

KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

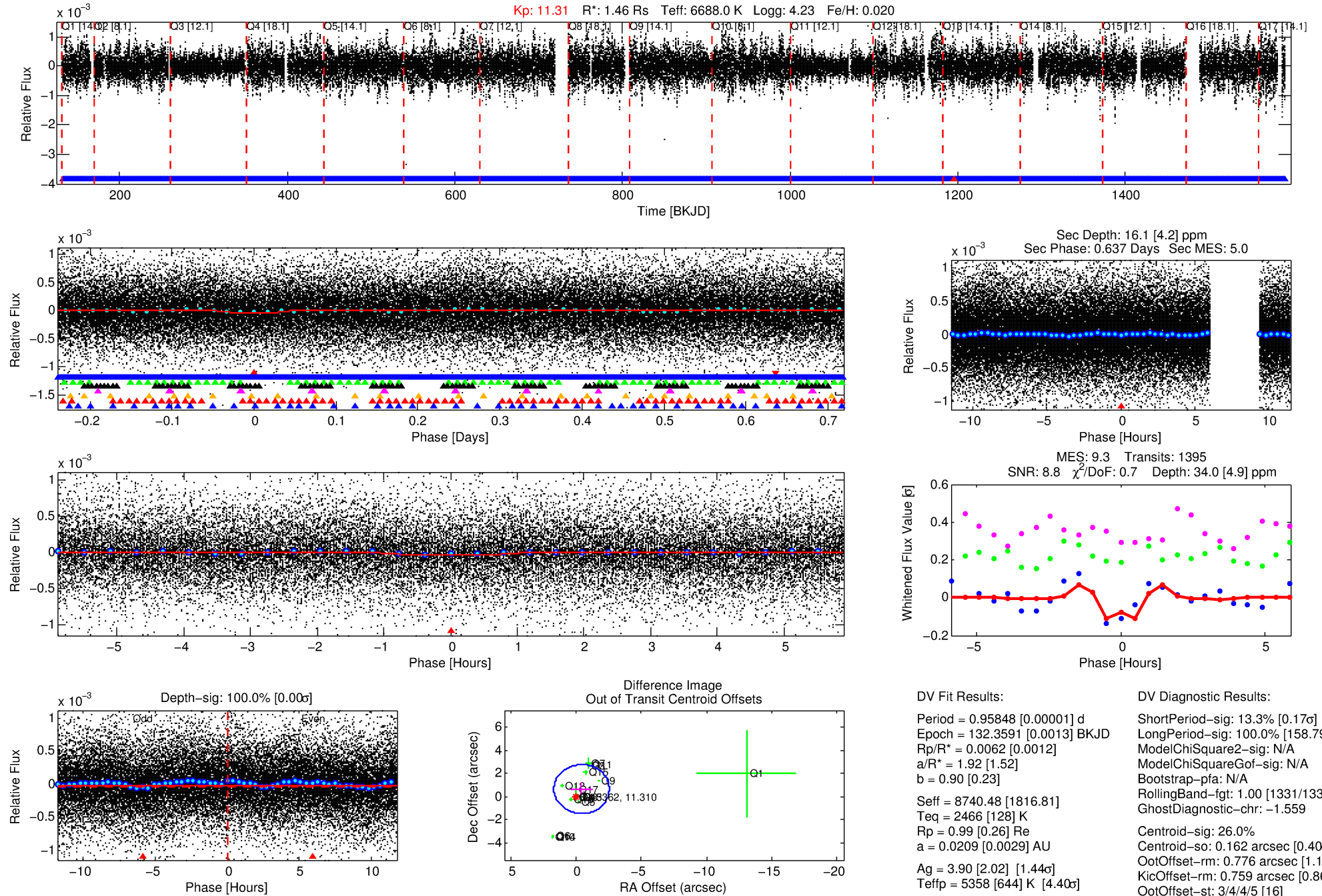
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-01

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 1 of 8 Period: 0.958 d



DV Fit Results:

Period = 0.95848 [0.00001] d
Epoch = 132.3591 [0.0013] BKJD
Rp/R* = 0.0062 [0.0012]
a/R* = 1.92 [1.52]
b = 0.90 [0.23]
Seff = 8740.48 [1816.81]
Teff = 2466 [128] K
Rp = 0.99 [0.26] Re
a = 0.0209 [0.0029] AU
Ag = 3.90 [2.02] [1.44σ]
Teffp = 5358 [644] K [4.40σ]

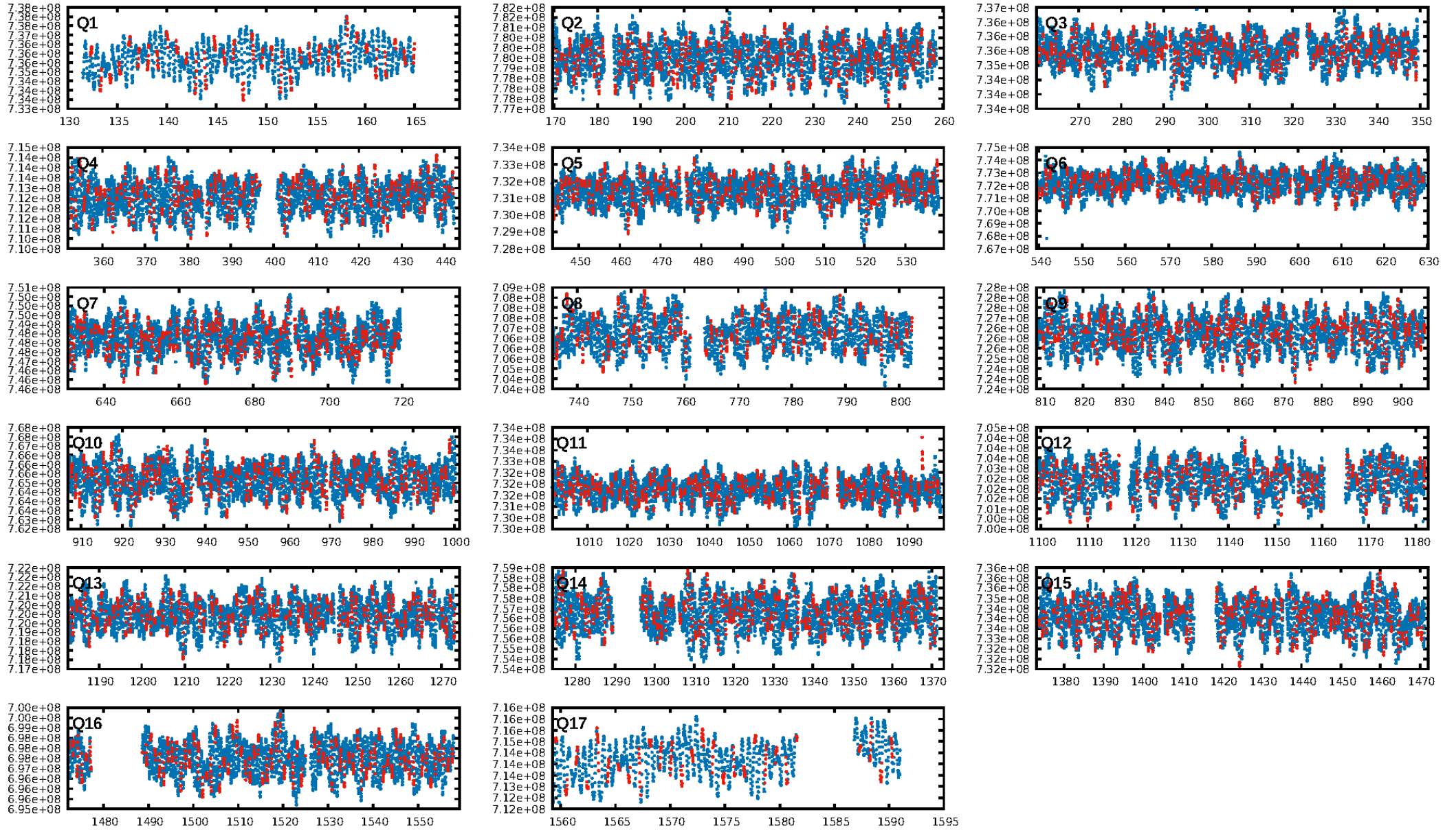
DV Diagnostic Results:

