

KIC 007974634

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})
007974634-01	OBS	No	1.373896	132.425164	21.6	10.242	12.3	10.8	3.87	6461	2.09	27014.35
007974634-02	OBS	No	29.887224	156.764901	262.8	1.729	10.9	11.8	3.87	6461	7.33	444.86
007974634-03	OBS	No	105.894894	131.652286	299.0	13.970	9.3	12.2	3.87	6461	6.72	82.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007974634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007974634-02	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
007974634-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

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

Ephemeris Match Information For 007974634-01

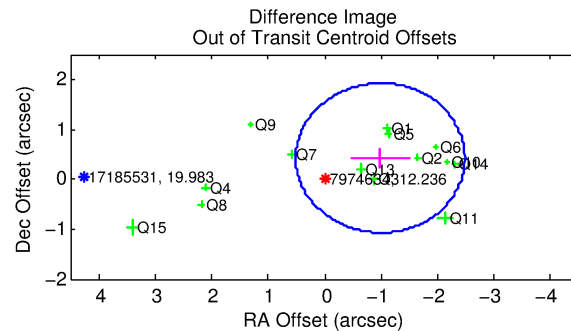
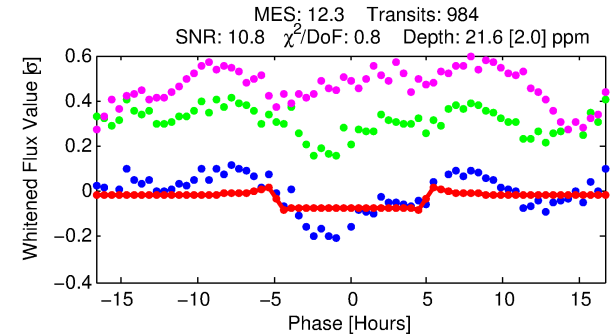
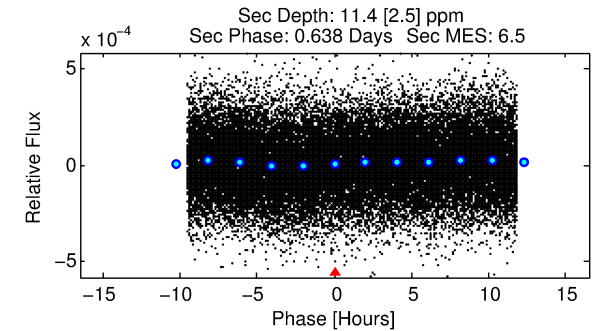
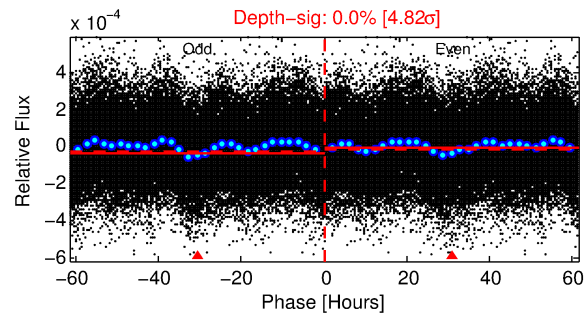
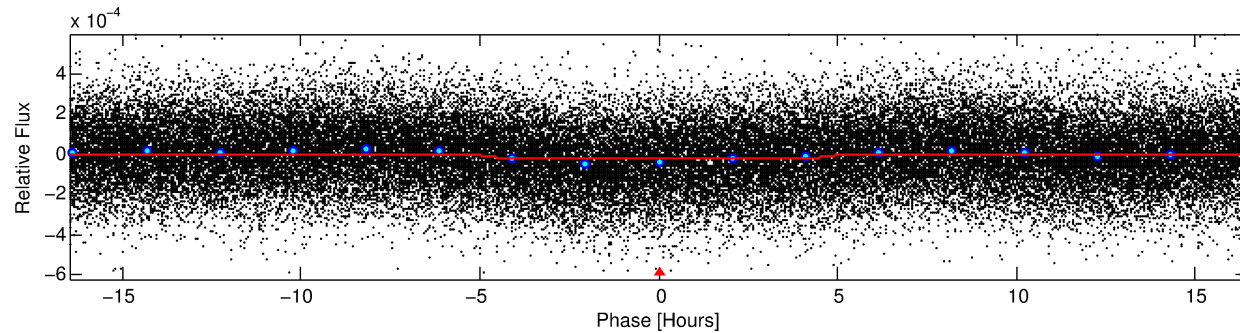
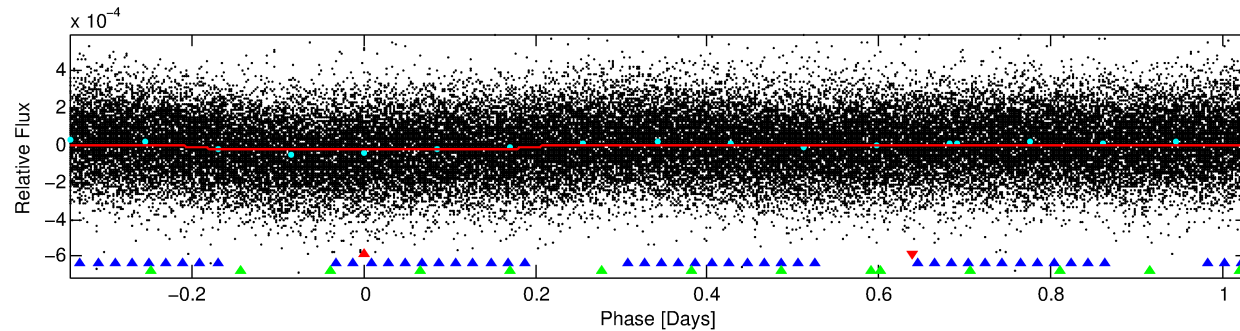
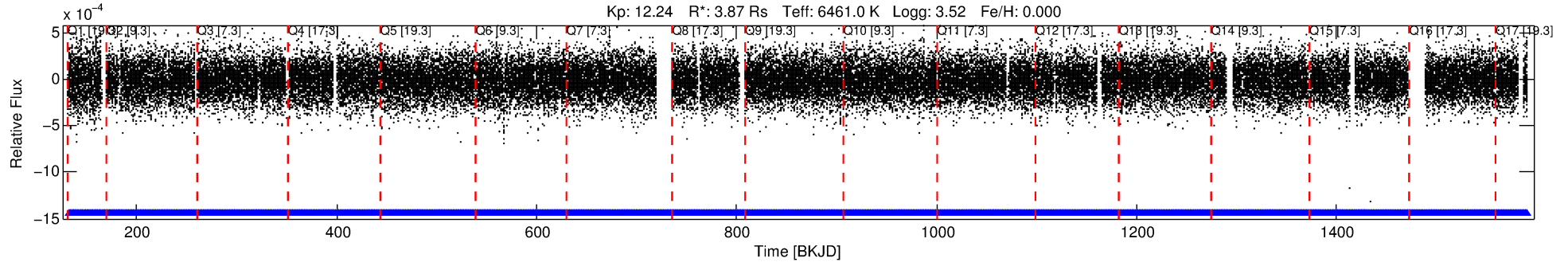
No Significant Match Found

DV One-Page Summary

KIC: 7974634 Candidate: 1 of 3 Period: 1.374 d

KOI: K06168 Corr: No Ephemeris Match

Kp: 12.24 R*: 3.87 Rs Teff: 6461.0 K Logg: 3.52 Fe/H: 0.000



DV Fit Results:

Period = 1.37390 [0.00002] d
Epoch = 132.4252 [0.0049] BKJD
Rp/R* = 0.0049 [0.0011]
a/R* = 1.05 [0.13]
b = 0.89 [0.28]
Seff = 27014.35 [15895.07]
Teq = 3269 [481] K
Rp = 2.09 [0.92] Re
a = 0.0295 [0.0107] AU
Ag = 1.24 [0.94] [0.26σ]
Teffp = 5337 [659] K [2.53σ]

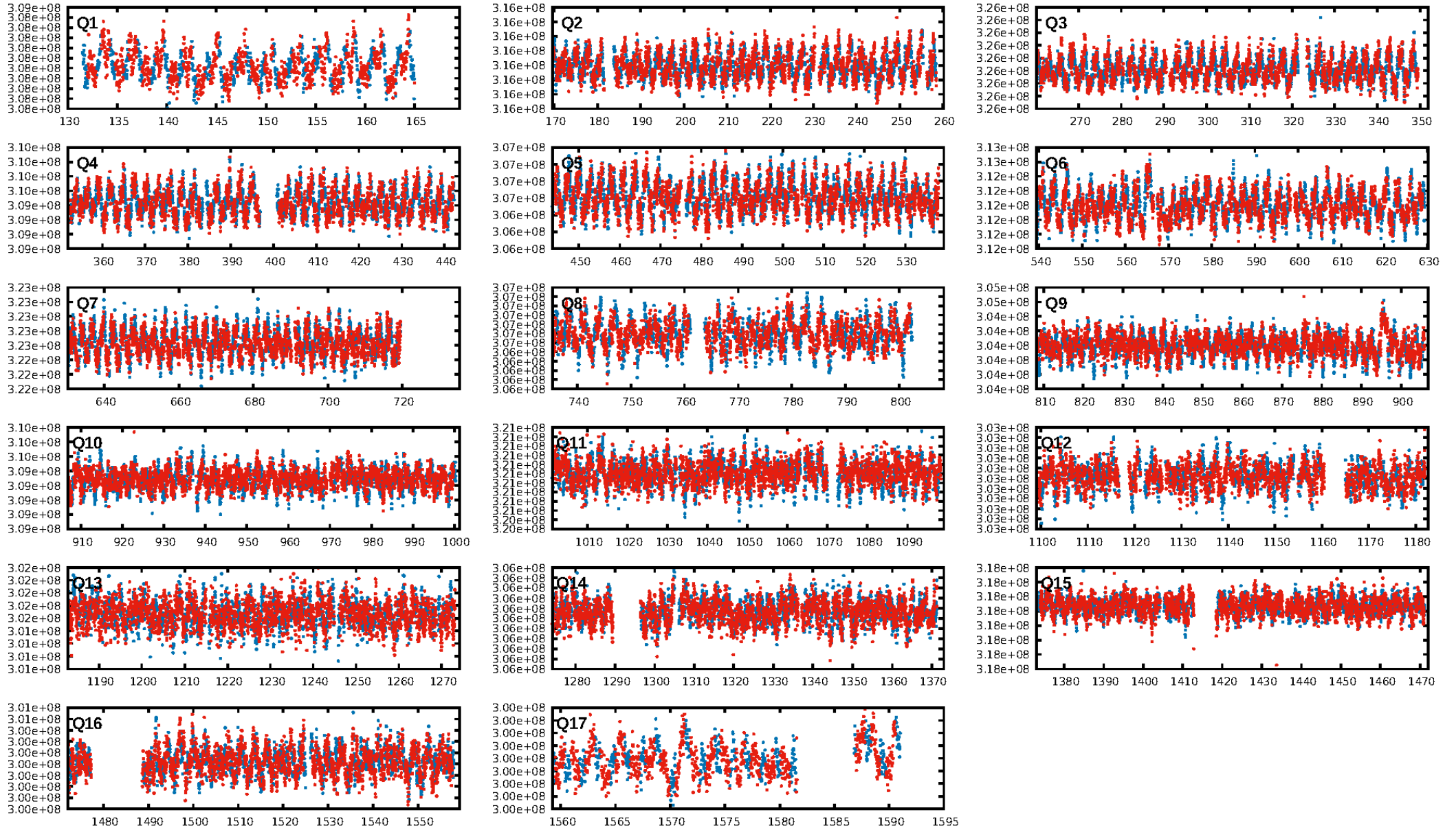
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [65.88σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.18e-124
RollingBand-fgt: 1.00 [941/941]
GhostDiagnostic-chr: 2.356
Centroid-sig: 0.0%
Centroid-so: 1.479 arcsec [3.86σ]
OotOffset-rm: 1.072 arcsec [2.15σ]
KicOffset-rm: 1.060 arcsec [2.22σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [17/17]

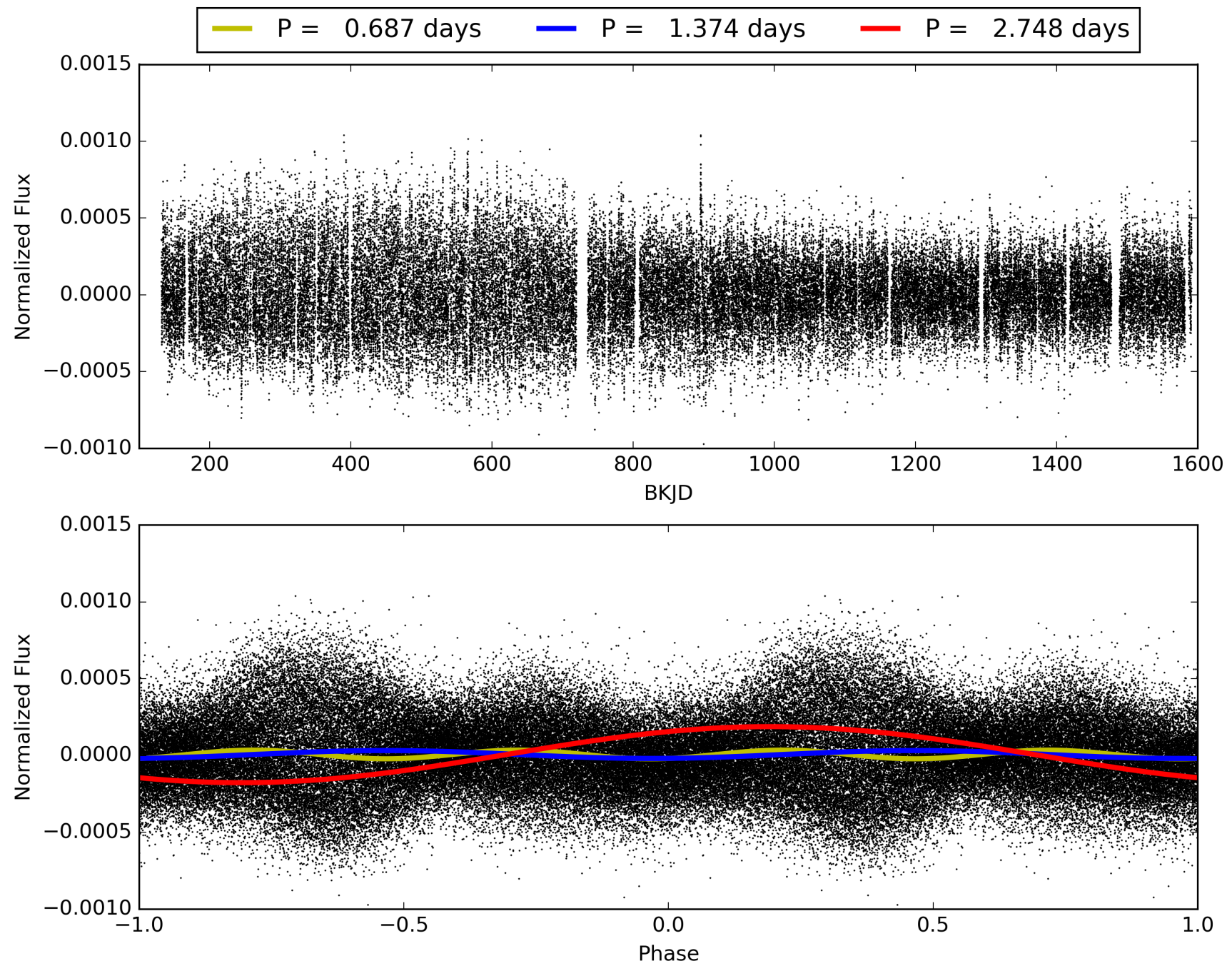
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:43:53 Z

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

TCE 007974634-01, PDC Light Curves

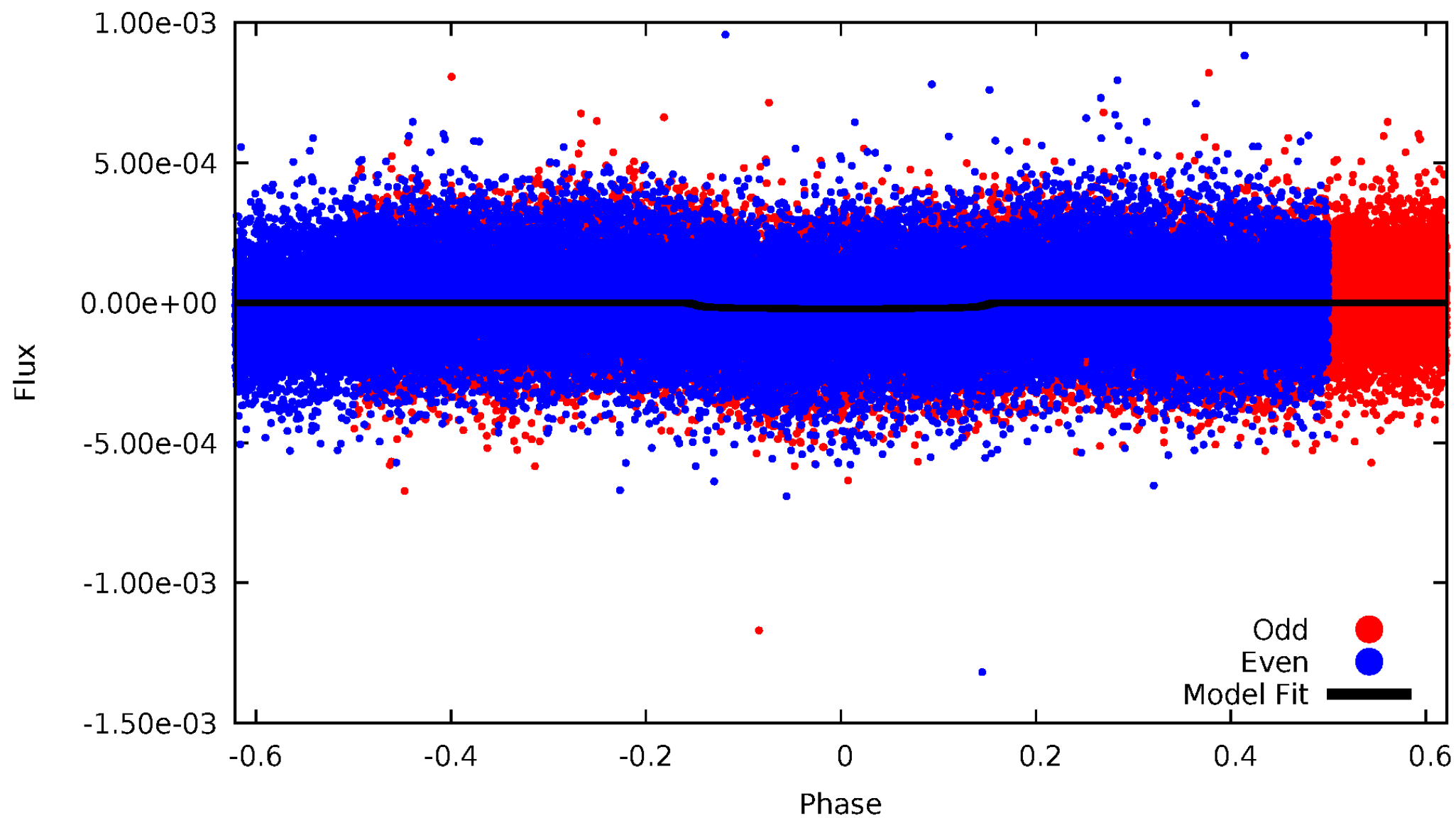


TCE 007974634-01



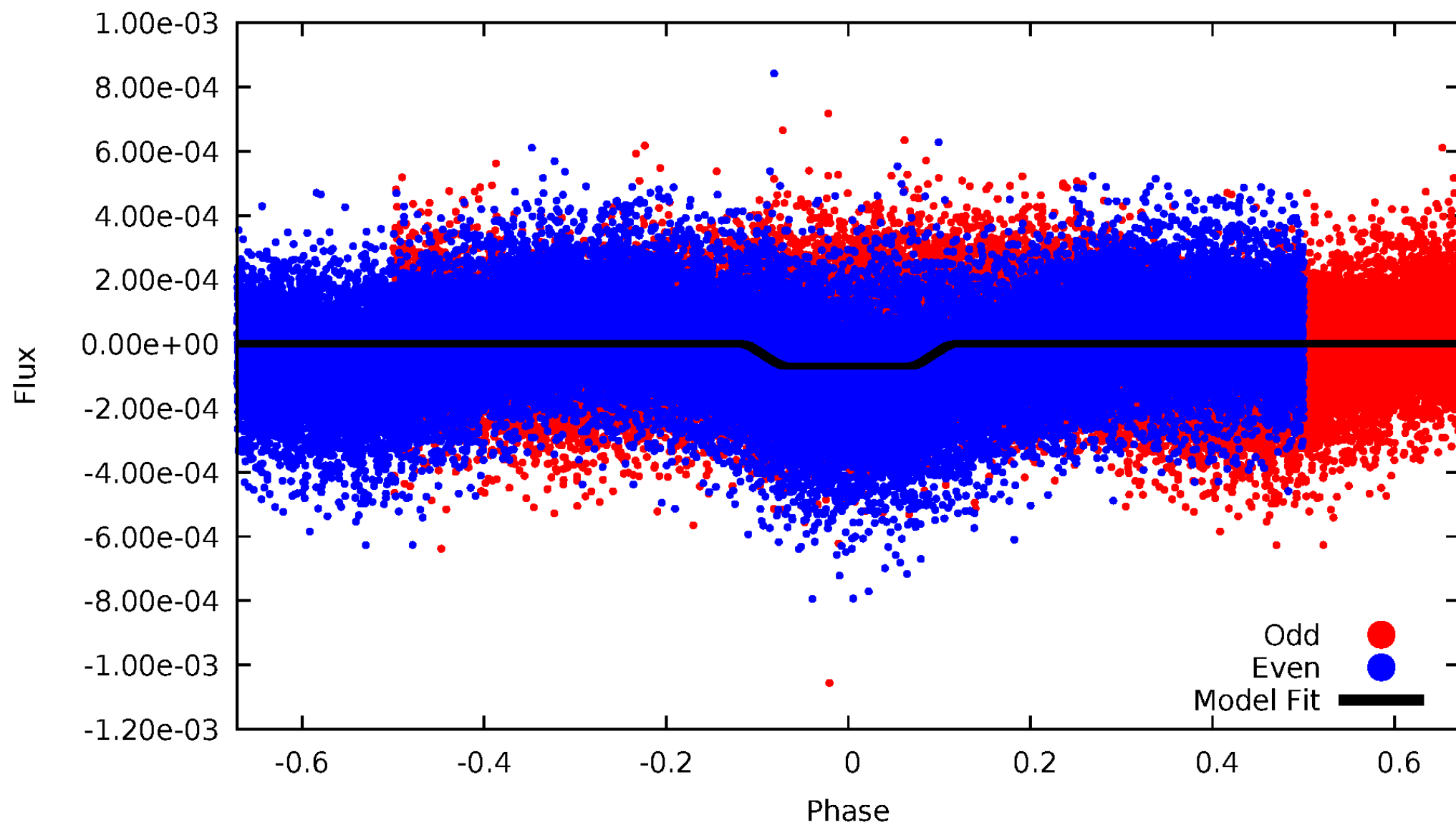
DV Odd/Even

TCE 007974634-01



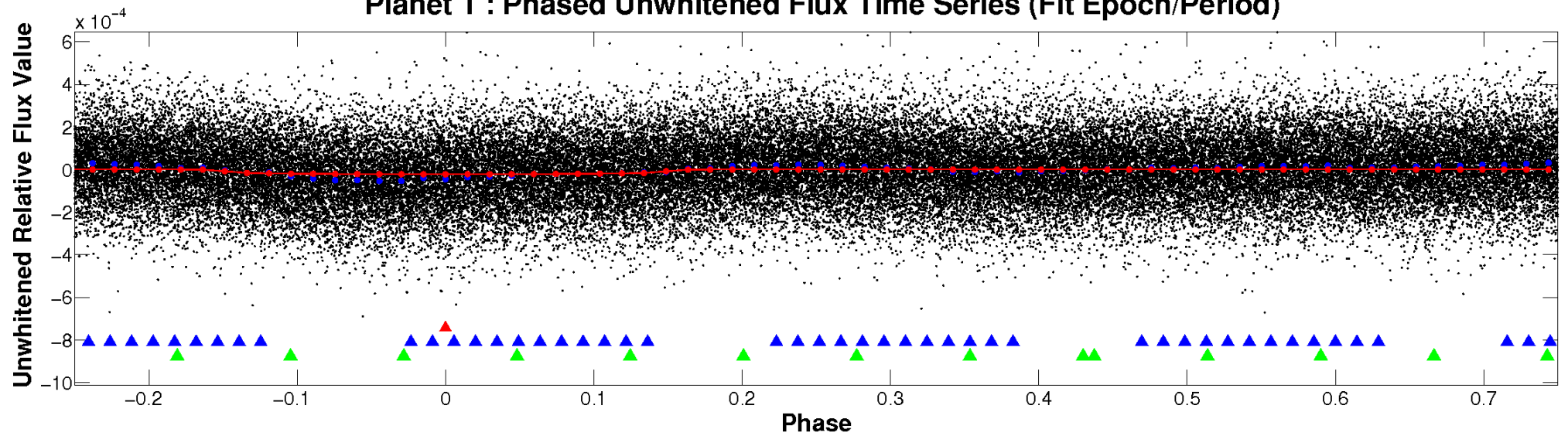
ALT Odd/Even

TCE 007974634-01

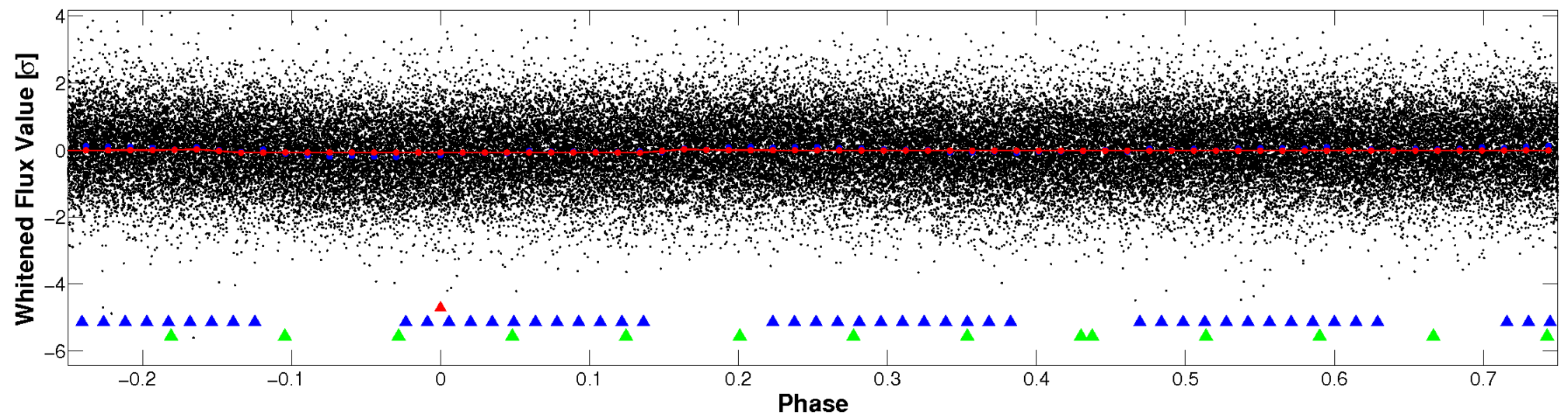


Non-Whitened Vs. Whitened Light Curve

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

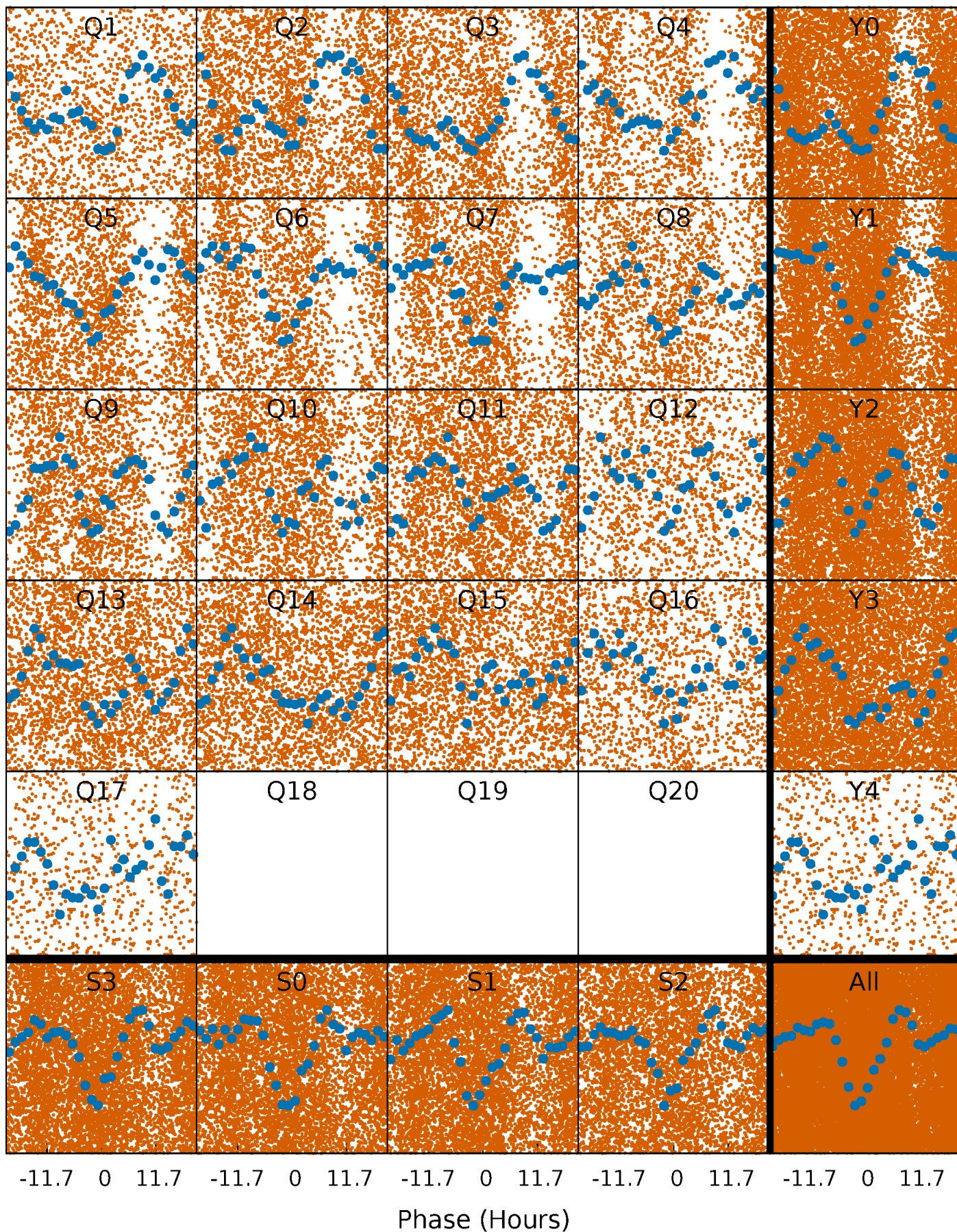


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



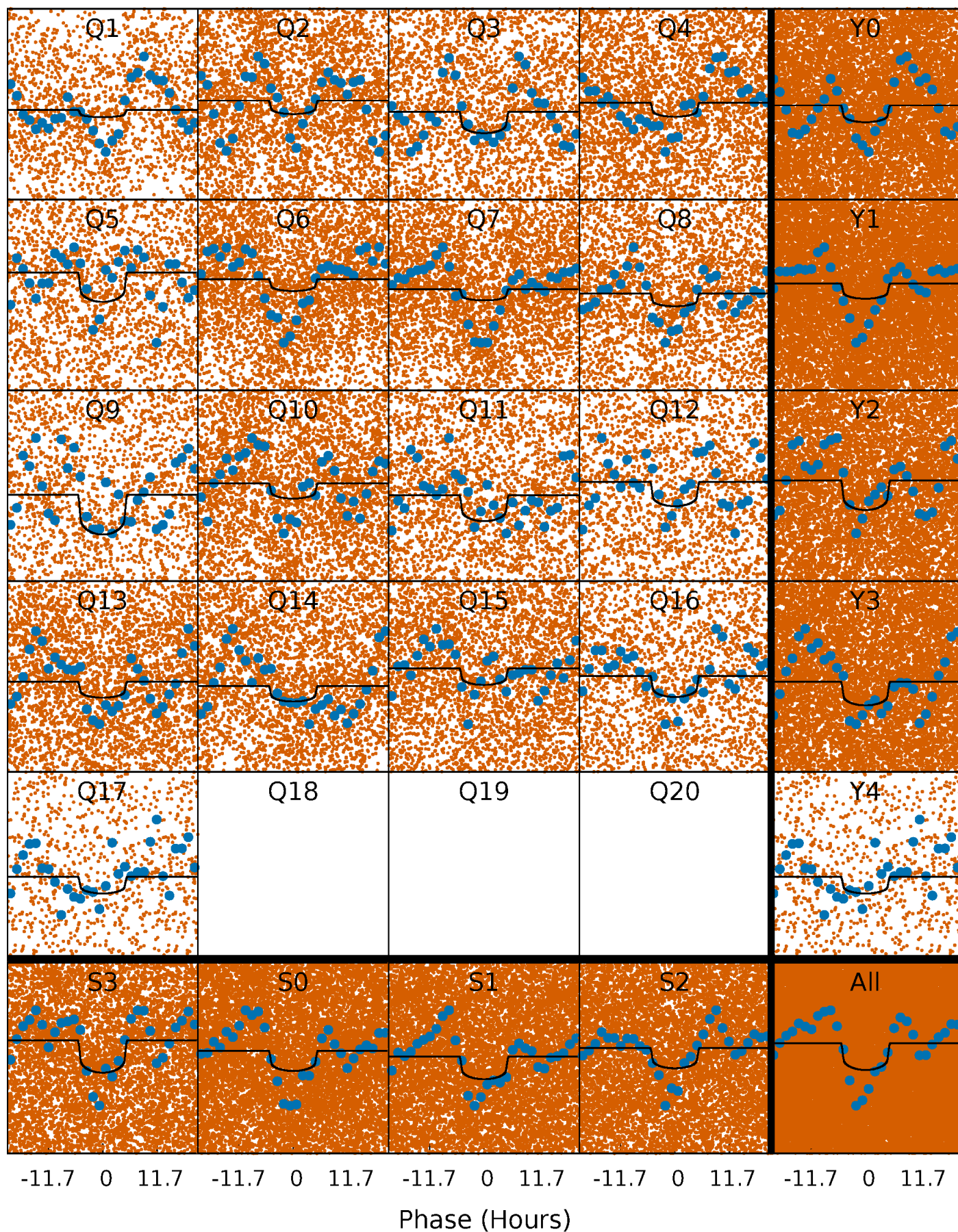
PDC Quarter-Phased Transit Curves

TCE 007974634-01 P= 1.373896 Days $T_0=132.425164$ (BKJD)



