

KIC 008824602

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})
008824602-01	OBS	No	2.079792	131.587275	13.7	11.761	7.5	7.6	1.30	5819	0.50	1789.23
008824602-02	OBS	No	243.407194	365.742499	197.0	2.605	9.5	4.2	1.30	5819	1.95	3.12
008824602-03	OBS	No	88.528249	178.455525	113.1	12.475	8.3	5.4	1.30	5819	1.47	12.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008824602-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
008824602-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV— MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008824602-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

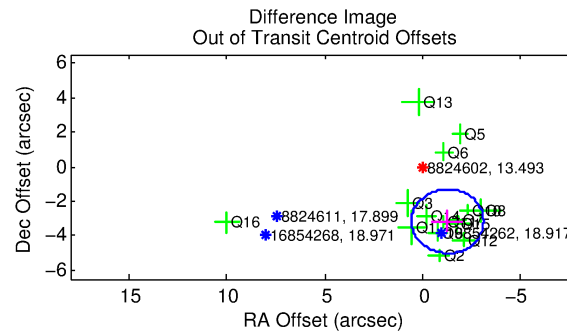
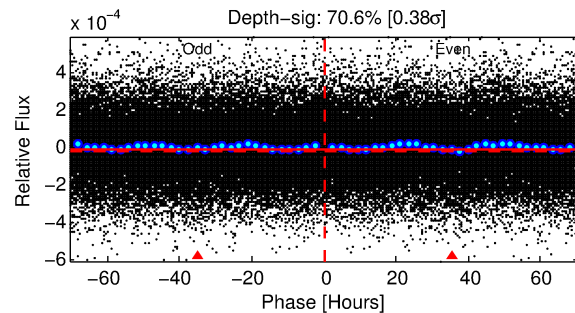
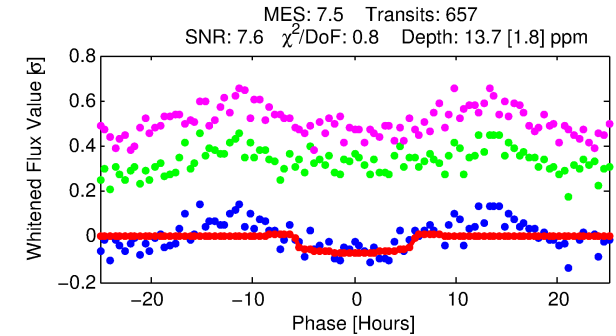
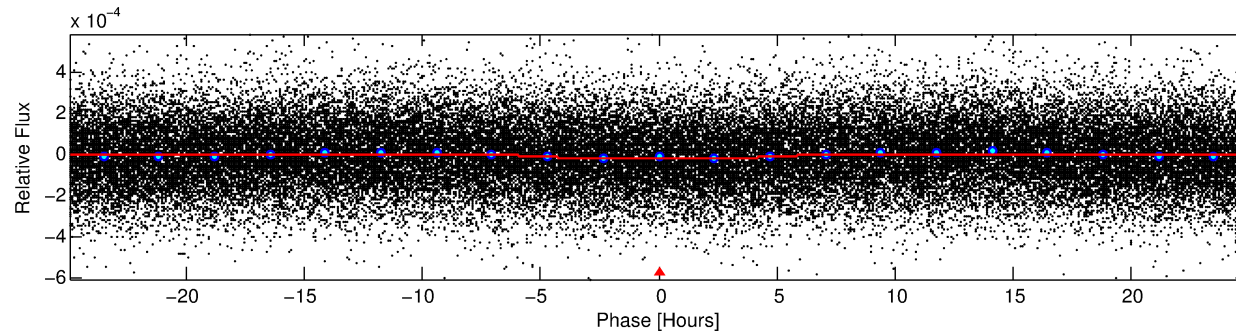
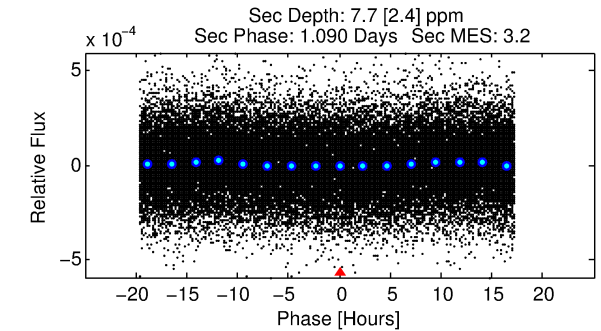
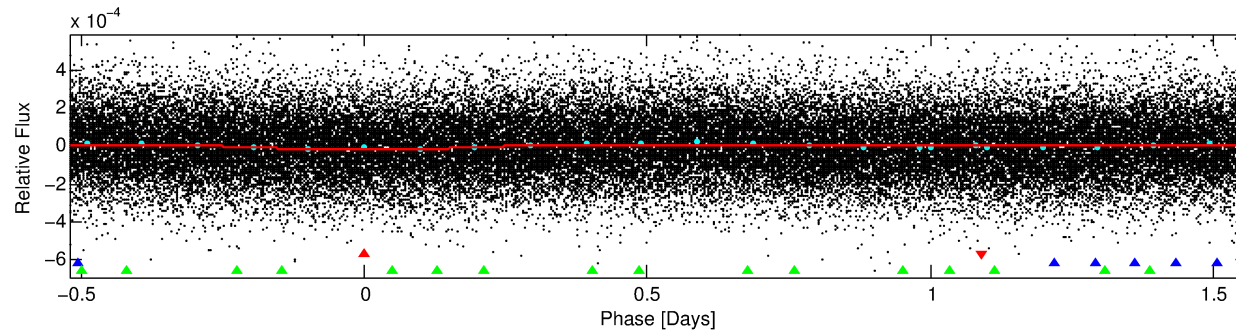
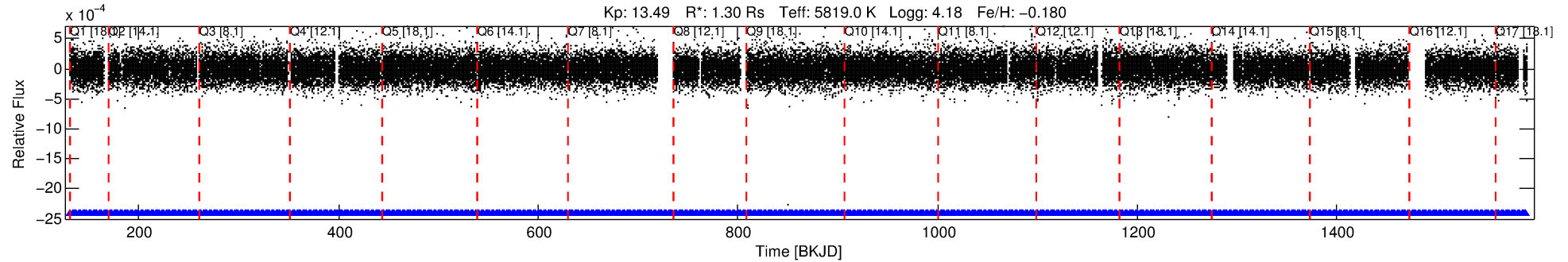
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008824602-01

No Significant Match Found

DV One-Page Summary

KIC: 8824602 Candidate: 1 of 3 Period: 2.080 d



DV Fit Results:

Period = 2.07979 [0.00005] d
Epoch = 131.5873 [0.0127] BKJD
Rp/R* = 0.0035 [0.0025]
a/R* = 1.36 [2.04]
b = 0.56 [4.07]
Seff = 1789.23 [852.05]
Teq = 1658 [197] K
Rp = 0.50 [0.38] Re
a = 0.0311 [0.0088] AU
Ag = 16.63 [25.61] [0.61σ]
Teffp = 5178 [1906] K [1.84σ]

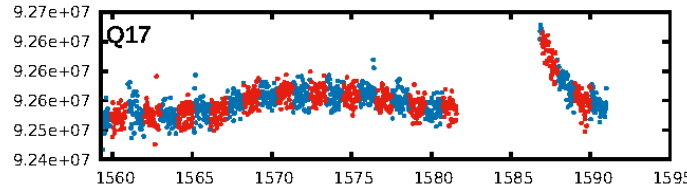
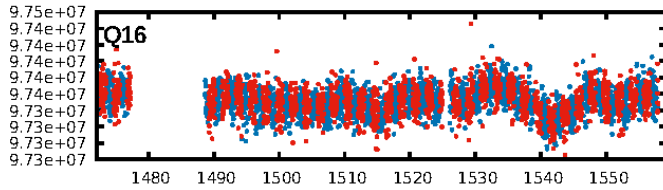
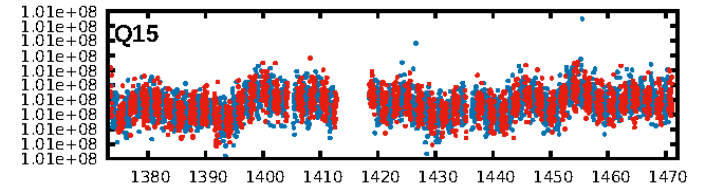
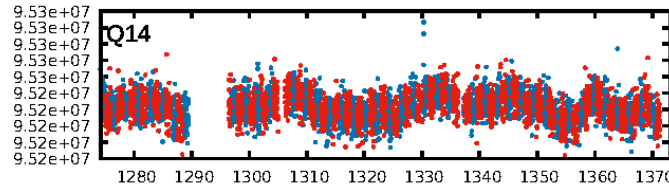
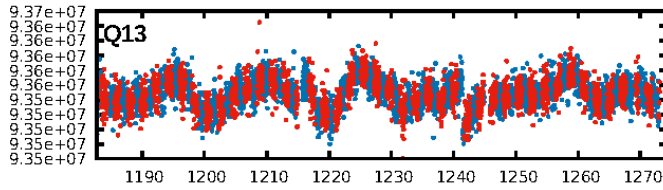
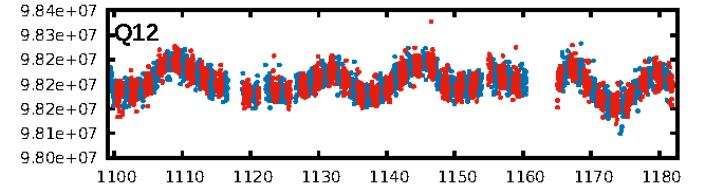
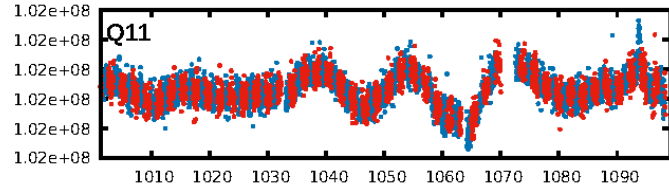
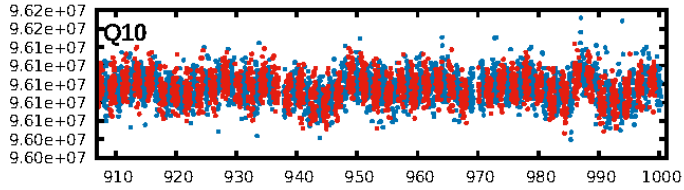
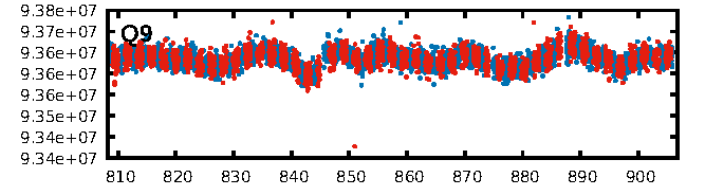
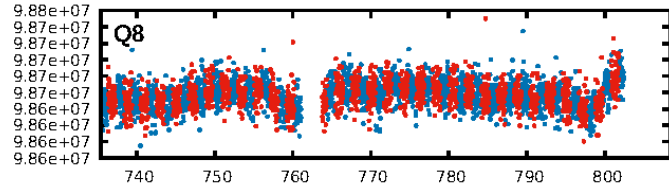
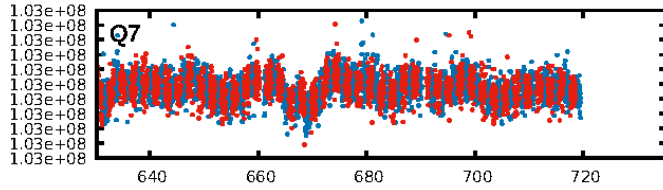
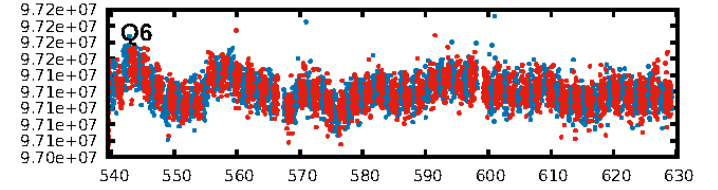
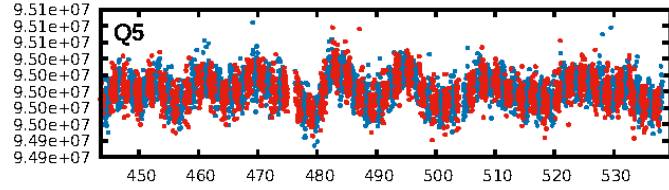
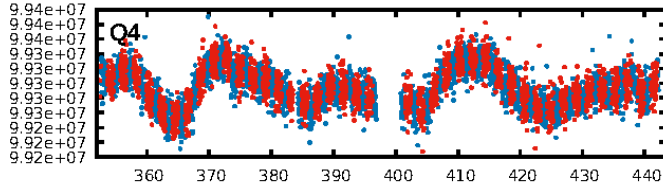
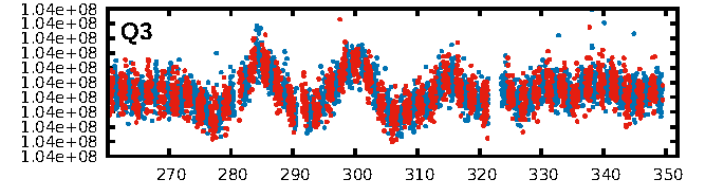
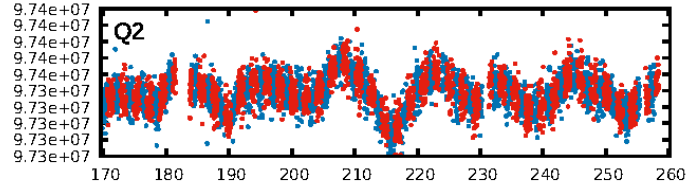
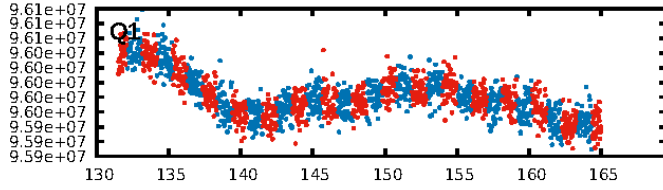
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [121.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 3.54e-10
RollingBand-fgt: 1.00 [627/627]
GhostDiagnostic-chr: 2.598
Centroid-sig: 0.9%
Centroid-so: 2.419 arcsec [1.80σ]
OotOffset-rm: 3.411 arcsec [5.52σ]
KicOffset-rm: 3.516 arcsec [5.45σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

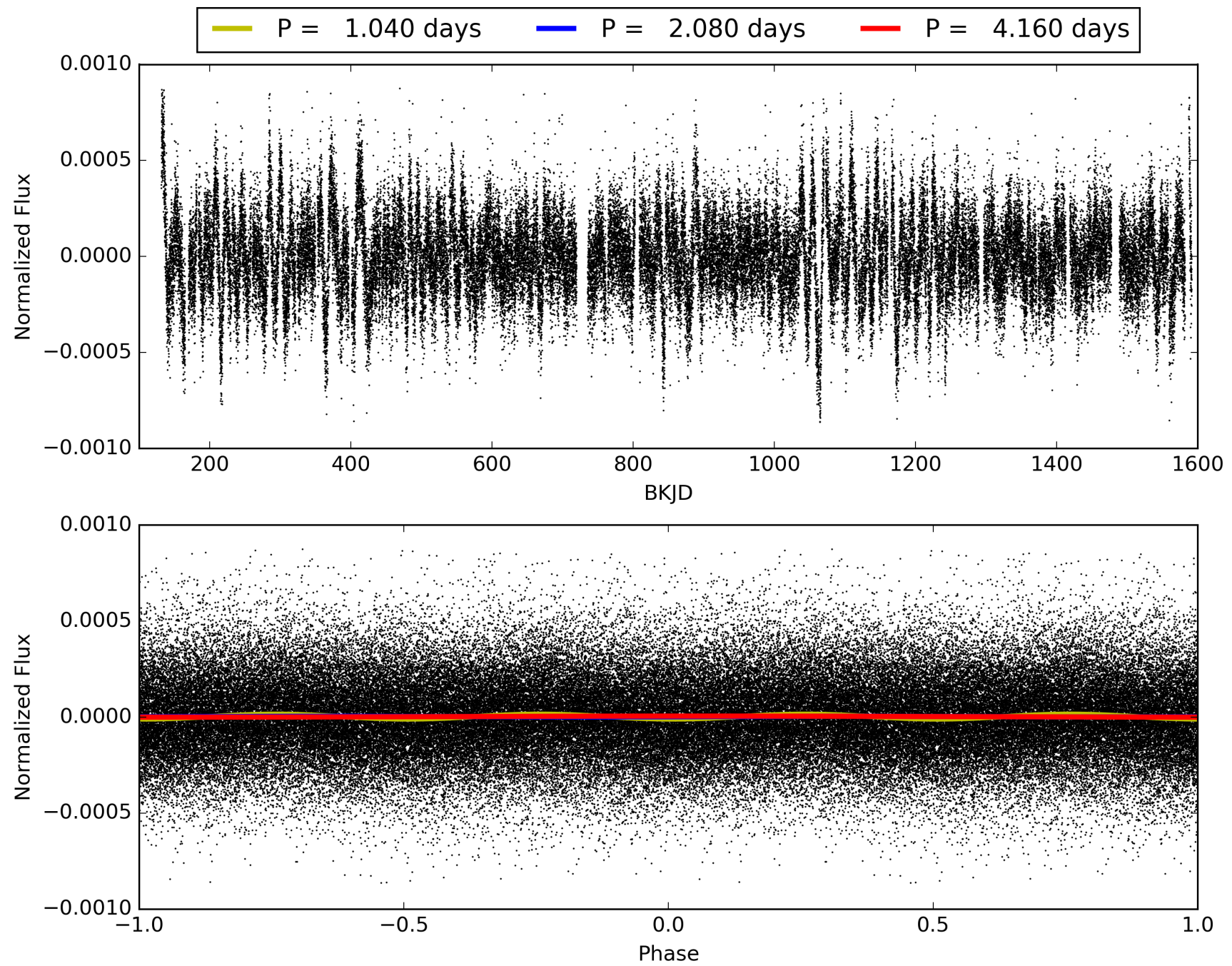
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008824602-01, PDC Light Curves

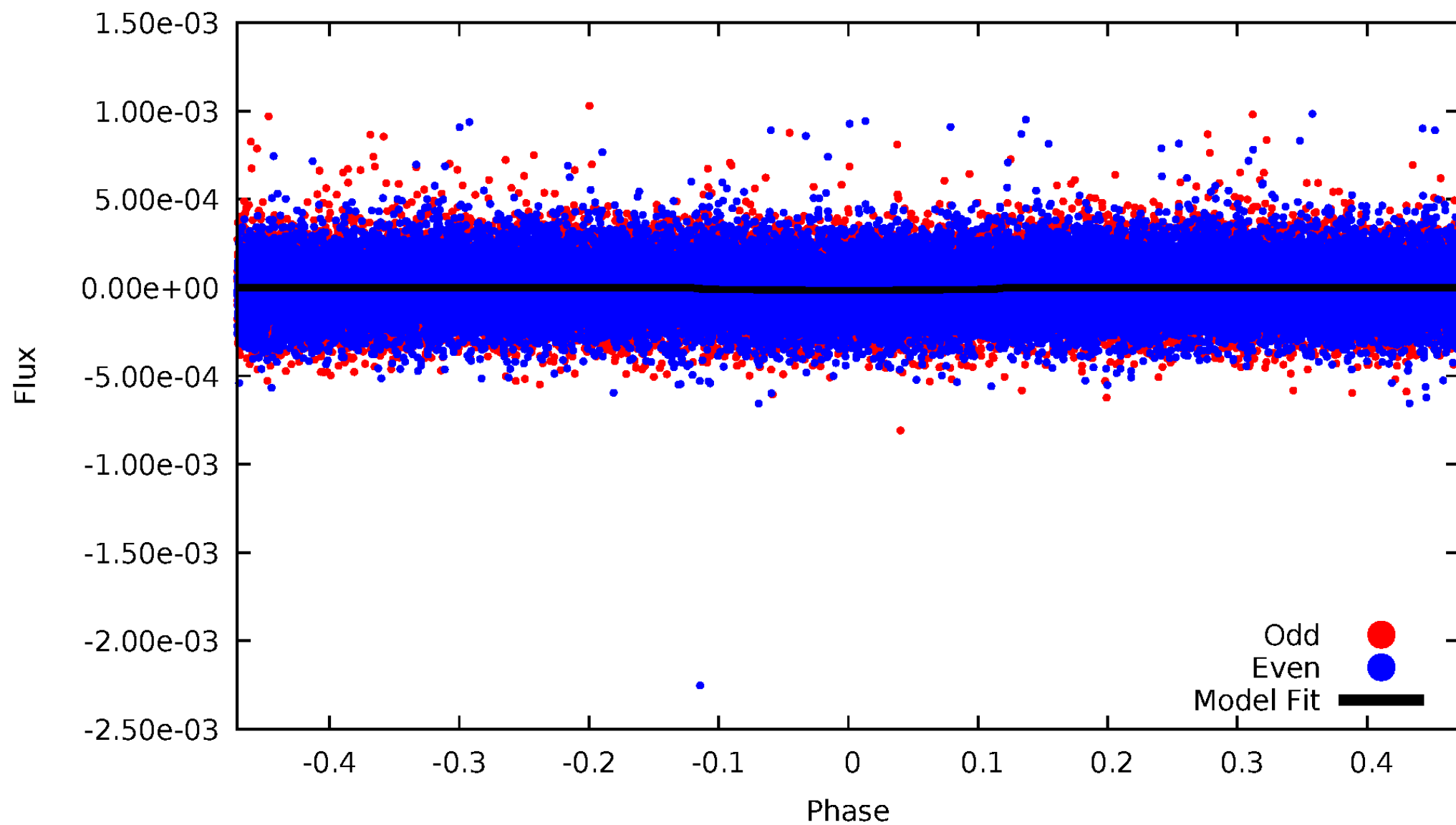


TCE 008824602-01



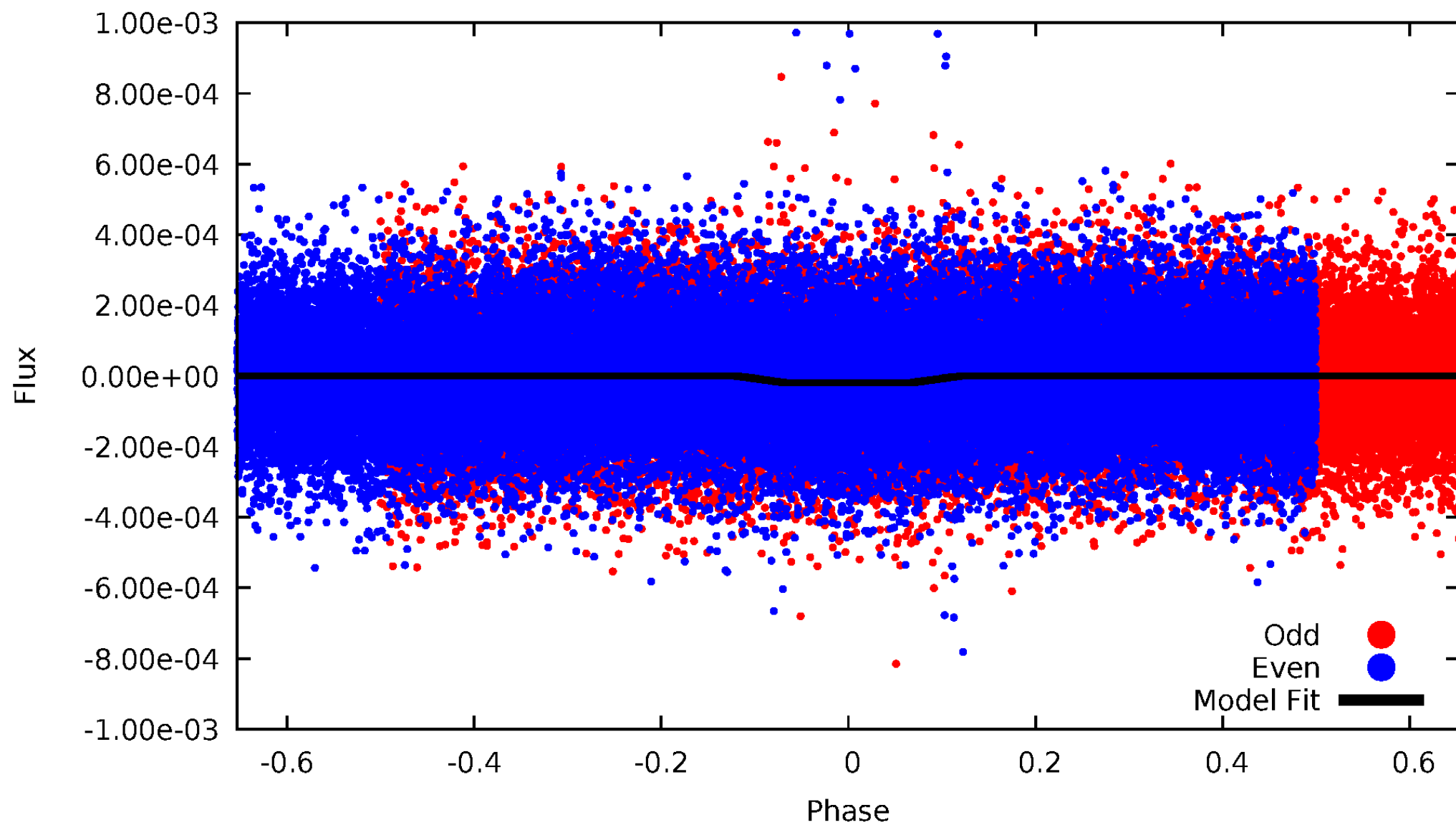
DV Odd/Even

TCE 008824602-01

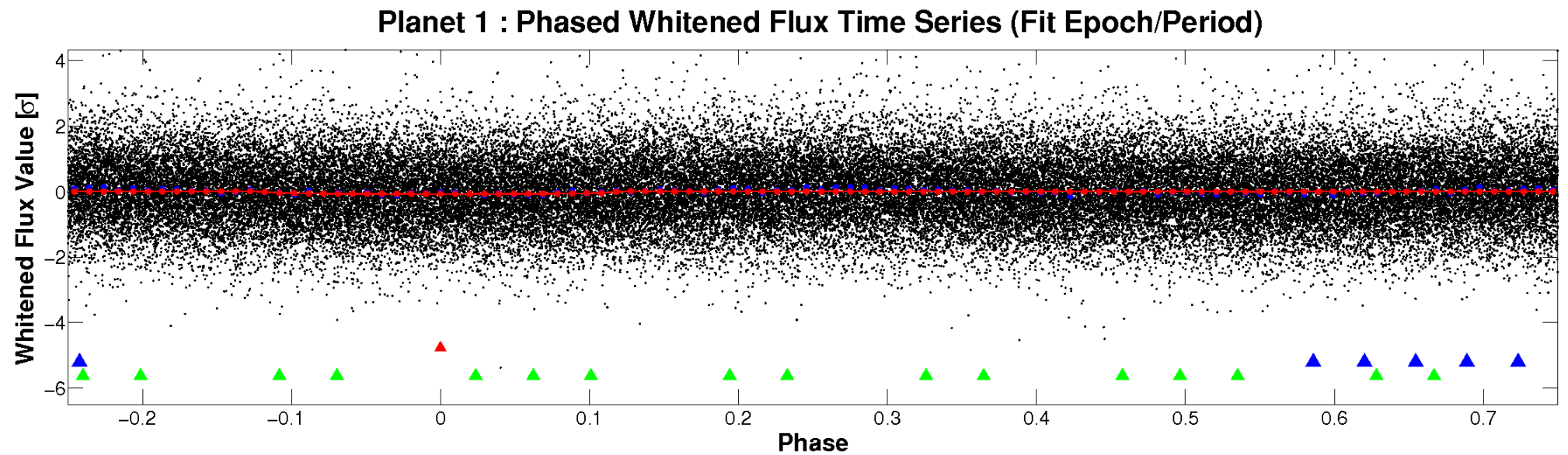
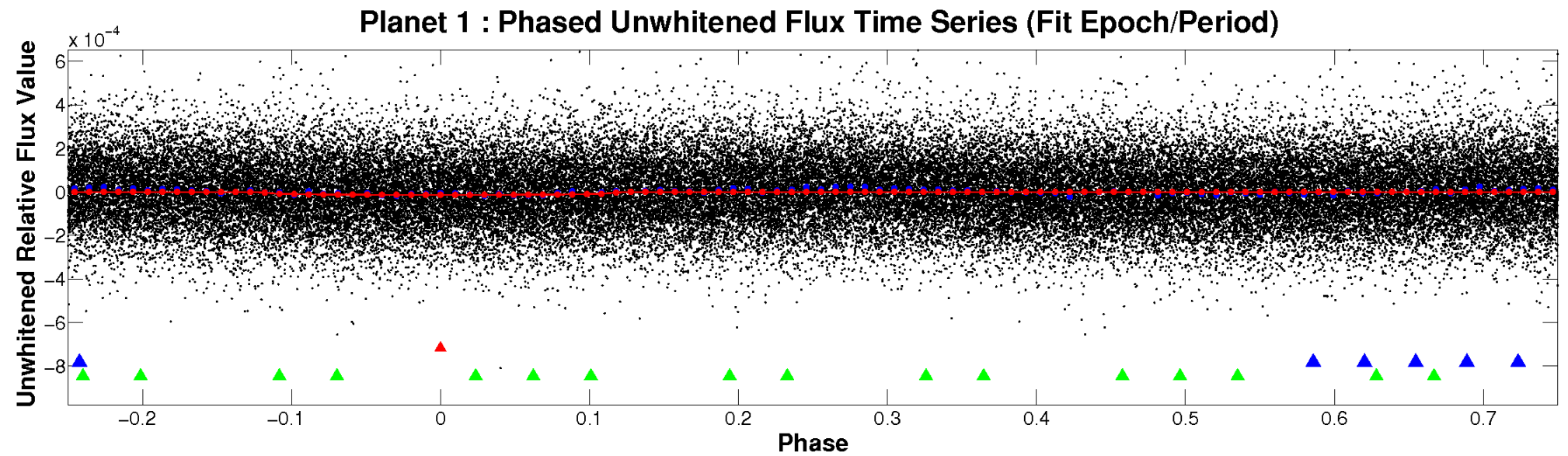


