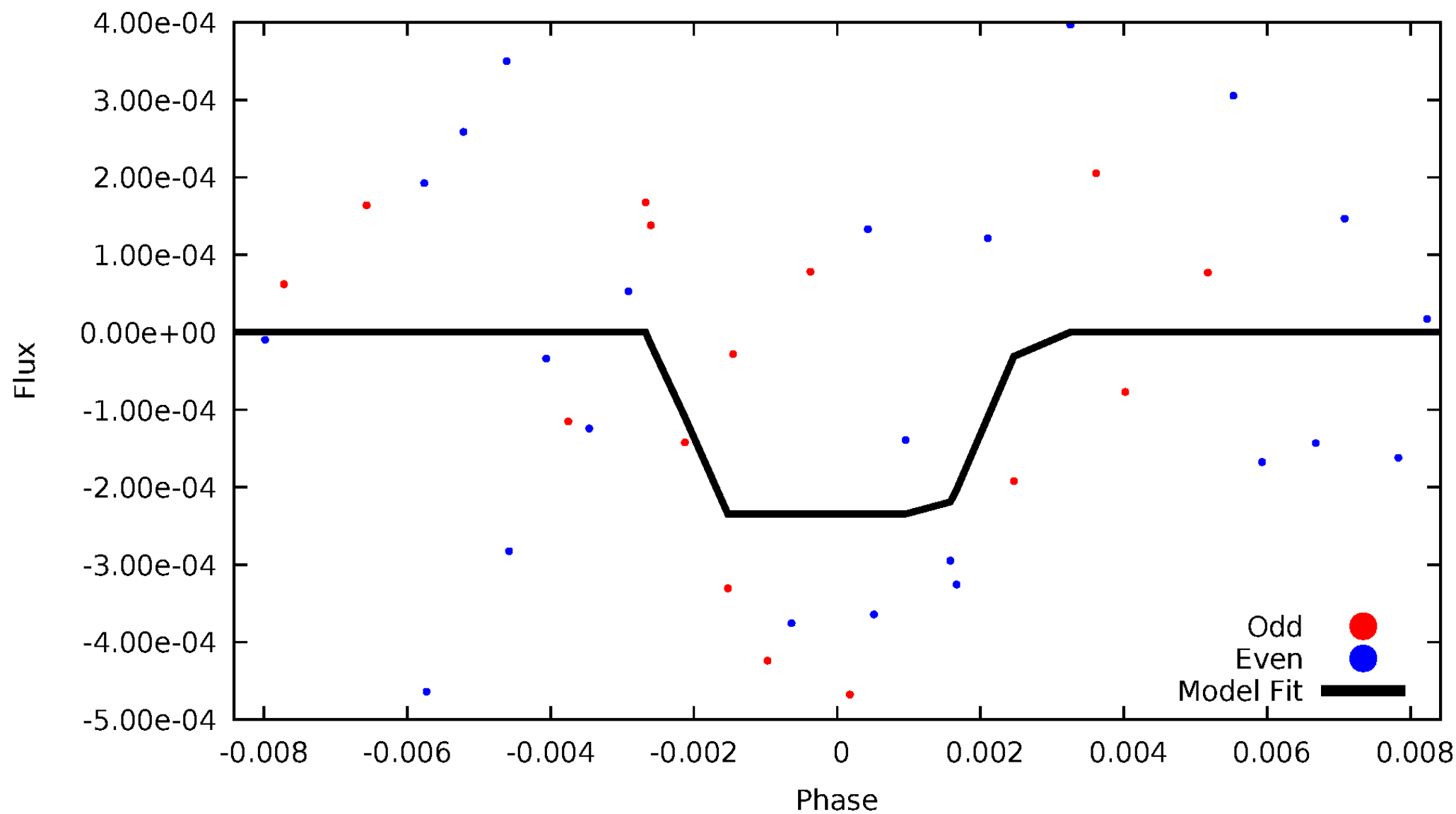
DV Odd/Even

TCE 004255732-04



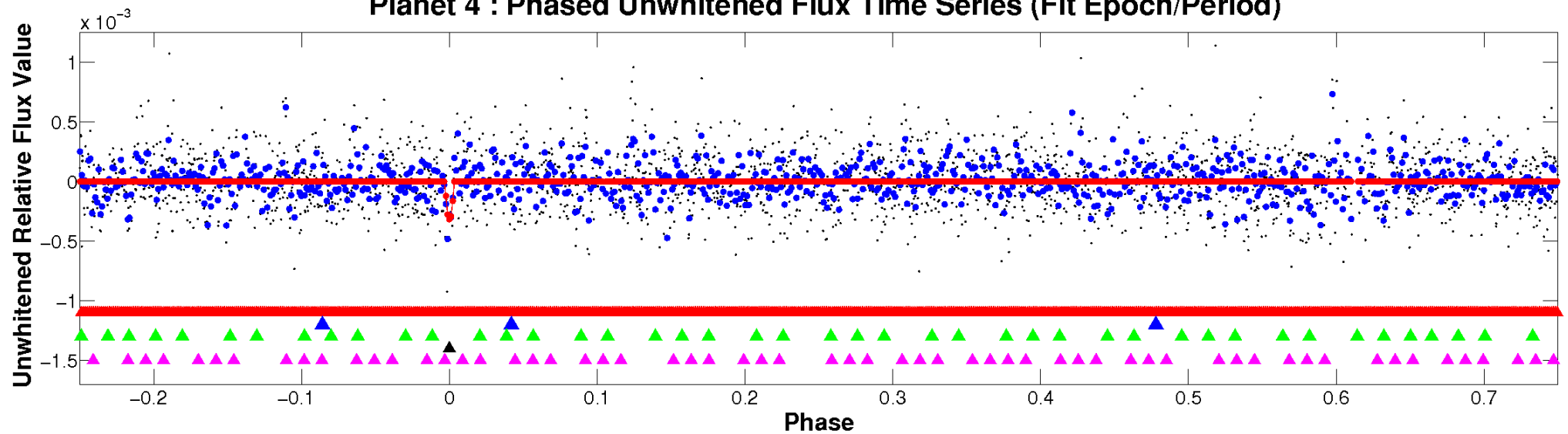
ALT Odd/Even

TCE 004255732-04

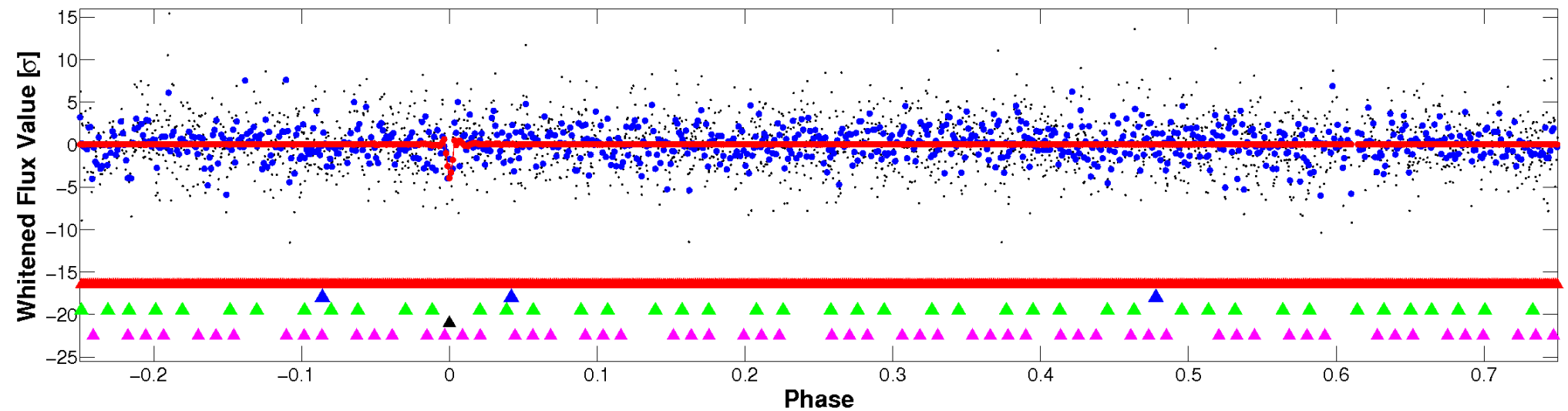


Non-Whitened Vs. Whitened Light Curve

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

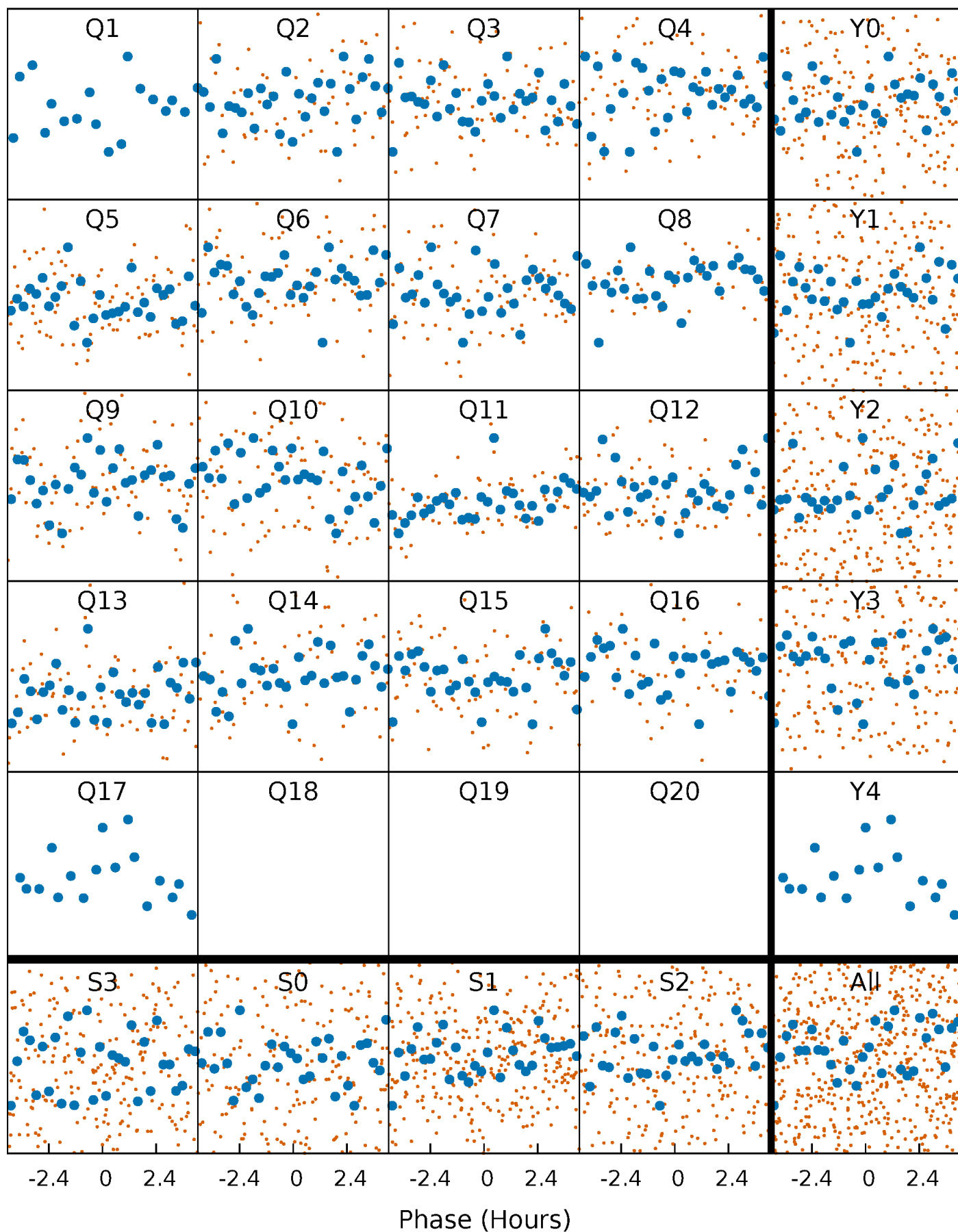


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



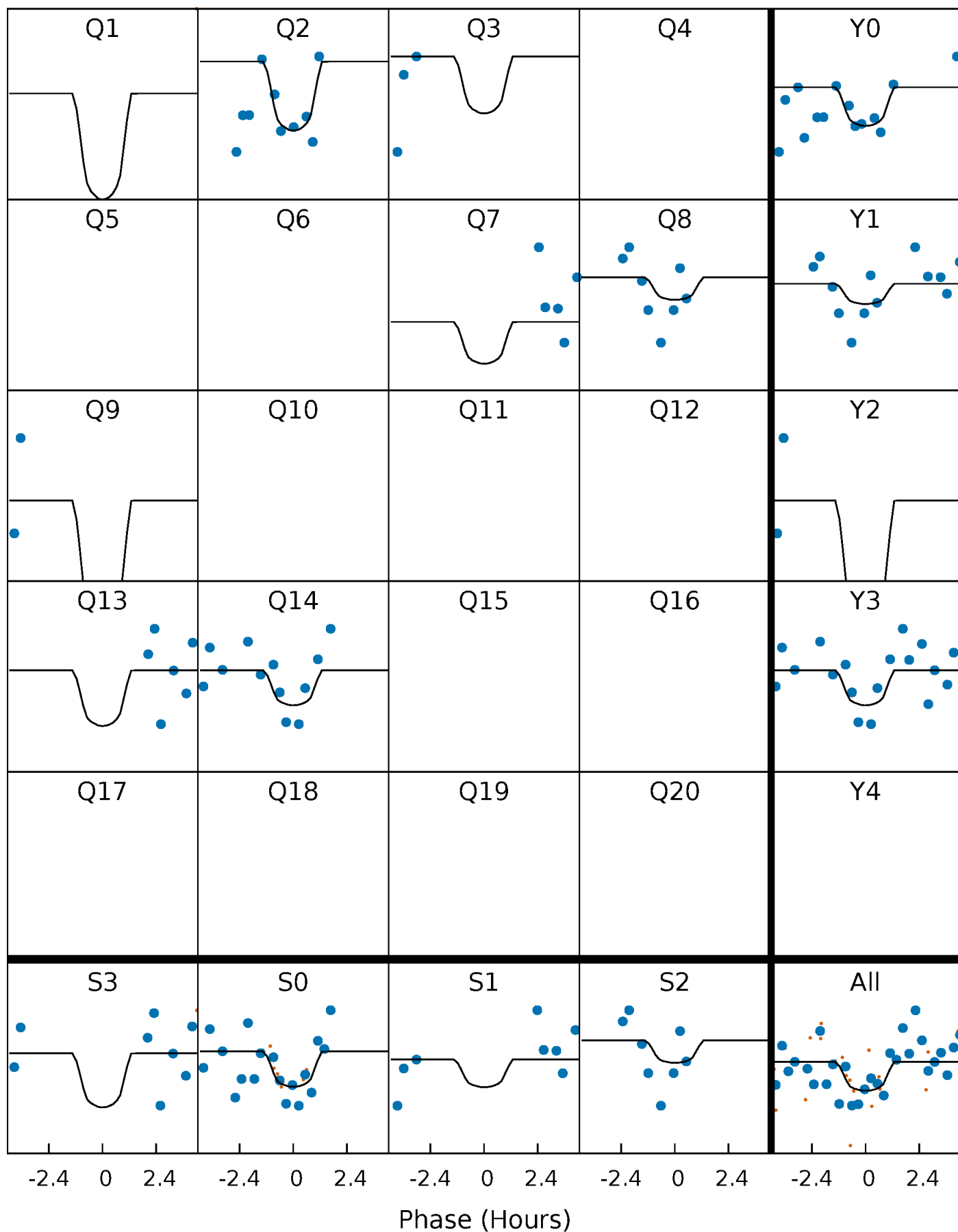
PDC Quarter-Phased Transit Curves

TCE 004255732-04 P= 17.750217 Days $T_0=147.562341$ (BKJD)