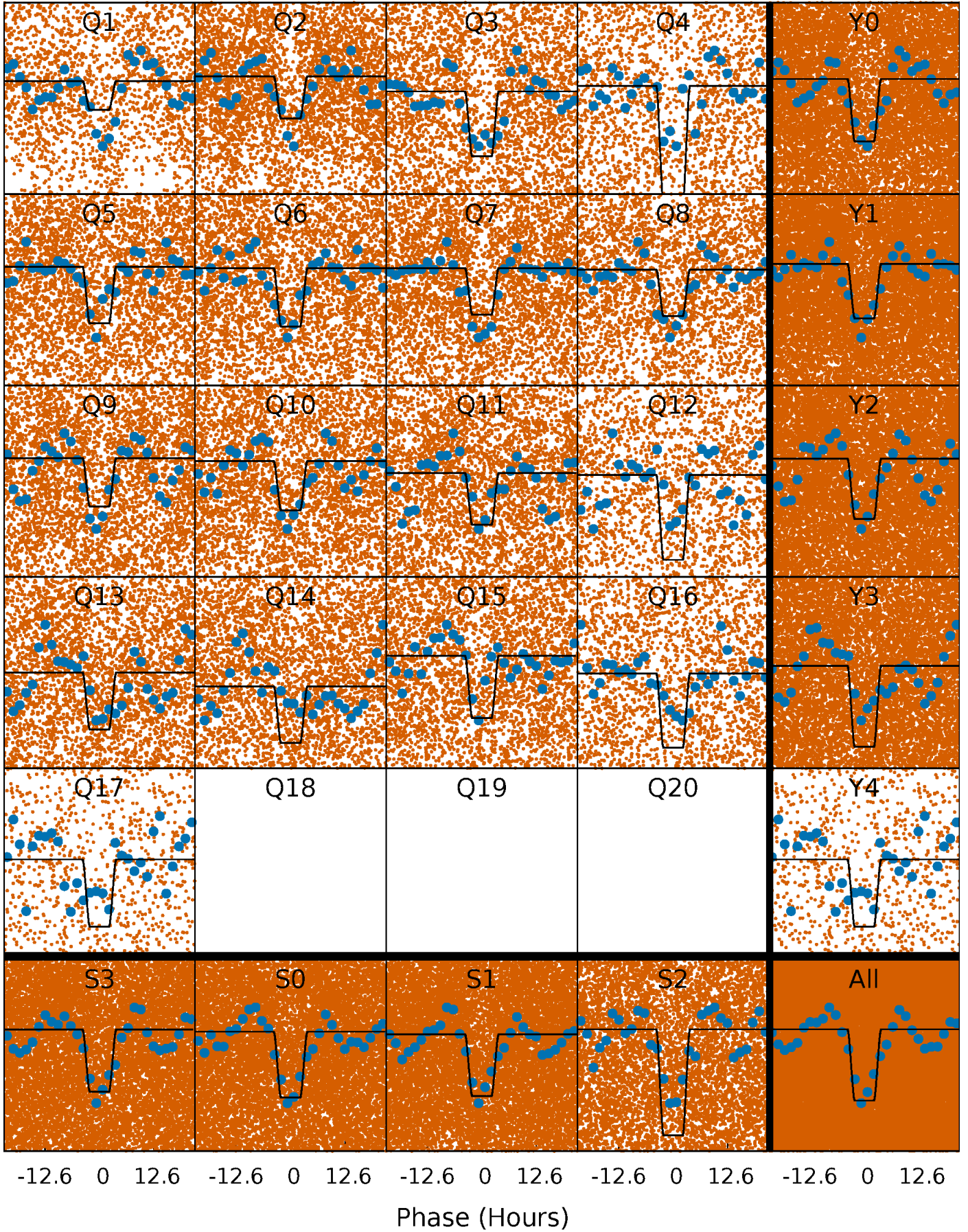
DV Quarter-Phased Transit Curves

TCE 007974634-01 P= 1.373896 Days $T_0=132.425164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

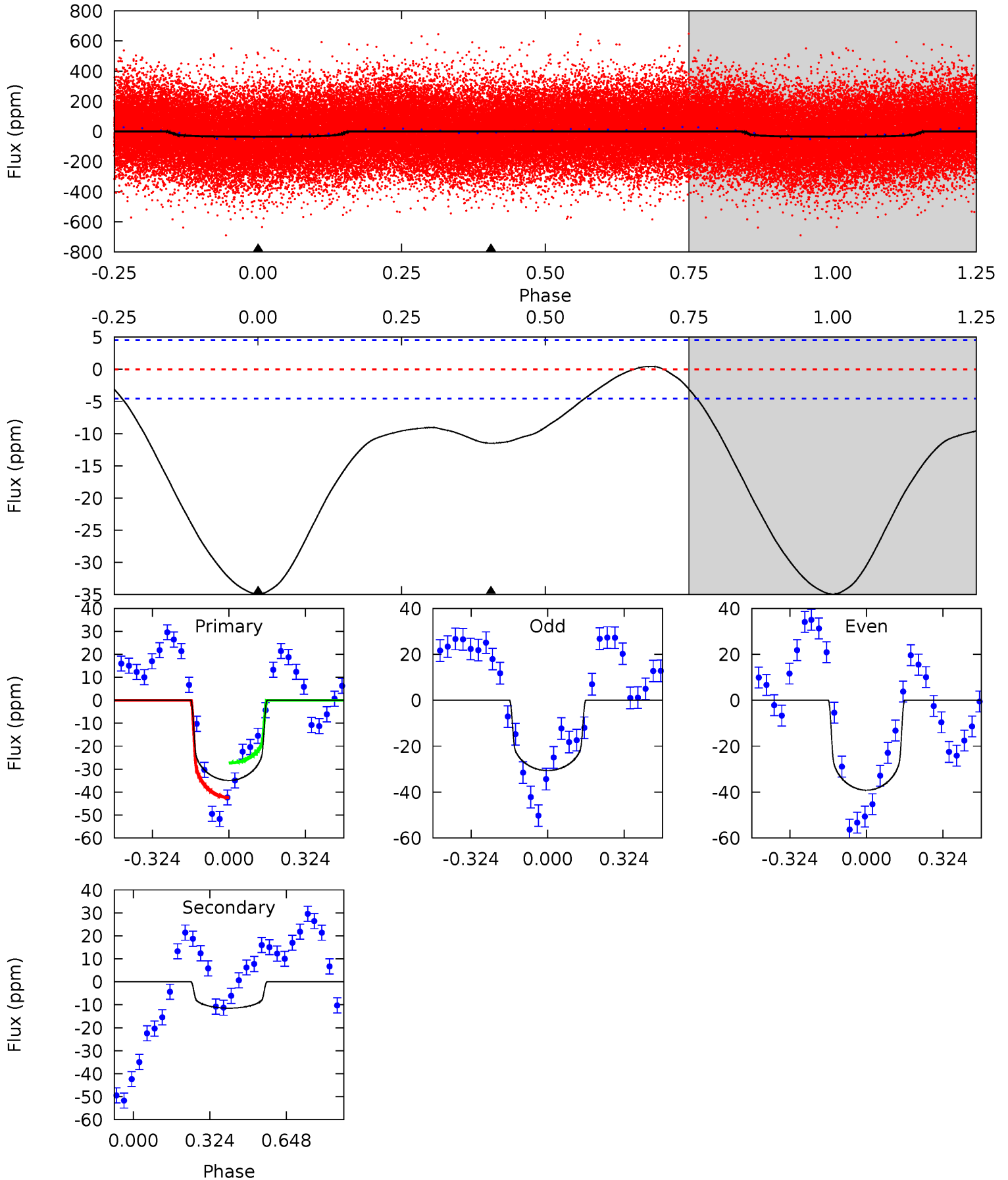
TCE 007974634-01 P= 1.373803 Days $T_0=132.424938$ (BKJD)



DV Model-Shift Uniqueness Test

007974634-01, P = 1.373896 Days, E = 131.051268 Days

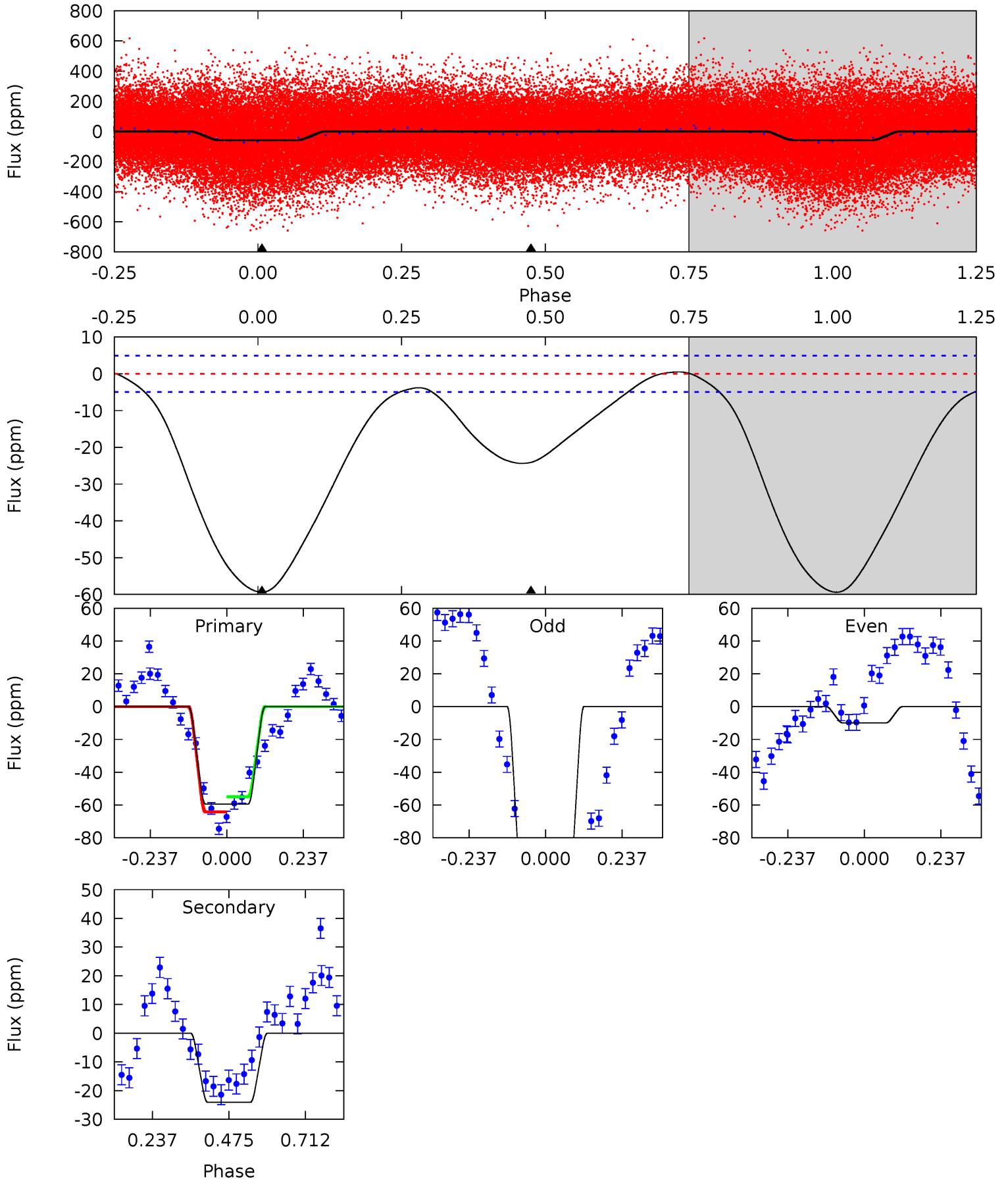
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.1	10.9	0	0	4.31	0.99	1.07	33.1	33.1	10.9	10.9	4.05	0.99	0.01	7.09



Alt Model-Shift Uniqueness Test

007974634-01, P = 1.373803 Days, E = 131.051135 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.7	21.3	0	0	4.38	1.18	1.93	52.7	52.7	21.3	21.3	51.2	1.02	0.01	4.11



Stellar Parameters For KIC 007974634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6461^{+156}_{-176}	$3.518^{+0.338}_{-0.113}$	$0.000^{+0.300}_{-0.250}$	$3.874^{+0.371}_{-1.483}$	$1.806^{+0.152}_{-0.355}$	$0.044^{+0.120}_{-0.012}$
	+2%/-3%	+10%/-3%	+inf%/-inf%	+10%/-38%	+8%/-20%	+275%/-28%
Source	PHO1	FLK73	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 007974634-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 1	$2.00^{+0.55}_{-0.53}$	4522^{+268}_{-413}	5051^{+720}_{-541}	$1.340^{+1.146}_{-0.518}$
Alt.	-24 ± 1	$3.36^{+0.69}_{-0.72}$	4524^{+252}_{-440}	4673^{+388}_{-371}	$1.011^{+0.600}_{-0.302}$

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

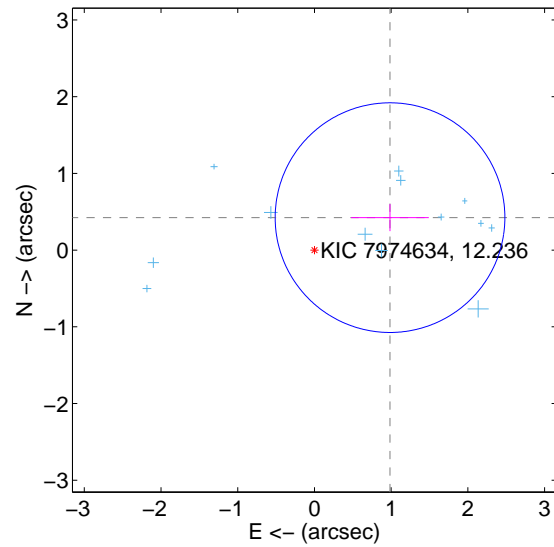
Supplemental centroid analysis for 007974634-01. Kepler magnitude: 12.24. Transit SNR 10.77

There are 14 quarters with good PRF difference image offsets

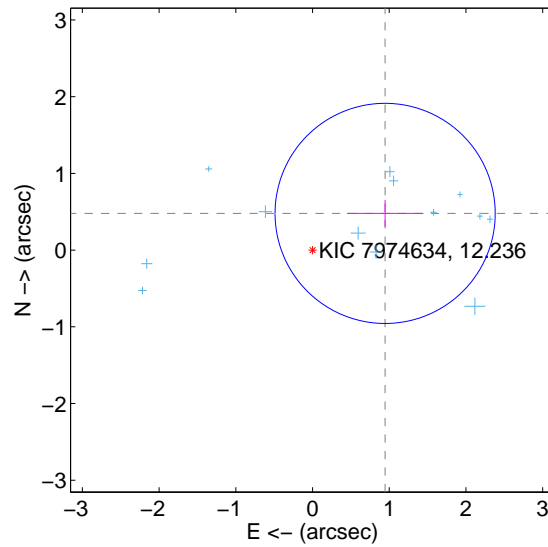
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.072 ± 0.499	2.15	-0.985 ± 0.506	0.423 ± 0.176
PRF-fit source offset from KIC position	1.060 ± 0.478	2.22	-0.946 ± 0.498	0.478 ± 0.175
photometric centroid source offset	1.48 ± 0.38	3.86	-1.13 ± 0.42	-0.96 ± 0.33

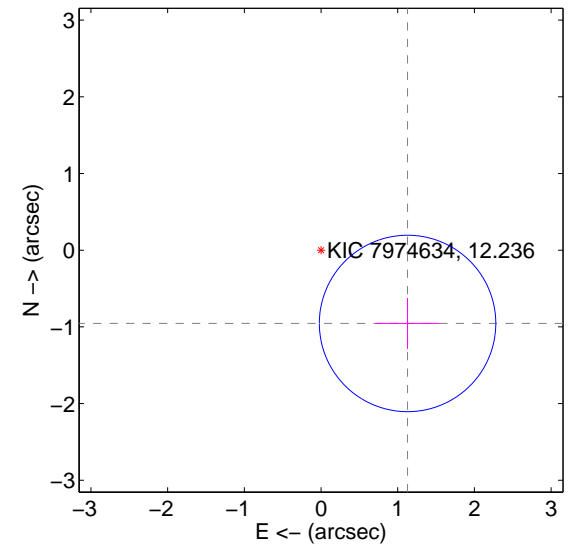
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

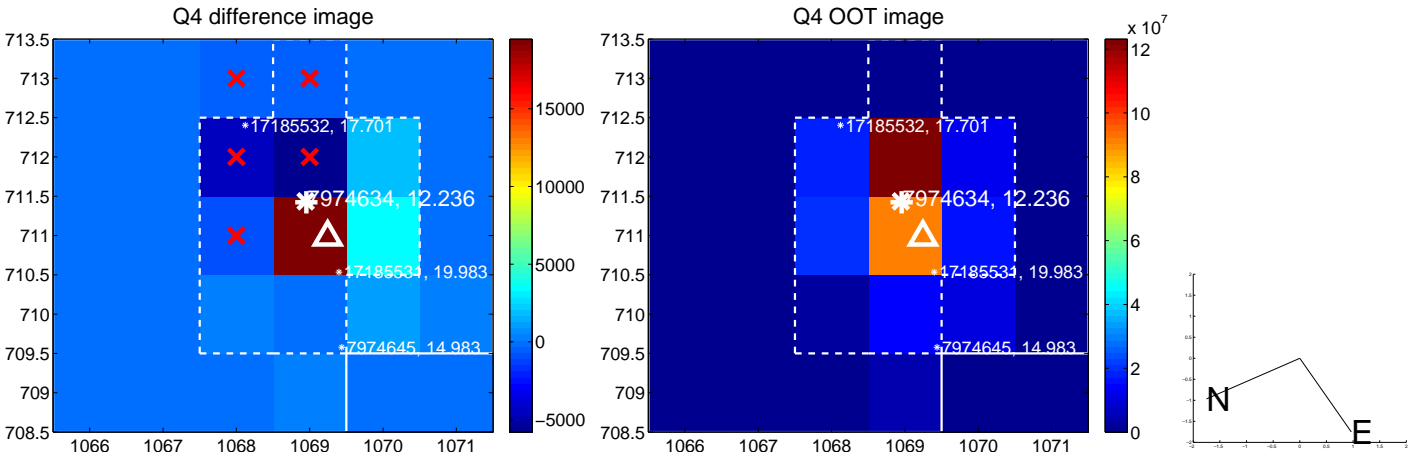
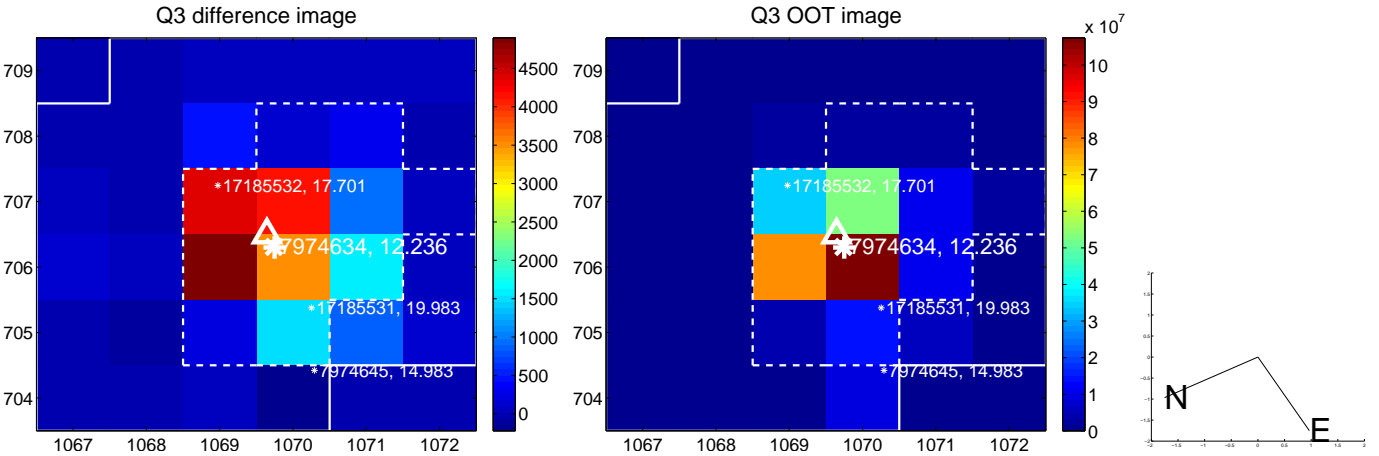
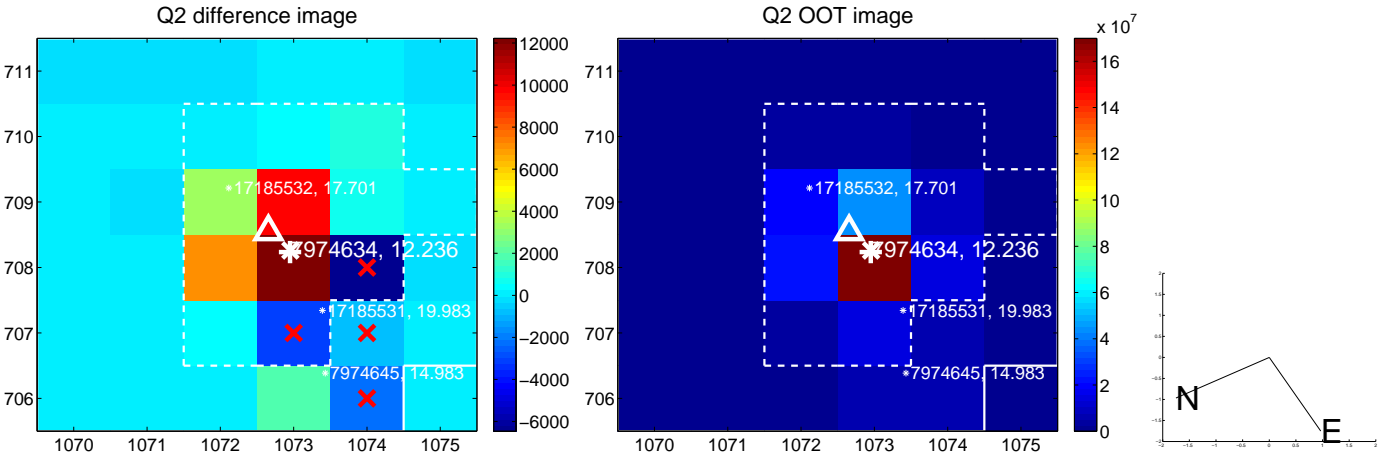
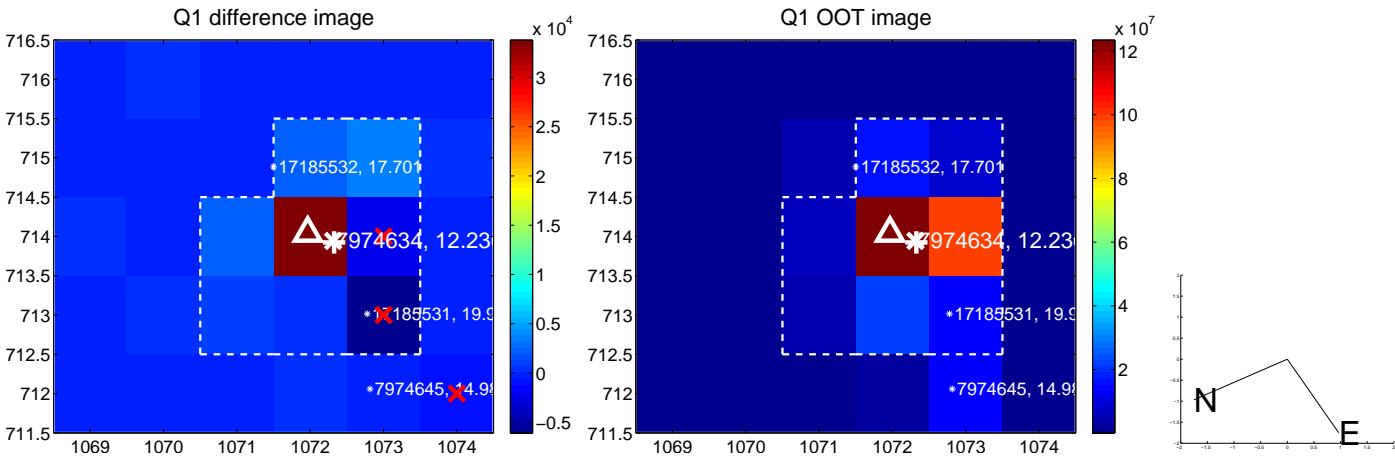


offset from photometric centroids

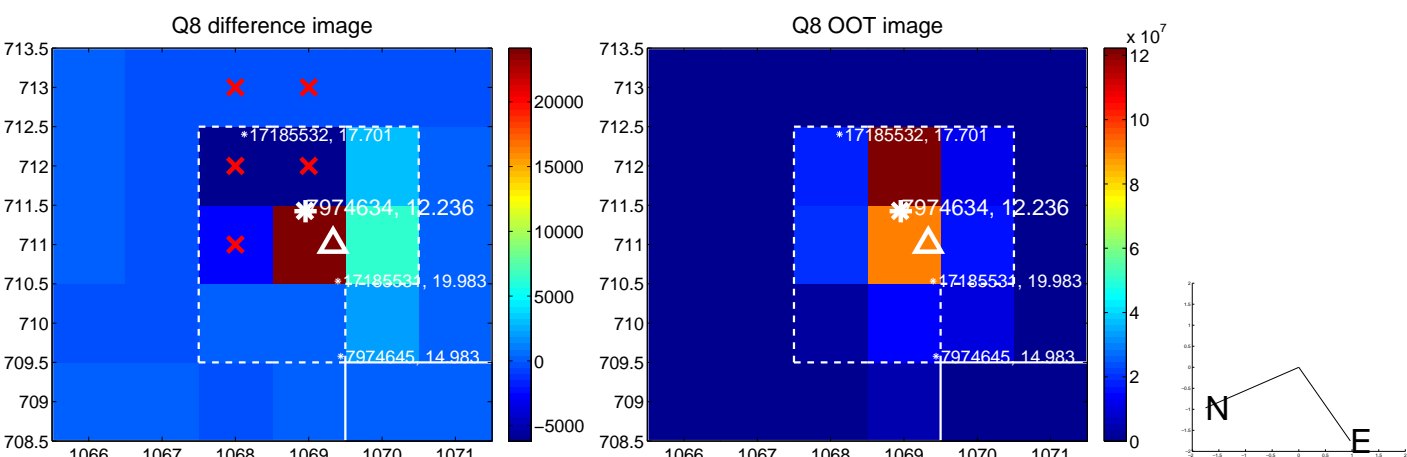
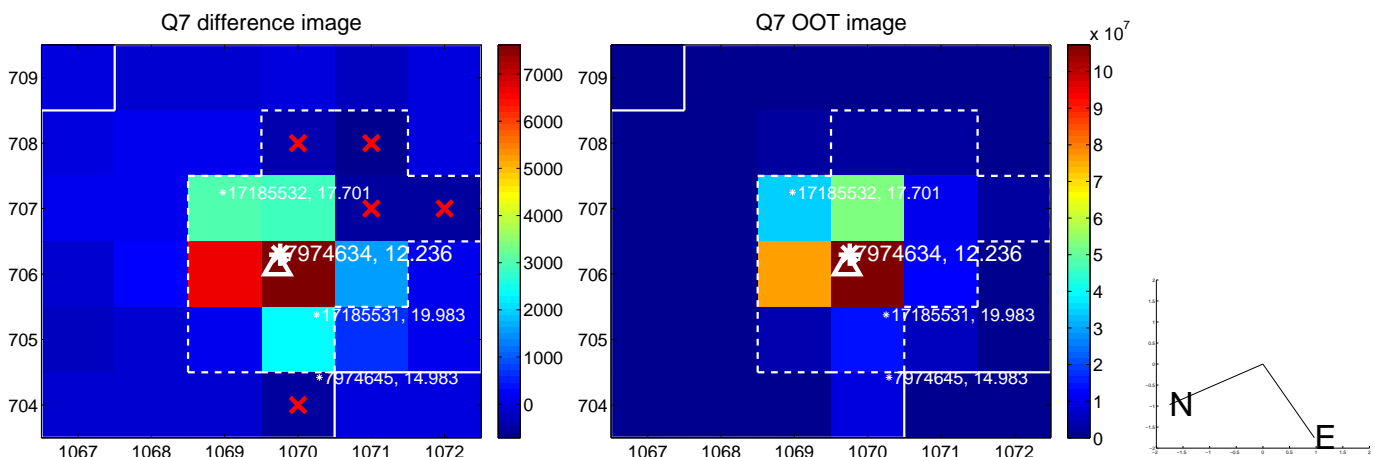
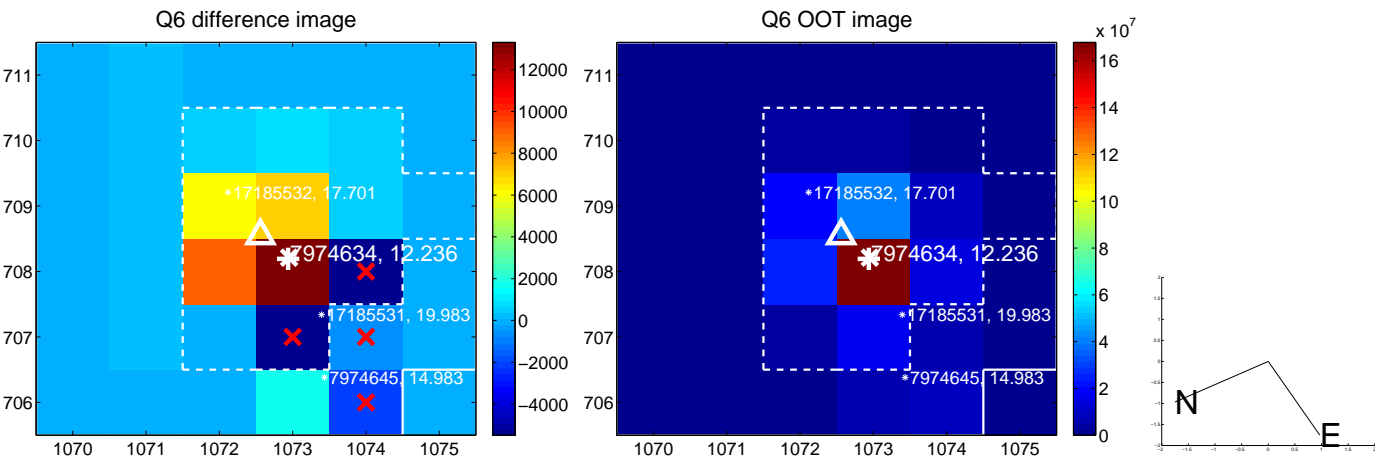
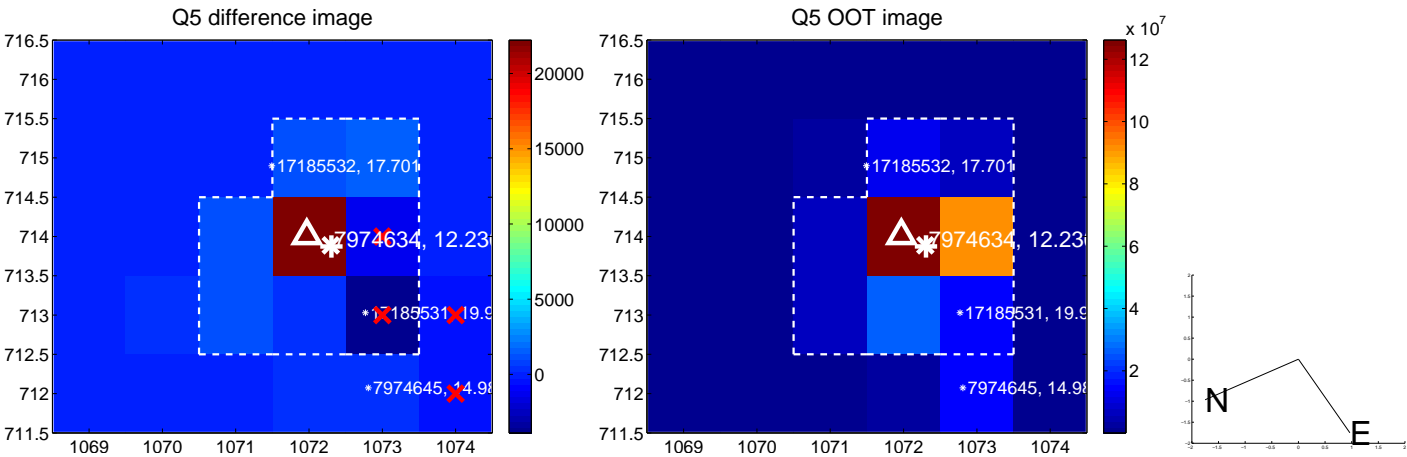