ALT Odd/Even

TCE 008824602-01

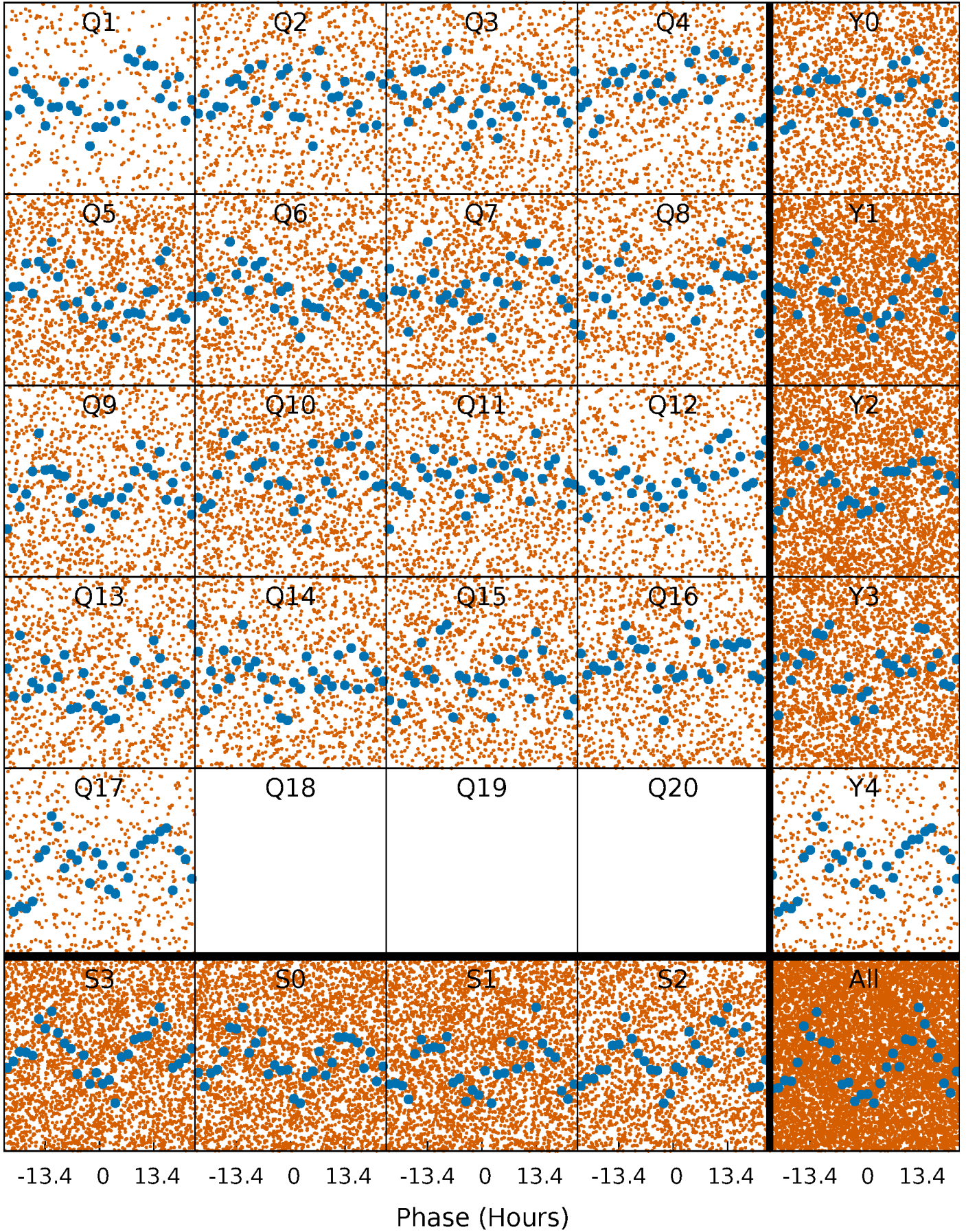


Non-Whitened Vs. Whitened Light Curve



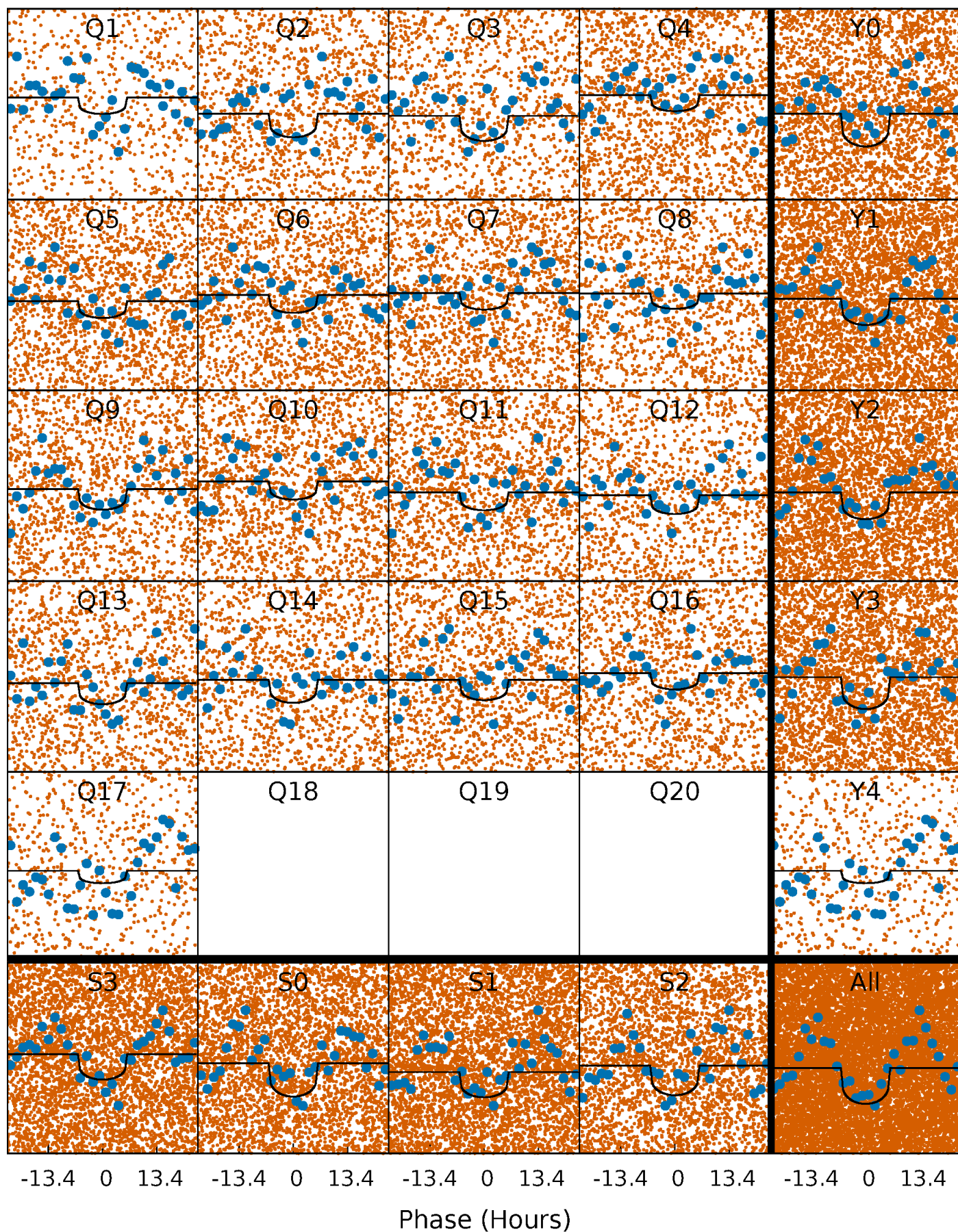
PDC Quarter-Phased Transit Curves

TCE 008824602-01 P= 2.079792 Days $T_0=131.587275$ (BKJD)



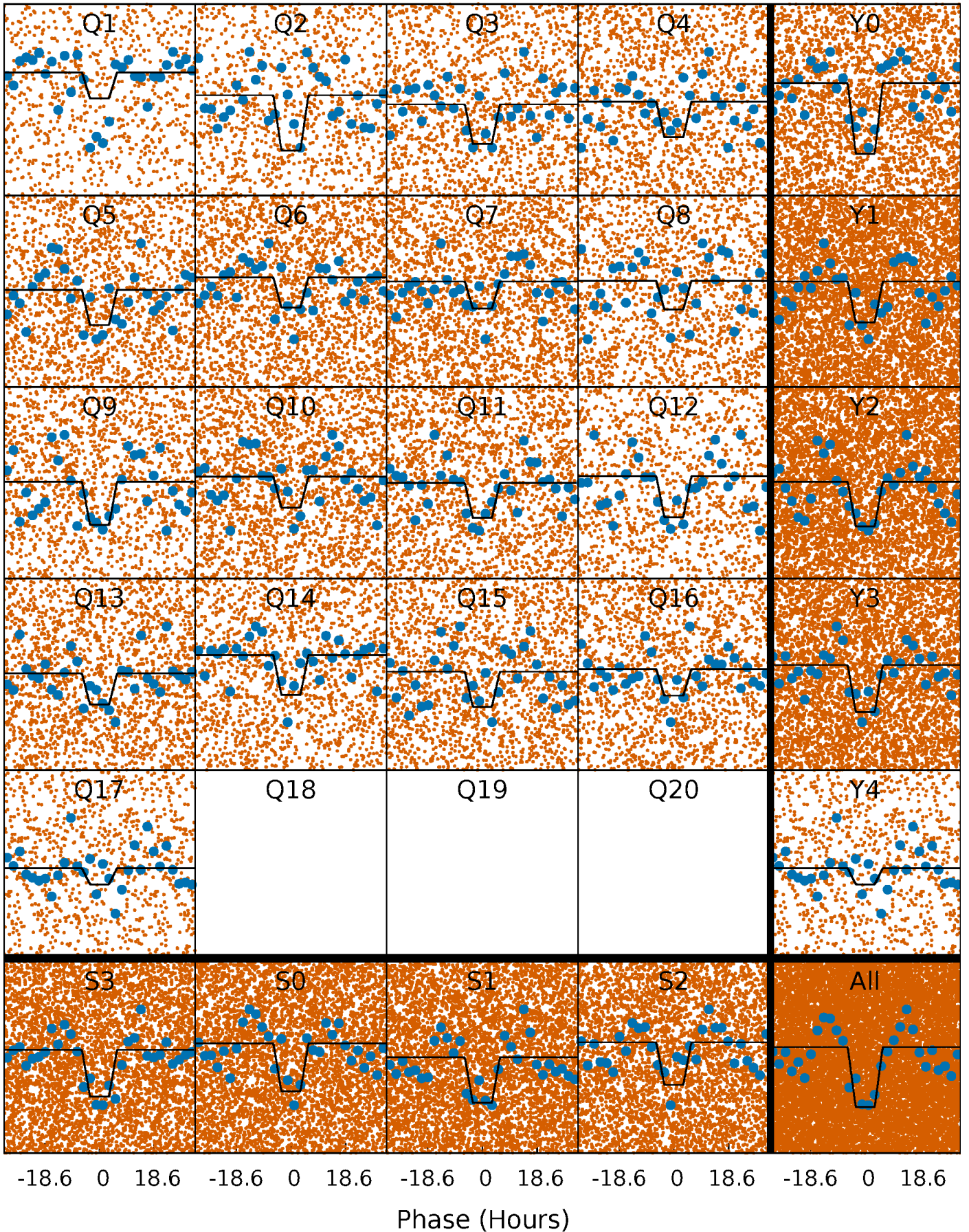
DV Quarter-Phased Transit Curves

TCE 008824602-01 P= 2.079792 Days $T_0=131.587275$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

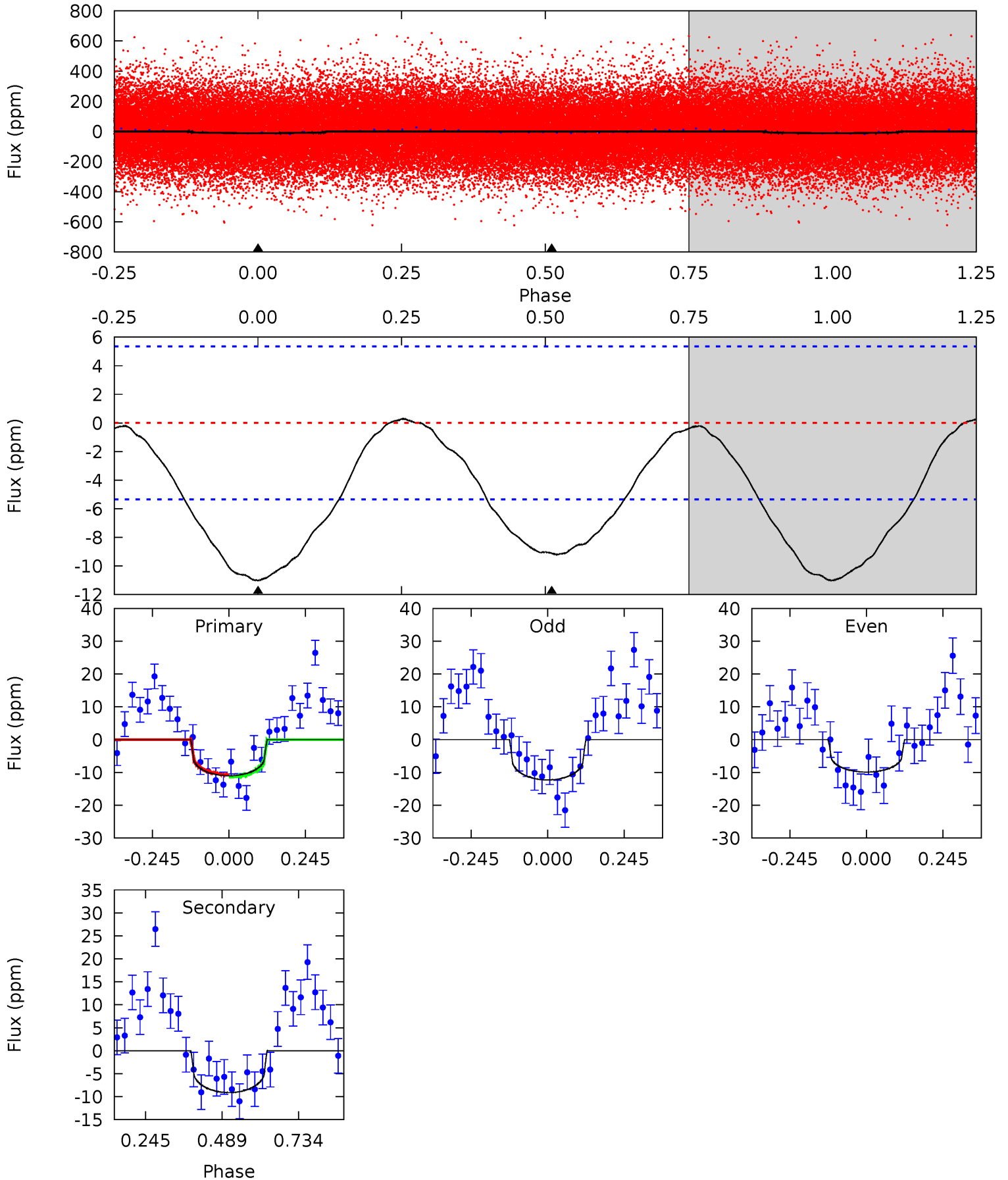
TCE 008824602-01 P= 2.079576 Days $T_0=131.679599$ (BKJD)



DV Model-Shift Uniqueness Test

008824602-01, P = 2.079792 Days, E = 129.507483 Days

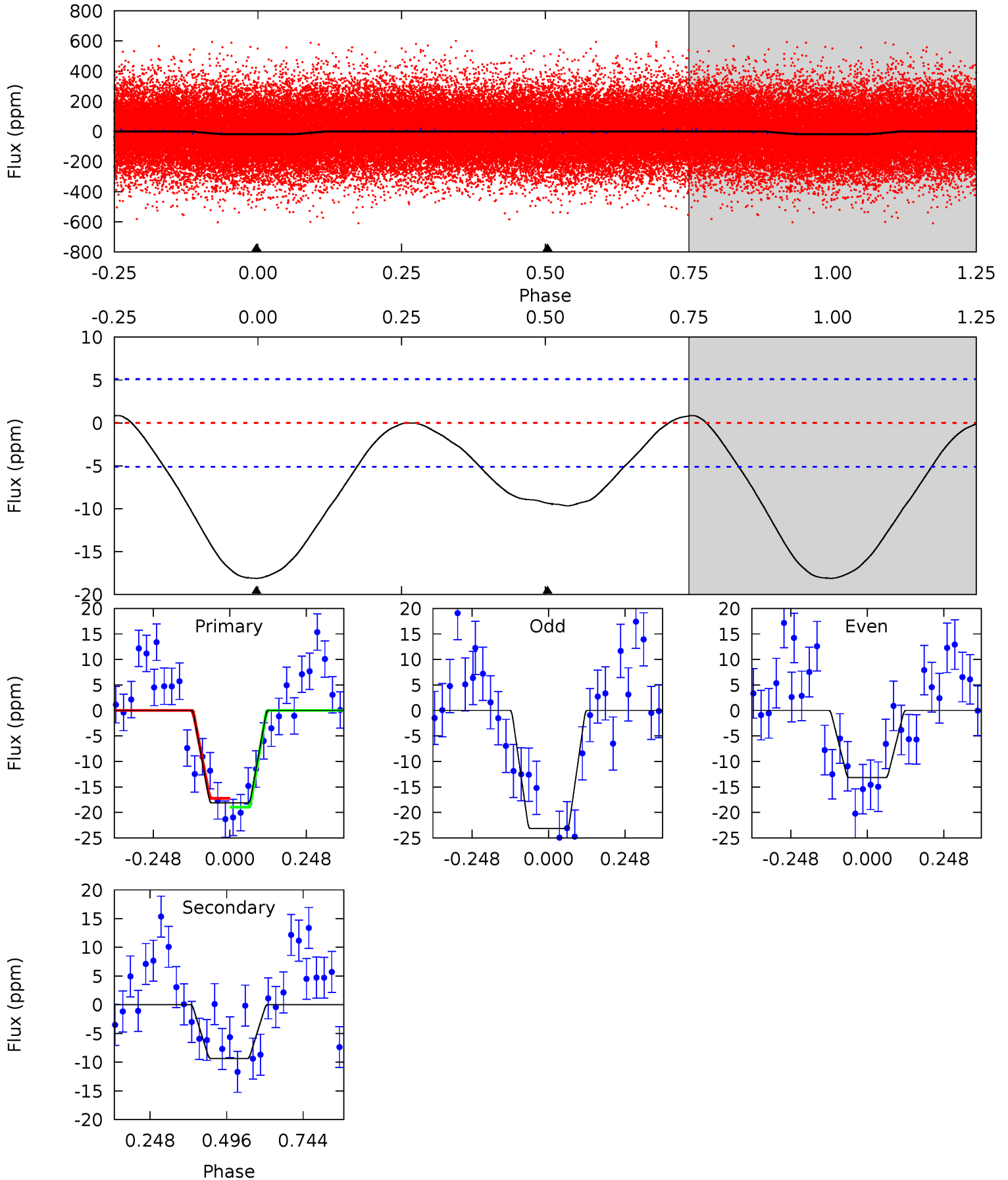
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	7.46	0	0	4.37	1.16	0.21	9.01	9.01	7.46	7.46	0.99	1.06	0.03	0.29



Alt Model-Shift Uniqueness Test

008824602-01, P = 2.079576 Days, E = 129.600023 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	8.00	0	0	4.37	1.16	0.47	15.5	15.5	8.00	8.00	4.29	1.12	0.05	0.73



Stellar Parameters For KIC 008824602

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5819^{+158}_{-158}	$4.179^{+0.276}_{-0.161}$	$-0.180^{+0.300}_{-0.300}$	$1.299^{+0.330}_{-0.367}$	$0.930^{+0.133}_{-0.096}$	$0.597^{+1.001}_{-0.288}$
	+3%/-3%	+7%/-4%	+167%/-167%	+25%/-28%	+14%/-10%	+168%/-48%
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 008824602-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 1	$0.51^{+0.36}_{-0.30}$	2301^{+173}_{-196}	5280^{+2971}_{-1051}	19^{+86}_{-12}
Alt.	-9 ± 1	$0.66^{+0.37}_{-0.35}$	2301^{+169}_{-168}	4804^{+1945}_{-783}	12^{+41}_{-7}

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

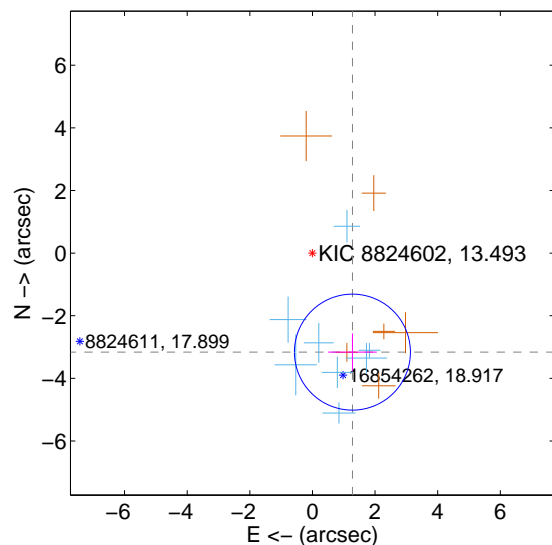
Supplemental centroid analysis for 008824602-01. Kepler magnitude: 13.49. Transit SNR 7.56

There are 8 quarters with good PRF difference image offsets

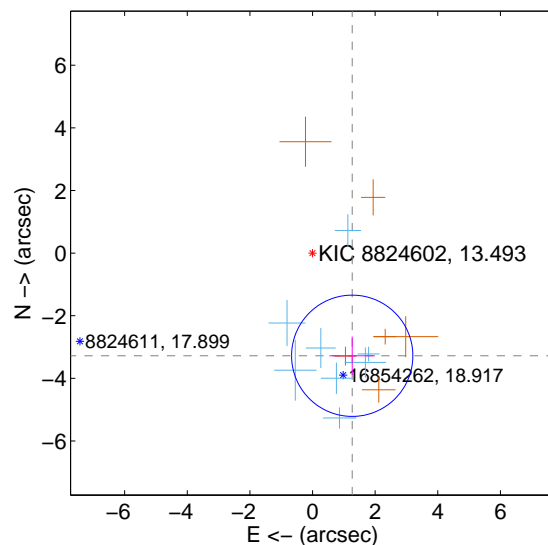
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.411 ± 0.617	5.52	-1.277 ± 0.779	-3.163 ± 0.598
PRF-fit source offset from KIC position	3.516 ± 0.646	5.45	-1.268 ± 0.727	-3.280 ± 0.614
photometric centroid source offset	2.42 ± 1.34	1.80	0.23 ± 1.20	-2.41 ± 1.34

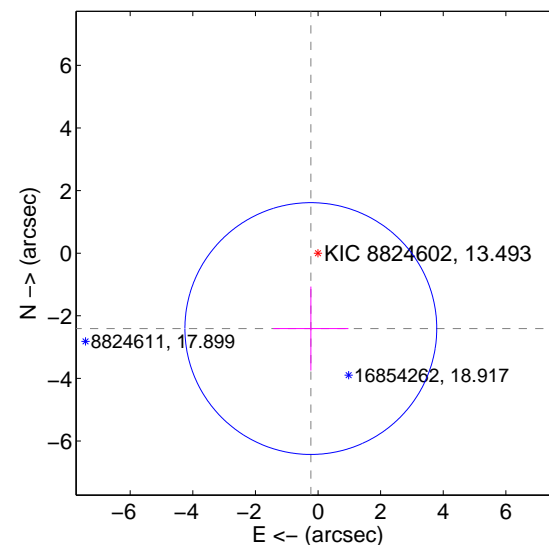
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

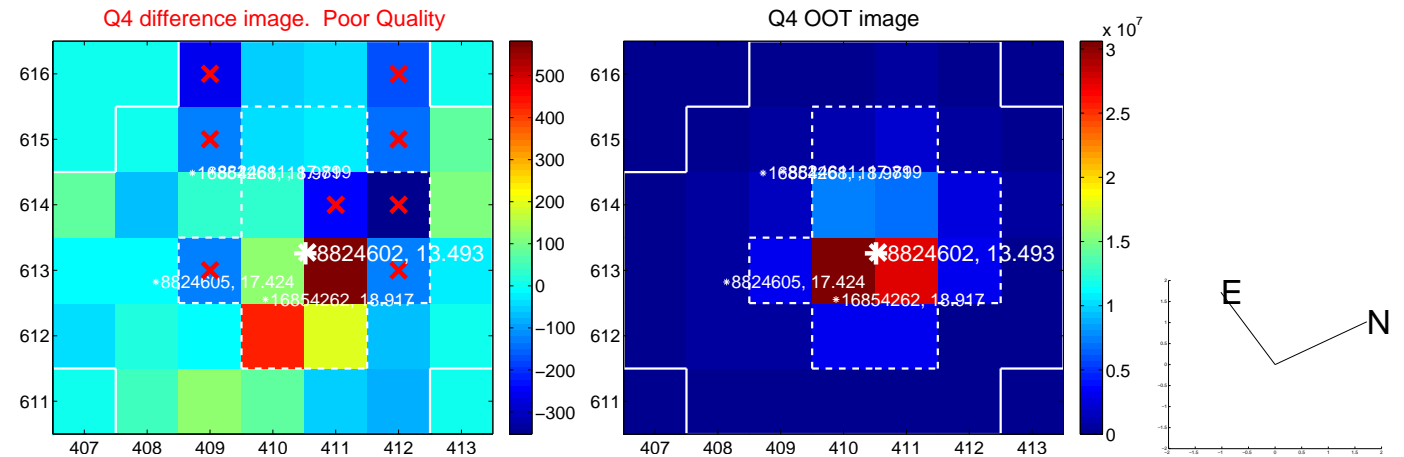
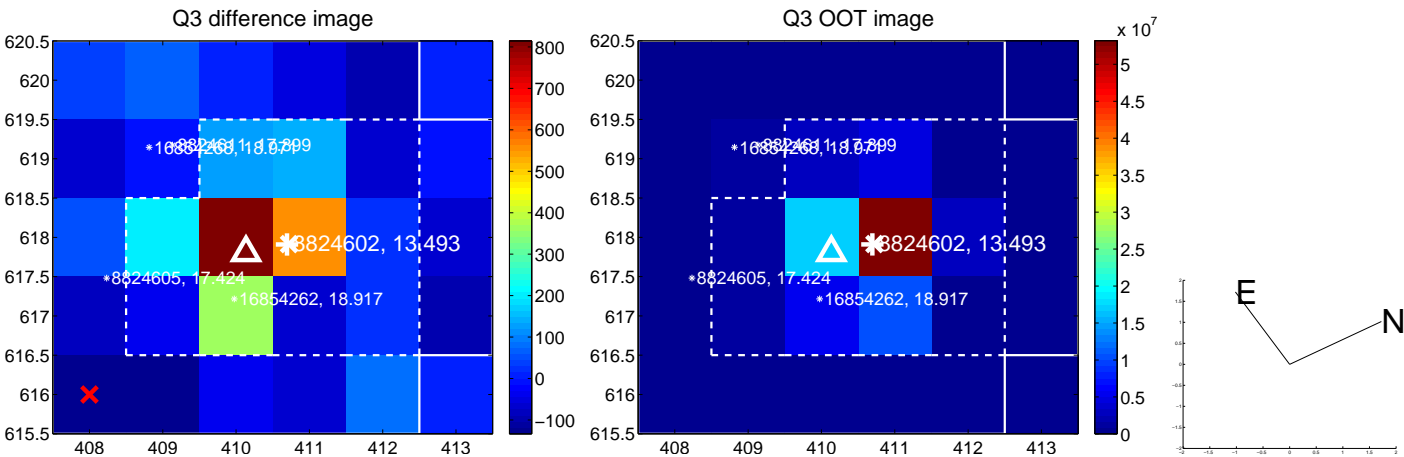
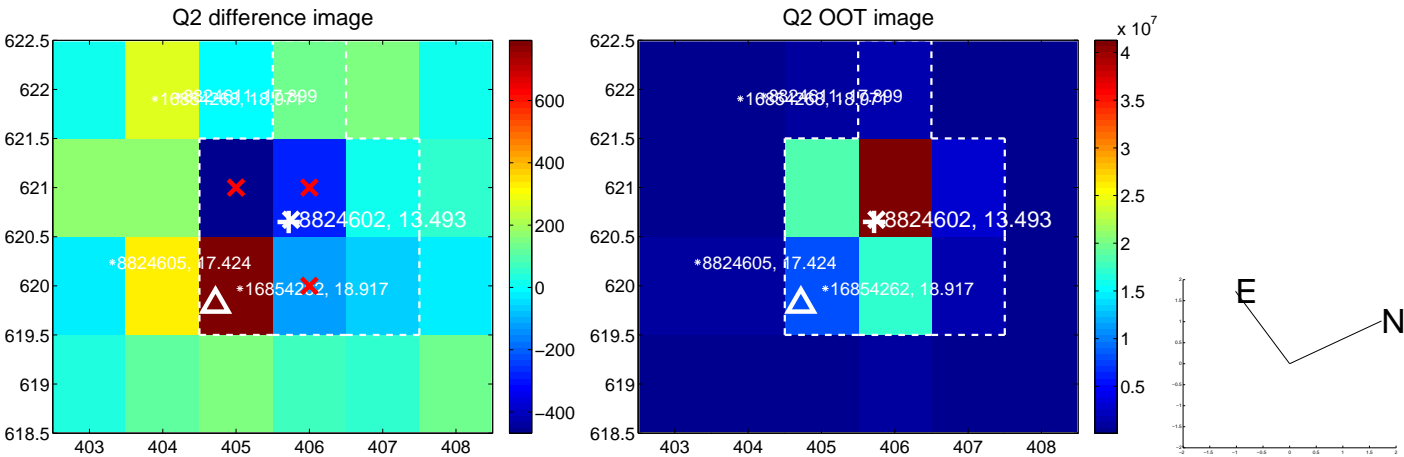
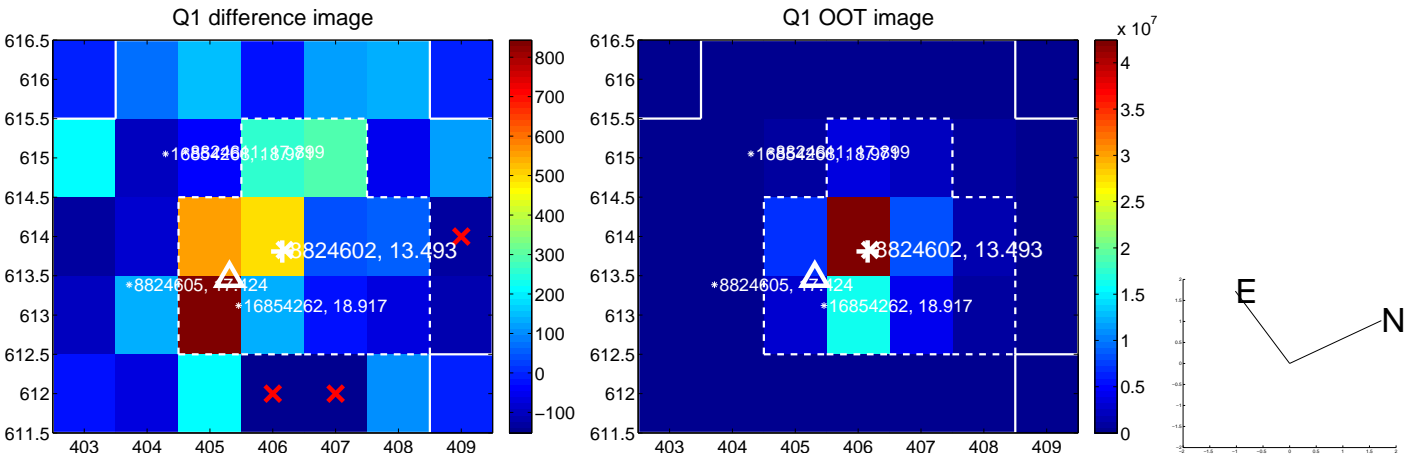


