

KIC 008621348

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})
008621348-01	OBS	0461.01	11.344398	138.809874	514.4	5.455	50.7	45.4	0.75	5594	2.78	57.75
008621348-02	OBS	No	11.344075	132.563138	186.5	2.462	14.5	15.5	0.75	5594	1.21	57.75
008621348-03	OBS	No	380.514857	138.546027	260.7	21.797	8.1	6.9	0.75	5594	2.45	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008621348-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008621348-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008621348-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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 008621348-01

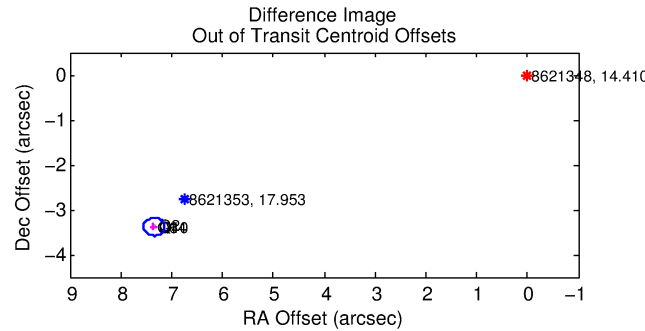
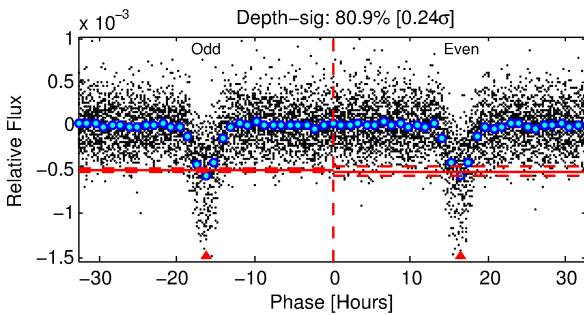
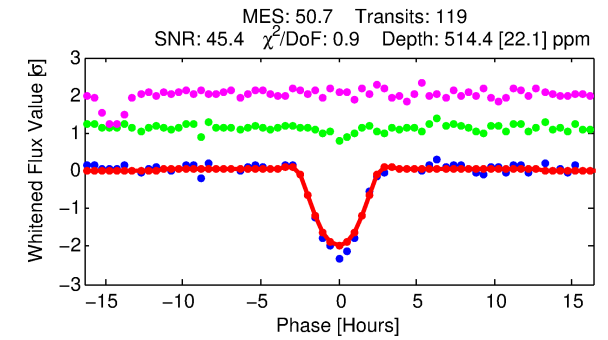
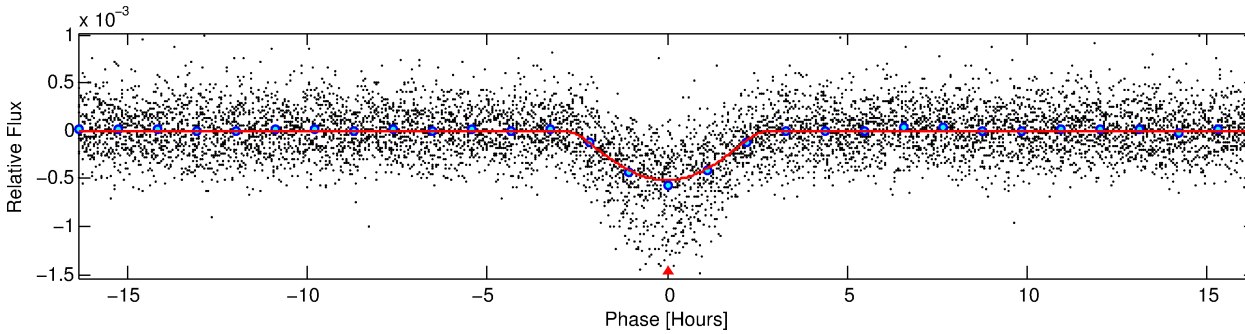
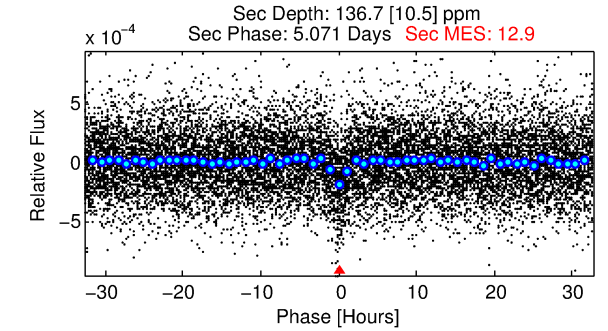
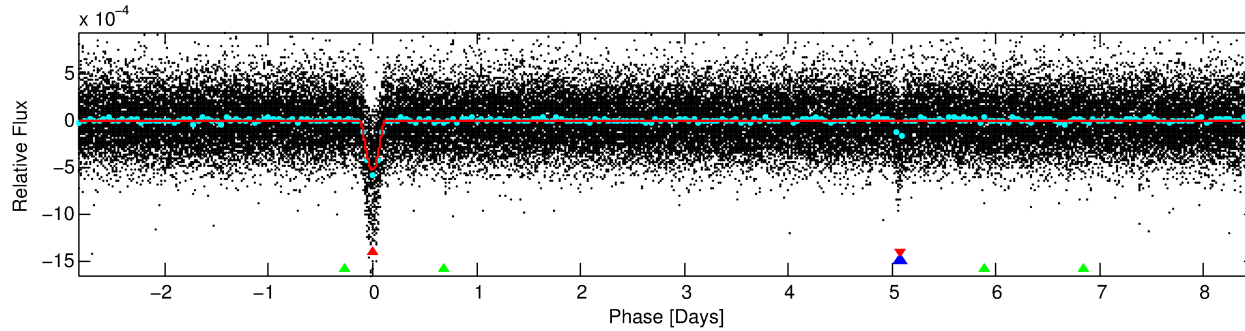
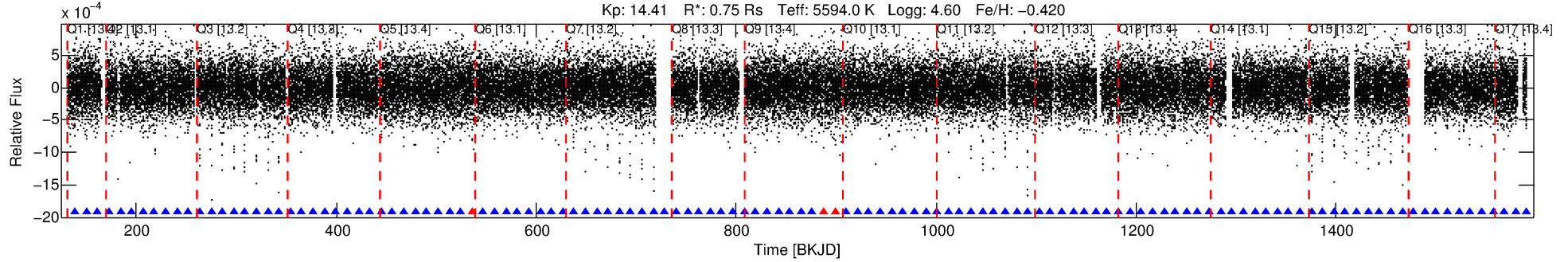
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
008621348-01	8621348	3682.01	8621353	1:1	7.3	1	-2	17.95	14.41	579.90	Direct-PRF	0	0.12	0.04

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 8621348 Candidate: 1 of 3 Period: 11.344 d
KOI: K00461 Corr: No Ephemeris Match

Kp: 14.41 R*: 0.75 Rs Teff: 5594.0 K Logg: 4.60 Fe/H: -0.420



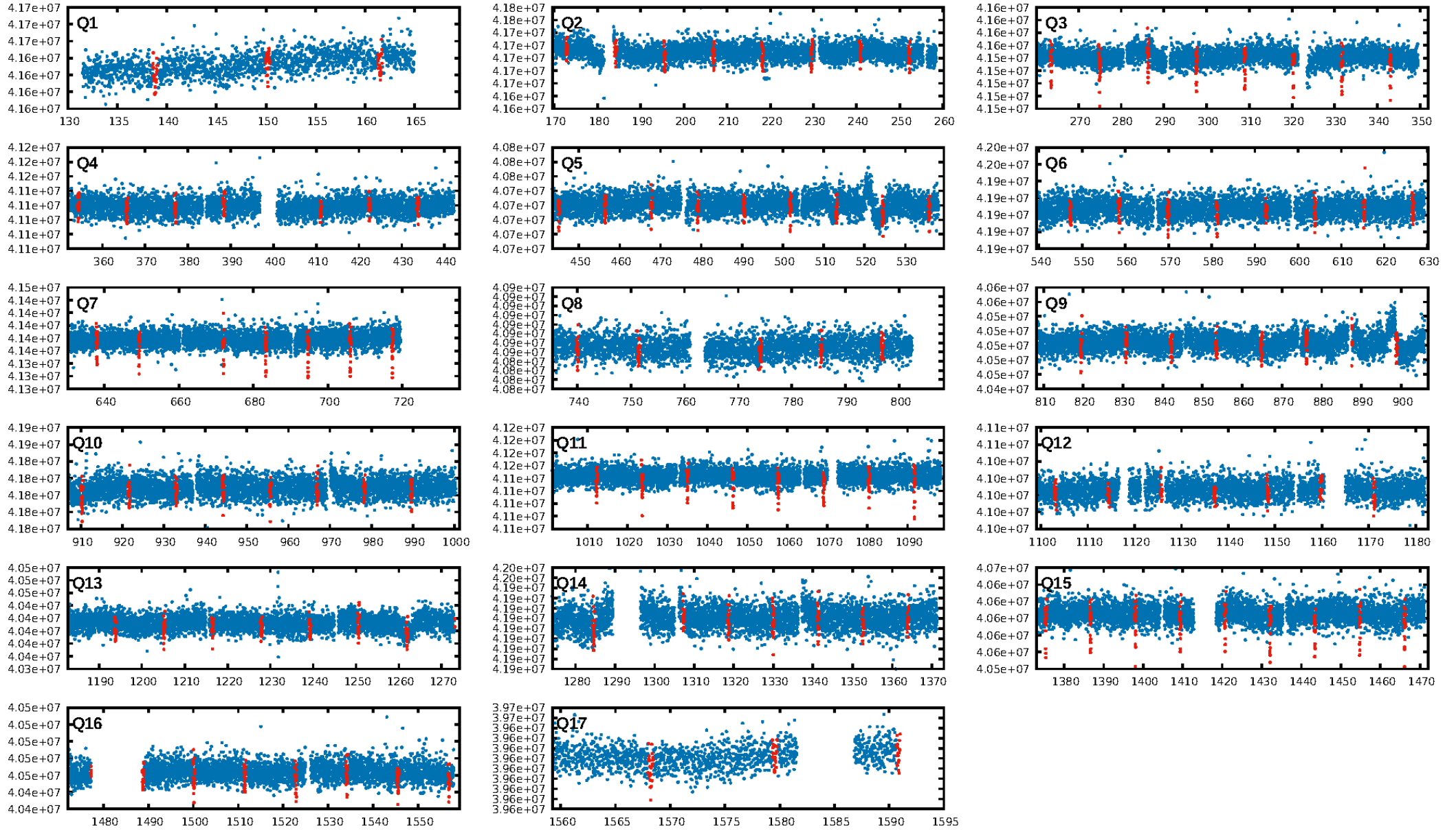
DV Fit Results:

Period = 11.34440 [0.00004] d
Epoch = 138.8099 [0.0028] BKJD
Rp/R* = 0.0339 [0.0125]
a/R* = 4.96 [0.64]
b = 0.99 [0.02]
Seff = 57.75 [16.71]
Teq = 703 [51] K
Rp = 2.78 [1.18] Re
a = 0.0927 [0.0166] AU
Ag = 83.33 [65.64] [1.25σ]
Teffp = 3284 [618] K [4.16σ]

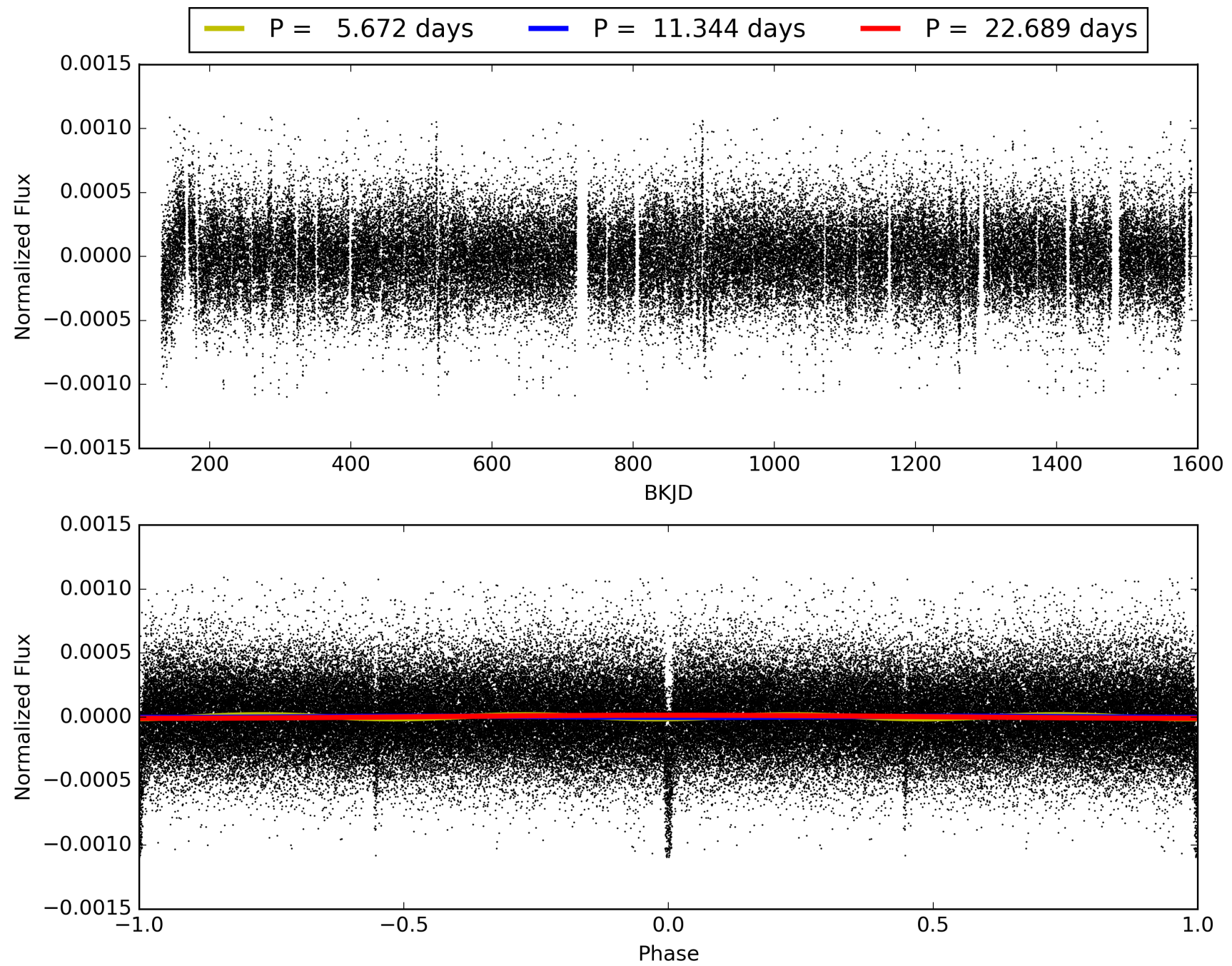
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [394.32σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [110/113]
GhostDiagnostic-chr: -0.465
Centroid-sig: 0.0%
Centroid-so: 57.966 arcsec [194.33σ]
OotOffset-rm: 8.089 arcsec [120.63σ]
KicOffset-rm: 8.133 arcsec [116.04σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008621348-01, PDC Light Curves

