

KIC 006606669

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})
006606669-01	OBS	6741.01	0.970076	132.412181	84.0	1.105	16.8	24.2	15.63	4555	17.87	0.00
006606669-02	OBS	No	0.970072	131.925003	30.7	1.348	8.8	8.2	15.63	4555	10.76	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606669-01	OBS	FP	0.00	0	1	1	0	PLANET_IN_STAR—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST
006606669-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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 006606669-01

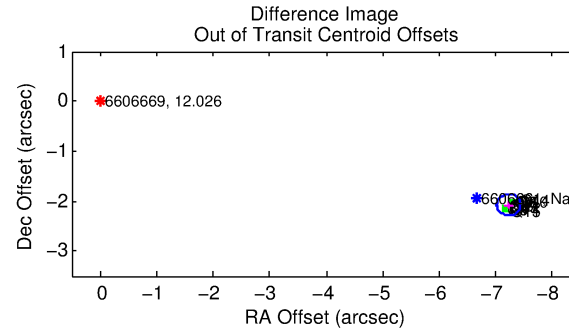
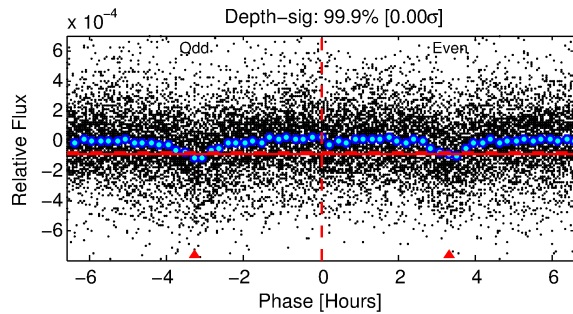
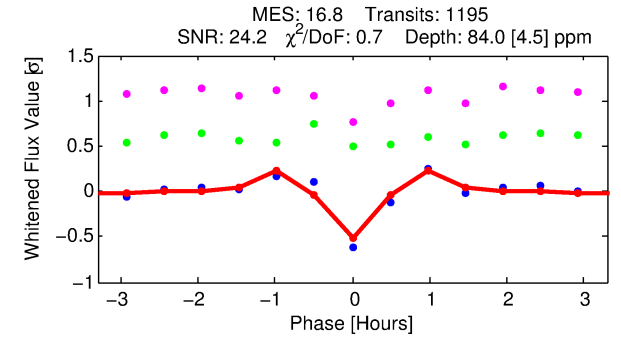
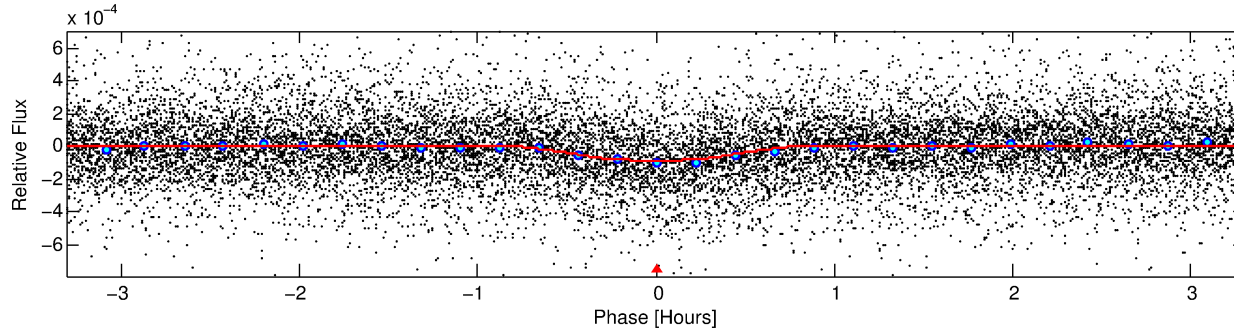
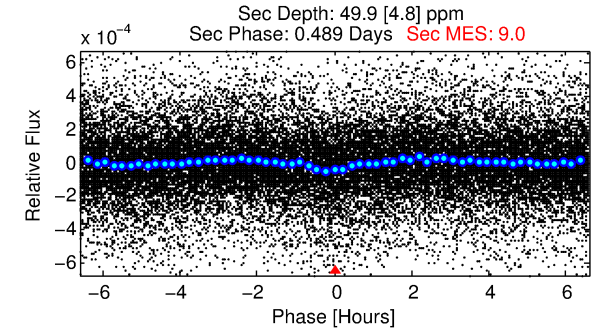
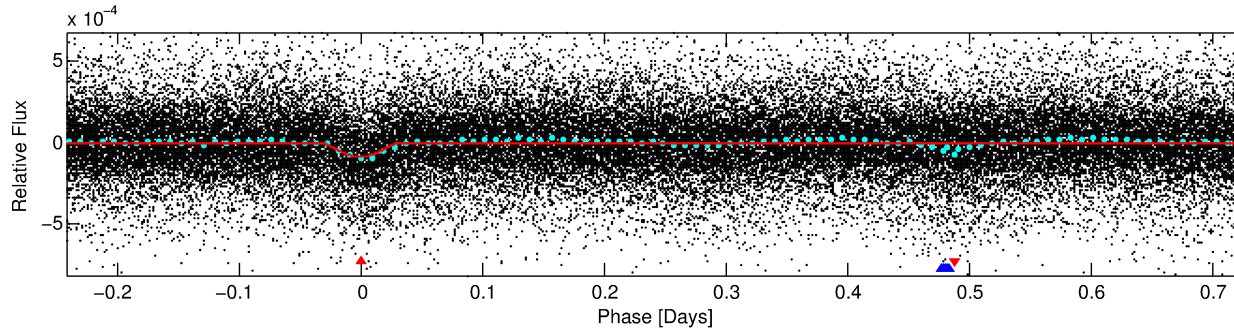
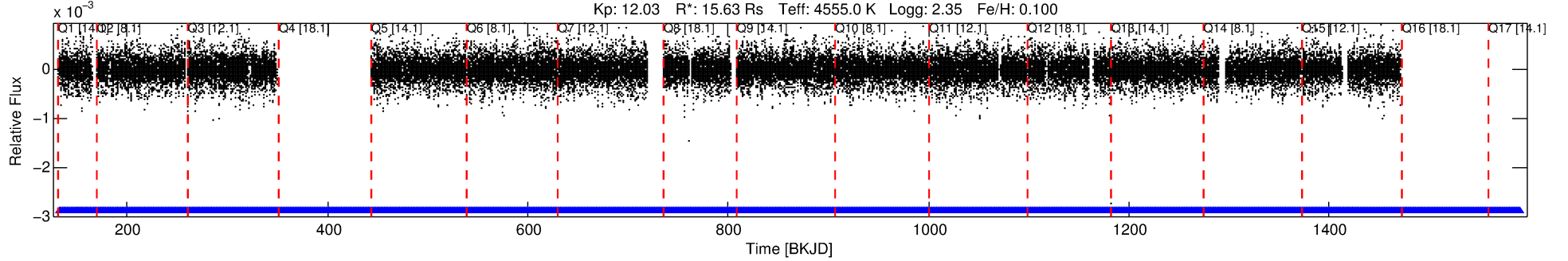
No Significant Match Found

DV One-Page Summary

KIC: 6606669 Candidate: 1 of 2 Period: 0.970 d

KOI: K06741.01 Corr: 0.899

Kp: 12.03 R*: 15.63 Rs Teff: 4555.0 K Logg: 2.35 Fe/H: 0.100



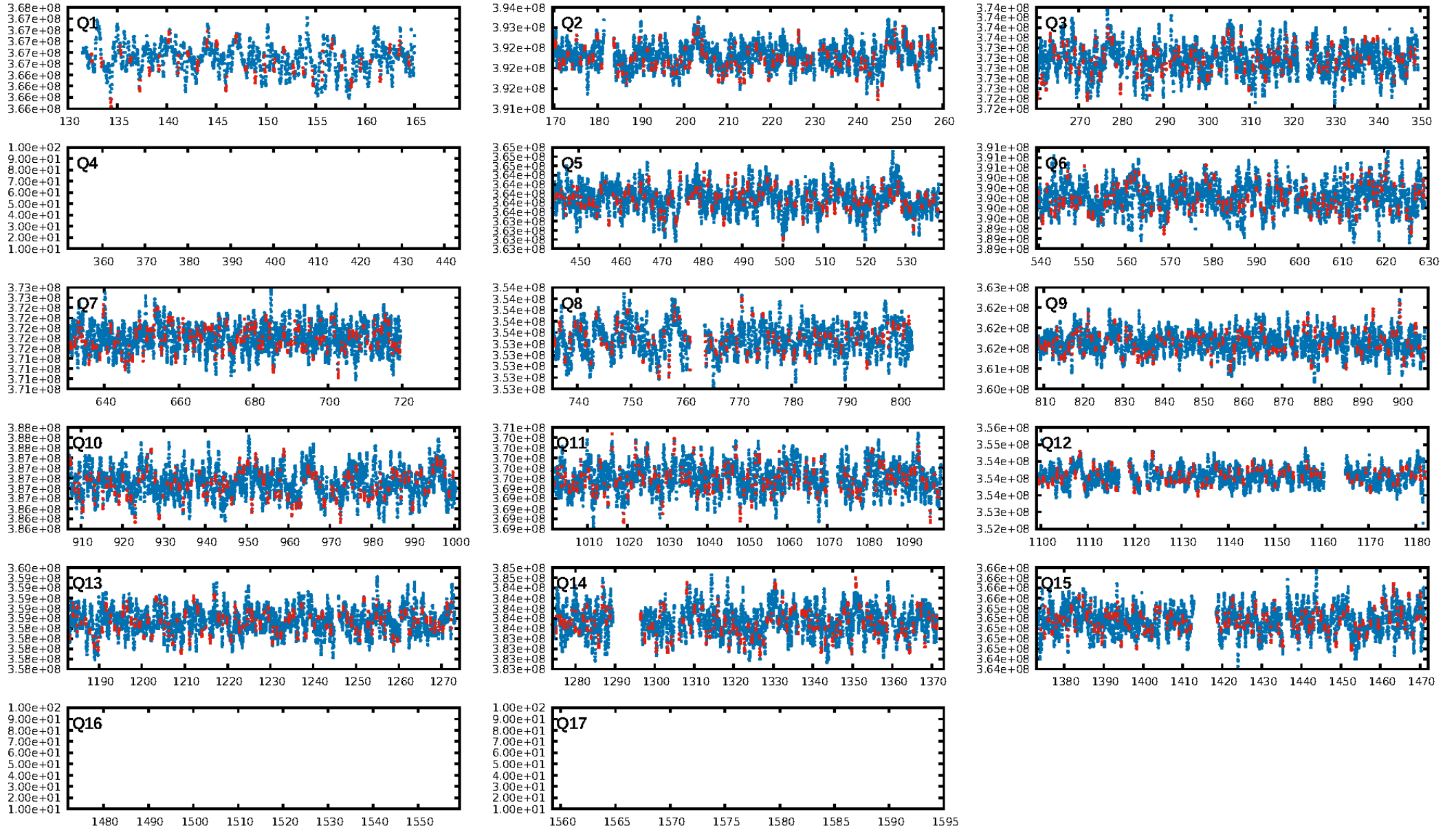
DV Fit Results:

Period = 0.97008 [0.00000] d
Epoch = 132.4122 [0.0005] BKJD
Rp/R* = 0.0105 [0.0026]
a/R* = 3.22 [2.60]
b = 0.90 [0.20]
Seff = N/A
Teq = N/A
Rp = 17.87 [7.77] Re
a = N/A
Ag = N/A
Teff = N/A

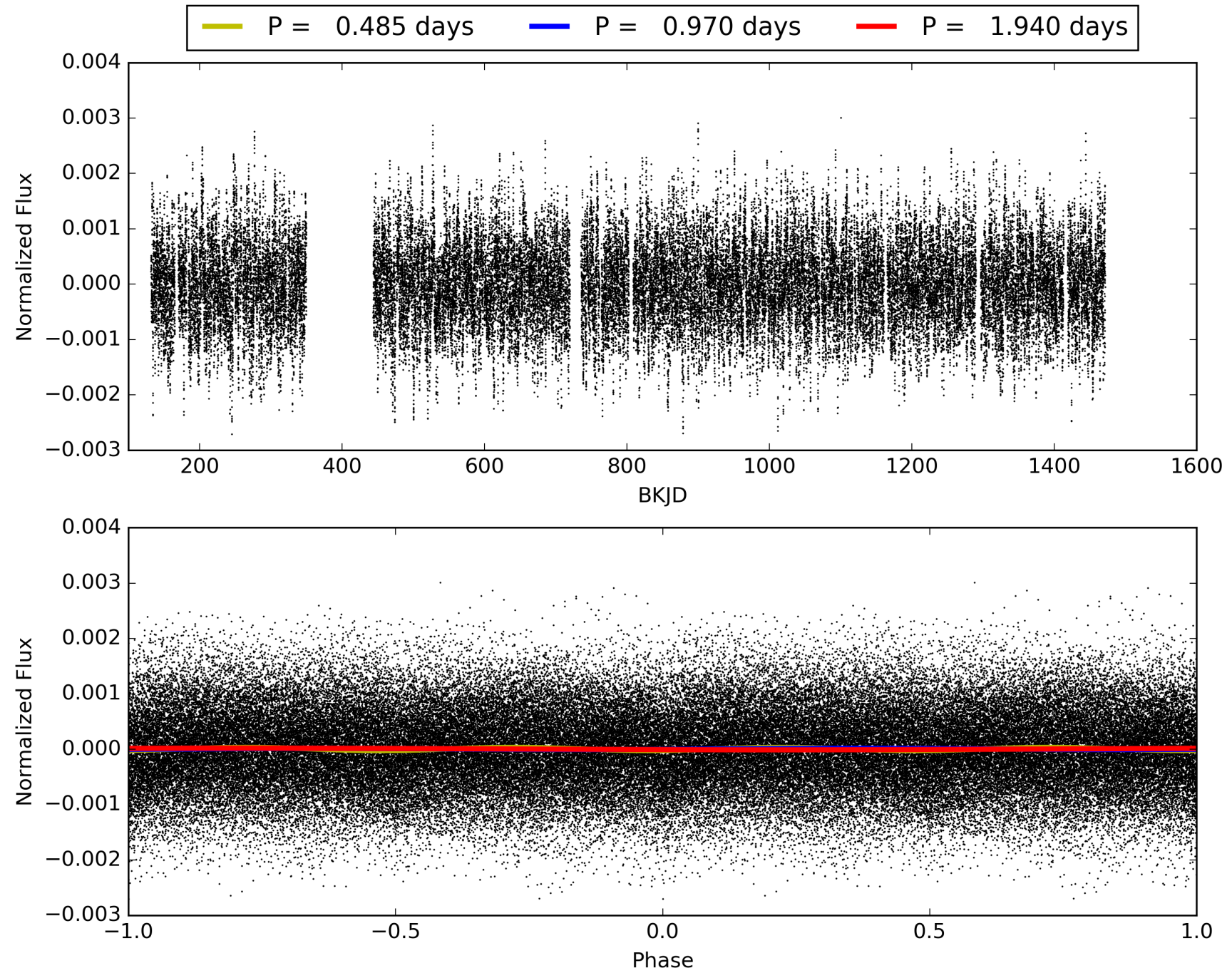
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.57e-117
RollingBand-fgt: 1.00 [1161/1161]
GhostDiagnostic-chr: 0.06679
Centroid-sig: N/A
Centroid-so: 7.791 arcsec [35.38σ]
OotOffset-rm: 7.511 arcsec [107.27σ]
KicOffset-rm: 7.508 arcsec [110.67σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006606669-01, PDC Light Curves