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

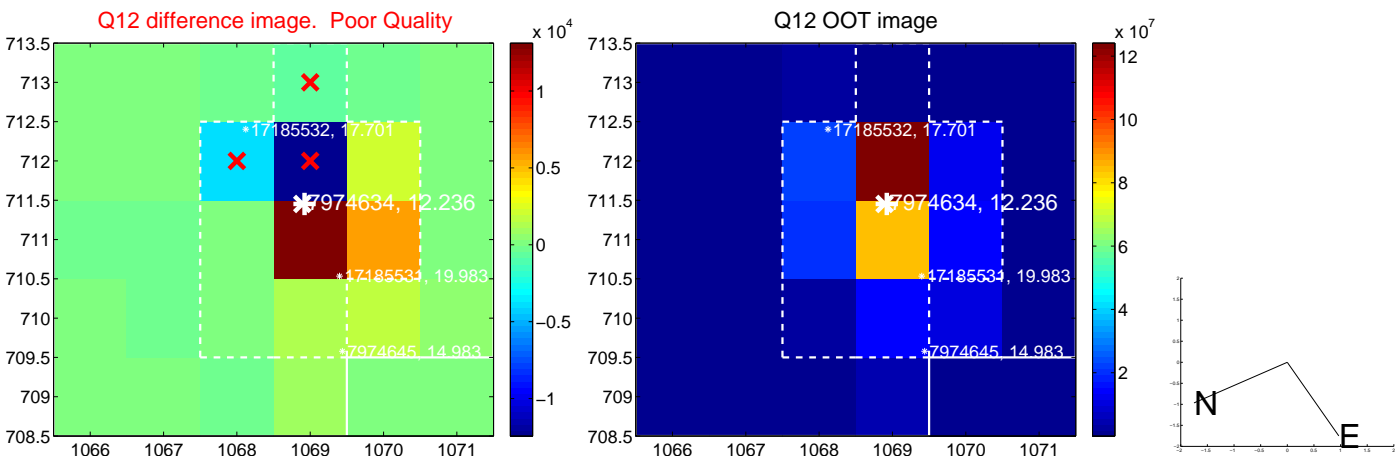
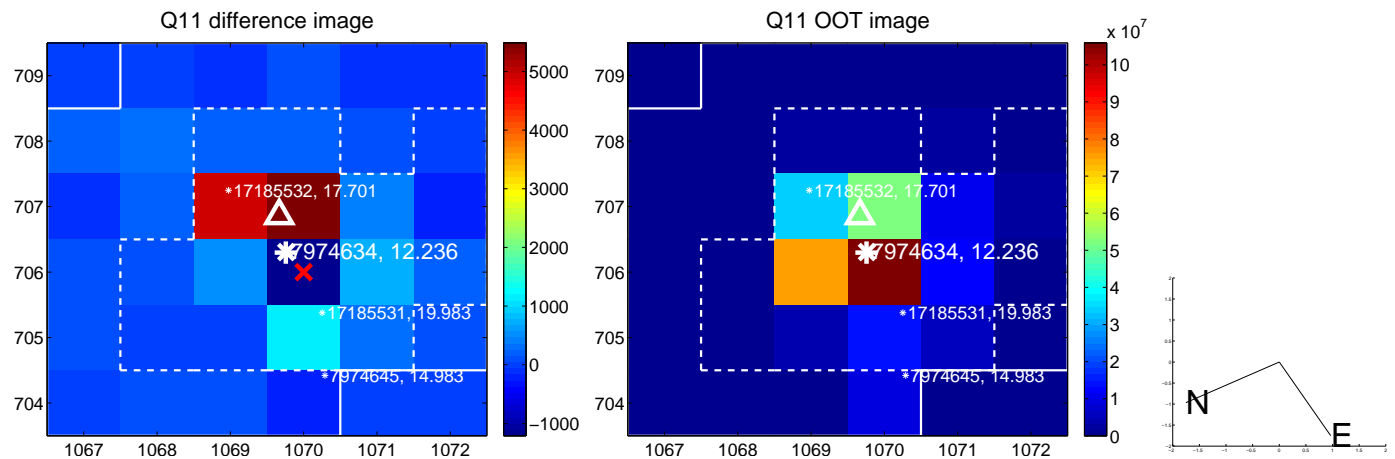
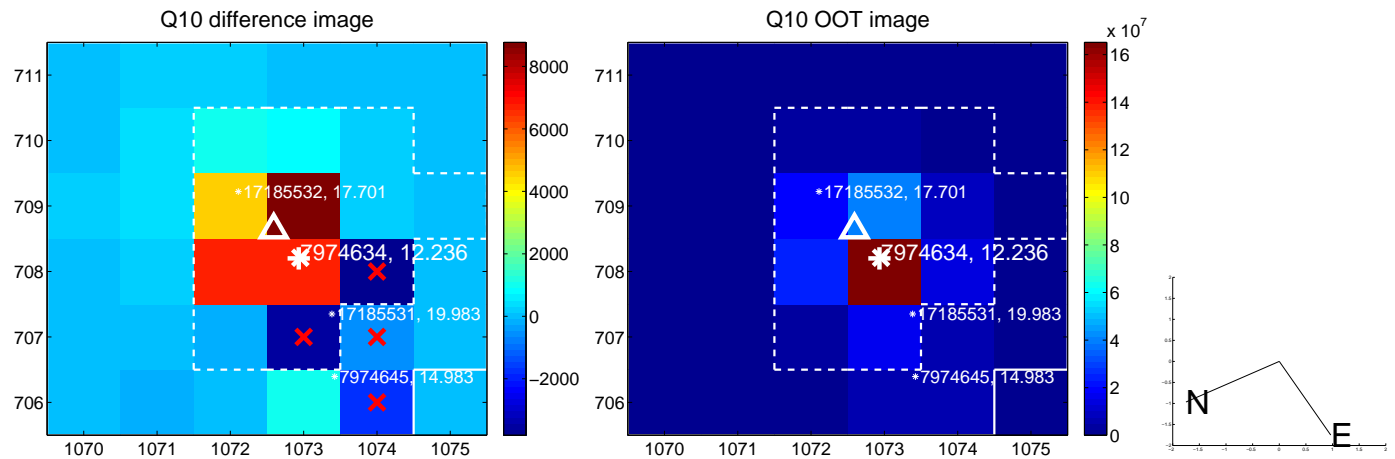
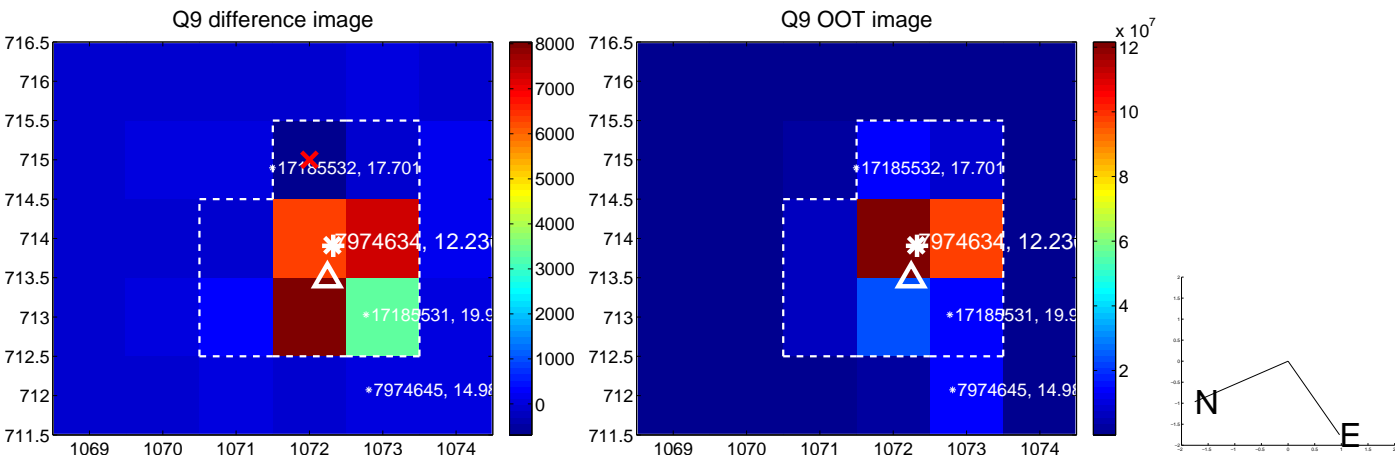
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



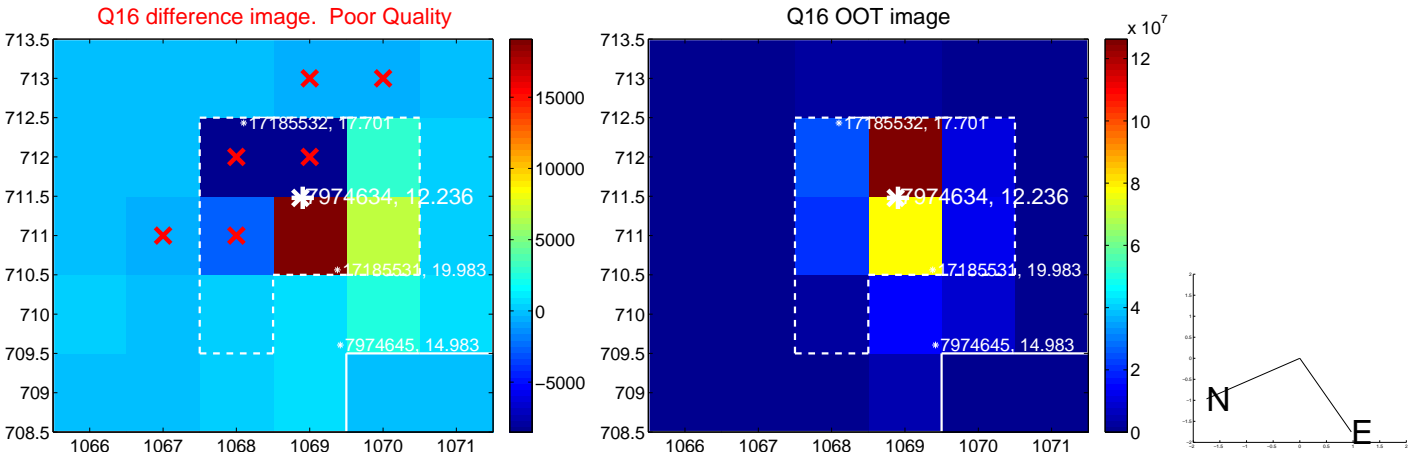
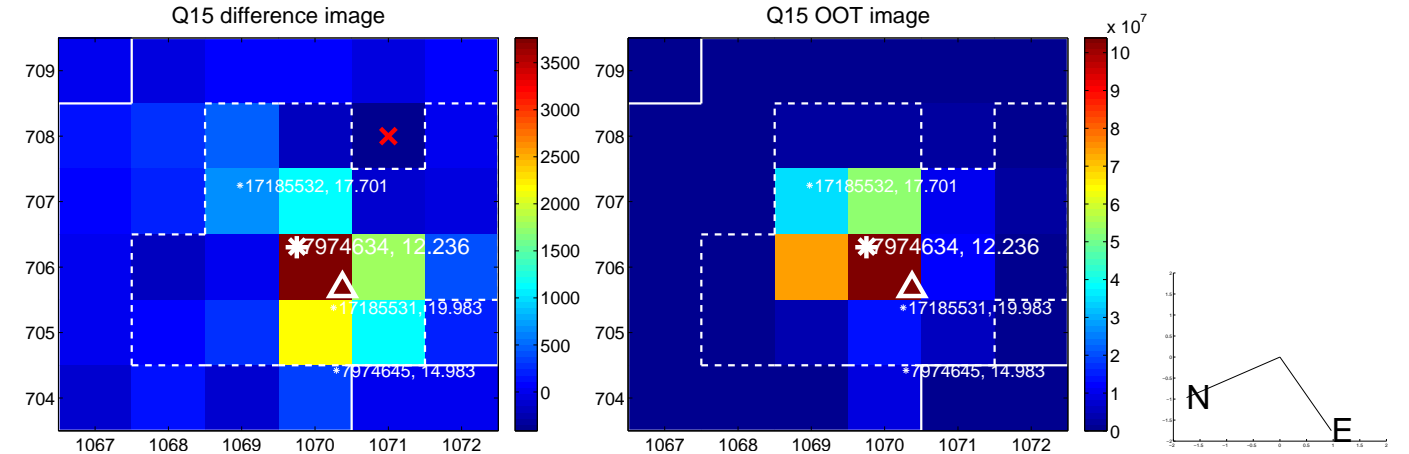
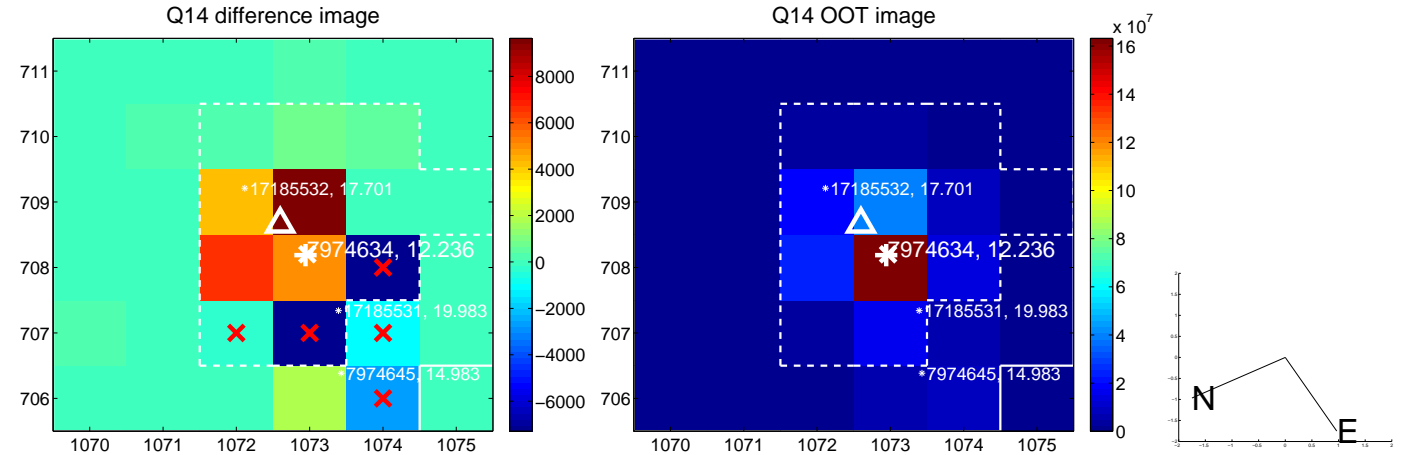
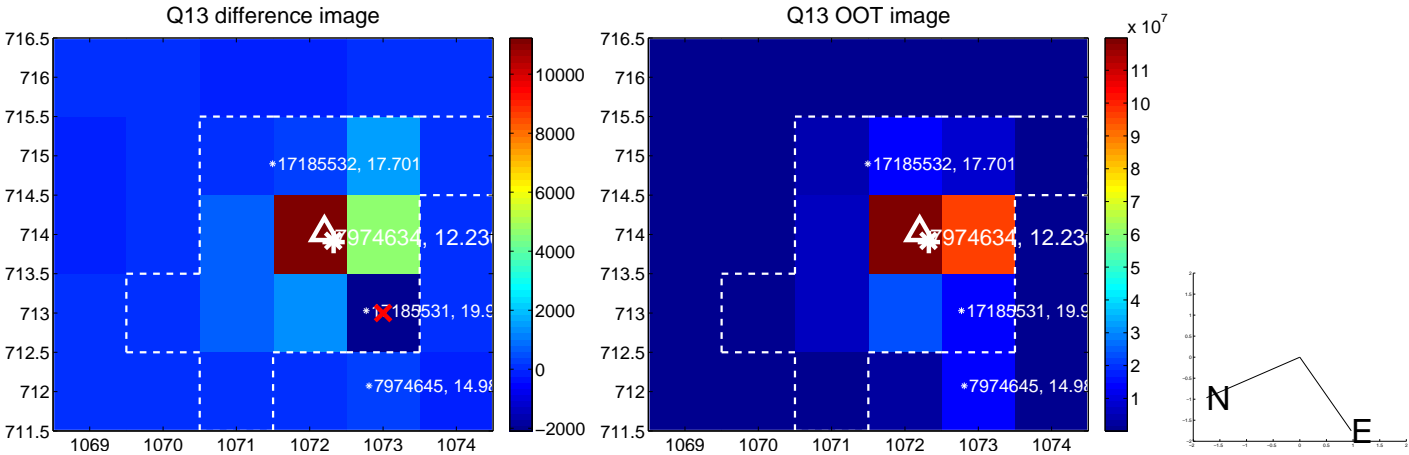
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



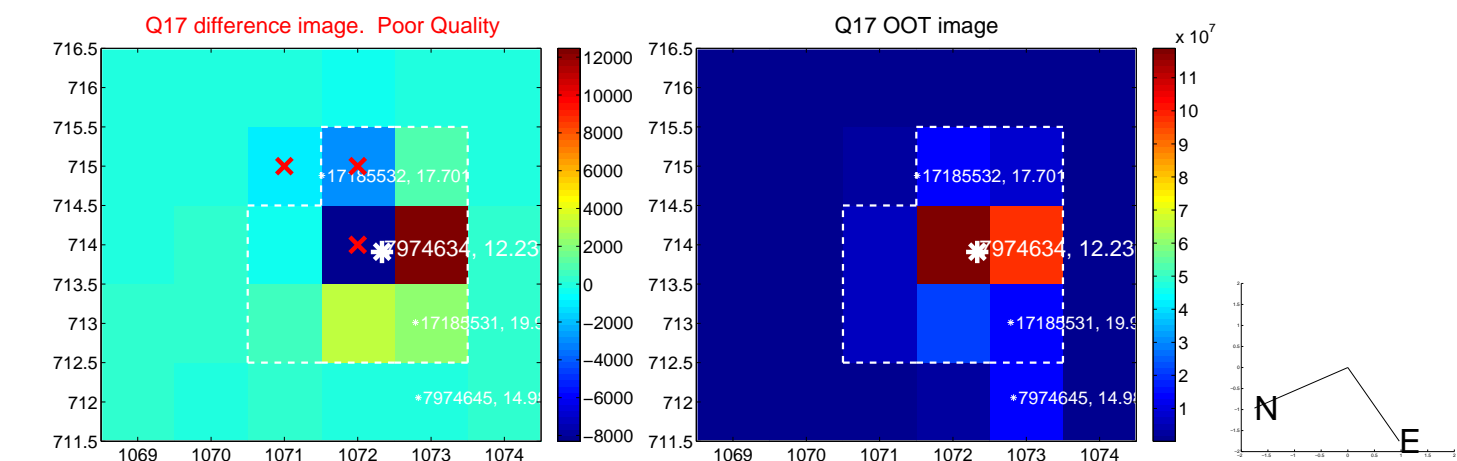
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



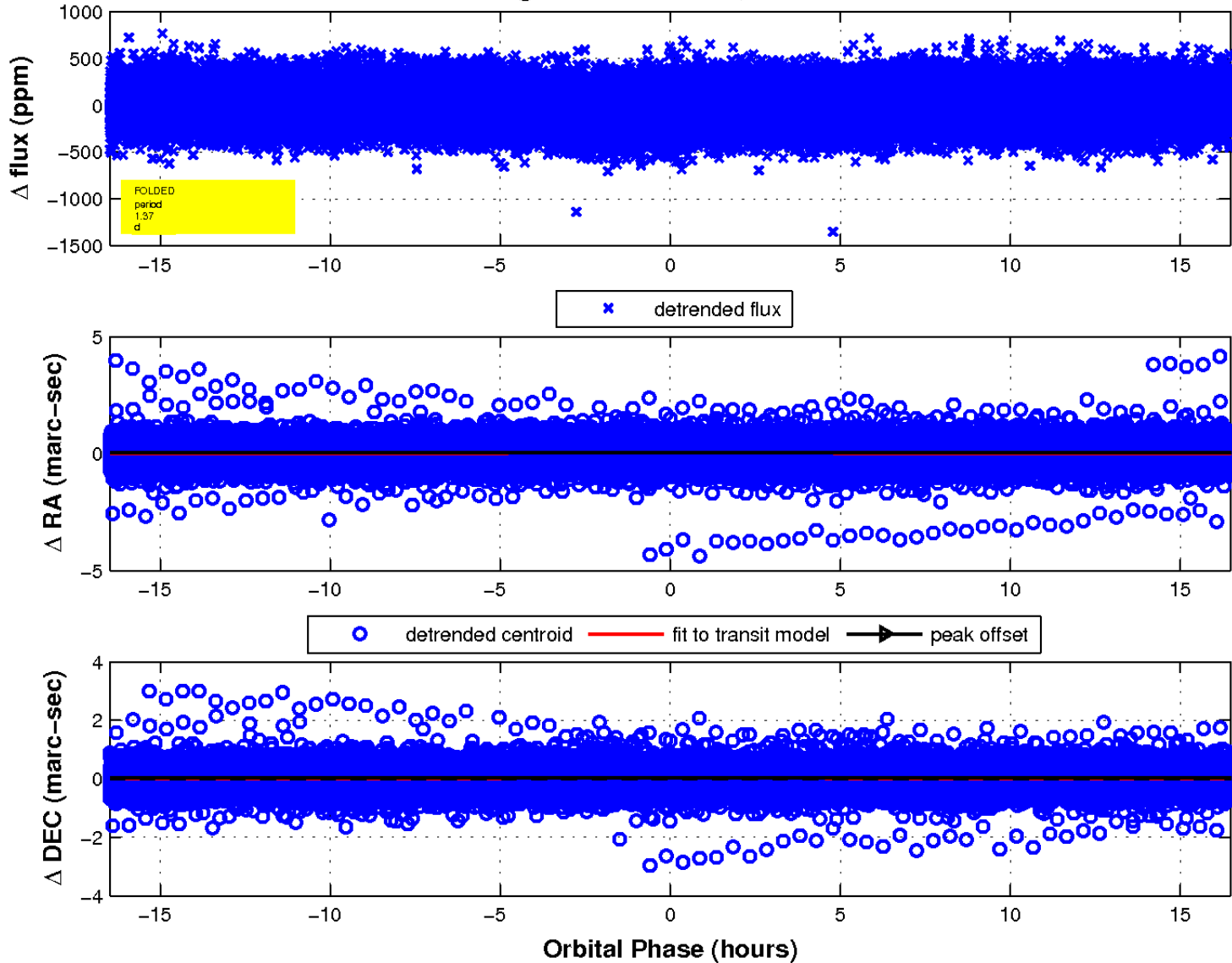
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

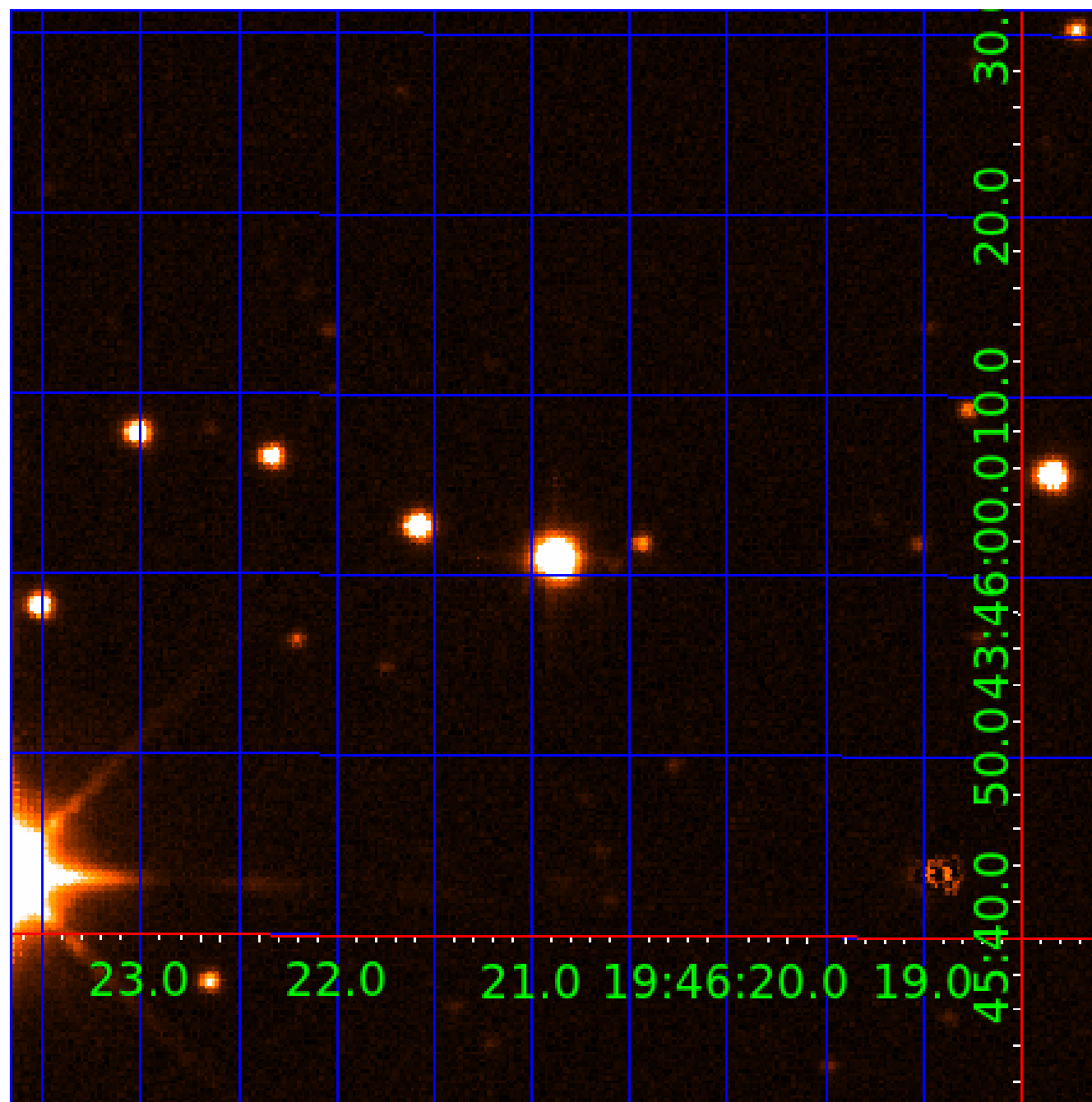


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 007974634

Q1-17 DR25 TCE Parameters

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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007974634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007974634-02	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
007974634-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

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

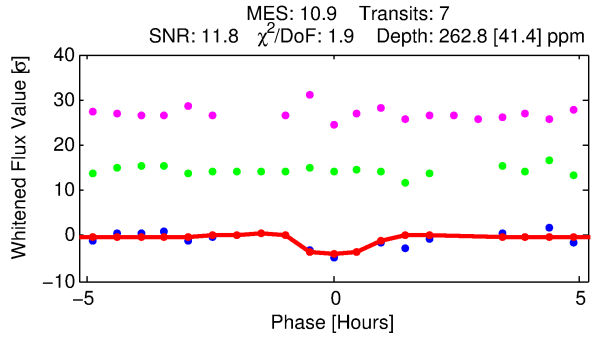
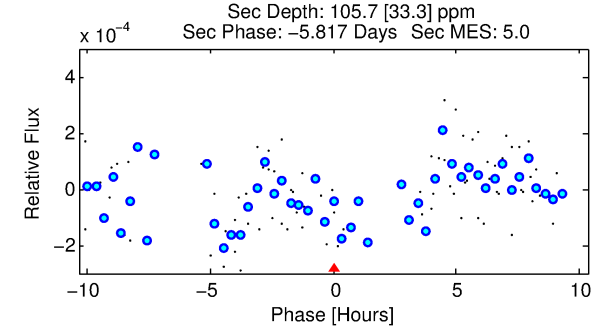
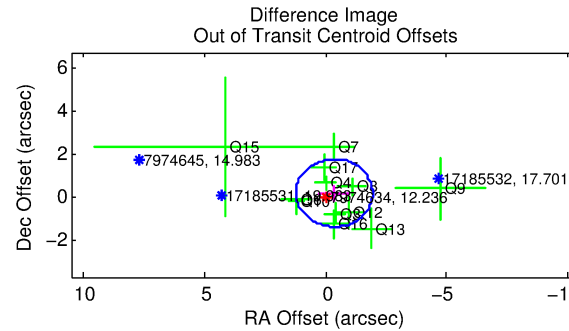
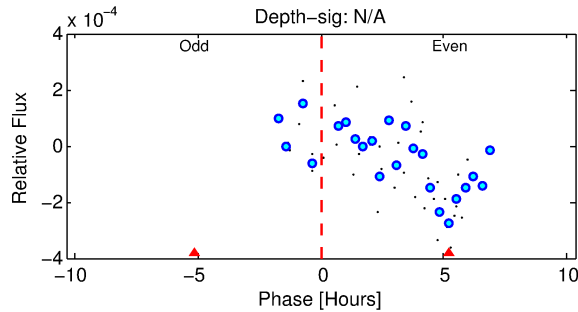
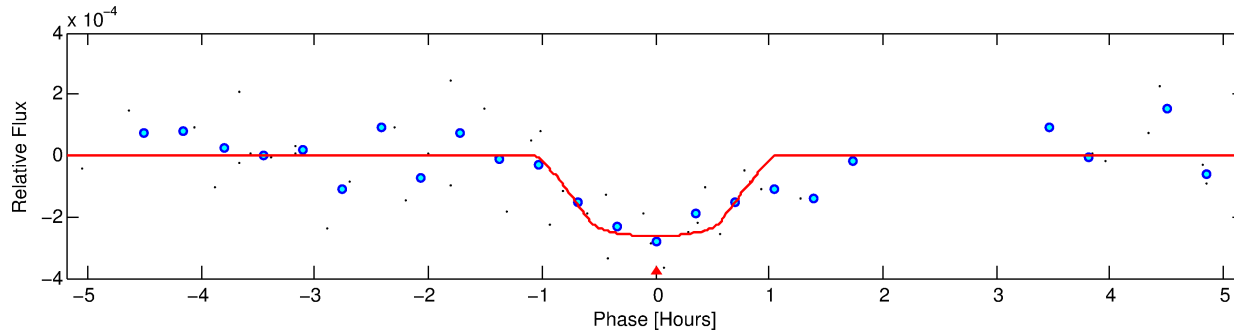
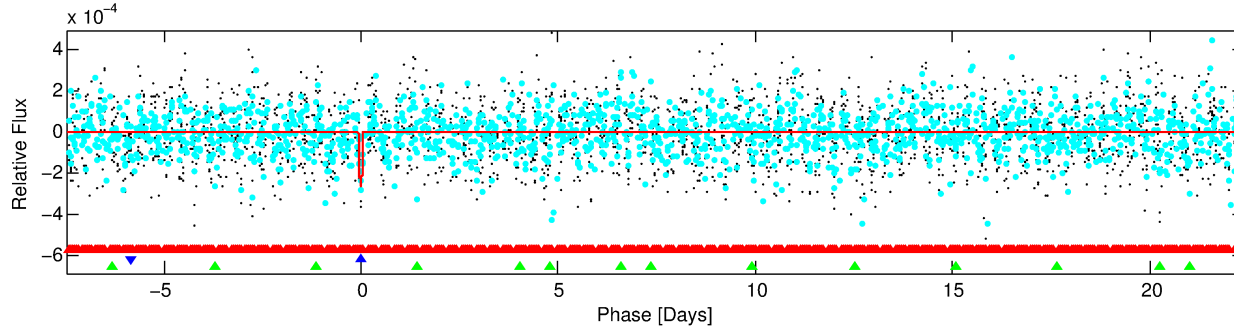
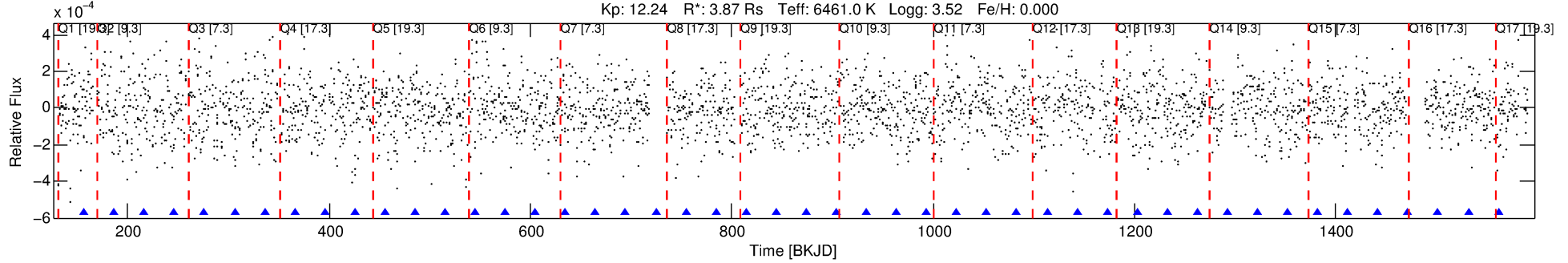
Ephemeris Match Information For 007974634-02

No Significant Match Found

DV One-Page Summary

KIC: 7974634 Candidate: 2 of 3 Period: 29.887 d
KOI: K06168 Corr: No Ephemeris Match

Kp: 12.24 R*: 3.87 Rs Teff: 6461.0 K Logg: 3.52 Fe/H: 0.000



DV Fit Results:

Period = 29.88722 [0.00091] d
Epoch = 156.7649 [0.0102] BKJD
Rp/R* = 0.0173 [0.0192]
a/R* = 63.99 [412.15]
b = 0.89 [1.41]
Seff = 444.86 [261.75]
Teq = 1171 [172] K
Rp = 7.33 [8.58] Re
a = 0.2295 [0.0835] AU
Ag = 57.07 [131.77] [0.43σ]
Teffp = 4977 [2784] K [1.36σ]

