

KIC 007117710

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})
007117710-01	OBS	7817.01	0.566789	131.812151	18.2	2.768	8.2	9.4	0.89	5403	0.46	3355.94
007117710-02	OBS	No	308.293496	141.147533	282.6	7.220	8.6	7.1	0.89	5403	1.67	0.76
007117710-03	OBS	No	72.660221	145.562827	221.0	2.214	7.5	7.6	0.89	5403	1.60	5.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007117710-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH
007117710-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007117710-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

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

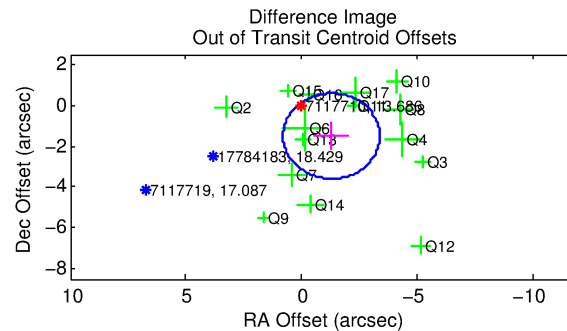
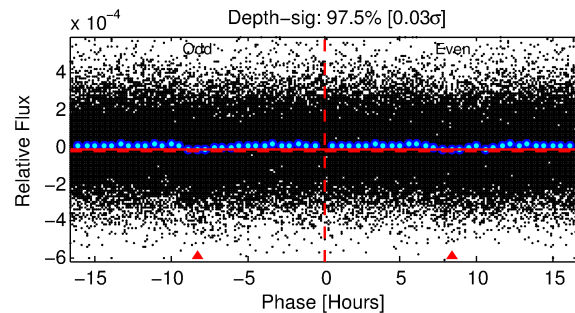
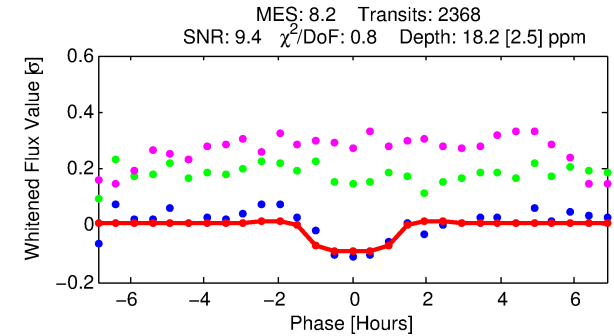
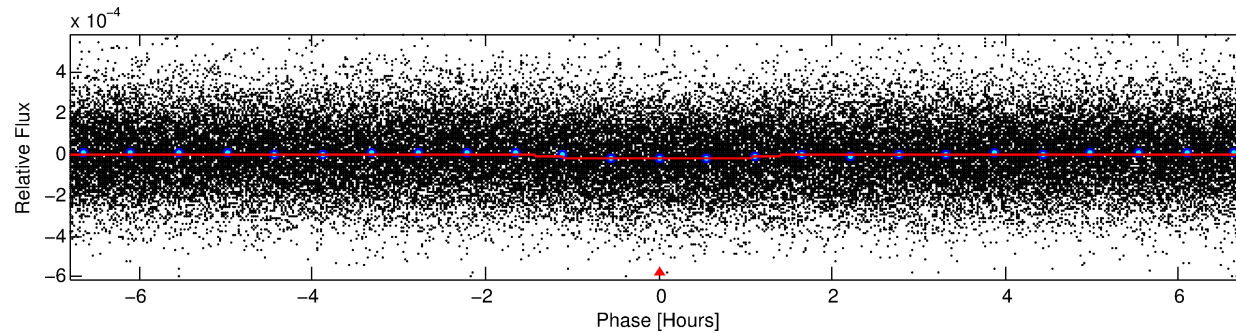
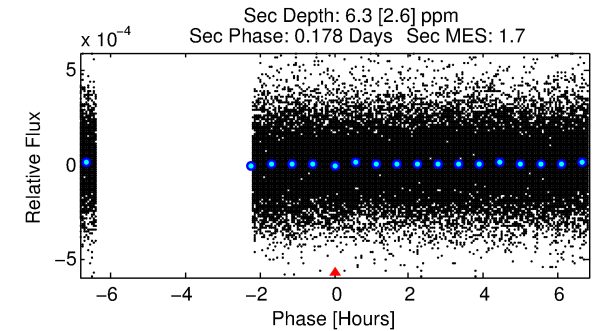
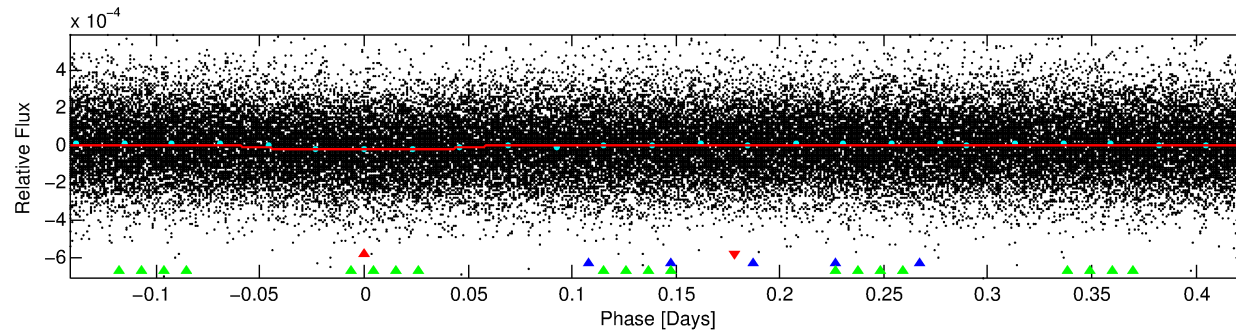
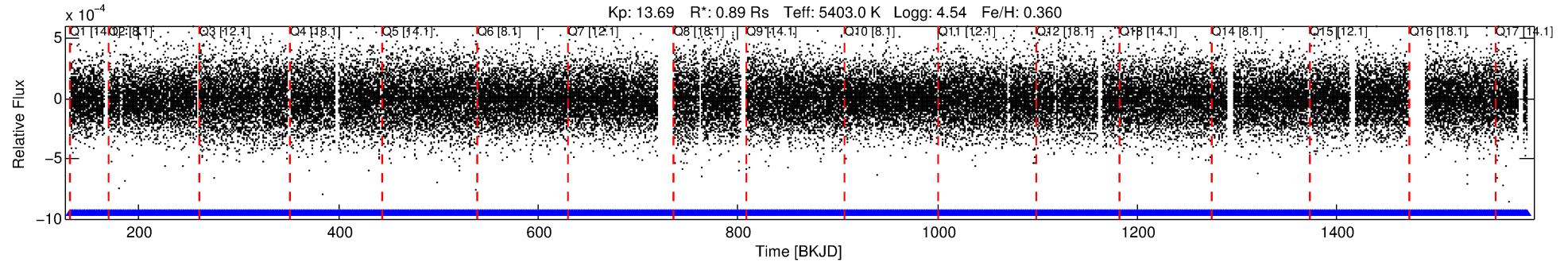
Ephemeris Match Information For 007117710-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (μ)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007117710-01	7117710	RR-Lyr-pri	7198959	1:1	1146.0	231	172	7.86	13.68	34628.00	Direct-PRF	0	1.76	20.19

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7117710 Candidate: 1 of 3 Period: 0.567 d



DV Fit Results:

Period = 0.56679 [0.00001] d
Epoch = 131.8122 [0.0031] BKJD
Rp/R* = 0.0047 [0.0025]
a/R* = 1.16 [0.70]
b = 0.91 [0.47]
Seff = 3355.94 [646.06]
Teq = 1941 [93] K
Rp = 0.46 [0.25] Re
a = 0.0134 [0.0015] AU
Ag = 2.93 [3.39] [0.57σ]
Teffp = 3927 [1121] K [1.77σ]

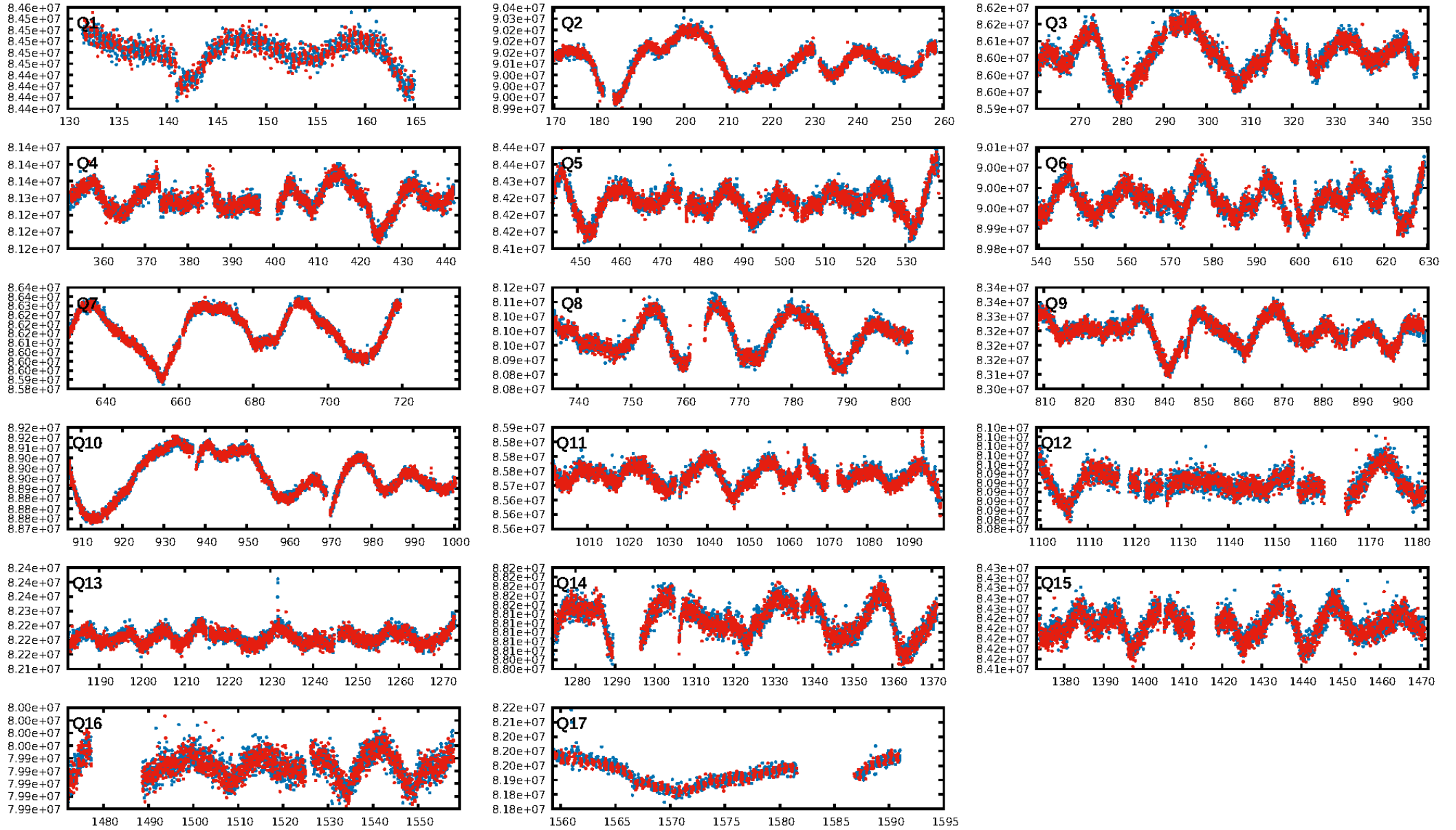
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [488.07σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.92e-13
RollingBand-fgt: 1.00 [2263/2263]
GhostDiagnostic-chr: 0.2251
Centroid-sig: 1.3%
Centroid-so: 1.938 arcsec [1.87σ]
OotOffset-rm: 1.979 arcsec [2.84σ]
KicOffset-rm: 1.949 arcsec [2.78σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

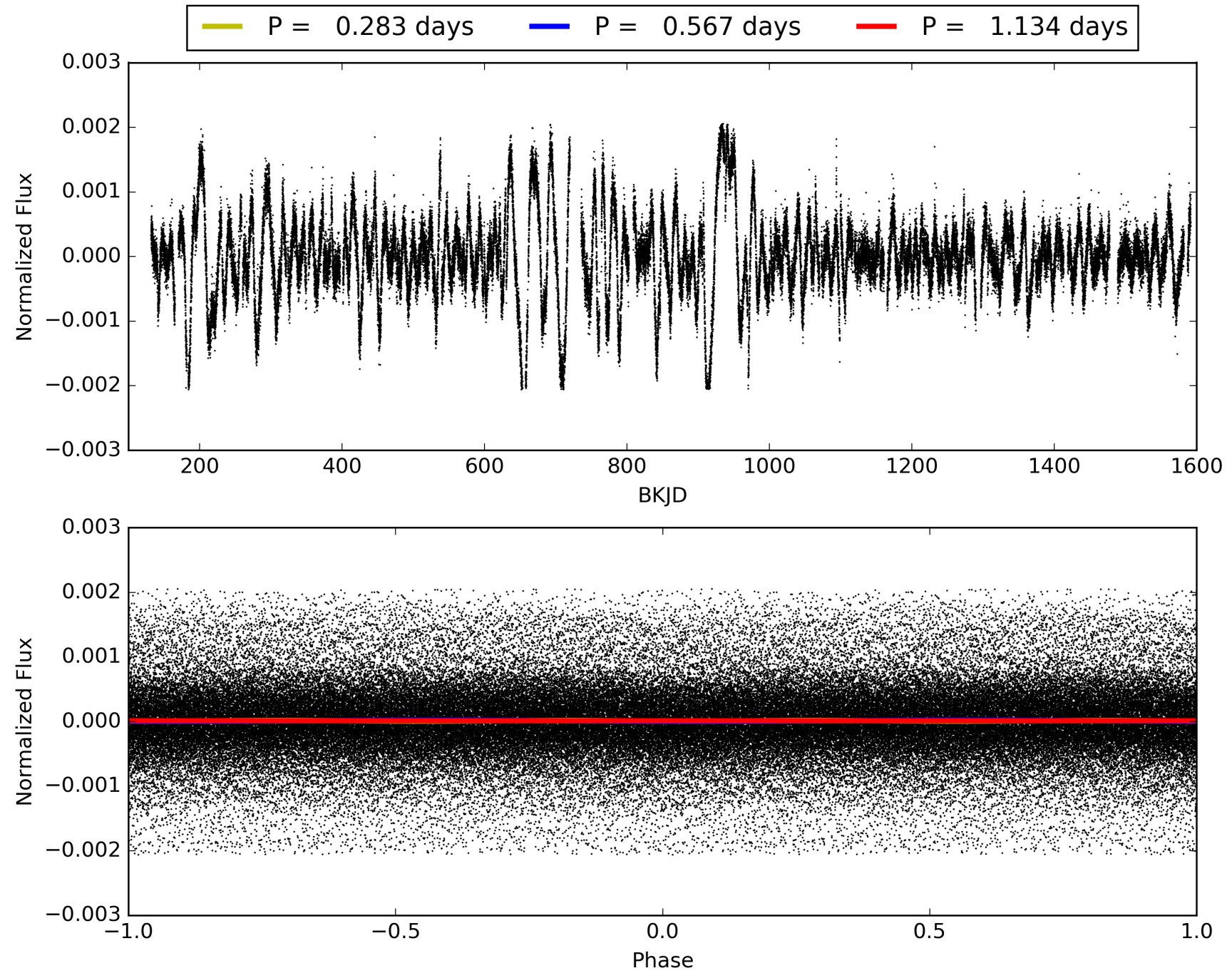
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:51:09 Z

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

TCE 007117710-01, PDC Light Curves

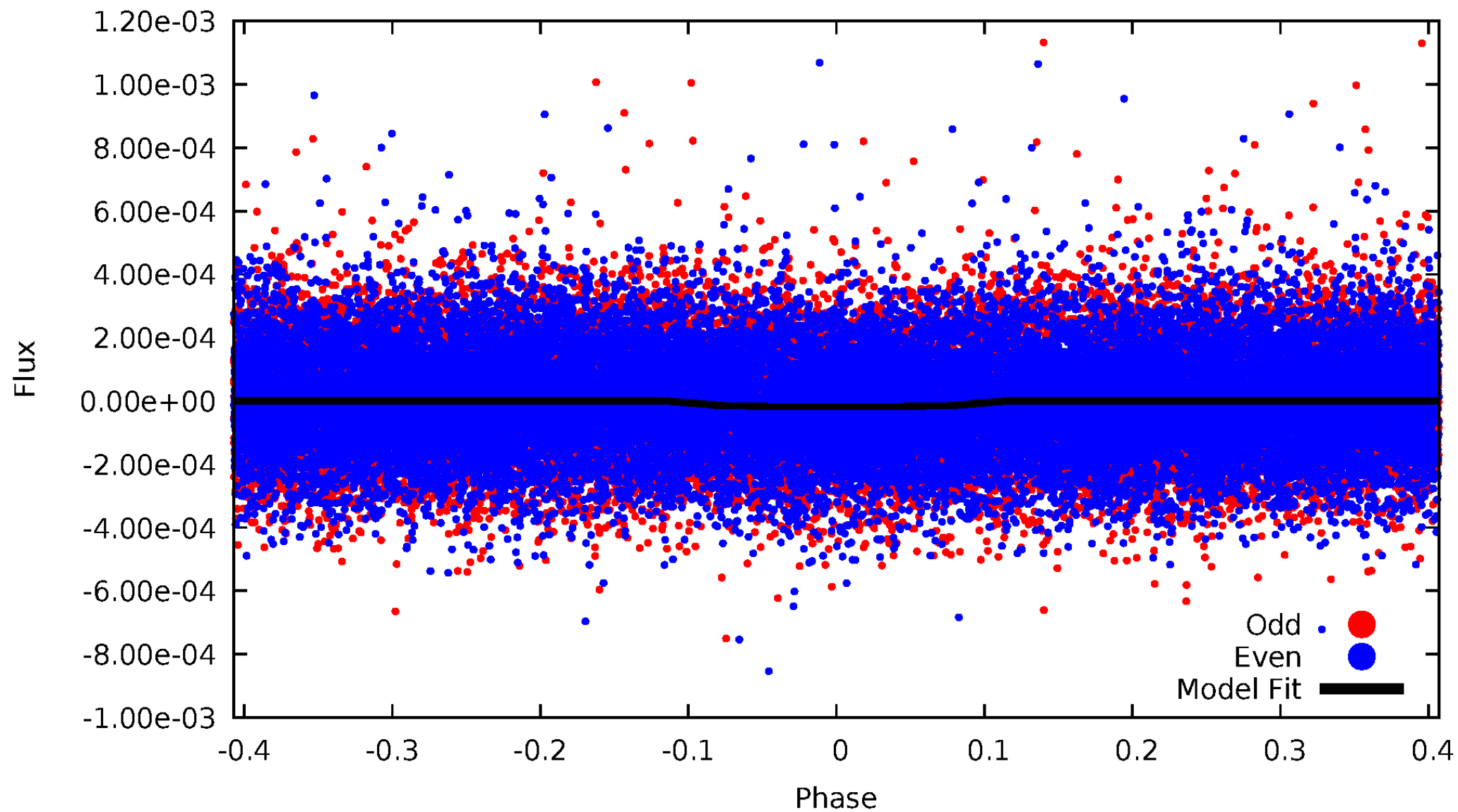


TCE 007117710-01



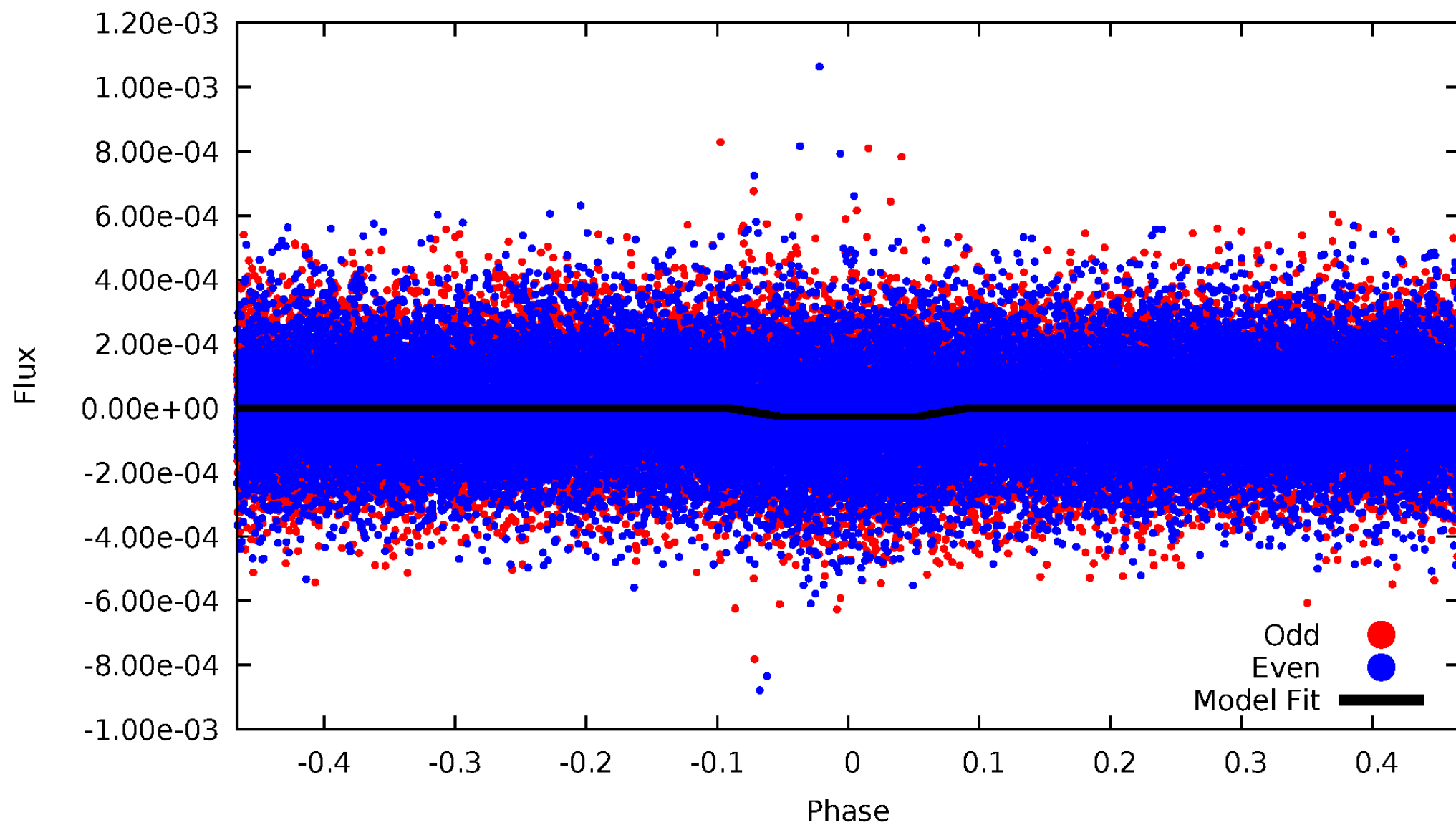
DV Odd/Even

TCE 007117710-01

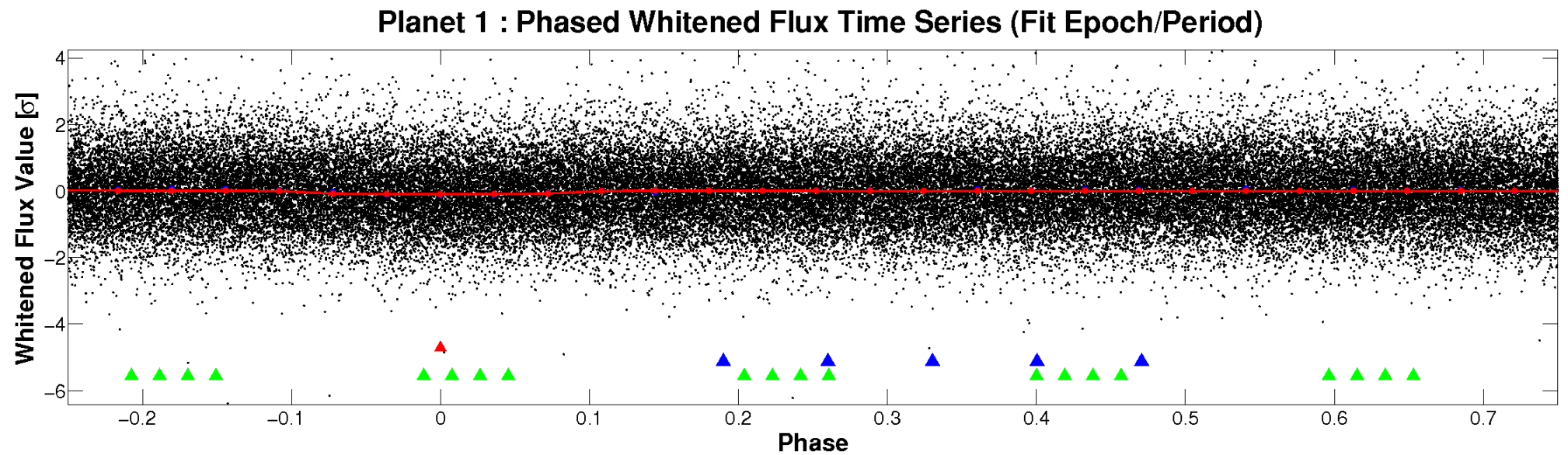
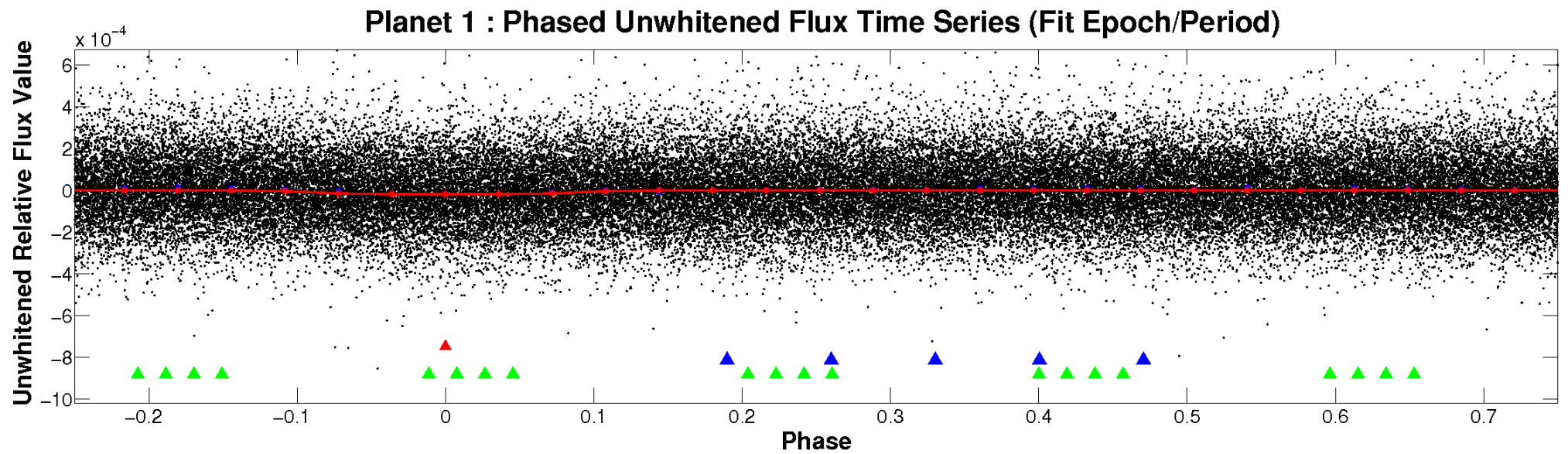


ALT Odd/Even

TCE 007117710-01

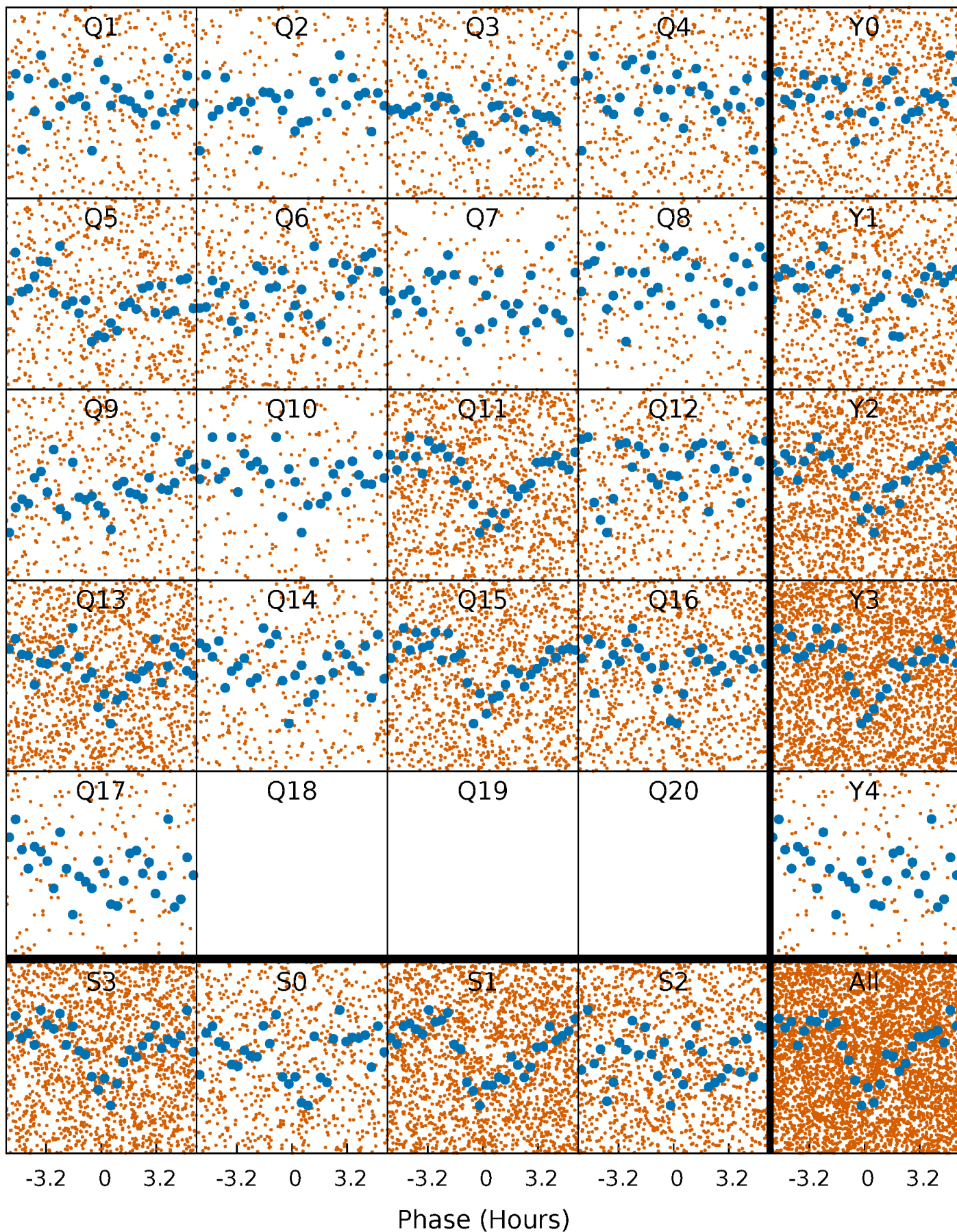


Non-Whitened Vs. Whitened Light Curve



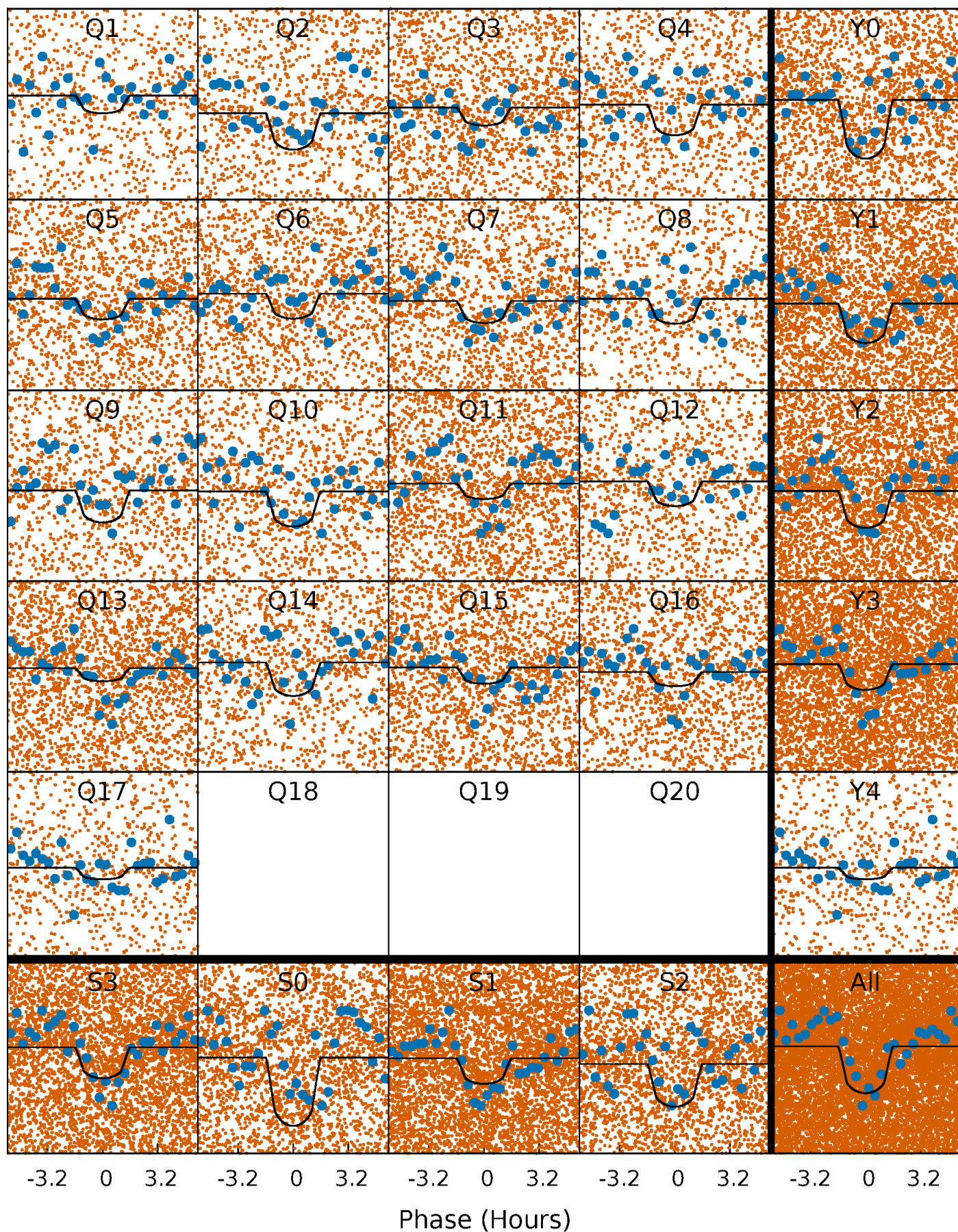
PDC Quarter-Phased Transit Curves

TCE 007117710-01 P= 0.566789 Days $T_0=131.812151$ (BKJD)



