

KIC 008430105

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})
008430105-01	OBS	No	63.327478	143.104386	9178.2	17.400	110.6	144.6	5.20	4919	54.01	152.82
008430105-02	OBS	No	63.327378	144.266903	17892.0	12.447	170.5	256.1	5.20	4919	77.54	152.82
008430105-03	OBS	3873.01	63.327145	165.197824	12210.1	45.456	58.9	179.0	5.20	4919	55.99	152.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430105-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
008430105-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008430105-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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.

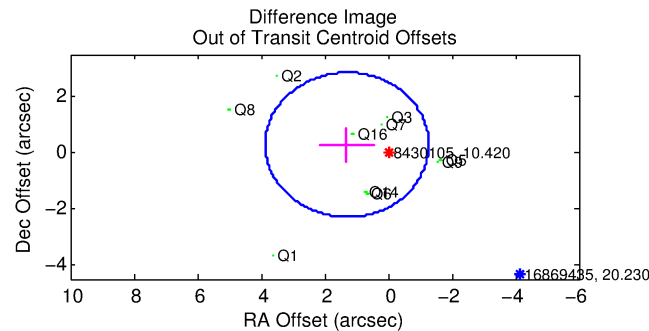
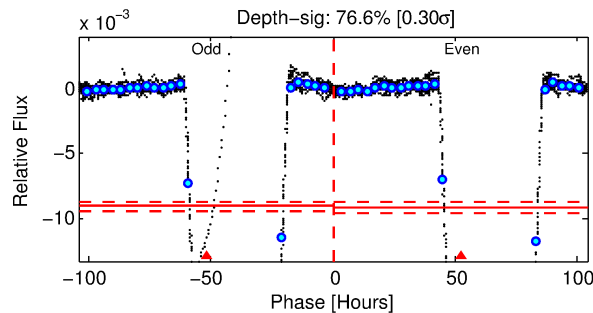
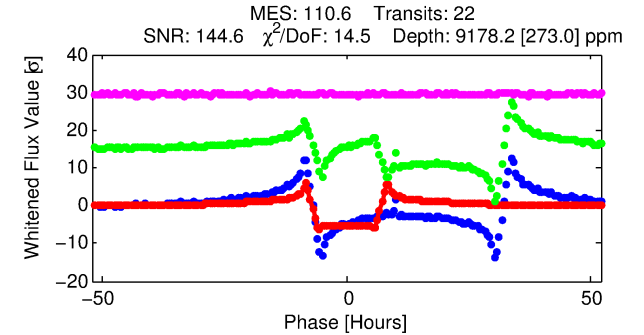
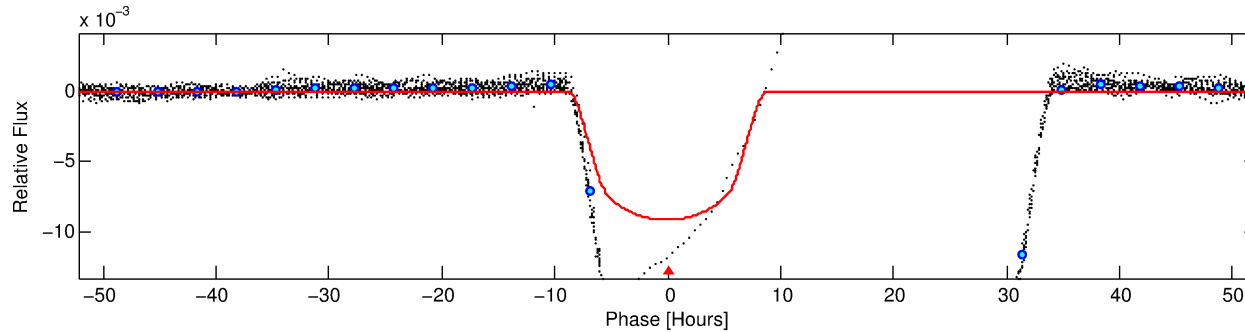
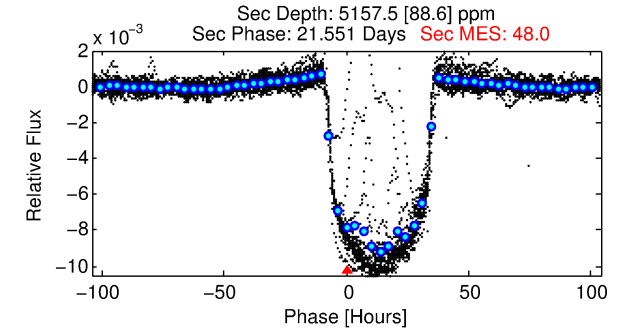
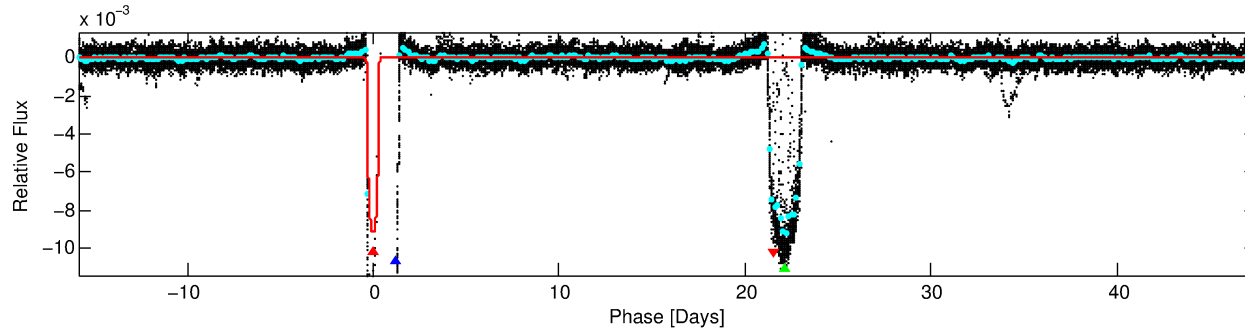
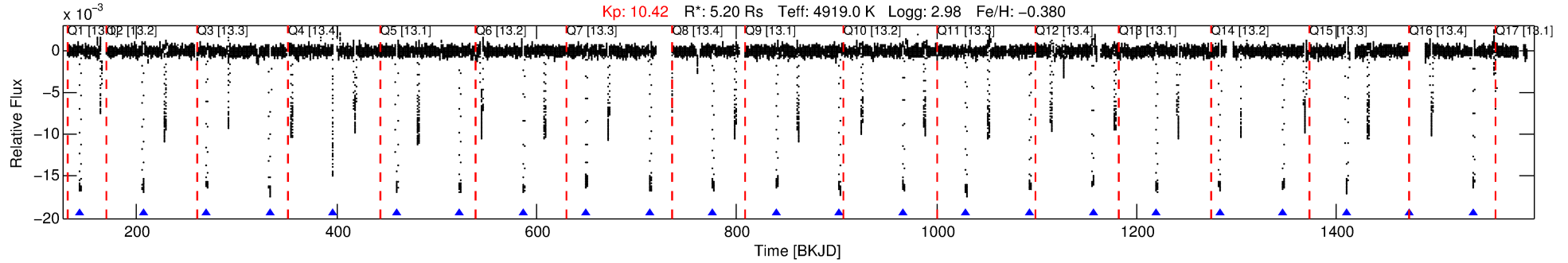
Ephemeris Match Information For 008430105-01

No Significant Match Found

DV One-Page Summary

KIC: 8430105 Candidate: 1 of 3 Period: 63.327 d

KOI: K03873 Corr: No Ephemeris Match



DV Fit Results:

Period = 63.32748 [0.00035] d
Epoch = 143.1044 [0.0043] BKJD
 $R_p/R^* = 0.0952$ [0.0015]
 $a/R^* = 22.54$ [0.51]
 $b = 0.74$ [0.01]
 $S_{\text{eff}} = 152.82$ [45.36]
 $T_{\text{eq}} = 897$ [67] K
 $R_p = 54.01$ [15.88] R_E
 $a = 0.3045$ [0.0680] AU
 $A_g = 90.21$ [26.43] [3.38 σ]
 $T_{\text{eff}} = 4272$ [75] K [33.62 σ]

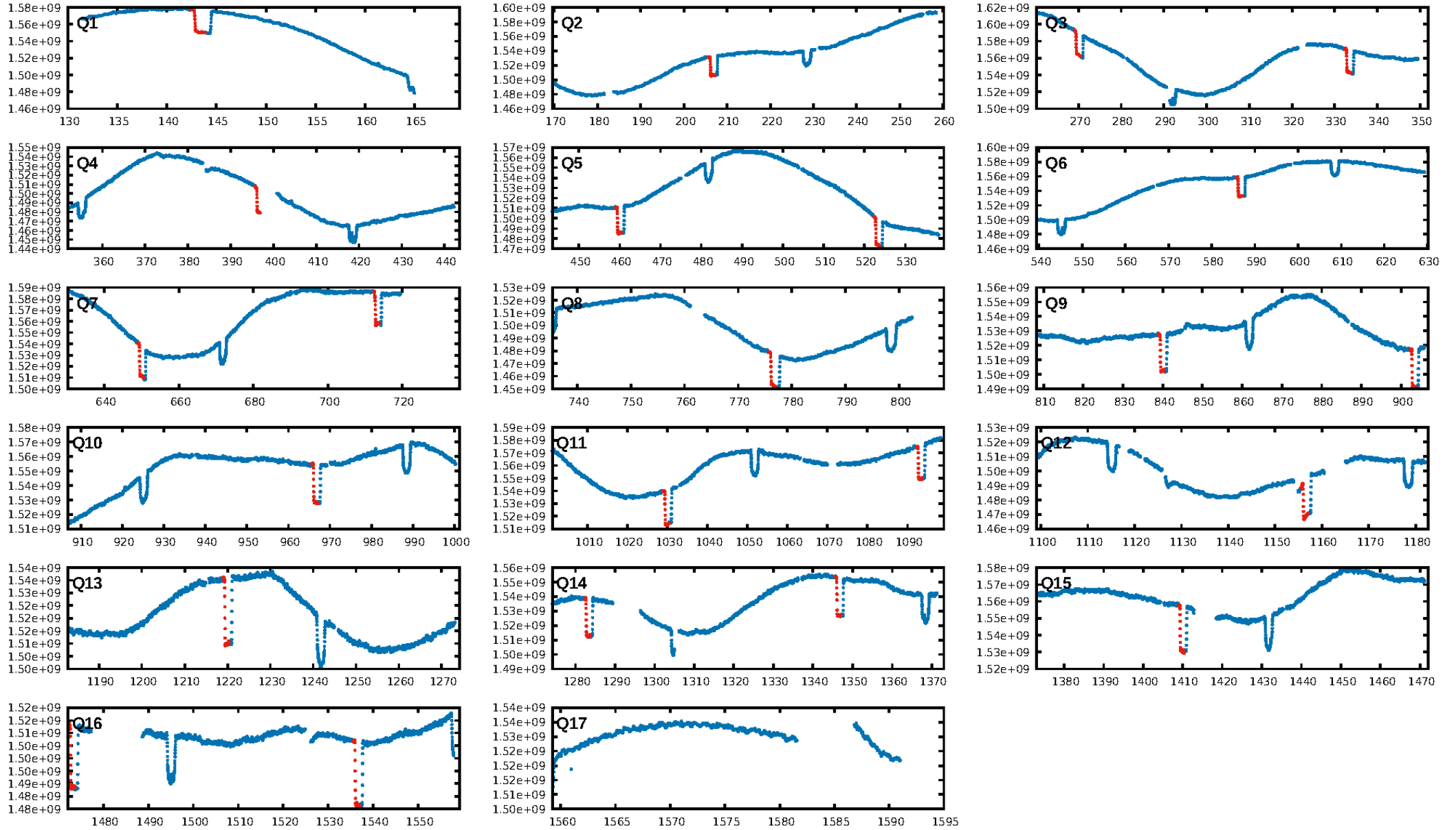
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.622 arcsec [45.79 σ]
OotOffset-rm: 1.328 arcsec [1.55 σ]
KicOffset-rm: 1.588 arcsec [1.68 σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.00 [0/10]

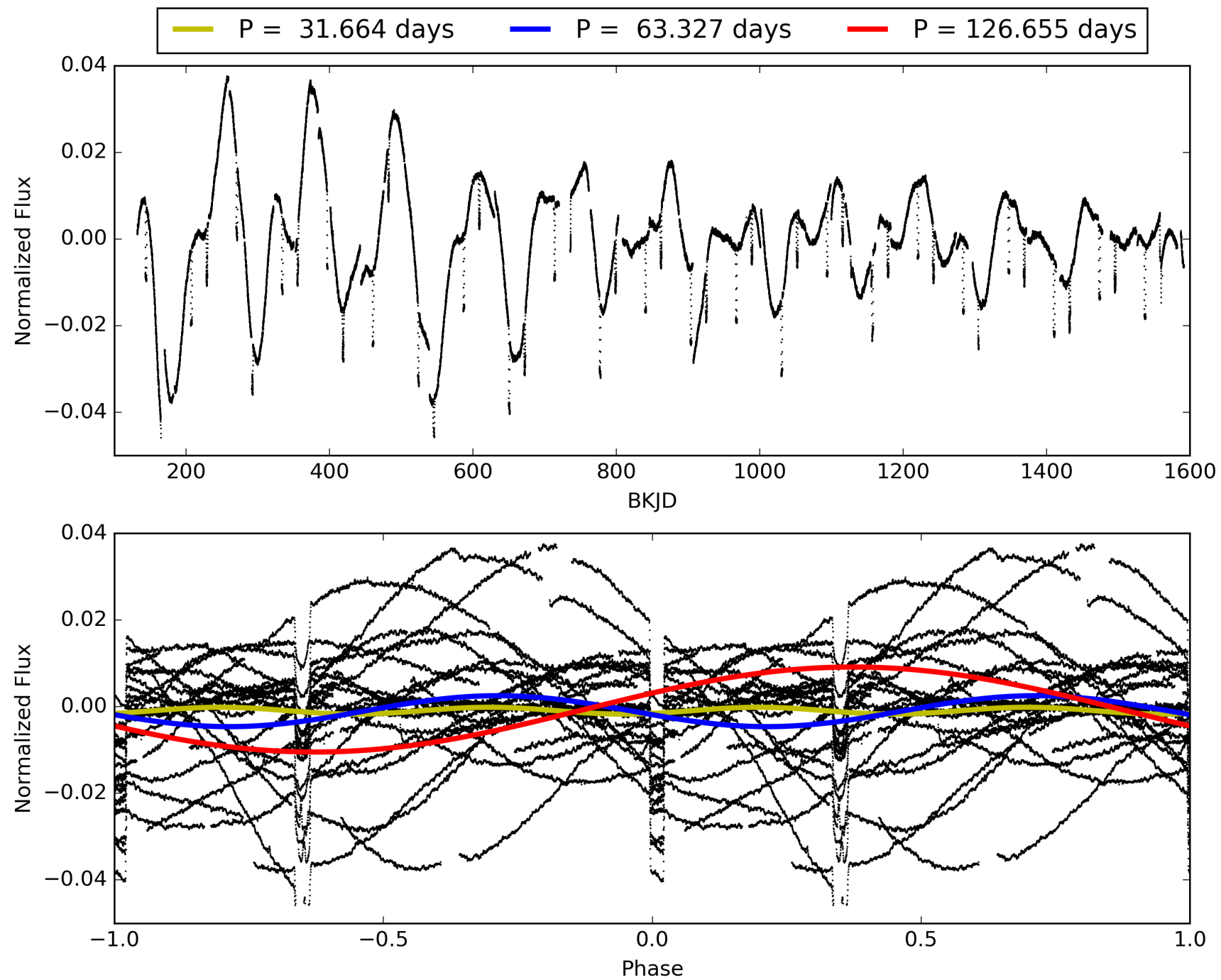
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 15:56:47 Z

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

TCE 008430105-01, PDC Light Curves

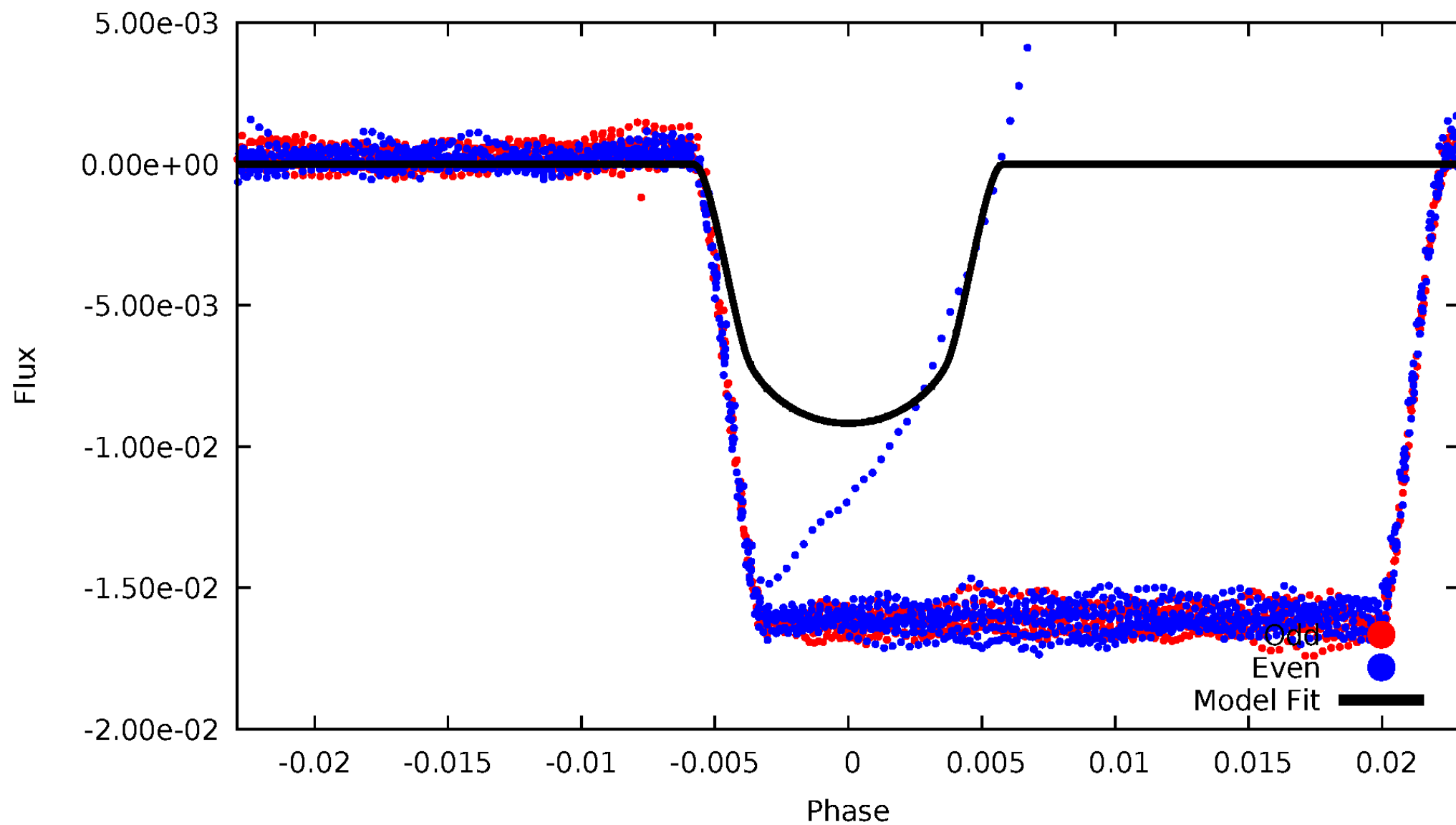


TCE 008430105-01



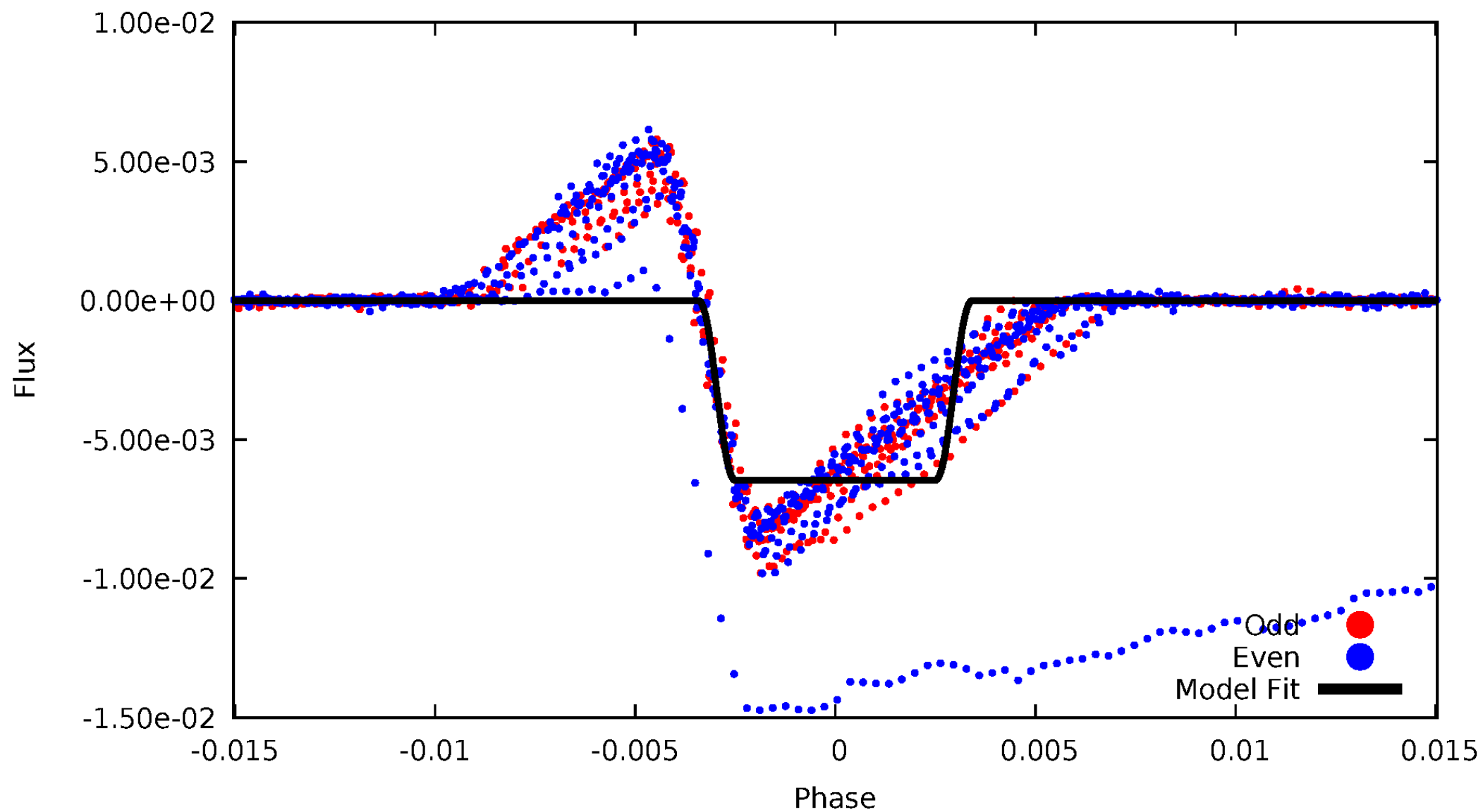
DV Odd/Even

TCE 008430105-01



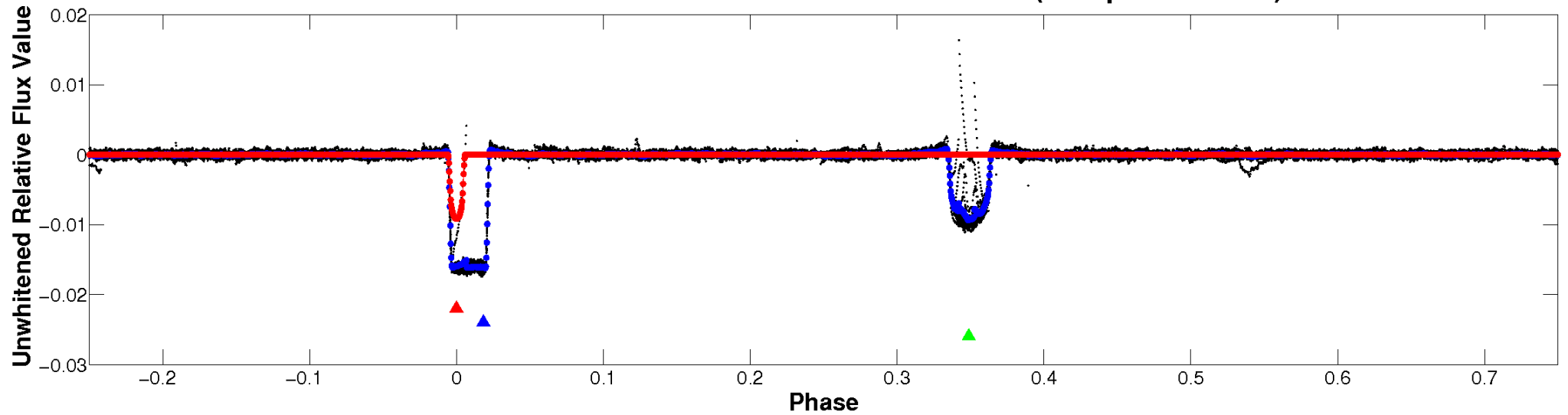
ALT Odd/Even

TCE 008430105-01

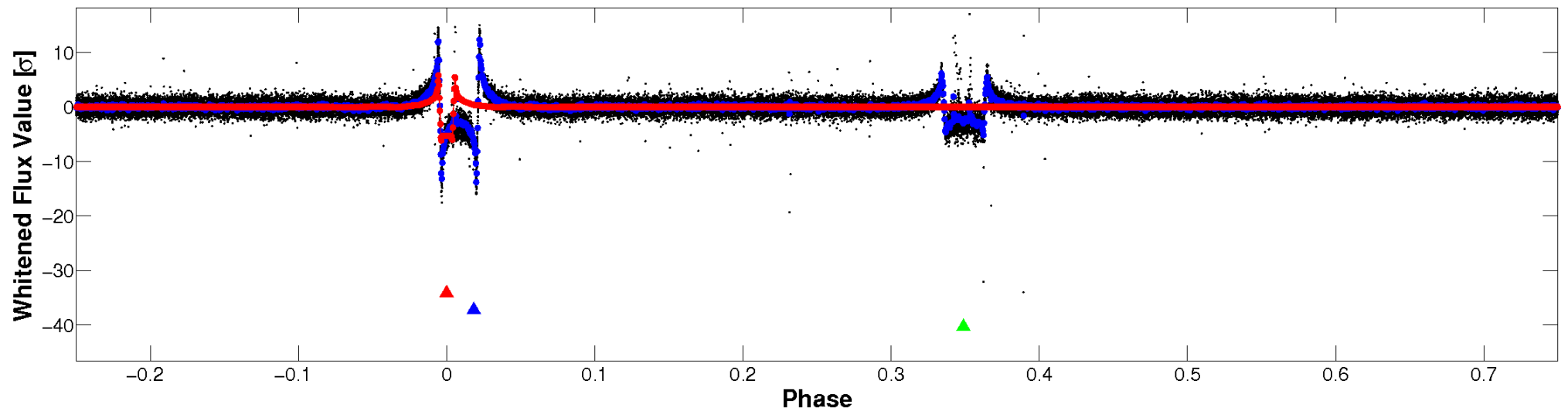


Non-Whitened Vs. Whitened Light Curve

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

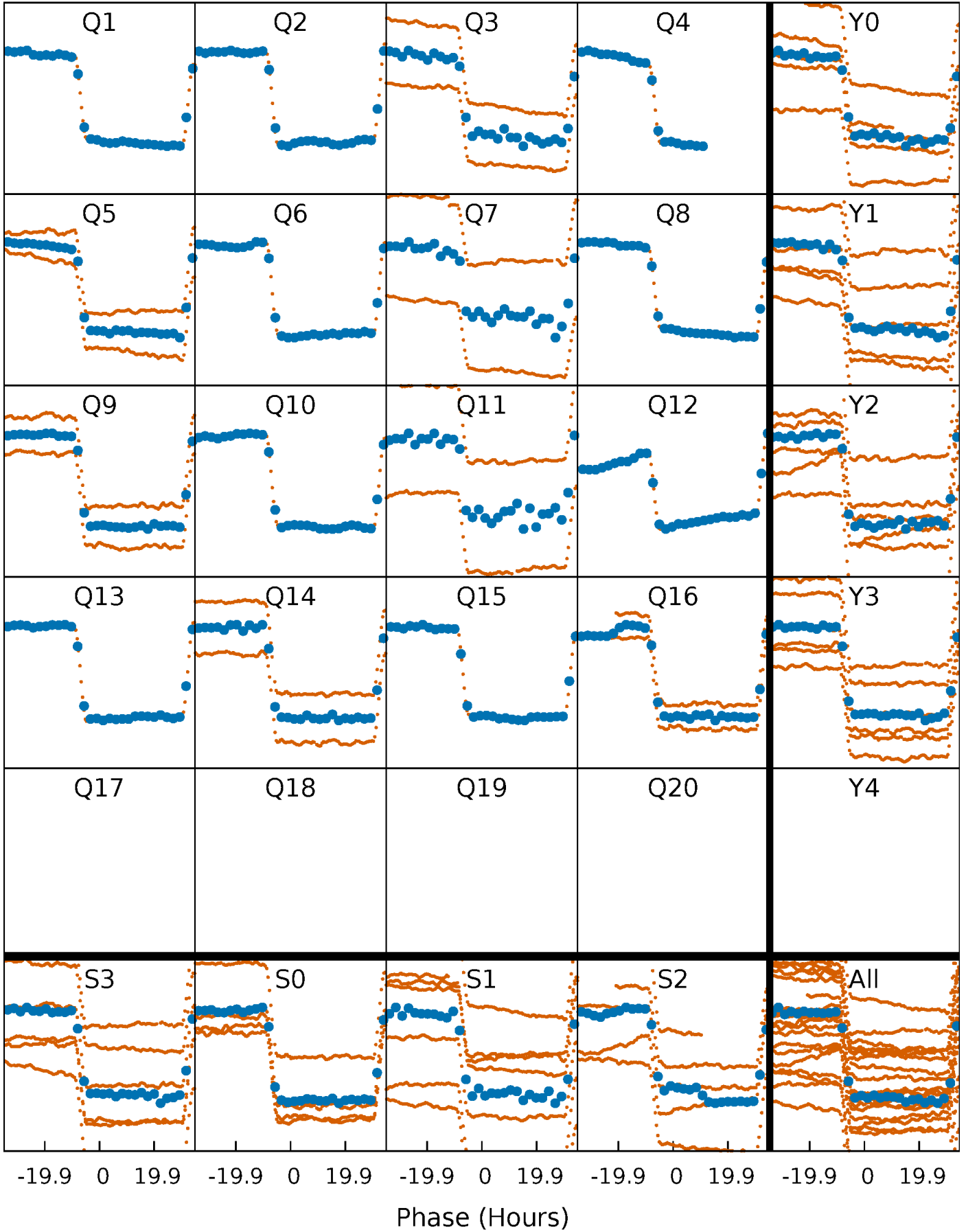


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



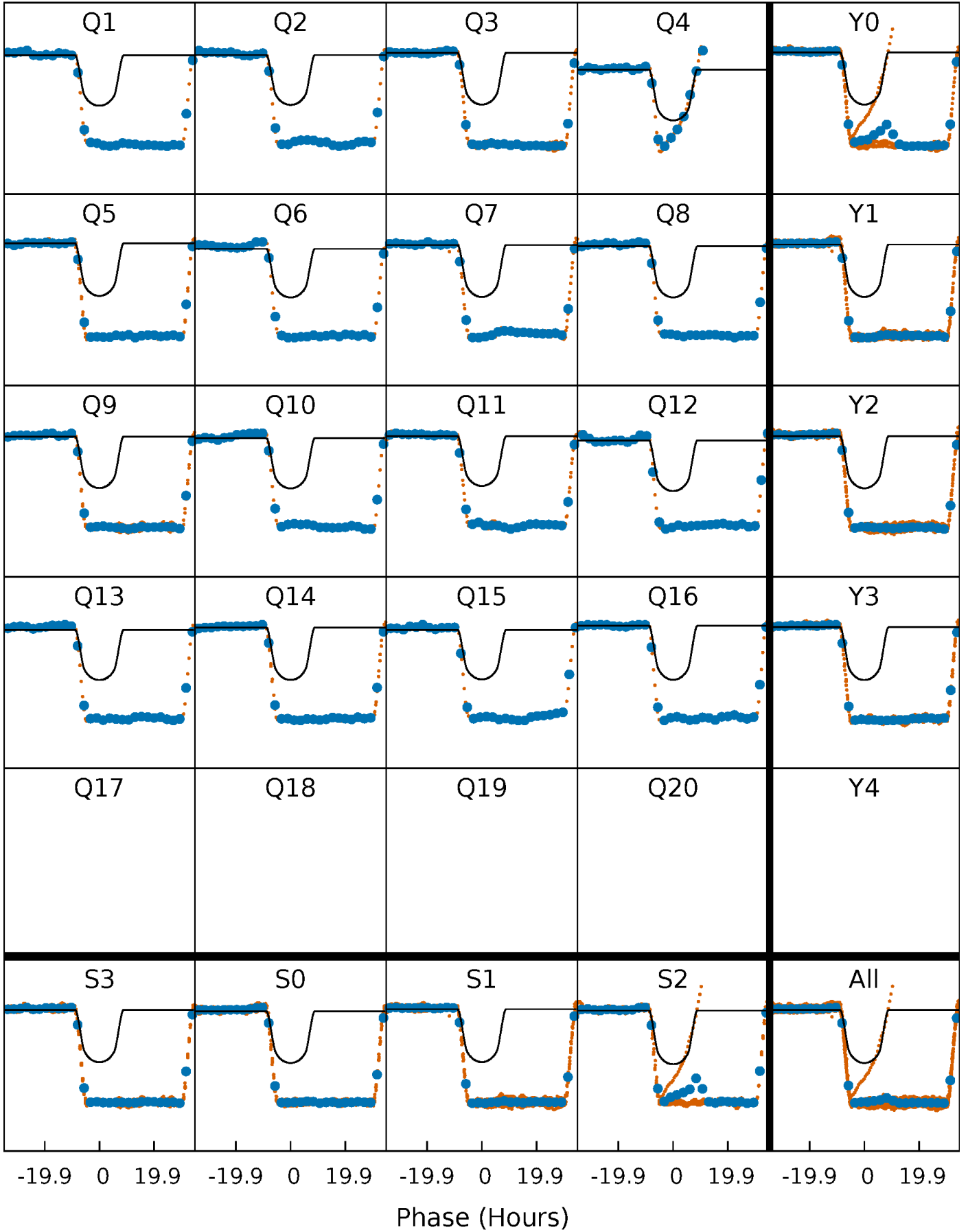
PDC Quarter-Phased Transit Curves

TCE 008430105-01 P= 63.327478 Days $T_0=143.104386$ (BKJD)



