

KIC 003442058

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})
003442058-01	OBS	No	1.430149	131.542444	250.2	2.000	15.0	-1.0	2.29	7703	3.65	18631.57
003442058-02	OBS	No	1.429946	132.052138	5.3	6.970	14.5	2.8	2.29	7703	0.54	18635.09
003442058-03	OBS	No	99.517576	214.349712	162.7	11.908	15.3	6.5	2.29	7703	3.38	65.10
003442058-04	OBS	No	1.430006	132.899421	17.8	14.199	14.9	7.7	2.29	7703	1.09	18634.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003442058-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_NOFITS
003442058-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003442058-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
003442058-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

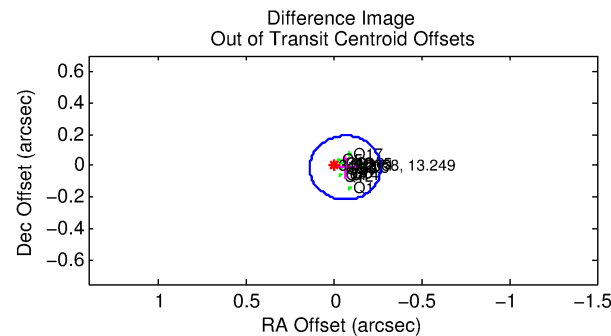
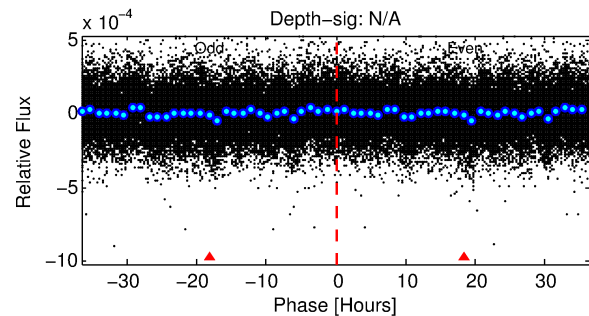
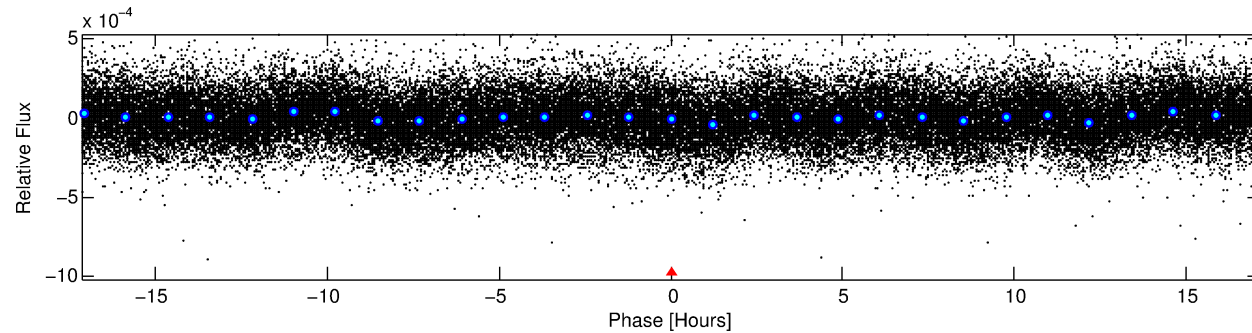
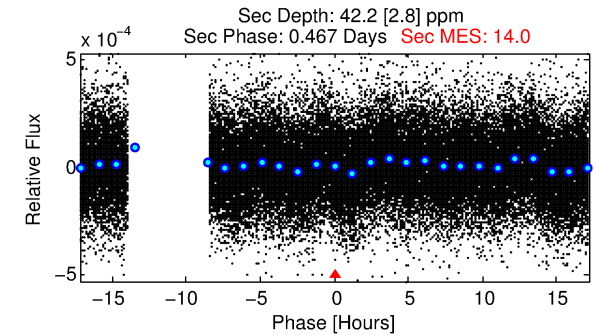
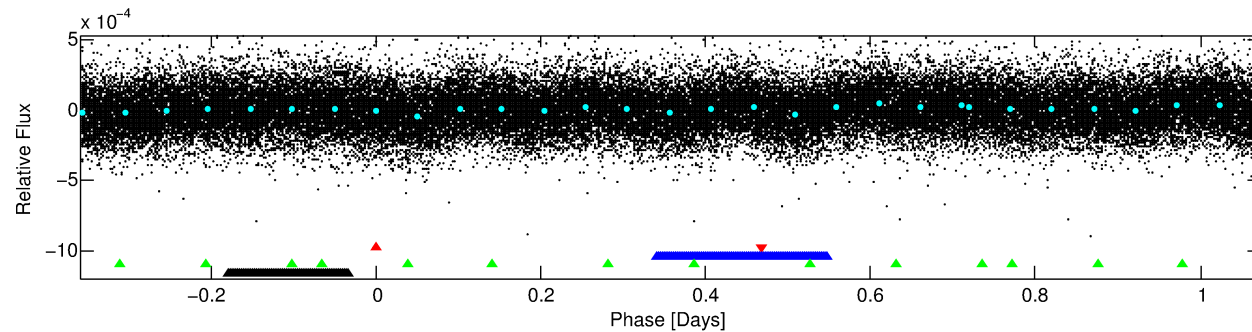
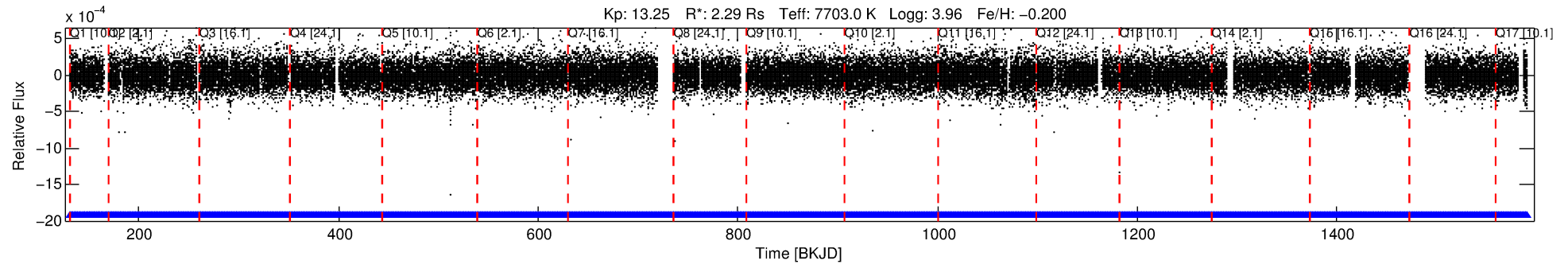
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003442058-01

No Significant Match Found

DV One-Page Summary

KIC: 3442058 Candidate: 1 of 4 Period: 1.430 d



TPS TCE Results:

Period = 1.43015 d
Epoch = 131.5424 BKJD

DV fit results are unavailable

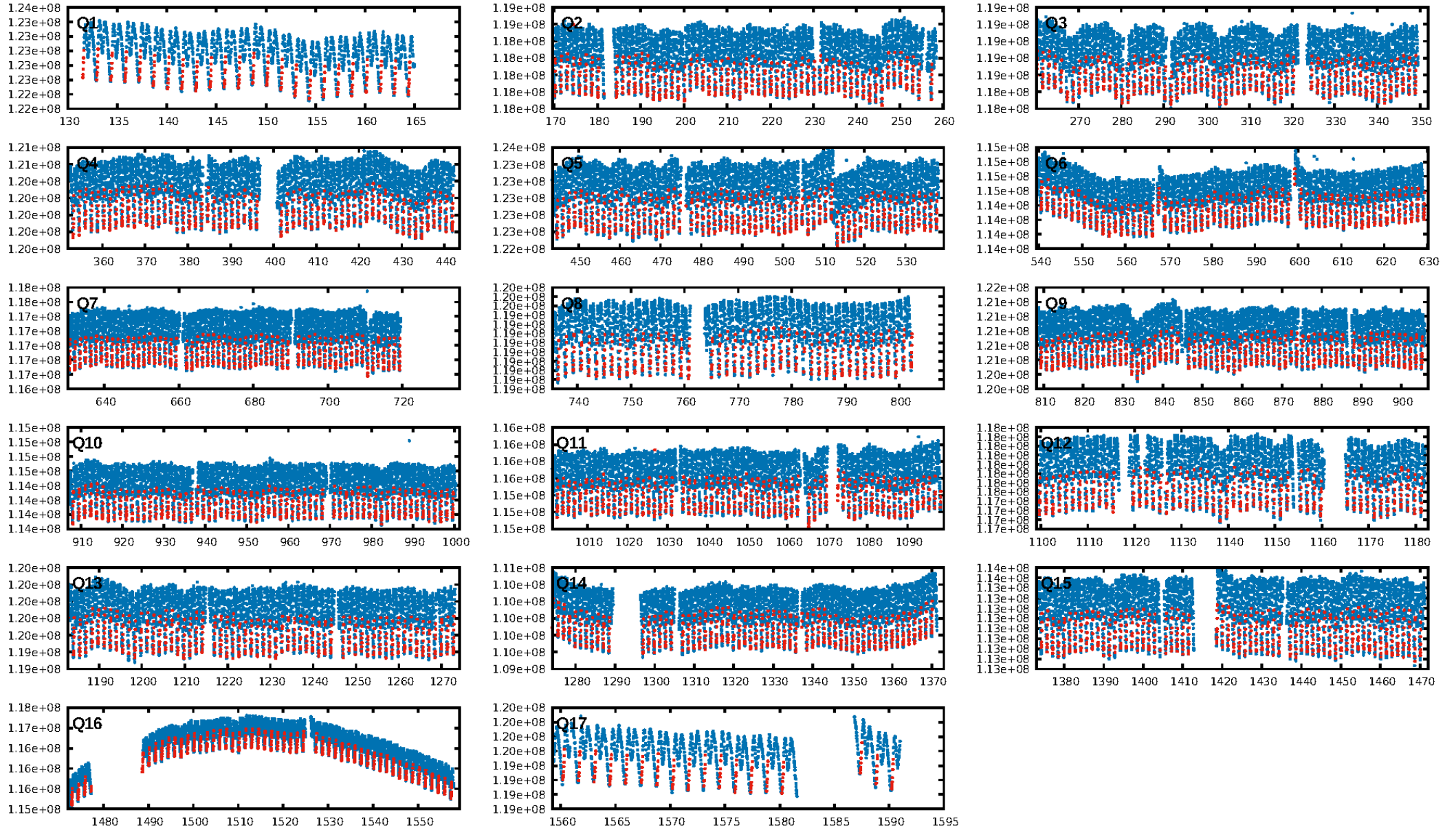
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [194.96 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [903/903]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.065 arcsec [0.96 σ]
KicOffset-rm: 0.024 arcsec [0.35 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

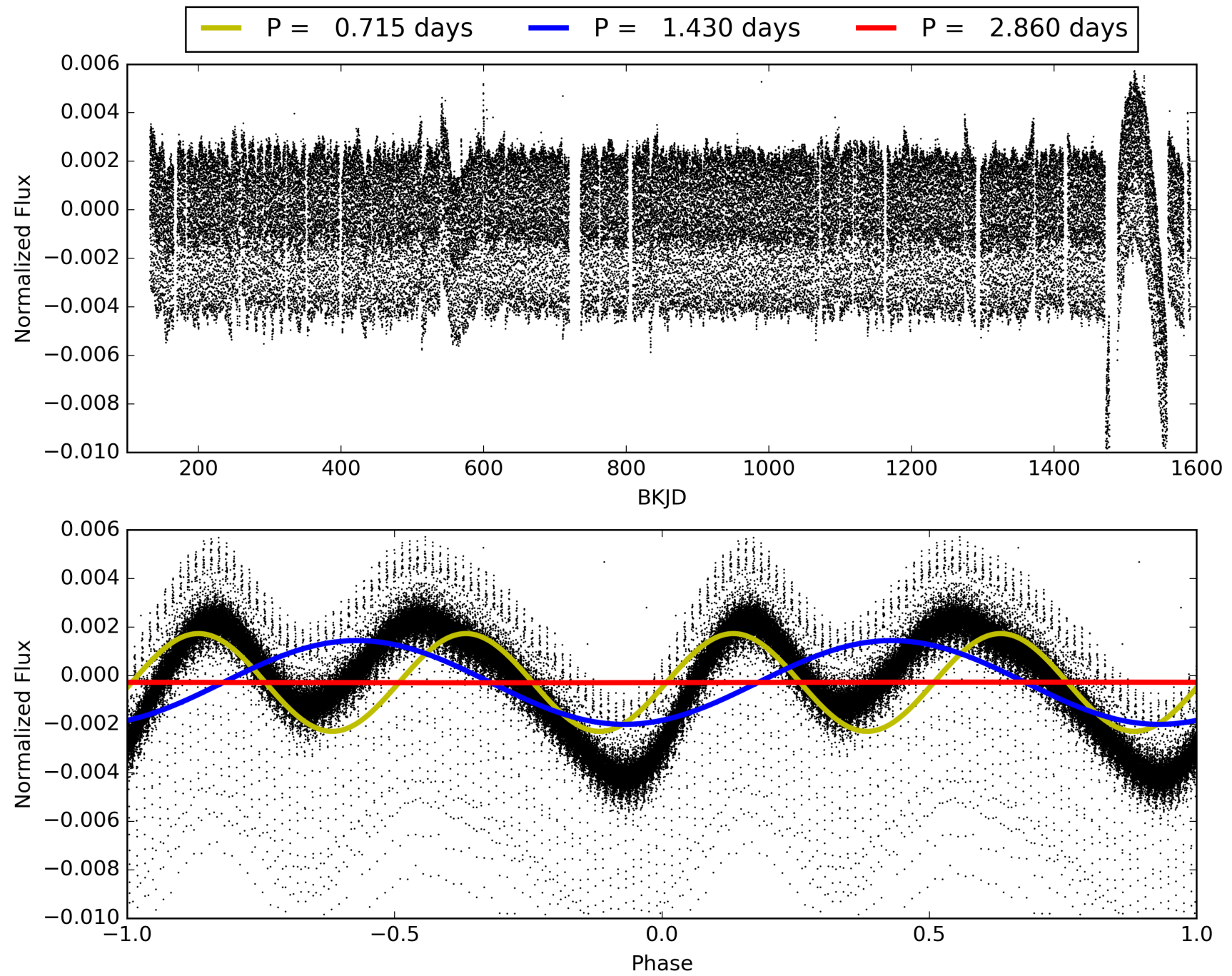
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:21:50 Z

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

TCE 003442058-01, PDC Light Curves

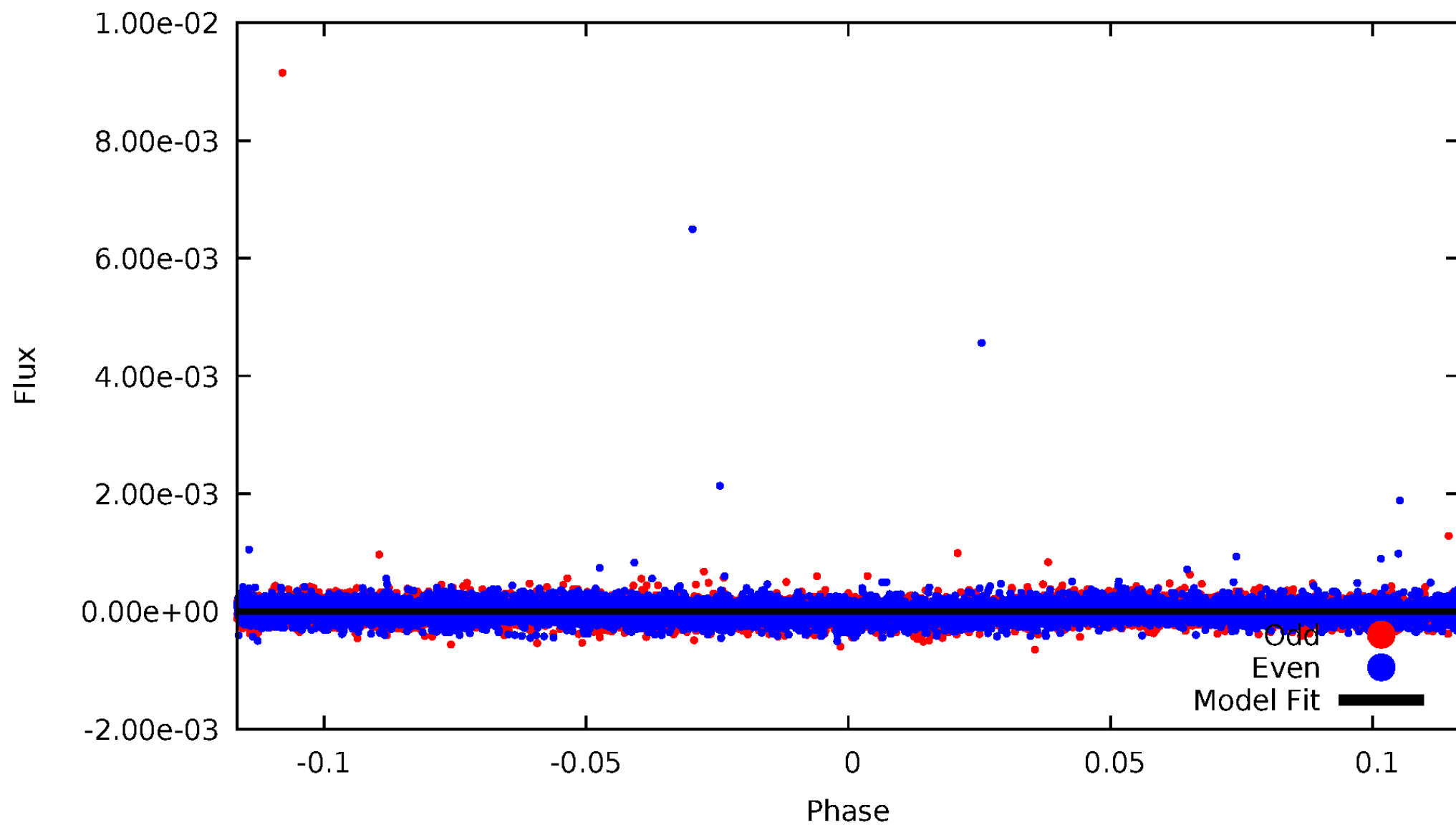


TCE 003442058-01



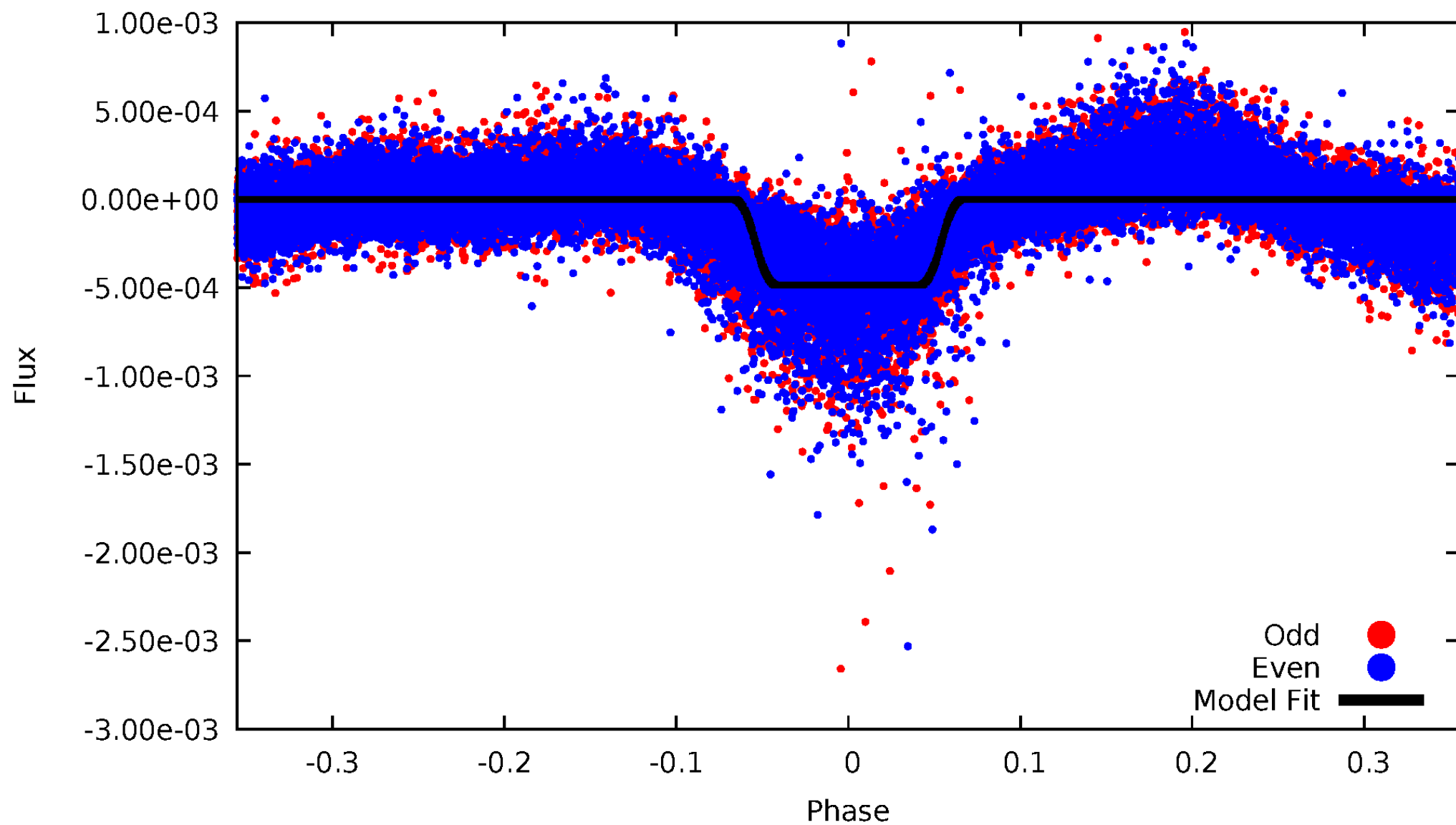
DV Odd/Even

TCE 003442058-01



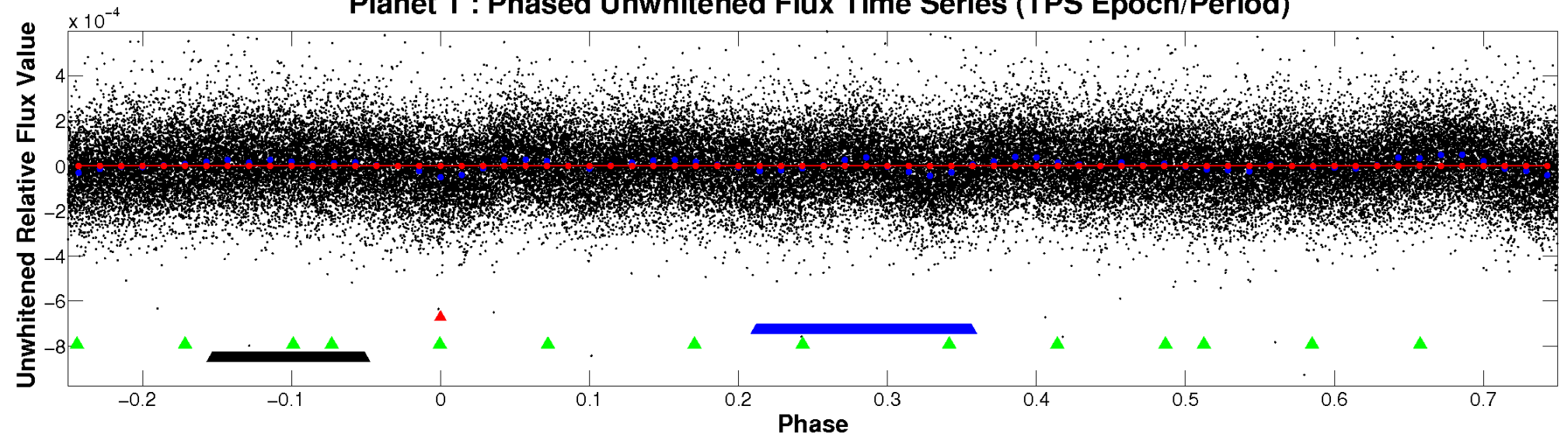
ALT Odd/Even

TCE 003442058-01



Non-Whitened Vs. Whitened Light Curve

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

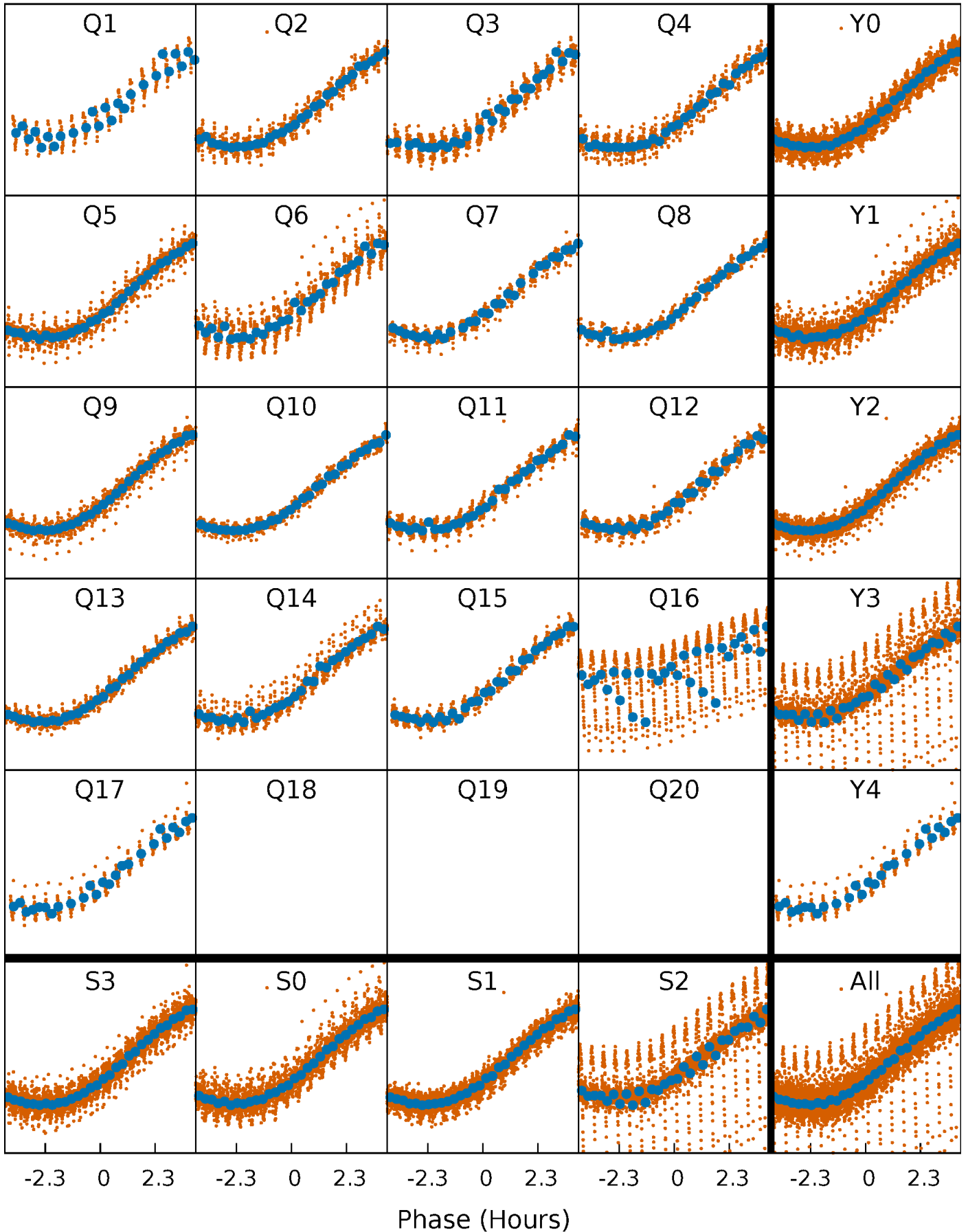


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



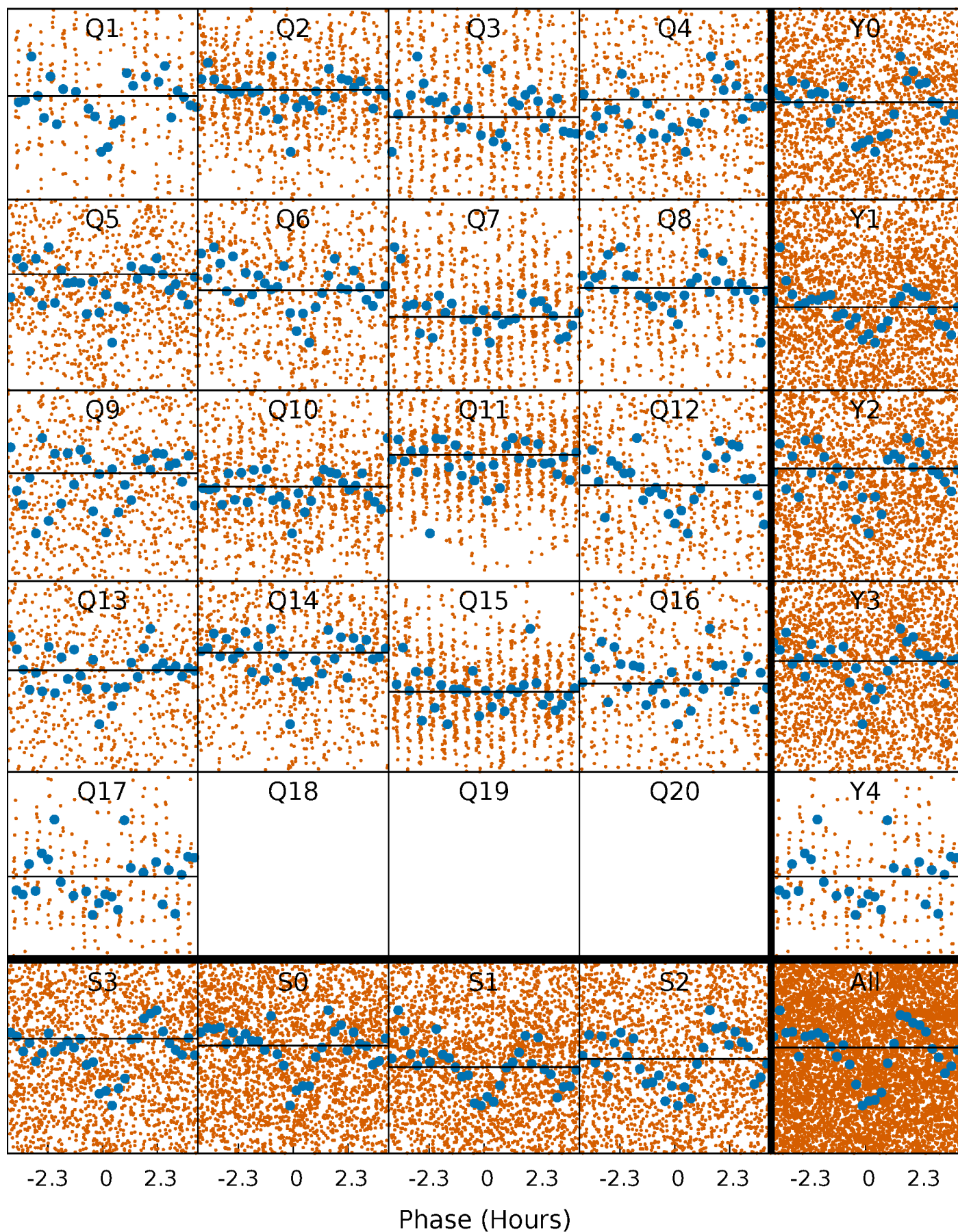
PDC Quarter-Phased Transit Curves

TCE 003442058-01 P= 1.430149 Days $T_0=131.542444$ (BKJD)



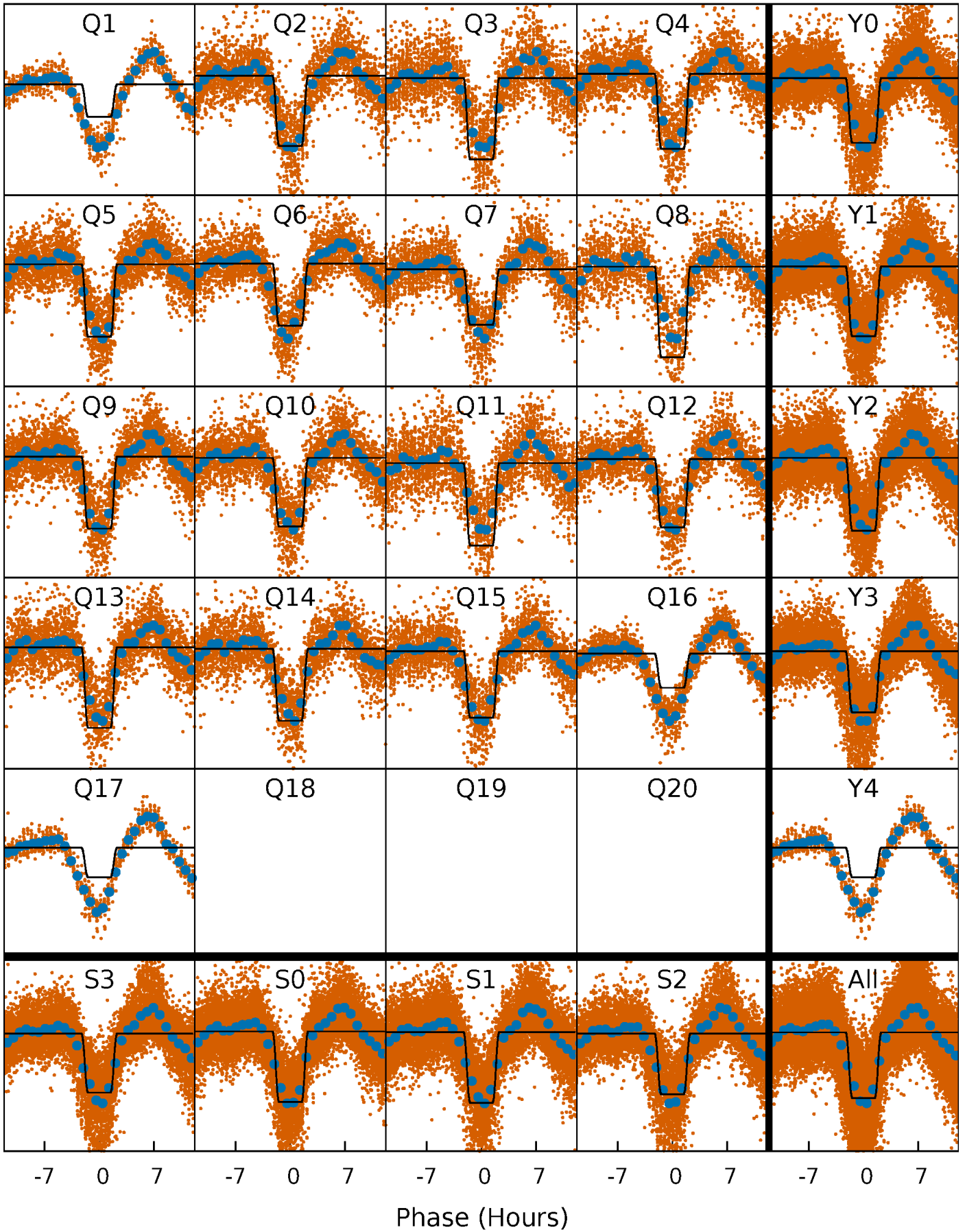
DV Quarter-Phased Transit Curves

TCE 003442058-01 P= 1.430149 Days $T_0=131.542444$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

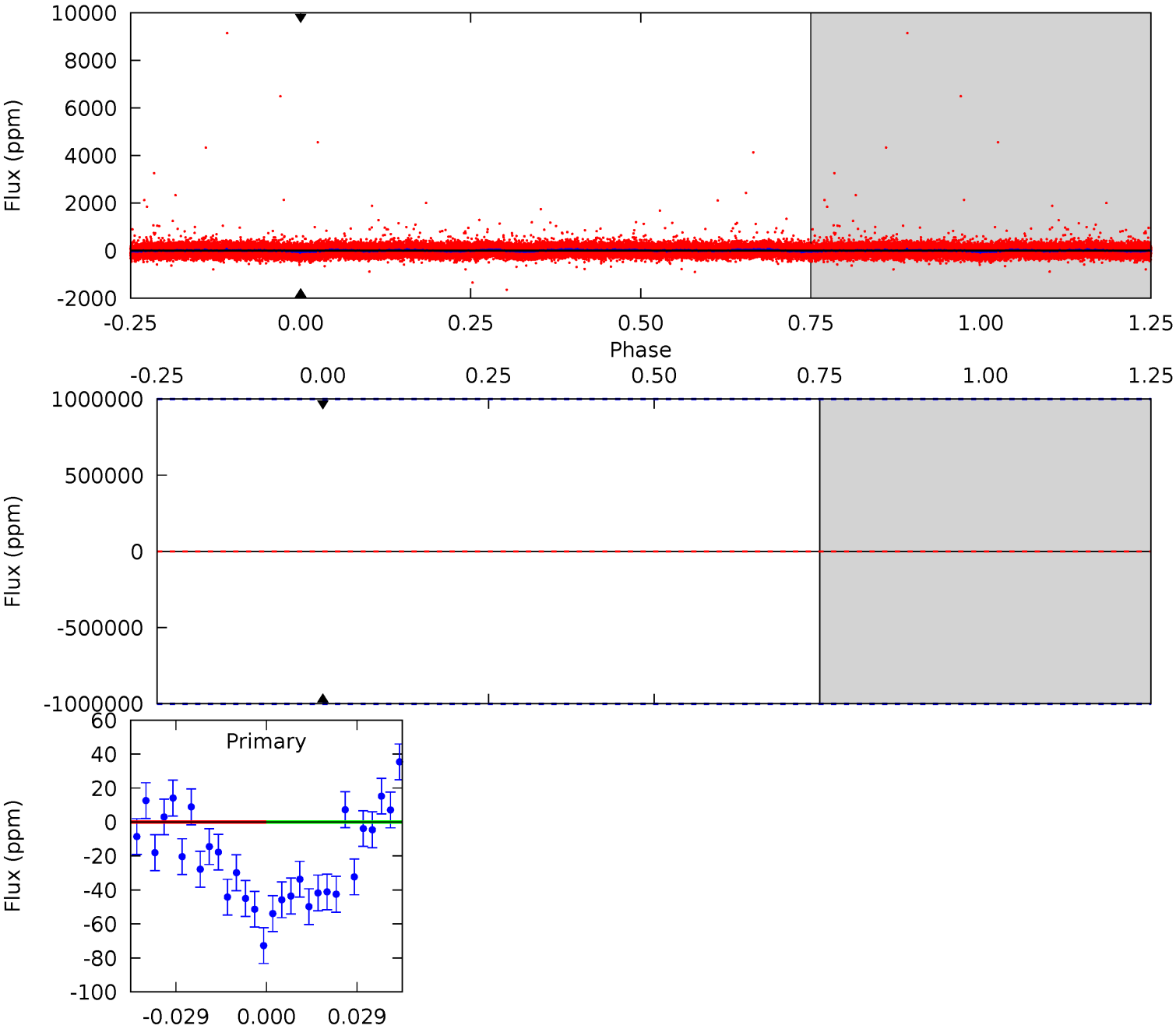
TCE 003442058-01 P= 1.430149 Days $T_0=131.503950$ (BKJD)