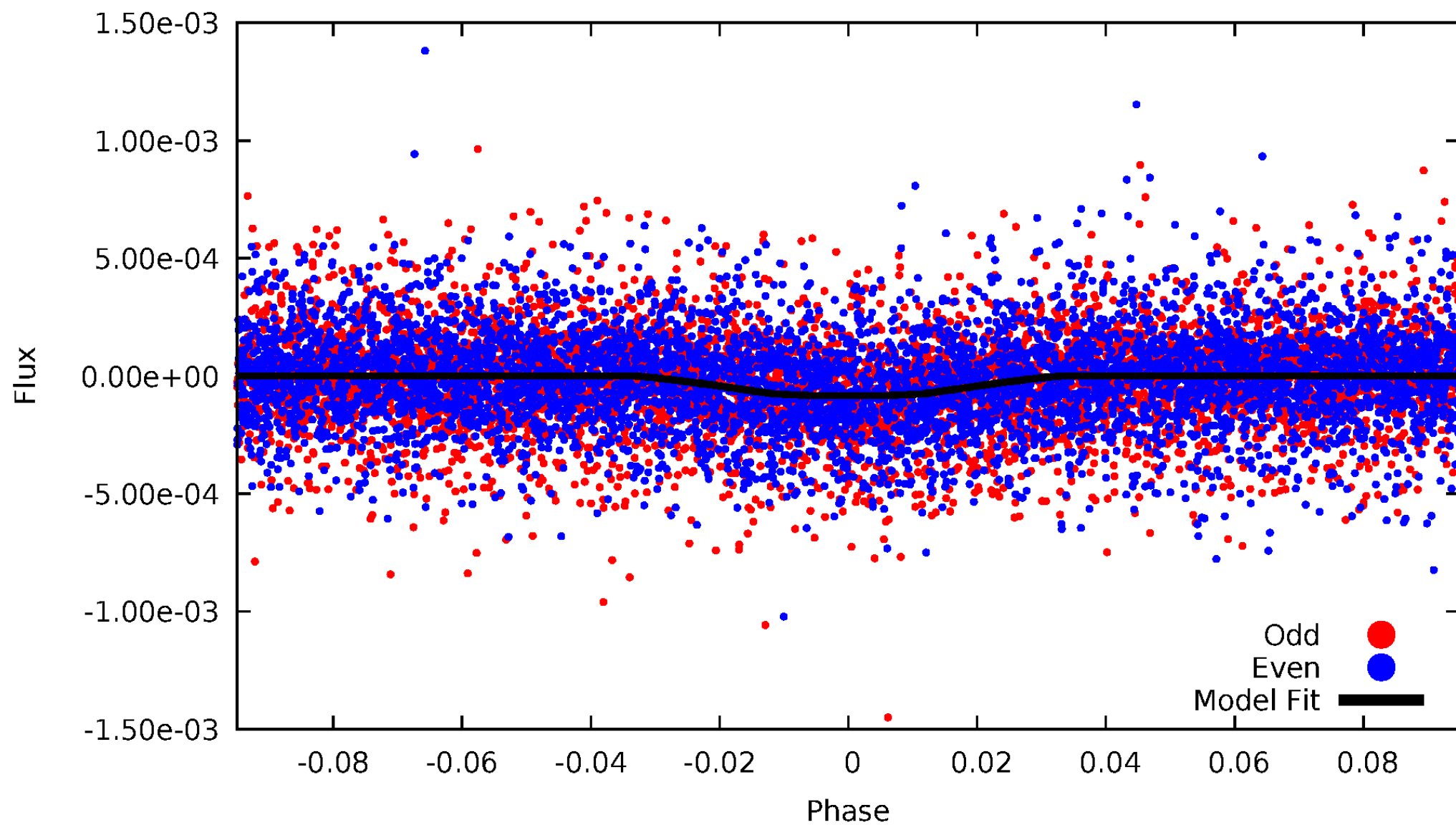


TCE 006606669-01



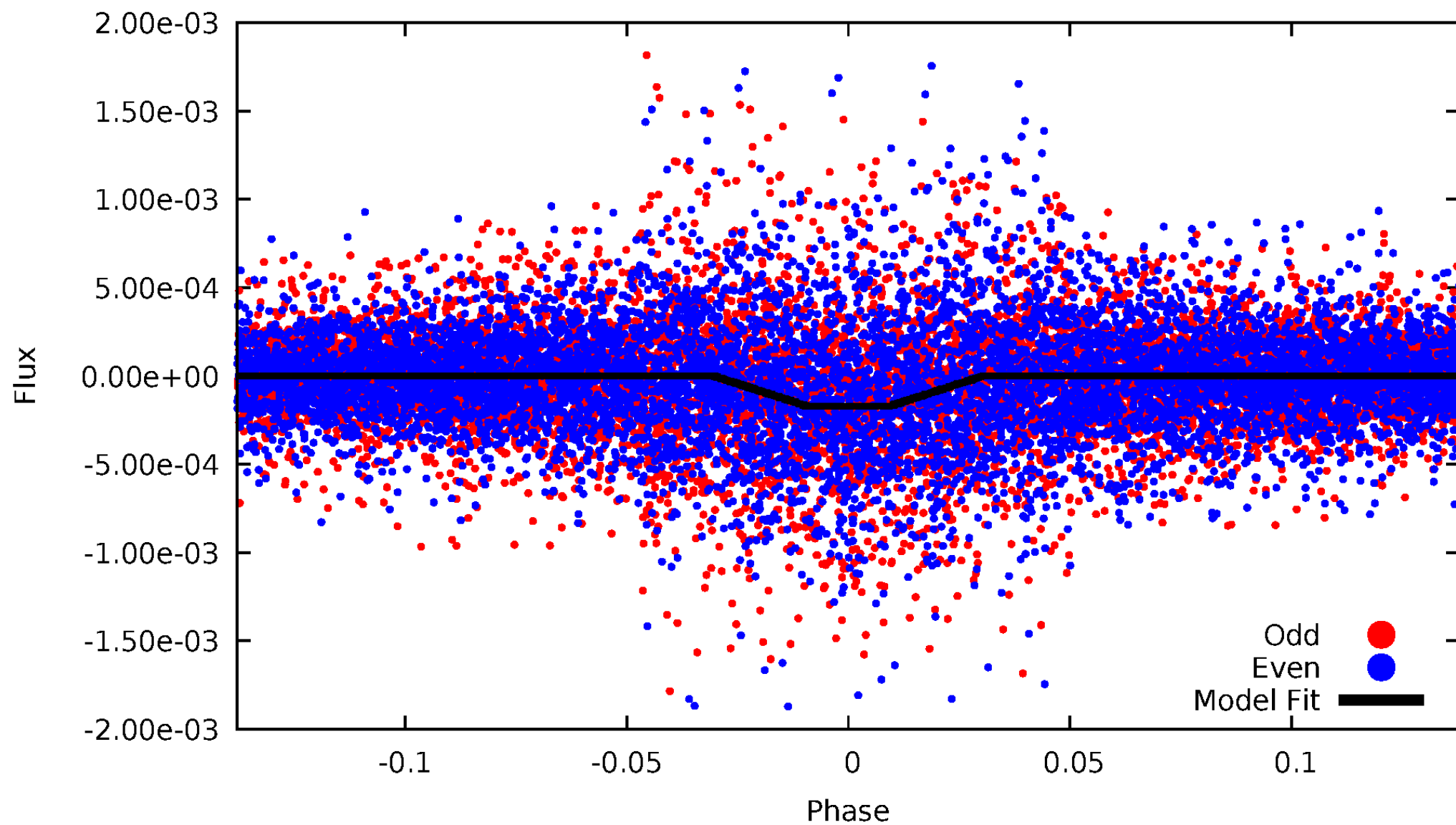
DV Odd/Even

TCE 006606669-01

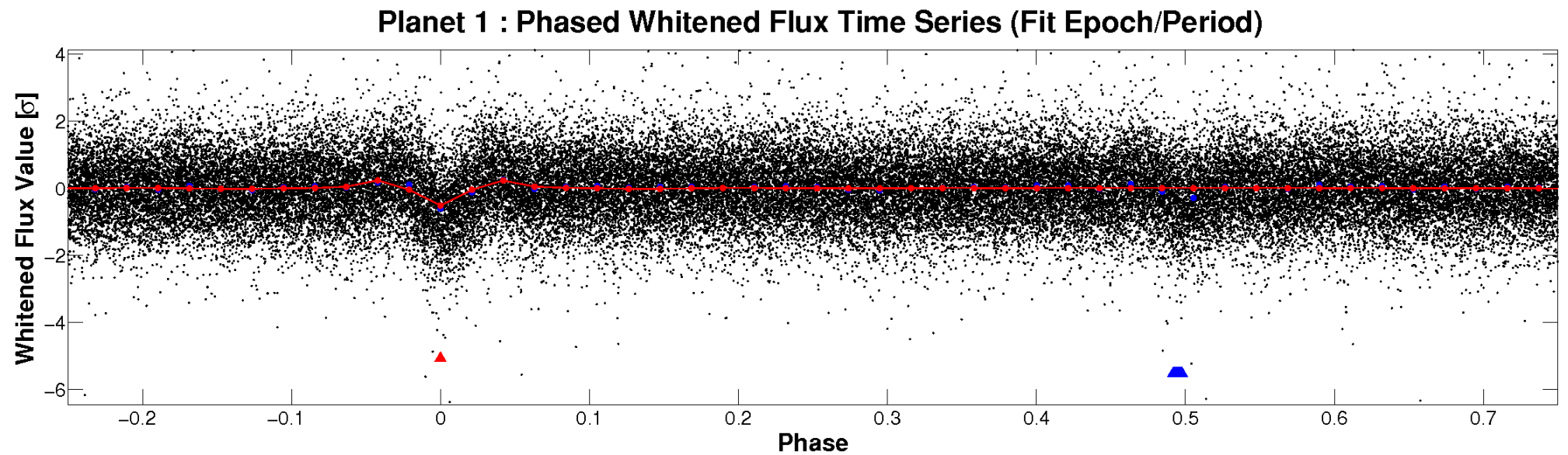
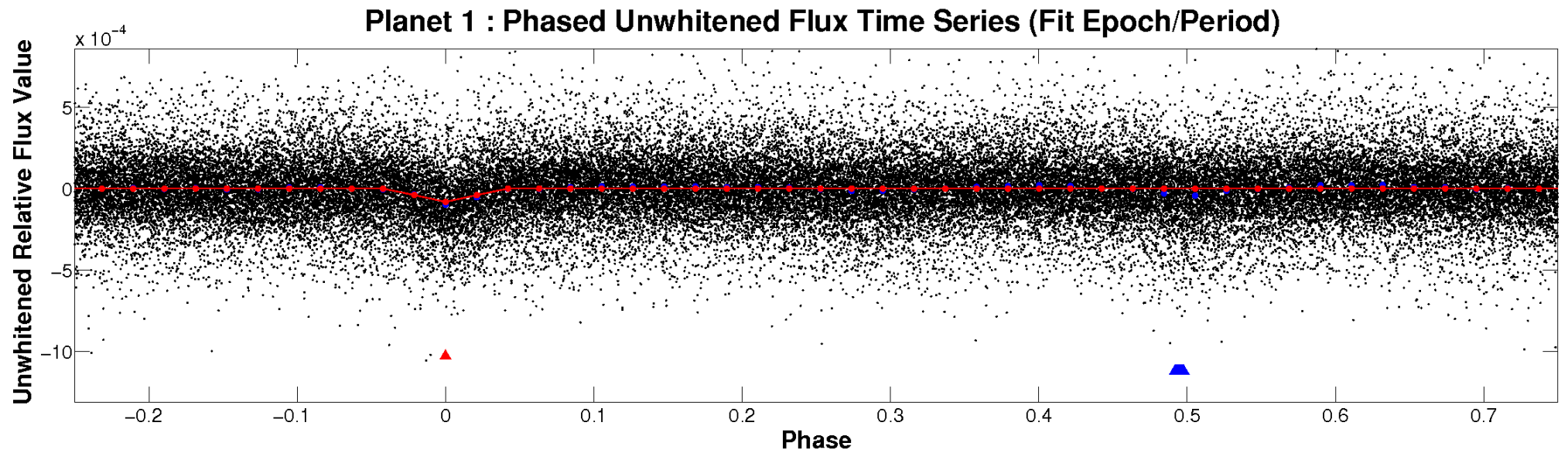


ALT Odd/Even

TCE 006606669-01

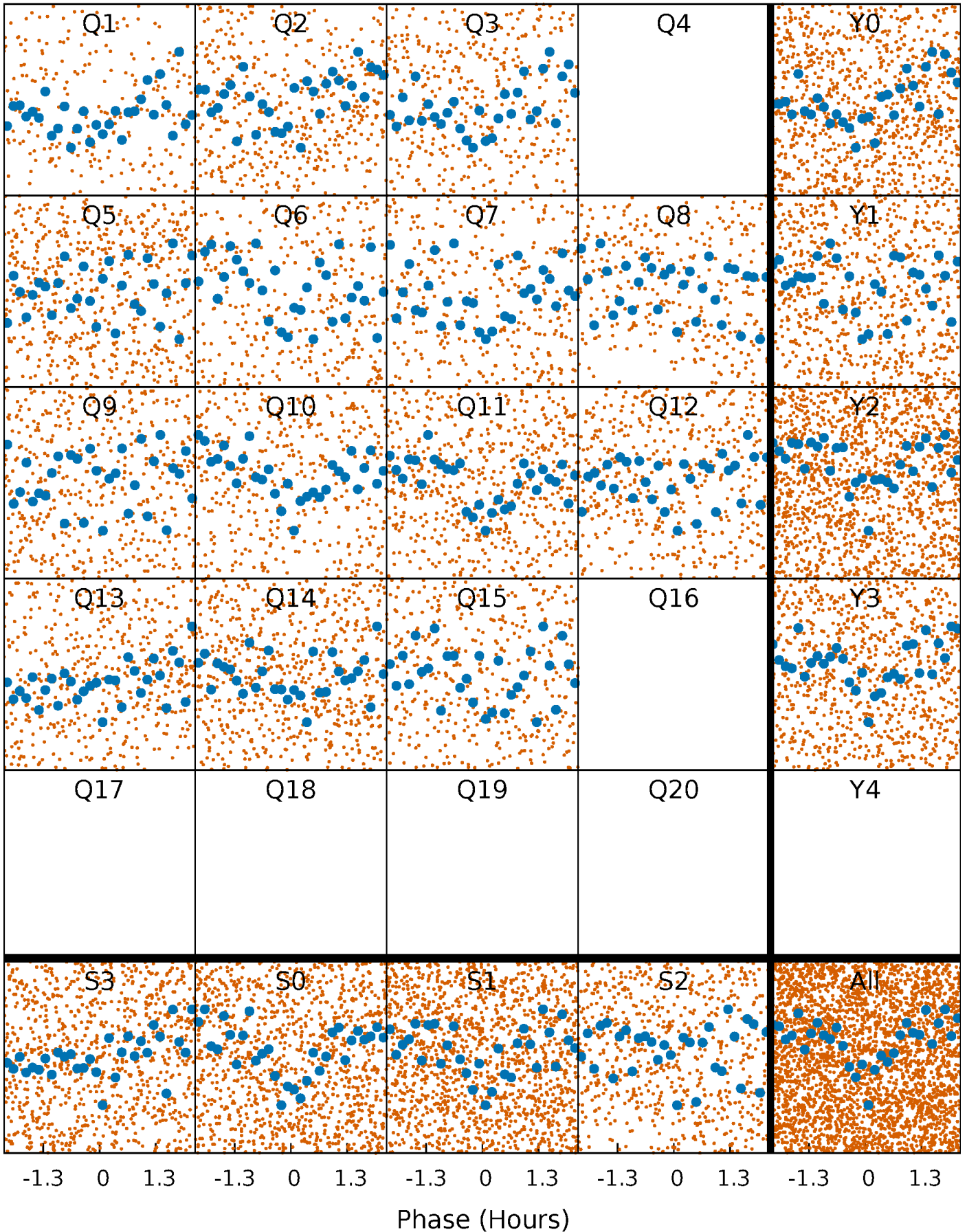


Non-Whitened Vs. Whitened Light Curve



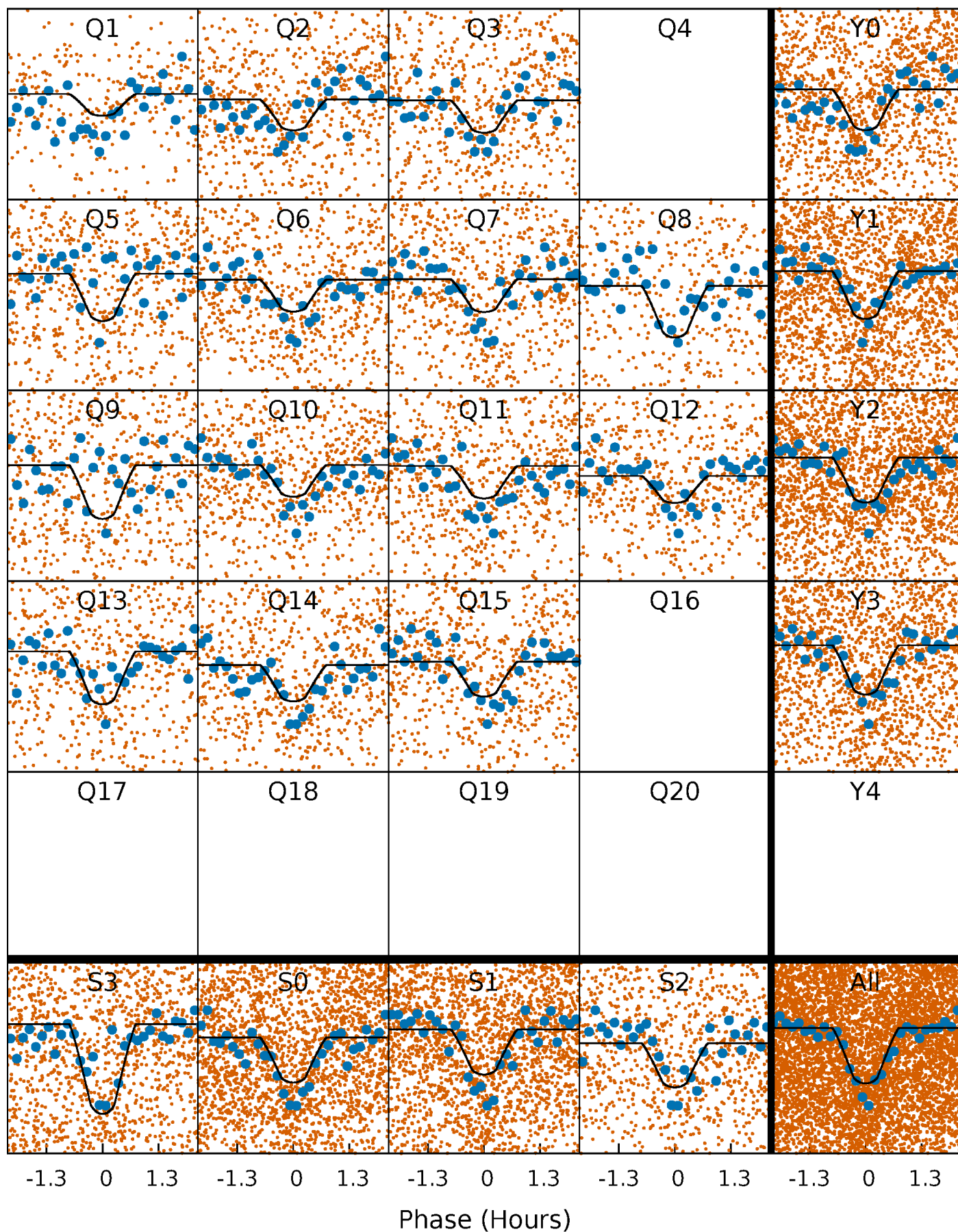
PDC Quarter-Phased Transit Curves

TCE 006606669-01 P= 0.970076 Days $T_0=132.412181$ (BKJD)



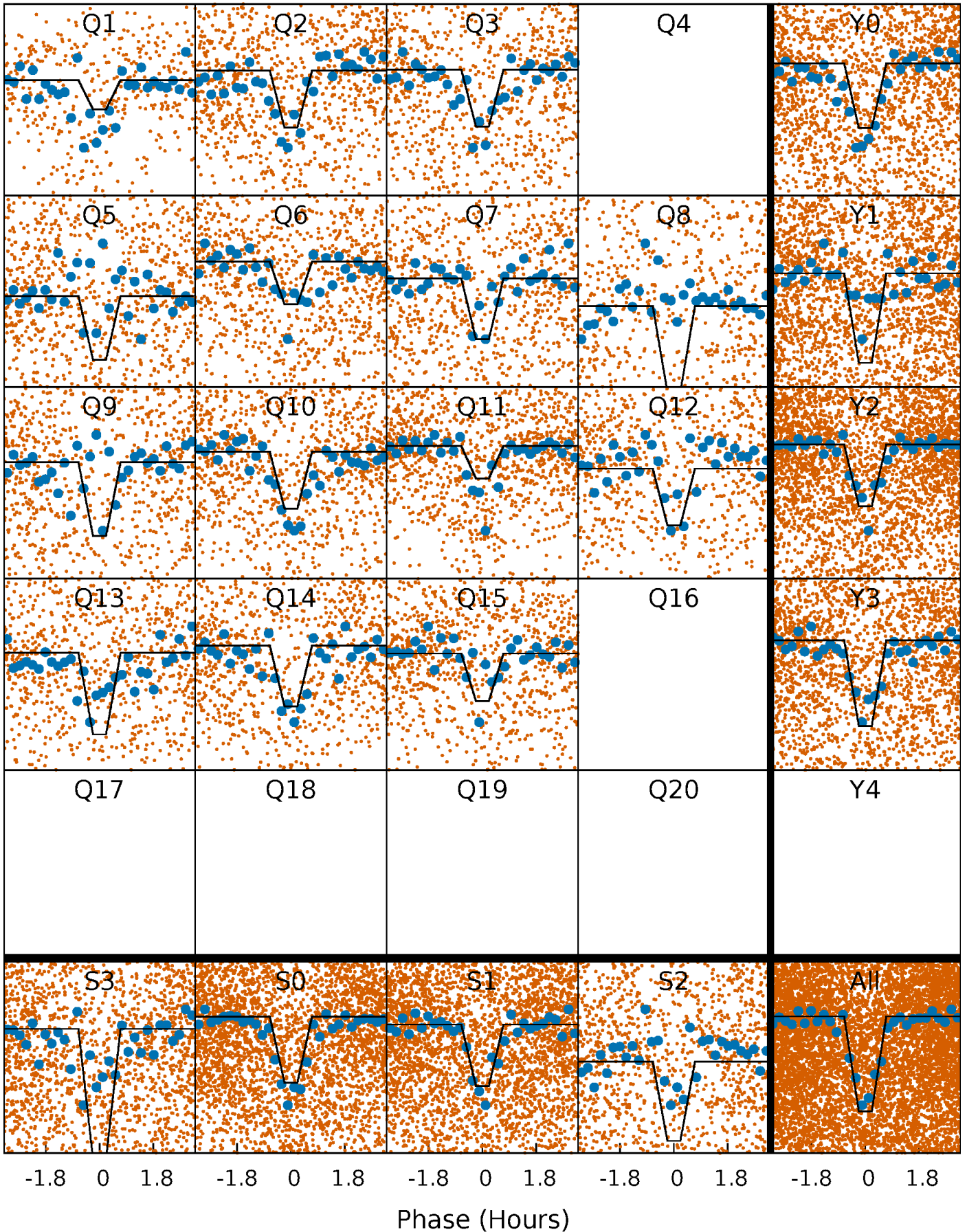
DV Quarter-Phased Transit Curves

TCE 006606669-01 P= 0.970076 Days $T_0=132.412181$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