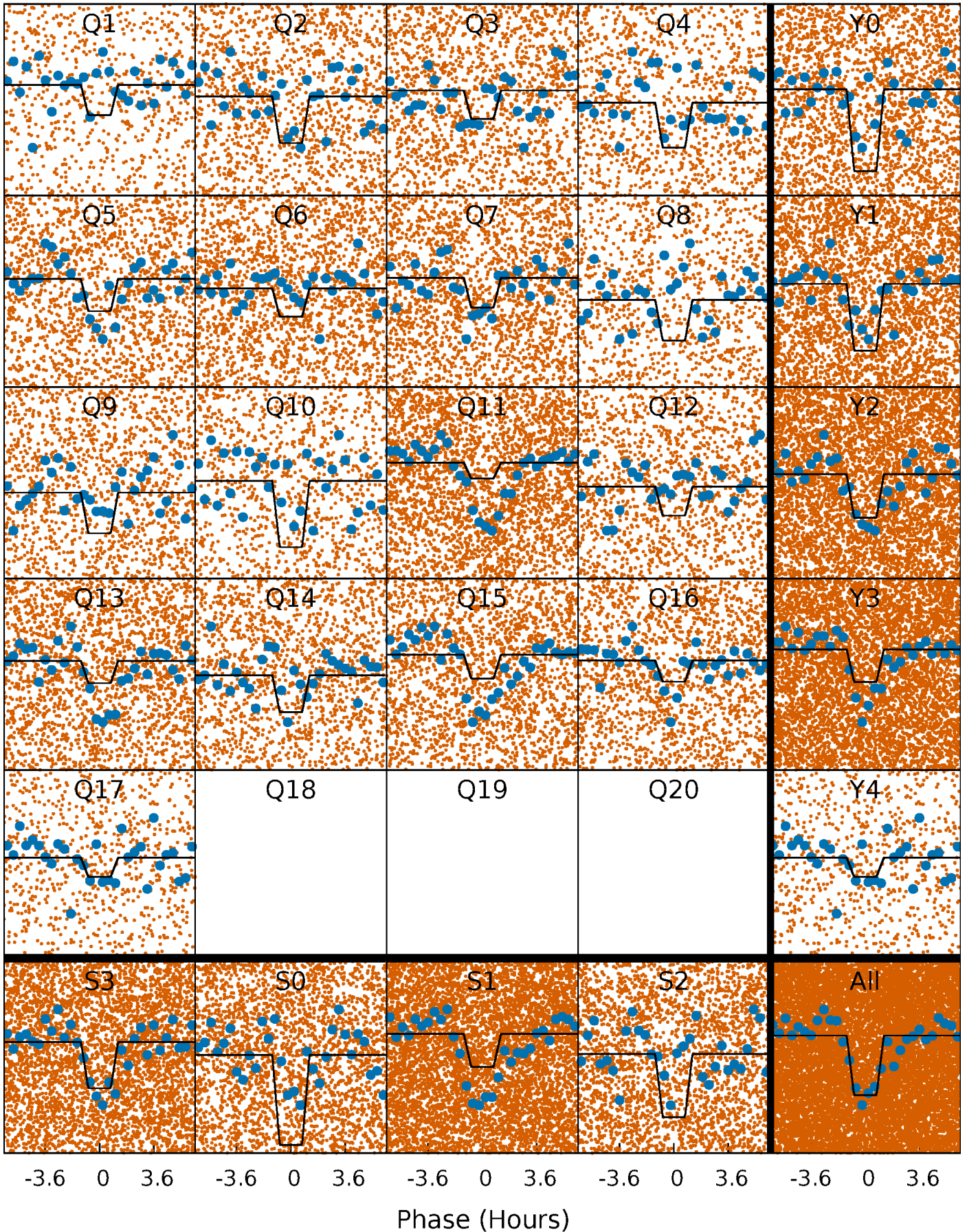
DV Quarter-Phased Transit Curves

TCE 007117710-01 P= 0.566789 Days $T_0=131.812151$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

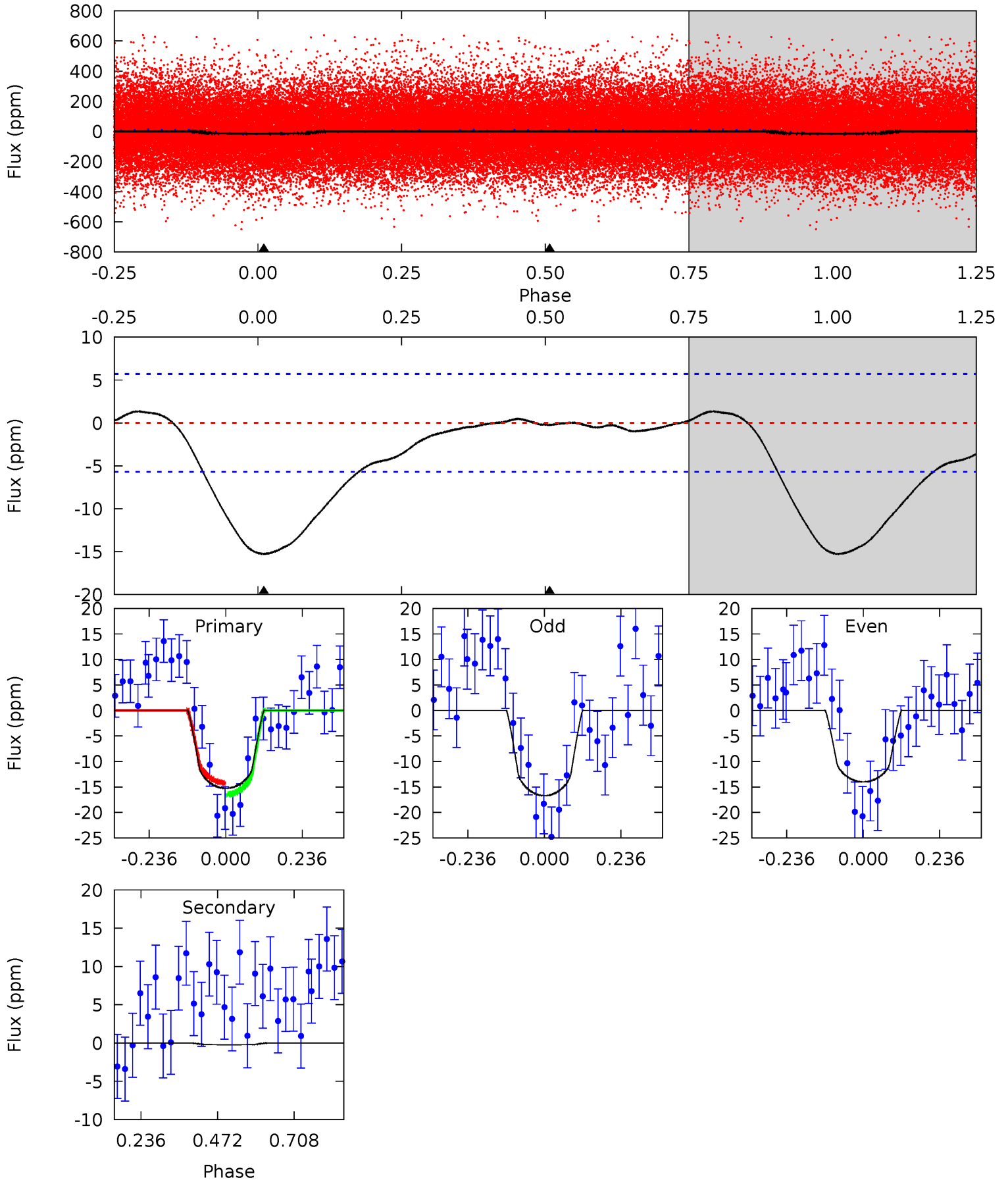
TCE 007117710-01 P= 0.566794 Days $T_0=131.810069$ (BKJD)



DV Model-Shift Uniqueness Test

007117710-01, $P = 0.566789$ Days, $E = 131.245362$ Days

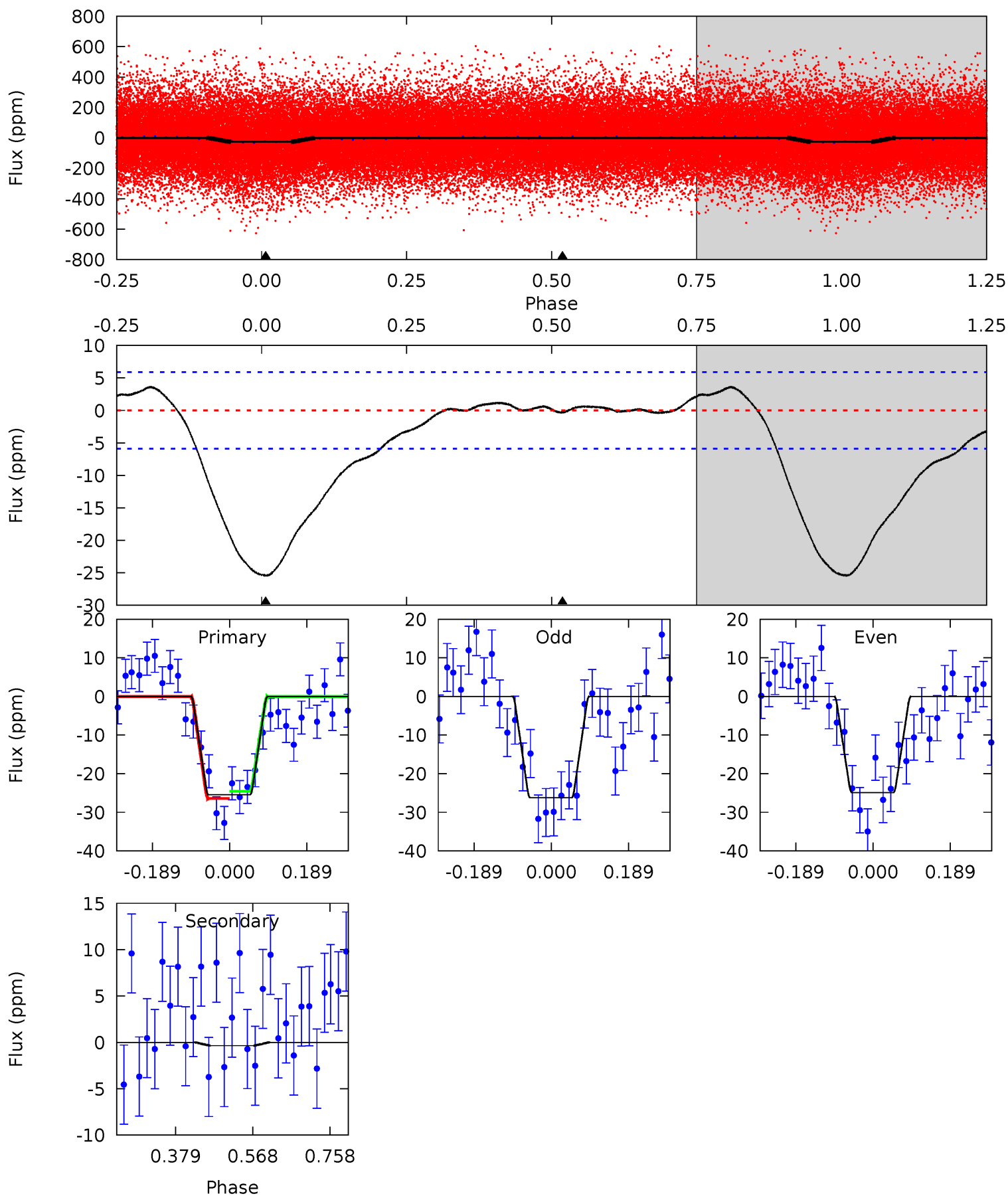
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	0.18	0	0	4.38	1.19	1.50	11.8	11.8	0.18	0.18	1.05	0.91	0.08	0.89



Alt Model-Shift Uniqueness Test

007117710-01, $P = 0.566794$ Days, $E = 131.243275$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	0.27	0	0	4.43	1.31	2.18	19.1	19.1	0.27	0.27	0.52	1.01	0.12	0.71



Stellar Parameters For KIC 007117710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5403^{+73}_{-81}	$4.540^{+0.012}_{-0.108}$	$0.360^{+0.100}_{-0.150}$	$0.888^{+0.103}_{-0.029}$	$0.998^{+0.020}_{-0.065}$	$2.006^{+0.129}_{-0.595}$
	+1%/-1%	+0%/-2%	+28%/-42%	+12%/-3%	+2%/-7%	+6%/-30%
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 007117710-01 / KOI 7817.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 \pm 1	$0.50^{+0.26}_{-0.24}$	2746^{+84}_{-58}	-2861^{+5997}_{-534}	$0.054^{+0.709}_{-0.577}$
Alt.	-0 \pm 1	$0.49^{+0.24}_{-0.22}$	2746^{+89}_{-57}	-2651^{+6024}_{-671}	$0.161^{+0.922}_{-0.565}$

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 $A_{obs} \gg 1.0$

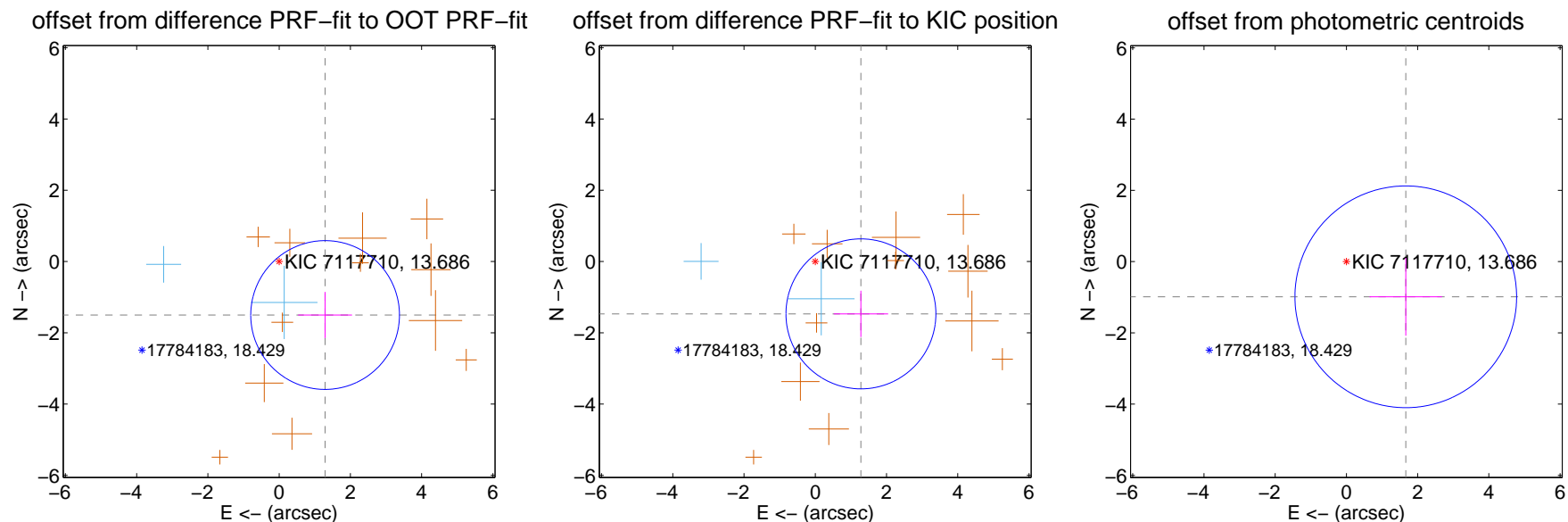
DV Centroid Data

Supplemental centroid analysis for 007117710-01. Kepler magnitude: 13.69. Transit SNR 9.40

There are 2 quarters with good PRF difference image offsets

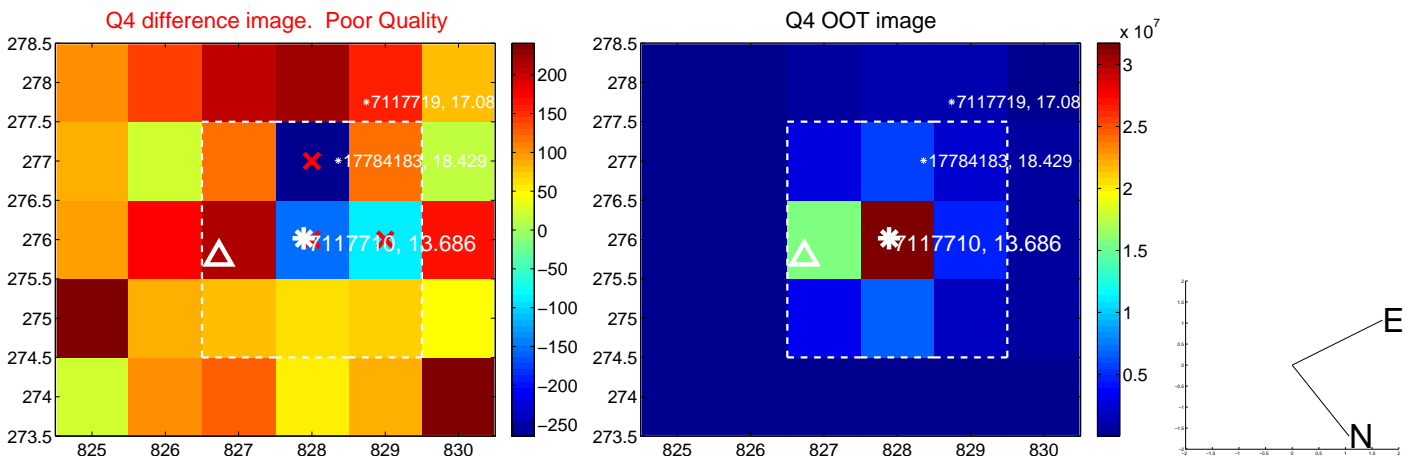
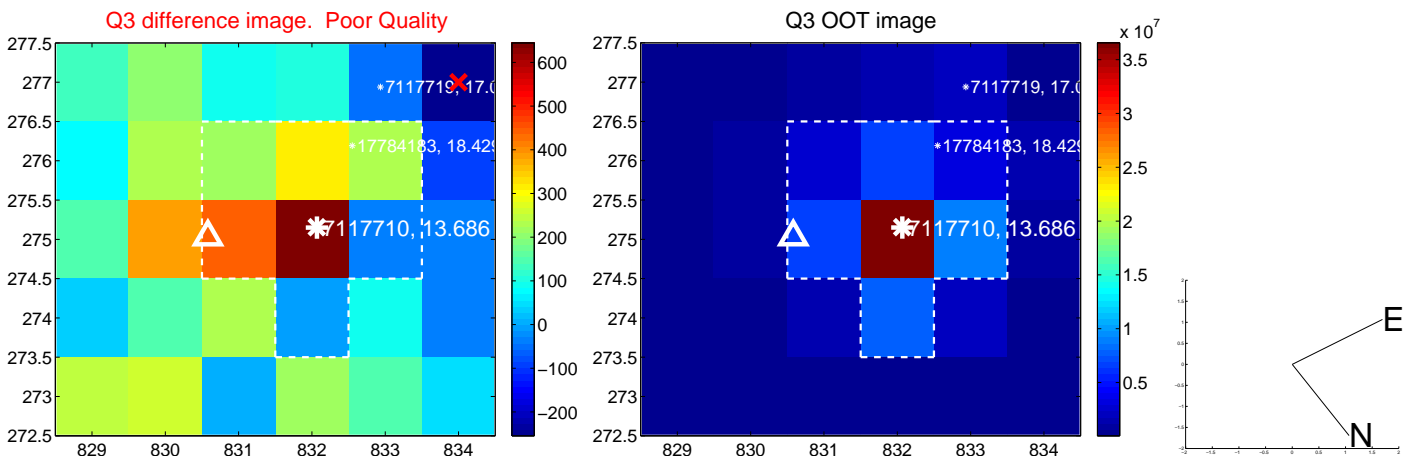
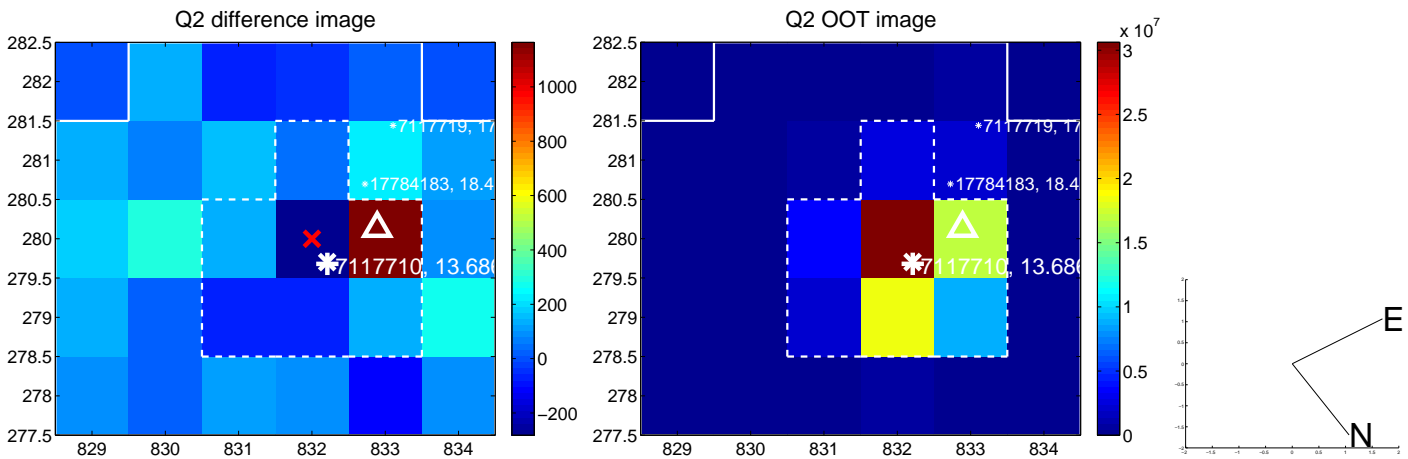
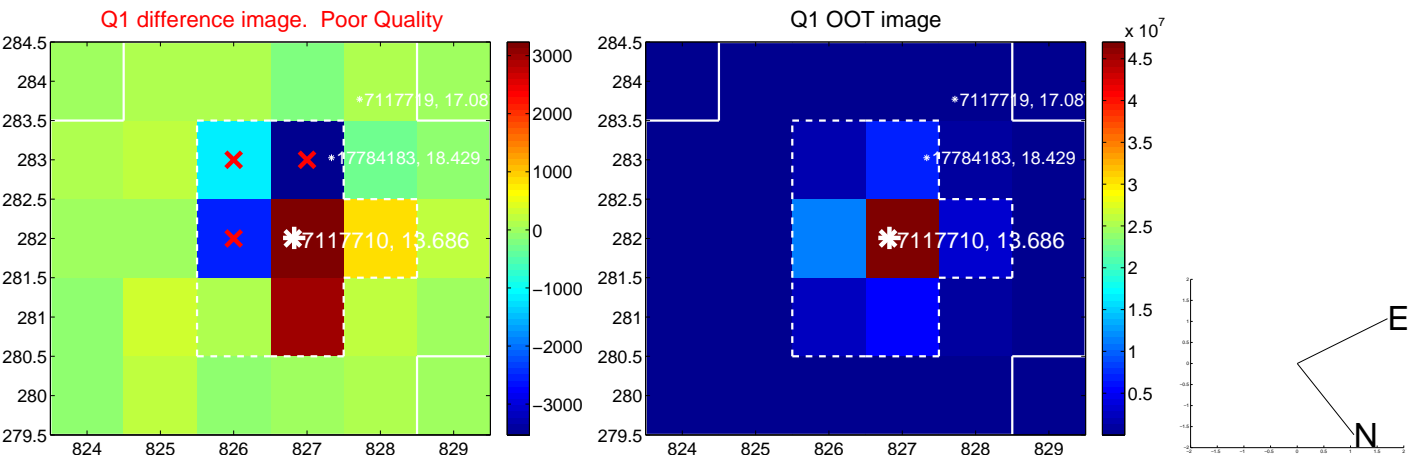
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.979 ± 0.696	2.84	-1.290 ± 0.757	-1.501 ± 0.647
PRF-fit source offset from KIC position	1.949 ± 0.701	2.78	-1.282 ± 0.764	-1.469 ± 0.649
photometric centroid source offset	1.94 ± 1.04	1.87	-1.67 ± 1.02	-0.99 ± 1.09

