

KIC 008265993

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})
008265993-01	OBS	No	0.779916	132.188515	12.2	4.741	9.4	6.9	3.42	5575	1.18	26206.51
008265993-03	OBS	No	103.868395	212.130814	360.1	1.686	7.4	8.1	3.42	5575	7.80	38.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008265993-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008265993-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

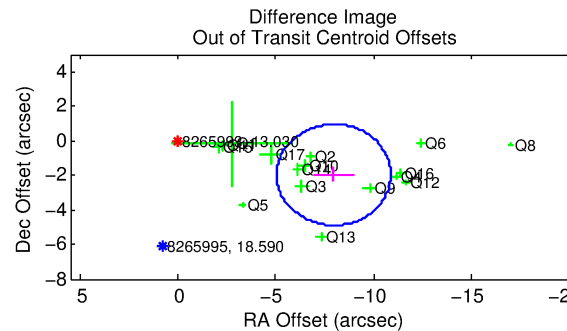
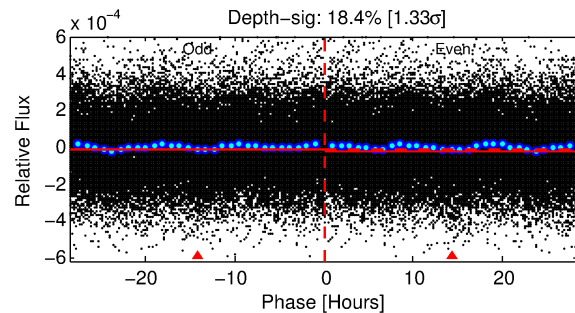
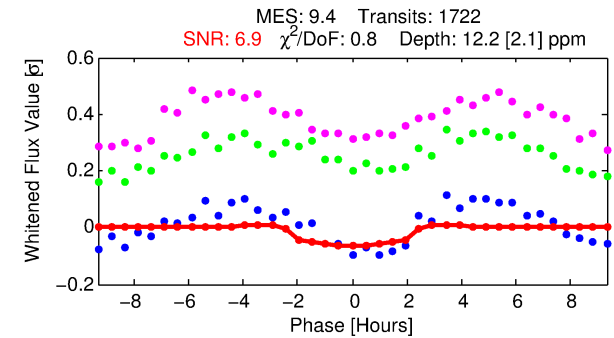
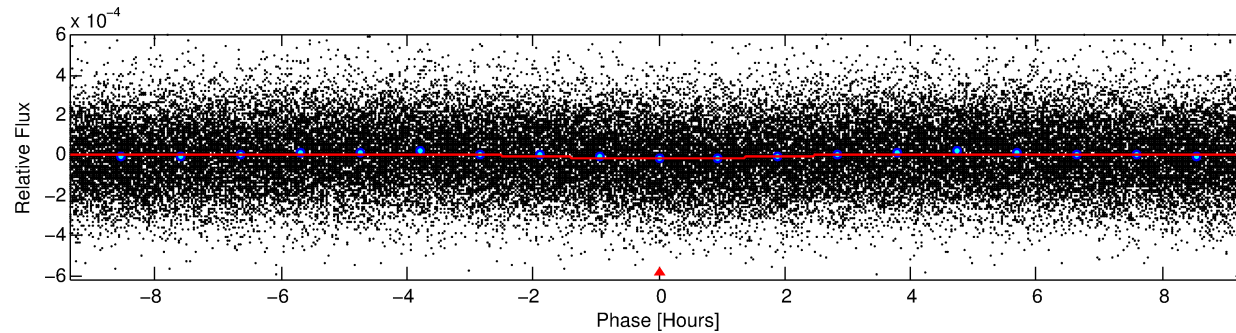
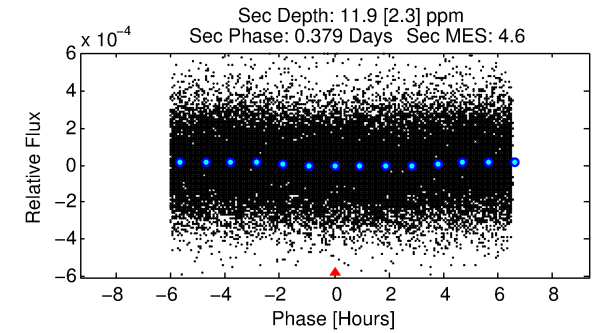
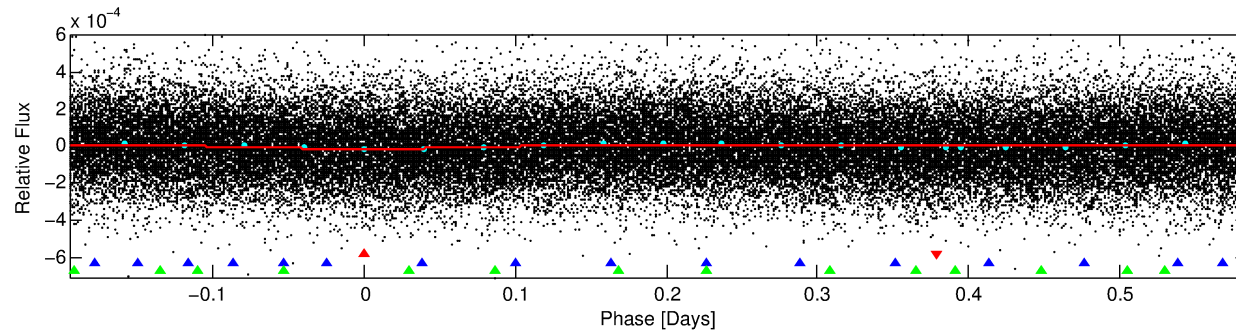
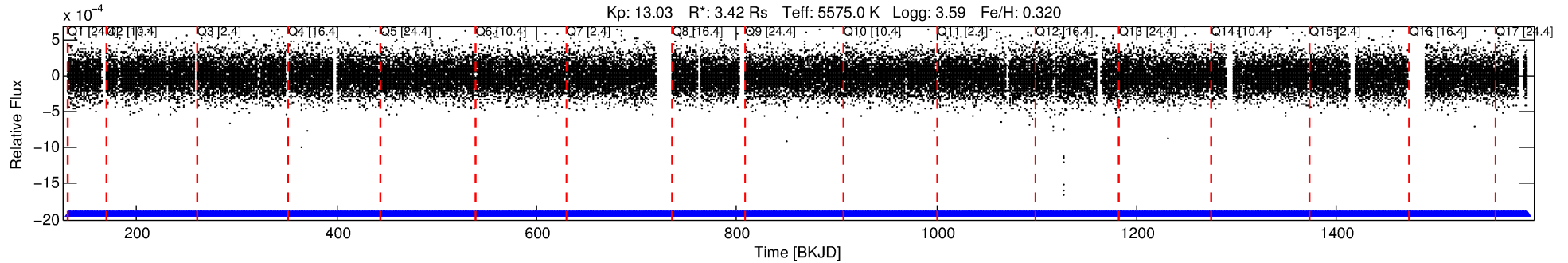
Ephemeris Match Information For 008265993-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008265993-01	8265993	008265953-01	8265953	1:1	54.3	-4	-13	15.31	13.03	3.83	Direct-PRF	1	0.89	1.62

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8265993 Candidate: 1 of 3 Period: 0.780 d



DV Fit Results:

Period = 0.77992 [0.00002] d
Epoch = 132.1885 [0.0072] BKJD
Rp/R* = 0.0032 [0.0048]
a/R* = 1.38 [3.97]
b = 0.27 [21.31]
Seff = 26206.51 [18769.14]
Teq = 3244 [581] K
Rp = 1.18 [1.88] Re
a = 0.0196 [0.0088] AU
Ag = 1.81 [5.65] [0.14σ]
Teffp = 5820 [4427] K [0.58σ]

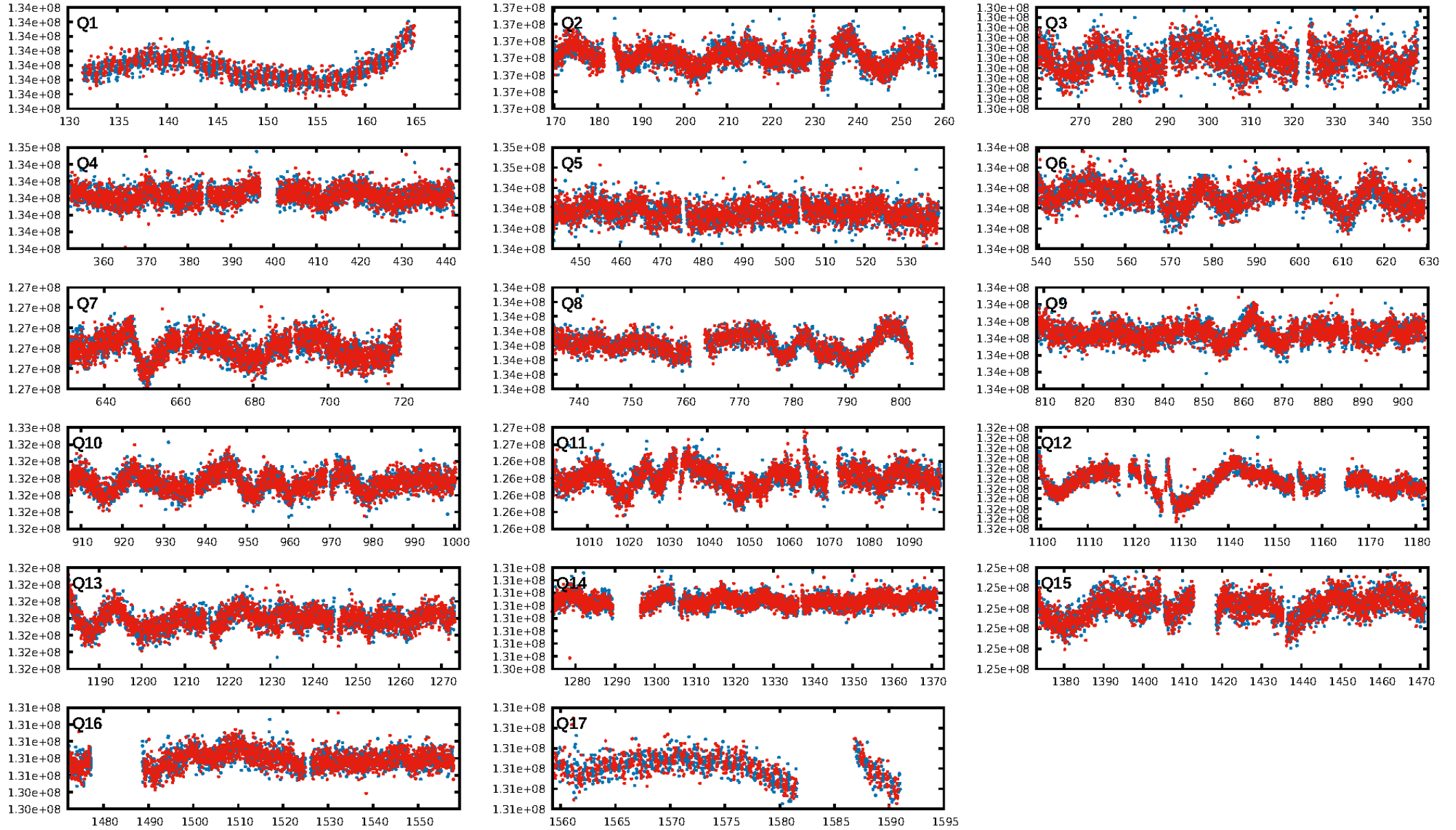
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [327.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.62e-12
RollingBand-fgt: 1.00 [1643/1643]
GhostDiagnostic-chr: -0.5679
Centroid-sig: 3.4%
Centroid-so: 2.393 arcsec [1.37σ]
OotOffset-rm: 8.194 arcsec [8.41σ]
KicOffset-rm: 8.084 arcsec [8.33σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

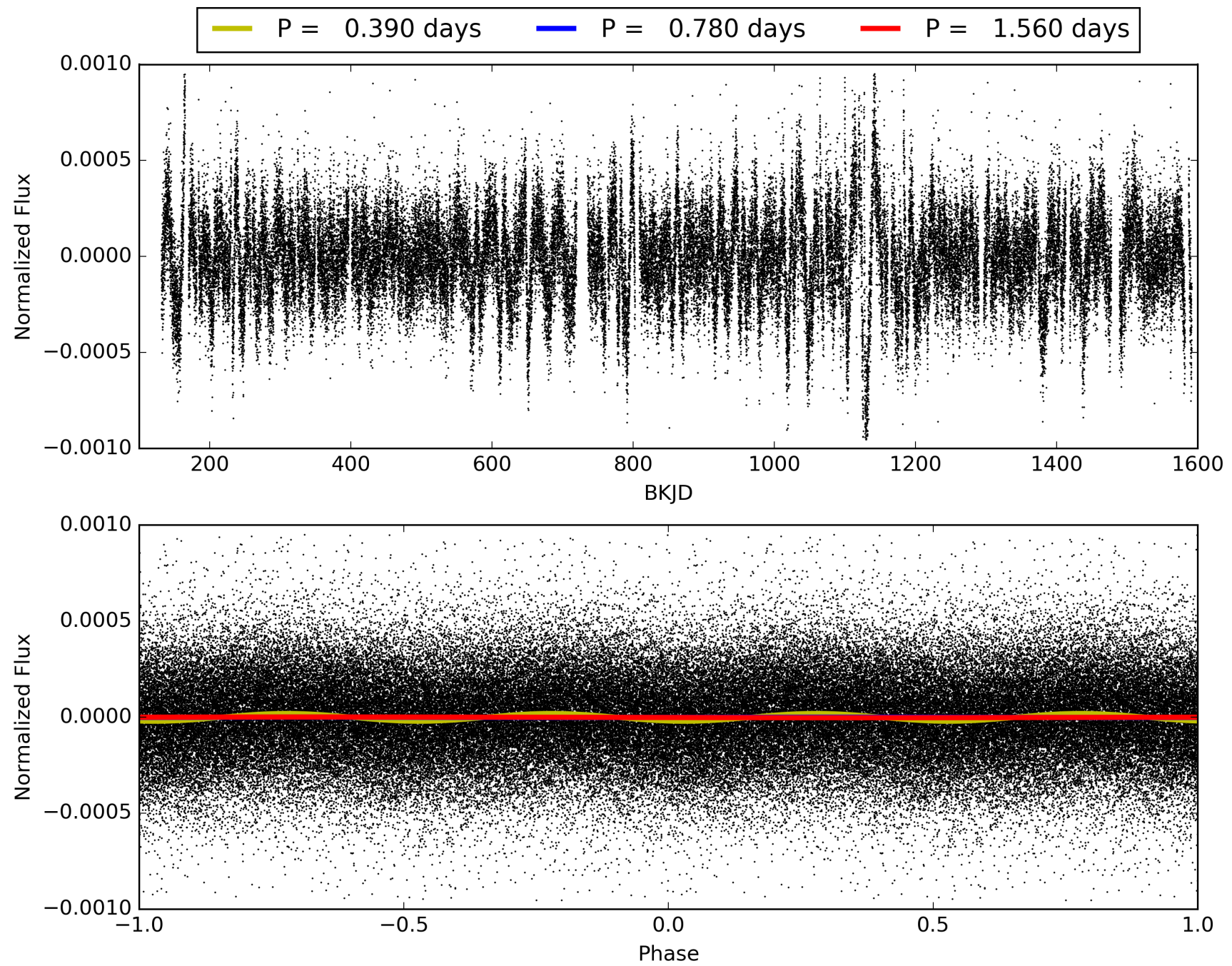
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:42:39 Z

