

KIC 006388443

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})
006388443-01	OBS	No	0.667042	131.748672	62.1	2.148	9.7	9.9	1.68	7138	1.54	23400.46
006388443-02	OBS	No	1.655337	132.469192	106.6	4.651	8.2	9.5	1.68	7138	2.02	6964.88
006388443-03	OBS	No	251.327799	137.902090	721.7	11.296	8.5	7.1	1.68	7138	4.91	8.60
006388443-04	OBS	No	246.155891	165.309787	902.9	3.162	7.8	7.2	1.68	7138	5.41	8.84
006388443-05	OBS	No	49.409458	148.444257	737.9	3.596	7.3	8.2	1.68	7138	8.52	75.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006388443-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
006388443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006388443-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—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.

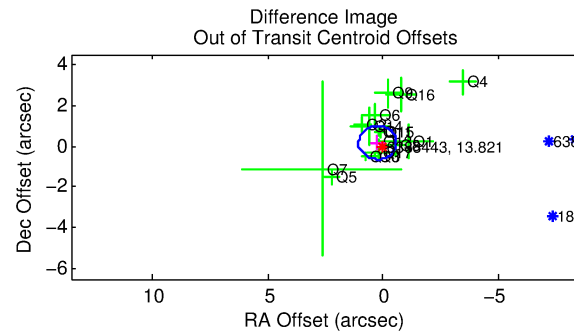
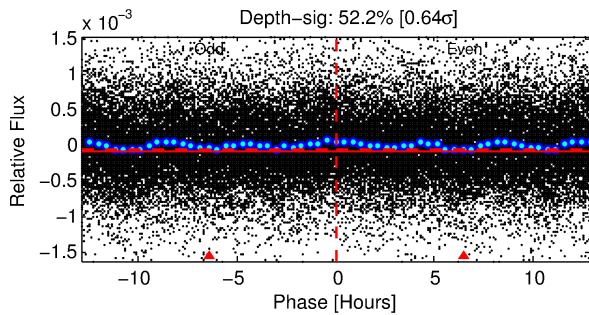
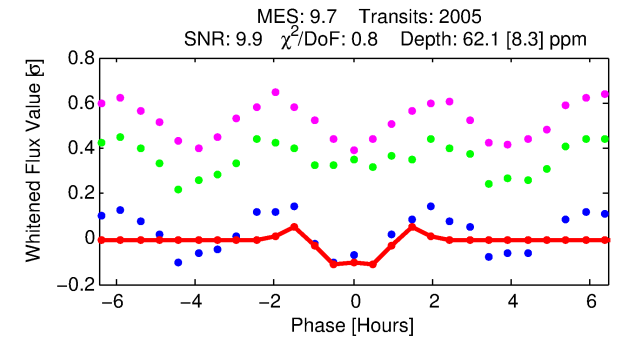
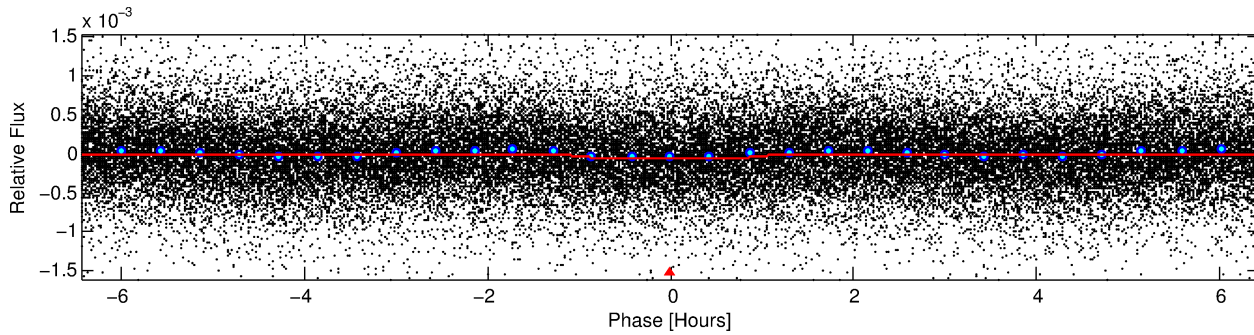
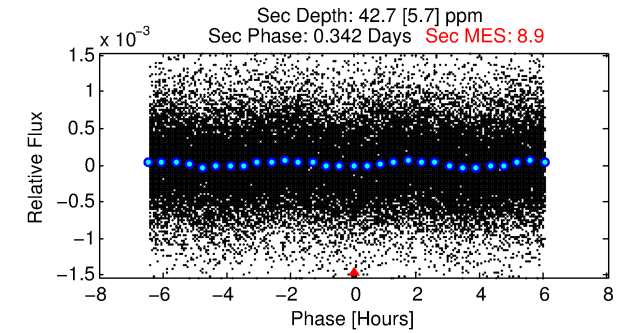
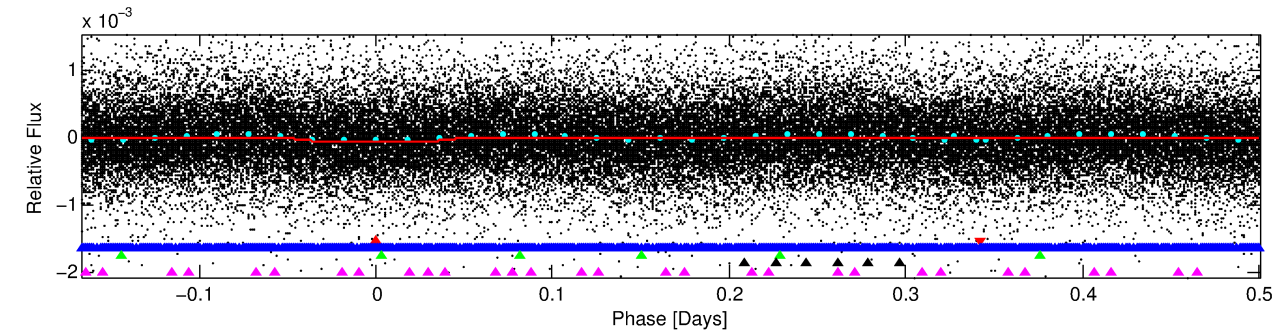
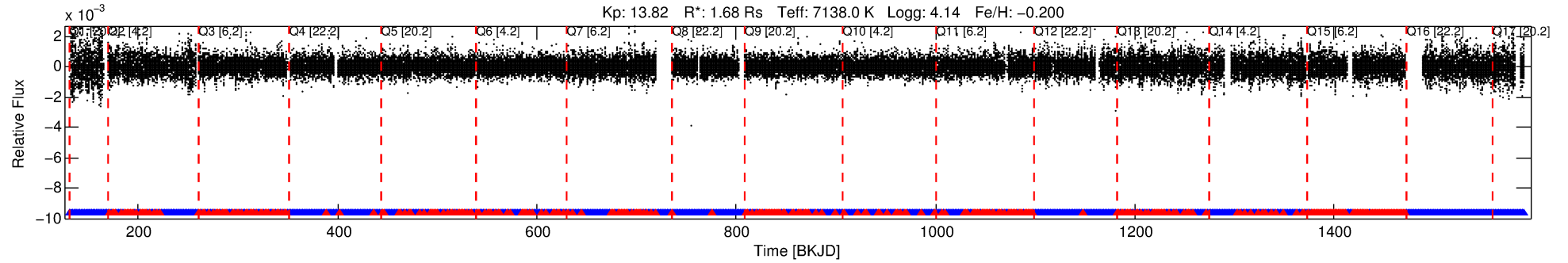
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388443-01

No Significant Match Found

DV One-Page Summary

KIC: 6388443 Candidate: 1 of 5 Period: 0.667 d



DV Fit Results:

Period = 0.66704 [0.00001] d
Epoch = 131.7487 [0.0016] BKJD
Rp/R* = 0.0084 [0.0025]
b = 0.90 [0.38]
Seff = 23400.46 [9210.03]
Teq = 3154 [310] K
Rp = 1.54 [0.64] Re
a = 0.0168 [0.0041] AU
Ag = 2.78 [1.93] [0.92σ]
Teffp = 6297 [989] K [3.03σ]

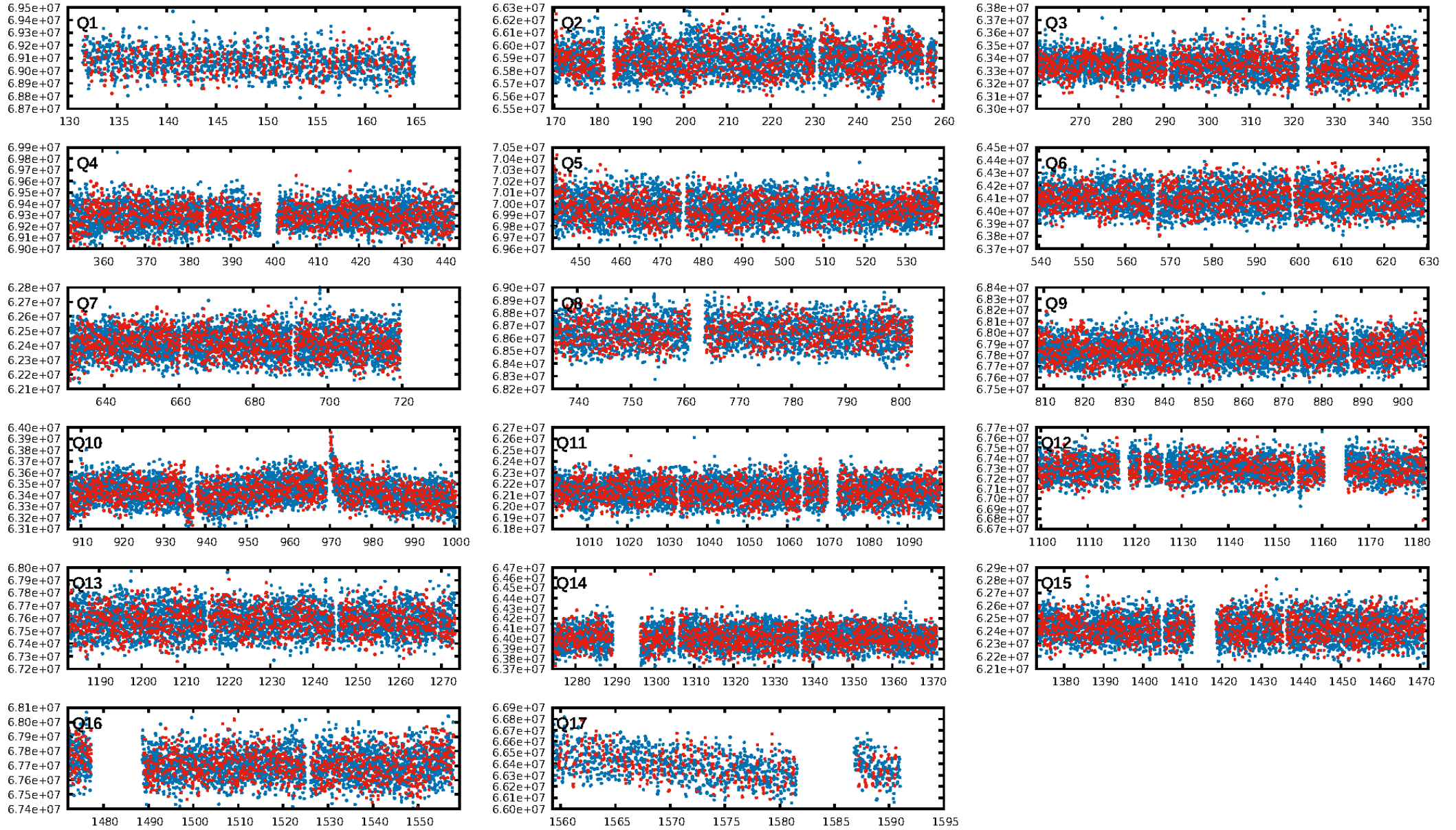
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.63σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.34e-23
RollingBand-fgt: 0.77 [1467/1915]
GhostDiagnostic-chr: 1.346
Centroid-sig: 0.0%
Centroid-so: 1.272 arcsec [2.14σ]
OotOffset-rm: 0.303 arcsec [1.11σ]
KicOffset-rm: 0.245 arcsec [0.85σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

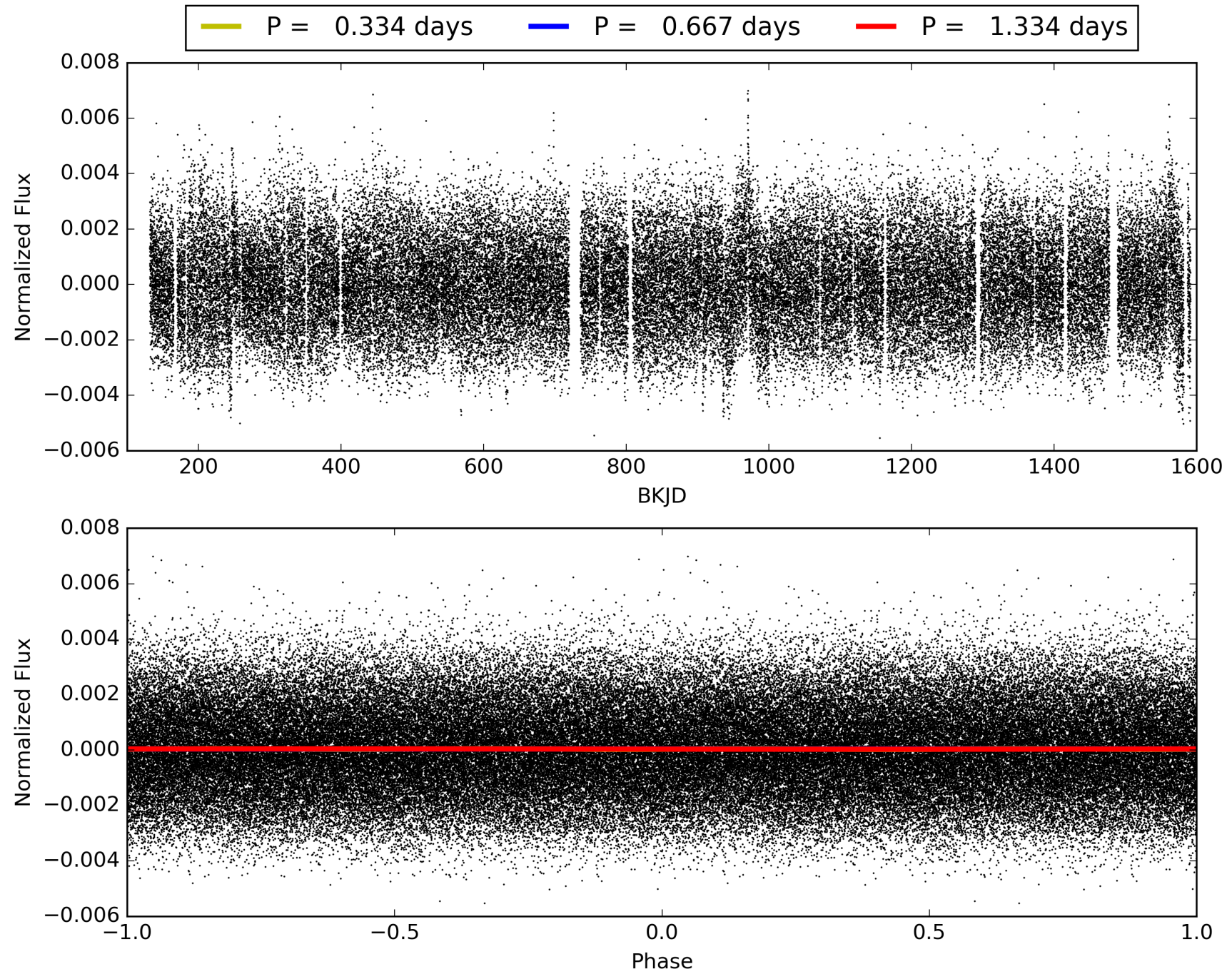
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:00 Z

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

TCE 006388443-01, PDC Light Curves

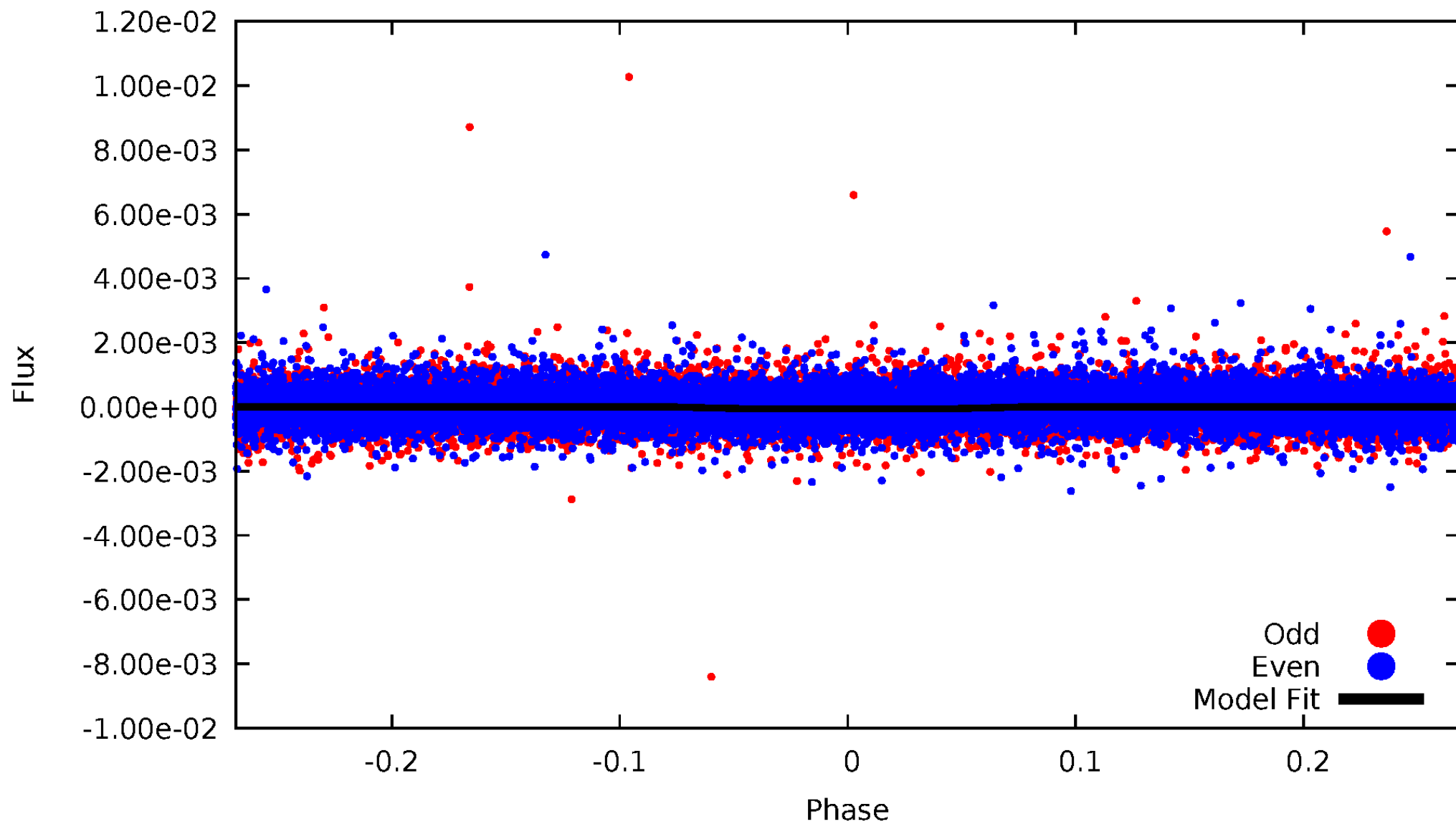


TCE 006388443-01



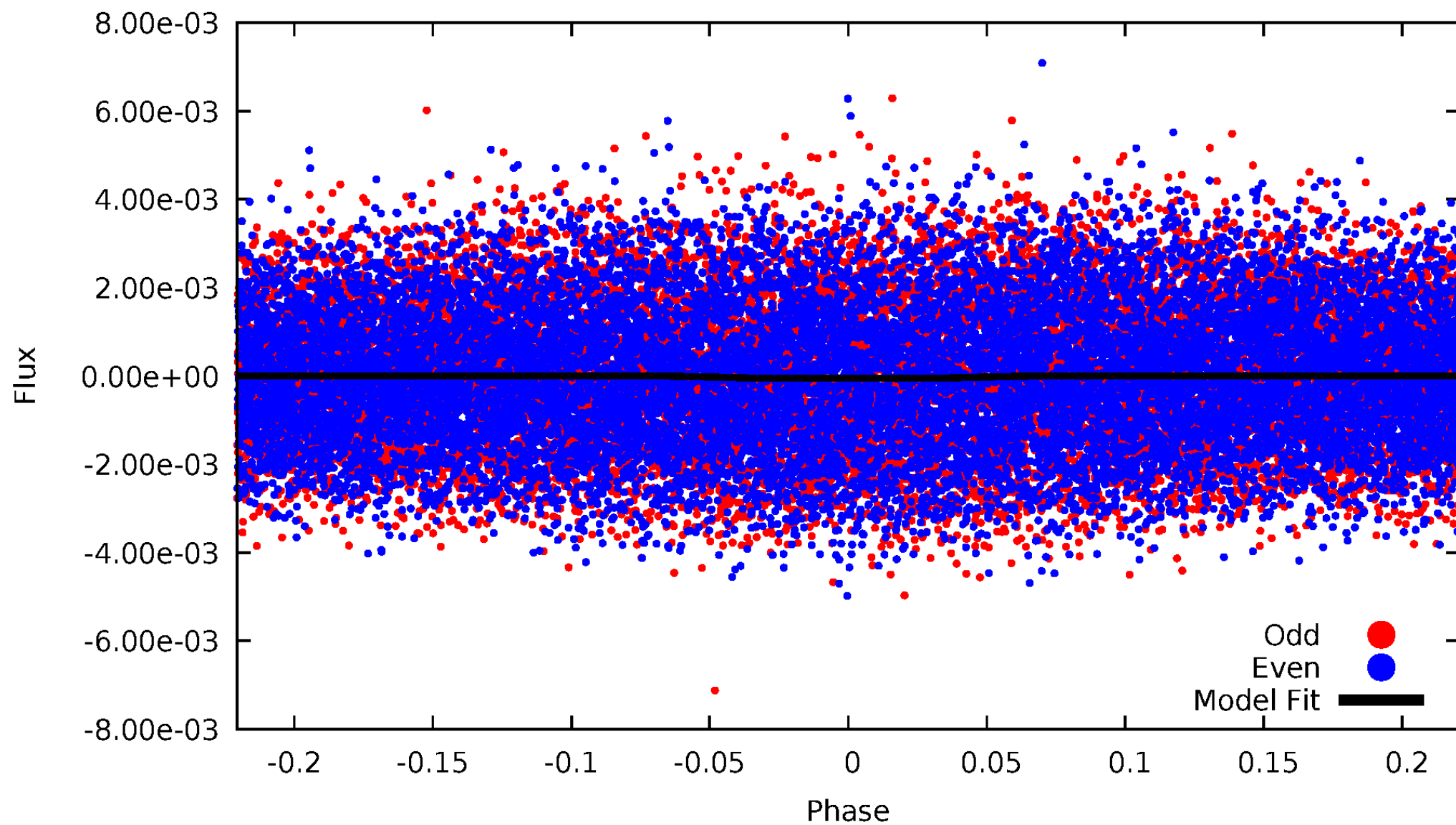
DV Odd/Even

TCE 006388443-01



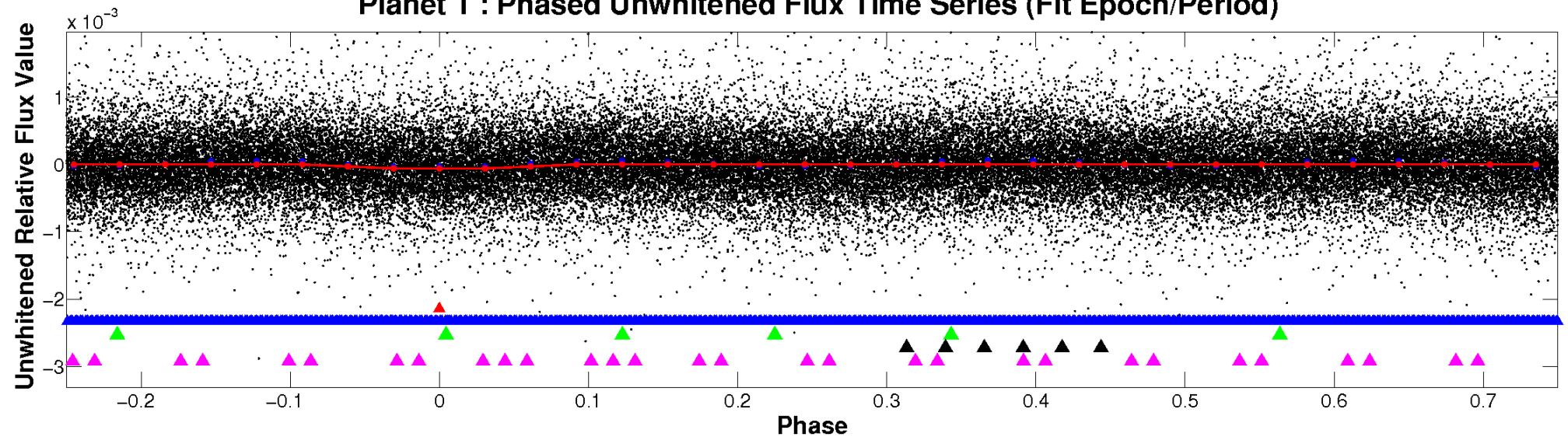
ALT Odd/Even

TCE 006388443-01

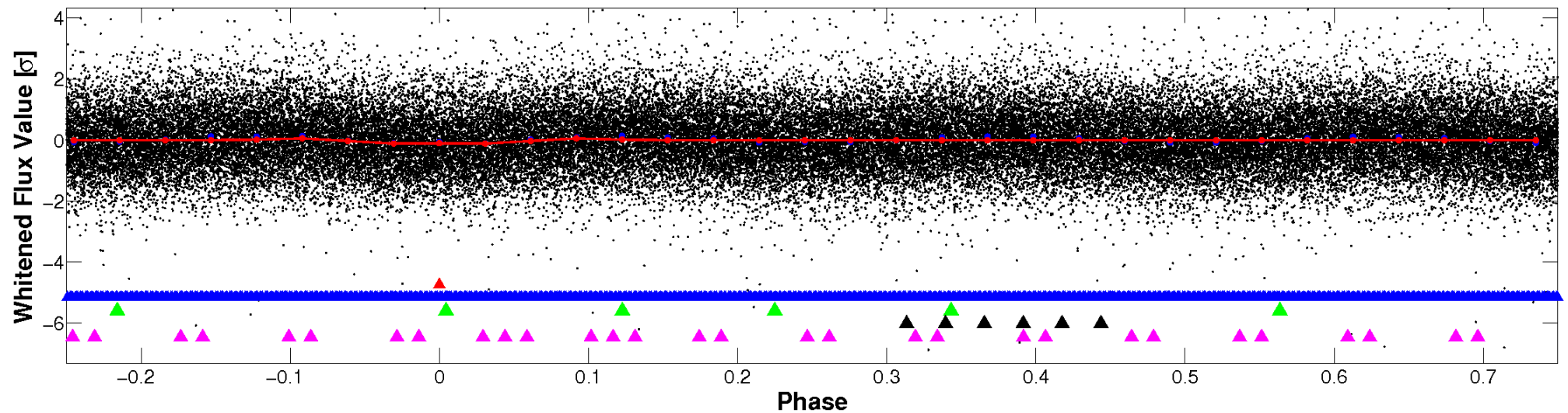


Non-Whitened Vs. Whitened Light Curve

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

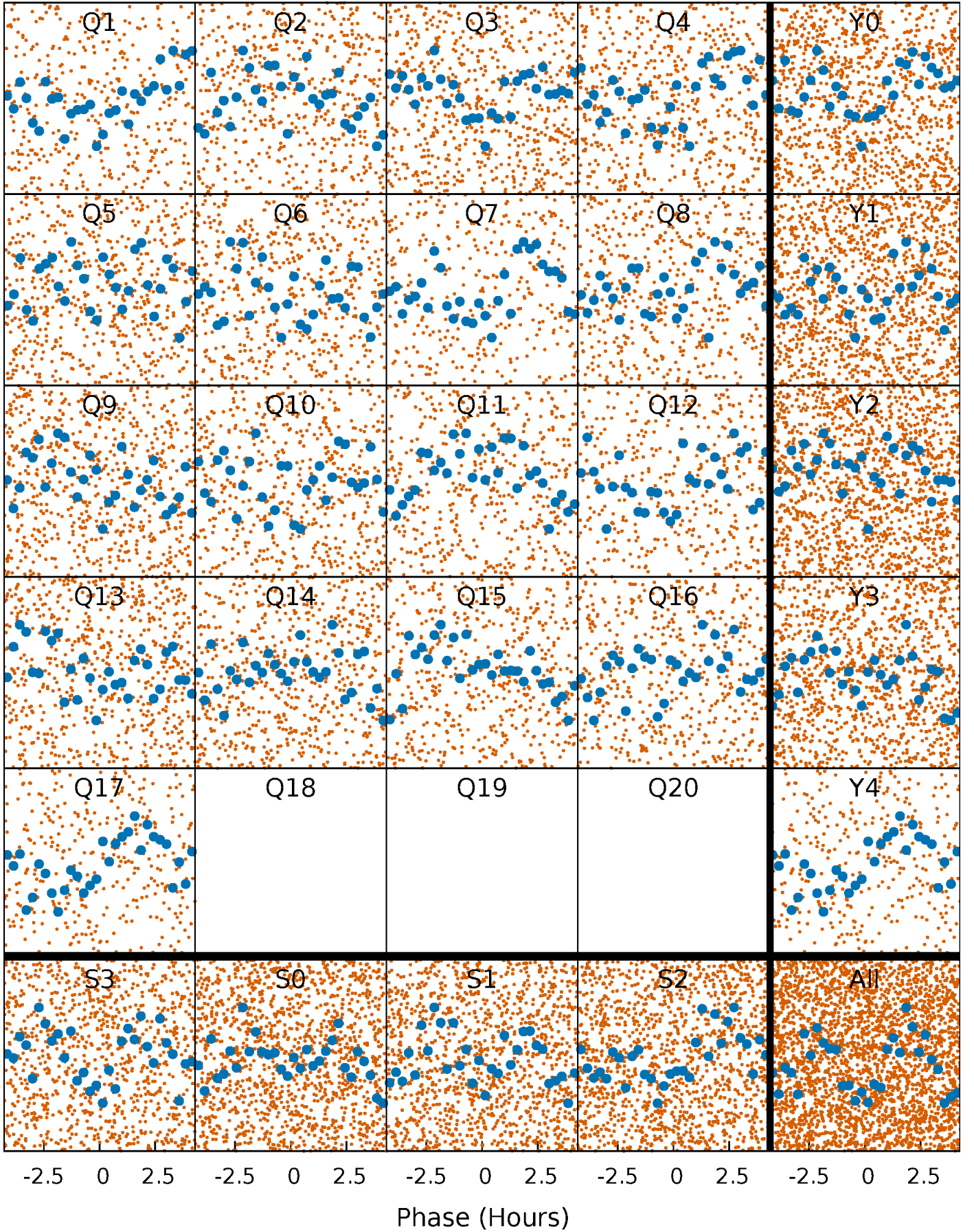


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



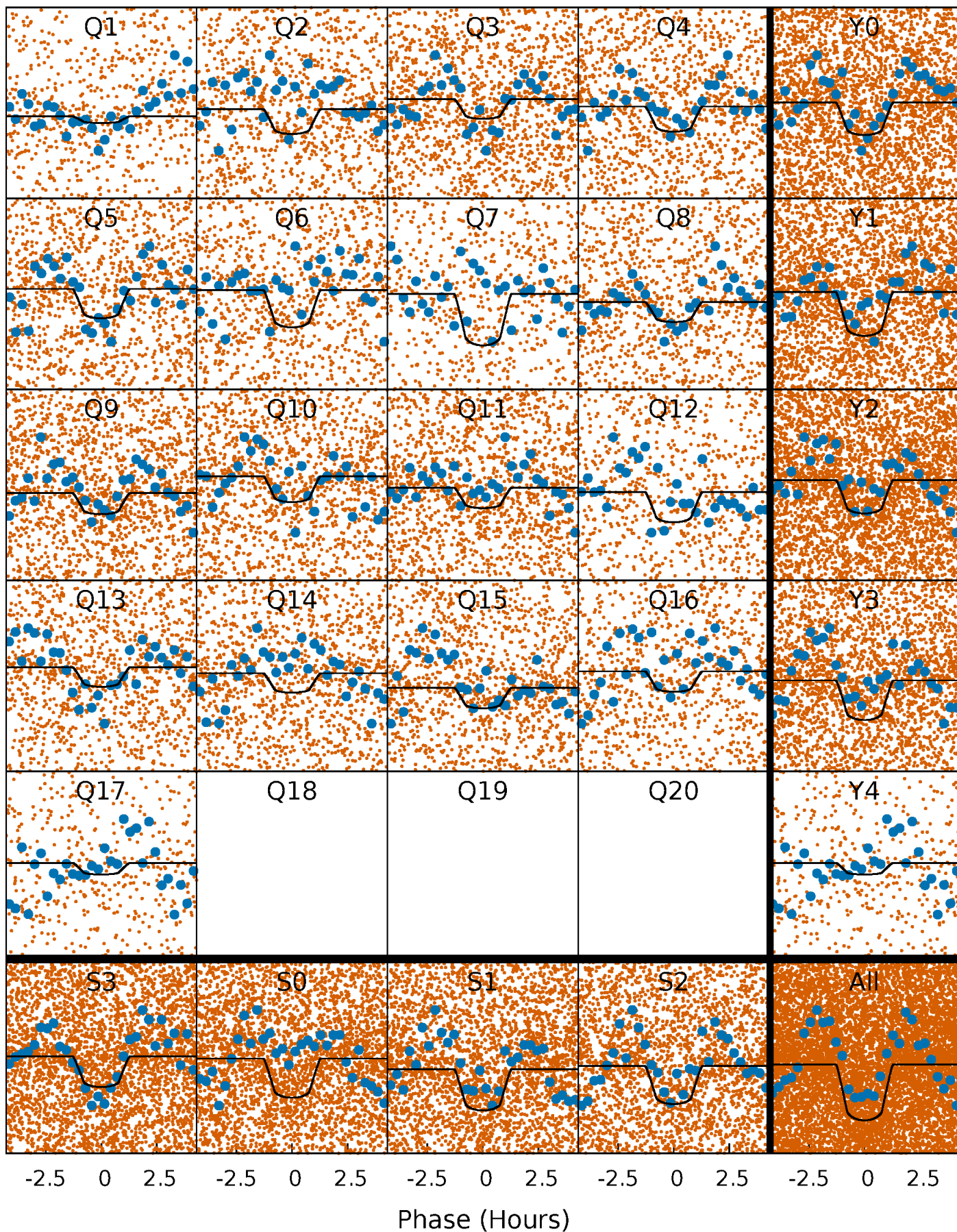
PDC Quarter-Phased Transit Curves

TCE 006388443-01 P= 0.667042 Days $T_0=131.748672$ (BKJD)



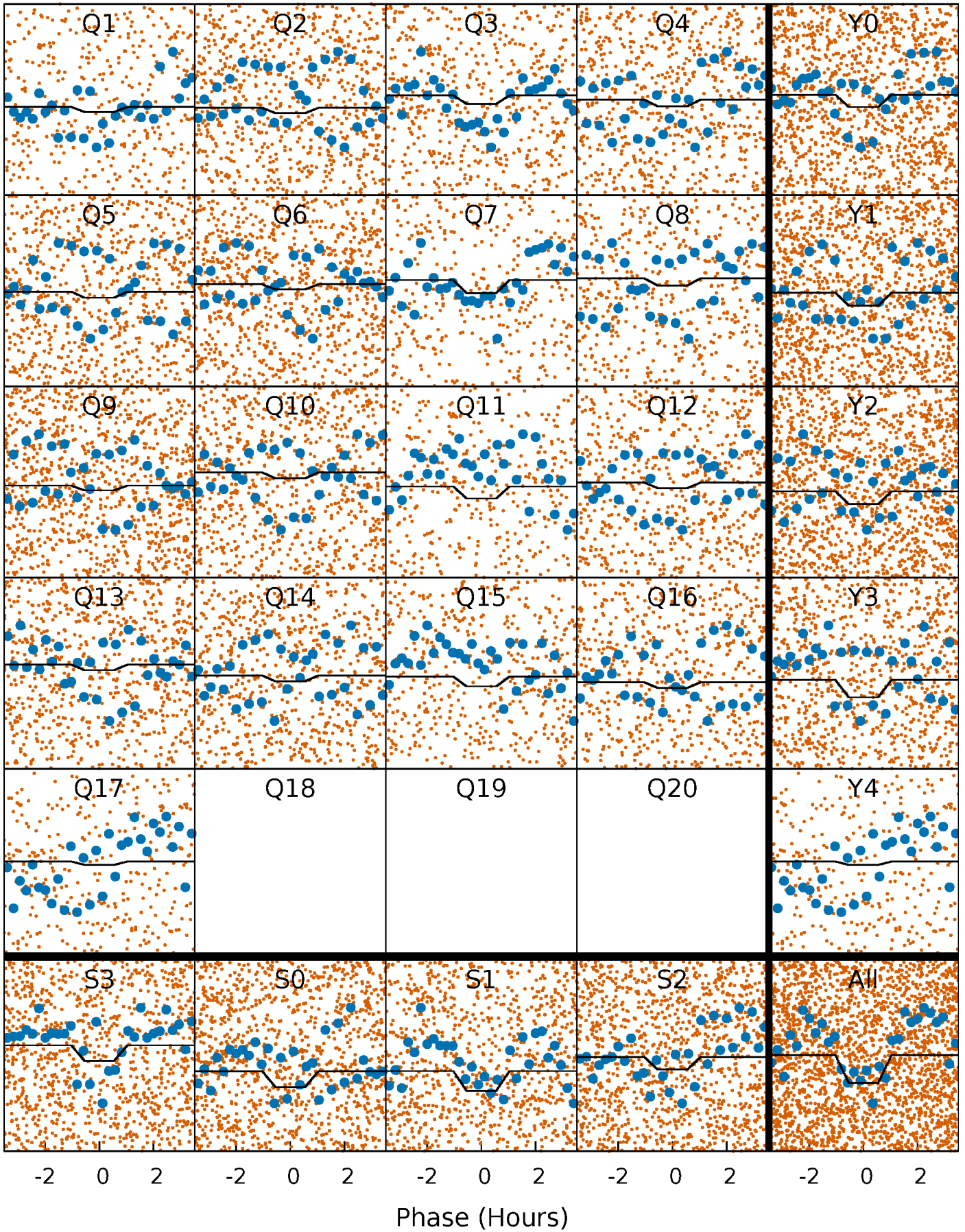
DV Quarter-Phased Transit Curves

TCE 006388443-01 P= 0.667042 Days $T_0=131.748672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

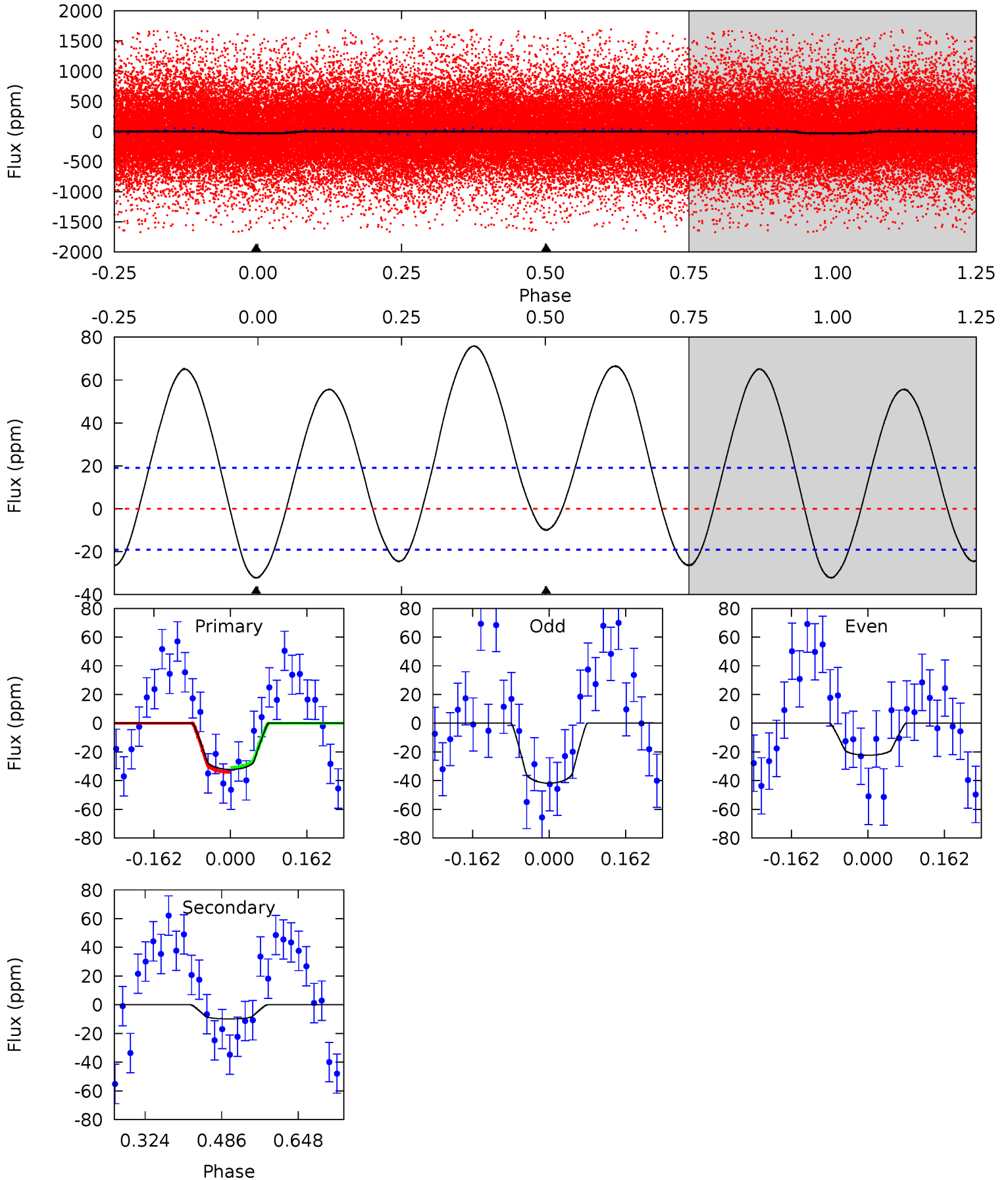
TCE 006388443-01 P= 0.667039 Days $T_0=131.746194$ (BKJD)



DV Model-Shift Uniqueness Test

006388443-01, P = 0.667042 Days, E = 131.081630 Days

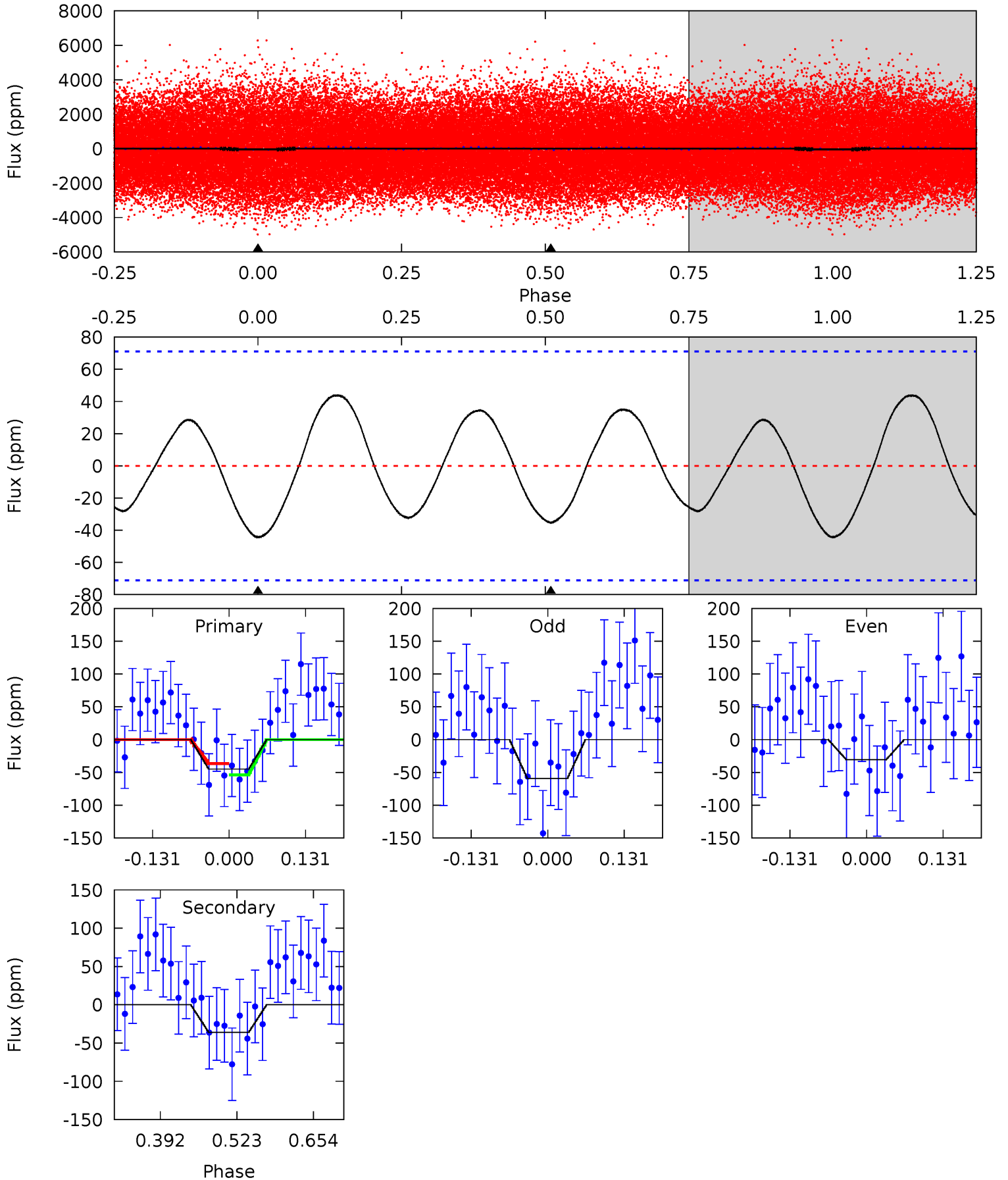
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.54	2.31	0	0	4.46	1.40	5.42	7.54	7.54	2.31	2.31	2.29	0.64	0.70	0.40



Alt Model-Shift Uniqueness Test

006388443-01, P = 0.667039 Days, E = 131.079155 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.85	2.28	0	0	4.51	1.51	1.48	2.85	2.85	2.28	2.28	0.85	0.40	0.50	0.55



Stellar Parameters For KIC 006388443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7138^{+225}_{-325}	$4.137^{+0.153}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$1.684^{+0.501}_{-0.410}$	$1.419^{+0.209}_{-0.232}$	$0.419^{+0.337}_{-0.218}$
	+3%/-5%	+4%/-5%	+125%/-175%	+30%/-24%	+15%/-16%	+81%/-52%
Source	PHO1	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 006388443-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 4	$1.56^{+0.48}_{-0.47}$	4411^{+341}_{-326}	3871^{+1016}_{-6662}	$0.590^{+0.737}_{-0.320}$
Alt.	-36 ± 16	$1.31^{+0.50}_{-0.45}$	4436^{+333}_{-313}	6227^{+2029}_{-1245}	$2.963^{+4.956}_{-1.663}$

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 $A_{obs} \gg 1.0$

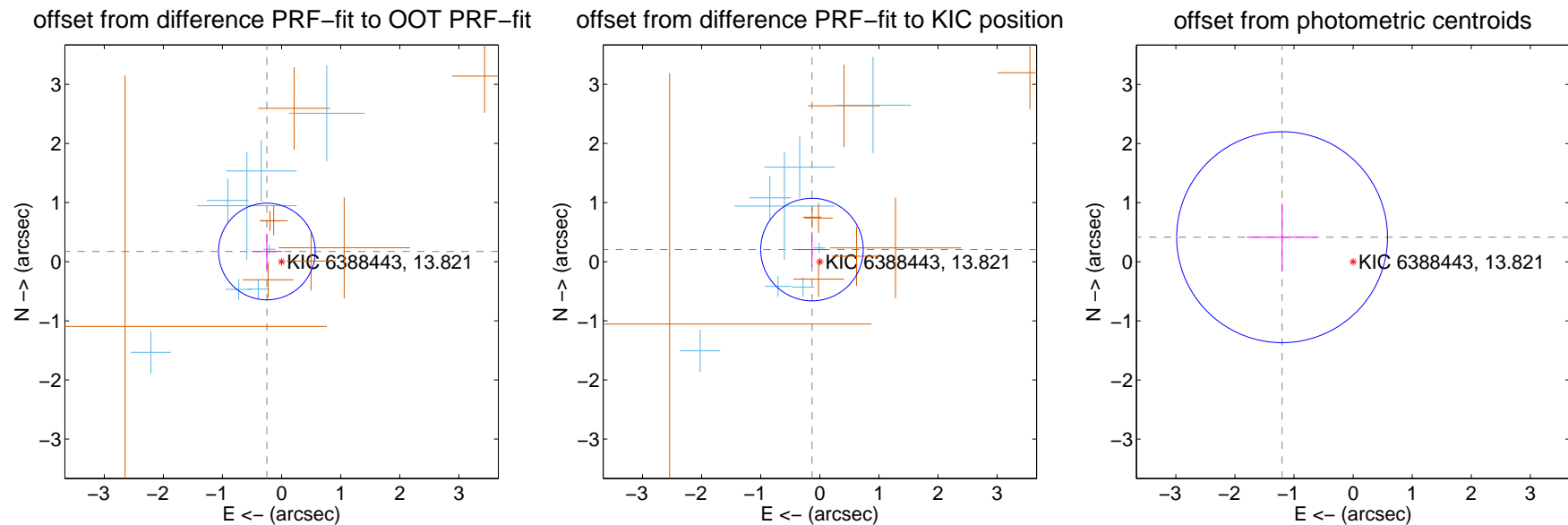
DV Centroid Data

Supplemental centroid analysis for 006388443-01. Kepler magnitude: 13.82. Transit SNR 9.93