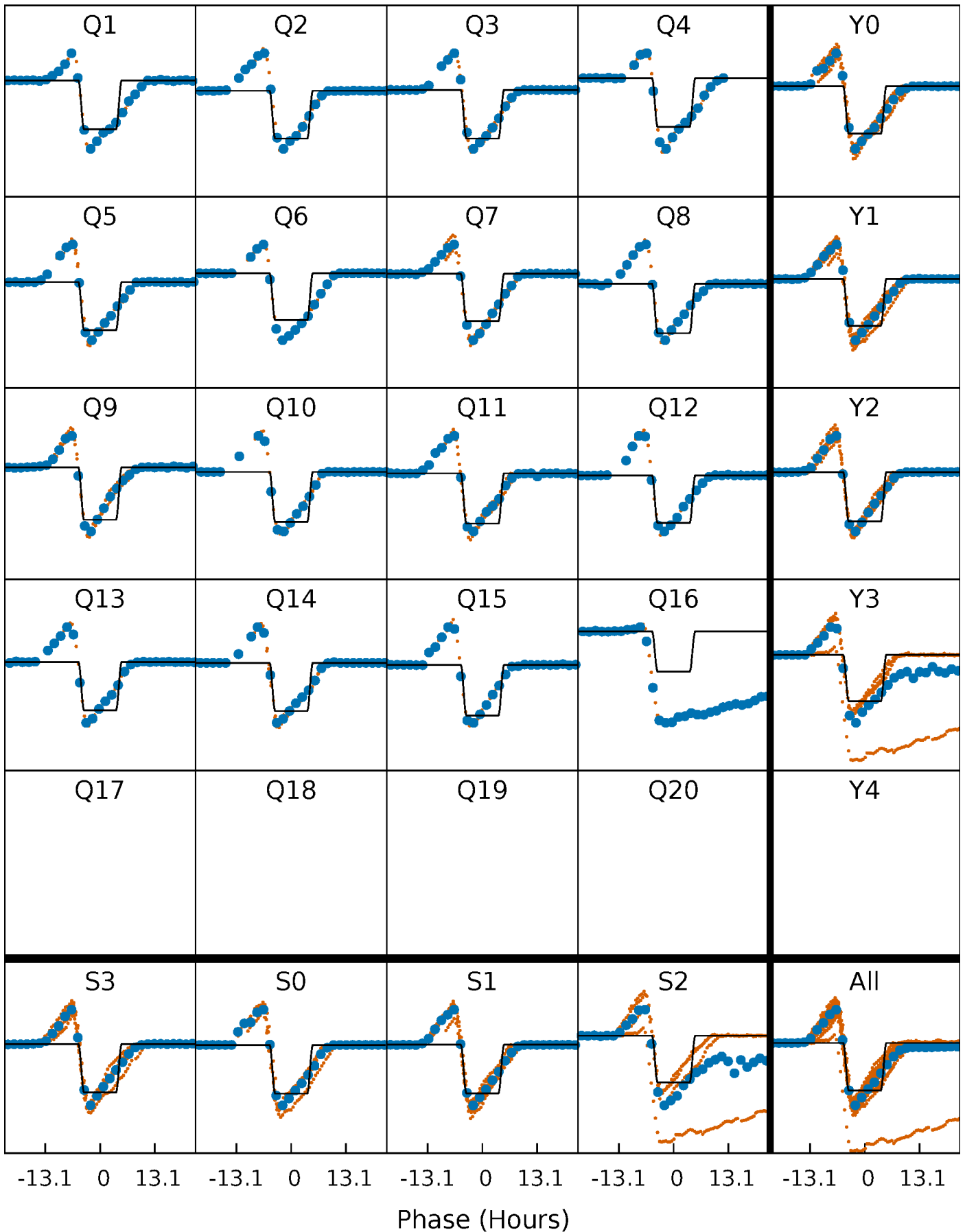
DV Quarter-Phased Transit Curves

TCE 008430105-01 P= 63.327478 Days $T_0=143.104386$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

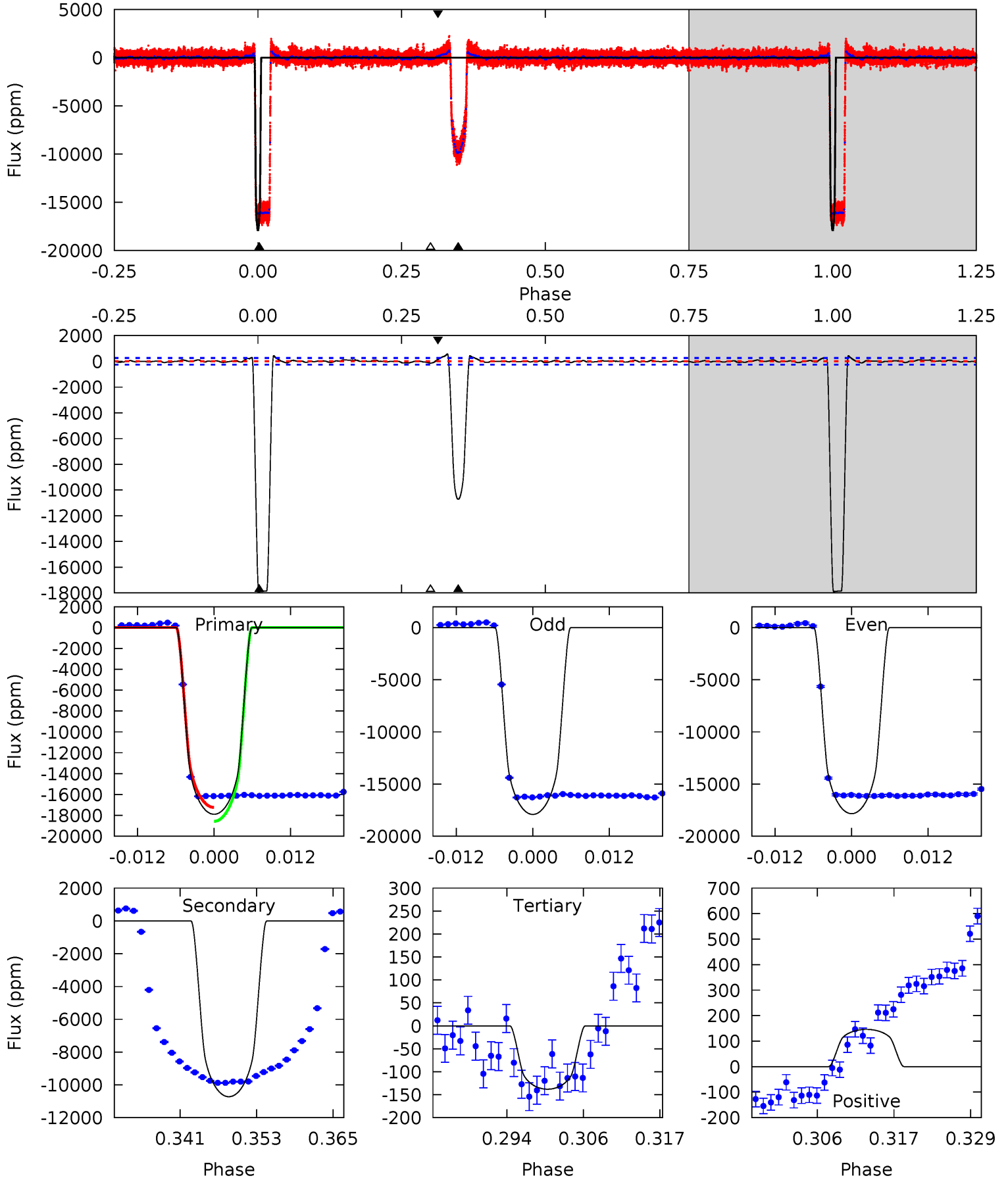
TCE 008430105-01 P= 63.328489 Days $T_0=143.007823$ (BKJD)



DV Model-Shift Uniqueness Test

008430105-01, P = 63.327478 Days, E = 79.776908 Days

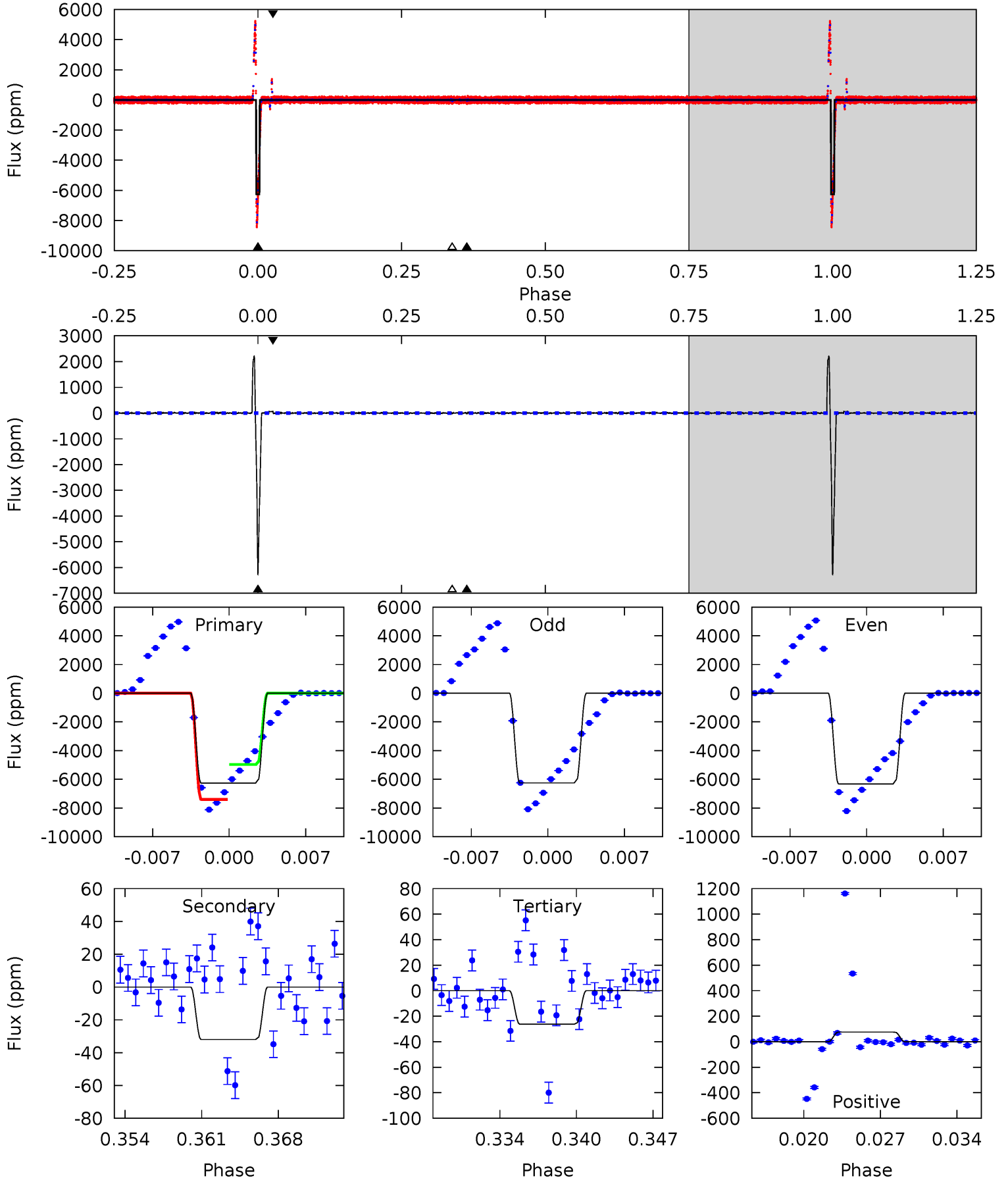
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
344.6	206.4	2.66	2.81	5.00	2.52	26.7	341.9	341.8	203.8	203.6	1.20	0.99	0.03	8.52



Alt Model-Shift Uniqueness Test

008430105-01, P = 63.328489 Days, E = 79.679334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
952.6	4.86	3.99	11.6	5.10	2.71	6.59	948.6	941.0	0.87	-6.69	5.26	1.09	0.26	0



Stellar Parameters For KIC 008430105

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4919^{+74}_{-52}	$2.979^{+0.140}_{-0.140}$	$-0.380^{+0.150}_{-0.100}$	$5.198^{+1.526}_{-0.822}$	$0.938^{+0.352}_{-0.059}$	$0.009^{+0.006}_{-0.004}$
	+2%/-1%	+5%/-5%	+39%/-26%	+29%/-16%	+38%/-6%	+60%/-43%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008430105-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10723 ± 52	$54.34^{+9.42}_{-5.32}$	1253^{+78}_{-65}	5115^{+83}_{-76}	192^{+44}_{-41}
Alt.	-32 ± 7	$46.23^{+7.89}_{-4.58}$	1255^{+77}_{-61}	2111^{+69}_{-100}	$0.778^{+0.221}_{-0.209}$

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 $A_{obs} \gg 1.0$

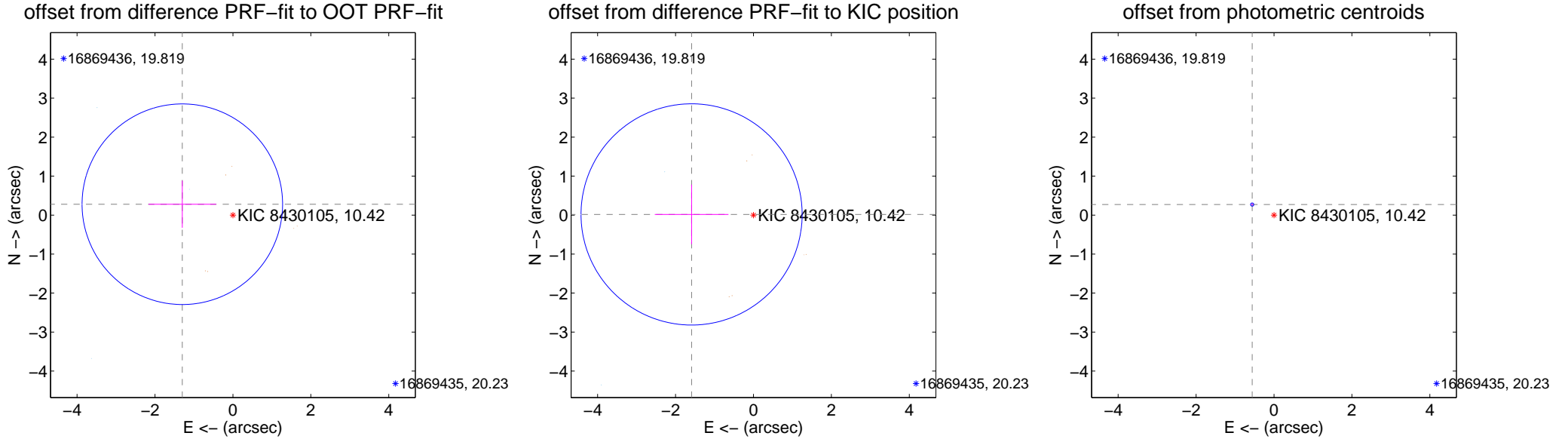
DV Centroid Data

Supplemental centroid analysis for 008430105-01. **Kepler magnitude: 10.42.** Transit SNR 144.56

There are 3 quarters with good PRF difference image offsets

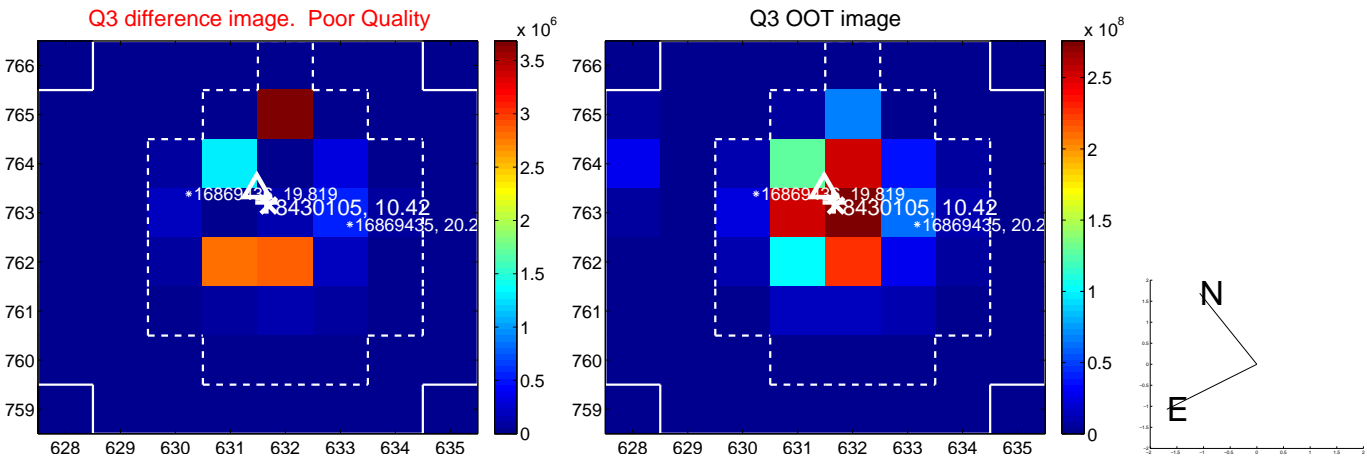
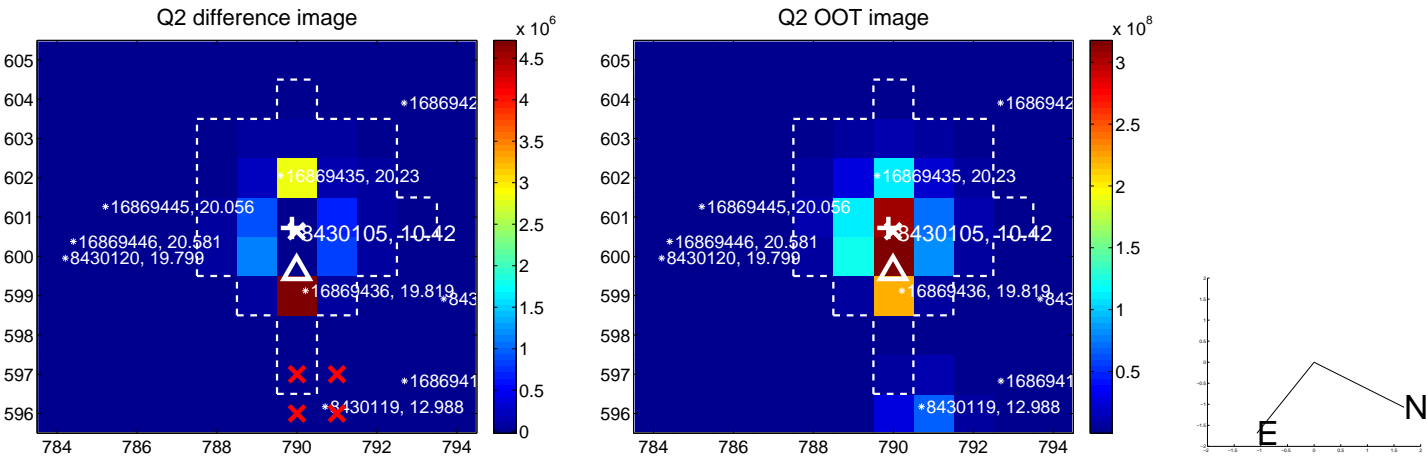
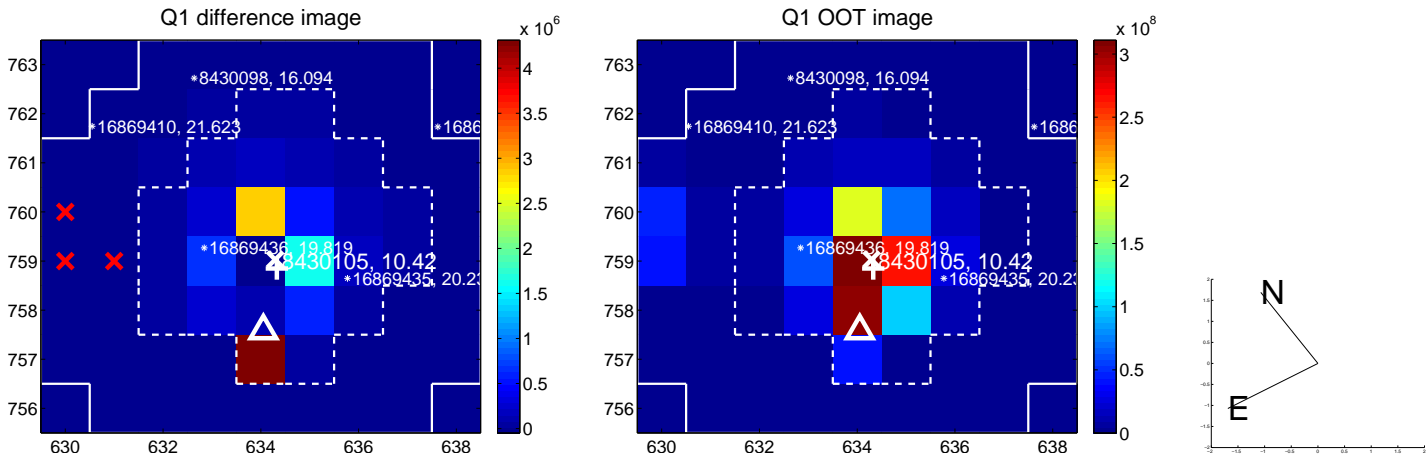
The direct PRF centroid is offset from the target star catalog position by about 1.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.328 ± 0.858	1.55	1.298 ± 0.867	0.279 ± 0.603
PRF-fit source offset from KIC position	1.588 ± 0.946	1.68	1.588 ± 0.946	0.017 ± 0.763
photometric centroid source offset	0.62 ± 0.01	45.79	0.56 ± 0.01	0.27 ± 0.02

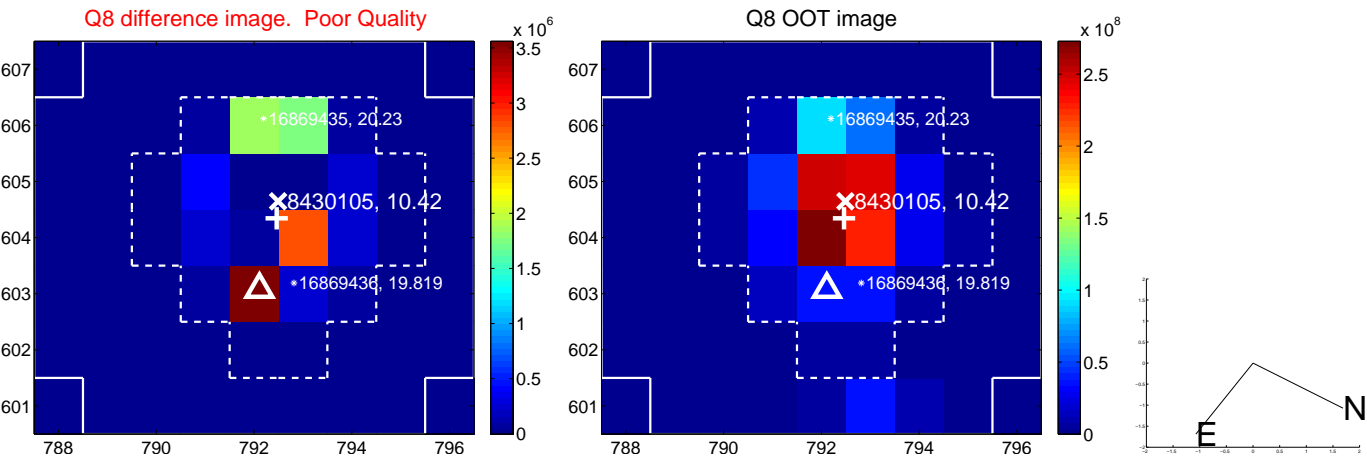
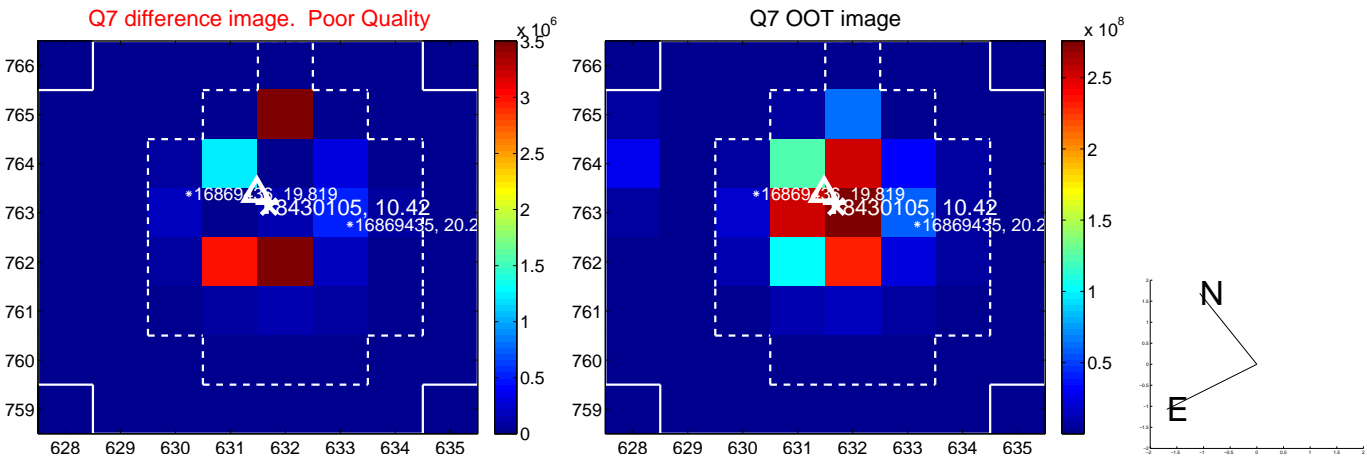
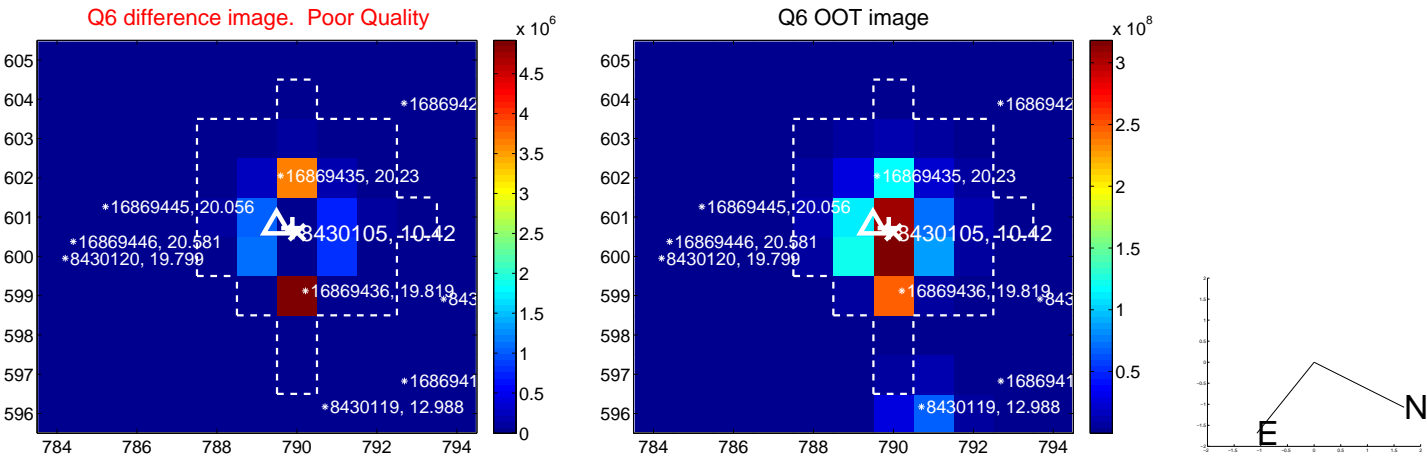
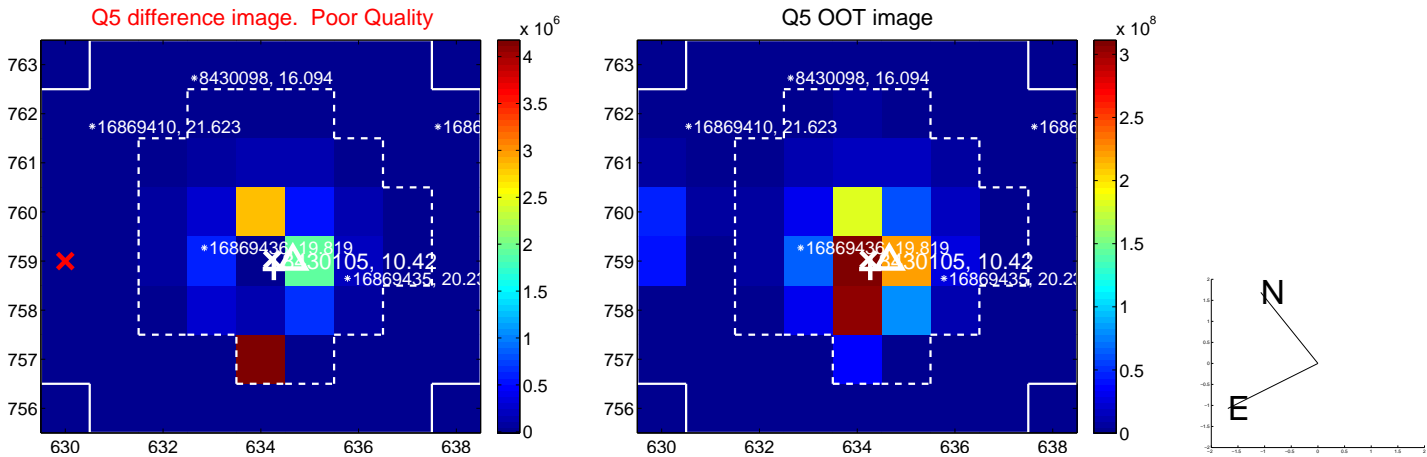