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

TCE 008265993-01, PDC Light Curves

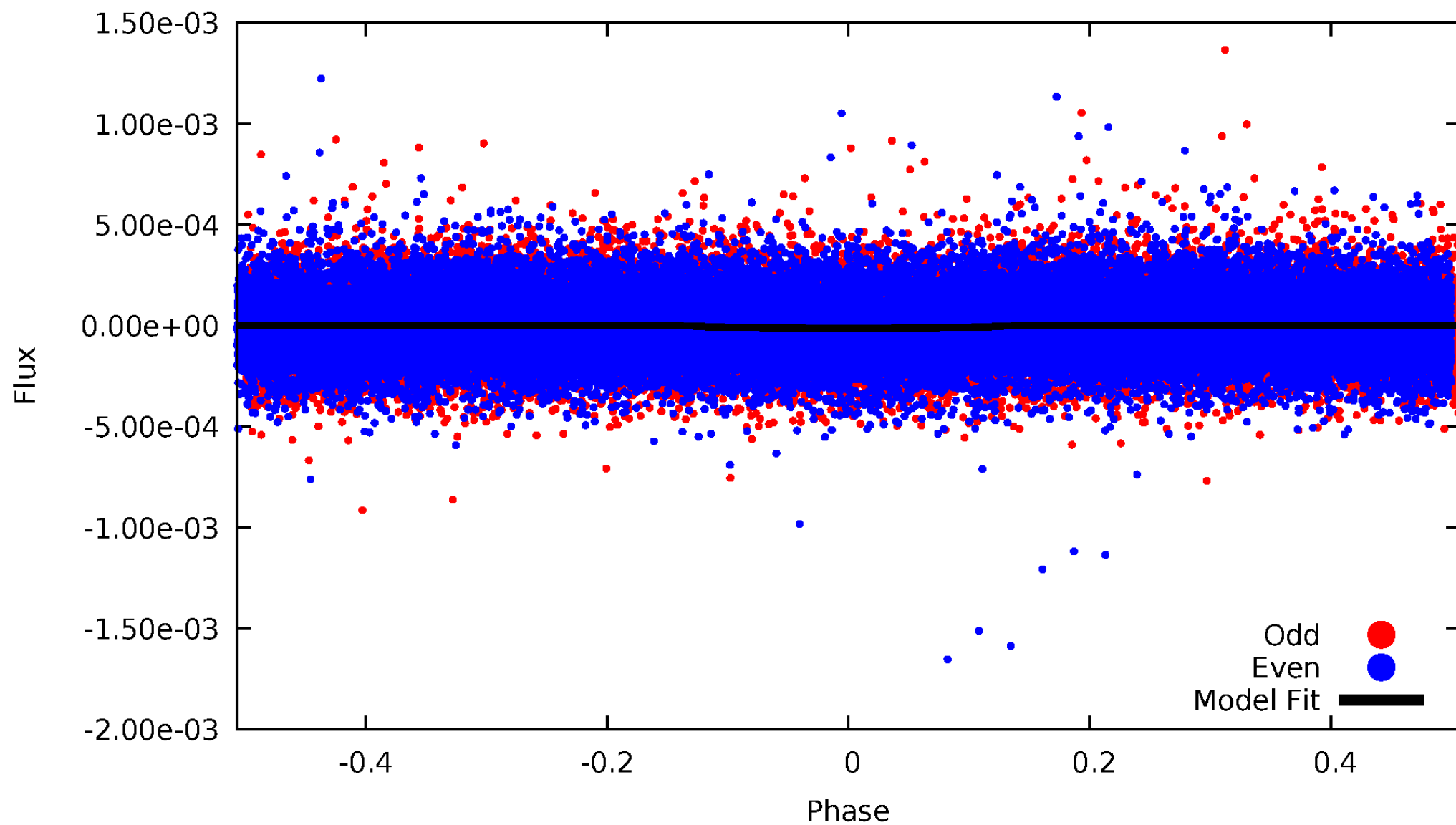


TCE 008265993-01



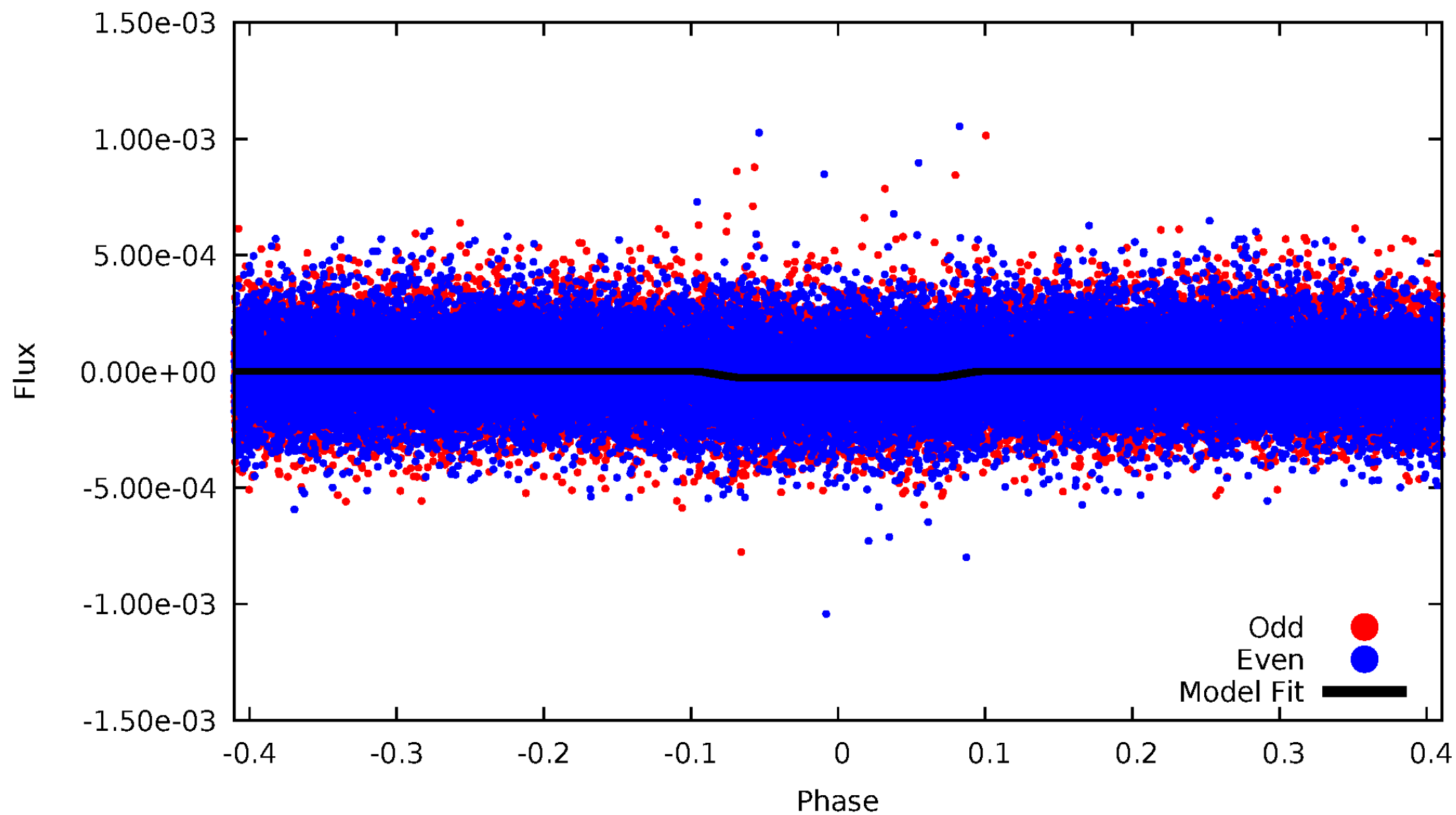
DV Odd/Even

TCE 008265993-01



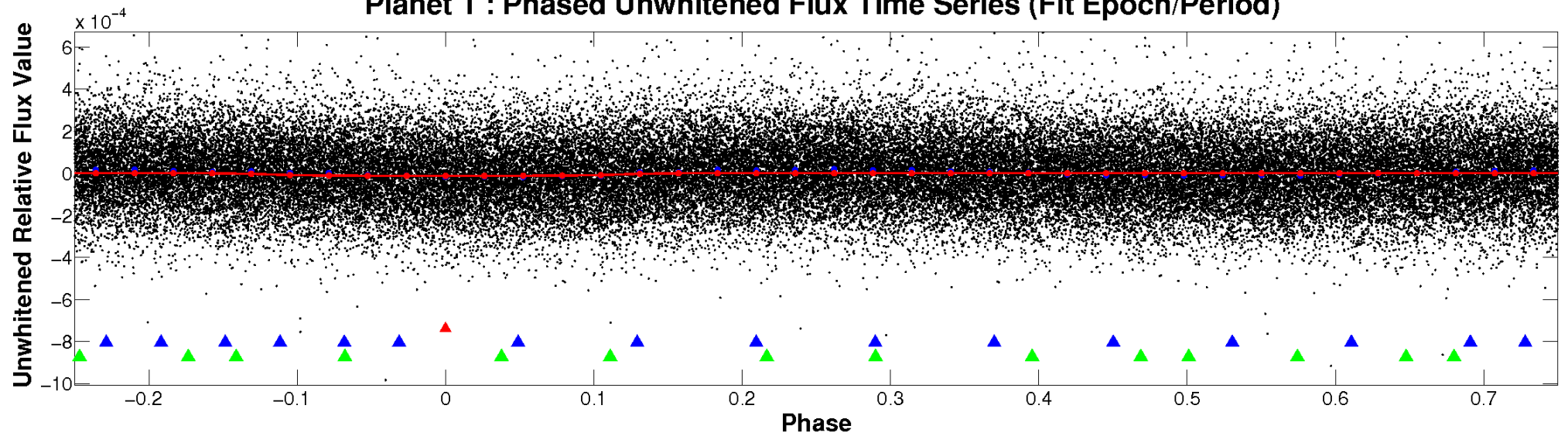
ALT Odd/Even

TCE 008265993-01

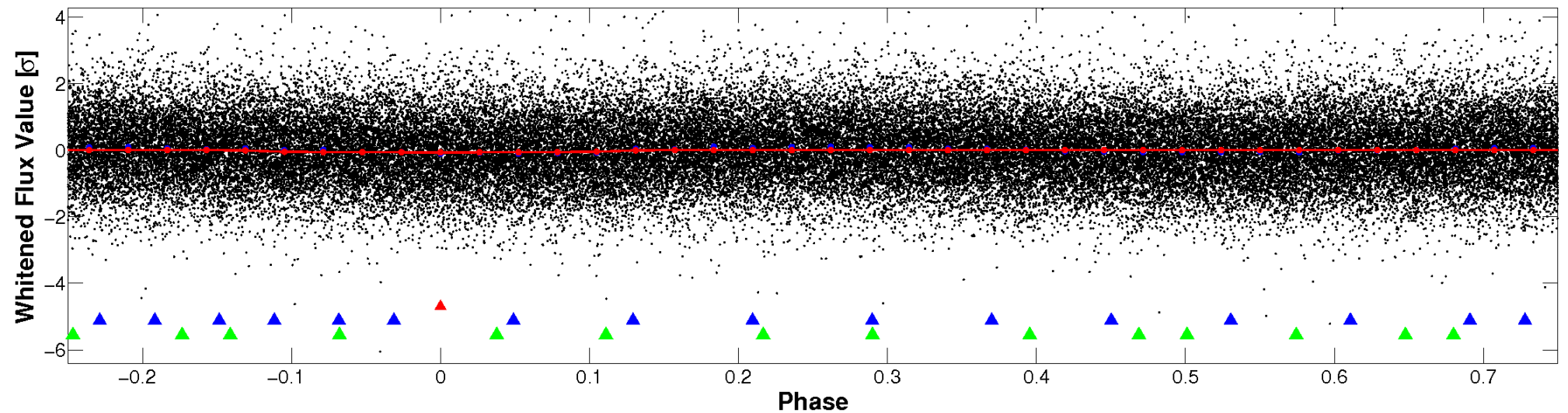


Non-Whitened Vs. Whitened Light Curve

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

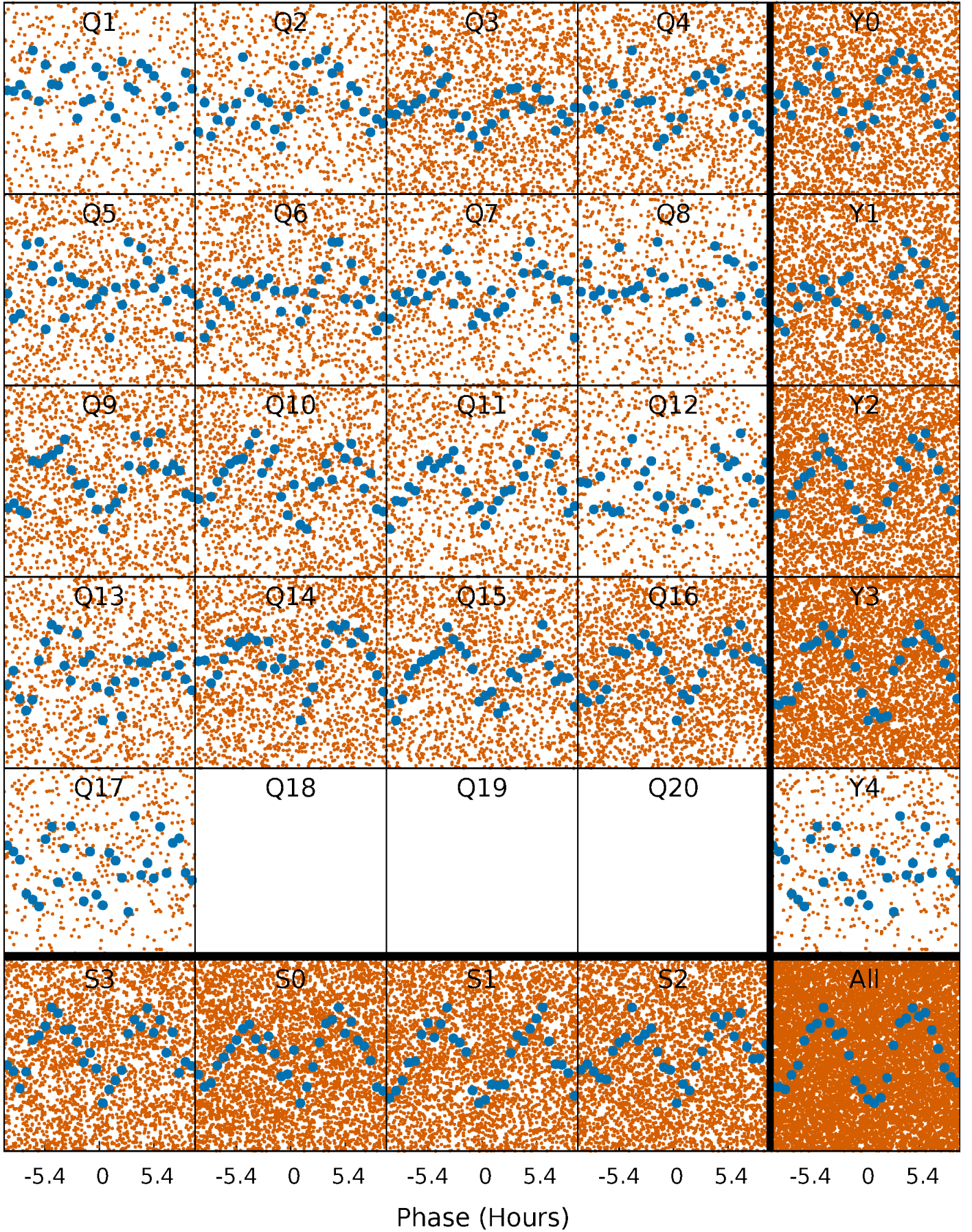


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



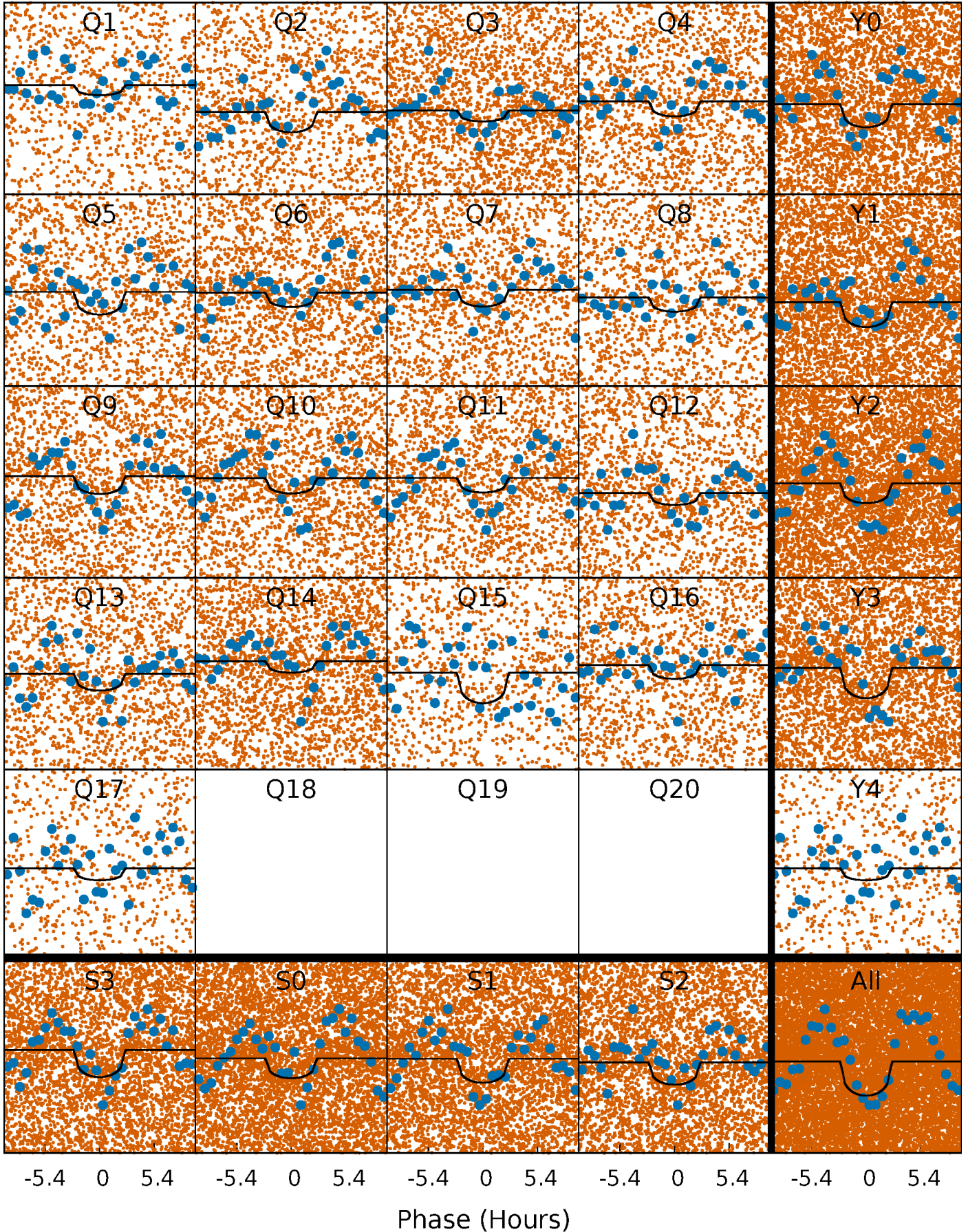
PDC Quarter-Phased Transit Curves

TCE 008265993-01 P= 0.779916 Days $T_0=132.188515$ (BKJD)



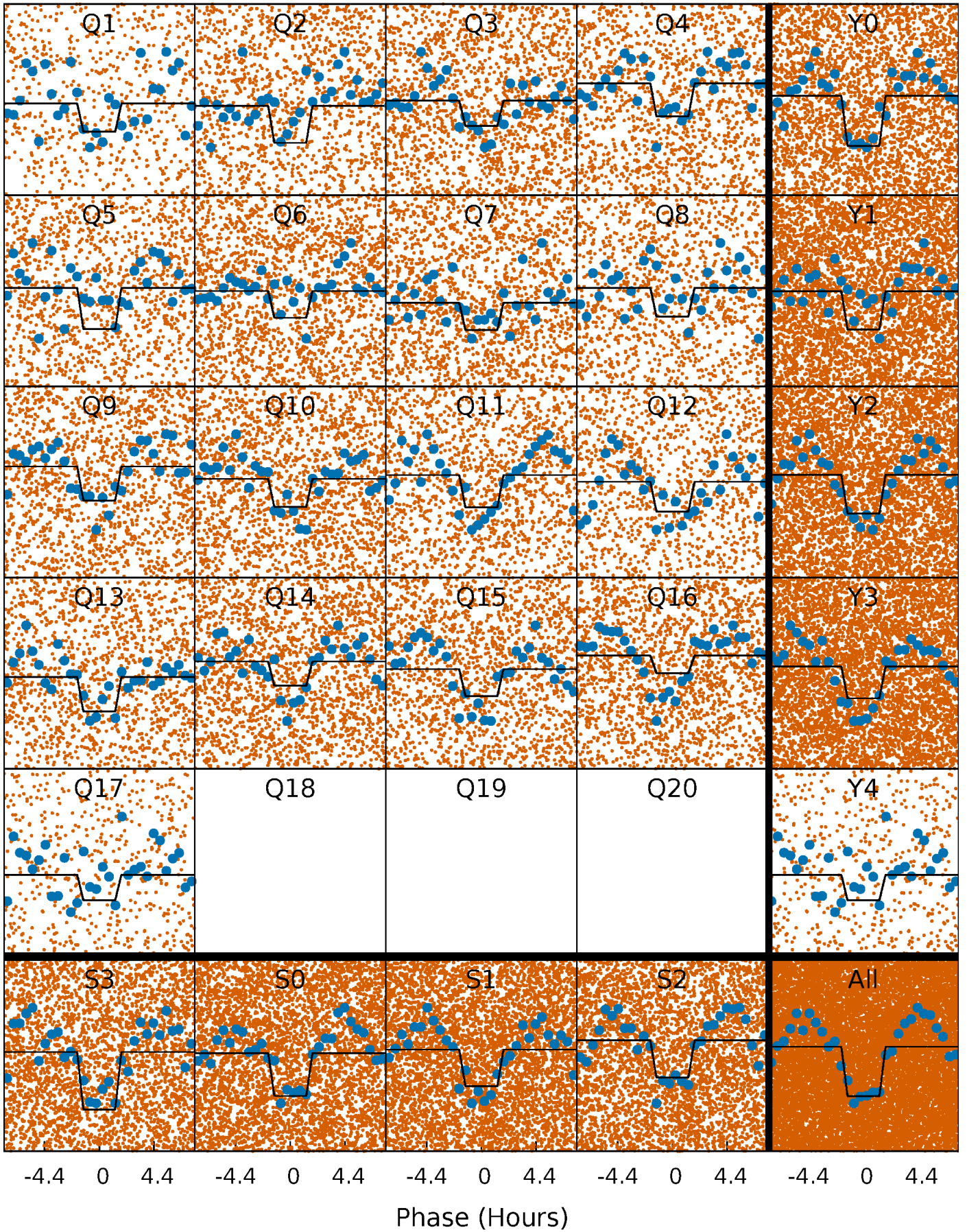
DV Quarter-Phased Transit Curves

TCE 008265993-01 P= 0.779916 Days $T_0=132.188515$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