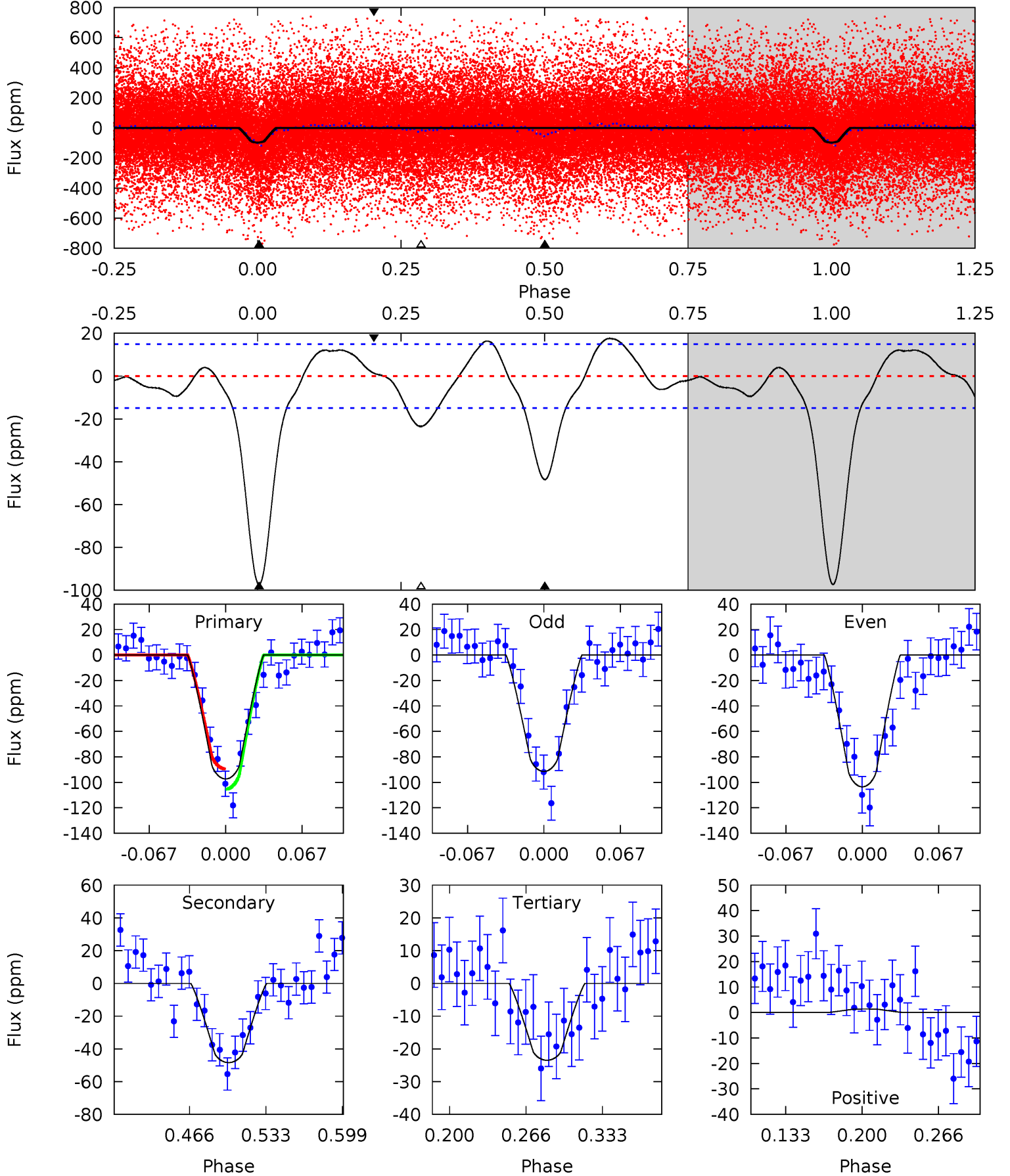
TCE 006606669-01 P= 0.970083 Days $T_0=132.409673$ (BKJD)



DV Model-Shift Uniqueness Test

006606669-01, P = 0.970076 Days, E = 131.442105 Days

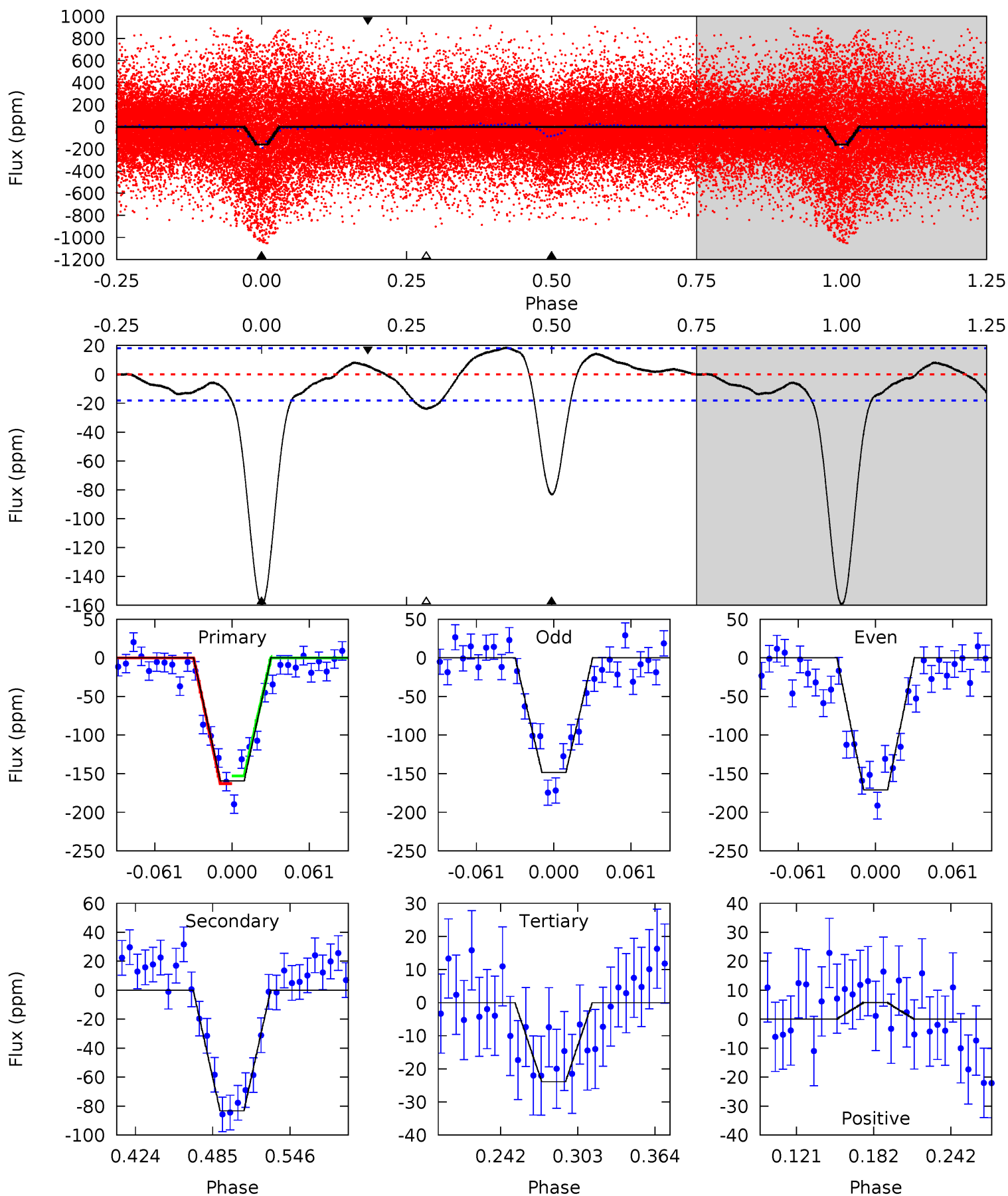
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	15.1	7.32	0.43	4.65	1.83	3.07	23.0	29.9	7.76	14.7	1.89	1.02	0.15	2.50



Alt Model-Shift Uniqueness Test

006606669-01, P = 0.970083 Days, E = 131.439590 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.9	21.4	6.13	1.47	4.67	1.88	2.65	34.8	39.4	15.3	19.9	2.87	1.00	0.10	1.26



Stellar Parameters For KIC 006606669

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4555^{+54}_{-68}	$2.346^{+0.196}_{-0.098}$	$0.100^{+0.150}_{-0.150}$	$15.630^{+1.868}_{-5.604}$	$1.974^{+0.918}_{-0.835}$	$0.001^{+0.001}_{-0.000}$
	+1%/-1%	+8%/-4%	+150%/-150%	+12%/-36%	+47%/-42%	+139%/-30%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006606669-01 / KOI 6741.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-48 ± 3	$17.55^{+5.14}_{-5.31}$	7066^{+336}_{-407}	-5296^{+427}_{-321}	$0.054^{+0.047}_{-0.021}$
Alt.	-83 ± 4	$22.15^{+5.88}_{-5.83}$	7043^{+342}_{-429}	-5285^{+446}_{-303}	$0.058^{+0.039}_{-0.021}$

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

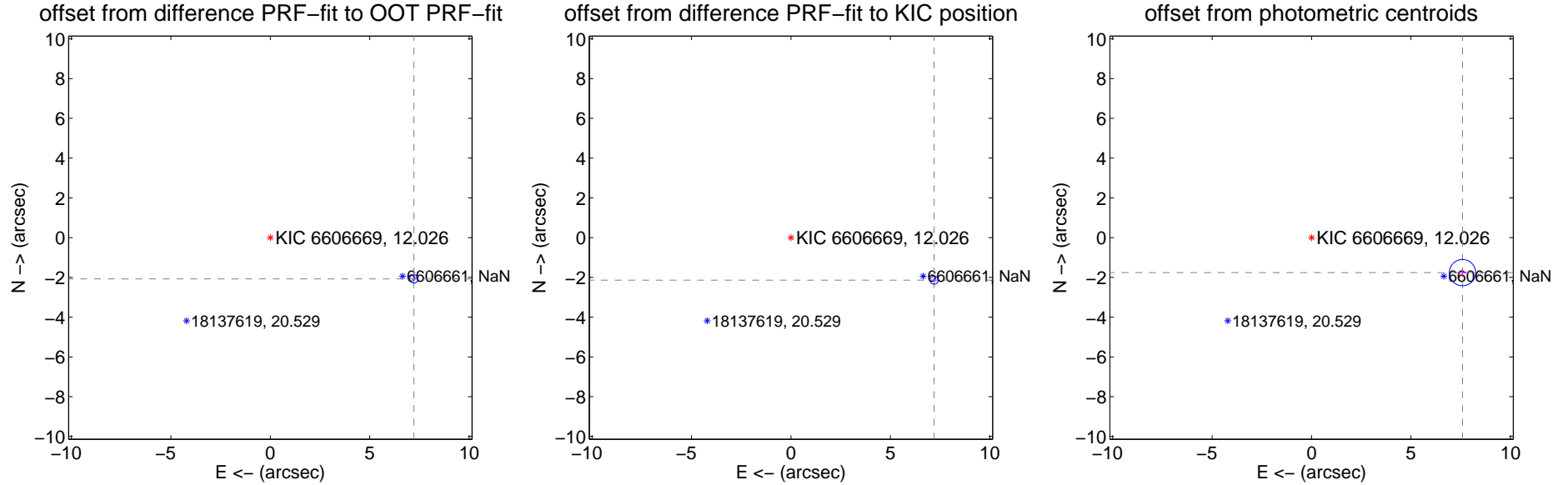
DV Centroid Data

Supplemental centroid analysis for 006606669-01. Kepler magnitude: 12.03. Transit SNR 24.17

There are 14 quarters with good PRF difference image offsets

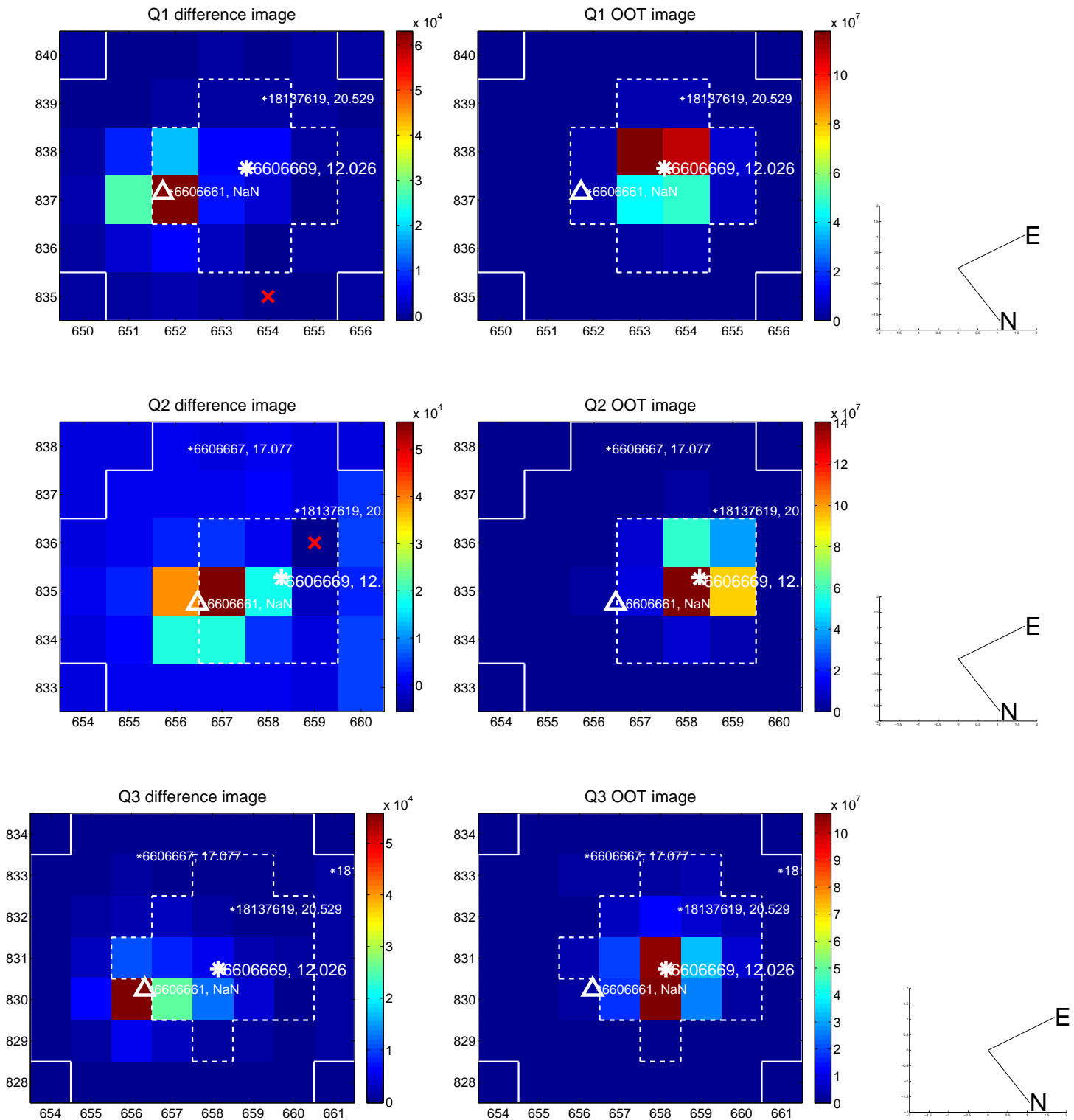
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.511 ± 0.070	107.27	-7.219 ± 0.070	-2.076 ± 0.070
PRF-fit source offset from KIC position	7.508 ± 0.068	110.67	-7.198 ± 0.068	-2.137 ± 0.067
photometric centroid source offset	7.79 ± 0.22	35.38	-7.59 ± 0.22	-1.76 ± 0.22

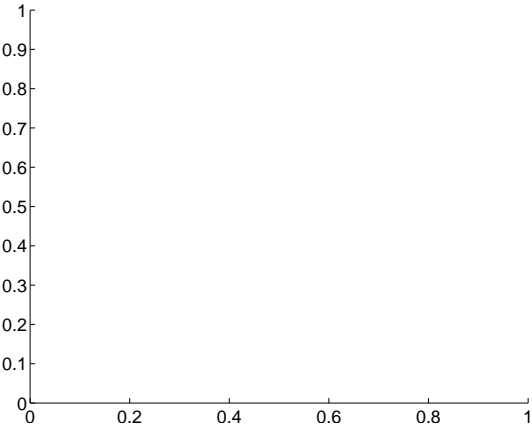


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

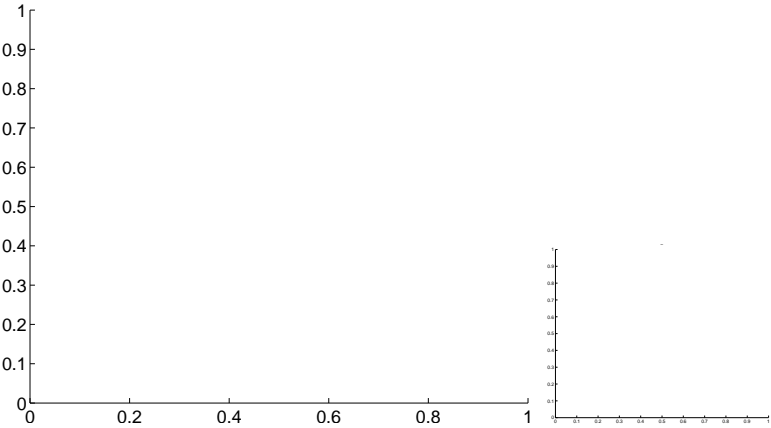
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



