

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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
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005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
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Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

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

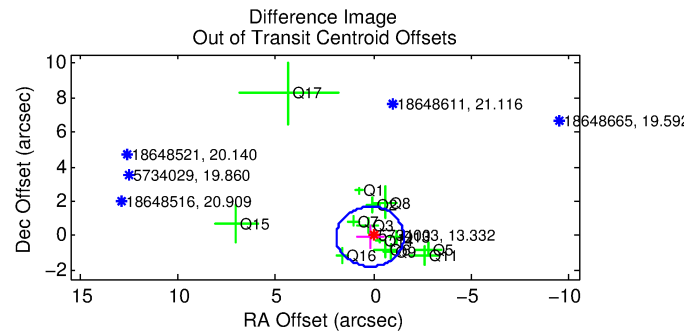
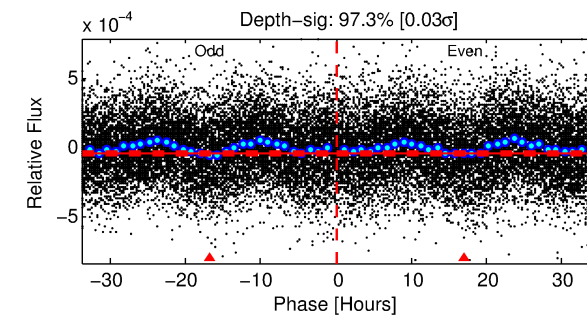
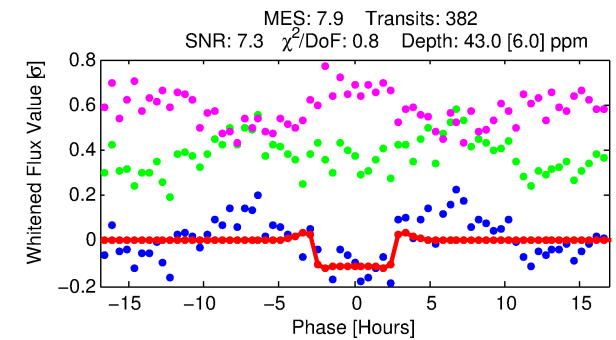
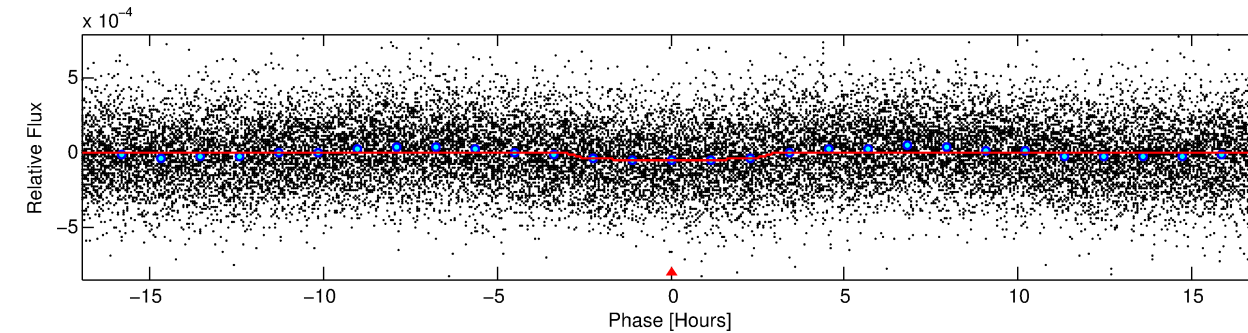
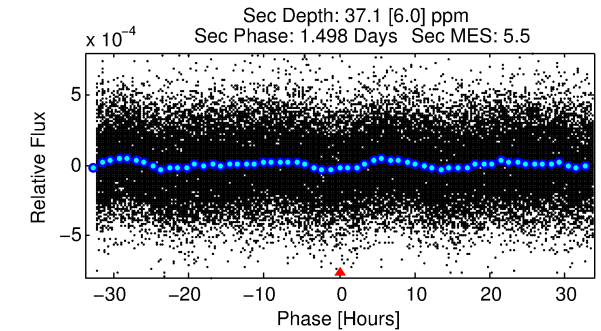
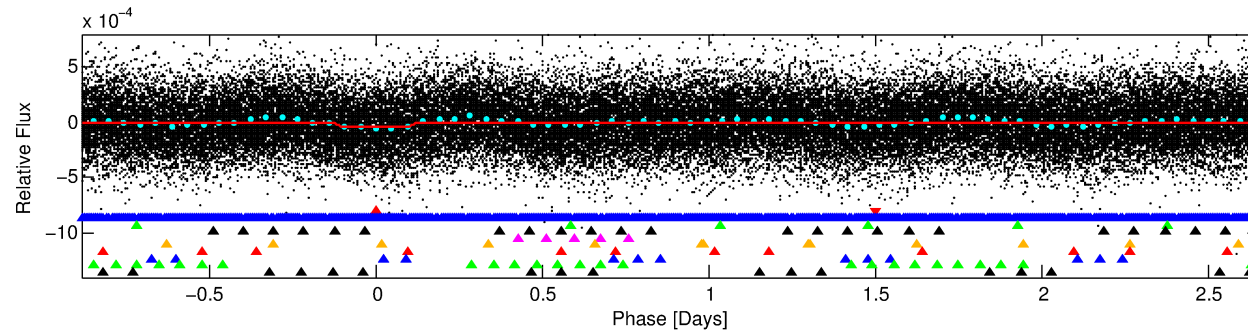
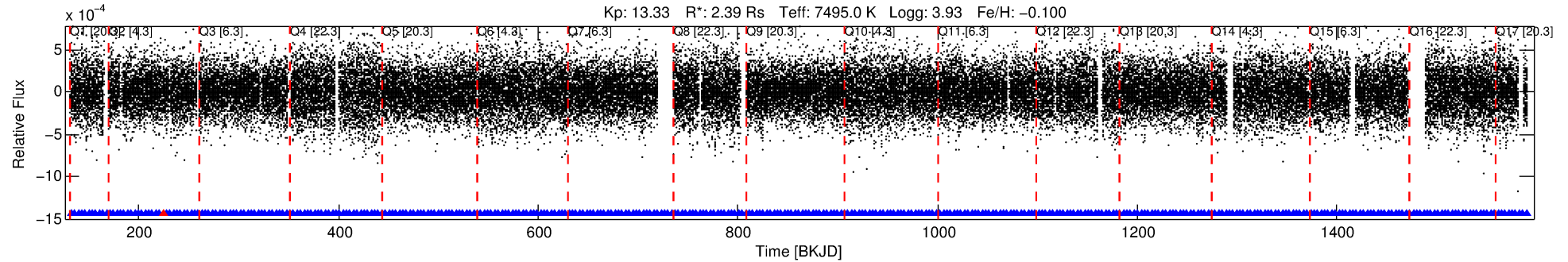
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-01

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 1 of 10 Period: 3.537 d



DV Fit Results:

Period = 3.53691 [0.00003] d
Epoch = 132.3811 [0.0052] BKJD
Rp/R* = 0.0068 [0.0018]
a/R* = 2.59 [3.61]
b = 0.87 [0.46]
Seff = 5369.83 [2825.46]
Teq = 2183 [287] K
Rp = 1.78 [0.76] Re
a = 0.0548 [0.0172] AU
Ag = 19.40 [14.35] [1.28σ]
Teffp = 7083 [1027] K [4.59σ]

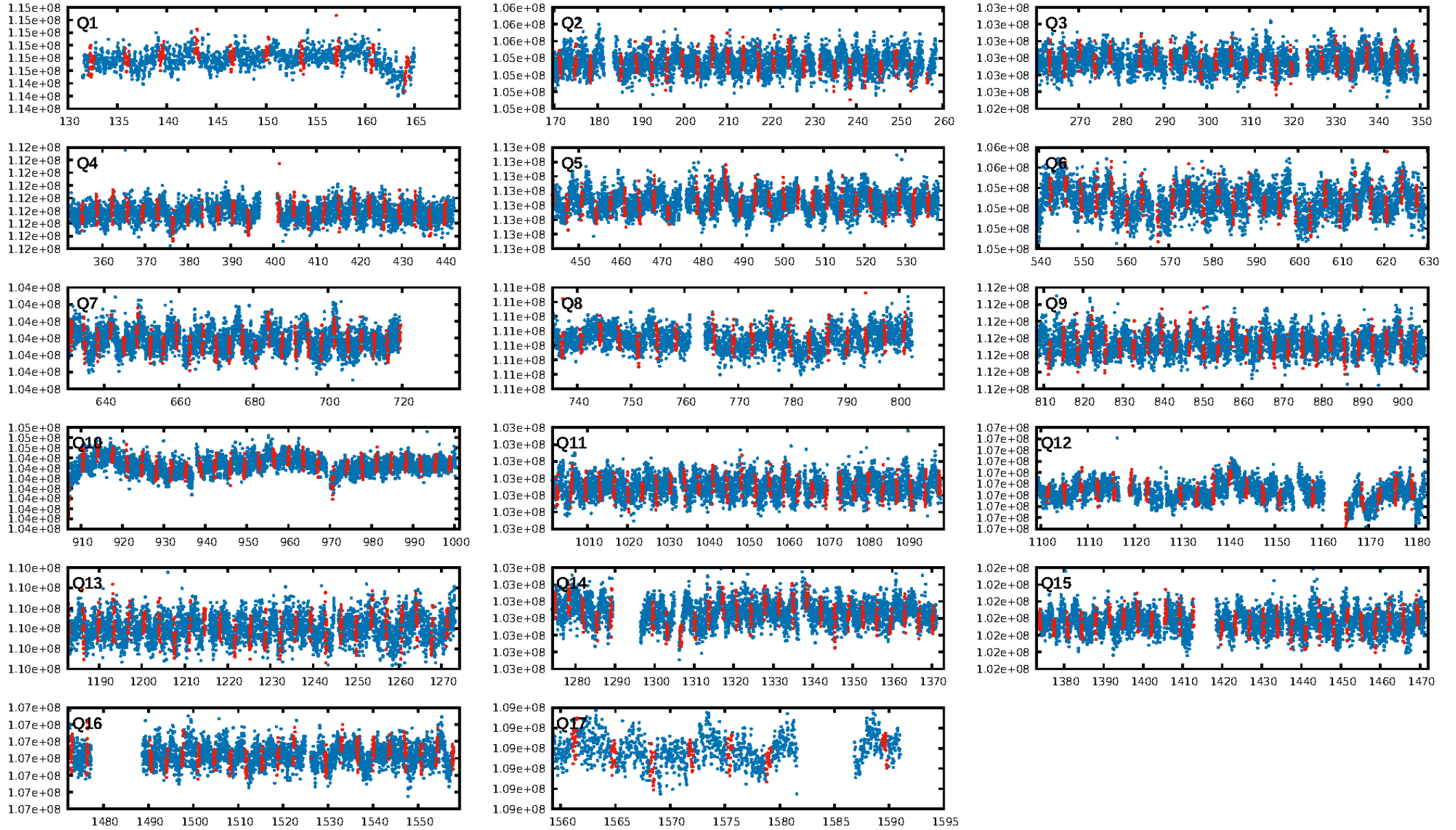
DV Diagnostic Results:

ShortPeriod-sig: 99.6% [2.84σ]
LongPeriod-sig: 100.0% [213.83σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [364/365]
GhostDiagnostic-chr: 2.107
Centroid-sig: 32.0%
Centroid-so: 0.567 arcsec [0.80σ]
OotOffset-rm: 0.187 arcsec [0.33σ]
OotOffset-st: 3/4/2/5 [14]
KicOffset-rm: 0.154 arcsec [0.35σ]
KicOffset-st: 3/4/2/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

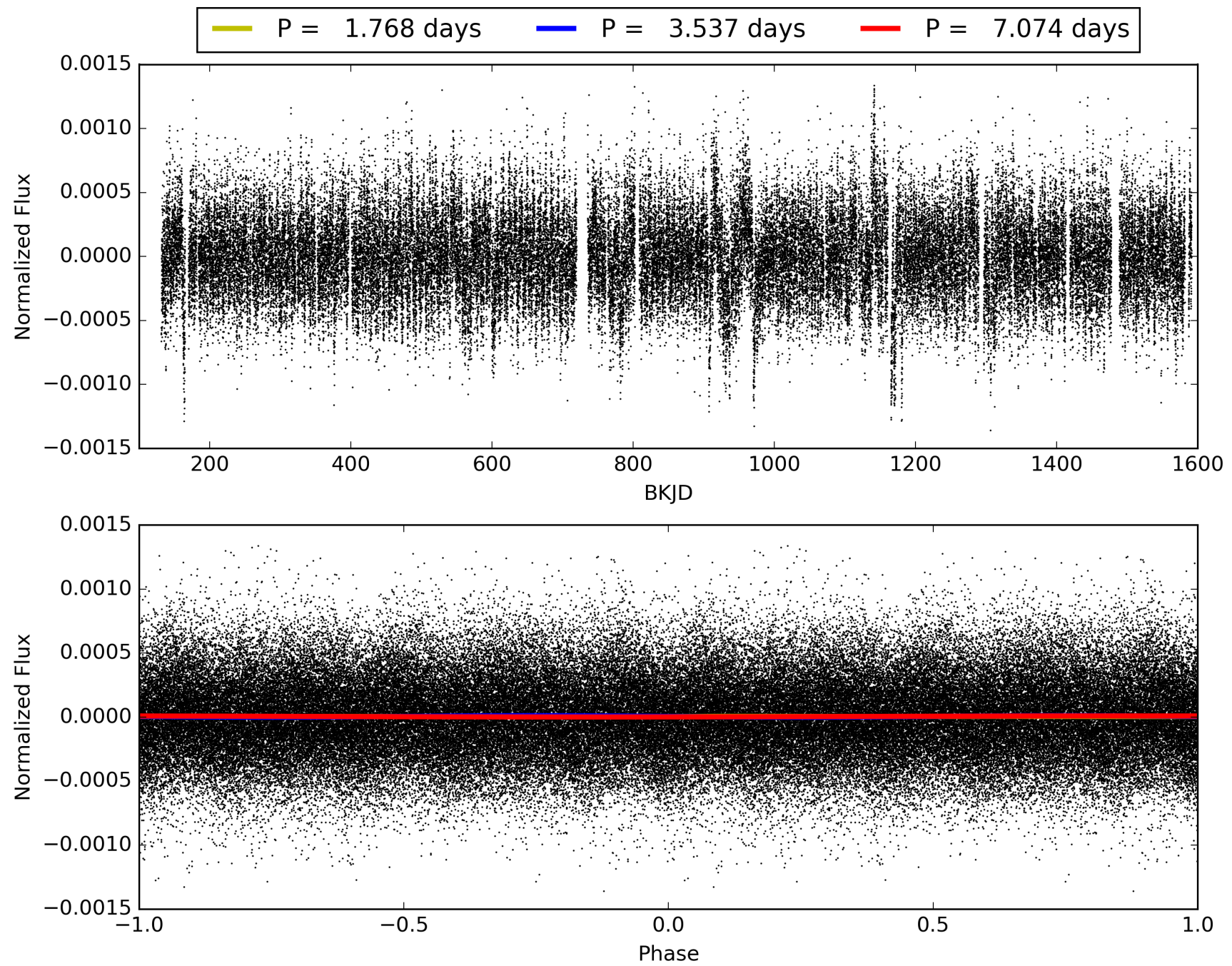
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:35 Z

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

TCE 005734003-01, PDC Light Curves

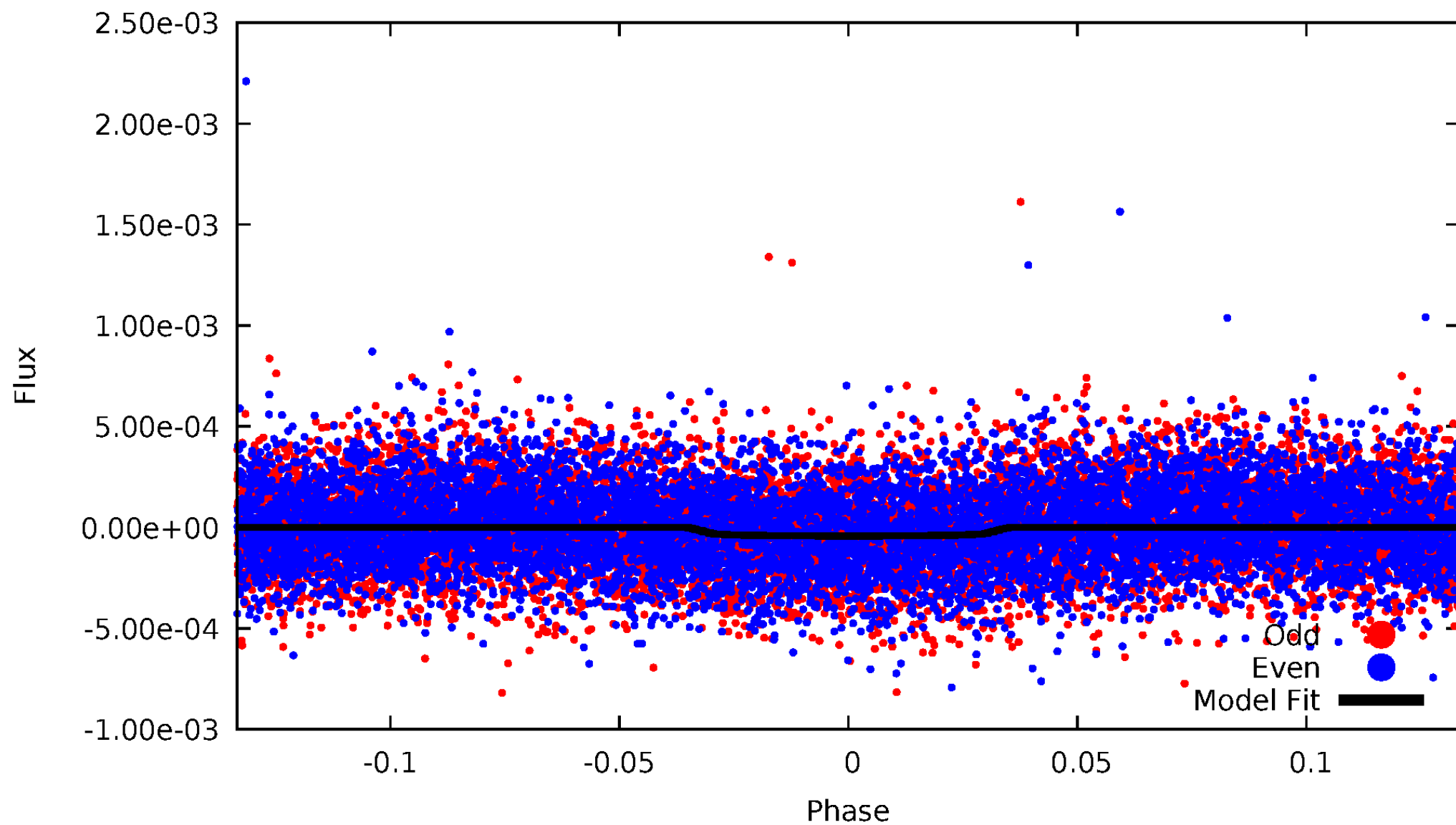


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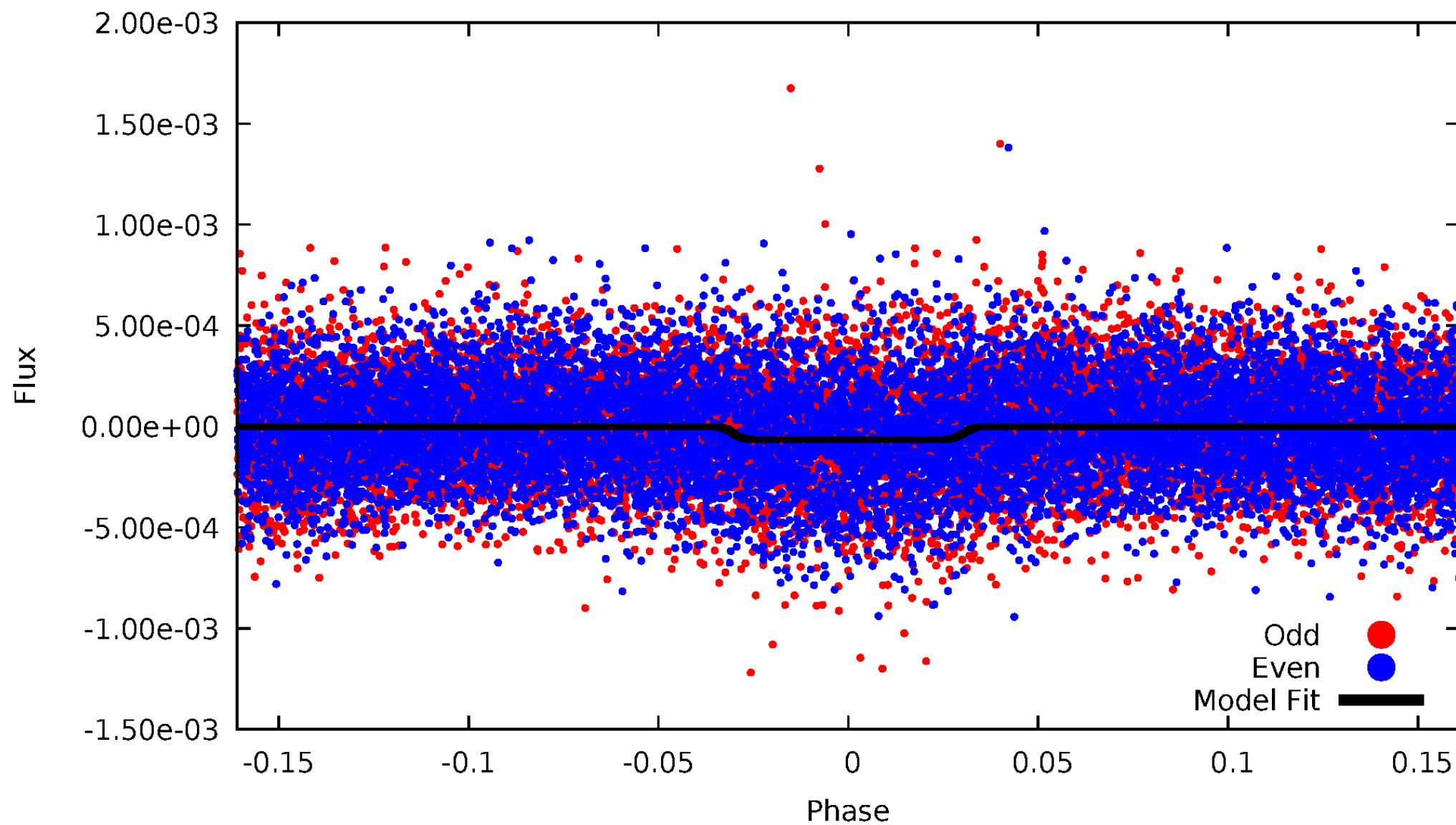
DV Odd/Even

TCE 005734003-01

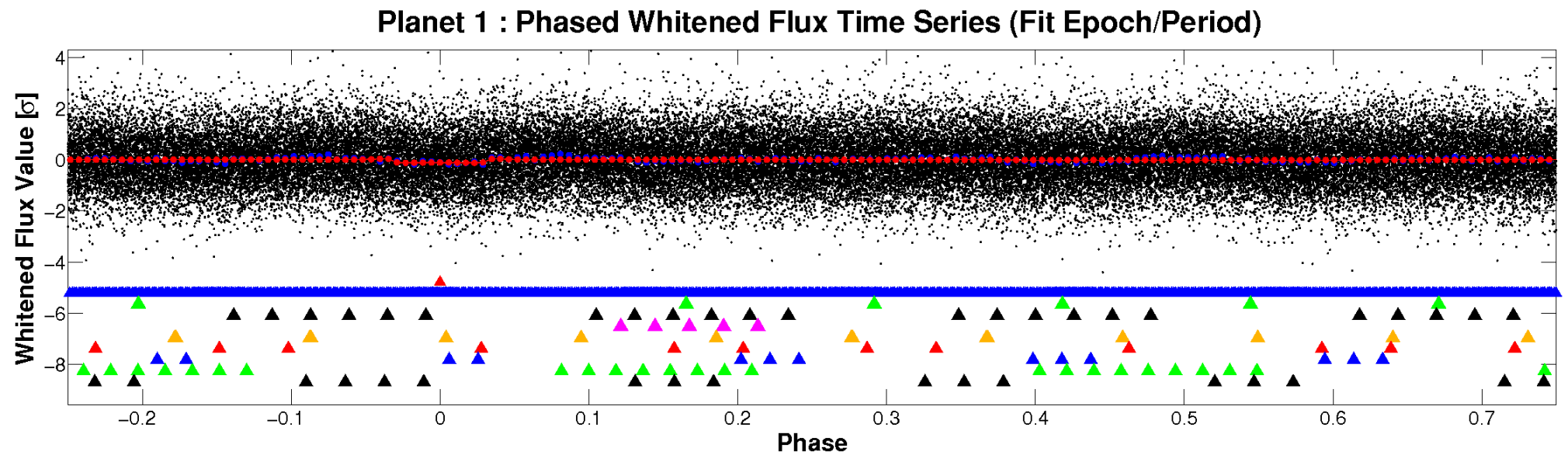
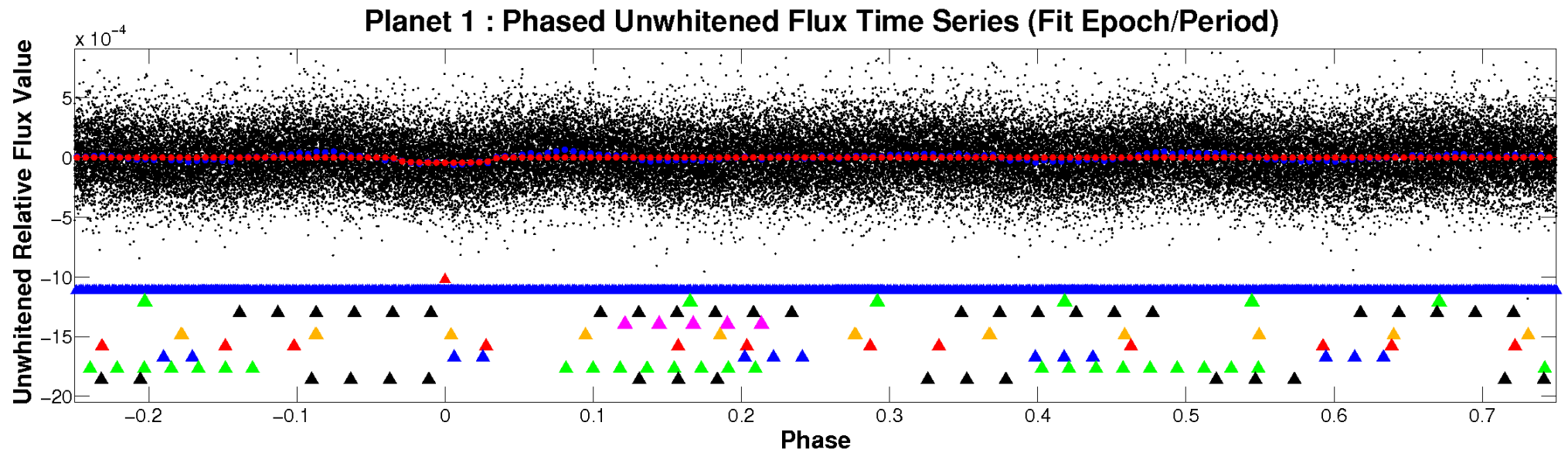


ALT Odd/Even

TCE 005734003-01

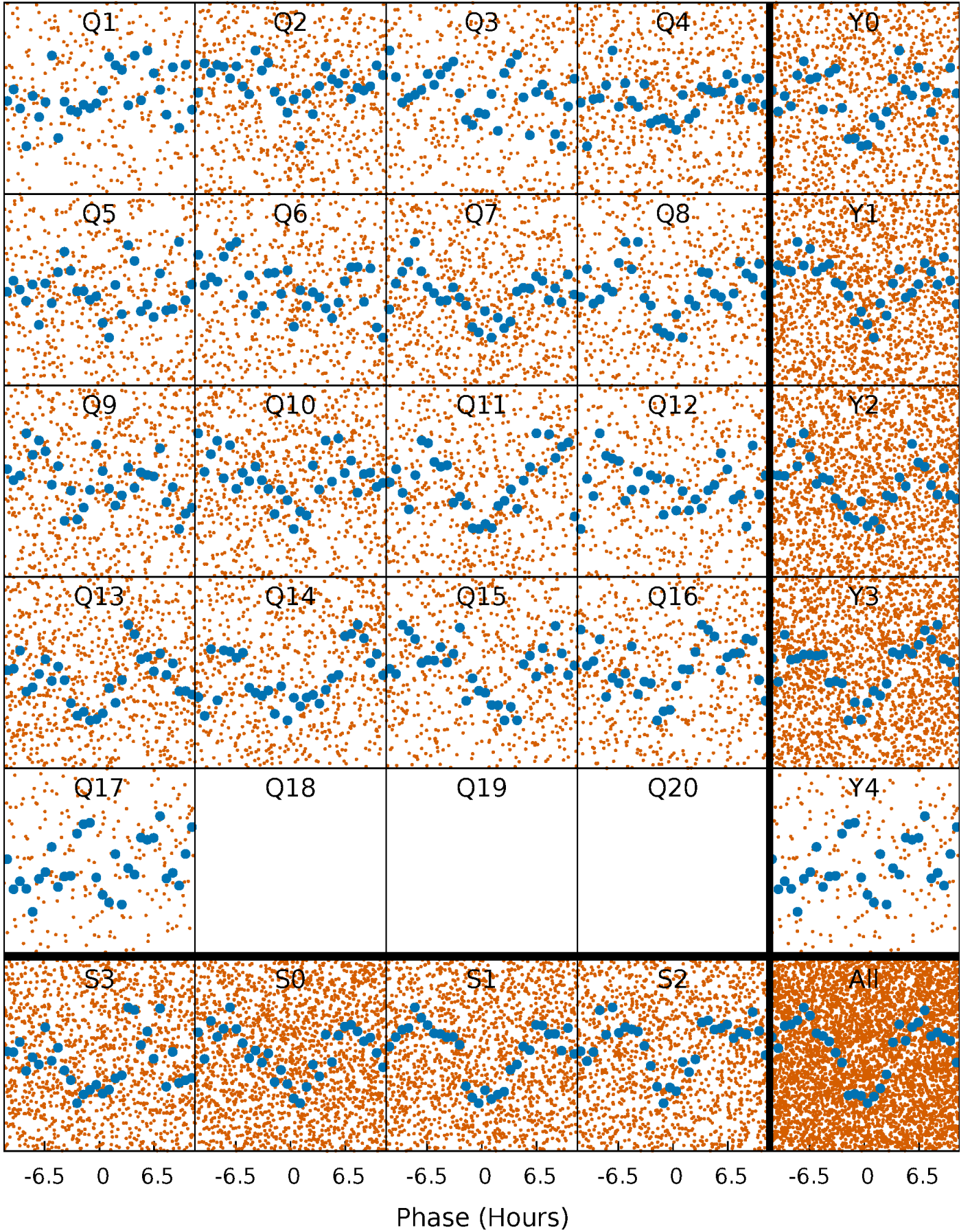


Non-Whitened Vs. Whitened Light Curve



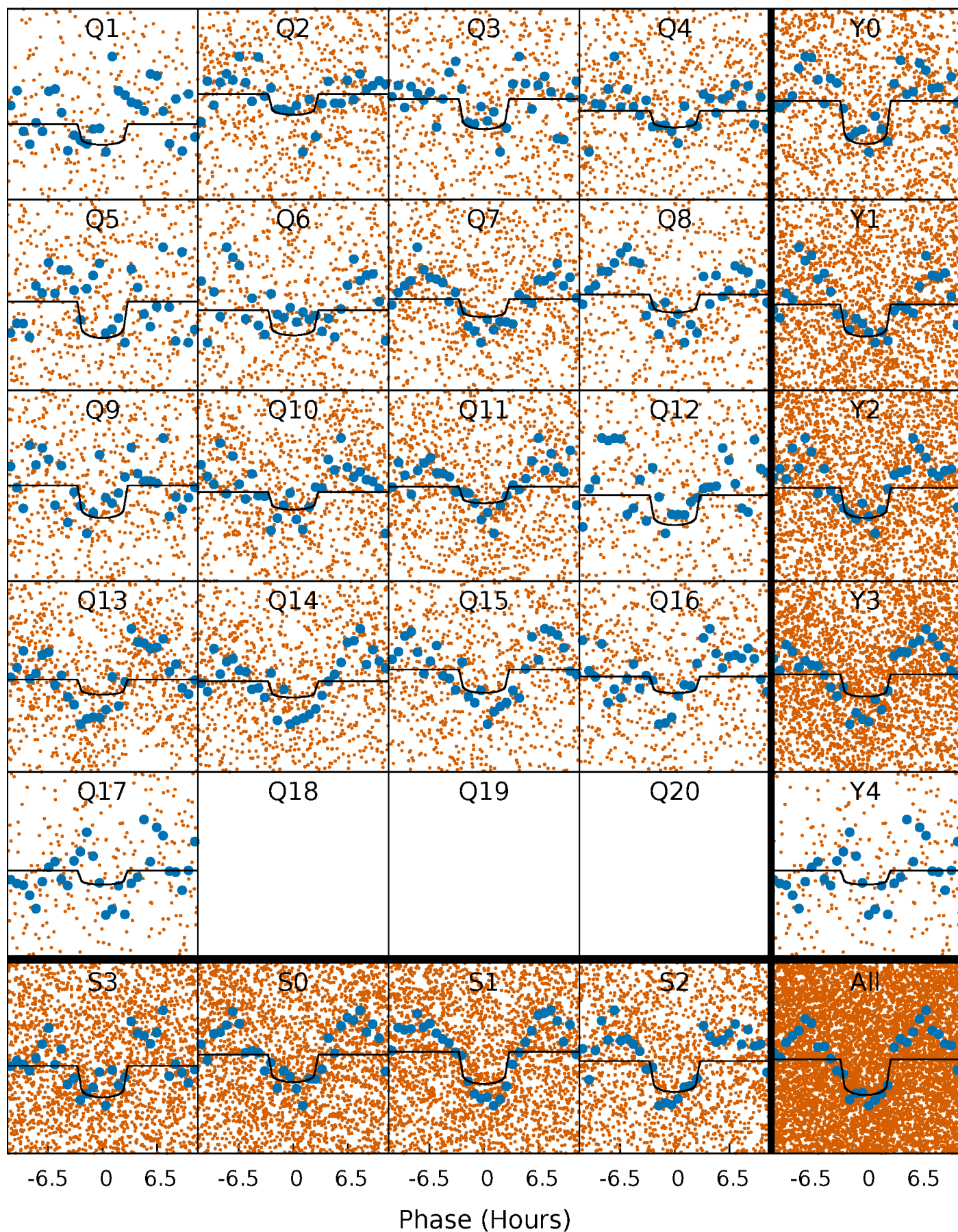
PDC Quarter-Phased Transit Curves

TCE 005734003-01 P= 3.536905 Days $T_0=132.381128$ (BKJD)



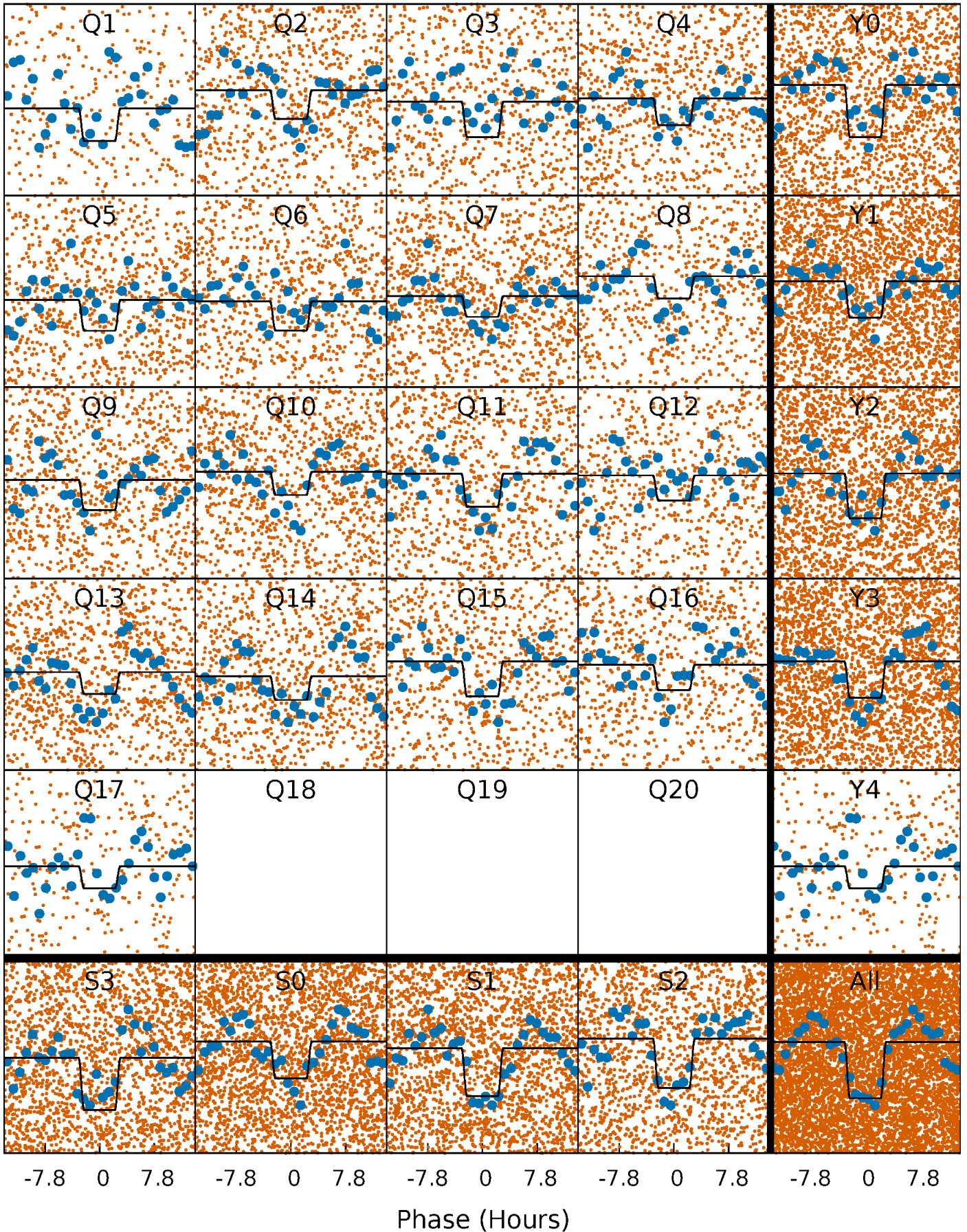
DV Quarter-Phased Transit Curves

TCE 005734003-01 P= 3.536905 Days $T_0=132.381128$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

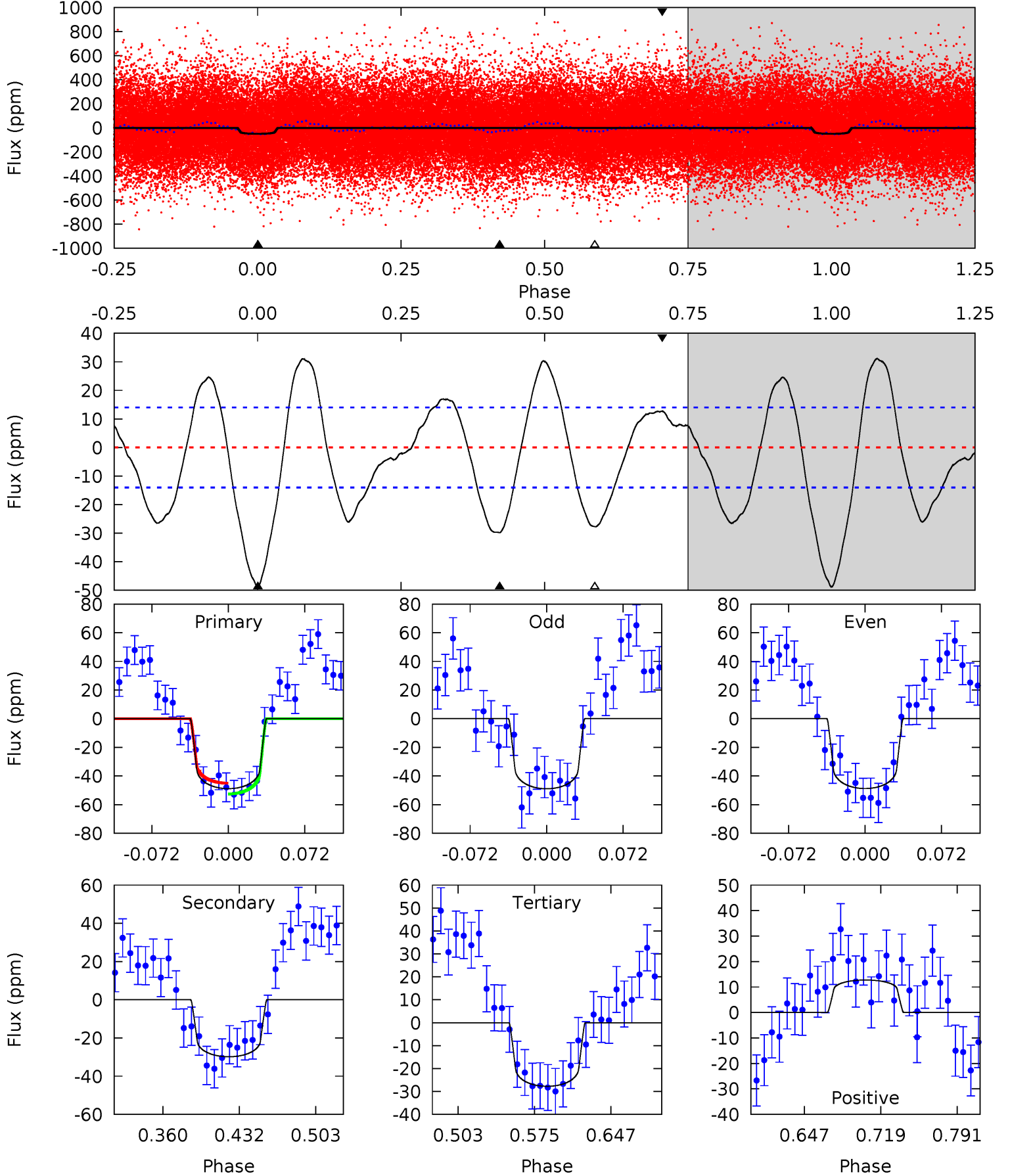
TCE 005734003-01 P= 3.536955 Days $T_0=132.364140$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-01, P = 3.536905 Days, E = 128.844223 Days

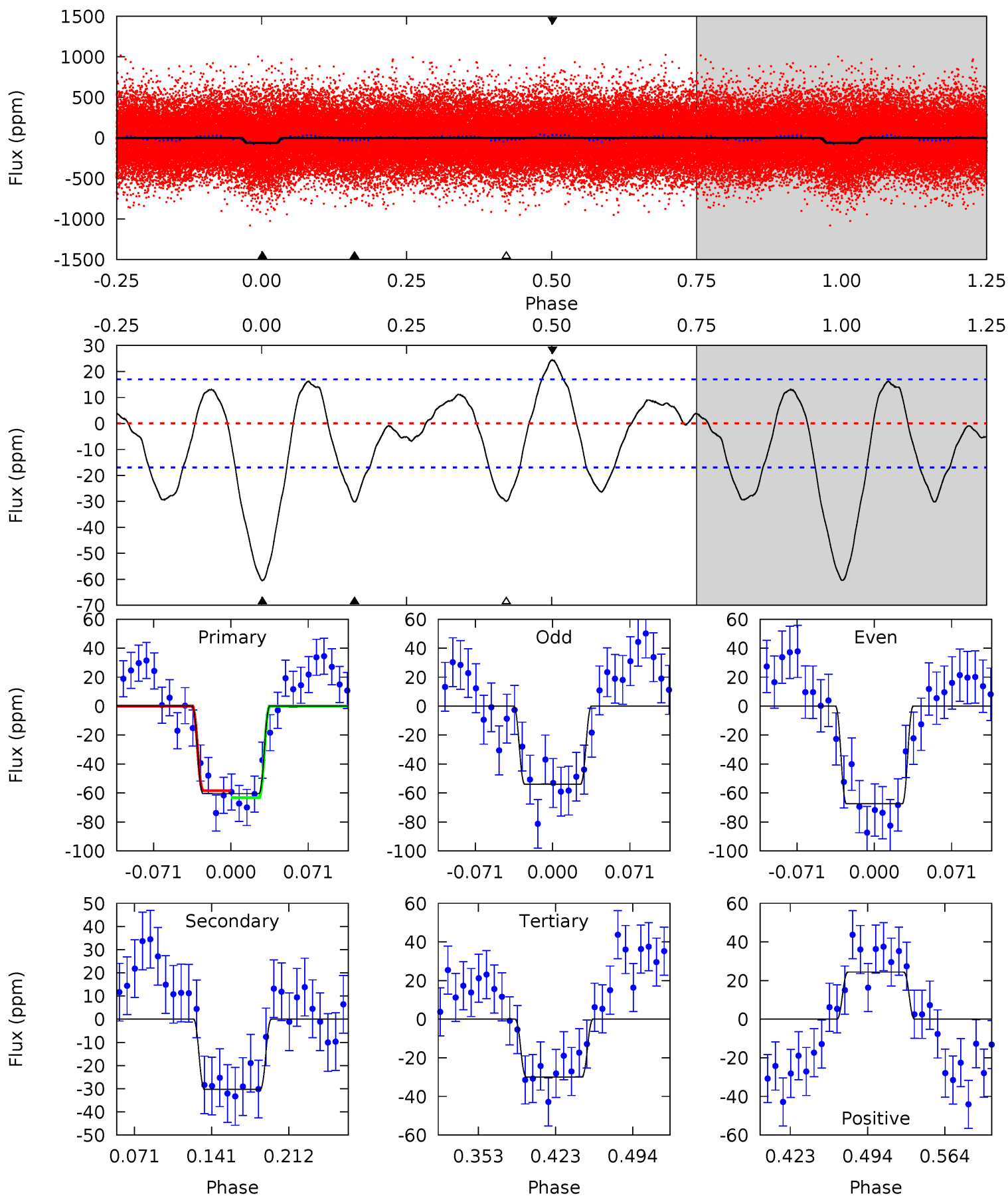
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	9.84	9.16	4.20	4.63	1.80	5.46	6.96	11.9	0.68	5.63	0.02	1.01	0.39	1.23



Alt Model-Shift Uniqueness Test

005734003-01, P = 3.536955 Days, E = 128.827185 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	8.26	8.16	6.67	4.64	1.81	3.86	8.34	9.84	0.10	1.59	1.85	1.12	0.29	0.66



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 3	$1.70^{+0.57}_{-0.54}$	2996^{+215}_{-257}	6571^{+1315}_{-825}	17^{+18}_{-7}
Alt.	-30 ± 4	$1.98^{+0.54}_{-0.53}$	2990^{+206}_{-263}	6045^{+946}_{-569}	13^{+11}_{-5}

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

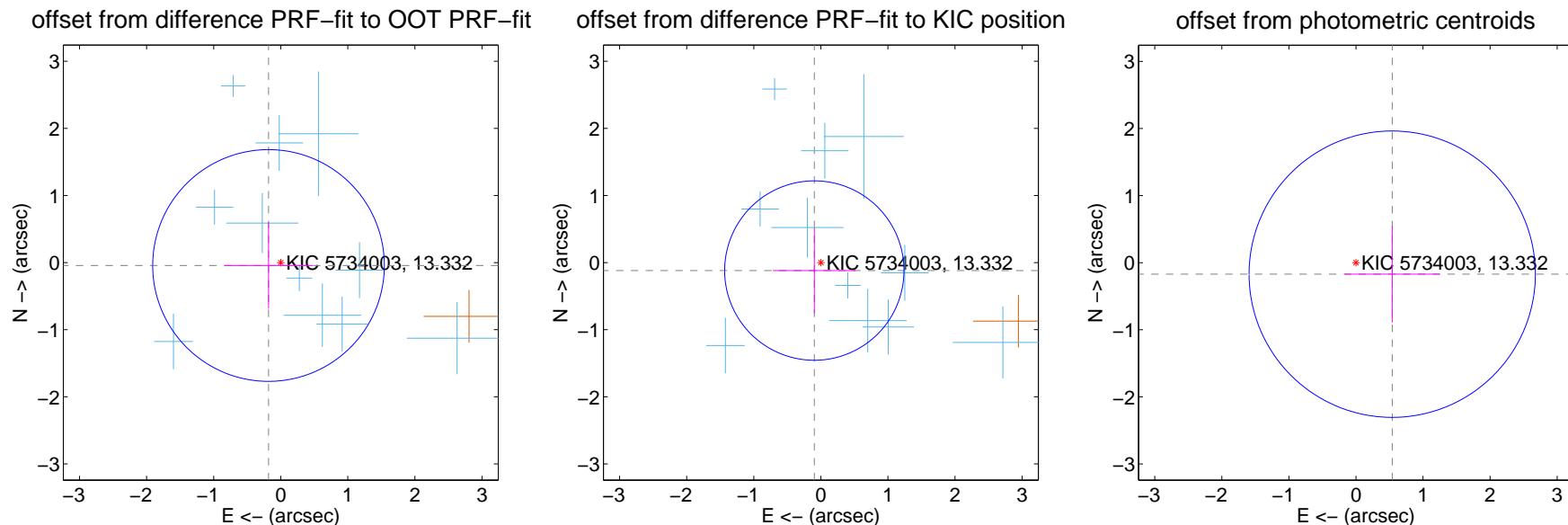
DV Centroid Data

Supplemental centroid analysis for 005734003-01. Kepler magnitude: 13.33. Transit SNR 7.30

There are 11 quarters with good PRF difference image offsets

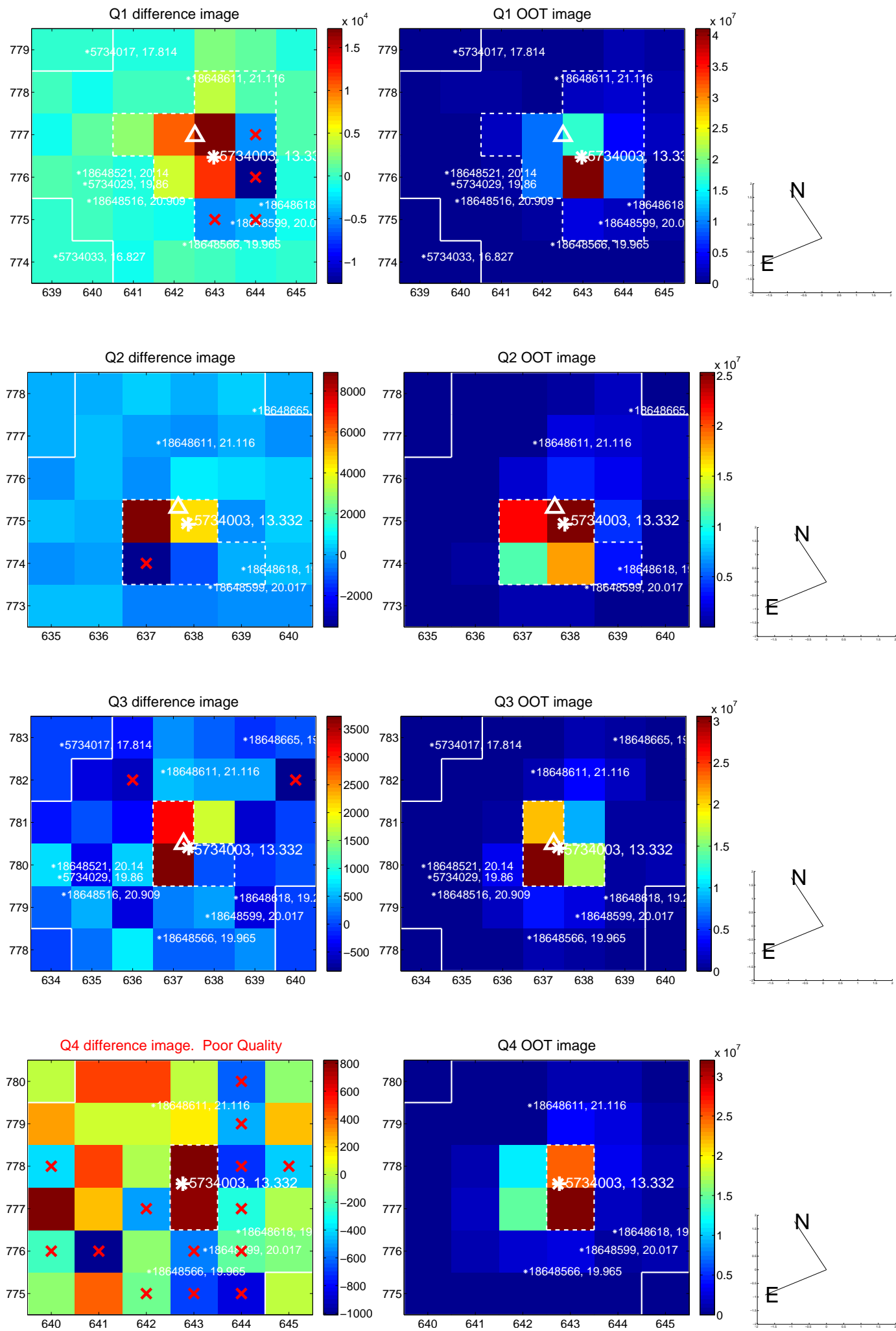
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.187 ± 0.575	0.33	0.182 ± 0.660	-0.043 ± 0.642
PRF-fit source offset from KIC position	0.154 ± 0.445	0.35	0.098 ± 0.617	-0.119 ± 0.635
photometric centroid source offset	0.57 ± 0.71	0.80	-0.54 ± 0.71	-0.17 ± 0.72

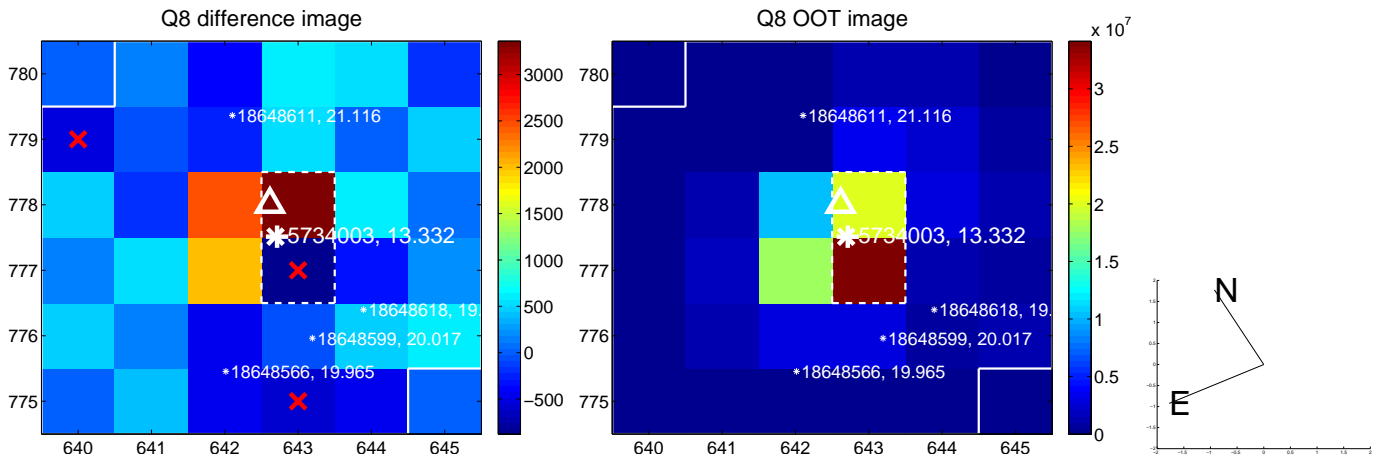
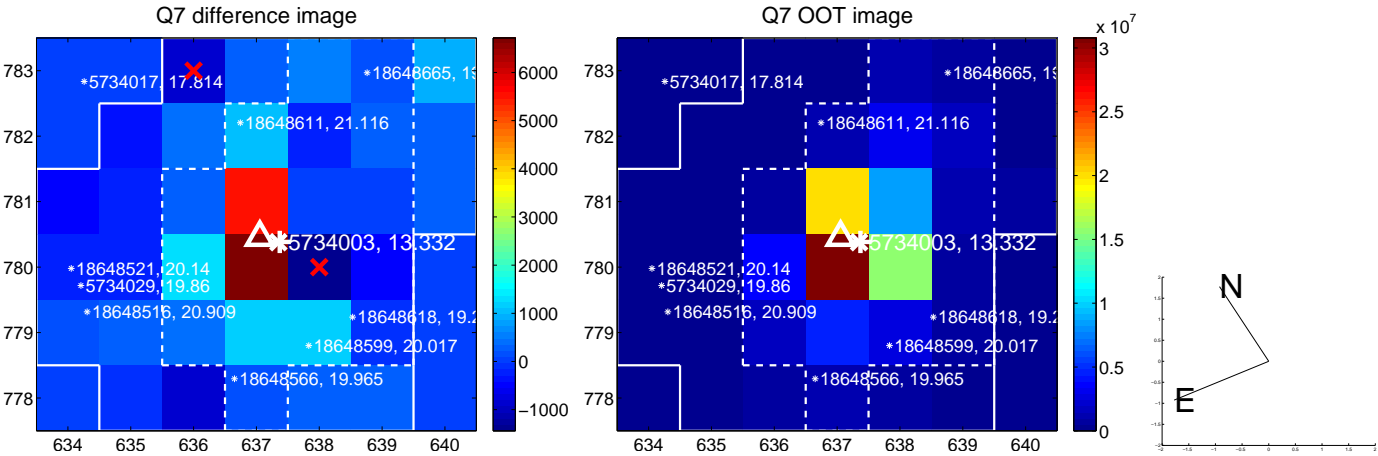
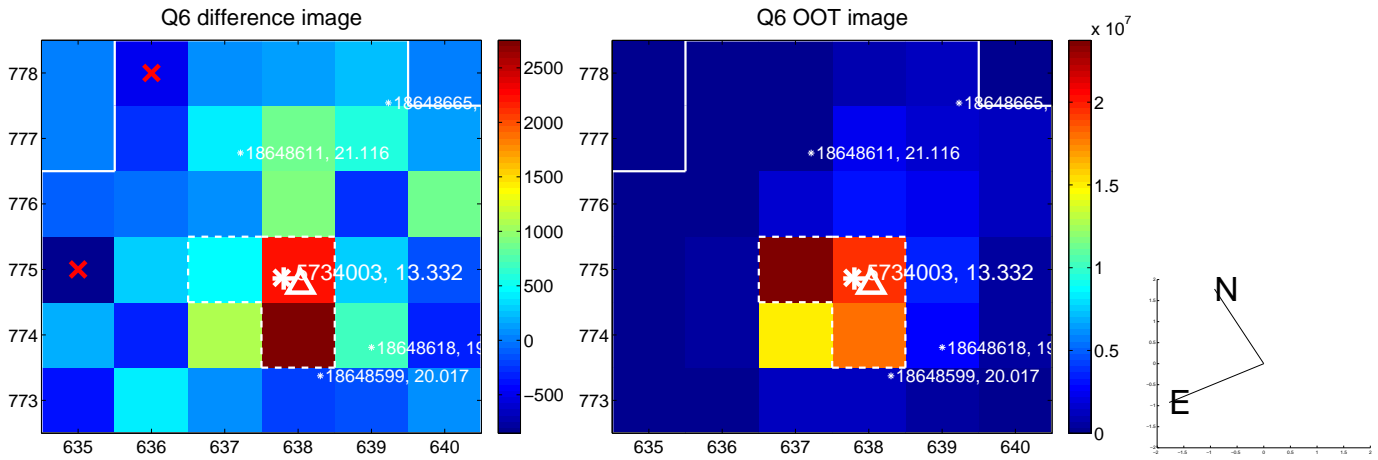
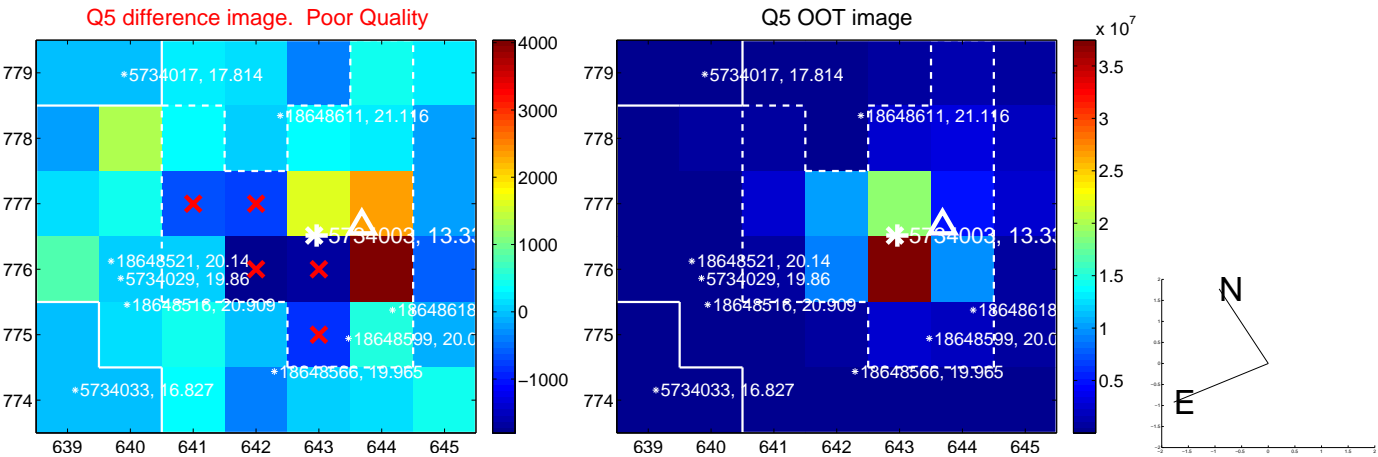


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

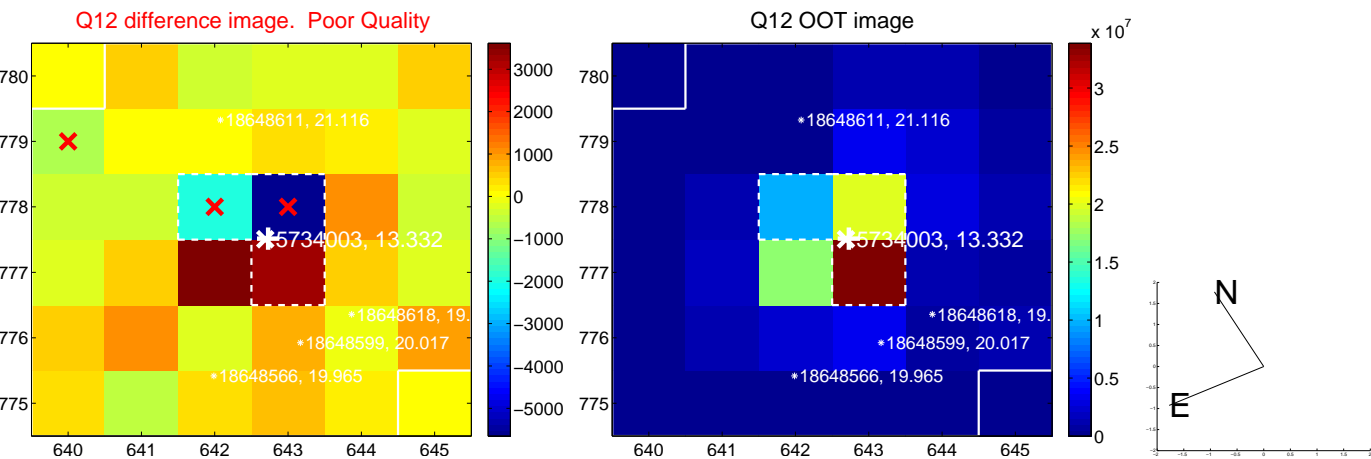
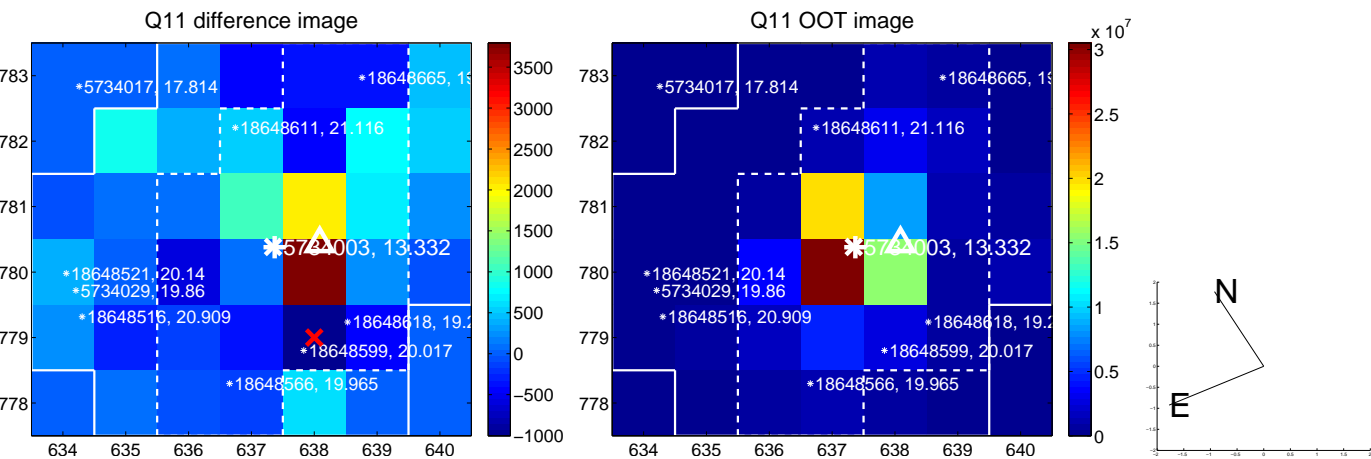
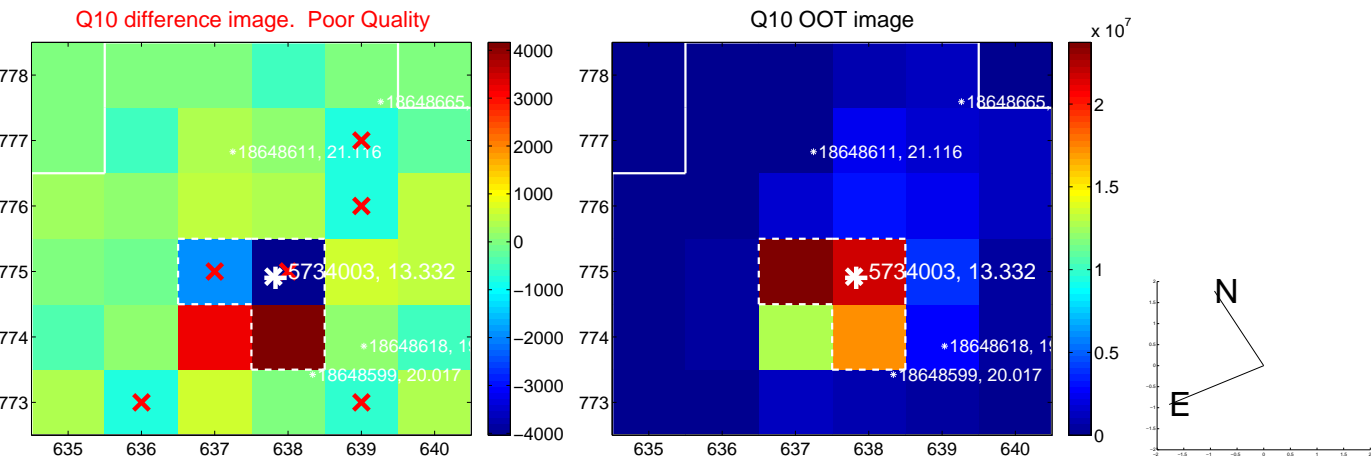
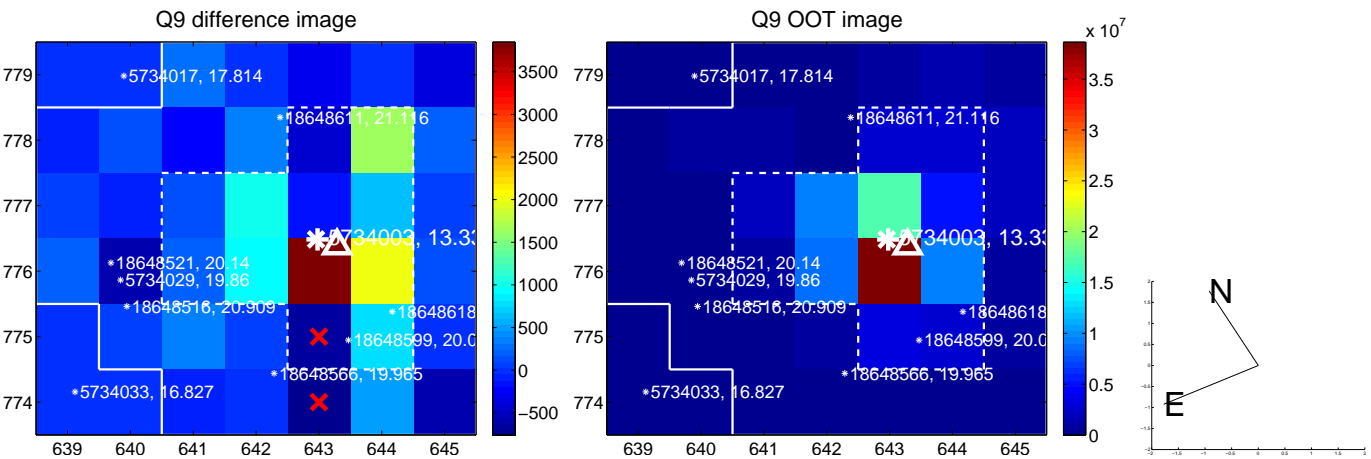
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



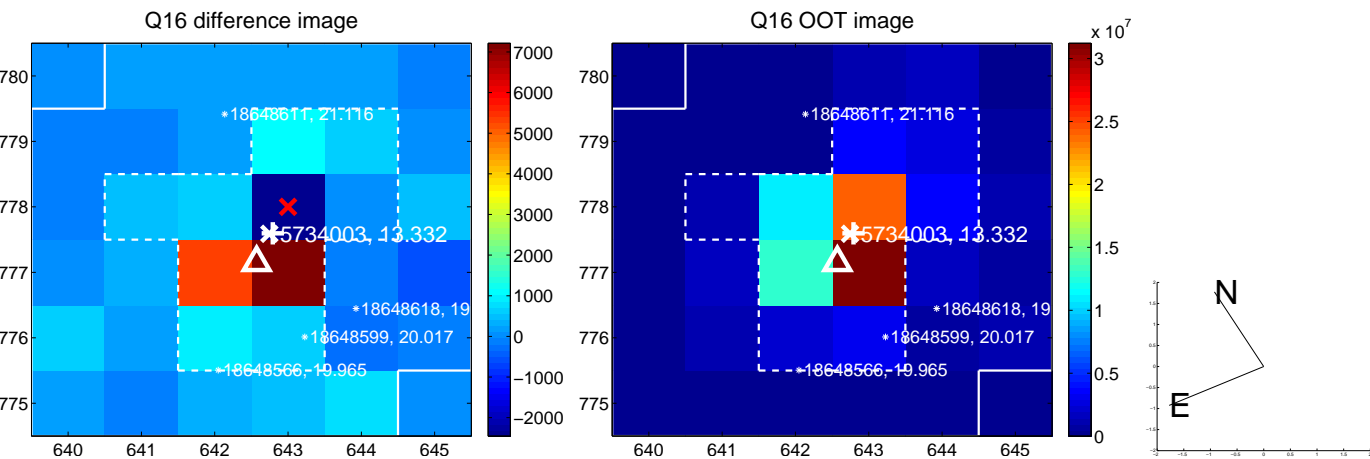
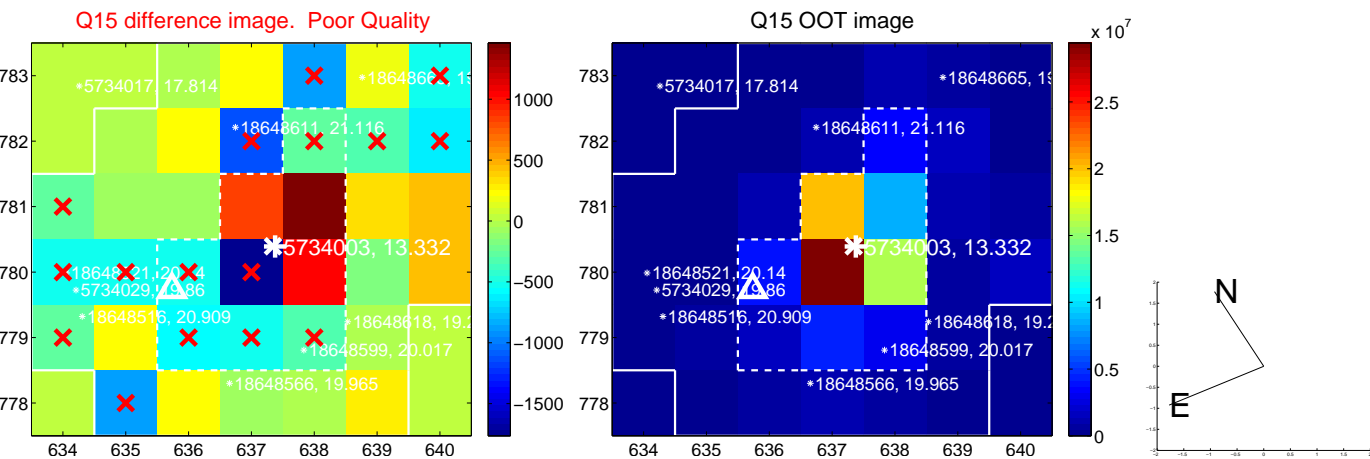
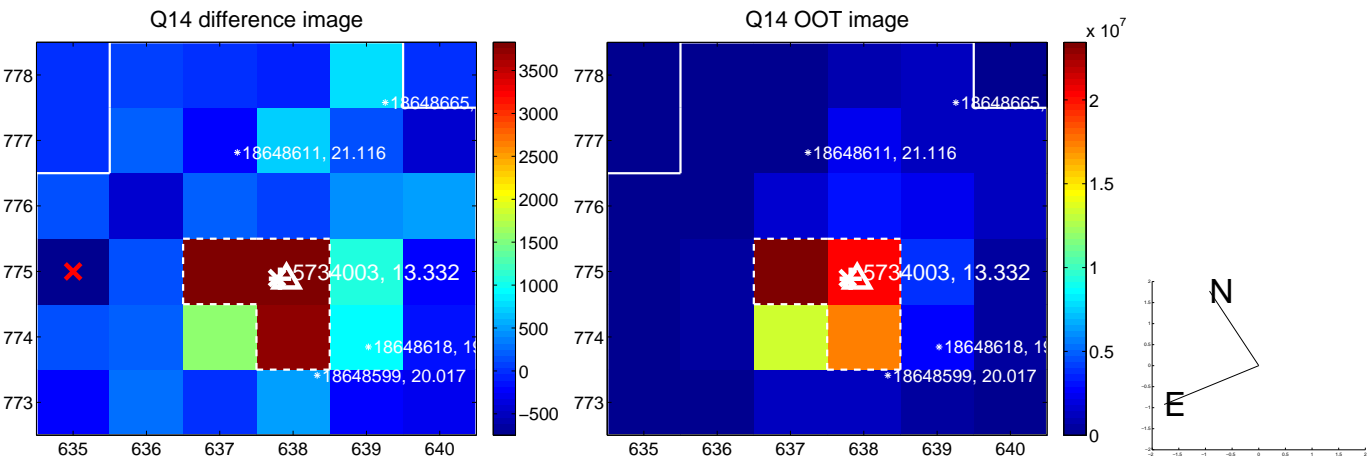
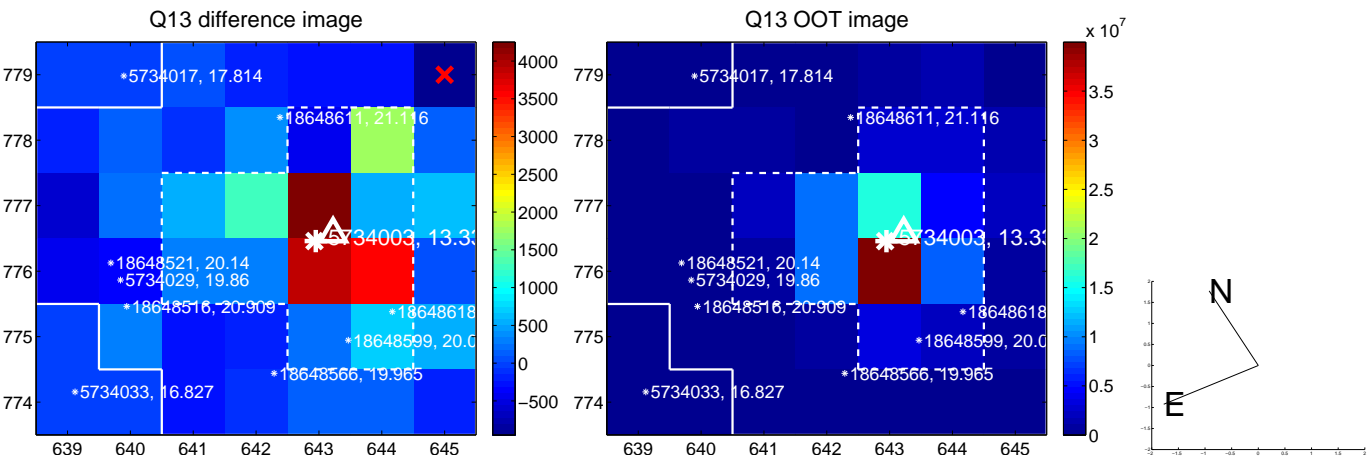
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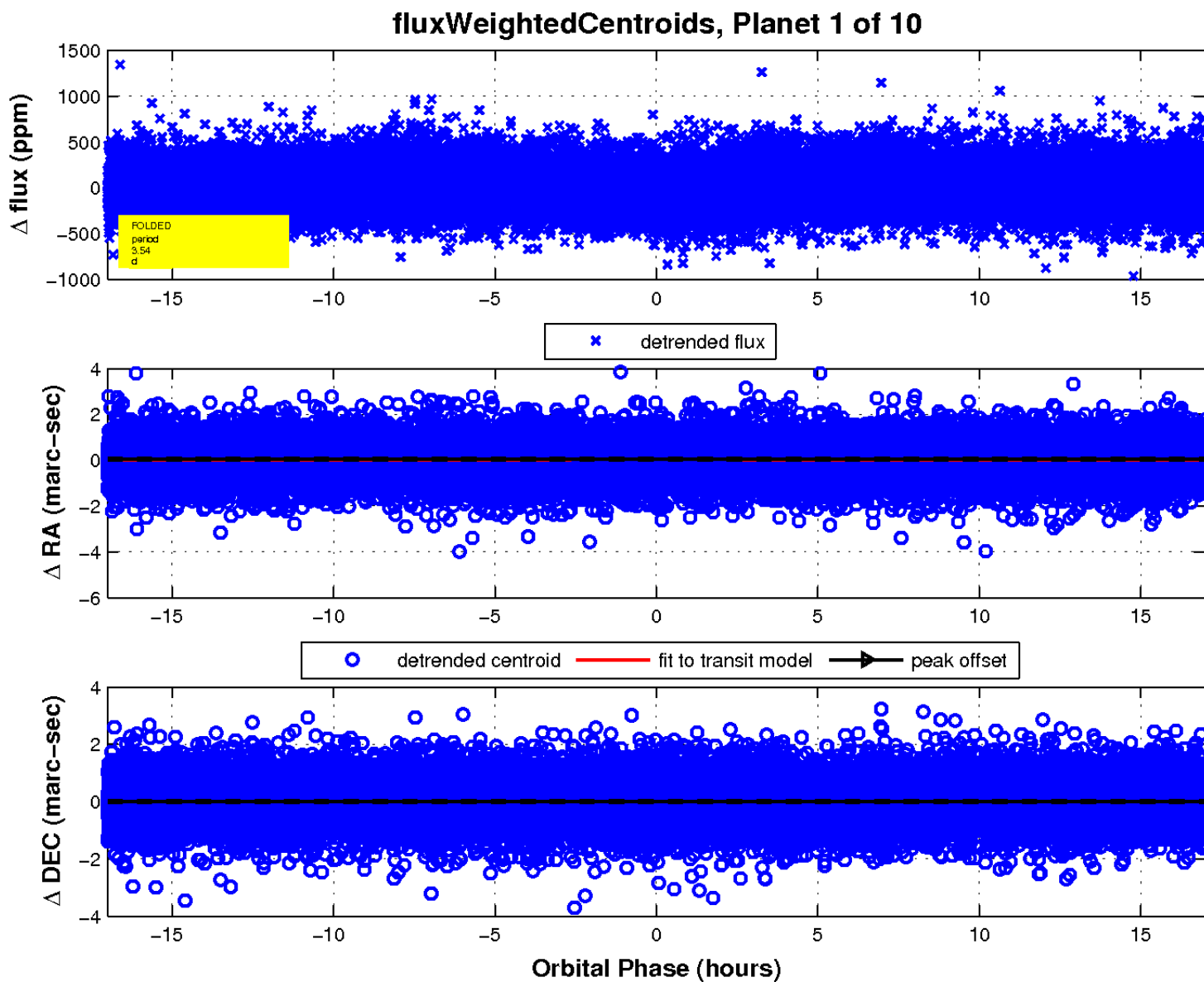
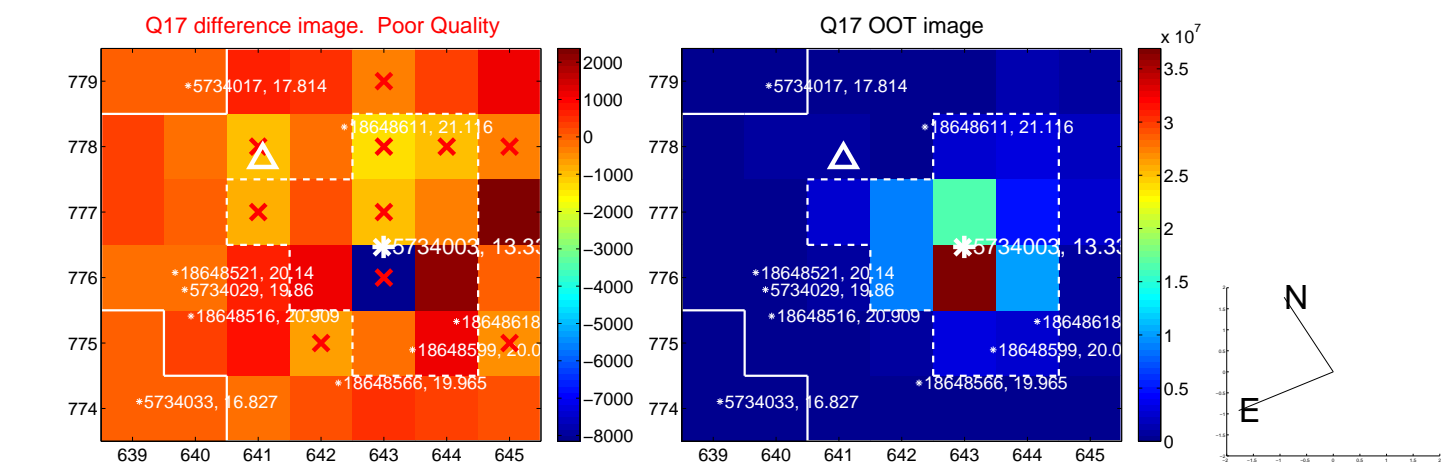
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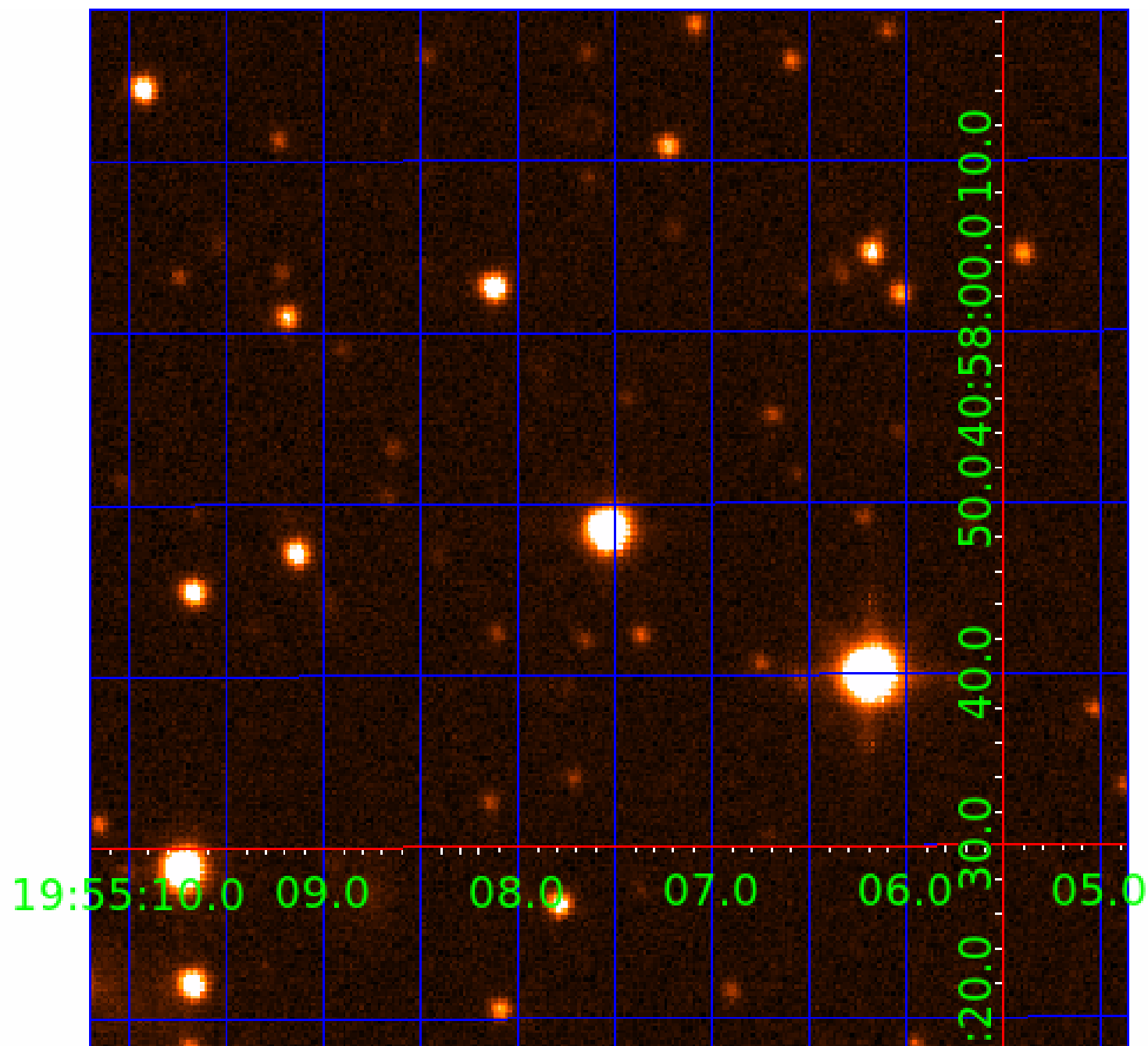


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UKIRT Image

Declination



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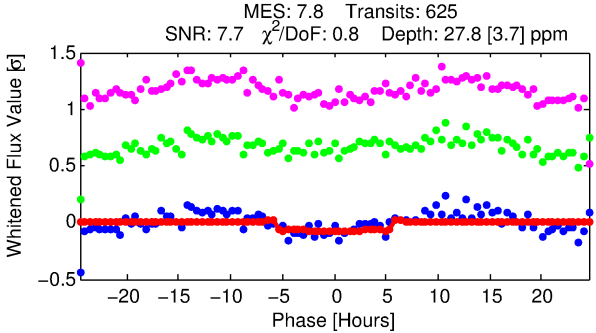
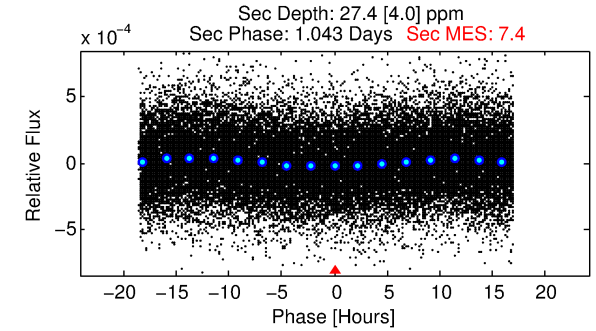
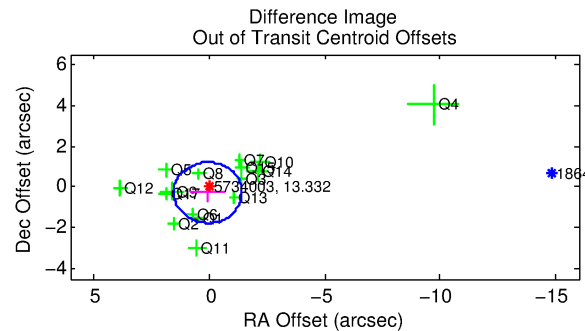
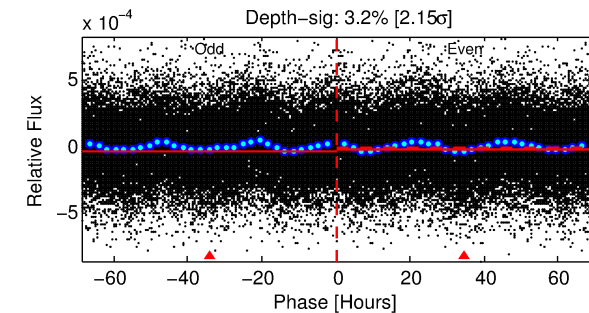
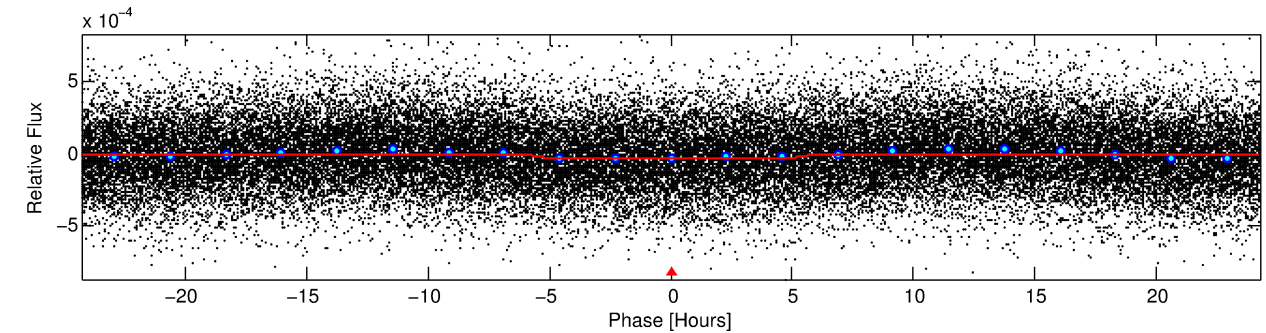
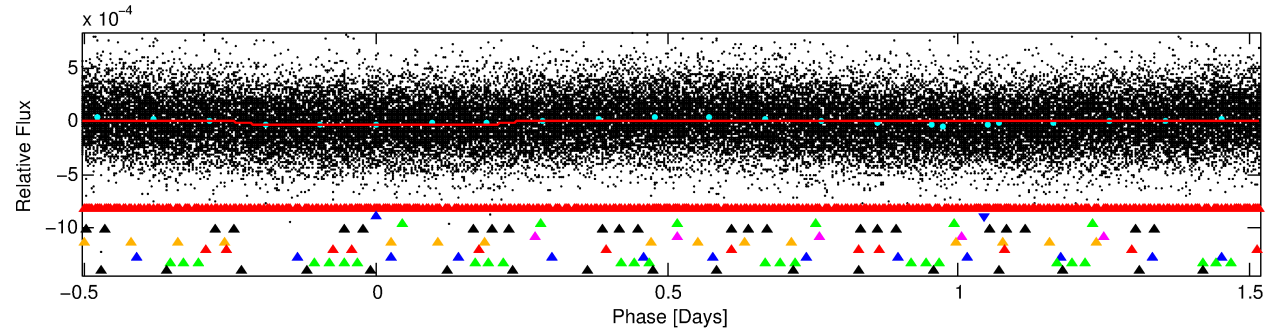
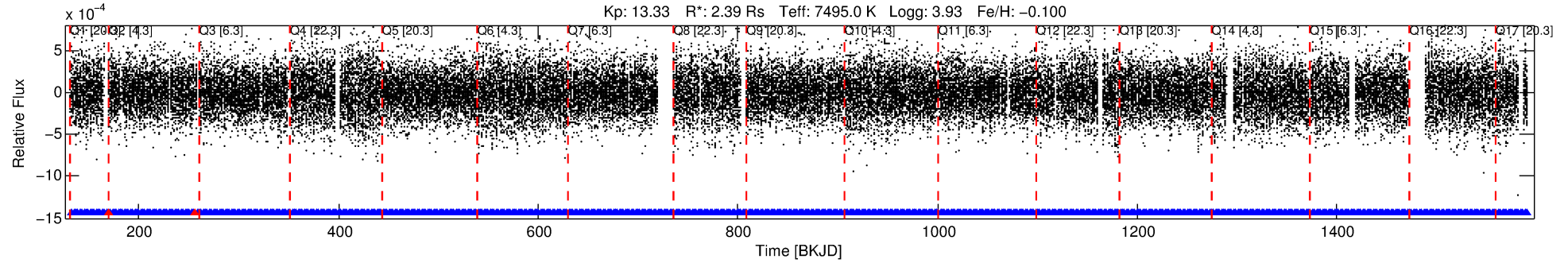
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-02

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 2 of 10 Period: 2.023 d



DV Fit Results:

Period = 2.02334 [0.00003] d
Epoch = 133.3189 [0.0073] BKJD
Rp/R* = 0.0051 [0.0024]
a/R* = 1.33 [1.71]
b = 0.60 [3.09]
Seff = 11307.46 [5949.69]
Teq = 2629 [346] K
Rp = 1.33 [0.77] Re
a = 0.0378 [0.0118] AU
Ag = 12.21 [13.15] [0.85 σ]
Teffp = 7600 [1851] K [2.64 σ]

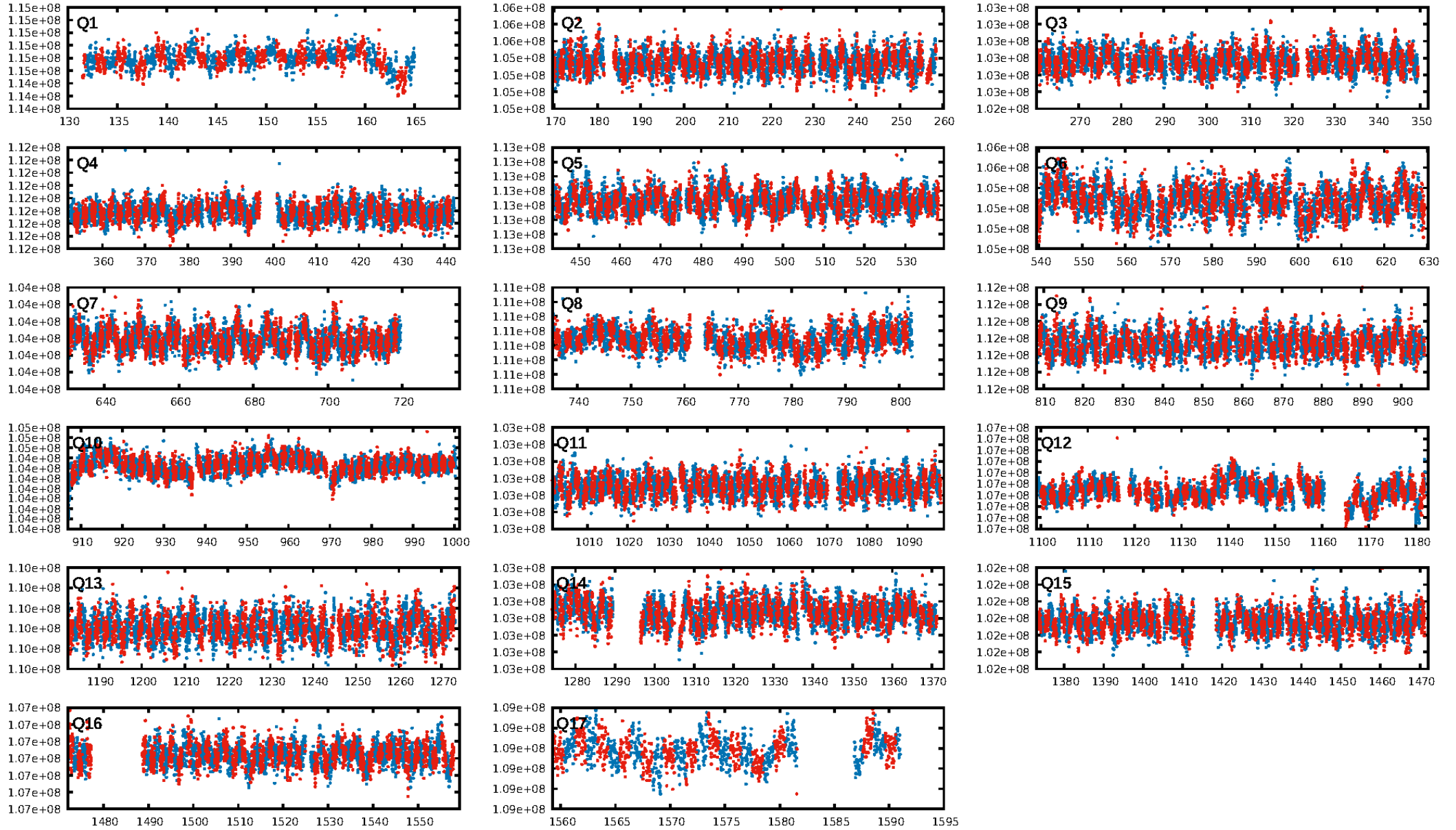
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.6% [2.84 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [596/598]
GhostDiagnostic-chr: 0.5827
Centroid-sig: 1.2%
Centroid-so: 0.709 arcsec [1.15 σ]
OotOffset-rm: 0.278 arcsec [0.56 σ]
KicOffset-rm: 0.335 arcsec [0.96 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

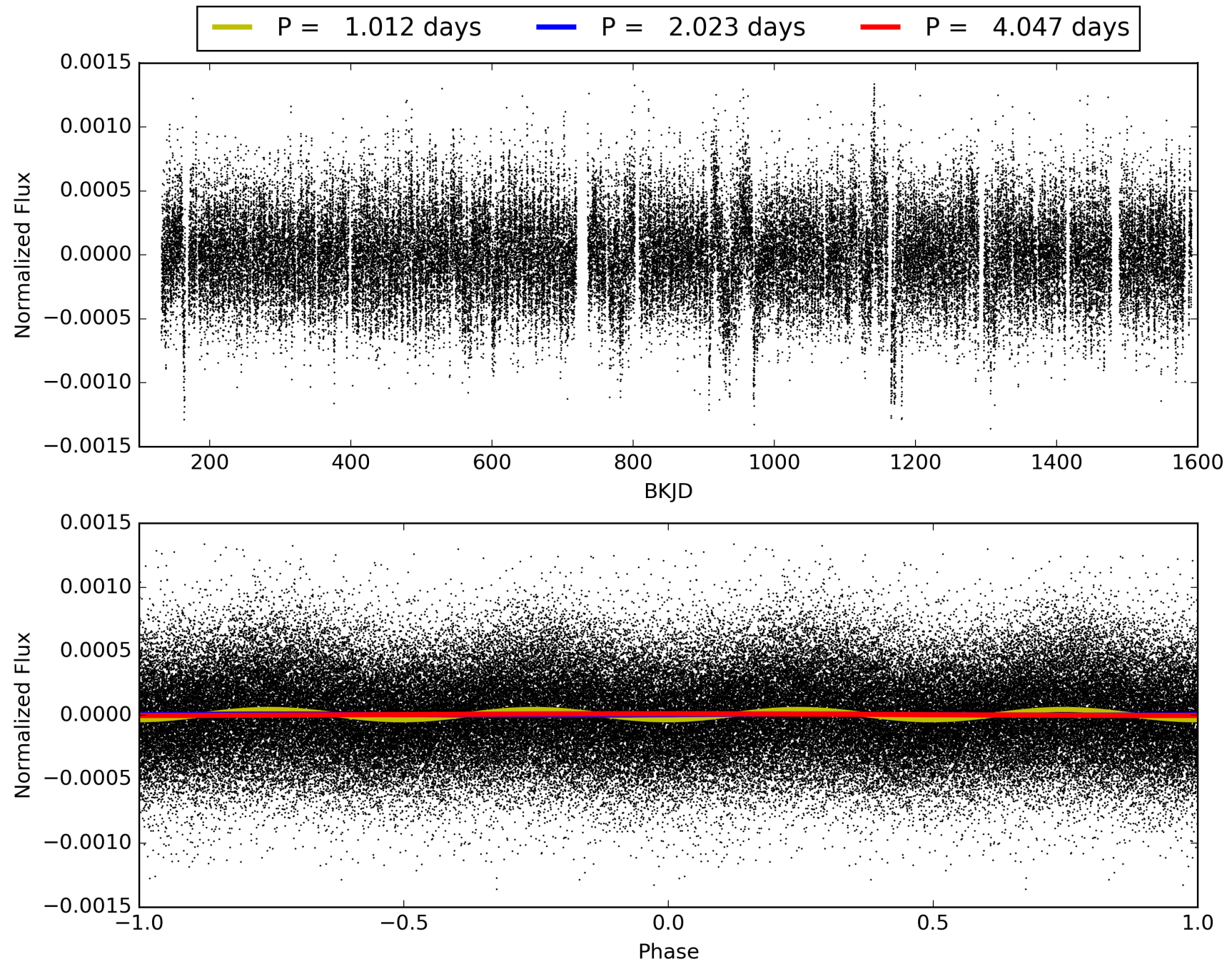
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:47 Z