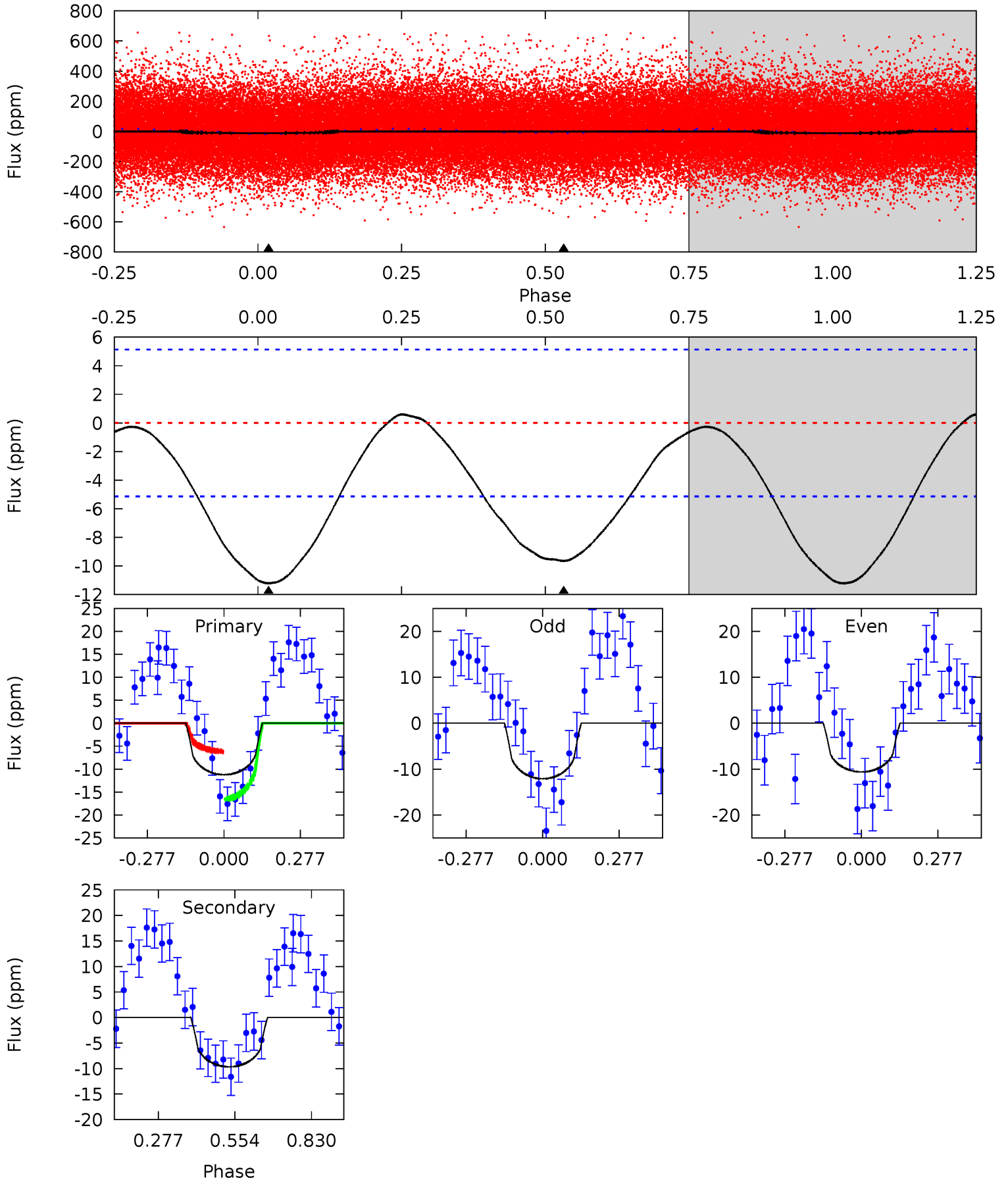
TCE 008265993-01 P= 0.779980 Days $T_0=132.144136$ (BKJD)



DV Model-Shift Uniqueness Test

008265993-01, P = 0.779916 Days, E = 131.408599 Days

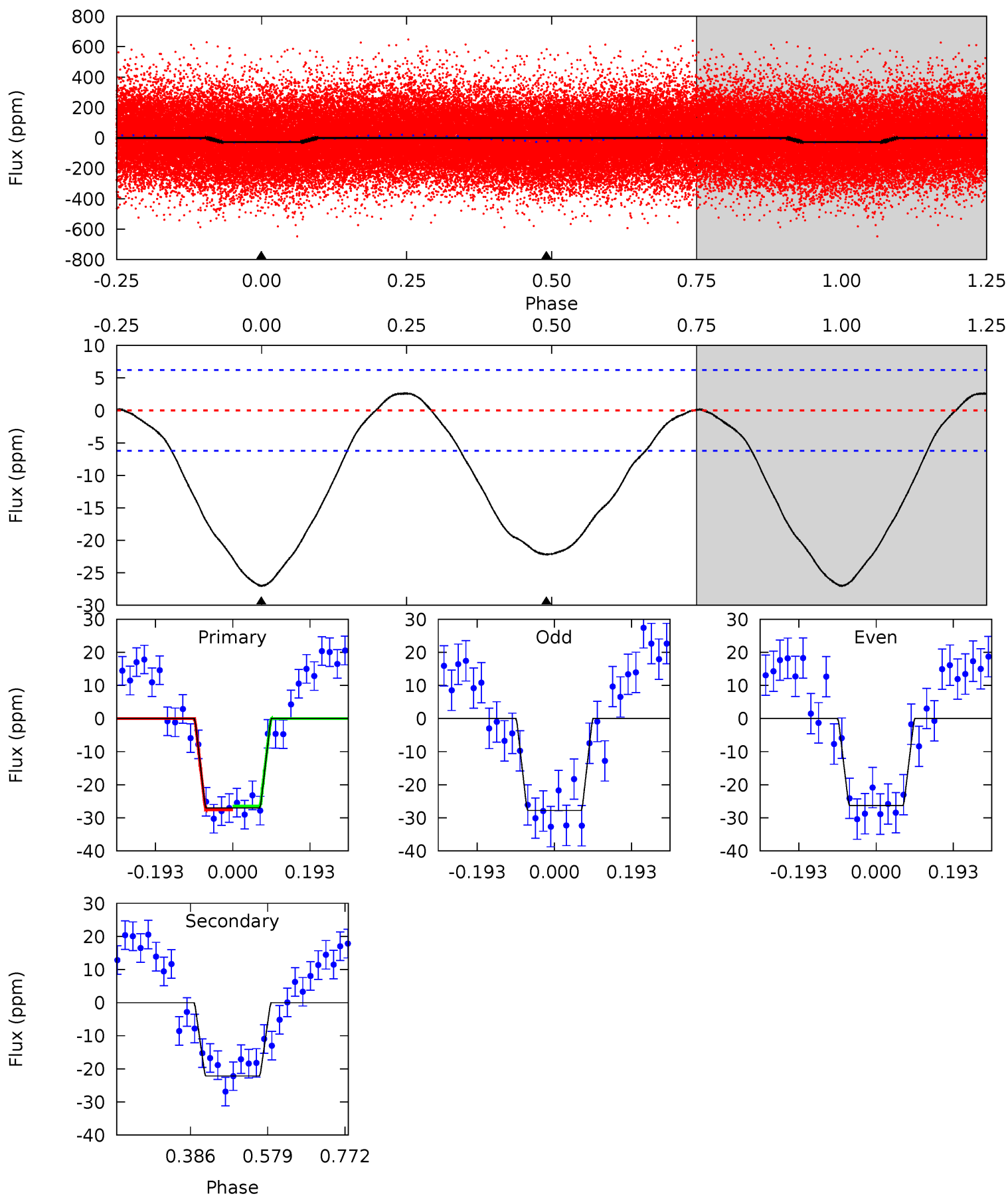
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	8.17	0	0	4.35	1.09	0.33	9.50	9.50	8.17	8.17	0.63	1.09	0.05	4.43



Alt Model-Shift Uniqueness Test

008265993-01, P = 0.779980 Days, E = 131.364156 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	15.8	0	0	4.42	1.30	1.15	19.2	19.2	15.8	15.8	0.53	0.98	0.09	0.40



Stellar Parameters For KIC 008265993

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5575^{+193}_{-193}	$3.591^{+0.408}_{-0.102}$	$0.320^{+0.150}_{-0.300}$	$3.419^{+0.700}_{-1.634}$	$1.664^{+0.175}_{-0.559}$	$0.059^{+0.222}_{-0.019}$
	+3%/-3%	+11%/-3%	+47%/-94%	+20%/-48%	+11%/-34%	+378%/-32%
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 008265993-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 1	$1.46^{+1.61}_{-1.00}$	4419^{+307}_{-521}	4339^{+3990}_{-7534}	$0.914^{+8.192}_{-0.700}$
Alt.	-22 ± 1	$1.97^{+1.70}_{-1.28}$	4411^{+326}_{-485}	4697^{+3982}_{-1791}	$1.189^{+8.667}_{-0.846}$

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 $A_{obs} \gg 1.0$

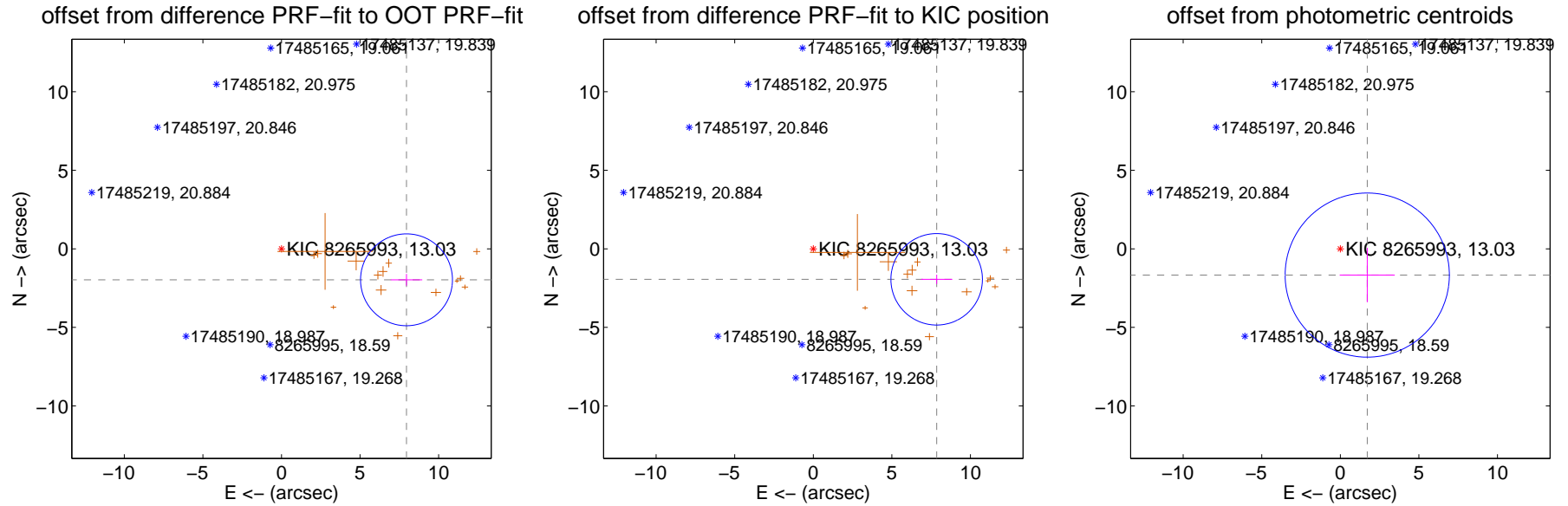
DV Centroid Data

Supplemental centroid analysis for 008265993-01. Kepler magnitude: 13.03. Transit SNR 6.86

There are 0 quarters with good PRF difference image offsets

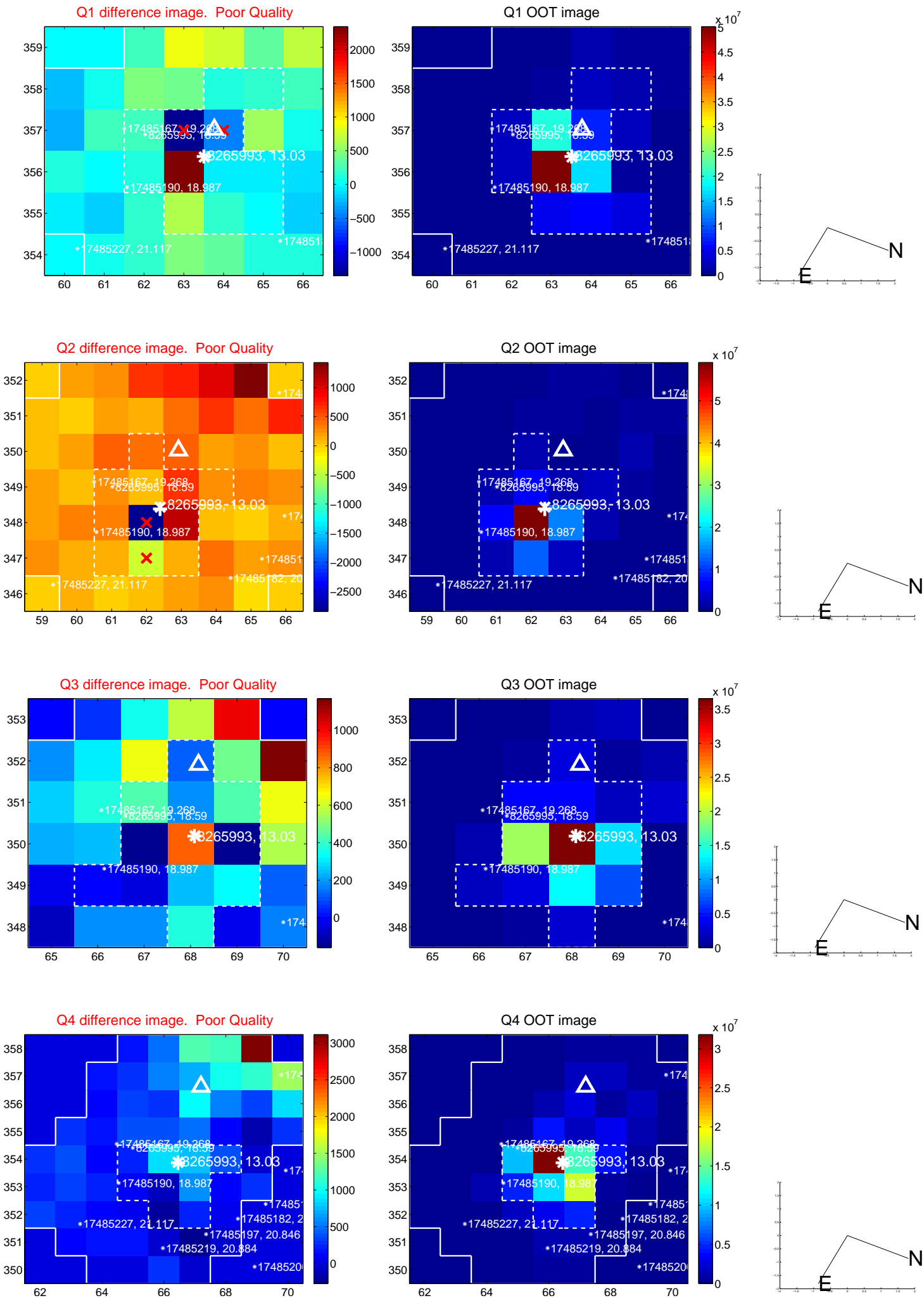
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.194 ± 0.974	8.41	-7.953 ± 1.001	-1.972 ± 0.372
PRF-fit source offset from KIC position	8.084 ± 0.970	8.33	-7.848 ± 0.997	-1.940 ± 0.297
photometric centroid source offset	2.39 ± 1.74	1.37	-1.71 ± 1.75	-1.67 ± 1.73