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

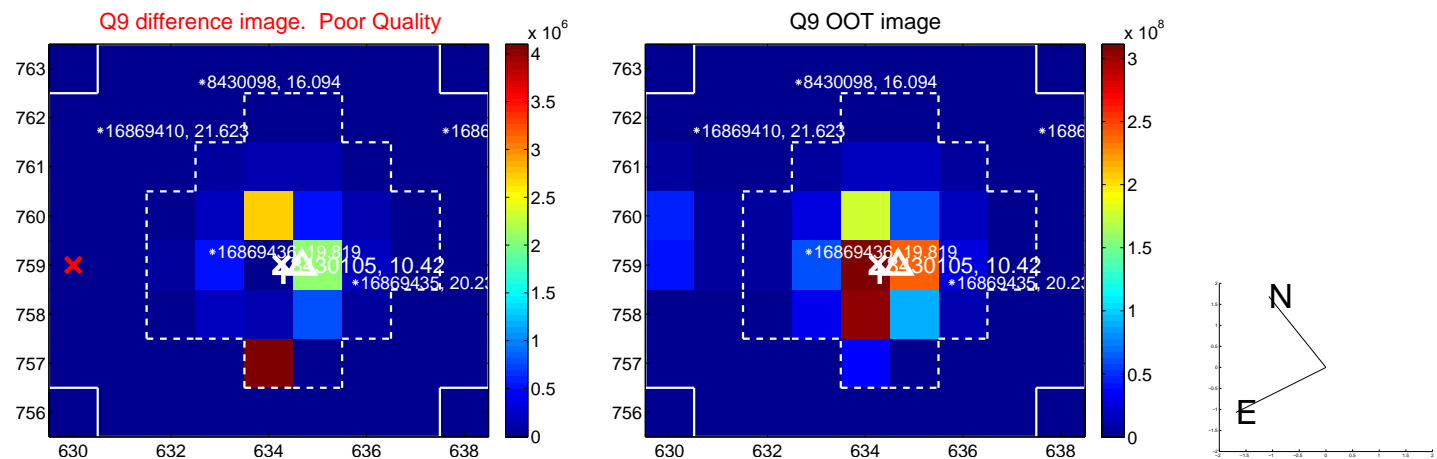
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

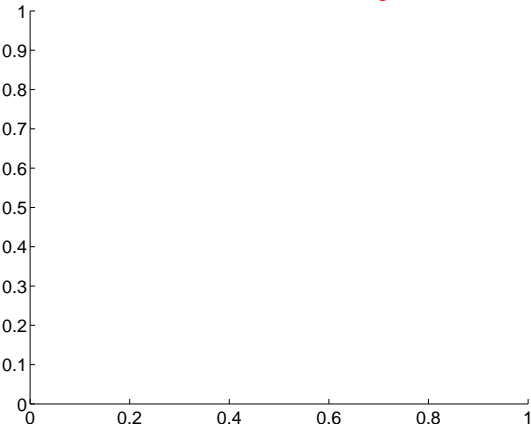


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

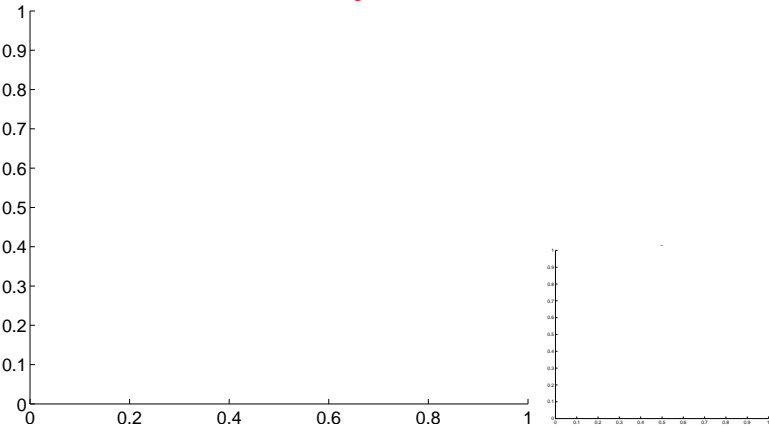


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

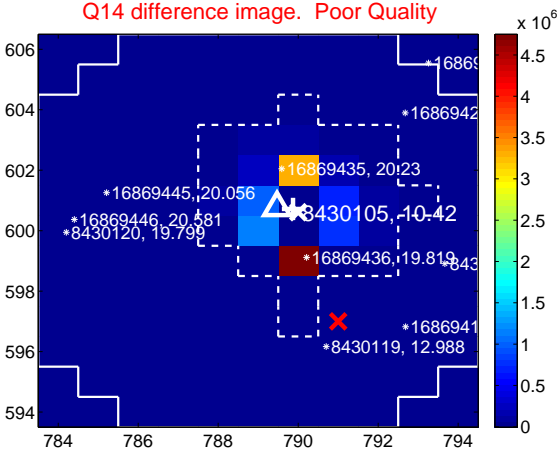
Q13 no difference image



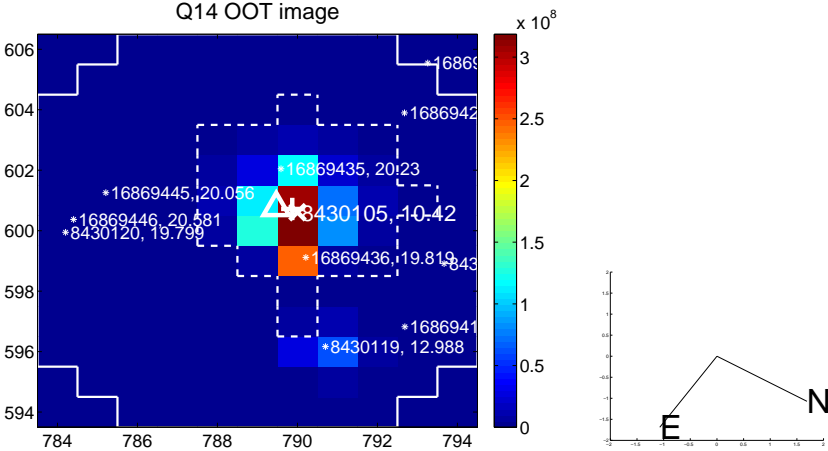
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



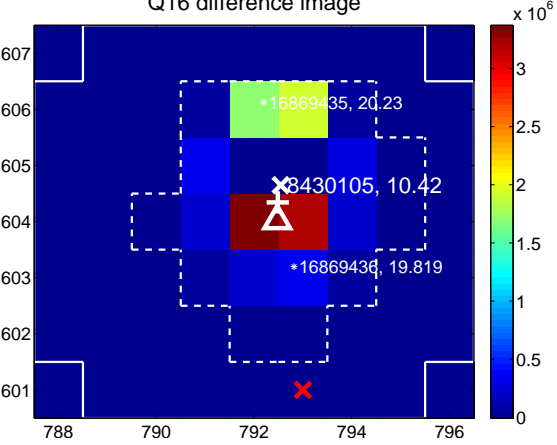
Q15 no difference image



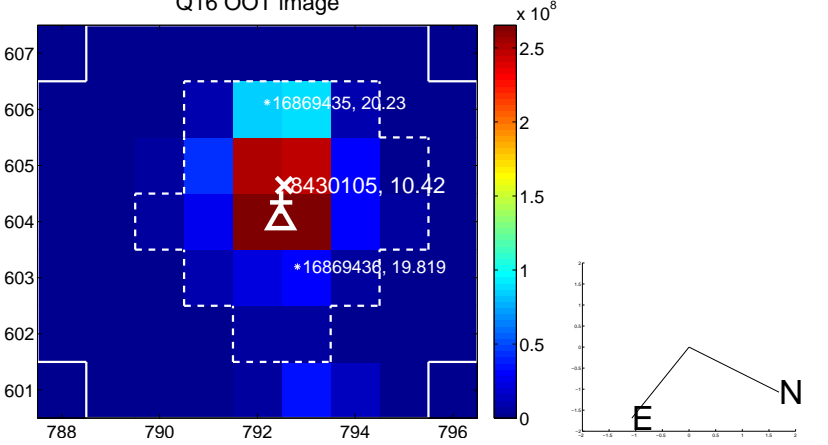
Q15 no OOT image



Q16 difference image



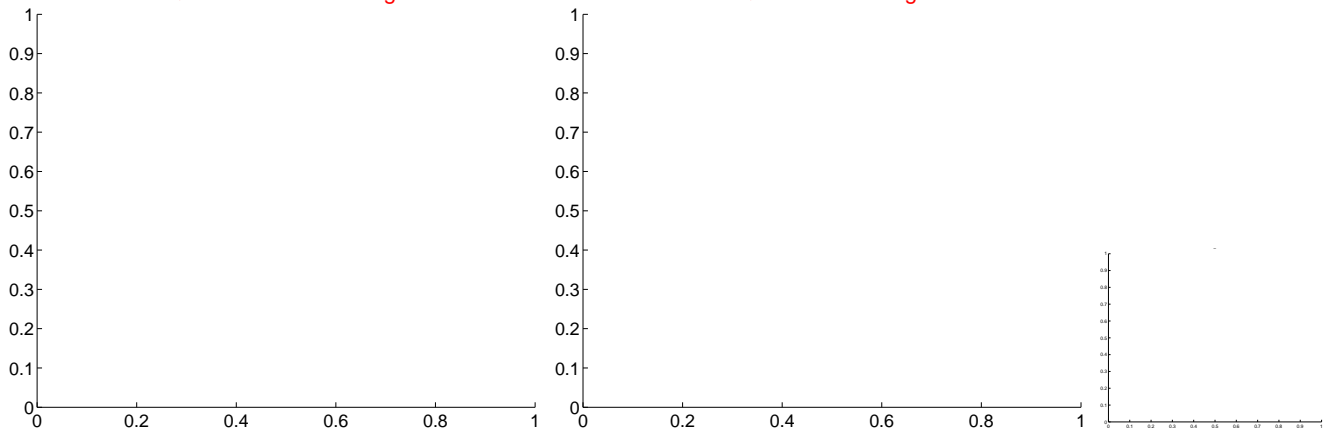
Q16 OOT image



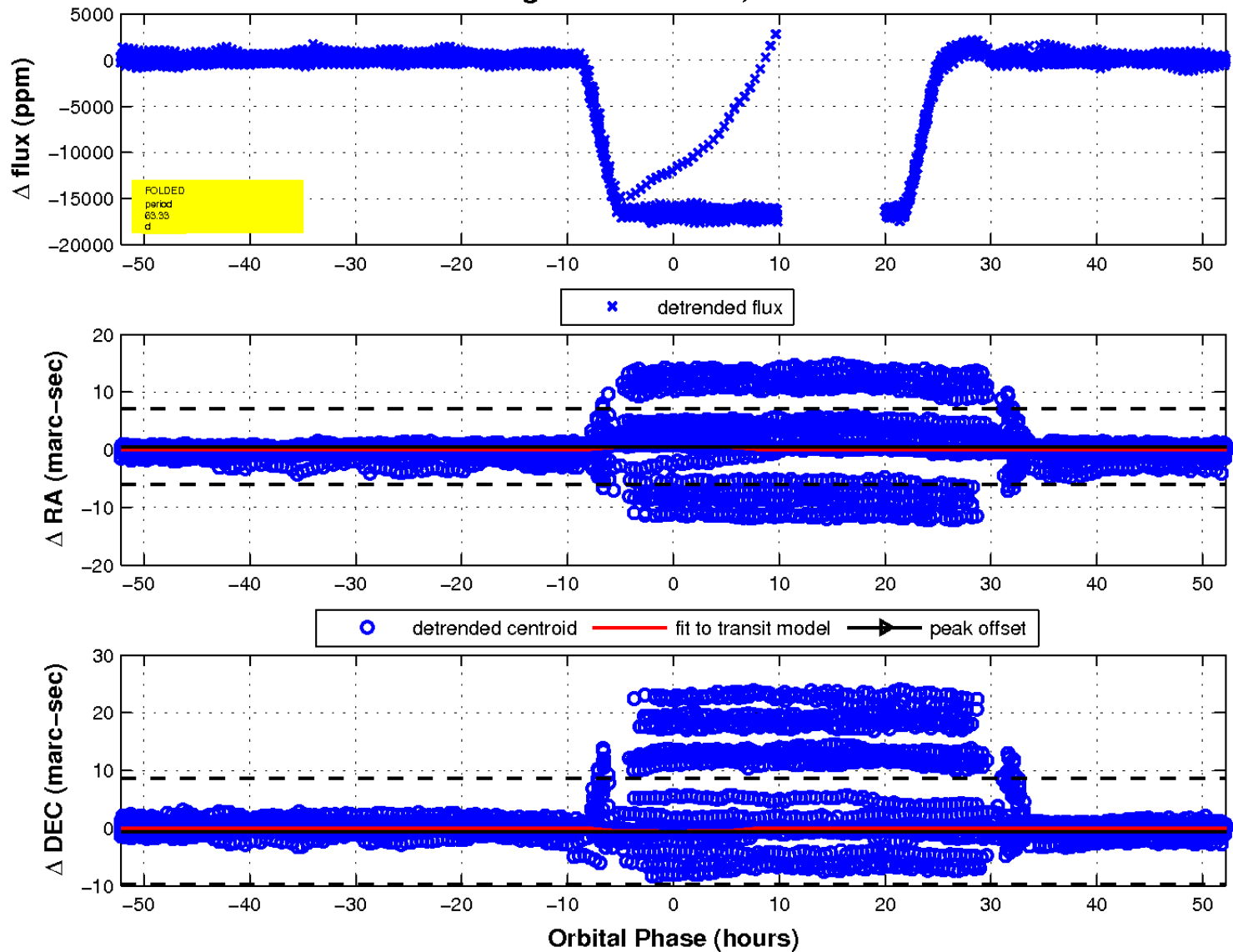
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image

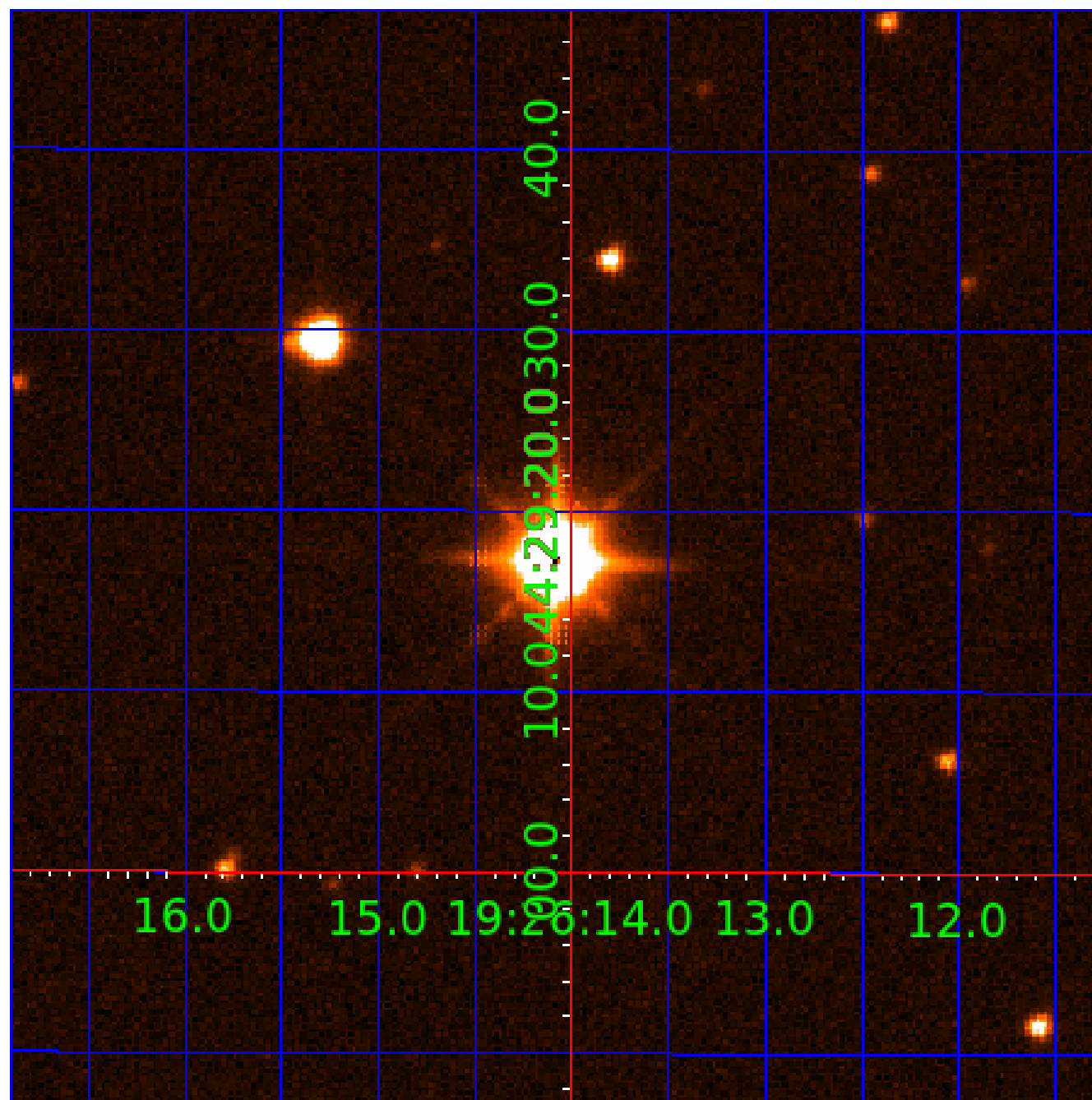


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008430105

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})
008430105-01	OBS	No	63.327478	143.104386	9178.2	17.400	110.6	144.6	5.20	4919	54.01	152.82
008430105-02	OBS	No	63.327378	144.266903	17892.0	12.447	170.5	256.1	5.20	4919	77.54	152.82
008430105-03	OBS	3873.01	63.327145	165.197824	12210.1	45.456	58.9	179.0	5.20	4919	55.99	152.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430105-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
008430105-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008430105-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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.

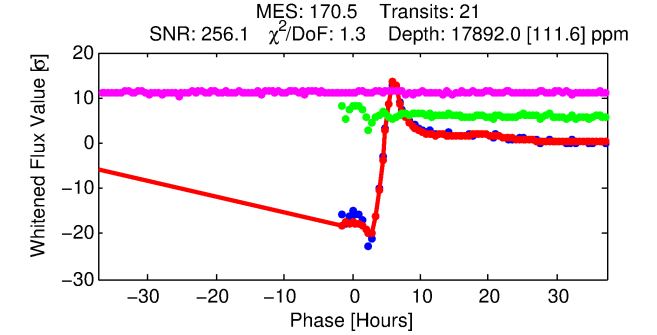
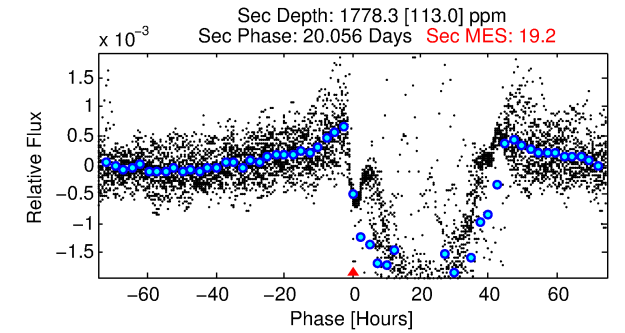
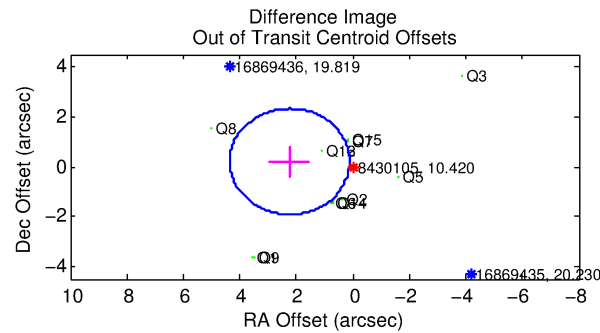
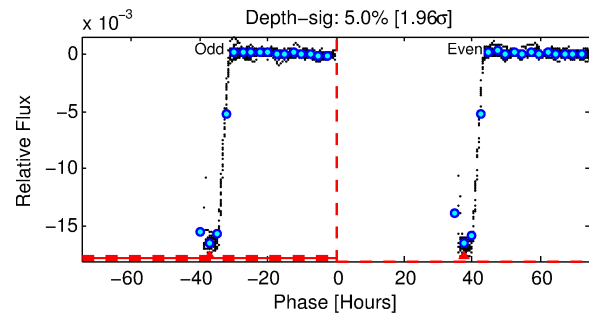
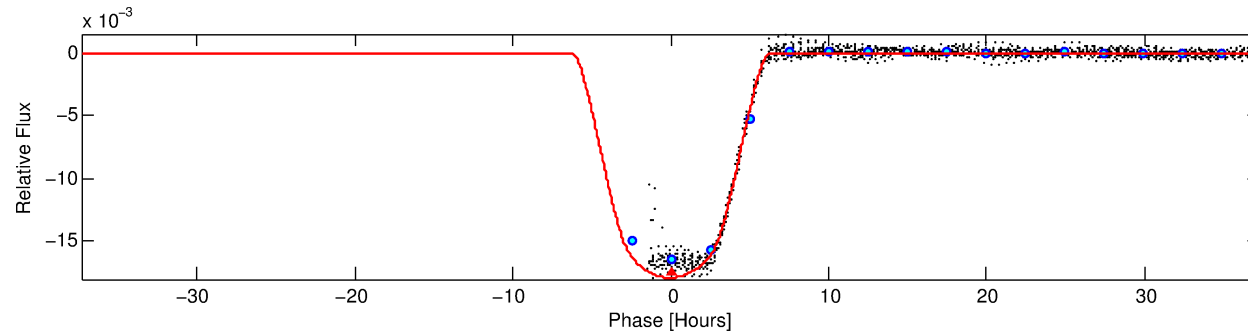
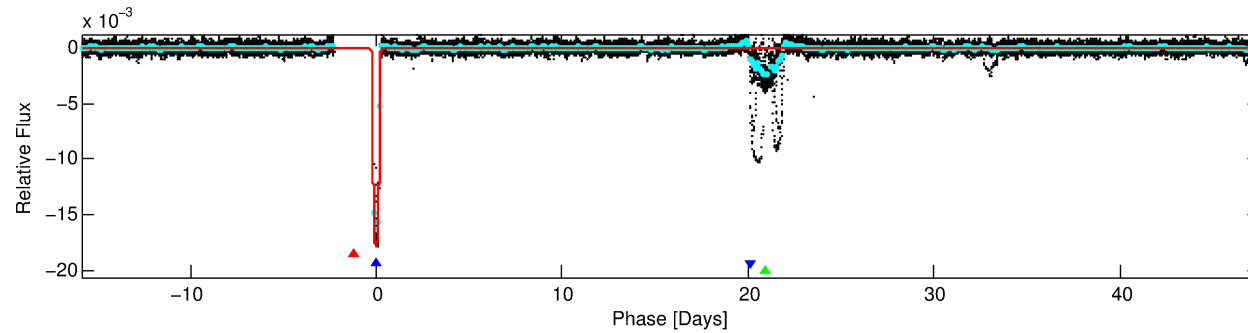
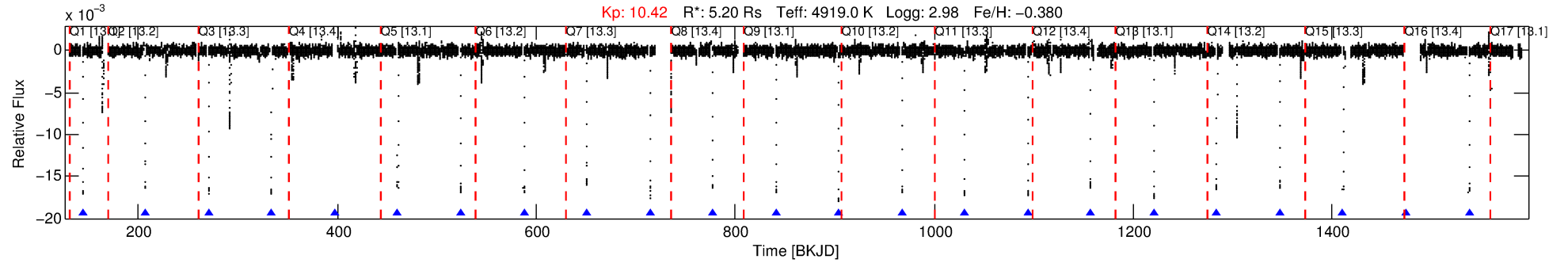
Ephemeris Match Information For 008430105-02

No Significant Match Found

DV One-Page Summary

KIC: 8430105 Candidate: 2 of 3 Period: 63.327 d

KOI: K03873 Corr: No Ephemeris Match



DV Fit Results:

Period = 63.32738 [0.00006] d
Epoch = 144.2669 [0.0016] BKJD
 $R_p/R^* = 0.1367$ [0.0004]
 $a/R^* = 31.99$ [0.20]
 $b = 0.78$ [0.00]
 $S_{\text{eff}} = 152.82$ [45.36]
 $T_{\text{eq}} = 897$ [67] K
 $R_p = 77.54$ [22.76] R_E
 $a = 0.3045$ [0.0680] AU
 $A_g = 15.09$ [4.49] [3.14 σ]
 $T_{\text{eff}} = 2732$ [60] K [20.50 σ]

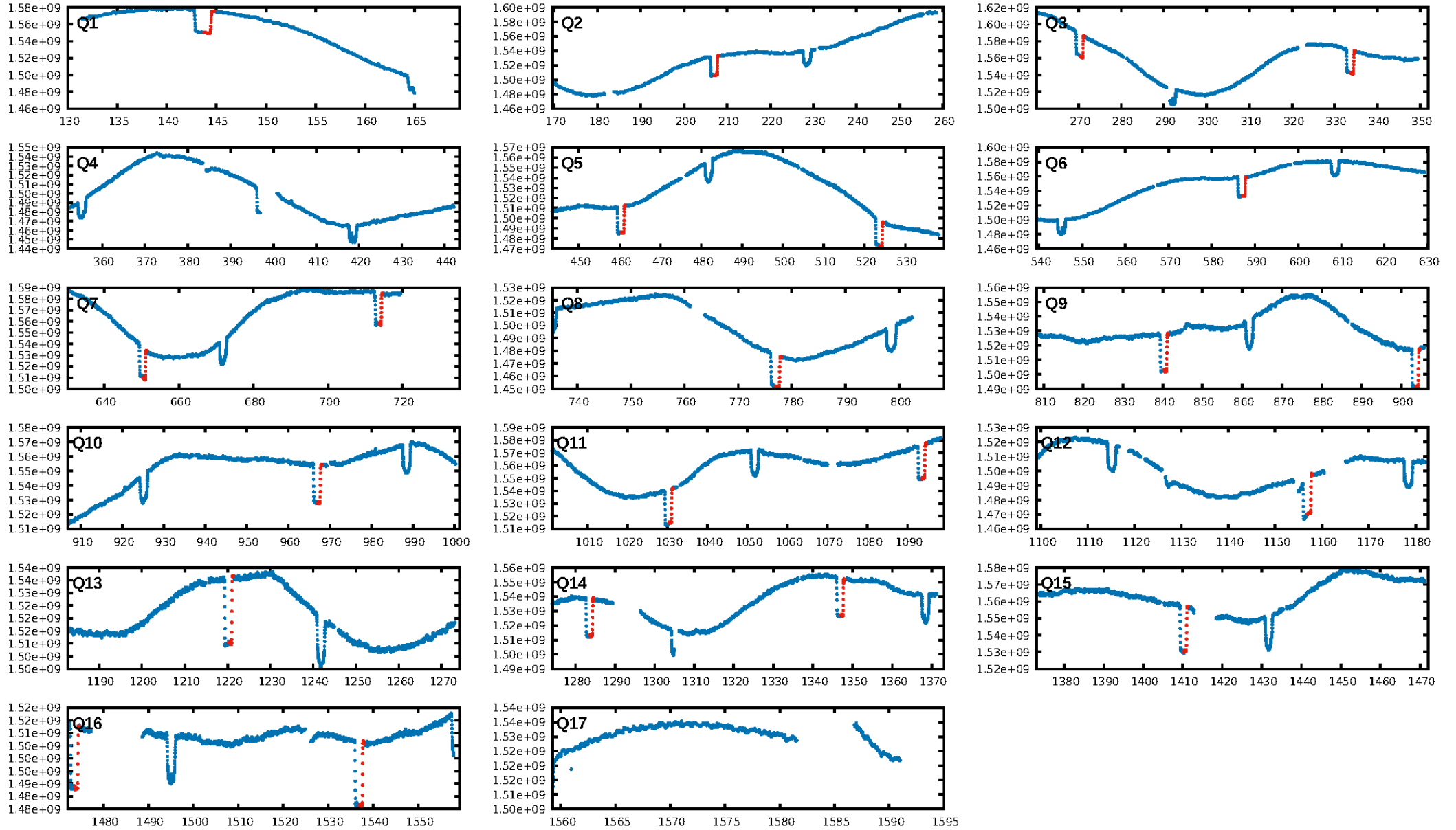
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.607 arcsec [90.29 σ]
OotOffset-rm: 2.252 arcsec [3.18 σ]
KicOffset-rm: 2.550 arcsec [3.40 σ]
OotOffset-st: 3/3/3 [12]
KicOffset-st: 3/3/3 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 0.00 [0/12]