DV Model-Shift Uniqueness Test

003442058-01, P = 1.430149 Days, E = 130.112295 Days

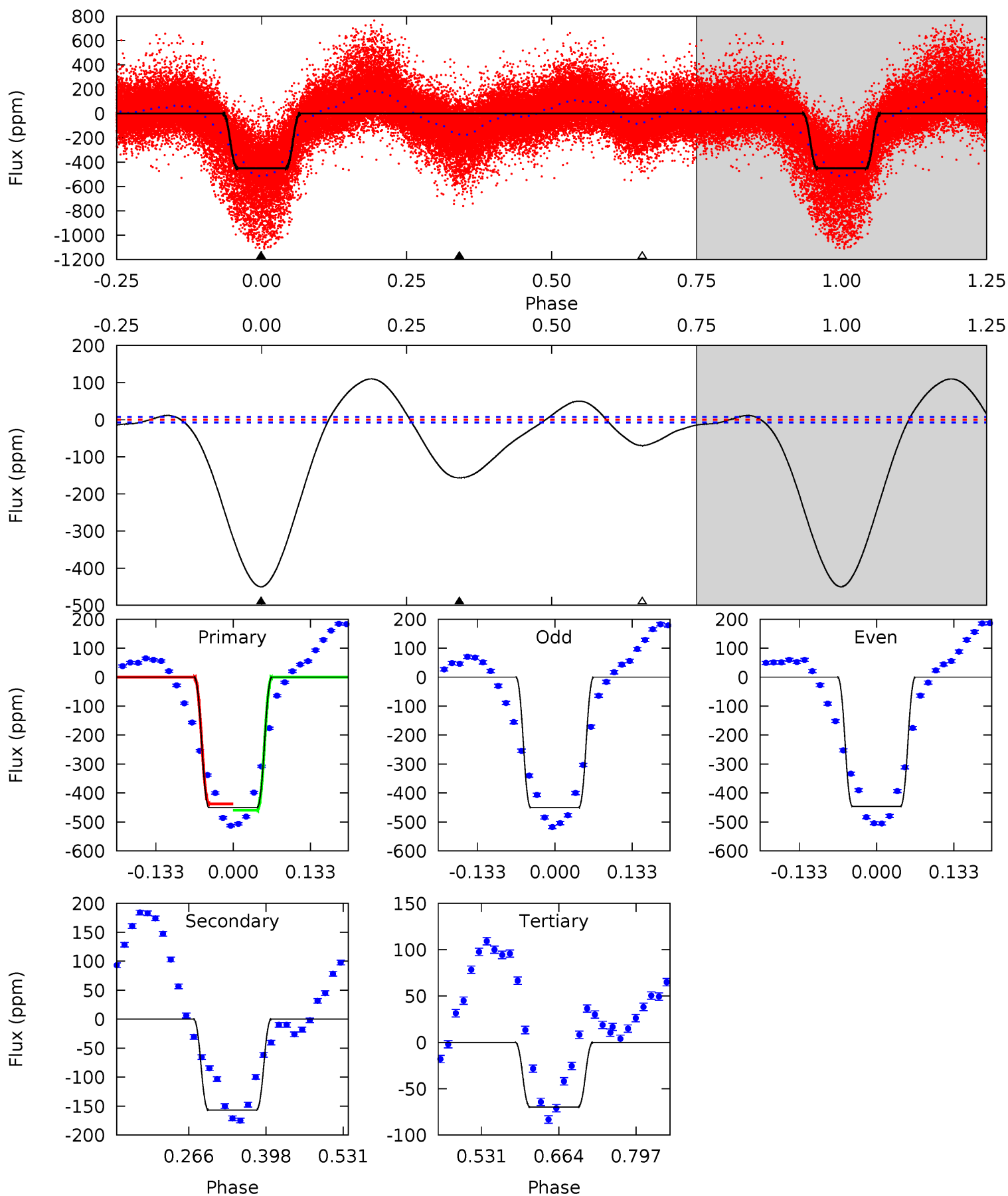
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003442058-01, P = 1.430149 Days, E = 131.503950 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
270.9	94.3	42.0	0	4.50	1.50	29.2	228.9	270.9	52.2	94.3	1.21	1.14	0.20	6.07



Stellar Parameters For KIC 003442058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7703^{+237}_{-316}	$3.955^{+0.260}_{-0.140}$	$-0.200^{+0.200}_{-0.350}$	$2.290^{+0.486}_{-0.729}$	$1.725^{+0.184}_{-0.341}$	$0.202^{+0.371}_{-0.082}$
	+3%/-4%	+7%/-4%	+100%/-175%	+21%/-32%	+11%/-20%	+183%/-40%
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 003442058-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.09^{+20.79}_{-11.61}$	4107^{+291}_{-340}	-6283^{+49595}_{-34106}	$-4.226^{+300.716}_{-243.337}$
Alt.	-157 ± 2	$18.53^{+19.19}_{-12.78}$	4093^{+310}_{-349}	-2969^{+8124}_{-656}	$0.219^{+2.014}_{-0.165}$

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

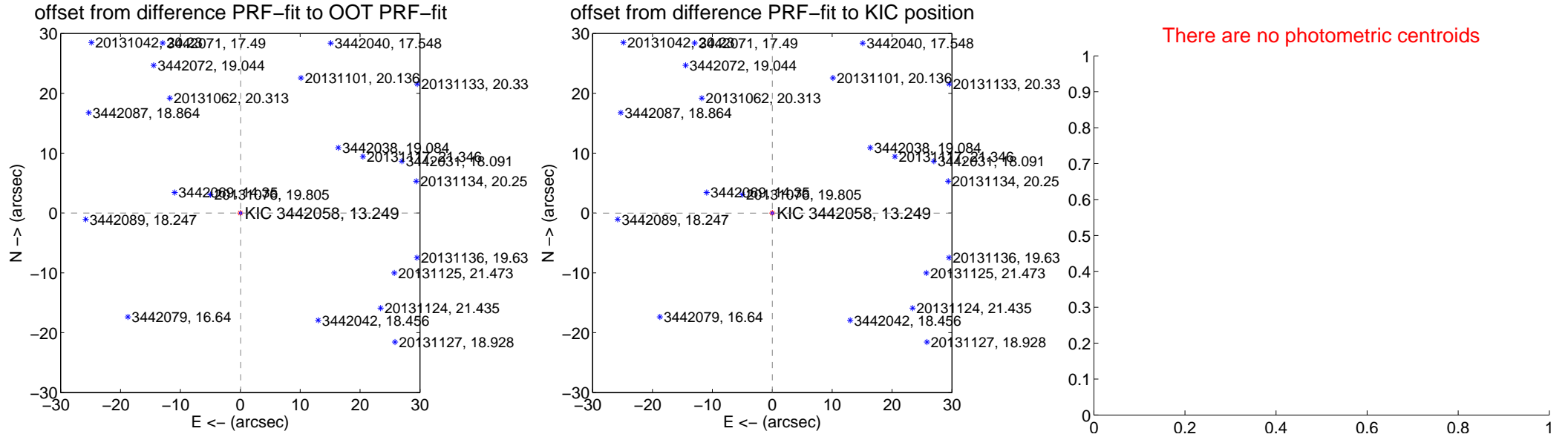
DV Centroid Data

Supplemental centroid analysis for 003442058-01. Kepler magnitude: 13.25. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

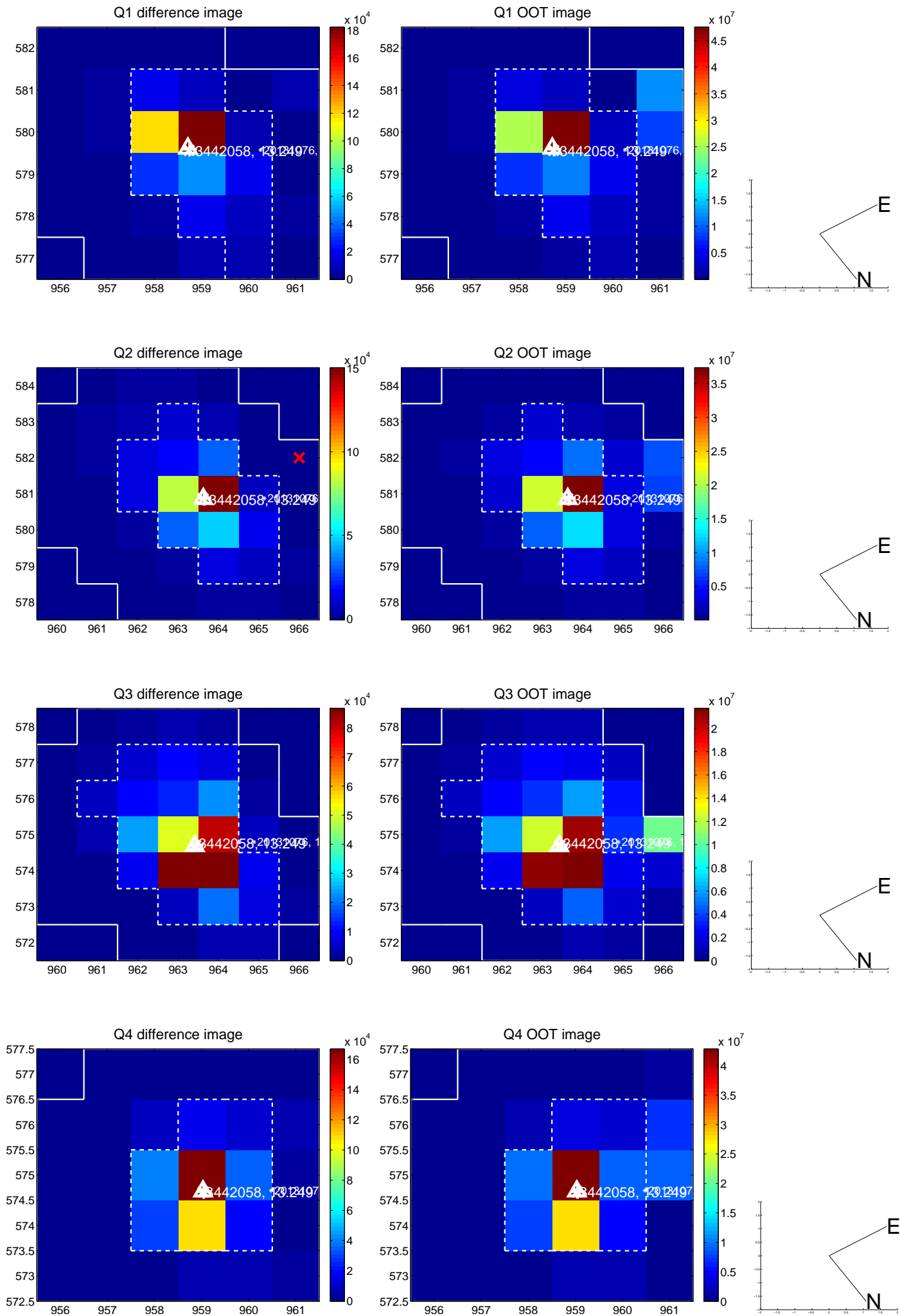
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.065 ± 0.068	0.96	-0.064 ± 0.068	-0.012 ± 0.068
PRF-fit source offset from KIC position	0.024 ± 0.068	0.35	-0.004 ± 0.068	-0.024 ± 0.068
photometric centroid source offset	—	—	—	—

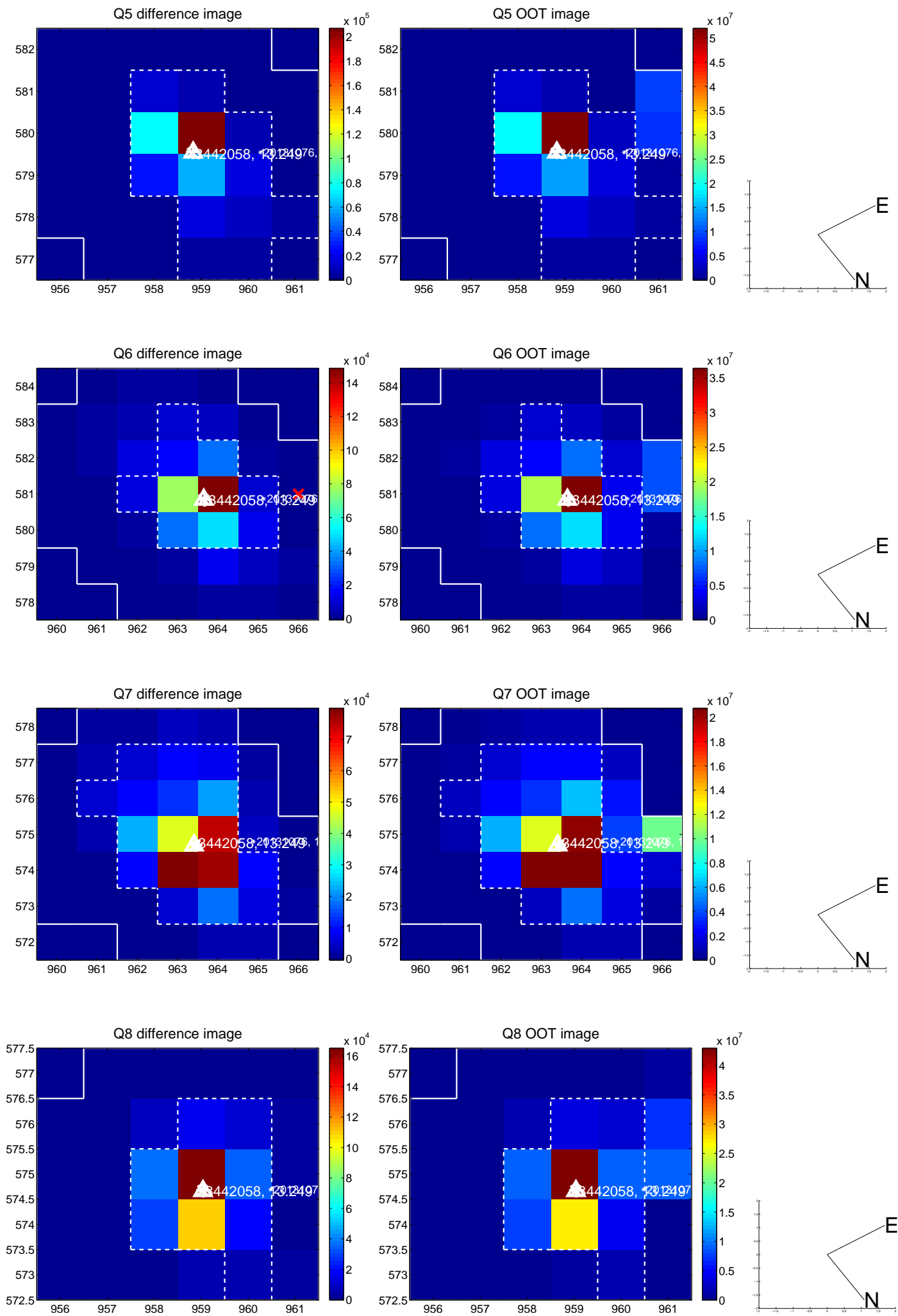


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

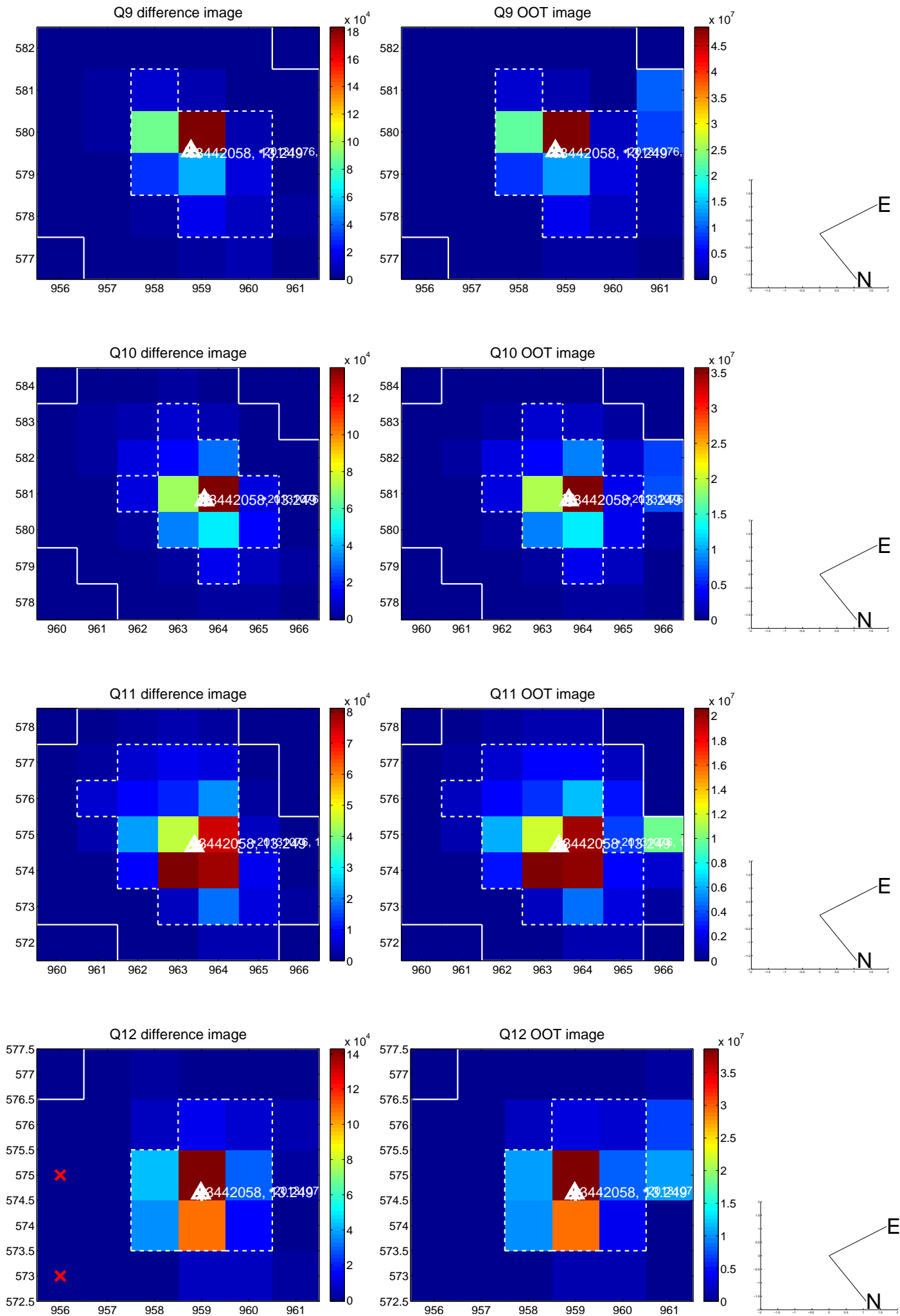
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



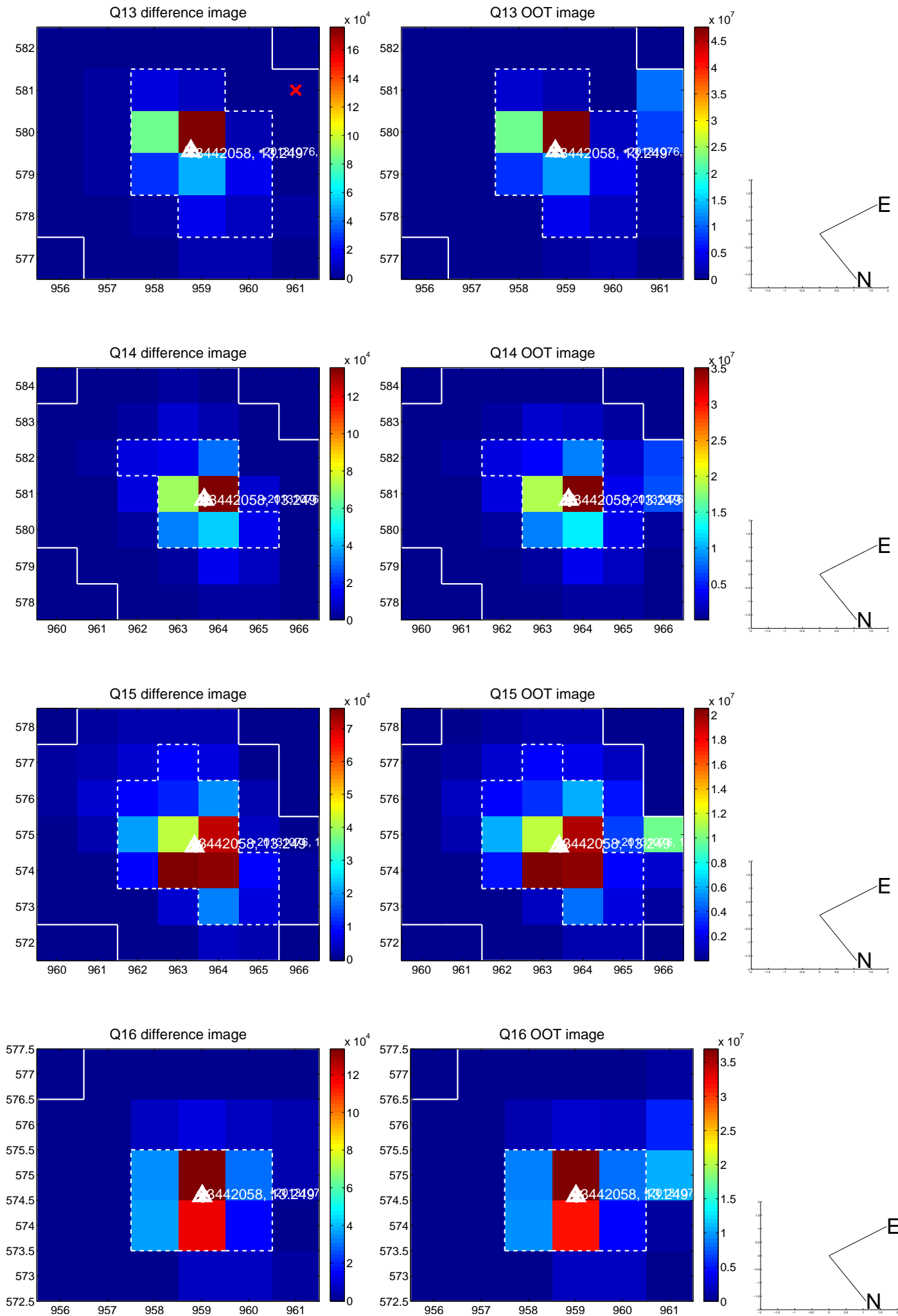
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



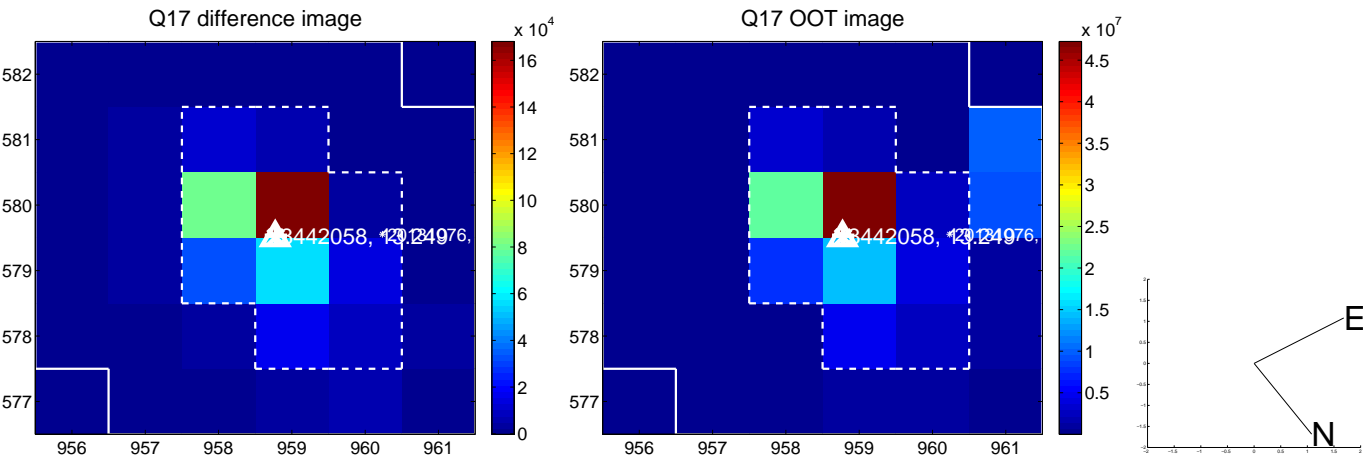
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



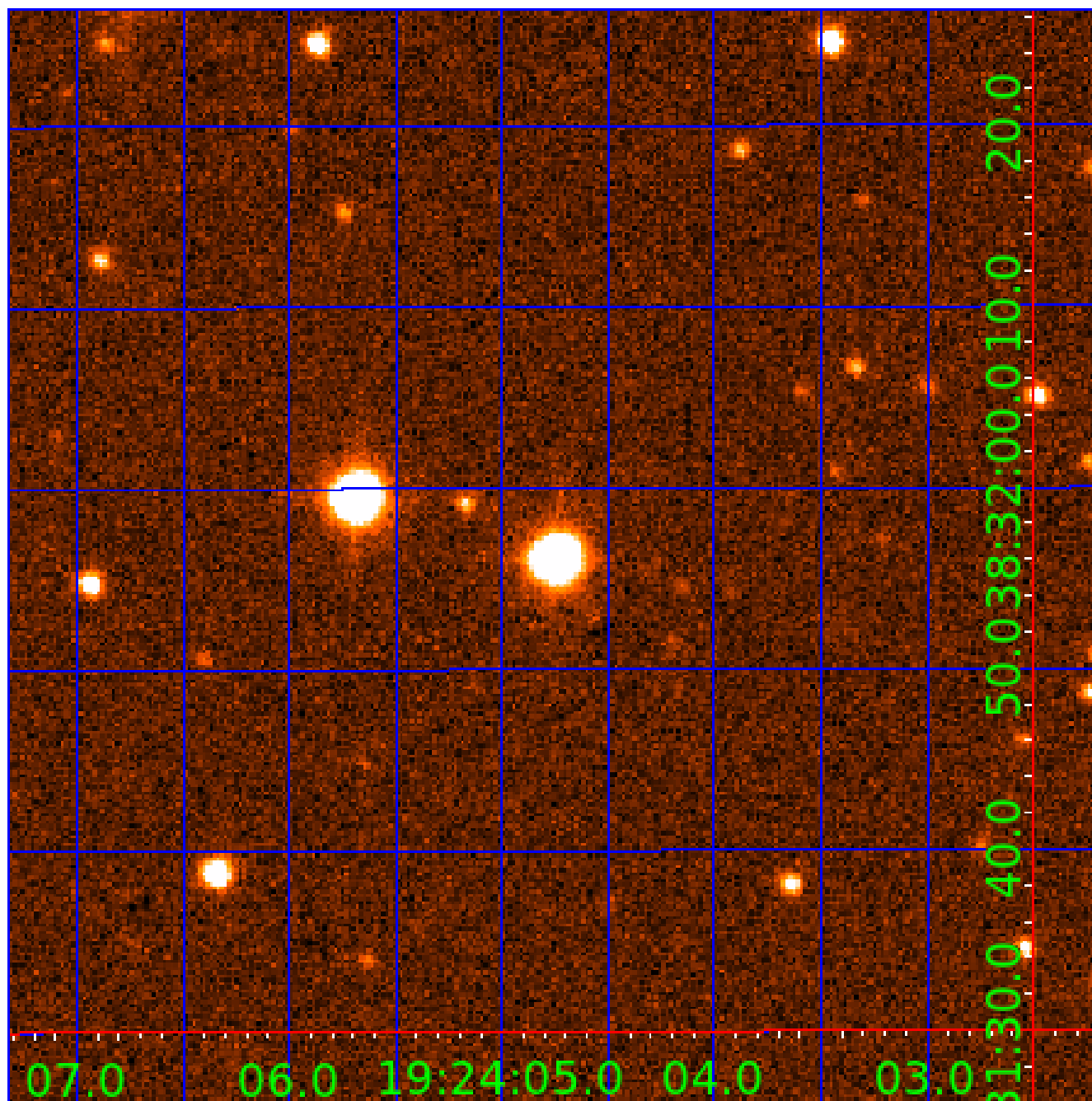
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 003442058

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})
003442058-01	OBS	No	1.430149	131.542444	250.2	2.000	15.0	-1.0	2.29	7703	3.65	18631.57
003442058-02	OBS	No	1.429946	132.052138	5.3	6.970	14.5	2.8	2.29	7703	0.54	18635.09
003442058-03	OBS	No	99.517576	214.349712	162.7	11.908	15.3	6.5	2.29	7703	3.38	65.10
003442058-04	OBS	No	1.430006	132.899421	17.8	14.199	14.9	7.7	2.29	7703	1.09	18634.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003442058-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_NOFITS
003442058-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003442058-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
003442058-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

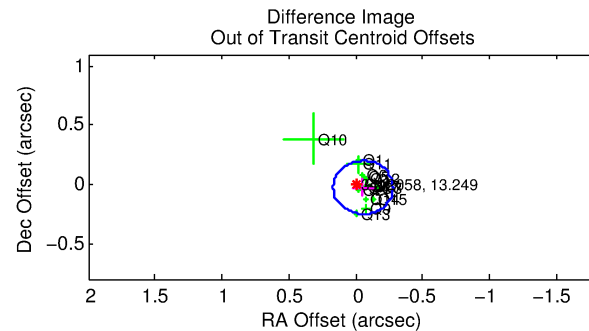
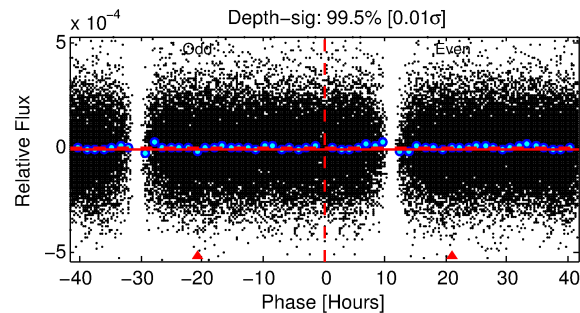
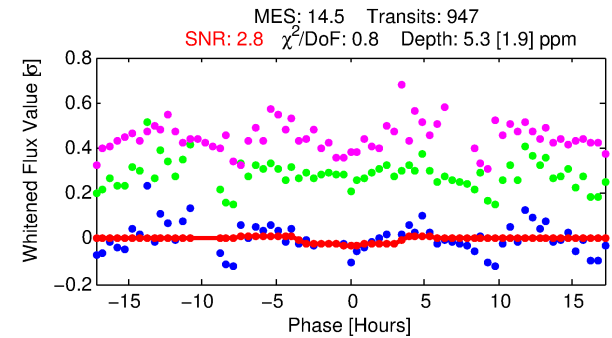
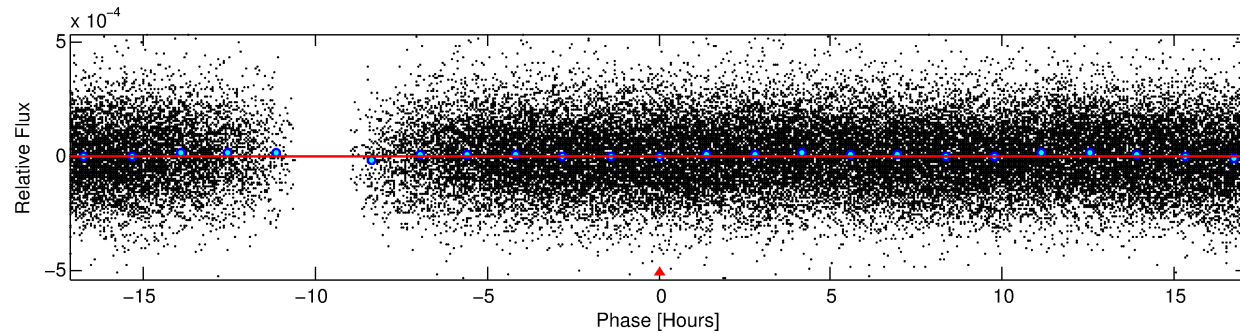
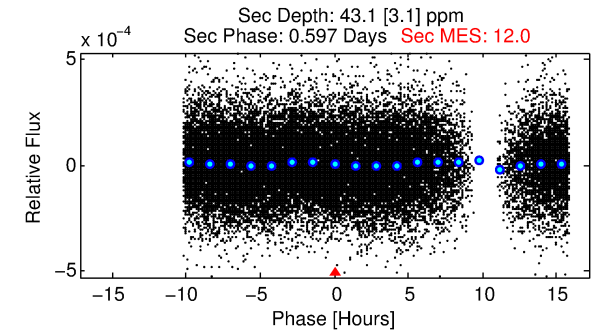
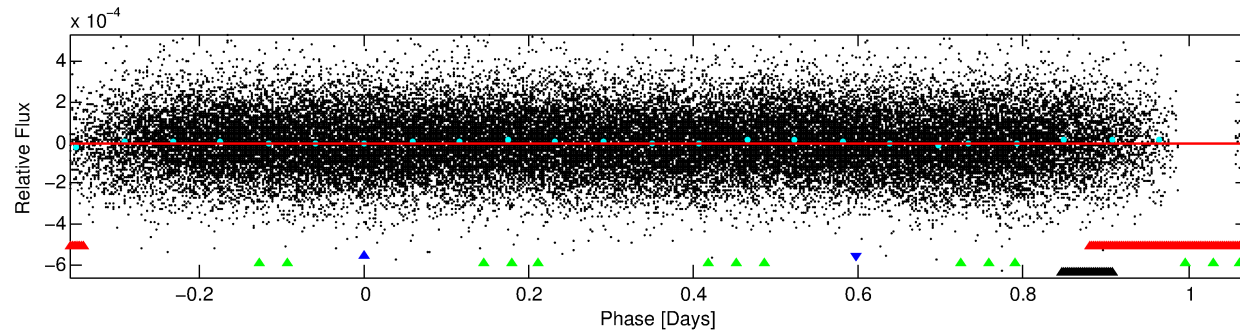
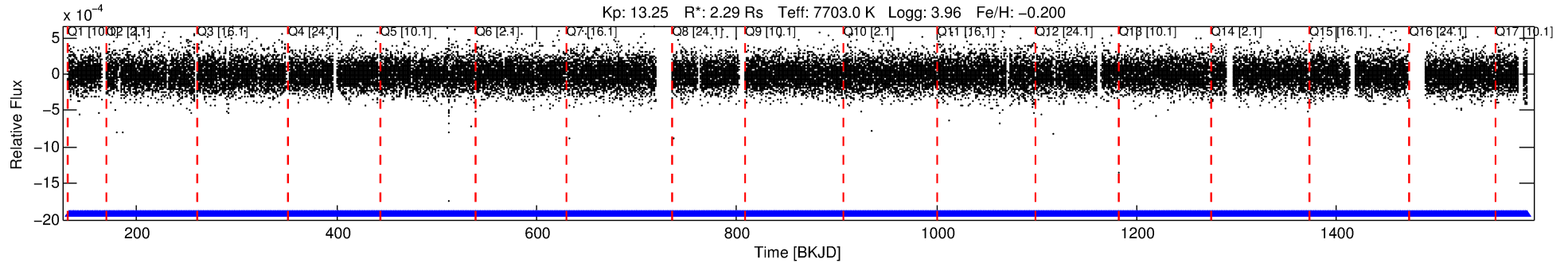
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003442058-02

No Significant Match Found

DV One-Page Summary

KIC: 3442058 Candidate: 2 of 4 Period: 1.430 d



DV Fit Results:

Period = 1.42995 [0.00006] d
Epoch = 132.0521 [0.0192] BKJD
Rp/R* = 0.0022 [0.0012]
a/R* = 1.54 [2.52]
b = 0.50 [4.27]
Seff = 18635.09 [8961.50]
Teq = 2979 [358] K
Rp = 0.54 [0.35] Re
a = 0.0298 [0.0087] AU
Ag = 71.62 [88.05] [0.80σ]
Teffp = 13400 [3869] K [2.68σ]