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

TCE 005734003-02, PDC Light Curves

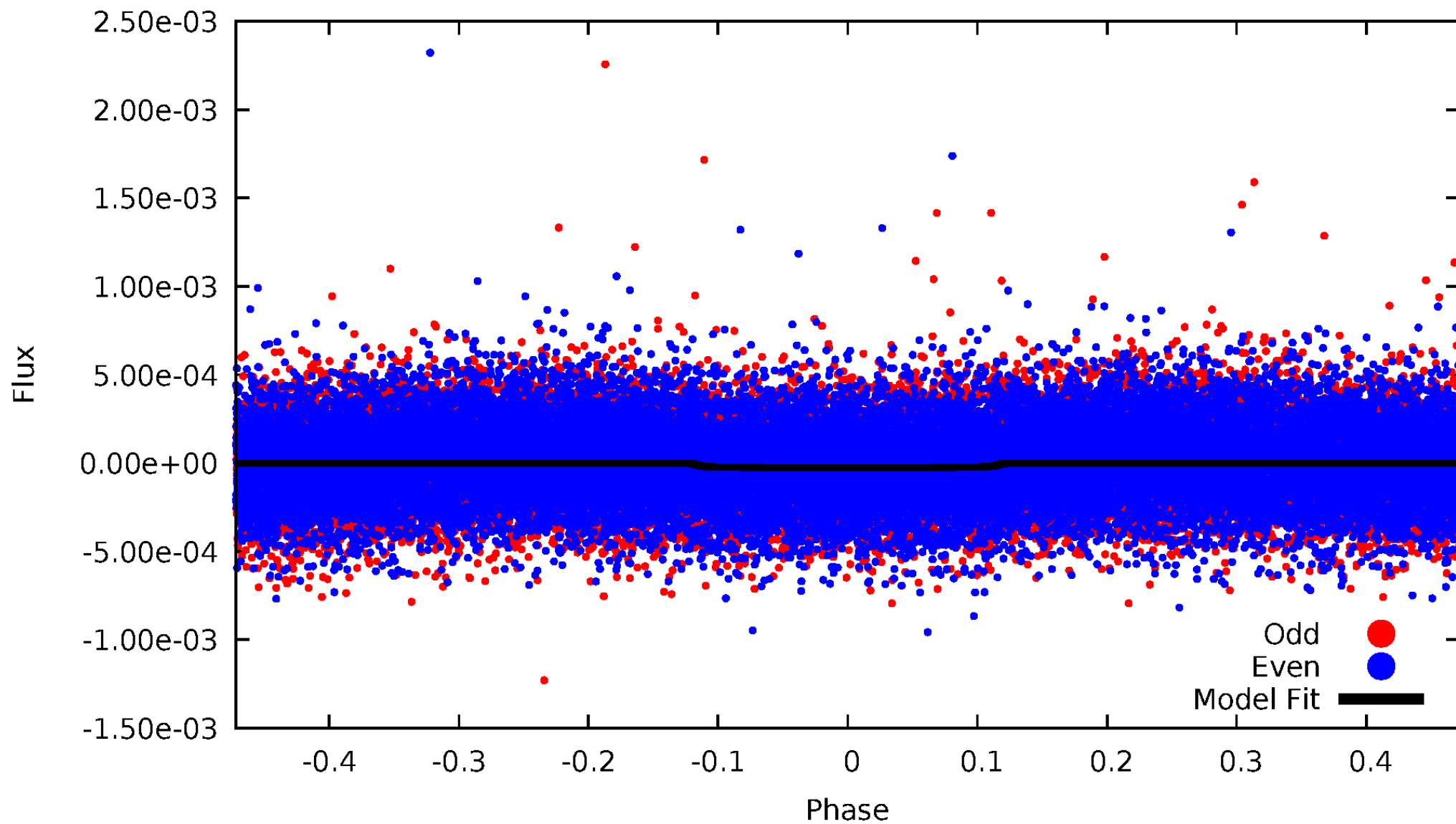


TCE 005734003-02



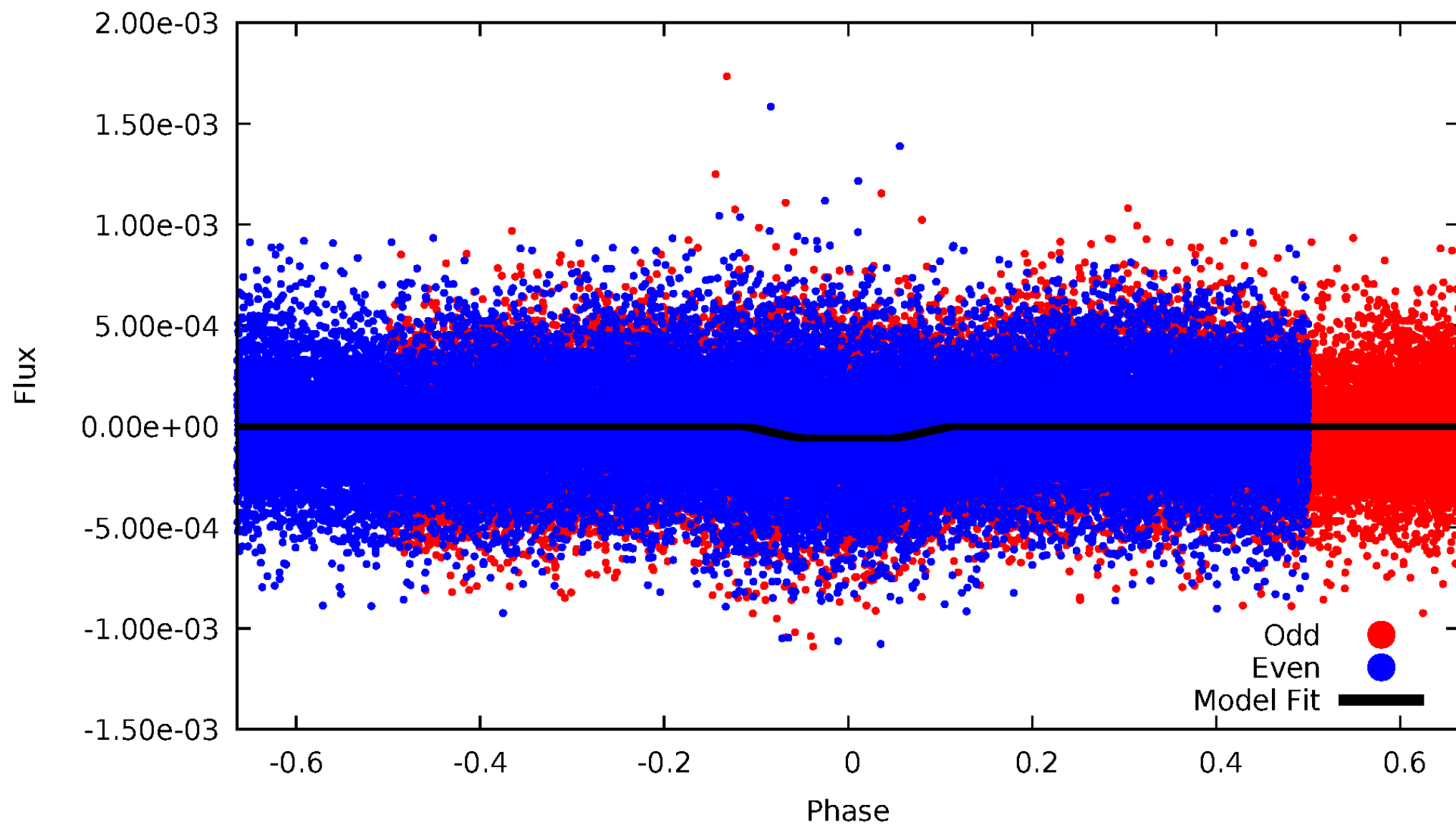
DV Odd/Even

TCE 005734003-02



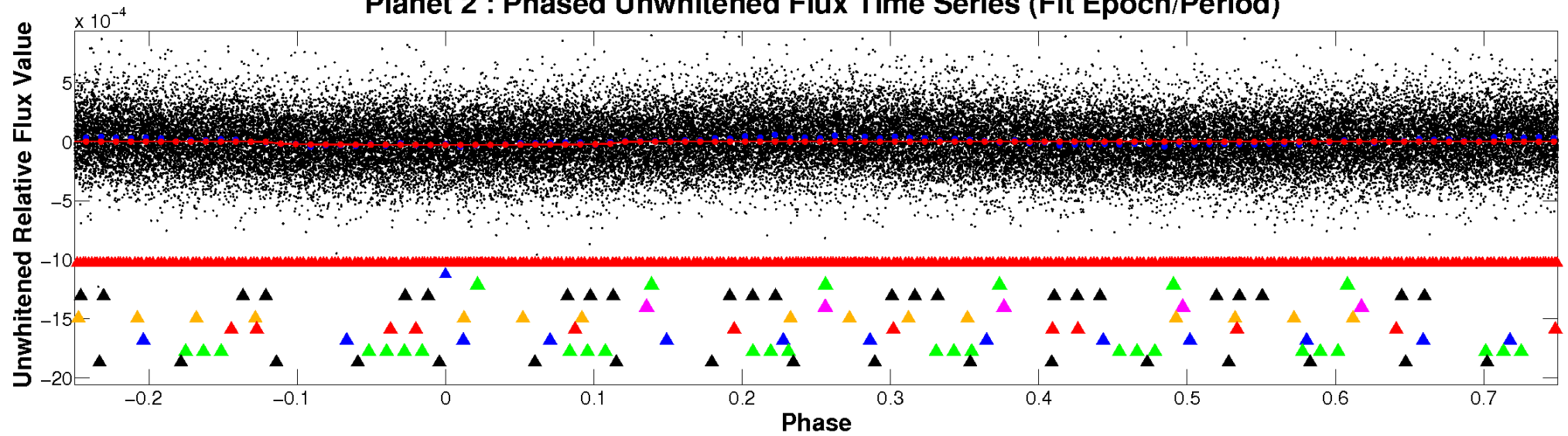
ALT Odd/Even

TCE 005734003-02

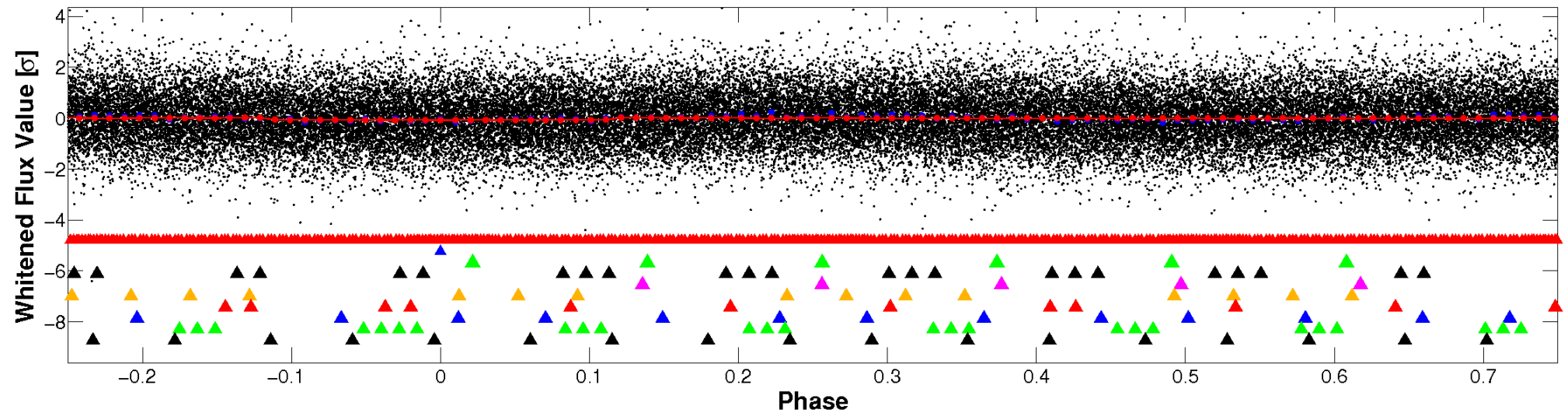


Non-Whitened Vs. Whitened Light Curve

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

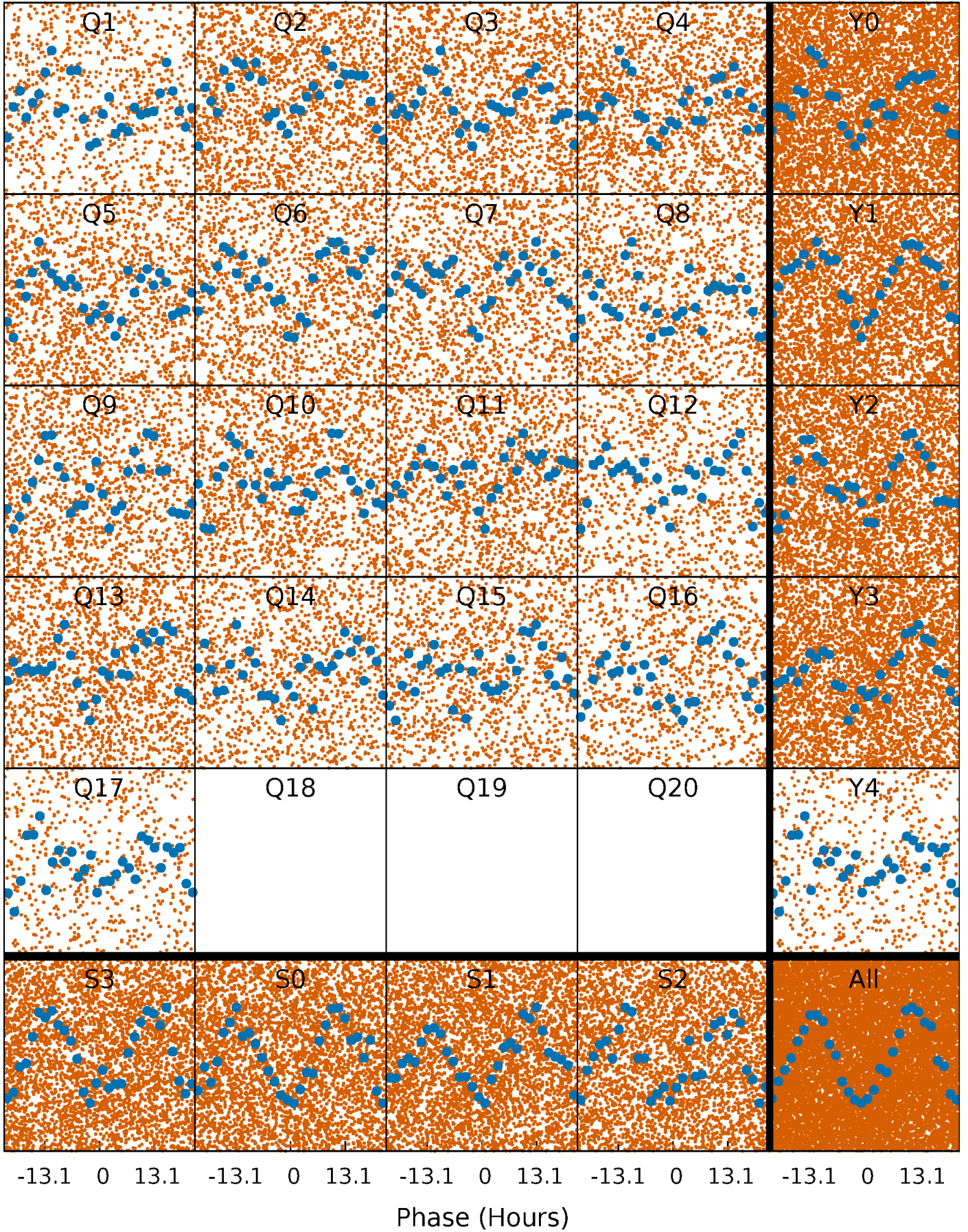


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



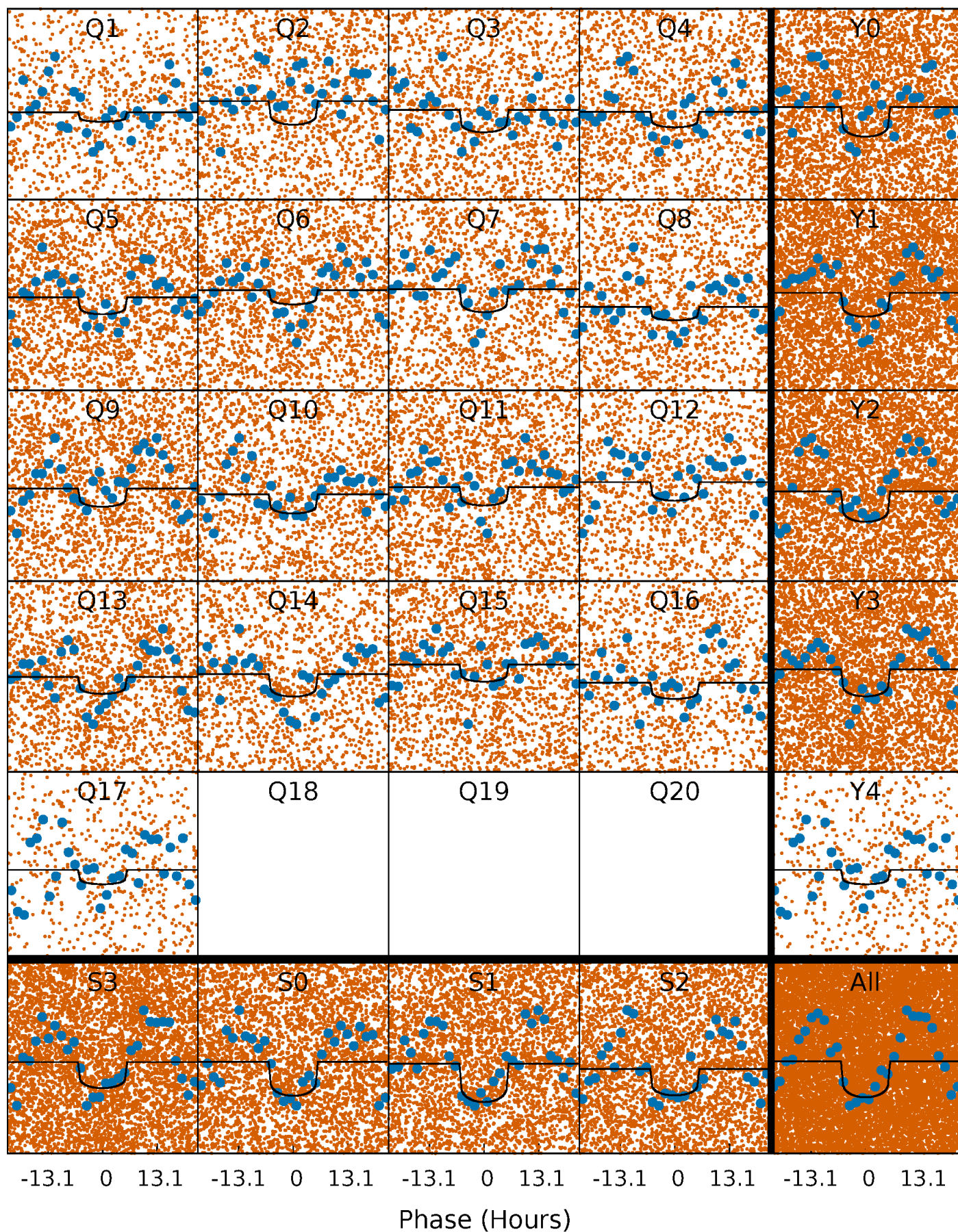
PDC Quarter-Phased Transit Curves

TCE 005734003-02 P= 2.023345 Days $T_0=133.318927$ (BKJD)



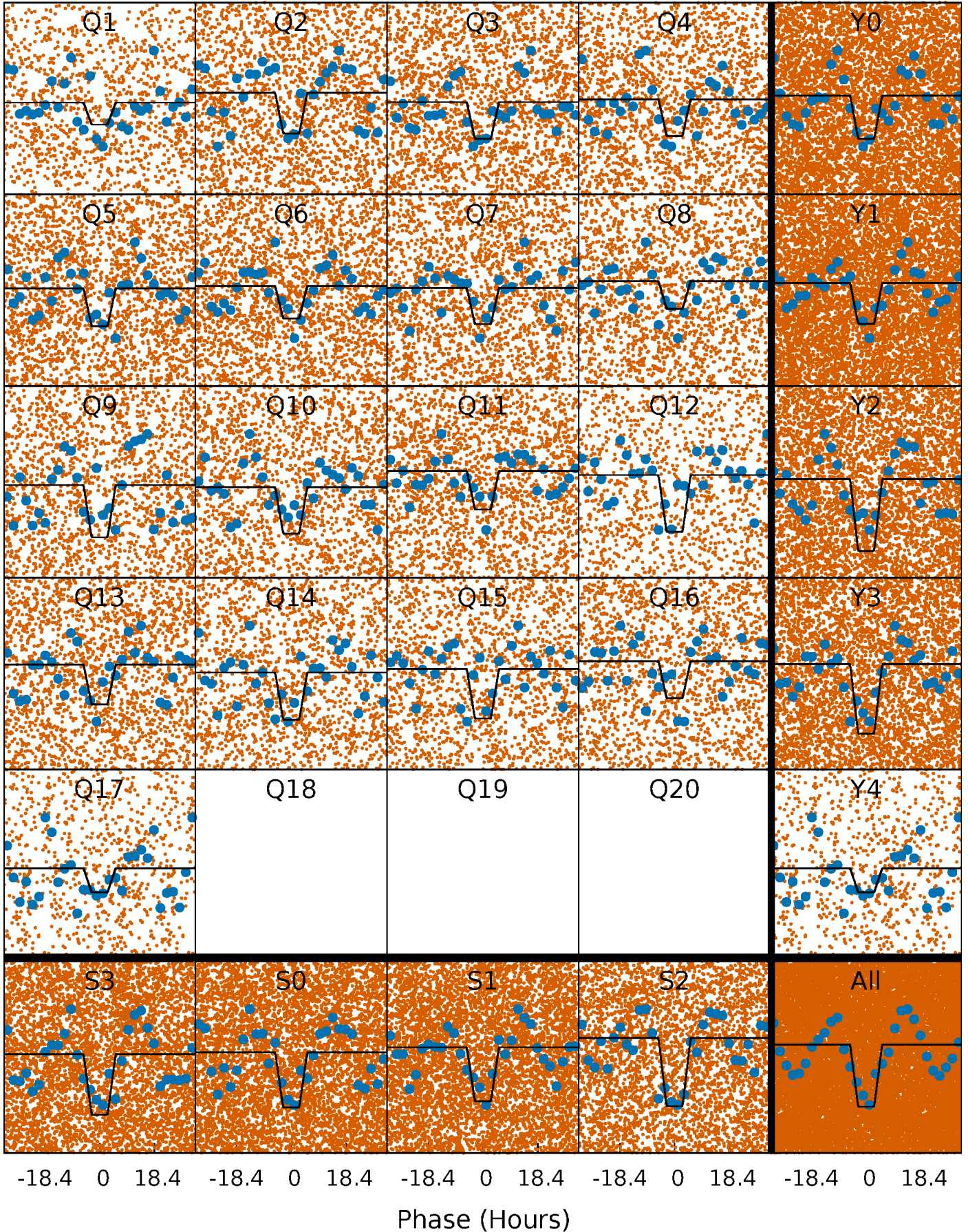
DV Quarter-Phased Transit Curves

TCE 005734003-02 P= 2.023345 Days $T_0=133.318927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

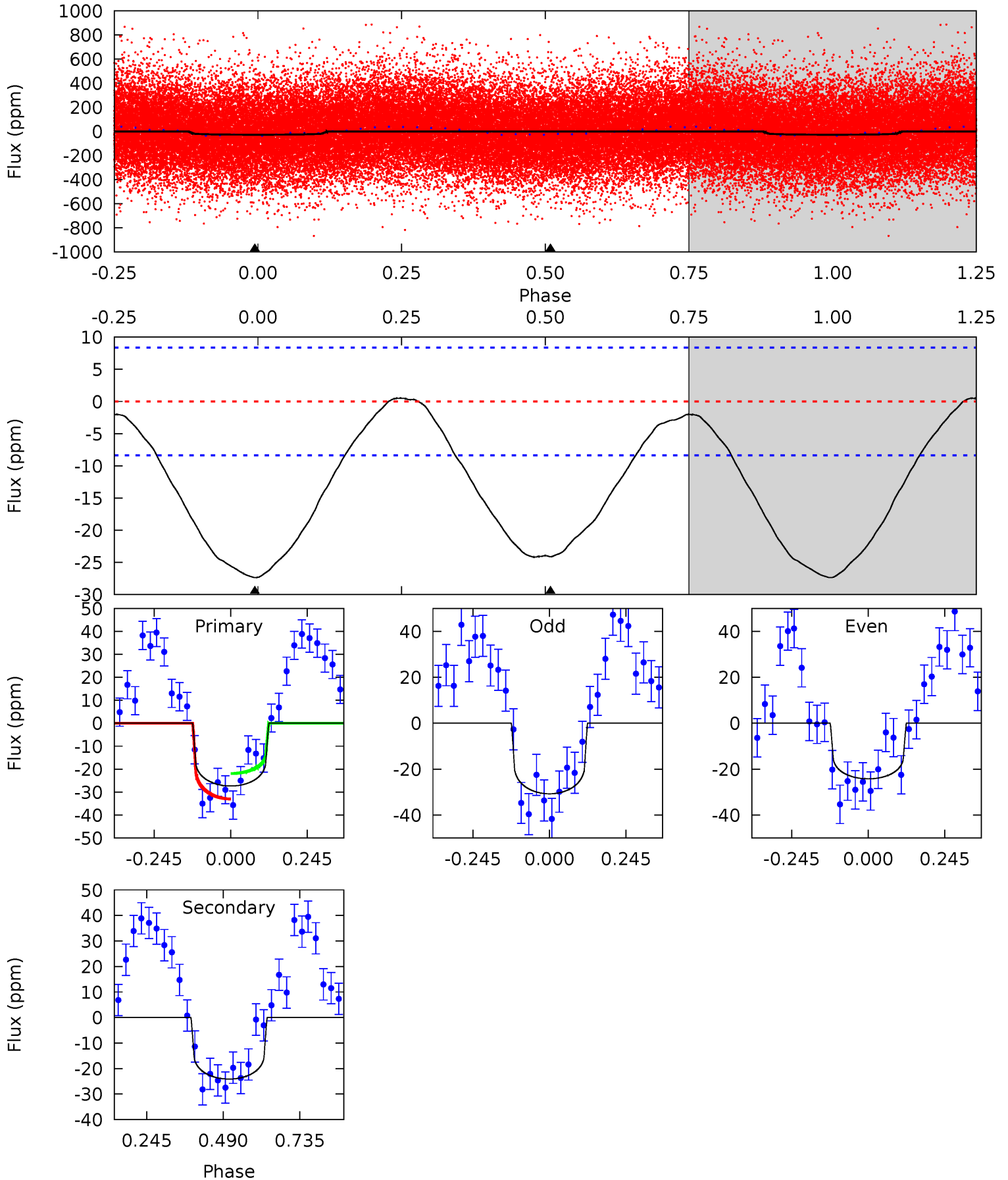
TCE 005734003-02 P= 2.023569 Days $T_0=133.215491$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-02, P = 2.023345 Days, E = 131.295582 Days

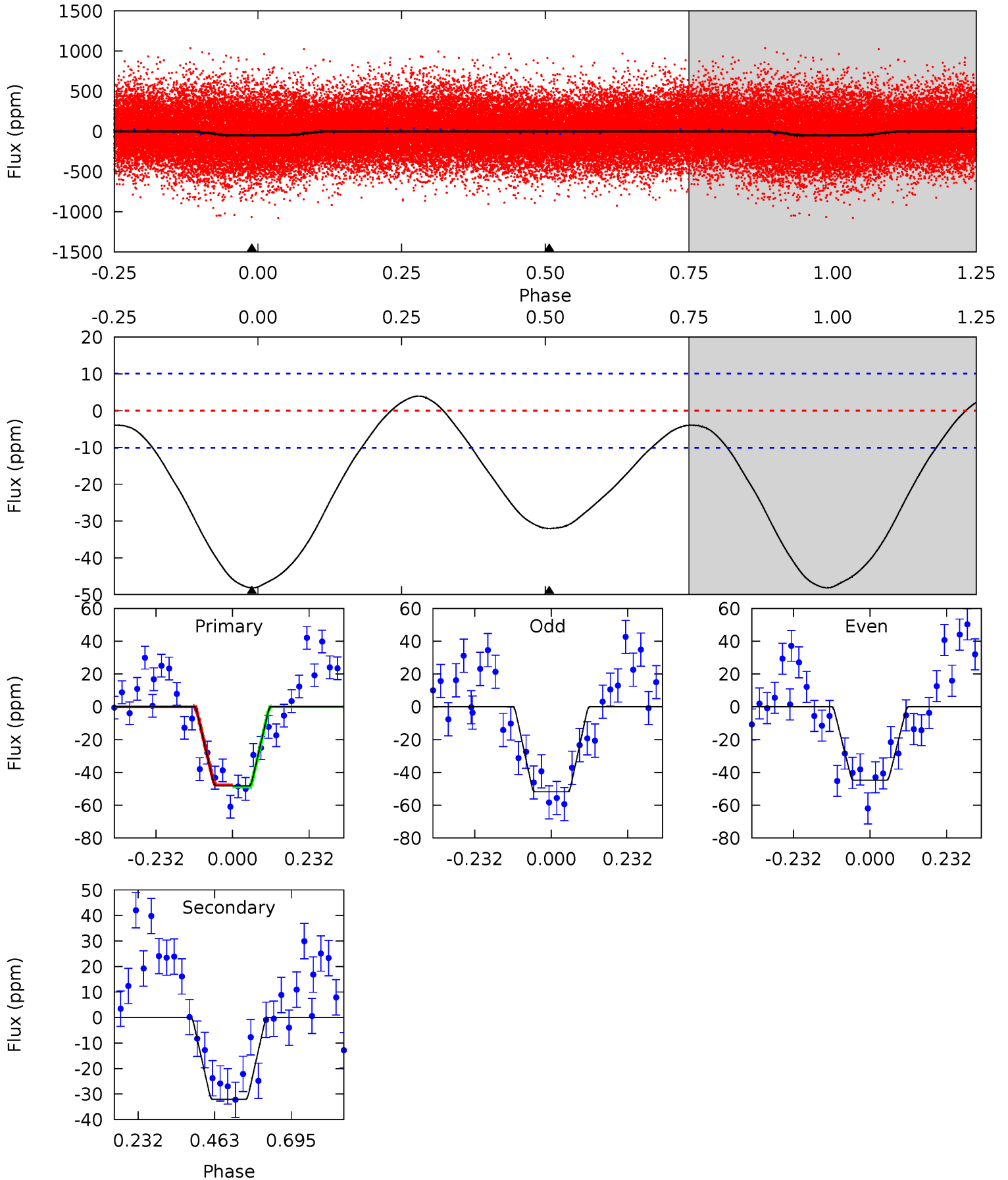
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	12.6	0	0	4.37	1.16	0.61	14.3	14.3	12.6	12.6	1.70	0.91	0.02	2.93



Alt Model-Shift Uniqueness Test

005734003-02, P = 2.023569 Days, E = 131.191922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	13.9	0	0	4.39	1.20	1.38	21.0	21.0	13.9	13.9	1.53	0.98	0.08	0.28



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 2	$1.27^{+0.59}_{-0.58}$	3595^{+256}_{-355}	7185^{+3574}_{-1361}	12^{+28}_{-6}
Alt.	-32 ± 2	$1.82^{+0.72}_{-0.66}$	3607^{+250}_{-322}	6414^{+1589}_{-969}	$7.659^{+10.447}_{-3.791}$

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

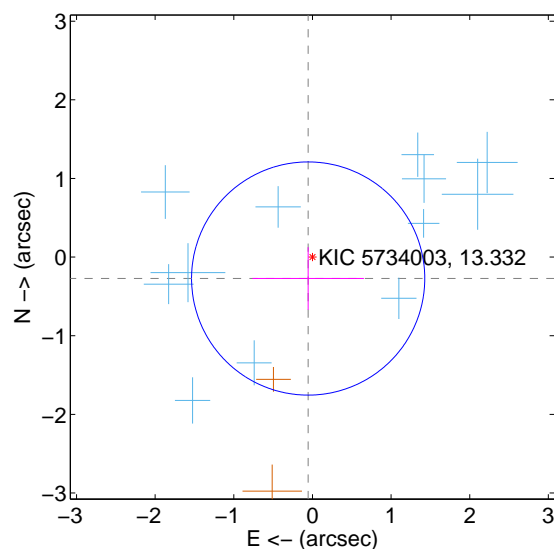
Supplemental centroid analysis for 005734003-02. Kepler magnitude: 13.33. Transit SNR 7.69

There are 12 quarters with good PRF difference image offsets

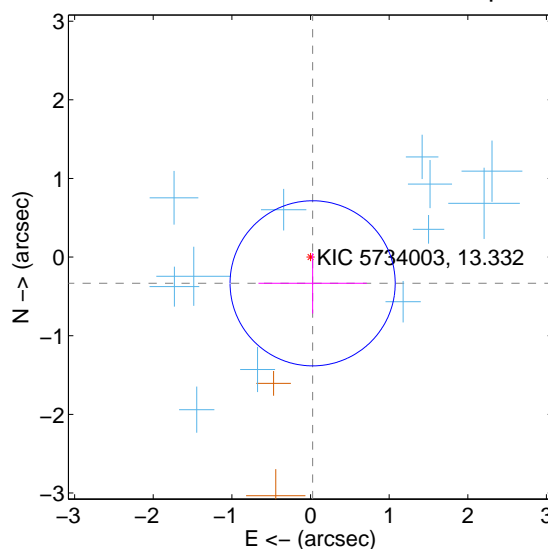
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.278 ± 0.494	0.56	0.054 ± 0.710	-0.272 ± 0.398
PRF-fit source offset from KIC position	0.335 ± 0.350	0.96	-0.027 ± 0.688	-0.333 ± 0.384
photometric centroid source offset	0.71 ± 0.62	1.15	0.20 ± 0.60	0.68 ± 0.62

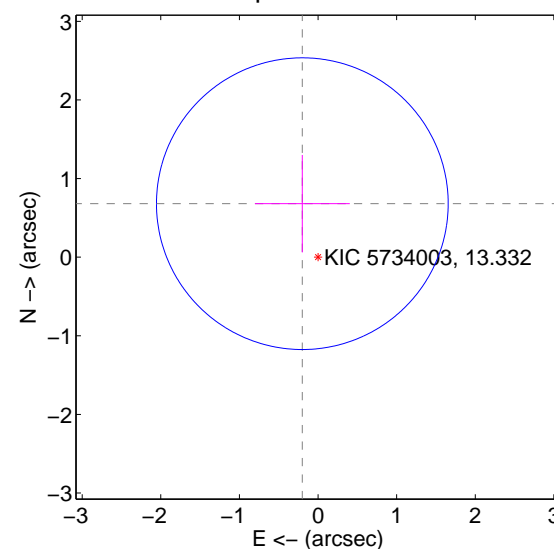
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

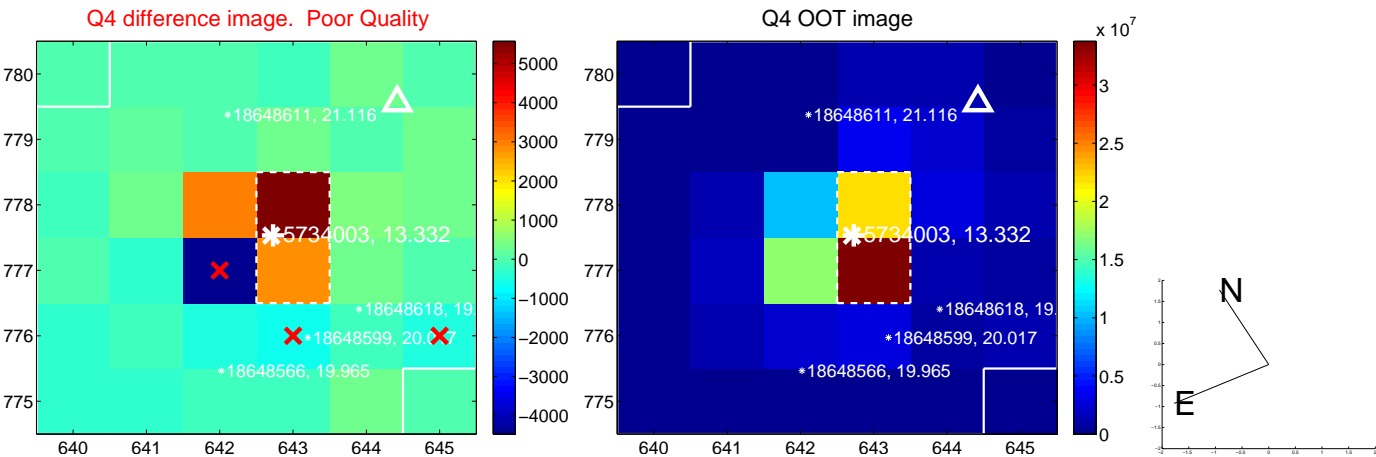
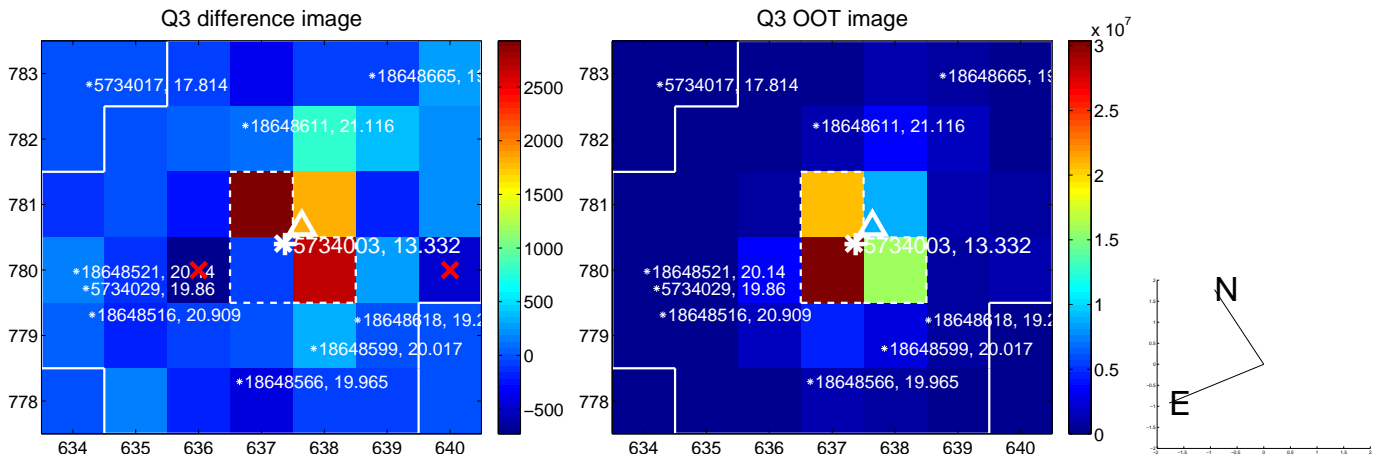
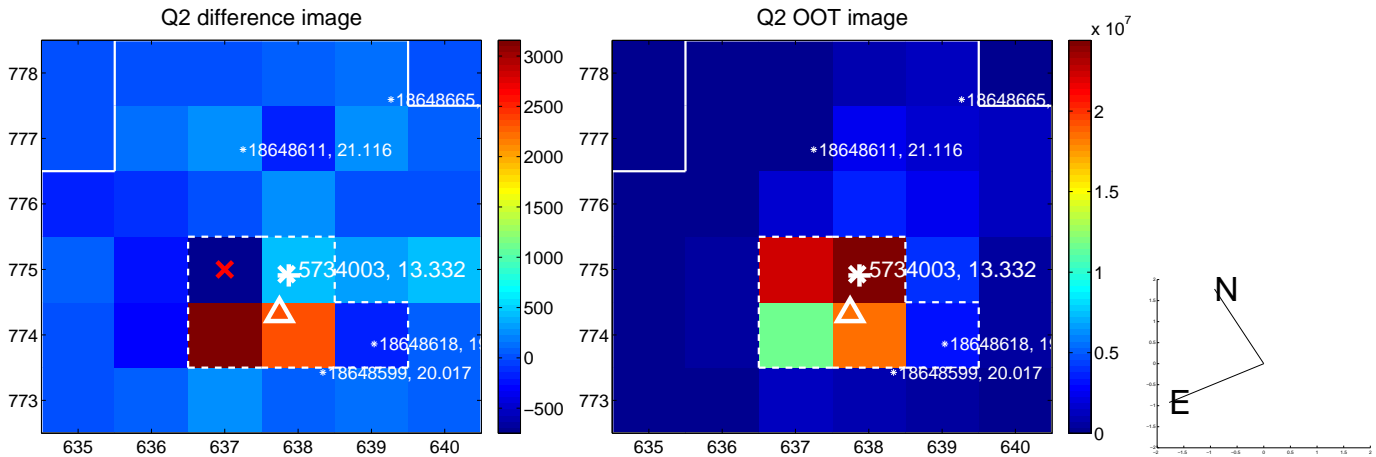
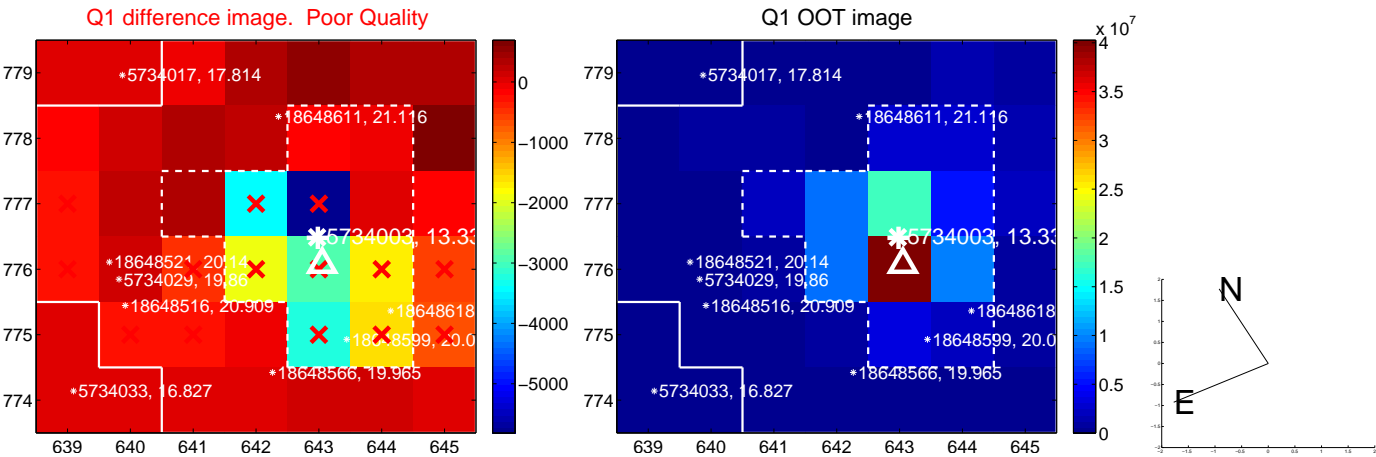


offset from photometric centroids

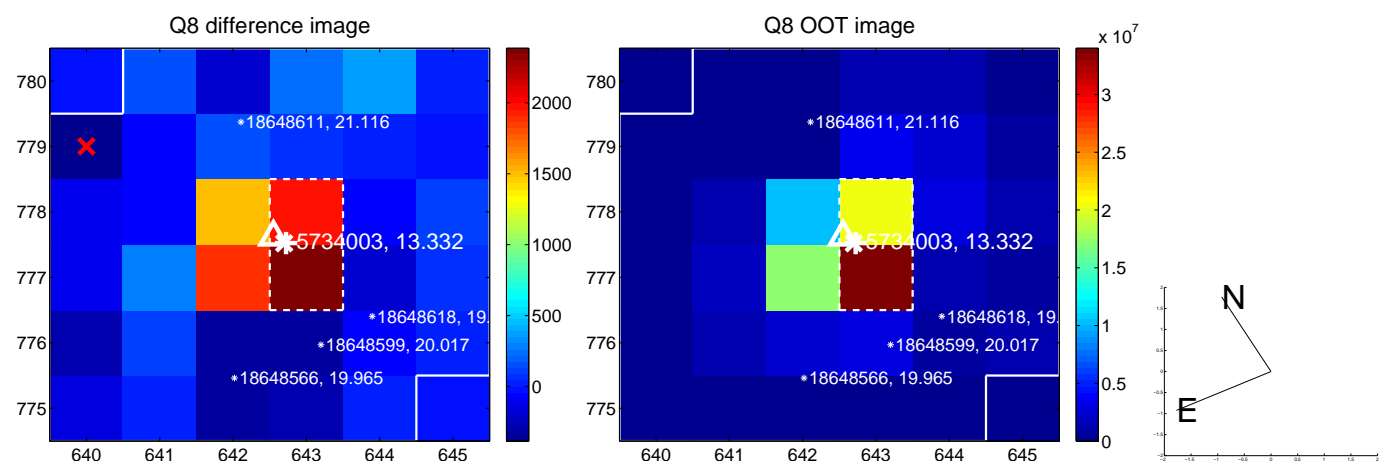
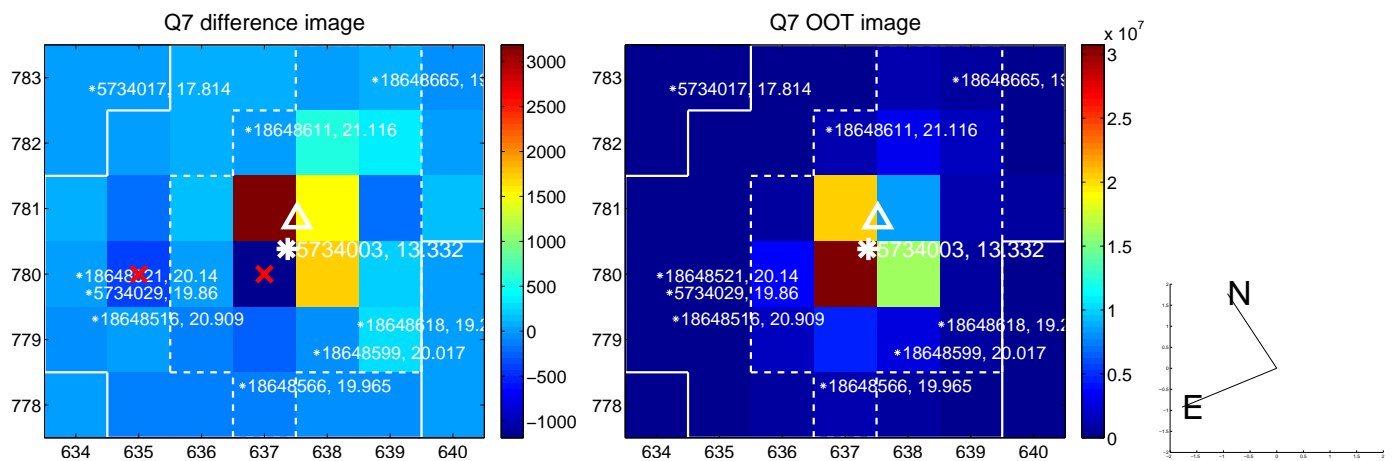
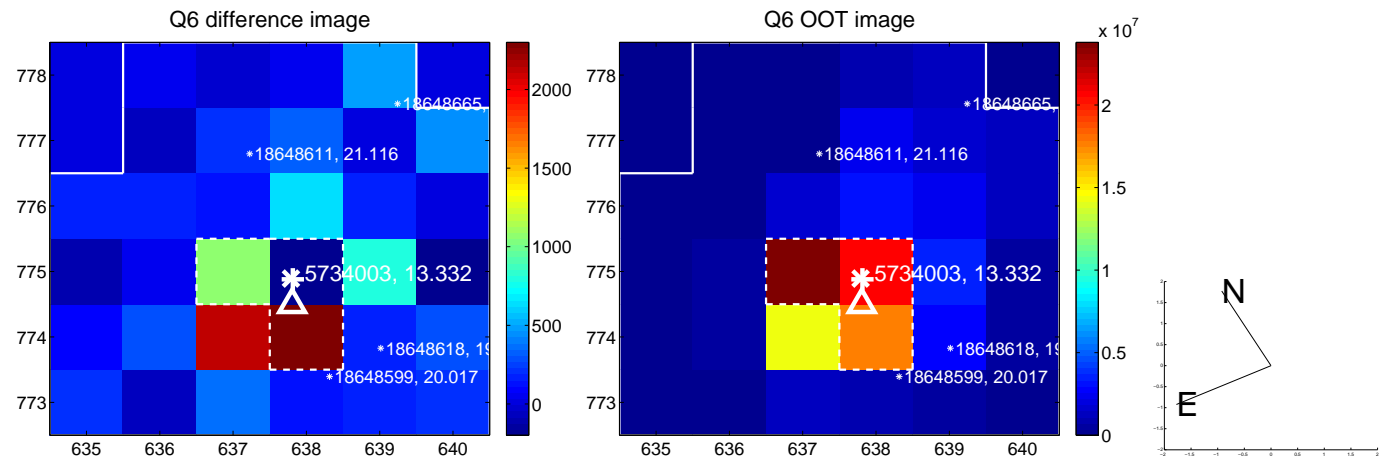
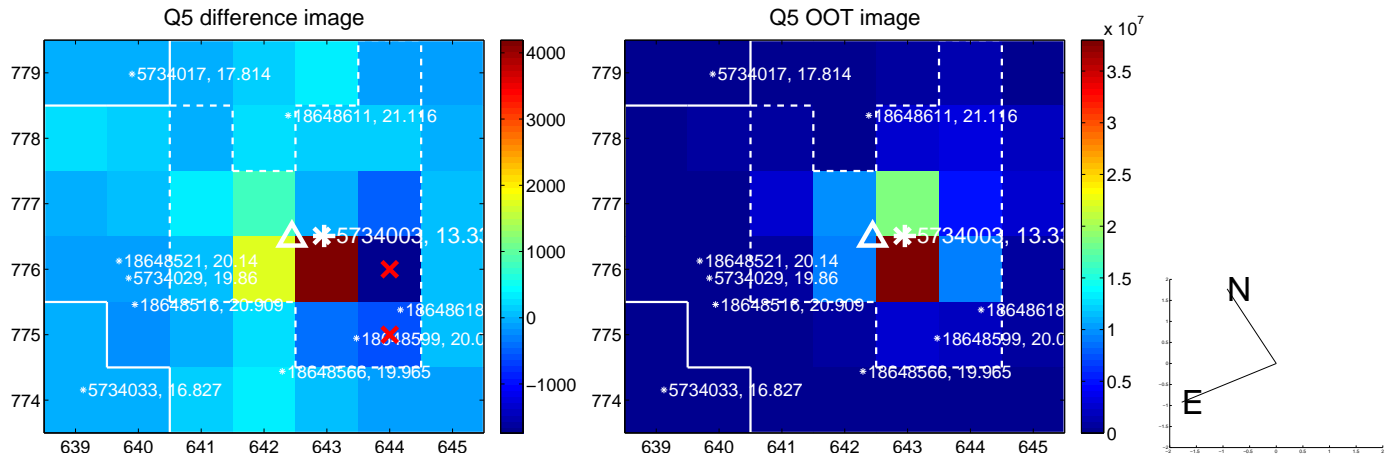


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

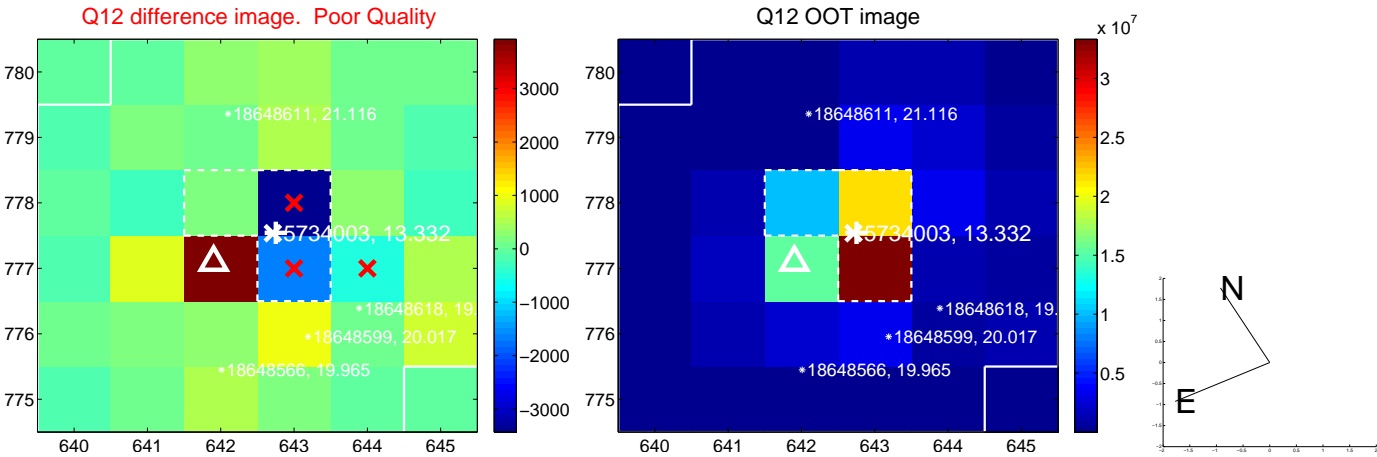
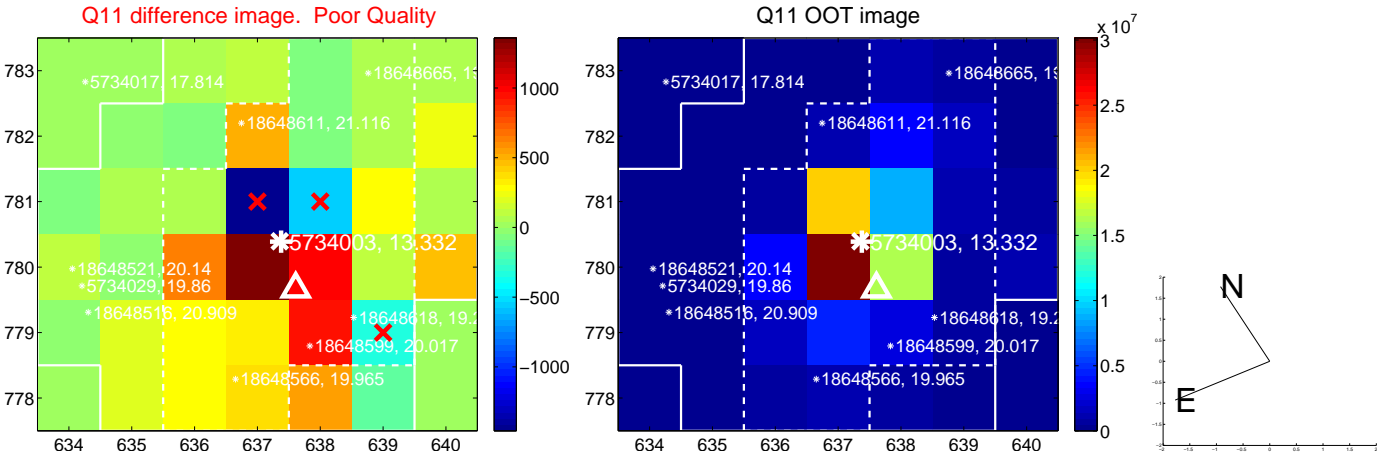
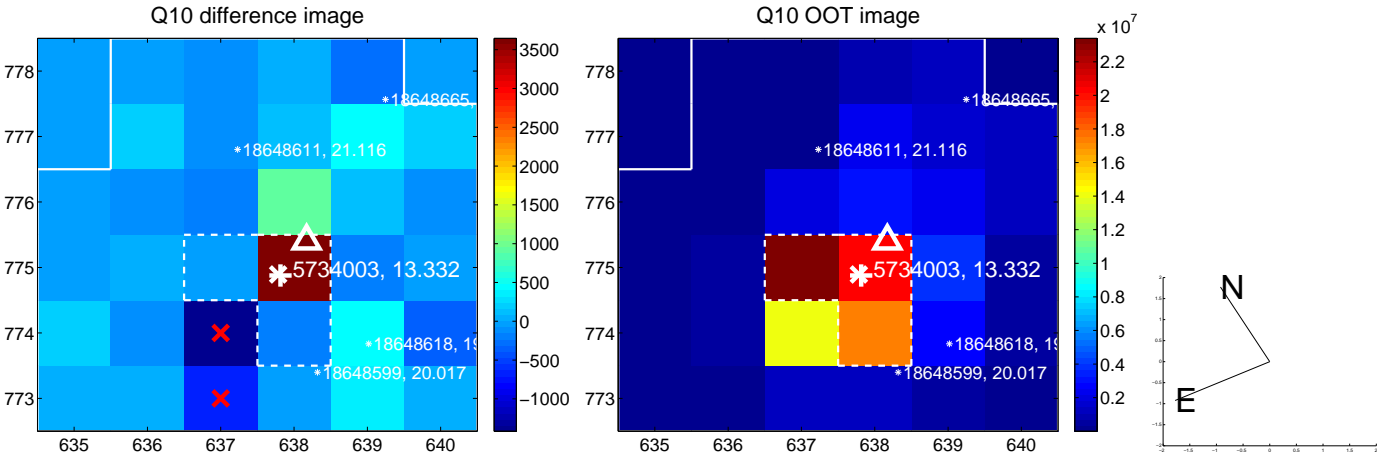
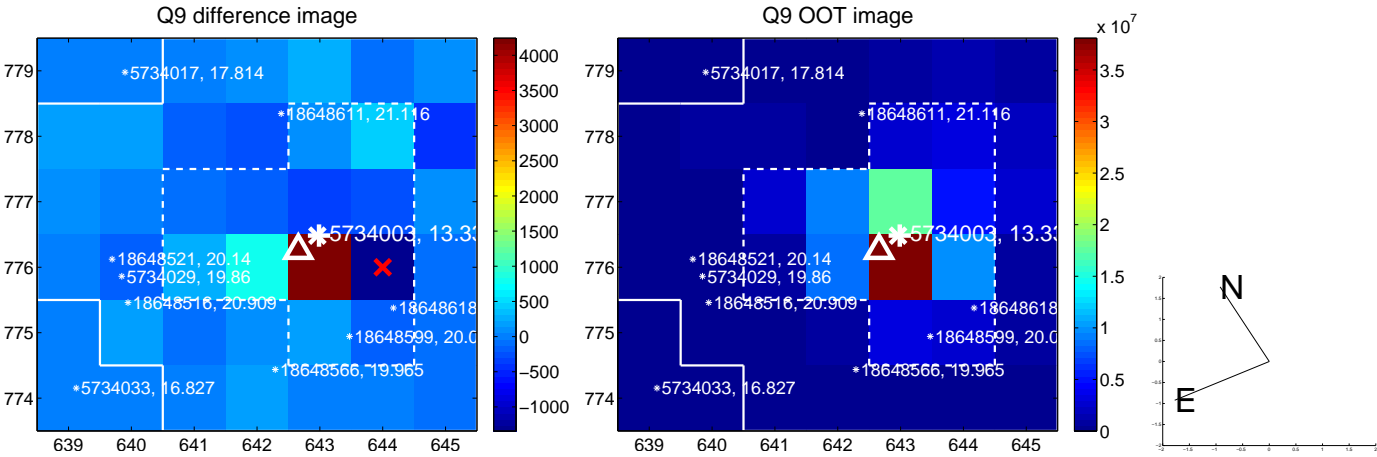
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



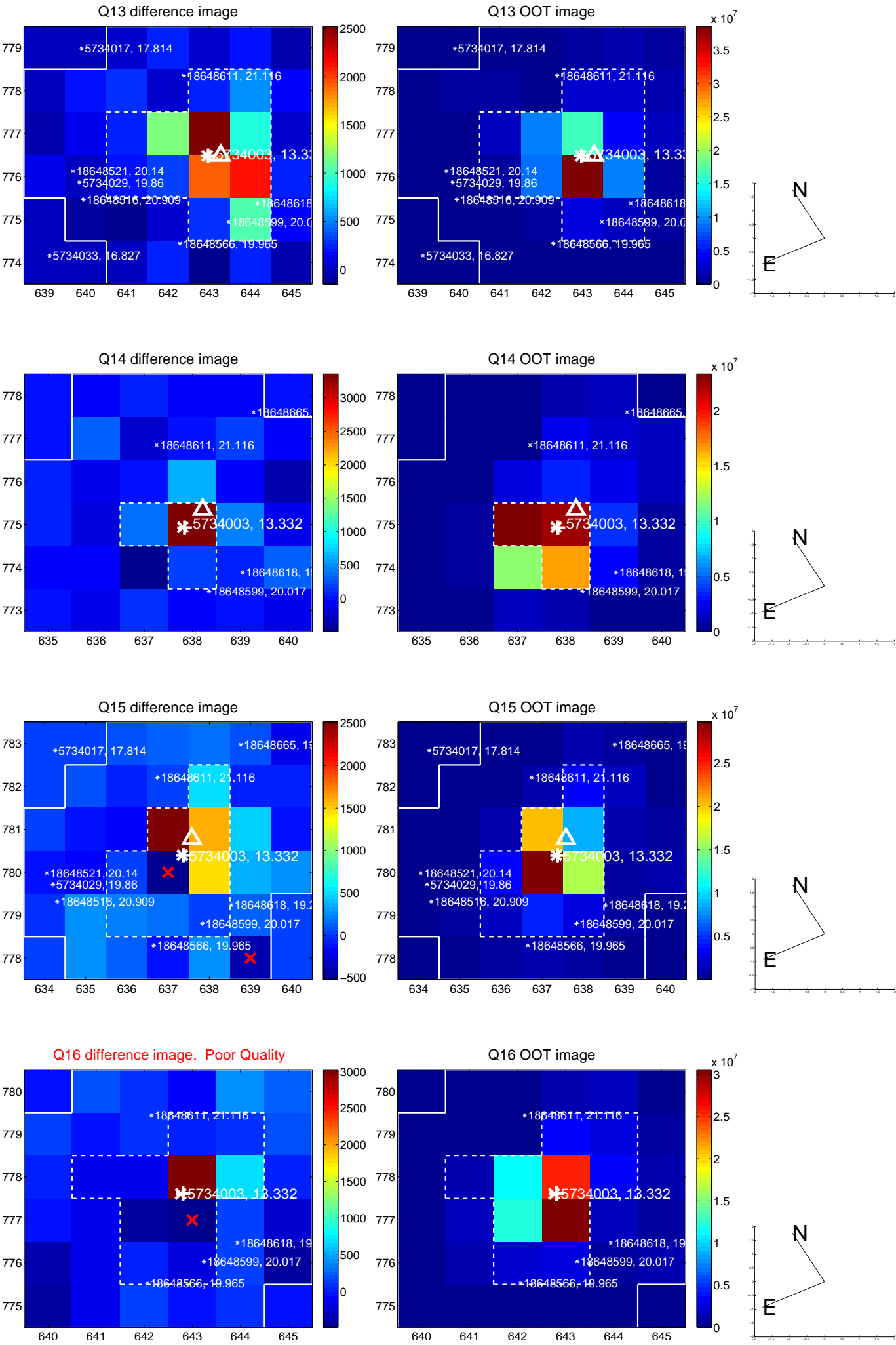
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



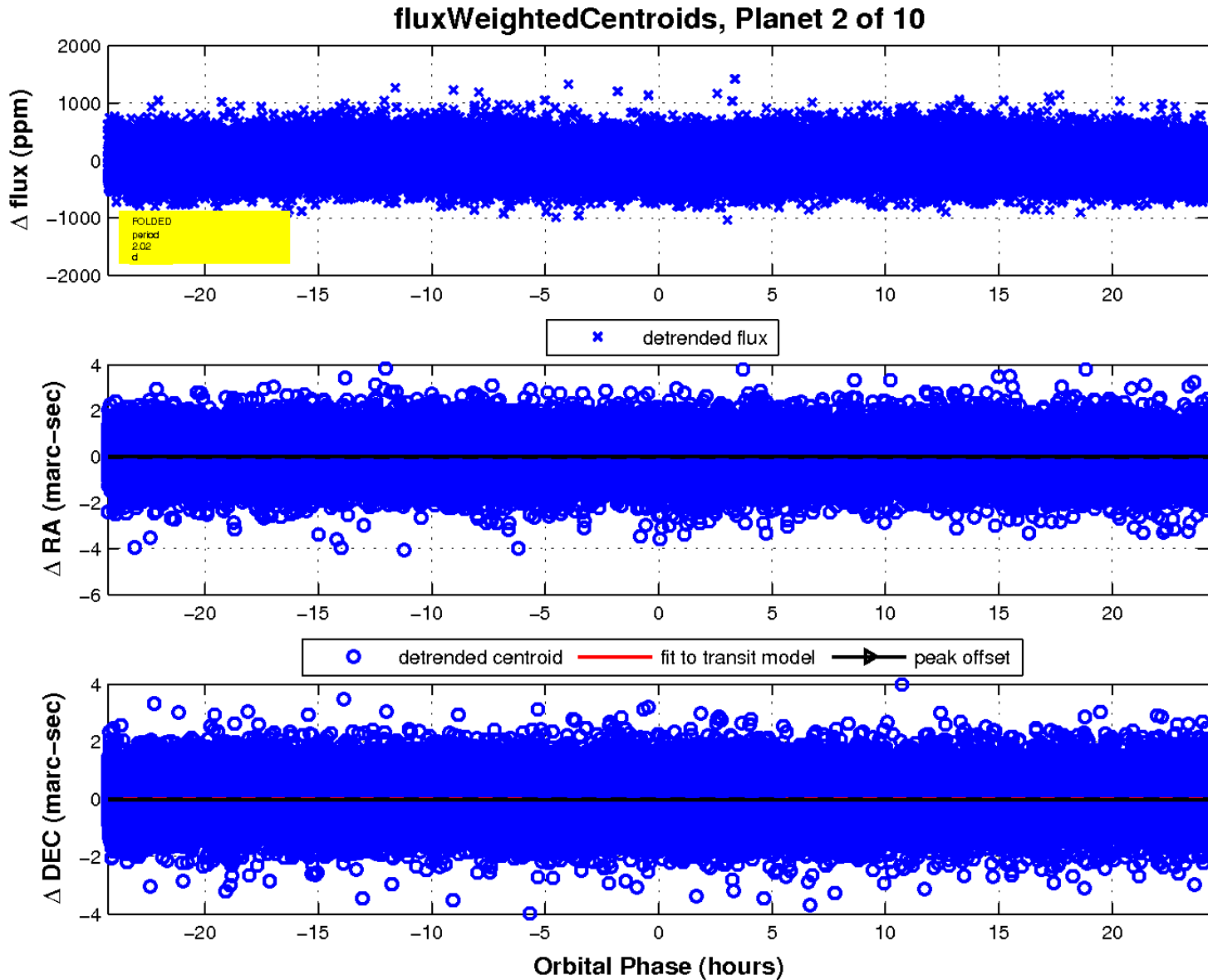
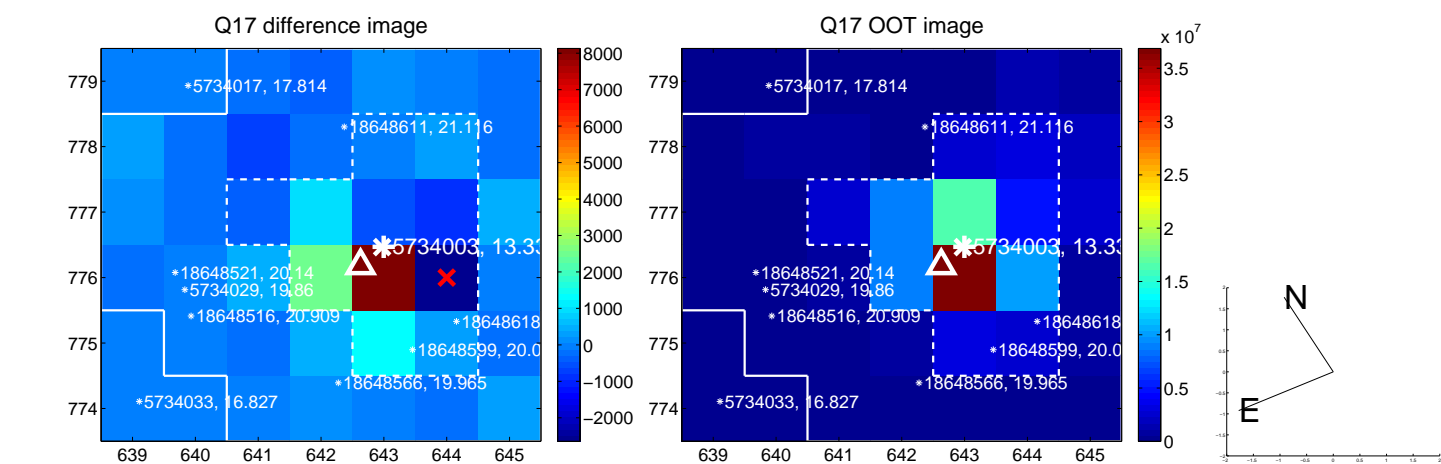
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

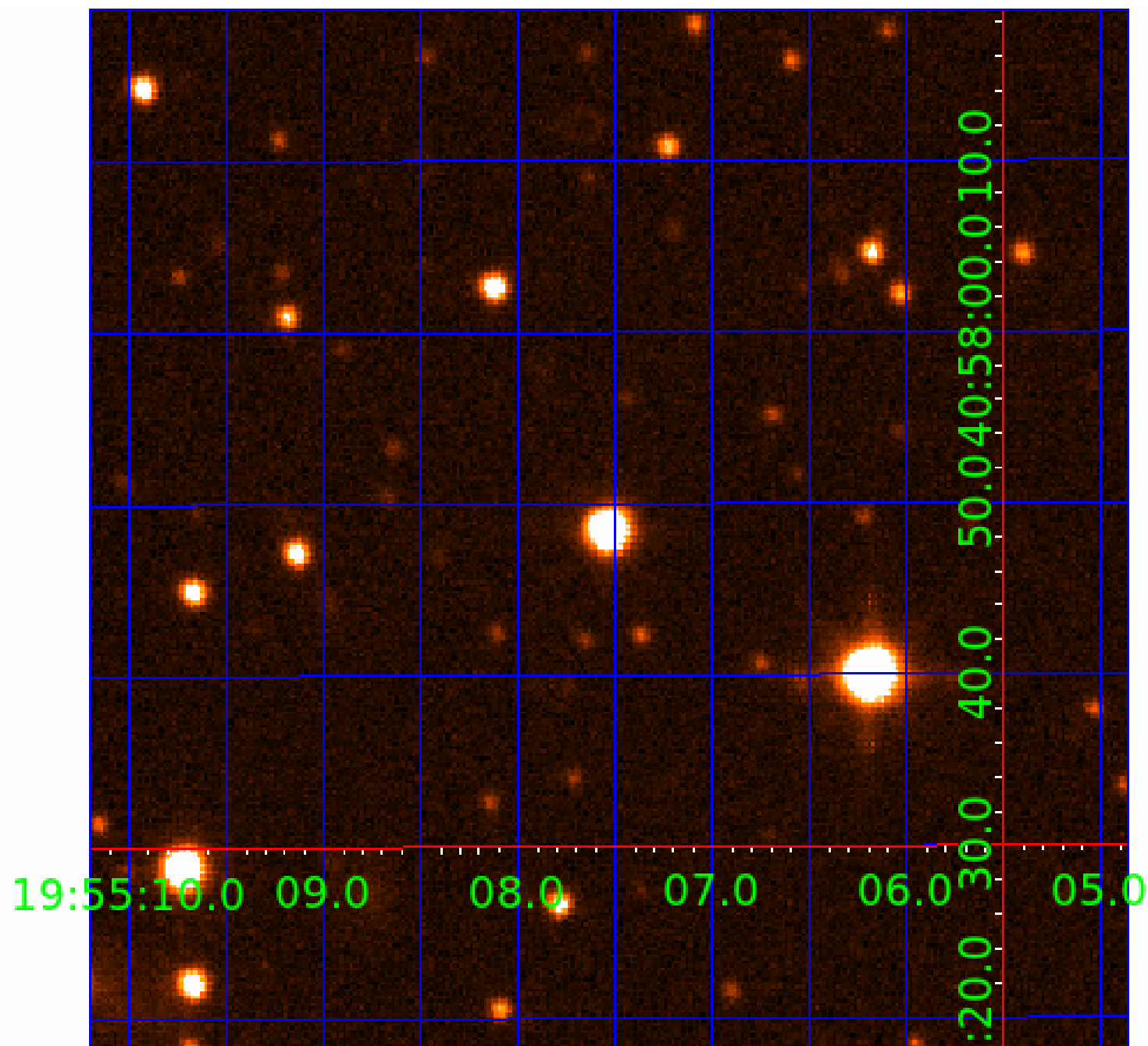


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005734003

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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

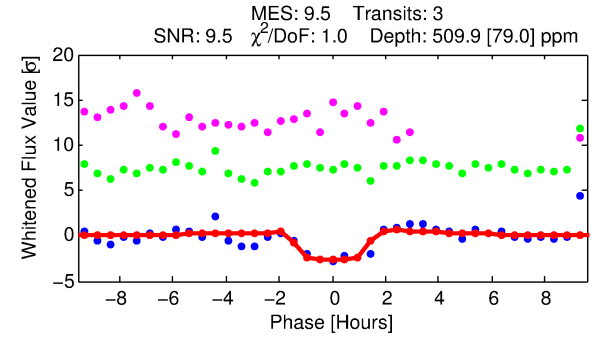
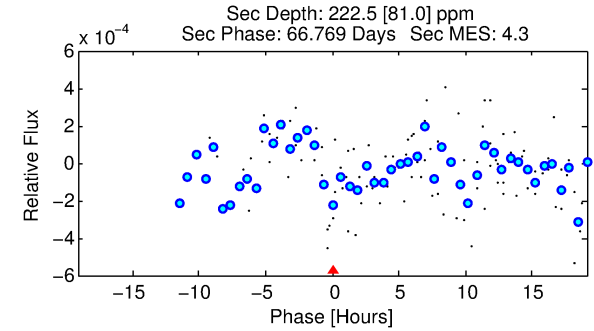
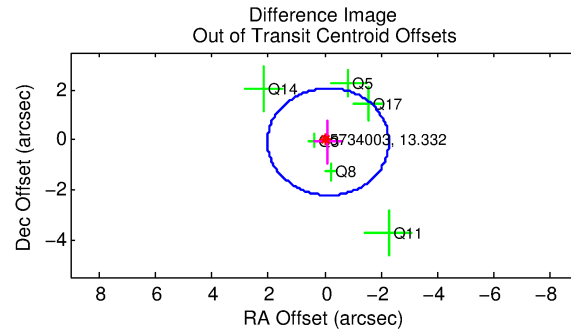
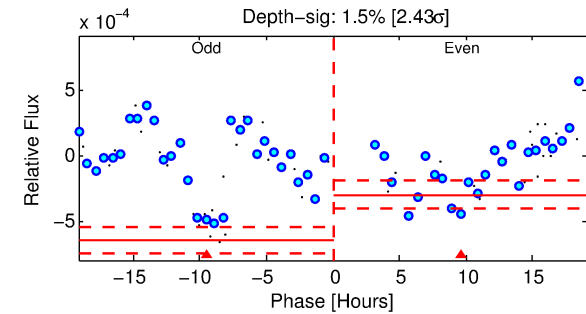
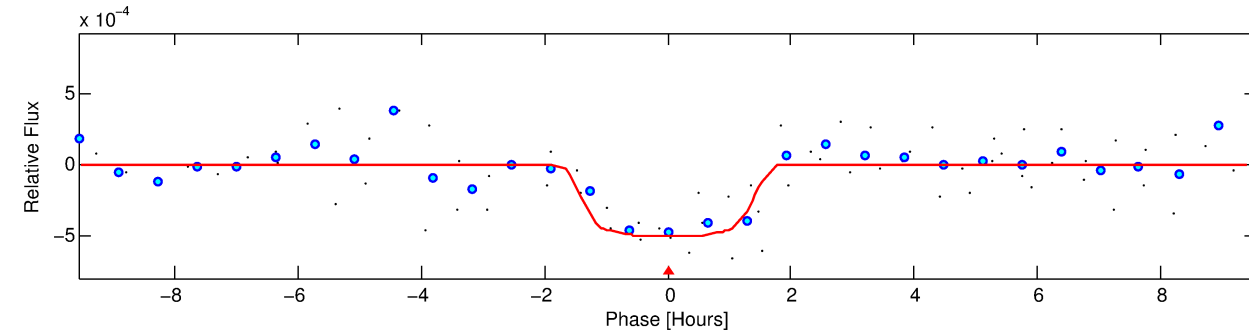
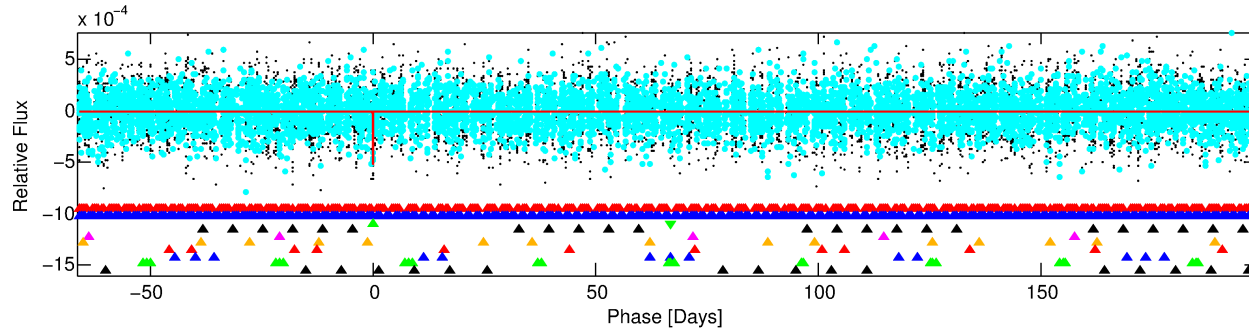
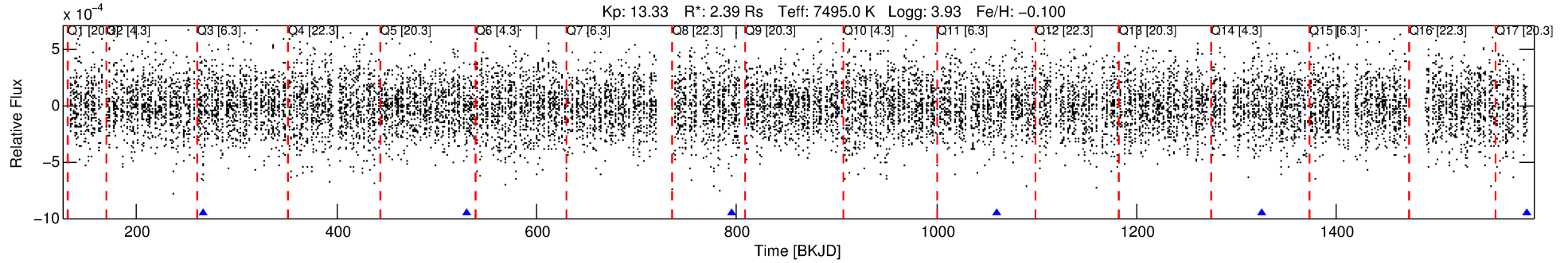
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-03

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 3 of 10 Period: 264.821 d



DV Fit Results:

Period = 264.82084 [0.00464] d
Epoch = 266.0667 [0.0045] BKJD
Rp/R* = 0.0237 [0.0333]
a/R* = 329.87 [2948.76]
b = 0.88 [2.28]
Seff = 17.02 [8.95]
Teq = 518 [68] K
Rp = 6.18 [8.92] Re
a = 0.9738 [0.3054] AU
Ag = 3043.43 [8749.84] [0.35 σ]
Teffp = 5947 [4220] K [1.29 σ]

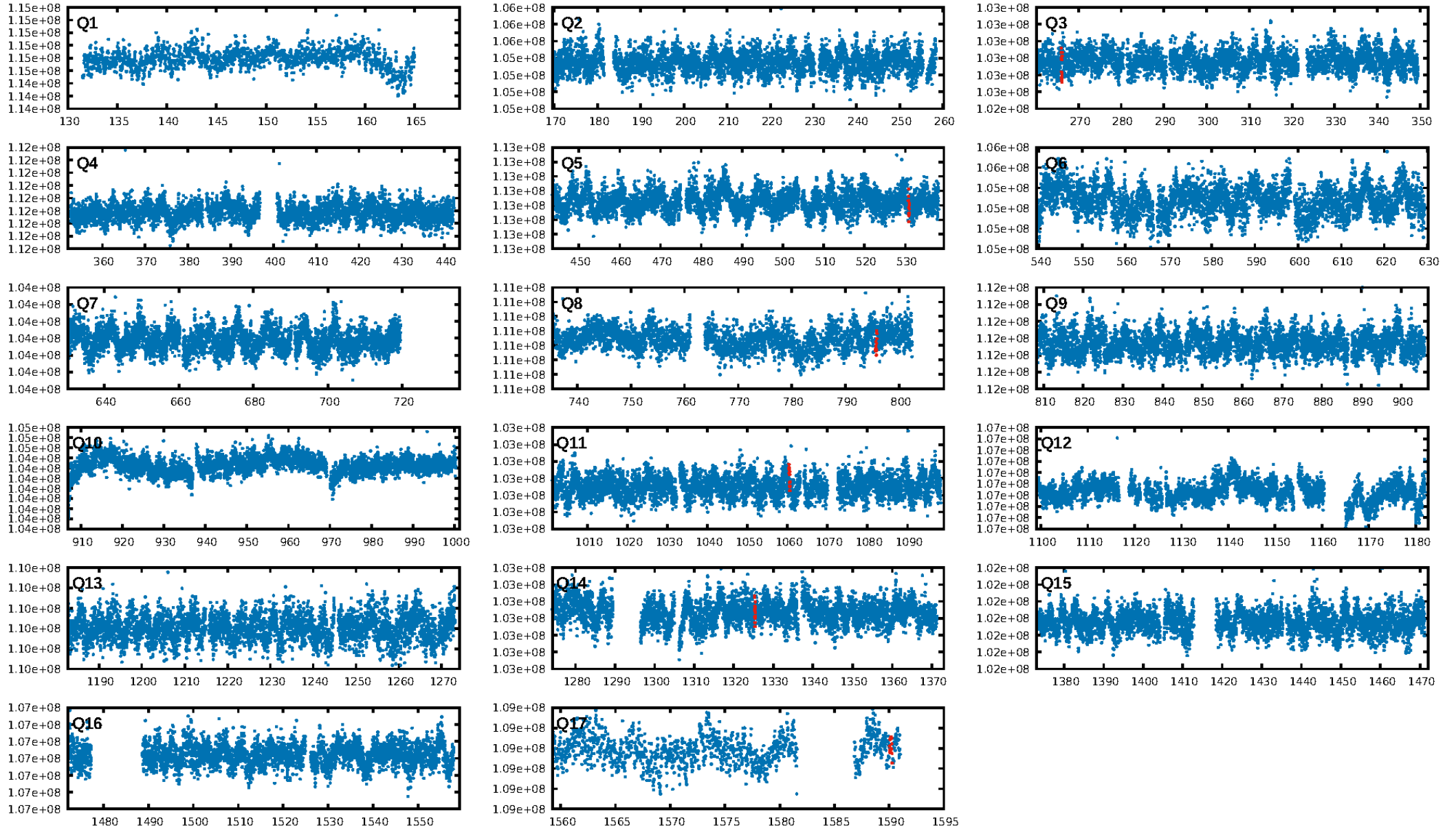
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [763.31 σ]
LongPeriod-sig: 100.0% [93.14 σ]
ModelChiSquare2-sig: 12.6%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.391
Centroid-sig: 44.2%
Centroid-so: 0.793 arcsec [1.26 σ]
OotOffset-rm: 0.152 arcsec [0.21 σ]
KicOffset-rm: 0.290 arcsec [0.38 σ]
OotOffset-st: 1/2/1/2 [6]
KicOffset-st: 1/2/1/2 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 0.50 [3/6]

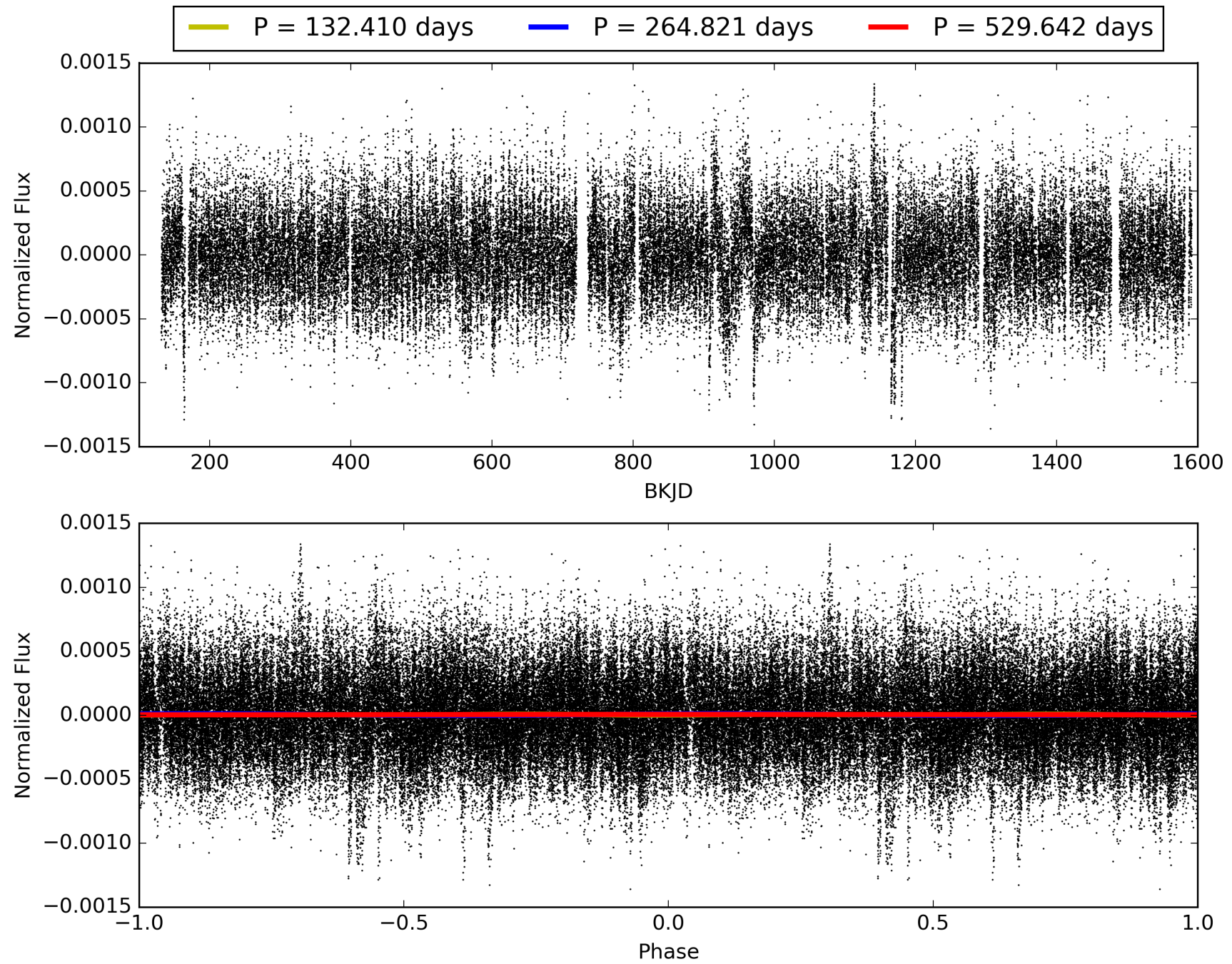
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:59 Z

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

TCE 005734003-03, PDC Light Curves

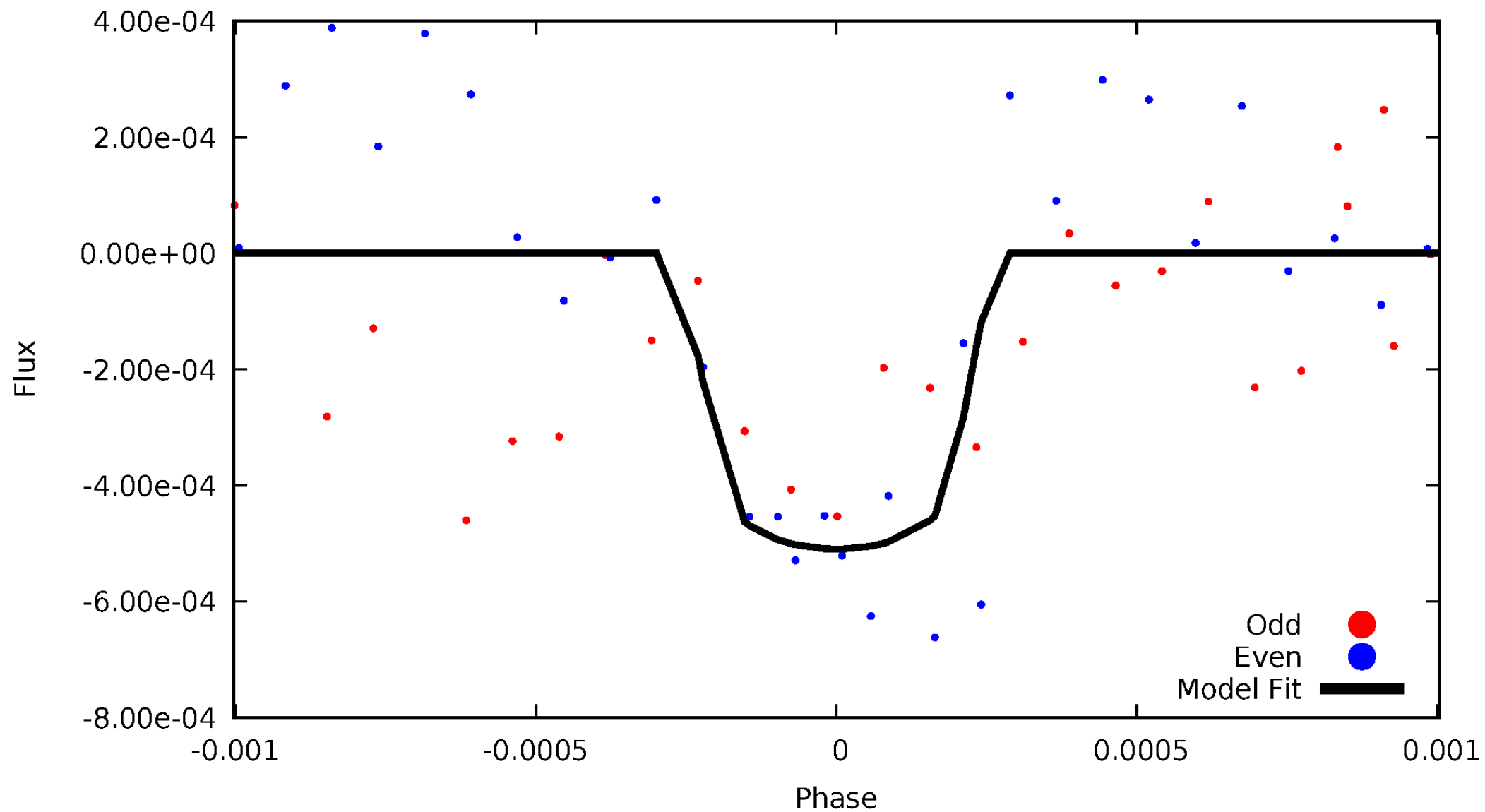


TCE 005734003-03



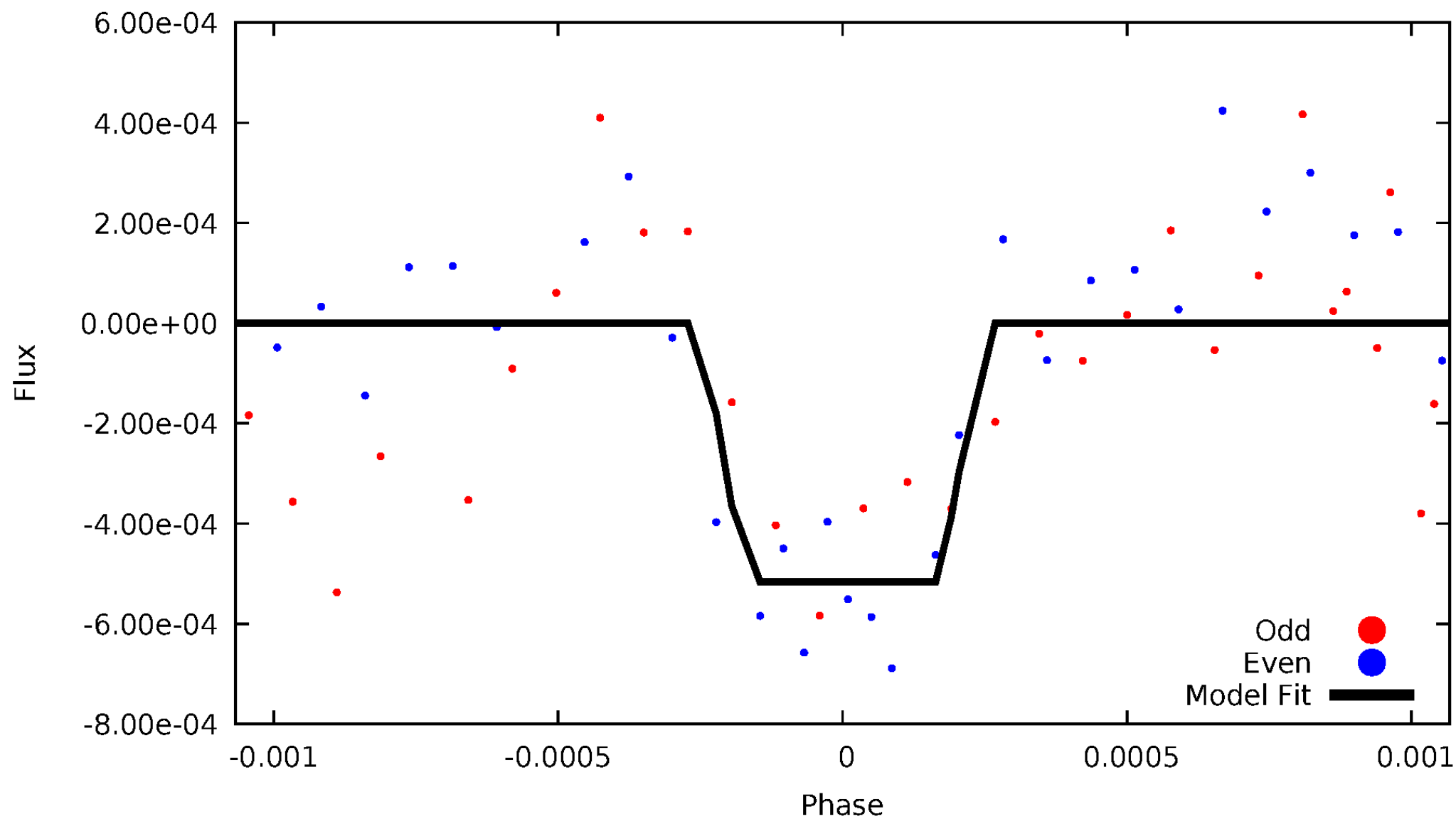
DV Odd/Even

TCE 005734003-03



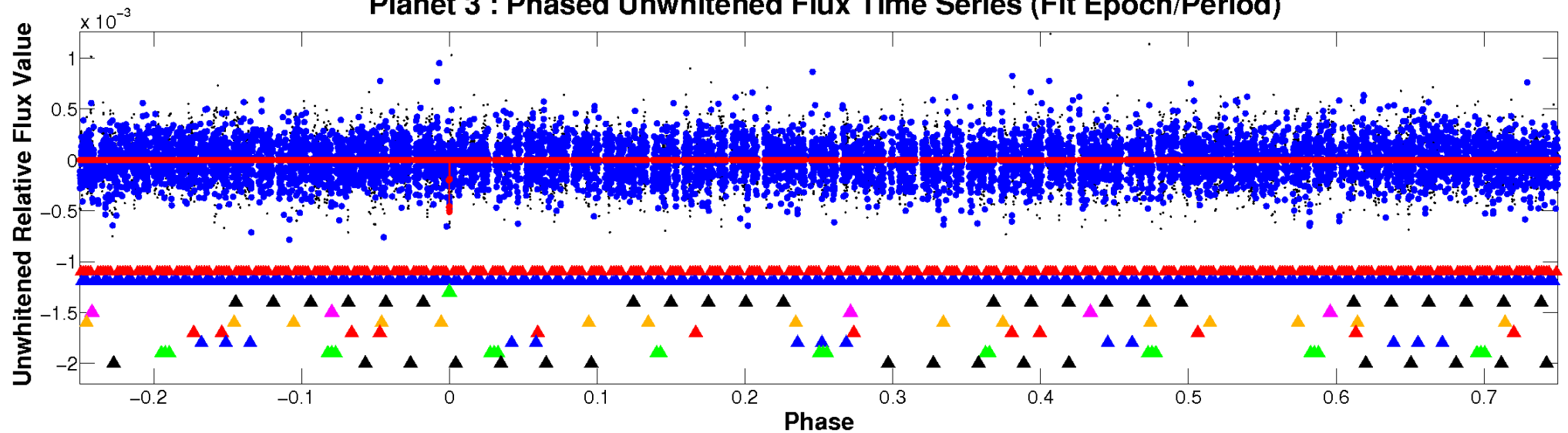
ALT Odd/Even

TCE 005734003-03

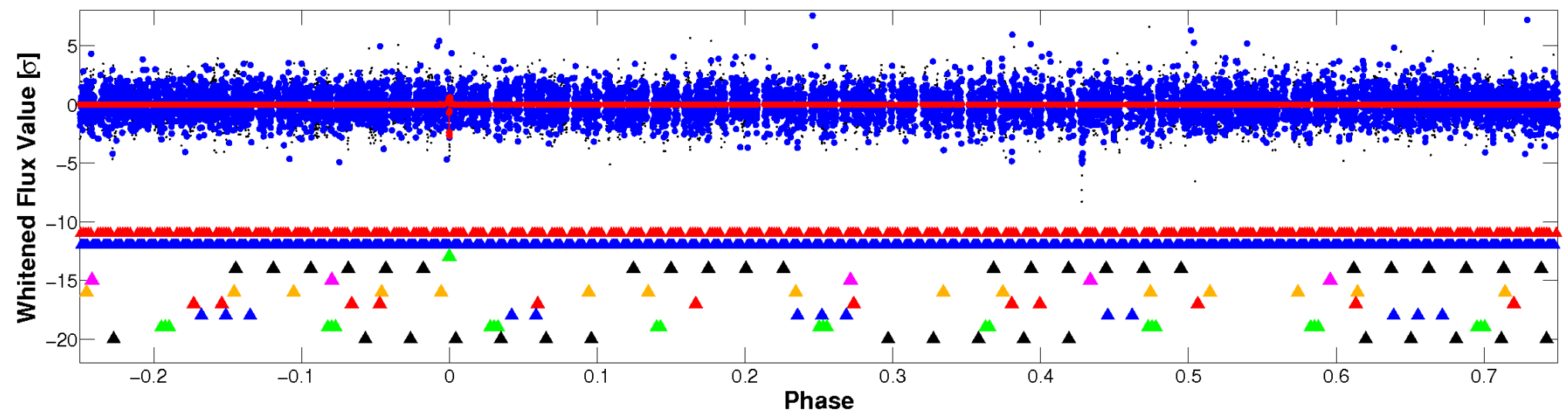


Non-Whitened Vs. Whitened Light Curve

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

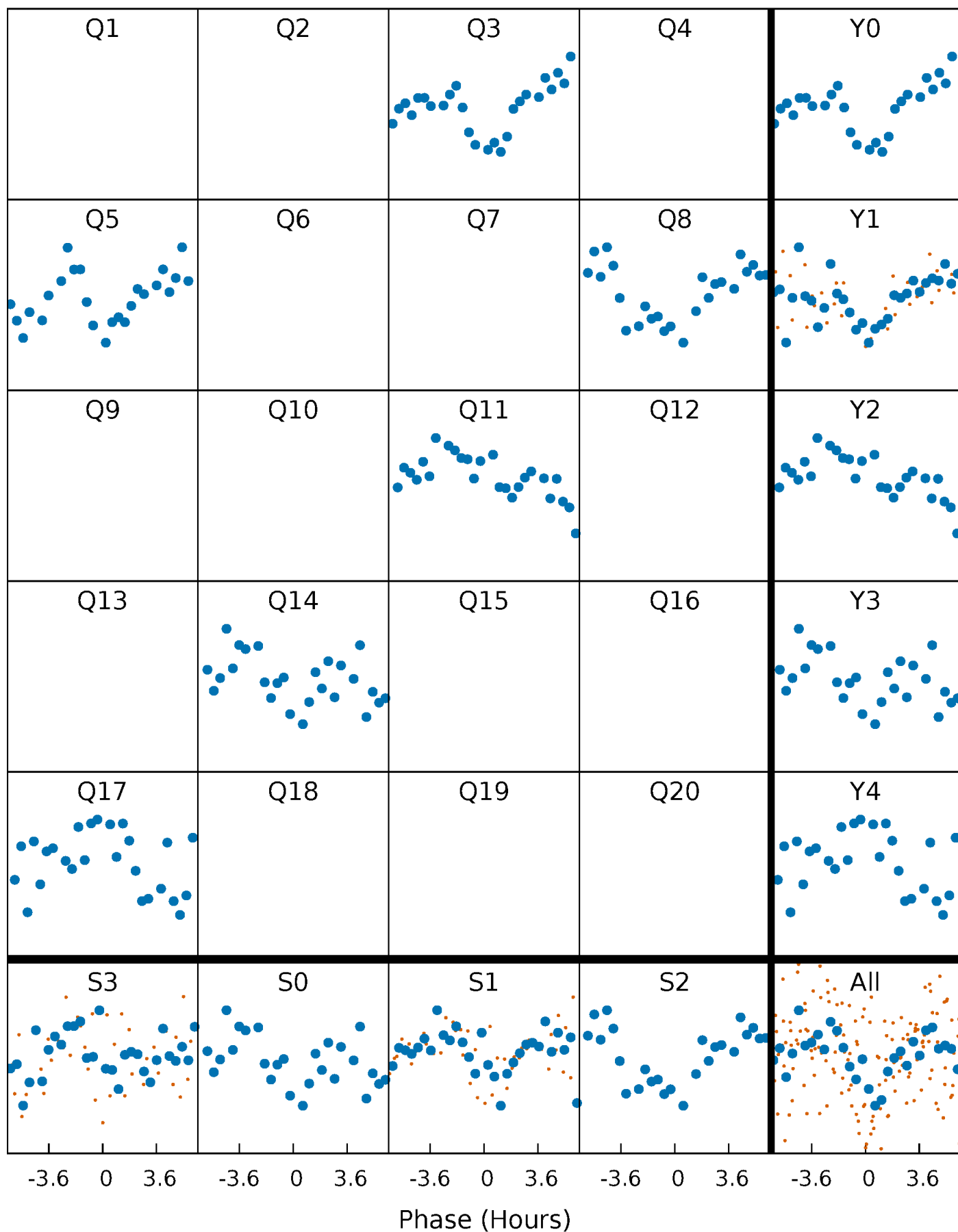


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



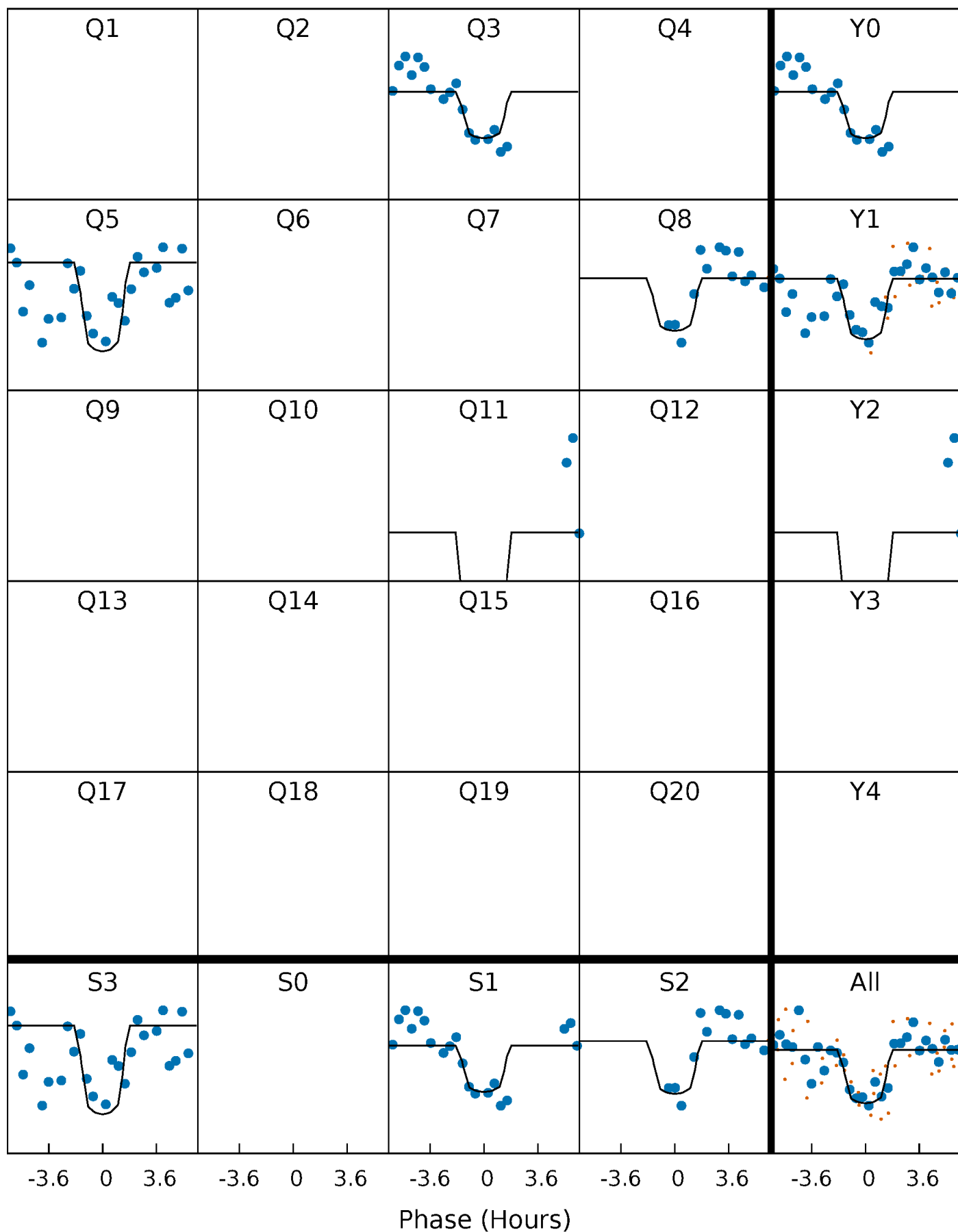
PDC Quarter-Phased Transit Curves

TCE 005734003-03 P=264.820843 Days $T_0=266.066747$ (BKJD)



