

KIC 007294867

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})
007294867-01	OBS	No	431.234163	459.844064	1624.2	3.681	17.2	5.3	0.68	5288	2.82	0.34
007294867-02	OBS	No	0.516387	132.010994	831.6	1.500	11.8	-1.0	0.68	5288	1.93	2676.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007294867-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007294867-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

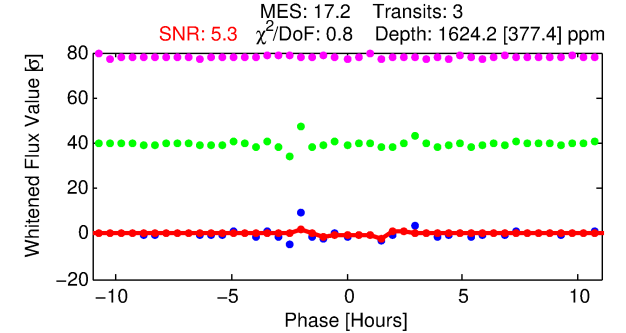
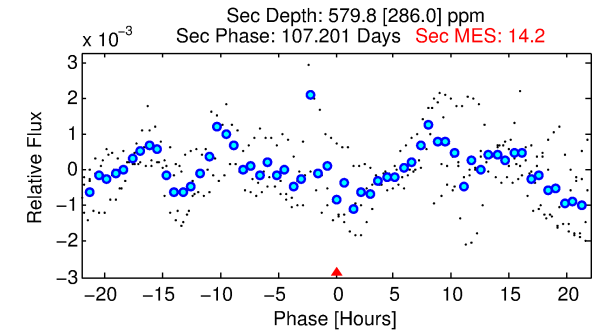
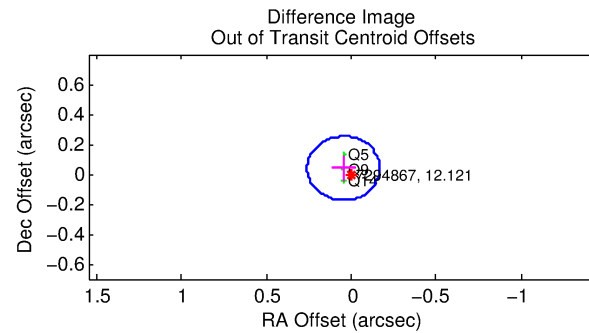
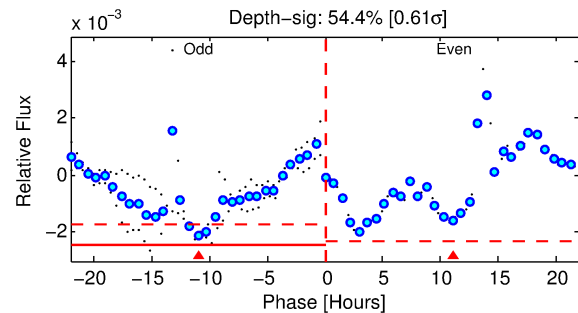
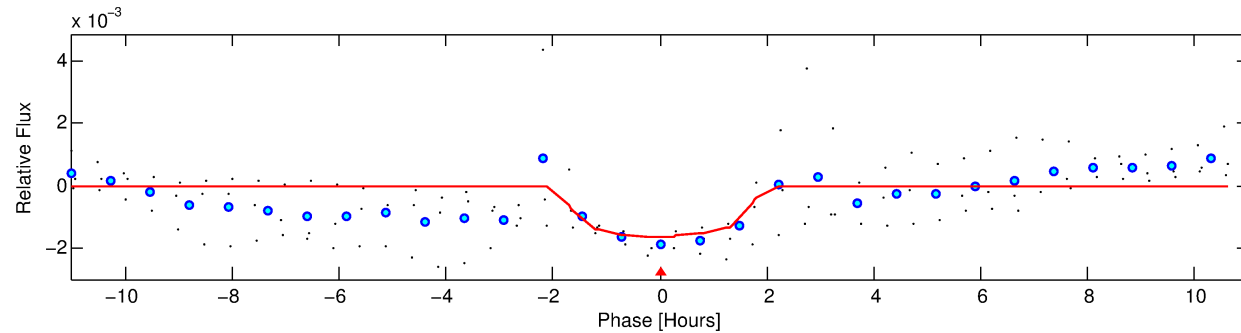
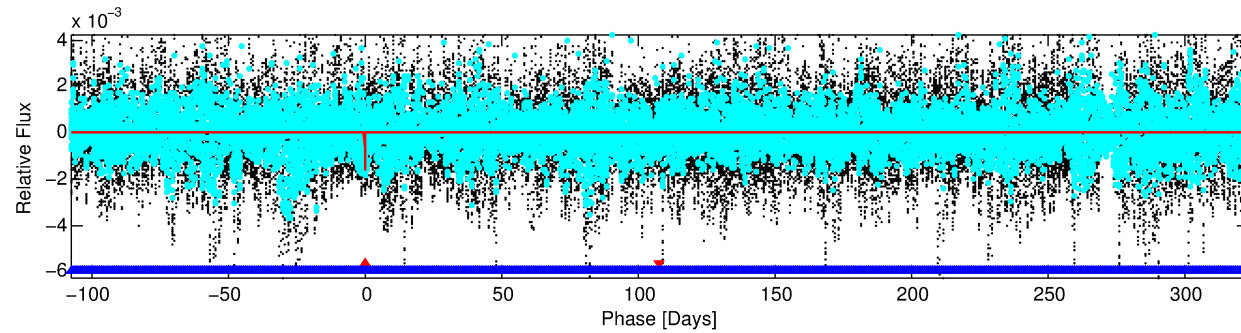
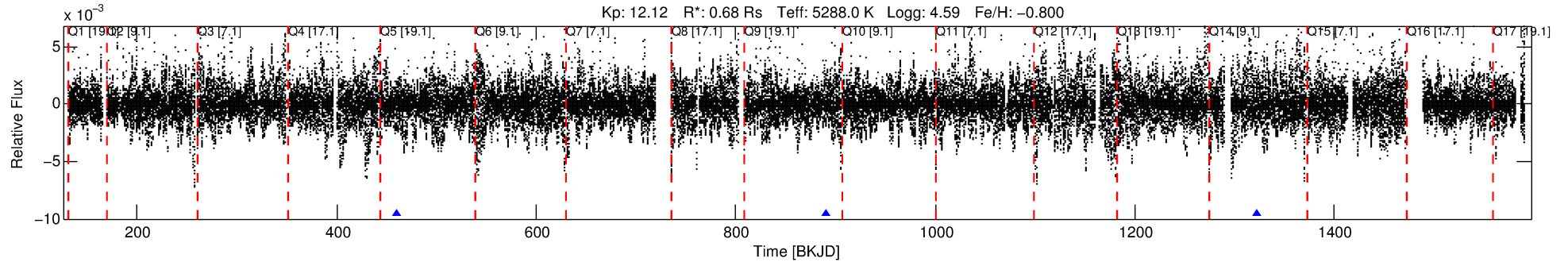
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007294867-01

No Significant Match Found

DV One-Page Summary

KIC: 7294867 Candidate: 1 of 2 Period: 431.234 d



DV Fit Results:

Period = 431.23416 [0.00302] d
Epoch = 459.8441 [0.0060] BKJD
Rp/R* = 0.0383 [0.2029]
a/R* = 769.67 [17594.52]
b = 0.58 [26.30]
Seff = 0.34 [0.06]
Teq = 195 [9] K
Rp = 2.82 [14.95] Re
a = 0.9684 [0.0895] AU
Ag = 37580.04 [398616.82] [0.09 σ]
Teffp = 4193 [11118] K [0.36 σ]

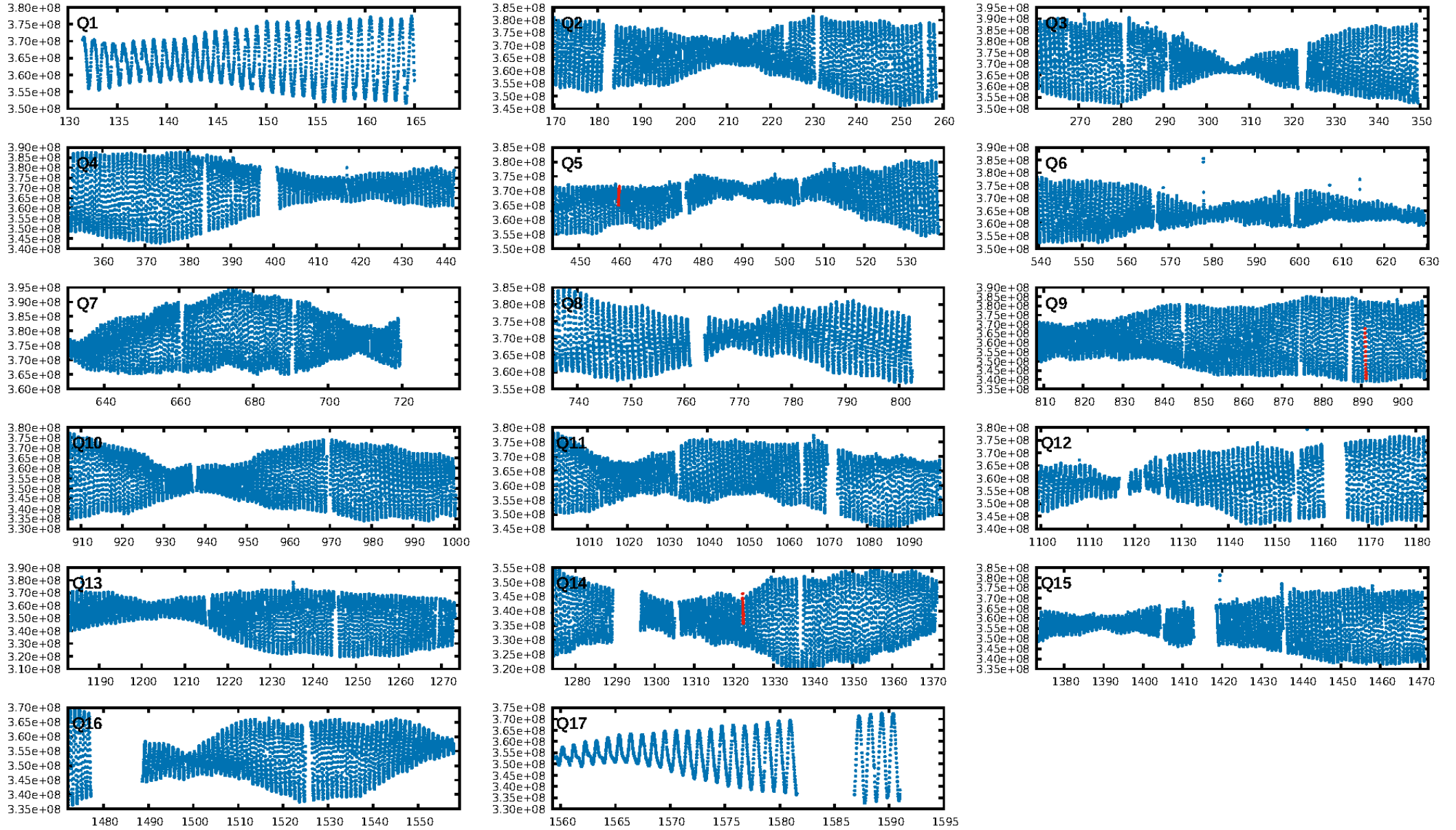
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2600.84 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3961
Centroid-sig: 19.8%
Centroid-so: 0.086 arcsec [0.56 σ]
OotOffset-rm: 0.061 arcsec [0.86 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 0.088 arcsec [1.15 σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/3]

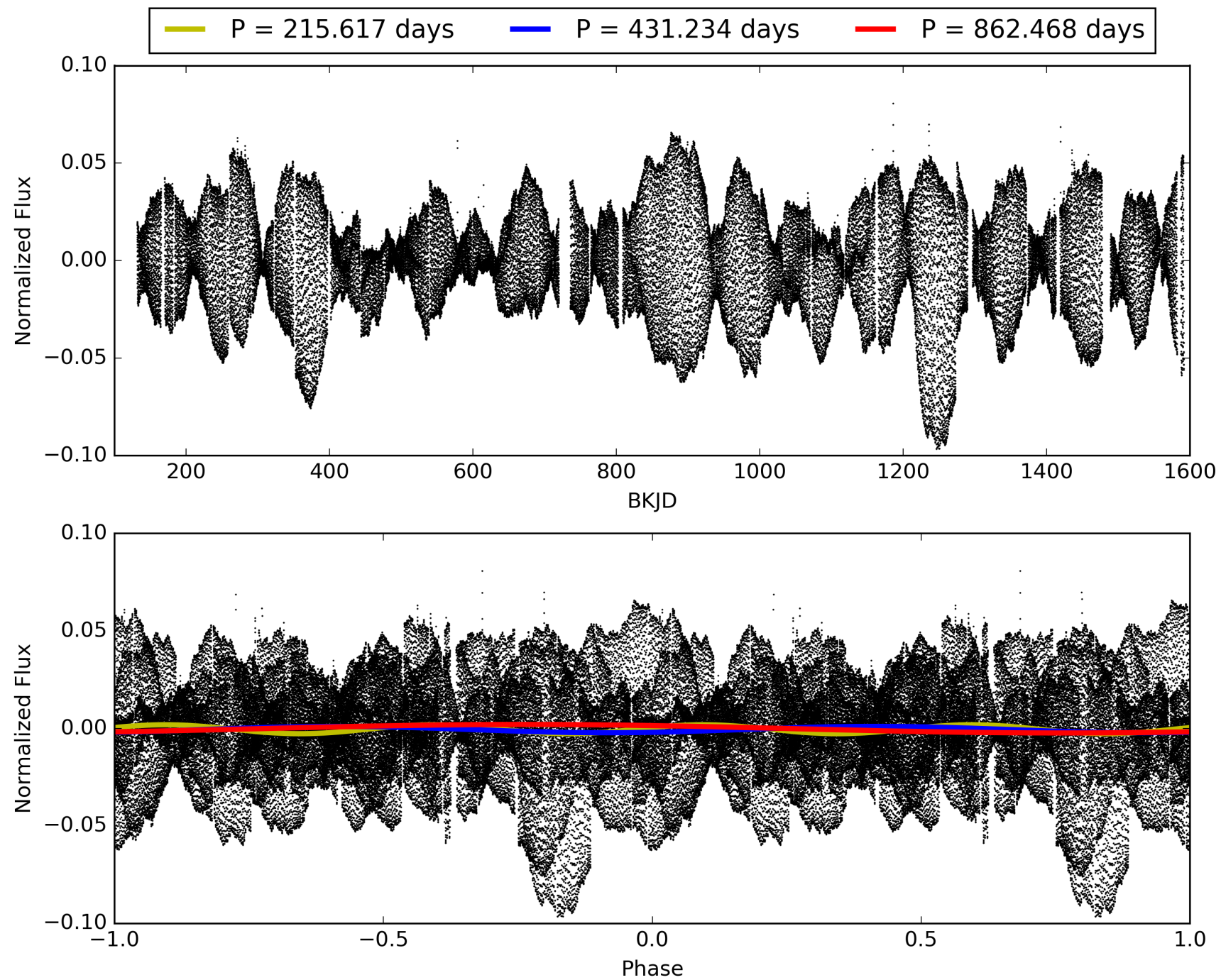
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:13:44 Z