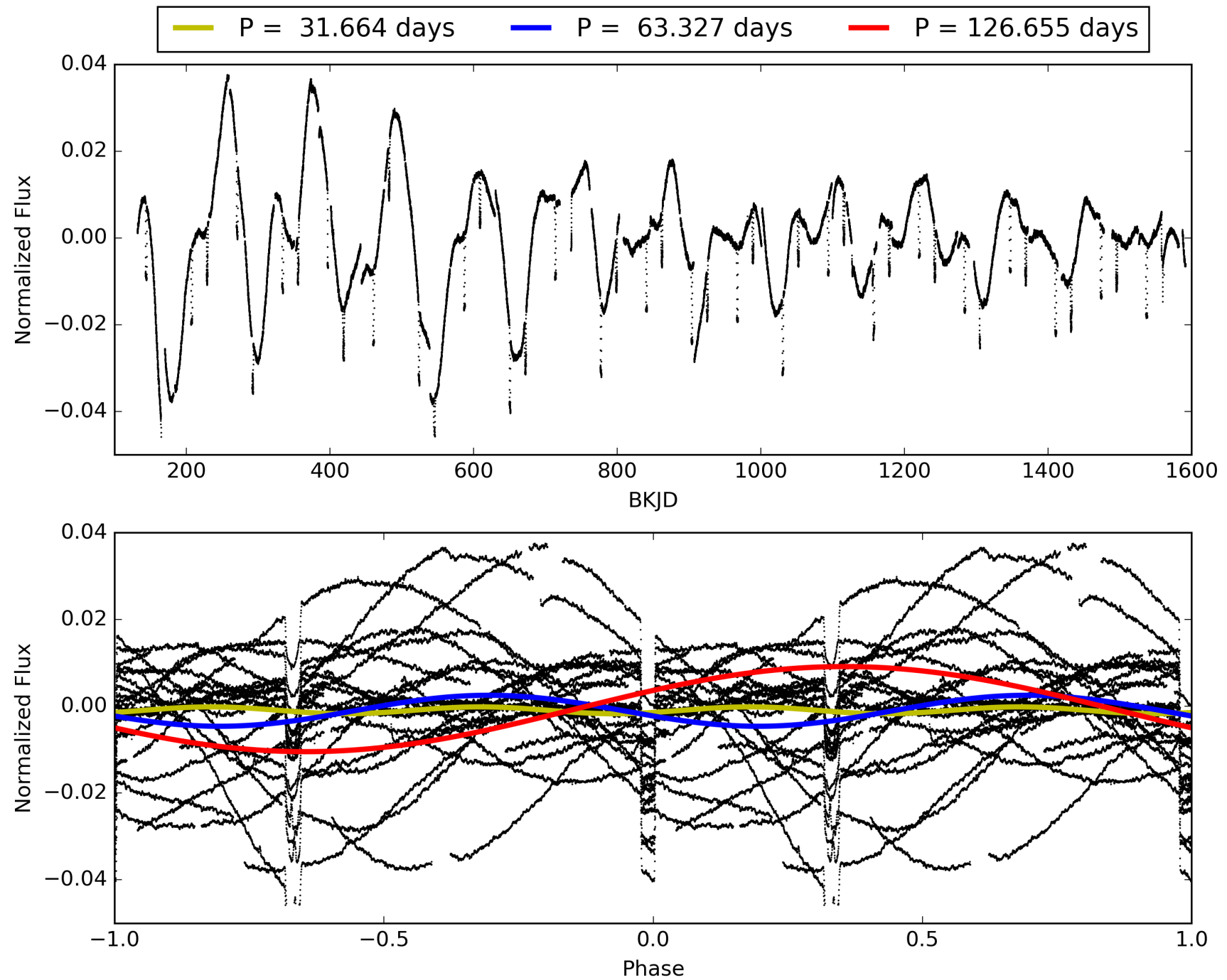
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 15:56:53 Z

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

TCE 008430105-02, PDC Light Curves

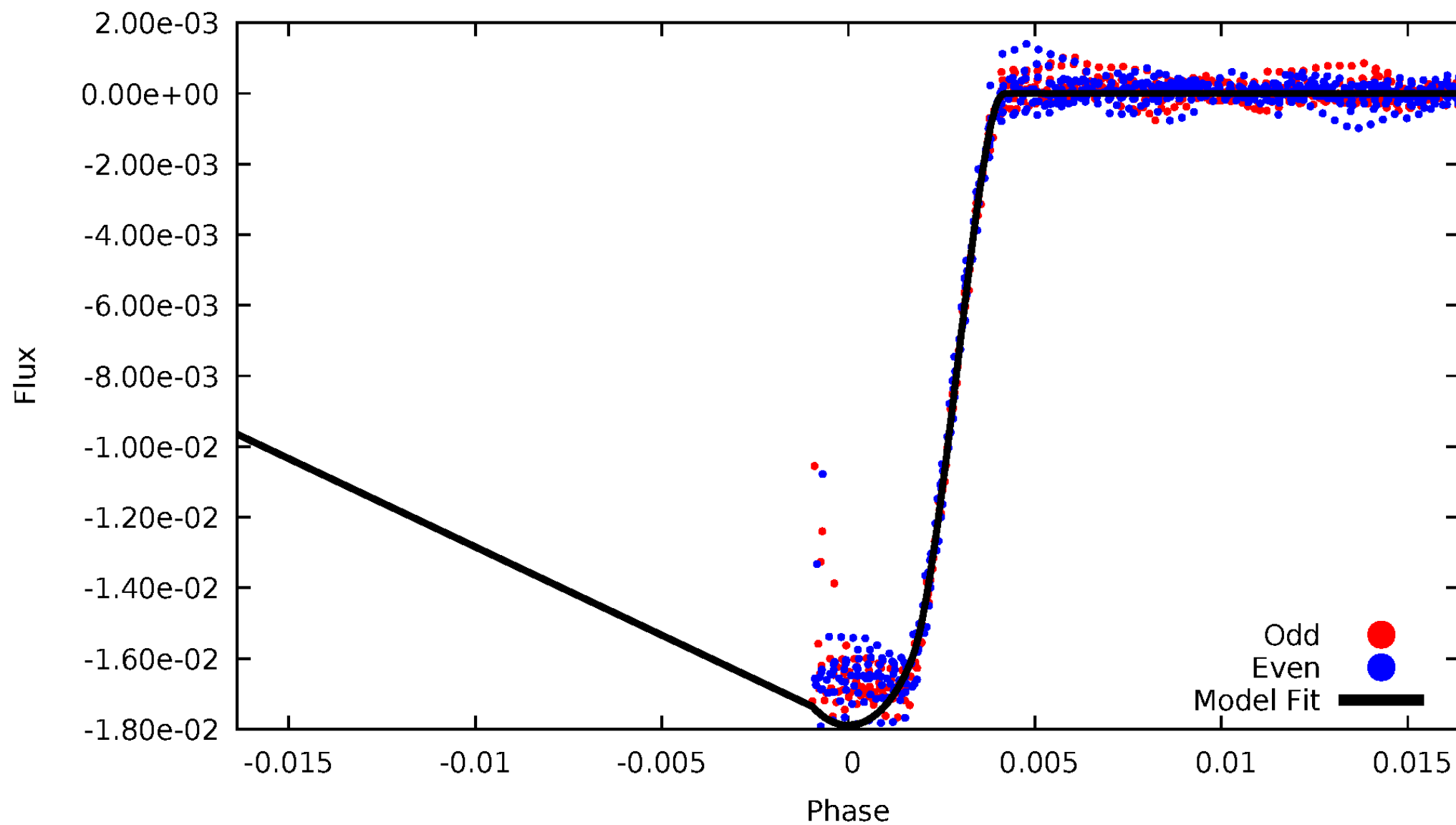


TCE 008430105-02



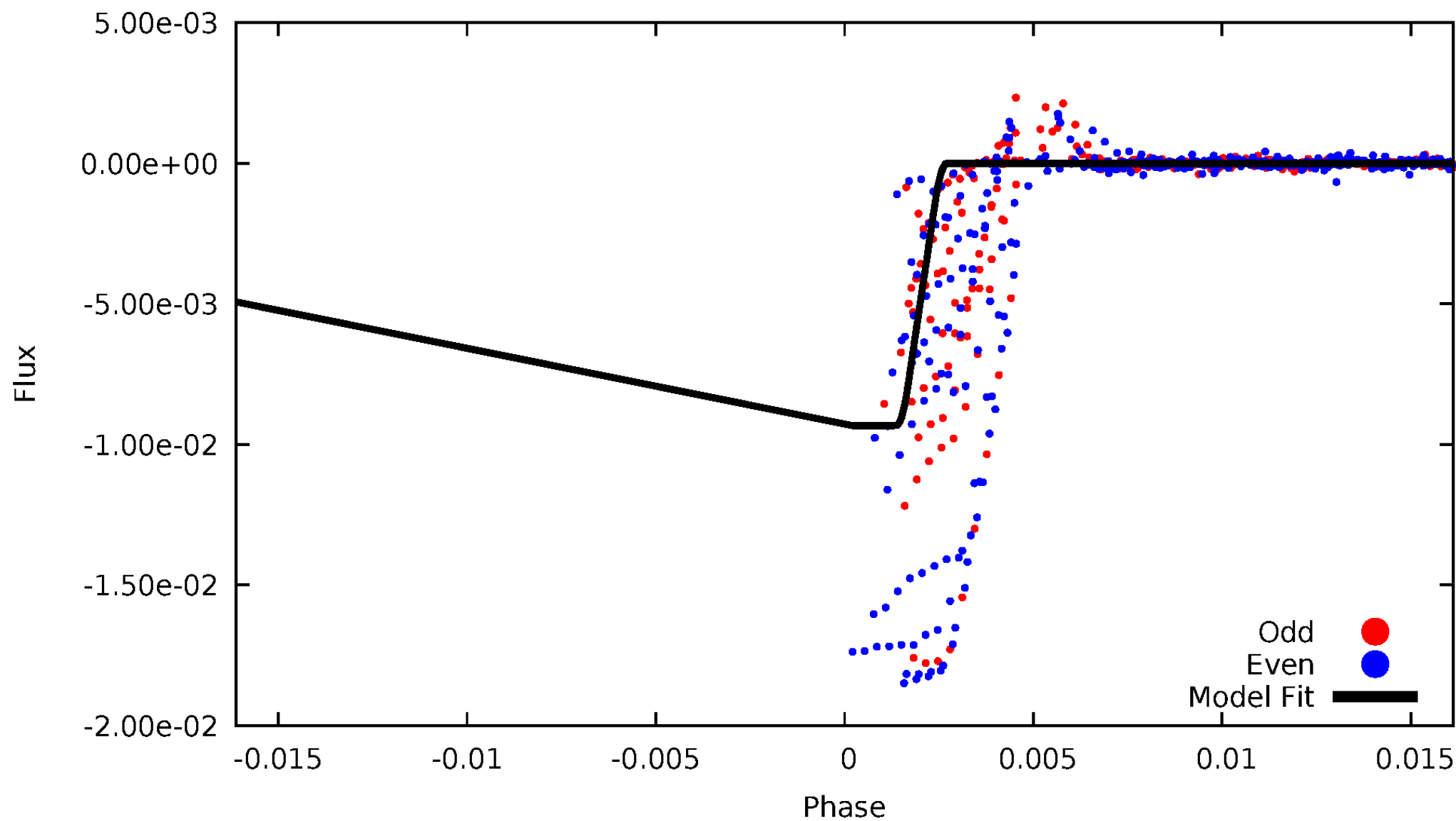
DV Odd/Even

TCE 008430105-02



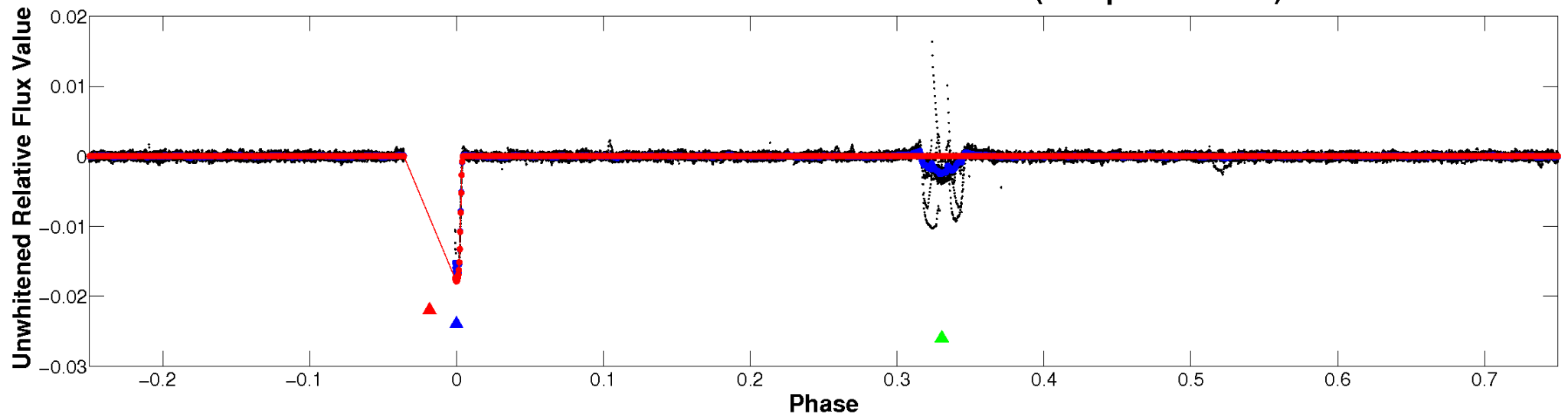
ALT Odd/Even

TCE 008430105-02

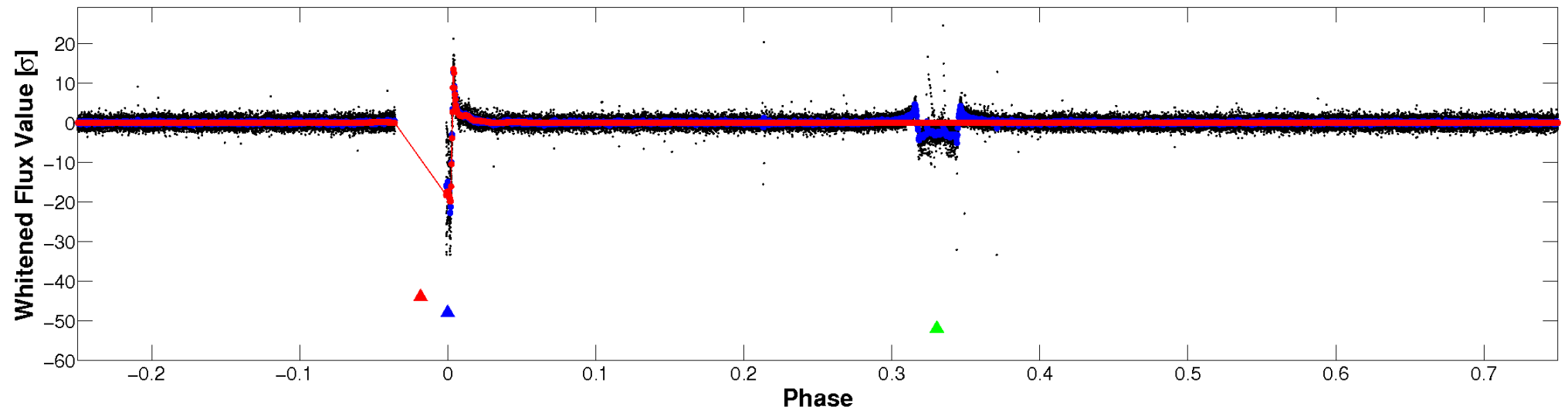


Non-Whitened Vs. Whitened Light Curve

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

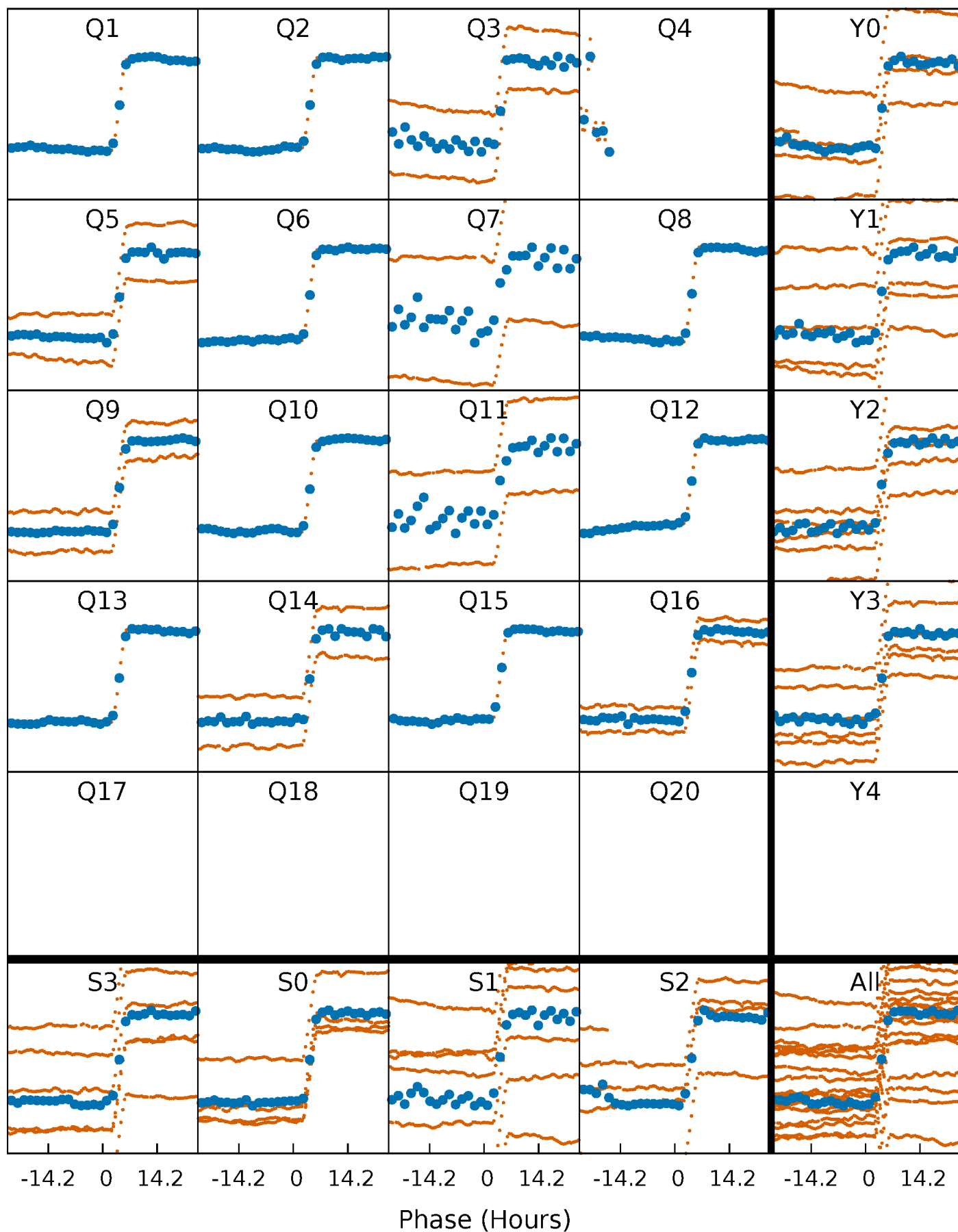


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



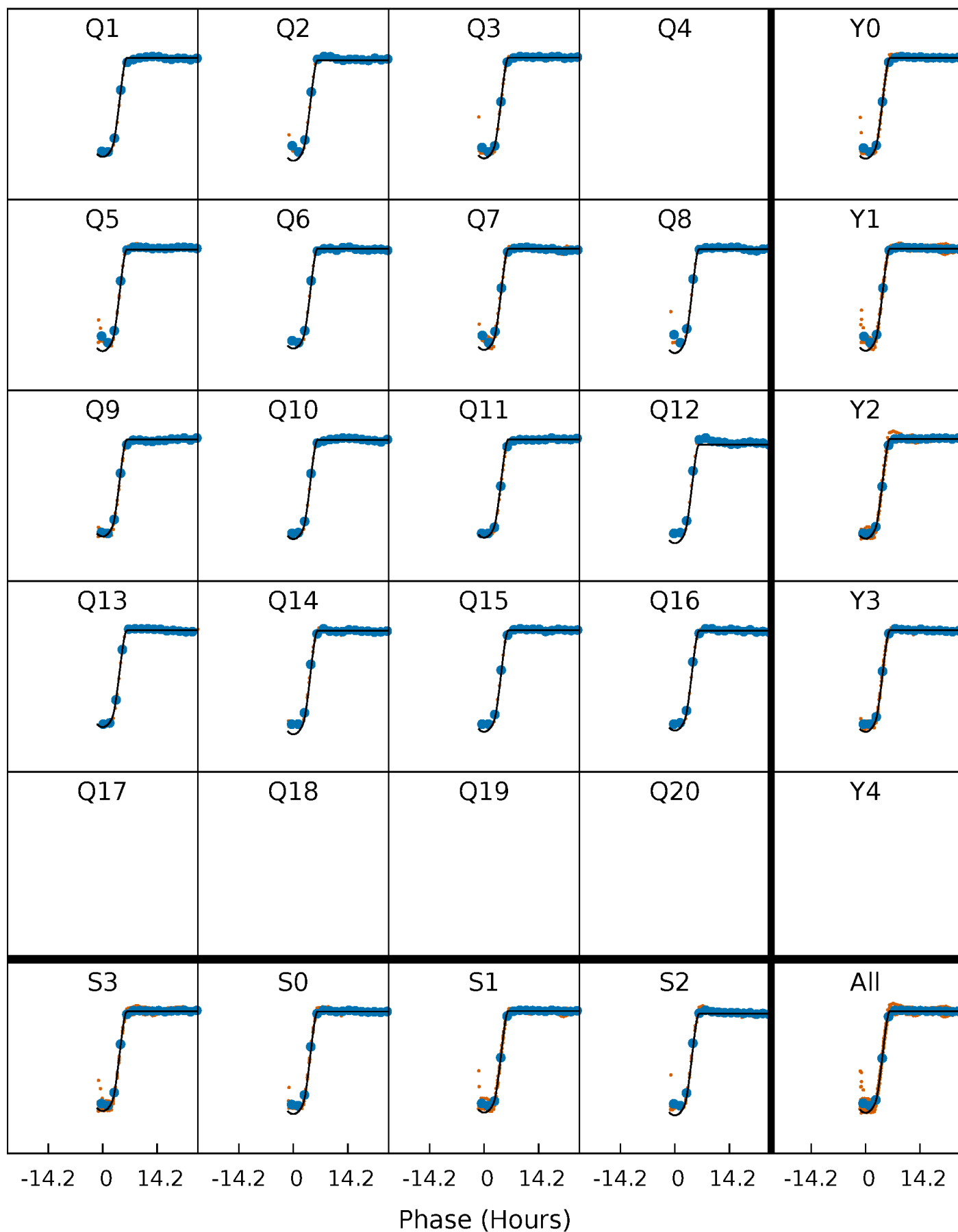
PDC Quarter-Phased Transit Curves

TCE 008430105-02 P= 63.327378 Days $T_0=144.266903$ (BKJD)



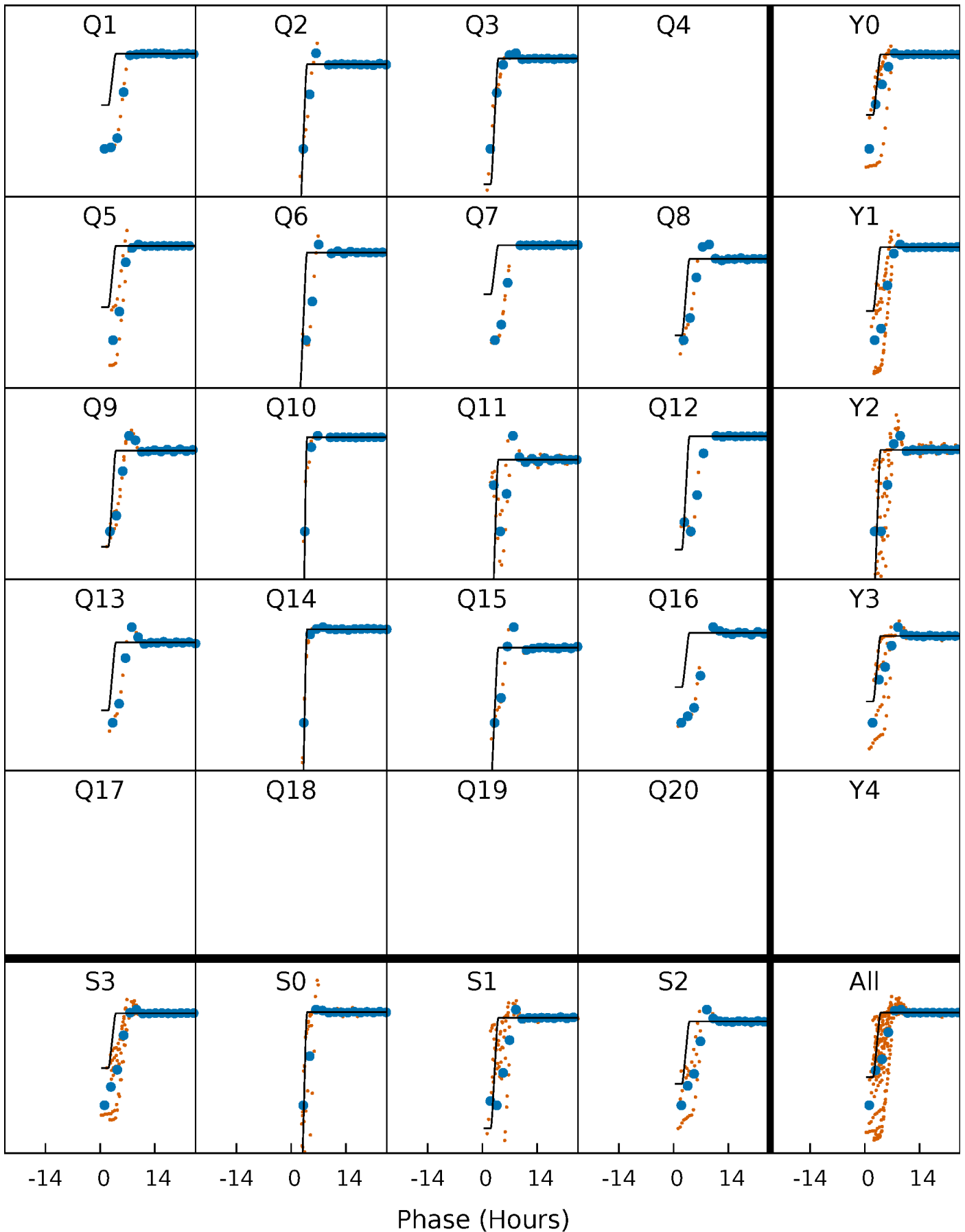
DV Quarter-Phased Transit Curves

TCE 008430105-02 P= 63.327378 Days $T_0=144.266903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

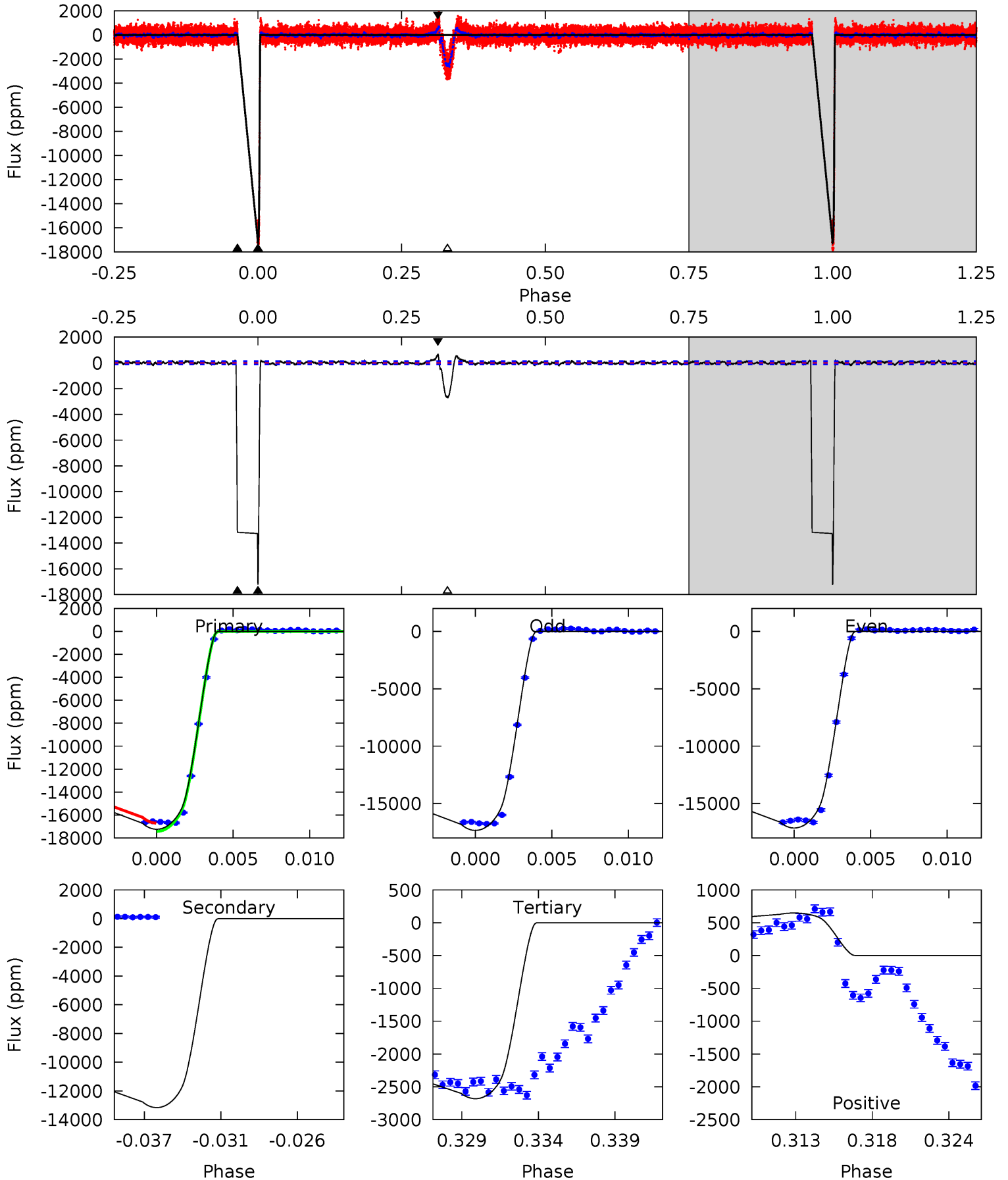
TCE 008430105-02 P= 63.325699 Days $T_0=144.209137$ (BKJD)