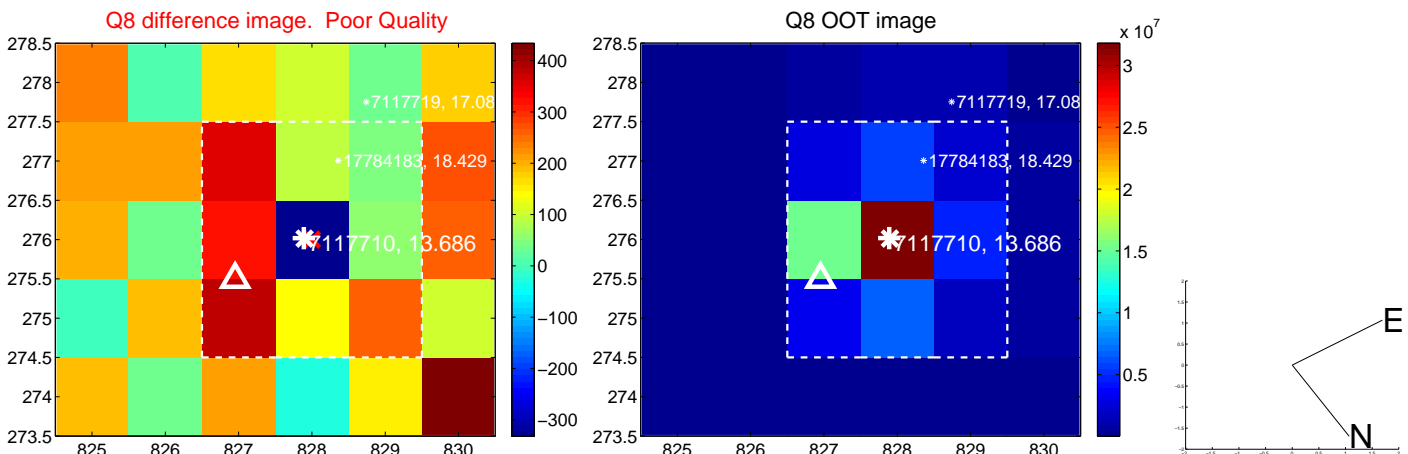
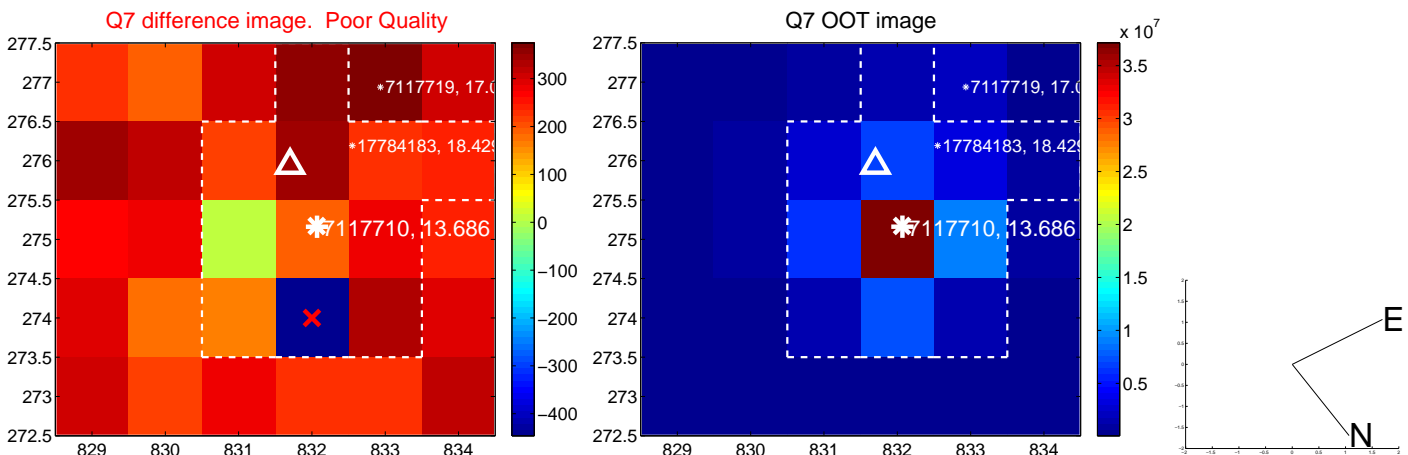
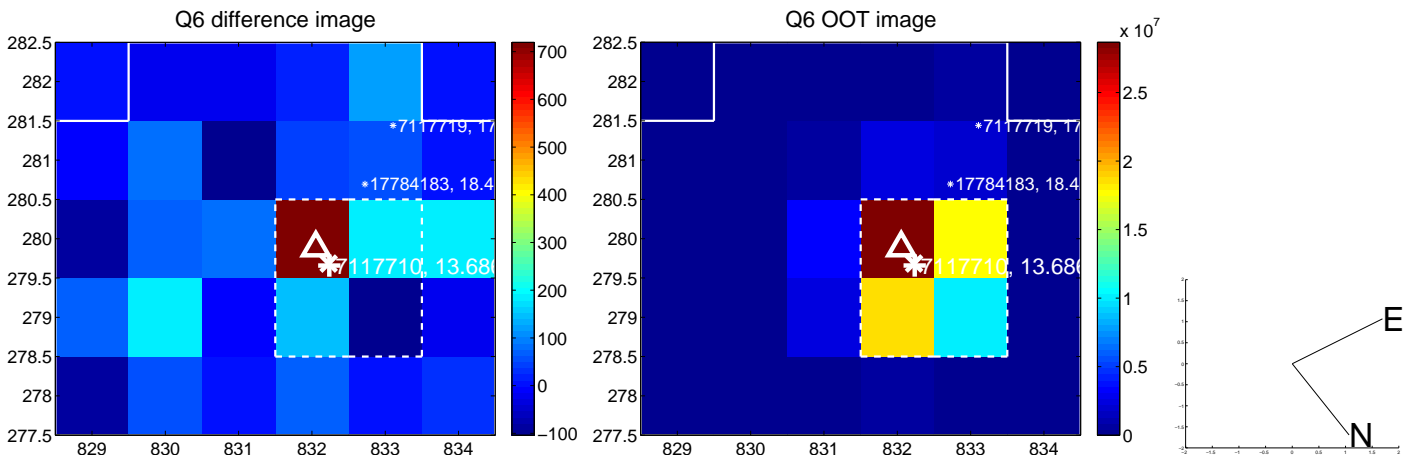
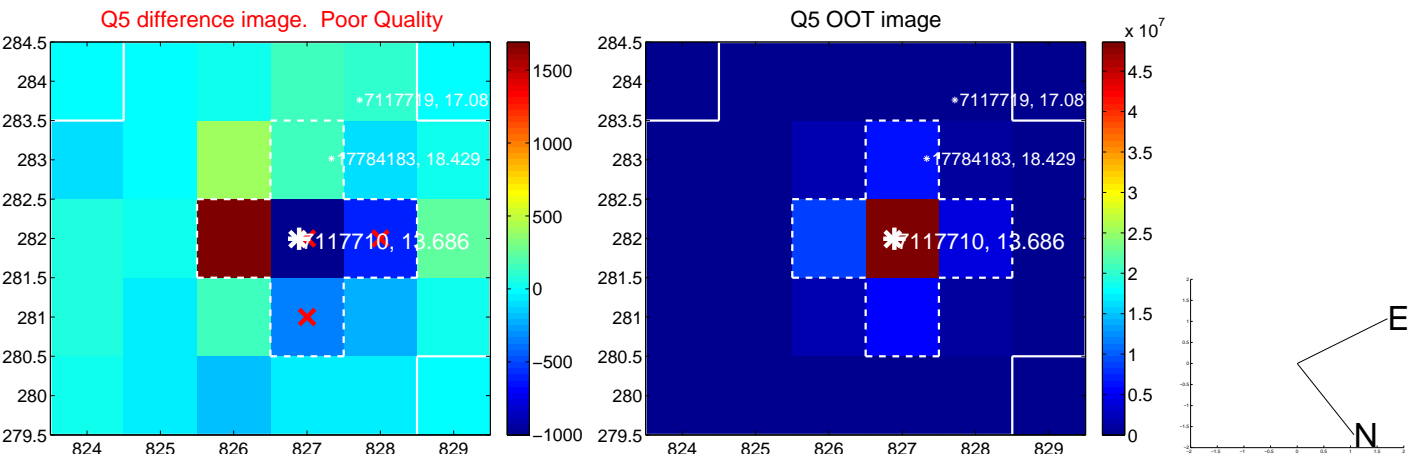


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

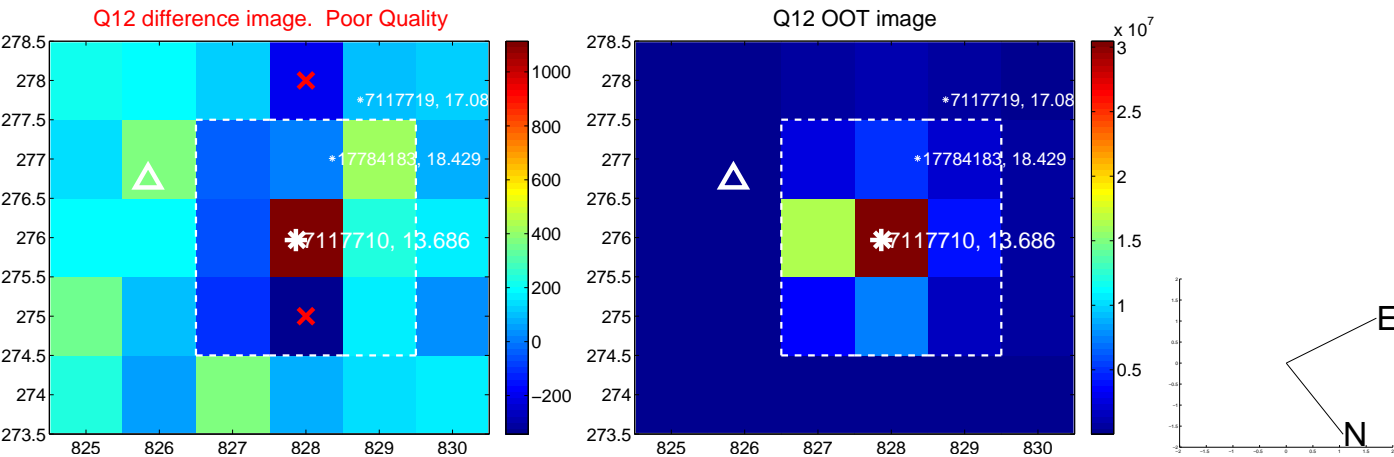
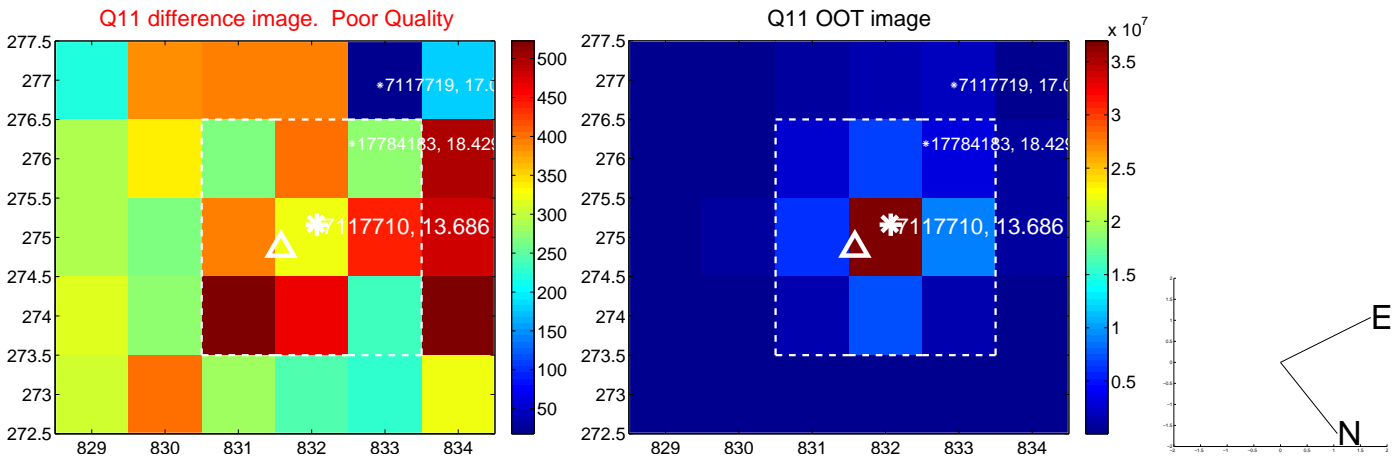
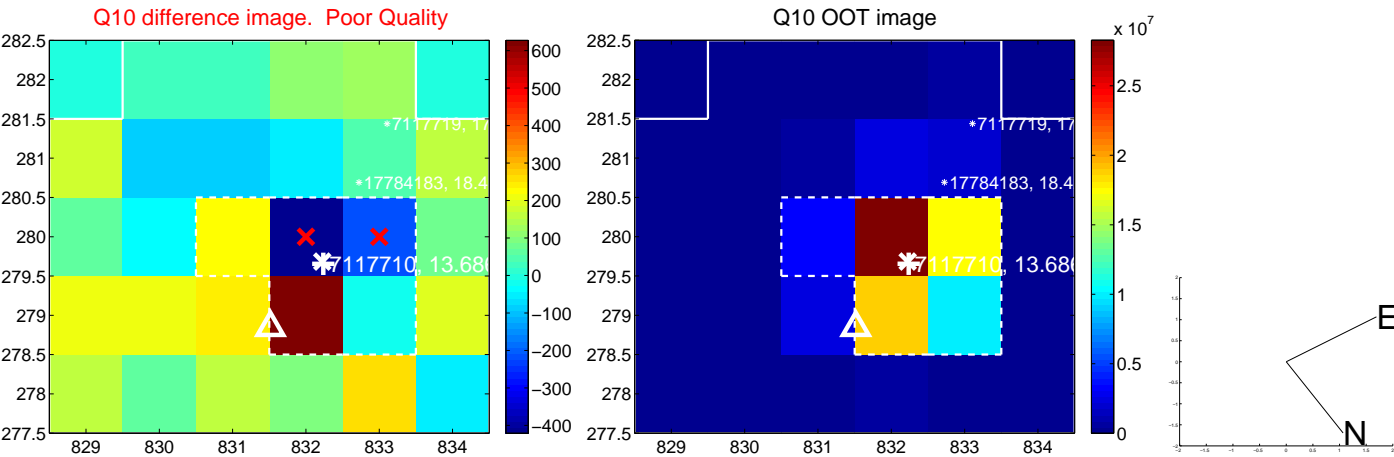
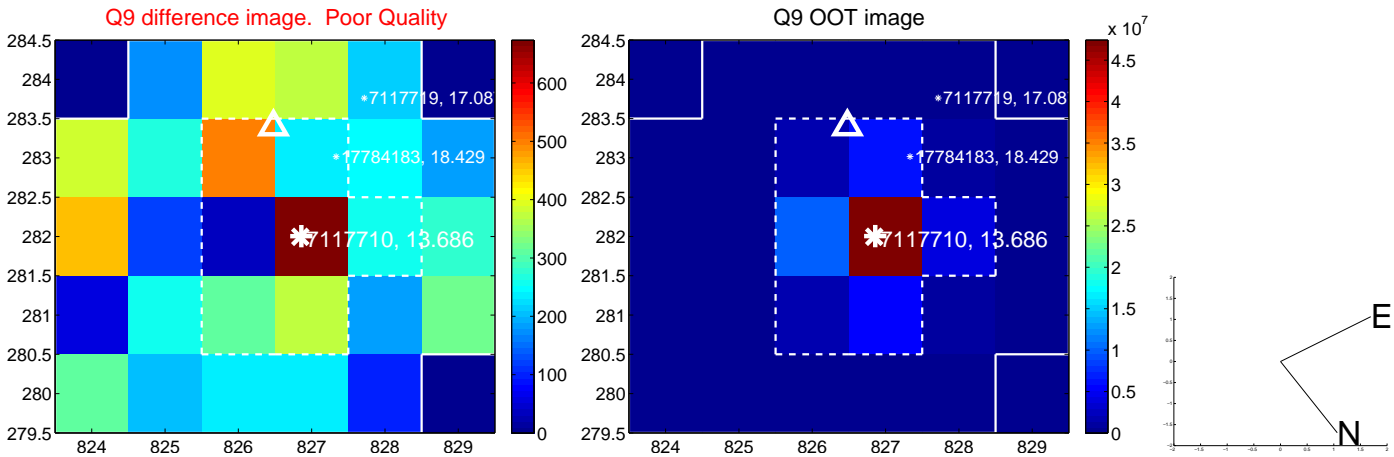
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



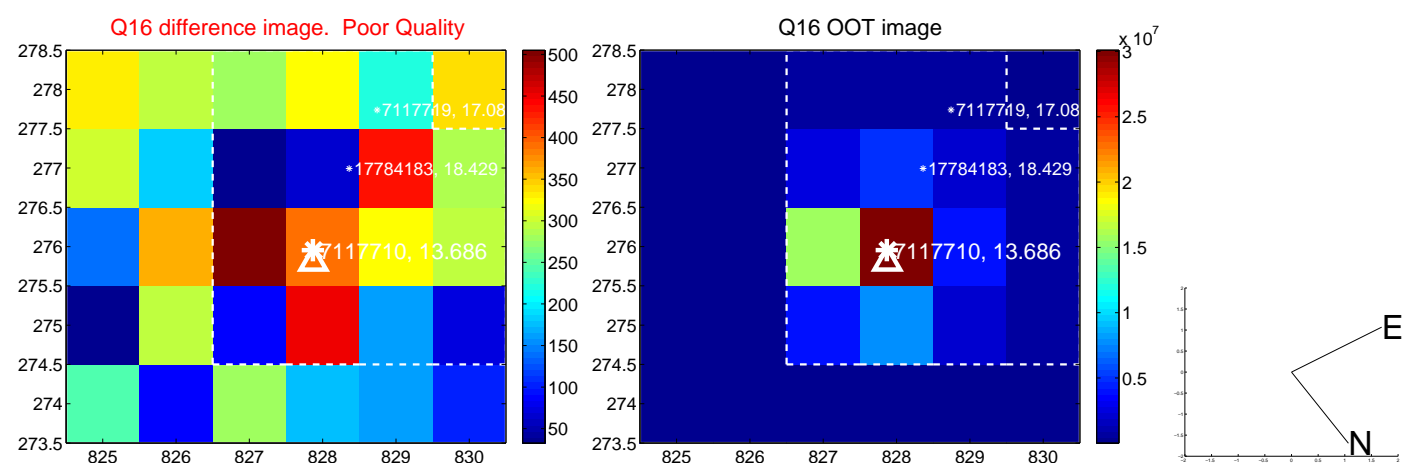
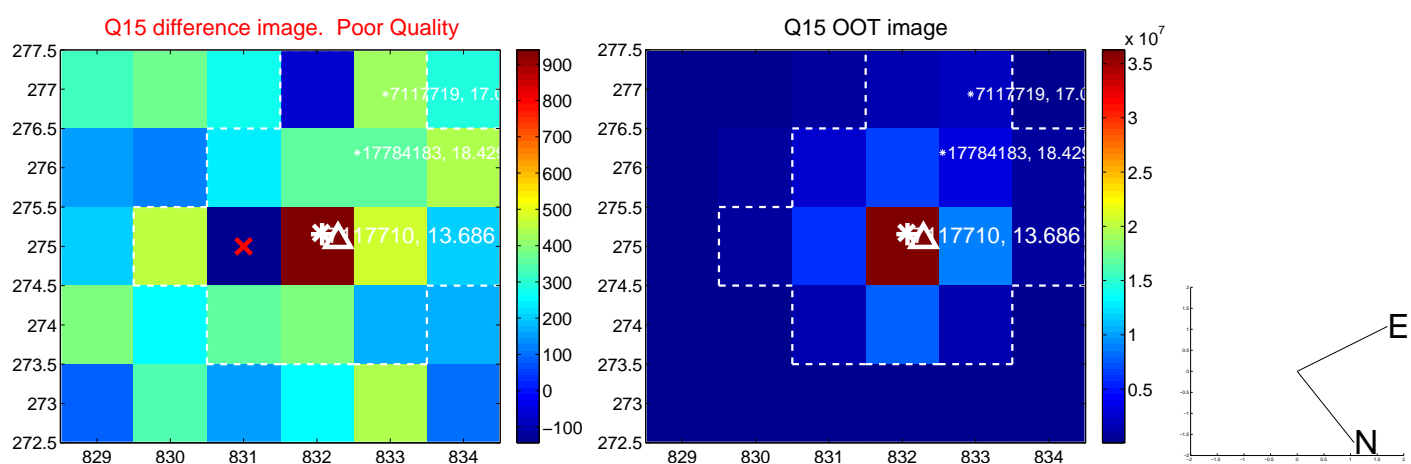
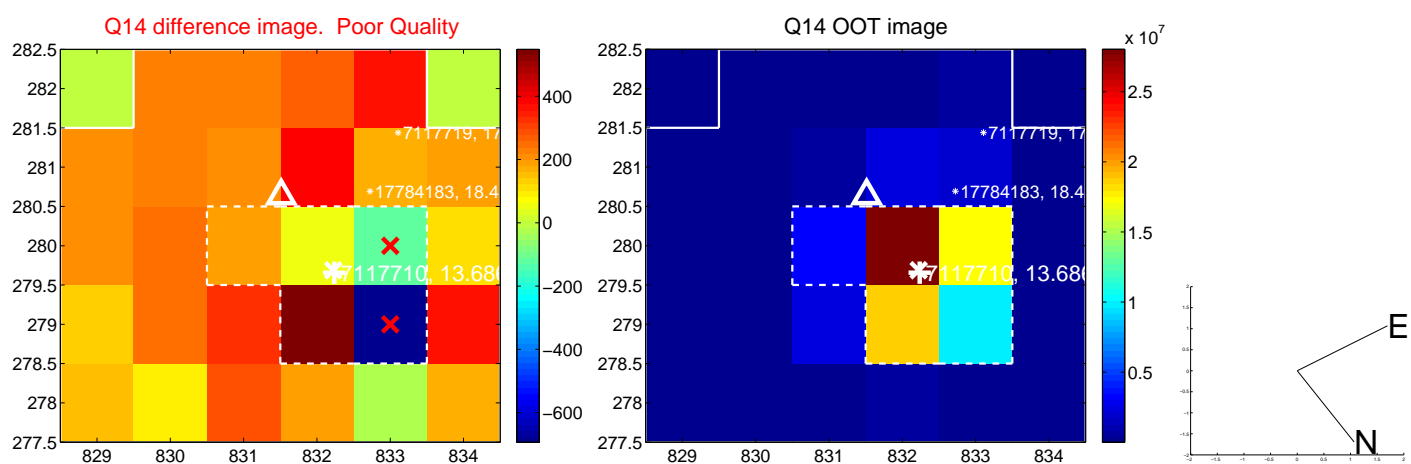
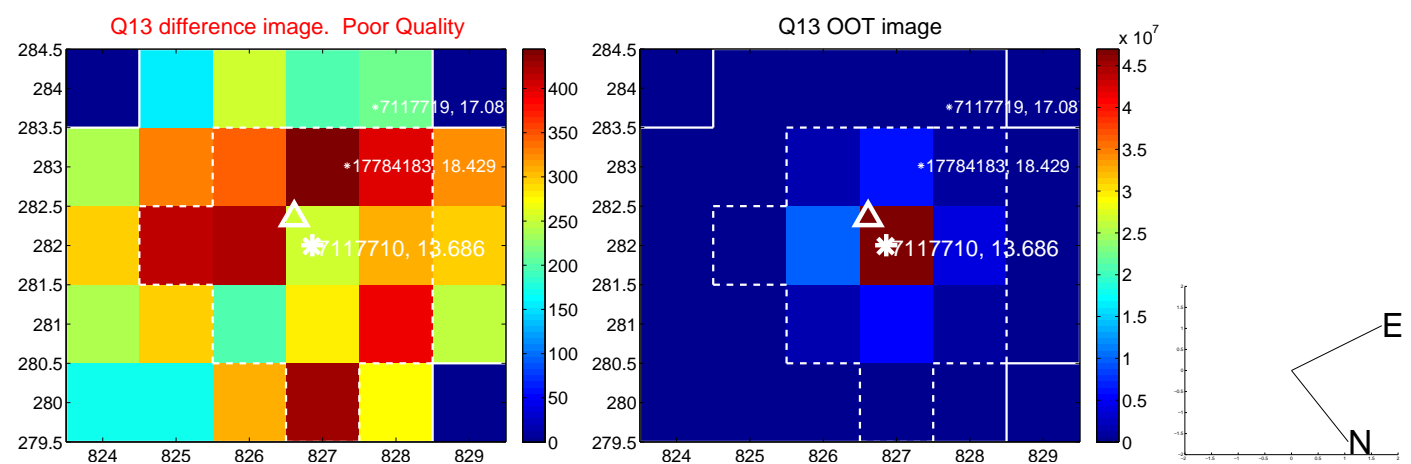
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



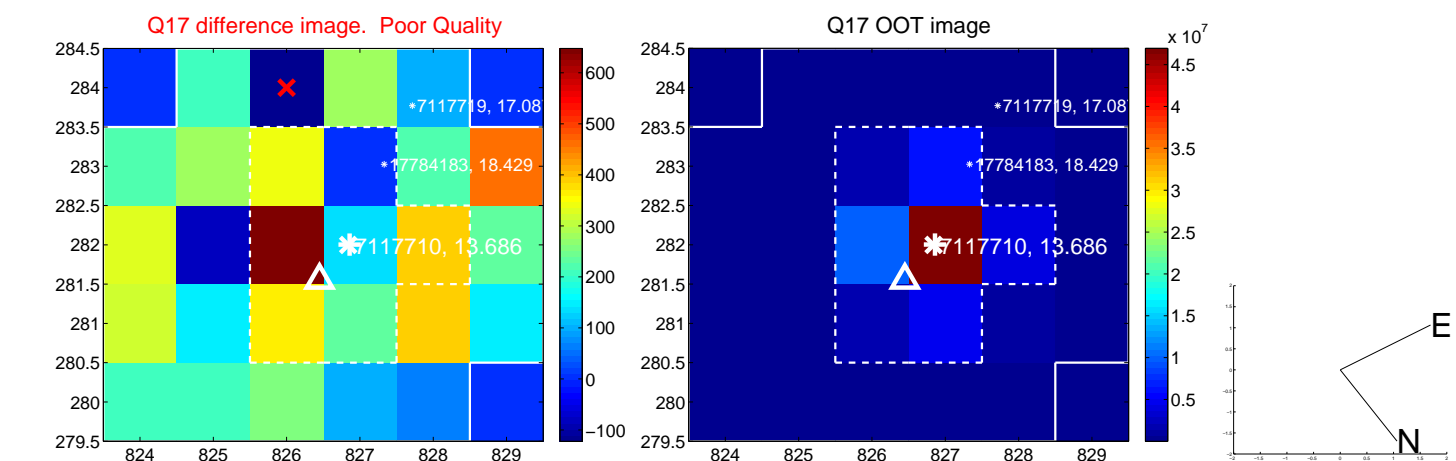
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



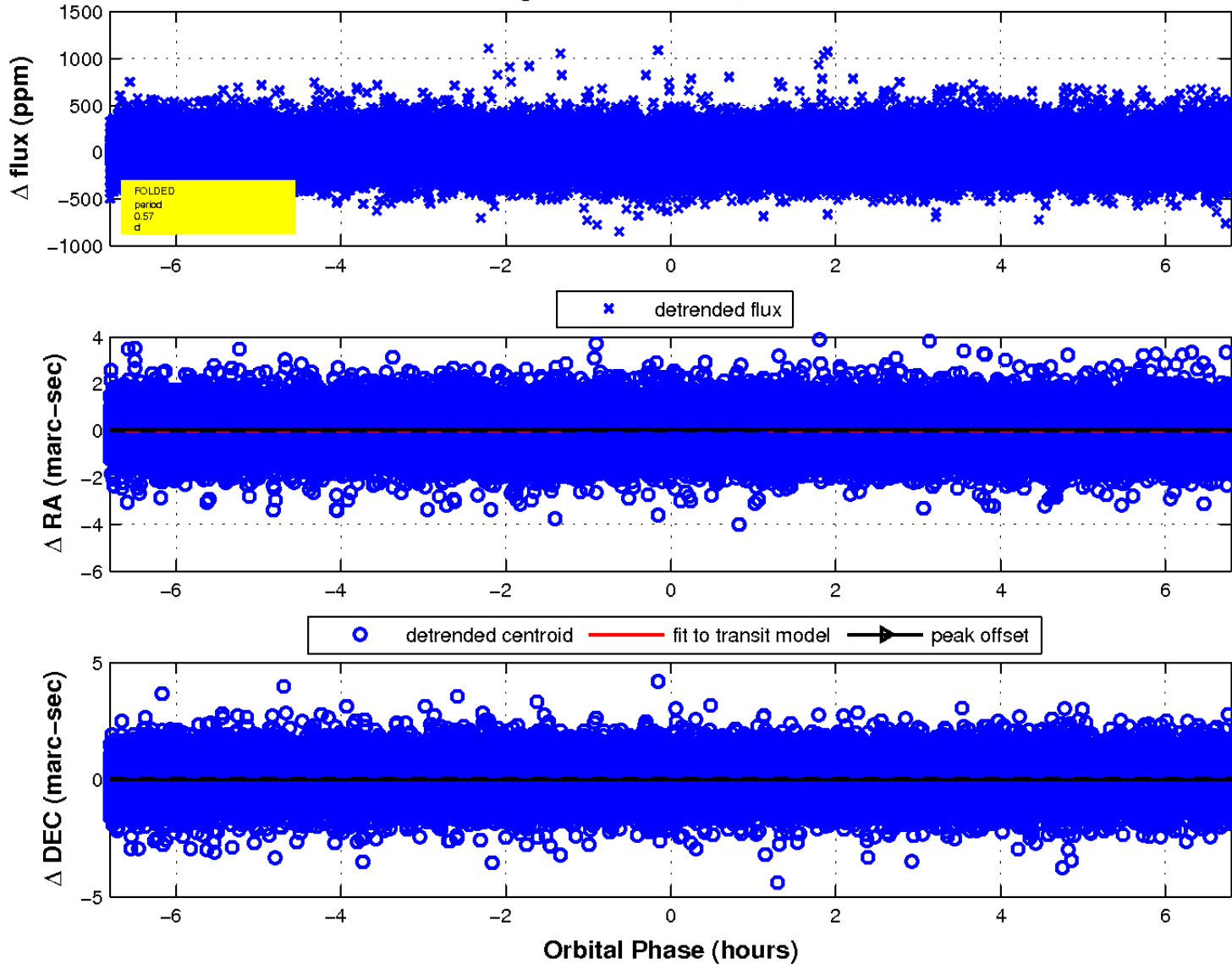
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

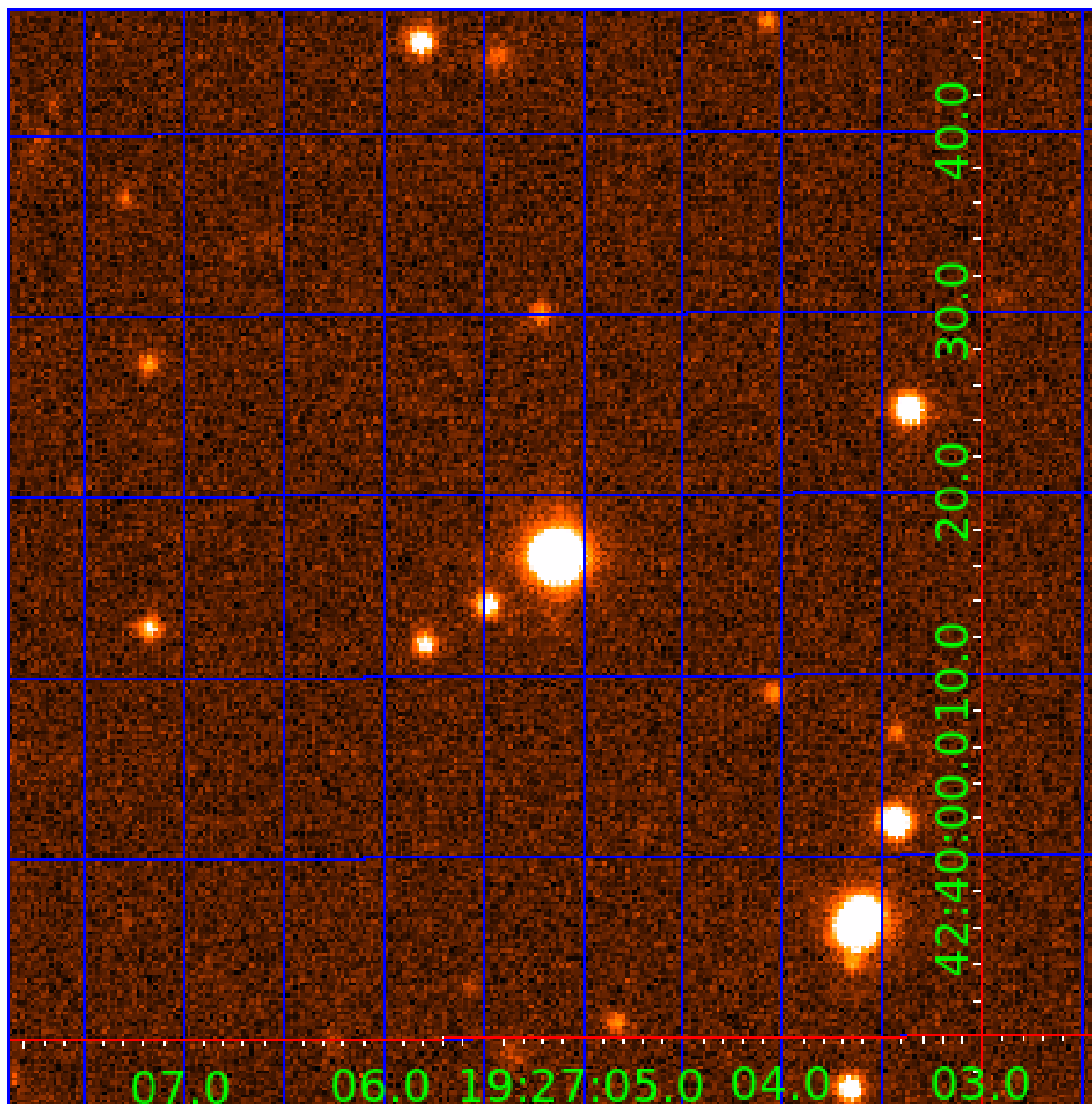


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 007117710

Q1-17 DR25 TCE Parameters

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Robovetter Results

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007117710-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