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

TCE 007294867-01, PDC Light Curves

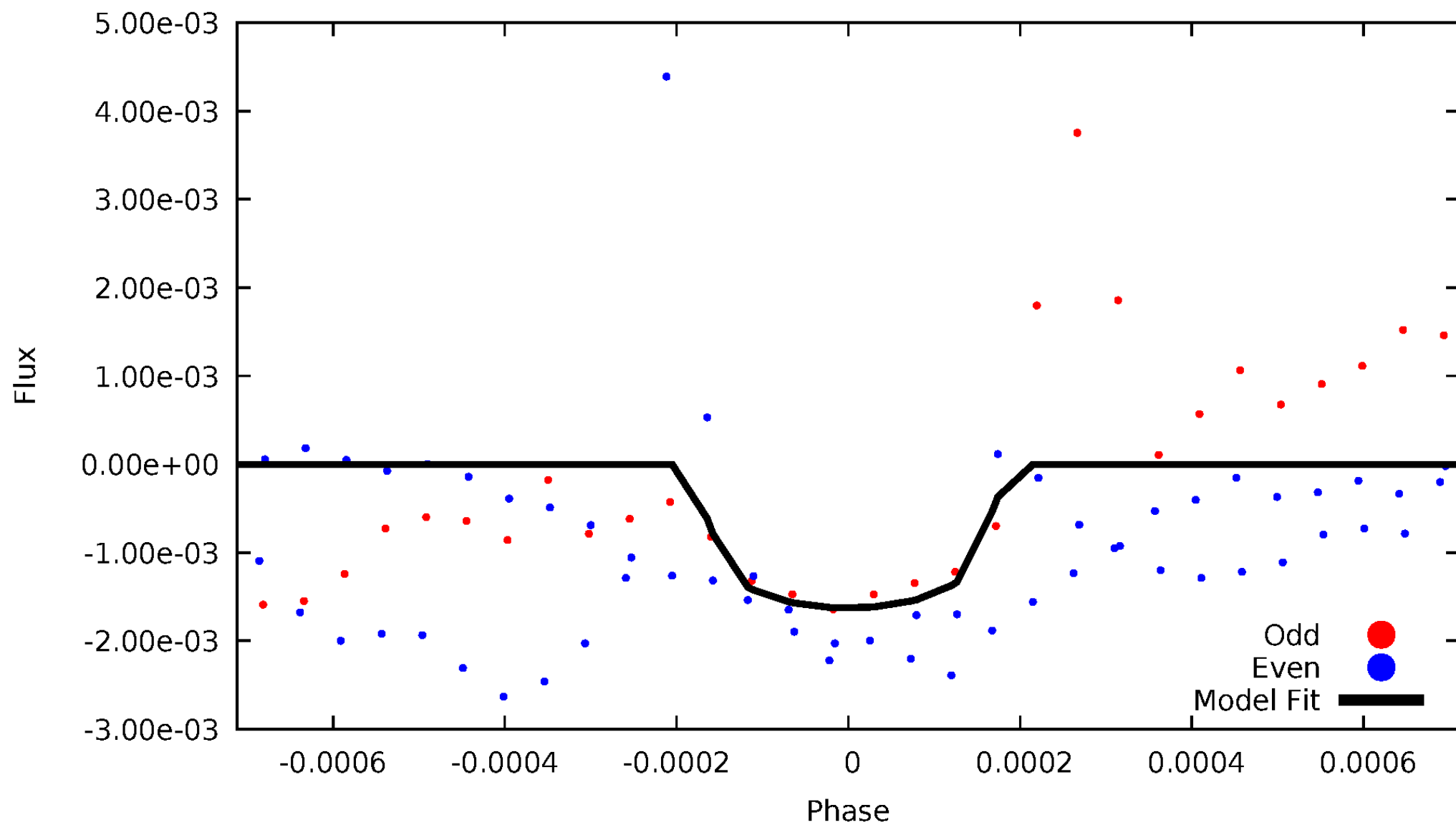


TCE 007294867-01



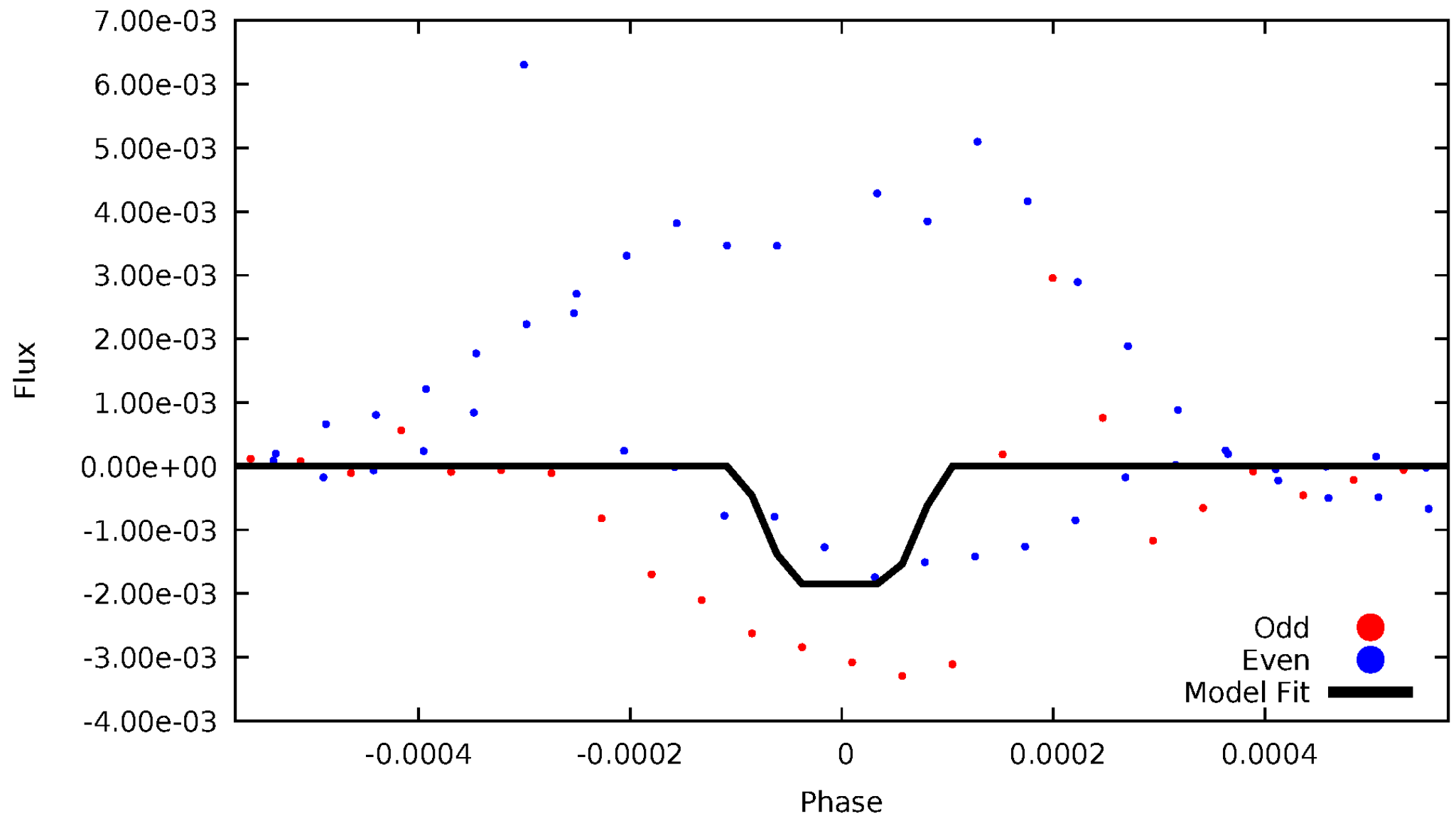
DV Odd/Even

TCE 007294867-01



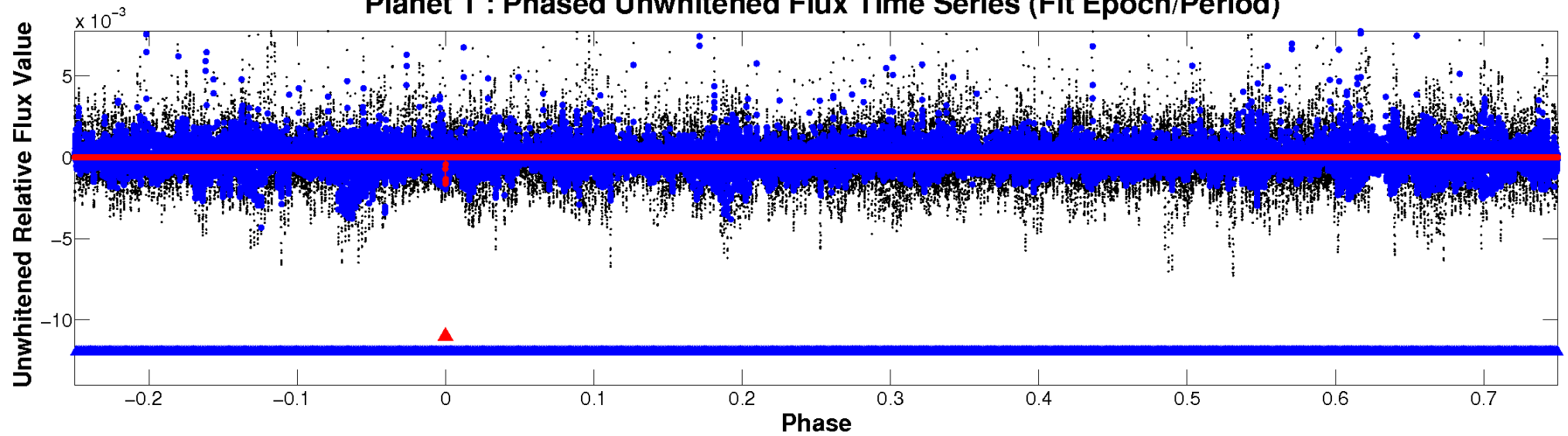
ALT Odd/Even

TCE 007294867-01

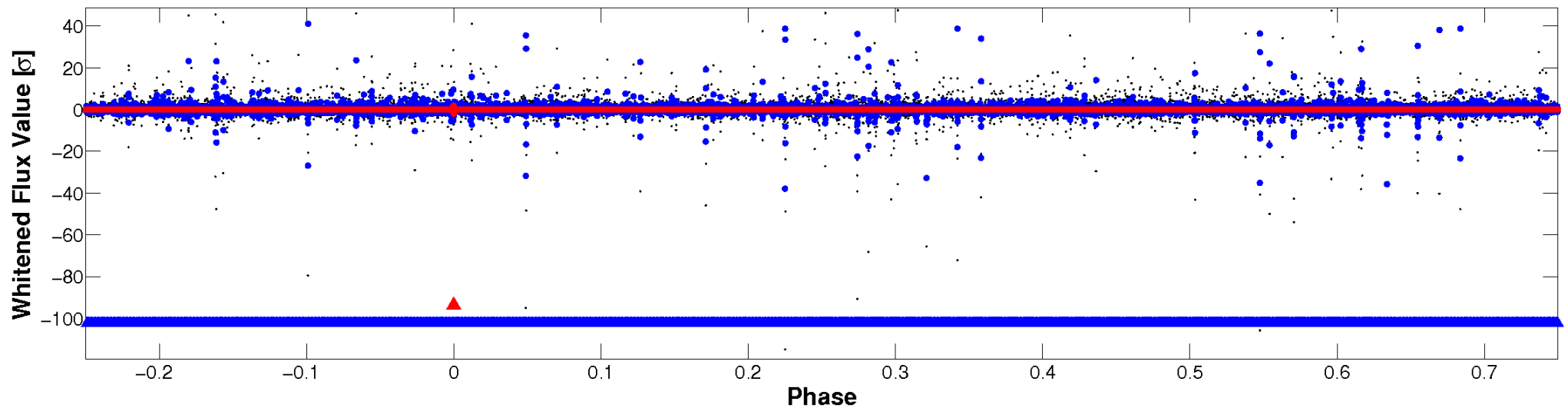


Non-Whitened Vs. Whitened Light Curve

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

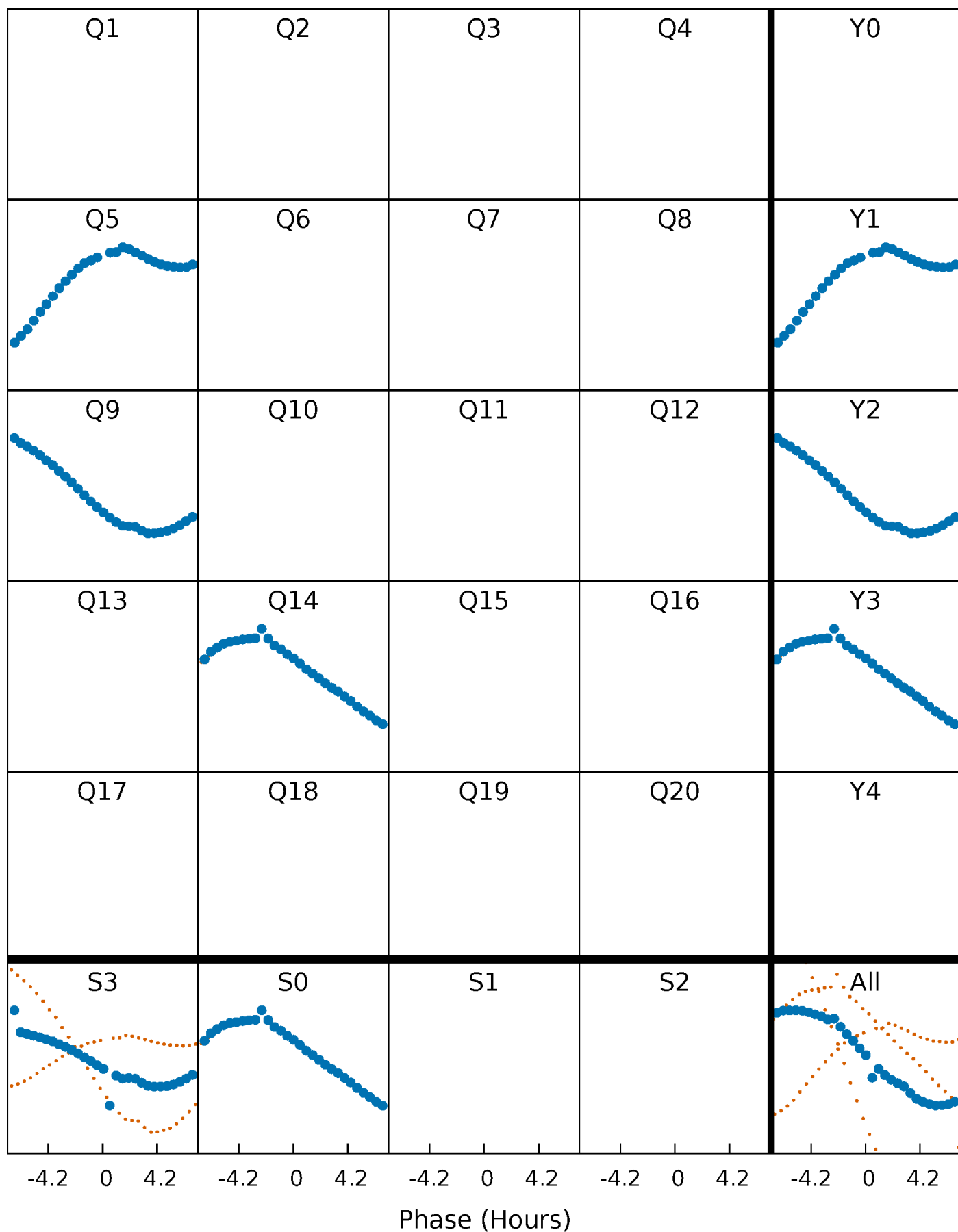


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



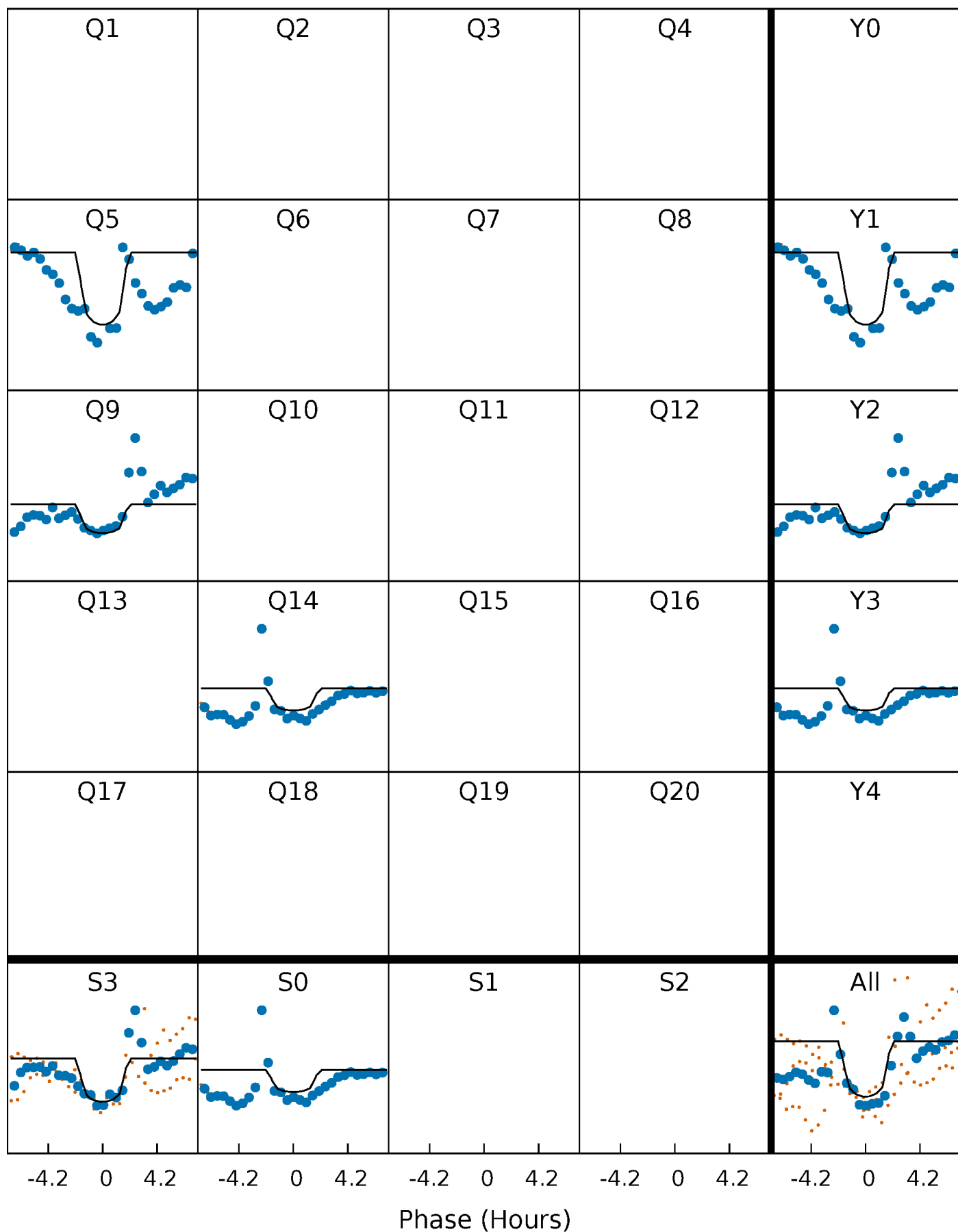
PDC Quarter-Phased Transit Curves

TCE 007294867-01 P=431.234163 Days $T_0=459.844064$ (BKJD)