offset from photometric centroids

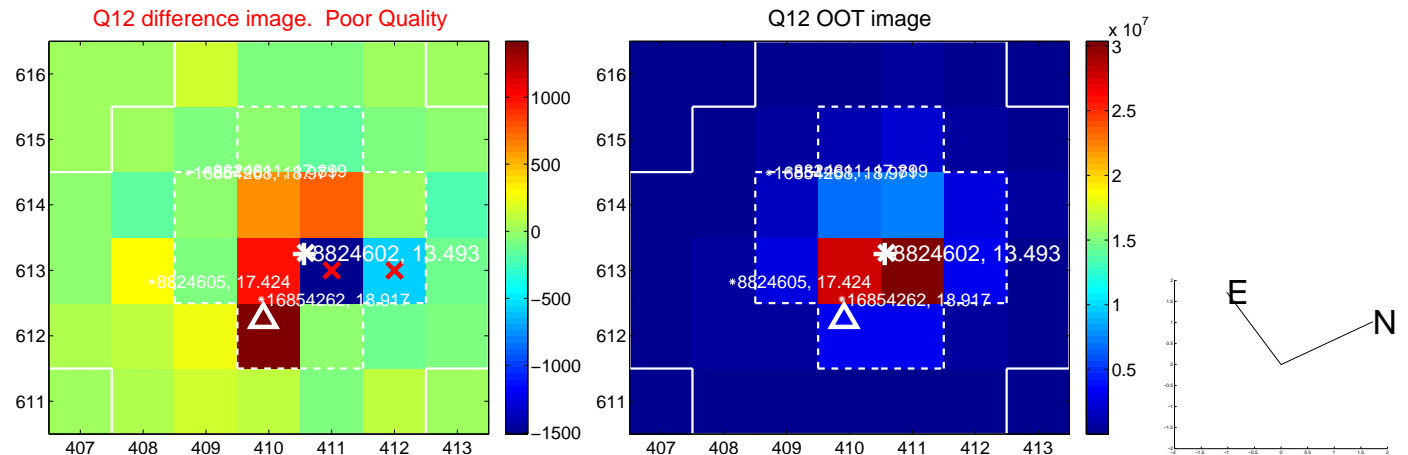
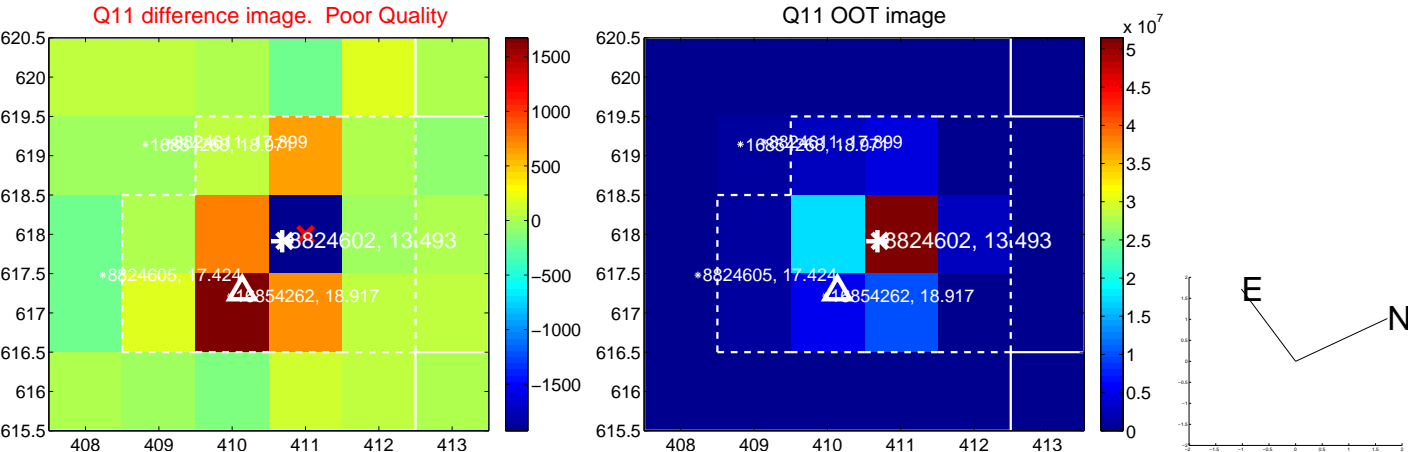
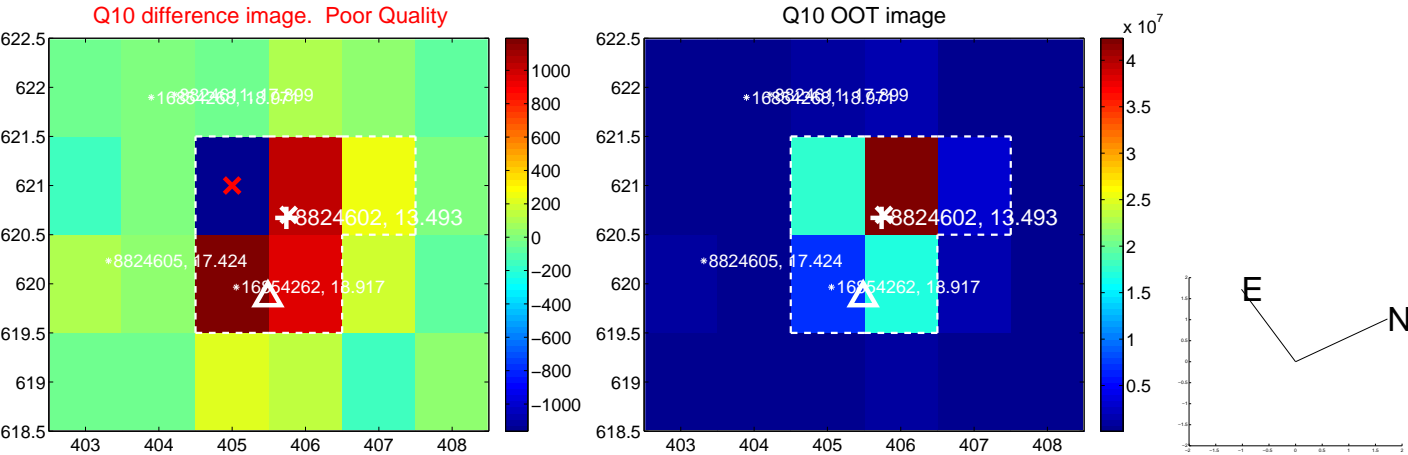
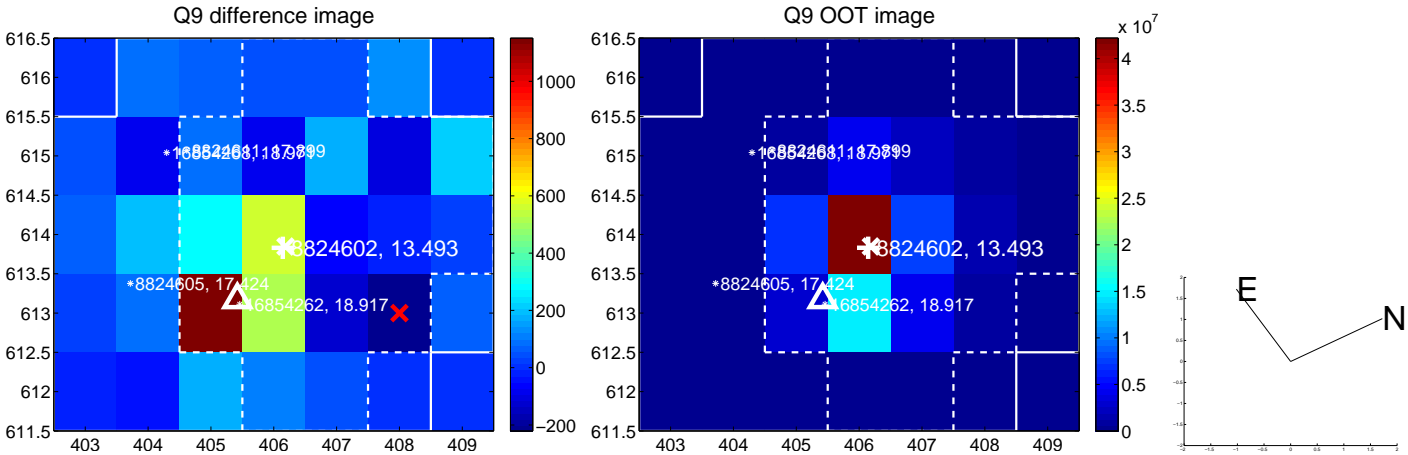


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

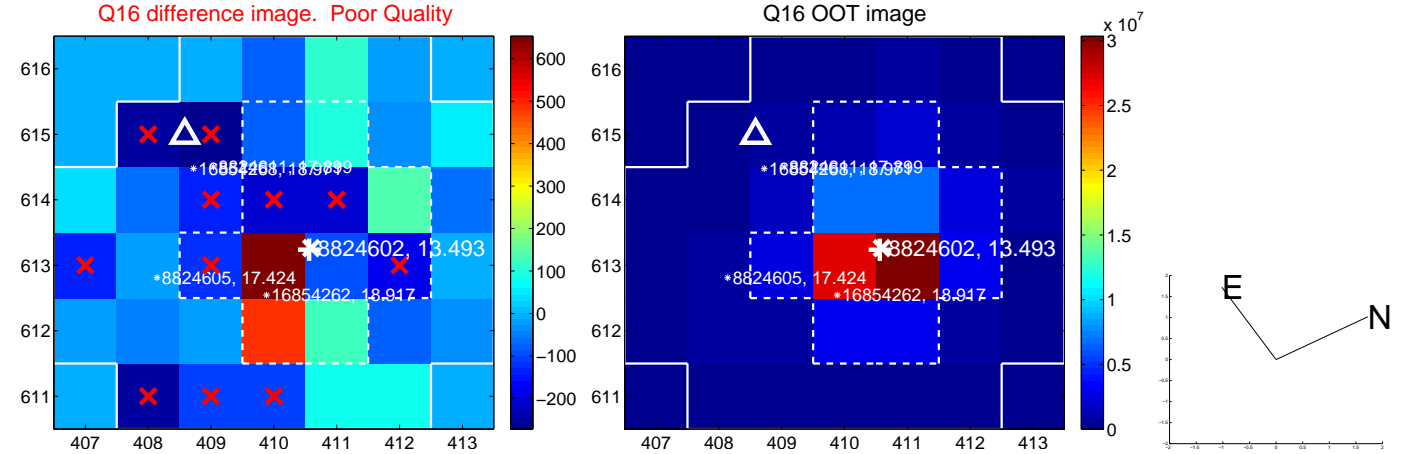
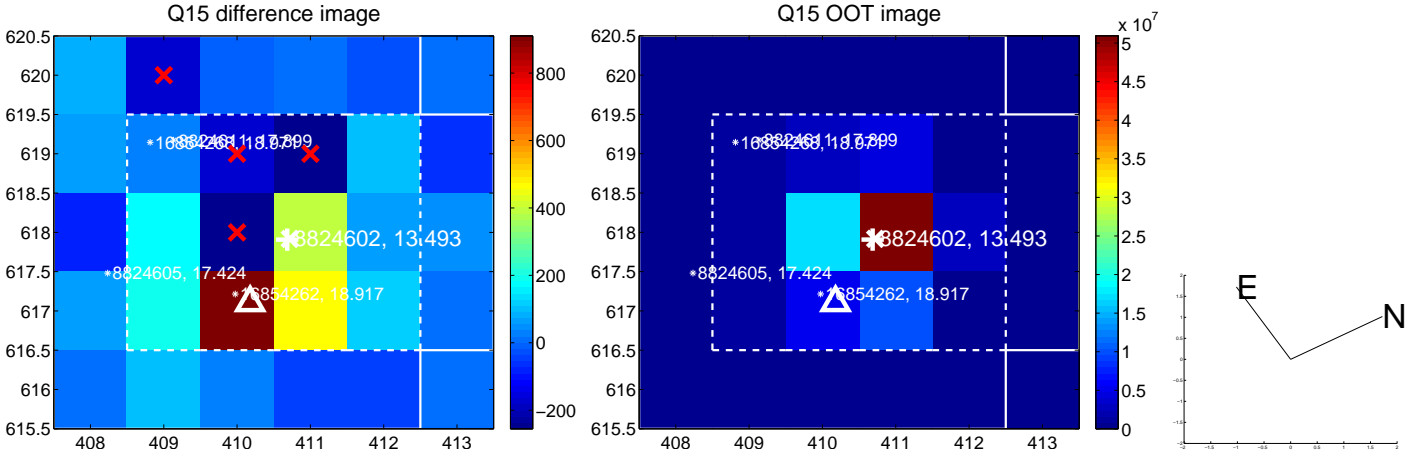
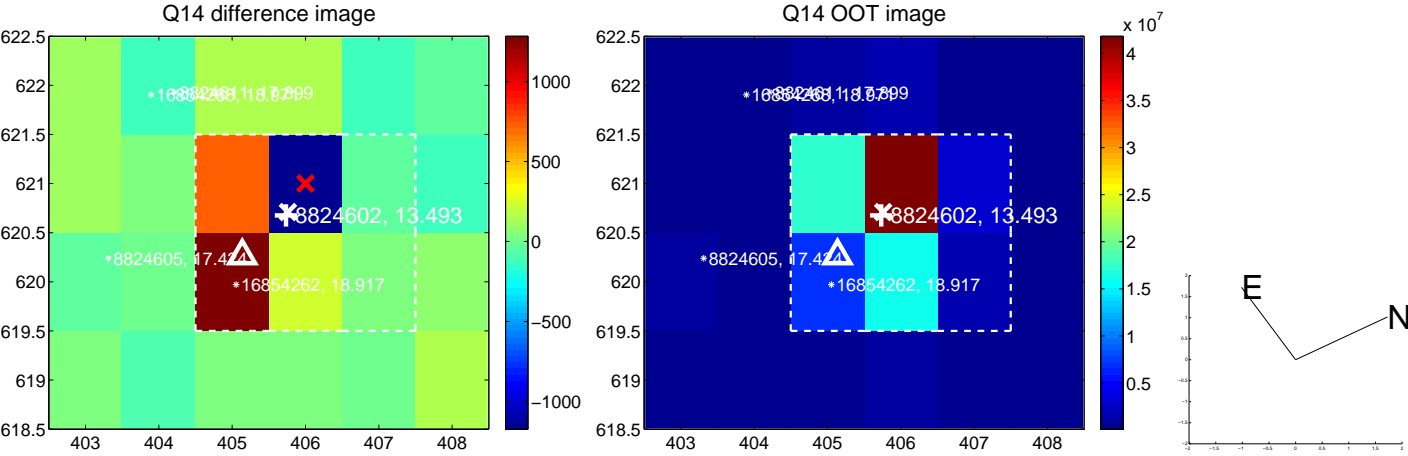
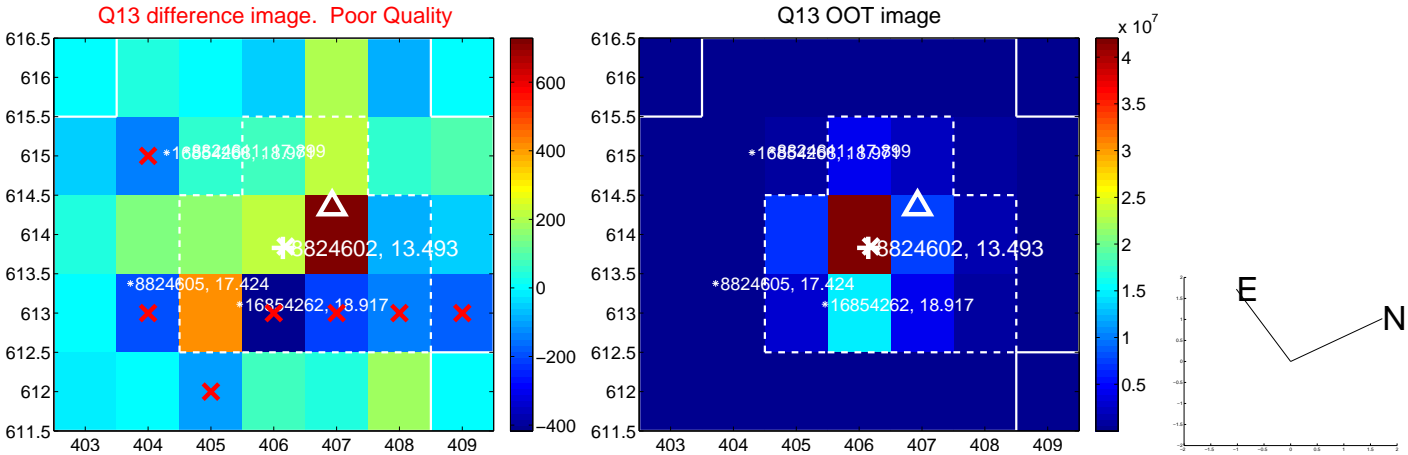
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



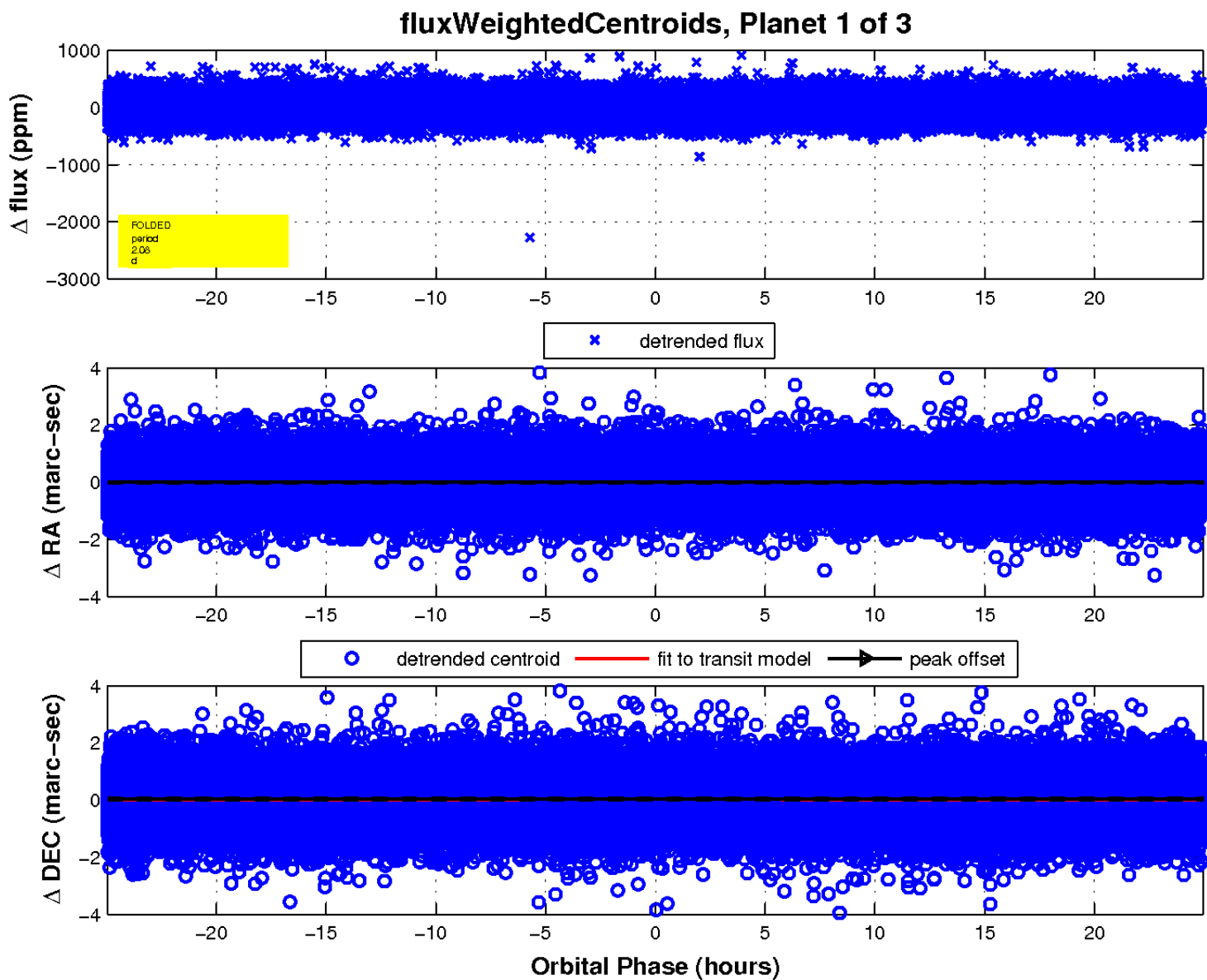
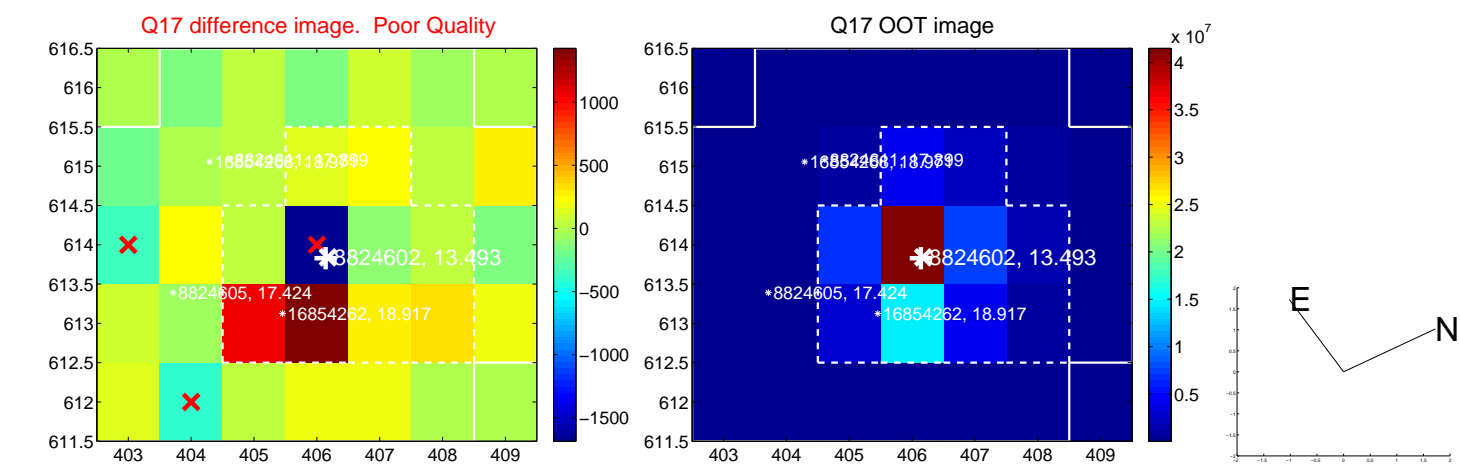
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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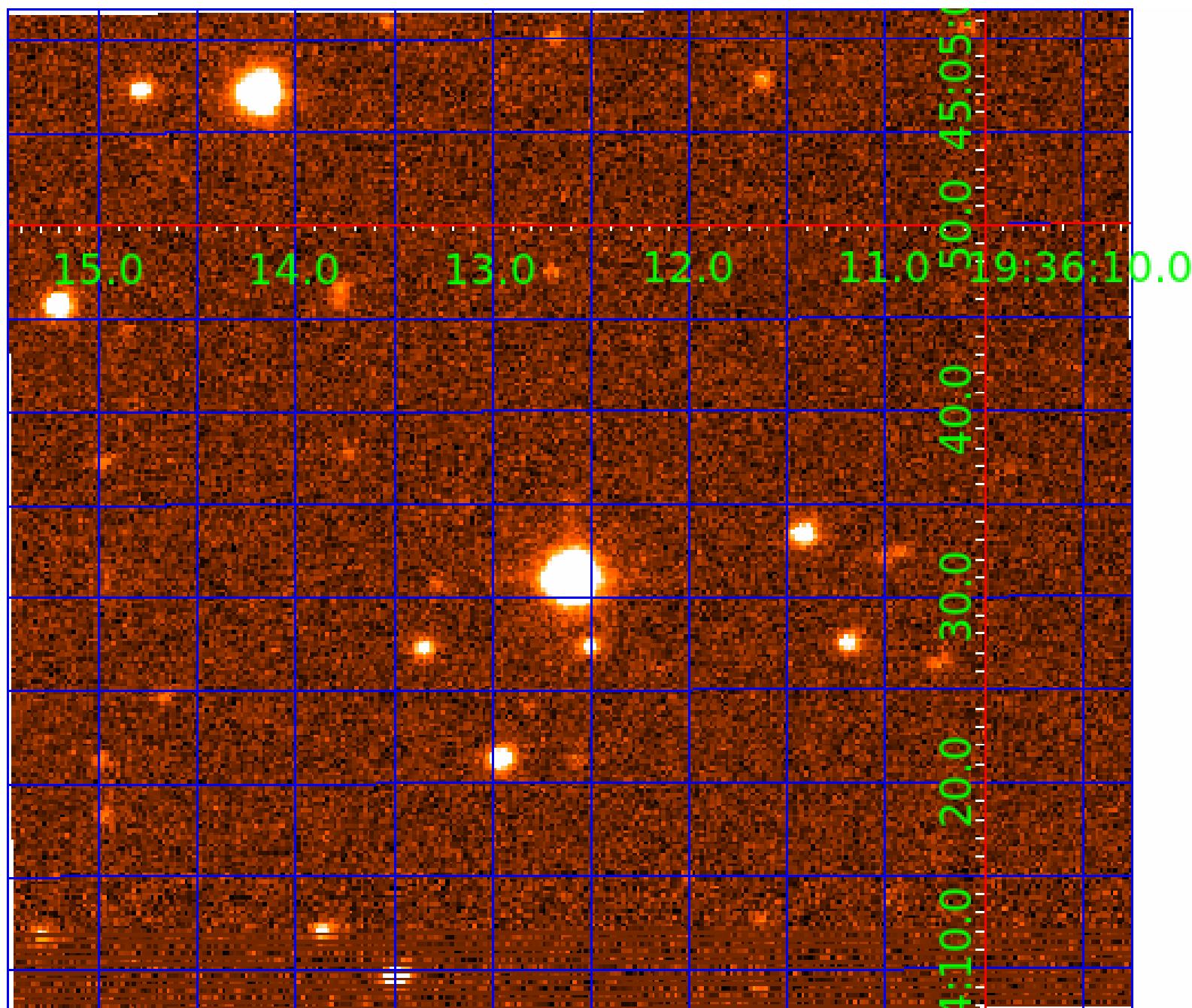


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008824602

Q1-17 DR25 TCE Parameters

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008824602-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
008824602-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV— MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008824602-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

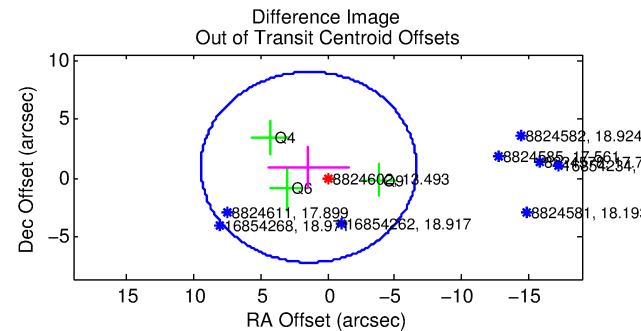
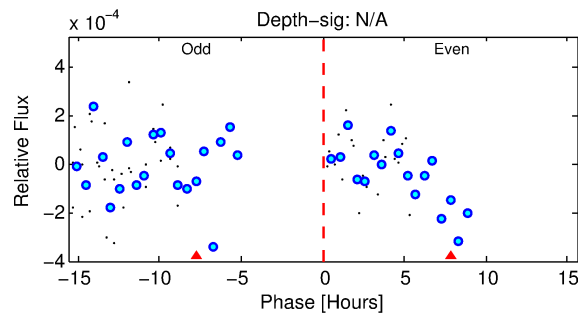
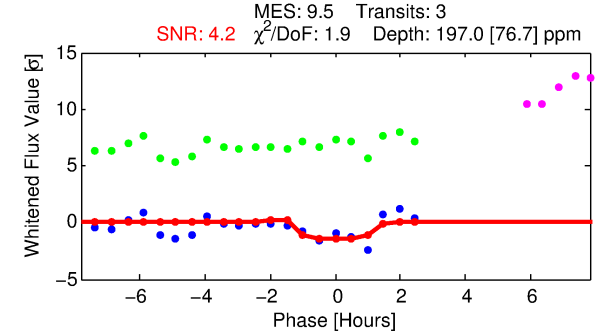
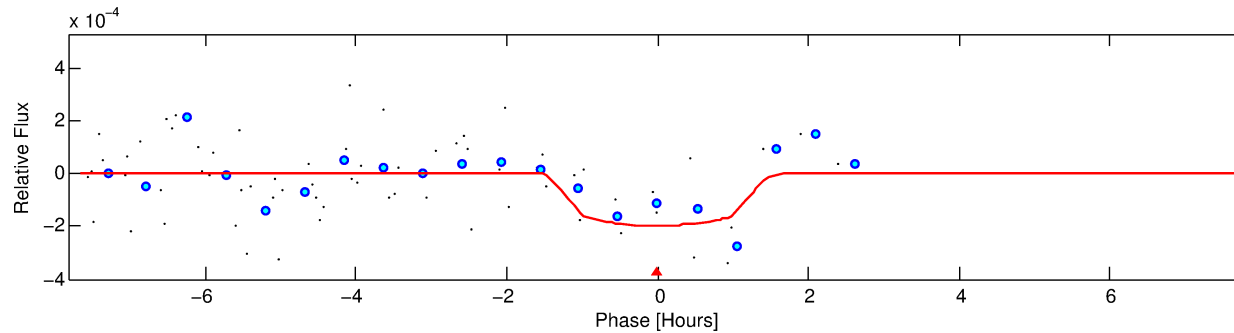
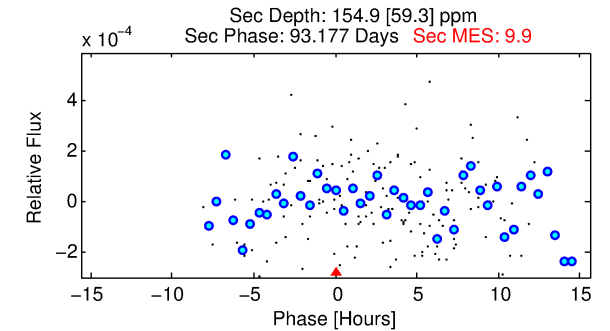
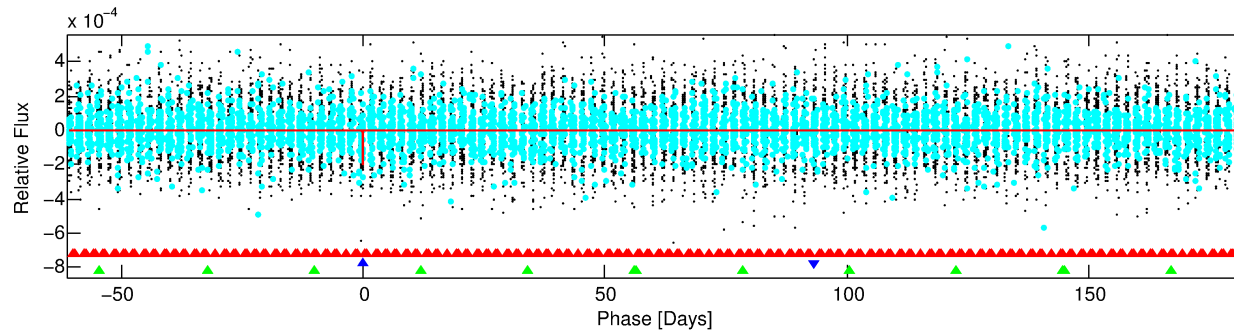
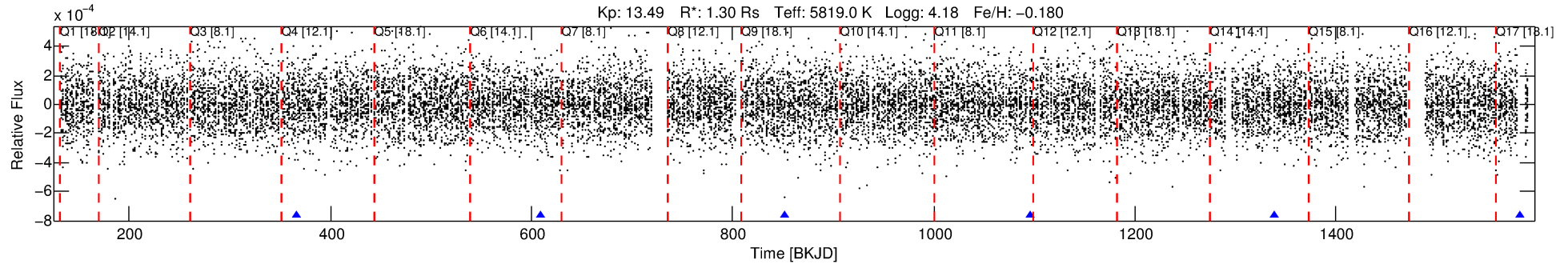
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008824602-02

No Significant Match Found

DV One-Page Summary

KIC: 8824602 Candidate: 2 of 3 Period: 243.407 d



DV Fit Results:

Period = 243.40719 [0.01426] d
Epoch = 365.7425 [0.0173] BKJD
Rp/R* = 0.0138 [0.0725]
a/R* = 519.24 [12702.38]
b = 0.71 [17.53]
Seff = 3.13 [1.49]
Teq = 339 [40] K
Rp = 1.95 [10.30] Re
a = 0.7447 [0.2111] AU
Ag = 12390.74 [130684.22] [0.09σ]
Teffp = 5531 [14569] K [0.3σ]