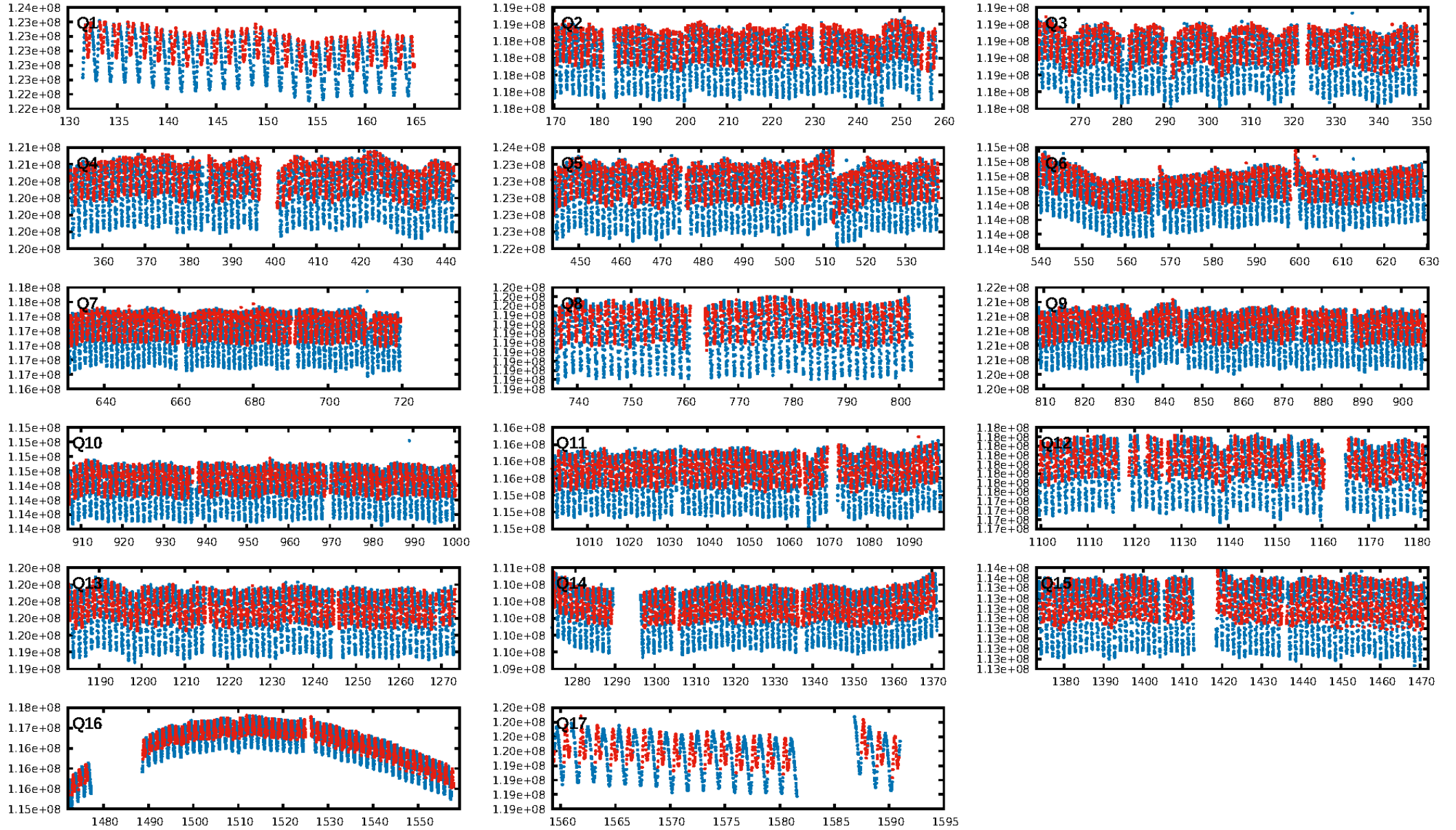
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [904/904]
GhostDiagnostic-chr: -1.187
Centroid-sig: 0.0%
Centroid-so: 18.002 arcsec [2.79σ]
OotOffset-rm: 0.059 arcsec [0.79σ]
KicOffset-rm: 0.038 arcsec [0.51σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

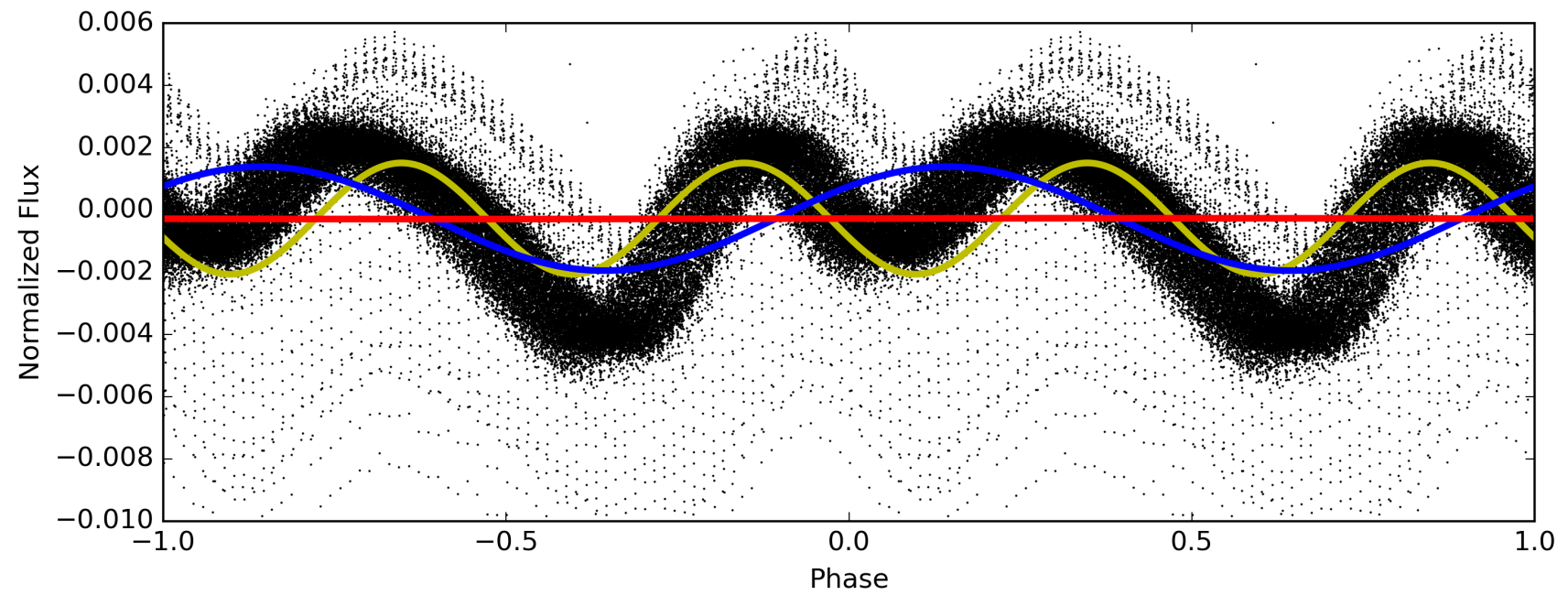
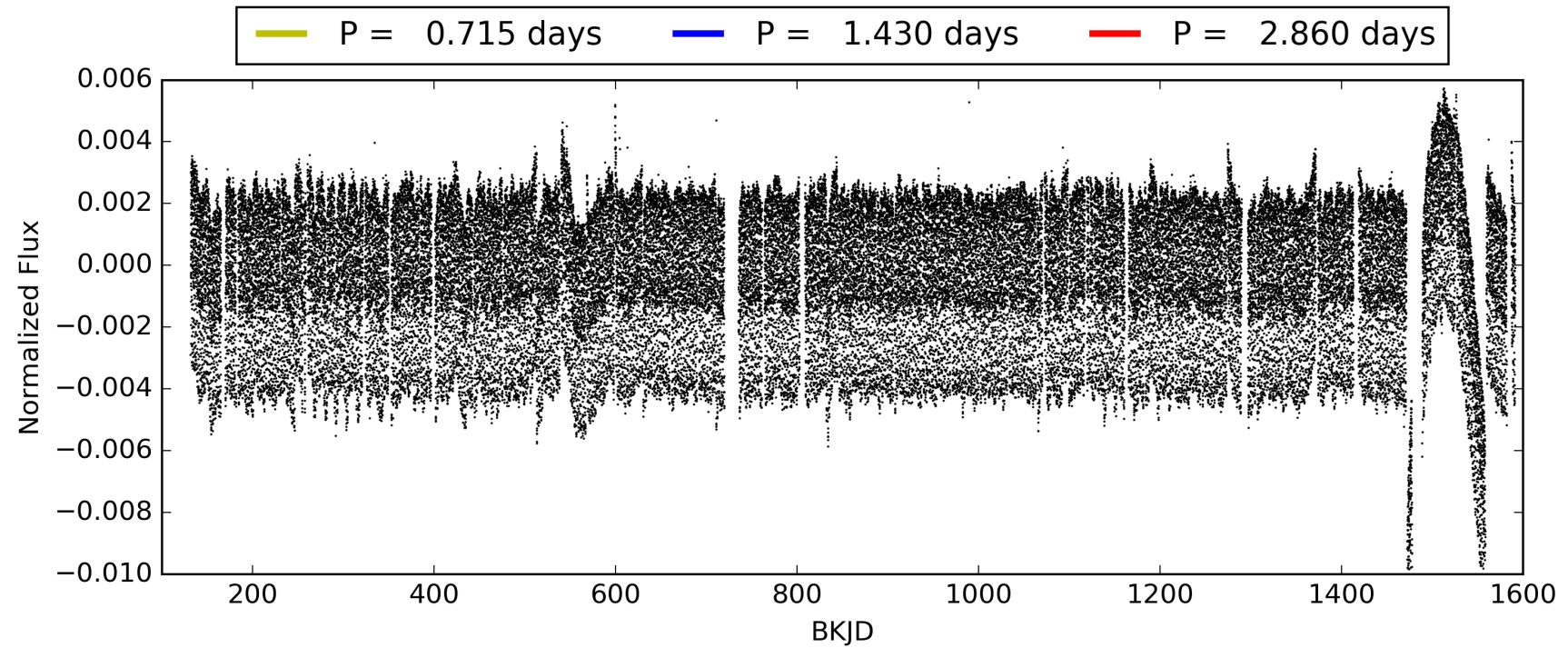
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:22:03 Z

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

TCE 003442058-02, PDC Light Curves

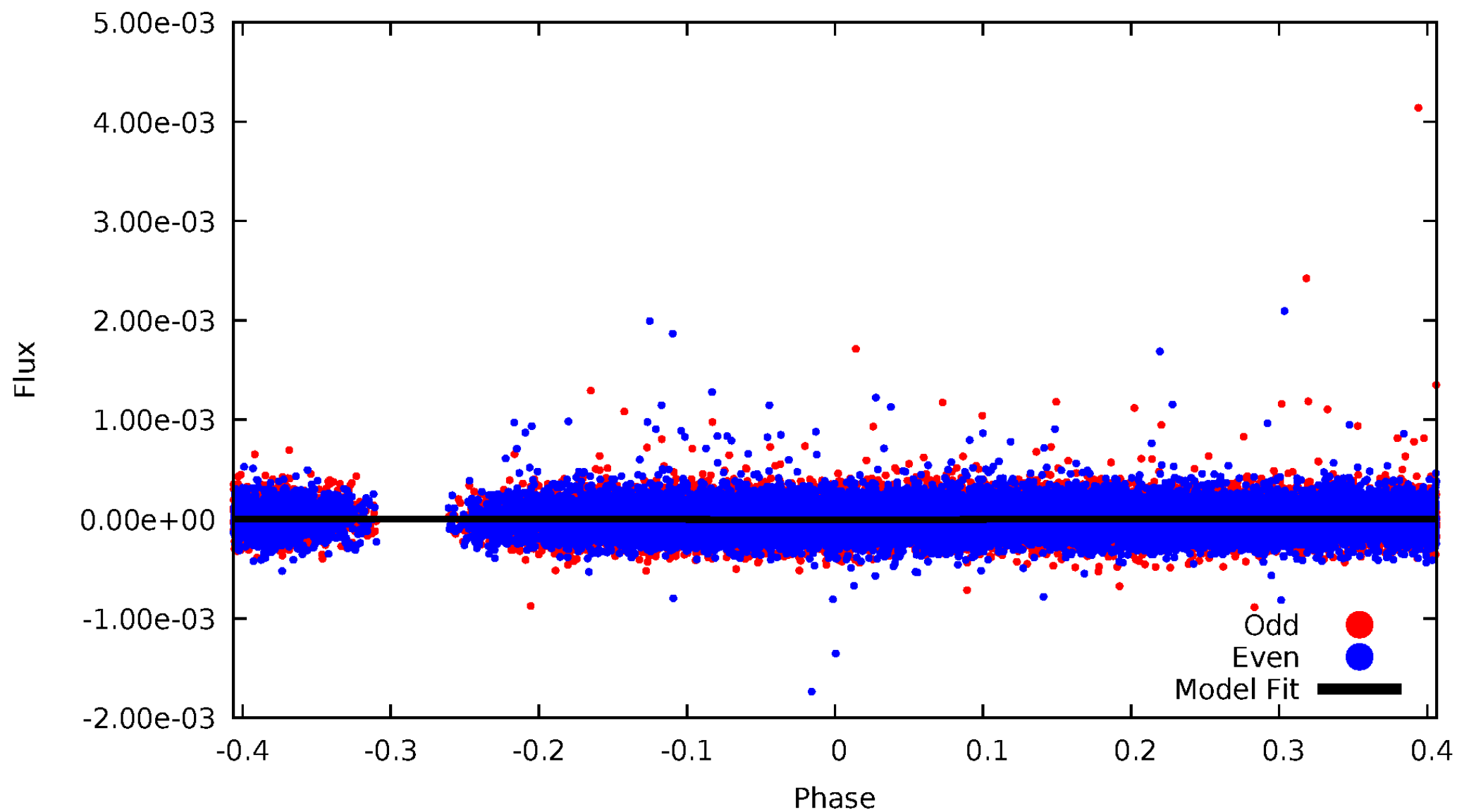


TCE 003442058-02



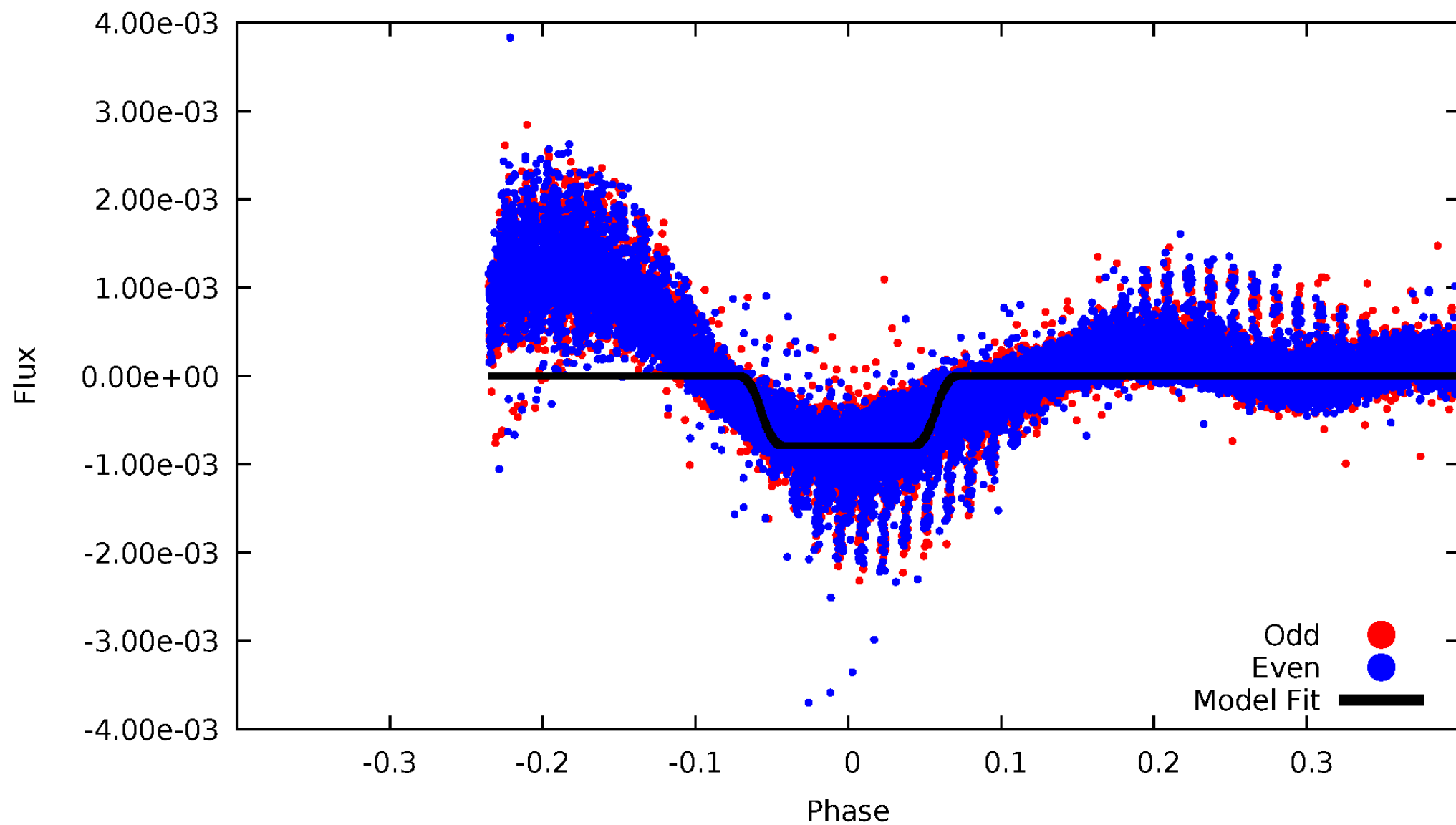
DV Odd/Even

TCE 003442058-02



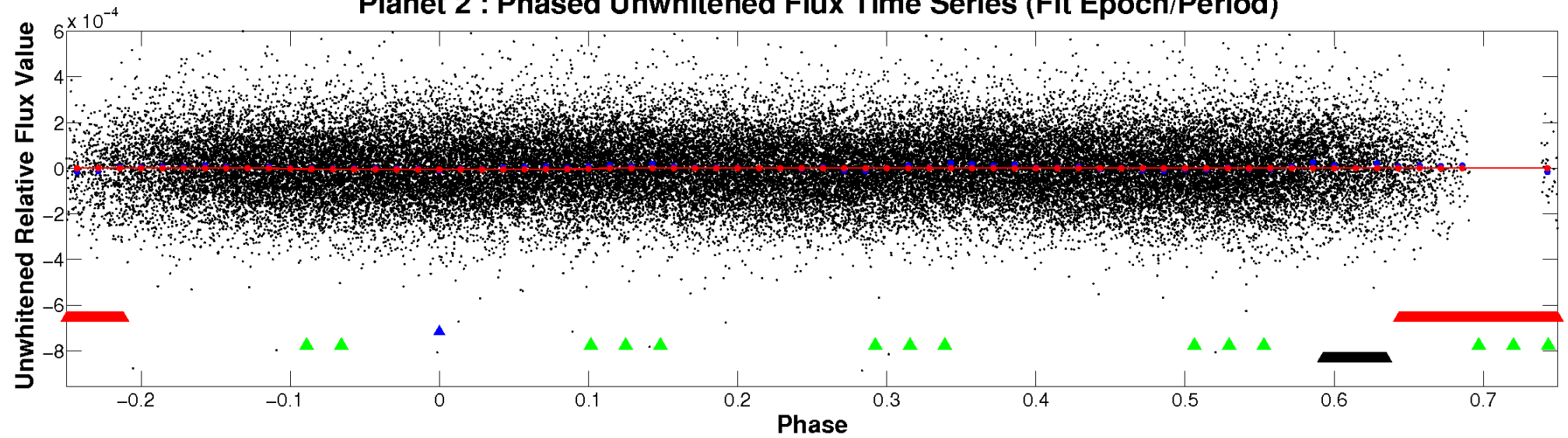
ALT Odd/Even

TCE 003442058-02

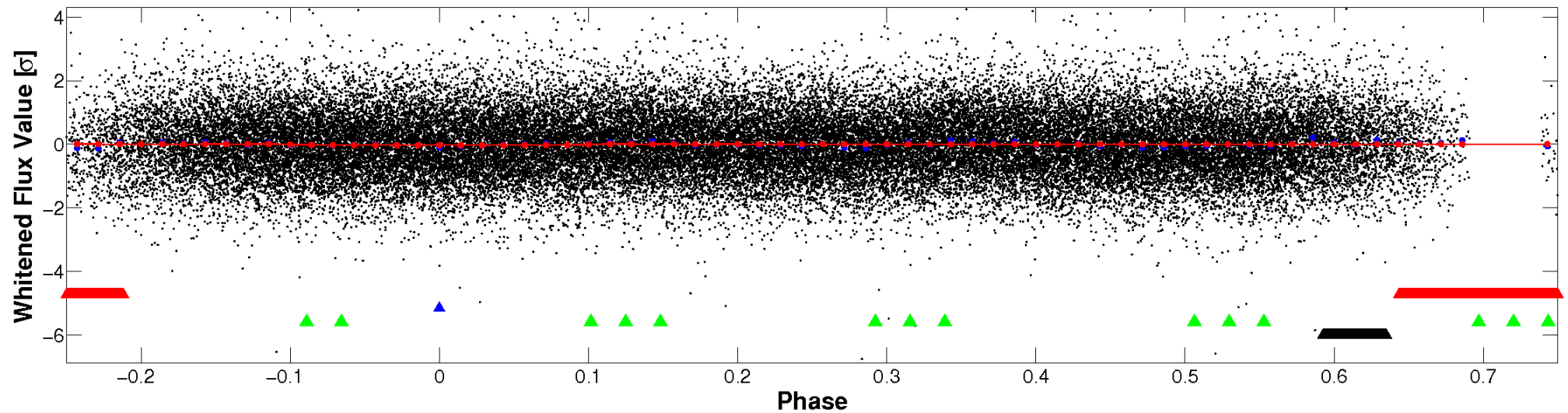


Non-Whitened Vs. Whitened Light Curve

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

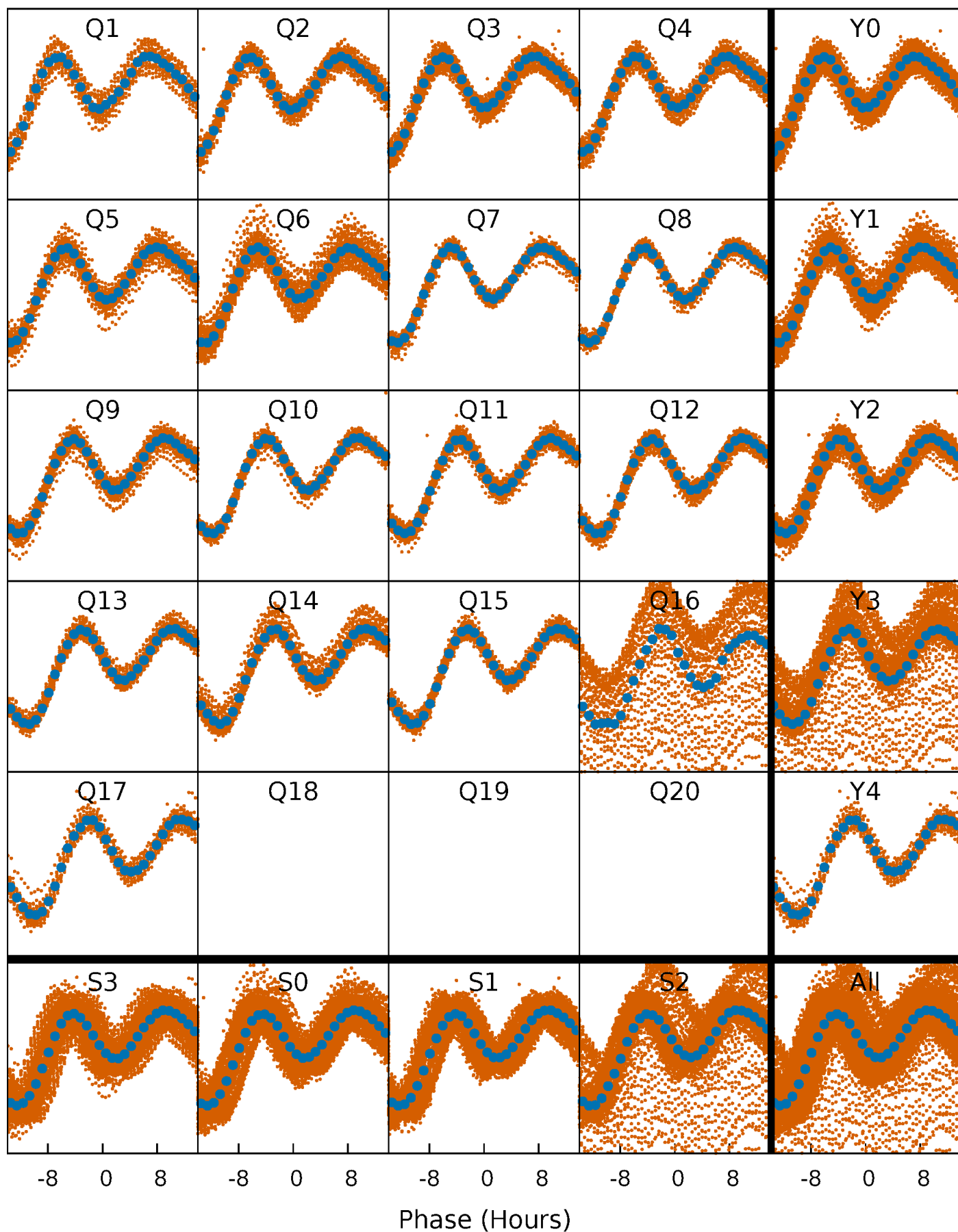


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



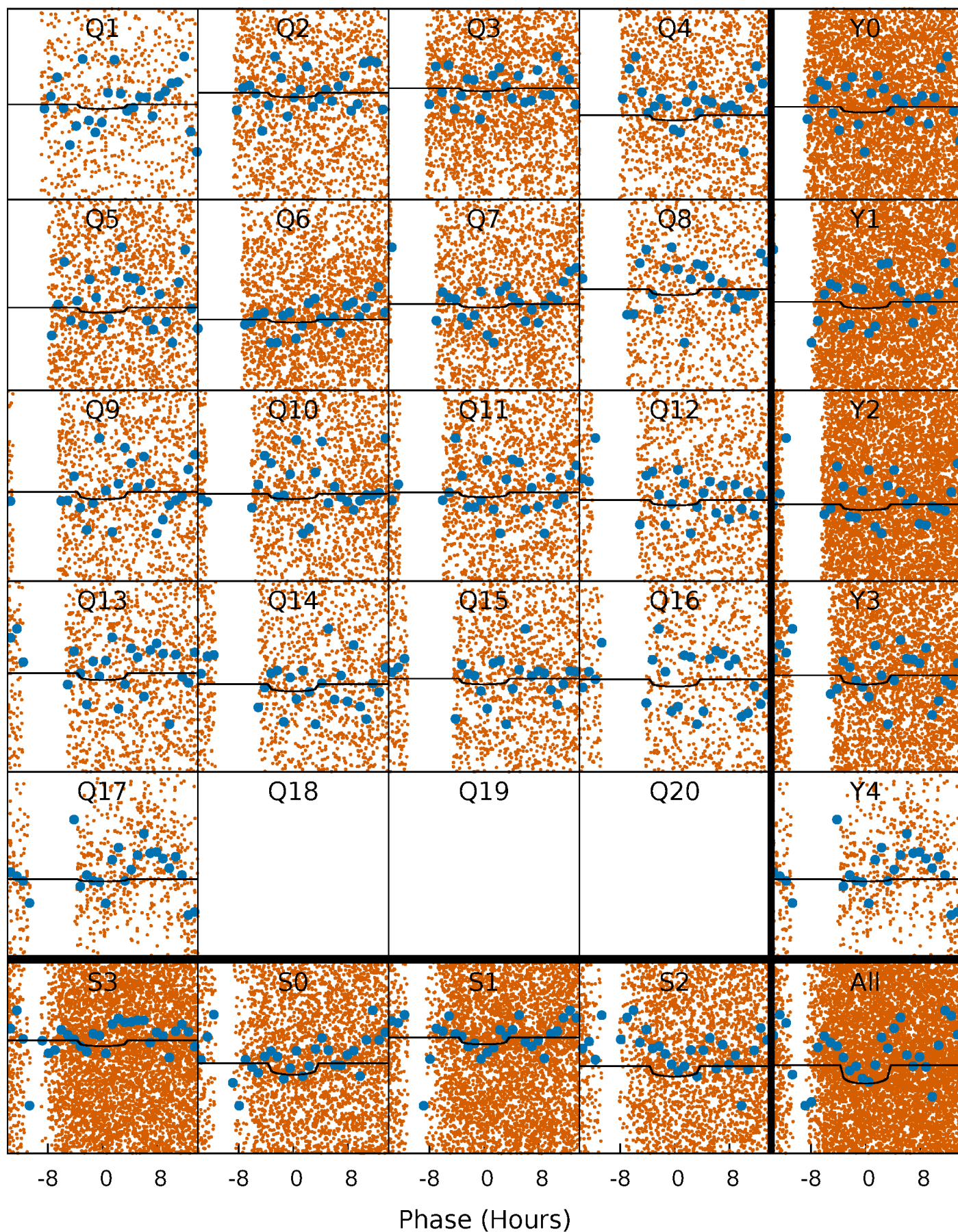
PDC Quarter-Phased Transit Curves

TCE 003442058-02 P= 1.429946 Days $T_0=132.052138$ (BKJD)



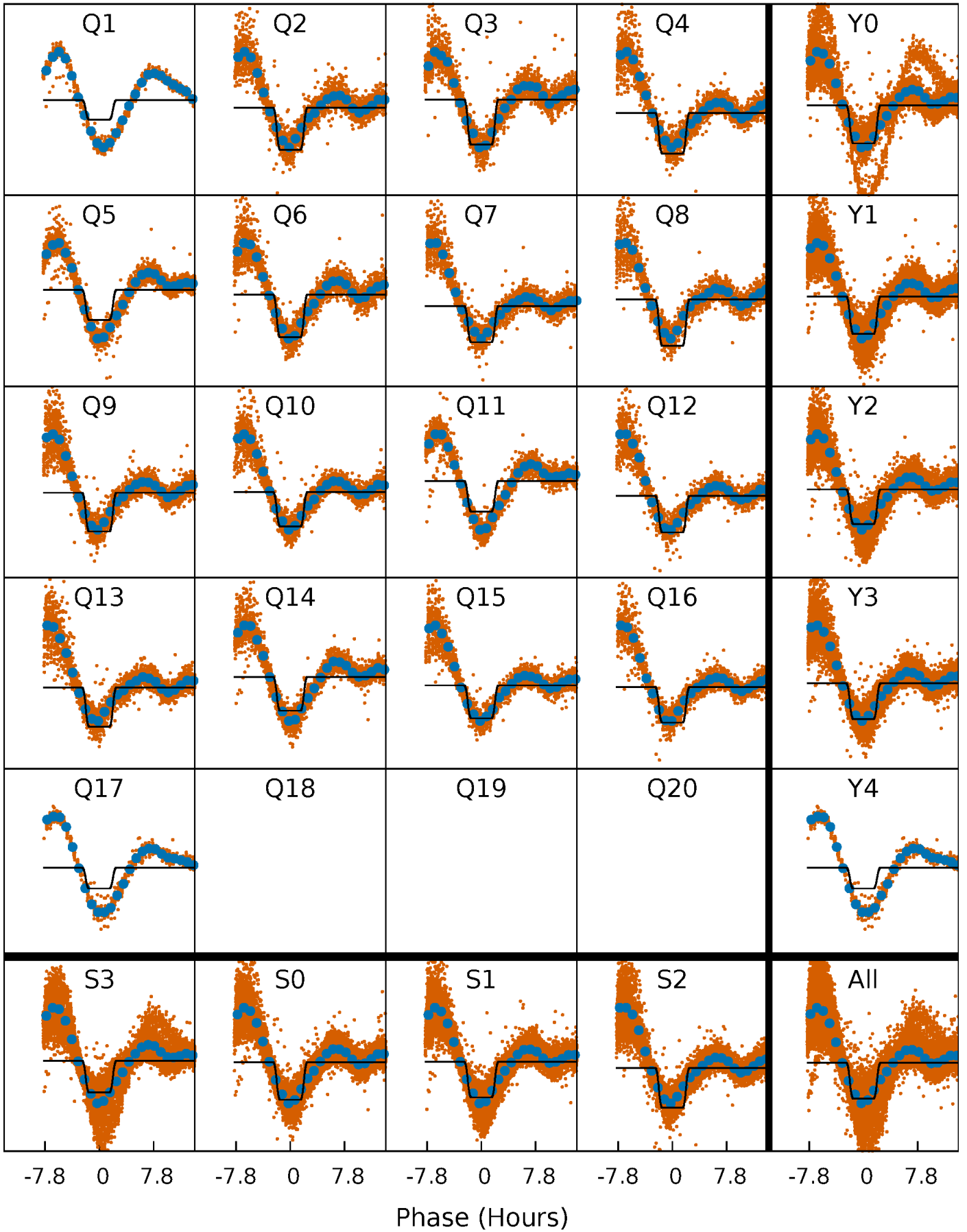
DV Quarter-Phased Transit Curves

TCE 003442058-02 P= 1.429946 Days $T_0=132.052138$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

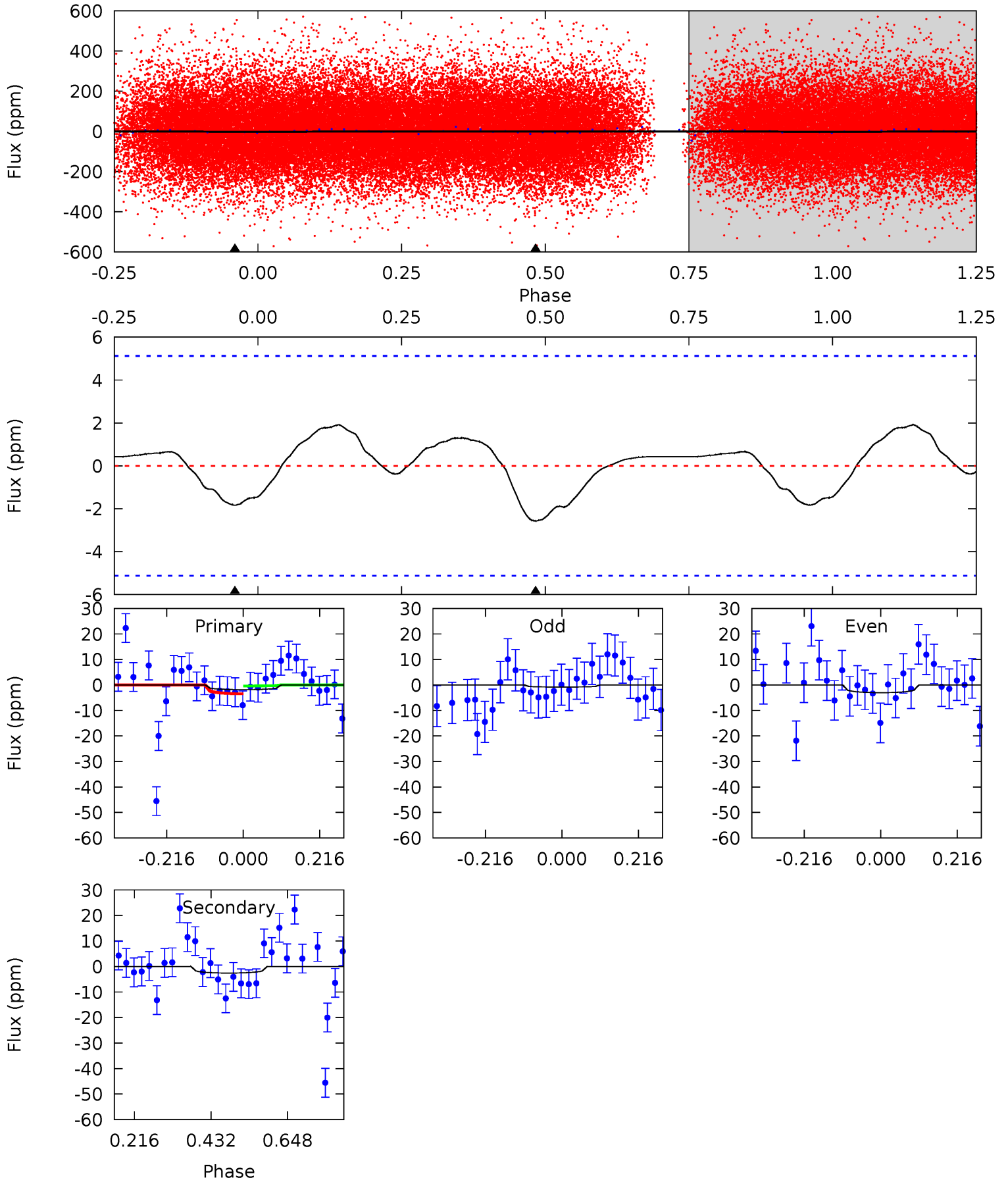
TCE 003442058-02 P= 1.430143 Days $T_0=132.014444$ (BKJD)