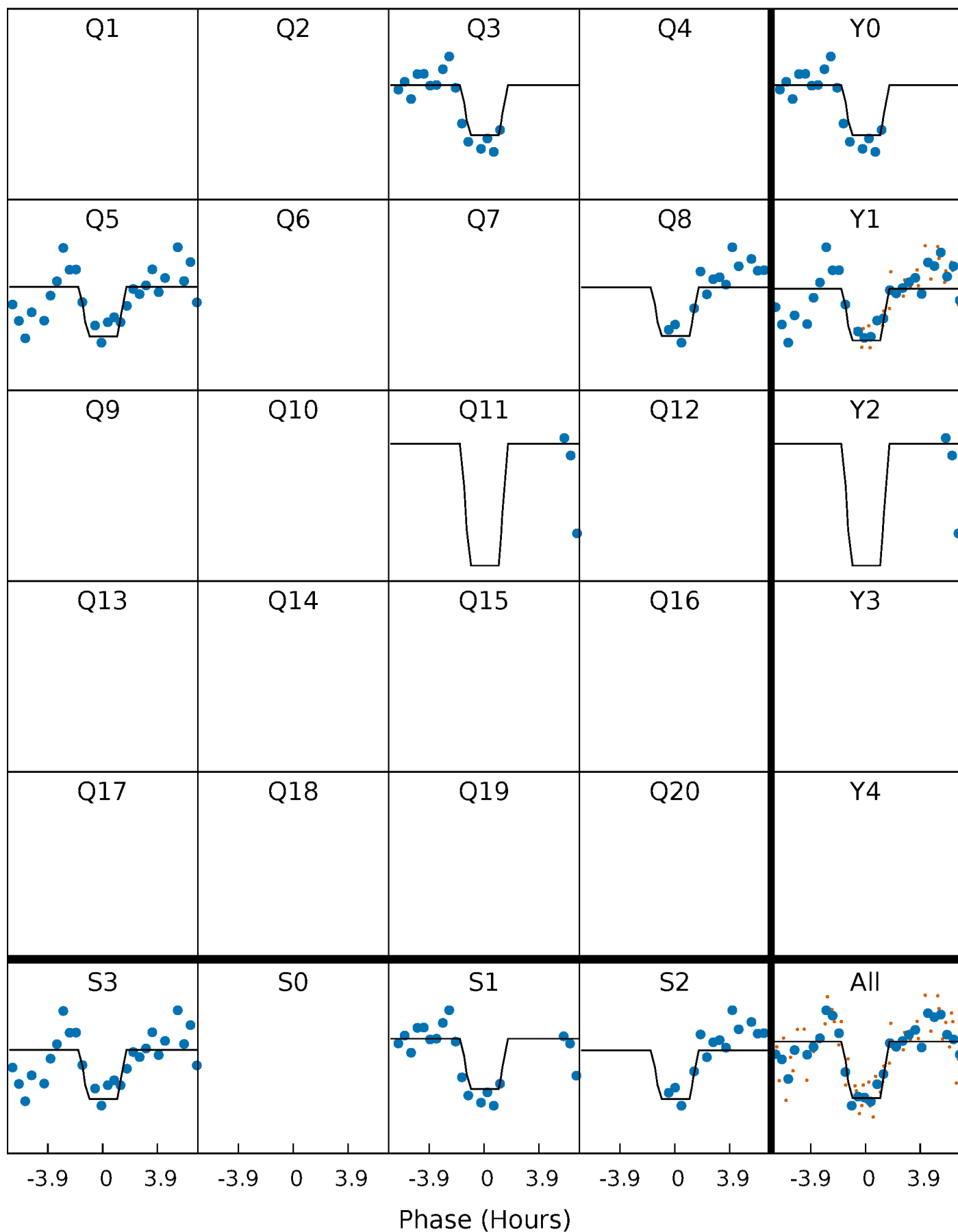
DV Quarter-Phased Transit Curves

TCE 005734003-03 P=264.820843 Days $T_0=266.066747$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

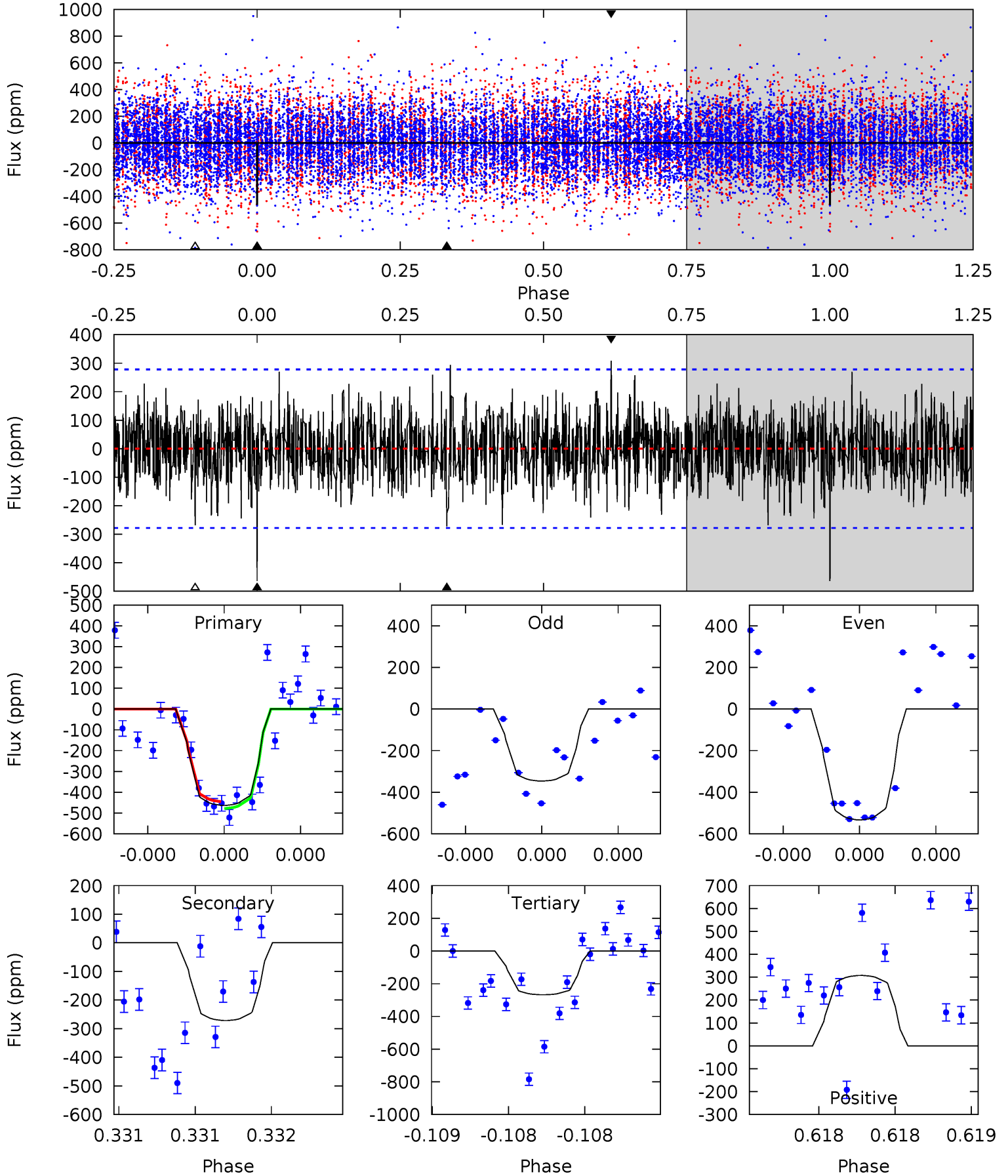
TCE 005734003-03 $P=264.811496$ Days $T_0=266.087159$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-03, P = 264.820843 Days, E = 1.245904 Days

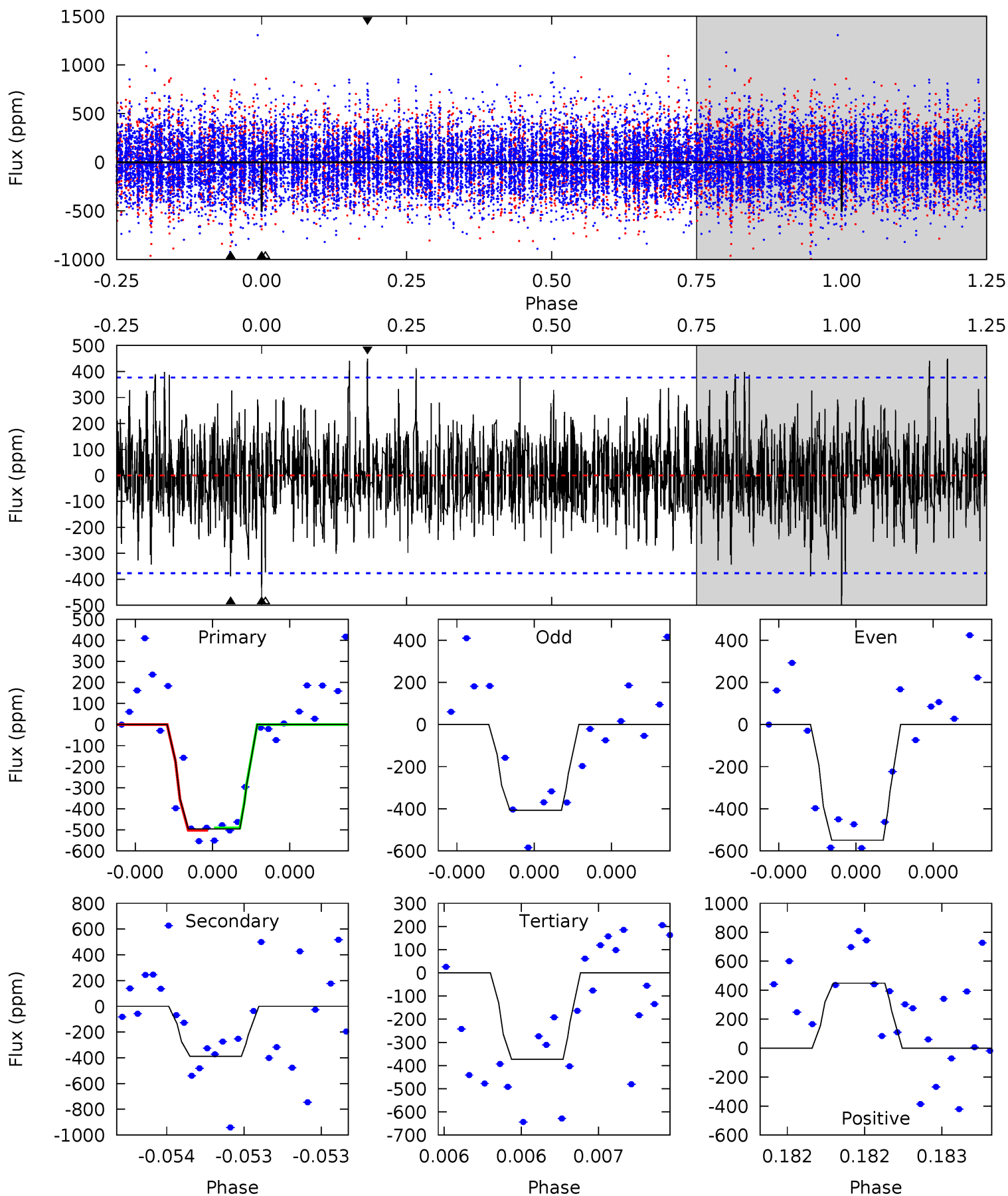
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.31	5.46	5.38	6.18	5.58	3.50	1.56	3.93	3.13	0.08	-0.72	1.84	0.94	0.40	0.32



Alt Model-Shift Uniqueness Test

005734003-03, P = 264.811496 Days, E = 1.275663 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.36	5.75	5.53	6.65	5.59	3.50	1.58	1.83	0.71	0.22	-0.90	1.01	1.05	0.47	0.08



Stellar Parameters For KIC 005734003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-272 ± 50	$8.15^{+7.80}_{-5.51}$	713^{+46}_{-65}	5207^{+4358}_{-1192}	2000^{+17498}_{-1470}
Alt.	-388 ± 67	$8.19^{+7.41}_{-5.49}$	708^{+49}_{-65}	5707^{+5002}_{-1390}	3098^{+25079}_{-2305}

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

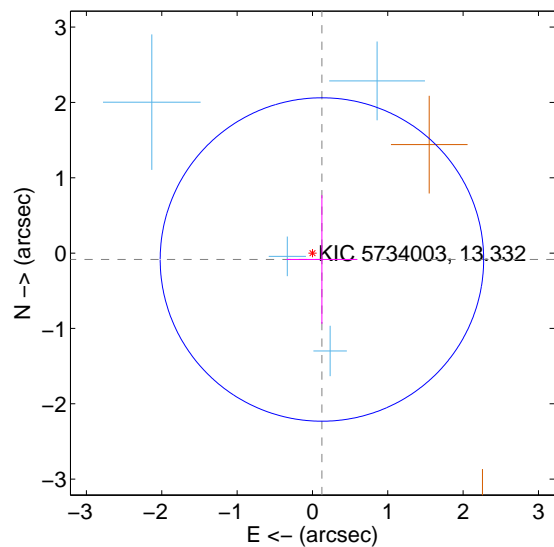
Supplemental centroid analysis for 005734003-03. Kepler magnitude: 13.33. Transit SNR 9.48

There are 4 quarters with good PRF difference image offsets

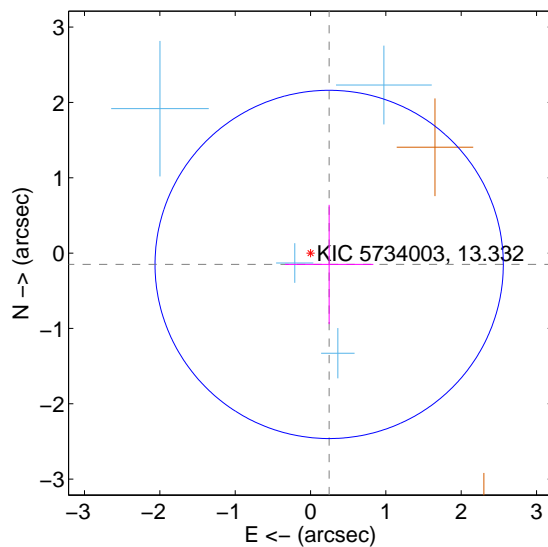
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.716	0.21	-0.126 ± 0.471	-0.085 ± 0.854
PRF-fit source offset from KIC position	0.290 ± 0.771	0.38	-0.247 ± 0.586	-0.150 ± 0.792
photometric centroid source offset	0.79 ± 0.63	1.26	0.72 ± 0.63	-0.32 ± 0.63

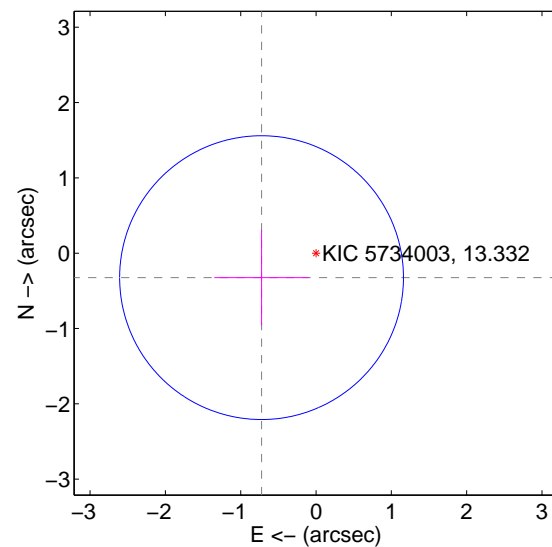
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



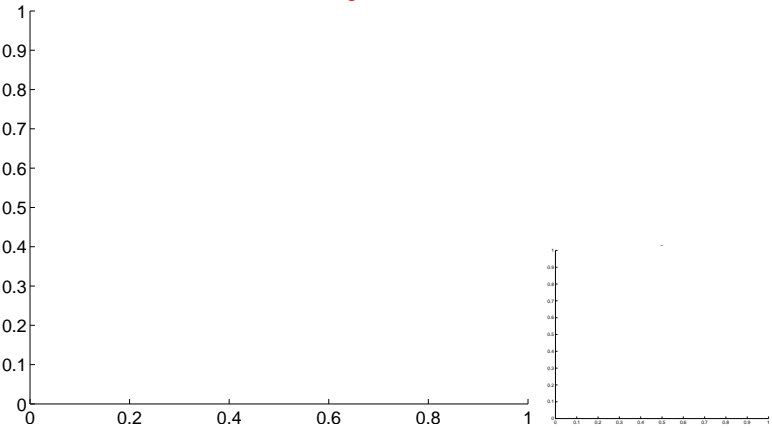
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

Q1 no difference image



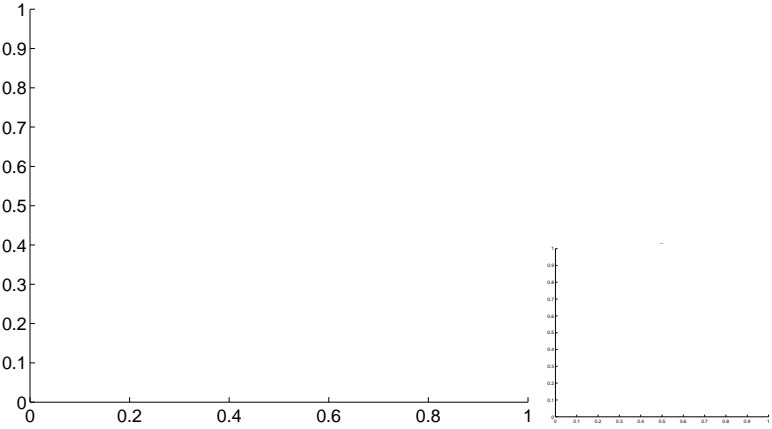
Q1 no OOT image



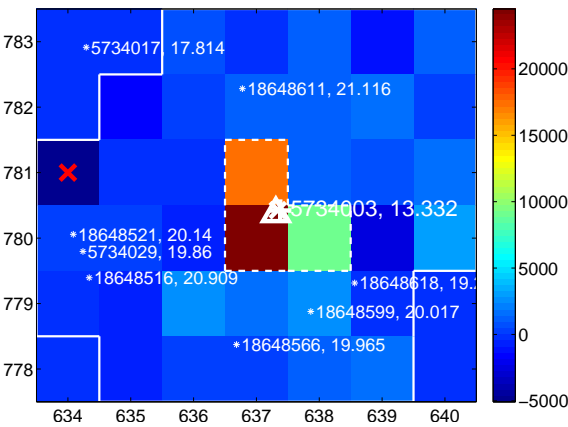
Q2 no difference image



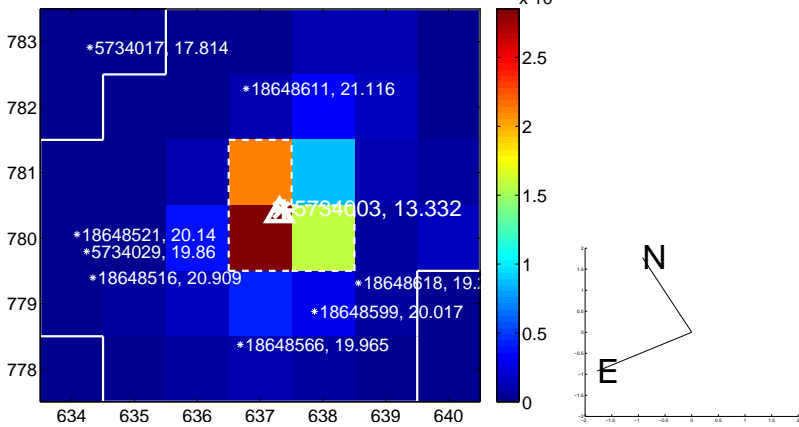
Q2 no OOT image



Q3 difference image



Q3 OOT image



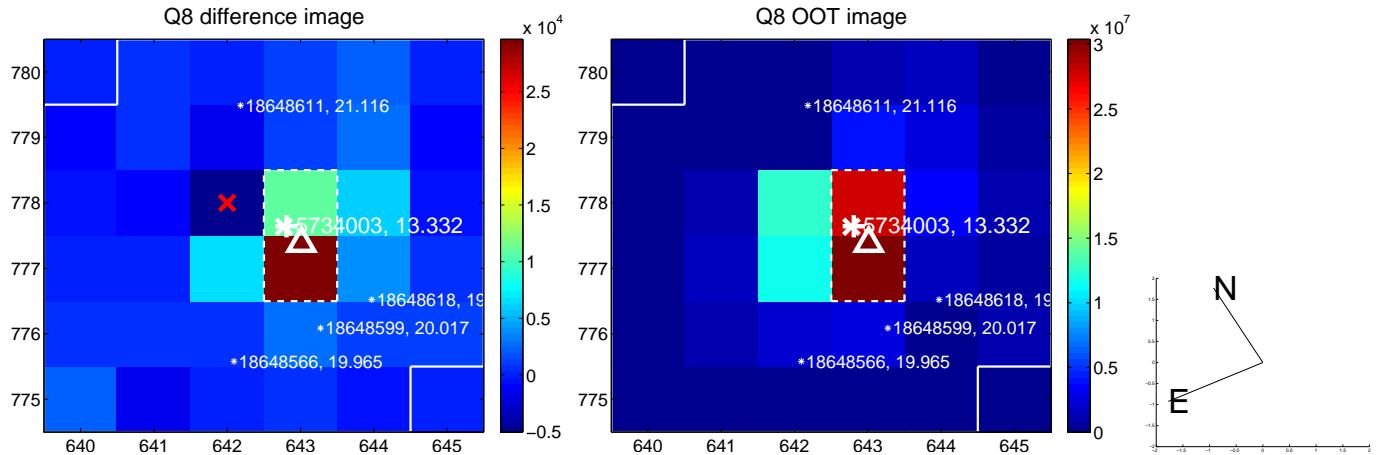
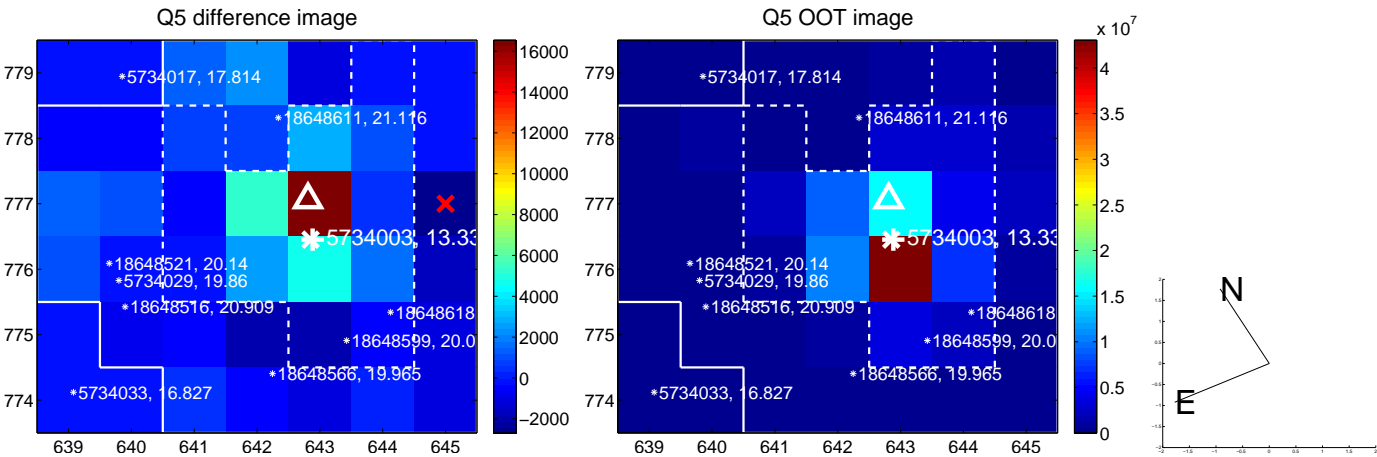
Q4 no difference image



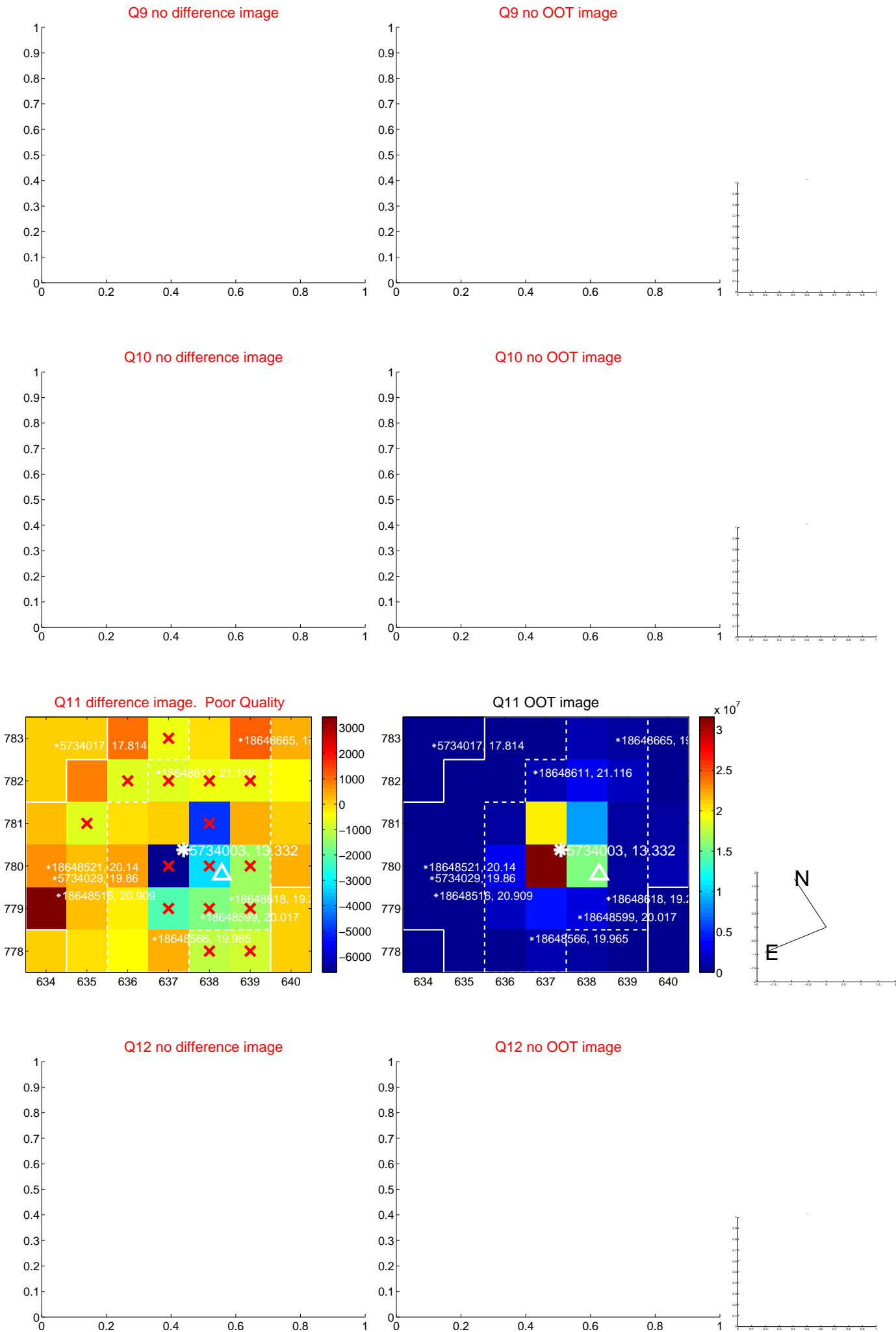
Q4 no OOT image



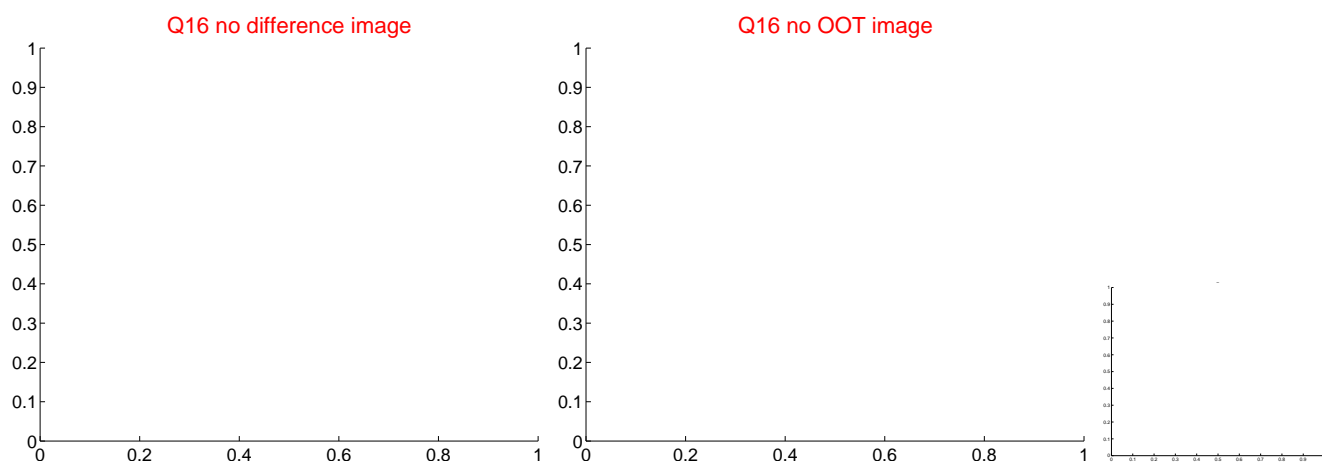
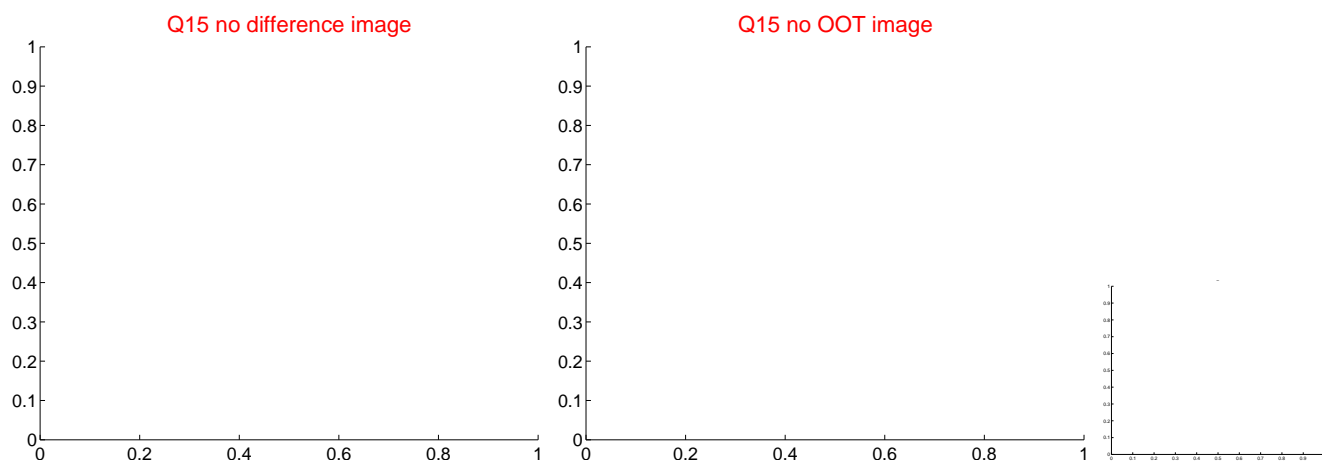
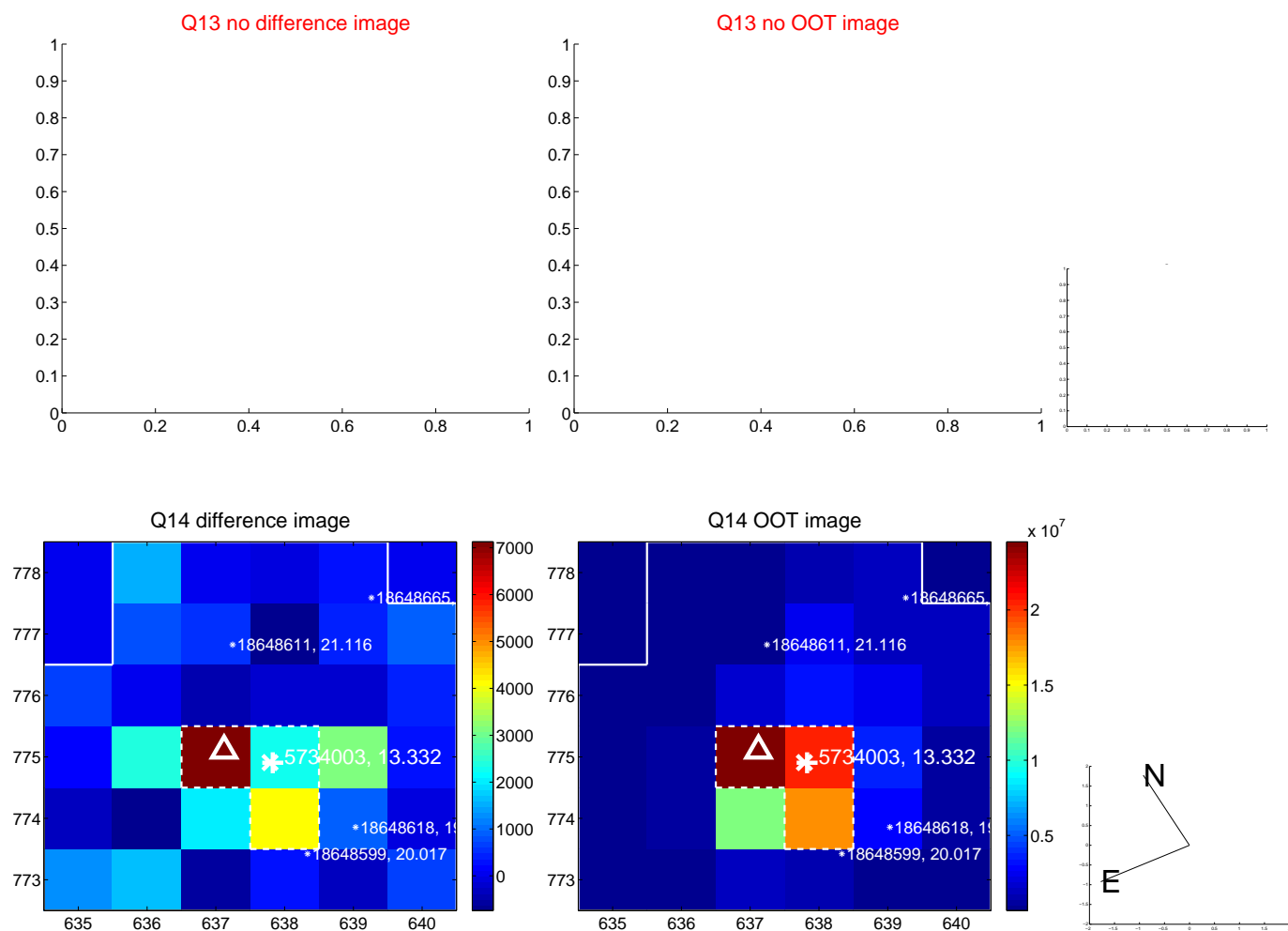
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



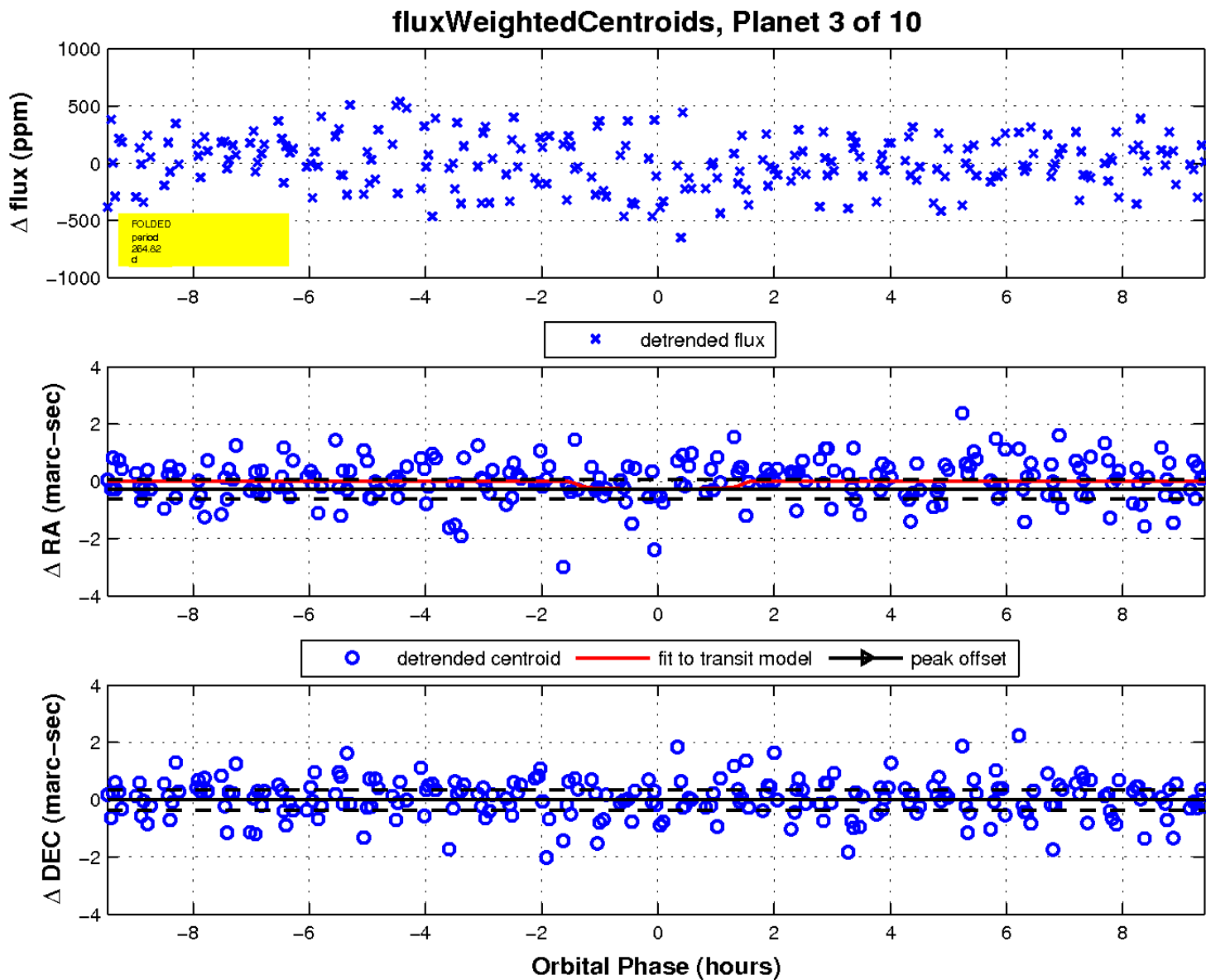
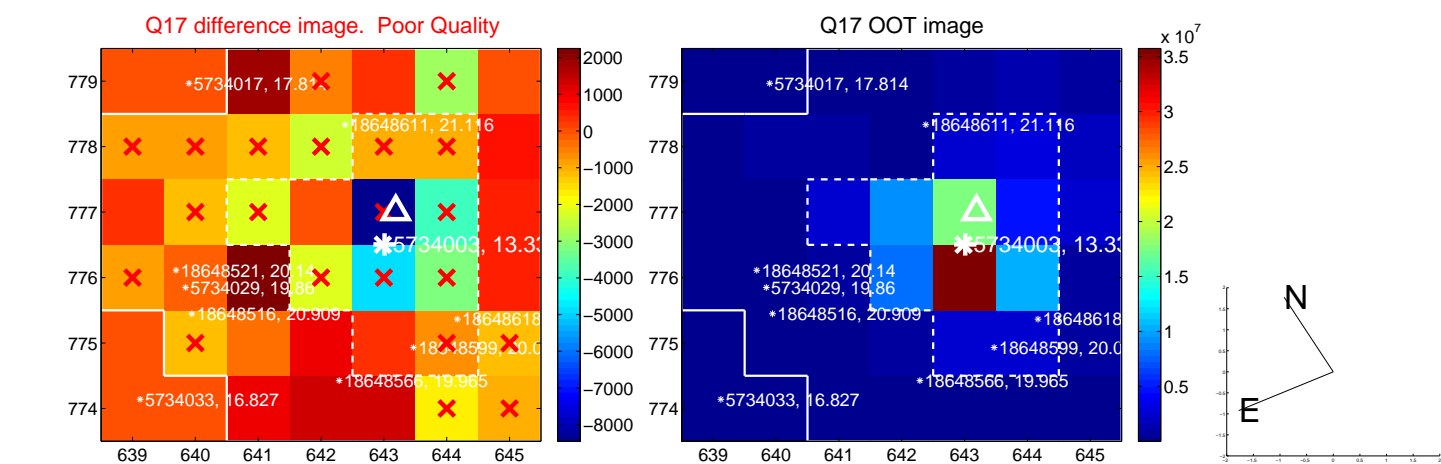
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

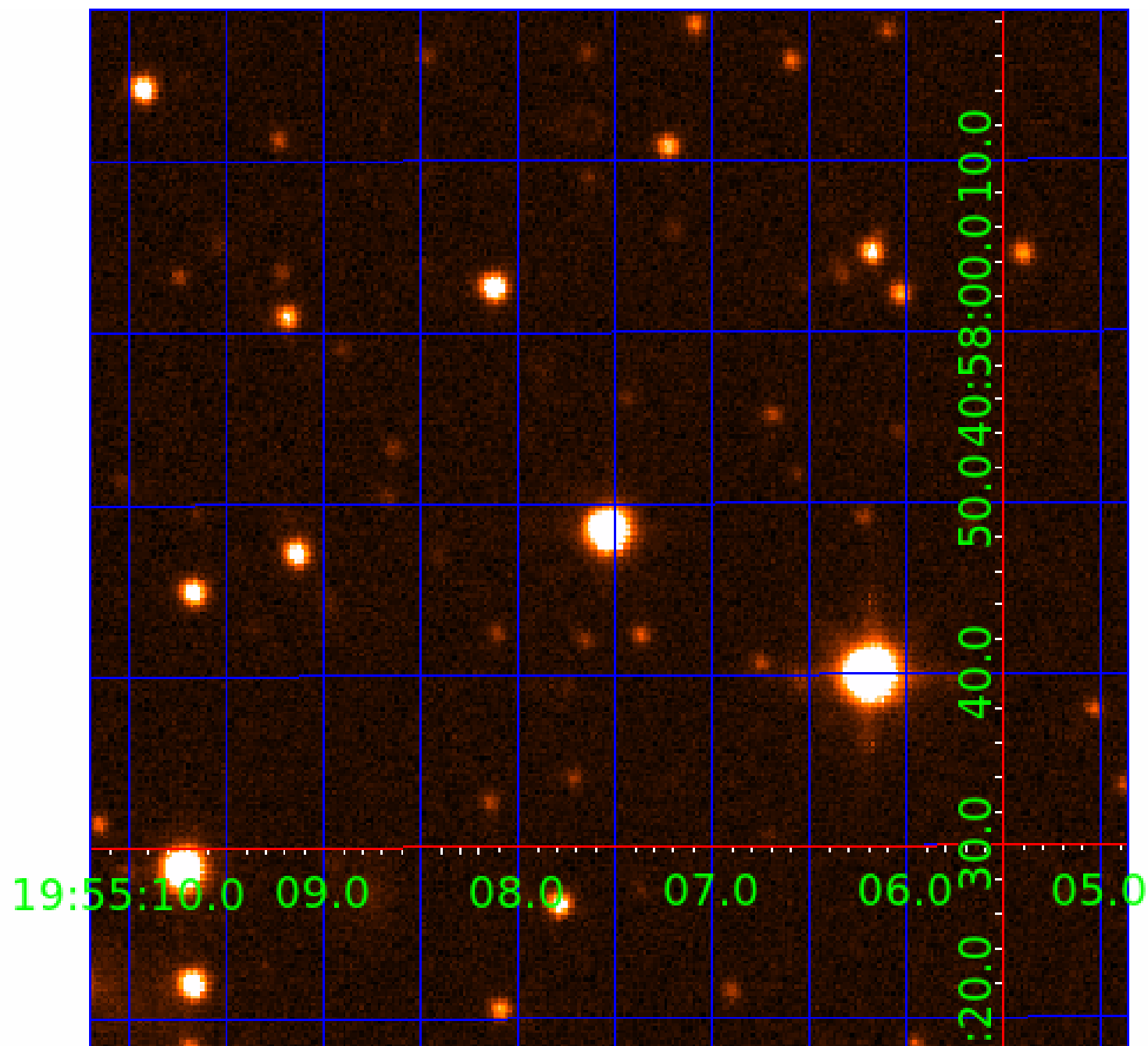


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

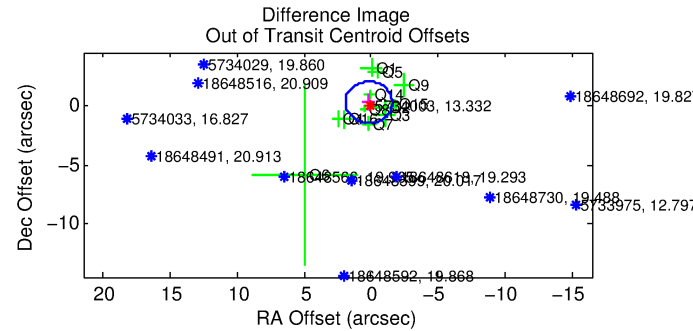
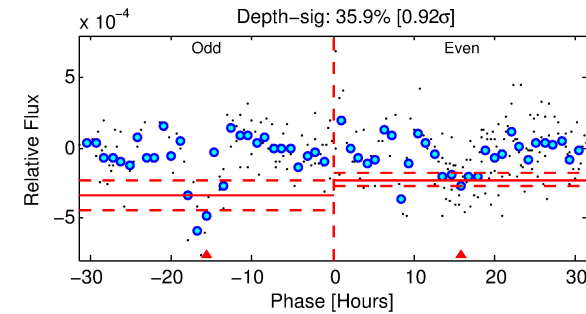
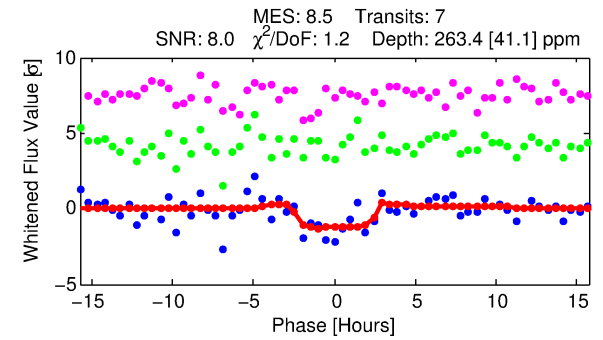
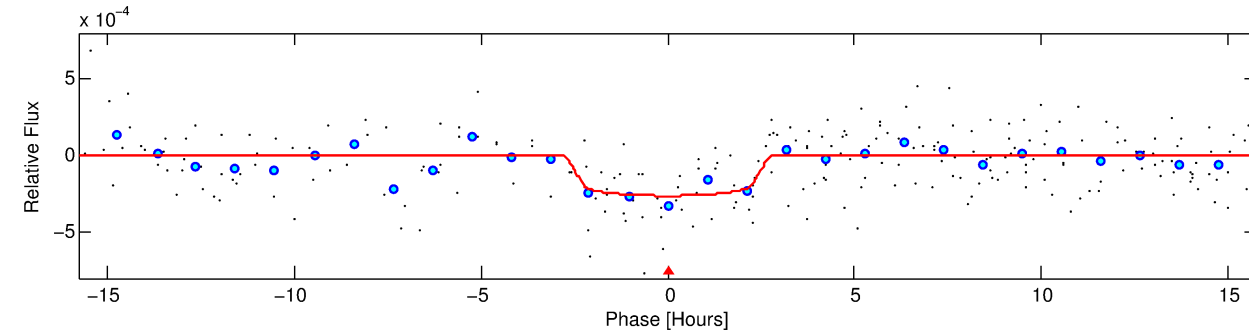
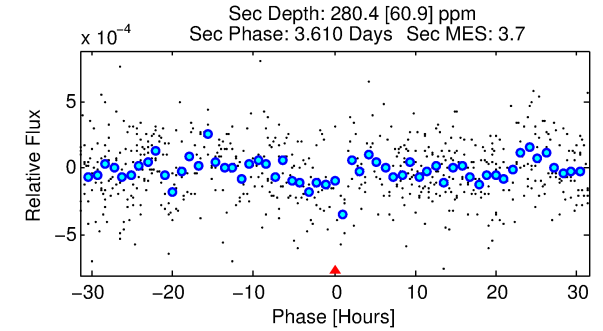
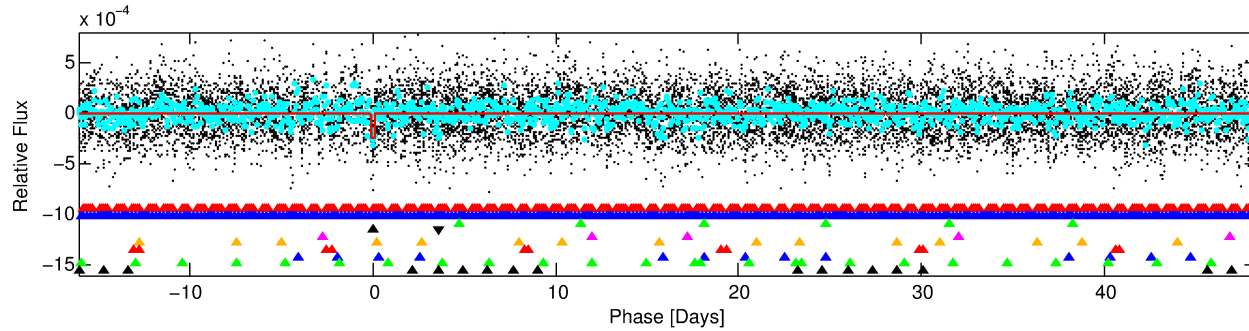
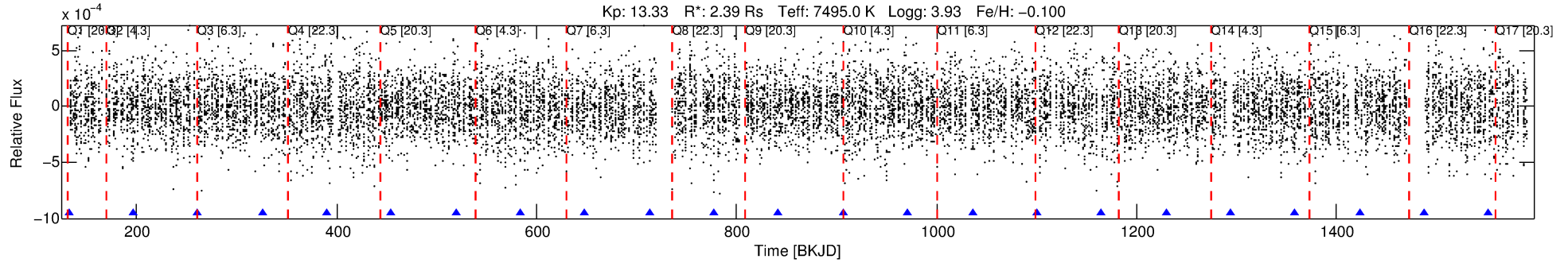
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-04

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 4 of 10 Period: 64.526 d



DV Fit Results:

Period = 64.52569 [0.00118] d
Epoch = 132.3474 [0.0149] BKJD
Rp/R* = 0.0165 [0.0071]
a/R* = 55.98 [147.49]
b = 0.82 [1.04]
Seff = 111.81 [58.83]
Teq = 829 [109] K
Rp = 4.31 [2.35] Re
a = 0.3799 [0.1191] AU
Ag = 1199.40 [1216.77] [0.98σ]
Teffp = 7544 [1706] K [3.93σ]

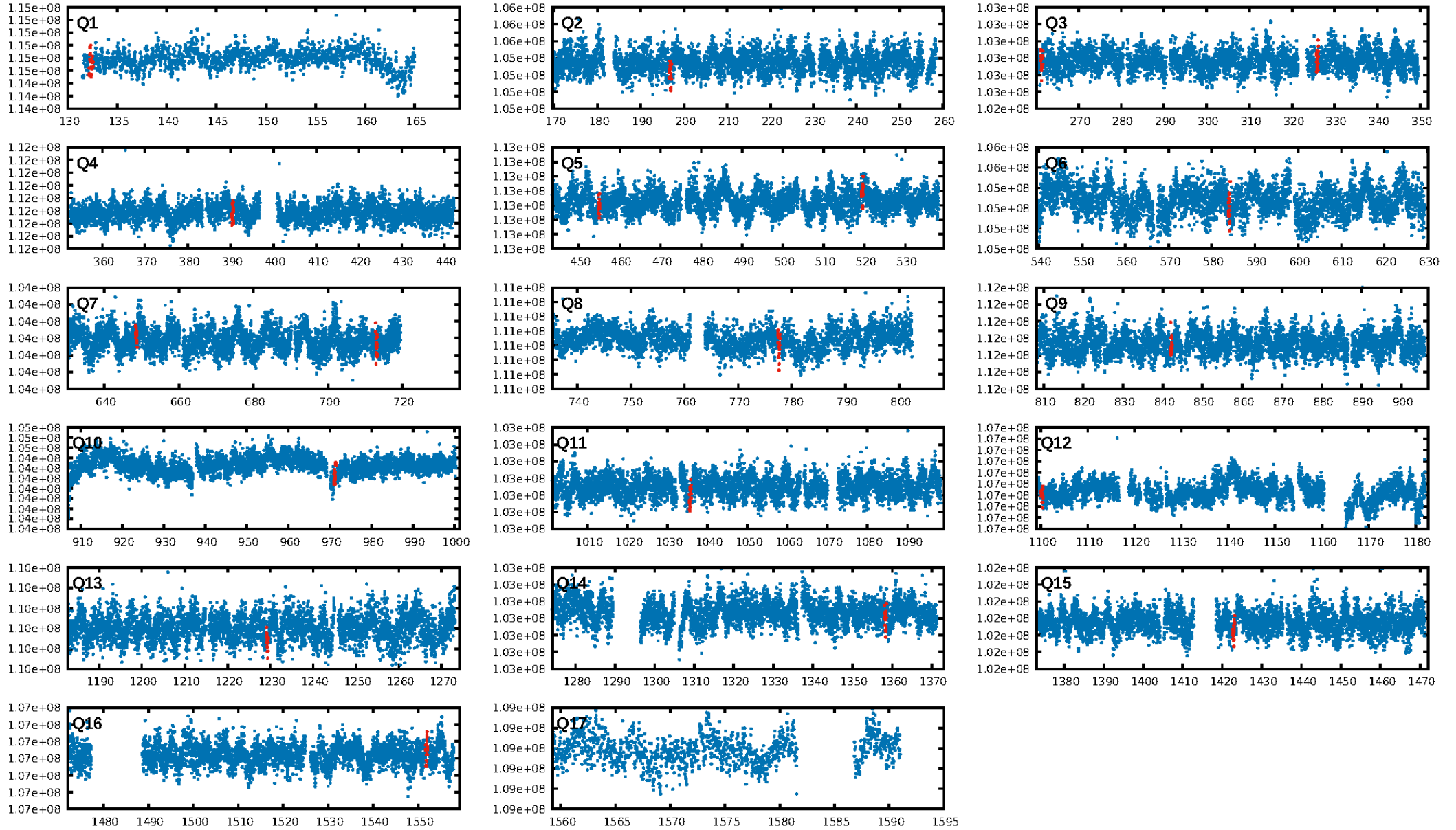
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.97σ]
LongPeriod-sig: 100.0% [80.75σ]
ModelChiSquare2-sig: 69.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.396
Centroid-sig: 0.0%
Centroid-so: 1.494 arcsec [2.70σ]
OotOffset-rm: 0.329 arcsec [0.56σ]
KicOffset-rm: 0.215 arcsec [0.34σ]
OotOffset-st: 3/3/3 [12]
KicOffset-st: 3/3/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 0.31 [4/13]

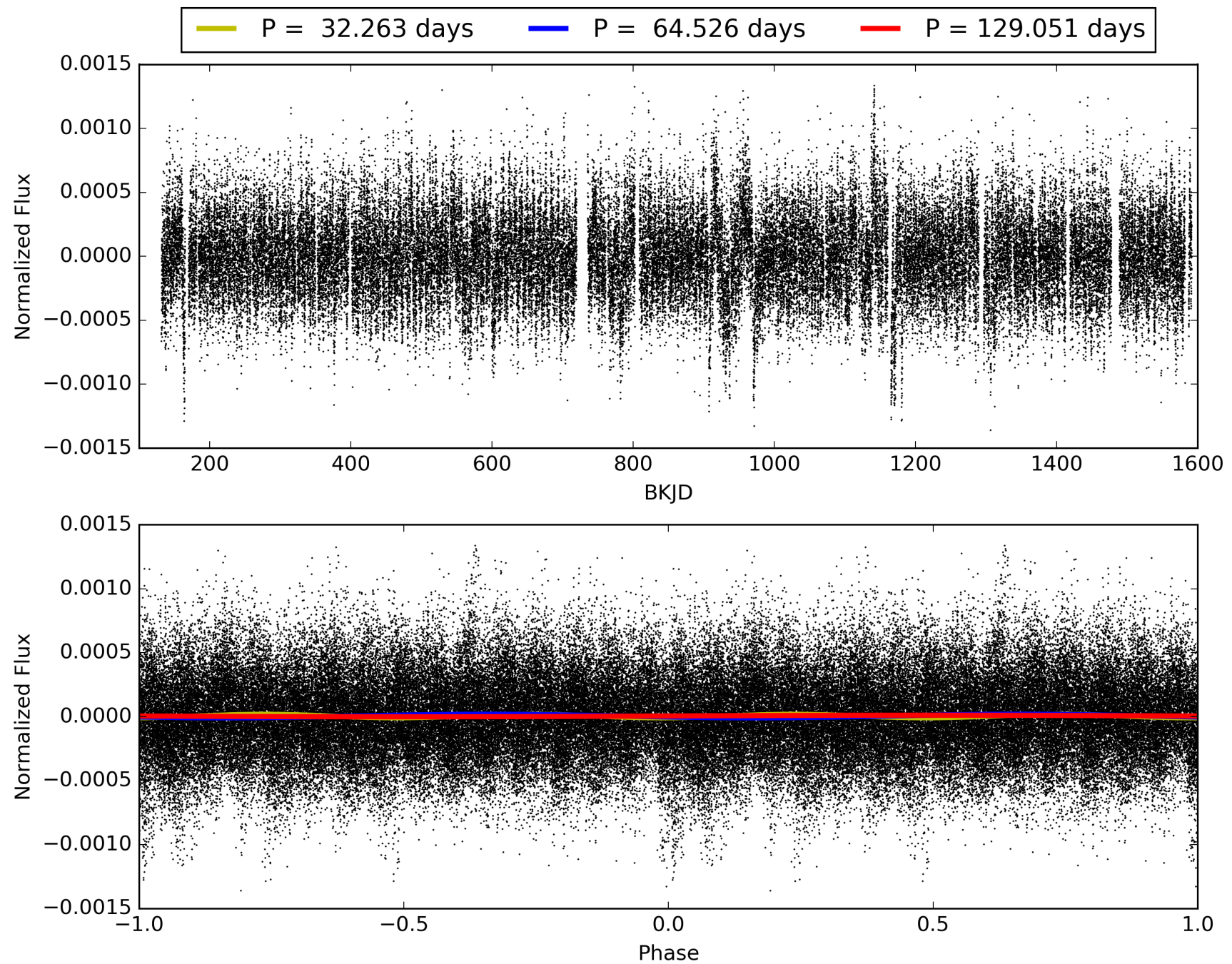
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:03 Z

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

TCE 005734003-04, PDC Light Curves

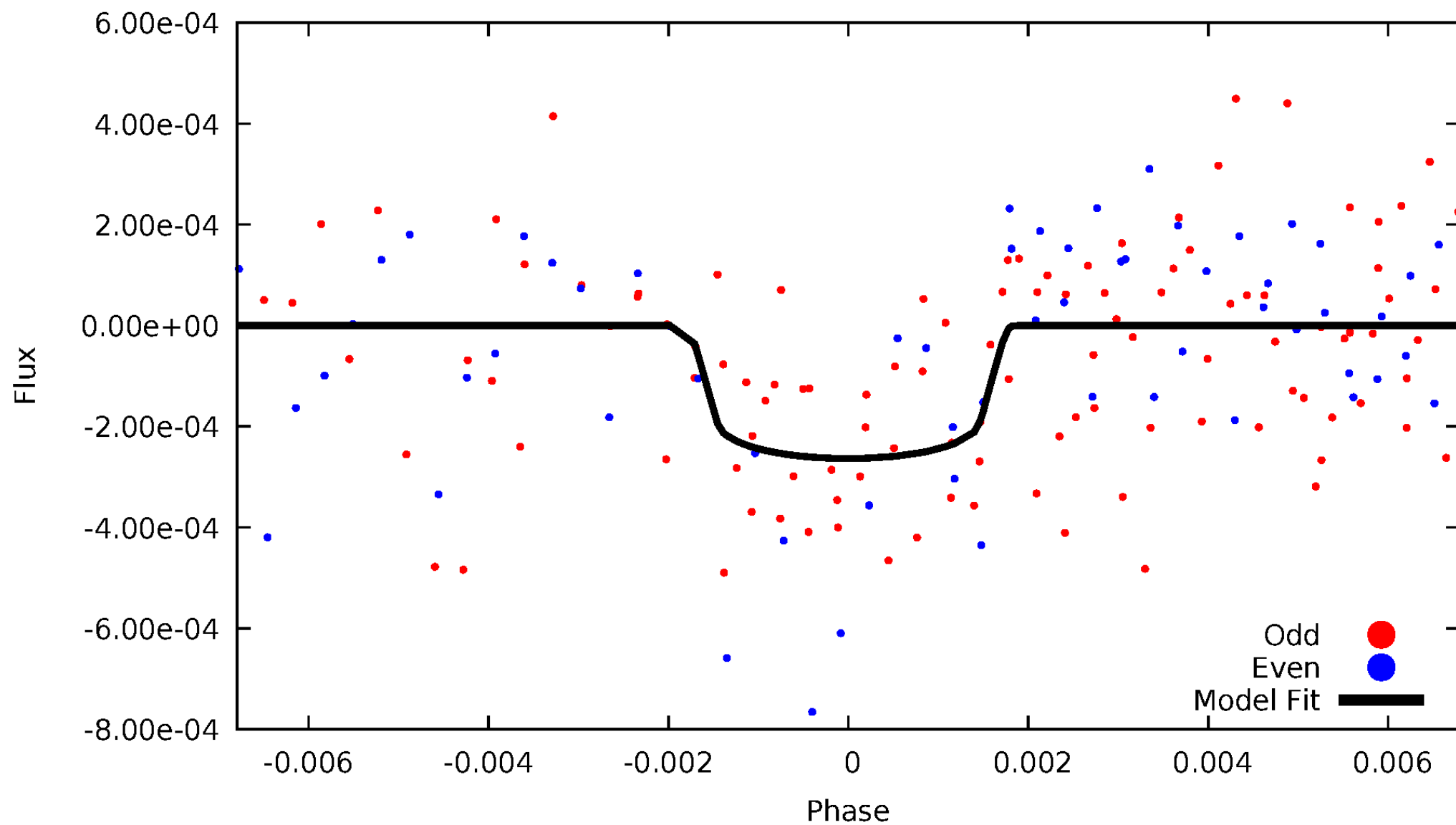


TCE 005734003-04



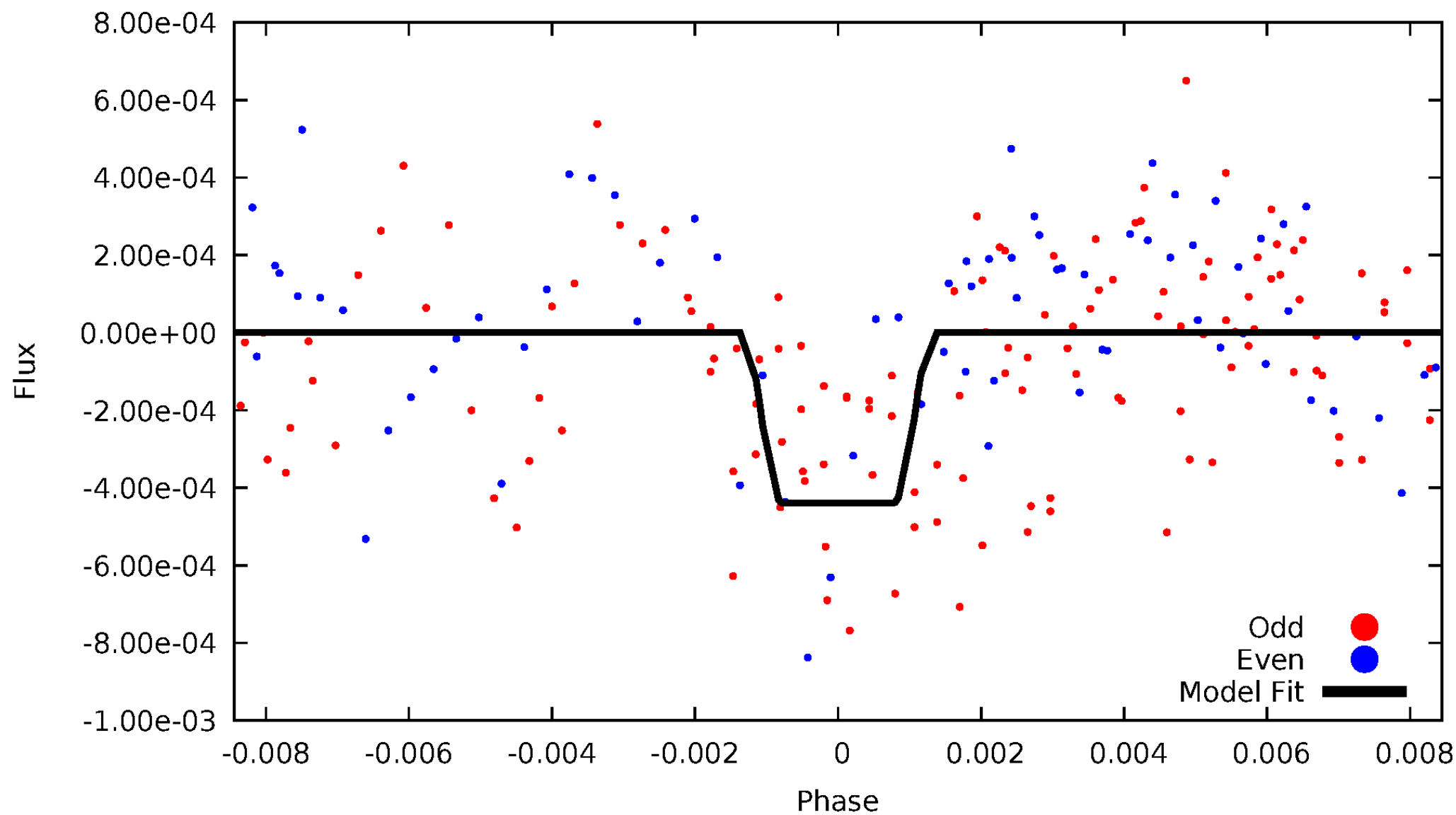
DV Odd/Even

TCE 005734003-04



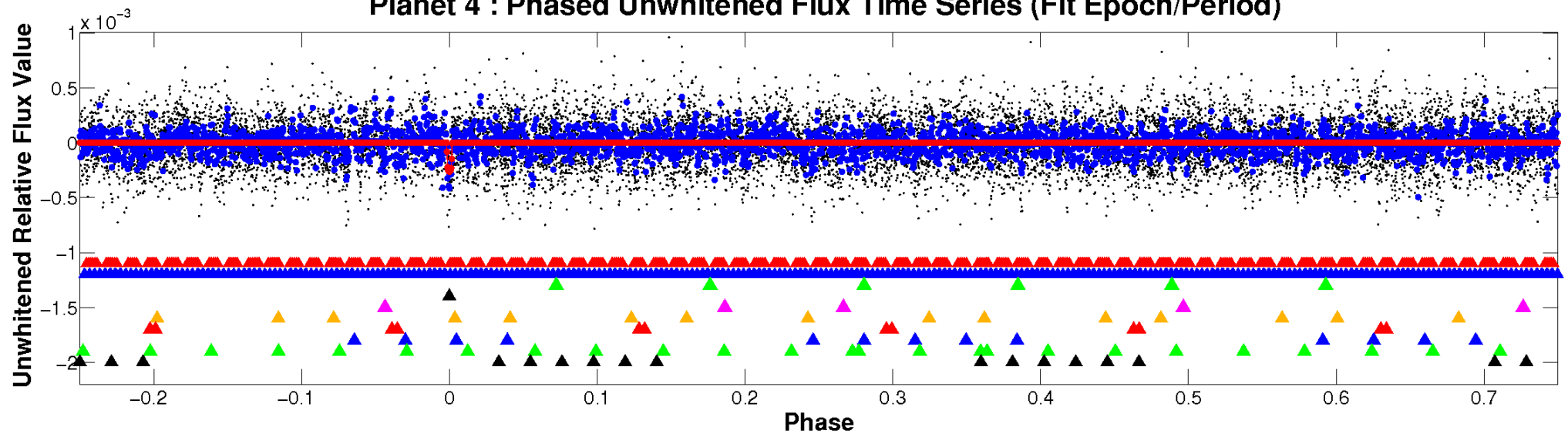
ALT Odd/Even

TCE 005734003-04

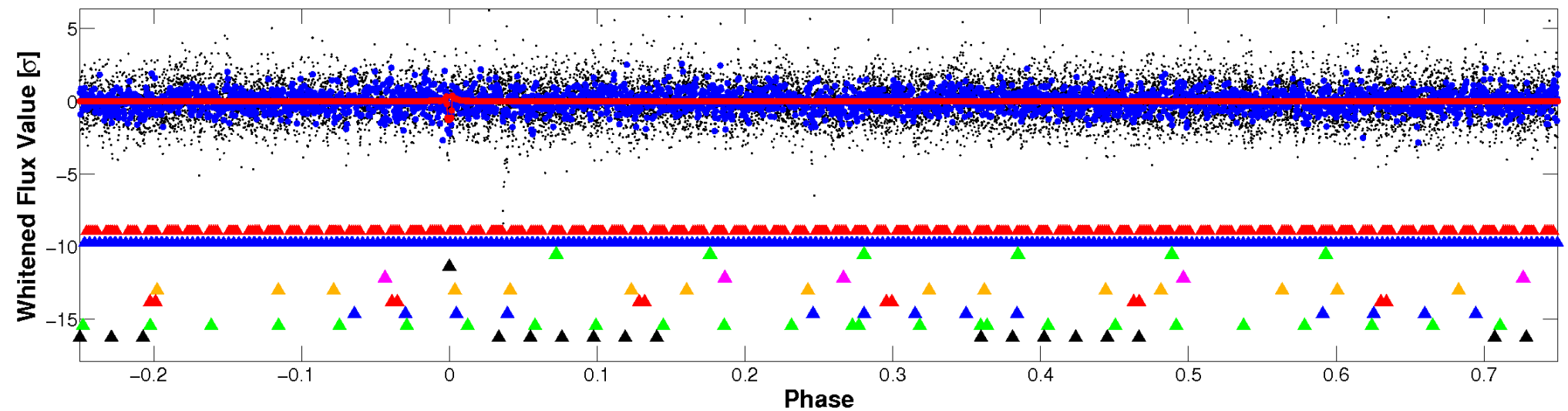


Non-Whitened Vs. Whitened Light Curve

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

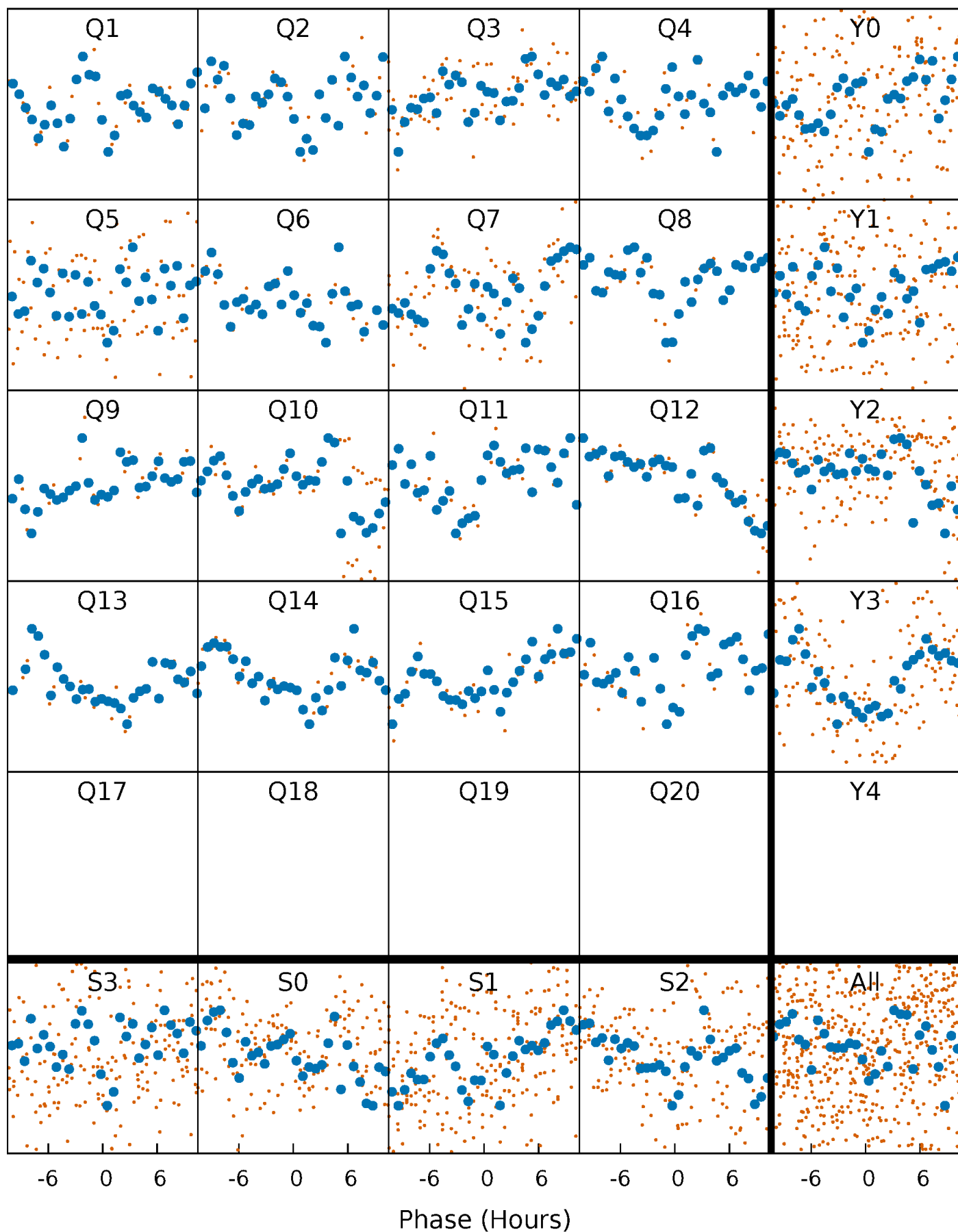


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



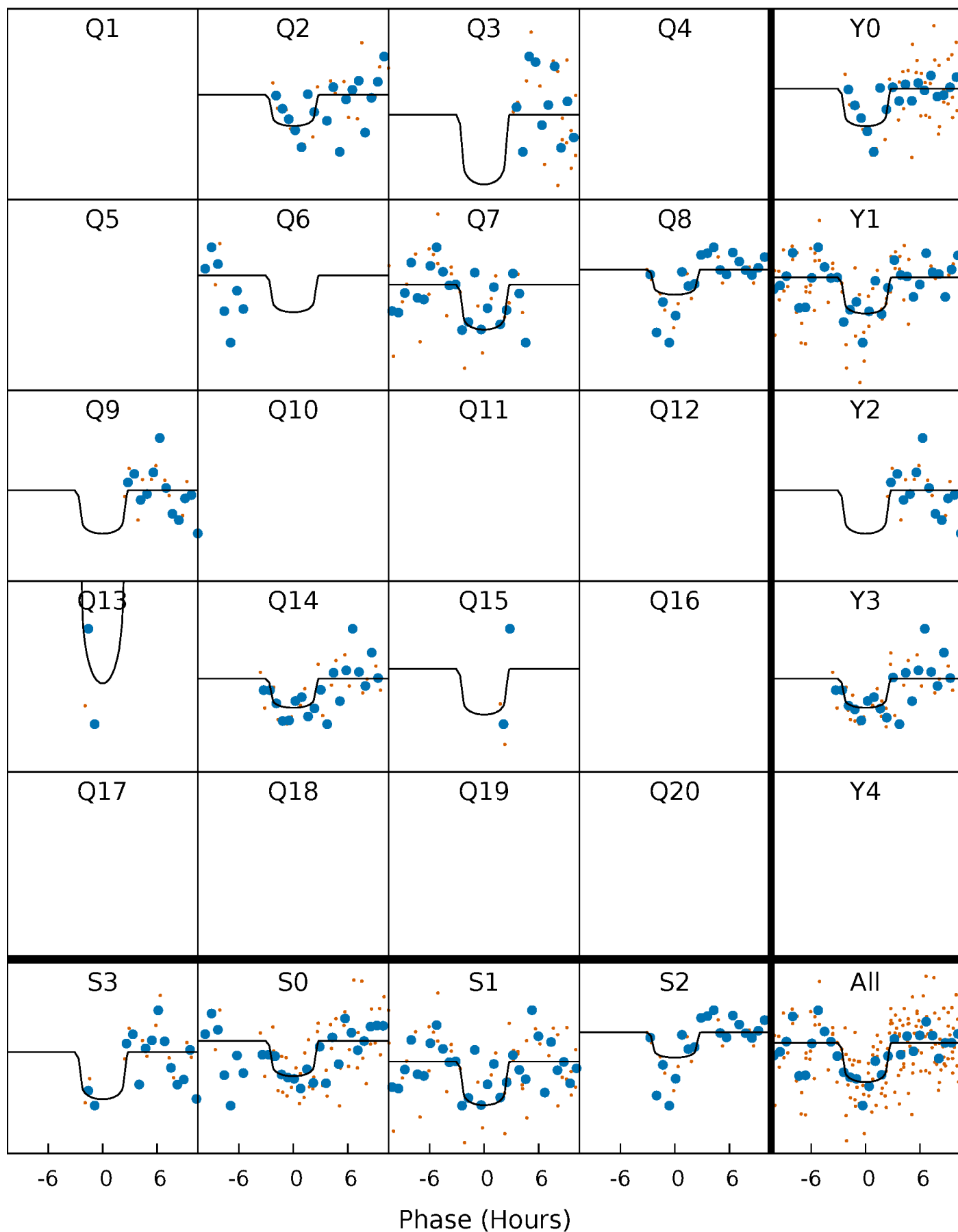
PDC Quarter-Phased Transit Curves

TCE 005734003-04 $P = 64.525687$ Days $T_0 = 132.347423$ (BKJD)



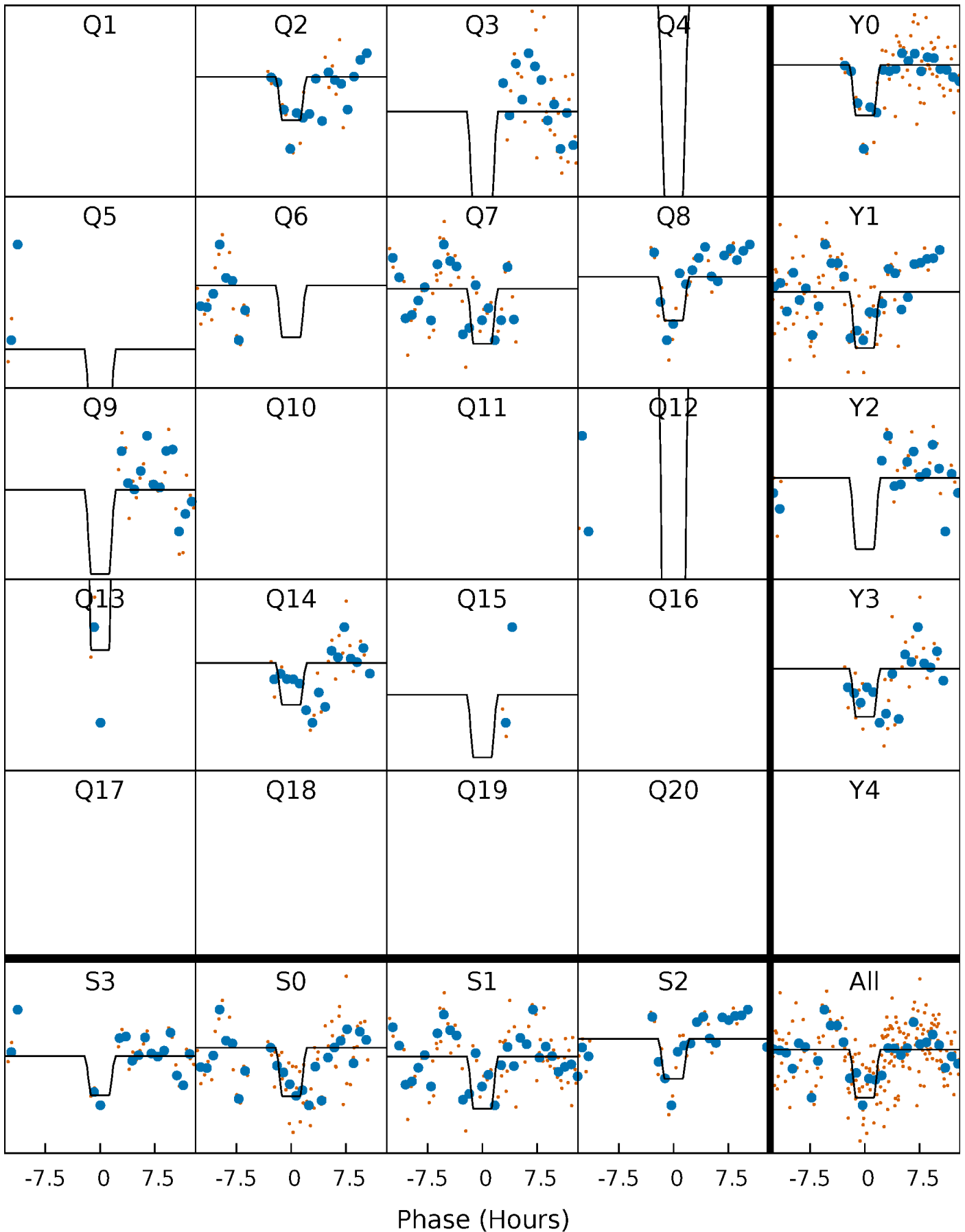
DV Quarter-Phased Transit Curves

TCE 005734003-04 $P = 64.525687$ Days $T_0 = 132.347423$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

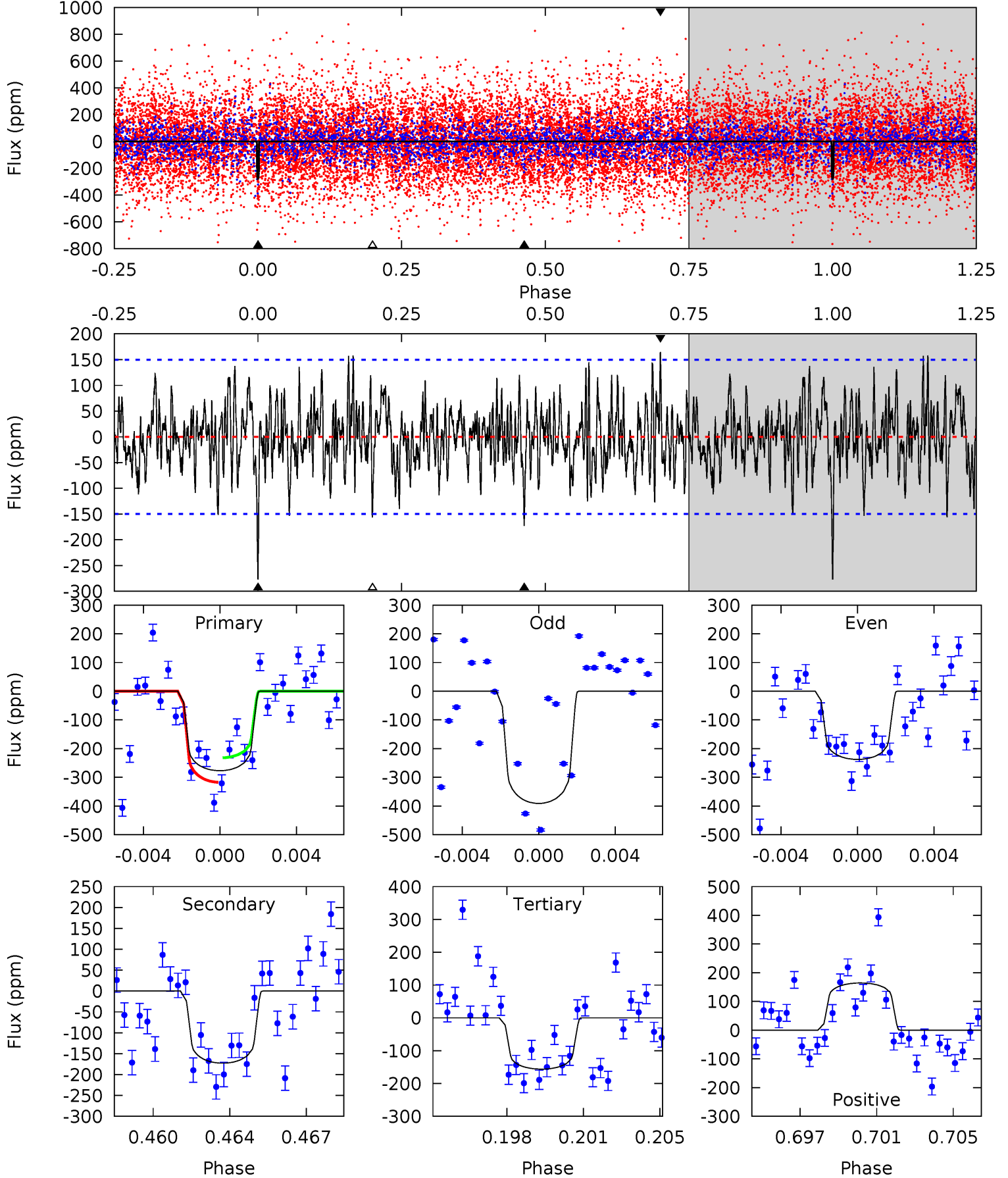
TCE 005734003-04 P= 64.521534 Days $T_0=132.390191$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-04, P = 64.525687 Days, E = 132.347423 Days

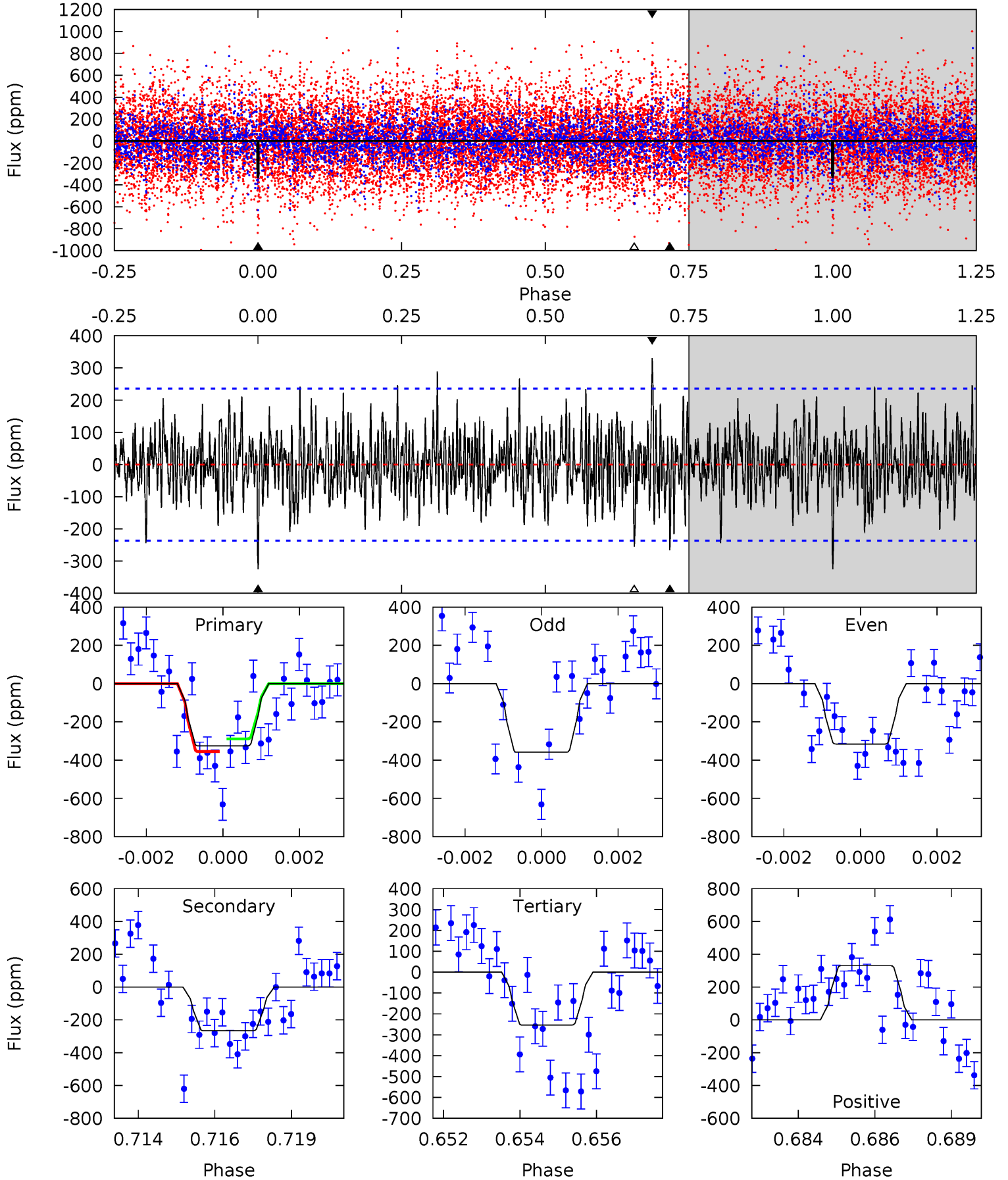
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.66	6.02	5.45	5.73	5.22	2.91	1.79	4.21	3.93	0.58	0.29	2.42	1.04	0.37	1.49



Alt Model-Shift Uniqueness Test

005734003-04, P = 64.521534 Days, E = 132.390191 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.29	5.97	5.68	7.41	5.30	3.05	1.84	1.61	-0.12	0.29	-1.44	0.40	0.95	0.50	0.75



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-173 ± 29	$4.13^{+1.85}_{-1.81}$	1140^{+80}_{-92}	6567^{+2427}_{-1093}	796^{+1572}_{-427}
Alt.	-266 ± 45	$5.14^{+2.04}_{-1.82}$	1132^{+78}_{-107}	6394^{+1695}_{-858}	775^{+1087}_{-383}

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

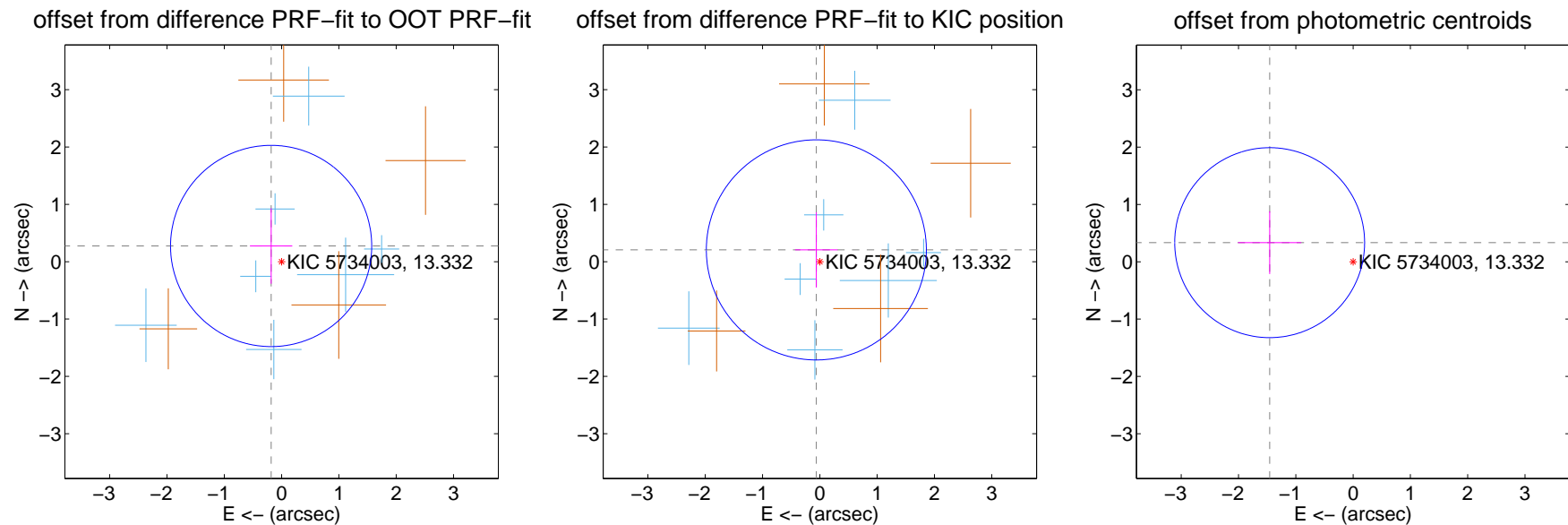
DV Centroid Data

Supplemental centroid analysis for 005734003-04. Kepler magnitude: 13.33. Transit SNR 7.99

There are 7 quarters with good PRF difference image offsets

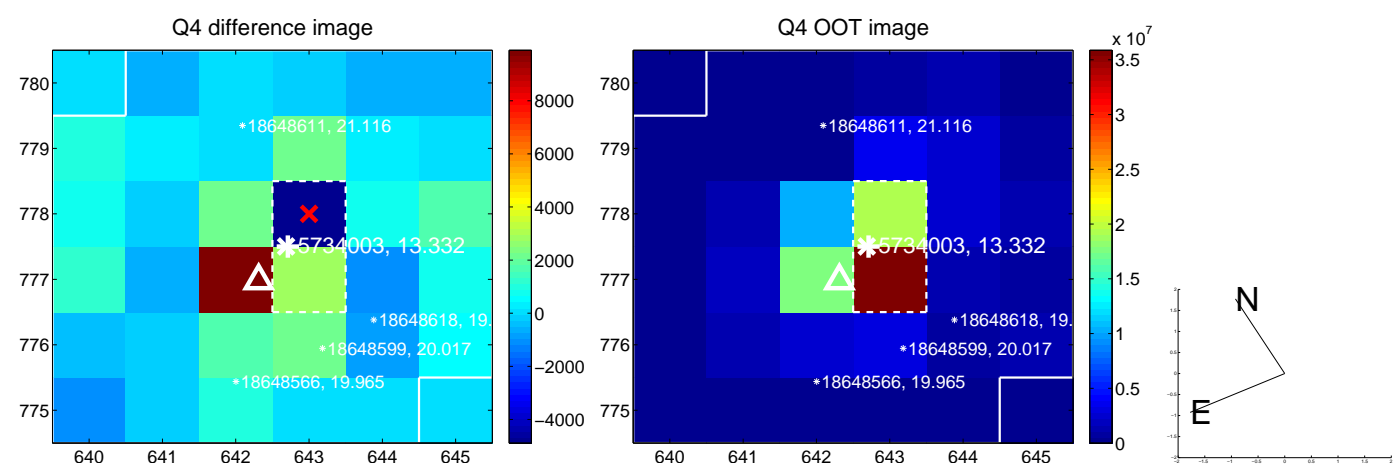
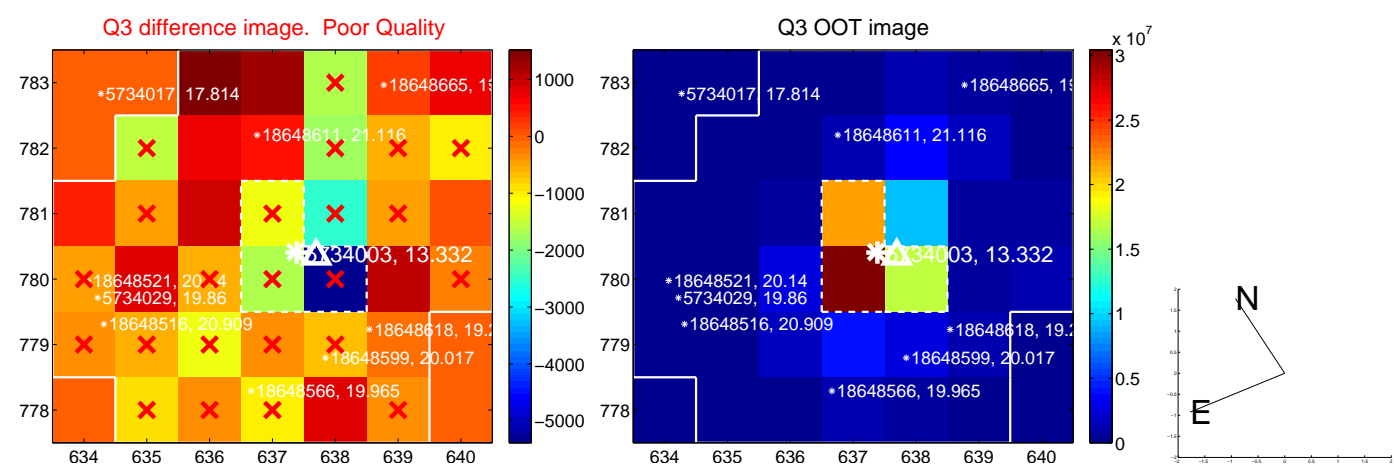
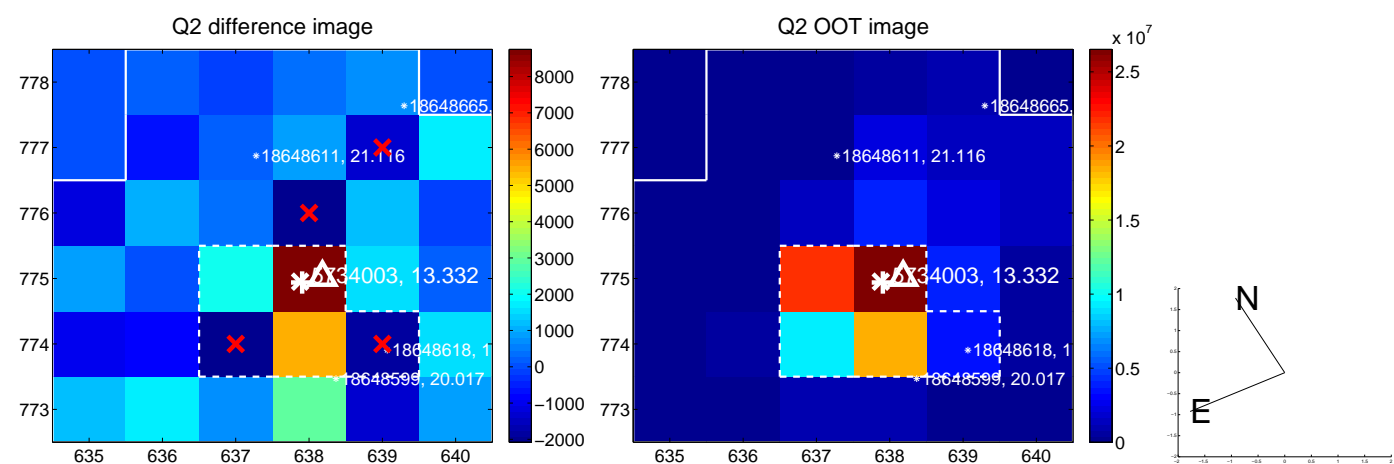
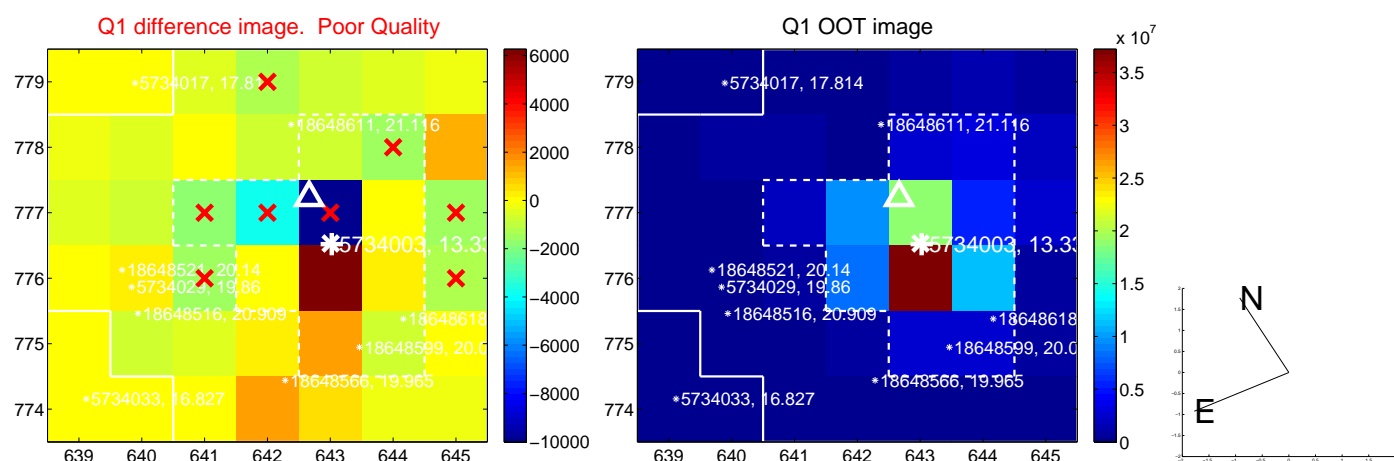
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.329 ± 0.585	0.56	0.182 ± 0.369	0.274 ± 0.658
PRF-fit source offset from KIC position	0.215 ± 0.640	0.34	0.061 ± 0.369	0.206 ± 0.658
photometric centroid source offset	1.49 ± 0.55	2.70	1.46 ± 0.55	0.33 ± 0.55