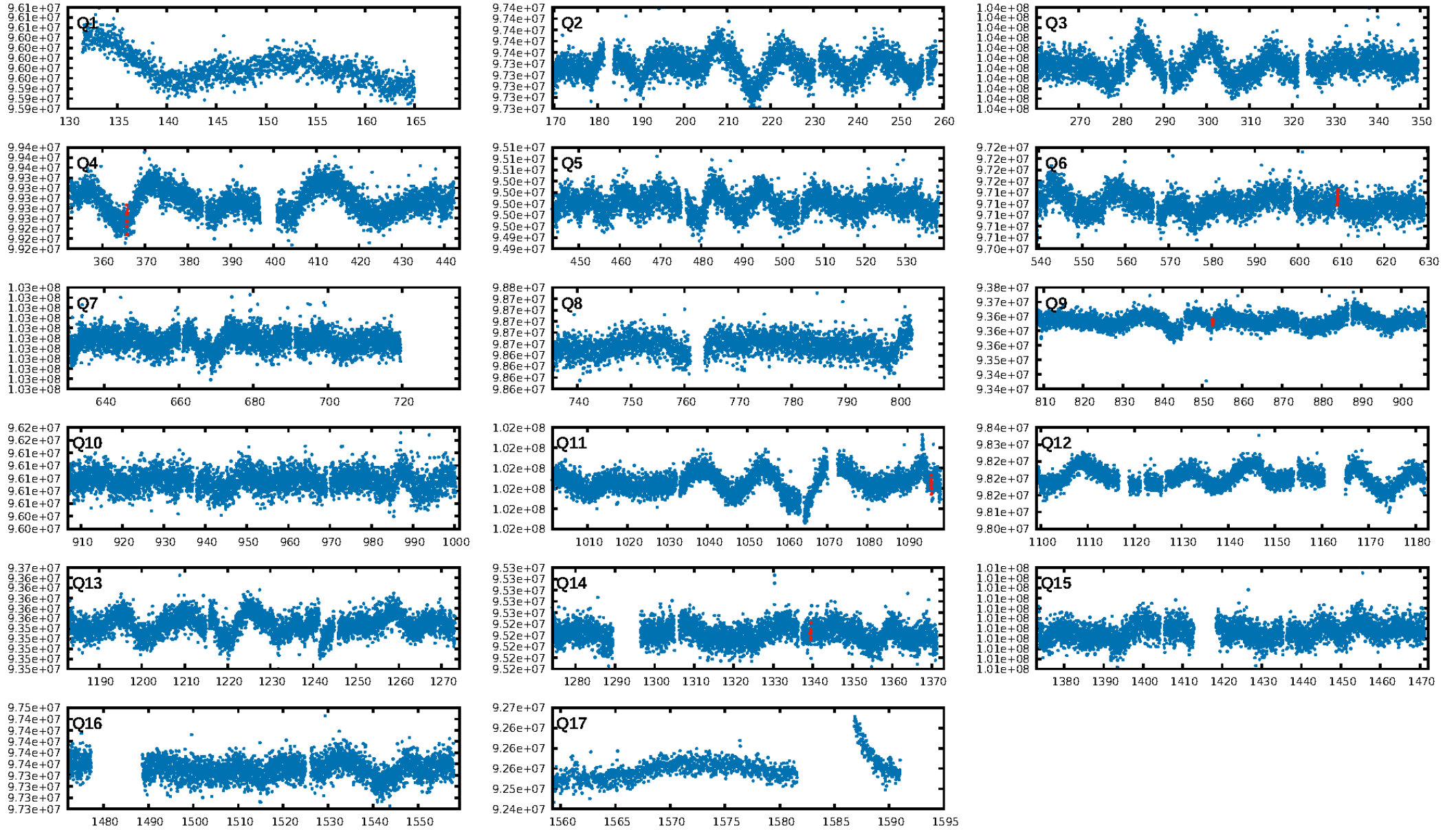
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [291.67σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 29.5%
ModelChiSquareGof-sig: 86.4%
Bootstrap-pfa: 4.26e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.4603
Centroid-sig: 22.6%
Centroid-so: 2.240 arcsec [1.15σ]
OotOffset-rm: 1.695 arcsec [0.63σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 1.596 arcsec [0.58σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [5/5]

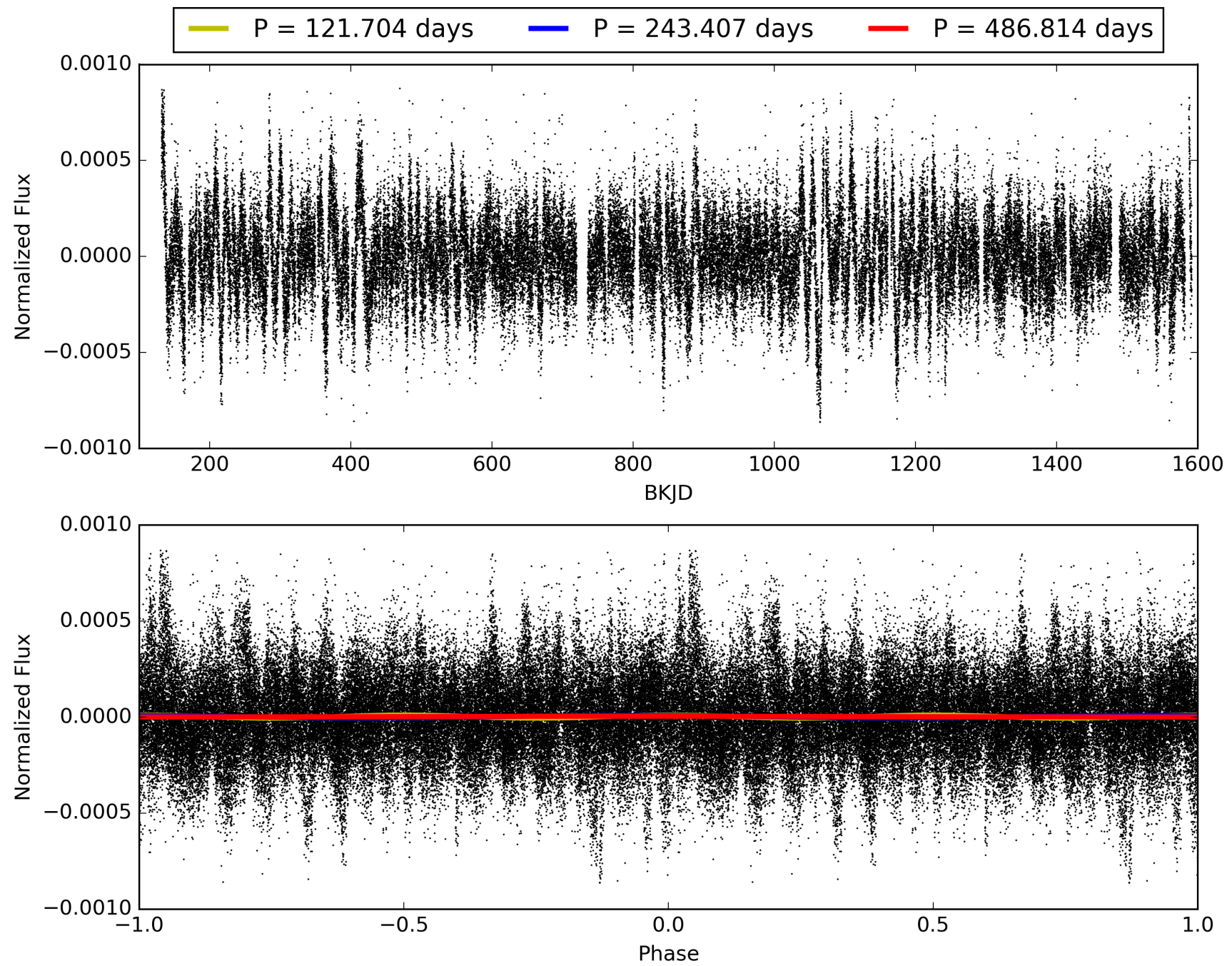
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:21:59 Z

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

TCE 008824602-02, PDC Light Curves

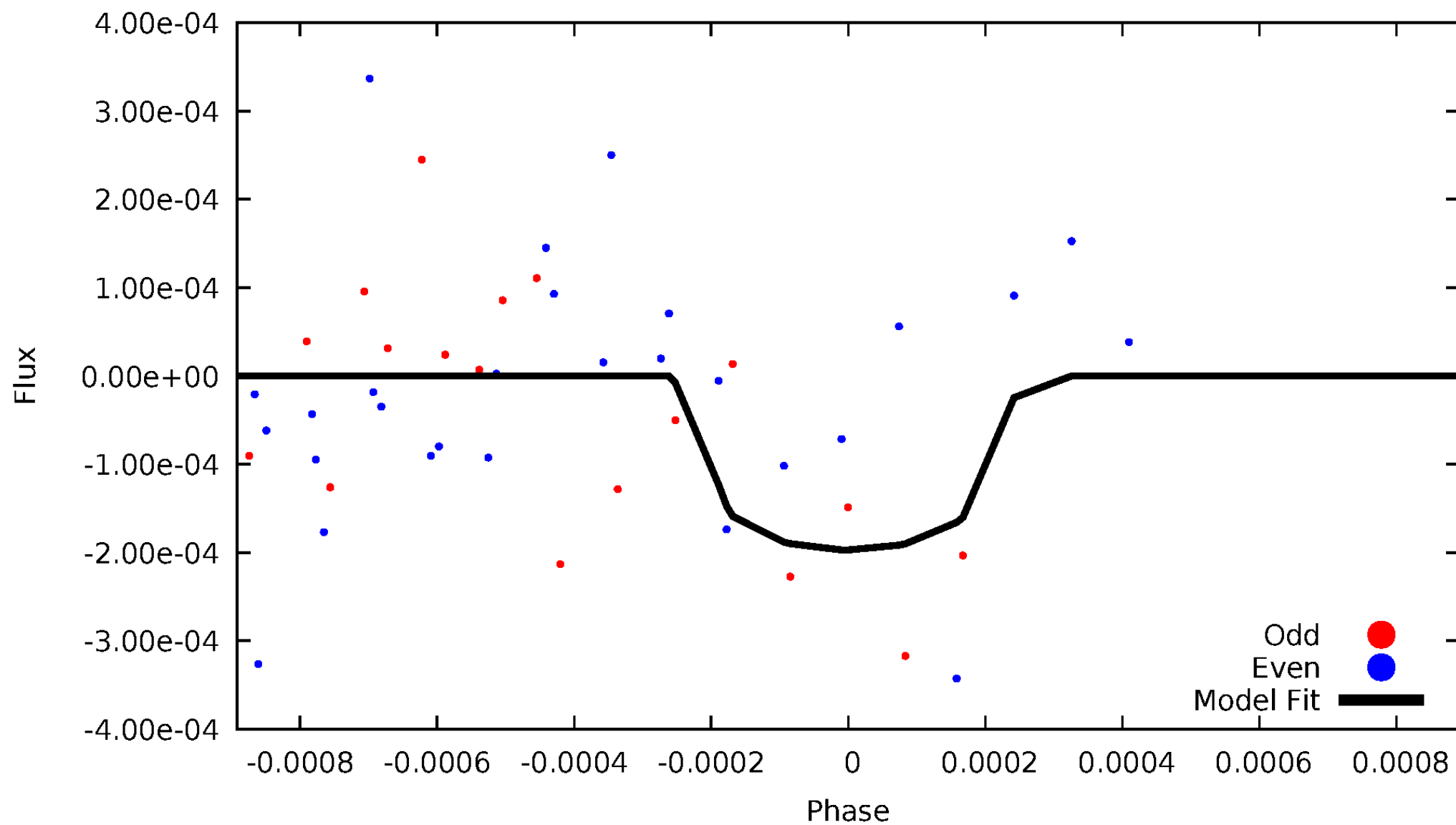


TCE 008824602-02



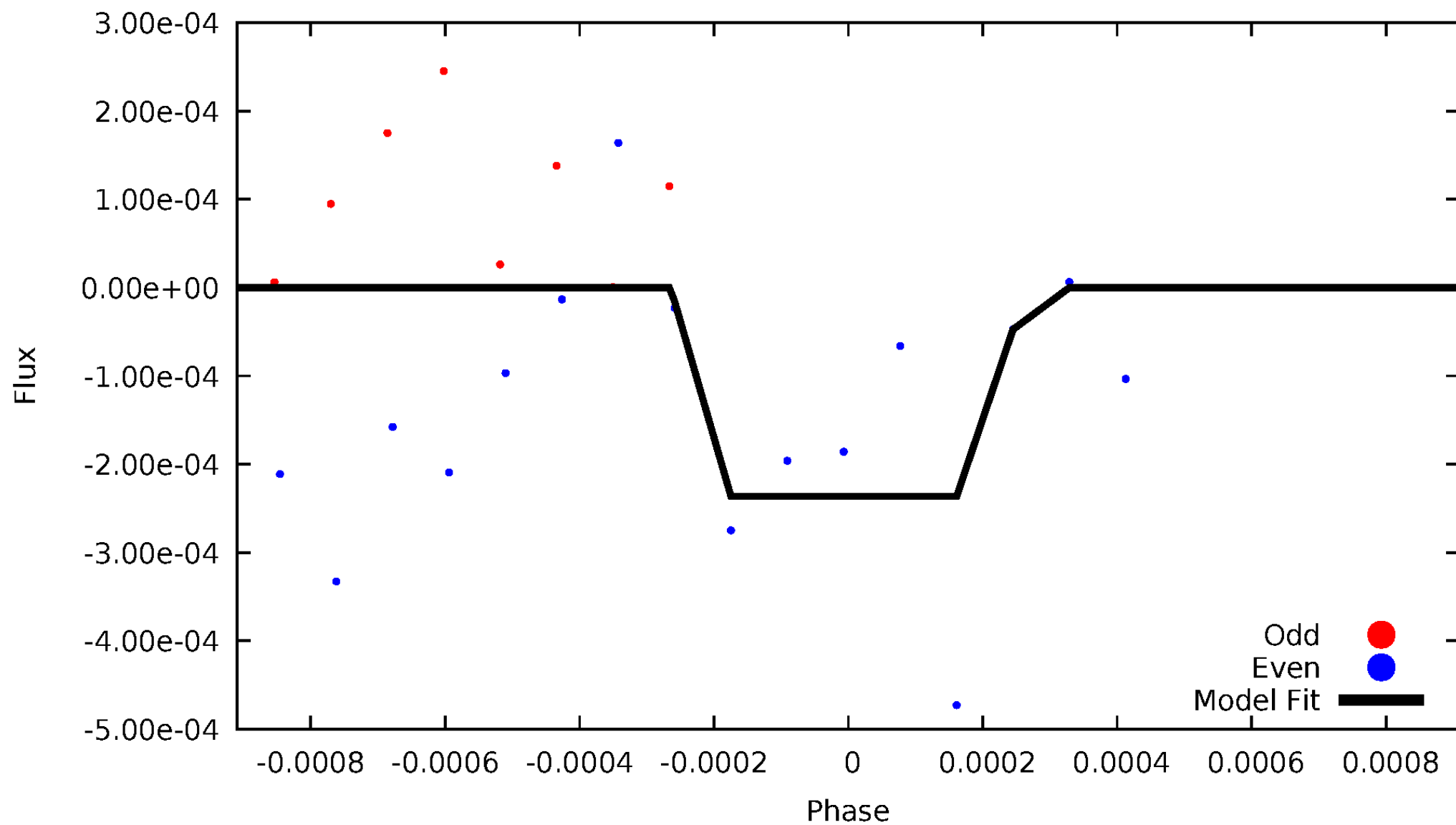
DV Odd/Even

TCE 008824602-02



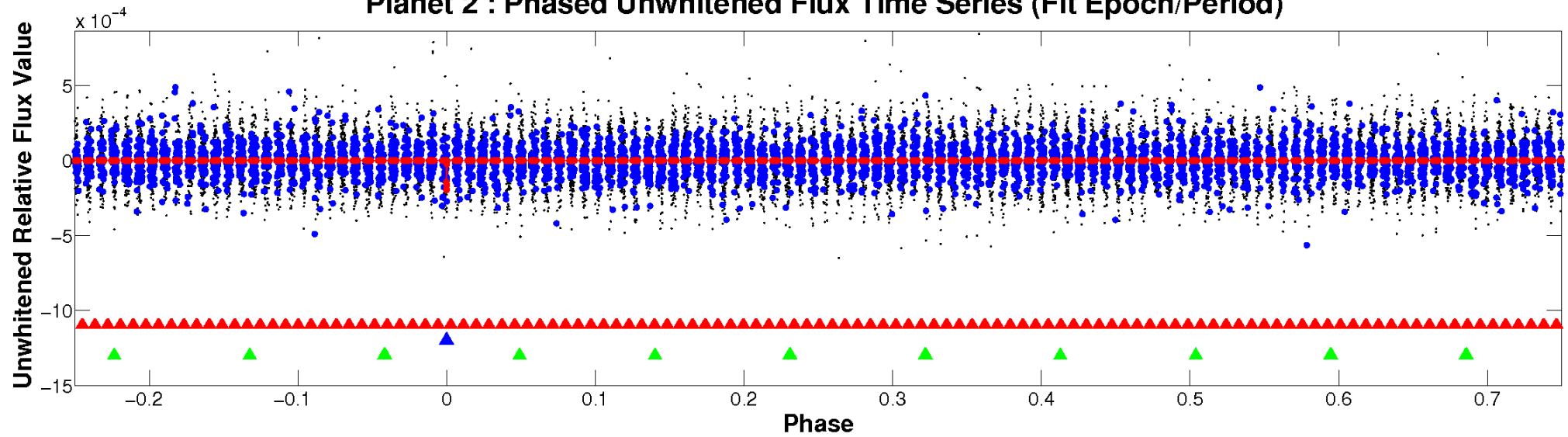
ALT Odd/Even

TCE 008824602-02

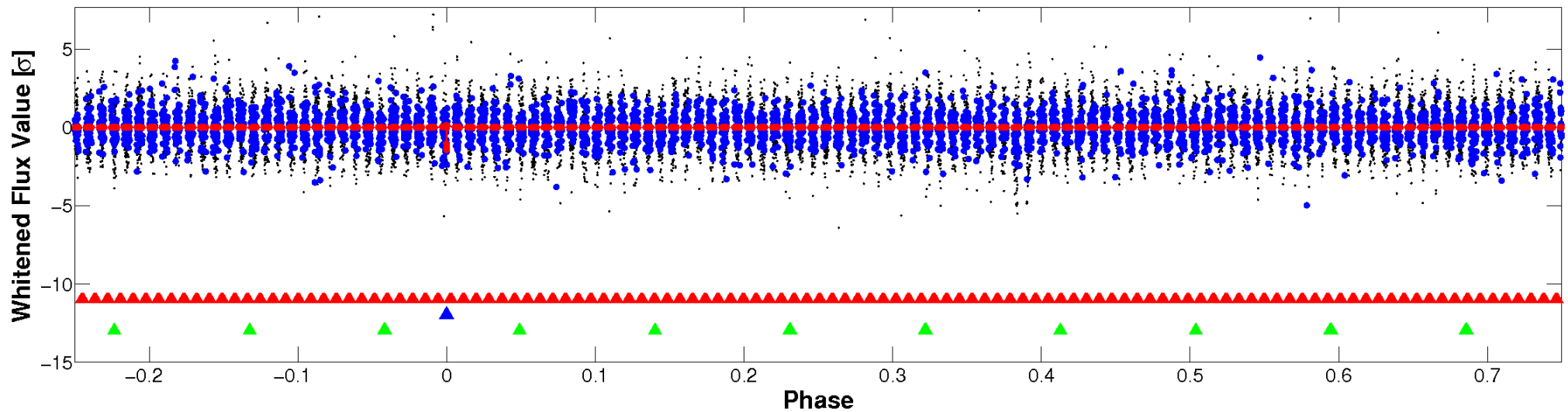


Non-Whitened Vs. Whitened Light Curve

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

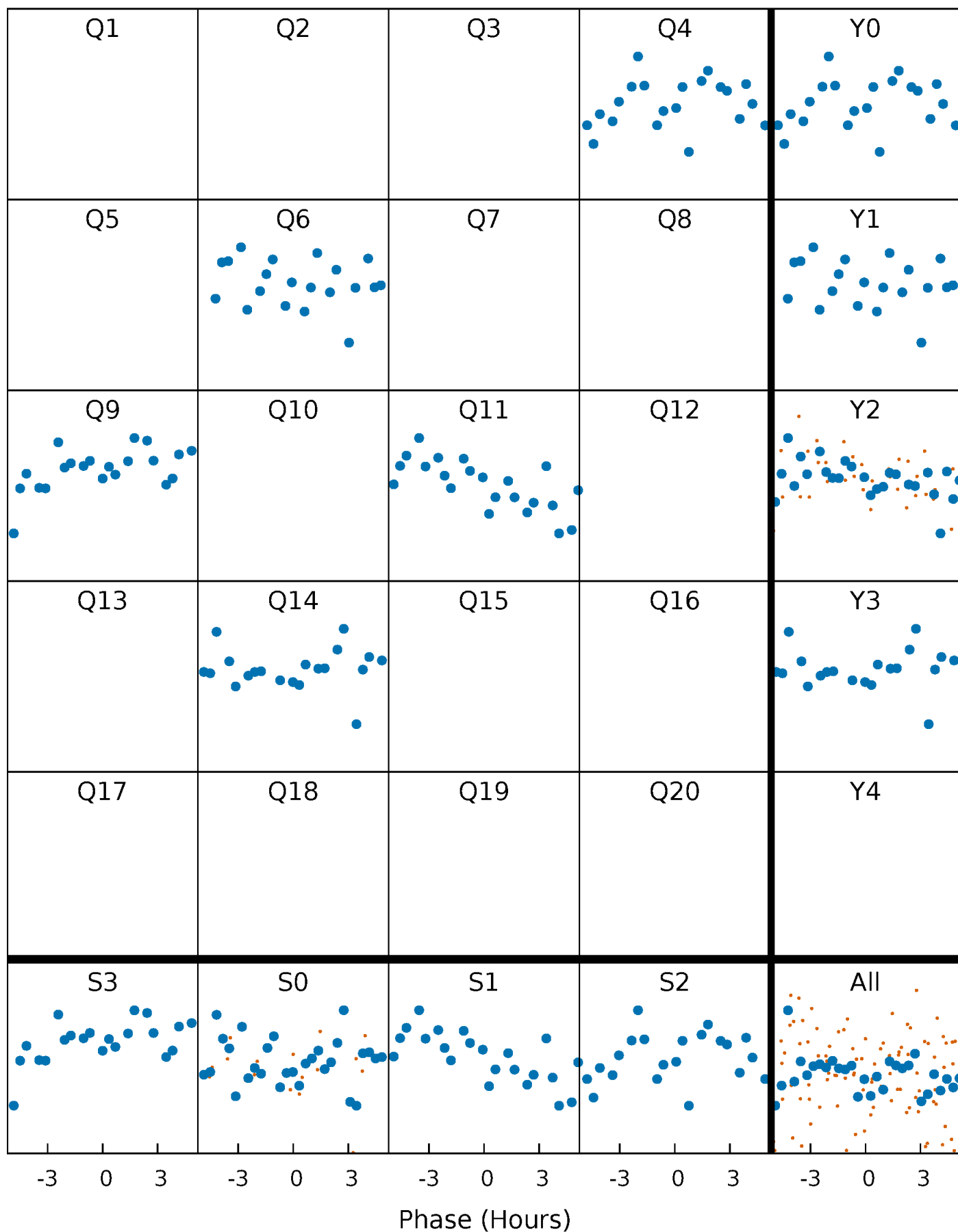


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



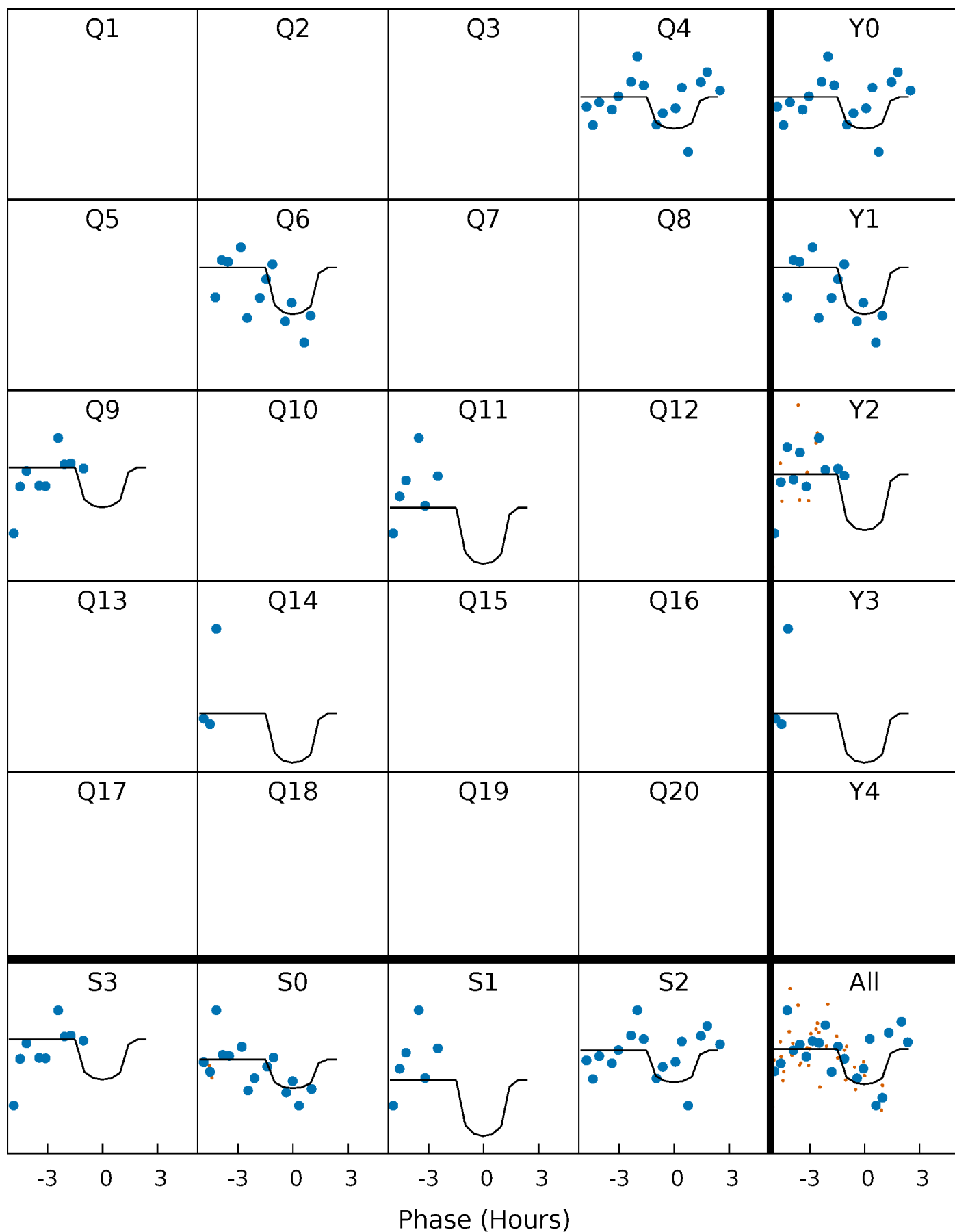
PDC Quarter-Phased Transit Curves

TCE 008824602-02 $P=243.407194$ Days $T_0=365.742499$ (BKJD)



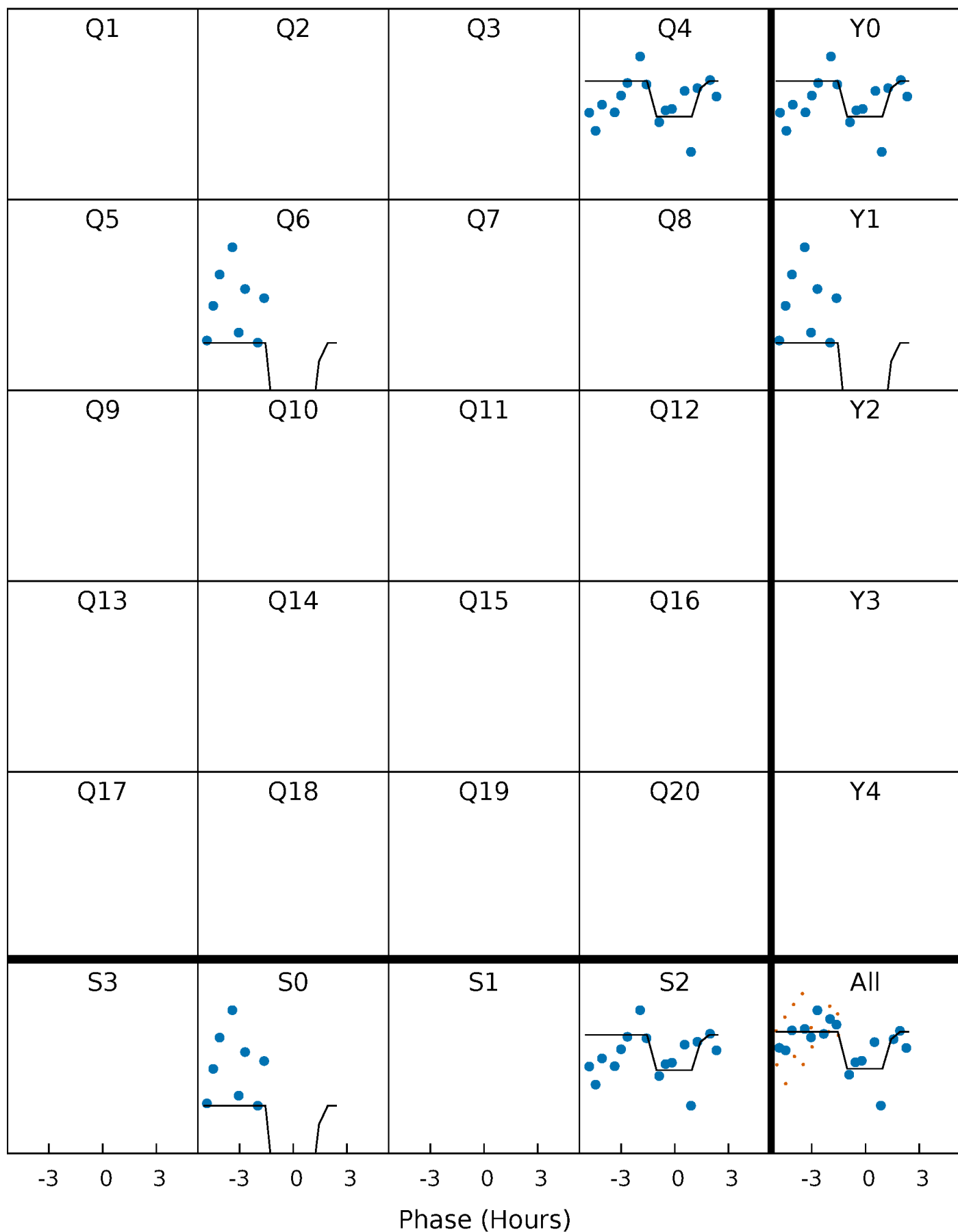
DV Quarter-Phased Transit Curves

TCE 008824602-02 P=243.407194 Days $T_0=365.742499$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

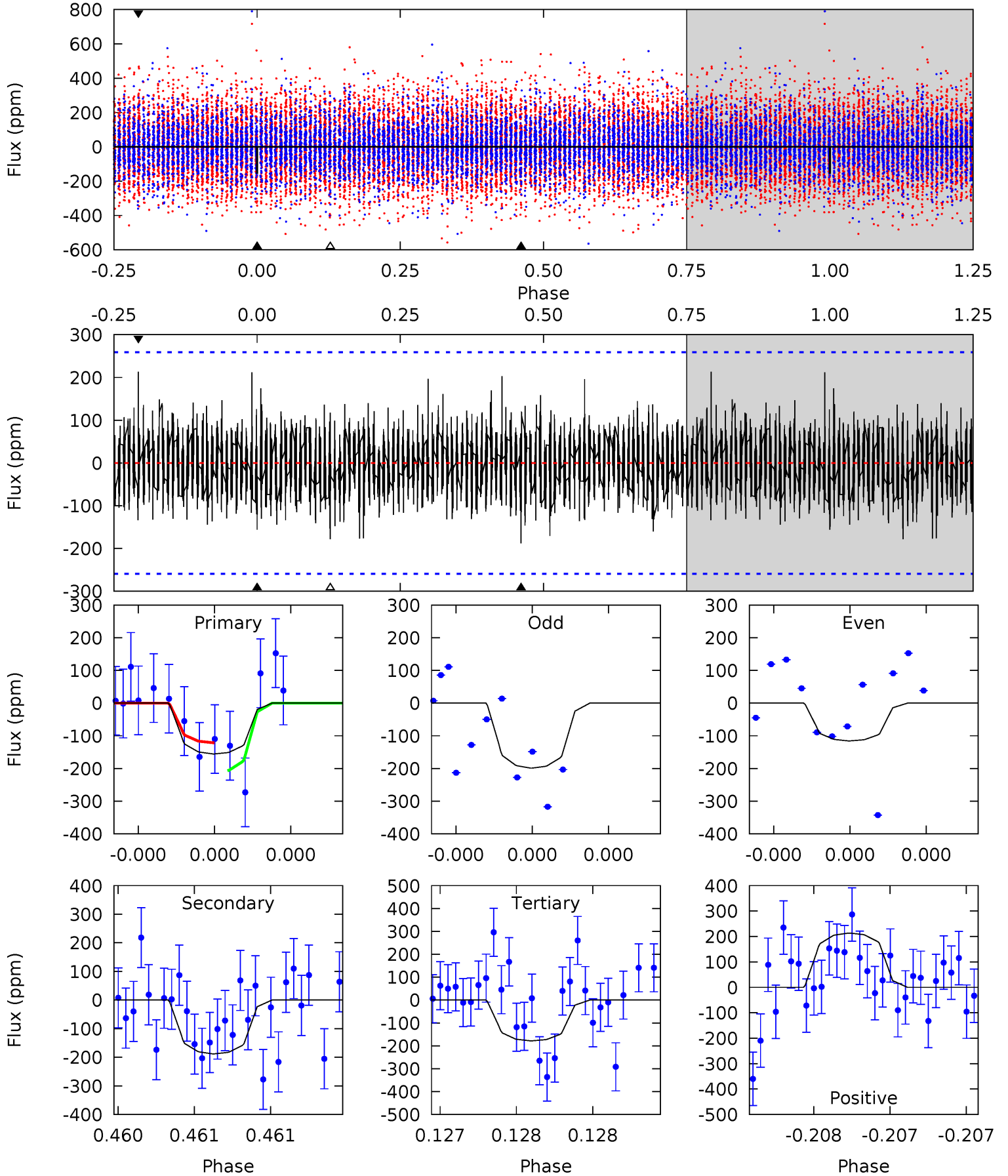
TCE 008824602-02 $P=243.513546$ Days $T_0=365.741728$ (BKJD)