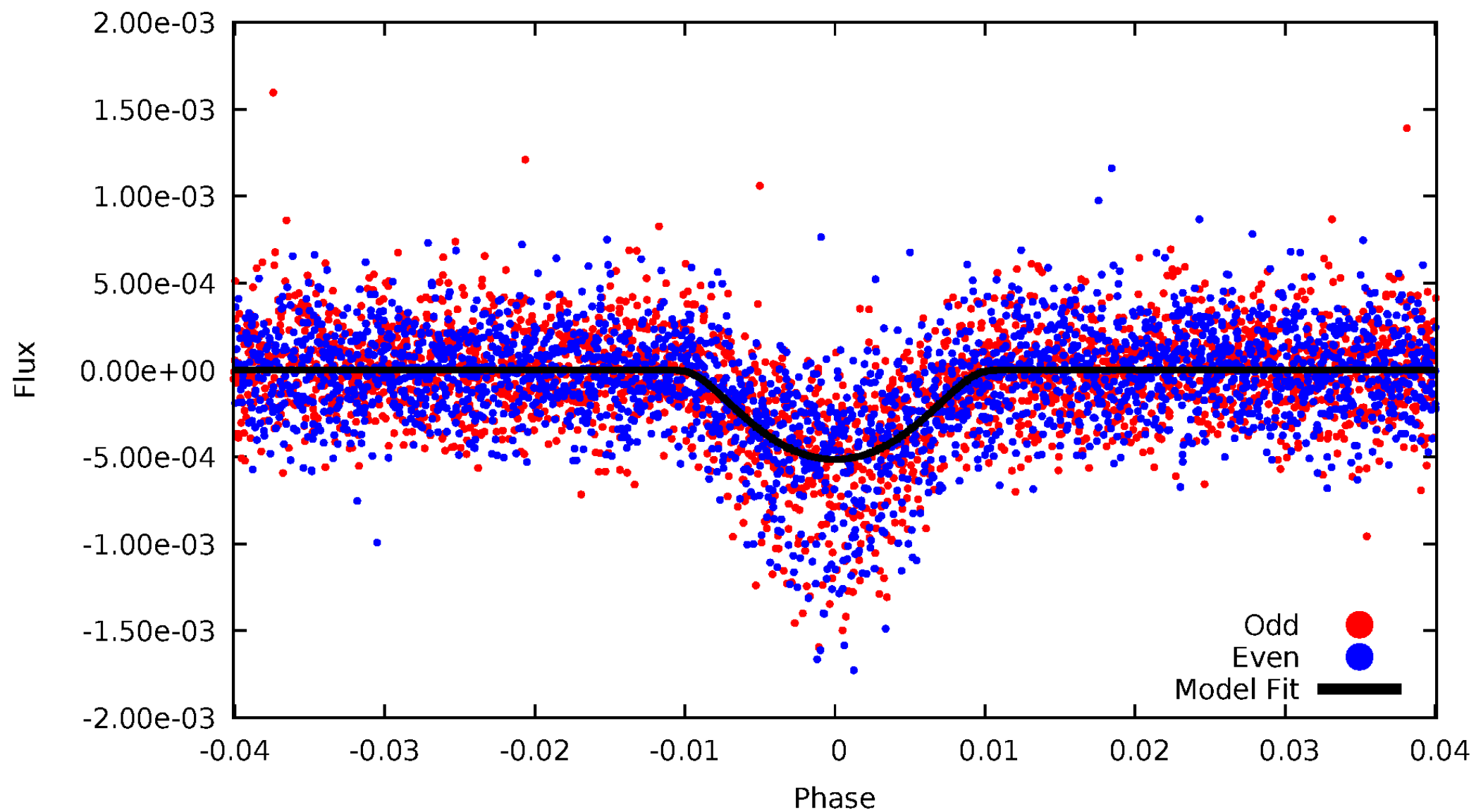


TCE 008621348-01



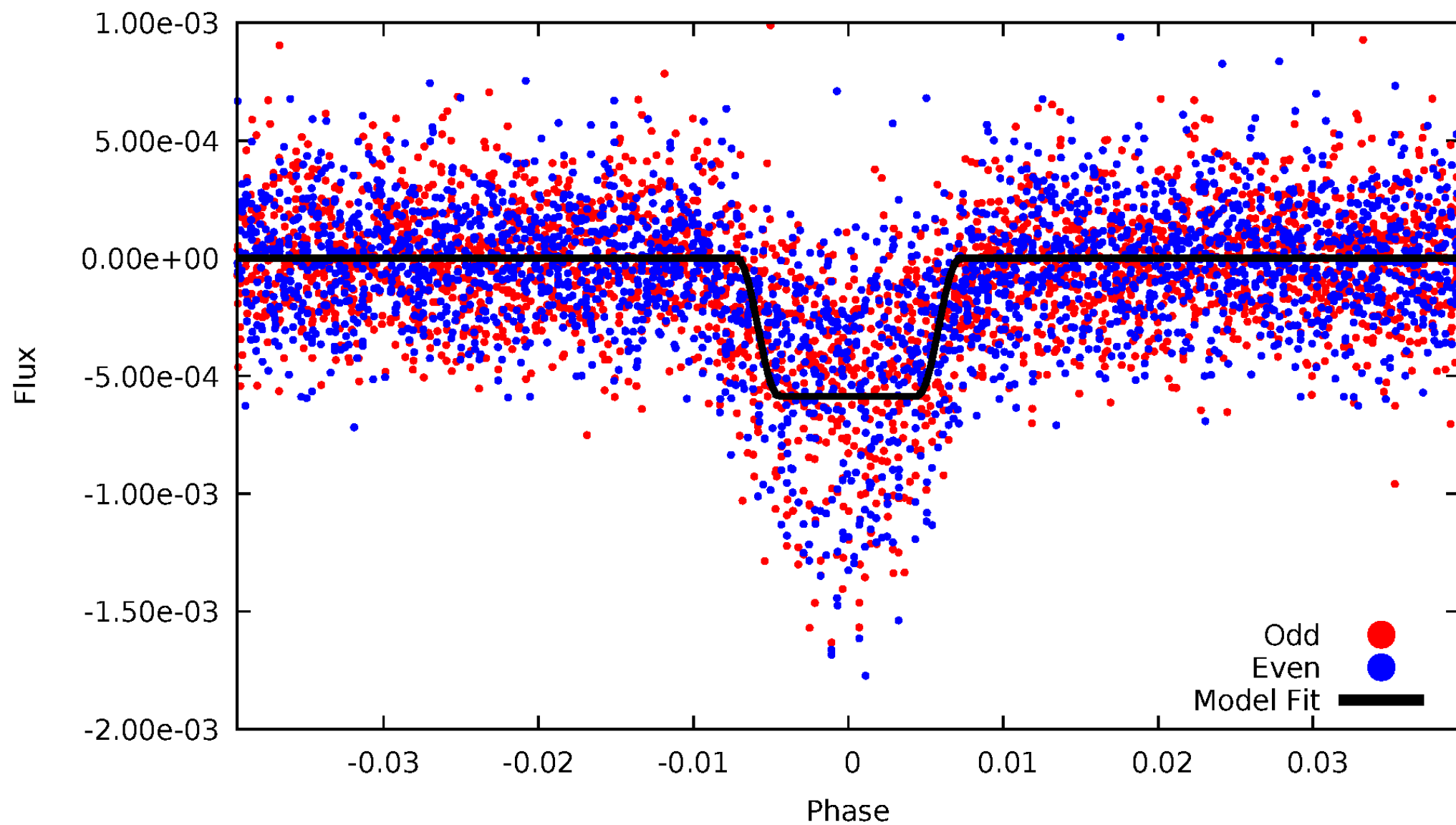
DV Odd/Even

TCE 008621348-01



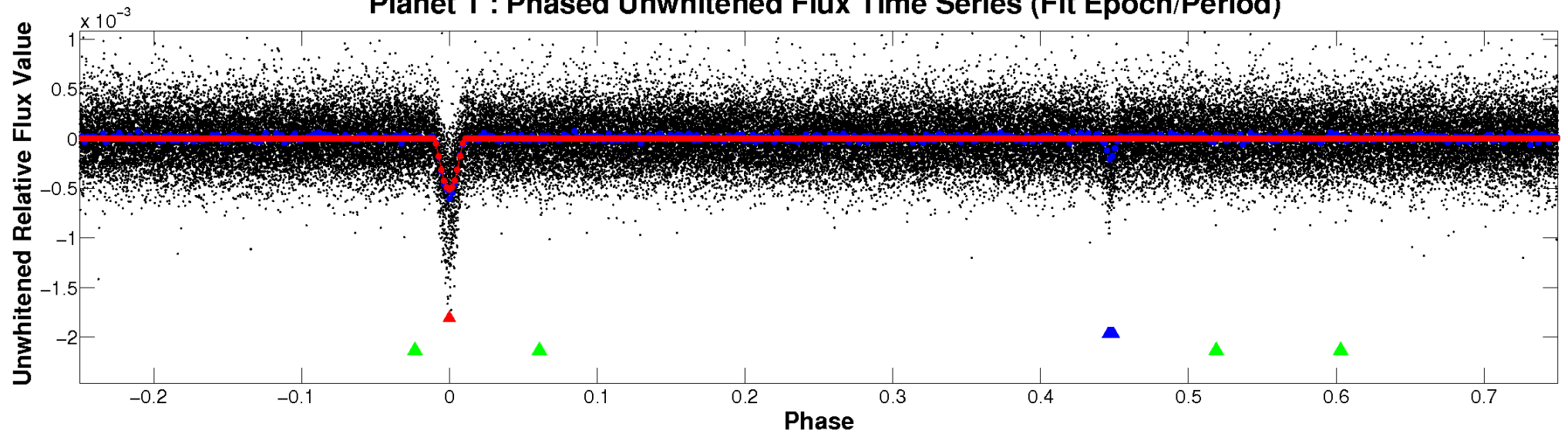
ALT Odd/Even

TCE 008621348-01

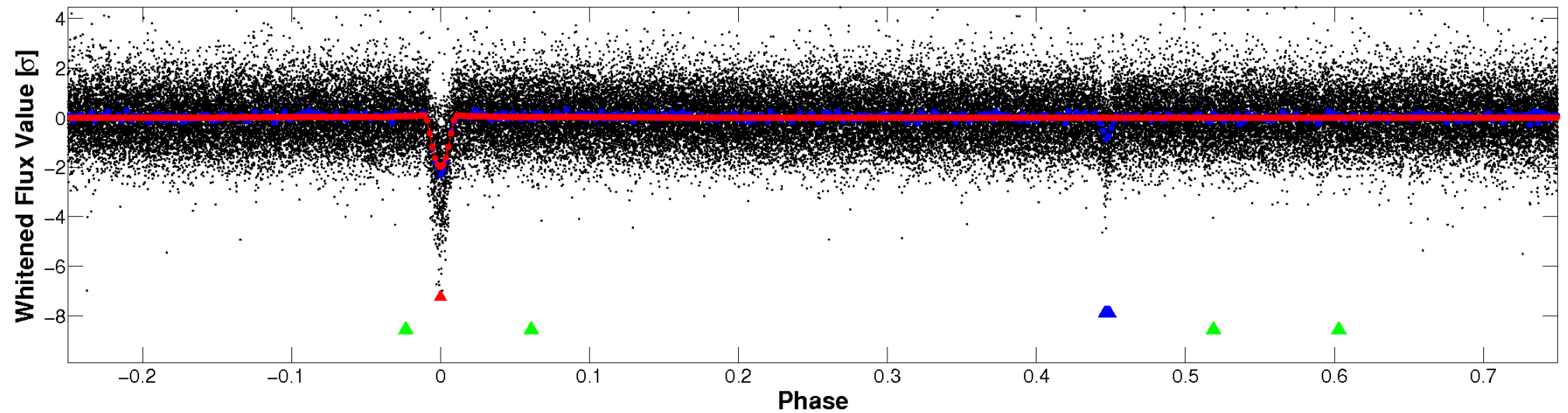


Non-Whitened Vs. Whitened Light Curve

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

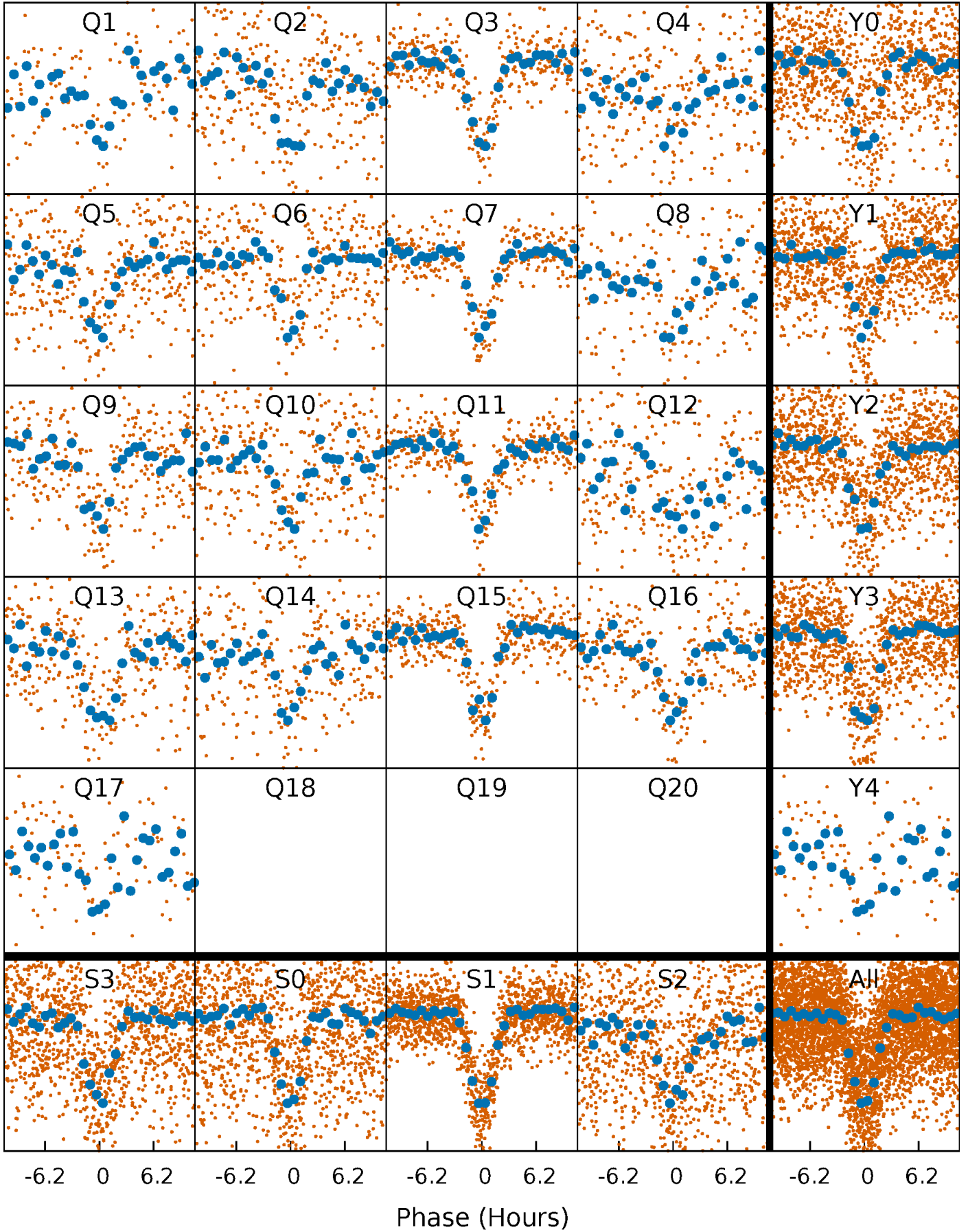


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



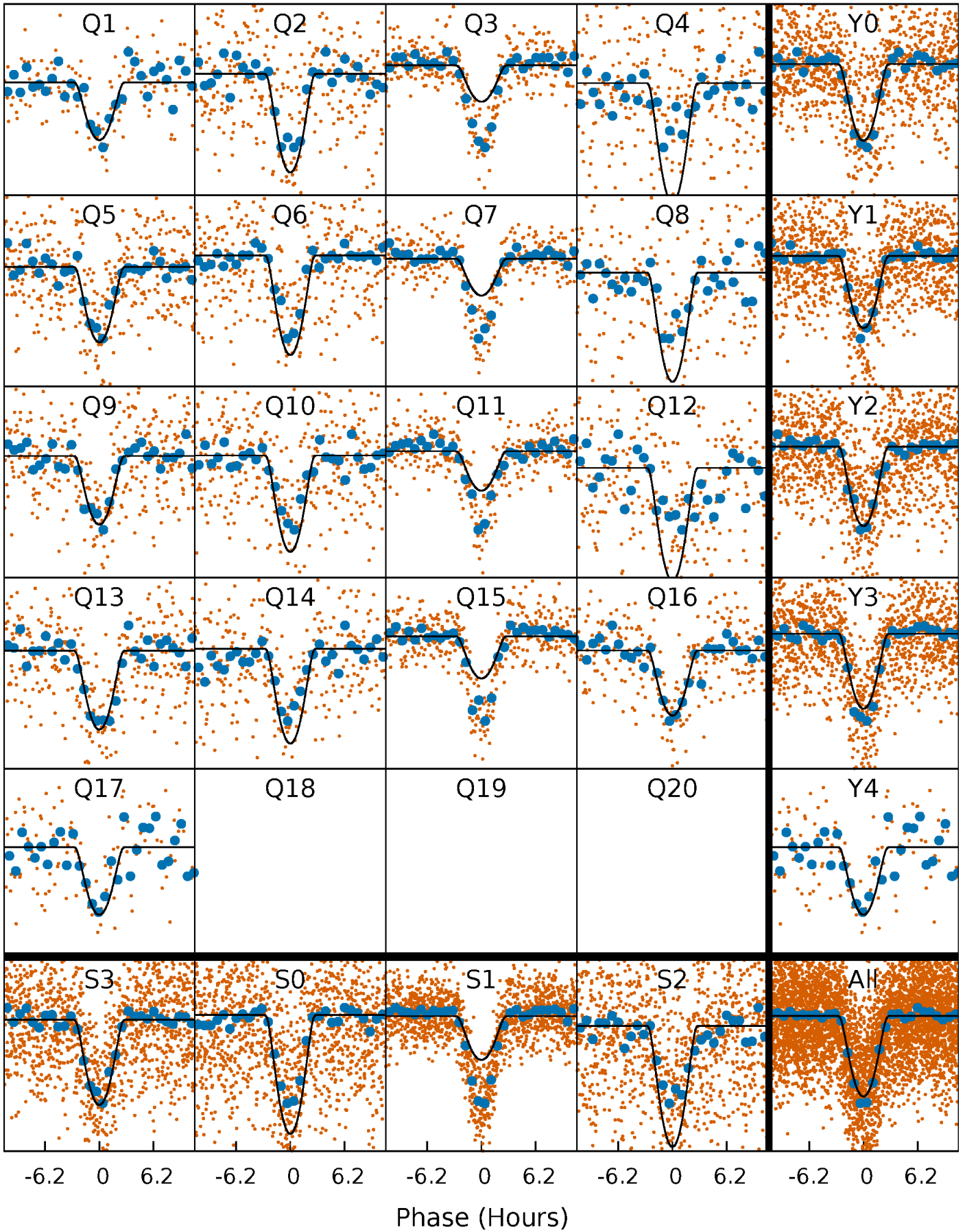
PDC Quarter-Phased Transit Curves

TCE 008621348-01 P= 11.344398 Days $T_0=138.809874$ (BKJD)



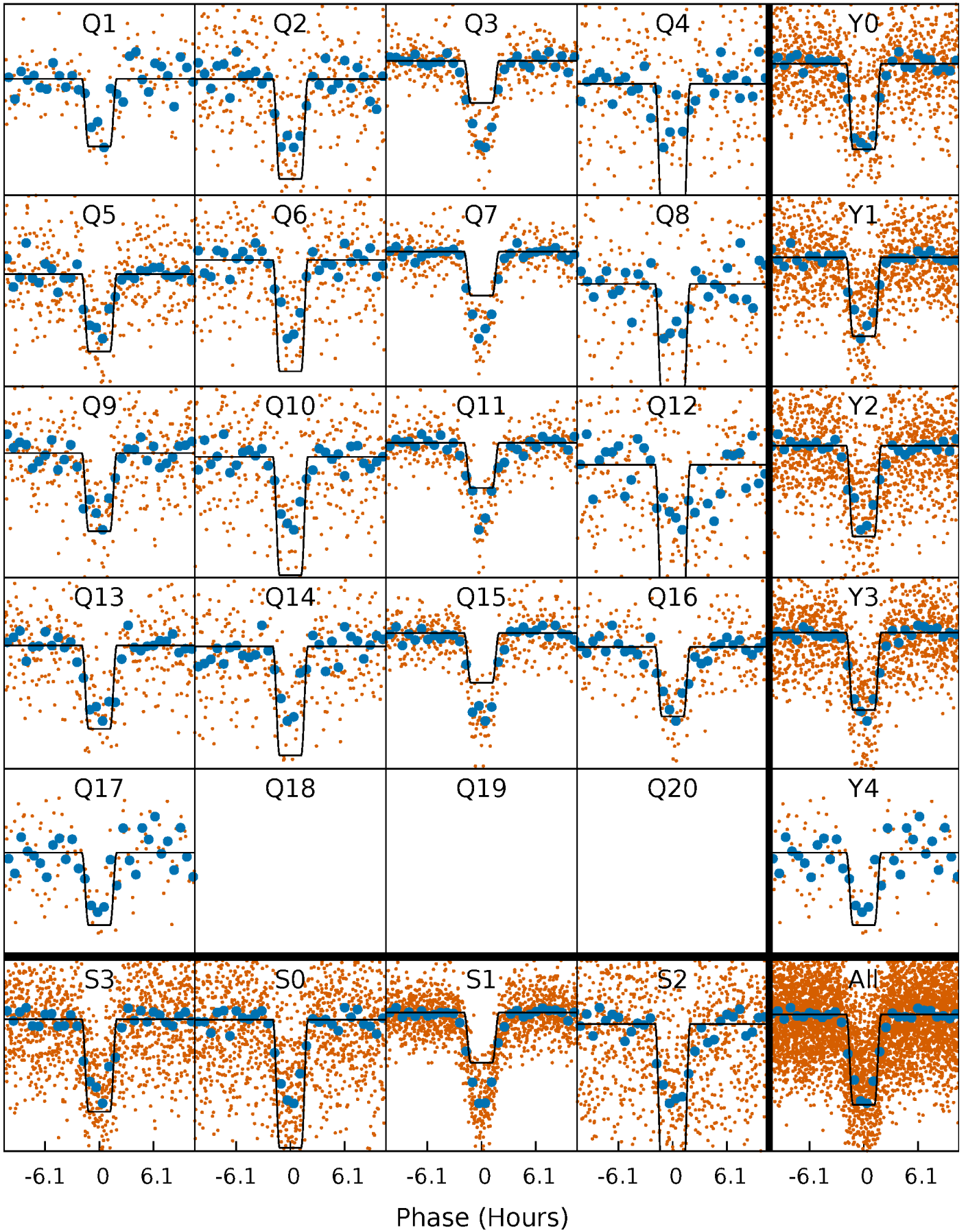
DV Quarter-Phased Transit Curves

TCE 008621348-01 P= 11.344398 Days $T_0=138.809874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

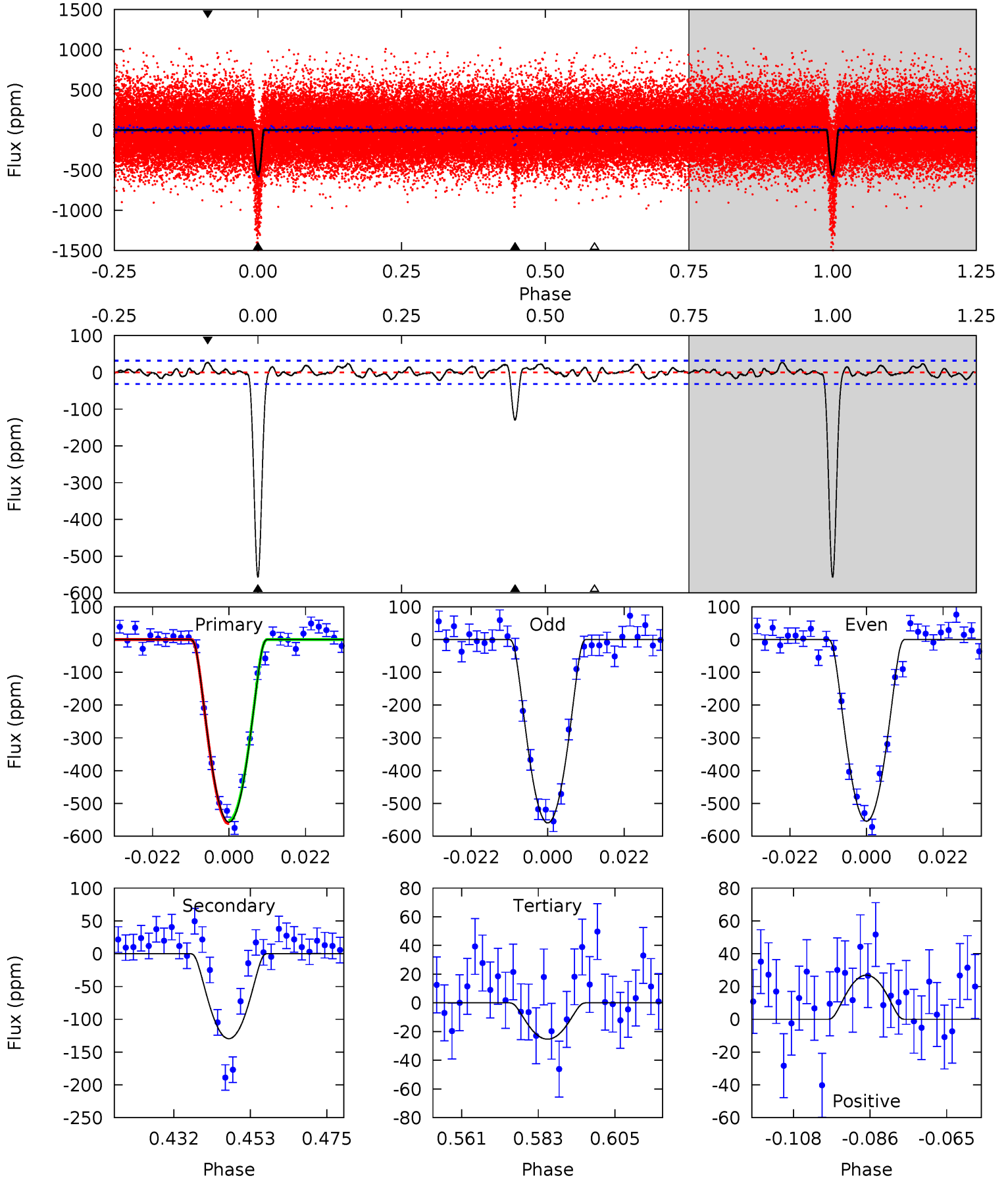
TCE 008621348-01 P= 11.344360 Days $T_0=138.811943$ (BKJD)



DV Model-Shift Uniqueness Test

008621348-01, P = 11.344398 Days, E = 127.465476 Days

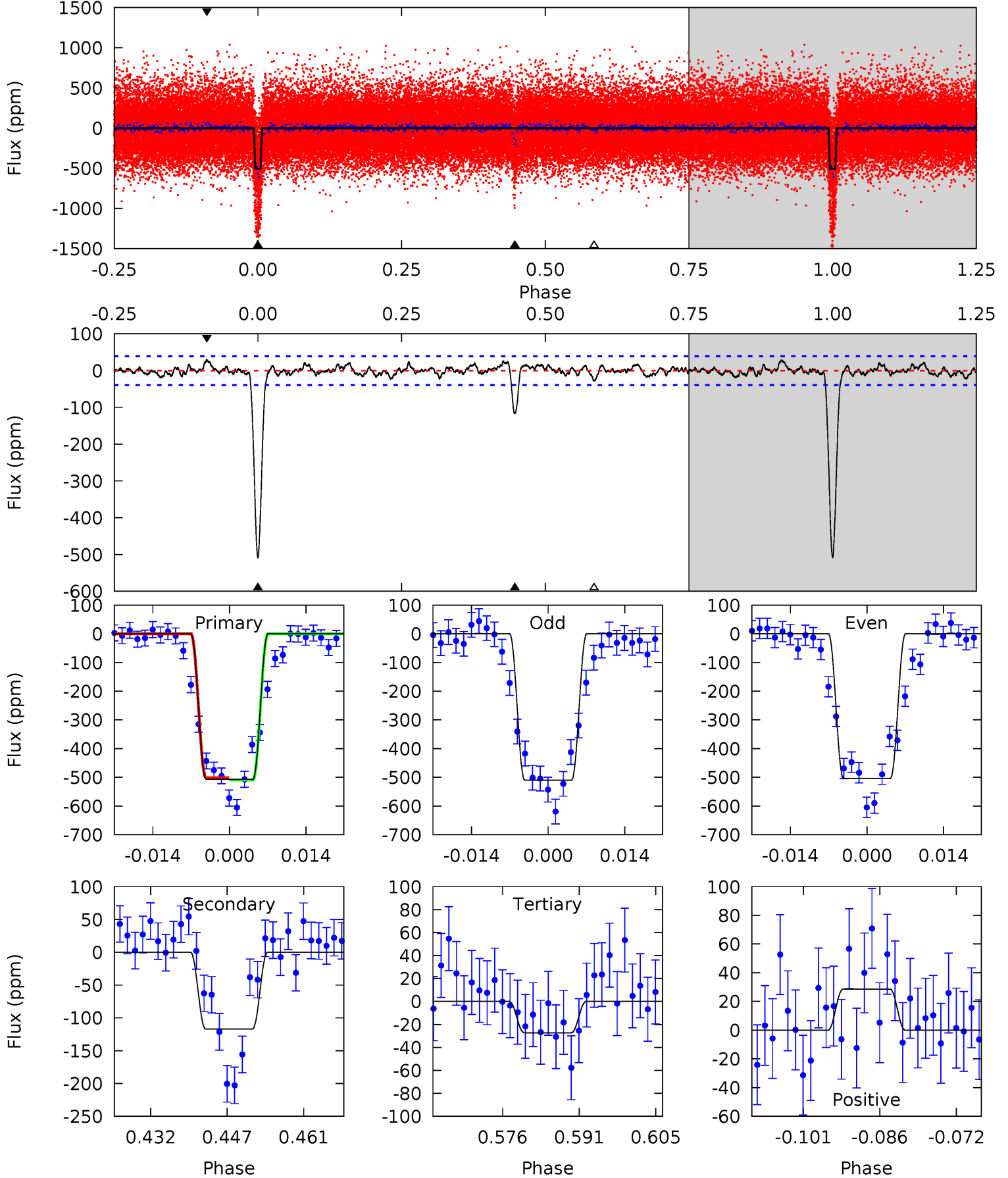
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.7	19.9	3.89	4.14	4.88	2.30	1.45	81.8	81.5	16.0	15.8	0.39	1.17	0.05	0.70



Alt Model-Shift Uniqueness Test

008621348-01, P = 11.344360 Days, E = 127.467583 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.1	14.8	3.44	3.62	4.96	2.45	1.16	60.6	60.5	11.3	11.2	0.38	1.23	0.05	0.51



Stellar Parameters For KIC 008621348

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5594^{+169}_{-152}	$4.602^{+0.034}_{-0.145}$	$-0.420^{+0.300}_{-0.300}$	$0.752^{+0.158}_{-0.056}$	$0.841^{+0.080}_{-0.089}$	$2.783^{+0.415}_{-1.132}$
	+3%/-3%	+1%/-3%	+71%/-71%	+21%/-7%	+10%/-11%	+15%/-41%
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 008621348-01 / KOI 0461.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-130 ± 7	$2.92^{+1.07}_{-1.09}$	1003^{+50}_{-40}	3651^{+634}_{-345}	71^{+110}_{-33}
Alt.	-117 ± 8	$2.18^{+1.10}_{-1.07}$	1001^{+51}_{-41}	3969^{+1150}_{-505}	118^{+315}_{-67}

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

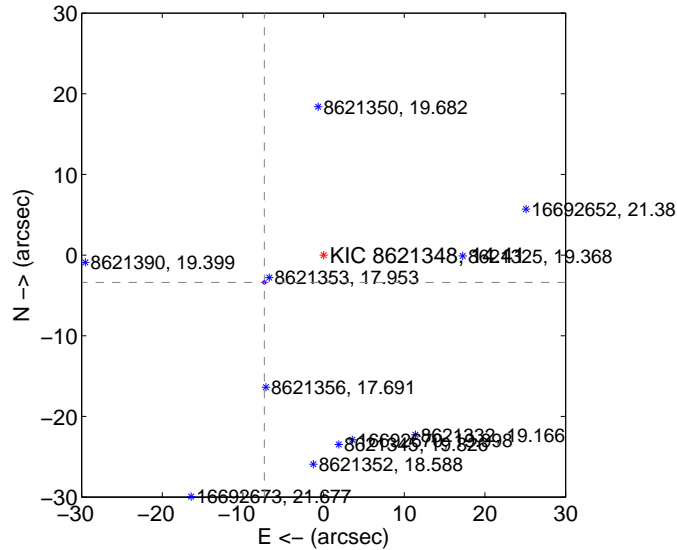
Supplemental centroid analysis for 008621348-01. Kepler magnitude: 14.41. Transit SNR 45.39

There are 4 quarters with good PRF difference image offsets

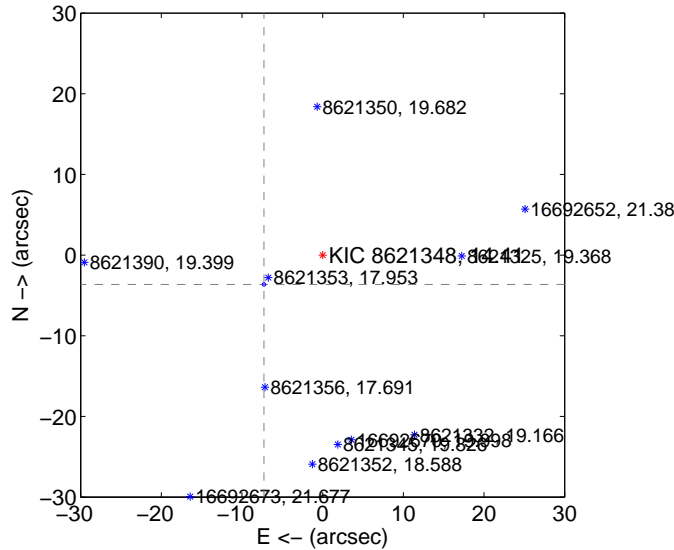
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.089 \pm 0.067	120.63	7.347 \pm 0.067	-3.383 \pm 0.067
PRF-fit source offset from KIC position	8.133 \pm 0.070	116.04	7.271 \pm 0.070	-3.643 \pm 0.071
photometric centroid source offset	57.97 \pm 0.30	194.33	53.06 \pm 0.30	-23.35 \pm 0.30

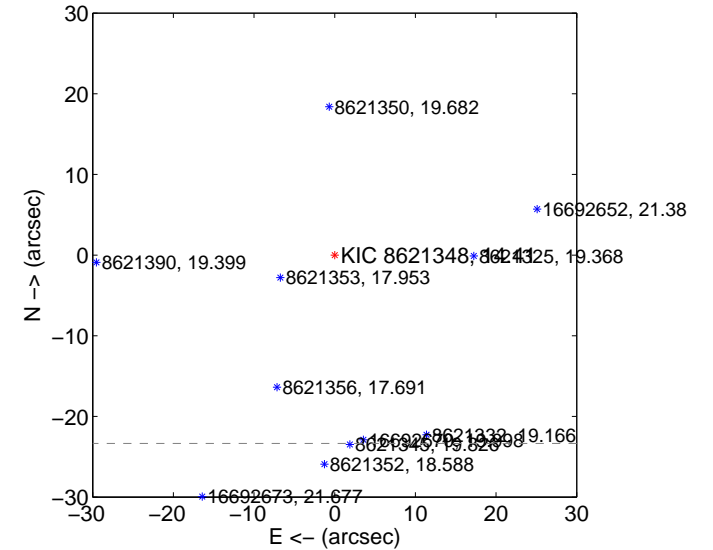
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