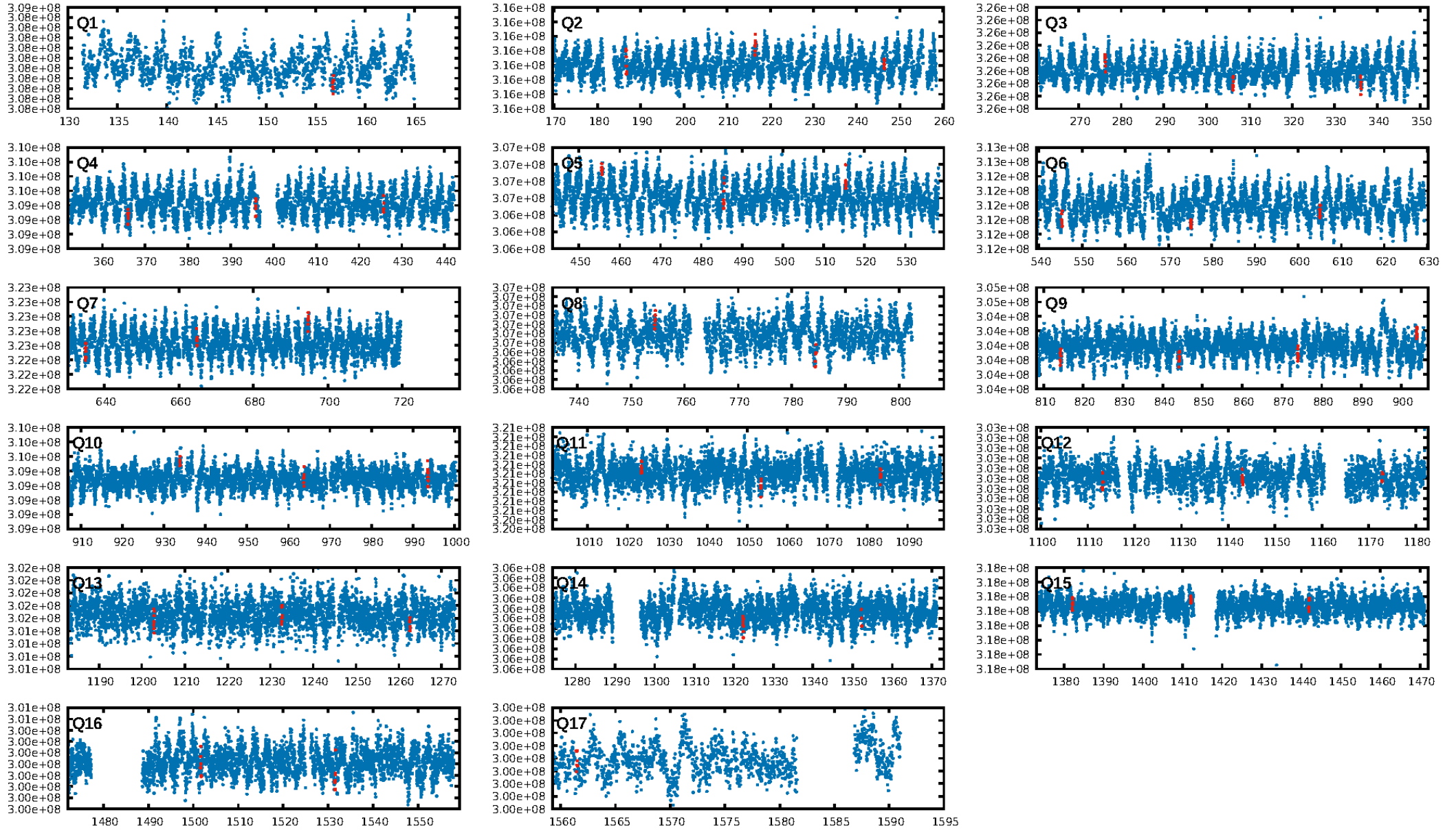
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [65.88σ]
LongPeriod-sig: 100.0% [129.59σ]
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 97.7%
Bootstrap-pfa: 2.83e-13
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.04
Centroid-sig: 71.3%
Centroid-so: 0.216 arcsec [0.69σ]
OotOffset-rm: 0.397 arcsec [0.75σ]
OotOffset-st: 2/3/4/3 [12]
KicOffset-rm: 0.300 arcsec [0.62σ]
KicOffset-st: 2/3/4/3 [12]
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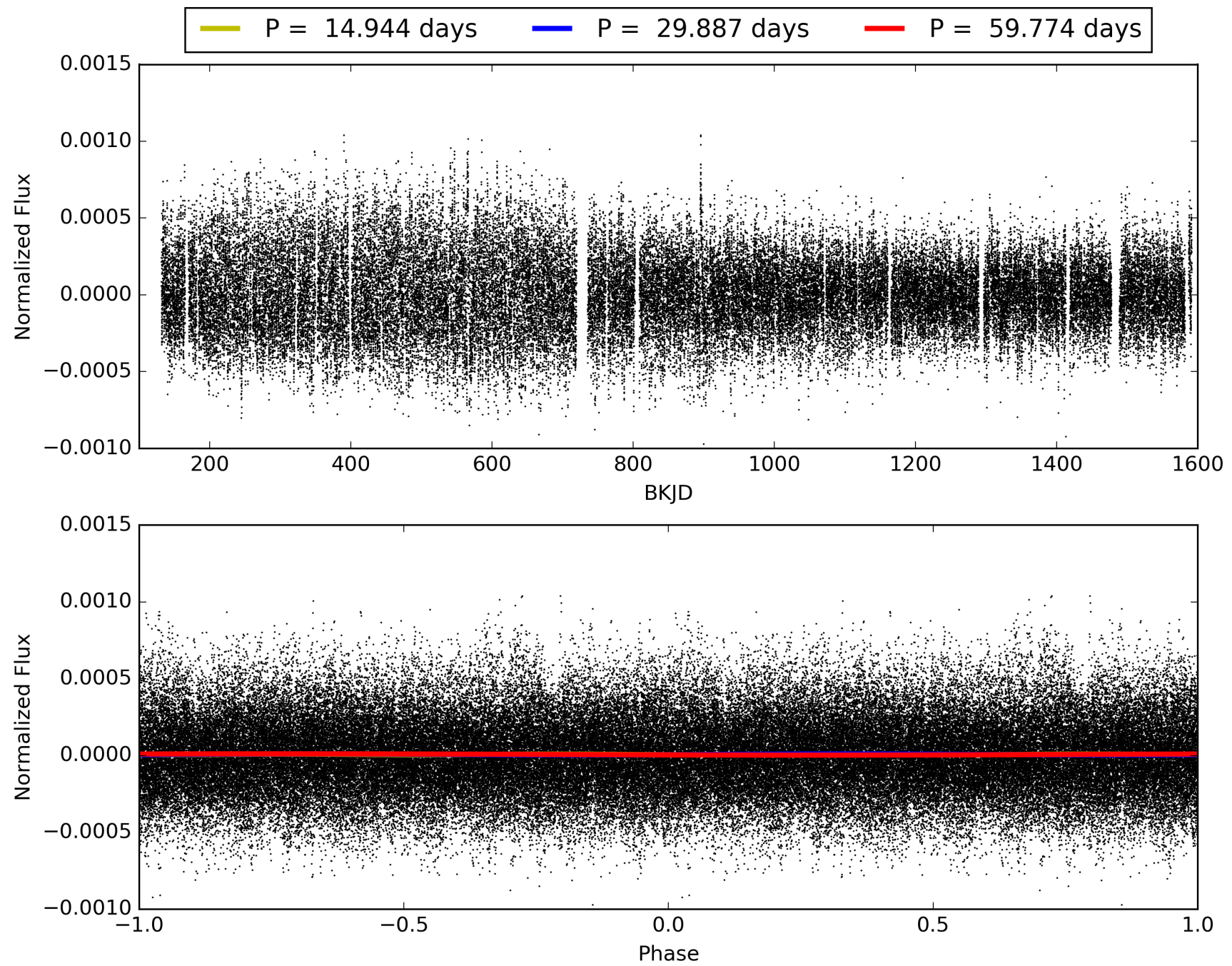
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007974634-02, PDC Light Curves

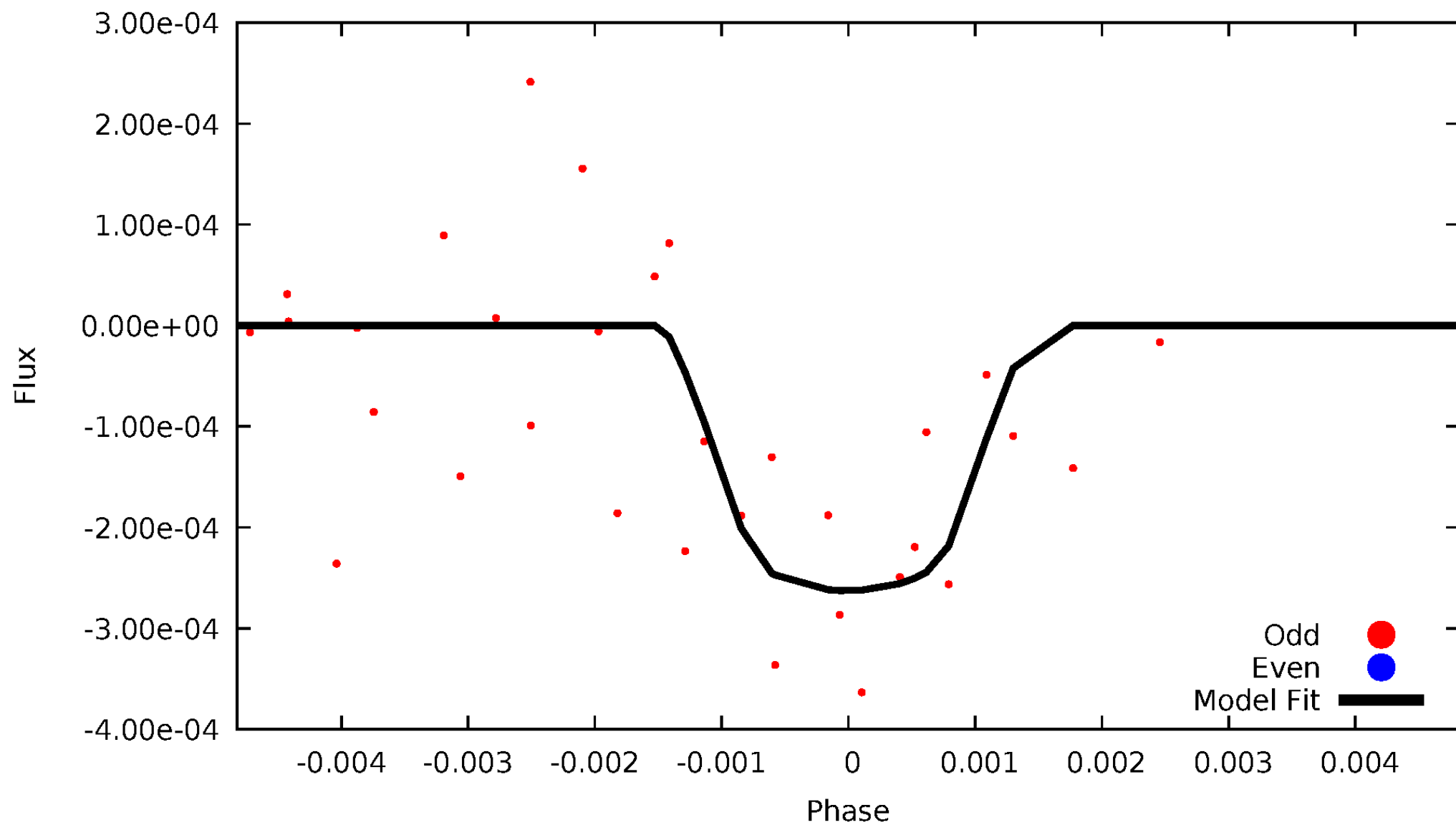


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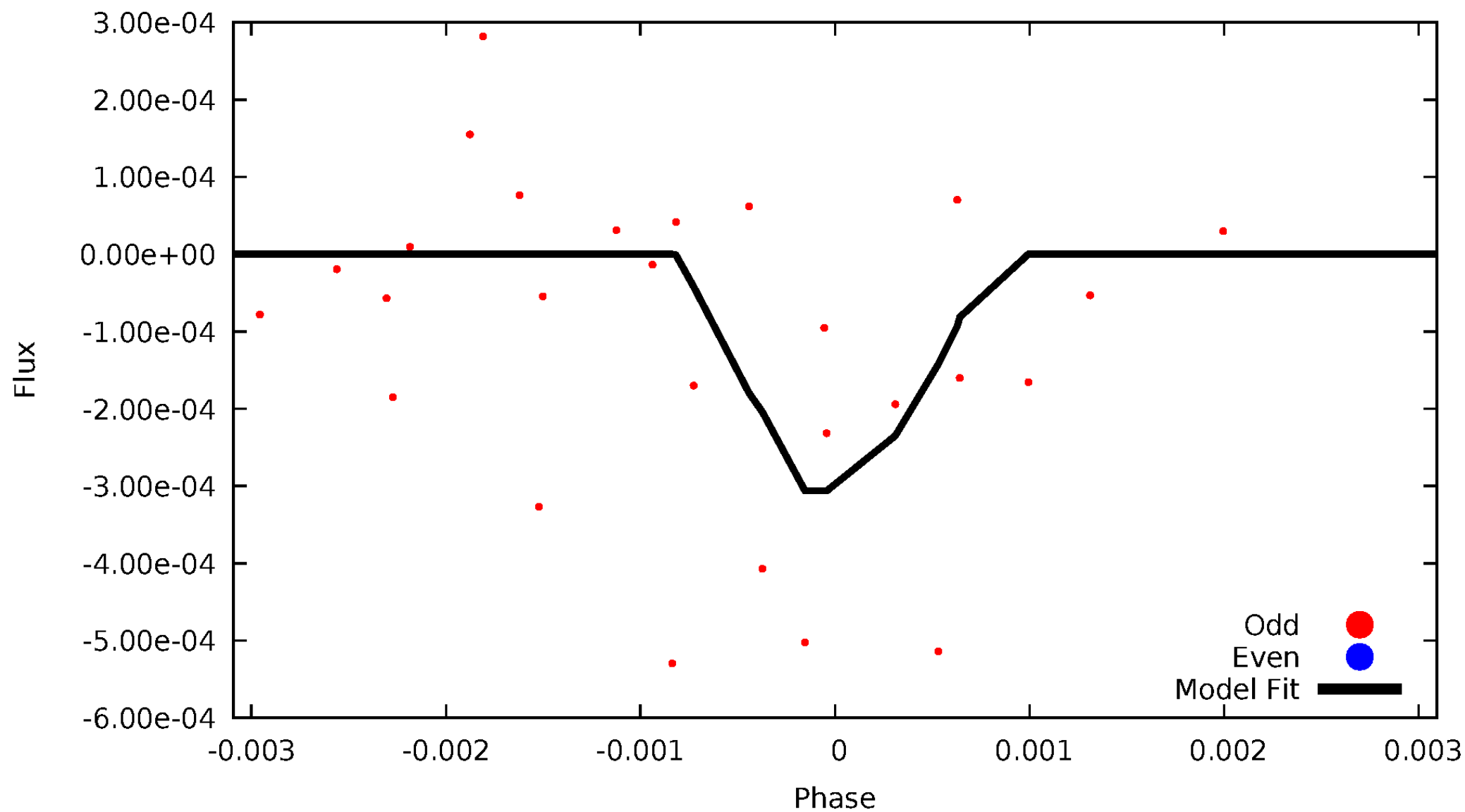
DV Odd/Even

TCE 007974634-02



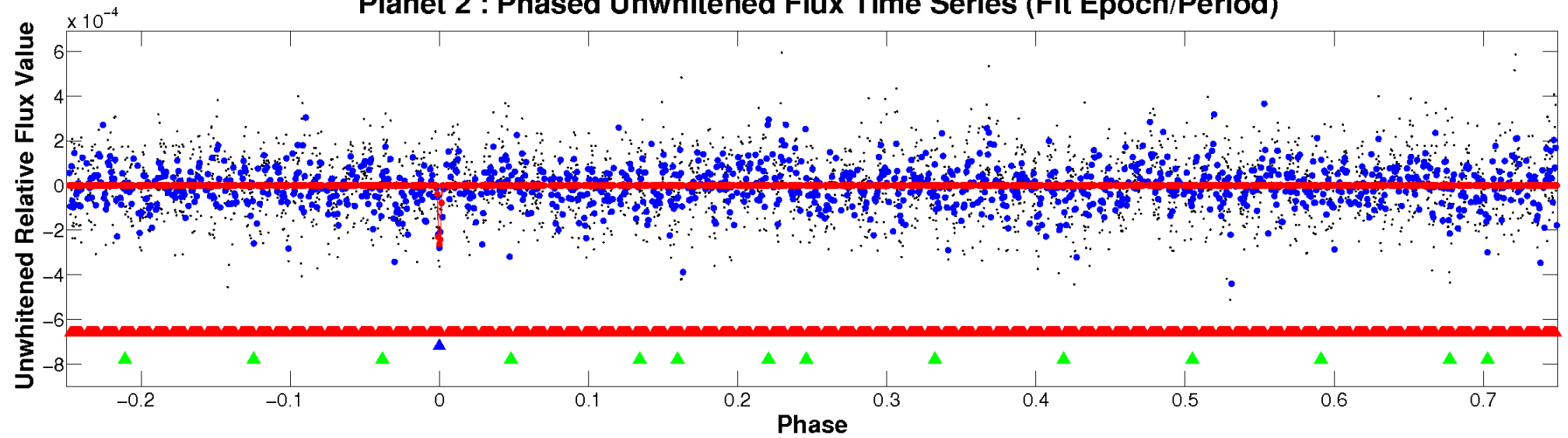
ALT Odd/Even

TCE 007974634-02

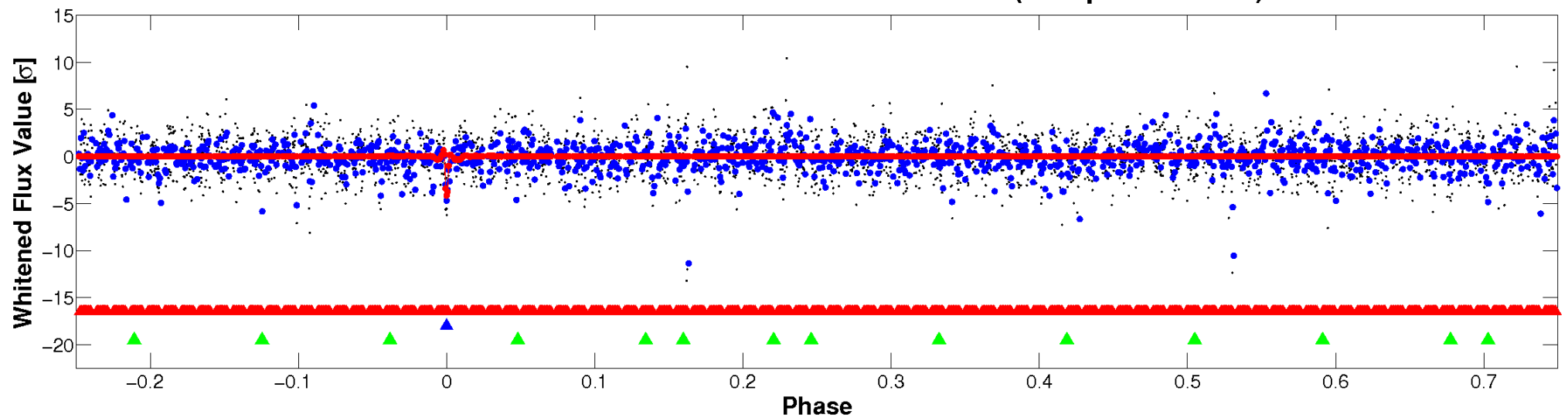


Non-Whitened Vs. Whitened Light Curve

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

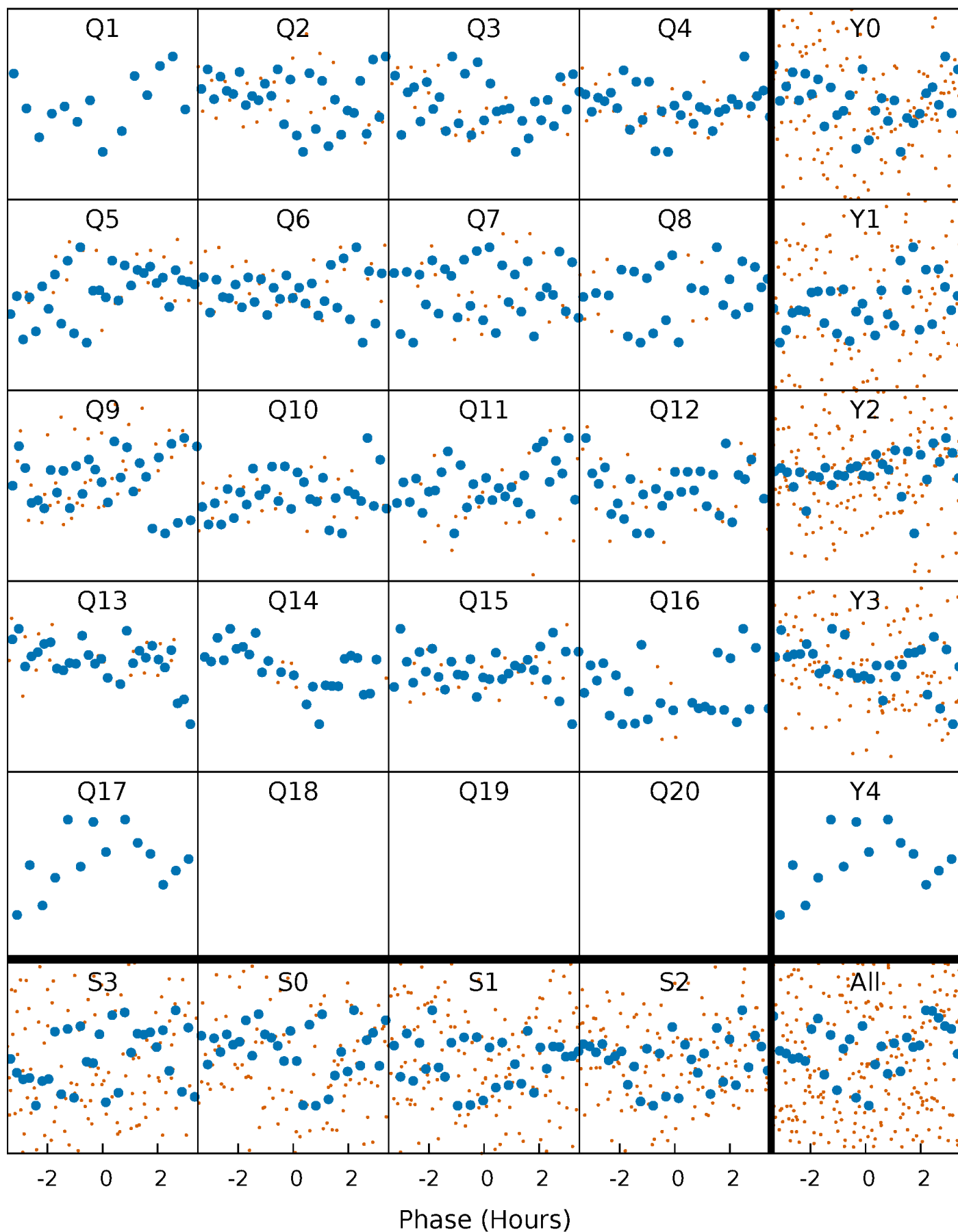


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



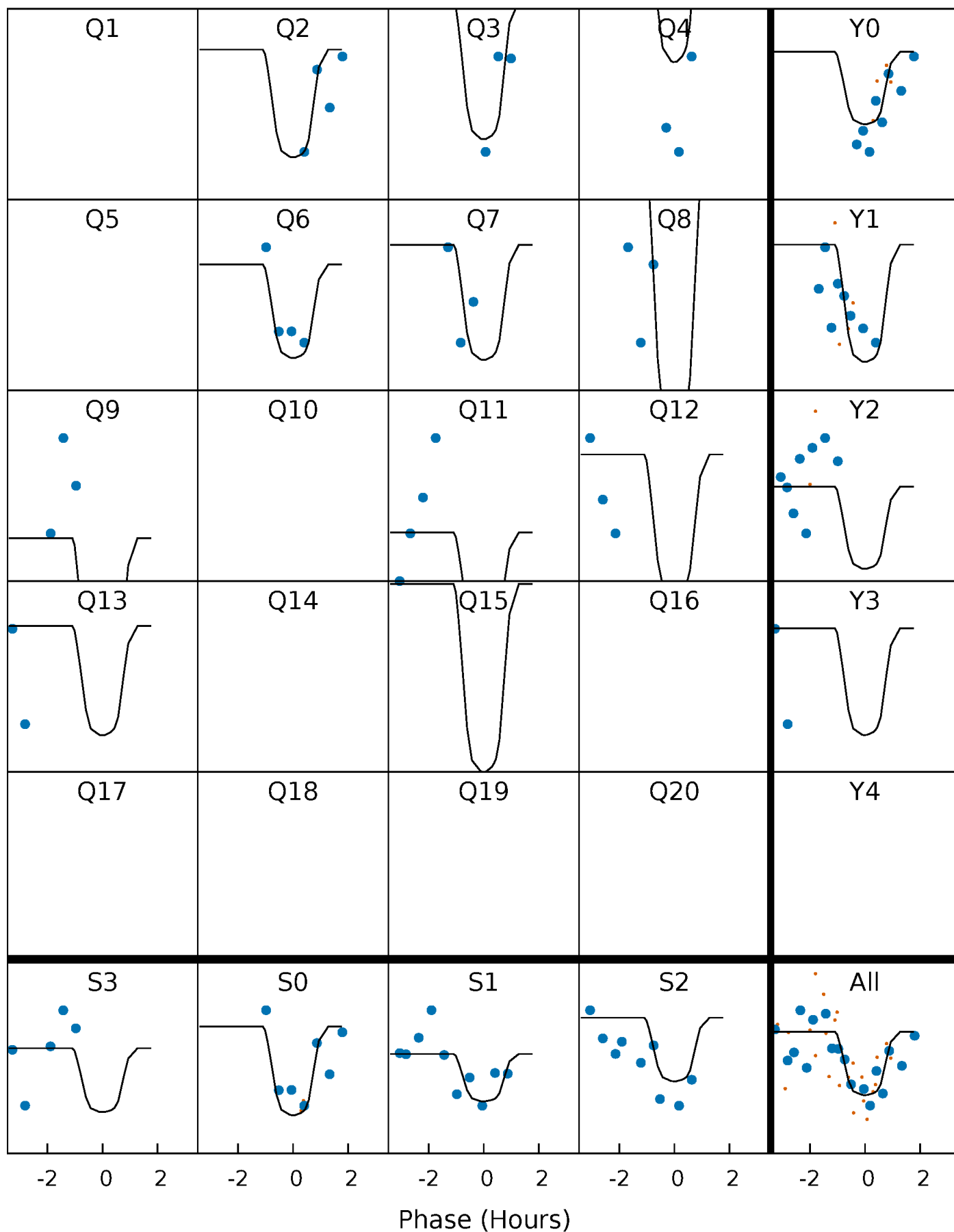
PDC Quarter-Phased Transit Curves

TCE 007974634-02 P= 29.887224 Days $T_0=156.764901$ (BKJD)



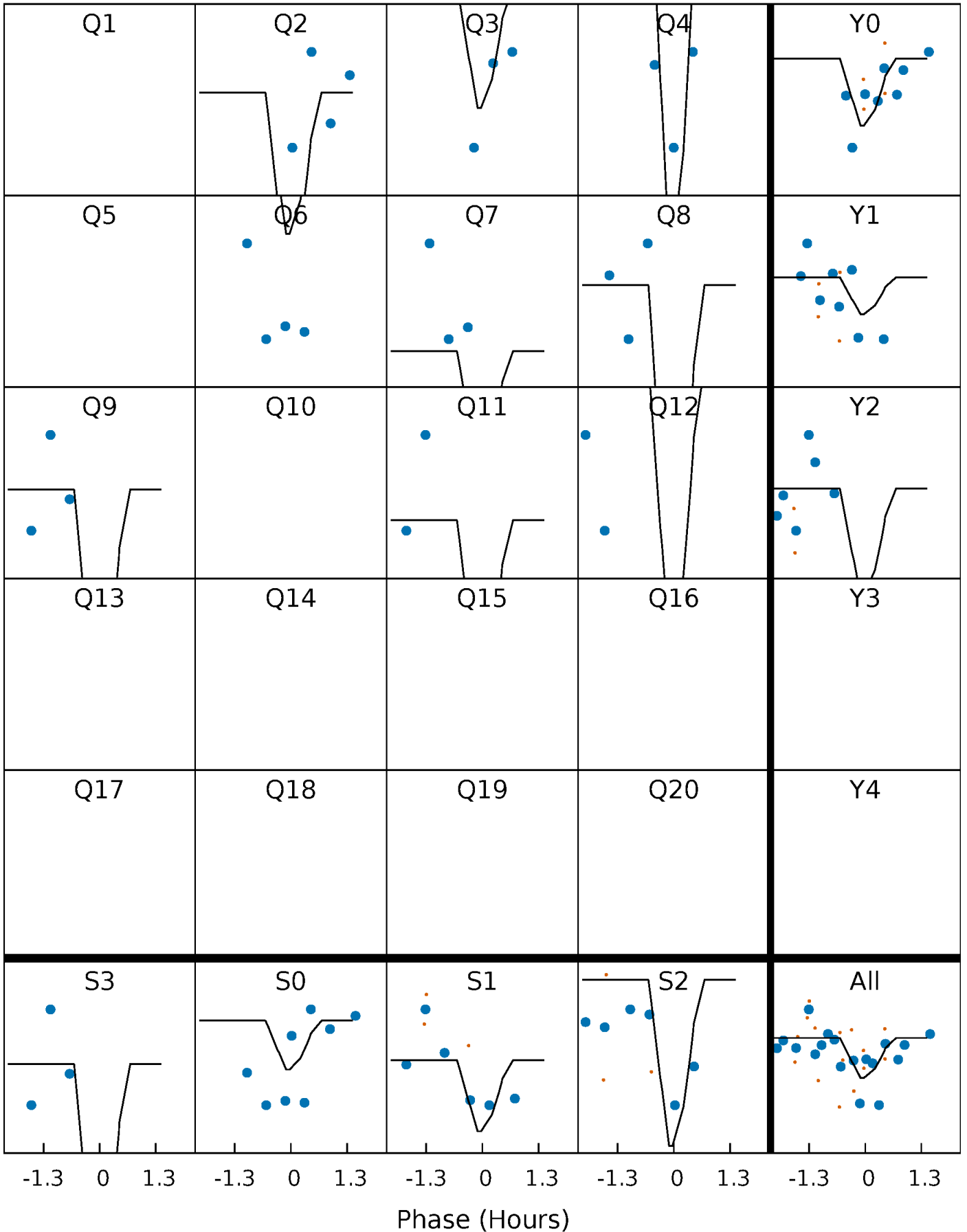
DV Quarter-Phased Transit Curves

TCE 007974634-02 P= 29.887224 Days $T_0=156.764901$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

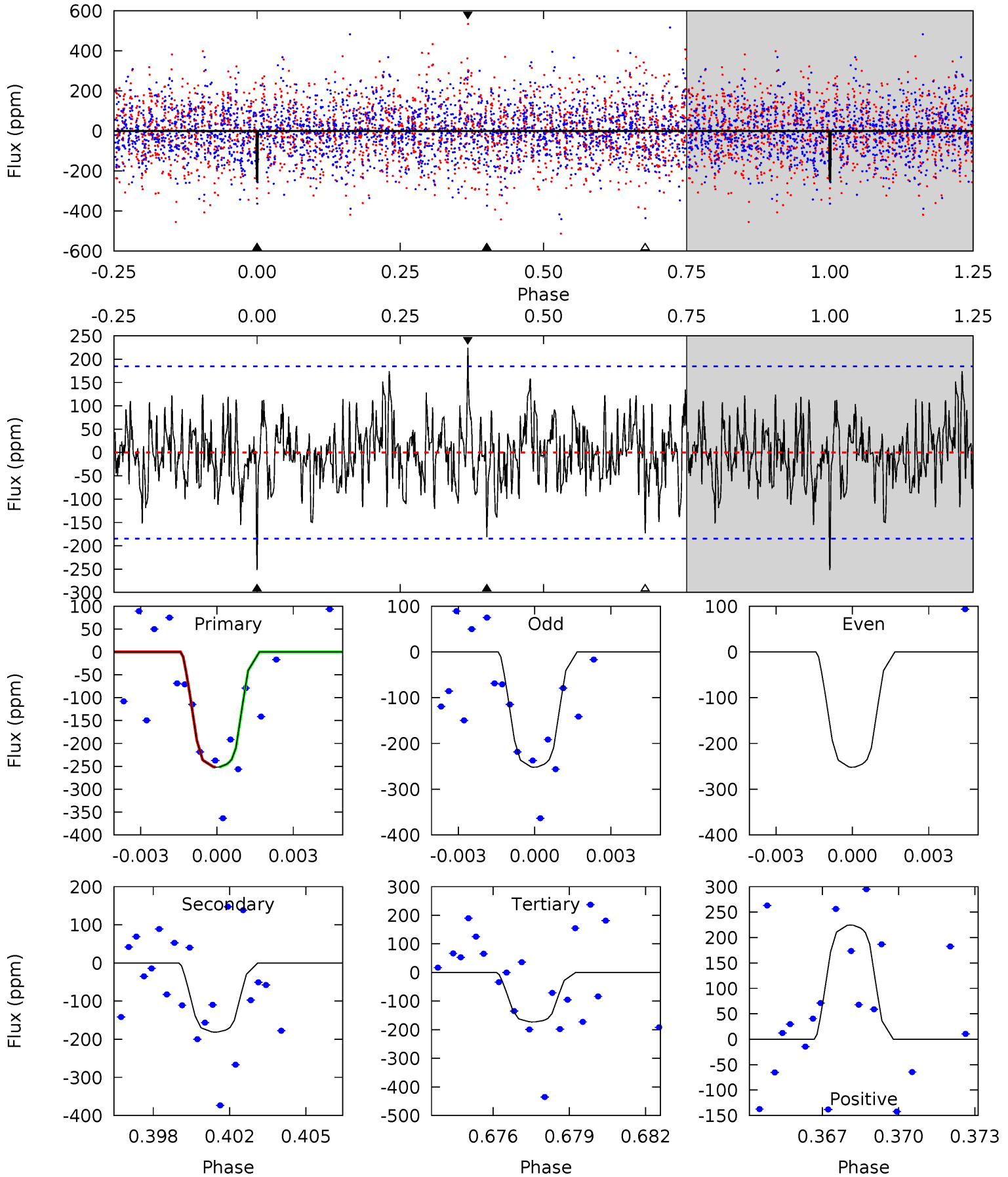
TCE 007974634-02 P= 29.886057 Days $T_0=156.779893$ (BKJD)