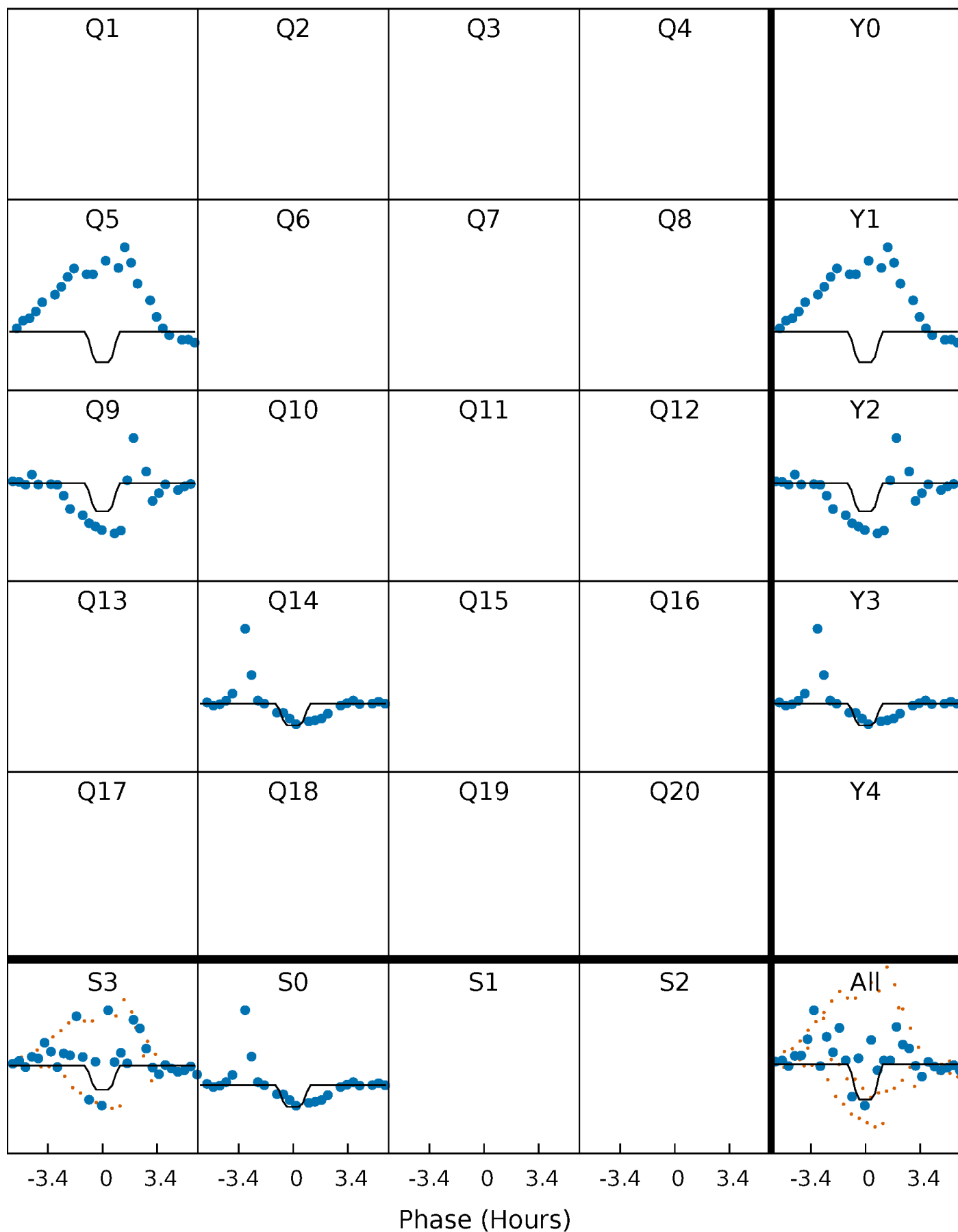
DV Quarter-Phased Transit Curves

TCE 007294867-01 P=431.234163 Days $T_0=459.844064$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

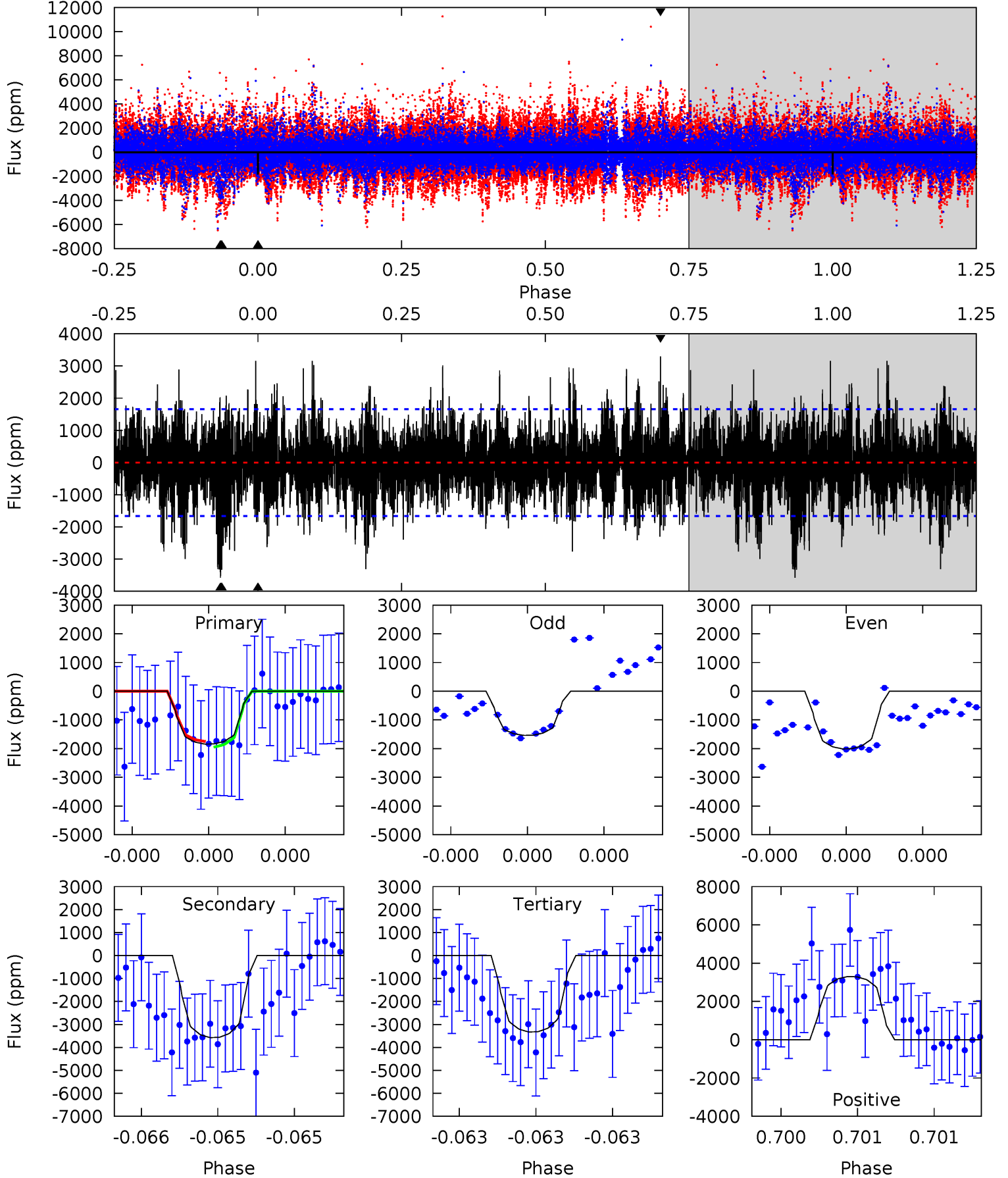
TCE 007294867-01 P=431.243473 Days $T_0=459.863716$ (BKJD)



DV Model-Shift Uniqueness Test

007294867-01, P = 431.234163 Days, E = 28.609901 Days

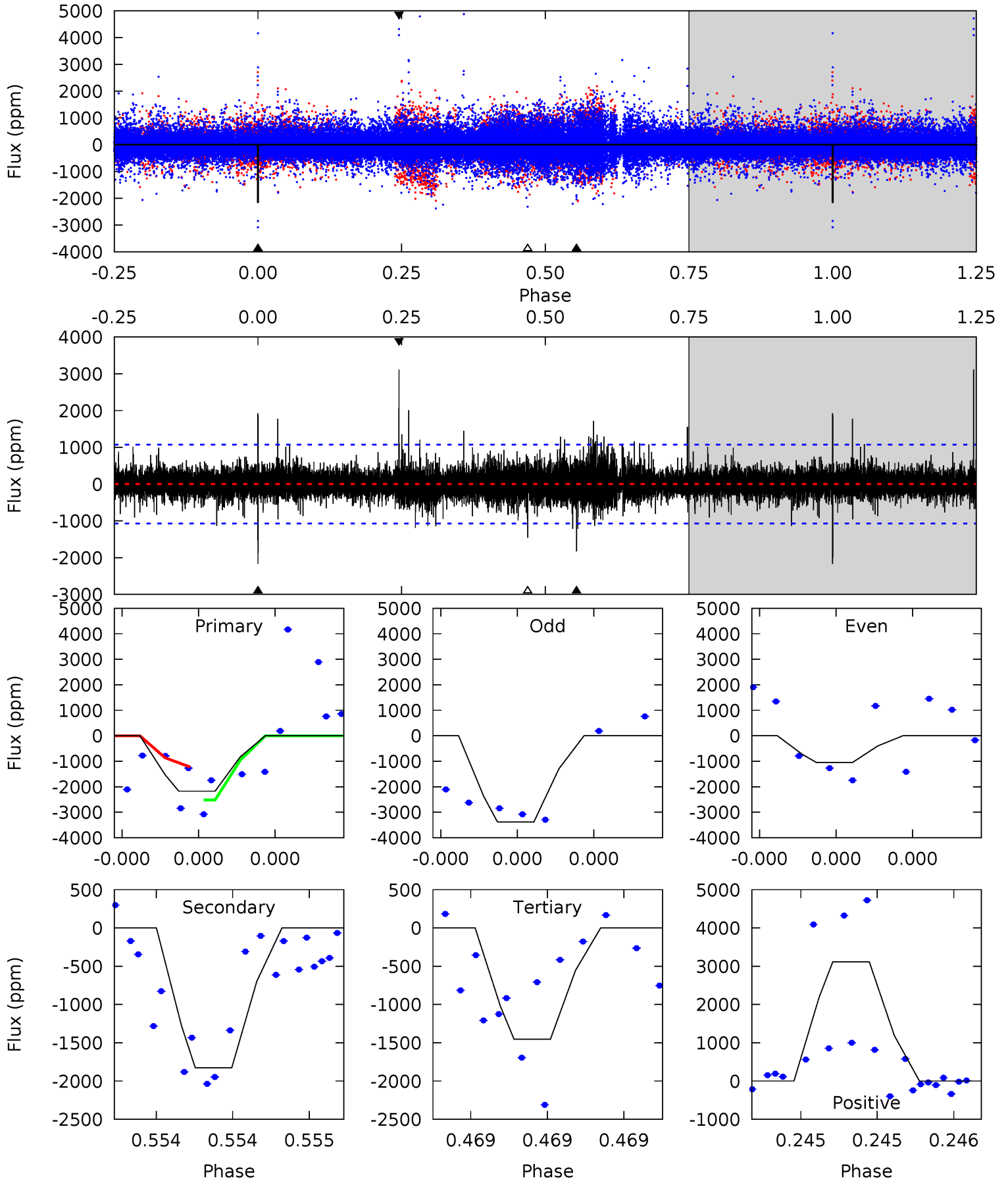
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	12.1	11.3	11.2	5.62	3.55	2.78	-5.03	-4.93	0.84	0.93	0.76	0.98	0.48	0.33



Alt Model-Shift Uniqueness Test

007294867-01, P = 431.243473 Days, E = 28.620243 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	9.86	7.84	16.8	5.79	3.80	1.29	3.87	-5.10	2.02	-6.95	4.84	0.02	0.59	2.71



Stellar Parameters For KIC 007294867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5288^{+143}_{-143}	$4.593^{+0.077}_{-0.056}$	$-0.800^{+0.300}_{-0.300}$	$0.675^{+0.072}_{-0.065}$	$0.652^{+0.072}_{-0.029}$	$2.982^{+0.960}_{-0.609}$
	+3%/-3%	+2%/-1%	+37%/-37%	+11%/-10%	+11%/-4%	+32%/-20%
Source	PHO1	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 007294867-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3575 ± 295	$11.74^{+12.40}_{-8.44}$	272^{+9}_{-10}	3672^{+2359}_{-736}	$14050^{+154416}_{-10787}$
Alt.	-1827 ± 185	$11.33^{+10.95}_{-8.11}$	271^{+11}_{-10}	3308^{+1893}_{-572}	7335^{+79411}_{-5445}

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

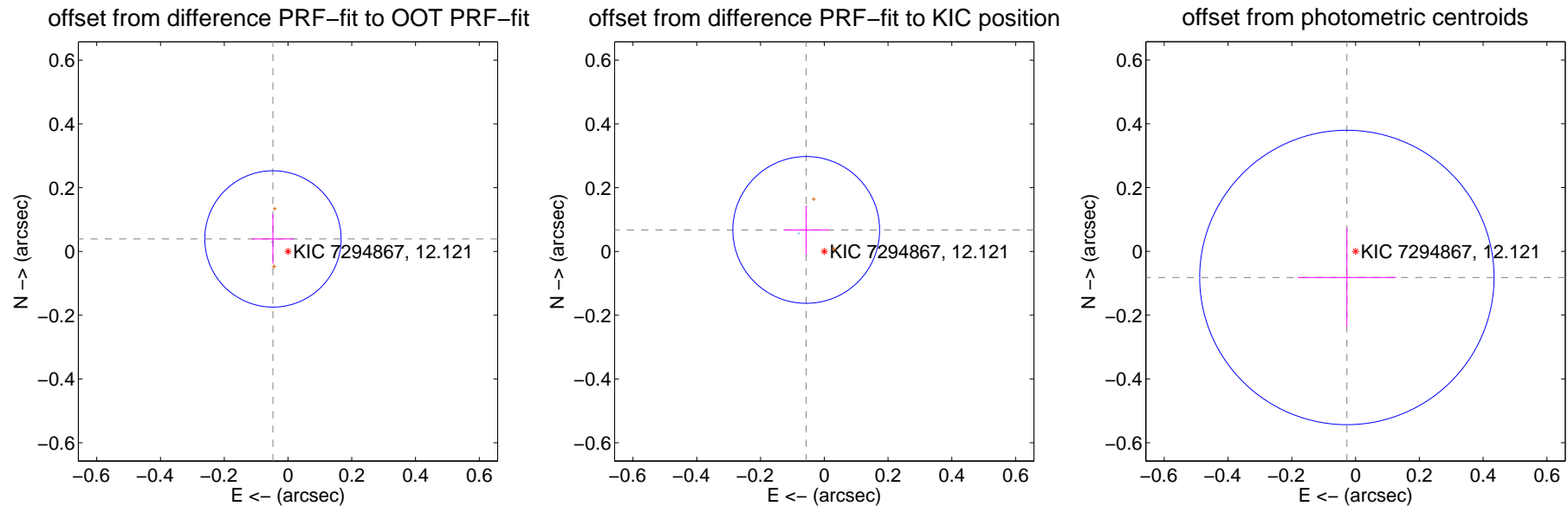
DV Centroid Data

Supplemental centroid analysis for 007294867-01. Kepler magnitude: 12.12. Transit SNR 5.33

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.061 ± 0.071	0.86	0.047 ± 0.067	0.039 ± 0.077
PRF-fit source offset from KIC position	0.088 ± 0.077	1.15	0.057 ± 0.071	0.067 ± 0.076
photometric centroid source offset	0.09 ± 0.15	0.56	0.03 ± 0.15	-0.08 ± 0.15