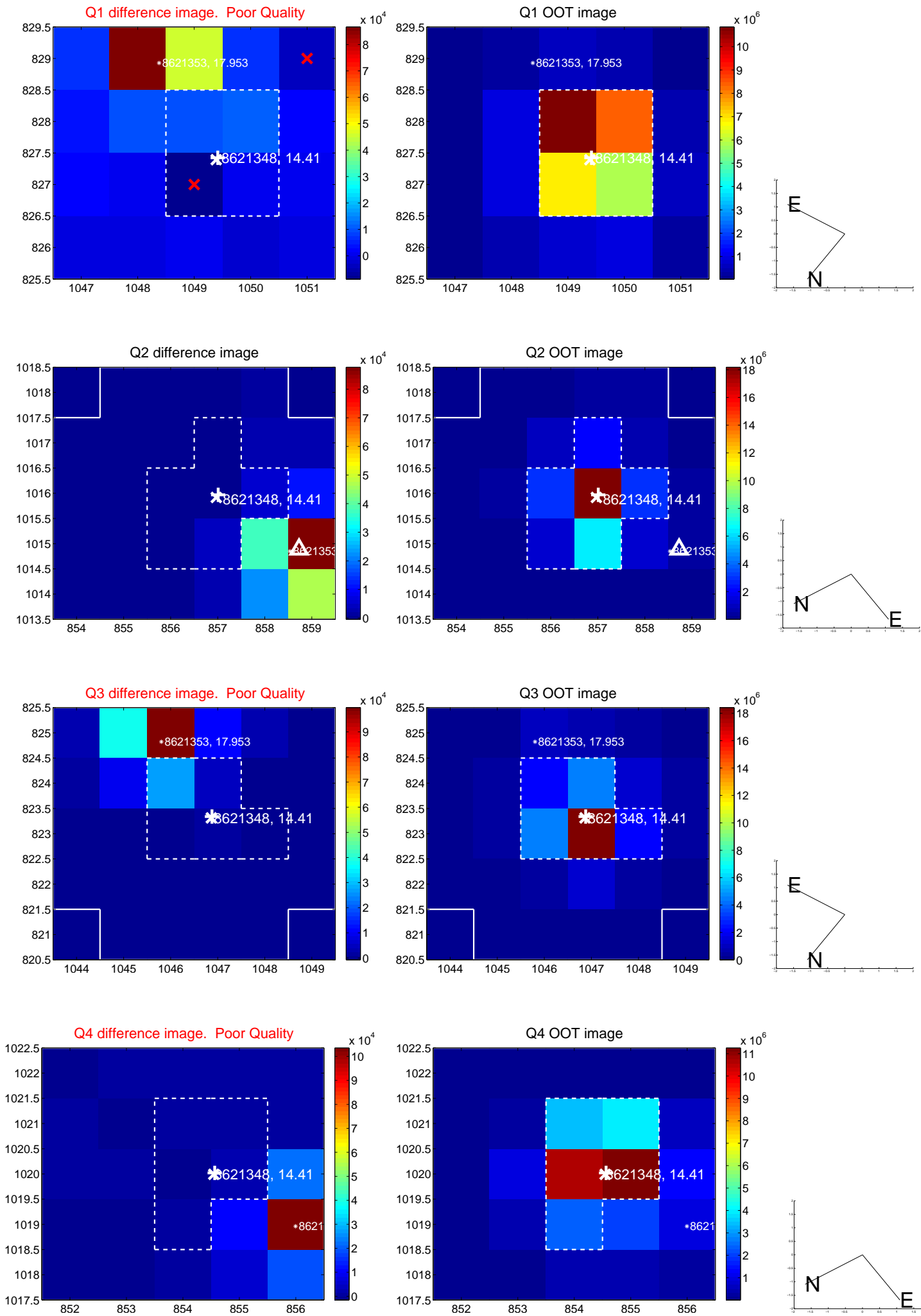


offset from photometric centroids

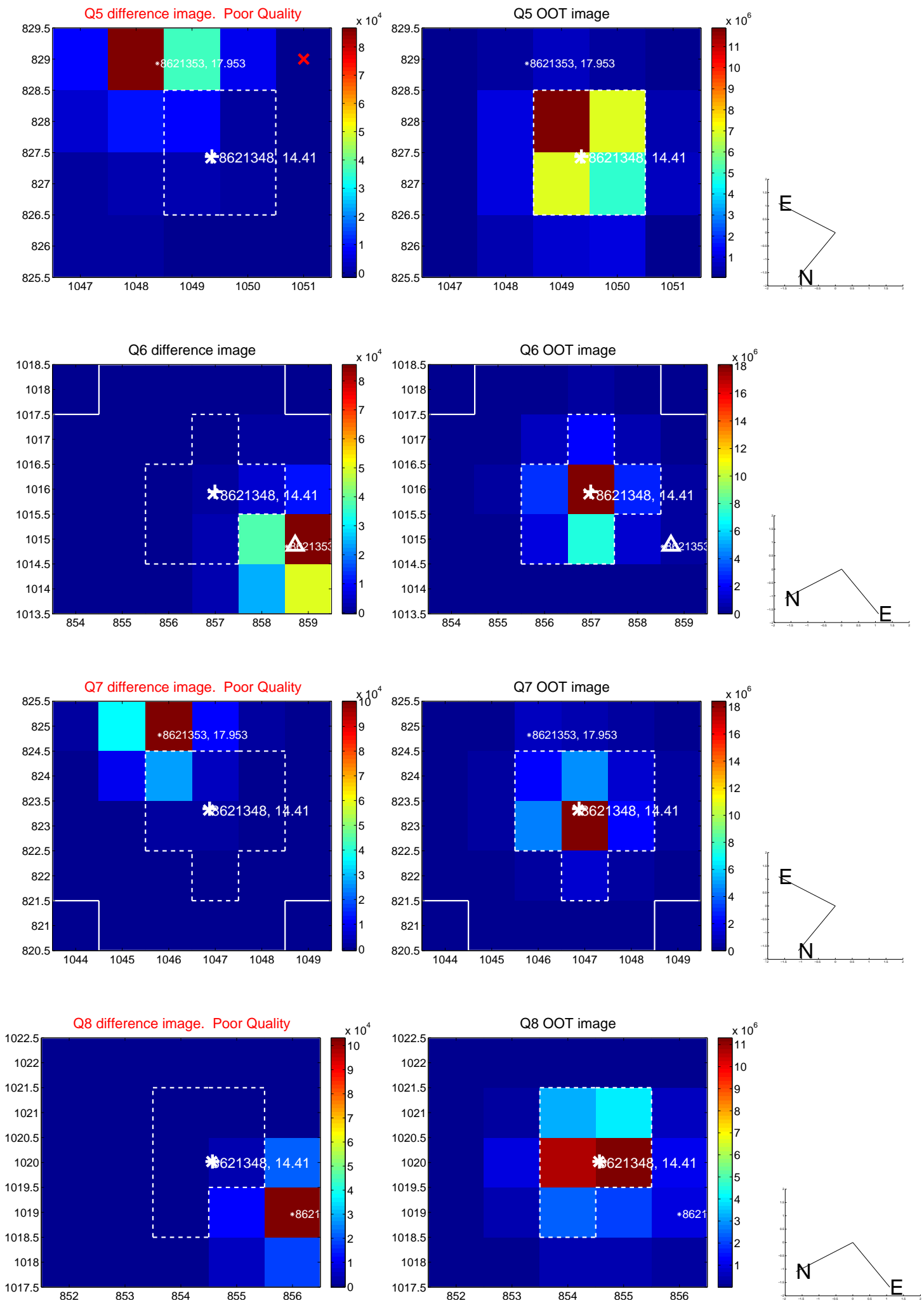


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

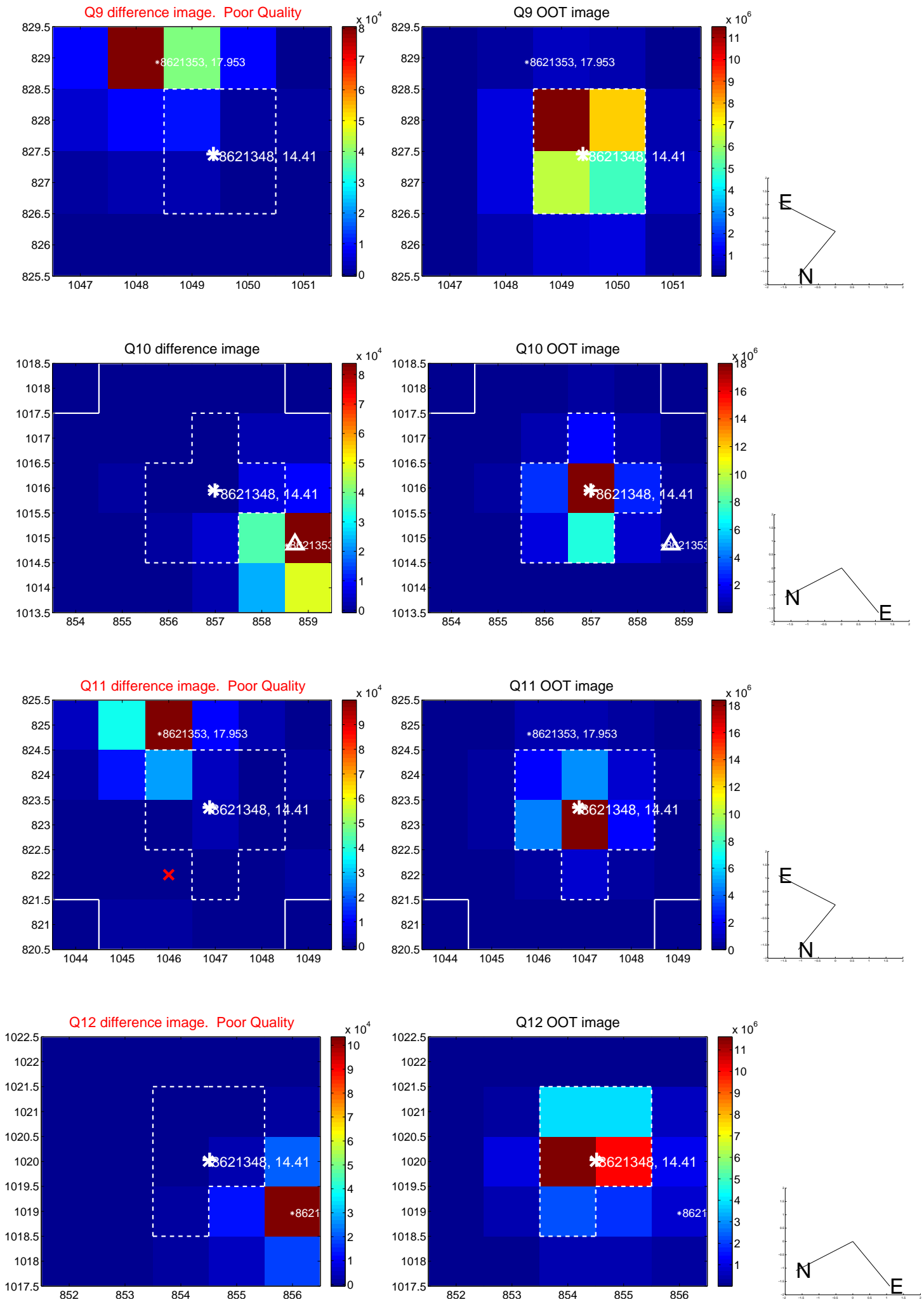
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



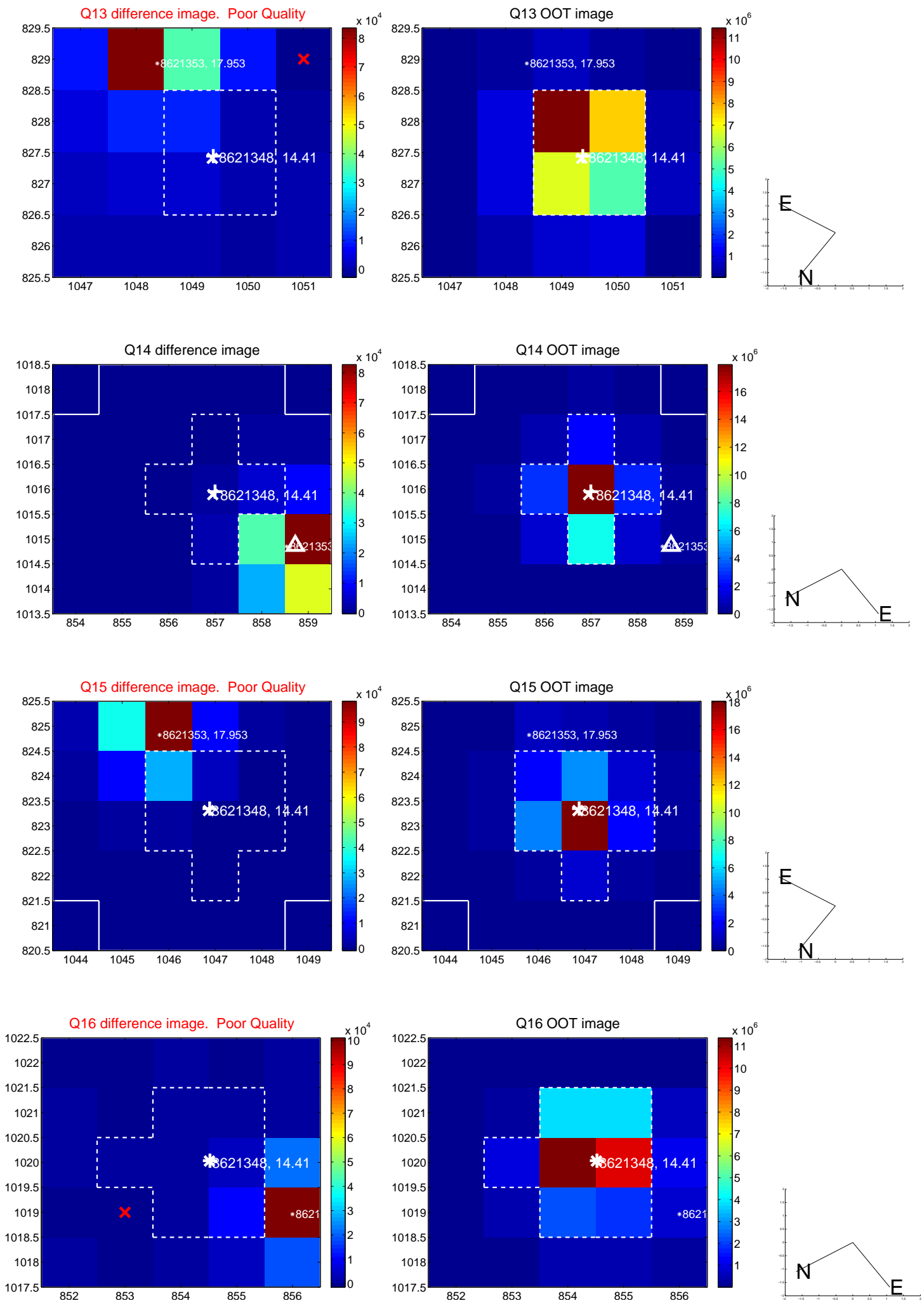
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



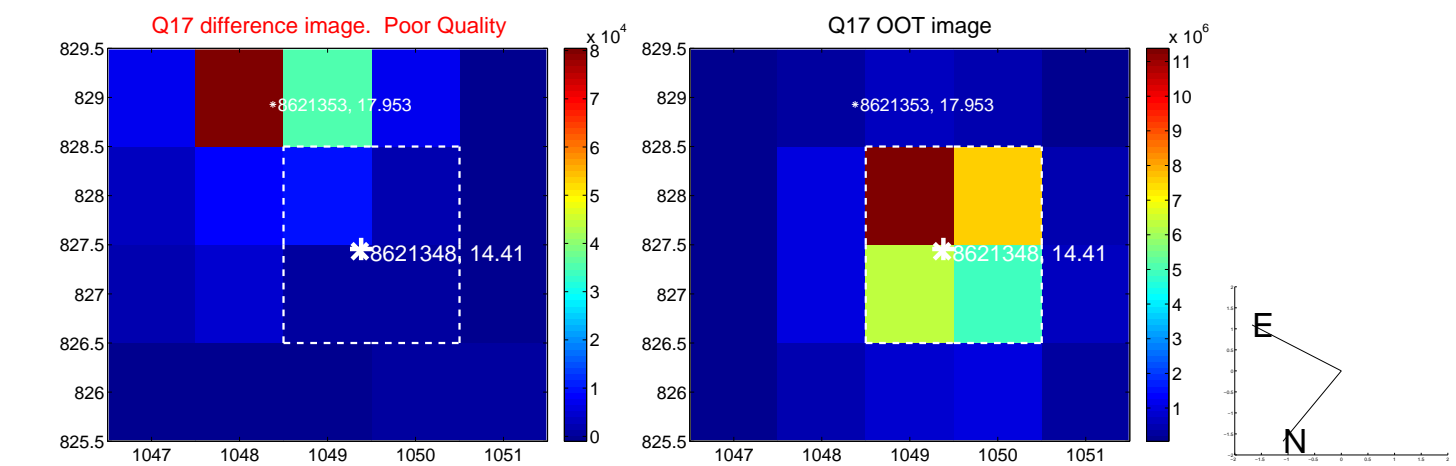
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



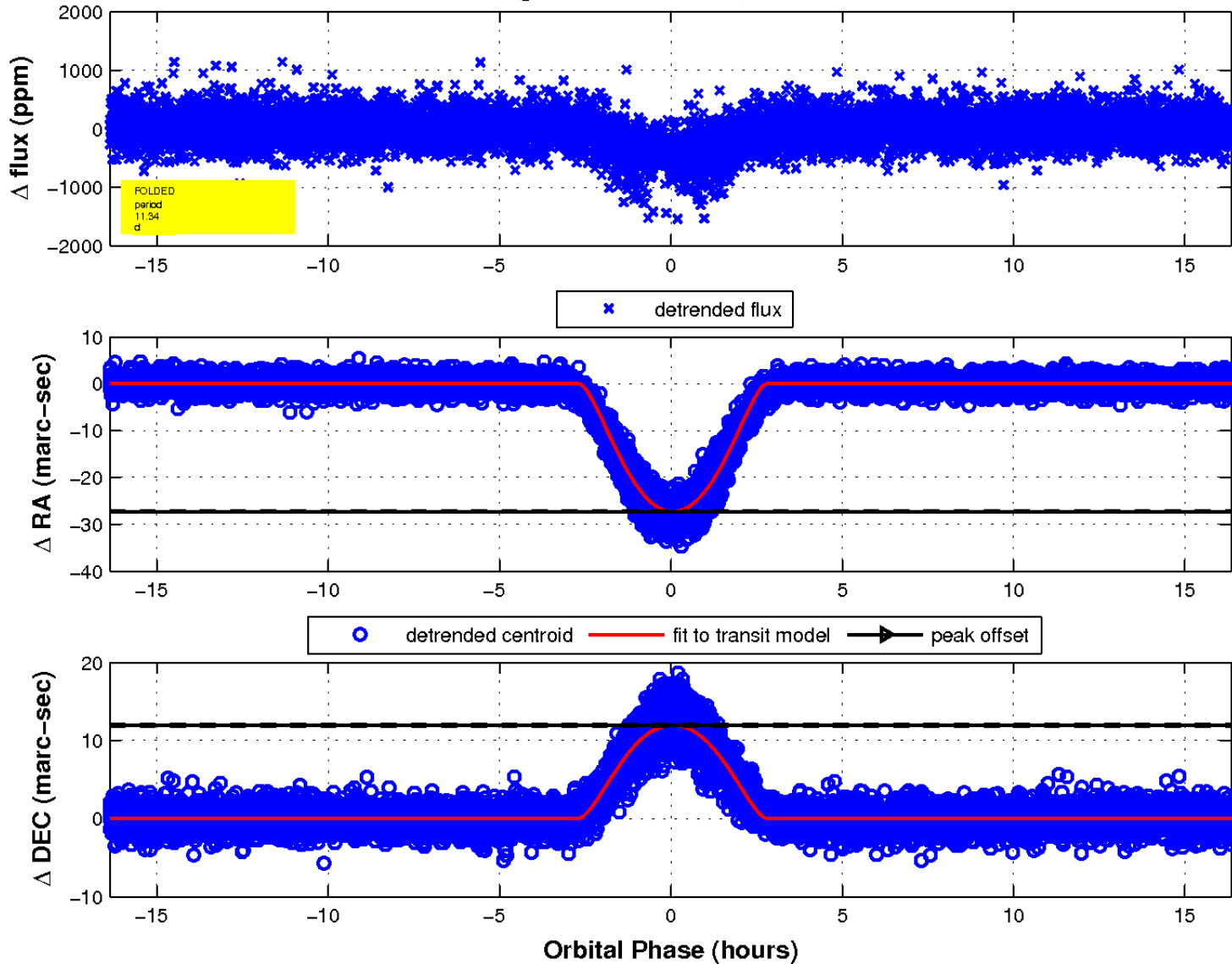
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

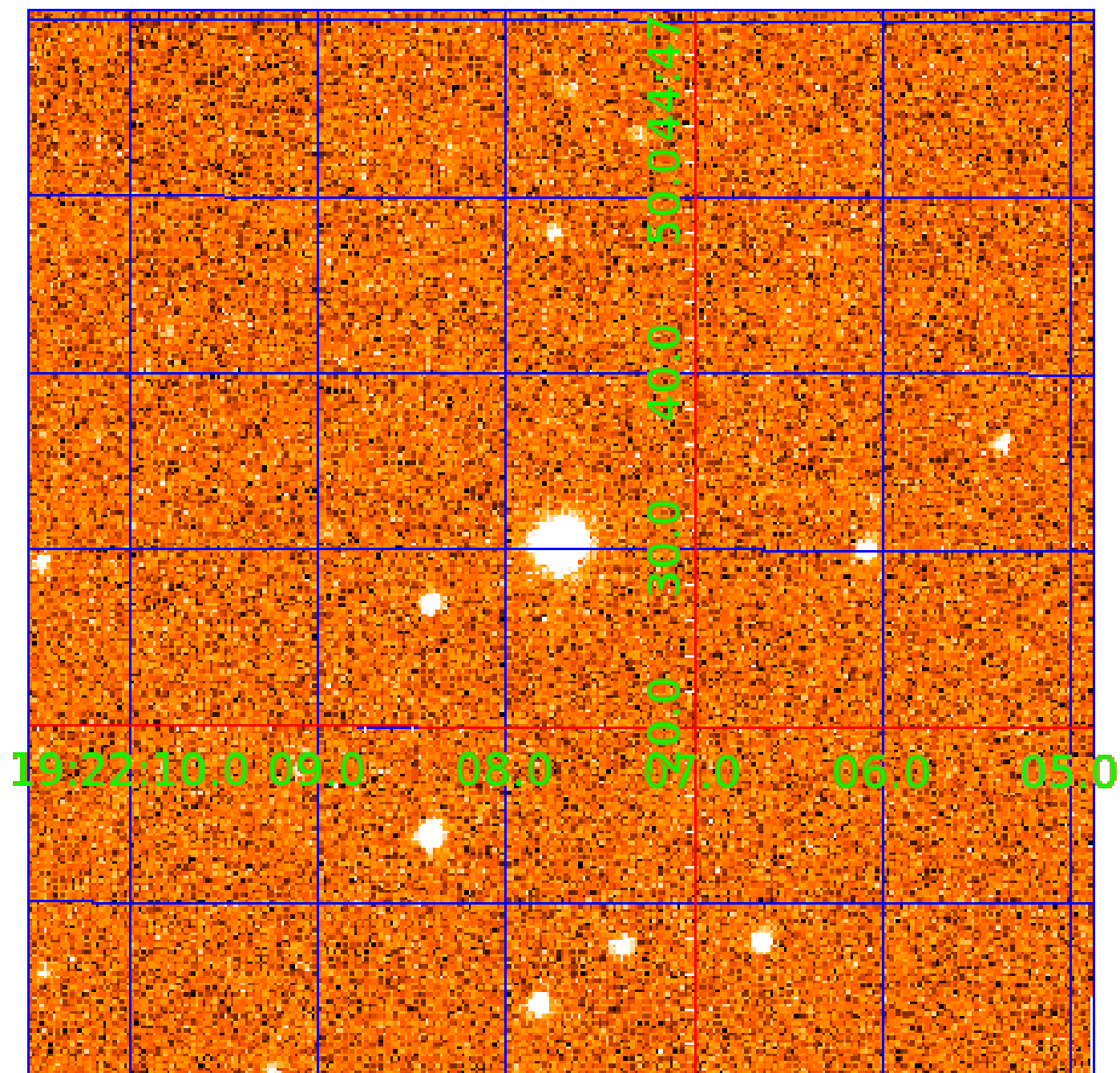


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008621348

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})
008621348-01	OBS	0461.01	11.344398	138.809874	514.4	5.455	50.7	45.4	0.75	5594	2.78	57.75
008621348-02	OBS	No	11.344075	132.563138	186.5	2.462	14.5	15.5	0.75	5594	1.21	57.75
008621348-03	OBS	No	380.514857	138.546027	260.7	21.797	8.1	6.9	0.75	5594	2.45	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008621348-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008621348-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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 008621348-02