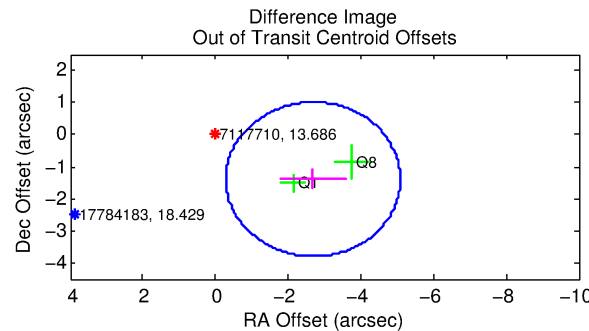
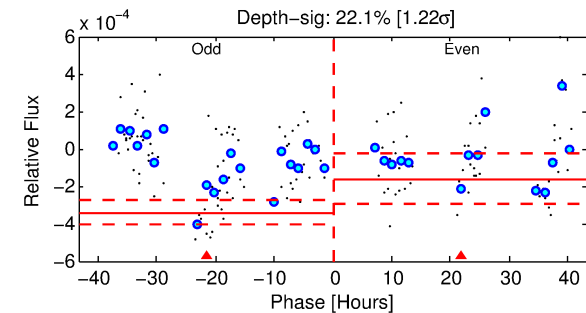
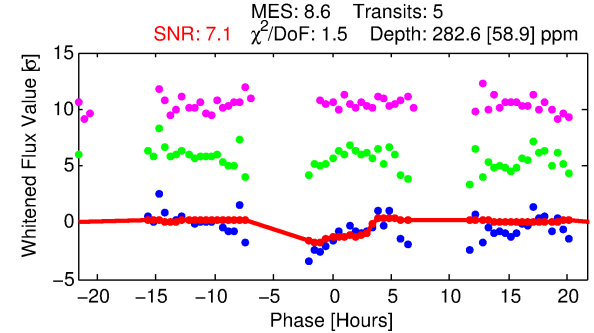
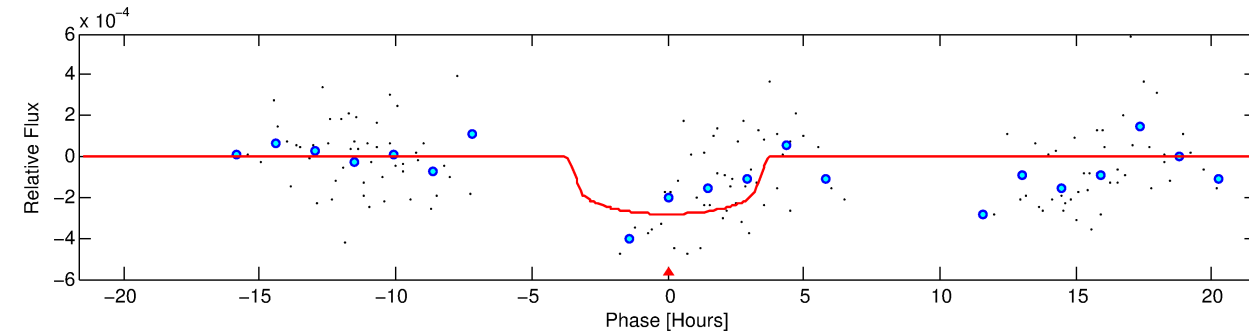
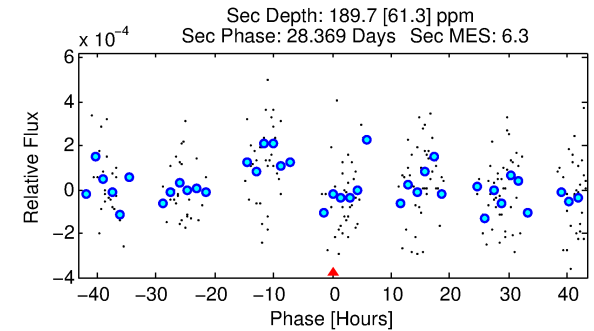
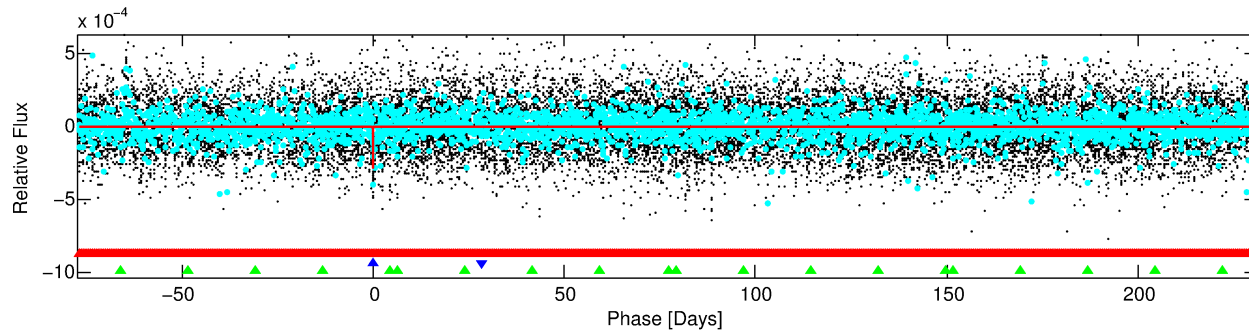
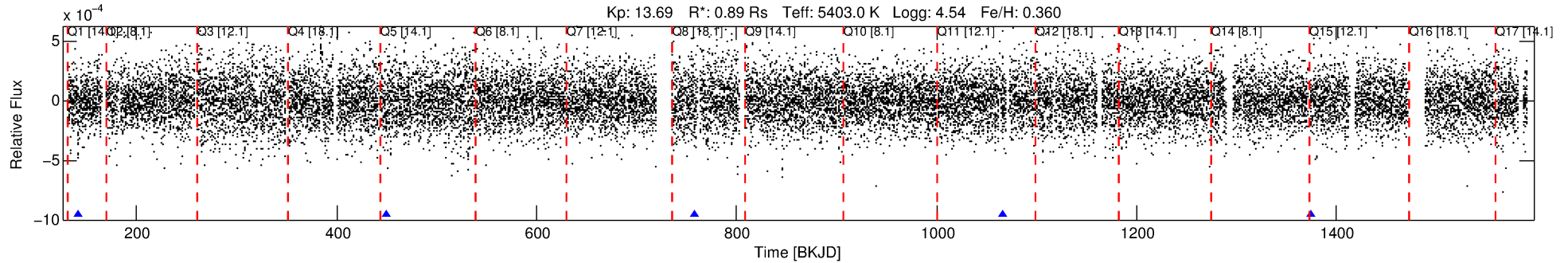
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007117710-02

No Significant Match Found

DV One-Page Summary

KIC: 7117710 Candidate: 2 of 3 Period: 308.293 d



DV Fit Results:

Period = 308.29350 [0.01000] d
Epoch = 141.1475 [0.0735] BKJD
Rp/R* = 0.0173 [0.0221]
a/R* = 201.77 [1047.01]
b = 0.81 [2.16]
Seff = 0.76 [0.15]
Teq = 238 [11] K
Rp = 1.67 [2.15] Re
a = 0.8925 [0.1012] AU
Ag = 29688.28 [76880.91] [0.39σ]
Teffp = 4825 [3117] K [1.47σ]

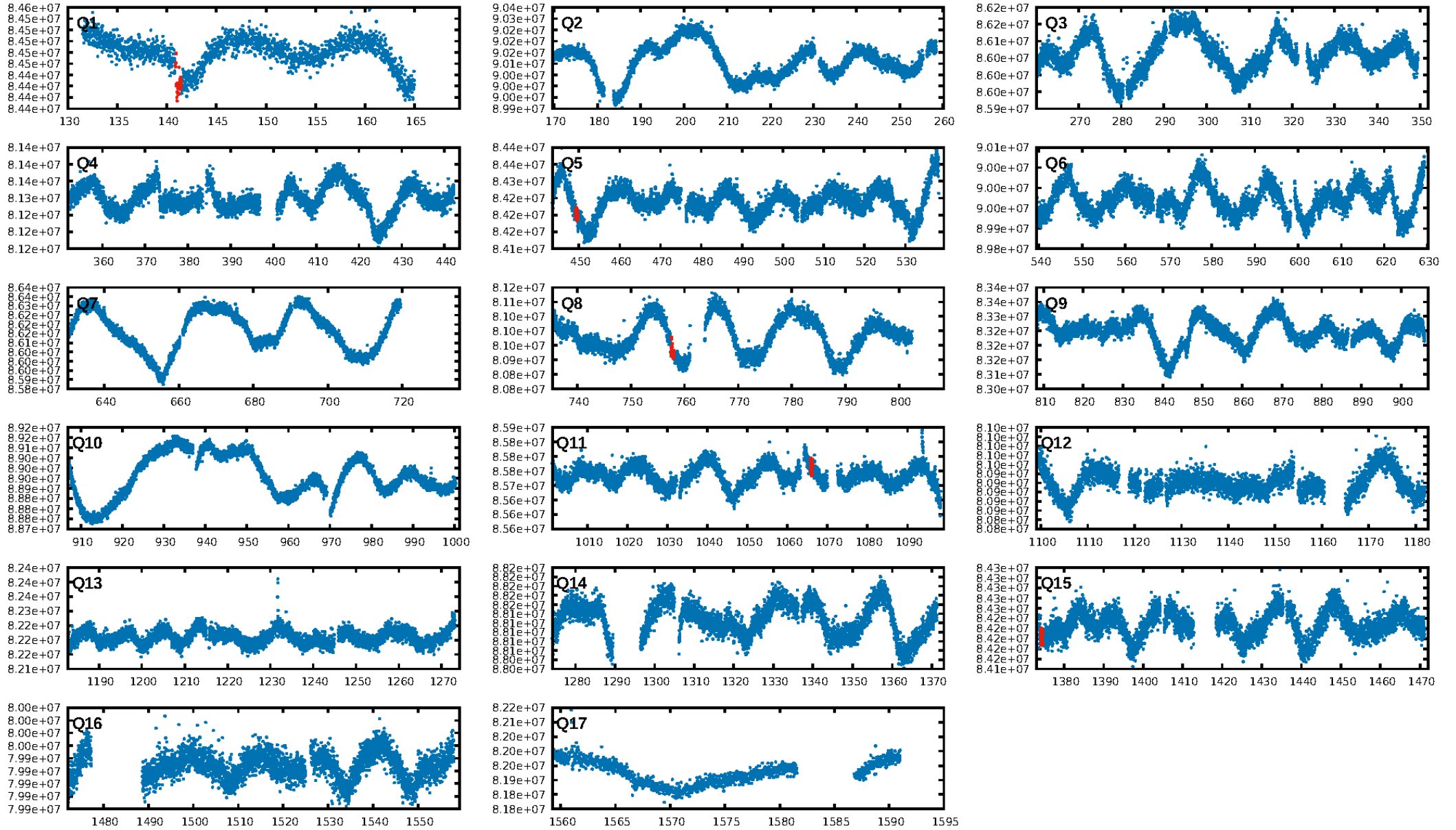
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [748.88σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.35e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 8.634
Centroid-sig: 0.3%
Centroid-so: 2.572 arcsec [2.54σ]
OotOffset-rm: 3.023 arcsec [3.78σ]
KicOffset-rm: 2.973 arcsec [3.51σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/4]

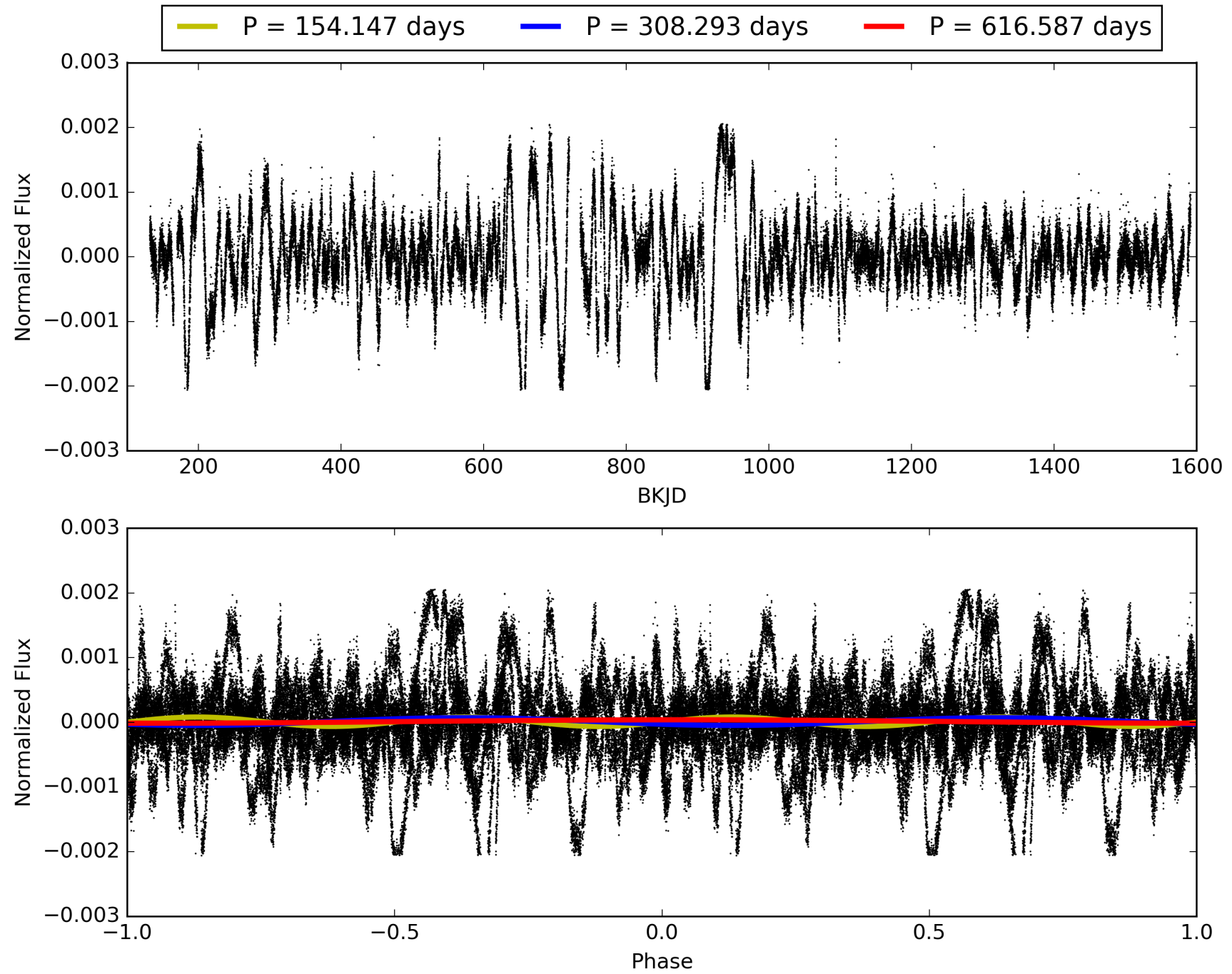
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:51:21 Z

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

TCE 007117710-02, PDC Light Curves

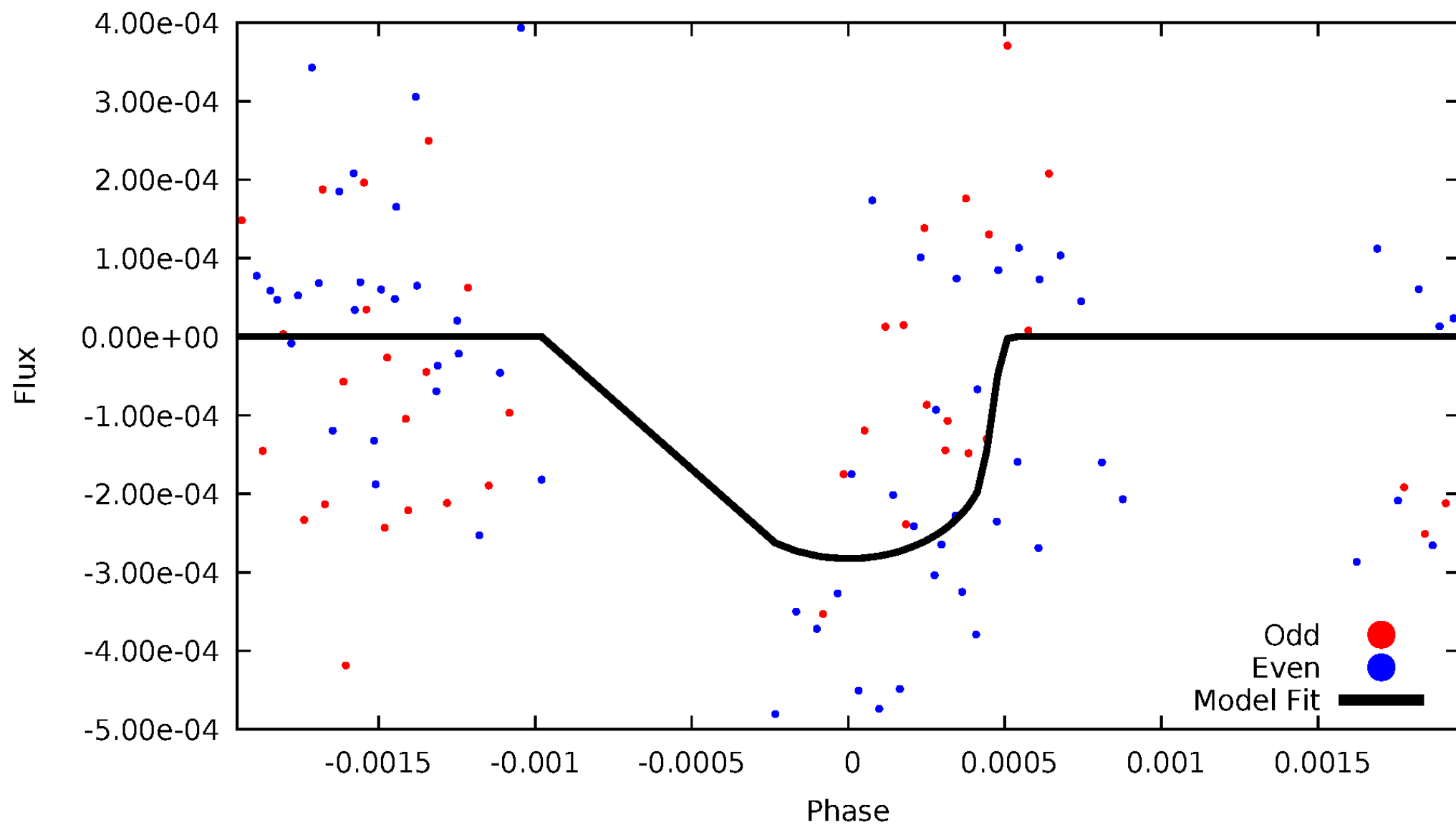


TCE 007117710-02



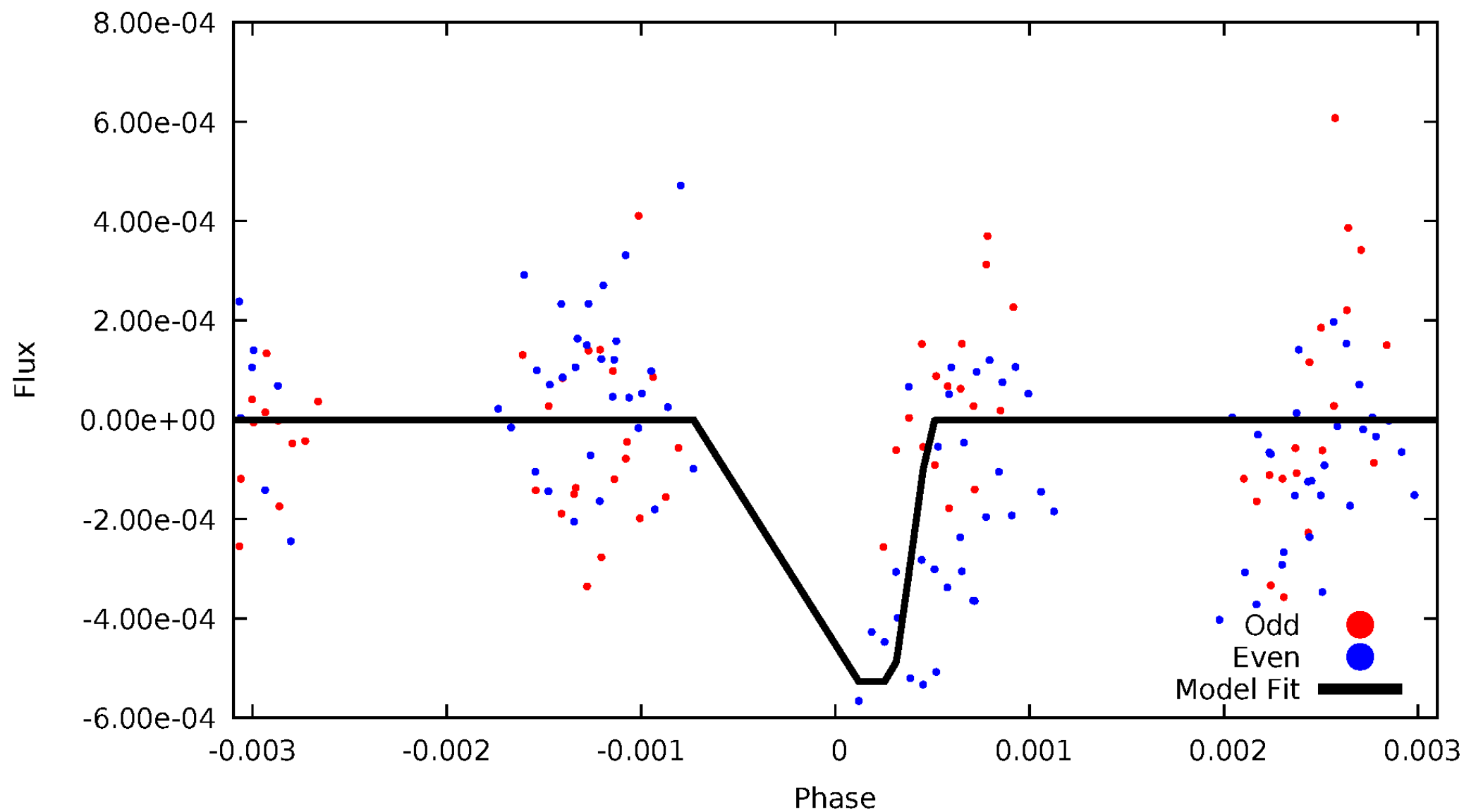
DV Odd/Even

TCE 007117710-02



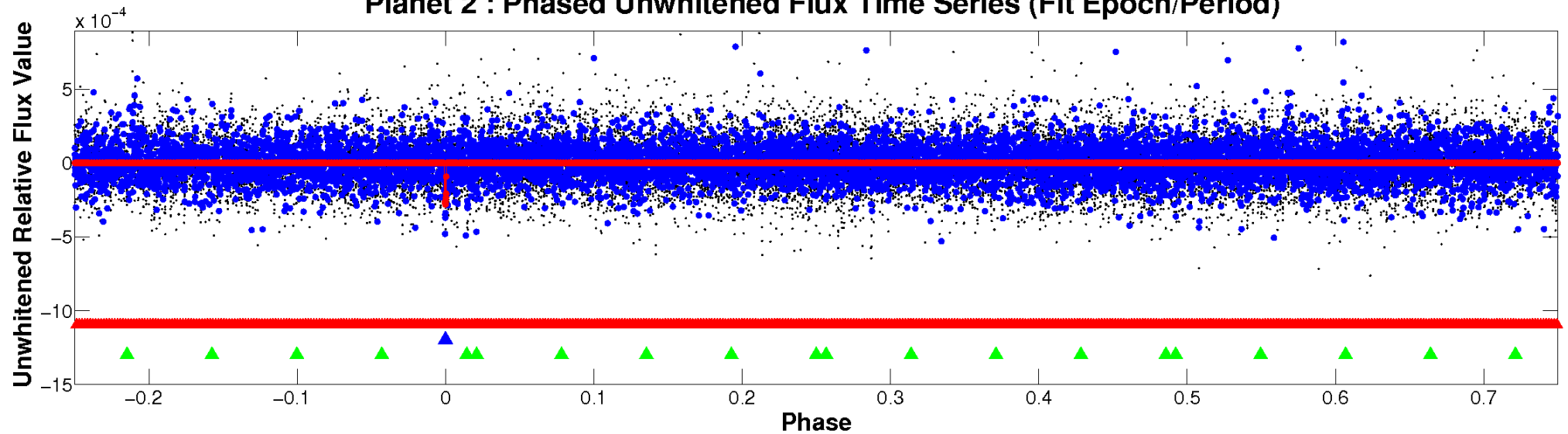
ALT Odd/Even

TCE 007117710-02

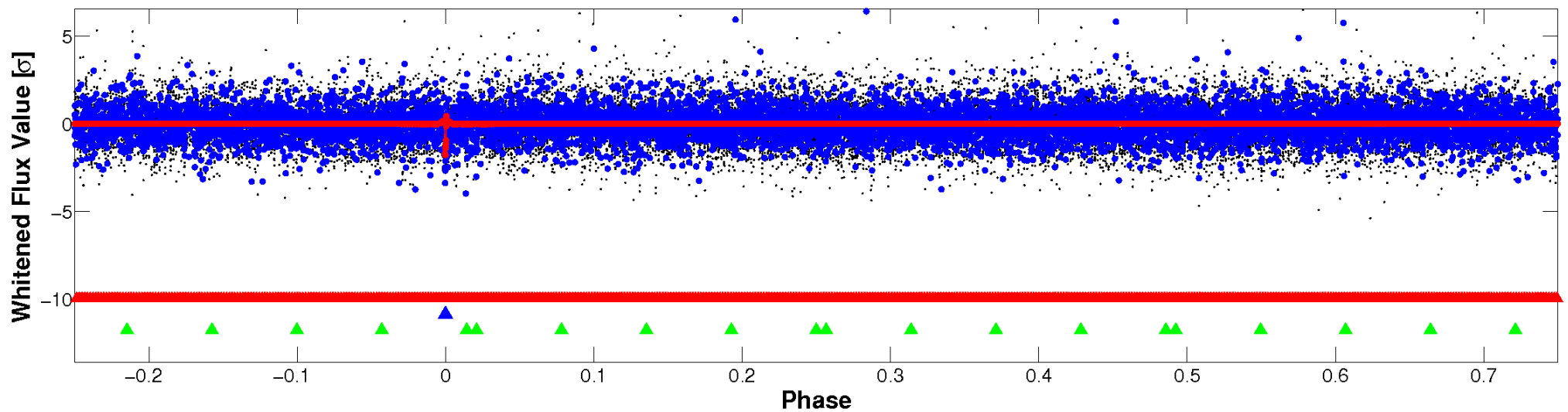


Non-Whitened Vs. Whitened Light Curve

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

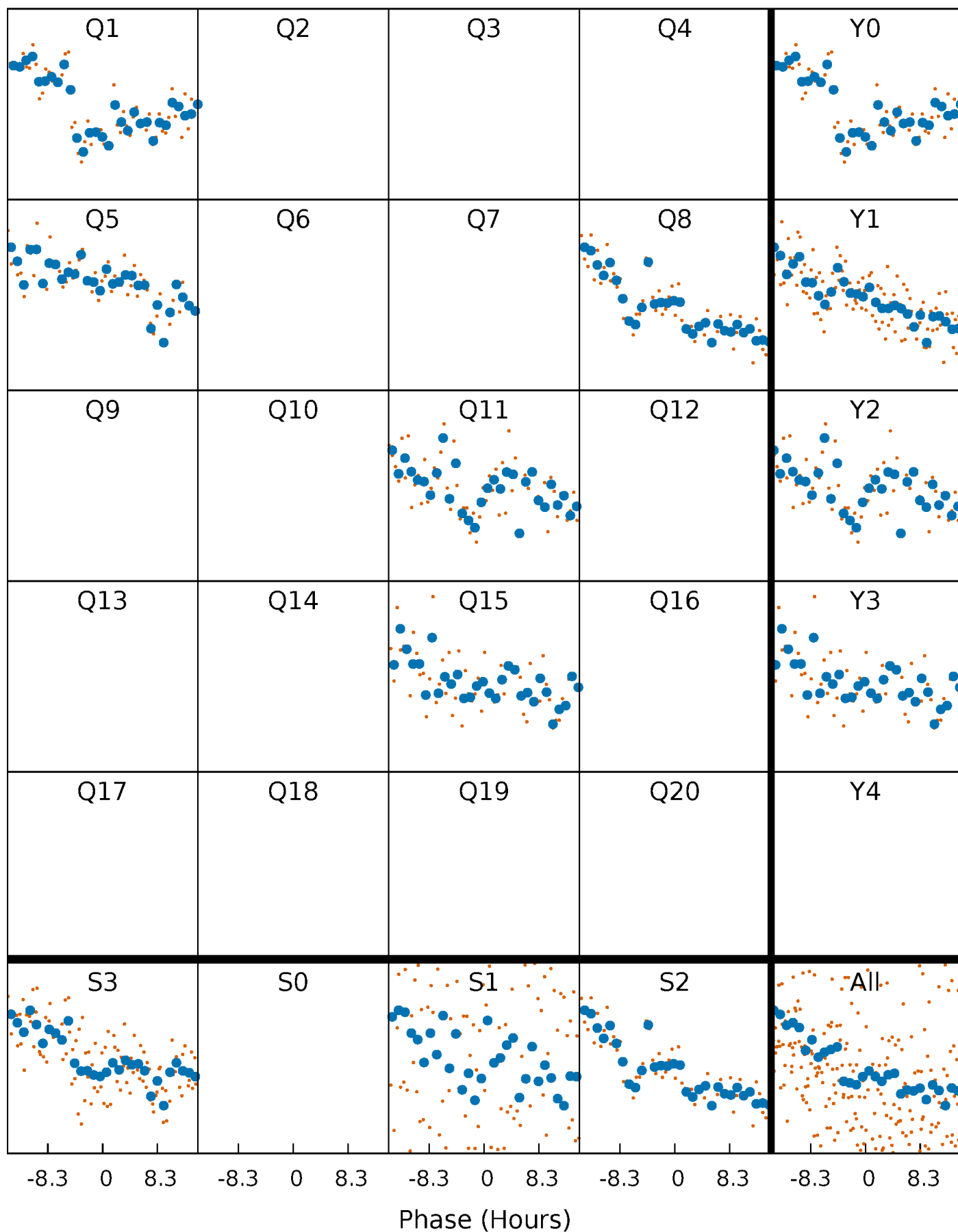


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



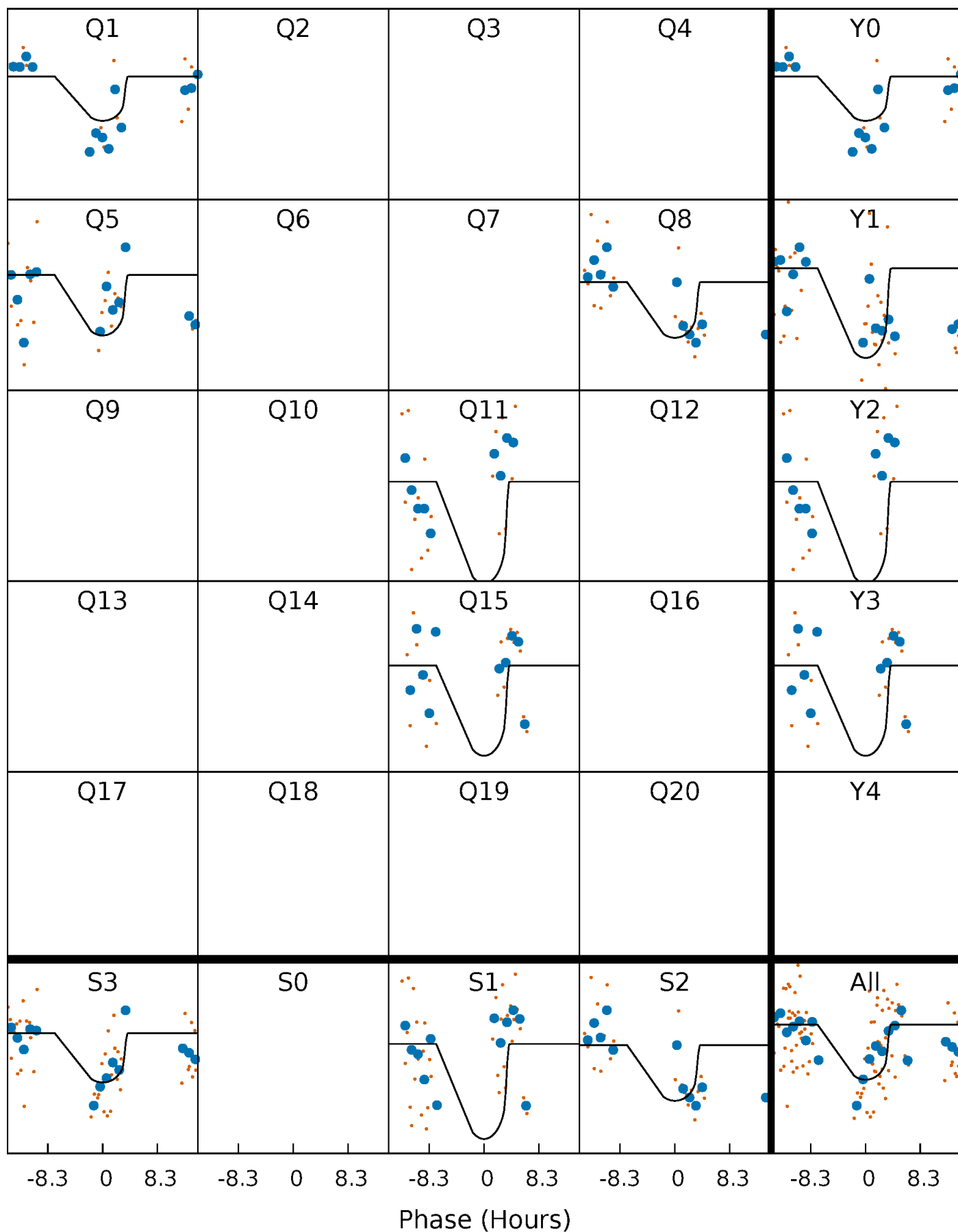
PDC Quarter-Phased Transit Curves

TCE 007117710-02 P=308.293496 Days $T_0=141.147533$ (BKJD)