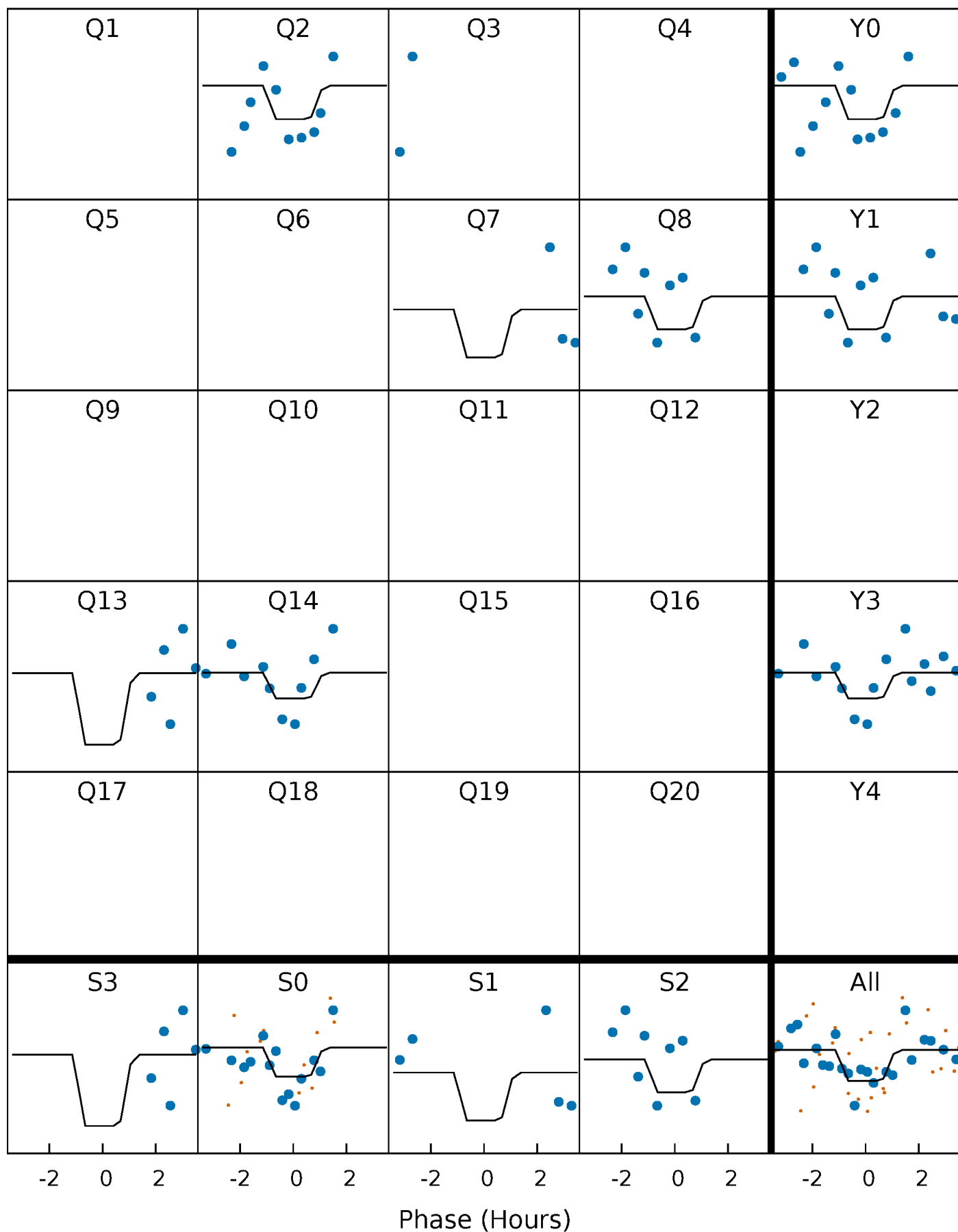
DV Quarter-Phased Transit Curves

TCE 004255732-04 P= 17.750217 Days $T_0=147.562341$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

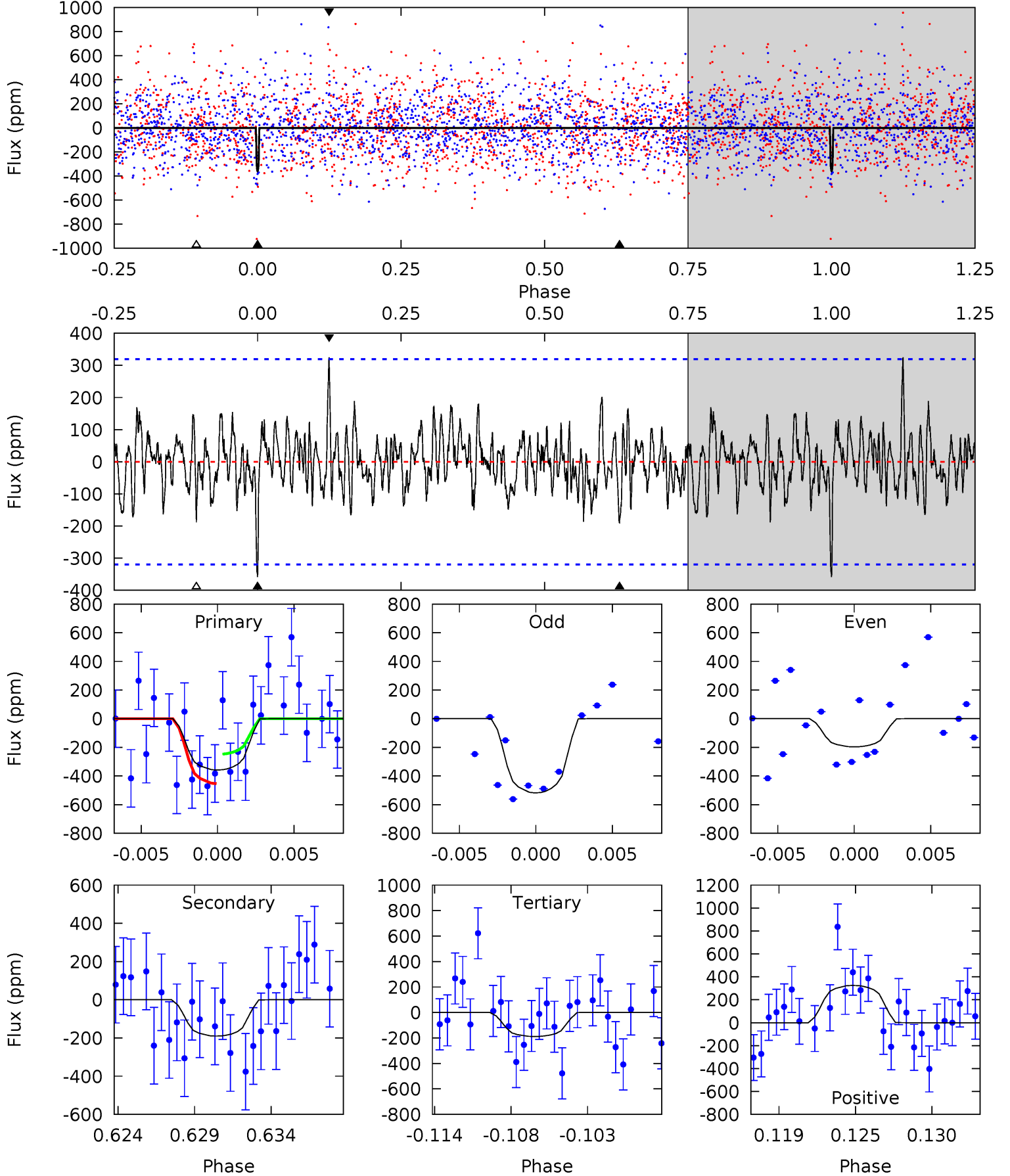
TCE 004255732-04 P= 17.750528 Days $T_0=147.550551$ (BKJD)



DV Model-Shift Uniqueness Test

004255732-04, P = 17.750217 Days, E = 129.812124 Days

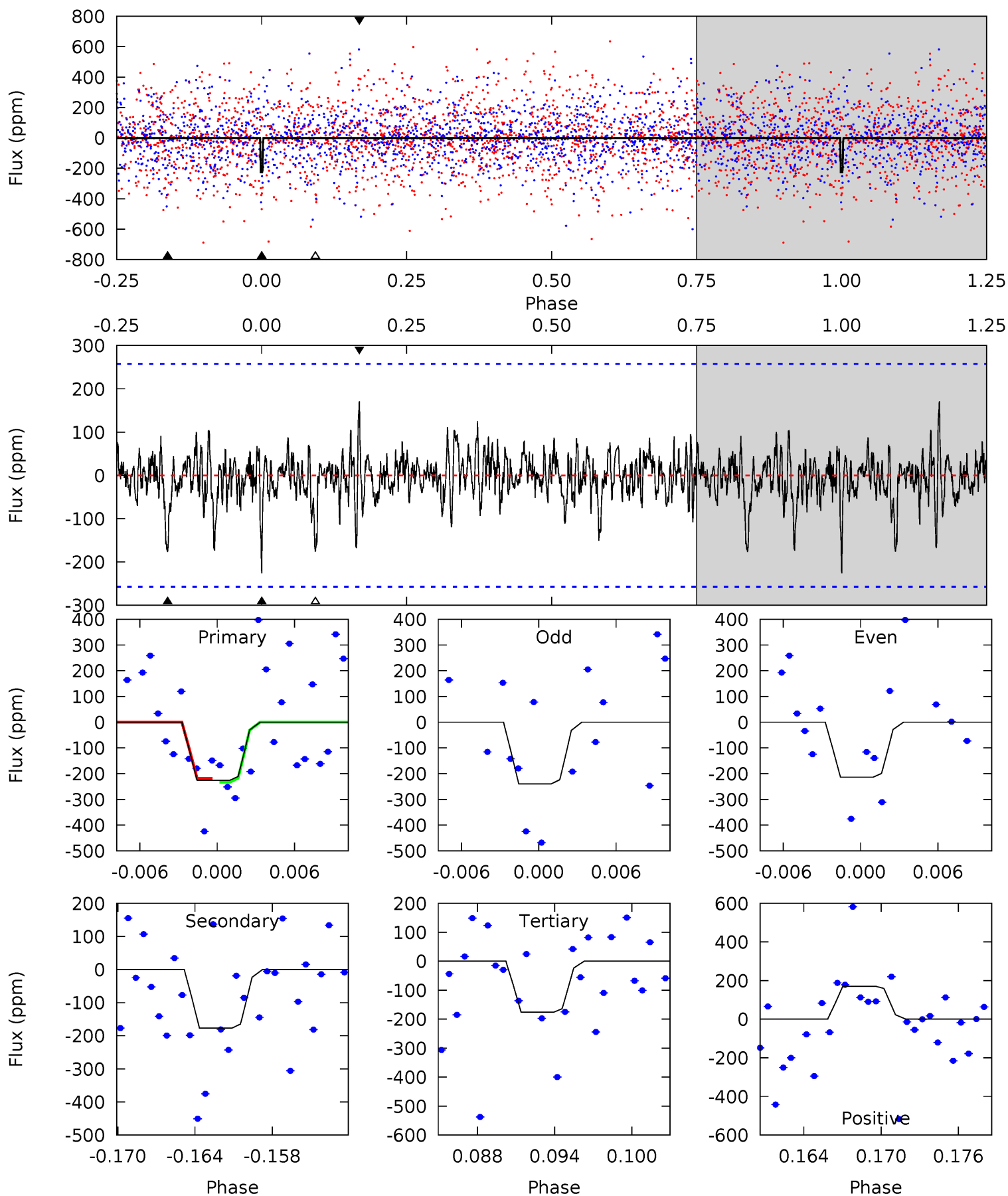
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.77	3.06	3.03	5.23	5.14	2.78	1.17	2.73	0.54	0.03	-2.17	2.60	1.00	0.48	1.66



Alt Model-Shift Uniqueness Test

004255732-04, P = 17.750528 Days, E = 129.800023 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	3.52	3.51	3.41	5.13	2.76	0.88	1.00	1.10	0.02	0.12	0.26	1.80	0.43	0.15



Stellar Parameters For KIC 004255732

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5376^{+75}_{-75}	$4.462^{+0.067}_{-0.090}$	$0.280^{+0.150}_{-0.150}$	$0.940^{+0.110}_{-0.064}$	$0.934^{+0.044}_{-0.044}$	$1.582^{+0.375}_{-0.433}$
	+1%/-1%	+2%/-2%	+54%/-54%	+12%/-7%	+5%/-5%	+24%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004255732-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-190 ± 62	$6.76^{+6.95}_{-4.51}$	893^{+30}_{-23}	3065^{+1300}_{-535}	38^{+280}_{-29}
Alt.	-177 ± 50	$6.76^{+6.38}_{-4.87}$	894^{+29}_{-25}	3041^{+1673}_{-522}	36^{+430}_{-27}

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

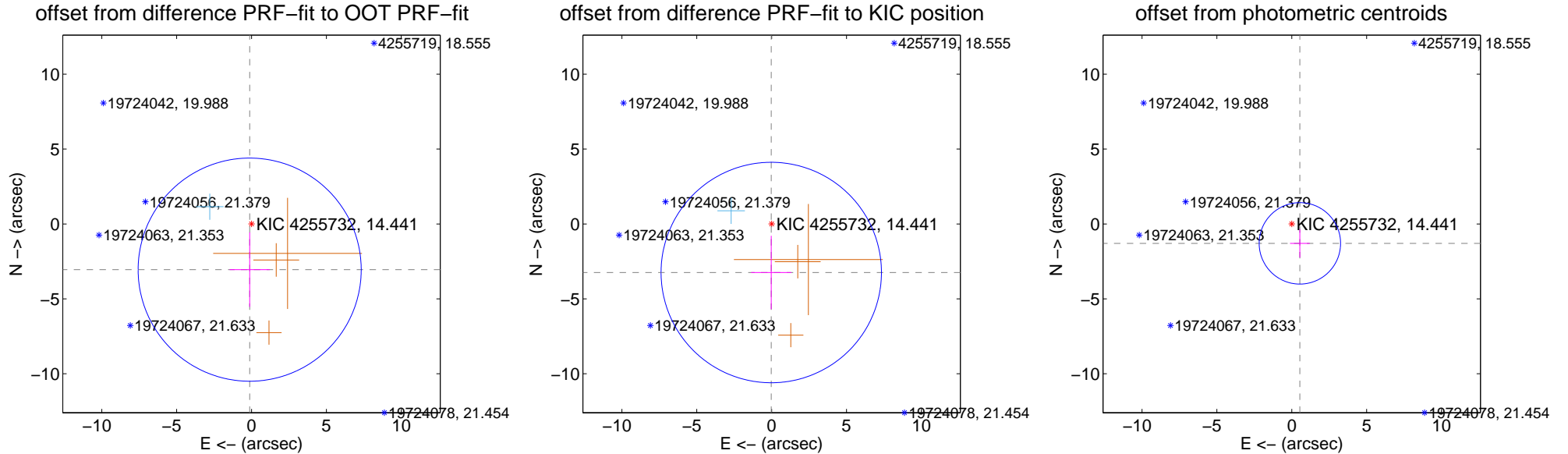
DV Centroid Data

Supplemental centroid analysis for 004255732-04. Kepler magnitude: 14.44. Transit SNR 11.16

There are 1 quarters with good PRF difference image offsets

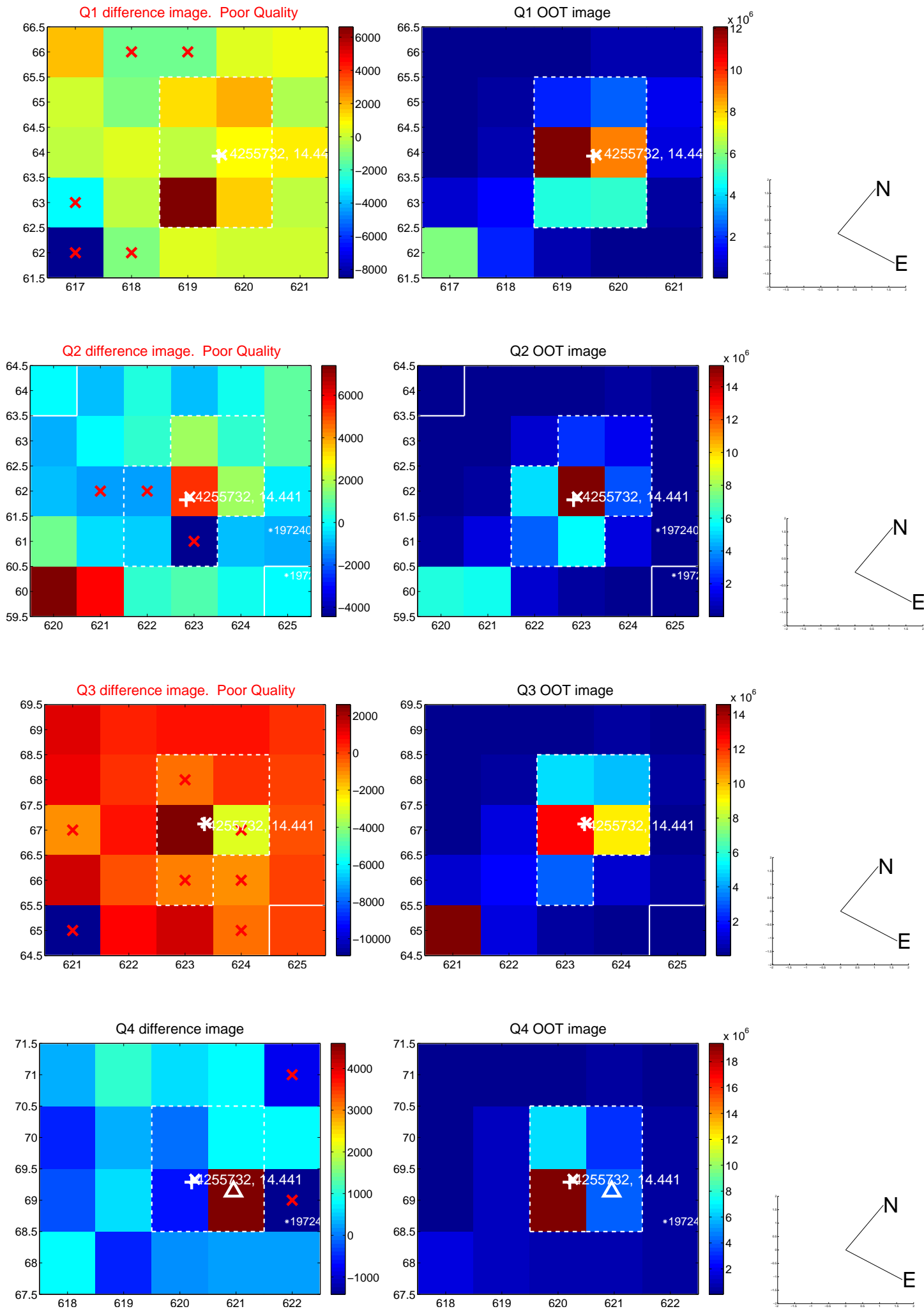
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.053 ± 2.483	1.23	0.124 ± 1.339	-3.051 ± 2.484
PRF-fit source offset from KIC position	3.242 ± 2.453	1.32	0.026 ± 1.344	-3.242 ± 2.453
photometric centroid source offset	1.40 ± 0.91	1.55	-0.54 ± 0.66	-1.29 ± 0.94