There are 8 quarters with good PRF difference image offsets

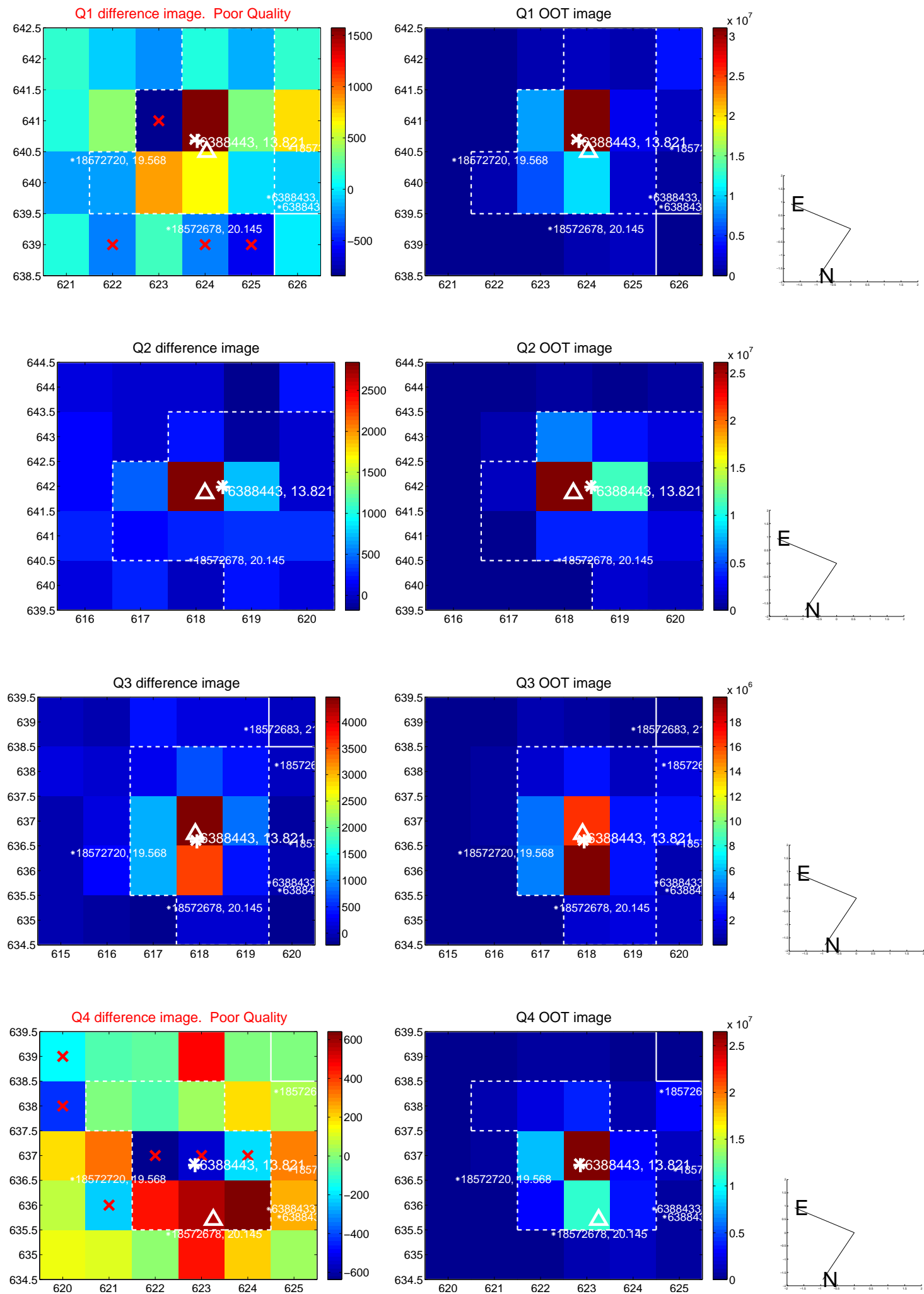
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.303 ± 0.272	1.11	0.249 ± 0.257	0.172 ± 0.301
PRF-fit source offset from KIC position	0.245 ± 0.289	0.85	0.133 ± 0.257	0.205 ± 0.301
photometric centroid source offset	1.27 ± 0.59	2.14	1.20 ± 0.60	0.42 ± 0.57

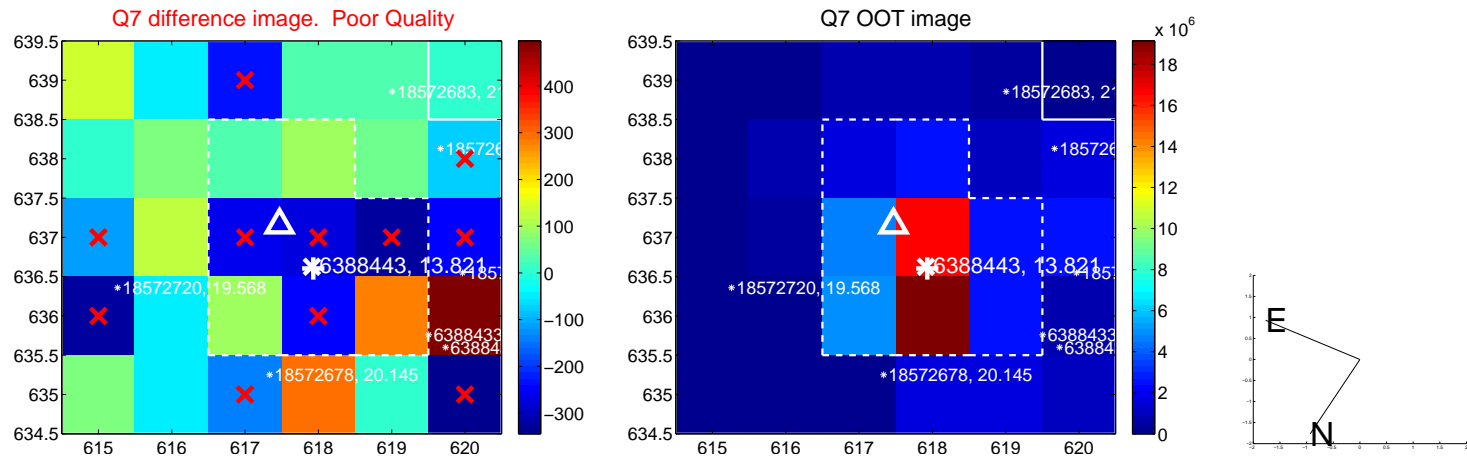
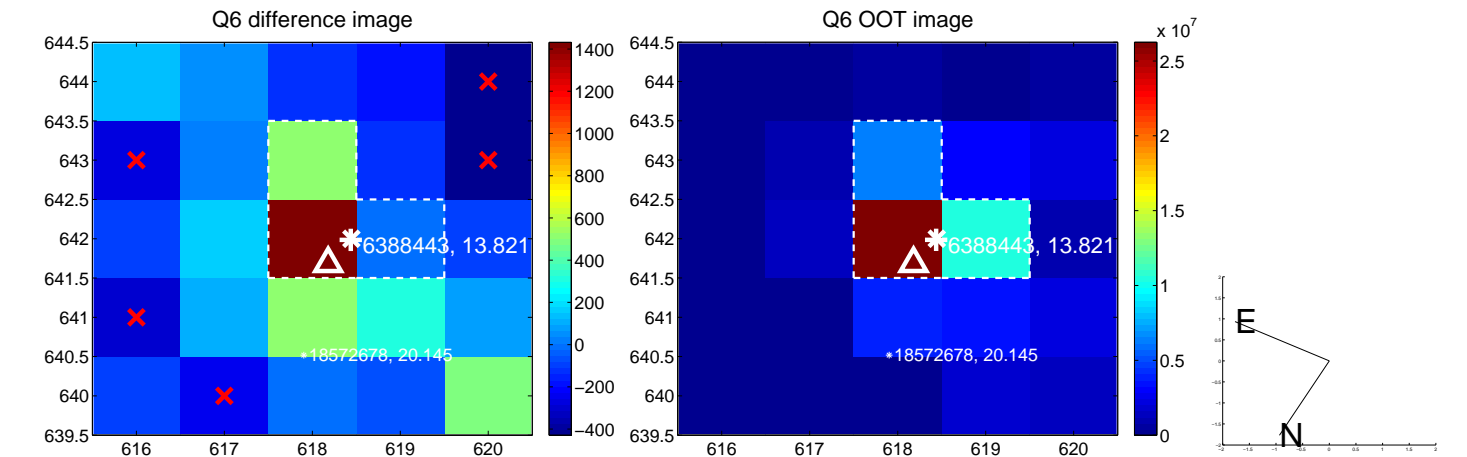
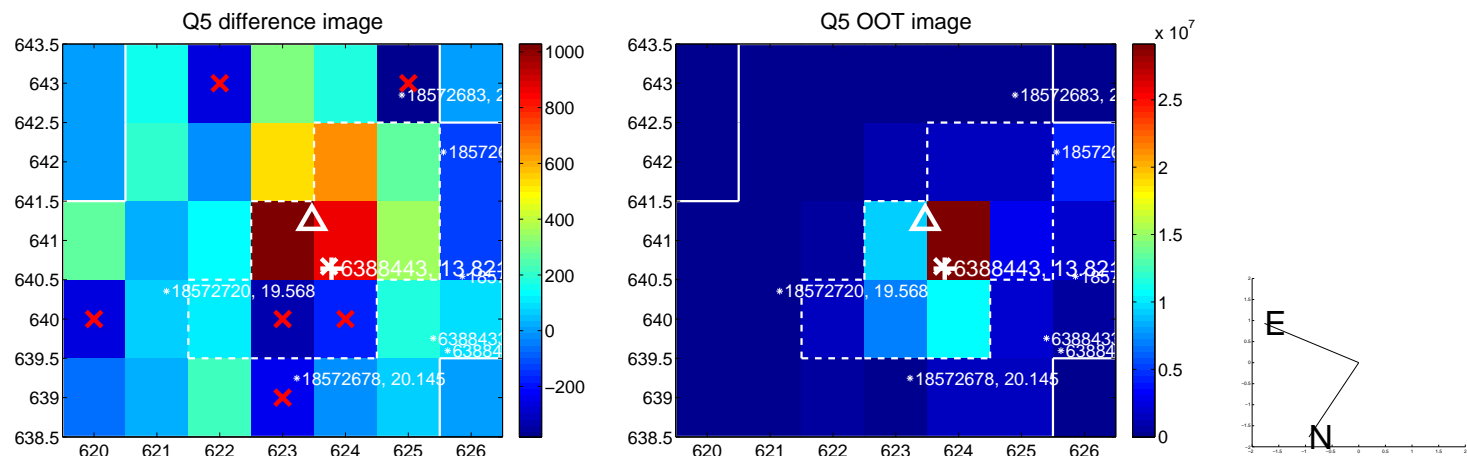


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

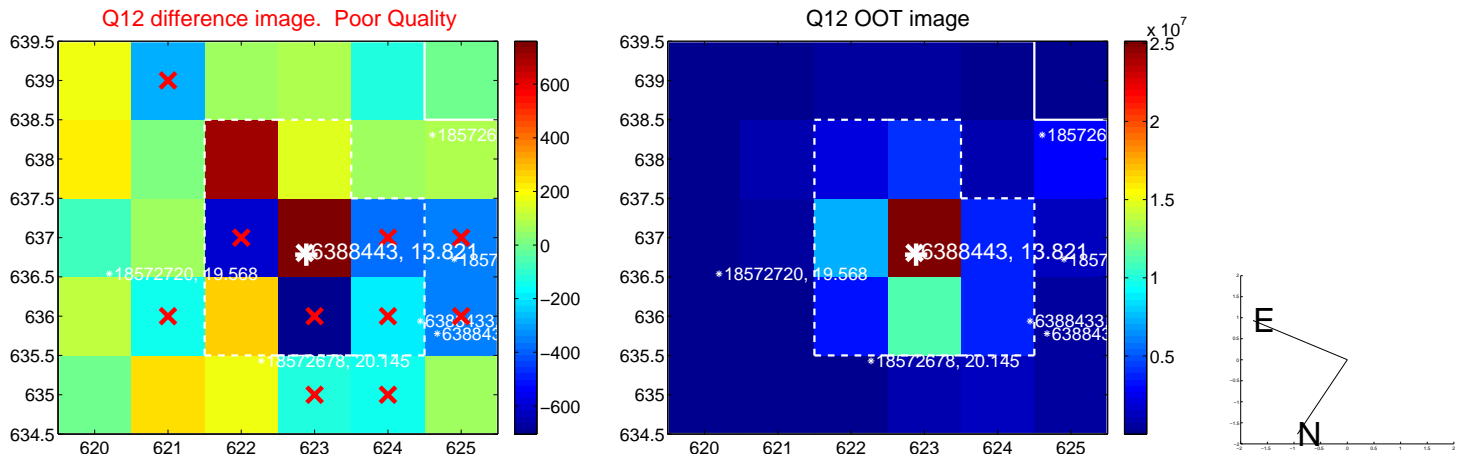
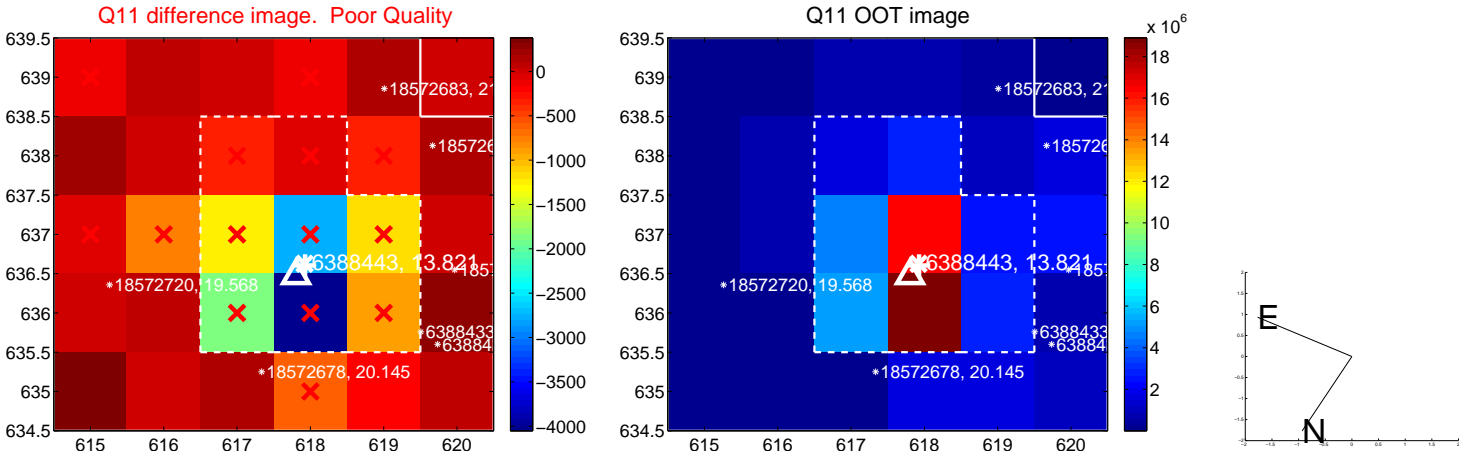
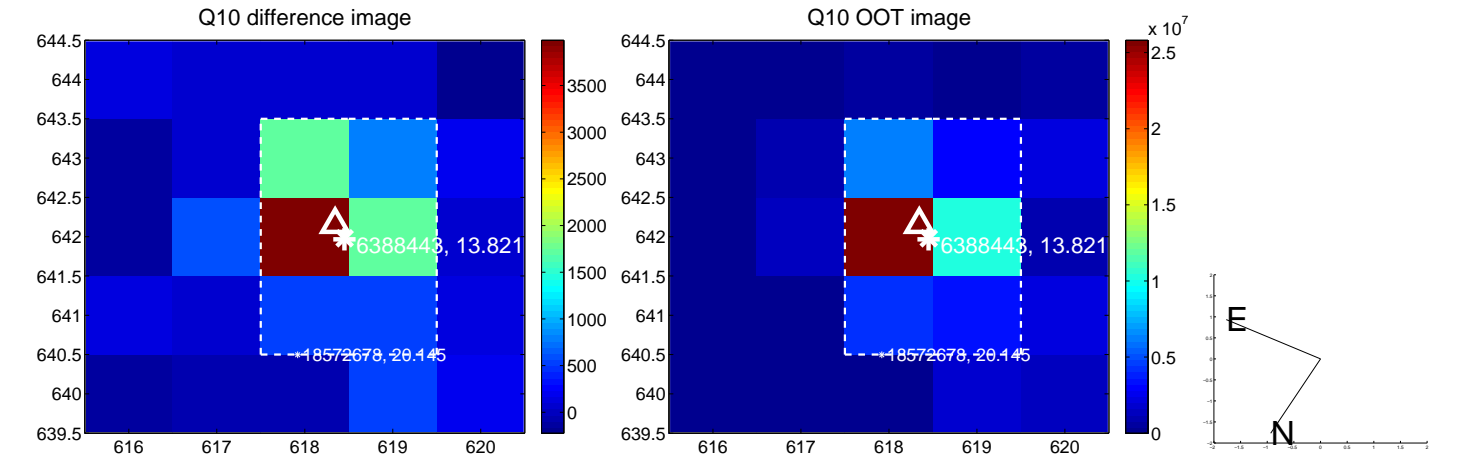
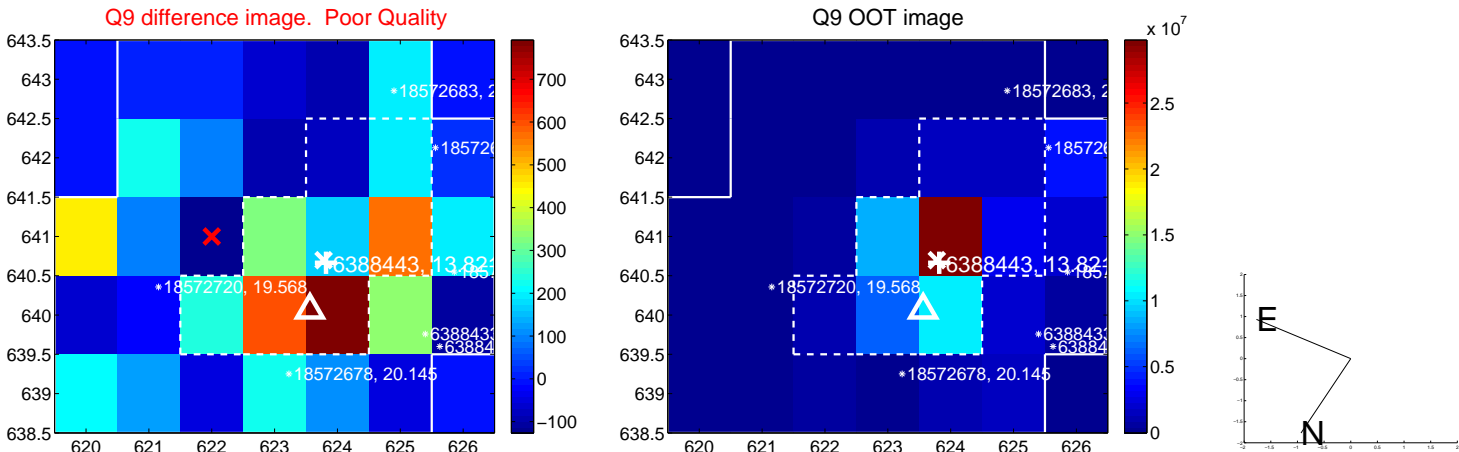
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



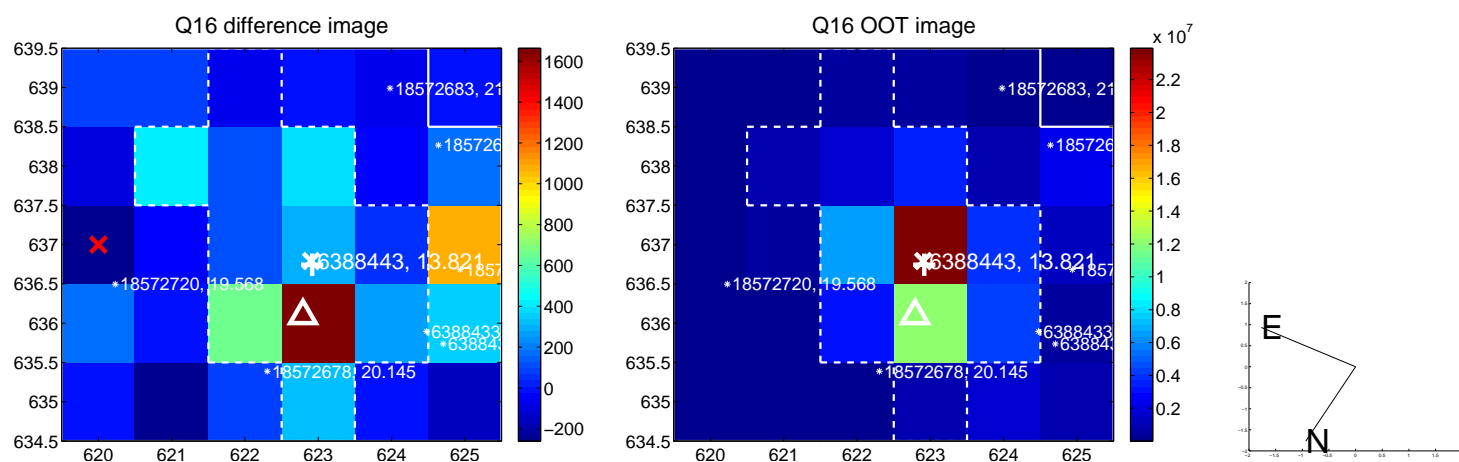
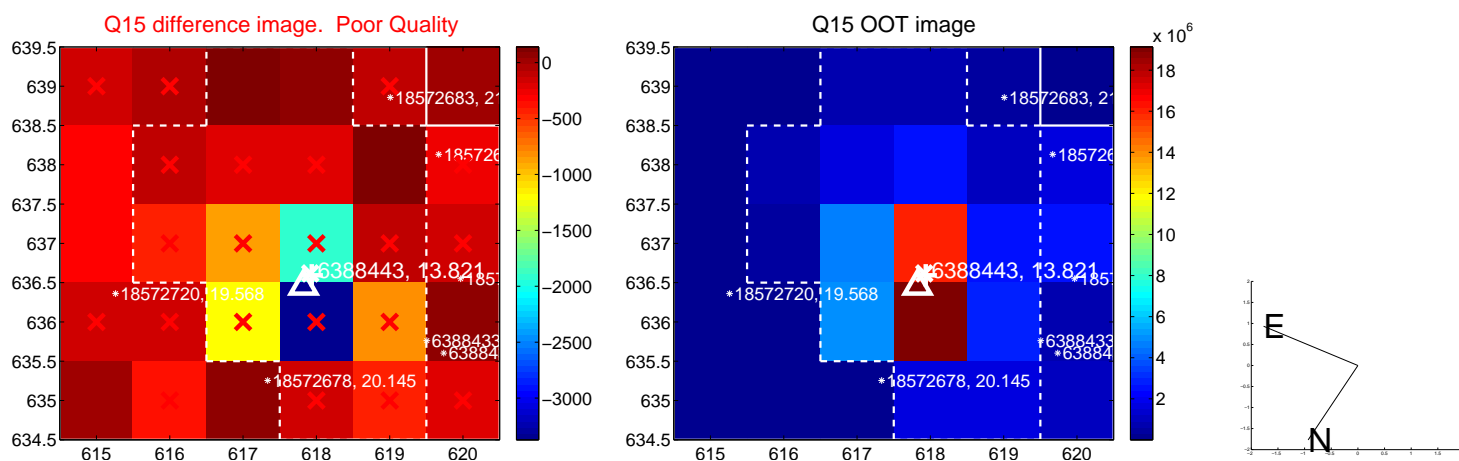
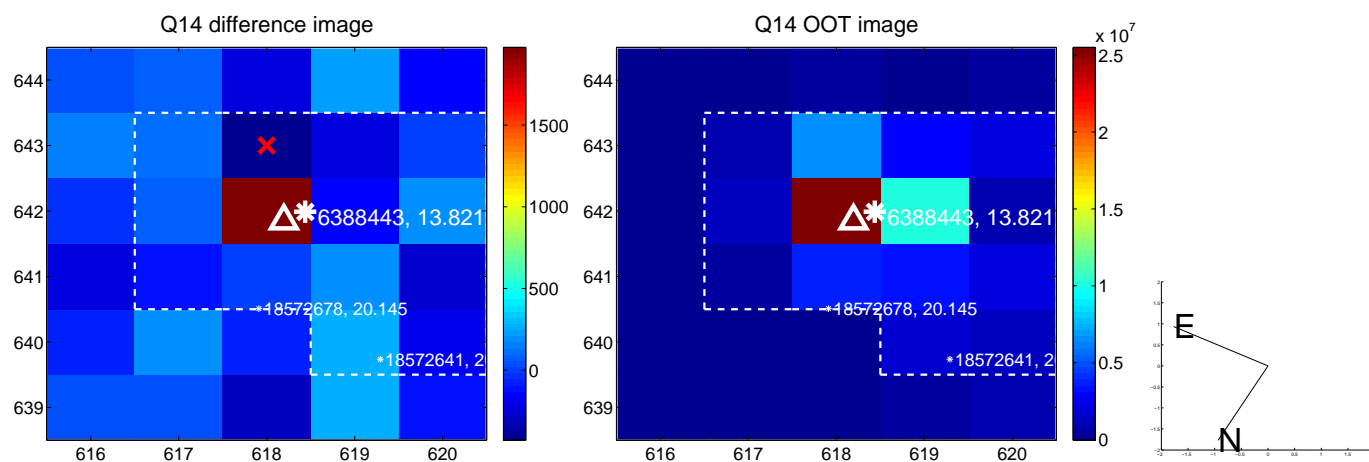
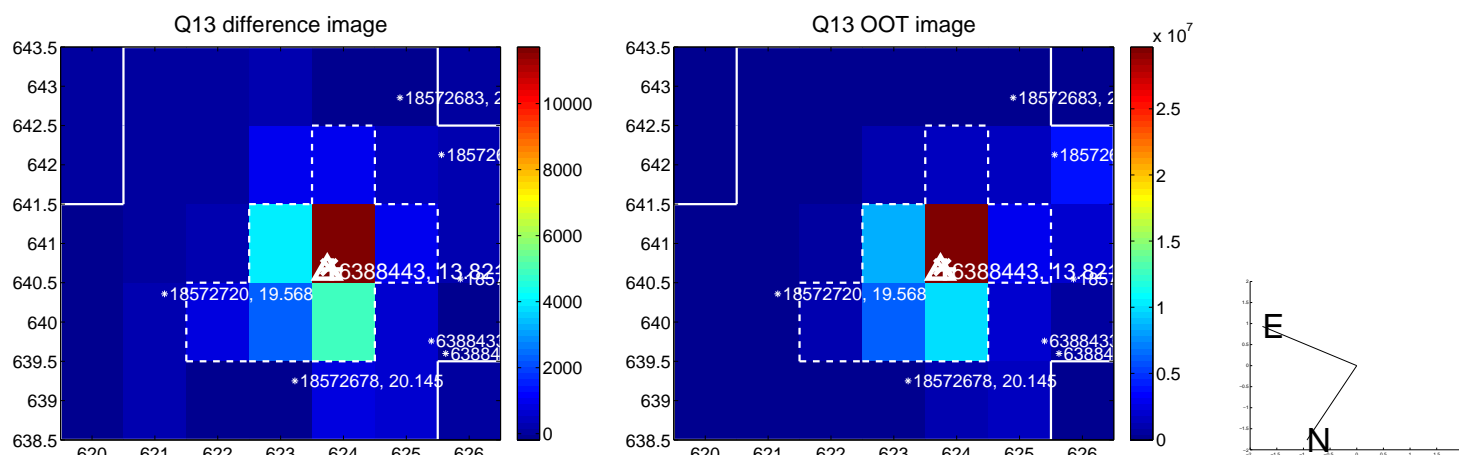
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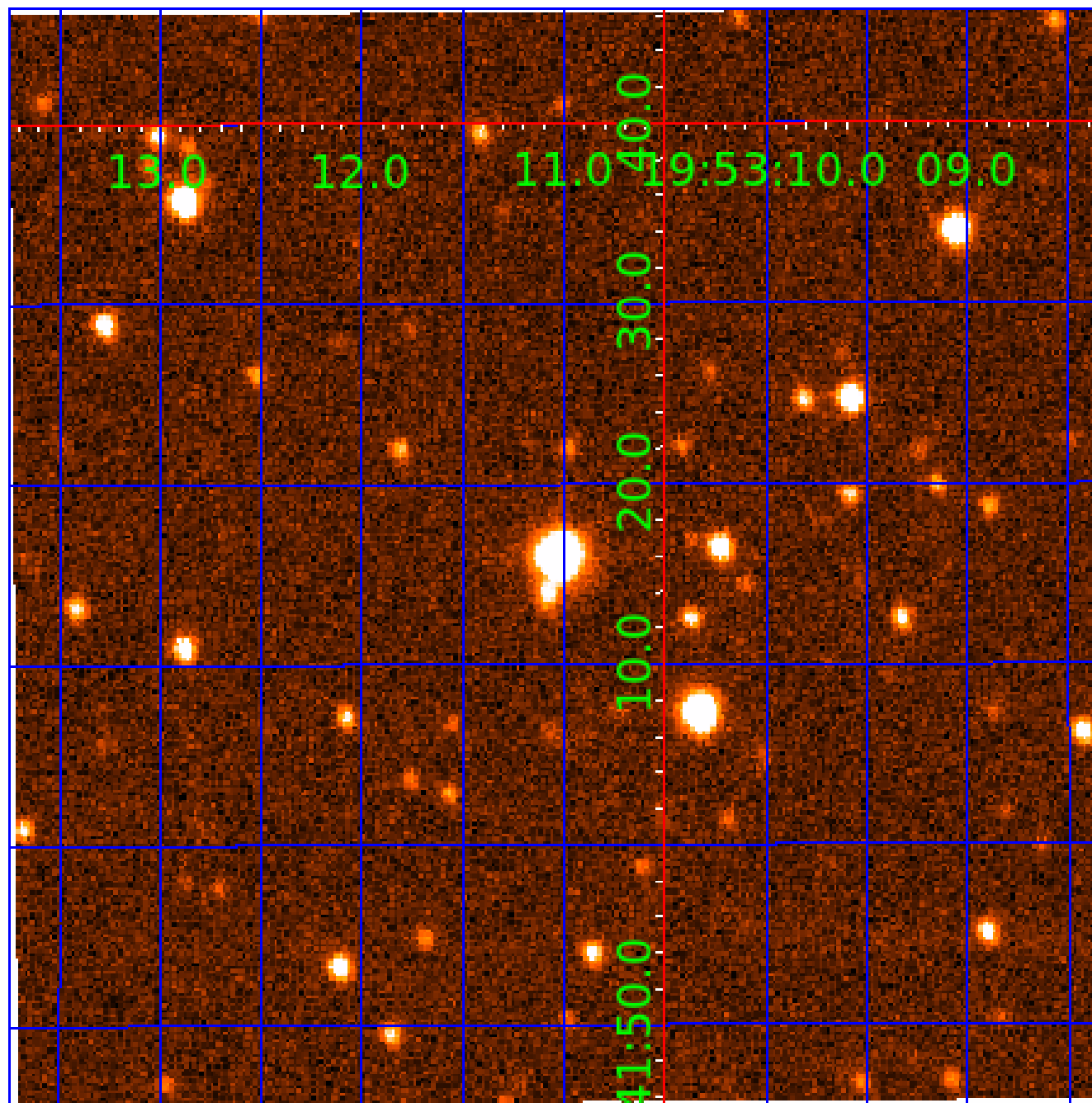


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006388443

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})
006388443-01	OBS	No	0.667042	131.748672	62.1	2.148	9.7	9.9	1.68	7138	1.54	23400.46
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006388443-04	OBS	No	246.155891	165.309787	902.9	3.162	7.8	7.2	1.68	7138	5.41	8.84
006388443-05	OBS	No	49.409458	148.444257	737.9	3.596	7.3	8.2	1.68	7138	8.52	75.22

Robovetter Results

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006388443-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
006388443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006388443-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—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.

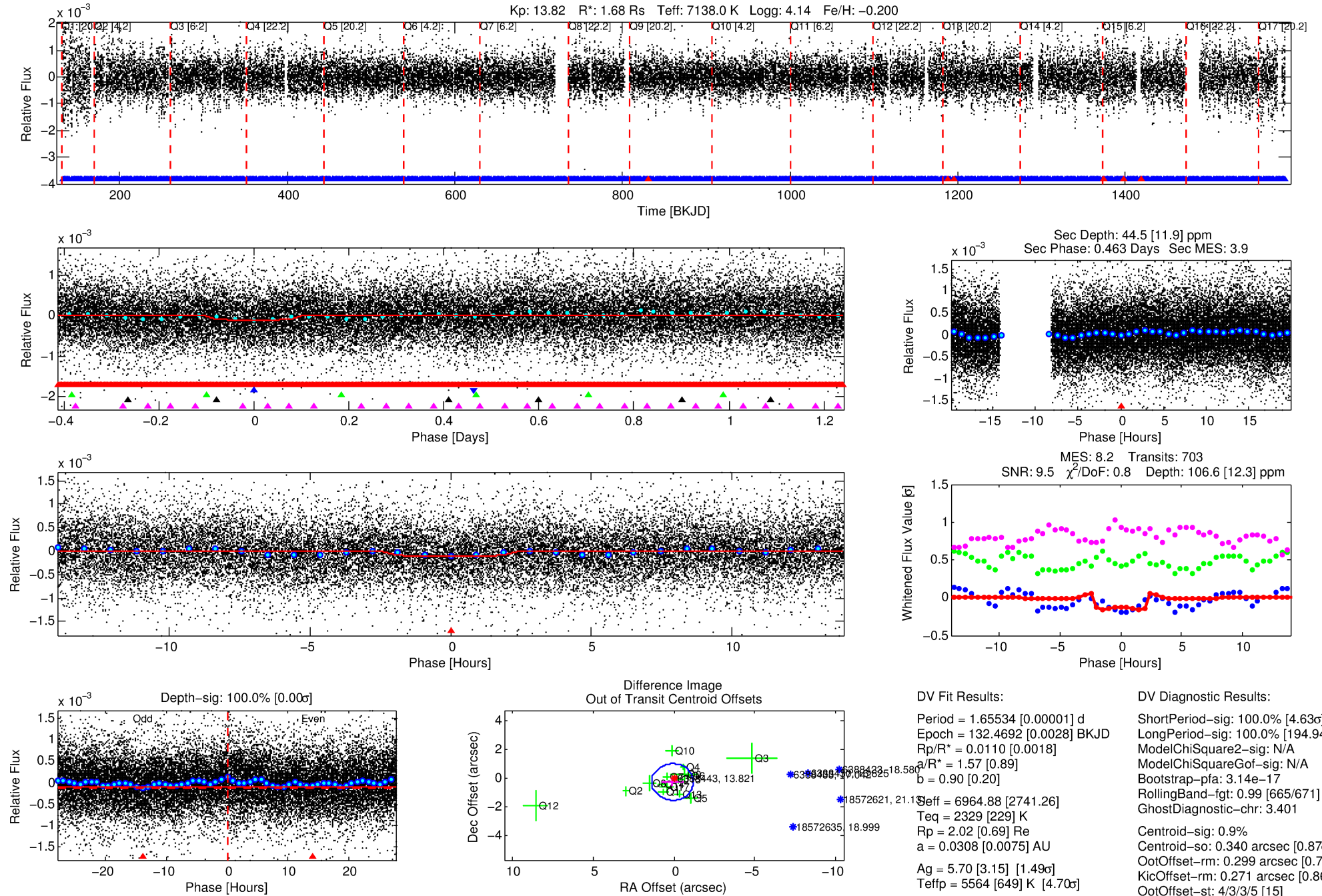
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388443-02

No Significant Match Found

DV One-Page Summary

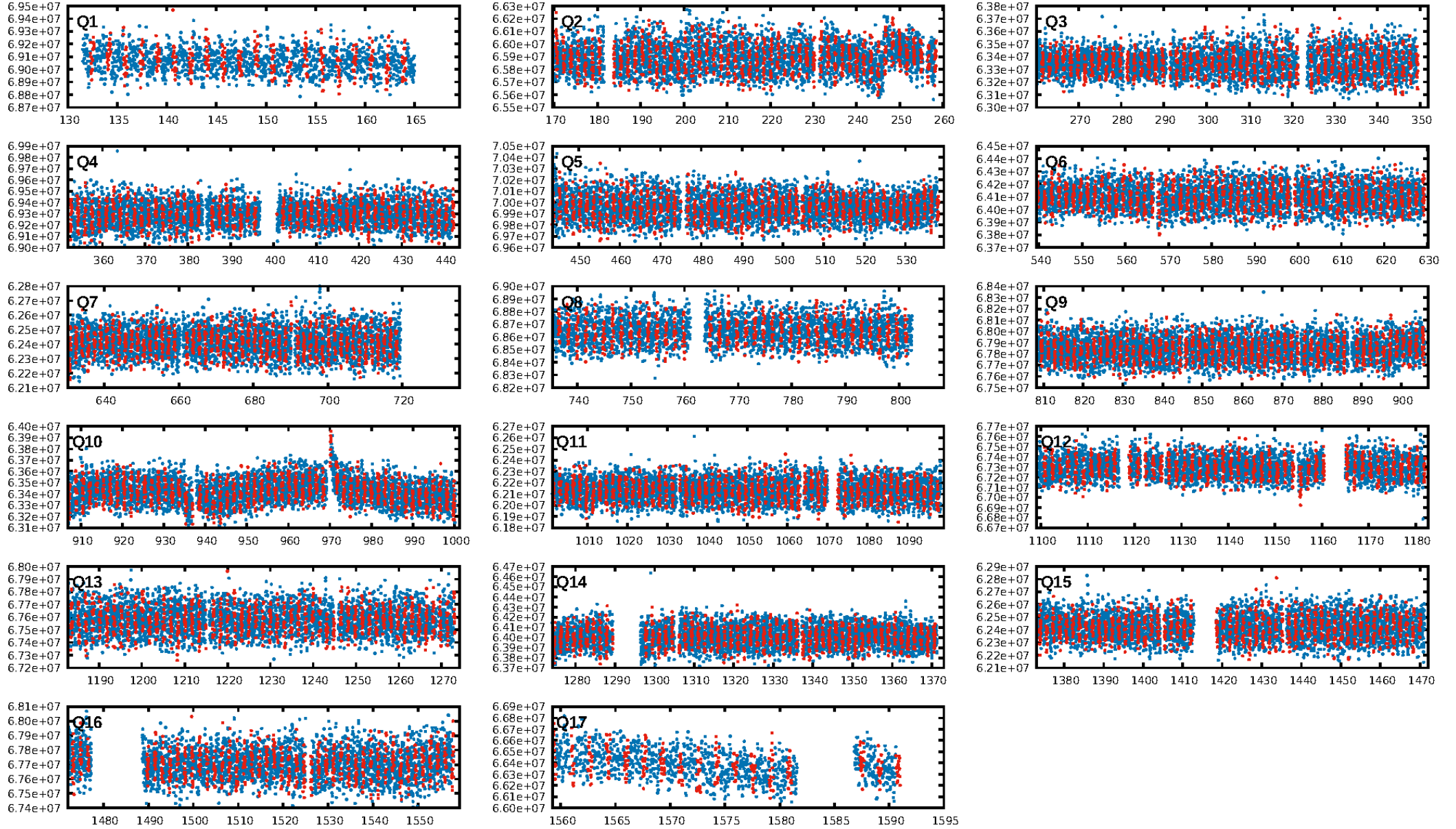
KIC: 6388443 Candidate: 2 of 5 Period: 1.655 d



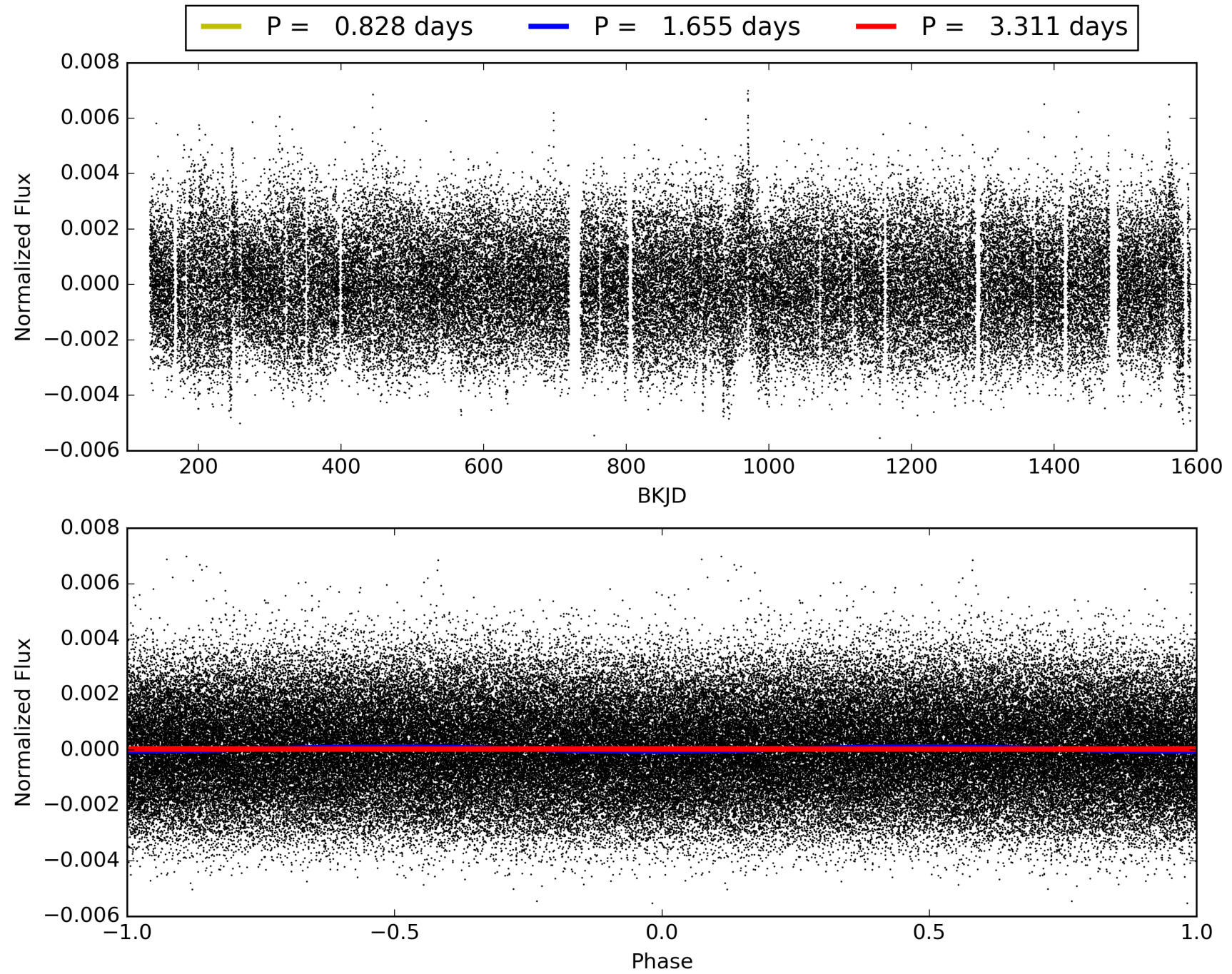
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:13 Z