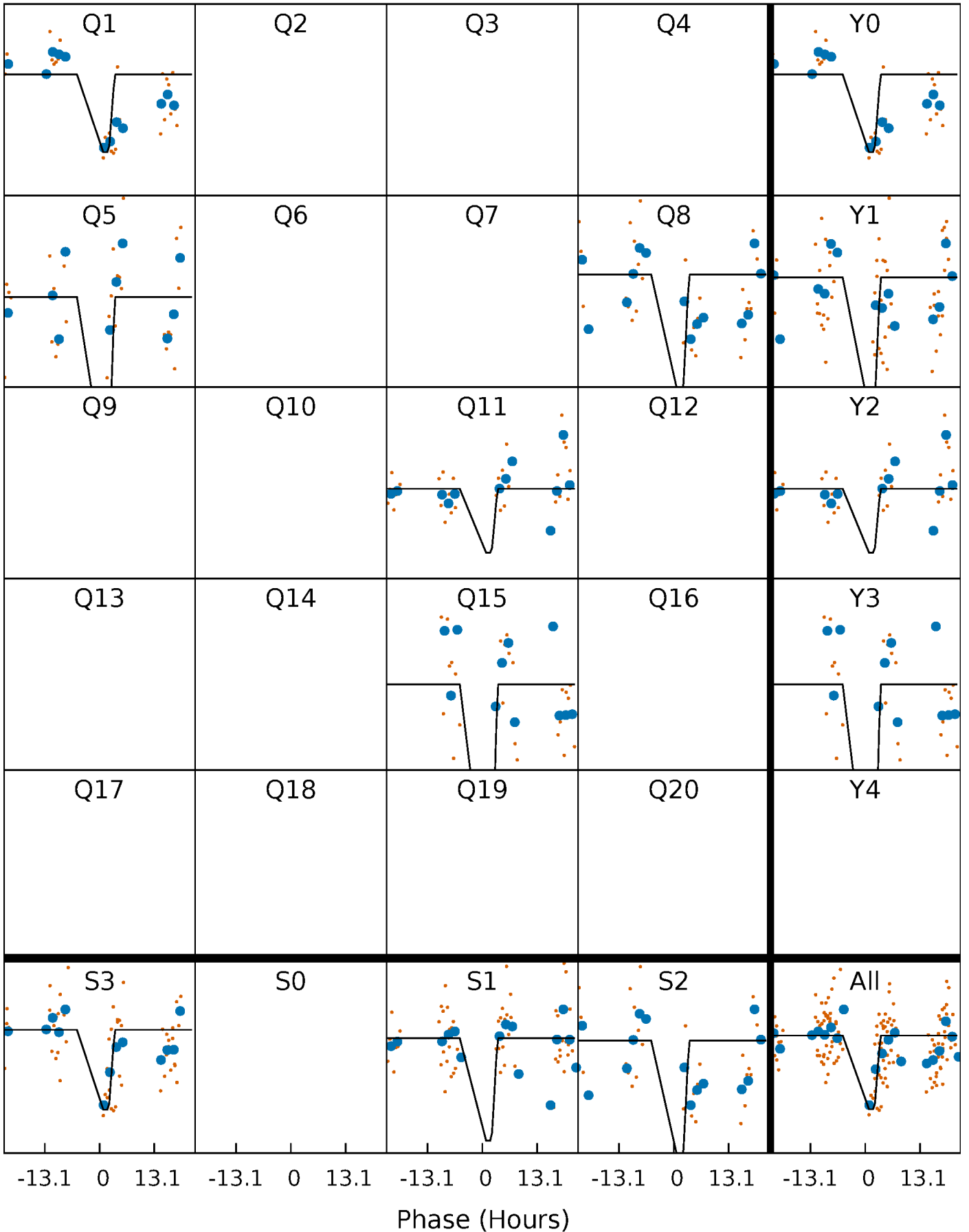
DV Quarter-Phased Transit Curves

TCE 007117710-02 $P=308.293496$ Days $T_0=141.147533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

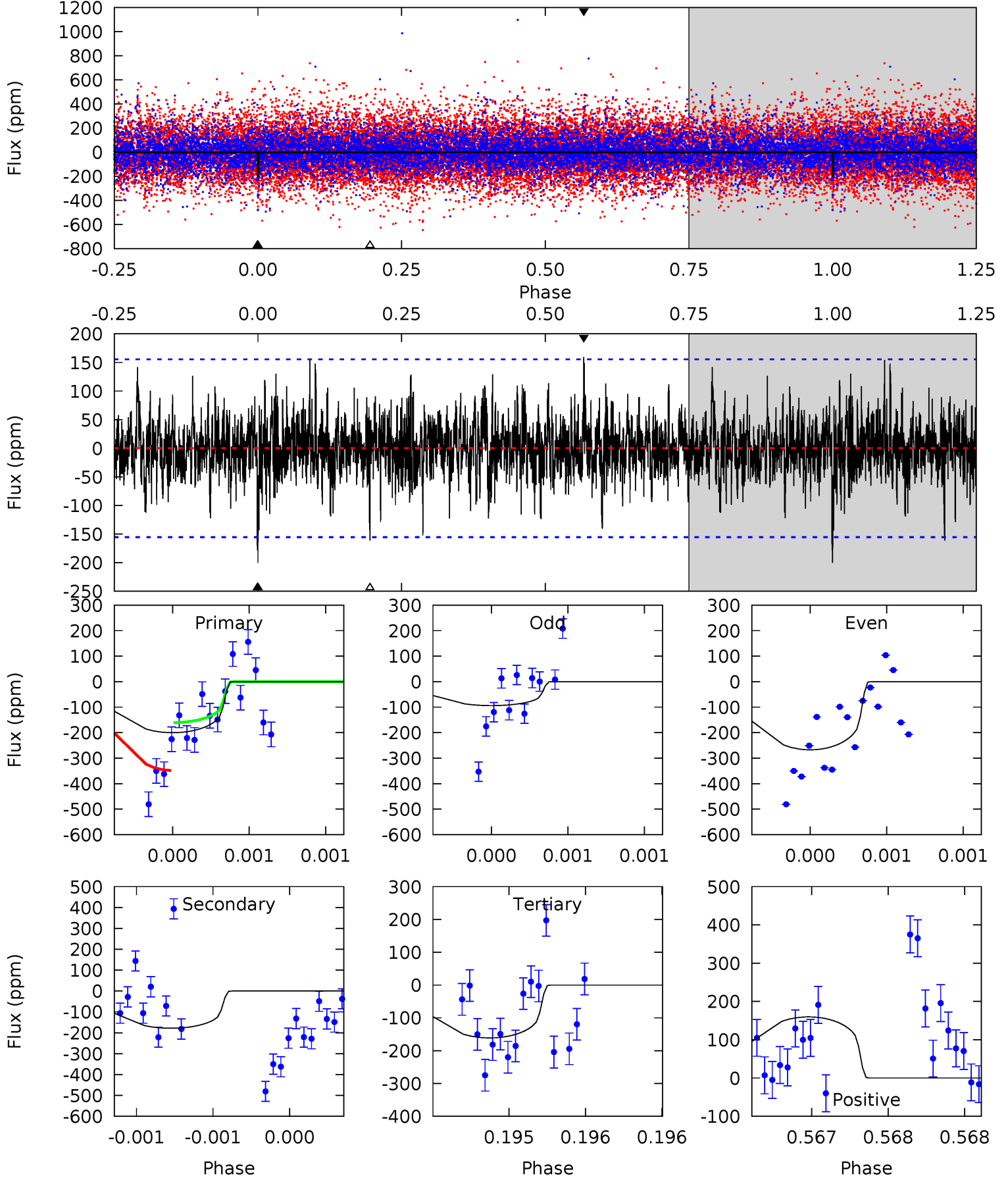
TCE 007117710-02 P=308.301553 Days $T_0=141.038413$ (BKJD)



DV Model-Shift Uniqueness Test

007117710-02, $P = 308.293496$ Days, $E = 141.147533$ Days

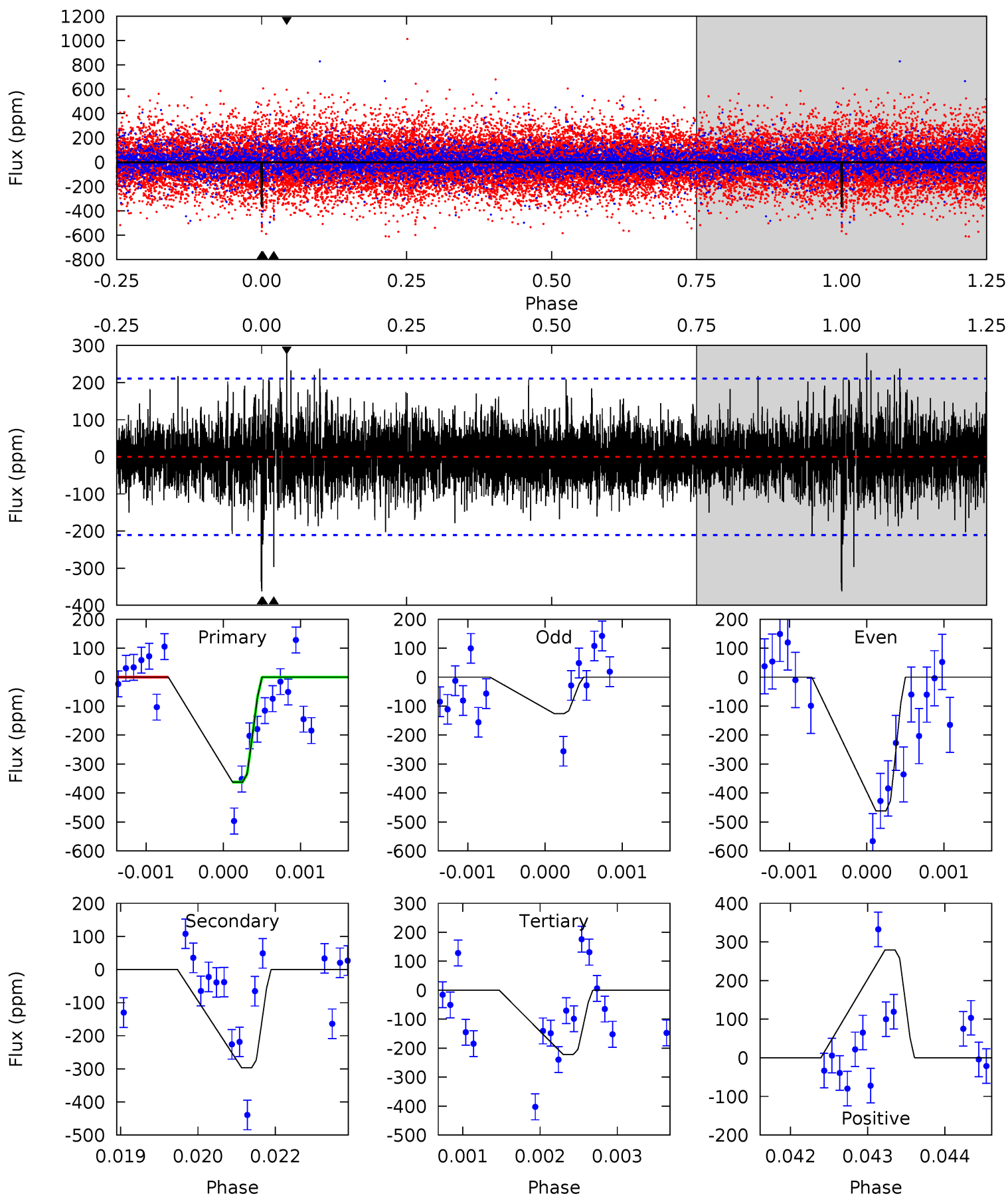
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.11	6.33	5.72	5.67	5.52	3.40	1.39	1.39	1.44	0.61	0.66	3.01	0.95	0.44	2.18



Alt Model-Shift Uniqueness Test

007117710-02, P = 308.301553 Days, E = 141.038413 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.37	7.67	5.73	7.22	5.45	3.28	1.41	3.63	2.15	1.94	0.45	4.07	1.21	0.44	0



Stellar Parameters For KIC 007117710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5403^{+73}_{-81}	$4.540^{+0.012}_{-0.108}$	$0.360^{+0.100}_{-0.150}$	$0.888^{+0.103}_{-0.029}$	$0.998^{+0.020}_{-0.065}$	$2.006^{+0.129}_{-0.595}$
	+1%/-1%	+0%/-2%	+28%/-42%	+12%/-3%	+2%/-7%	+6%/-30%
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 007117710-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-178 ± 28	$2.32^{+1.86}_{-1.48}$	337^{+10}_{-8}	4298^{+2488}_{-801}	14679^{+93950}_{-10417}
Alt.	-297 ± 39	$2.77^{+2.07}_{-1.66}$	336^{+11}_{-7}	4385^{+2293}_{-764}	16270^{+87588}_{-10921}

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

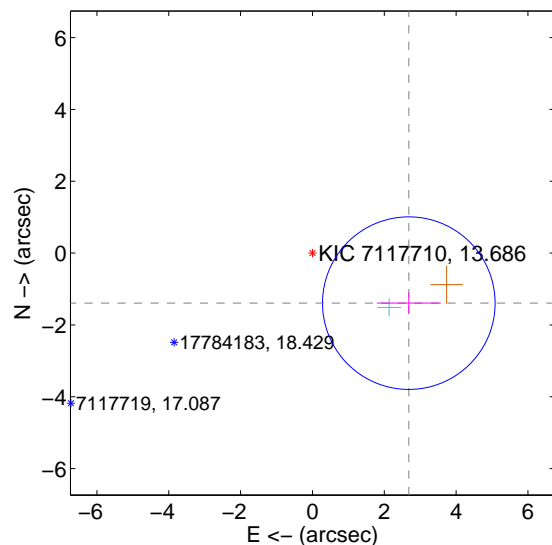
Supplemental centroid analysis for 007117710-02. Kepler magnitude: 13.69. Transit SNR 7.07

There are 1 quarters with good PRF difference image offsets

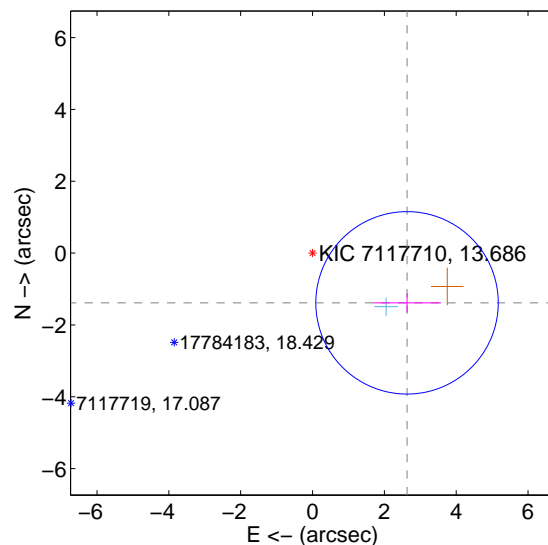
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.023 ± 0.801	3.78	-2.683 ± 0.889	-1.393 ± 0.296
PRF-fit source offset from KIC position	2.973 ± 0.846	3.51	-2.631 ± 0.946	-1.385 ± 0.264
photometric centroid source offset	2.57 ± 1.01	2.54	-2.57 ± 1.01	-0.07 ± 1.03

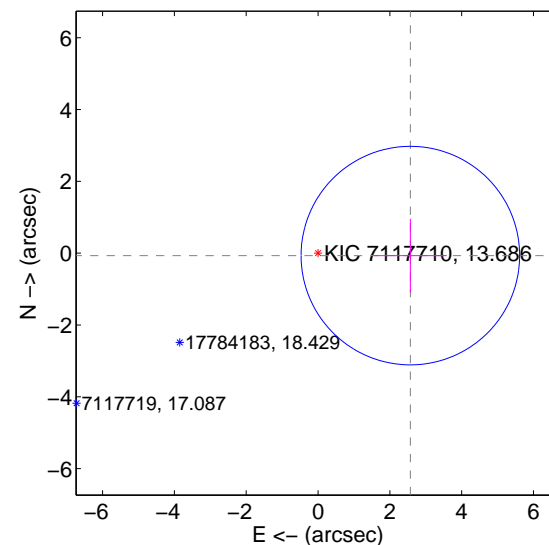
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

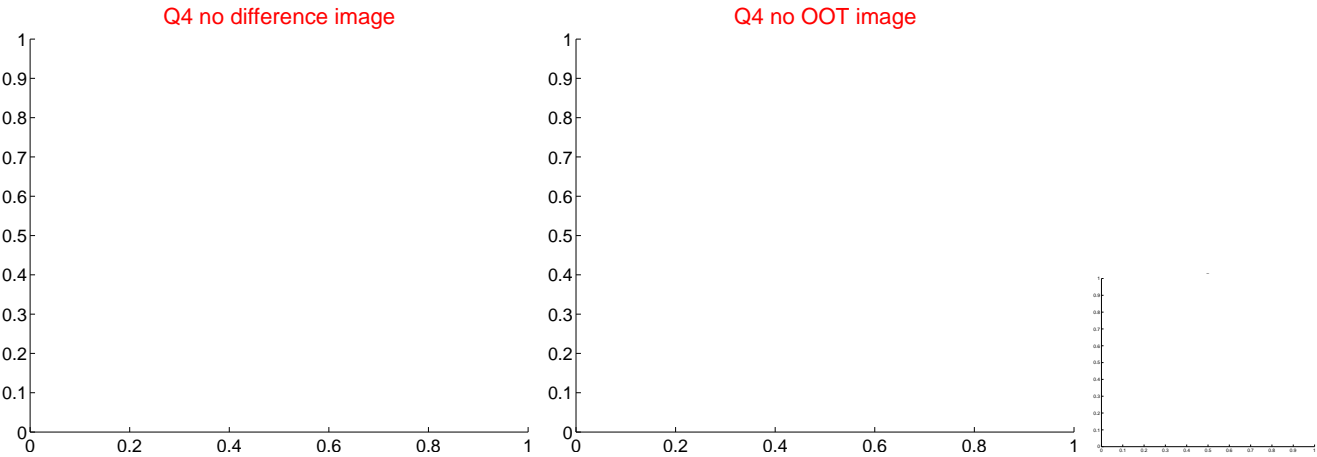
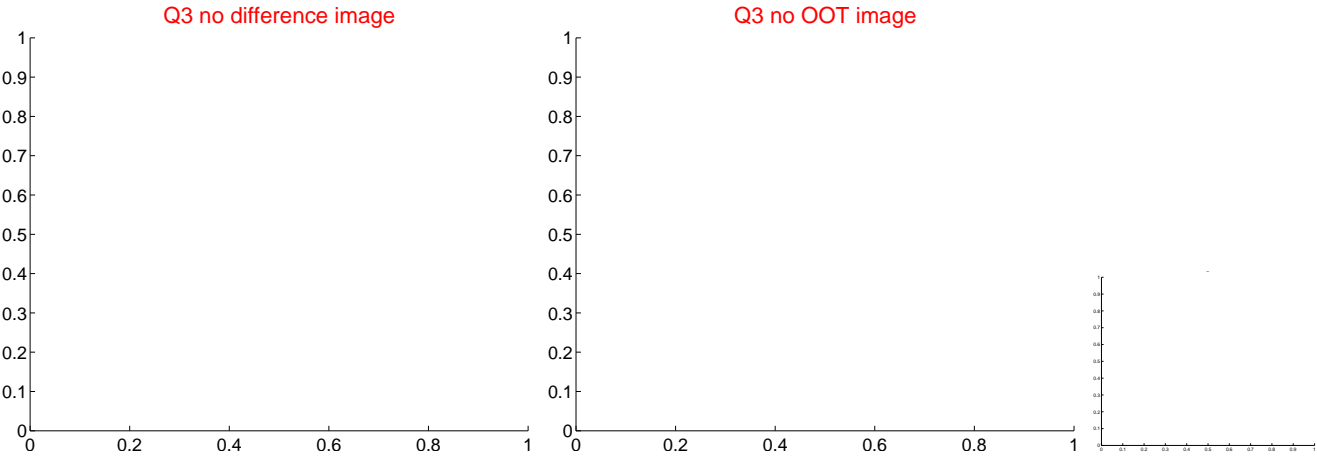
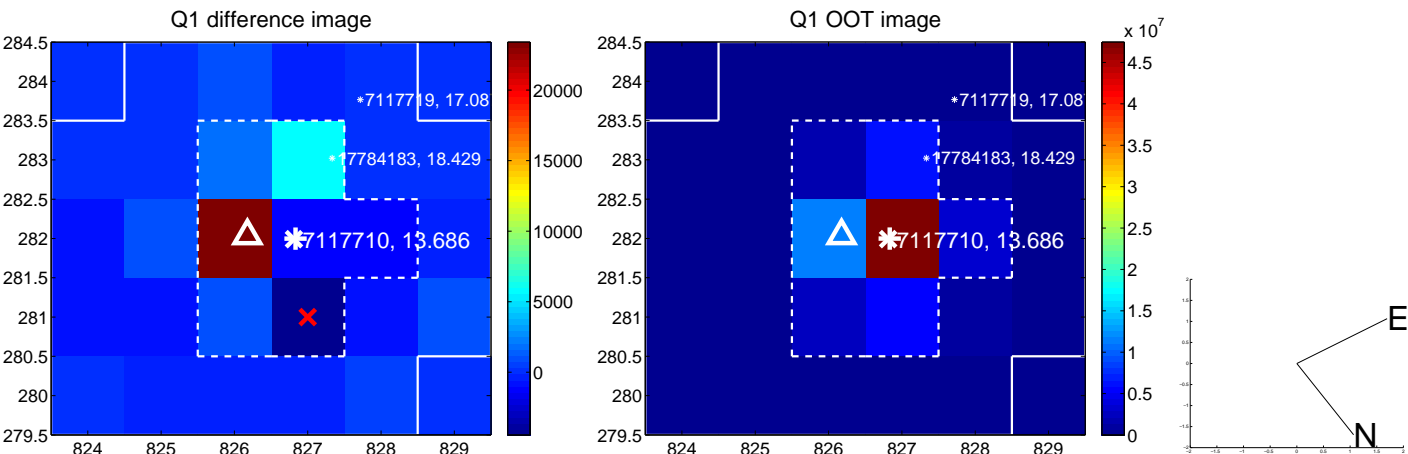


offset from photometric centroids

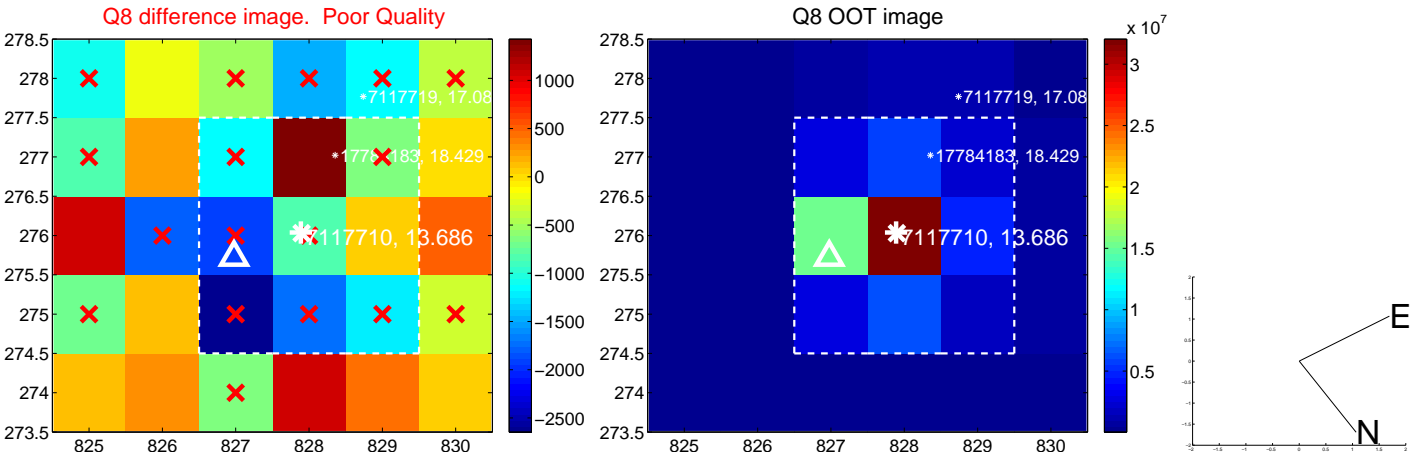
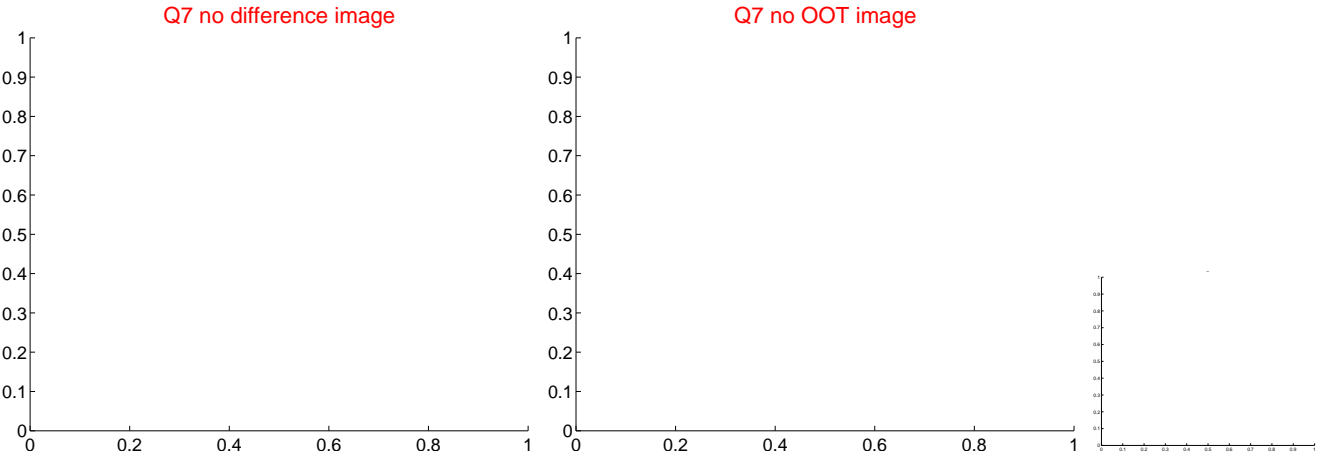
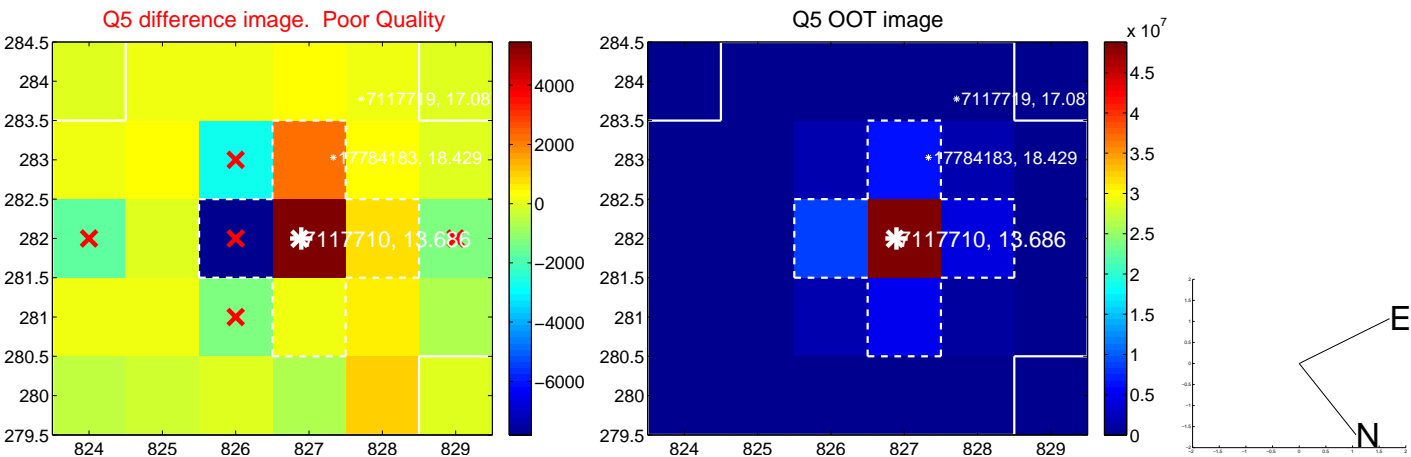


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

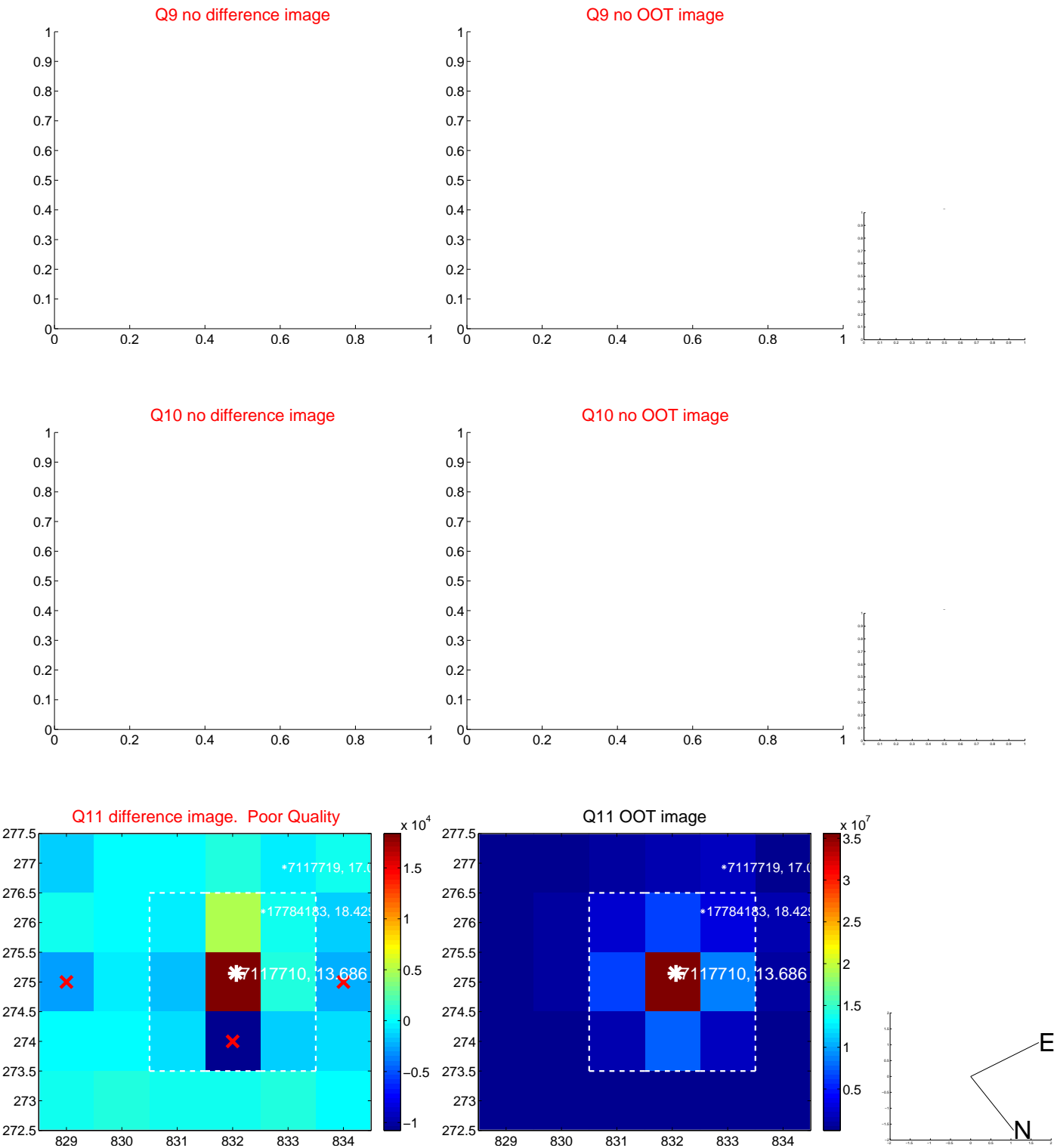
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