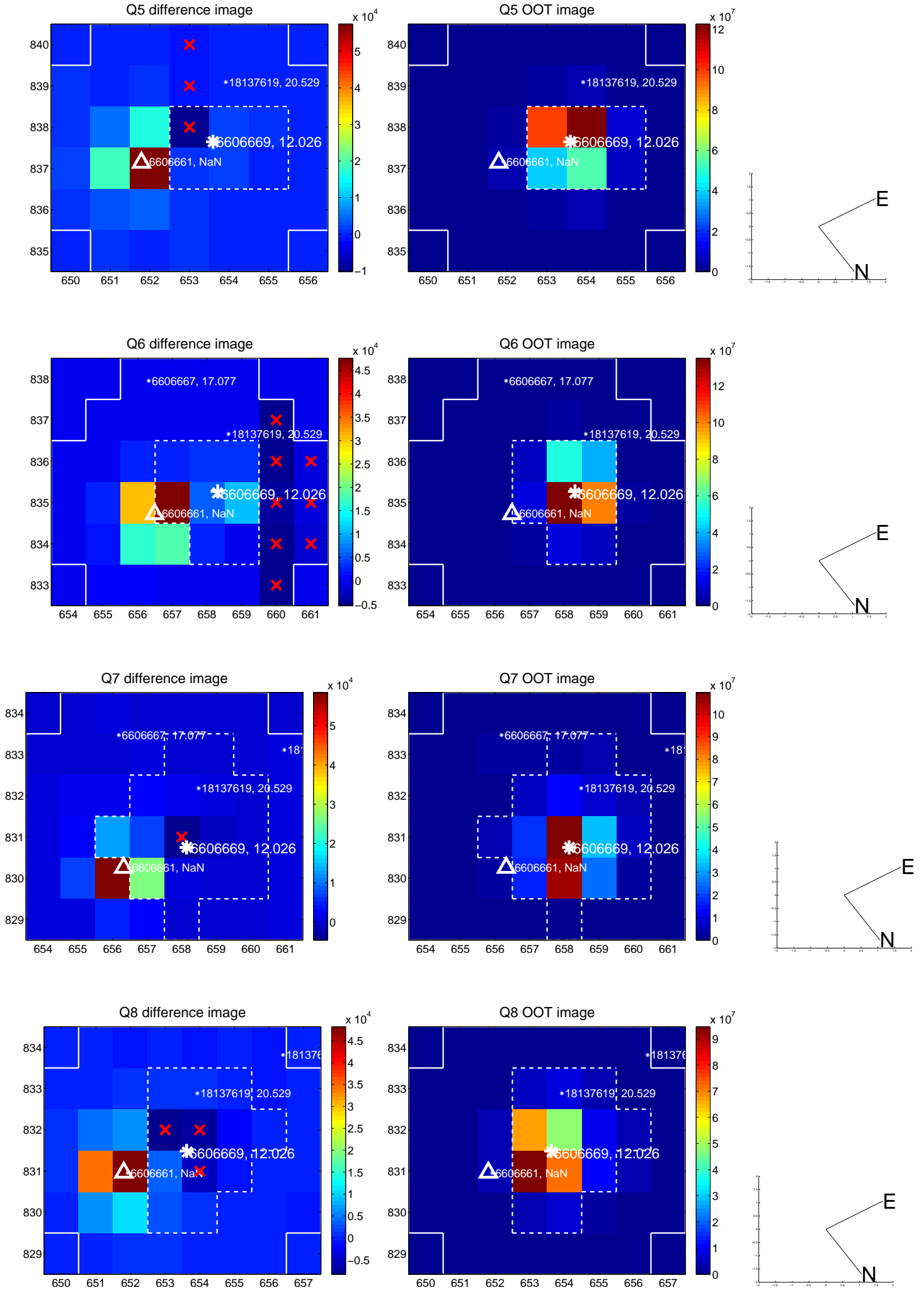
Q4 no difference image



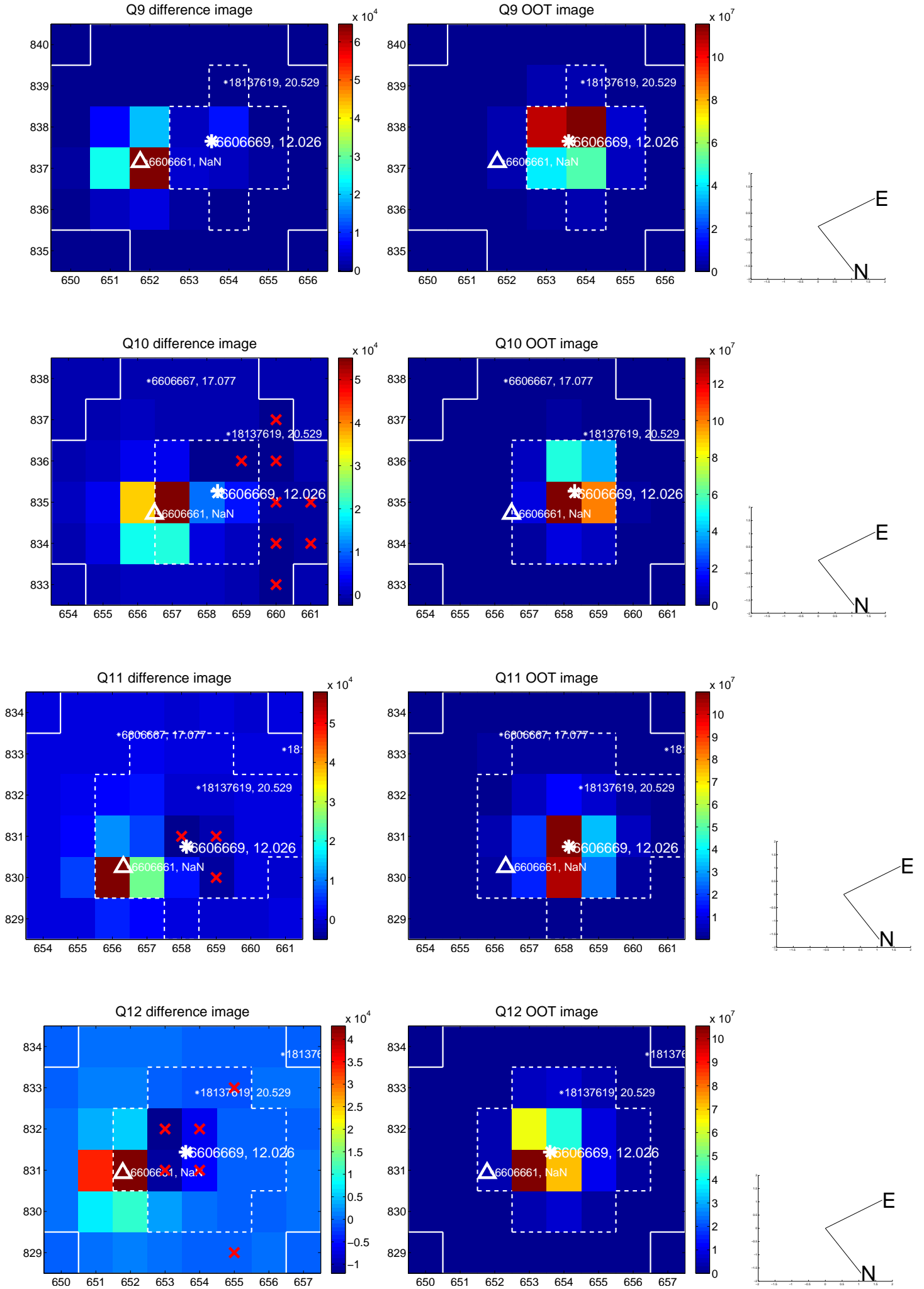
Q4 no OOT image



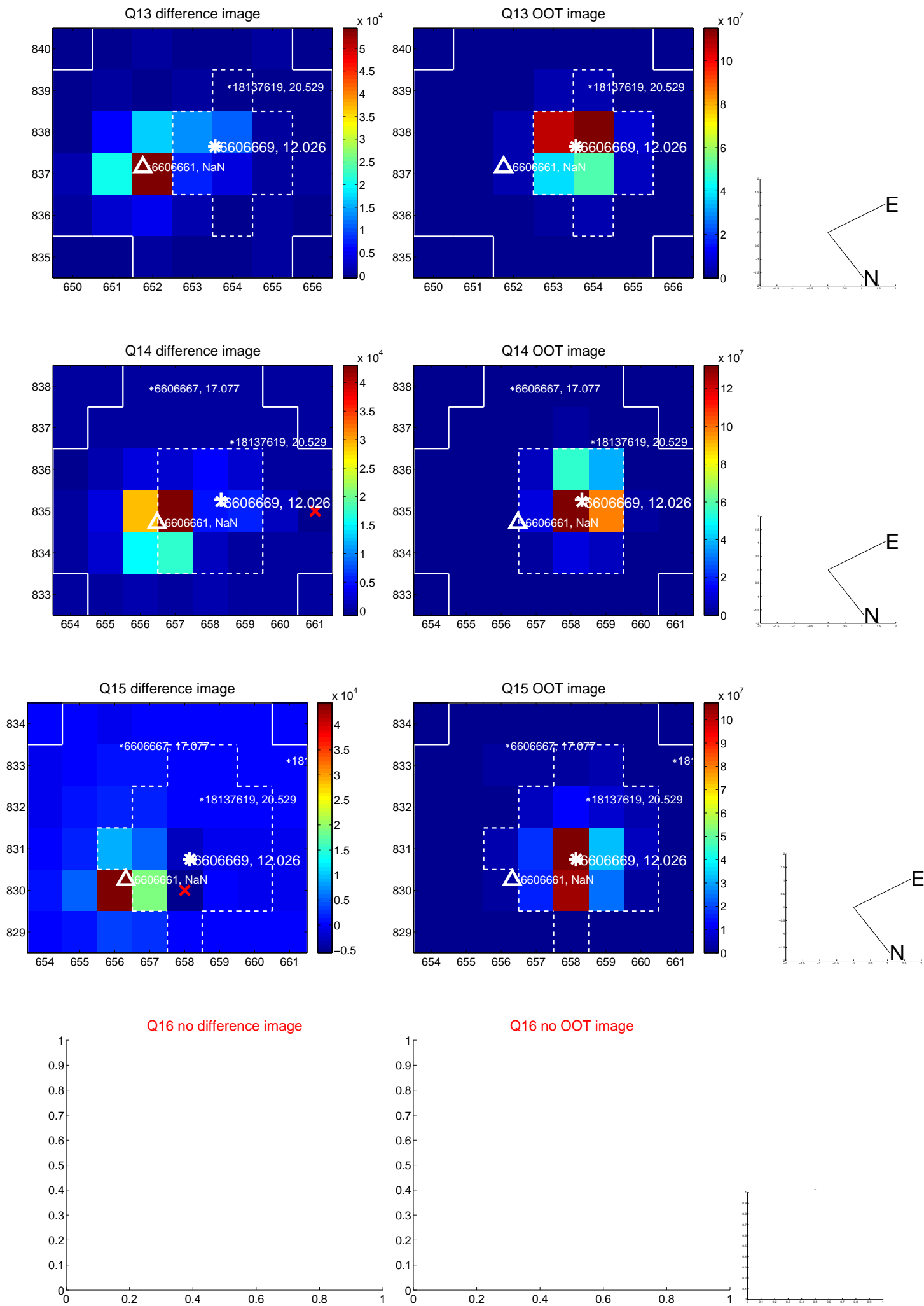
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



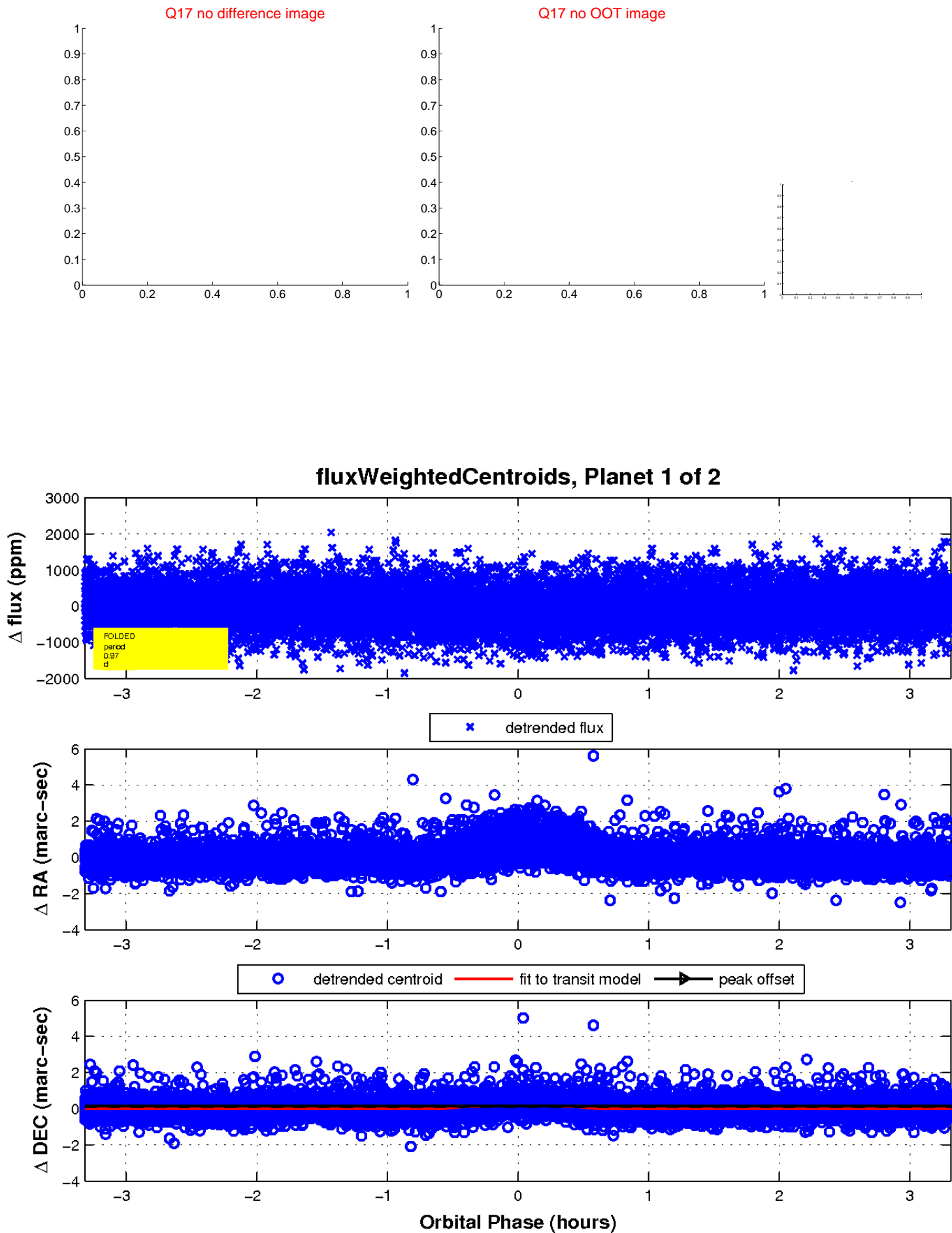
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



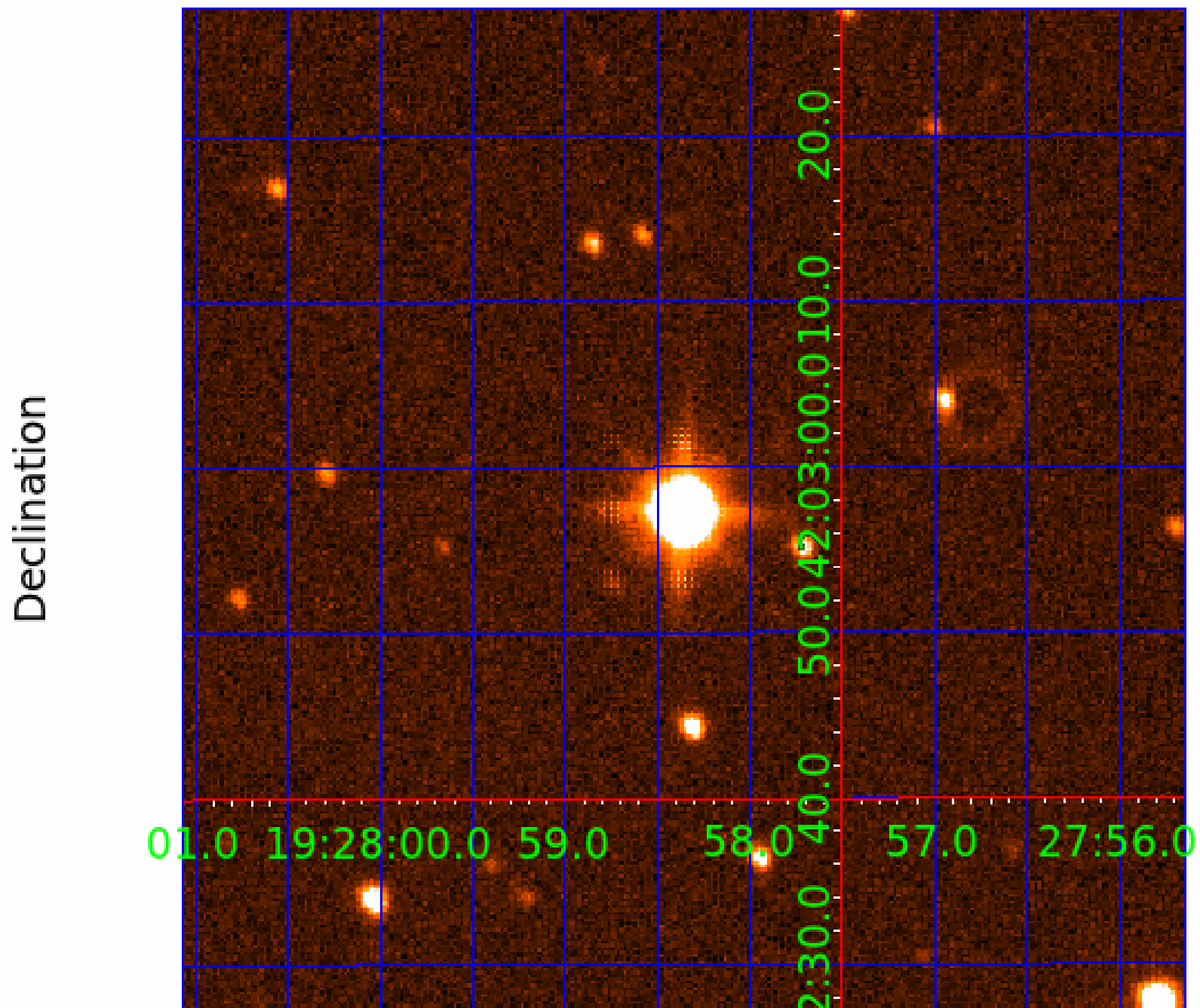
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006606669