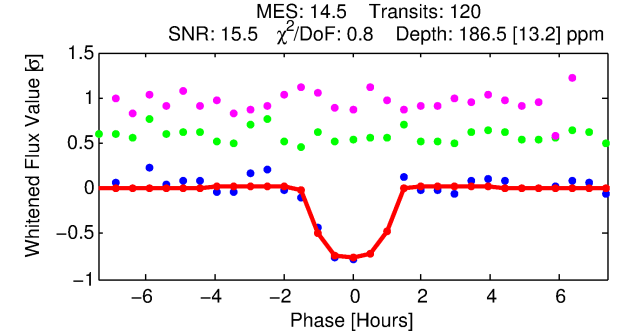
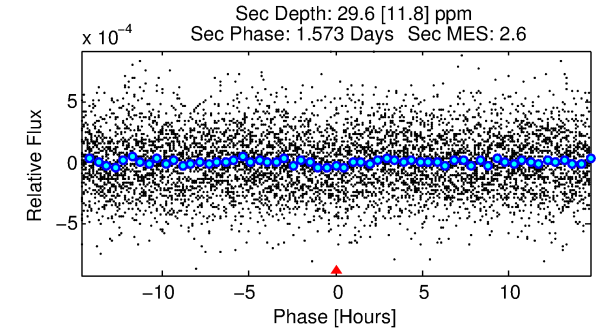
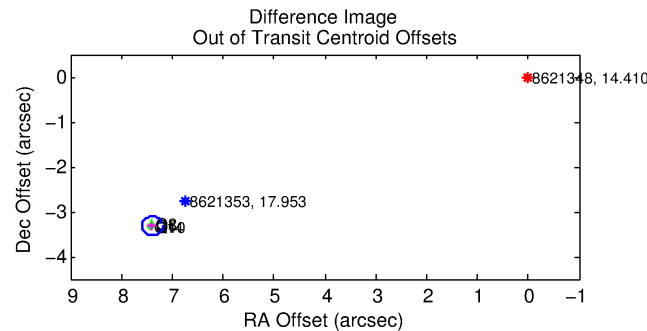
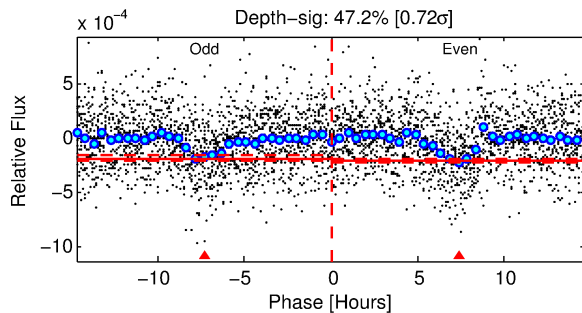
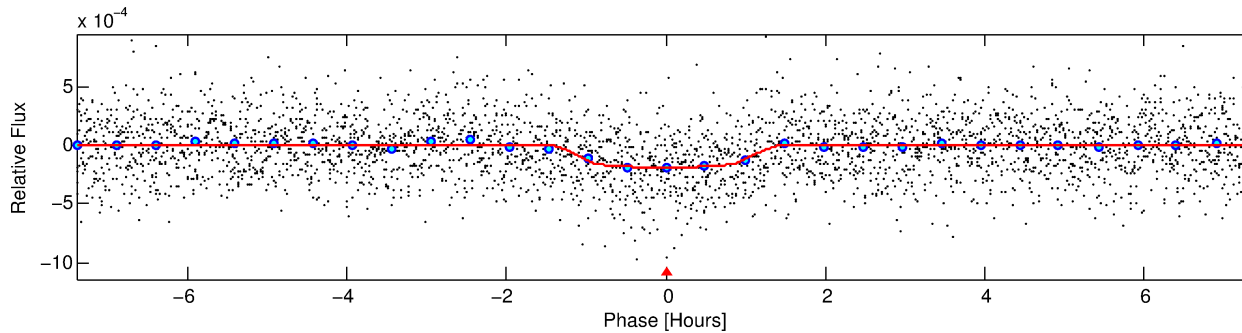
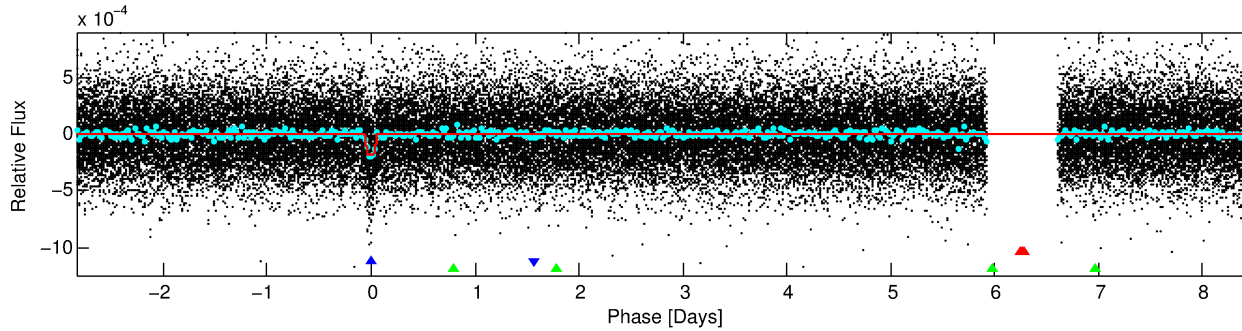
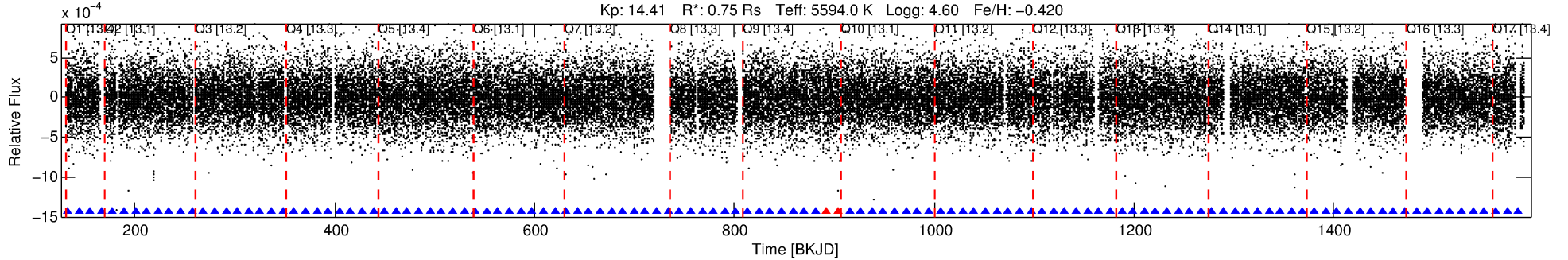
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
008621348-02	8621348	008621353-02	8621353	1:1	7.3	1	-2	17.95	14.41	407.14	Direct-PRF	0	1.00	0.81

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 8621348 Candidate: 2 of 3 Period: 11.344 d
KOI: K00461 Corr: No Ephemeris Match

Kp: 14.41 R*: 0.75 Rs Teff: 5594.0 K Logg: 4.60 Fe/H: -0.420



DV Fit Results:

Period = 11.34408 [0.00006] d
Epoch = 132.5631 [0.0039] BKJD
Rp/R* = 0.0147 [0.0075]
a/R* = 17.18 [41.30]
b = 0.89 [0.57]
Seff = 57.75 [16.71]
Teq = 703 [51] K
Rp = 1.21 [0.66] Re
a = 0.0927 [0.0166] AU
Ag = 95.72 [107.32] [0.88σ]
Teff = 3399 [932] K [2.89σ]

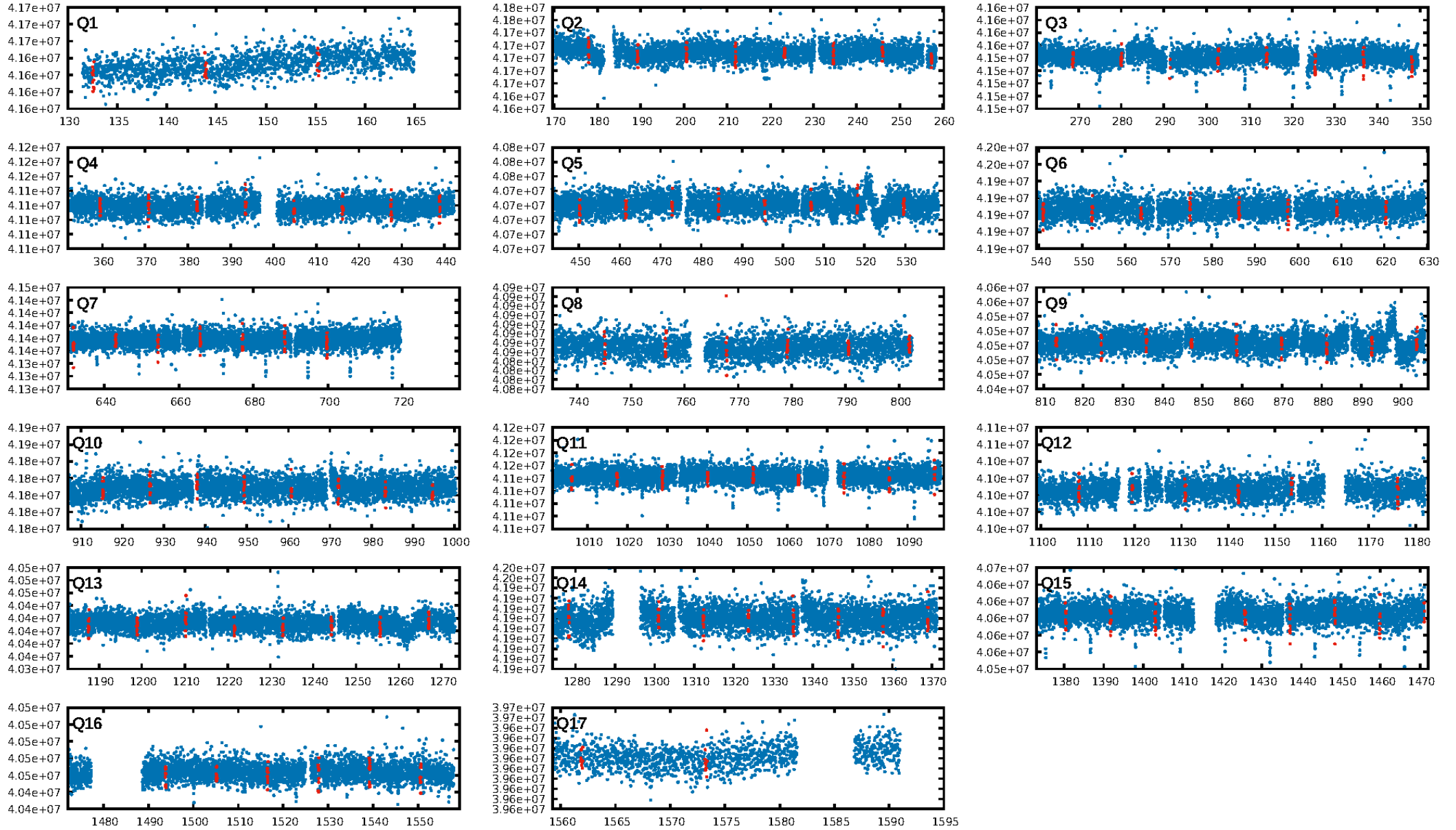
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: 88.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.43e-47
RollingBand-fgt: 0.98 [113/115]
GhostDiagnostic-chr: -0.2746
Centroid-sig: 0.0%
Centroid-so: 40.479 arcsec [43.35σ]
OotOffset-rm: 8.106 arcsec [116.80σ]
KicOffset-rm: 8.134 arcsec [111.87σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

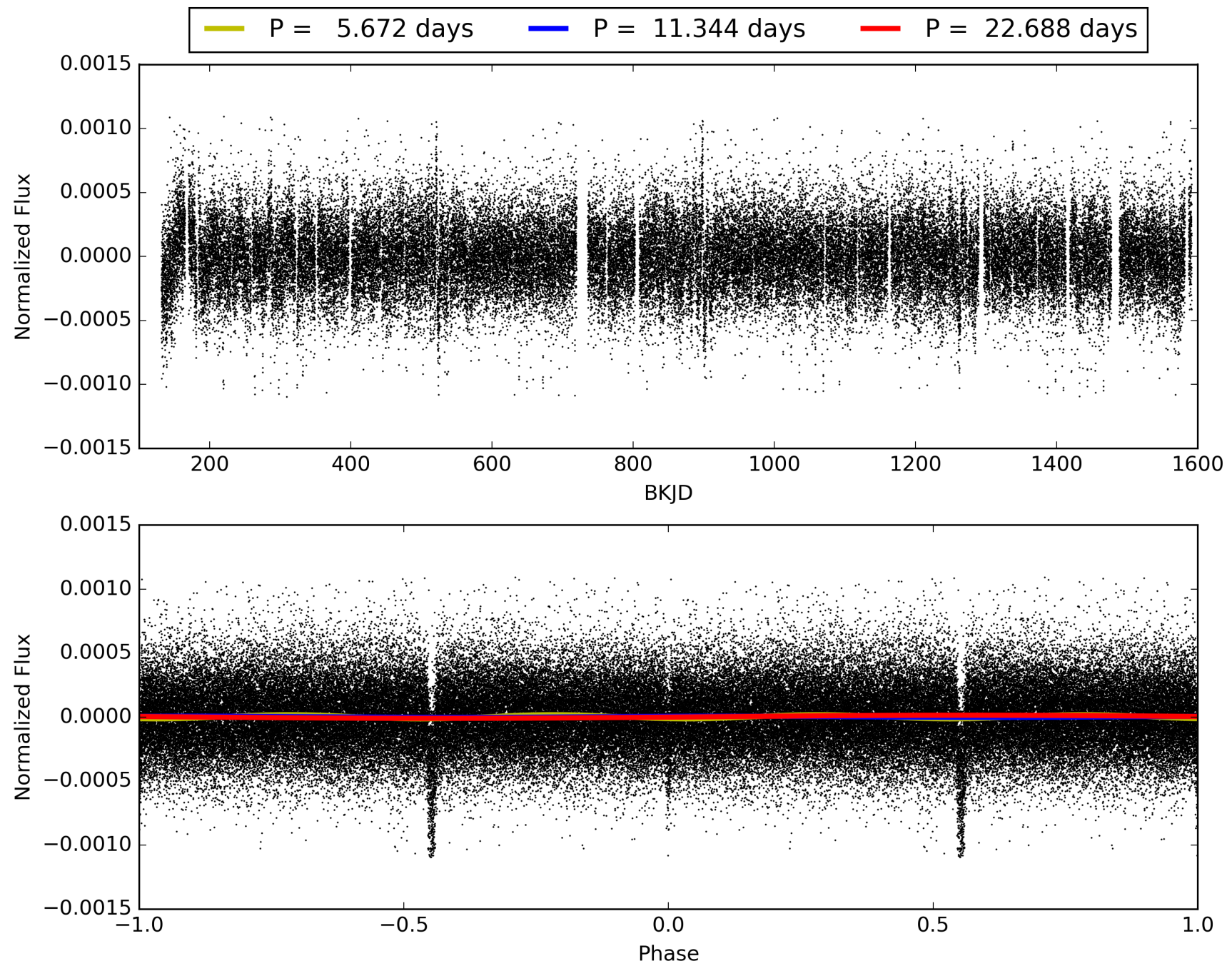
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:26:02 Z