DV Model-Shift Uniqueness Test

008824602-02, P = 243.407194 Days, E = 122.335305 Days

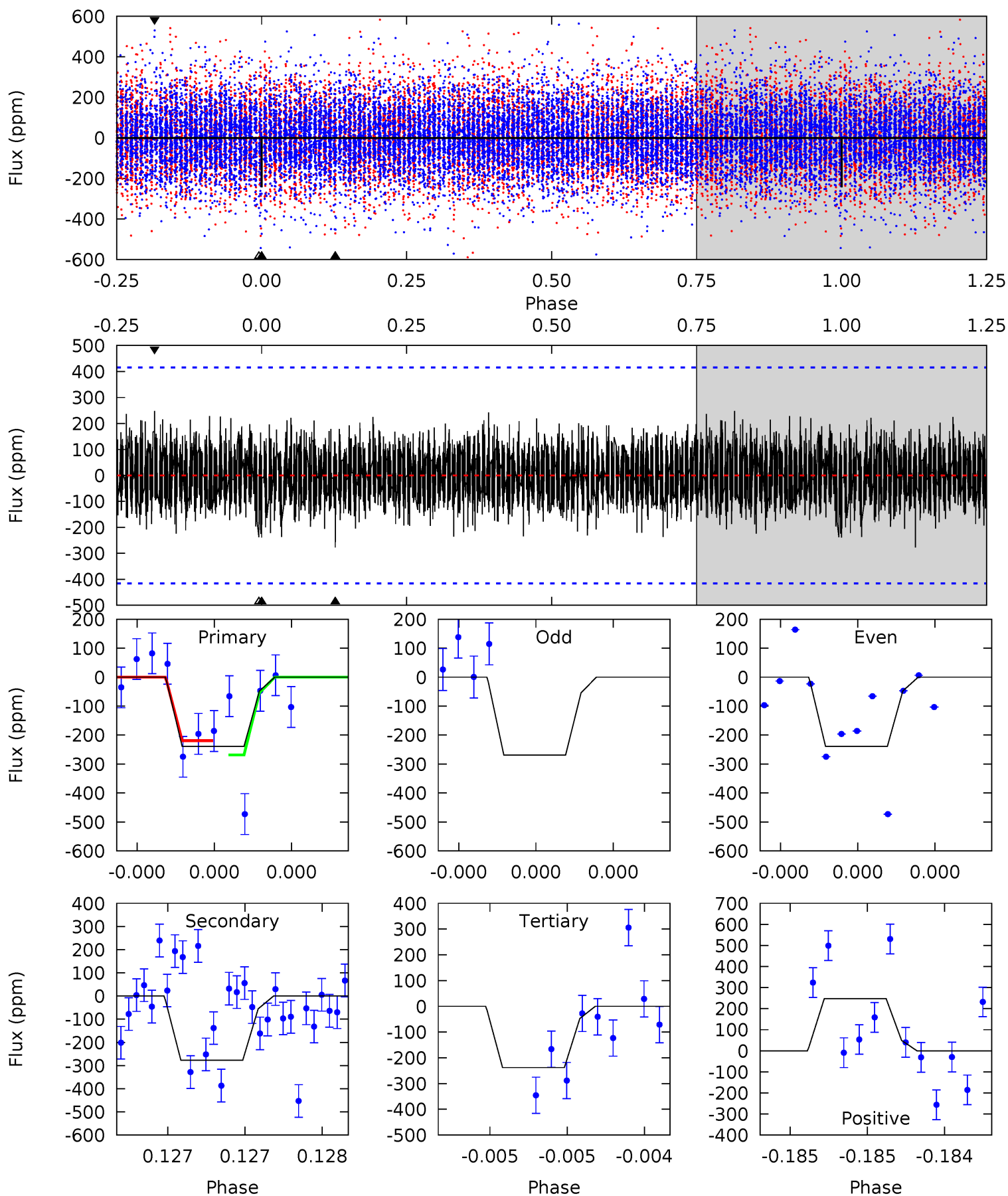
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.36	4.06	3.85	4.61	5.60	3.52	1.05	-0.49	-1.25	0.22	-0.54	0.94	1.00	0.53	0.91



Alt Model-Shift Uniqueness Test

008824602-02, P = 243.513546 Days, E = 122.228182 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.23	3.74	3.21	3.34	5.60	3.53	0.90	0.02	-0.12	0.53	0.40	0.23	1.00	0.47	0.34



Stellar Parameters For KIC 008824602

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5819^{+158}_{-158}	$4.179^{+0.276}_{-0.161}$	$-0.180^{+0.300}_{-0.300}$	$1.299^{+0.330}_{-0.367}$	$0.930^{+0.133}_{-0.096}$	$0.597^{+1.001}_{-0.288}$
	+3%/-3%	+7%/-4%	+167%/-167%	+25%/-28%	+14%/-10%	+168%/-48%
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 008824602-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-188 ± 46	$7.41^{+8.17}_{-4.92}$	470^{+35}_{-37}	3416^{+1730}_{-656}	1010^{+8368}_{-785}
Alt.	-277 ± 74	$7.89^{+8.86}_{-5.28}$	471^{+32}_{-39}	3586^{+1902}_{-705}	1353^{+10617}_{-1059}

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

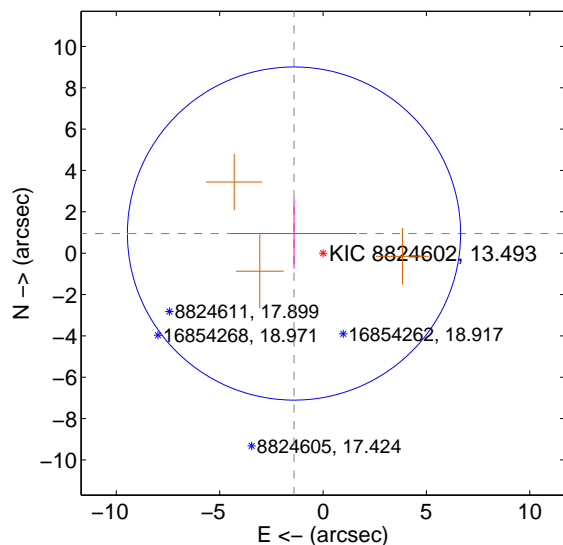
Supplemental centroid analysis for 008824602-02. Kepler magnitude: 13.49. Transit SNR 4.17

There are 0 quarters with good PRF difference image offsets

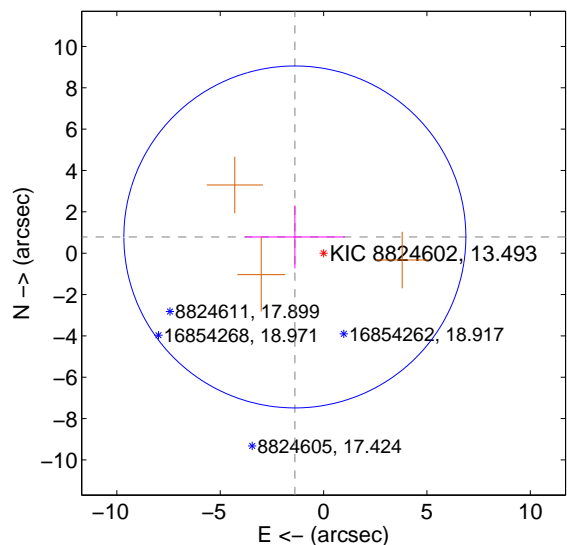
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.695 ± 2.685	0.63	1.404 ± 3.033	0.950 ± 1.692
PRF-fit source offset from KIC position	1.596 ± 2.756	0.58	1.389 ± 2.420	0.785 ± 1.526
photometric centroid source offset	2.24 ± 1.95	1.15	2.15 ± 1.94	0.63 ± 2.08

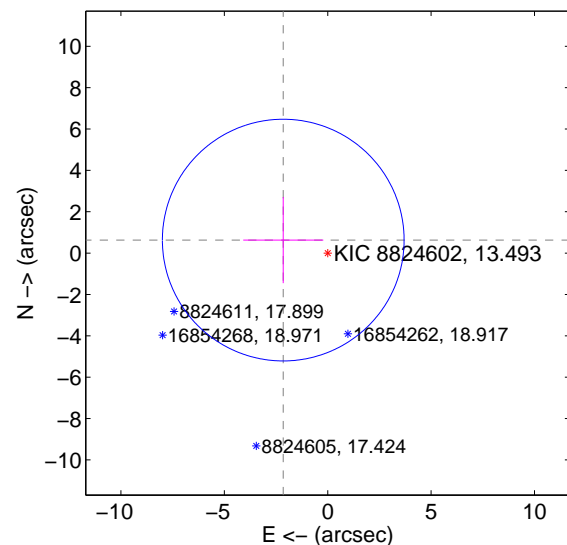
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

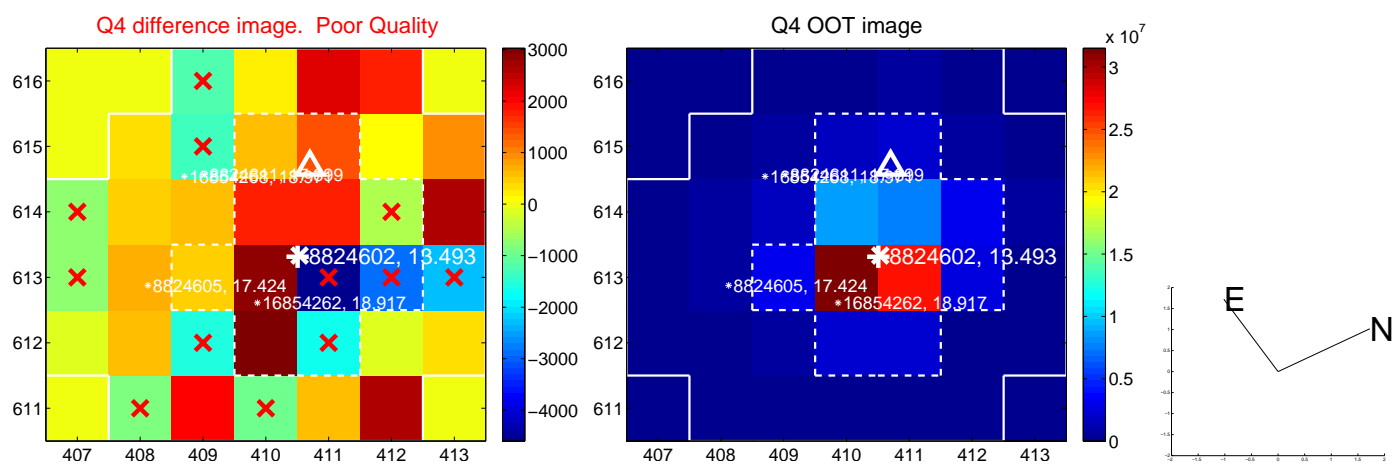
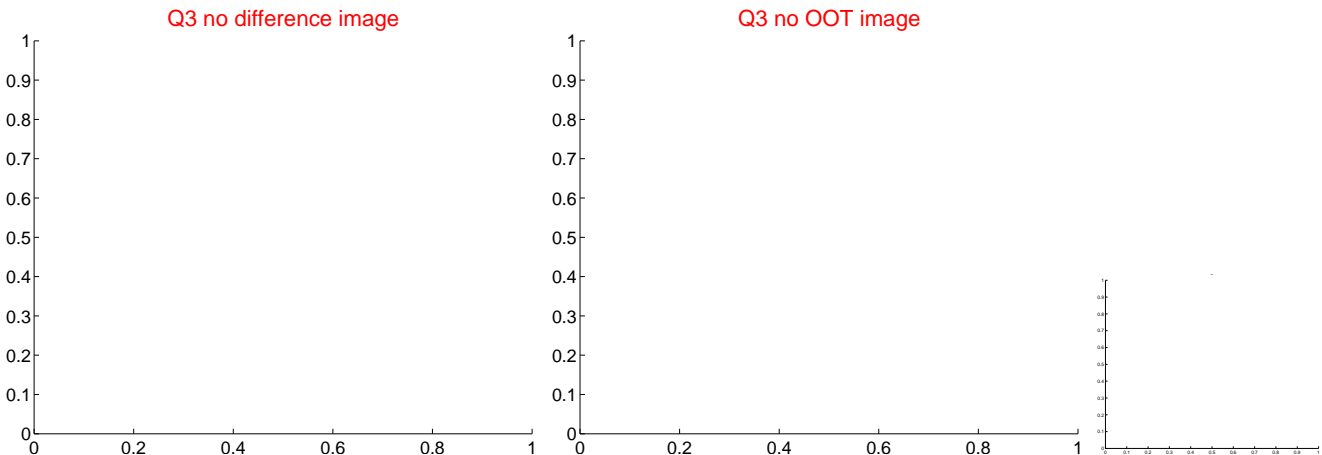
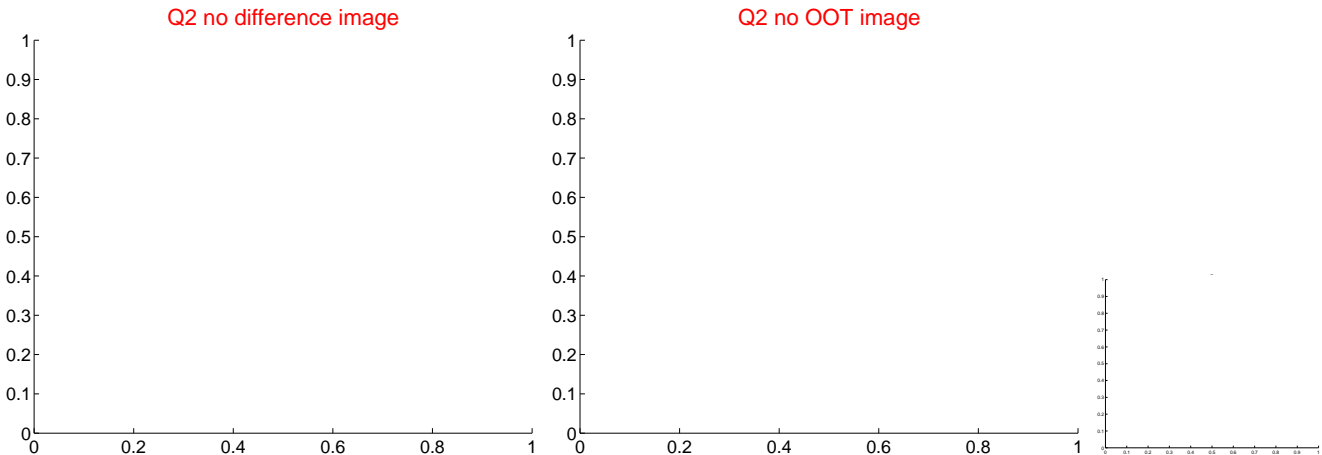
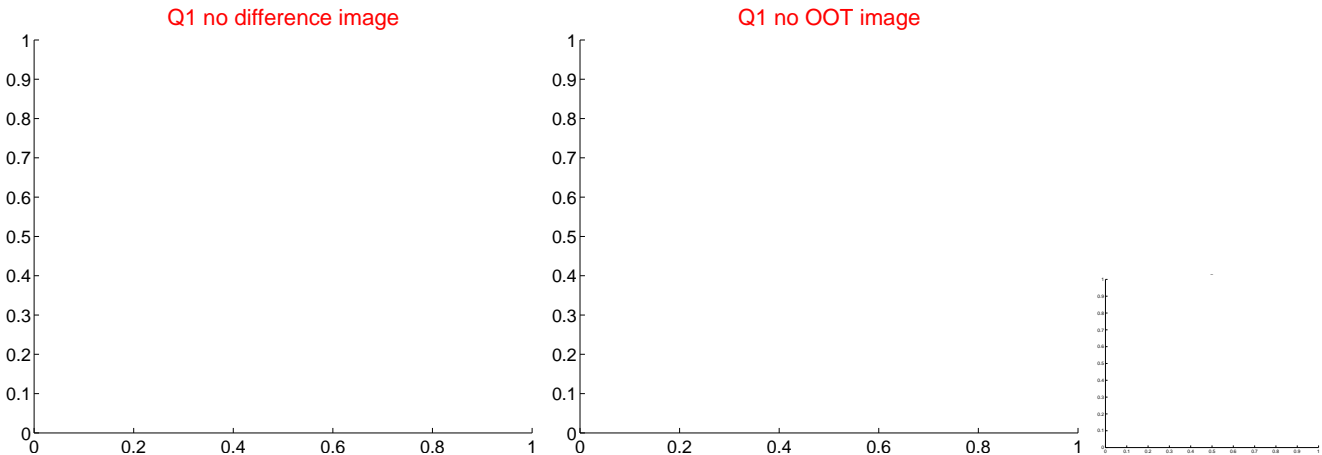


offset from photometric centroids

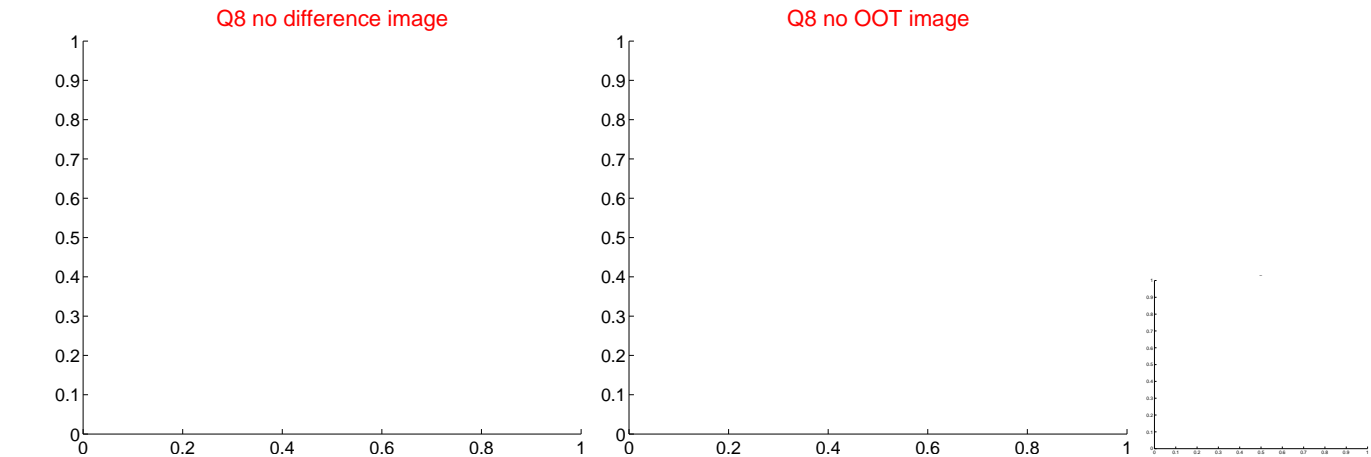
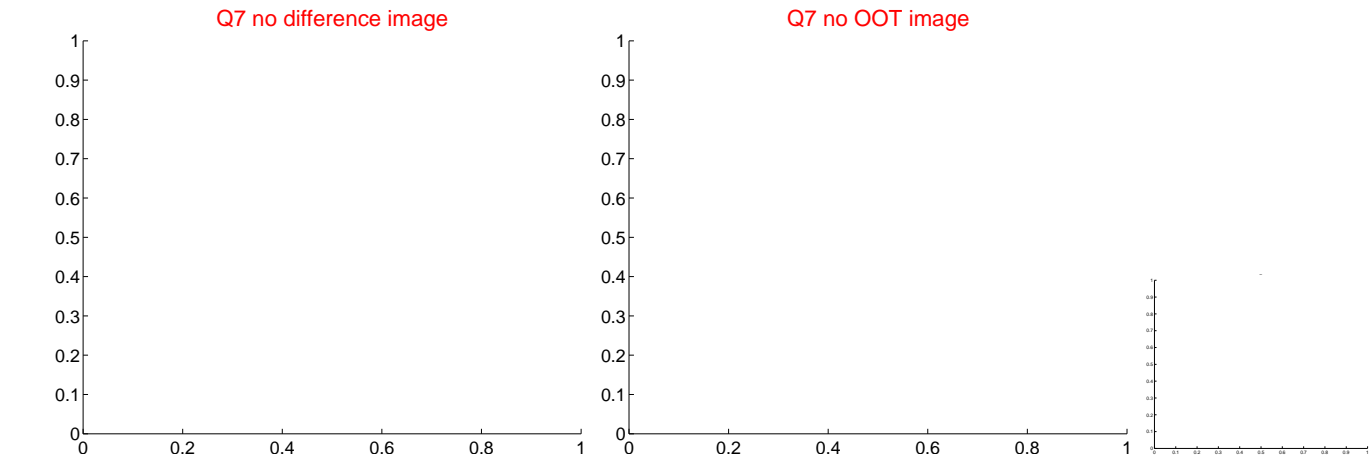
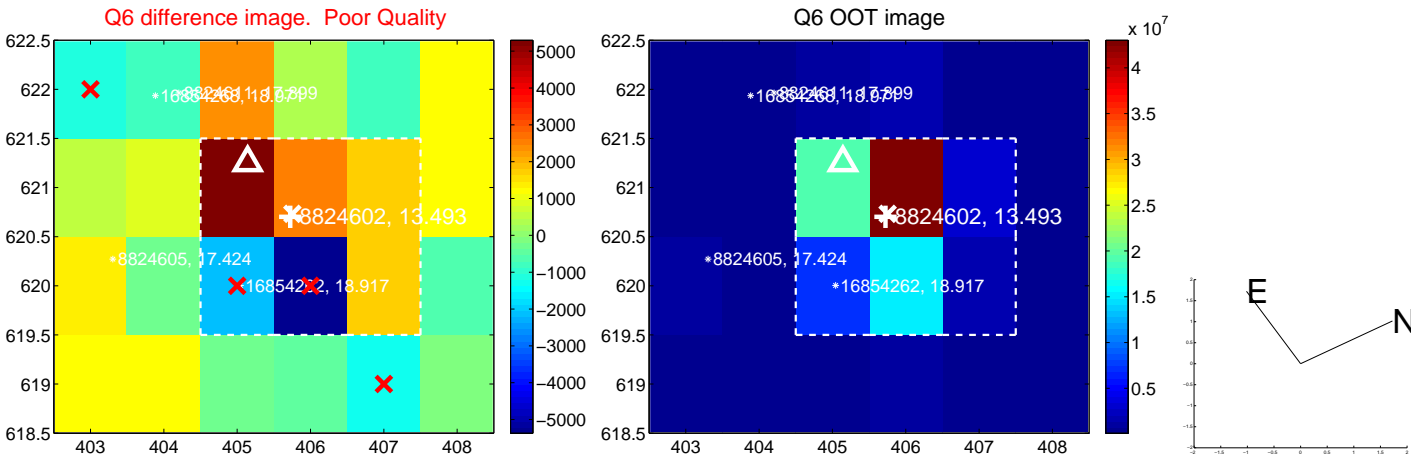
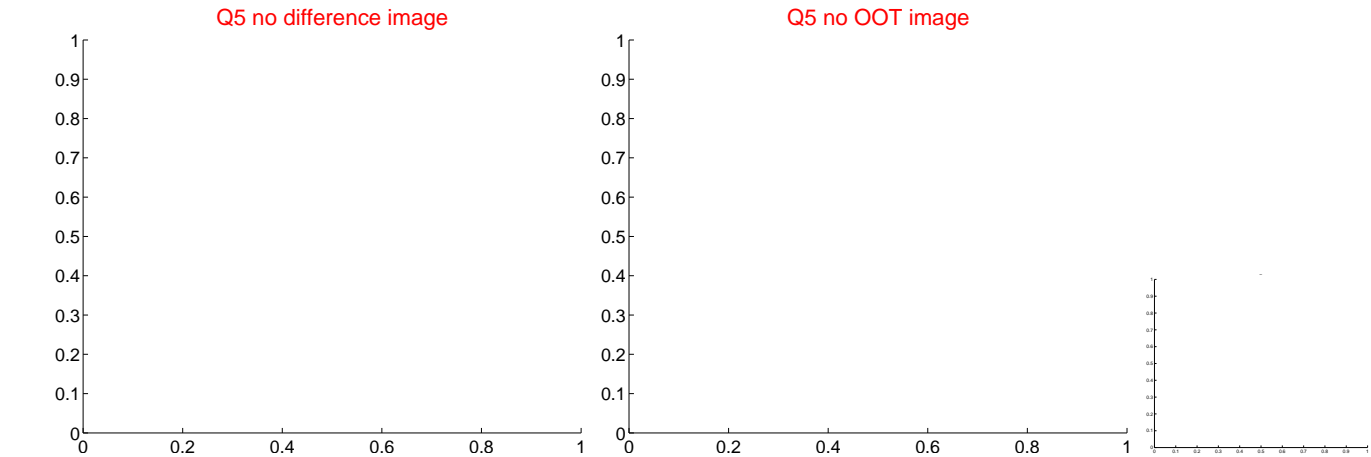


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

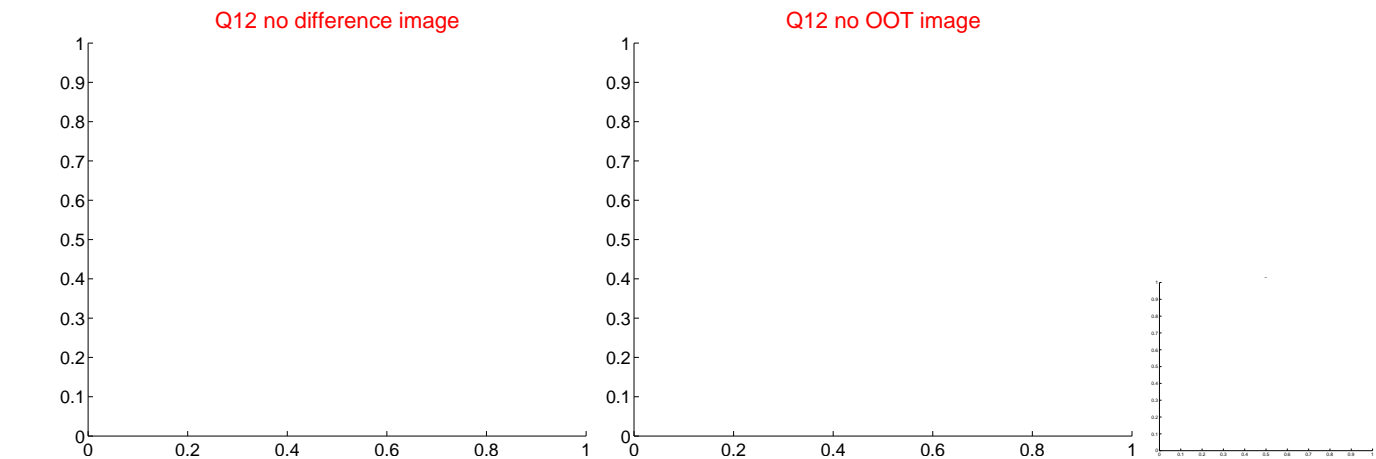
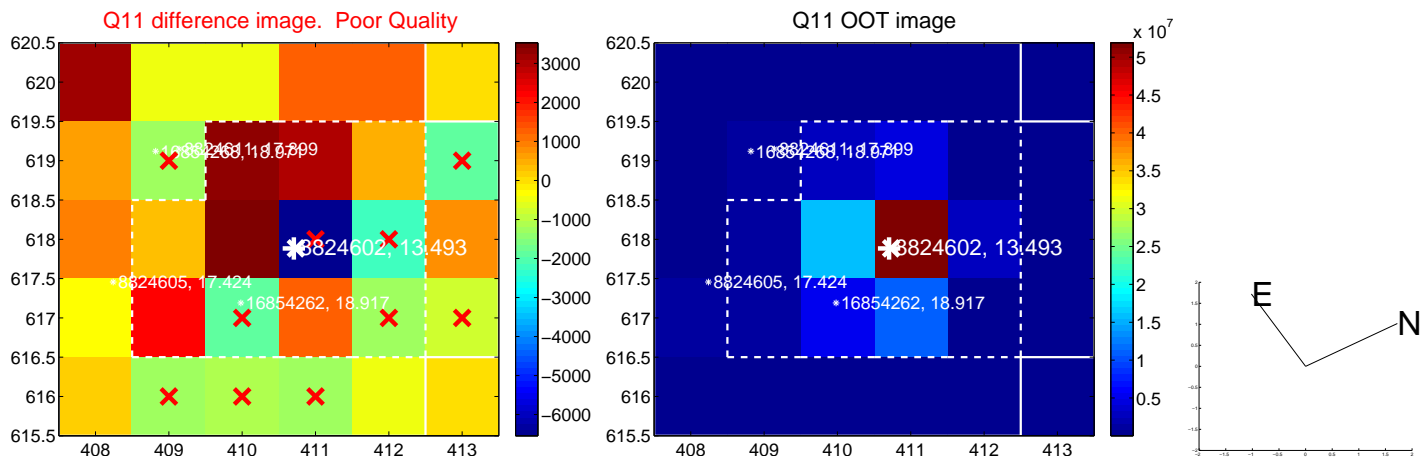
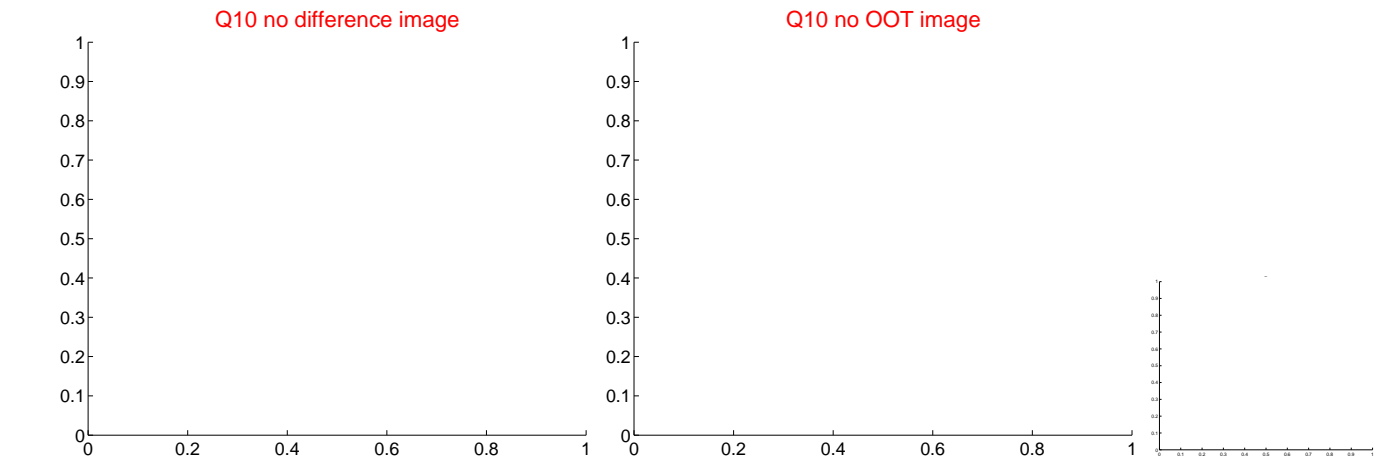
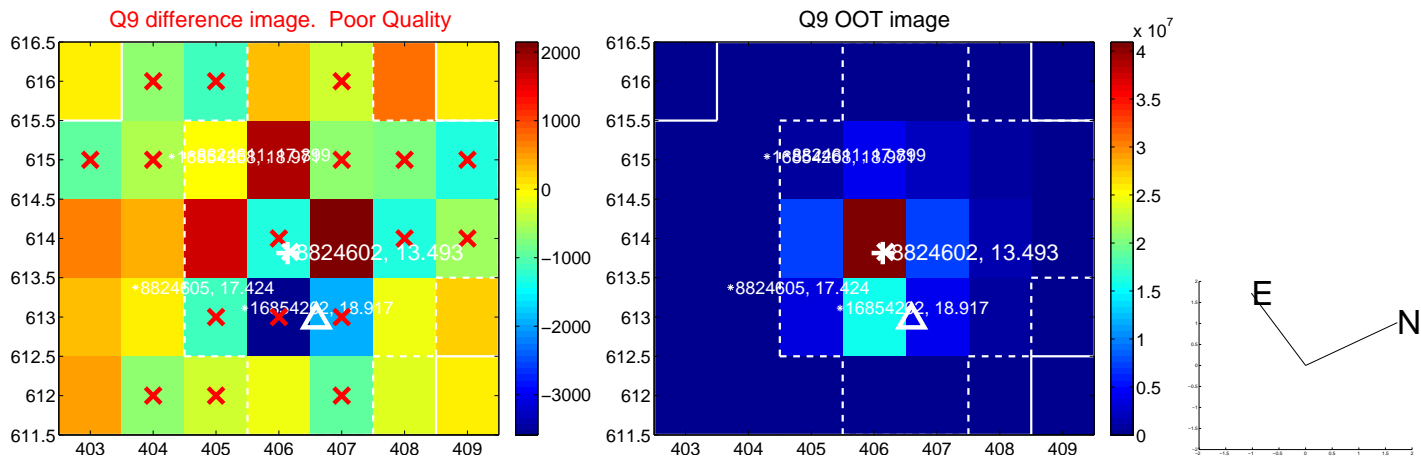
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