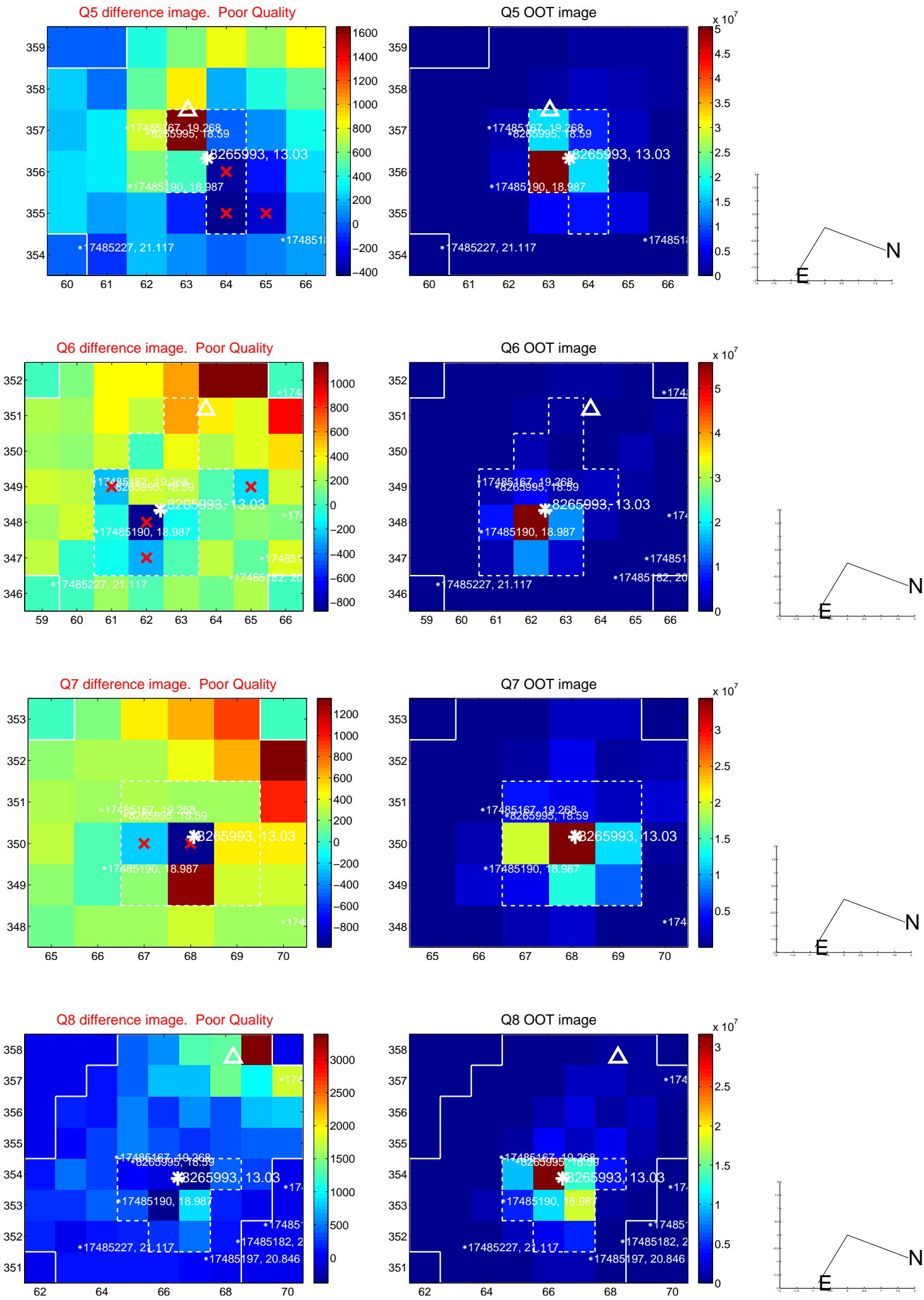


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

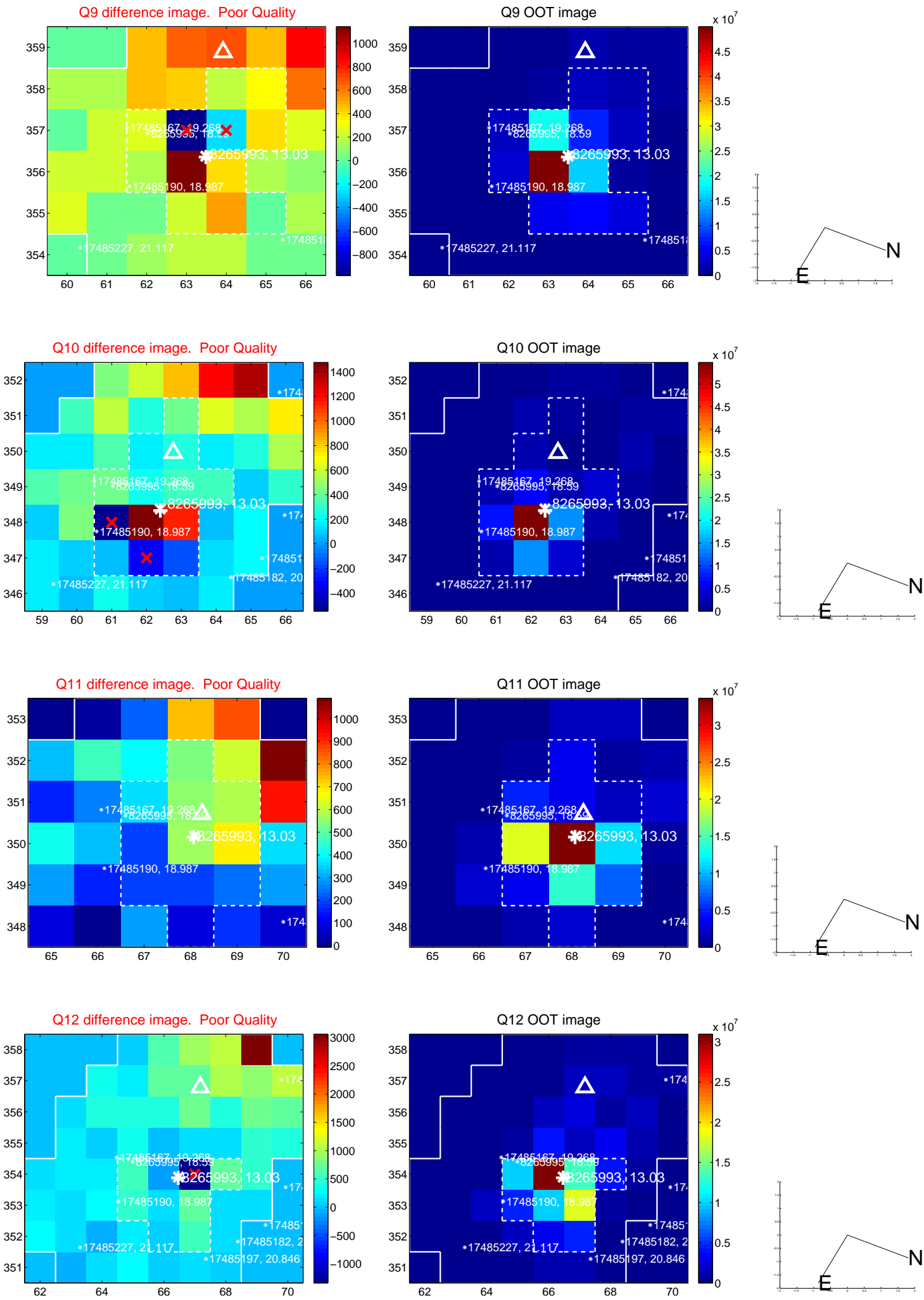
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

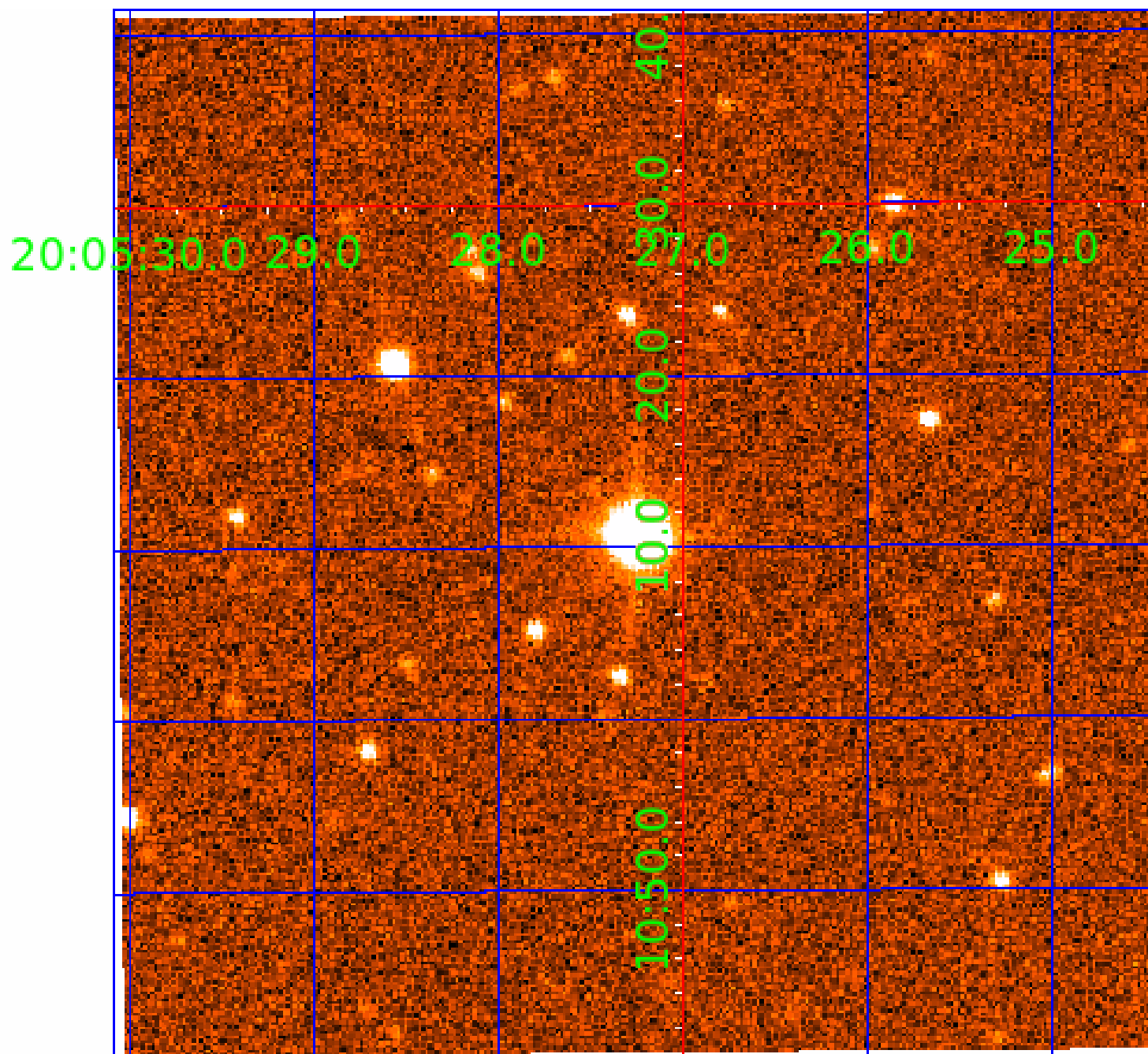


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008265993

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})
008265993-01	OBS	No	0.779916	132.188515	12.2	4.741	9.4	6.9	3.42	5575	1.18	26206.51
008265993-03	OBS	No	103.868395	212.130814	360.1	1.686	7.4	8.1	3.42	5575	7.80	38.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008265993-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008265993-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

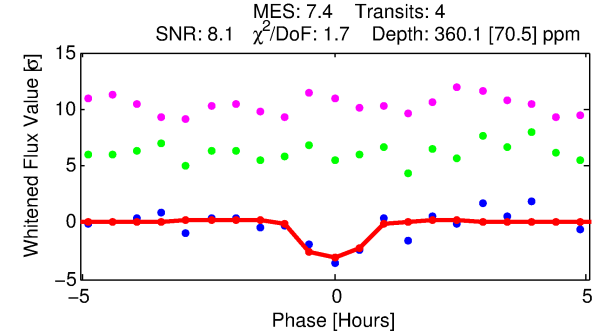
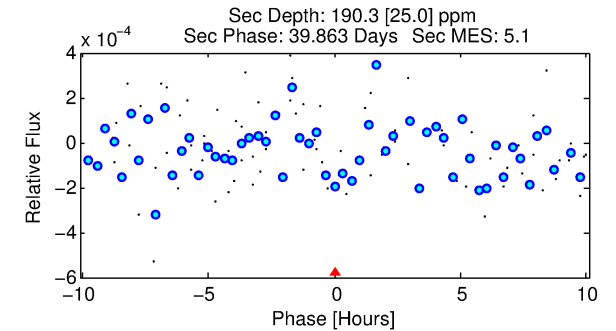
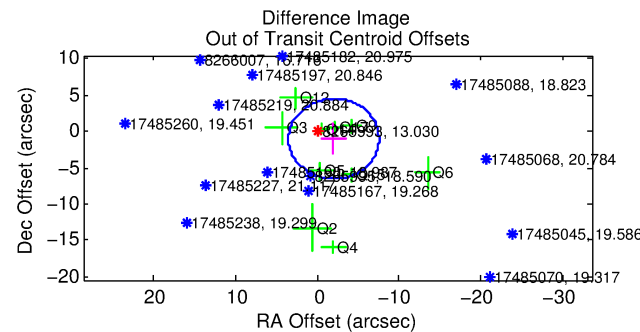
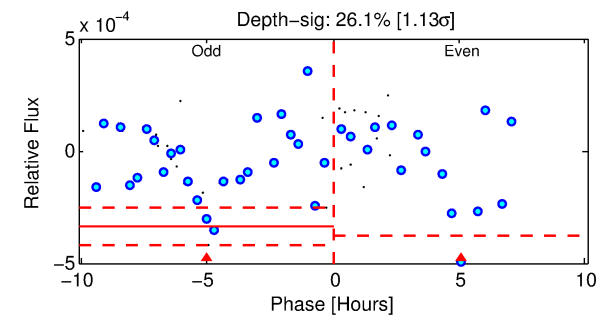
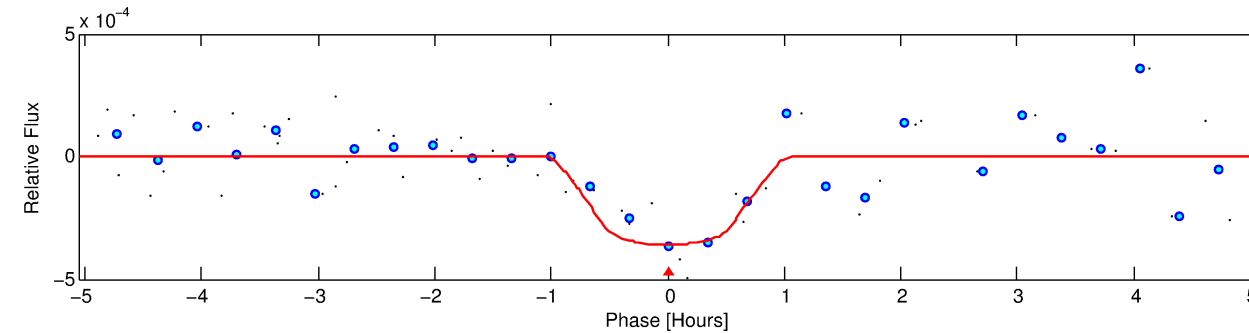
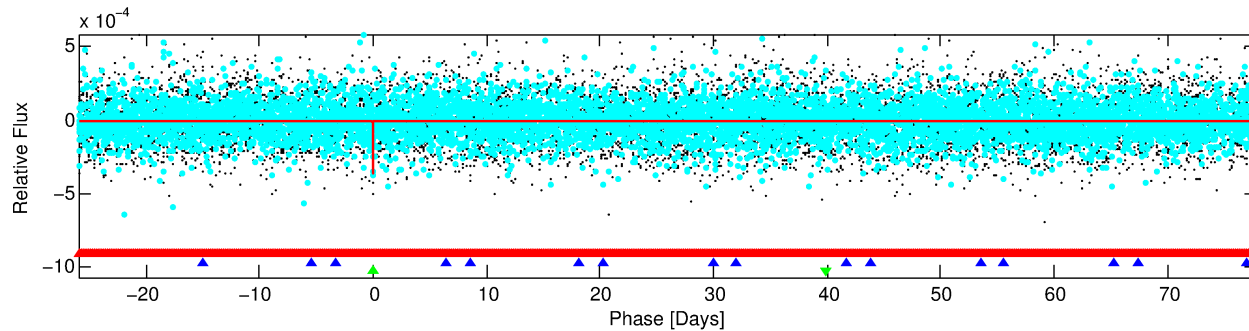
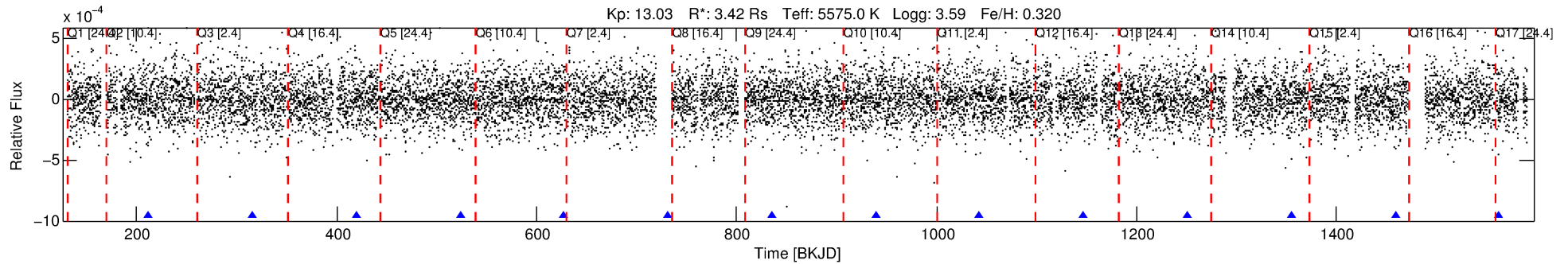
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008265993-03

No Significant Match Found

DV One-Page Summary

KIC: 8265993 Candidate: 3 of 3 Period: 103.868 d



DV Fit Results:

Period = 103.86839 [0.00092] d
Epoch = 212.1308 [0.0070] BKJD
Rp/R* = 0.0209 [0.0342]
a/R* = 227.02 [1636.70]
b = 0.90 [1.57]
Seff = 38.53 [27.60]
Teq = 635 [114] K
Rp = 7.80 [13.30] Re
a = 0.5124 [0.2289] AU
Ag = 451.29 [1511.68] [0.30σ]
Teffp = 4527 [3710] K [1.05σ]

