

KIC 006965758

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})
006965758-01	OBS	No	1.070568	132.235630	30.2	3.860	18.3	17.2	2.18	6200	1.23	13976.96
006965758-02	OBS	No	1.070608	131.776694	12.9	8.541	11.8	10.7	2.18	6200	0.92	13976.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006965758-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
006965758-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

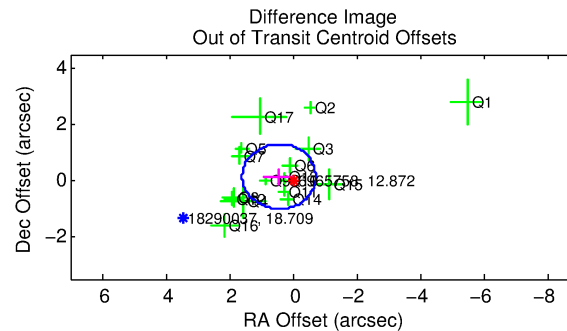
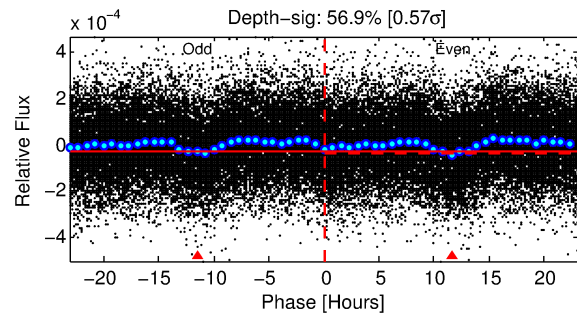
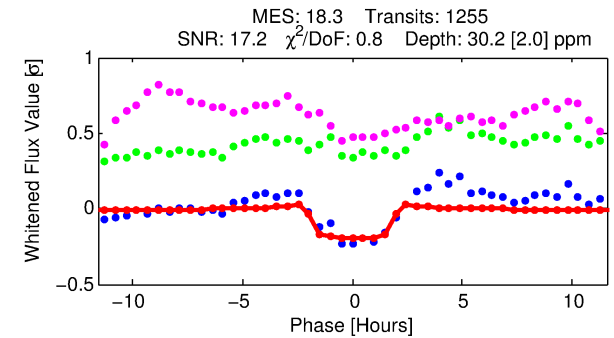
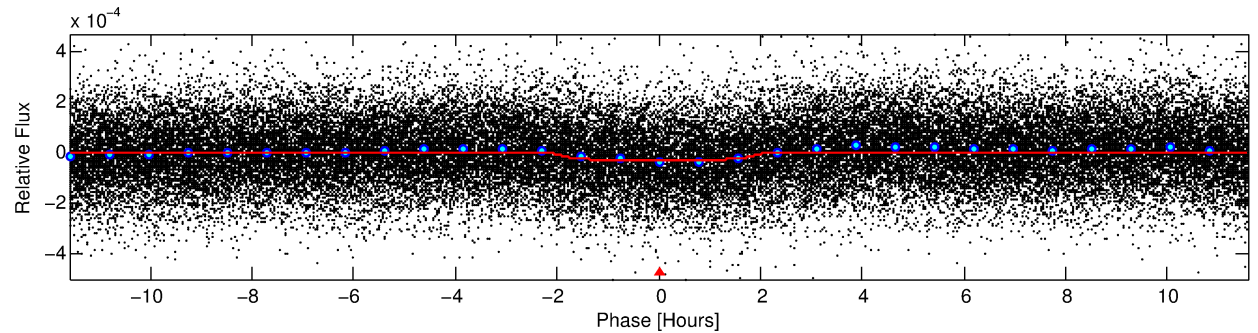
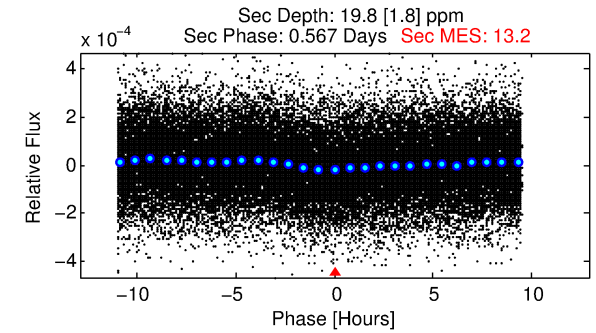
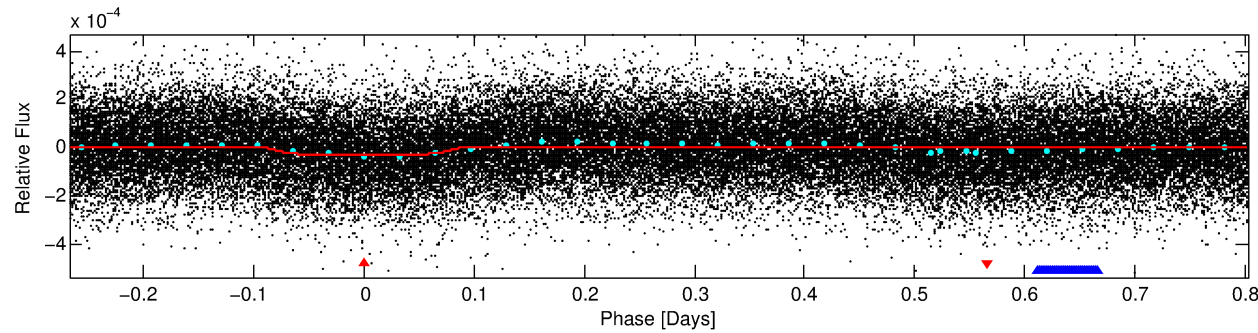
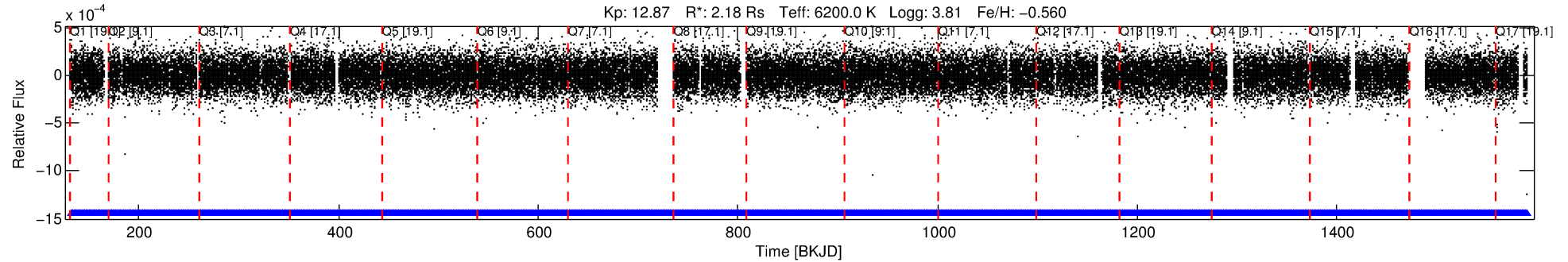
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006965758-01

No Significant Match Found

DV One-Page Summary

KIC: 6965758 Candidate: 1 of 2 Period: 1.071 d



DV Fit Results:

Period = 1.07057 [0.00001] d
Epoch = 132.2356 [0.0023] BKJD
Rp/R* = 0.0052 [0.0012]
a/R* = 2.02 [1.79]
b = 0.46 [2.04]
Seff = 13976.96 [7749.46]
Teq = 2773 [384] K
Rp = 1.23 [0.53] Re
a = 0.0212 [0.0073] AU
Ag = 3.25 [2.31] [0.97σ]
Teffp = 5755 [687] K [3.79σ]

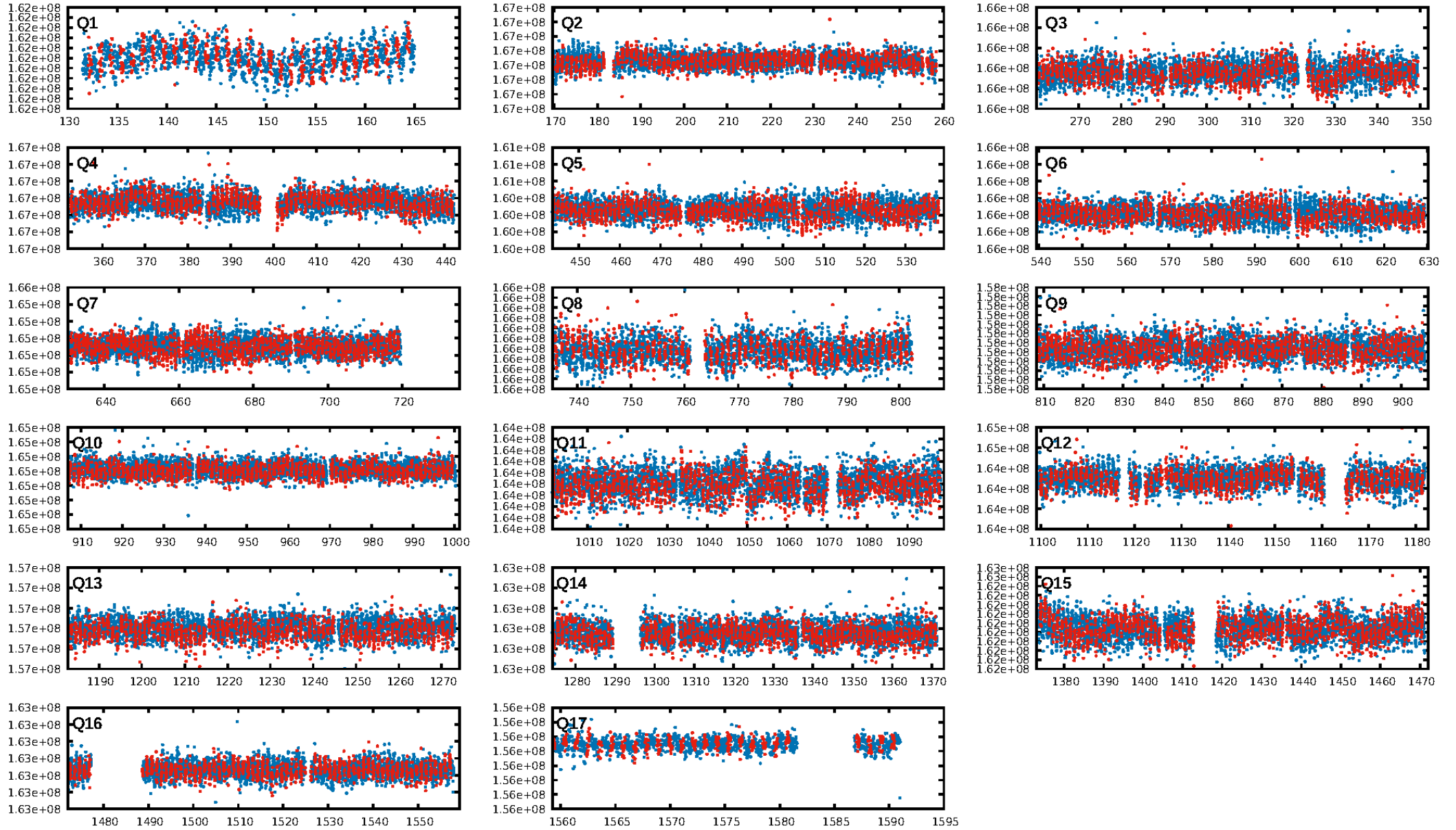
DV Diagnostic Results:

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 [1199/1199]
GhostDiagnostic-chr: 5.2
Centroid-sig: 8.9%
Centroid-so: 0.685 arcsec [1.46σ]
OotOffset-rm: 0.461 arcsec [1.20σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.535 arcsec [1.47σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

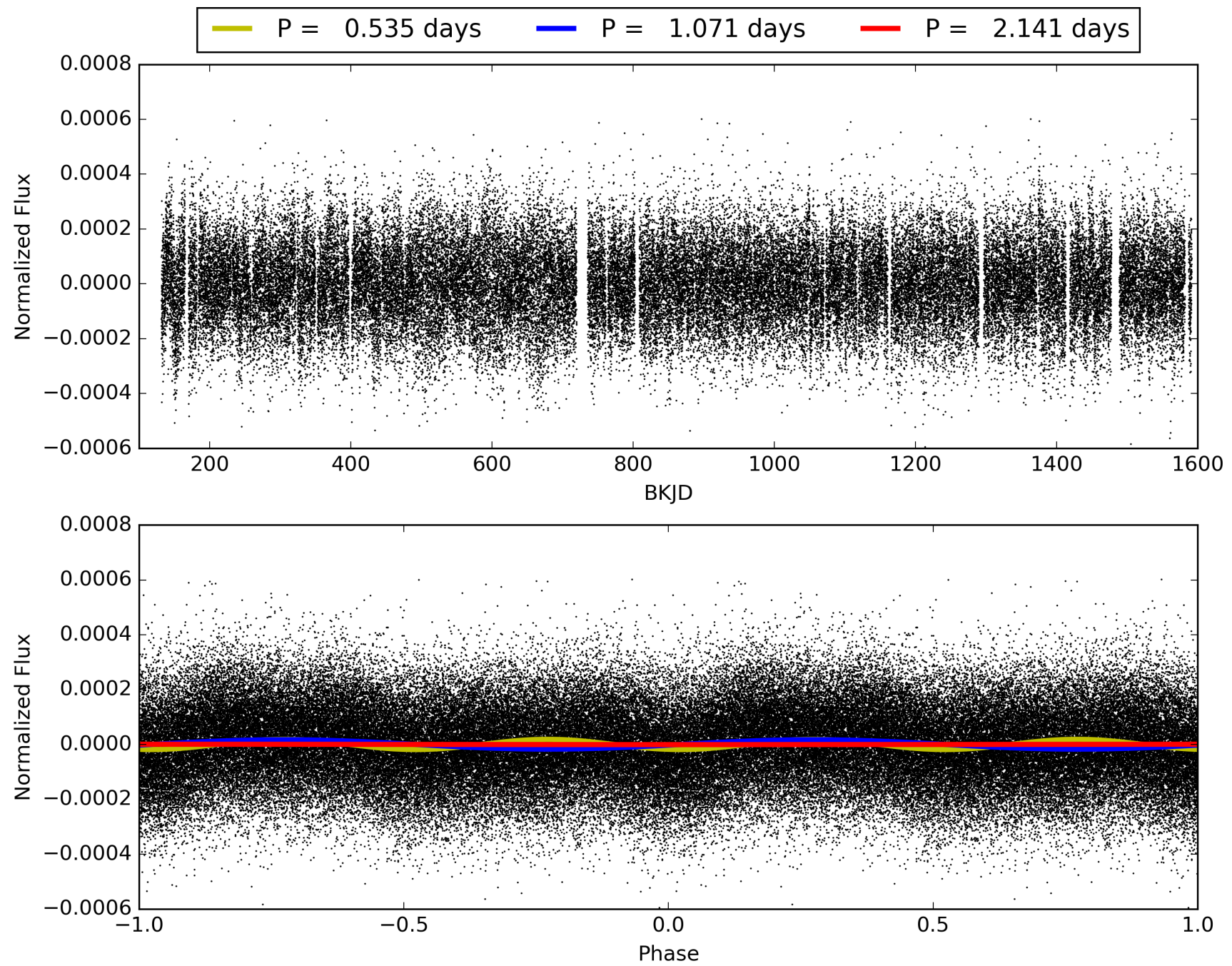
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:14:46 Z