DV Model-Shift Uniqueness Test

003442058-02, P = 1.429946 Days, E = 130.622192 Days

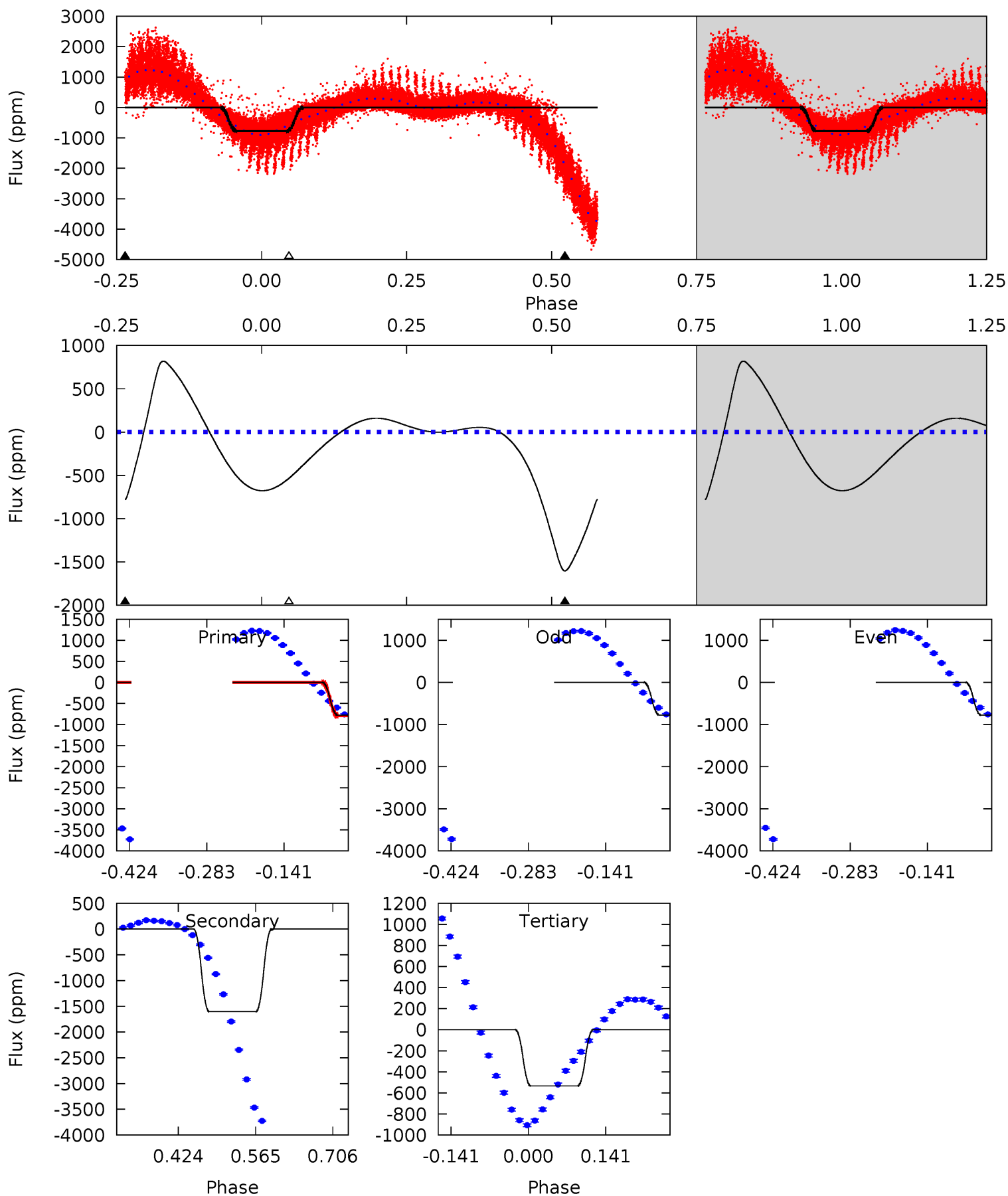
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.58	2.21	0	0	4.40	1.24	0.37	1.58	1.58	2.21	2.21	0.94	-0.57	0.43	1.32



Alt Model-Shift Uniqueness Test

003442058-02, P = 1.430143 Days, E = 130.584301 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
259.1	533.8	177.7	0	4.49	1.47	94.0	81.3	259.1	356.1	533.8	0.20	1.14	0.34	11.2



Stellar Parameters For KIC 003442058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7703^{+237}_{-316}	$3.955^{+0.260}_{-0.140}$	$-0.200^{+0.200}_{-0.350}$	$2.290^{+0.486}_{-0.729}$	$1.725^{+0.184}_{-0.341}$	$0.202^{+0.371}_{-0.082}$
	+3%/-4%	+7%/-4%	+100%/-175%	+21%/-32%	+11%/-20%	+183%/-40%
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 003442058-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.52^{+0.31}_{-0.28}$	4104^{+311}_{-385}	6269^{+3614}_{-1523}	$4.355^{+14.879}_{-2.915}$
Alt.	-1603 ± 3	$6.84^{+0.99}_{-1.13}$	4109^{+287}_{-342}	9608^{+555}_{-485}	17^{+6}_{-4}

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

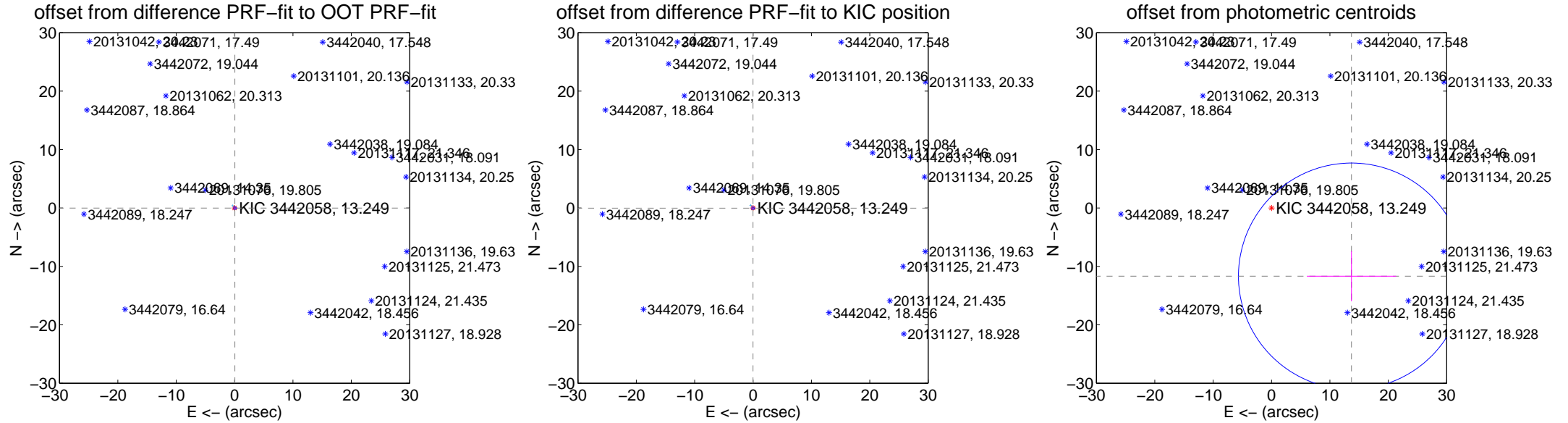
DV Centroid Data

Supplemental centroid analysis for 003442058-02. Kepler magnitude: 13.25. Transit SNR 2.80

There are 10 quarters with good PRF difference image offsets

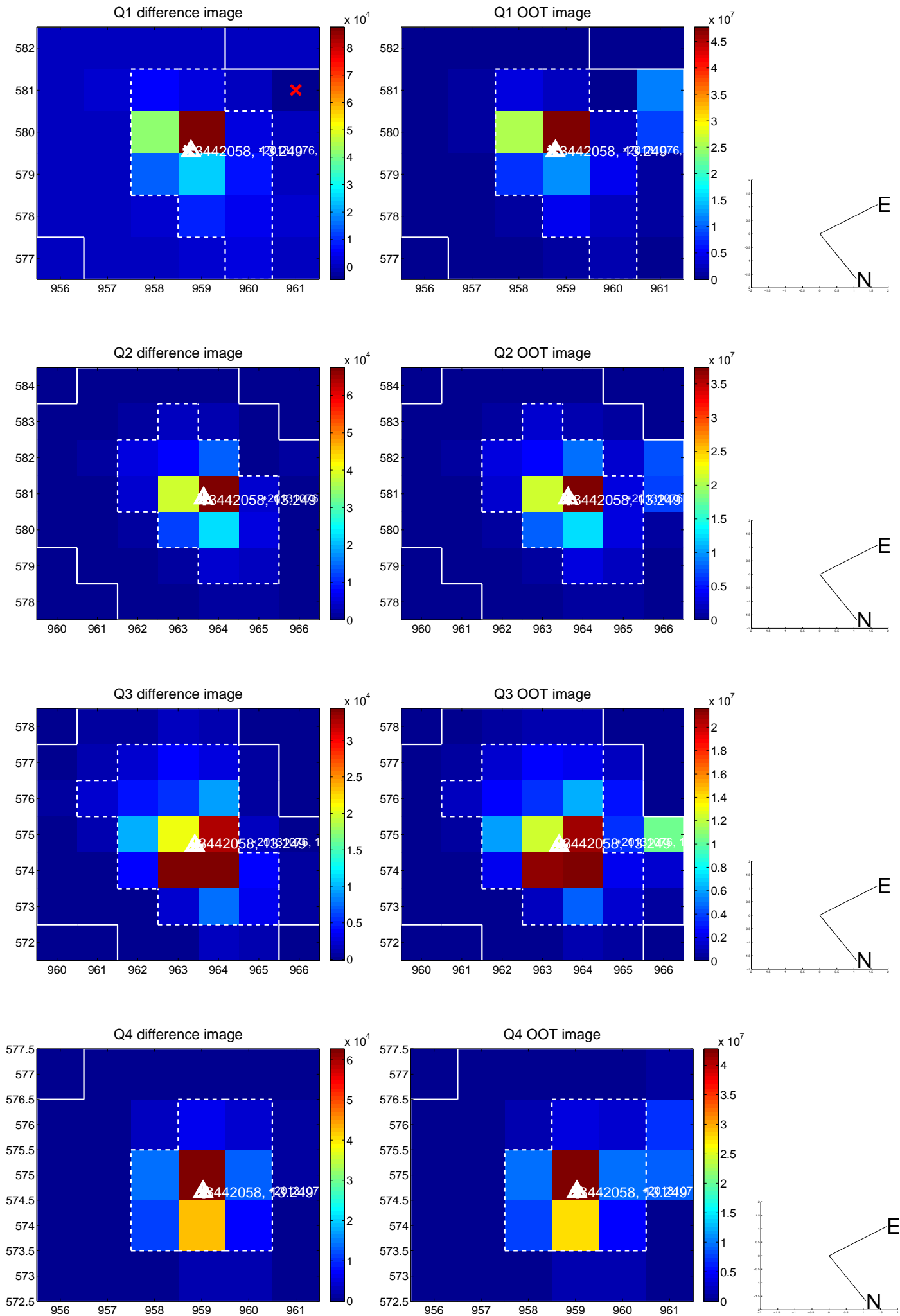
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.059 ± 0.075	0.79	-0.053 ± 0.071	-0.026 ± 0.075
PRF-fit source offset from KIC position	0.038 ± 0.075	0.51	0.011 ± 0.072	-0.037 ± 0.078
photometric centroid source offset	18.00 ± 6.45	2.79	-13.70 ± 7.65	-11.68 ± 4.30

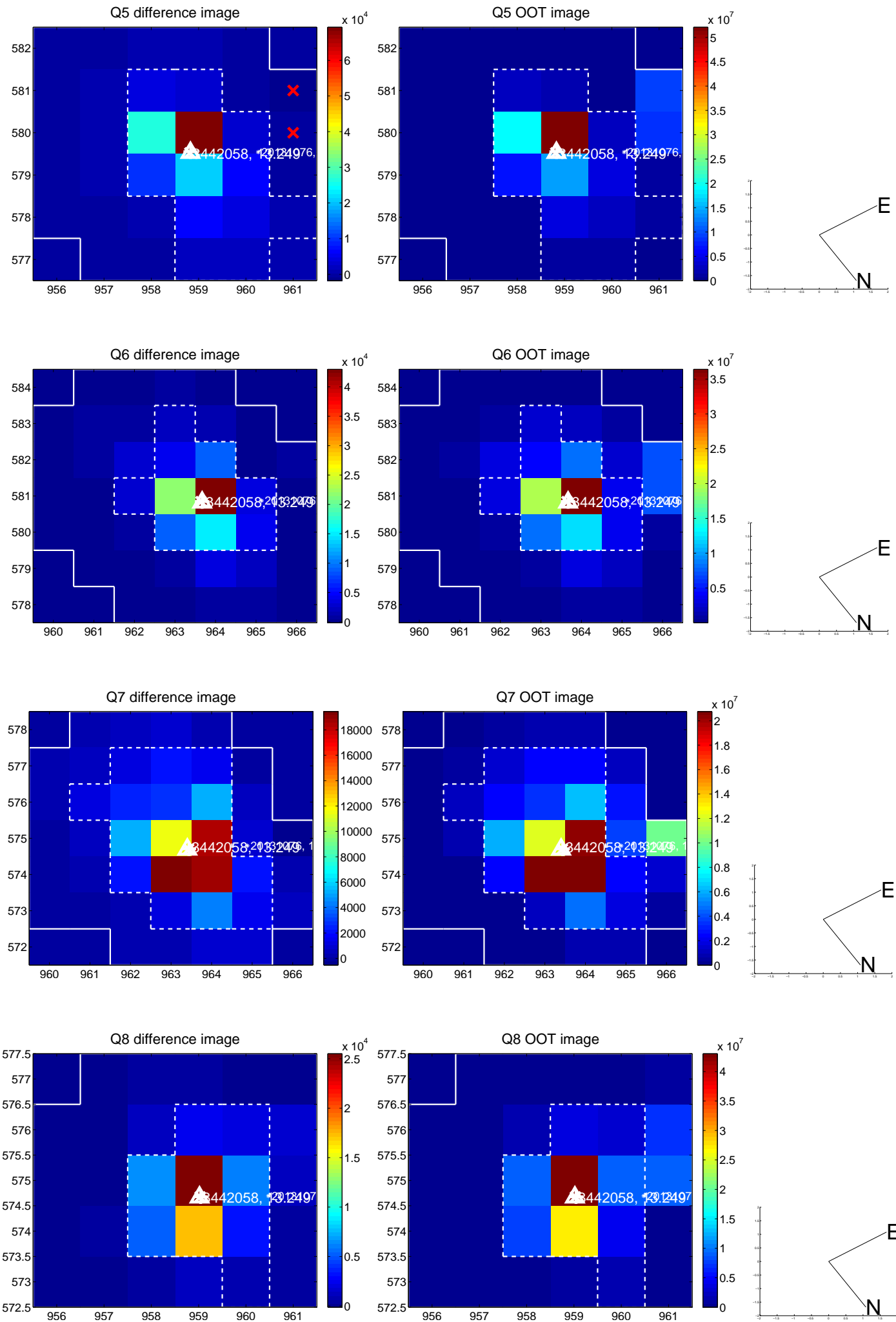


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

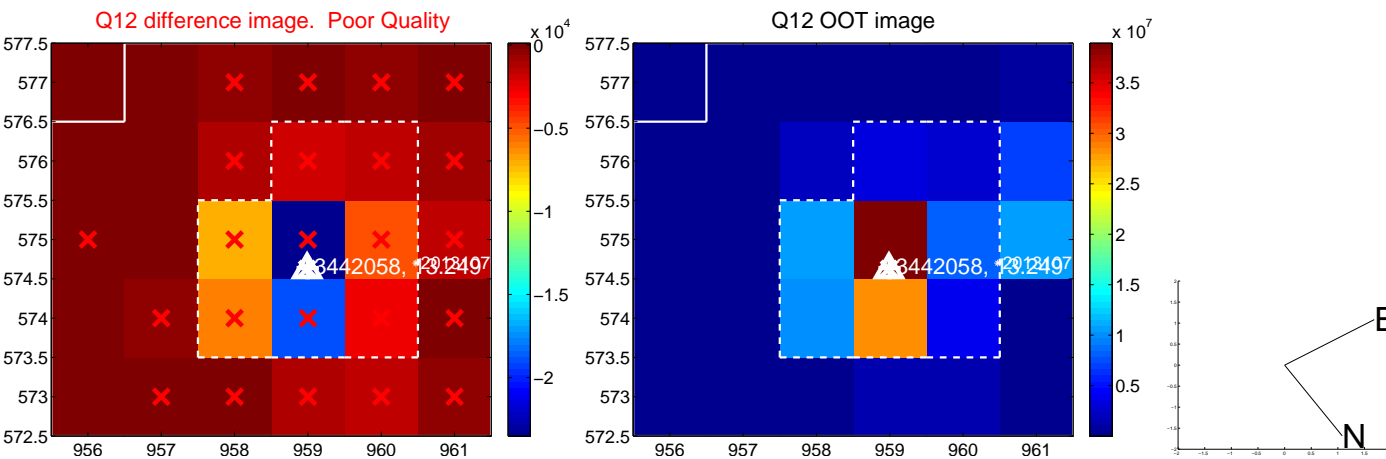
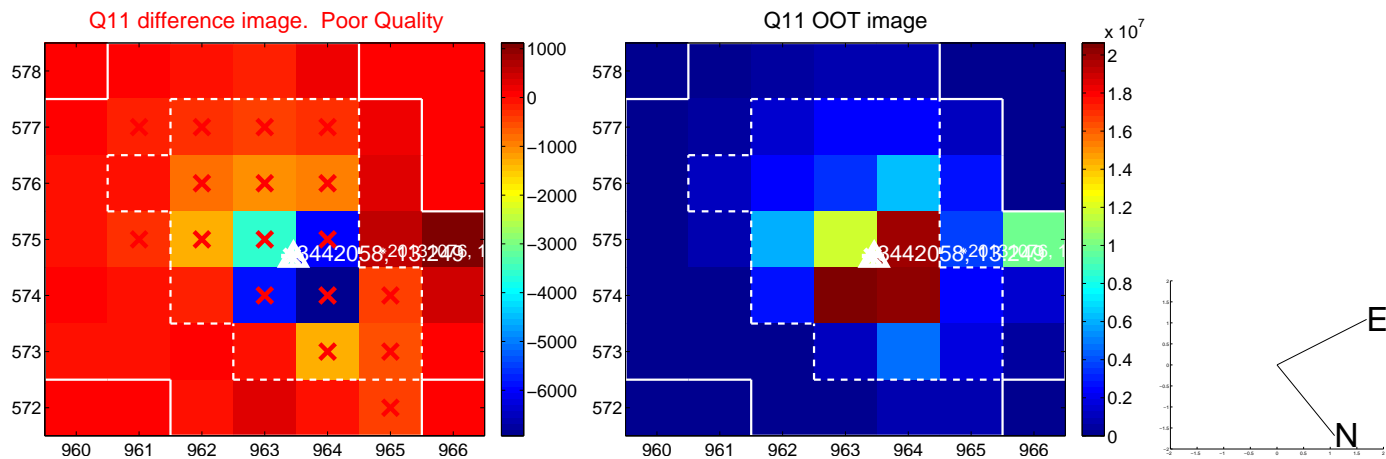
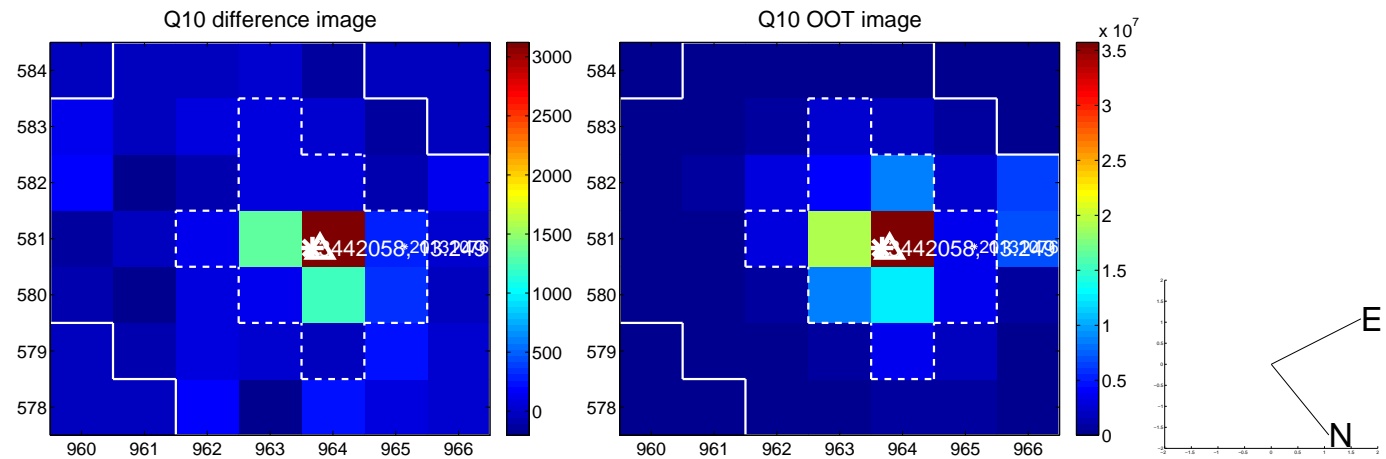
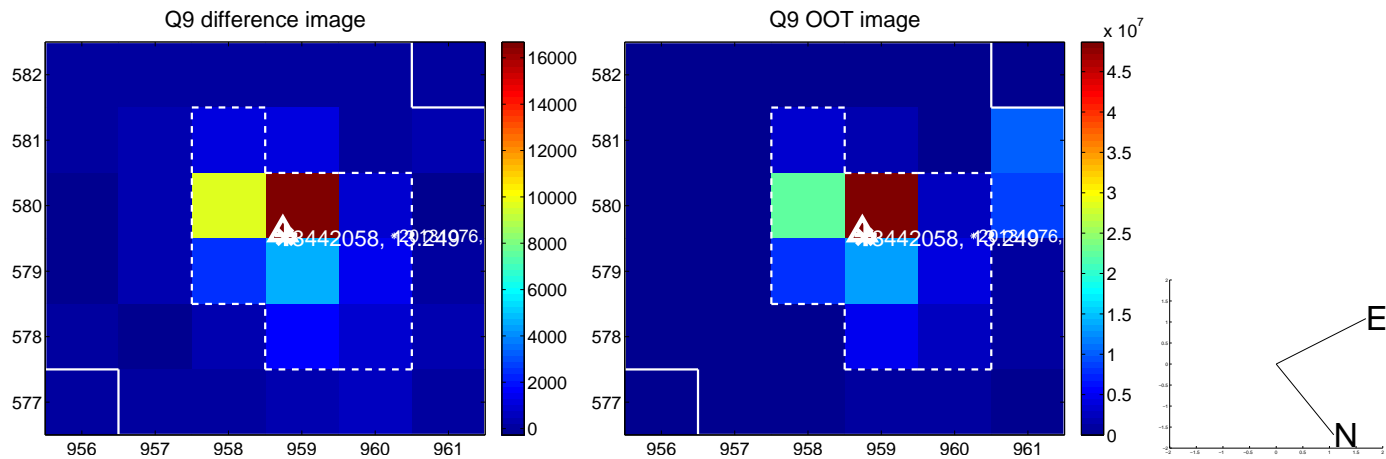
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



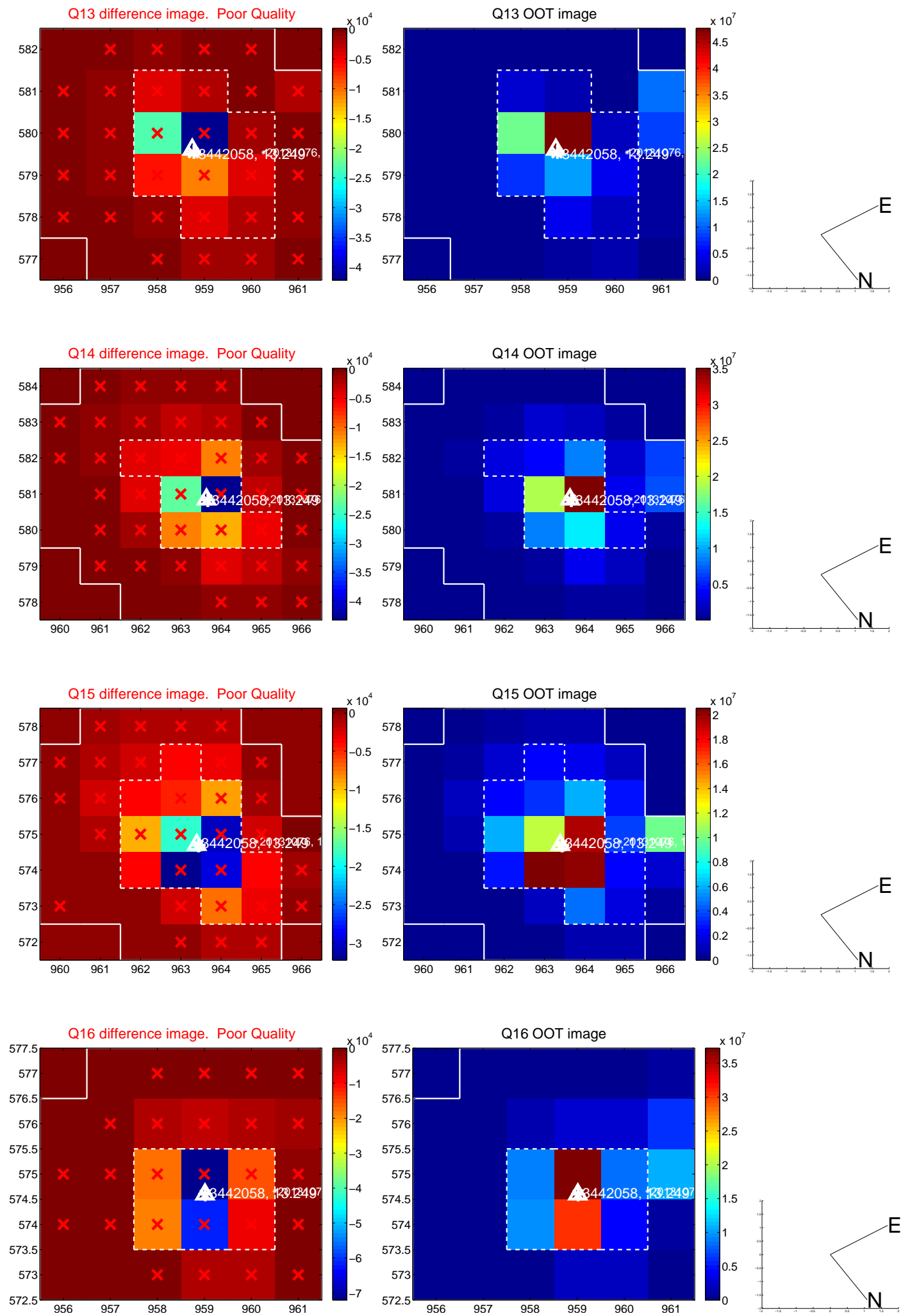
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



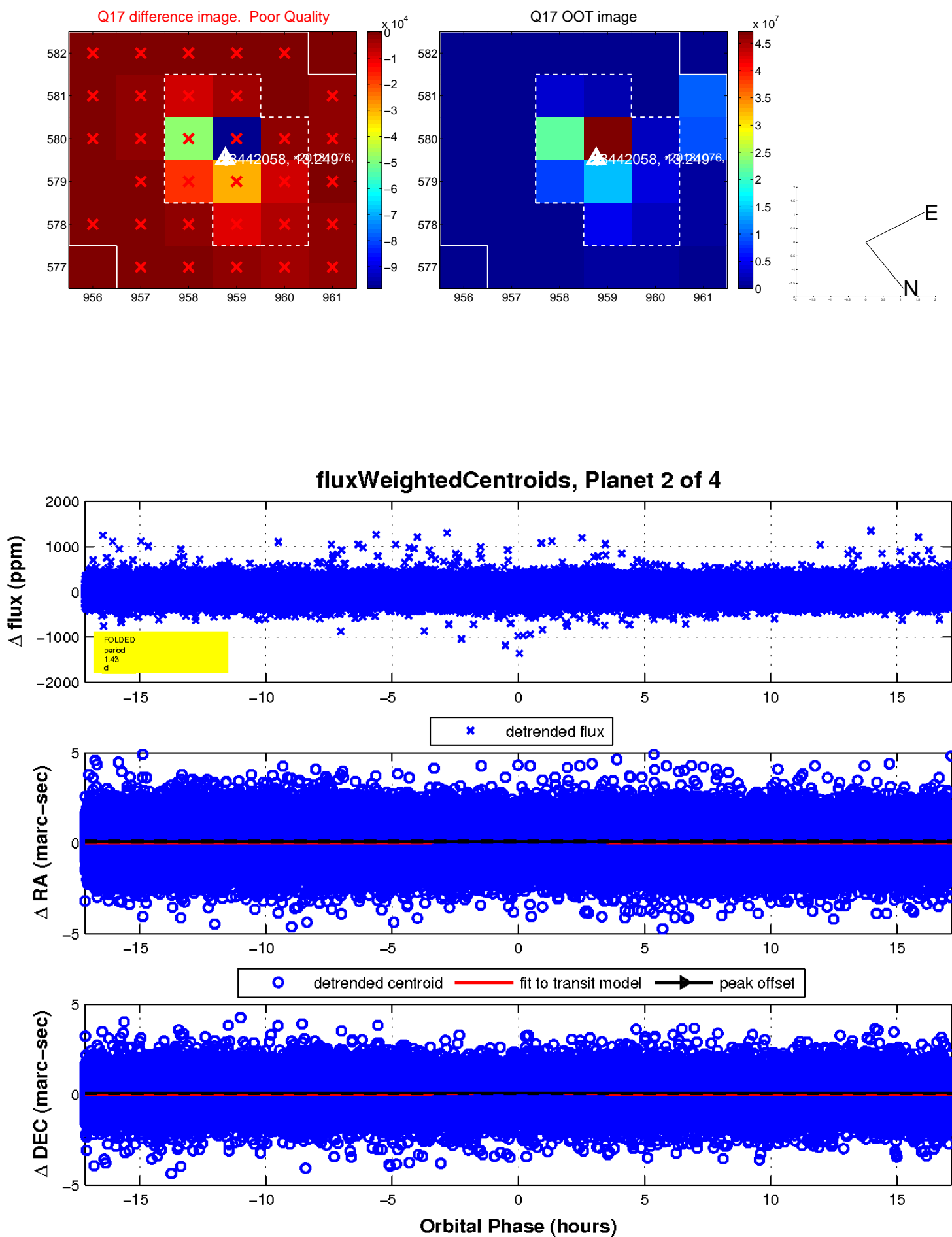
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

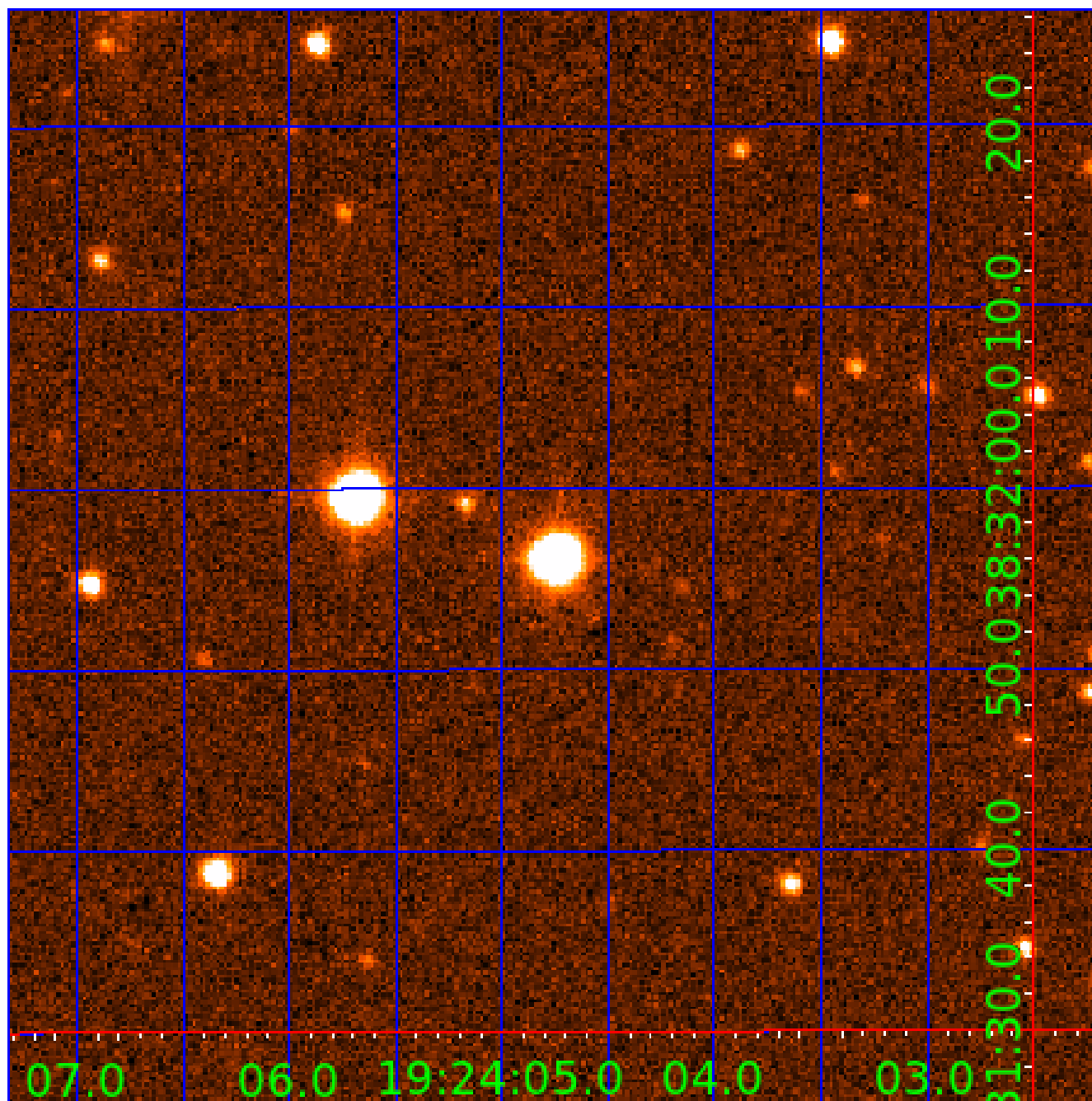


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003442058

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})
003442058-01	OBS	No	1.430149	131.542444	250.2	2.000	15.0	-1.0	2.29	7703	3.65	18631.57
003442058-02	OBS	No	1.429946	132.052138	5.3	6.970	14.5	2.8	2.29	7703	0.54	18635.09
003442058-03	OBS	No	99.517576	214.349712	162.7	11.908	15.3	6.5	2.29	7703	3.38	65.10
003442058-04	OBS	No	1.430006	132.899421	17.8	14.199	14.9	7.7	2.29	7703	1.09	18634.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003442058-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_NOFITS
003442058-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003442058-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
003442058-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

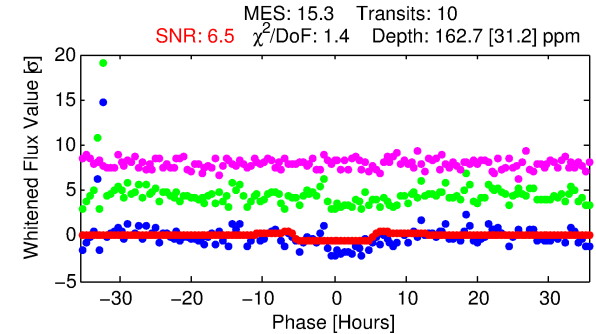
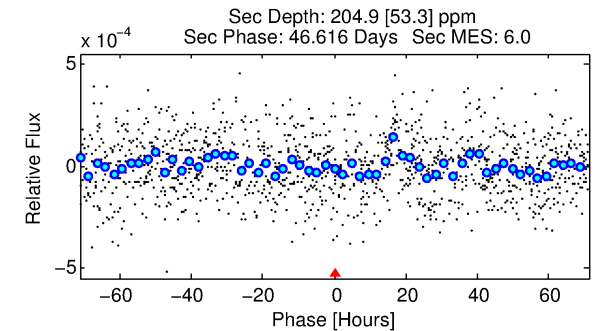
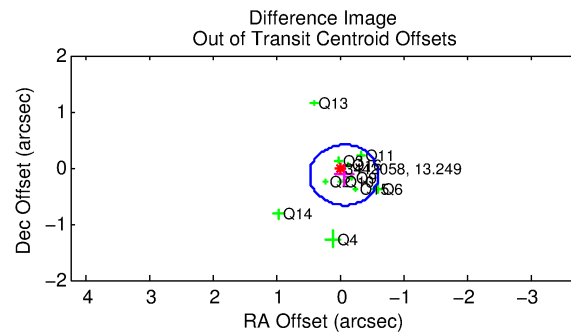
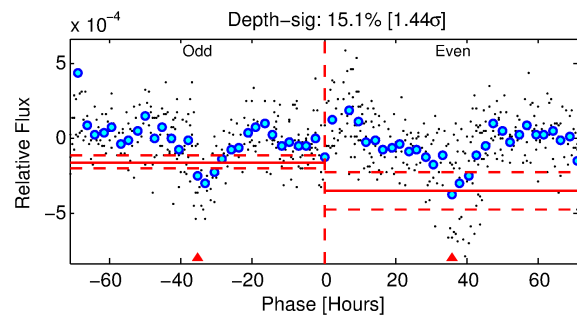
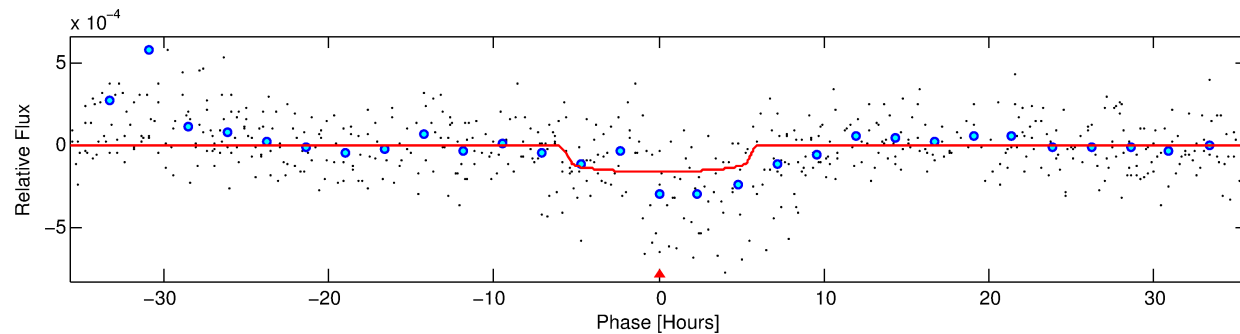
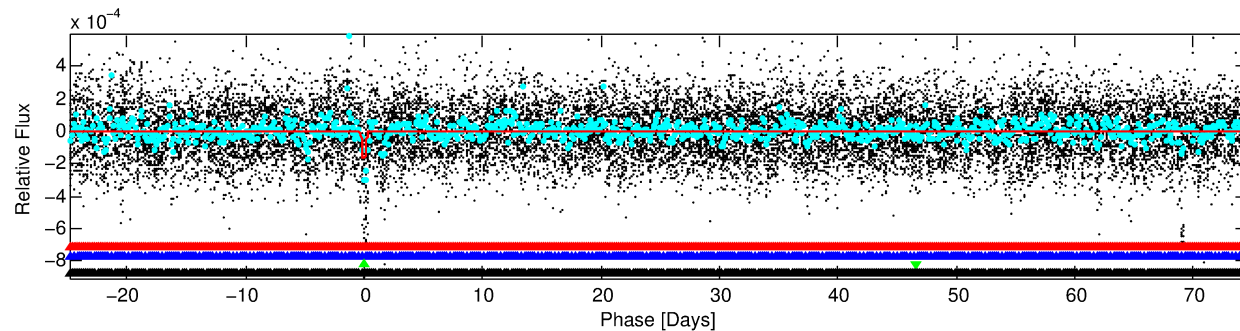
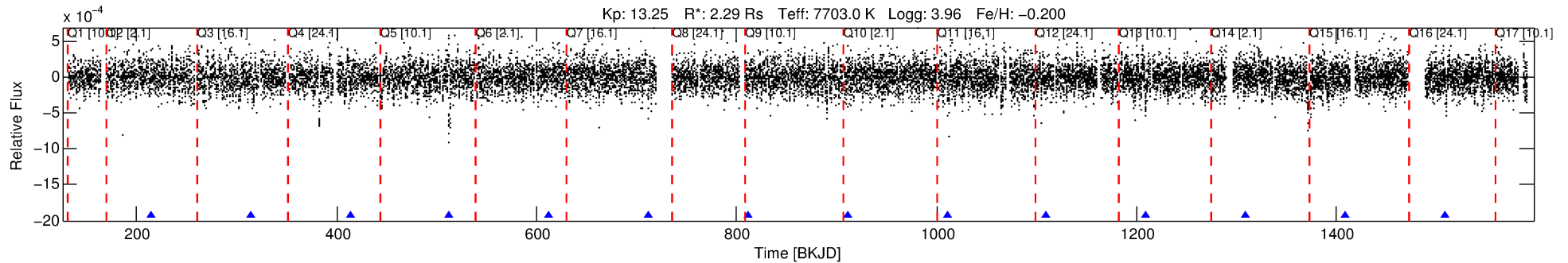
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003442058-03