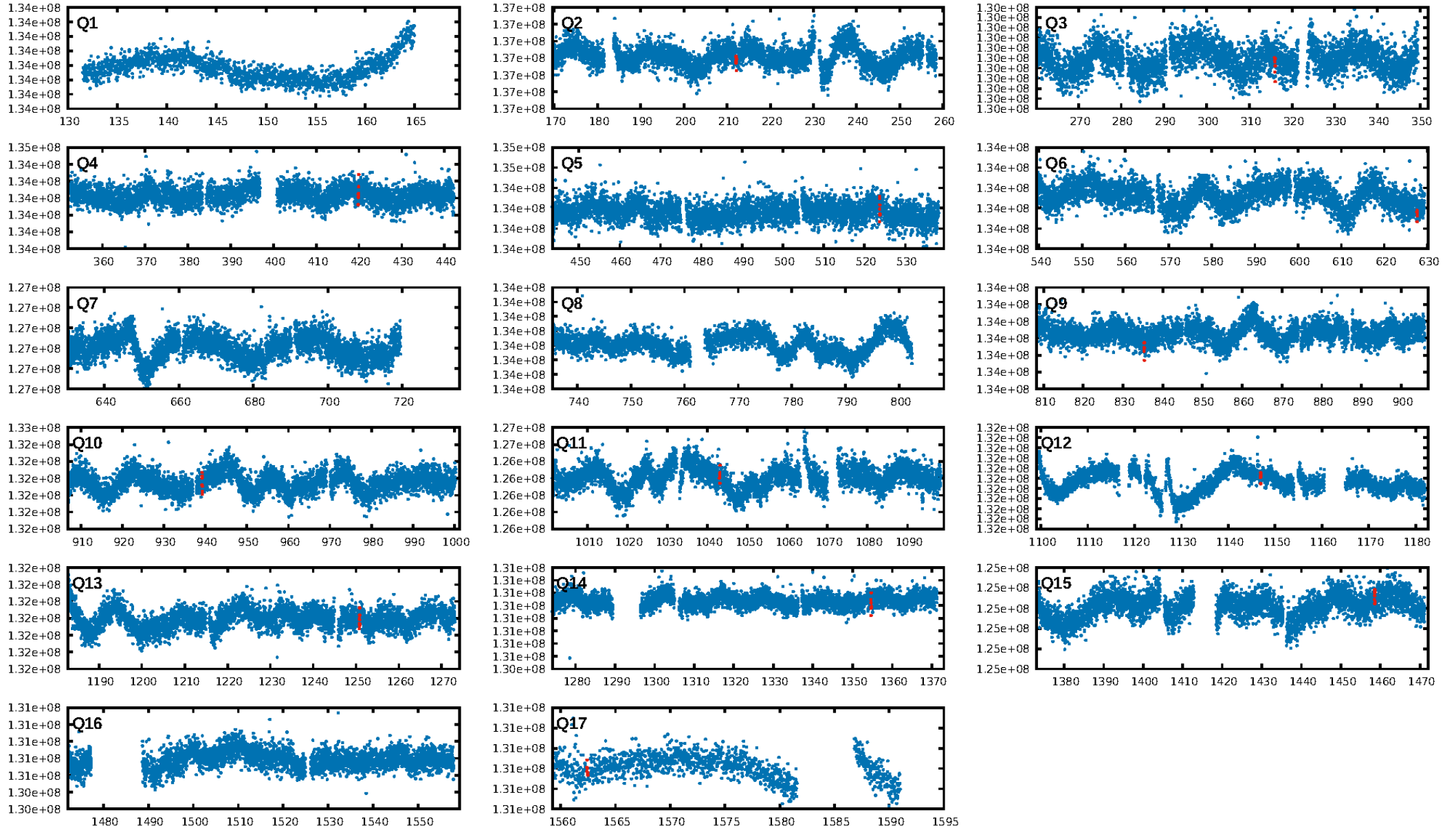
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.41σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 49.8%
ModelChiSquareGof-sig: 81.5%
Bootstrap-pfa: 8.80e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 4.443
Centroid-sig: 3.7%
Centroid-so: 1.527 arcsec [1.36σ]
OotOffset-rm: 2.263 arcsec [1.23σ]
KicOffset-rm: 2.252 arcsec [1.20σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 0.15 [2/13]

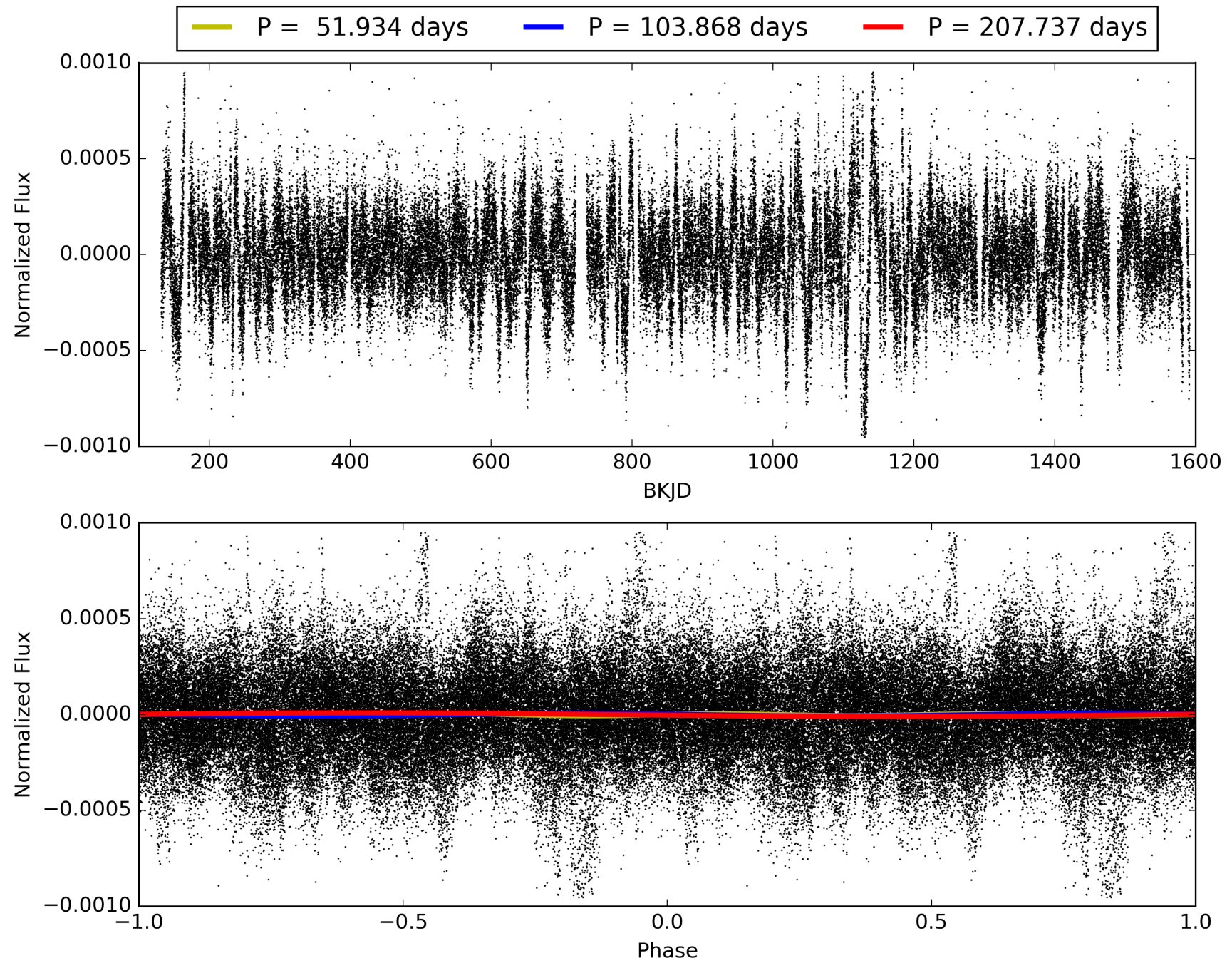
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:42:55 Z