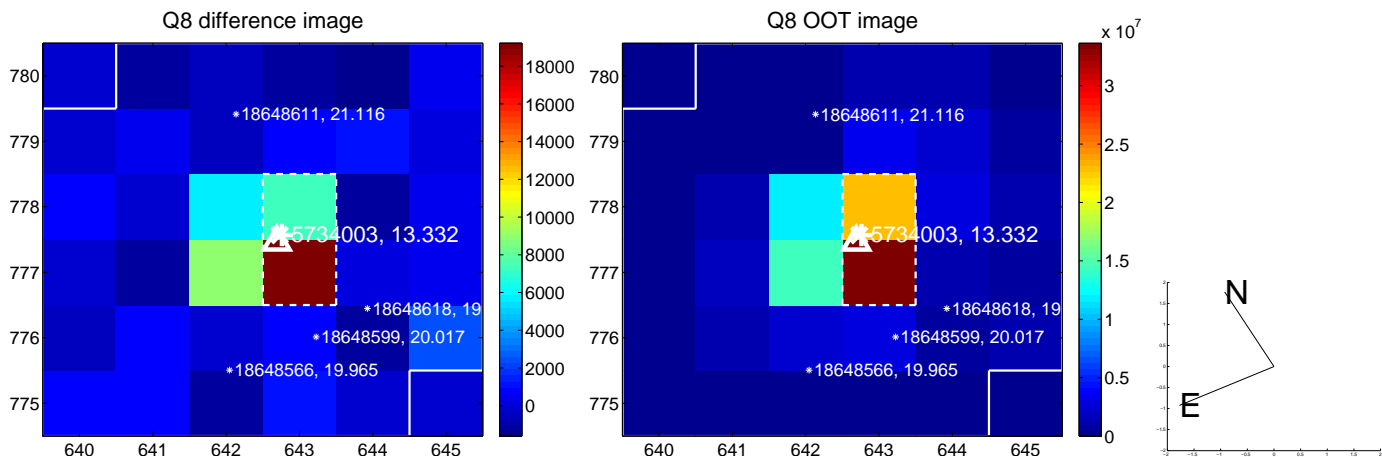
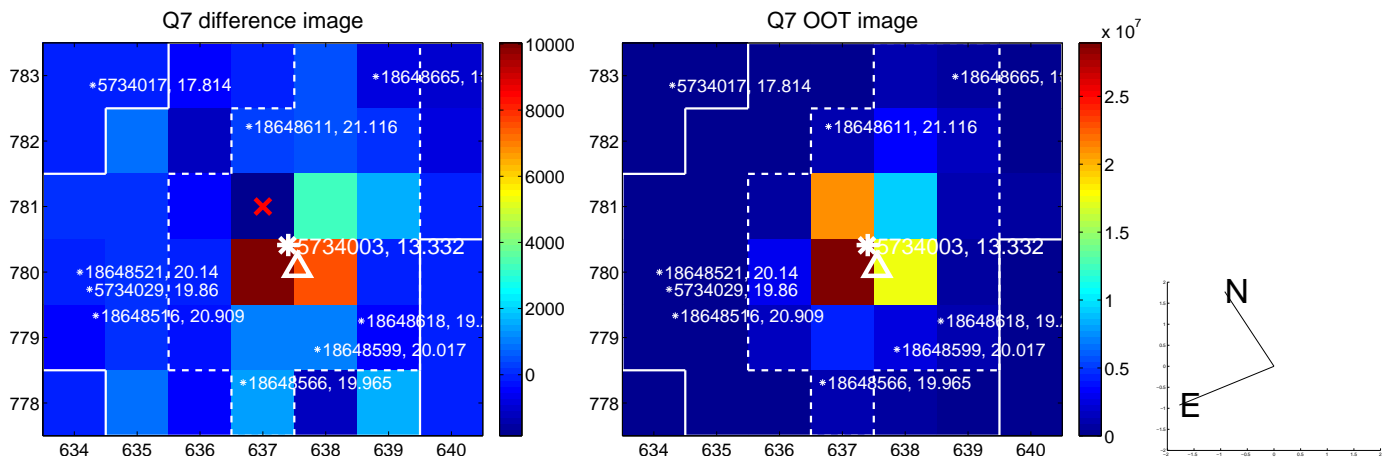
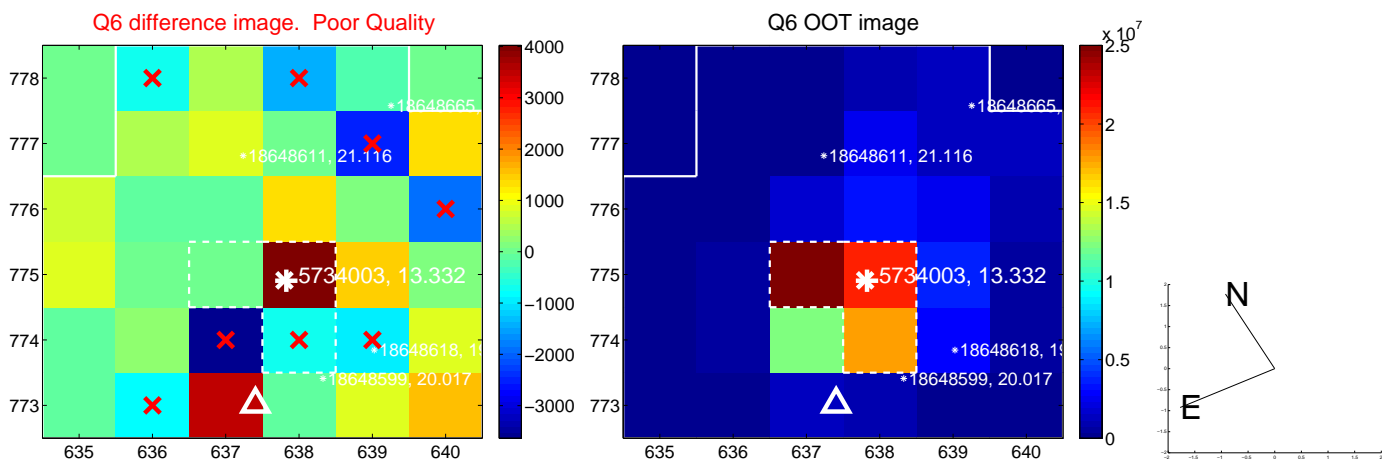
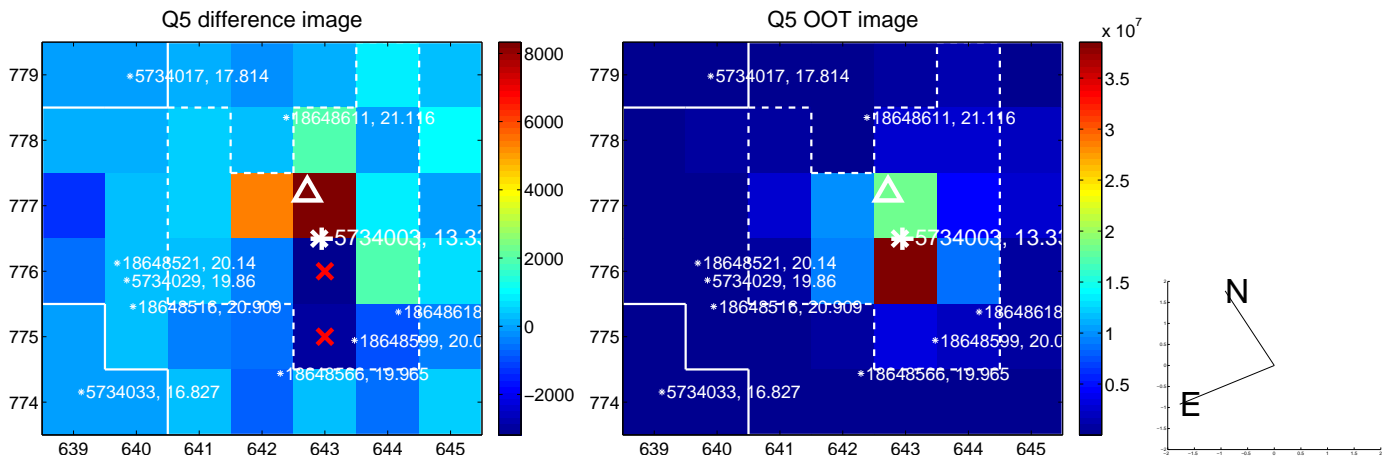


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

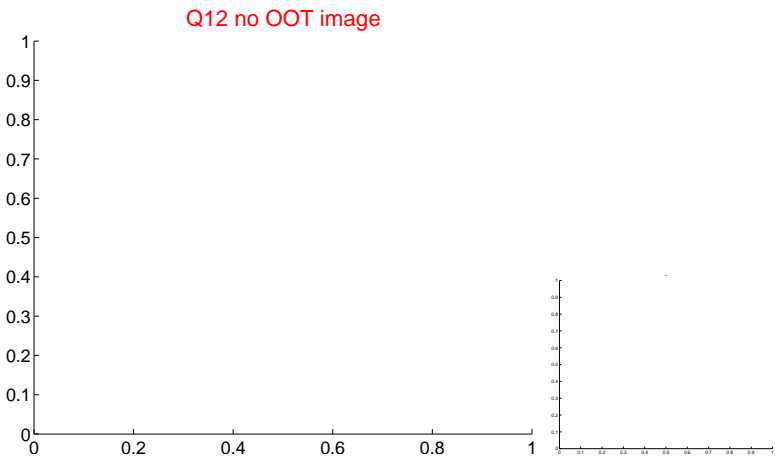
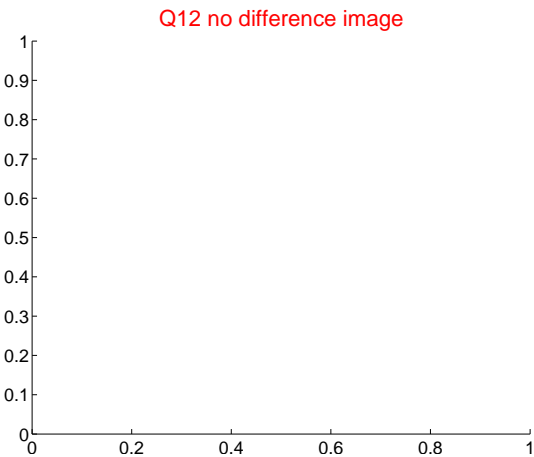
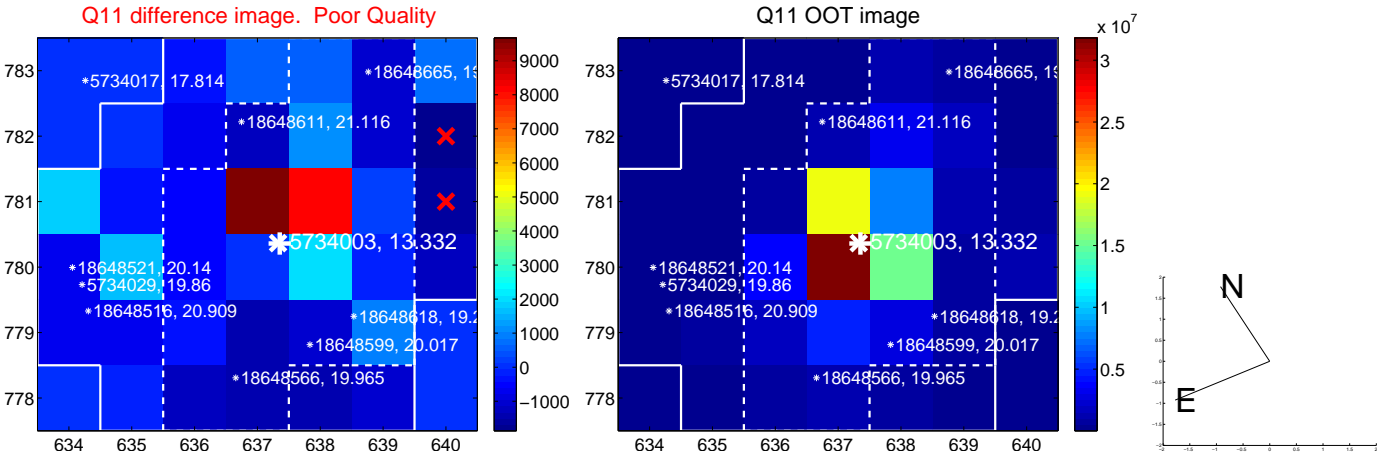
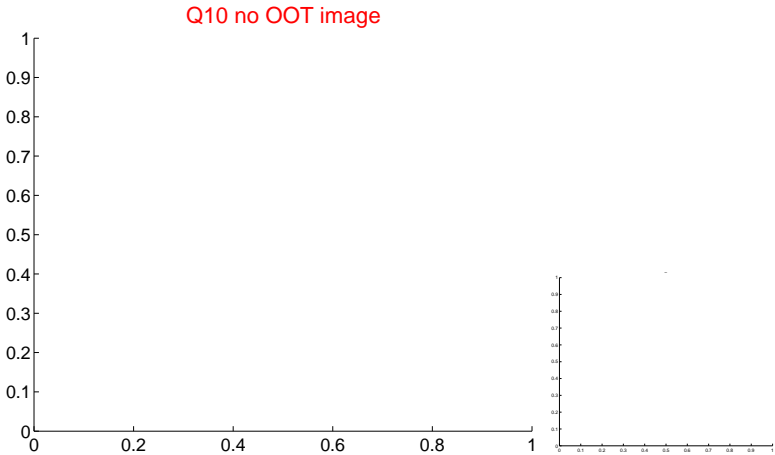
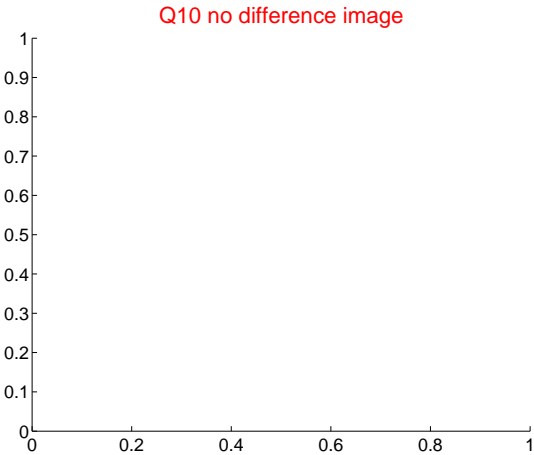
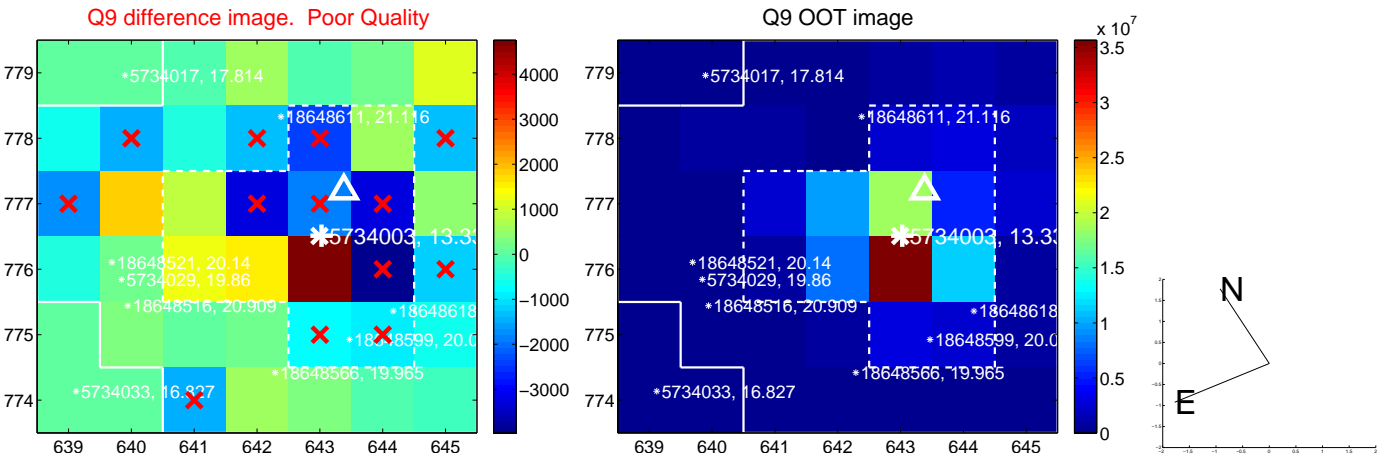
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



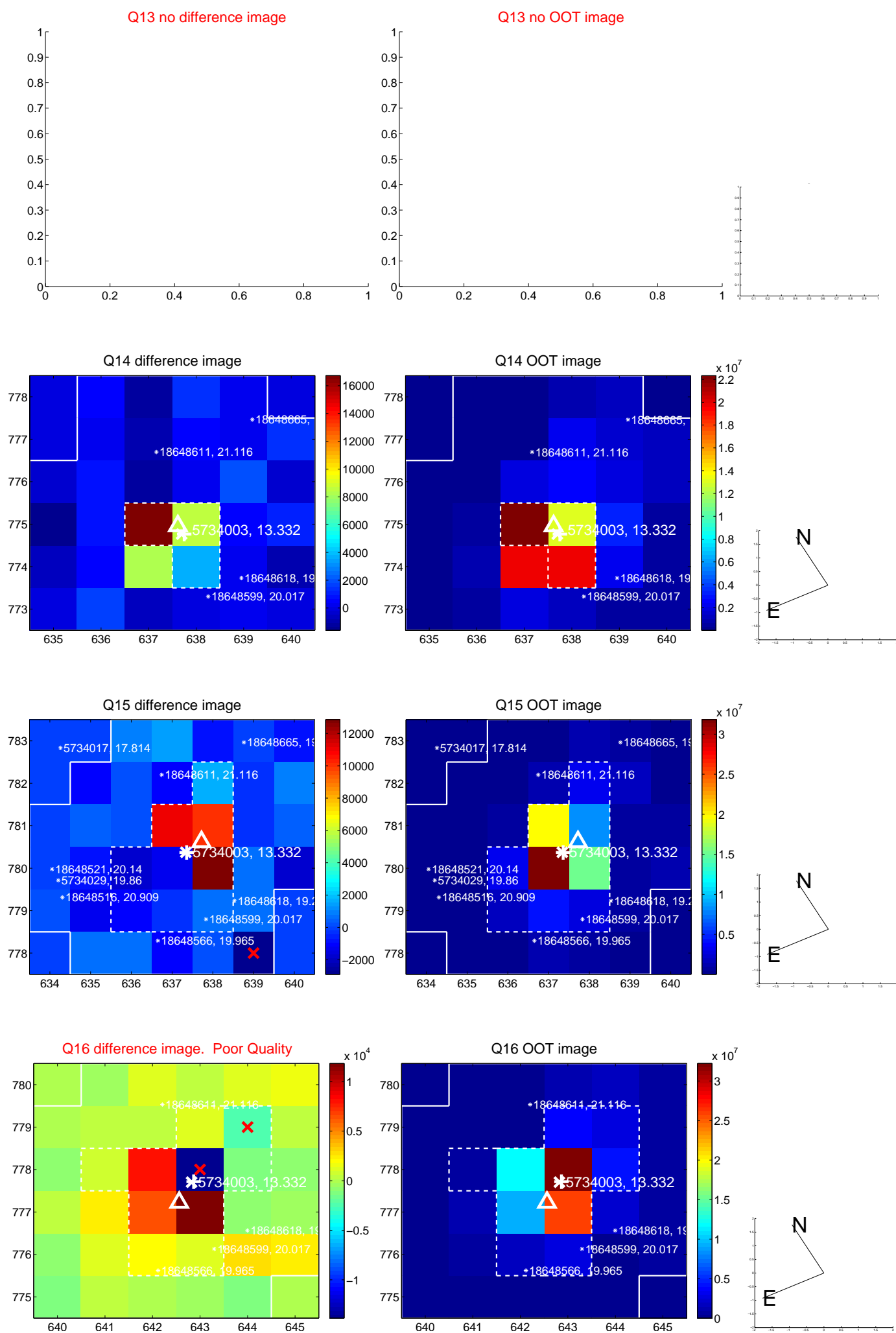
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



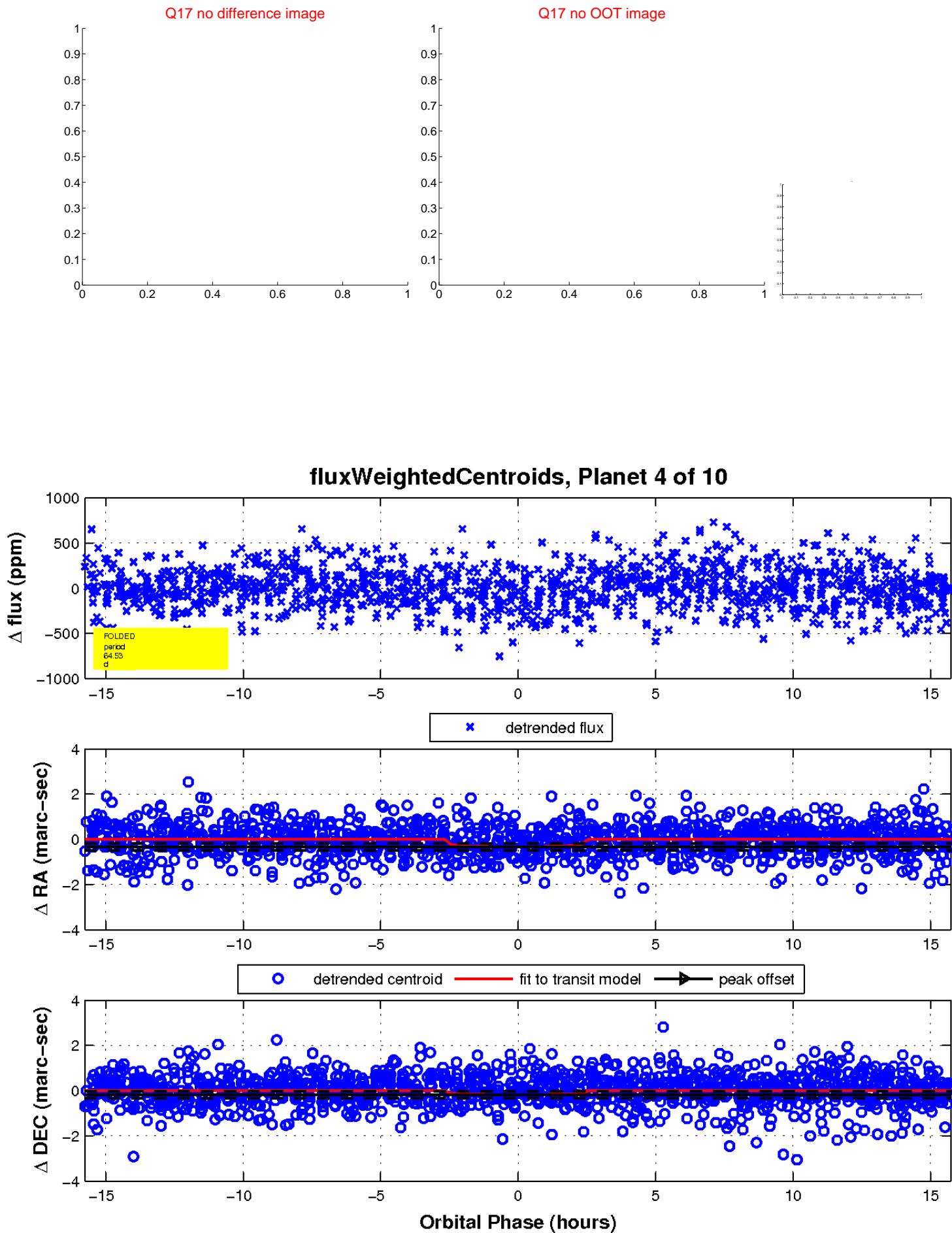
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

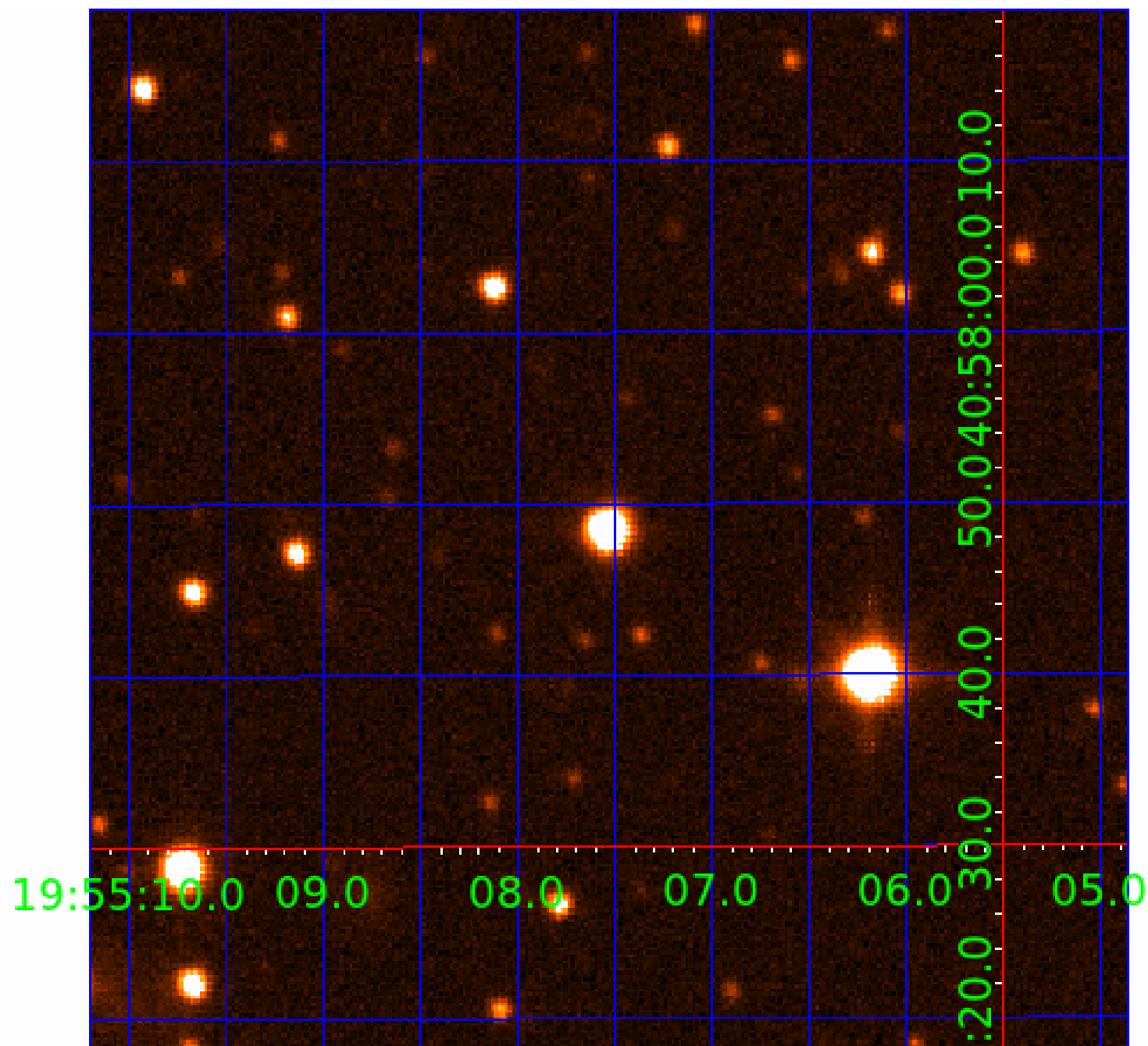


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

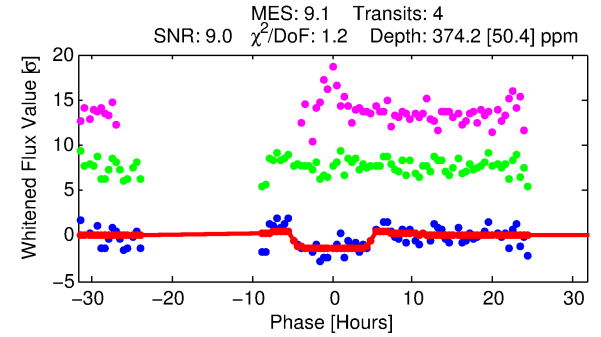
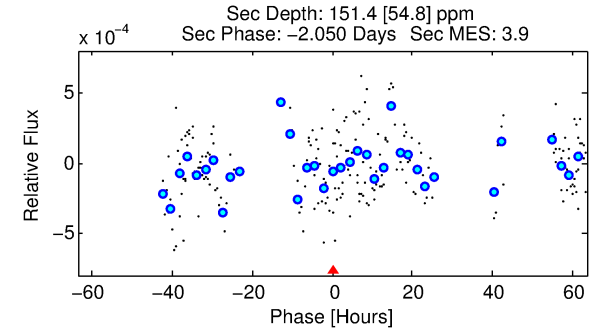
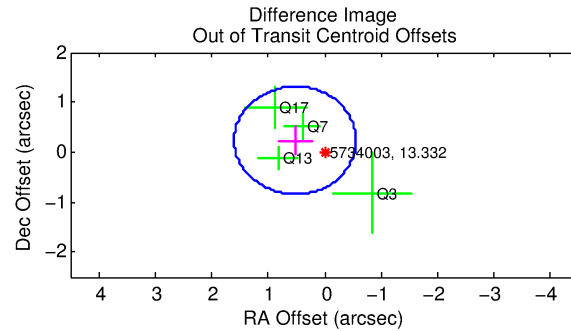
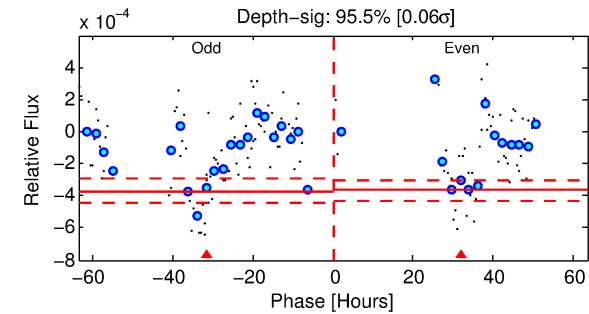
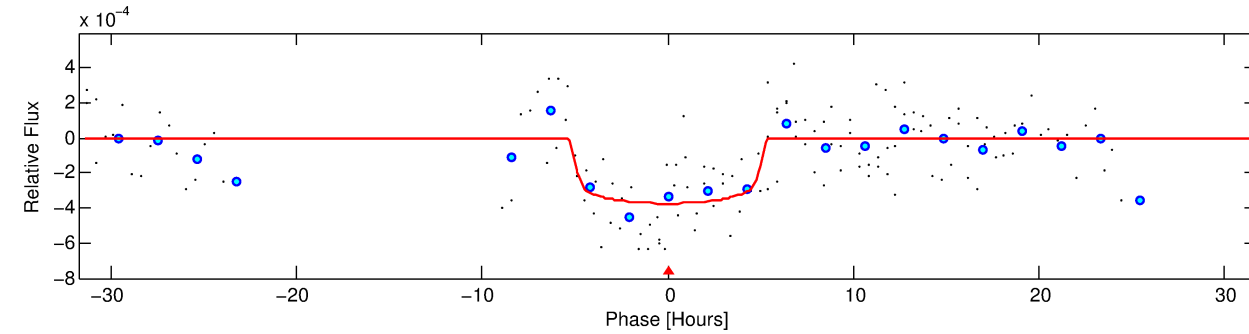
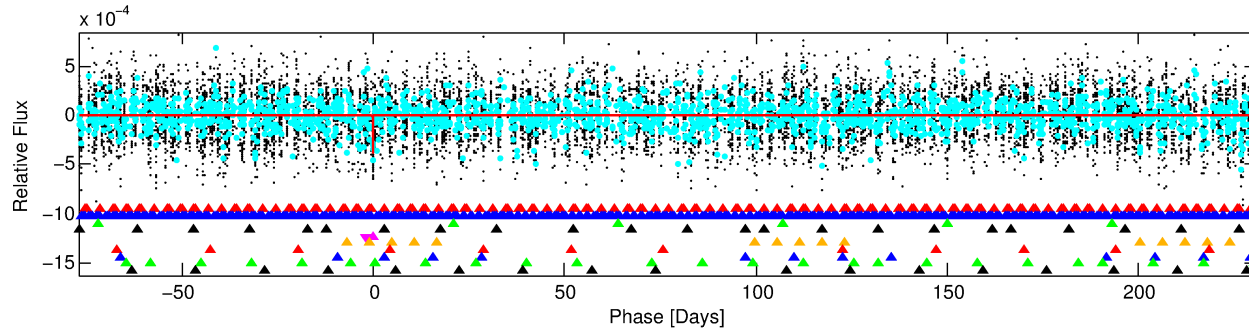
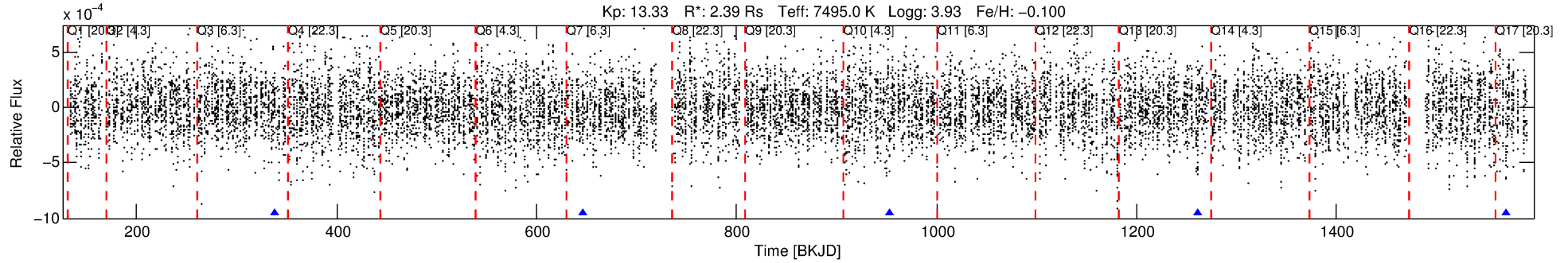
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-05

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 5 of 10 Period: 307.792 d



DV Fit Results:

Period = 307.79223 [0.01542] d
Epoch = 337.9511 [0.0472] BKJD
Rp/R* = 0.0194 [0.0071]
a/R* = 144.27 [327.54]
b = 0.78 [1.10]
Seff = 13.92 [7.33]
Teff = 493 [65] K
Rp = 5.07 [2.50] Re
a = 1.0765 [0.3376] AU
Ag = 3760.53 [3575.74] [1.05 σ]
Teffp = 5964 [1241] K [4.40 σ]

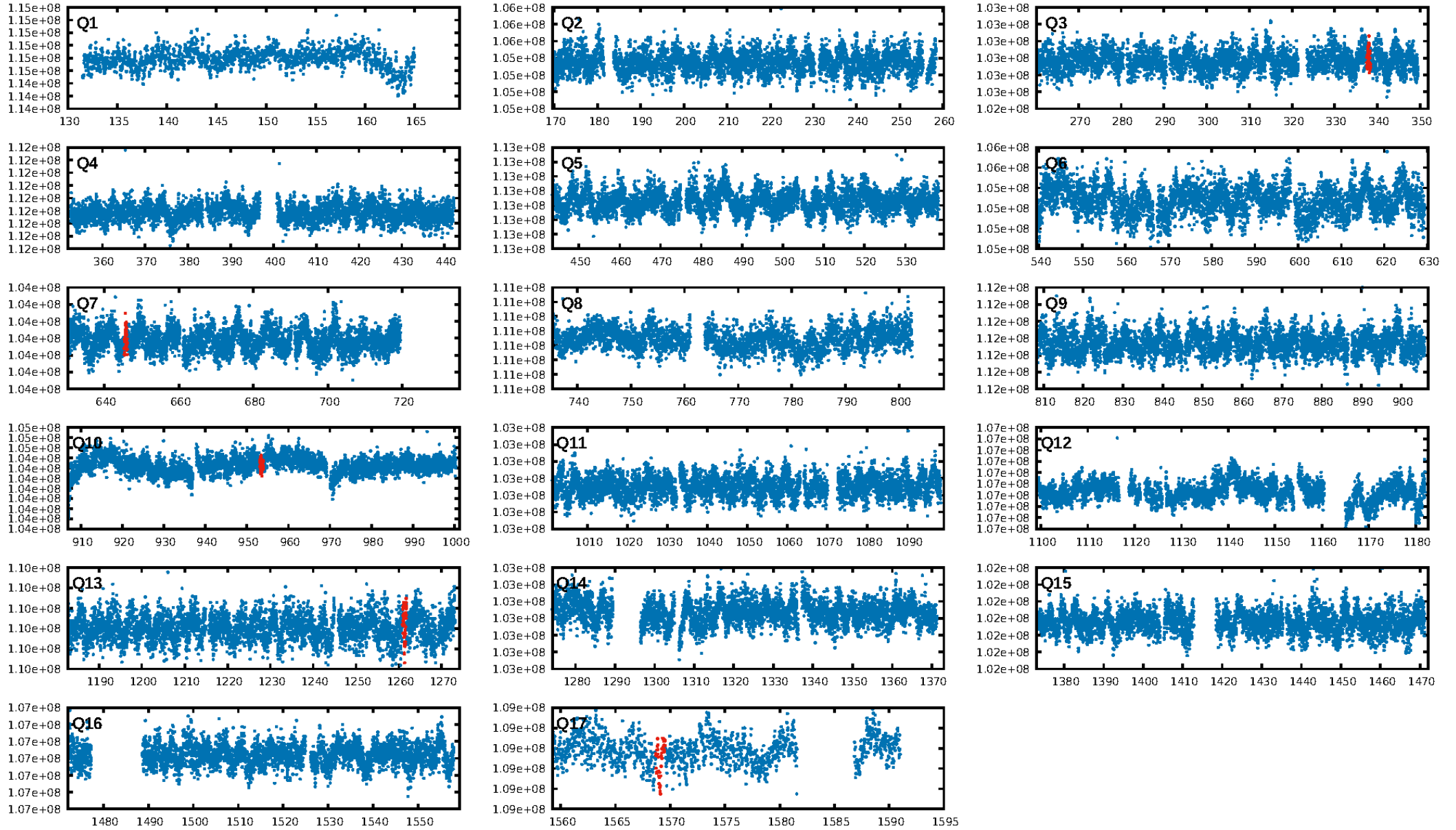
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [93.14 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.0708
Centroid-sig: 91.8%
Centroid-so: 0.490 arcsec [0.91 σ]
OotOffset-rm: 0.575 arcsec [1.60 σ]
KicOffset-rm: 0.463 arcsec [1.09 σ]
OotOffset-st: 0/2/0/2 [4]
KicOffset-st: 0/2/0/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/5]

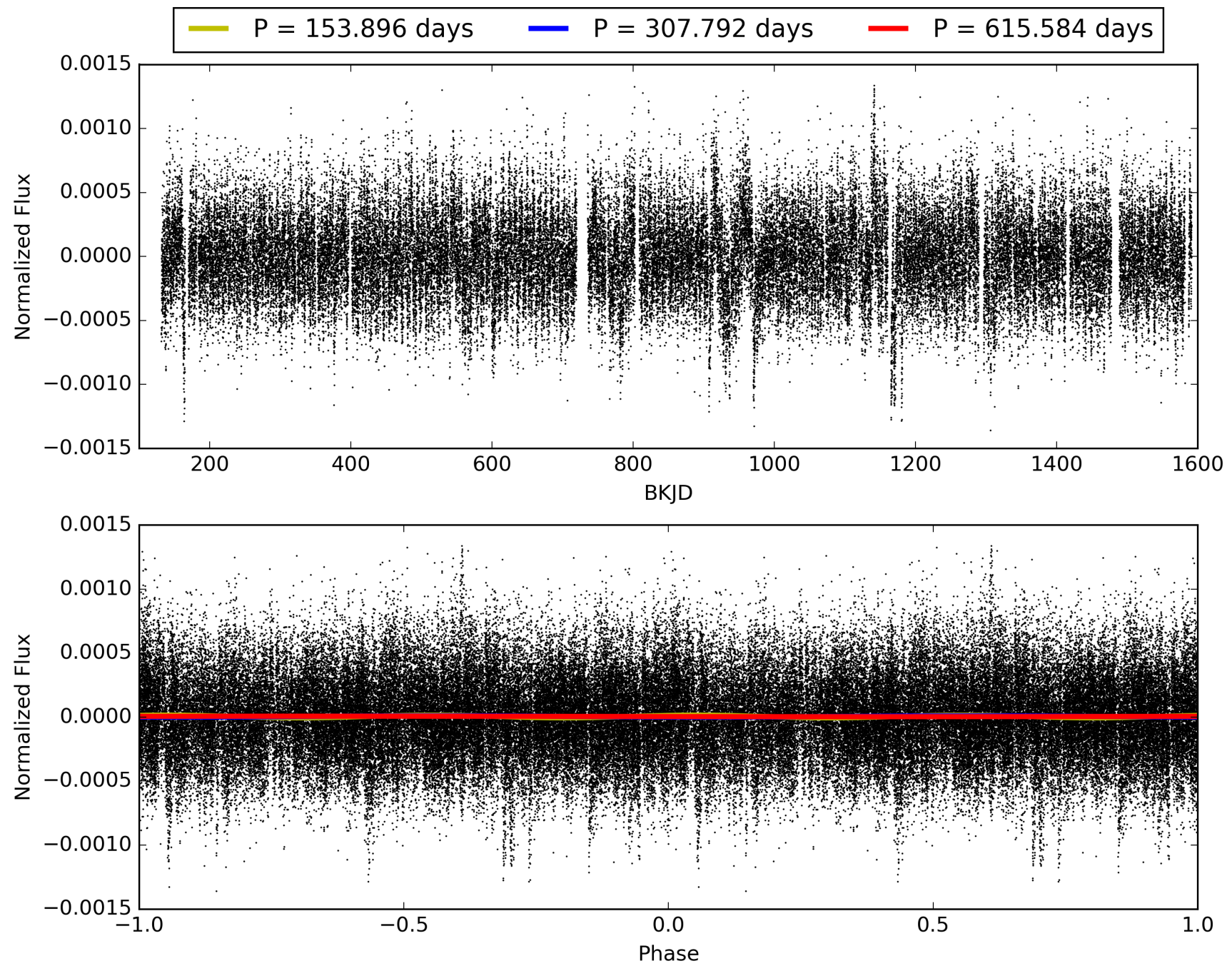
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:07 Z

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

TCE 005734003-05, PDC Light Curves

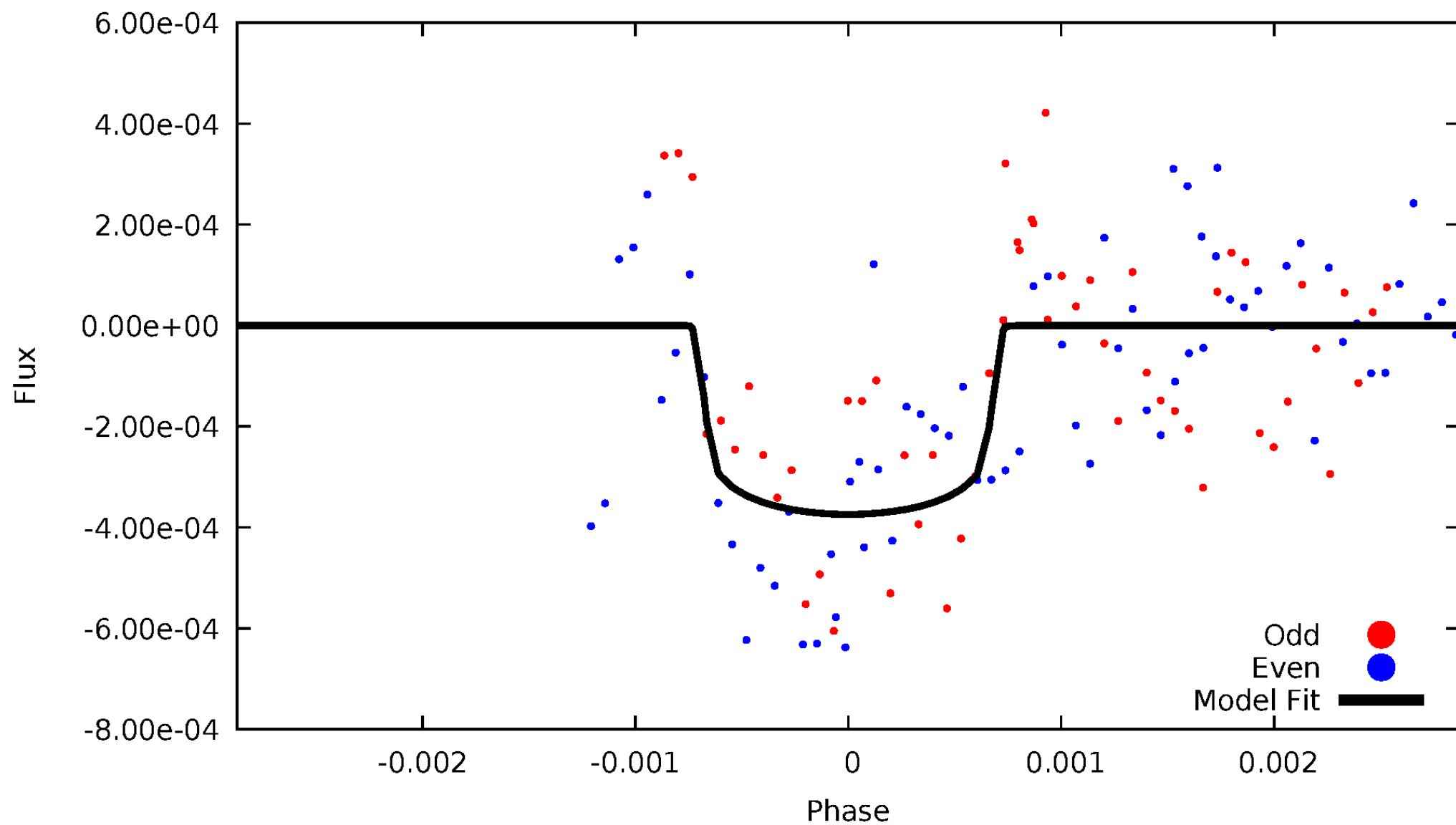


TCE 005734003-05



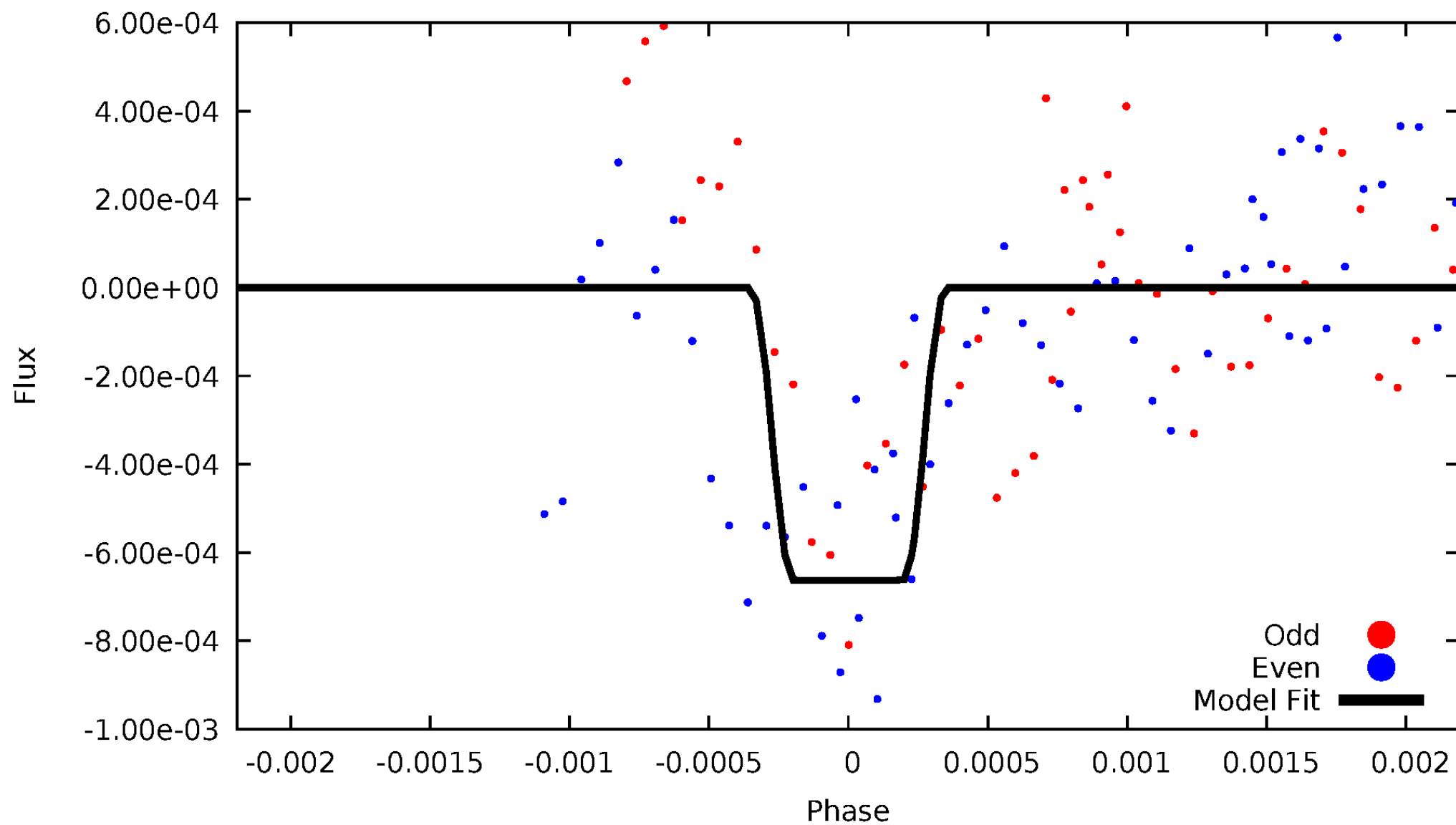
DV Odd/Even

TCE 005734003-05



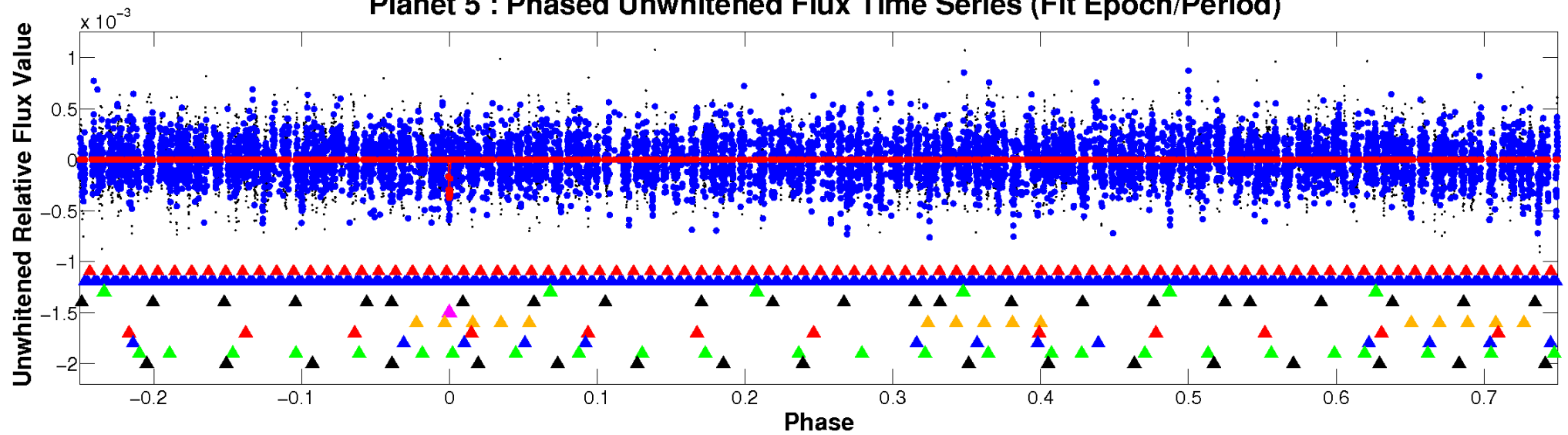
ALT Odd/Even

TCE 005734003-05

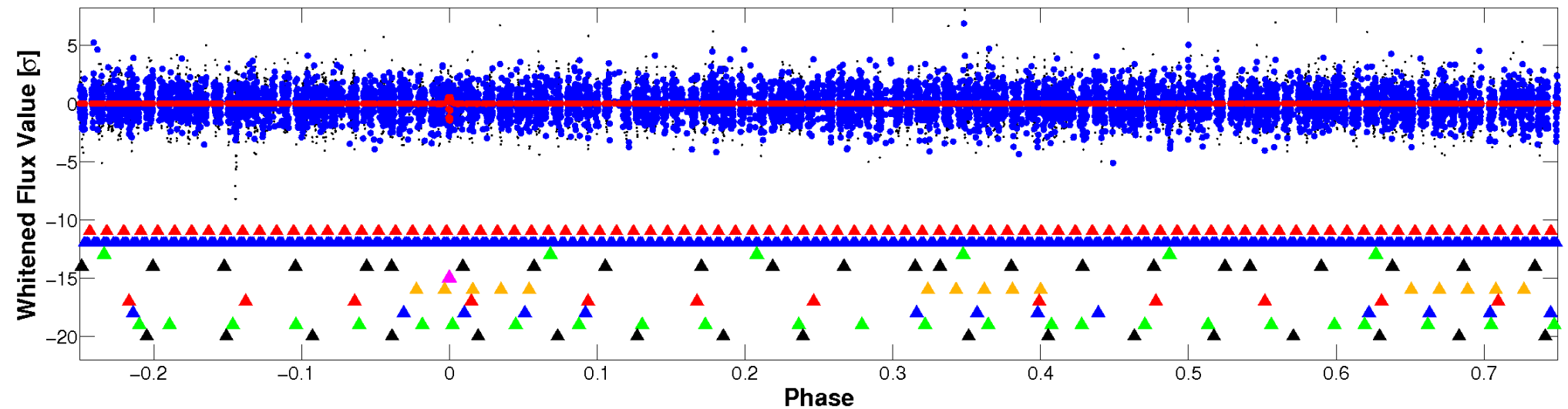


Non-Whitened Vs. Whitened Light Curve

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

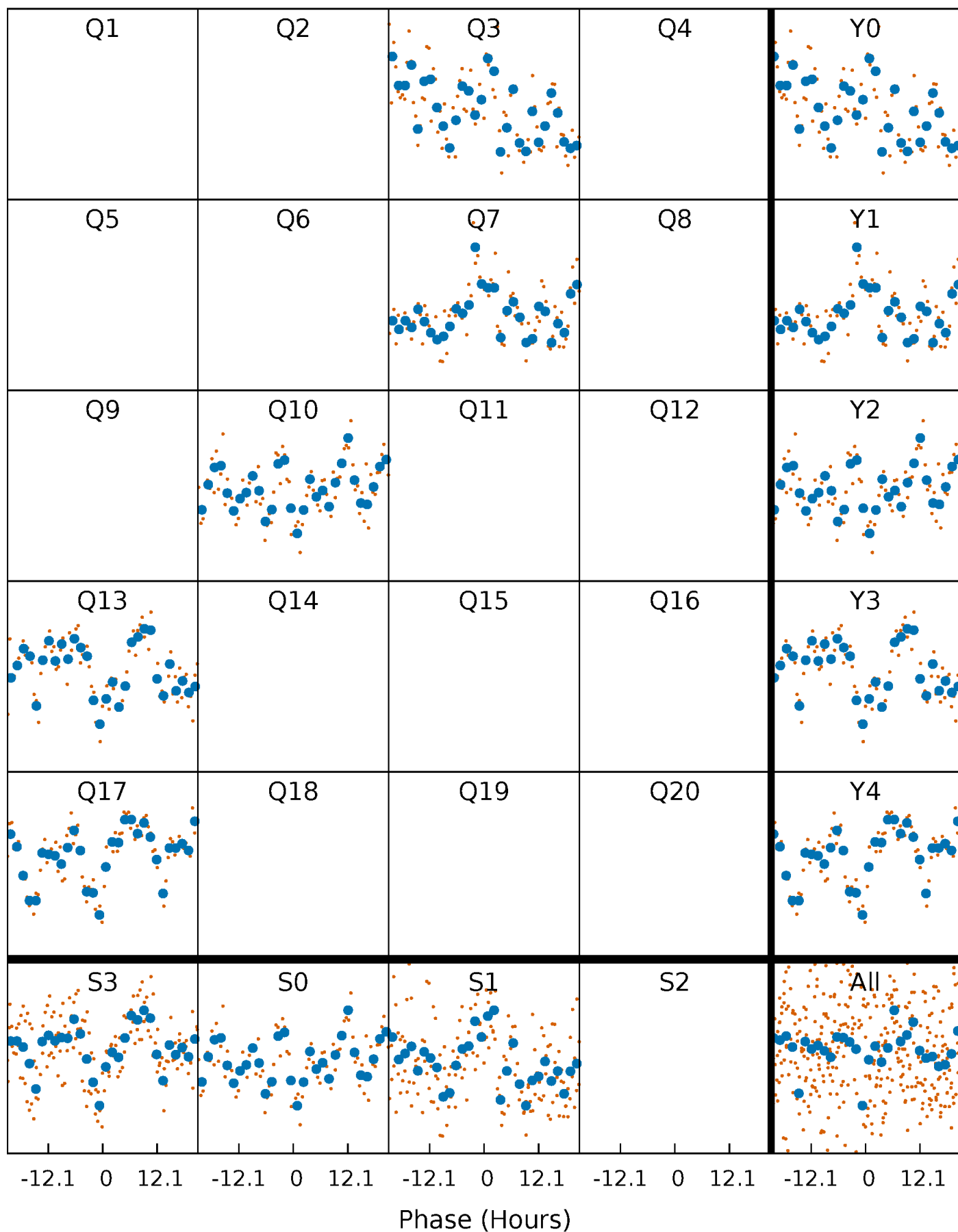


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



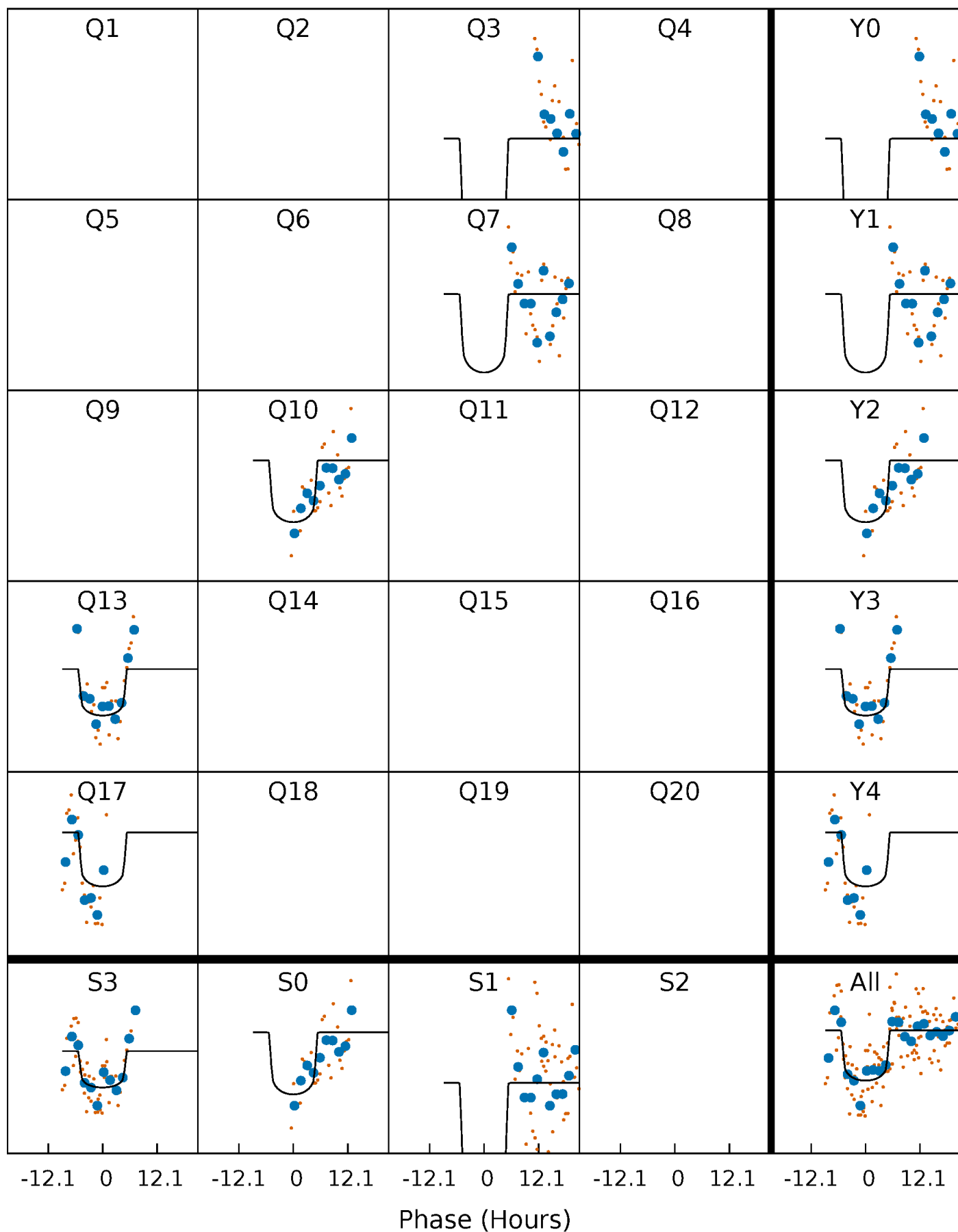
PDC Quarter-Phased Transit Curves

TCE 005734003-05 $P=307.792226$ Days $T_0=337.951078$ (BKJD)



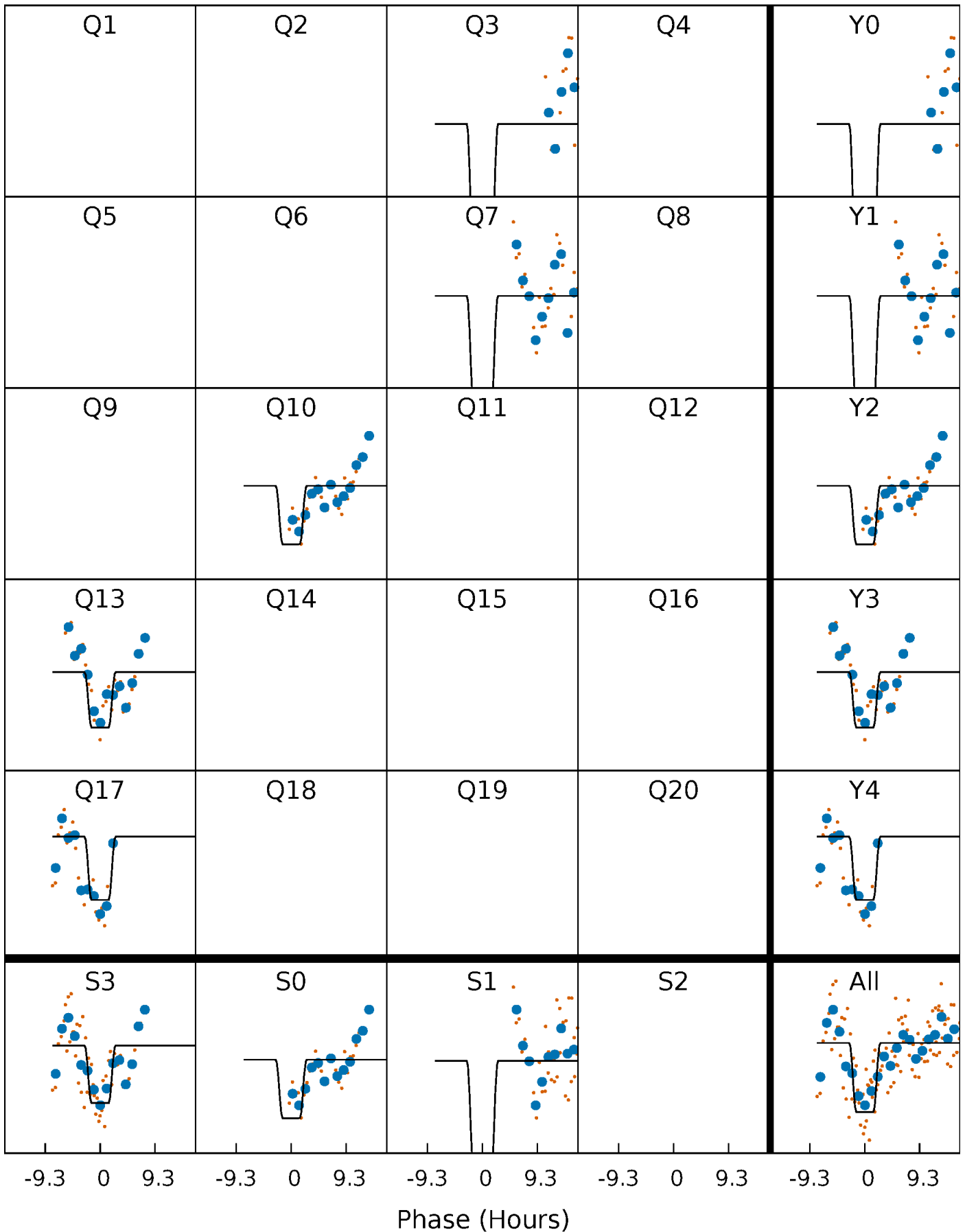
DV Quarter-Phased Transit Curves

TCE 005734003-05 $P=307.792226$ Days $T_0=337.951078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

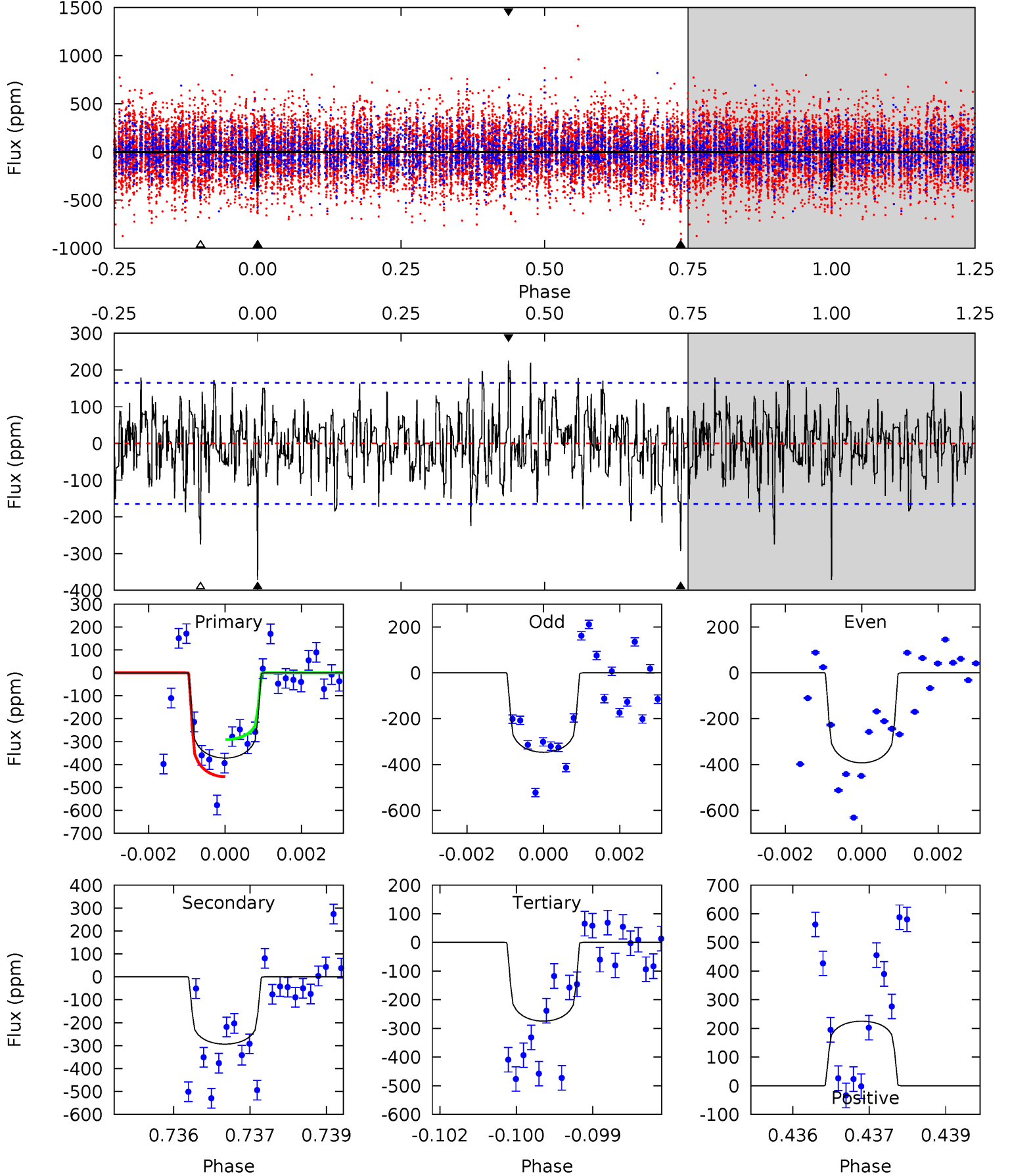
TCE 005734003-05 $P=307.777092$ Days $T_0=337.975103$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-05, $P = 307.792226$ Days, $E = 30.158852$ Days

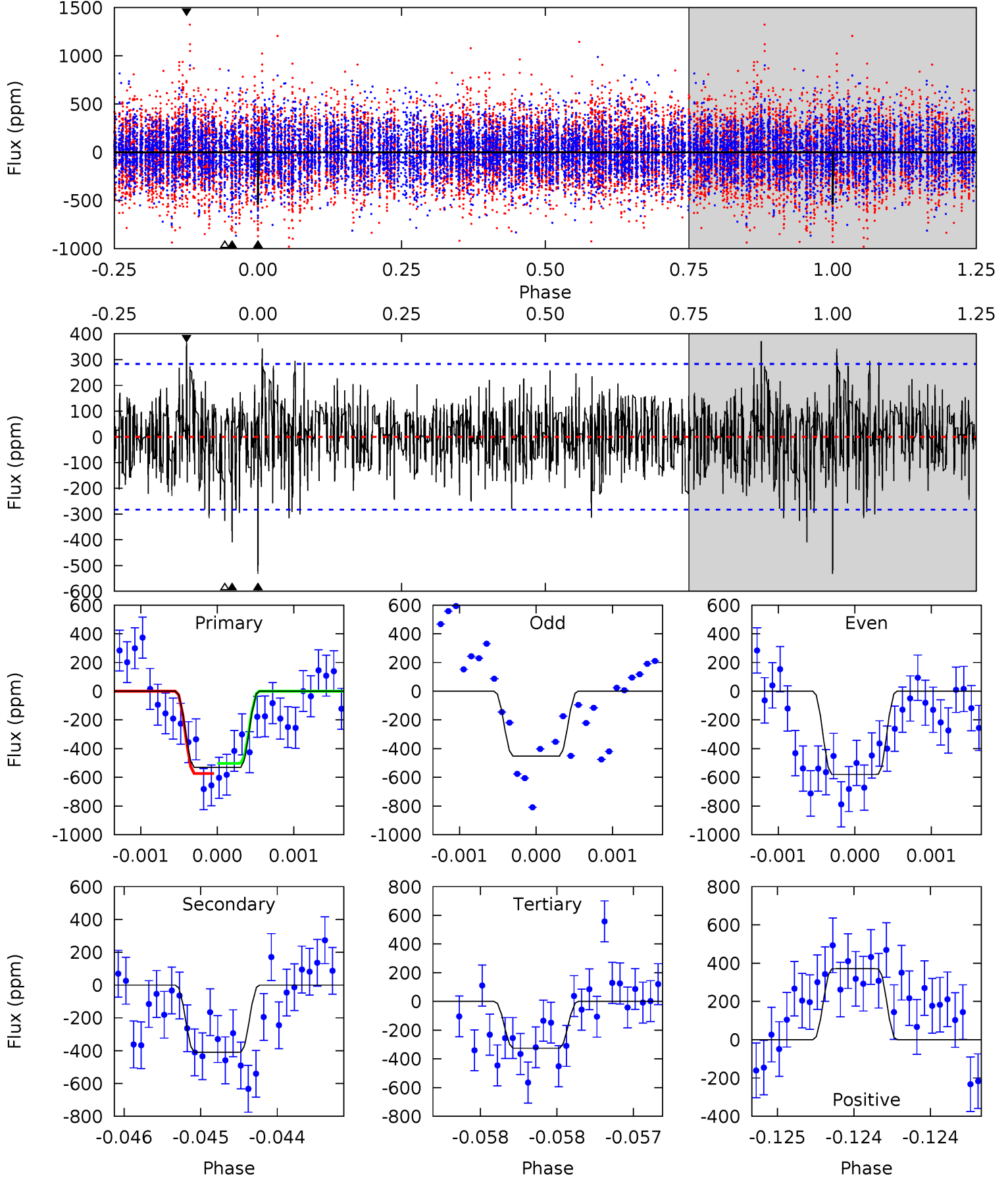
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	9.56	8.94	7.34	5.37	3.17	2.21	3.17	4.77	0.62	2.22	0.75	1.08	0.38	2.63



Alt Model-Shift Uniqueness Test

005734003-05, P = 307.777092 Days, E = 30.198011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	8.01	6.37	7.25	5.53	3.41	1.85	4.02	3.15	1.64	0.76	1.24	1.14	0.41	0.68



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-294 ± 31	$4.65^{+1.95}_{-1.82}$	677^{+45}_{-62}	7065^{+2144}_{-1103}	8446^{+15277}_{-4293}
Alt.	-410 ± 51	$6.31^{+2.17}_{-1.95}$	677^{+45}_{-66}	6548^{+1342}_{-804}	6578^{+6850}_{-2985}

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 $A_{obs} \gg 1.0$

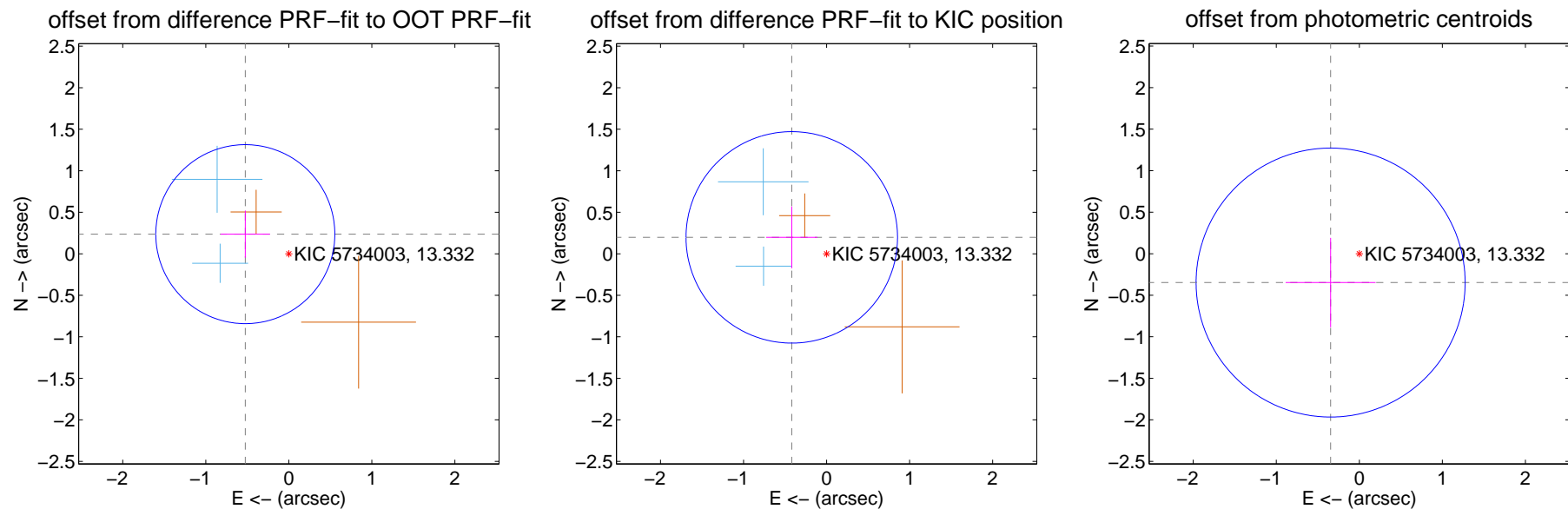
DV Centroid Data

Supplemental centroid analysis for 005734003-05. Kepler magnitude: 13.33. Transit SNR 8.96

There are 2 quarters with good PRF difference image offsets

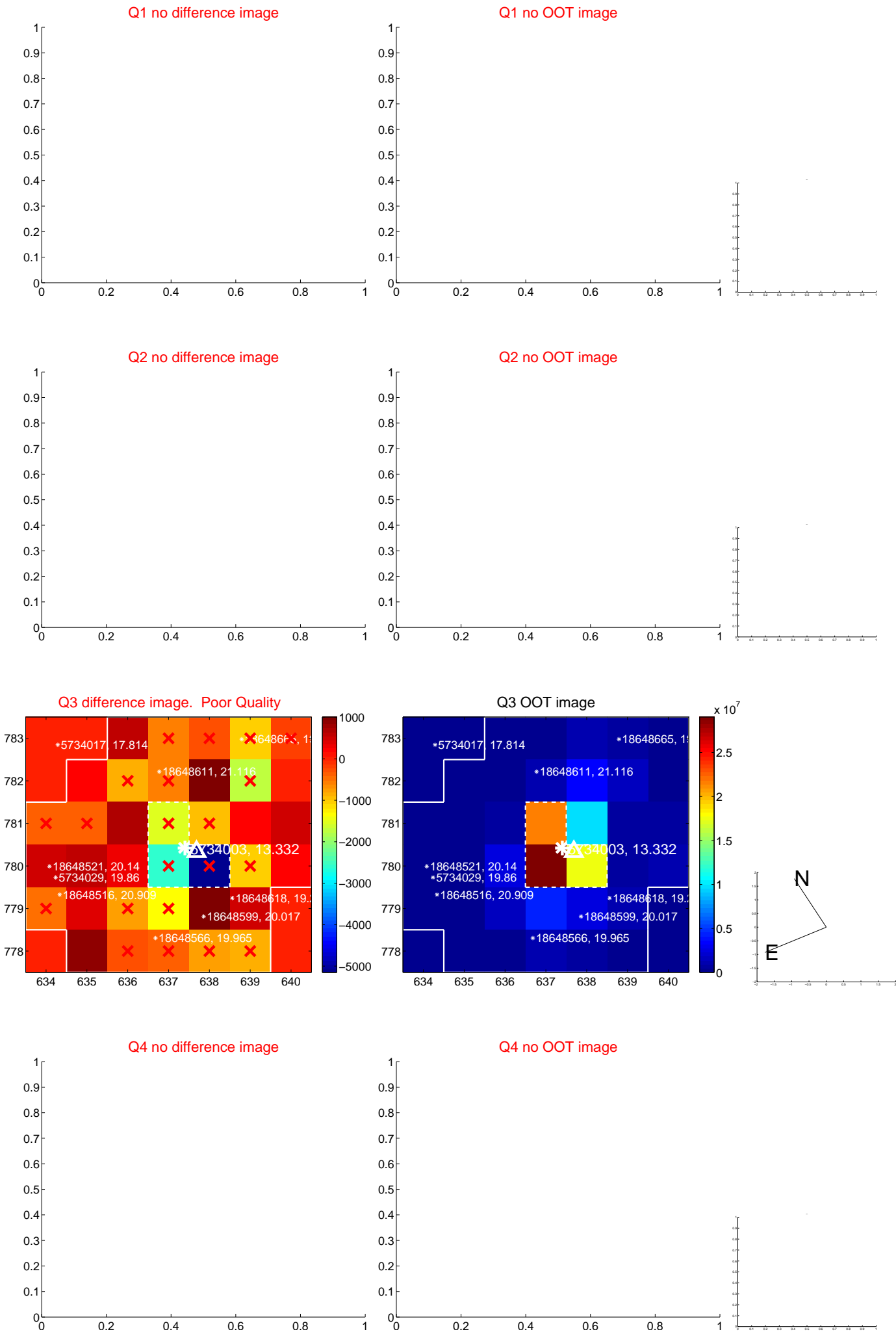
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.575 ± 0.359	1.60	0.524 ± 0.297	0.236 ± 0.283
PRF-fit source offset from KIC position	0.463 ± 0.424	1.09	0.419 ± 0.308	0.198 ± 0.372
photometric centroid source offset	0.49 ± 0.54	0.91	0.35 ± 0.54	-0.35 ± 0.54



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.

Q5 no difference image



Q5 no OOT image



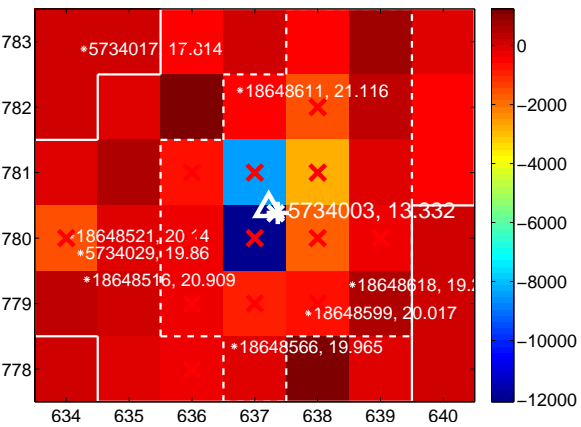
Q6 no difference image



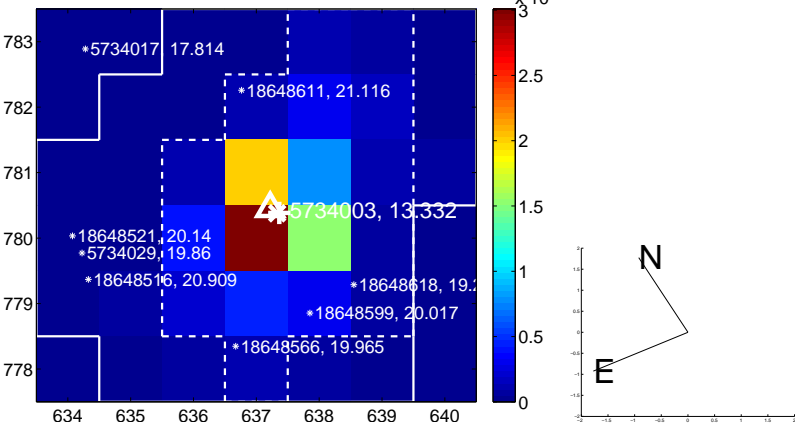
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



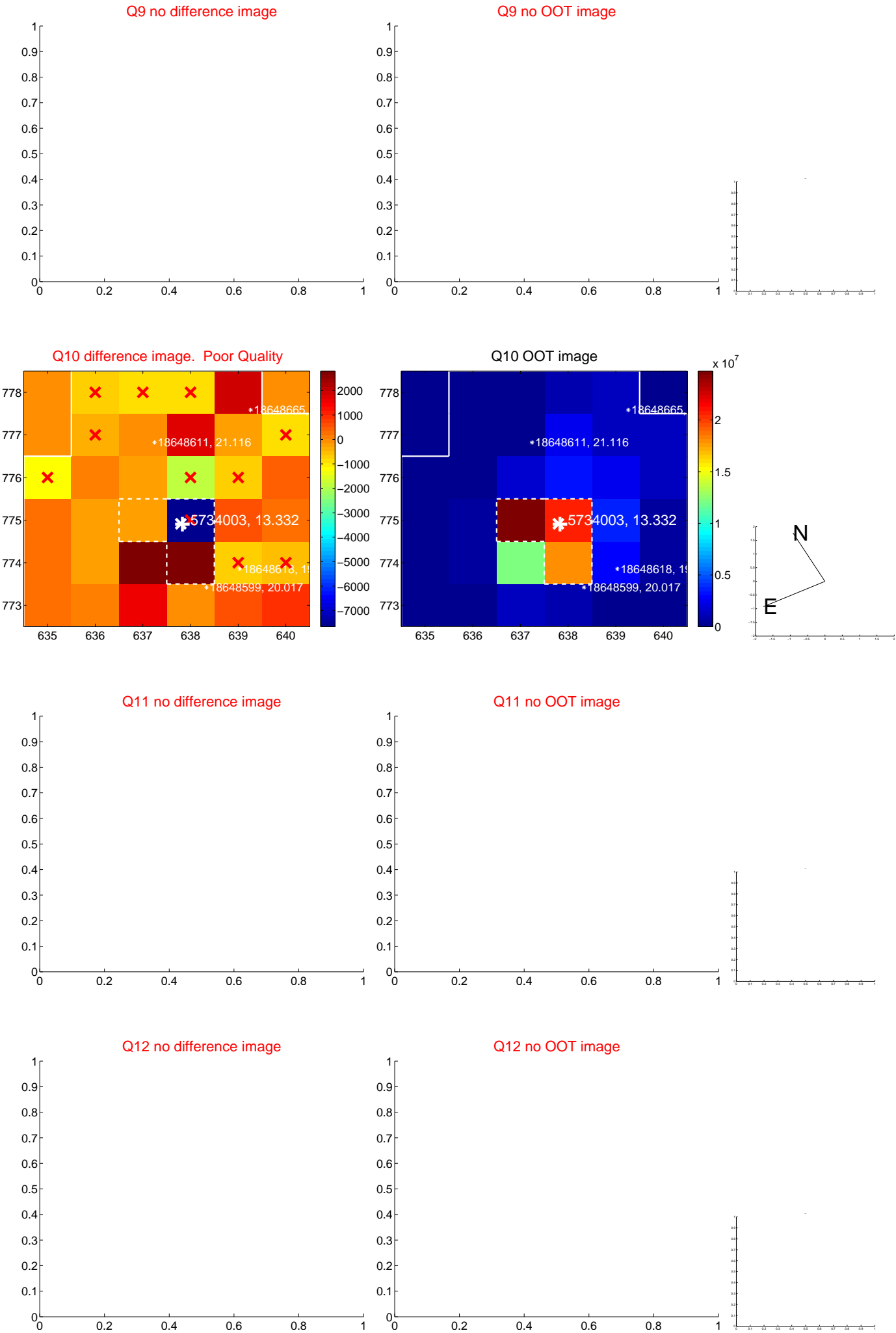
Q8 no difference image



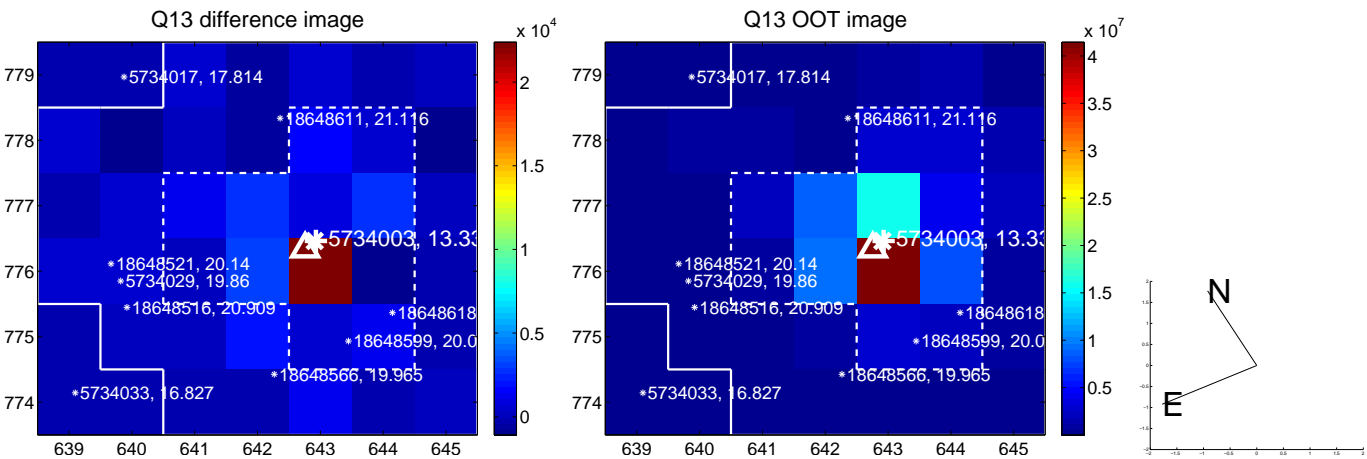
Q8 no OOT image



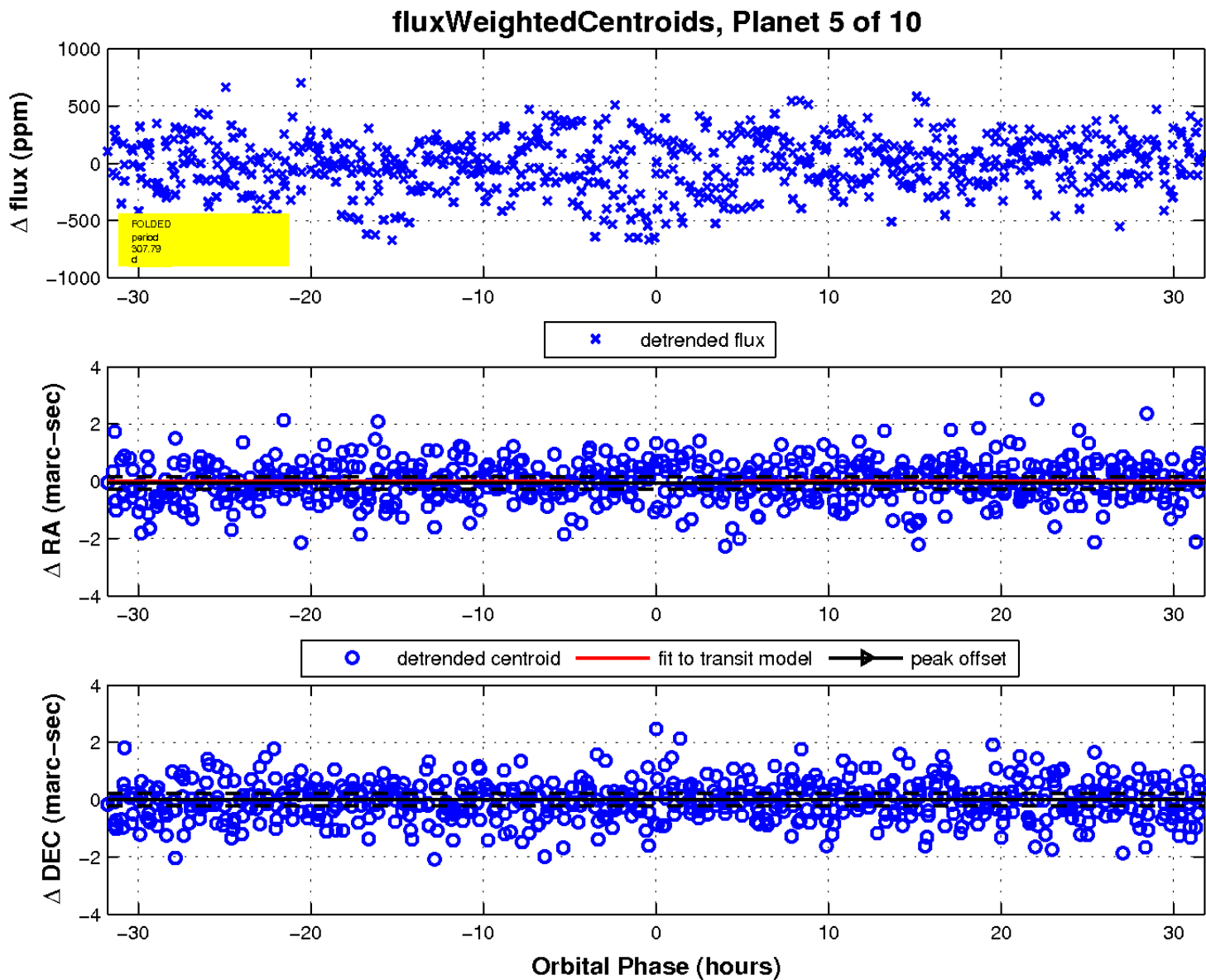
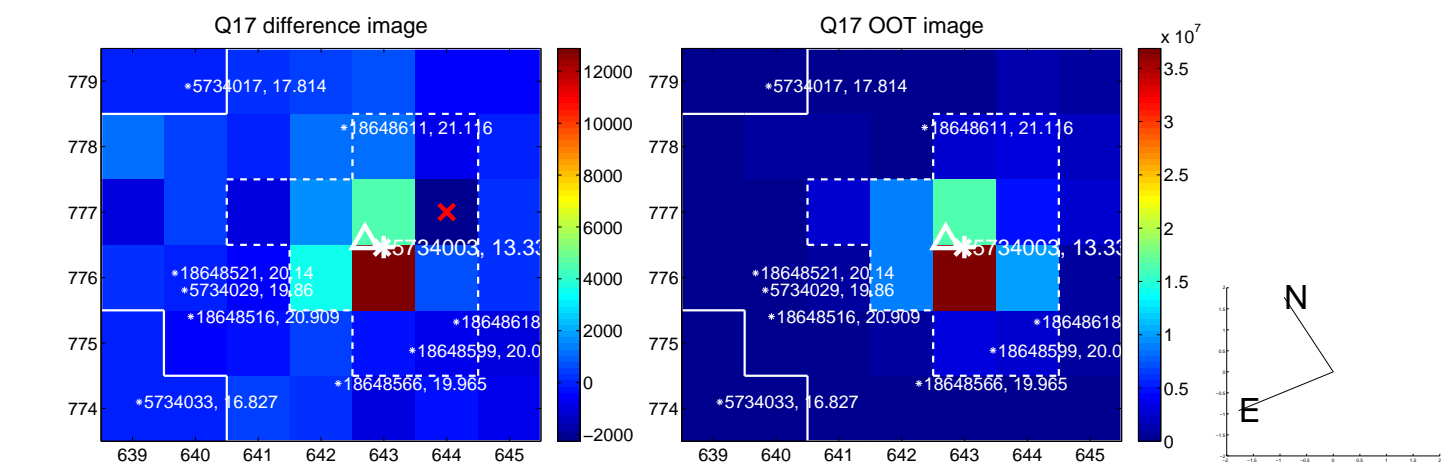
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

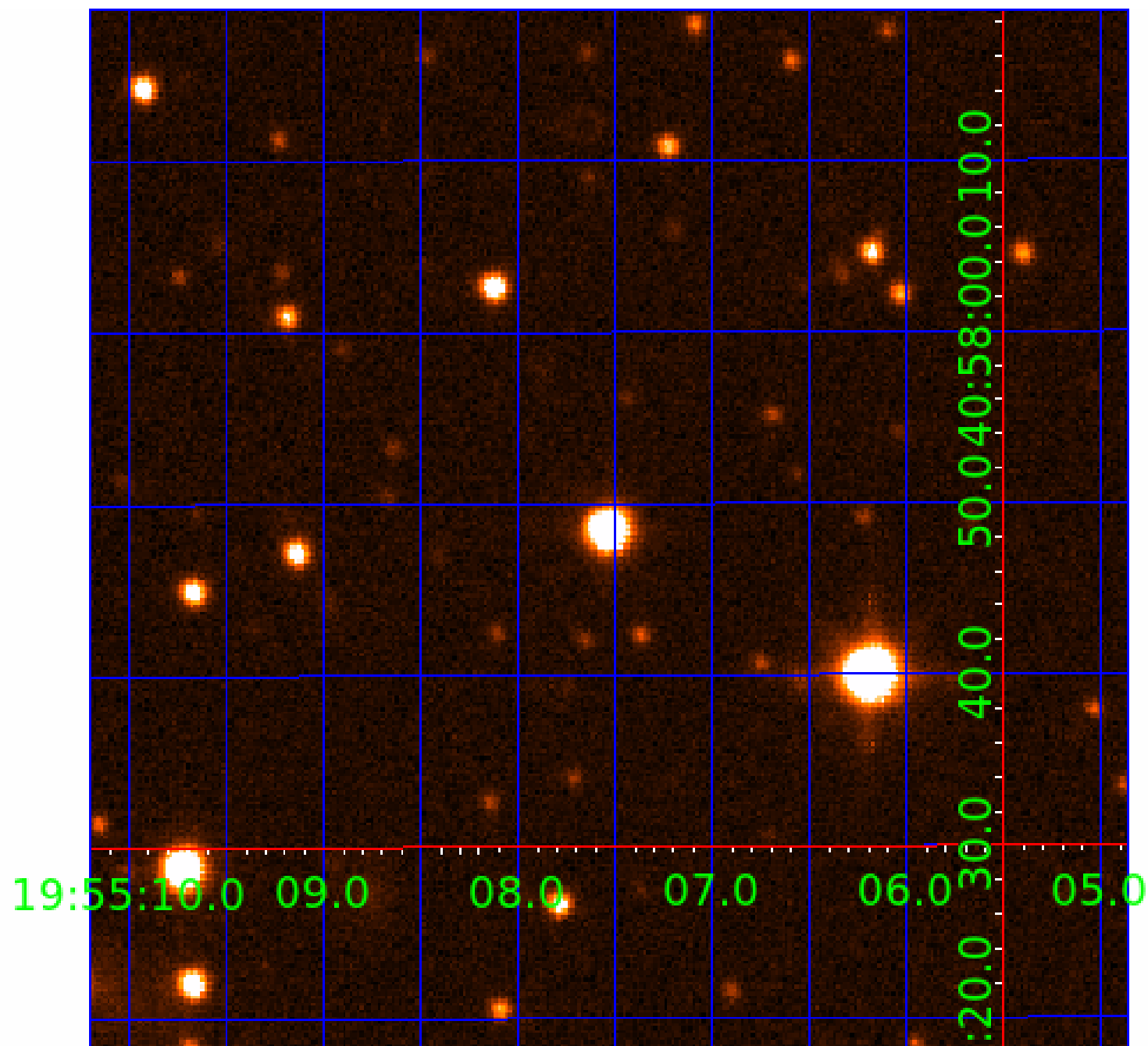


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

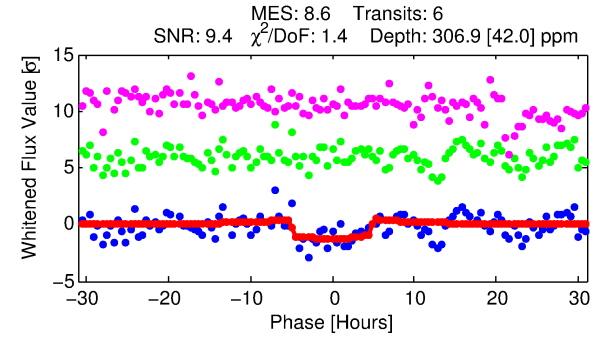
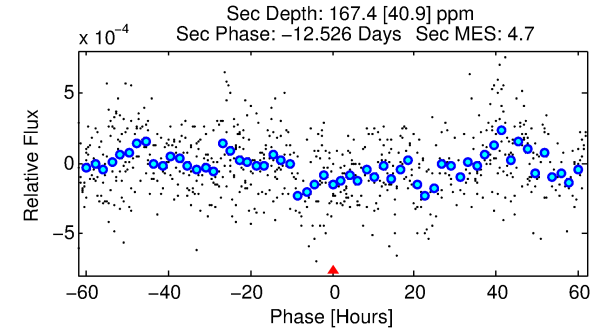
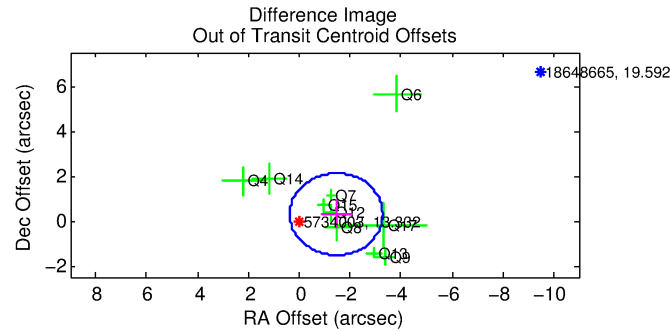
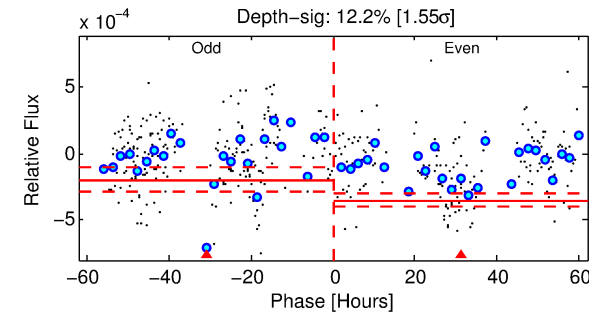
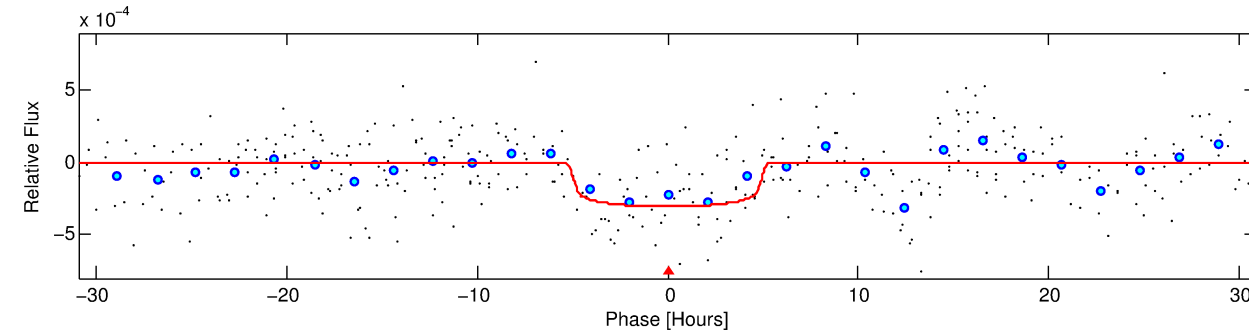
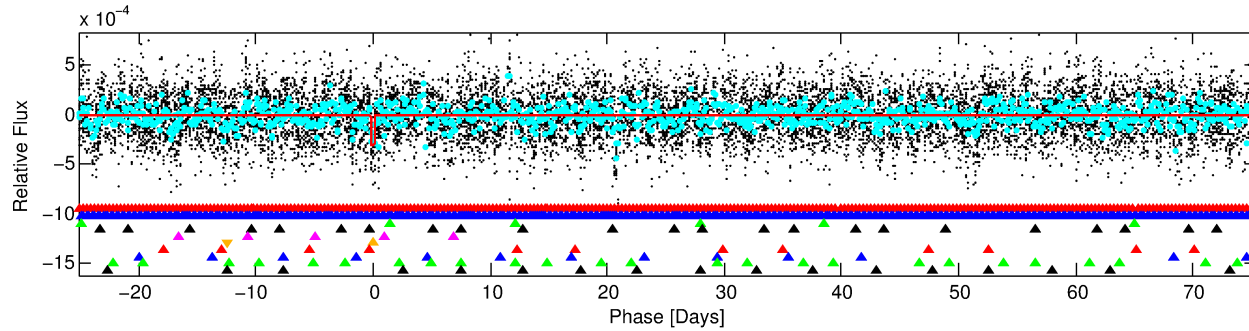
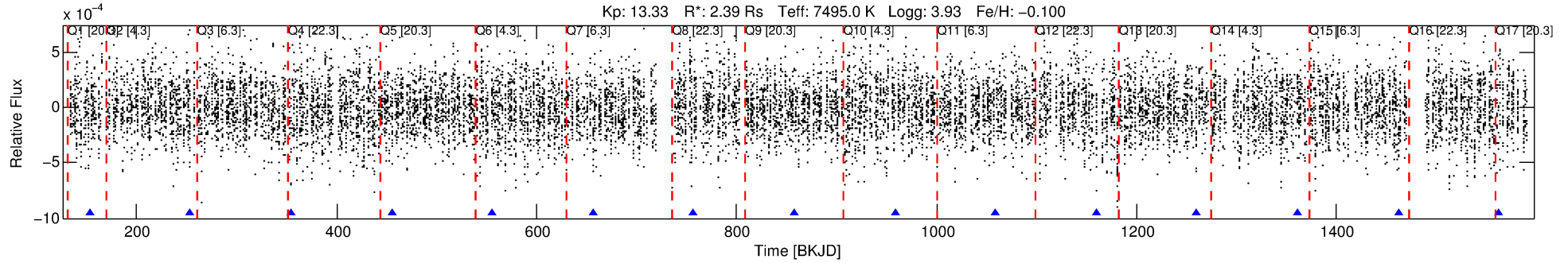
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-06