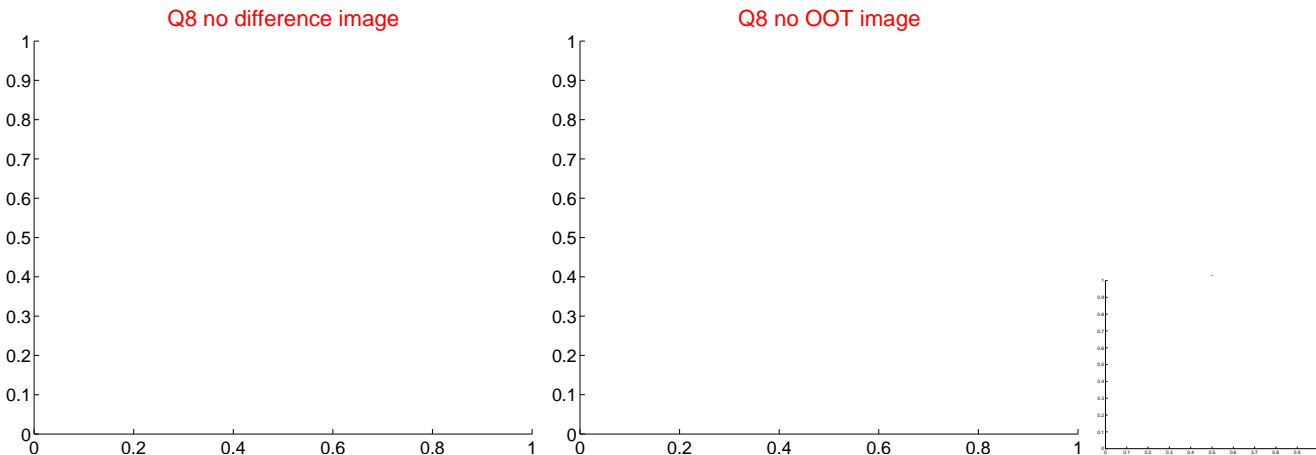
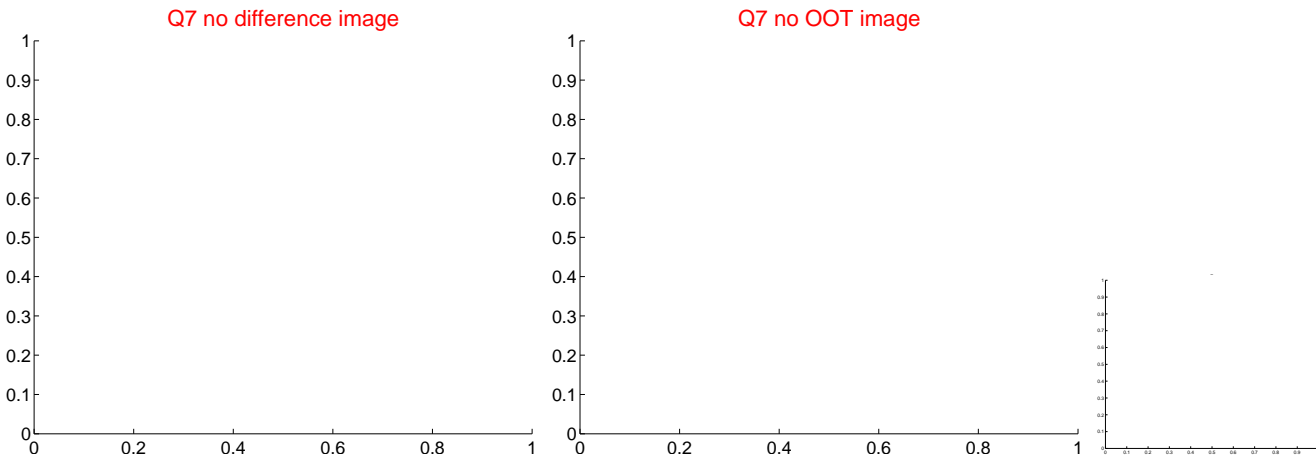
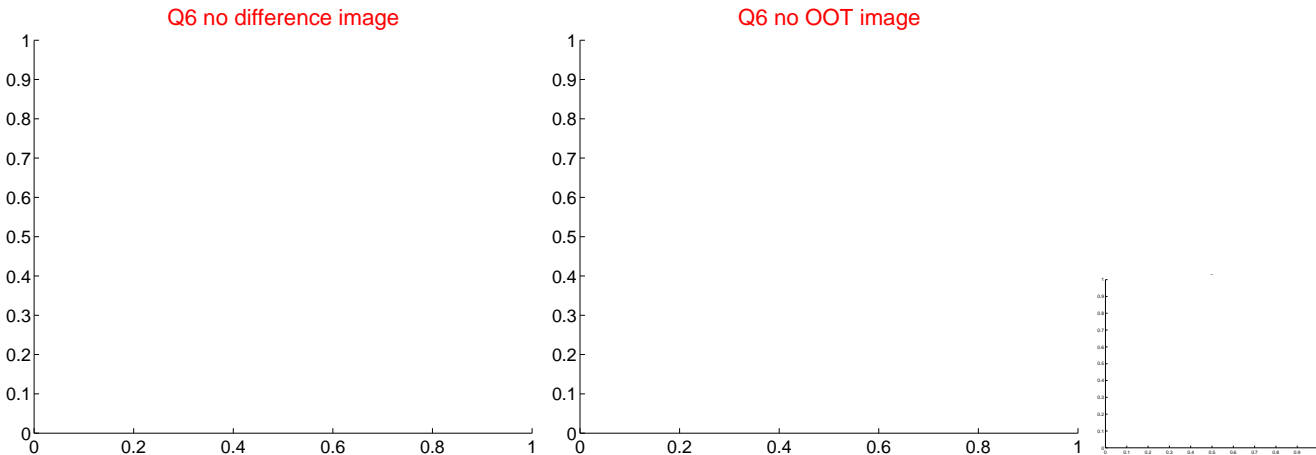
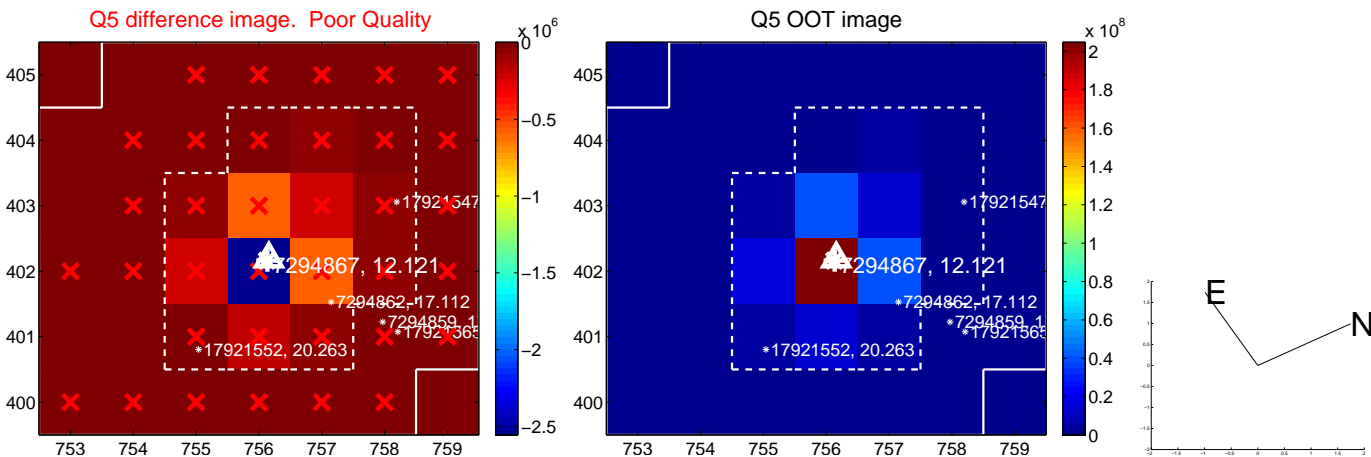


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

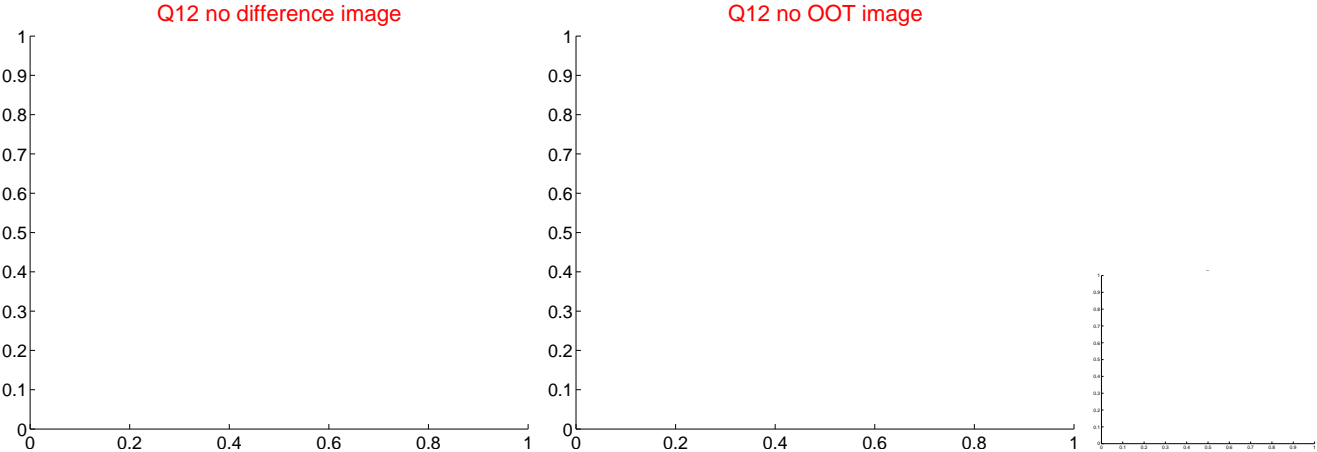
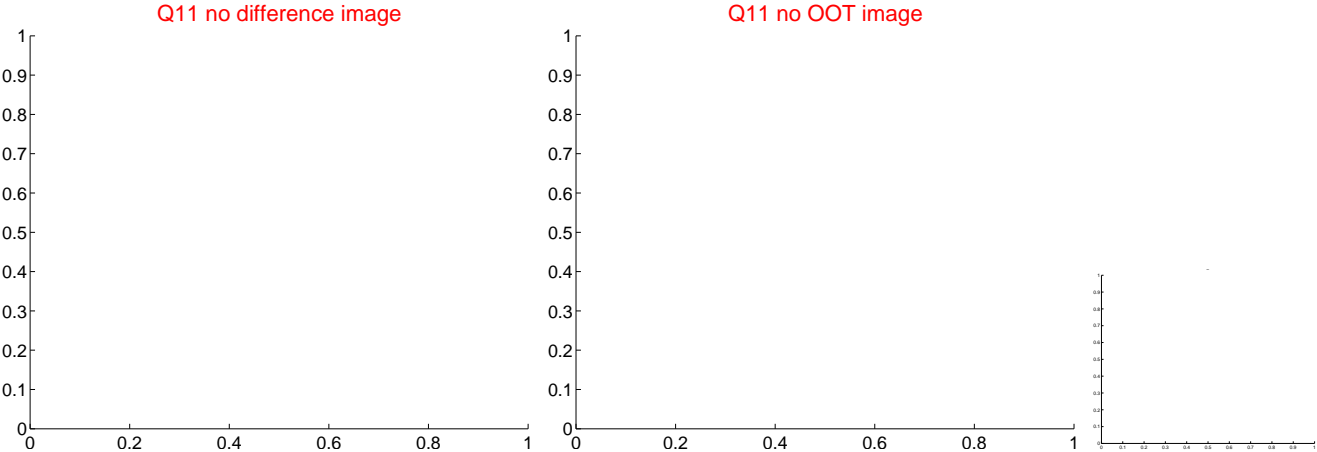
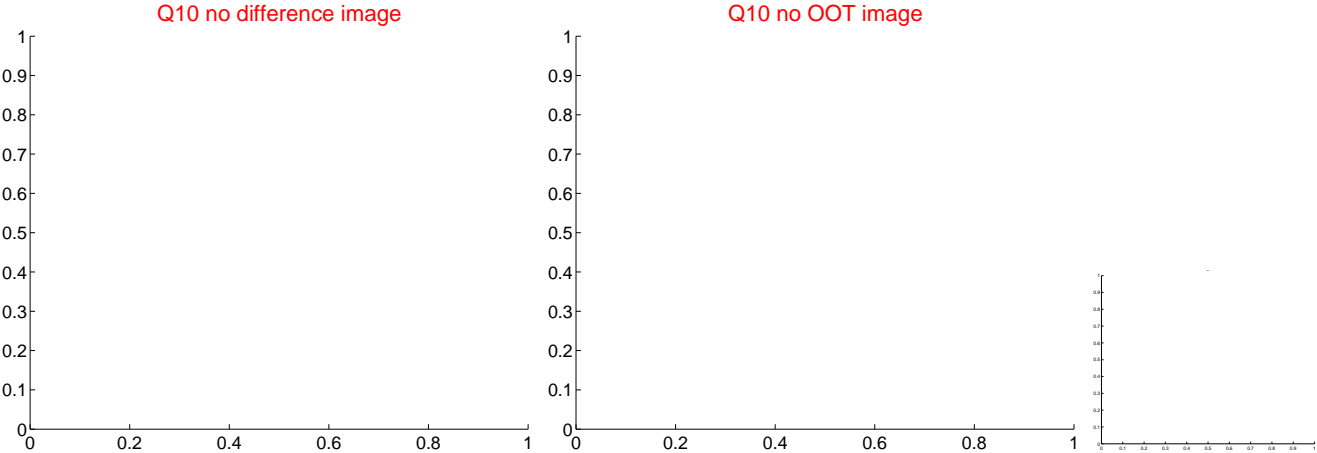
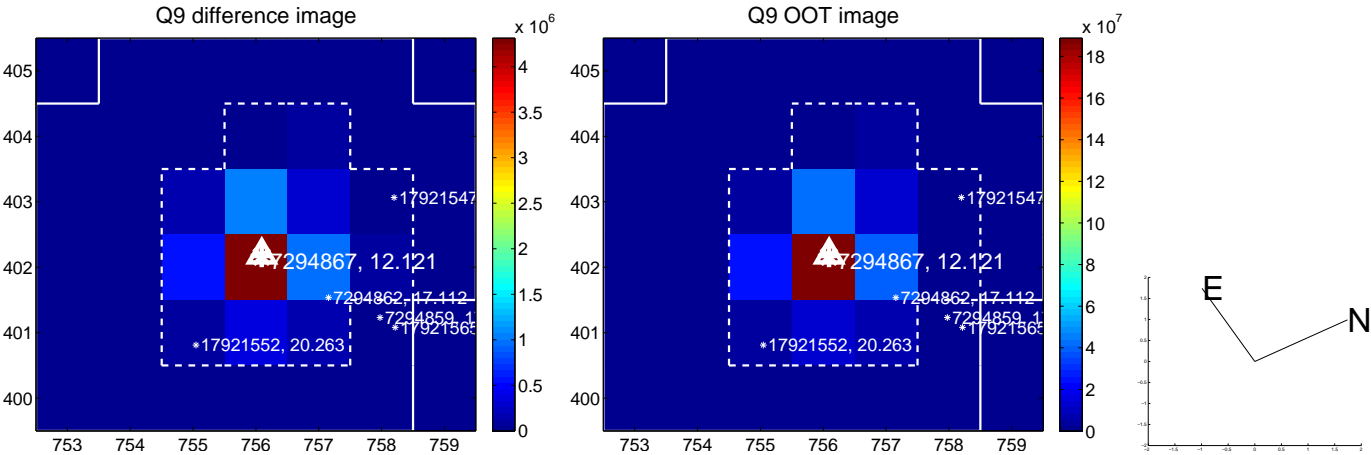
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



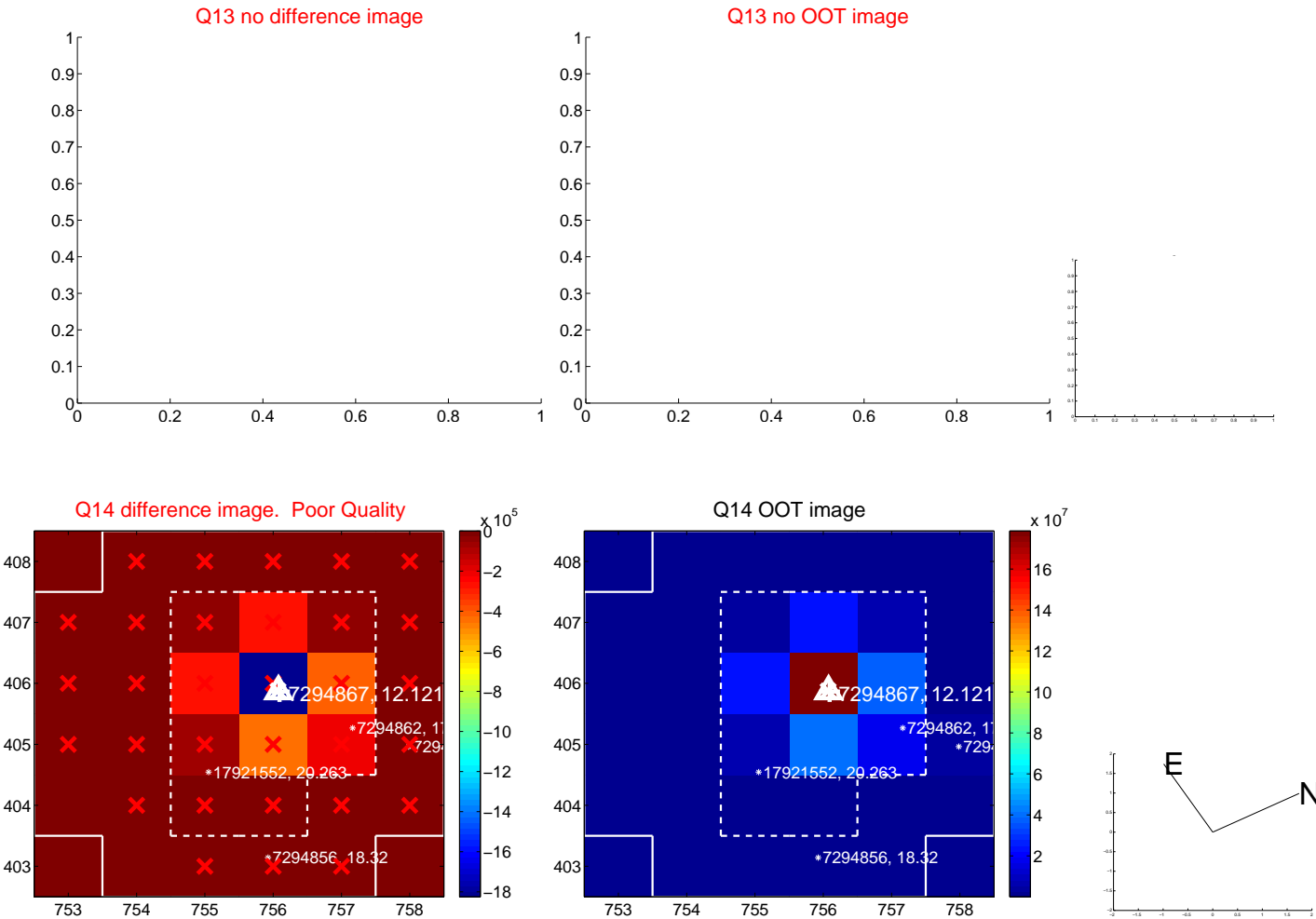
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



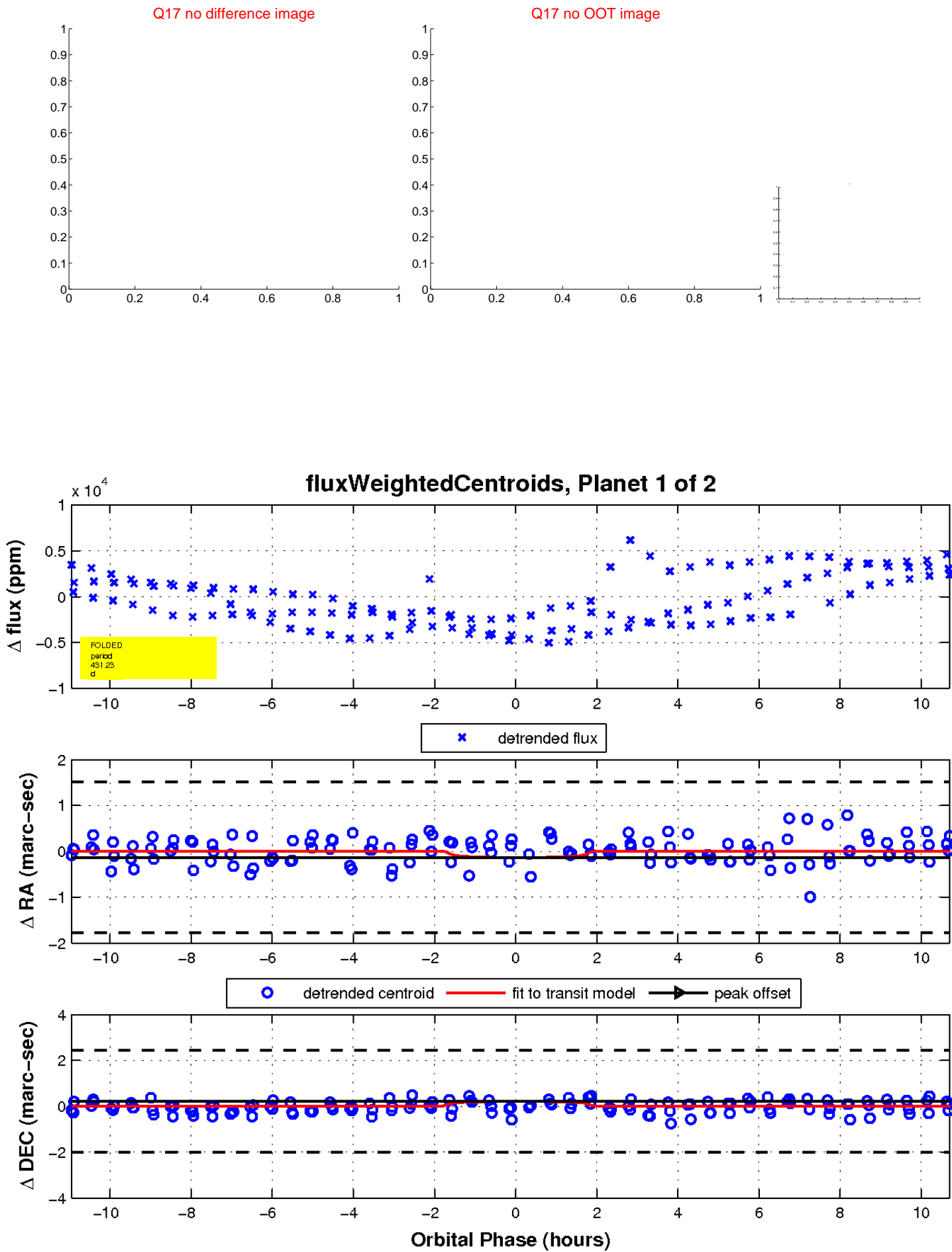
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