DV Model-Shift Uniqueness Test

007974634-02, P = 29.887224 Days, E = 126.877677 Days

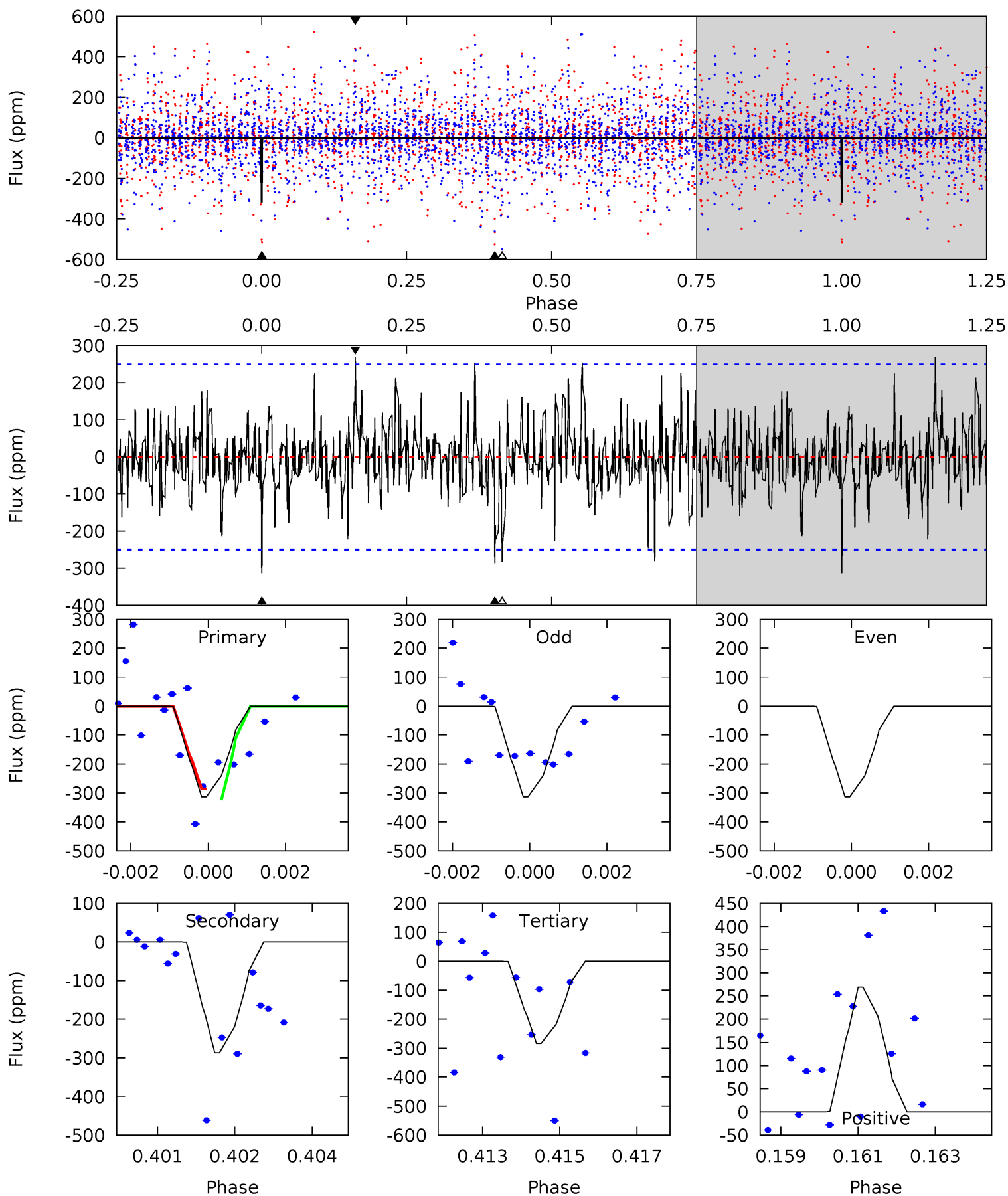
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.15	5.14	4.91	6.37	5.24	2.95	1.58	2.24	0.78	0.24	-1.23	0	1.09	0.47	0.00



Alt Model-Shift Uniqueness Test

007974634-02, P = 29.886057 Days, E = 126.893836 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.71	6.14	6.07	5.76	5.34	3.12	1.54	0.64	0.96	0.07	0.38	0	1.00	0.46	0.41



Stellar Parameters For KIC 007974634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6461^{+156}_{-176}	$3.518^{+0.338}_{-0.113}$	$0.000^{+0.300}_{-0.250}$	$3.874^{+0.371}_{-1.483}$	$1.806^{+0.152}_{-0.355}$	$0.044^{+0.120}_{-0.012}$
	+2%/-3%	+10%/-3%	+inf%/-inf%	+10%/-38%	+8%/-20%	+275%/-28%
Source	PHO1	FLK73	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 007974634-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-181 ± 35	$8.45^{+7.23}_{-5.55}$	1623^{+84}_{-159}	5133^{+3919}_{-1072}	70^{+518}_{-50}
Alt.	-287 ± 47	$9.02^{+7.15}_{-5.60}$	1623^{+82}_{-149}	5554^{+4467}_{-1131}	96^{+623}_{-65}

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 $A_{obs} \gg 1.0$

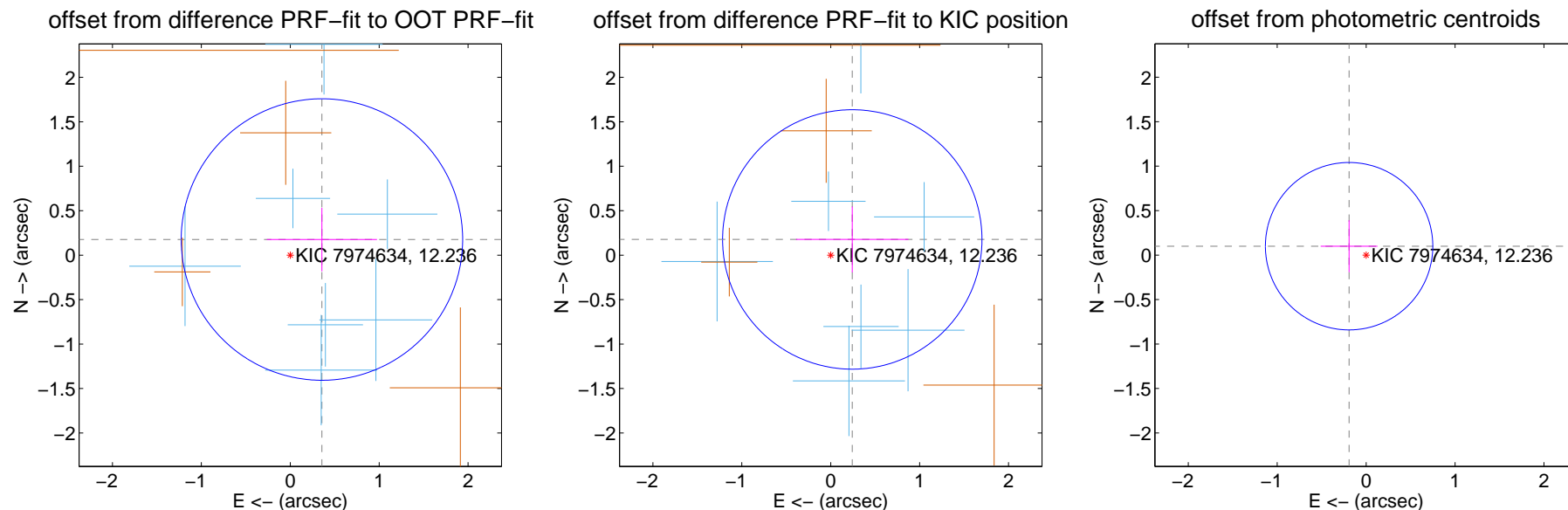
DV Centroid Data

Supplemental centroid analysis for 007974634-02. Kepler magnitude: 12.24. Transit SNR 11.85

There are 7 quarters with good PRF difference image offsets

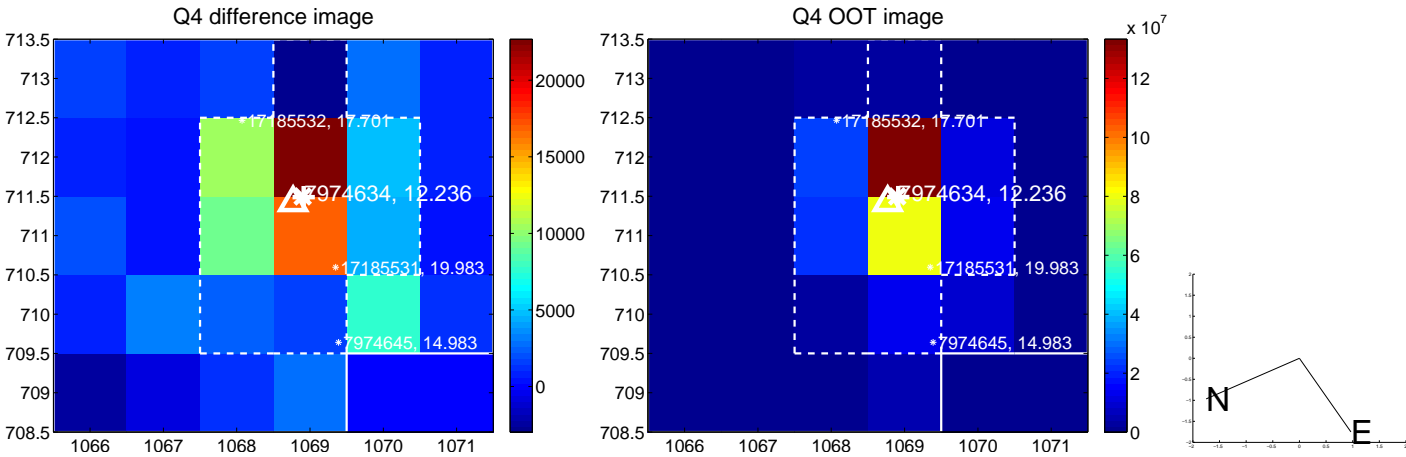
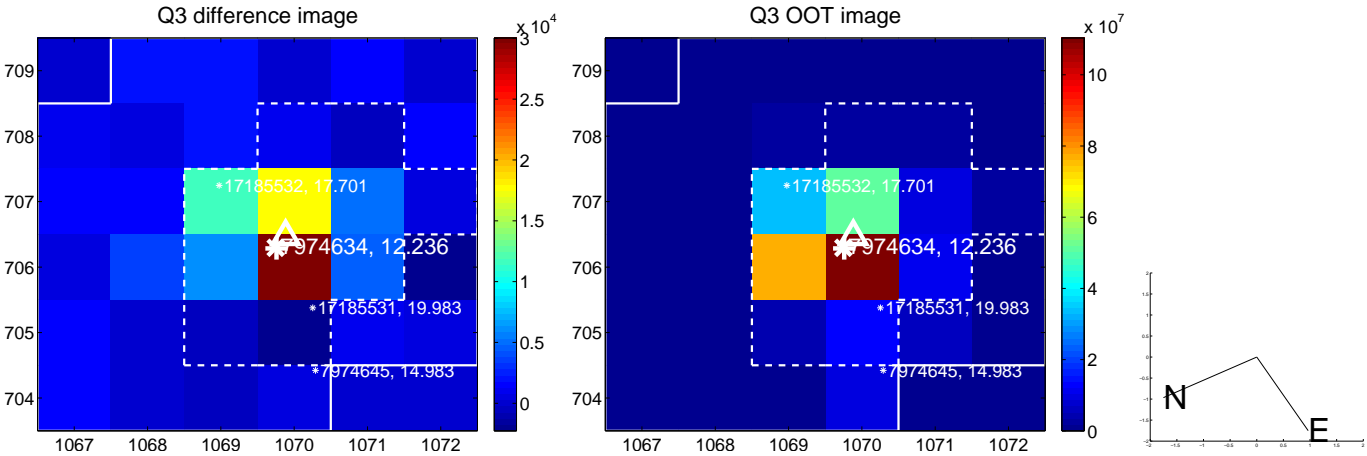
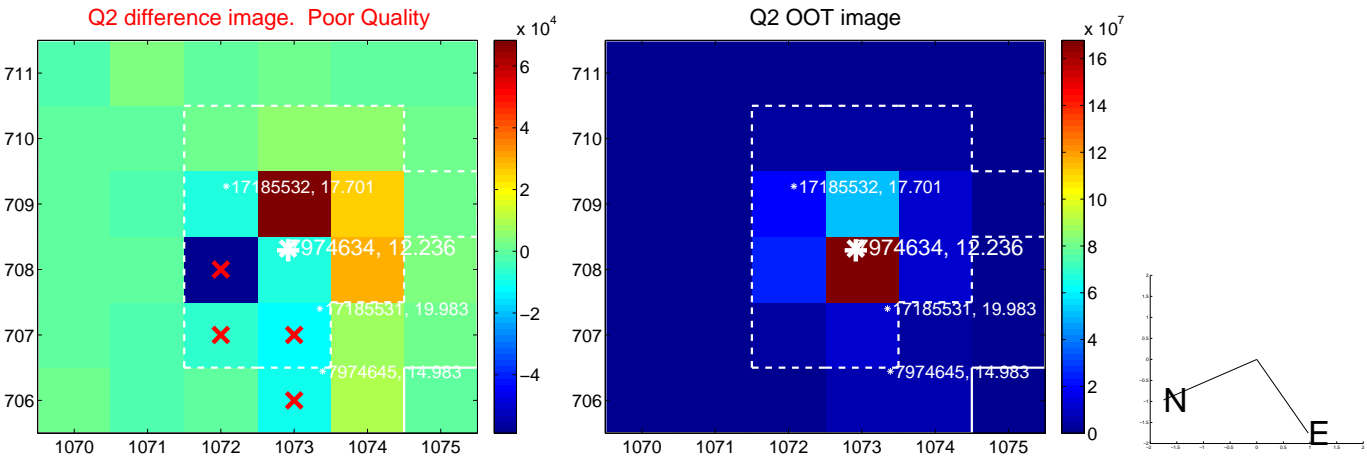
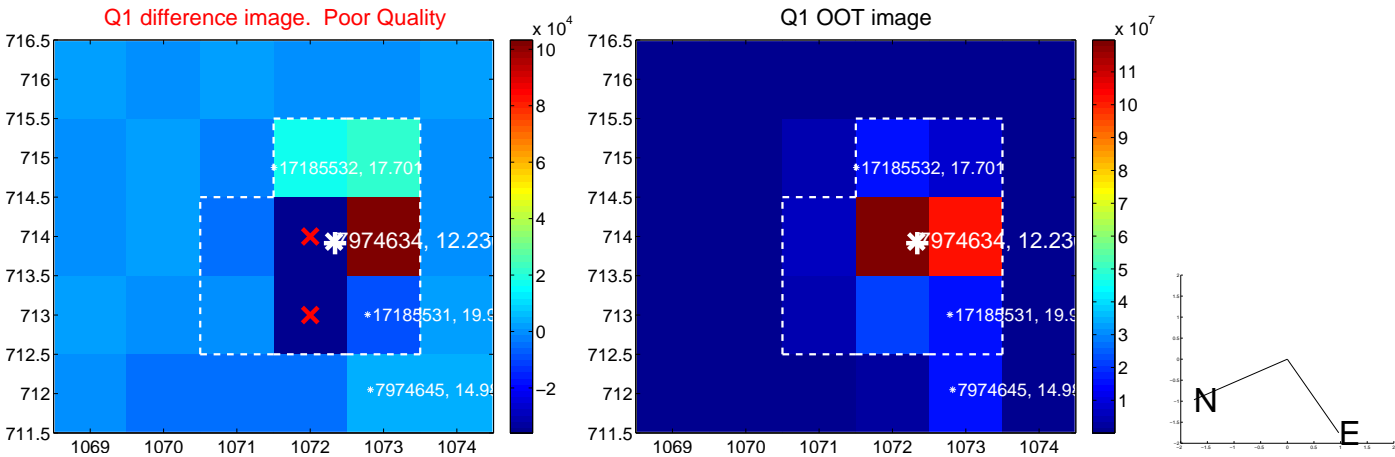
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.397 ± 0.528	0.75	-0.356 ± 0.619	0.176 ± 0.357
PRF-fit source offset from KIC position	0.300 ± 0.486	0.62	-0.243 ± 0.632	0.177 ± 0.371
photometric centroid source offset	0.22 ± 0.31	0.69	0.19 ± 0.32	0.10 ± 0.29

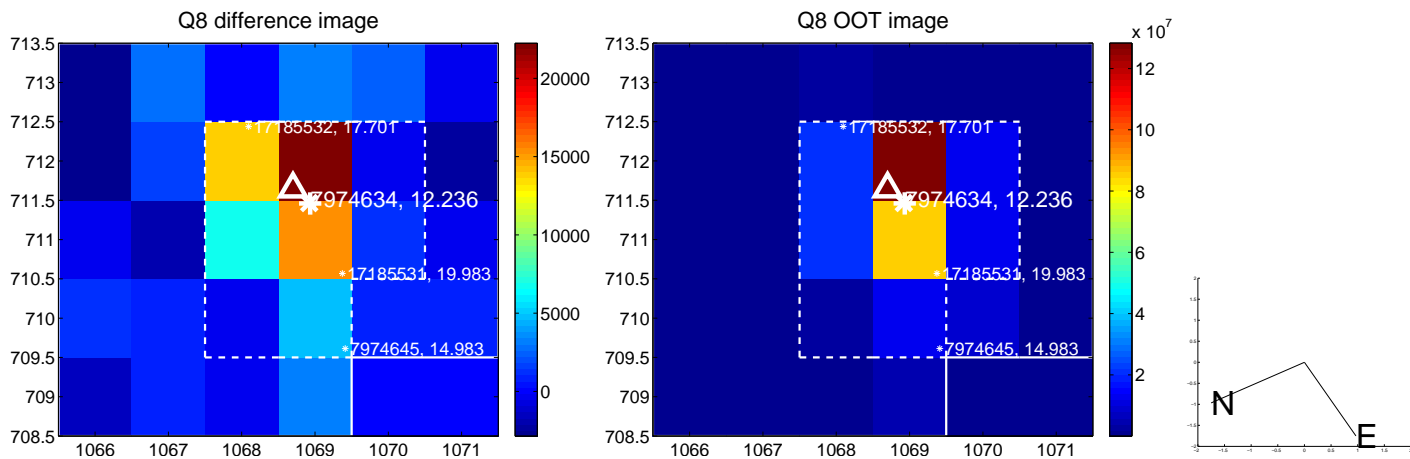
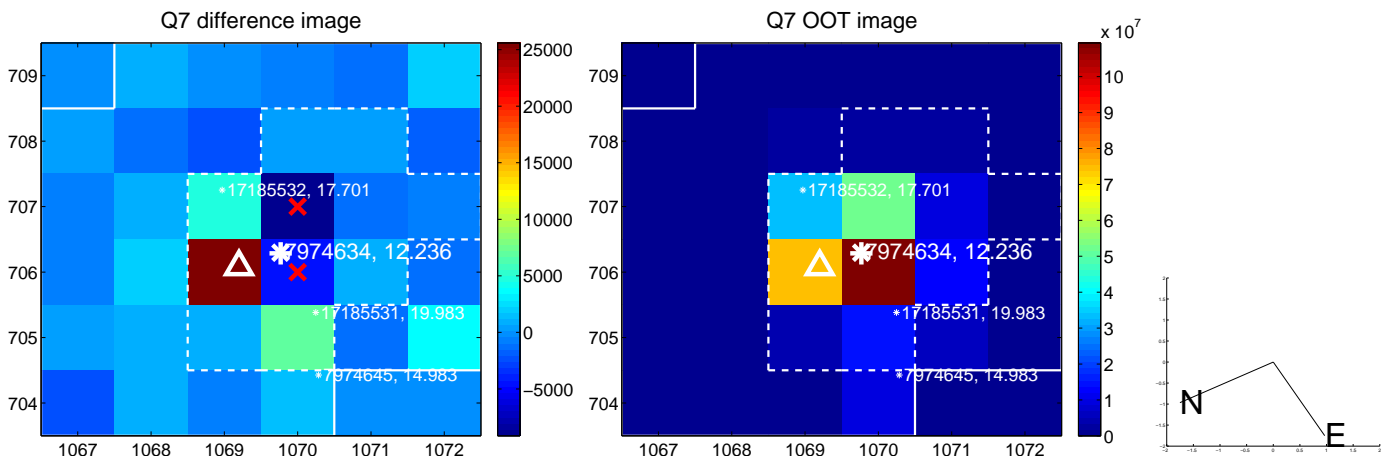
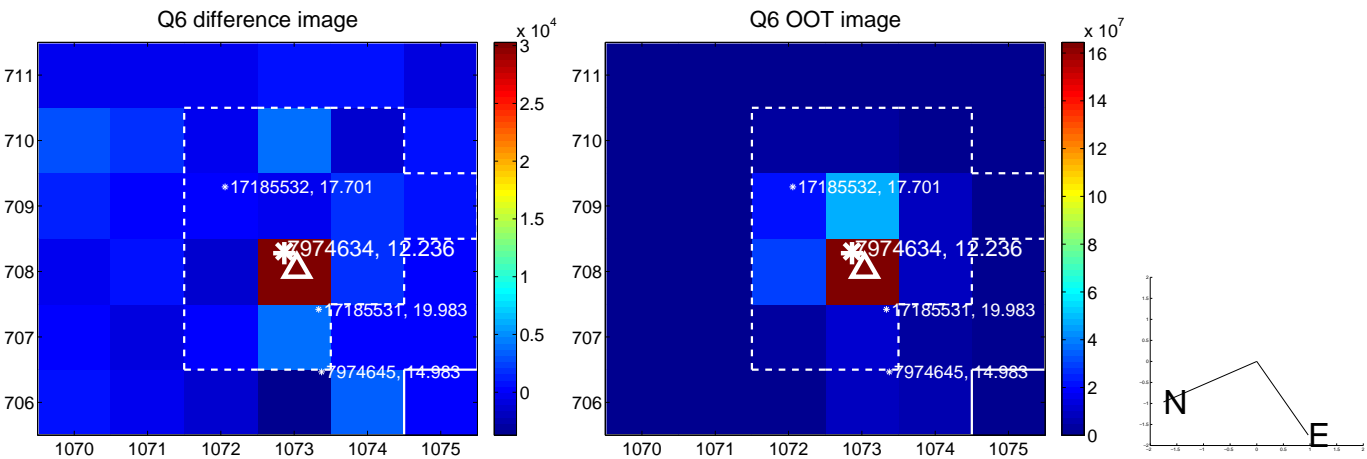
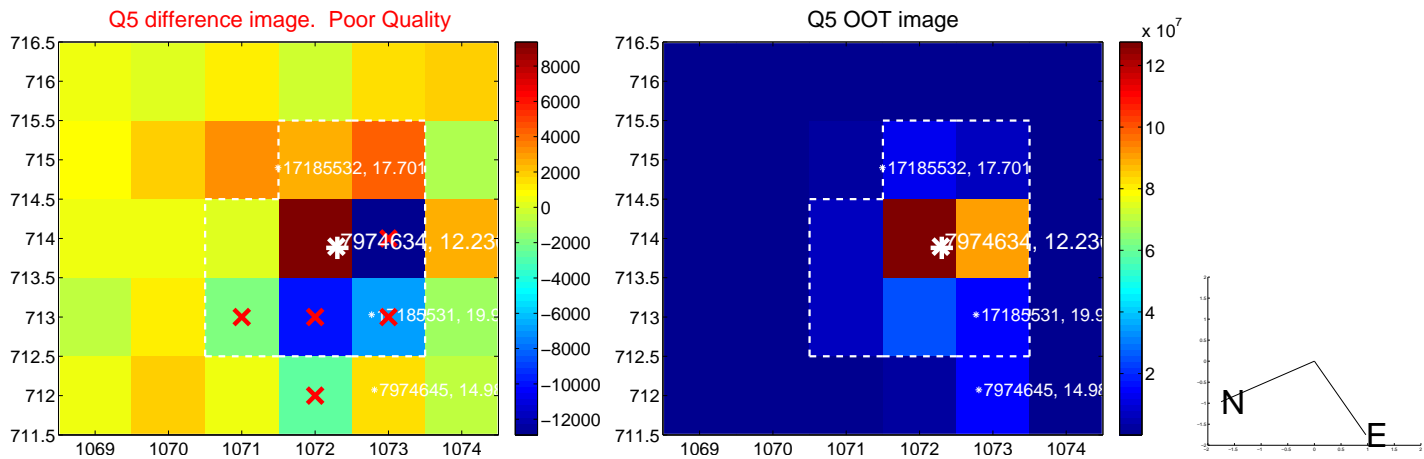


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

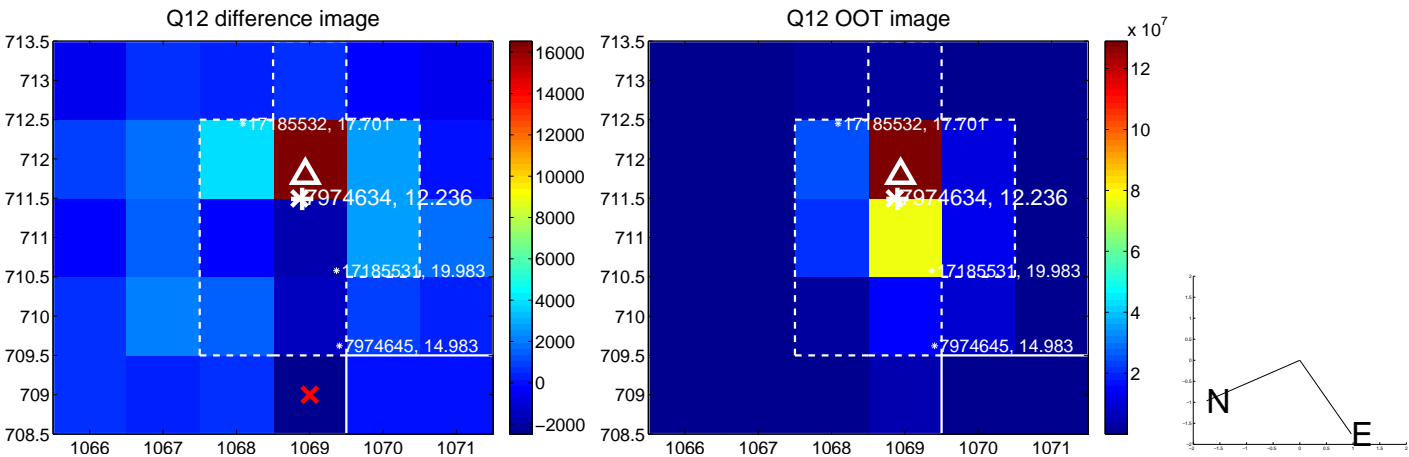
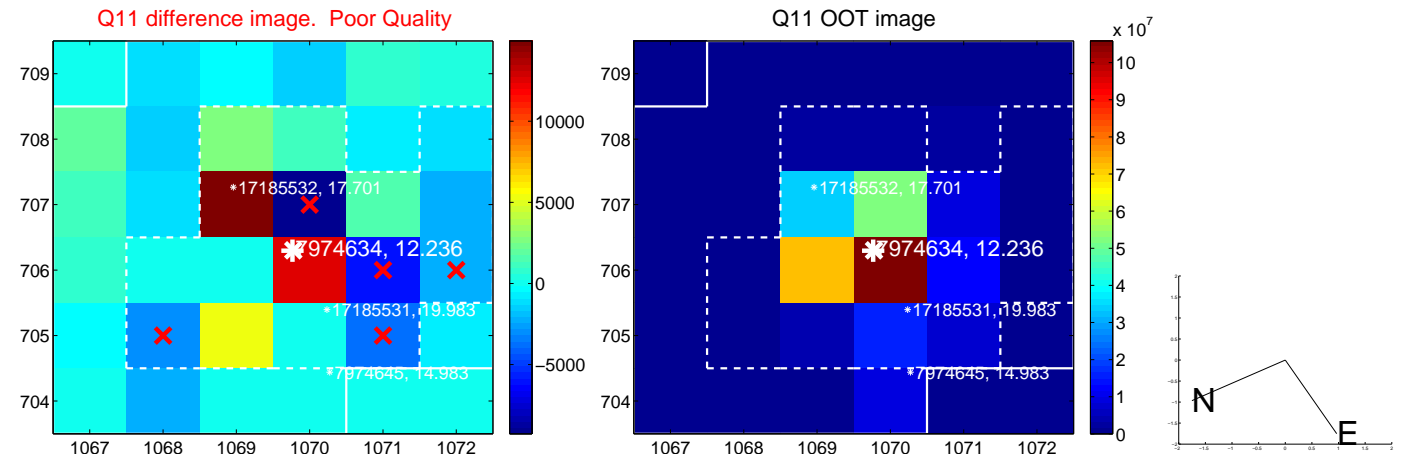
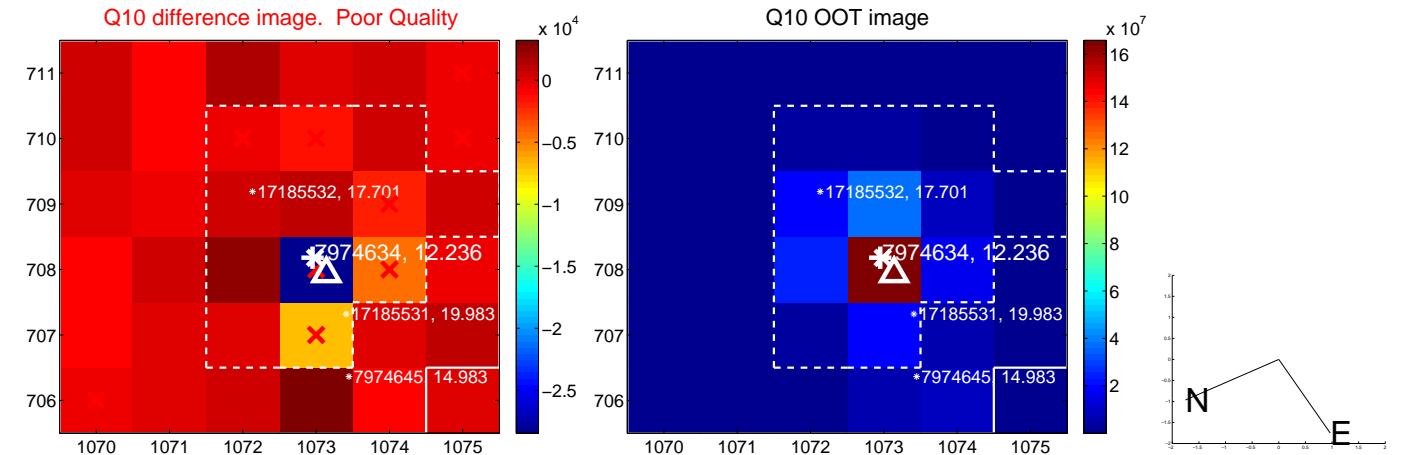
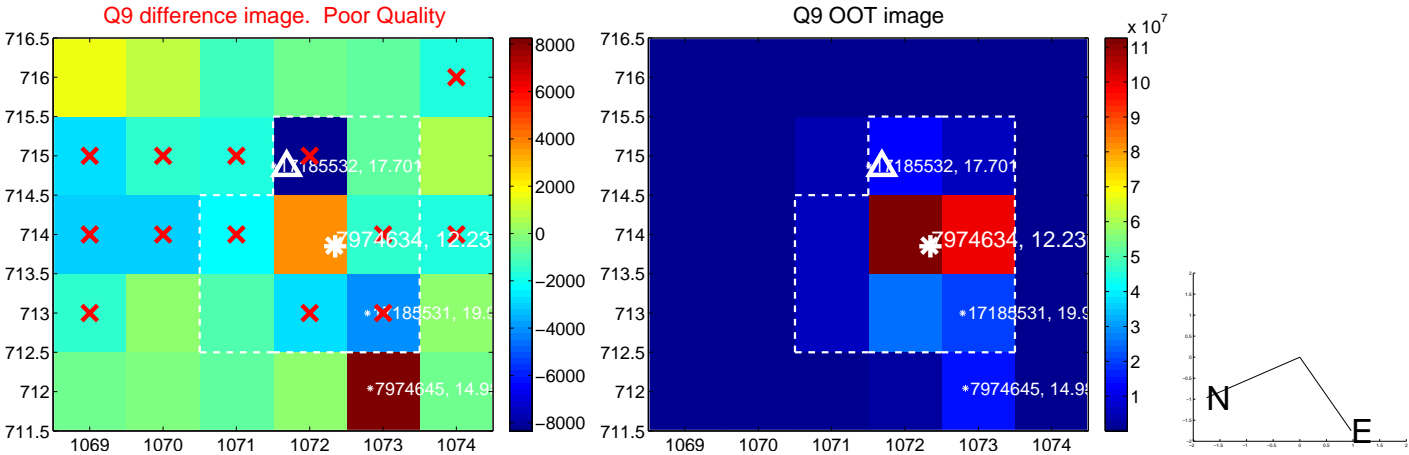
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