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})
006606669-01	OBS	6741.01	0.970076	132.412181	84.0	1.105	16.8	24.2	15.63	4555	17.87	0.00
006606669-02	OBS	No	0.970072	131.925003	30.7	1.348	8.8	8.2	15.63	4555	10.76	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606669-01	OBS	FP	0.00	0	1	1	0	PLANET_IN_STAR—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST
006606669-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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 006606669-02

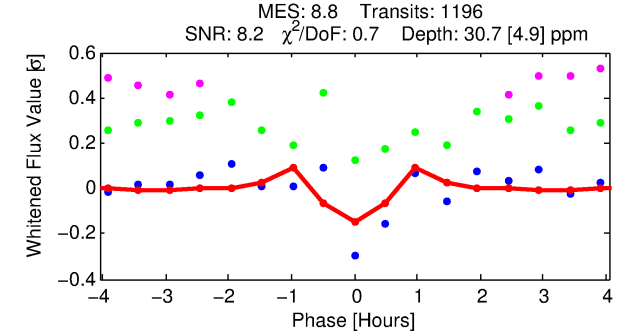
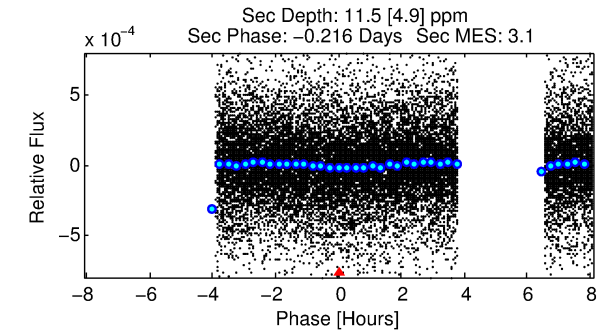
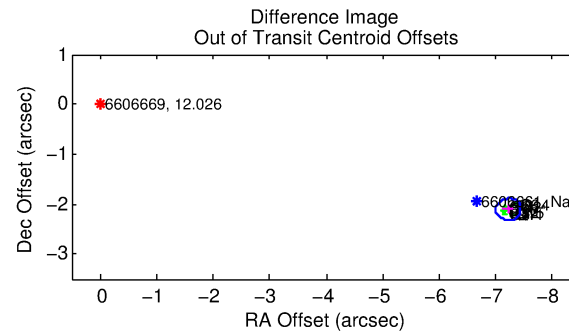
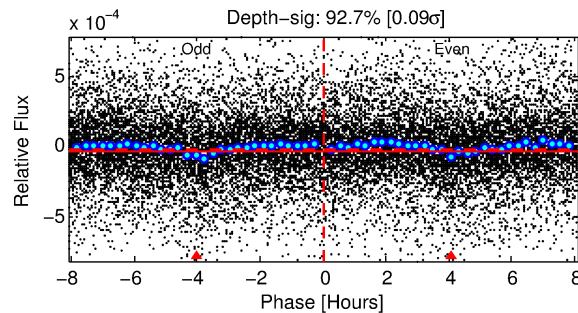
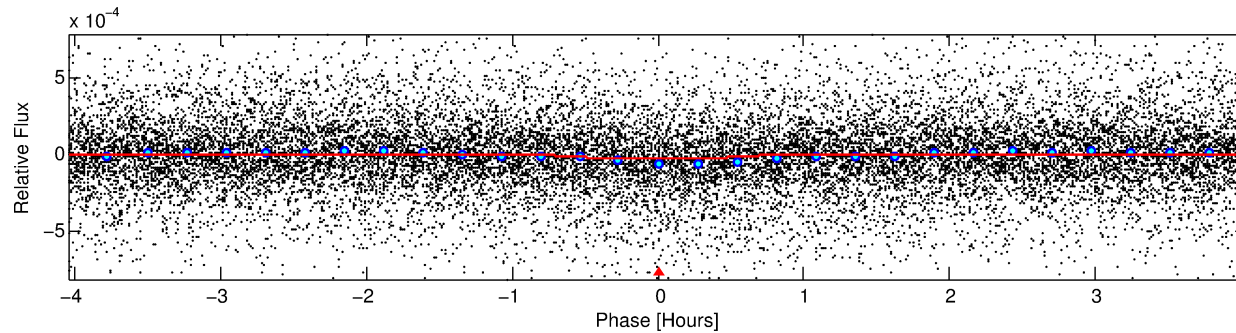
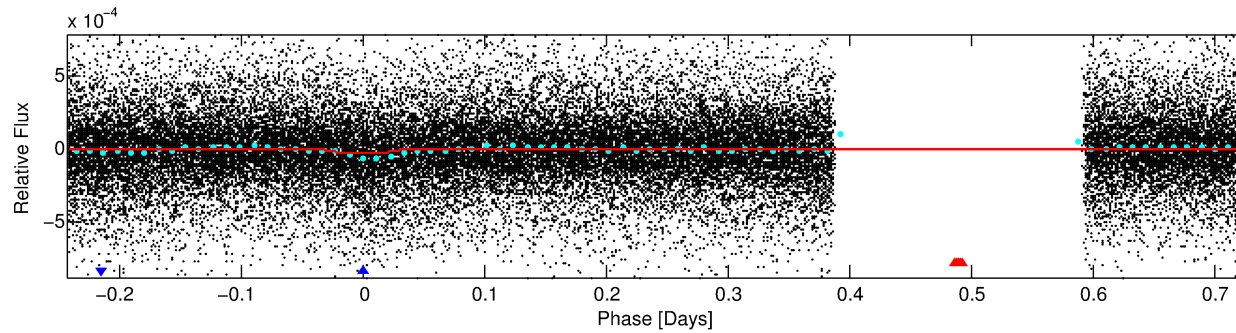
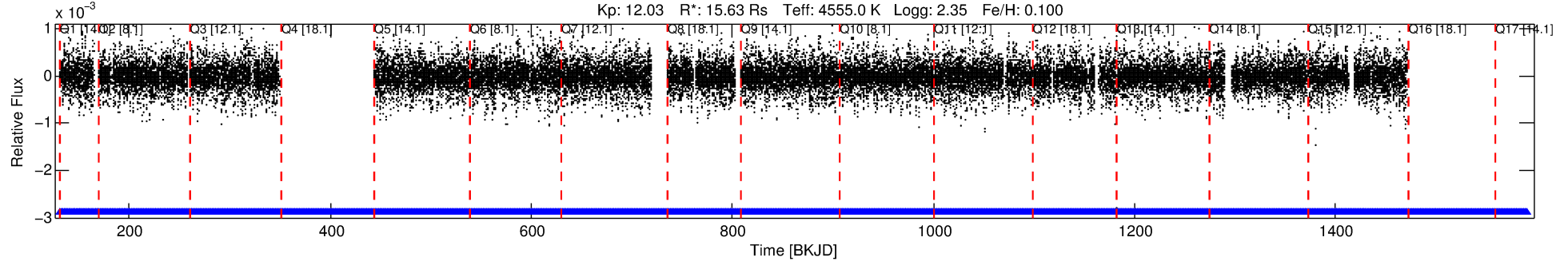
No Significant Match Found

DV One-Page Summary

KIC: 6606669 Candidate: 2 of 2 Period: 0.970 d

KOI: K06741 Corr: No Ephemeris Match

Kp: 12.03 R*: 15.63 Rs Teff: 4555.0 K Logg: 2.35 Fe/H: 0.100



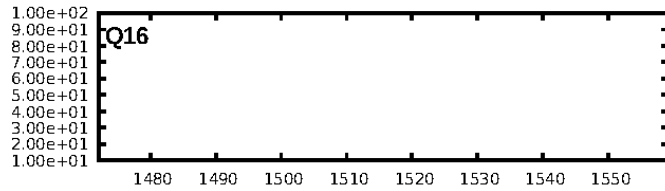
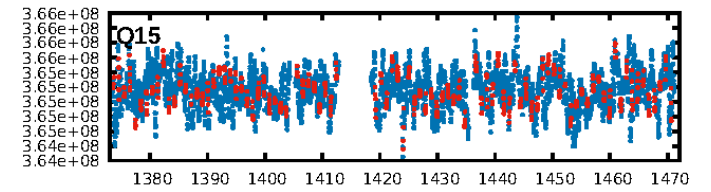
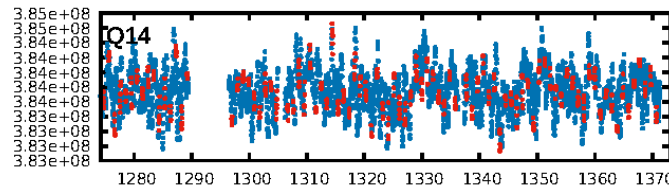
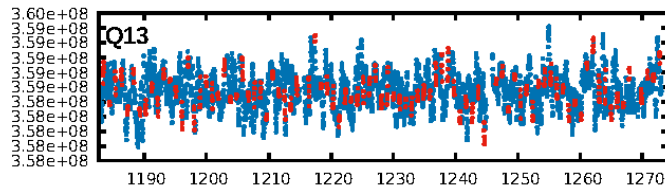
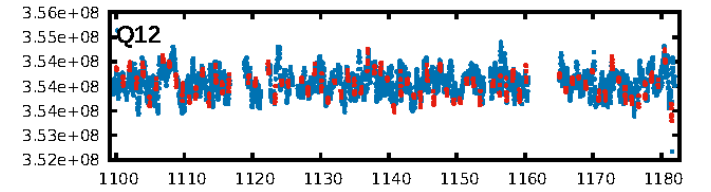
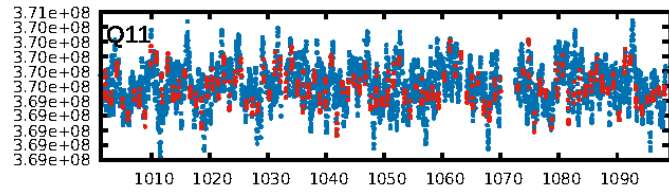
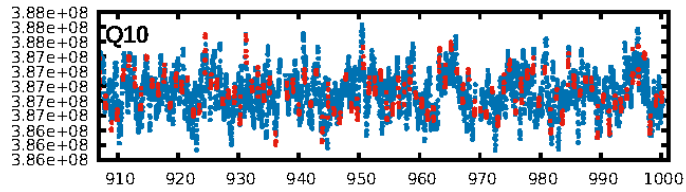
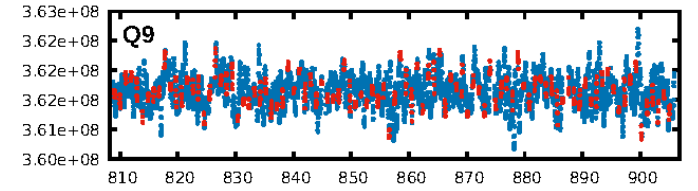
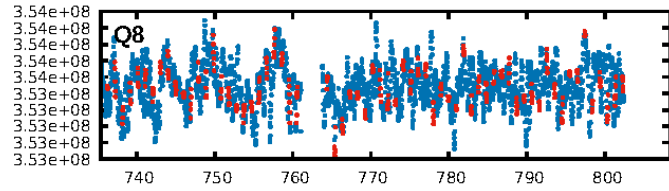
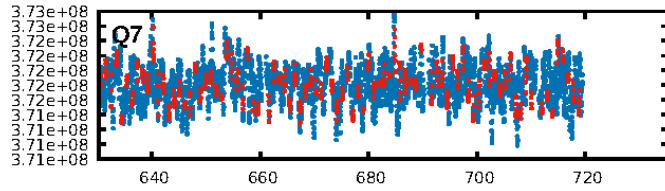
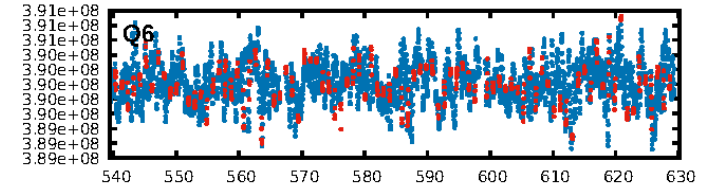
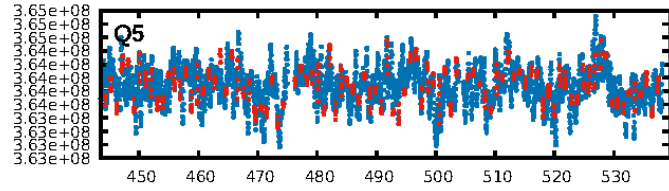
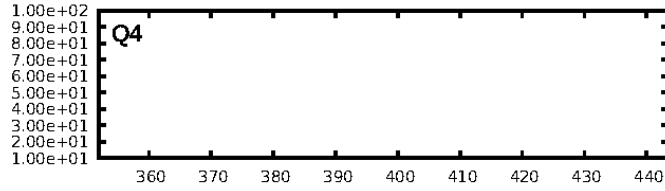
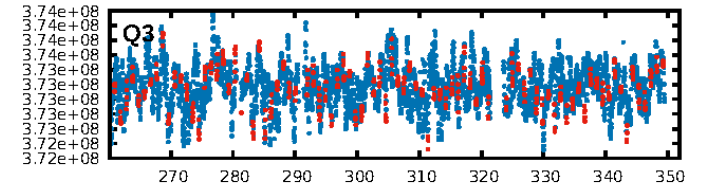
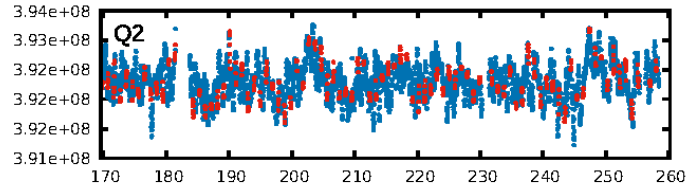
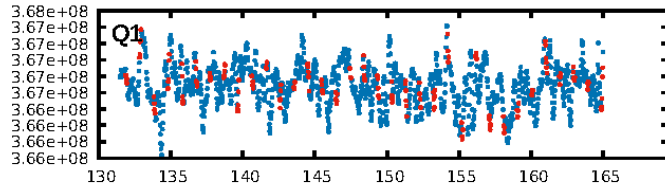
DV Fit Results:

Period = 0.97007 [0.00001] d
Epoch = 131.9250 [0.0014] BKJD
Rp/R* = 0.0063 [0.0018]
a/R* = 2.65 [2.36]
b = 0.90 [0.23]
Seff = N/A
Teq = N/A
Rp = 10.76 [4.98] Re
a = N/A
Ag = N/A
Teff = N/A

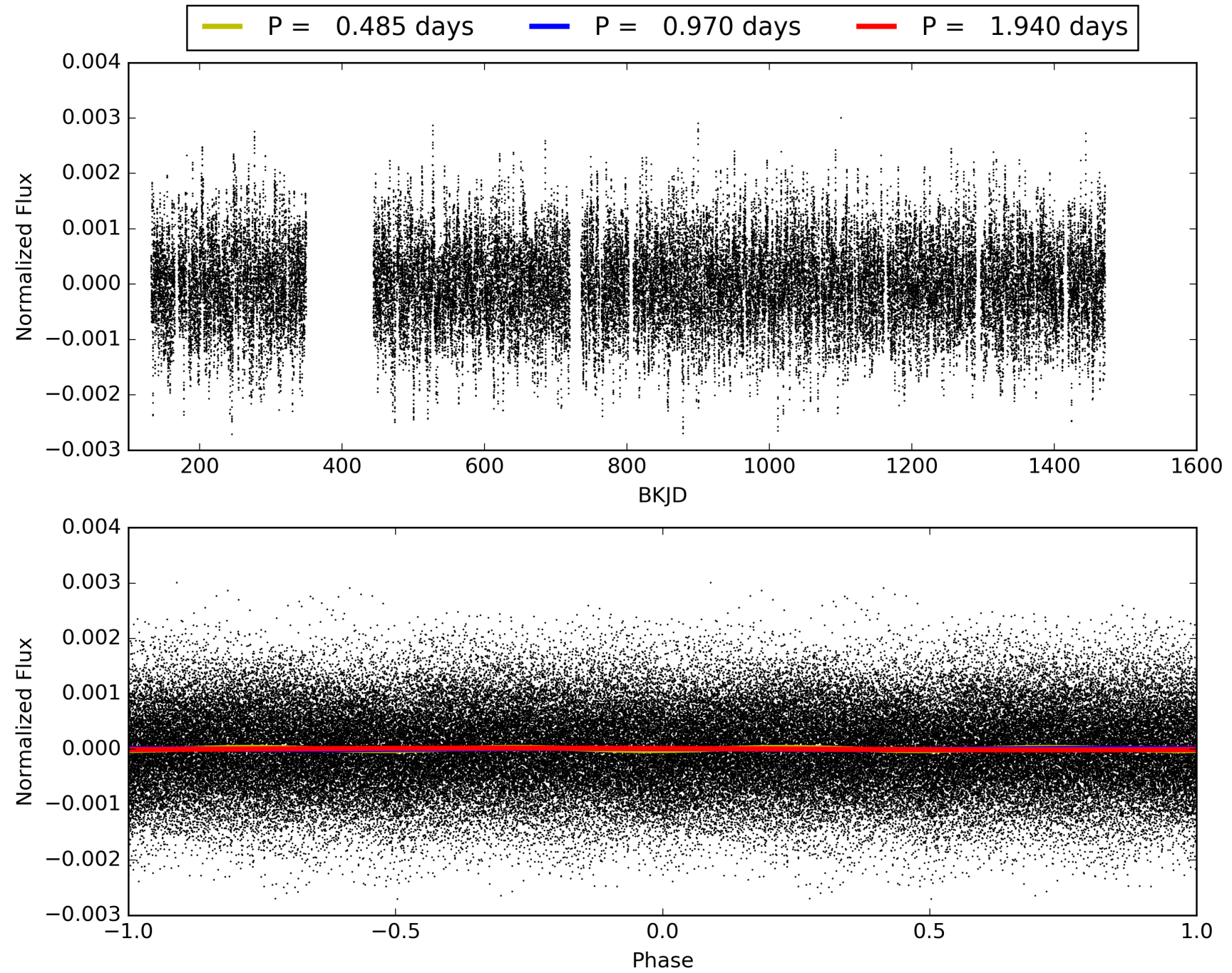
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.39e-35
RollingBand-fgt: 1.00 [1161/1161]
GhostDiagnostic-chr: 0.3813
Centroid-sig: N/A
Centroid-so: 2.830 arcsec [5.20σ]
OotOffset-rm: 7.516 arcsec [103.07σ]
KicOffset-rm: 7.522 arcsec [108.27σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006606669-02, PDC Light Curves