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

TCE 008265993-03, PDC Light Curves

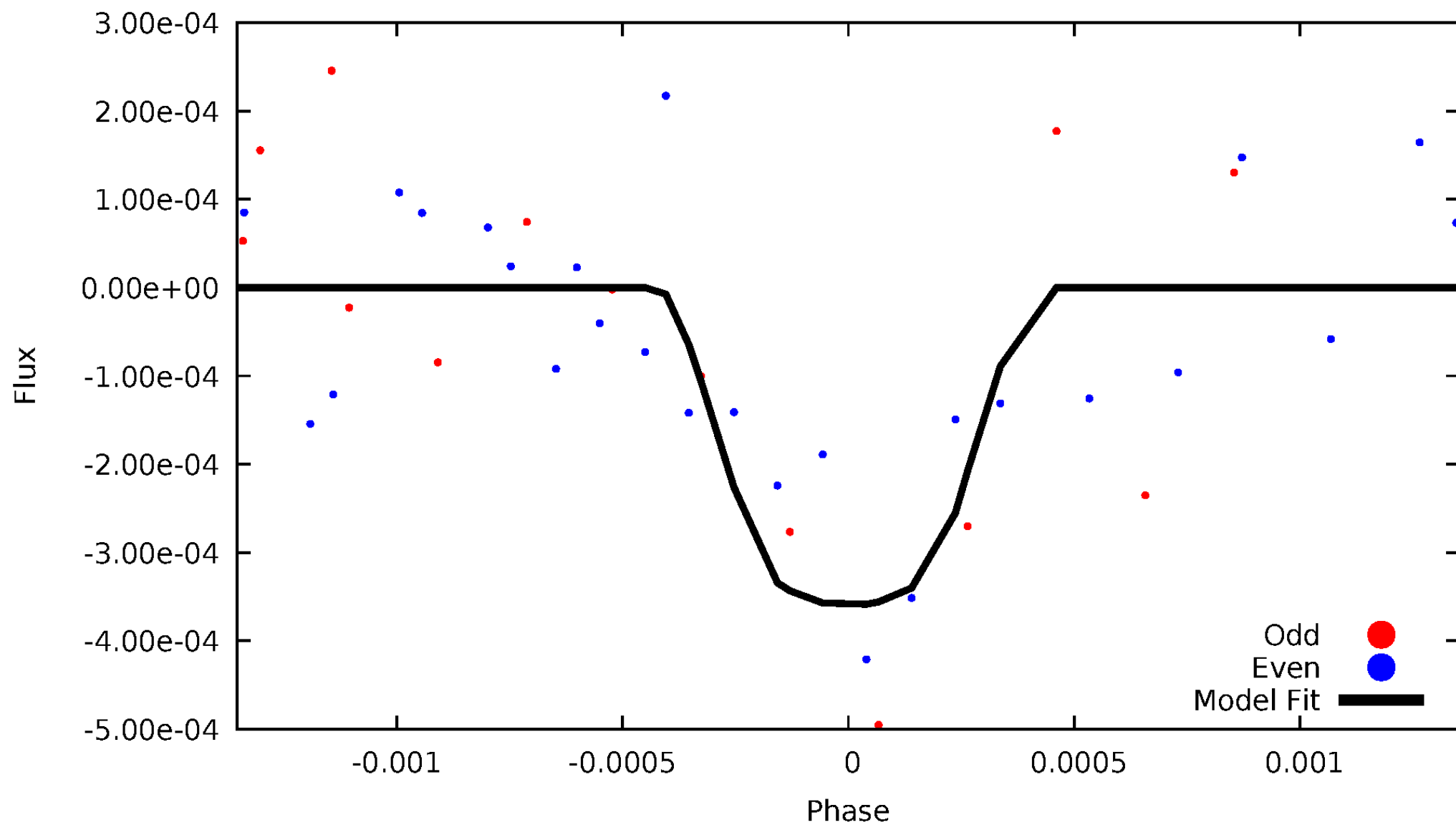


TCE 008265993-03



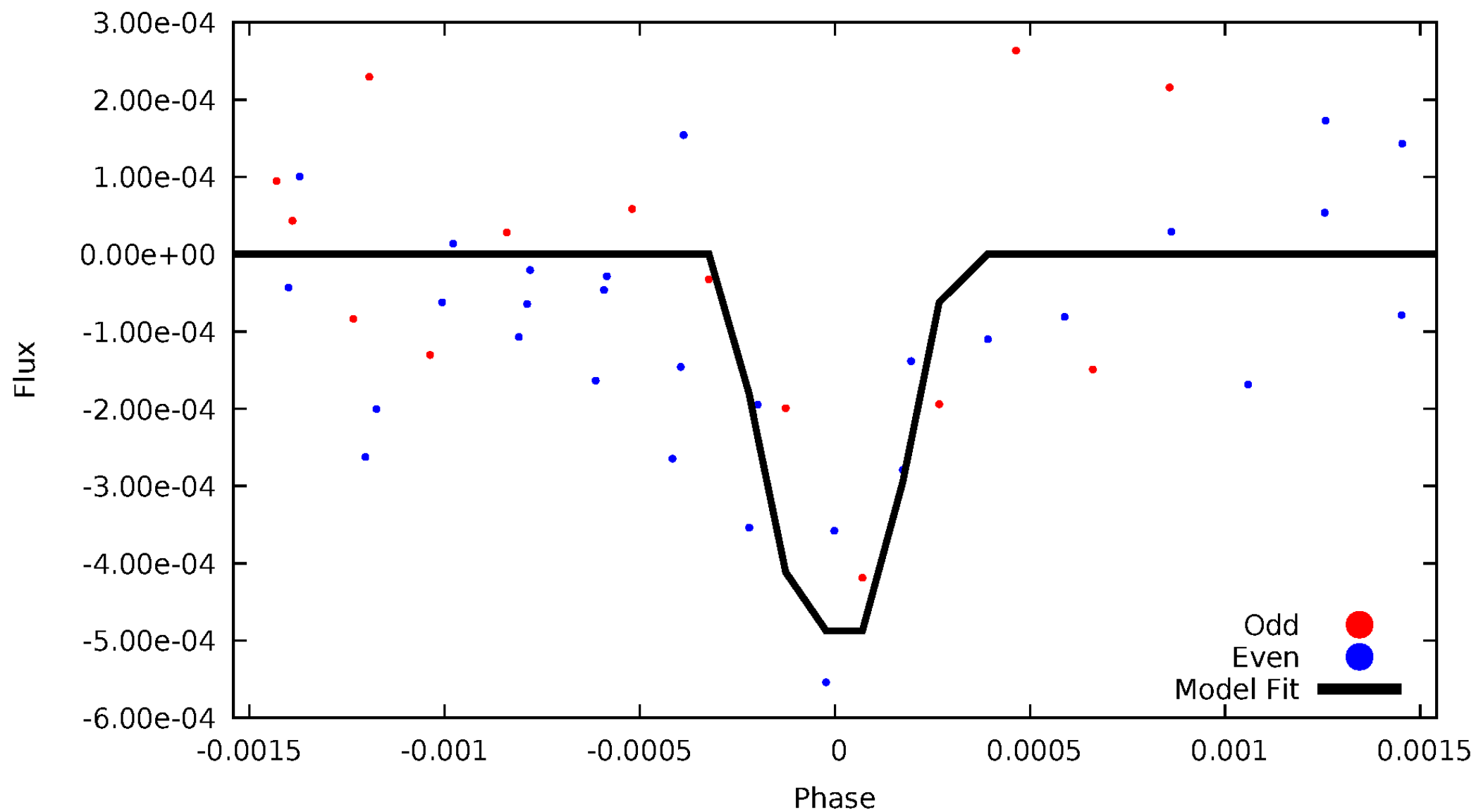
DV Odd/Even

TCE 008265993-03



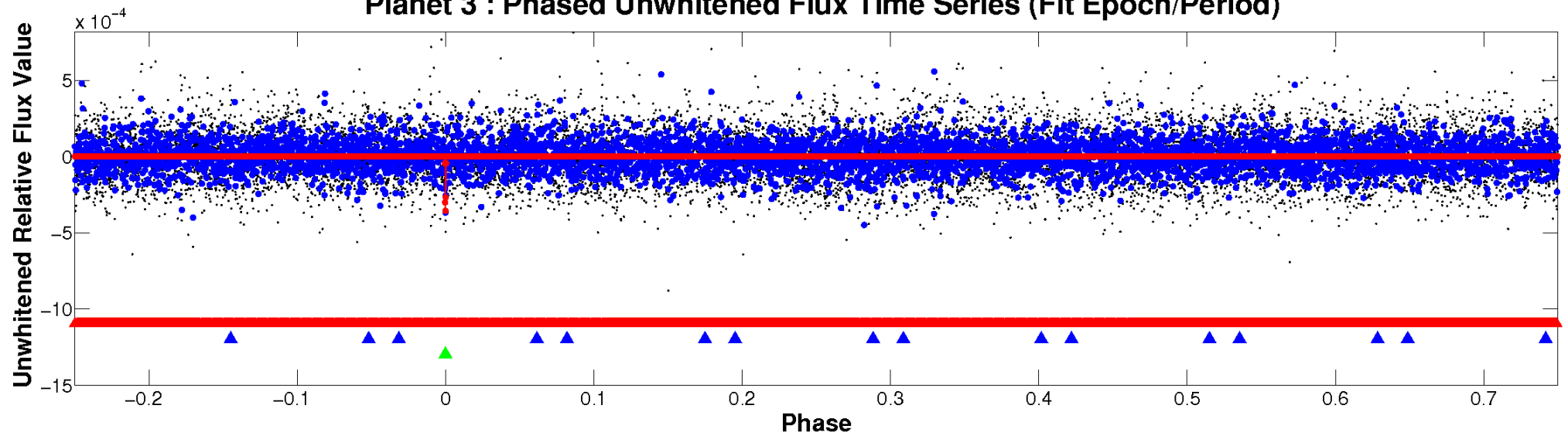
ALT Odd/Even

TCE 008265993-03

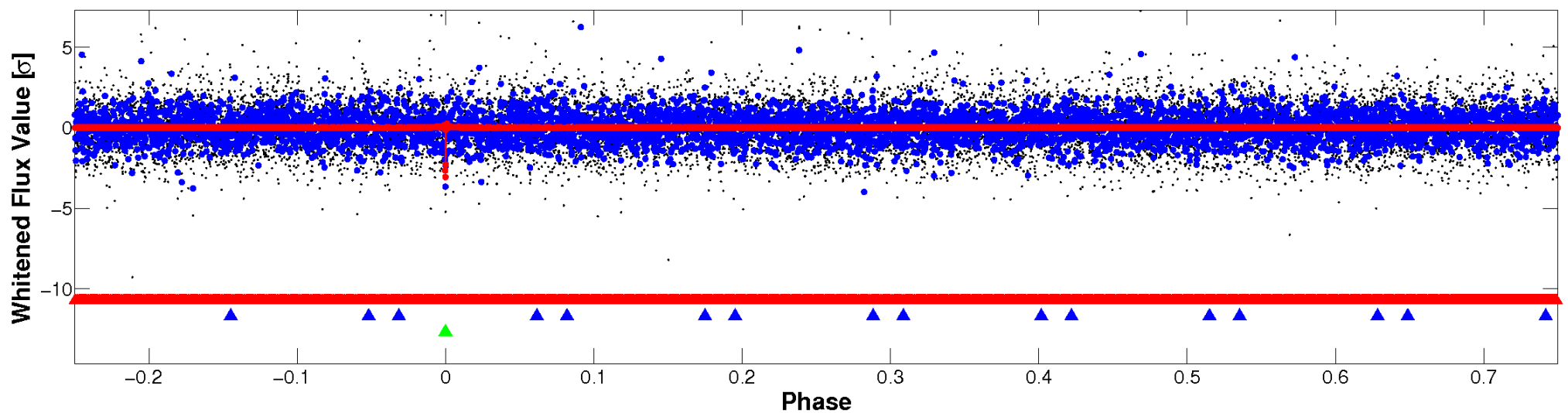


Non-Whitened Vs. Whitened Light Curve

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

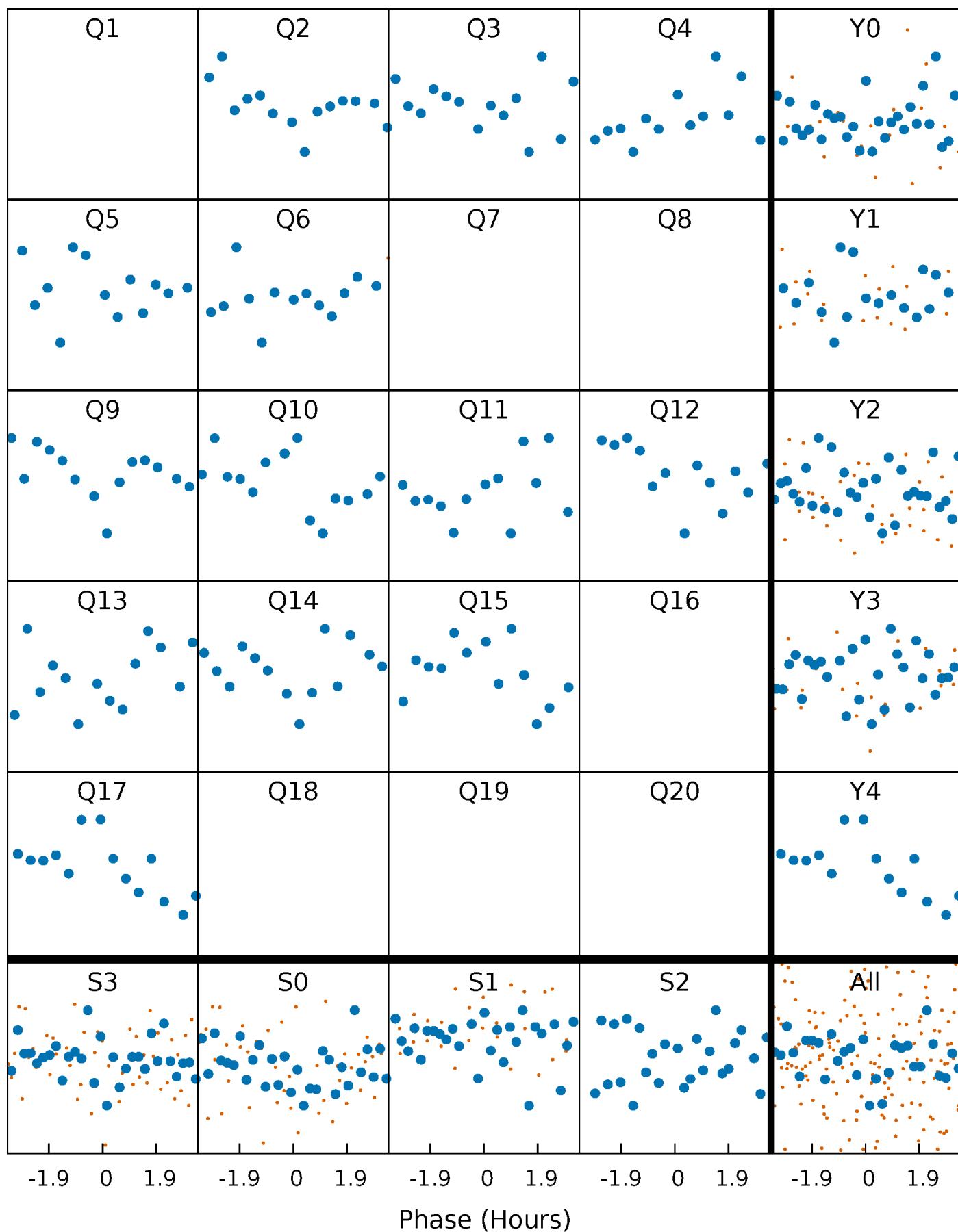


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



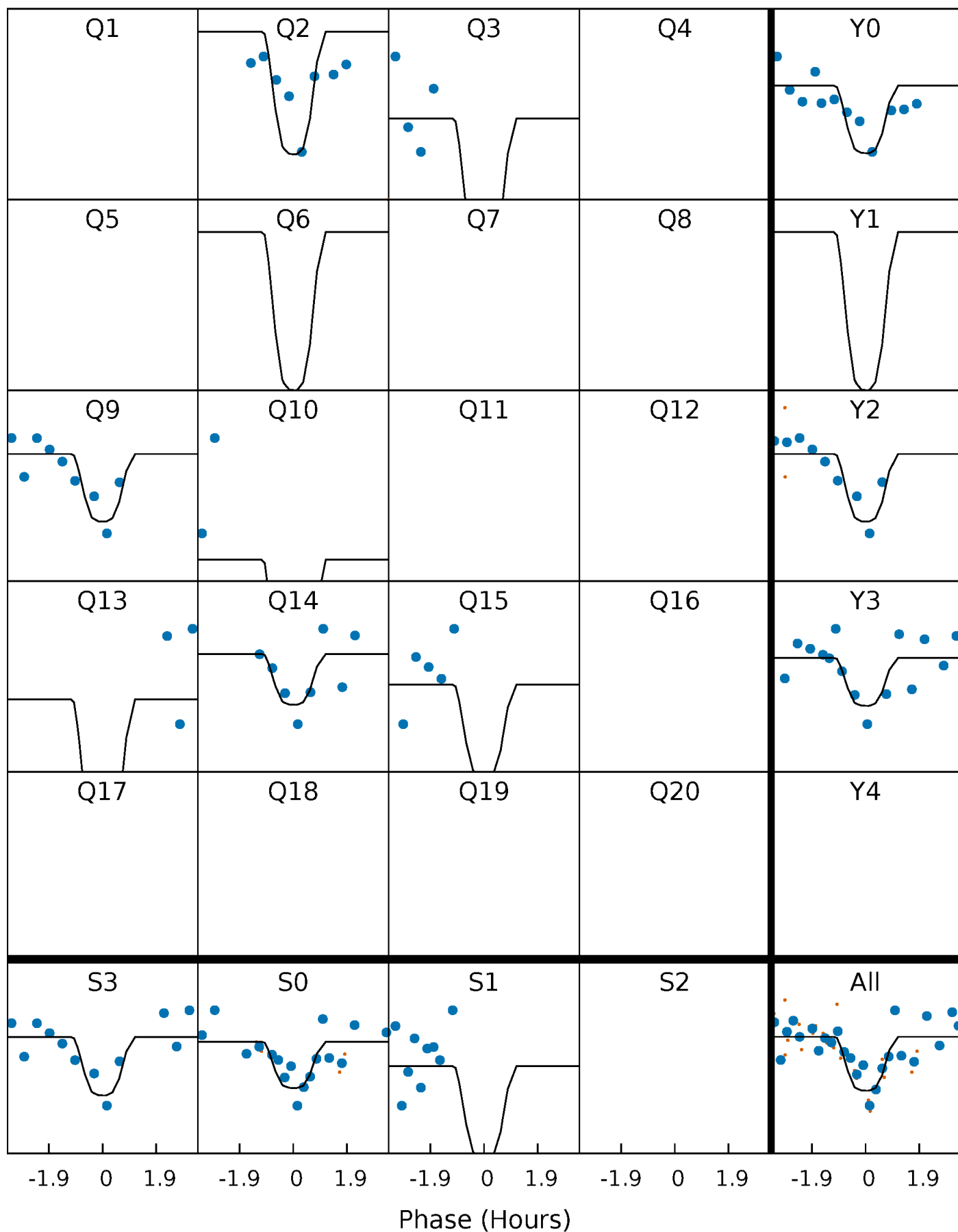
PDC Quarter-Phased Transit Curves

TCE 008265993-03 P=103.868395 Days $T_0=212.130814$ (BKJD)



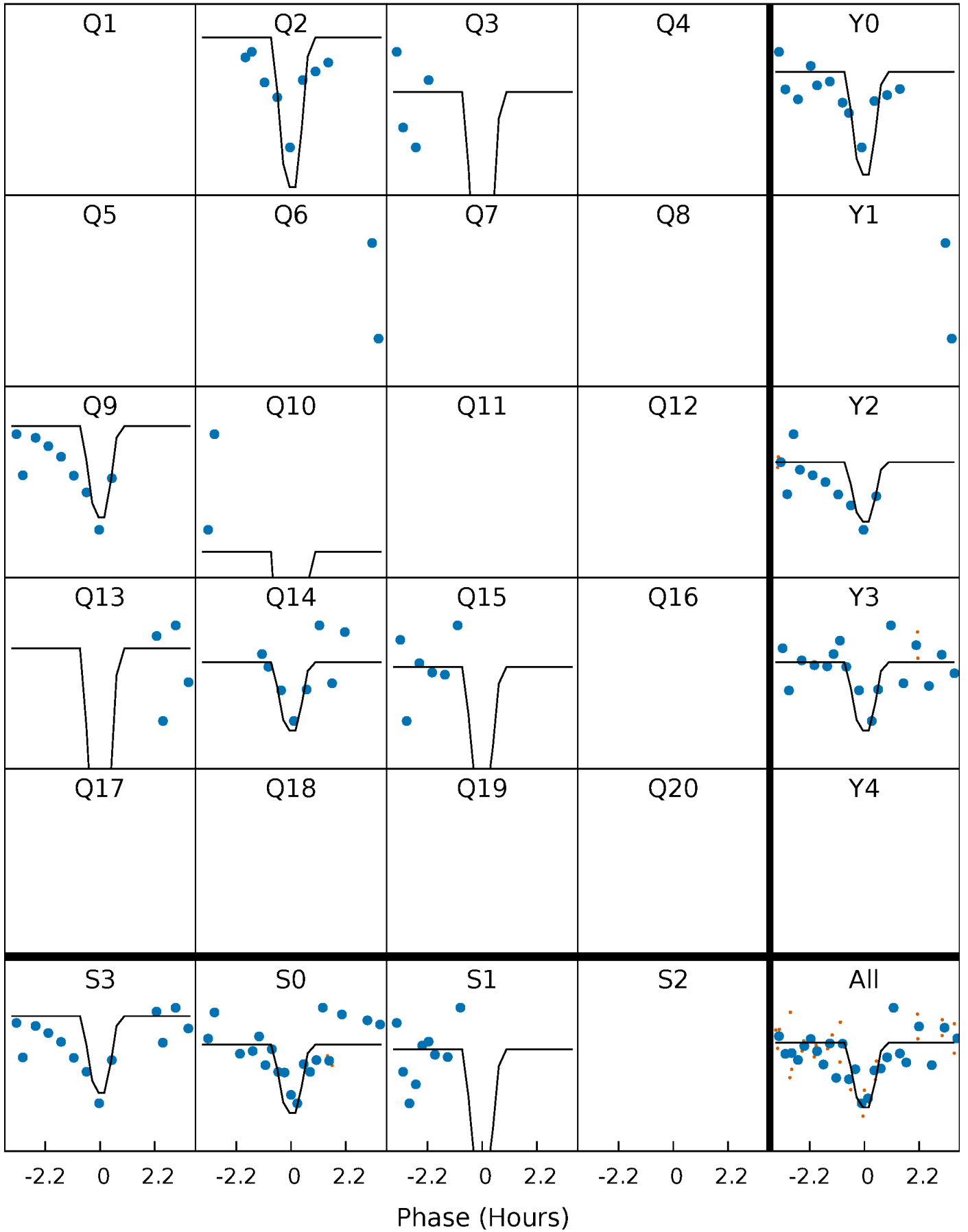
DV Quarter-Phased Transit Curves

TCE 008265993-03 P=103.868395 Days $T_0=212.130814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

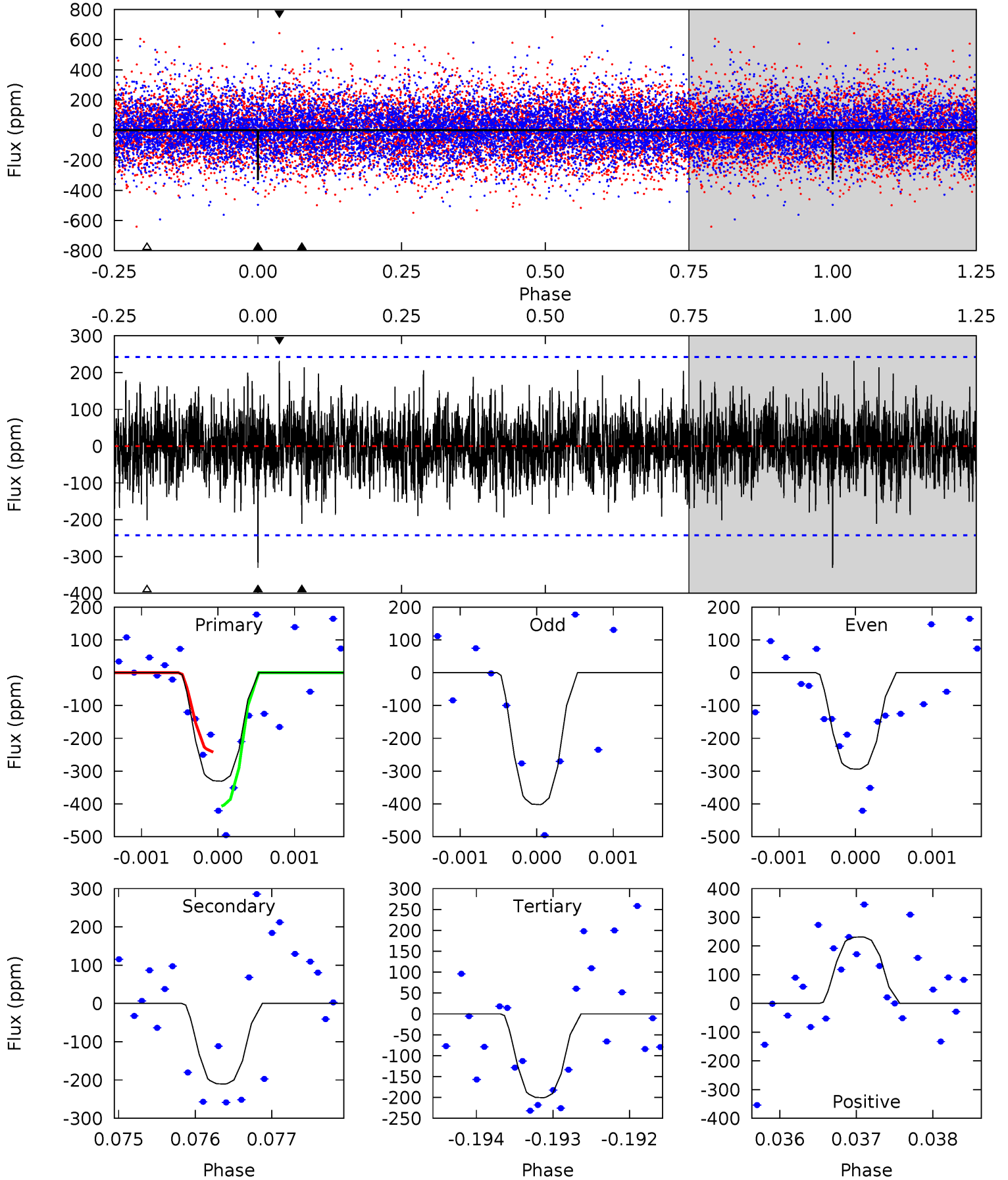
TCE 008265993-03 P=103.867027 Days $T_0=212.145519$ (BKJD)



DV Model-Shift Uniqueness Test

008265993-03, P = 103.868395 Days, E = 108.262419 Days

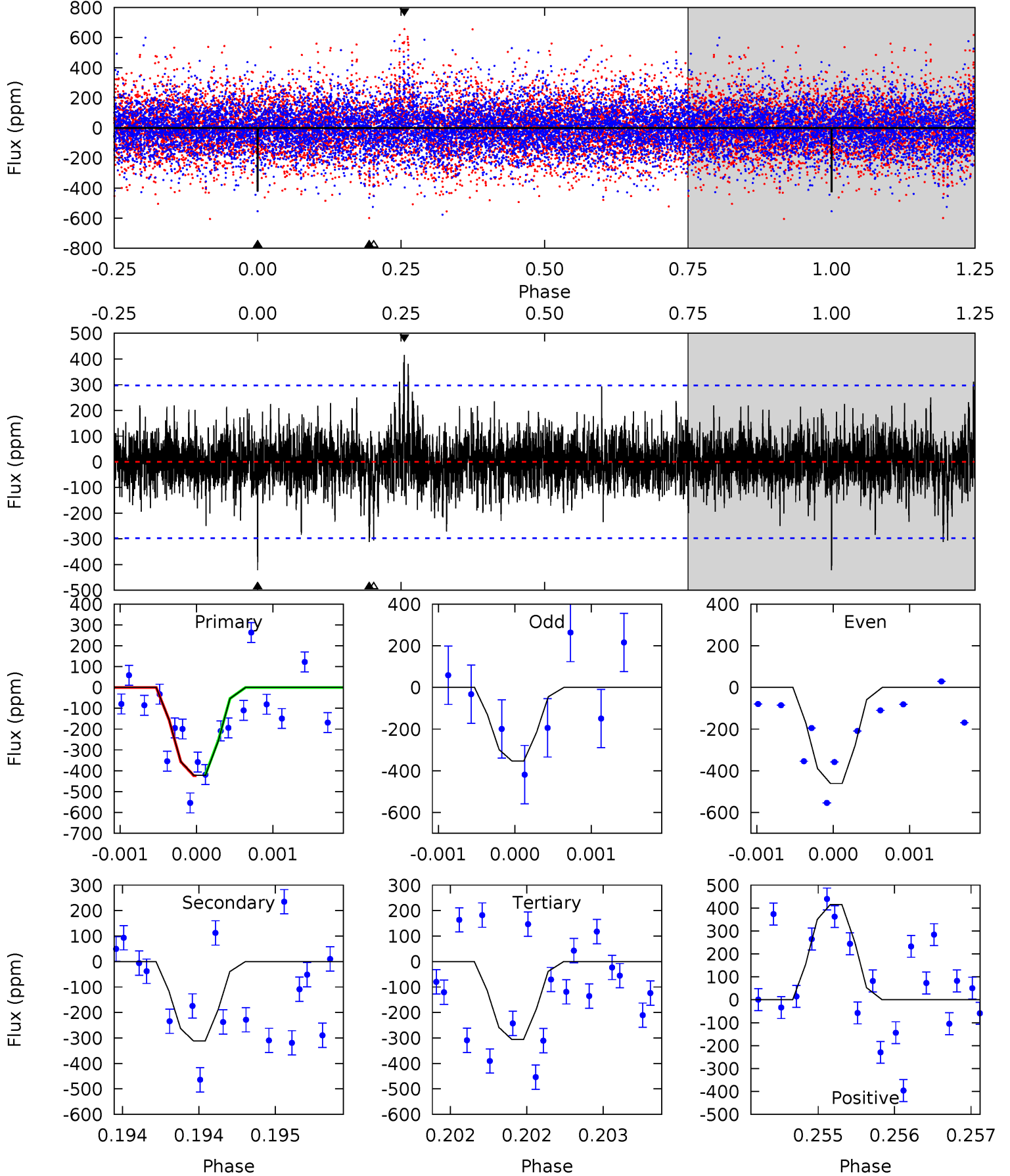
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	4.76	4.54	5.24	5.48	3.33	1.37	2.94	2.24	0.22	-0.48	1.15	1.05	0.41	1.87