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

TCE 006965758-01, PDC Light Curves

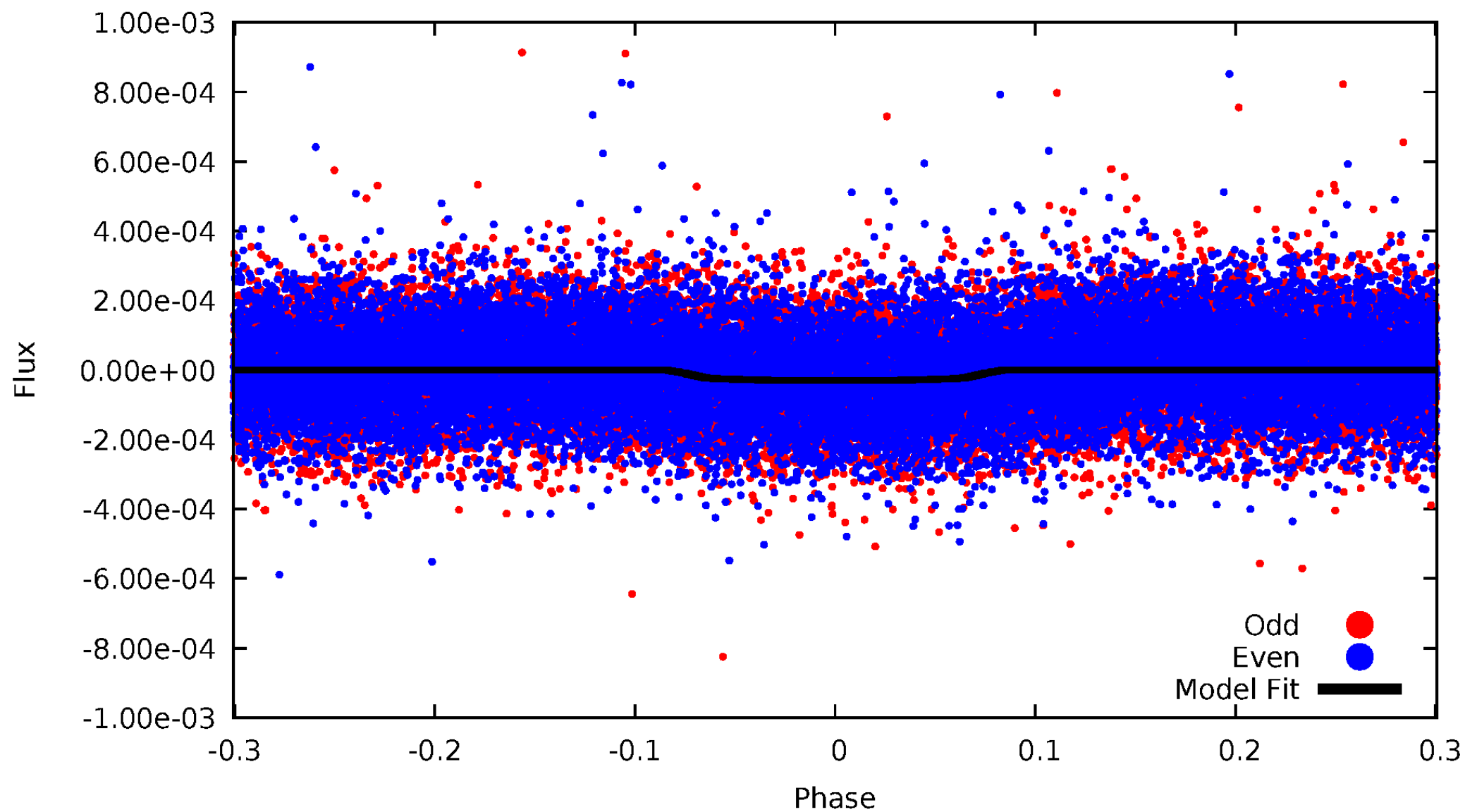


TCE 006965758-01



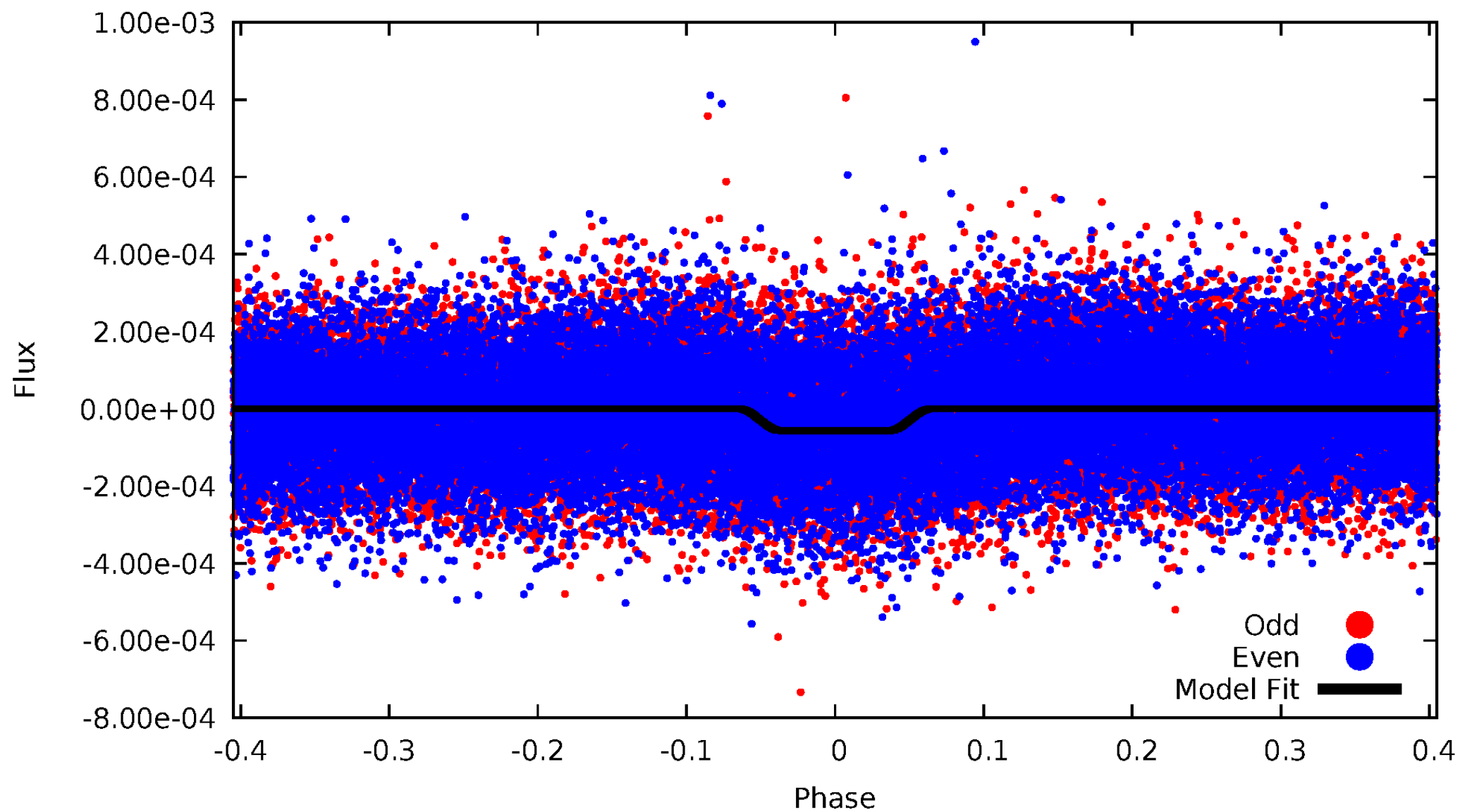
DV Odd/Even

TCE 006965758-01



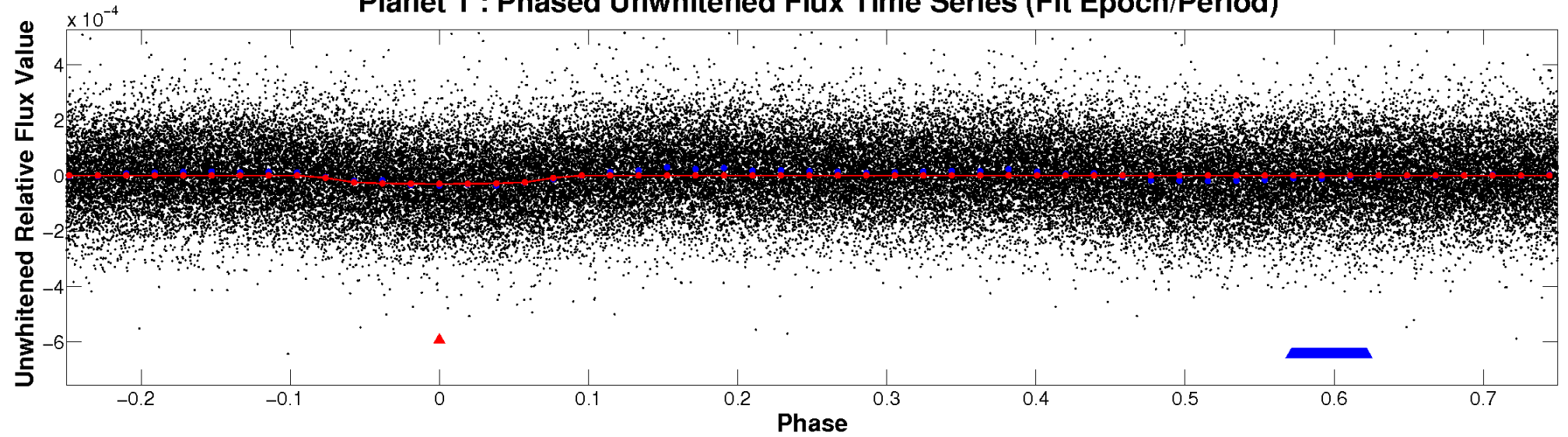
ALT Odd/Even

TCE 006965758-01

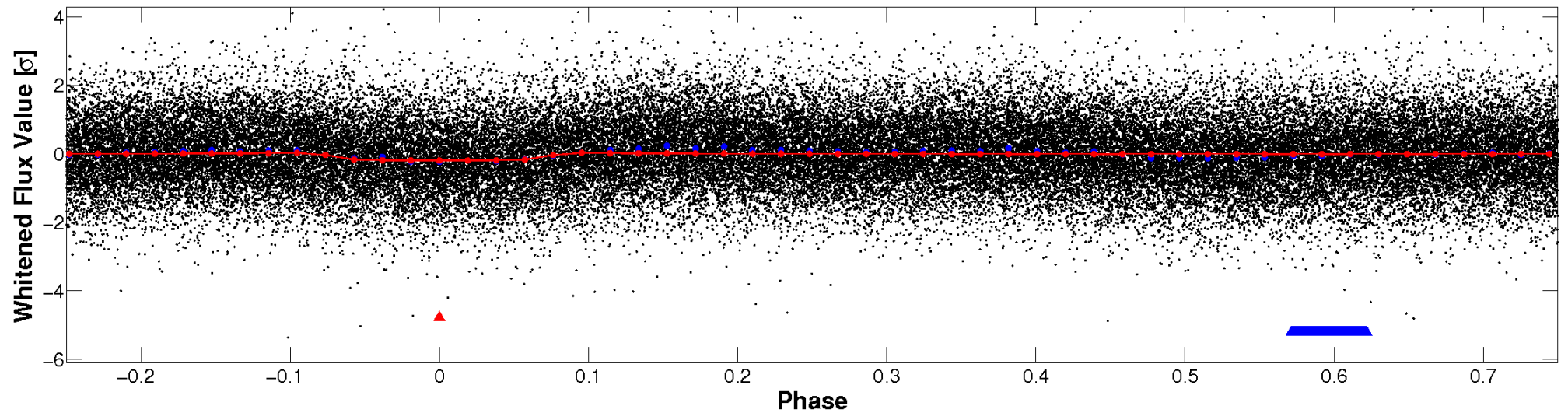


Non-Whitened Vs. Whitened Light Curve

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

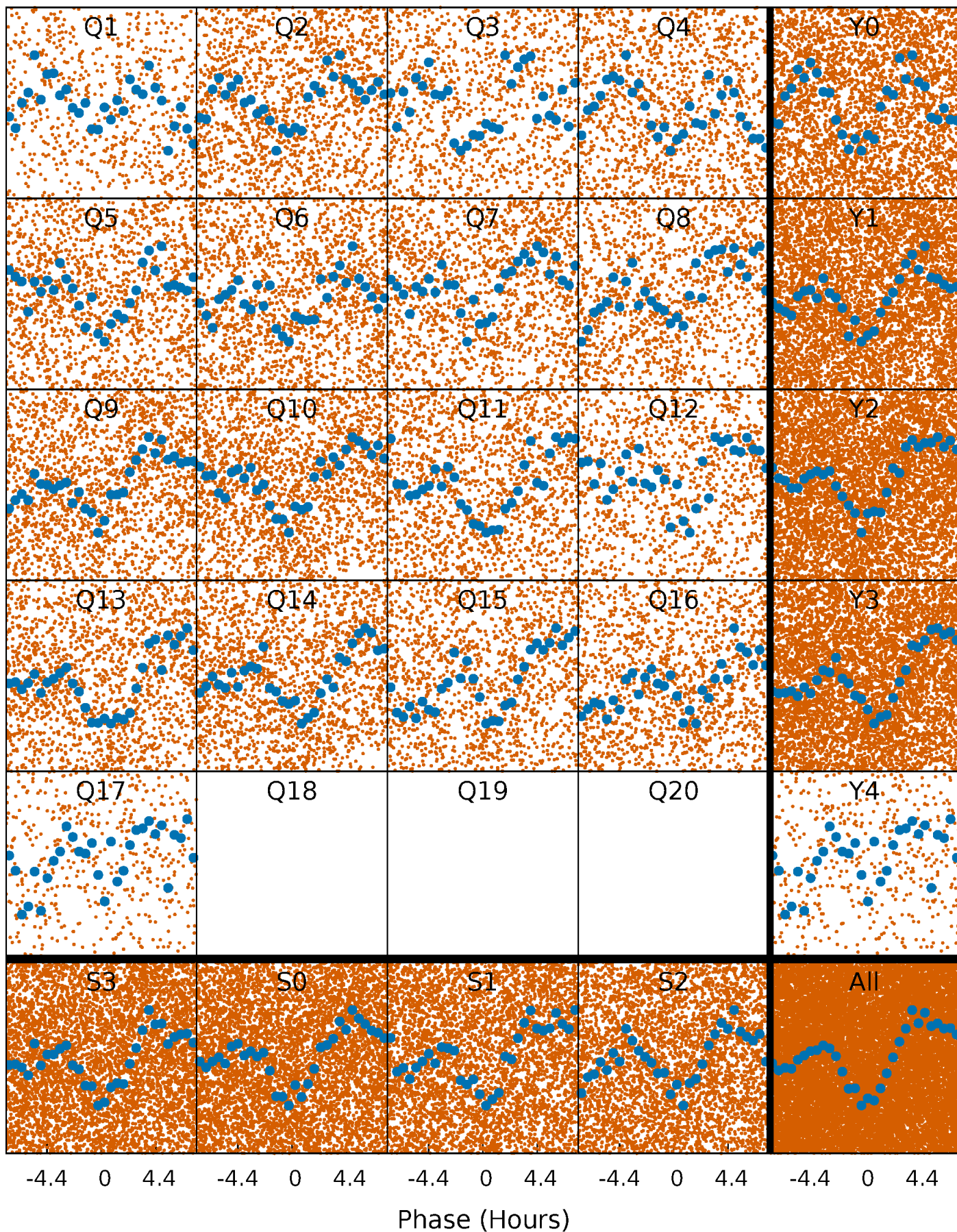


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



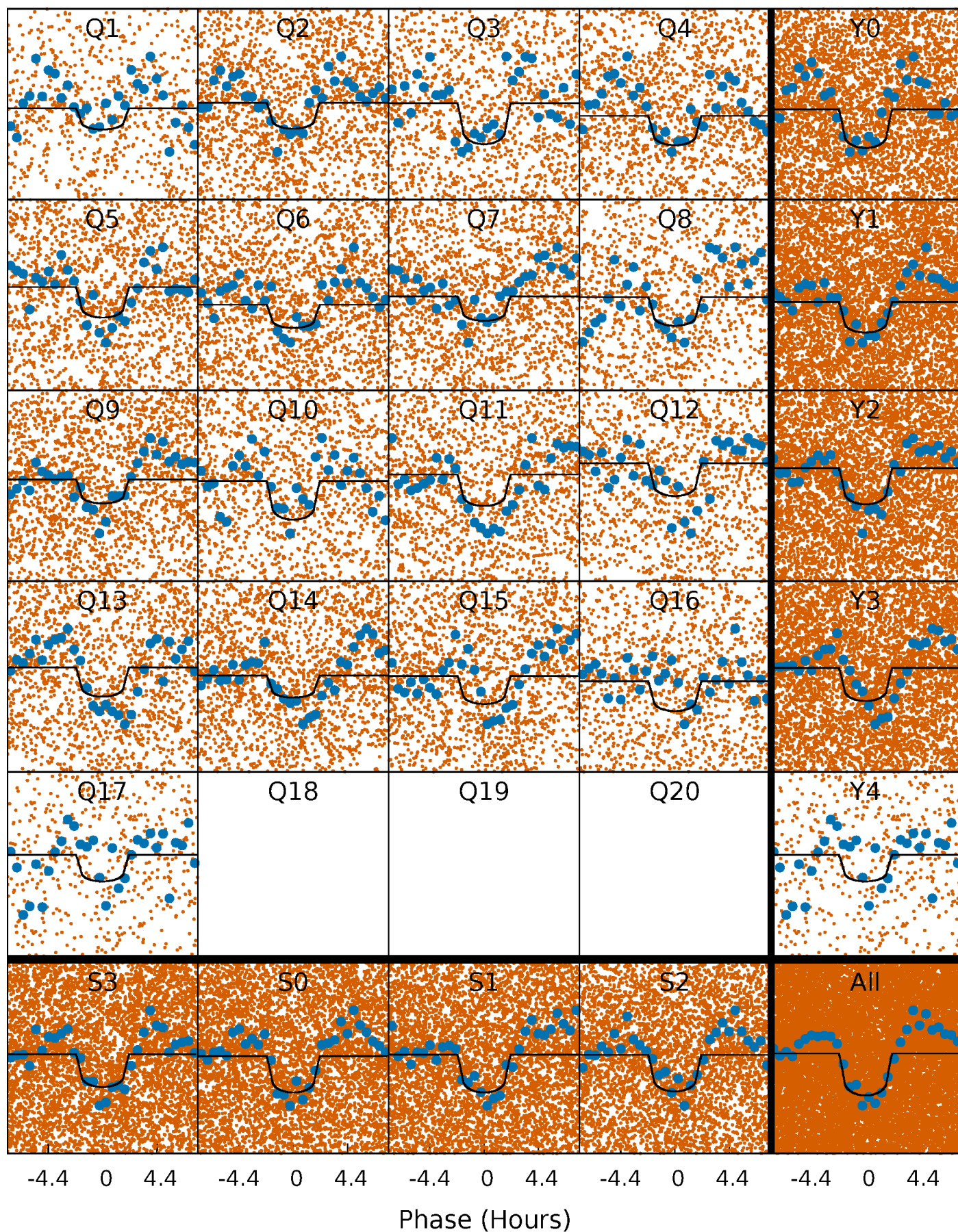
PDC Quarter-Phased Transit Curves

TCE 006965758-01 P= 1.070568 Days $T_0=132.235630$ (BKJD)



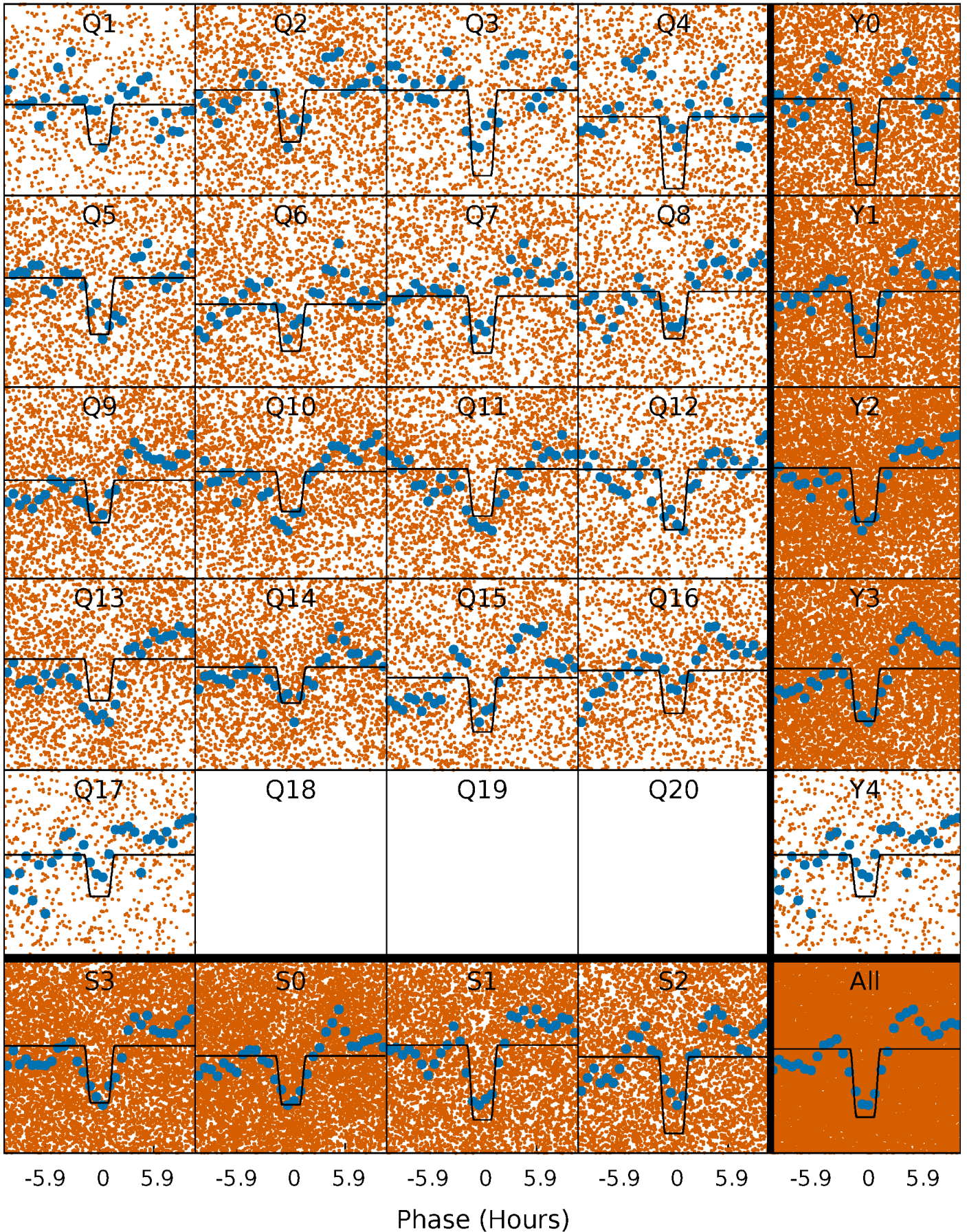
DV Quarter-Phased Transit Curves

TCE 006965758-01 P= 1.070568 Days $T_0=132.235630$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

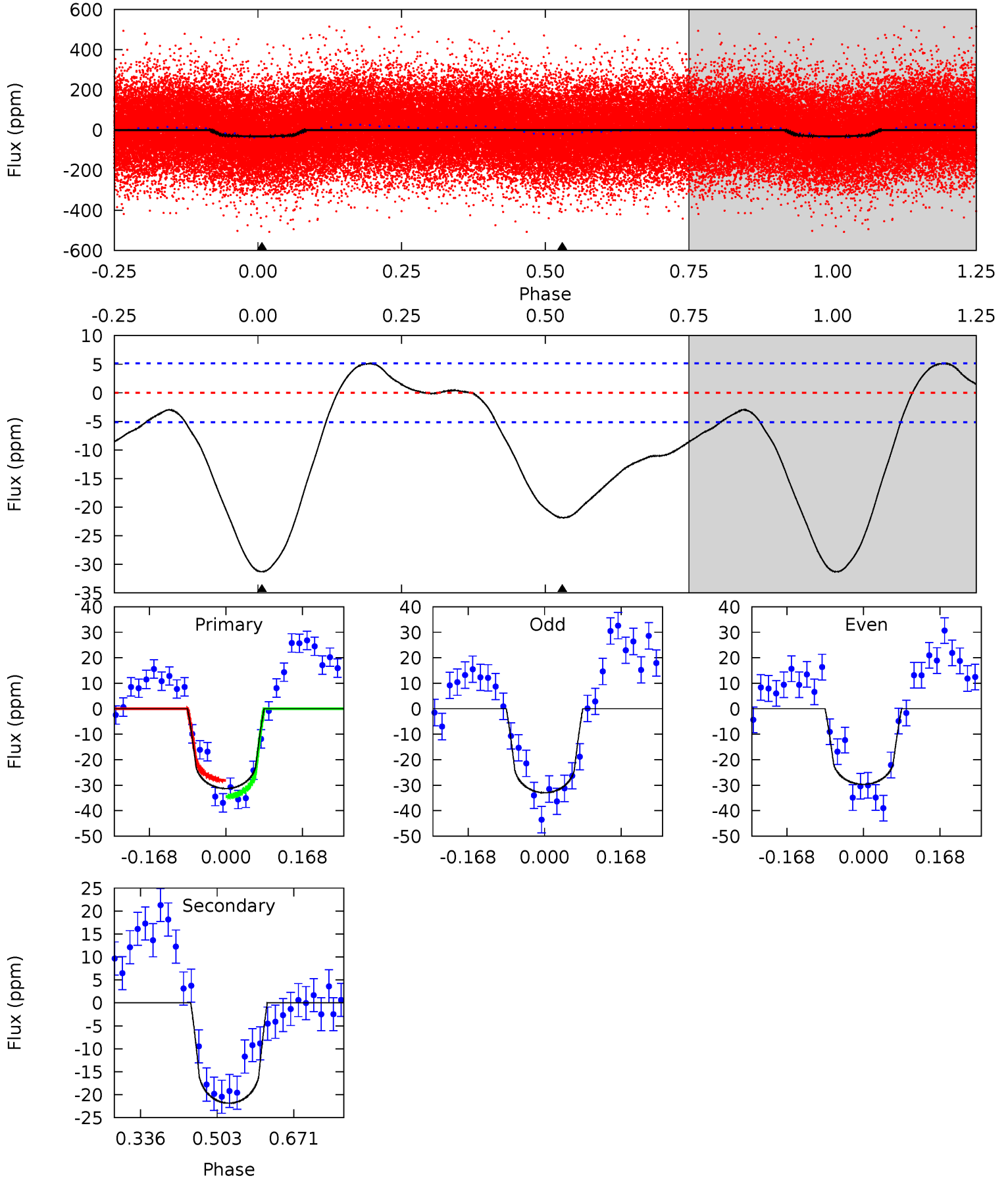
TCE 006965758-01 P= 1.070627 Days $T_0=132.197418$ (BKJD)