ShortPeriod-sig: 13.3% [0.17σ]
LongPeriod-sig: 100.0% [158.79σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1331/1332]
GhostDiagnostic-chr: -1.559
Centroid-sig: 26.0%
Centroid-so: 0.162 arcsec [0.40σ]
OotOffset-rm: 0.776 arcsec [1.10σ]
KicOffset-rm: 0.759 arcsec [0.86σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.31 [5/16]
DiffImageOverlap-fno: 1.00 [17/17]

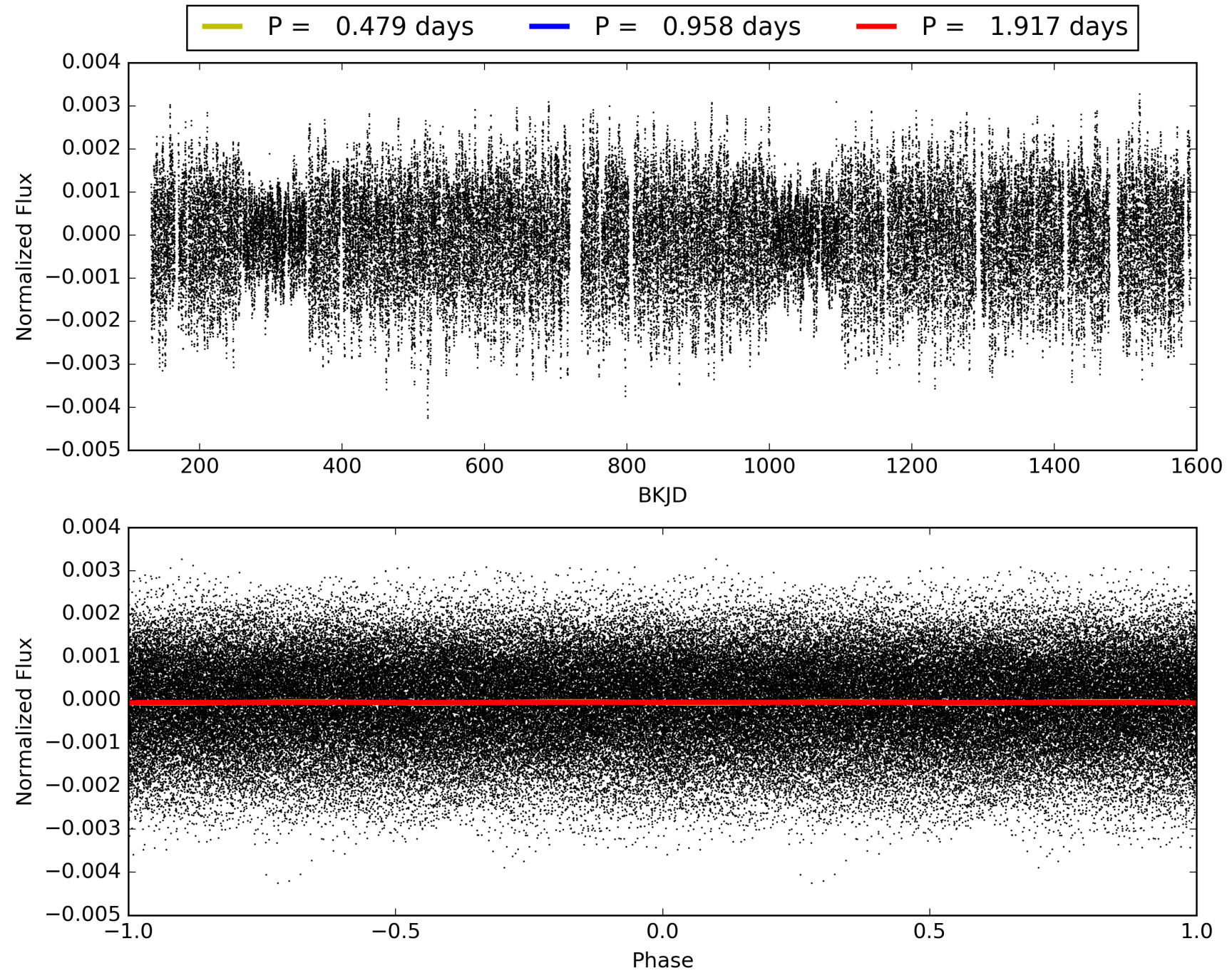
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:12 Z