No Significant Match Found

DV One-Page Summary

KIC: 3442058 Candidate: 3 of 4 Period: 99.518 d



DV Fit Results:

Period = 99.51758 [0.00265] d
Epoch = 214.3497 [0.0213] BKJD
Rp/R* = 0.0135 [0.0029]
a/R* = 31.83 [32.19]
b = 0.88 [0.26]
Seff = 65.10 [31.30]
Teq = 724 [87] K
Rp = 3.38 [1.30] Re
a = 0.5041 [0.1469] AU
Ag = 2510.46 [1694.02] [1.48 σ]
Teffp = 7927 [1045] K [6.87 σ]

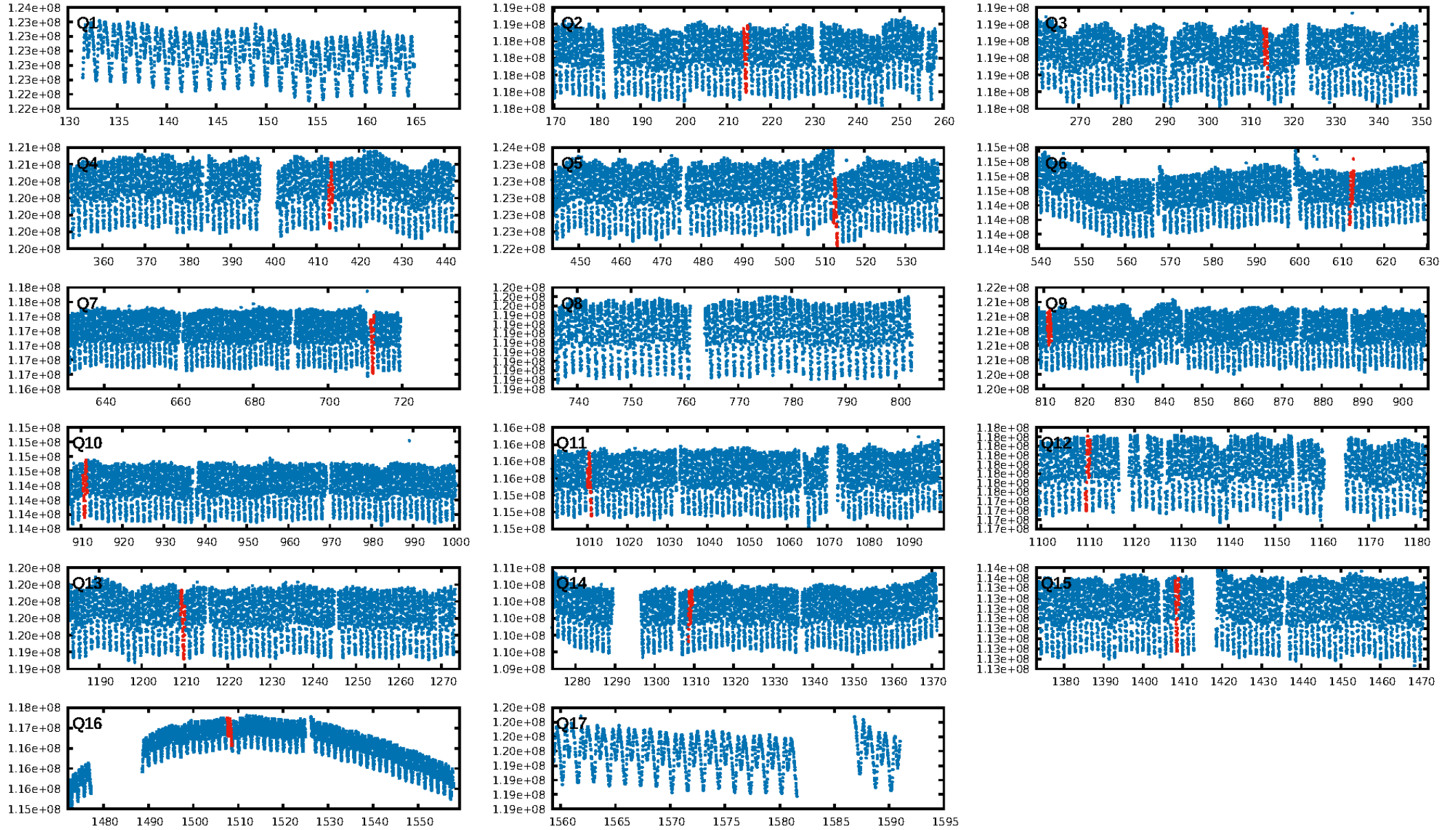
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [194.96 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 0.05201
Centroid-sig: 1.0%
Centroid-so: 2.134 arcsec [1.41 σ]
OotOffset-rm: 0.142 arcsec [0.79 σ]
KicOffset-rm: 0.157 arcsec [0.80 σ]
OotOffset-st: 4/3/2/2 [11]
KicOffset-st: 4/3/2/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.00 [0/12]

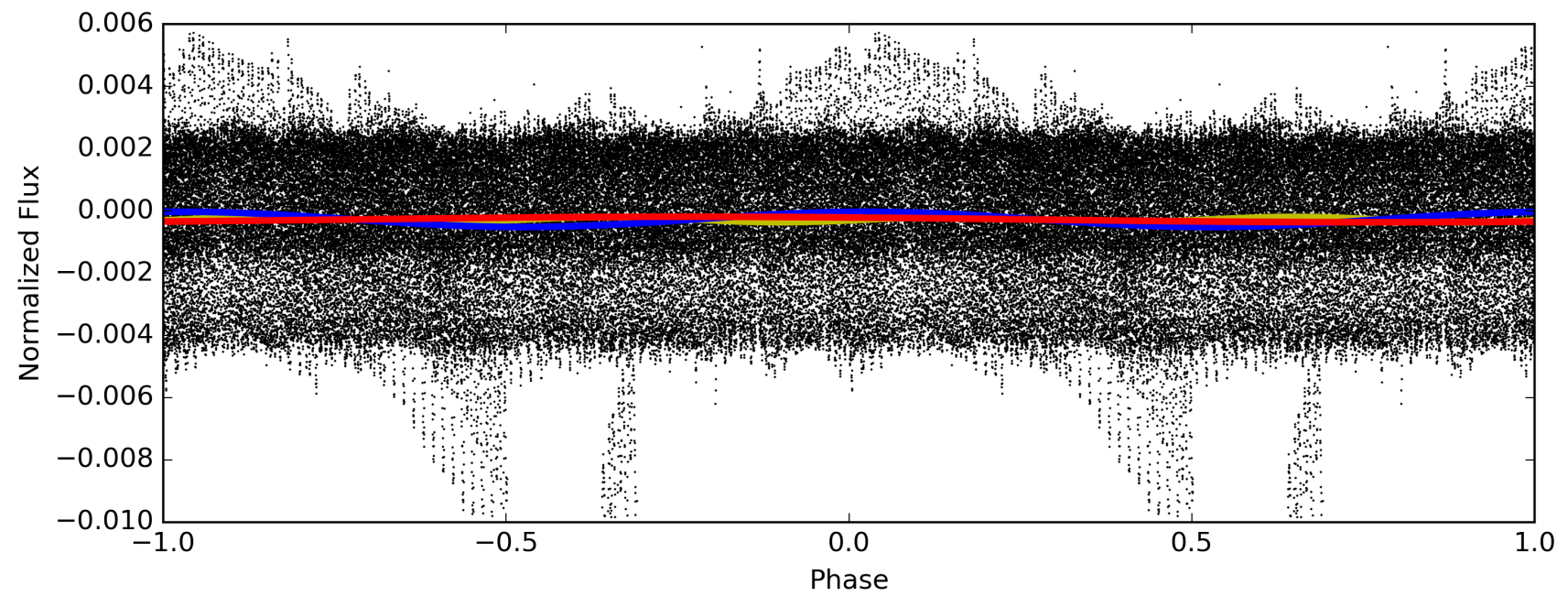
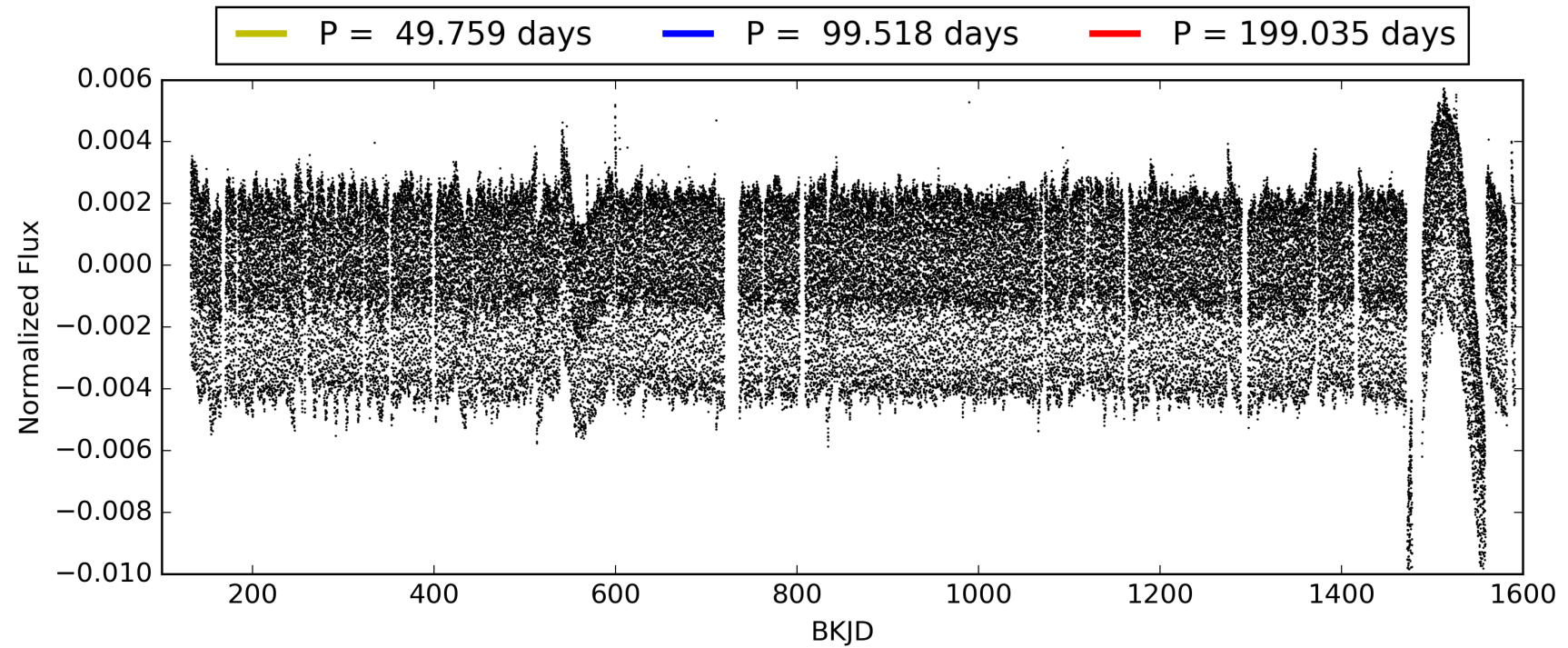
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:22:13 Z

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

TCE 003442058-03, PDC Light Curves

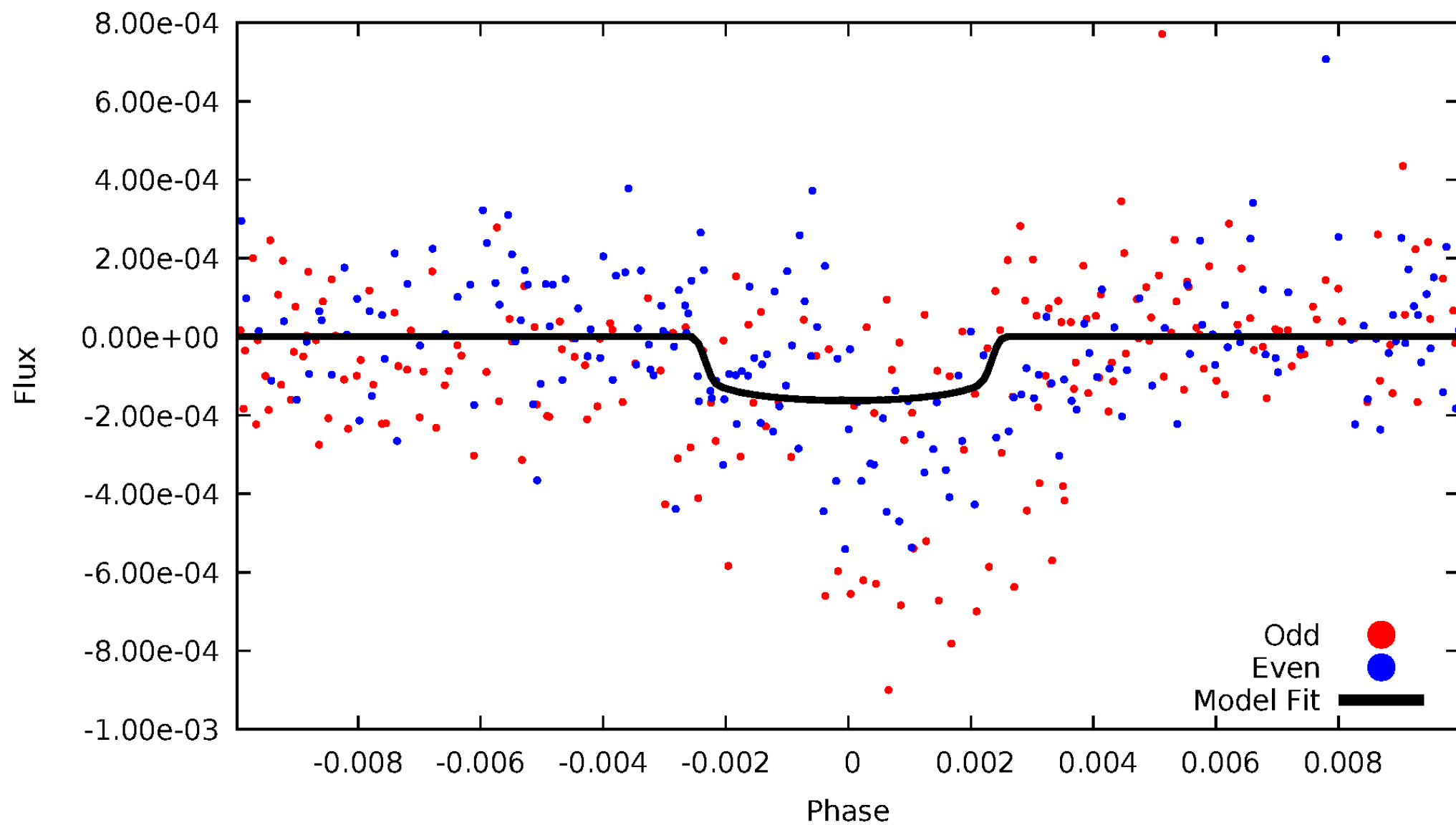


TCE 003442058-03



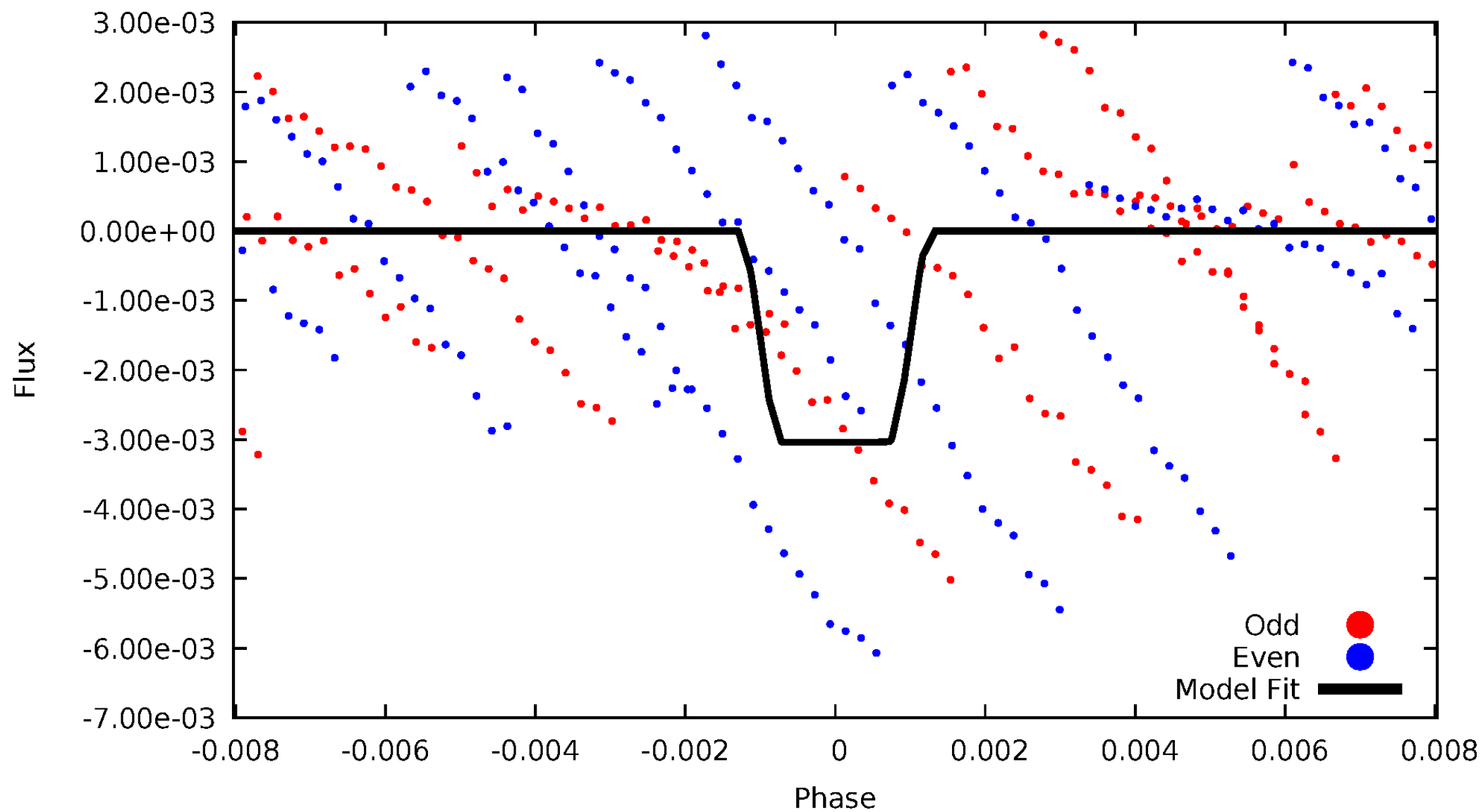
DV Odd/Even

TCE 003442058-03



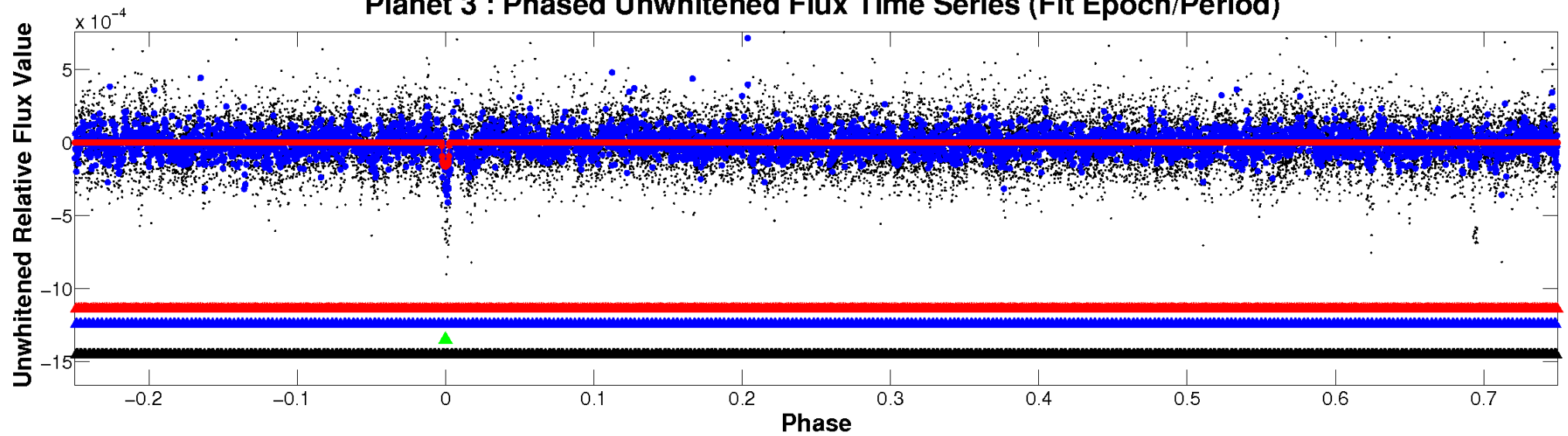
ALT Odd/Even

TCE 003442058-03

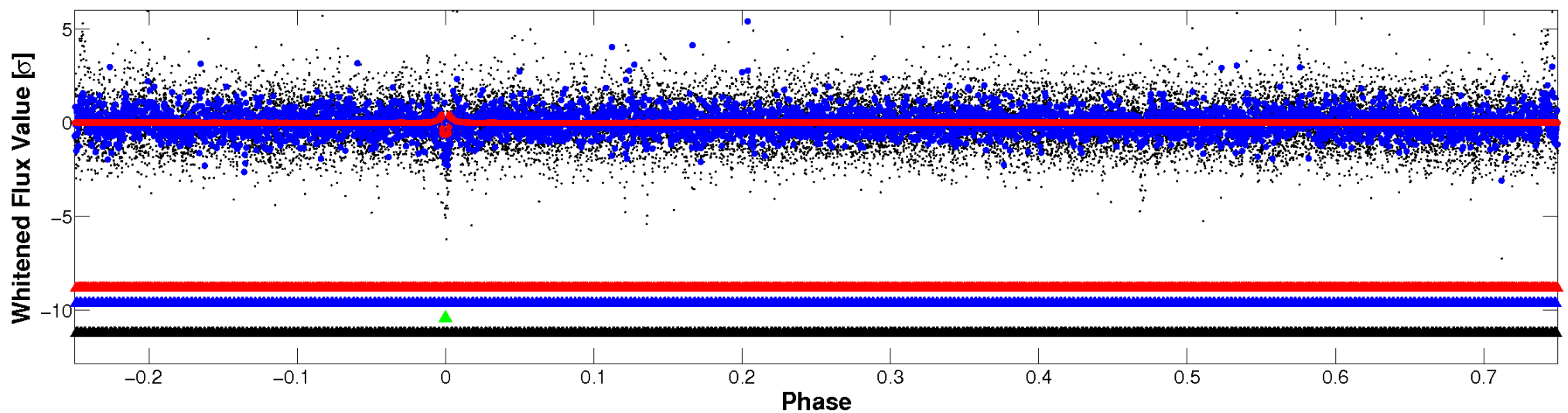


Non-Whitened Vs. Whitened Light Curve

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

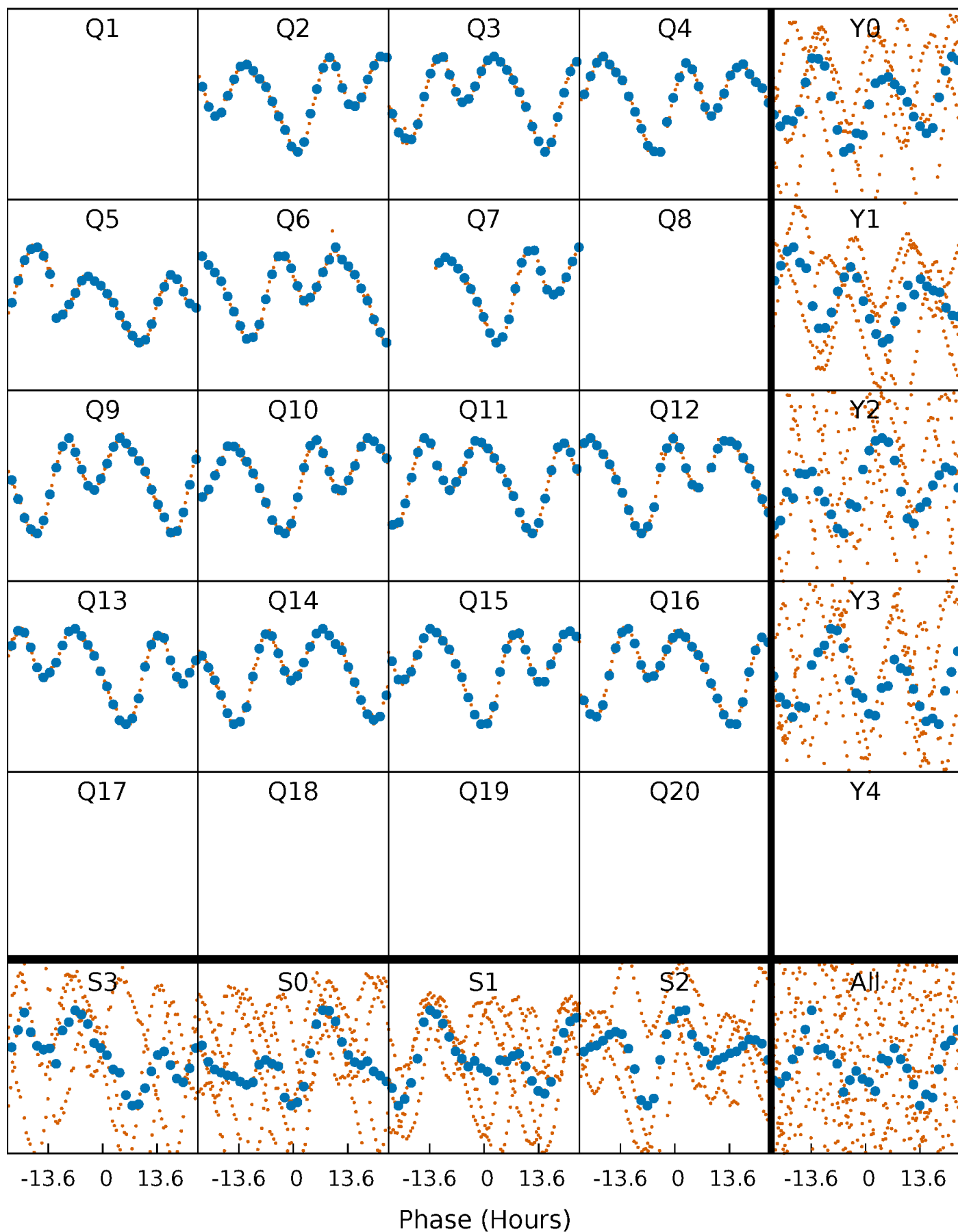


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



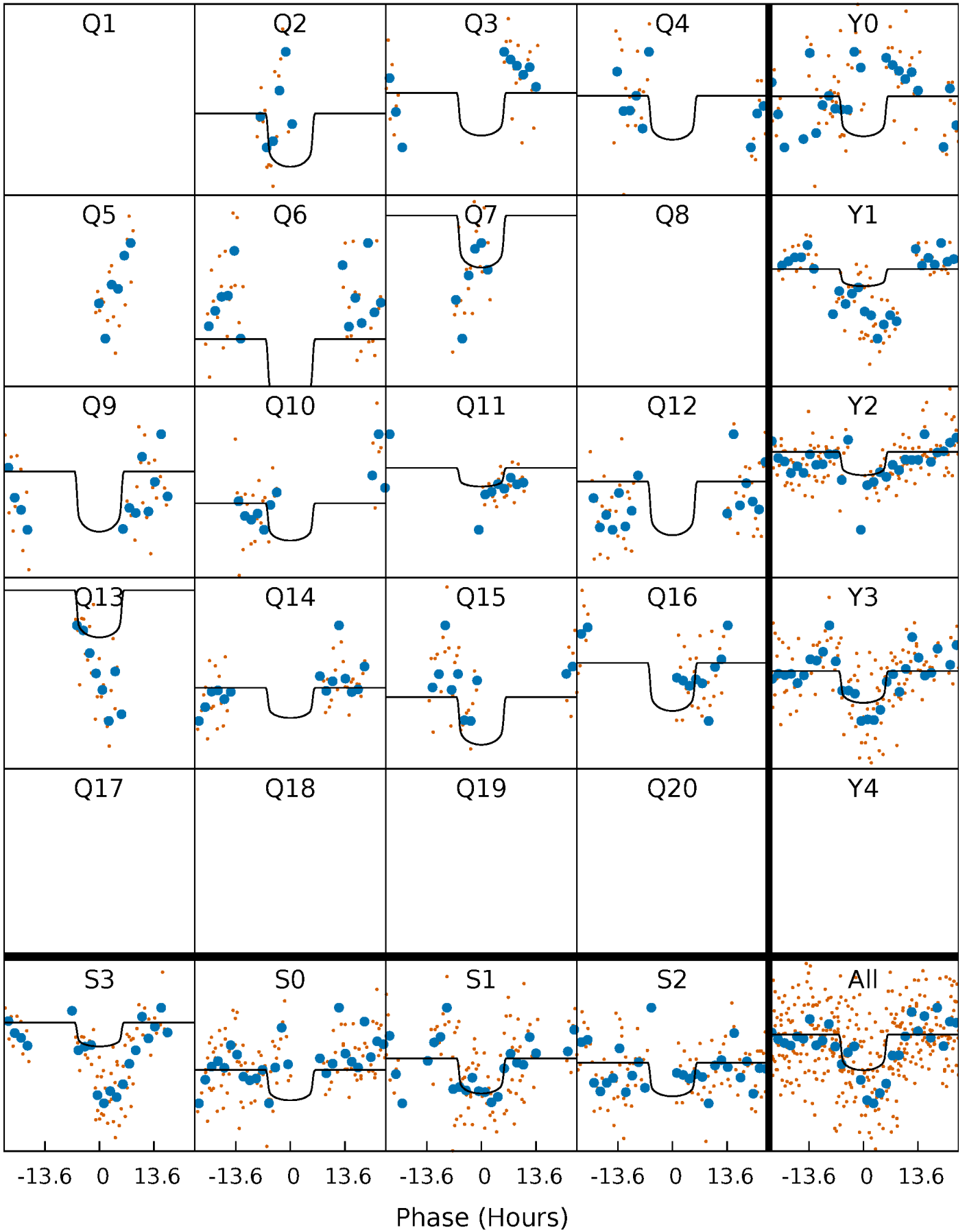
PDC Quarter-Phased Transit Curves

TCE 003442058-03 P= 99.517576 Days $T_0=214.349712$ (BKJD)



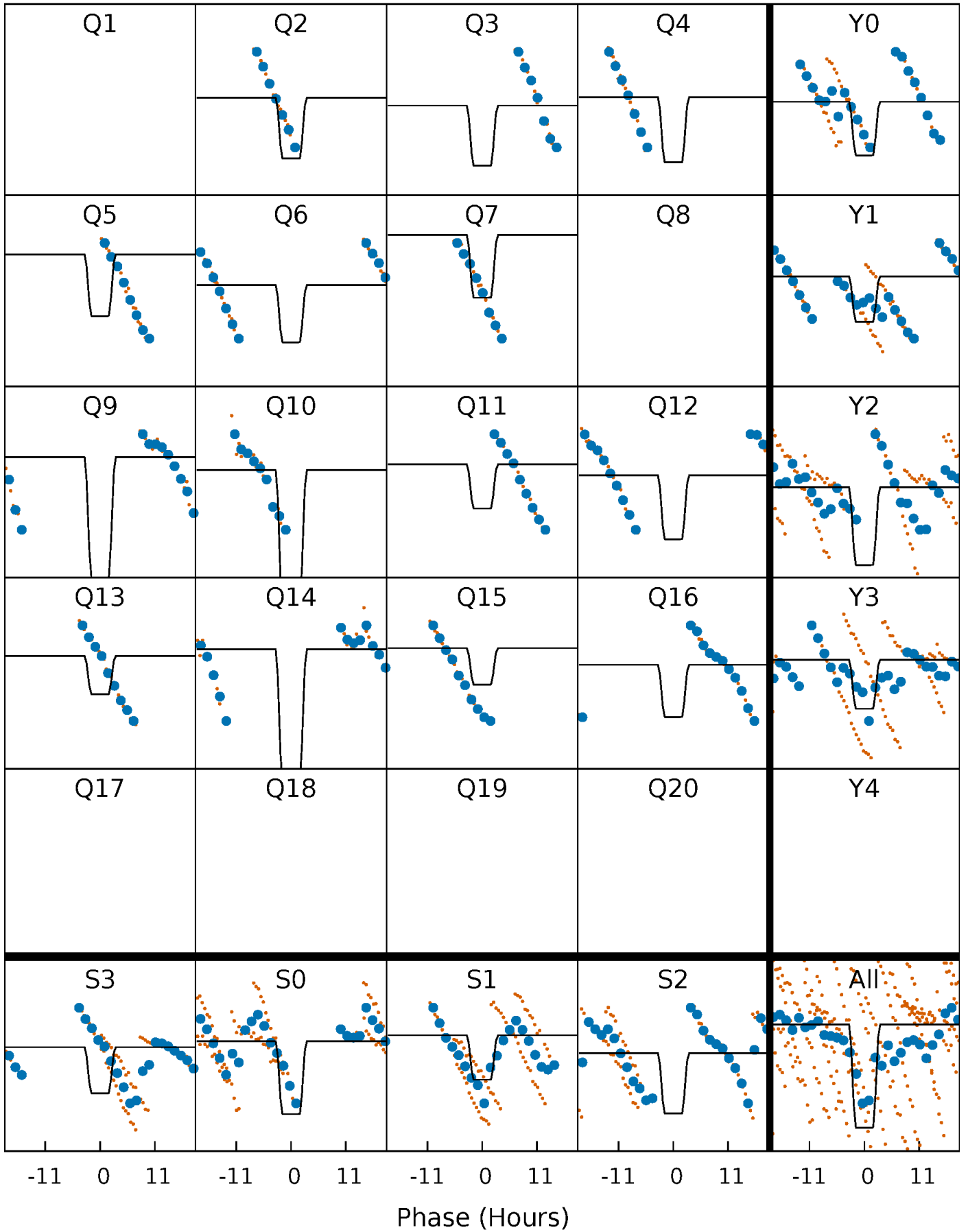
DV Quarter-Phased Transit Curves

TCE 003442058-03 P= 99.517576 Days $T_0=214.349712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