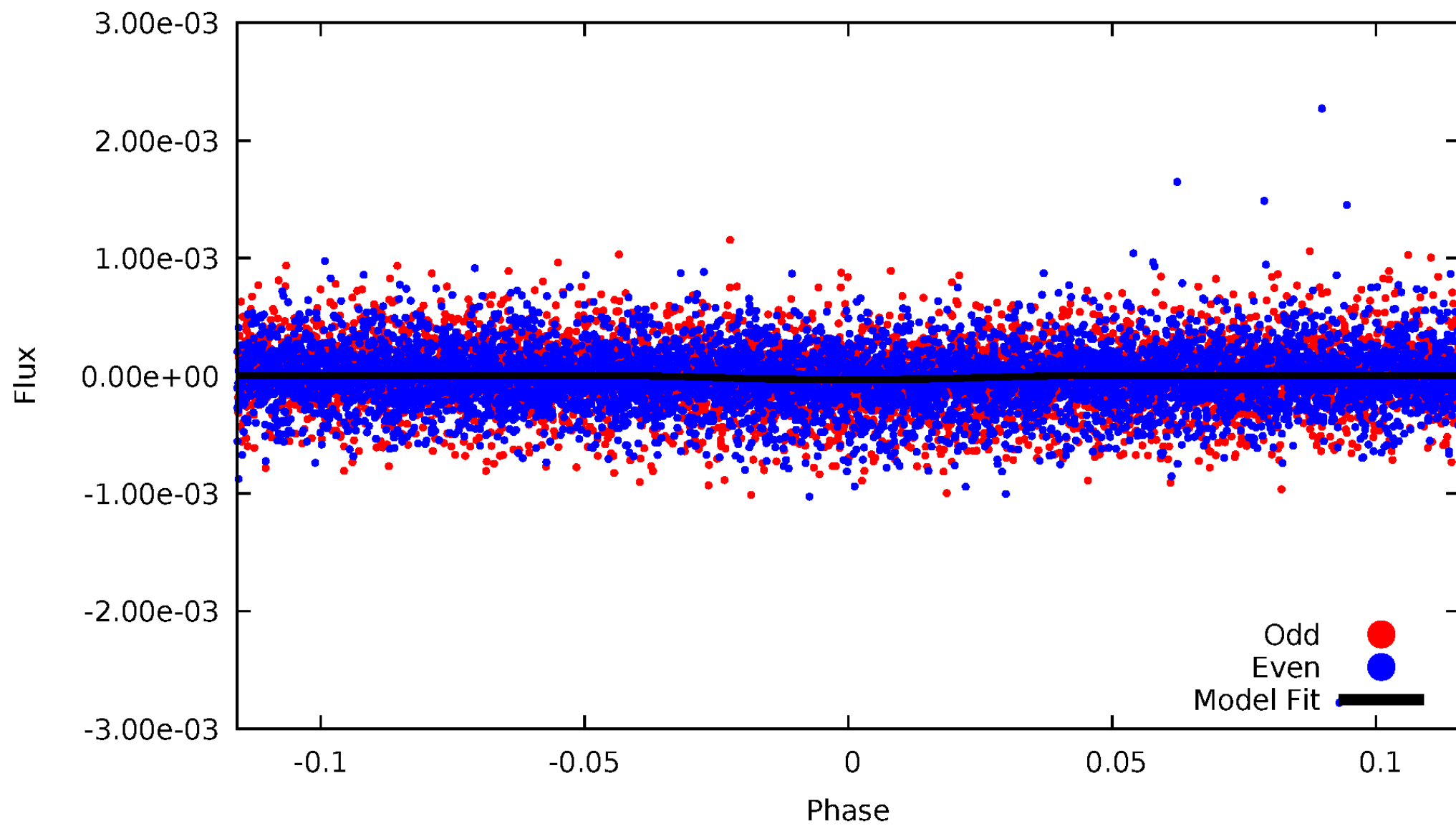


TCE 006606669-02



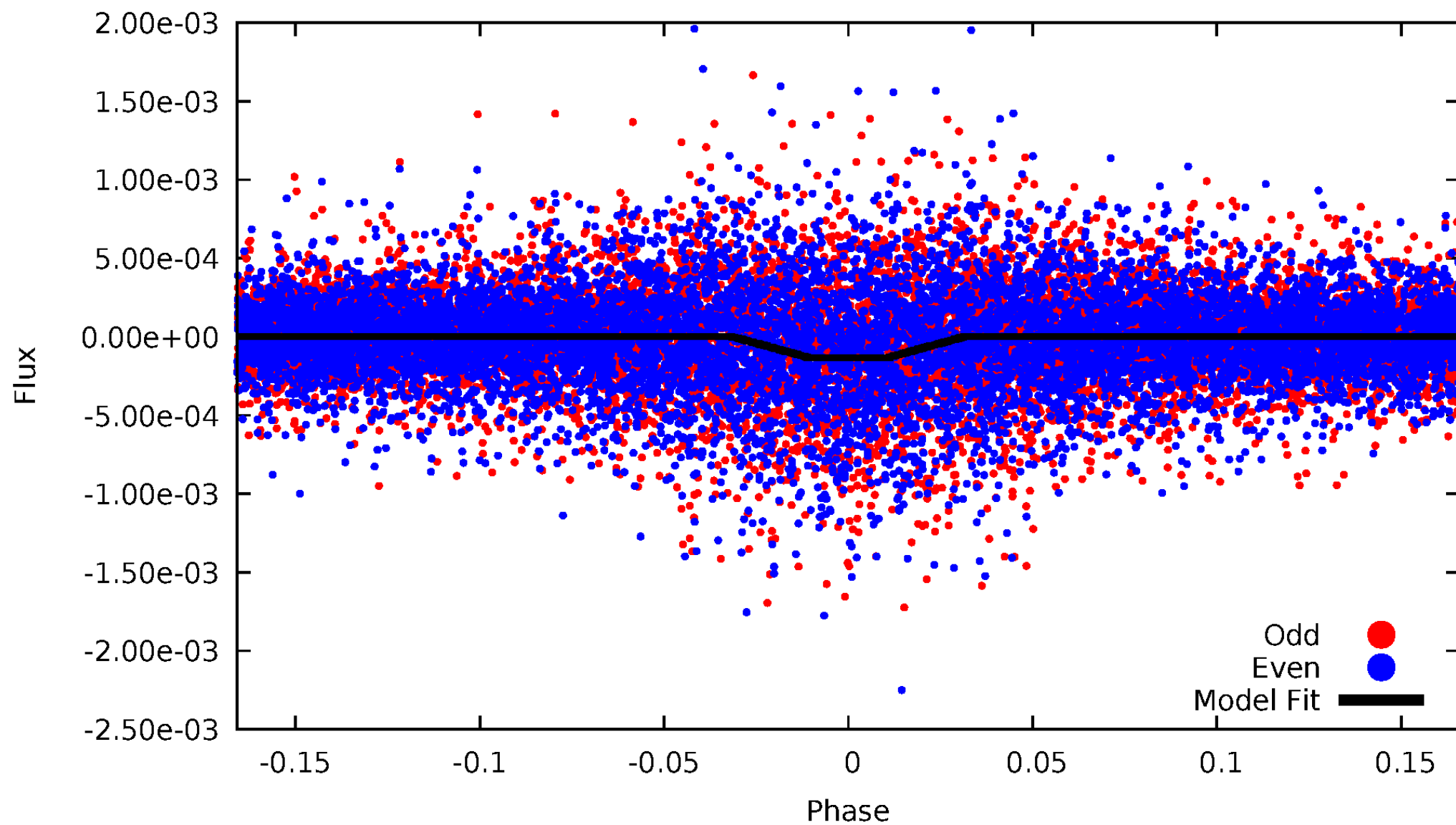
DV Odd/Even

TCE 006606669-02



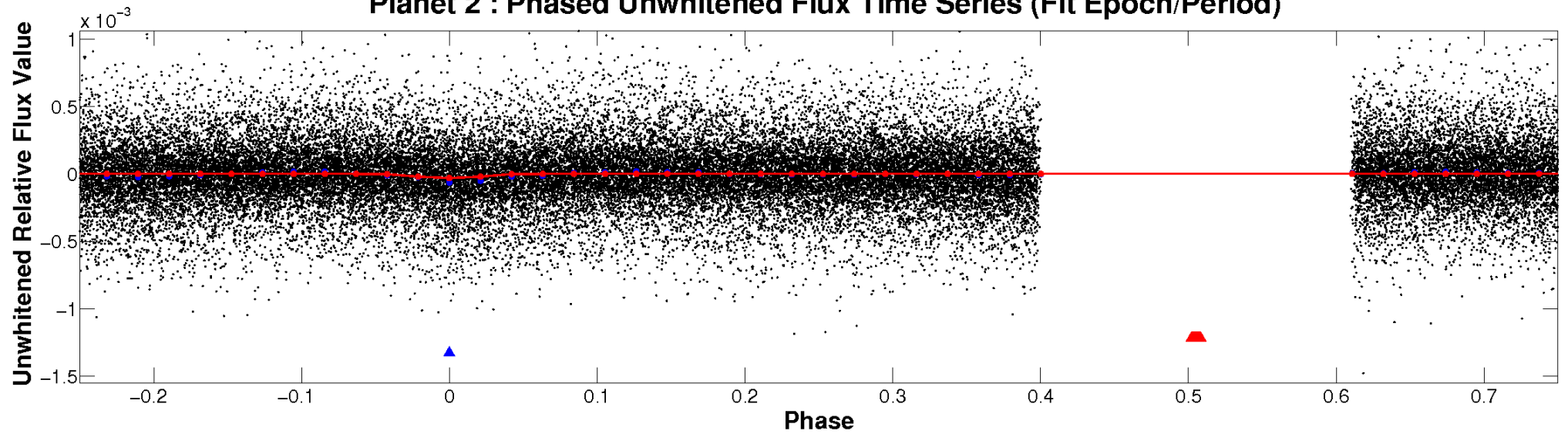
ALT Odd/Even

TCE 006606669-02

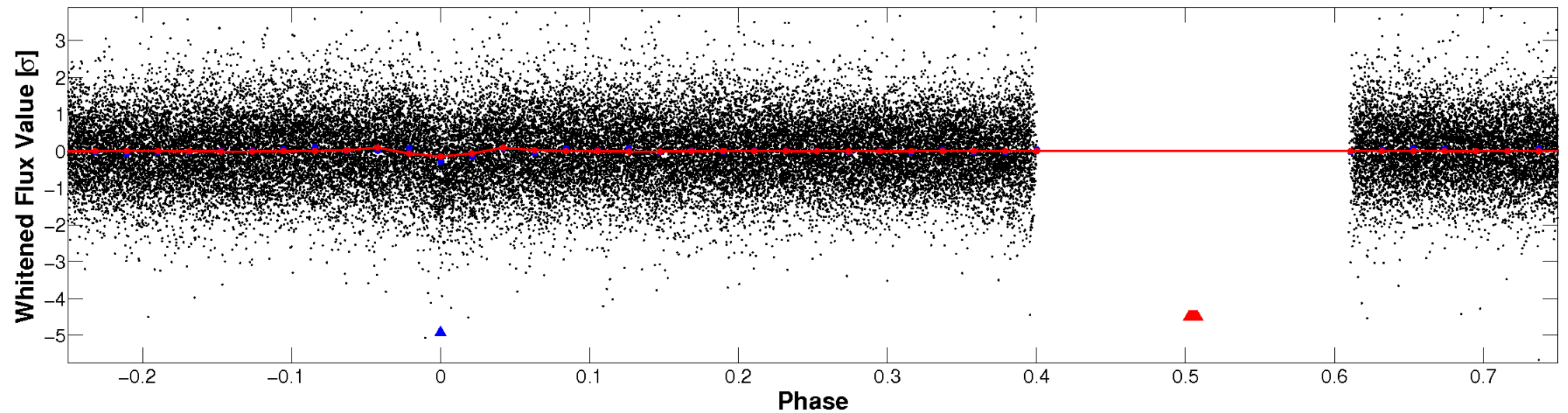


Non-Whitened Vs. Whitened Light Curve

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

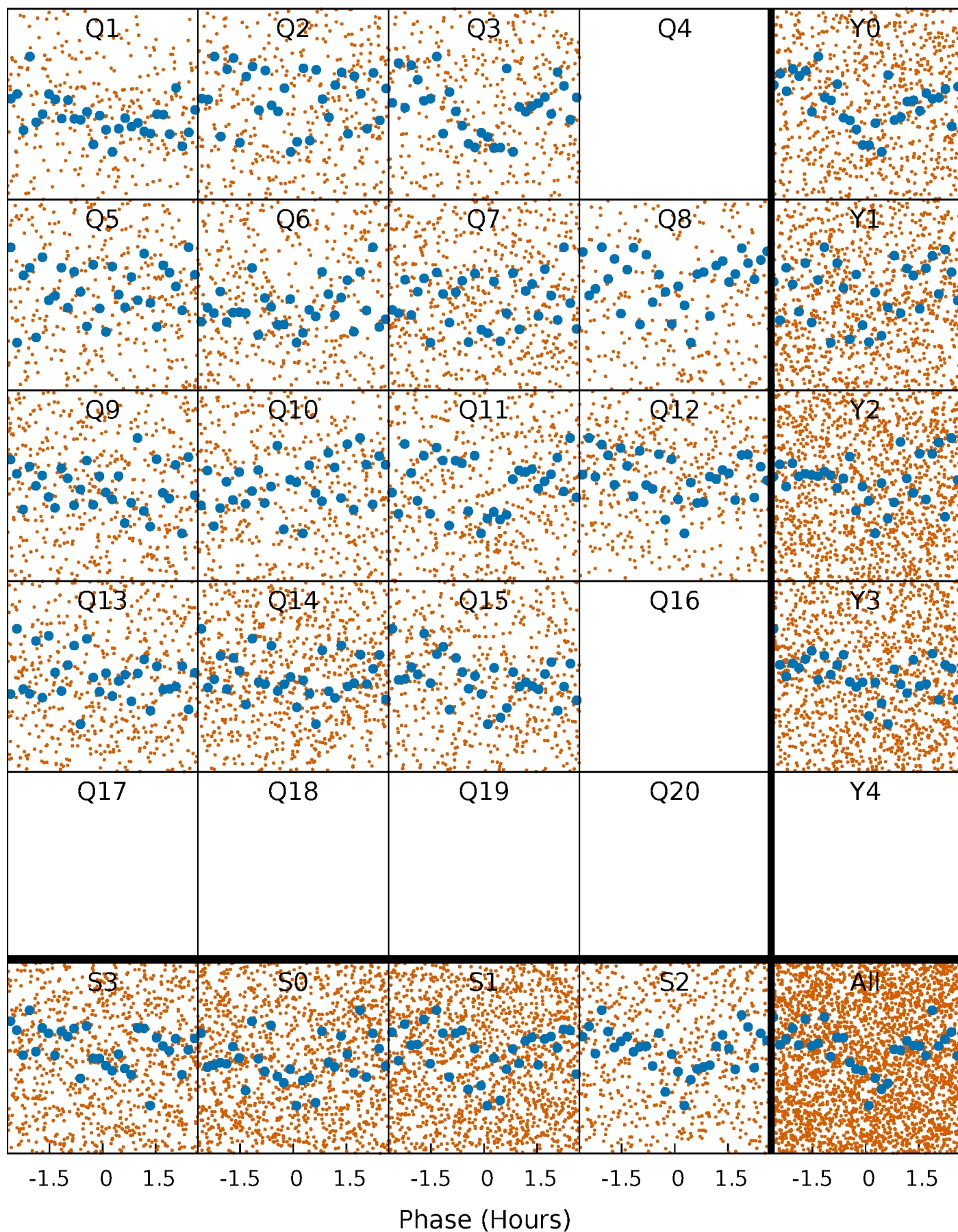


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



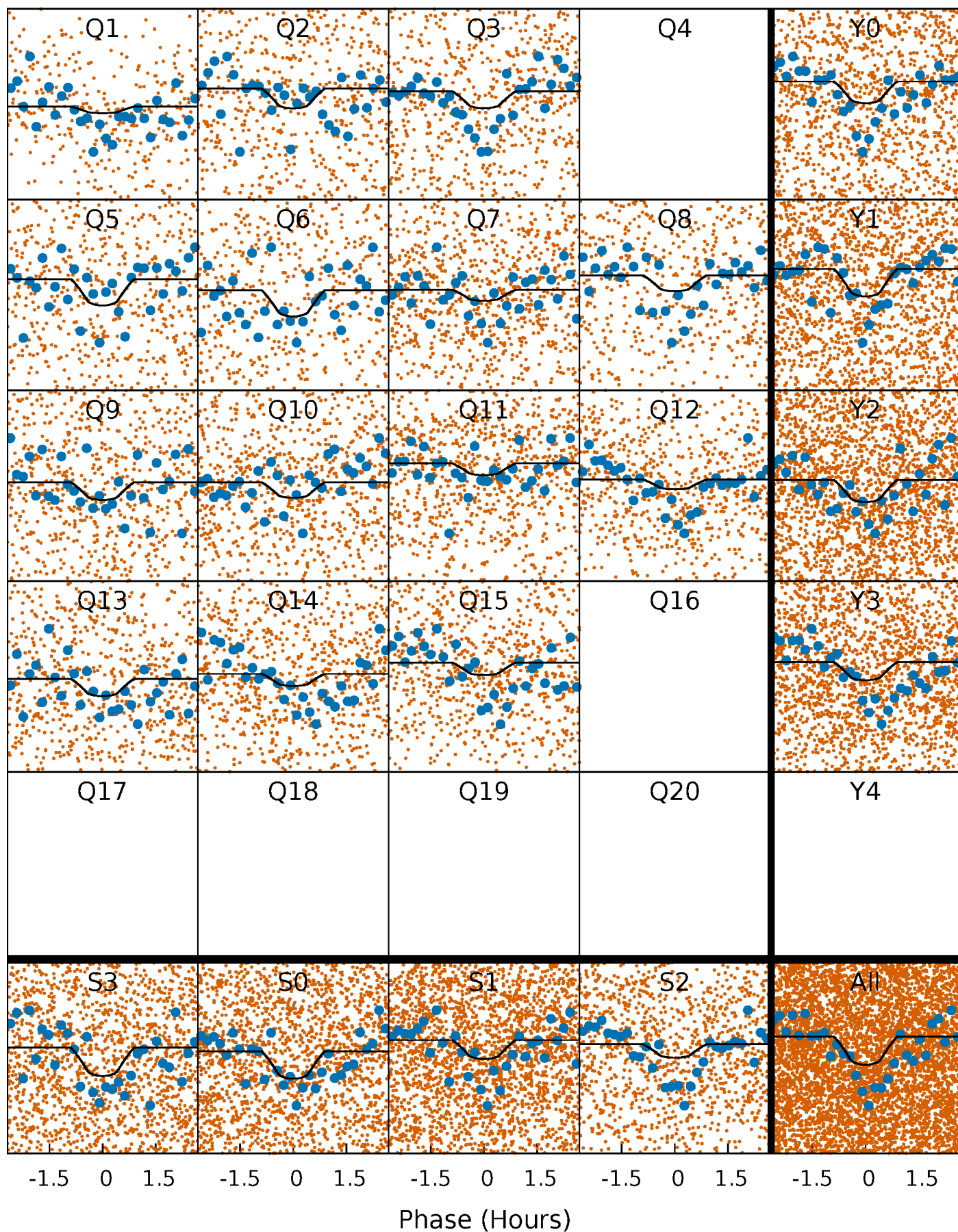
PDC Quarter-Phased Transit Curves

TCE 006606669-02 P= 0.970072 Days $T_0=131.925003$ (BKJD)