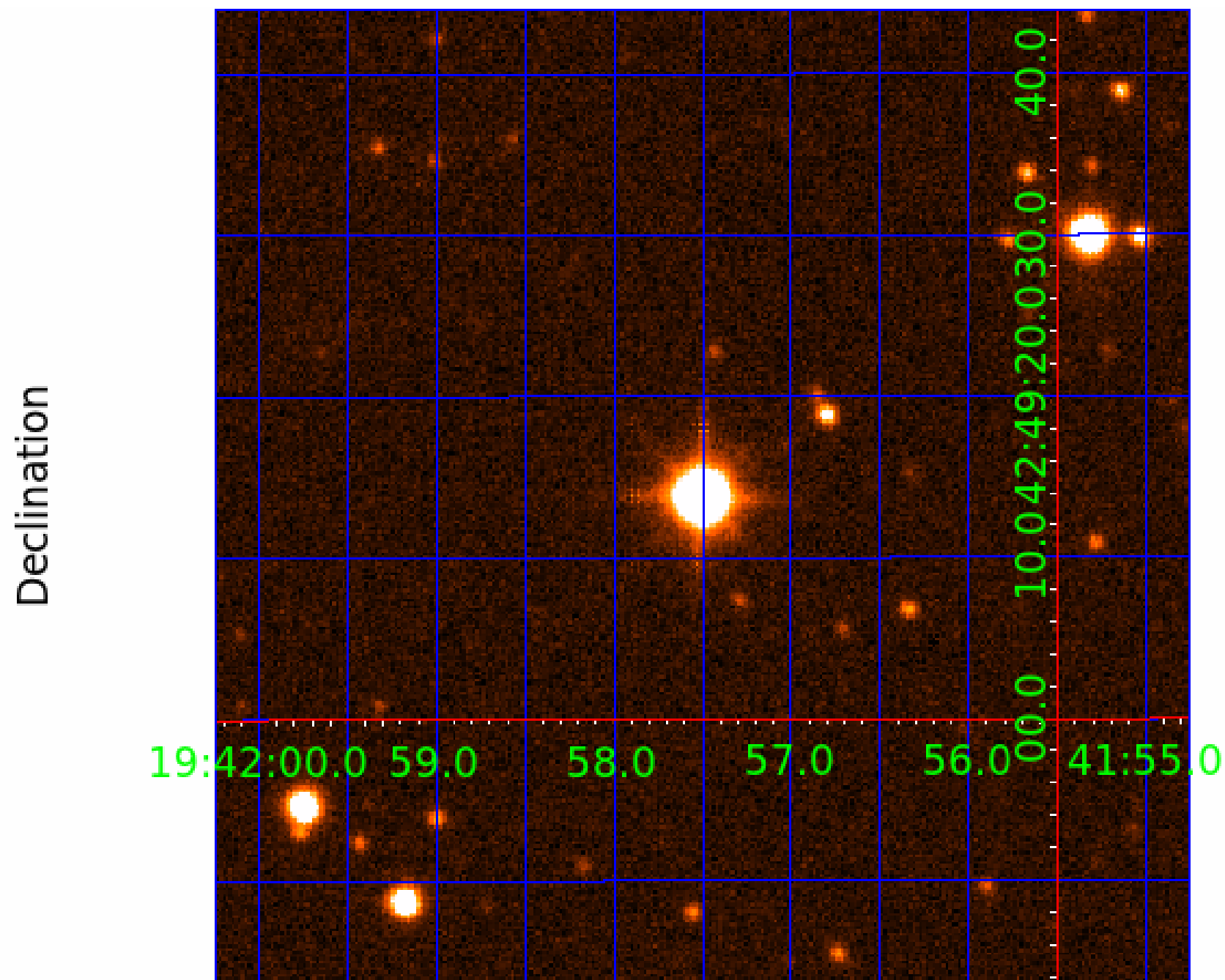
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007294867

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})
007294867-01	OBS	No	431.234163	459.844064	1624.2	3.681	17.2	5.3	0.68	5288	2.82	0.34
007294867-02	OBS	No	0.516387	132.010994	831.6	1.500	11.8	-1.0	0.68	5288	1.93	2676.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007294867-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007294867-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

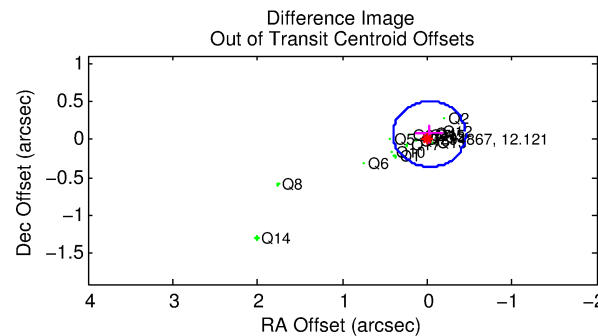
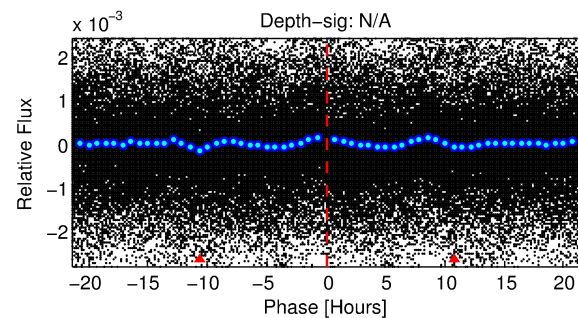
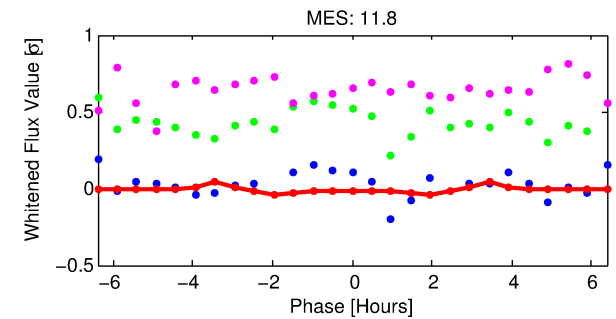
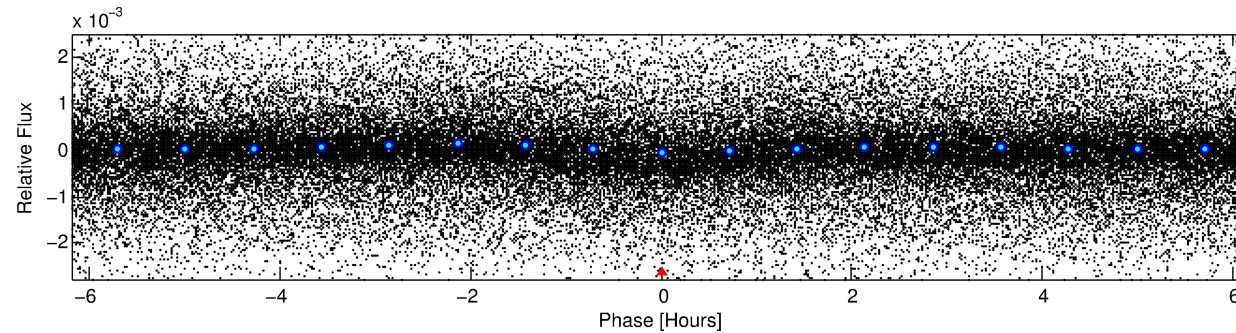
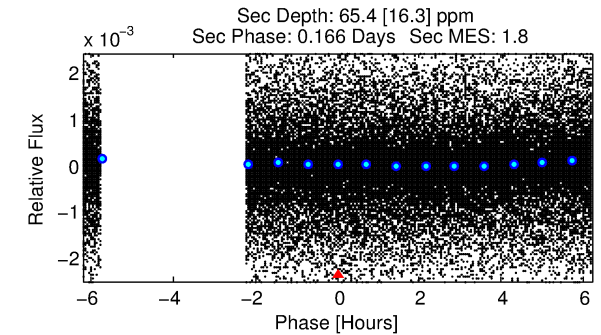
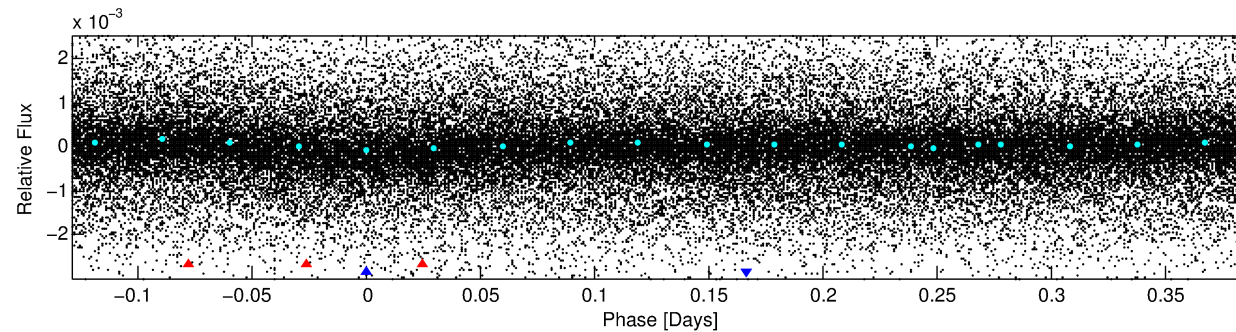
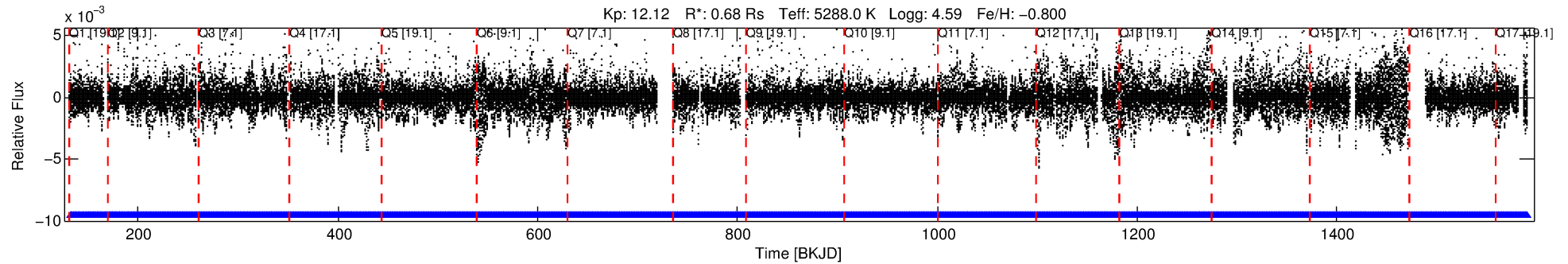
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007294867-02

No Significant Match Found

DV One-Page Summary

KIC: 7294867 Candidate: 2 of 2 Period: 0.516 d



TPS TCE Results:

Period = 0.51639 d
Epoch = 132.0110 BKJD

DV fit results are unavailable

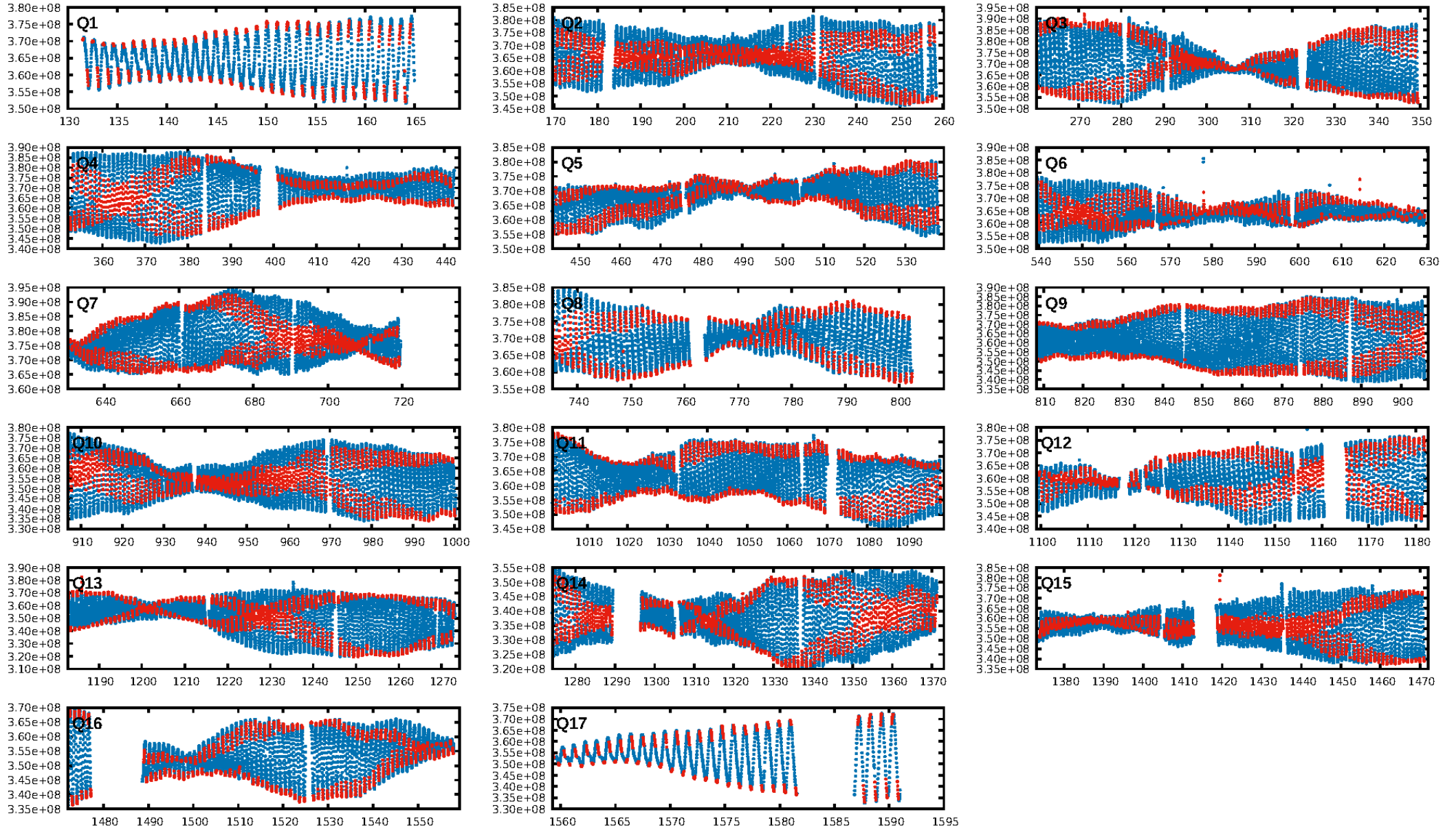
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [2600.84σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2481/2481]
GhostDiagnostic-chr: 1.789
Centroid-sig: 30.6%
Centroid-so: 0.072 arcsec [2.28σ]
OotOffset-rm: 0.074 arcsec [0.52σ]
KicOffset-rm: 0.104 arcsec [1.03σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
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DiffImageOverlap-fno: 1.00 [17/17]