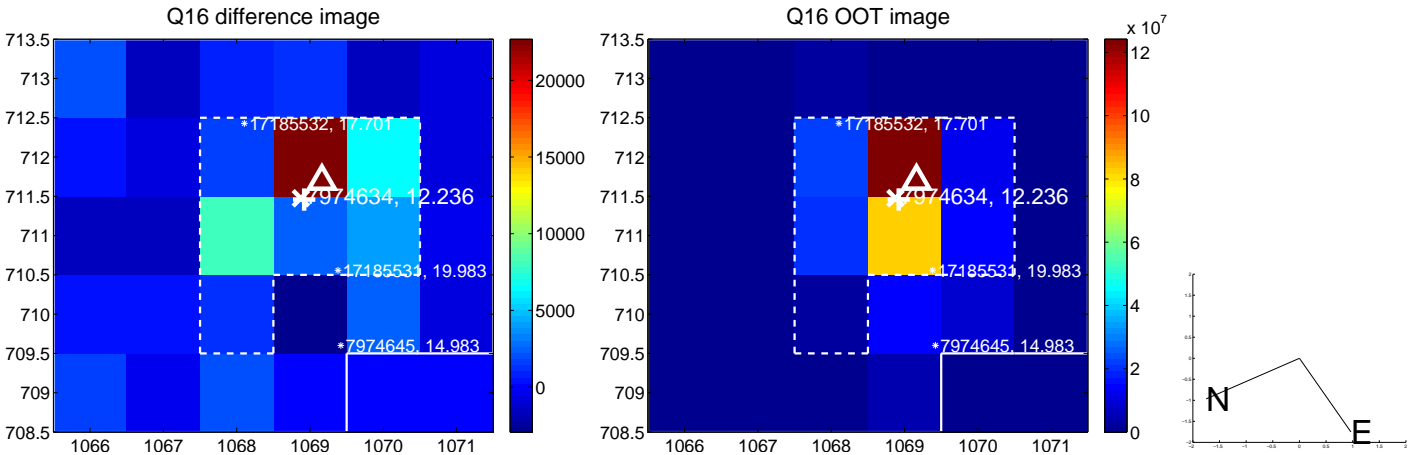
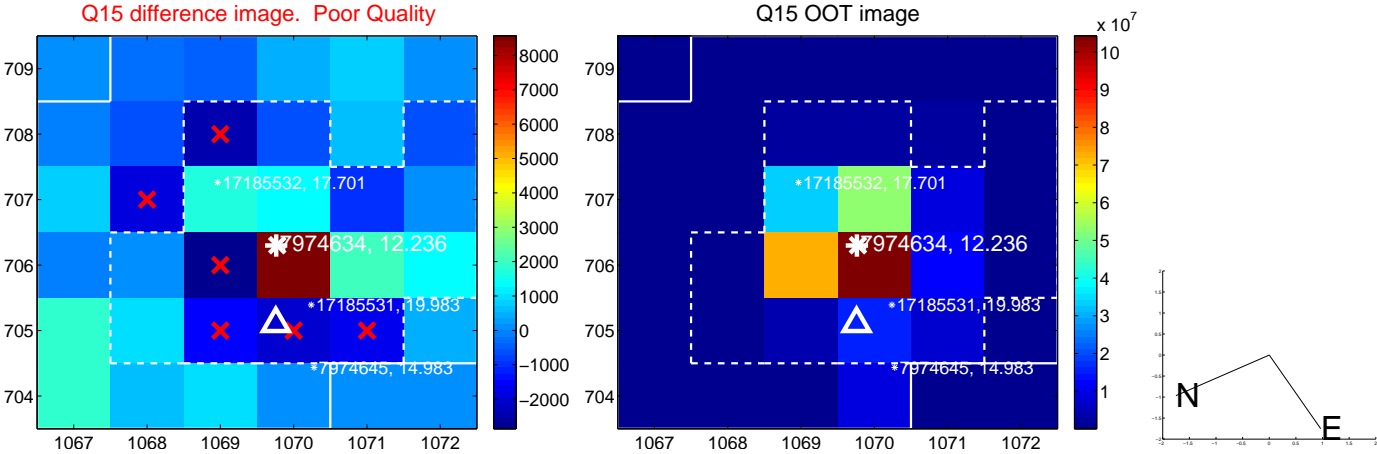
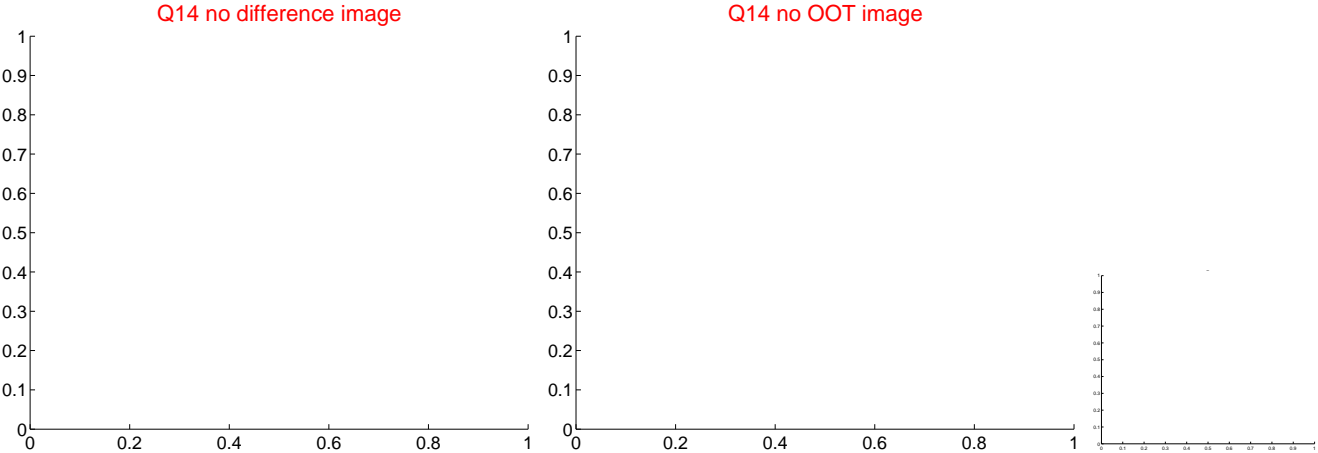
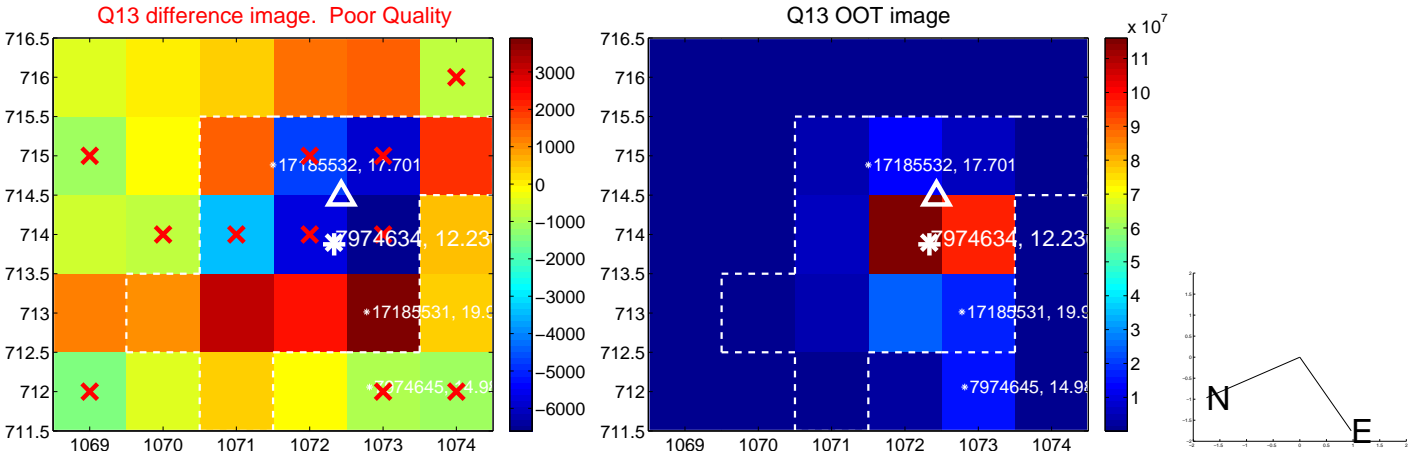
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



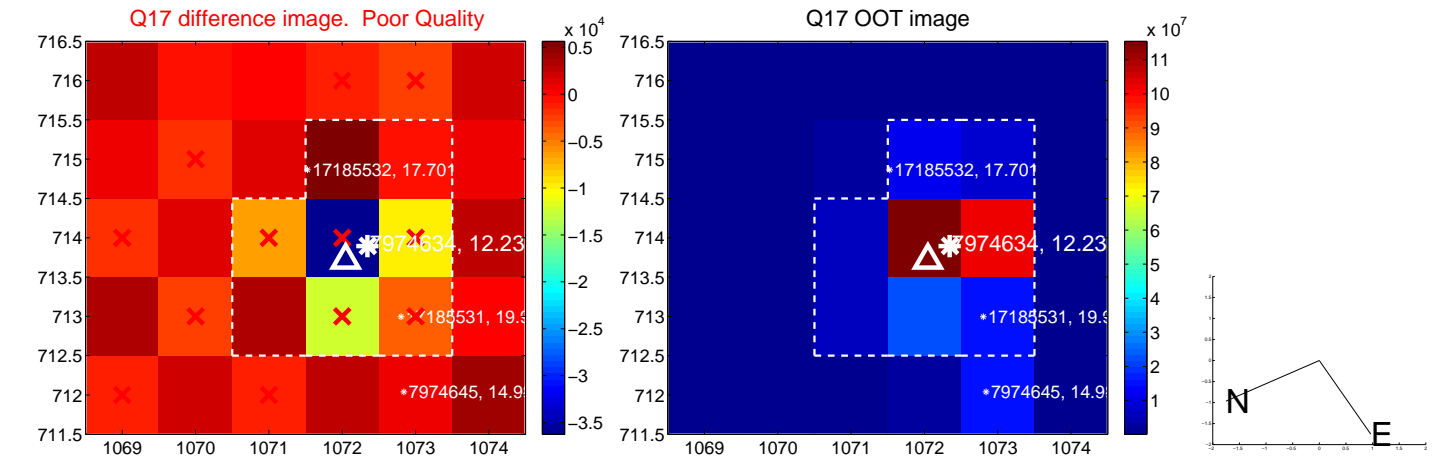
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



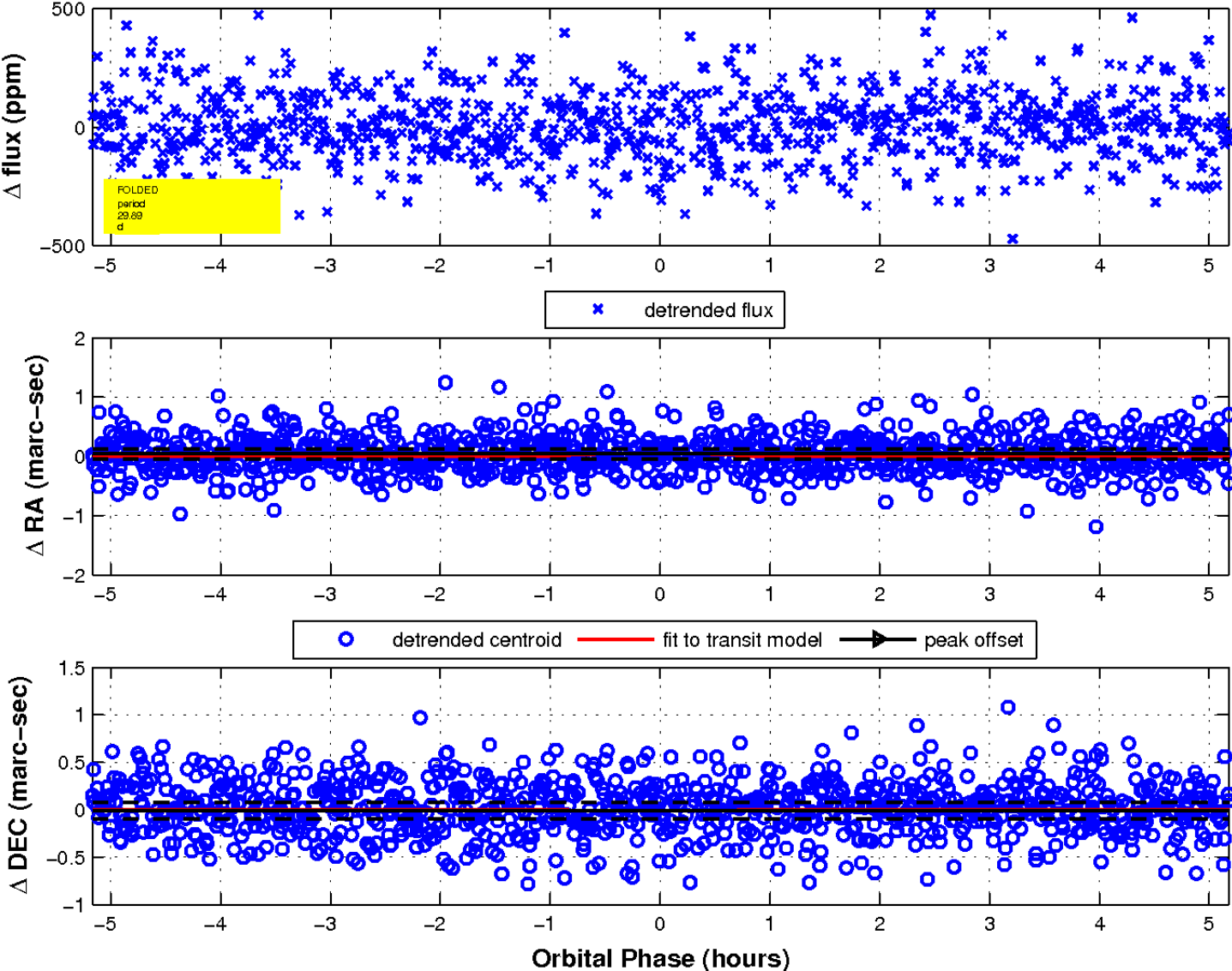
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

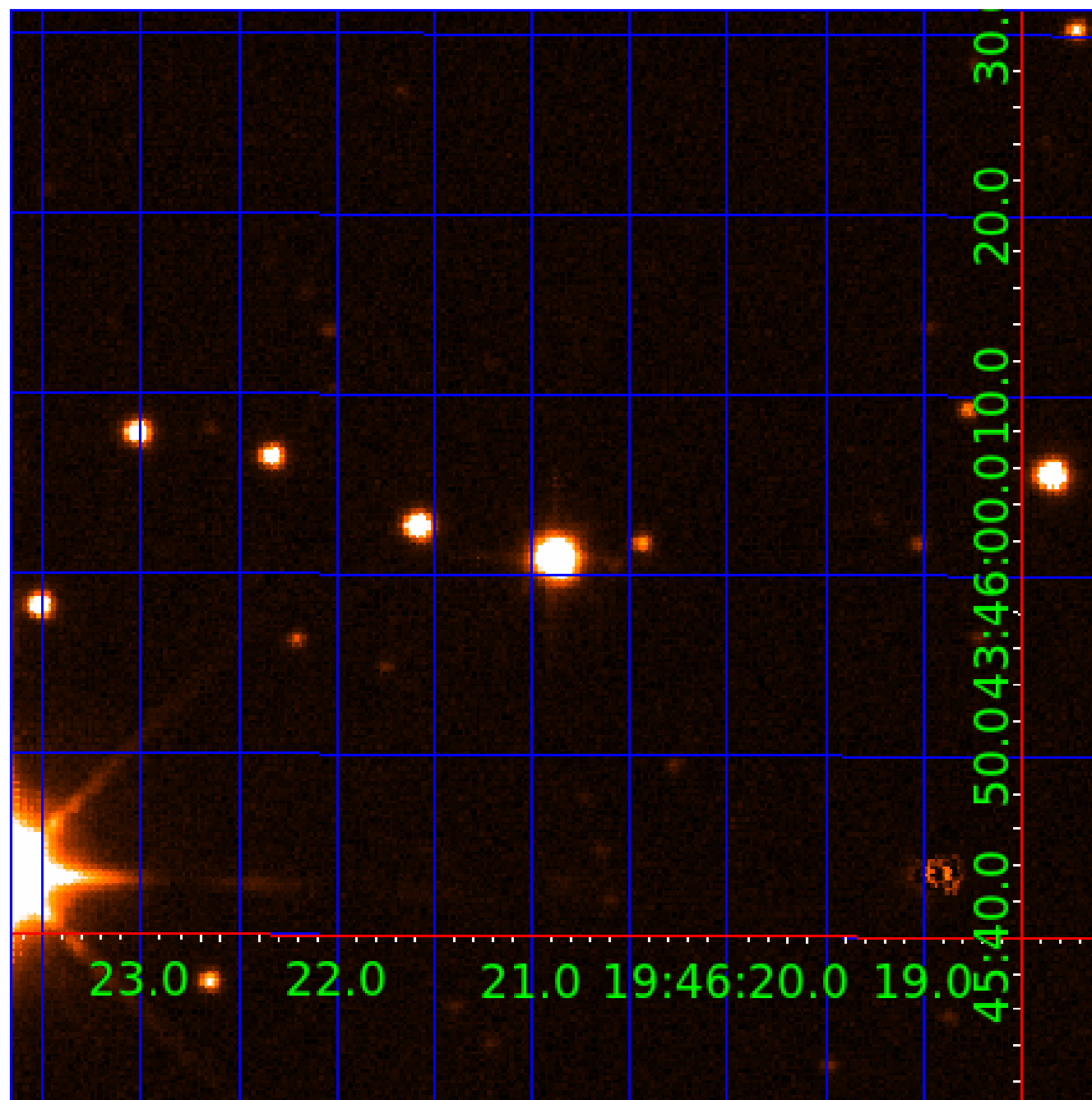


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 007974634

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})
007974634-01	OBS	No	1.373896	132.425164	21.6	10.242	12.3	10.8	3.87	6461	2.09	27014.35
007974634-02	OBS	No	29.887224	156.764901	262.8	1.729	10.9	11.8	3.87	6461	7.33	444.86
007974634-03	OBS	No	105.894894	131.652286	299.0	13.970	9.3	12.2	3.87	6461	6.72	82.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007974634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007974634-02	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
007974634-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

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

Ephemeris Match Information For 007974634-03

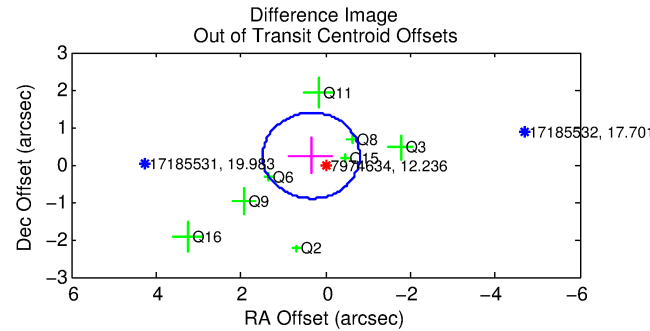
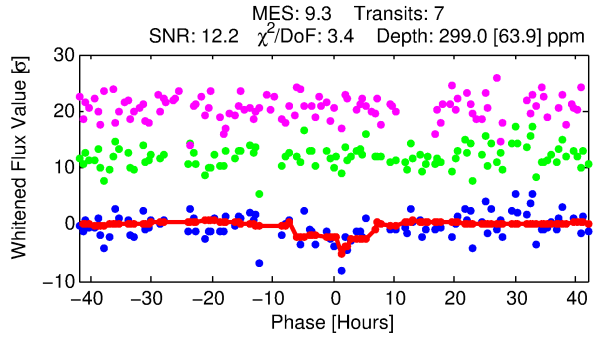
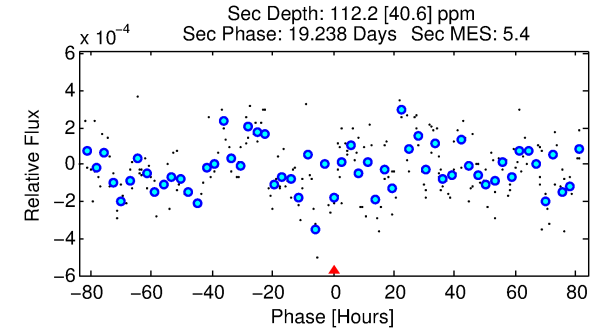
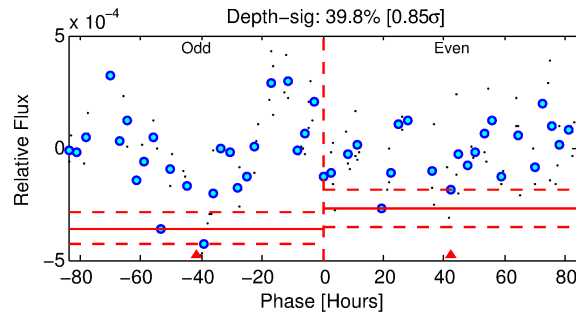
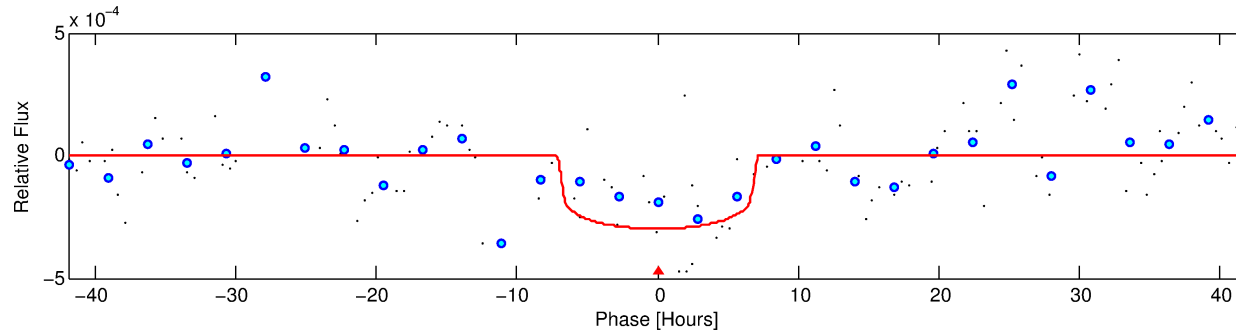
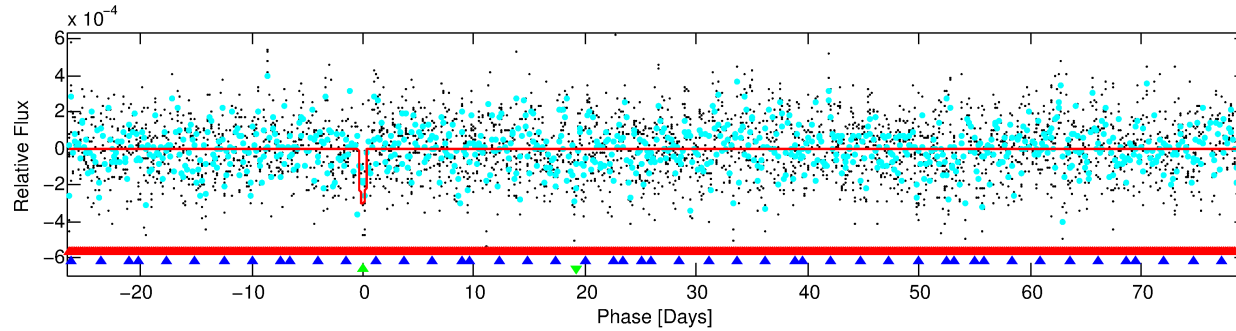
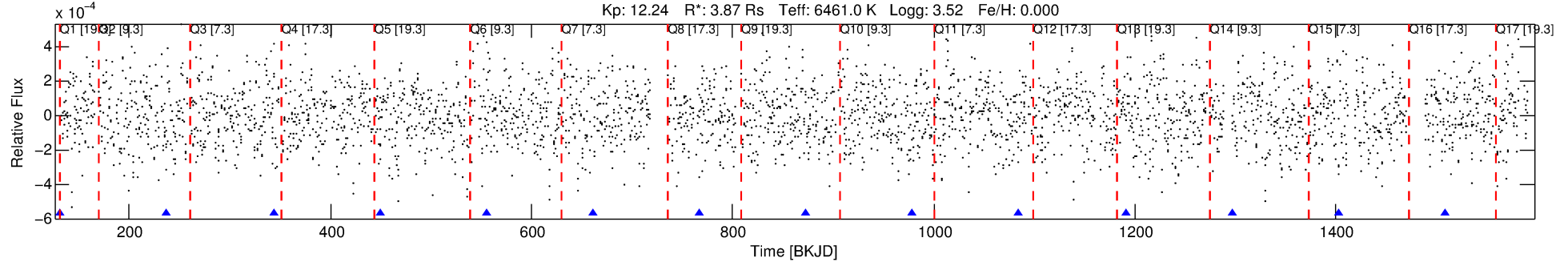
No Significant Match Found

DV One-Page Summary

KIC: 7974634 Candidate: 3 of 3 Period: 105.895 d

KOI: K06168 Corr: No Ephemeris Match

Kp: 12.24 R*: 3.87 Rs Teff: 6461.0 K Logg: 3.52 Fe/H: 0.000



DV Fit Results:

Period = 105.89489 [0.04208] d
Epoch = 131.6523 [0.3424] BKJD
Rp/R* = 0.0159 [0.0425]
a/R* = 58.77 [820.48]
b = 0.05 [296.55]
Seff = 82.36 [48.46]
Teff = 768 [113] K
Rp = 6.72 [18.17] Re
a = 0.5334 [0.1941] AU
Ag = 388.54 [2095.64] [0.18σ]
Teffp = 5273 [7070] K [0.64σ]

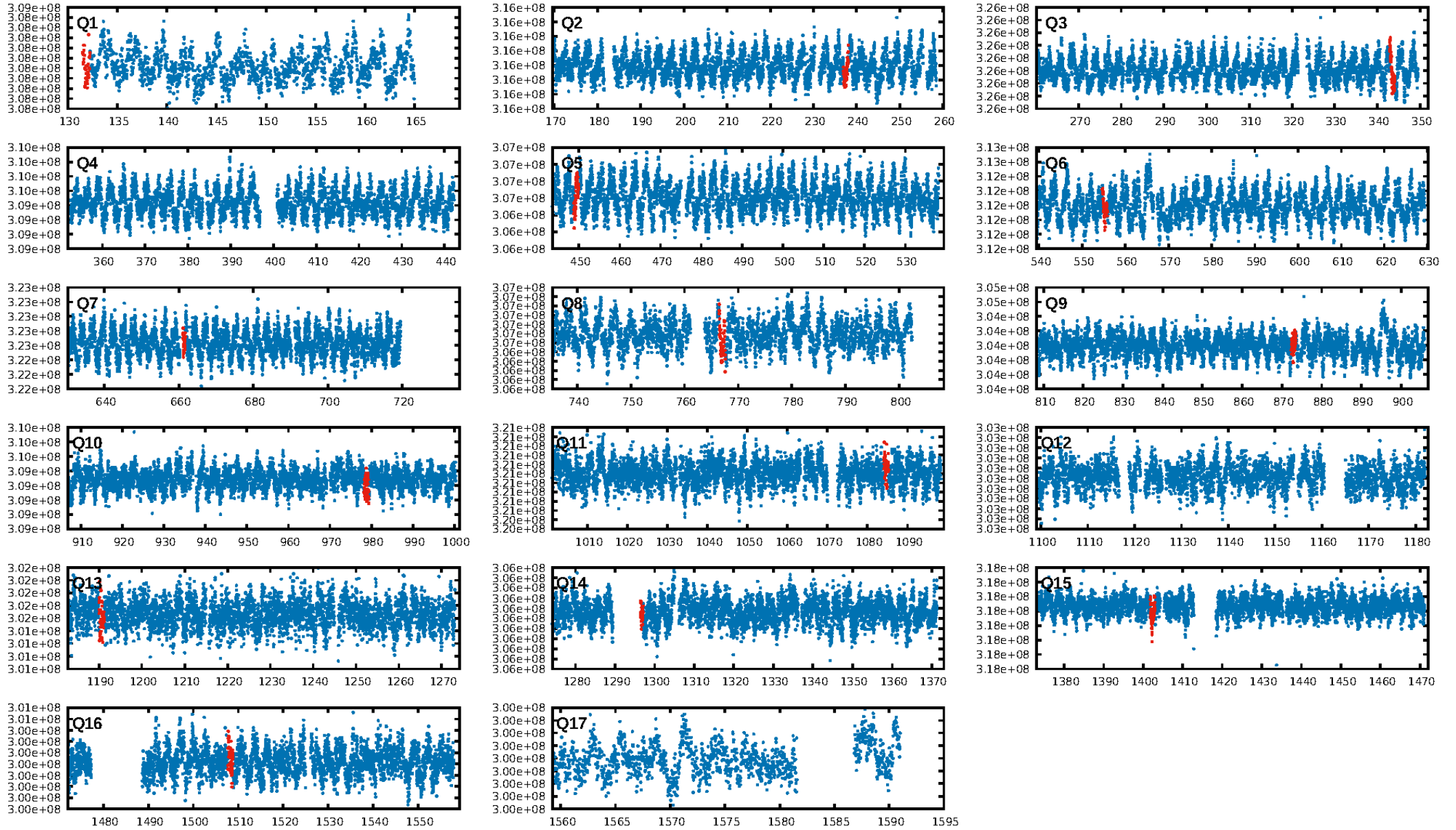
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [129.59σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.46e-09
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.8921
Centroid-sig: 0.1%
Centroid-so: 0.308 arcsec [1.25σ]
OotOffset-rm: 0.416 arcsec [1.09σ]
KicOffset-rm: 0.459 arcsec [1.21σ]
OotOffset-st: 2/3/2/1 [8]
KicOffset-st: 2/3/2/1 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.00 [0/11]

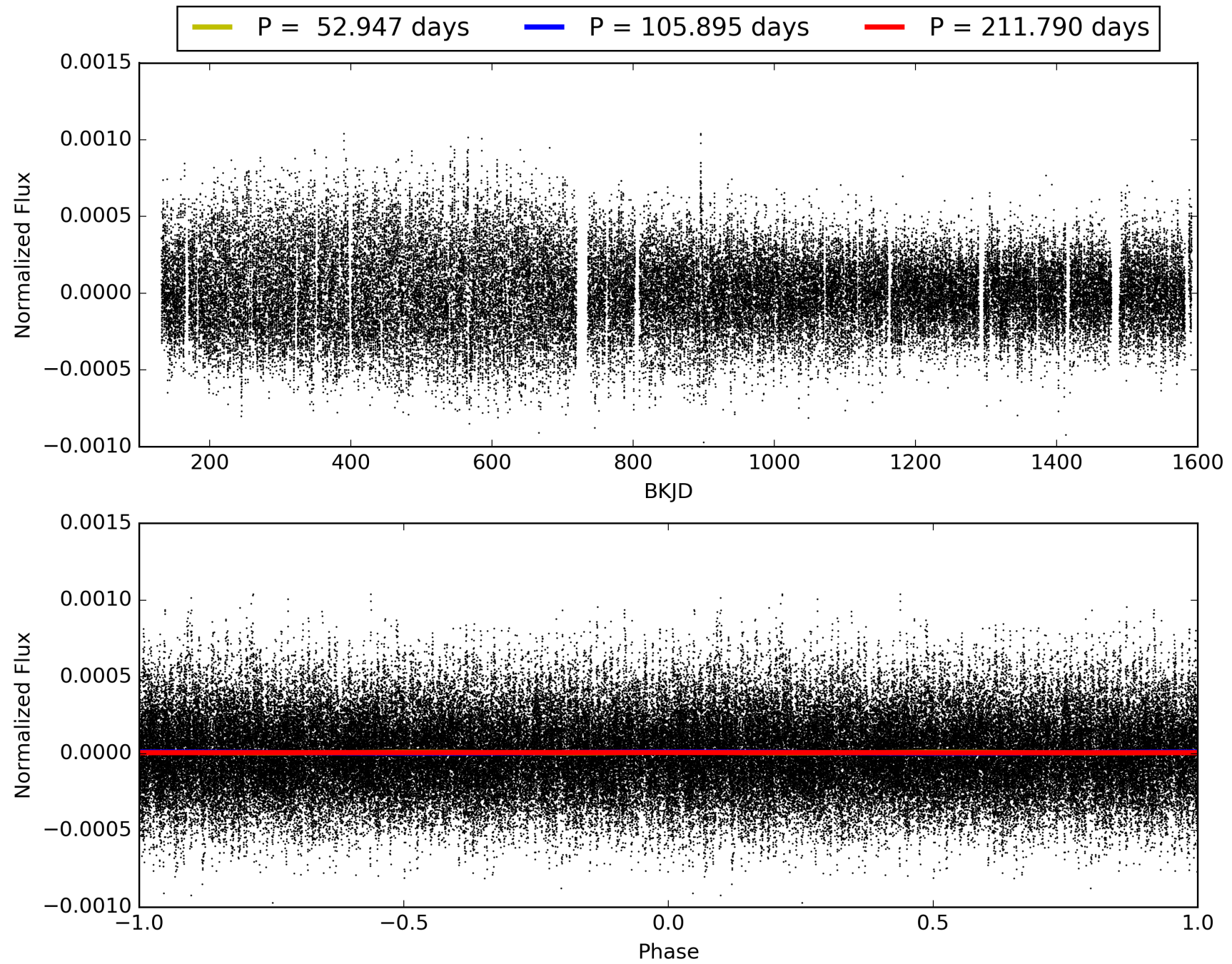
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:44:07 Z