DV Model-Shift Uniqueness Test

006965758-01, P = 1.070568 Days, E = 131.165062 Days

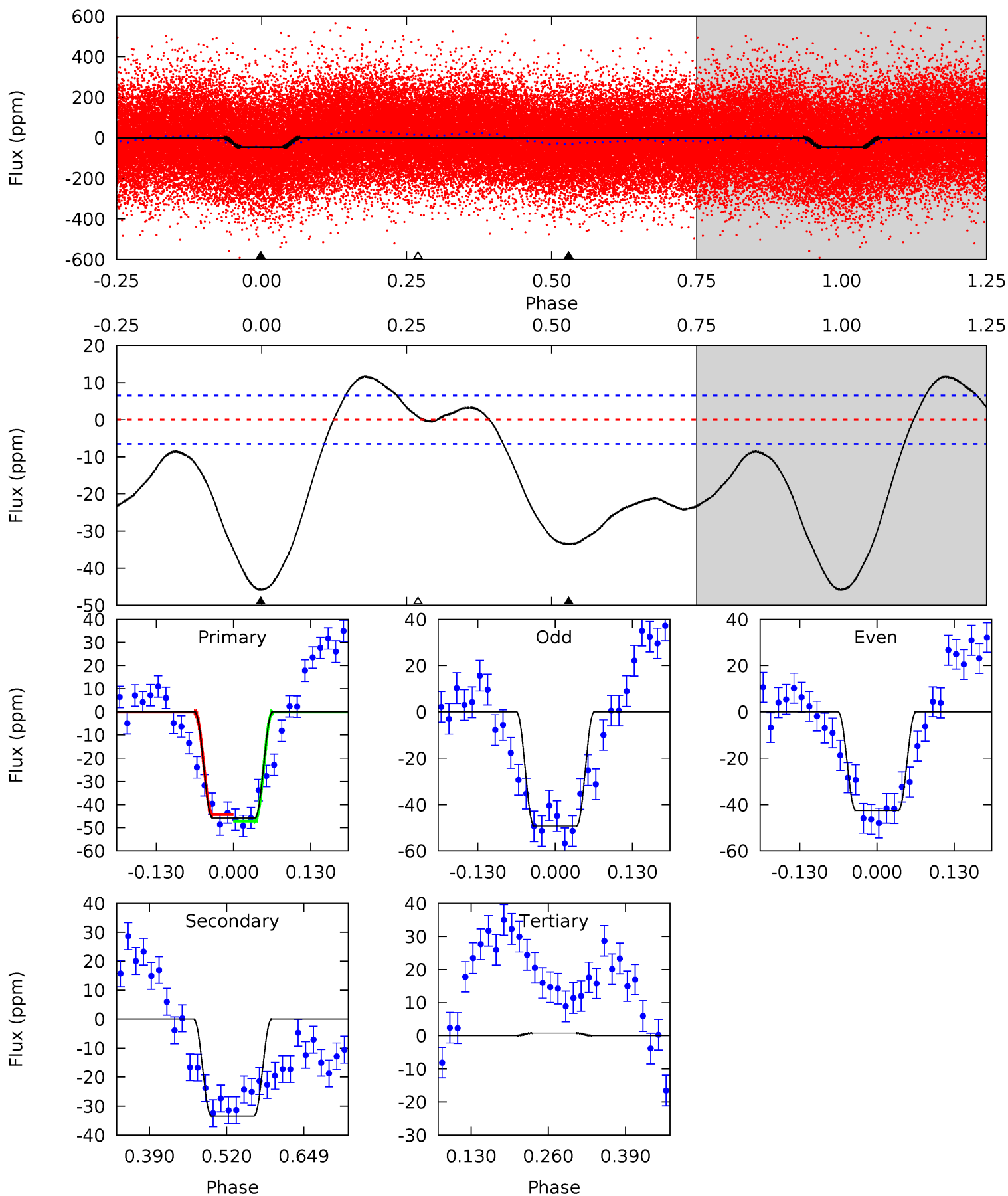
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	18.9	0	0	4.45	1.38	4.36	27.1	27.1	18.9	18.9	1.43	0.99	0.14	2.75



Alt Model-Shift Uniqueness Test

006965758-01, P = 1.070627 Days, E = 131.126791 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.8	23.2	-0.57	0	4.51	1.51	8.53	32.3	31.8	23.8	23.2	2.37	0.86	0.20	1.02



Stellar Parameters For KIC 006965758

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6200^{+185}_{-185}	$3.807^{+0.315}_{-0.105}$	$-0.560^{+0.350}_{-0.250}$	$2.181^{+0.429}_{-0.797}$	$1.110^{+0.195}_{-0.195}$	$0.151^{+0.339}_{-0.049}$
	+3%/-3%	+8%/-3%	+62%/-45%	+20%/-37%	+18%/-18%	+225%/-33%
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 006965758-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 1	$1.16^{+0.35}_{-0.33}$	3781^{+256}_{-332}	5761^{+937}_{-595}	$4.051^{+3.762}_{-1.606}$
Alt.	-33 ± 1	$1.72^{+0.39}_{-0.39}$	3806^{+260}_{-365}	5322^{+504}_{-410}	$2.866^{+1.874}_{-0.942}$

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

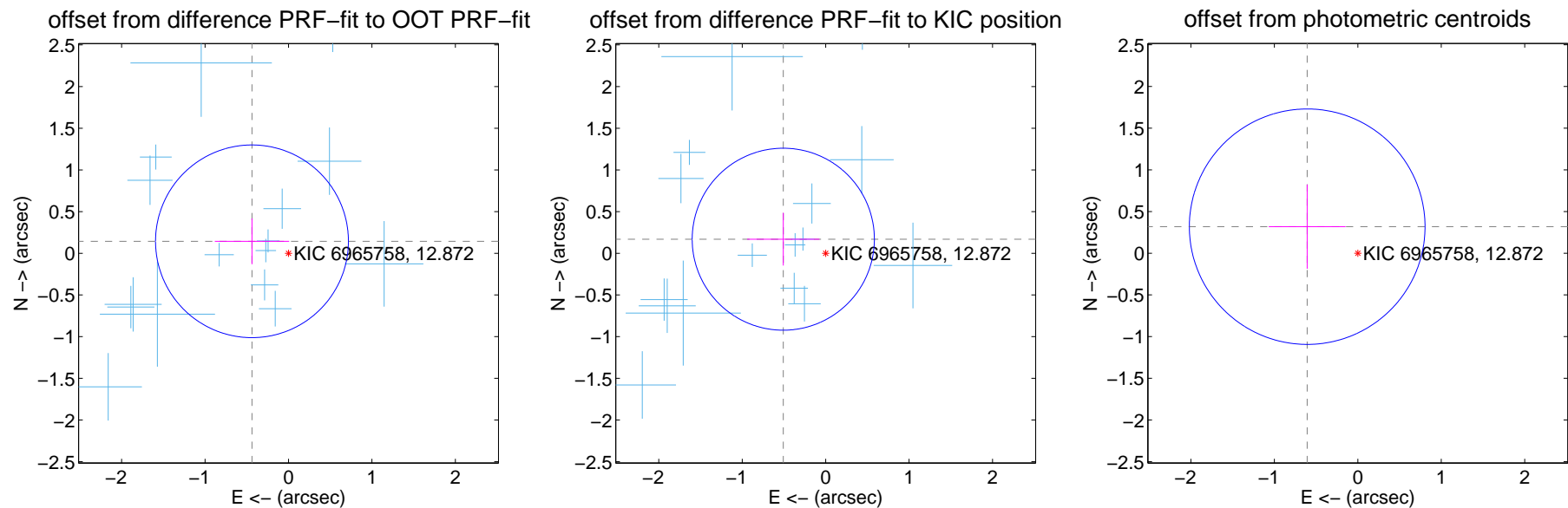
DV Centroid Data

Supplemental centroid analysis for 006965758-01. Kepler magnitude: 12.87. Transit SNR 17.23

There are 16 quarters with good PRF difference image offsets

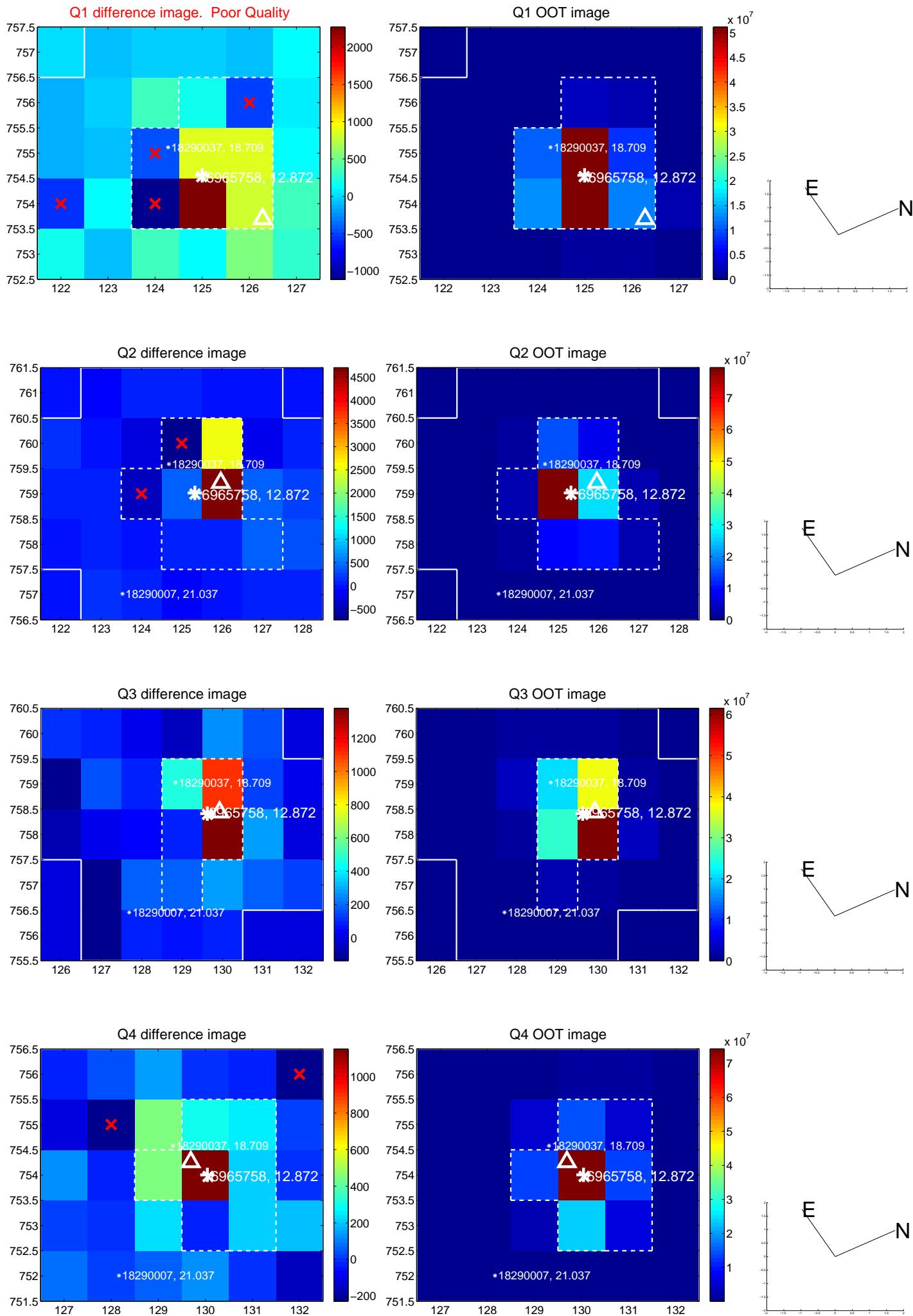
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.461 ± 0.385	1.20	0.438 ± 0.445	0.144 ± 0.275
PRF-fit source offset from KIC position	0.535 ± 0.364	1.47	0.508 ± 0.434	0.169 ± 0.316
photometric centroid source offset	0.68 ± 0.47	1.46	0.61 ± 0.46	0.32 ± 0.50

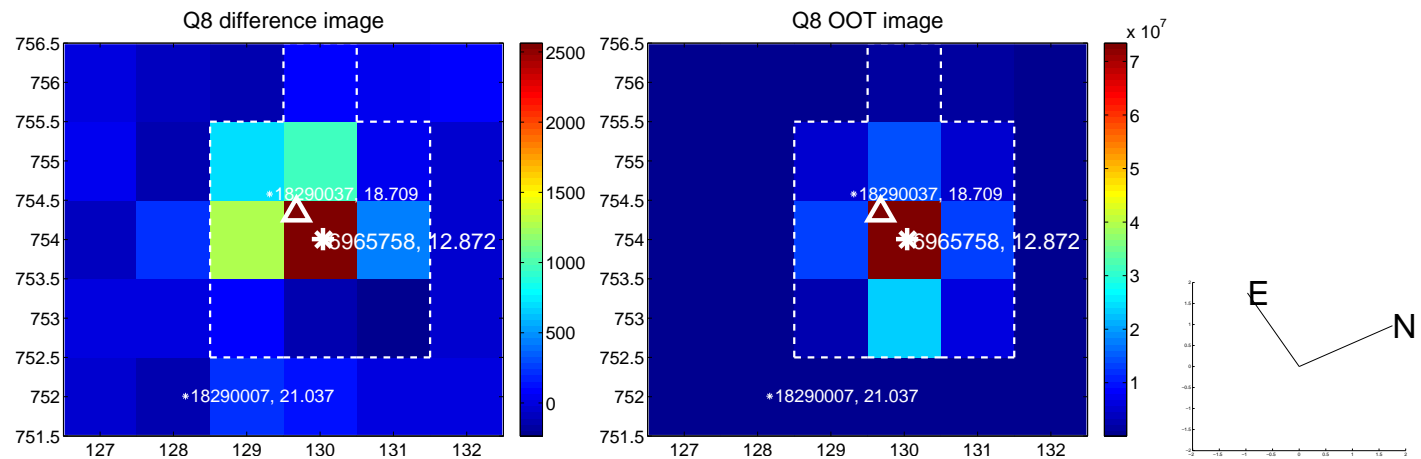
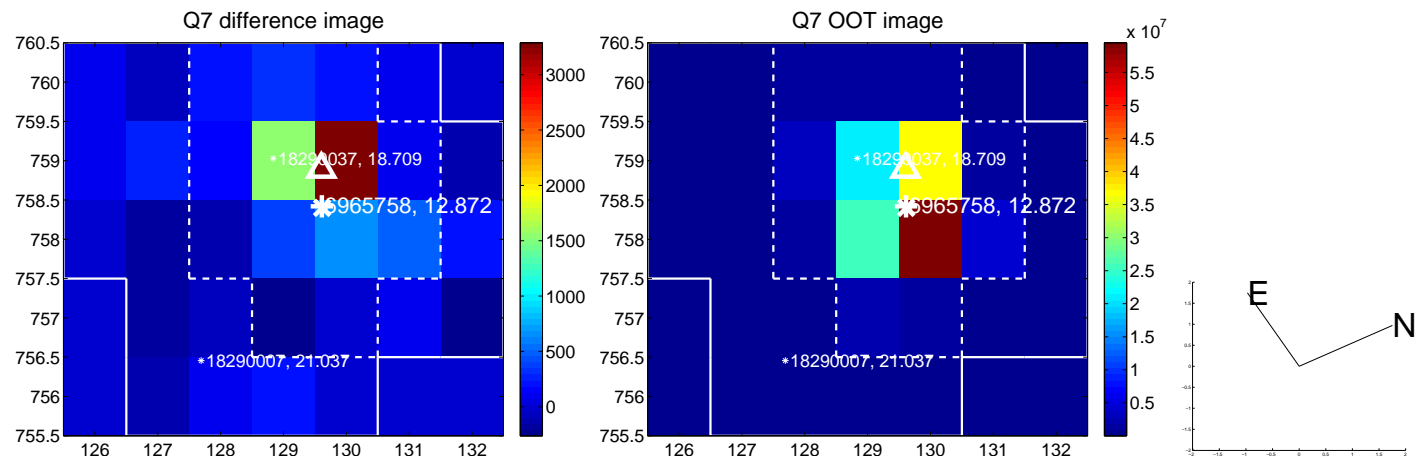
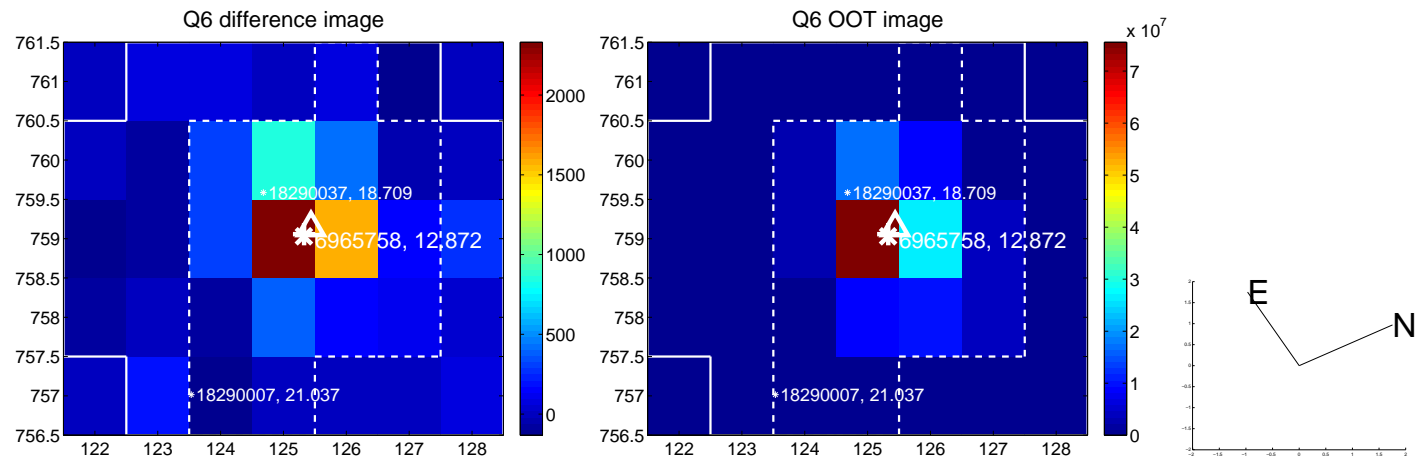
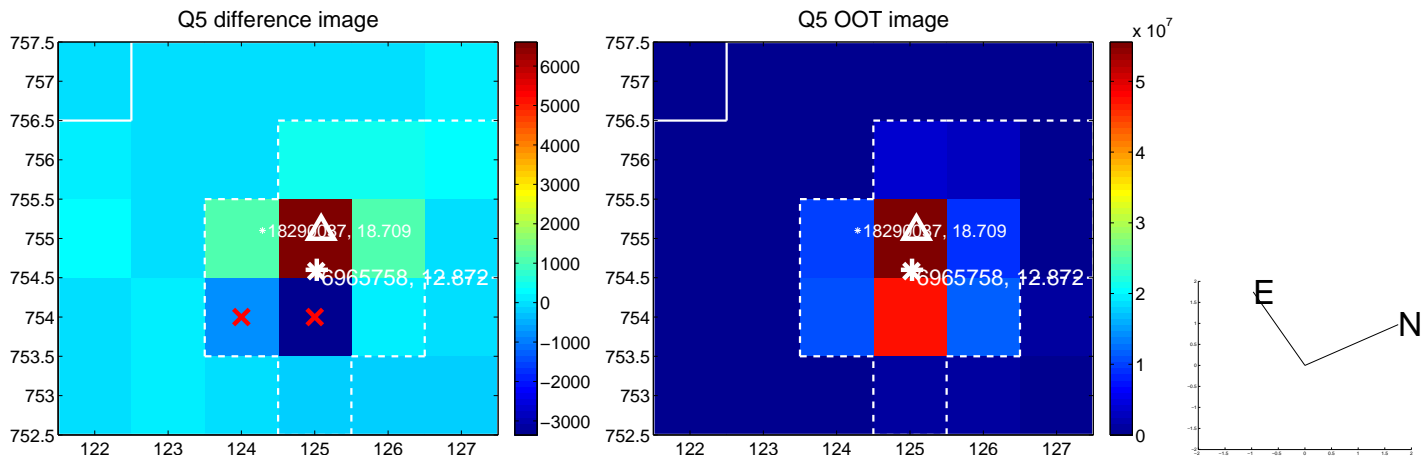