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

TCE 006945362-01, PDC Light Curves

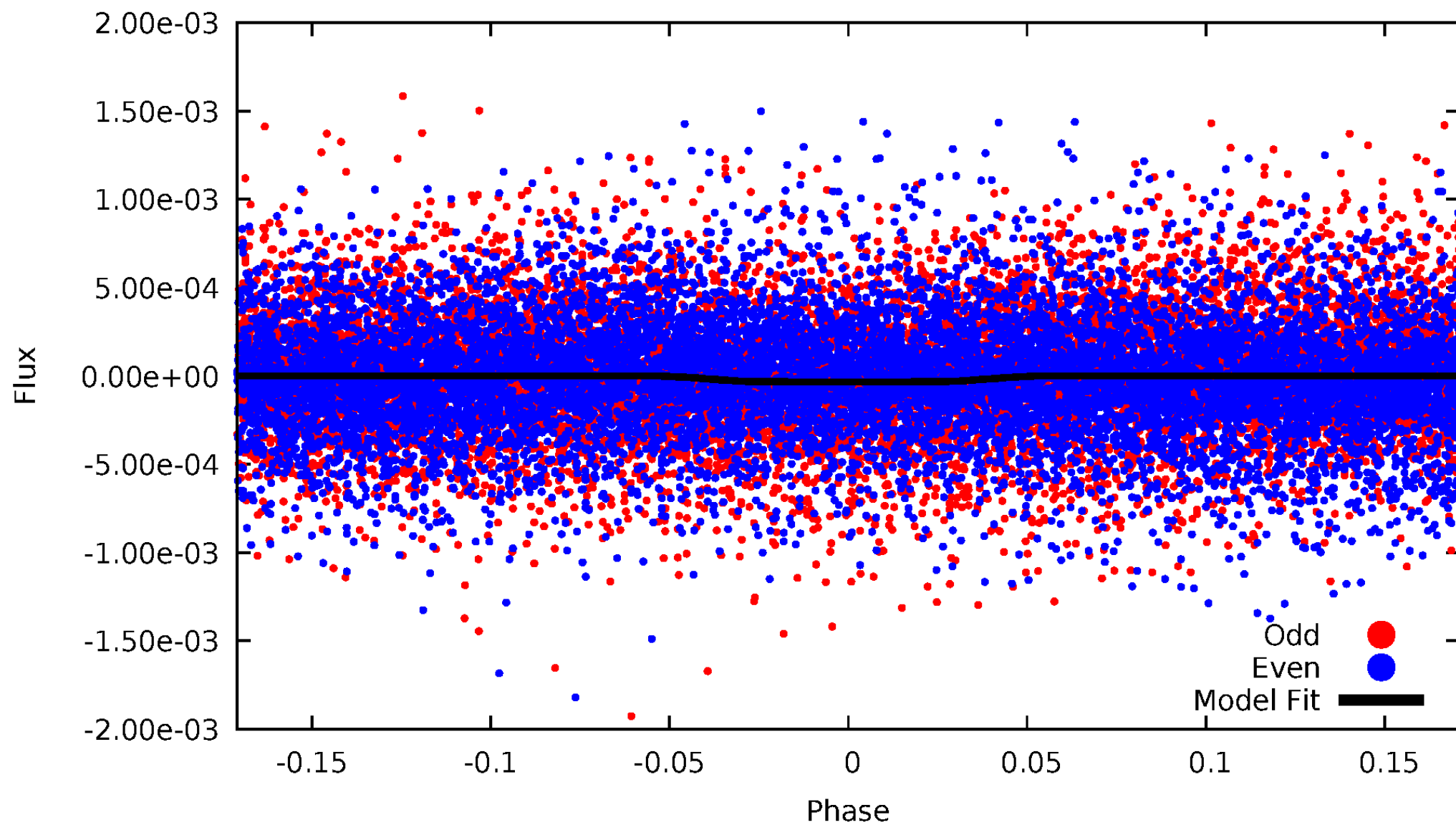


TCE 006945362-01



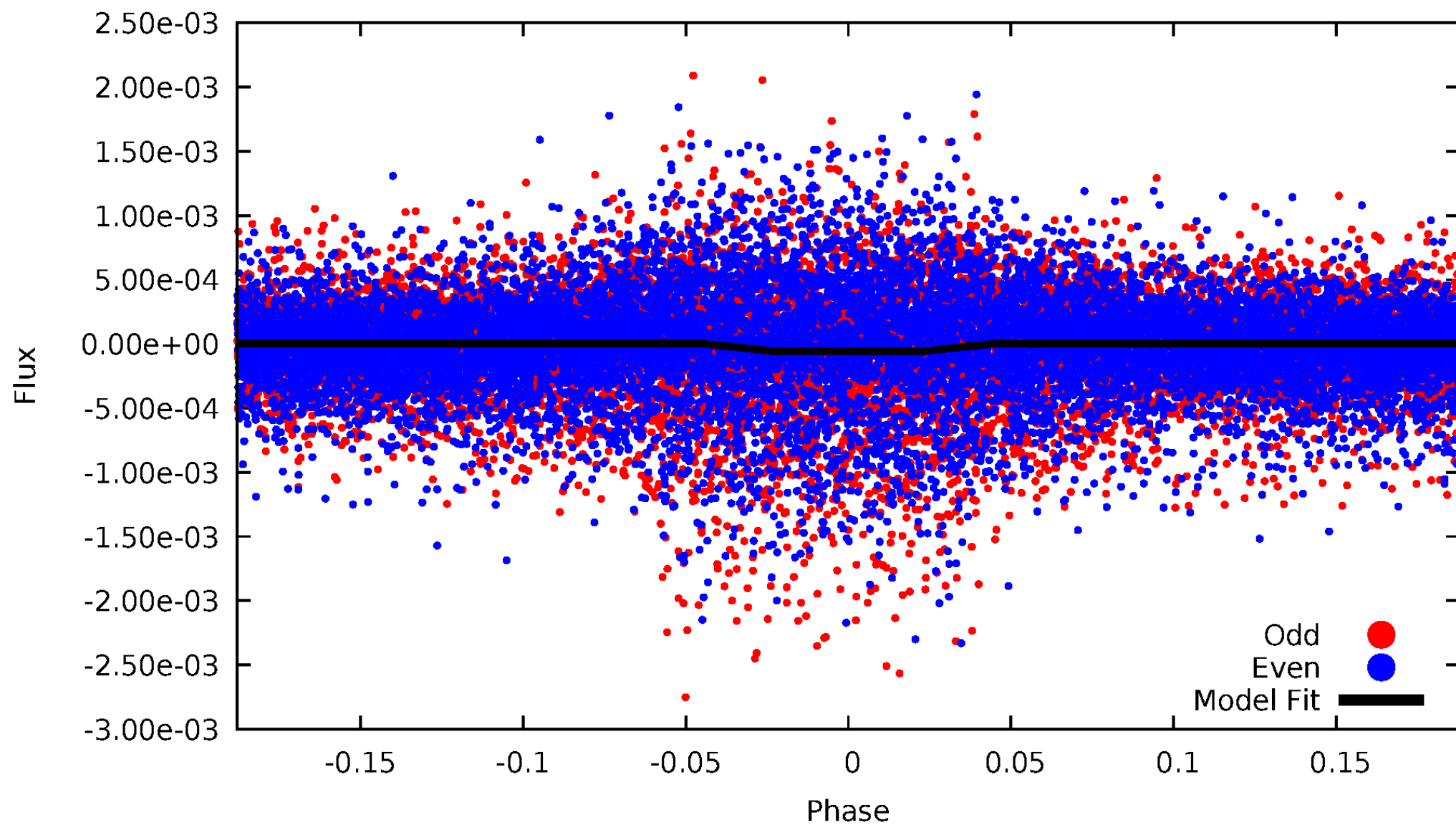
DV Odd/Even

TCE 006945362-01