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

TCE 006388443-02, PDC Light Curves

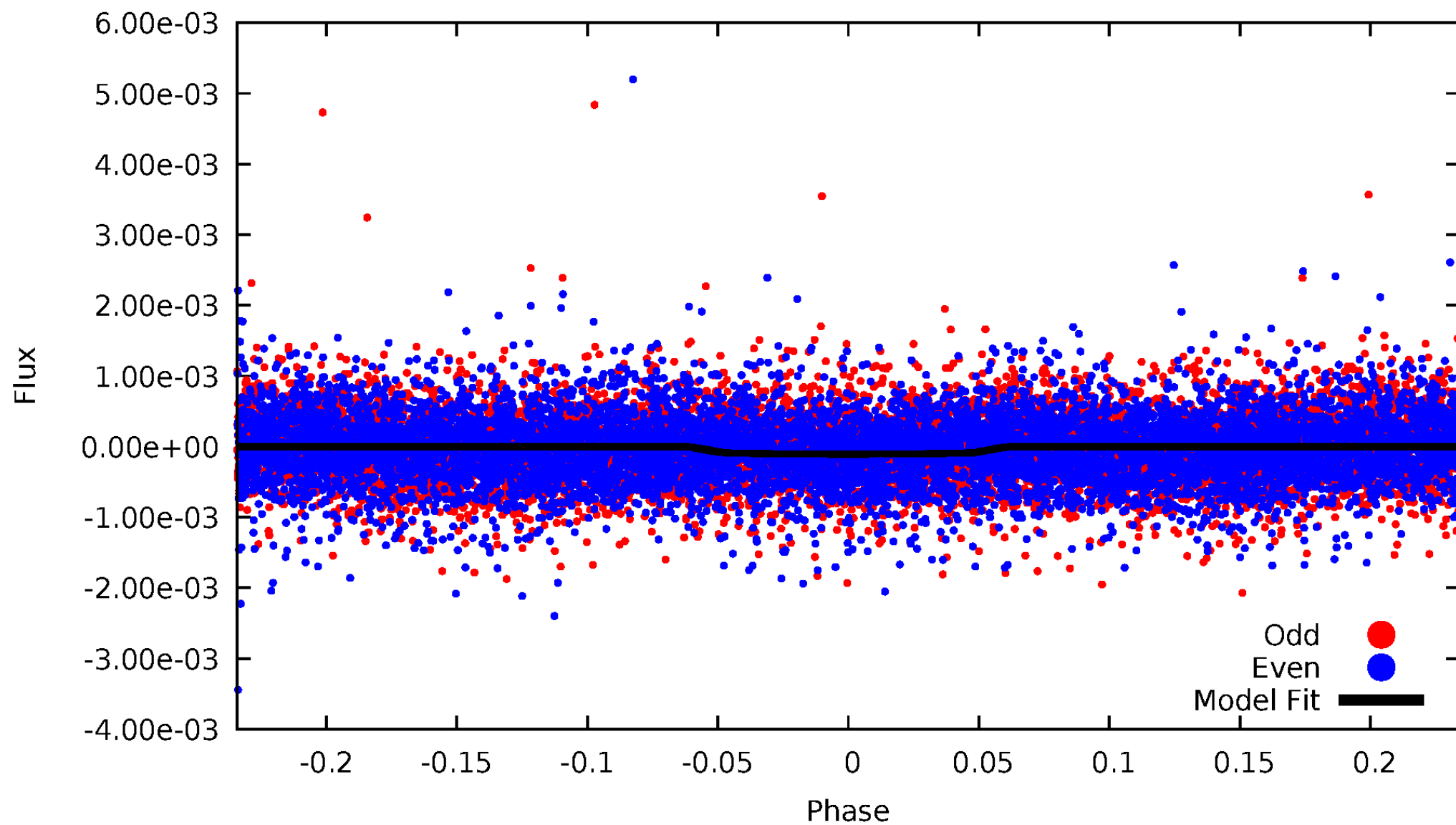


TCE 006388443-02



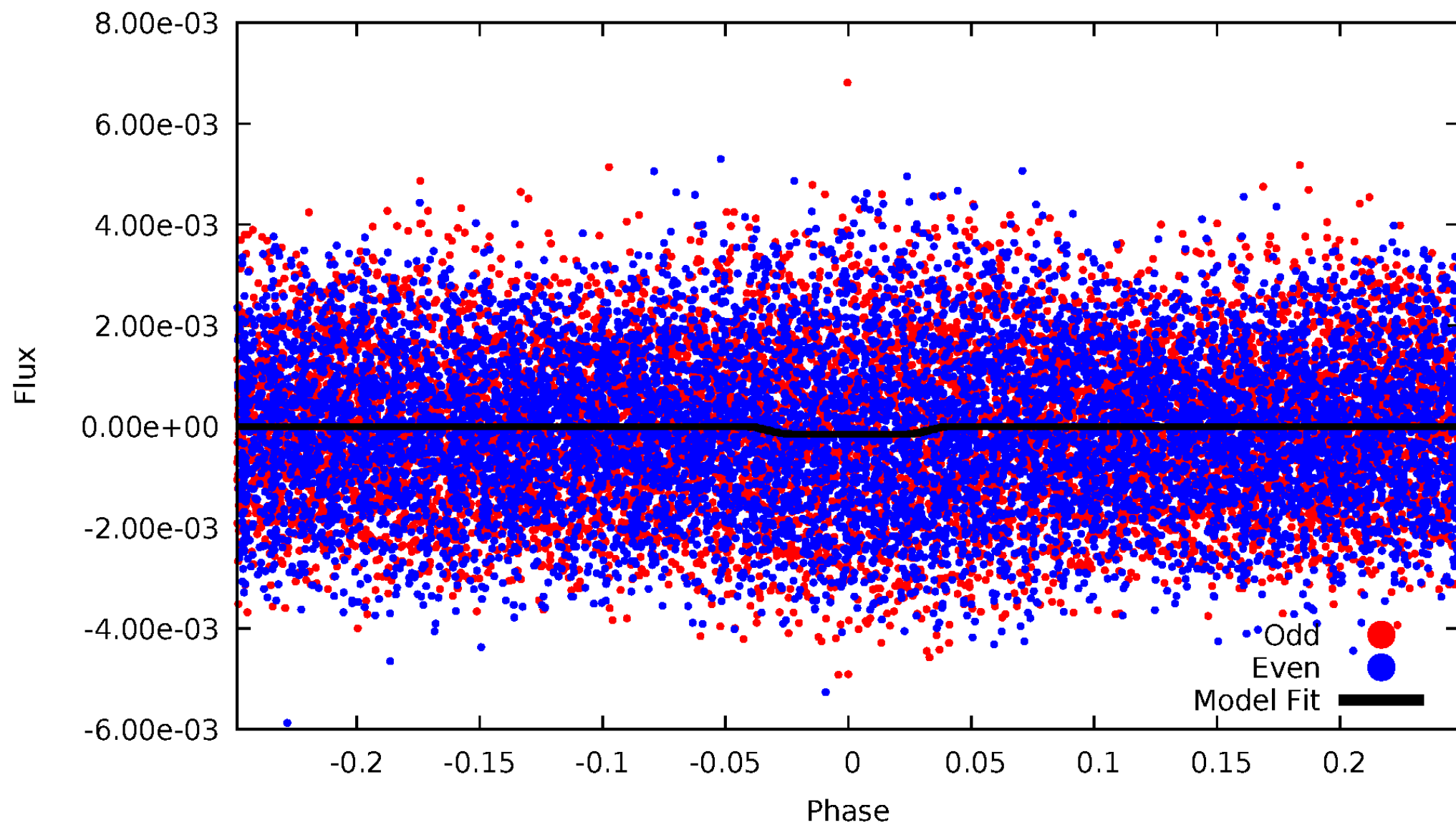
DV Odd/Even

TCE 006388443-02



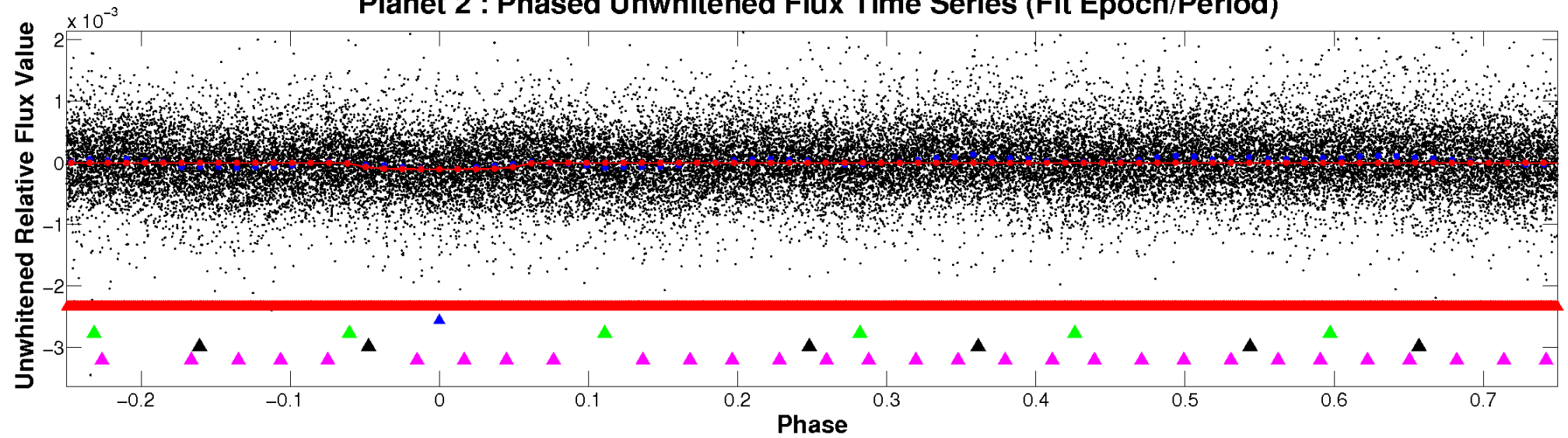
ALT Odd/Even

TCE 006388443-02

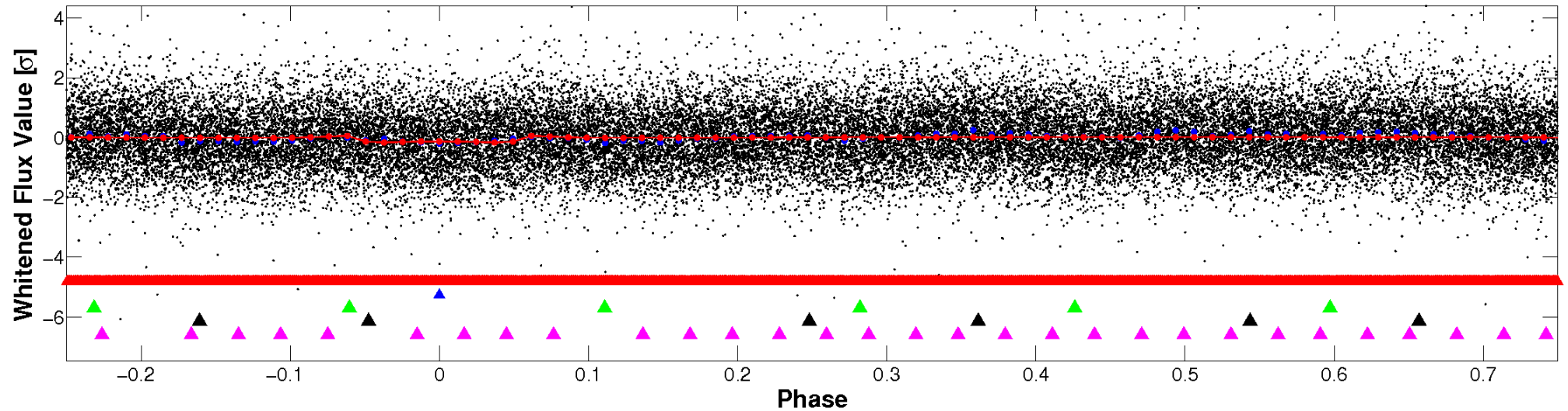


Non-Whitened Vs. Whitened Light Curve

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

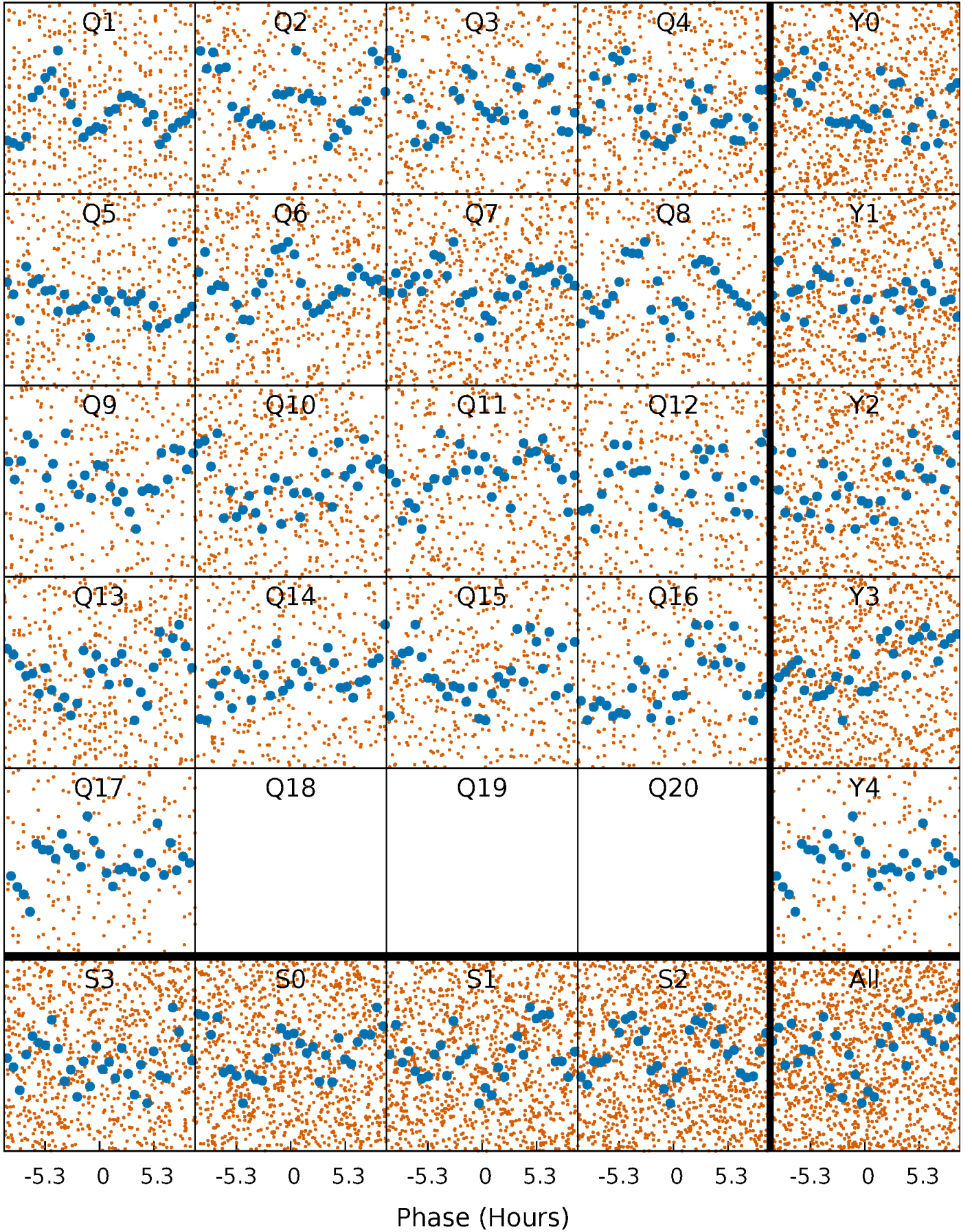


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



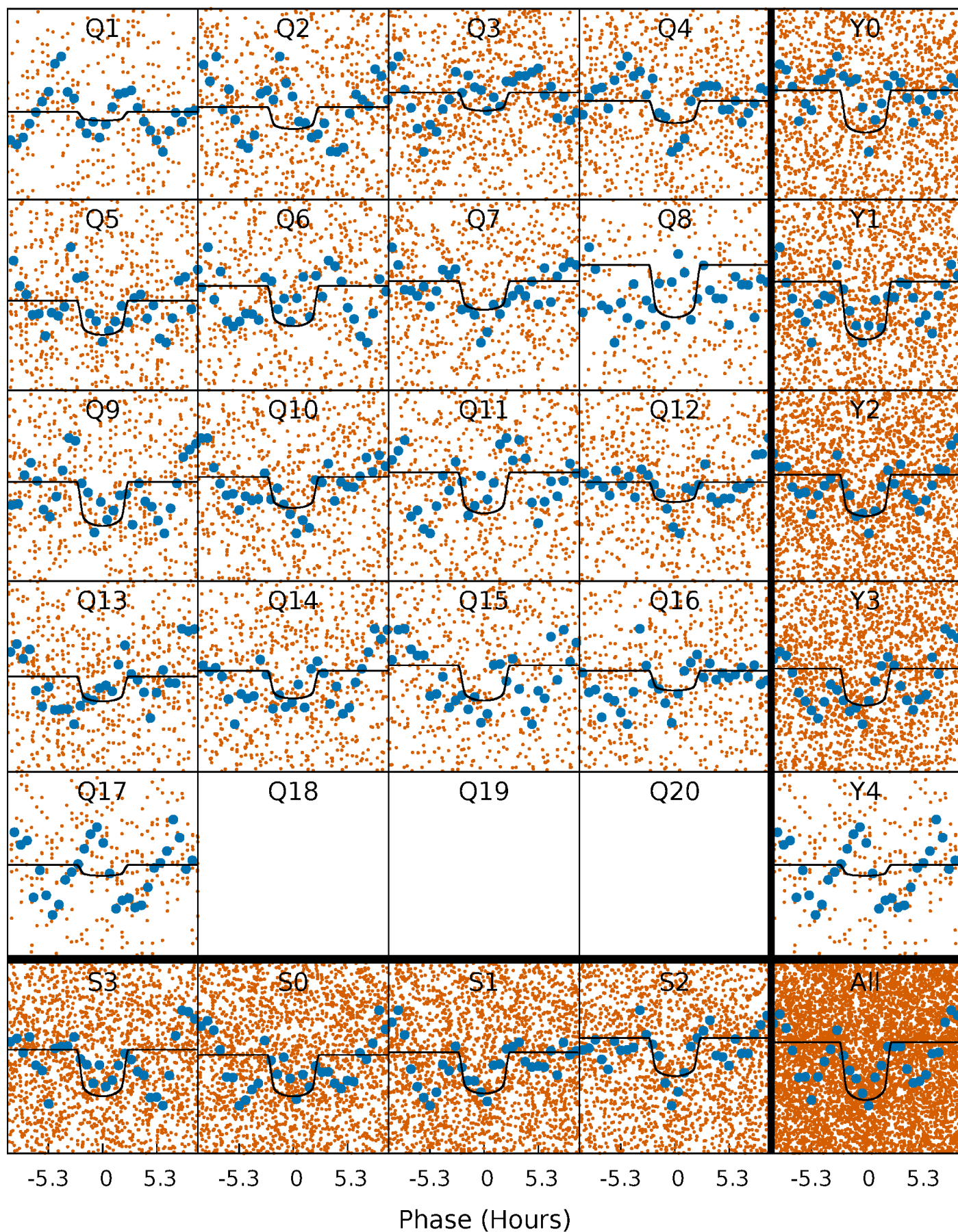
PDC Quarter-Phased Transit Curves

TCE 006388443-02 P= 1.655337 Days $T_0=132.469192$ (BKJD)



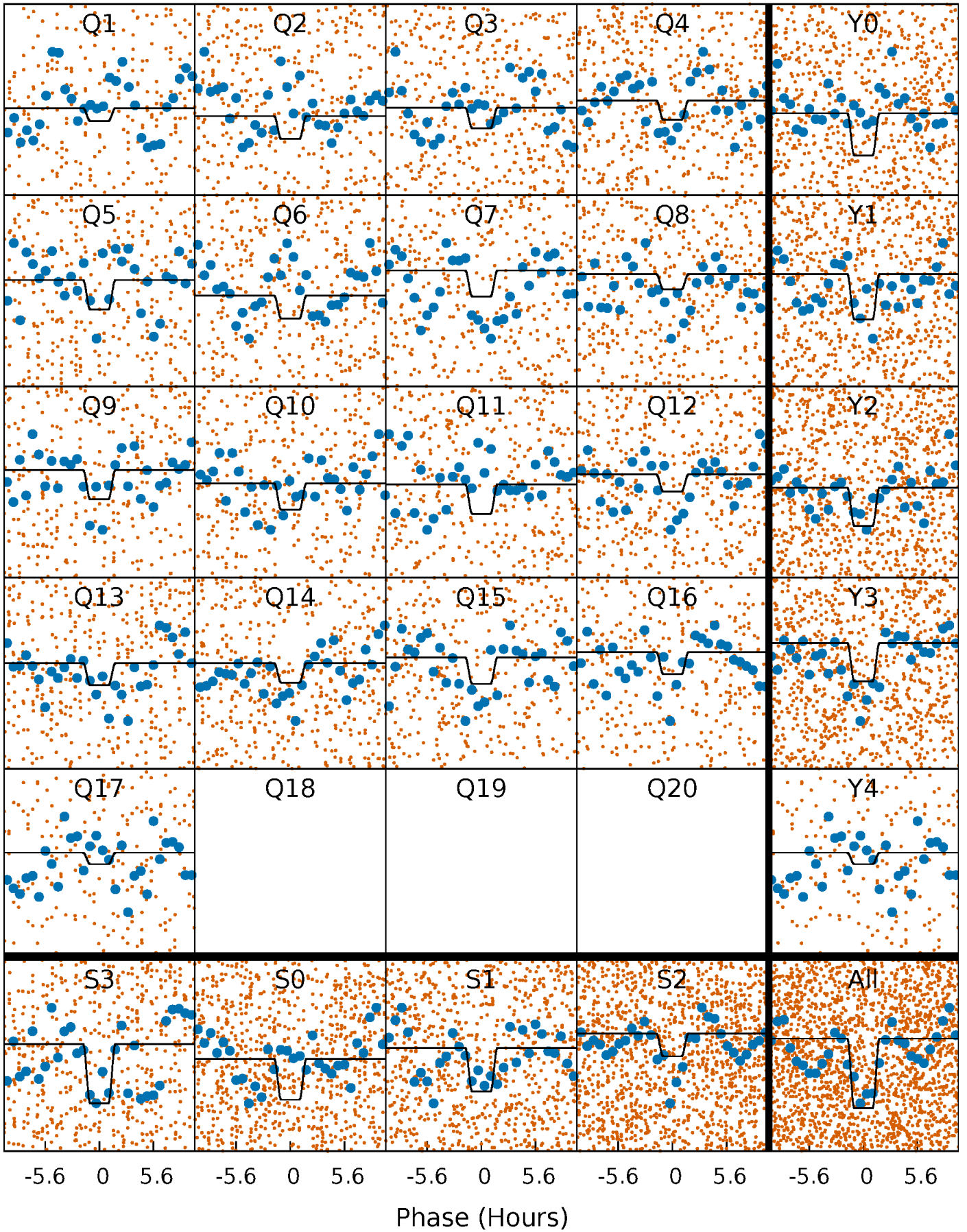
DV Quarter-Phased Transit Curves

TCE 006388443-02 $P = 1.655337$ Days $T_0 = 132.469192$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

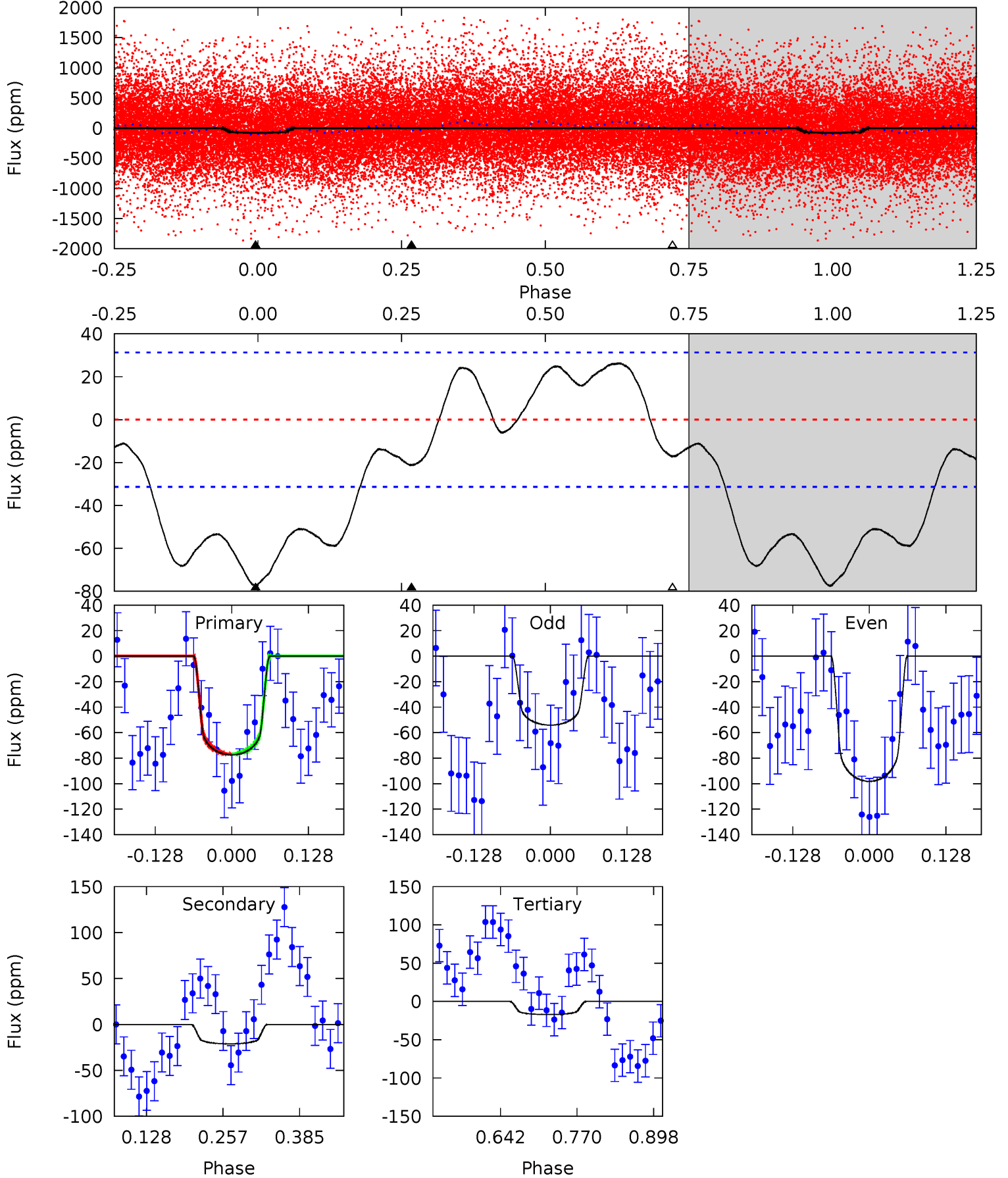
TCE 006388443-02 P= 1.655311 Days $T_0=132.469537$ (BKJD)



DV Model-Shift Uniqueness Test

006388443-02, P = 1.655337 Days, E = 130.813855 Days

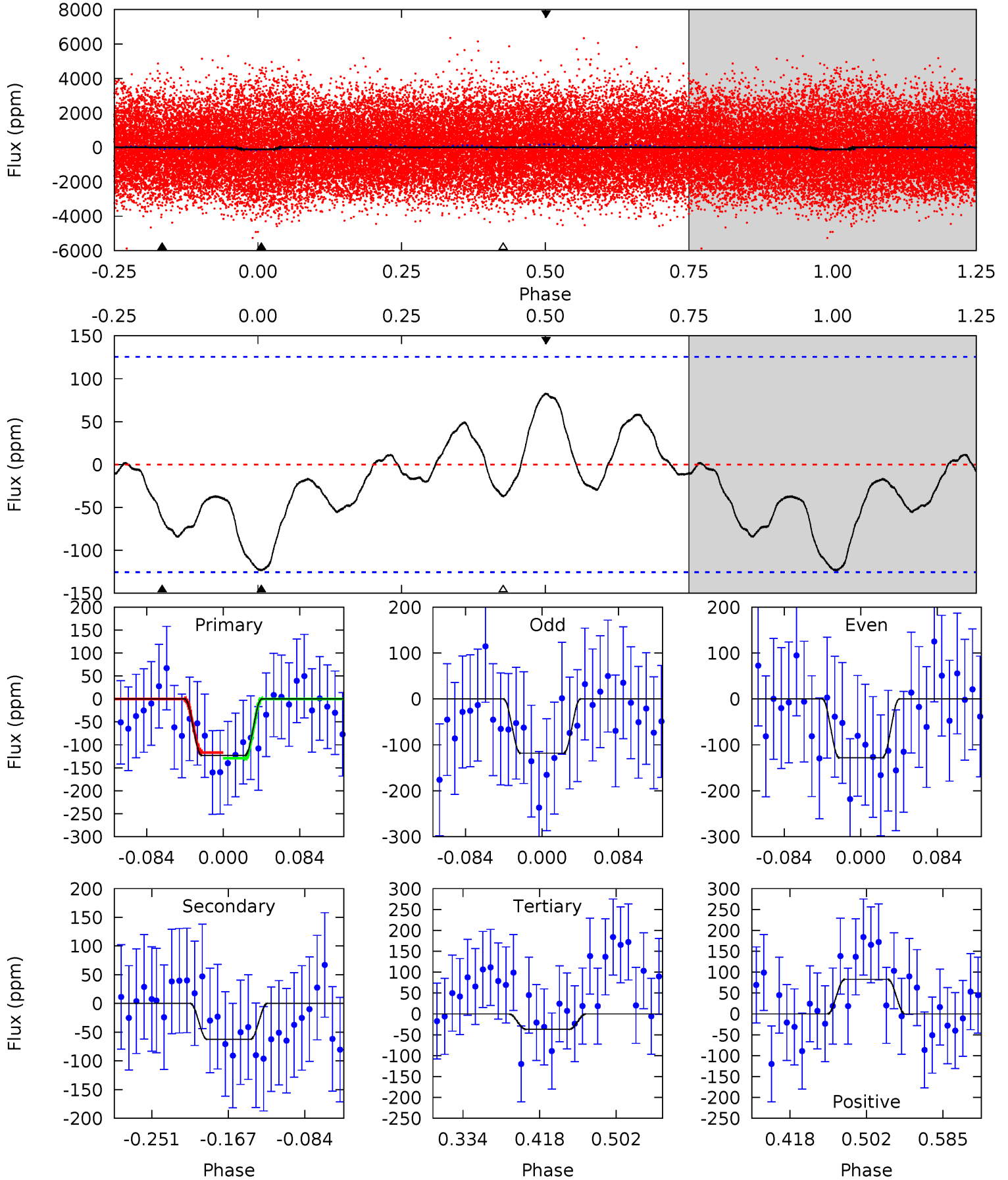
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	3.05	2.46	0	4.51	1.52	3.79	8.69	11.1	0.58	3.05	3.23	0.92	0.25	0.02



Alt Model-Shift Uniqueness Test

006388443-02, P = 1.655311 Days, E = 130.814226 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.51	2.29	1.35	3.03	4.60	1.73	1.28	3.16	1.49	0.94	-0.73	0.18	0.37	0.40	0.22



Stellar Parameters For KIC 006388443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7138^{+225}_{-325}	$4.137^{+0.153}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$1.684^{+0.501}_{-0.410}$	$1.419^{+0.209}_{-0.232}$	$0.419^{+0.337}_{-0.218}$
	+3%/-5%	+4%/-5%	+125%/-175%	+30%/-24%	+15%/-16%	+81%/-52%
Source	PHO1	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 006388443-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 7	$2.04^{+0.52}_{-0.44}$	3263^{+277}_{-243}	4569^{+539}_{-542}	$2.497^{+1.943}_{-1.117}$
Alt.	-63 ± 27	$2.26^{+0.50}_{-0.43}$	3266^{+262}_{-229}	5601^{+835}_{-767}	$6.200^{+4.356}_{-2.929}$

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

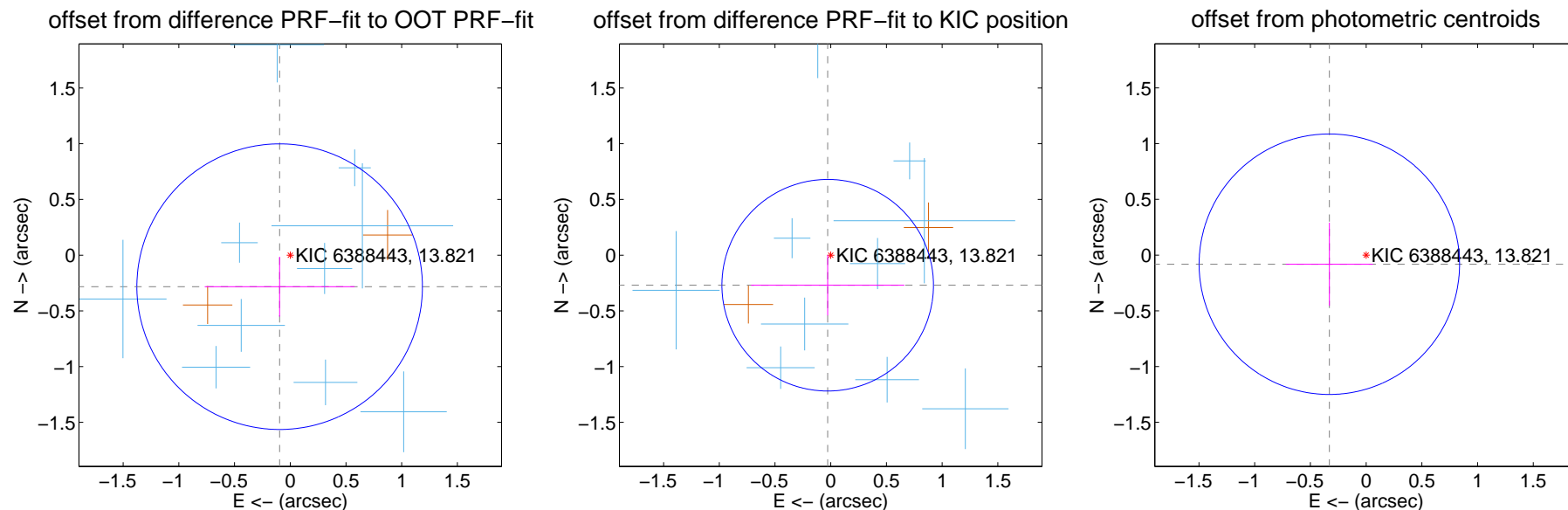
DV Centroid Data

Supplemental centroid analysis for 006388443-02. Kepler magnitude: 13.82. Transit SNR 9.47

There are 10 quarters with good PRF difference image offsets

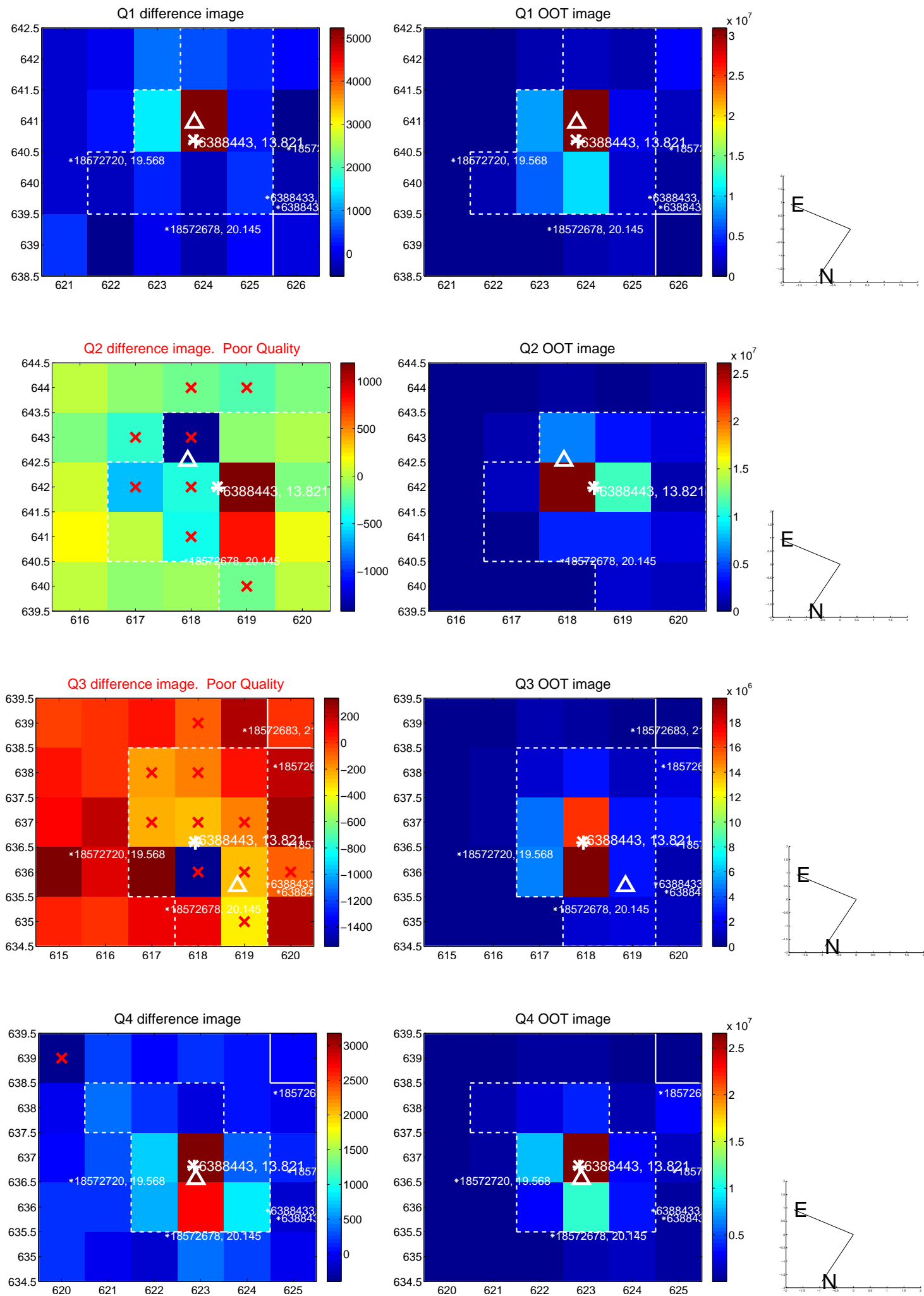
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.299 ± 0.427	0.70	0.095 ± 0.672	-0.283 ± 0.268
PRF-fit source offset from KIC position	0.271 ± 0.317	0.86	0.027 ± 0.688	-0.270 ± 0.270
photometric centroid source offset	0.34 ± 0.39	0.87	0.33 ± 0.39	-0.08 ± 0.37

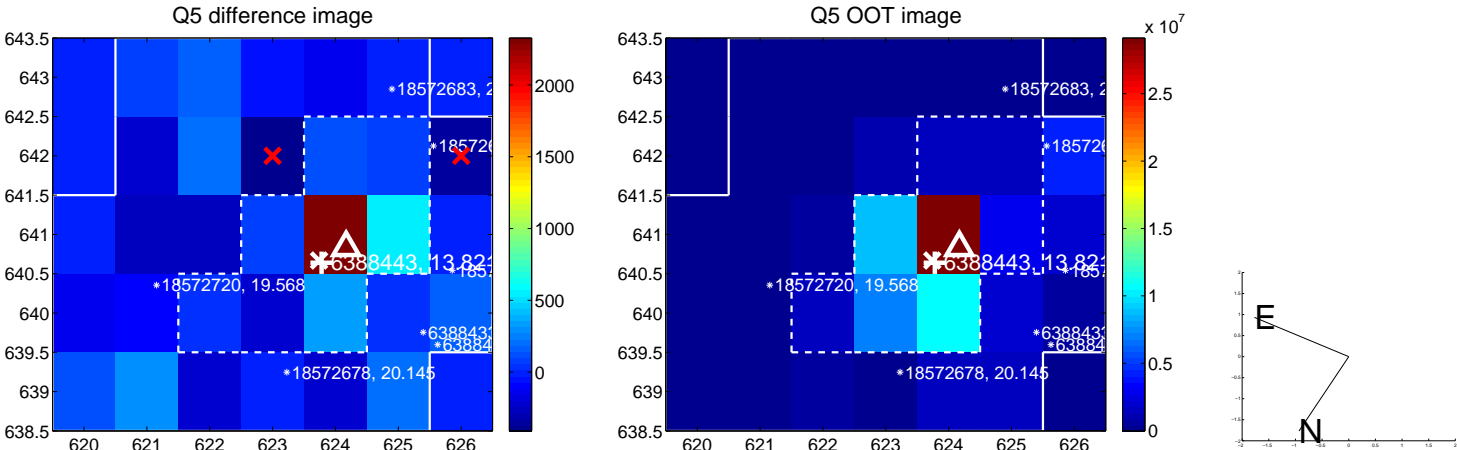


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

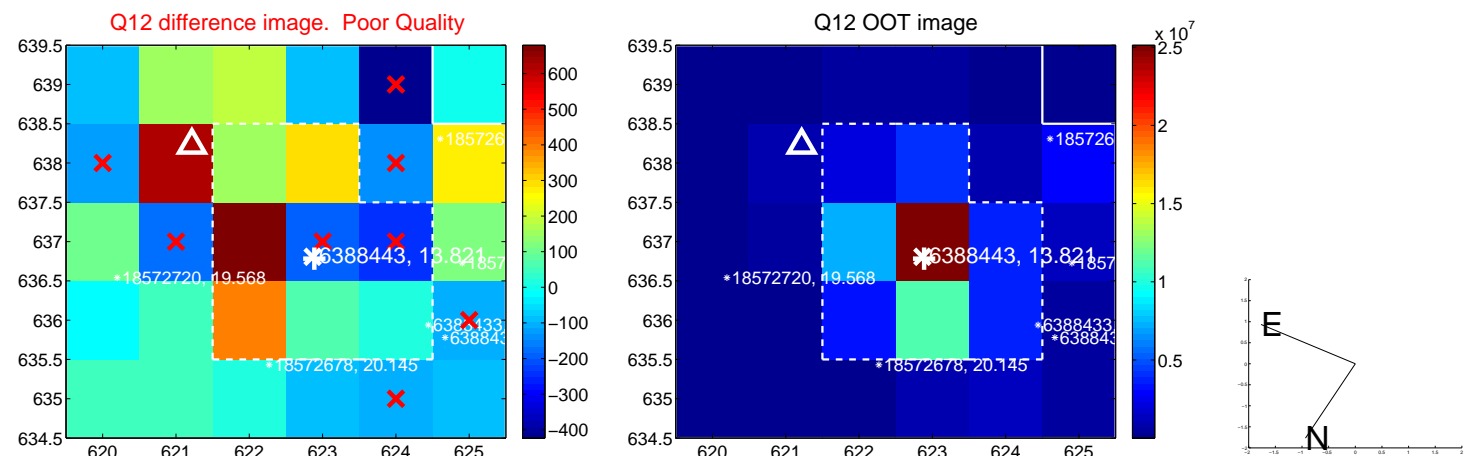
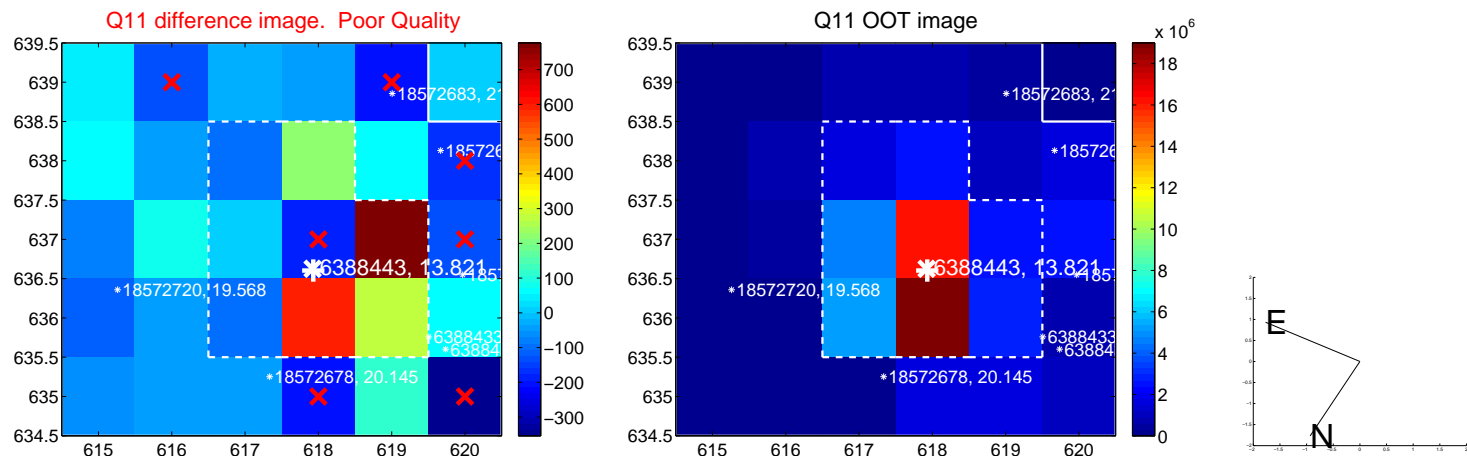
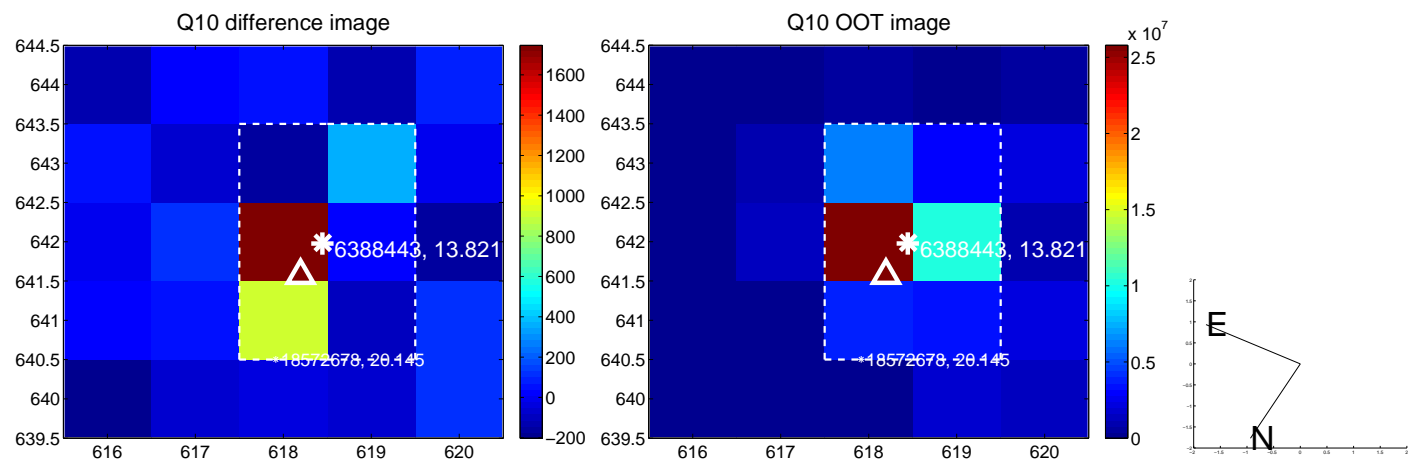
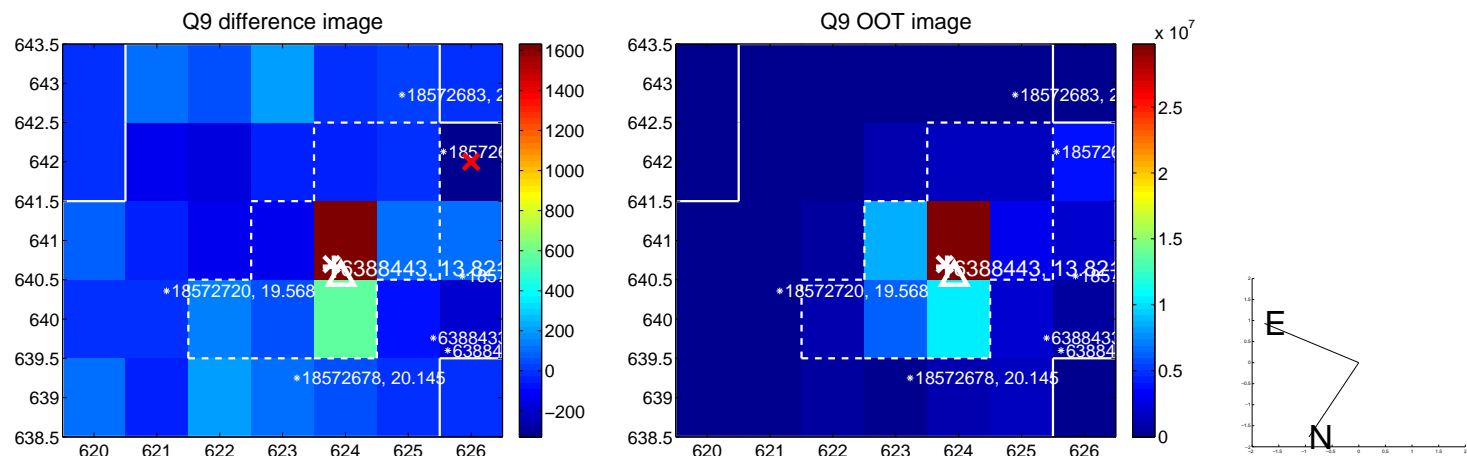
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



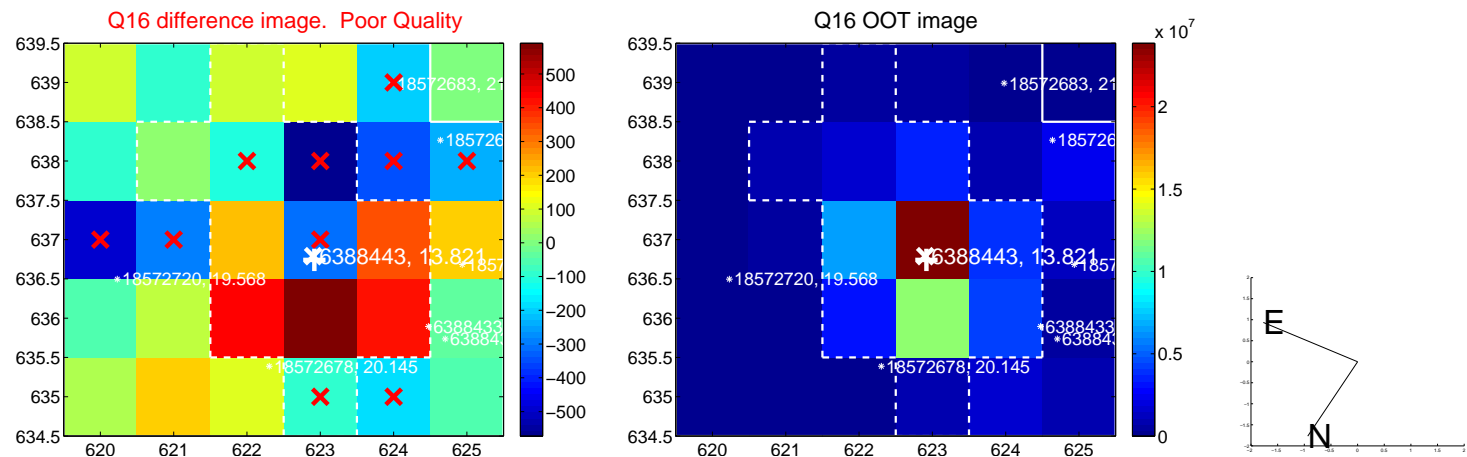
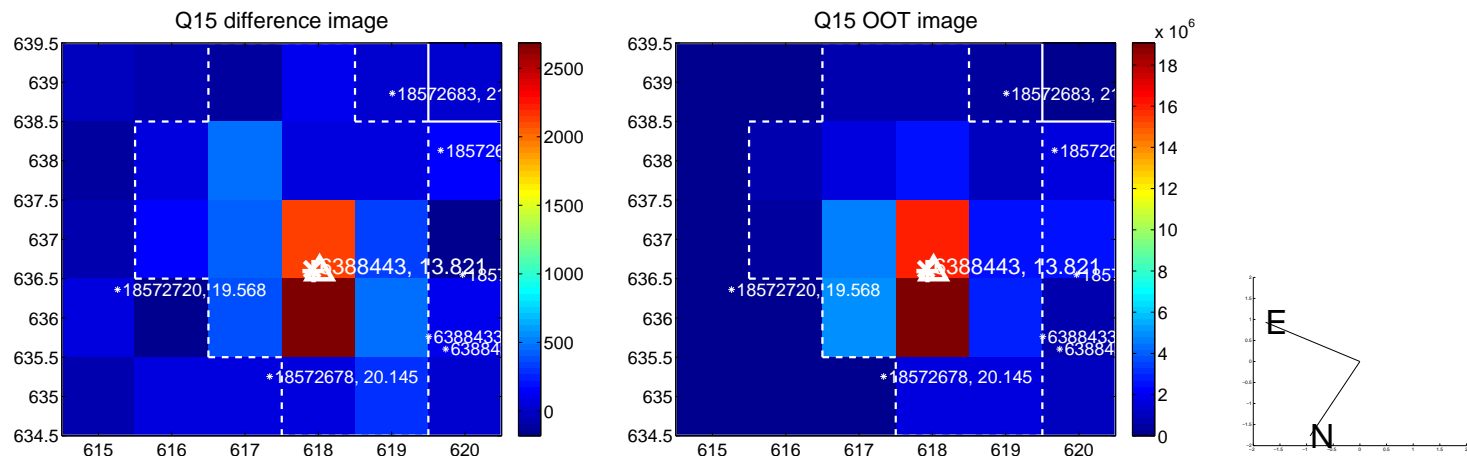
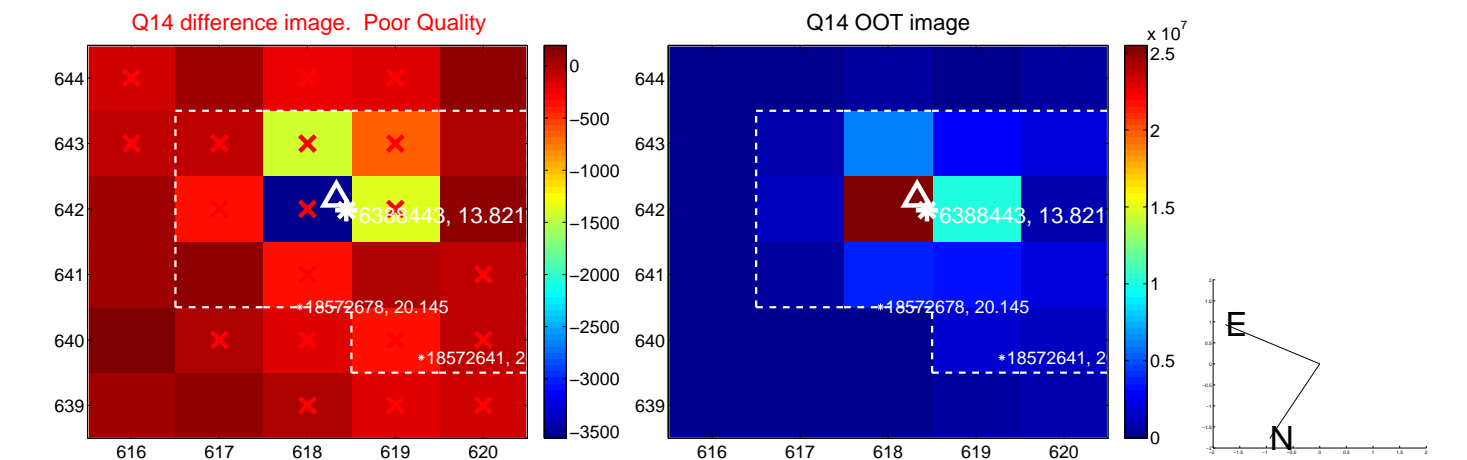
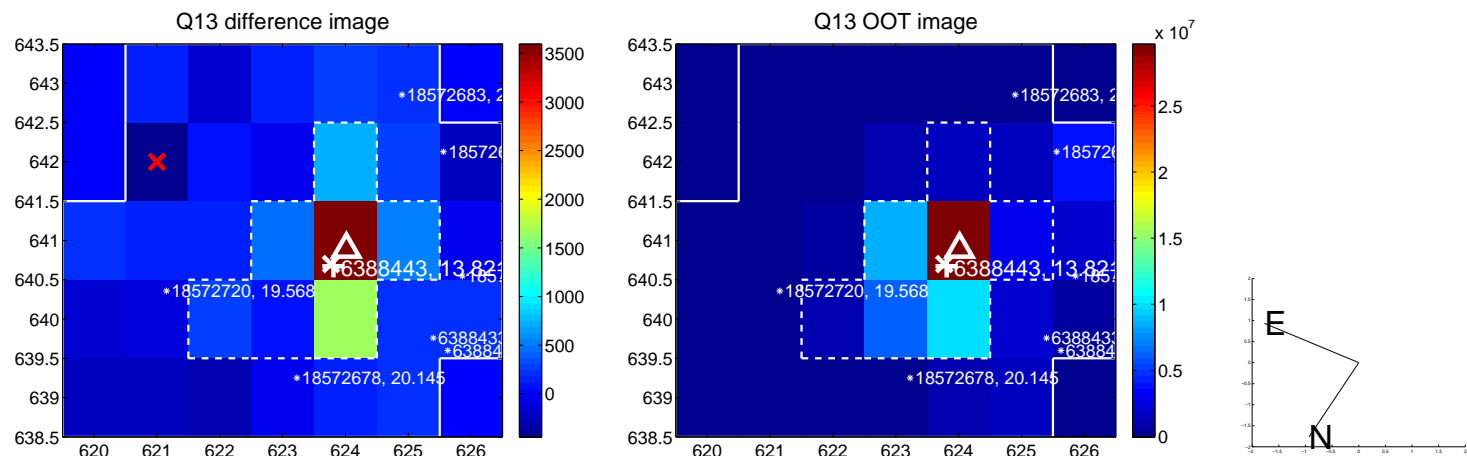
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