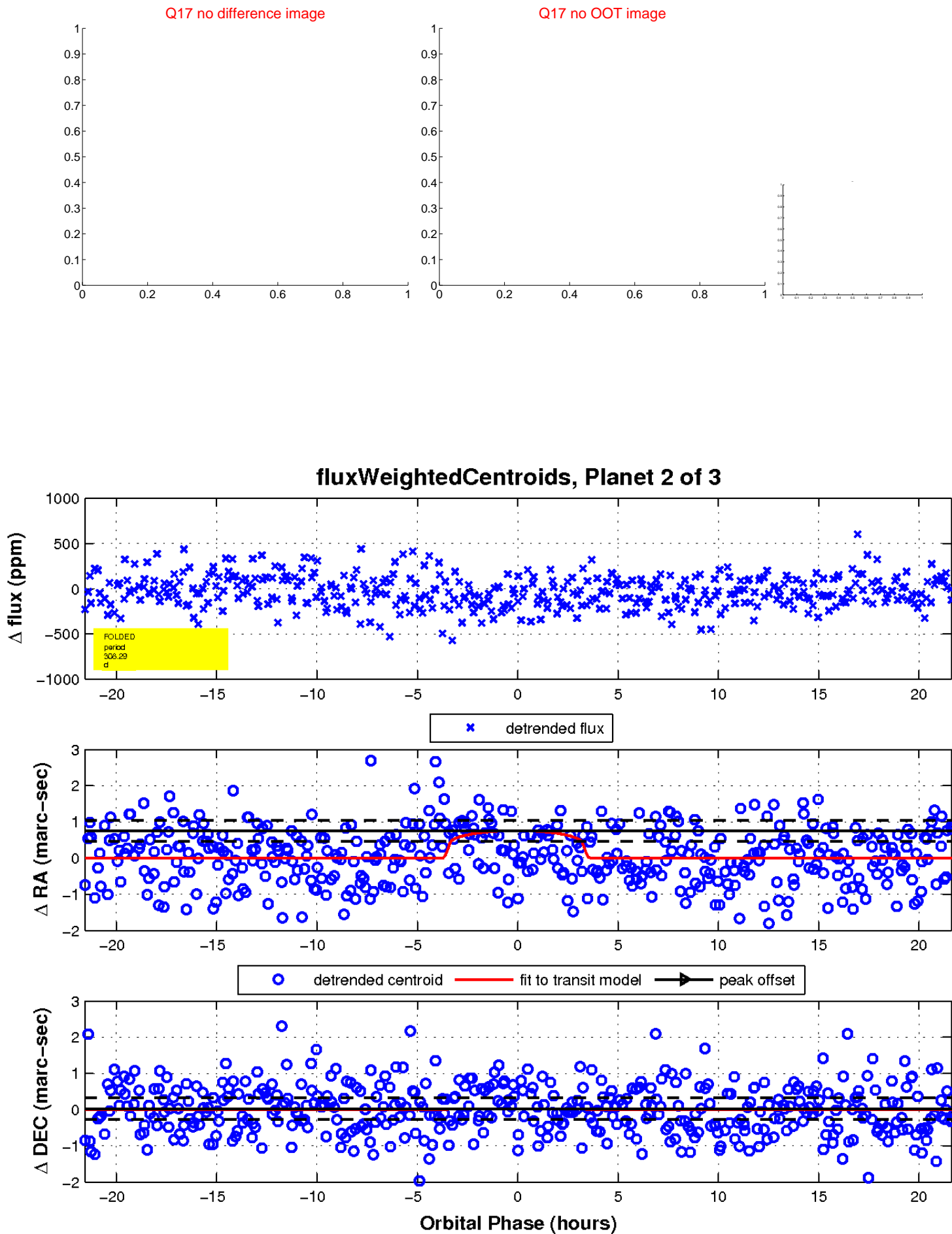
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

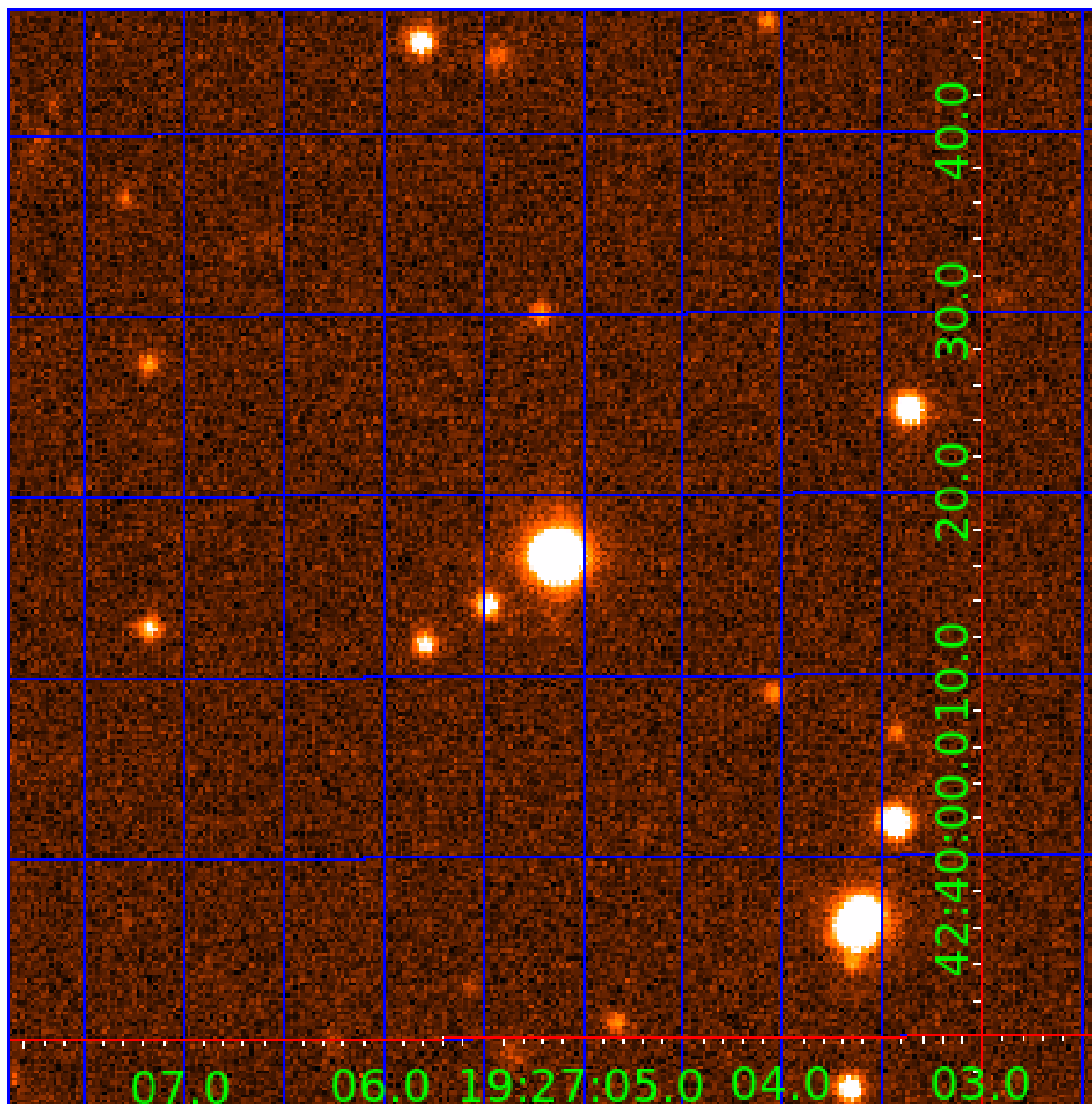


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007117710

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})
007117710-01	OBS	7817.01	0.566789	131.812151	18.2	2.768	8.2	9.4	0.89	5403	0.46	3355.94
007117710-02	OBS	No	308.293496	141.147533	282.6	7.220	8.6	7.1	0.89	5403	1.67	0.76
007117710-03	OBS	No	72.660221	145.562827	221.0	2.214	7.5	7.6	0.89	5403	1.60	5.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007117710-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH
007117710-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007117710-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

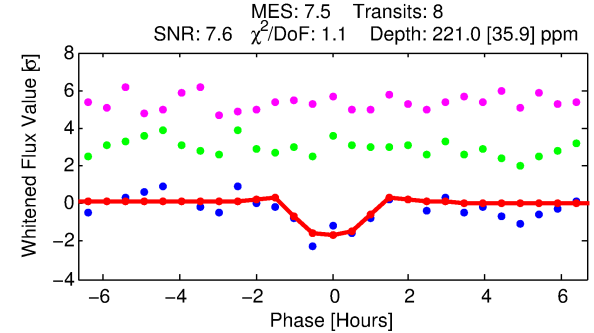
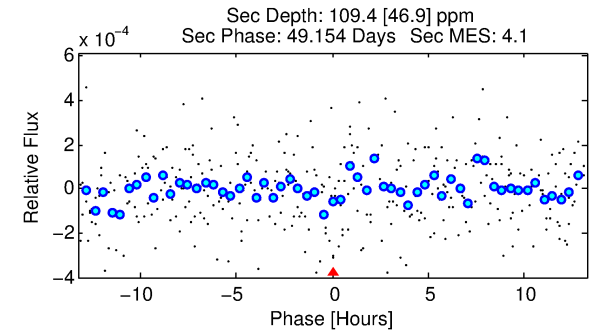
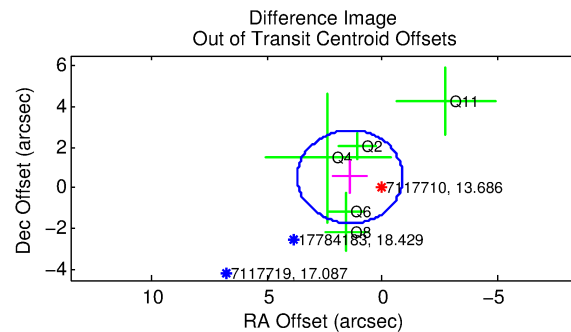
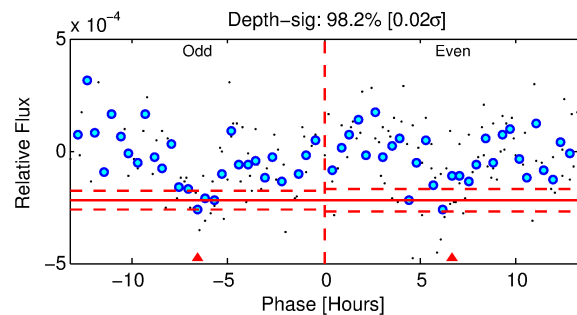
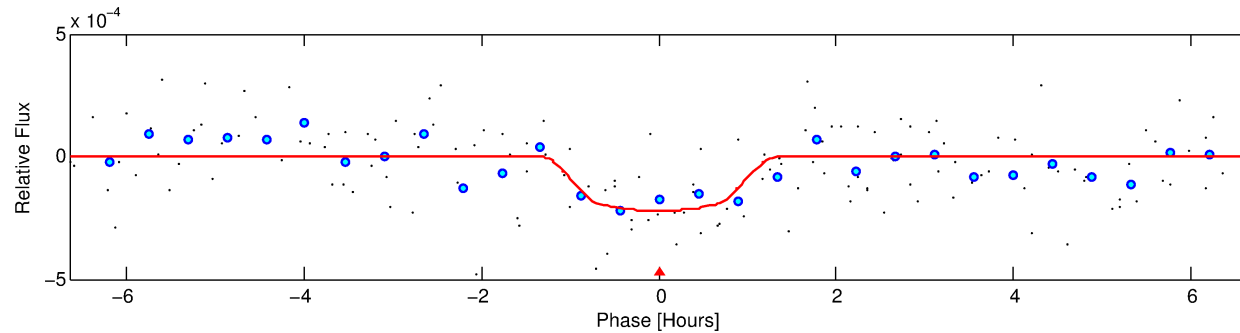
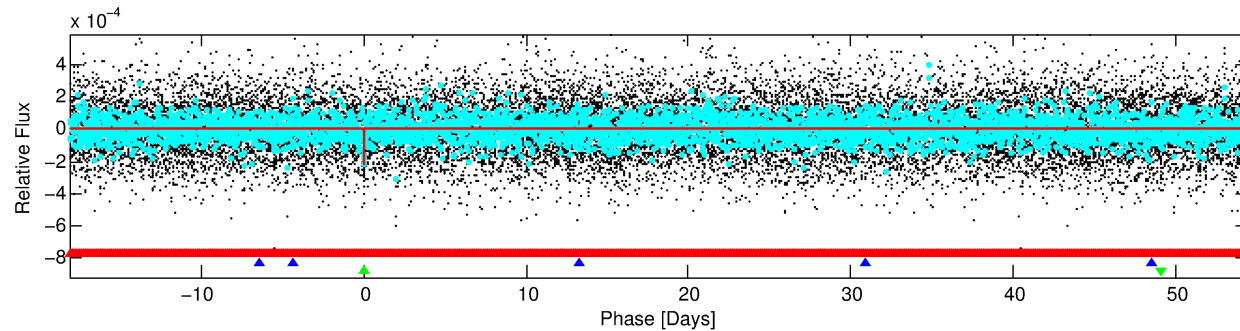
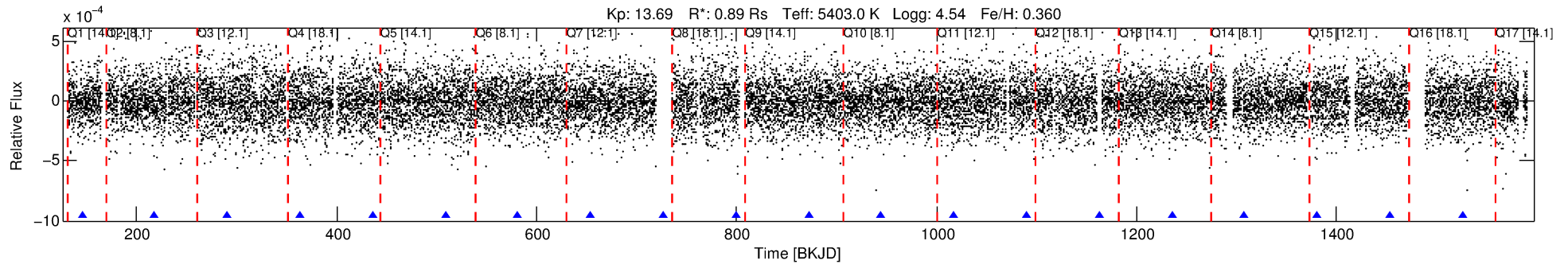
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007117710-03

No Significant Match Found

DV One-Page Summary

KIC: 7117710 Candidate: 3 of 3 Period: 72.660 d



DV Fit Results:

Period = 72.66022 [0.00083] d
Epoch = 145.5628 [0.0088] BKJD
Rp/R* = 0.0165 [0.0157]
a/R* = 117.27 [468.61]
b = 0.90 [0.84]
Seff = 5.19 [1.00]
Teq = 385 [19] K
Rp = 1.60 [1.53] Re
a = 0.3405 [0.0386] AU
Ag = 2720.05 [5306.33] [0.51σ]
Teffp = 4298 [2088] K [1.87σ]

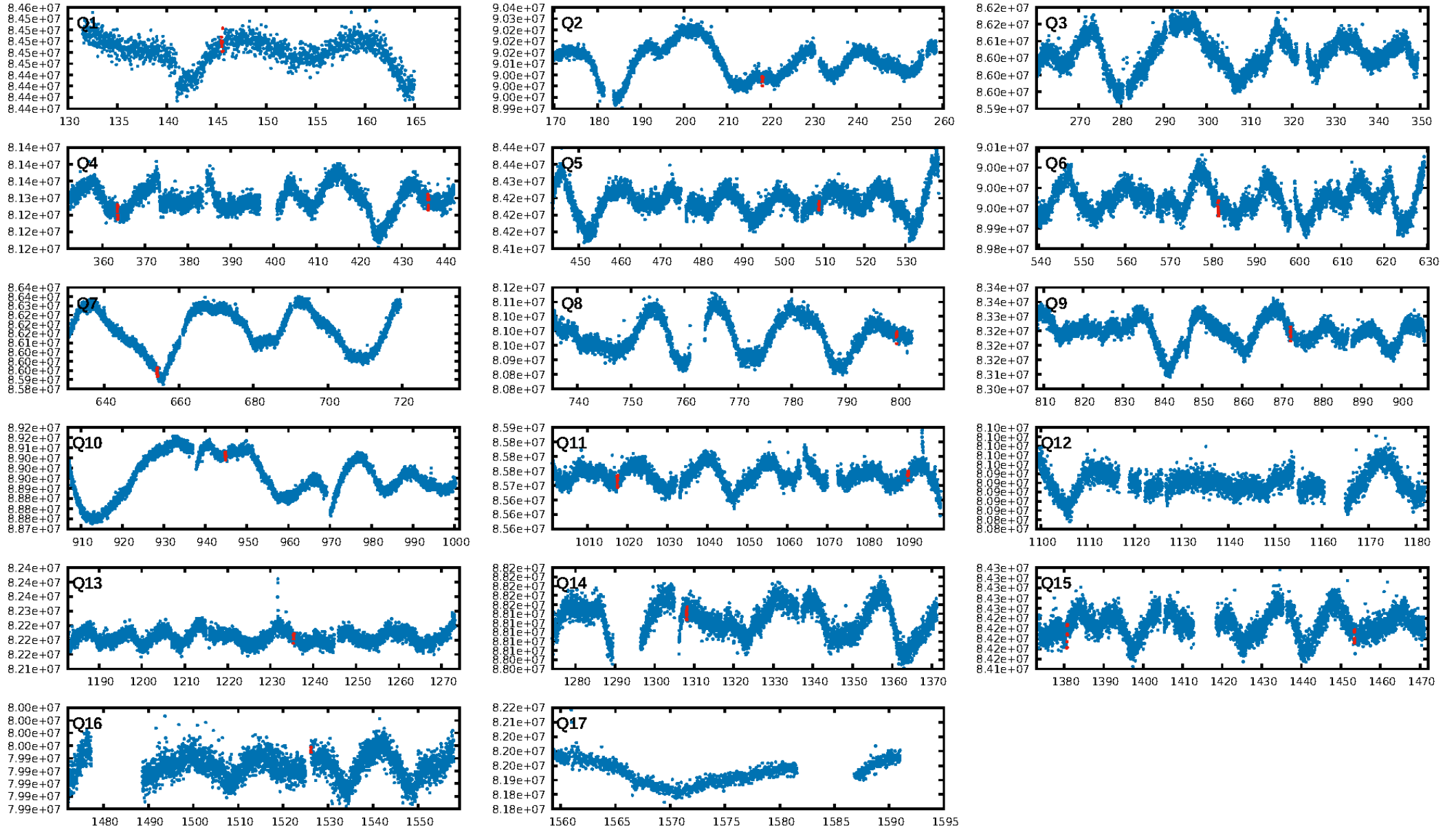
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [488.07σ]
LongPeriod-sig: 100.0% [748.88σ]
ModelChiSquare2-sig: 90.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.35e-10
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 4.863
Centroid-sig: 3.8%
Centroid-so: 2.097 arcsec [1.77σ]
OotOffset-rm: 1.506 arcsec [1.98σ]
OotOffset-st: 2/1/2/0 [5]
KicOffset-rm: 1.492 arcsec [1.96σ]
KicOffset-st: 2/1/2/0 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.00 [0/13]

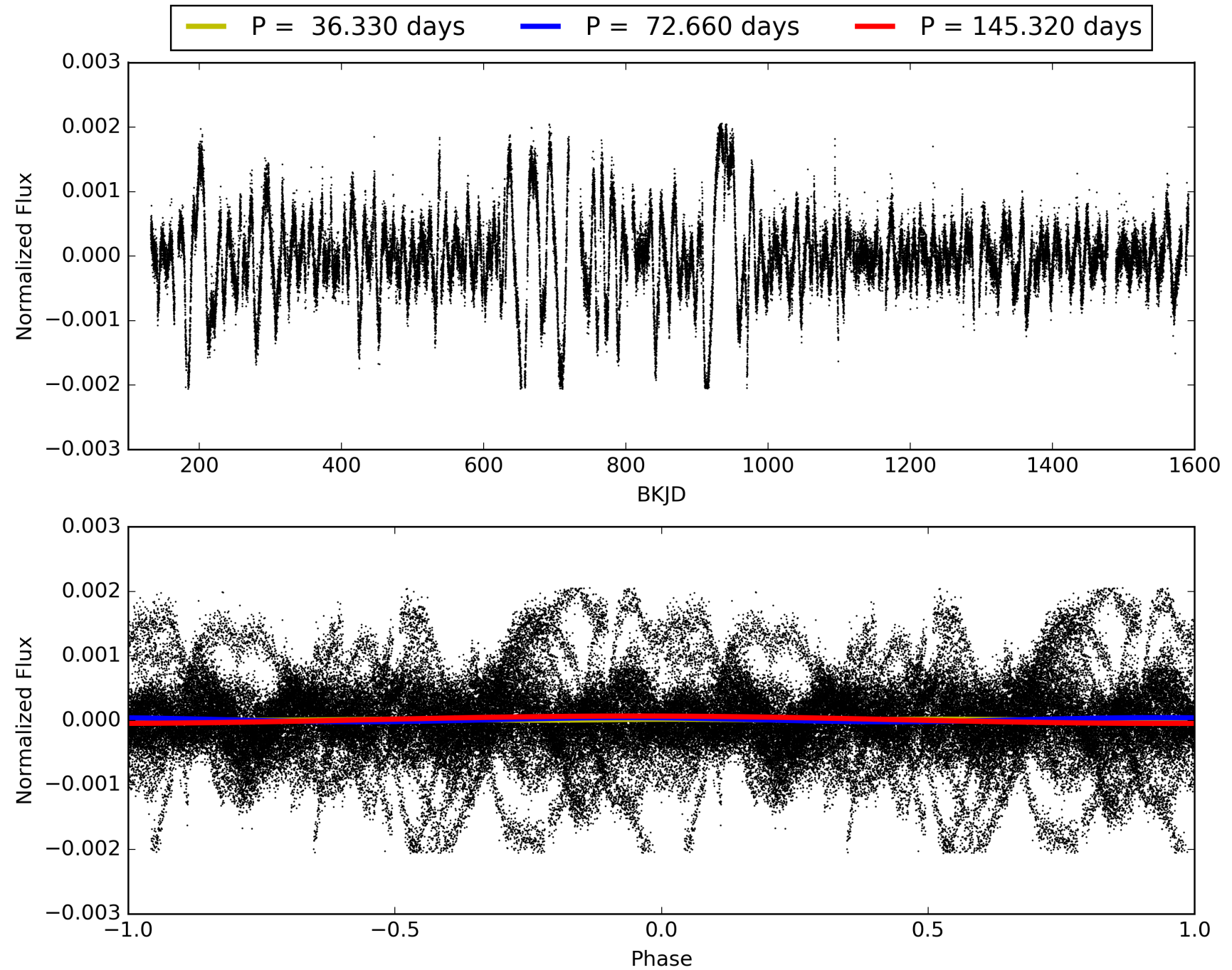
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:51:26 Z