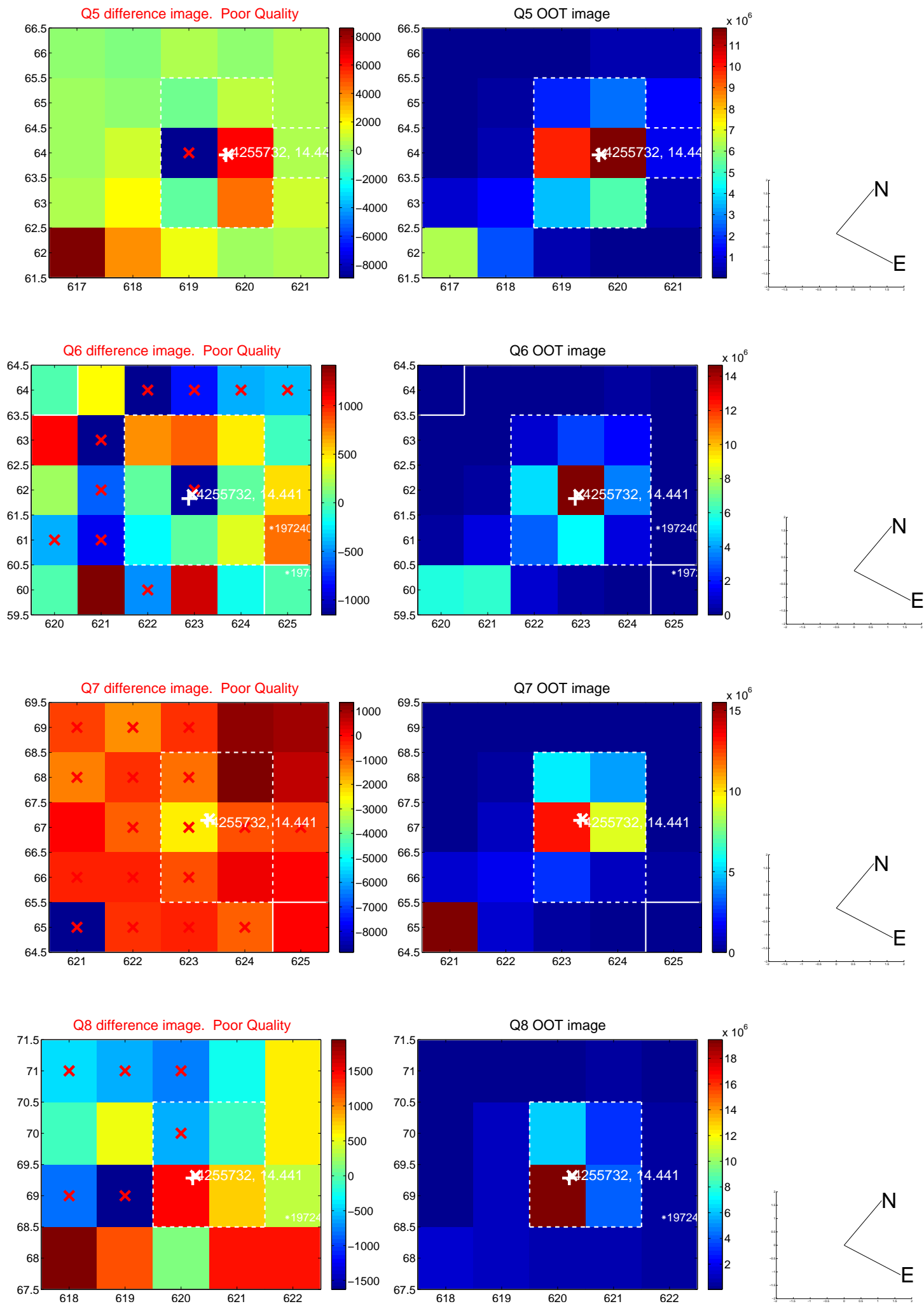


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

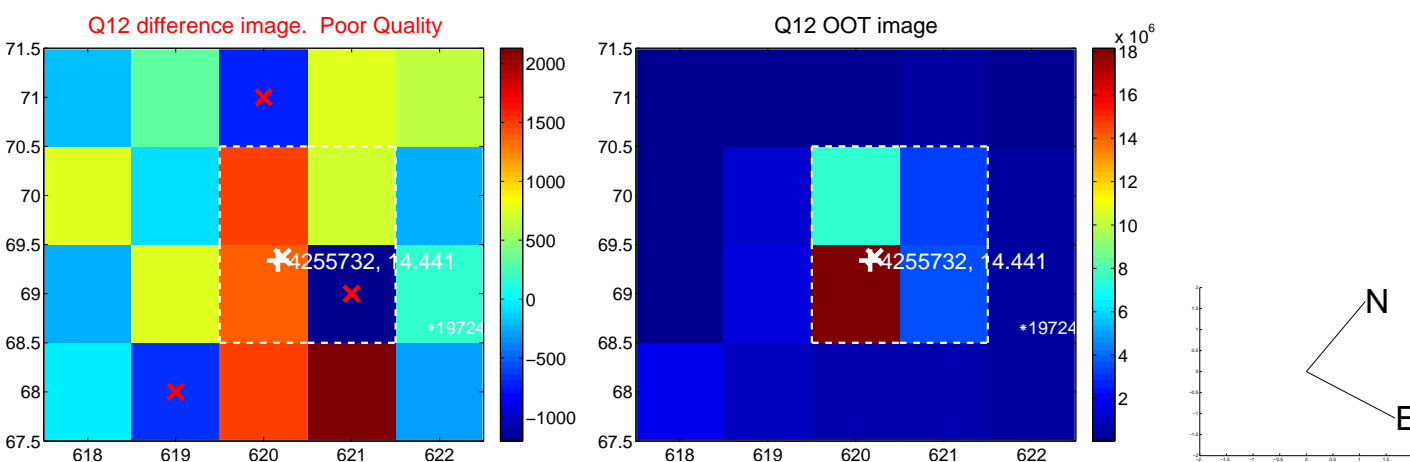
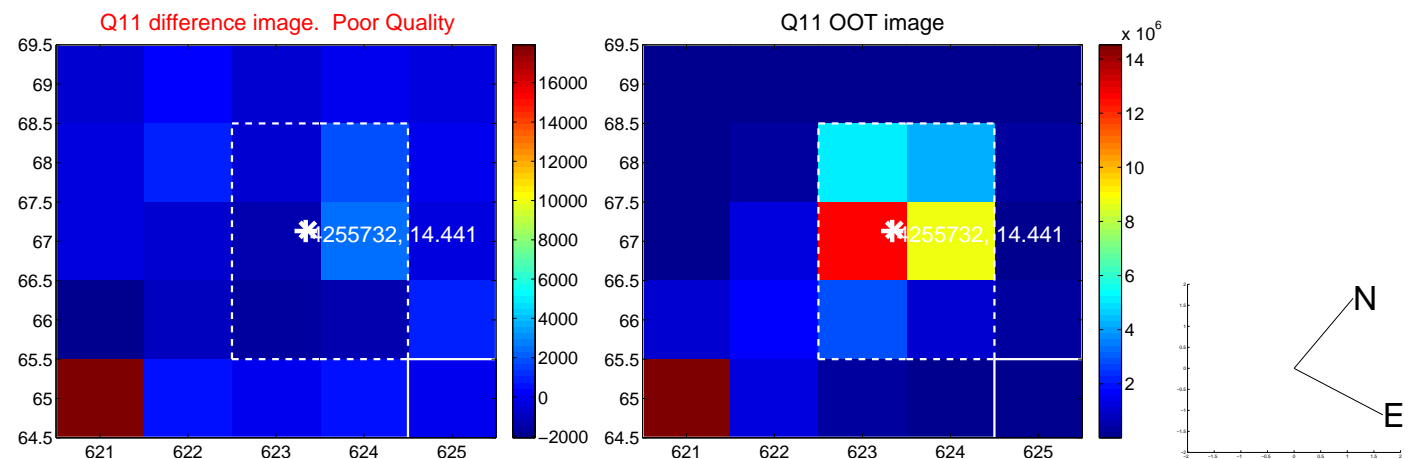
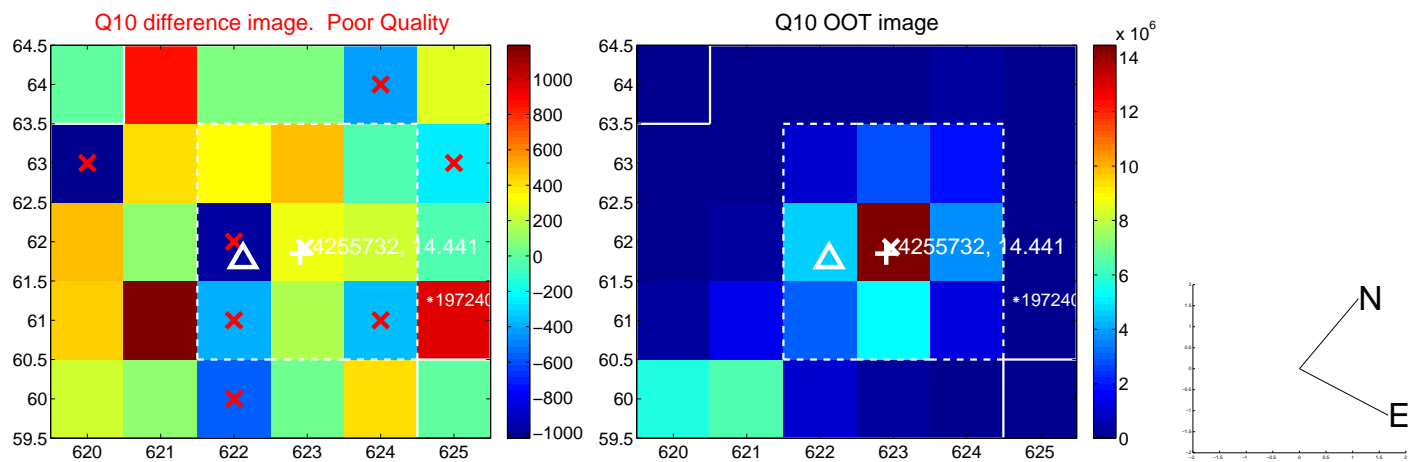
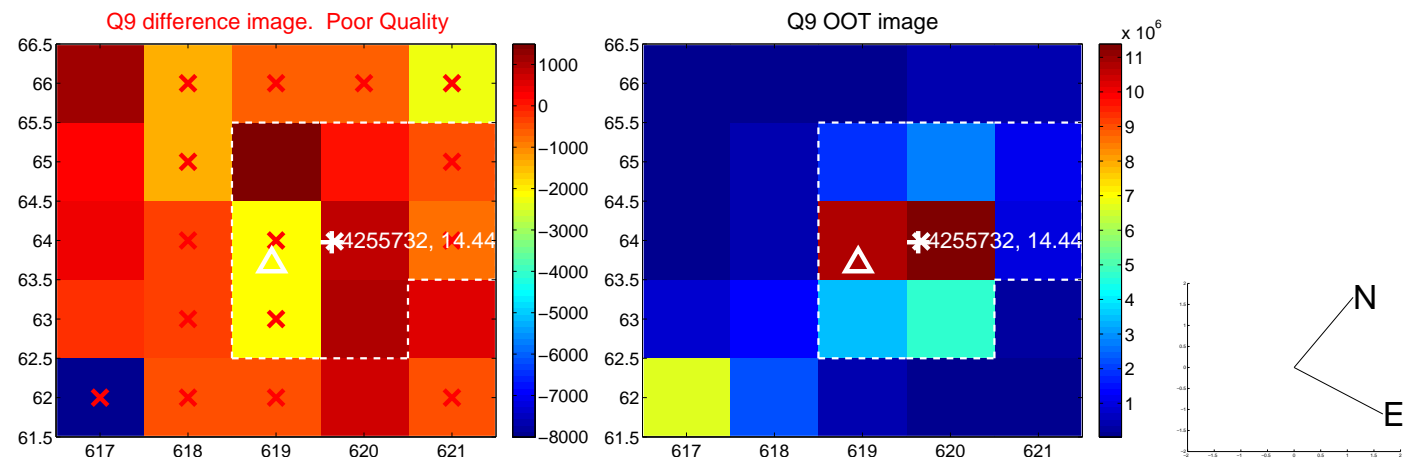
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



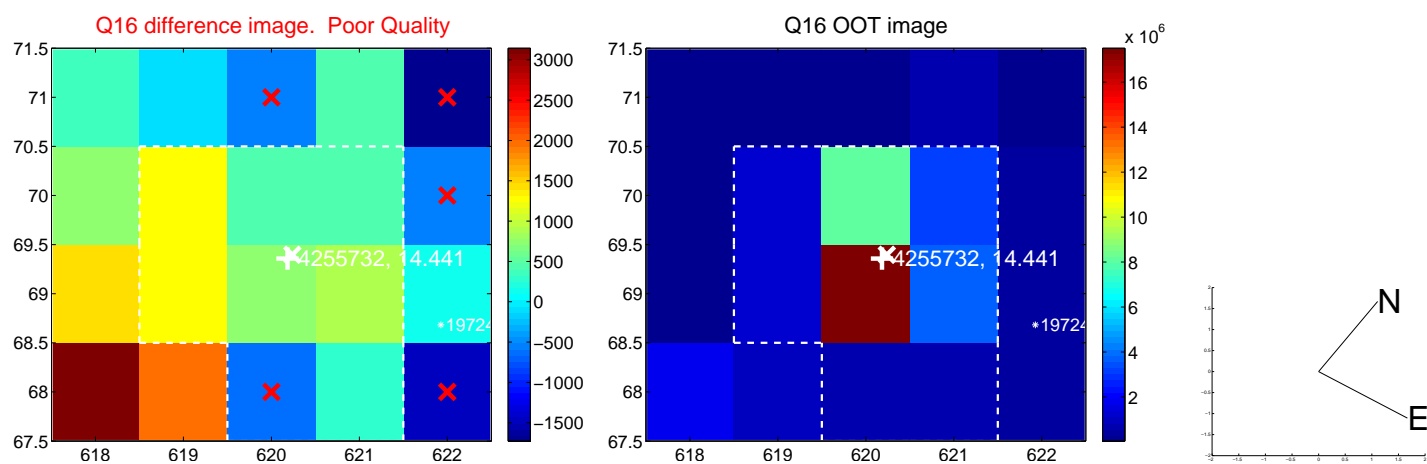
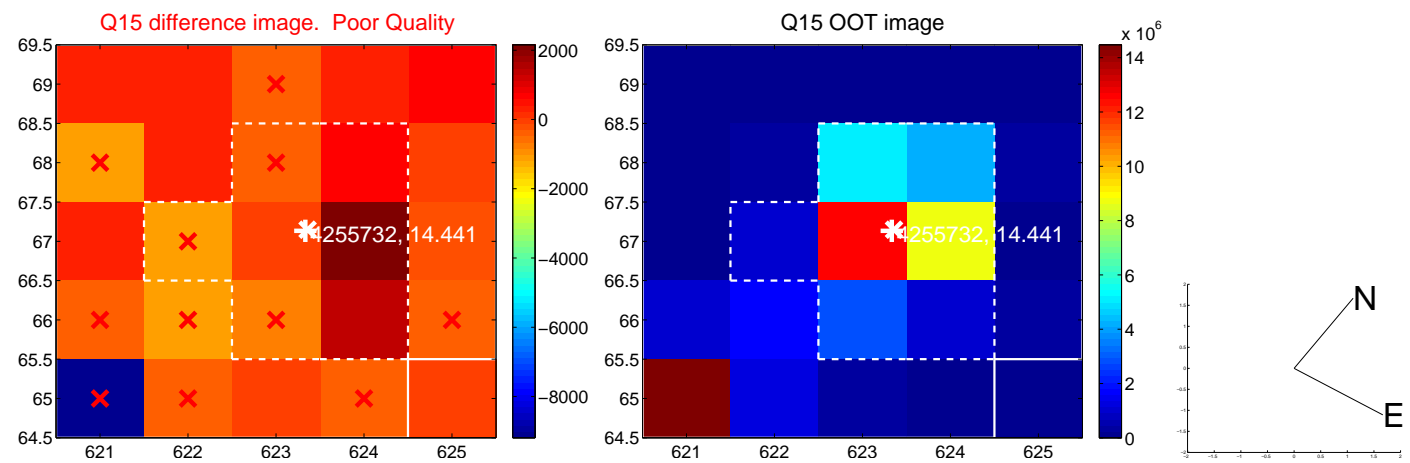
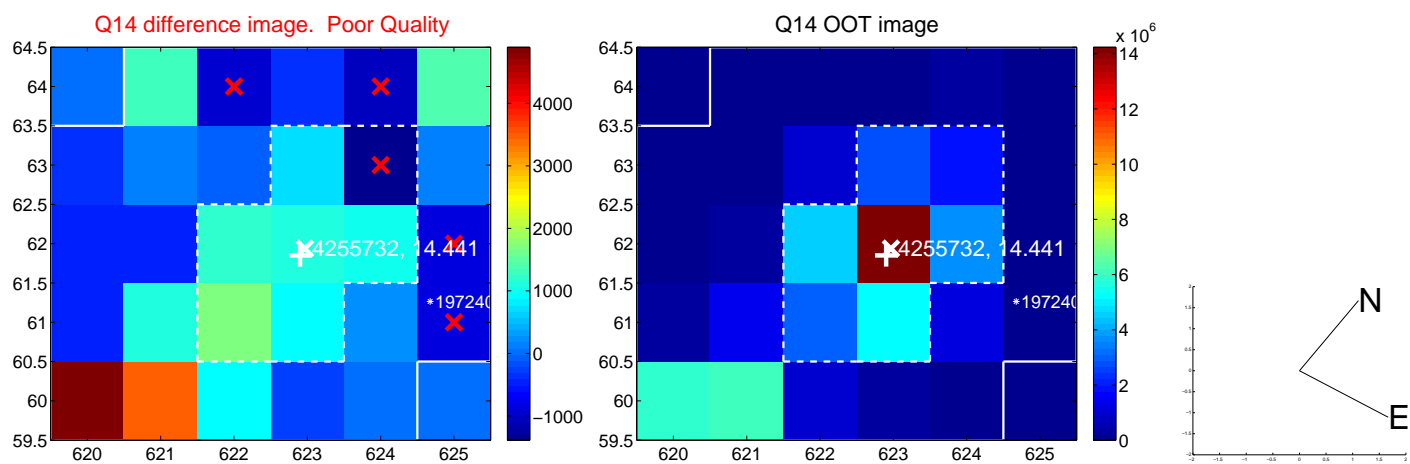
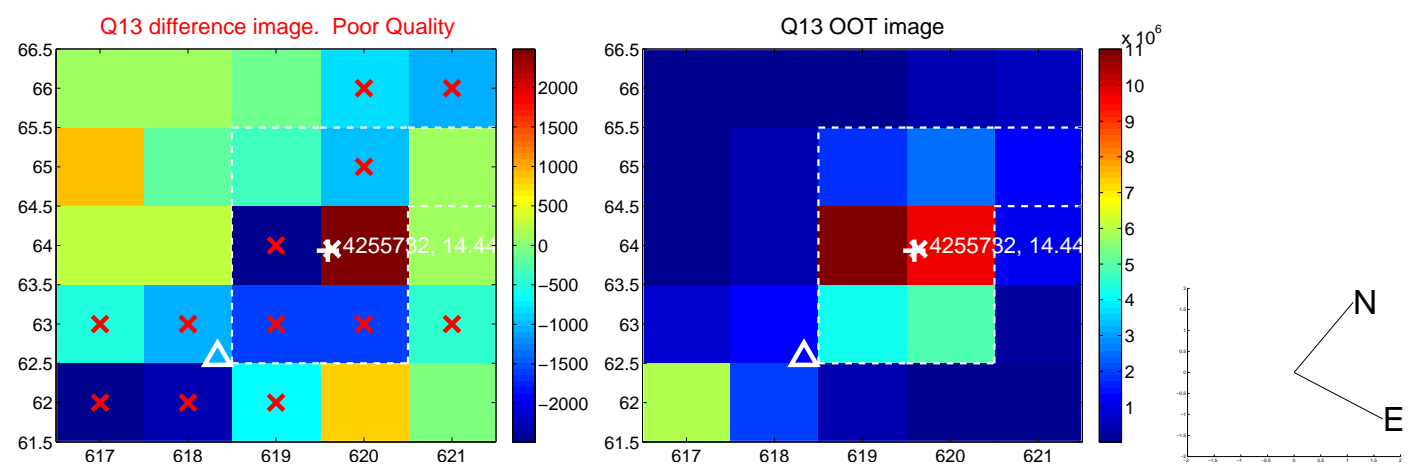
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