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 6 of 10 Period: 100.641 d



DV Fit Results:

Period = 100.64129 [0.00179] d
Epoch = 153.2930 [0.0148] BKJD
Rp/R* = 0.0173 [0.0083]
a/R* = 53.24 [157.13]
b = 0.73 [1.94]
Seff = 61.81 [32.53]
Teq = 715 [94] K
Rp = 4.51 [2.64] Re
a = 0.5109 [0.1602] AU
Ag = 1180.82 [1305.12] [0.90 σ]
Teffp = 6480 [1629] K [3.53 σ]

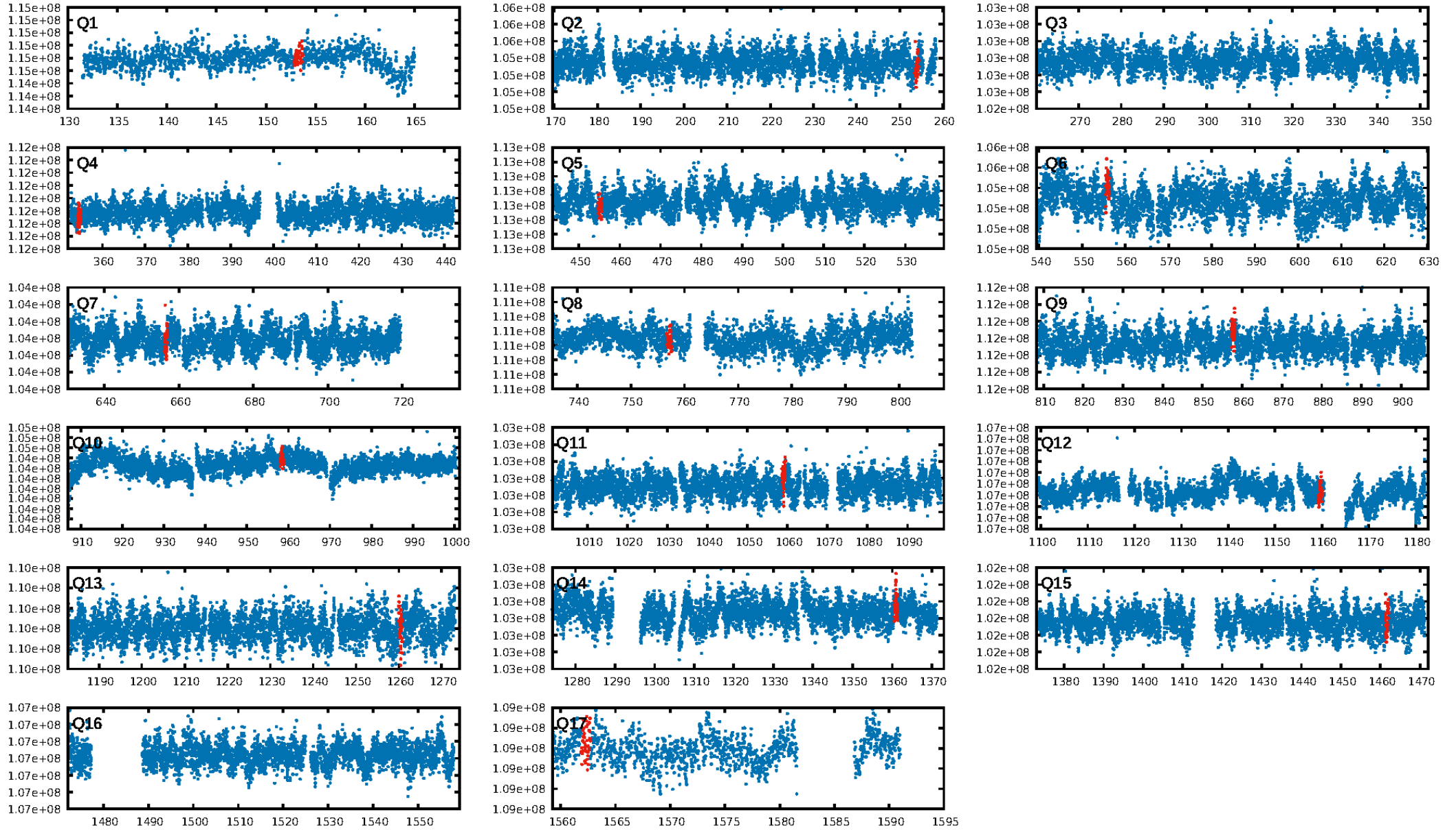
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.34 σ]
LongPeriod-sig: 100.0% [14.00 σ]
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.3891
Centroid-sig: 0.0%
Centroid-so: 1.324 arcsec [3.19 σ]
OotOffset-rm: 1.486 arcsec [2.44 σ]
KicOffset-rm: 1.760 arcsec [2.97 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 0.00 [0/15]

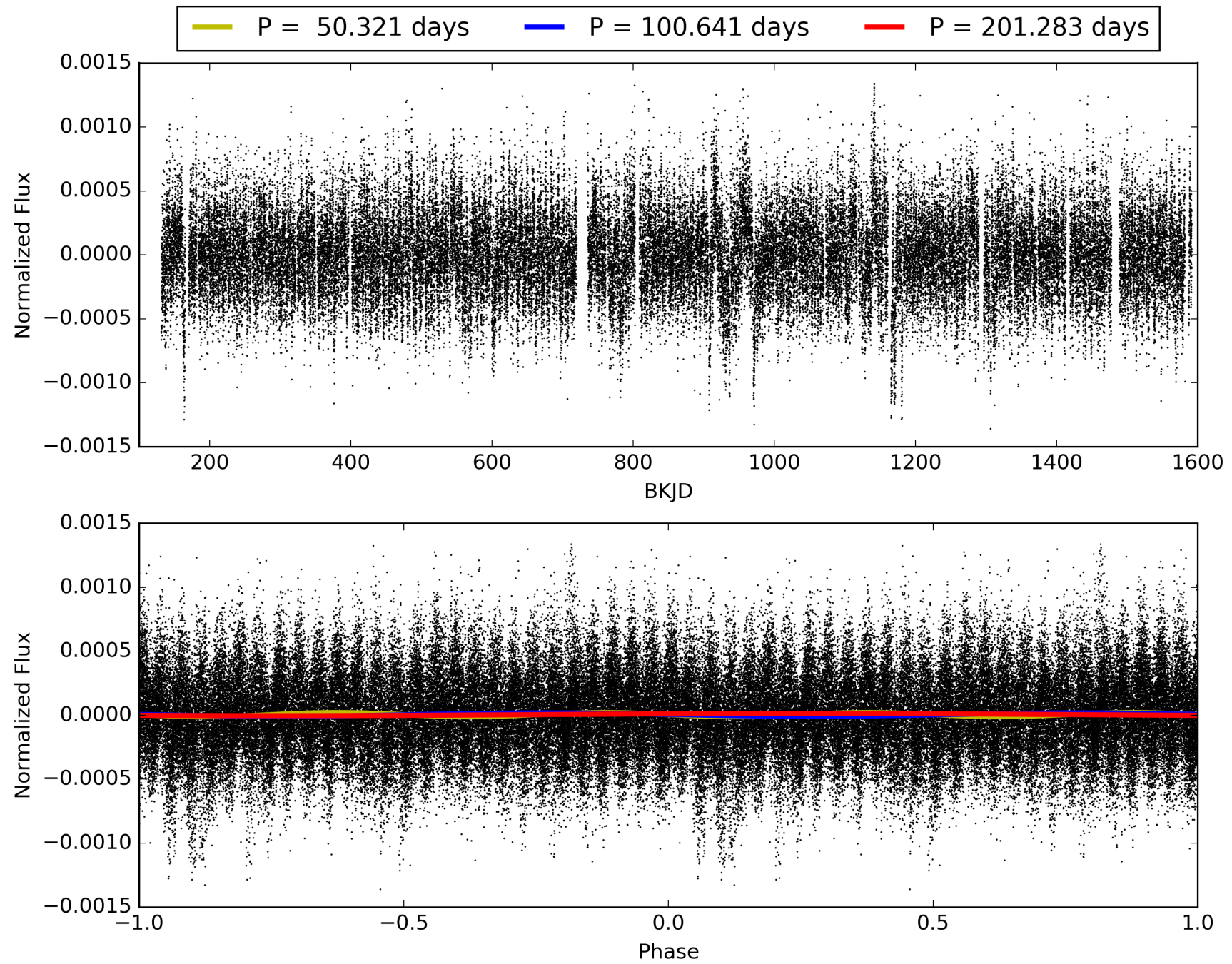
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:11 Z

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

TCE 005734003-06, PDC Light Curves

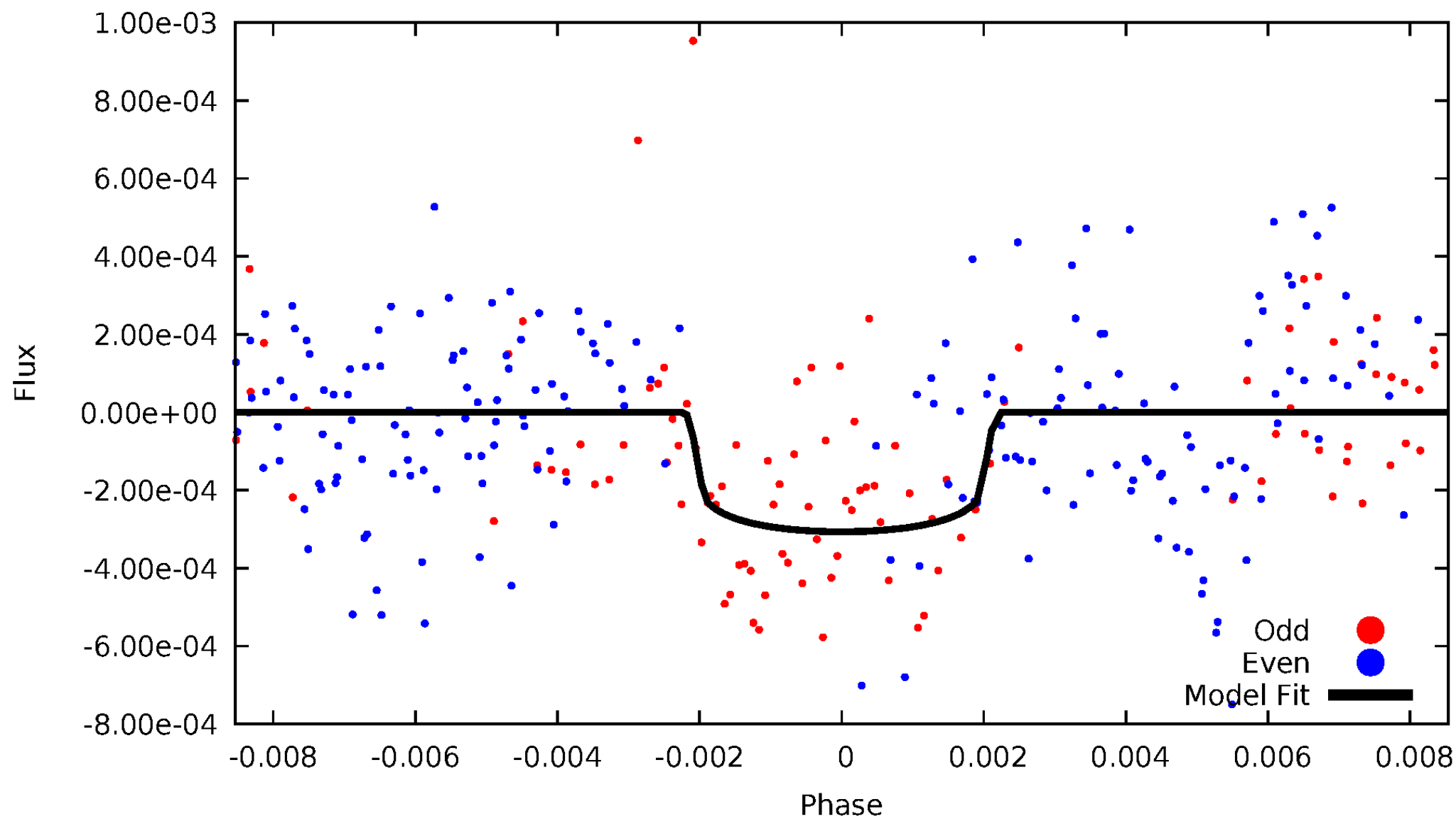


TCE 005734003-06



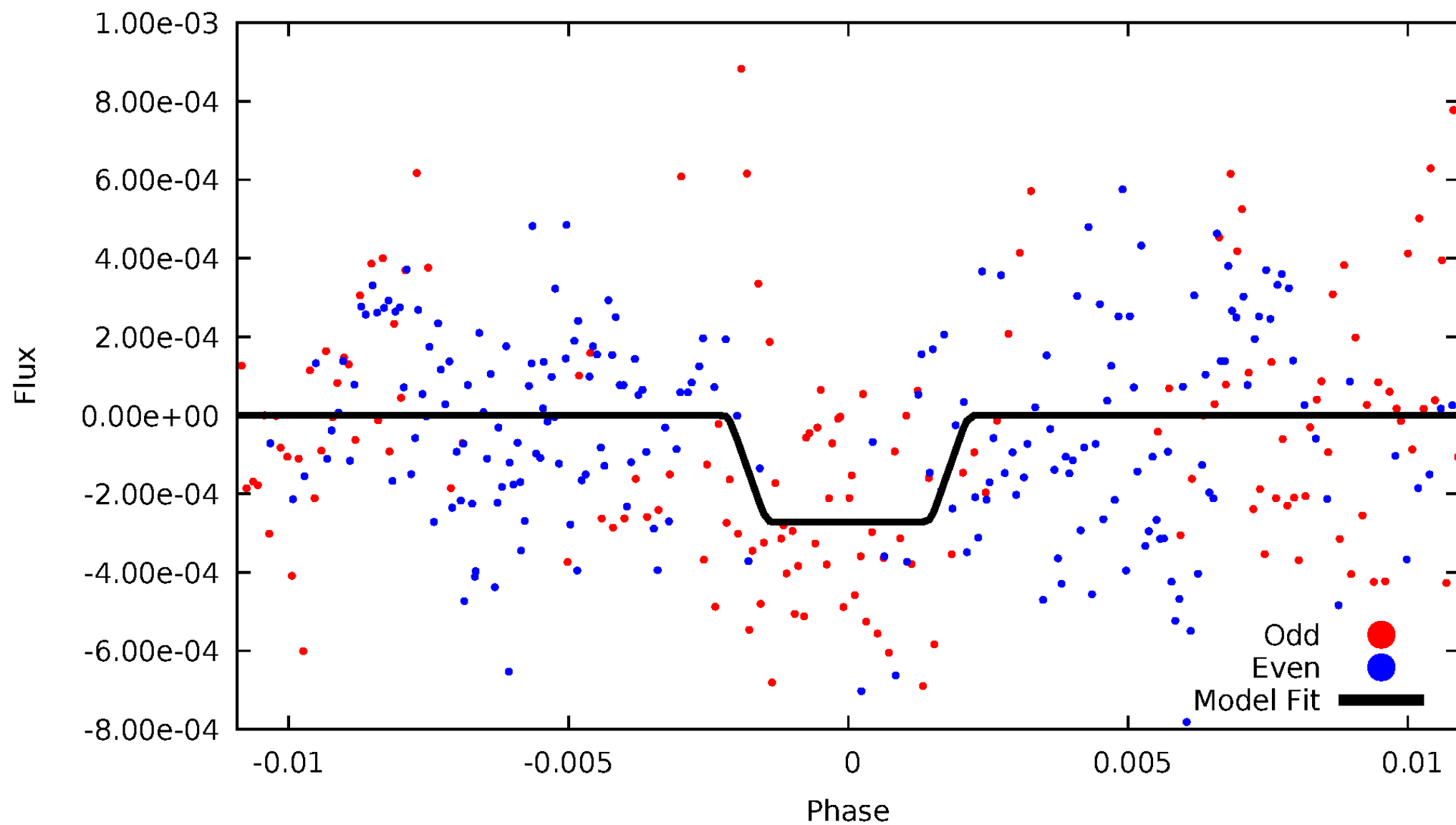
DV Odd/Even

TCE 005734003-06



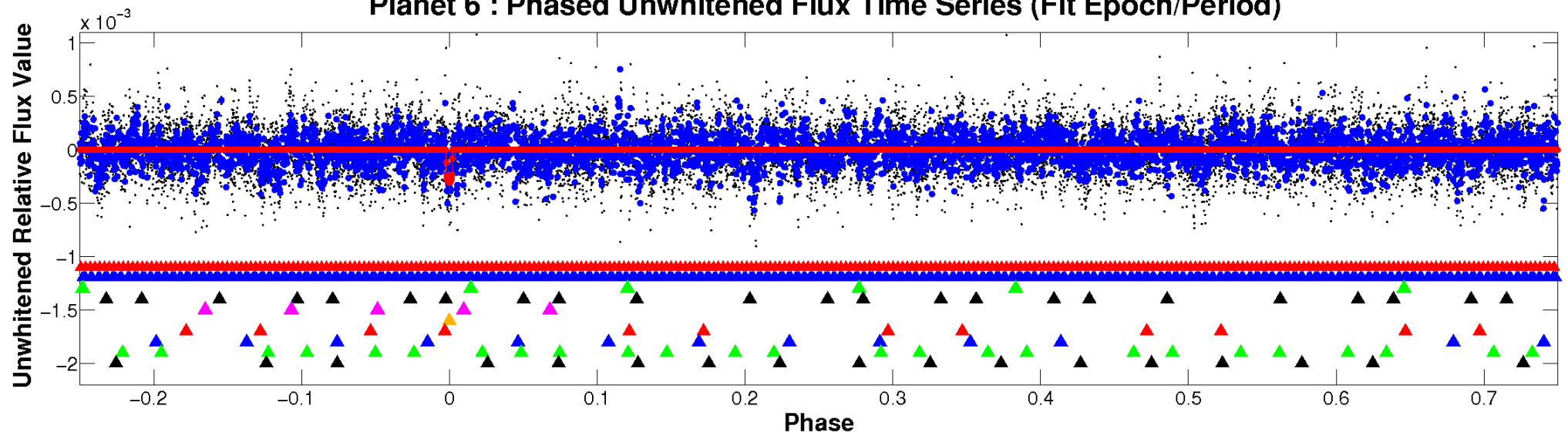
ALT Odd/Even

TCE 005734003-06

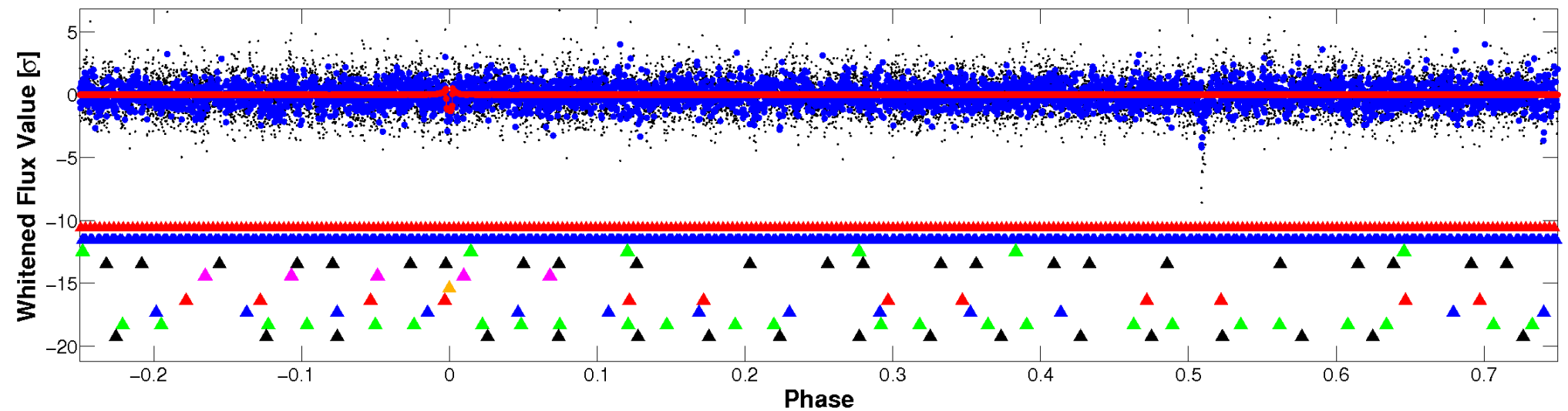


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

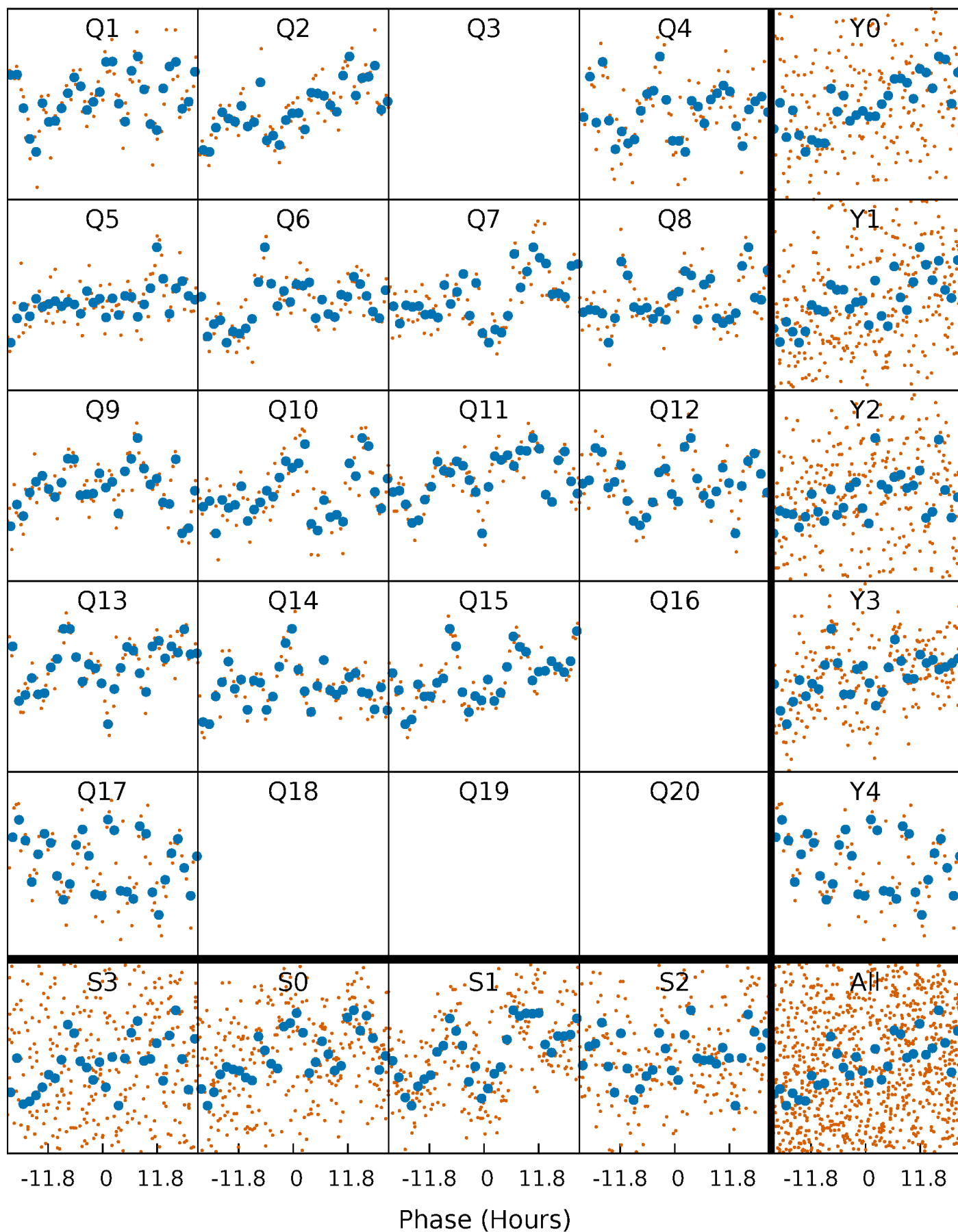


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



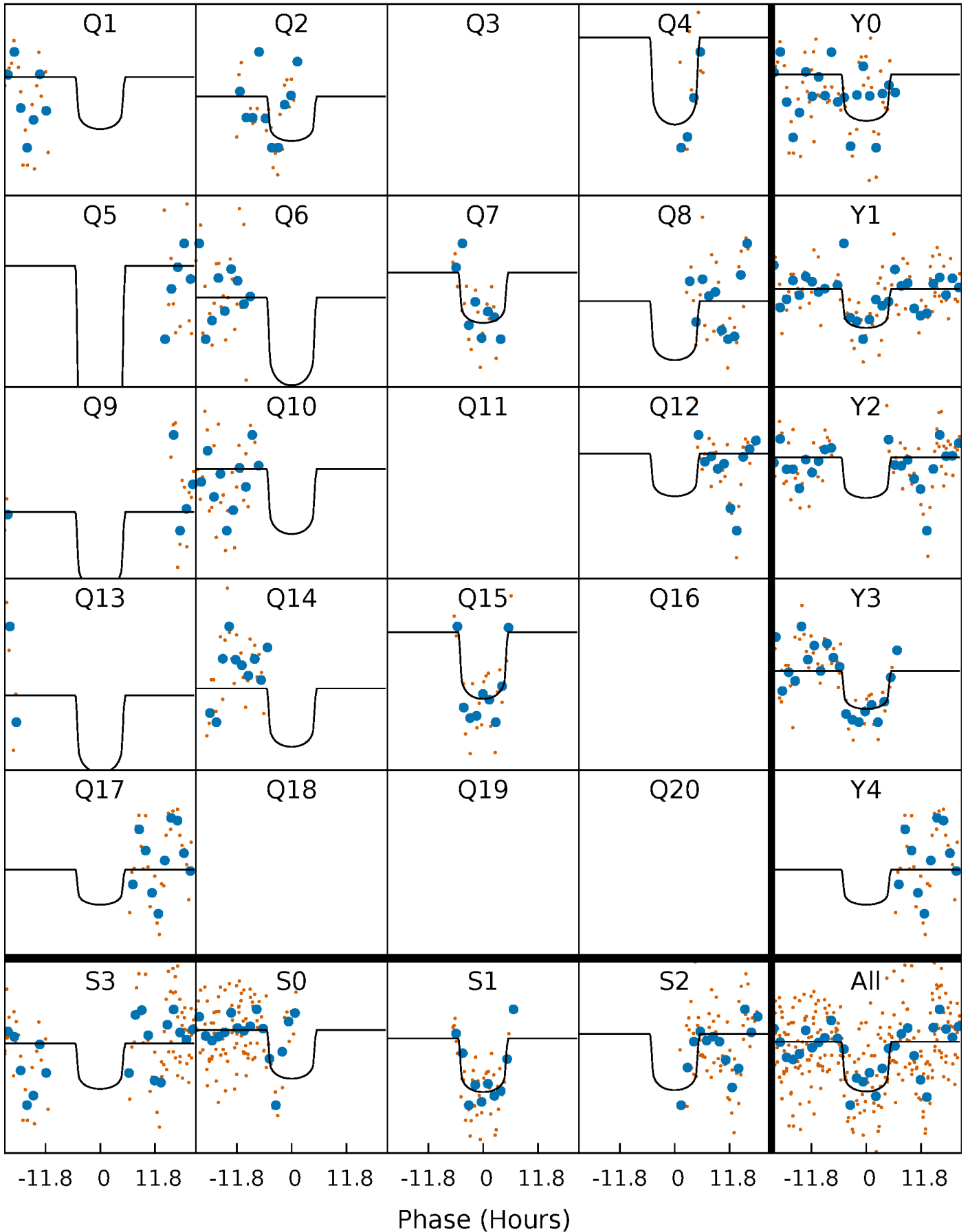
PDC Quarter-Phased Transit Curves

TCE 005734003-06 P=100.641288 Days $T_0=153.293039$ (BKJD)



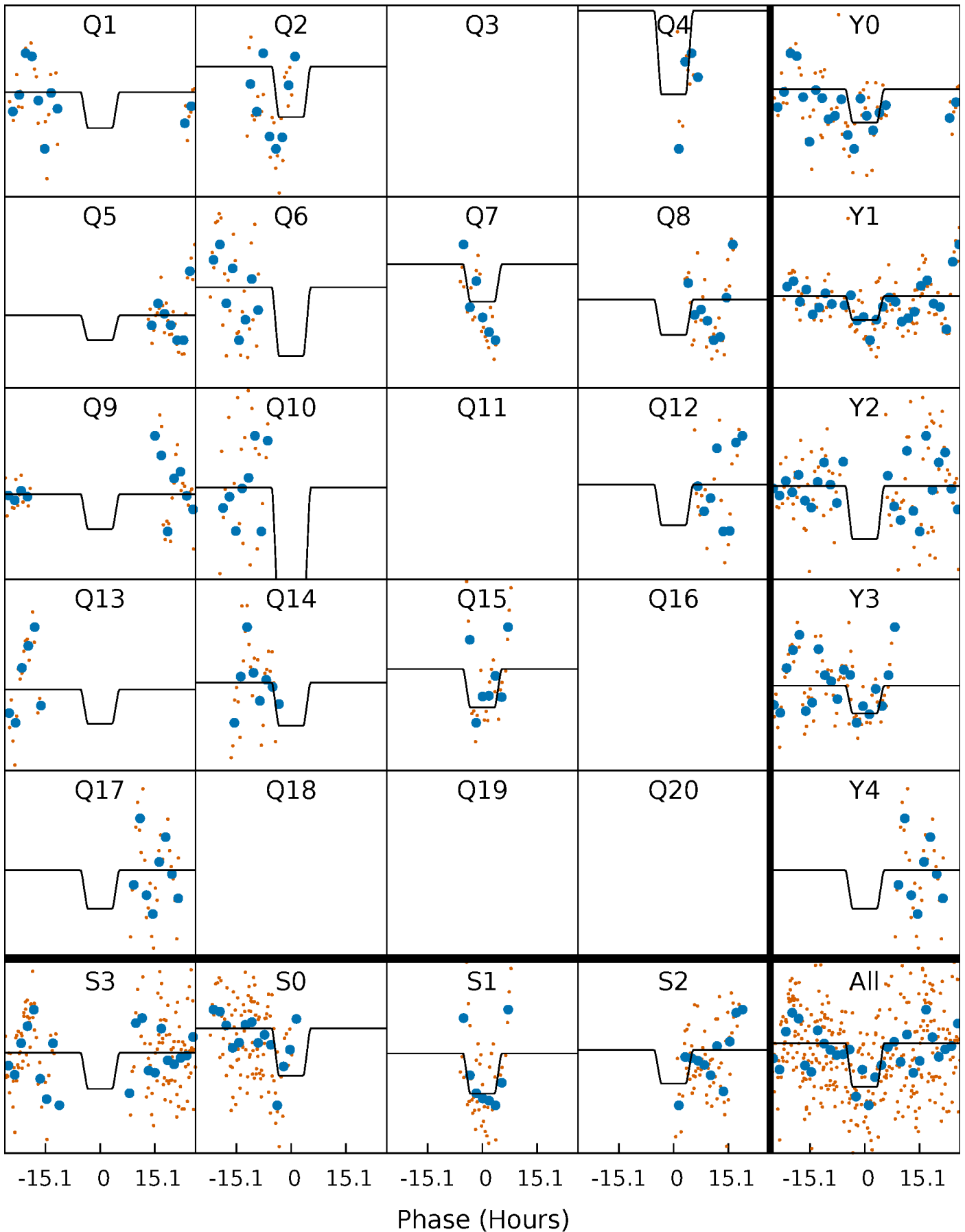
DV Quarter-Phased Transit Curves

TCE 005734003-06 P=100.641288 Days $T_0=153.293039$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

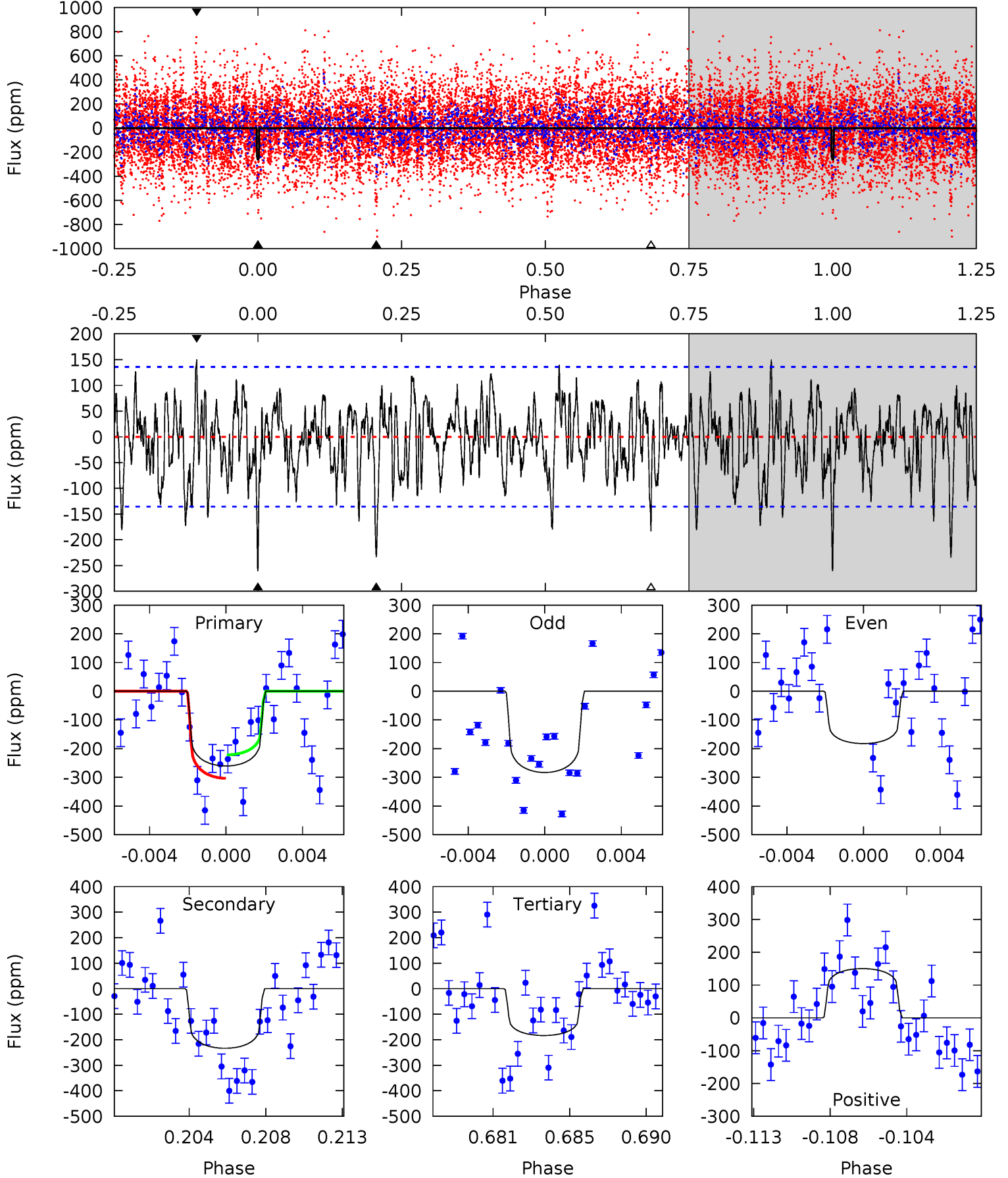
TCE 005734003-06 P=100.633776 Days $T_0=153.312781$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-06, P = 100.641288 Days, E = 52.651751 Days

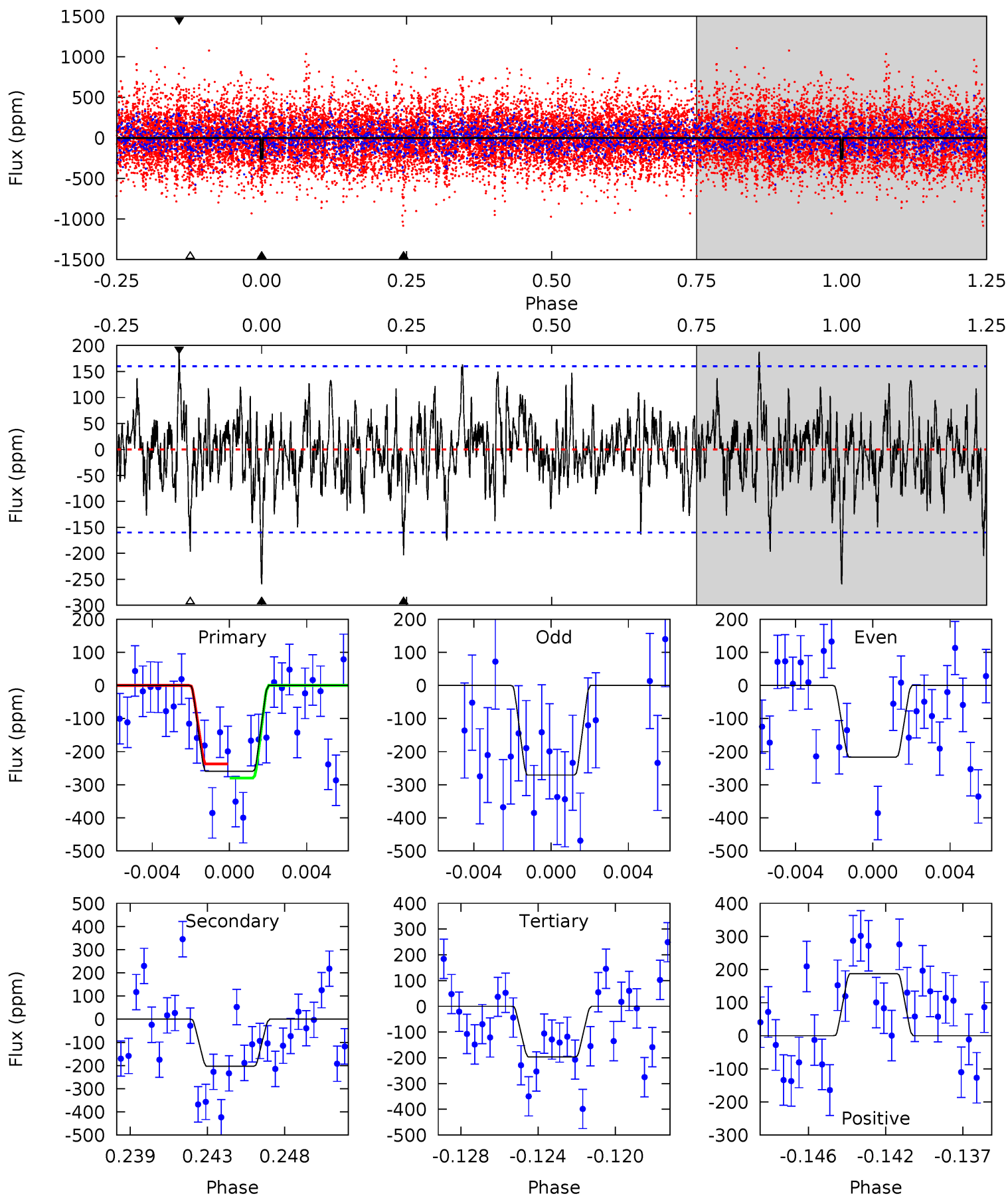
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.95	8.91	7.01	5.73	5.18	2.85	2.19	2.94	4.22	1.91	3.18	1.70	0.54	0.37	1.55



Alt Model-Shift Uniqueness Test

005734003-06, P = 100.633776 Days, E = 52.679005 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	6.59	6.36	6.07	5.18	2.85	1.71	2.05	2.33	0.23	0.51	0.78	0.73	0.42	0.69



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-233 ± 26	$4.22^{+2.16}_{-2.08}$	982^{+67}_{-98}	6935^{+3750}_{-1326}	1814^{+5183}_{-992}
Alt.	-203 ± 31	$4.18^{+2.25}_{-2.06}$	983^{+67}_{-81}	6732^{+3567}_{-1207}	1672^{+4717}_{-971}

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

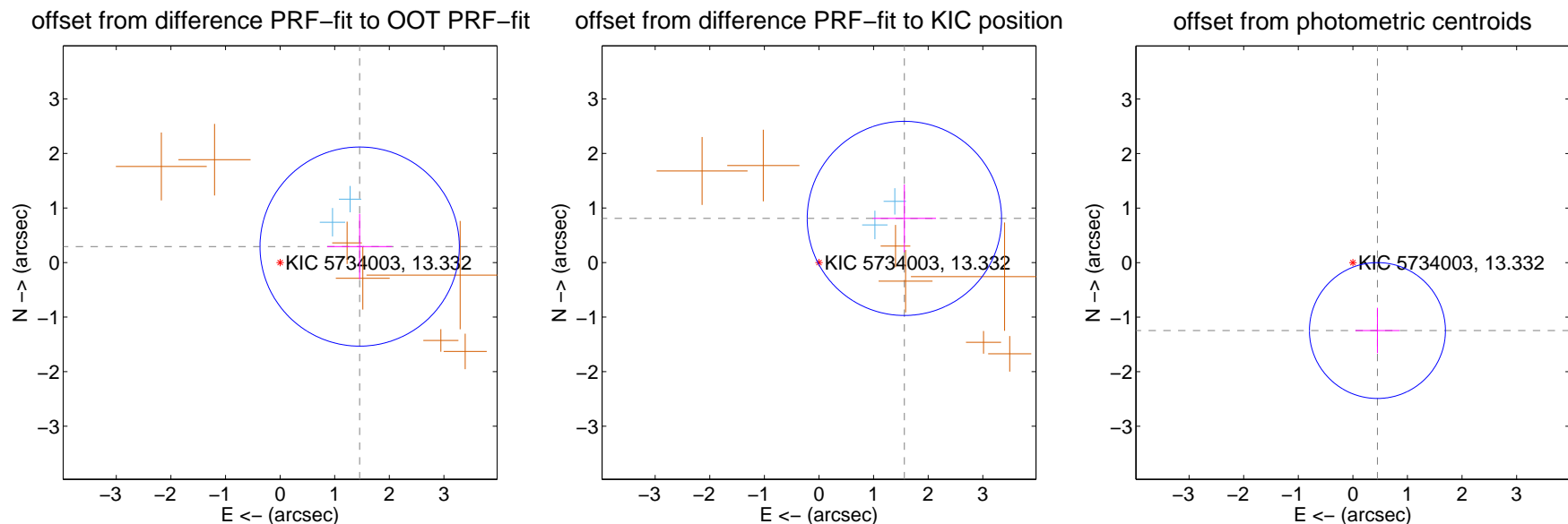
DV Centroid Data

Supplemental centroid analysis for 005734003-06. Kepler magnitude: 13.33. Transit SNR 9.36

There are 2 quarters with good PRF difference image offsets

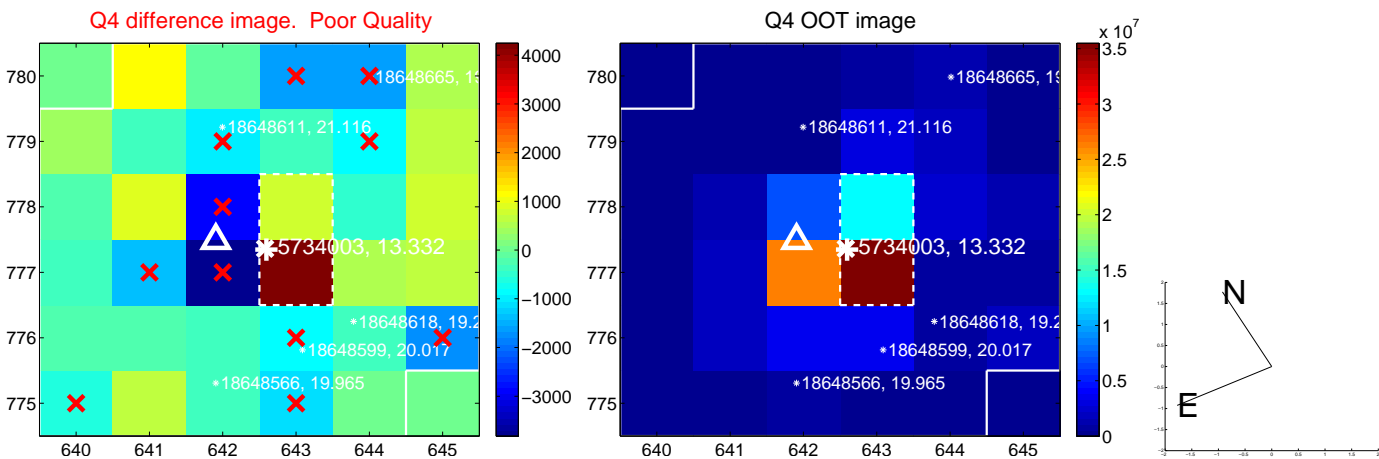
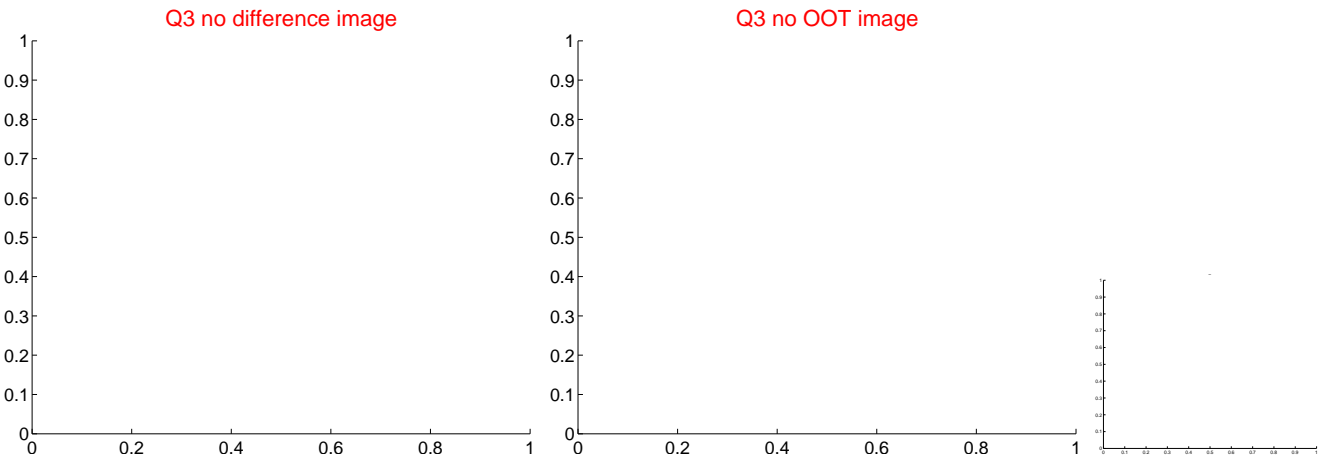
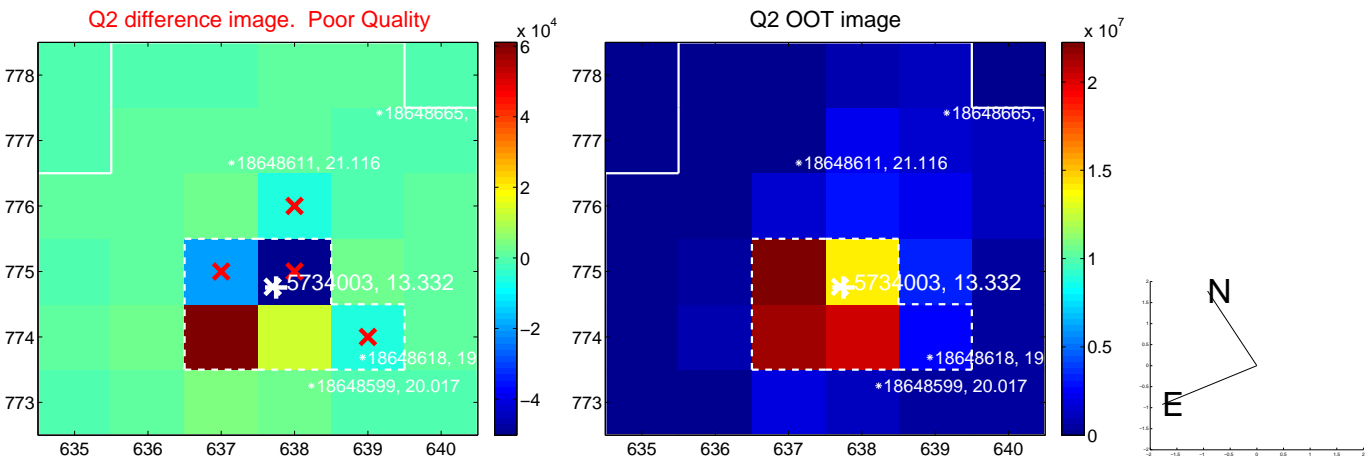
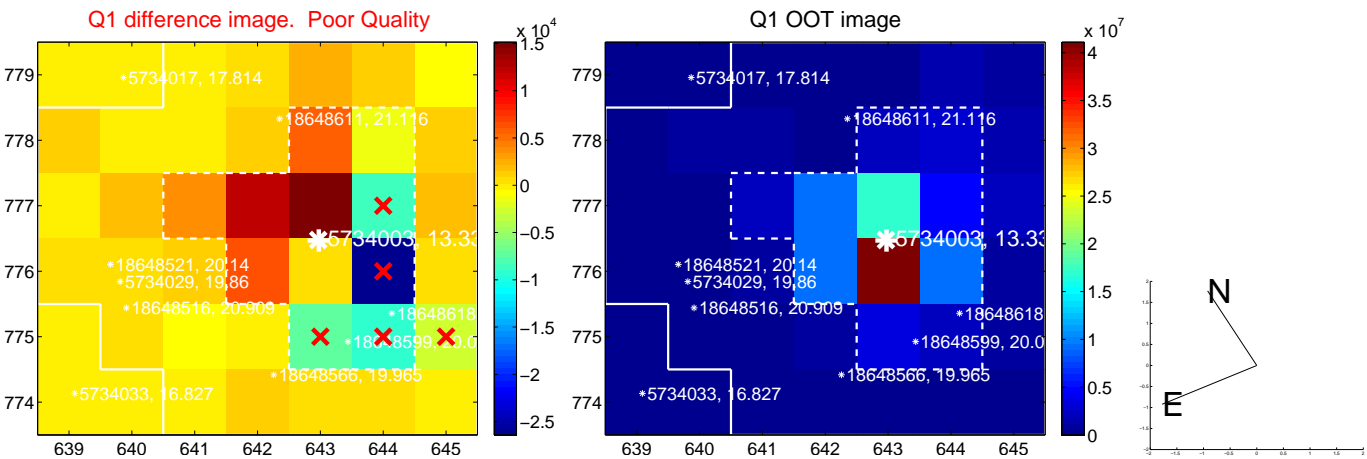
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.486 ± 0.608	2.44	-1.457 ± 0.594	0.292 ± 0.599
PRF-fit source offset from KIC position	1.760 ± 0.593	2.97	-1.563 ± 0.578	0.809 ± 0.621
photometric centroid source offset	1.32 ± 0.42	3.19	-0.45 ± 0.40	-1.25 ± 0.42

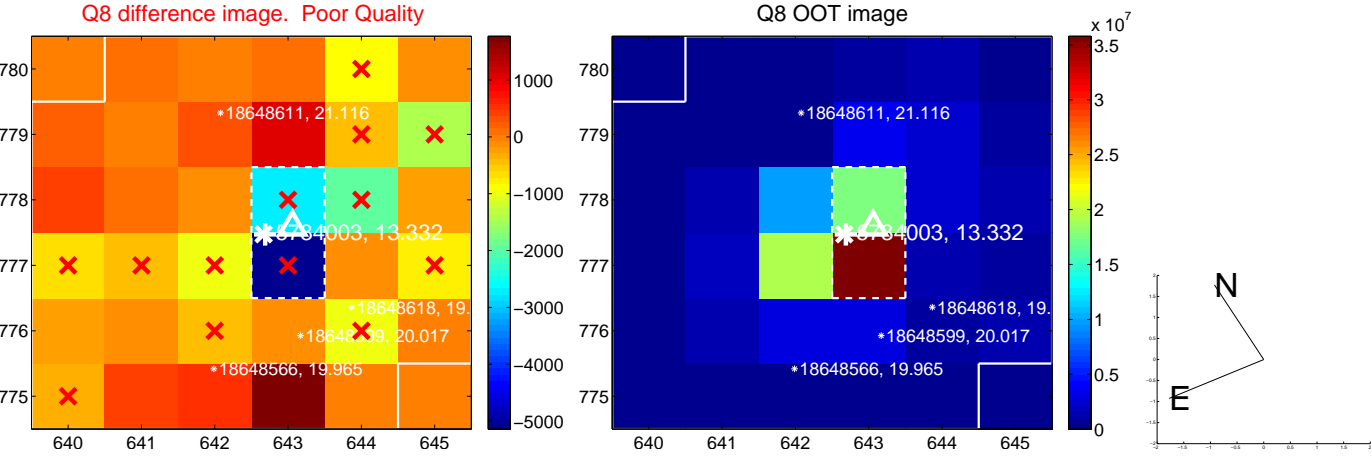
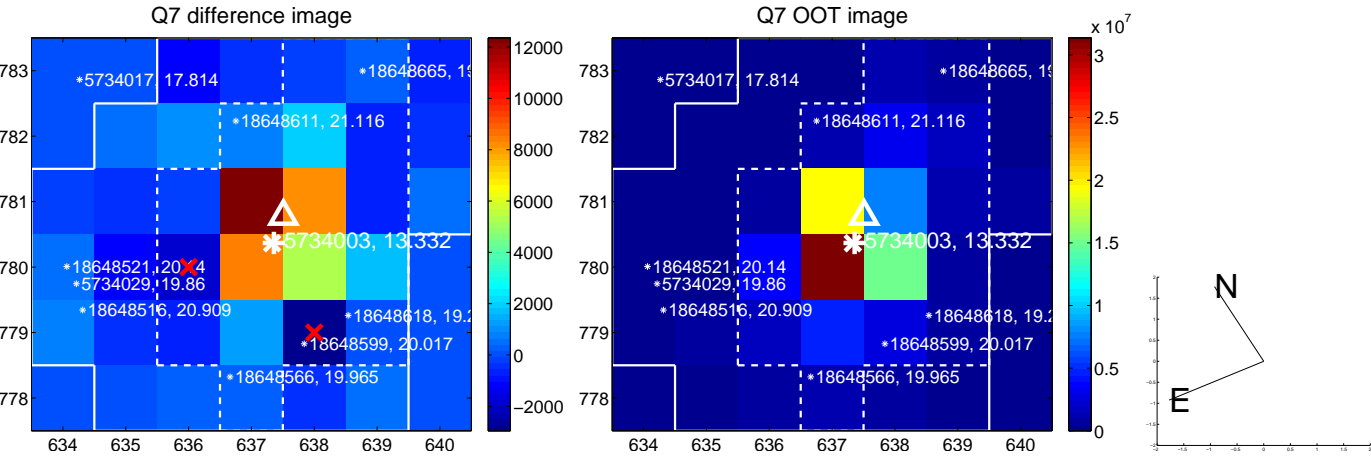
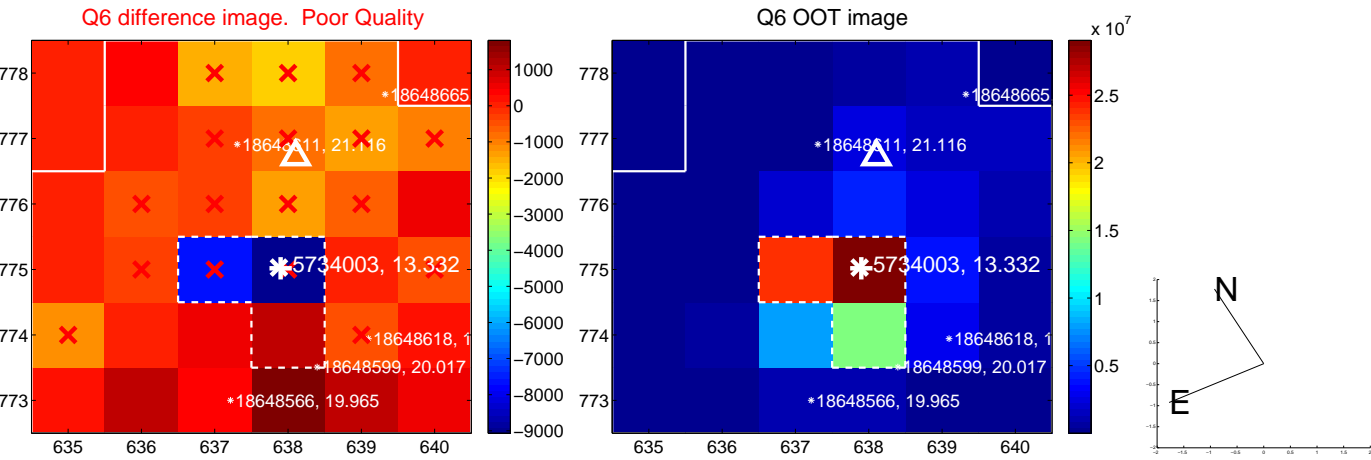
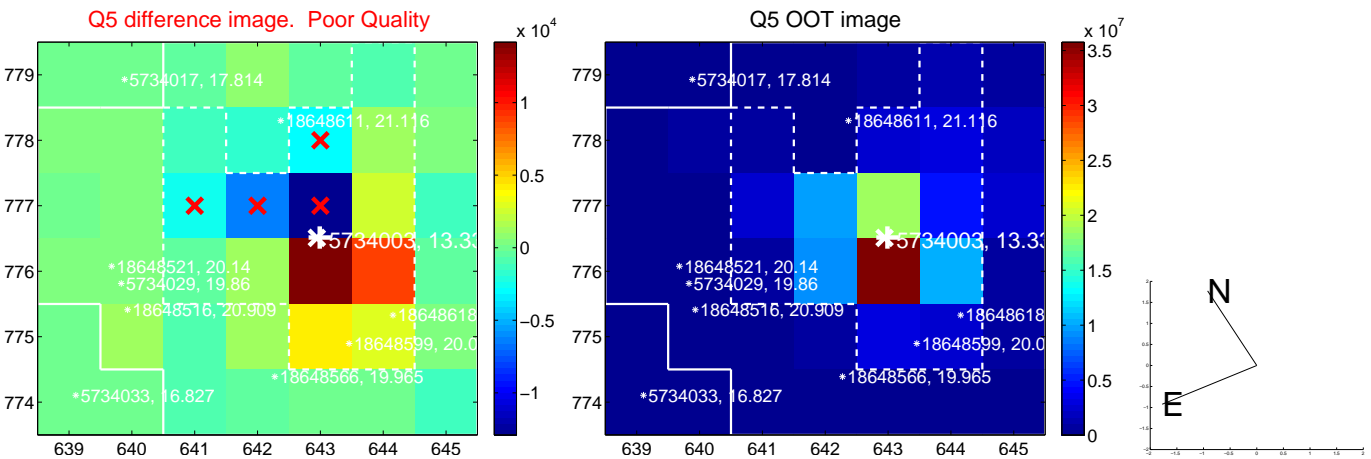


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

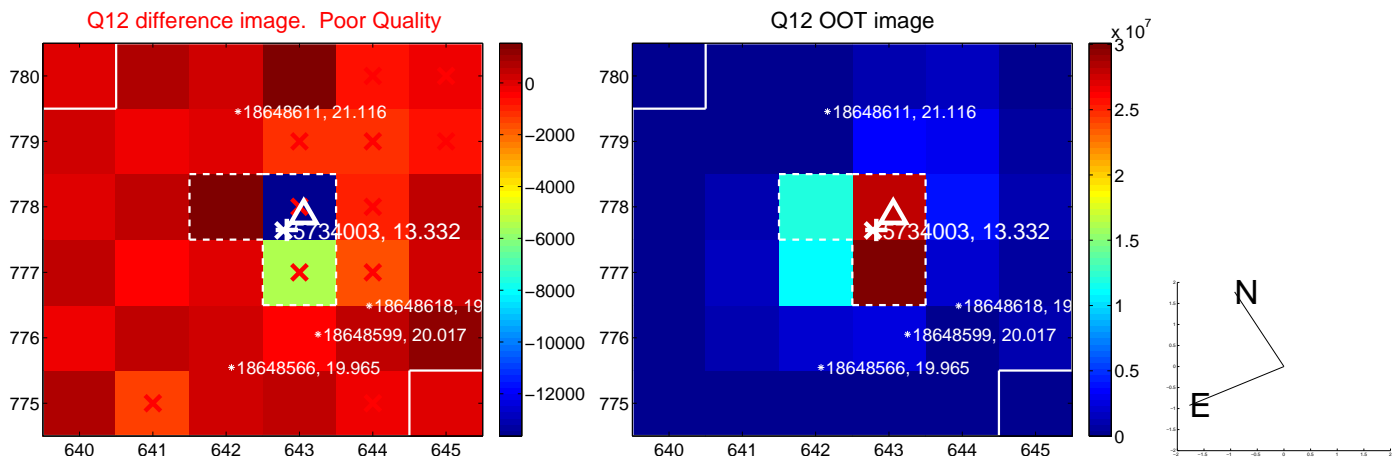
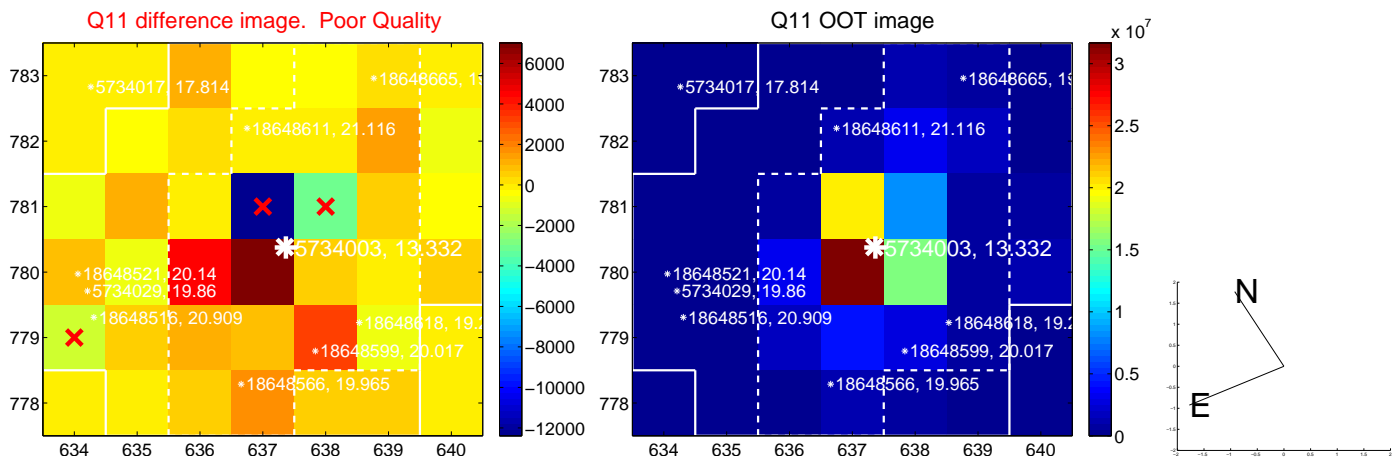
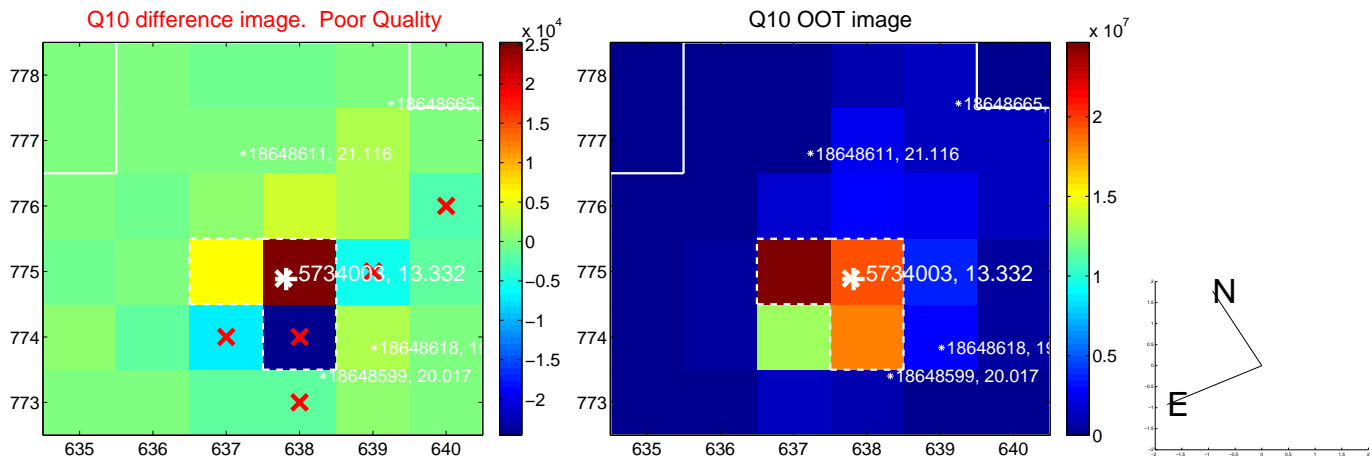
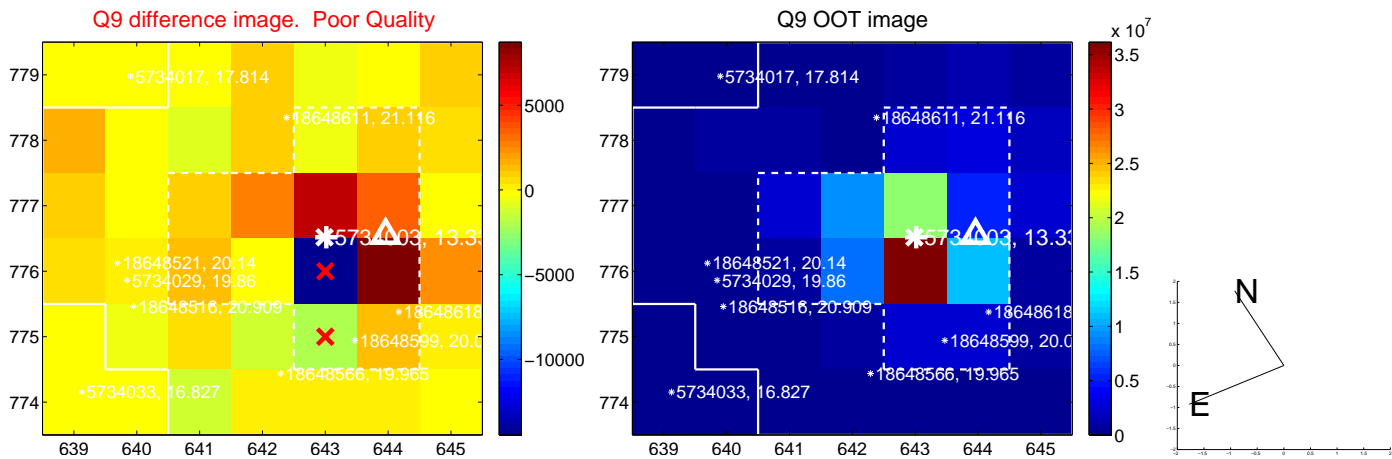
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



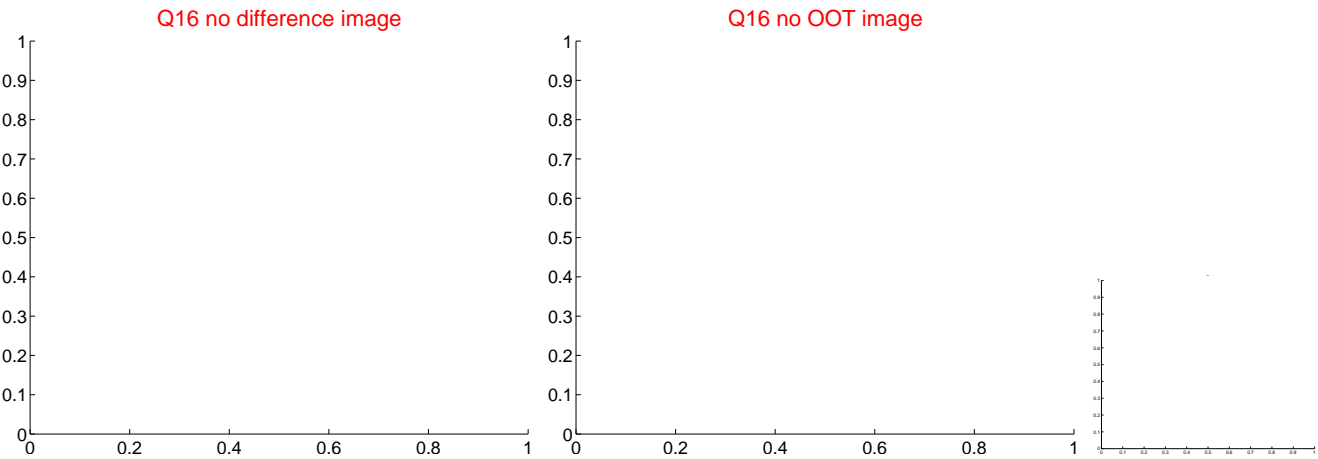
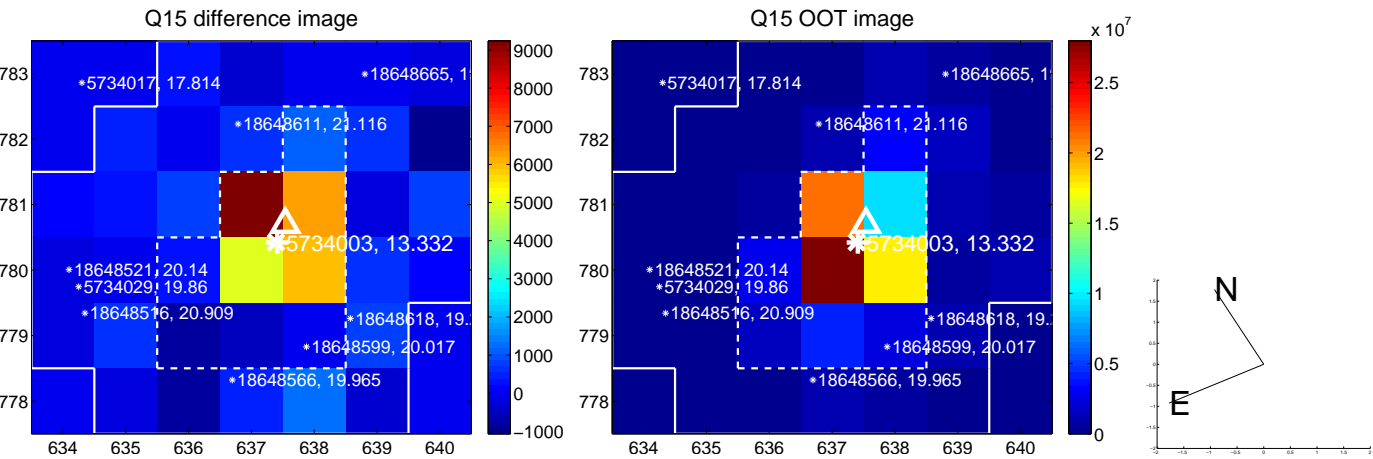
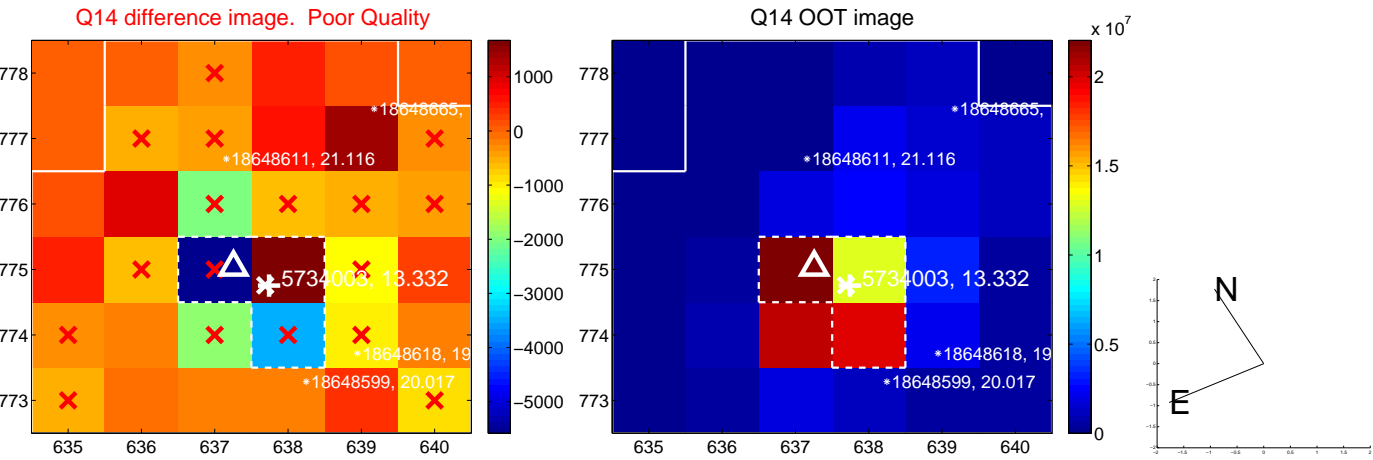
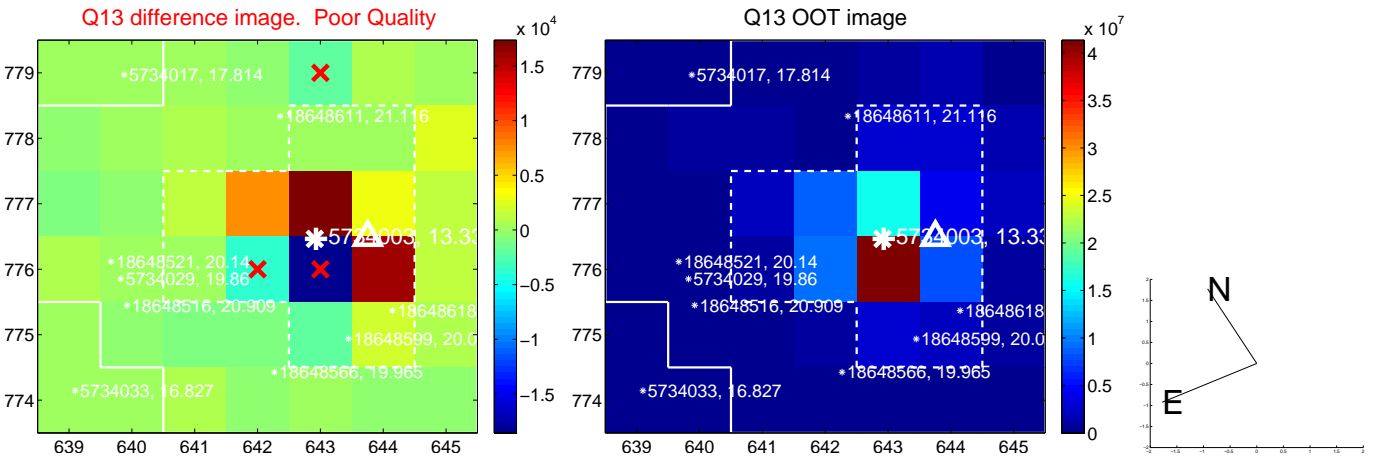
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



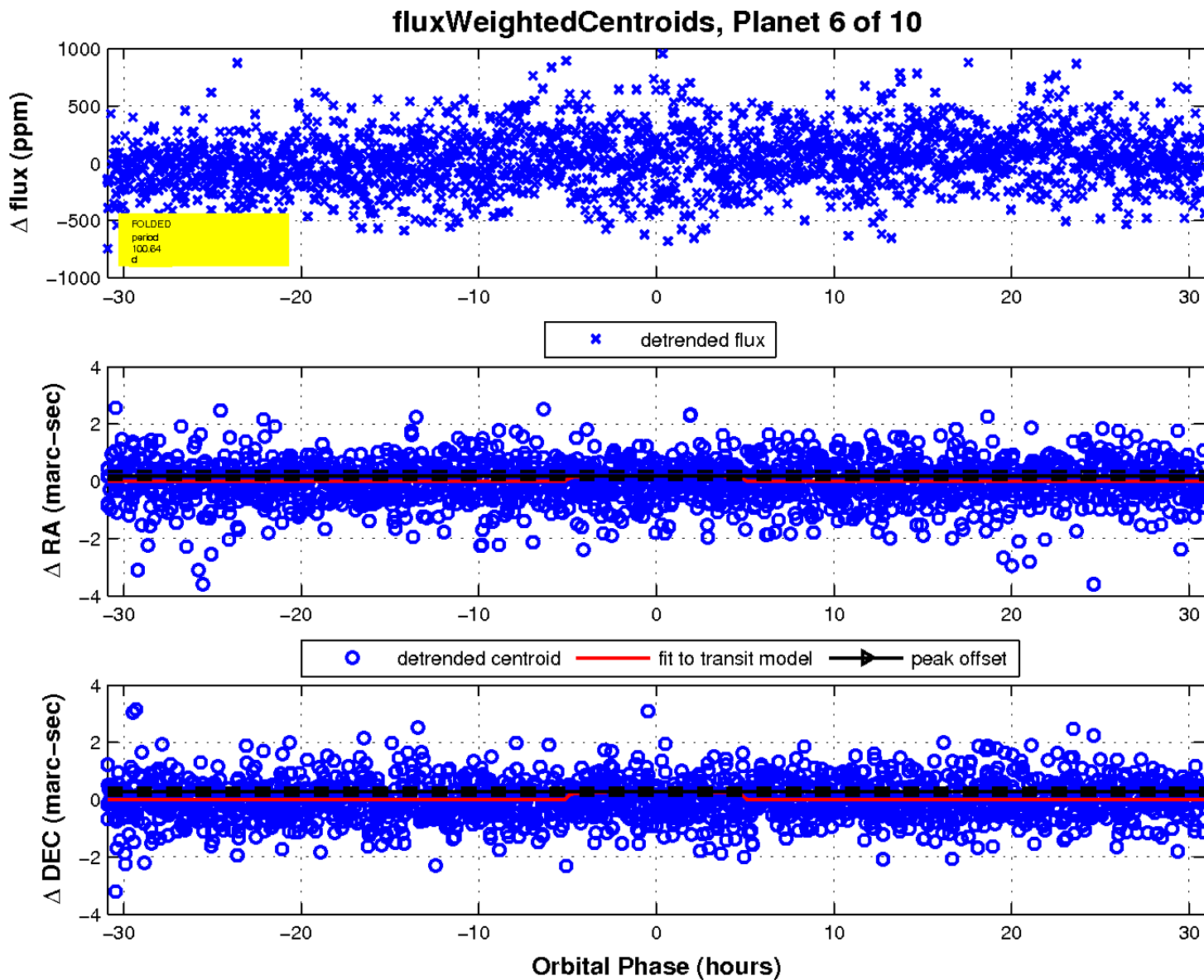
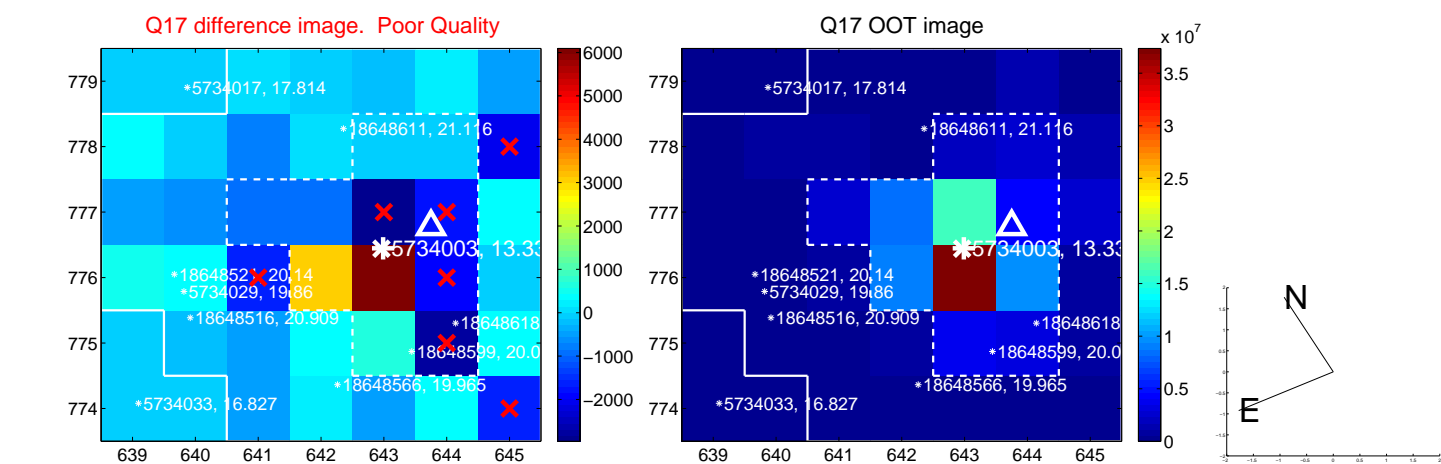
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

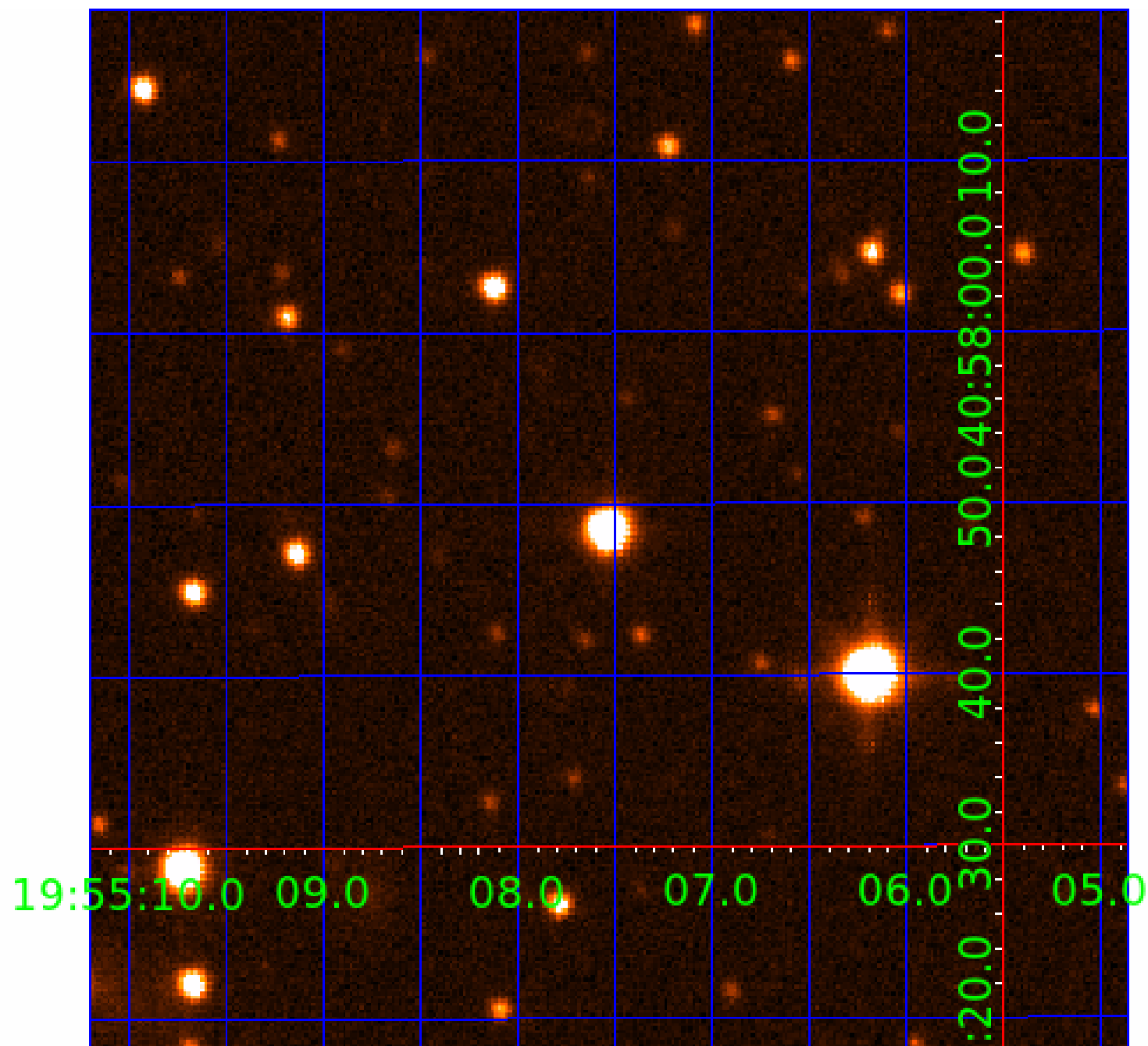


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

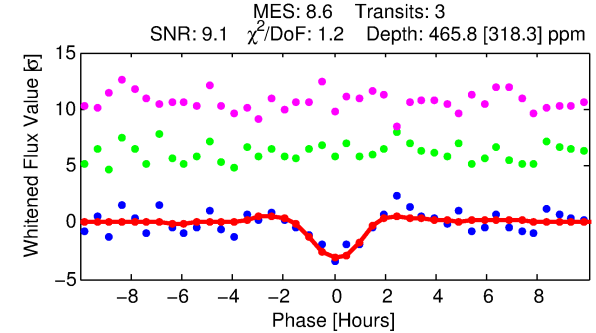
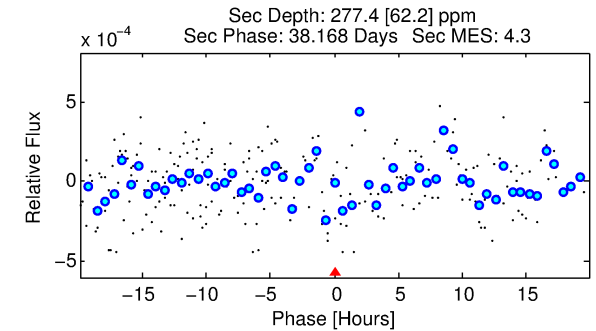
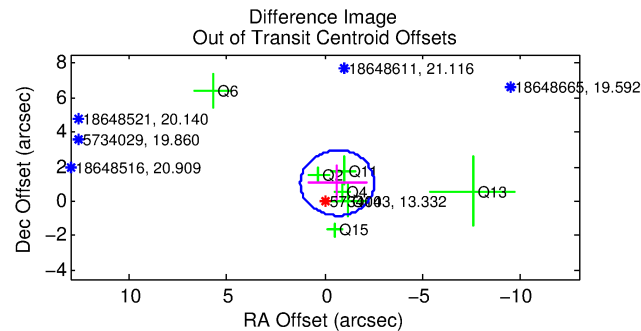
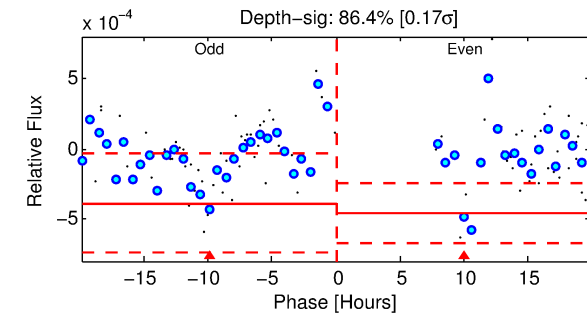
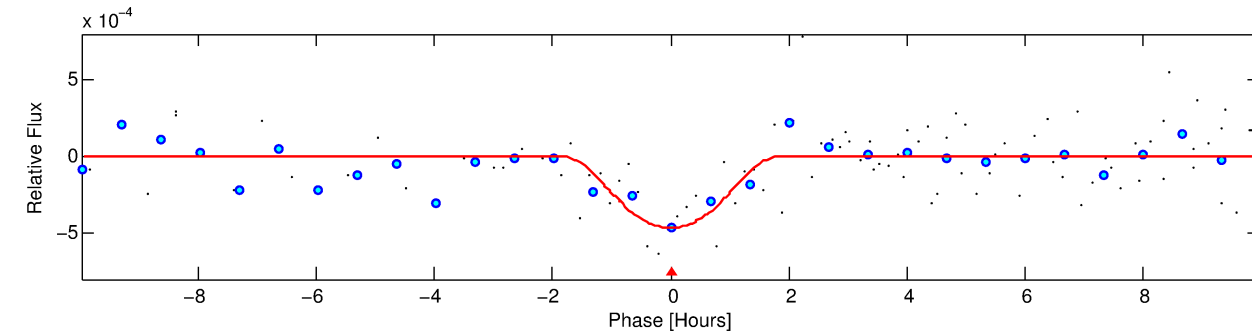
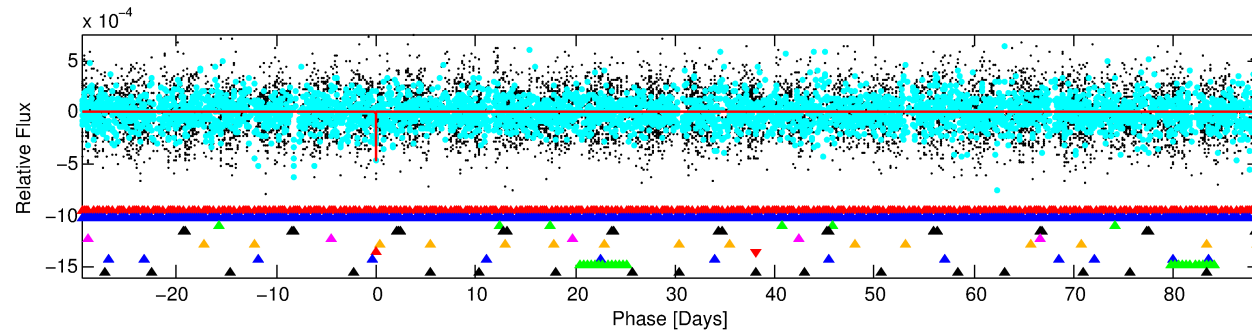
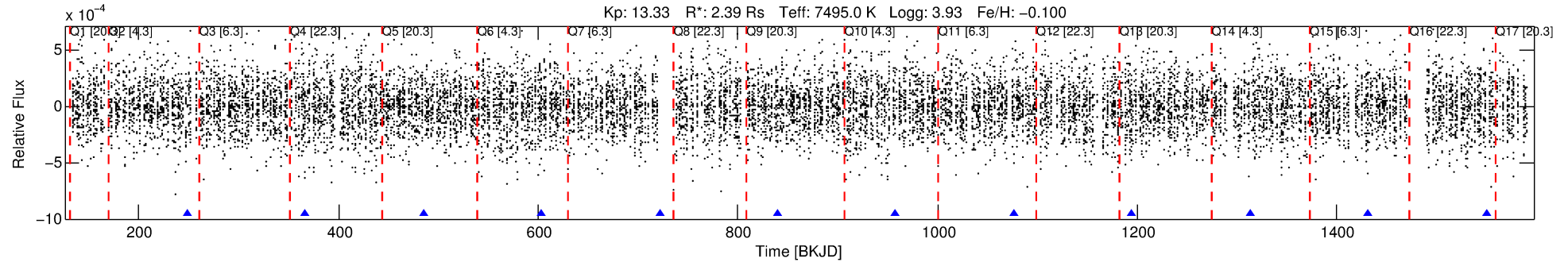
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-07

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 7 of 10 Period: 118.257 d



DV Fit Results:

Period = 118.25712 [0.00130] d
Epoch = 248.5746 [0.0091] BKJD
Rp/R* = 0.0375 [0.2787]
a/R* = 75.05 [146.56]
b = 1.00 [0.39]
Seff = 49.85 [26.23]
Teq = 678 [89] K
Rp = 9.77 [72.72] Re
a = 0.5689 [0.1784] AU
Ag = 517.66 [7704.66] [0.07σ]
Teffp = 4997 [18584] K [0.23σ]

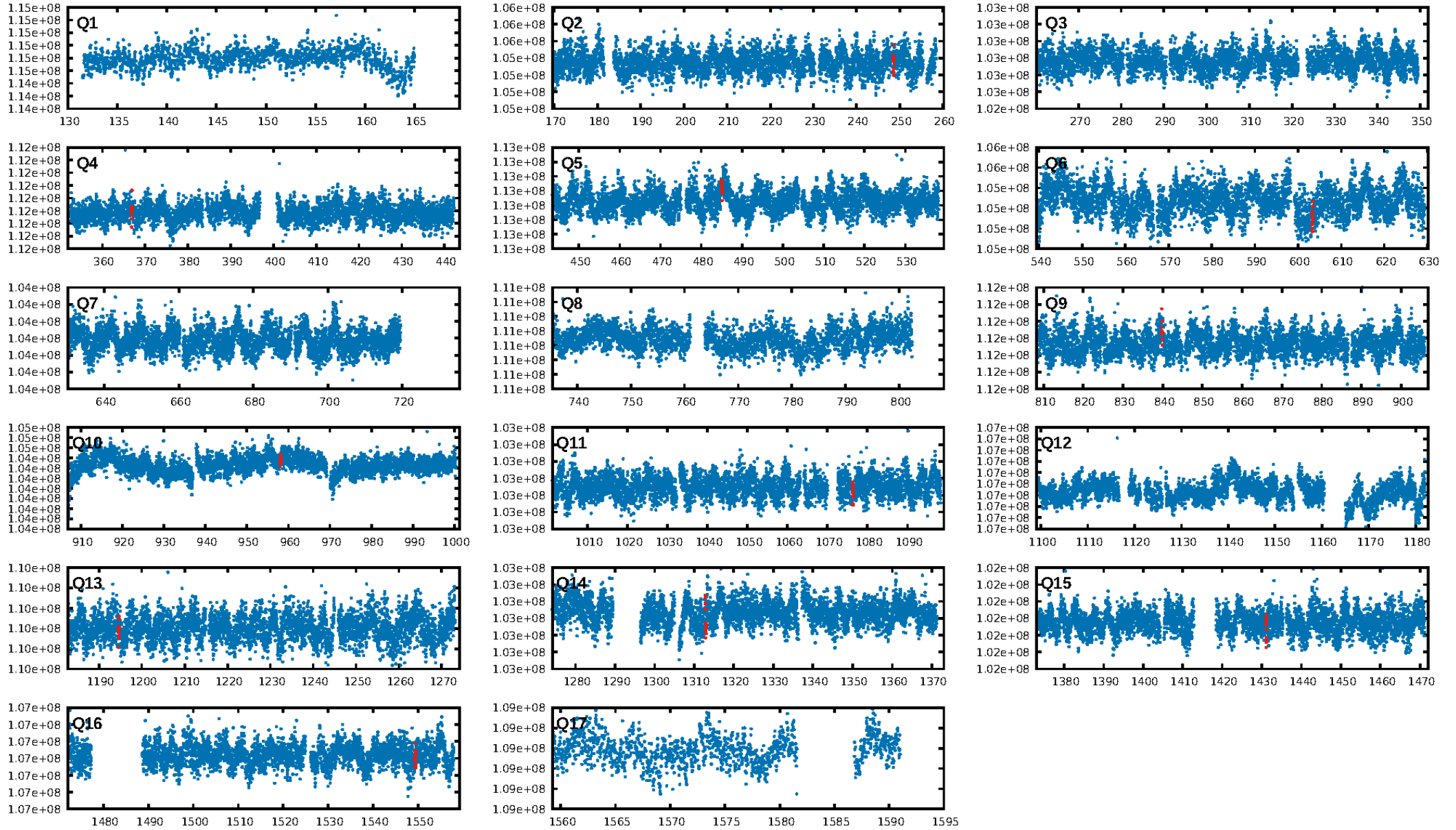
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [67.93σ]
LongPeriod-sig: 100.0% [763.31σ]
ModelChiSquare2-sig: 22.7%
ModelChiSquareGof-sig: 65.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.7231
Centroid-sig: 12.3%
Centroid-so: 1.430 arcsec [2.13σ]
OotOffset-rm: 1.237 arcsec [1.97σ]
KicOffset-rm: 1.196 arcsec [1.87σ]
OotOffset-st: 3/2/1/1 [7]
KicOffset-st: 3/2/1/1 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.40 [4/10]

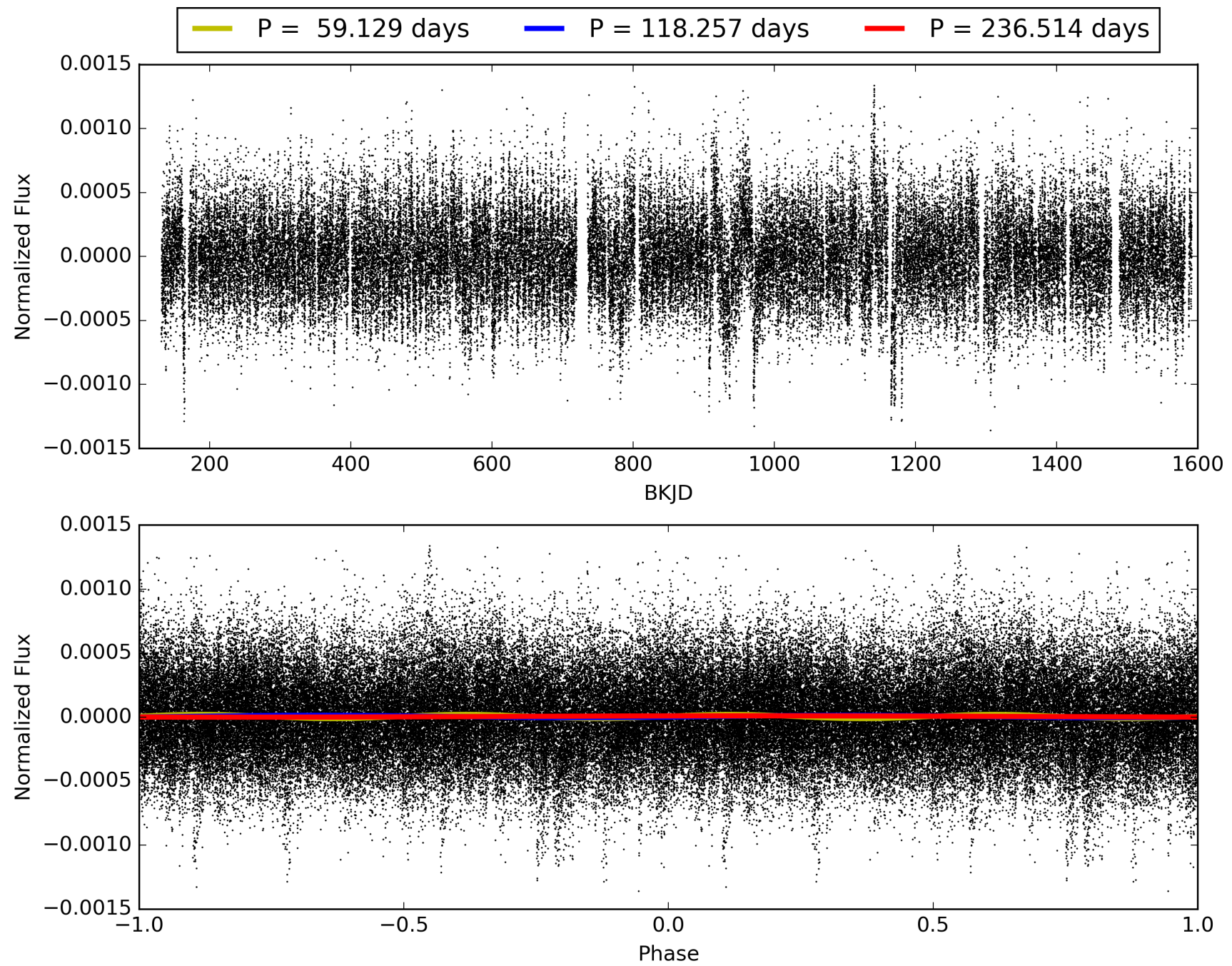
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:16 Z