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

TCE 007117710-03, PDC Light Curves

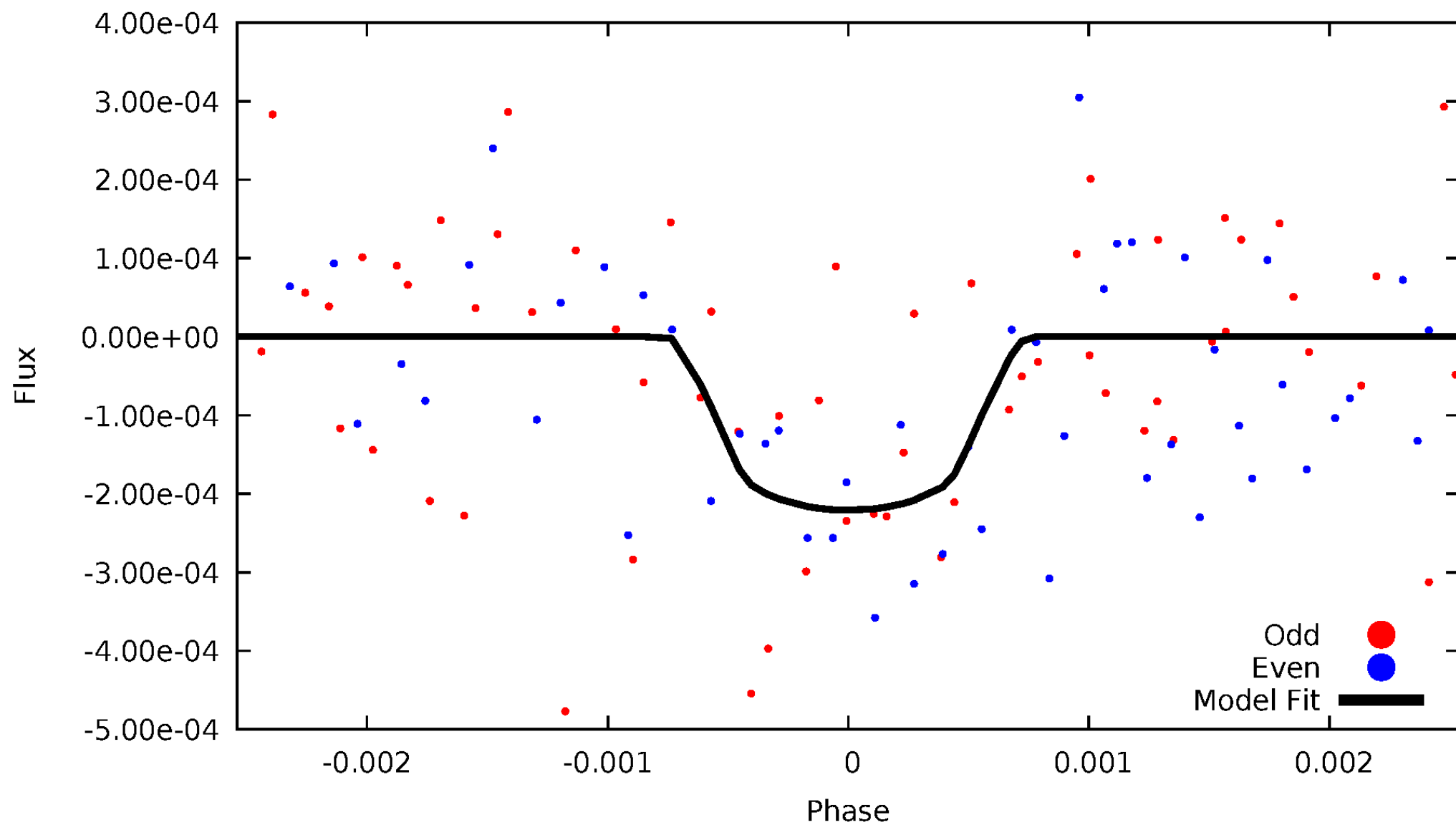


TCE 007117710-03



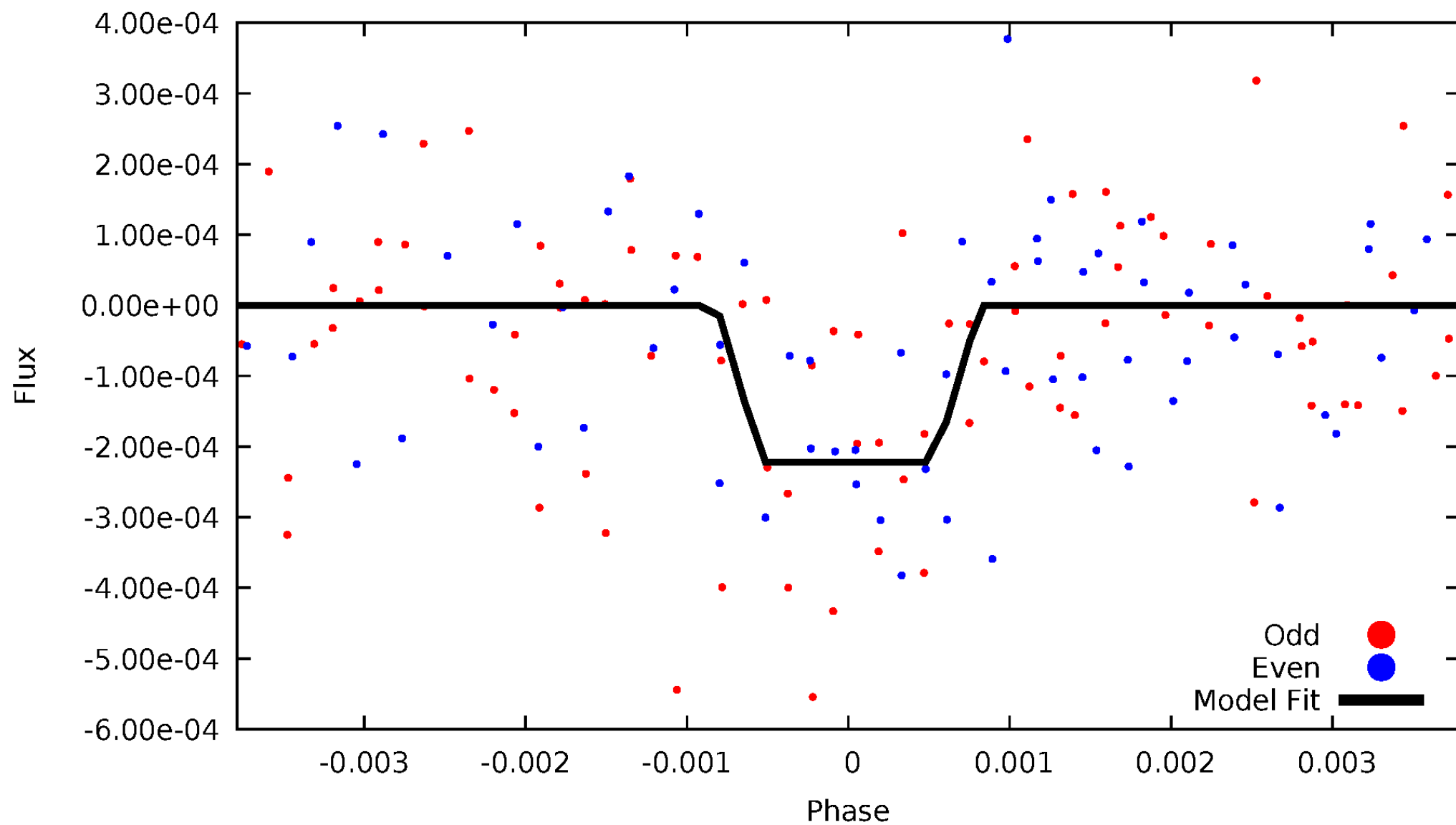
DV Odd/Even

TCE 007117710-03

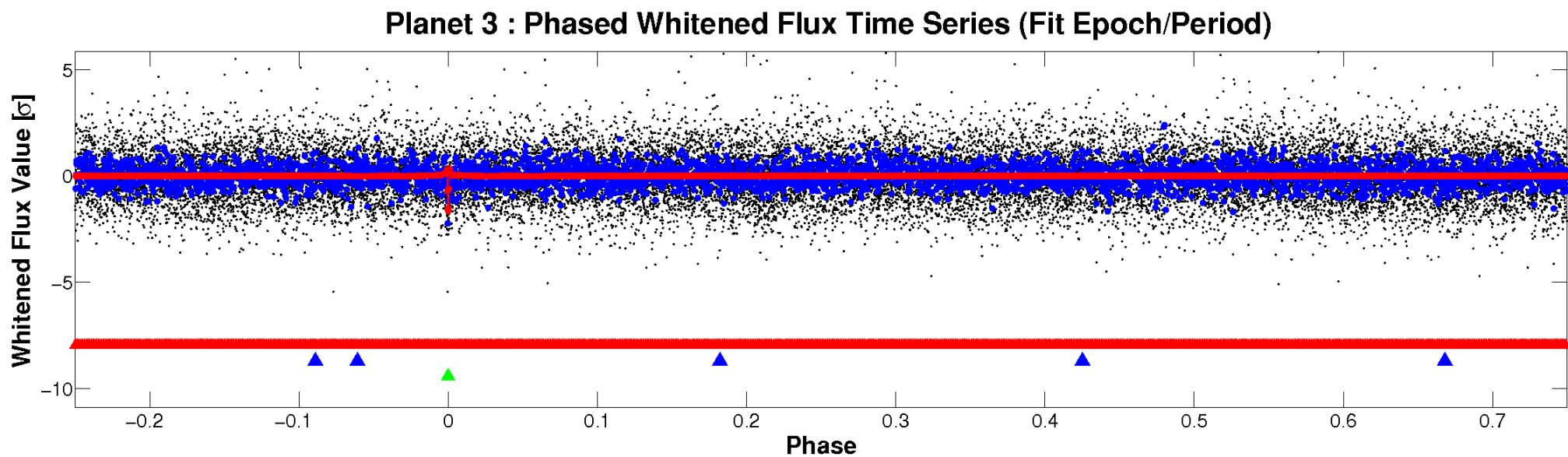
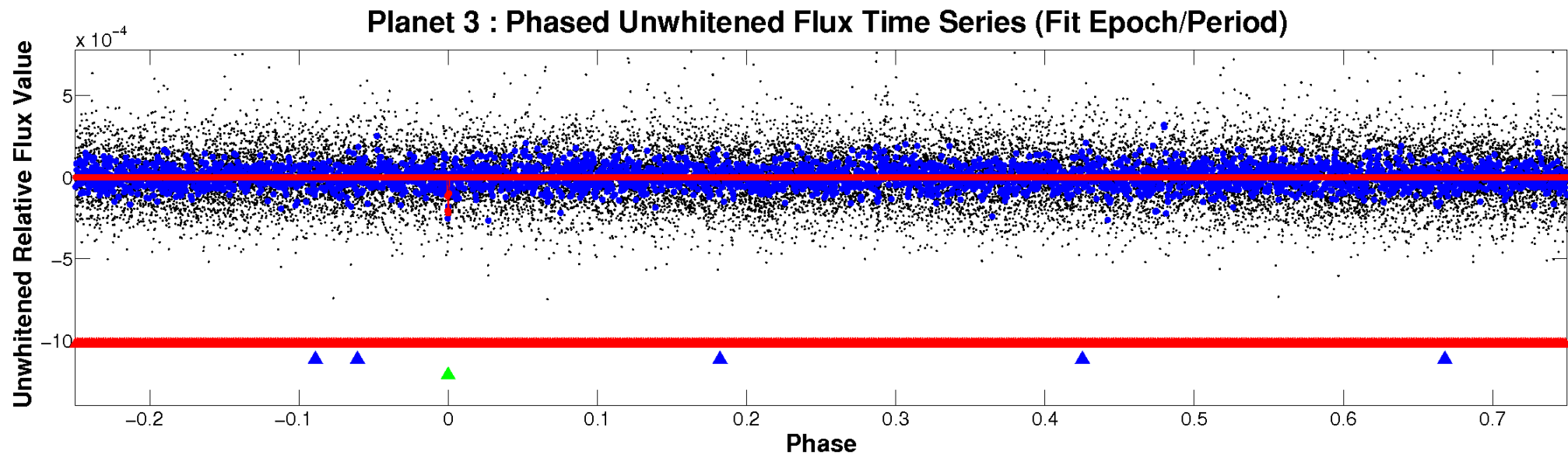


ALT Odd/Even

TCE 007117710-03

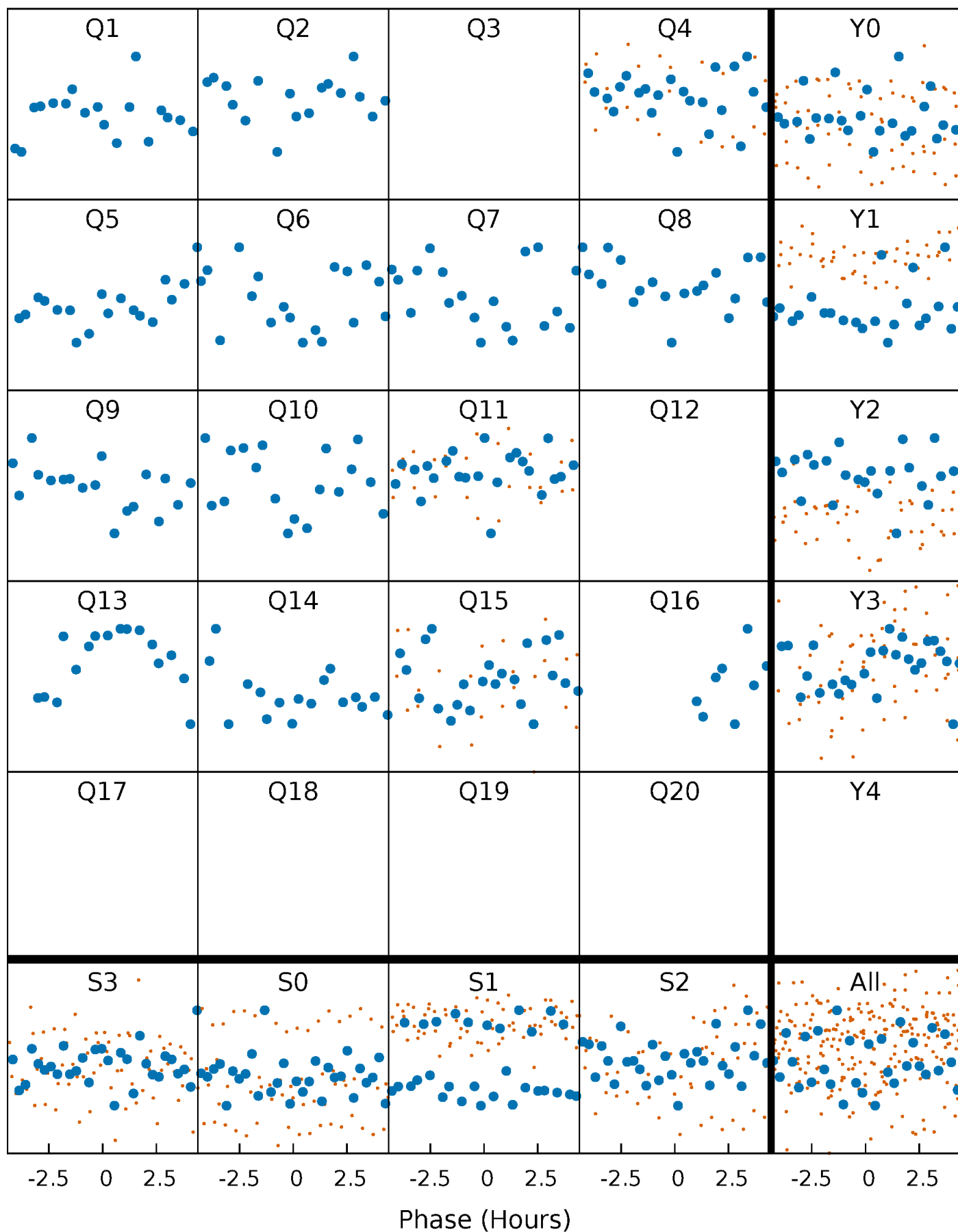


Non-Whitened Vs. Whitened Light Curve



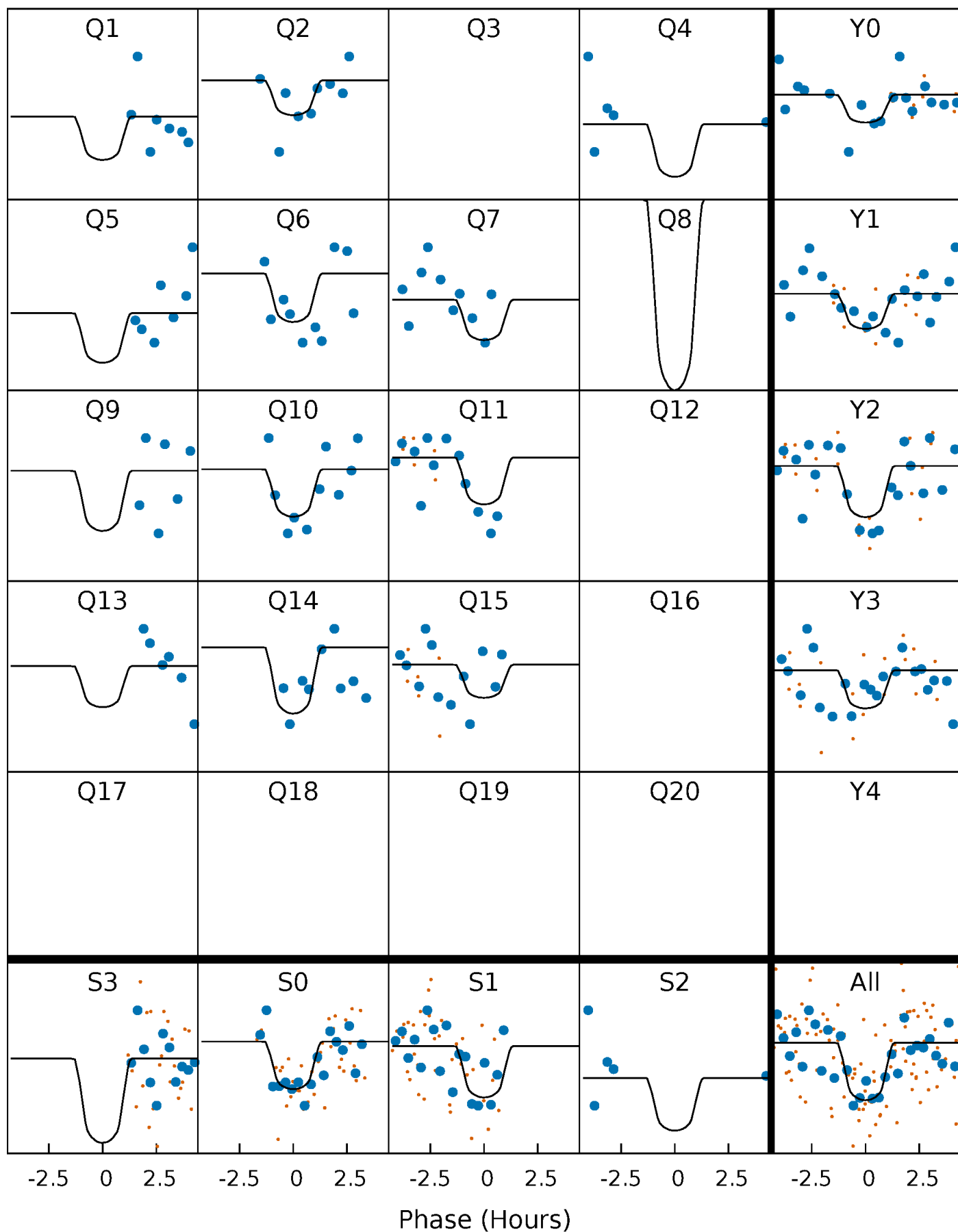
PDC Quarter-Phased Transit Curves

TCE 007117710-03 P= 72.660221 Days $T_0=145.562827$ (BKJD)



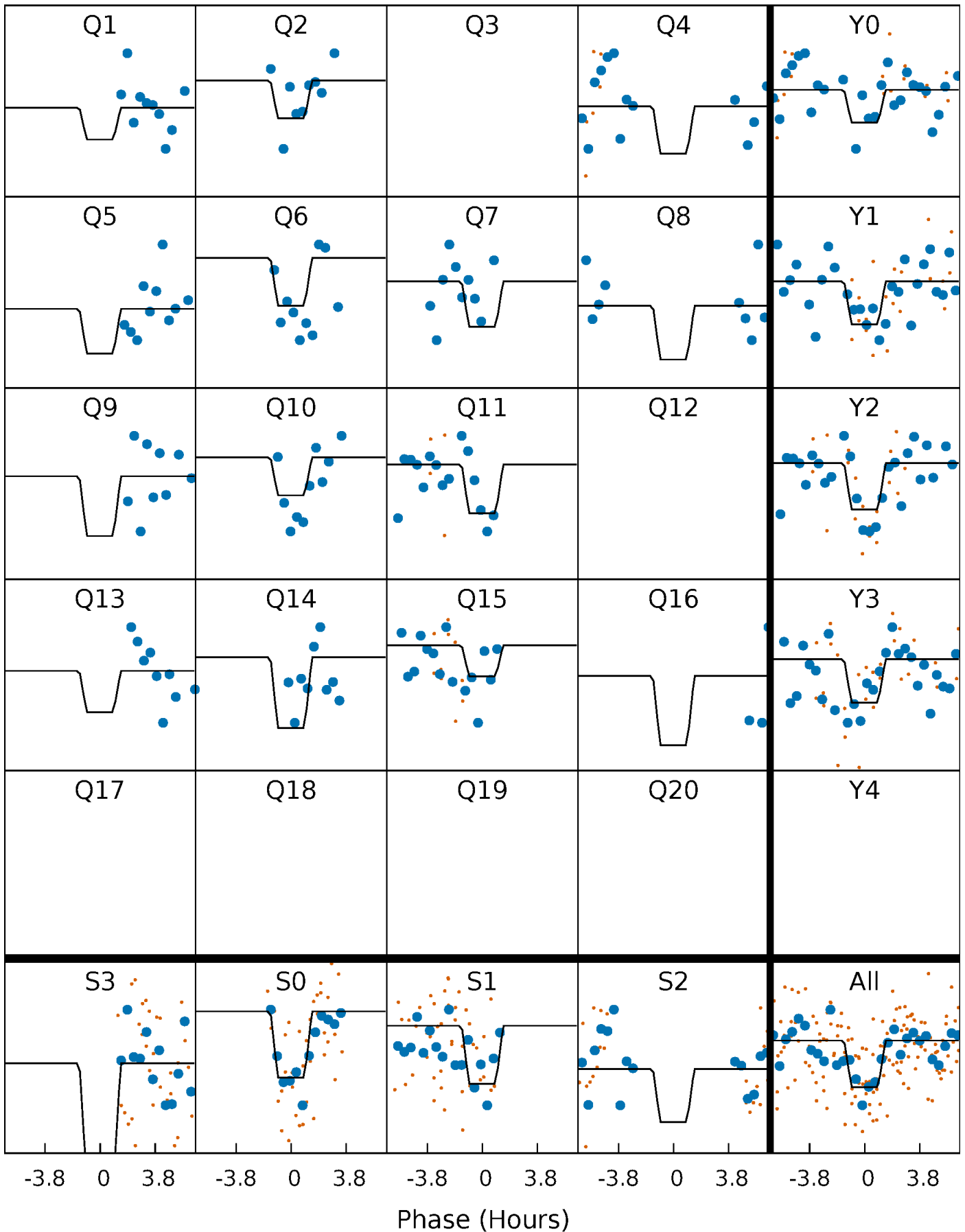
DV Quarter-Phased Transit Curves

TCE 007117710-03 P= 72.660221 Days $T_0=145.562827$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

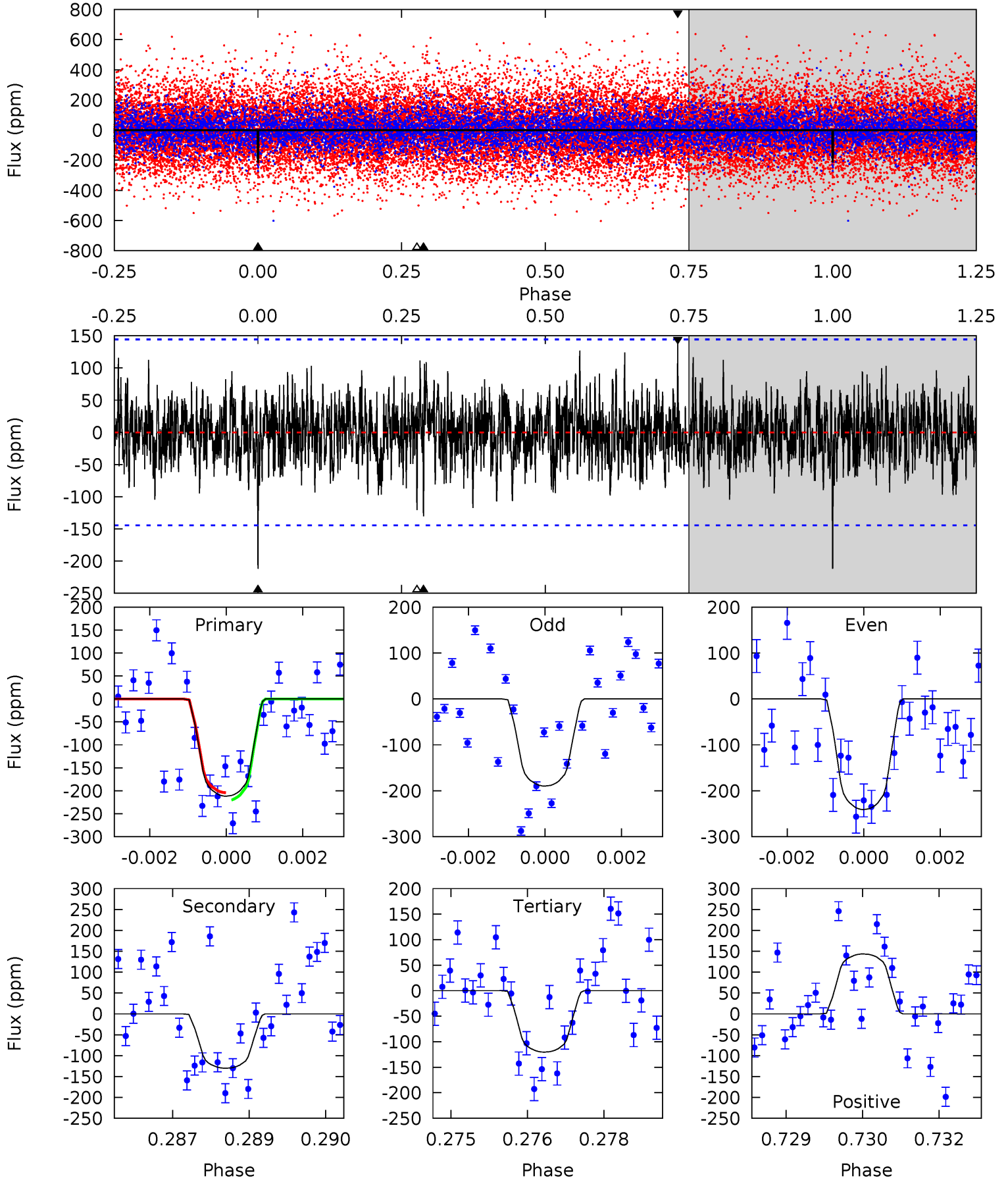
TCE 007117710-03 P= 72.659853 Days $T_0=145.560891$ (BKJD)



DV Model-Shift Uniqueness Test

007117710-03, P = 72.660221 Days, E = 72.902606 Days

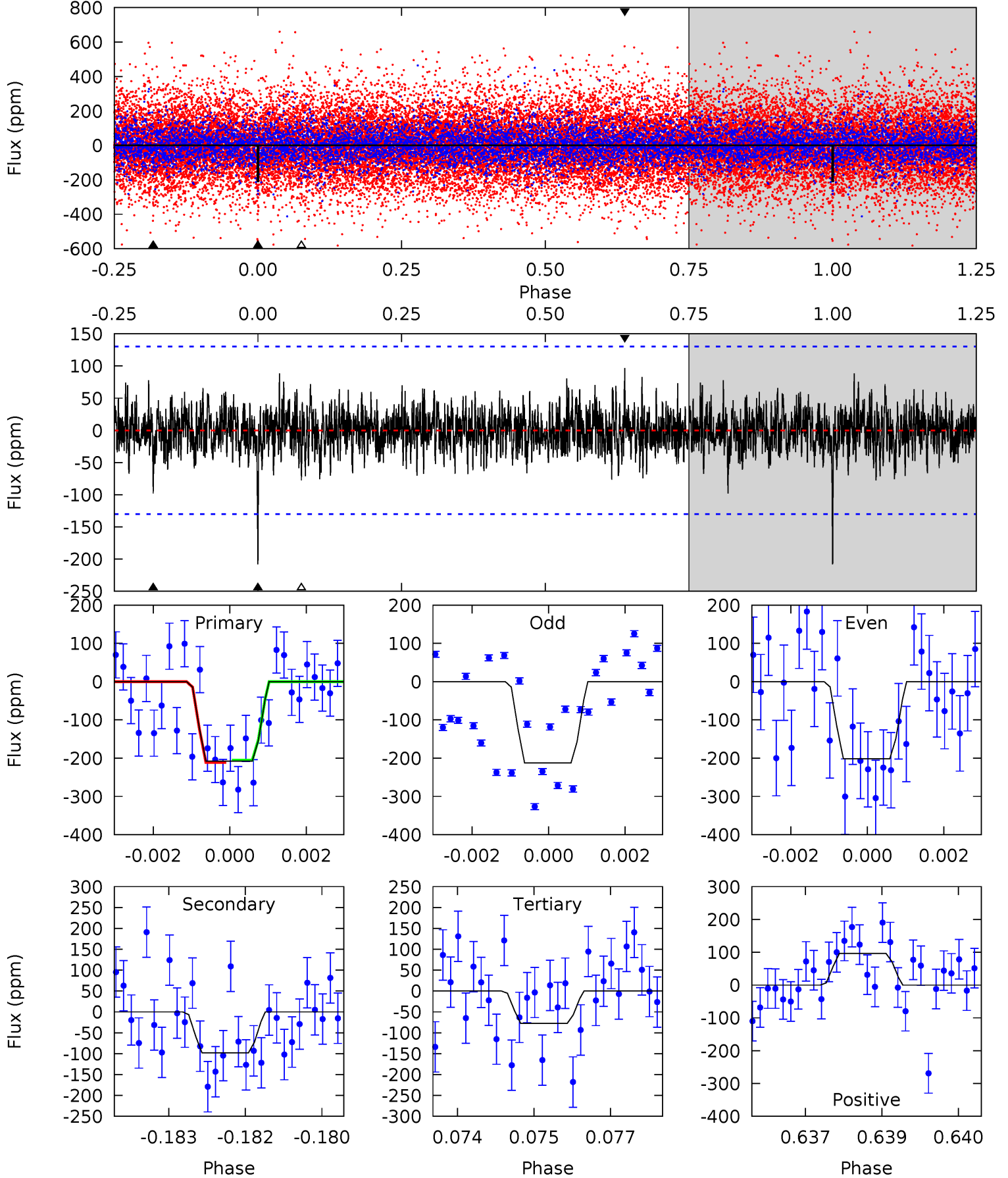
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.89	4.85	4.48	5.35	5.38	3.17	1.37	3.41	2.54	0.37	-0.50	0.95	0.83	0.40	0.30



Alt Model-Shift Uniqueness Test

007117710-03, P = 72.659853 Days, E = 72.901038 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.57	4.03	3.20	3.98	5.36	3.15	1.04	5.37	4.59	0.83	0.05	0.22	1.01	0.32	0.12



Stellar Parameters For KIC 007117710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5403^{+73}_{-81}	$4.540^{+0.012}_{-0.108}$	$0.360^{+0.100}_{-0.150}$	$0.888^{+0.103}_{-0.029}$	$0.998^{+0.020}_{-0.065}$	$2.006^{+0.129}_{-0.595}$
	+1%/-1%	+0%/-2%	+28%/-42%	+12%/-3%	+2%/-7%	+6%/-30%
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 007117710-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-130 ± 27	$1.97^{+1.46}_{-1.24}$	545^{+17}_{-12}	4328^{+2422}_{-791}	2135^{+13061}_{-1463}
Alt.	-98 ± 24	$1.81^{+1.42}_{-1.14}$	544^{+17}_{-11}	4209^{+2273}_{-744}	1862^{+12152}_{-1281}

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 $A_{obs} \gg 1.0$

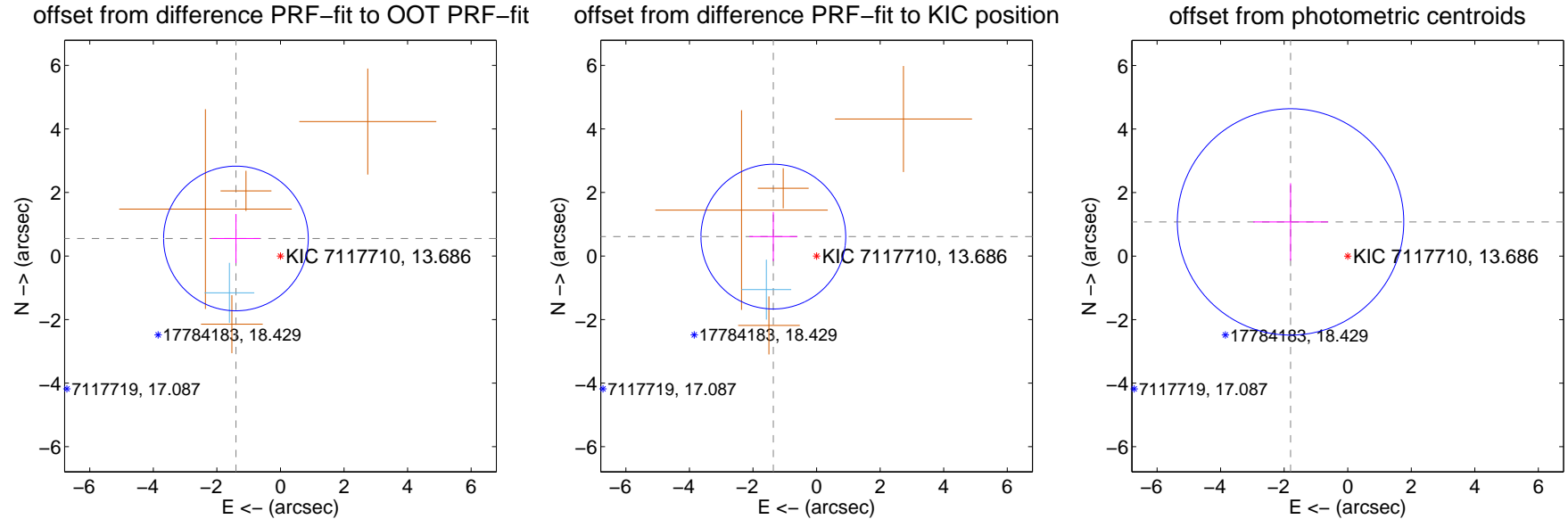
DV Centroid Data

Supplemental centroid analysis for 007117710-03. Kepler magnitude: 13.69. Transit SNR 7.59