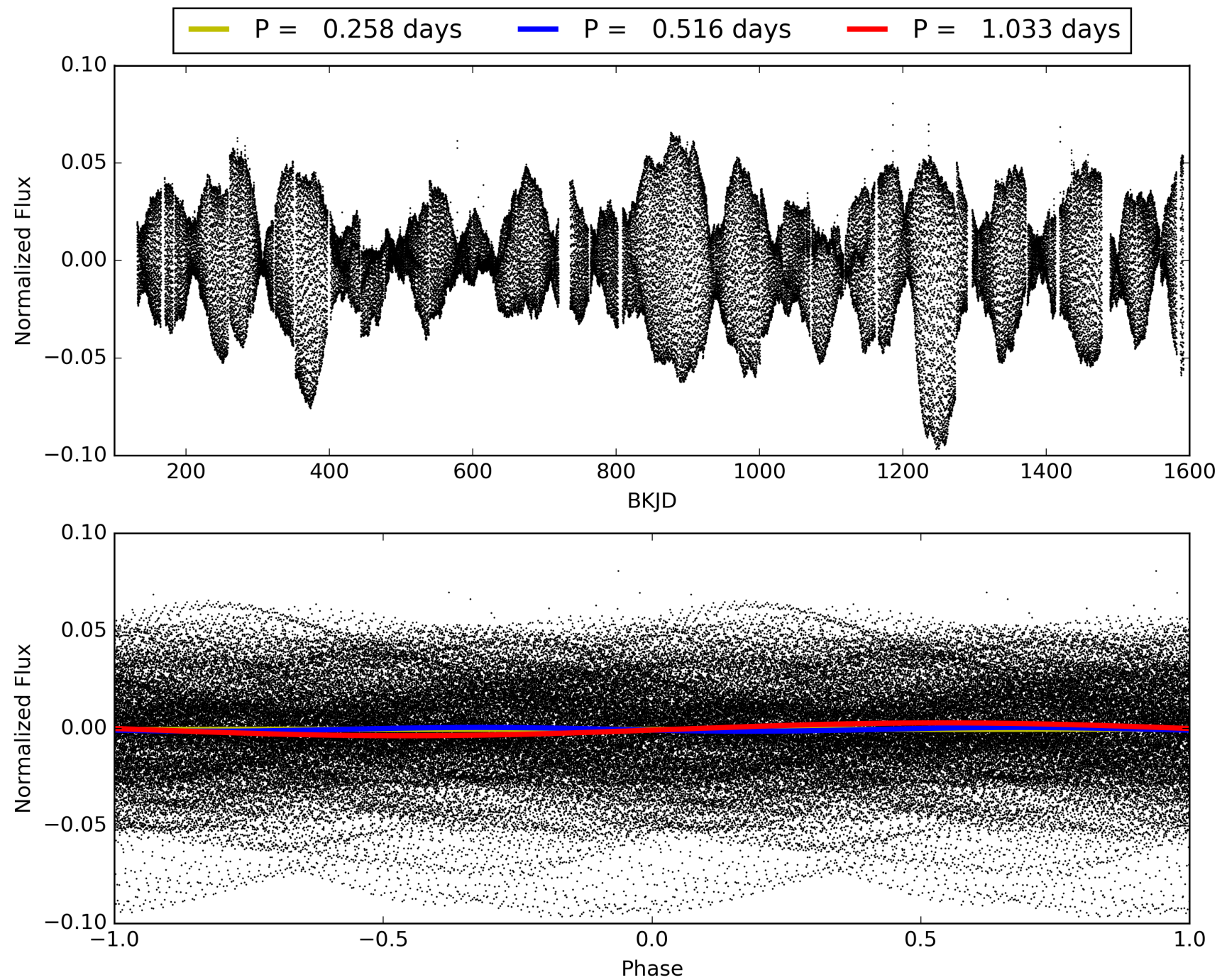
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:13:53 Z