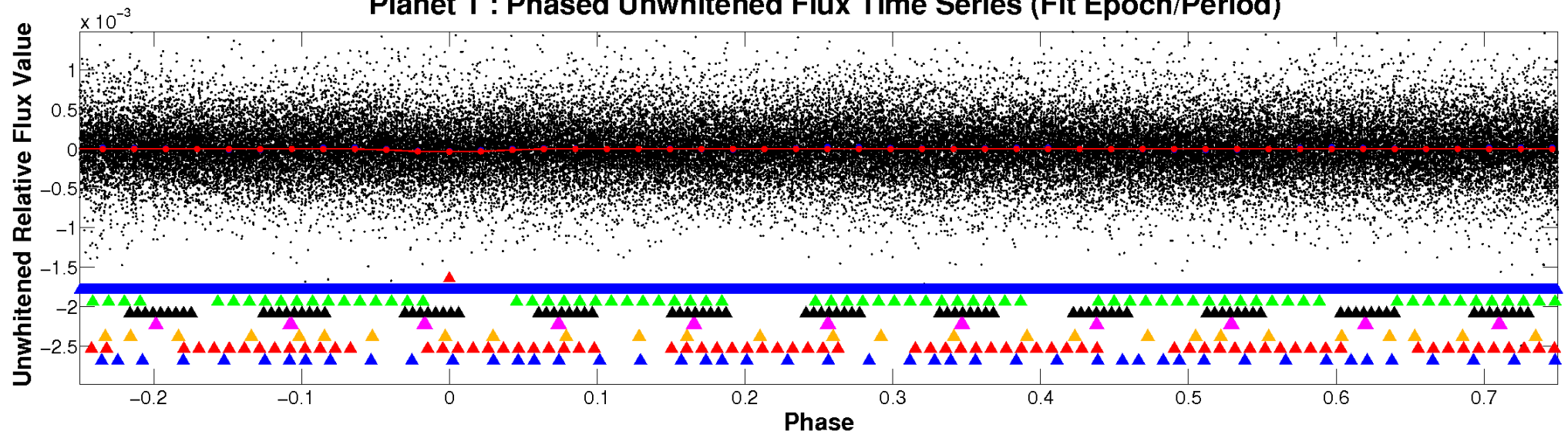
ALT Odd/Even

TCE 006945362-01

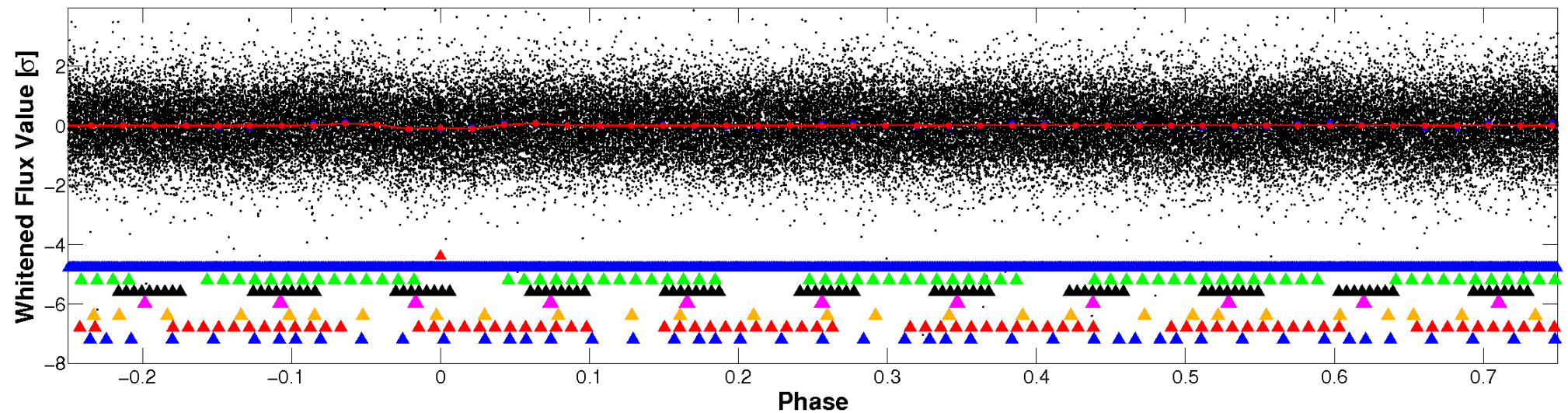


Non-Whitened Vs. Whitened Light Curve

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