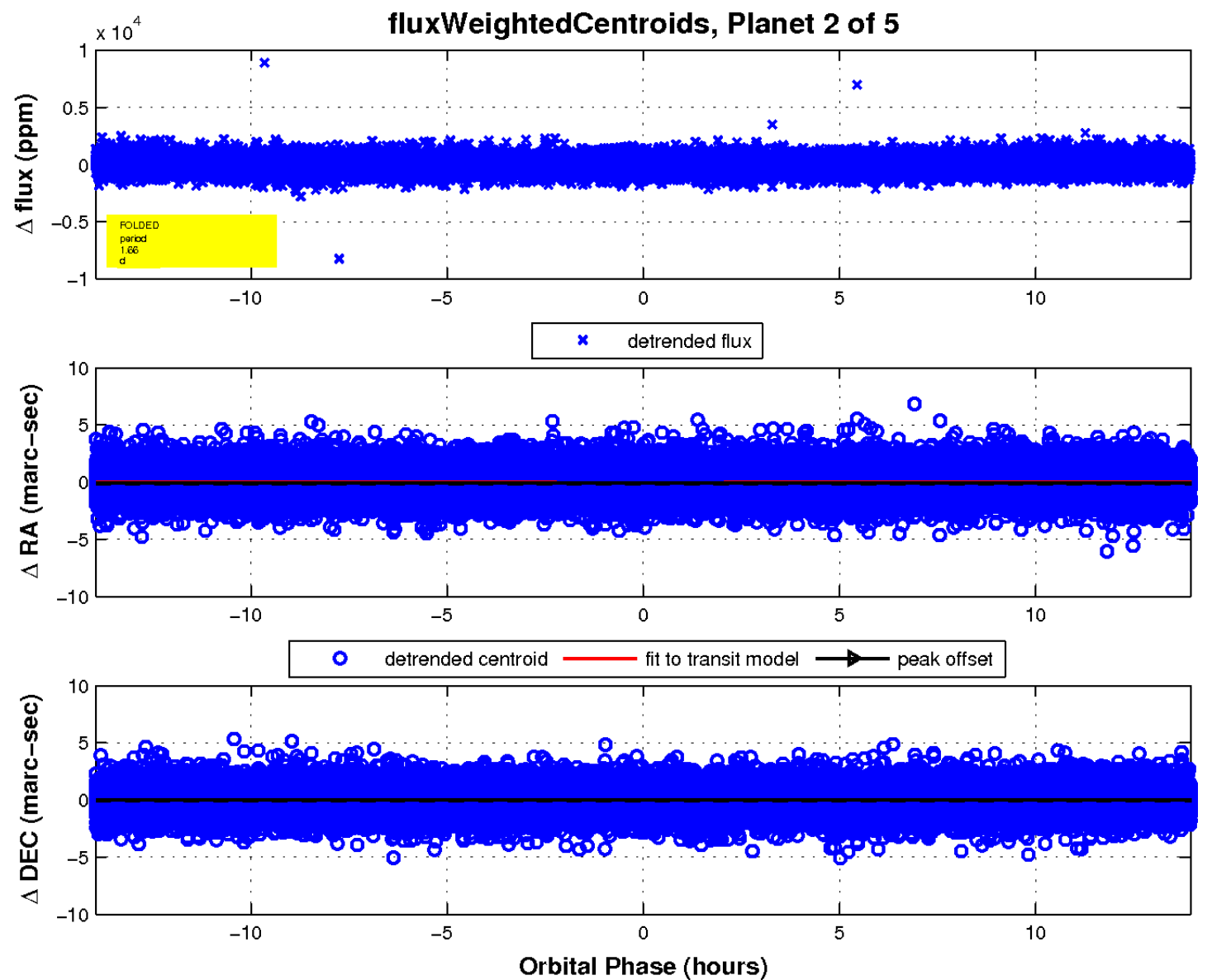
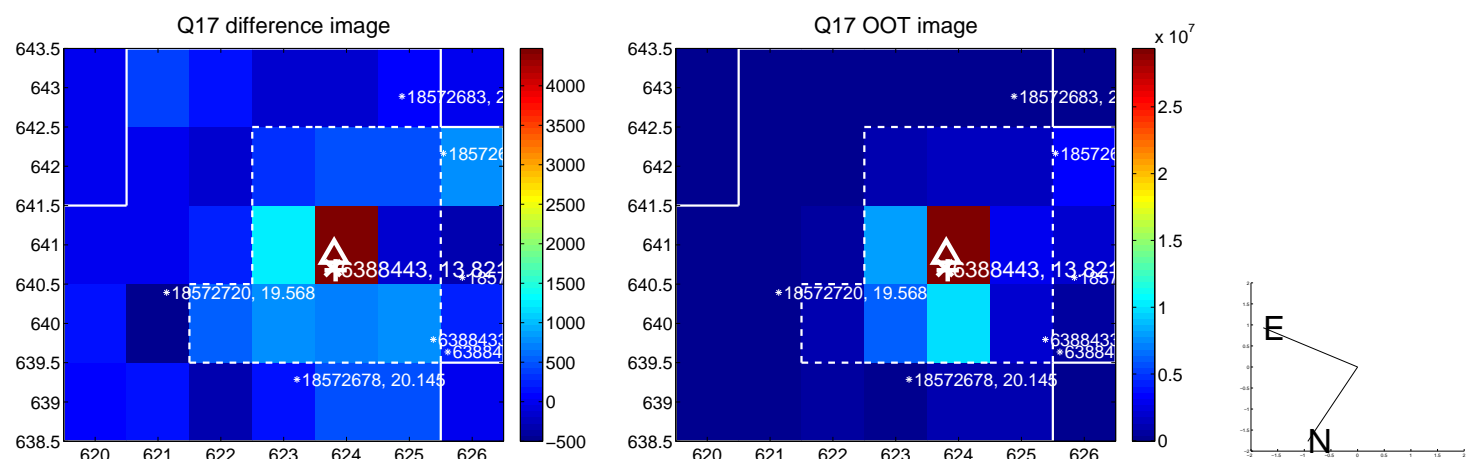
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

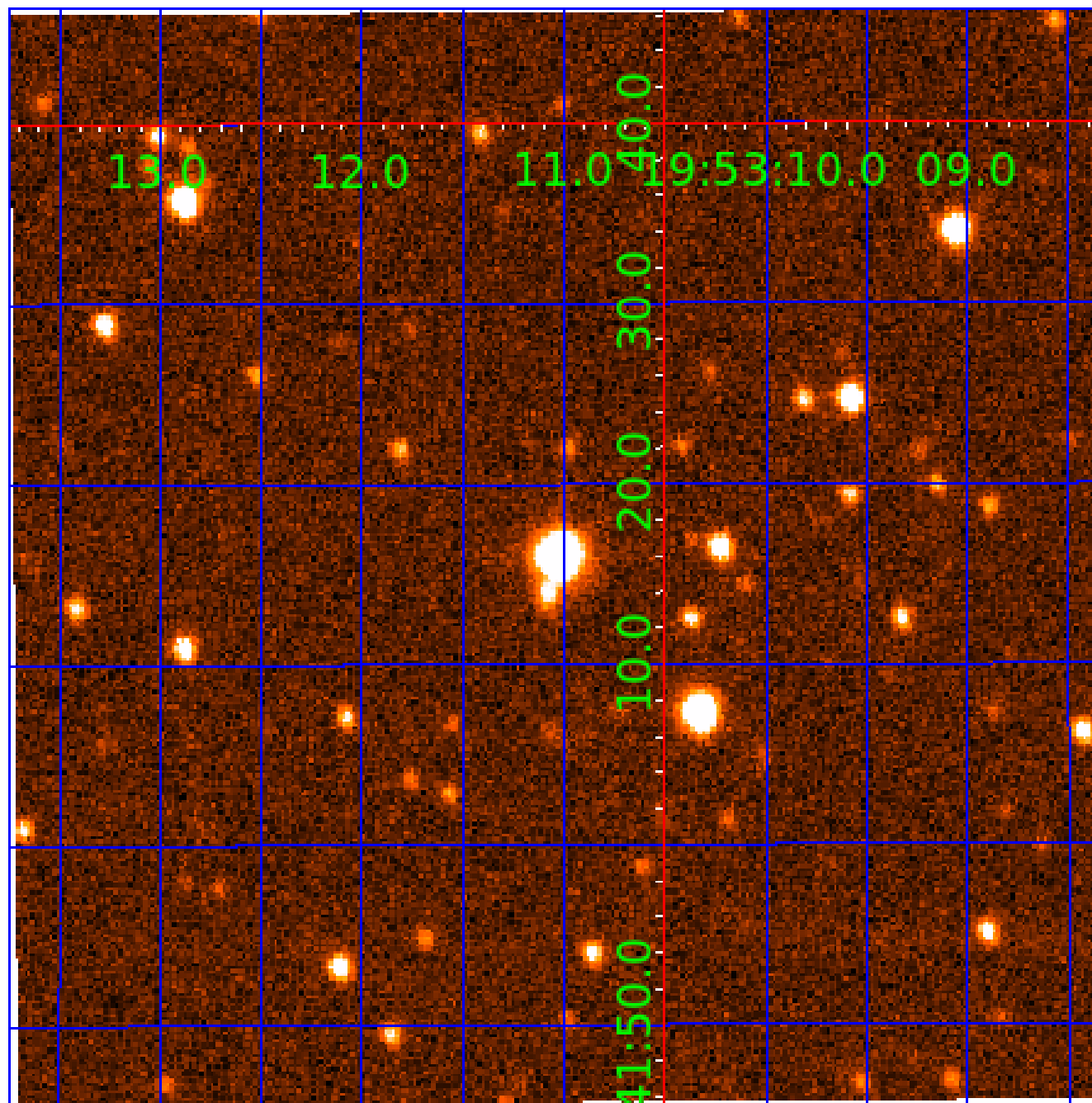


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006388443

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})
006388443-01	OBS	No	0.667042	131.748672	62.1	2.148	9.7	9.9	1.68	7138	1.54	23400.46
006388443-02	OBS	No	1.655337	132.469192	106.6	4.651	8.2	9.5	1.68	7138	2.02	6964.88
006388443-03	OBS	No	251.327799	137.902090	721.7	11.296	8.5	7.1	1.68	7138	4.91	8.60
006388443-04	OBS	No	246.155891	165.309787	902.9	3.162	7.8	7.2	1.68	7138	5.41	8.84
006388443-05	OBS	No	49.409458	148.444257	737.9	3.596	7.3	8.2	1.68	7138	8.52	75.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006388443-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
006388443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006388443-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—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.

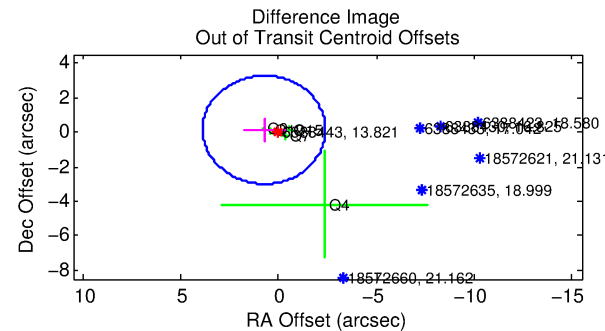
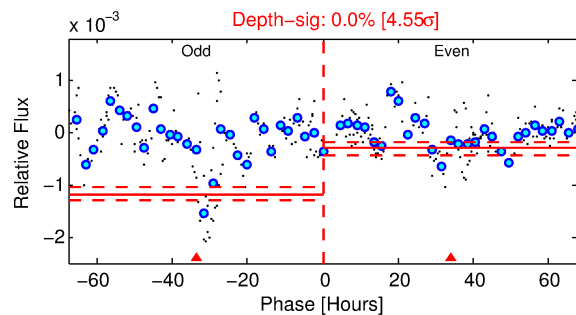
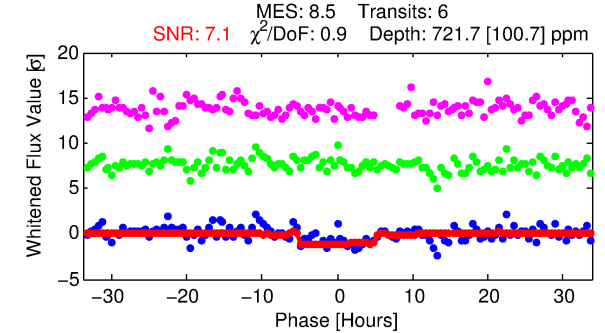
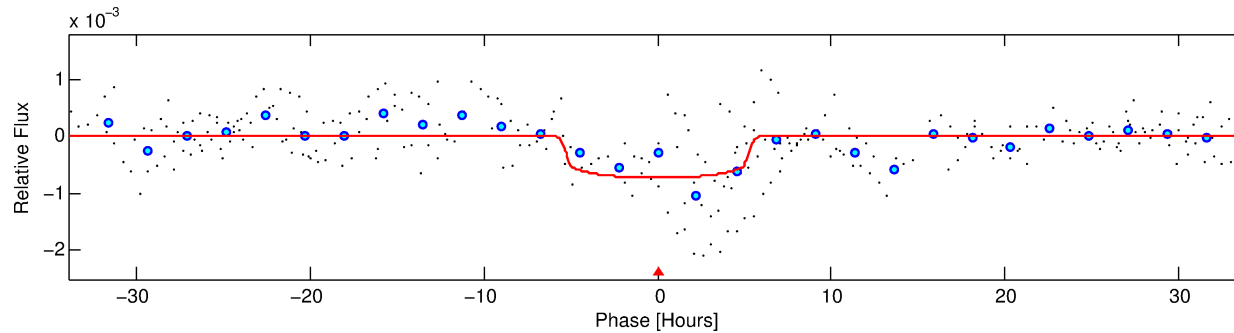
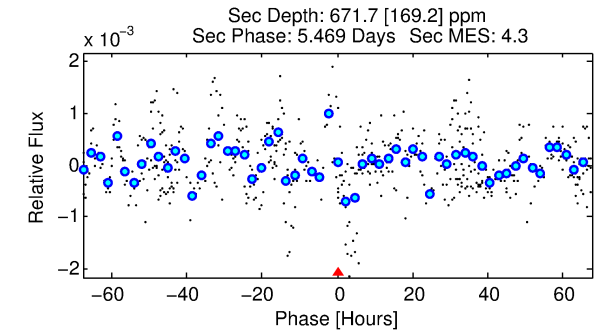
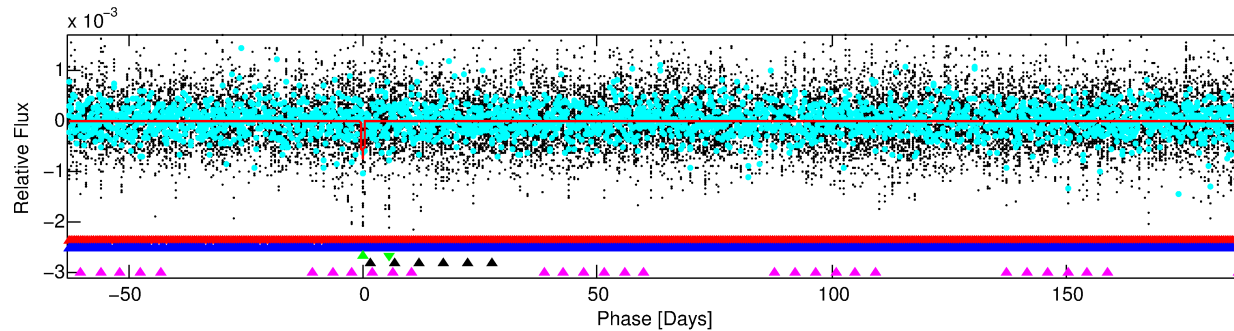
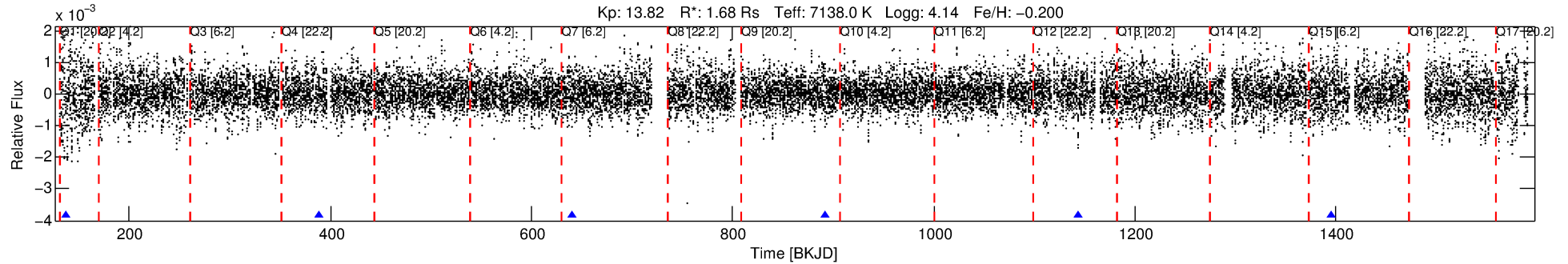
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388443-03

No Significant Match Found

DV One-Page Summary

KIC: 6388443 Candidate: 3 of 5 Period: 251.328 d



DV Fit Results:

Period = 251.32780 [0.00419] d
Epoch = 137.9021 [0.0138] BKJD
Rp/R* = 0.0267 [0.0034]
a/R* = 118.80 [69.36]
b = 0.75 [0.34]
Seff = 8.60 [3.38]
Teq = 437 [43] K
Rp = 4.91 [1.59] Re
a = 0.8758 [0.2144] AU
Ag = 11753.86 [5897.77] [1.99σ]
Teffp = 7029 [710] K [9.27σ]

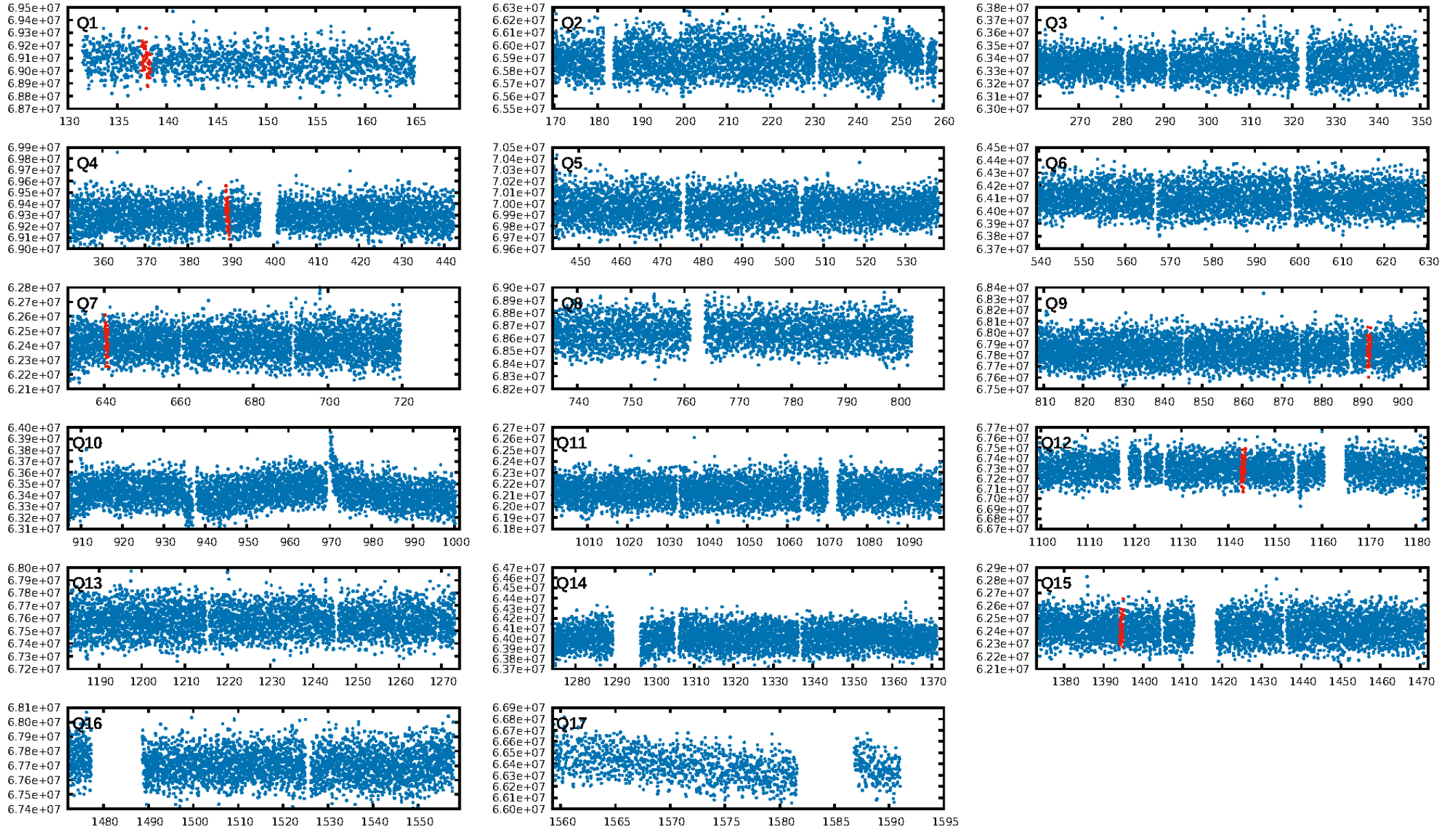
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.58σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.08e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -1.962
Centroid-sig: 0.0%
Centroid-so: 0.845 arcsec [1.76σ]
OotOffset-rm: 0.758 arcsec [0.73σ]
OotOffset-st: 0/2/2/1 [5]
KicOffset-rm: 0.582 arcsec [0.57σ]
KicOffset-st: 0/2/2/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.00 [0/6]

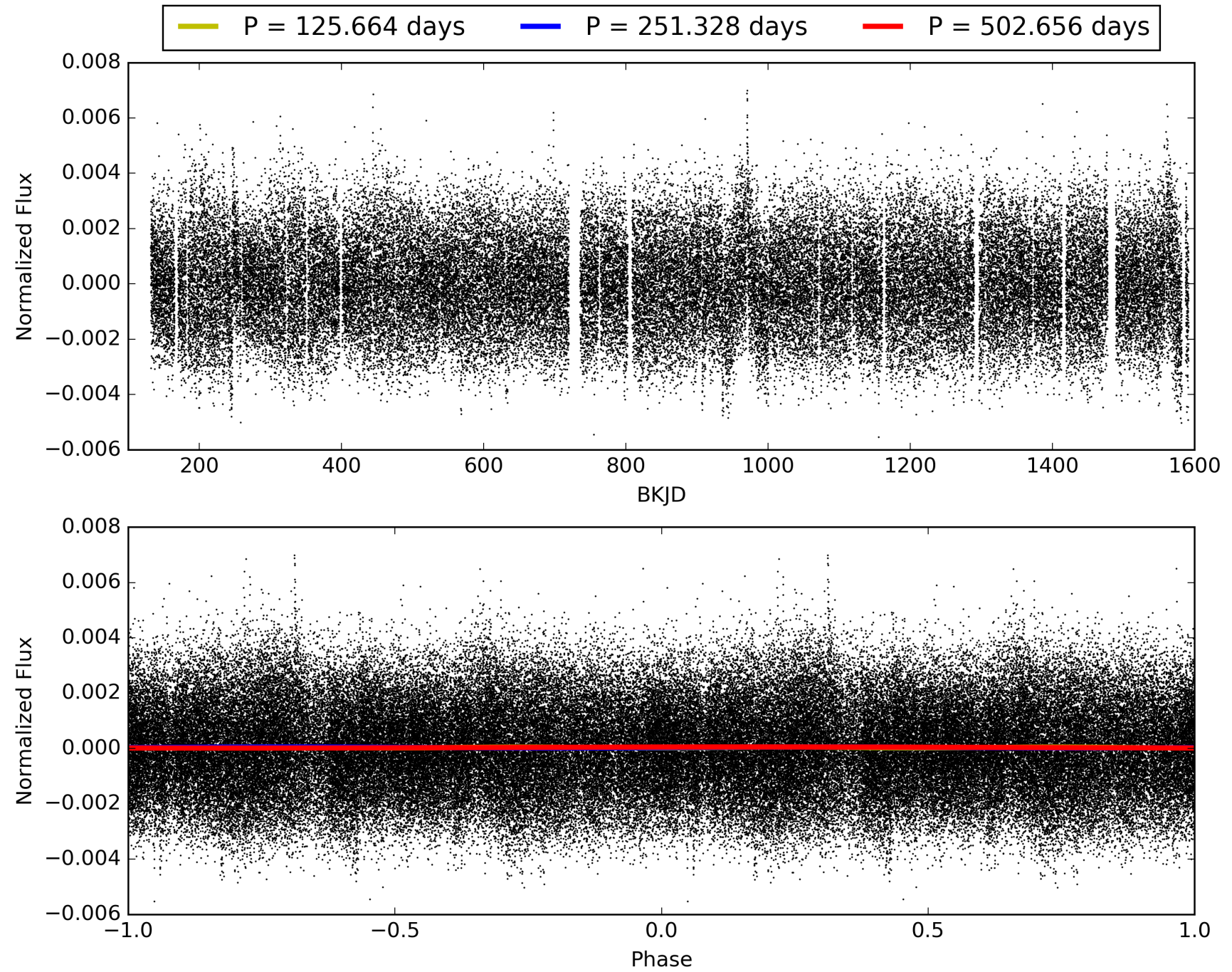
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:21 Z

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

TCE 006388443-03, PDC Light Curves

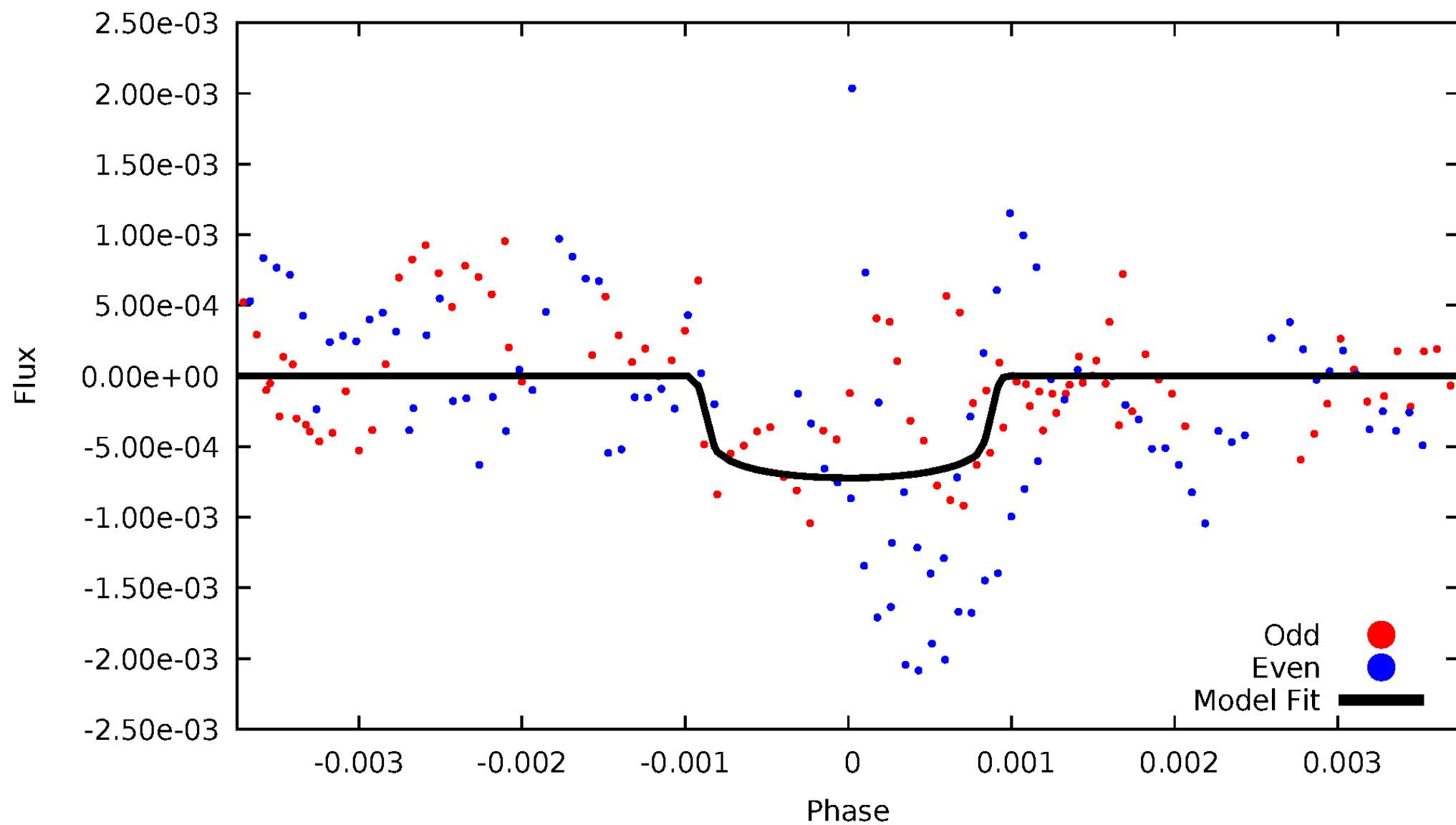


TCE 006388443-03



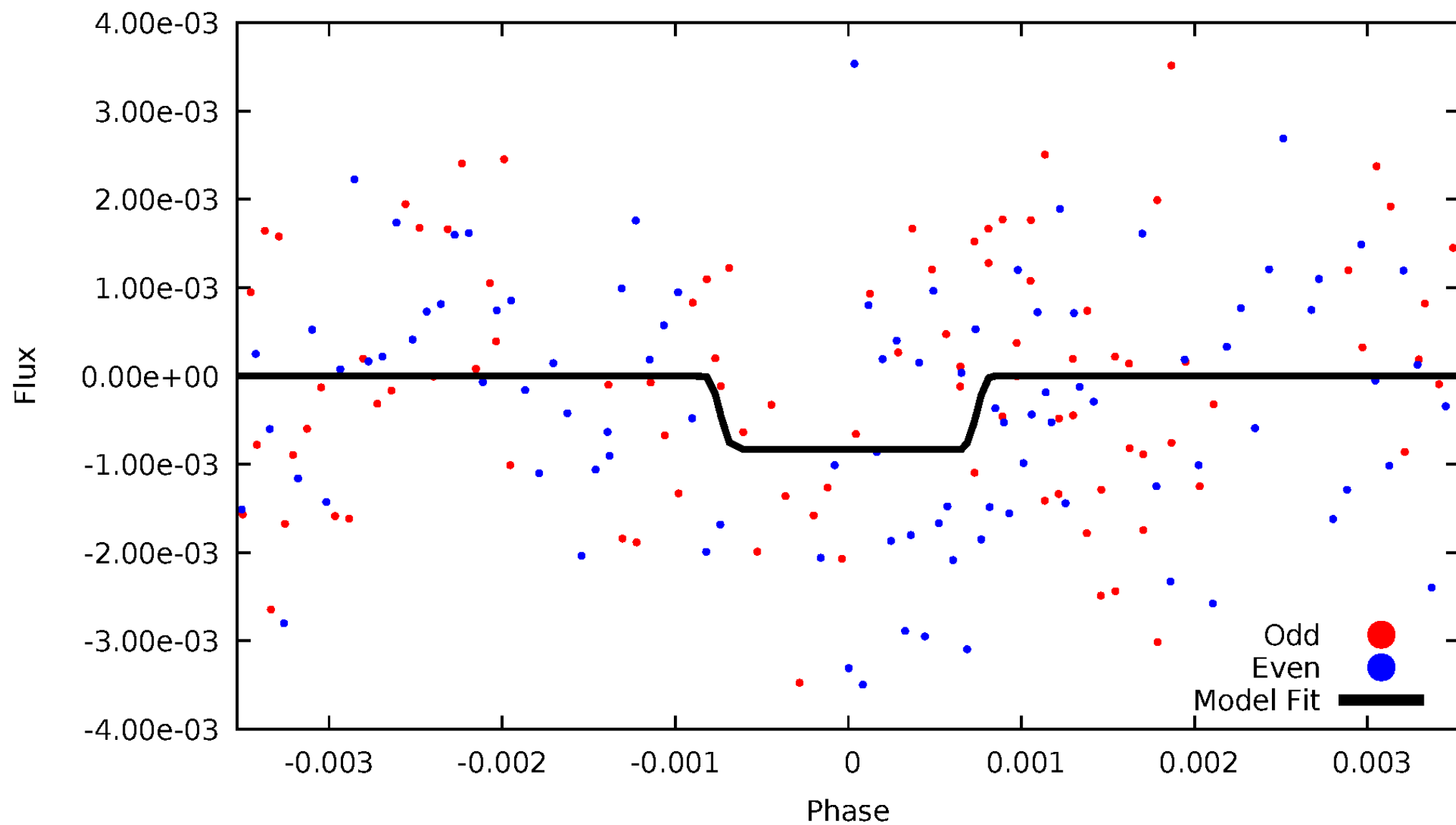
DV Odd/Even

TCE 006388443-03



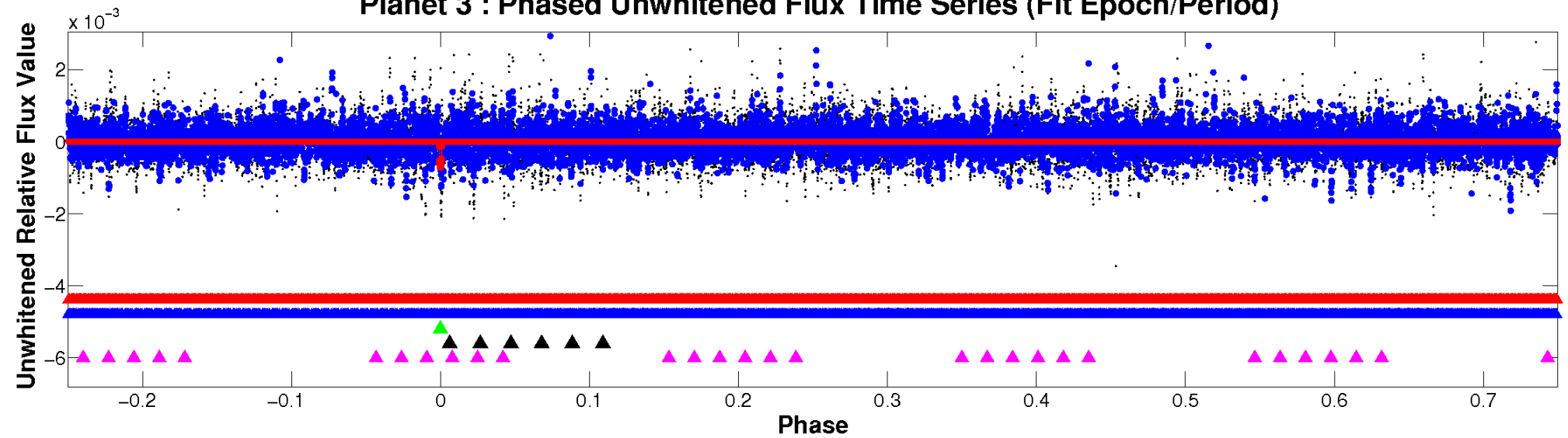
ALT Odd/Even

TCE 006388443-03

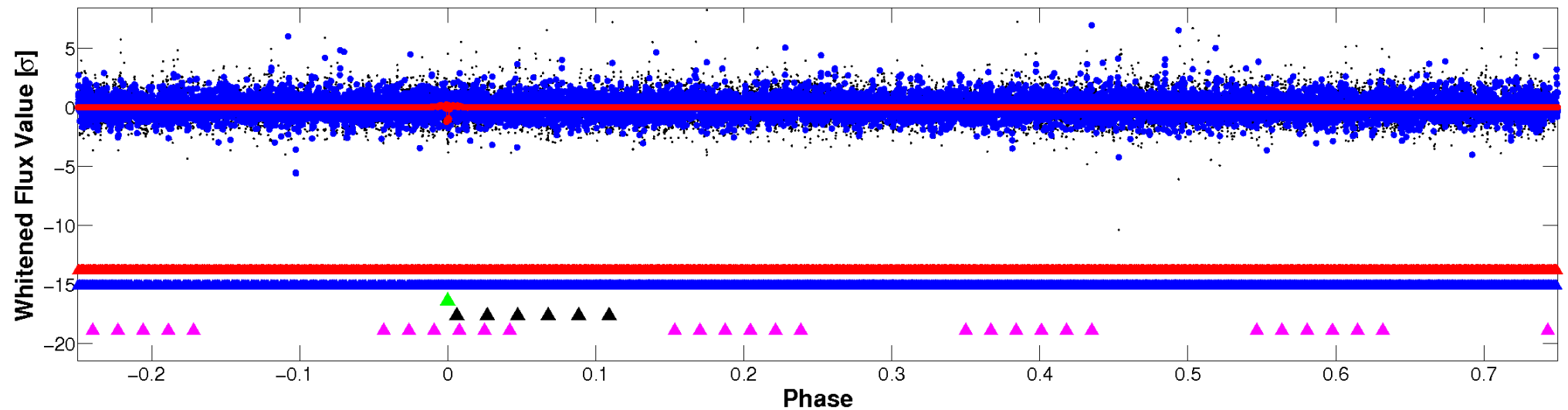


Non-Whitened Vs. Whitened Light Curve

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

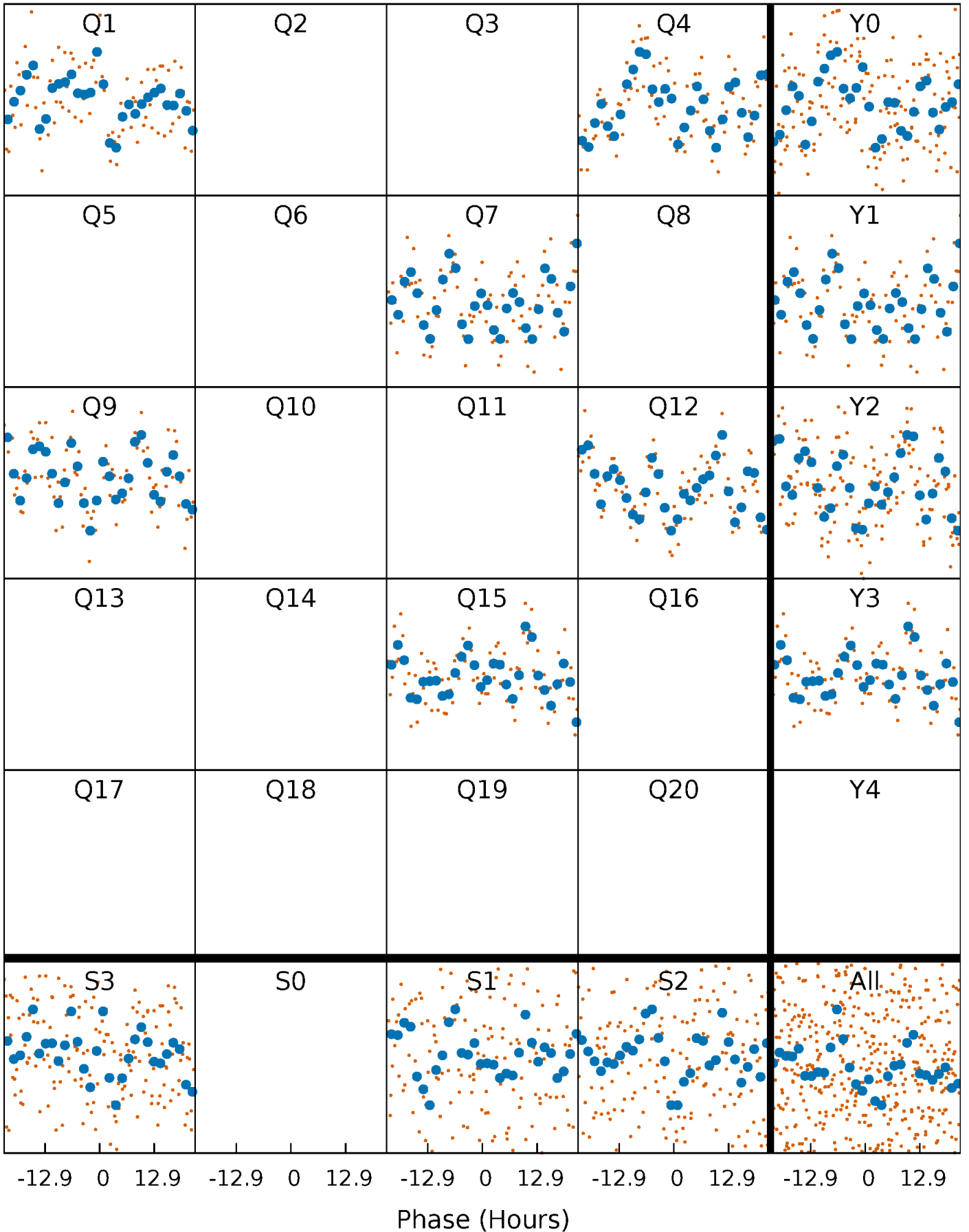


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



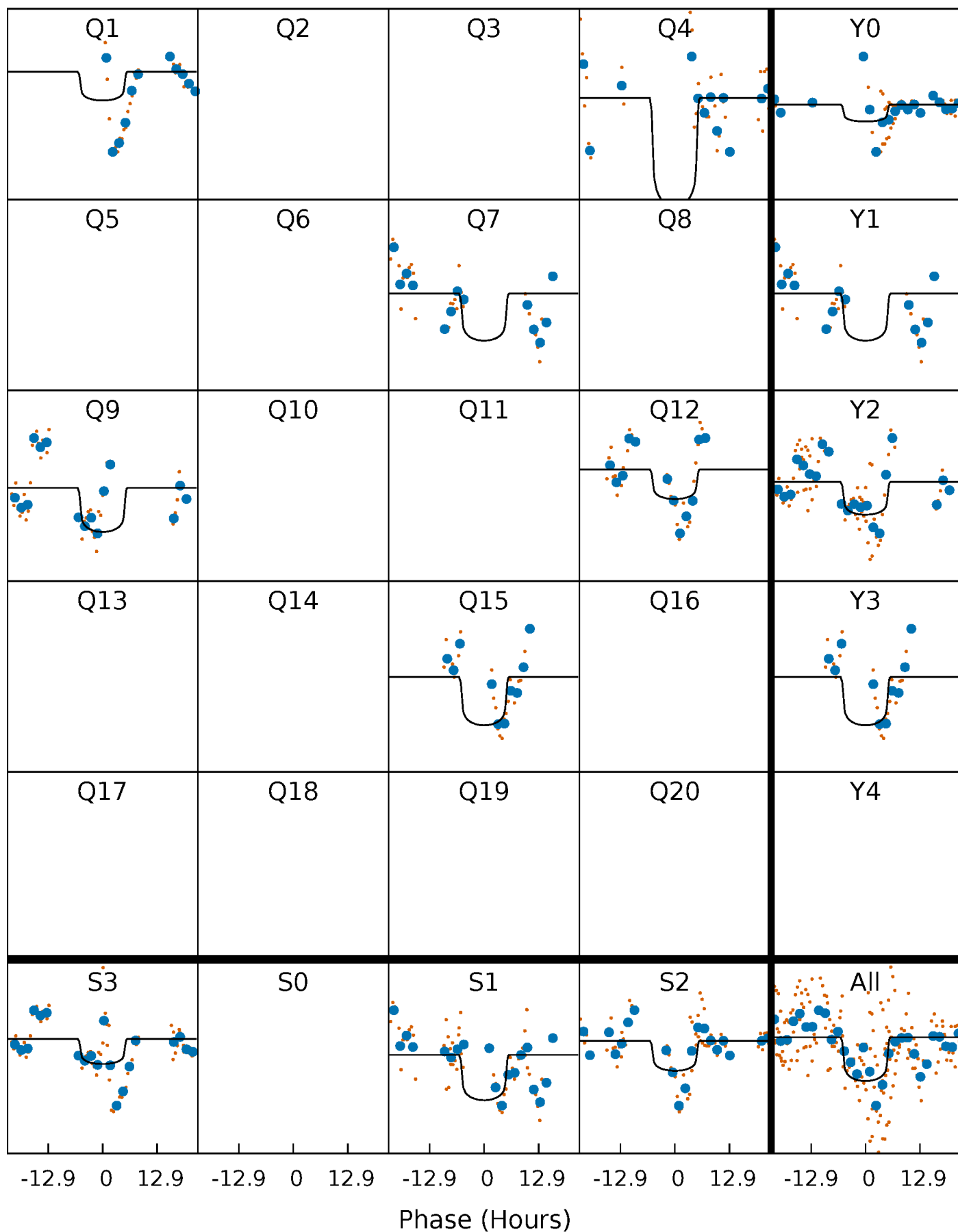
PDC Quarter-Phased Transit Curves

TCE 006388443-03 $P=251.327799$ Days $T_0=137.902091$ (BKJD)