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

TCE 007294867-02, PDC Light Curves

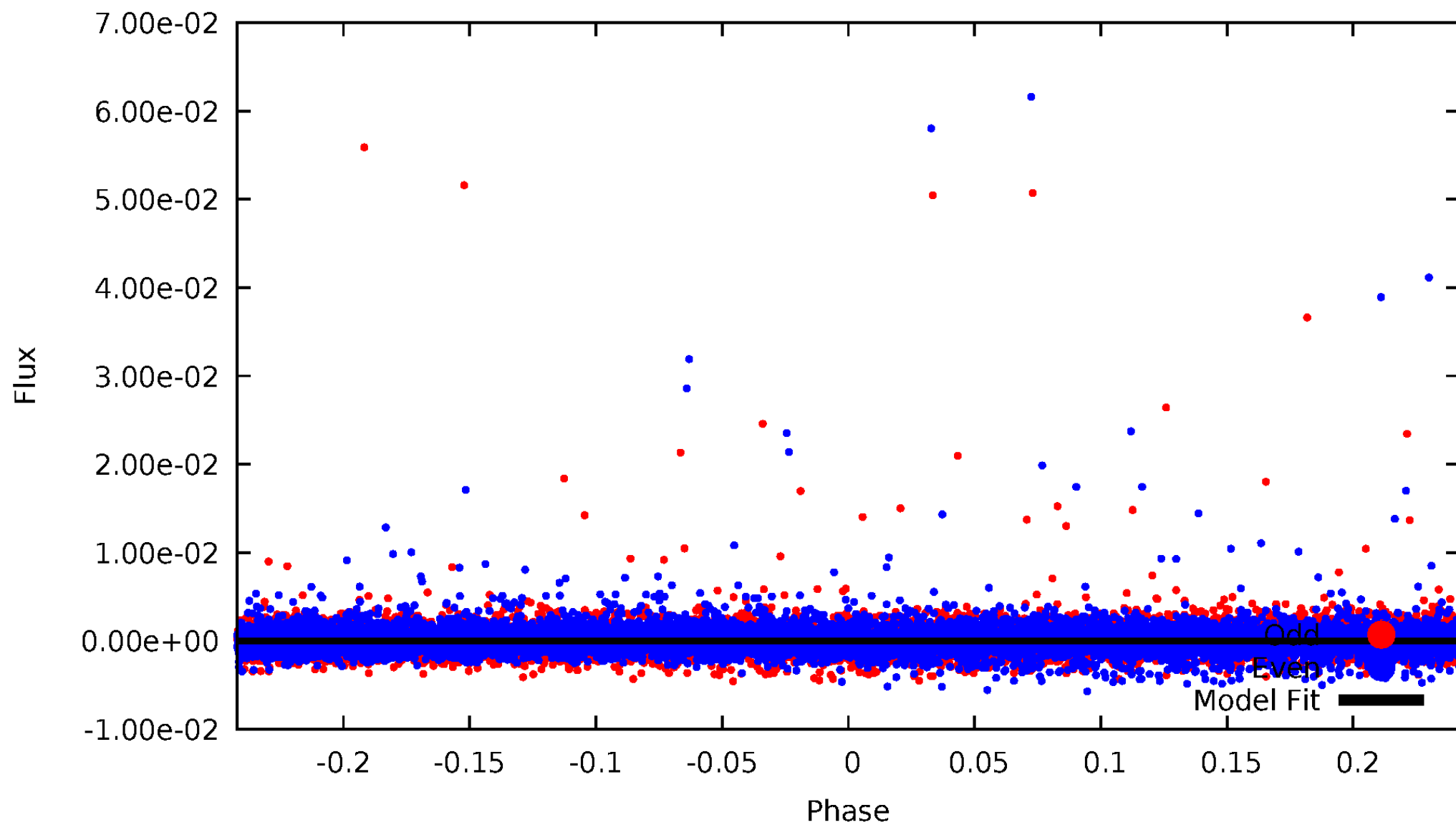


TCE 007294867-02



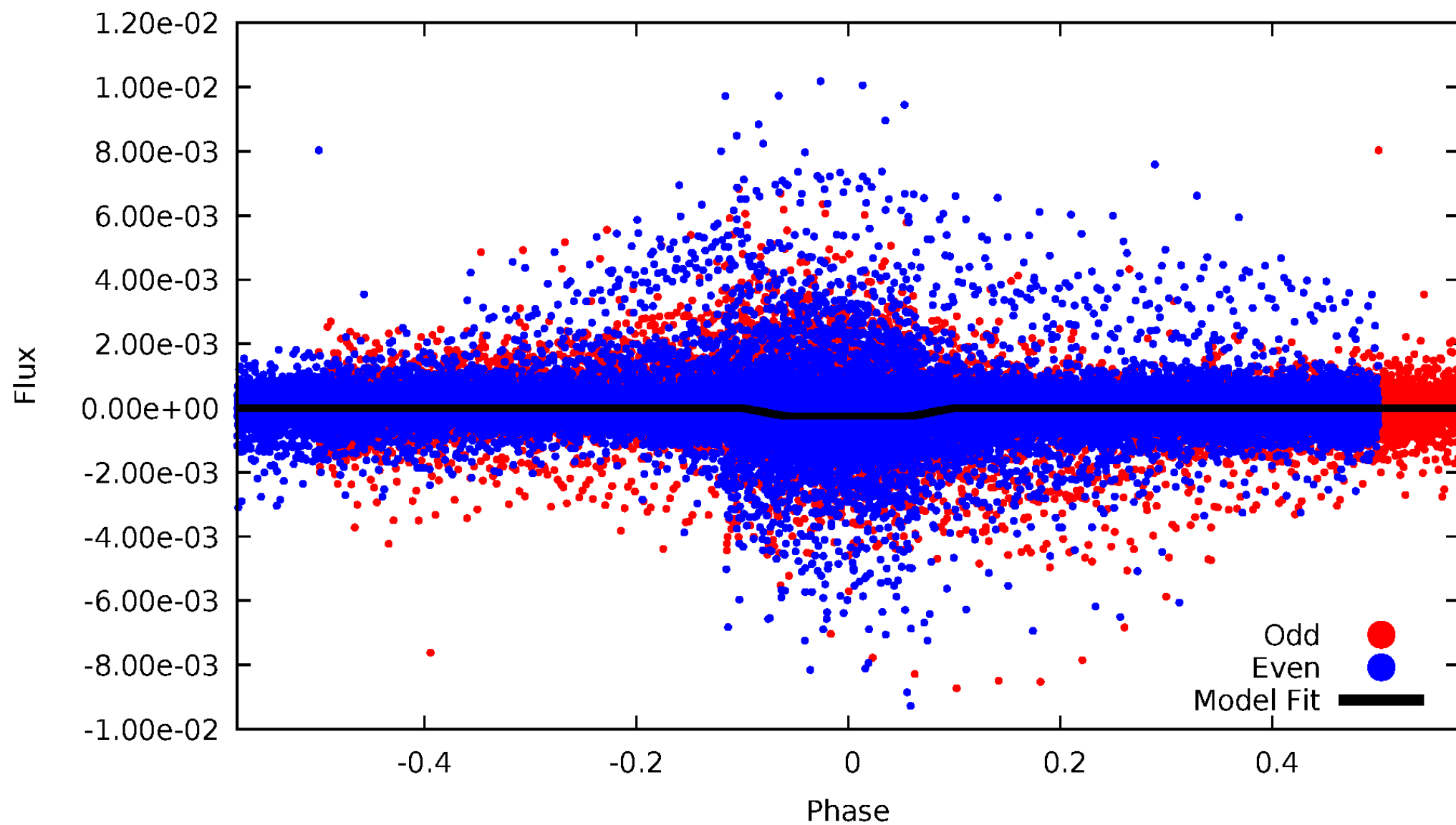
DV Odd/Even

TCE 007294867-02



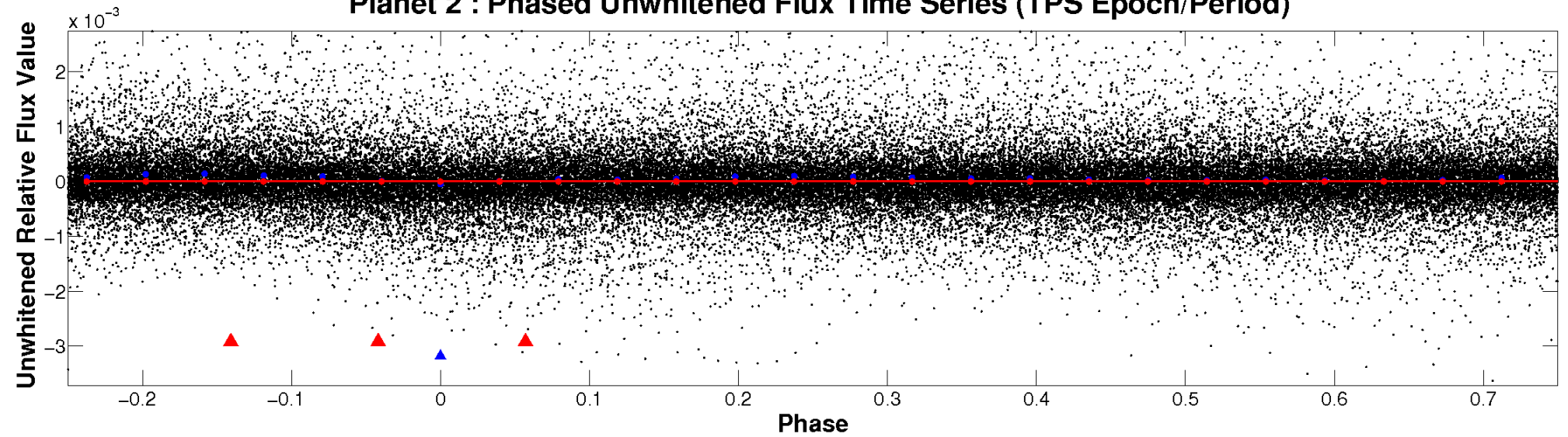
ALT Odd/Even

TCE 007294867-02

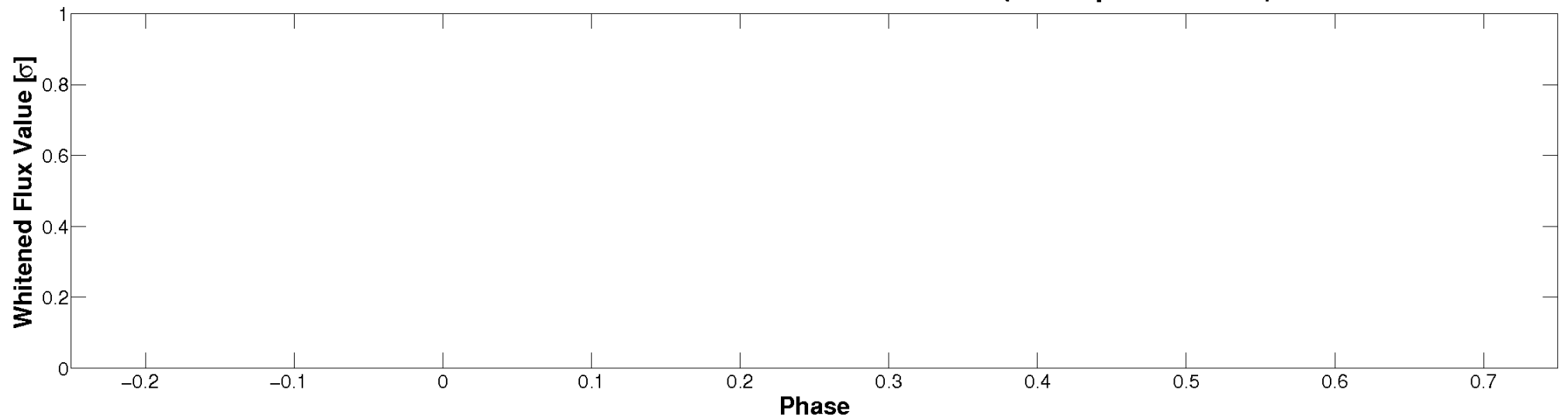


Non-Whitened Vs. Whitened Light Curve

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

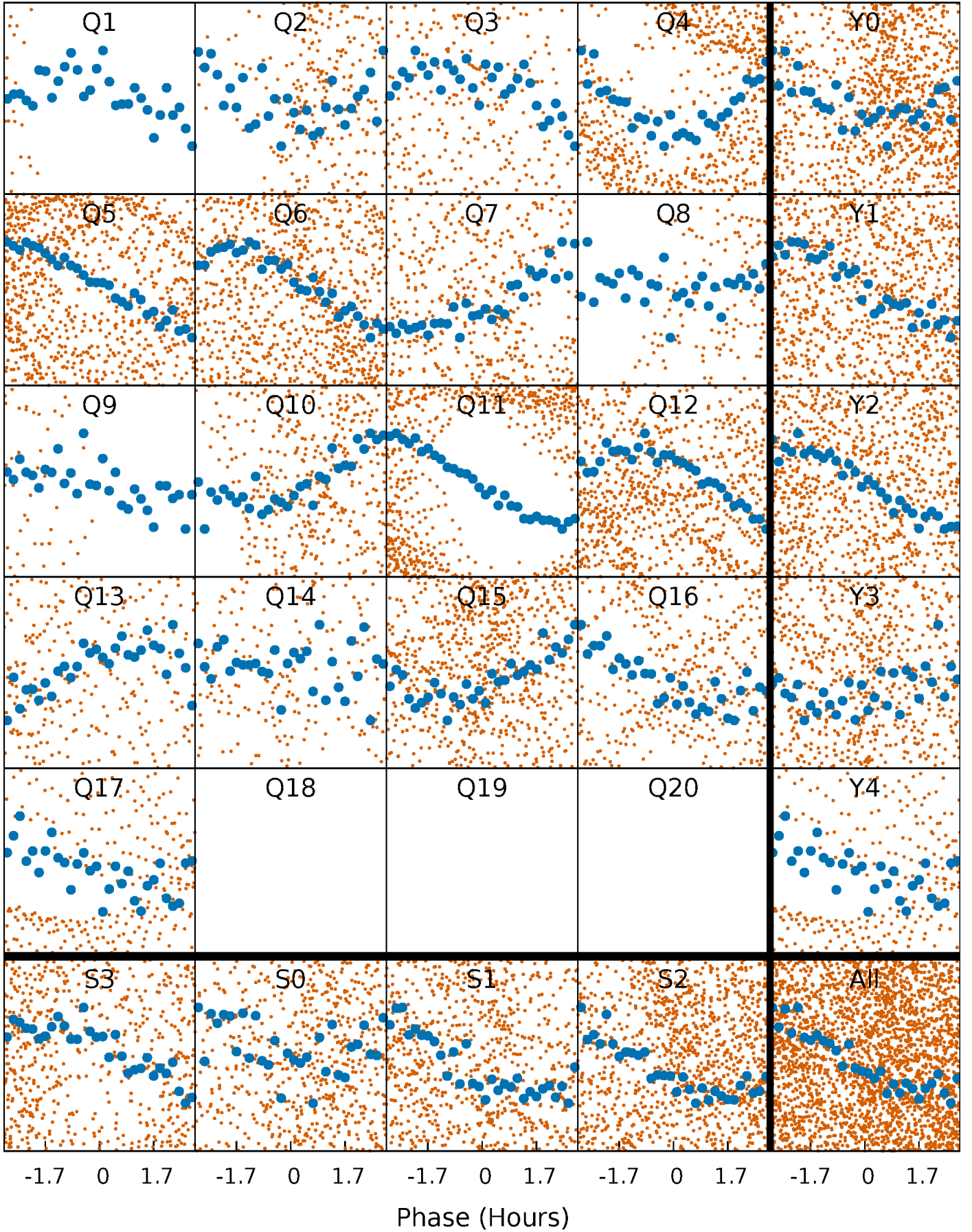


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



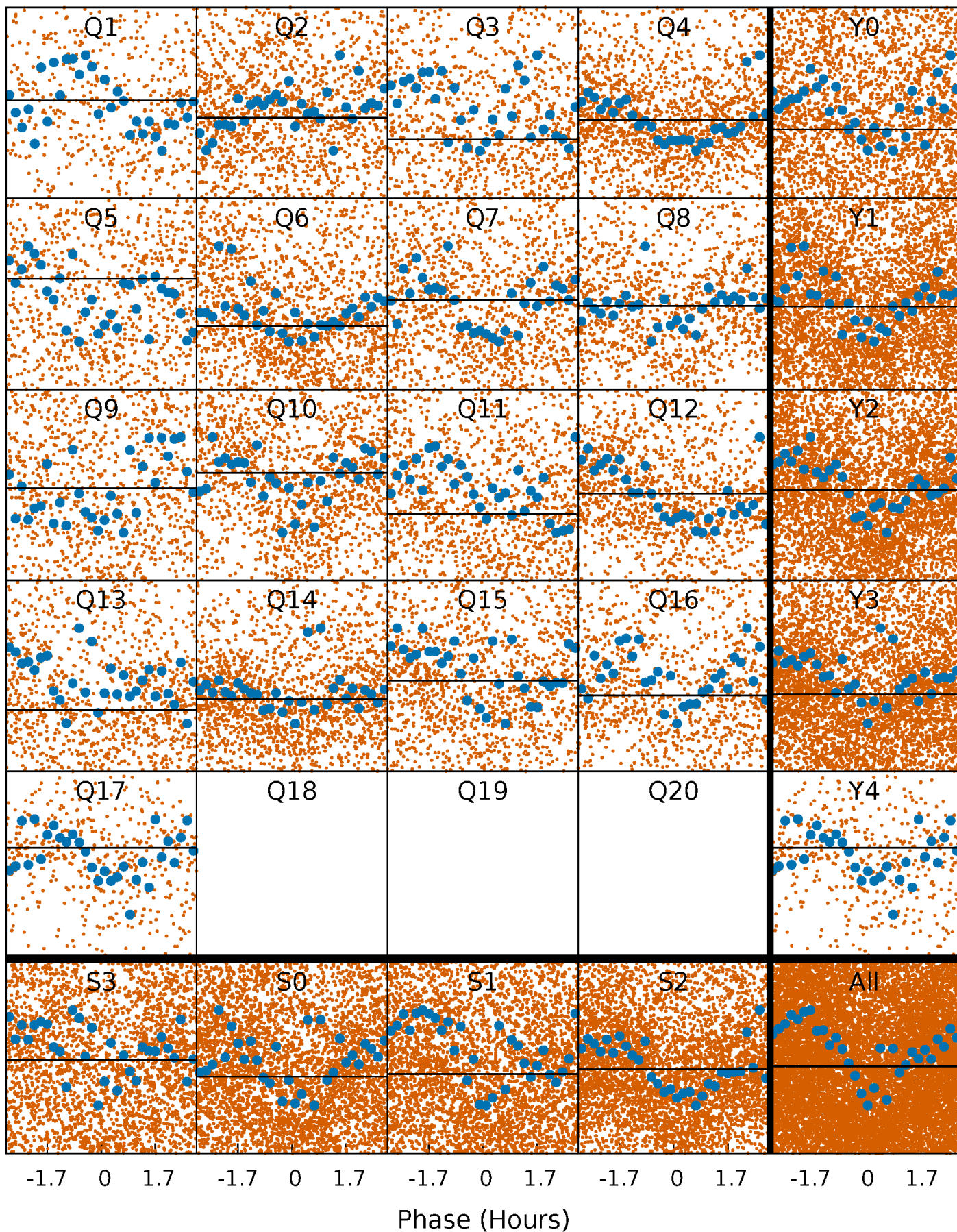
PDC Quarter-Phased Transit Curves

TCE 007294867-02 P= 0.516387 Days $T_0=132.010994$ (BKJD)



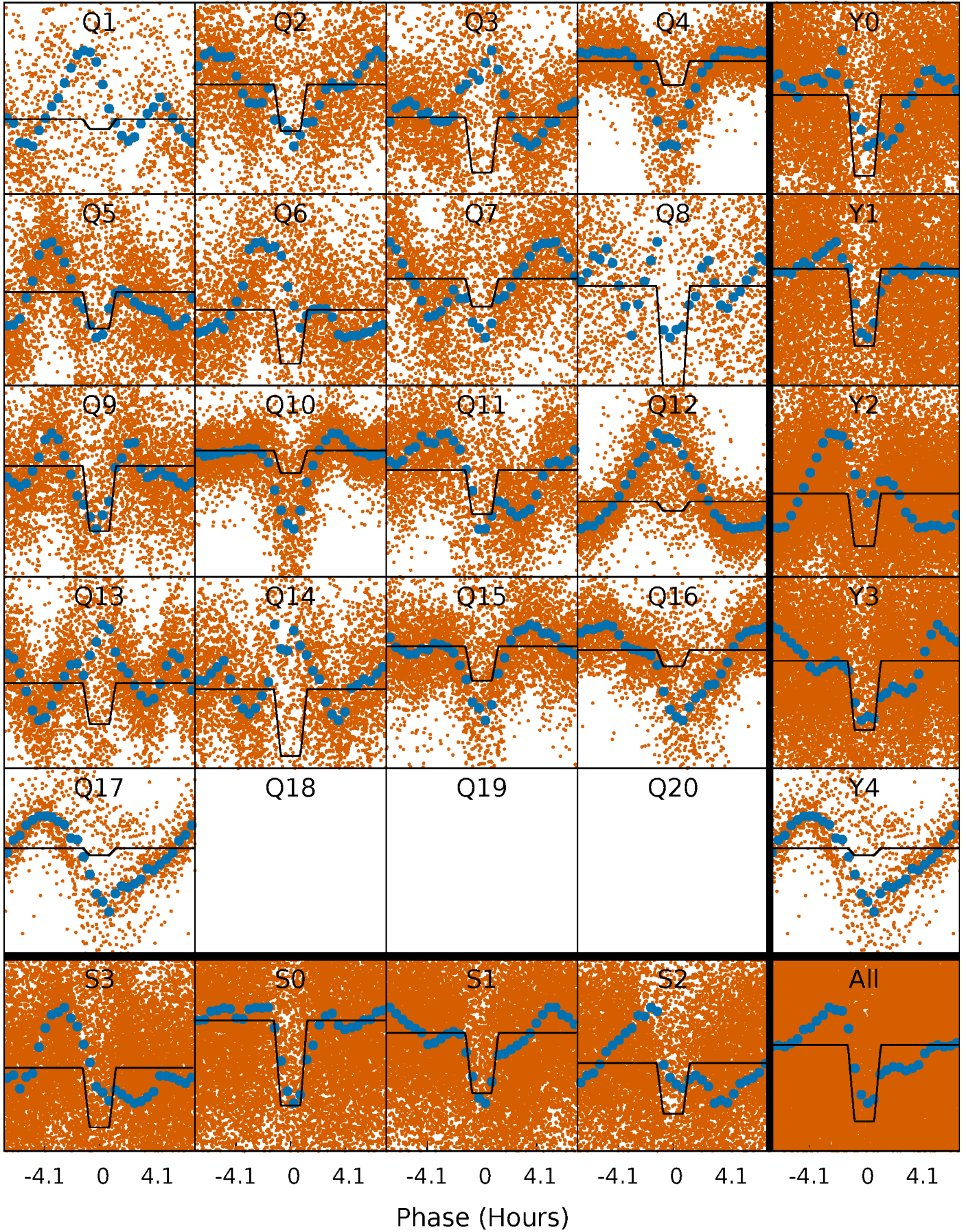
DV Quarter-Phased Transit Curves

TCE 007294867-02 P= 0.516387 Days $T_0=132.010994$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

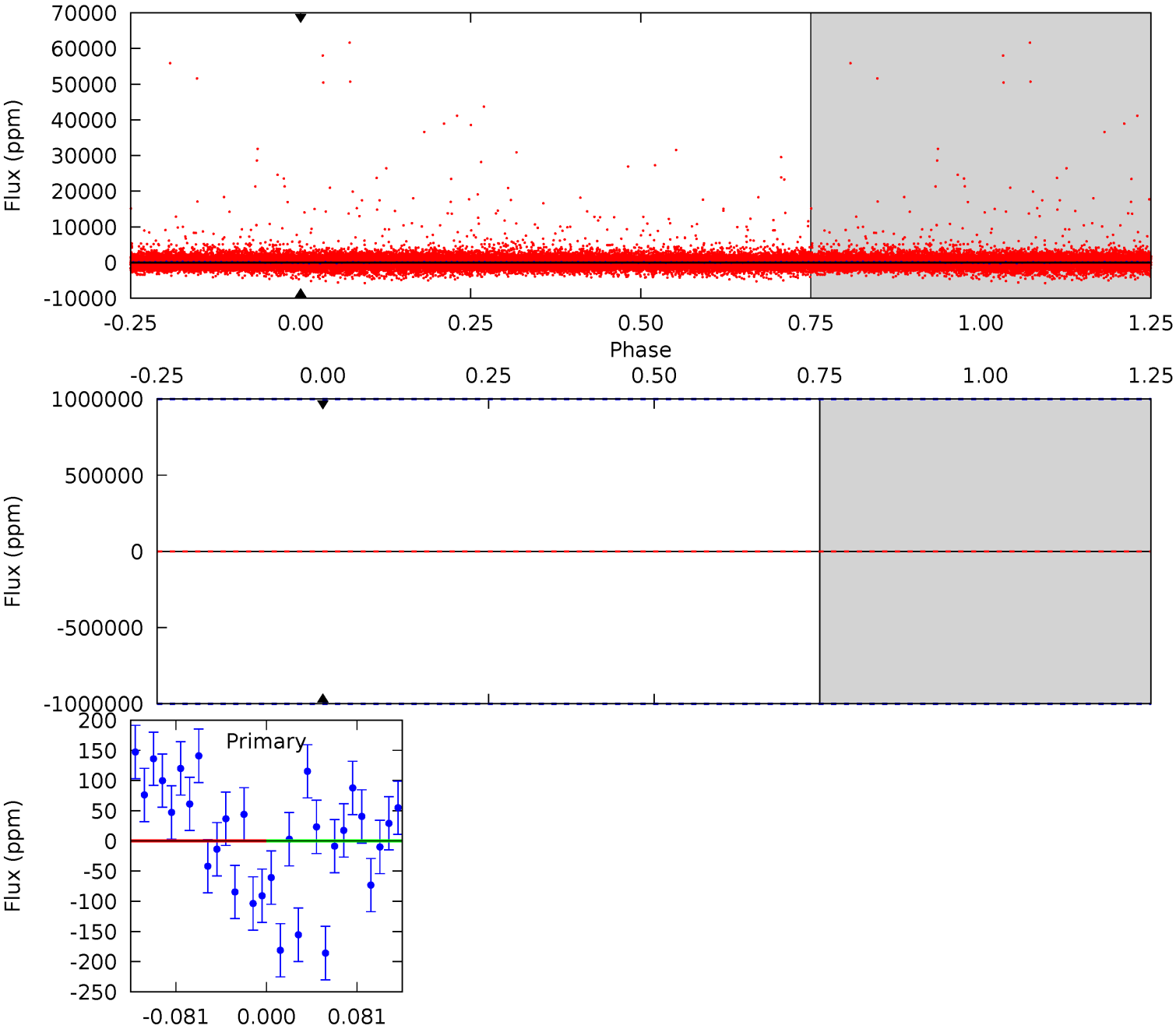
TCE 007294867-02 P= 0.516387 Days $T_0=132.015827$ (BKJD)



DV Model-Shift Uniqueness Test

007294867-02, P = 0.516387 Days, E = 131.494607 Days

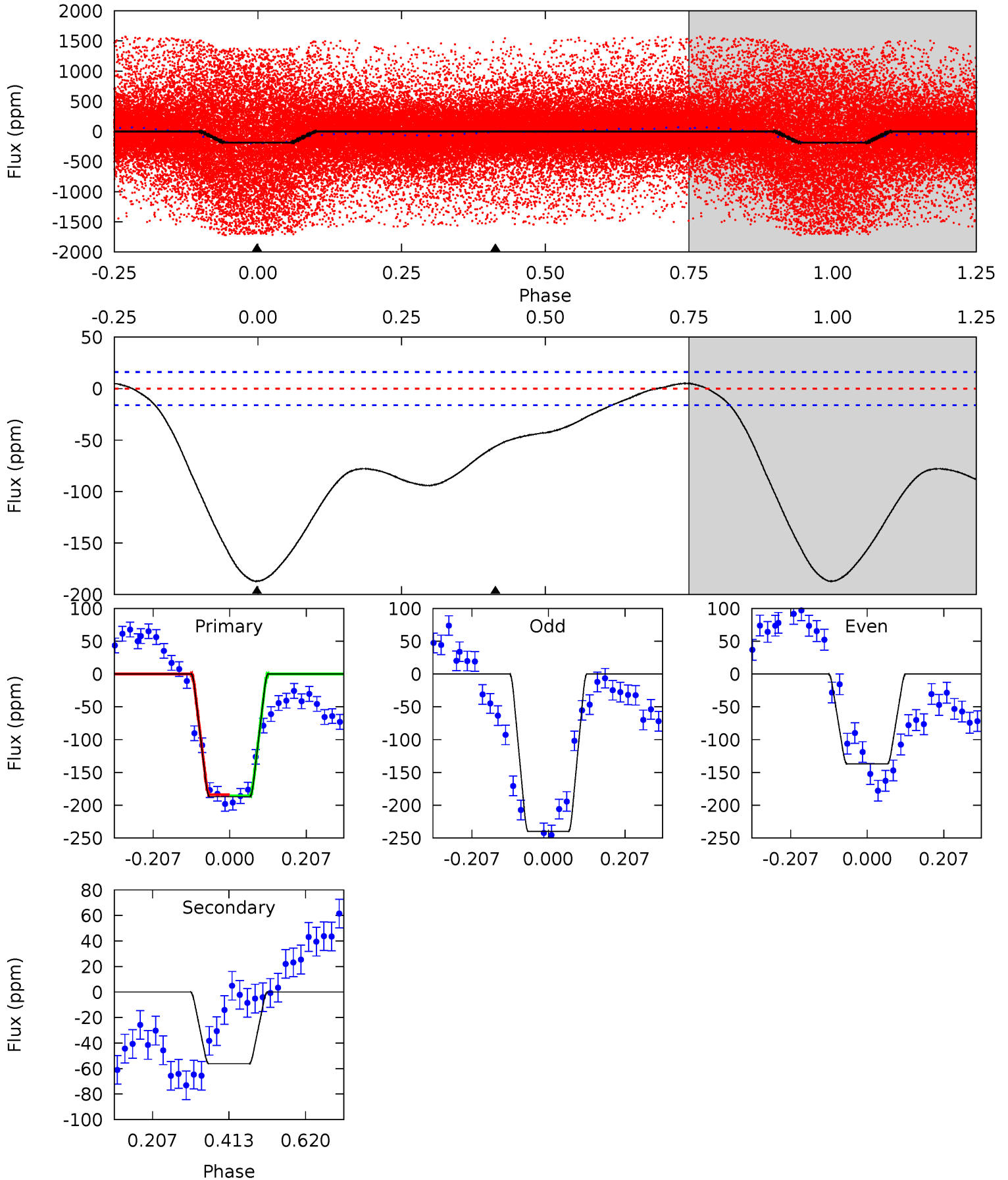
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007294867-02, P = 0.516387 Days, E = 131.499440 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.3	15.4	0	0	4.41	1.26	2.59	51.3	51.3	15.4	15.4	14.1	1.05	0.03	0.25



Stellar Parameters For KIC 007294867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5288^{+143}_{-143}	$4.593^{+0.077}_{-0.056}$	$-0.800^{+0.300}_{-0.300}$	$0.675^{+0.072}_{-0.065}$	$0.652^{+0.072}_{-0.029}$	$2.982^{+0.960}_{-0.609}$
	+3%/-3%	+2%/-1%	+37%/-37%	+11%/-10%	+11%/-4%	+32%/-20%
Source	PHO1	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 007294867-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.86^{+5.97}_{-4.01}$	2555^{+94}_{-87}	2840^{+12797}_{-18363}	$0.581^{+355.366}_{-345.729}$
Alt.	-56 ± 4	$5.20^{+5.41}_{-3.44}$	2553^{+104}_{-103}	-2587^{+5864}_{-191}	$0.139^{+1.088}_{-0.106}$

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 $A_{obs} \gg 1.0$

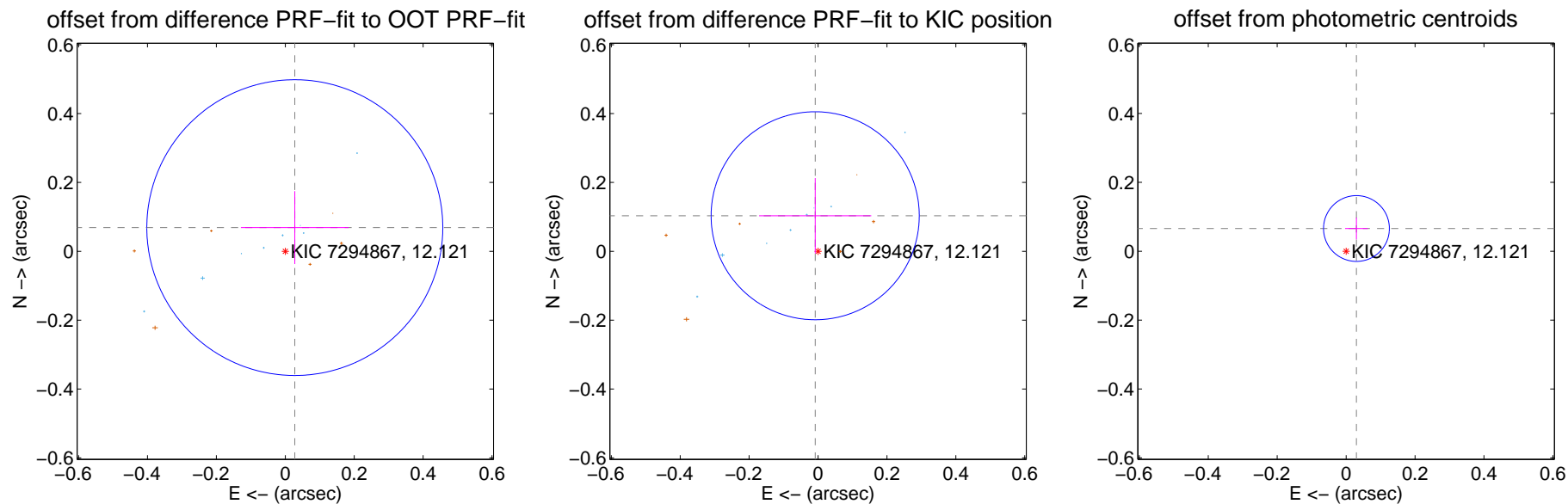
DV Centroid Data

Supplemental centroid analysis for 007294867-02. Kepler magnitude: 12.12. Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