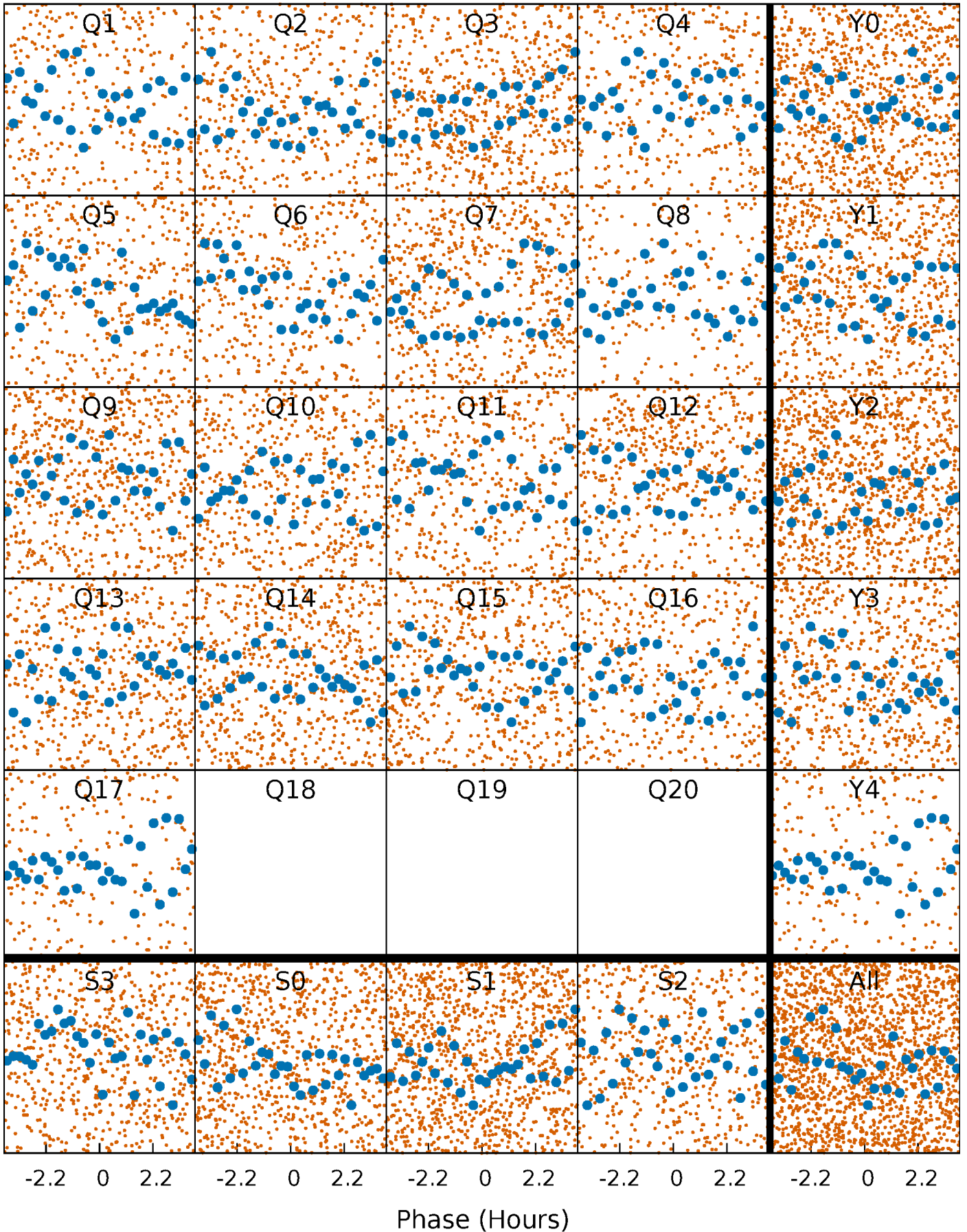


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



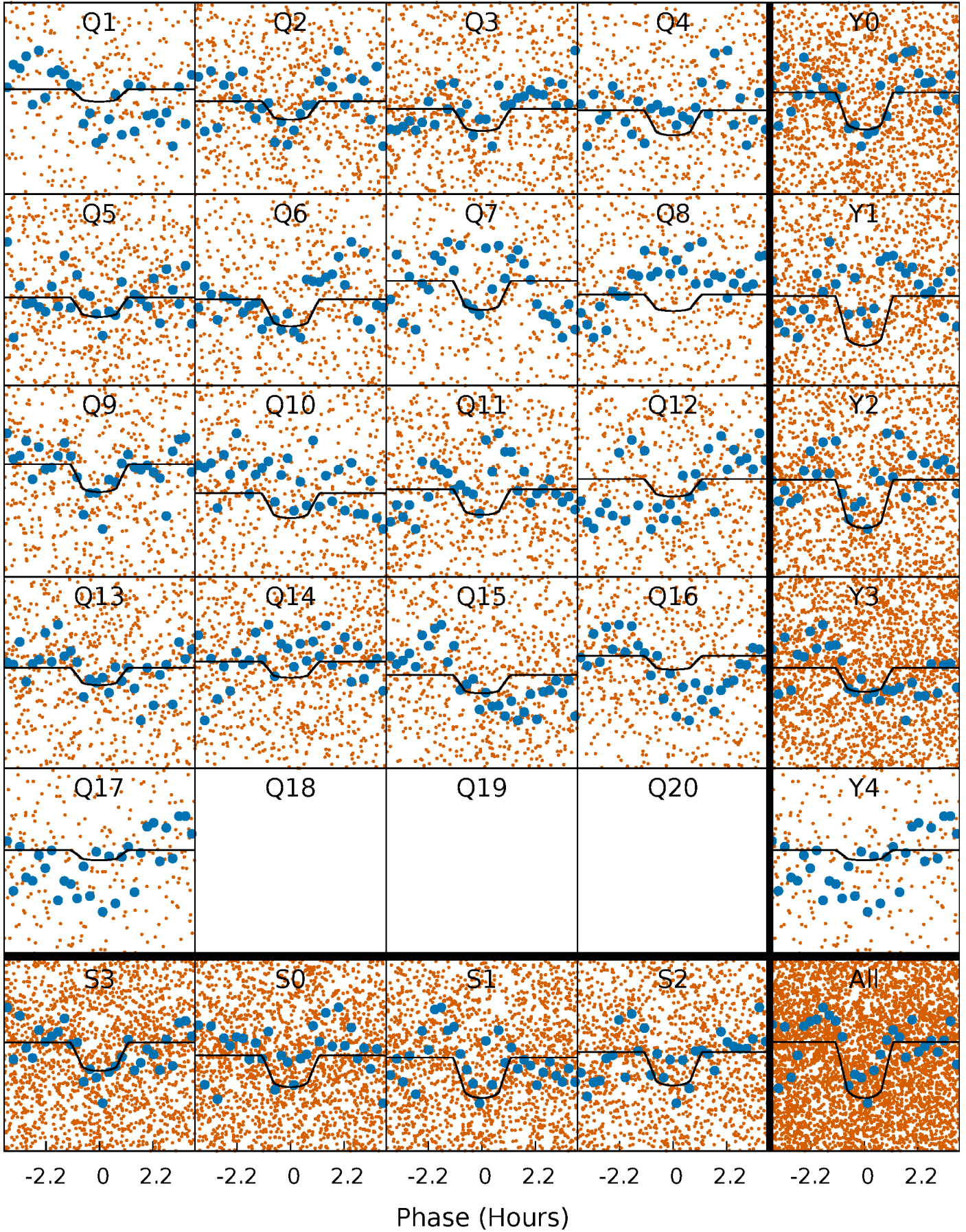
PDC Quarter-Phased Transit Curves

TCE 006945362-01 P= 0.958483 Days $T_0=132.359063$ (BKJD)