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

TCE 005734003-07, PDC Light Curves

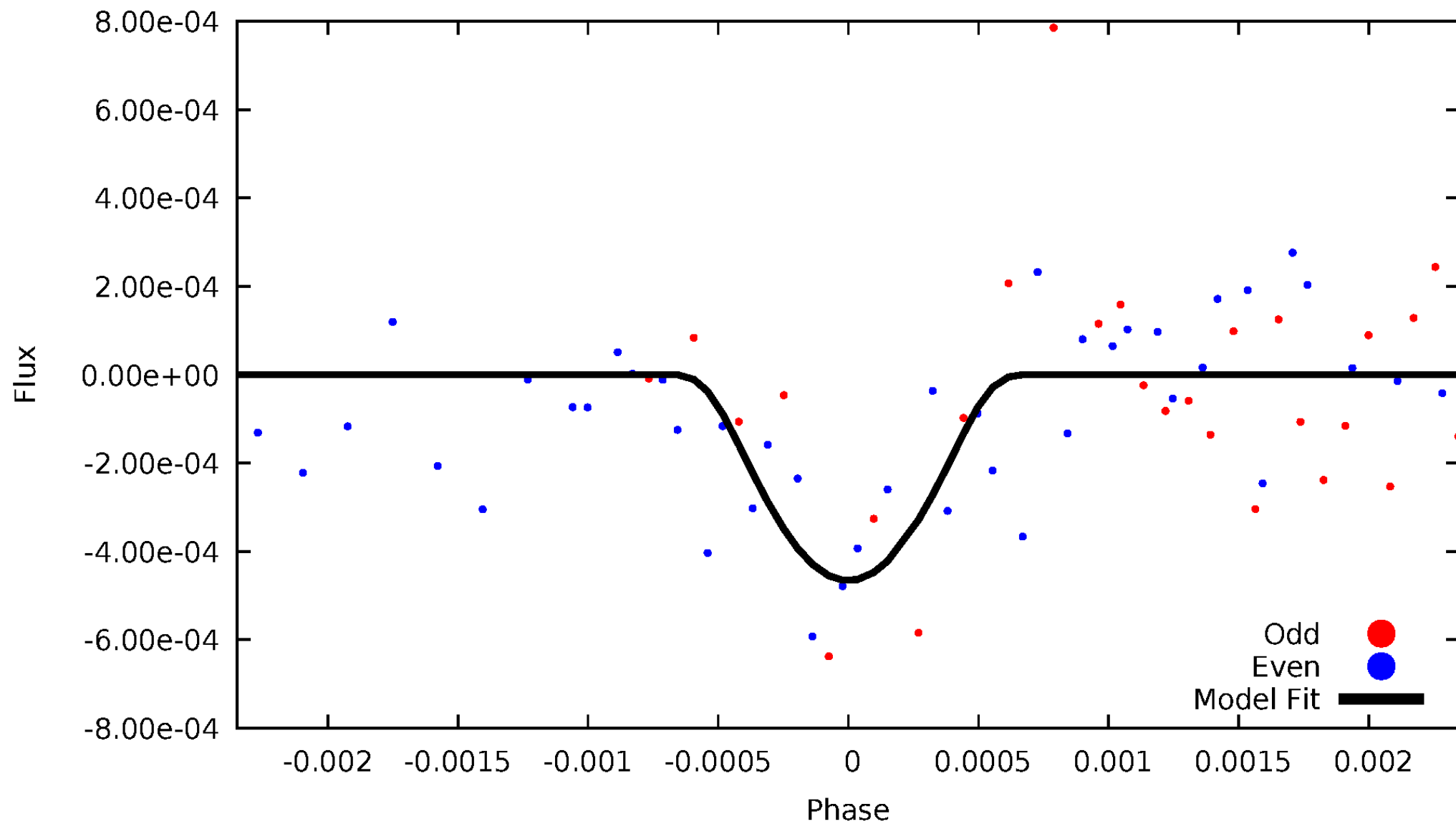


TCE 005734003-07



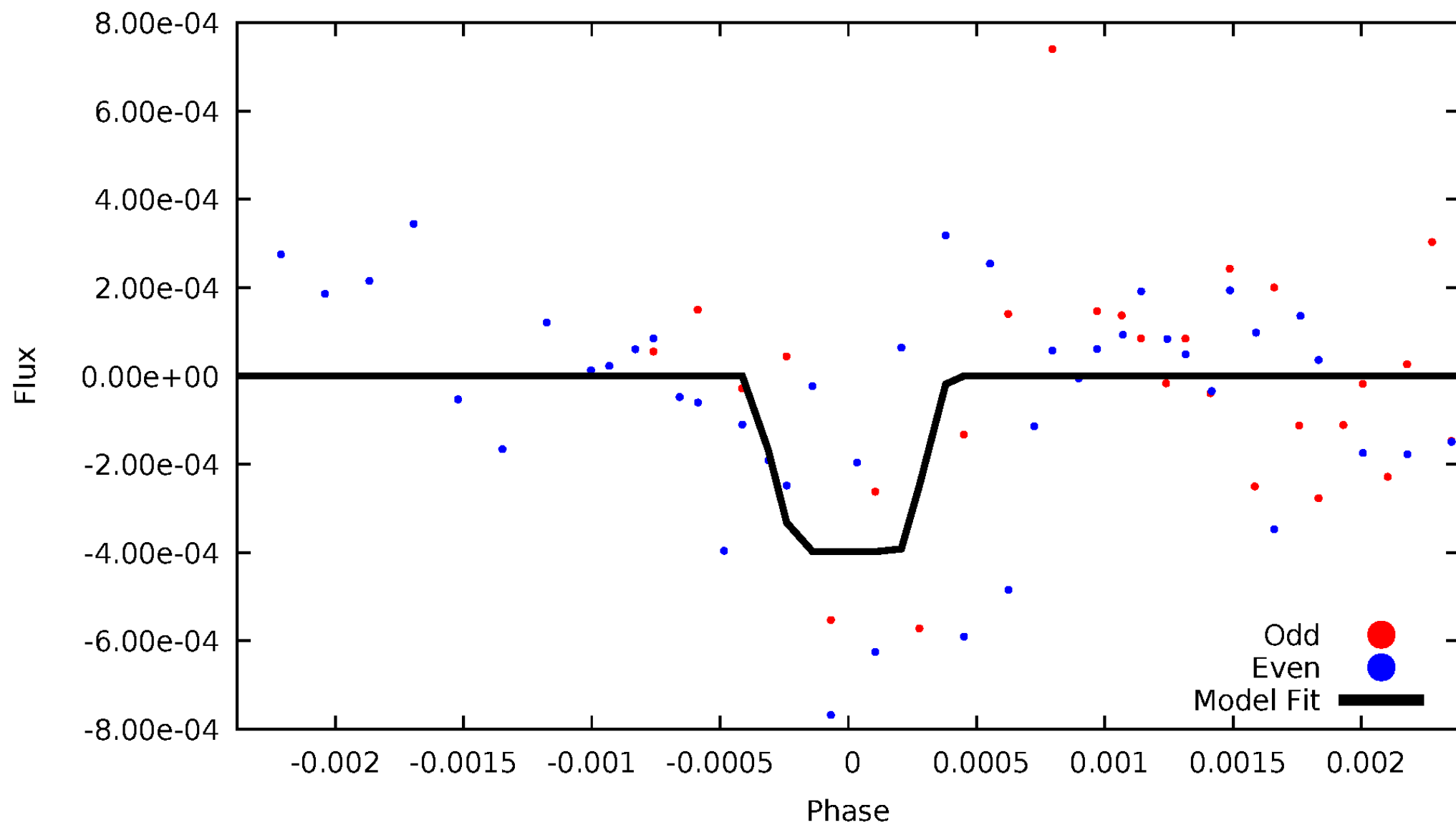
DV Odd/Even

TCE 005734003-07



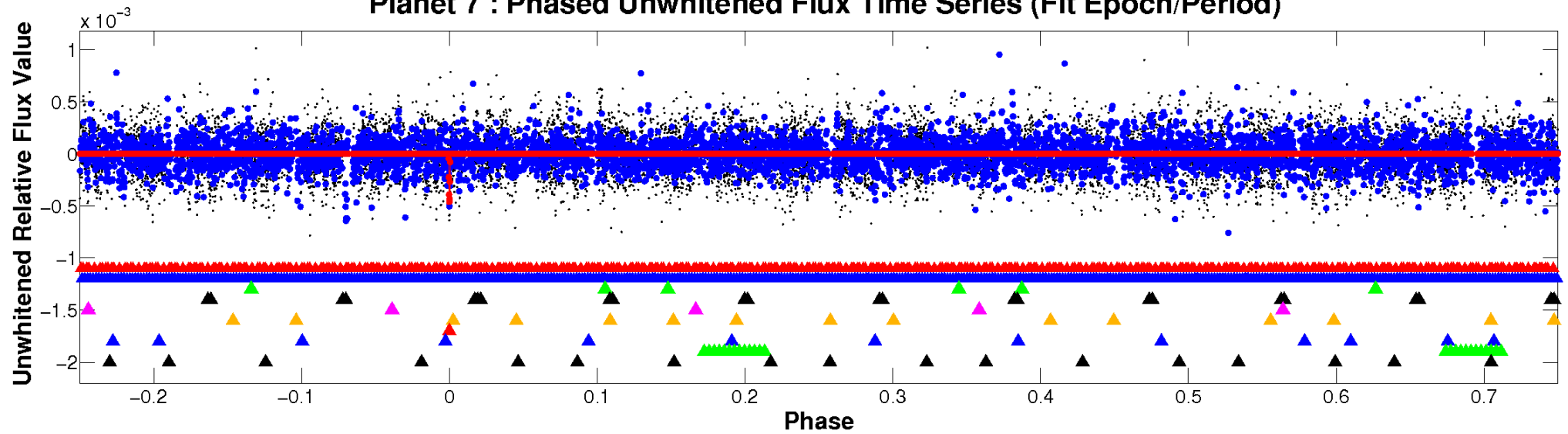
ALT Odd/Even

TCE 005734003-07

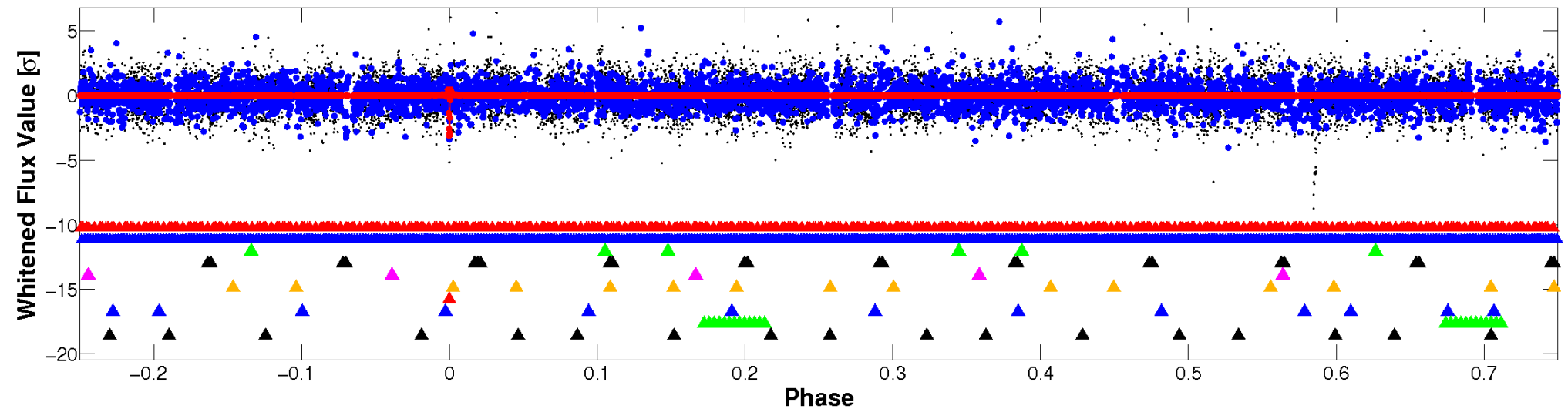


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

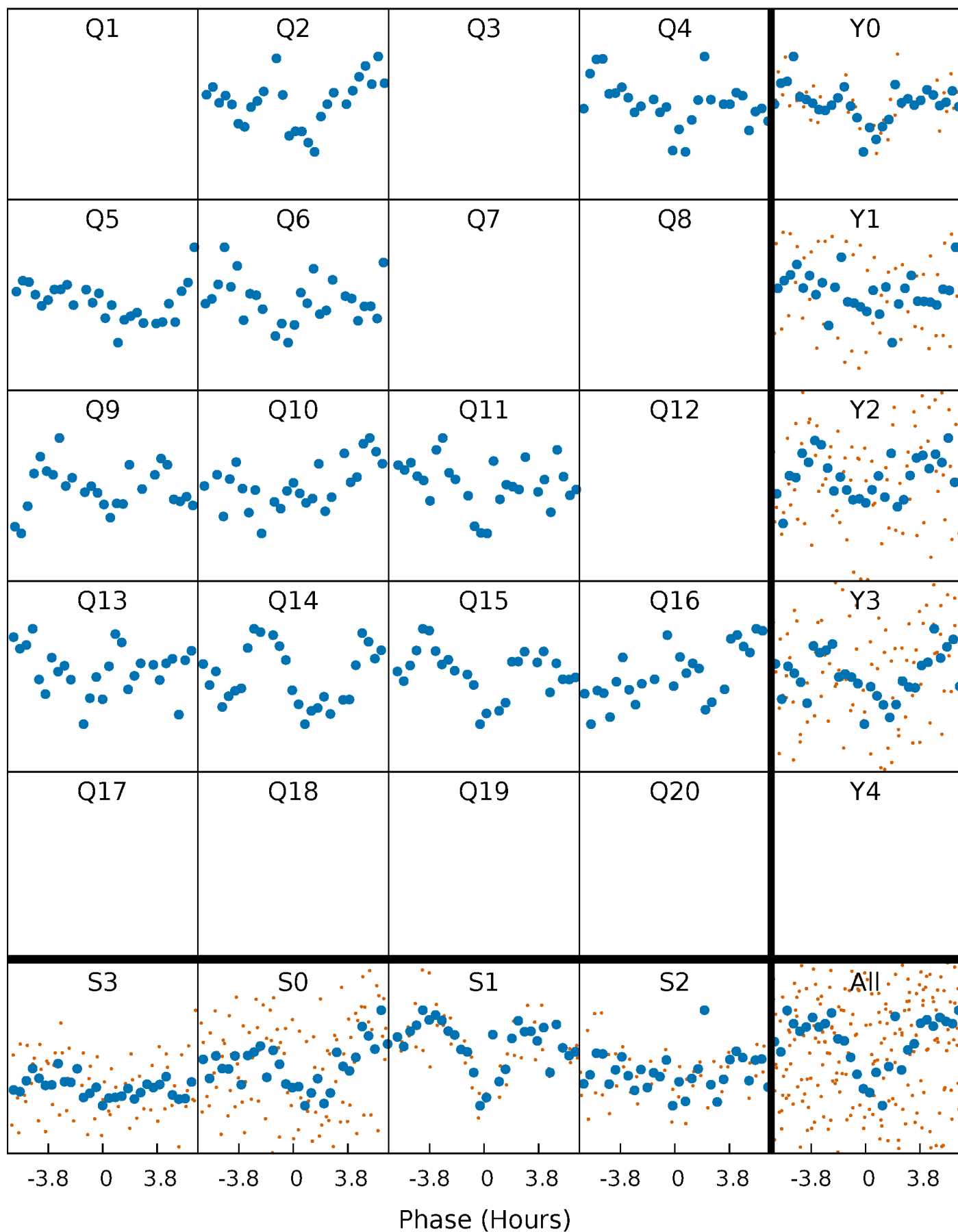


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



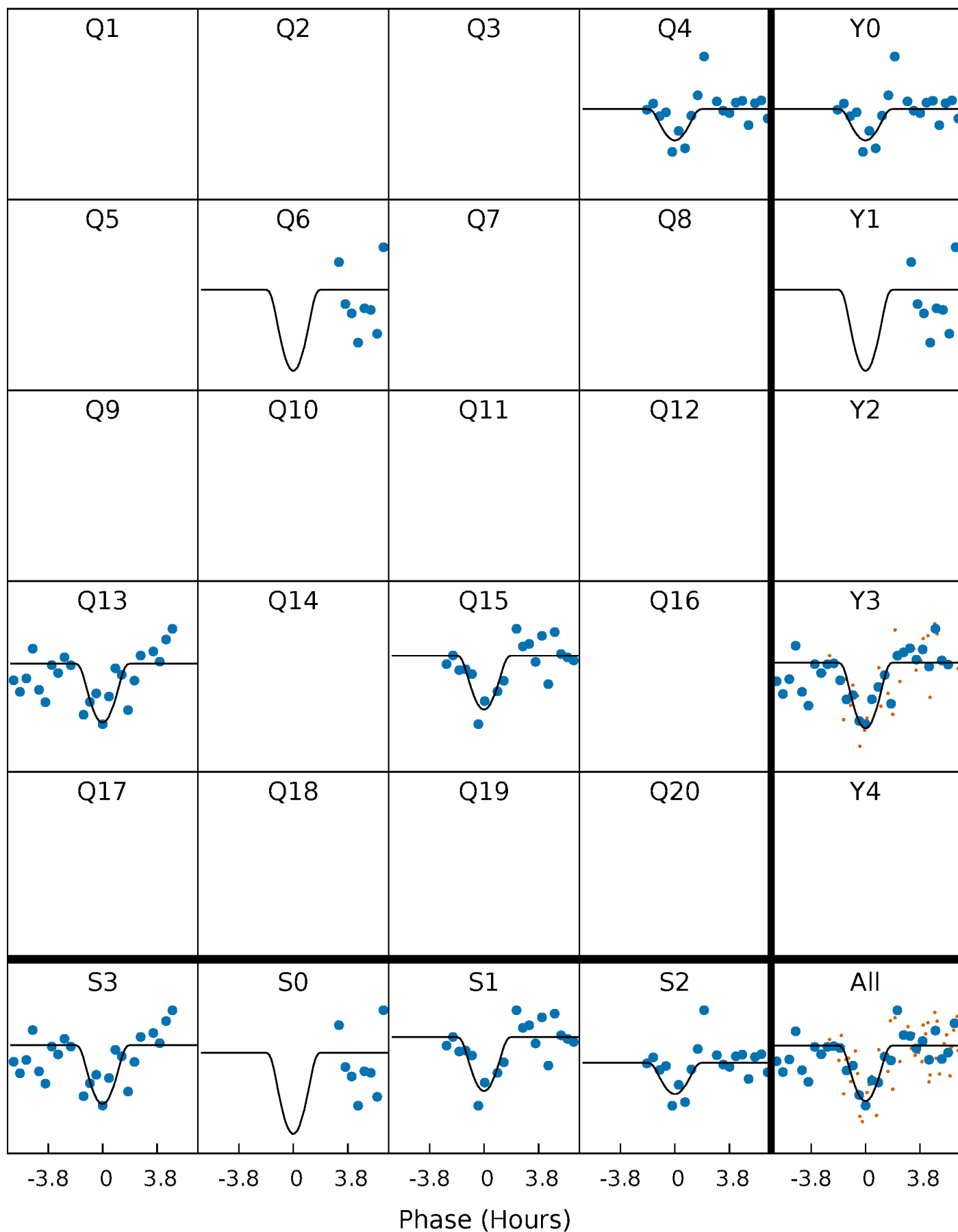
PDC Quarter-Phased Transit Curves

TCE 005734003-07 $P=118.257115$ Days $T_0=248.574597$ (BKJD)



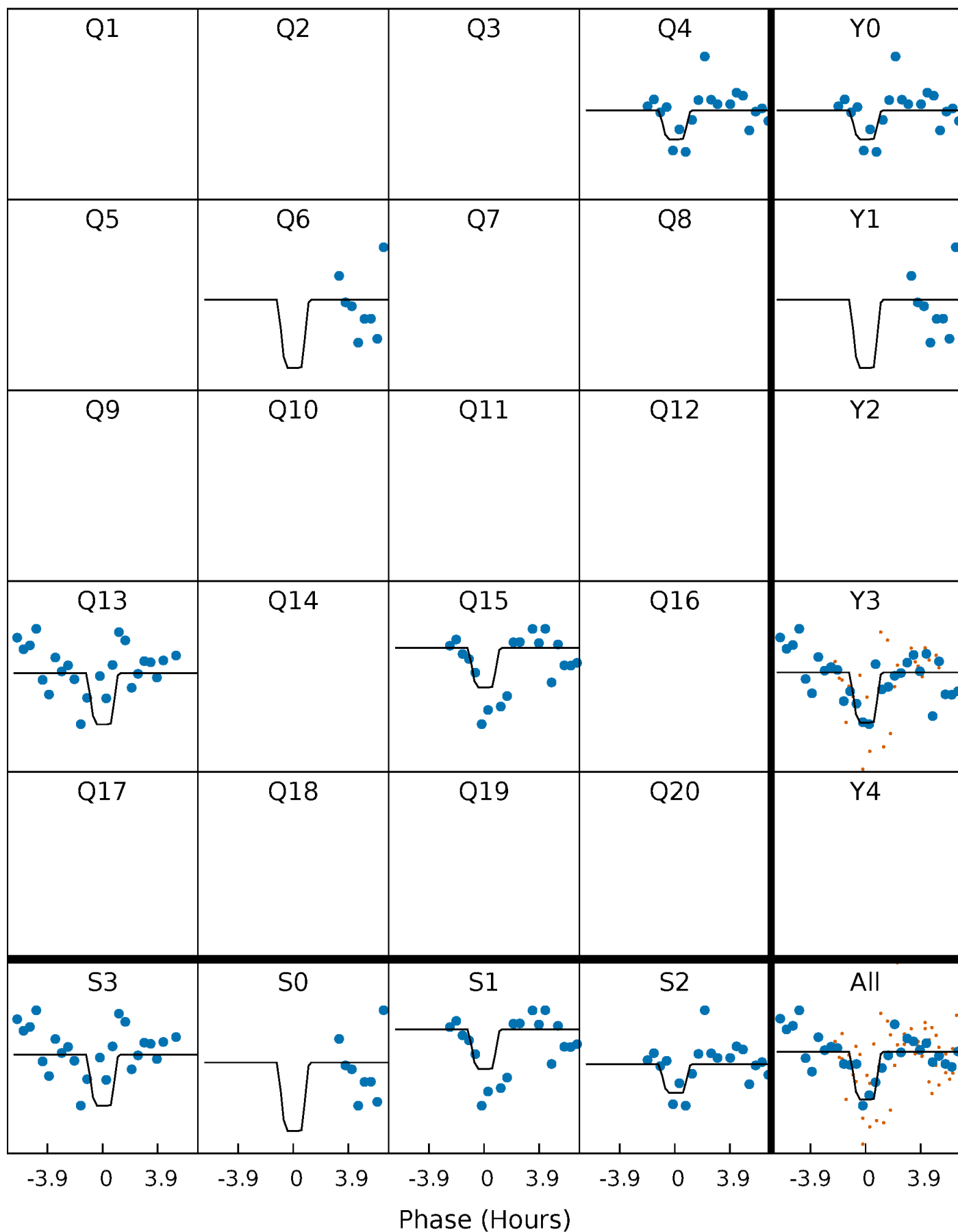
DV Quarter-Phased Transit Curves

TCE 005734003-07 $P=118.257115$ Days $T_0=248.574597$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

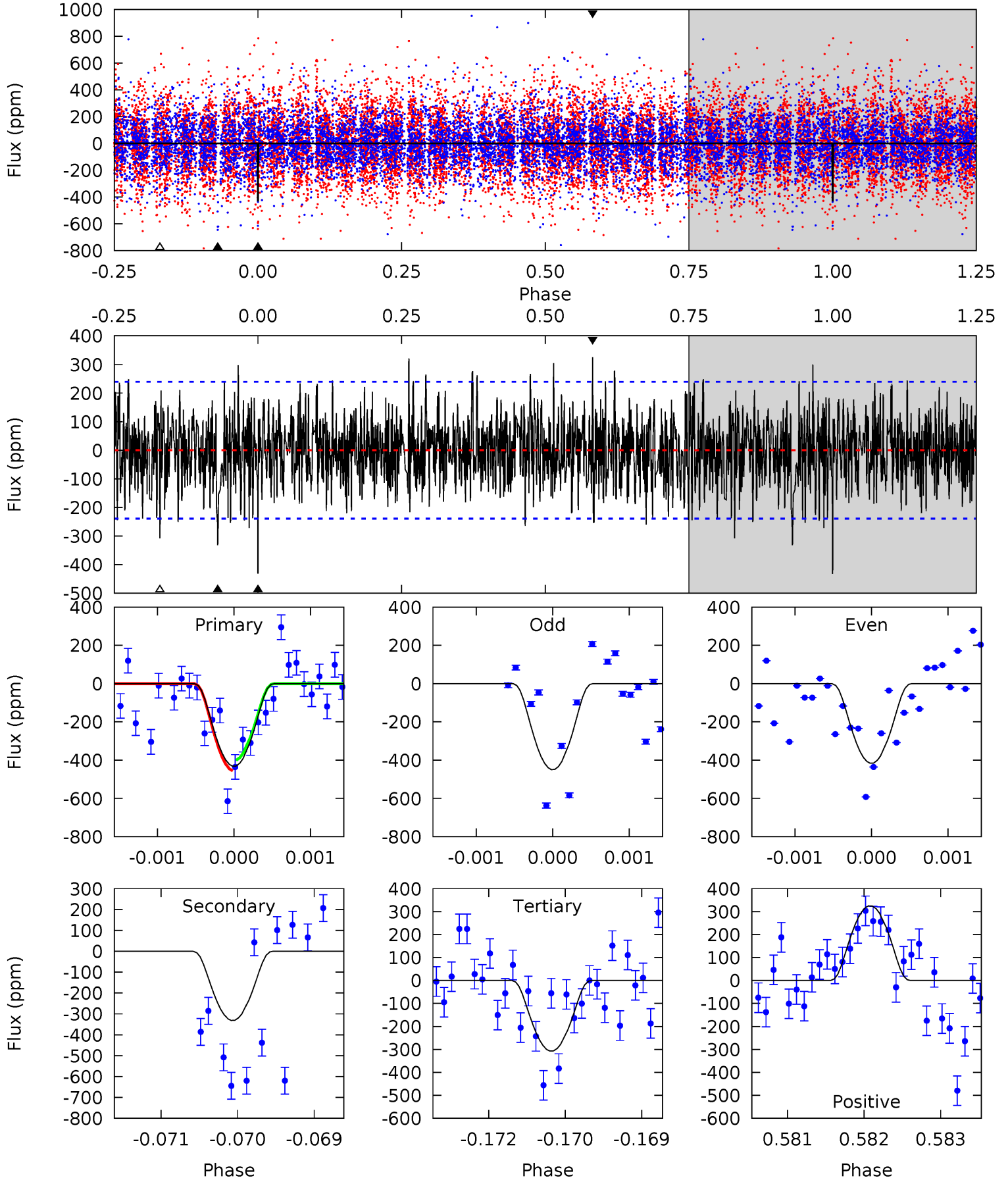
TCE 005734003-07 P=118.256297 Days $T_0=248.574569$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-07, P = 118.257115 Days, E = 130.317482 Days

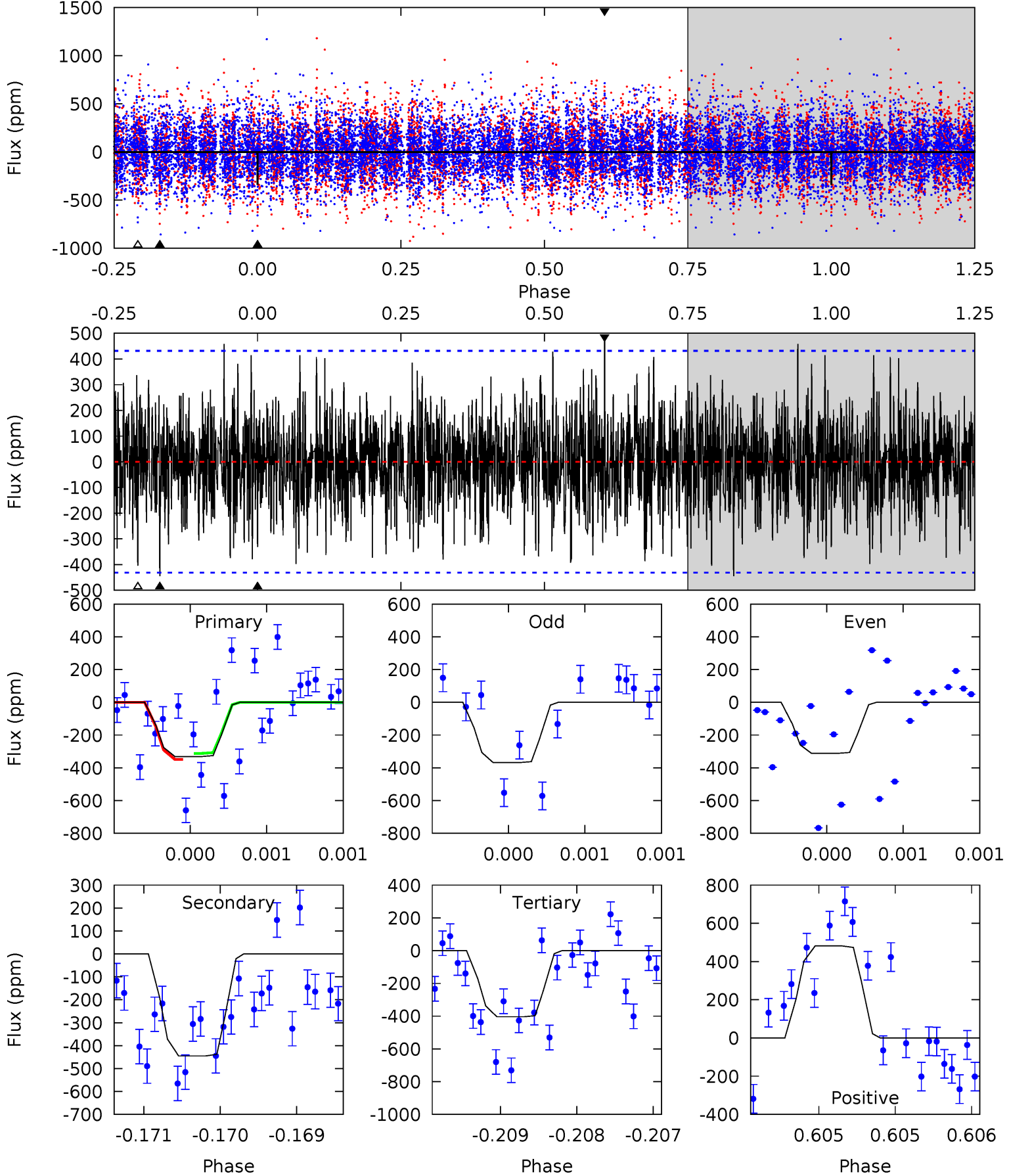
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.77	7.50	6.95	7.36	5.41	3.22	2.07	2.82	2.41	0.54	0.14	0.36	0.95	0.43	0.62



Alt Model-Shift Uniqueness Test

005734003-07, P = 118.256297 Days, E = 130.318272 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.24	5.69	5.17	6.16	5.52	3.39	1.70	-0.93	-1.93	0.53	-0.47	0.34	0.93	0.52	0.23



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-331 ± 44	$47.93^{+52.15}_{-33.68}$	922^{+62}_{-82}	2888^{+1414}_{-490}	25^{+264}_{-19}
Alt.	-445 ± 78	$49.03^{+56.52}_{-34.98}$	925^{+66}_{-89}	3020^{+1544}_{-533}	32^{+371}_{-25}

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

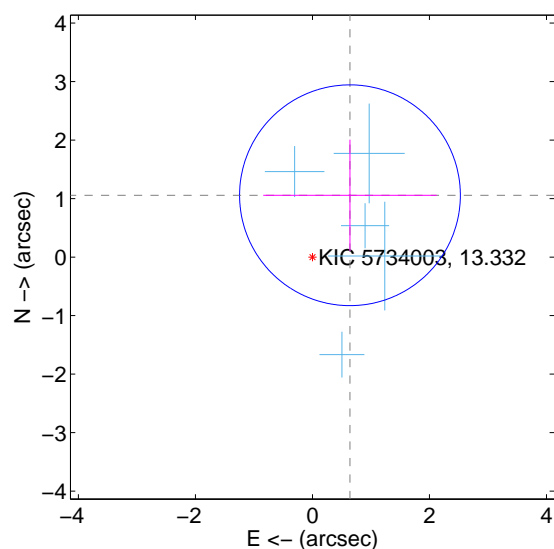
Supplemental centroid analysis for 005734003-07. Kepler magnitude: 13.33. Transit SNR 9.11

There are 5 quarters with good PRF difference image offsets

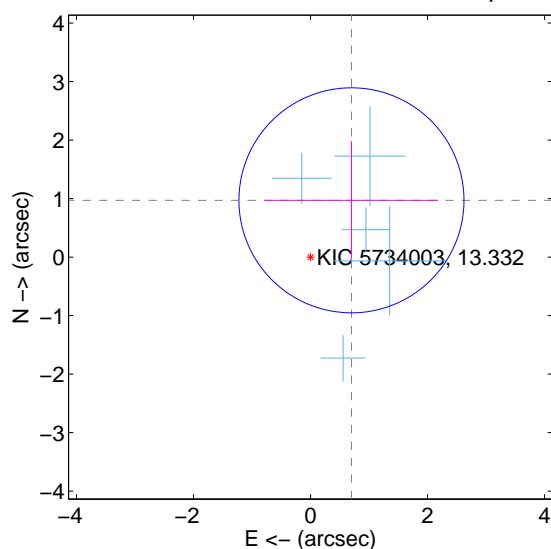
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.237 ± 0.629	1.97	-0.641 ± 1.482	1.057 ± 0.950
PRF-fit source offset from KIC position	1.196 ± 0.641	1.87	-0.700 ± 1.479	0.970 ± 1.013
photometric centroid source offset	1.43 ± 0.67	2.13	1.26 ± 0.68	-0.68 ± 0.66

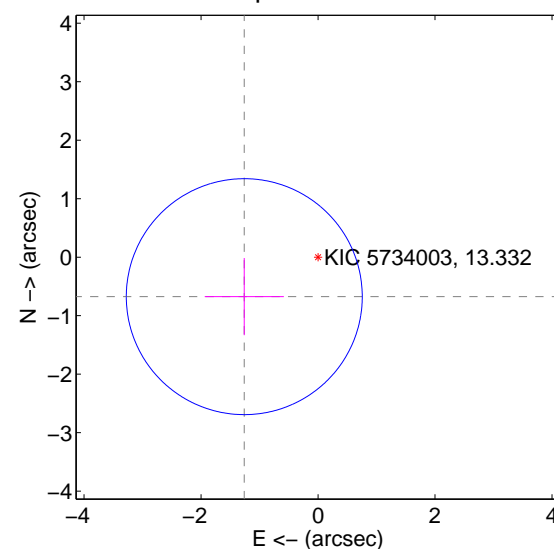
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

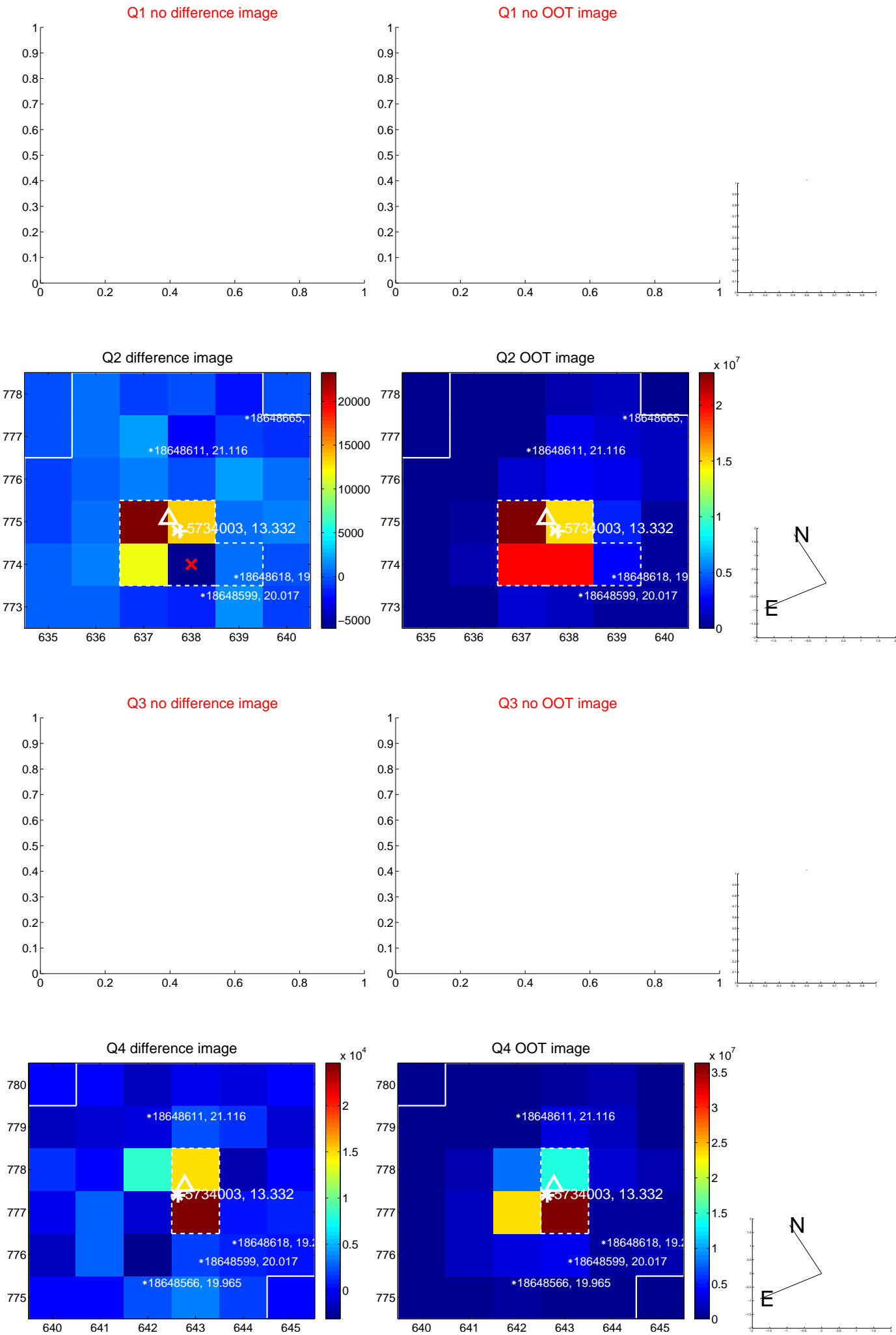


offset from photometric centroids

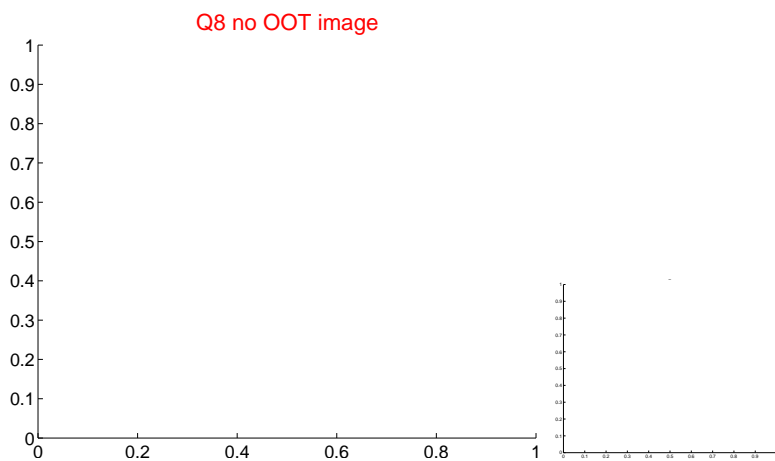
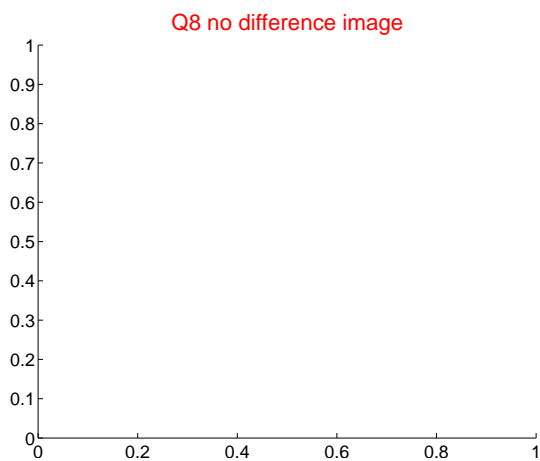
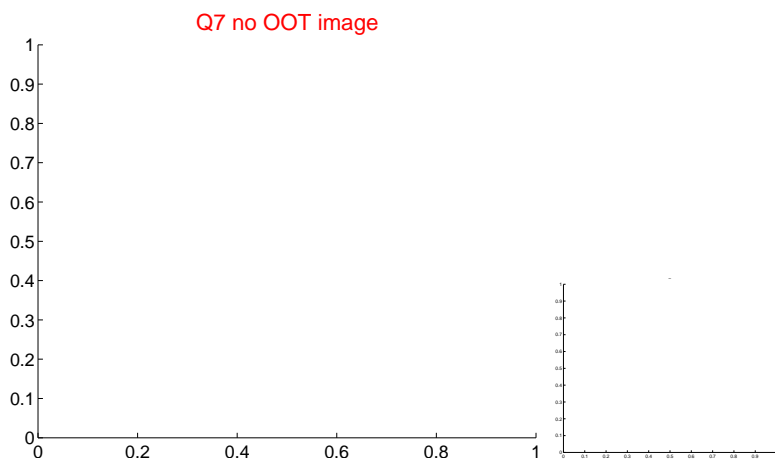
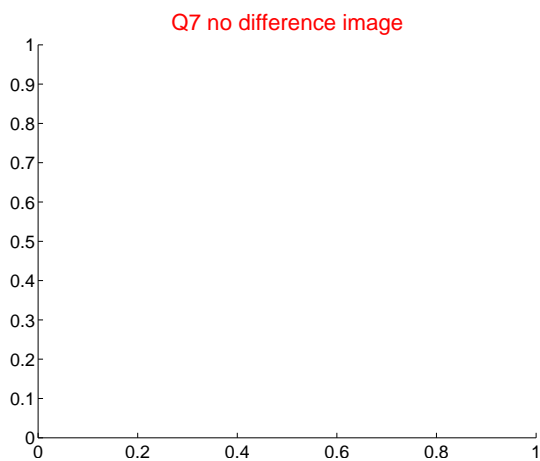
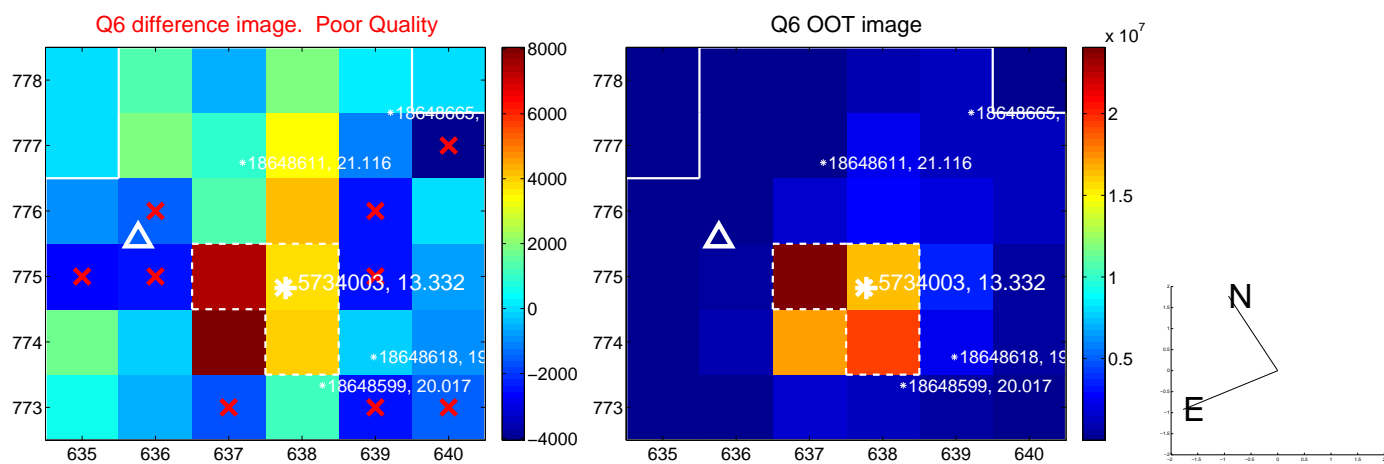
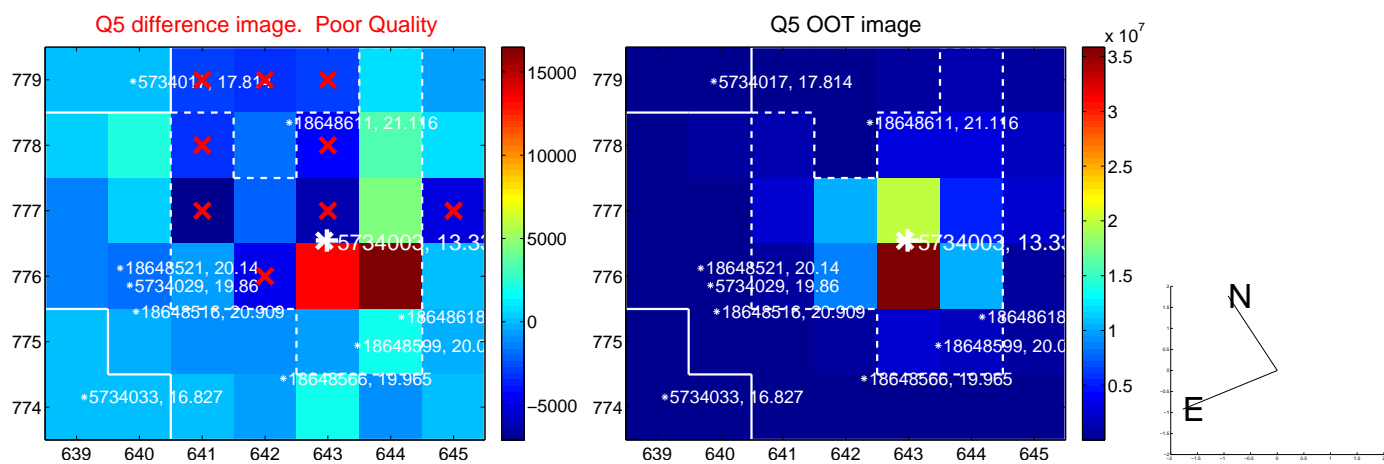


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

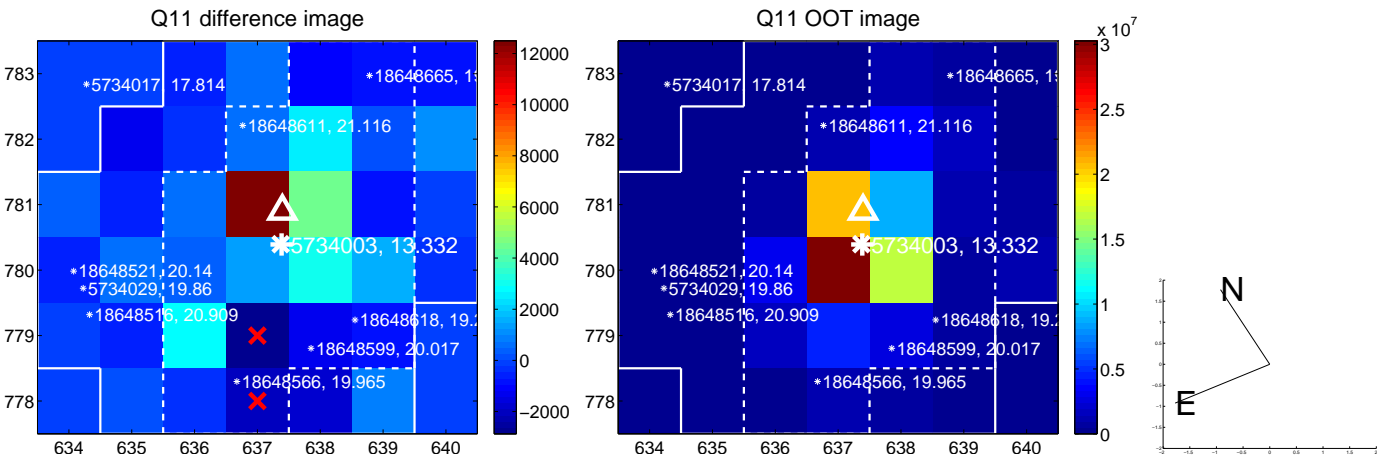
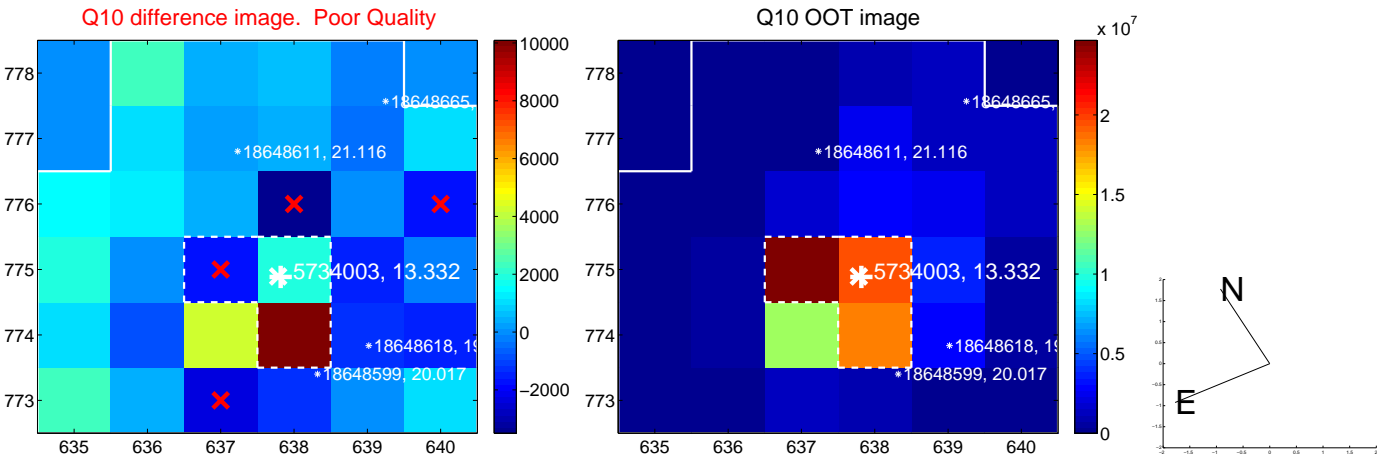
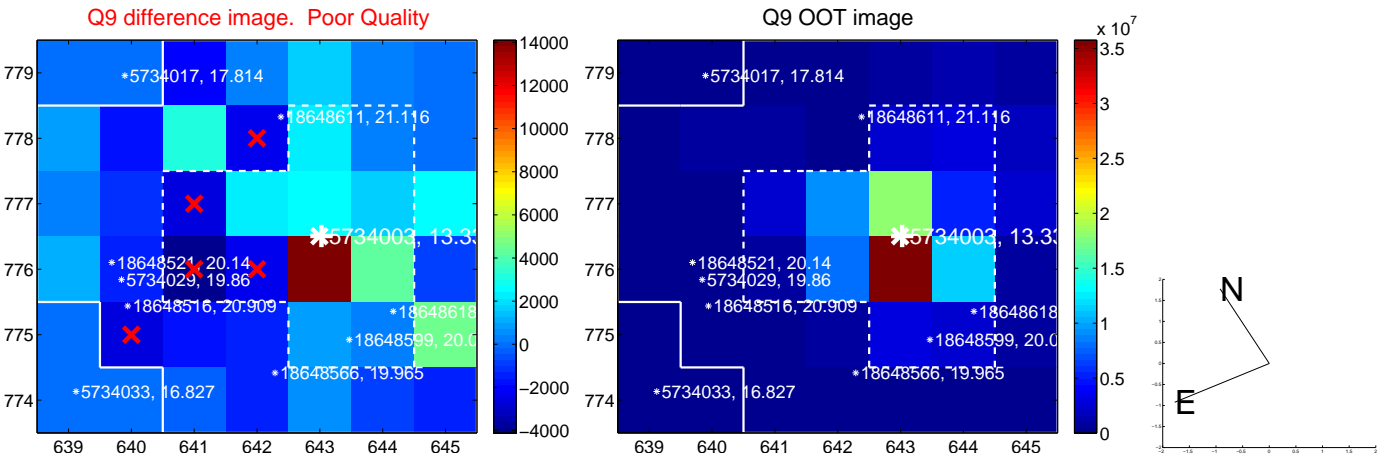
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



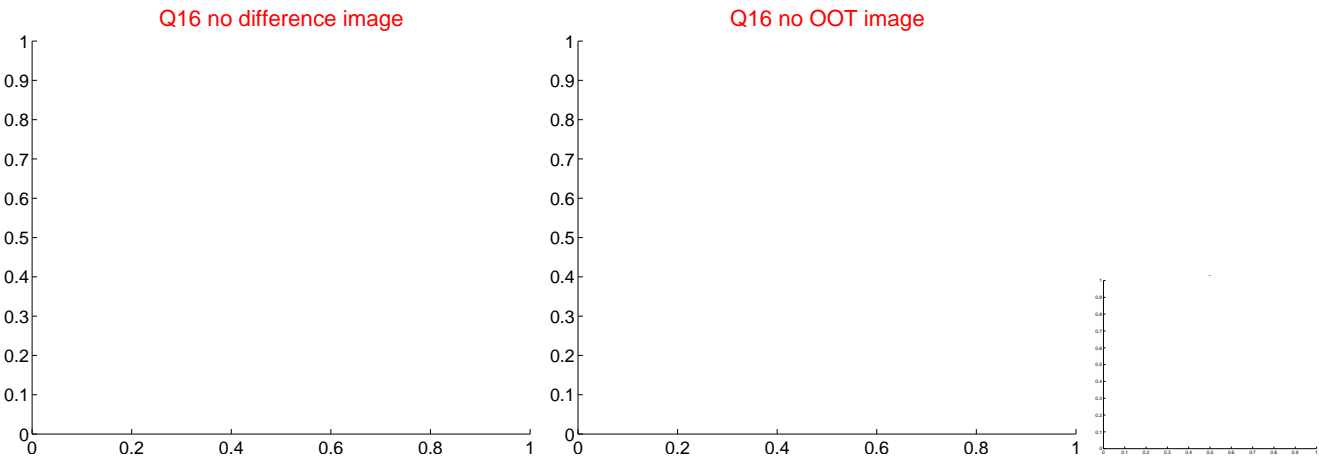
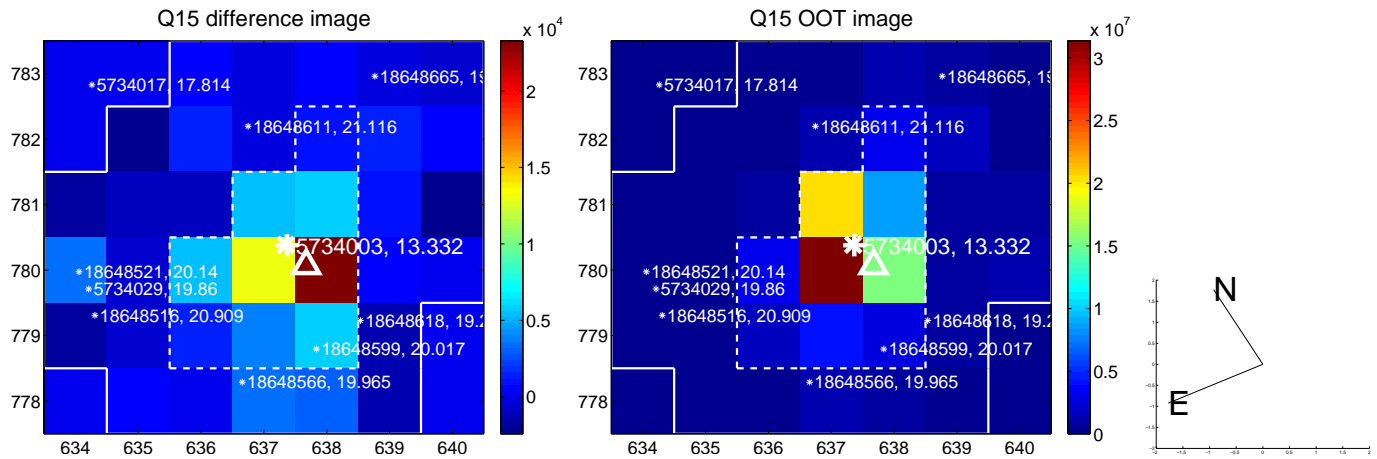
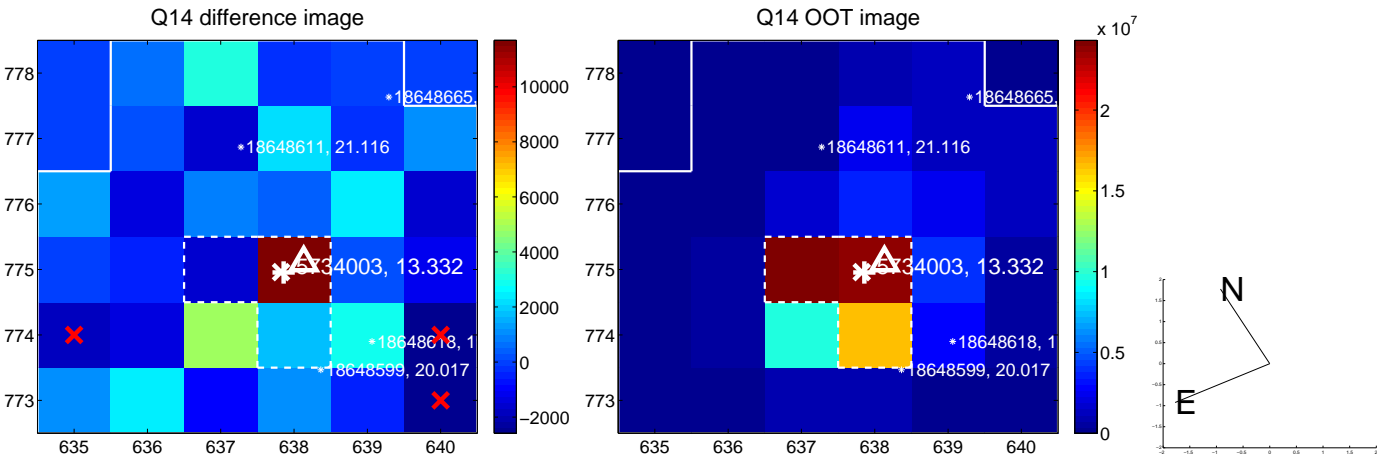
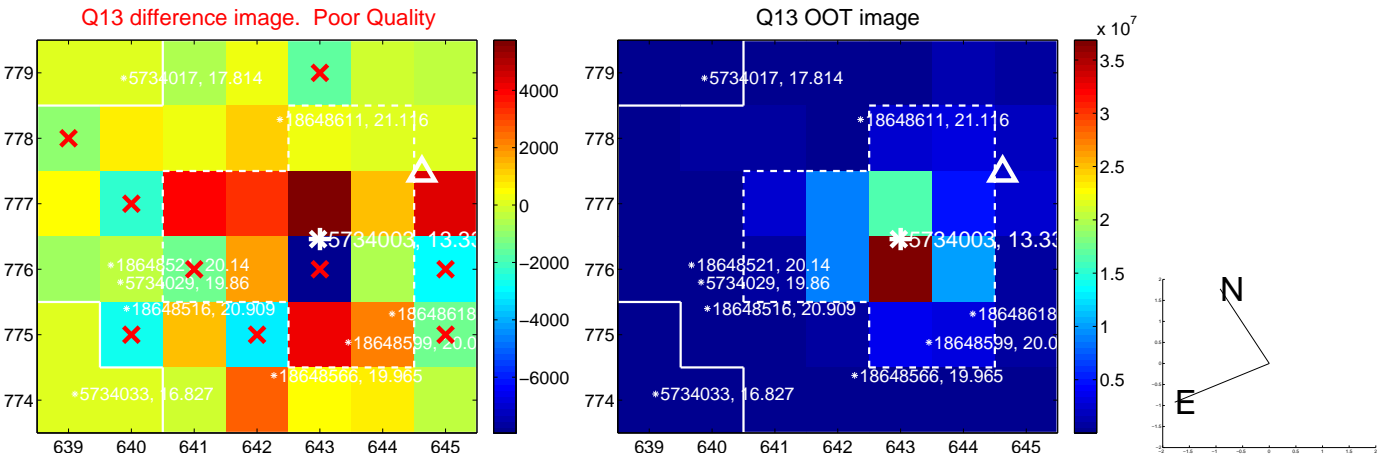
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



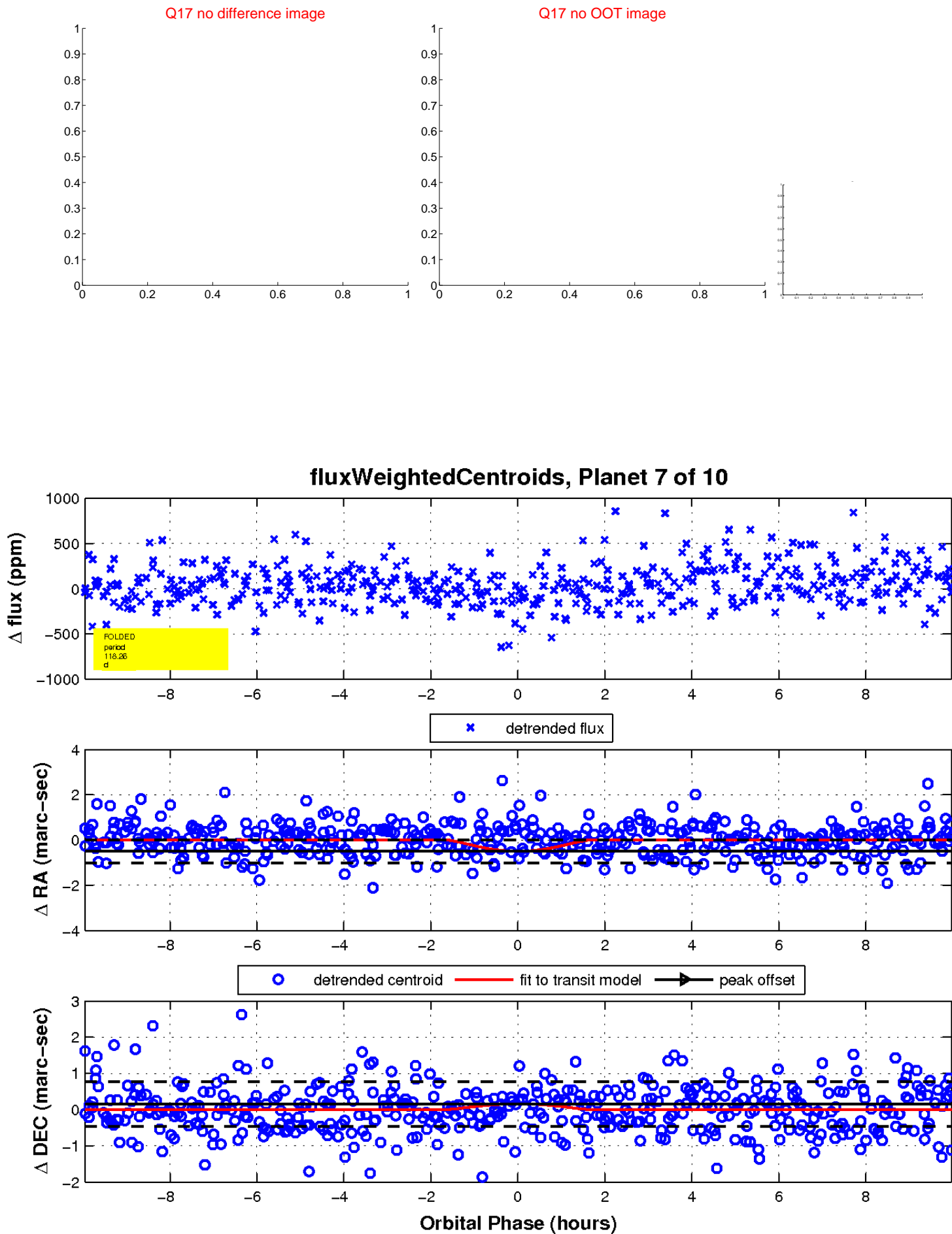
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

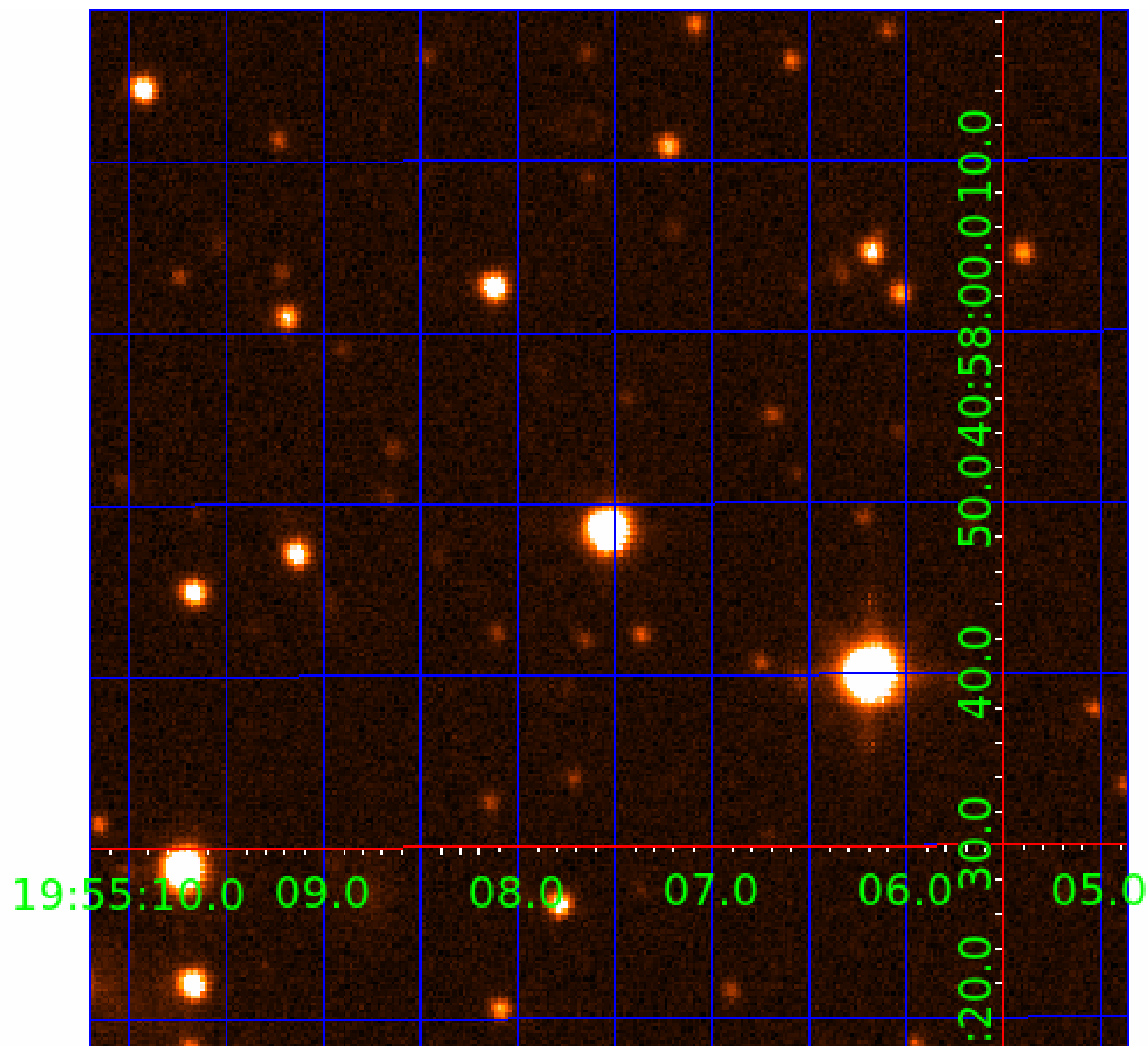


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

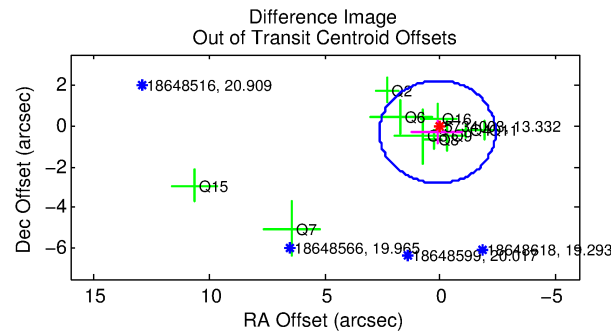
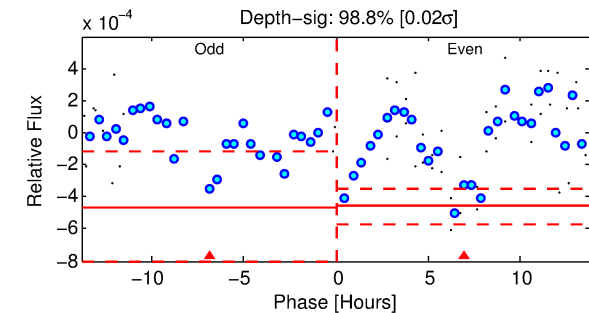
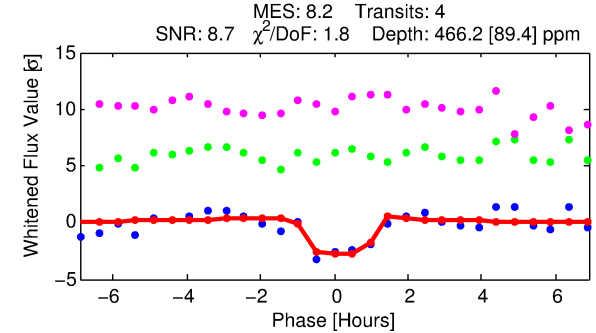
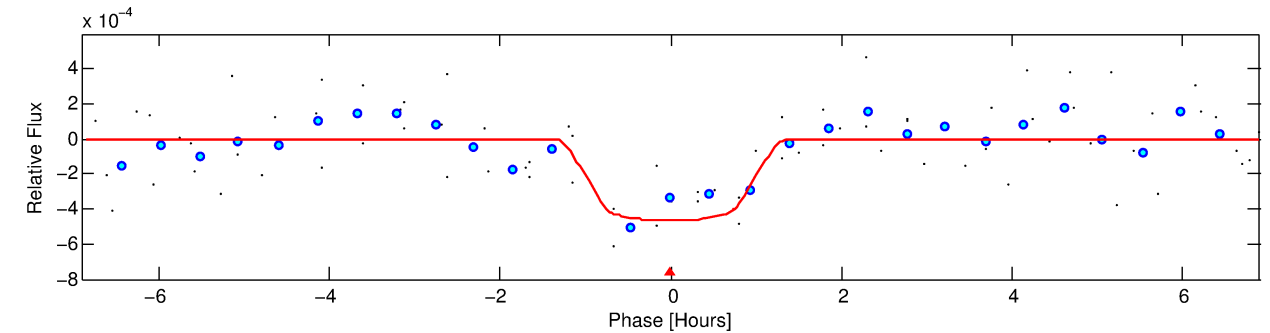
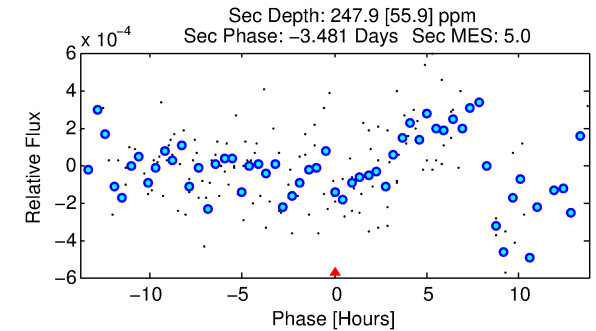
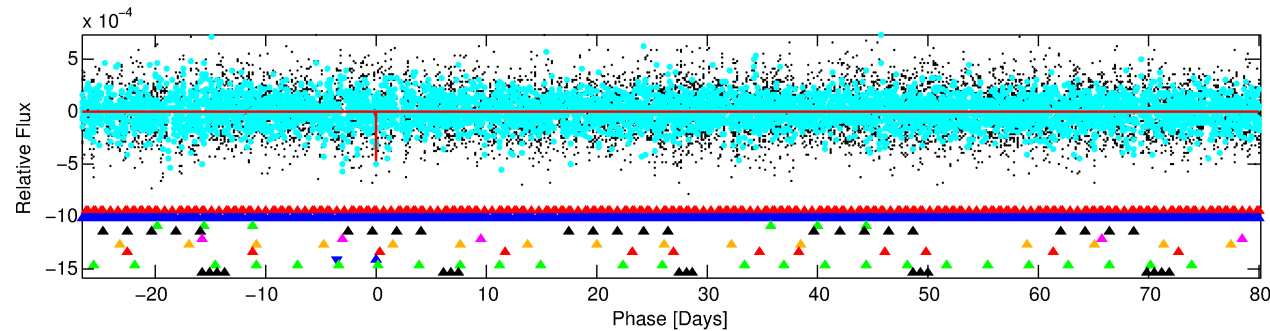
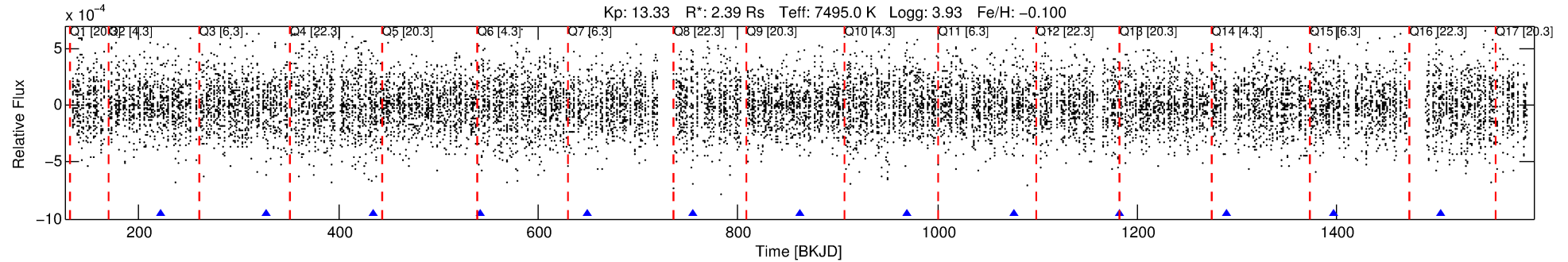
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-08

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 8 of 10 Period: 106.801 d



DV Fit Results:

Period = 106.80079 [0.00222] d
Epoch = 221.6566 [0.0090] BKJD
Rp/R* = 0.0229 [0.0107]
a/R* = 172.47 [485.95]
b = 0.90 [0.60]
Seff = 57.11 [30.05]
Teq = 701 [92] K
Rp = 5.98 [3.43] Re
a = 0.5316 [0.1667] AU
Ag = 1077.73 [1163.51] [0.93 σ]
Teffp = 6210 [1517] K [3.63 σ]

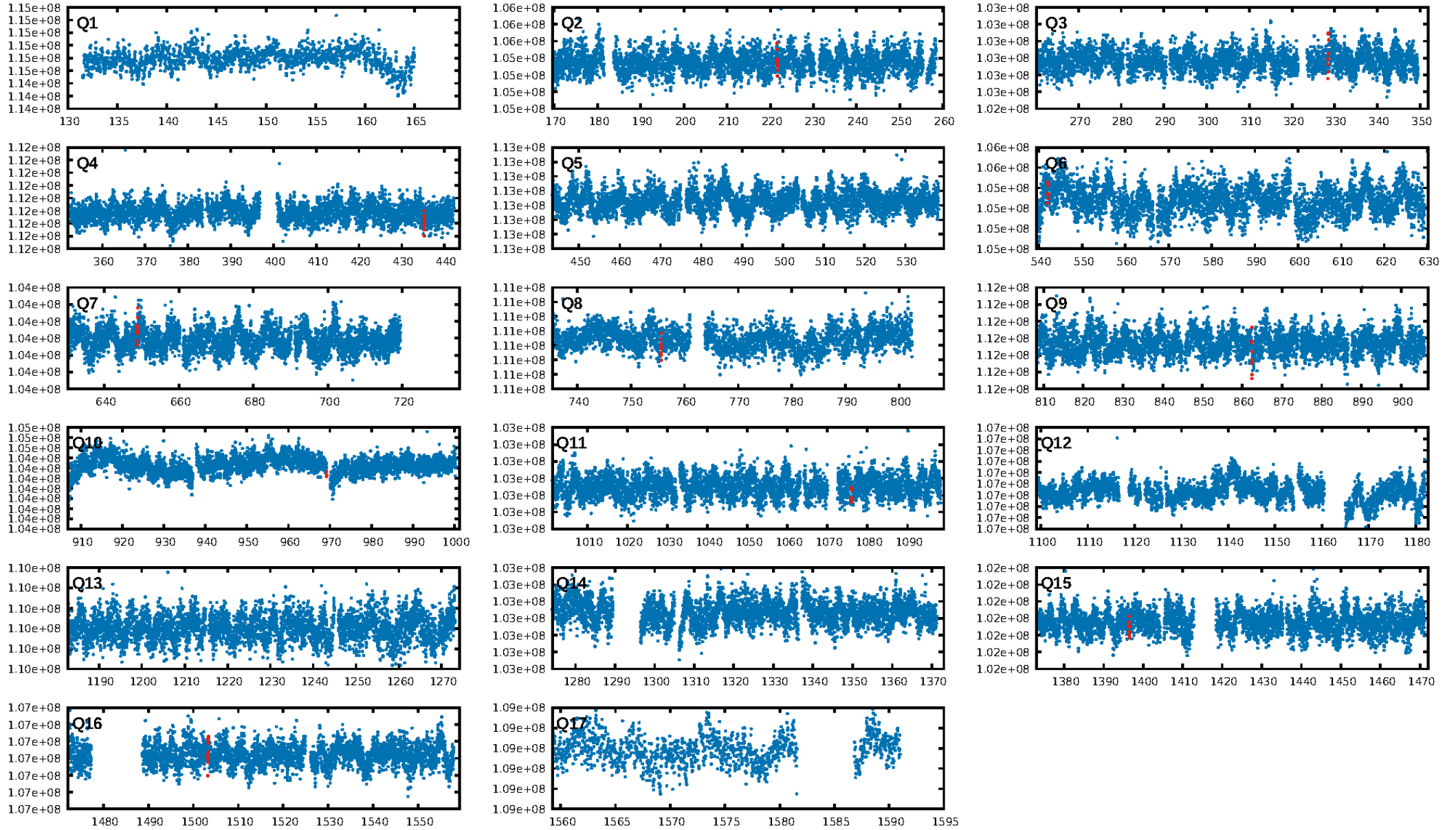
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.00 σ]
LongPeriod-sig: 100.0% [67.93 σ]
ModelChiSquare2-sig: 73.2%
ModelChiSquareGof-sig: 97.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 16.56
Centroid-sig: 3.5%
Centroid-so: 0.707 arcsec [1.20 σ]
OotOffset-rm: 0.324 arcsec [0.39 σ]
KicOffset-rm: 0.346 arcsec [0.55 σ]
OotOffset-st: 2/4/3/1 [10]
KicOffset-st: 2/4/3/1 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.40 [4/10]

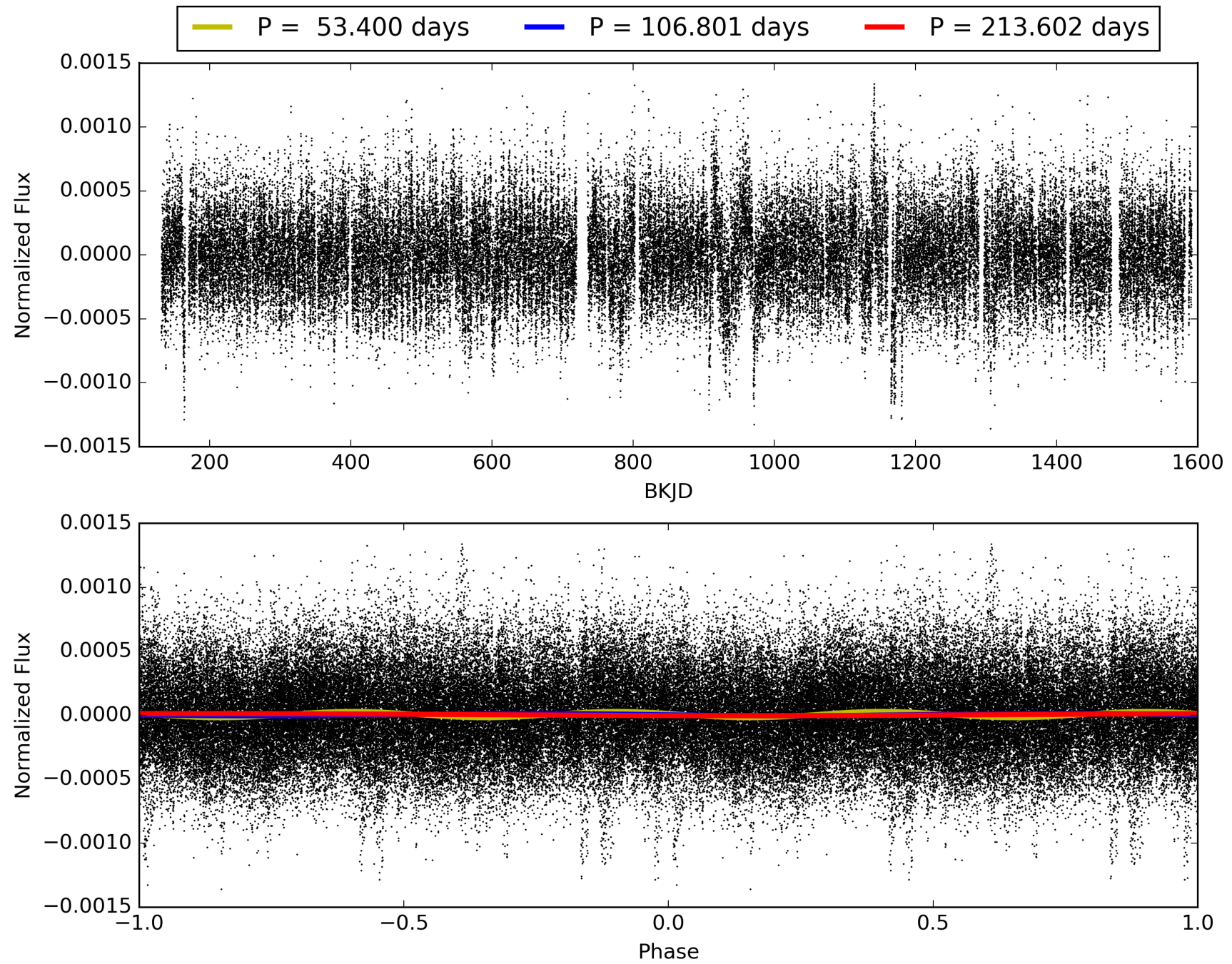
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:20 Z

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

TCE 005734003-08, PDC Light Curves

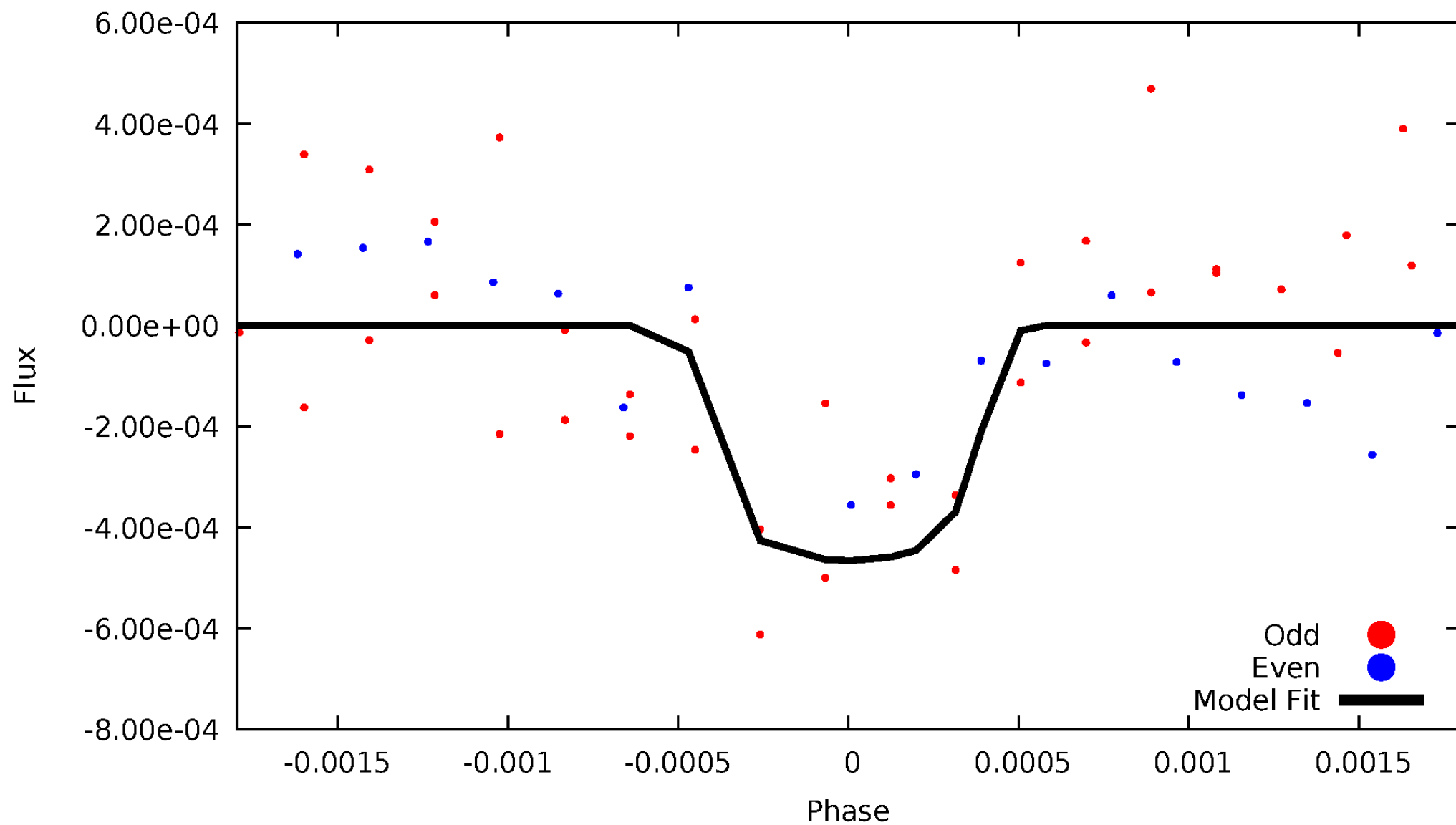


TCE 005734003-08



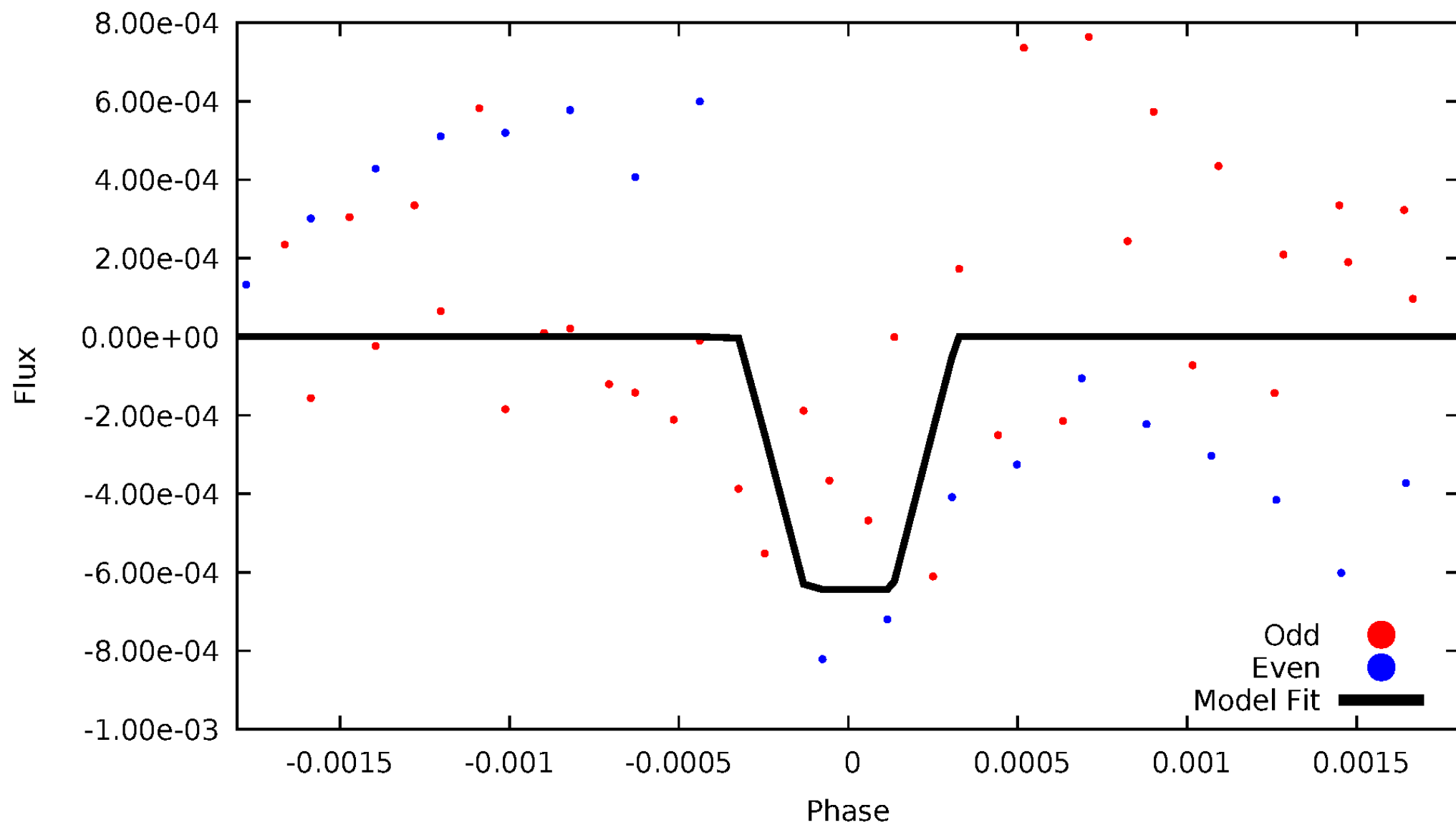
DV Odd/Even

TCE 005734003-08



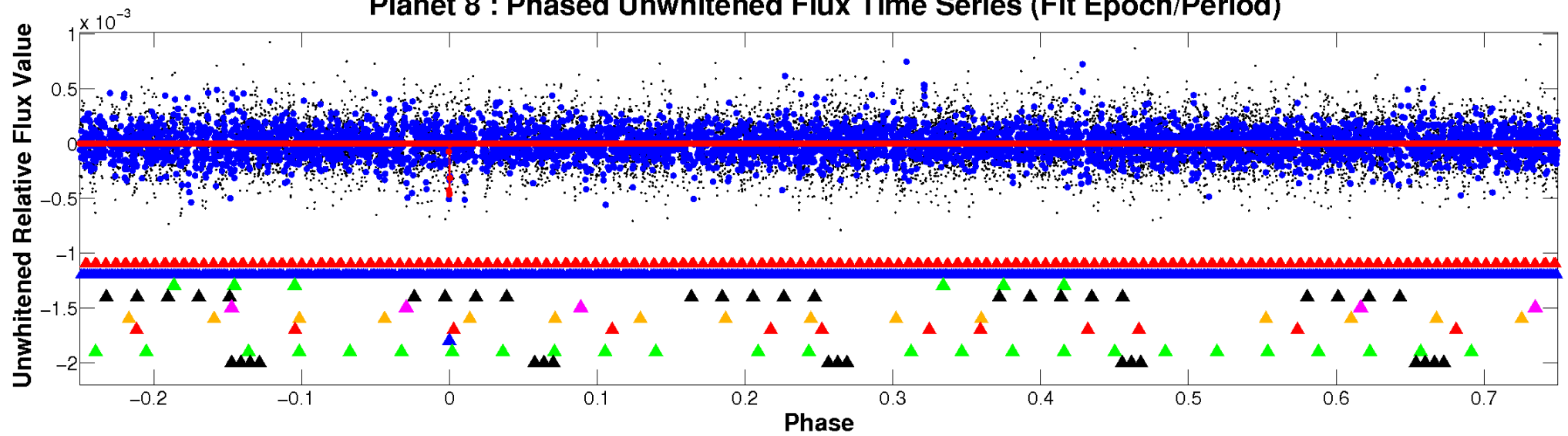
ALT Odd/Even

TCE 005734003-08

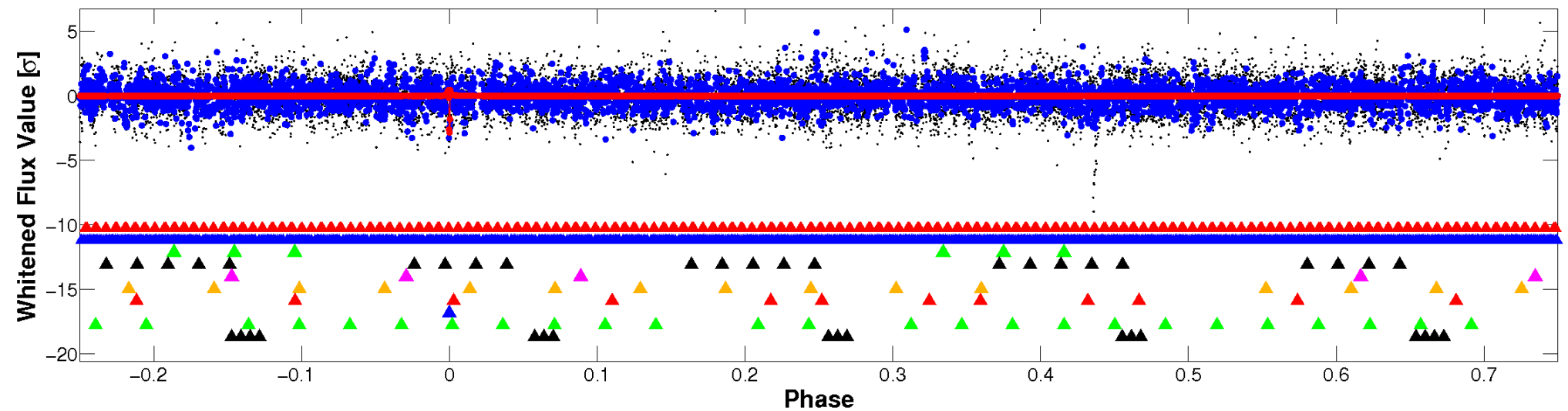


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

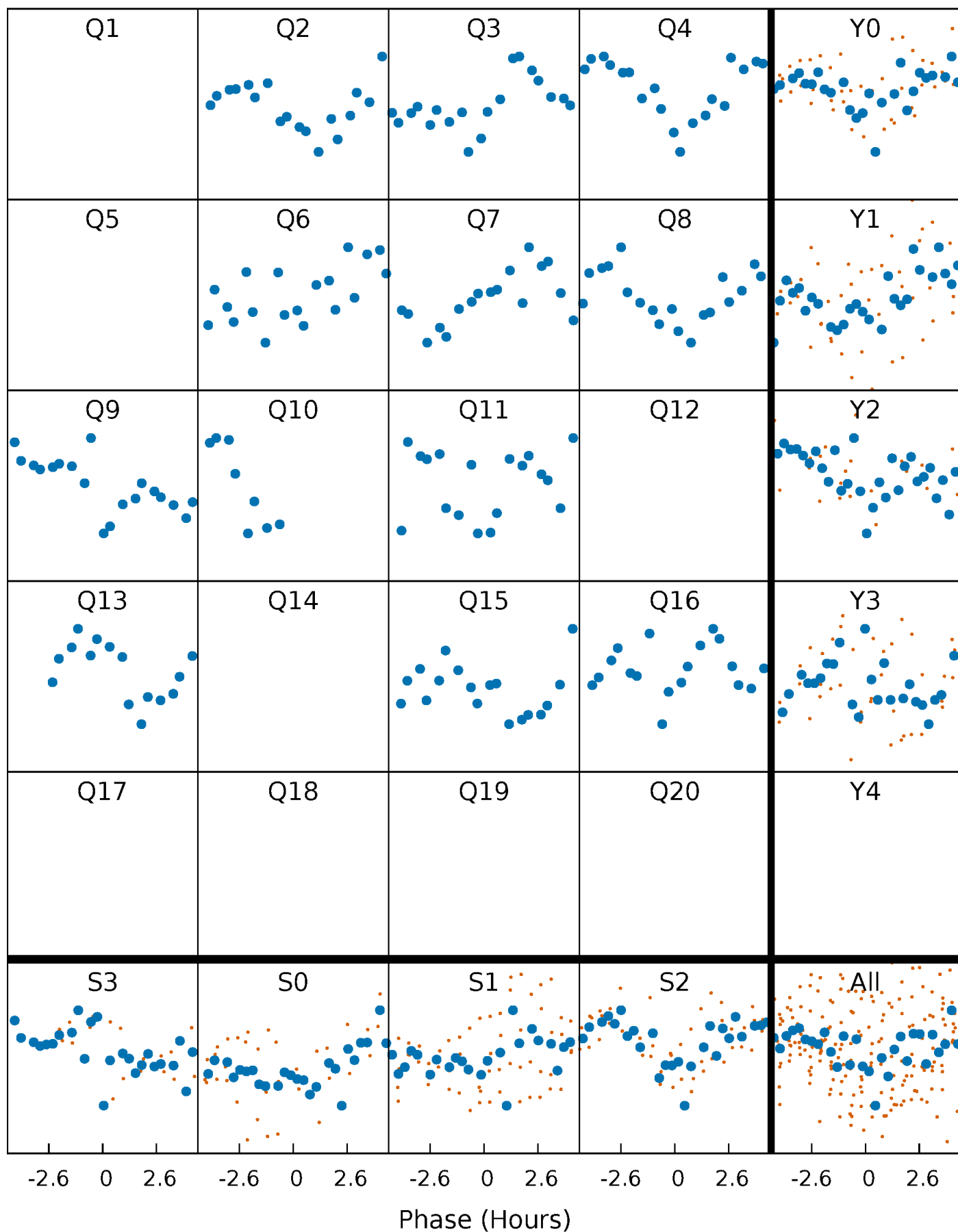


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



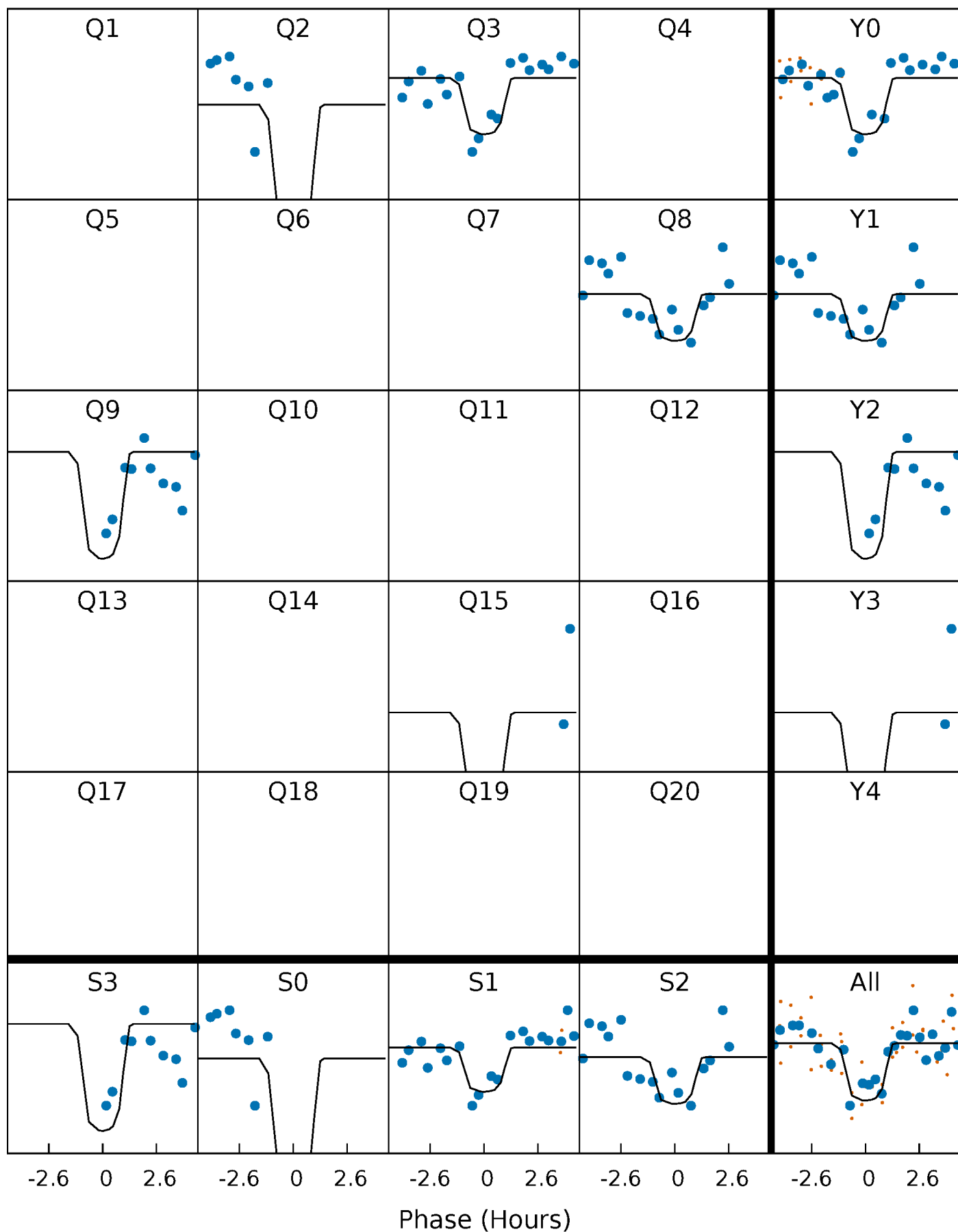
PDC Quarter-Phased Transit Curves

TCE 005734003-08 P=106.800792 Days $T_0=221.656555$ (BKJD)