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

TCE 008621348-02, PDC Light Curves

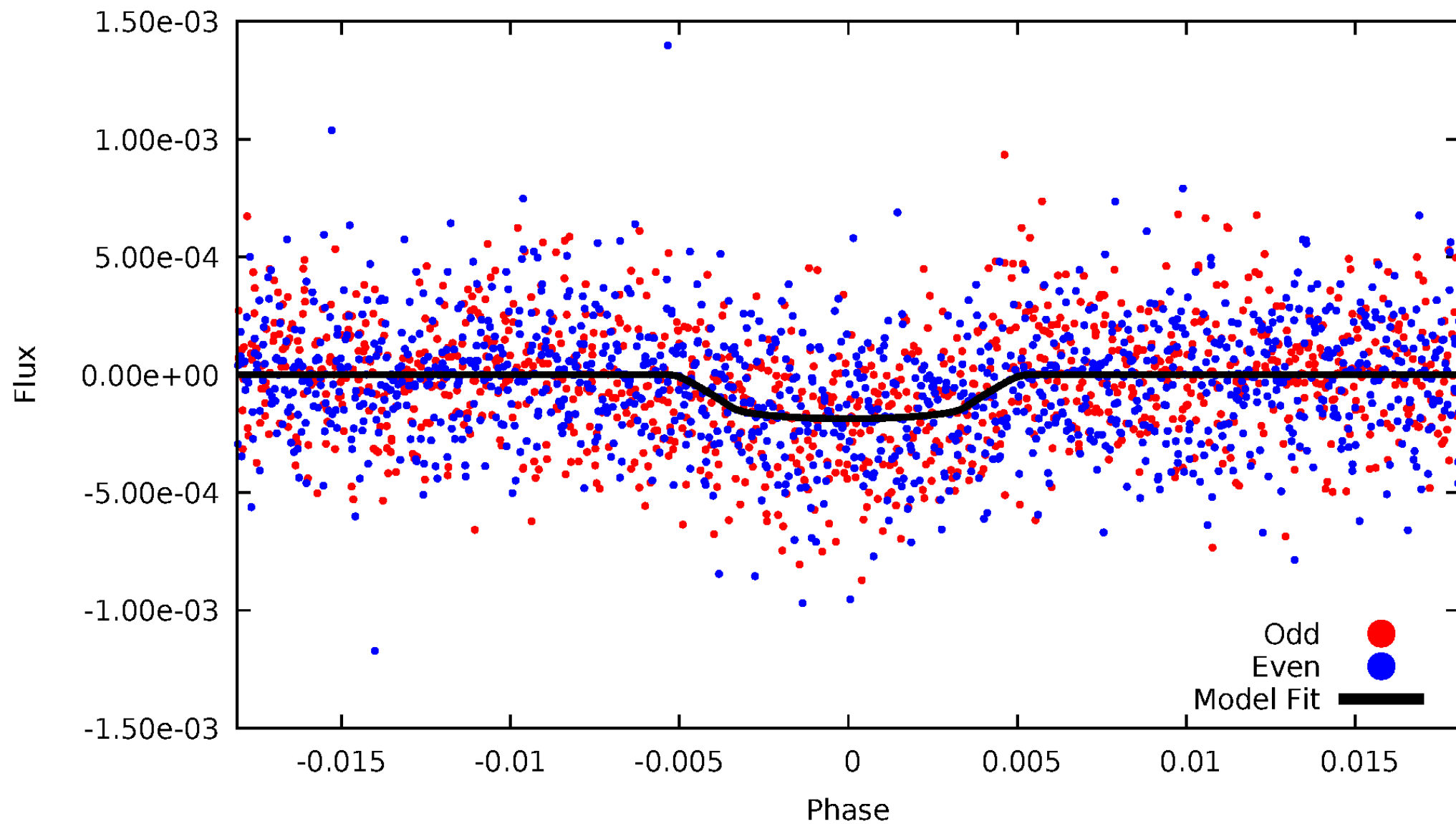


TCE 008621348-02



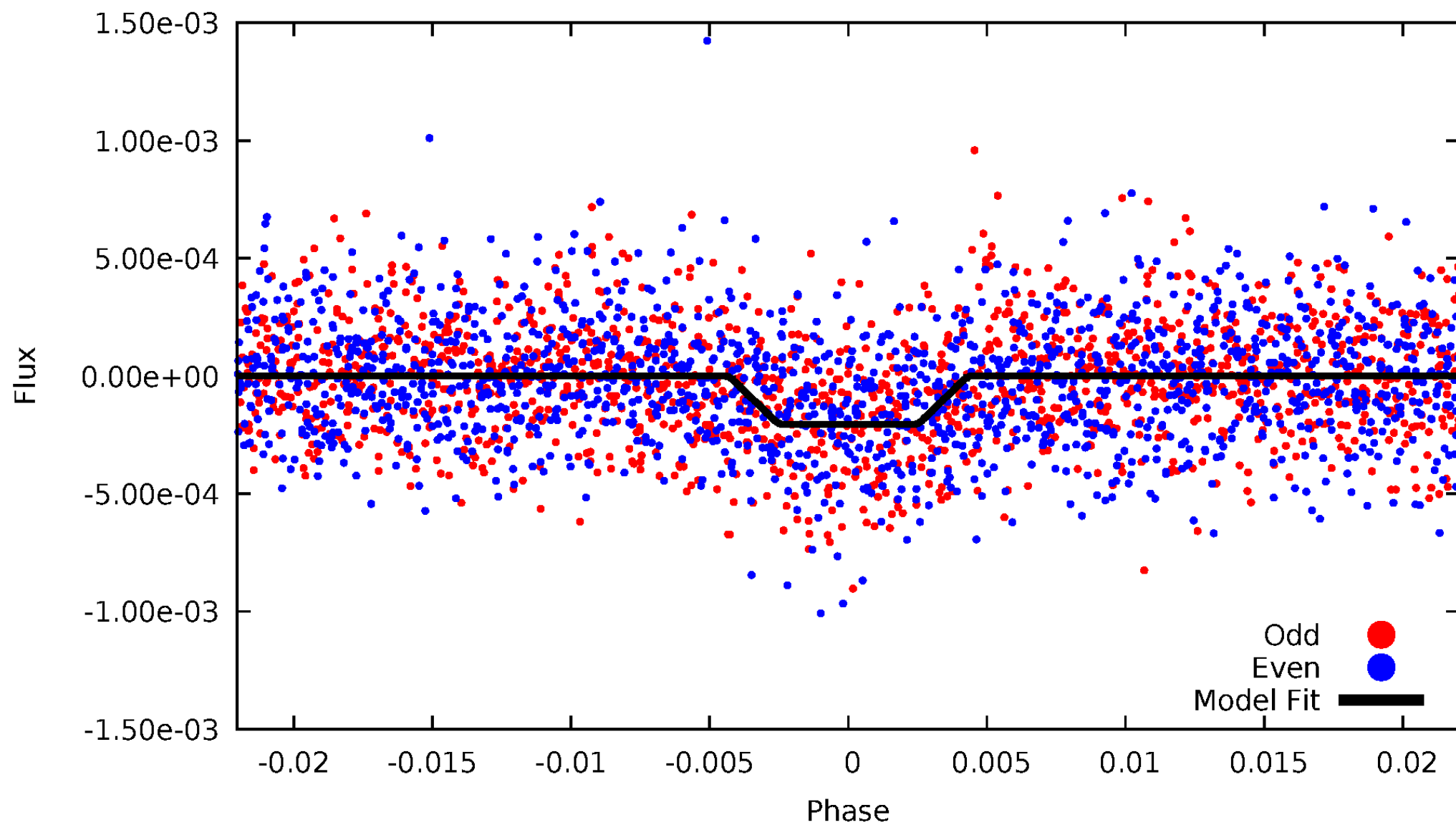
DV Odd/Even

TCE 008621348-02



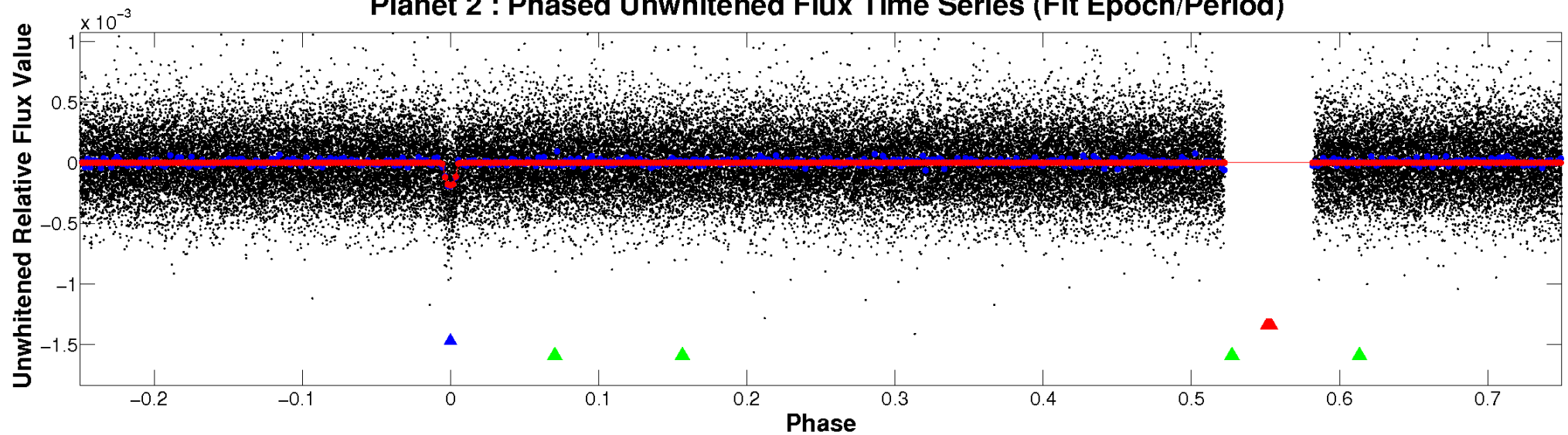
ALT Odd/Even

TCE 008621348-02

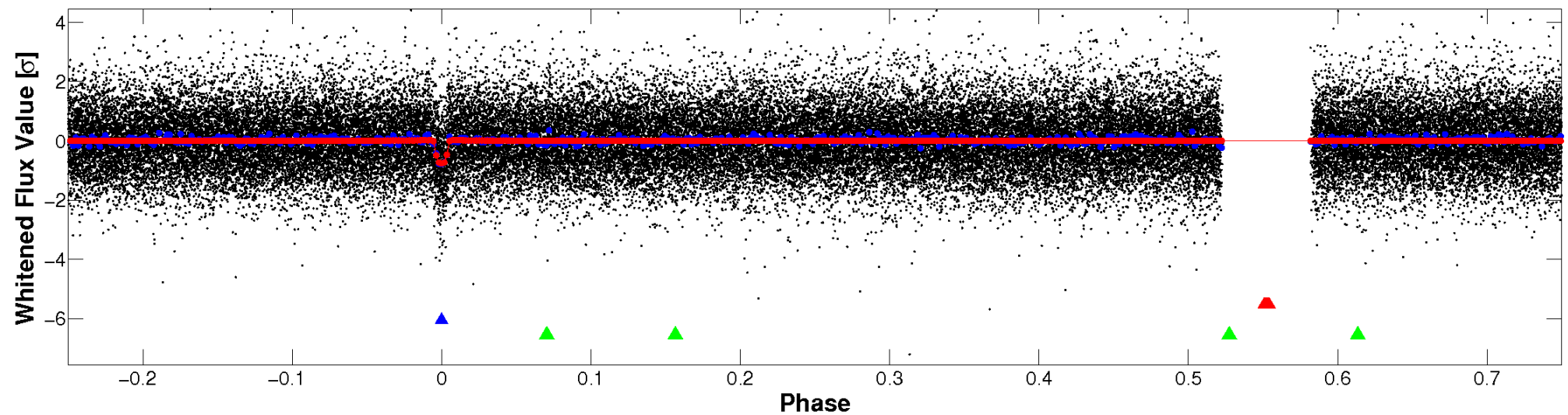


Non-Whitened Vs. Whitened Light Curve

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

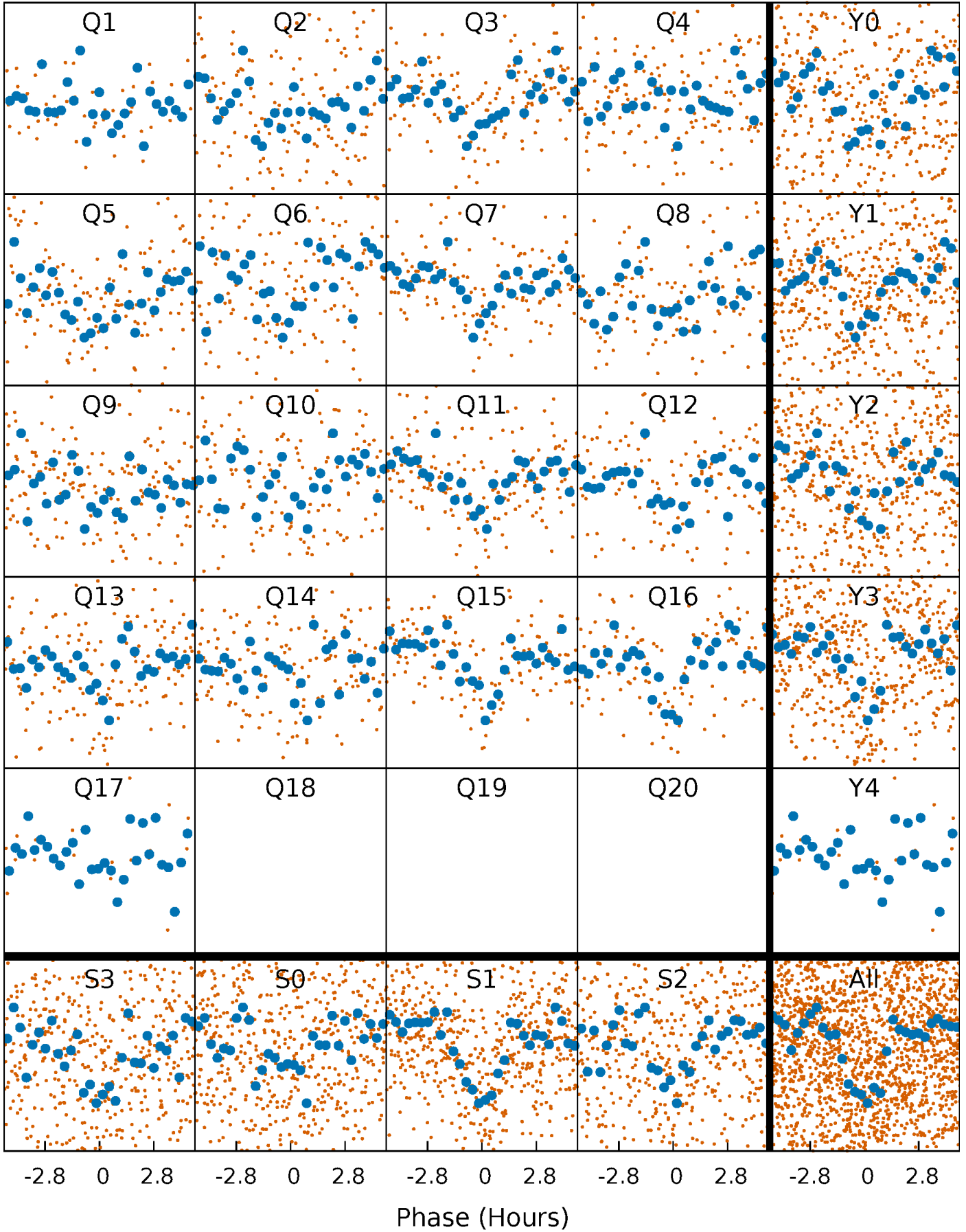


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



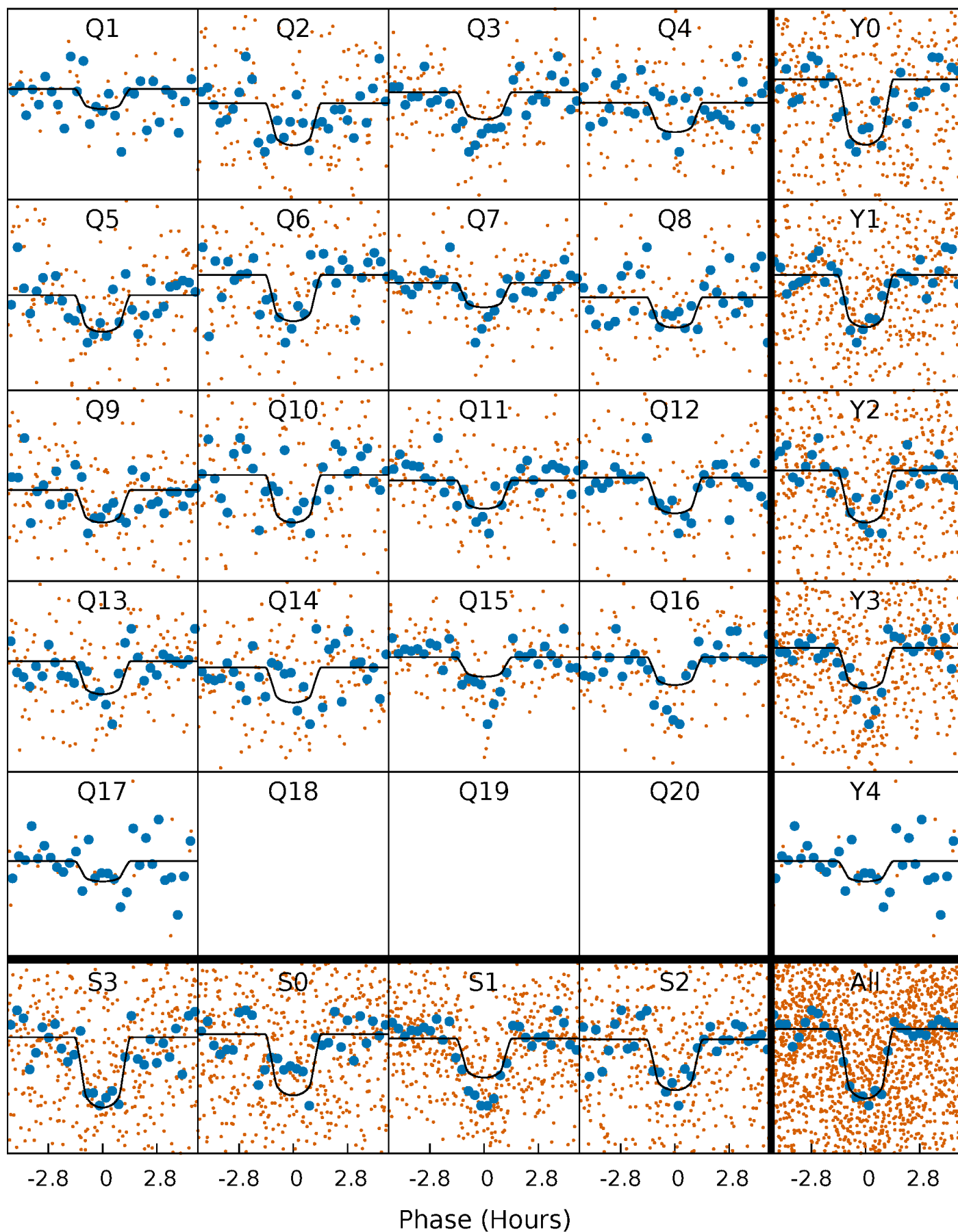
PDC Quarter-Phased Transit Curves

TCE 008621348-02 P= 11.344075 Days $T_0=132.563138$ (BKJD)



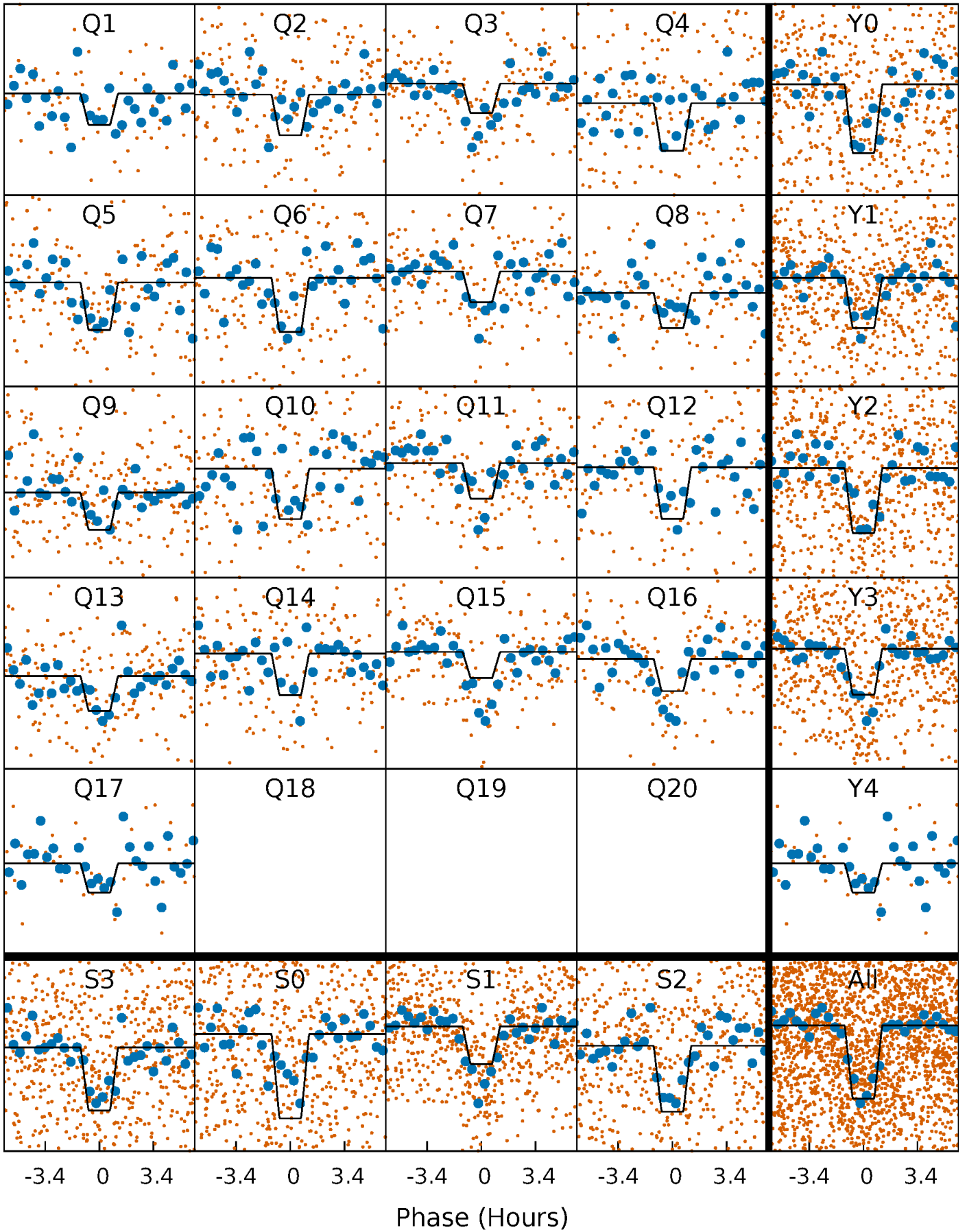
DV Quarter-Phased Transit Curves

TCE 008621348-02 P= 11.344075 Days $T_0=132.563138$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

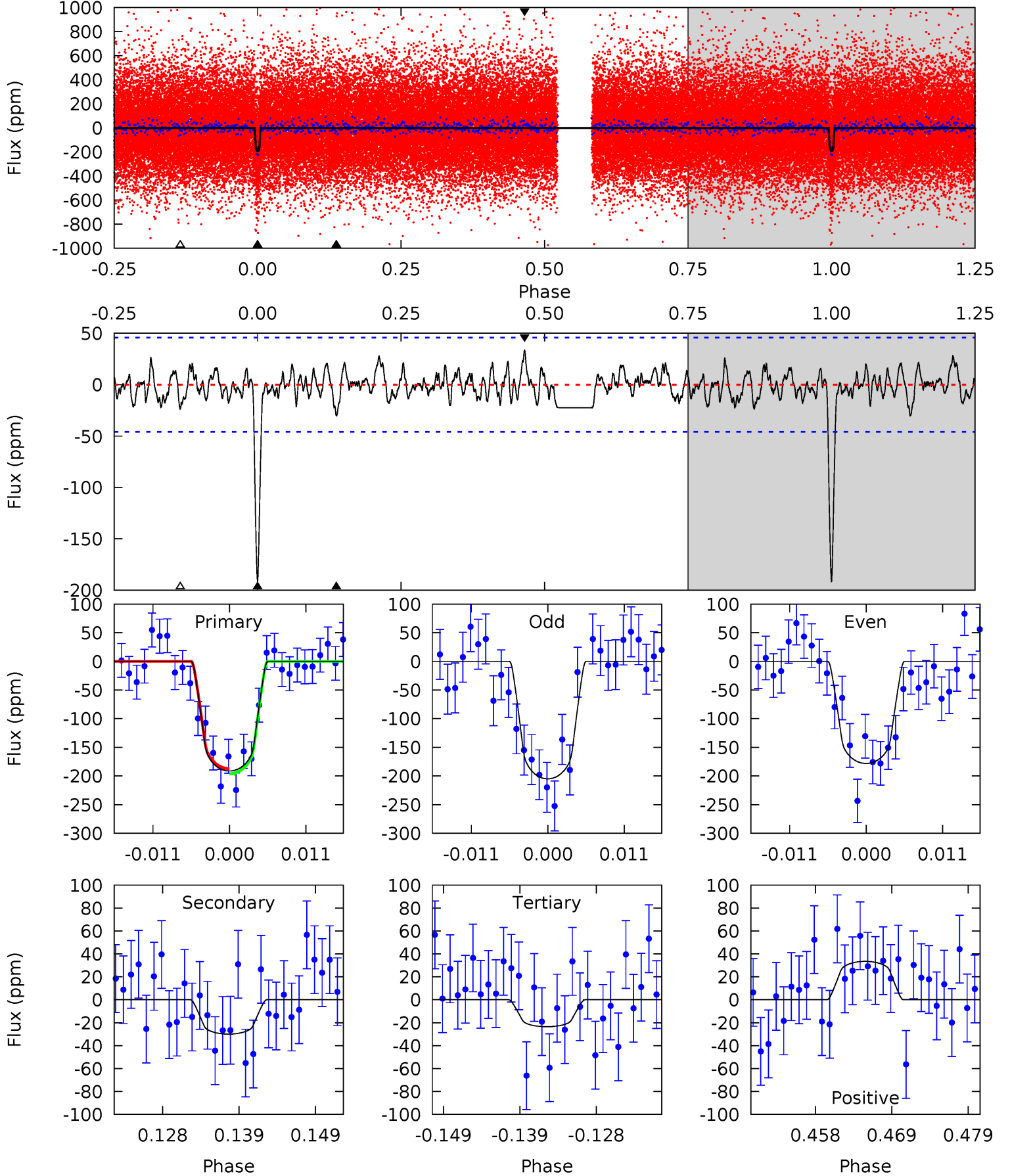
TCE 008621348-02 P= 11.344170 Days $T_0=132.554956$ (BKJD)



DV Model-Shift Uniqueness Test

008621348-02, P = 11.344075 Days, E = 121.219063 Days

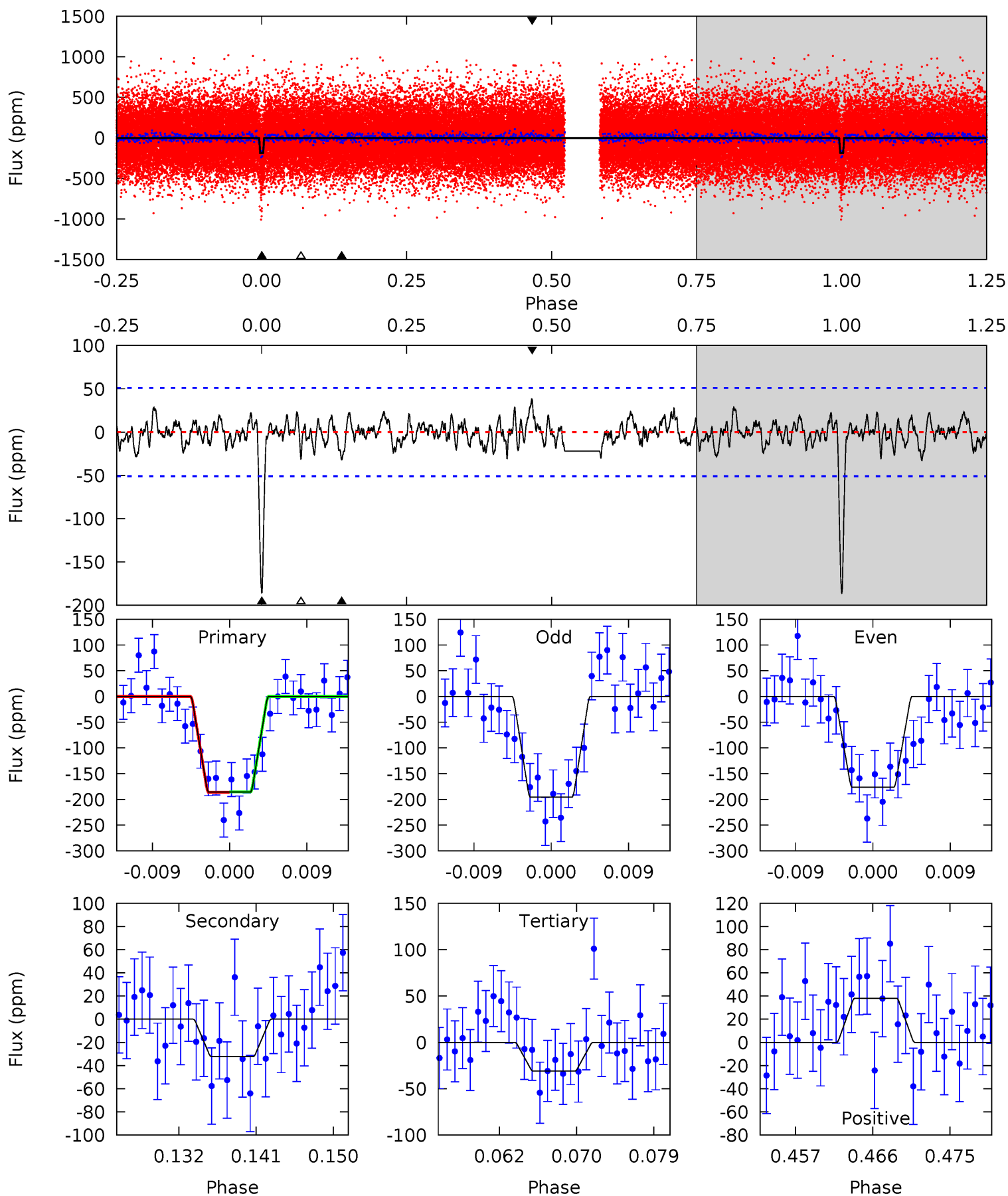
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	3.28	2.57	3.66	5.01	2.55	1.11	18.4	17.3	0.71	-0.38	1.47	1.07	0.15	0.48



Alt Model-Shift Uniqueness Test

008621348-02, P = 11.344170 Days, E = 121.210786 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	3.21	3.07	3.78	5.05	2.62	1.10	15.4	14.7	0.13	-0.57	0.96	1.08	0.17	0.05



Stellar Parameters For KIC 008621348

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5594^{+169}_{-152}	$4.602^{+0.034}_{-0.145}$	$-0.420^{+0.300}_{-0.300}$	$0.752^{+0.158}_{-0.056}$	$0.841^{+0.080}_{-0.089}$	$2.783^{+0.415}_{-1.132}$
	+3%/-3%	+1%/-3%	+71%/-71%	+21%/-7%	+10%/-11%	+15%/-41%
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 008621348-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 9	$1.29^{+0.65}_{-0.59}$	1006^{+58}_{-41}	3759^{+962}_{-494}	83^{+207}_{-50}
Alt.	-32 ± 10	$1.23^{+0.63}_{-0.60}$	1003^{+54}_{-40}	3853^{+1134}_{-532}	100^{+279}_{-61}

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

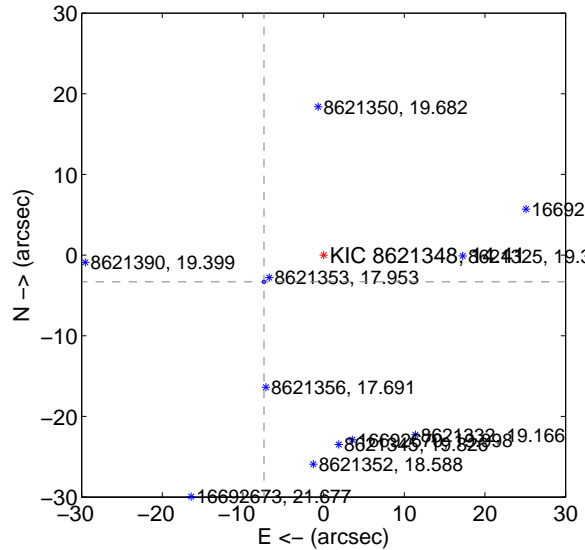
Supplemental centroid analysis for 008621348-02. Kepler magnitude: 14.41. Transit SNR 15.45

There are 4 quarters with good PRF difference image offsets

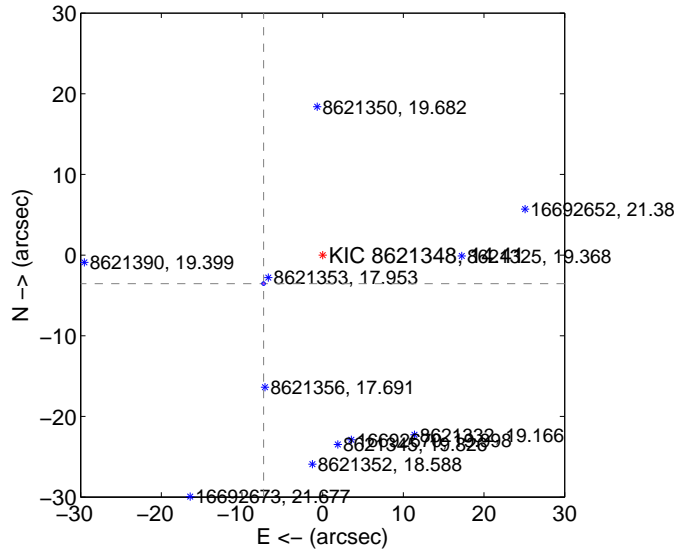
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.106 \pm 0.069	116.80	7.395 \pm 0.069	-3.322 \pm 0.070
PRF-fit source offset from KIC position	8.134 \pm 0.073	111.87	7.325 \pm 0.069	-3.536 \pm 0.086
photometric centroid source offset	40.48 \pm 0.93	43.35	36.94 \pm 0.93	-16.56 \pm 0.96

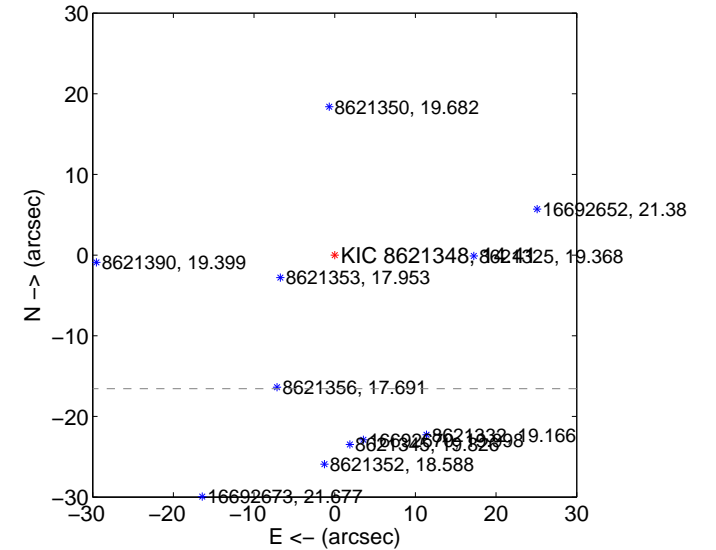
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