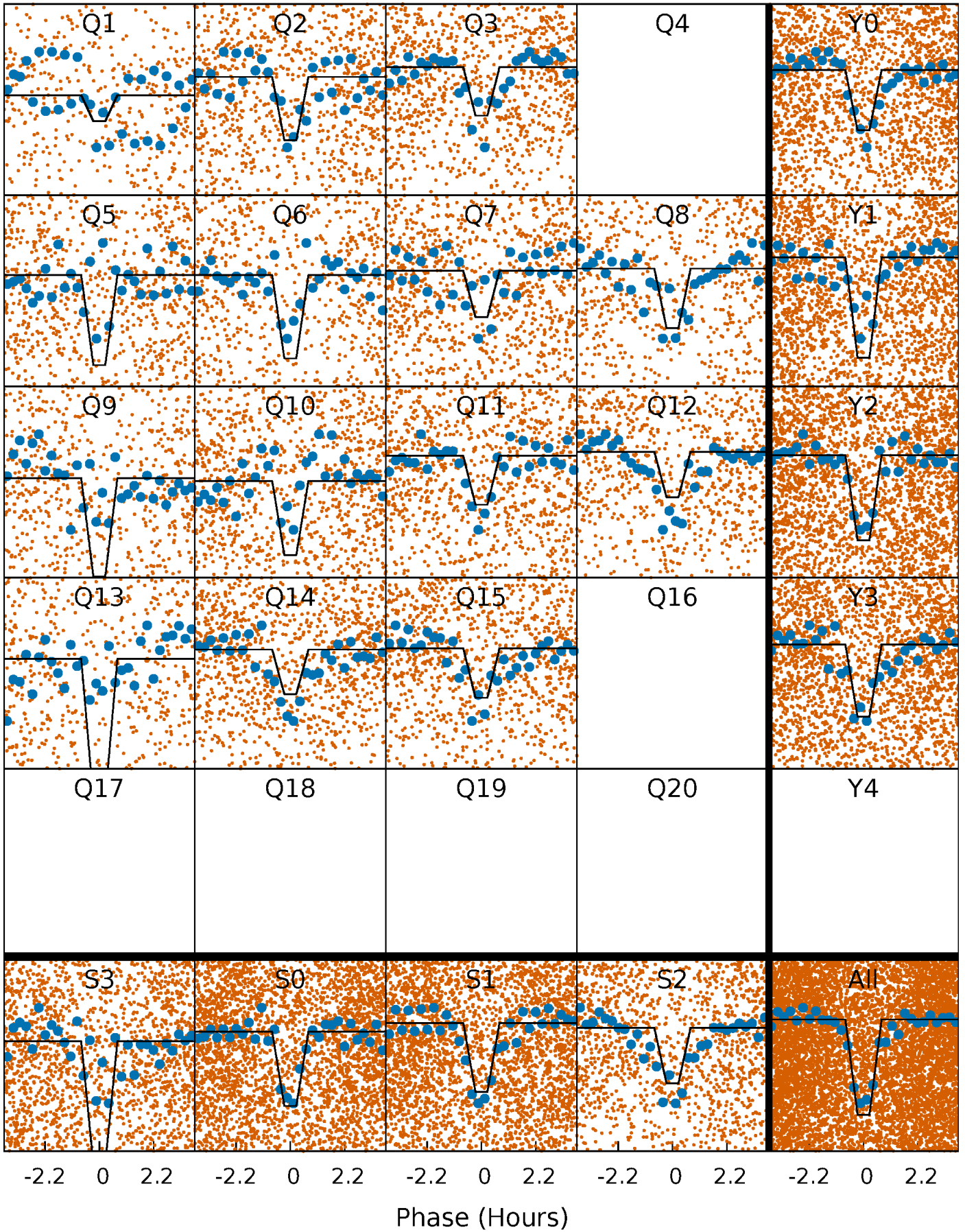
DV Quarter-Phased Transit Curves

TCE 006606669-02 P= 0.970072 Days $T_0=131.925003$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

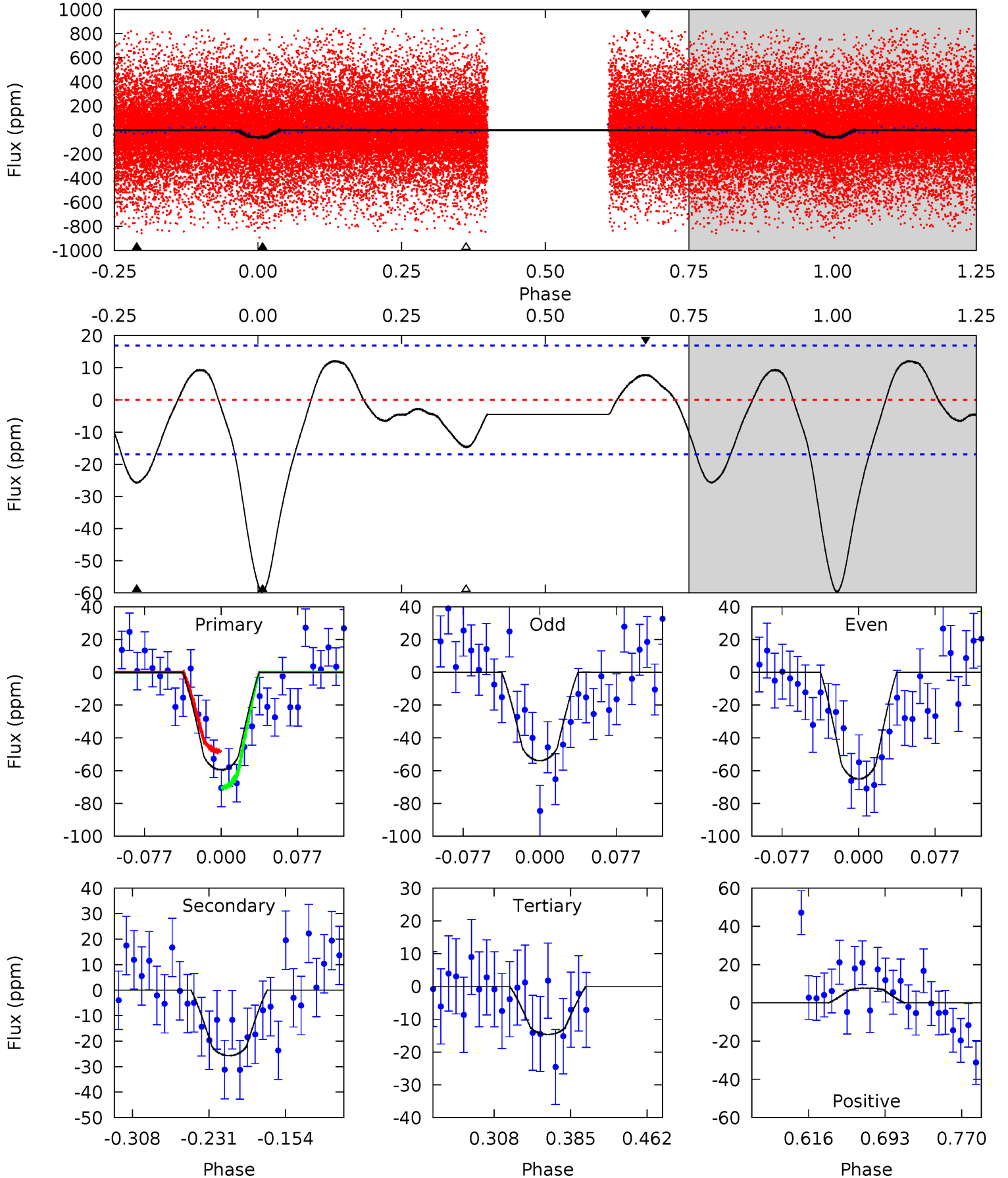
TCE 006606669-02 P= 0.970092 Days $T_0=131.918825$ (BKJD)



DV Model-Shift Uniqueness Test

006606669-02, P = 0.970072 Days, E = 130.954931 Days

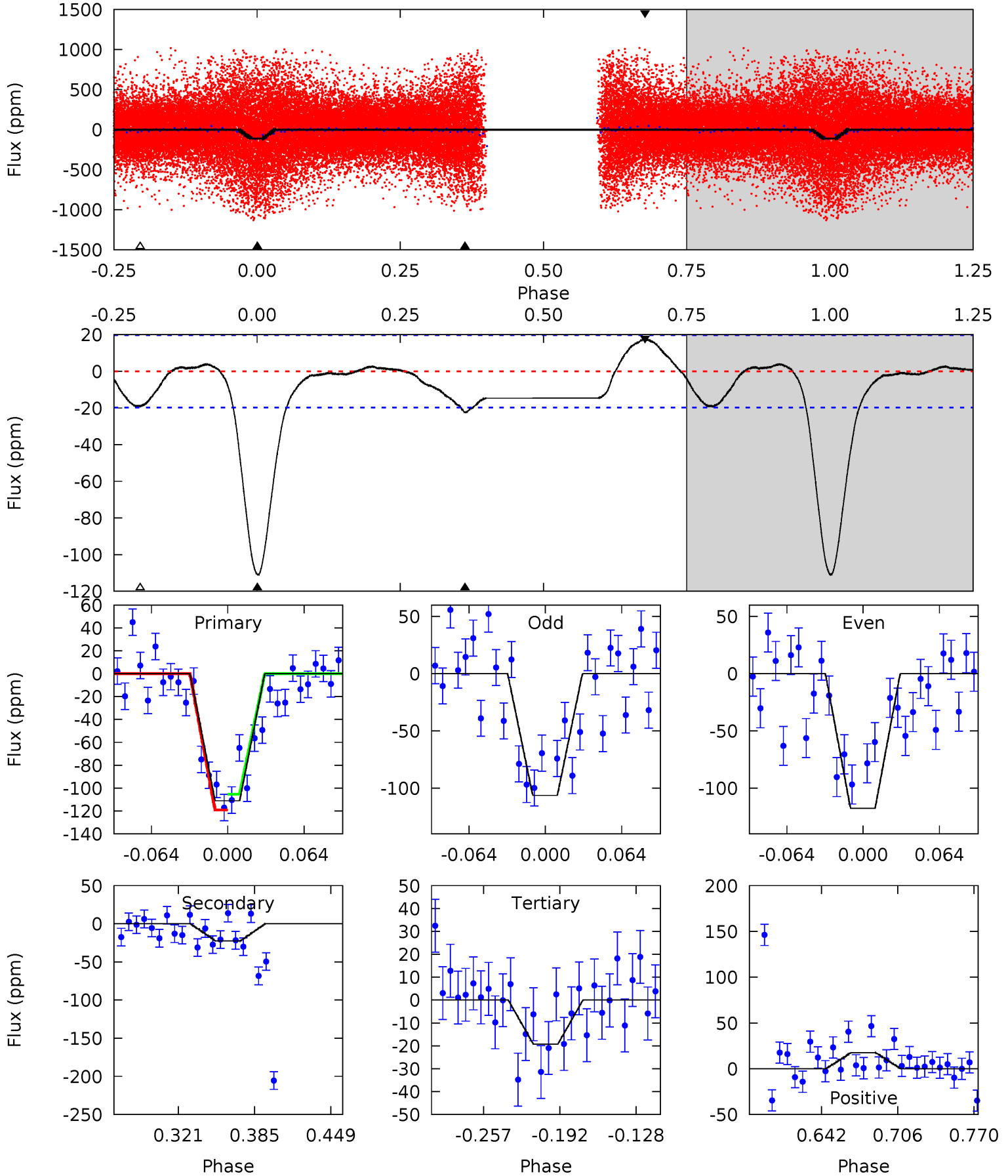
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	7.03	4.00	2.12	4.62	1.77	1.99	12.3	14.2	3.03	4.91	1.53	1.22	0.17	3.04



Alt Model-Shift Uniqueness Test

006606669-02, P = 0.970092 Days, E = 130.948733 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	5.33	4.53	4.15	4.66	1.85	1.95	21.7	22.1	0.80	1.18	1.29	1.29	0.14	1.71



Stellar Parameters For KIC 006606669

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4555^{+54}_{-68}	$2.346^{+0.196}_{-0.098}$	$0.100^{+0.150}_{-0.150}$	$15.630^{+1.868}_{-5.604}$	$1.974^{+0.918}_{-0.835}$	$0.001^{+0.001}_{-0.000}$
	+1%/-1%	+8%/-4%	+150%/-150%	+12%/-36%	+47%/-42%	+139%/-30%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006606669-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 4	$10.44^{+3.47}_{-3.36}$	7046^{+317}_{-433}	-5151^{+617}_{-339}	$0.076^{+0.079}_{-0.031}$
Alt.	-23 ± 4	$19.53^{+4.21}_{-4.53}$	7035^{+323}_{-425}	-5464^{+316}_{-266}	$0.020^{+0.013}_{-0.006}$

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

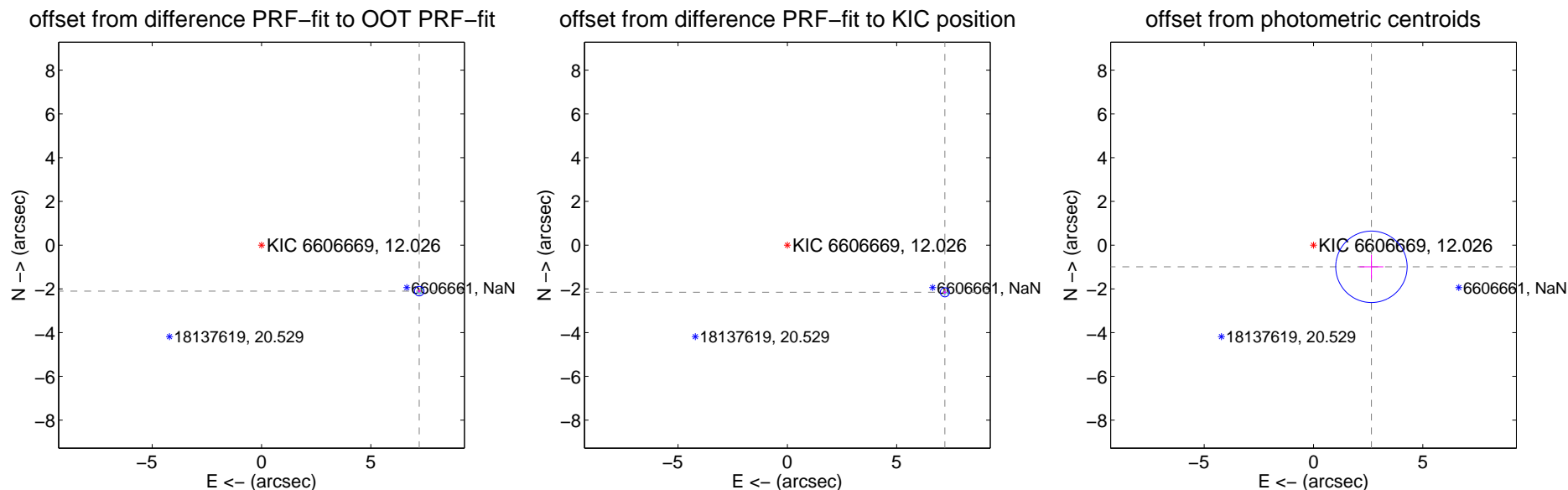
DV Centroid Data

Supplemental centroid analysis for 006606669-02. Kepler magnitude: 12.03. Transit SNR 8.24

There are 12 quarters with good PRF difference image offsets

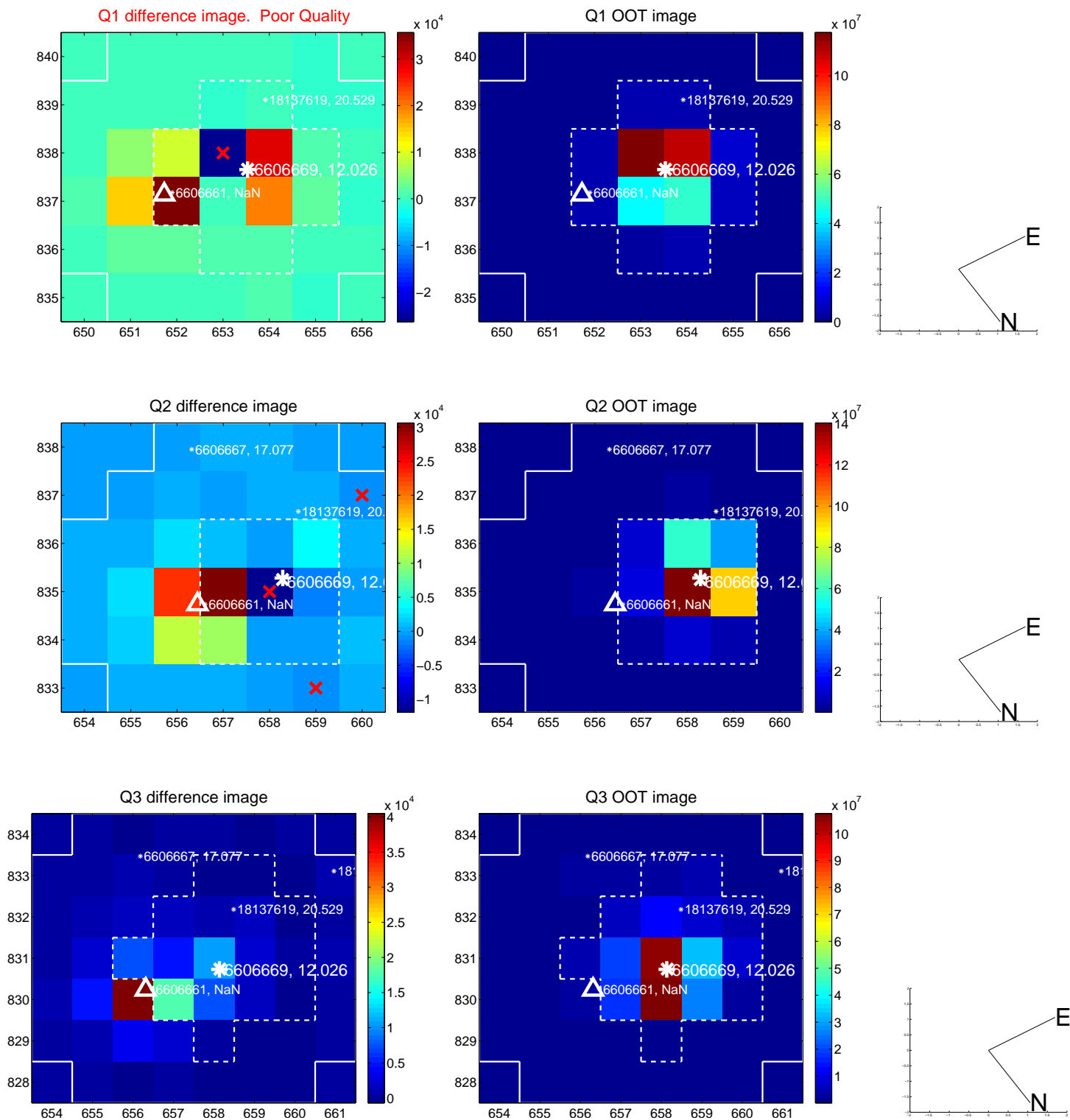
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.516 ± 0.073	103.07	-7.216 ± 0.073	-2.103 ± 0.070
PRF-fit source offset from KIC position	7.522 ± 0.069	108.27	-7.206 ± 0.069	-2.156 ± 0.069
photometric centroid source offset	2.83 ± 0.54	5.20	-2.65 ± 0.54	-0.99 ± 0.55