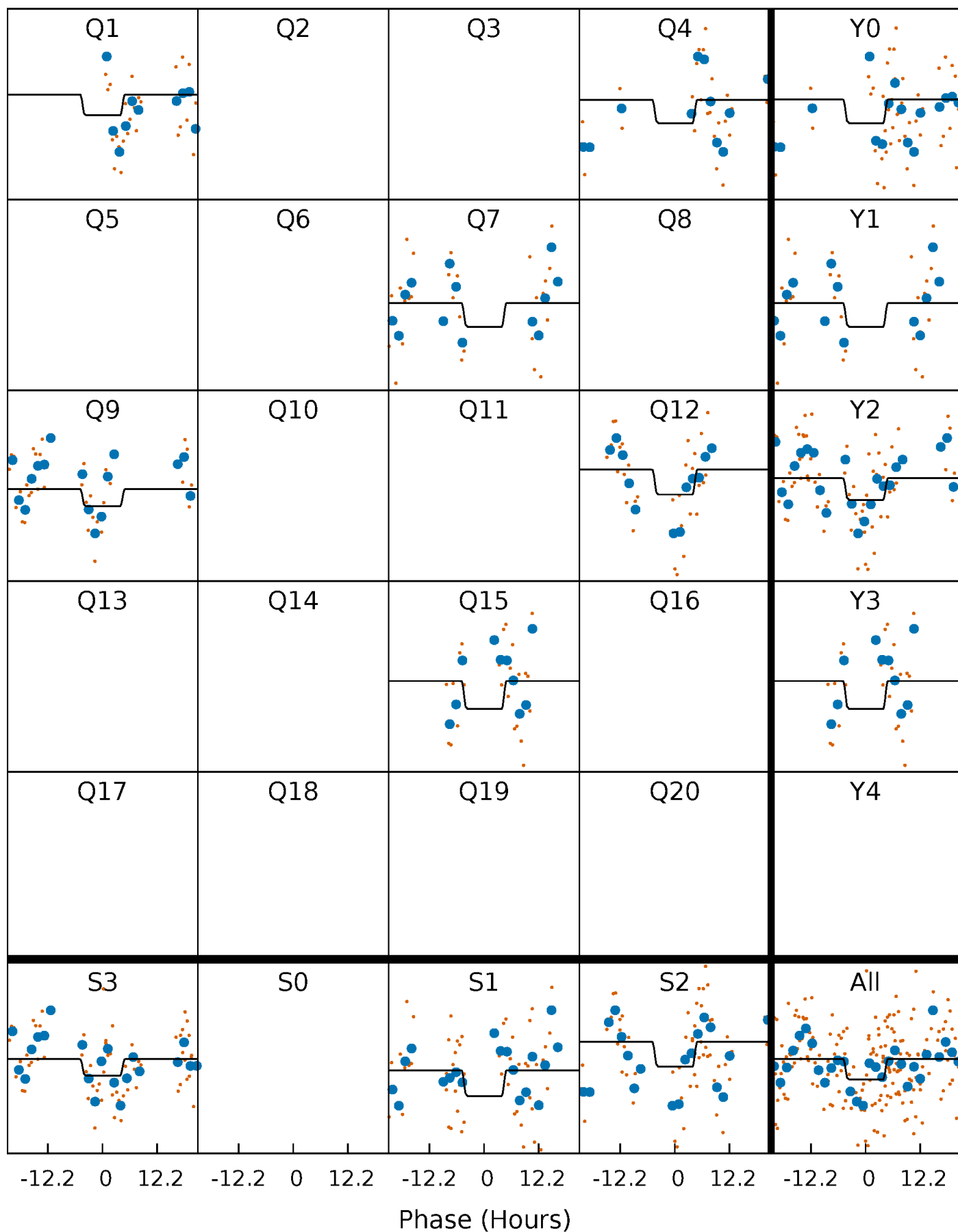
DV Quarter-Phased Transit Curves

TCE 006388443-03 P=251.327799 Days $T_0=137.902091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

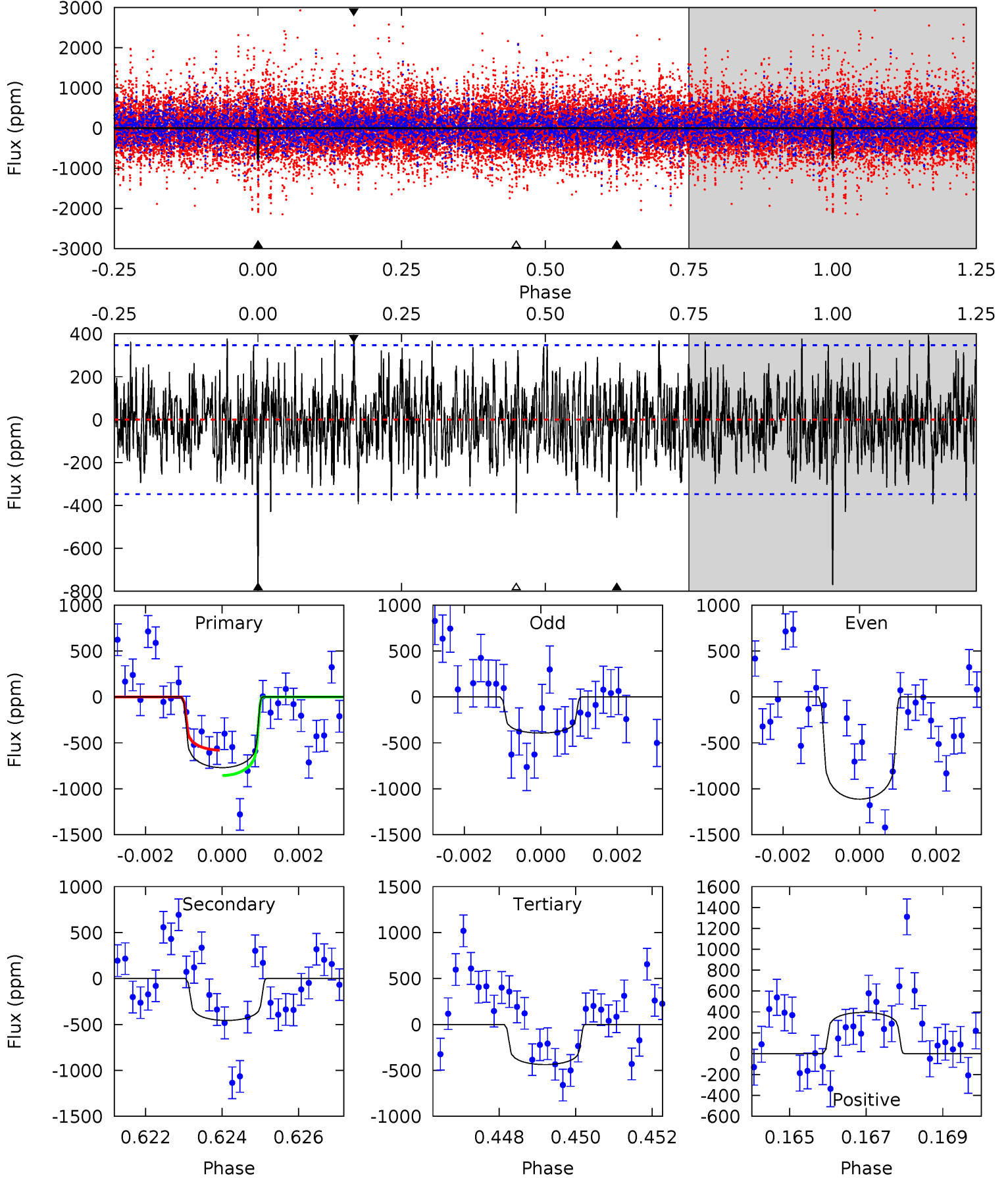
TCE 006388443-03 P=251.319166 Days $T_0=137.898994$ (BKJD)



DV Model-Shift Uniqueness Test

006388443-03, P = 251.327799 Days, E = 137.902091 Days

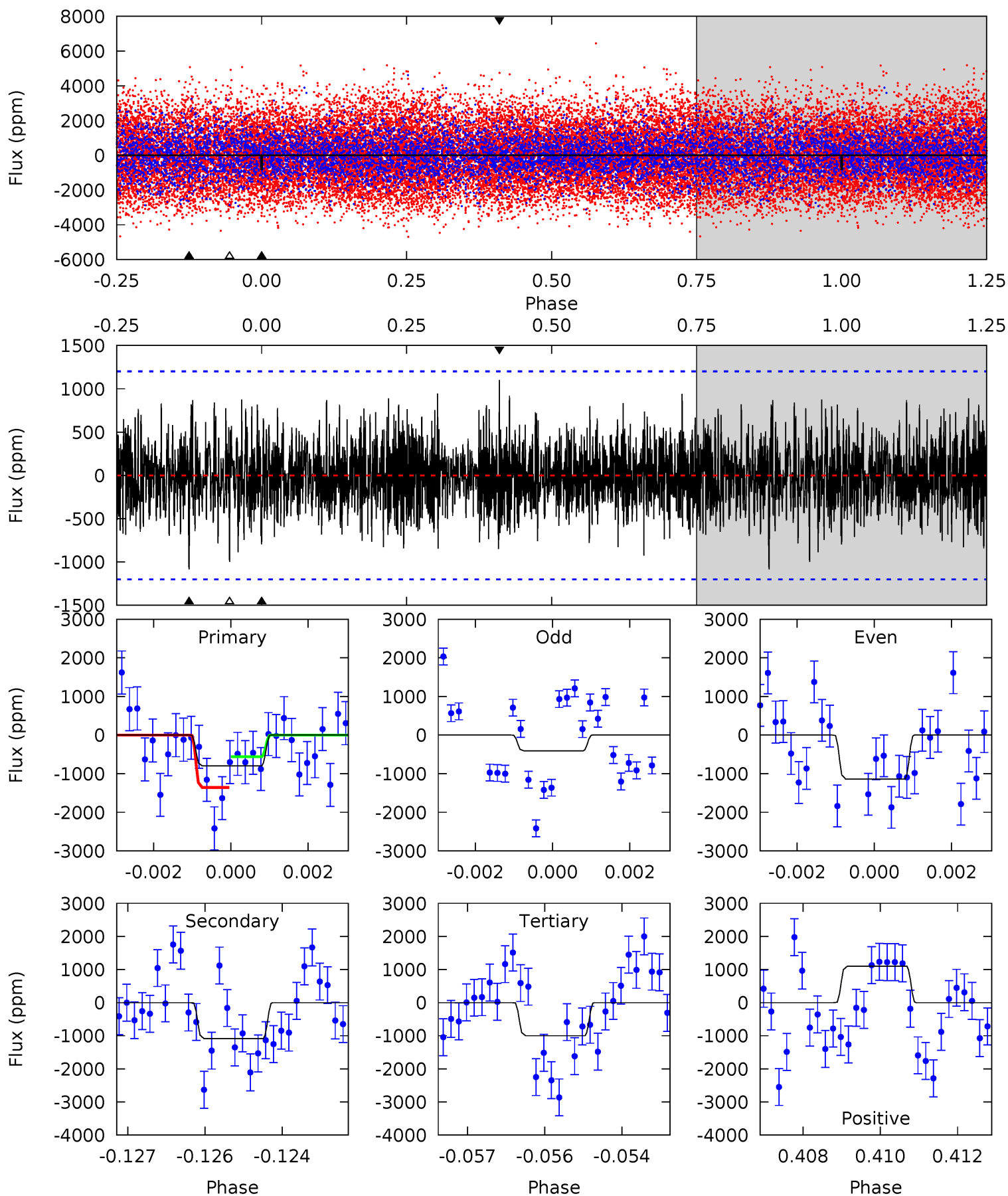
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	7.03	6.72	6.08	5.34	3.11	1.96	5.12	5.77	0.30	0.95	5.50	0.98	0.34	1.95



Alt Model-Shift Uniqueness Test

006388443-03, P = 251.319166 Days, E = 137.898994 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.56	4.85	4.46	4.92	5.36	3.15	1.37	-0.90	-1.36	0.39	-0.07	1.63	1.32	0.50	1.65



Stellar Parameters For KIC 006388443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7138^{+225}_{-325}	$4.137^{+0.153}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$1.684^{+0.501}_{-0.410}$	$1.419^{+0.209}_{-0.232}$	$0.419^{+0.337}_{-0.218}$
	+3%/-5%	+4%/-5%	+125%/-175%	+30%/-24%	+15%/-16%	+81%/-52%
Source	PHO1	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 006388443-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-457 ± 65	$4.93^{+1.09}_{-0.88}$	612^{+49}_{-43}	6314^{+592}_{-487}	7796^{+3595}_{-2566}
Alt.	-1085 ± 224	$5.32^{+1.17}_{-0.86}$	614^{+48}_{-48}	7688^{+861}_{-822}	15756^{+8319}_{-5614}

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

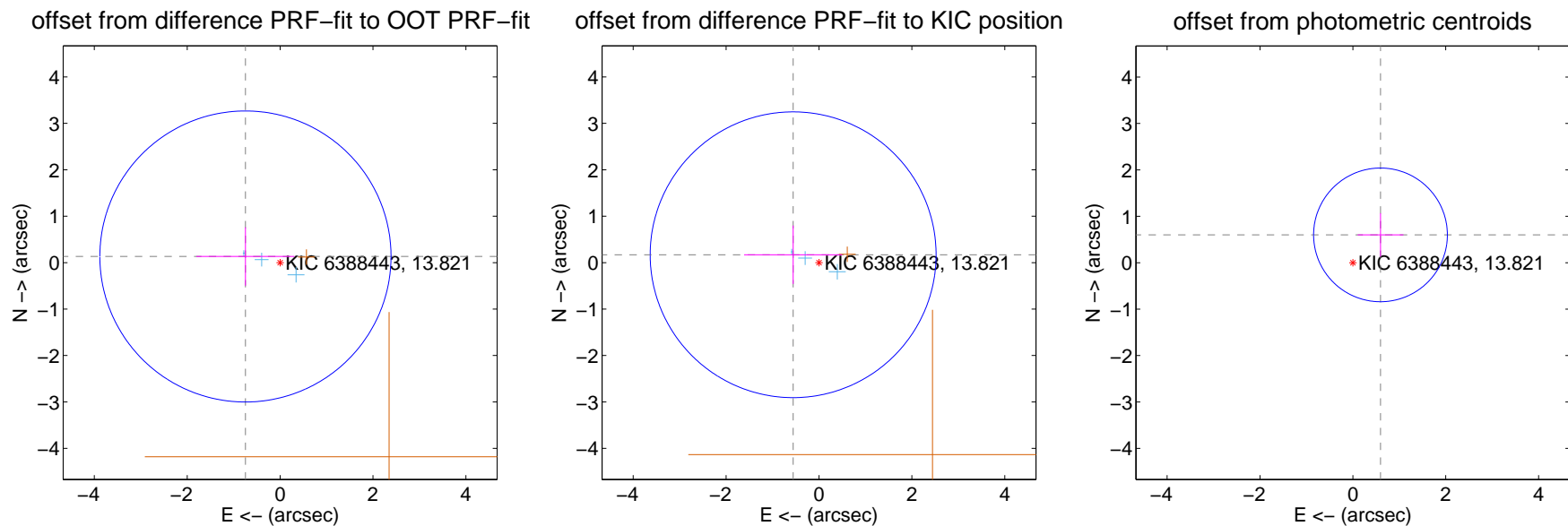
DV Centroid Data

Supplemental centroid analysis for 006388443-03. Kepler magnitude: 13.82. Transit SNR 7.07

There are 3 quarters with good PRF difference image offsets

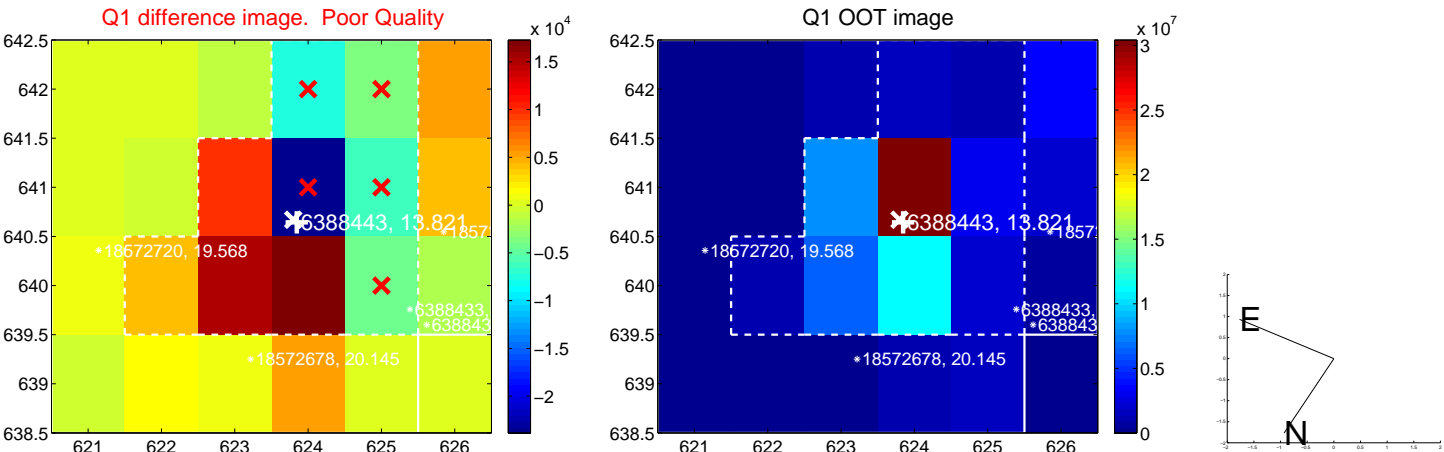
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.758 ± 1.045	0.73	0.746 ± 1.055	0.133 ± 0.630
PRF-fit source offset from KIC position	0.582 ± 1.026	0.57	0.556 ± 1.055	0.170 ± 0.630
photometric centroid source offset	0.84 ± 0.48	1.76	-0.59 ± 0.49	0.60 ± 0.47

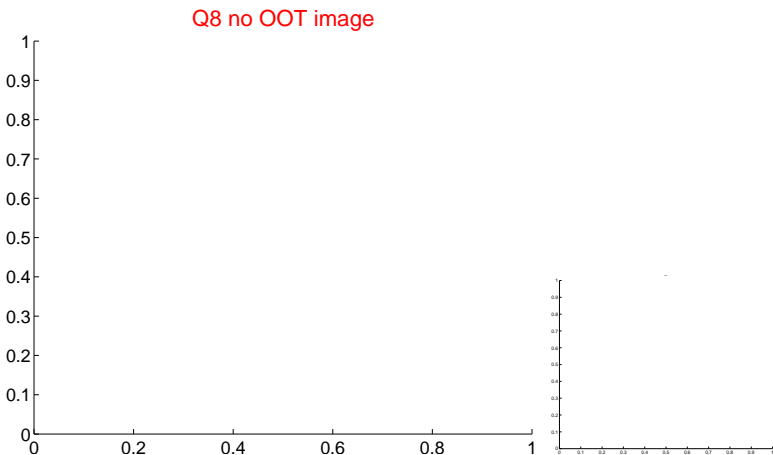
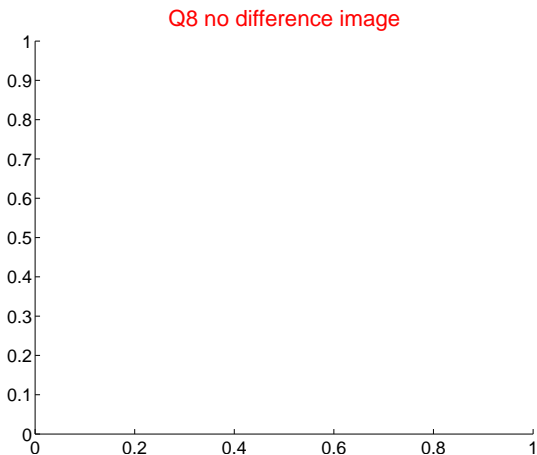
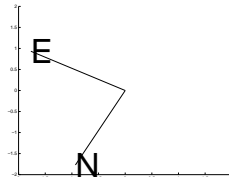
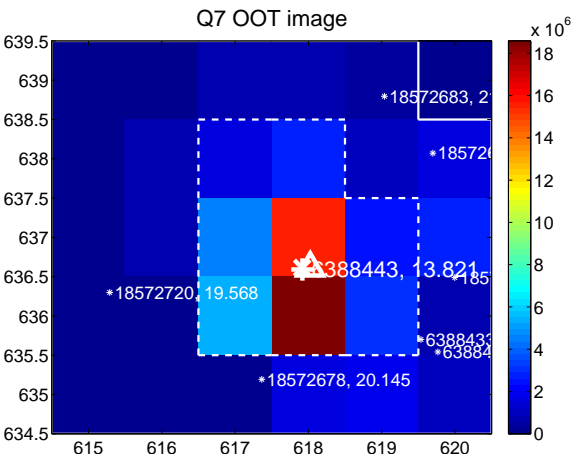
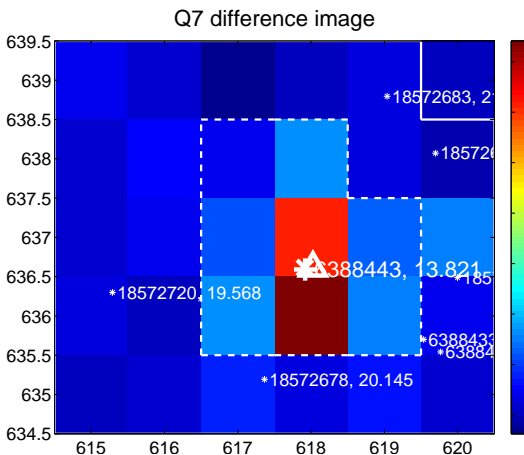
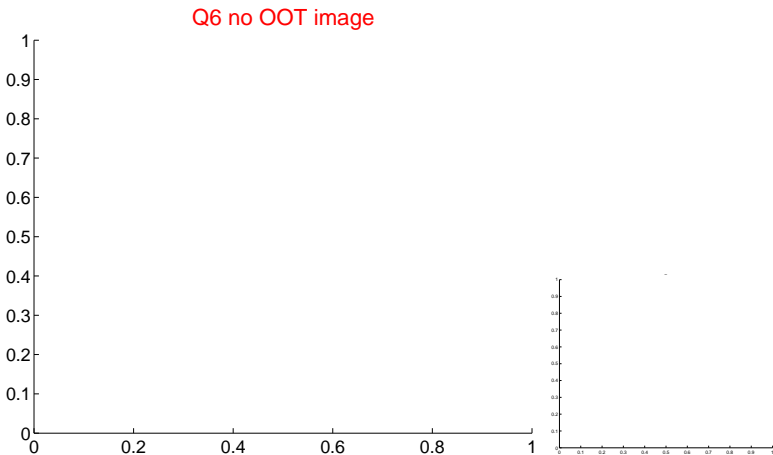
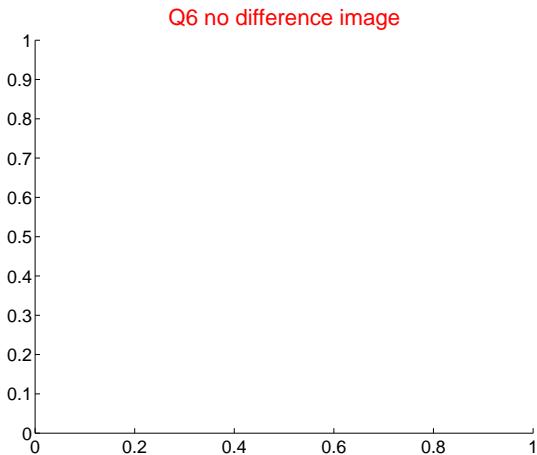
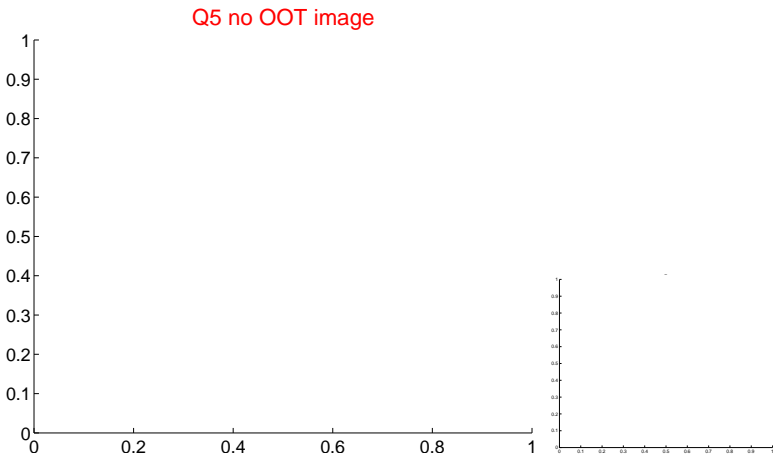
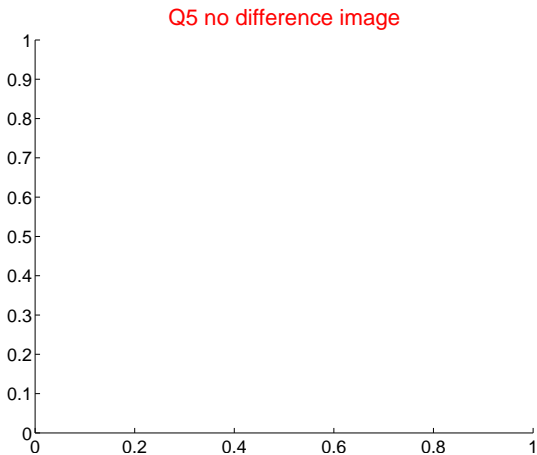


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

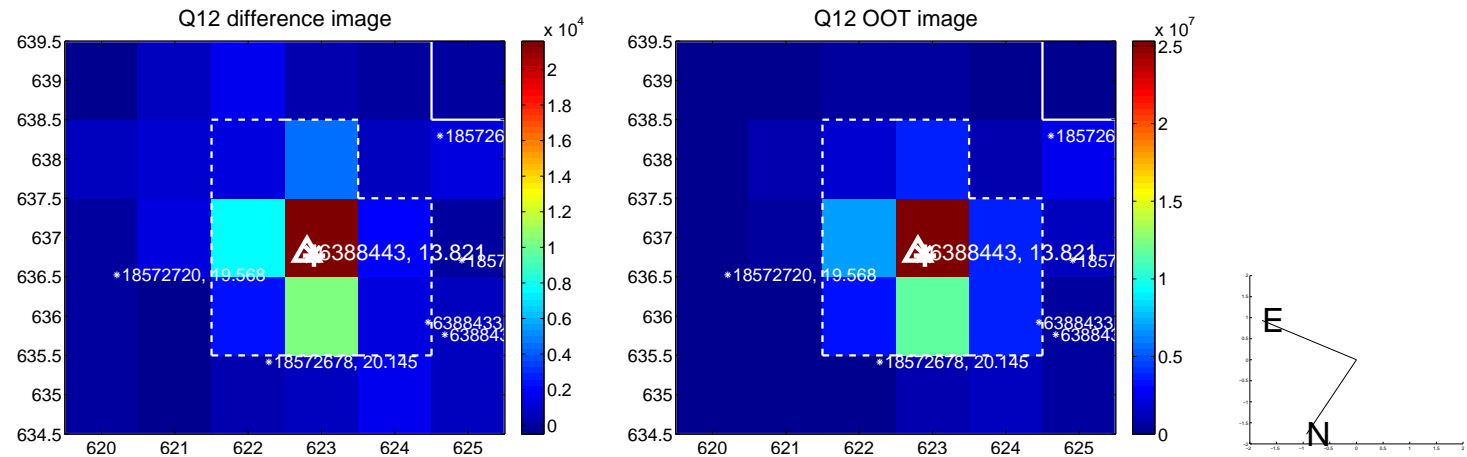
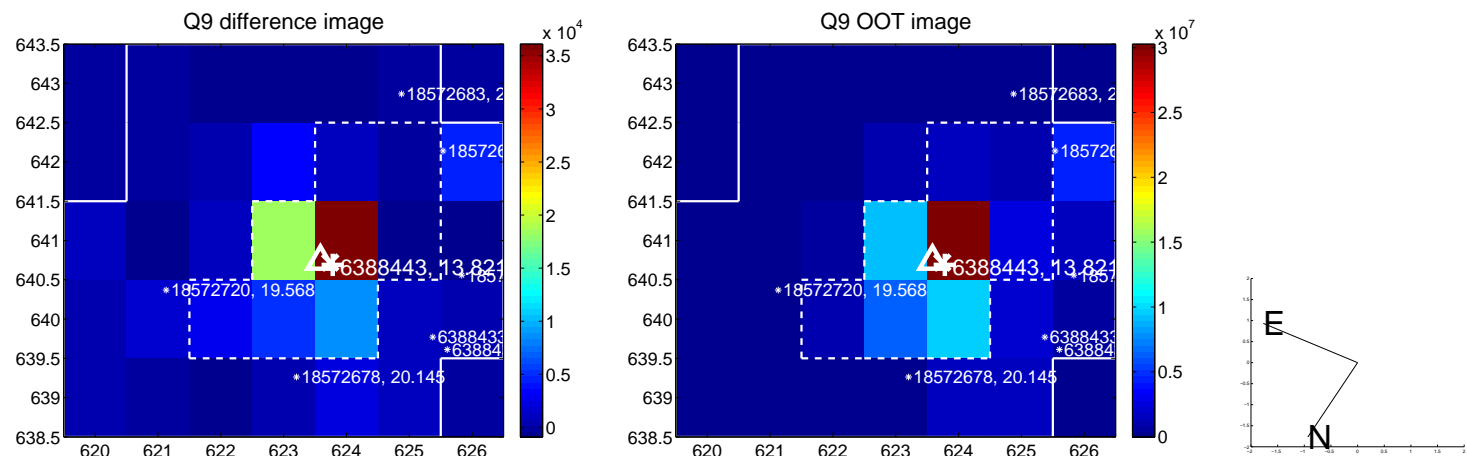
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



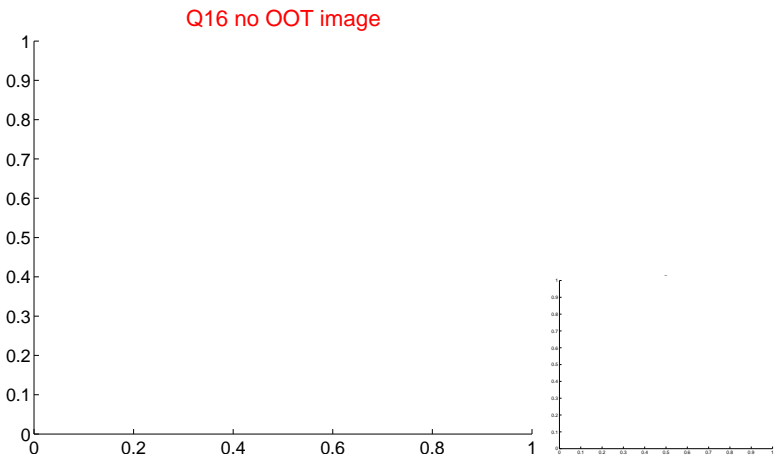
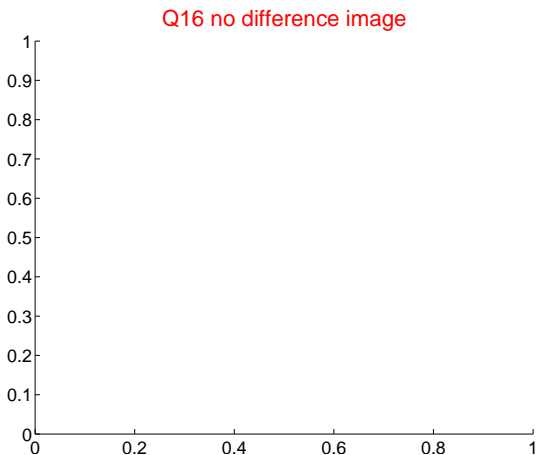
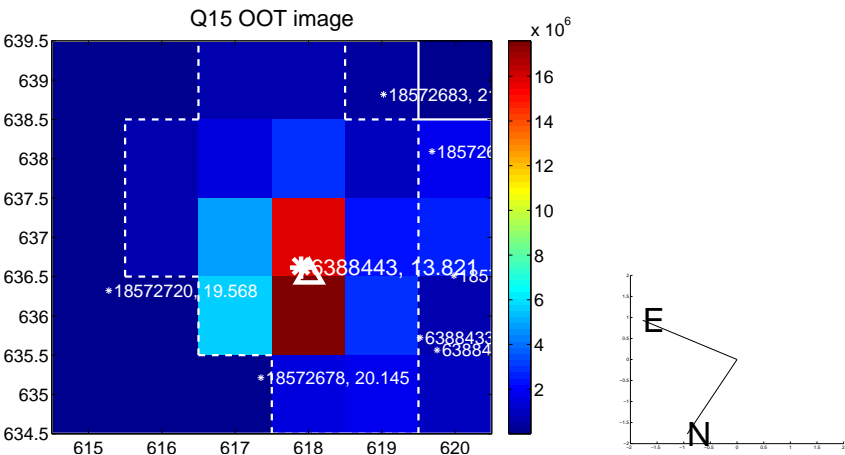
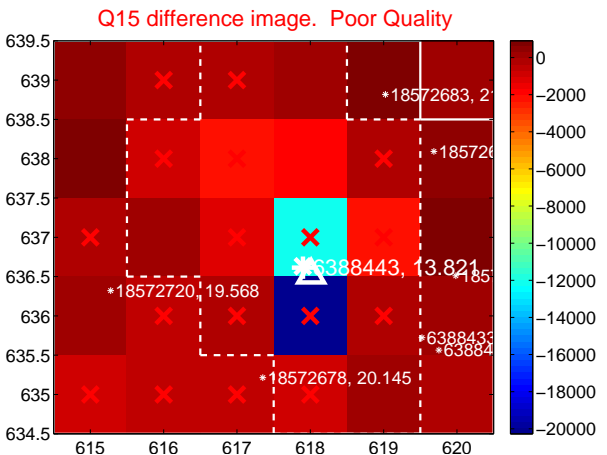
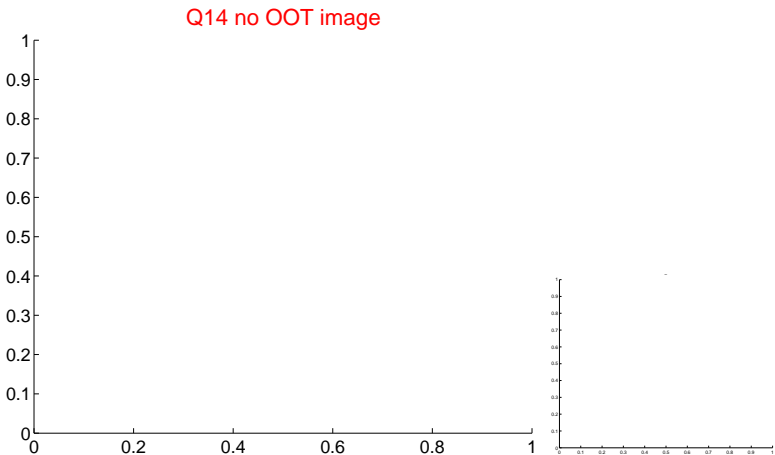
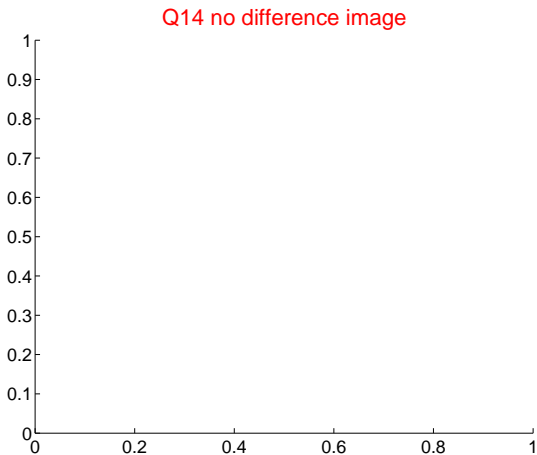
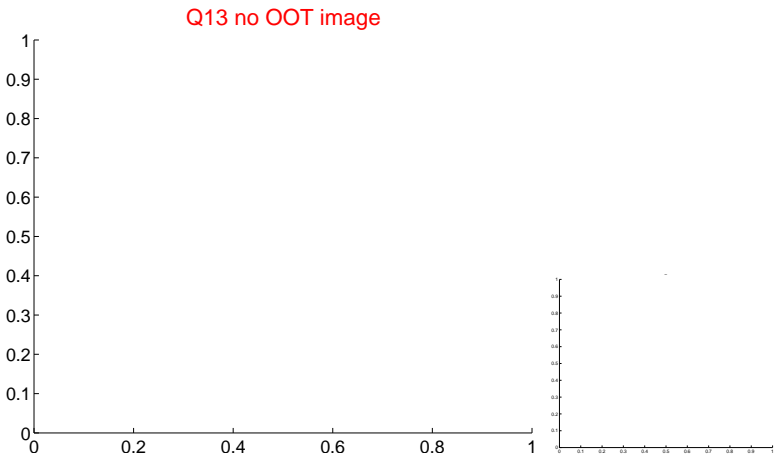
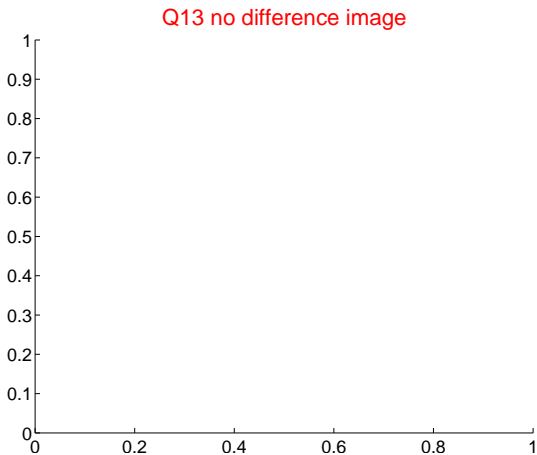
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



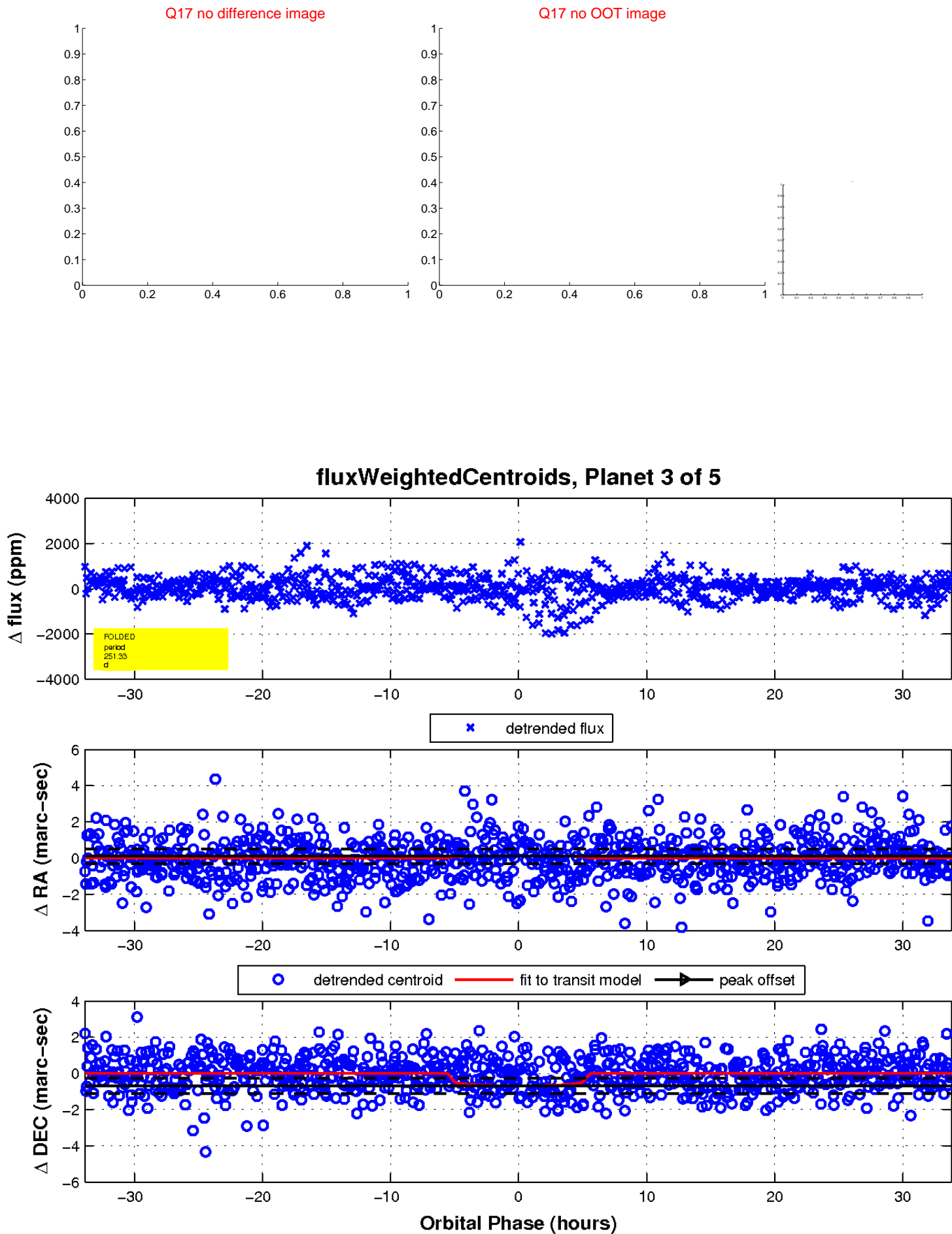
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

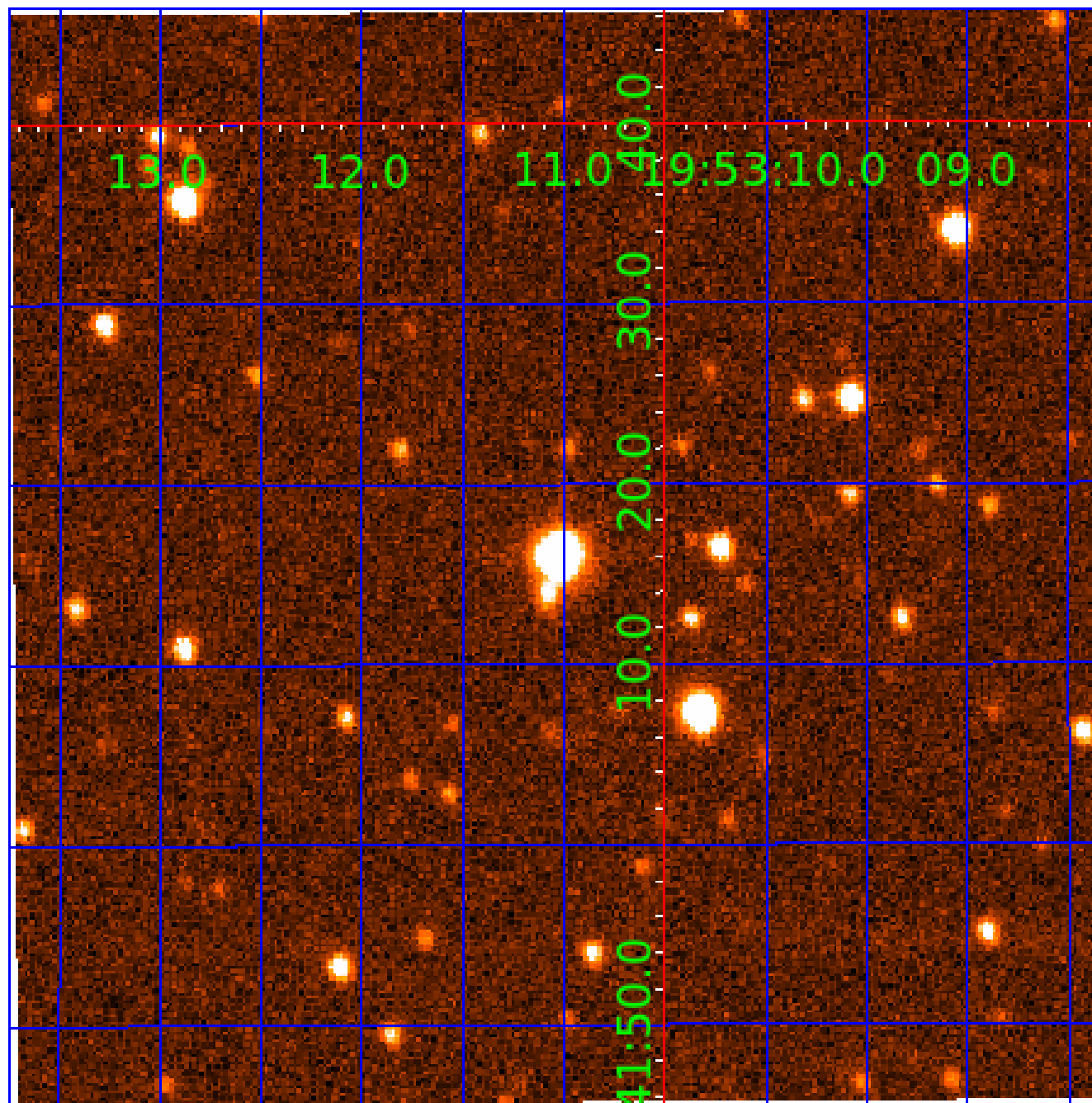


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006388443

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})
006388443-01	OBS	No	0.667042	131.748672	62.1	2.148	9.7	9.9	1.68	7138	1.54	23400.46
006388443-02	OBS	No	1.655337	132.469192	106.6	4.651	8.2	9.5	1.68	7138	2.02	6964.88
006388443-03	OBS	No	251.327799	137.902090	721.7	11.296	8.5	7.1	1.68	7138	4.91	8.60
006388443-04	OBS	No	246.155891	165.309787	902.9	3.162	7.8	7.2	1.68	7138	5.41	8.84
006388443-05	OBS	No	49.409458	148.444257	737.9	3.596	7.3	8.2	1.68	7138	8.52	75.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006388443-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
006388443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006388443-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—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.