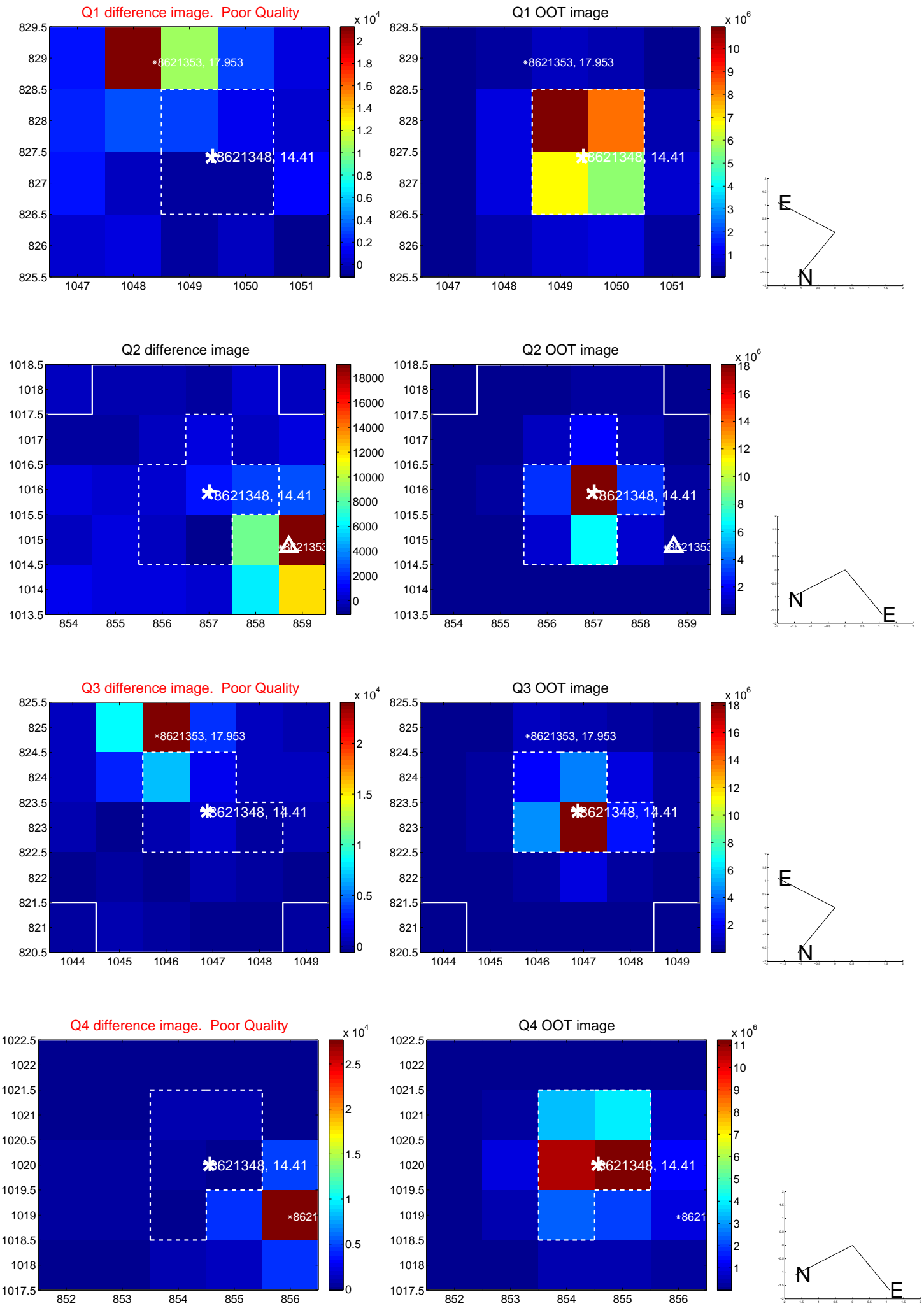


offset from photometric centroids

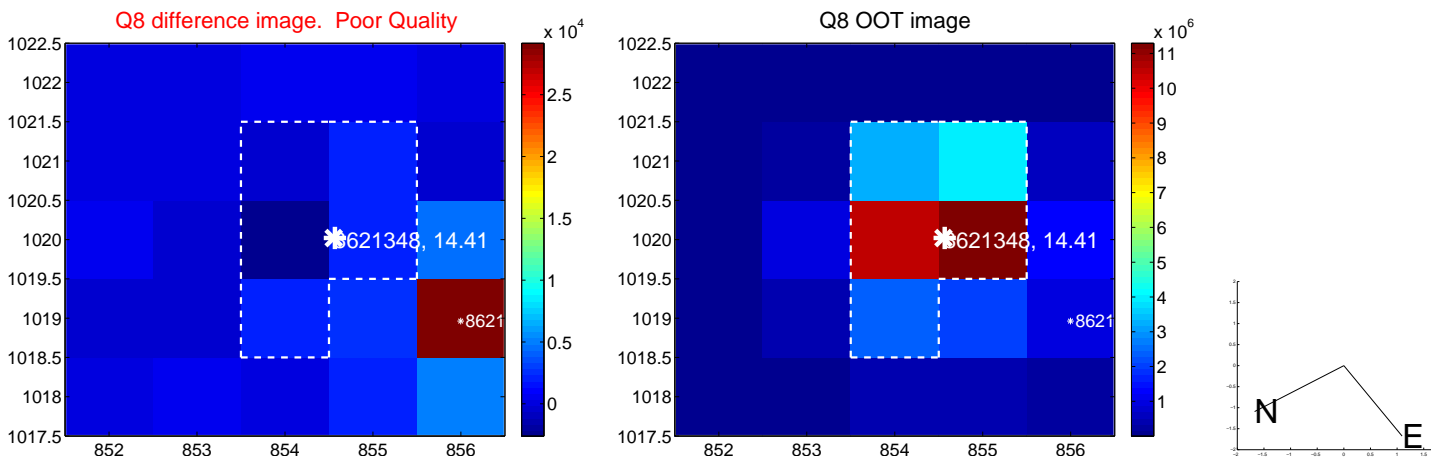
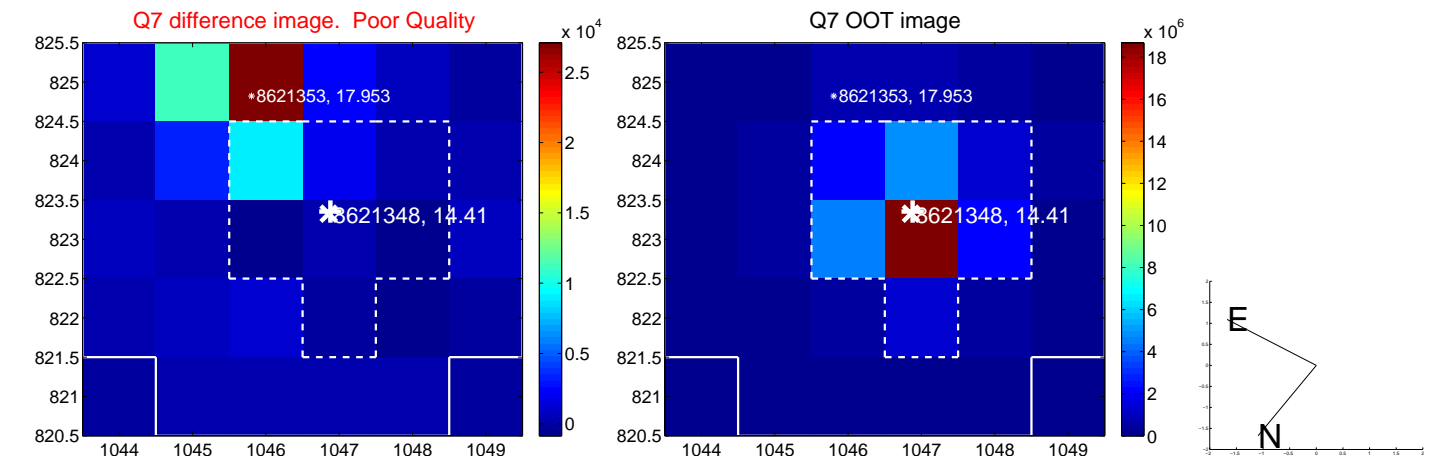
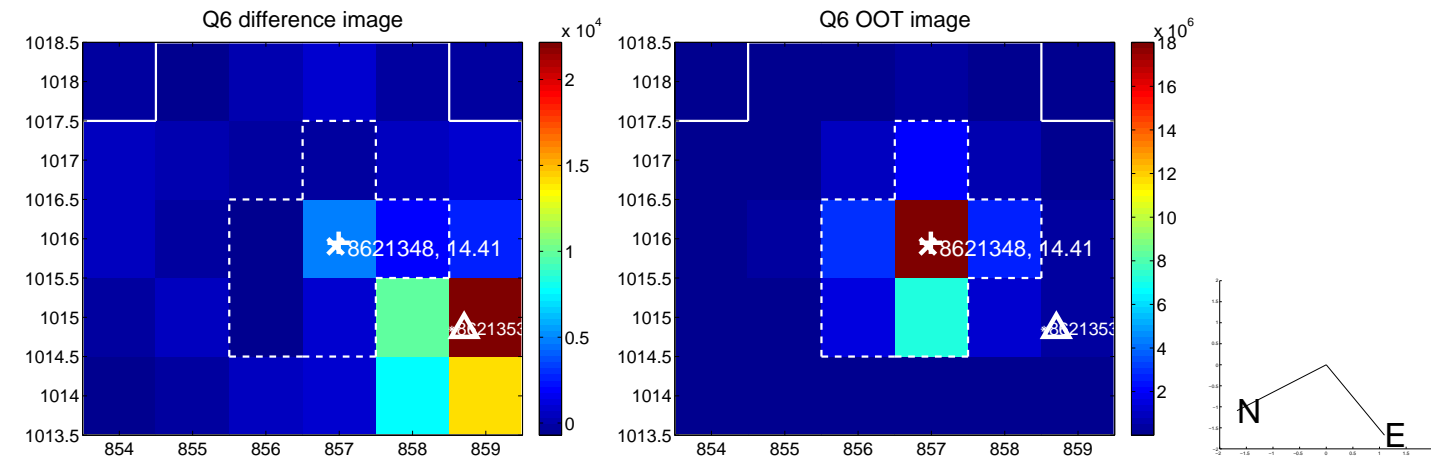
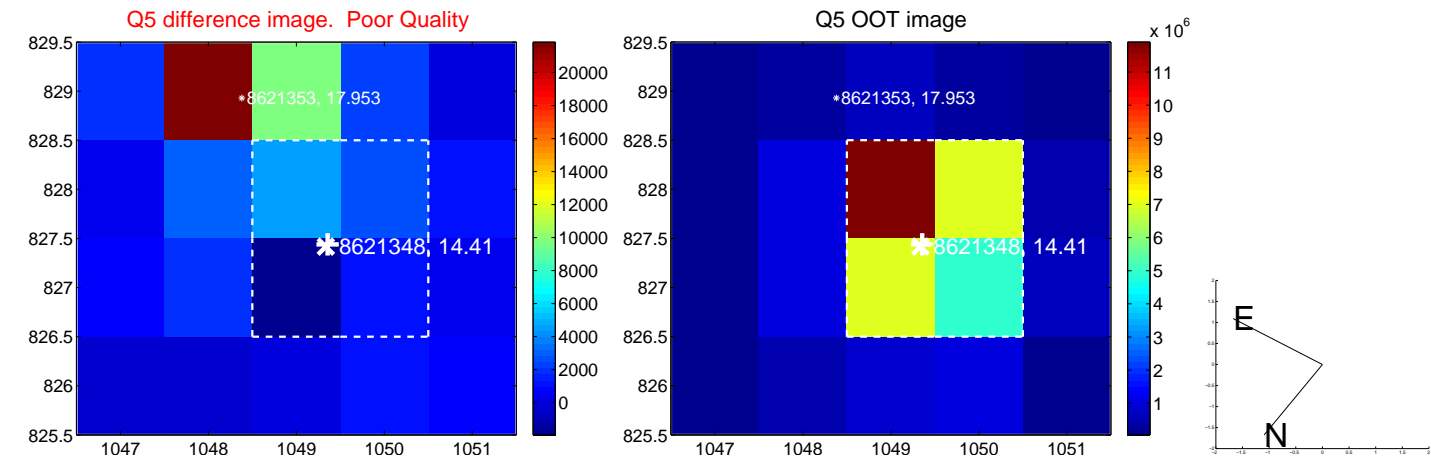


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

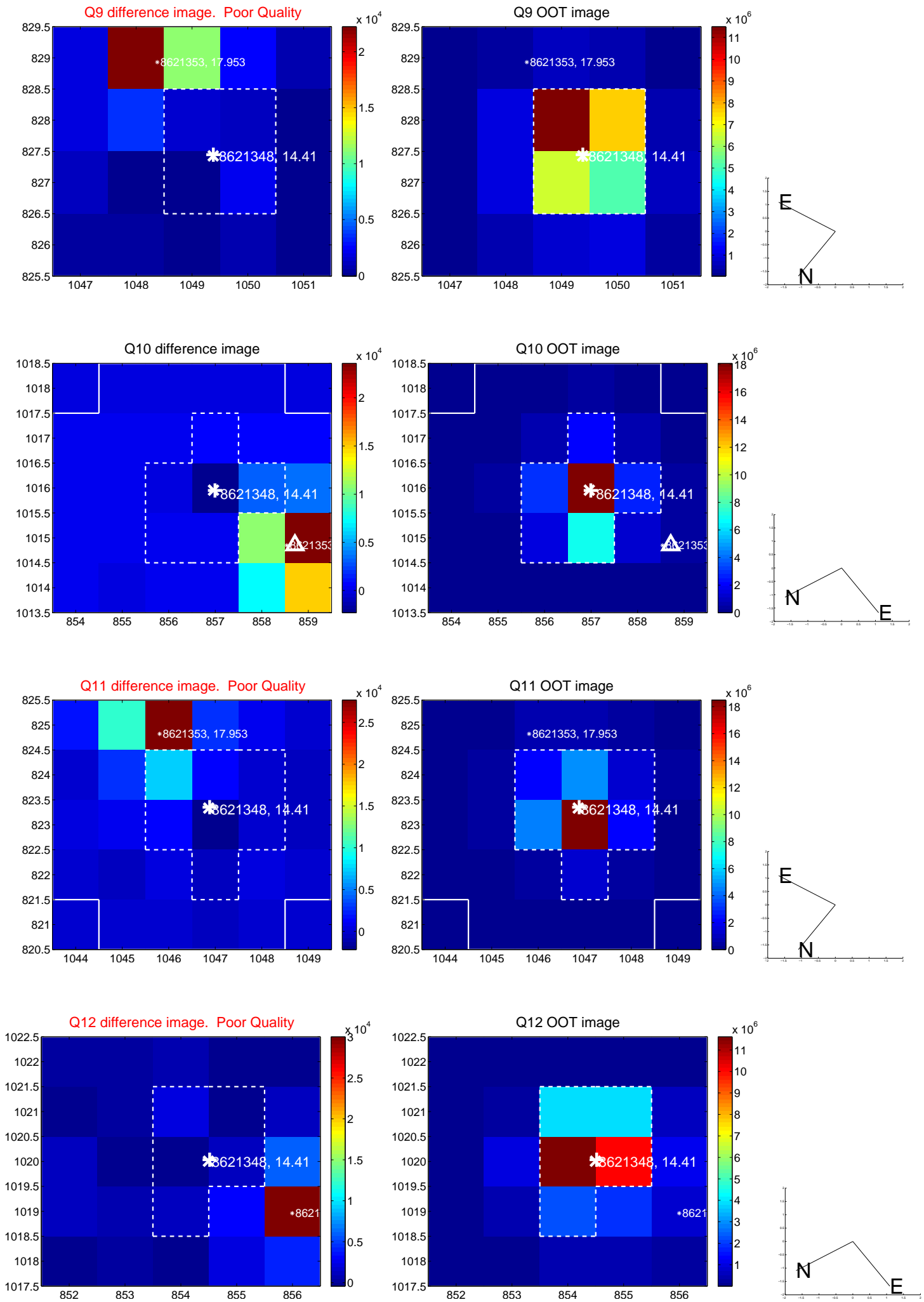
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



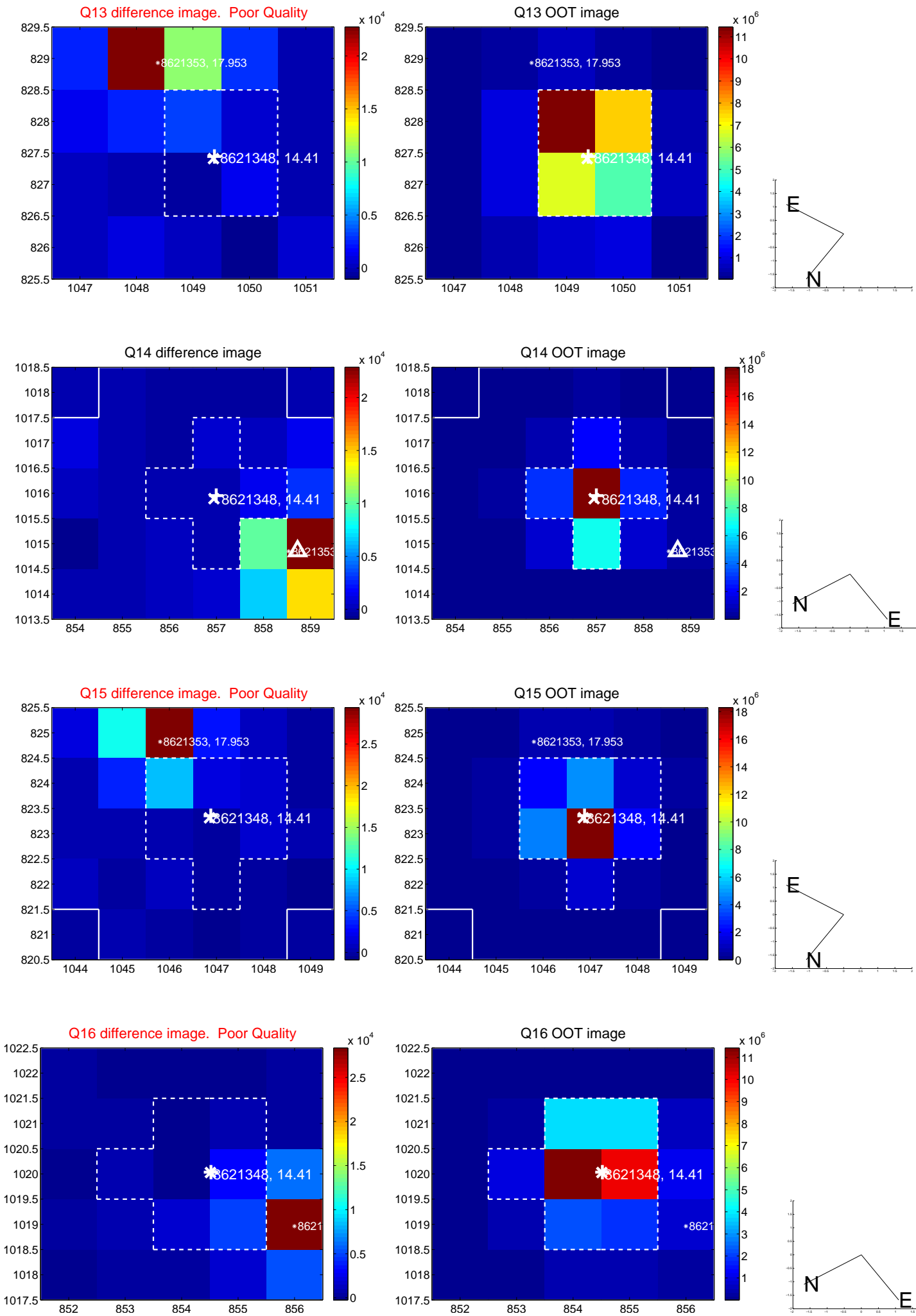
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



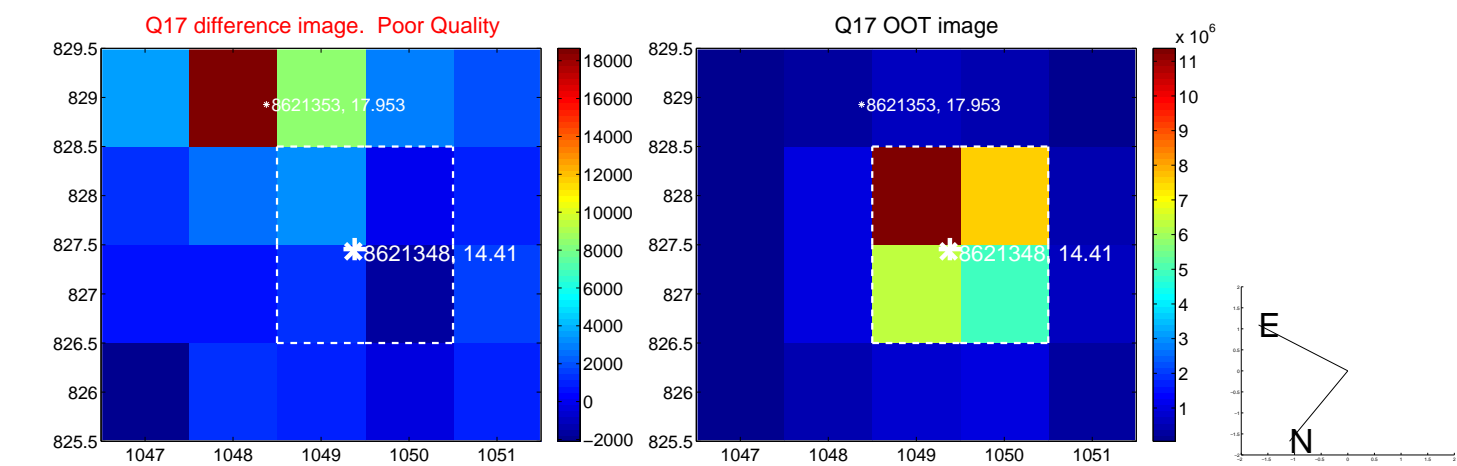
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



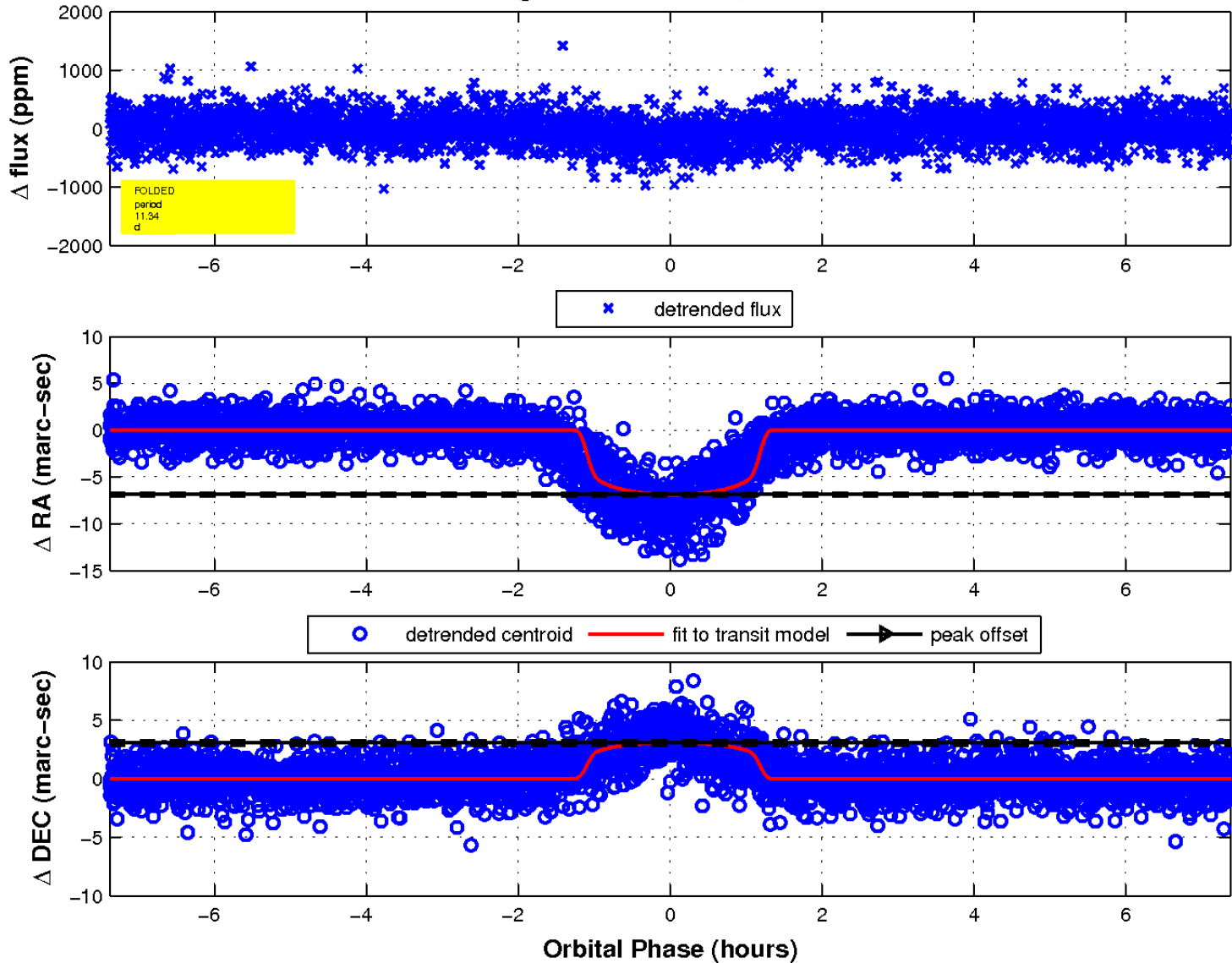
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

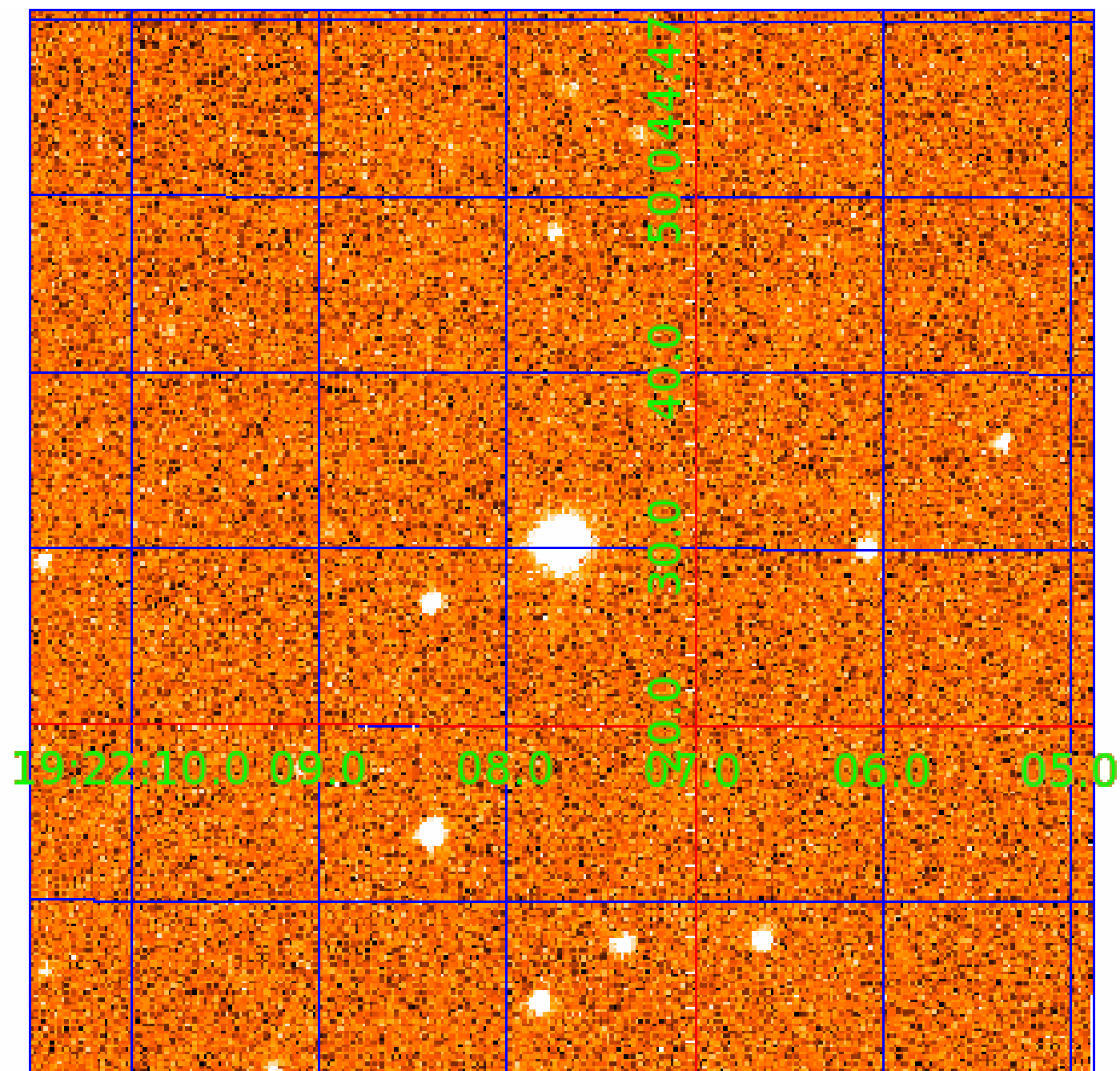


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008621348

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})
008621348-01	OBS	0461.01	11.344398	138.809874	514.4	5.455	50.7	45.4	0.75	5594	2.78	57.75
008621348-02	OBS	No	11.344075	132.563138	186.5	2.462	14.5	15.5	0.75	5594	1.21	57.75
008621348-03	OBS	No	380.514857	138.546027	260.7	21.797	8.1	6.9	0.75	5594	2.45	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008621348-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008621348-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
008621348-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