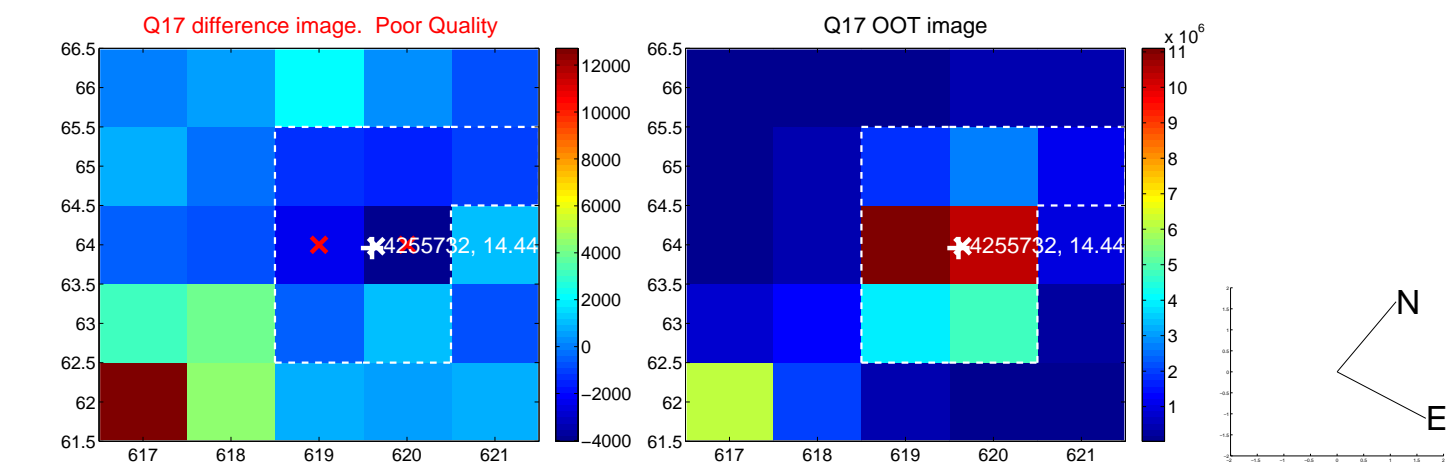
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



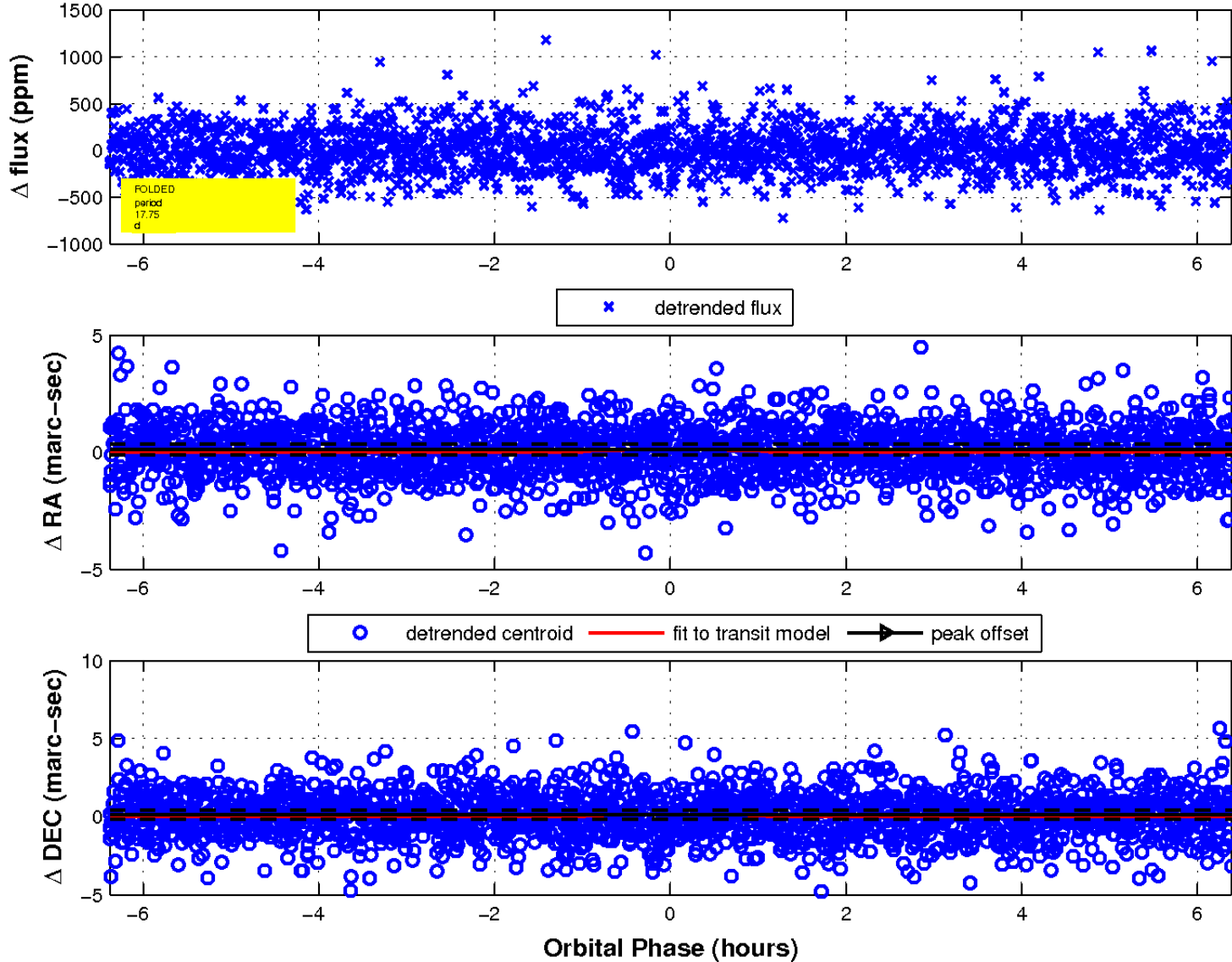
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

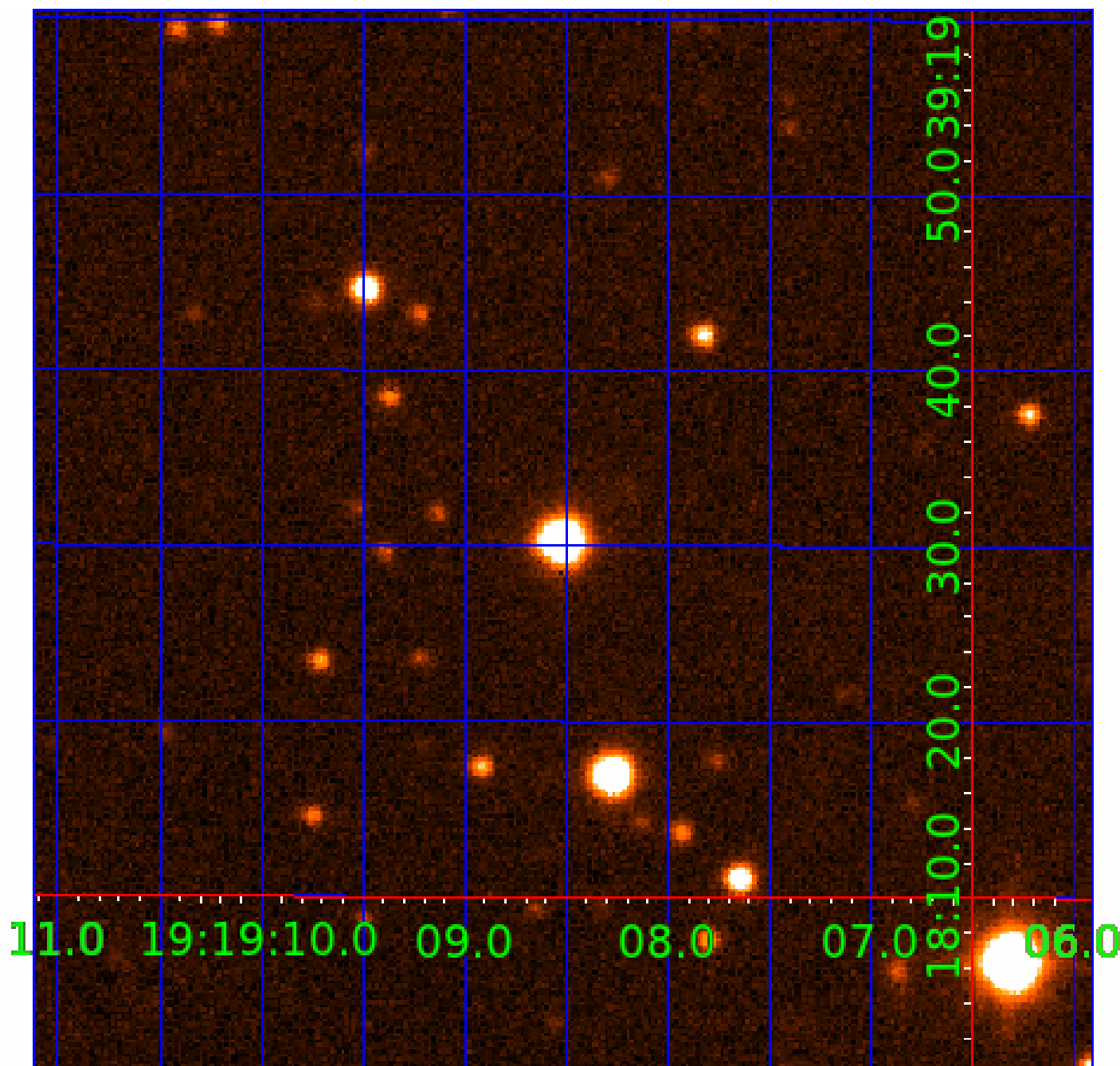


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 004255732

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})
004255732-01	OBS	No	1.475151	132.262139	22.3	11.174	7.6	9.9	0.94	5376	0.43	1075.72
004255732-03	OBS	No	33.393355	143.462292	320.8	3.191	13.5	12.7	0.94	5376	1.83	16.80
004255732-04	OBS	No	17.750217	147.562341	318.4	2.130	10.3	11.2	0.94	5376	1.72	39.01
004255732-05	OBS	No	24.301017	147.293386	437.1	1.061	12.0	12.9	0.94	5376	1.96	25.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004255732-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
004255732-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004255732-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