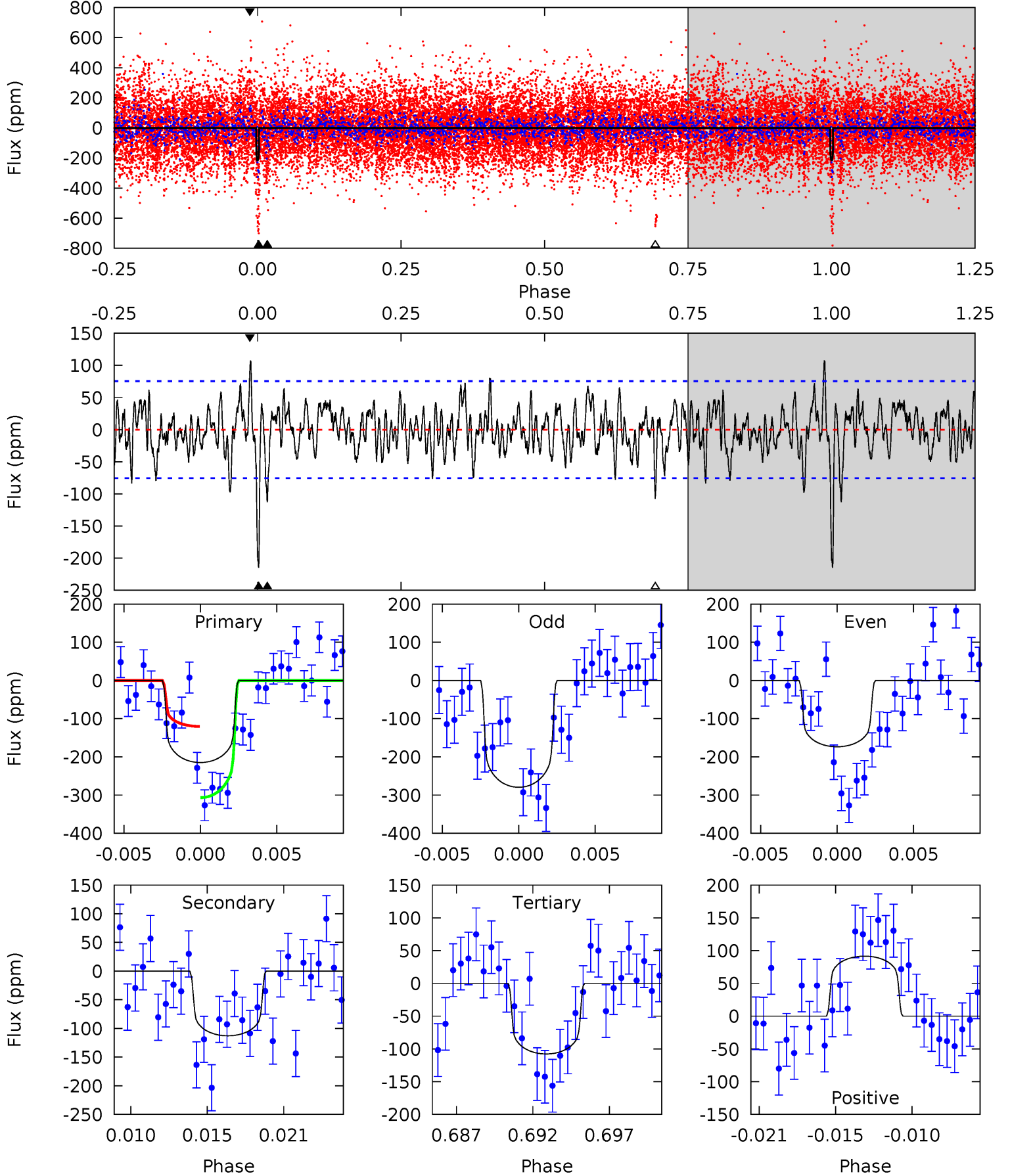
TCE 003442058-03 P= 99.511437 Days $T_0=214.318289$ (BKJD)



DV Model-Shift Uniqueness Test

003442058-03, P = 99.517576 Days, E = 114.832136 Days

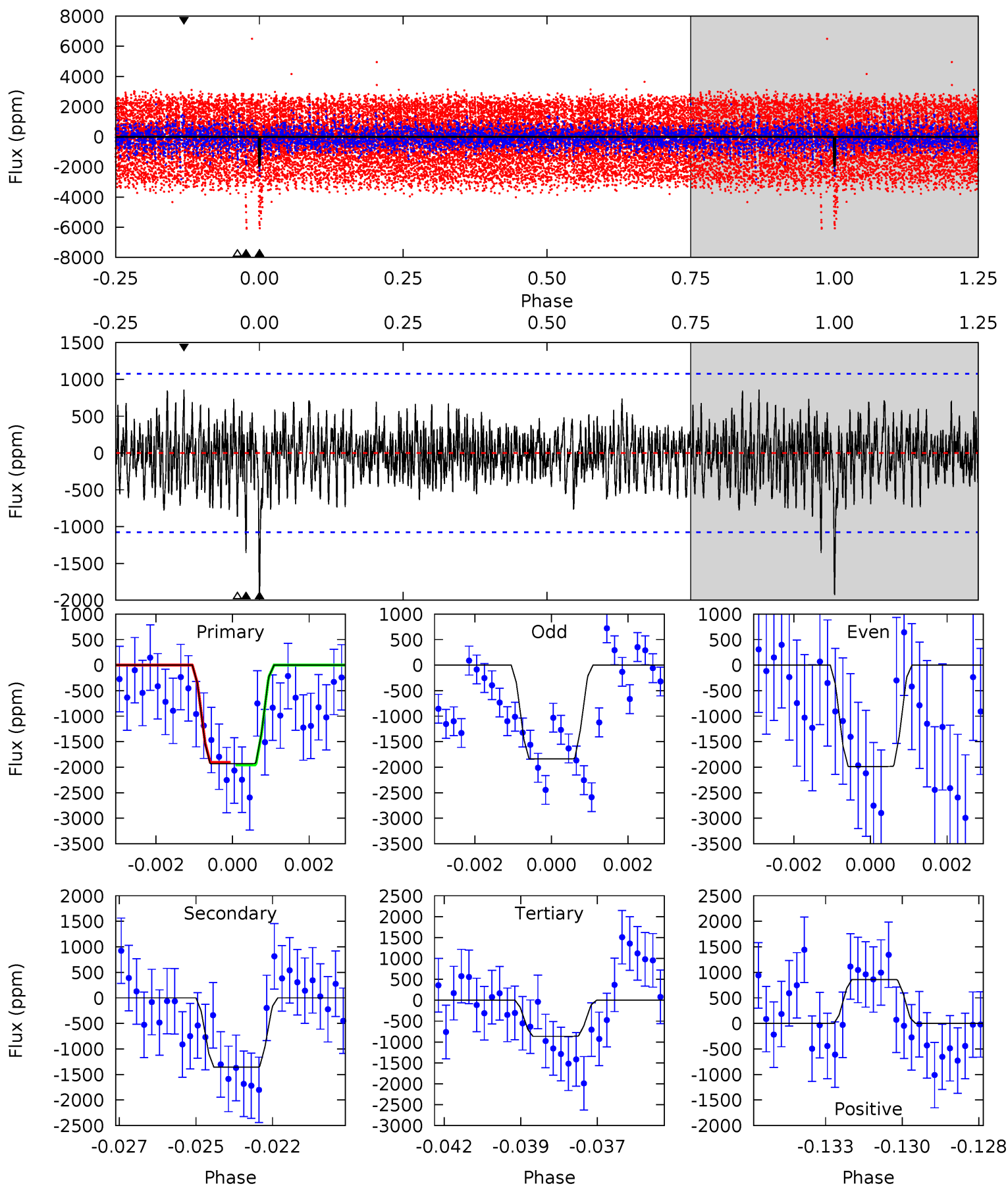
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	7.71	7.36	6.26	5.15	2.80	2.03	7.31	8.42	0.35	1.45	3.62	1.47	0.33	6.36



Alt Model-Shift Uniqueness Test

003442058-03, P = 99.511437 Days, E = 114.806852 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.48	6.68	4.24	4.22	5.29	3.03	1.38	5.24	5.26	2.43	2.46	0.36	0.82	0.31	0.13



Stellar Parameters For KIC 003442058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7703^{+237}_{-316}	$3.955^{+0.260}_{-0.140}$	$-0.200^{+0.200}_{-0.350}$	$2.290^{+0.486}_{-0.729}$	$1.725^{+0.184}_{-0.341}$	$0.202^{+0.371}_{-0.082}$
	+3%/-4%	+7%/-4%	+100%/-175%	+21%/-32%	+11%/-20%	+183%/-40%
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 003442058-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-113 ± 15	$3.21^{+0.99}_{-0.80}$	994^{+79}_{-89}	6649^{+1183}_{-665}	1487^{+1230}_{-587}
Alt.	-1359 ± 204	$13.48^{+1.89}_{-2.18}$	1002^{+68}_{-85}	6160^{+337}_{-341}	1046^{+449}_{-288}

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

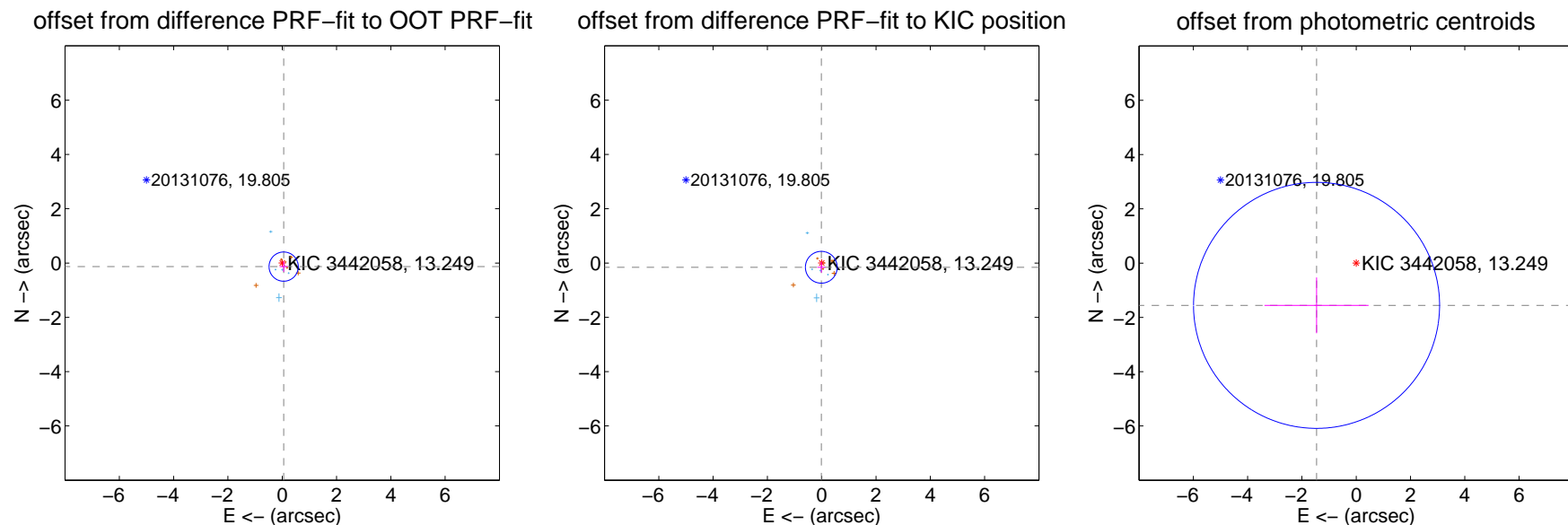
DV Centroid Data

Supplemental centroid analysis for 003442058-03. Kepler magnitude: 13.25. Transit SNR 6.47

There are 5 quarters with good PRF difference image offsets

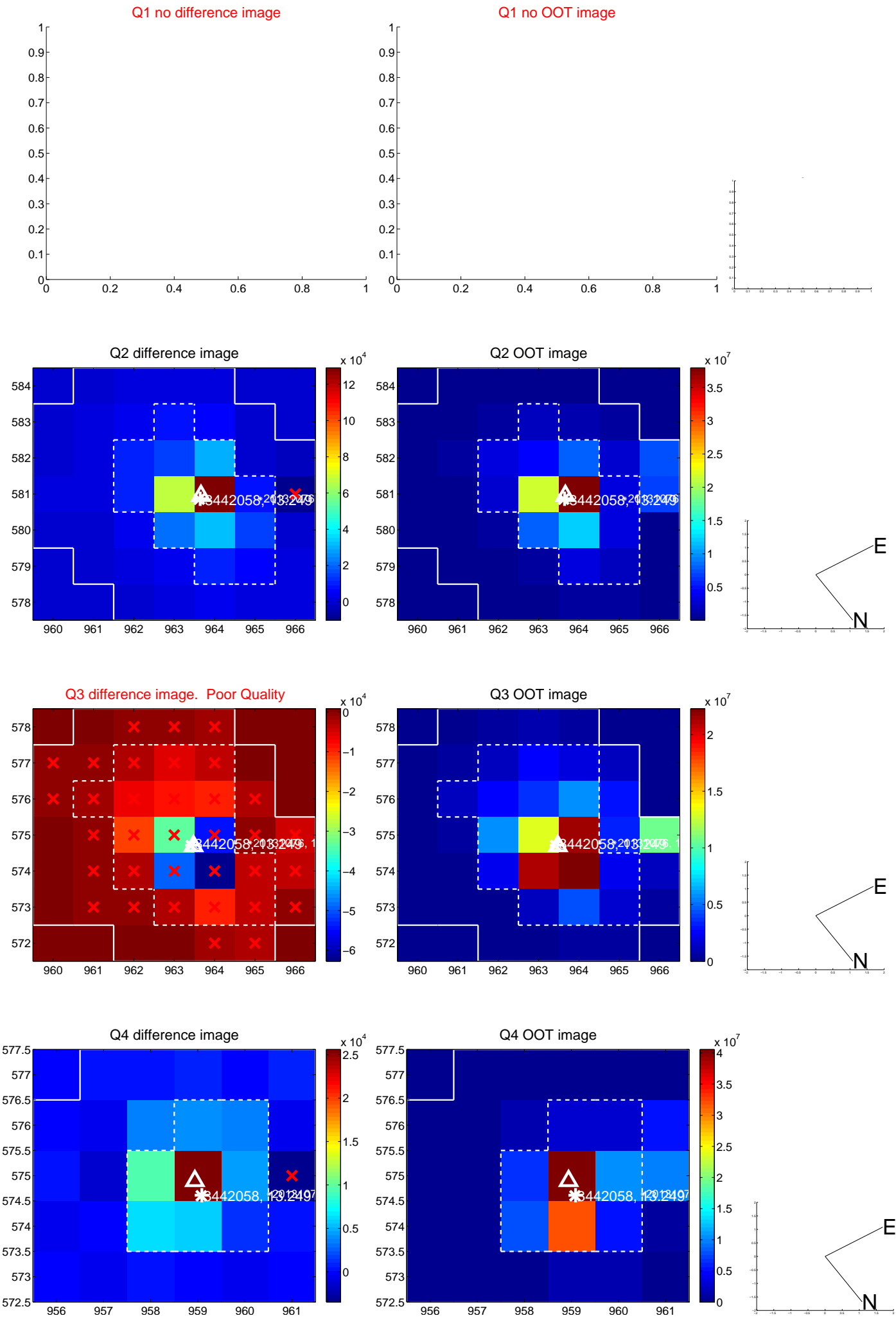
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.142 ± 0.179	0.79	-0.053 ± 0.150	-0.131 ± 0.192
PRF-fit source offset from KIC position	0.157 ± 0.195	0.80	0.015 ± 0.146	-0.156 ± 0.197
photometric centroid source offset	2.13 ± 1.51	1.41	1.46 ± 1.92	-1.56 ± 1.03

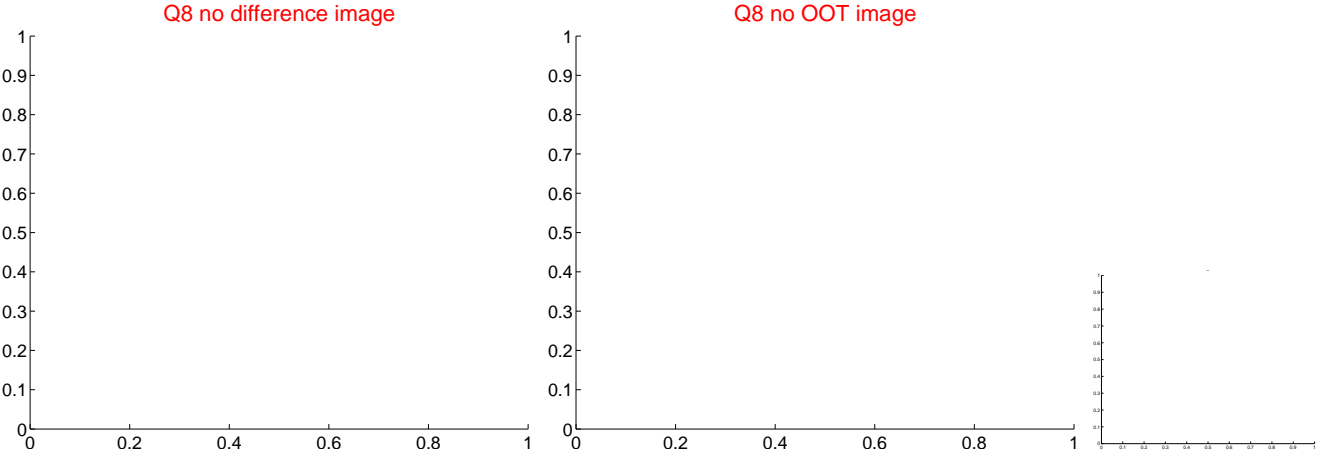
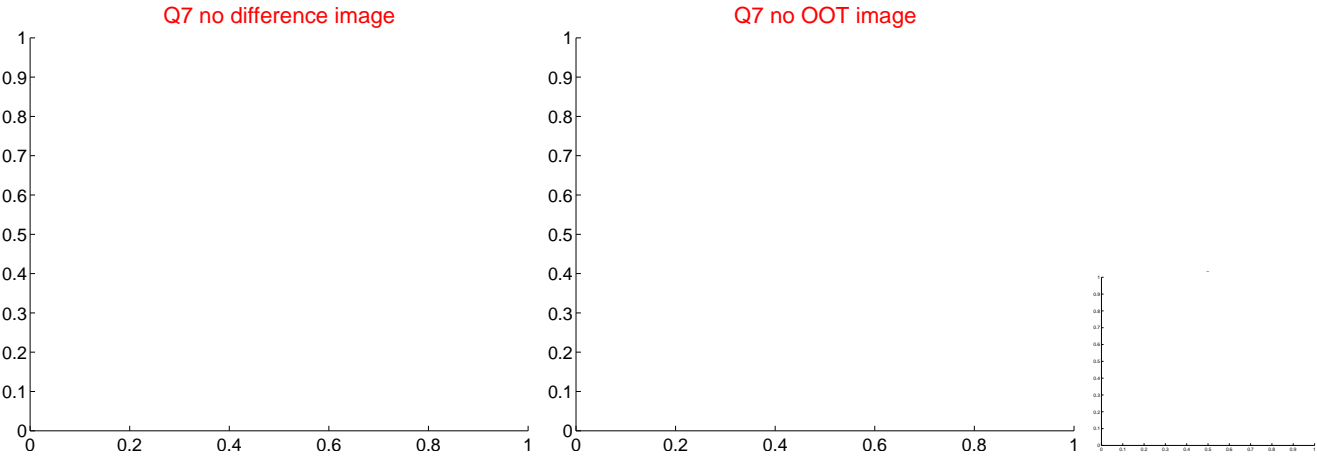
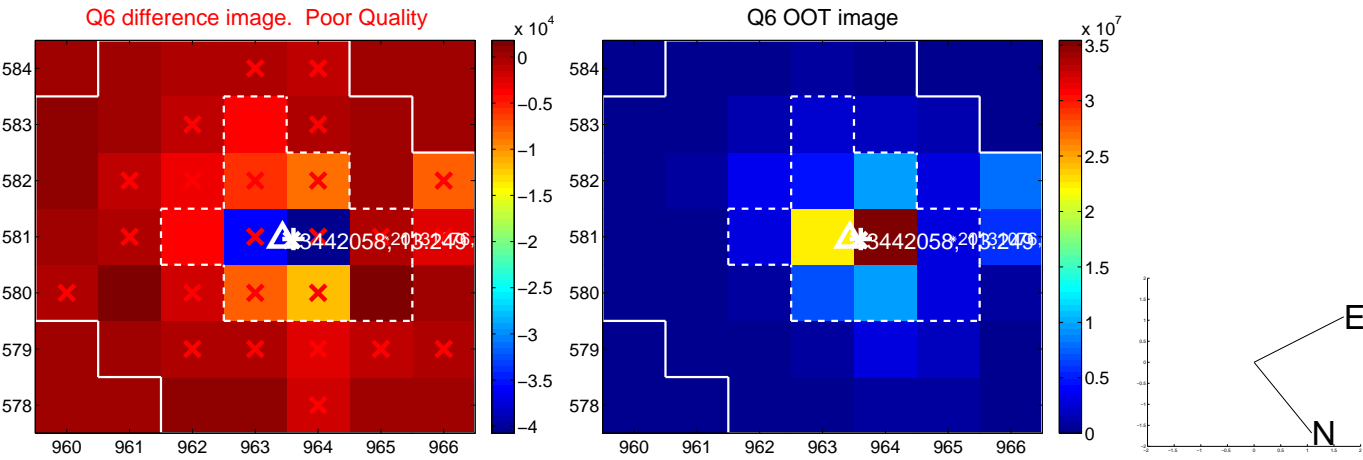
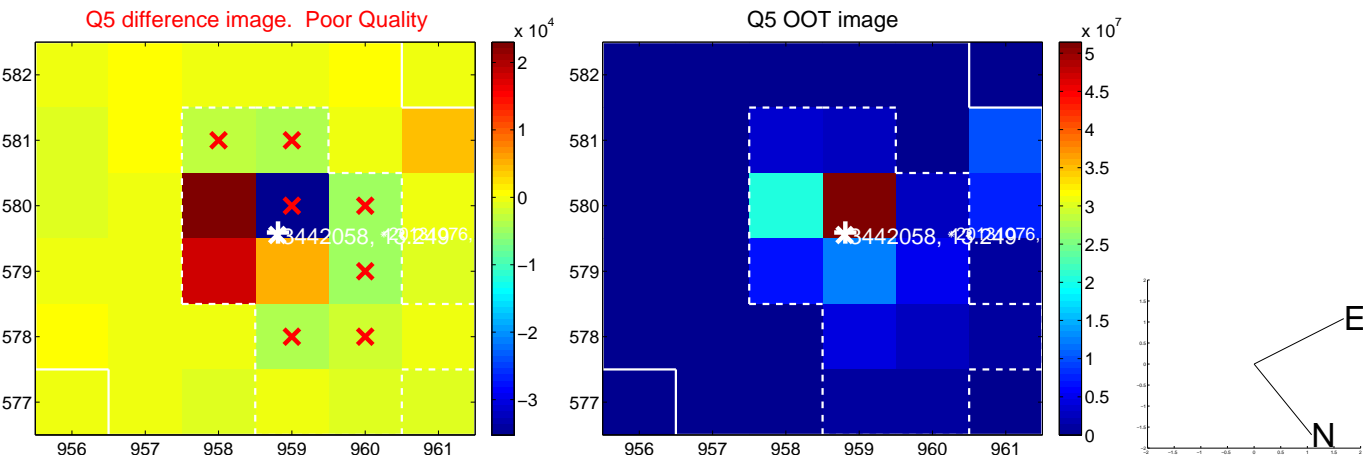


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

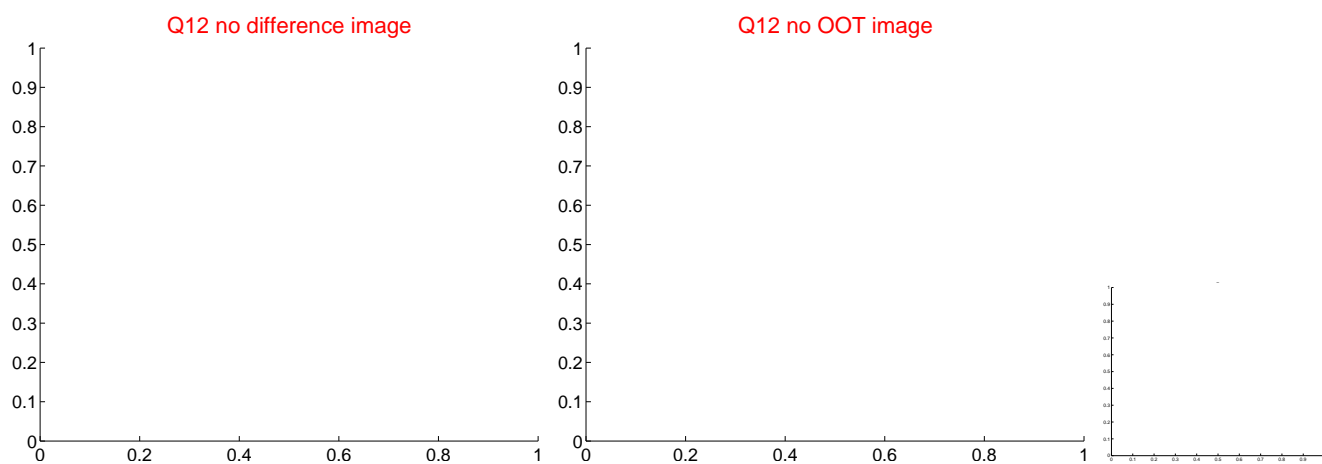
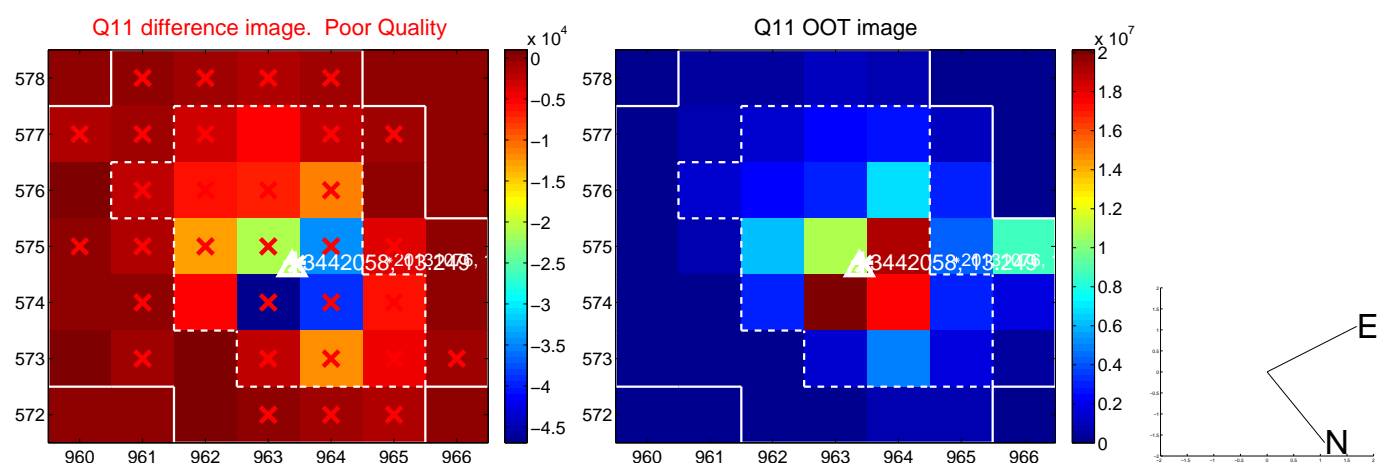
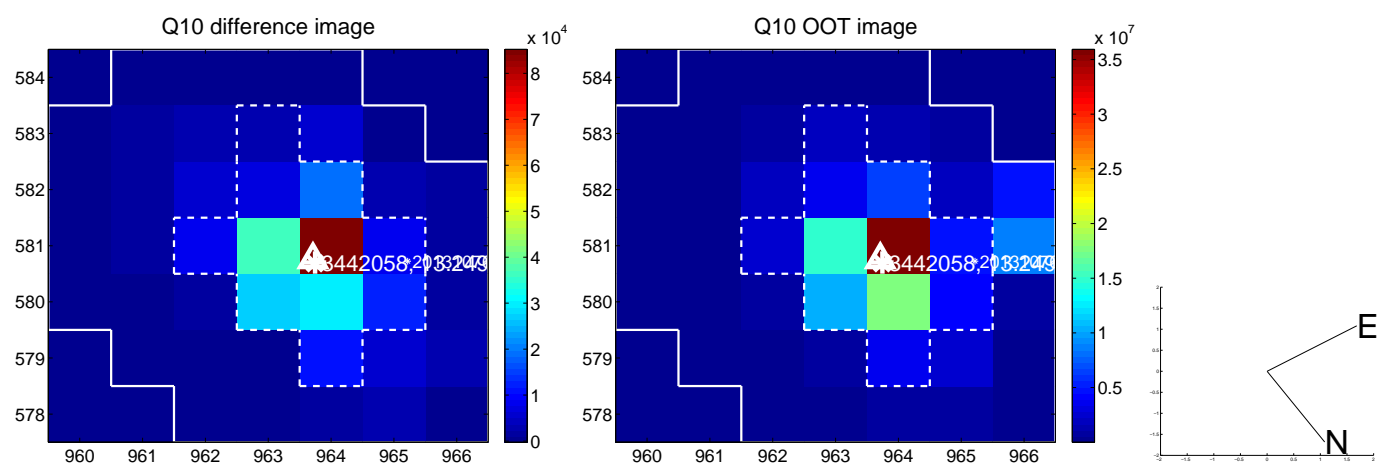
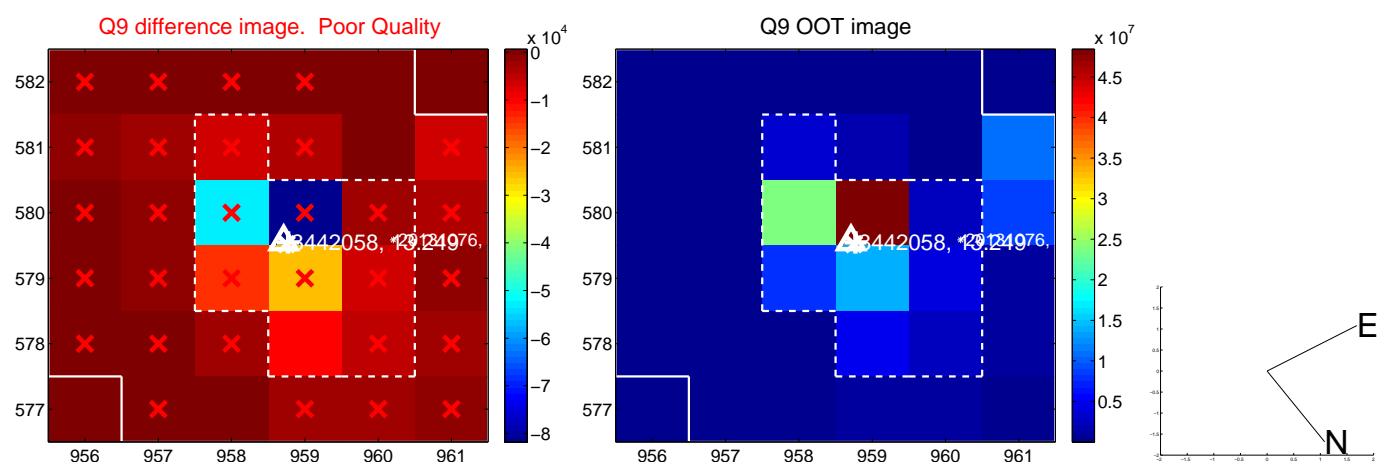
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



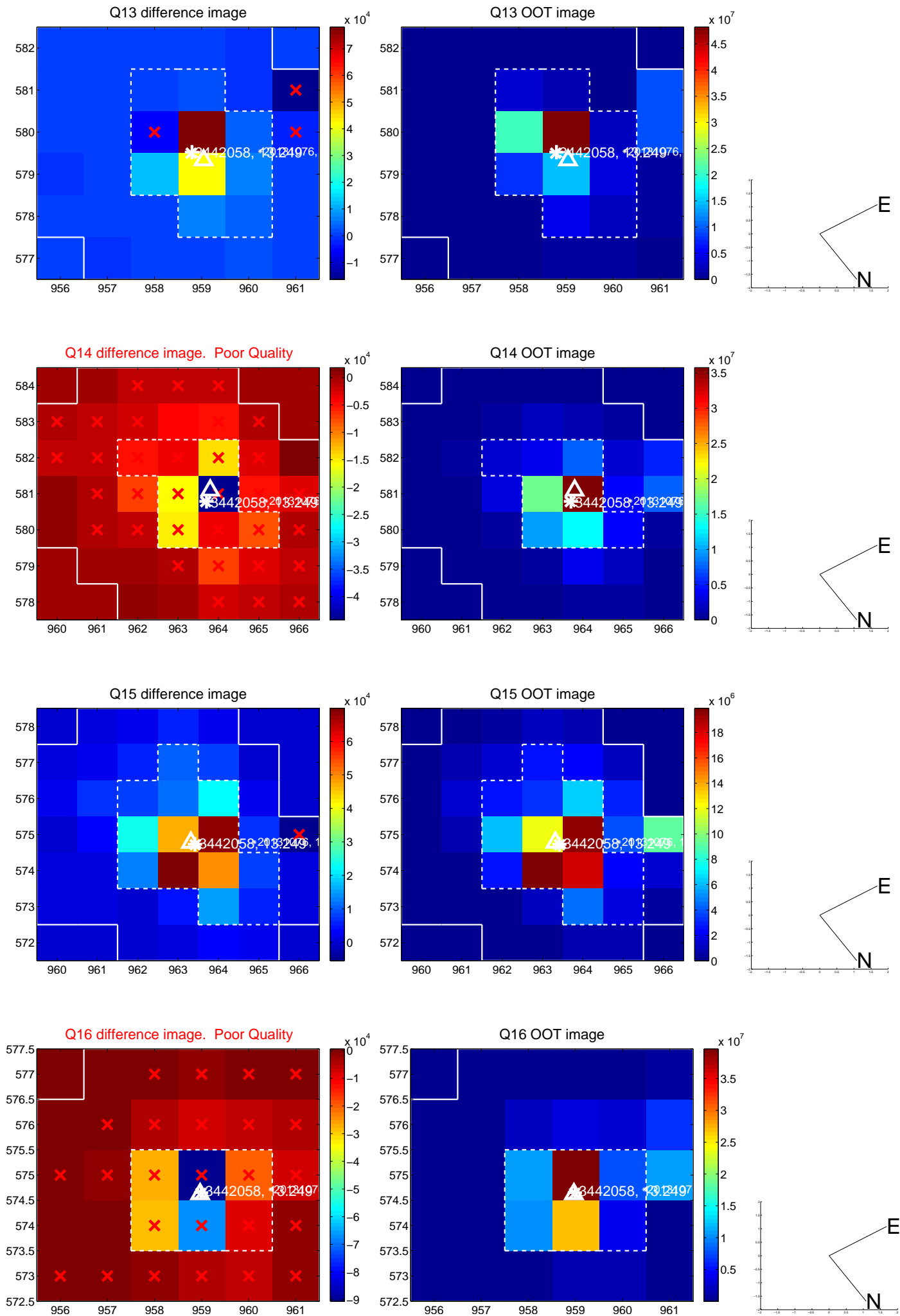
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



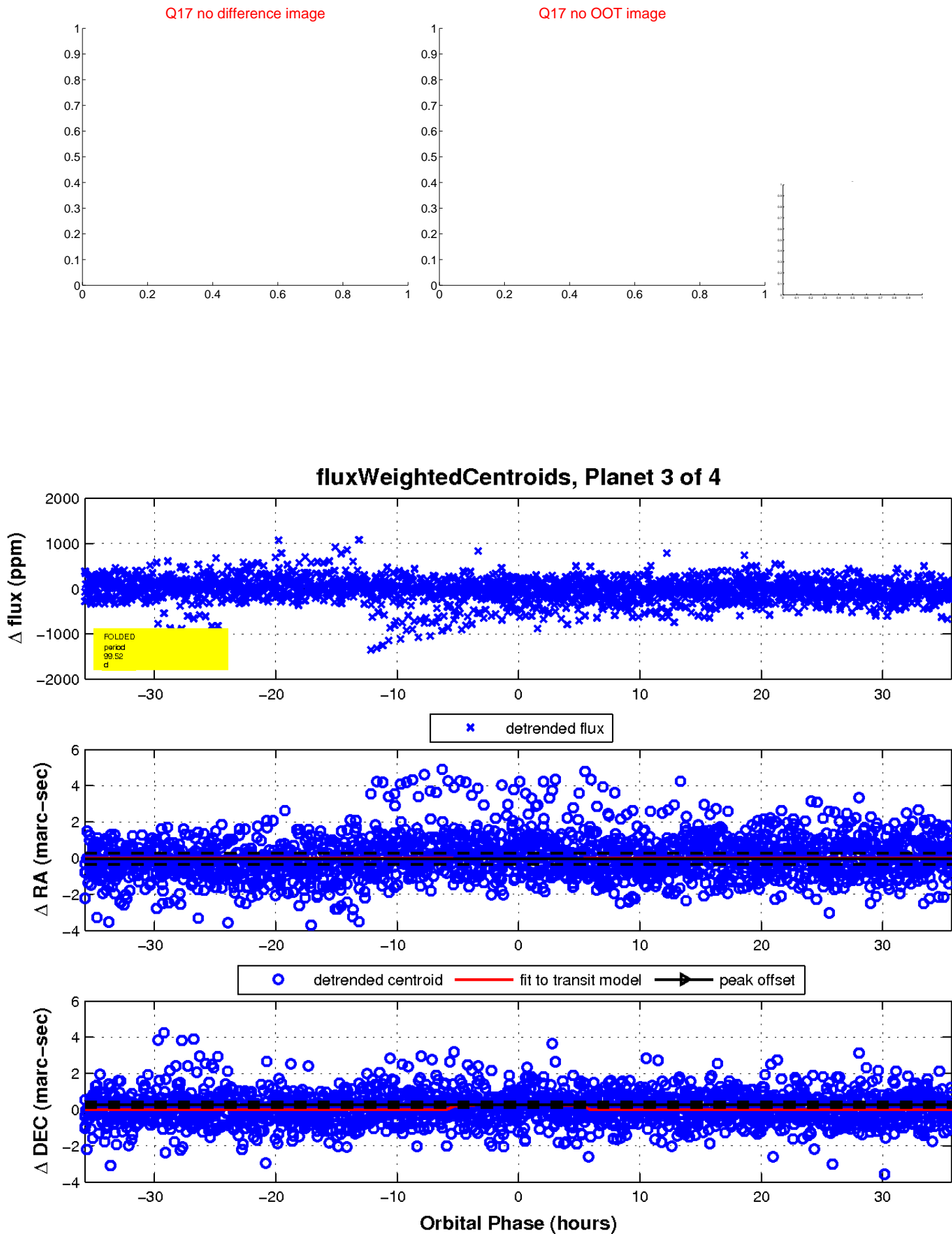
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