DV Model-Shift Uniqueness Test

008430105-02, P = 63.327378 Days, E = 80.939525 Days

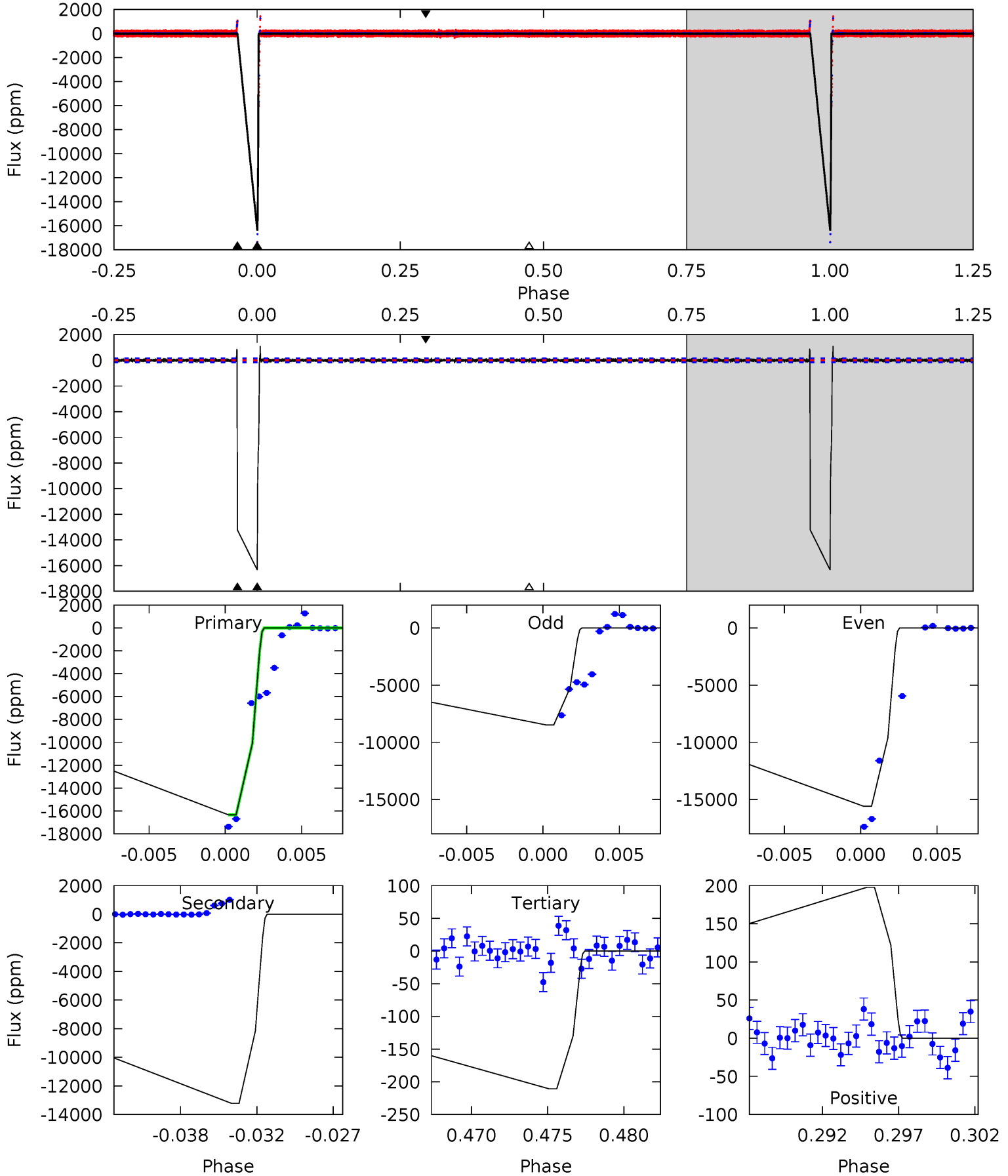
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
762.1	582.0	118.5	28.7	5.15	2.79	12.4	643.5	733.4	463.5	553.4	4.60	0.99	0.04	13.9



Alt Model-Shift Uniqueness Test

008430105-02, P = 63.325699 Days, E = 80.883438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
544.9	440.9	7.03	6.59	5.14	2.78	1.42	537.9	538.3	433.8	434.3	133.7	1.24	0.06	0



Stellar Parameters For KIC 008430105

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4919^{+74}_{-52}	$2.979^{+0.140}_{-0.140}$	$-0.380^{+0.150}_{-0.100}$	$5.198^{+1.526}_{-0.822}$	$0.938^{+0.352}_{-0.059}$	$0.009^{+0.006}_{-0.004}$
	+2%/-1%	+5%/-5%	+39%/-26%	+29%/-16%	+38%/-6%	+60%/-43%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008430105-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13164 ± 23	$77.62^{+13.20}_{-6.98}$	1249^{+79}_{-61}	4593^{+64}_{-49}	115^{+26}_{-24}
Alt.	-13217 ± 30	$54.91^{+9.31}_{-5.06}$	1251^{+74}_{-59}	5317^{+90}_{-69}	230^{+46}_{-45}

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

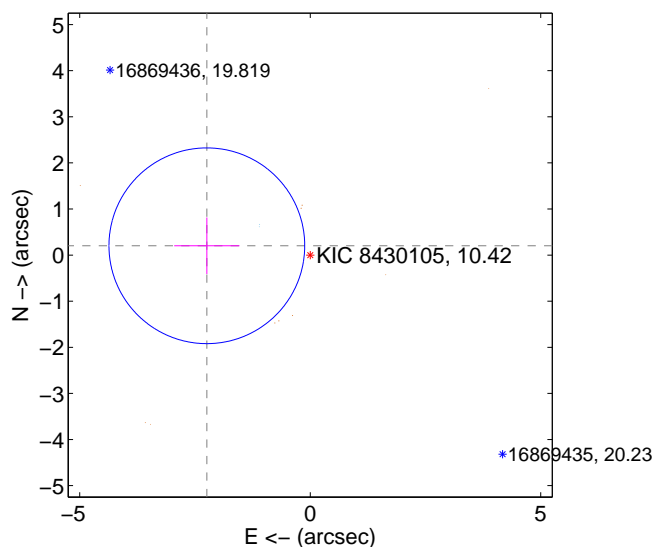
Supplemental centroid analysis for 008430105-02. **Kepler magnitude: 10.42.** Transit SNR 256.08

There are 2 quarters with good PRF difference image offsets

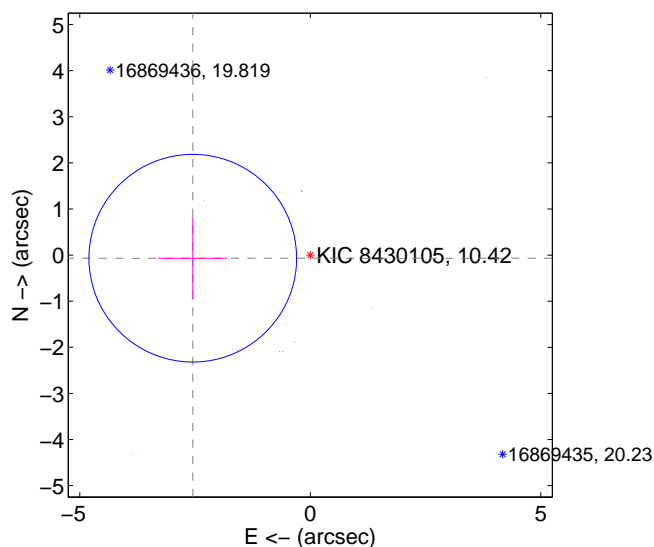
The direct PRF centroid is offset from the target star catalog position by about 1.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.252 \pm 0.708	3.18	2.243 \pm 0.708	0.202 \pm 0.614
PRF-fit source offset from KIC position	2.550 \pm 0.751	3.40	2.549 \pm 0.751	-0.067 \pm 0.896
photometric centroid source offset	0.61 \pm 0.01	90.29	0.57 \pm 0.01	0.19 \pm 0.01

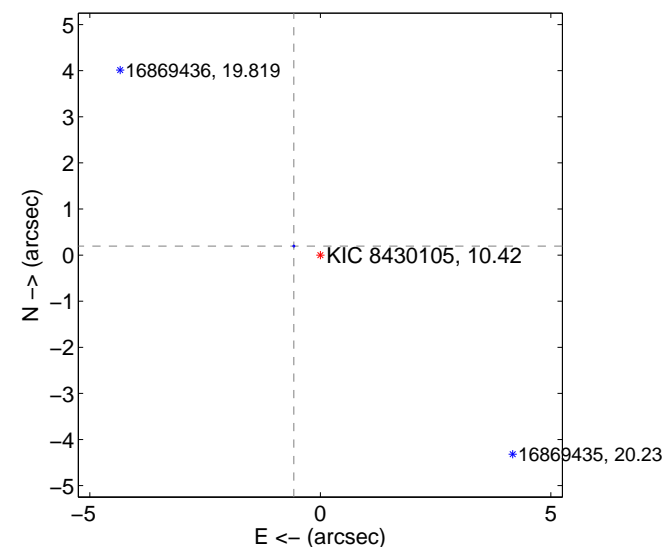
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

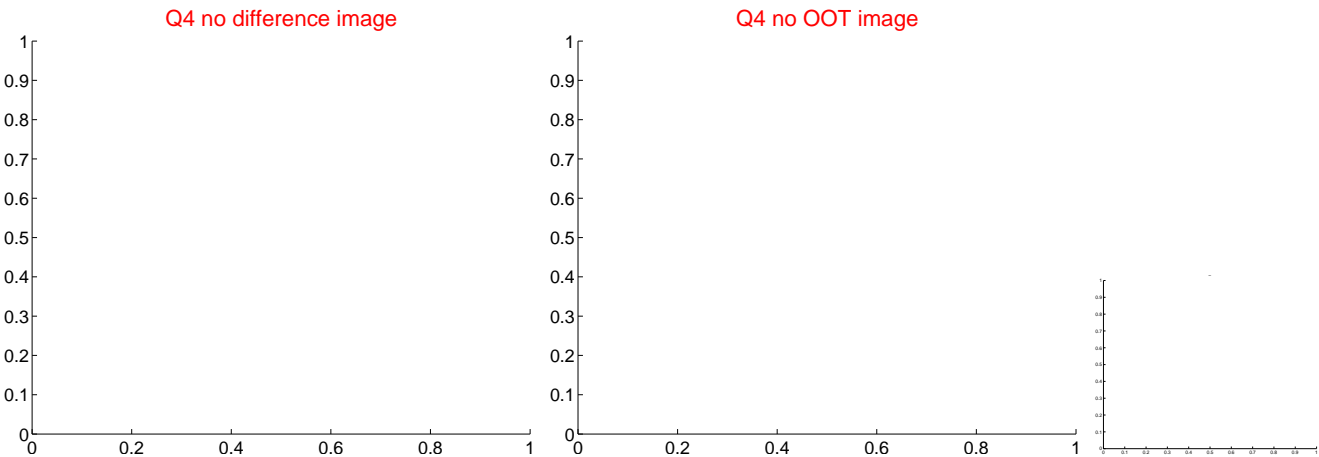
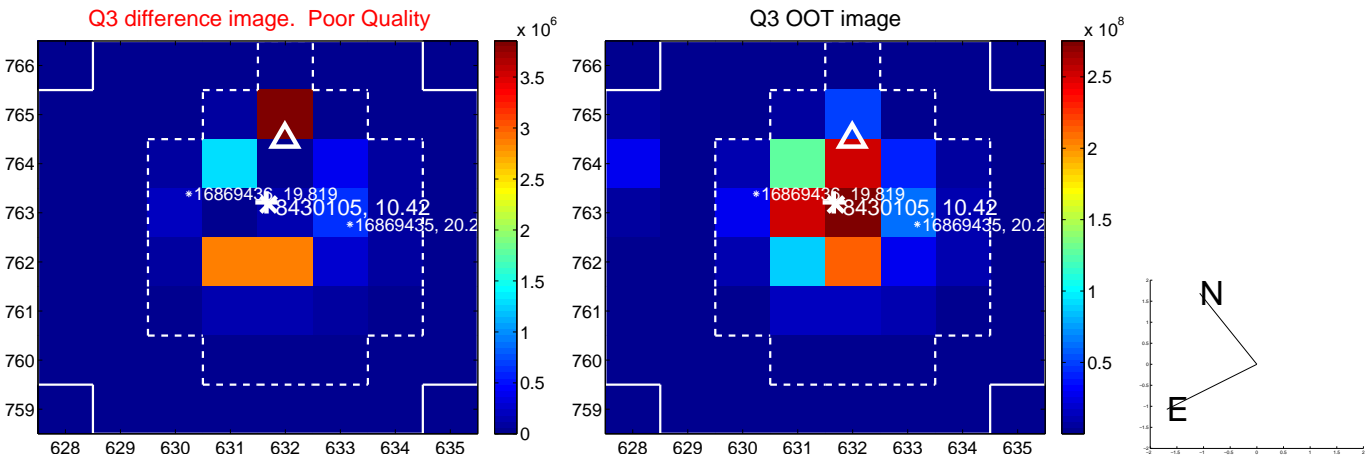
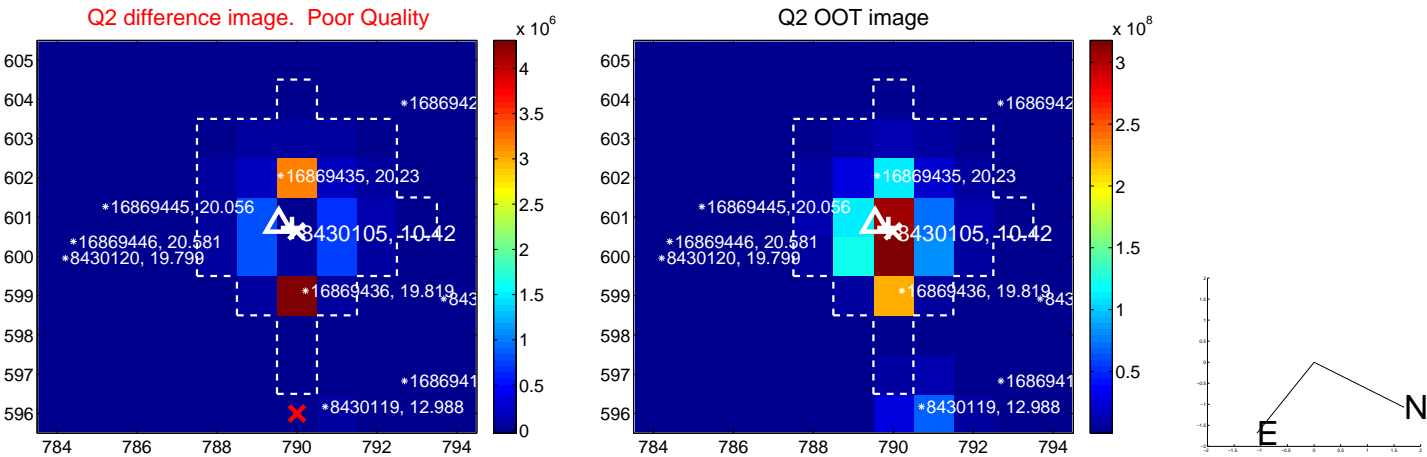
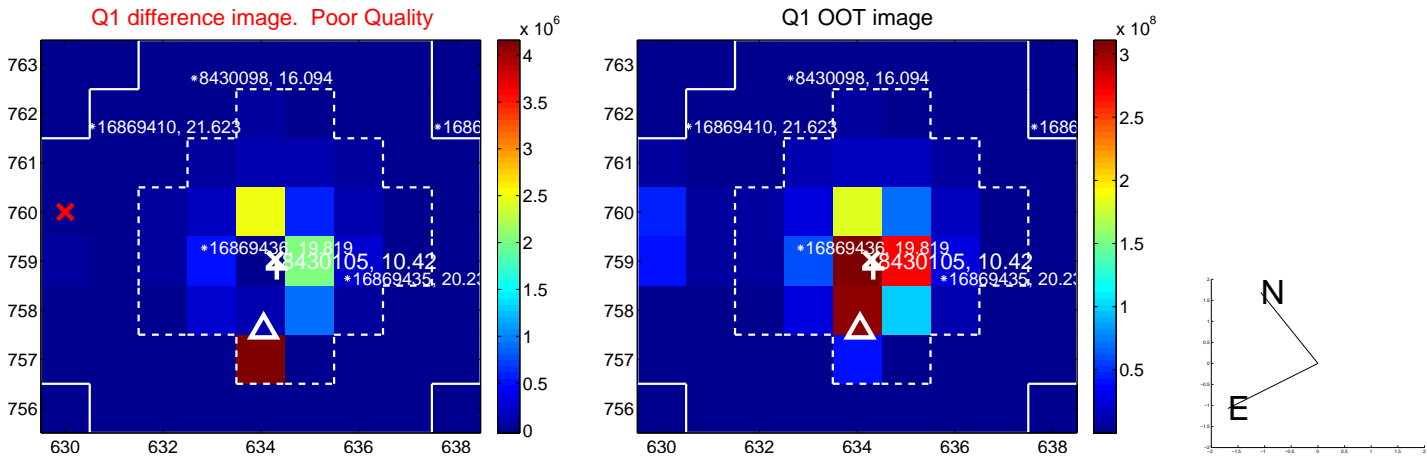


offset from photometric centroids

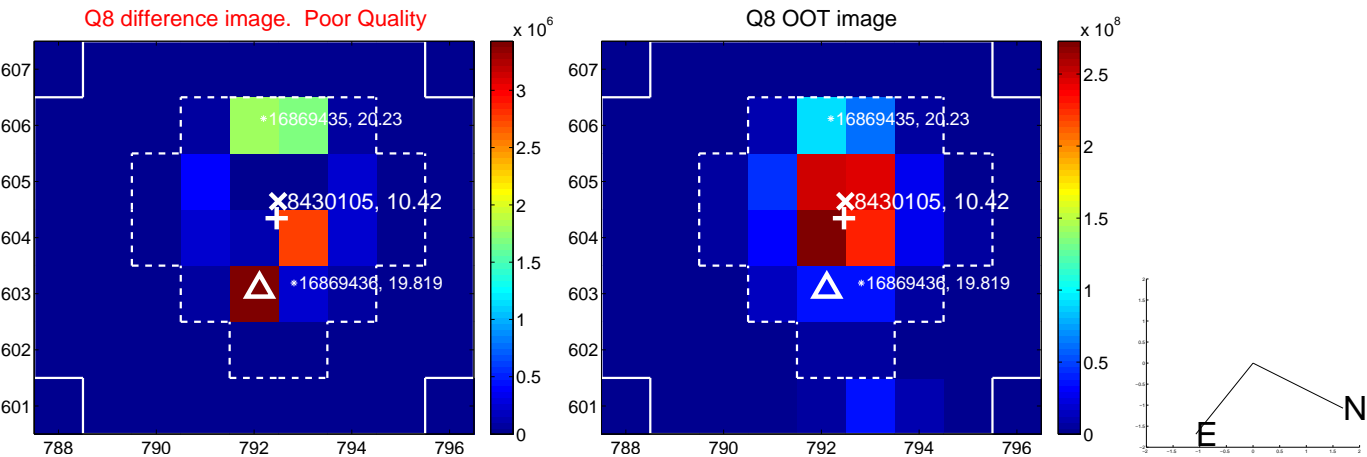
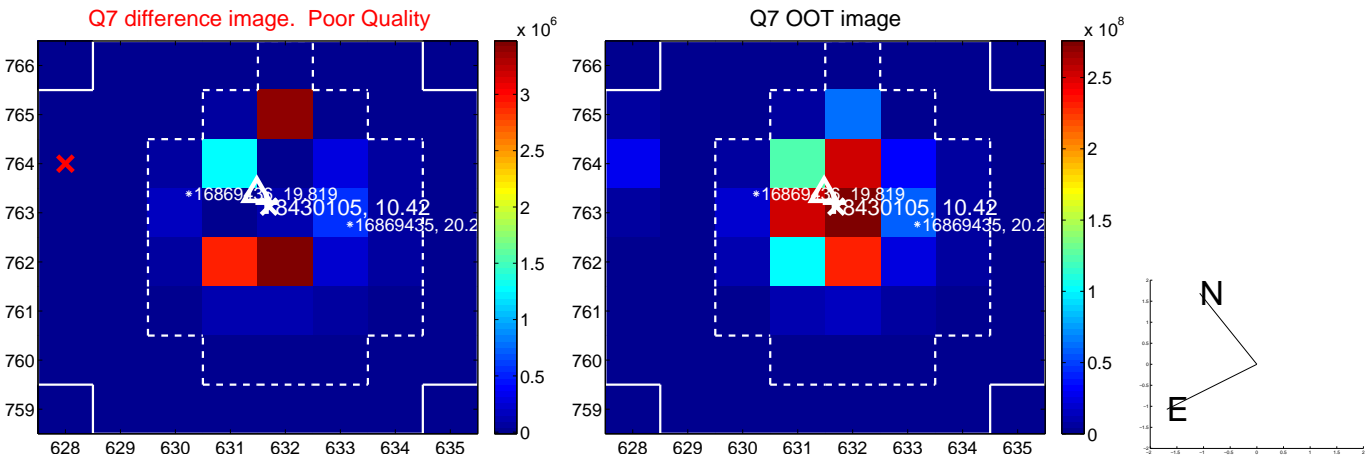
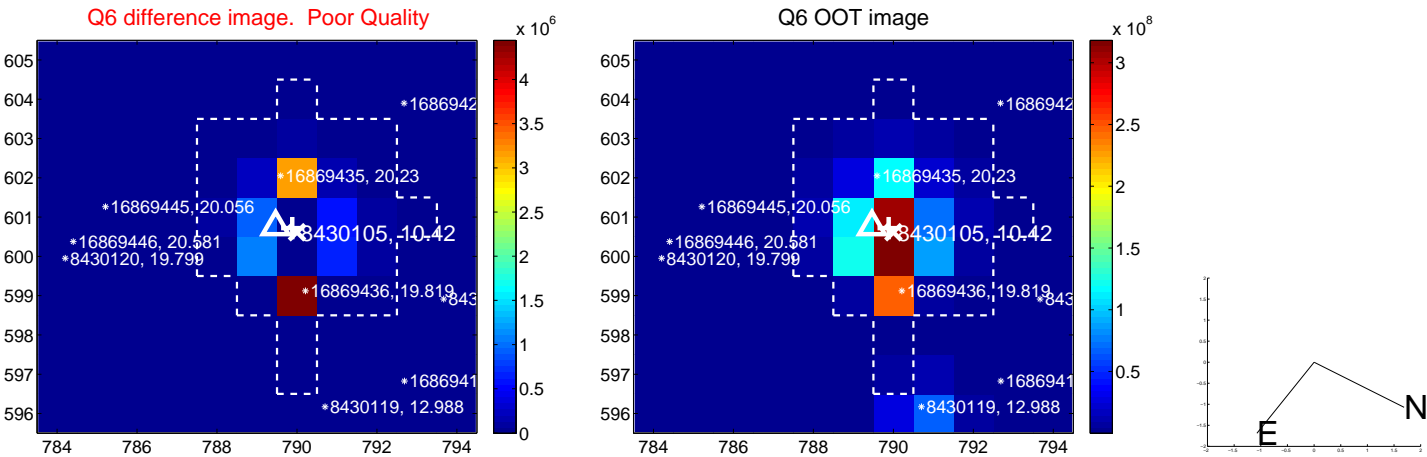
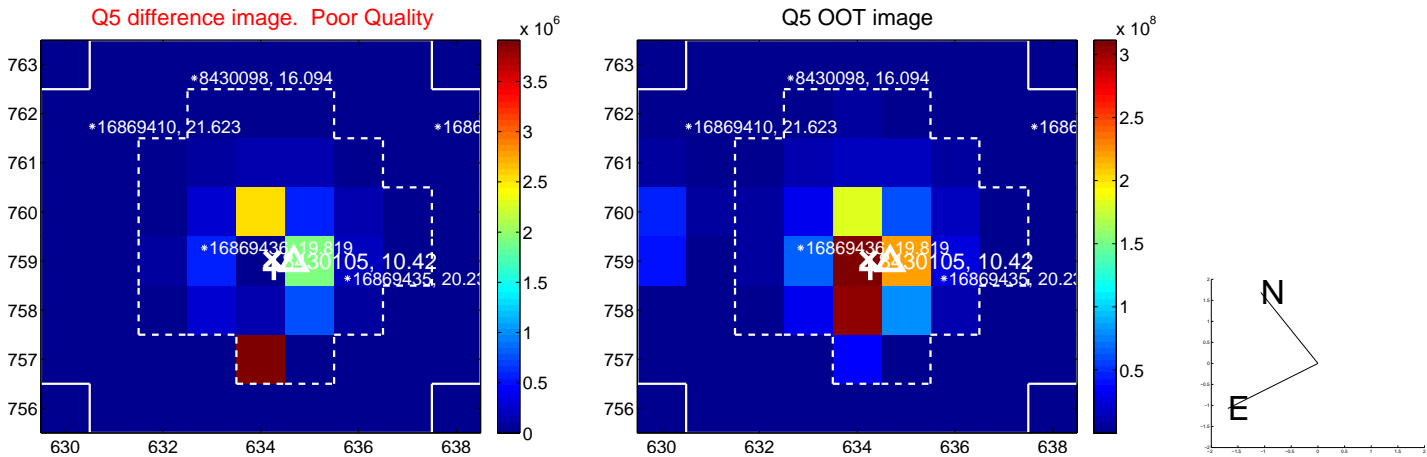


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

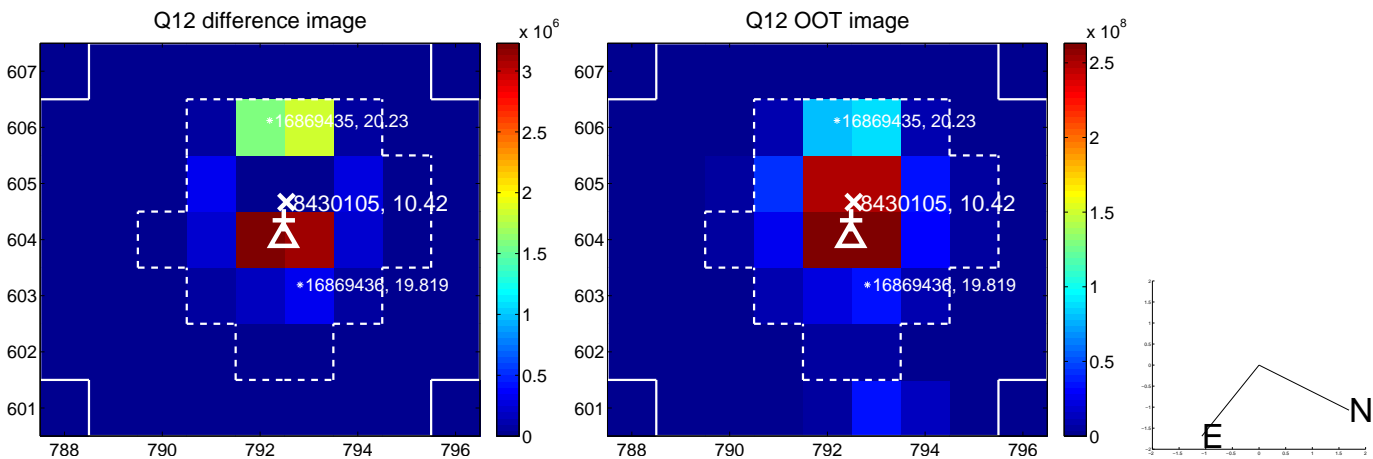
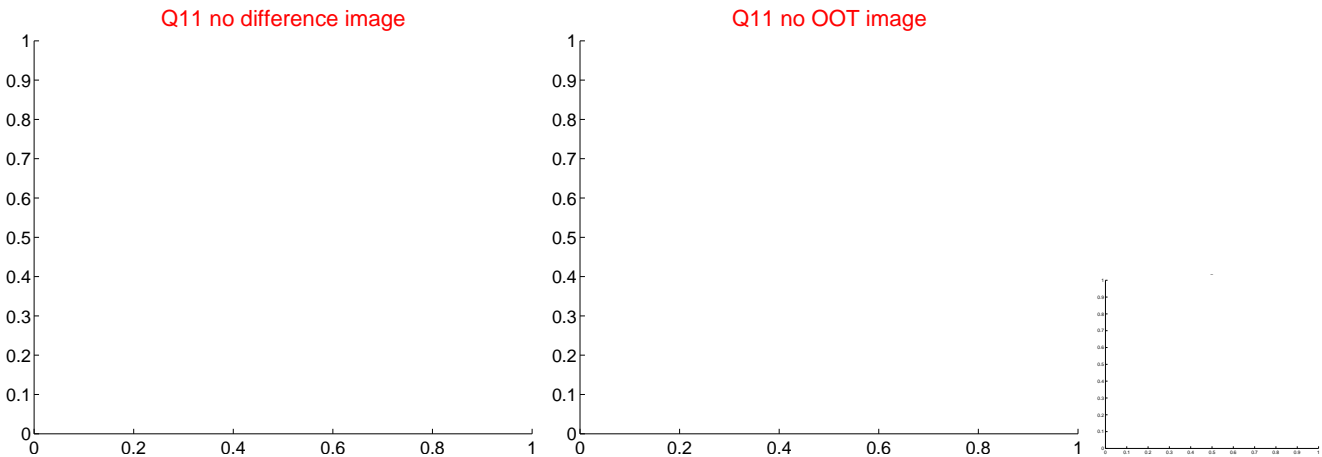
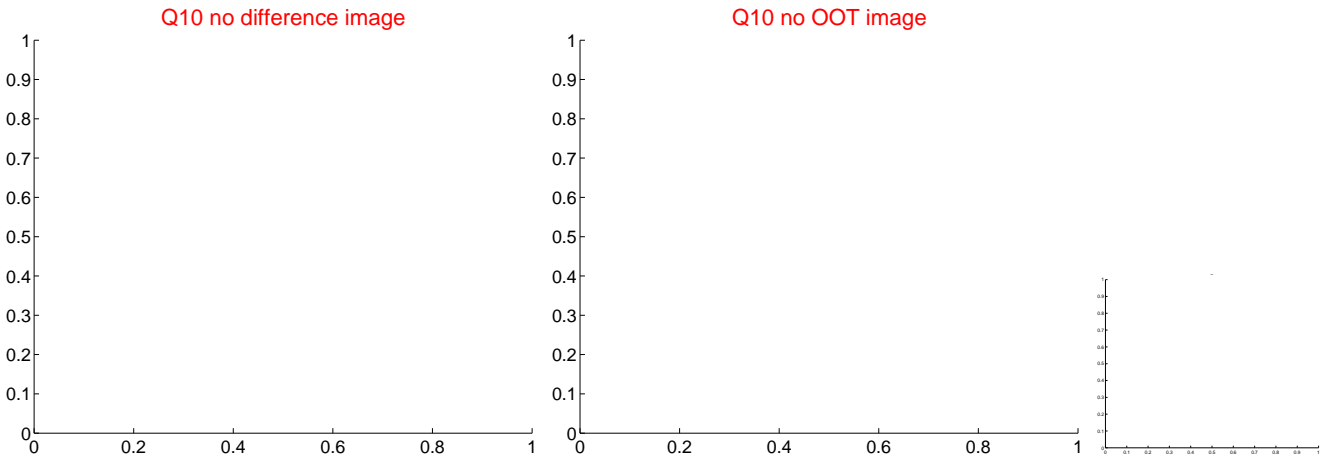
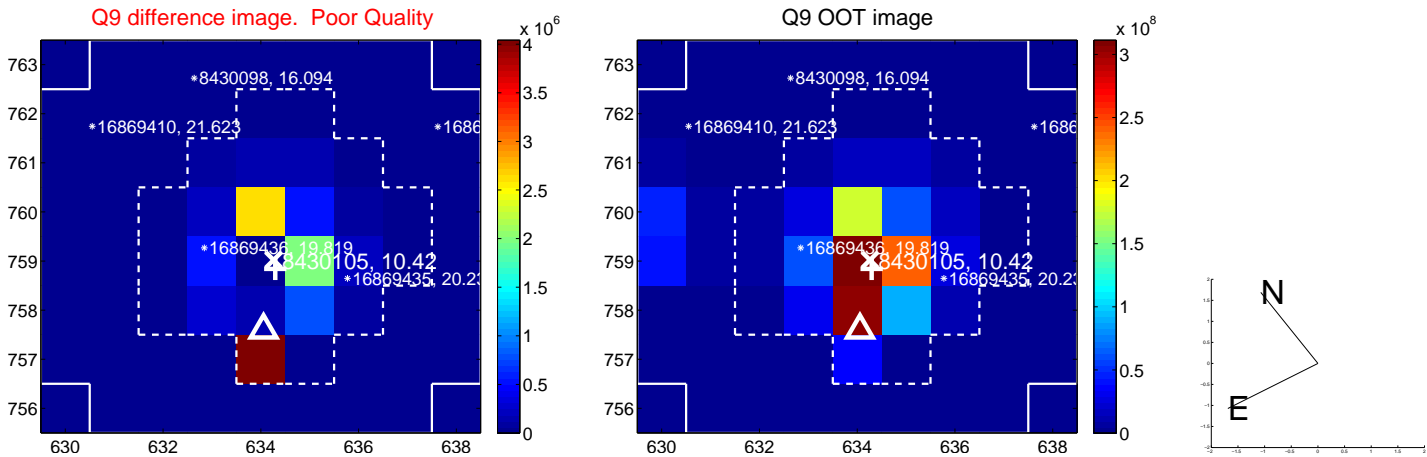
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