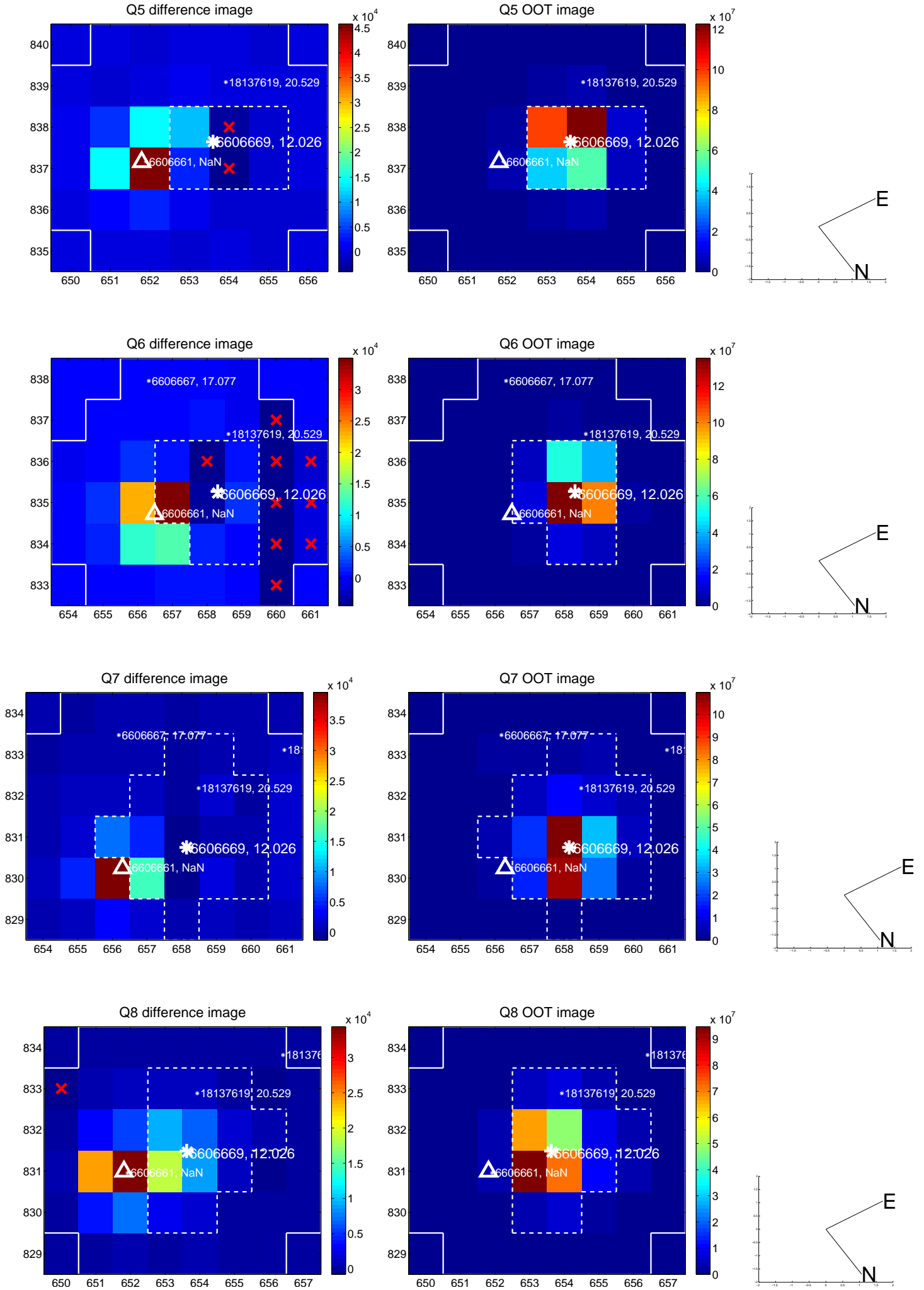


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

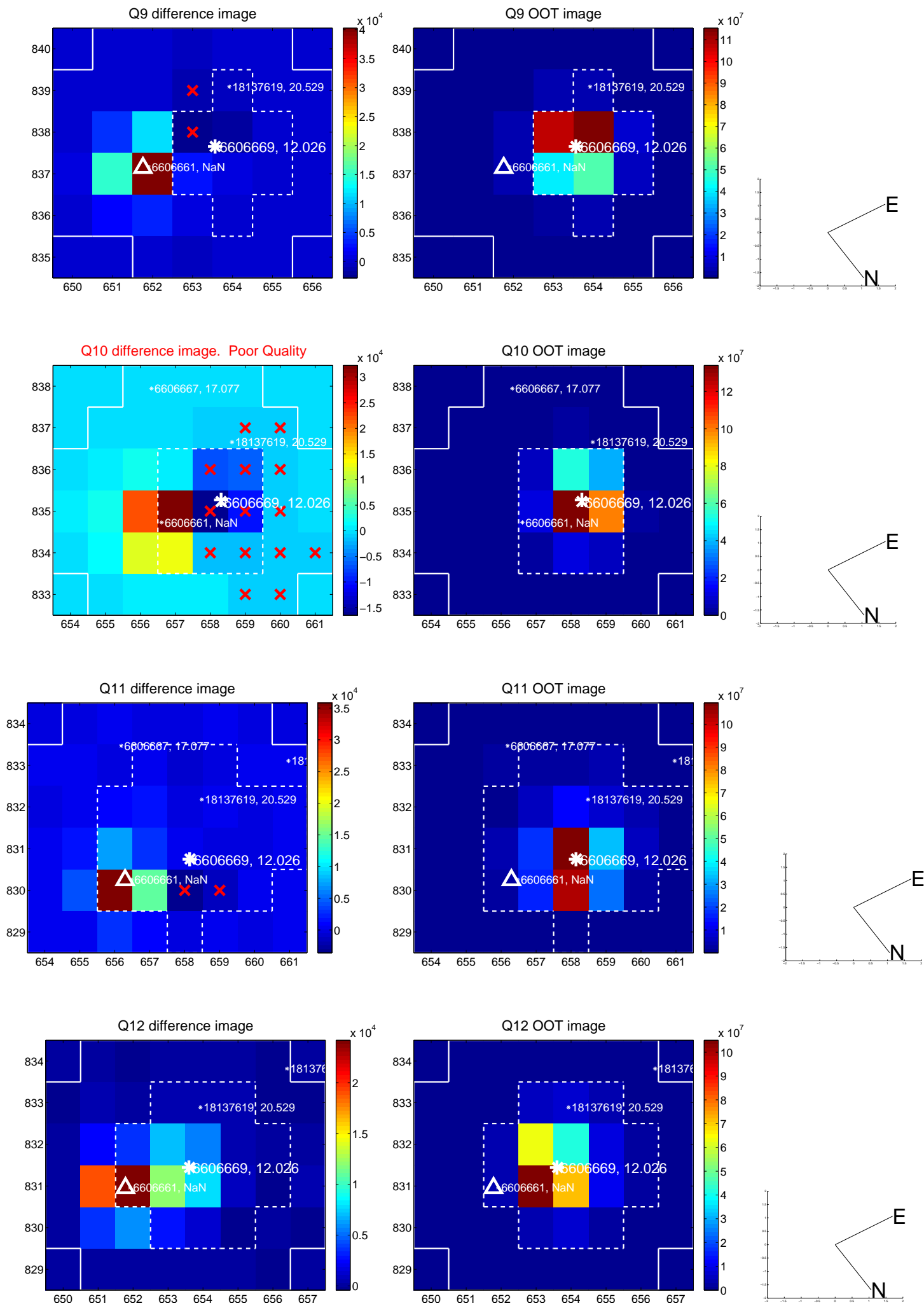
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



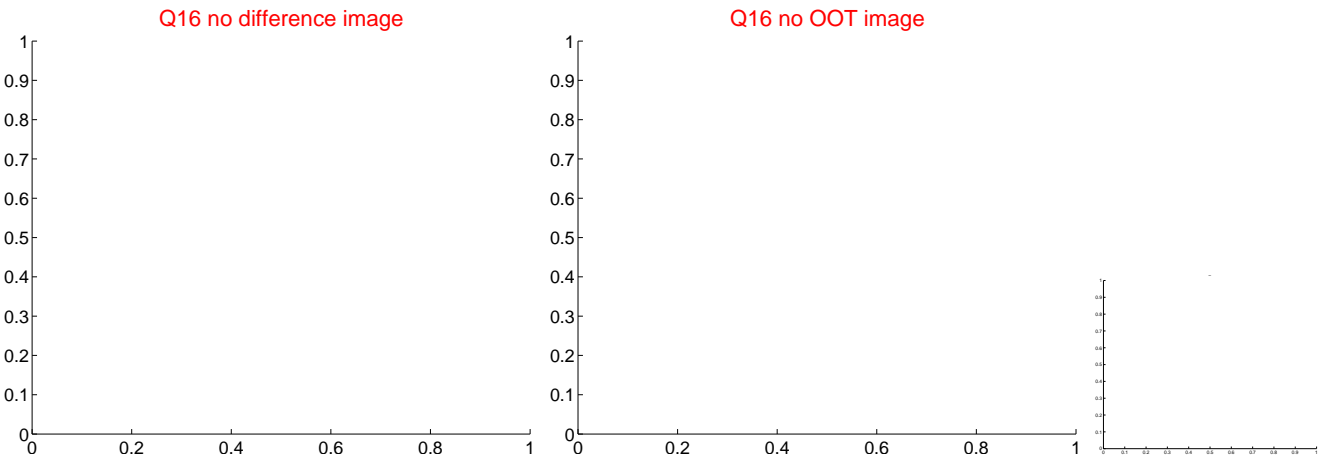
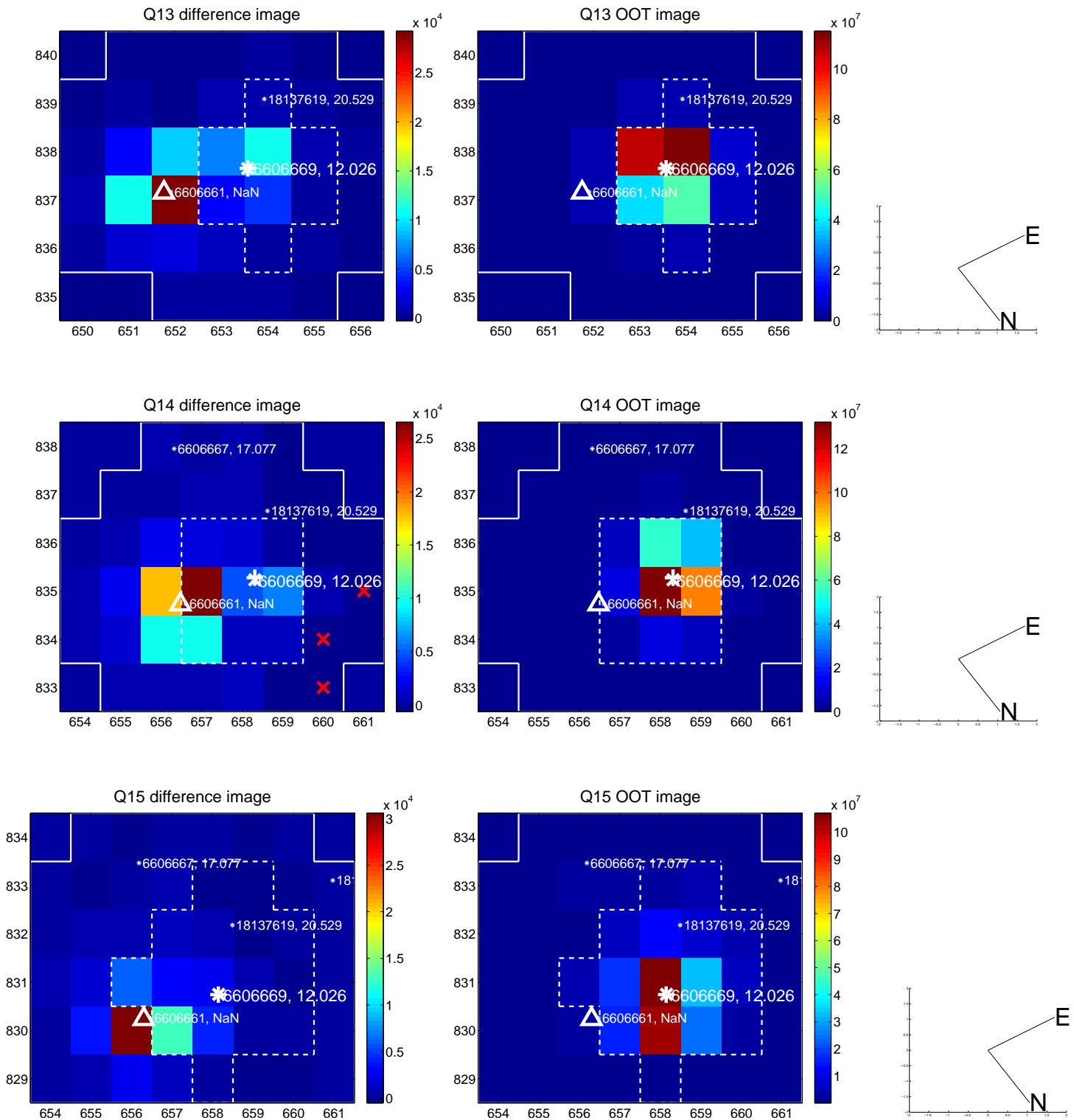
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



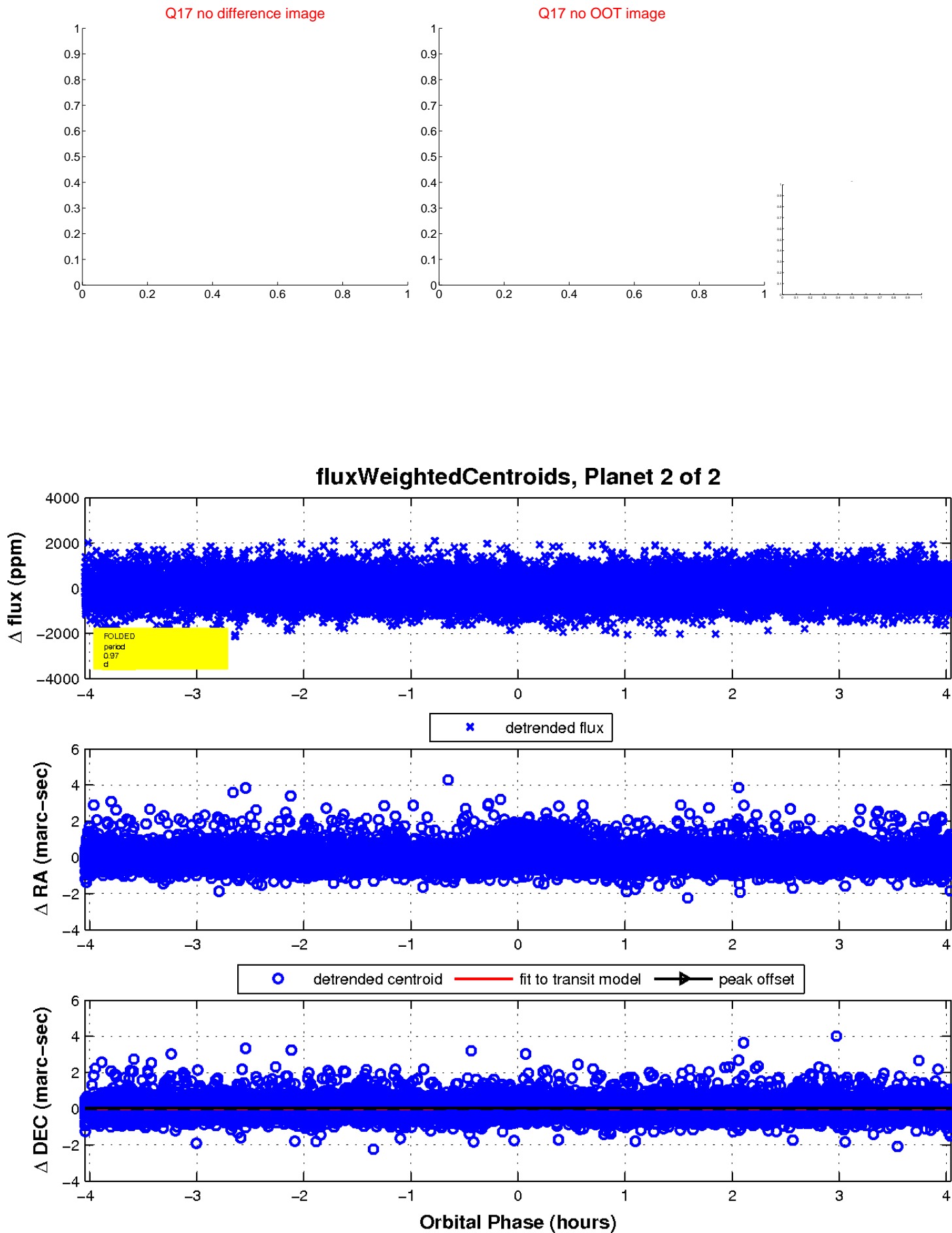
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