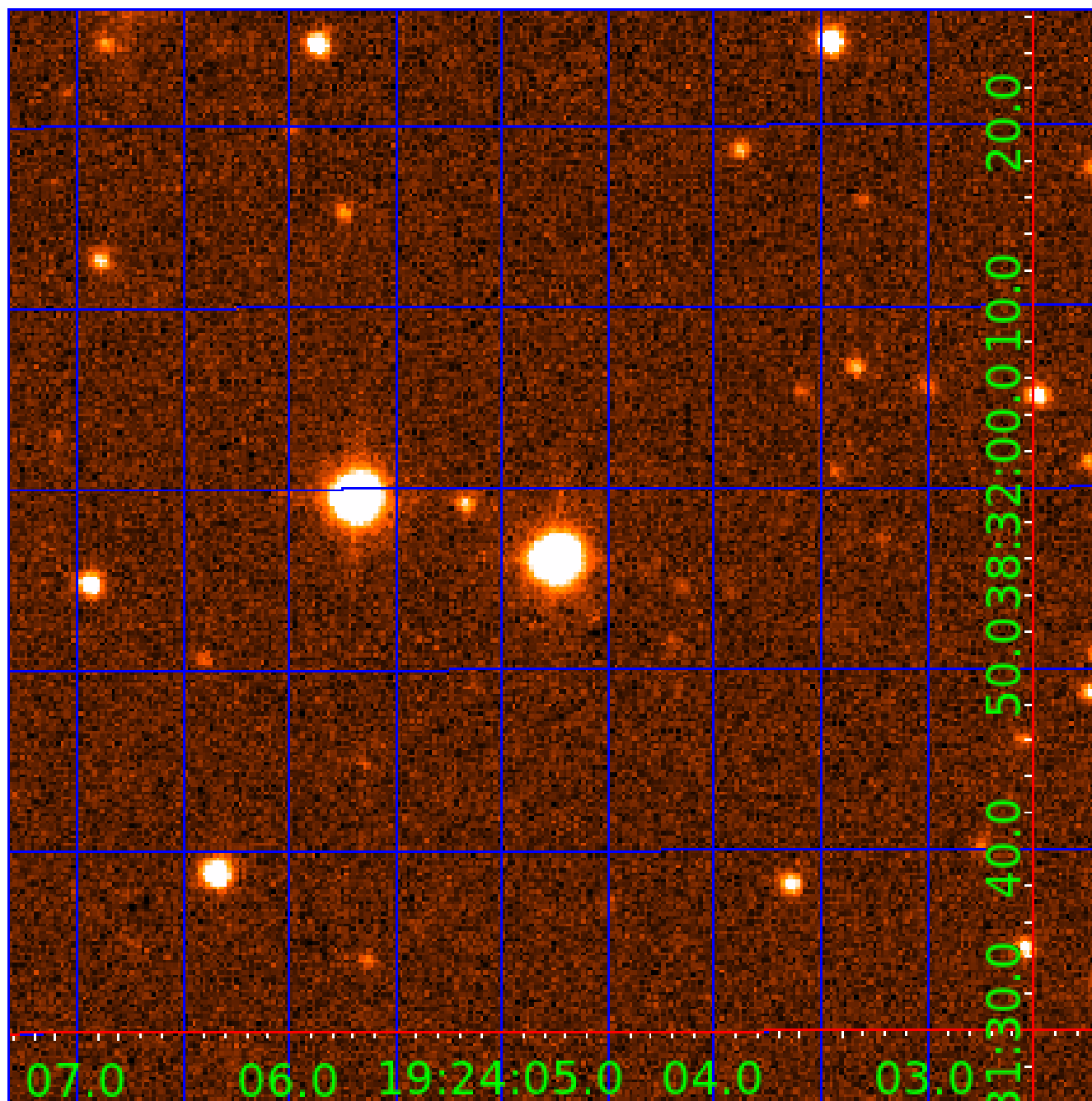


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003442058

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})
003442058-01	OBS	No	1.430149	131.542444	250.2	2.000	15.0	-1.0	2.29	7703	3.65	18631.57
003442058-02	OBS	No	1.429946	132.052138	5.3	6.970	14.5	2.8	2.29	7703	0.54	18635.09
003442058-03	OBS	No	99.517576	214.349712	162.7	11.908	15.3	6.5	2.29	7703	3.38	65.10
003442058-04	OBS	No	1.430006	132.899421	17.8	14.199	14.9	7.7	2.29	7703	1.09	18634.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003442058-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_NOFITS
003442058-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003442058-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
003442058-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

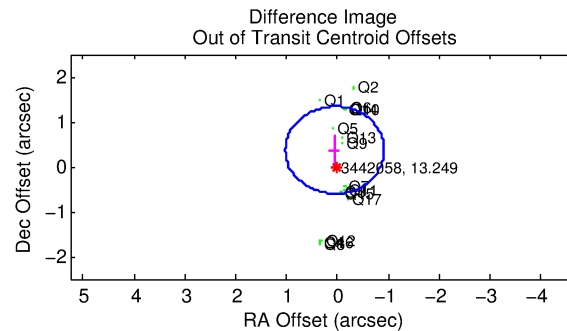
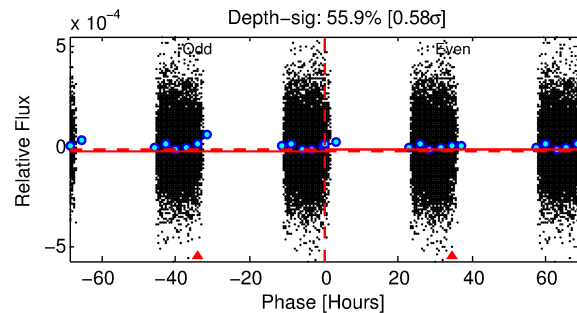
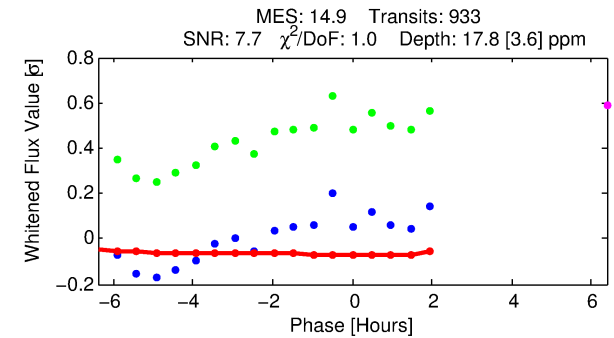
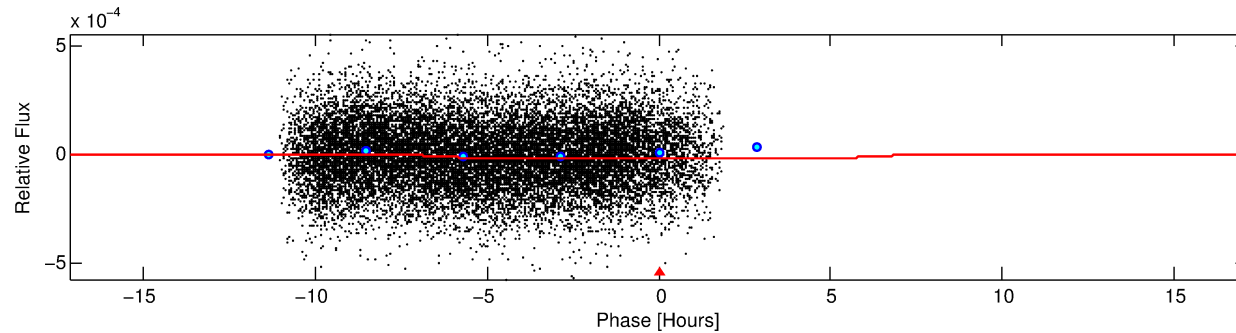
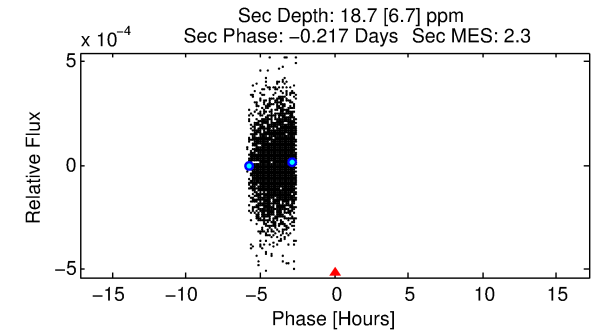
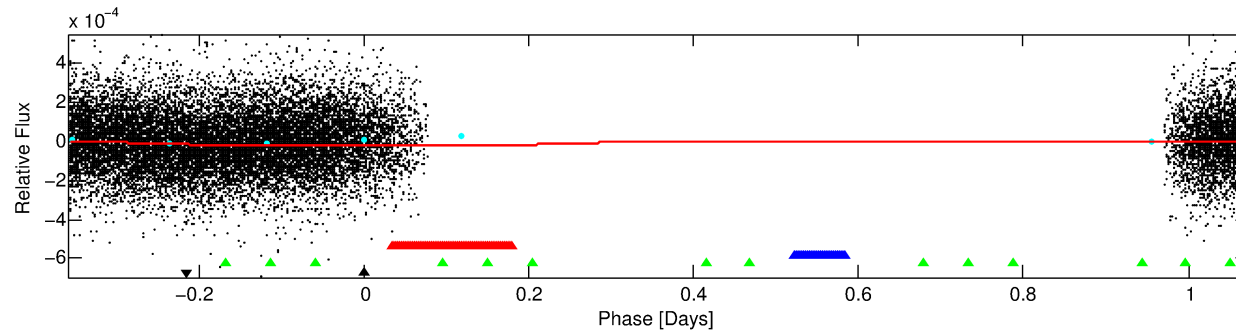
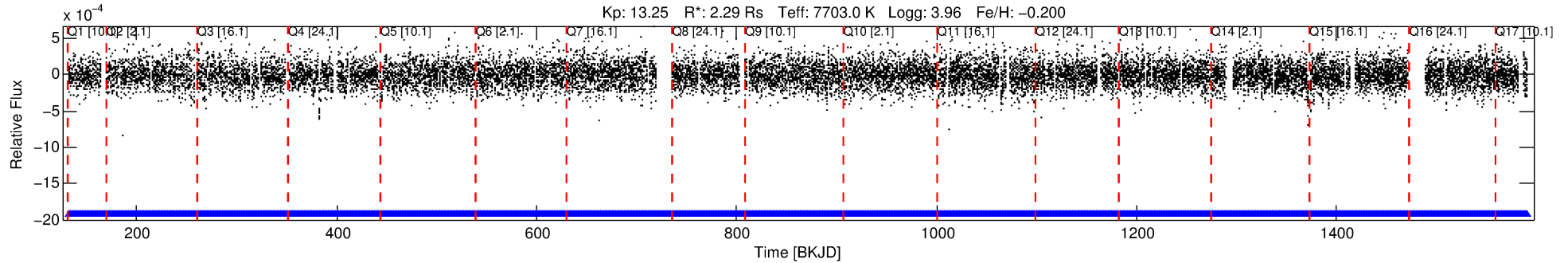
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003442058-04

No Significant Match Found

DV One-Page Summary

KIC: 3442058 Candidate: 4 of 4 Period: 1.430 d



DV Fit Results:

Period = 1.43001 [0.00004] d
Epoch = 132.8994 [0.0659] BKJD
Rp/R* = 0.0044 [0.0017]
a/R* = 1.02 [0.05]
b = 0.85 [0.77]
Seff = 18634.05 [8961.00]
Teq = 2979 [358] K
Rp = 1.10 [0.56] Re
a = 0.0298 [0.0087] AU
Ag = 7.60 [7.48] [0.88σ]
Teffp = 7649 [1699] K [2.69σ]

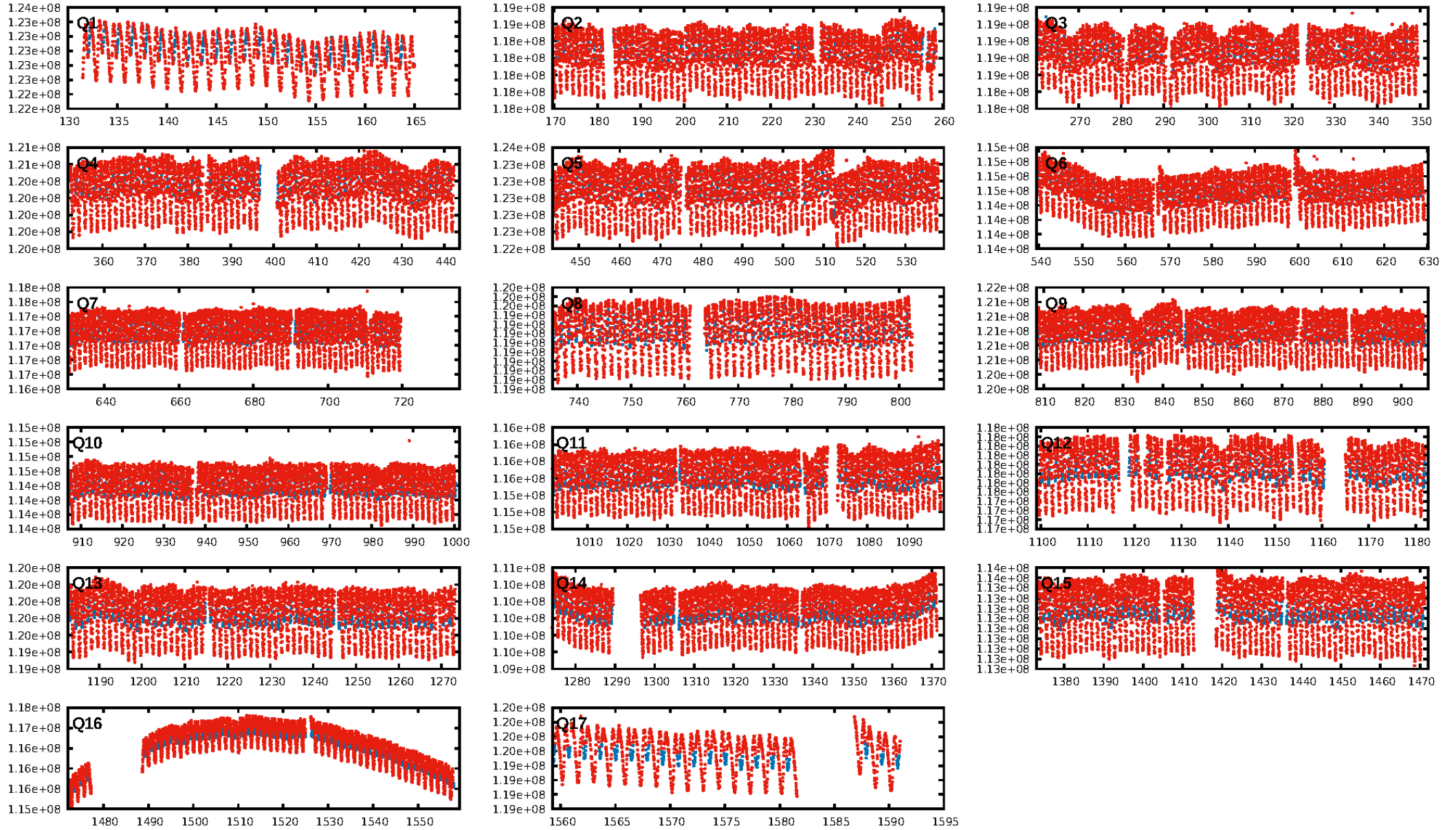
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [891/891]
GhostDiagnostic-chr: 1.532
Centroid-sig: 0.0%
Centroid-so: 2.775 arcsec [2.36σ]
OotOffset-rm: 0.373 arcsec [1.15σ]
KicOffset-rm: 0.379 arcsec [1.21σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

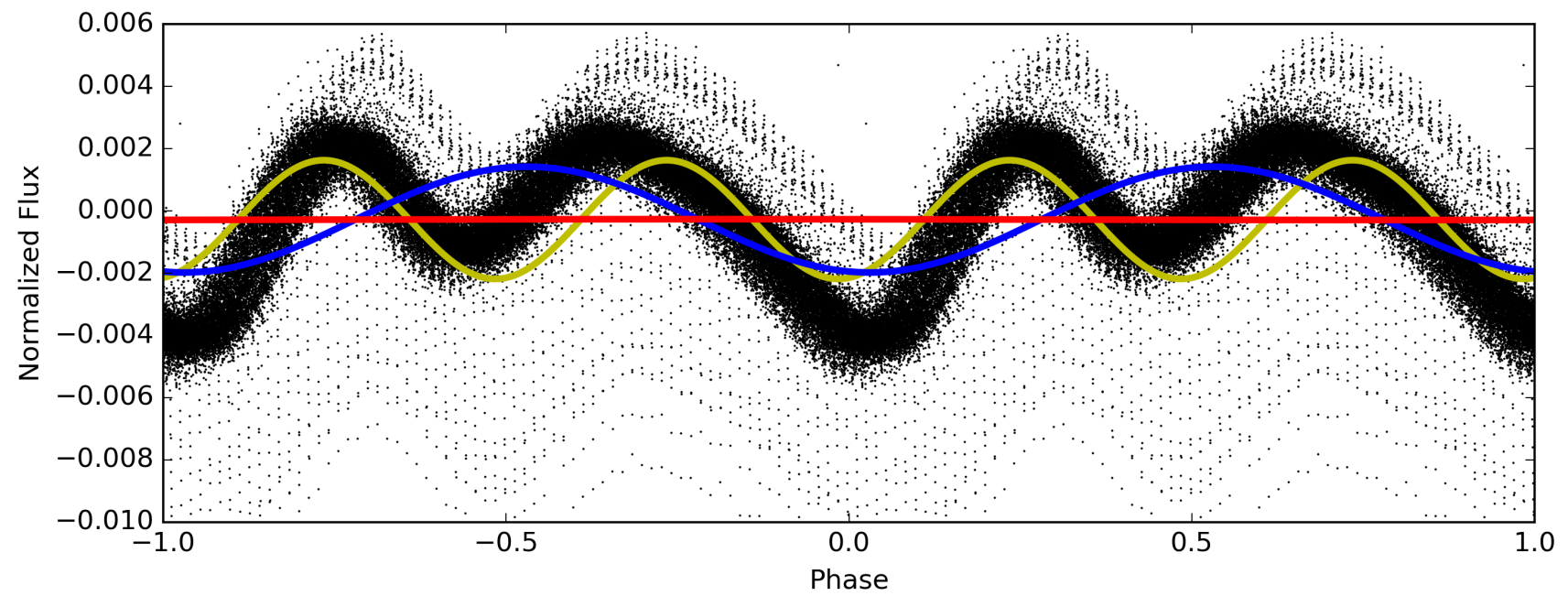
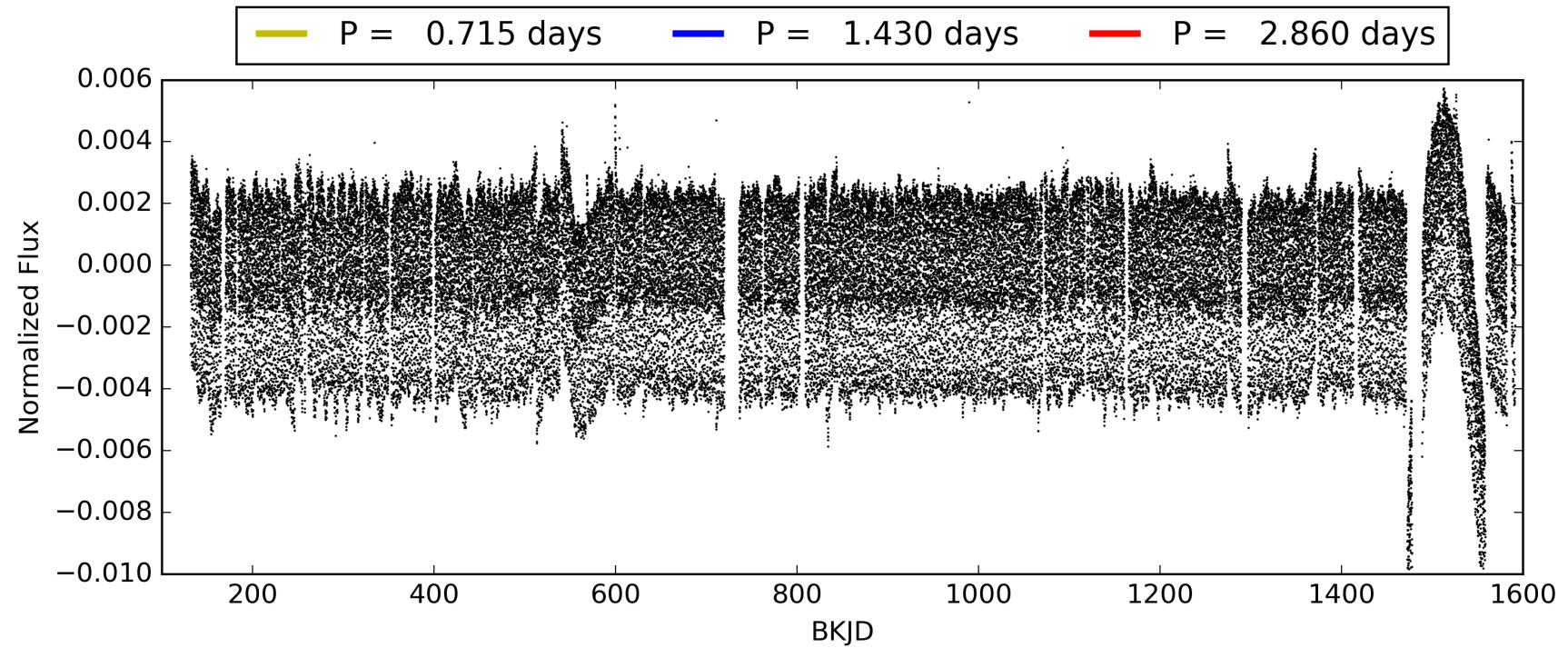
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:22:22 Z

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

TCE 003442058-04, PDC Light Curves

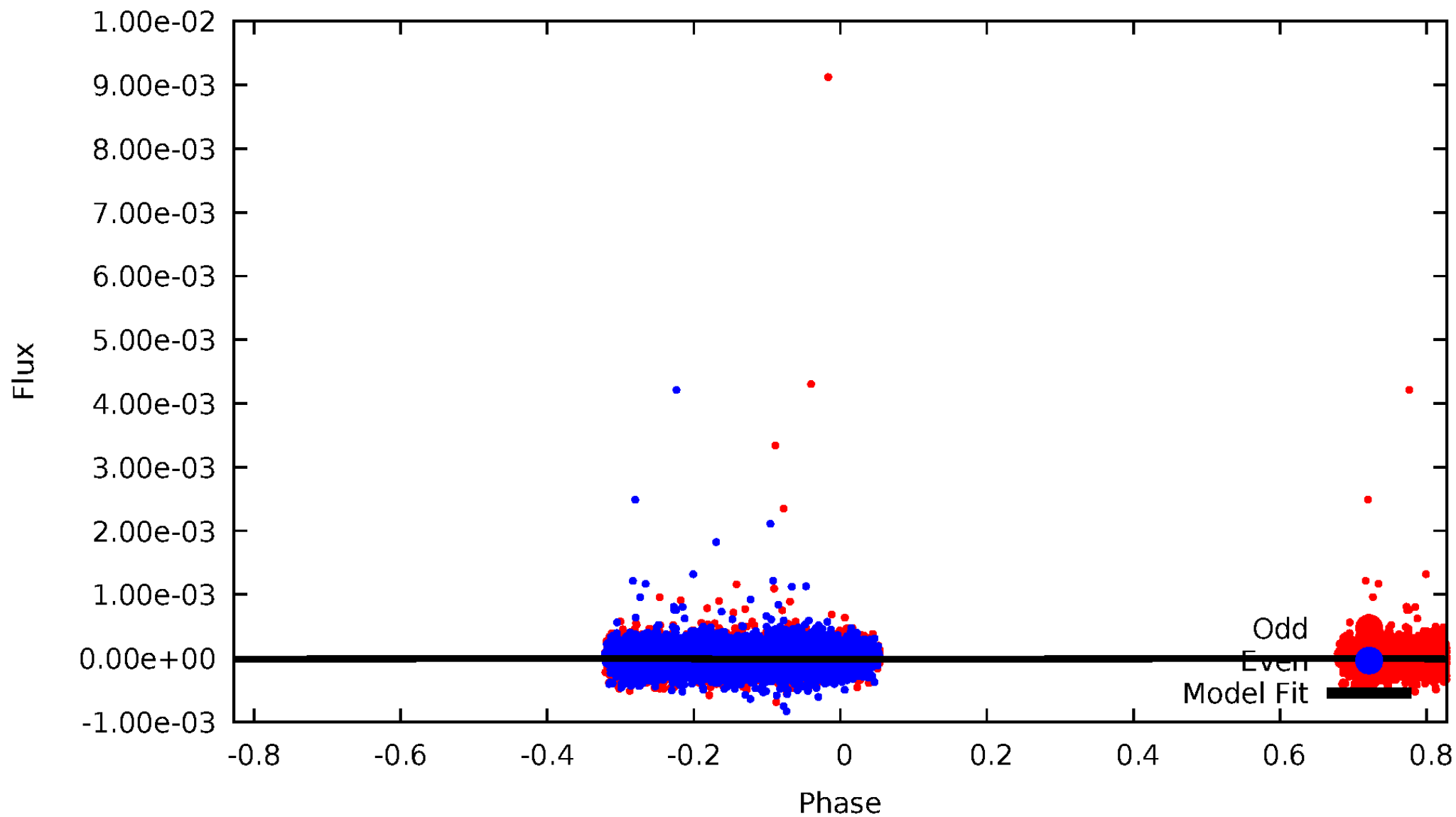


TCE 003442058-04



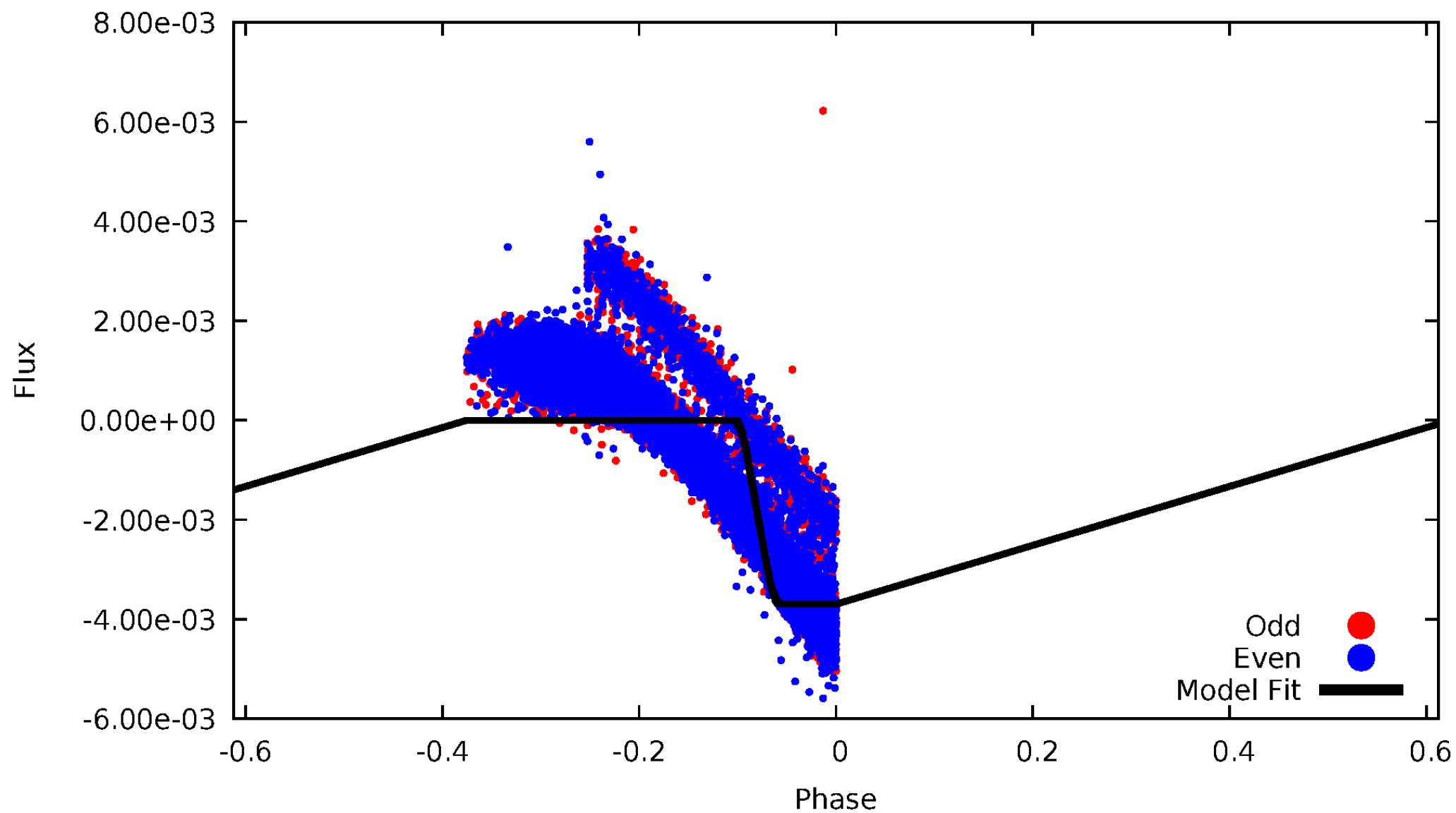
DV Odd/Even

TCE 003442058-04



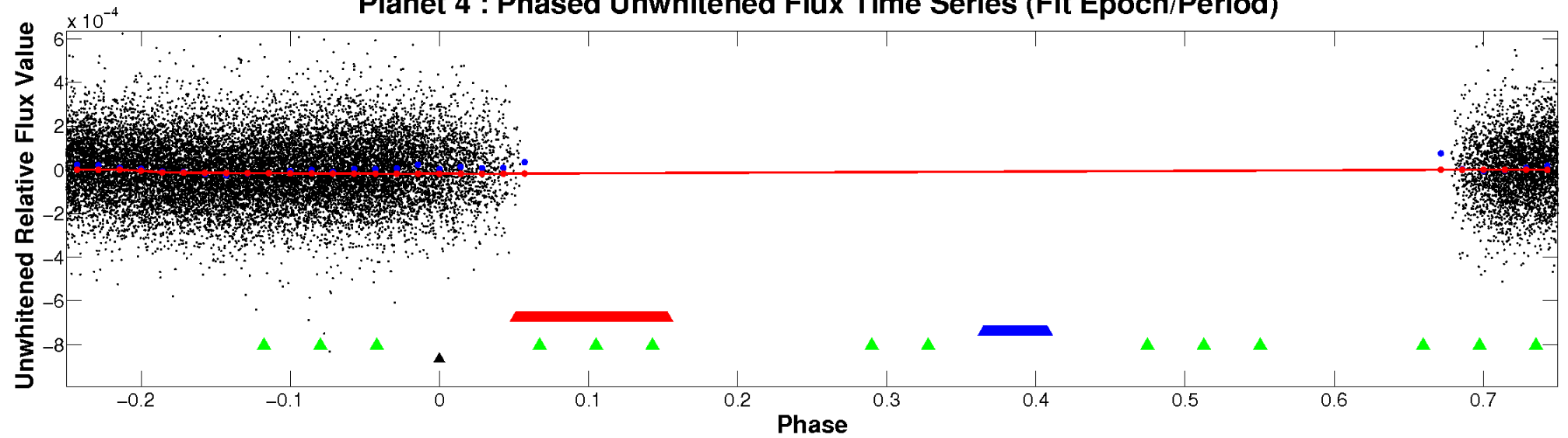
ALT Odd/Even

TCE 003442058-04

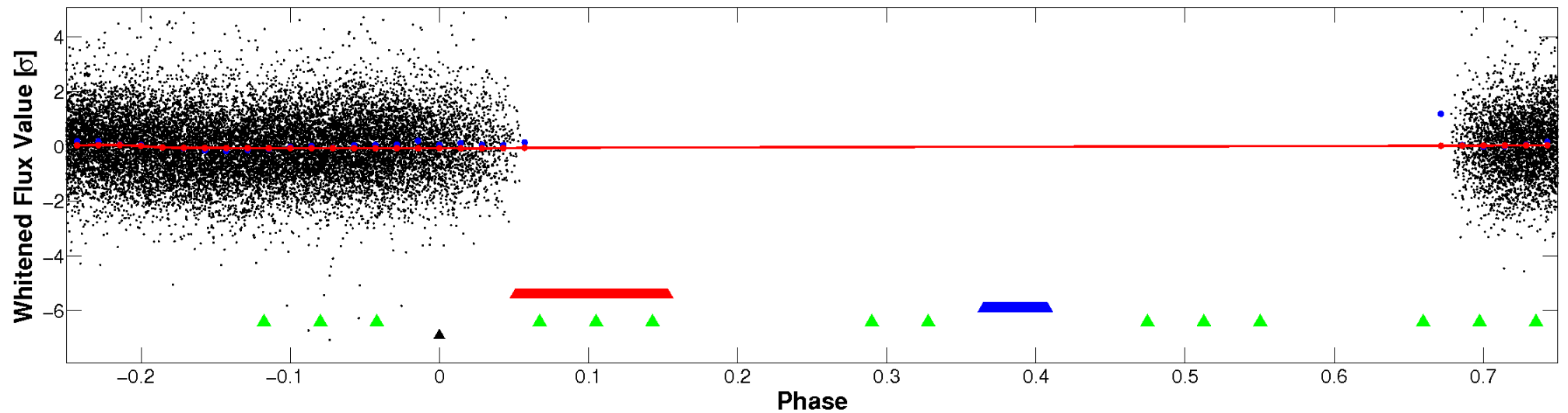


Non-Whitened Vs. Whitened Light Curve

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

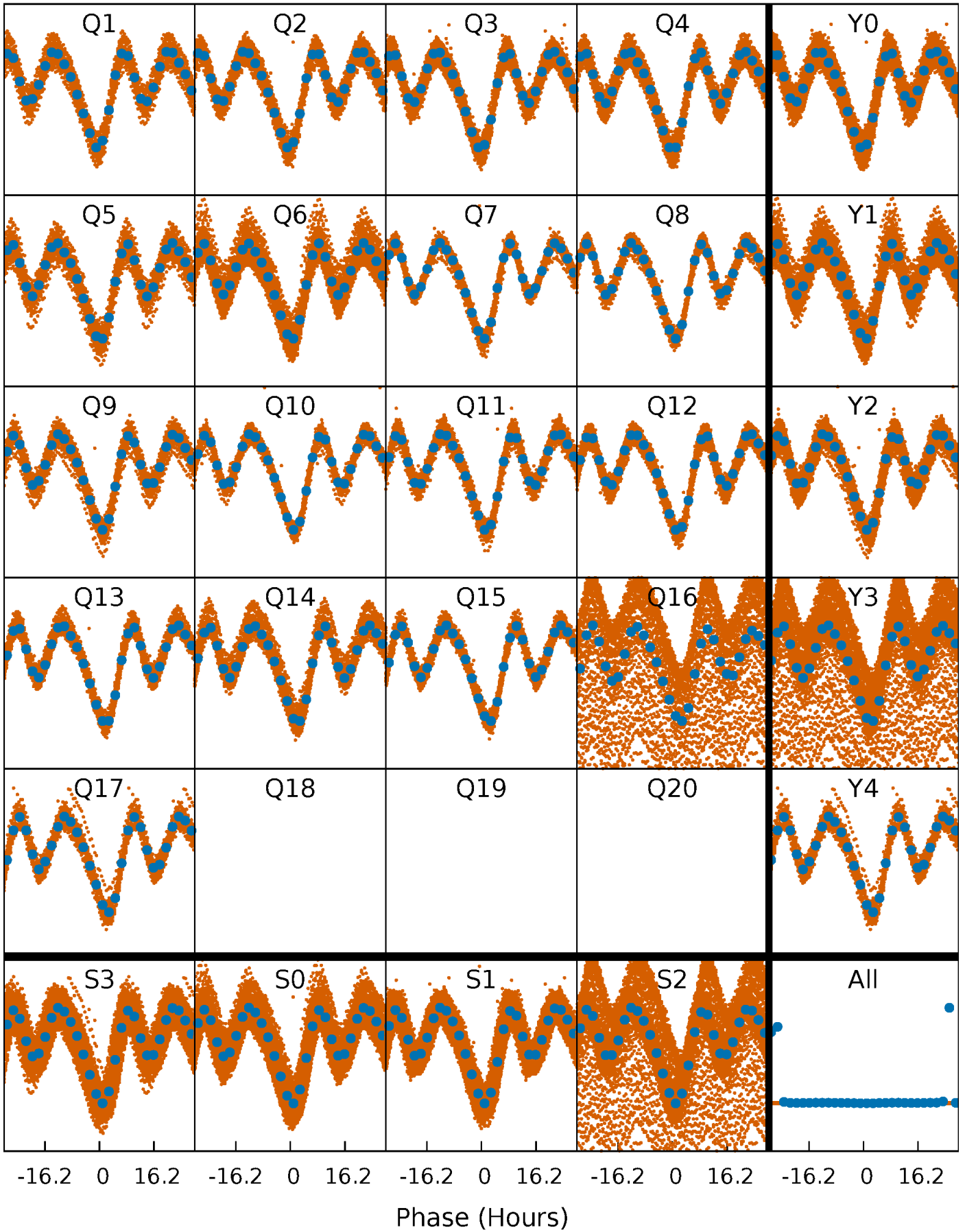


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



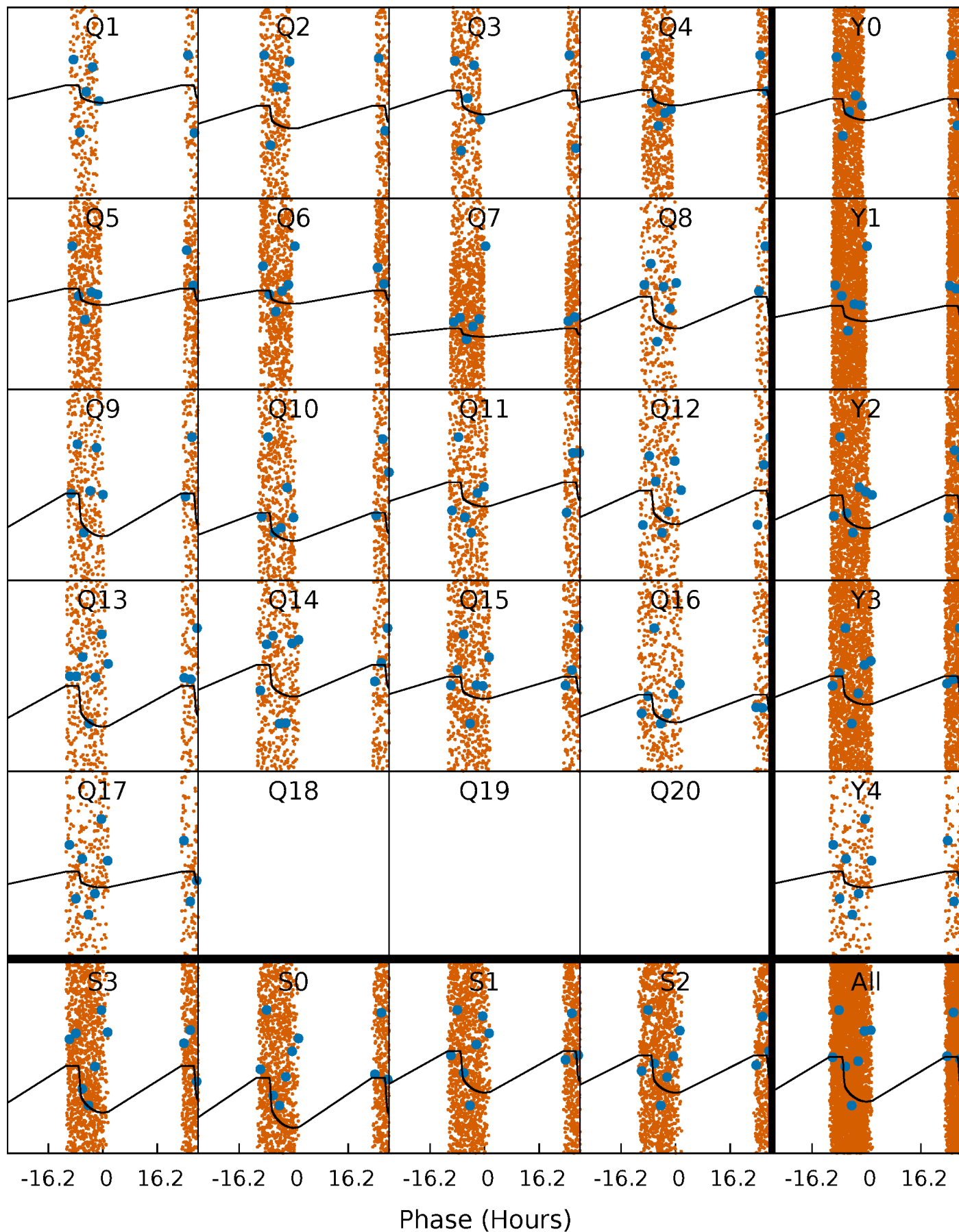
PDC Quarter-Phased Transit Curves

TCE 003442058-04 P= 1.430006 Days $T_0=132.899421$ (BKJD)