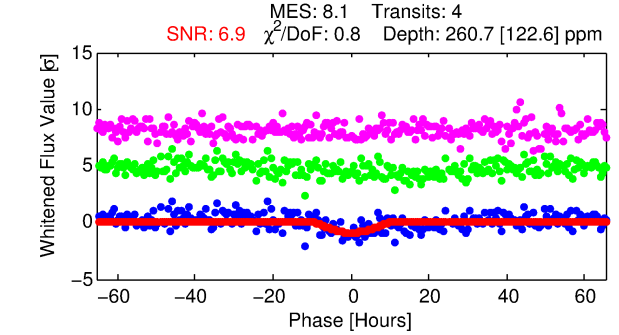
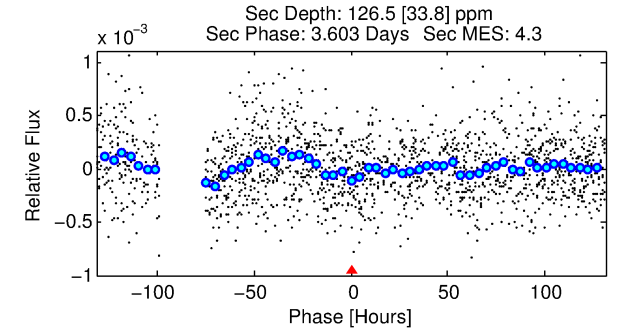
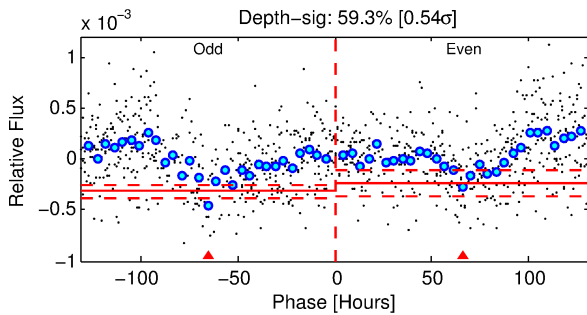
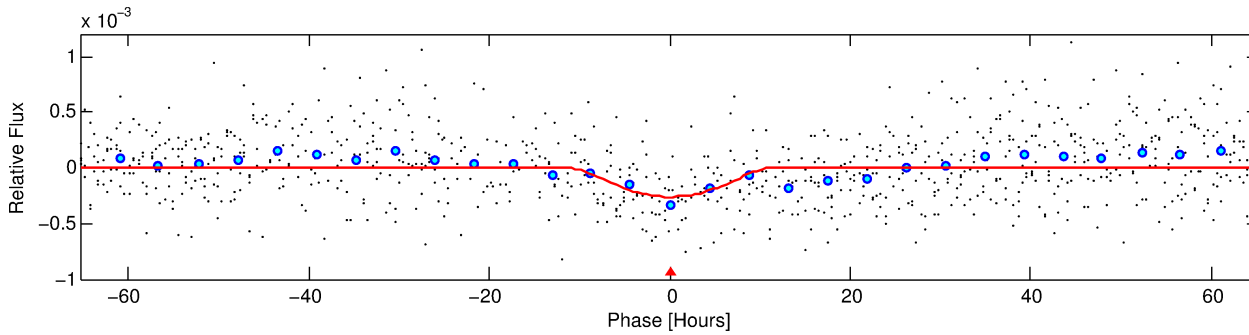
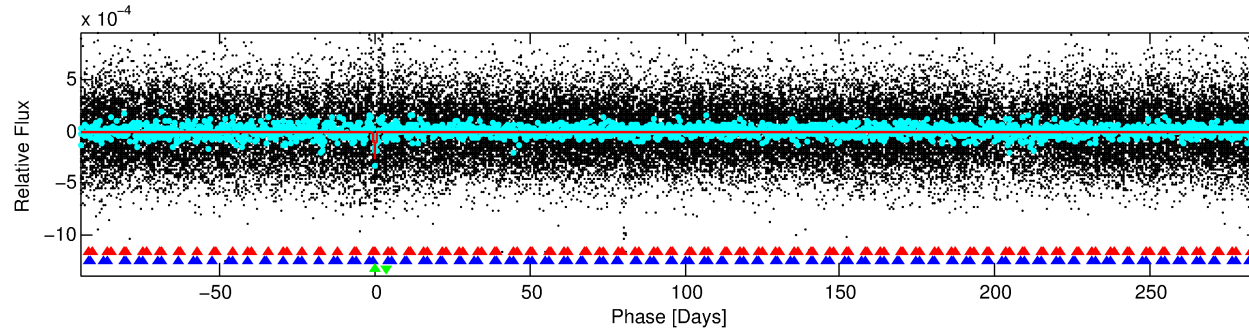
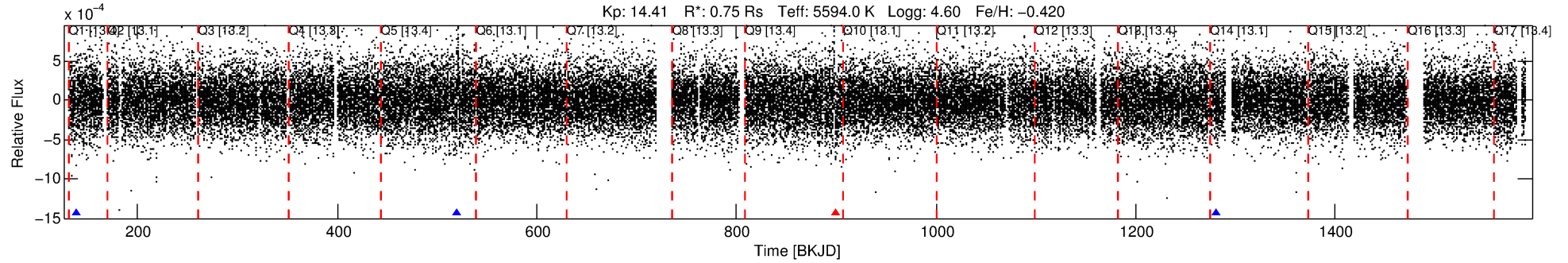
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008621348-03

No Significant Match Found

DV One-Page Summary

KIC: 8621348 Candidate: 3 of 3 Period: 380.515 d
KOI: K00461 Corr: No Ephemeris Match



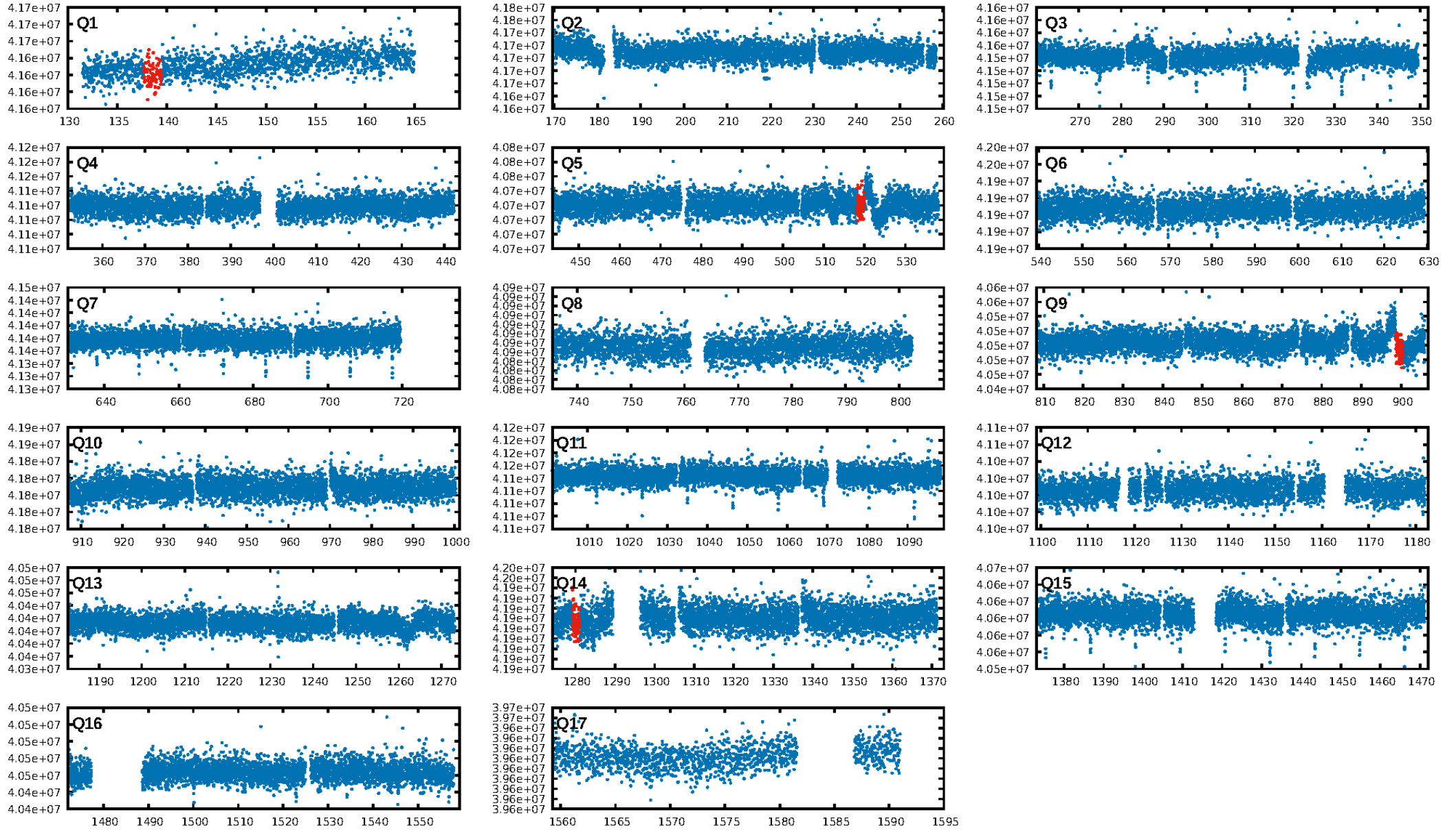
DV Fit Results:

Period = 380.51486 [0.03393] d
Epoch = 138.5460 [0.0712] BKJD
Rp/R* = 0.0299 [0.1425]
a/R* = 33.05 [41.51]
b = 1.00 [0.22]
Seff = 0.53 [0.15]
Teq = 218 [16] K
Rp = 2.45 [11.71] Re
a = 0.9640 [0.1725] AU
Ag = 10762.05 [102784.02] [0.10 σ]
Teffp = 3432 [8193] K [0.39 σ]

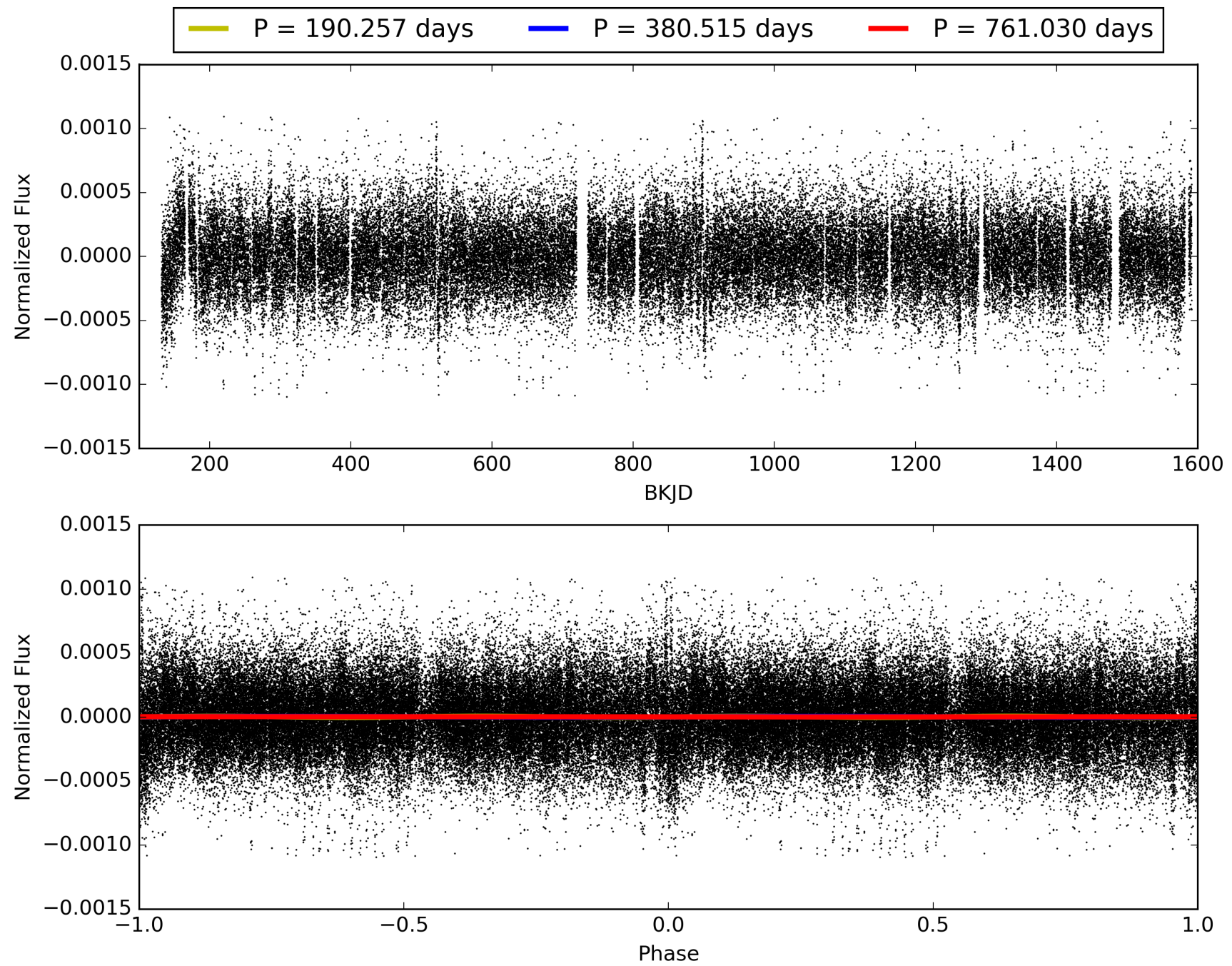
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [394.32 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.21e-14
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -5.715
Centroid-sig: 6.5%
Centroid-so: 3.000 arcsec [1.54 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/3]

TCE 008621348-03, PDC Light Curves

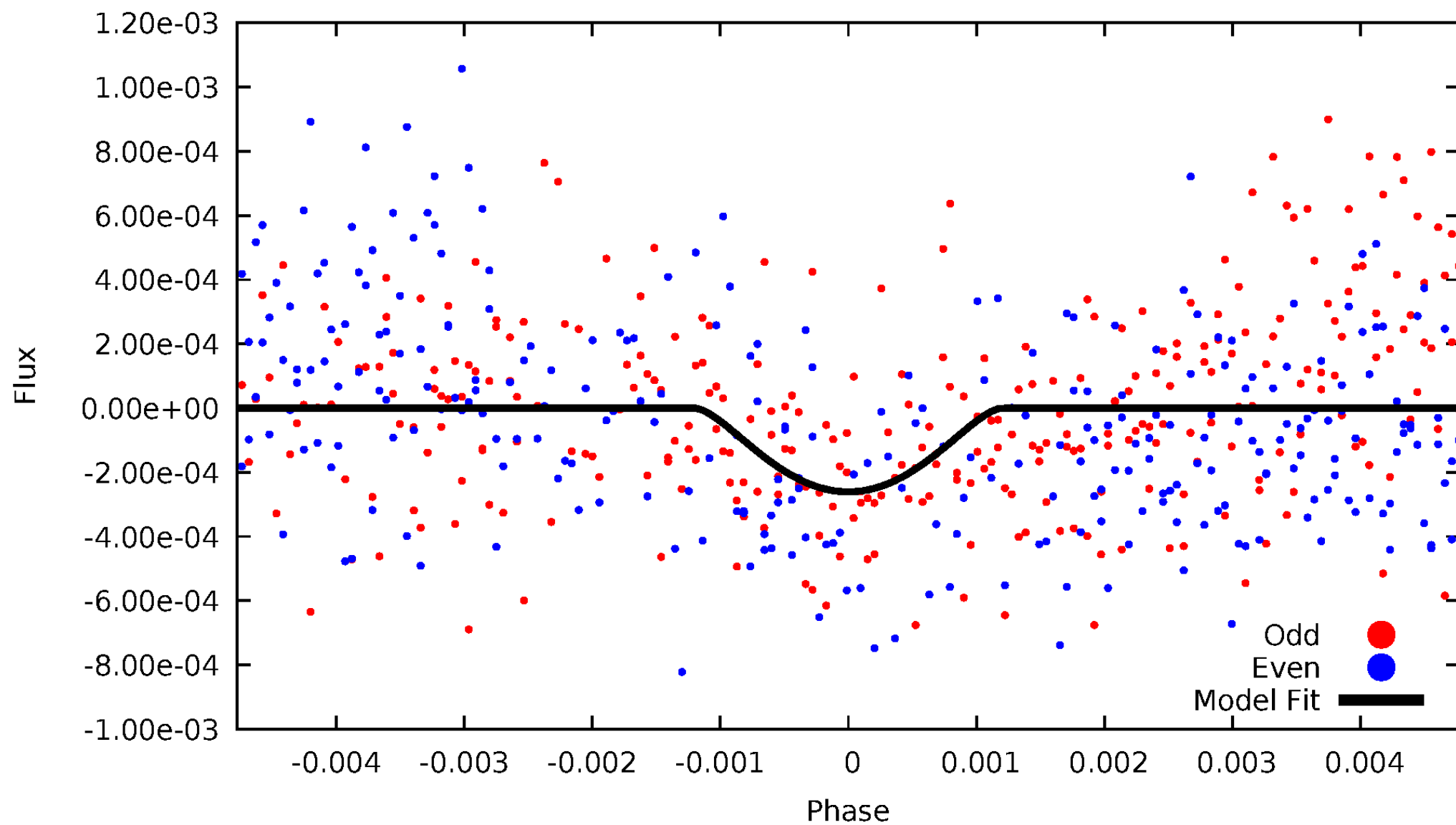


TCE 008621348-03



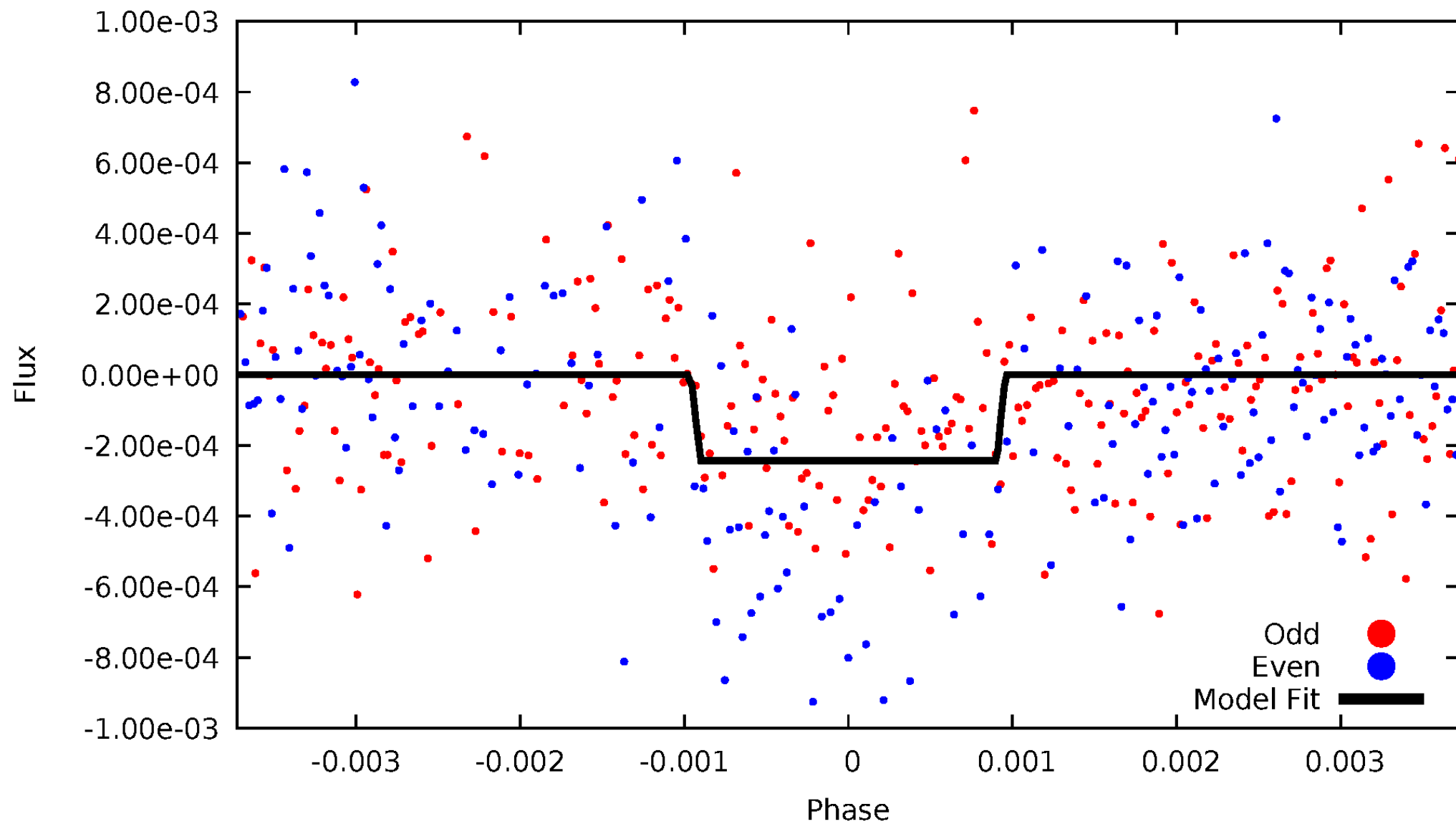
DV Odd/Even

TCE 008621348-03

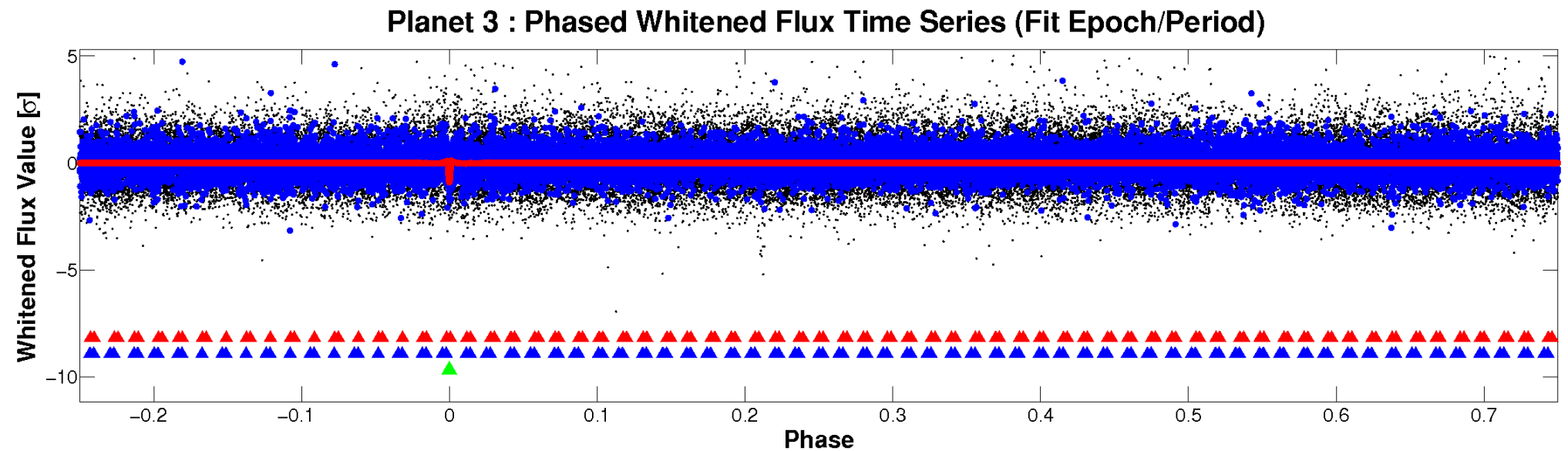
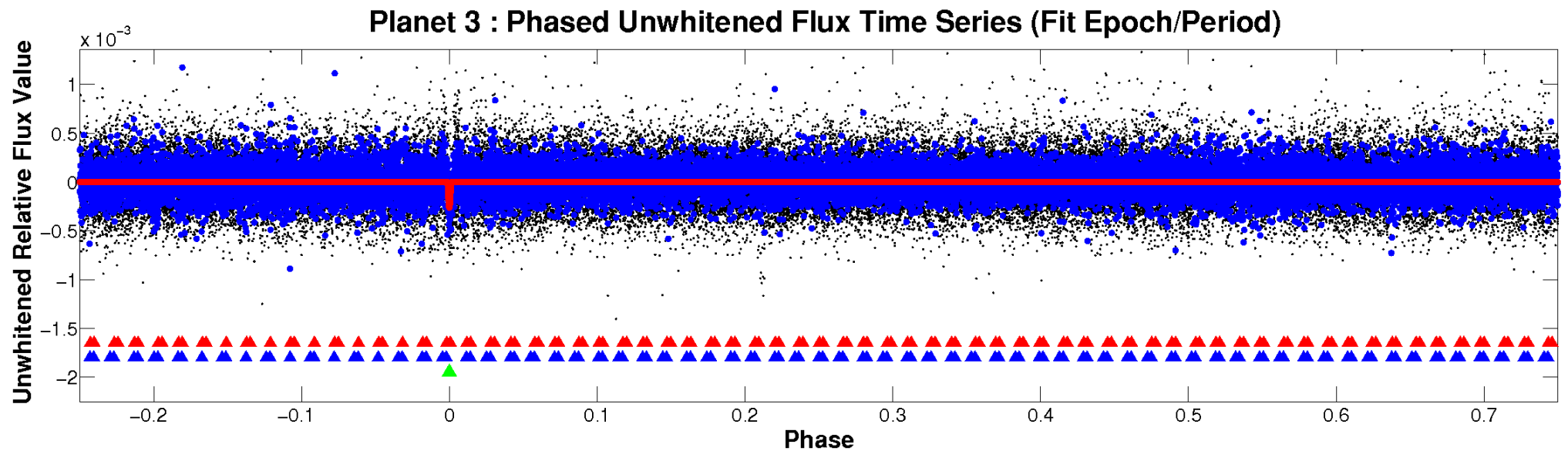