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

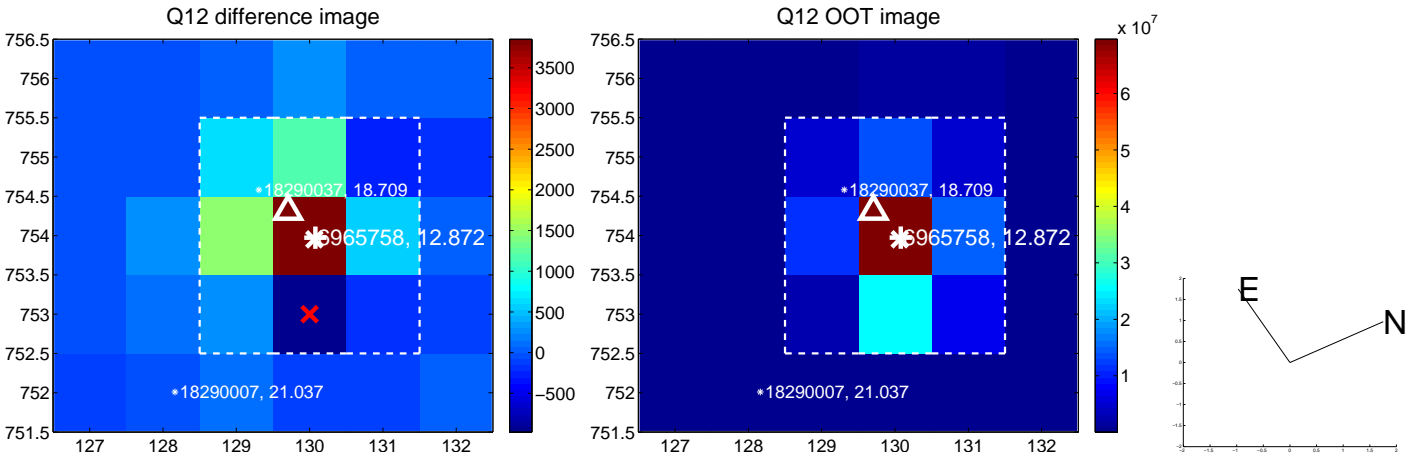
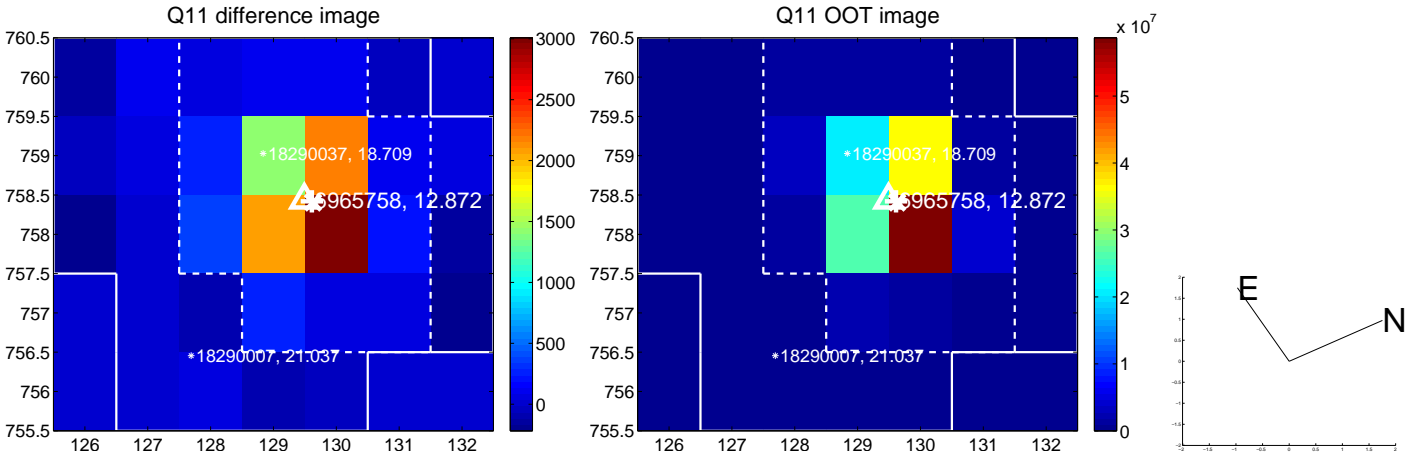
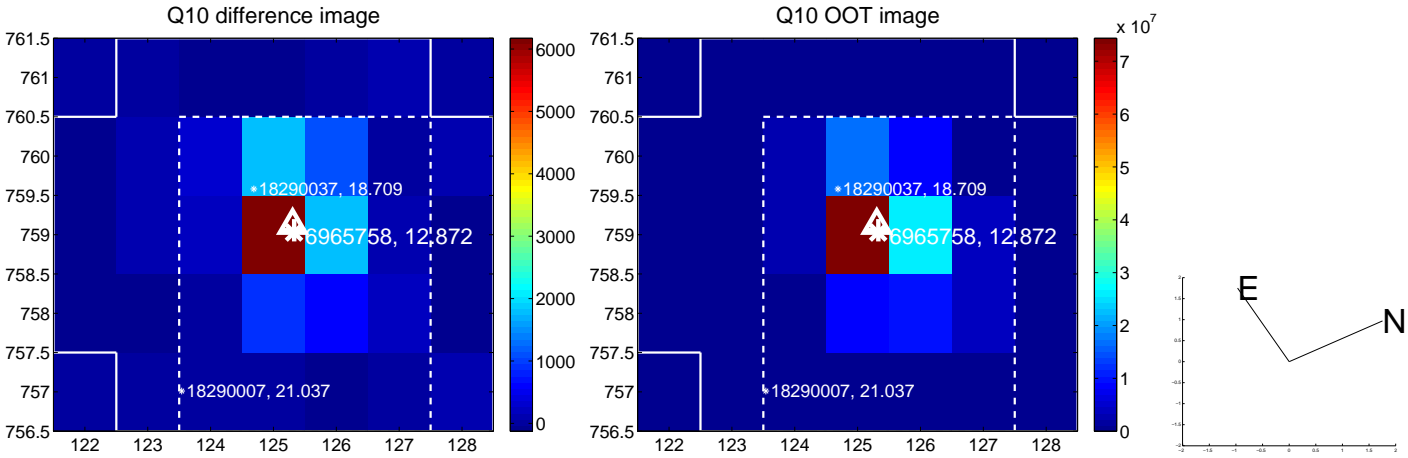
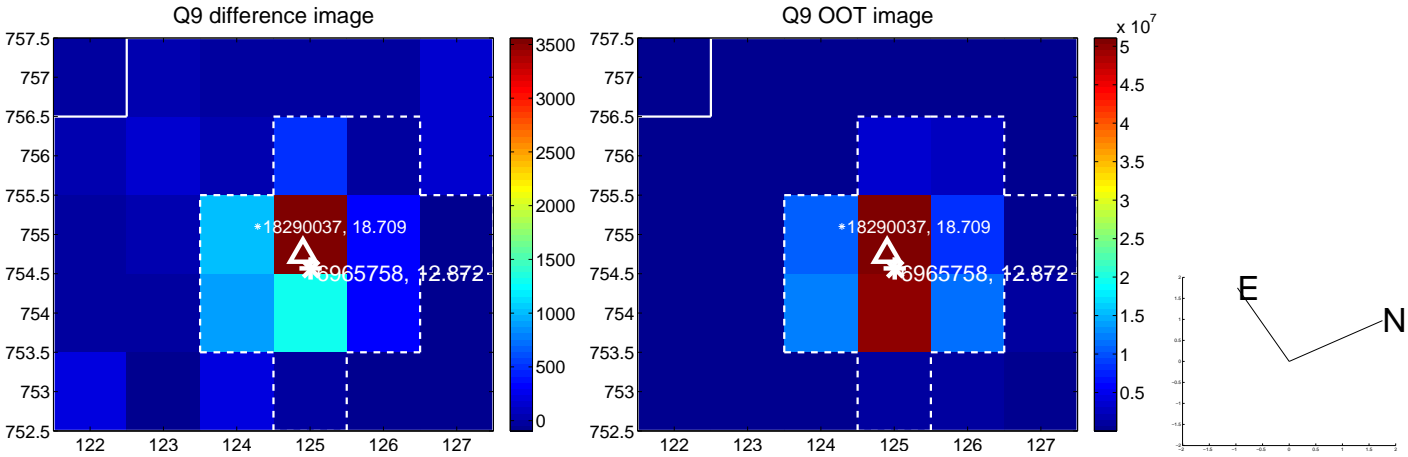
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



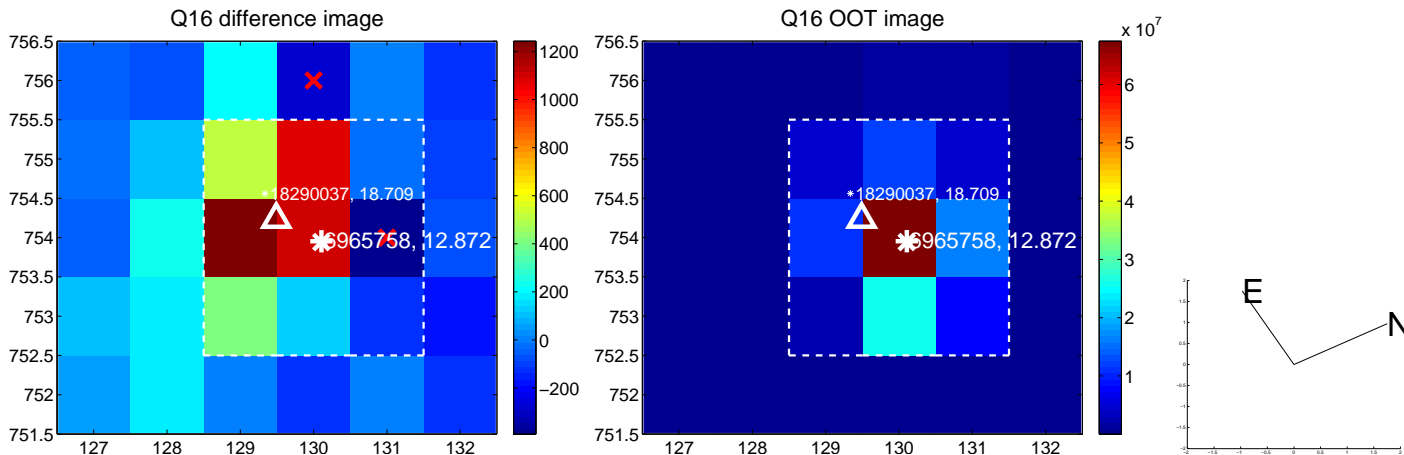
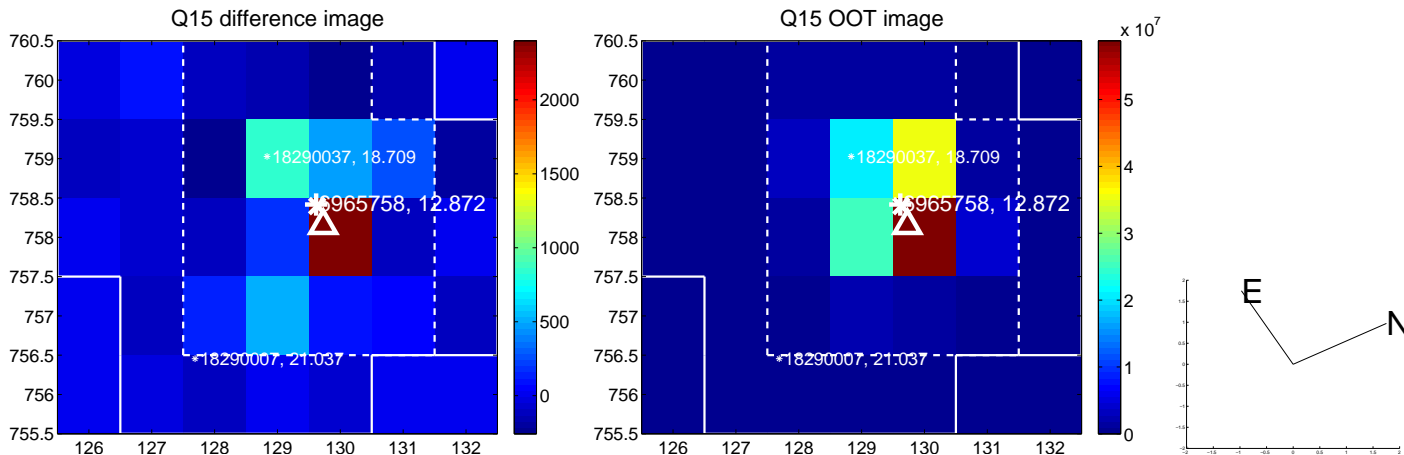
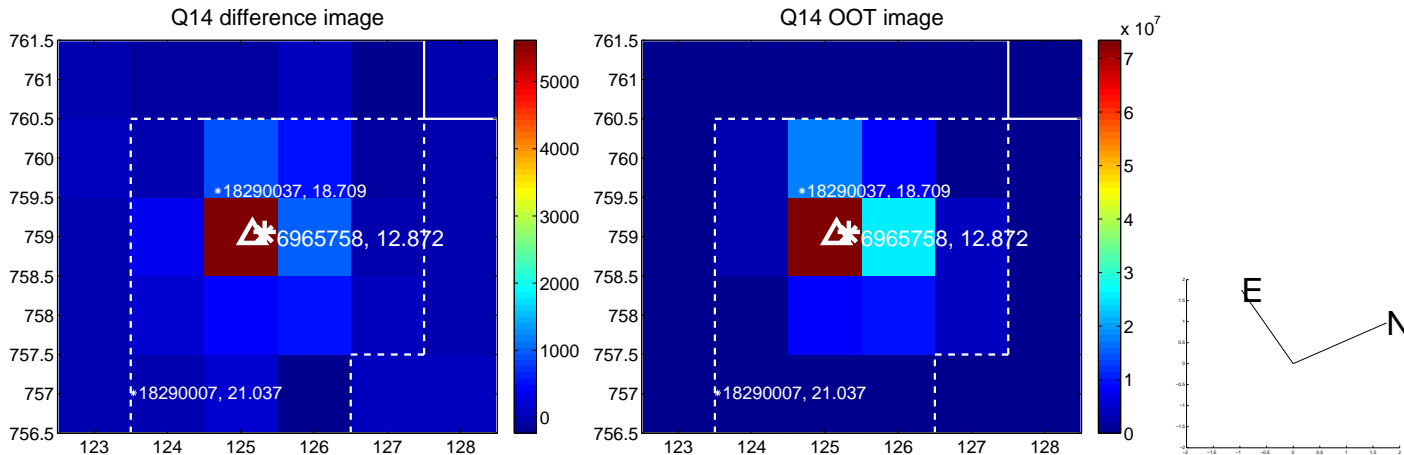
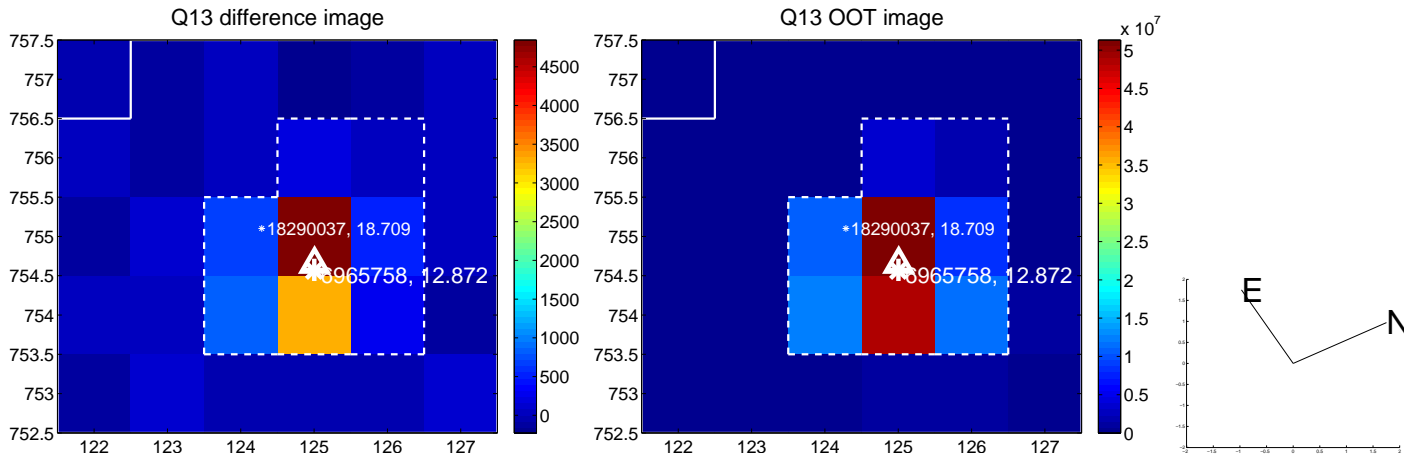
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



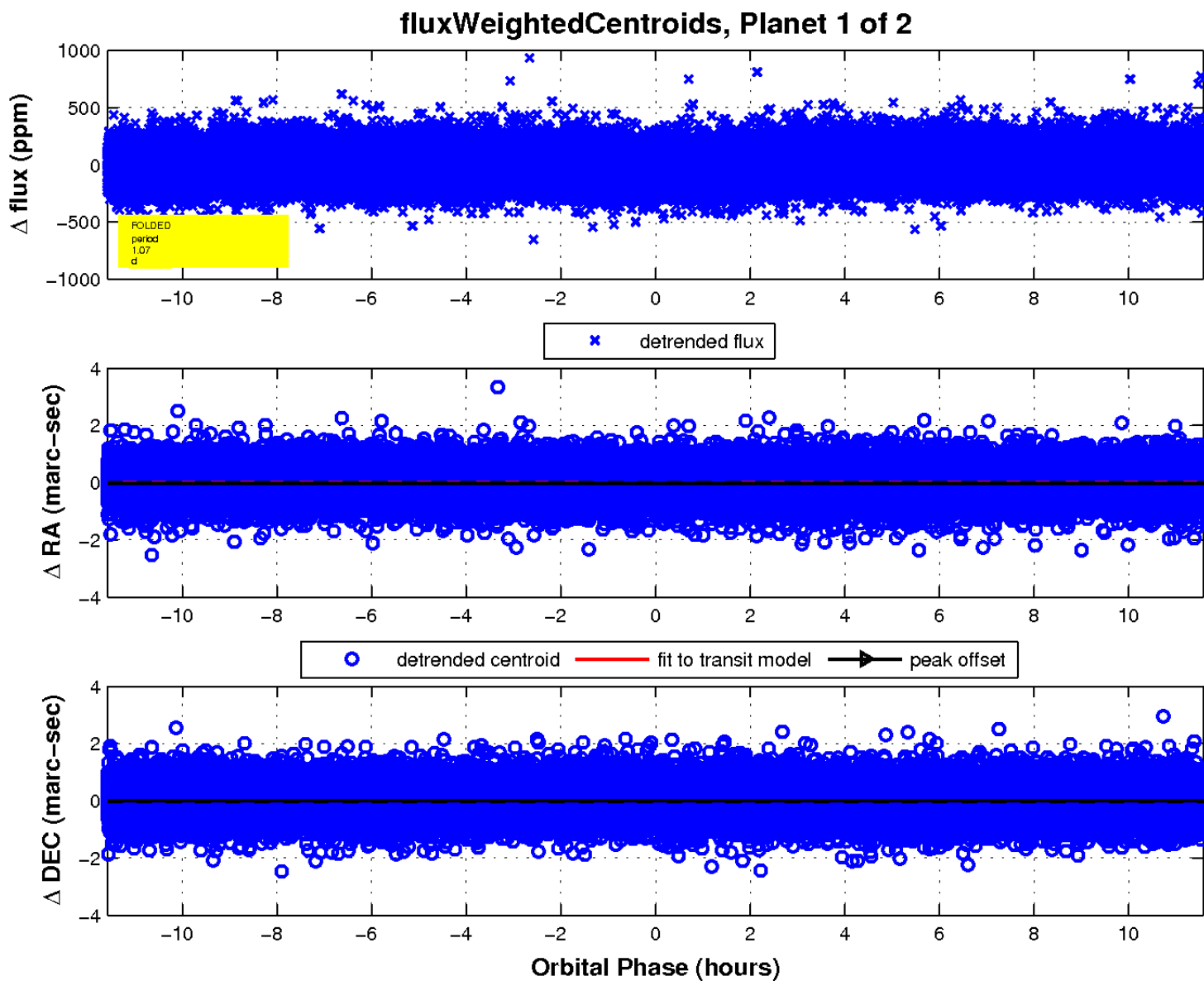
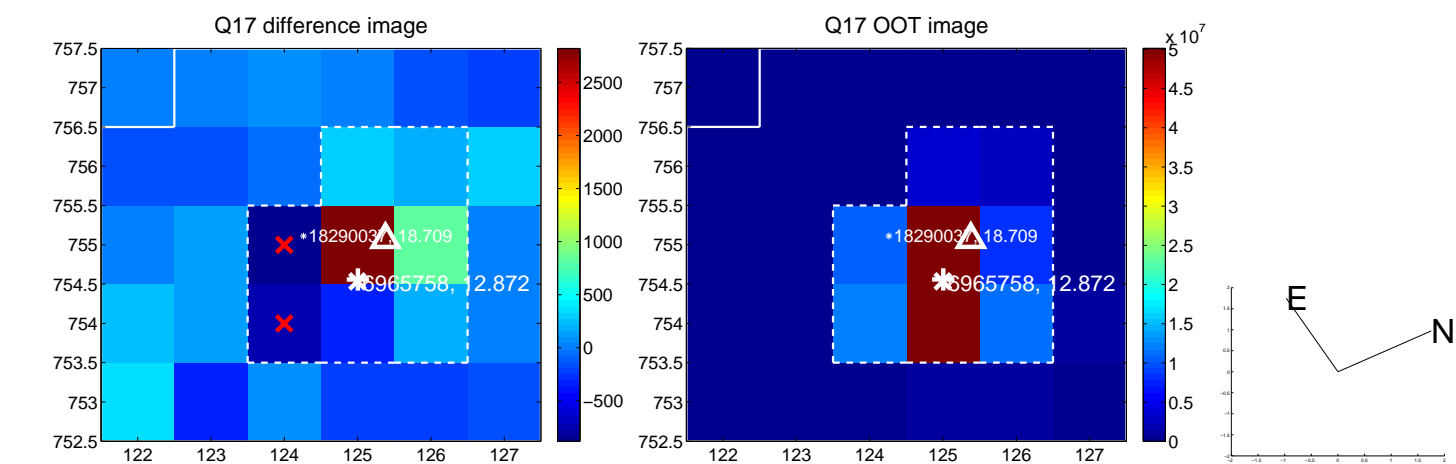
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