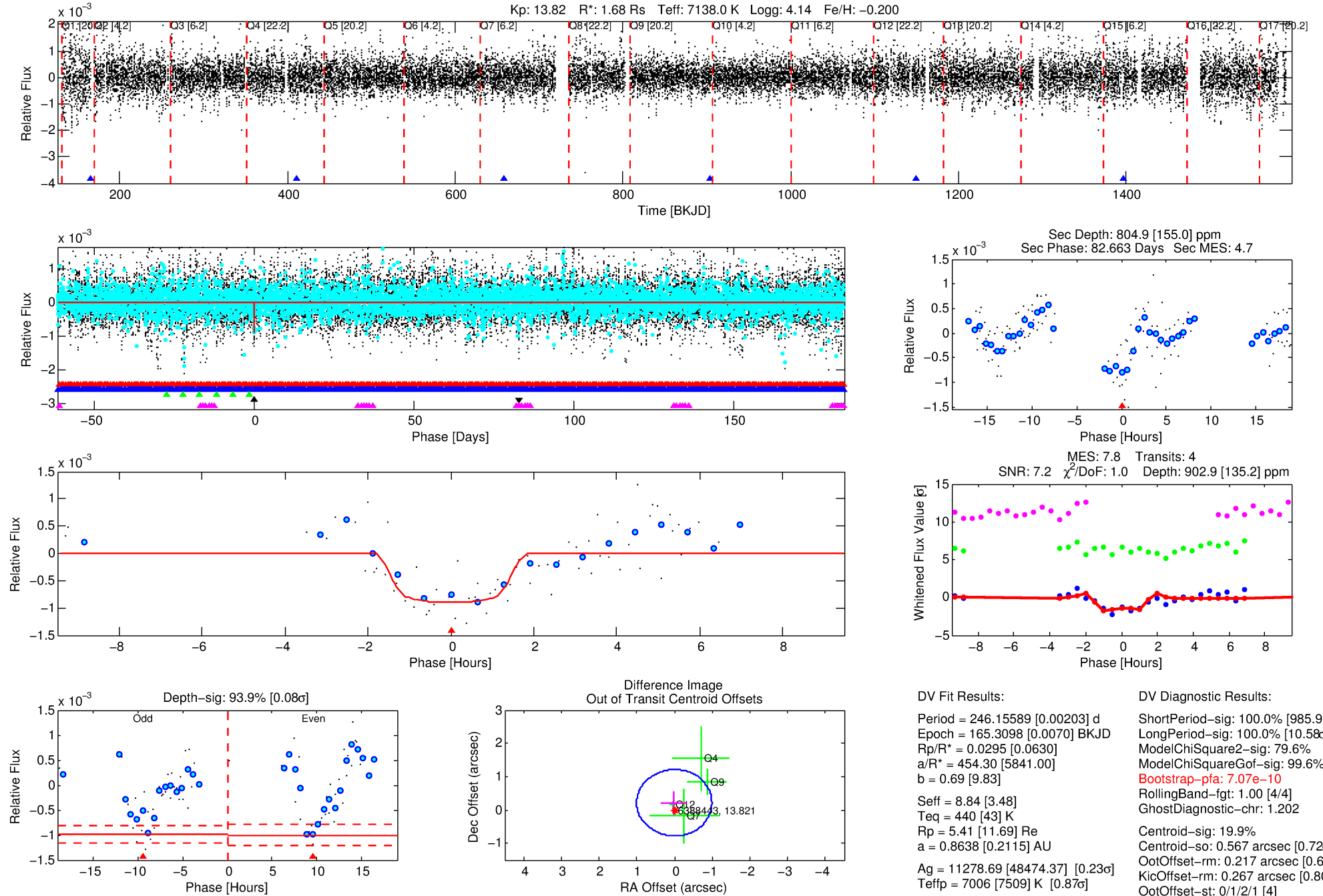
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388443-04

No Significant Match Found

DV One-Page Summary

KIC: 6388443 Candidate: 4 of 5 Period: 246.156 d



DV Fit Results:

Period = 246.15589 [0.00203] d
Epoch = 165.3098 [0.0070] BKJD
Rp/R* = 0.0295 [0.0630]
a/R* = 454.30 [5841.00]
b = 0.69 [9.83]
Seff = 8.84 [3.48]
Teff = 440 [43] K
Rp = 5.41 [11.69] Re
a = 0.8638 [0.2115] AU
Ag = 11278.69 [48474.37] [0.23 σ]
Teffp = 7006 [7509] K [0.87 σ]

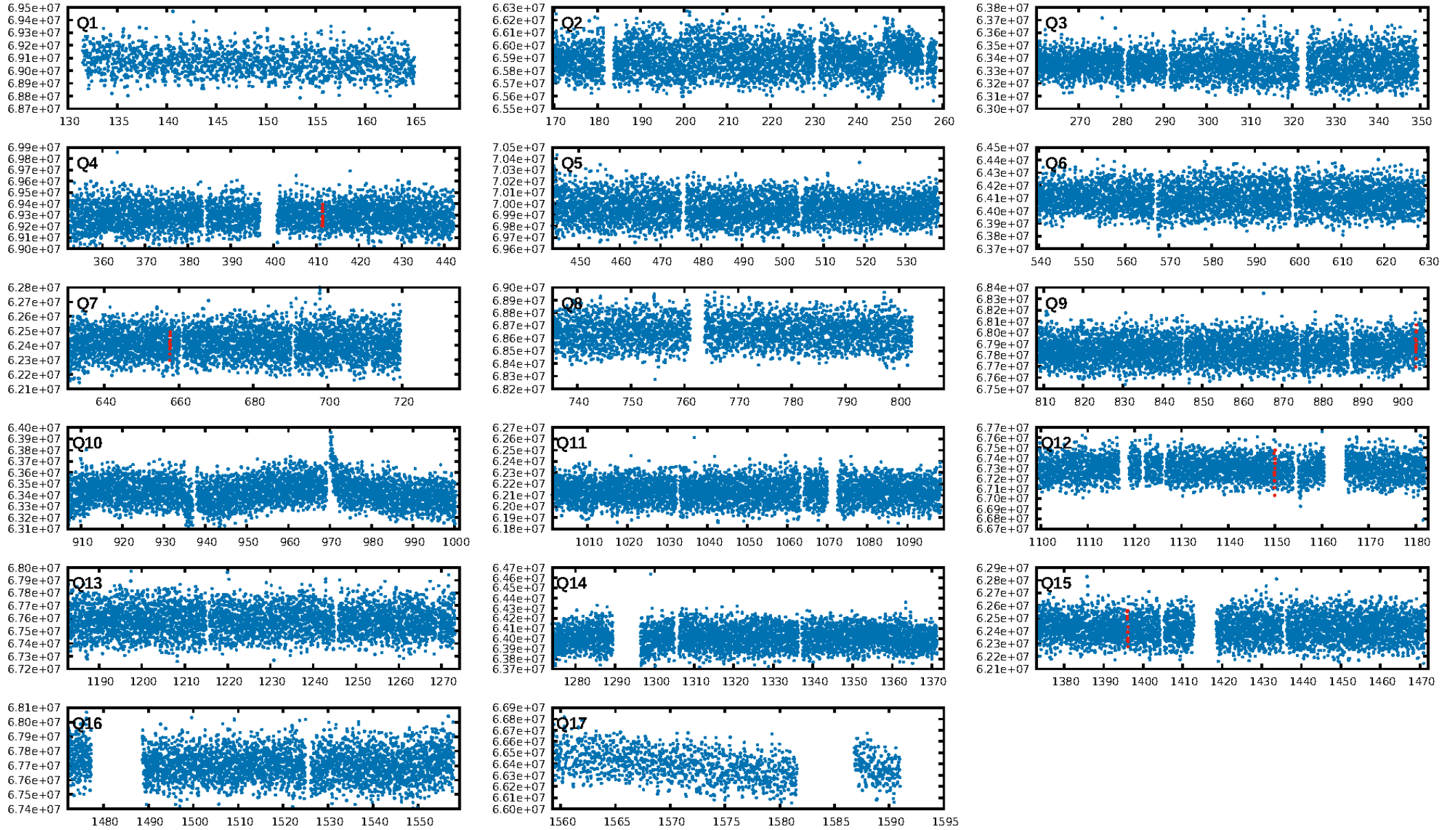
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [985.98 σ]
LongPeriod-sig: 100.0% [10.58 σ]
ModelChiSquare2-sig: 79.6%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 7.07e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.202
Centroid-sig: 19.9%
Centroid-so: 0.567 arcsec [0.72 σ]
OotOffset-rm: 0.217 arcsec [0.65 σ]
KicOffset-rm: 0.267 arcsec [0.80 σ]
OotOffset-st: 0/1/2/1 [4]
KicOffset-st: 0/1/2/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/4]

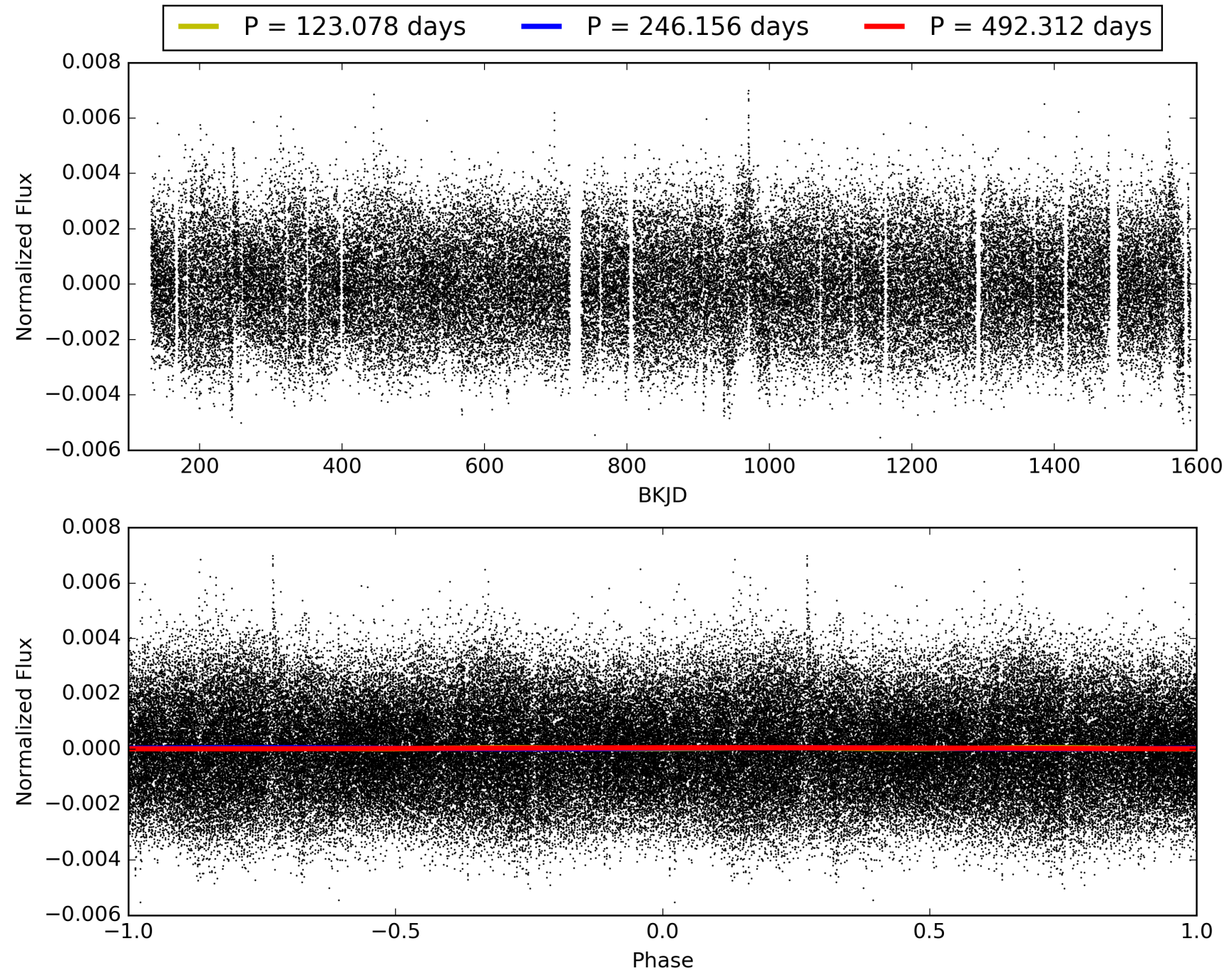
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:27 Z

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

TCE 006388443-04, PDC Light Curves

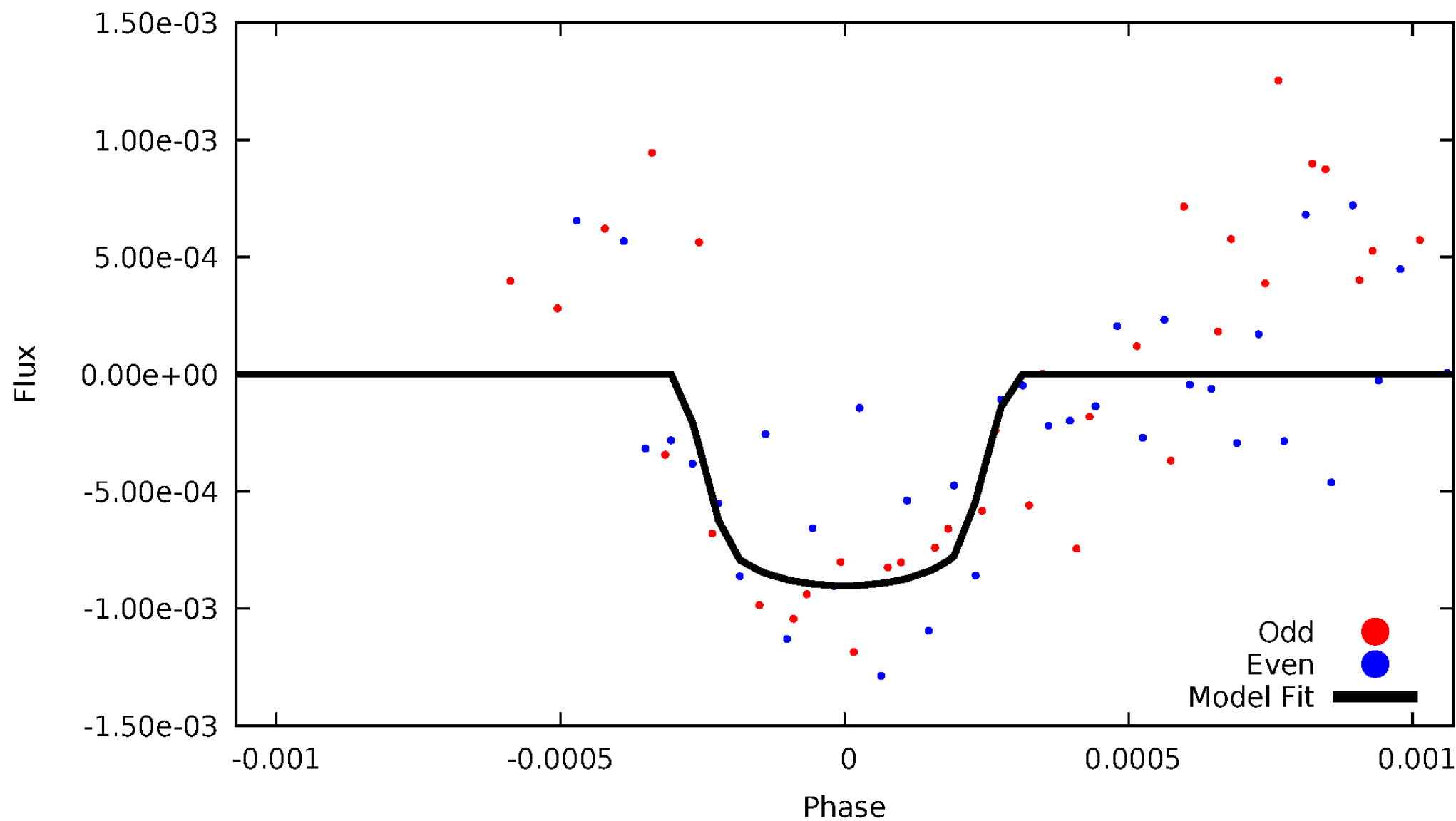


TCE 006388443-04



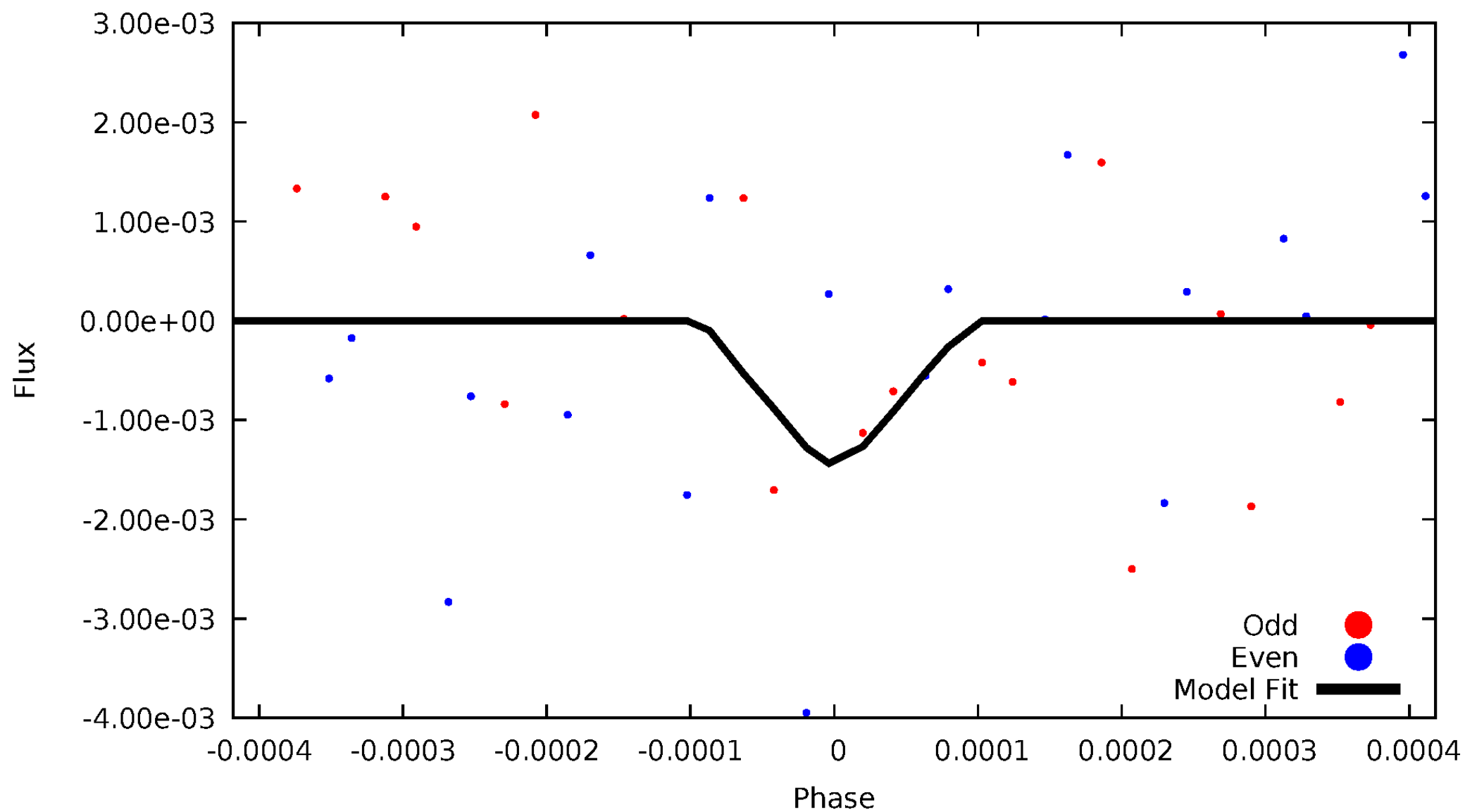
DV Odd/Even

TCE 006388443-04



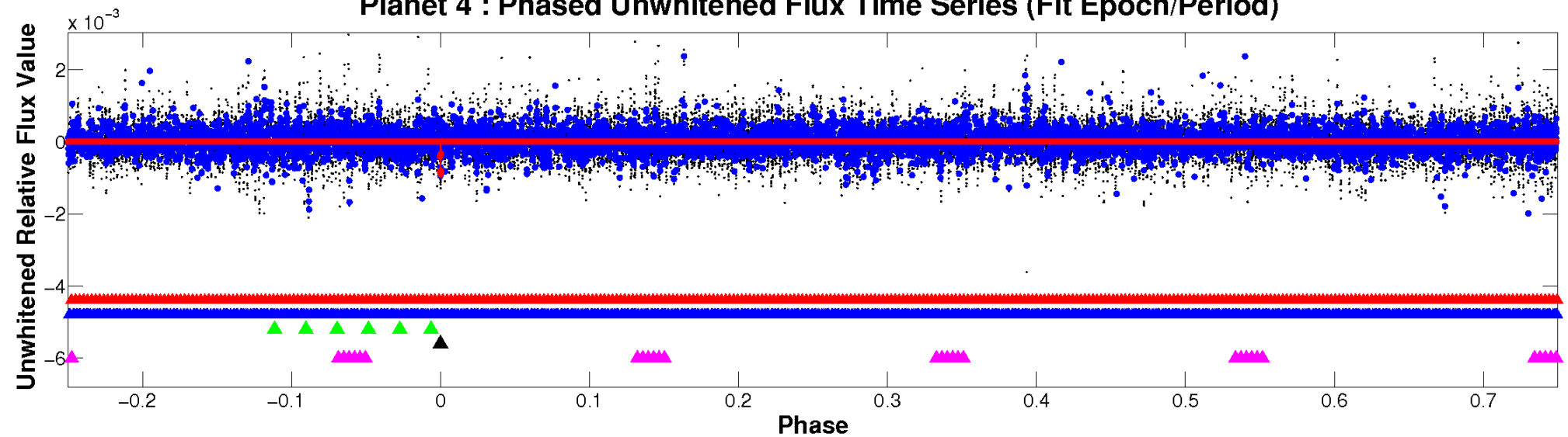
ALT Odd/Even

TCE 006388443-04

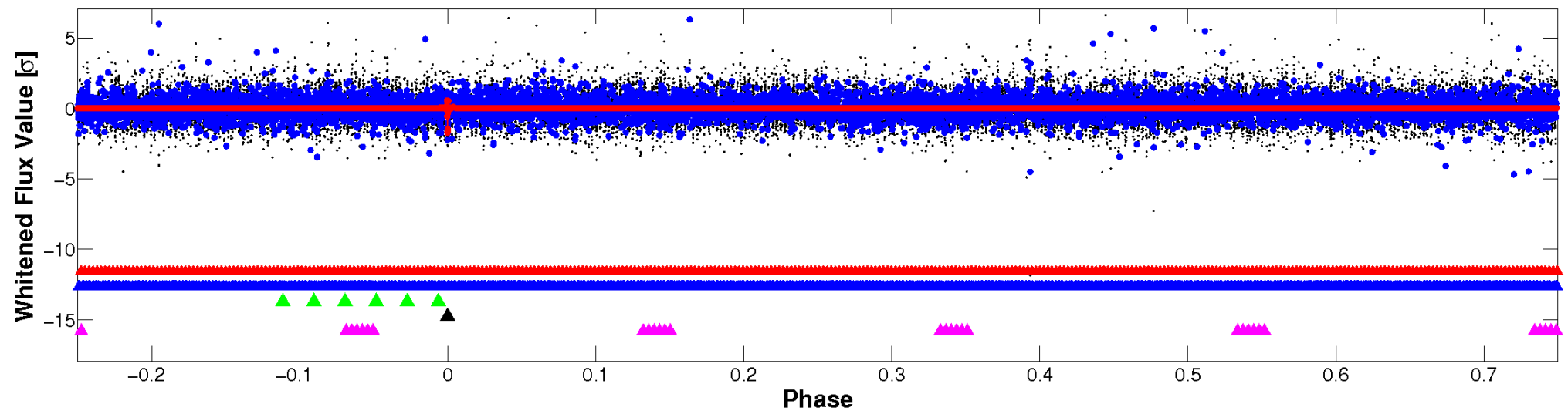


Non-Whitened Vs. Whitened Light Curve

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

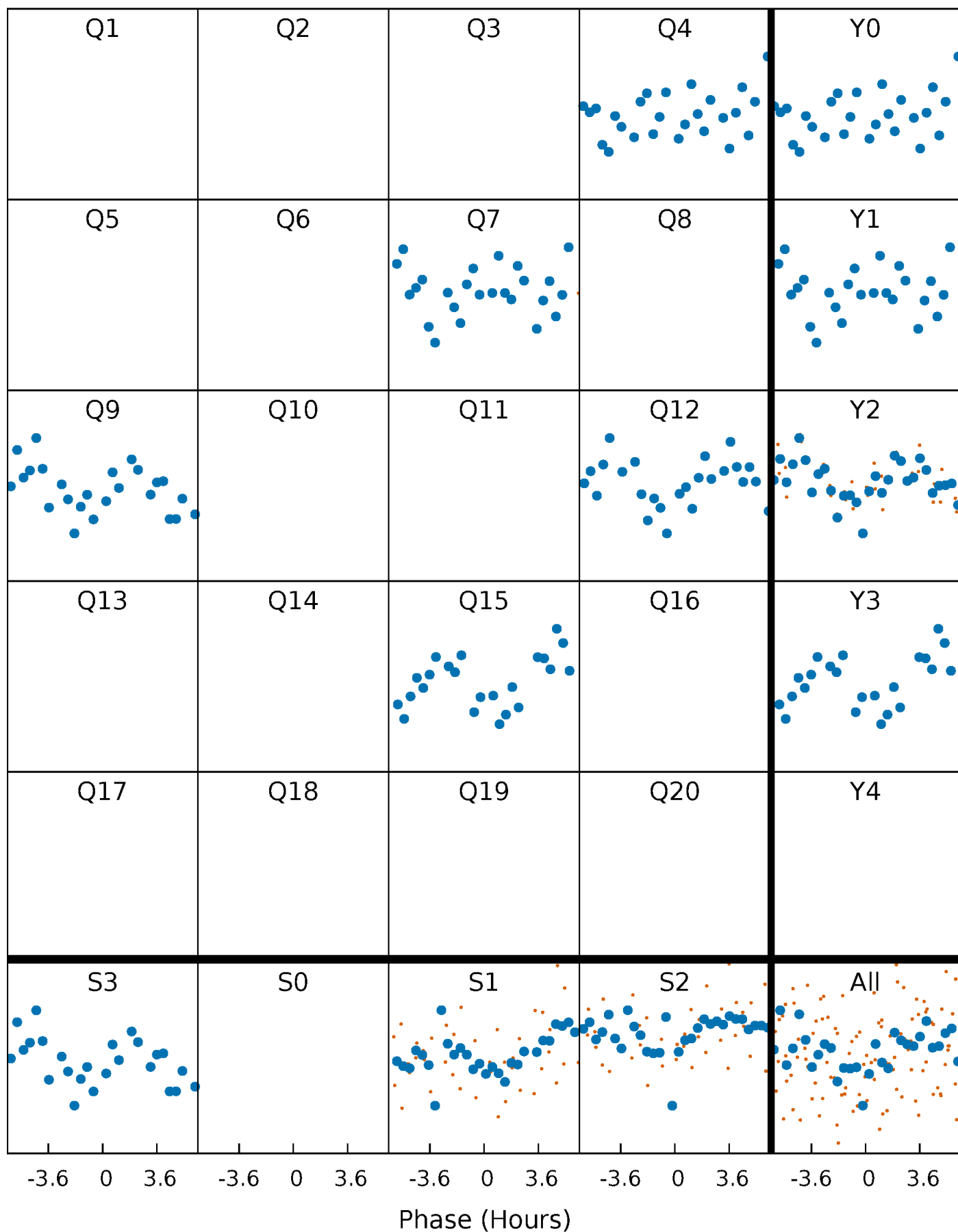


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



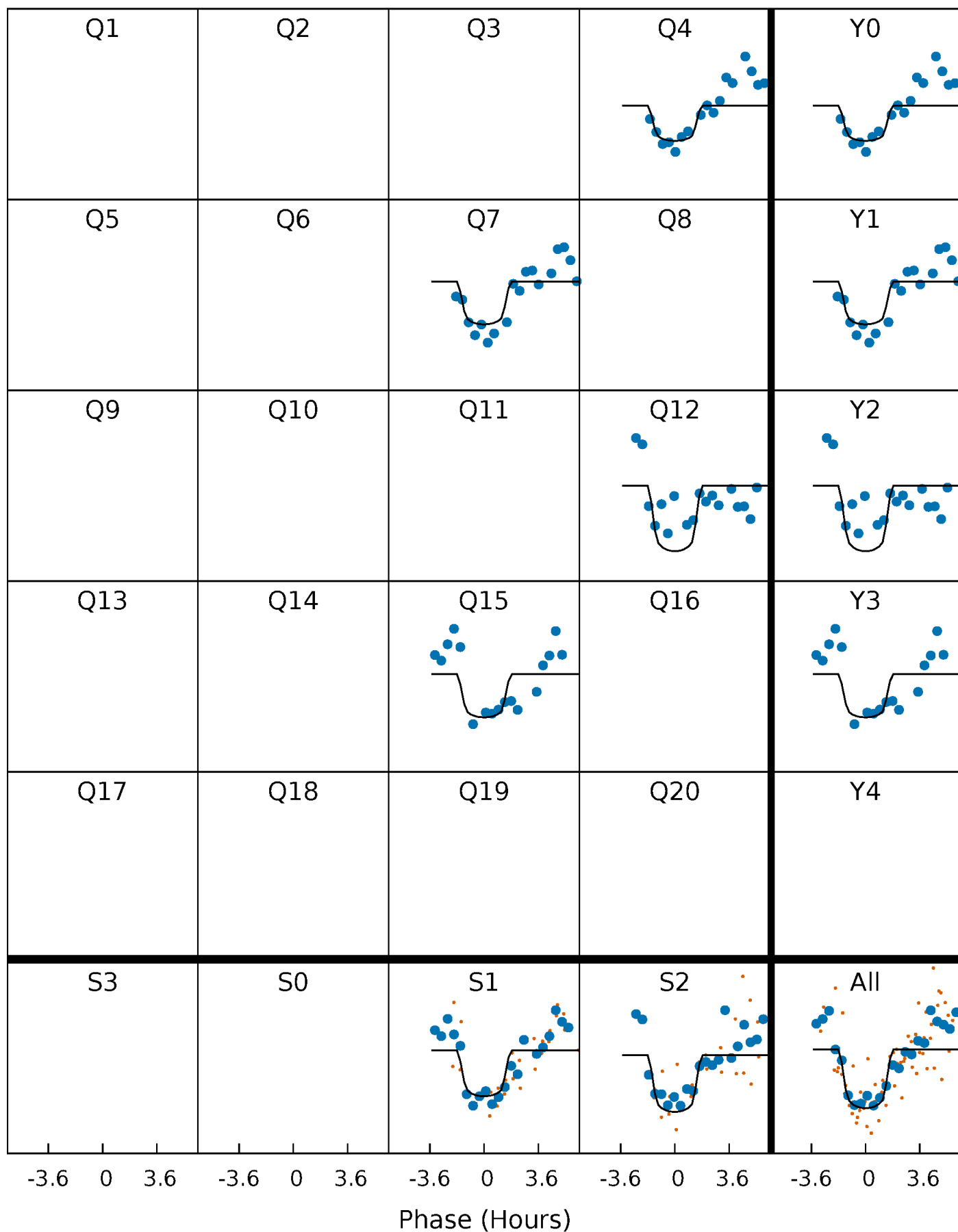
PDC Quarter-Phased Transit Curves

TCE 006388443-04 P=246.155891 Days $T_0=165.309787$ (BKJD)



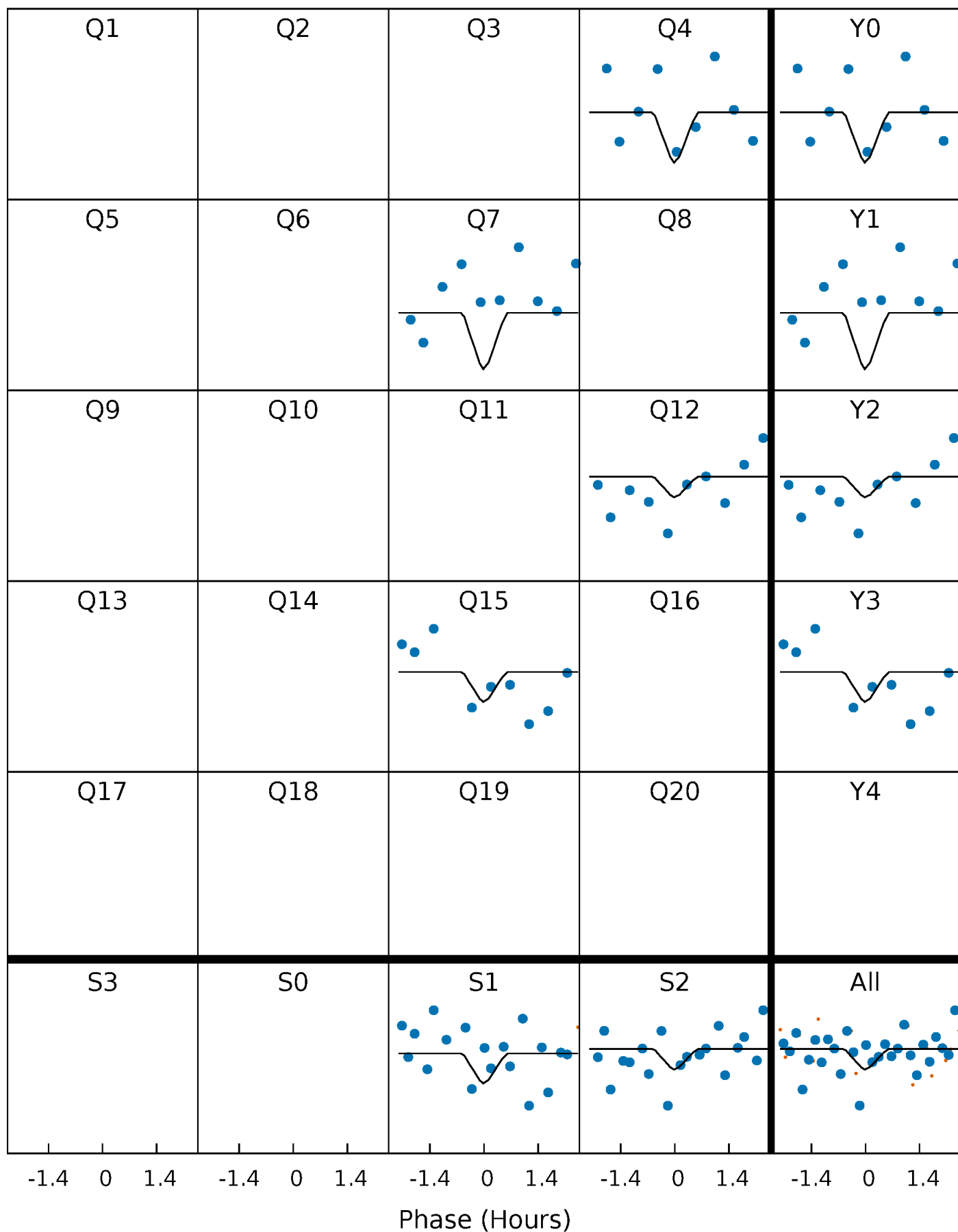
DV Quarter-Phased Transit Curves

TCE 006388443-04 P=246.155891 Days $T_0=165.309787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

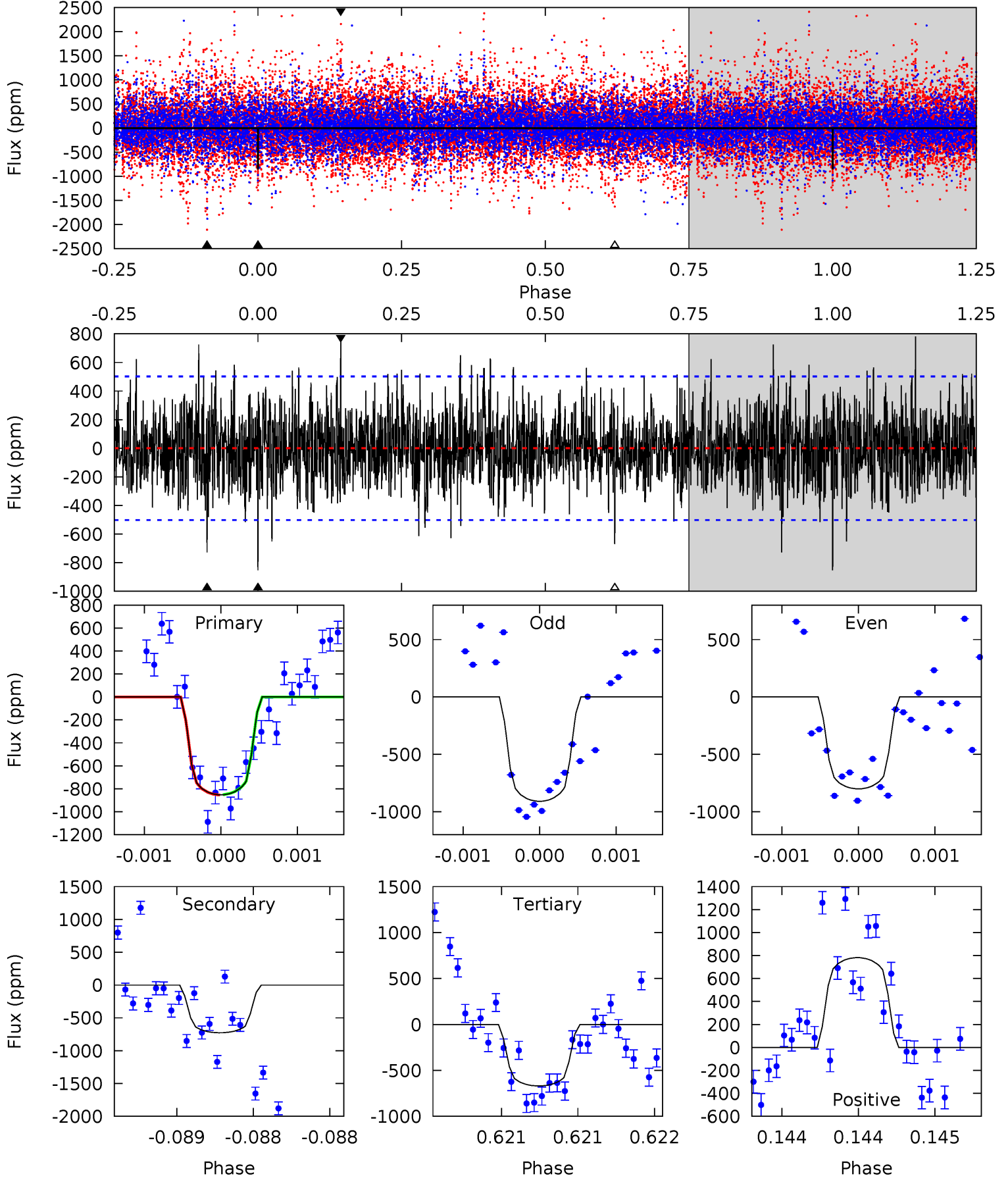
TCE 006388443-04 P=246.153158 Days $T_0=165.311629$ (BKJD)



DV Model-Shift Uniqueness Test

006388443-04, P = 246.155891 Days, E = 165.309787 Days

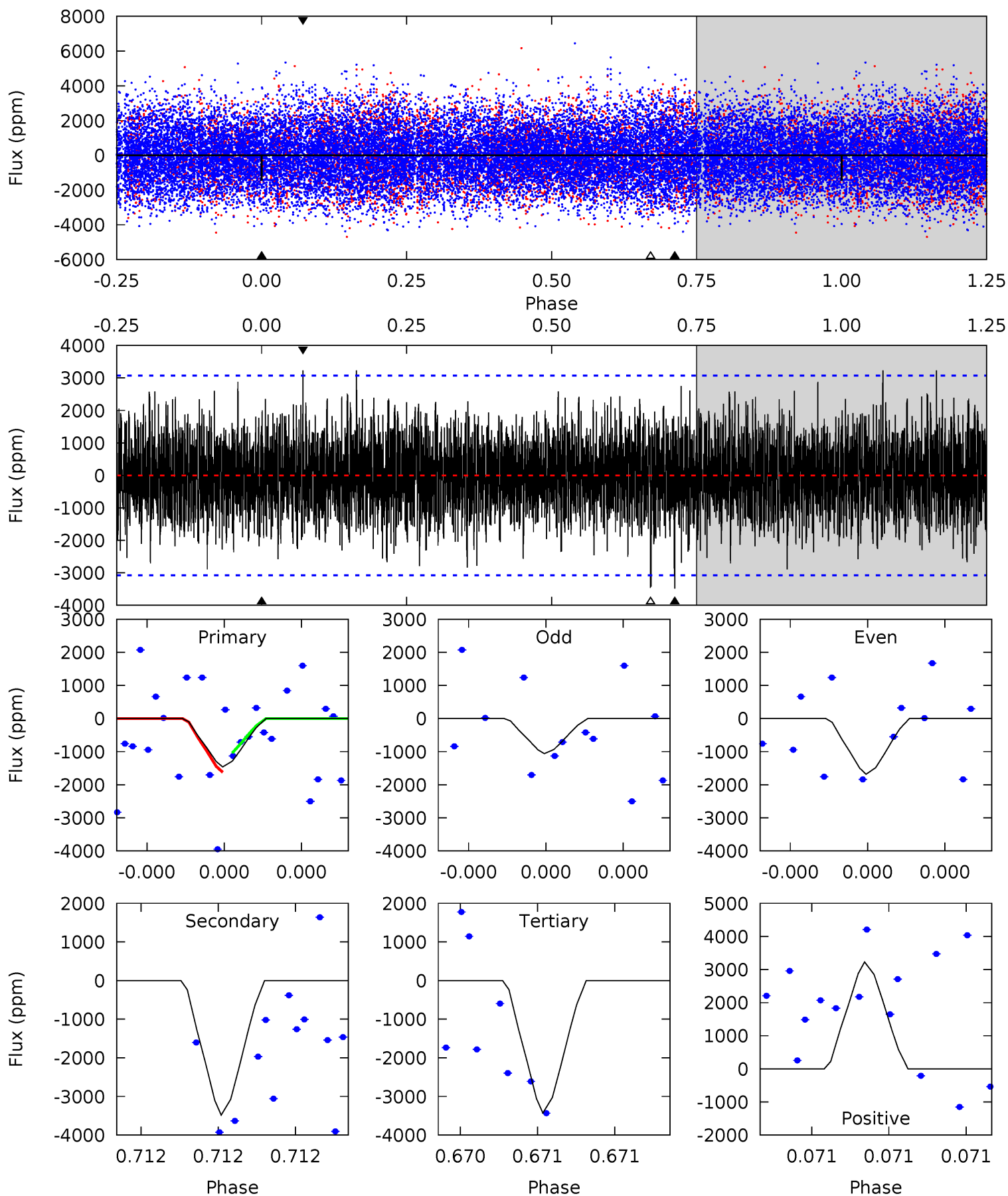
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.41	8.03	7.40	8.63	5.55	3.44	2.08	2.02	0.78	0.63	-0.60	0.59	0.95	0.48	0.02



Alt Model-Shift Uniqueness Test

006388443-04, P = 246.153158 Days, E = 165.311629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.73	6.50	6.40	6.03	5.74	3.73	1.56	-3.67	-3.30	0.10	0.48	0.58	1.22	0.48	0.54



Stellar Parameters For KIC 006388443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7138^{+225}_{-325}	$4.137^{+0.153}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$1.684^{+0.501}_{-0.410}$	$1.419^{+0.209}_{-0.232}$	$0.419^{+0.337}_{-0.218}$
	+3%/-5%	+4%/-5%	+125%/-175%	+30%/-24%	+15%/-16%	+81%/-52%
Source	PHO1	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 006388443-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-727 ± 91	$10.82^{+9.38}_{-7.33}$	616^{+48}_{-47}	4898^{+3939}_{-1048}	2588^{+23634}_{-1881}
Alt.	-3484 ± 536	$11.83^{+9.80}_{-7.50}$	614^{+48}_{-43}	6825^{+6434}_{-1786}	10570^{+61467}_{-7615}

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 $A_{obs} \gg 1.0$

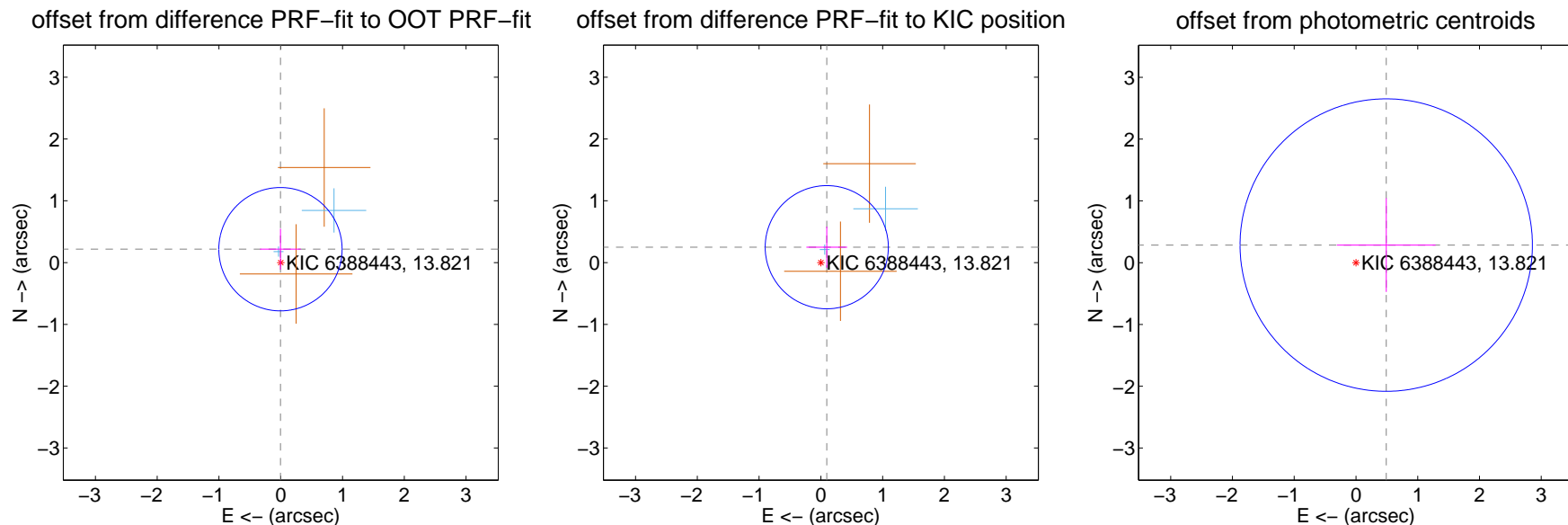
DV Centroid Data

Supplemental centroid analysis for 006388443-04. Kepler magnitude: 13.82. Transit SNR 7.22

There are 2 quarters with good PRF difference image offsets

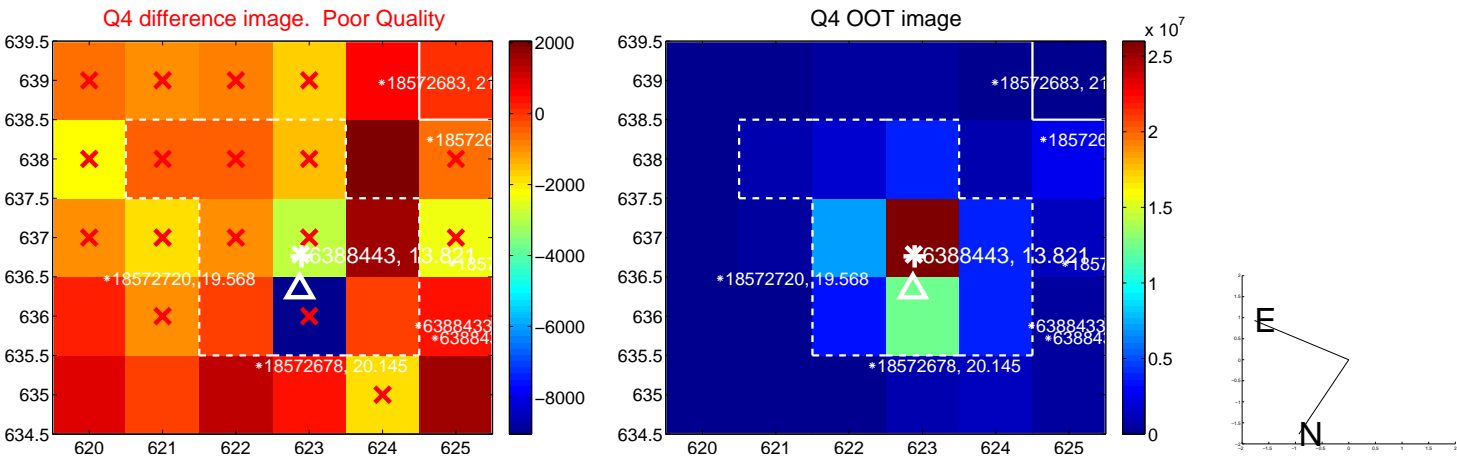
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.217 ± 0.333	0.65	0.005 ± 0.330	0.217 ± 0.333
PRF-fit source offset from KIC position	0.267 ± 0.332	0.80	-0.096 ± 0.330	0.249 ± 0.333
photometric centroid source offset	0.57 ± 0.79	0.72	-0.49 ± 0.80	0.28 ± 0.76

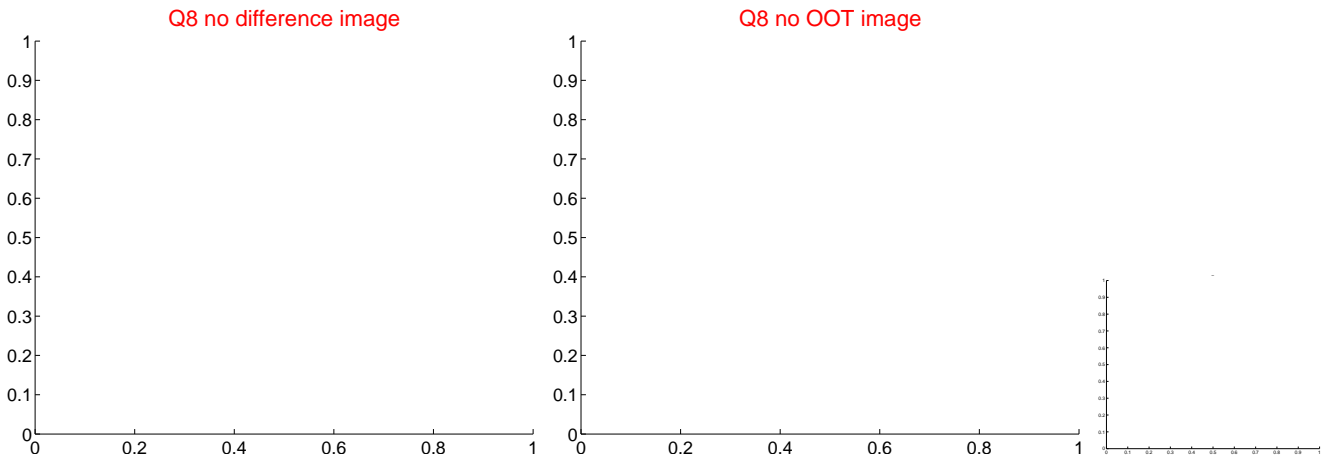
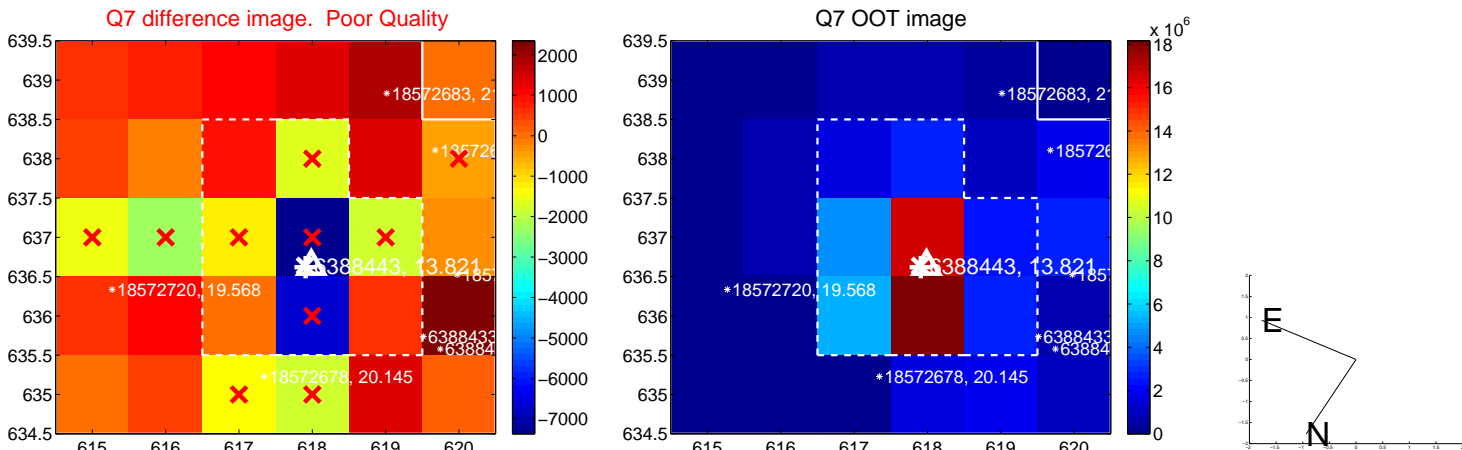
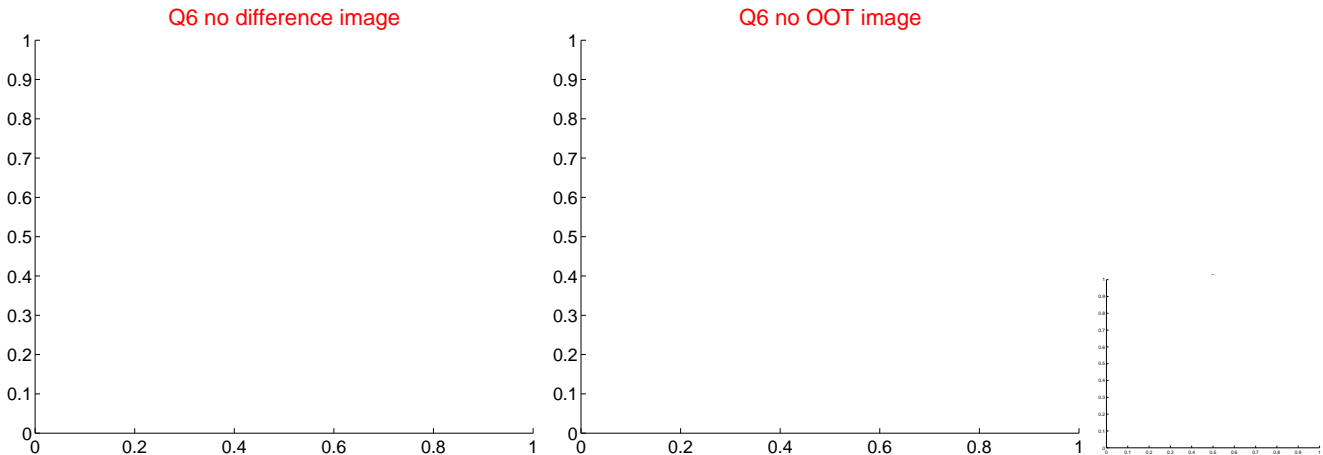
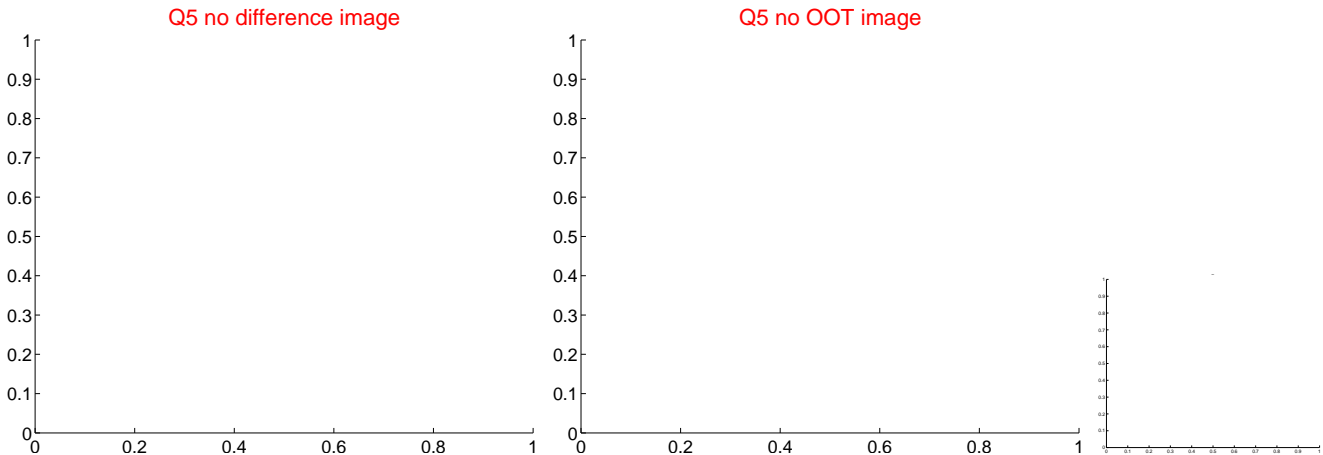