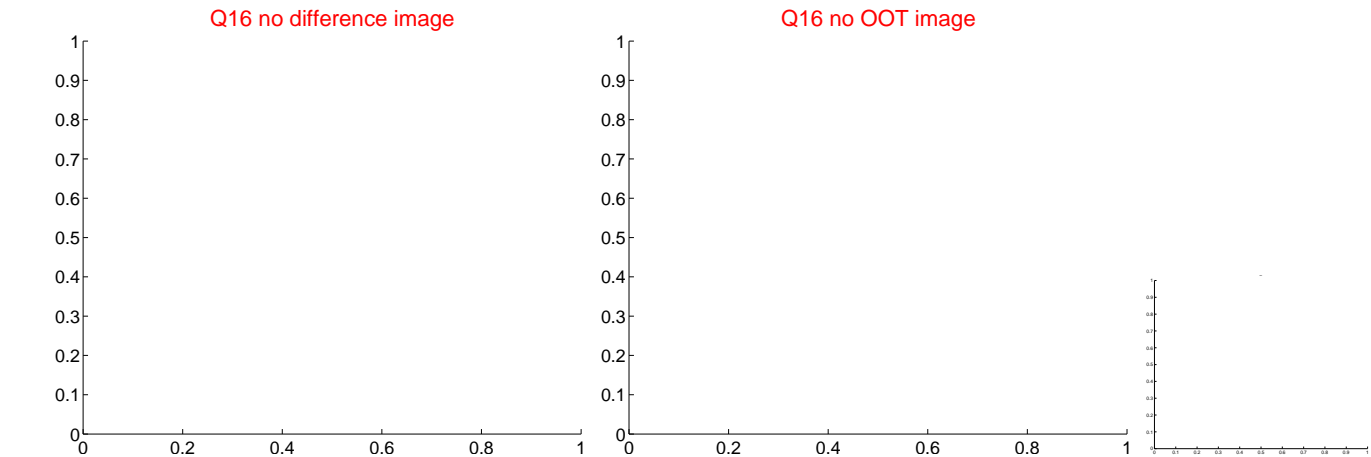
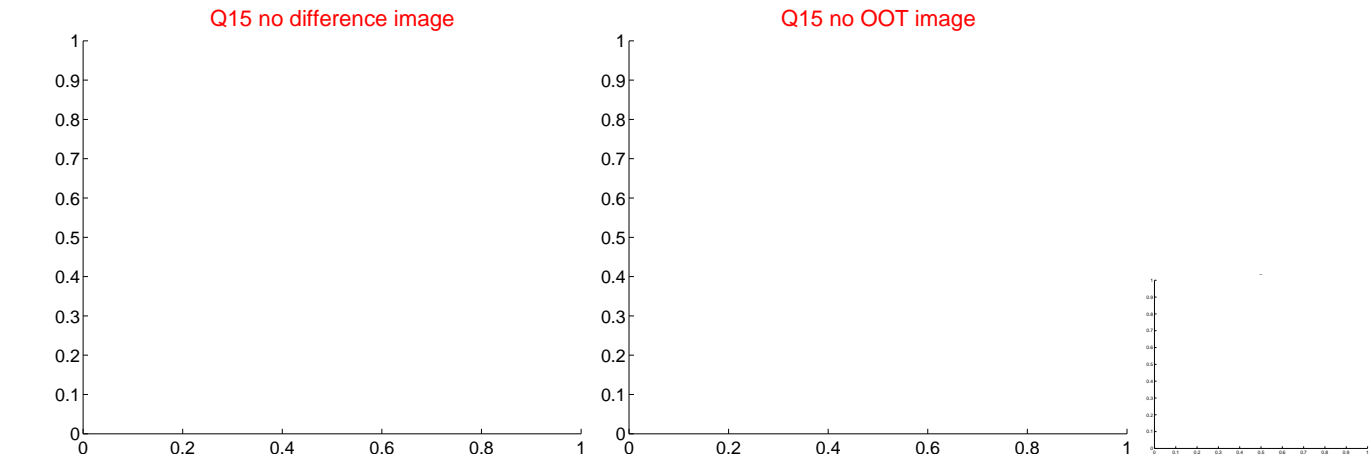
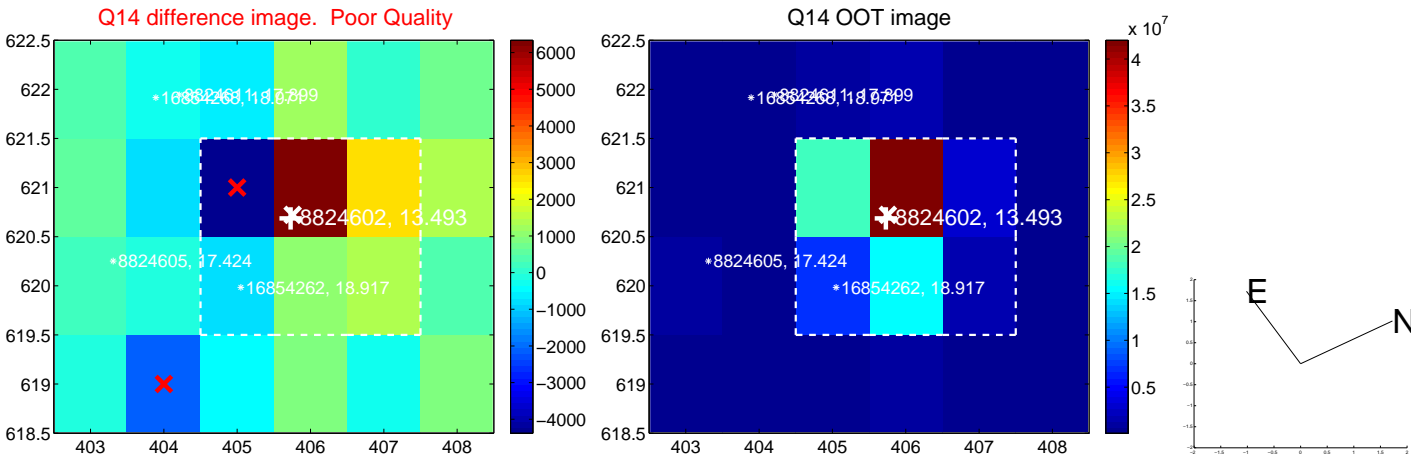
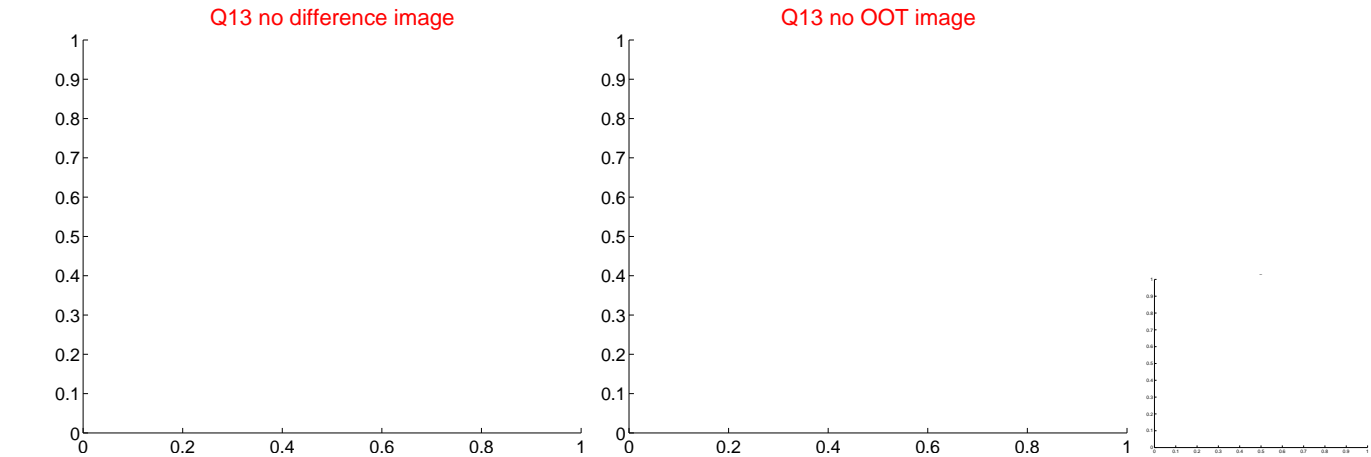
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



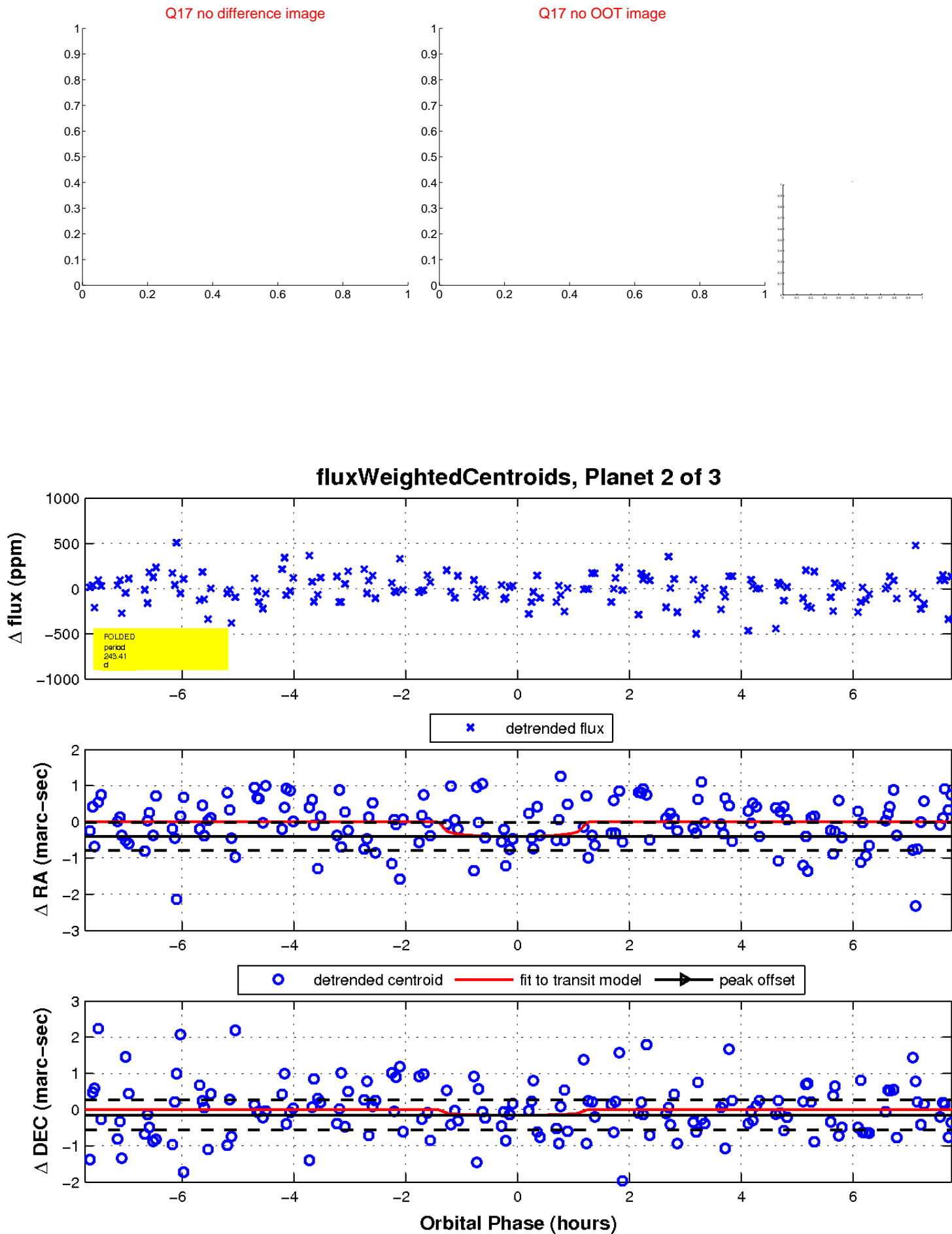
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

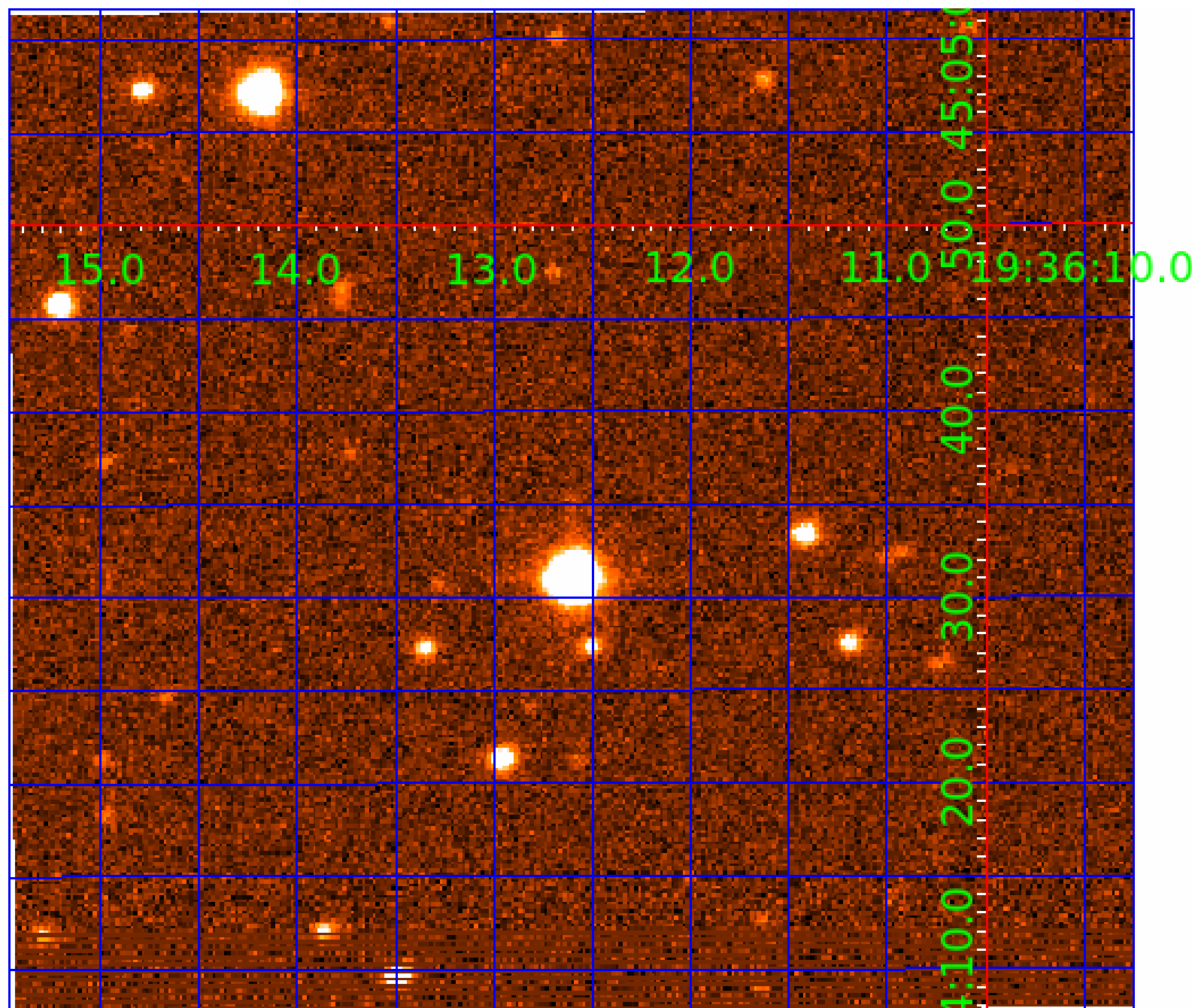


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008824602

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})
008824602-01	OBS	No	2.079792	131.587275	13.7	11.761	7.5	7.6	1.30	5819	0.50	1789.23
008824602-02	OBS	No	243.407194	365.742499	197.0	2.605	9.5	4.2	1.30	5819	1.95	3.12
008824602-03	OBS	No	88.528249	178.455525	113.1	12.475	8.3	5.4	1.30	5819	1.47	12.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008824602-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
008824602-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV— MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008824602-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

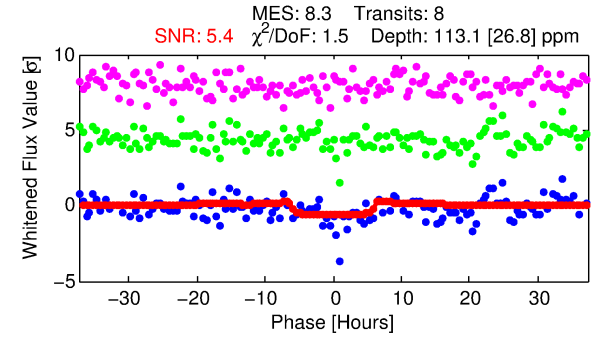
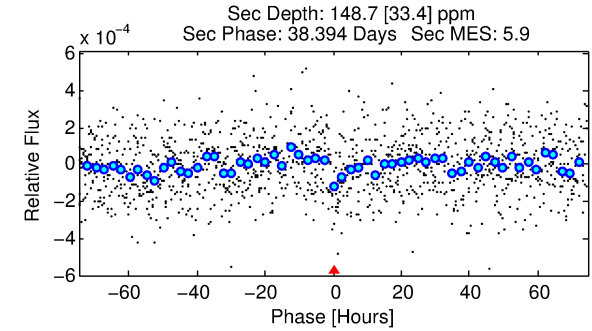
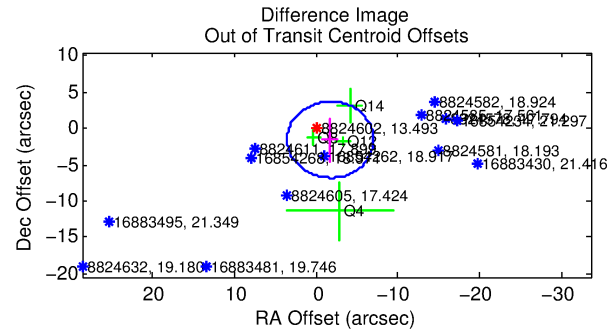
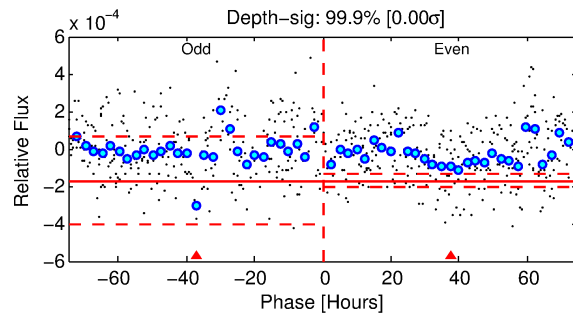
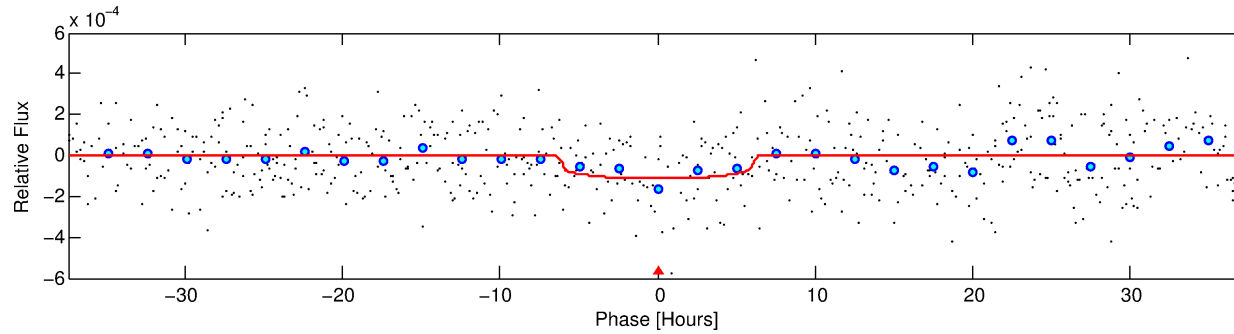
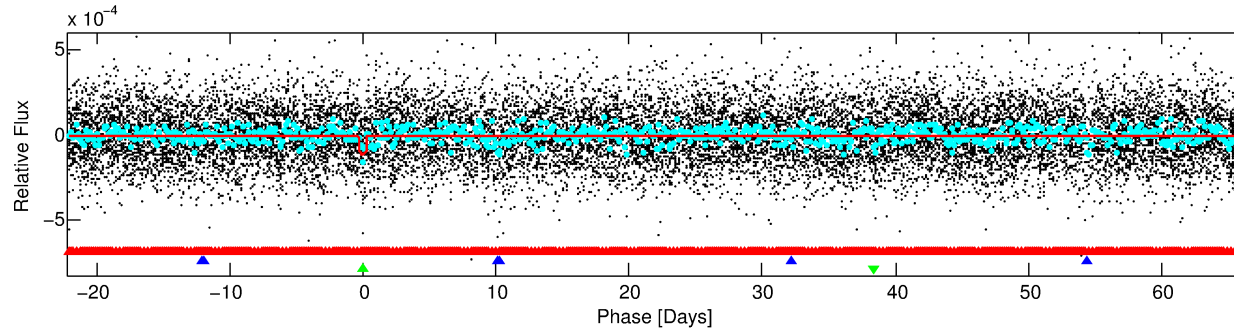
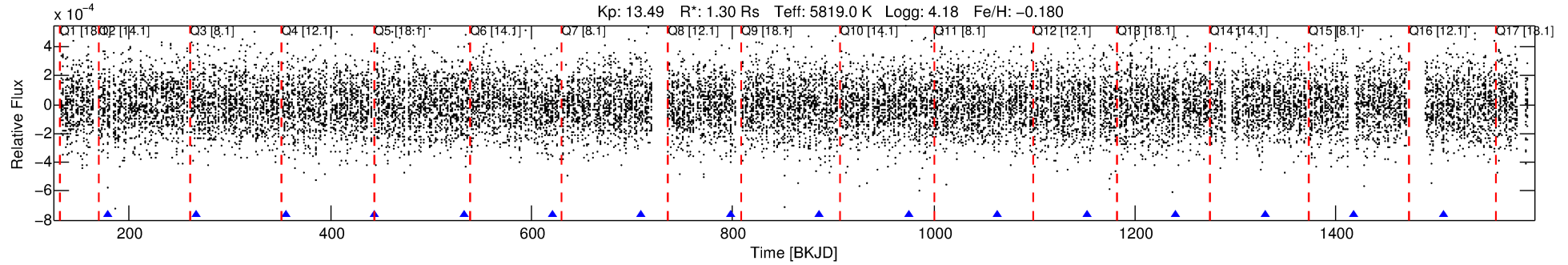
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008824602-03

No Significant Match Found

DV One-Page Summary

KIC: 8824602 Candidate: 3 of 3 Period: 88.528 d



DV Fit Results:

Period = 88.52825 [0.00461] d
Epoch = 178.4555 [0.0328] BKJD
Rp/R* = 0.0103 [0.0120]
a/R* = 40.75 [217.20]
b = 0.68 [4.35]
Seff = 12.04 [5.73]
Teq = 475 [57] K
Rp = 1.46 [1.75] Re
a = 0.3795 [0.1076] AU
Ag = 5491.11 [13058.99] [0.42 σ]
Teffp = 6322 [3690] K [1.58 σ]

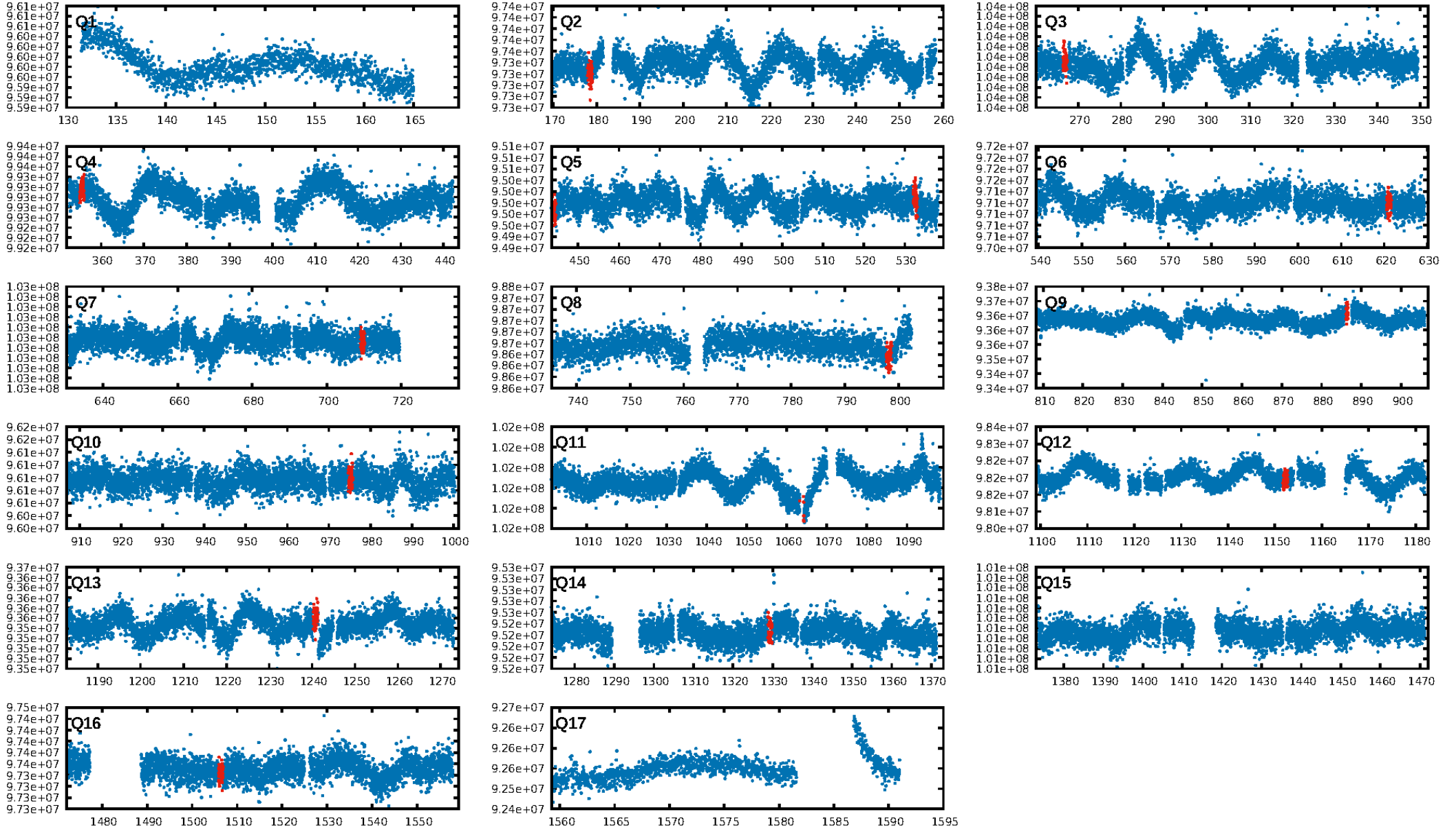
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [121.01 σ]
LongPeriod-sig: 100.0% [291.67 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.82e-10
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.8357
Centroid-sig: 59.7%
Centroid-so: 0.873 arcsec [0.85 σ]
OotOffset-rm: 2.337 arcsec [1.33 σ]
KicOffset-rm: 2.423 arcsec [1.47 σ]
OotOffset-st: 1/0/3/0 [4]
KicOffset-st: 1/0/3/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/9]

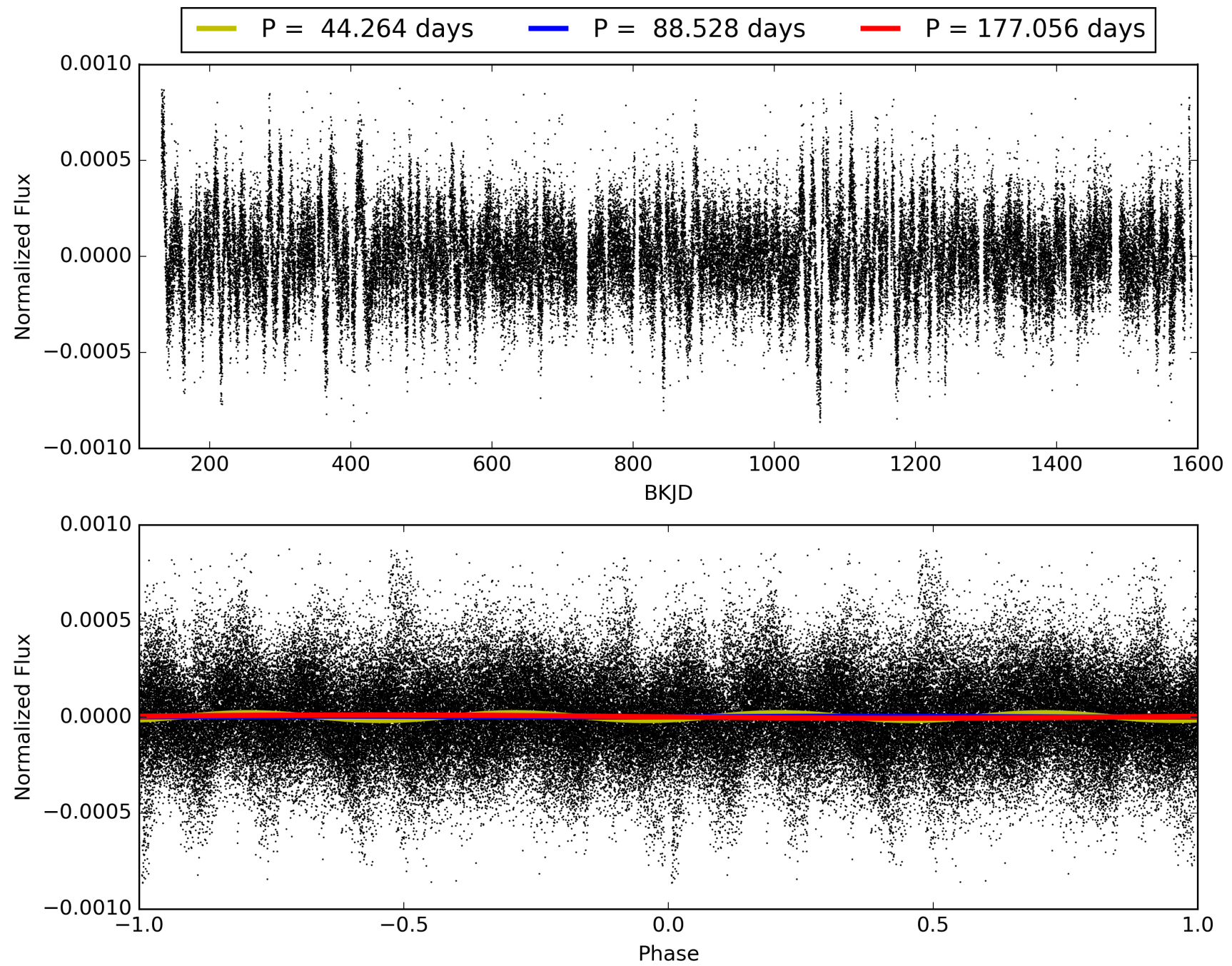
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:22:04 Z