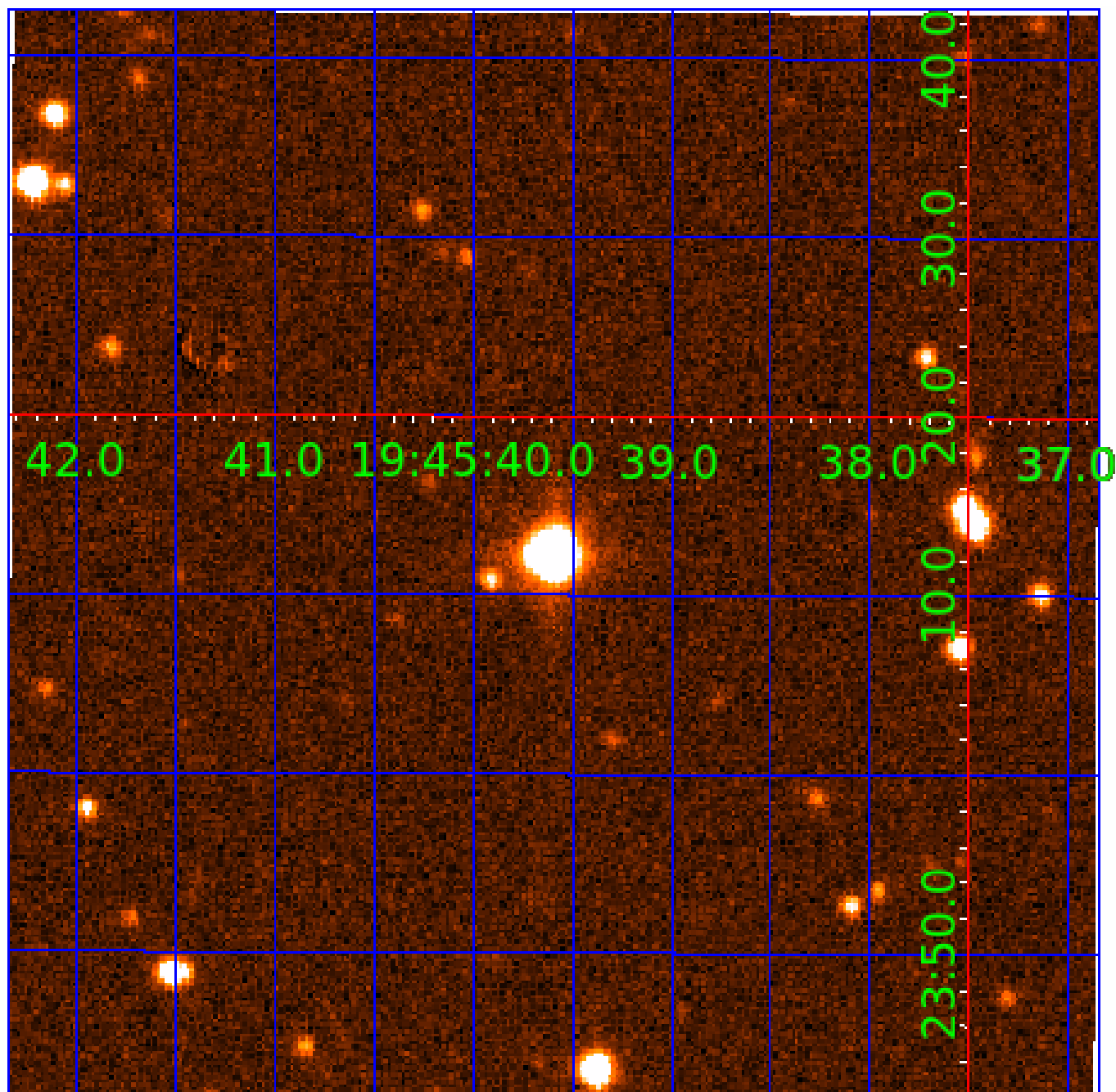


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006965758

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})
006965758-01	OBS	No	1.070568	132.235630	30.2	3.860	18.3	17.2	2.18	6200	1.23	13976.96
006965758-02	OBS	No	1.070608	131.776694	12.9	8.541	11.8	10.7	2.18	6200	0.92	13976.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006965758-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
006965758-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFS

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

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

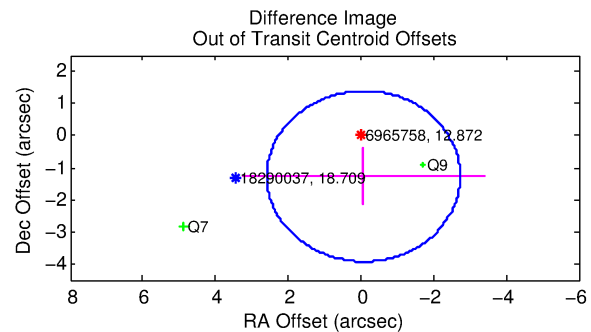
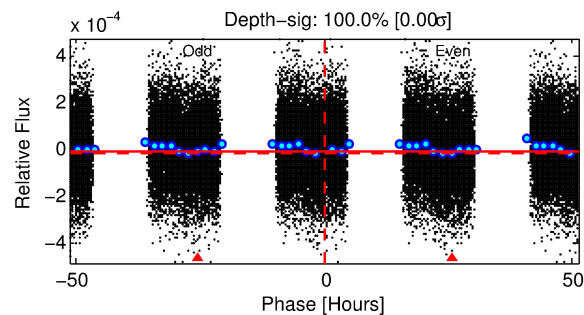
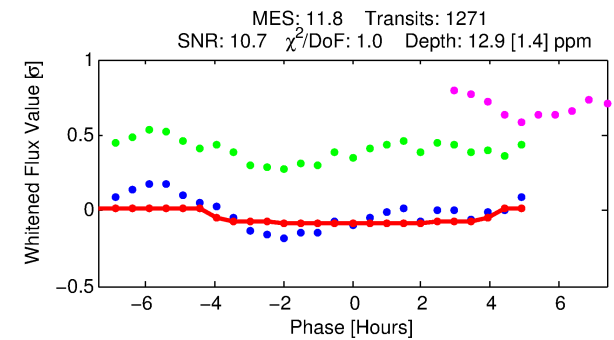
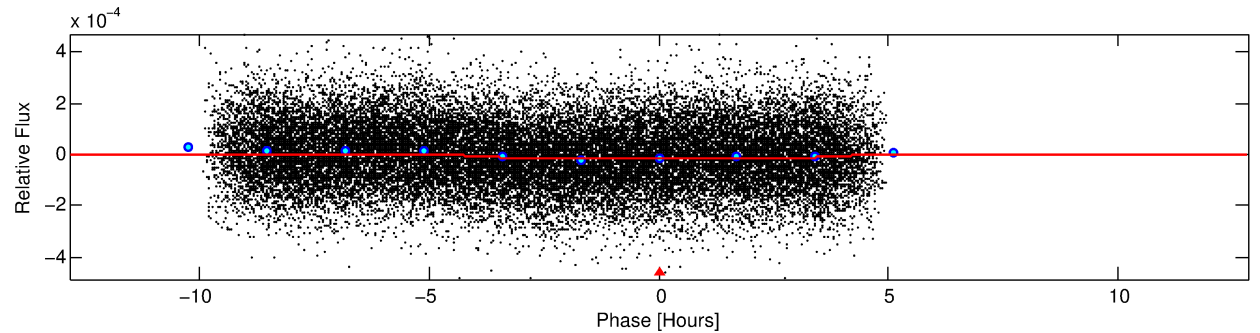
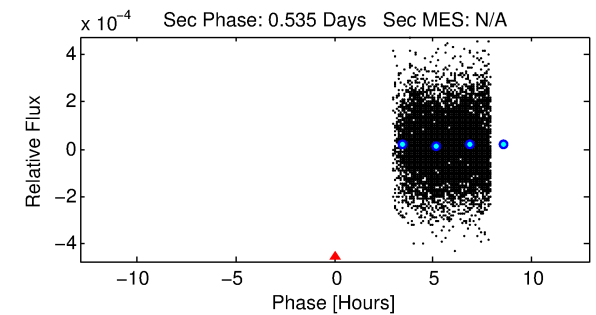
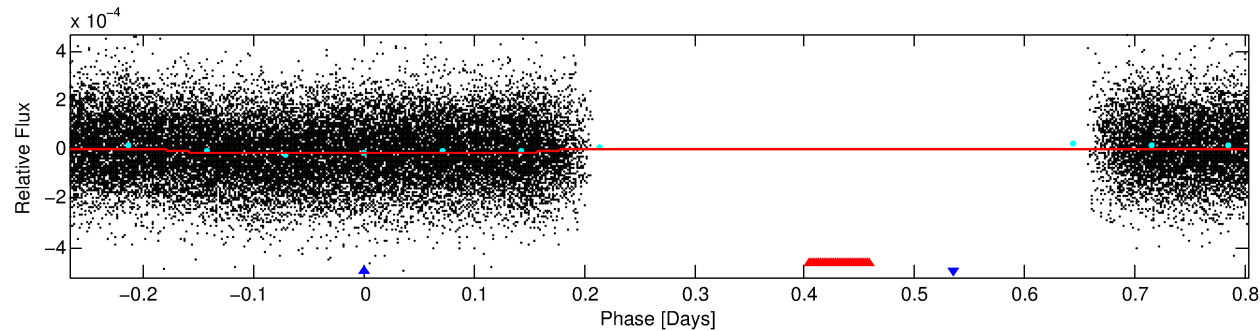
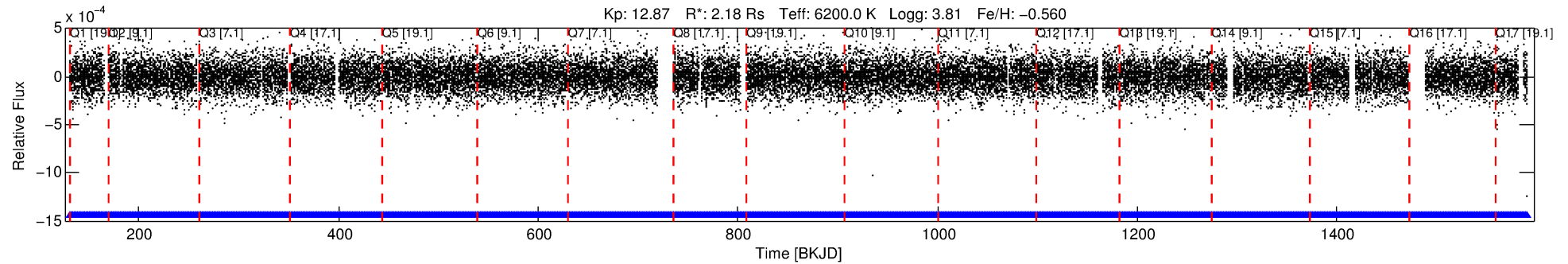
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006965758-02

No Significant Match Found

DV One-Page Summary

KIC: 6965758 Candidate: 2 of 2 Period: 1.071 d



DV Fit Results:

Period = 1.07061 [0.00002] d
Epoch = 131.7767 [0.0077] BKJD
Rp/R* = 0.0038 [0.0020]
a/R* = 1.04 [0.21]
b = 0.90 [0.63]
Seff = 13976.27 [7749.07]
Teq = 2773 [384] K
Rp = 0.92 [0.57] Re
a = 0.0212 [0.0073] AU

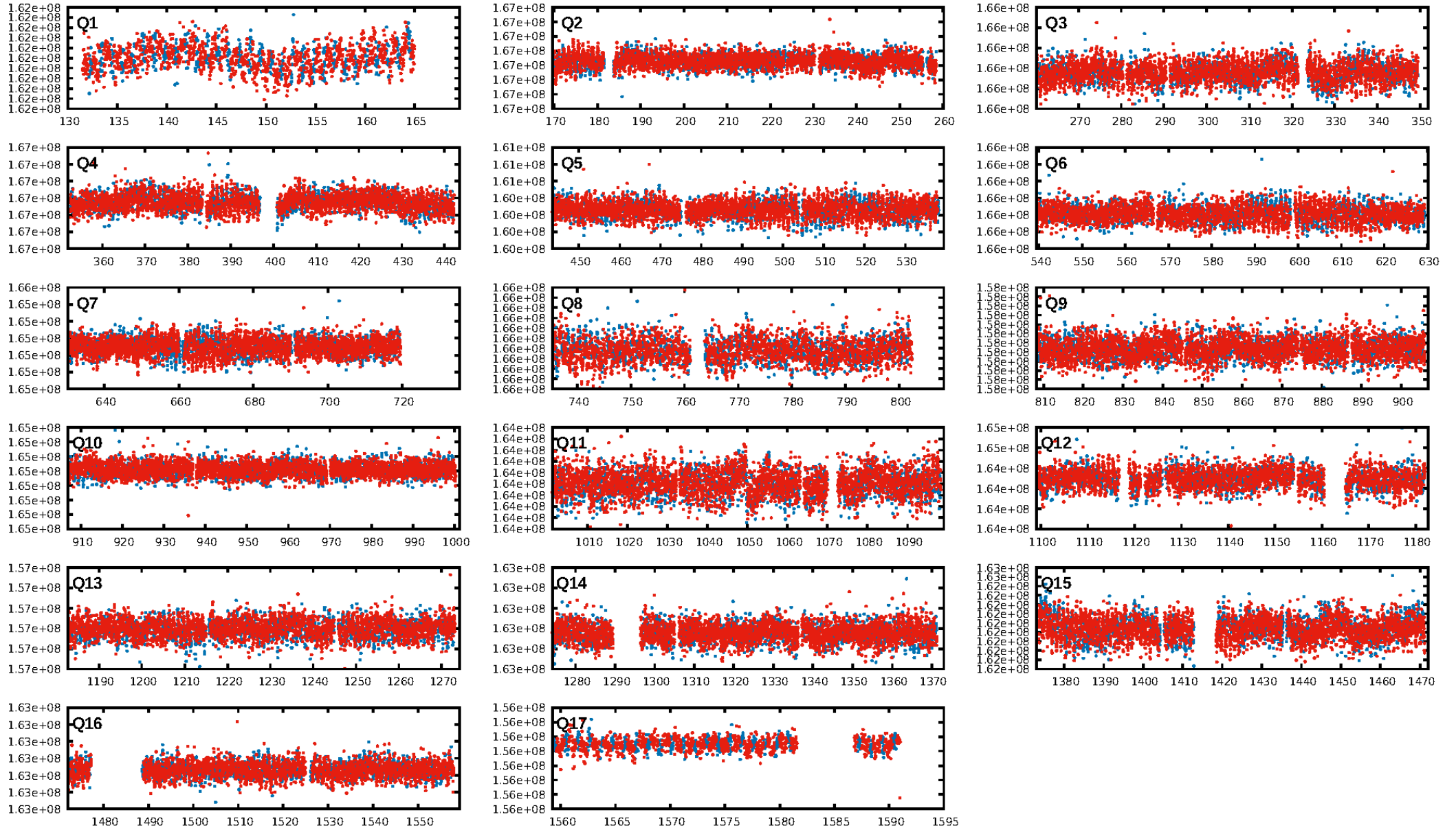
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1213/1213]
GhostDiagnostic-chr: 4.265
Centroid-sig: 0.0%
Centroid-so: 2.306 arcsec [3.02σ]
OotOffset-rm: 1.270 arcsec [1.43σ]
KicOffset-rm: 1.270 arcsec [1.48σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/17]

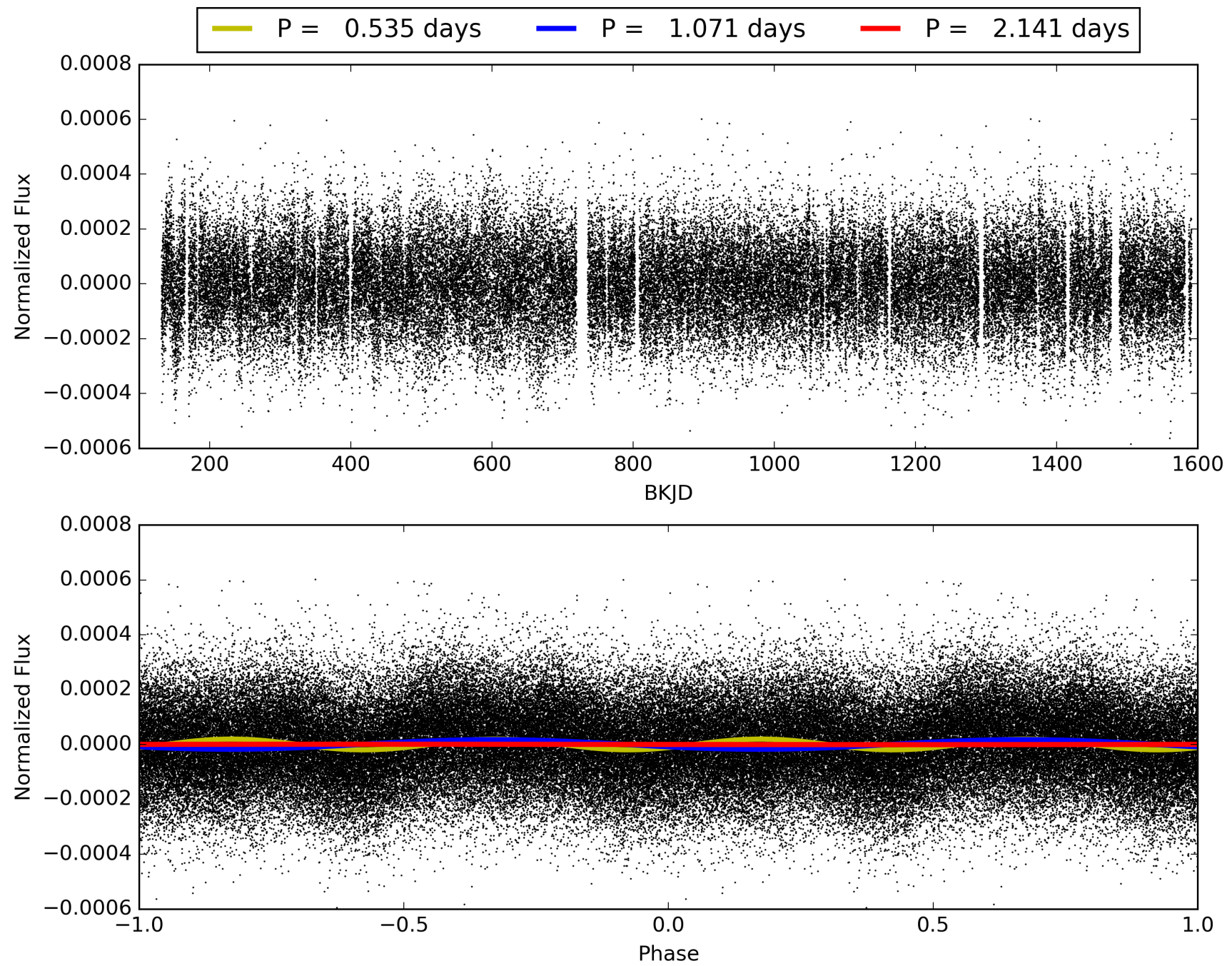
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:15:04 Z