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

TCE 007974634-03, PDC Light Curves

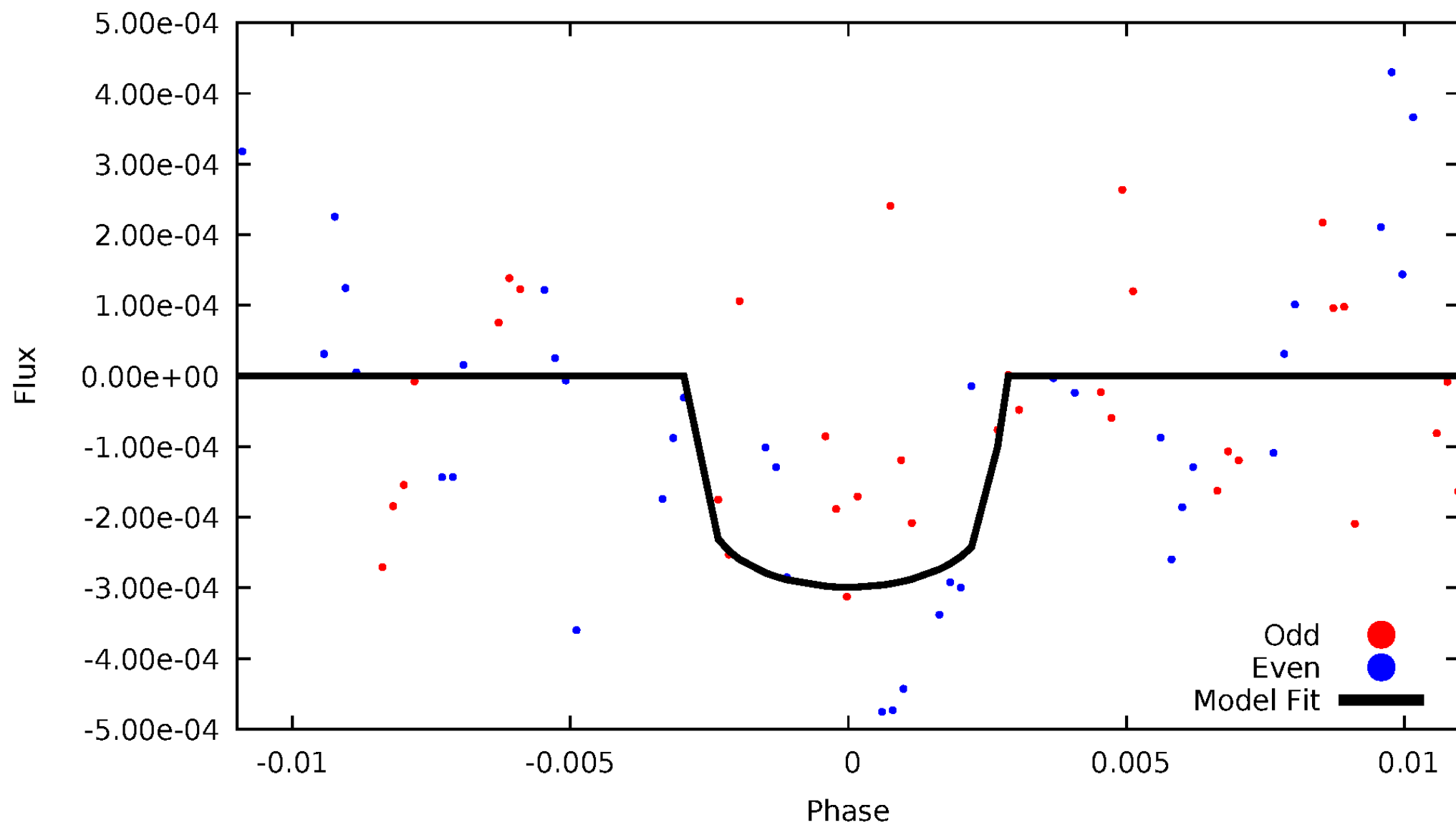


TCE 007974634-03



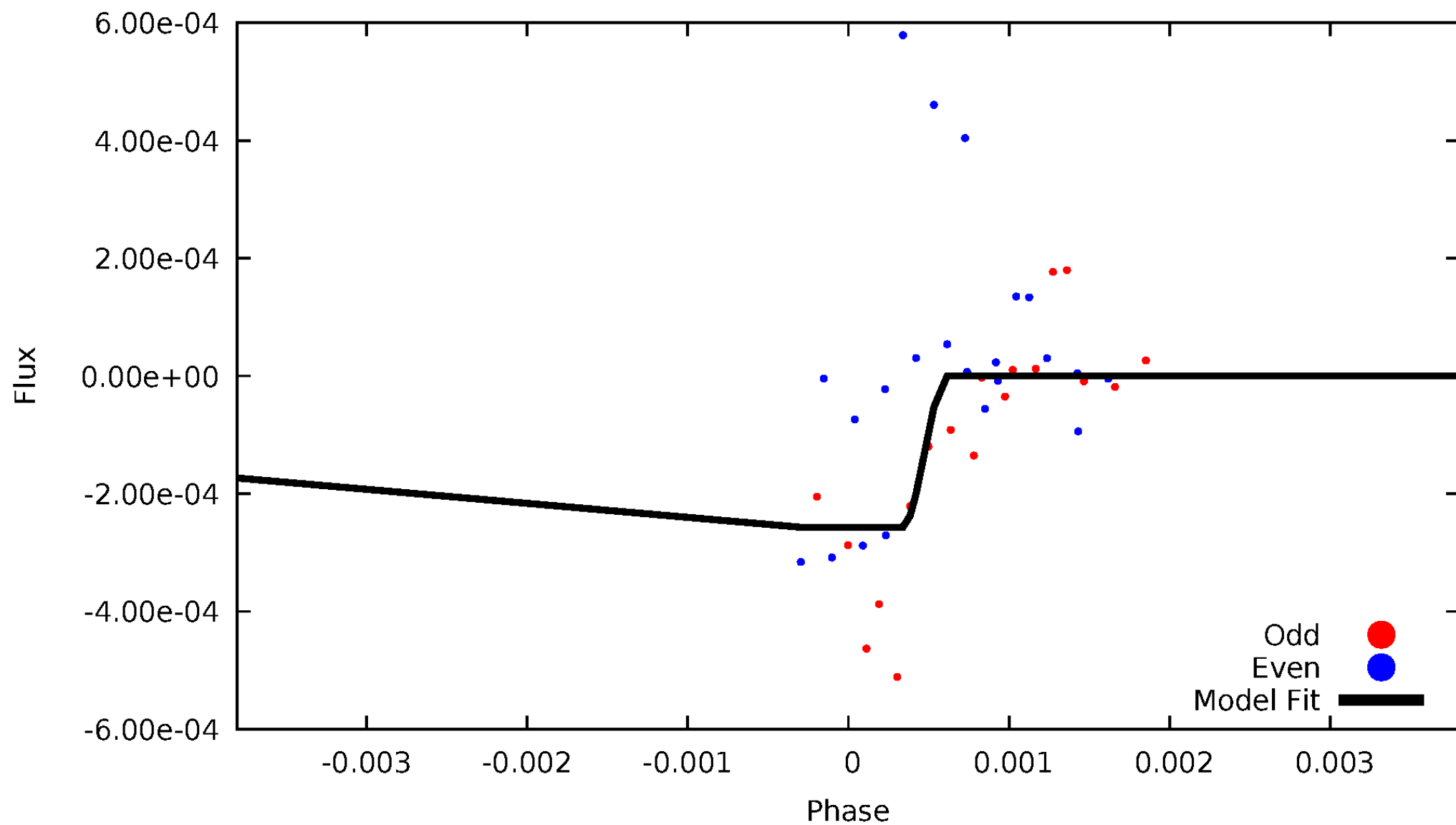
DV Odd/Even

TCE 007974634-03



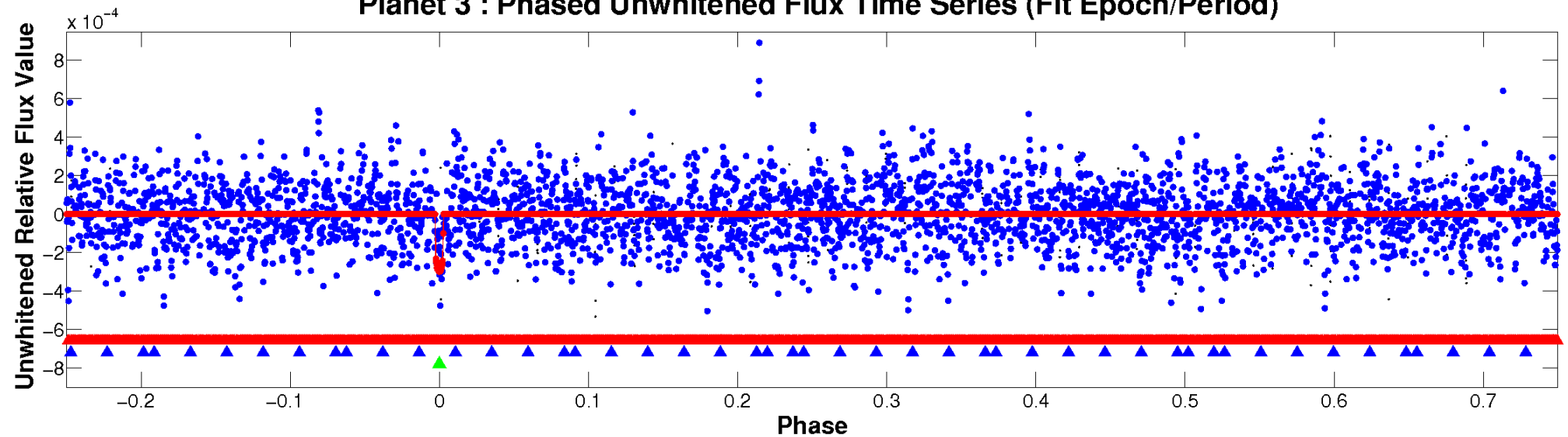
ALT Odd/Even

TCE 007974634-03

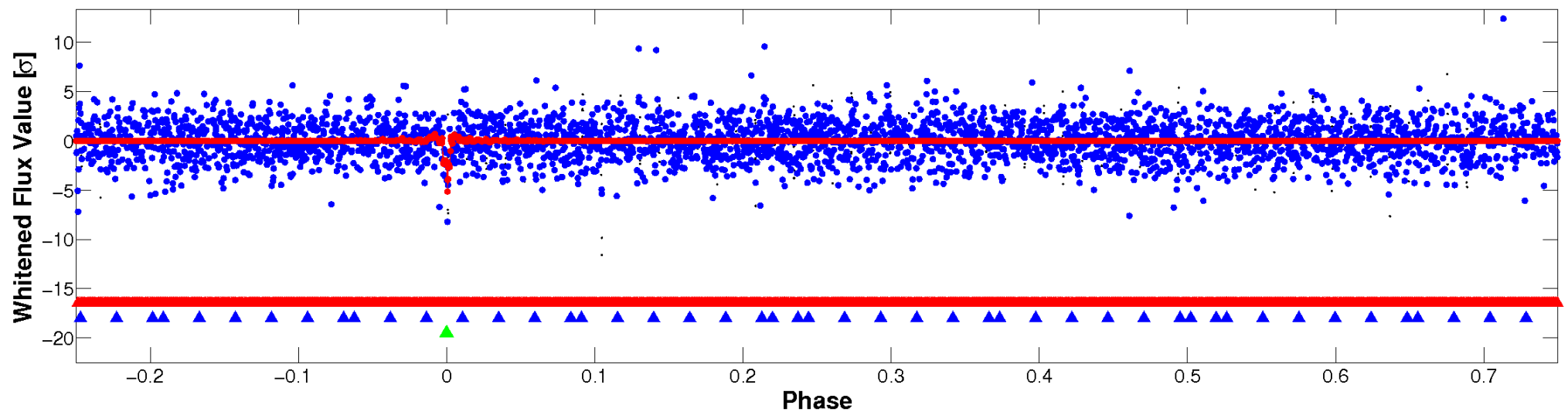


Non-Whitened Vs. Whitened Light Curve

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

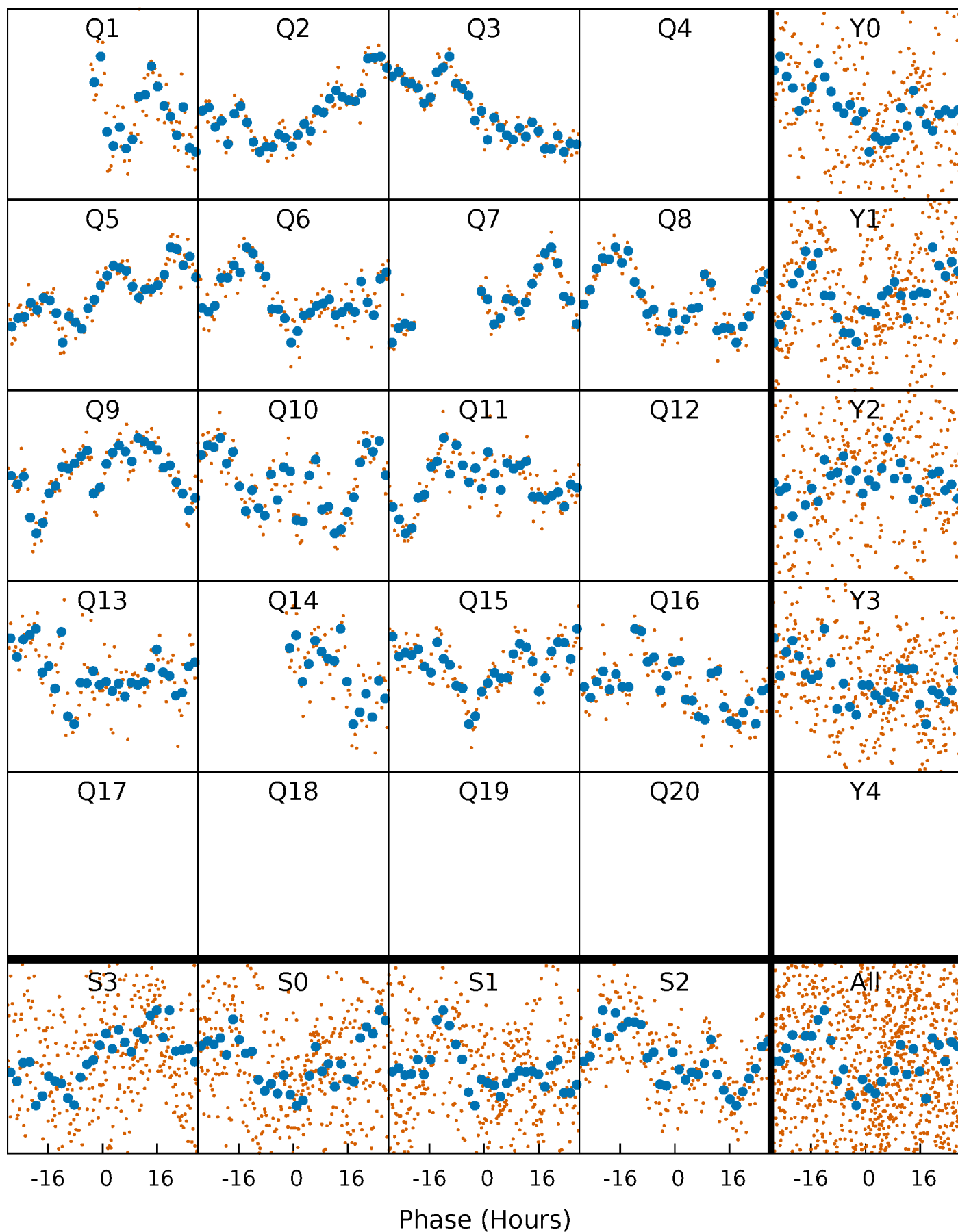


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



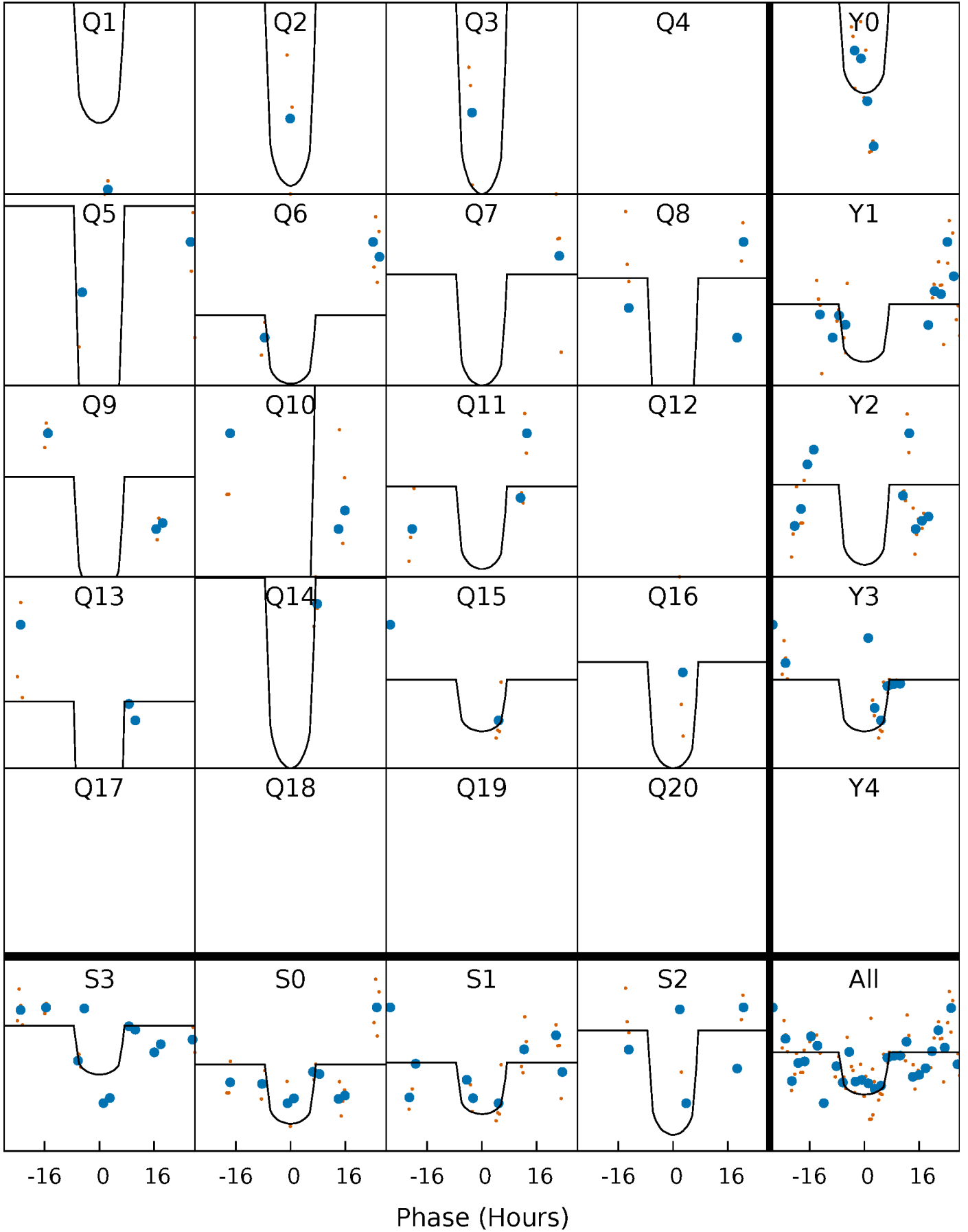
PDC Quarter-Phased Transit Curves

TCE 007974634-03 P=105.894895 Days $T_0=131.652286$ (BKJD)



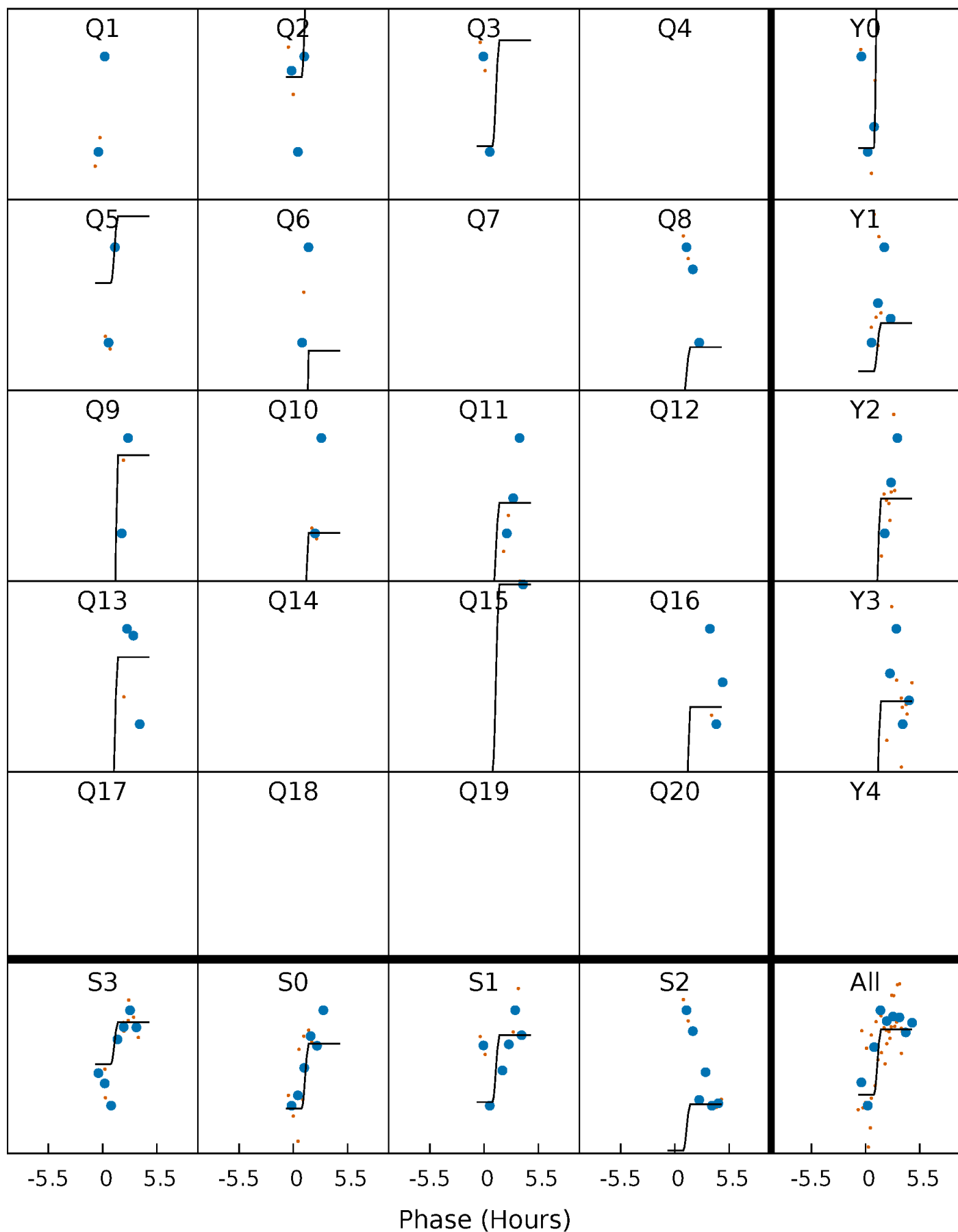
DV Quarter-Phased Transit Curves

TCE 007974634-03 P=105.894895 Days $T_0=131.652286$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

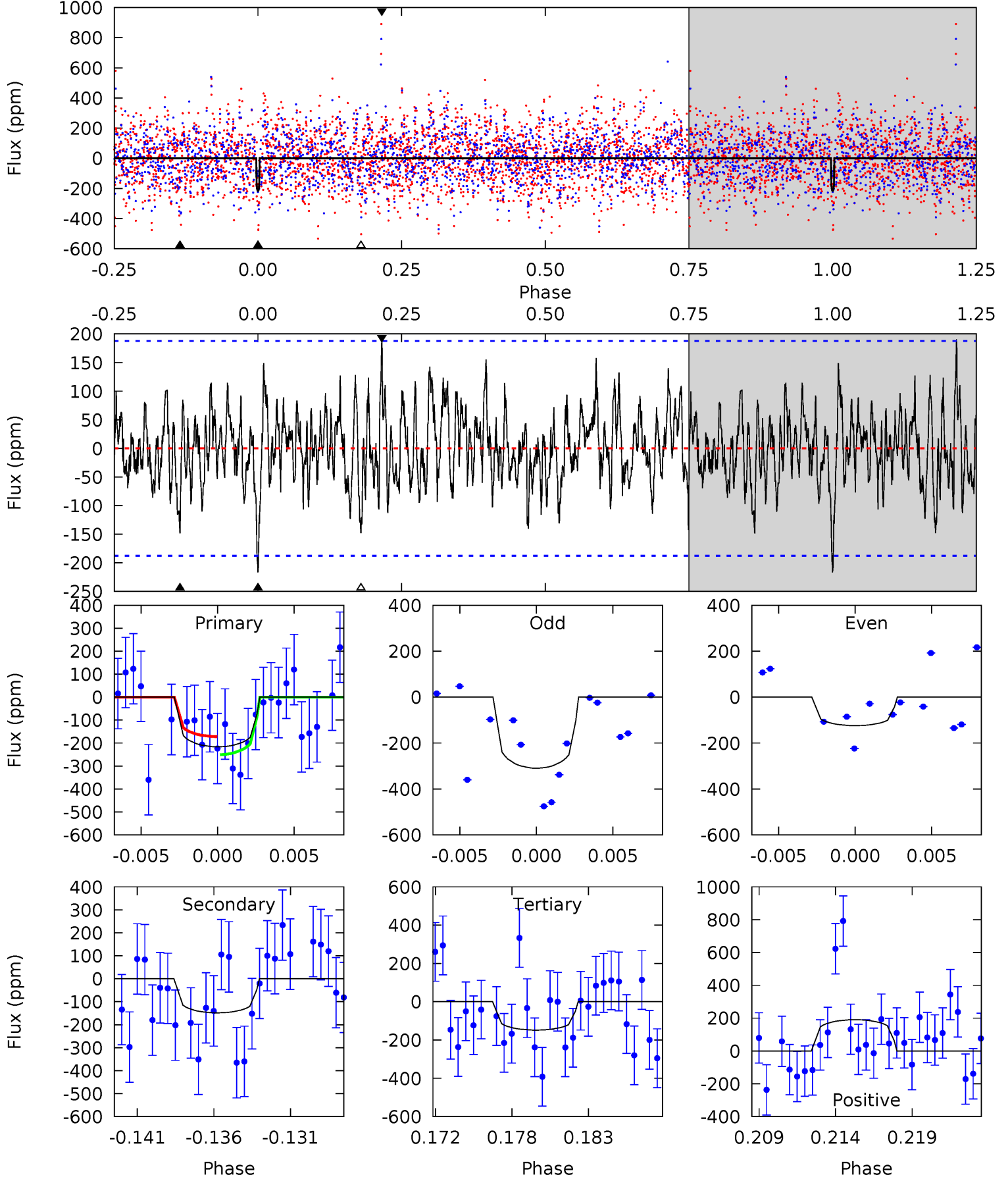
TCE 007974634-03 P=105.776472 Days $T_0=131.747578$ (BKJD)



DV Model-Shift Uniqueness Test

007974634-03, P = 105.894895 Days, E = 131.652286 Days

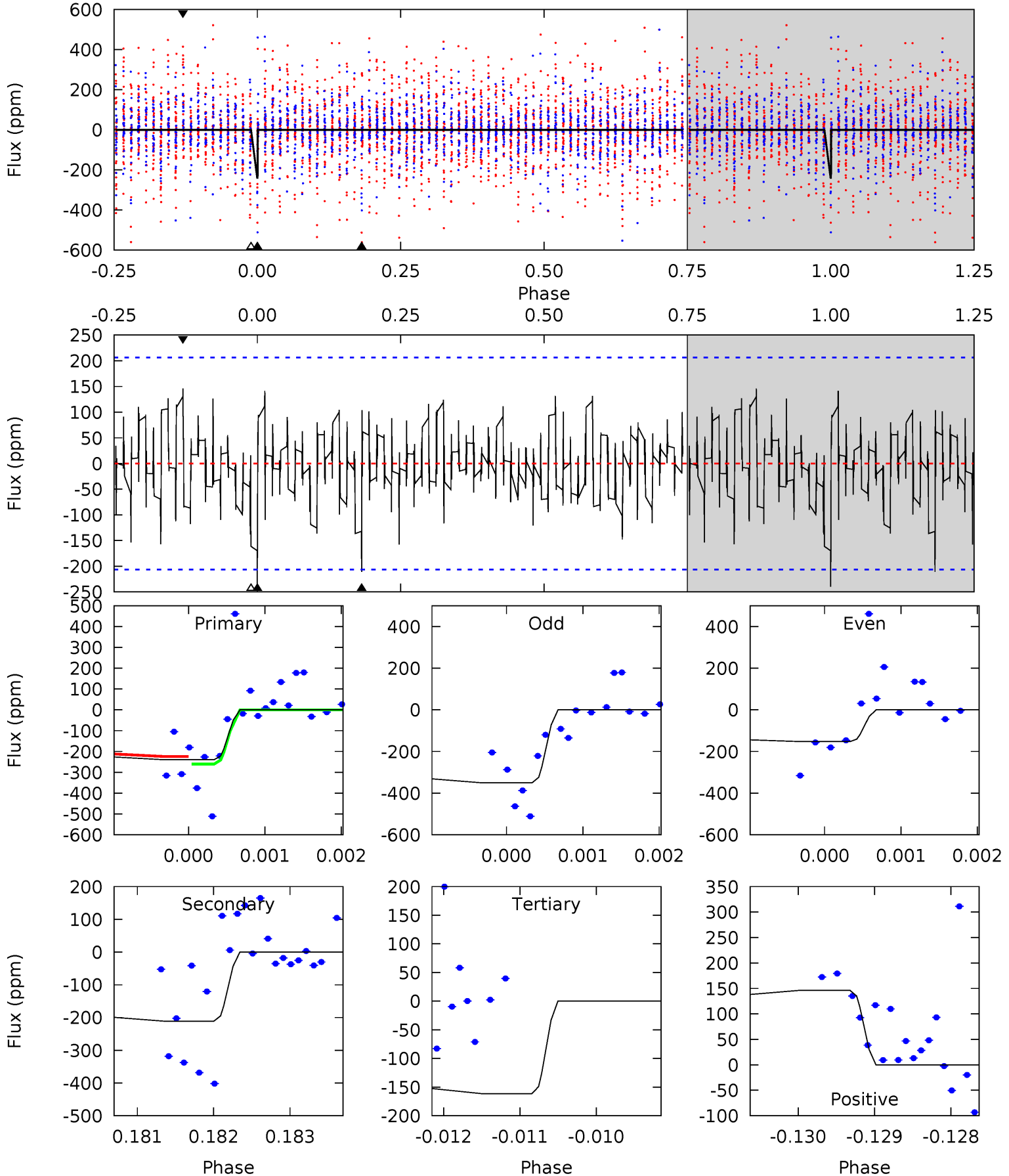
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.94	4.08	4.07	5.23	5.15	2.79	1.51	1.88	0.72	0.01	-1.15	2.61	1.14	0.47	1.07



Alt Model-Shift Uniqueness Test

007974634-03, P = 105.776472 Days, E = 25.971106 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.35	5.59	4.28	3.87	5.47	3.32	1.27	2.07	2.47	1.31	1.72	2.51	0.44	0.38	0.42



Stellar Parameters For KIC 007974634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6461^{+156}_{-176}	$3.518^{+0.338}_{-0.113}$	$0.000^{+0.300}_{-0.250}$	$3.874^{+0.371}_{-1.483}$	$1.806^{+0.152}_{-0.355}$	$0.044^{+0.120}_{-0.012}$
	+2%/-3%	+10%/-3%	+inf%/-inf%	+10%/-38%	+8%/-20%	+275%/-28%
Source	PHO1	FLK73	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 007974634-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-148 ± 36	$13.47^{+15.23}_{-9.62}$	1066^{+53}_{-93}	4158^{+2935}_{-928}	129^{+1386}_{-104}
Alt.	-211 ± 38	$14.49^{+13.59}_{-10.06}$	1064^{+58}_{-94}	4276^{+2997}_{-847}	149^{+1460}_{-109}

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 $A_{obs} \gg 1.0$

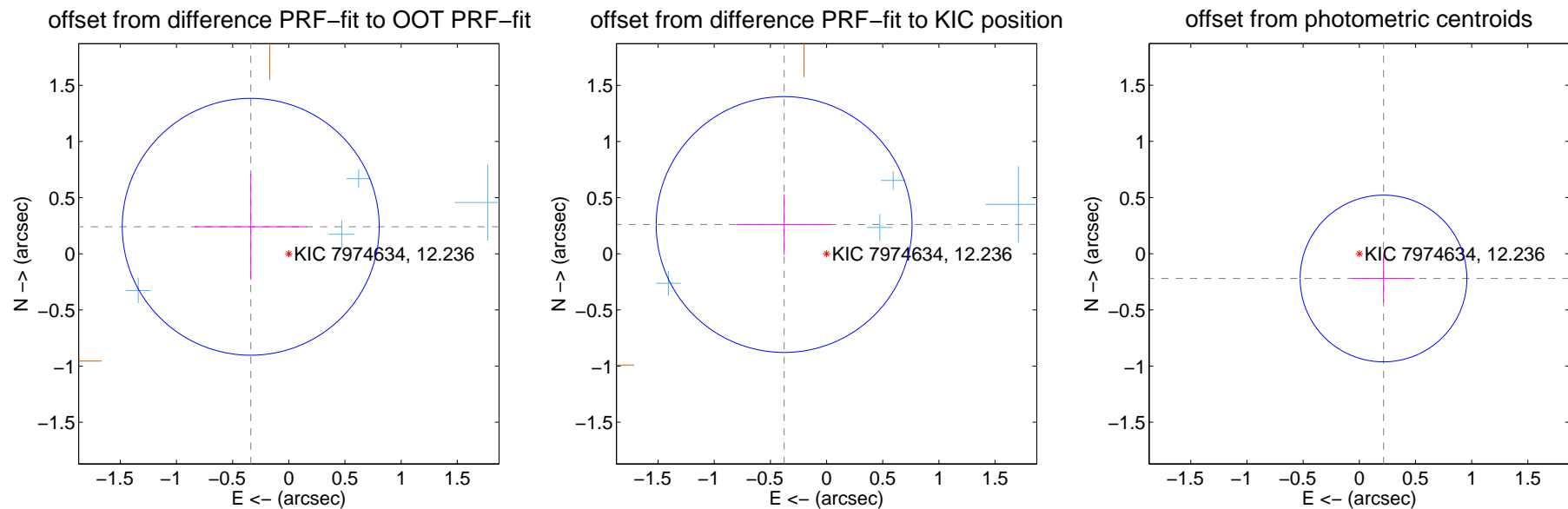
DV Centroid Data

Supplemental centroid analysis for 007974634-03. Kepler magnitude: 12.24. Transit SNR 12.22