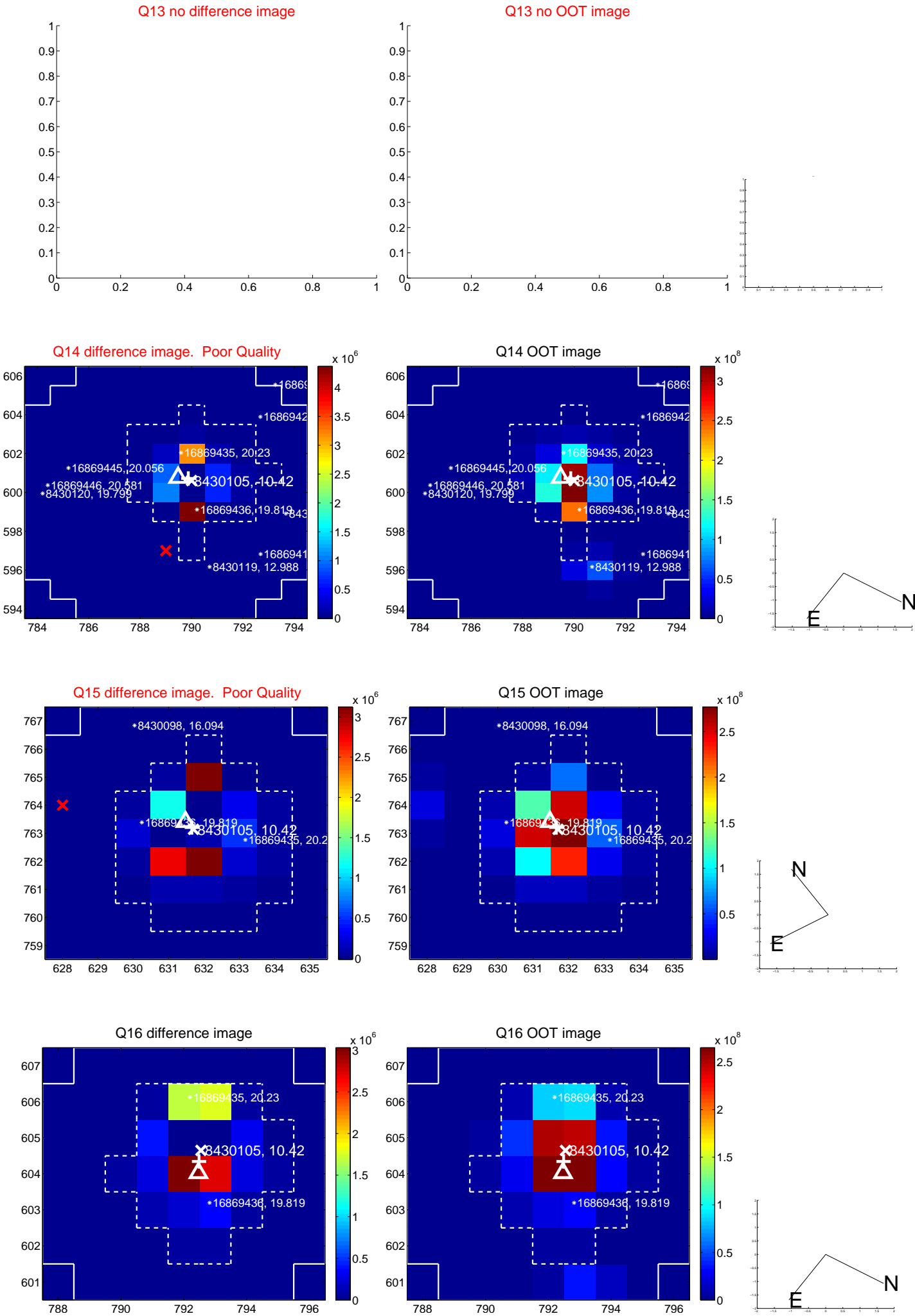
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

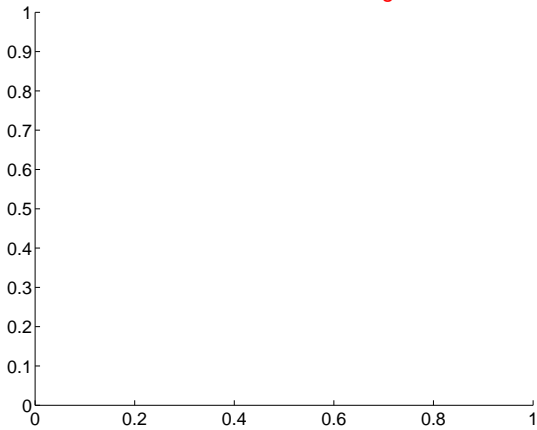


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

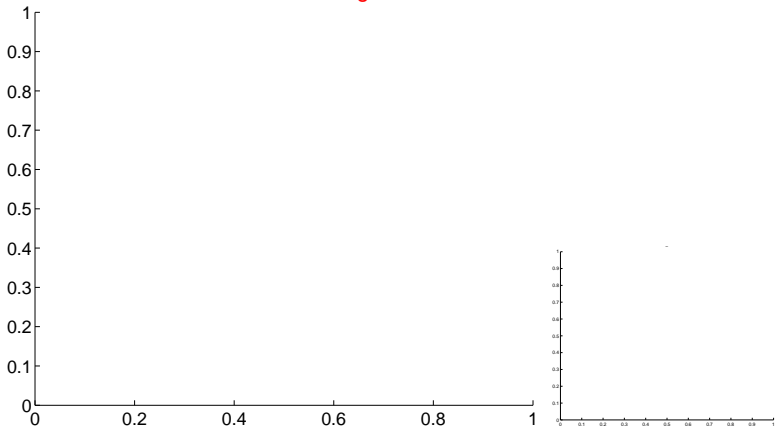


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

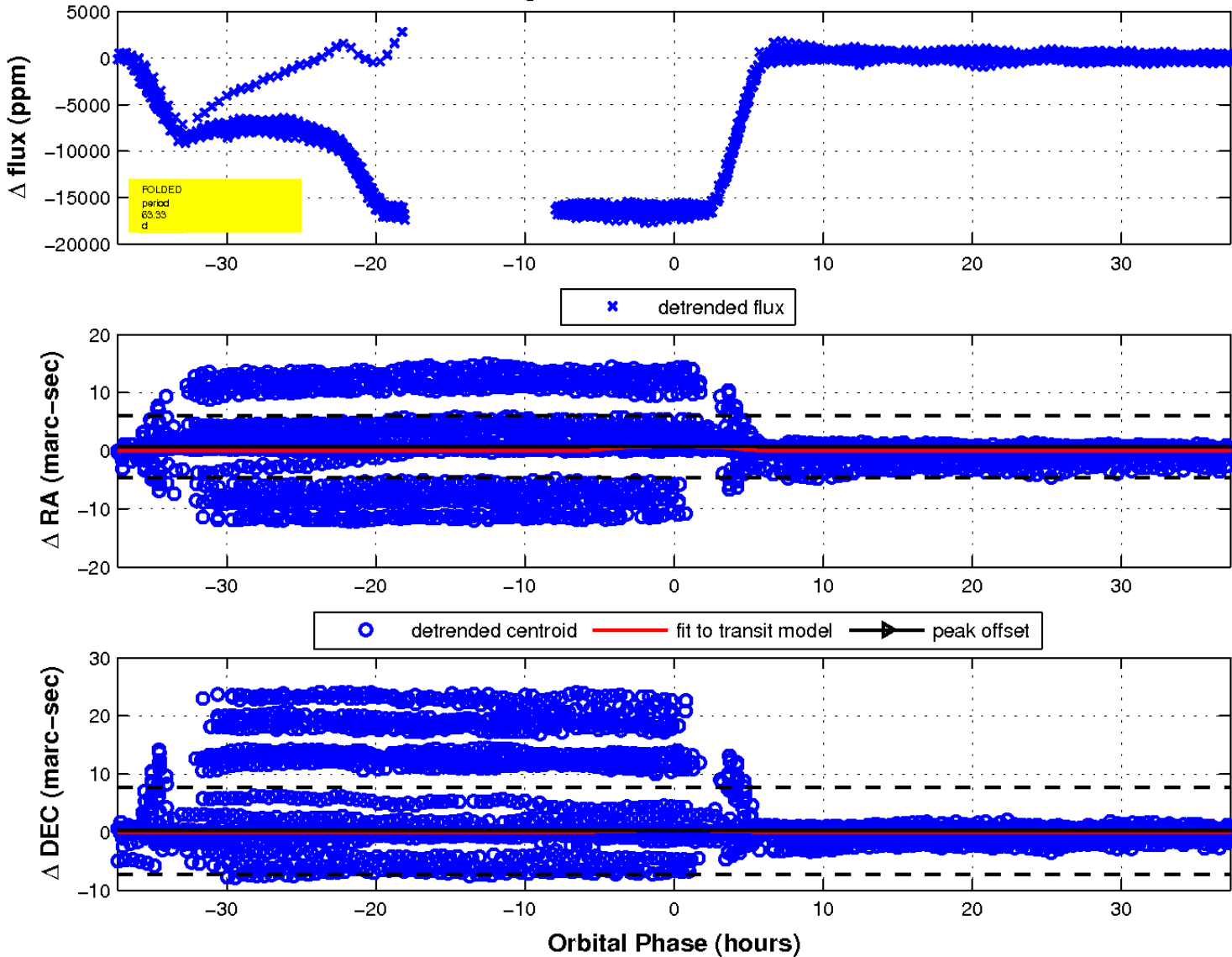
Q17 no difference image



Q17 no OOT image

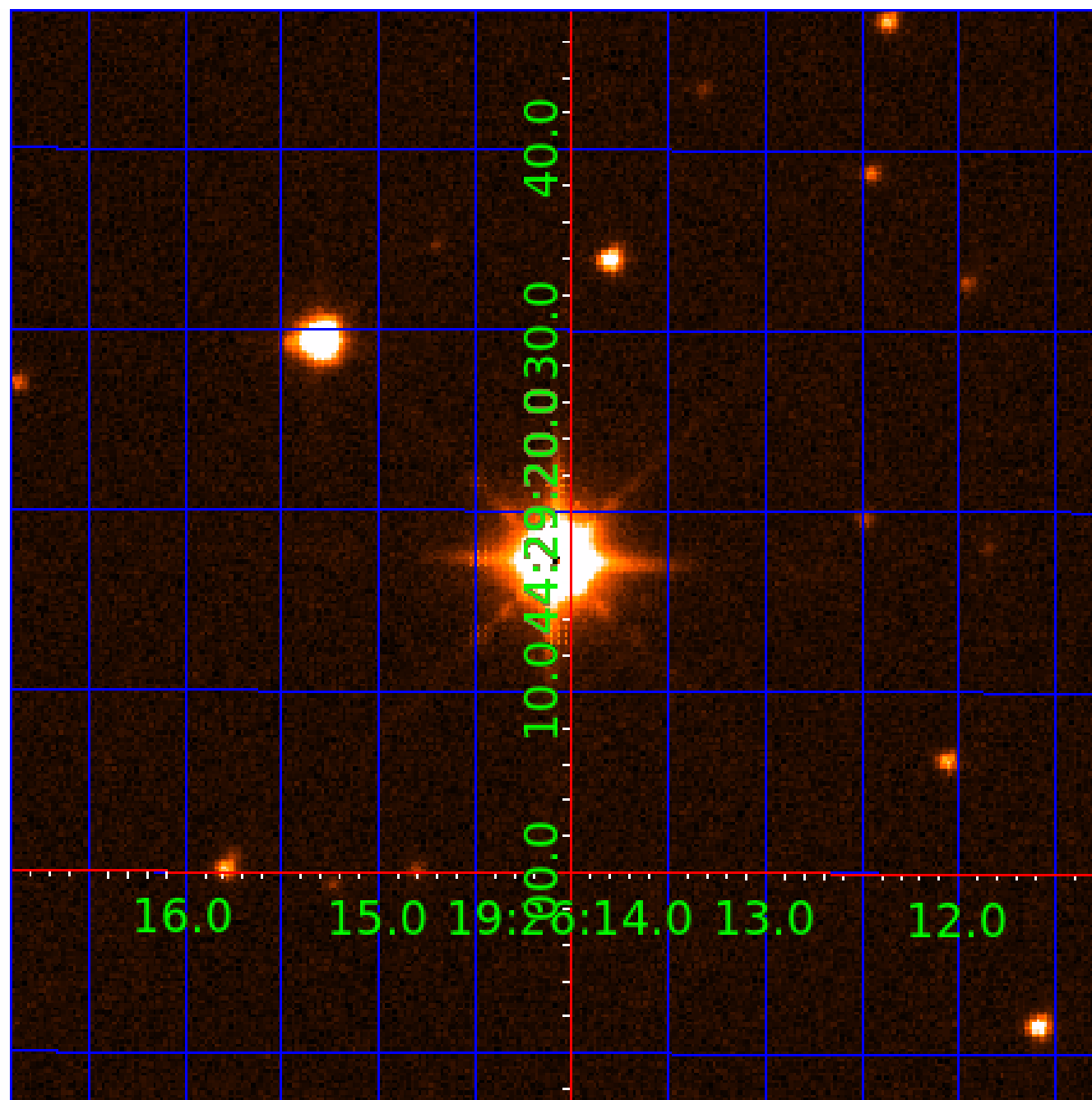


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008430105

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})
008430105-01	OBS	No	63.327478	143.104386	9178.2	17.400	110.6	144.6	5.20	4919	54.01	152.82
008430105-02	OBS	No	63.327378	144.266903	17892.0	12.447	170.5	256.1	5.20	4919	77.54	152.82
008430105-03	OBS	3873.01	63.327145	165.197824	12210.1	45.456	58.9	179.0	5.20	4919	55.99	152.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430105-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
008430105-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008430105-03	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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.

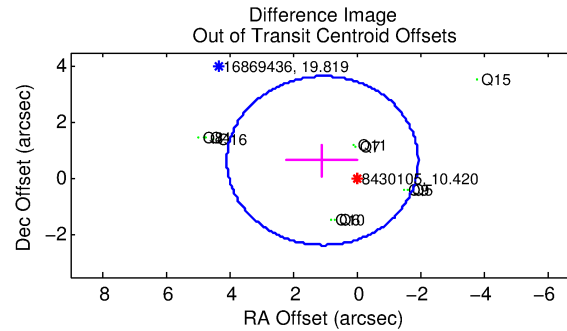
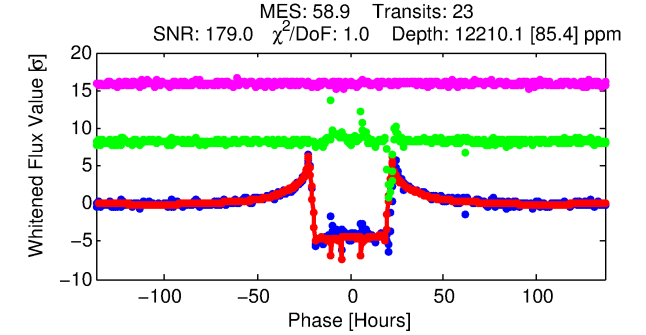
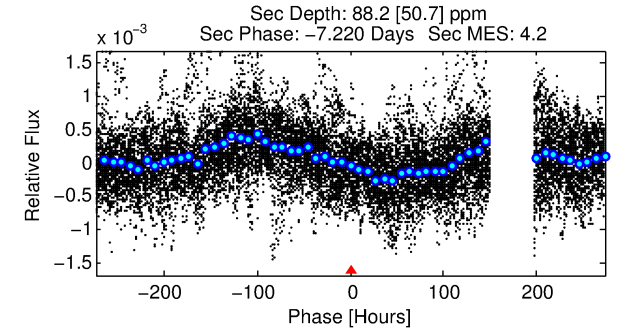
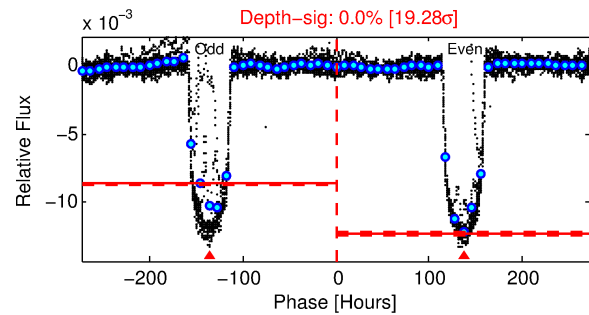
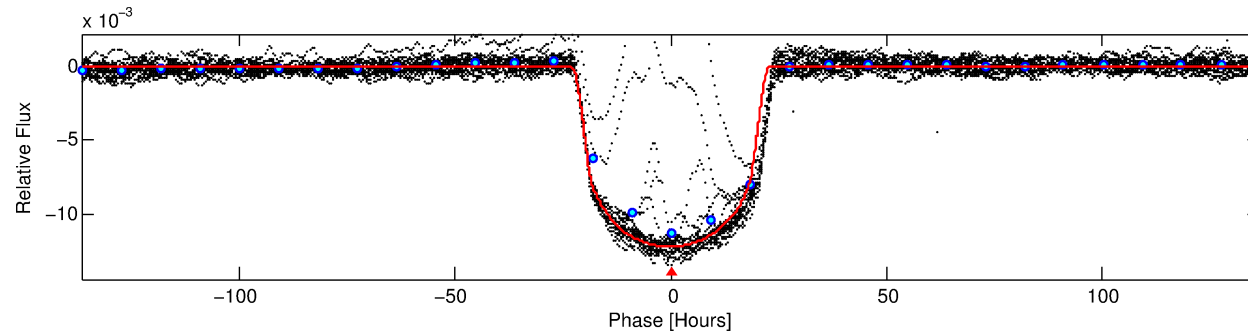
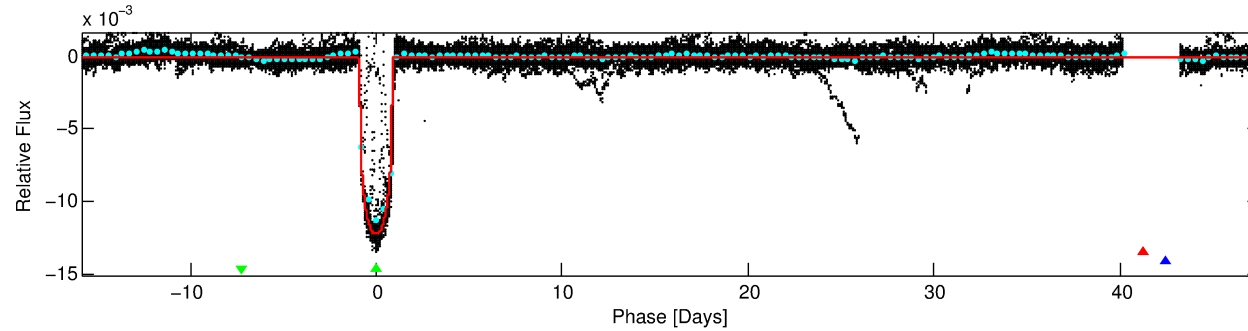
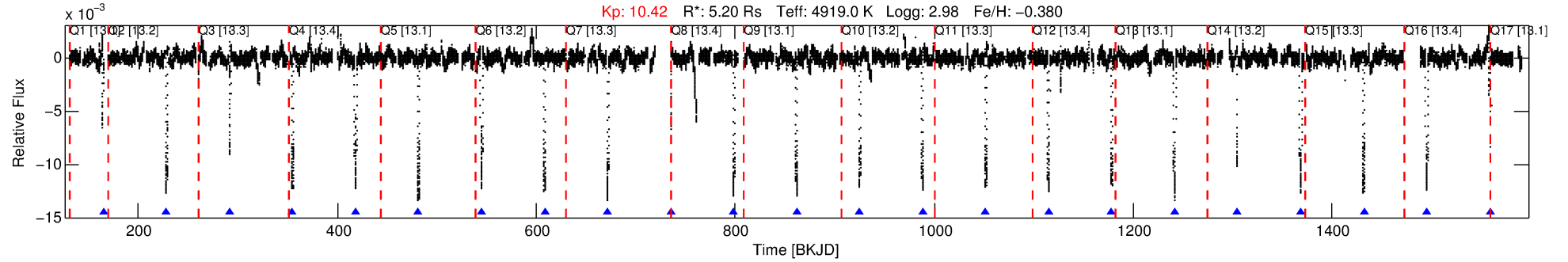
Ephemeris Match Information For 008430105-03

No Significant Match Found

DV One-Page Summary

KIC: 8430105 Candidate: 3 of 3 Period: 63.327 d

KOI: K03873.01 Corr: 0.978



DV Fit Results:

Period = 63.32714 [0.00016] d
Epoch = 165.1978 [0.0083] BKJD
 R_p/R^* = 0.0987 [0.0003]
 a/R^* = 11.56 [0.10]
 b = 0.18 [0.05]
 S_{eff} = 152.82 [45.36]
 T_{eq} = 897 [67] K
 R_p = 55.99 [16.44] R_E
 a = 0.3045 [0.0680] AU
 A_g = 1.44 [0.93] [0.47 σ]
 T_{eff} = 1517 [219] K [2.71 σ]

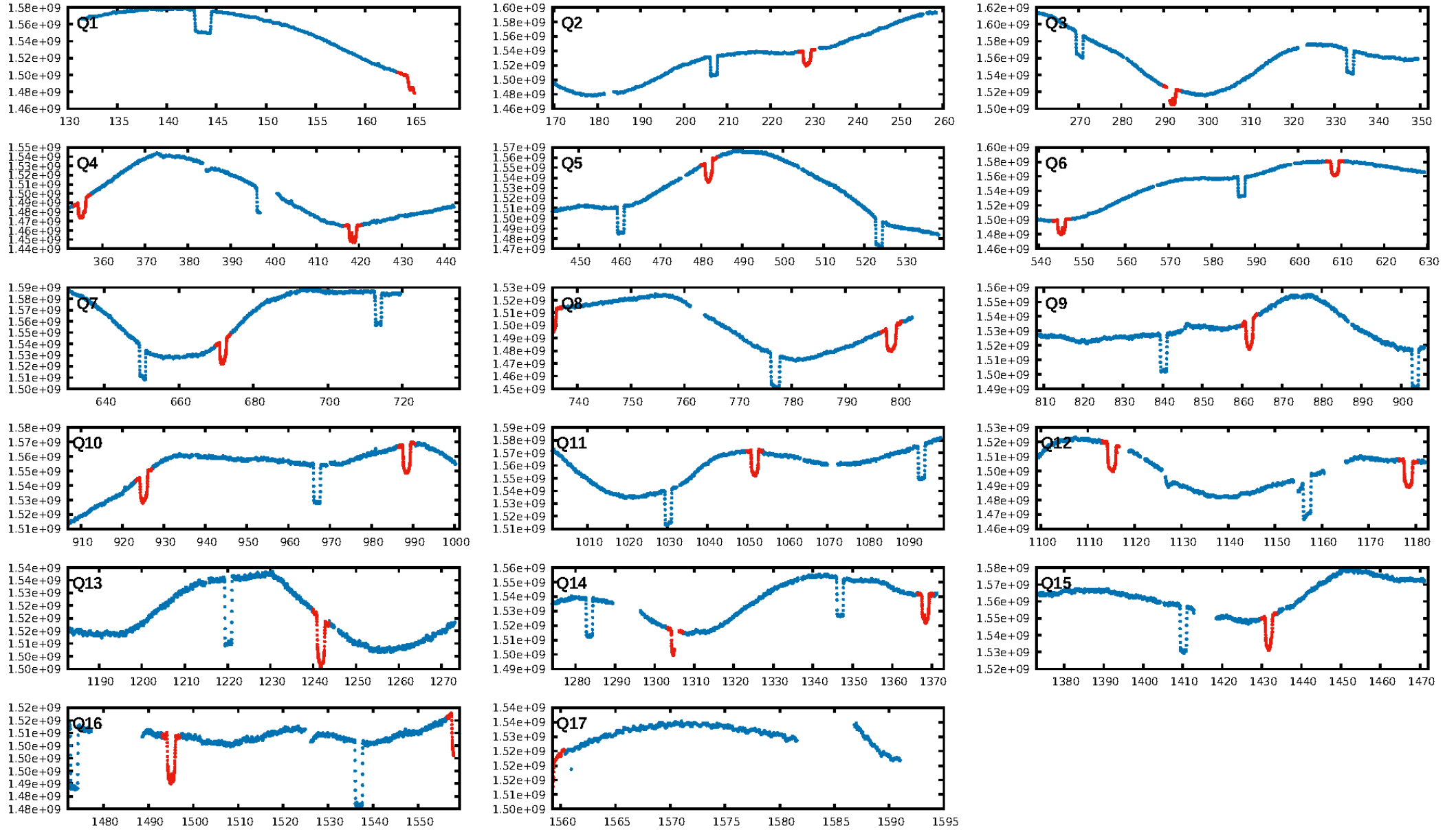
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: N/A
Centroid-sig: 1.3%
Centroid-so: 0.680 arcsec [51.82 σ]
OotOffset-rm: 1.238 arcsec [1.24 σ]
KicOffset-rm: 1.544 arcsec [1.22 σ]
OotOffset-st: 2/3/3/2 [10]
KicOffset-st: 2/3/3/2 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 1.00 [10/10]

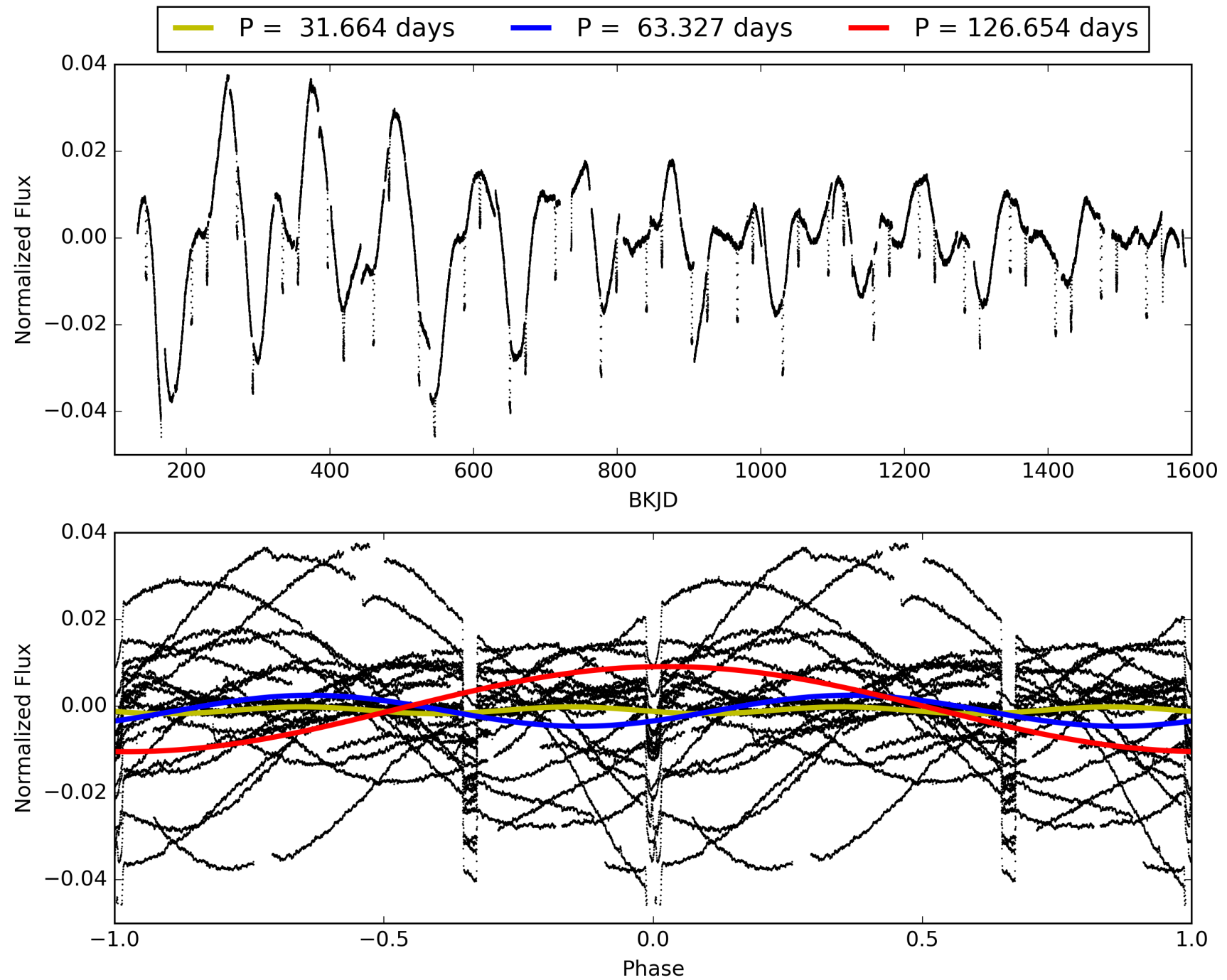
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 15:56:59 Z