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

TCE 006965758-02, PDC Light Curves

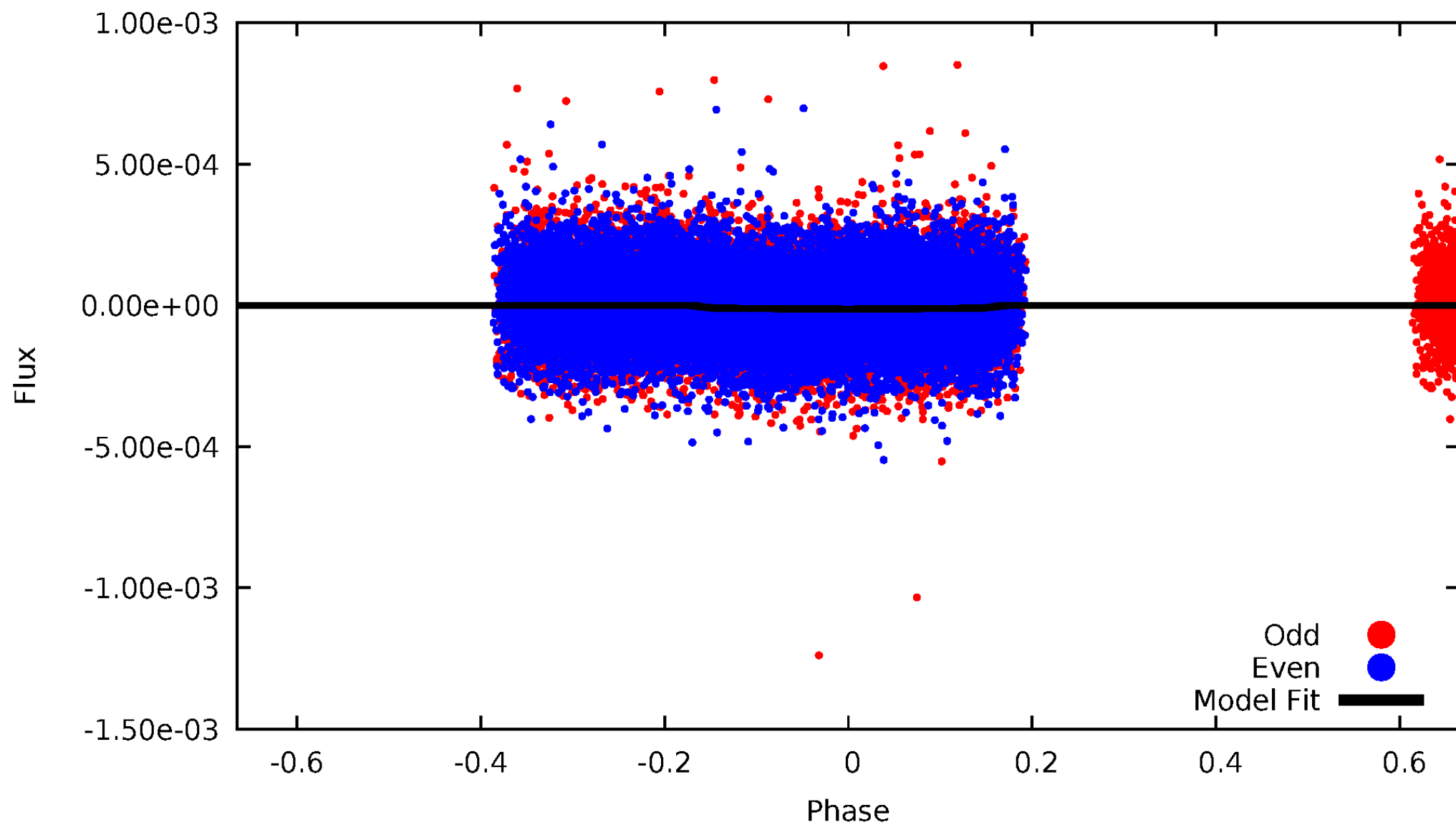


TCE 006965758-02



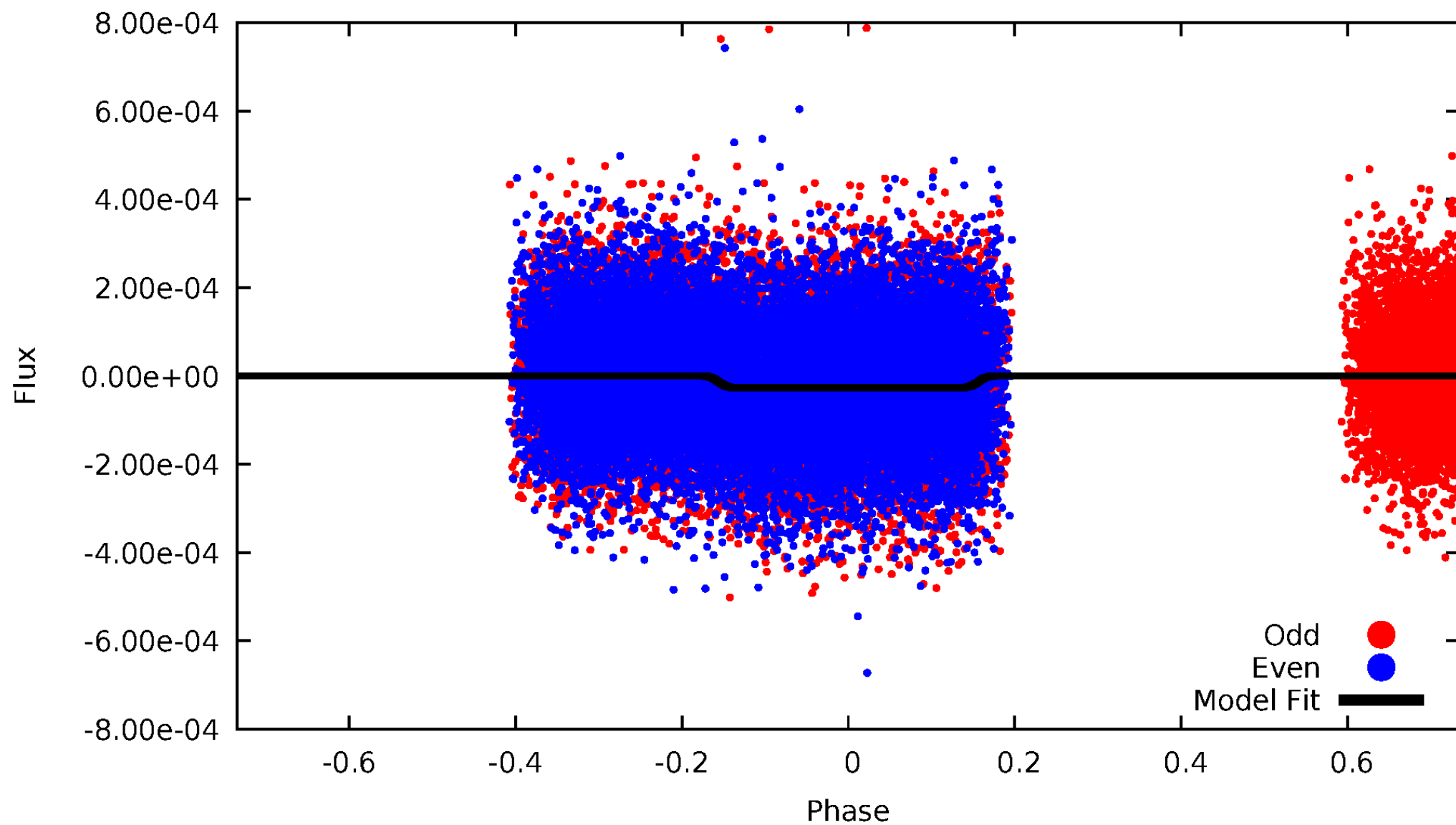
DV Odd/Even

TCE 006965758-02



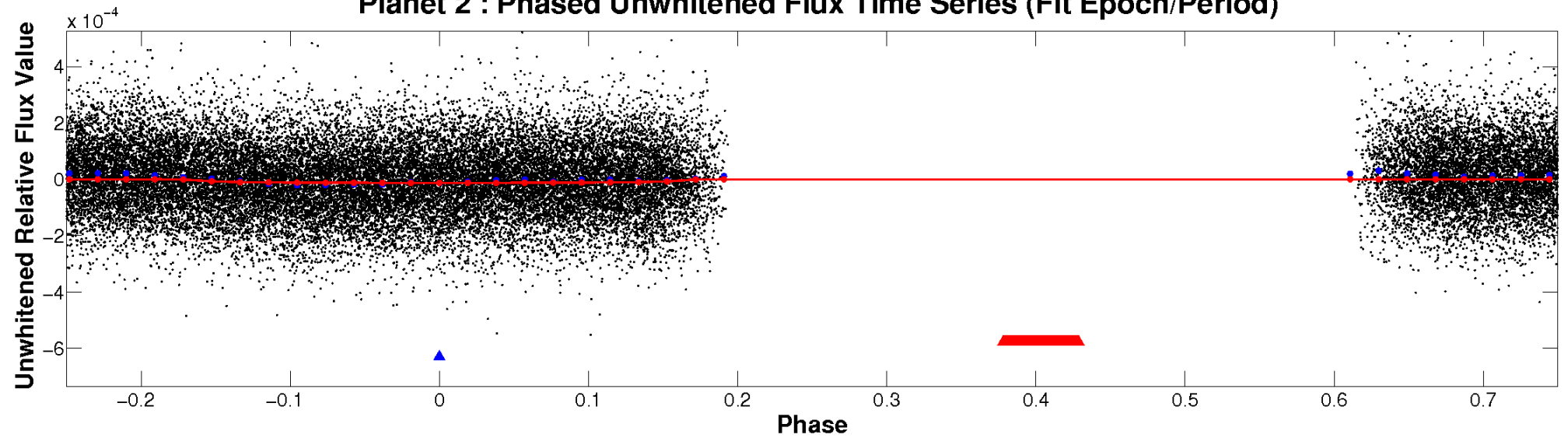
ALT Odd/Even

TCE 006965758-02

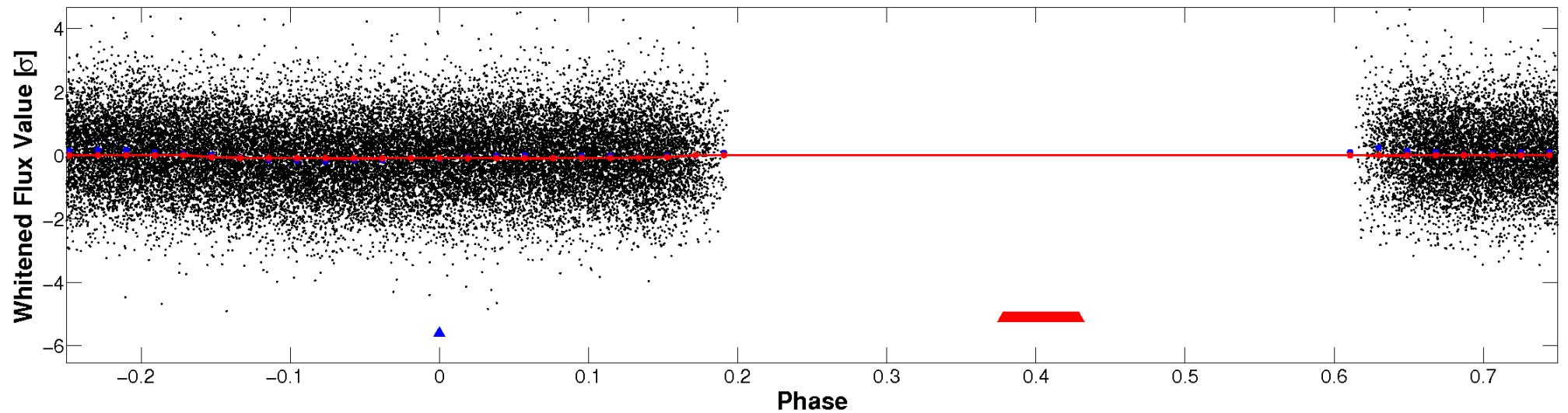


Non-Whitened Vs. Whitened Light Curve

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

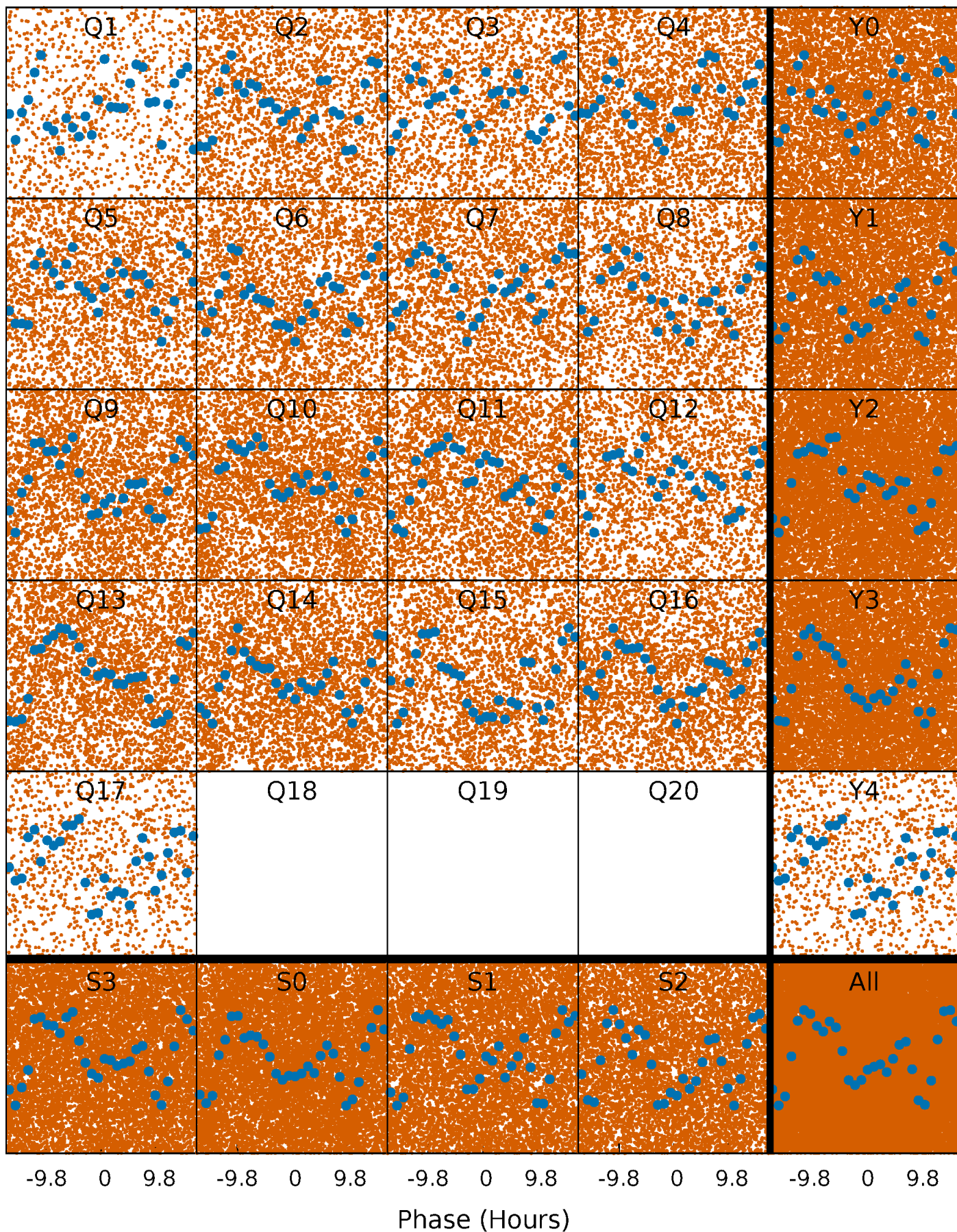


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



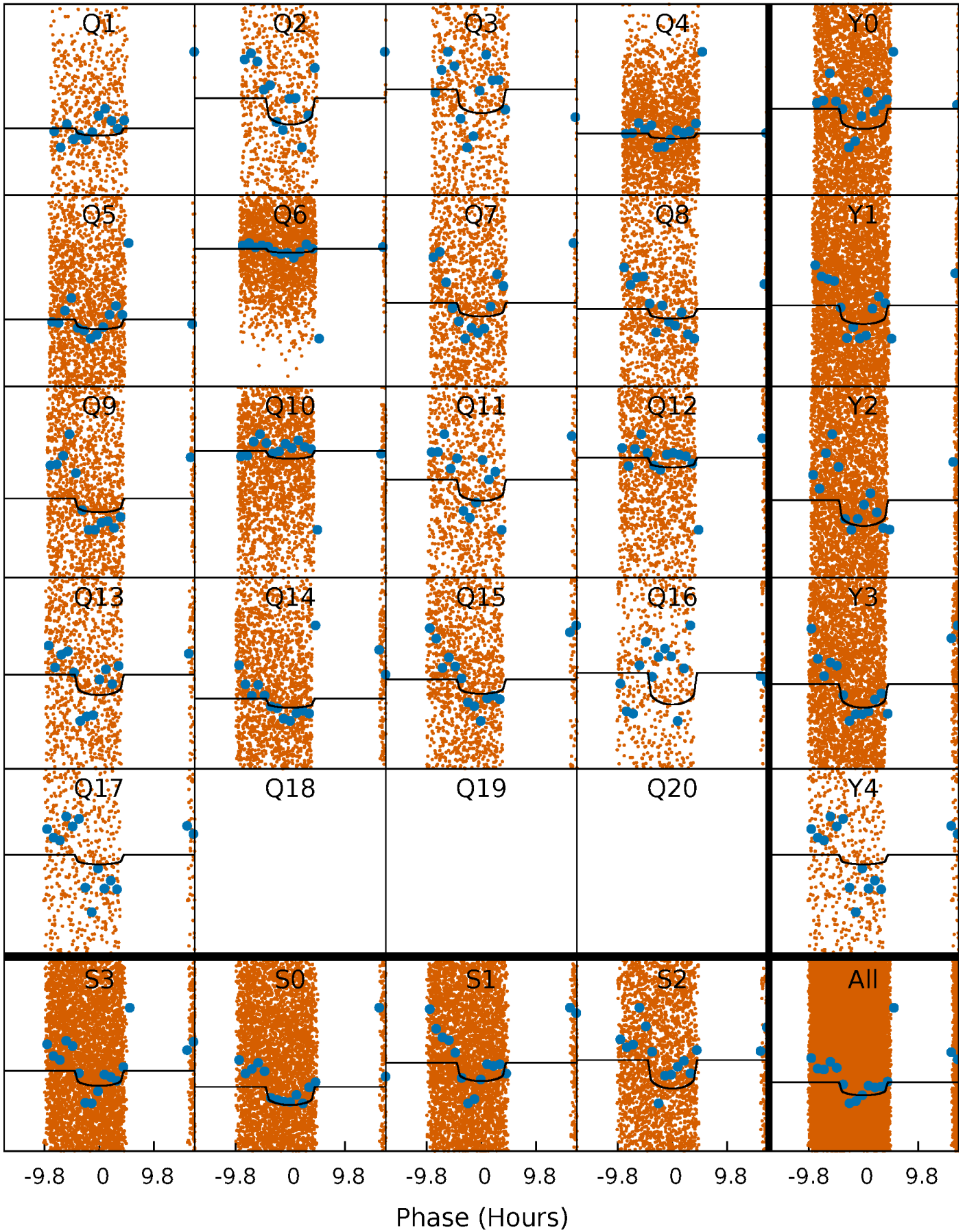
PDC Quarter-Phased Transit Curves

TCE 006965758-02 P= 1.070608 Days $T_0=131.776694$ (BKJD)



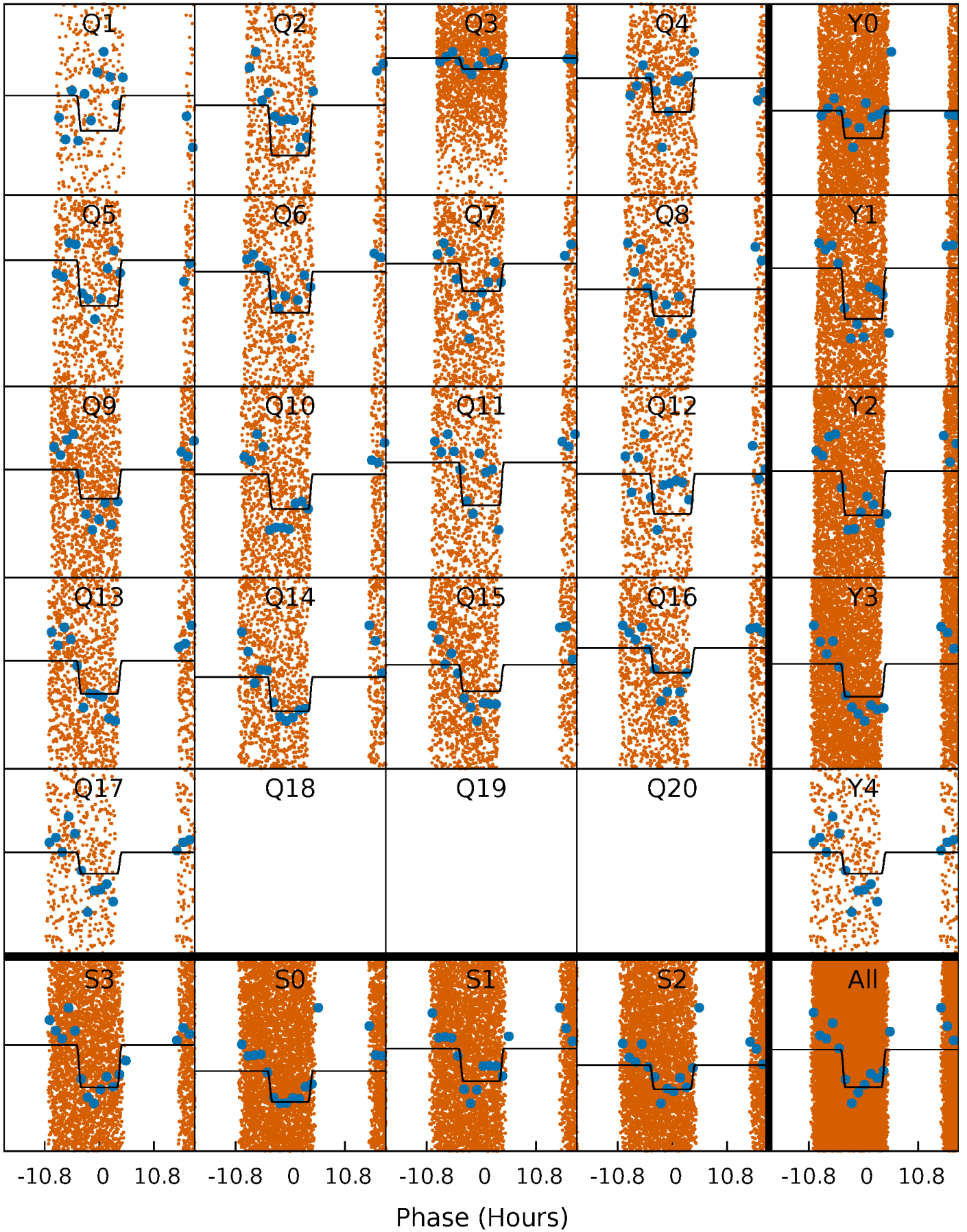
DV Quarter-Phased Transit Curves

TCE 006965758-02 P= 1.070608 Days $T_0=131.776694$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