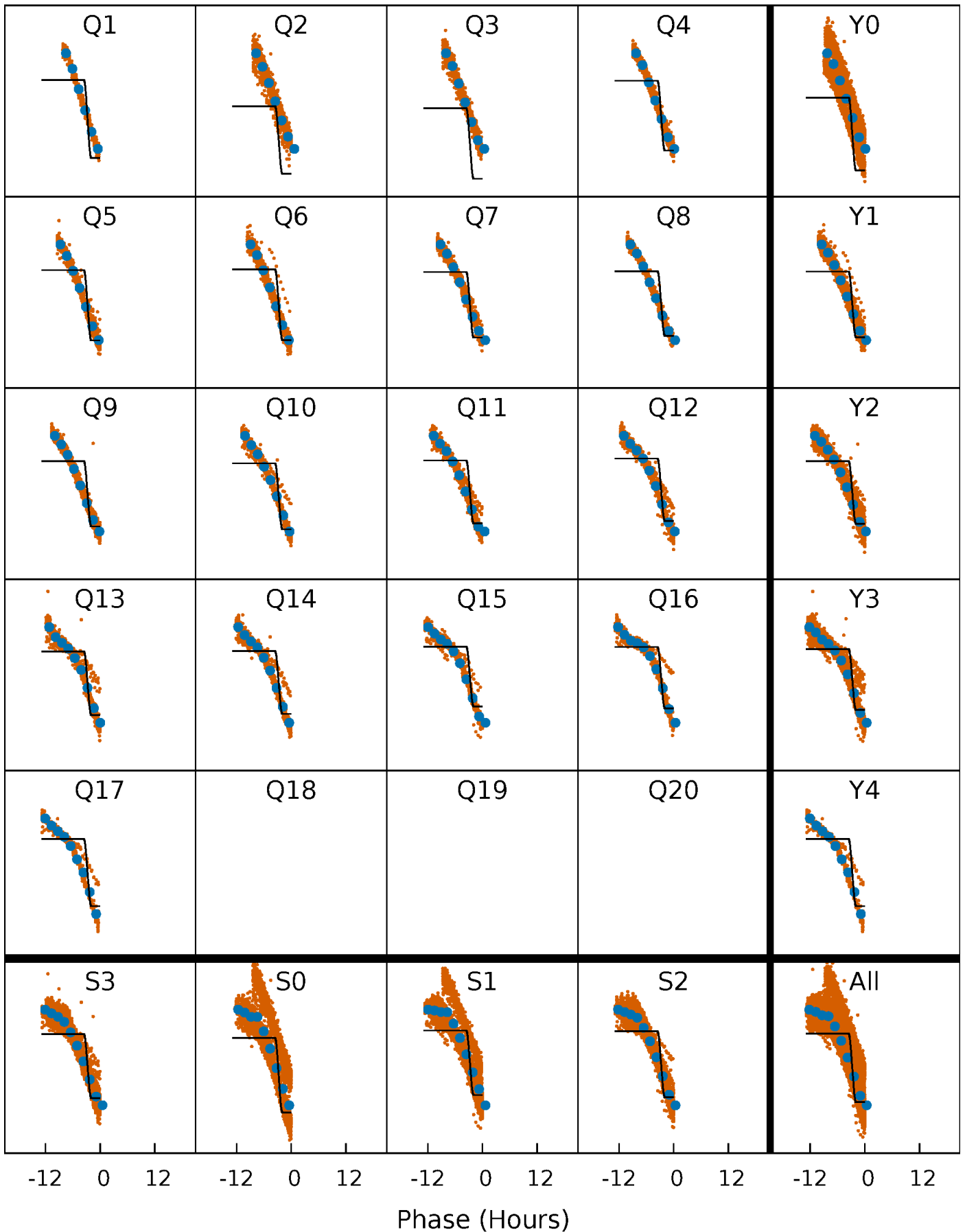
DV Quarter-Phased Transit Curves

TCE 003442058-04 P= 1.430006 Days $T_0=132.899421$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

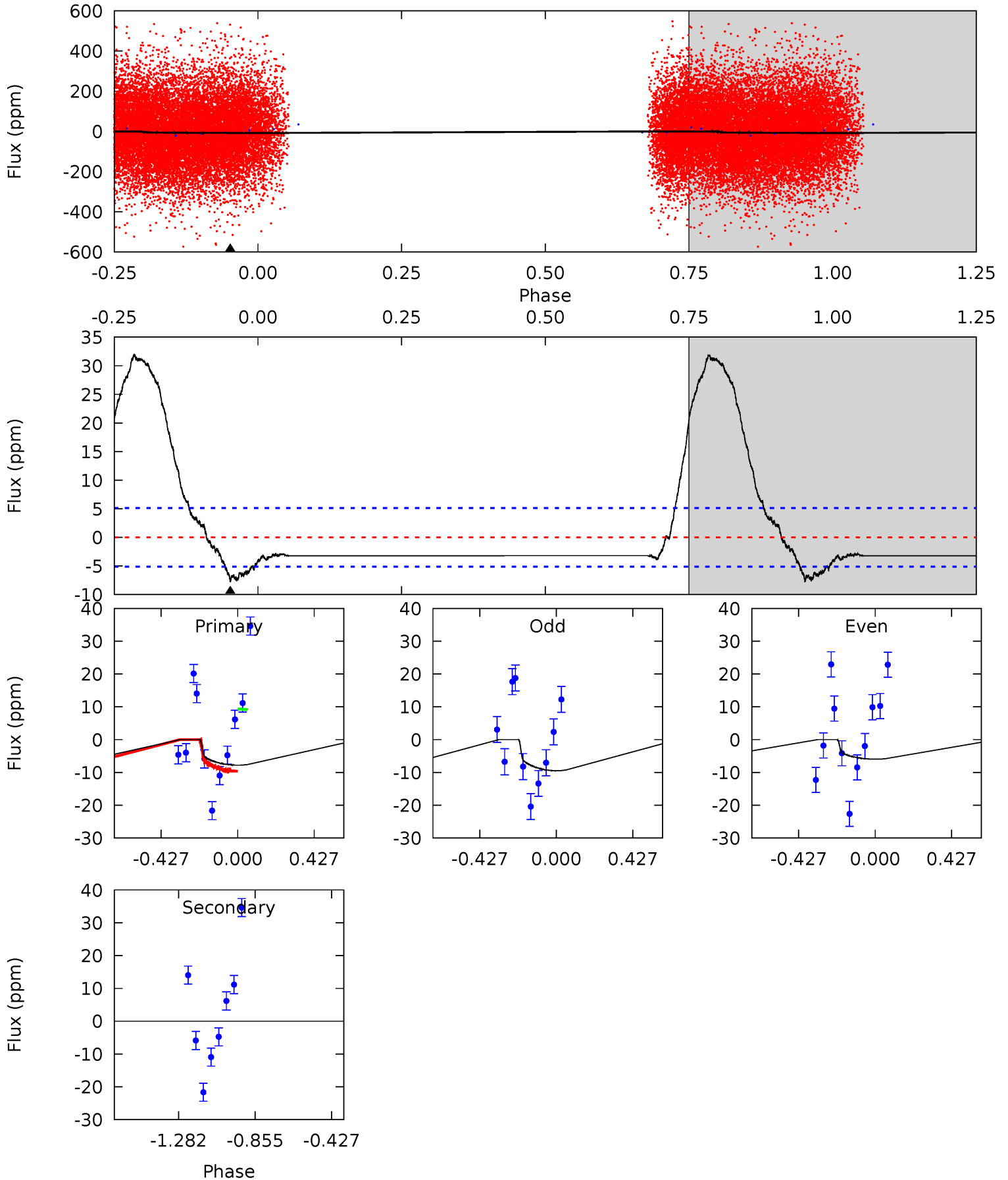
TCE 003442058-04 $P = 1.430149$ Days $T_0 = 132.837033$ (BKJD)



DV Model-Shift Uniqueness Test

003442058-04, P = 1.430006 Days, E = 131.469415 Days

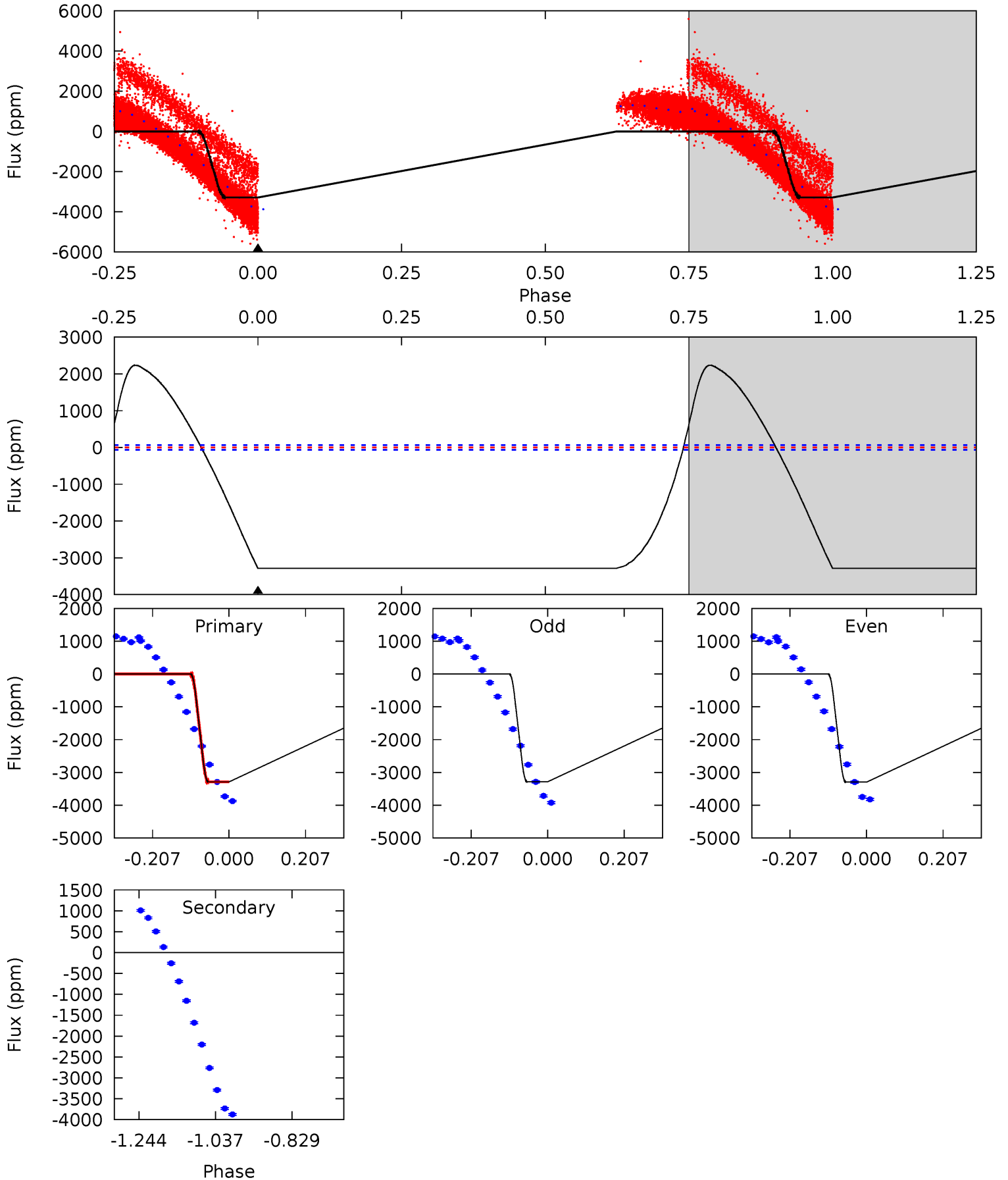
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.47	0	0	0	4.25	0.79	2.63	6.47	6.47	0	0	1.46	0.60	0.80	0.07



Alt Model-Shift Uniqueness Test

003442058-04, P = 1.430149 Days, E = 131.406884 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
220.0	0	0	0	4.41	1.26	121.6	220.0	220.0	0	0	0.44	0.93	0.40	8.61



Stellar Parameters For KIC 003442058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7703^{+237}_{-316}	$3.955^{+0.260}_{-0.140}$	$-0.200^{+0.200}_{-0.350}$	$2.290^{+0.486}_{-0.729}$	$1.725^{+0.184}_{-0.341}$	$0.202^{+0.371}_{-0.082}$
	+3%/-4%	+7%/-4%	+100%/-175%	+21%/-32%	+11%/-20%	+183%/-40%
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 003442058-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$1.03^{+0.47}_{-0.42}$	4124^{+278}_{-373}	-3672^{+7551}_{-844}	$0.012^{+0.672}_{-0.675}$
Alt.	0 ± 15	$15.07^{+1.90}_{-2.59}$	4120^{+296}_{-347}	-3721^{+230}_{-180}	$0.001^{+0.033}_{-0.032}$

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

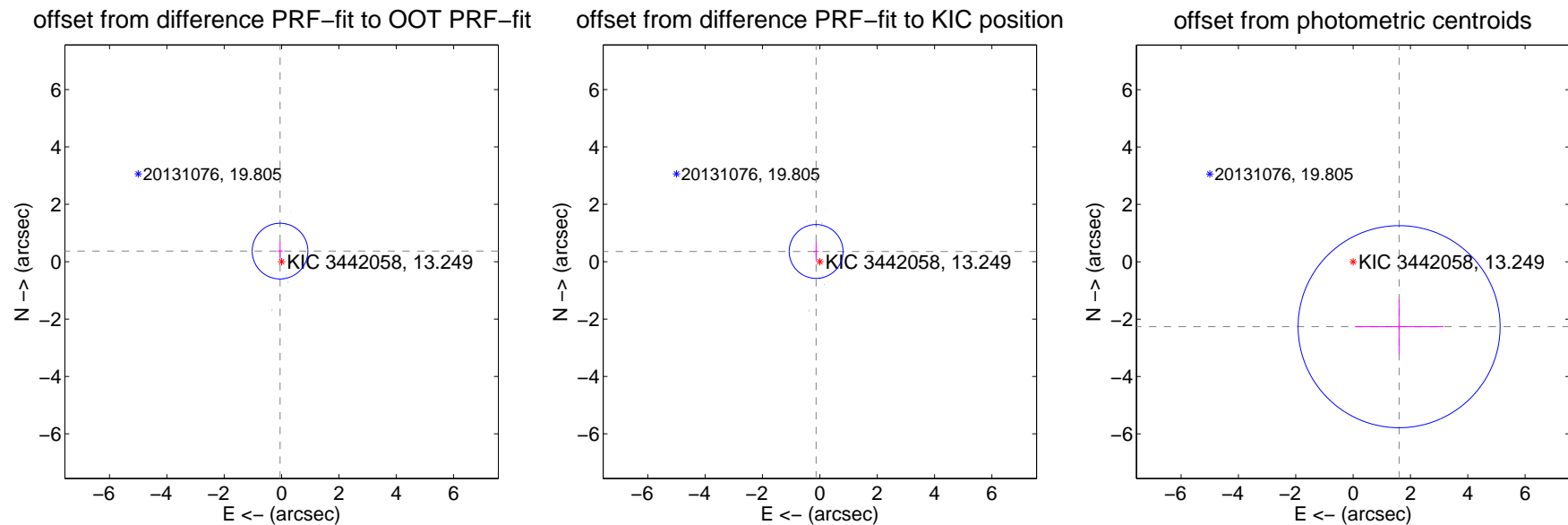
DV Centroid Data

Supplemental centroid analysis for 003442058-04. Kepler magnitude: 13.25. Transit SNR 7.66

There are 17 quarters with good PRF difference image offsets

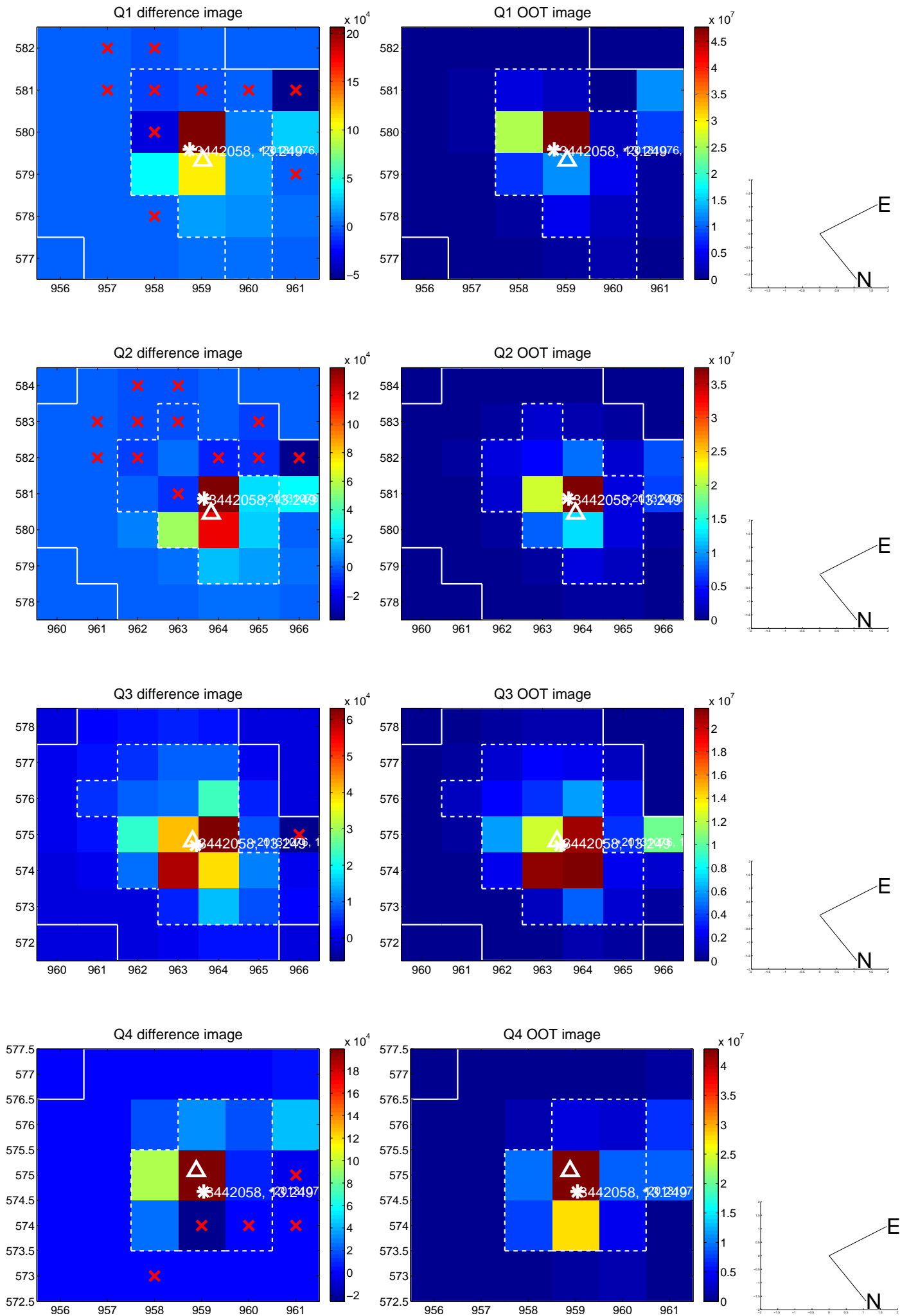
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.373 ± 0.324	1.15	0.054 ± 0.093	0.369 ± 0.327
PRF-fit source offset from KIC position	0.379 ± 0.313	1.21	0.130 ± 0.089	0.356 ± 0.331
photometric centroid source offset	2.78 ± 1.17	2.36	-1.61 ± 1.54	-2.26 ± 0.93

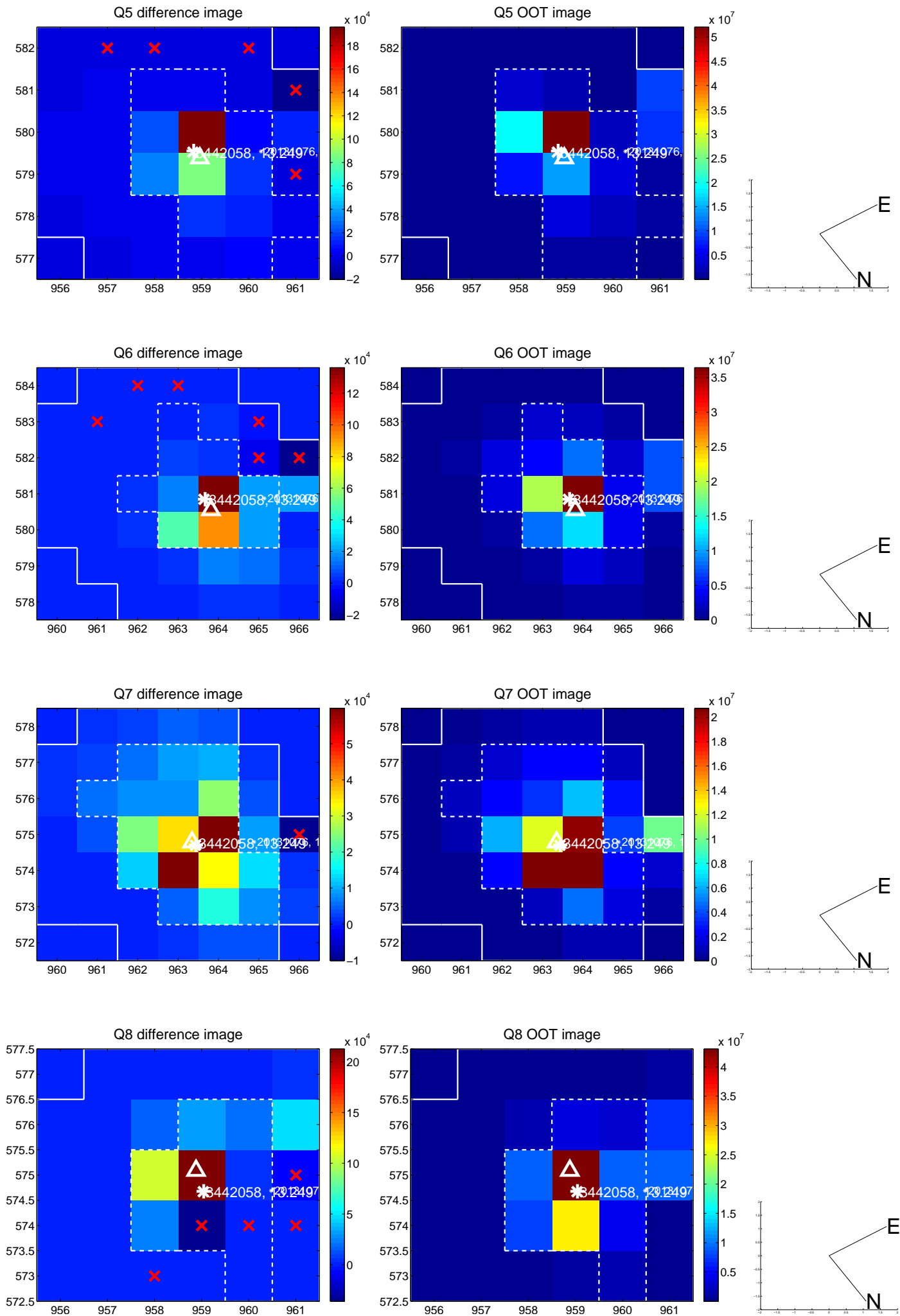


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

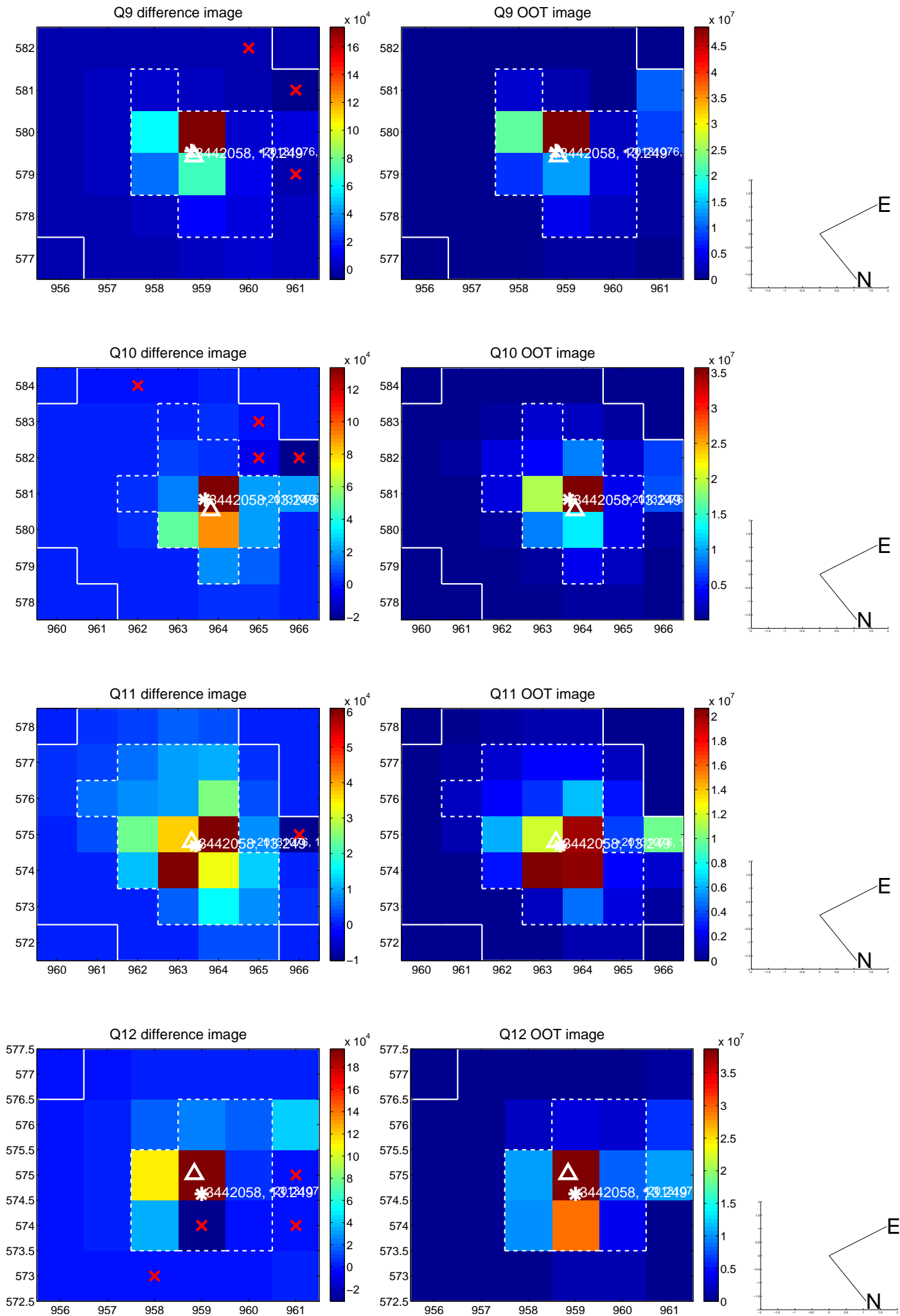
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



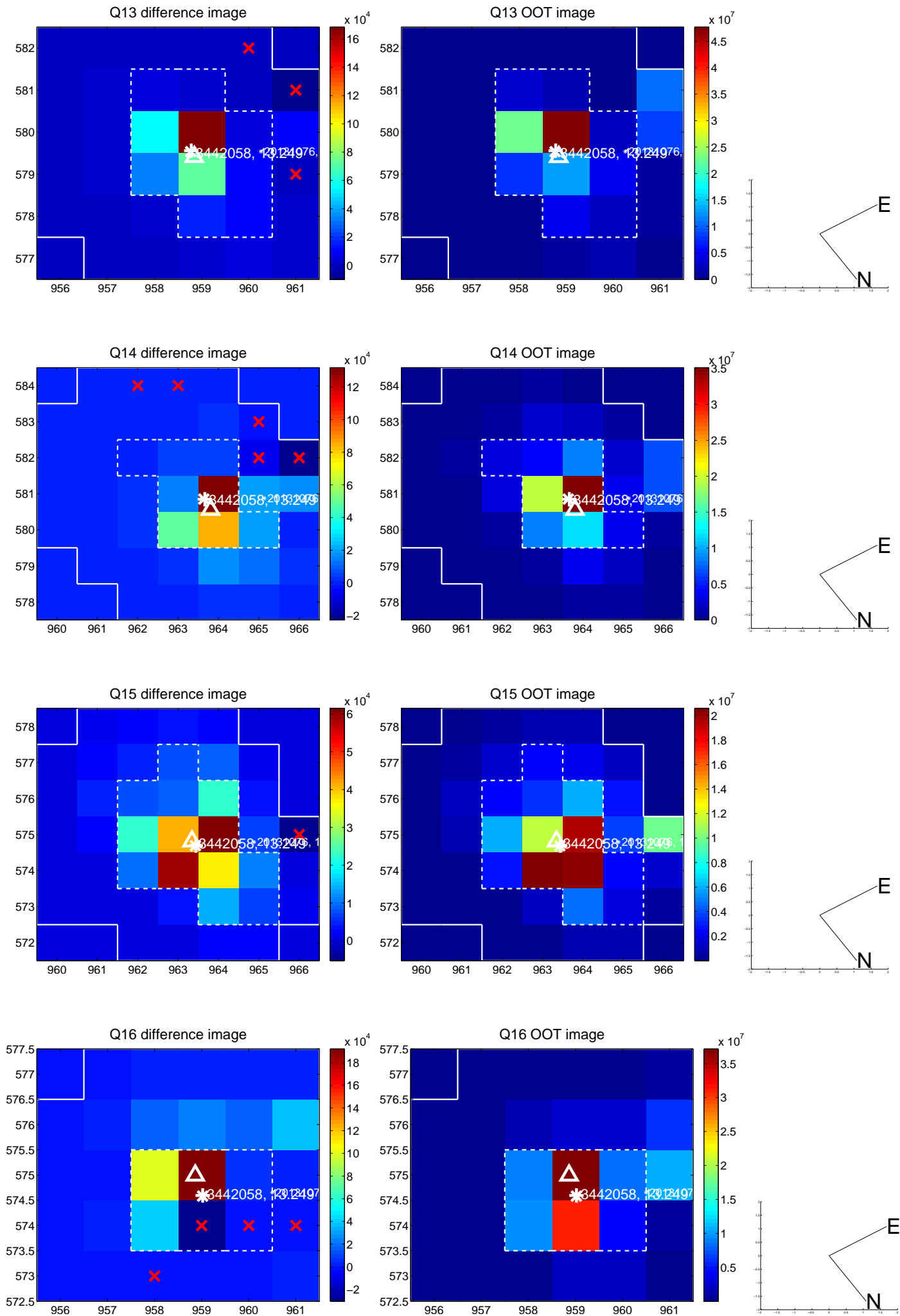
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



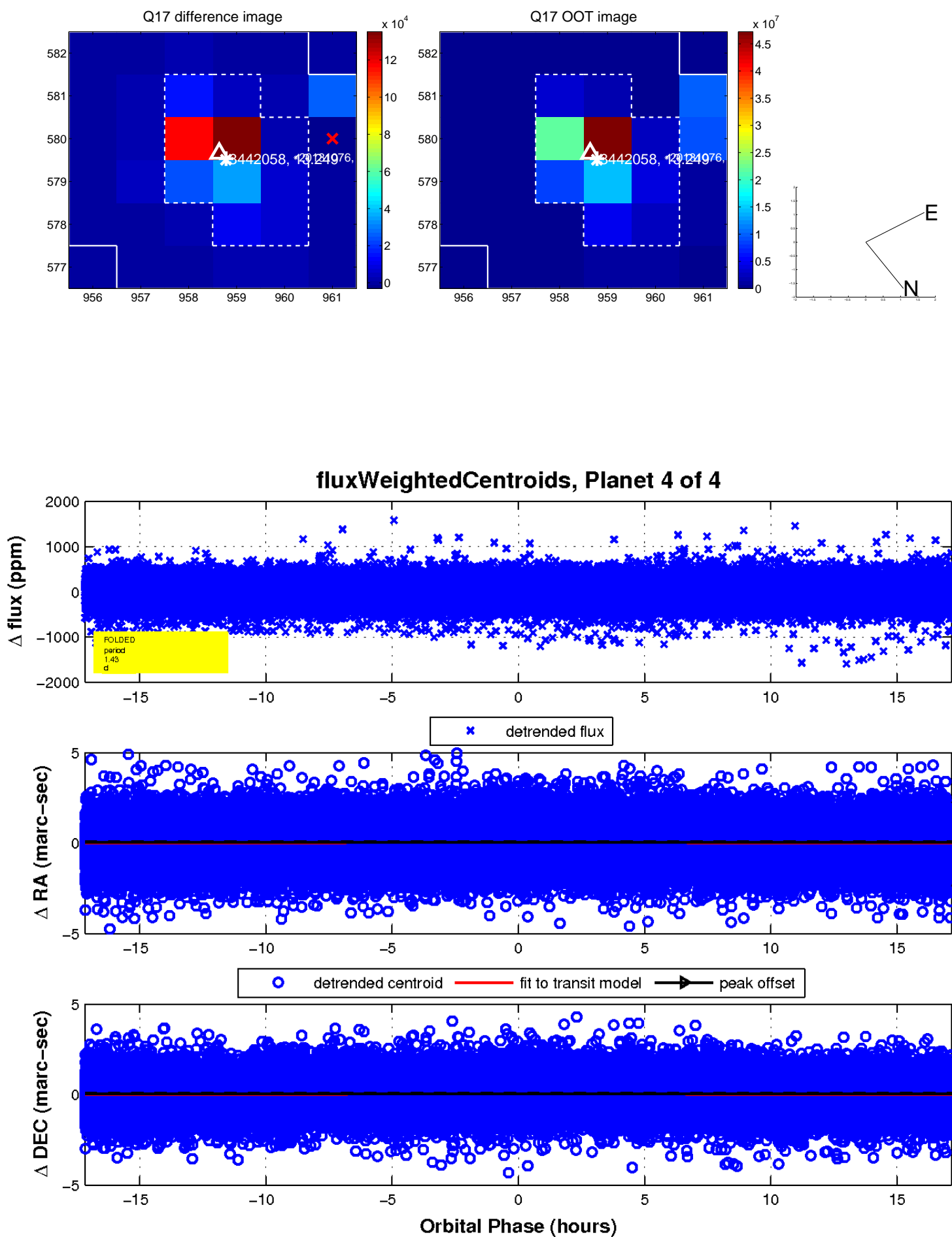
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