There are 1 quarters with good PRF difference image offsets

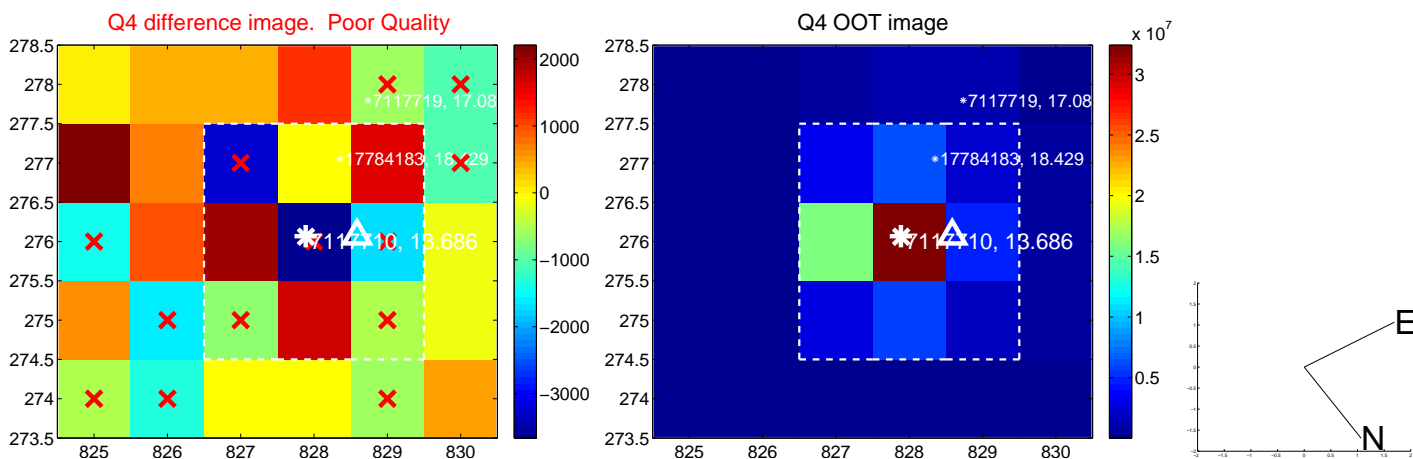
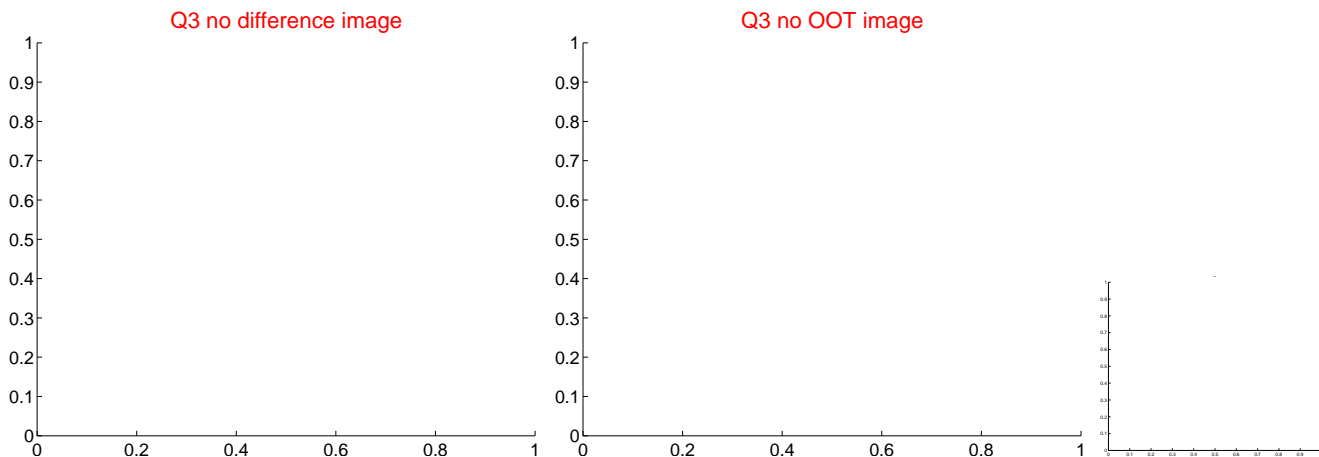
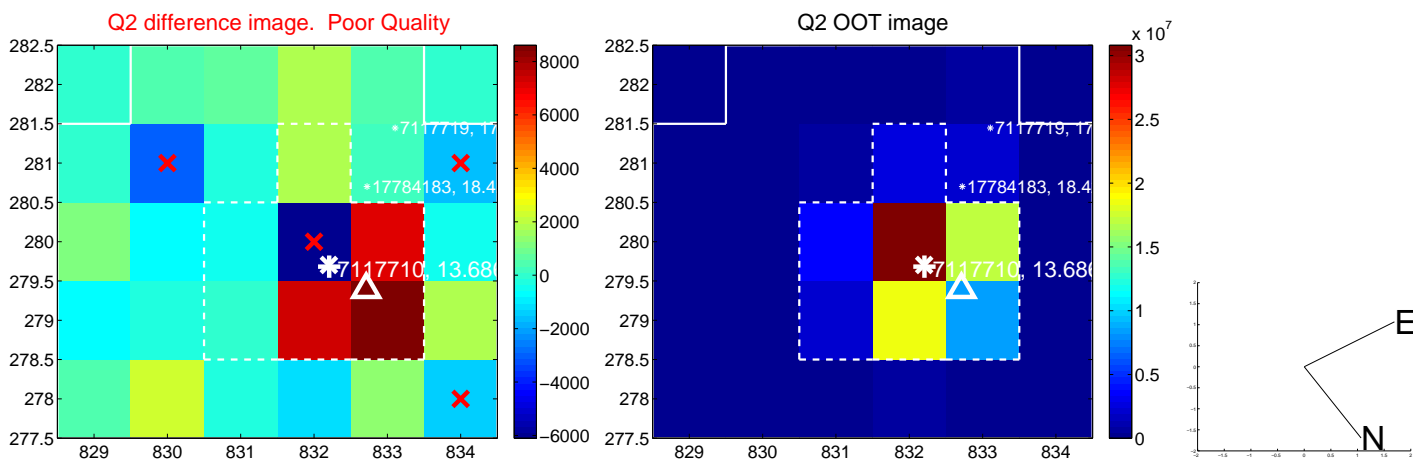
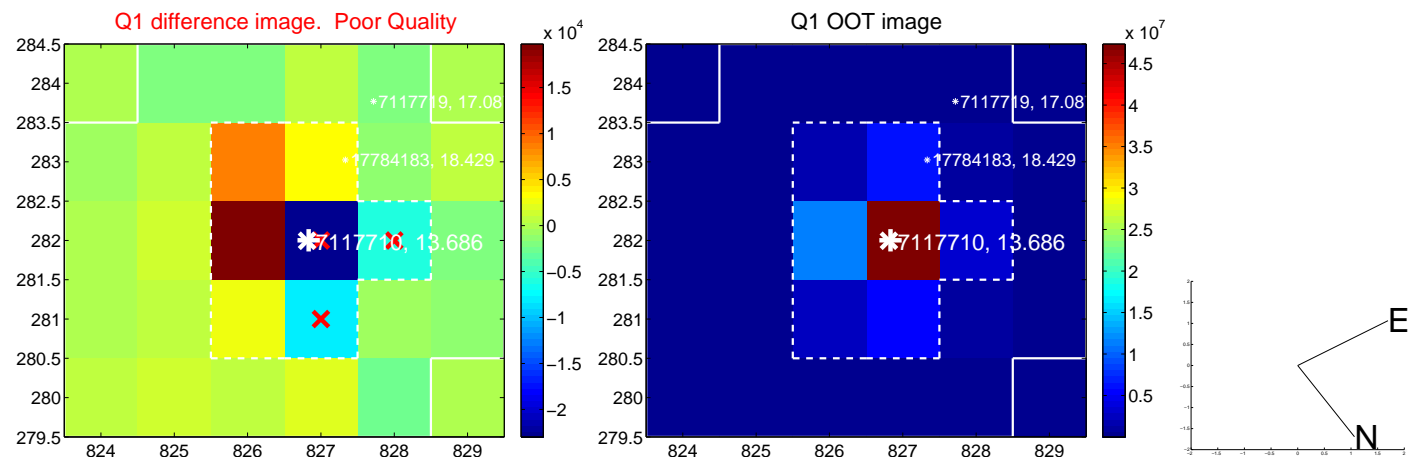
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.506 ± 0.759	1.98	1.401 ± 0.757	0.552 ± 0.772
PRF-fit source offset from KIC position	1.492 ± 0.759	1.96	1.361 ± 0.757	0.611 ± 0.772
photometric centroid source offset	2.10 ± 1.19	1.77	1.80 ± 1.18	1.08 ± 1.22

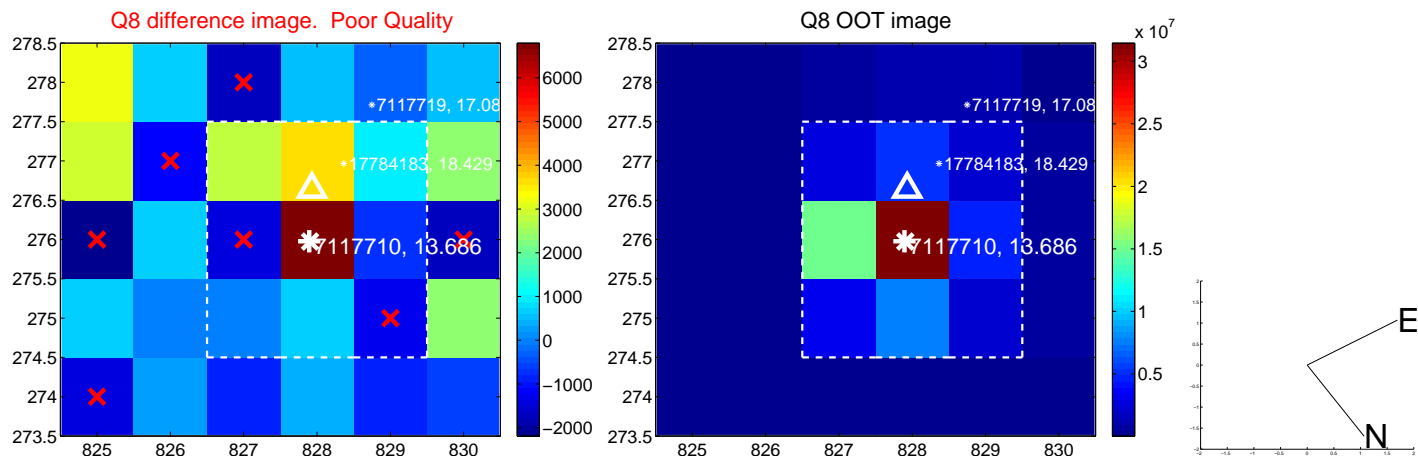
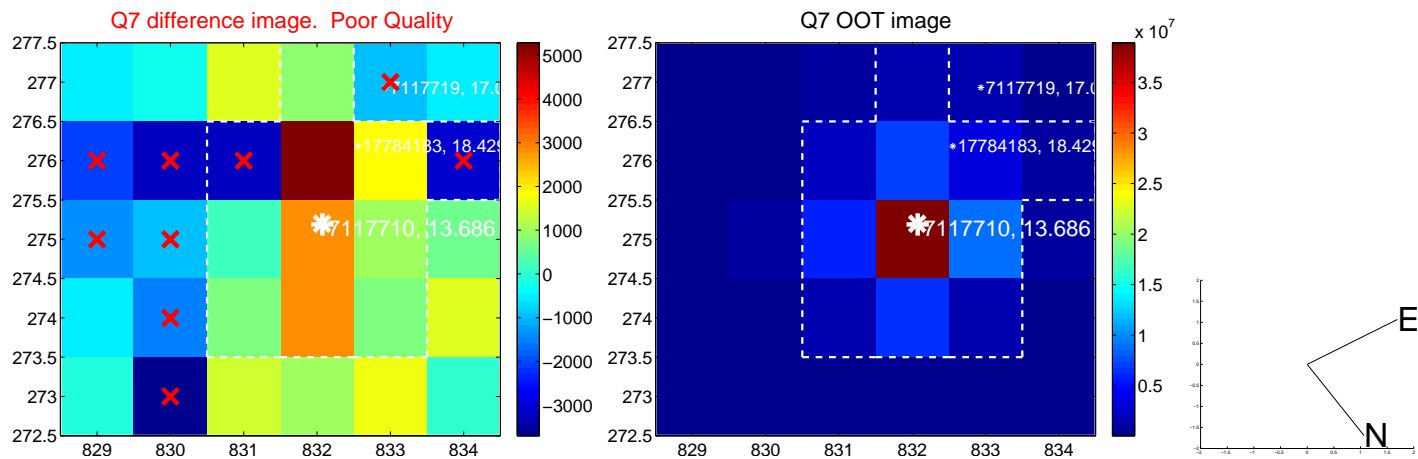
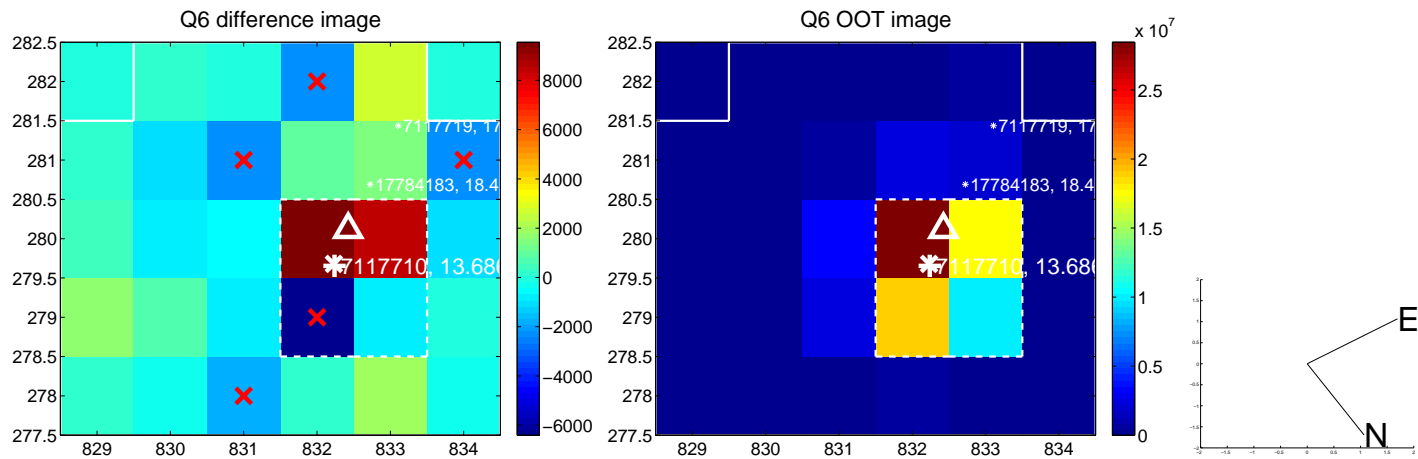
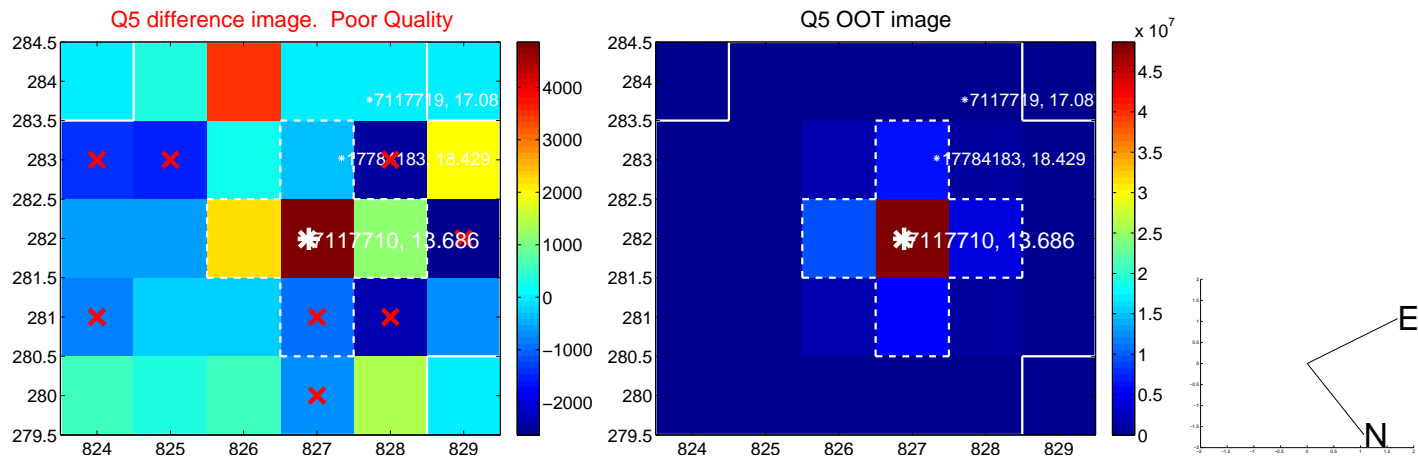


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

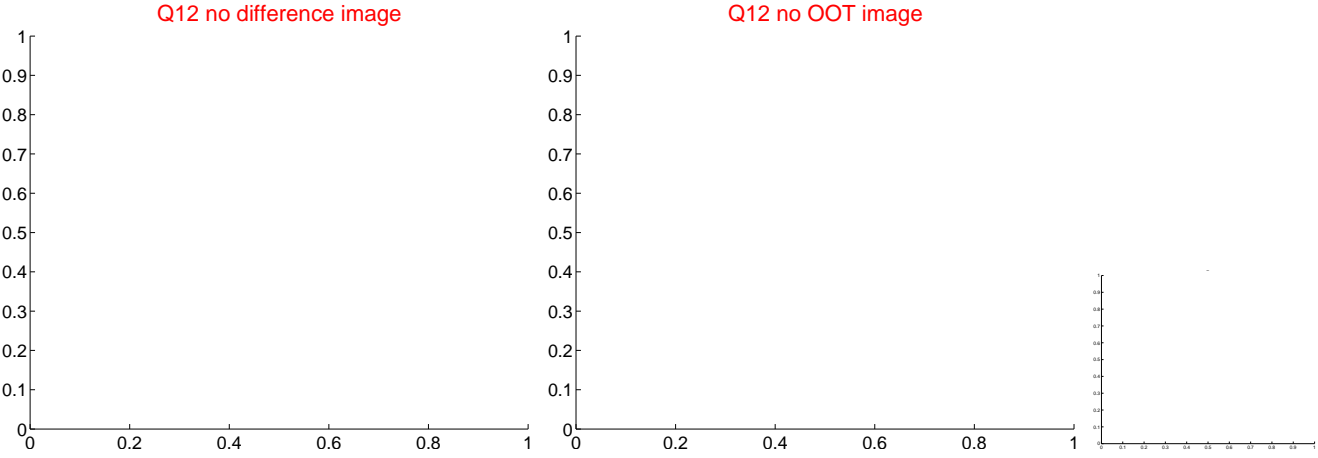
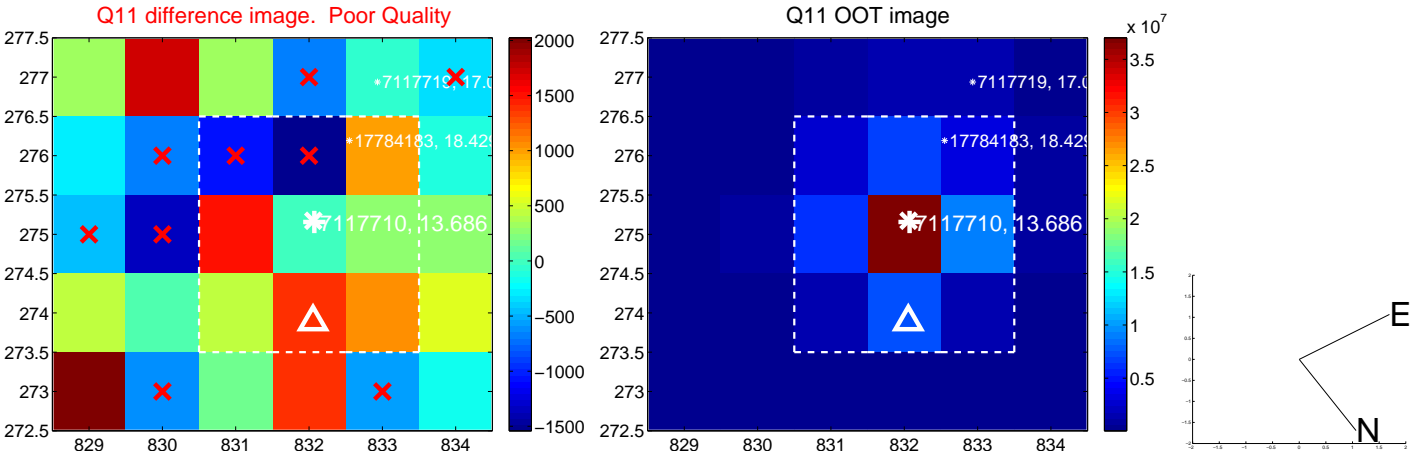
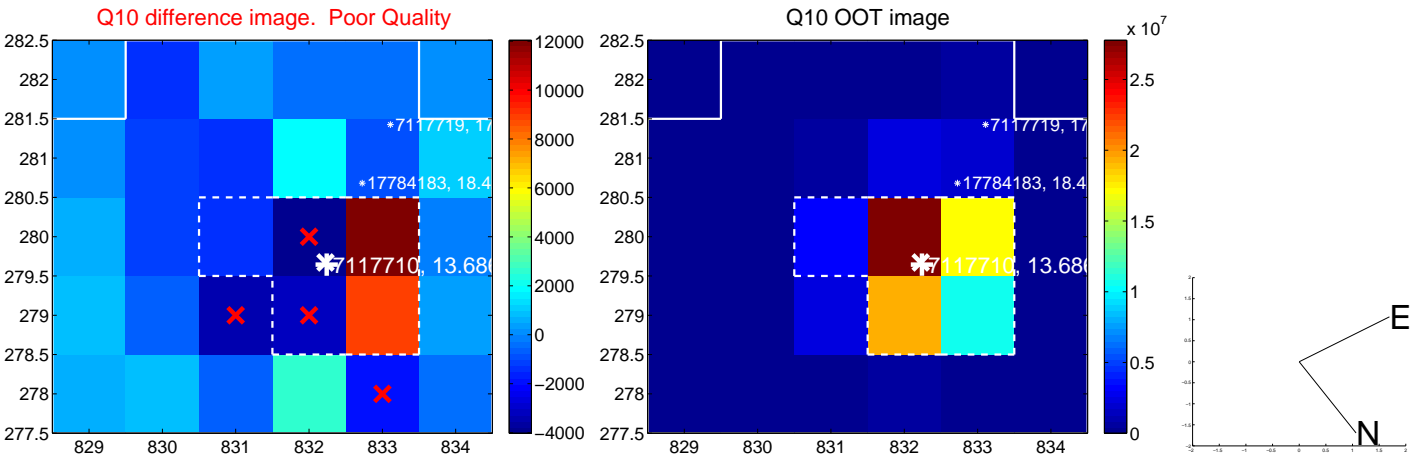
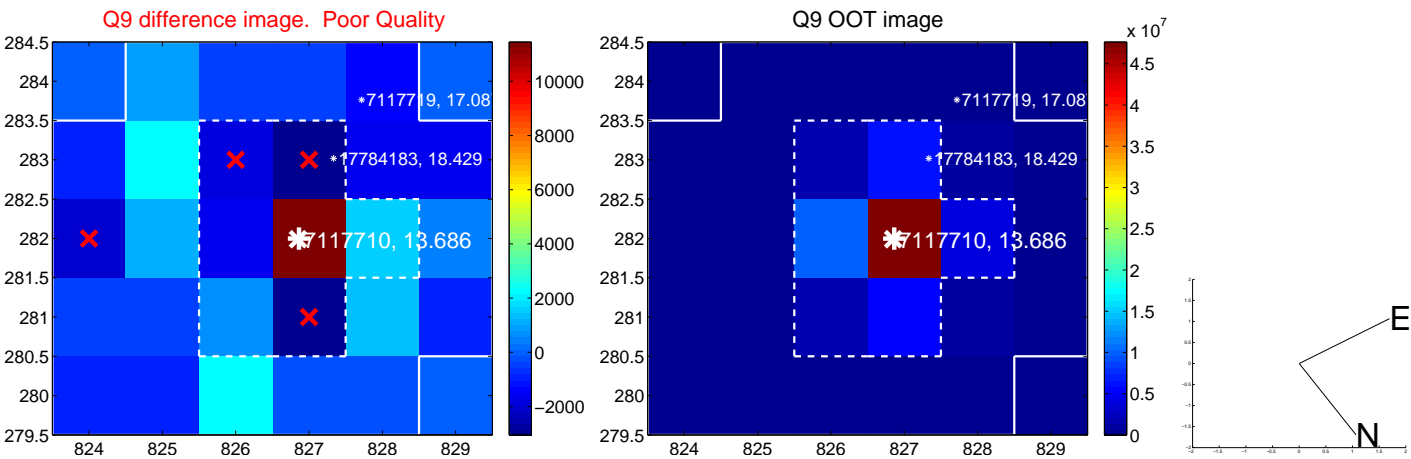
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



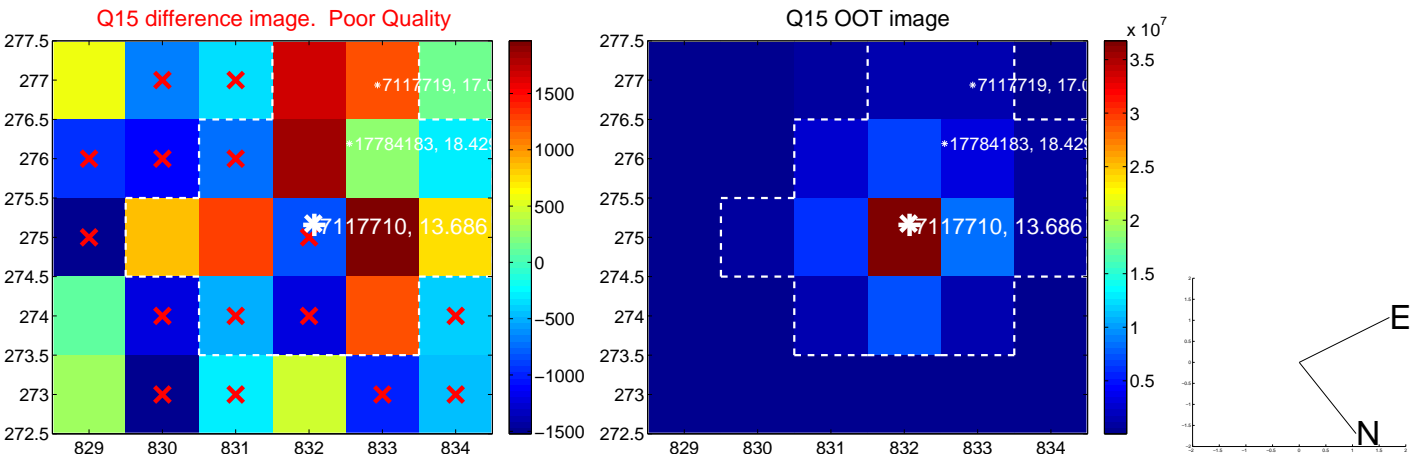
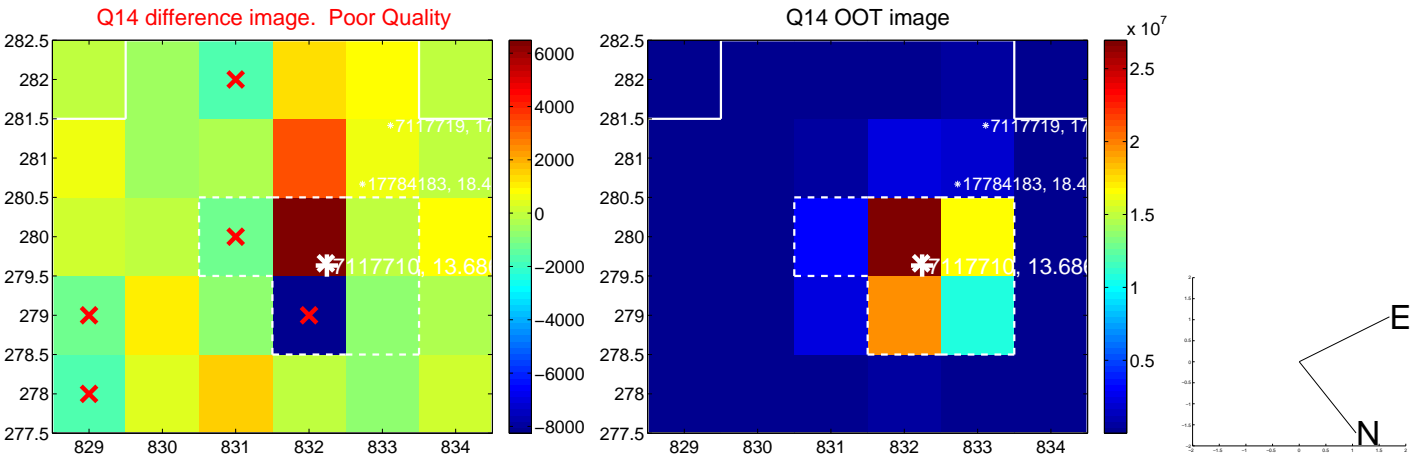
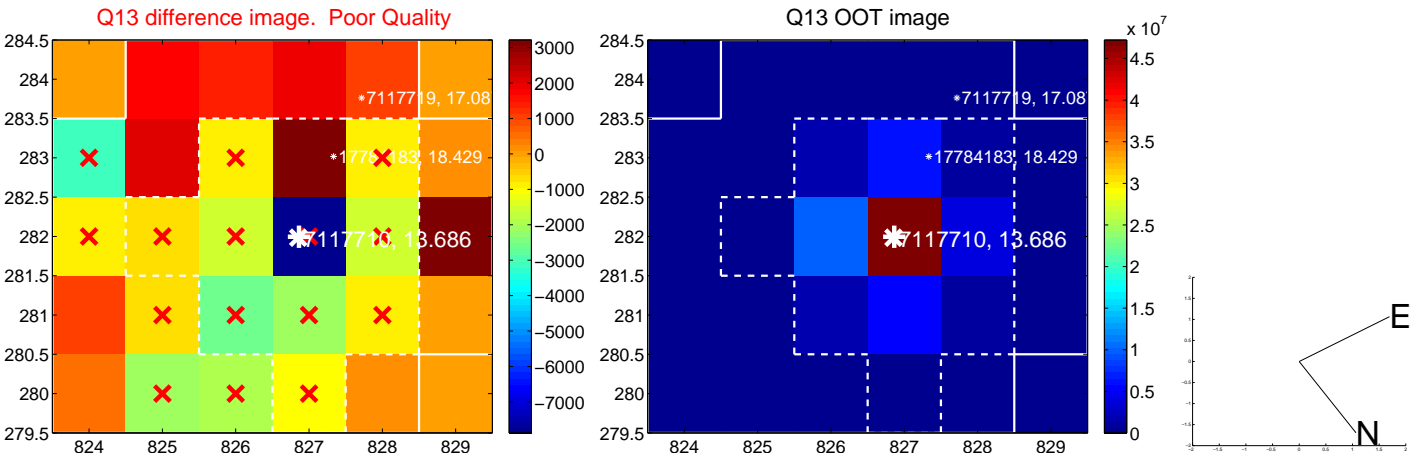
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



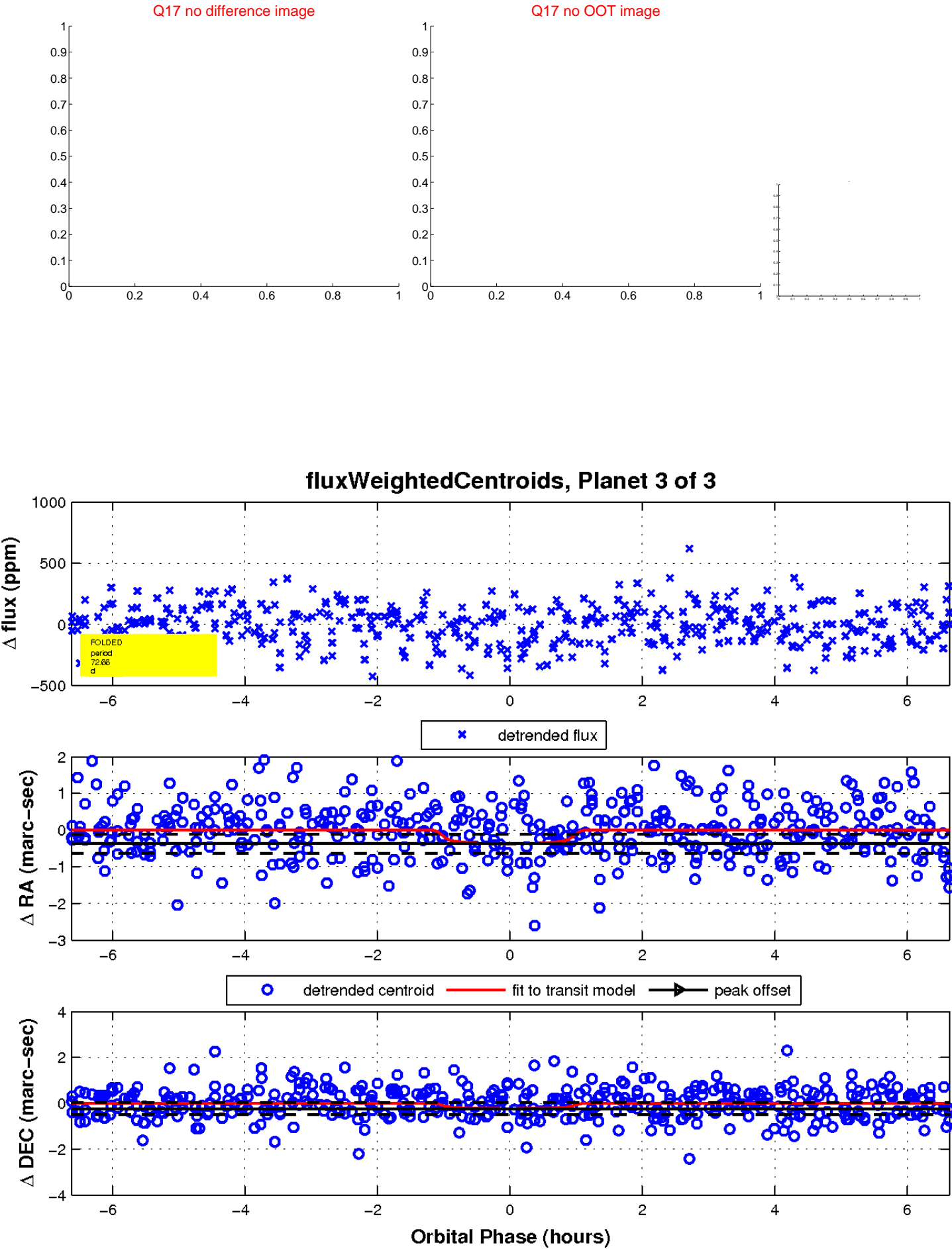
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