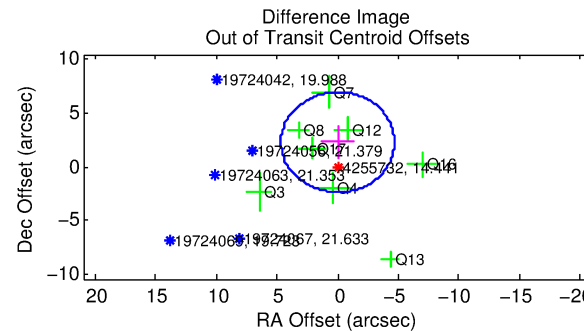
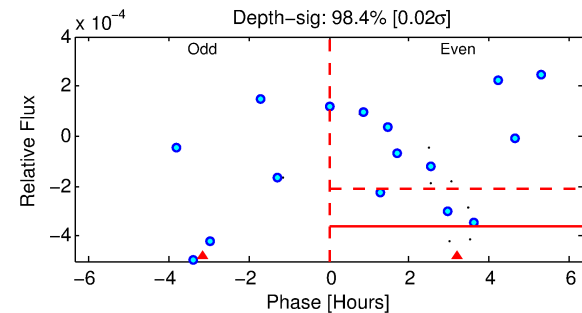
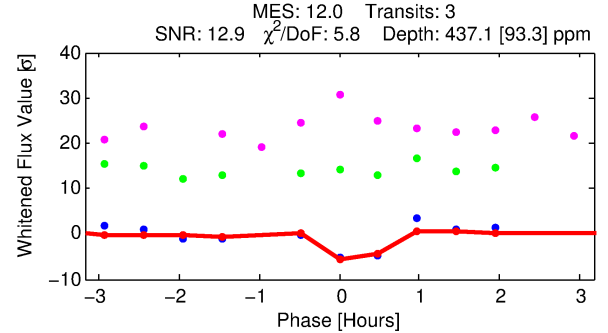
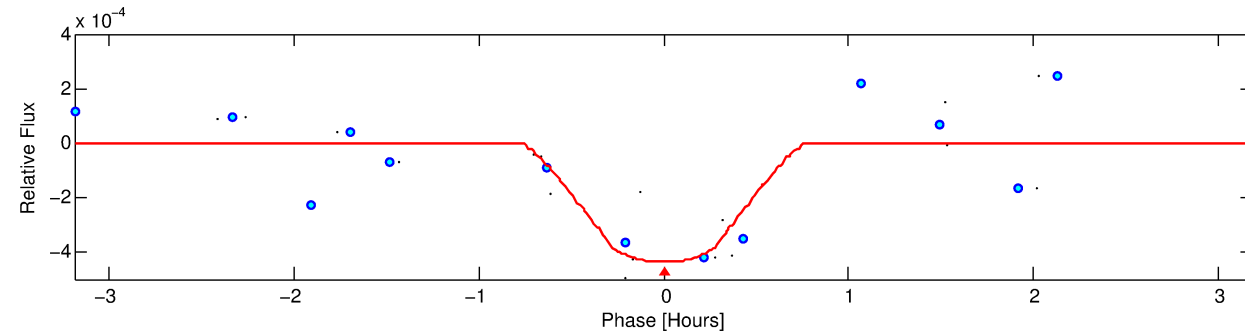
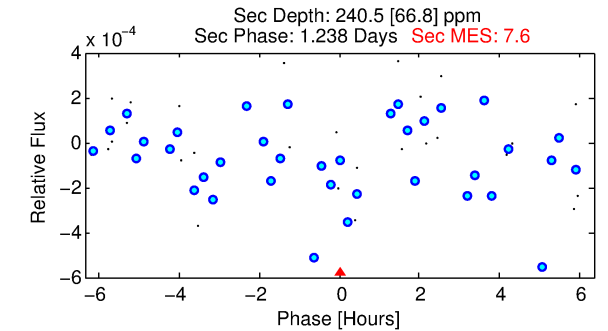
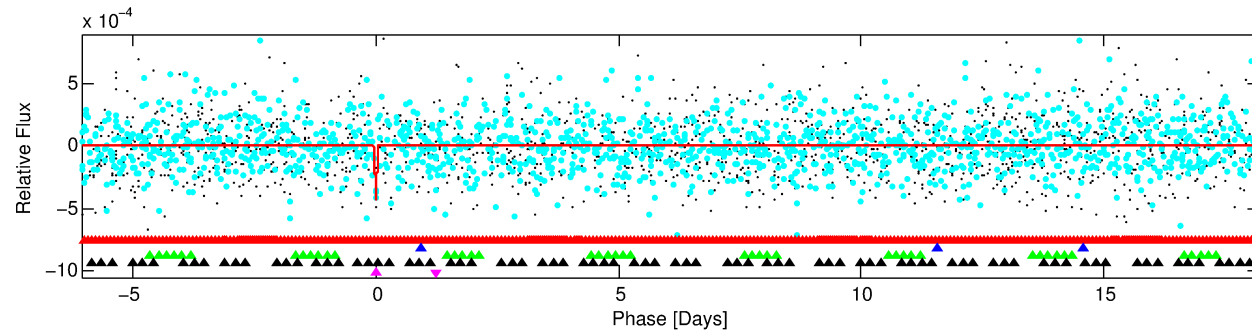
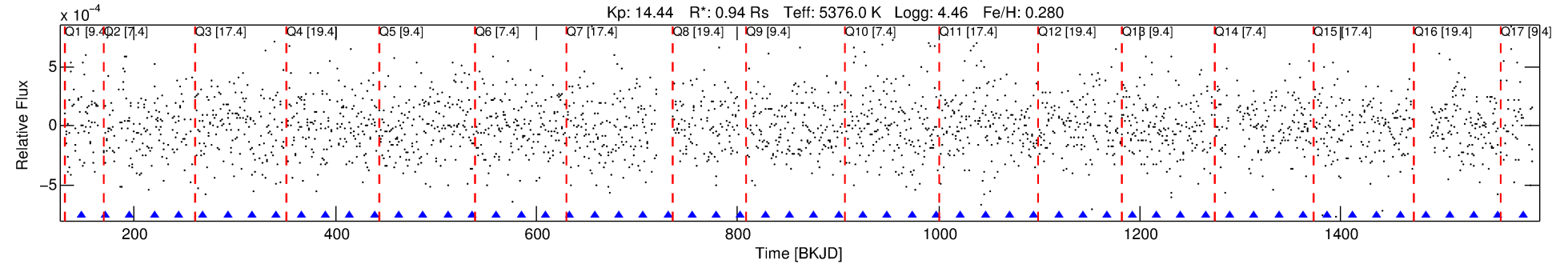
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004255732-05

No Significant Match Found

DV One-Page Summary

KIC: 4255732 Candidate: 5 of 5 Period: 24.301 d



DV Fit Results:

Period = 24.30102 [0.00028] d
Epoch = 147.2934 [0.0080] BKJD
Rp/R* = 0.0191 [0.1651]
a/R* = 170.41 [5327.93]
b = 0.30 [97.53]
Seff = 25.66 [4.32]
Teq = 574 [24] K
Rp = 1.96 [16.94] Re
a = 0.1605 [0.0167] AU
Ag = 887.91 [15352.20] [0.06 σ]
Teffp = 4844 [20937] K [0.20 σ]

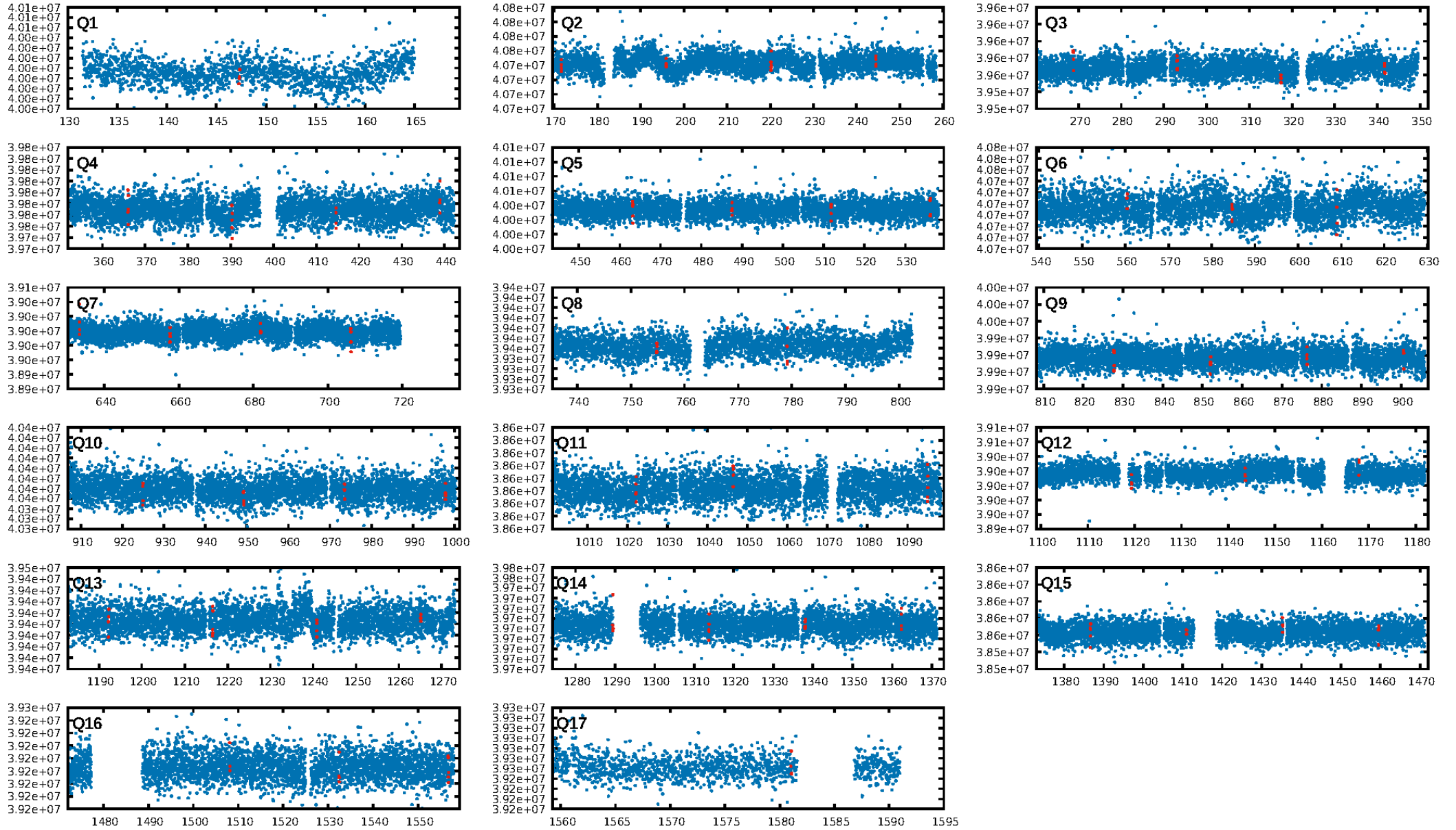
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [66.06 σ]
LongPeriod-sig: 100.0% [64.90 σ]
ModelChiSquare2-sig: 23.1%
ModelChiSquareGof-sig: 14.2%
Bootstrap-pfa: 1.85e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2012
Centroid-sig: 7.7%
Centroid-so: 1.856 arcsec [1.79 σ]
OotOffset-rm: 2.288 arcsec [1.47 σ]
OotOffset-st: 0.2/4/2 [8]
KicOffset-rm: 2.066 arcsec [1.41 σ]
KicOffset-st: 0.2/4/2 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.76 [13/17]

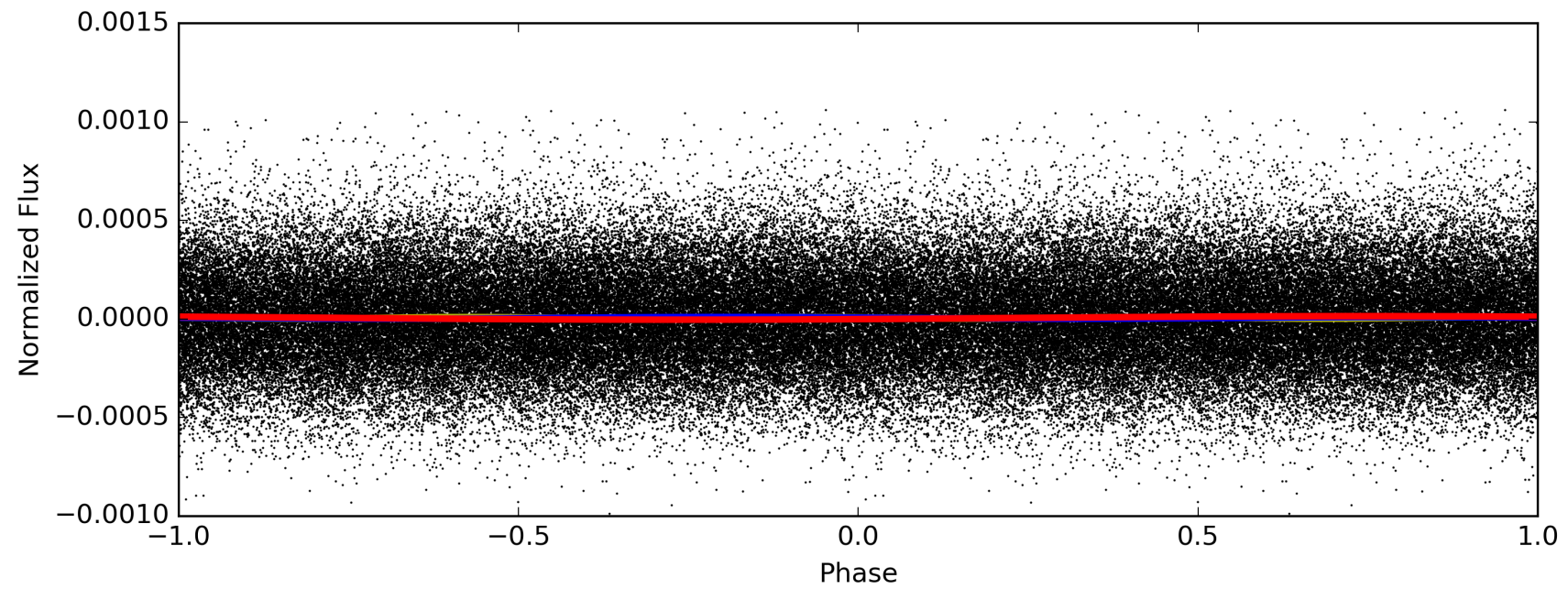
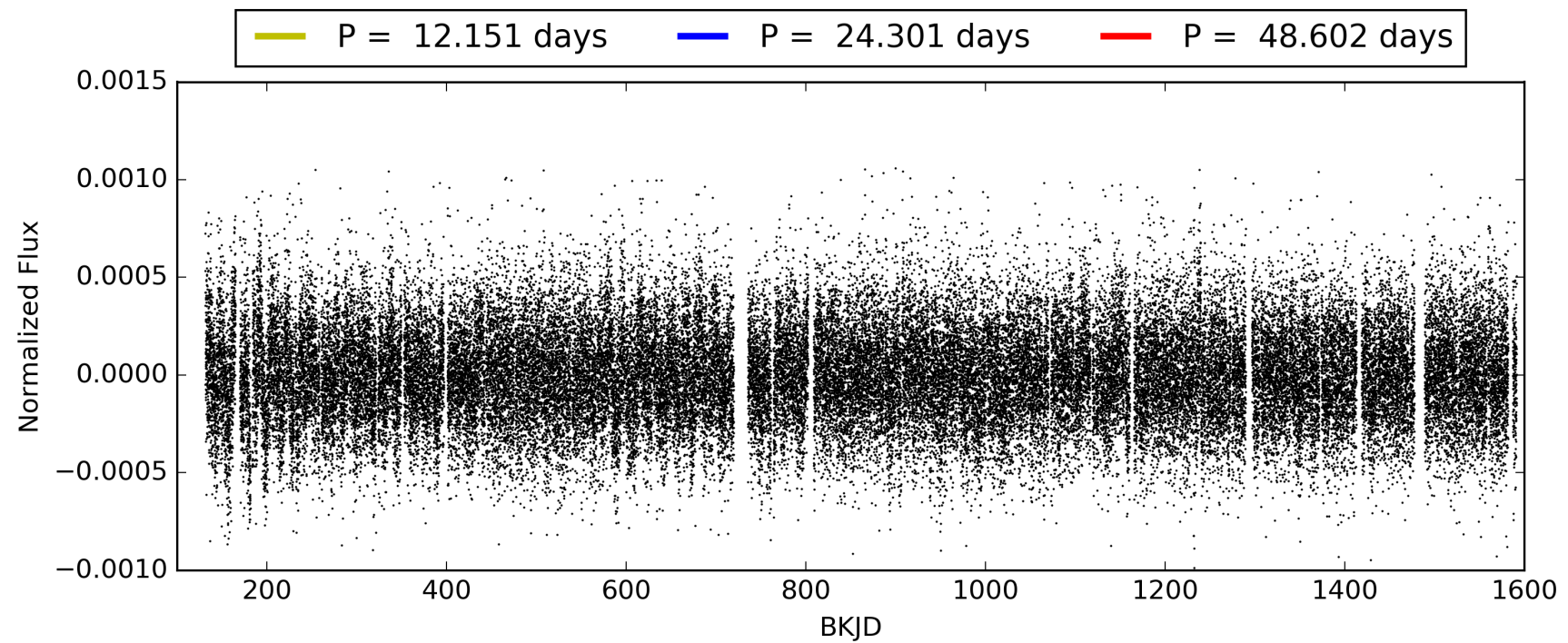
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:33:17 Z