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

TCE 008430105-03, PDC Light Curves

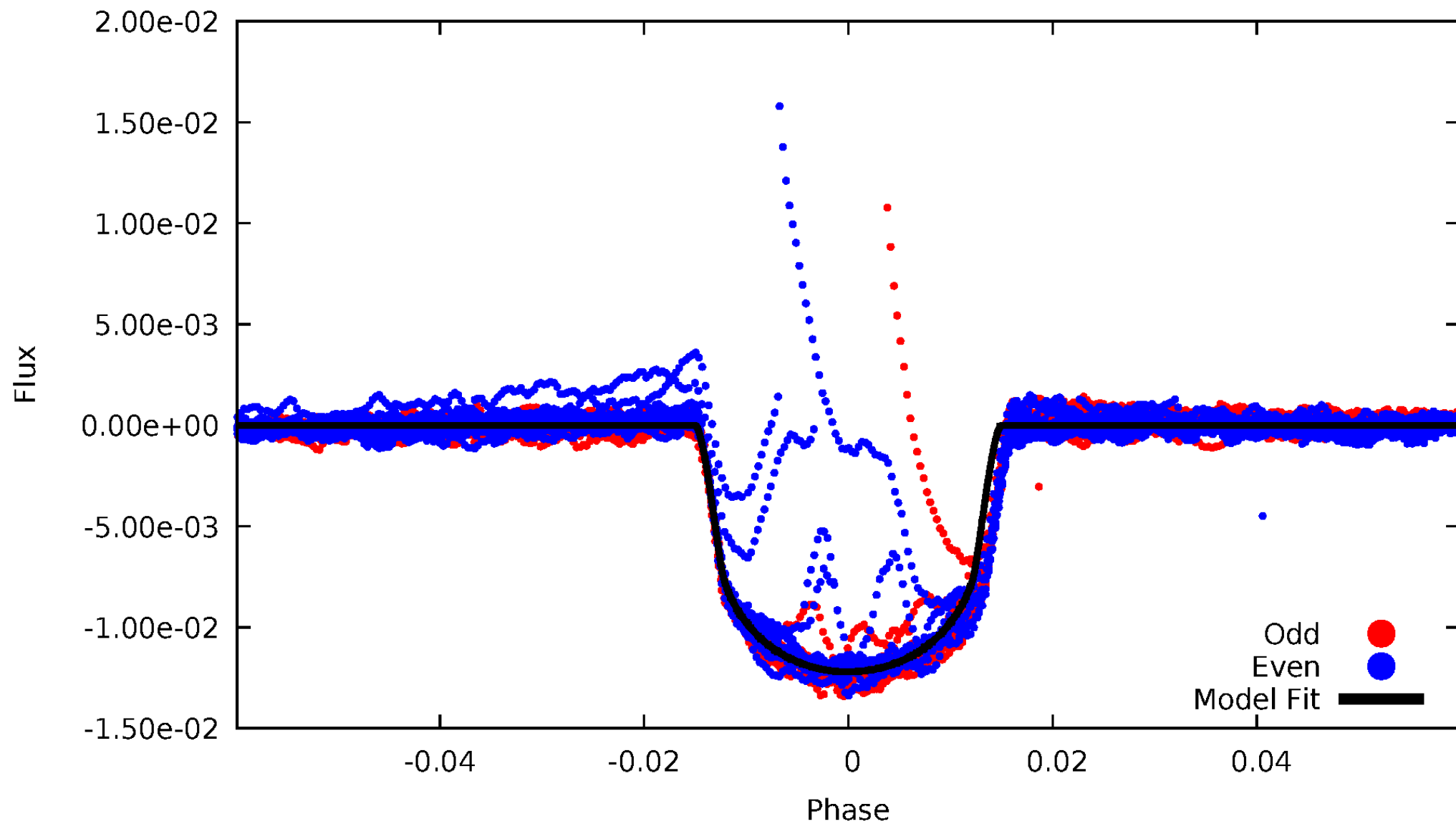


TCE 008430105-03



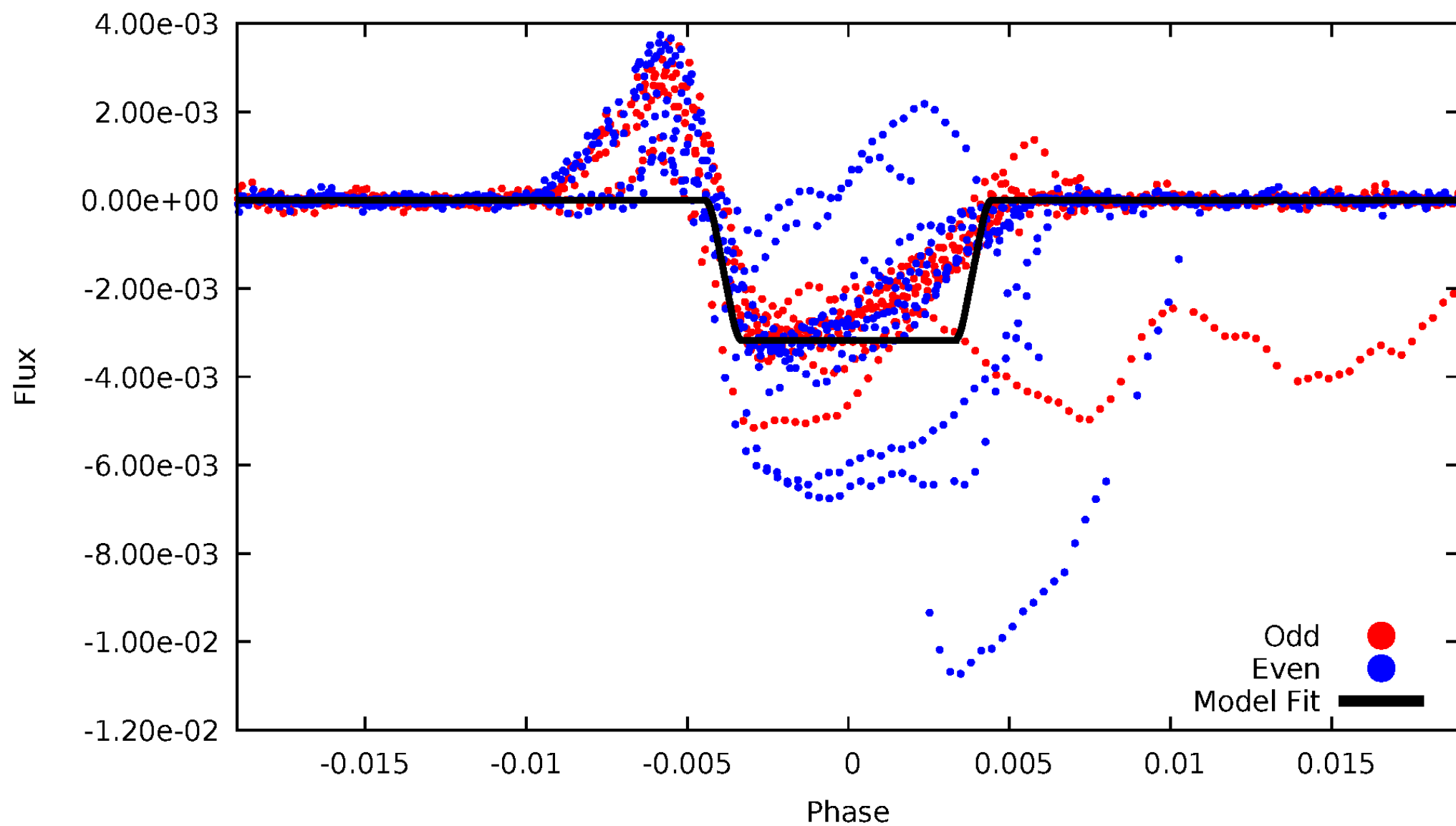
DV Odd/Even

TCE 008430105-03



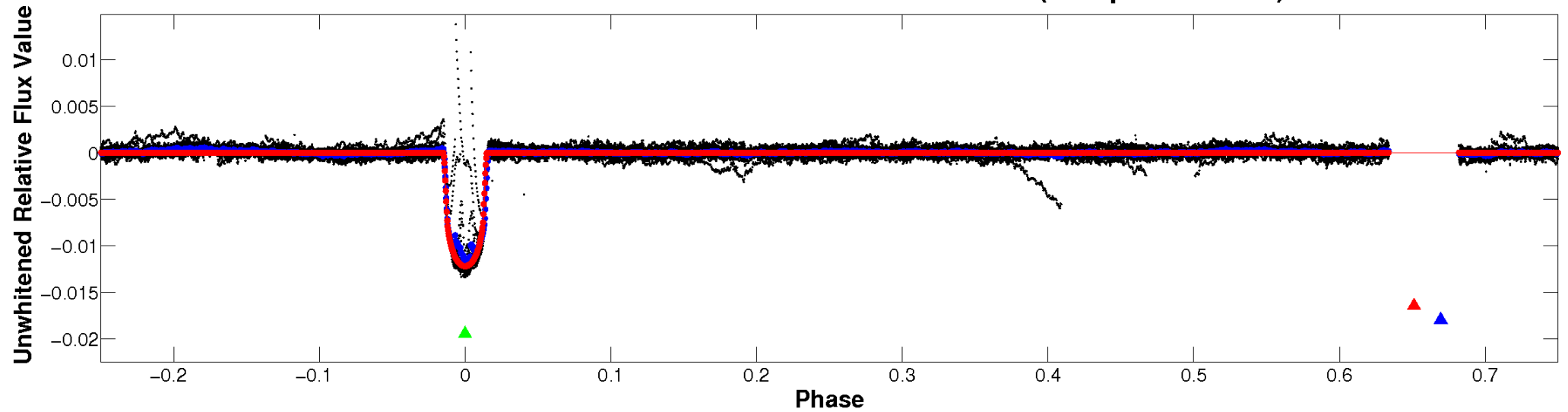
ALT Odd/Even

TCE 008430105-03

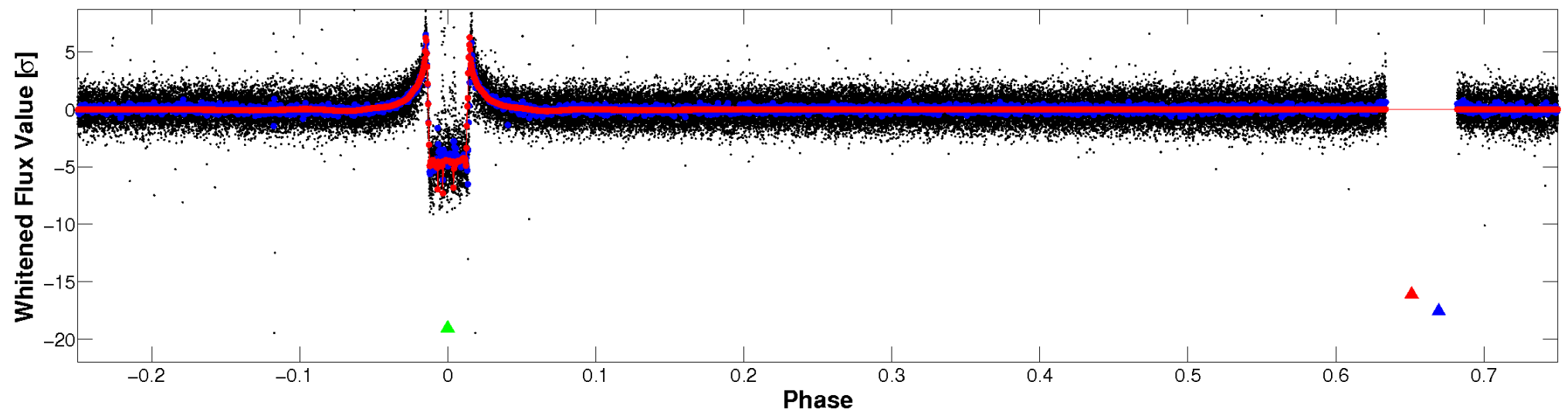


Non-Whitened Vs. Whitened Light Curve

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

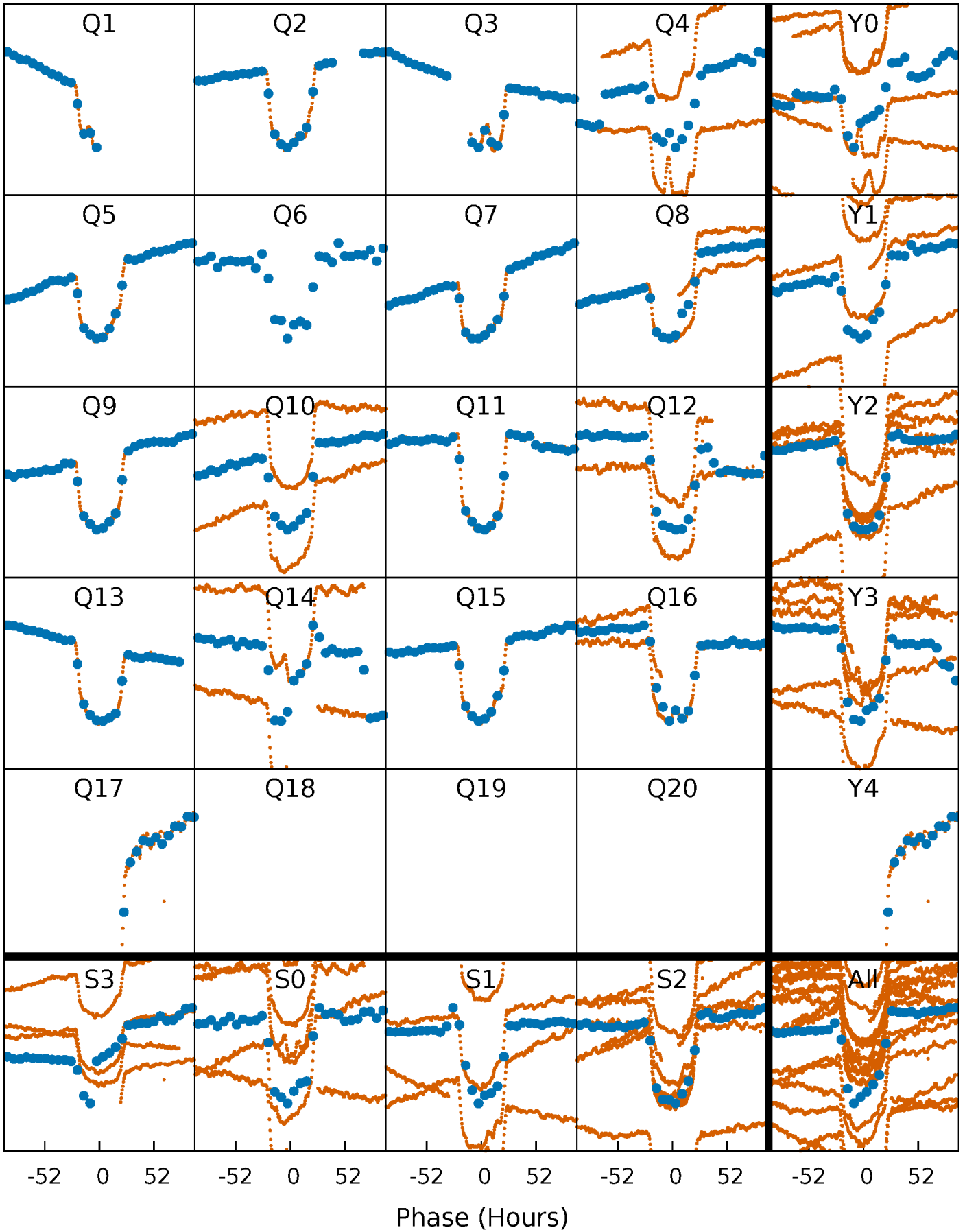


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



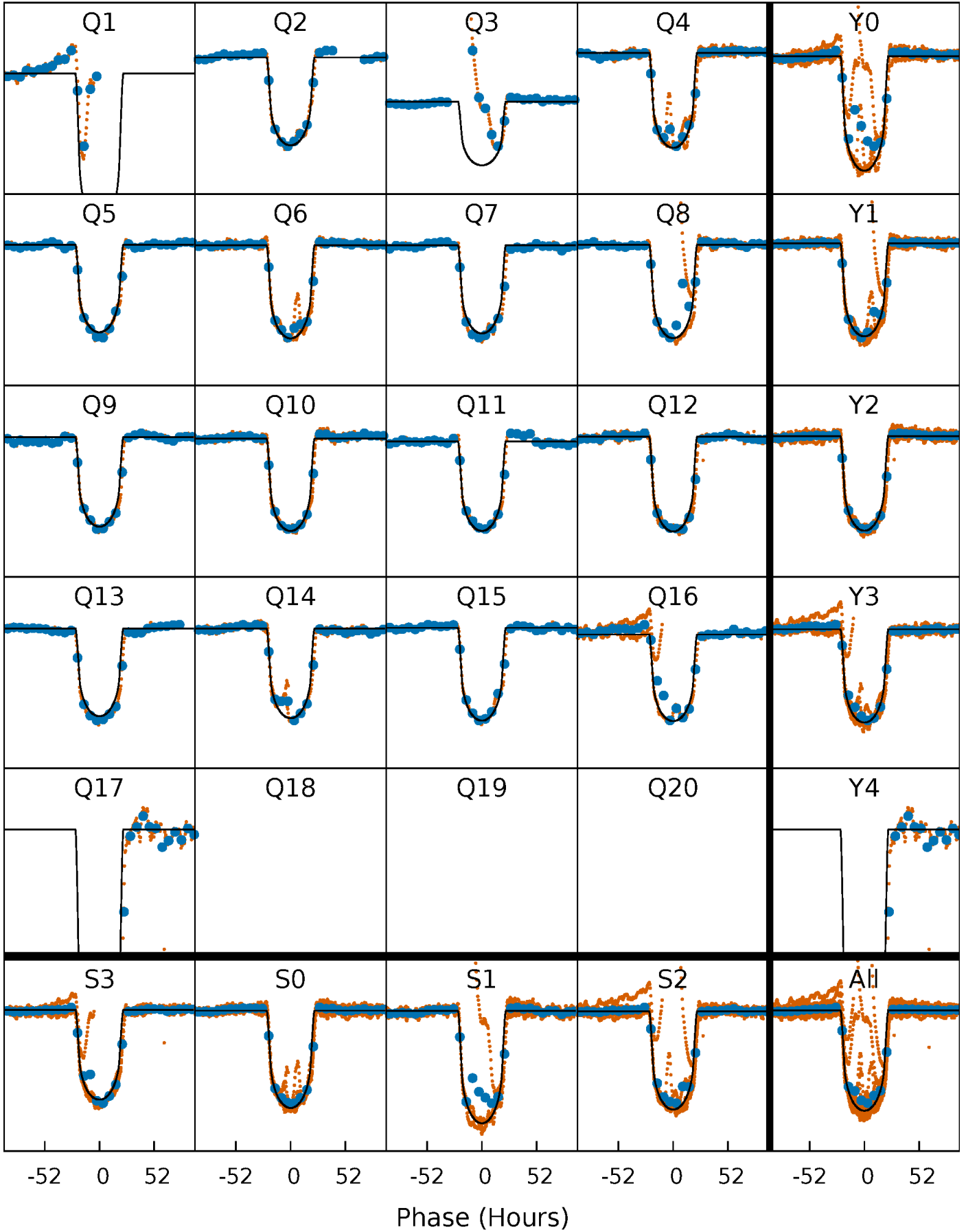
PDC Quarter-Phased Transit Curves

TCE 008430105-03 P= 63.327145 Days $T_0=165.197824$ (BKJD)



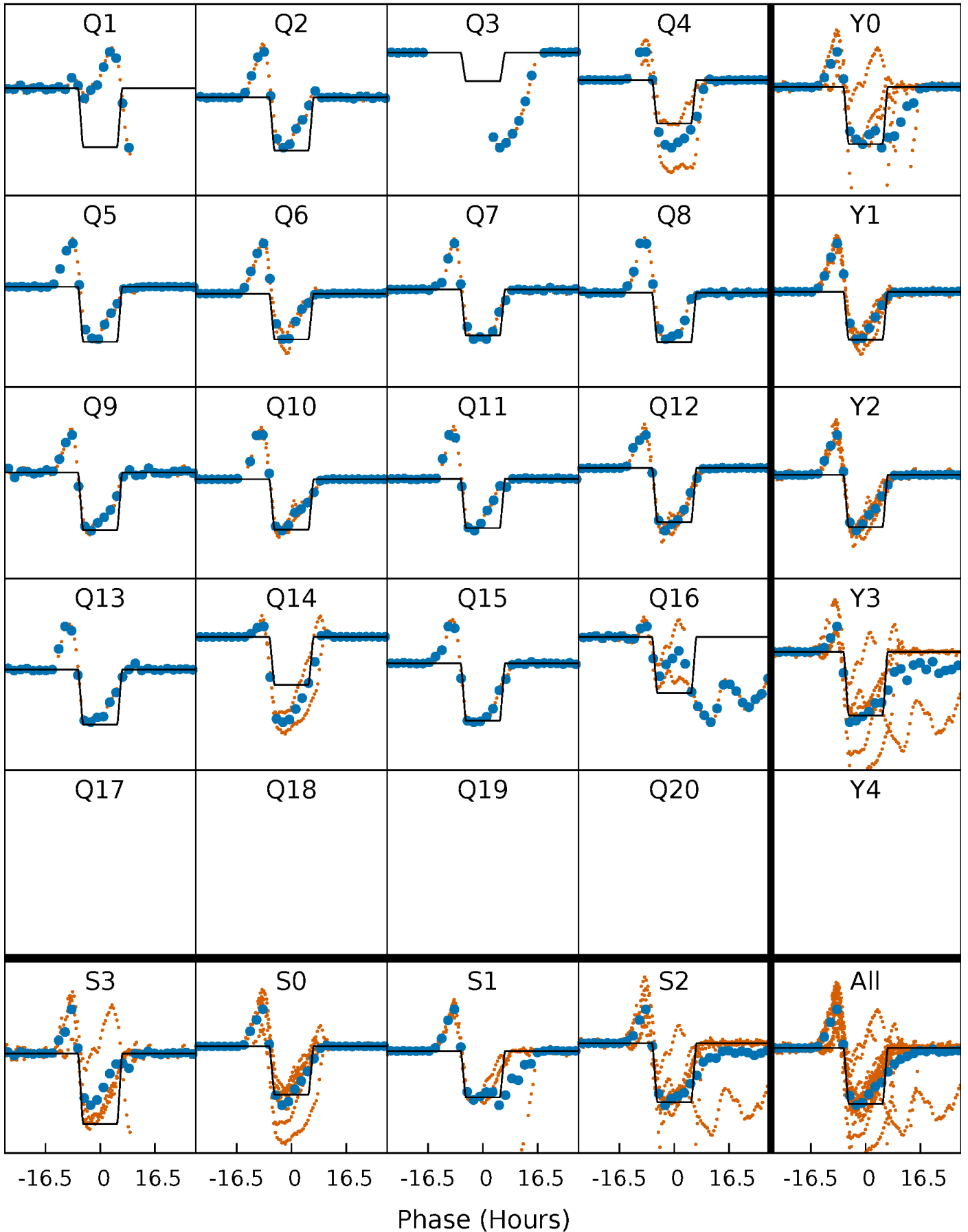
DV Quarter-Phased Transit Curves

TCE 008430105-03 P= 63.327145 Days $T_0=165.197824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

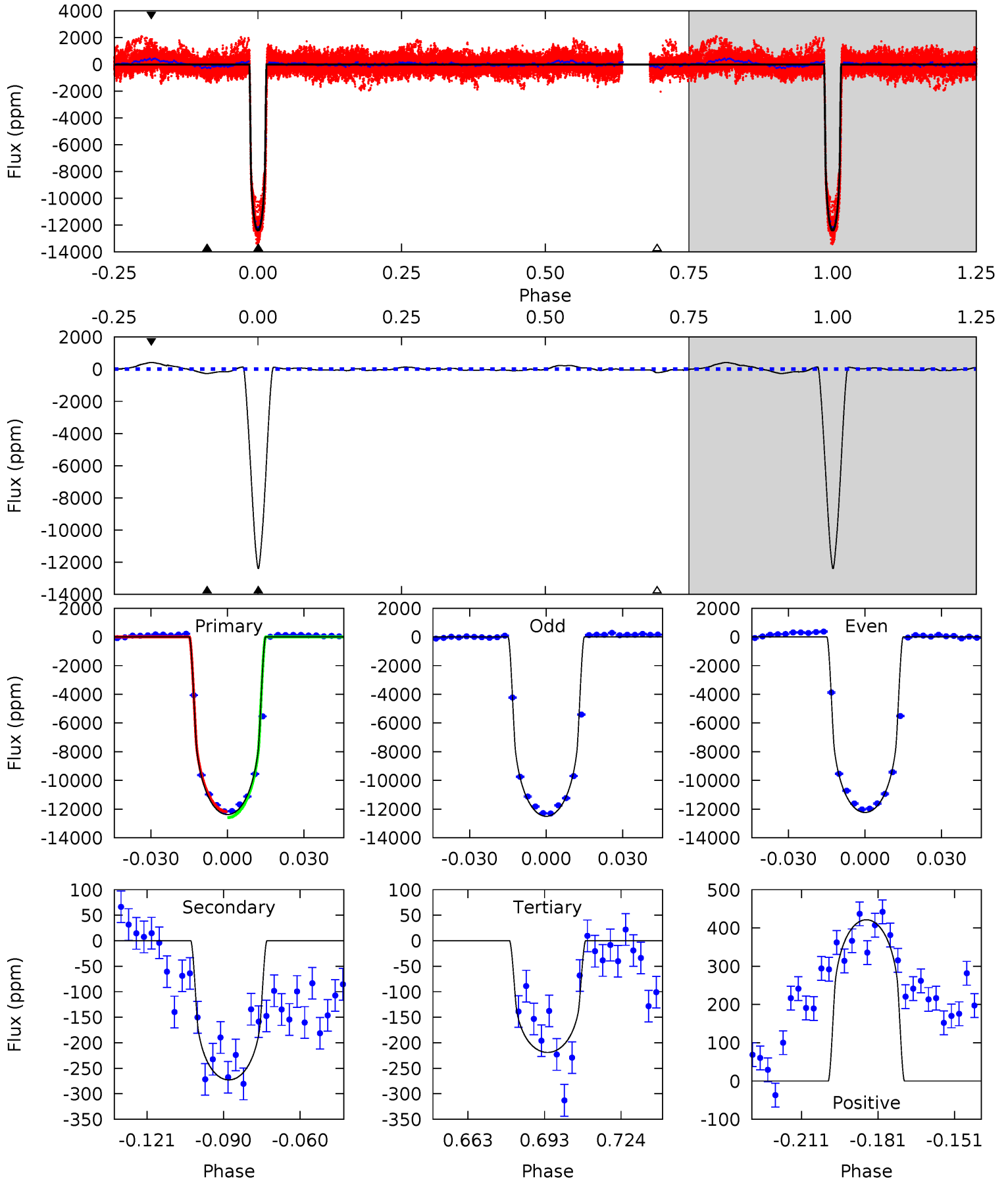
TCE 008430105-03 P= 63.328489 Days $T_0=164.609473$ (BKJD)



DV Model-Shift Uniqueness Test

008430105-03, P = 63.327145 Days, E = 101.870679 Days

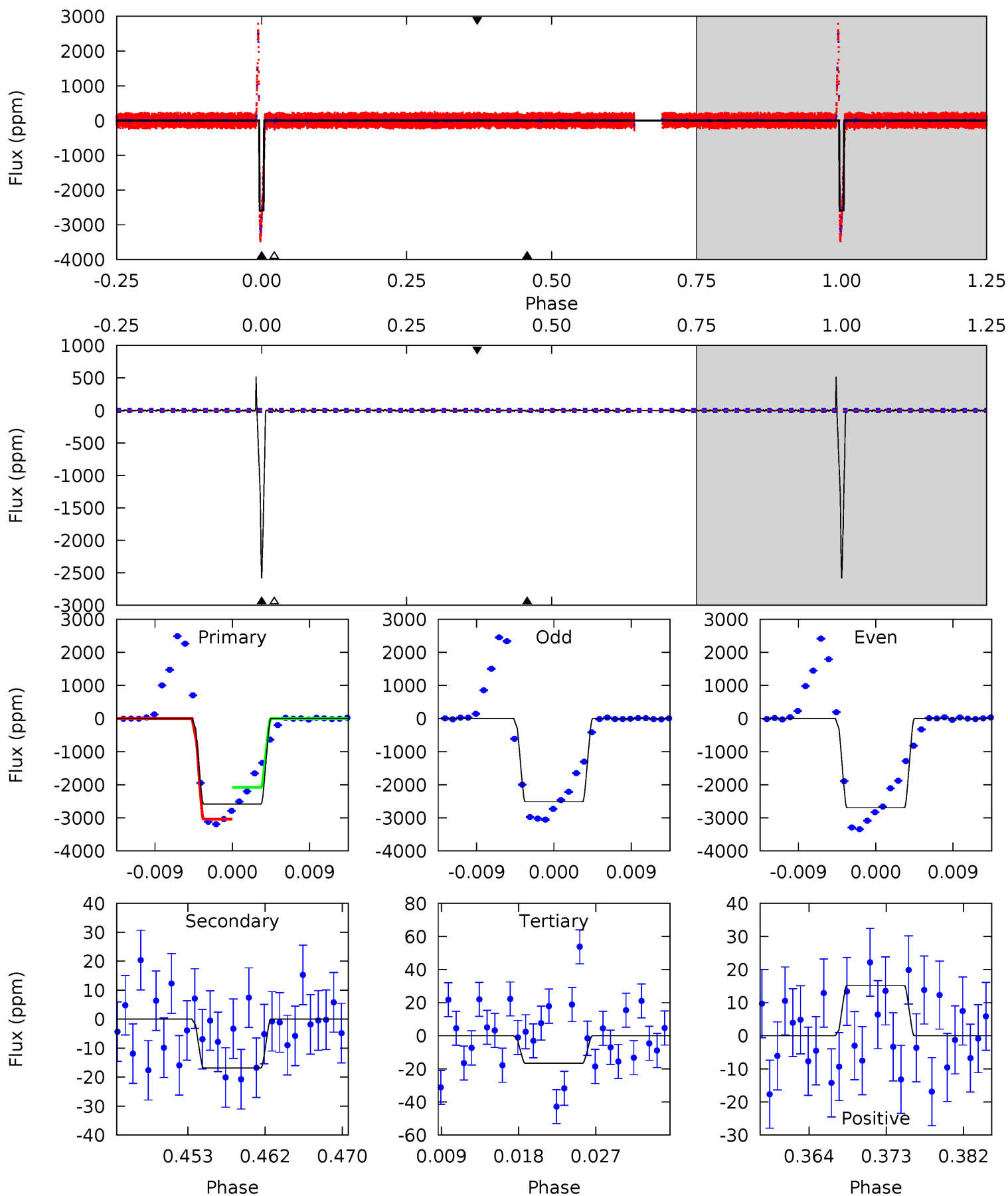
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1154	25.4	20.4	39.3	4.81	2.17	10.8	1134	1115	5.02	-13.9	12.4	0.86	0.03	19.3