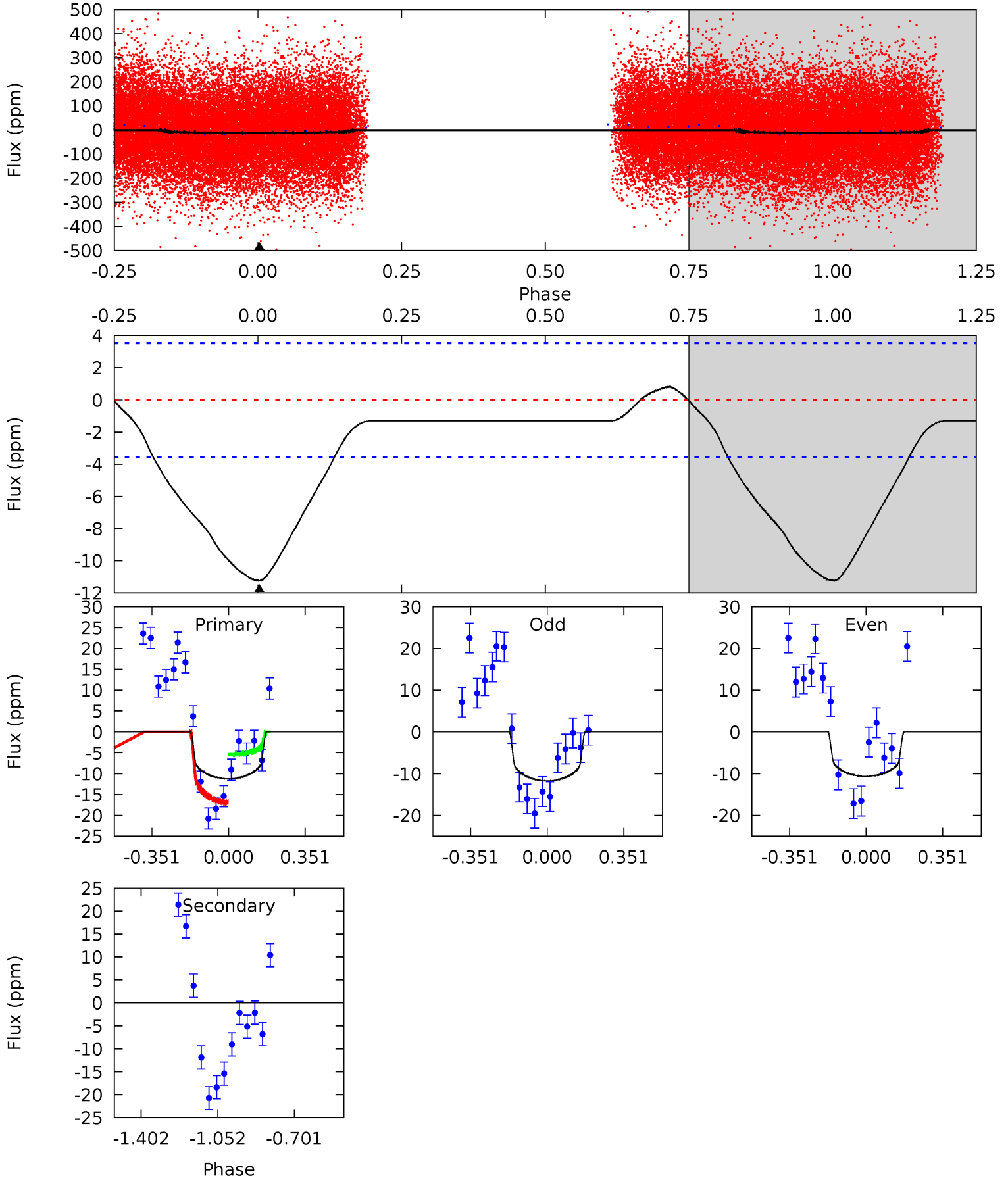
TCE 006965758-02 P= 1.070627 Days $T_0=131.772906$ (BKJD)



DV Model-Shift Uniqueness Test

006965758-02, P = 1.070608 Days, E = 130.706086 Days

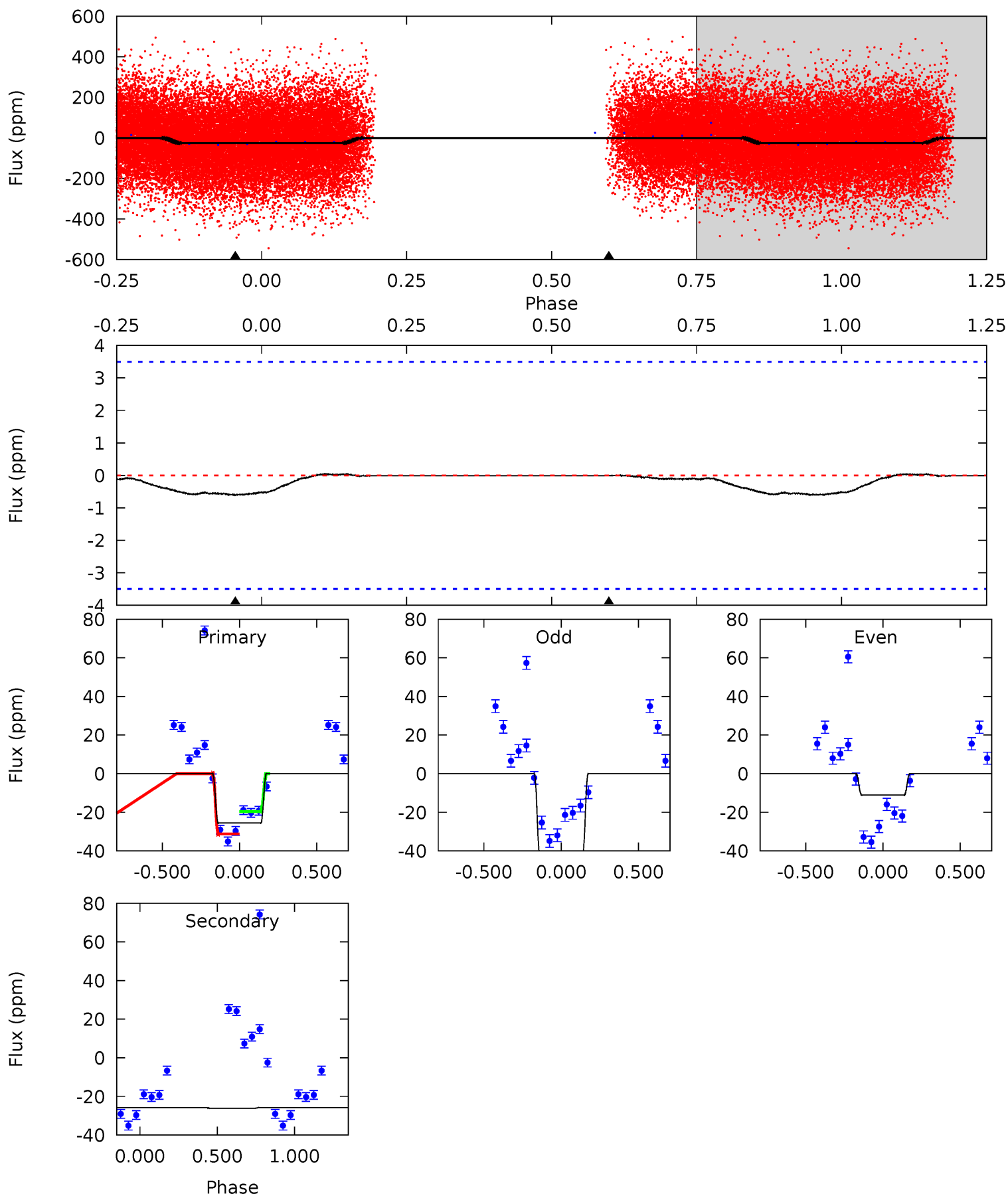
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	0	0	0	4.29	0.93	0.65	13.6	13.6	0	0	0.67	0.98	0.07	7.00



Alt Model-Shift Uniqueness Test

006965758-02, P = 1.070627 Days, E = 130.702279 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.73	0.01	0	0	4.21	0.67	0.07	0.73	0.73	0.01	0.01	0.45	0	0.06	0.87



Stellar Parameters For KIC 006965758

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6200^{+185}_{-185}	$3.807^{+0.315}_{-0.105}$	$-0.560^{+0.350}_{-0.250}$	$2.181^{+0.429}_{-0.797}$	$1.110^{+0.195}_{-0.195}$	$0.151^{+0.339}_{-0.049}$
	+3%/-3%	+8%/-3%	+62%/-45%	+20%/-37%	+18%/-18%	+225%/-33%
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 006965758-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$0.86^{+0.45}_{-0.44}$	3794^{+253}_{-380}	-3585^{+5943}_{-552}	$-0.010^{+0.325}_{-0.429}$
Alt.	-0 ± 1	$1.14^{+0.51}_{-0.41}$	3808^{+236}_{-338}	-3589^{+499}_{-340}	$-0.006^{+0.168}_{-0.208}$

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 $A_{obs} \gg 1.0$

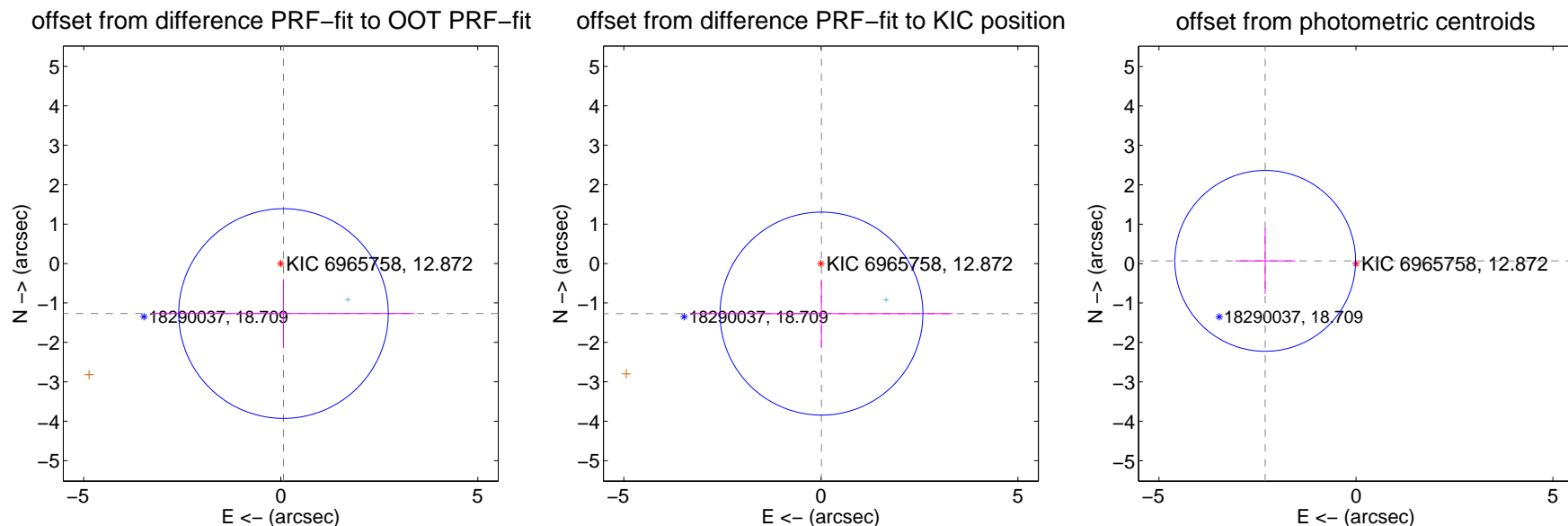
DV Centroid Data

Supplemental centroid analysis for 006965758-02. Kepler magnitude: 12.87. Transit SNR 10.71

There are 1 quarters with good PRF difference image offsets

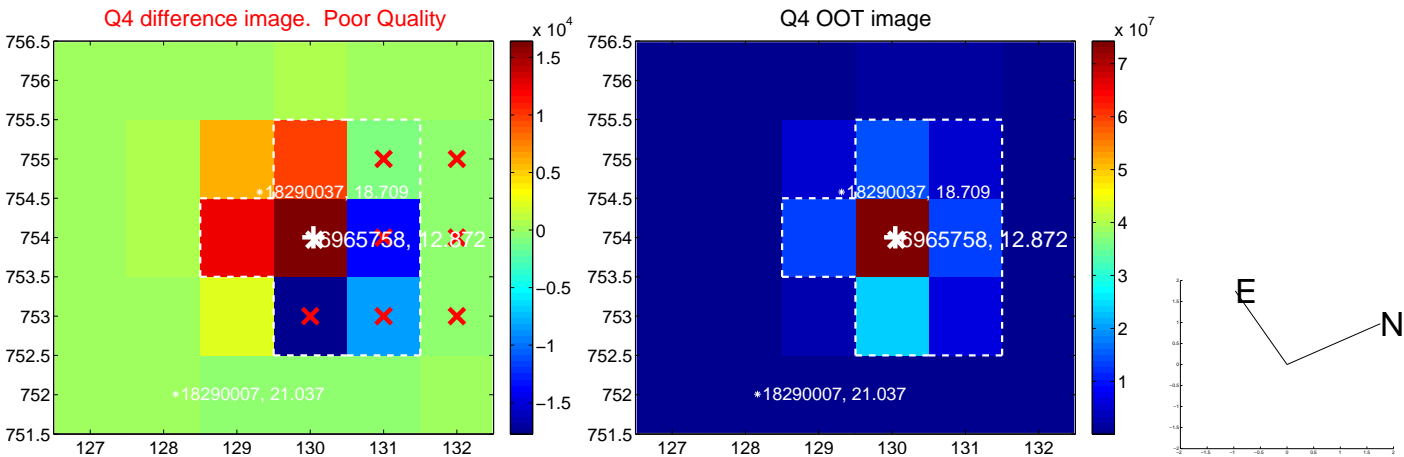
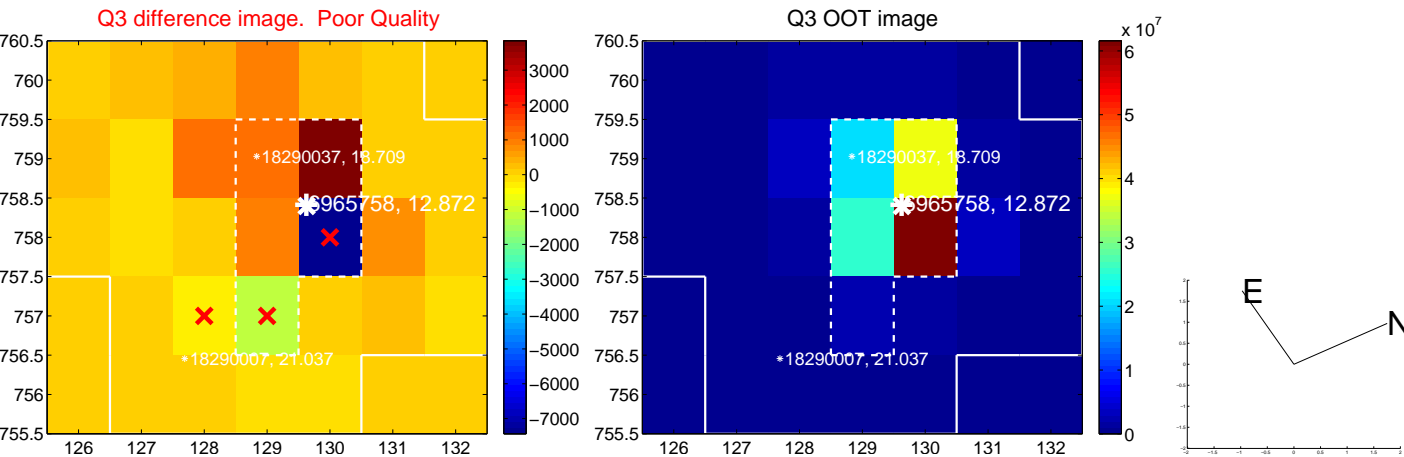
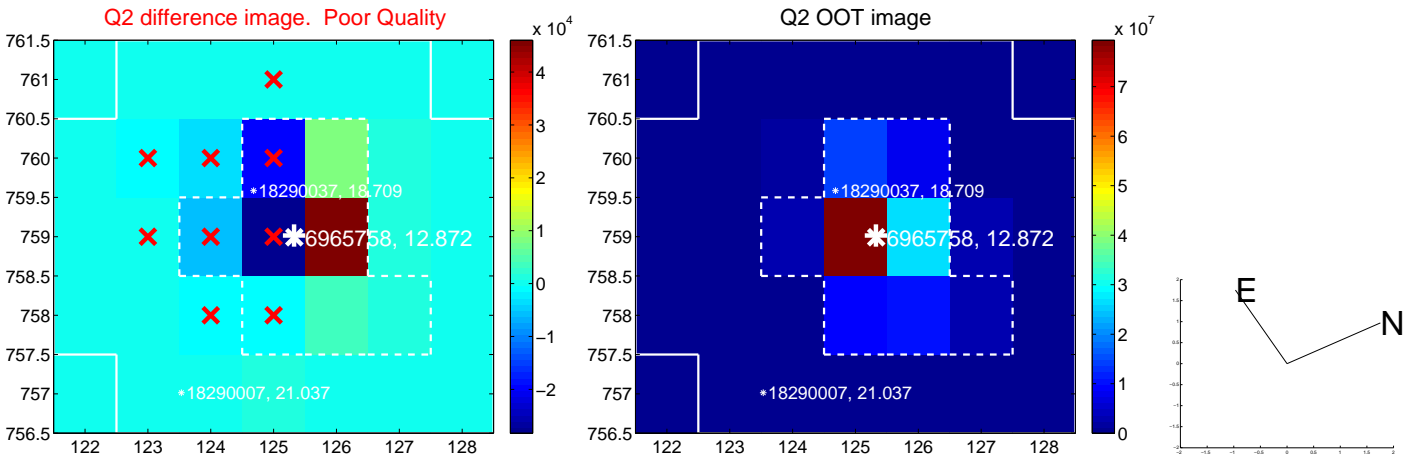
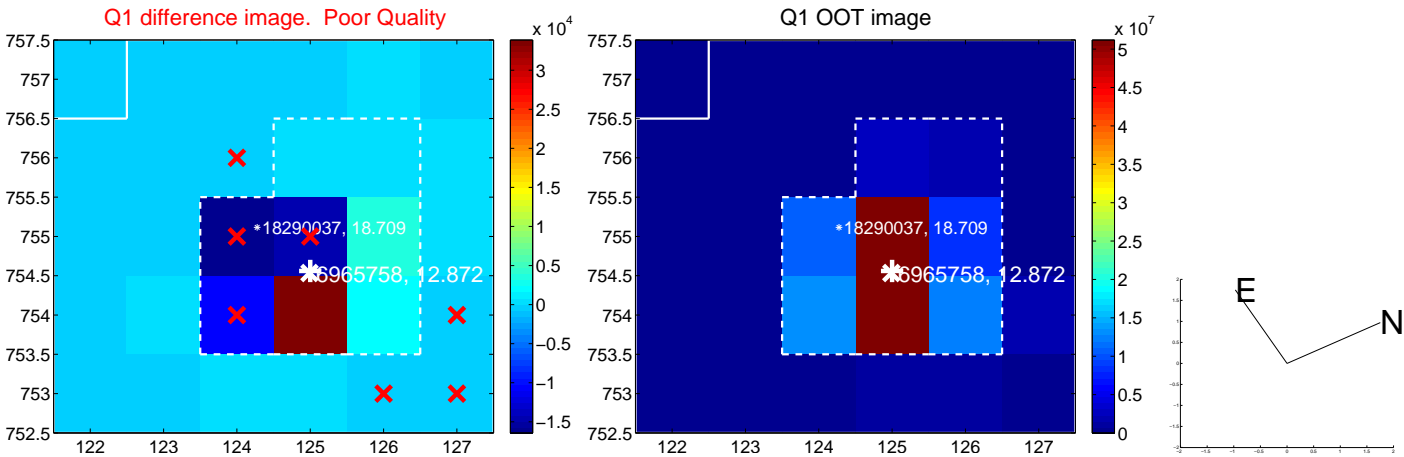
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.270 ± 0.886	1.43	-0.070 ± 3.317	-1.269 ± 0.869
PRF-fit source offset from KIC position	1.270 ± 0.858	1.48	-0.015 ± 3.330	-1.270 ± 0.857
photometric centroid source offset	2.31 ± 0.76	3.02	2.30 ± 0.76	0.07 ± 0.84