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

TCE 004255732-05, PDC Light Curves

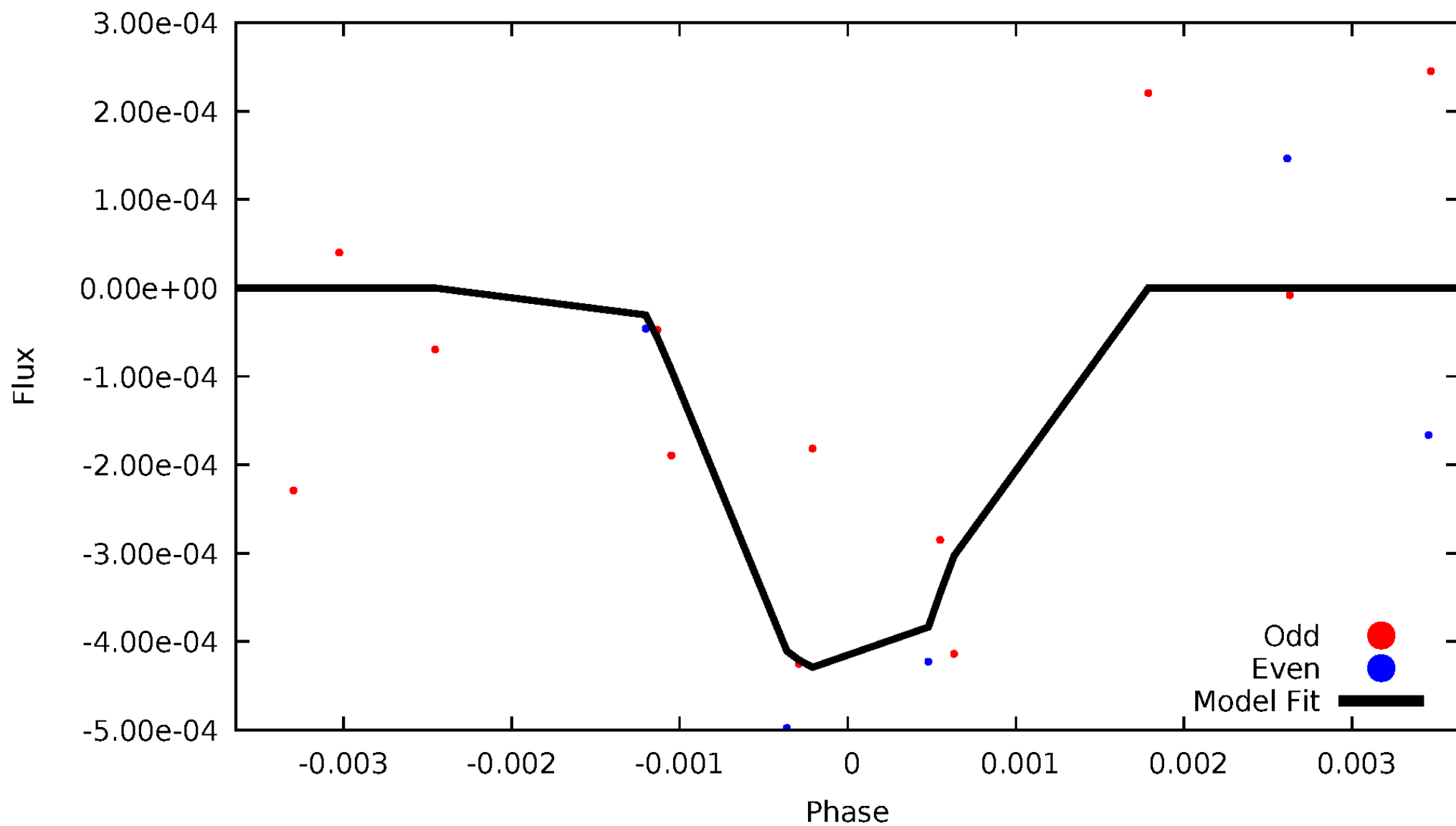


TCE 004255732-05



DV Odd/Even

TCE 004255732-05

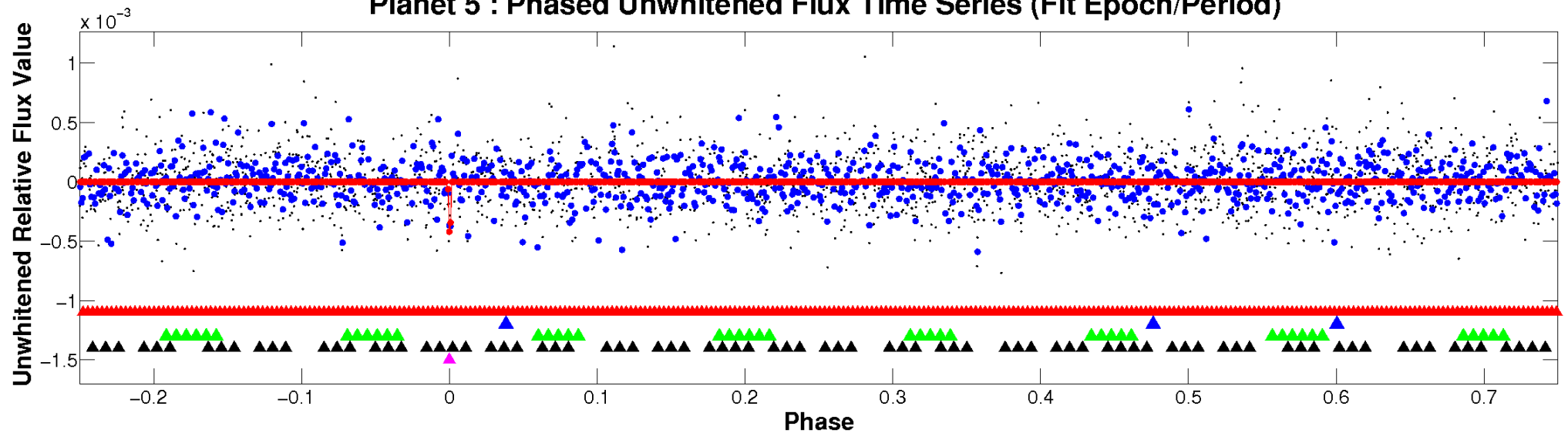


ALT Odd/Even

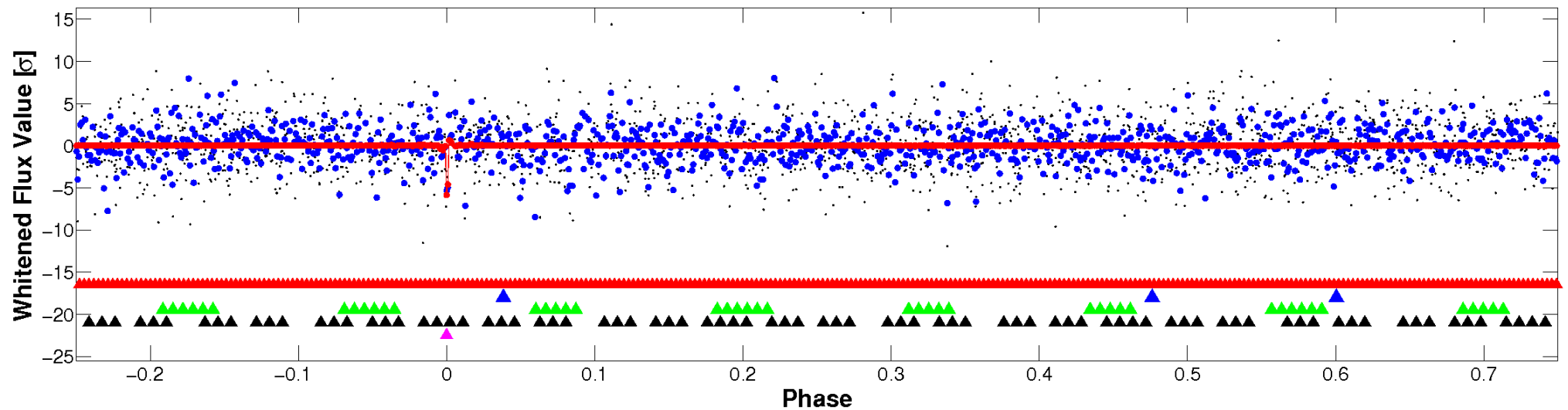
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

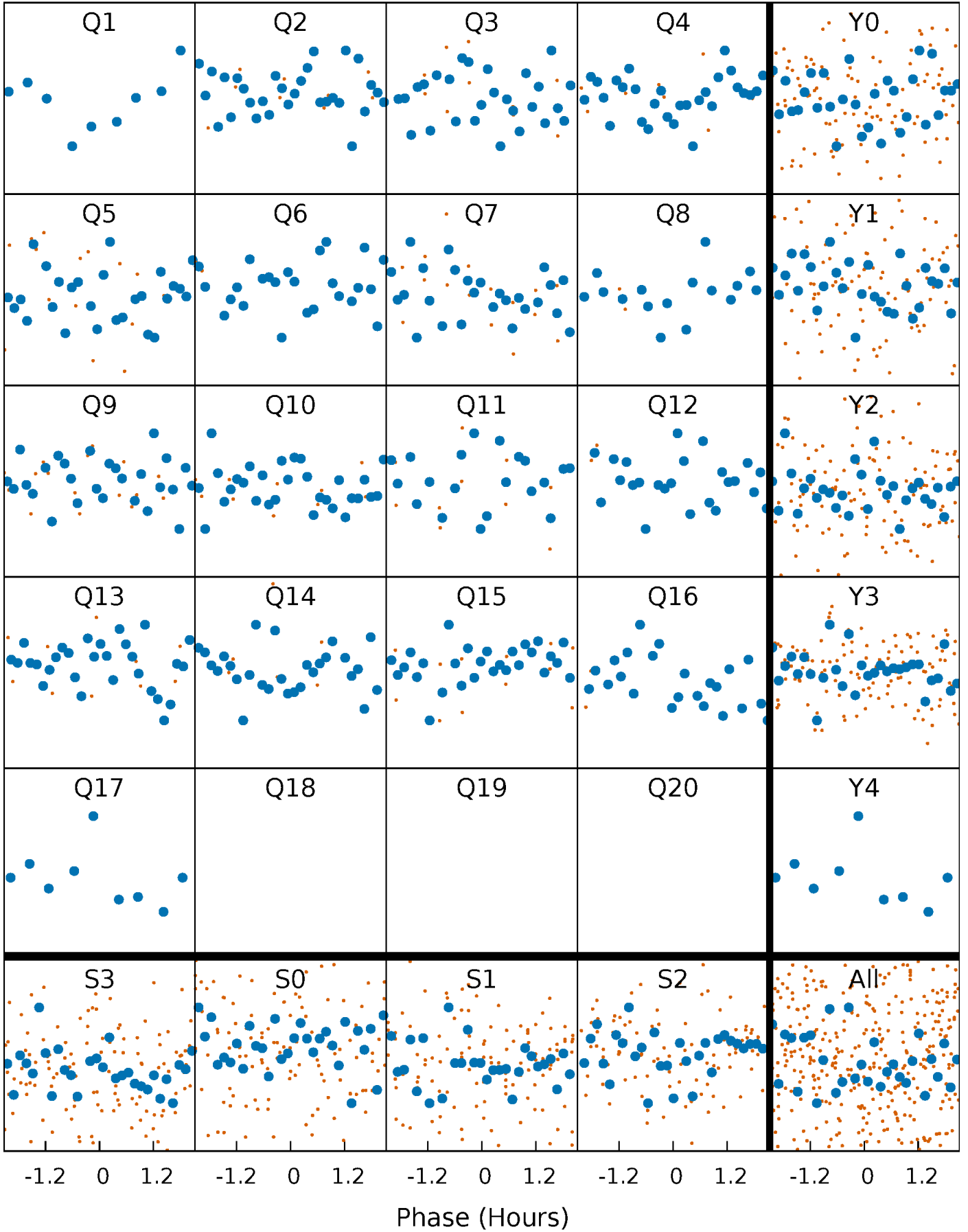


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



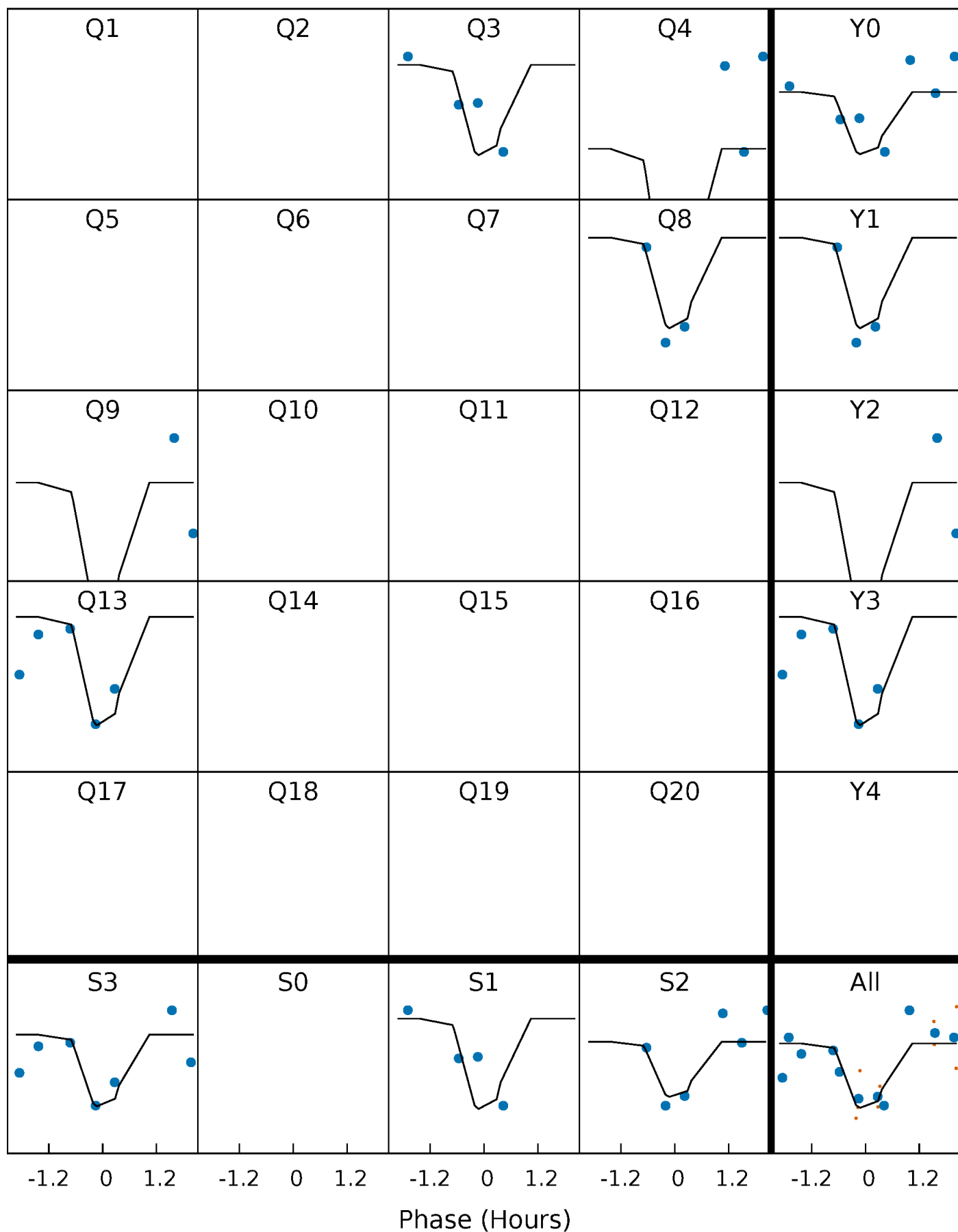
PDC Quarter-Phased Transit Curves

TCE 004255732-05 P= 24.301017 Days $T_0=147.293385$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004255732-05 P= 24.301017 Days $T_0=147.293385$ (BKJD)

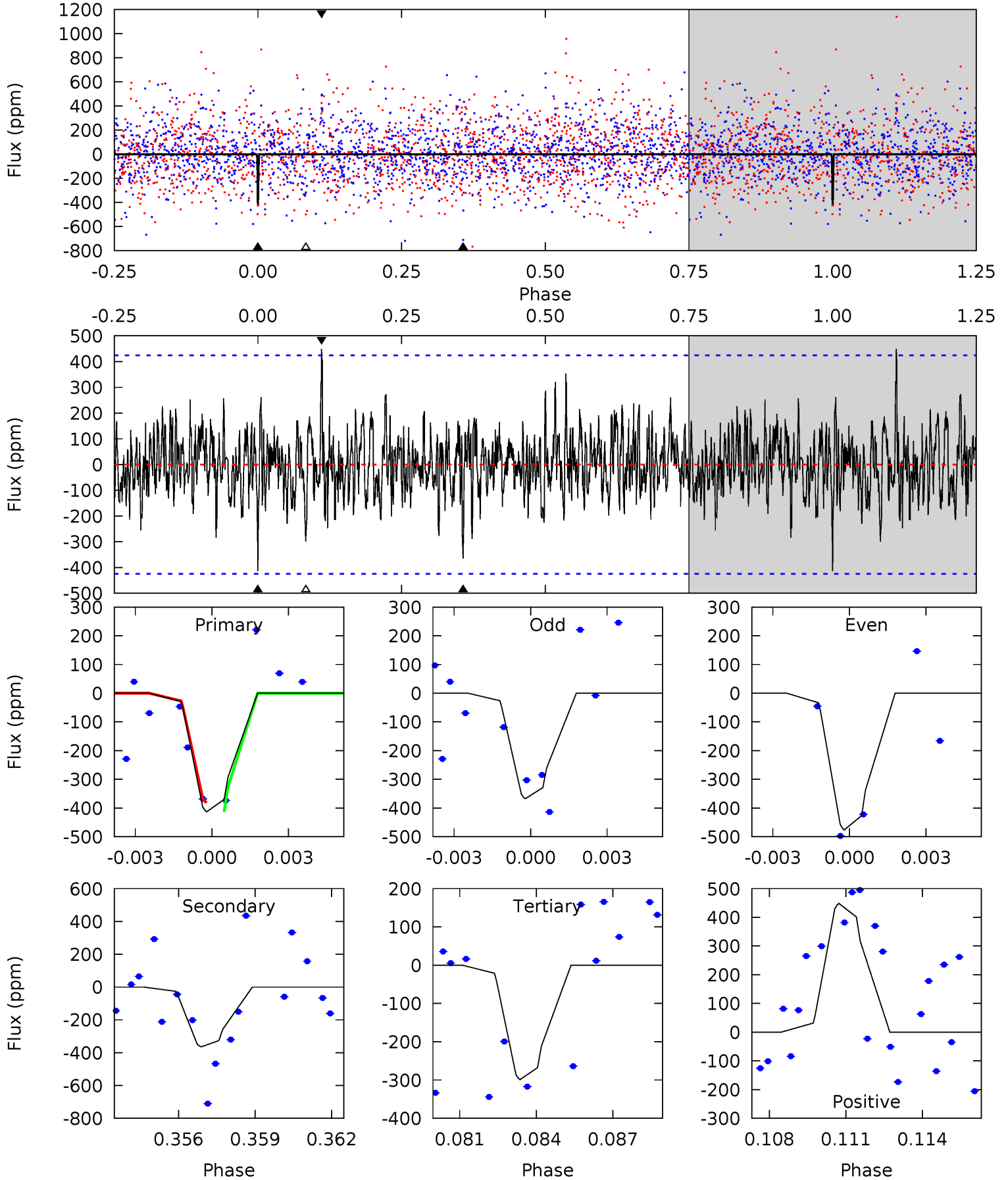


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004255732-05, P = 24.301017 Days, E = 122.992368 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.12	4.51	3.70	5.55	5.25	2.97	1.25	1.42	-0.43	0.81	-1.04	0.59	1.02	0.52	0.19