Alt Model-Shift Uniqueness Test

008265993-03, P = 103.867027 Days, E = 108.278492 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.86	5.81	5.71	7.73	5.54	3.43	1.38	2.15	0.13	0.10	-1.92	1.01	1.20	0.50	0.05



Stellar Parameters For KIC 008265993

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5575^{+193}_{-193}	$3.591^{+0.408}_{-0.102}$	$0.320^{+0.150}_{-0.300}$	$3.419^{+0.700}_{-1.634}$	$1.664^{+0.175}_{-0.559}$	$0.059^{+0.222}_{-0.019}$
	+3%/-3%	+11%/-3%	+47%/-94%	+20%/-48%	+11%/-34%	+378%/-32%
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 008265993-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-211 ± 44	$10.93^{+11.28}_{-7.48}$	864^{+63}_{-104}	4023^{+2261}_{-837}	245^{+2138}_{-187}
Alt.	-312 ± 54	$11.39^{+10.63}_{-7.98}$	867^{+61}_{-92}	4312^{+2920}_{-901}	356^{+3433}_{-265}

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 $A_{obs} \gg 1.0$

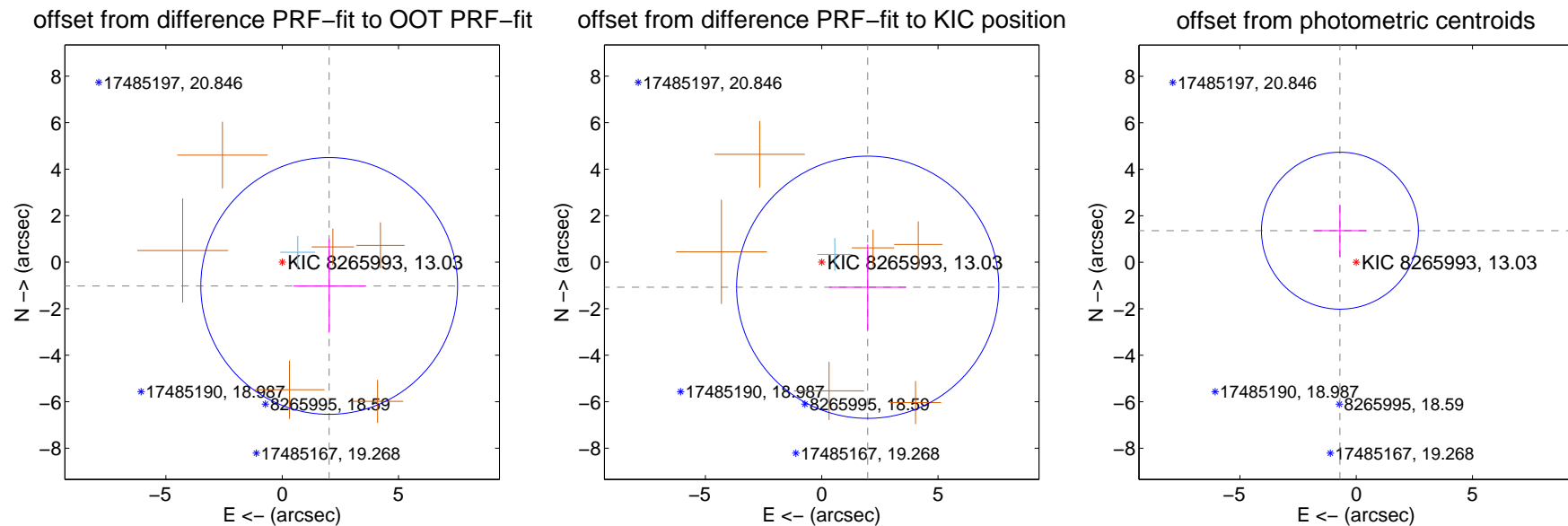
DV Centroid Data

Supplemental centroid analysis for 008265993-03. Kepler magnitude: 13.03. Transit SNR 8.12

There are 1 quarters with good PRF difference image offsets

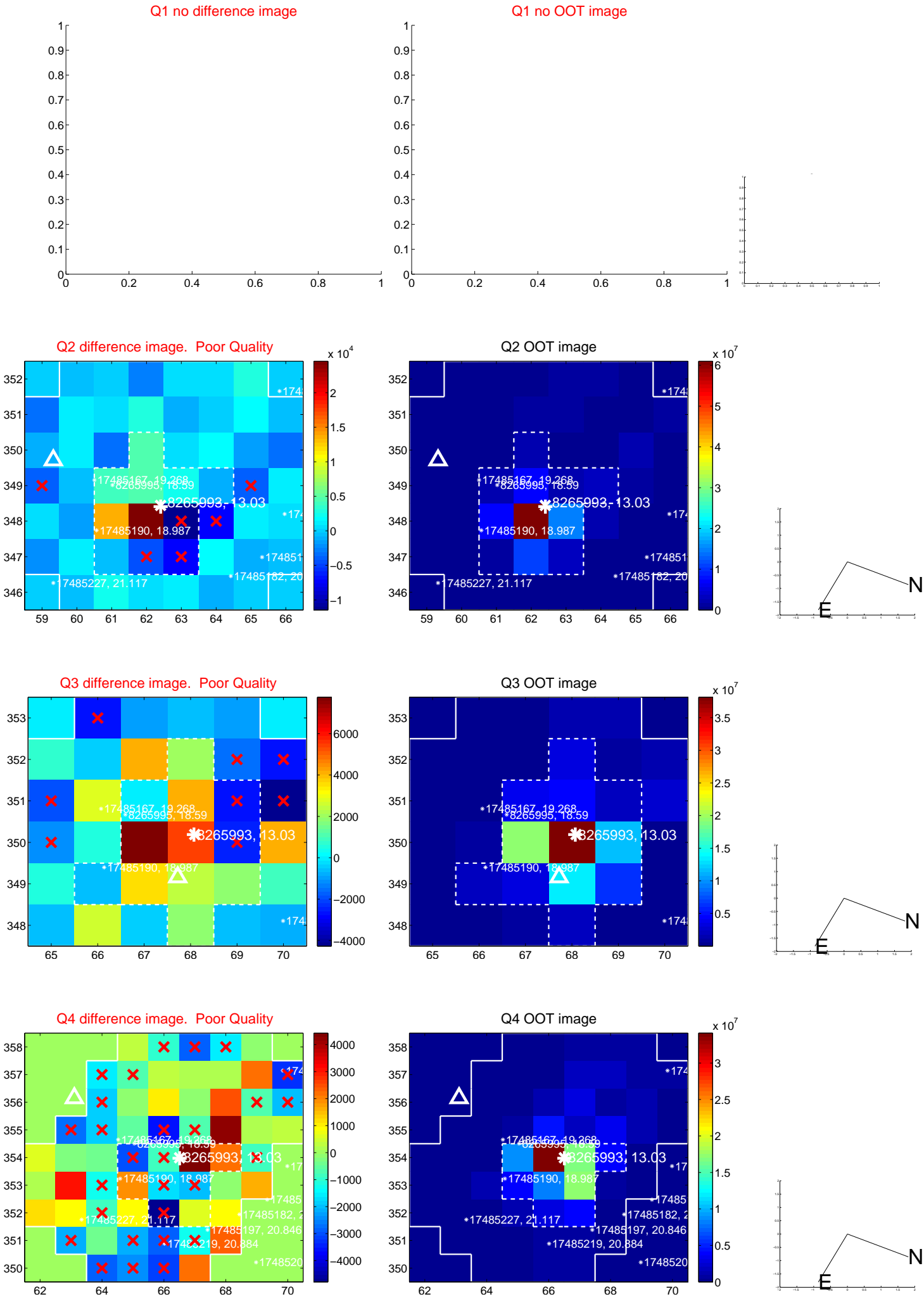
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.263 ± 1.840	1.23	-2.020 ± 1.546	-1.022 ± 2.009
PRF-fit source offset from KIC position	2.252 ± 1.879	1.20	-1.978 ± 1.657	-1.077 ± 1.834
photometric centroid source offset	1.53 ± 1.13	1.36	0.70 ± 1.15	1.36 ± 1.12

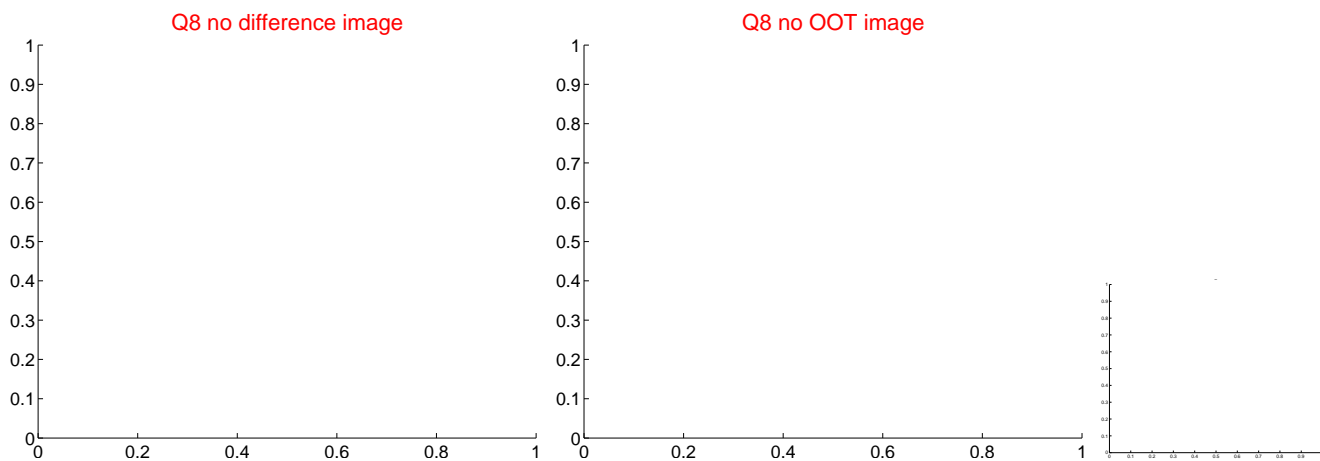
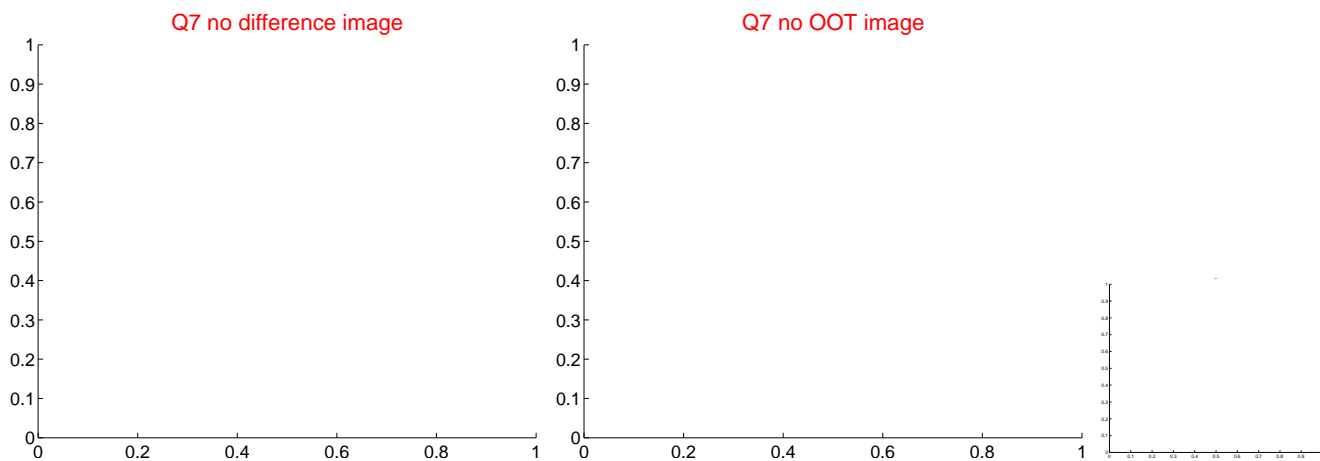
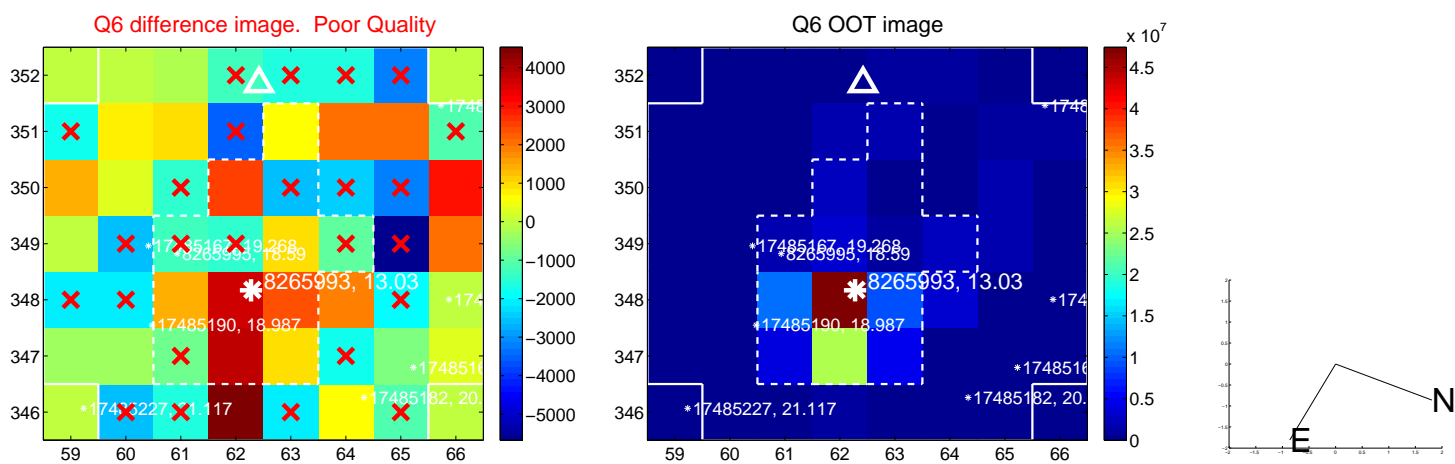
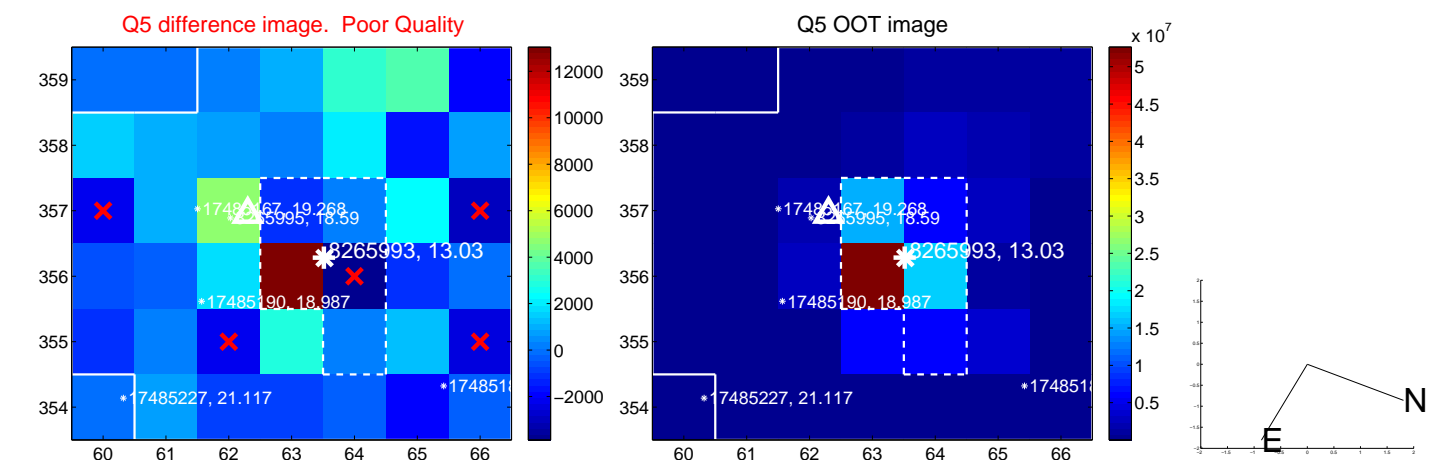