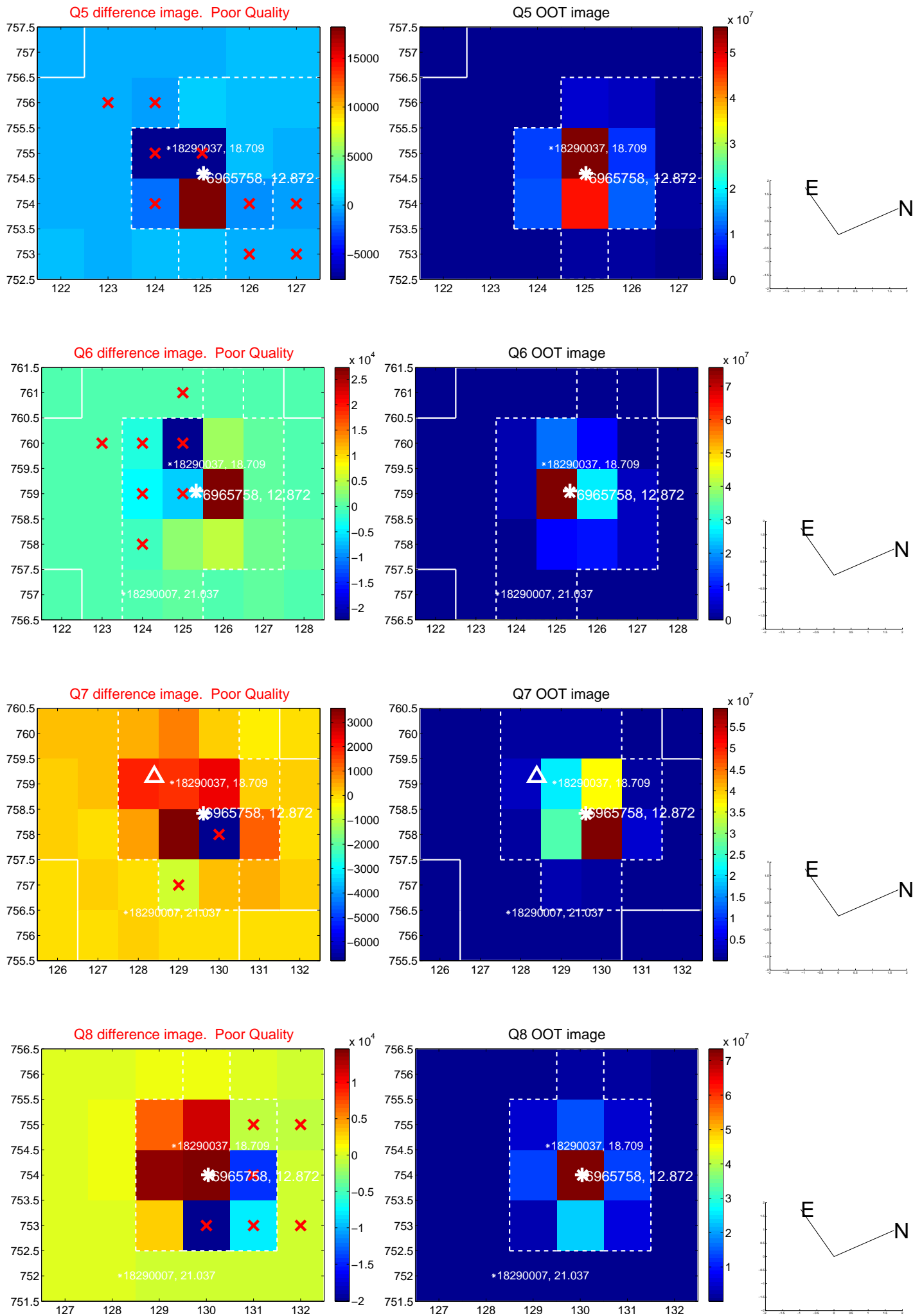


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

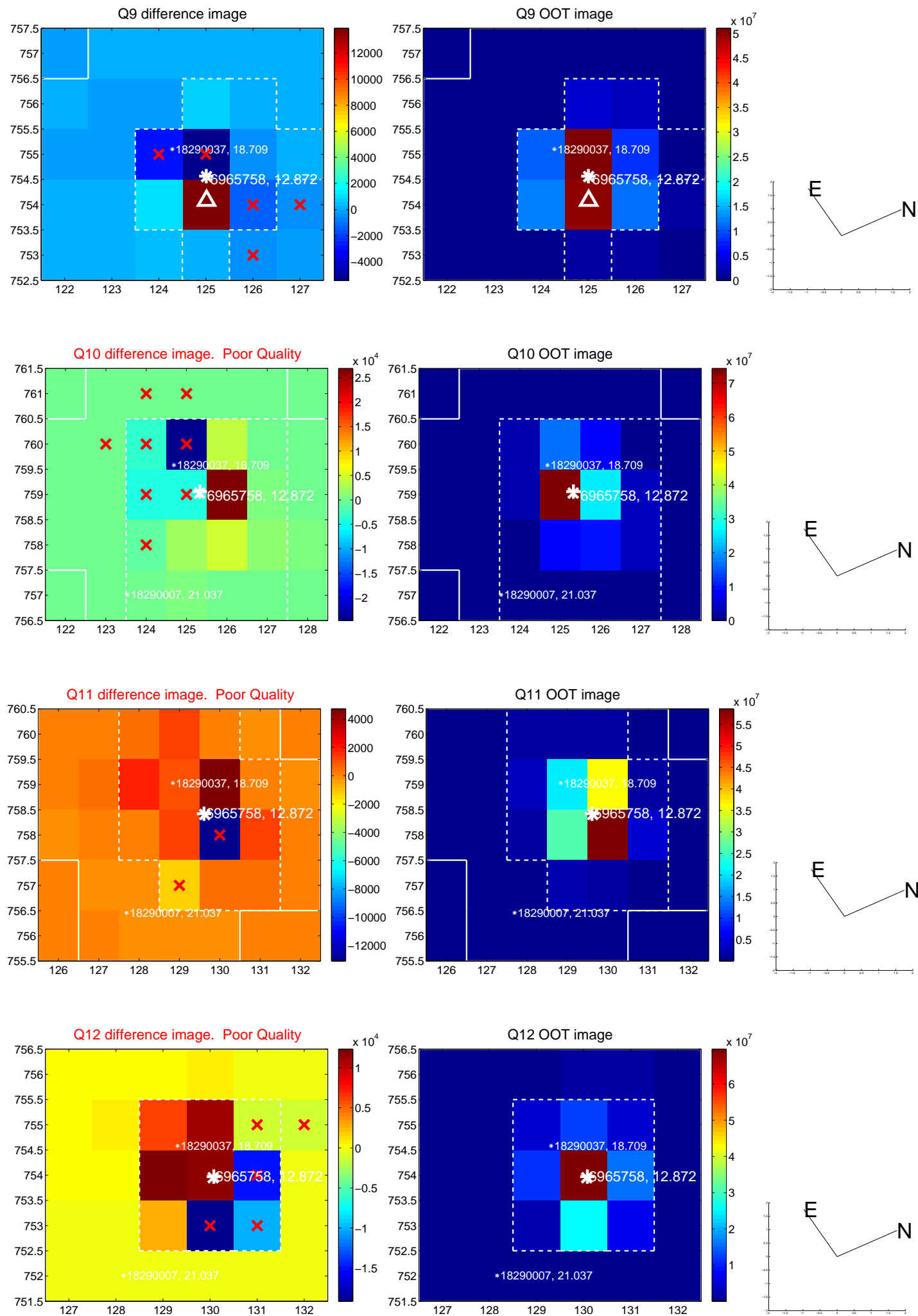
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



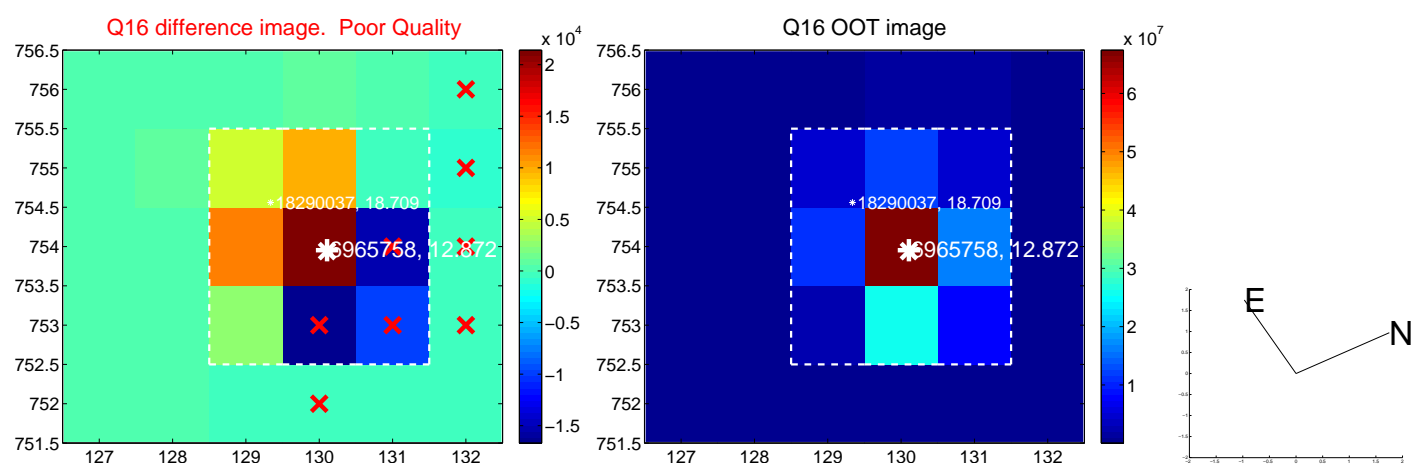
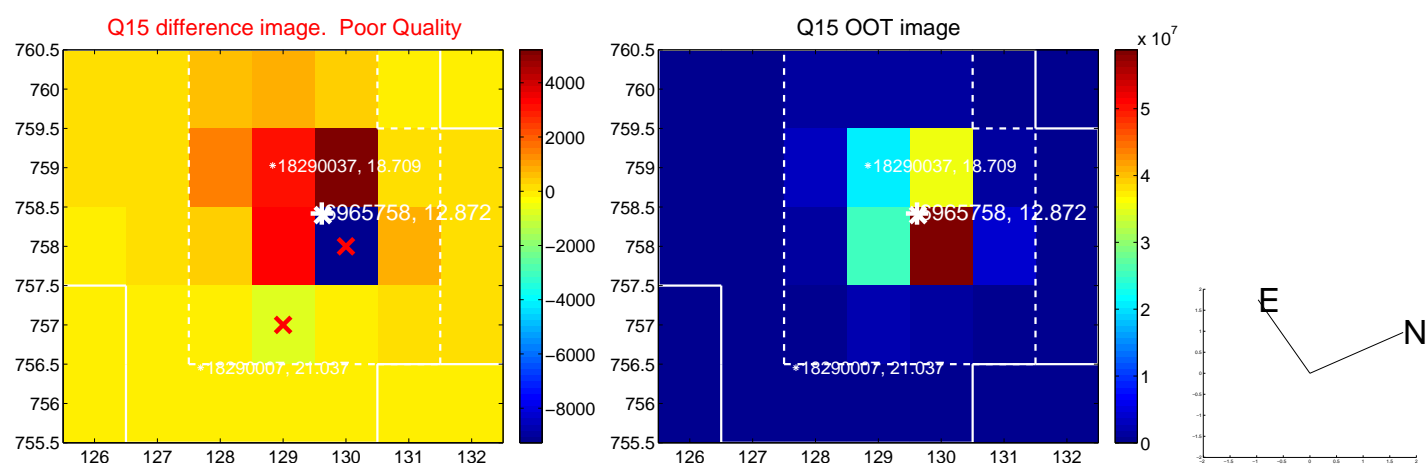
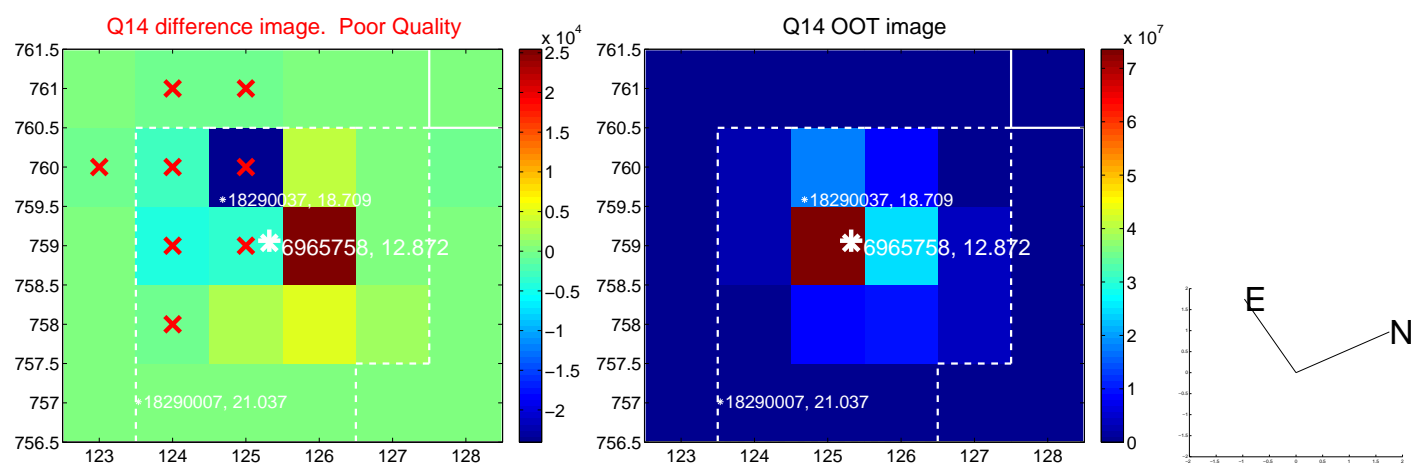
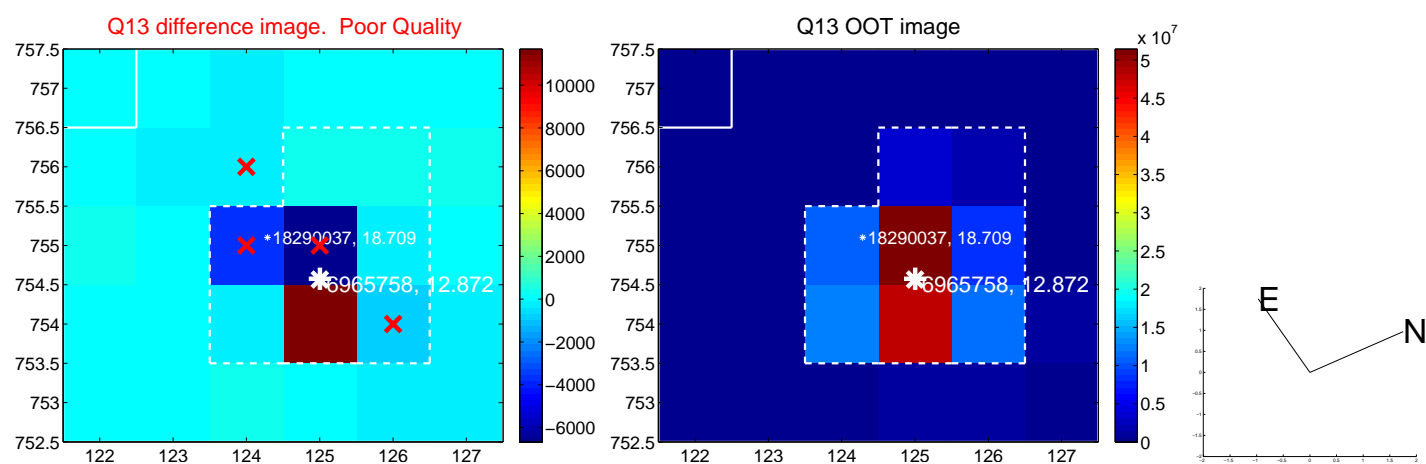
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



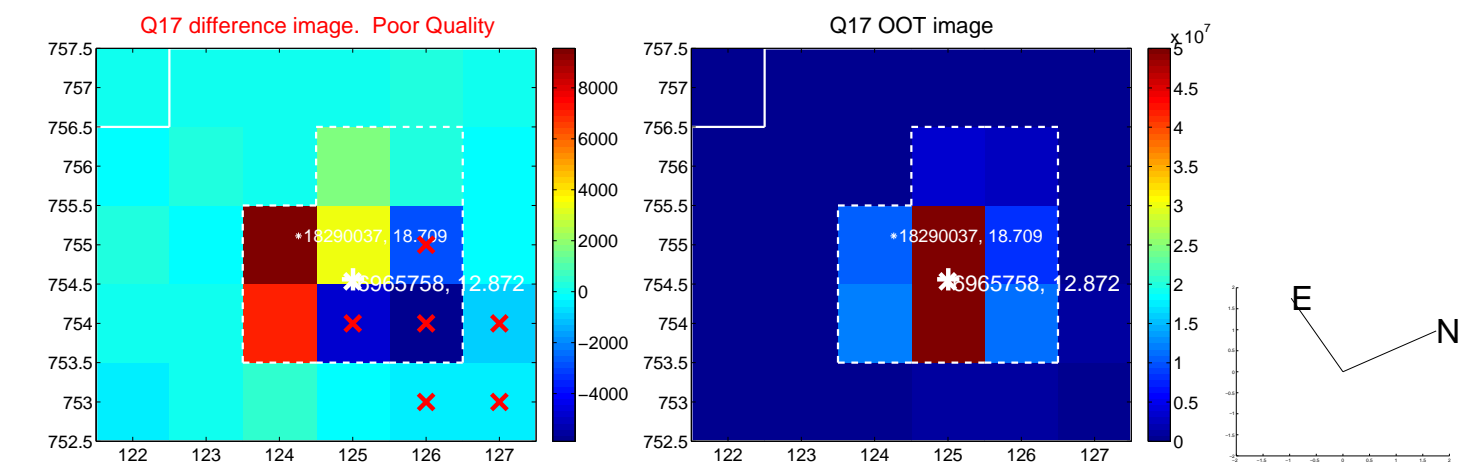
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



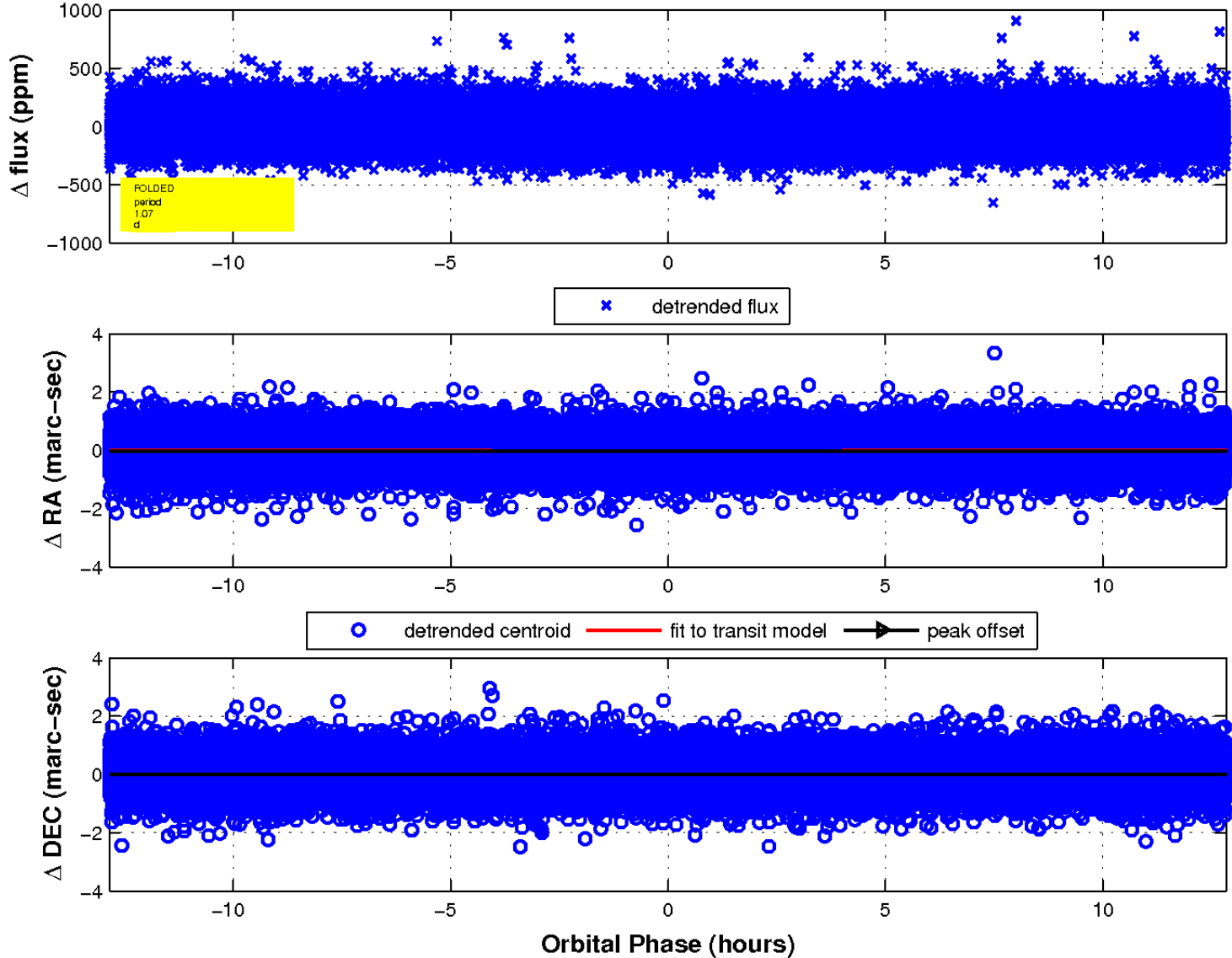
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