Alt Model-Shift Uniqueness Test

008430105-03, P = 63.328489 Days, E = 101.280984 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
516.7	3.37	3.33	3.03	5.05	2.62	2.63	513.4	513.7	0.04	0.34	18.2	1.19	0.17	95.6



Stellar Parameters For KIC 008430105

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4919^{+74}_{-52}	$2.979^{+0.140}_{-0.140}$	$-0.380^{+0.150}_{-0.100}$	$5.198^{+1.526}_{-0.822}$	$0.938^{+0.352}_{-0.059}$	$0.009^{+0.006}_{-0.004}$
	+2%/-1%	+5%/-5%	+39%/-26%	+29%/-16%	+38%/-6%	+60%/-43%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008430105-03 / KOI 3873.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-273 ± 11	$56.41^{+8.74}_{-5.21}$	1251^{+74}_{-58}	2719^{+27}_{-27}	$4.537^{+0.898}_{-0.932}$
Alt.	-17 ± 5	$31.96^{+5.42}_{-2.78}$	1248^{+72}_{-57}	2131^{+93}_{-145}	$0.830^{+0.313}_{-0.284}$

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

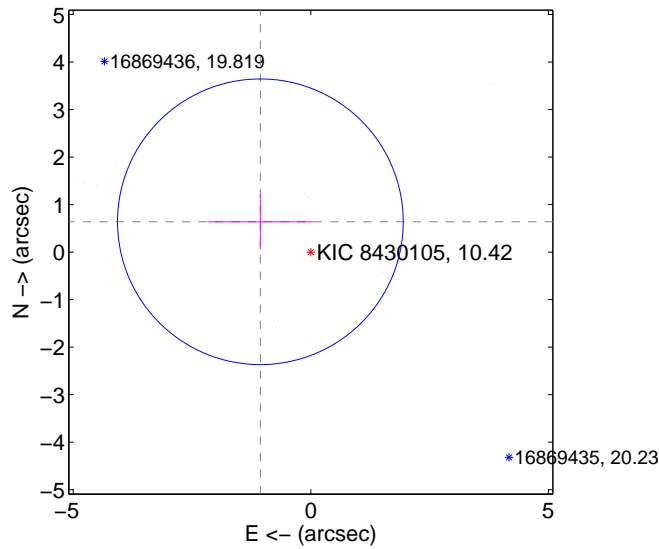
Supplemental centroid analysis for 008430105-03. **Kepler magnitude: 10.42.** Transit SNR 179.01

There are 0 quarters with good PRF difference image offsets

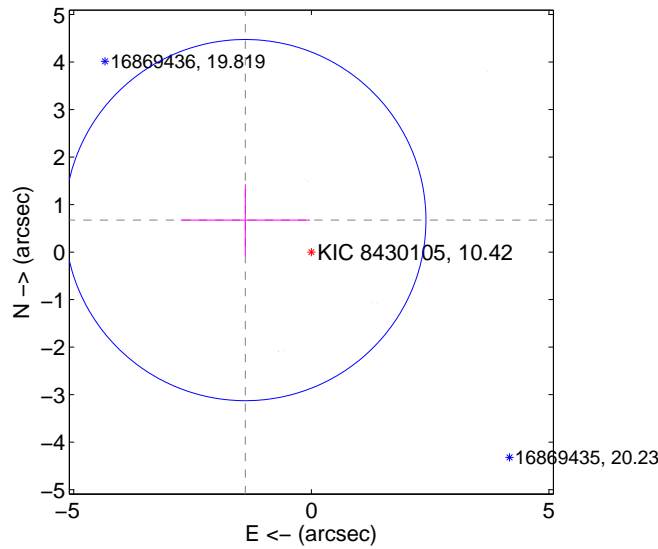
The direct PRF centroid is offset from the target star catalog position by about 1.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.238 ± 1.002	1.24	1.061 ± 1.116	0.638 ± 0.579
PRF-fit source offset from KIC position	1.544 ± 1.267	1.22	1.389 ± 1.360	0.674 ± 0.752
photometric centroid source offset	0.68 ± 0.01	51.82	0.64 ± 0.01	0.22 ± 0.01

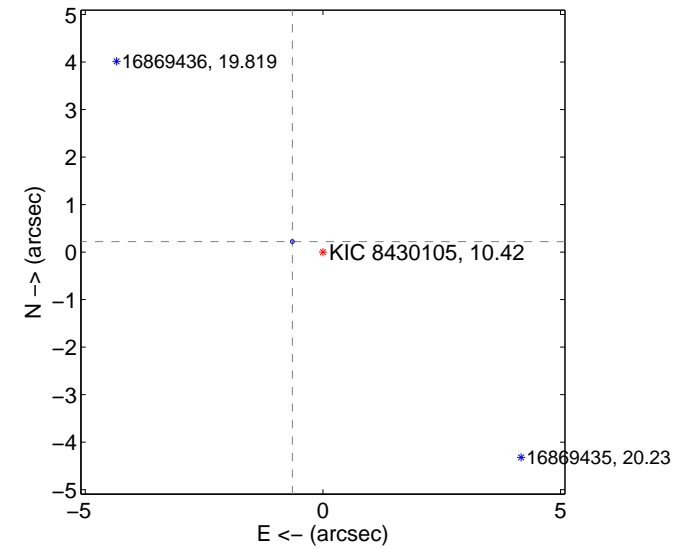
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

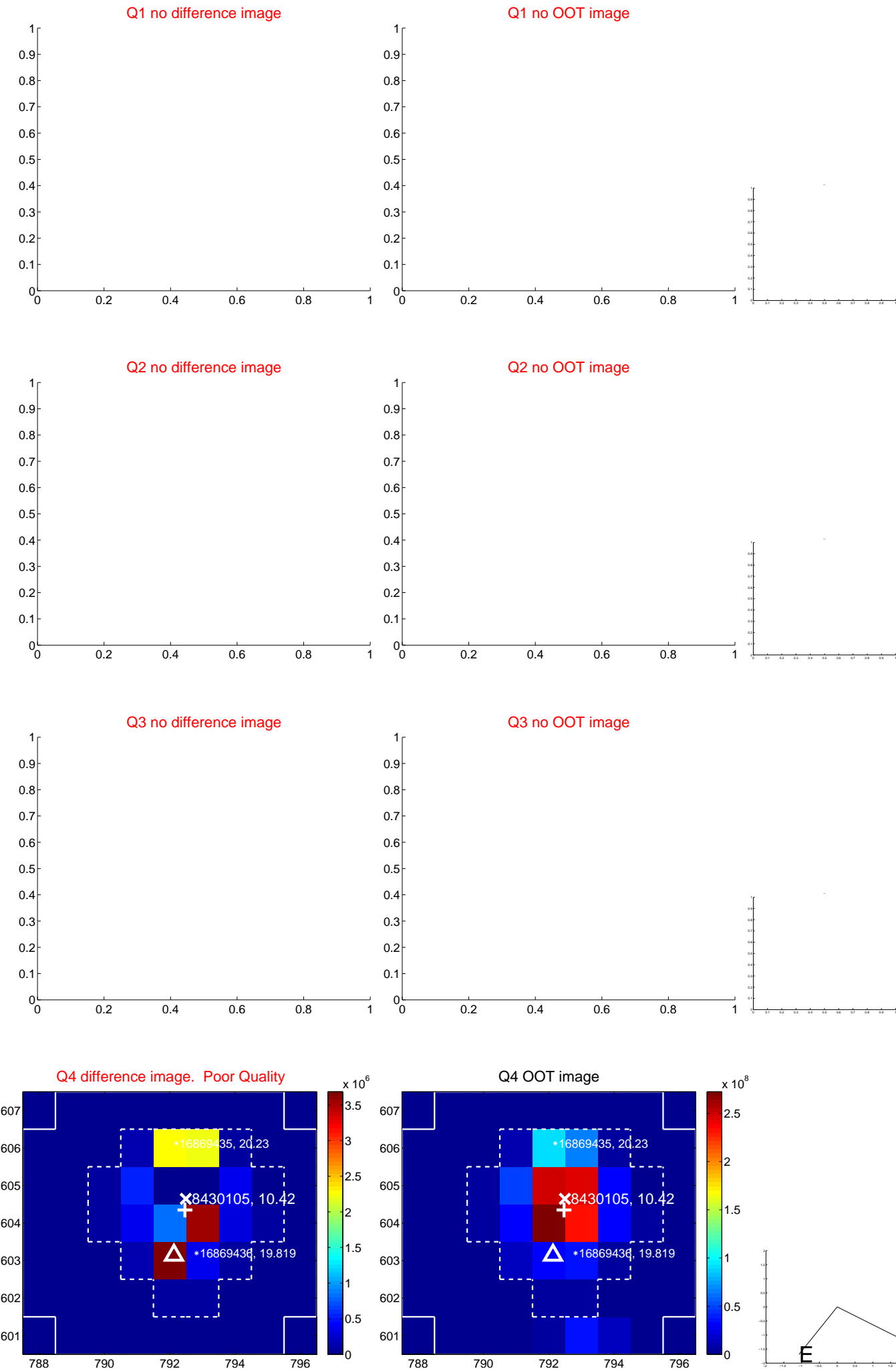


offset from photometric centroids

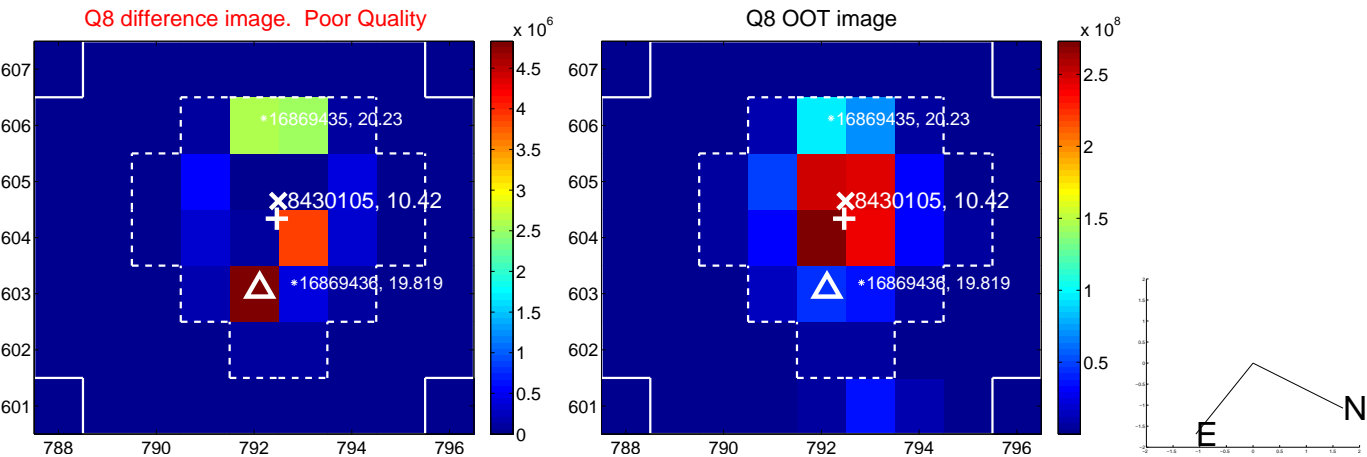
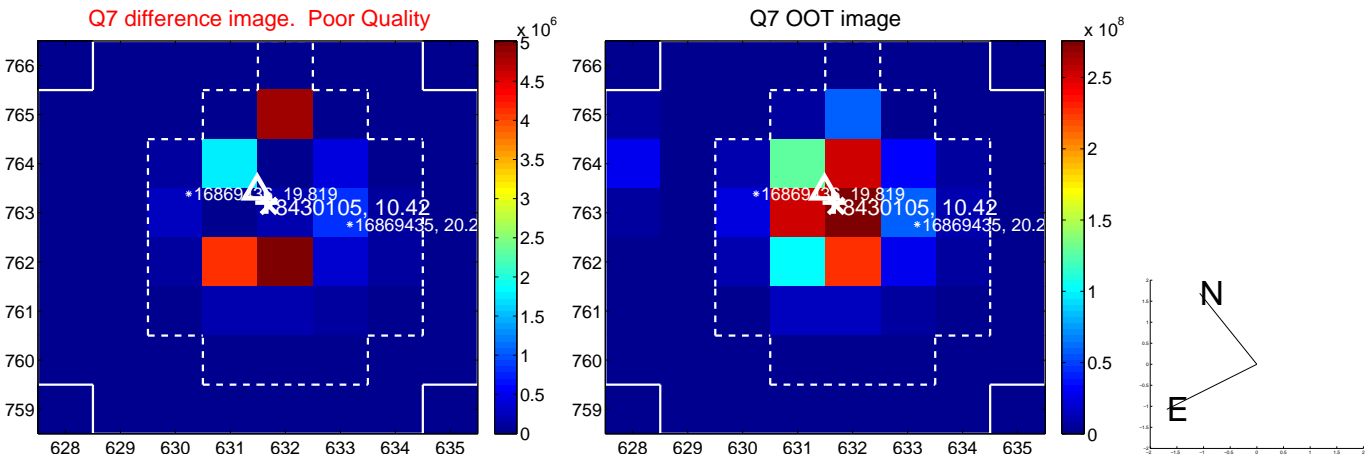
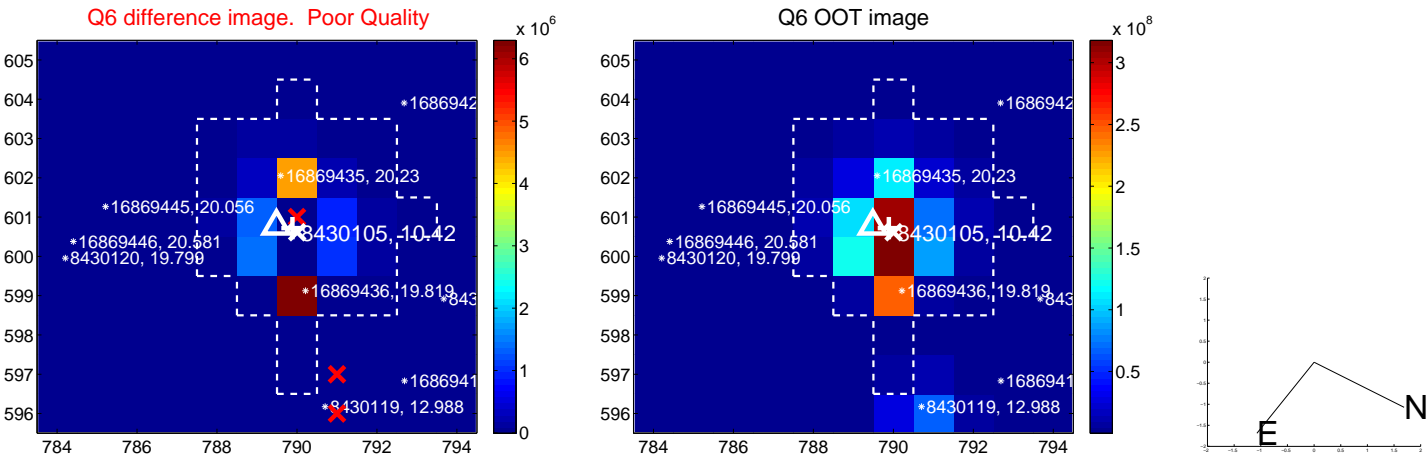
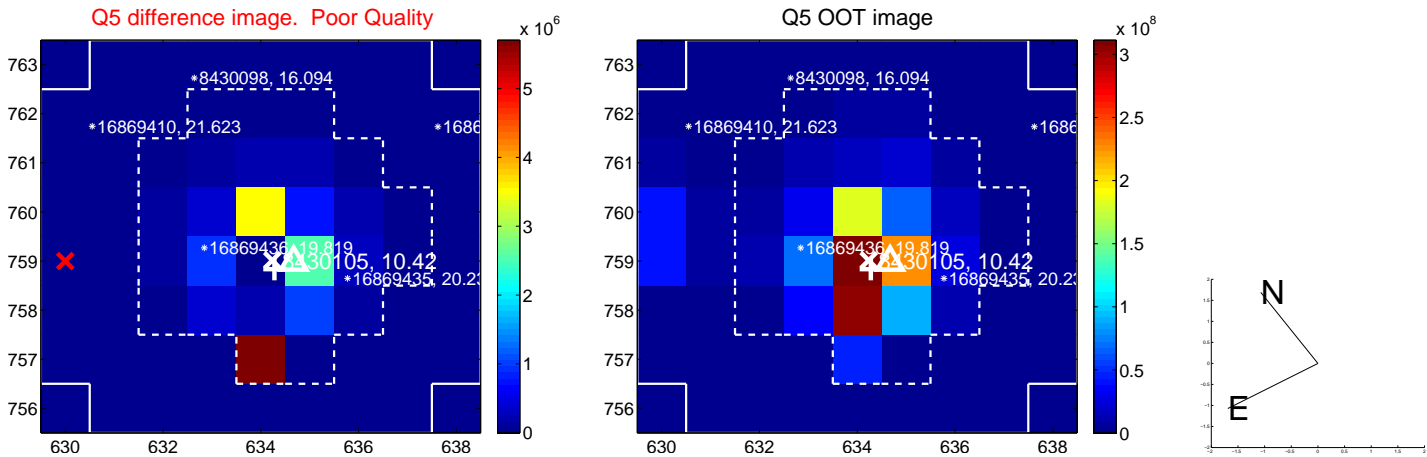


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

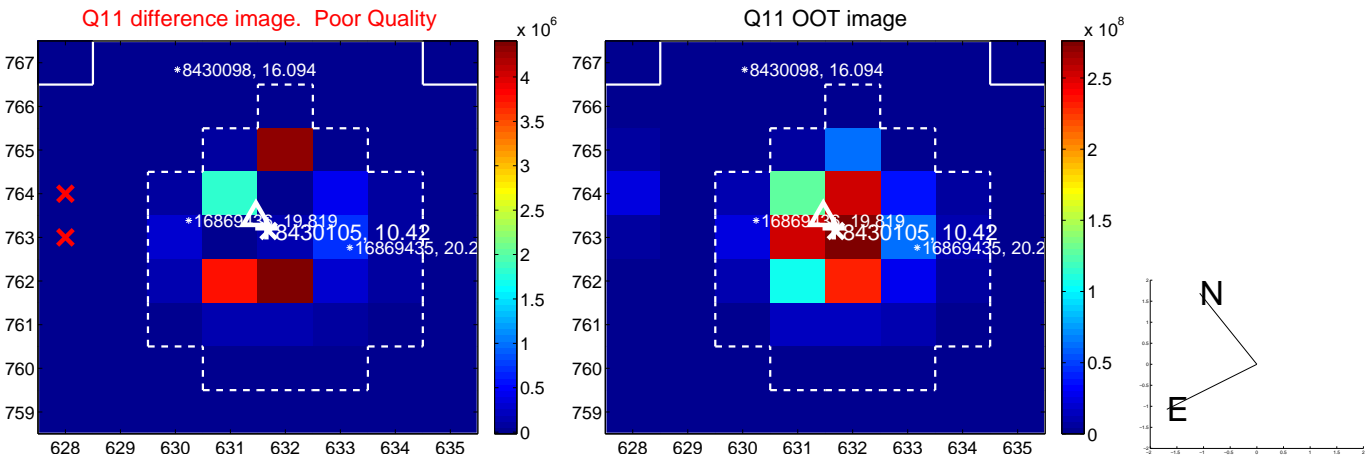
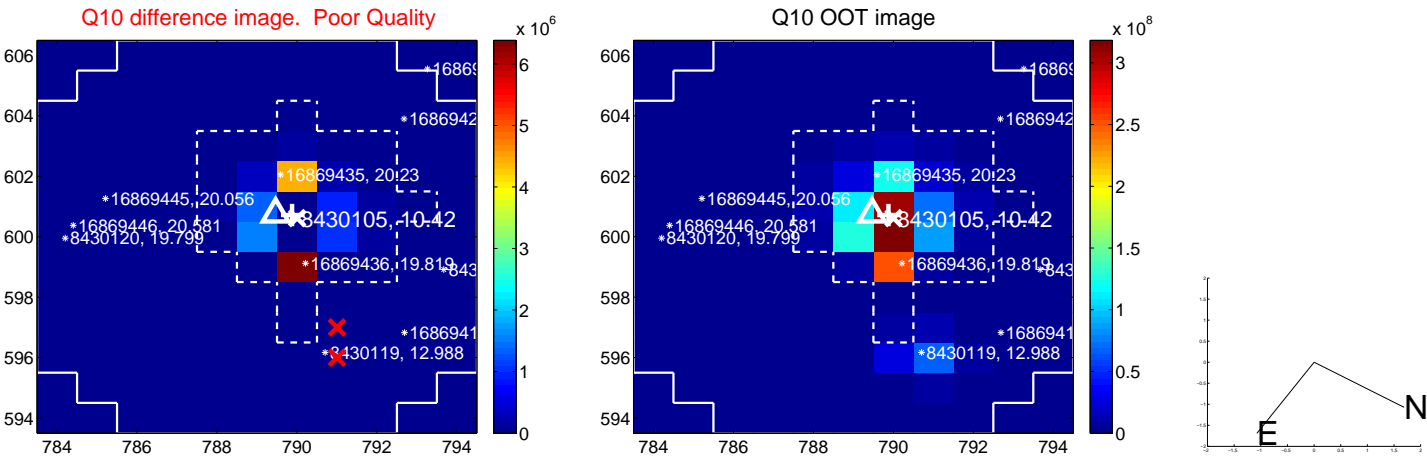
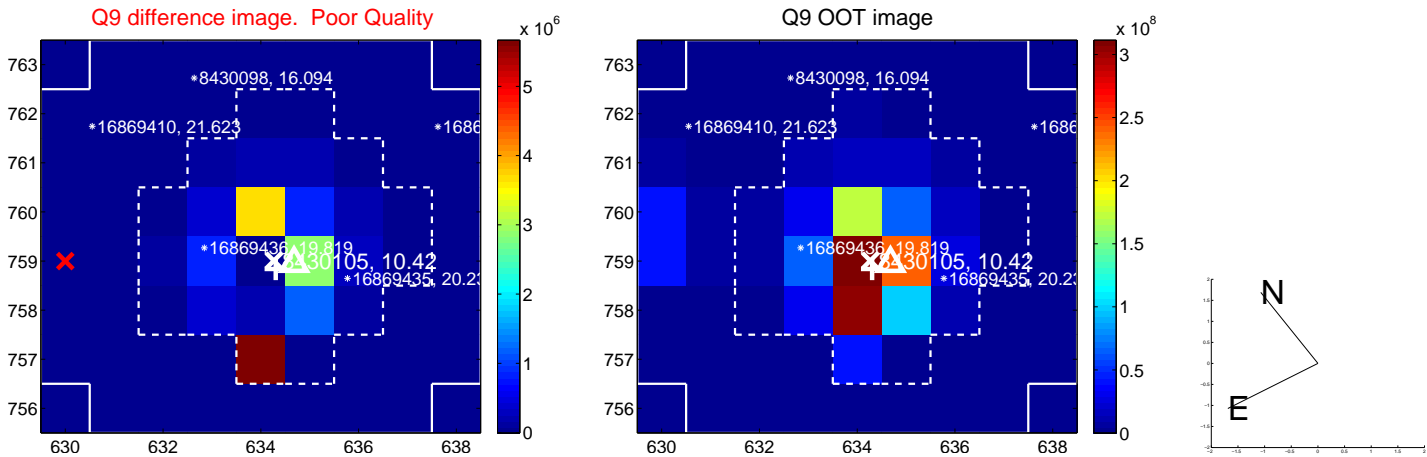
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



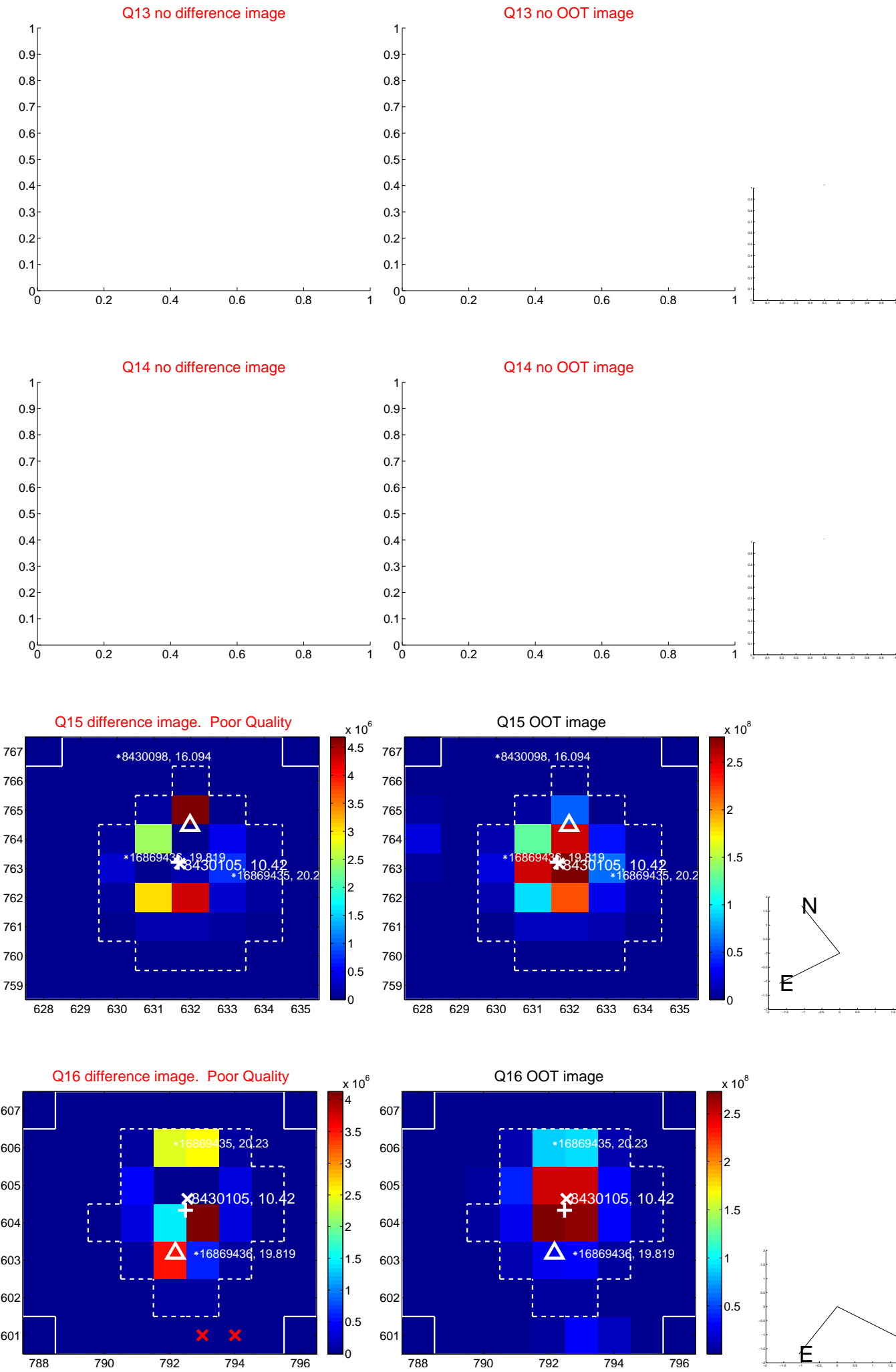
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



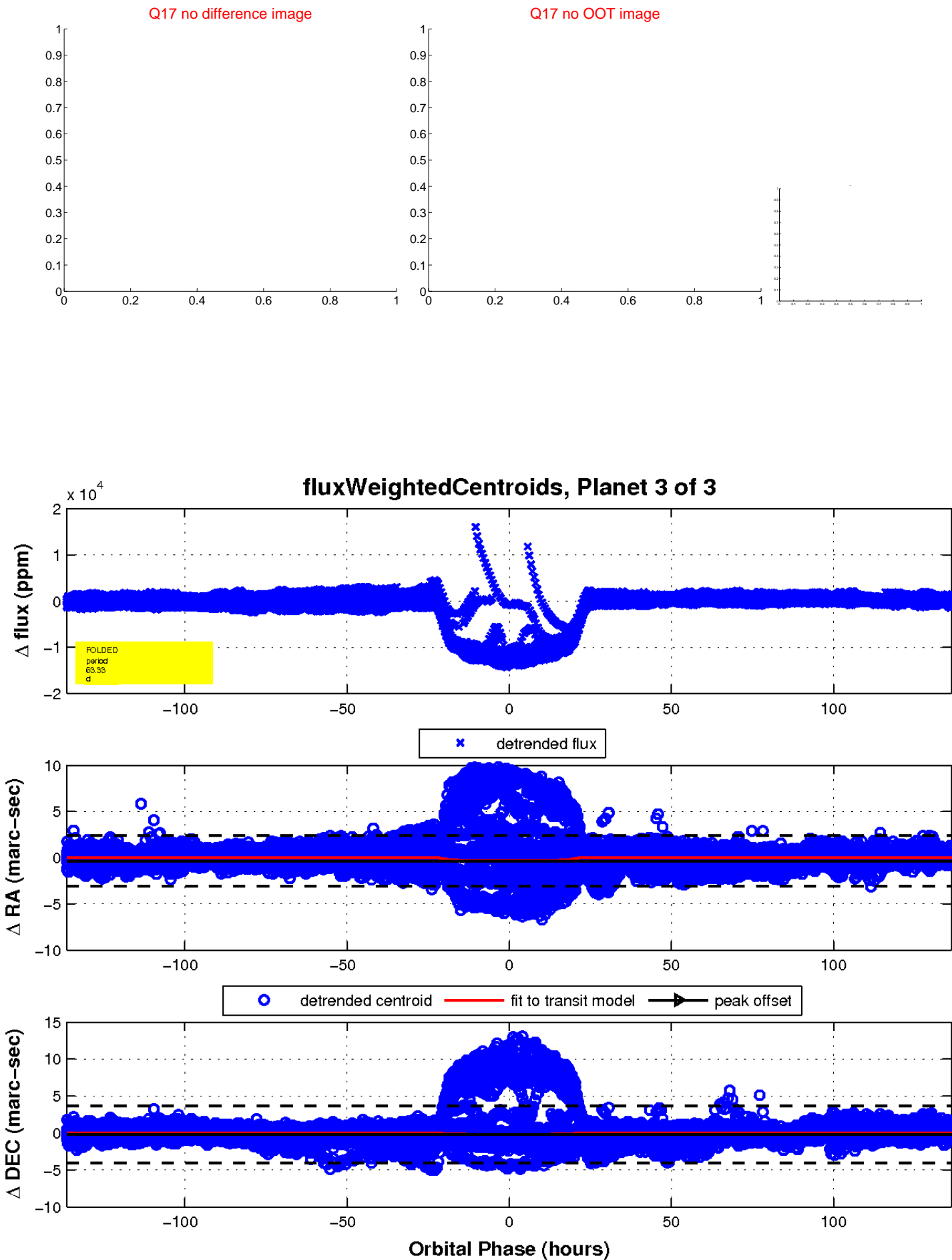
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