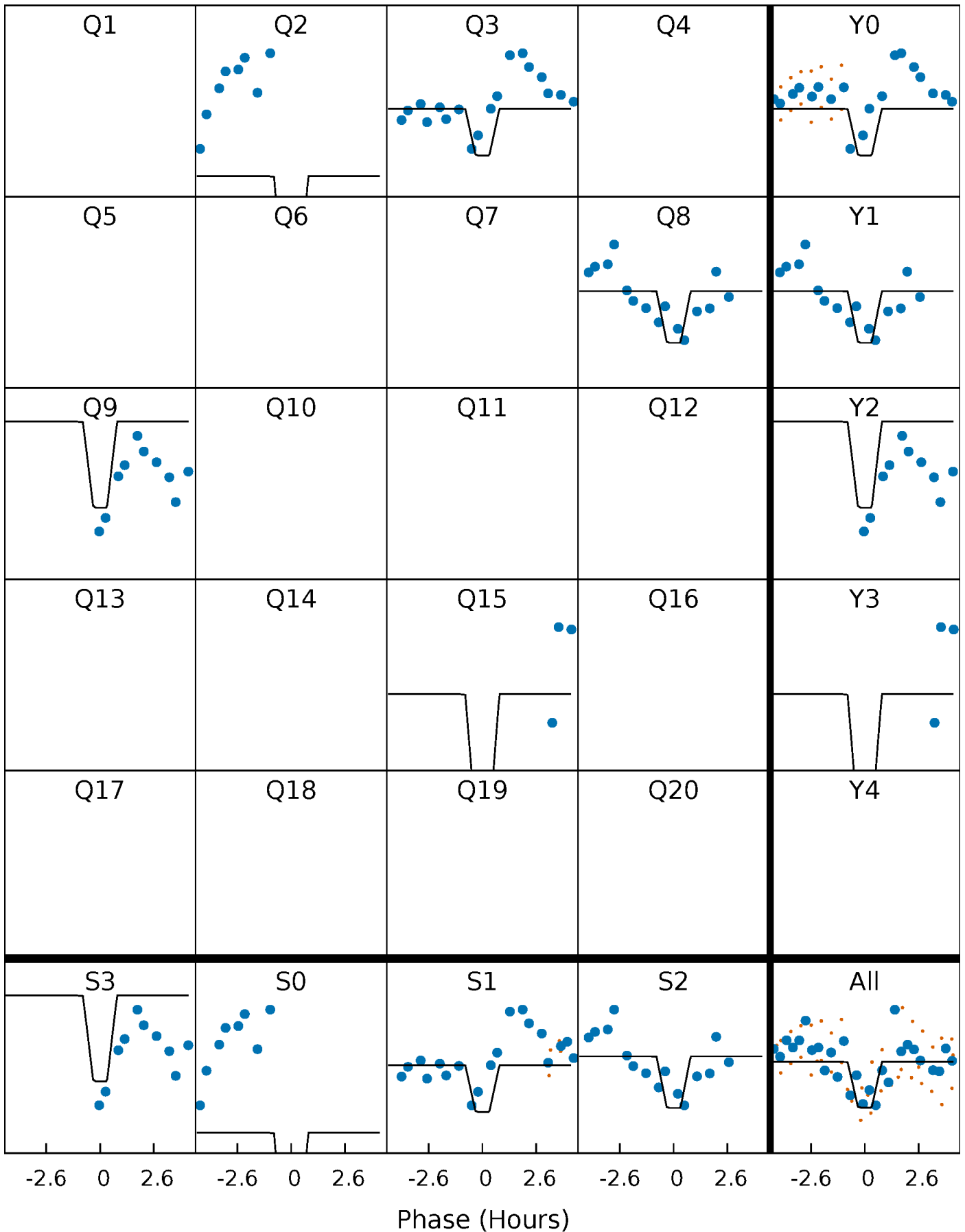
DV Quarter-Phased Transit Curves

TCE 005734003-08 $P=106.800792$ Days $T_0=221.656555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

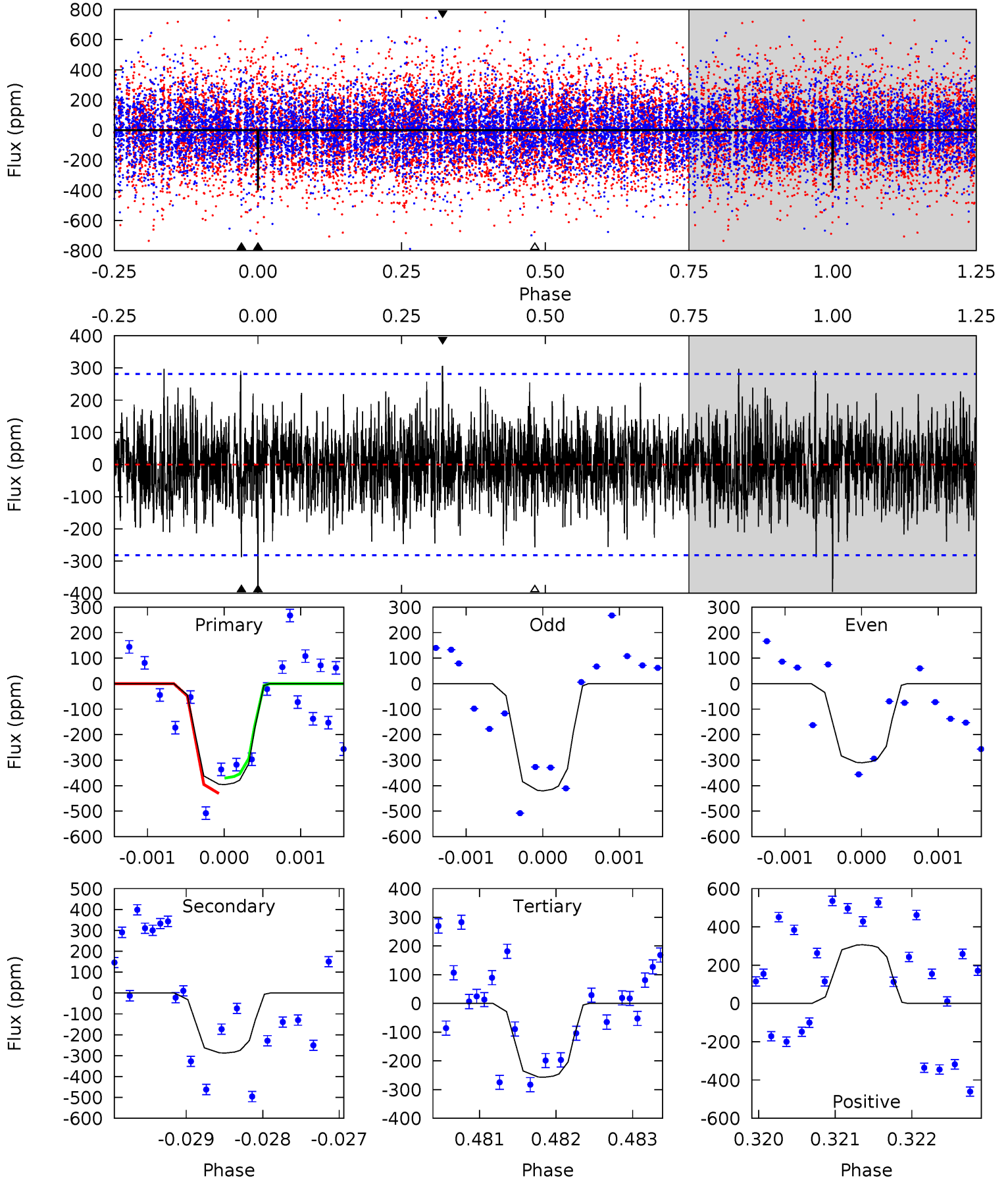
TCE 005734003-08 $P=106.802845$ Days $T_0=221.653227$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-08, P = 106.800792 Days, E = 114.855763 Days

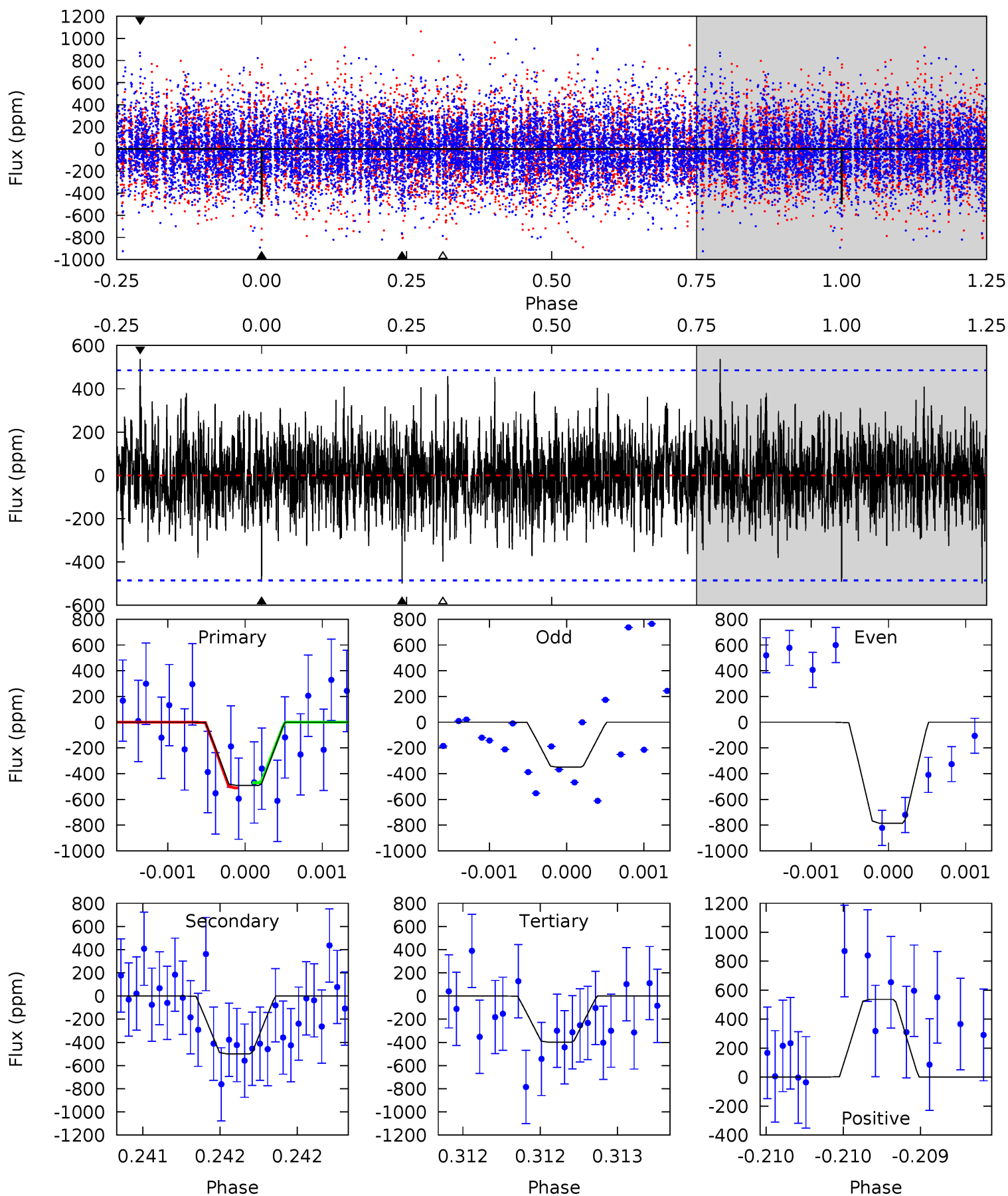
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	5.57	4.98	5.94	5.46	3.30	1.52	2.69	1.73	0.59	-0.37	0.89	1.03	0.44	0.58



Alt Model-Shift Uniqueness Test

005734003-08, P = 106.802845 Days, E = 114.850382 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.60	5.69	4.54	6.12	5.53	3.42	1.36	1.06	-0.53	1.15	-0.43	2.15	1.18	0.52	0.23



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-288 ± 52	$5.68^{+2.80}_{-2.59}$	963^{+61}_{-87}	6256^{+2480}_{-1075}	1301^{+3145}_{-719}
Alt.	-499 ± 88	$6.05^{+3.28}_{-2.69}$	960^{+68}_{-82}	6968^{+3062}_{-1225}	2030^{+4828}_{-1128}

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

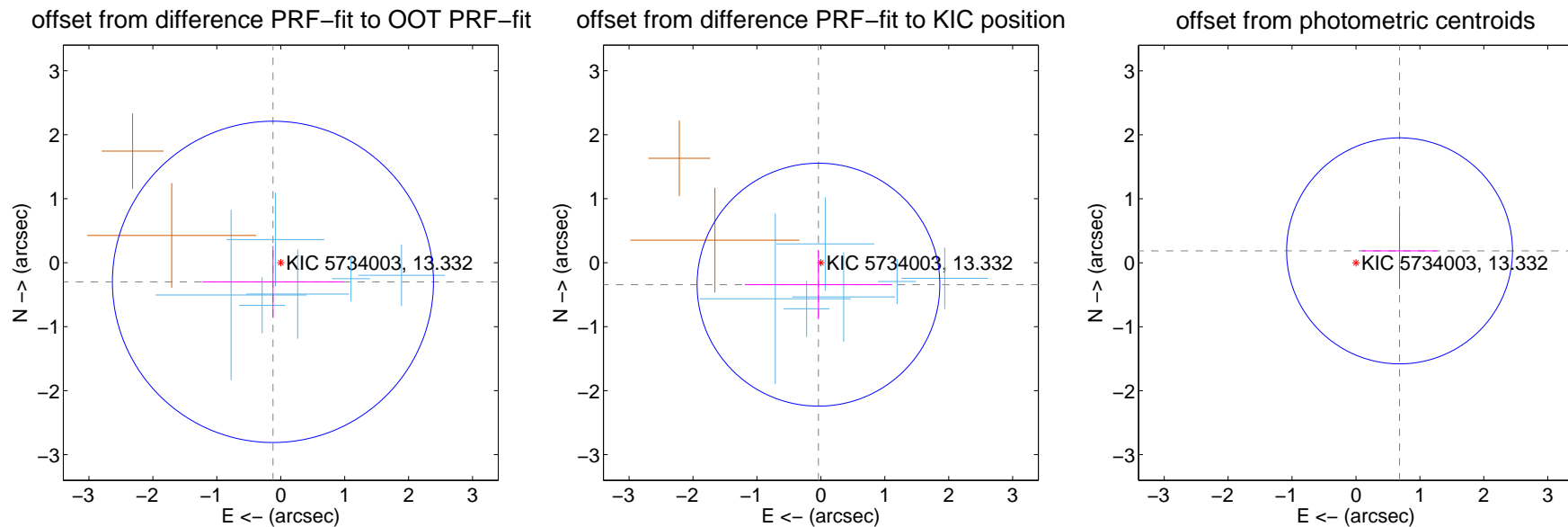
DV Centroid Data

Supplemental centroid analysis for 005734003-08. Kepler magnitude: 13.33. Transit SNR 8.65

There are 6 quarters with good PRF difference image offsets

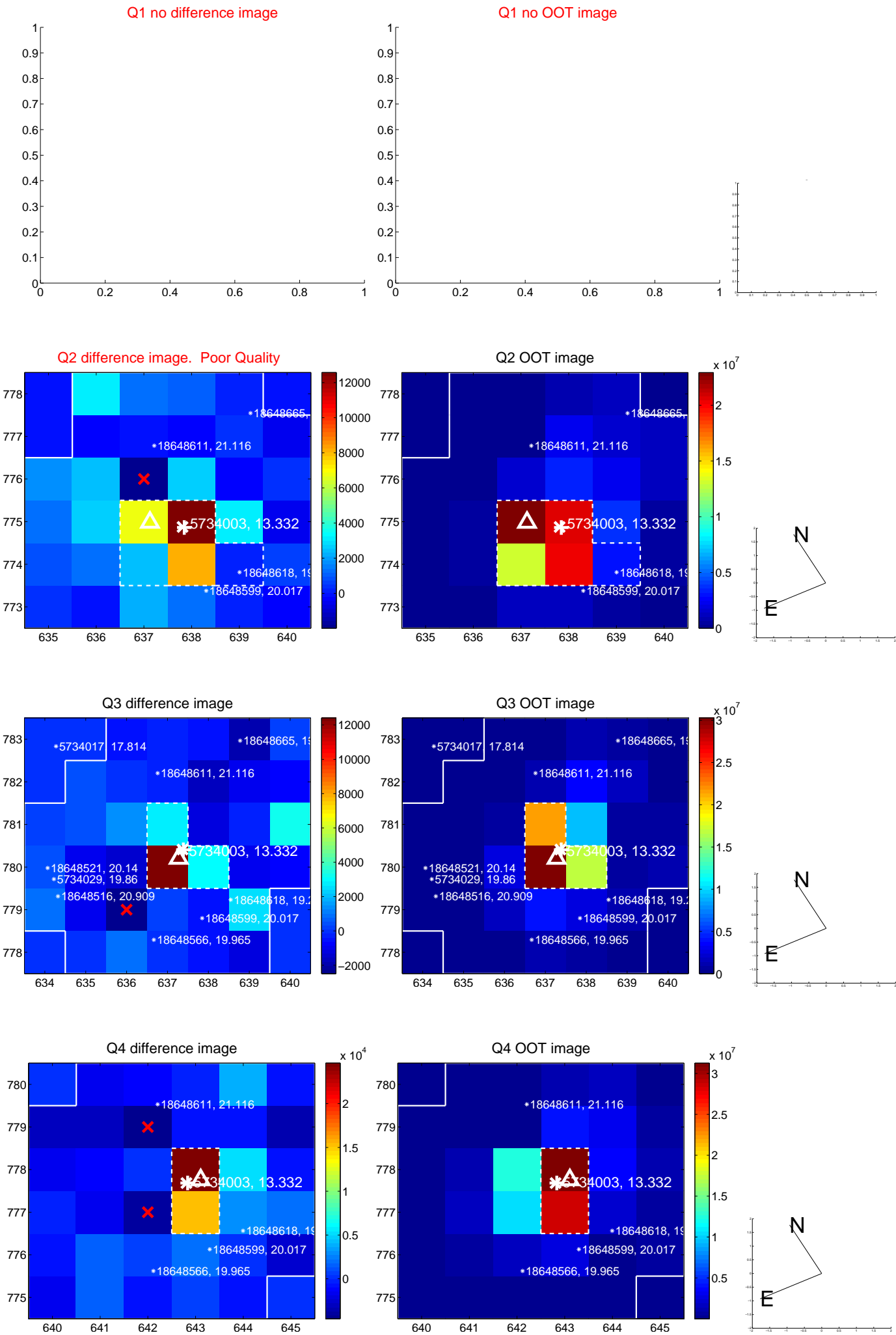
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.324 ± 0.837	0.39	0.122 ± 1.099	-0.300 ± 0.562
PRF-fit source offset from KIC position	0.346 ± 0.633	0.55	0.038 ± 1.151	-0.344 ± 0.541
photometric centroid source offset	0.71 ± 0.59	1.20	-0.68 ± 0.59	0.19 ± 0.59

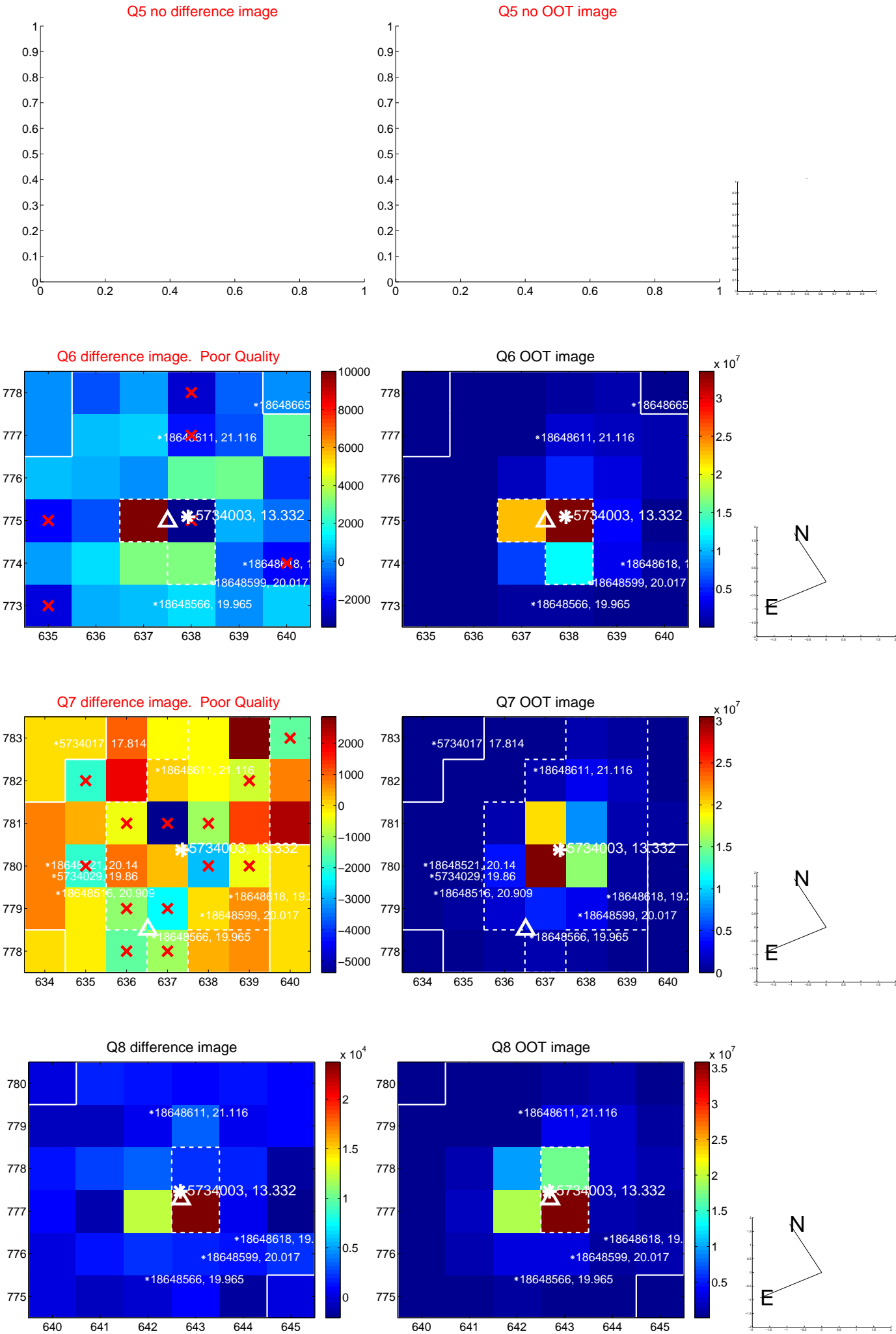


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

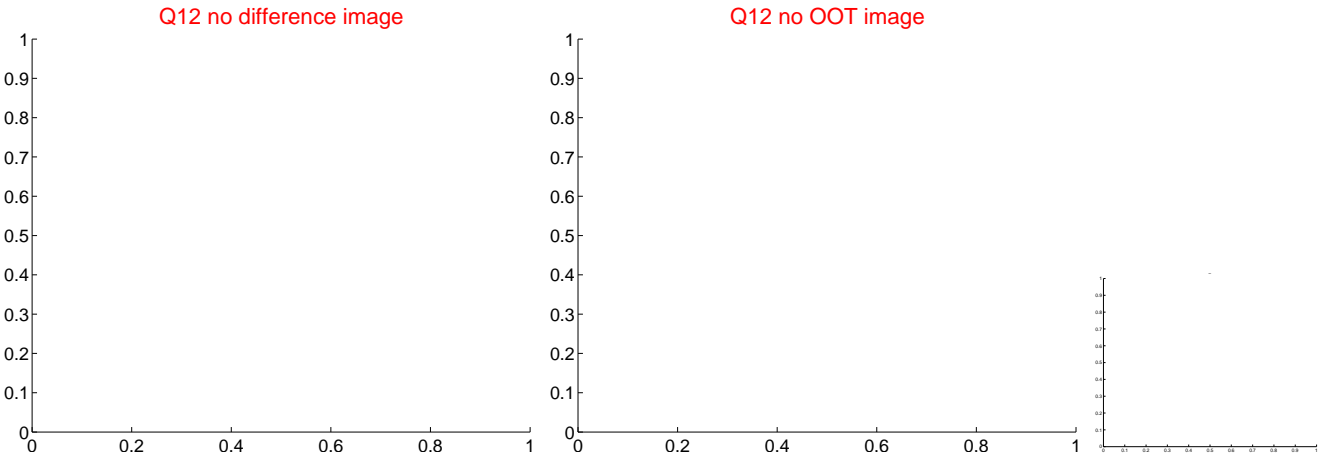
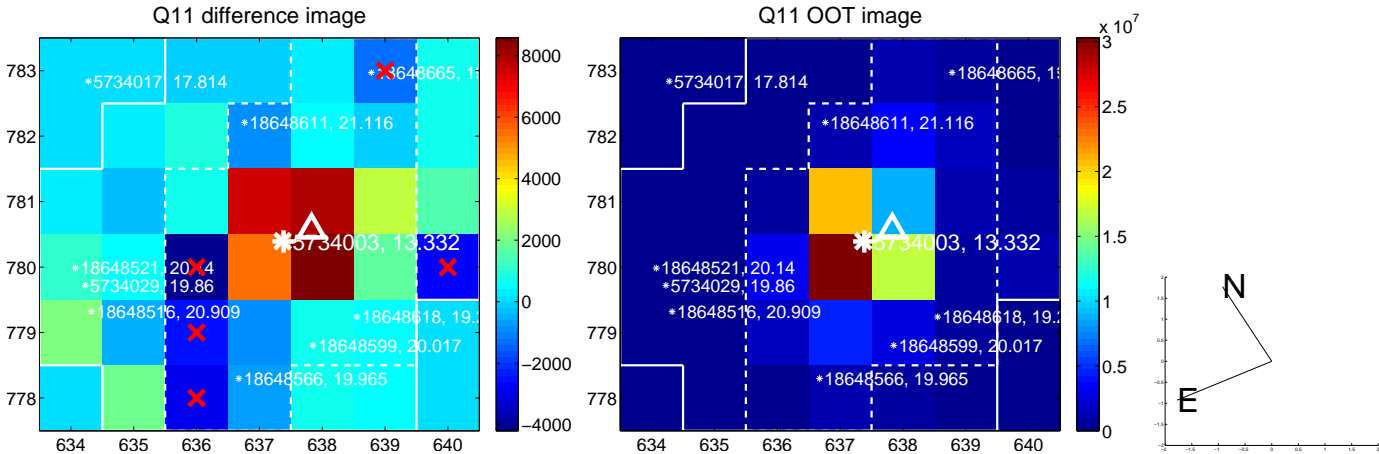
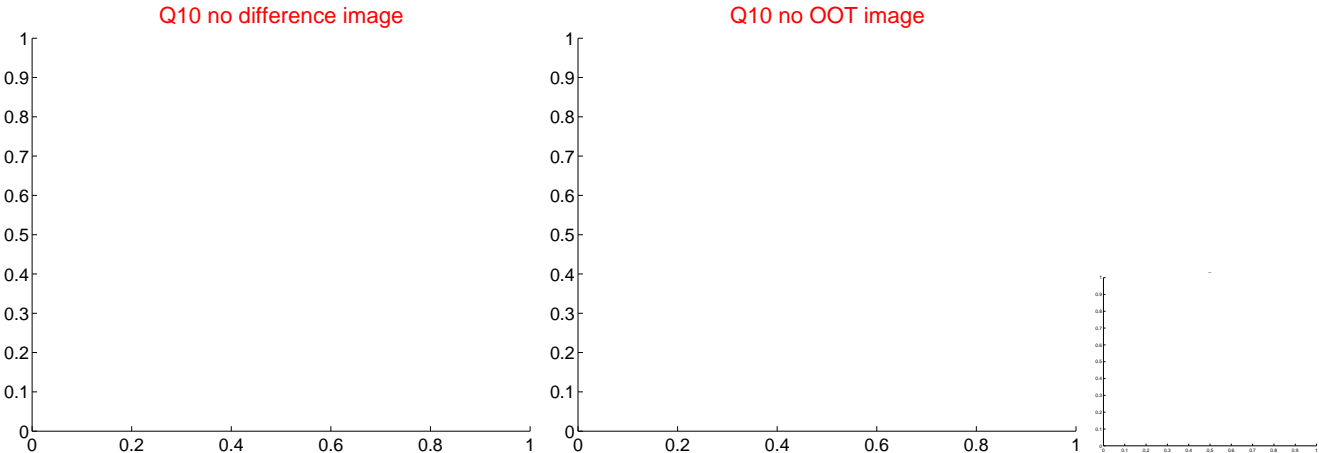
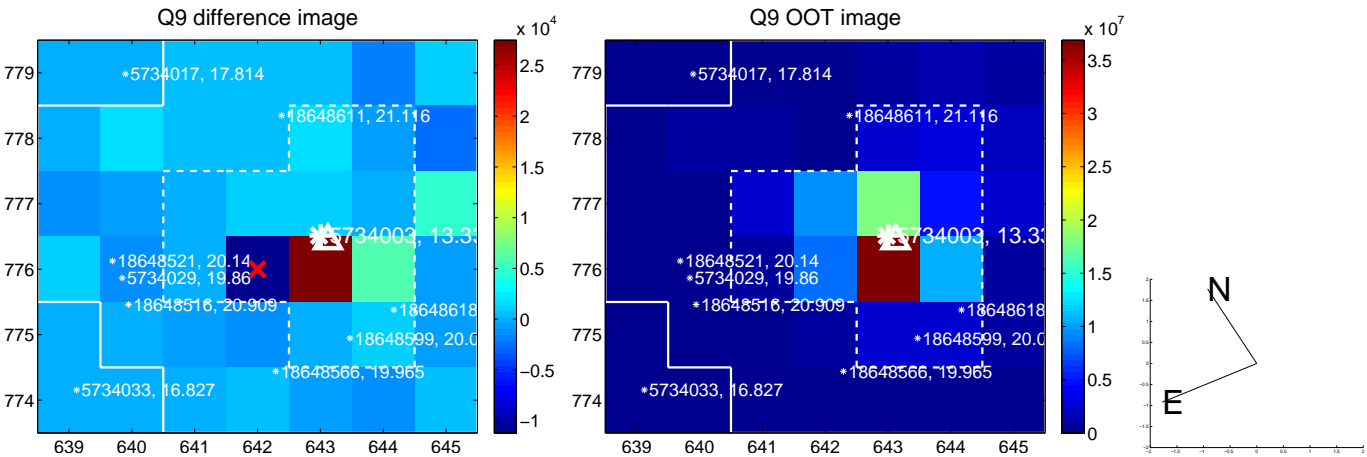
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



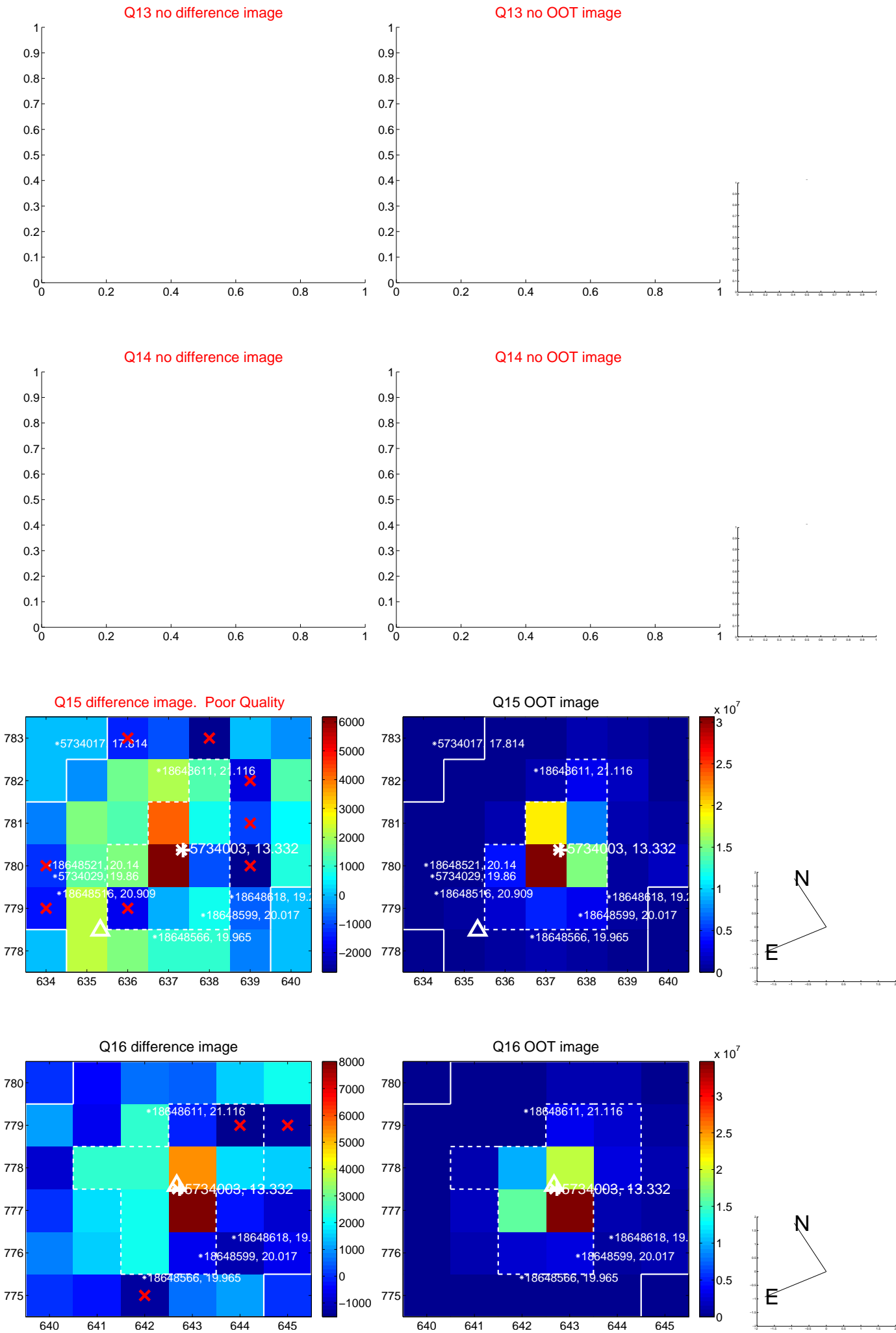
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



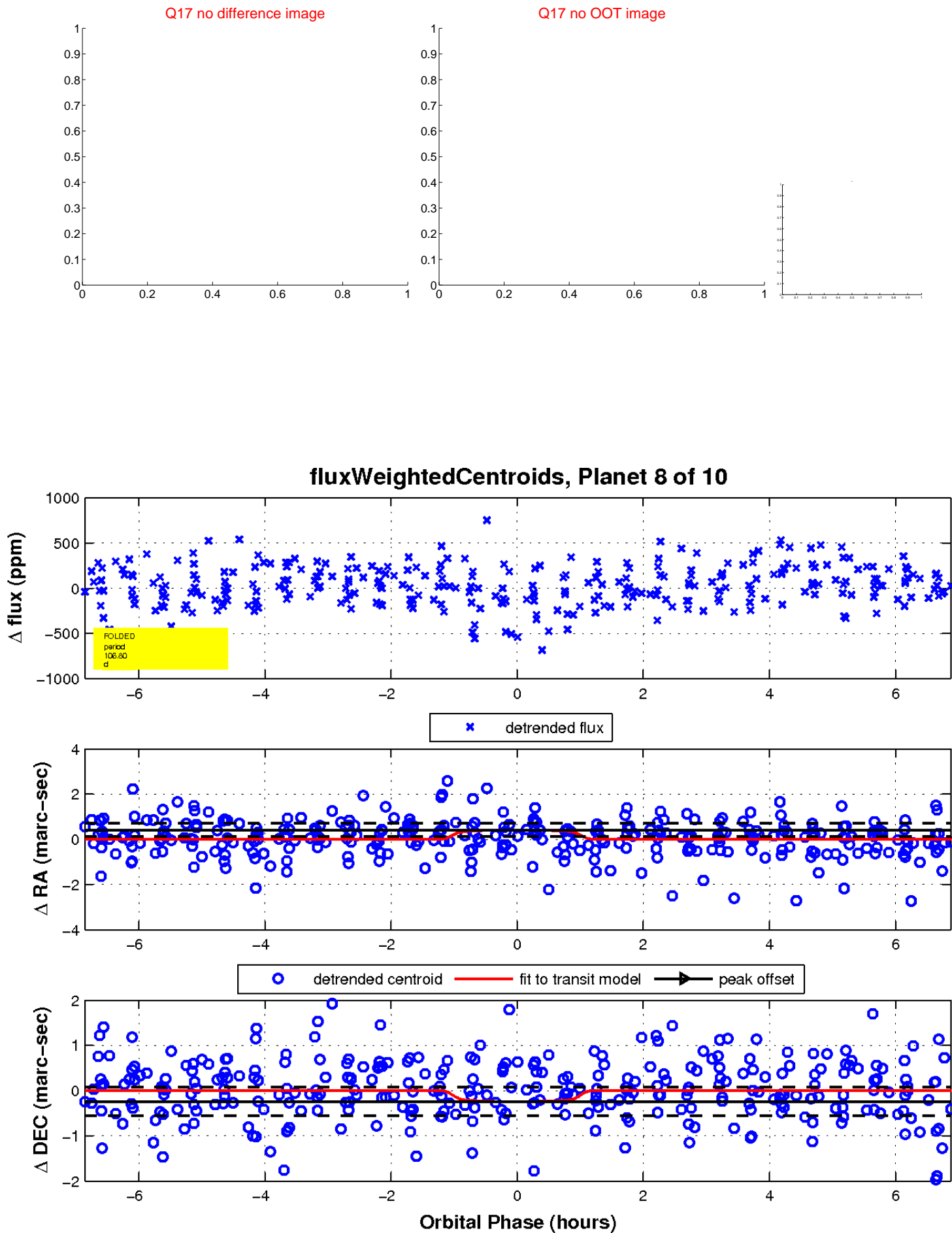
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

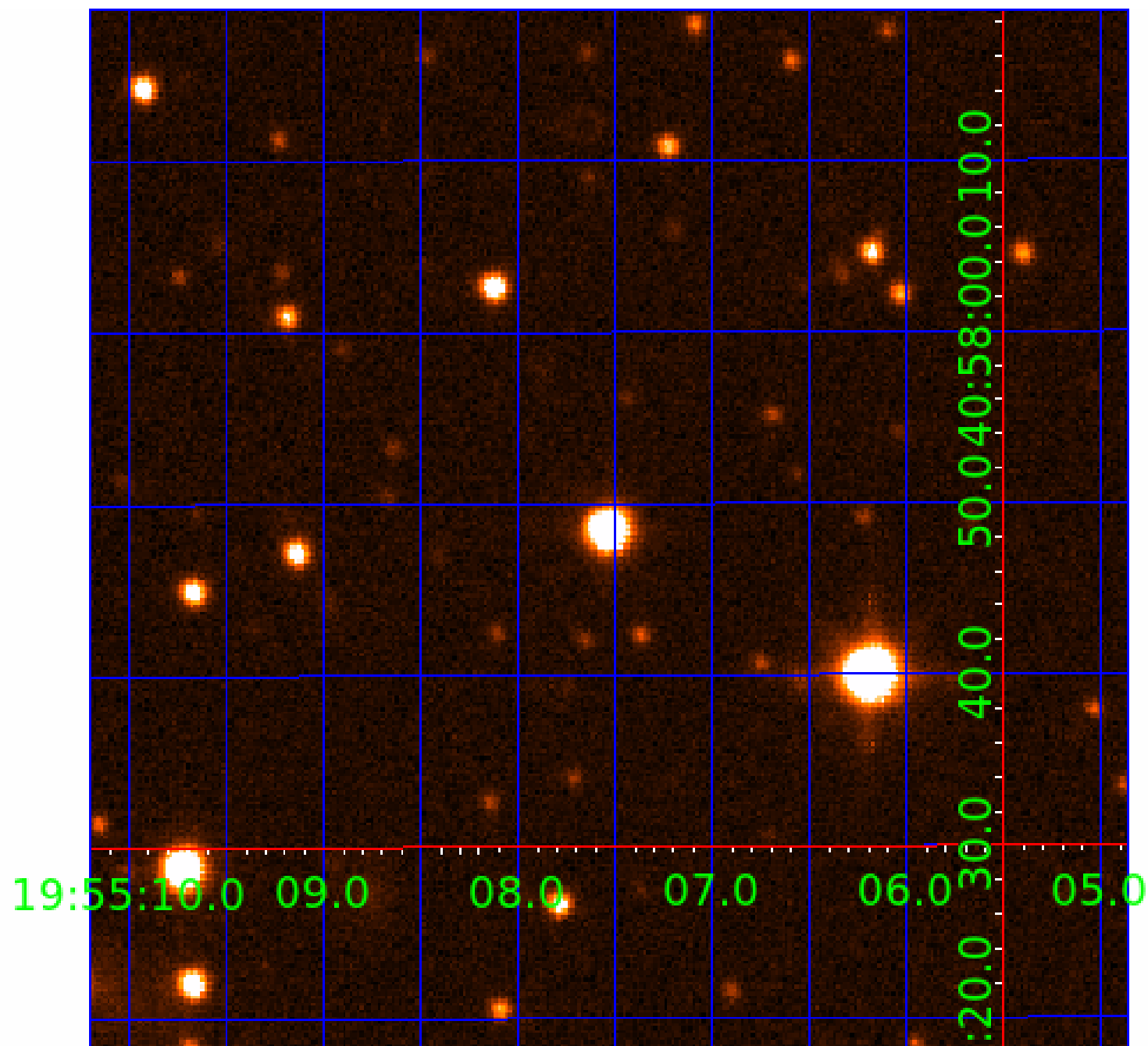


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

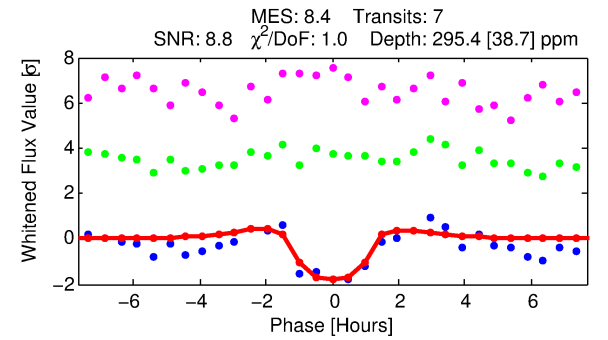
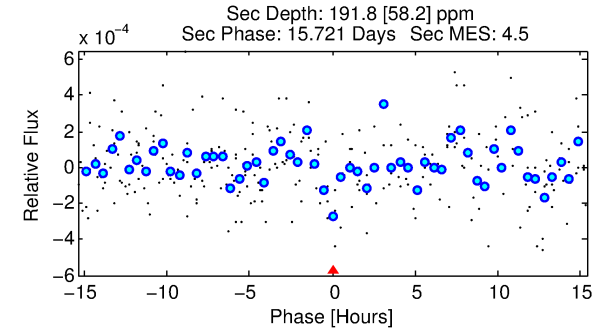
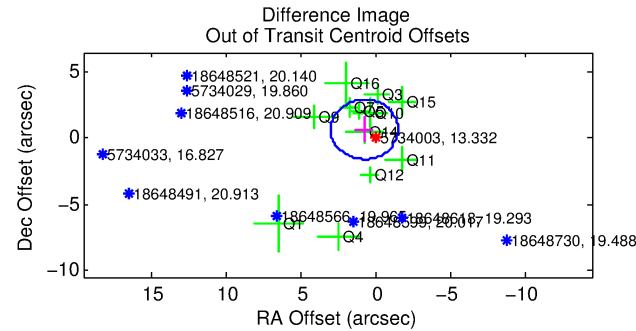
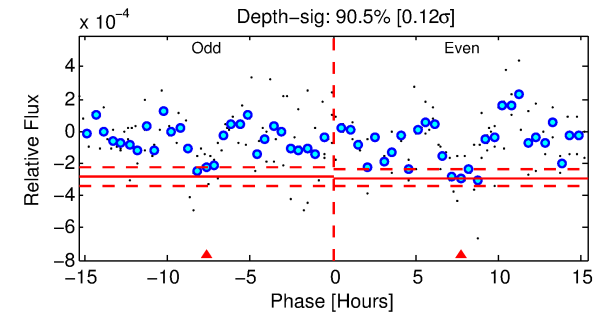
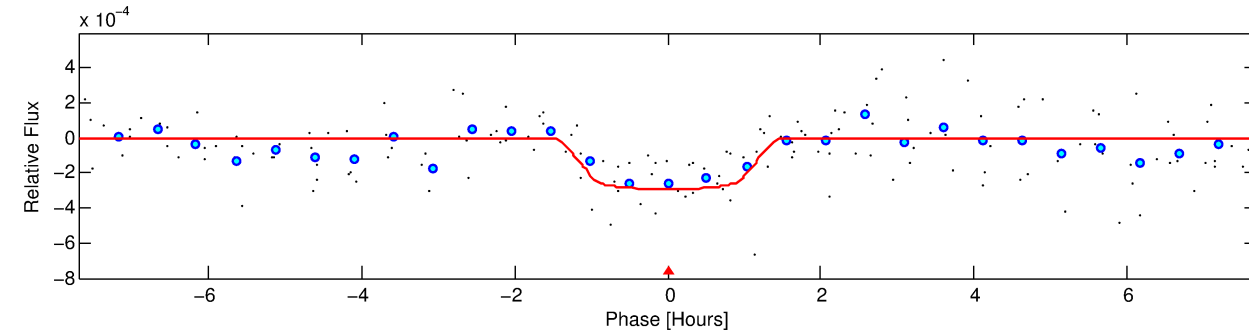
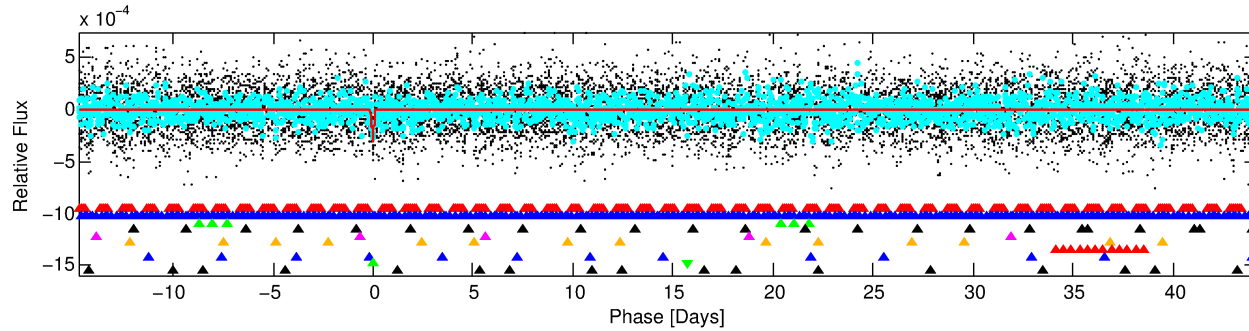
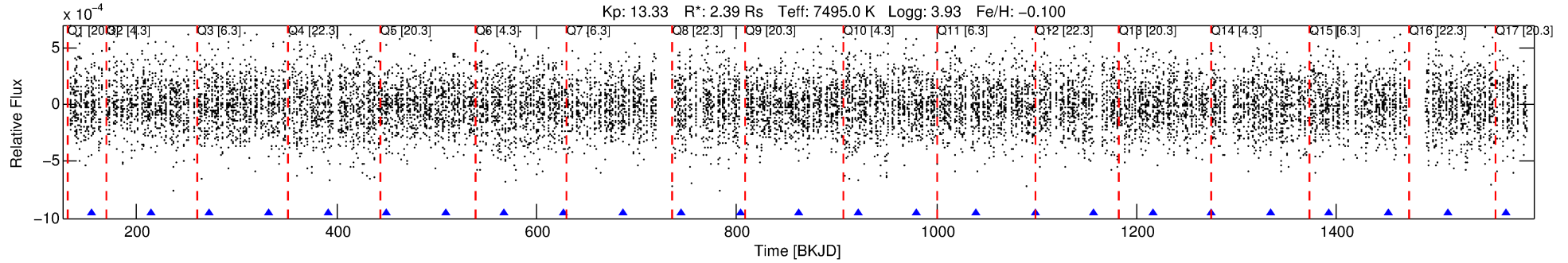
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-09

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 9 of 10 Period: 58.927 d



DV Fit Results:

Period = 58.92689 [0.00047] d
Epoch = 155.5439 [0.0068] BKJD
Rp/R* = 0.0179 [0.0134]
a/R* = 92.20 [444.83]
b = 0.87 [1.33]
Seff = 126.19 [66.40]
Teq = 855 [112] K
Rp = 4.67 [3.83] Re
a = 0.3576 [0.1121] AU
Ag = 617.72 [991.00] [0.62 σ]
Teffp = 6588 [2531] K [2.26 σ]

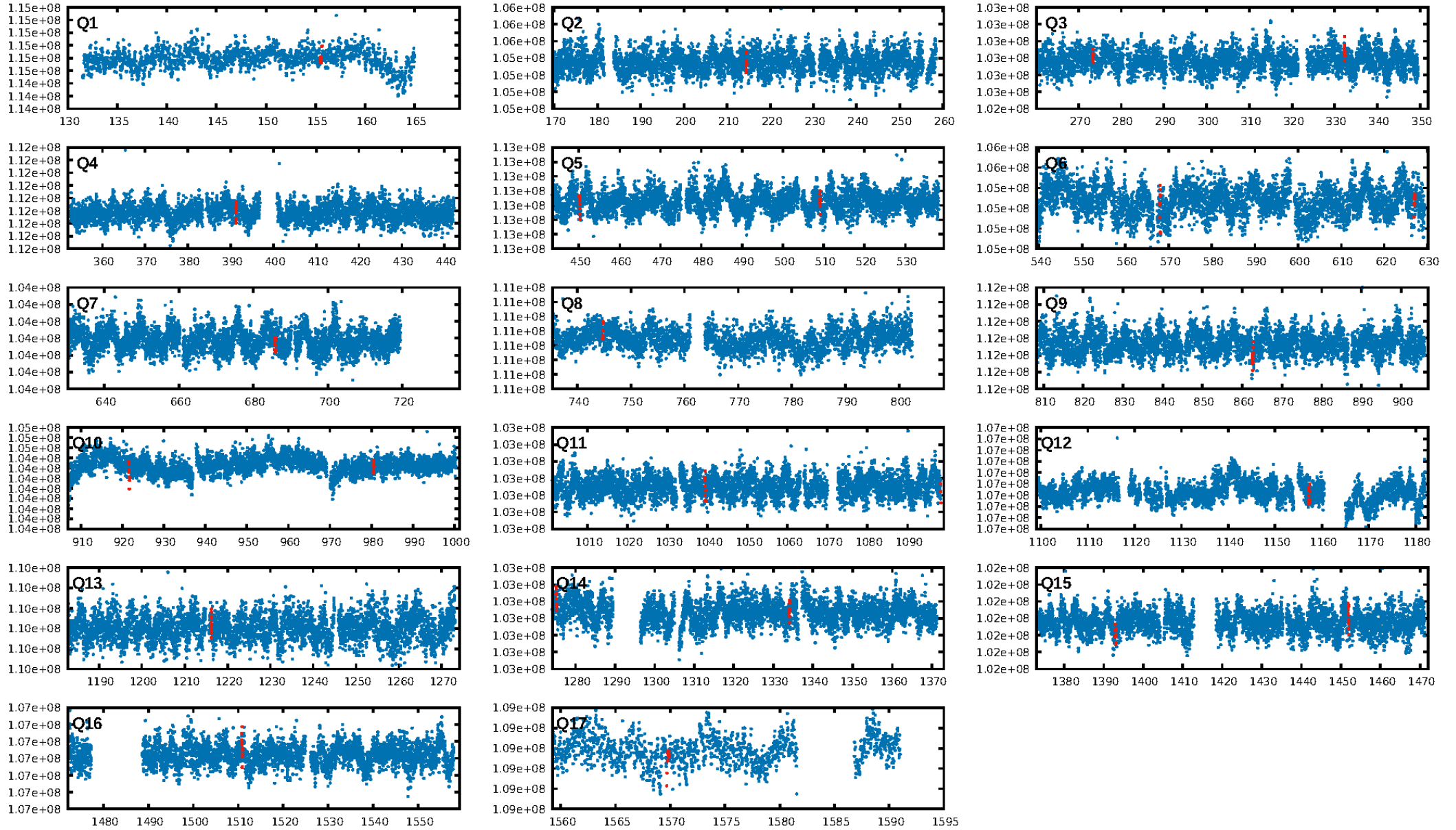
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [213.83 σ]
LongPeriod-sig: 100.0% [22.97 σ]
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 4.351
Centroid-sig: 15.4%
Centroid-so: 0.375 arcsec [0.60 σ]
OotOffset-rm: 0.984 arcsec [1.31 σ]
KicOffset-rm: 0.845 arcsec [1.09 σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.08 [1/12]
DiffImageOverlap-fno: 0.38 [6/16]

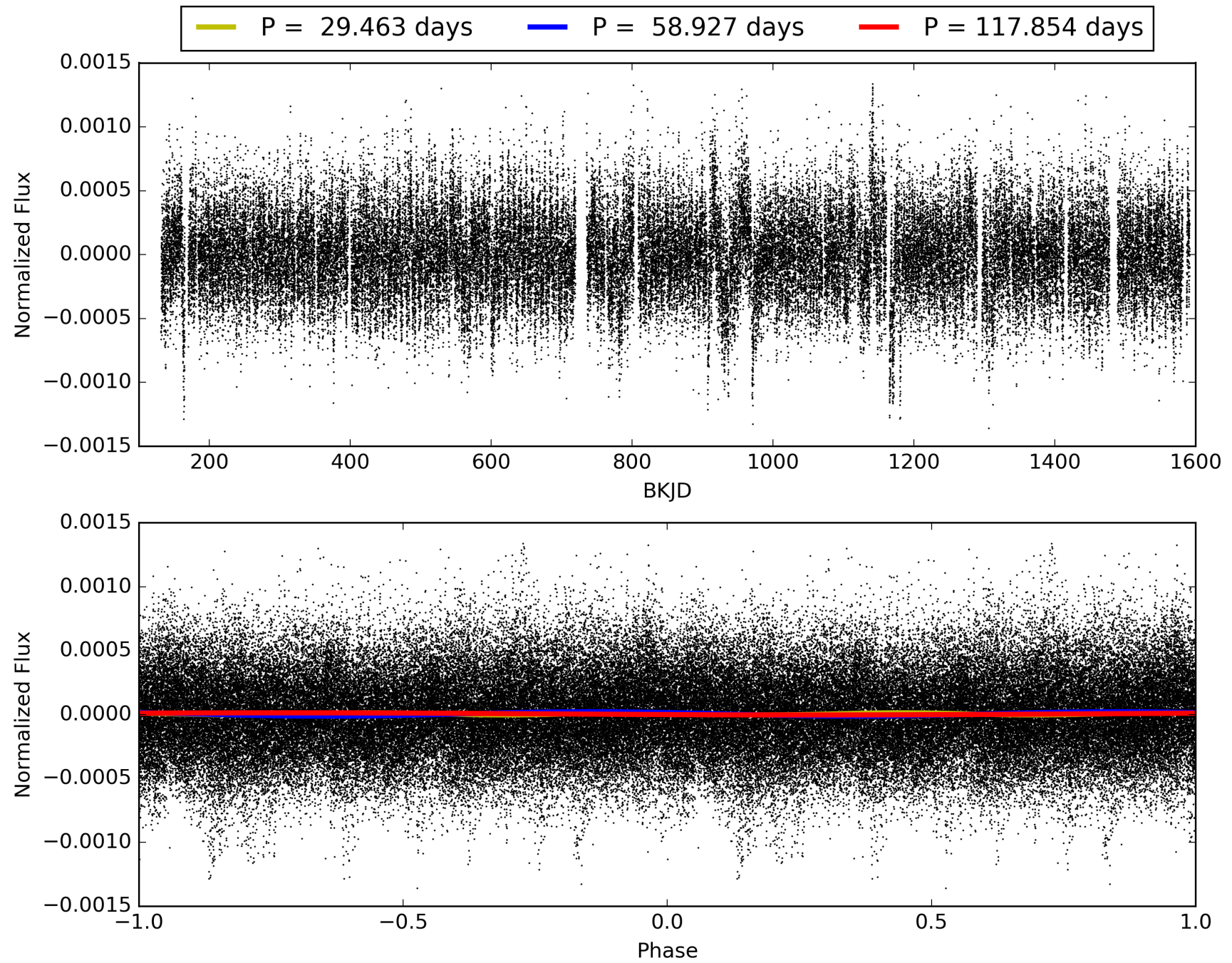
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:24 Z

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

TCE 005734003-09, PDC Light Curves

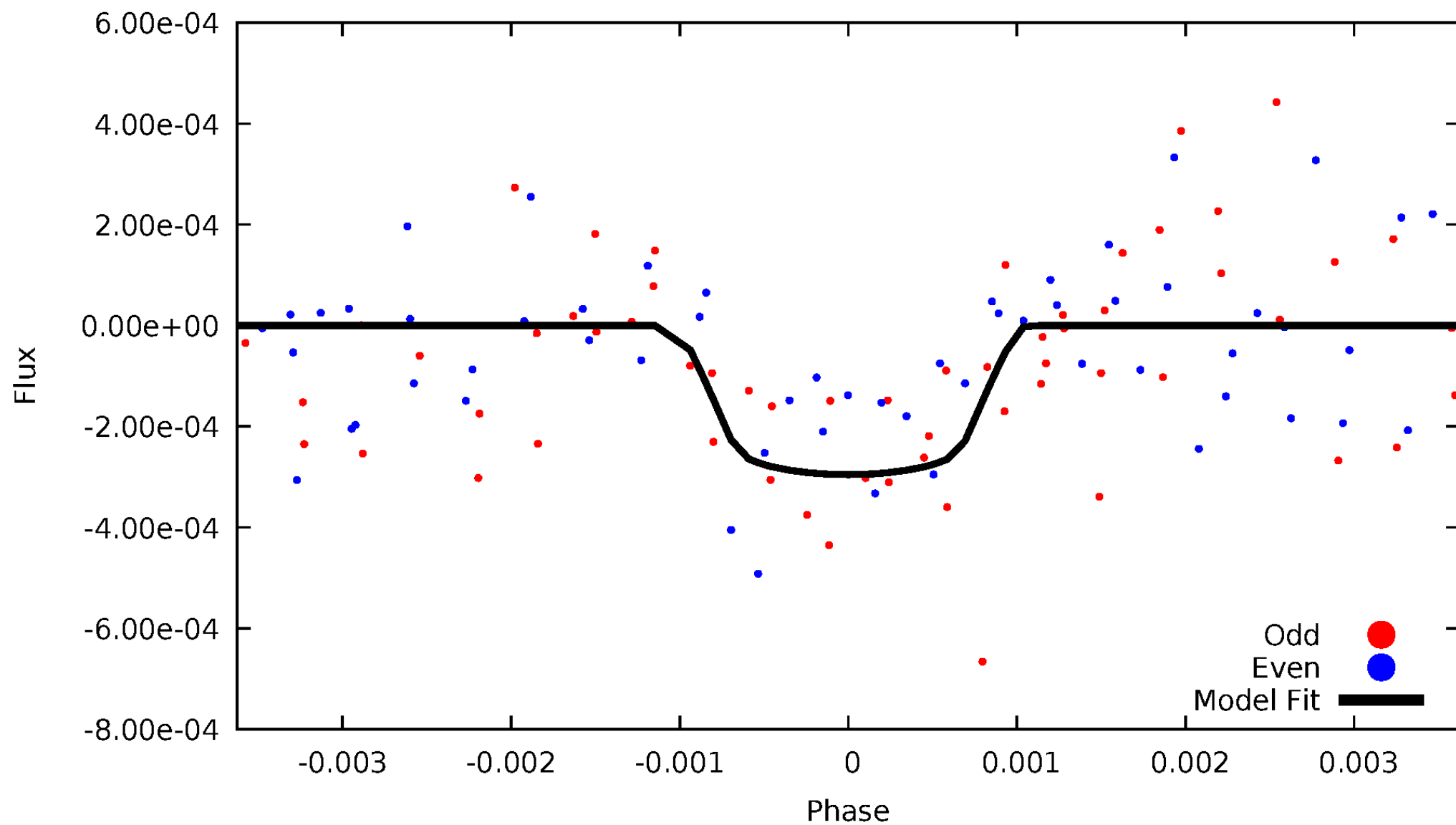


TCE 005734003-09



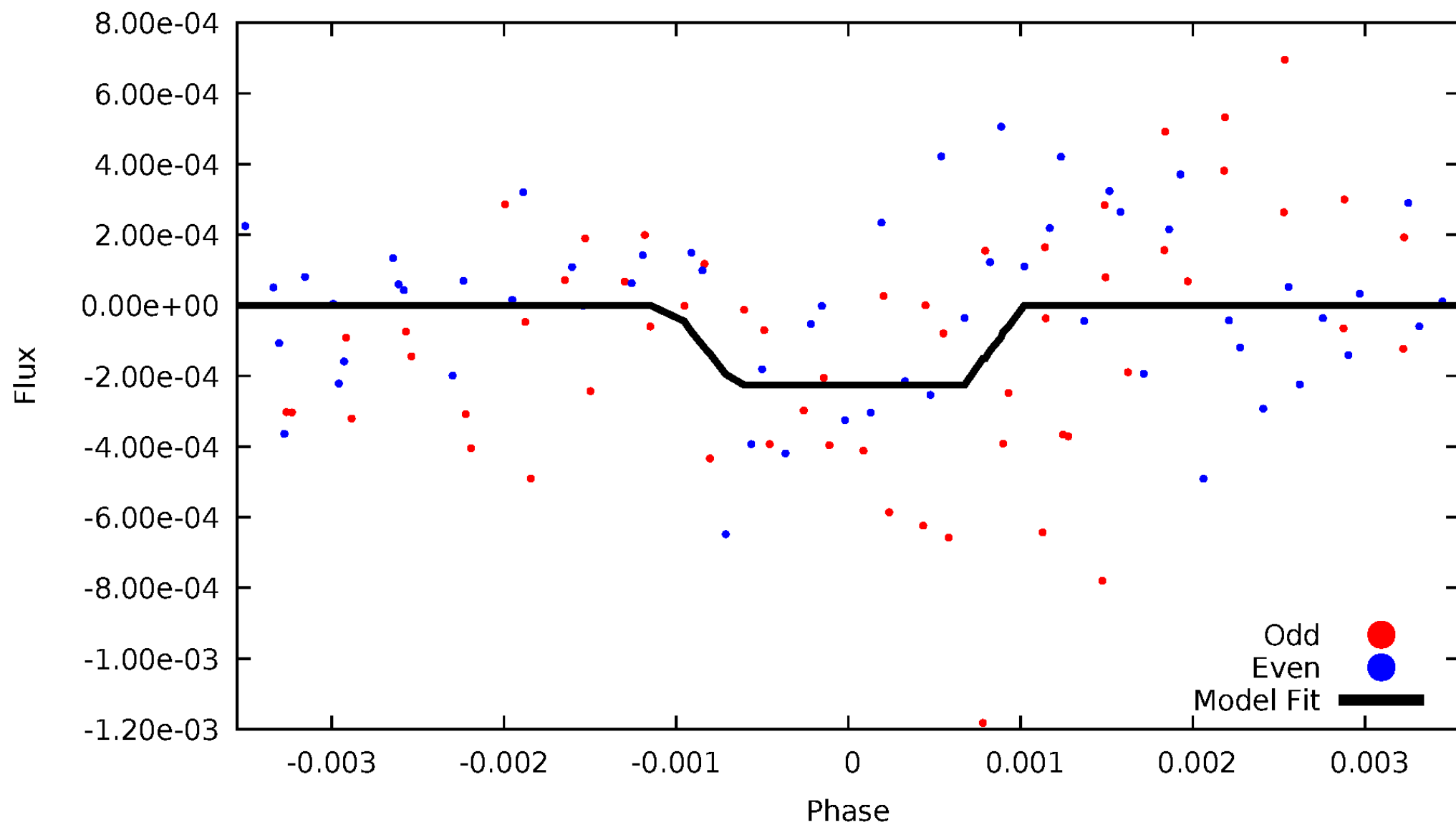
DV Odd/Even

TCE 005734003-09



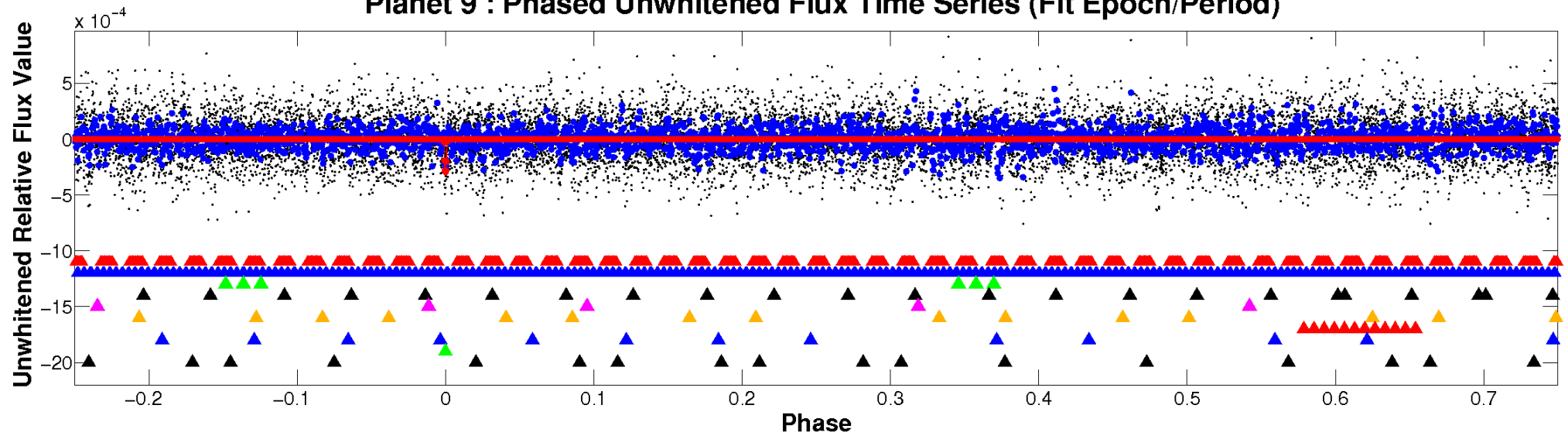
ALT Odd/Even

TCE 005734003-09

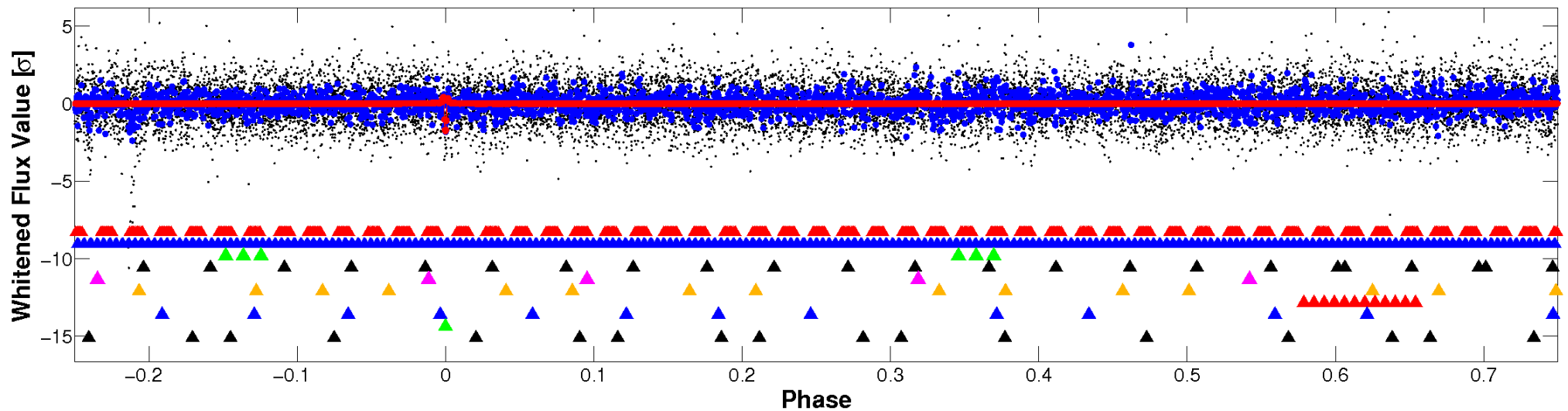


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

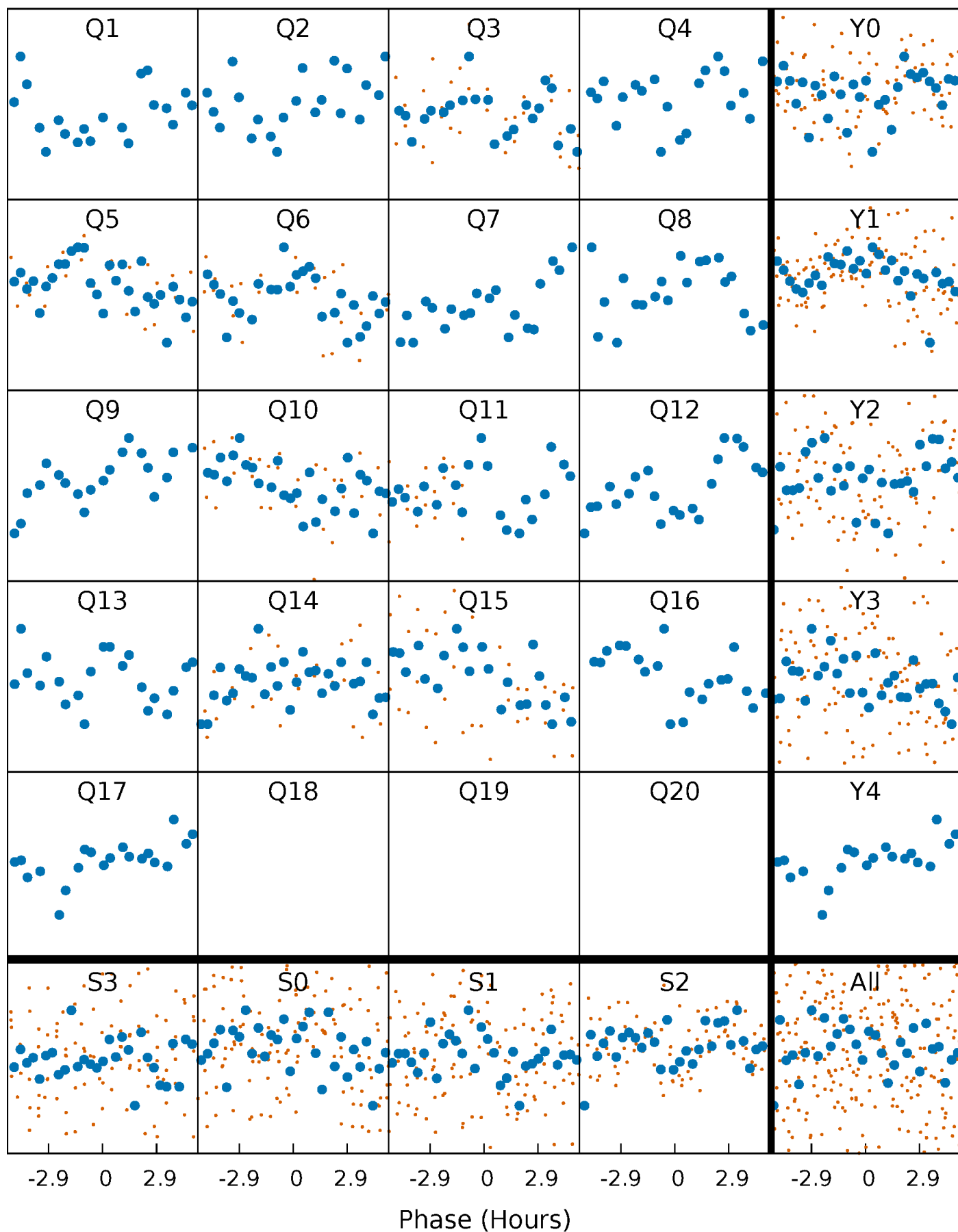


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



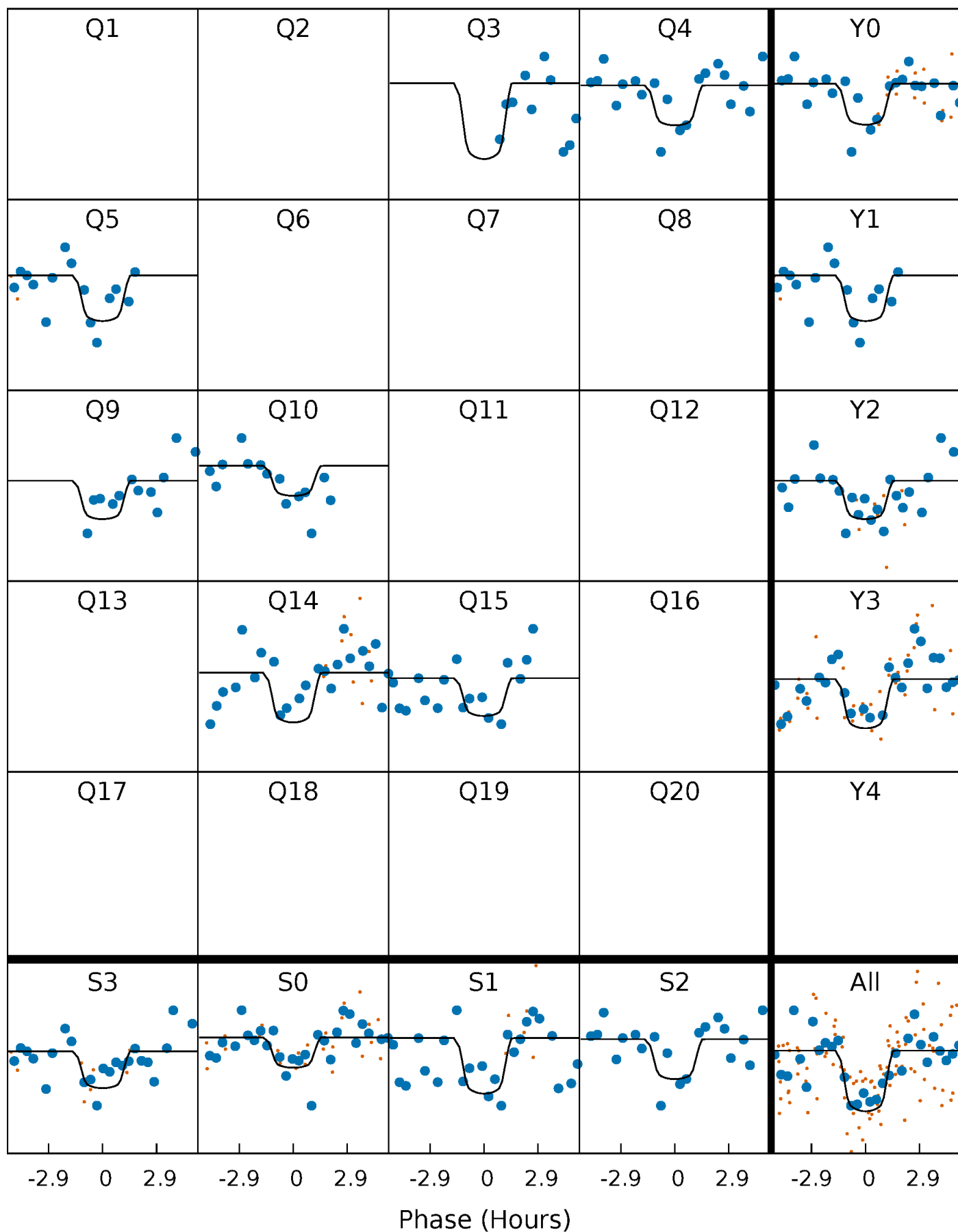
PDC Quarter-Phased Transit Curves

TCE 005734003-09 P= 58.926888 Days $T_0=155.543918$ (BKJD)



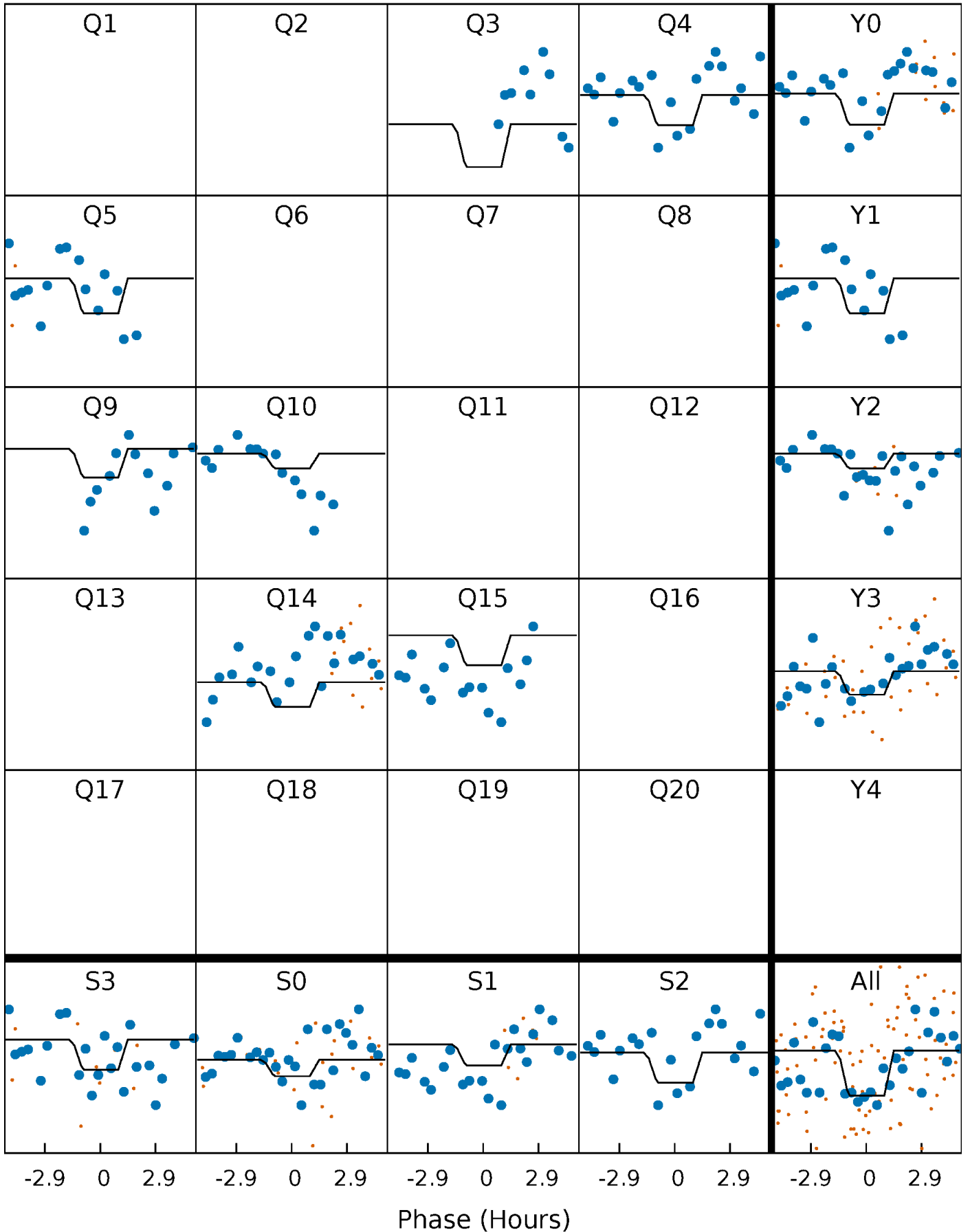
DV Quarter-Phased Transit Curves

TCE 005734003-09 P= 58.926888 Days $T_0=155.543918$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

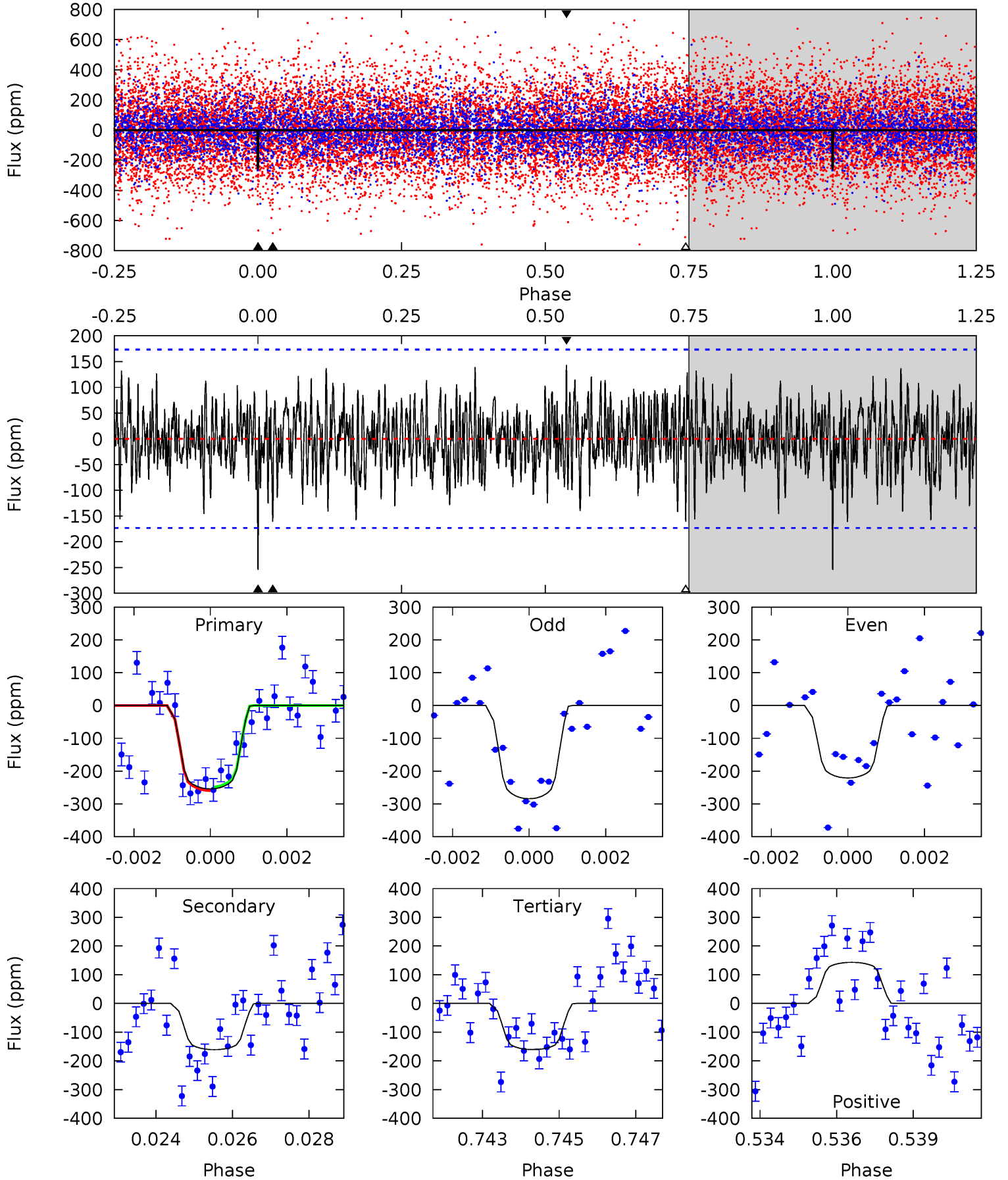
TCE 005734003-09 P= 58.926796 Days $T_0=155.545990$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-09, P = 58.926888 Days, E = 96.617030 Days

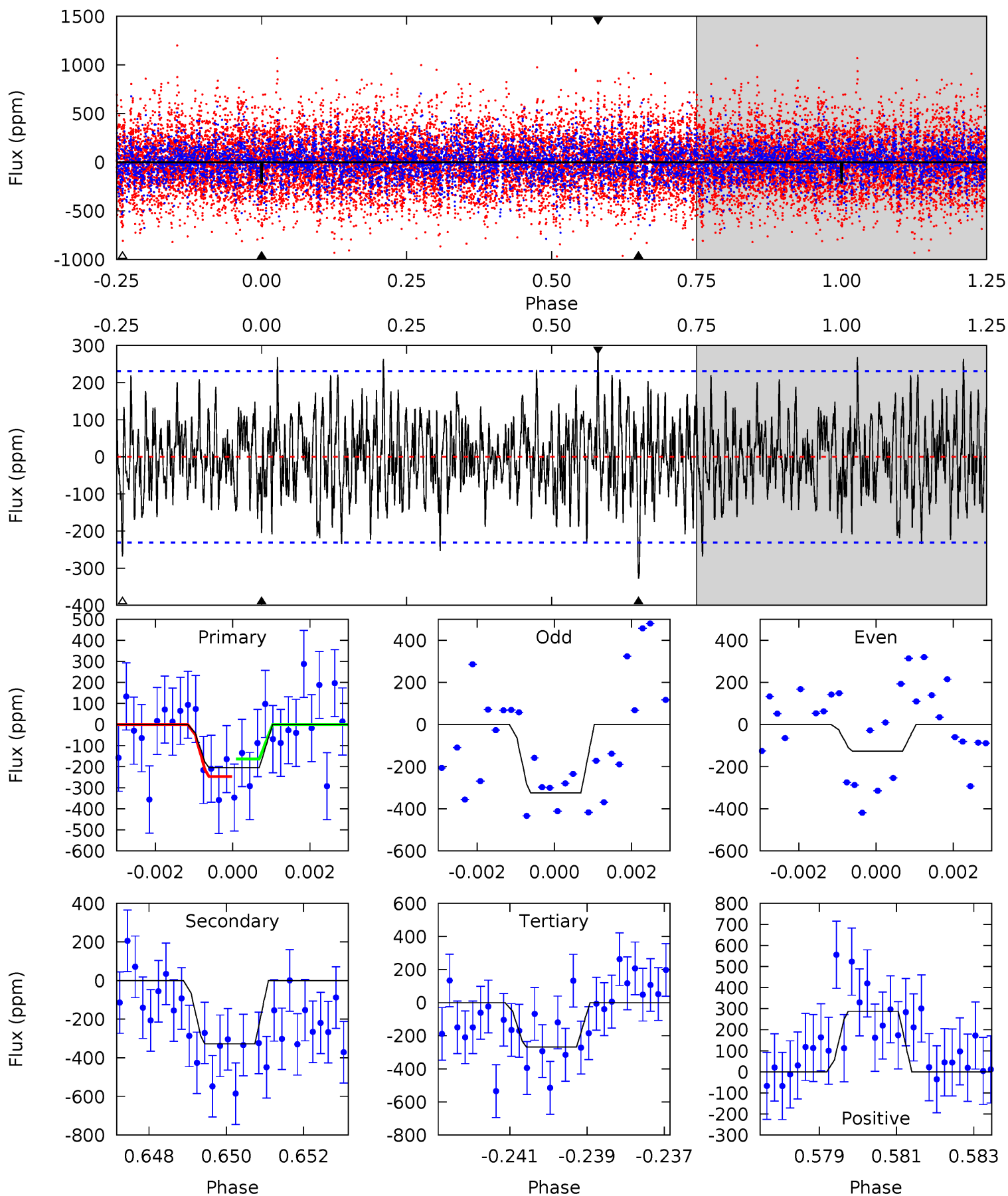
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.82	4.95	4.94	4.40	5.32	3.09	1.56	2.88	3.42	0.01	0.55	0.97	0.97	0.36	0.16



Alt Model-Shift Uniqueness Test

005734003-09, P = 58.926796 Days, E = 96.619194 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.73	7.56	6.19	6.62	5.33	3.09	2.01	-1.46	-1.89	1.38	0.95	2.31	0.99	0.47	0.97



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-161 ± 33	$5.03^{+3.60}_{-3.06}$	1167^{+88}_{-102}	5749^{+4178}_{-1128}	441^{+2341}_{-299}
Alt.	-328 ± 43	$4.26^{+3.23}_{-2.72}$	1167^{+81}_{-107}	7555^{+8269}_{-1925}	1263^{+7394}_{-870}

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

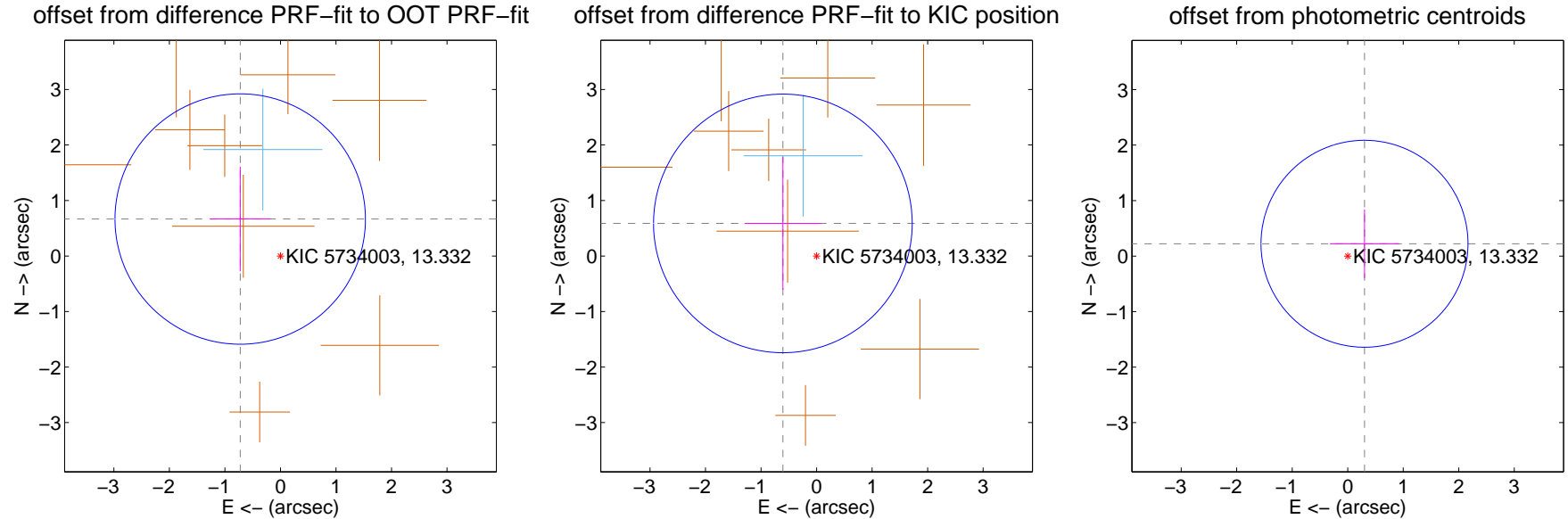
DV Centroid Data

Supplemental centroid analysis for 005734003-09. Kepler magnitude: 13.33. Transit SNR 8.79

There are 1 quarters with good PRF difference image offsets

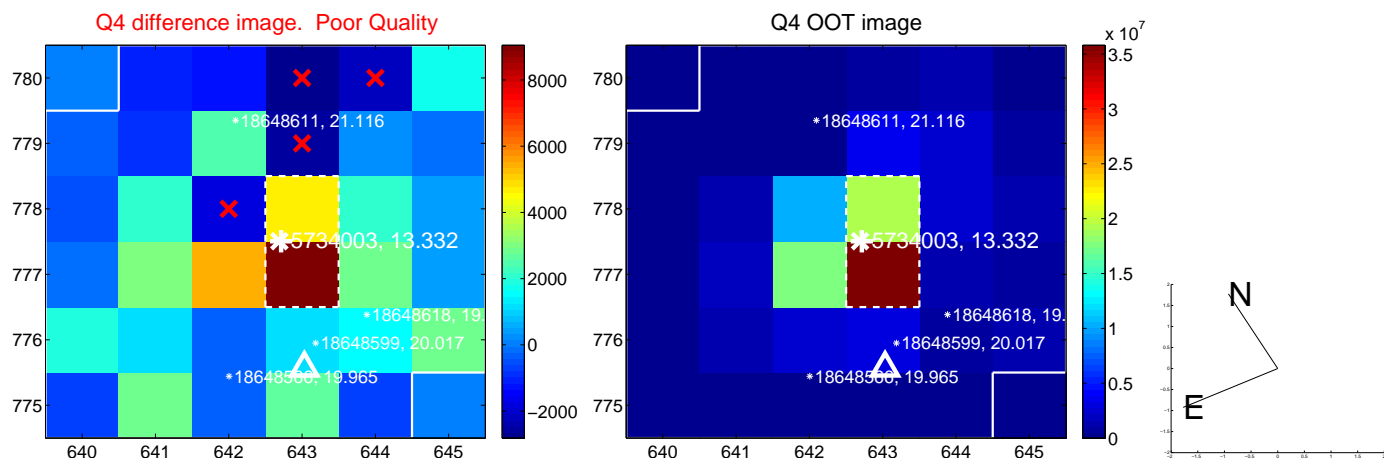
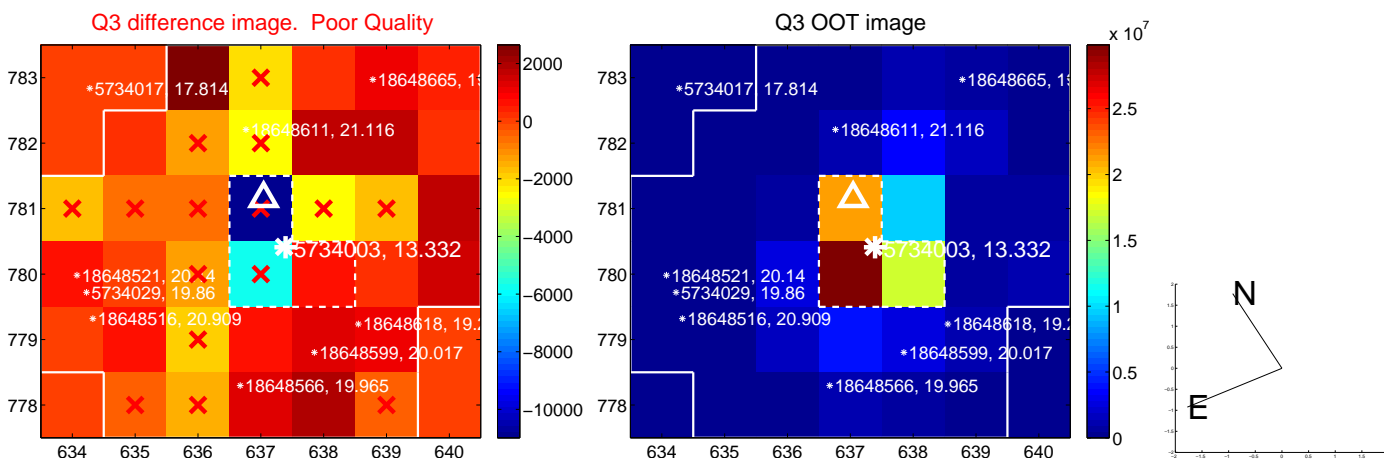
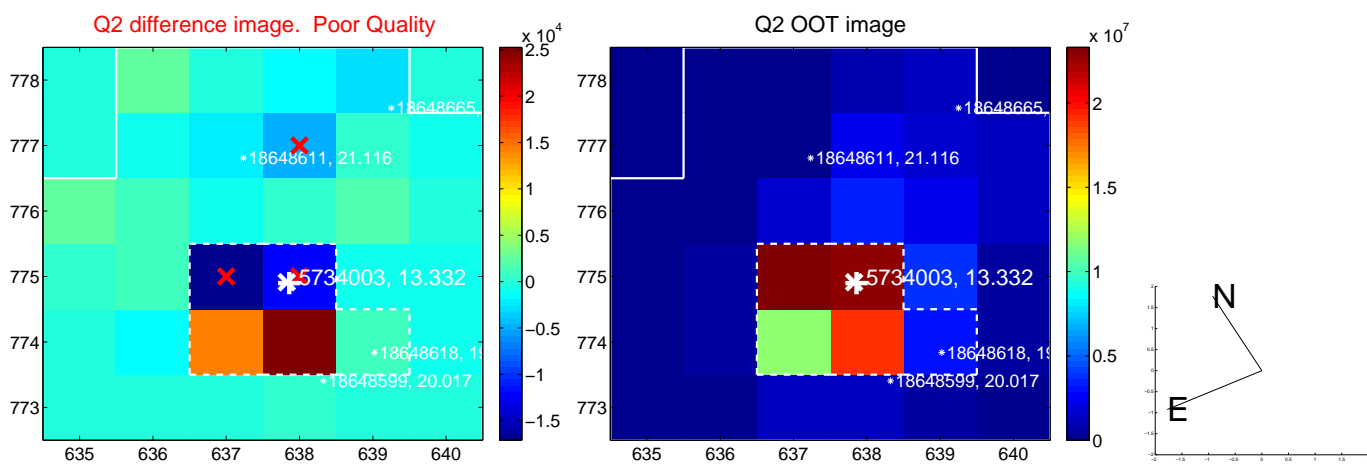
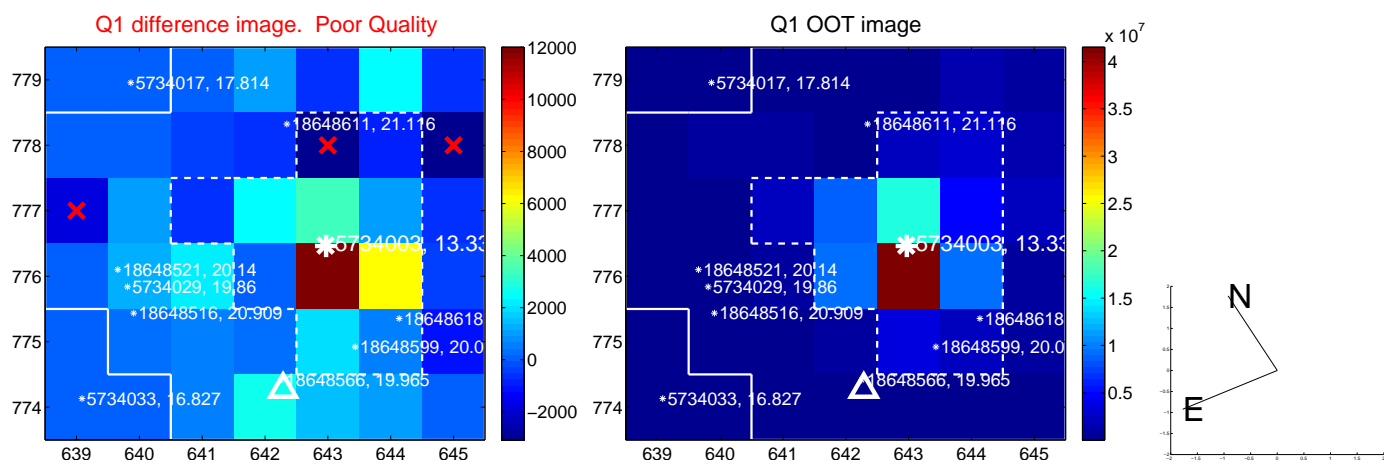
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.984 ± 0.752	1.31	0.725 ± 0.539	0.666 ± 0.943
PRF-fit source offset from KIC position	0.845 ± 0.776	1.09	0.607 ± 0.689	0.588 ± 1.196
photometric centroid source offset	0.38 ± 0.62	0.60	-0.30 ± 0.62	0.22 ± 0.62

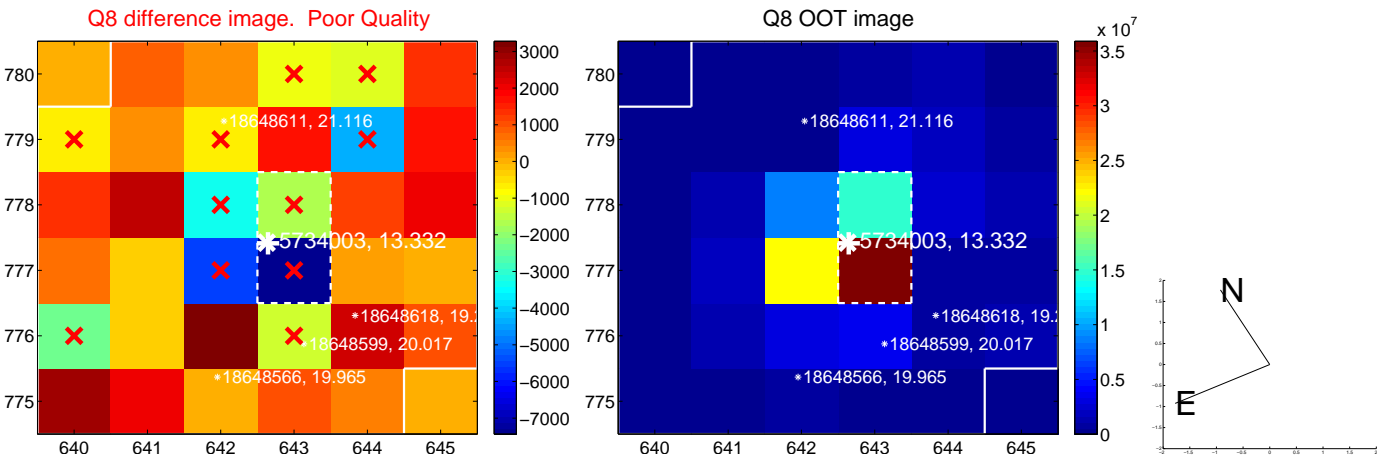
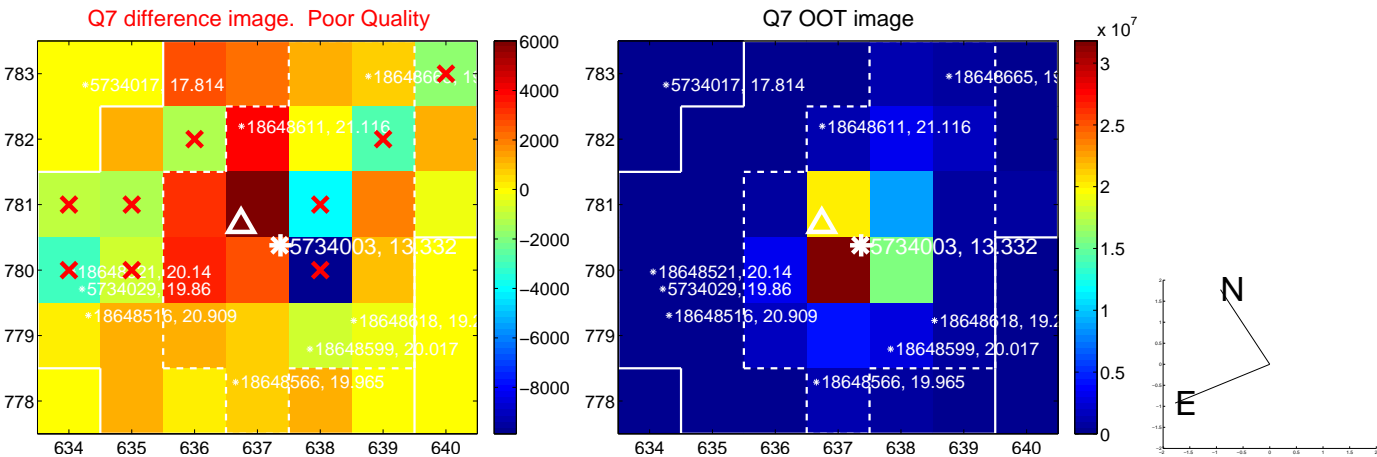
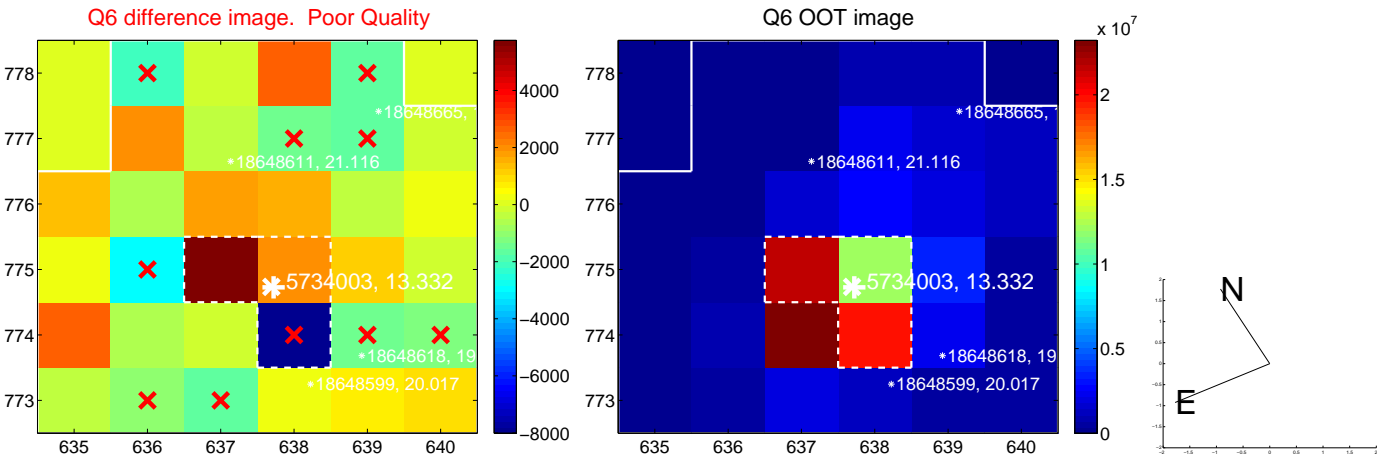
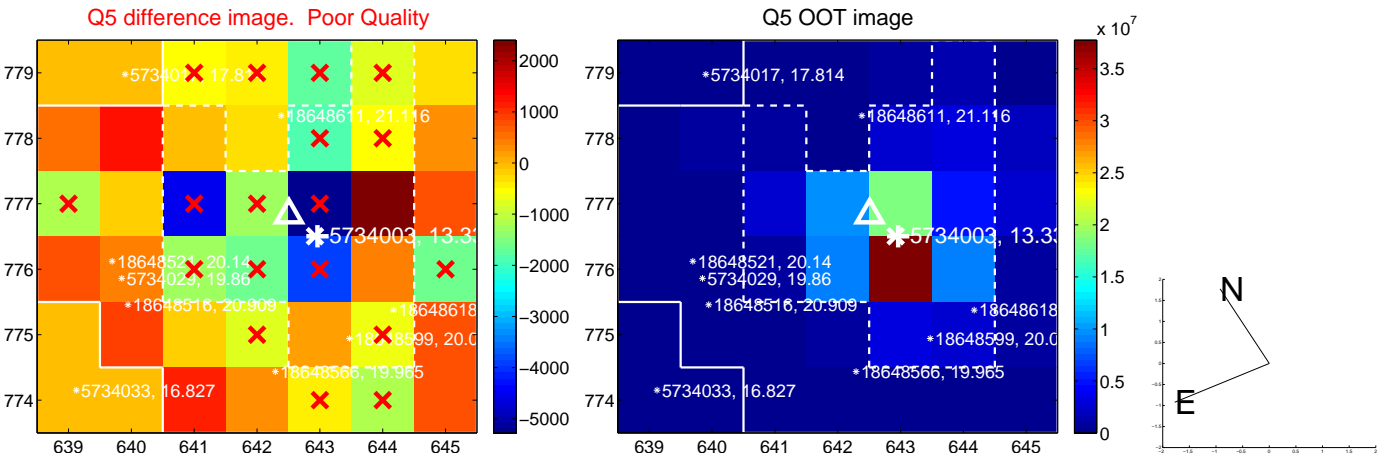