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

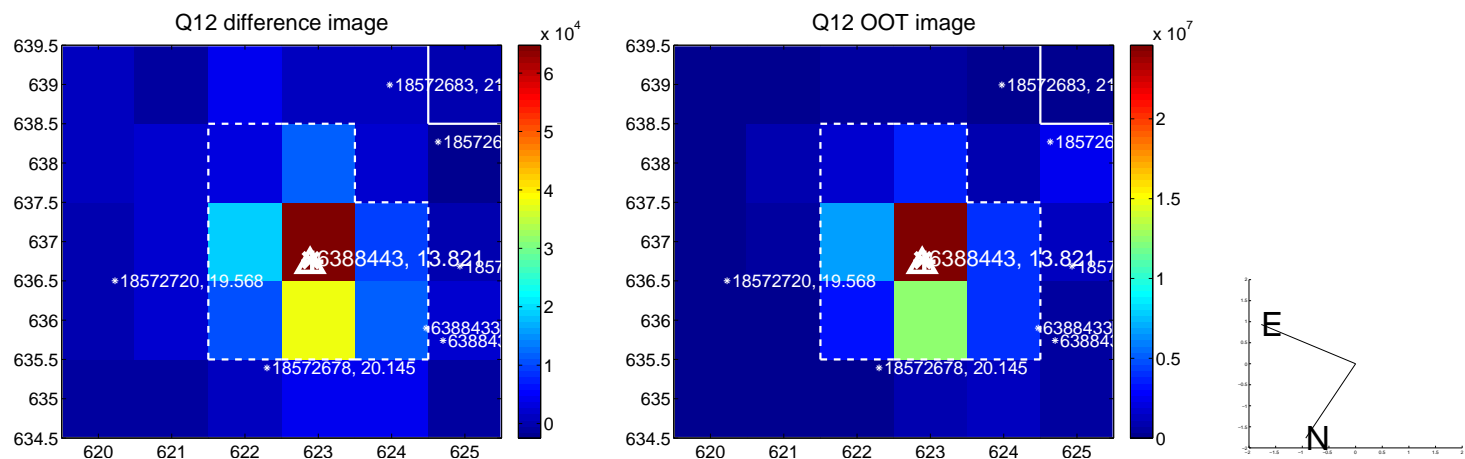
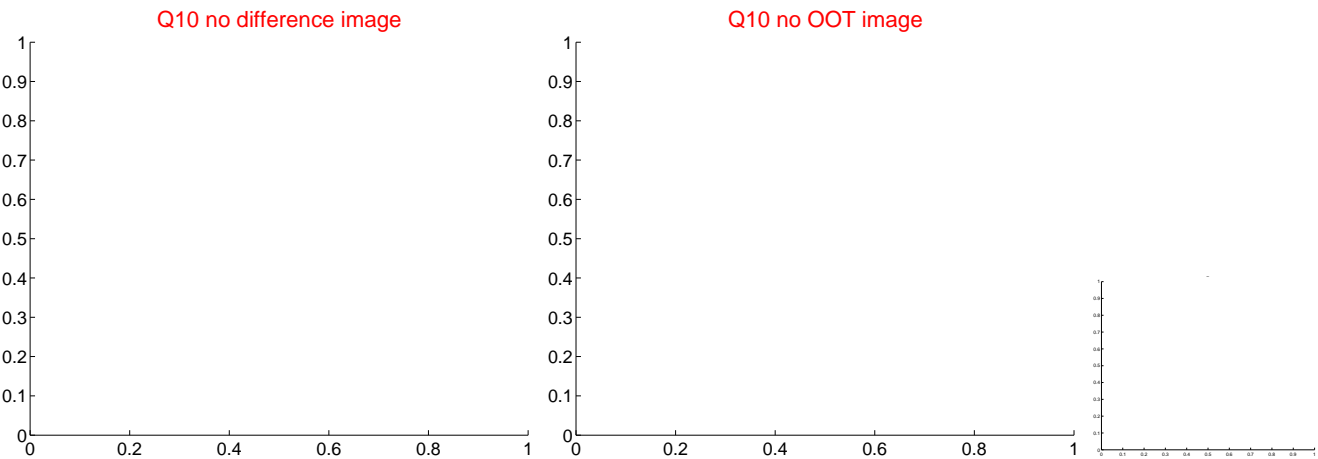
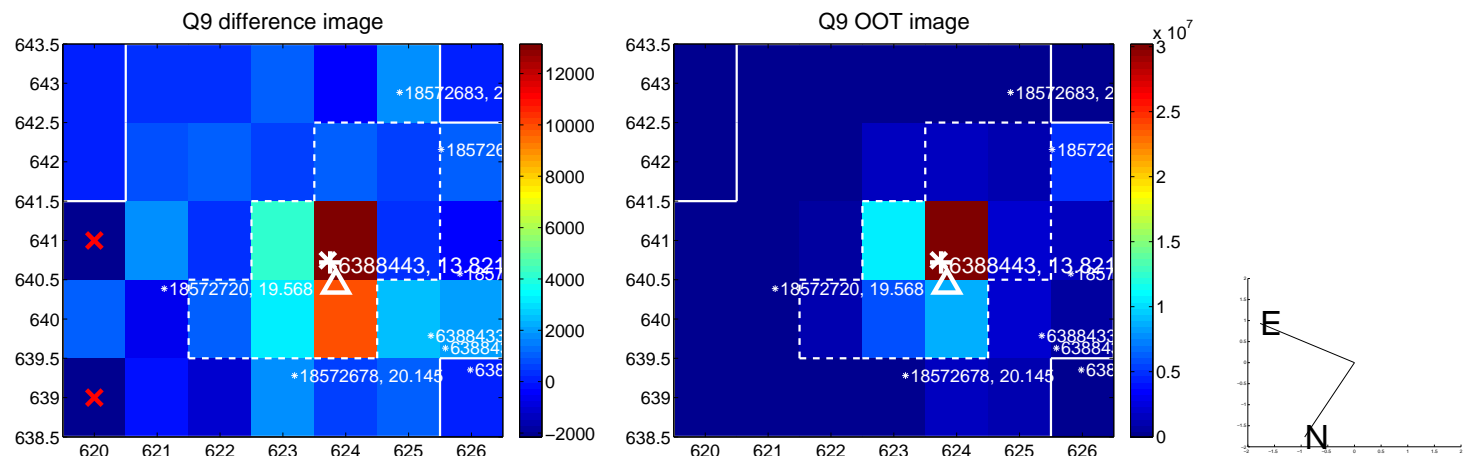
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



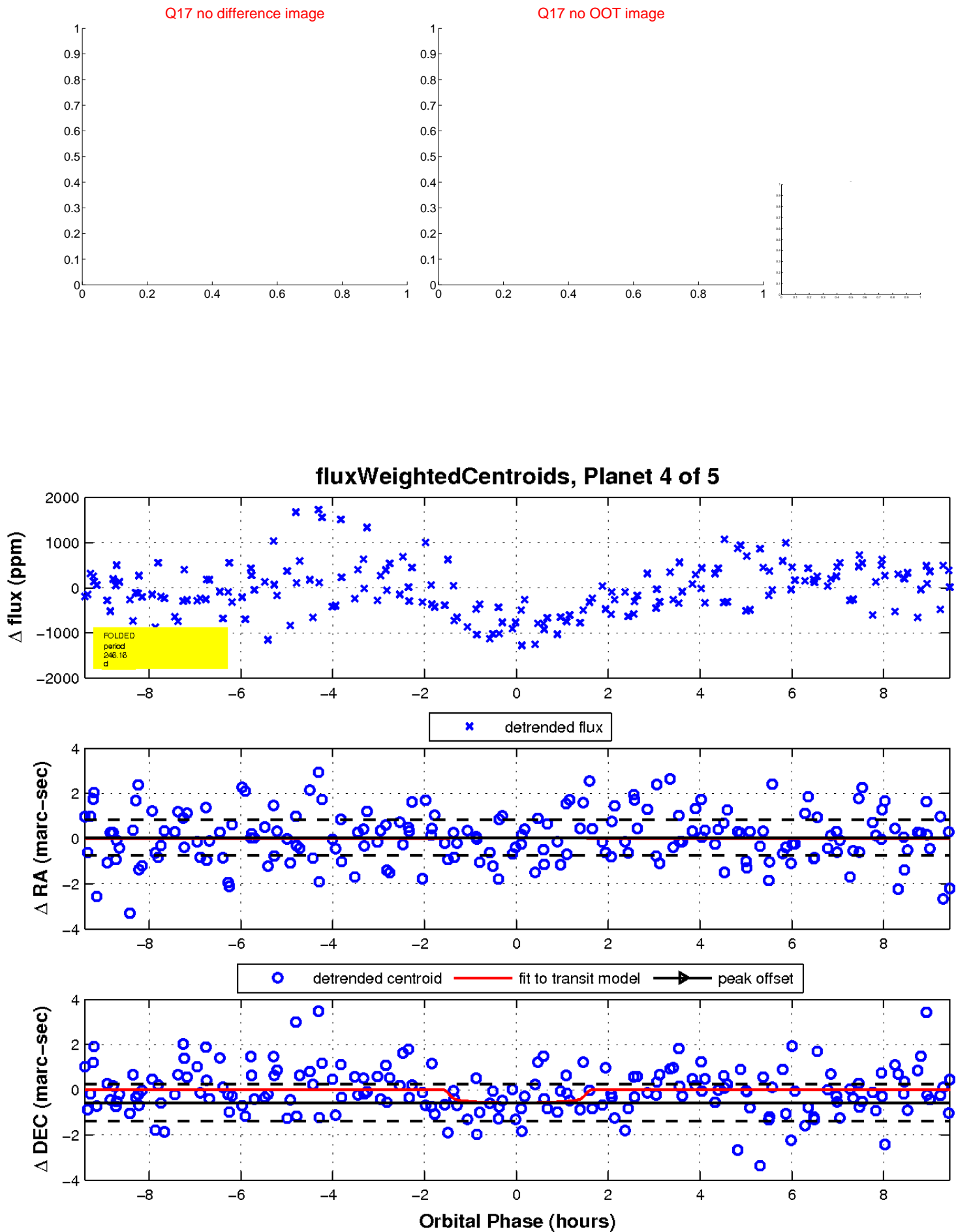
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

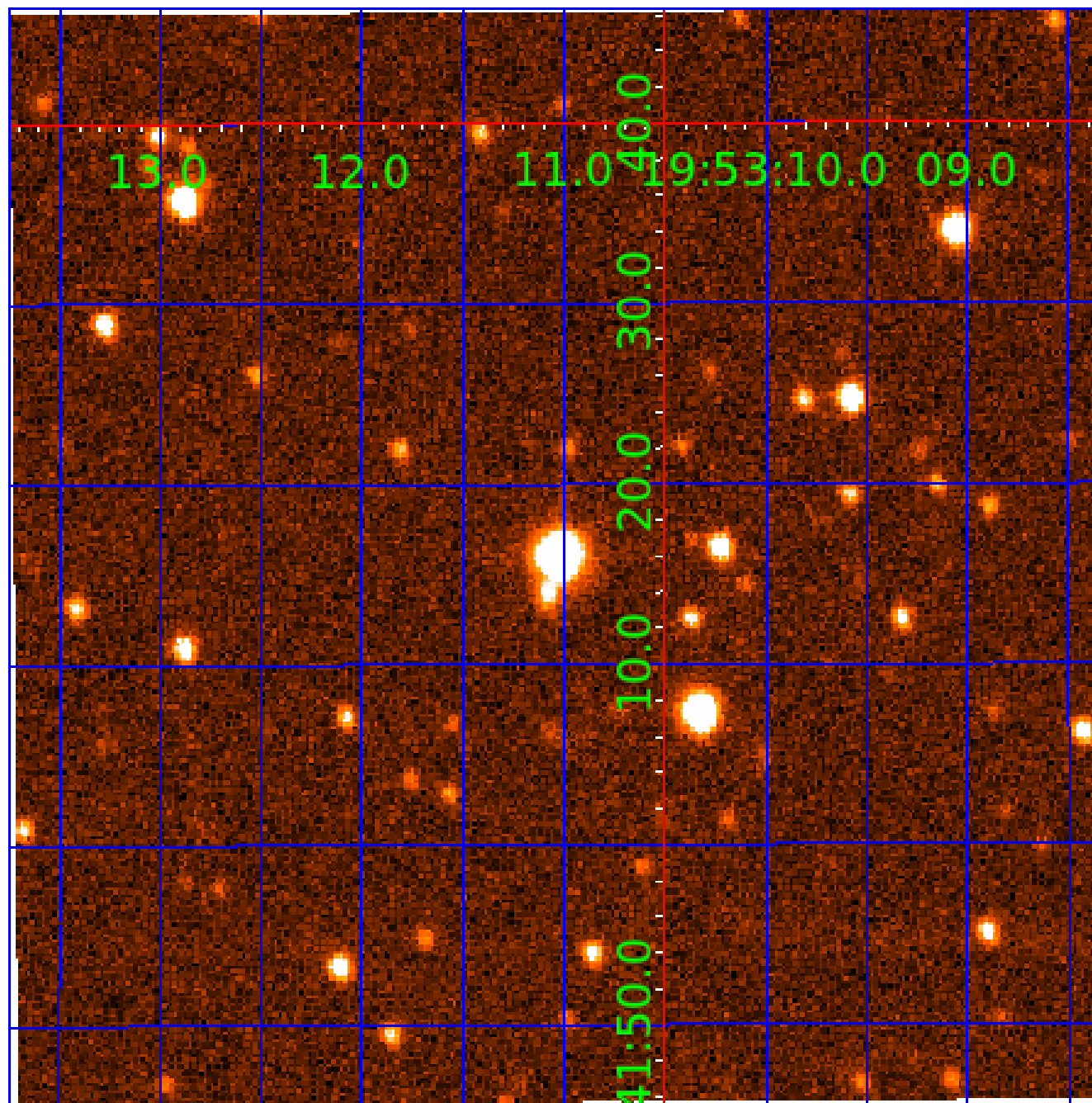


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006388443

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})
006388443-01	OBS	No	0.667042	131.748672	62.1	2.148	9.7	9.9	1.68	7138	1.54	23400.46
006388443-02	OBS	No	1.655337	132.469192	106.6	4.651	8.2	9.5	1.68	7138	2.02	6964.88
006388443-03	OBS	No	251.327799	137.902090	721.7	11.296	8.5	7.1	1.68	7138	4.91	8.60
006388443-04	OBS	No	246.155891	165.309787	902.9	3.162	7.8	7.2	1.68	7138	5.41	8.84
006388443-05	OBS	No	49.409458	148.444257	737.9	3.596	7.3	8.2	1.68	7138	8.52	75.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006388443-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006388443-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
006388443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006388443-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—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.

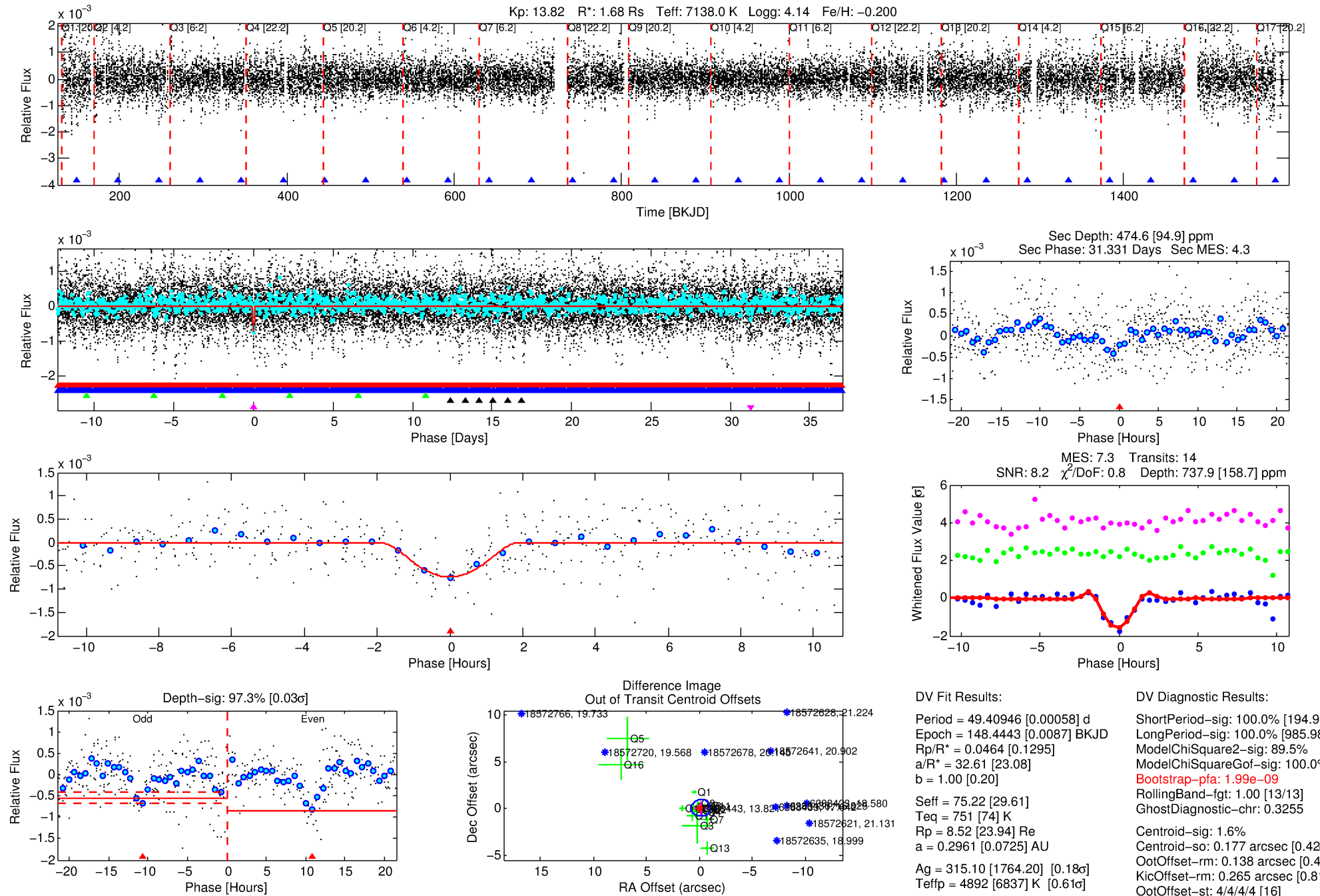
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388443-05

No Significant Match Found

DV One-Page Summary

KIC: 6388443 Candidate: 5 of 5 Period: 49.409 d



DV Fit Results:

Period = 49.40946 [0.00058] d
Epoch = 148.4443 [0.0087] BKJD
Rp/R* = 0.0464 [0.1295]
a/R* = 32.61 [23.08]
b = 1.00 [0.20]
Seff = 75.22 [29.61]
Teff = 751 [74] K
Rp = 8.52 [23.94] Re
a = 0.2961 [0.0725] AU
Ag = 315.10 [1764.20] [0.18 σ]
Teffp = 4892 [6837] K [0.61 σ]

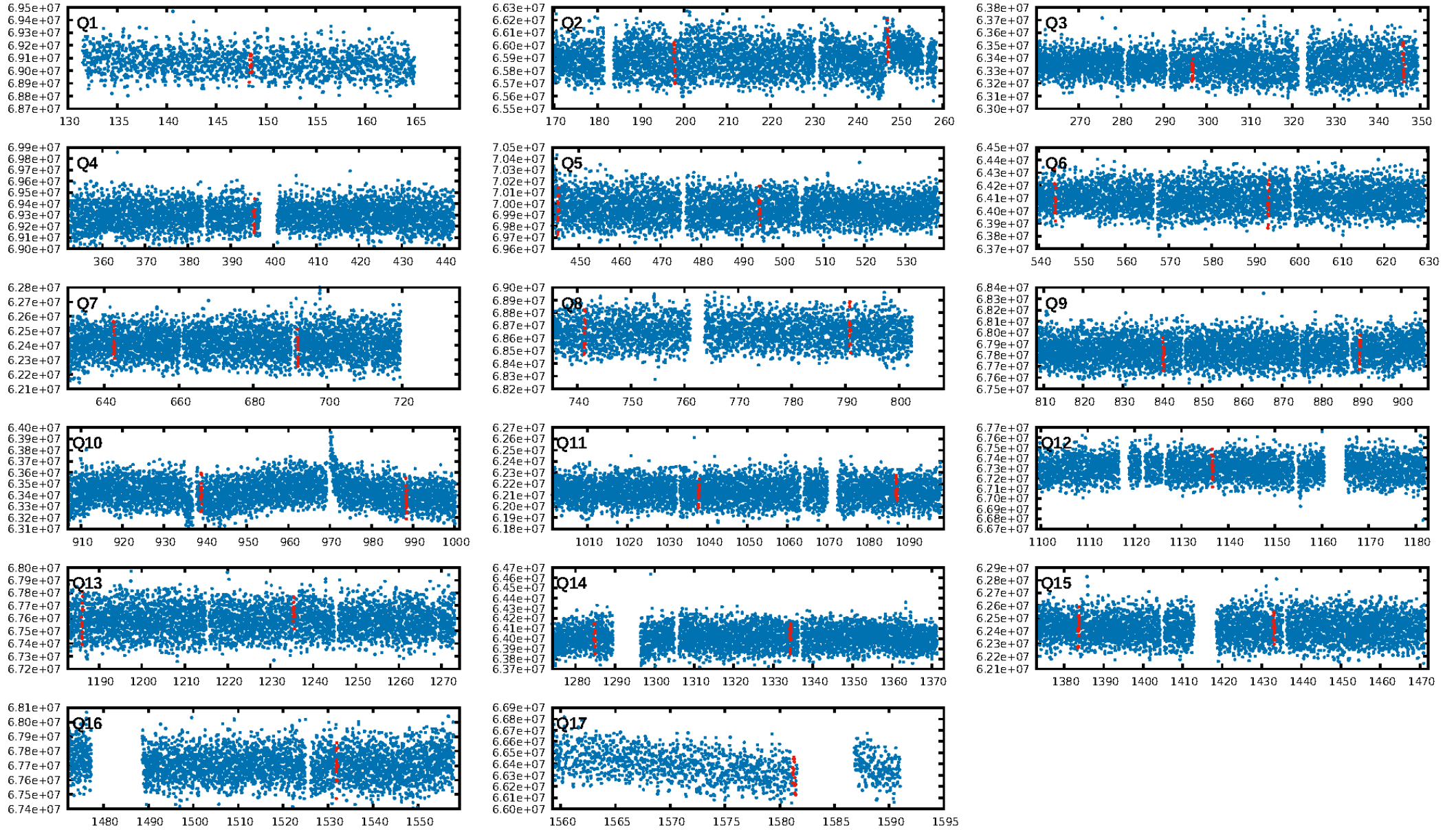
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [194.94 σ]
LongPeriod-sig: 100.0% [985.98 σ]
ModelChiSquare2-sig: 89.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.99e-09
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 0.3255
Centroid-sig: 1.6%
Centroid-so: 0.177 arcsec [0.42 σ]
OotOffset-rm: 0.138 arcsec [0.46 σ]
KicOffset-rm: 0.265 arcsec [0.81 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/16]

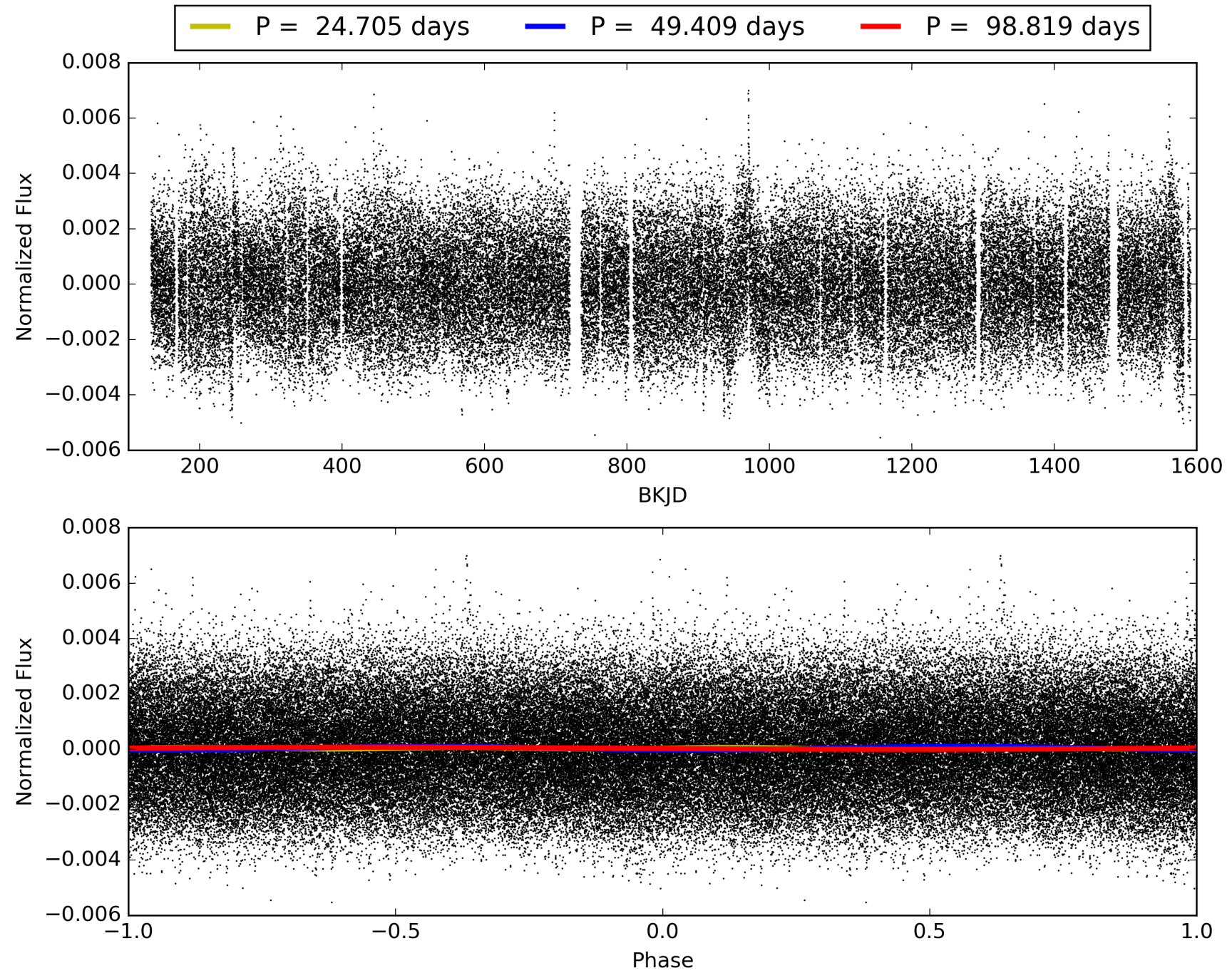
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:32 Z

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

TCE 006388443-05, PDC Light Curves

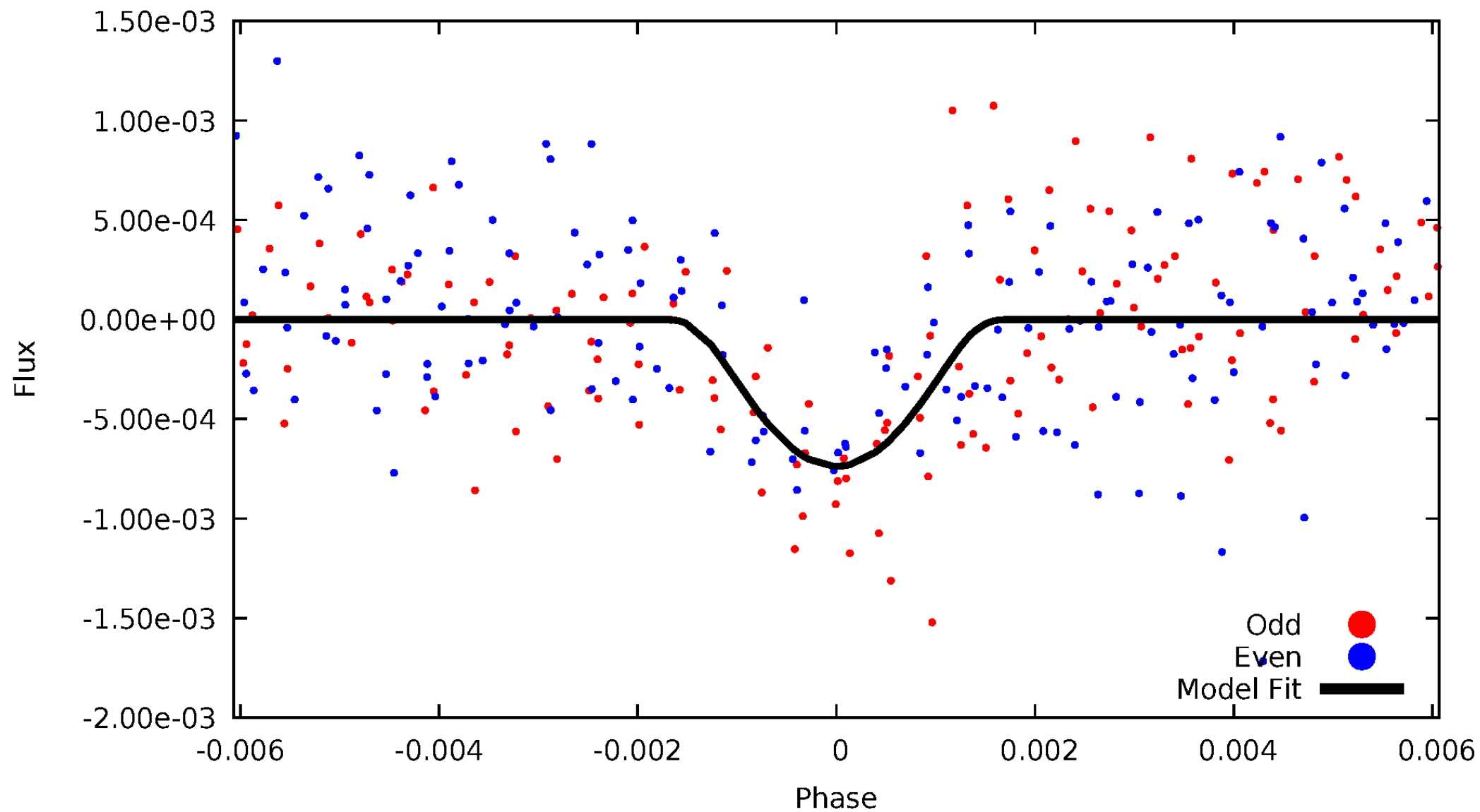


TCE 006388443-05



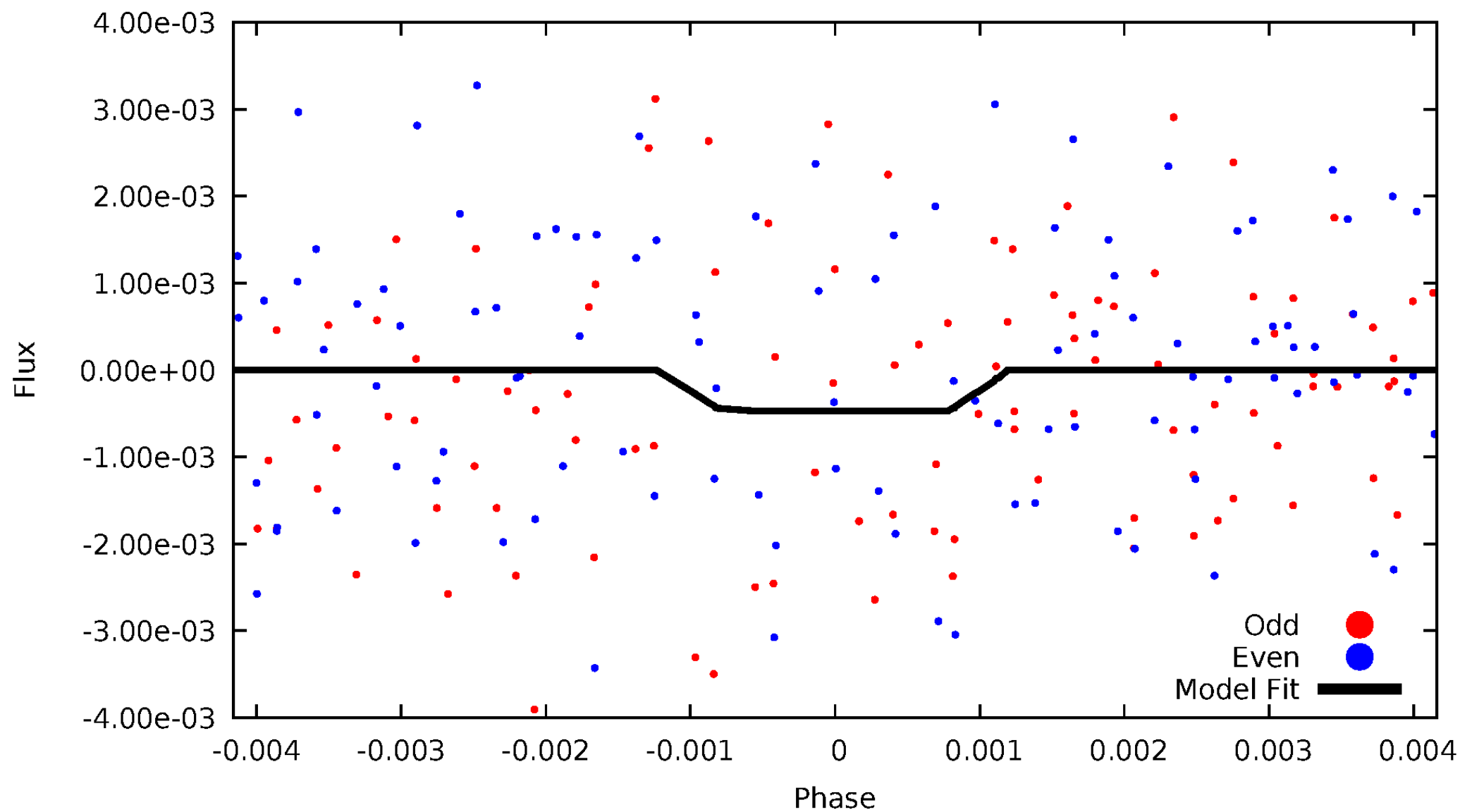
DV Odd/Even

TCE 006388443-05



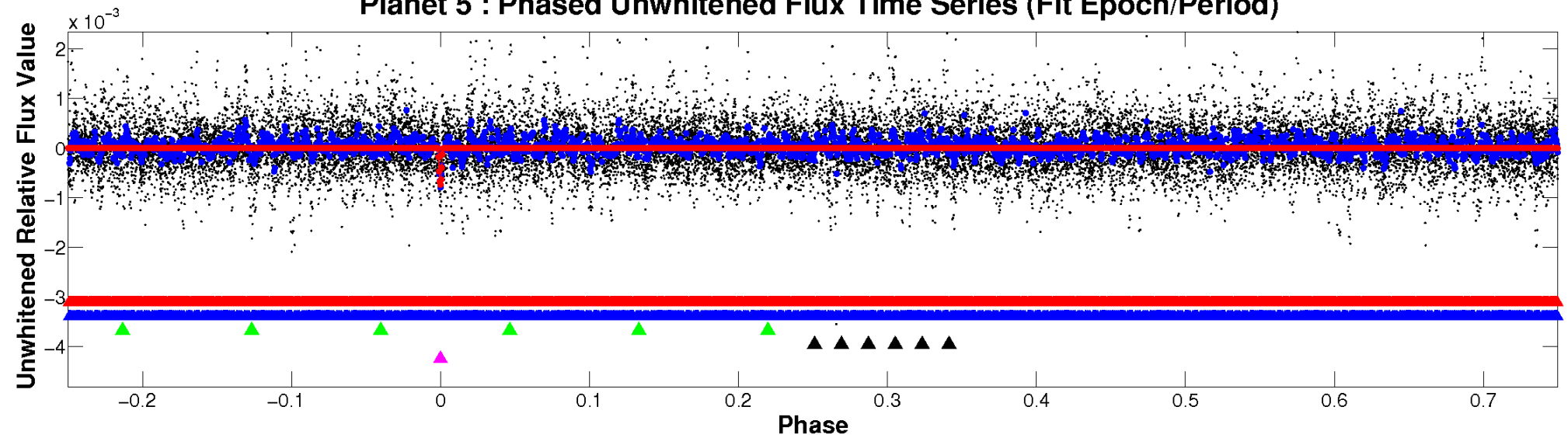
ALT Odd/Even

TCE 006388443-05

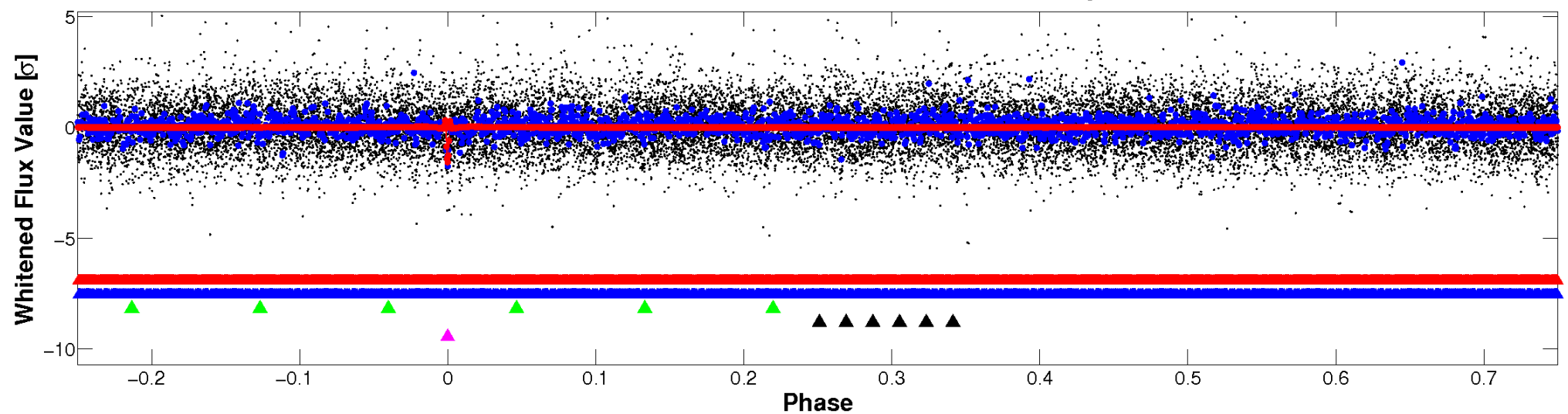


Non-Whitened Vs. Whitened Light Curve

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

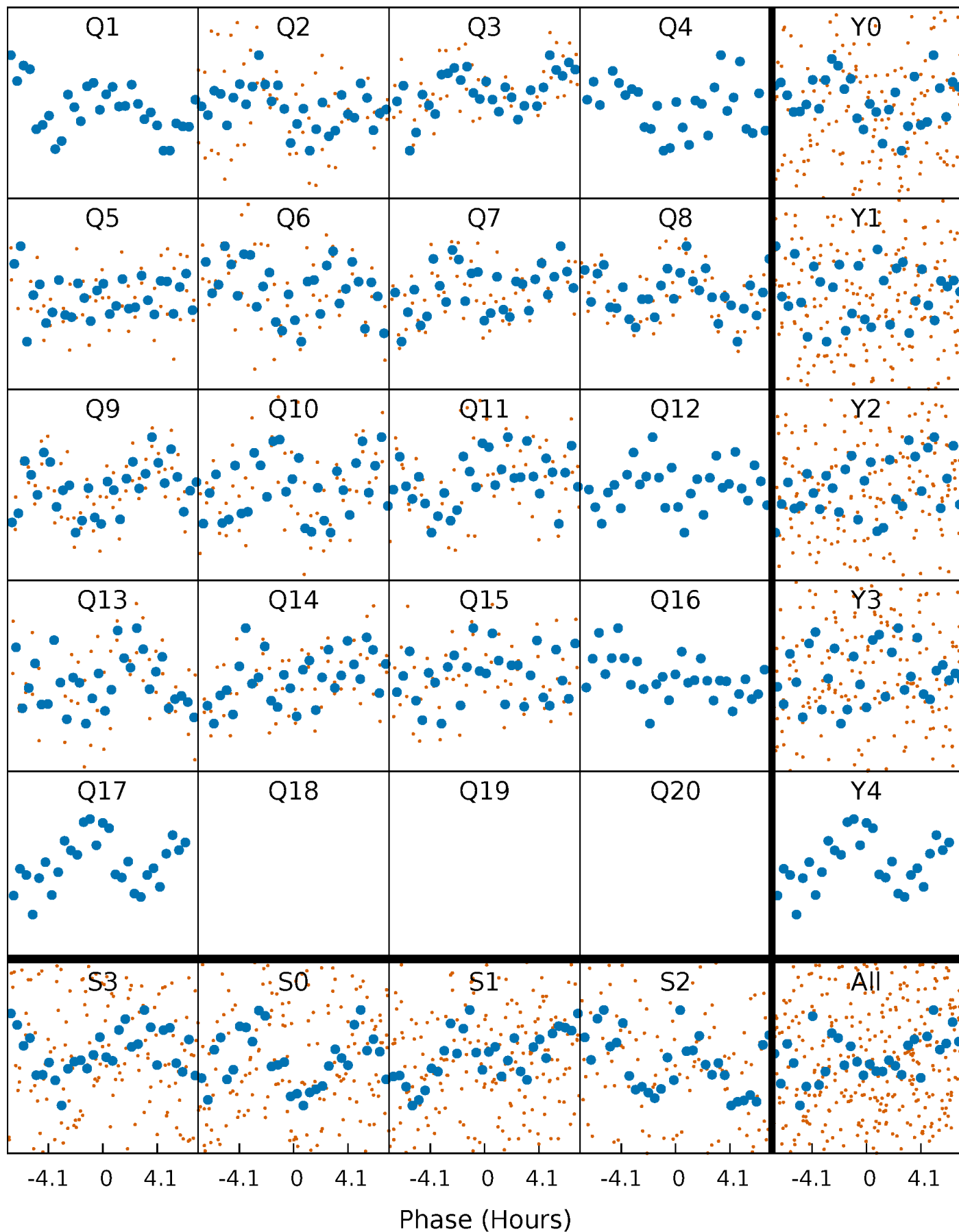


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



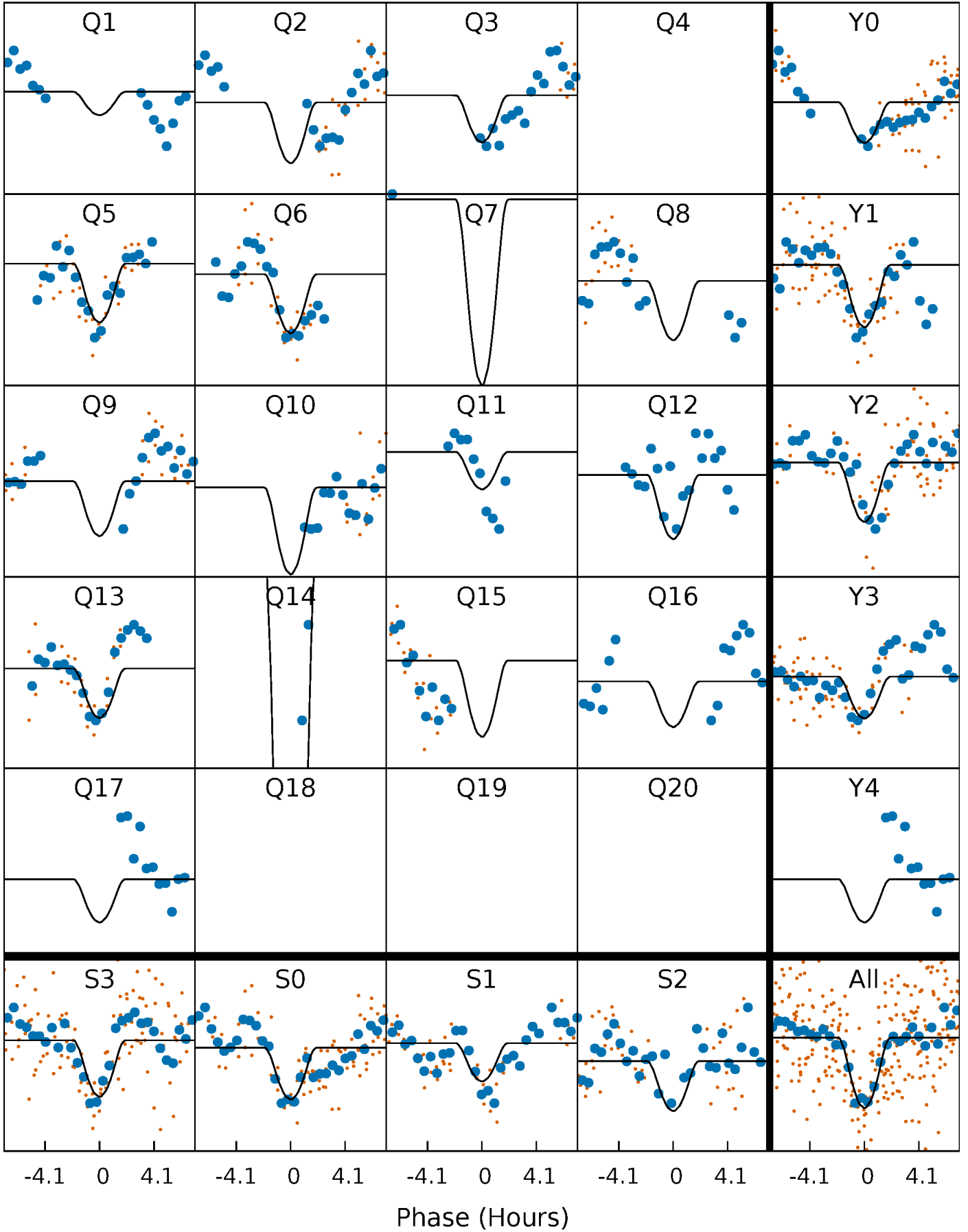
PDC Quarter-Phased Transit Curves

TCE 006388443-05 P= 49.409458 Days $T_0=148.444257$ (BKJD)