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

TCE 008824602-03, PDC Light Curves

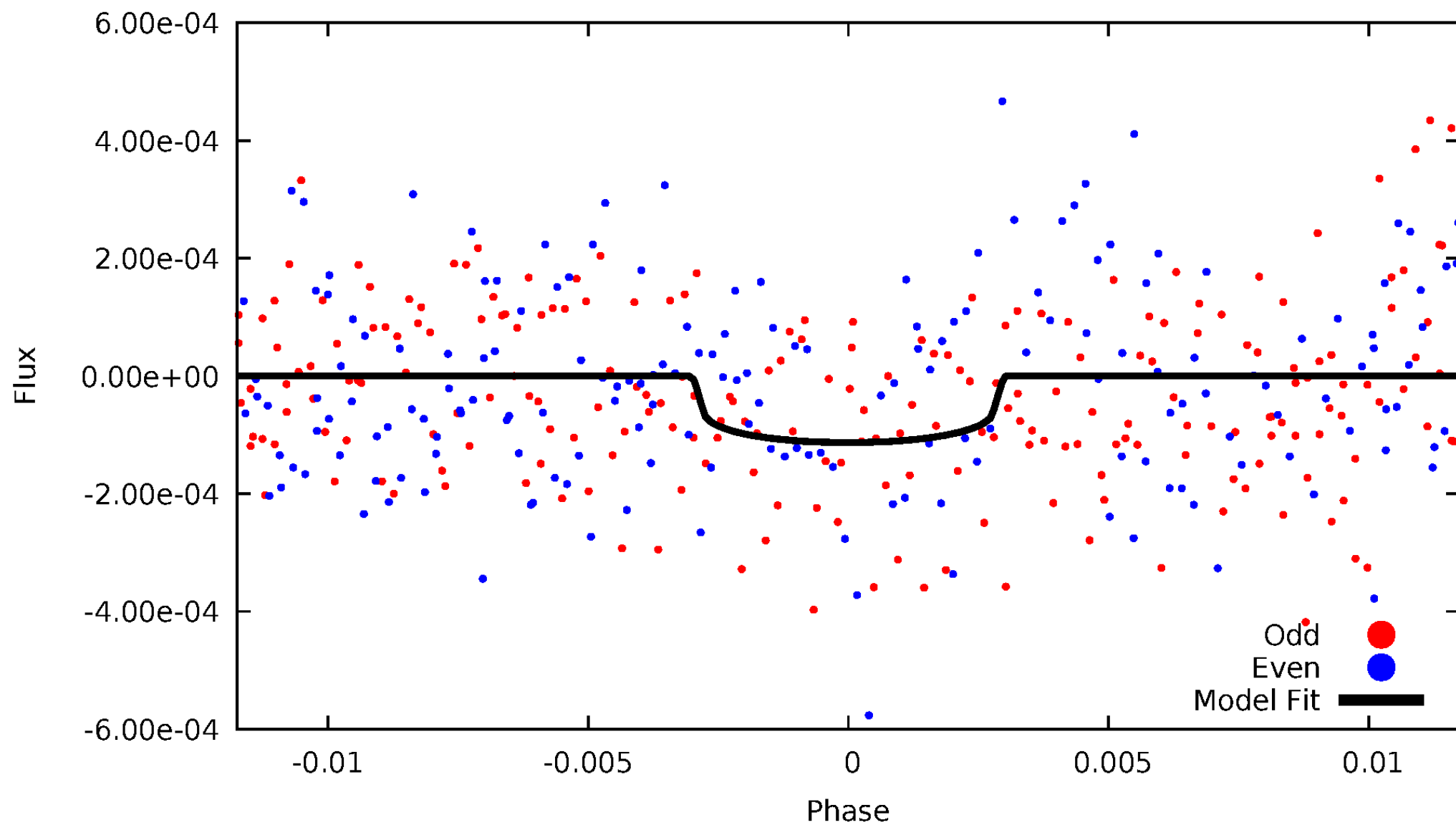


TCE 008824602-03



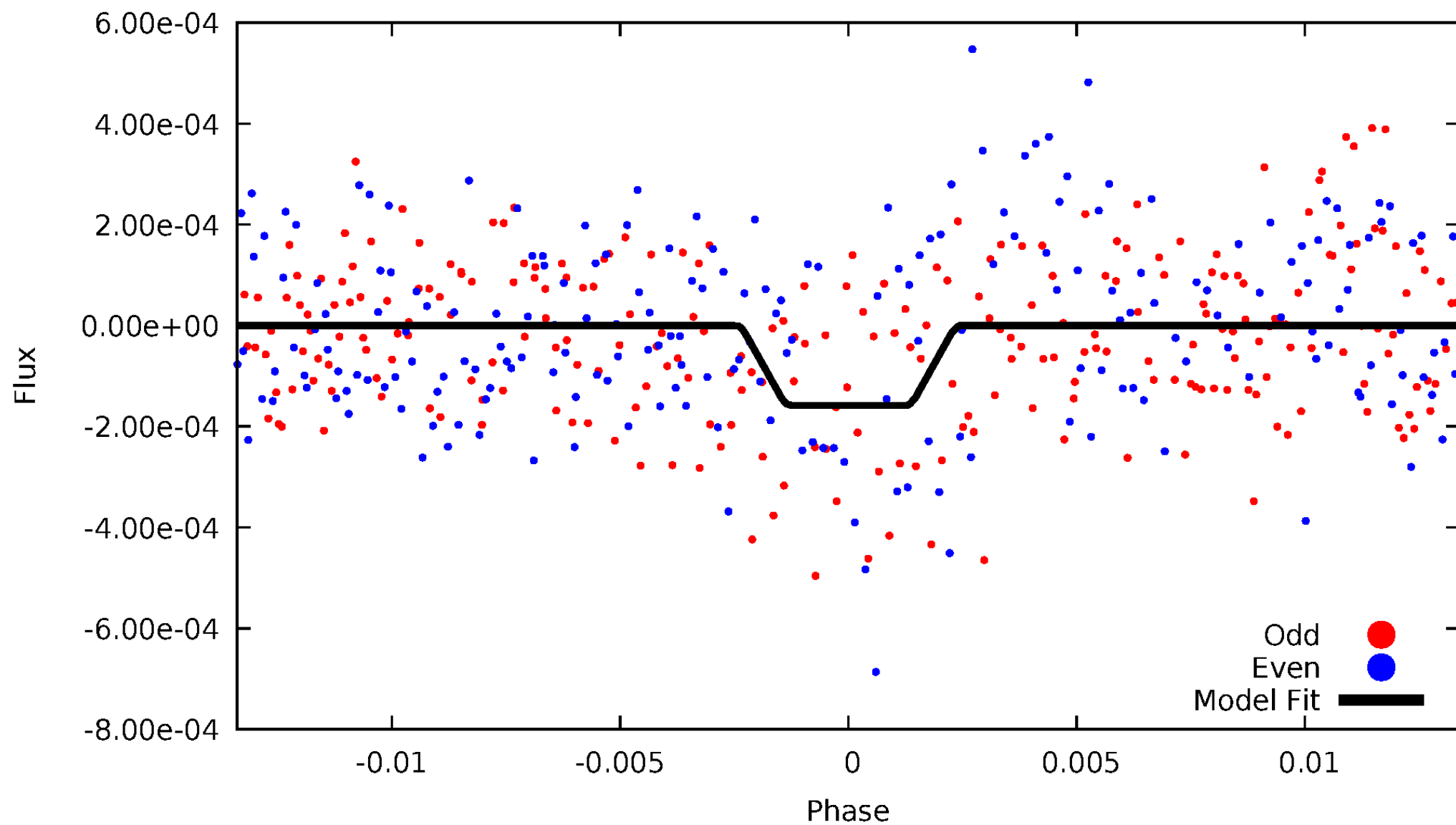
DV Odd/Even

TCE 008824602-03

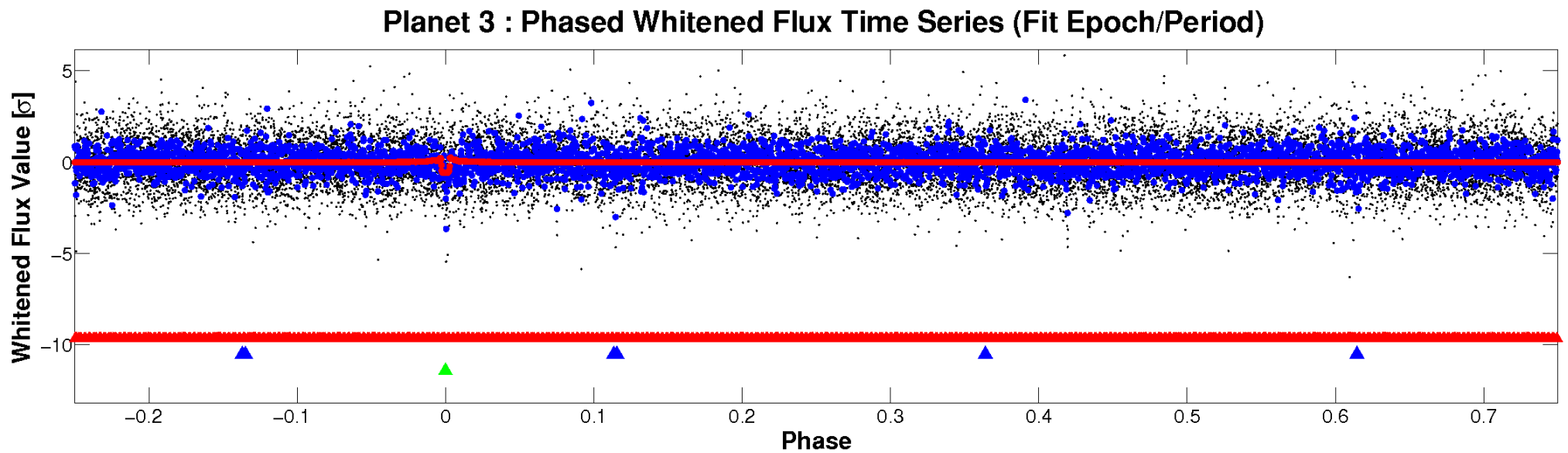
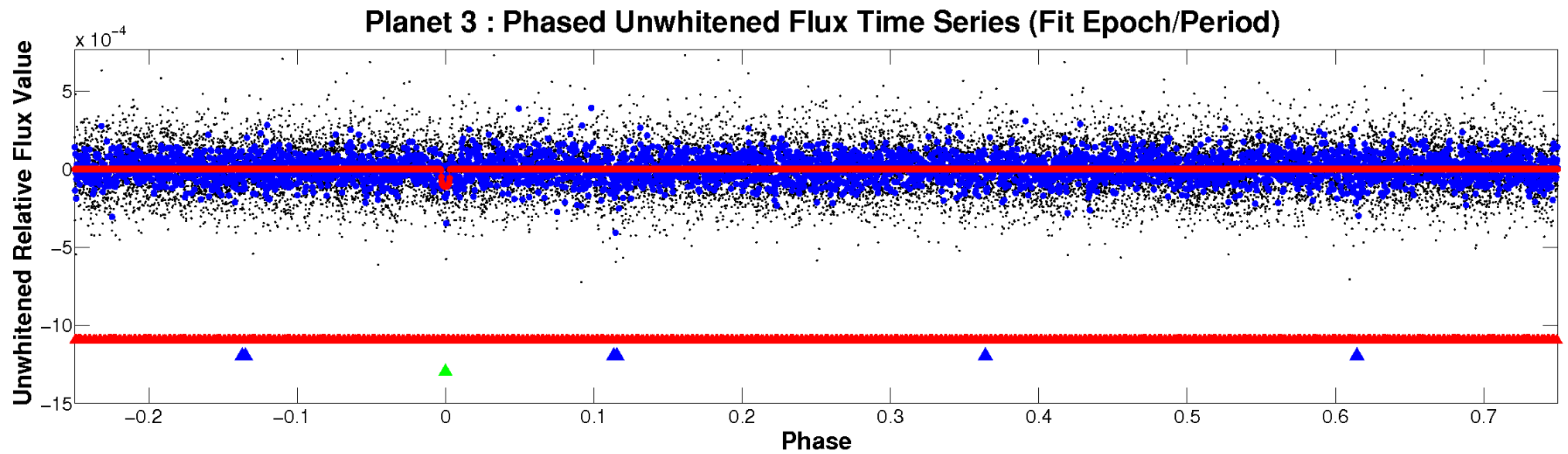


ALT Odd/Even

TCE 008824602-03

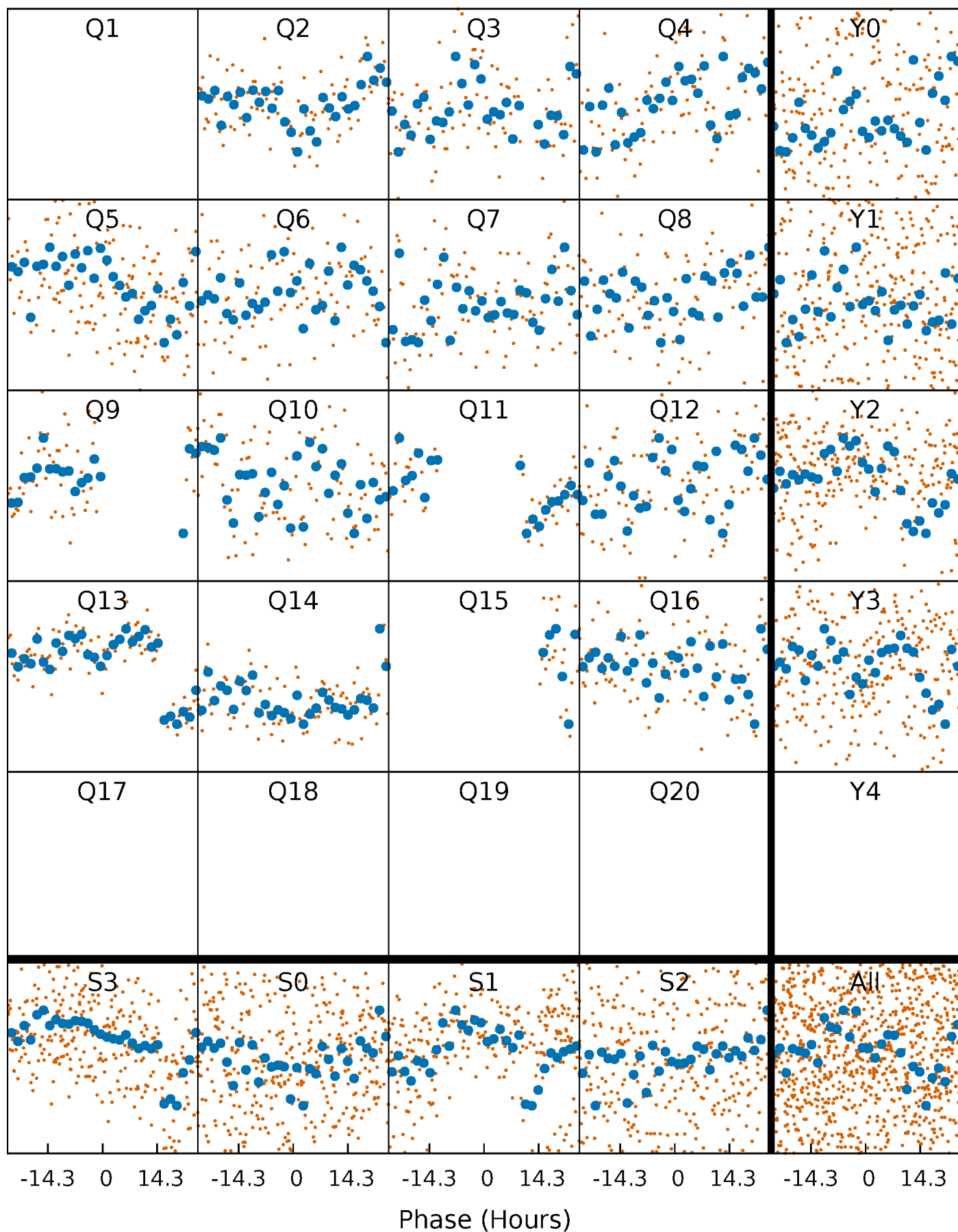


Non-Whitened Vs. Whitened Light Curve



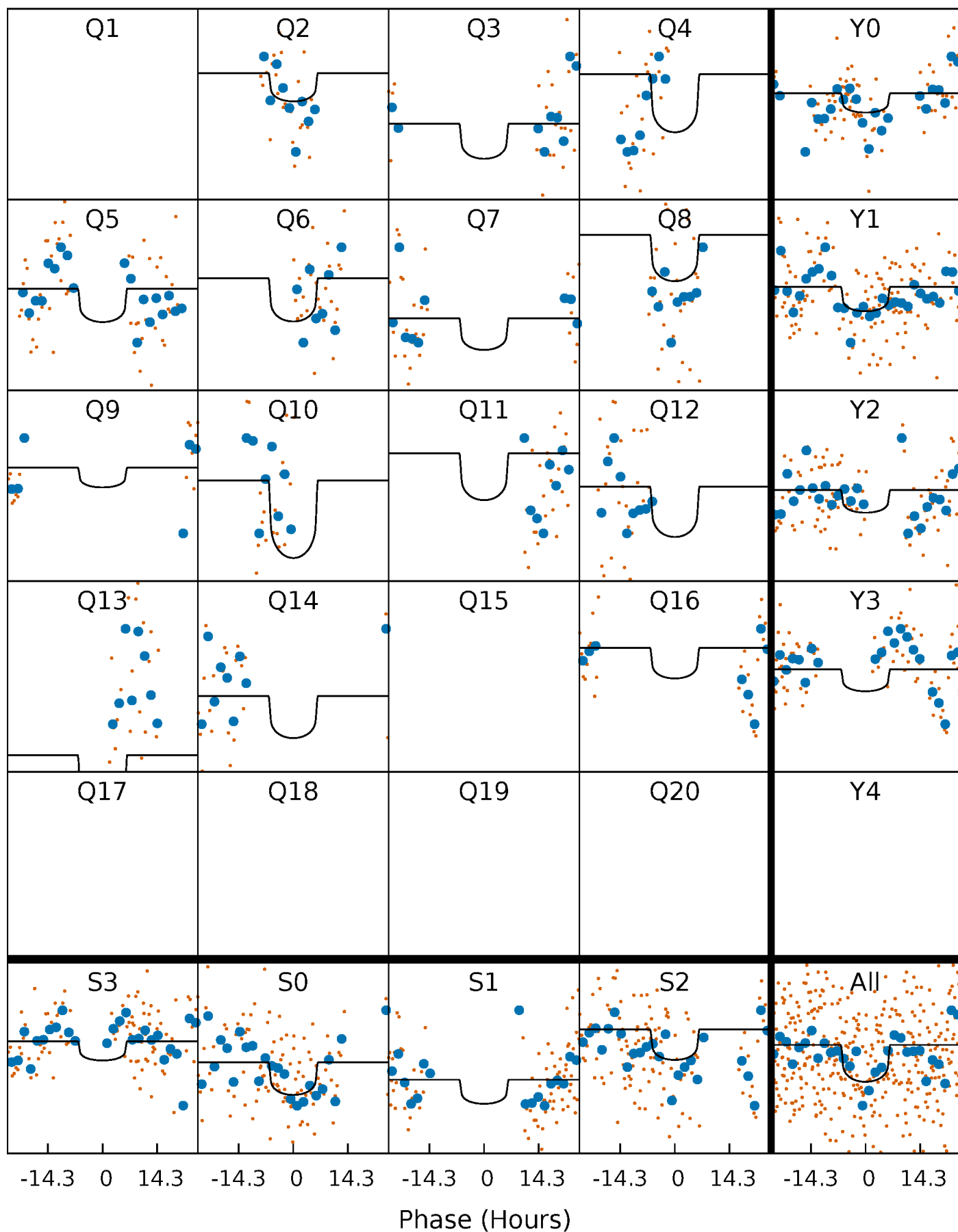
PDC Quarter-Phased Transit Curves

TCE 008824602-03 $P = 88.528249$ Days $T_0 = 178.455525$ (BKJD)



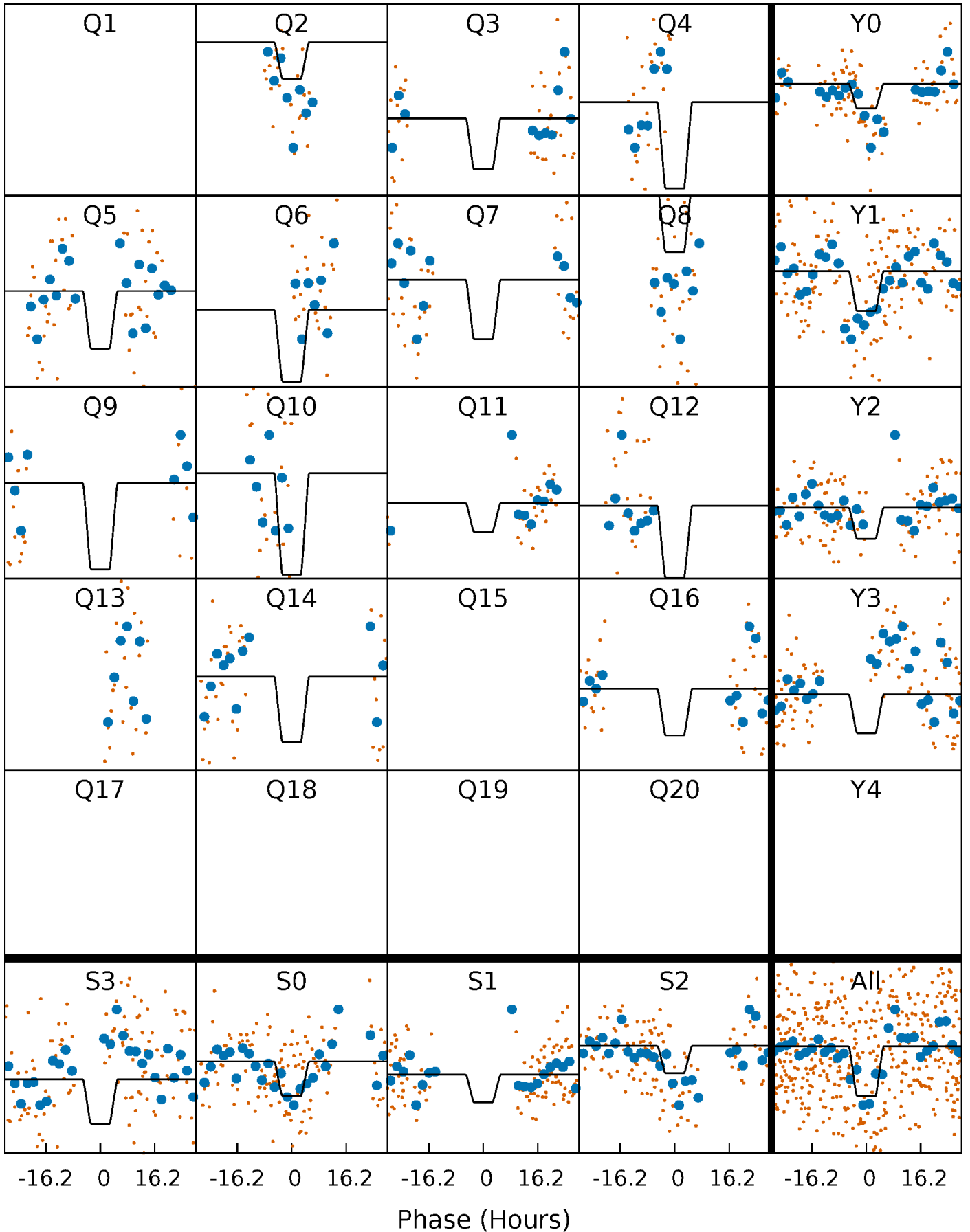
DV Quarter-Phased Transit Curves

TCE 008824602-03 P= 88.528249 Days $T_0=178.455525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

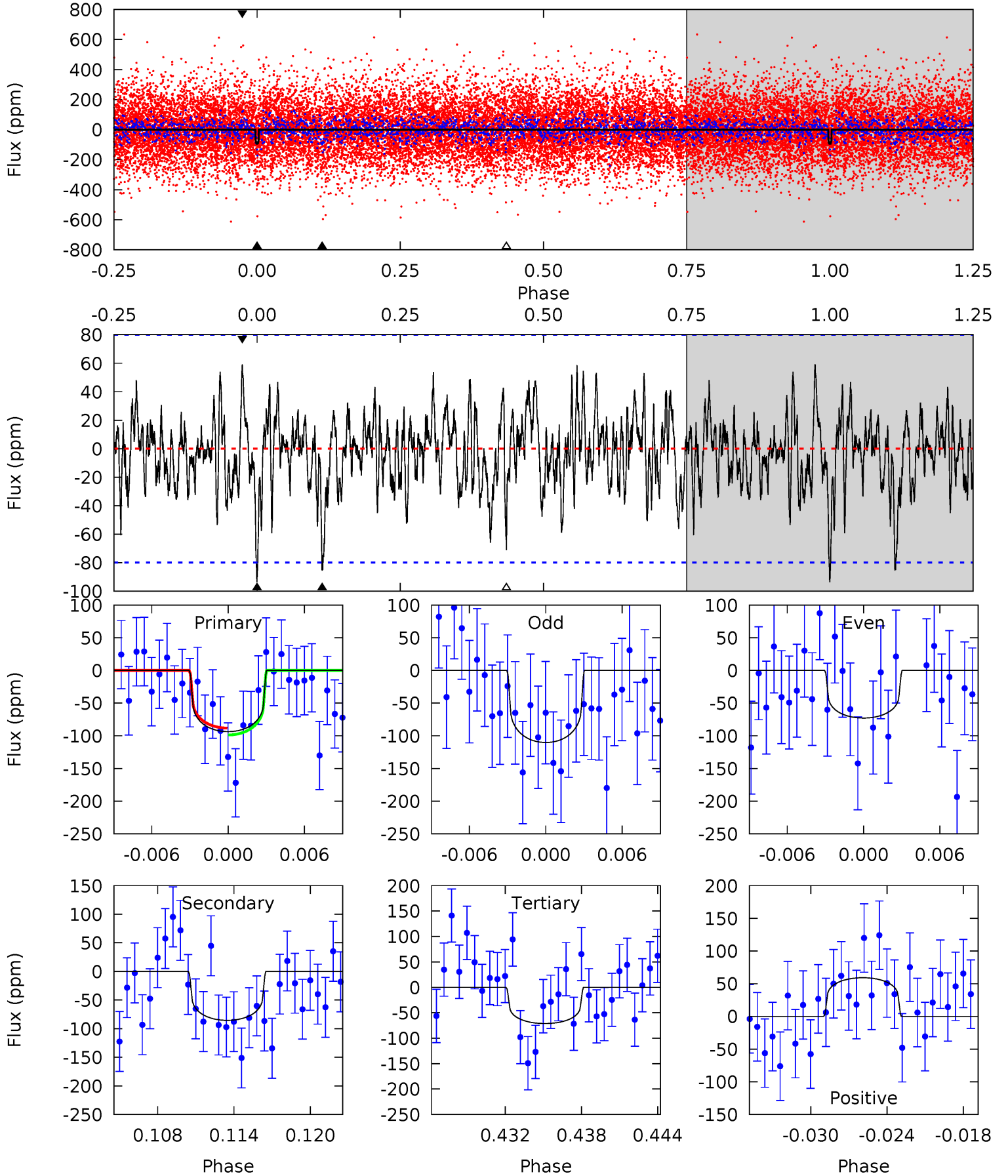
TCE 008824602-03 $P = 88.531569$ Days $T_0 = 178.436977$ (BKJD)



DV Model-Shift Uniqueness Test

008824602-03, P = 88.528249 Days, E = 89.927276 Days

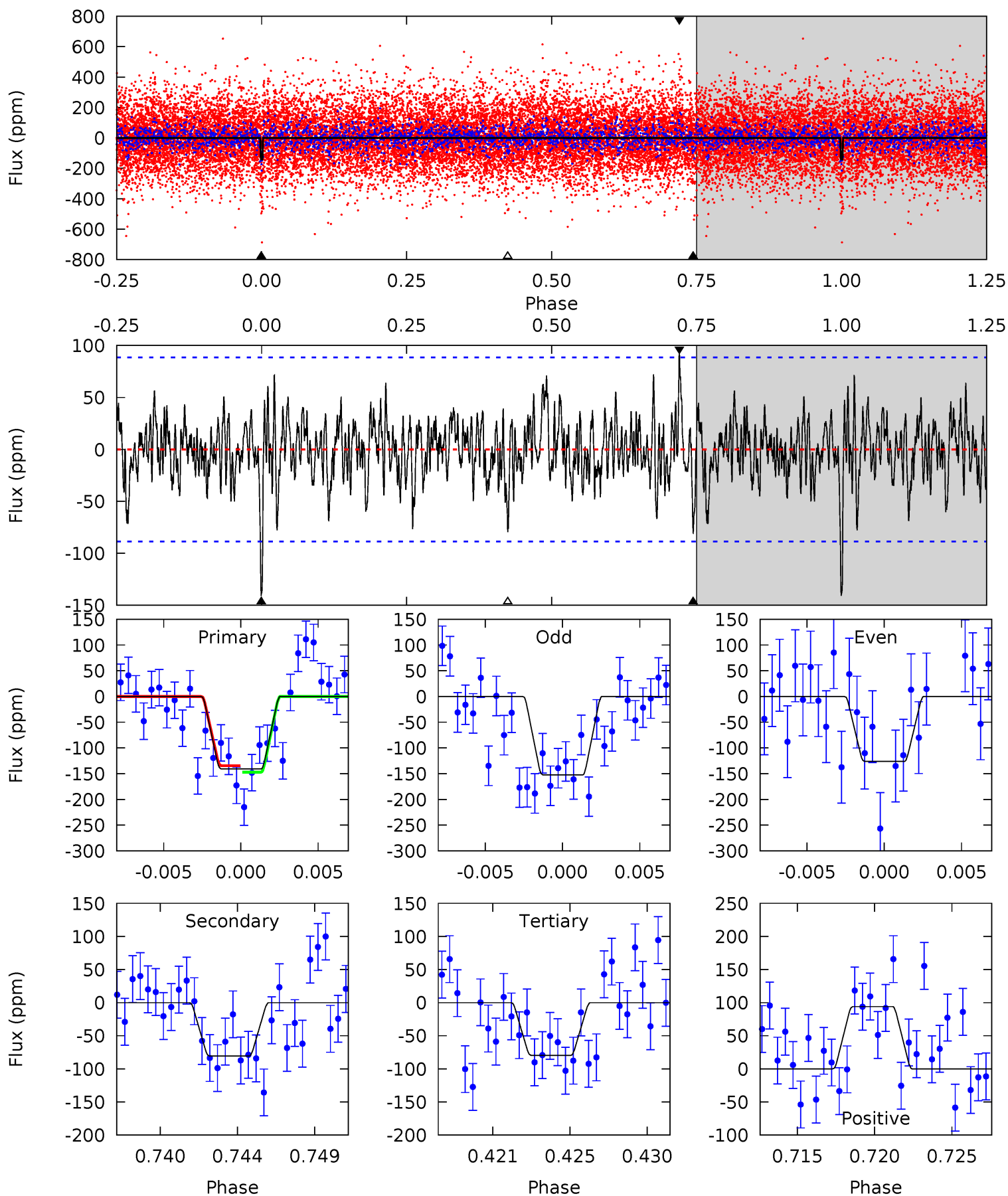
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.01	5.48	4.56	3.79	5.12	2.75	1.41	1.44	2.21	0.92	1.69	1.19	1.03	0.39	0.34



Alt Model-Shift Uniqueness Test

008824602-03, P = 88.531569 Days, E = 89.905408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.21	4.69	4.63	5.48	5.16	2.82	1.45	3.57	2.73	0.06	-0.79	0.76	2.52	0.40	0.37



Stellar Parameters For KIC 008824602

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5819^{+158}_{-158}	$4.179^{+0.276}_{-0.161}$	$-0.180^{+0.300}_{-0.300}$	$1.299^{+0.330}_{-0.367}$	$0.930^{+0.133}_{-0.096}$	$0.597^{+1.001}_{-0.288}$
	+3%/-3%	+7%/-4%	+167%/-167%	+25%/-28%	+14%/-10%	+168%/-48%
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 008824602-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-85 ± 16	$1.80^{+1.58}_{-1.11}$	659^{+49}_{-54}	4952^{+3104}_{-1027}	2061^{+11370}_{-1454}
Alt.	-81 ± 17	$2.03^{+1.50}_{-1.31}$	658^{+47}_{-53}	4677^{+3106}_{-893}	1514^{+10825}_{-1030}

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

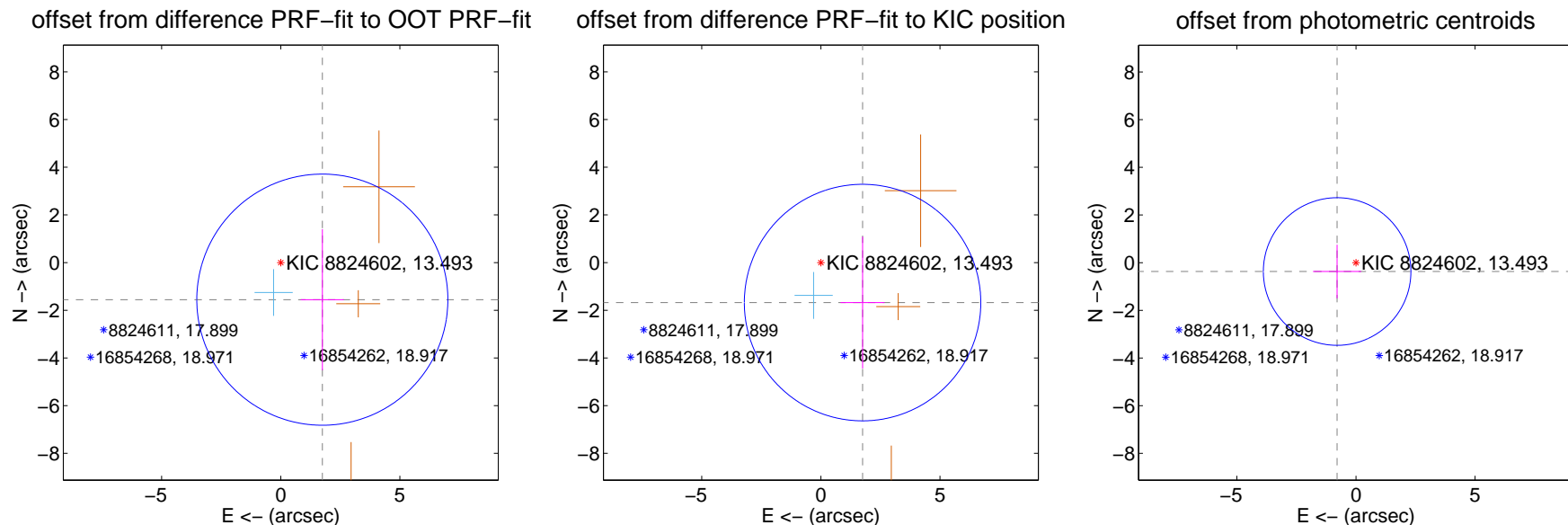
DV Centroid Data

Supplemental centroid analysis for 008824602-03. Kepler magnitude: 13.49. Transit SNR 5.43