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

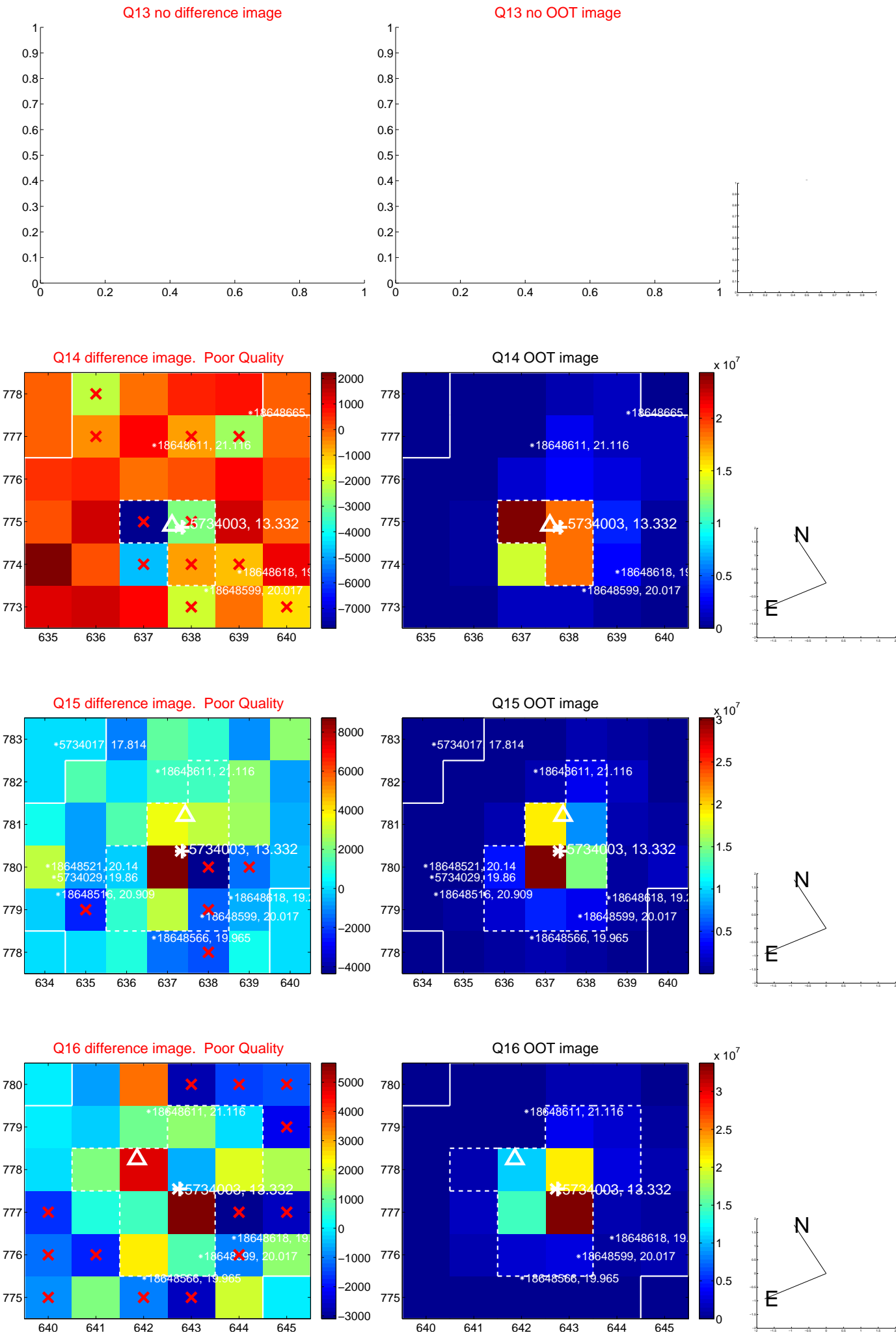
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



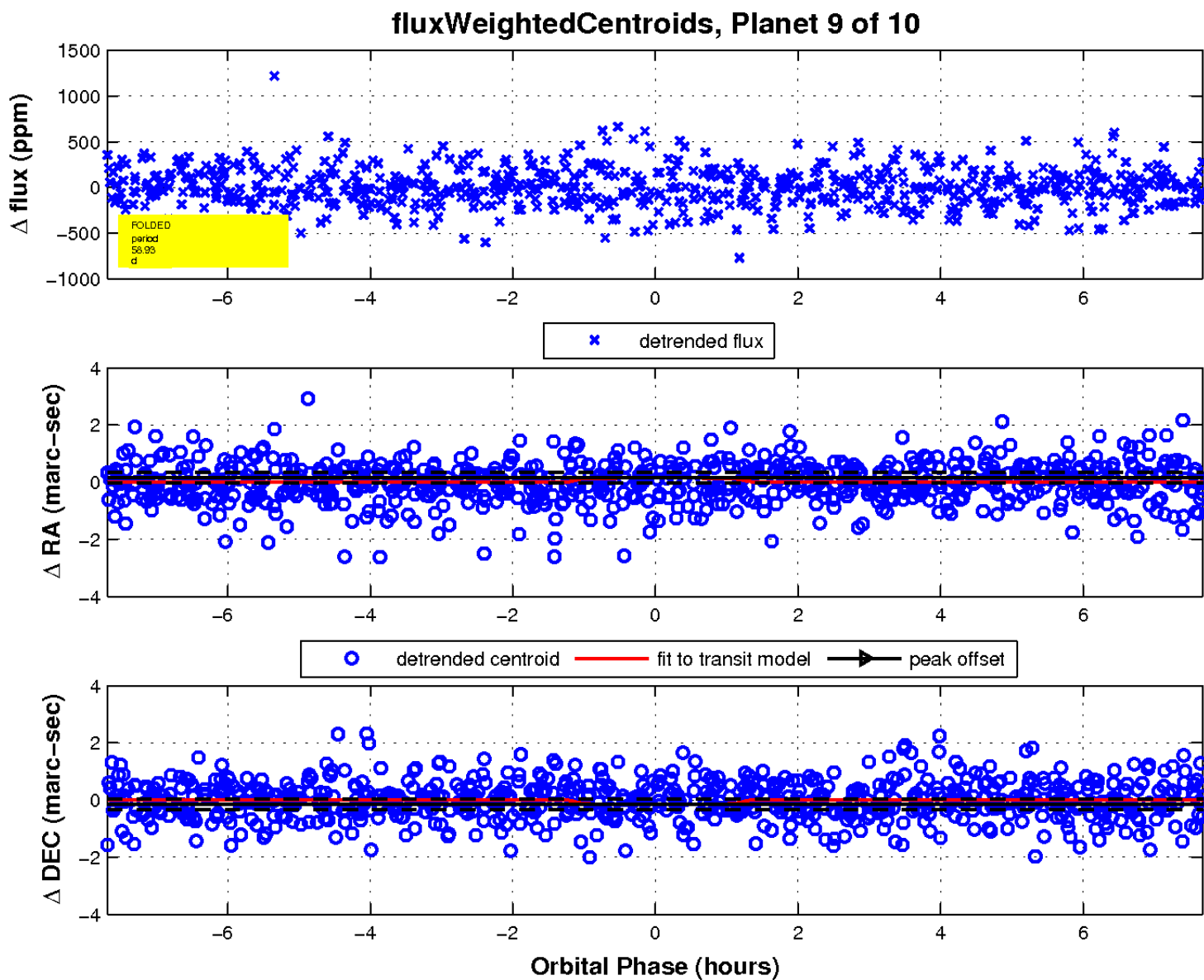
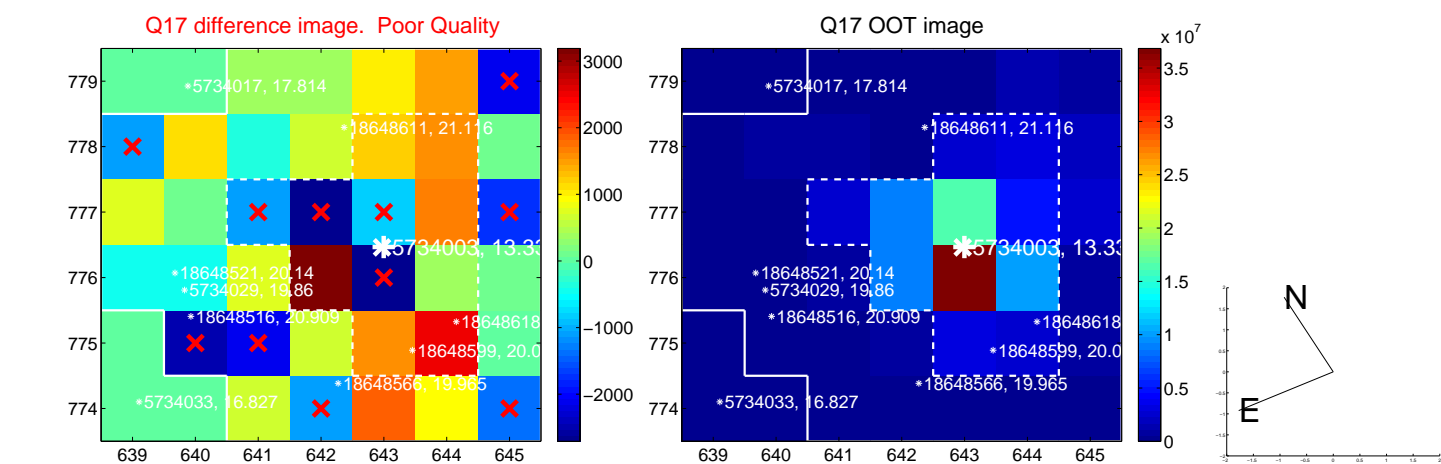
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

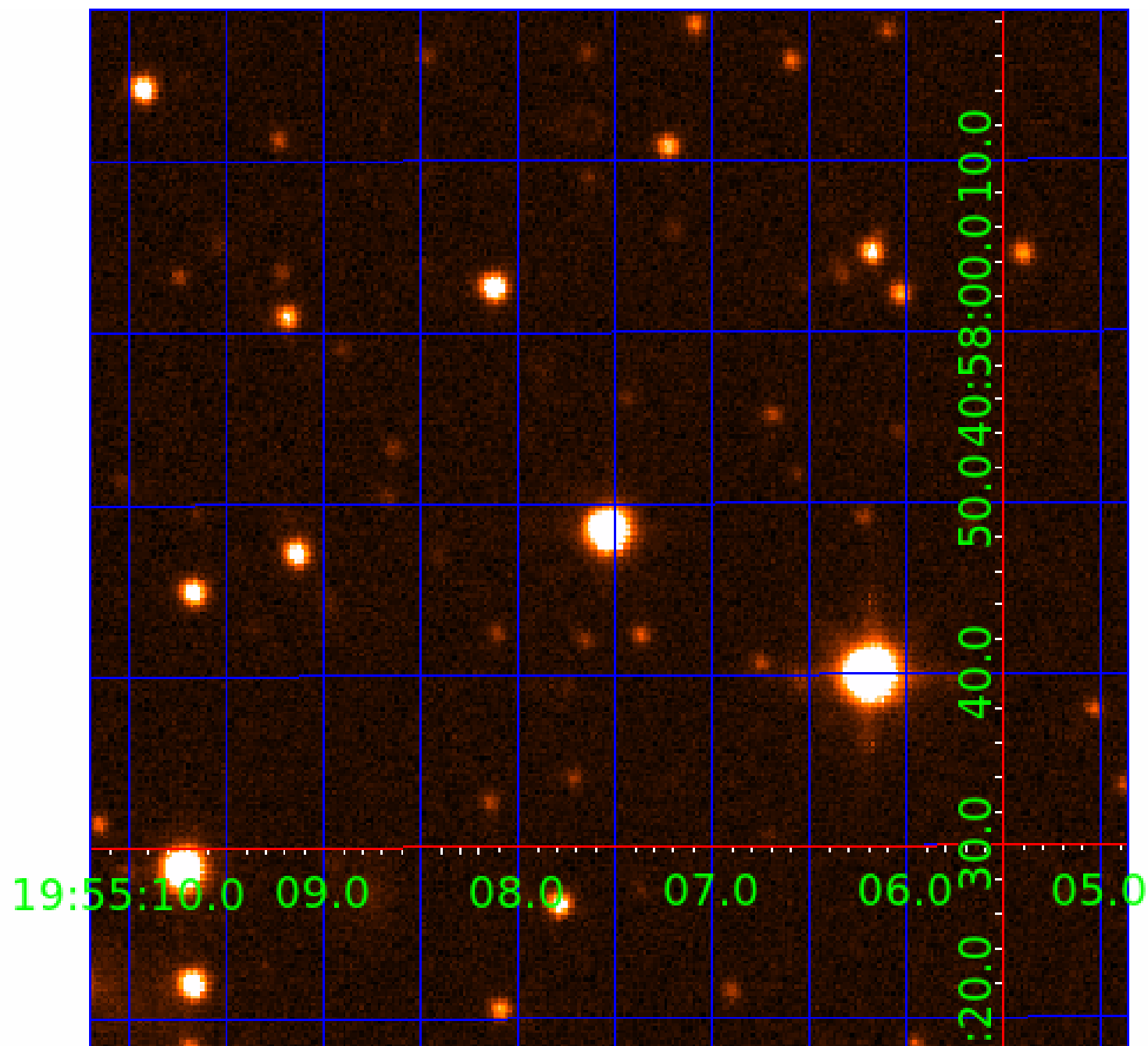


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005734003

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})
005734003-01	OBS	No	3.536905	132.381128	43.0	5.664	7.9	7.3	2.39	7495	1.78	5369.83
005734003-02	OBS	No	2.023345	133.318927	27.8	11.458	7.8	7.7	2.39	7495	1.33	11307.46
005734003-03	OBS	No	264.820843	266.066747	509.9	3.185	9.5	9.5	2.39	7495	6.17	17.02
005734003-04	OBS	No	64.525687	132.347423	263.4	5.260	8.5	8.0	2.39	7495	4.31	111.81
005734003-05	OBS	No	307.792226	337.951078	374.2	10.605	9.1	9.0	2.39	7495	5.07	13.93
005734003-06	OBS	No	100.641288	153.293039	306.9	10.305	8.6	9.4	2.39	7495	4.51	61.81
005734003-07	OBS	No	118.257115	248.574597	465.8	3.330	8.6	9.1	2.39	7495	9.77	49.85
005734003-08	OBS	No	106.800792	221.656555	466.2	2.300	8.2	8.7	2.39	7495	5.98	57.11
005734003-09	OBS	No	58.926888	155.543918	295.4	2.563	8.4	8.8	2.39	7495	4.67	126.19
005734003-10	OBS	No	85.574457	205.928759	375.4	3.387	7.8	8.5	2.39	7495	5.33	76.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005734003-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005734003-02	OBS	FP	0.00	1	0	0	0	LPP_DV
005734003-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
005734003-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005734003-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005734003-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005734003-10	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

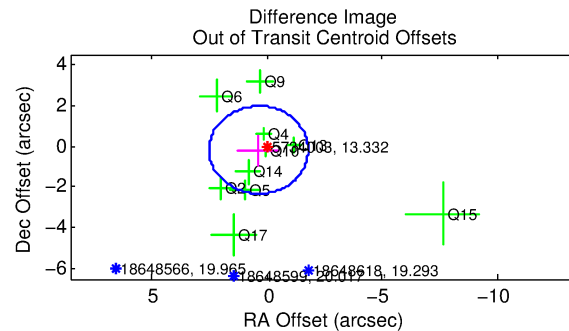
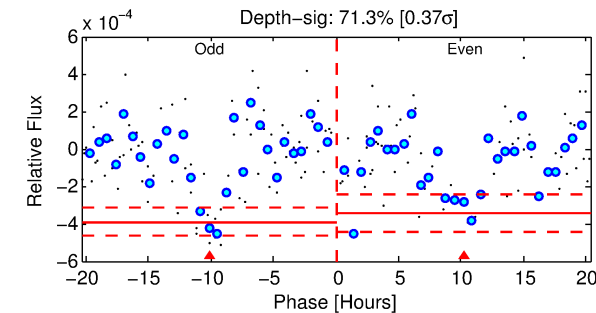
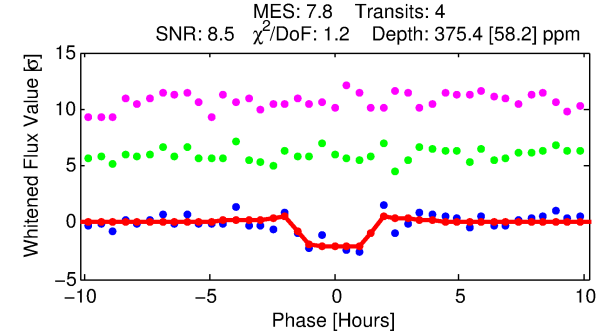
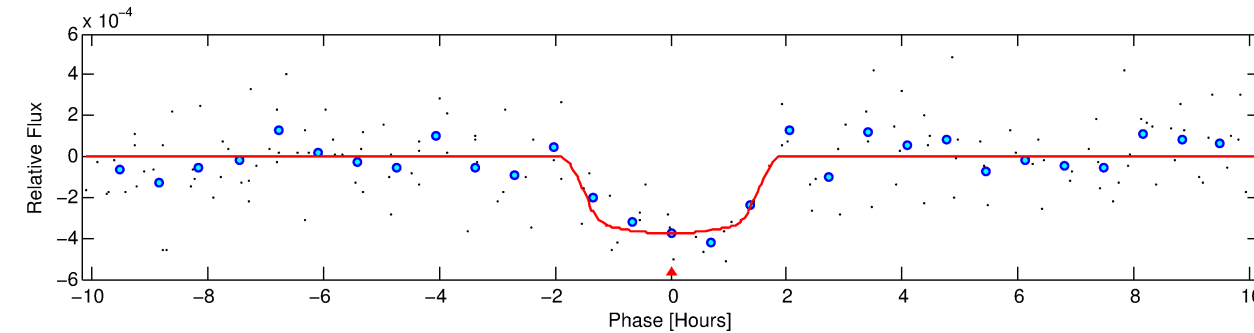
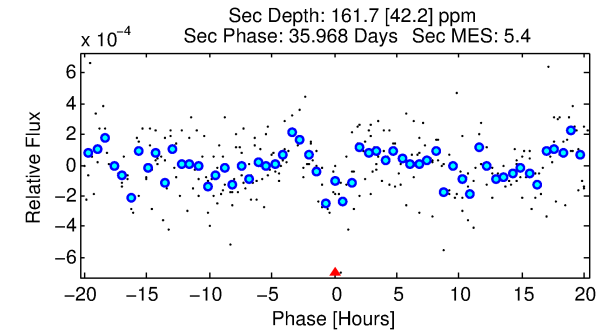
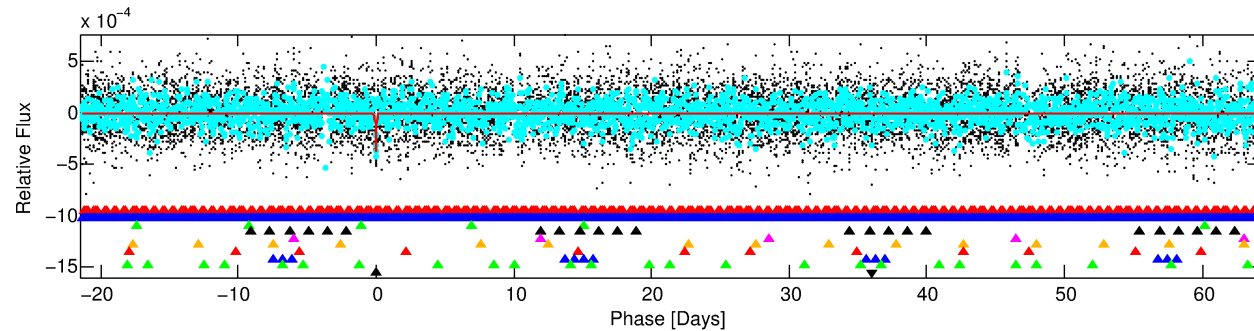
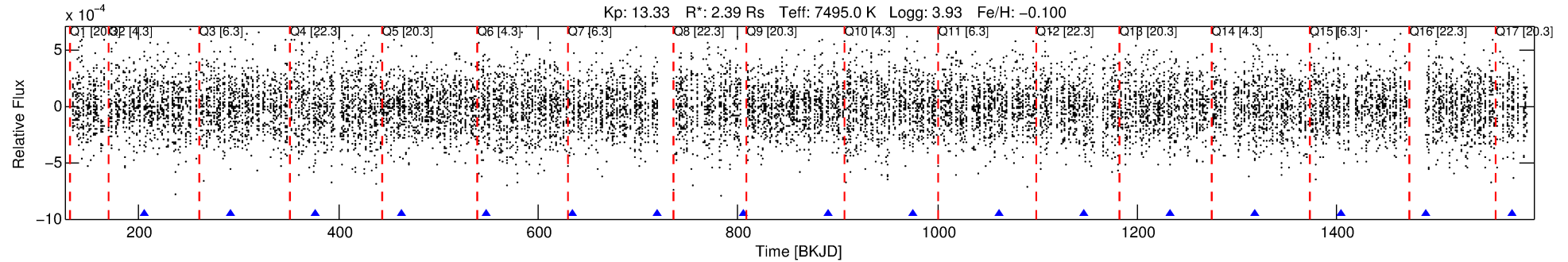
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005734003-10

No Significant Match Found

DV One-Page Summary

KIC: 5734003 Candidate: 10 of 10 Period: 85.574 d



DV Fit Results:

Period = 85.57446 [0.00084] d
Epoch = 205.9288 [0.0085] BKJD
Rp/R* = 0.0205 [0.0169]
a/R* = 95.44 [509.40]
b = 0.89 [1.22]
Seff = 76.74 [40.38]
Teq = 755 [99] K
Rp = 5.33 [4.76] Re
a = 0.4586 [0.1438] AU
Ag = 657.63 [1148.00] [0.57σ]
Teffp = 5909 [2488] K [2.07σ]

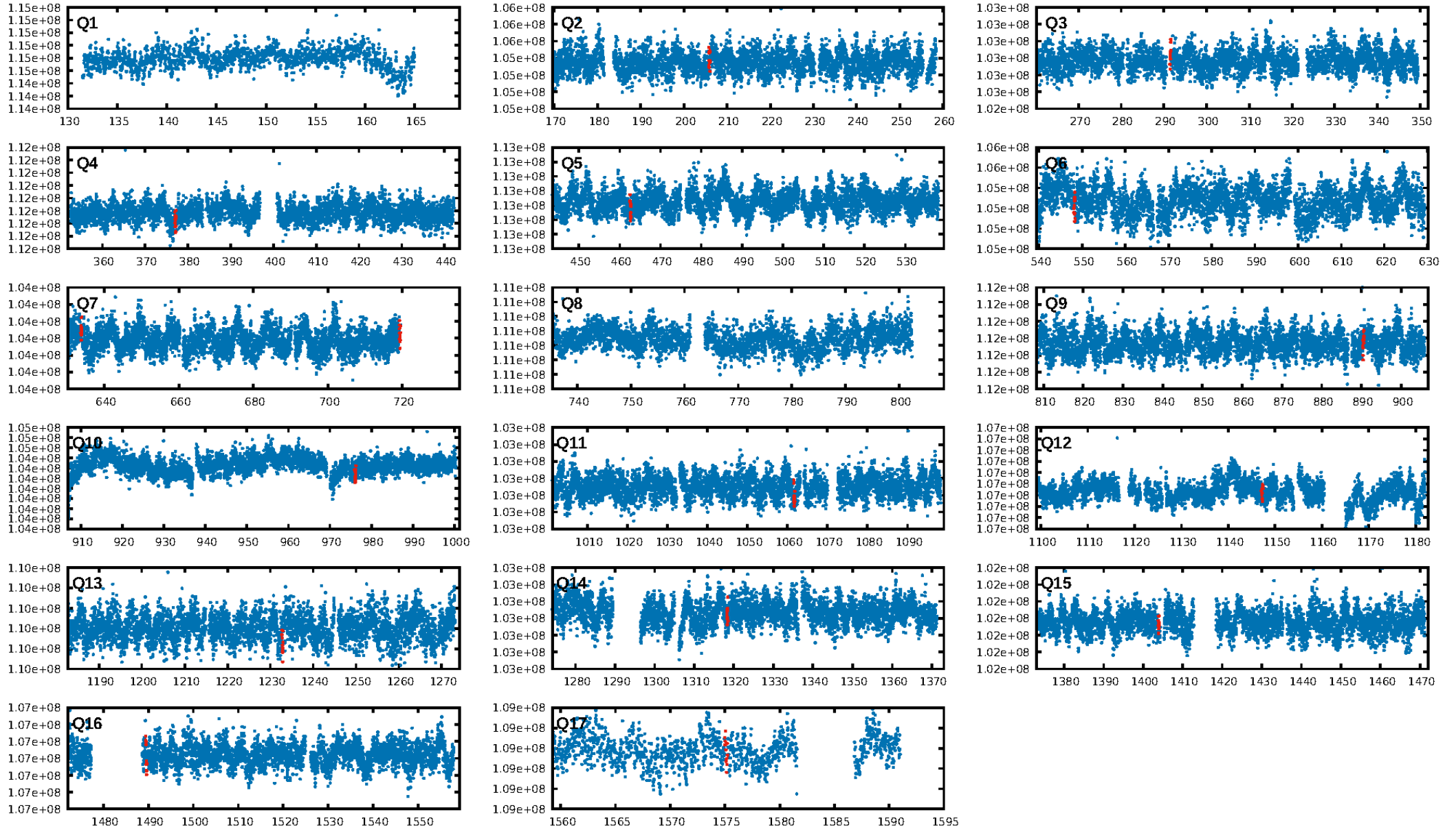
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.75σ]
LongPeriod-sig: 100.0% [33.34σ]
ModelChiSquare2-sig: 98.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1045
Centroid-sig: 31.9%
Centroid-so: 0.884 arcsec [1.60σ]
OotOffset-rm: 0.403 arcsec [0.56σ]
KicOffset-rm: 0.351 arcsec [0.53σ]
OotOffset-st: 4/1/1/4 [10]
KicOffset-st: 4/1/1/4 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.33 [4/12]

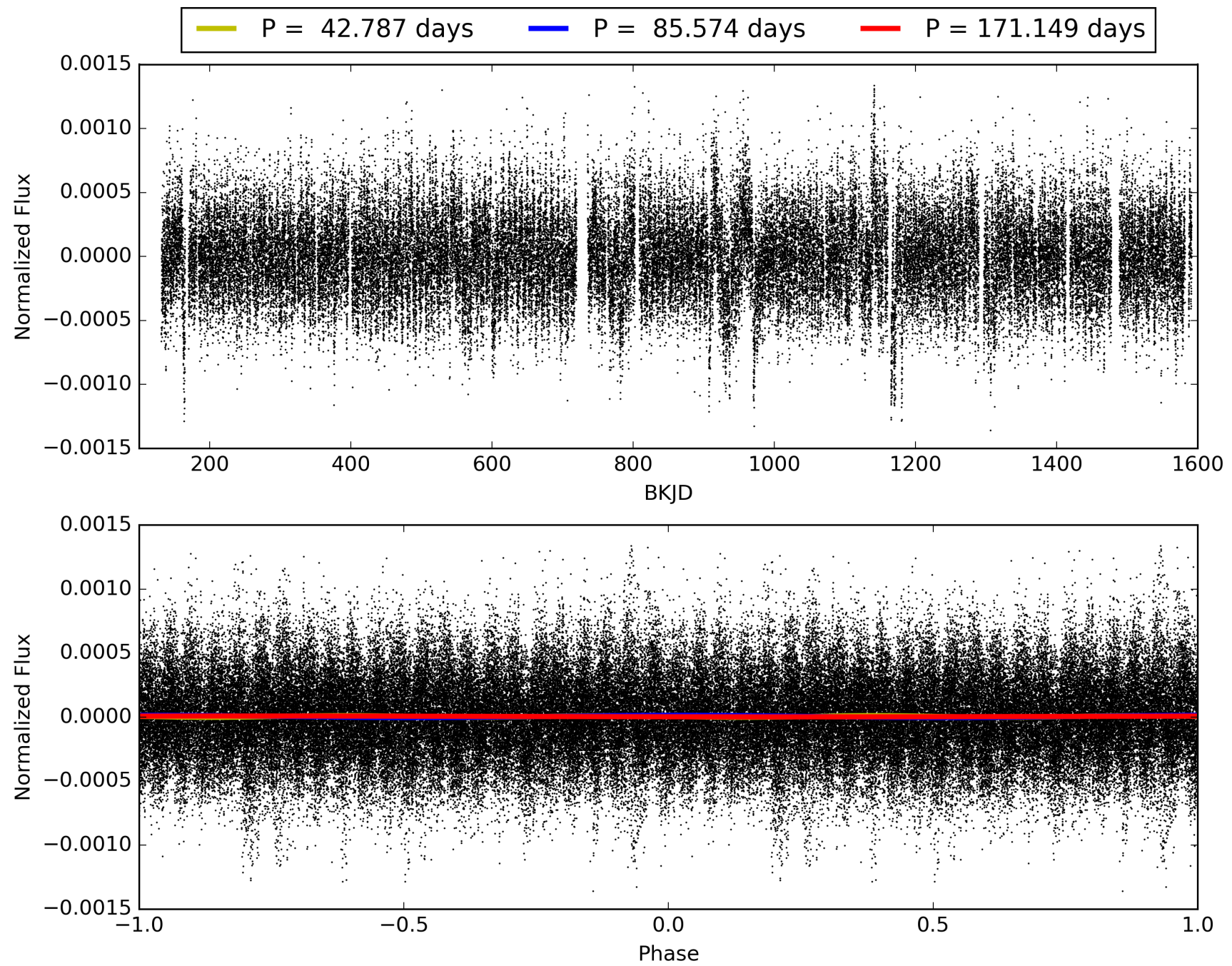
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:33:28 Z

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

TCE 005734003-10, PDC Light Curves

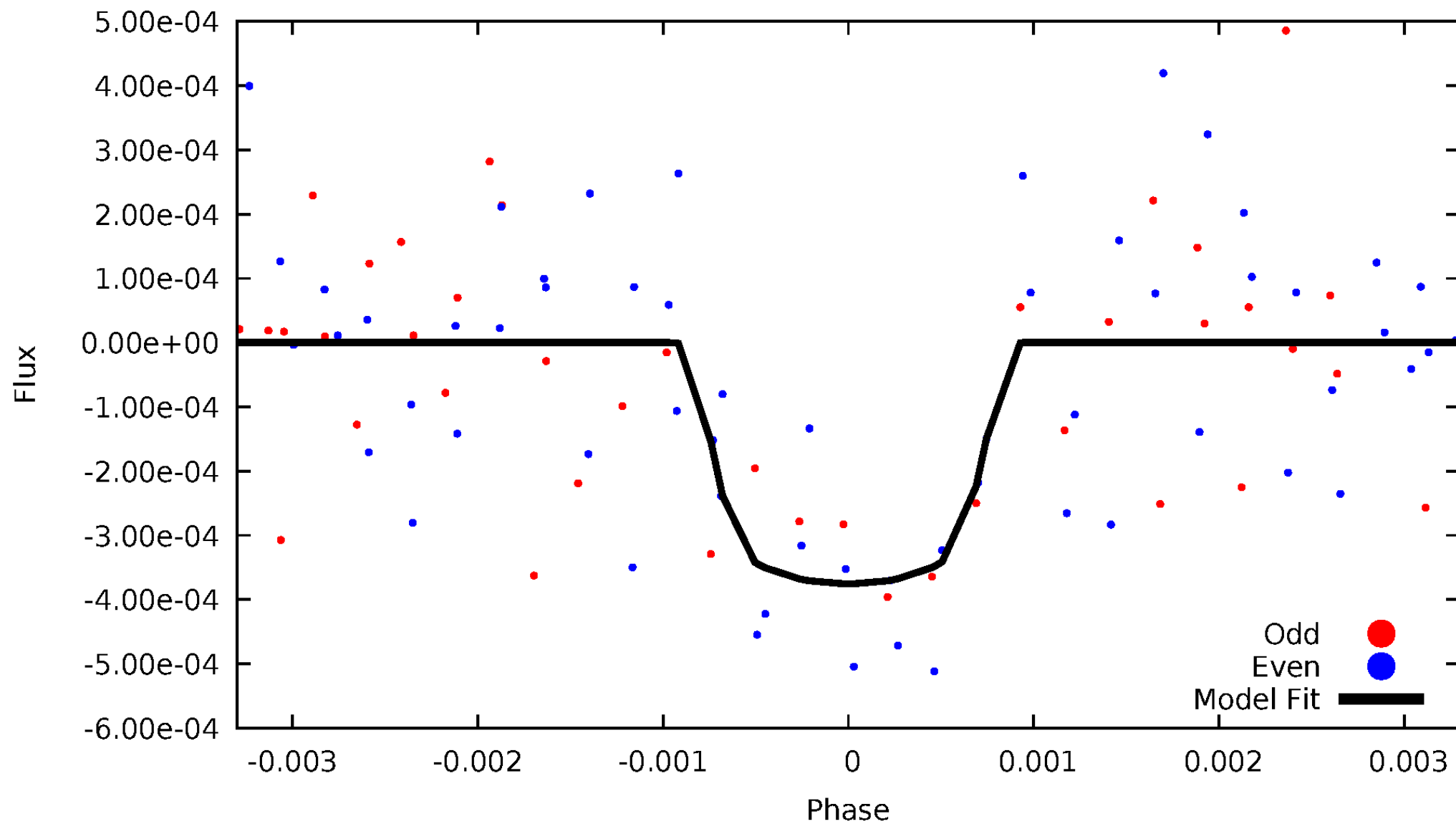


TCE 005734003-10



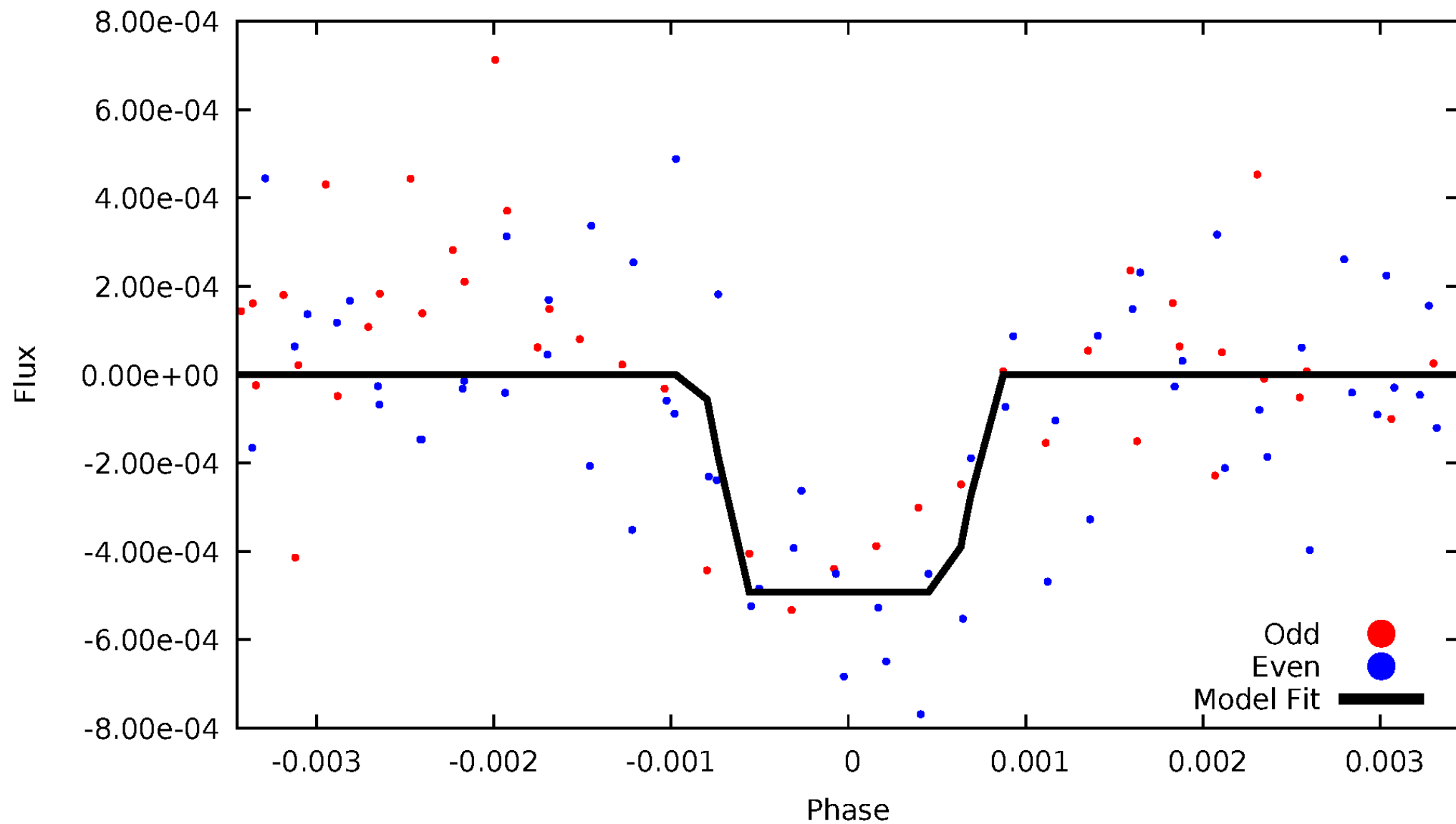
DV Odd/Even

TCE 005734003-10



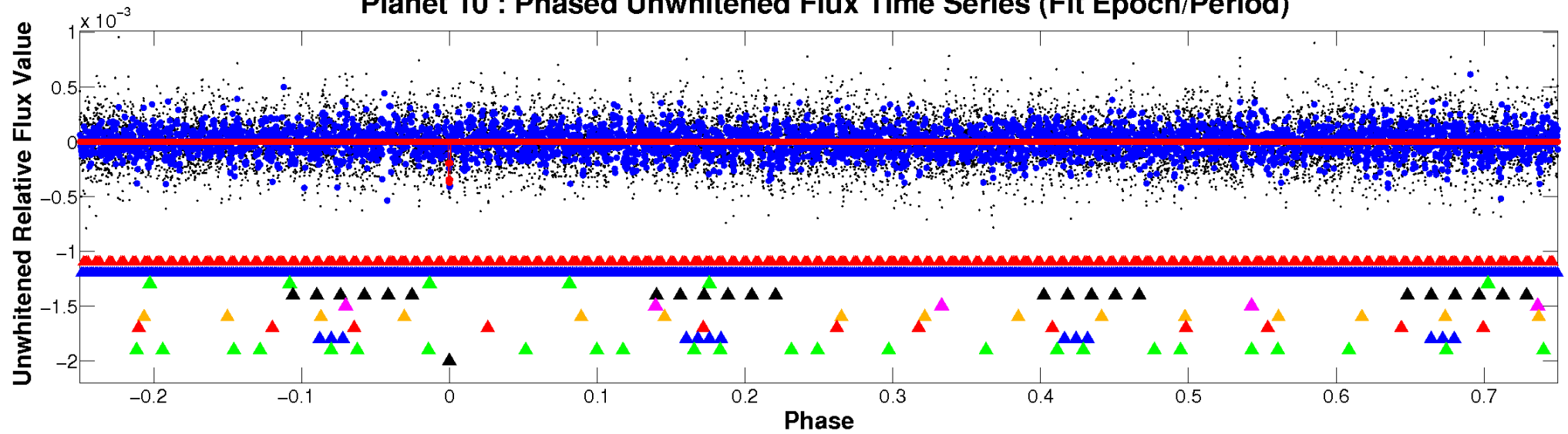
ALT Odd/Even

TCE 005734003-10

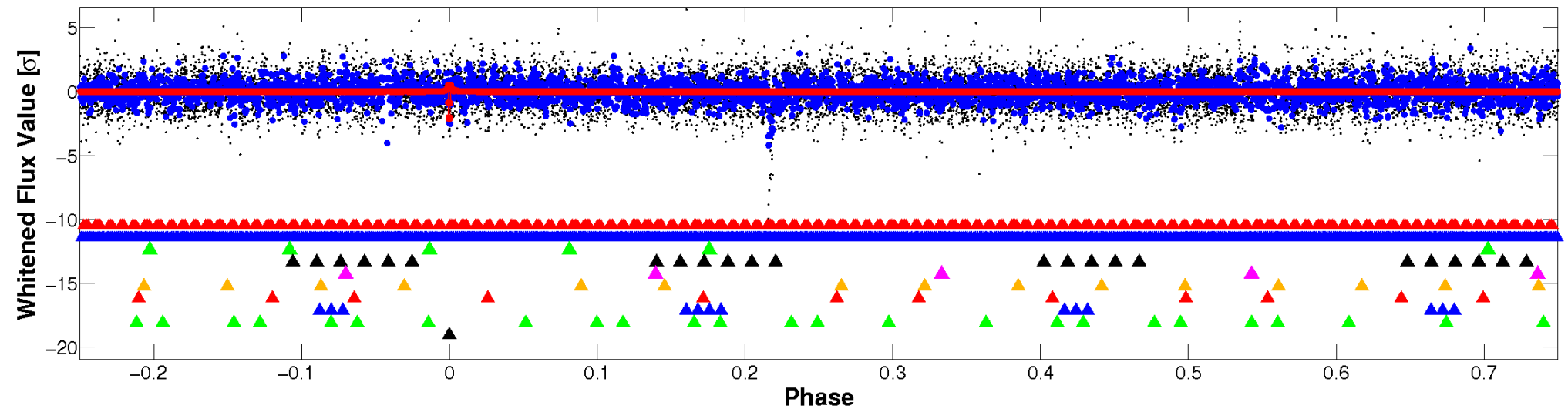


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

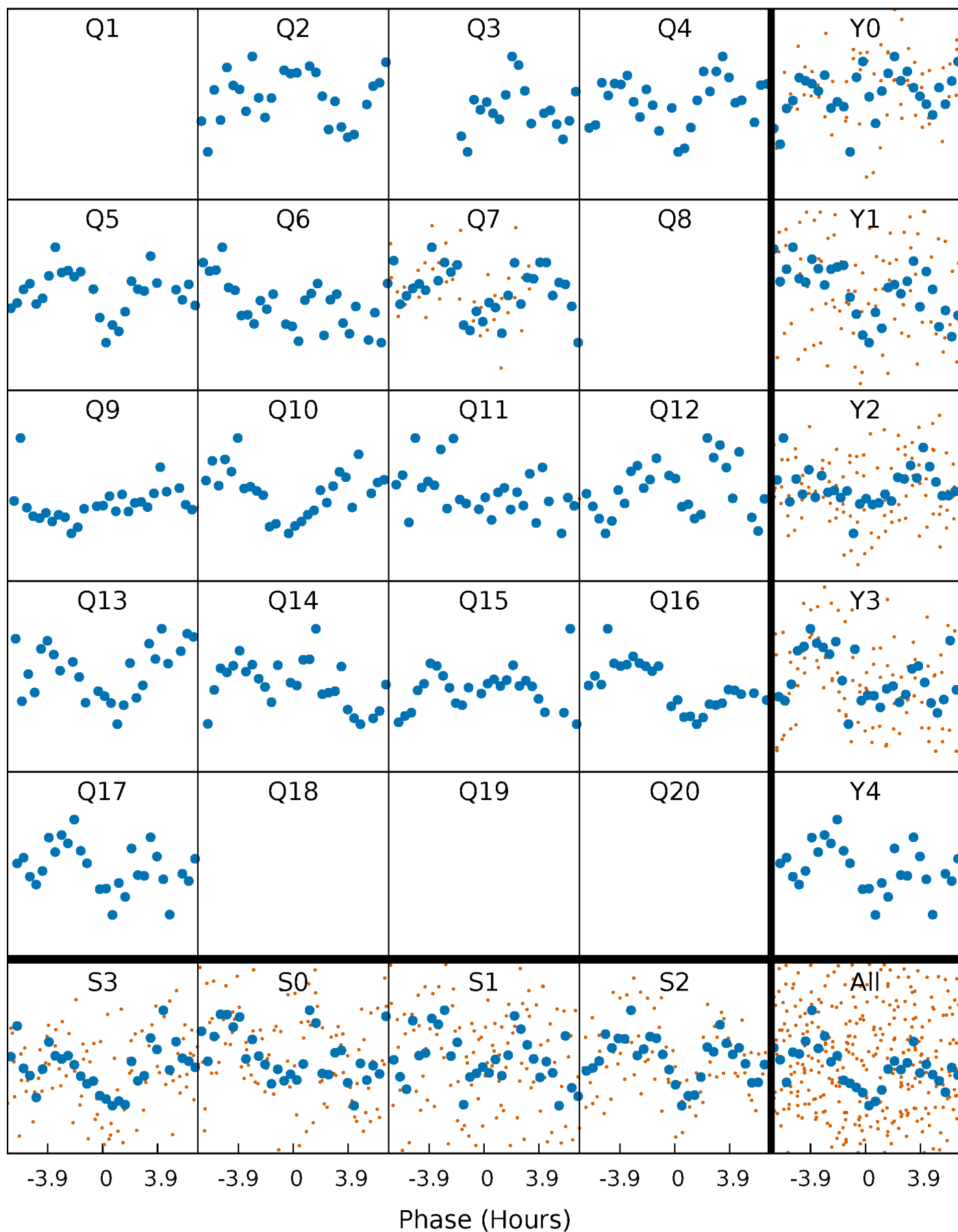


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



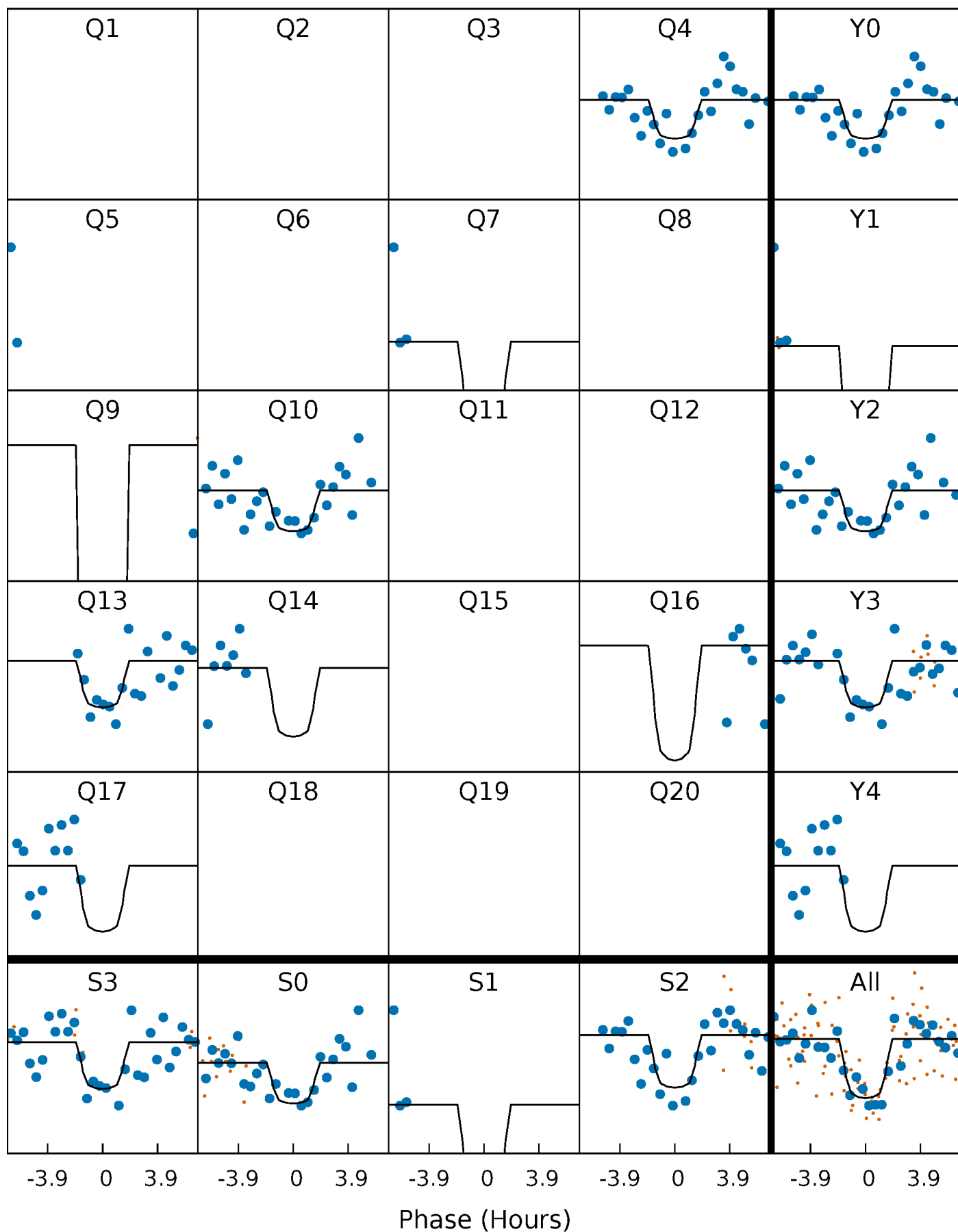
PDC Quarter-Phased Transit Curves

TCE 005734003-10 P= 85.574457 Days $T_0=205.928759$ (BKJD)



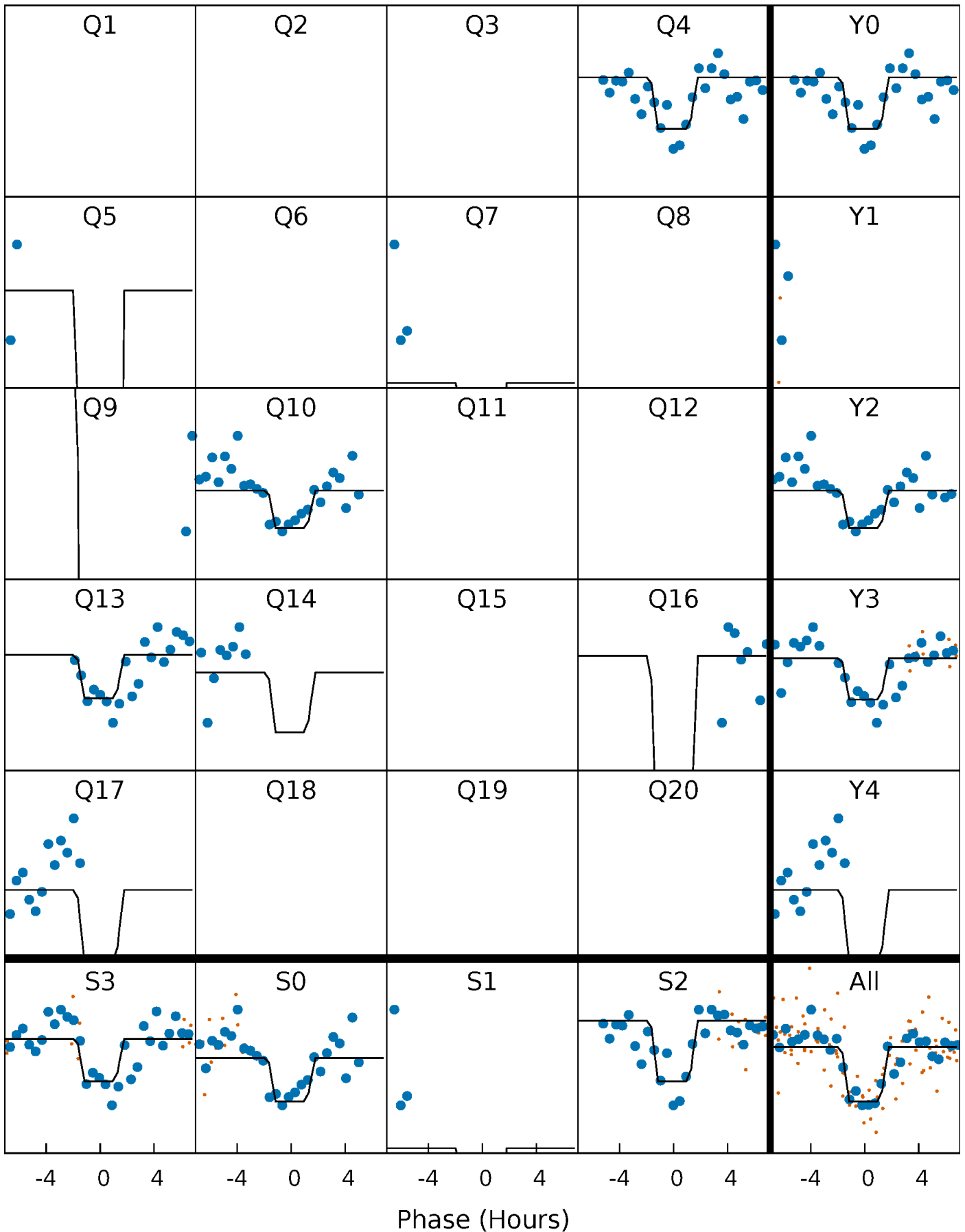
DV Quarter-Phased Transit Curves

TCE 005734003-10 P= 85.574457 Days $T_0=205.928759$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

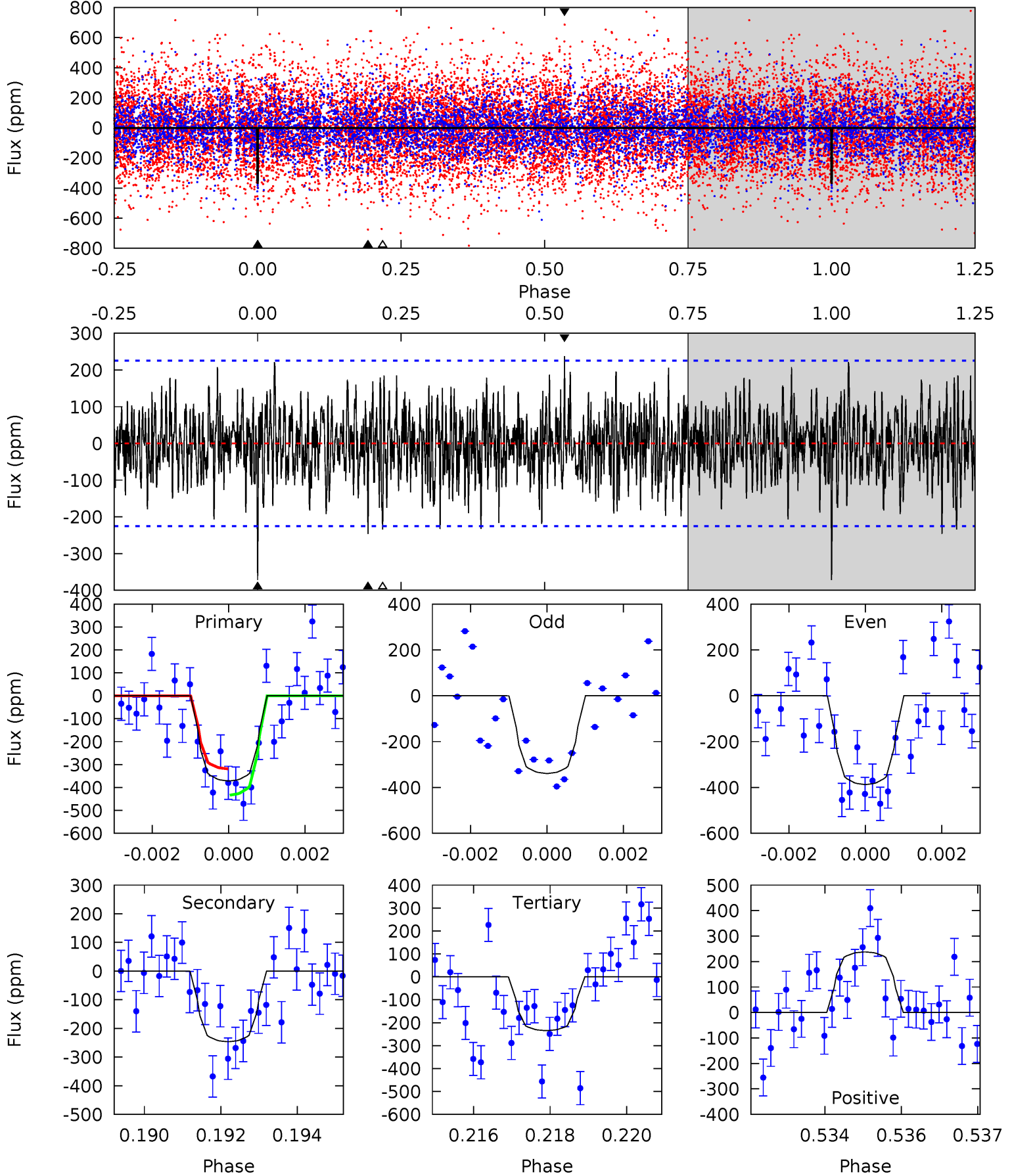
TCE 005734003-10 P= 85.574461 Days $T_0=205.933426$ (BKJD)



DV Model-Shift Uniqueness Test

005734003-10, $P = 85.574457$ Days, $E = 120.354302$ Days

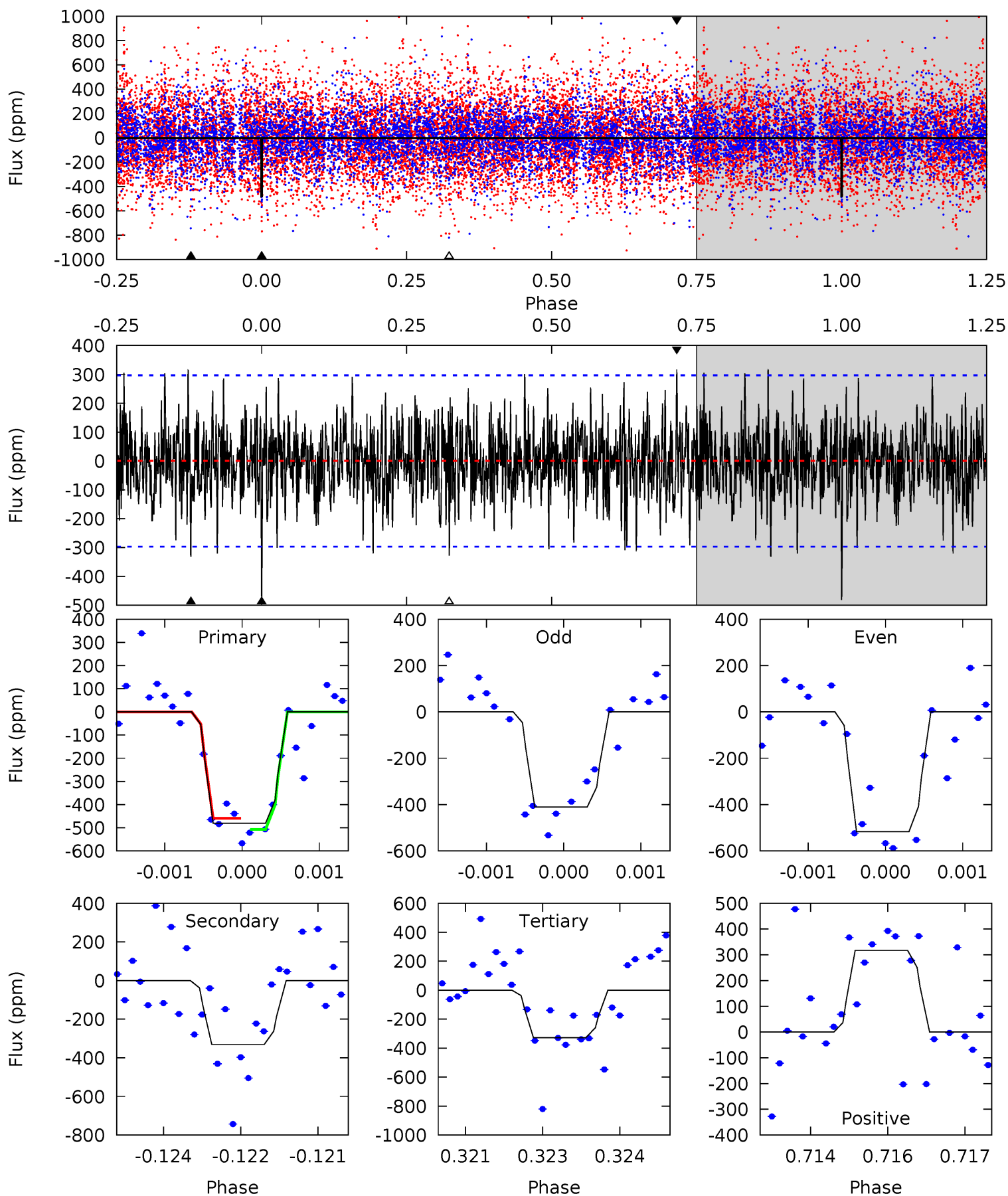
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.81	5.84	5.56	5.63	5.34	3.11	1.71	3.25	3.18	0.28	0.21	0.53	0.87	0.39	1.36



Alt Model-Shift Uniqueness Test

005734003-10, P = 85.574461 Days, E = 120.358965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.72	6.00	5.94	5.75	5.38	3.18	1.77	2.78	2.97	0.07	0.26	0.88	0.98	0.40	0.42



Stellar Parameters For KIC 005734003

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7495^{+209}_{-340}	$3.926^{+0.287}_{-0.123}$	$-0.100^{+0.200}_{-0.350}$	$2.389^{+0.467}_{-0.800}$	$1.754^{+0.167}_{-0.391}$	$0.181^{+0.333}_{-0.071}$
	+3%/-5%	+7%/-3%	+200%/-350%	+20%/-33%	+10%/-22%	+184%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005734003-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-246 ± 42	$5.52^{+4.12}_{-3.33}$	1034^{+69}_{-100}	6147^{+4318}_{-1377}	920^{+4957}_{-617}
Alt.	-331 ± 55	$5.76^{+4.52}_{-3.33}$	1036^{+71}_{-100}	6379^{+4323}_{-1420}	1101^{+4933}_{-762}

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

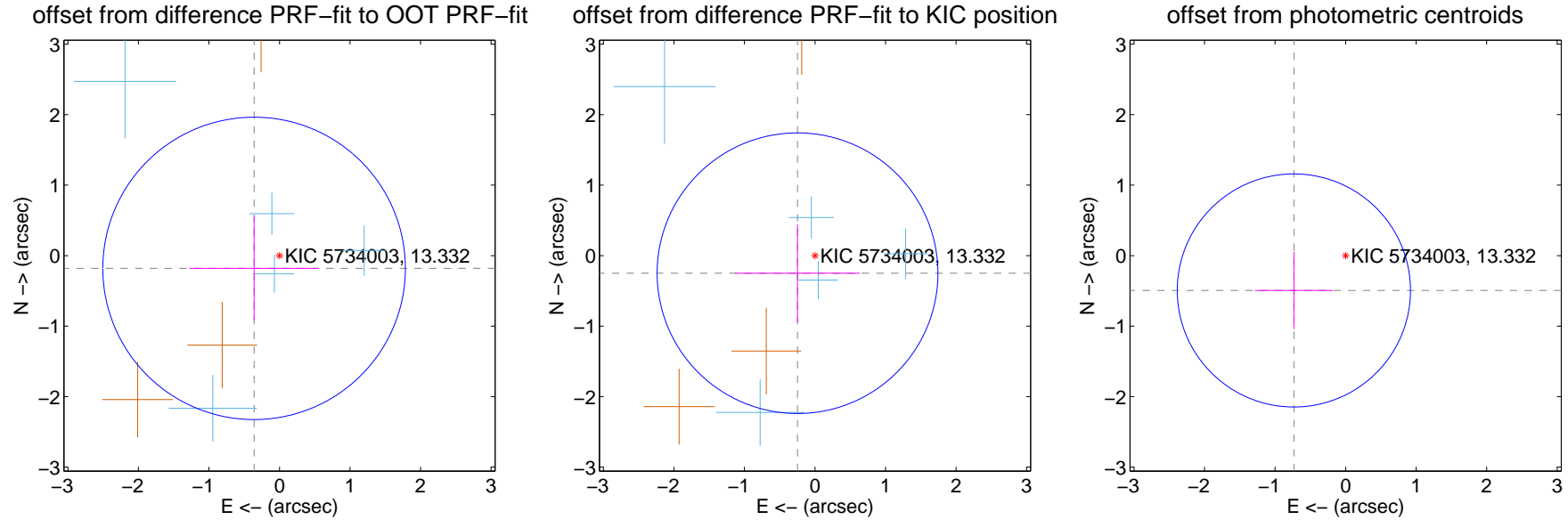
DV Centroid Data

Supplemental centroid analysis for 005734003-10. Kepler magnitude: 13.33. Transit SNR 8.48

There are 5 quarters with good PRF difference image offsets

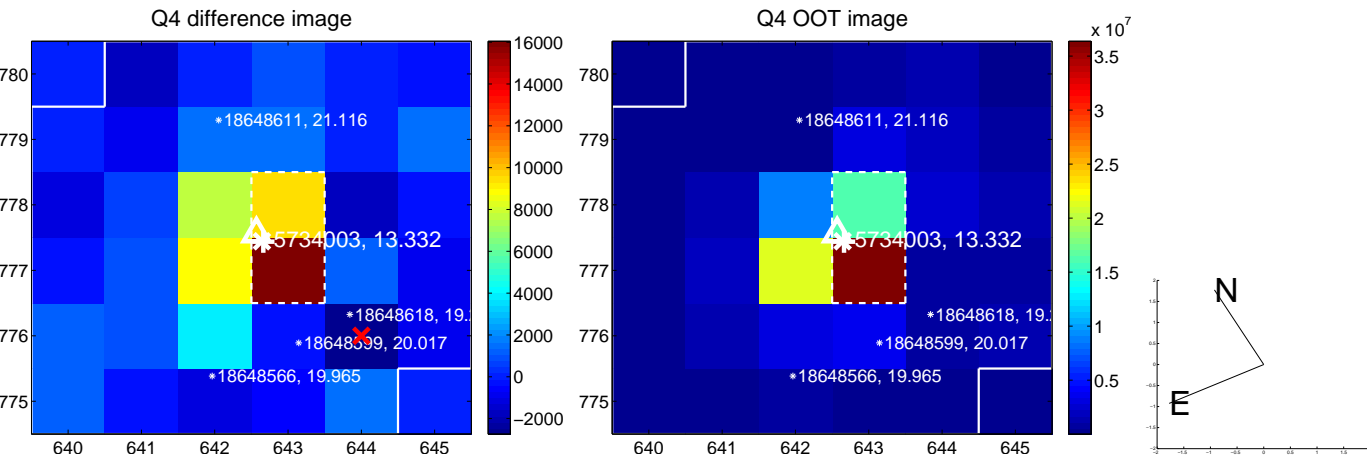
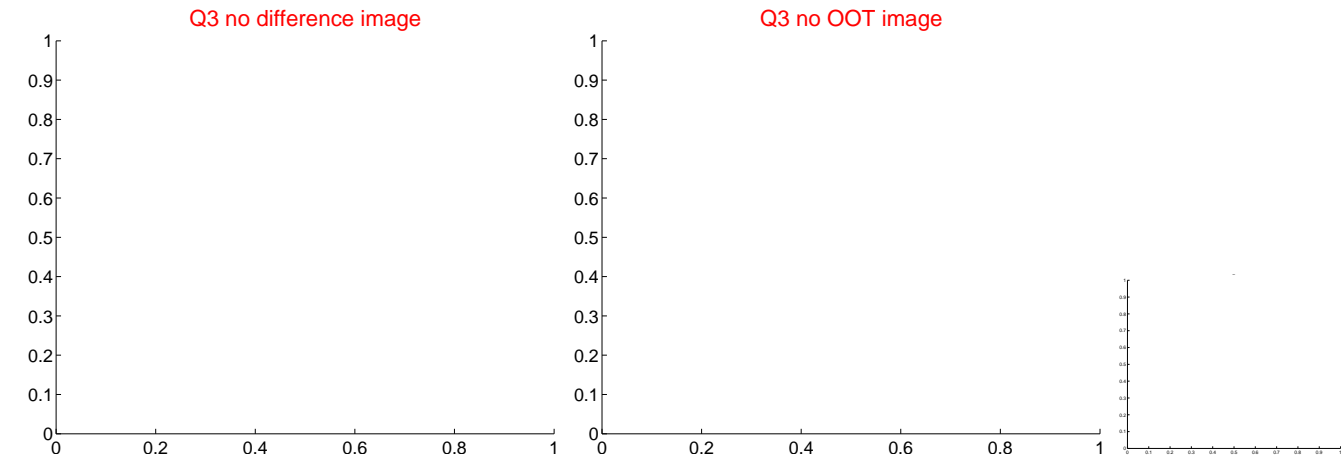
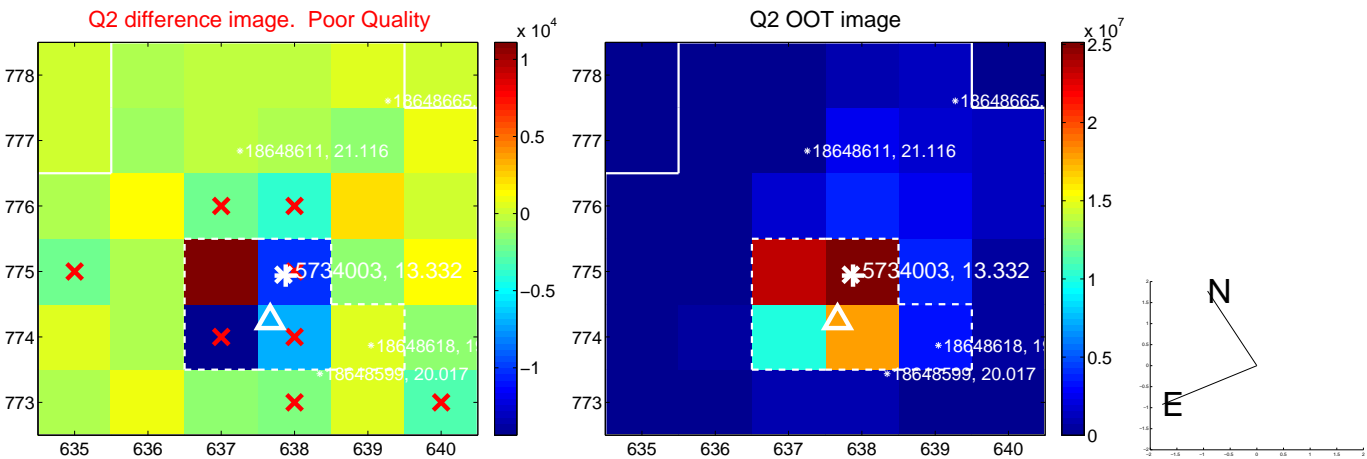
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.403 ± 0.715	0.56	0.360 ± 0.915	-0.181 ± 0.732
PRF-fit source offset from KIC position	0.351 ± 0.664	0.53	0.248 ± 0.882	-0.249 ± 0.695
photometric centroid source offset	0.88 ± 0.55	1.60	0.73 ± 0.55	-0.49 ± 0.55

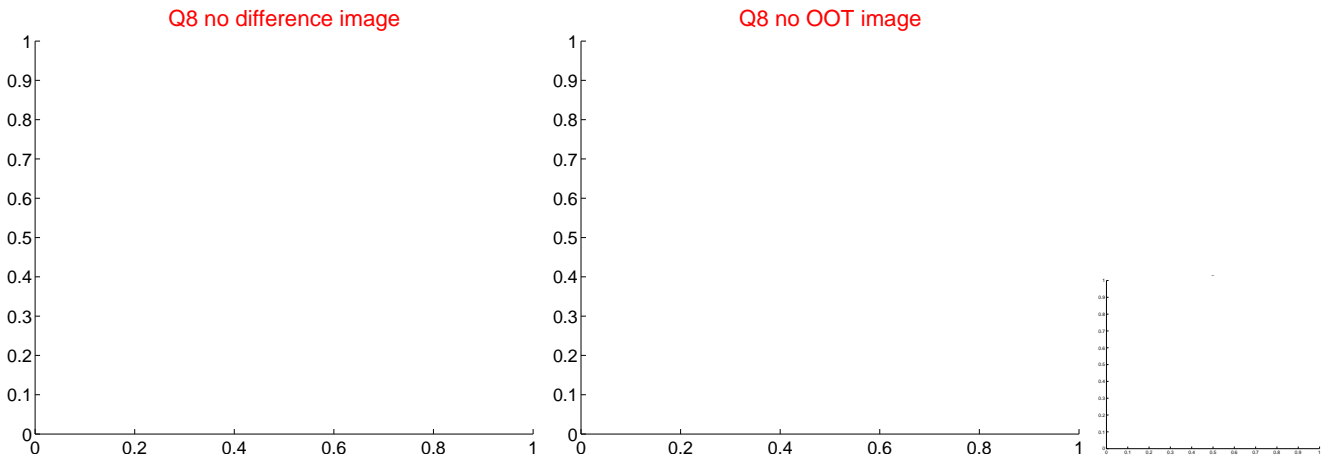
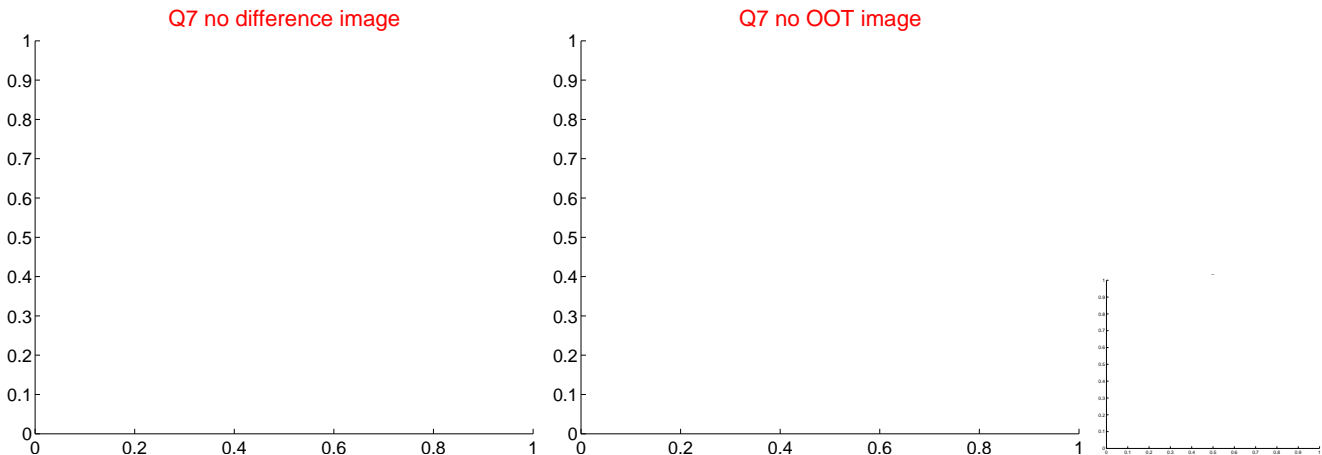
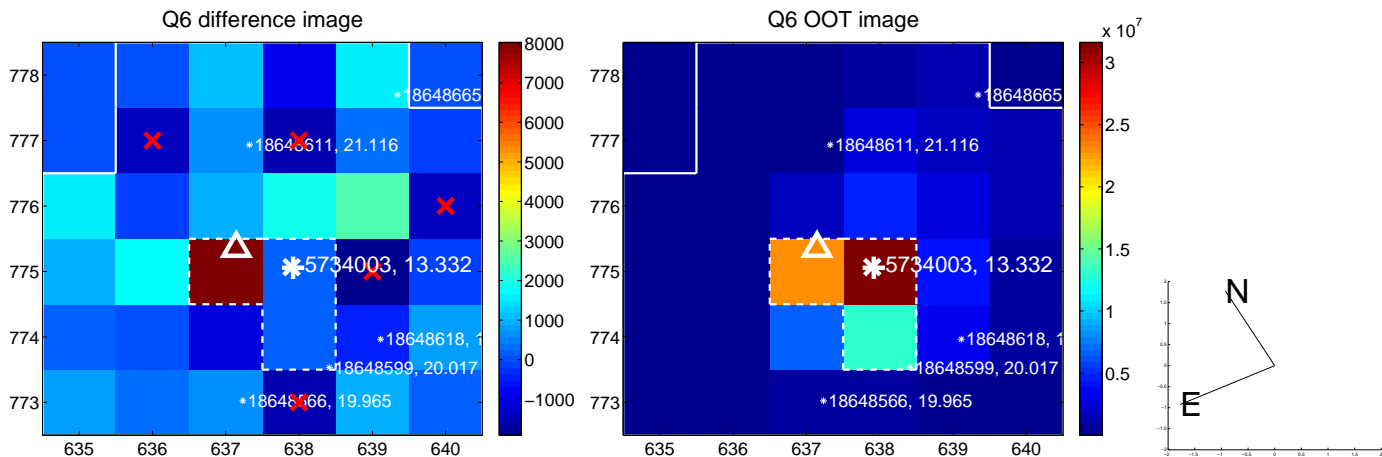
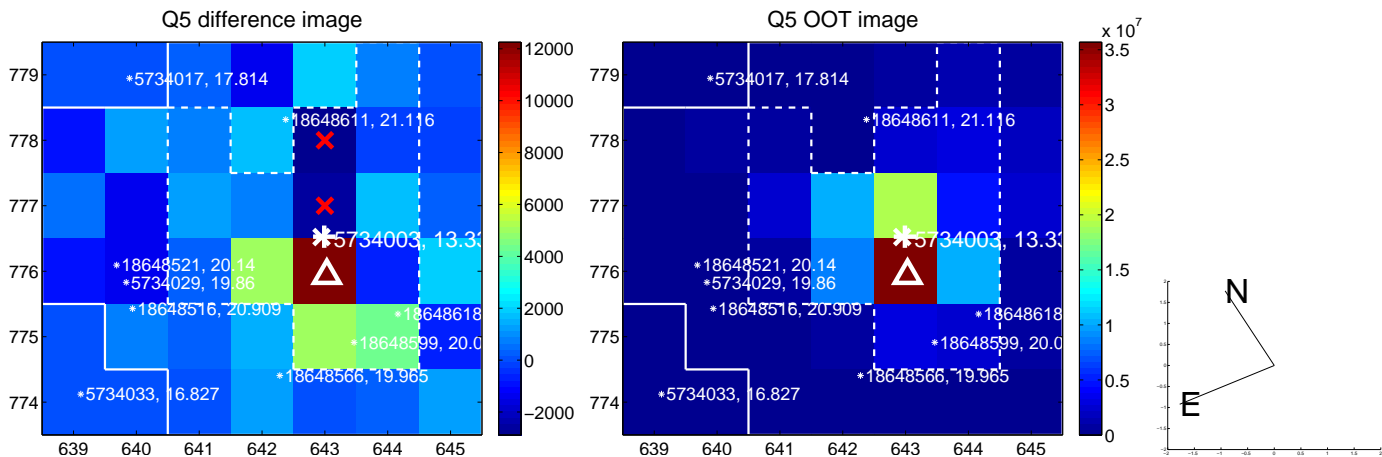


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

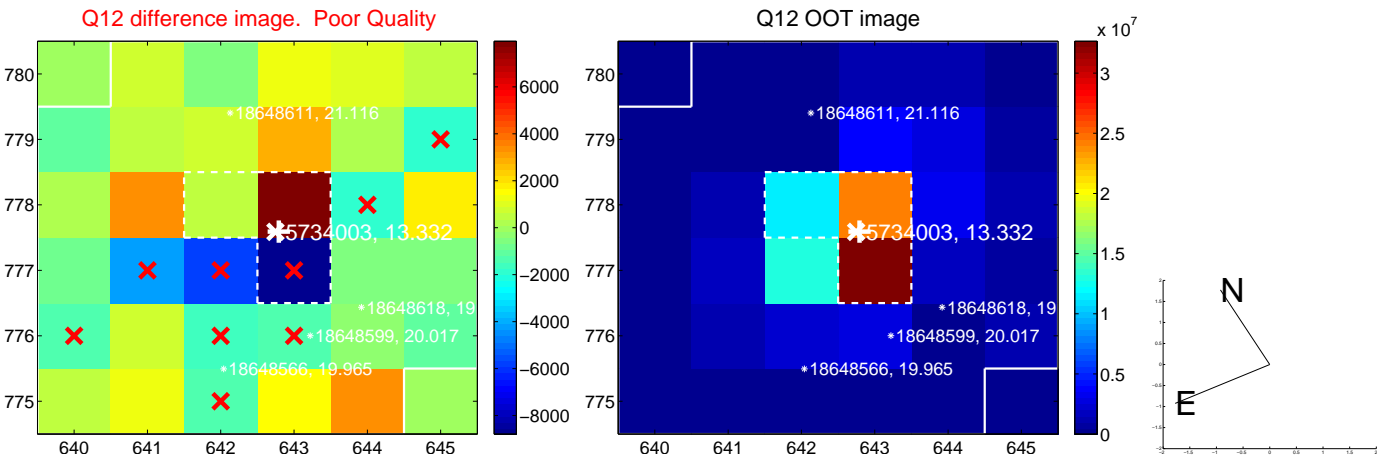
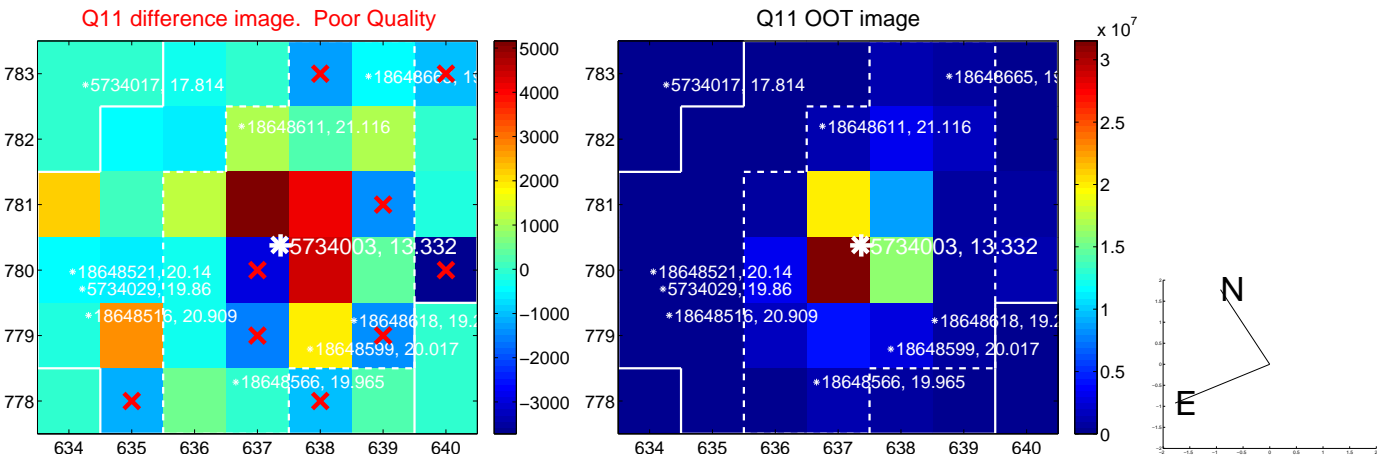
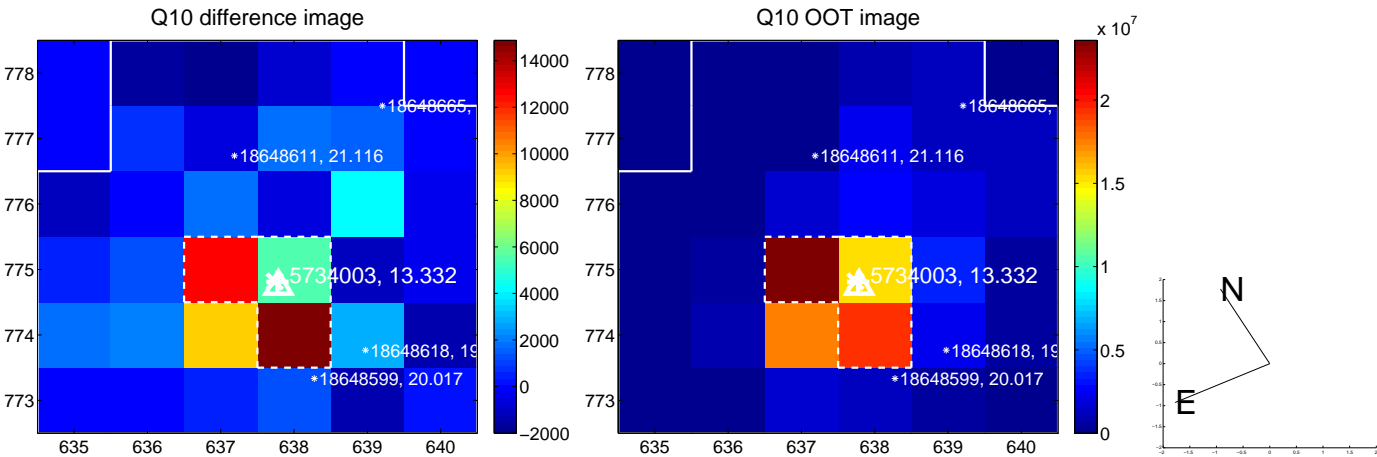
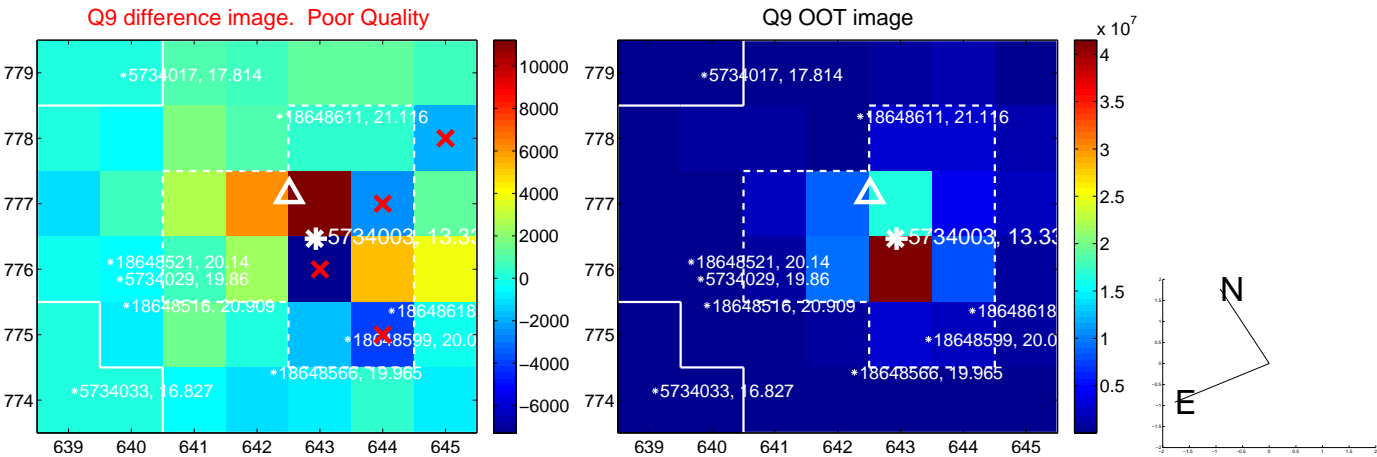
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



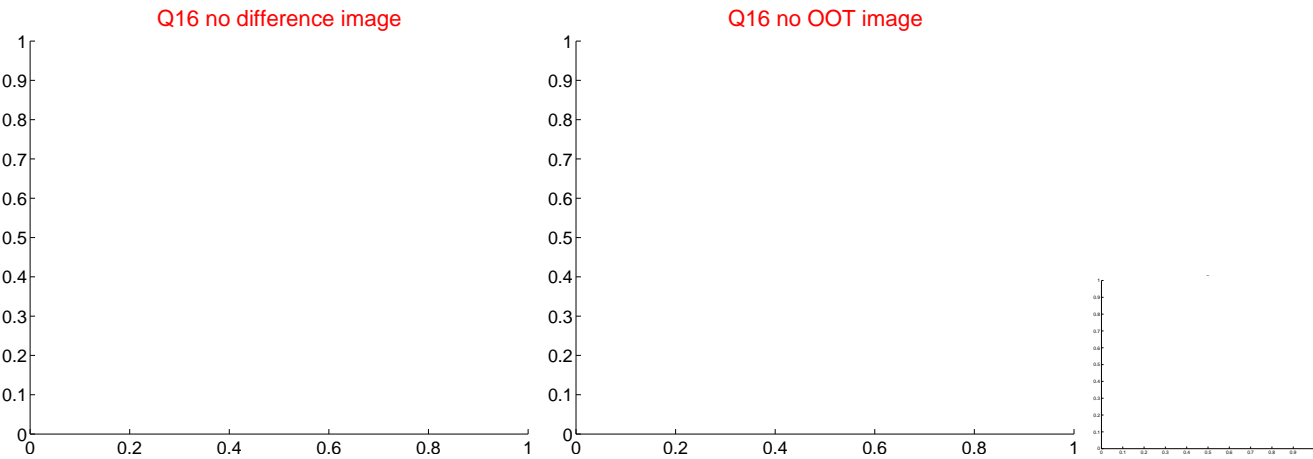
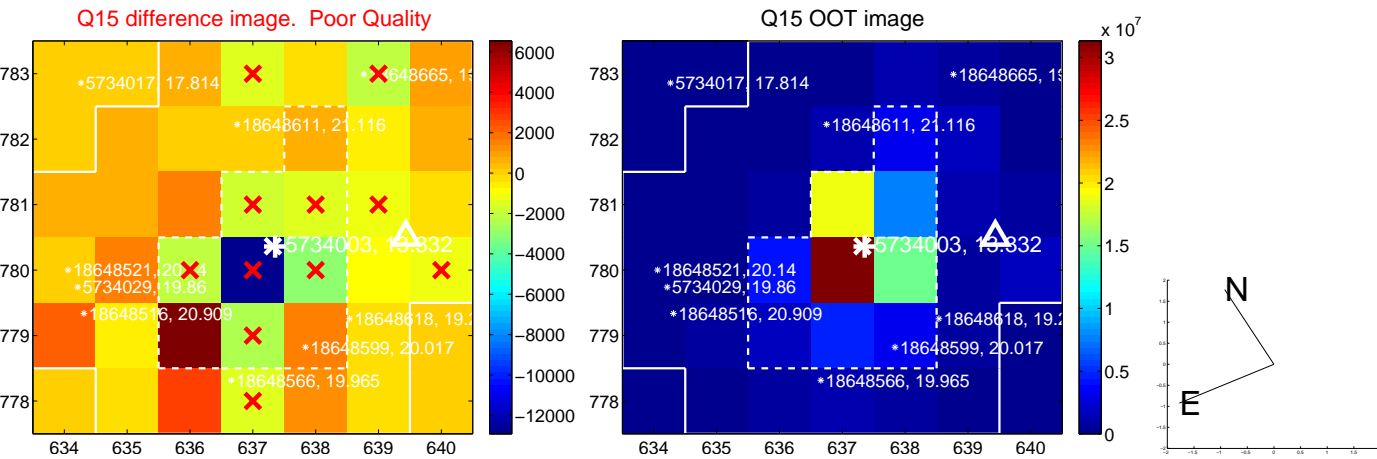
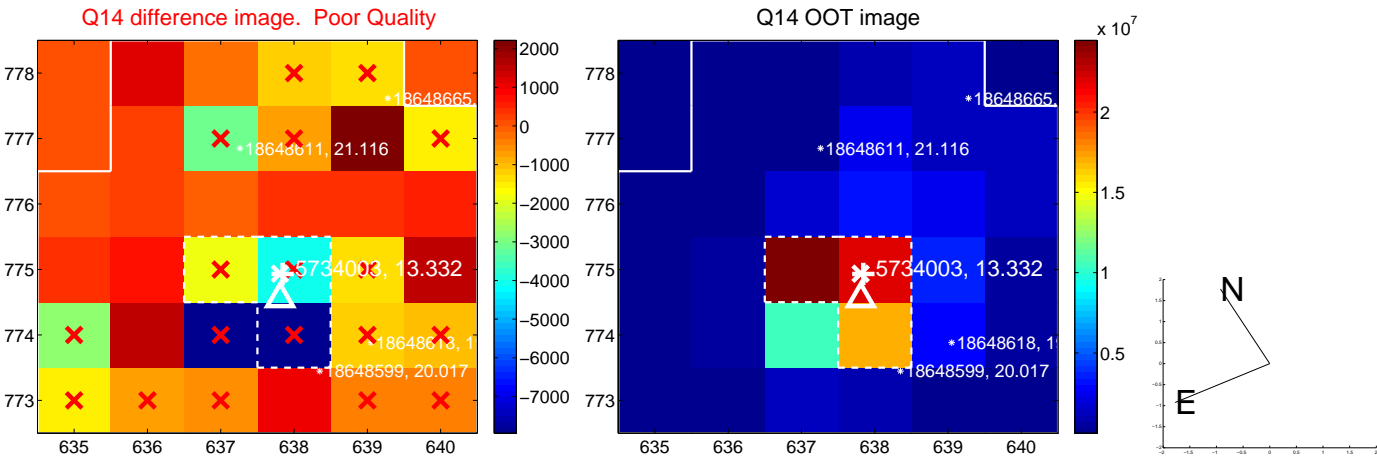
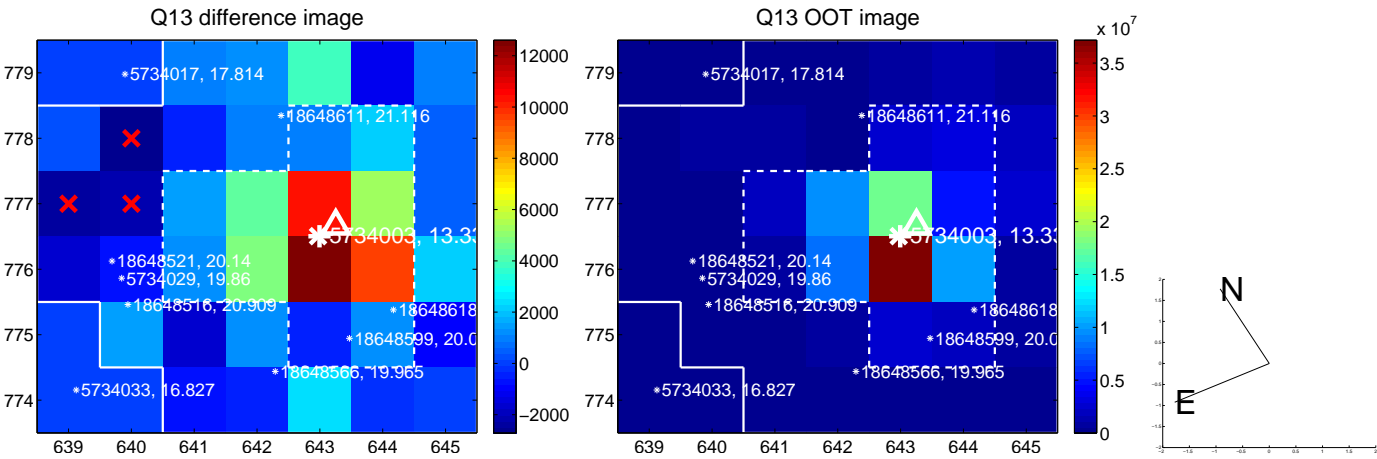
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



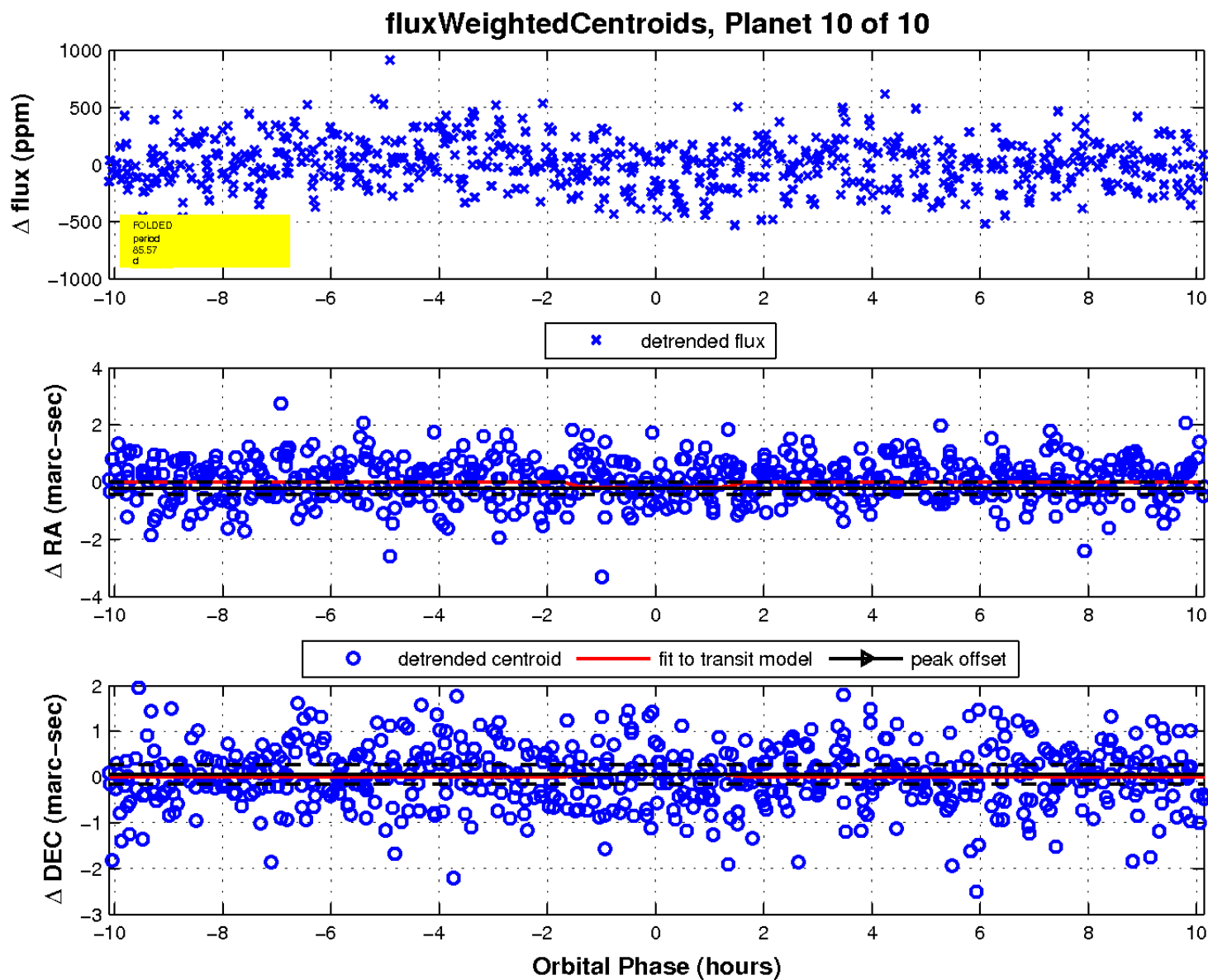
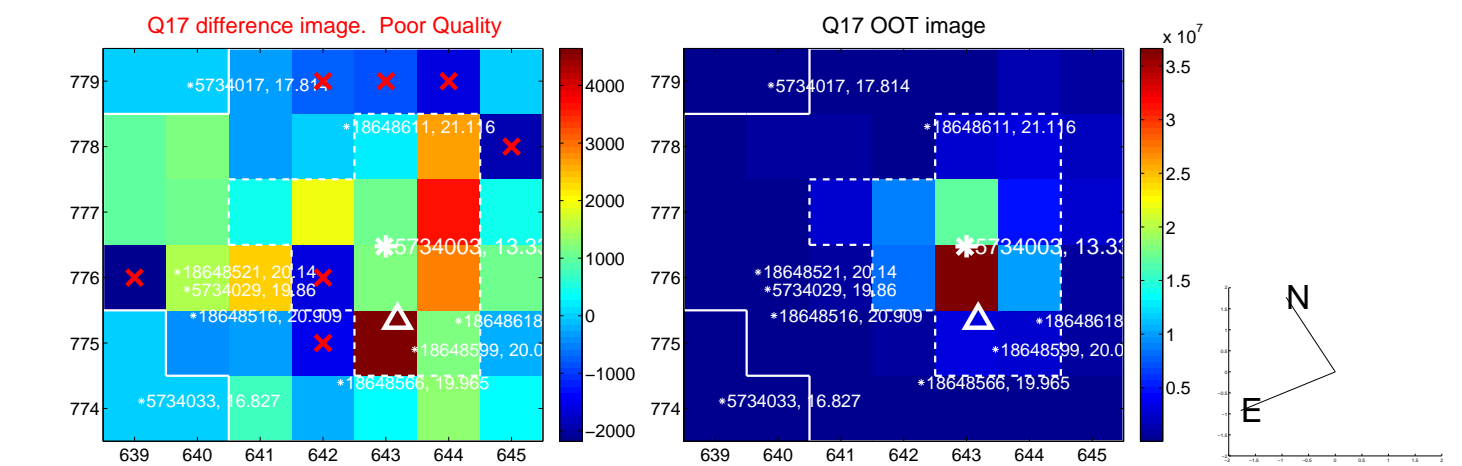
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