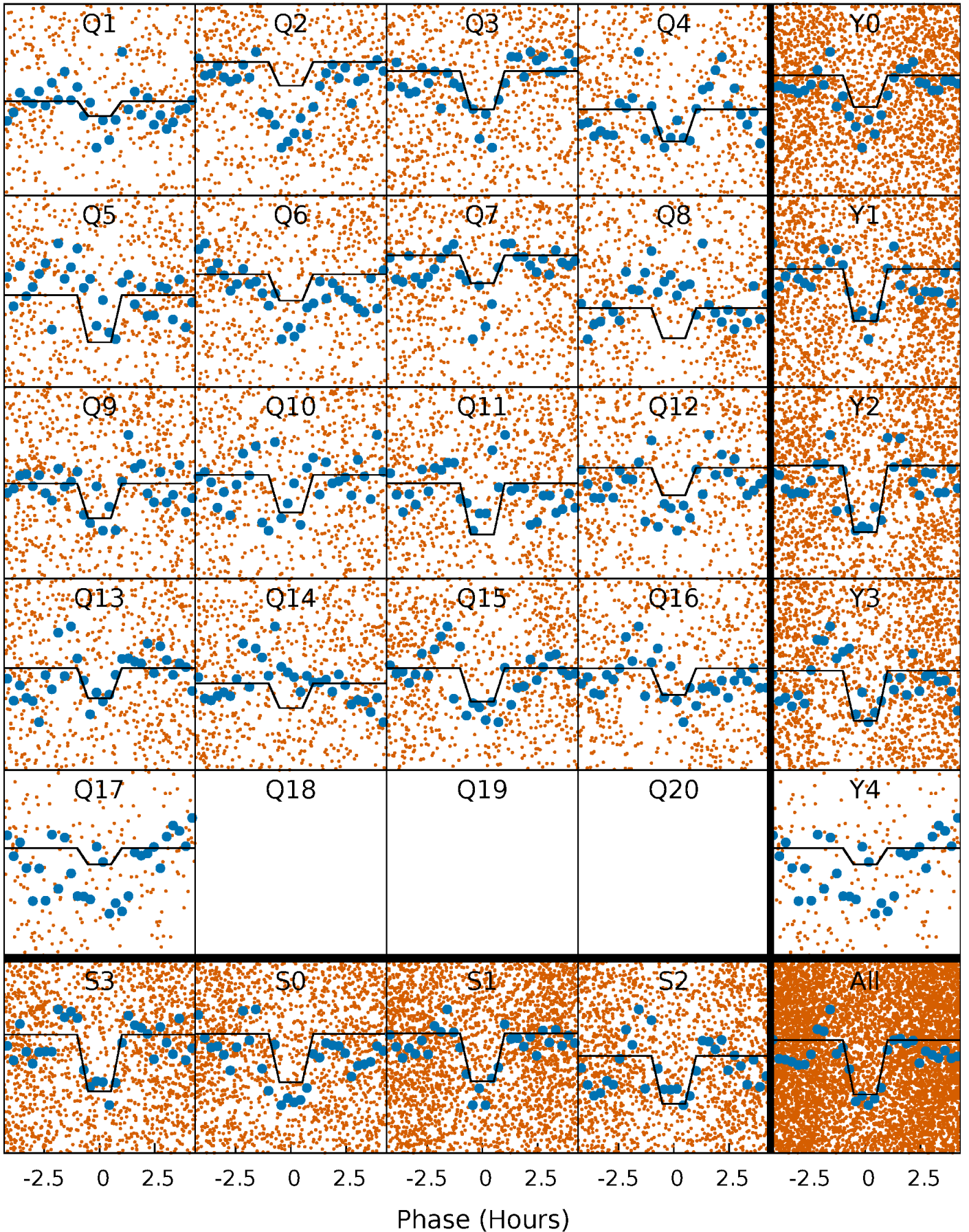
DV Quarter-Phased Transit Curves

TCE 006945362-01 P= 0.958483 Days $T_0=132.359063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

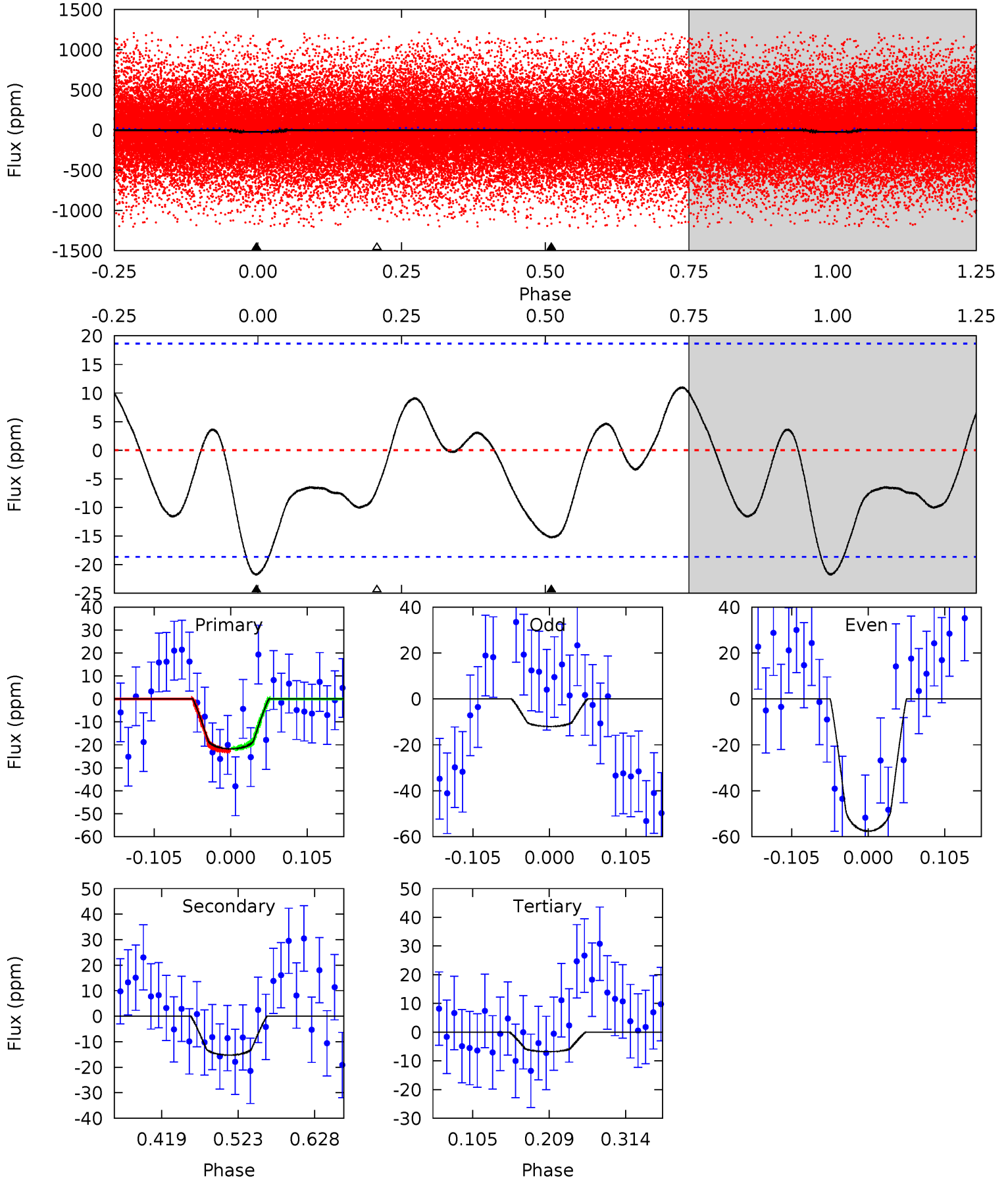
TCE 006945362-01 P= 0.958476 Days $T_0=132.358657$ (BKJD)