There are 1 quarters with good PRF difference image offsets

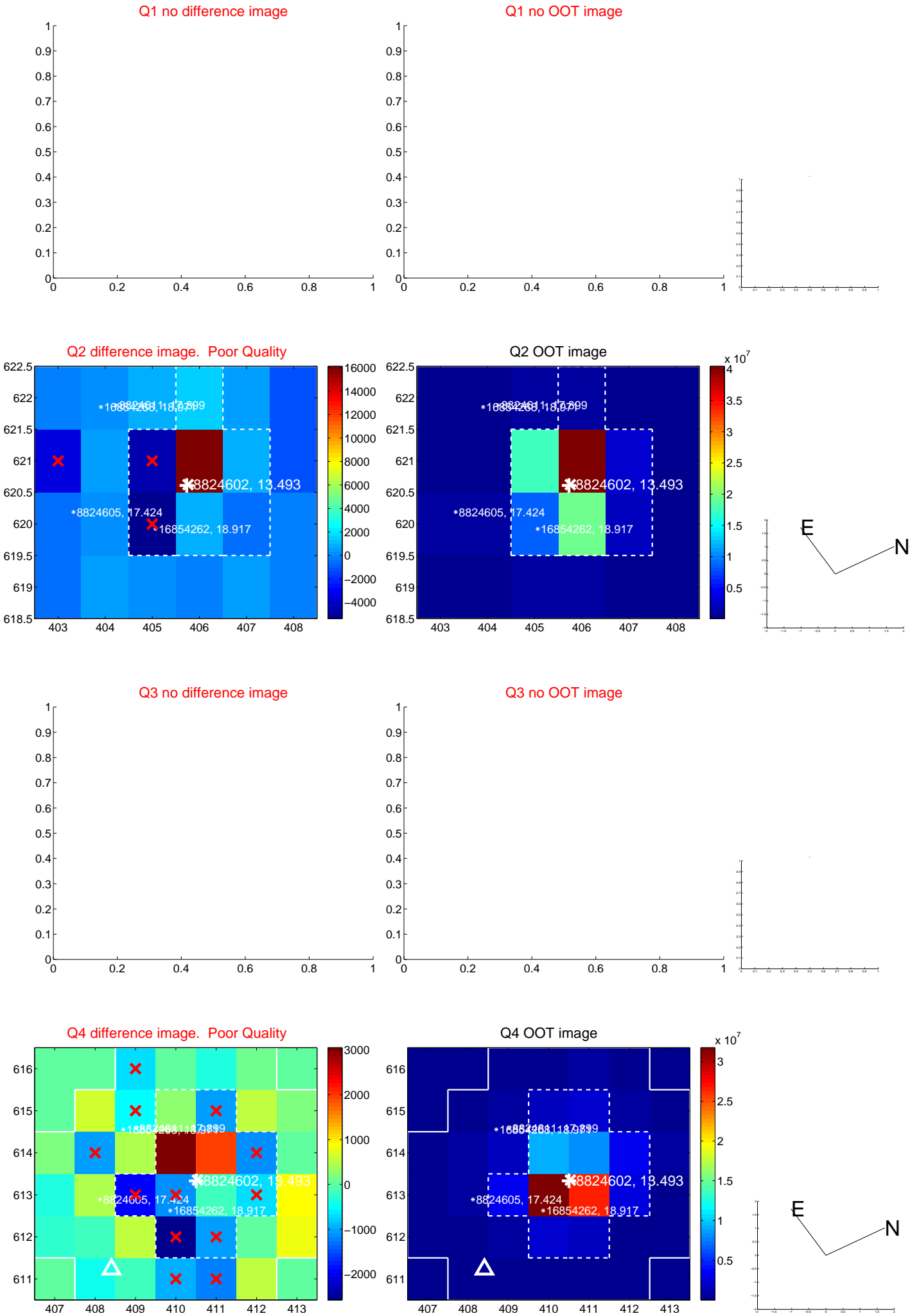
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.337 ± 1.755	1.33	-1.745 ± 0.903	-1.555 ± 2.955
PRF-fit source offset from KIC position	2.423 ± 1.653	1.47	-1.749 ± 0.921	-1.677 ± 2.763
photometric centroid source offset	0.87 ± 1.03	0.85	0.79 ± 1.01	-0.37 ± 1.12

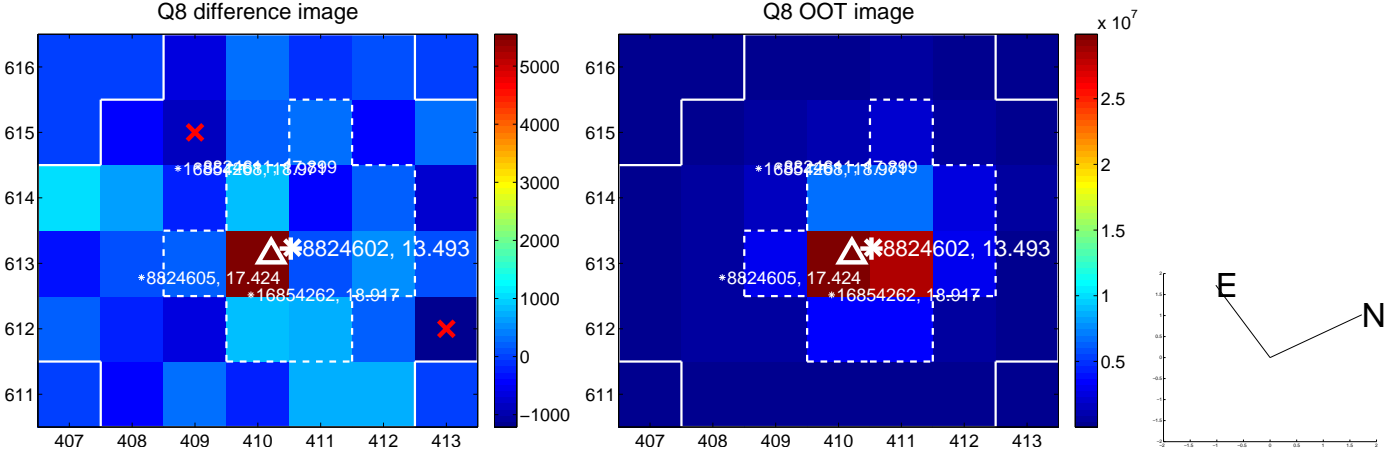
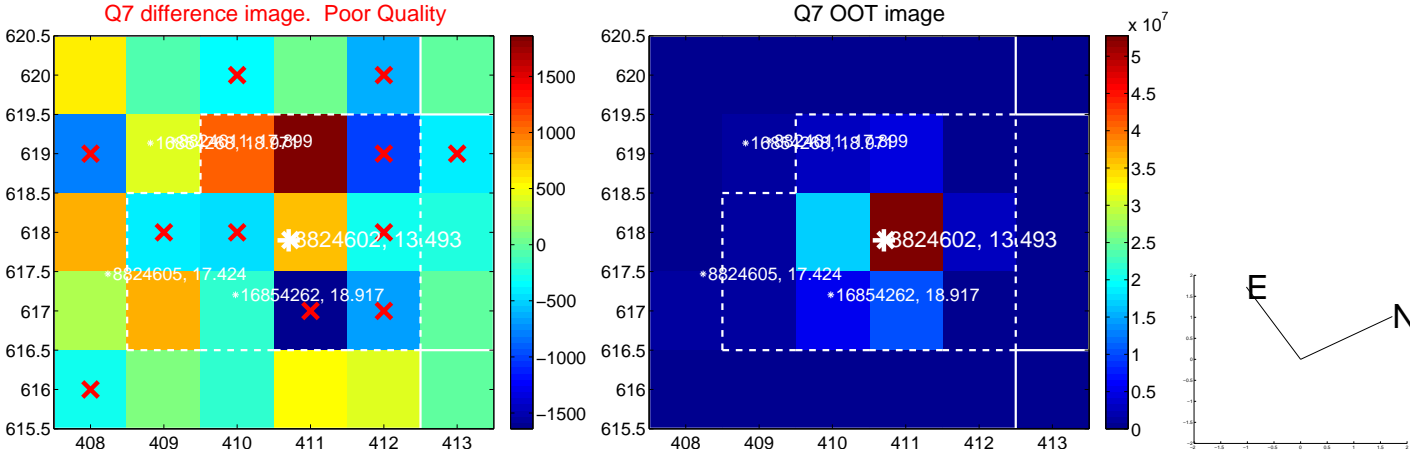
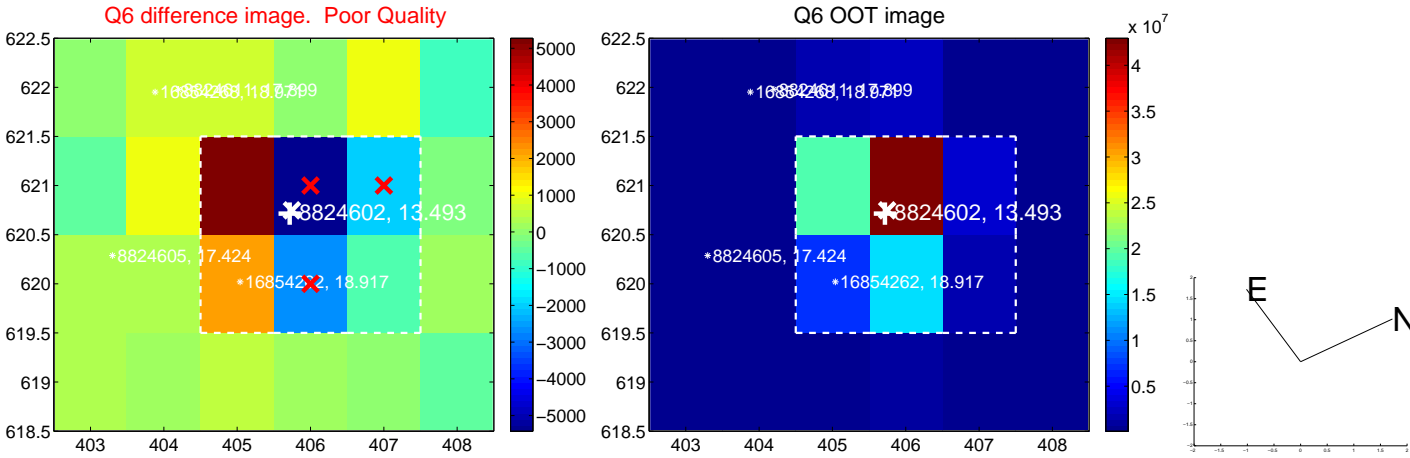
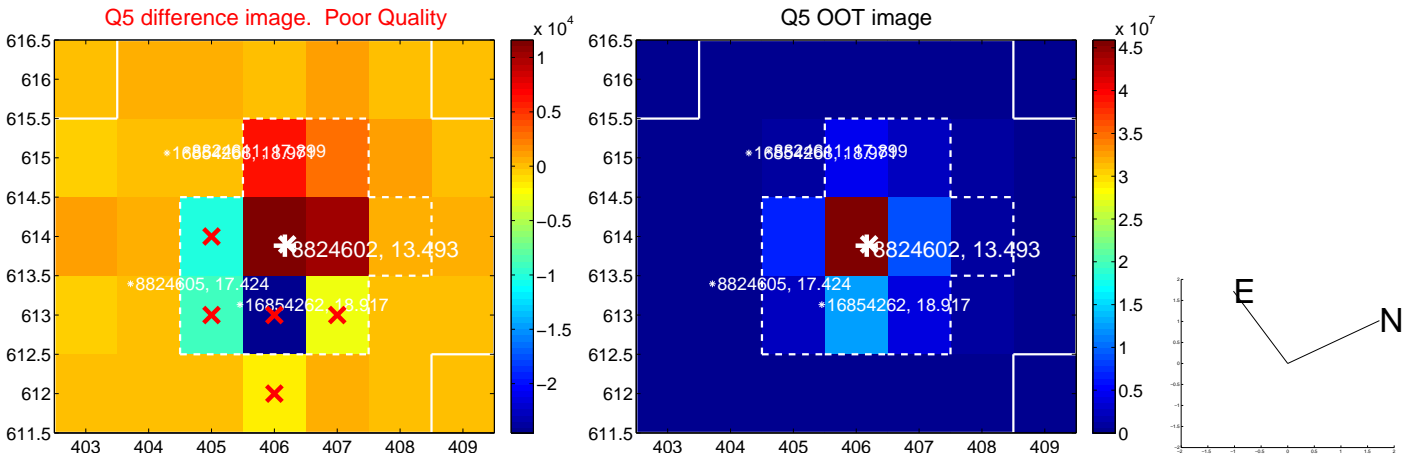


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

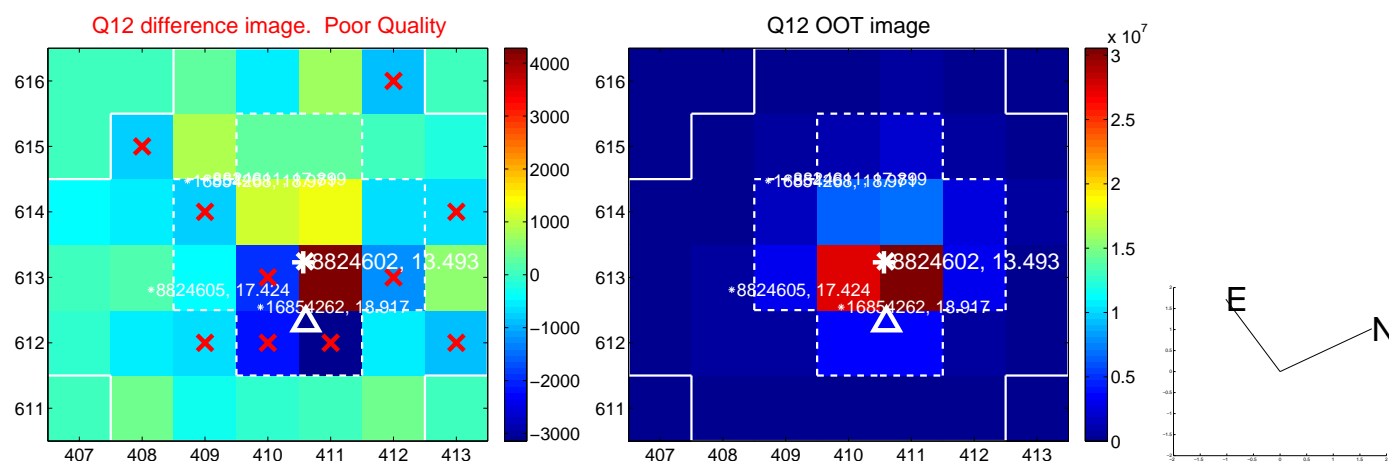
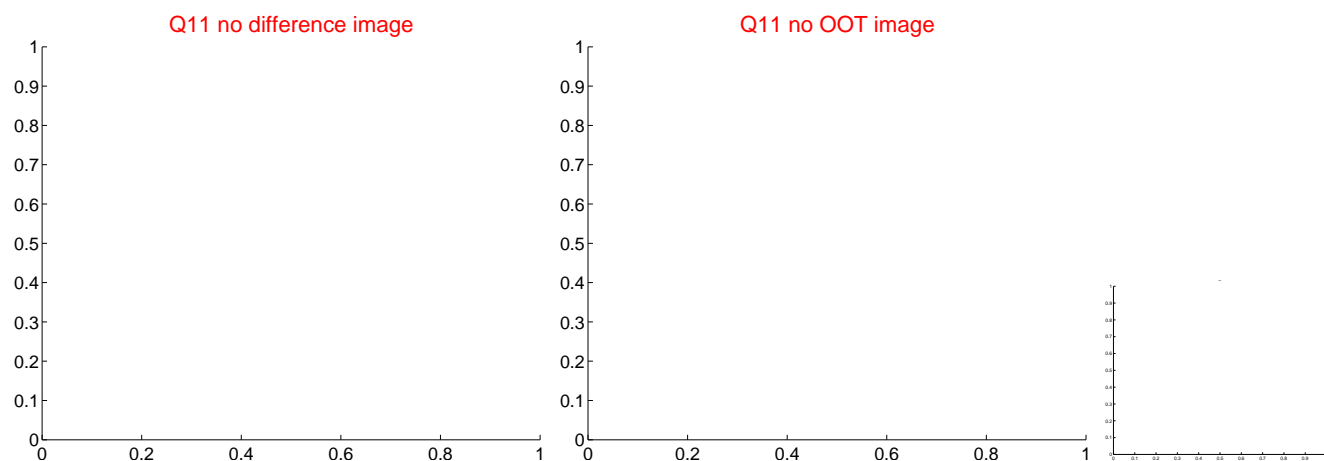
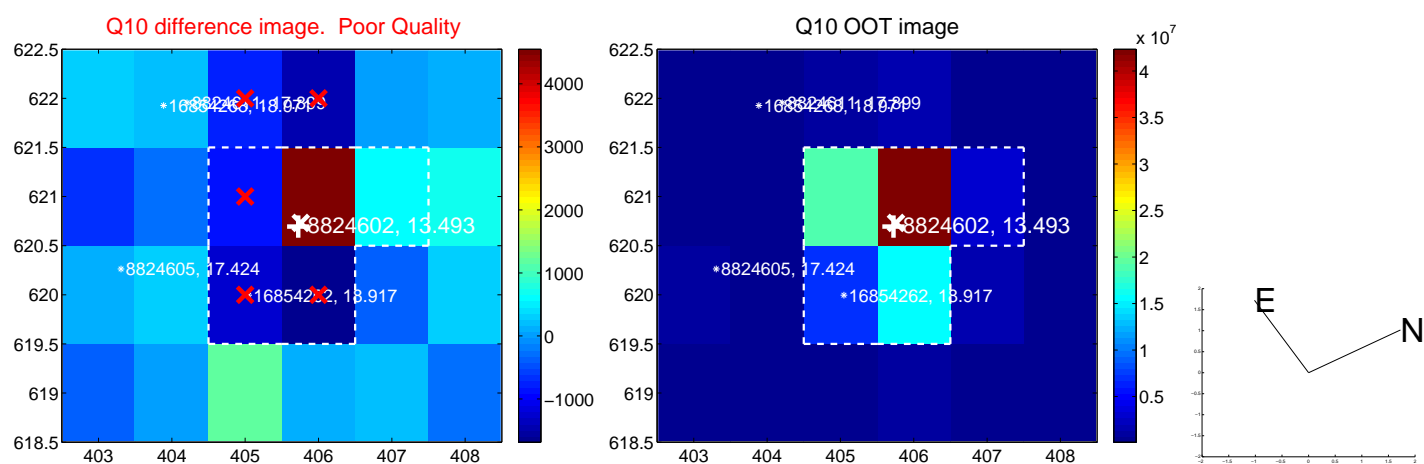
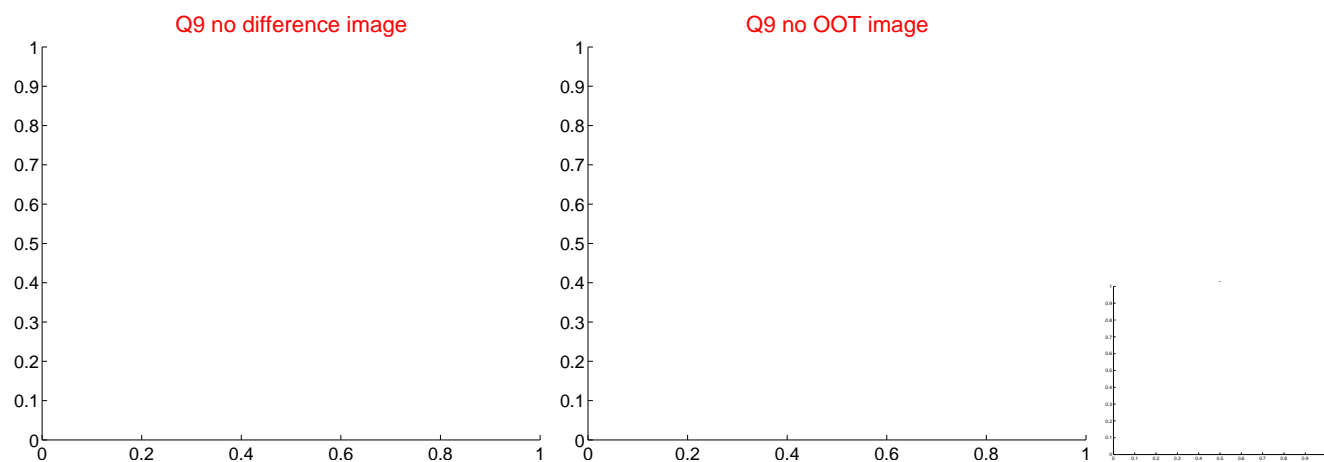
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



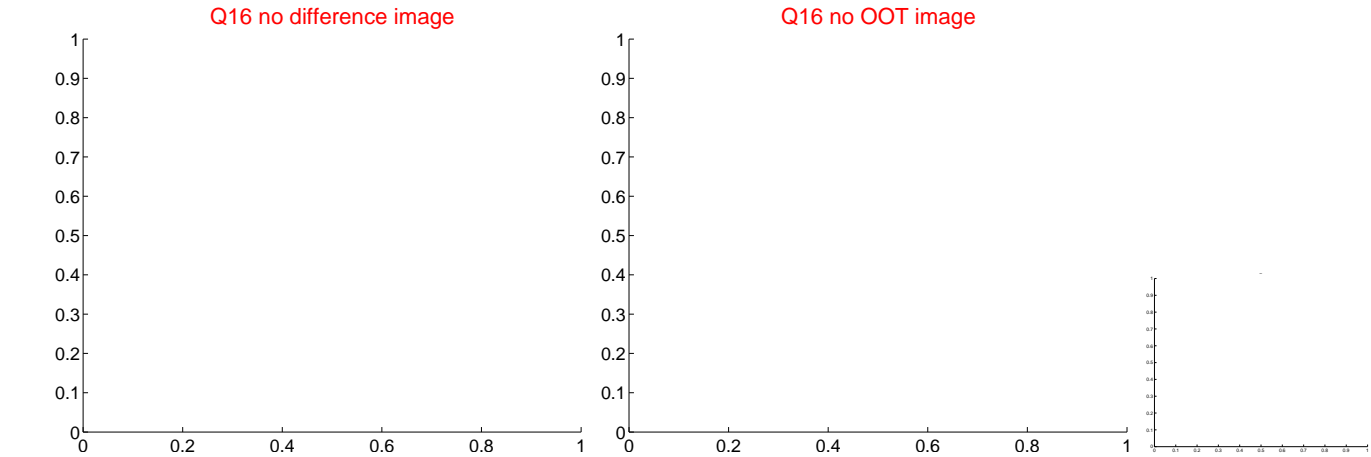
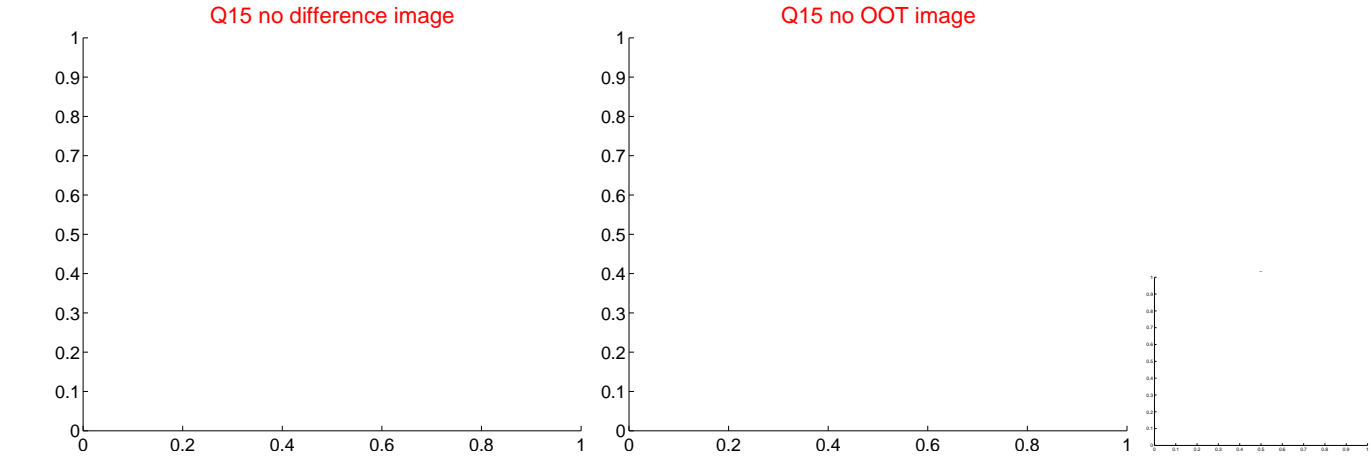
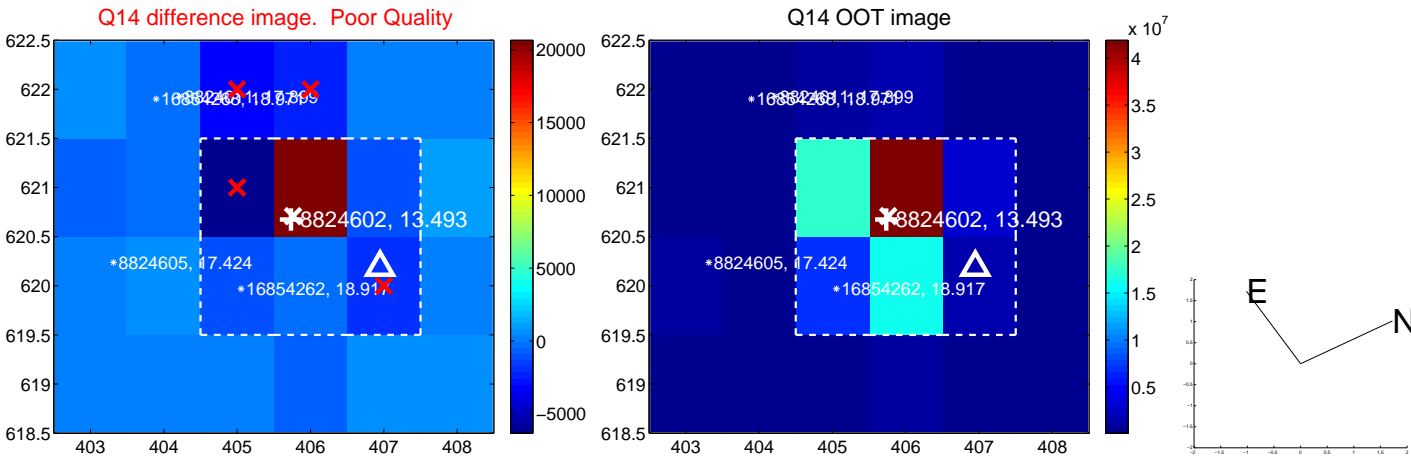
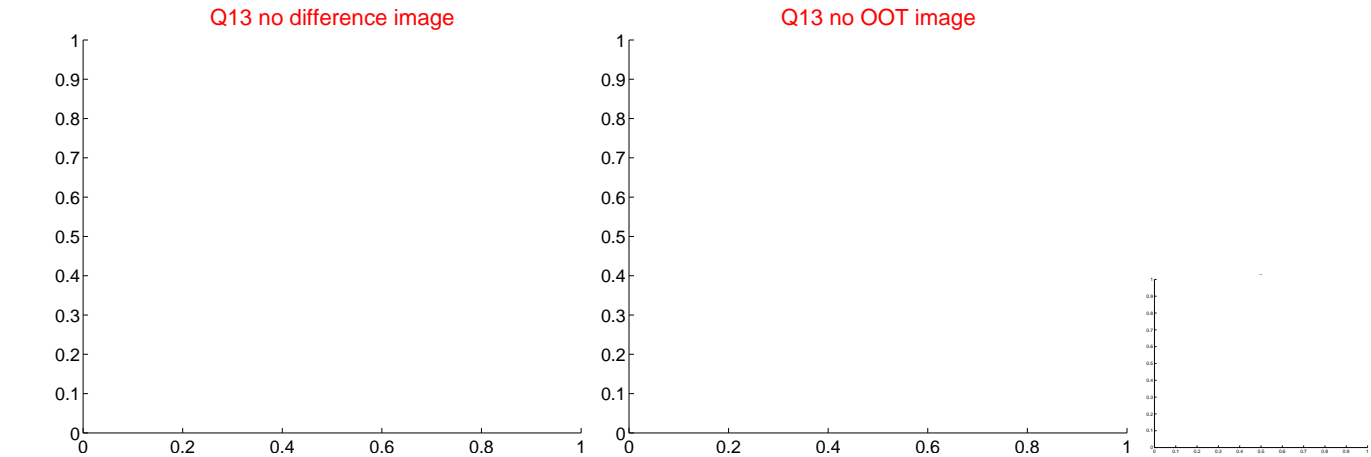
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



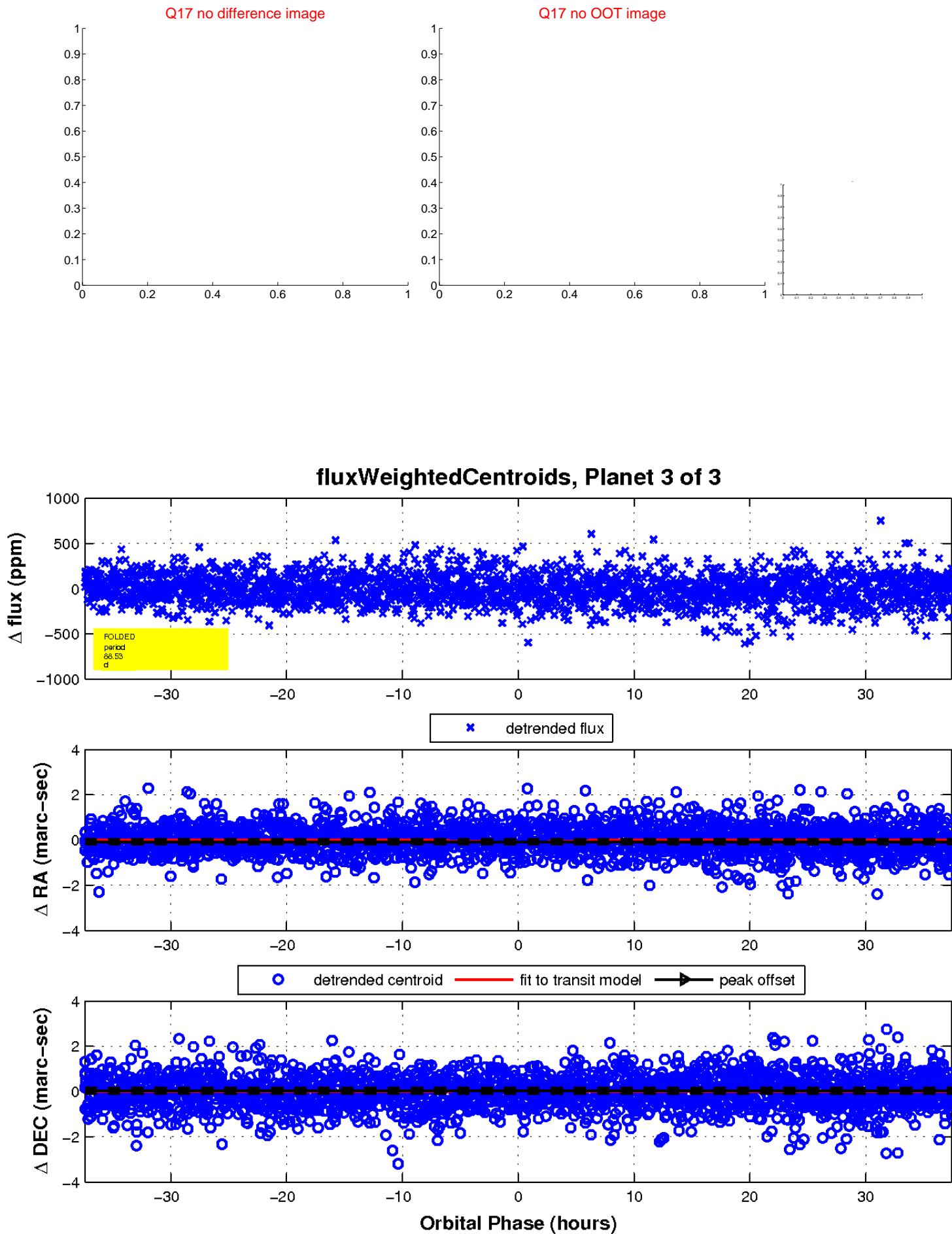
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



white ×: 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.



UKIRT Image

Declination