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004255732

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5376^{+75}_{-75}	$4.462^{+0.067}_{-0.090}$	$0.280^{+0.150}_{-0.150}$	$0.940^{+0.110}_{-0.064}$	$0.934^{+0.044}_{-0.044}$	$1.582^{+0.375}_{-0.433}$
	+1%/-1%	+2%/-2%	+54%/-54%	+12%/-7%	+5%/-5%	+24%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004255732-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-365 ± 81	$12.13^{+12.73}_{-8.71}$	803^{+27}_{-22}	2871^{+1416}_{-504}	35^{+421}_{-27}
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

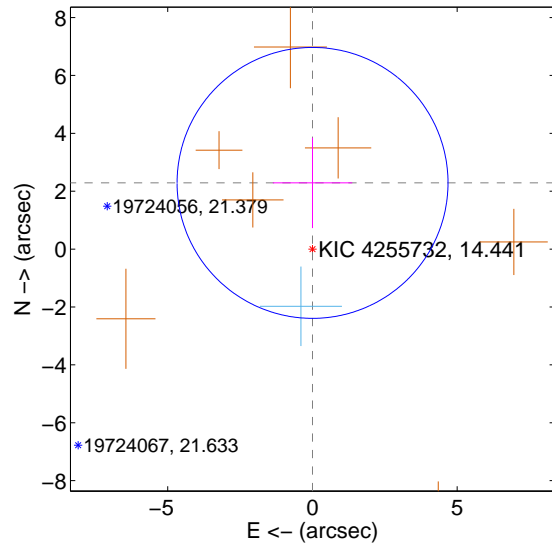
Supplemental centroid analysis for 004255732-05. Kepler magnitude: 14.44. Transit SNR 12.86

There are 1 quarters with good PRF difference image offsets

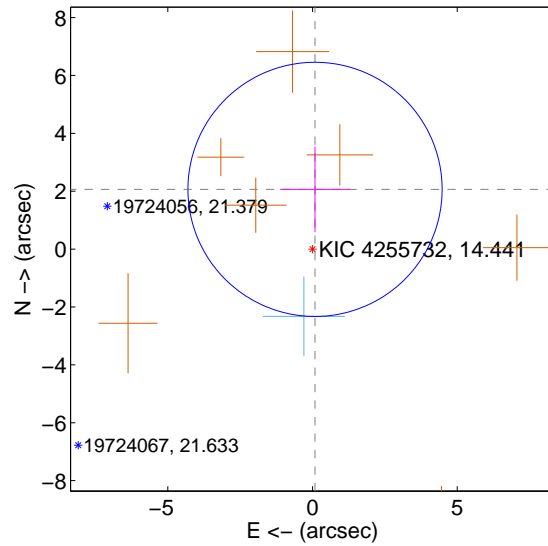
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.288 ± 1.560	1.47	-0.003 ± 1.371	2.288 ± 1.560
PRF-fit source offset from KIC position	2.066 ± 1.464	1.41	-0.086 ± 1.206	2.064 ± 1.478
photometric centroid source offset	1.86 ± 1.04	1.79	0.63 ± 0.78	-1.75 ± 1.06

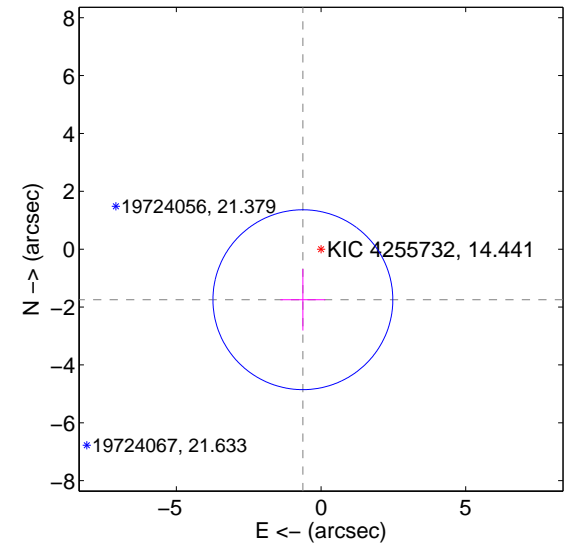
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

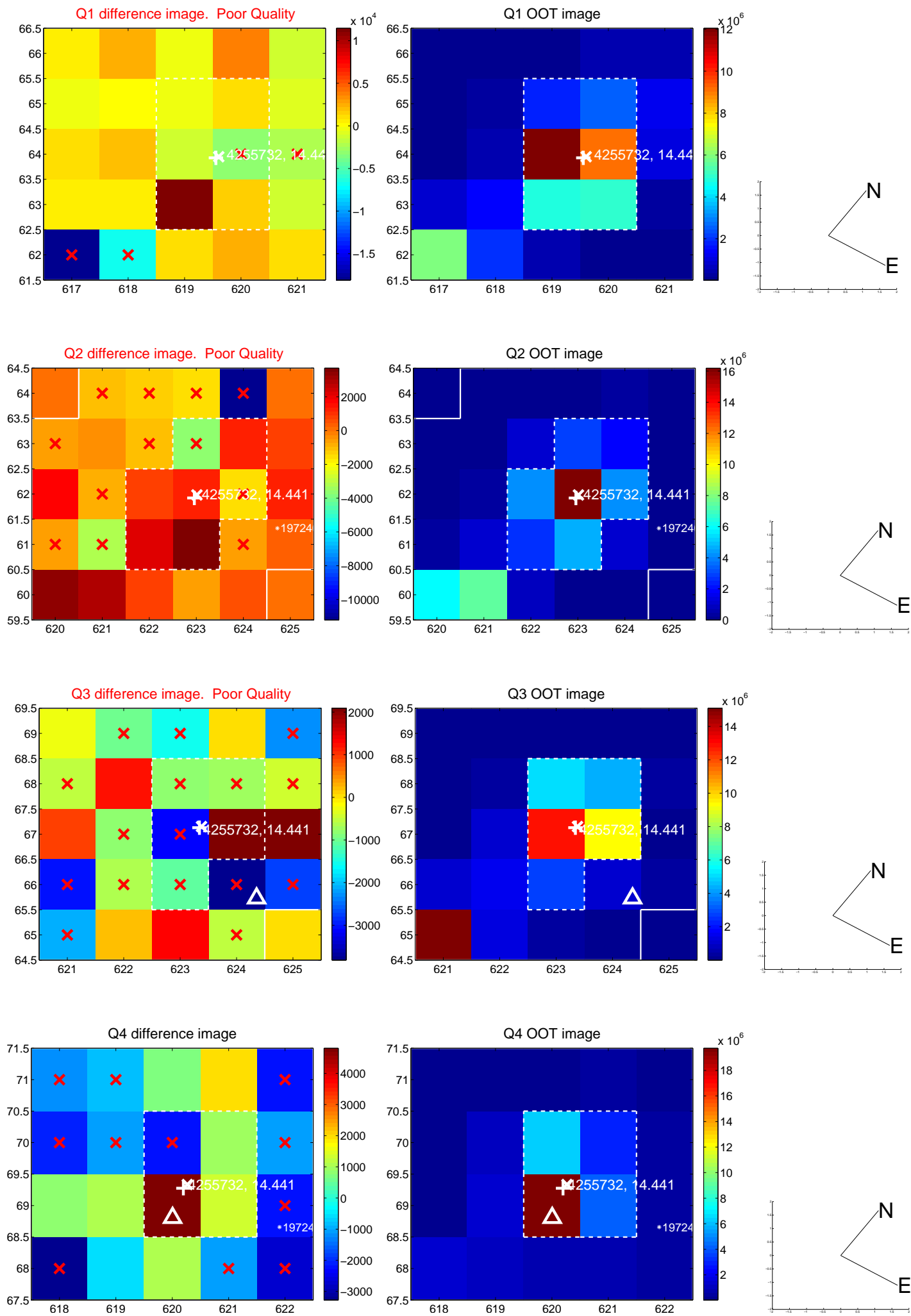


offset from photometric centroids

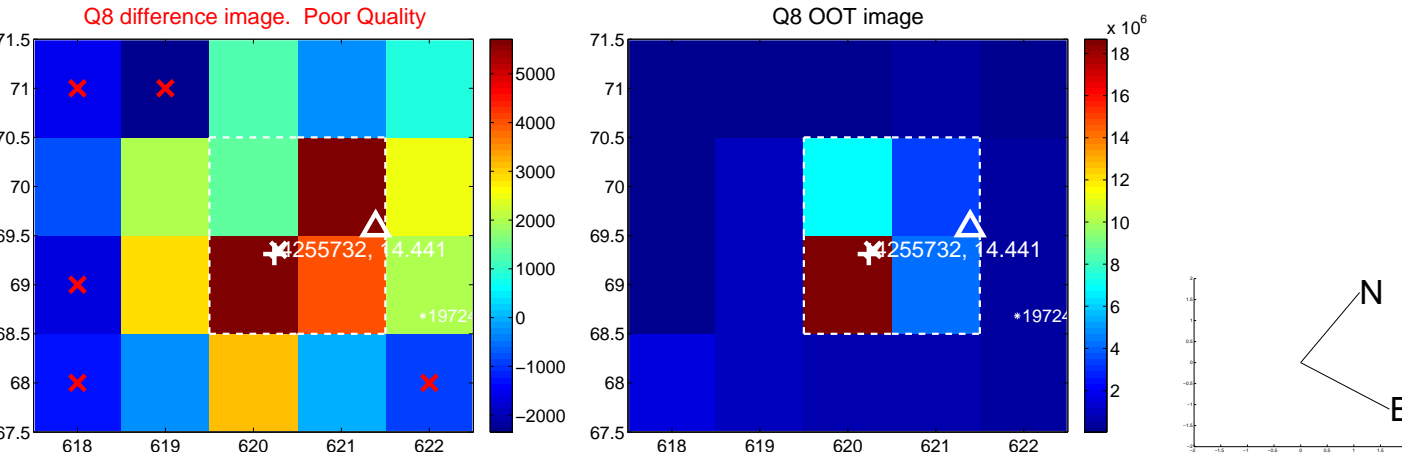
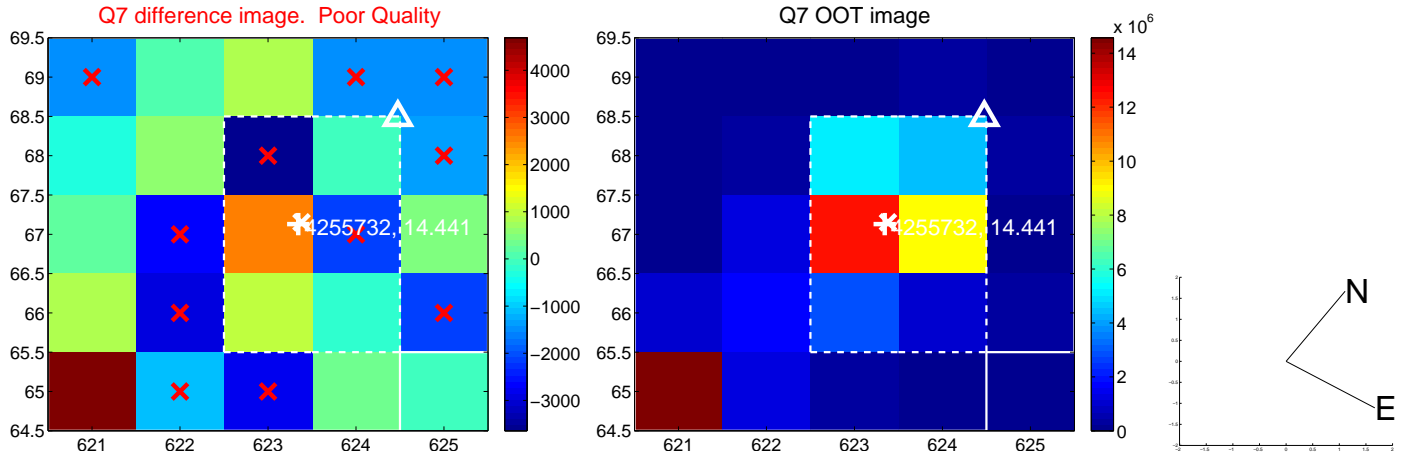
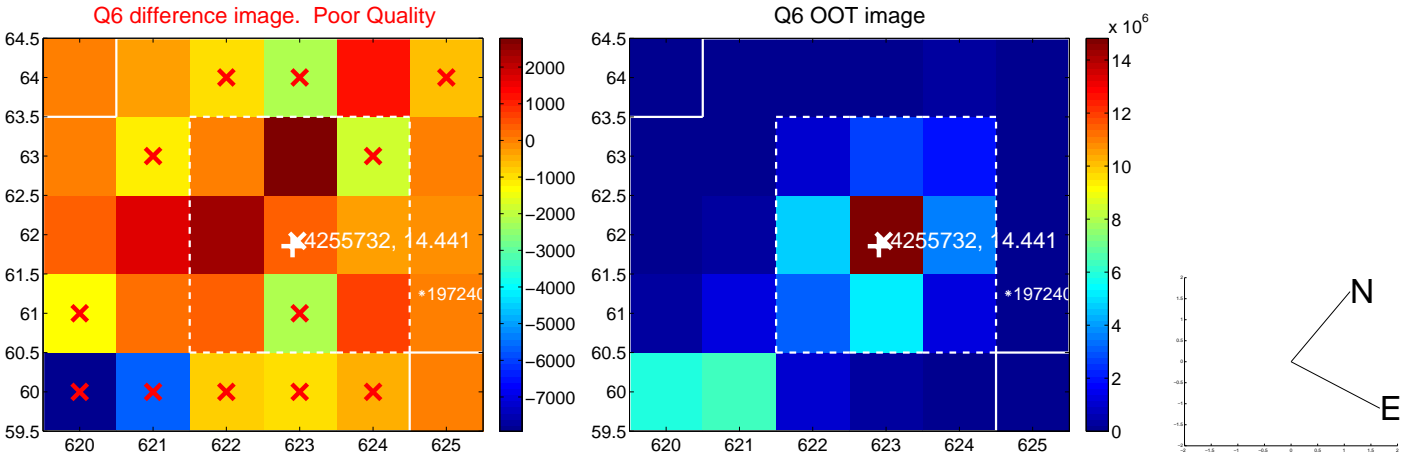
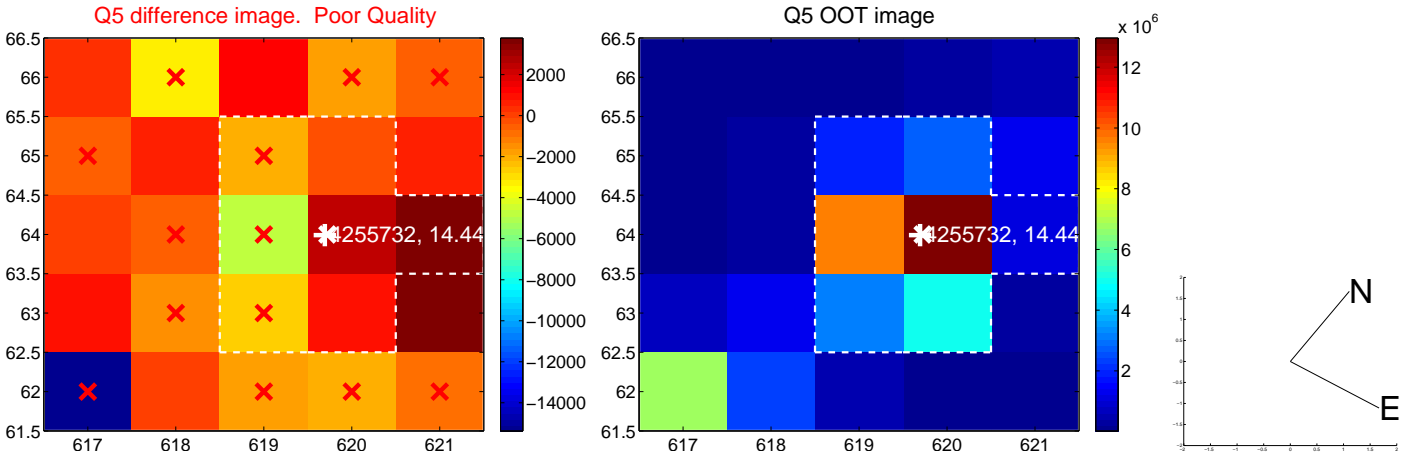