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

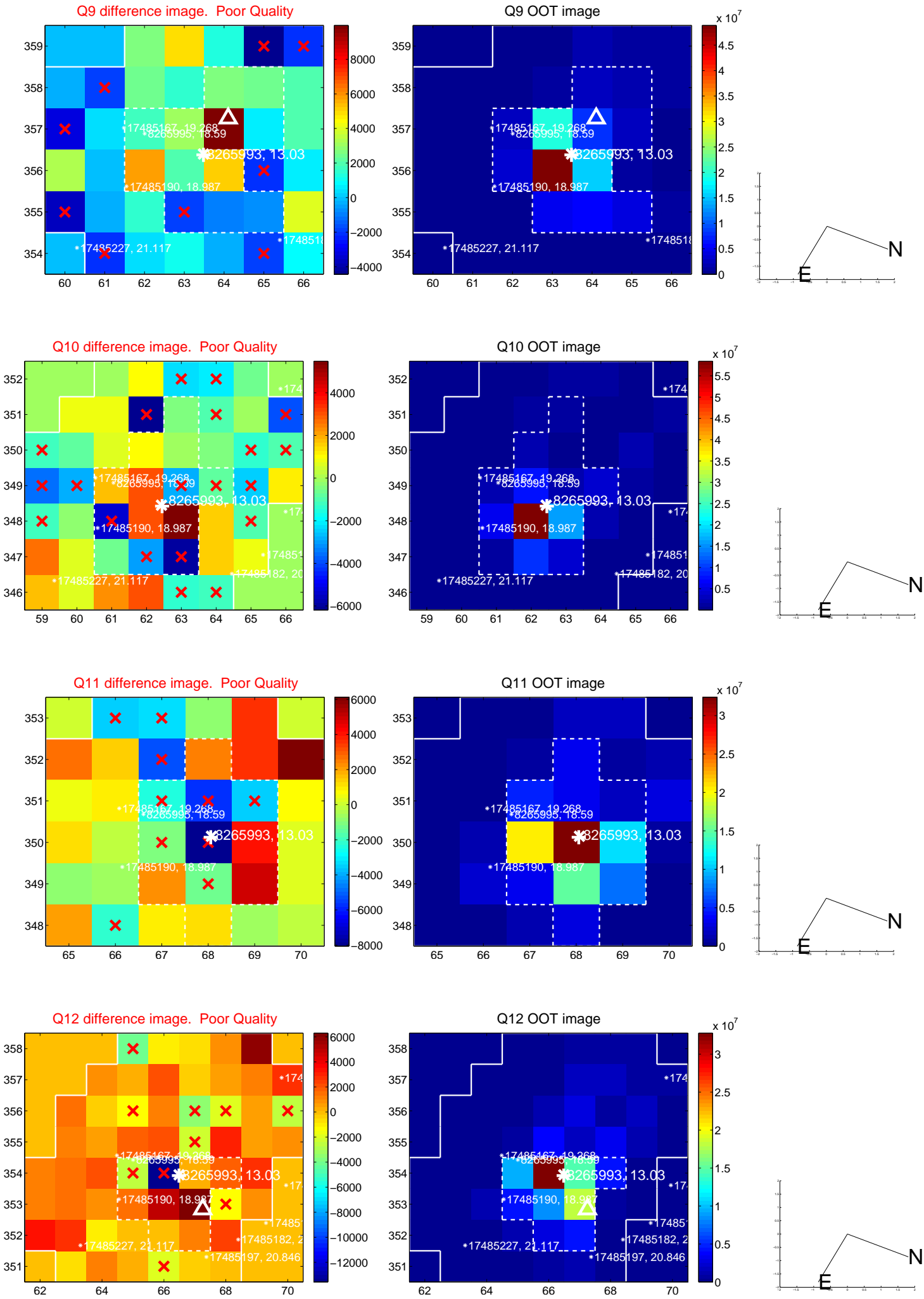
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



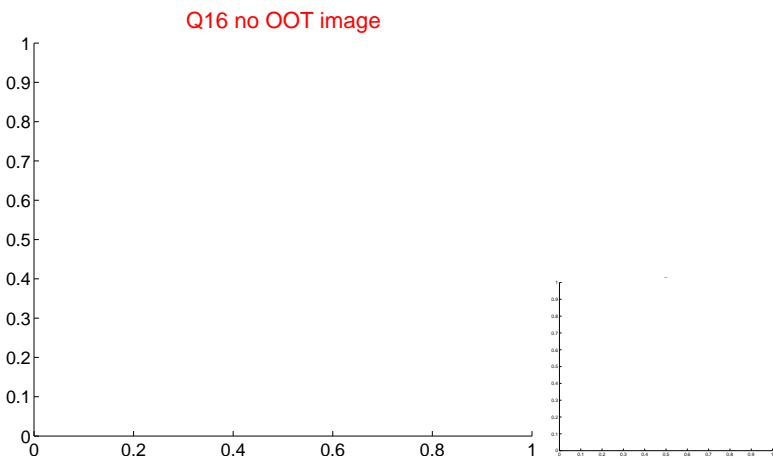
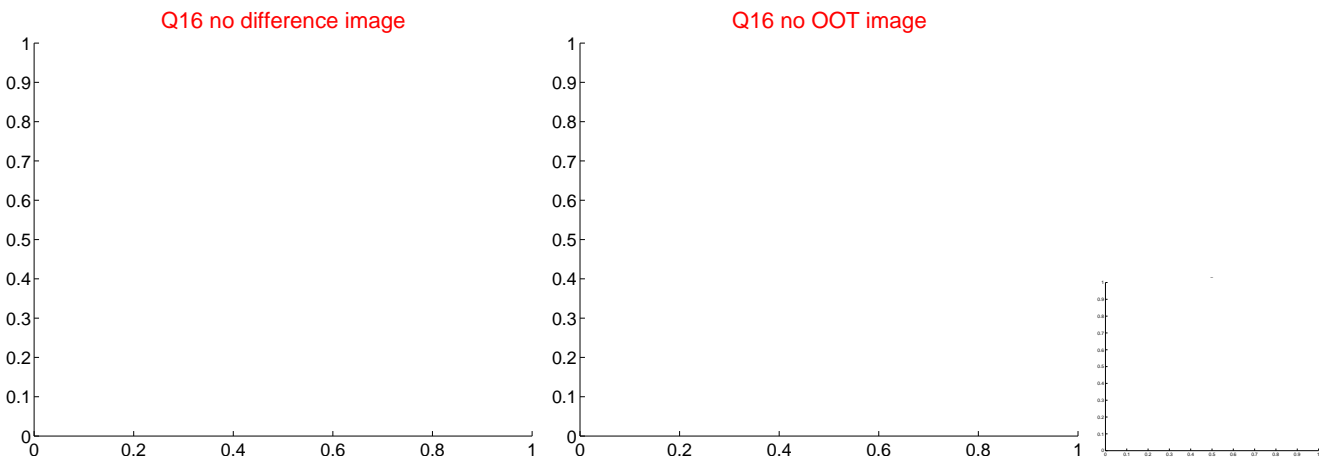
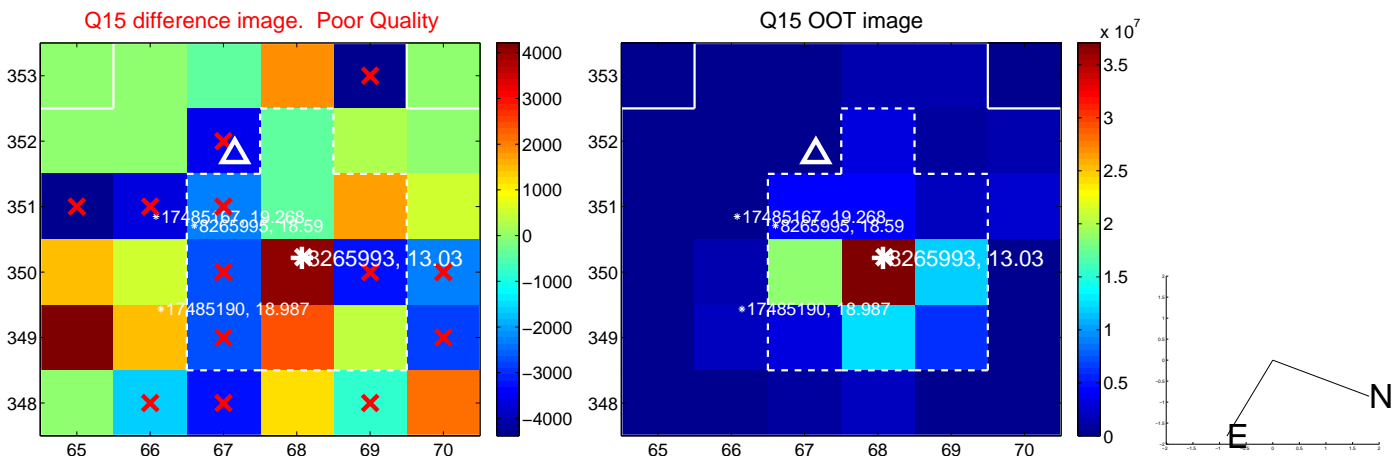
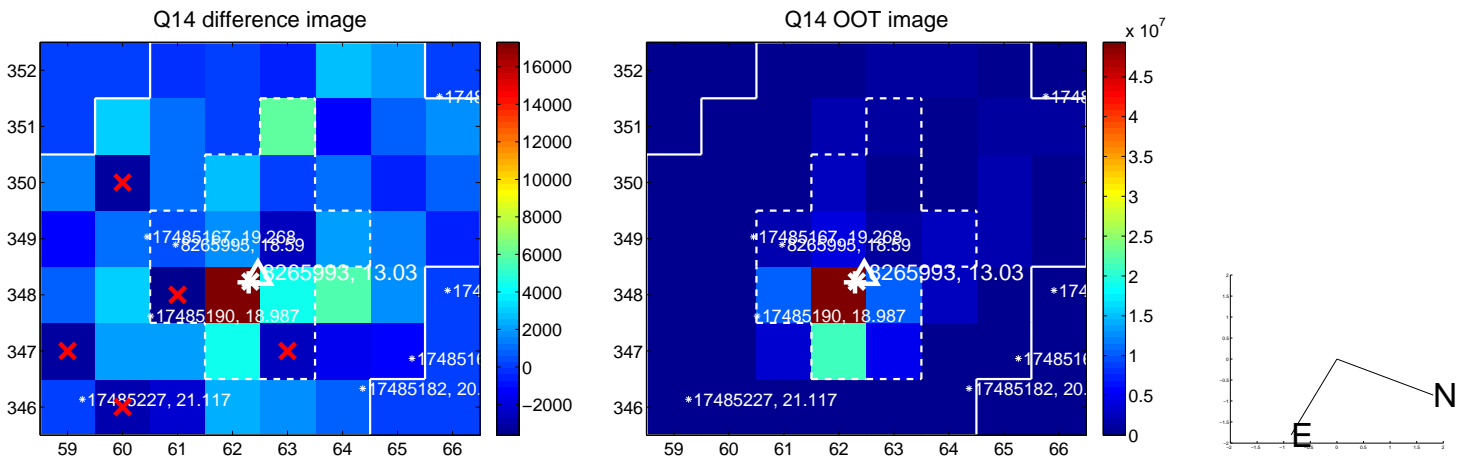
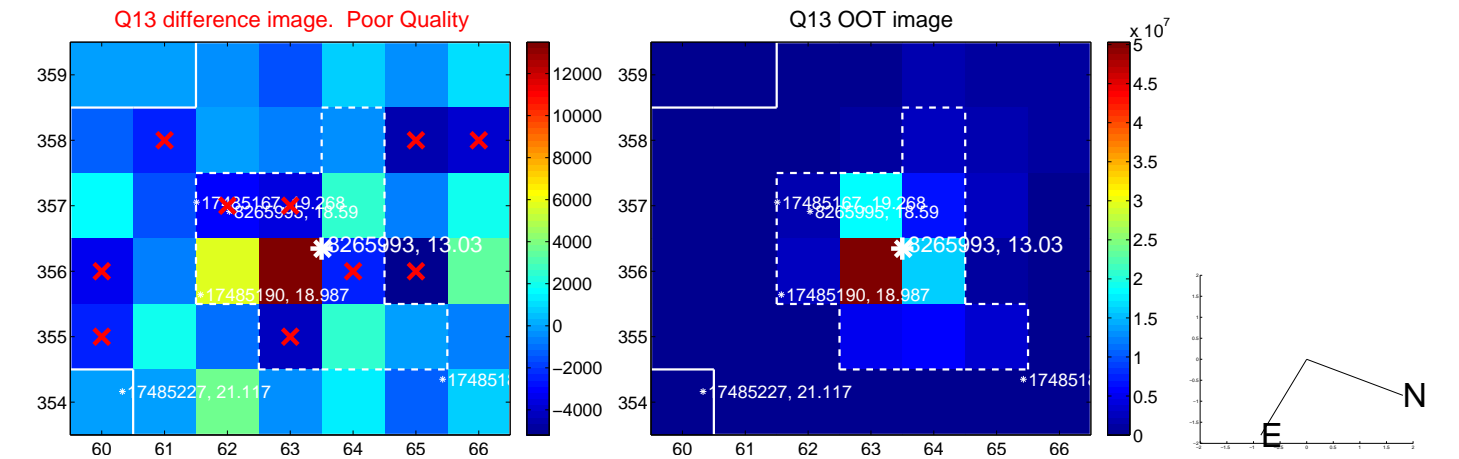
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



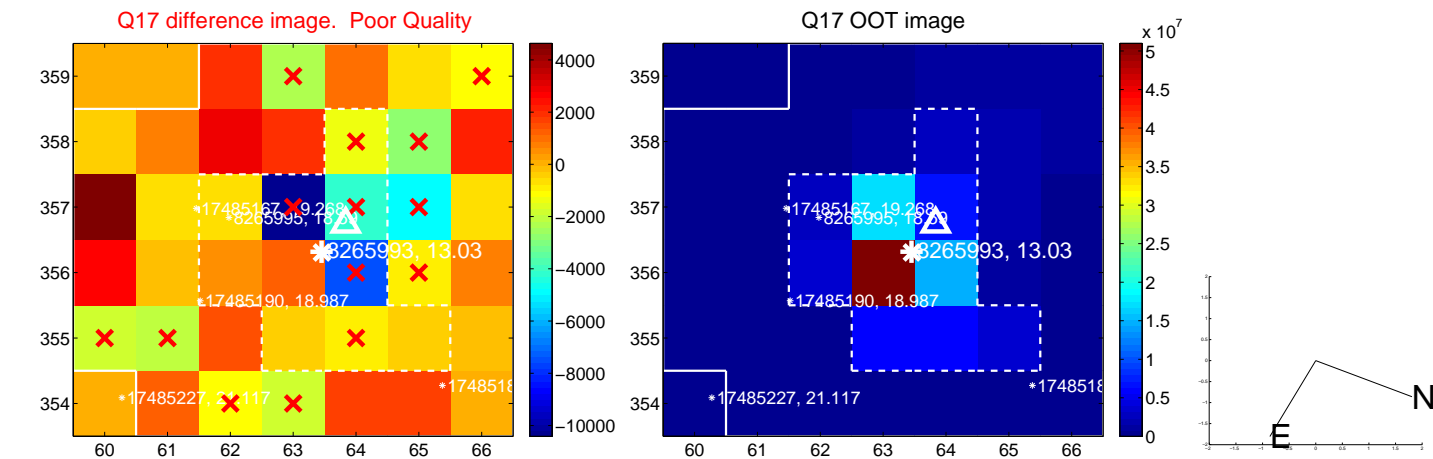
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



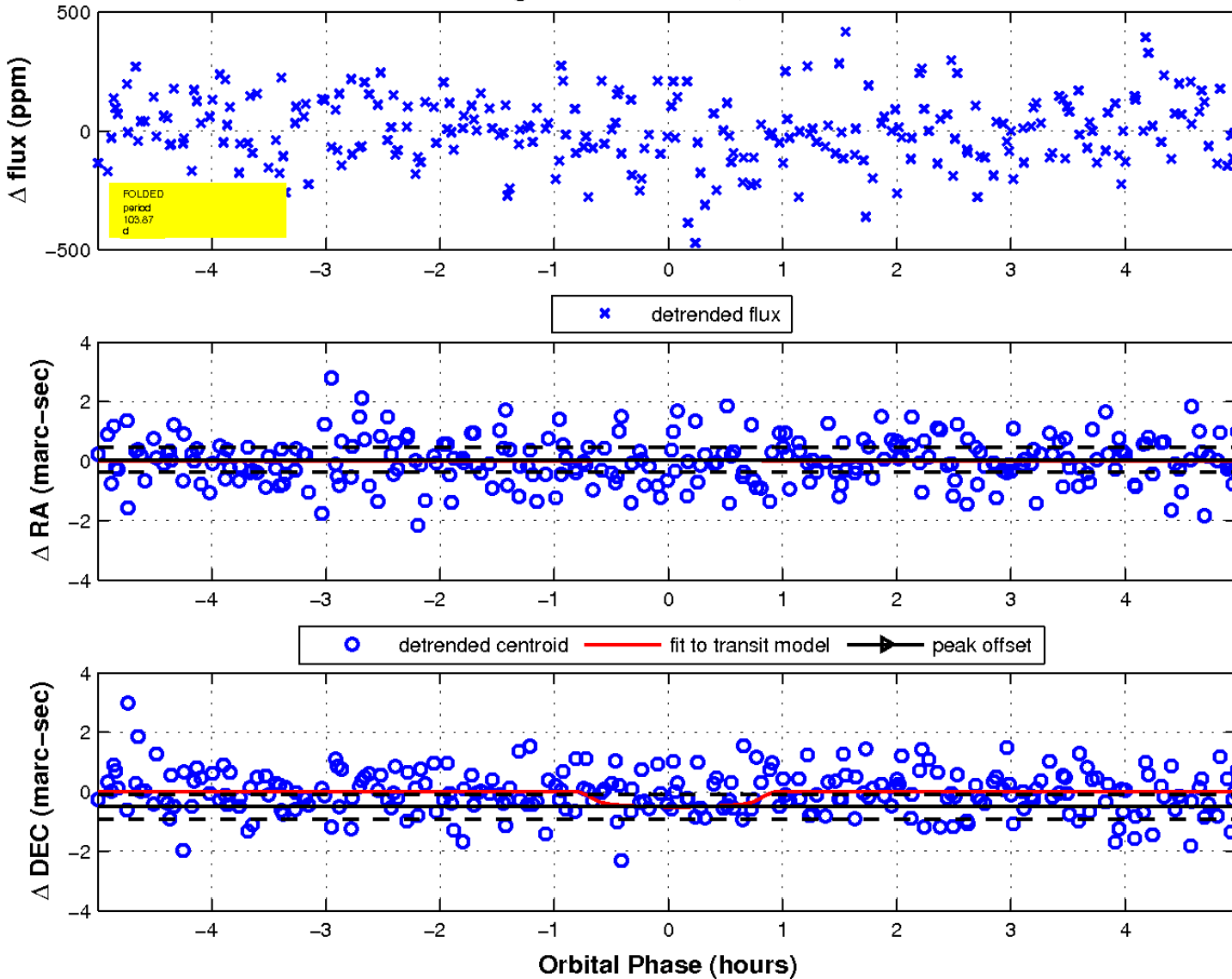
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