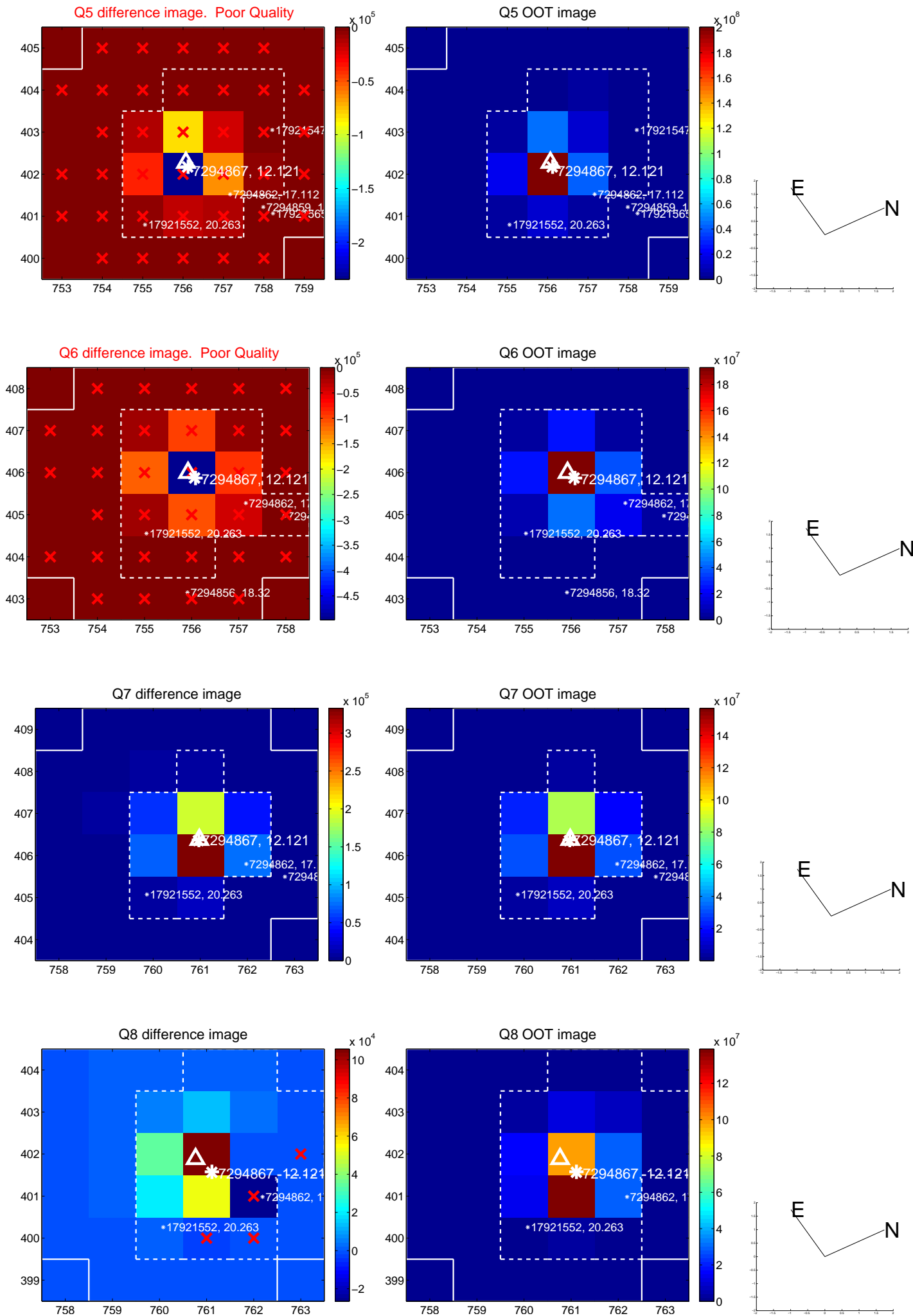
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.074 ± 0.143	0.52	-0.028 ± 0.156	0.069 ± 0.106
PRF-fit source offset from KIC position	0.104 ± 0.101	1.03	0.008 ± 0.163	0.103 ± 0.109
photometric centroid source offset	0.07 ± 0.03	2.28	-0.03 ± 0.03	0.07 ± 0.03

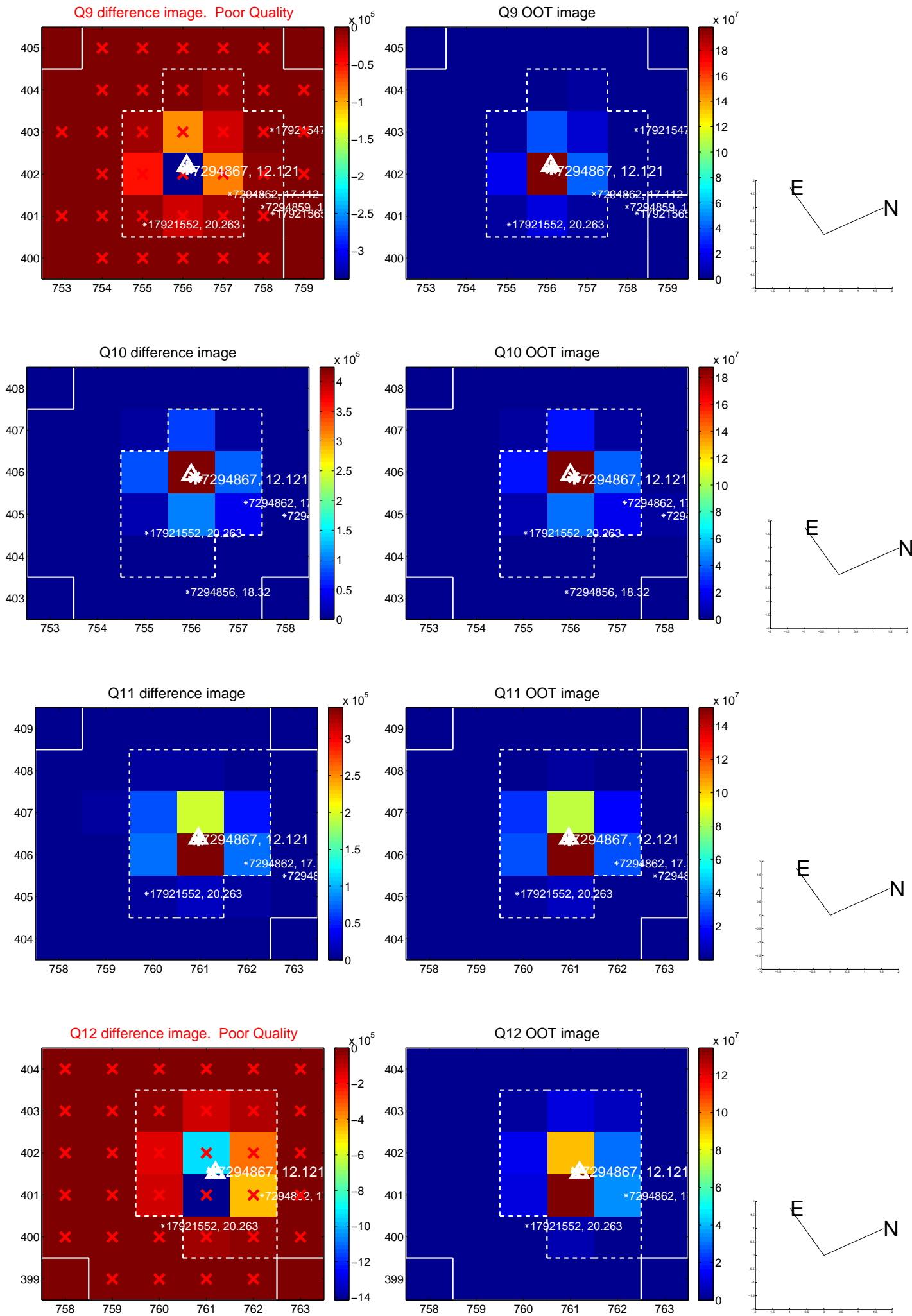


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

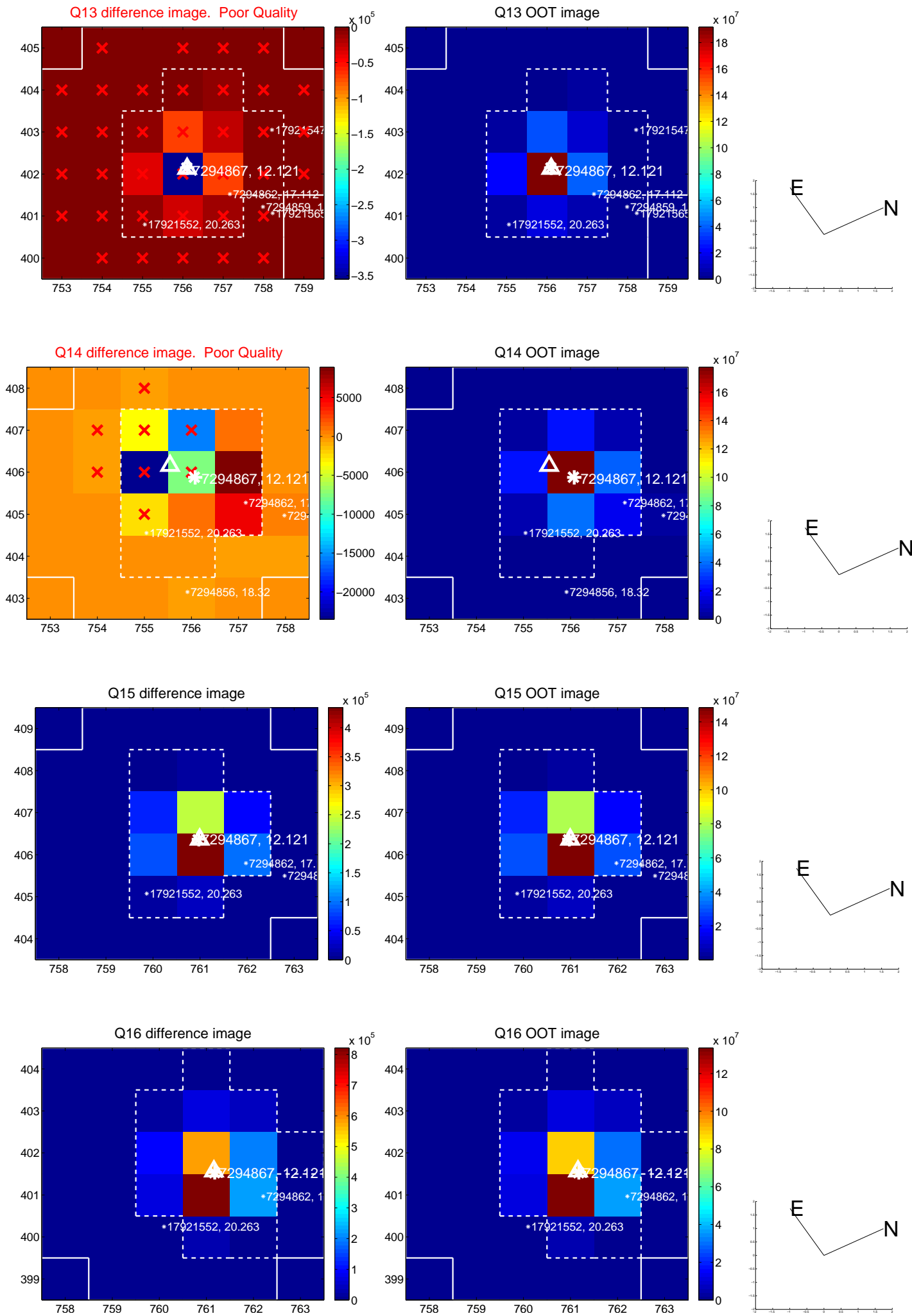
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



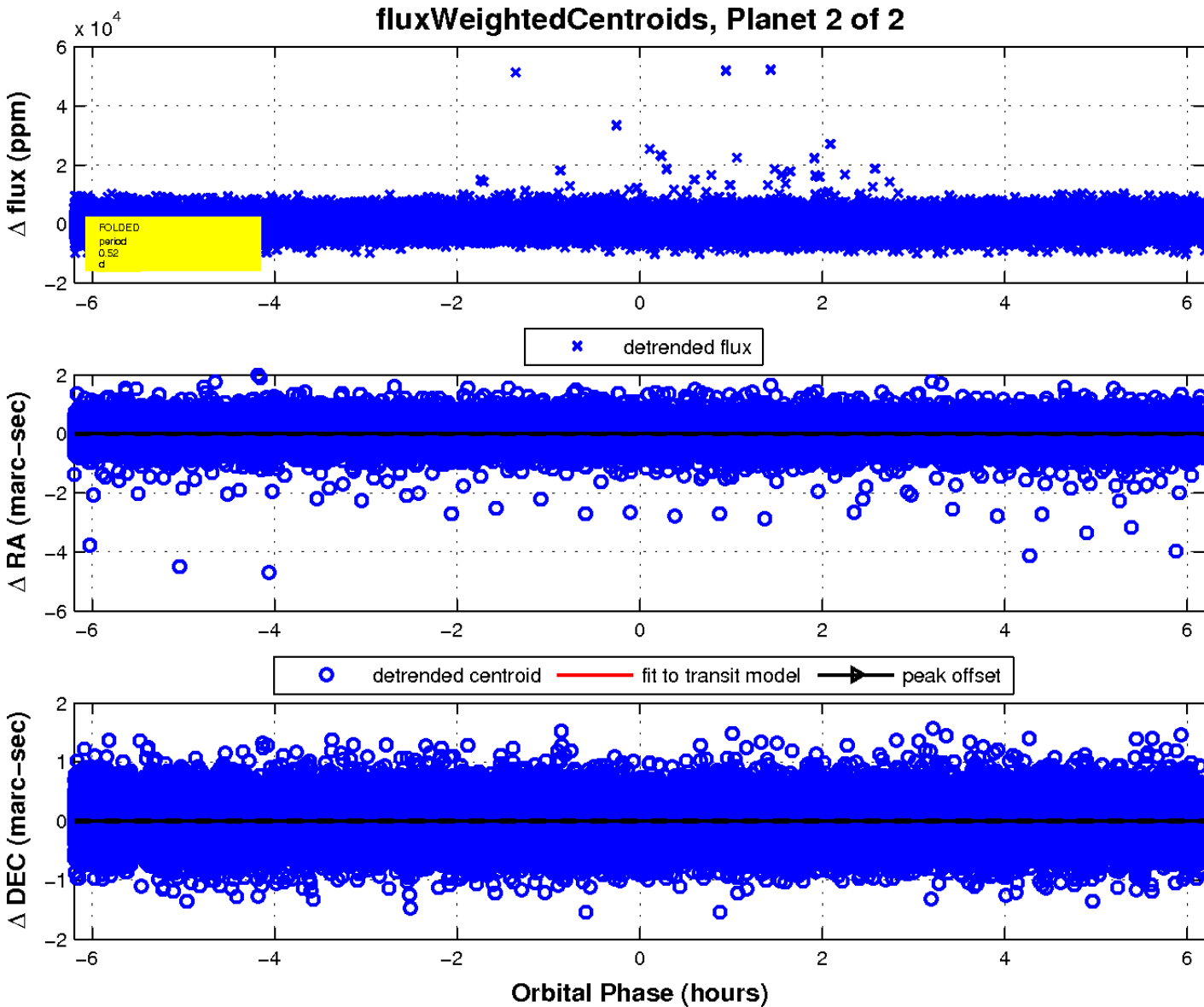
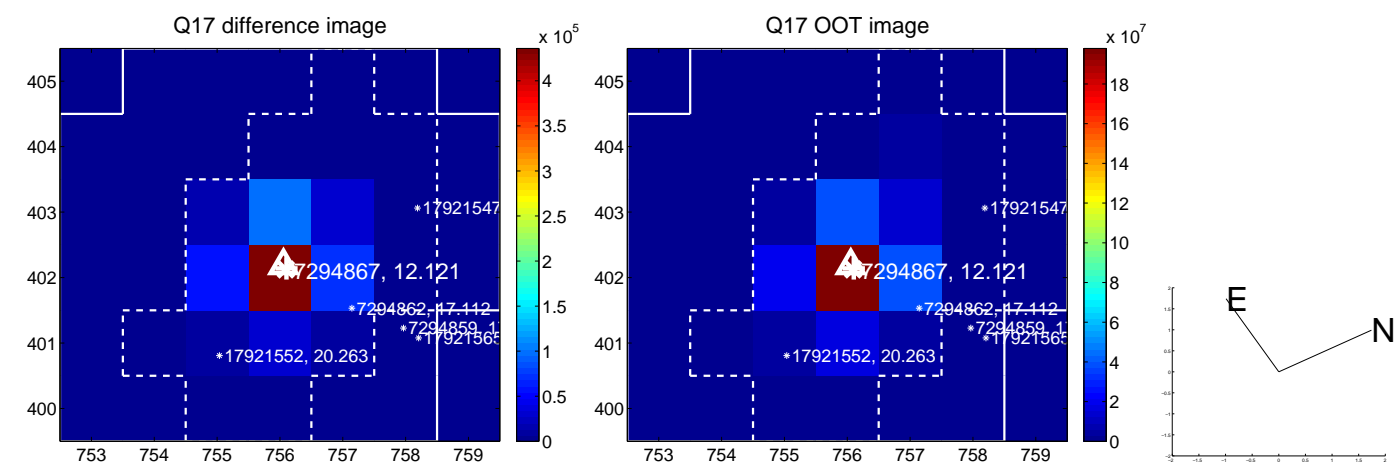
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