There are 5 quarters with good PRF difference image offsets

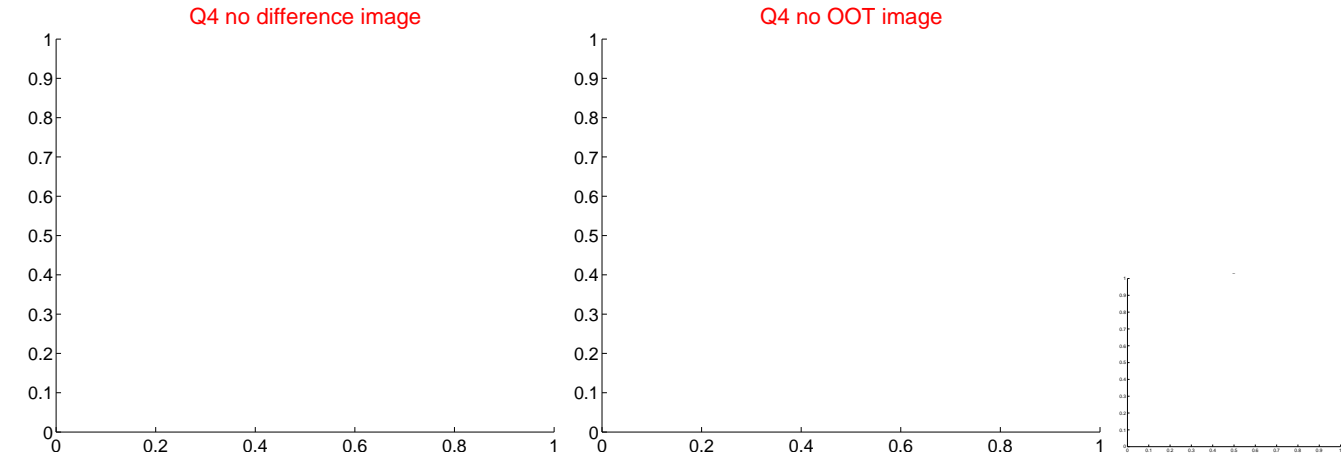
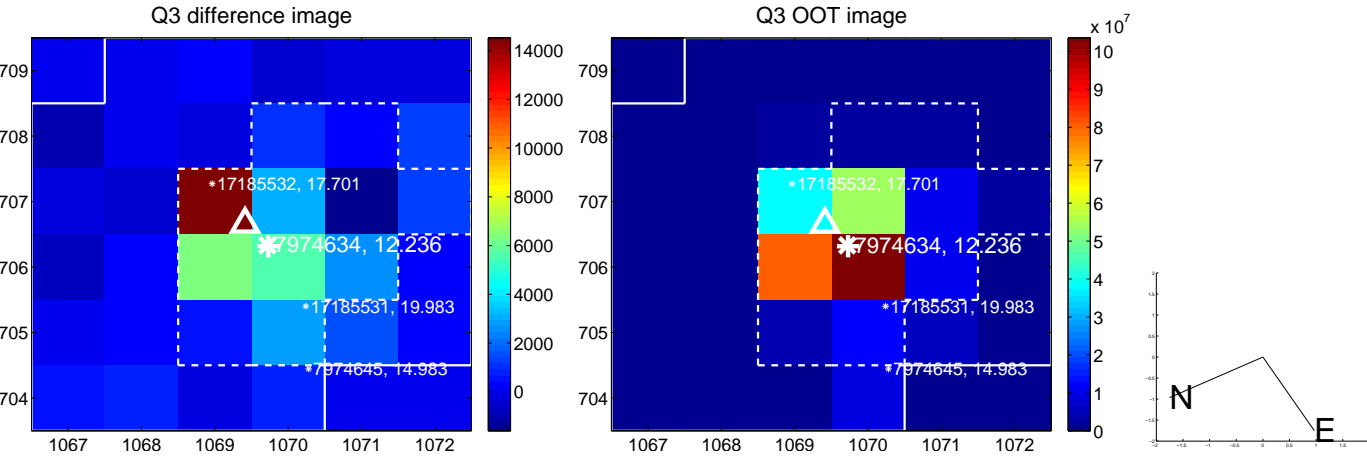
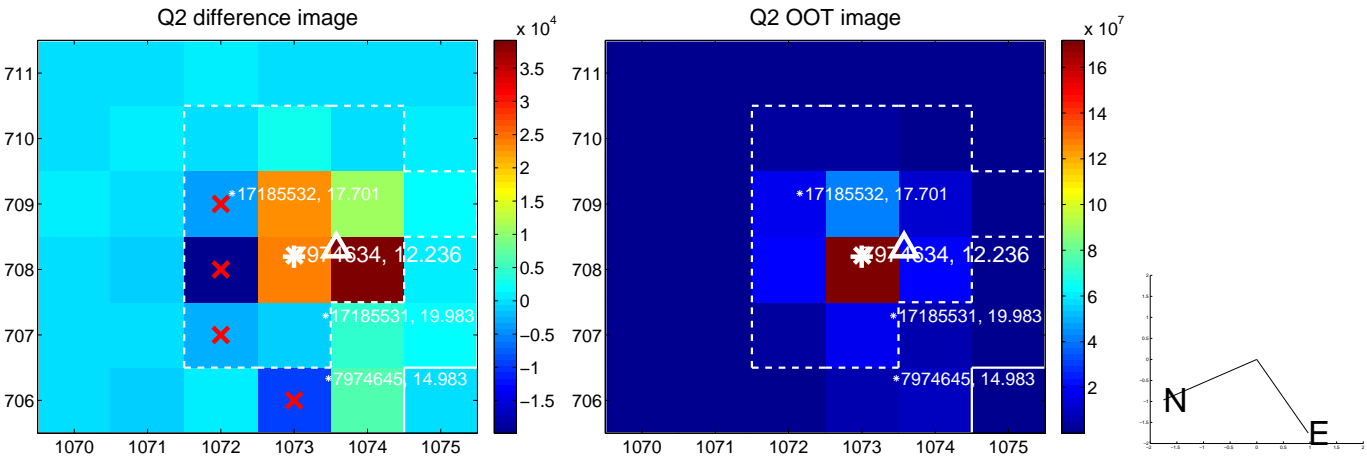
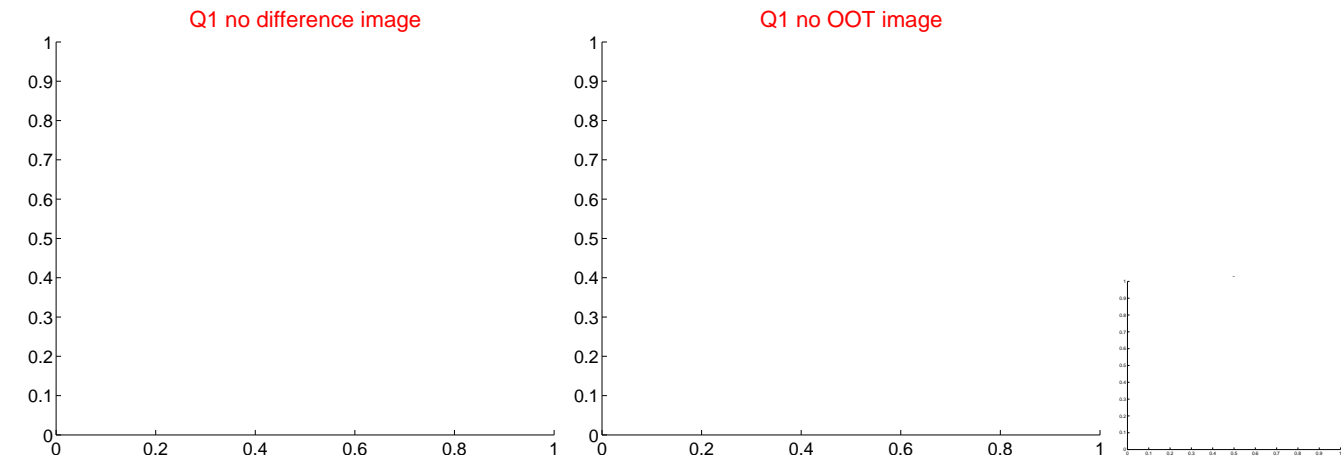
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.416 ± 0.381	1.09	0.339 ± 0.501	0.240 ± 0.473
PRF-fit source offset from KIC position	0.459 ± 0.380	1.21	0.378 ± 0.422	0.260 ± 0.270
photometric centroid source offset	0.31 ± 0.25	1.25	-0.22 ± 0.28	-0.22 ± 0.21

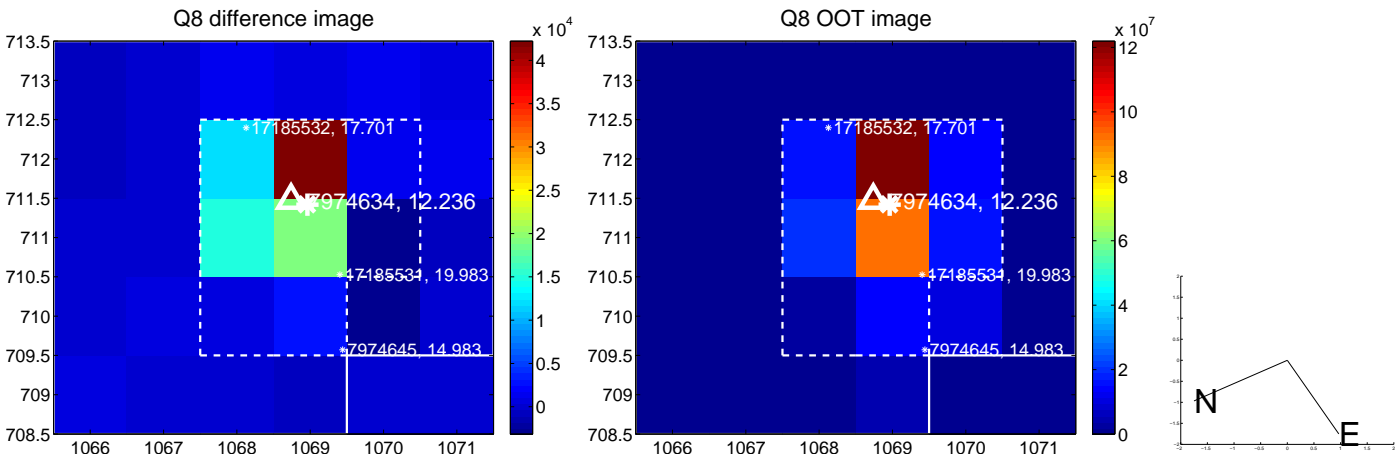
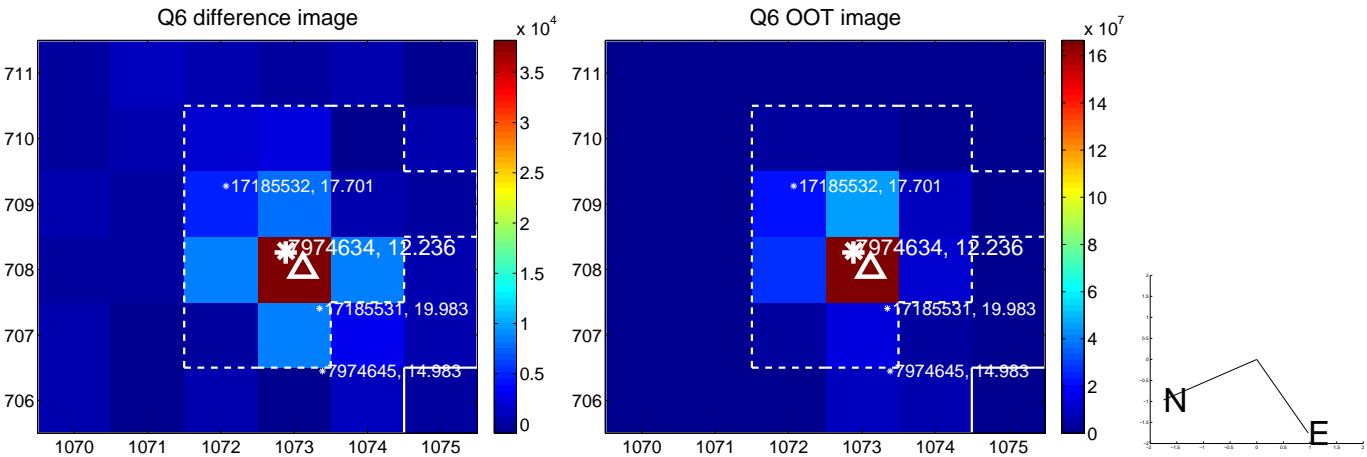
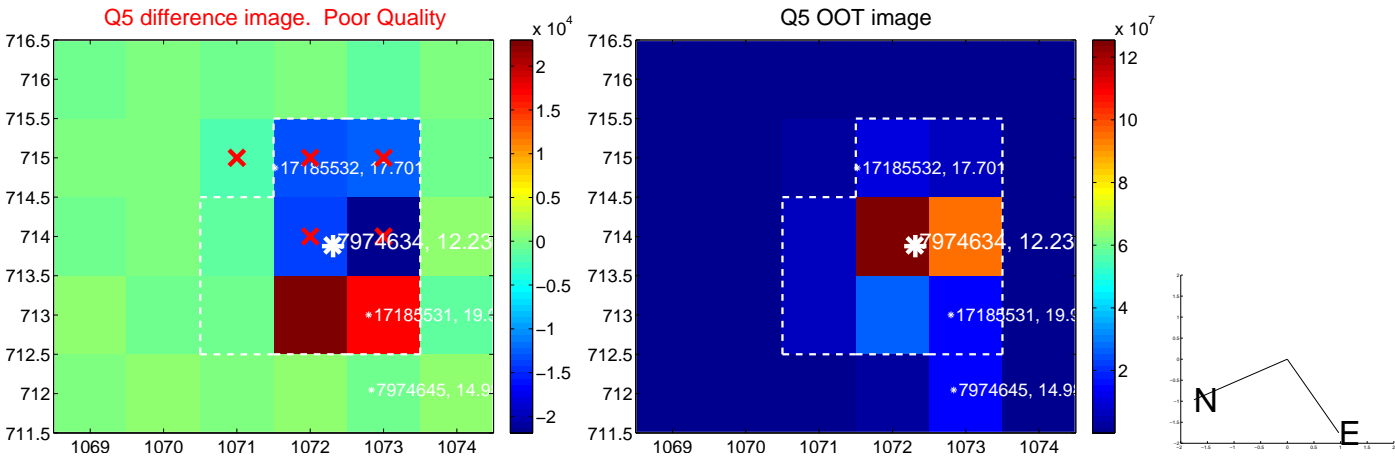


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

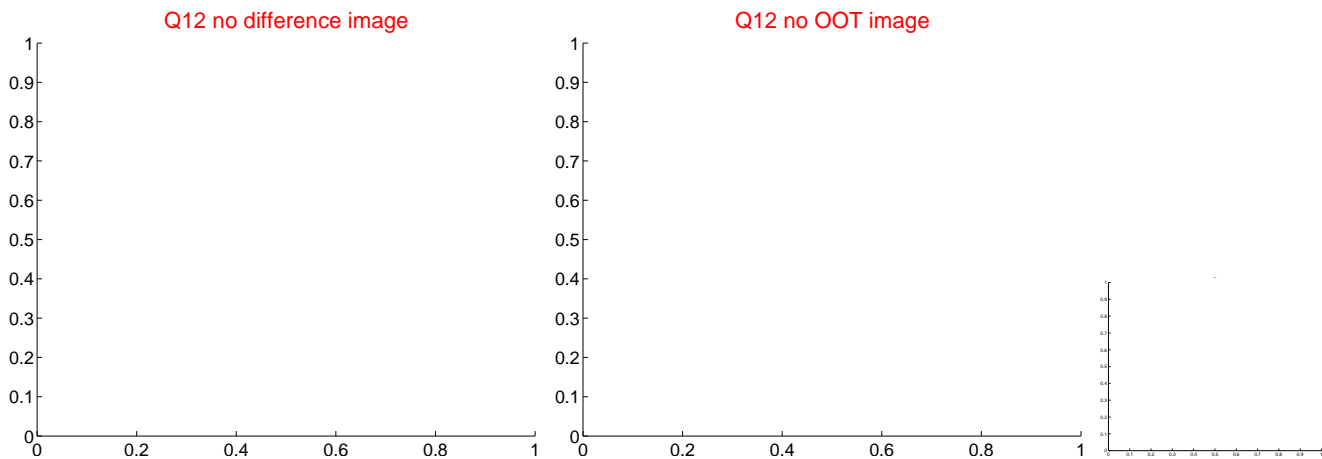
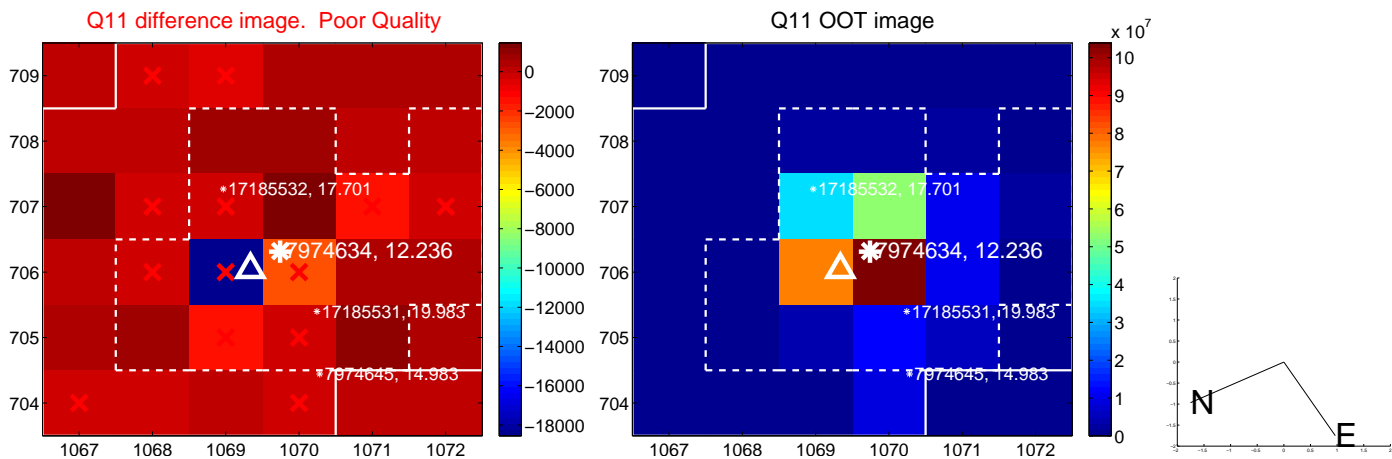
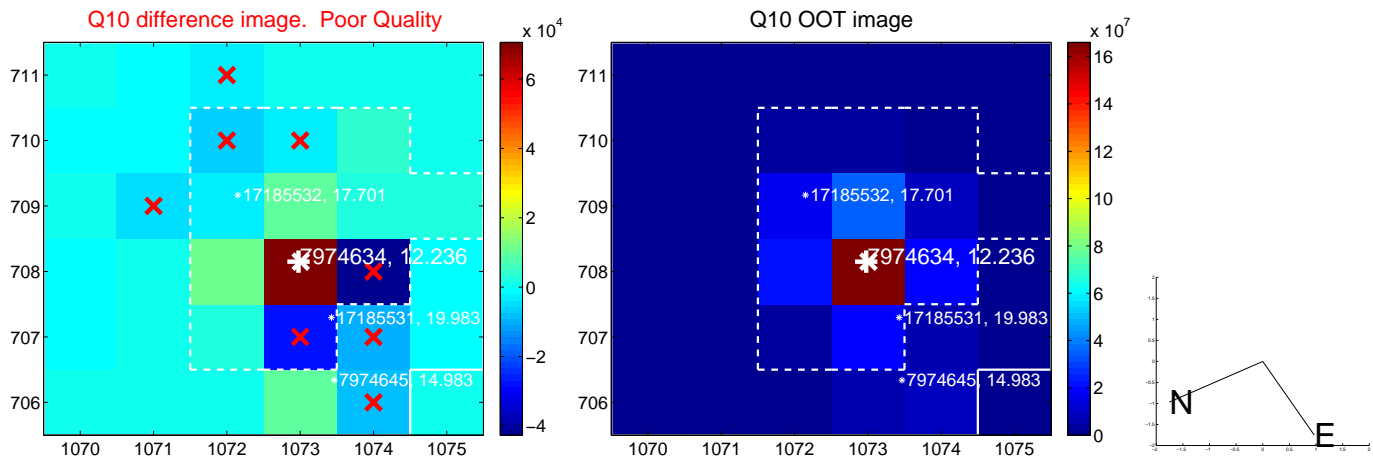
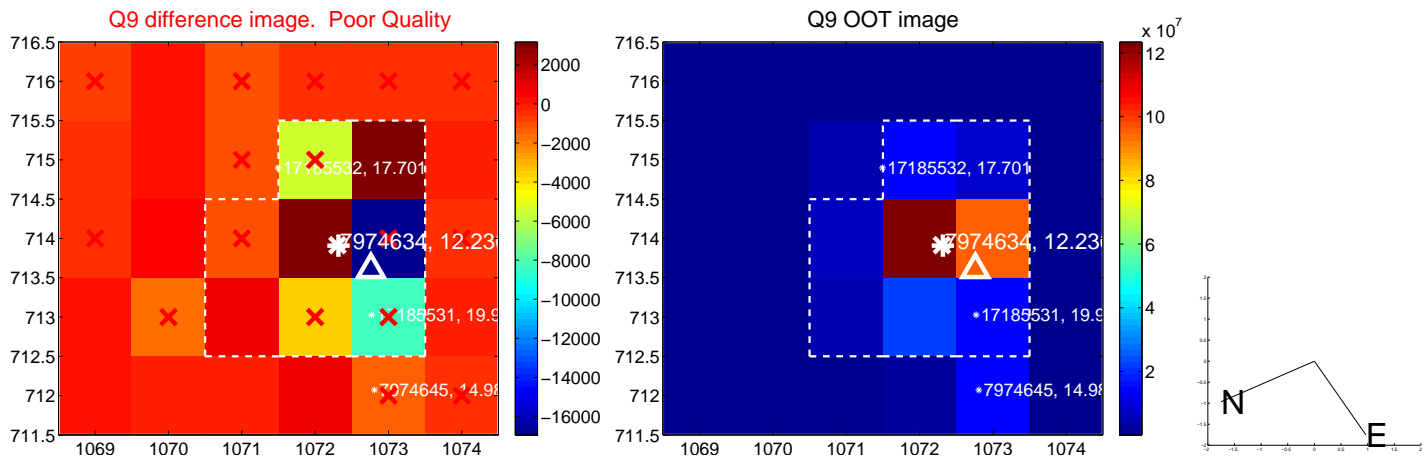
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



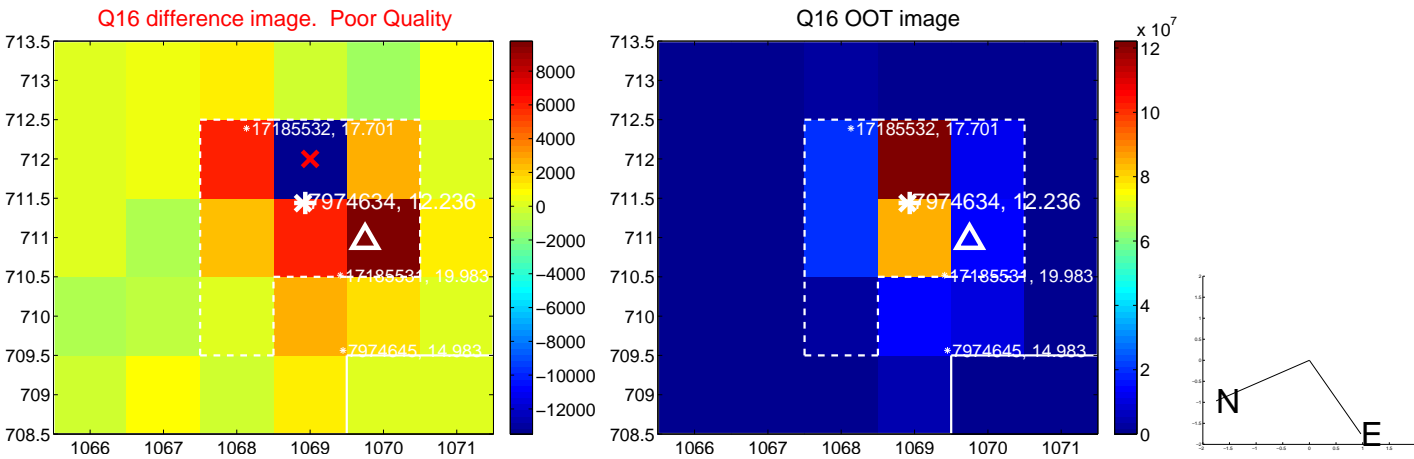
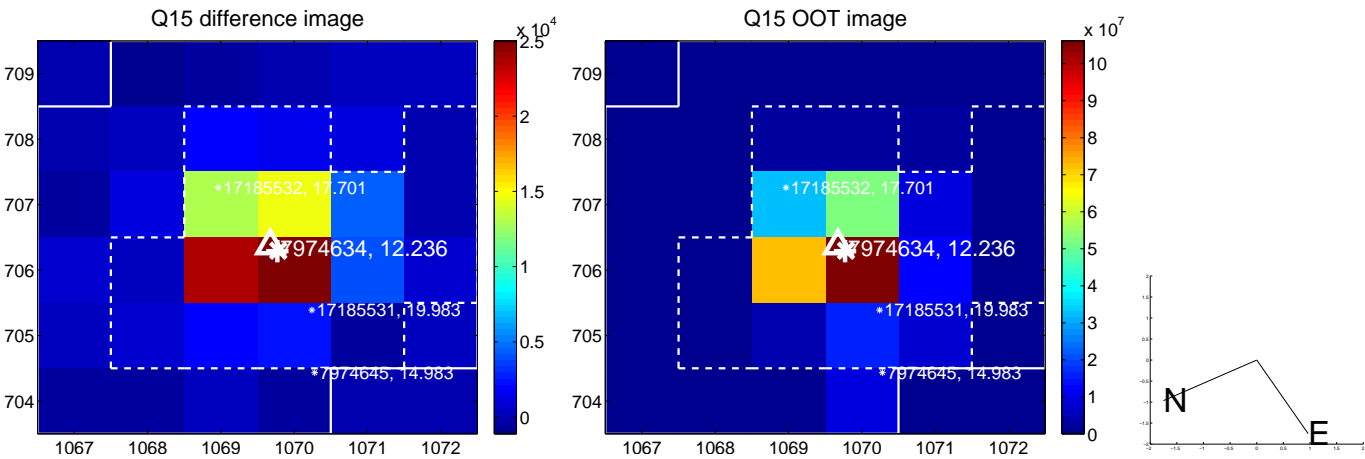
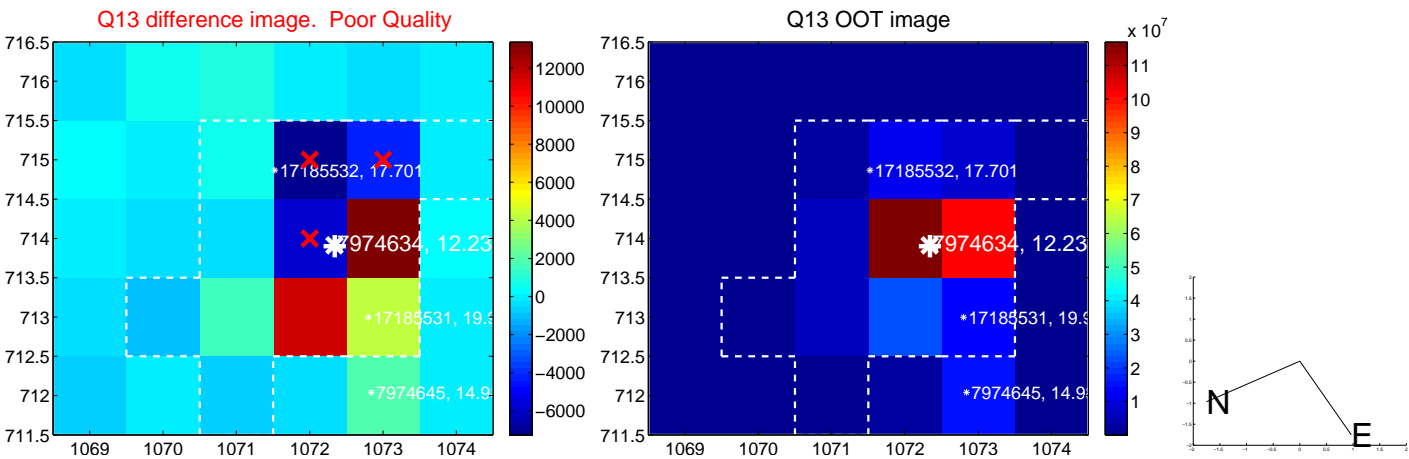
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



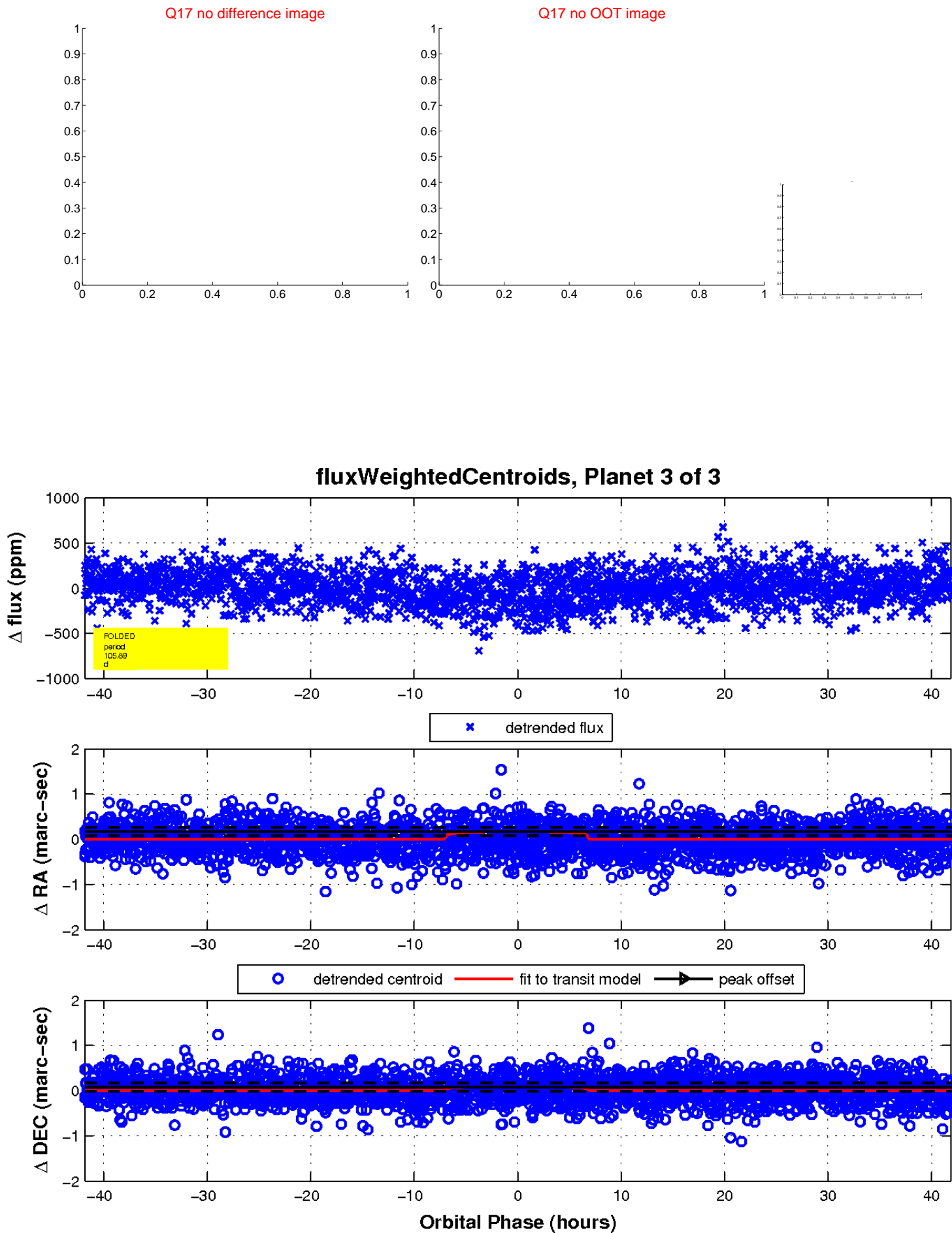
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