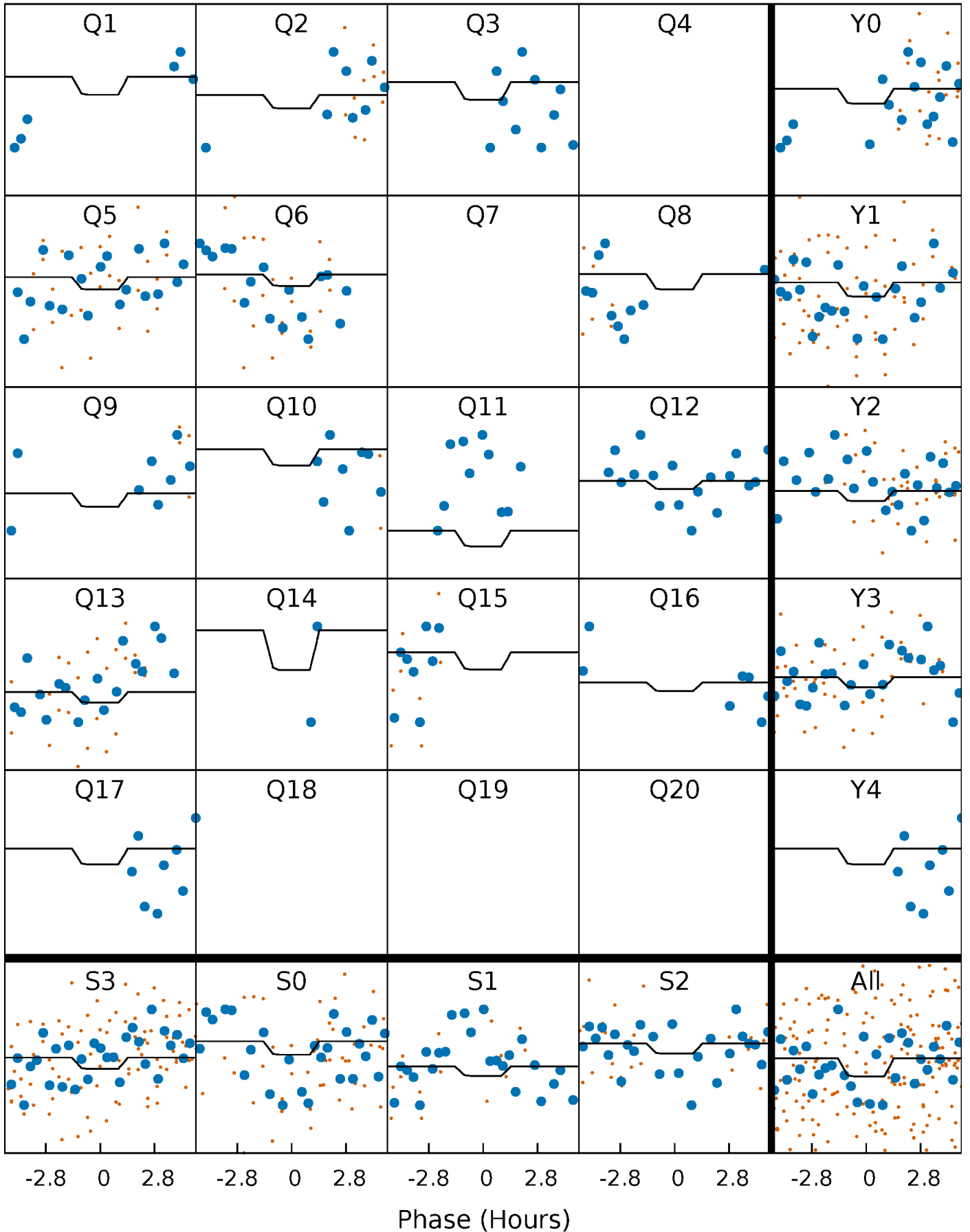
DV Quarter-Phased Transit Curves

TCE 006388443-05 $P = 49.409458$ Days $T_0 = 148.444257$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

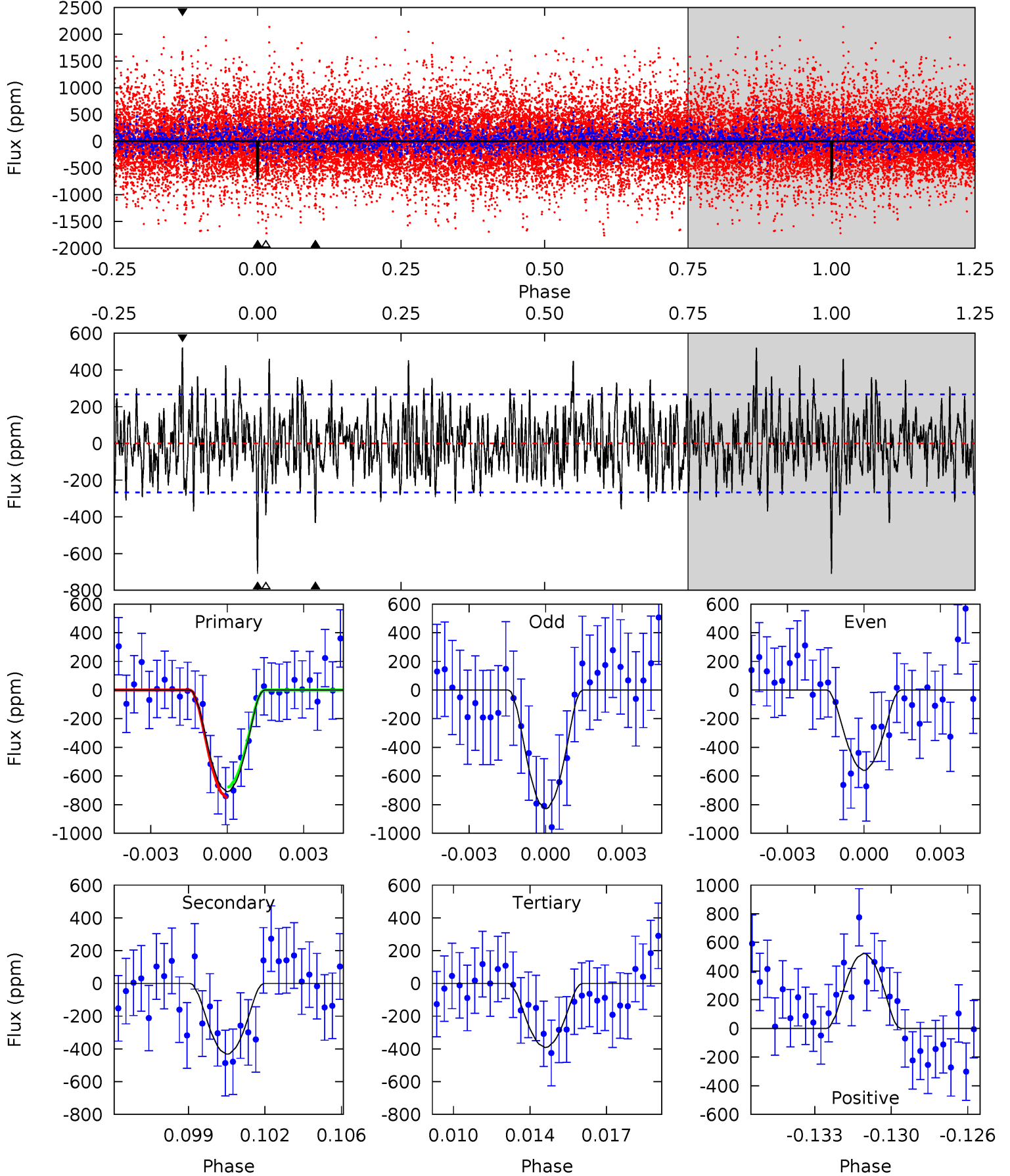
TCE 006388443-05 P= 49.410234 Days $T_0=148.418155$ (BKJD)



DV Model-Shift Uniqueness Test

006388443-05, P = 49.409458 Days, E = 99.034799 Days

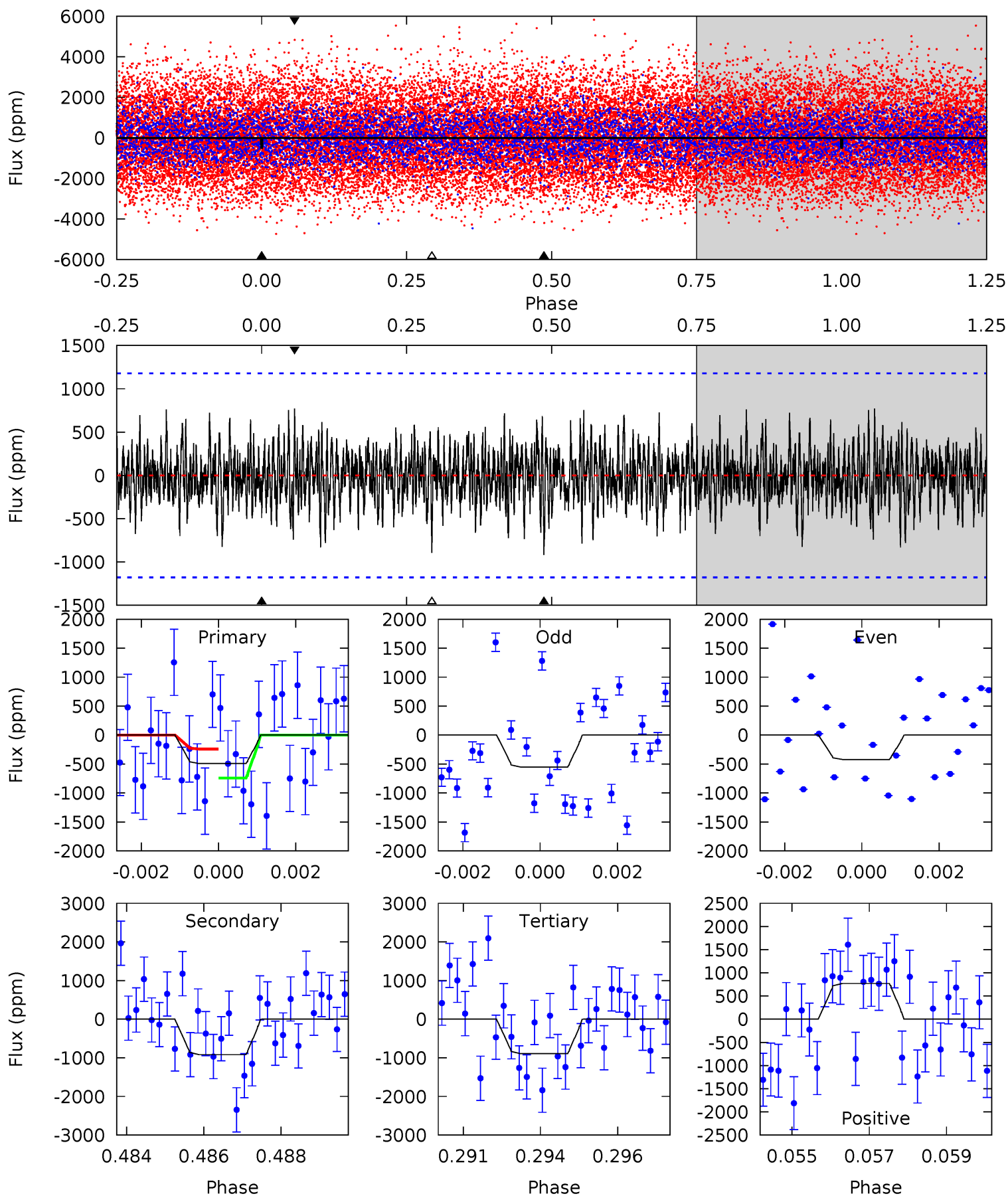
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	8.46	7.65	10.2	5.23	2.93	2.68	6.23	3.66	0.81	-1.77	2.61	0.37	0.42	0.71



Alt Model-Shift Uniqueness Test

006388443-05, P = 49.410234 Days, E = 99.007921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.22	4.14	4.03	3.47	5.31	3.06	1.15	-1.81	-1.26	0.11	0.66	0.30	0.61	0.46	1.12



Stellar Parameters For KIC 006388443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7138^{+225}_{-325}	$4.137^{+0.153}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$1.684^{+0.501}_{-0.410}$	$1.419^{+0.209}_{-0.232}$	$0.419^{+0.337}_{-0.218}$
	+3%/-5%	+4%/-5%	+125%/-175%	+30%/-24%	+15%/-16%	+81%/-52%
Source	PHO1	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 006388443-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-432 ± 51	$18.98^{+20.42}_{-13.17}$	1050^{+80}_{-74}	3603^{+2243}_{-694}	57^{+600}_{-43}
Alt.	-918 ± 222	$17.60^{+19.10}_{-12.43}$	1051^{+85}_{-75}	4253^{+3108}_{-953}	147^{+1454}_{-116}

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 $A_{obs} \gg 1.0$

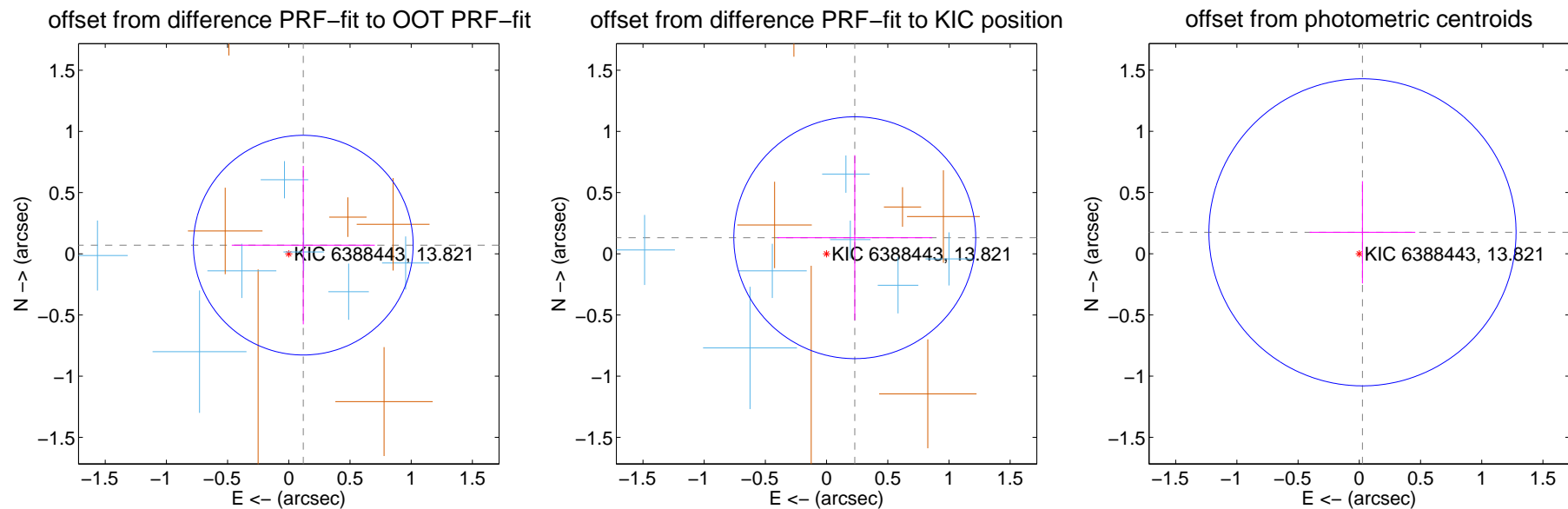
DV Centroid Data

Supplemental centroid analysis for 006388443-05. Kepler magnitude: 13.82. Transit SNR 8.21

There are 7 quarters with good PRF difference image offsets

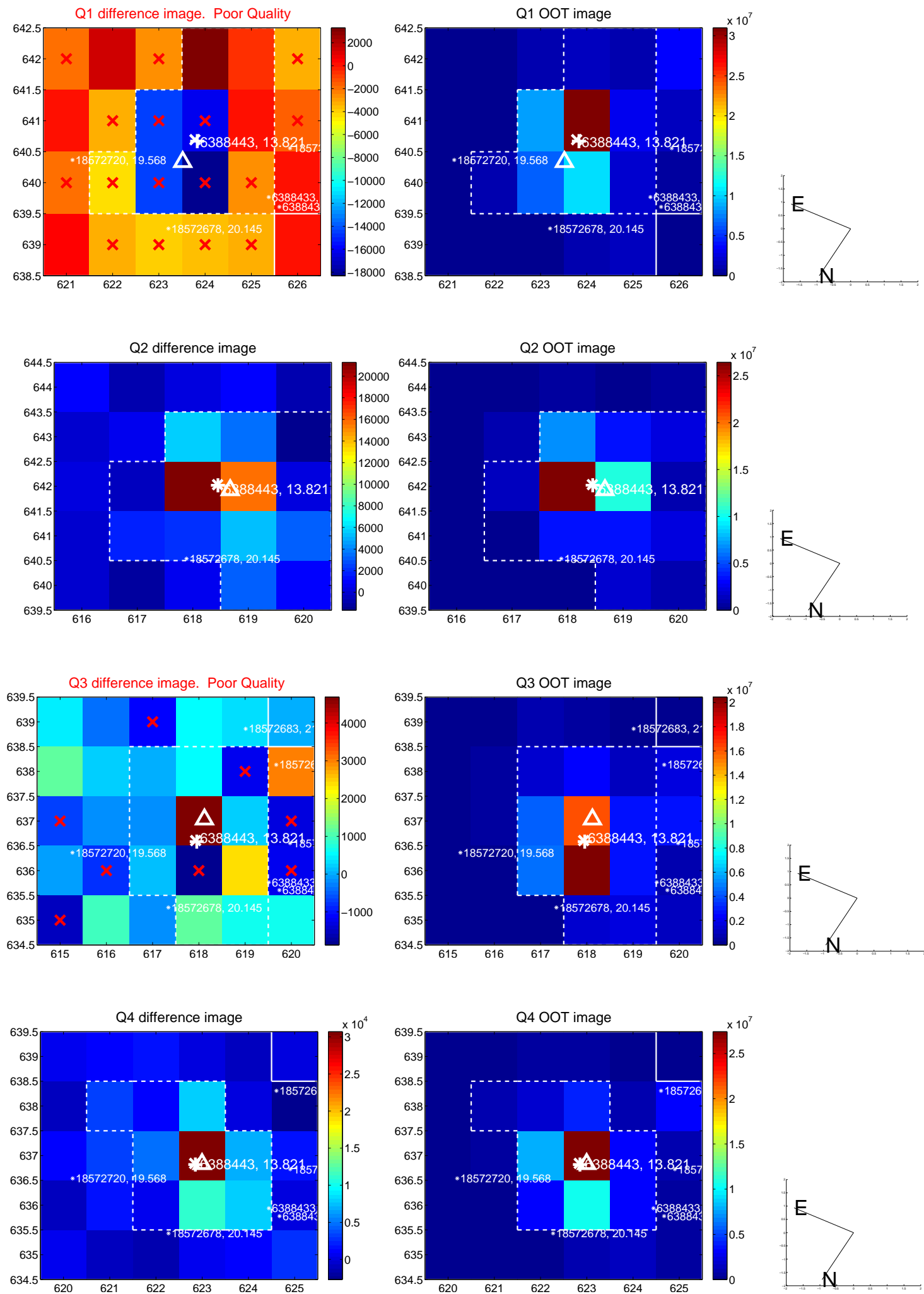
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.138 ± 0.299	0.46	-0.118 ± 0.584	0.071 ± 0.647
PRF-fit source offset from KIC position	0.265 ± 0.329	0.81	-0.230 ± 0.633	0.131 ± 0.674
photometric centroid source offset	0.18 ± 0.42	0.42	-0.03 ± 0.43	0.17 ± 0.42

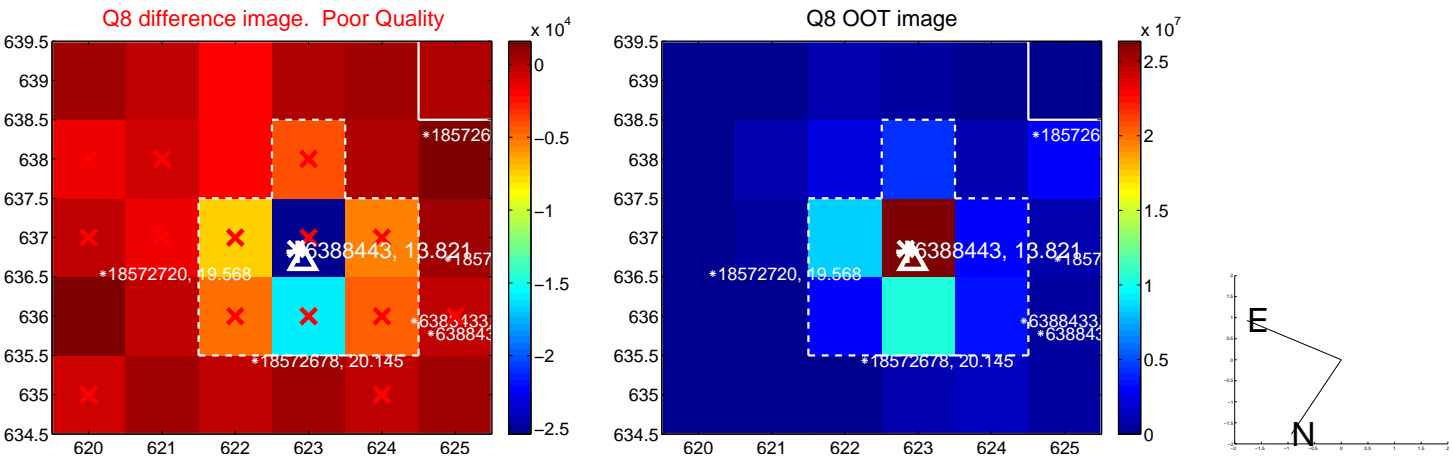
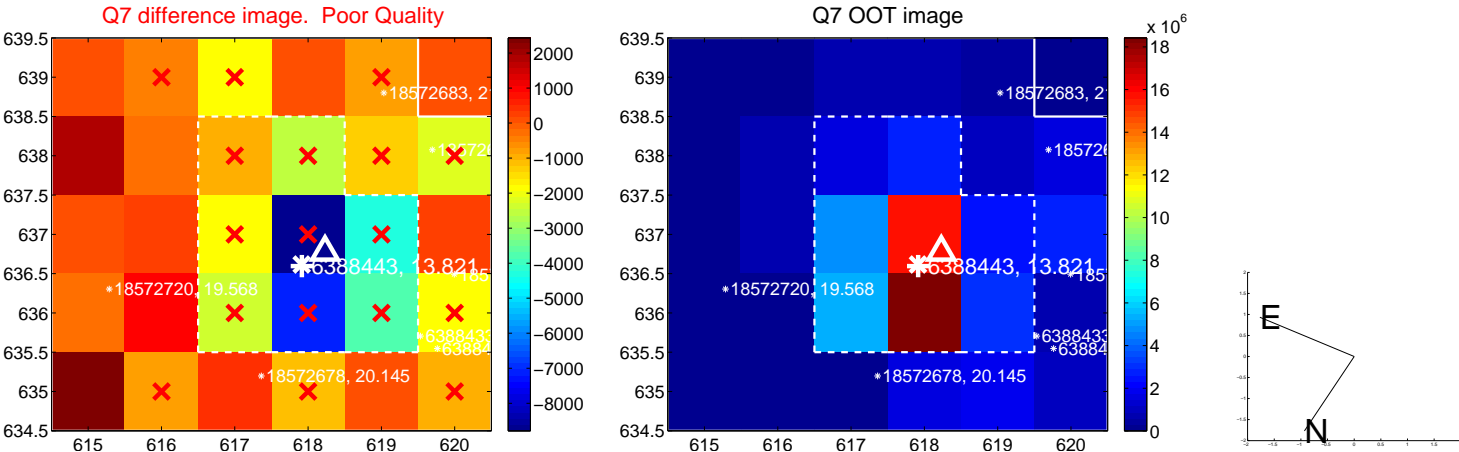
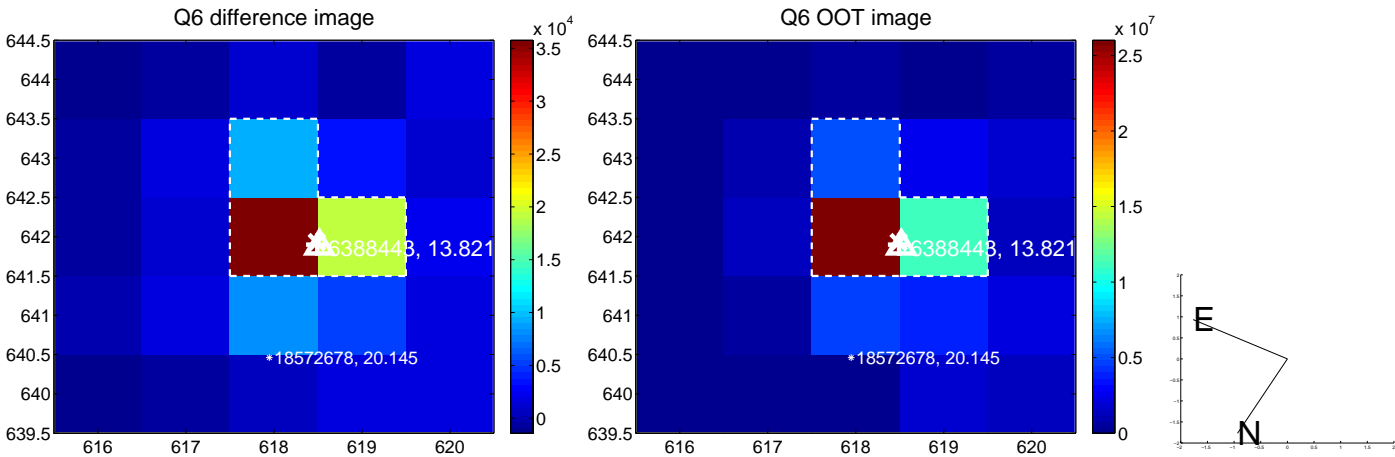
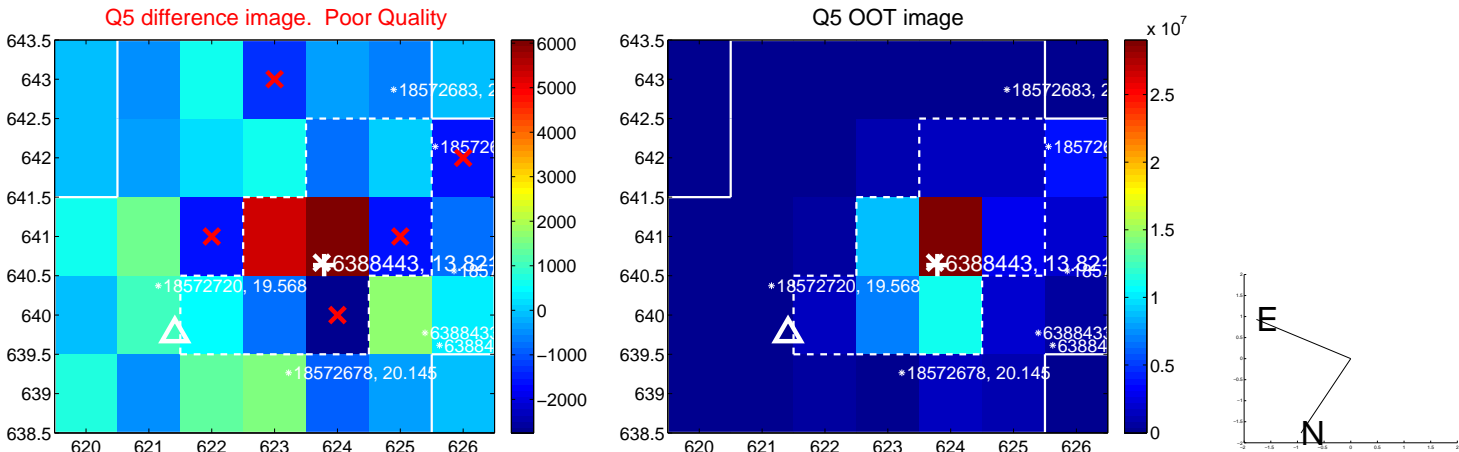


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

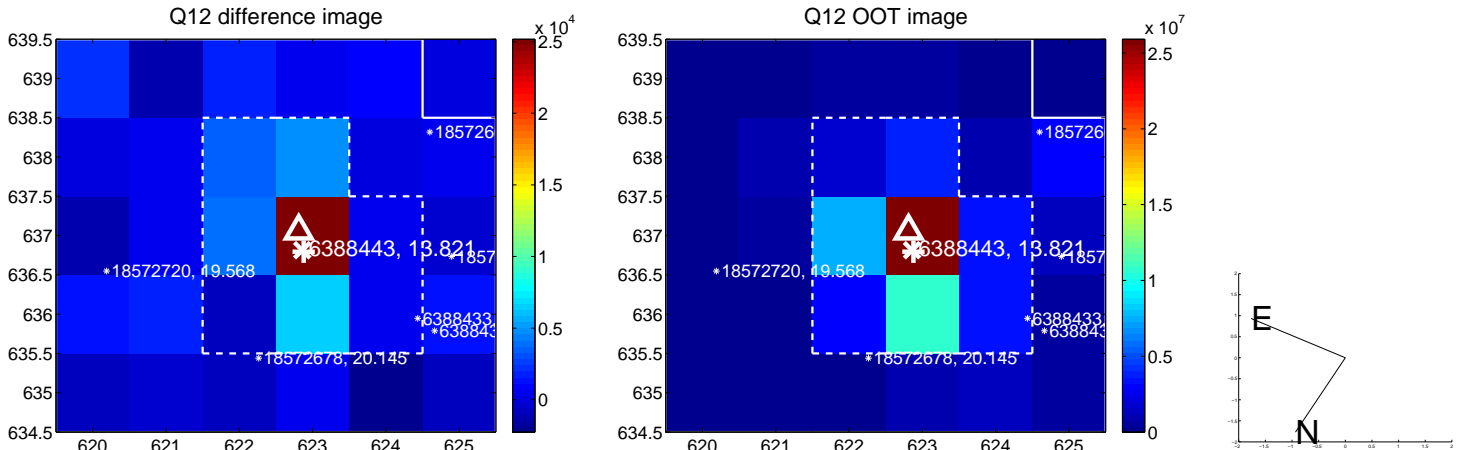
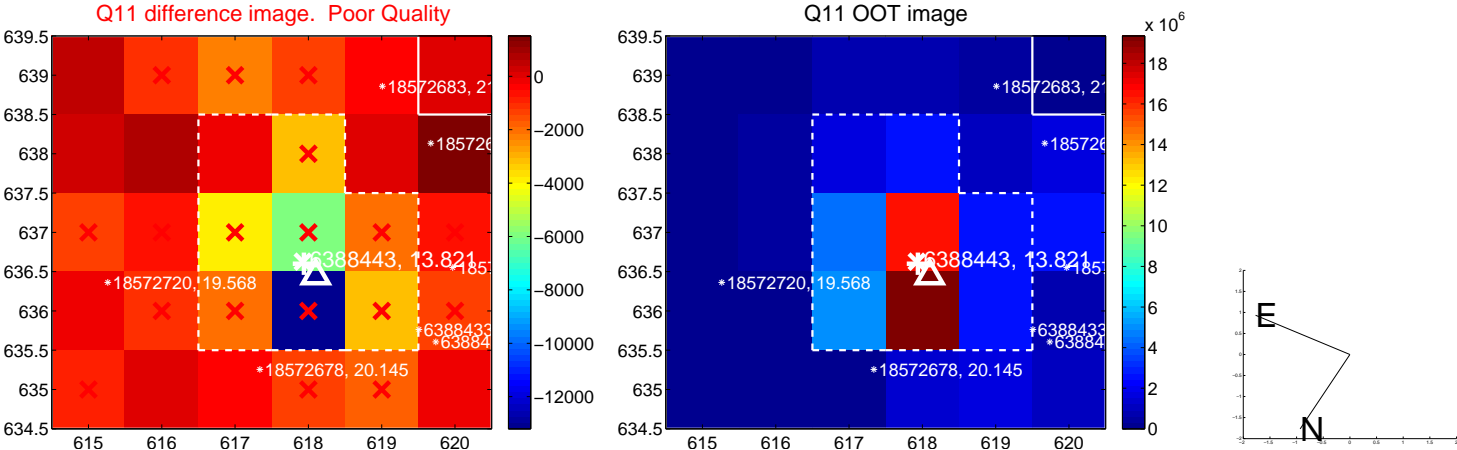
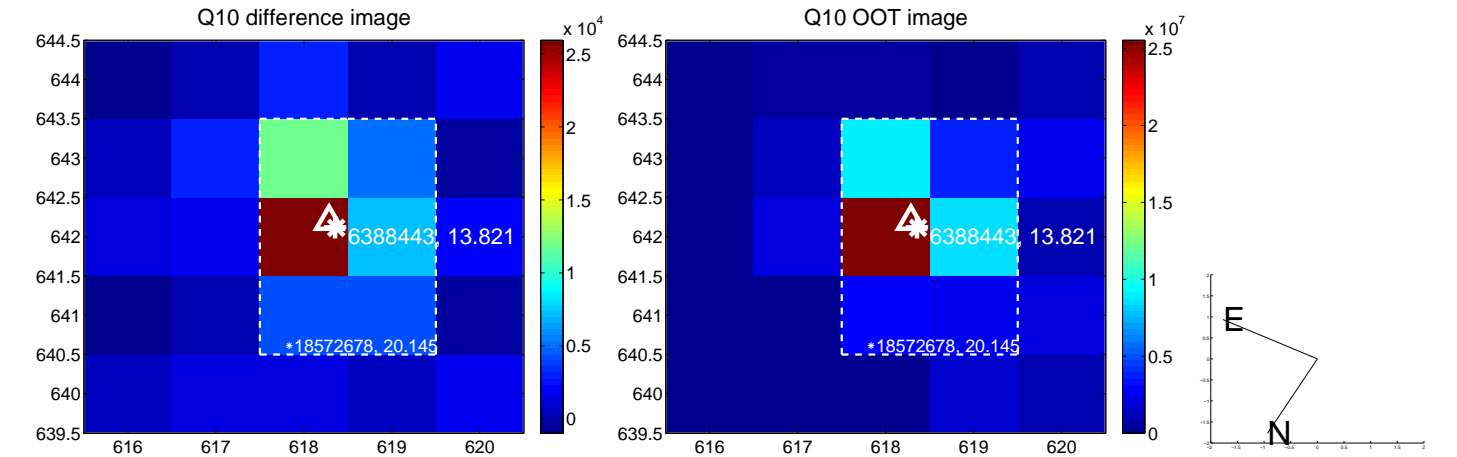
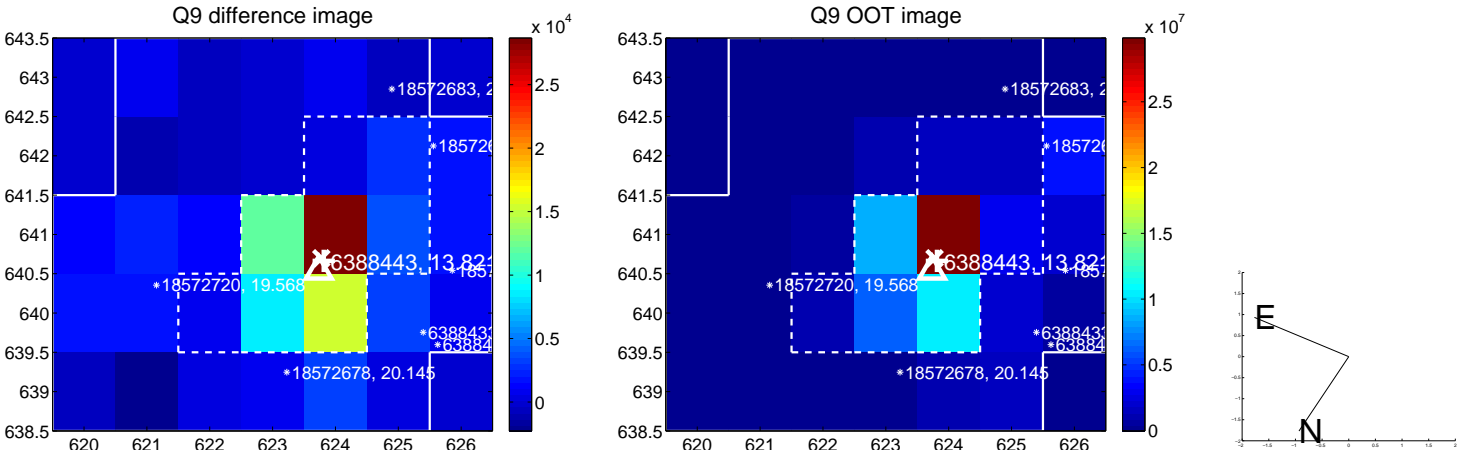
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



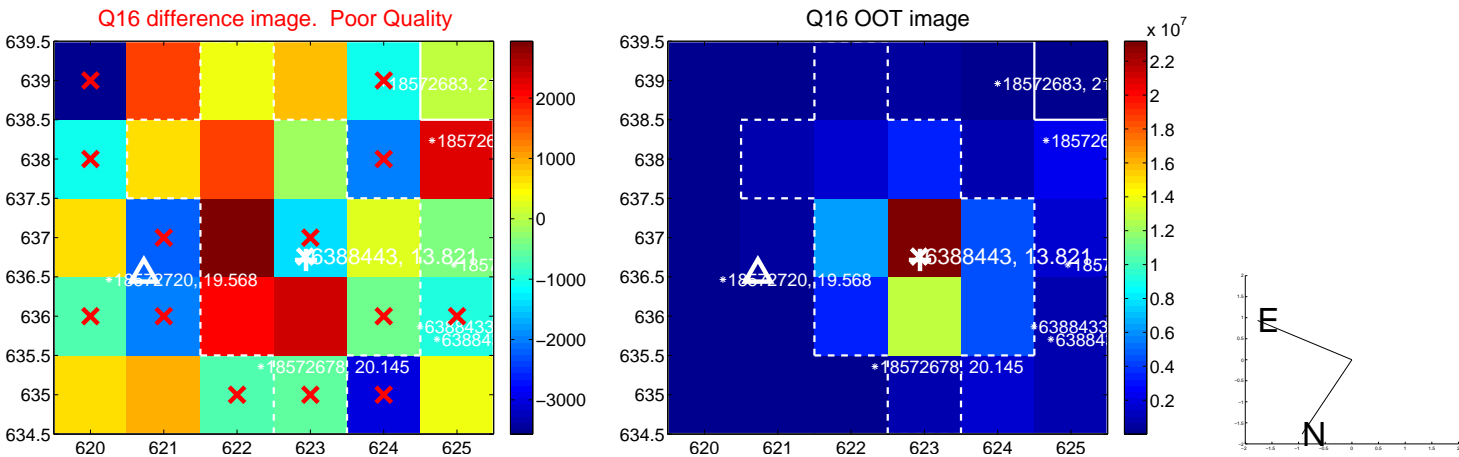
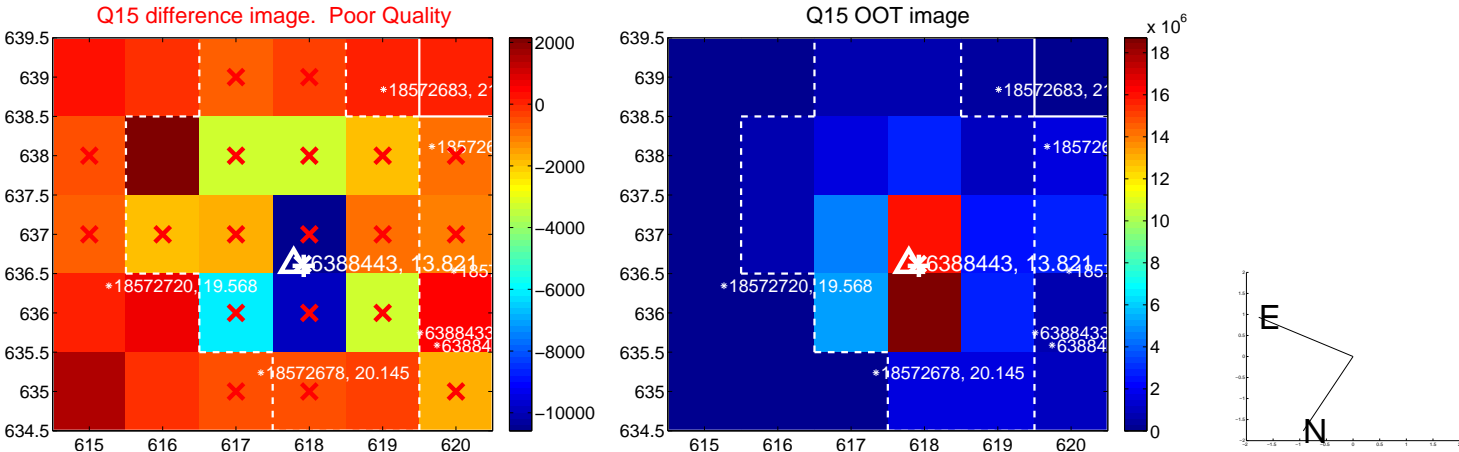
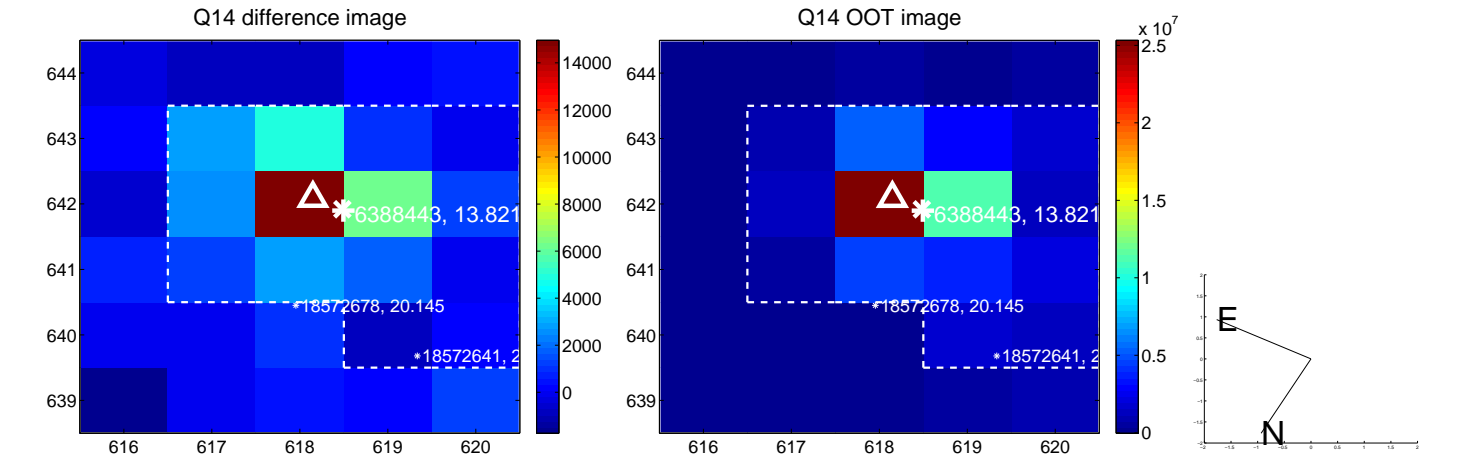
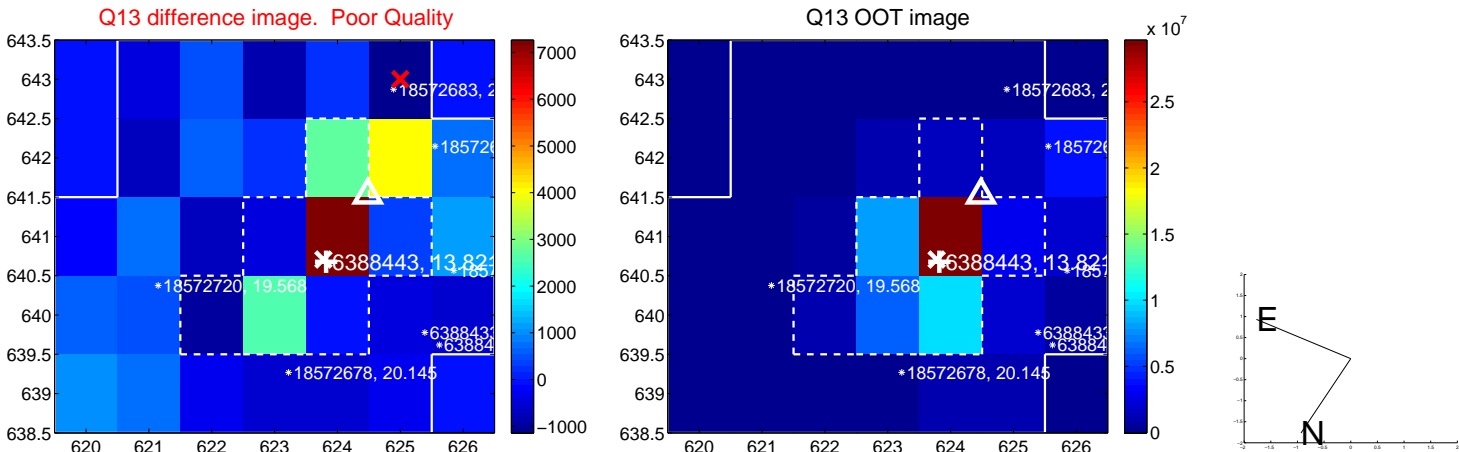
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



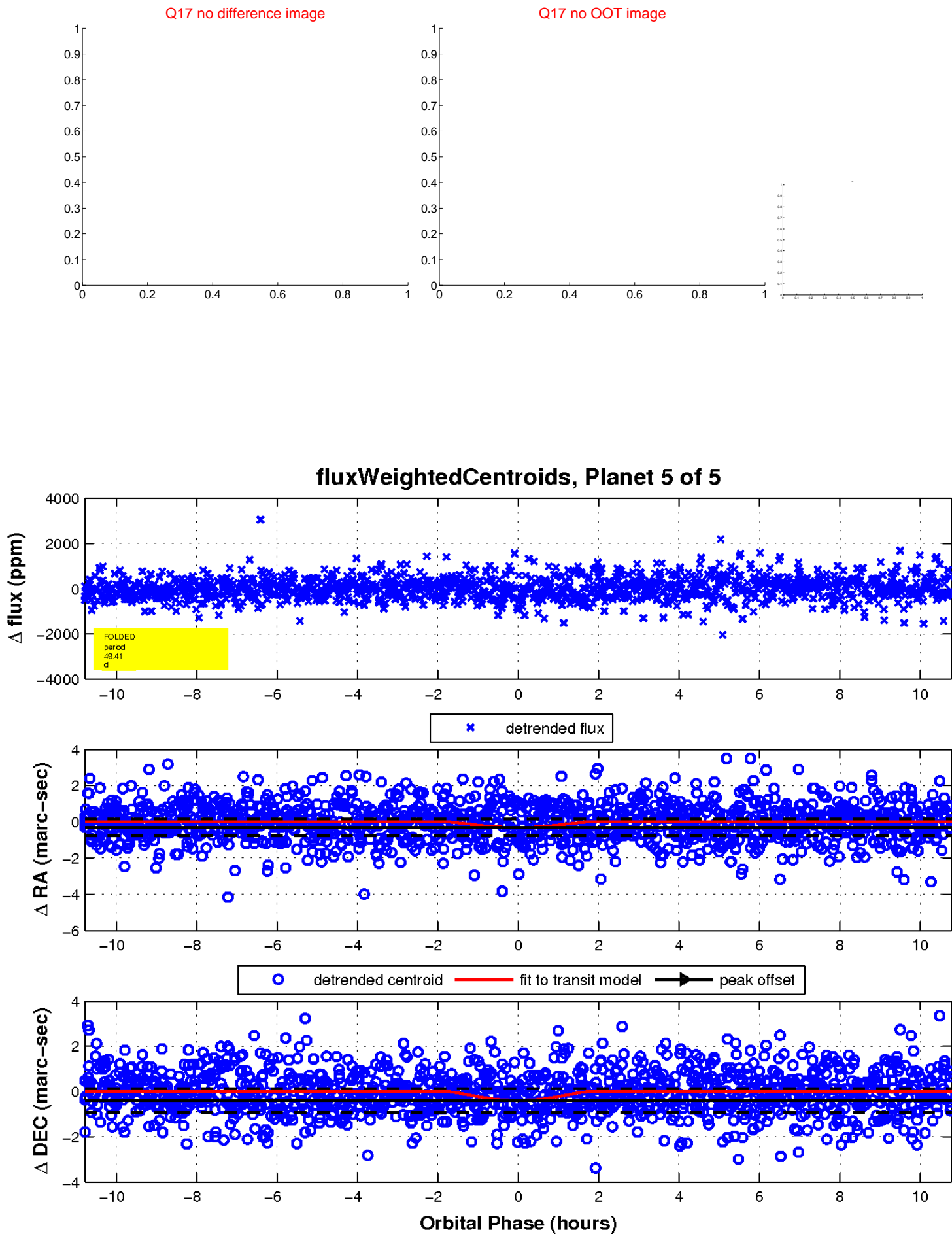
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