DV Model-Shift Uniqueness Test

006945362-01, P = 0.958483 Days, E = 131.400580 Days

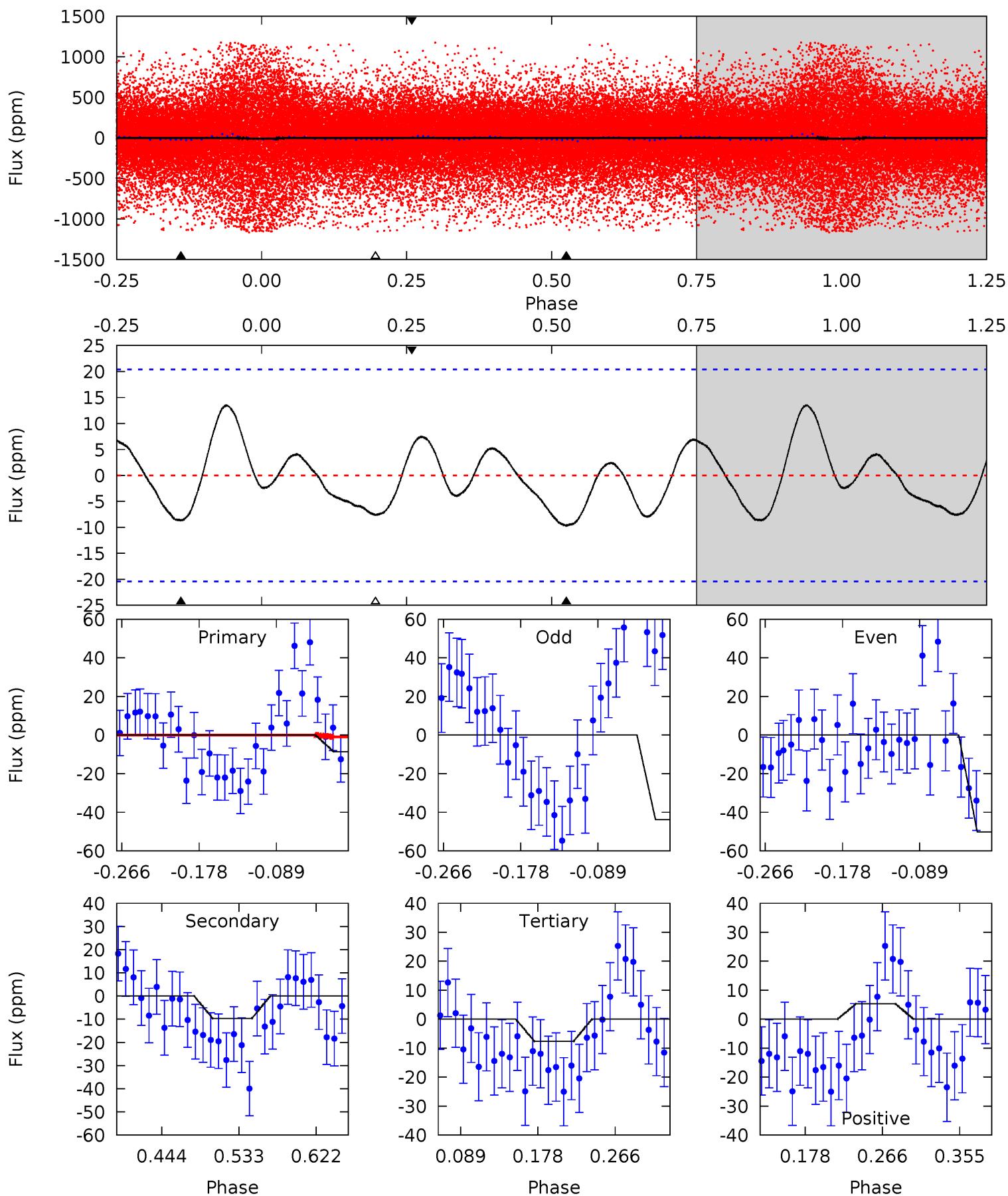
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	3.72	1.66	0	4.56	1.62	1.59	3.65	5.31	2.06	3.72	5.60	0.65	0.34	0.13



Alt Model-Shift Uniqueness Test

006945362-01, P = 0.958476 Days, E = 131.400181 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.95	2.18	1.72	1.20	4.59	1.70	1.08	0.23	0.75	0.46	0.98	0.79	-11.4	0.58	0.66



Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 4	$1.00^{+0.22}_{-0.19}$	3459^{+131}_{-110}	5216^{+644}_{-551}	$3.576^{+2.254}_{-1.317}$
Alt.	-10 ± 4	$1.22^{+0.24}_{-0.20}$	3459^{+133}_{-104}	4252^{+566}_{-678}	$1.478^{+1.125}_{-0.747}$

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

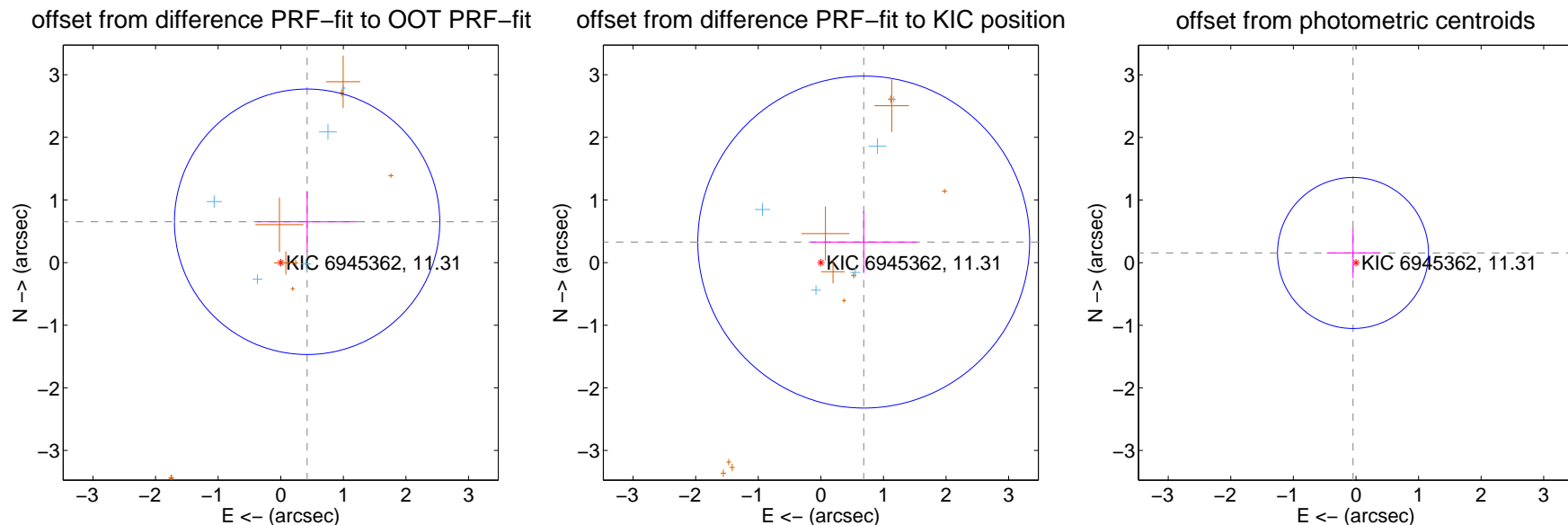
DV Centroid Data

Supplemental centroid analysis for 006945362-01. **Kepler magnitude: 11.31.** Transit SNR 8.75