ALT Odd/Even

TCE 008621348-03



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008621348-03 $P=380.514857$ Days $T_0=138.546027$ (BKJD)



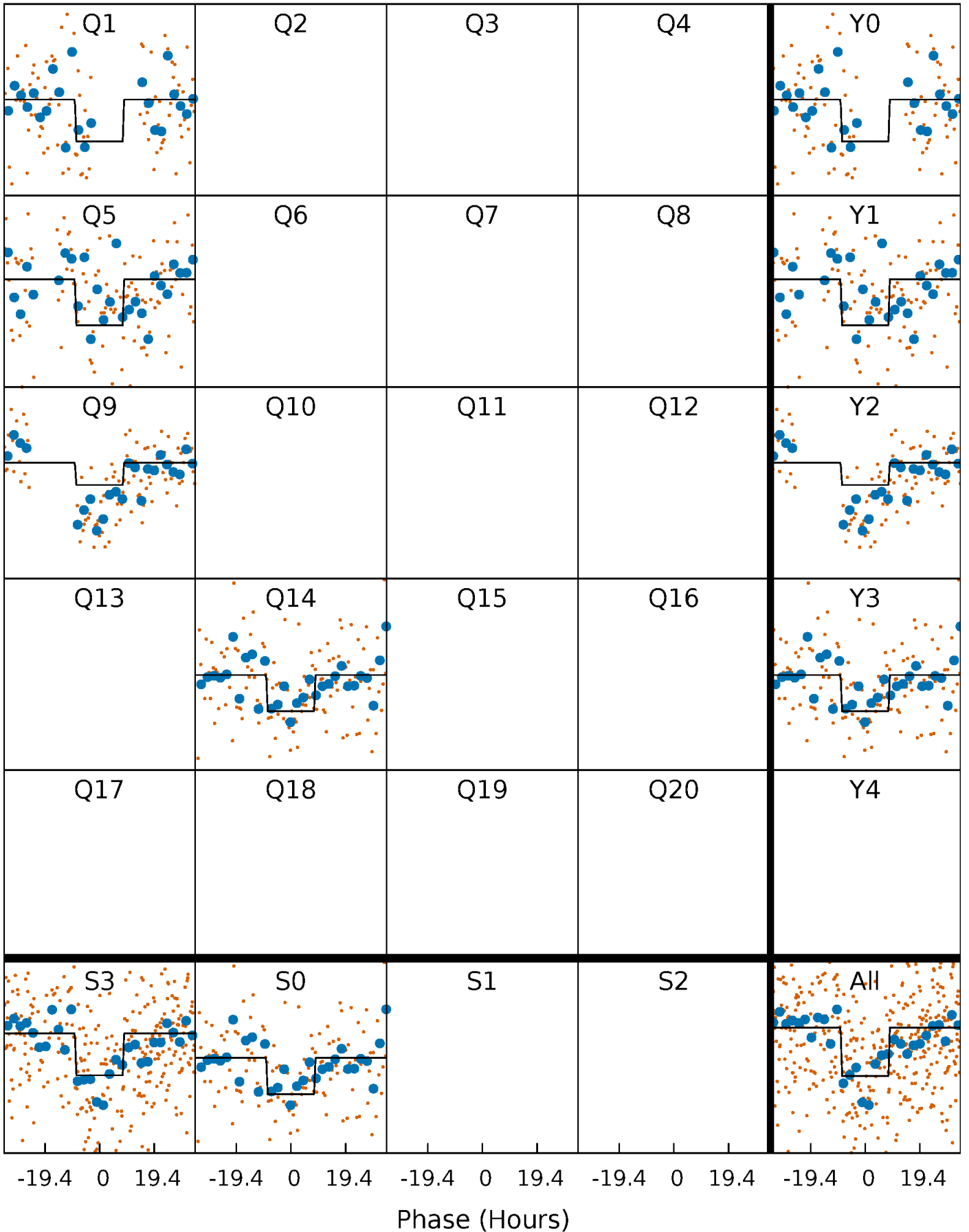
DV Quarter-Phased Transit Curves

TCE 008621348-03 $P=380.514857$ Days $T_0=138.546027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

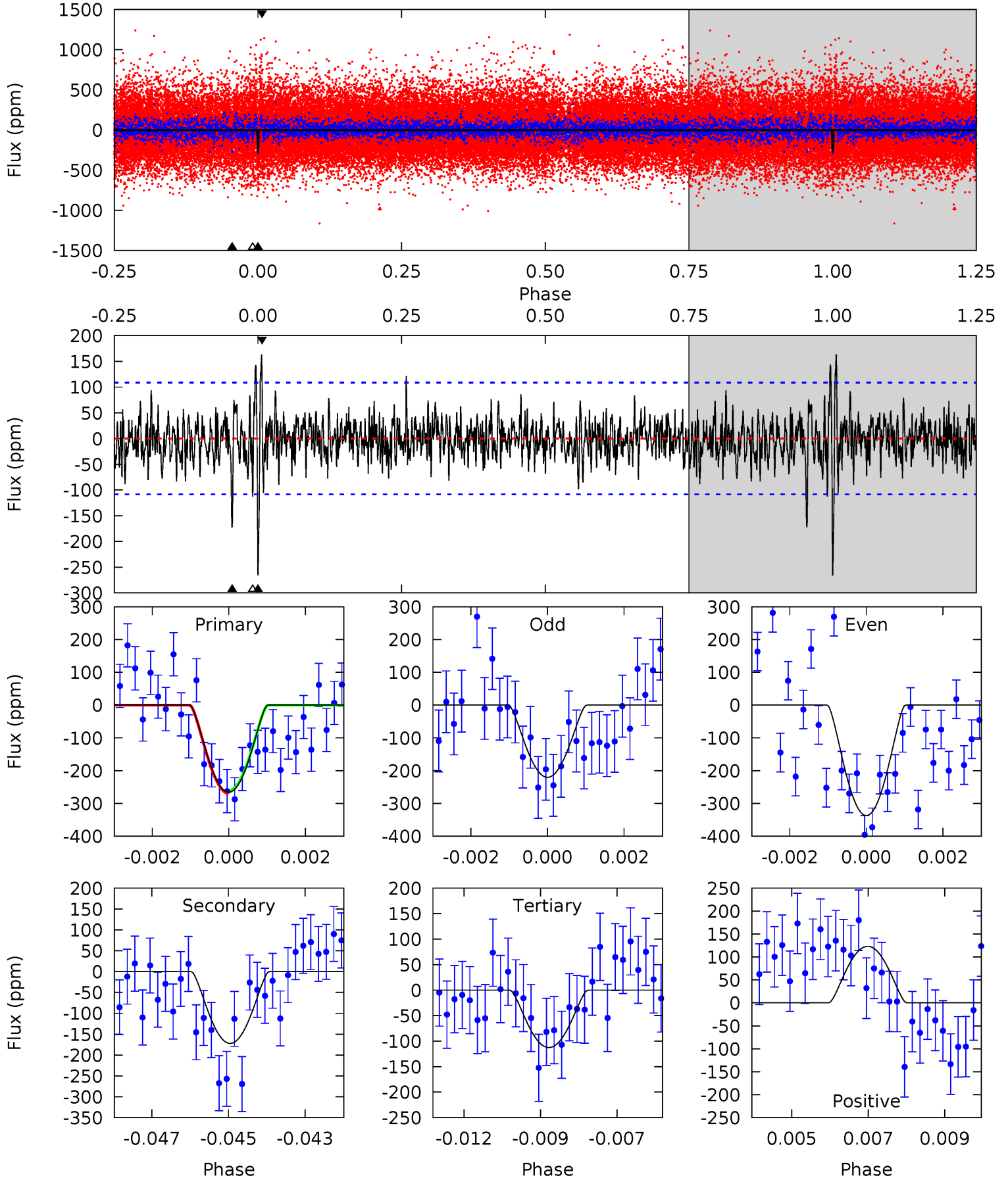
TCE 008621348-03 $P=380.500132$ Days $T_0=138.571172$ (BKJD)



DV Model-Shift Uniqueness Test

008621348-03, $P = 380.514857$ Days, $E = 138.546027$ Days

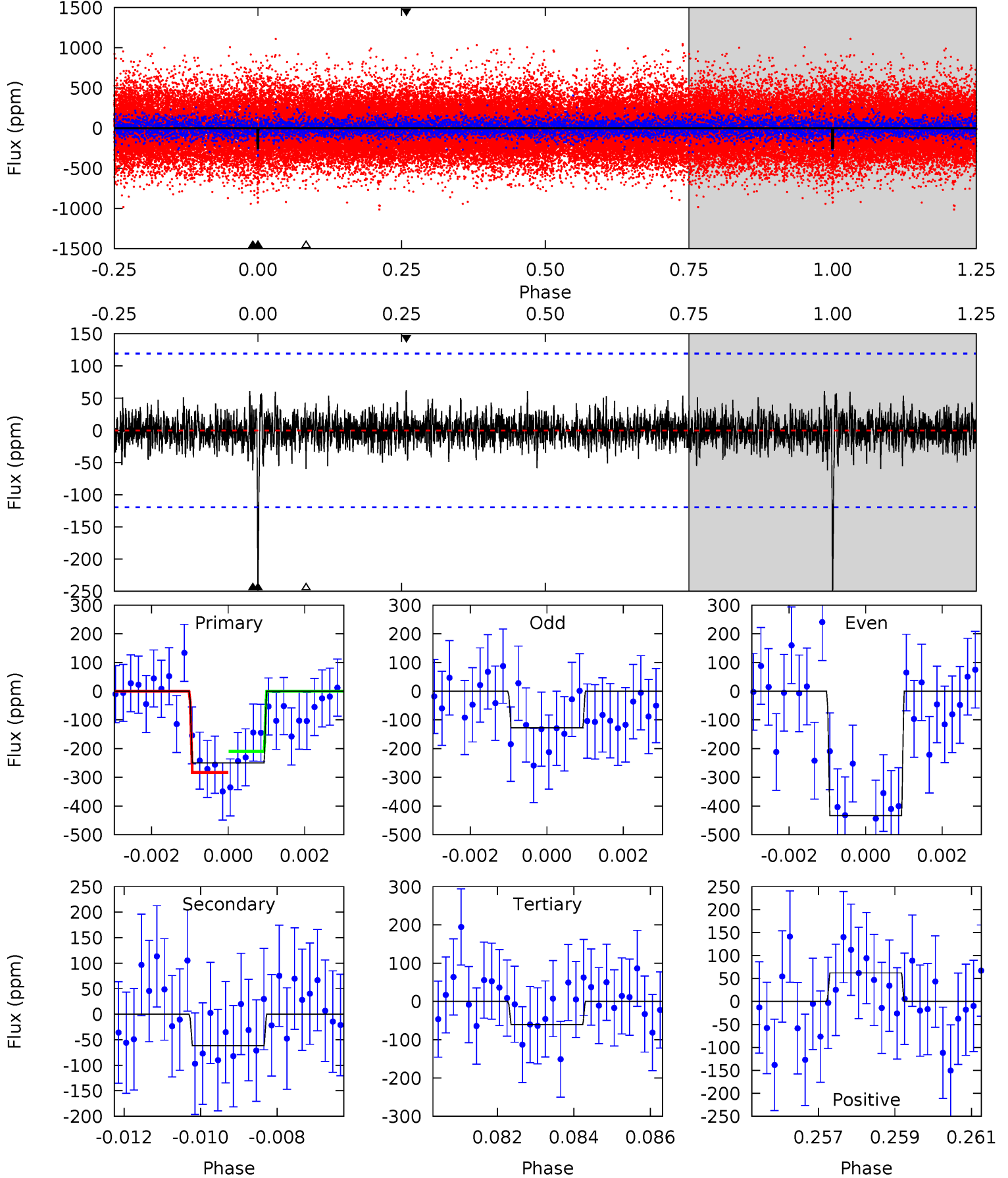
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	8.41	5.50	6.01	5.30	3.04	1.60	7.49	6.97	2.91	2.39	2.80	1.00	0.38	0.21



Alt Model-Shift Uniqueness Test

008621348-03, P = 380.500132 Days, E = 138.571172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.75	2.68	2.77	5.33	3.10	0.73	8.48	8.38	0.07	-0.02	6.69	1.27	0.20	1.63



Stellar Parameters For KIC 008621348

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5594^{+169}_{-152}	$4.602^{+0.034}_{-0.145}$	$-0.420^{+0.300}_{-0.300}$	$0.752^{+0.158}_{-0.056}$	$0.841^{+0.080}_{-0.089}$	$2.783^{+0.415}_{-1.132}$
	+3%/-3%	+1%/-3%	+71%/-71%	+21%/-7%	+10%/-11%	+15%/-41%
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 008621348-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-172 ± 20	$9.48^{+10.07}_{-6.63}$	311^{+15}_{-12}	2710^{+1168}_{-436}	978^{+9445}_{-750}
Alt.	-62 ± 22	$8.92^{+8.69}_{-6.10}$	311^{+16}_{-13}	2416^{+849}_{-367}	385^{+3314}_{-295}

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

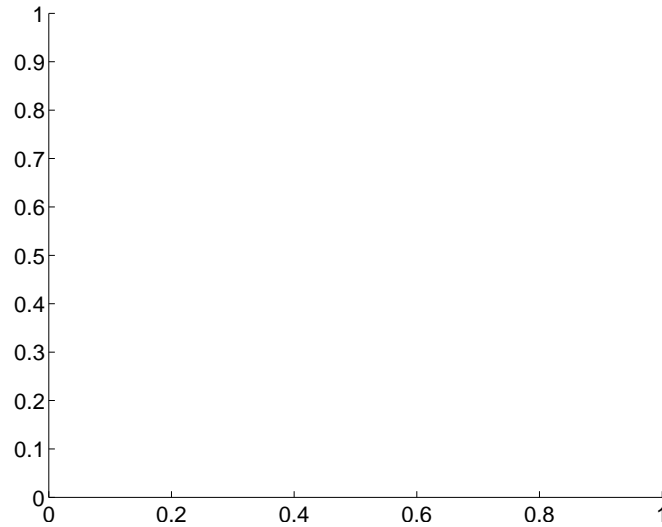
Supplemental centroid analysis for 008621348-03. Kepler magnitude: 14.41. Transit SNR 6.90

There are 0 quarters with good PRF difference image offsets

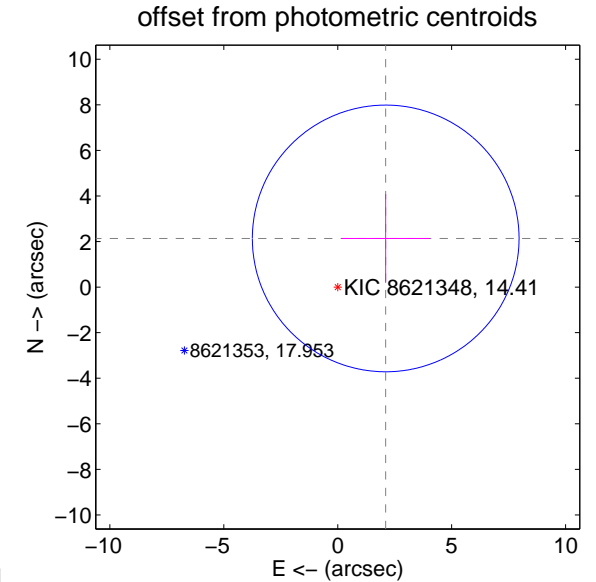
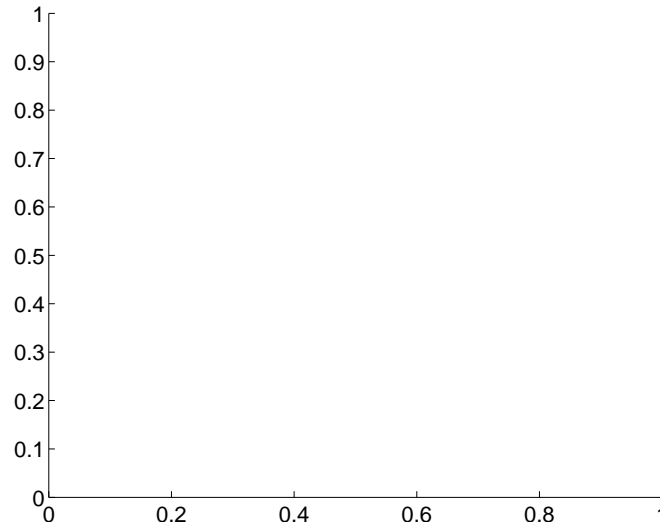
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.00 ± 1.95	1.54	-2.11 ± 1.95	2.14 ± 1.95

There is no PRF-fit offset from OOT-fit

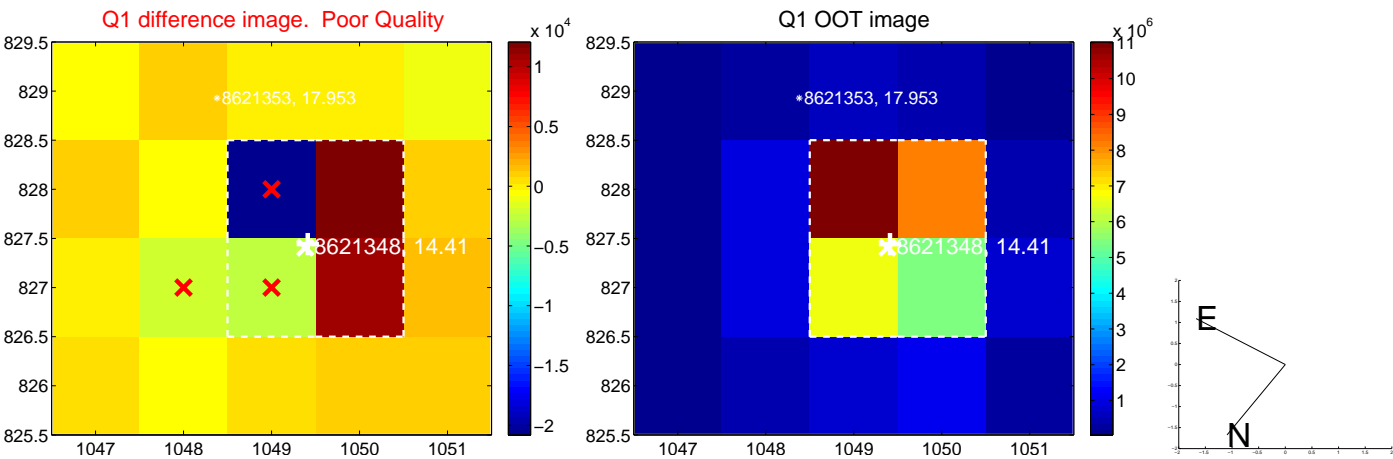


There is no PRF-fit offset from KIC

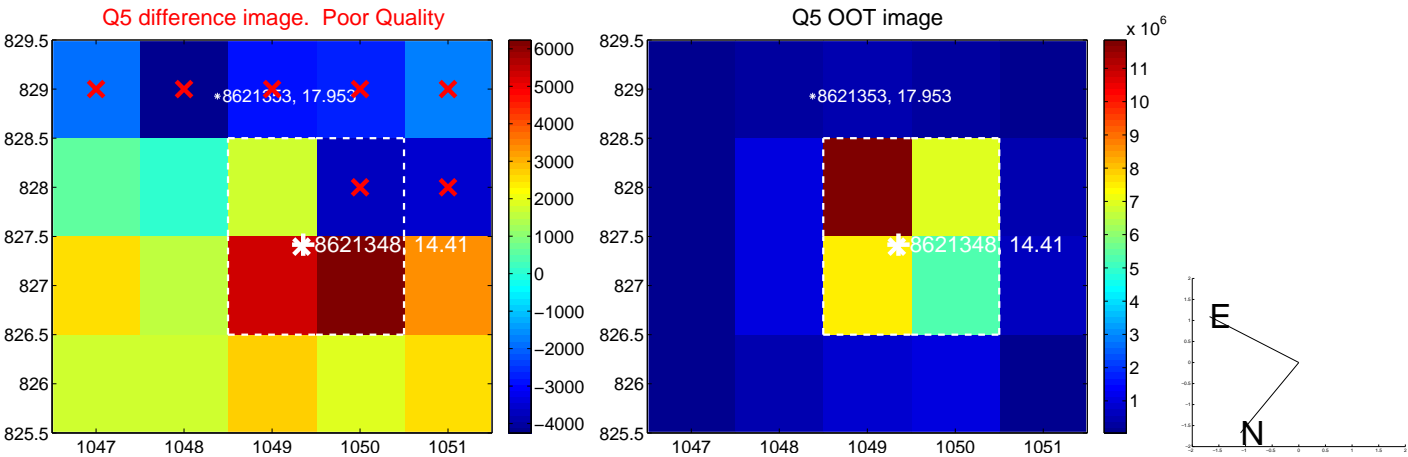


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

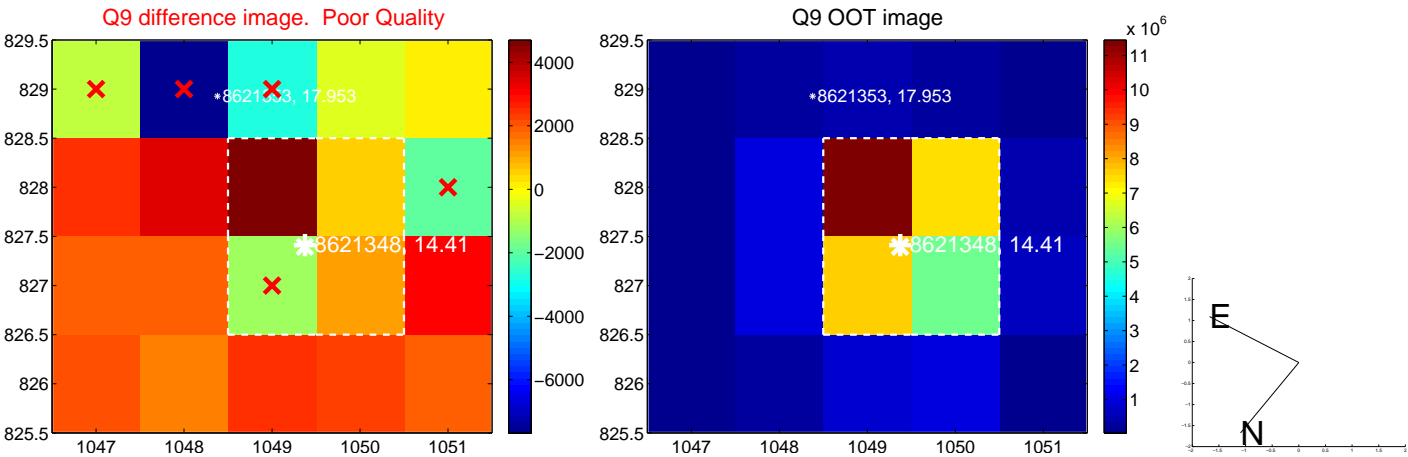
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



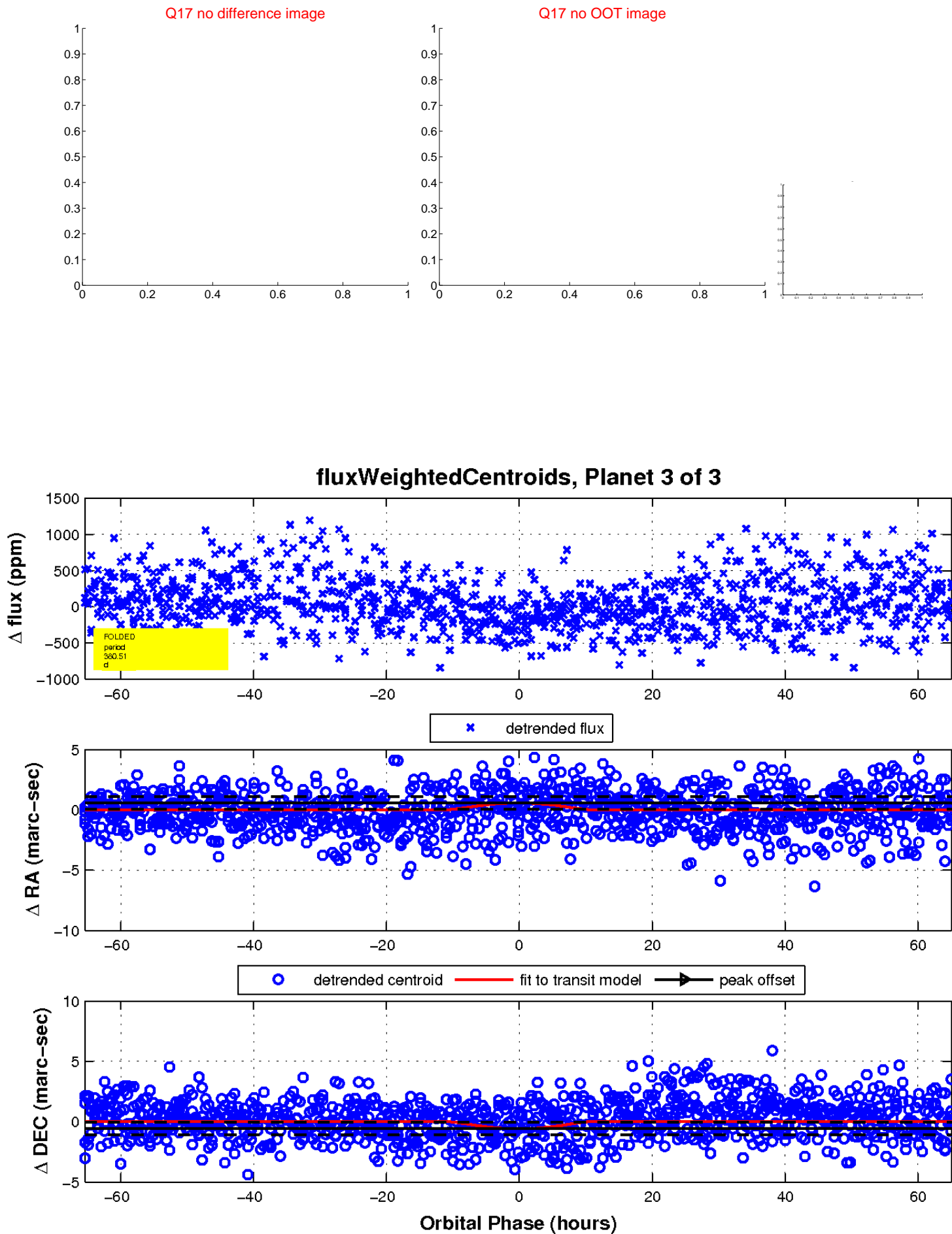
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