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

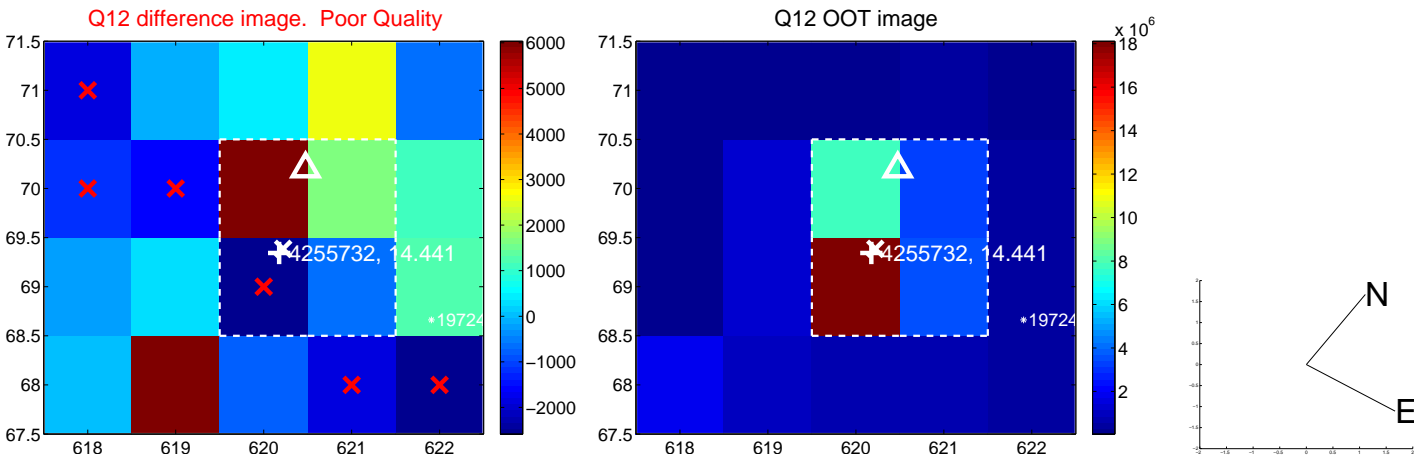
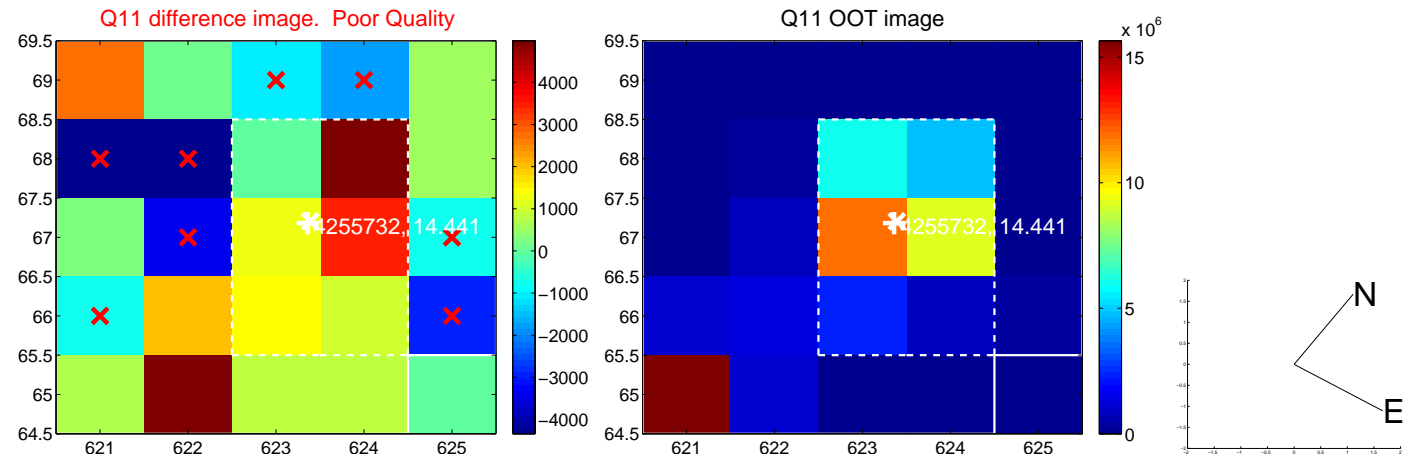
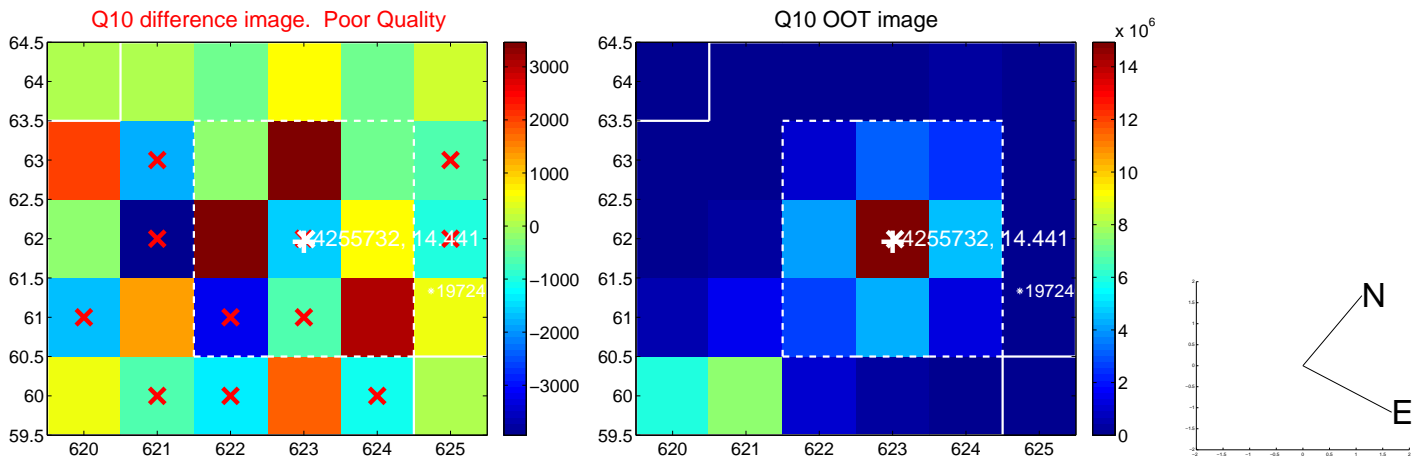
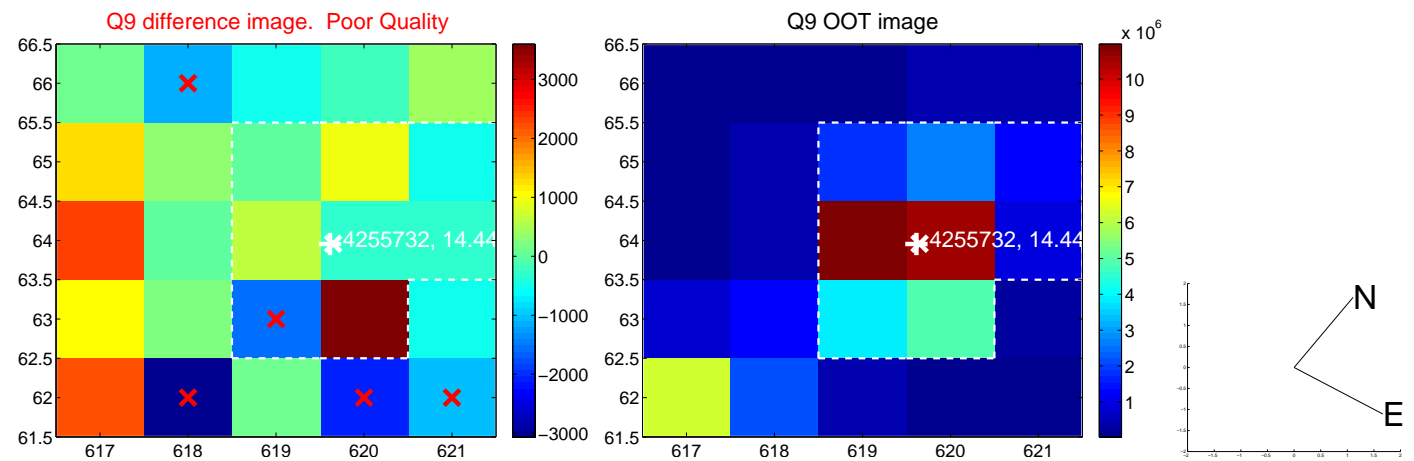
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



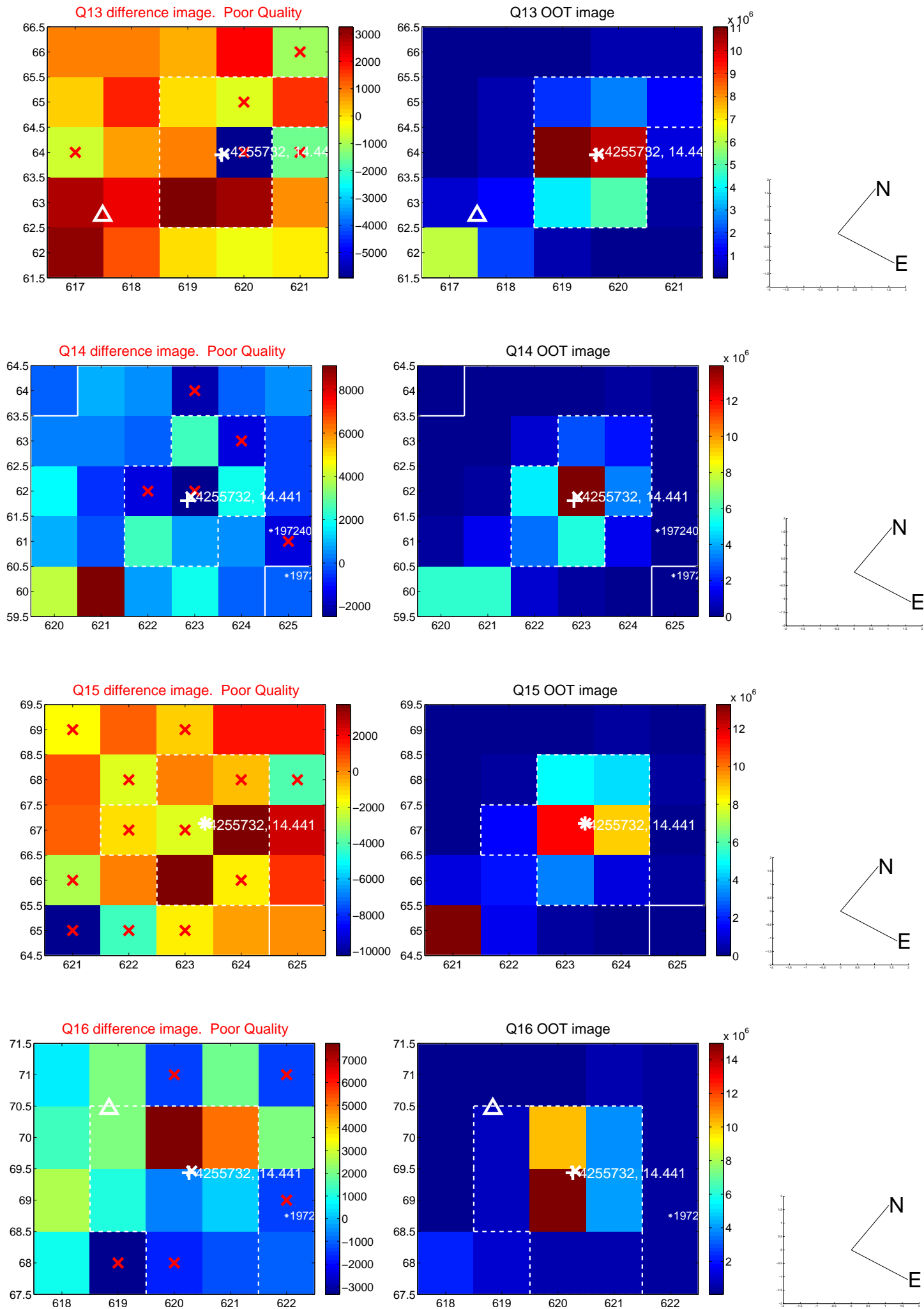
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



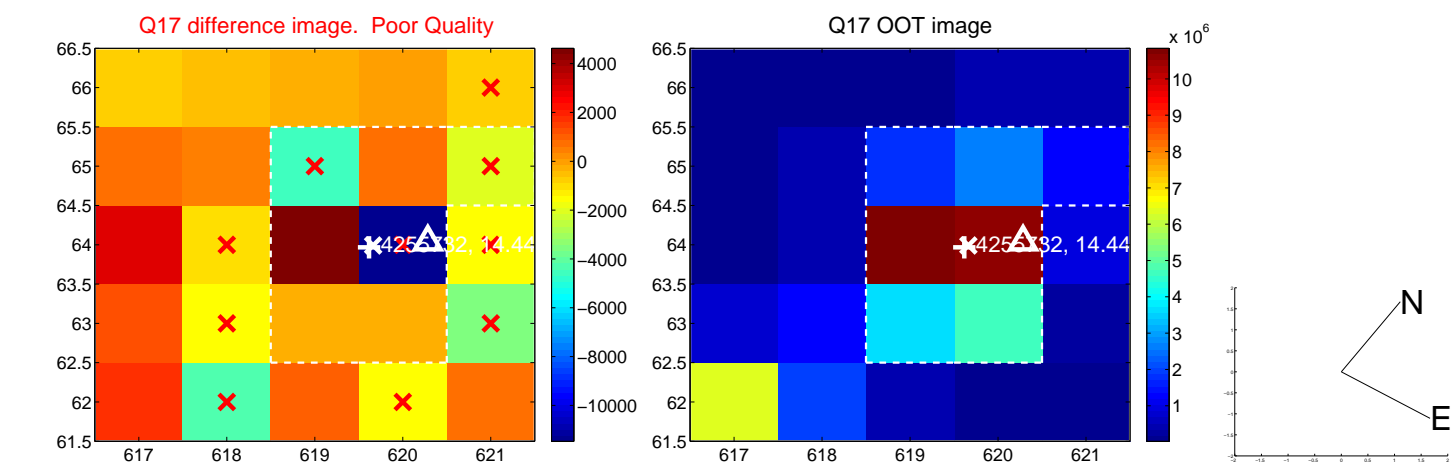
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



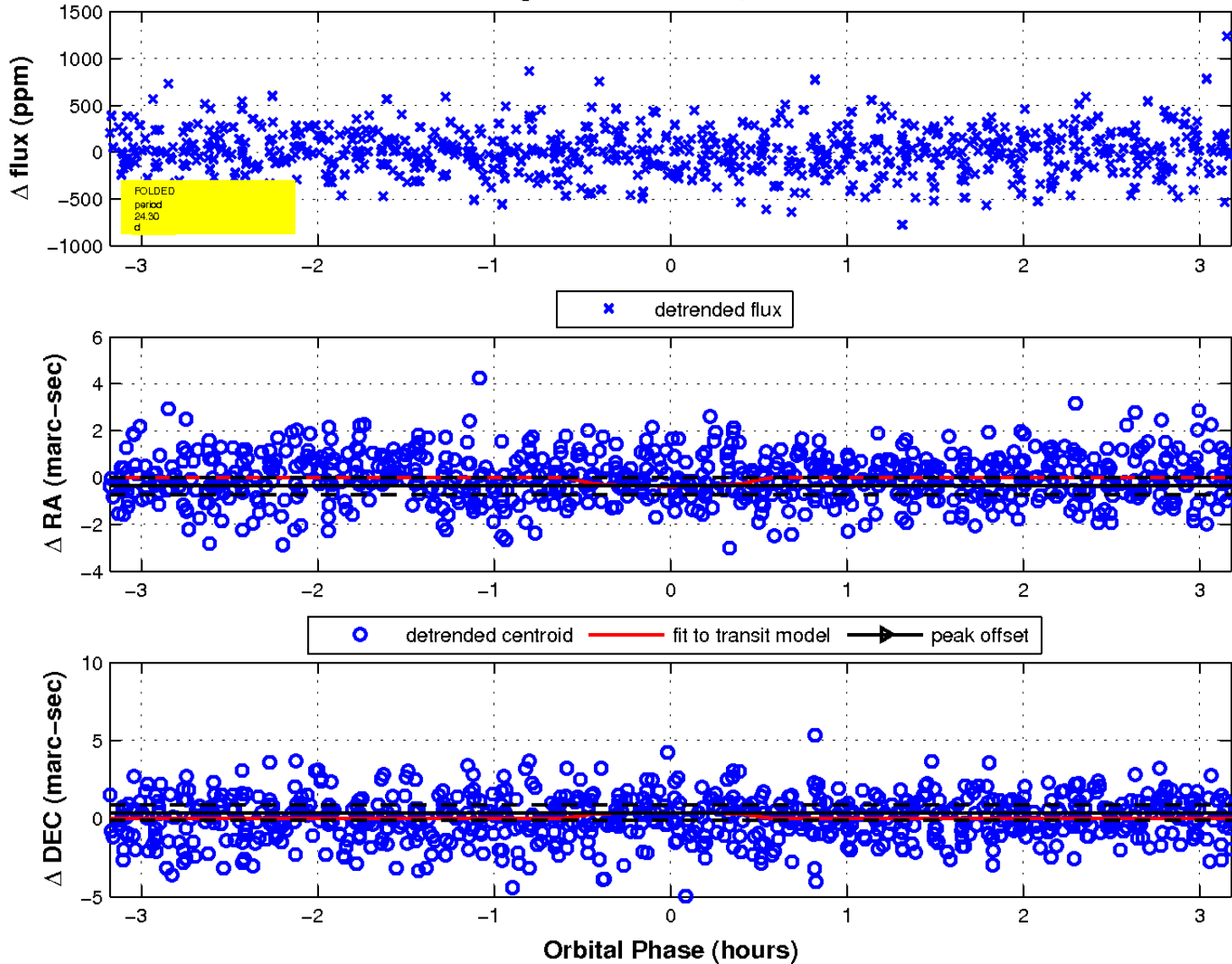
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