There are 5 quarters with good PRF difference image offsets

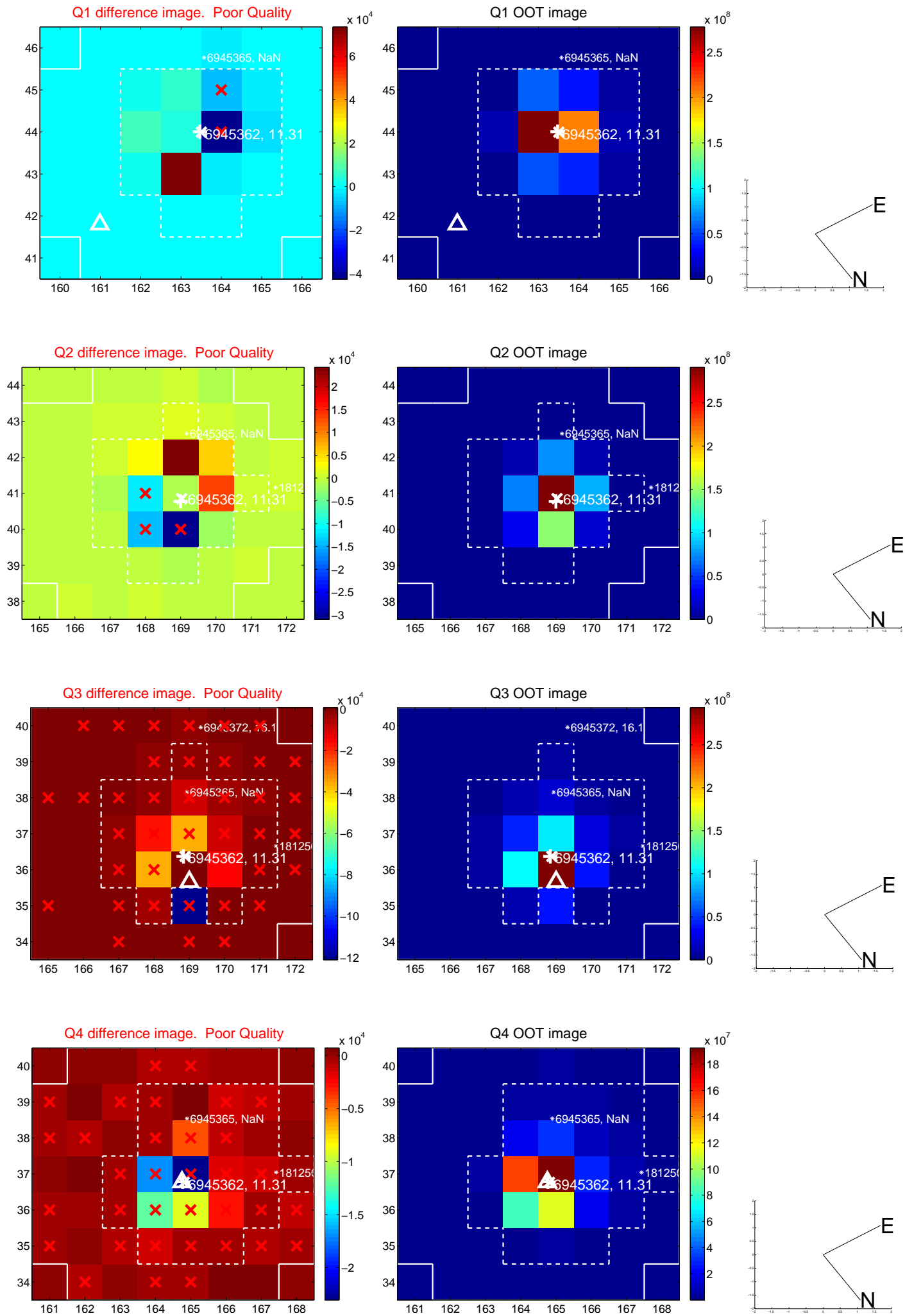
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.776 ± 0.707	1.10	-0.421 ± 0.803	0.652 ± 0.487
PRF-fit source offset from KIC position	0.759 ± 0.884	0.86	-0.685 ± 0.842	0.328 ± 0.493
photometric centroid source offset	0.16 ± 0.40	0.40	0.05 ± 0.42	0.15 ± 0.40

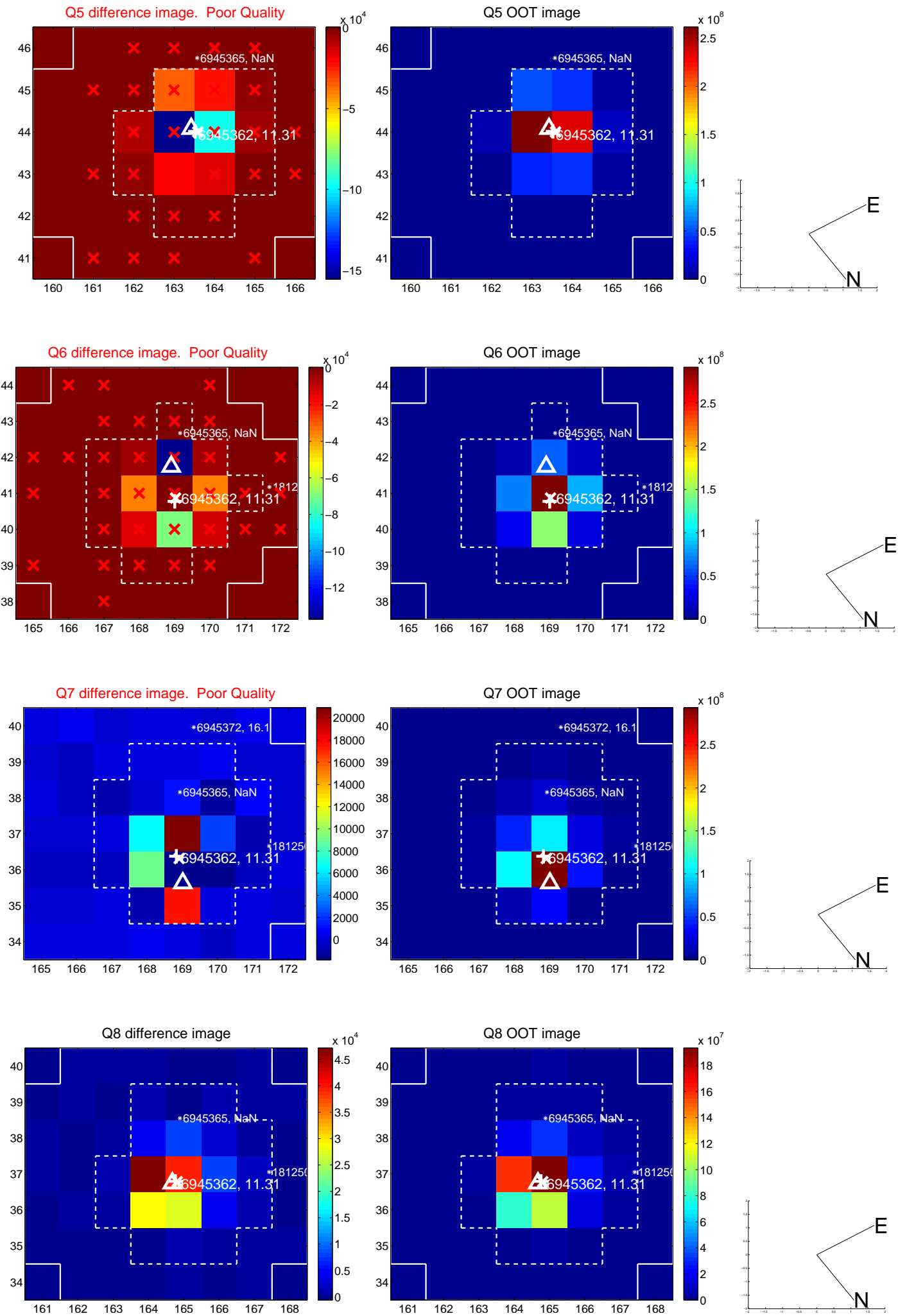


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

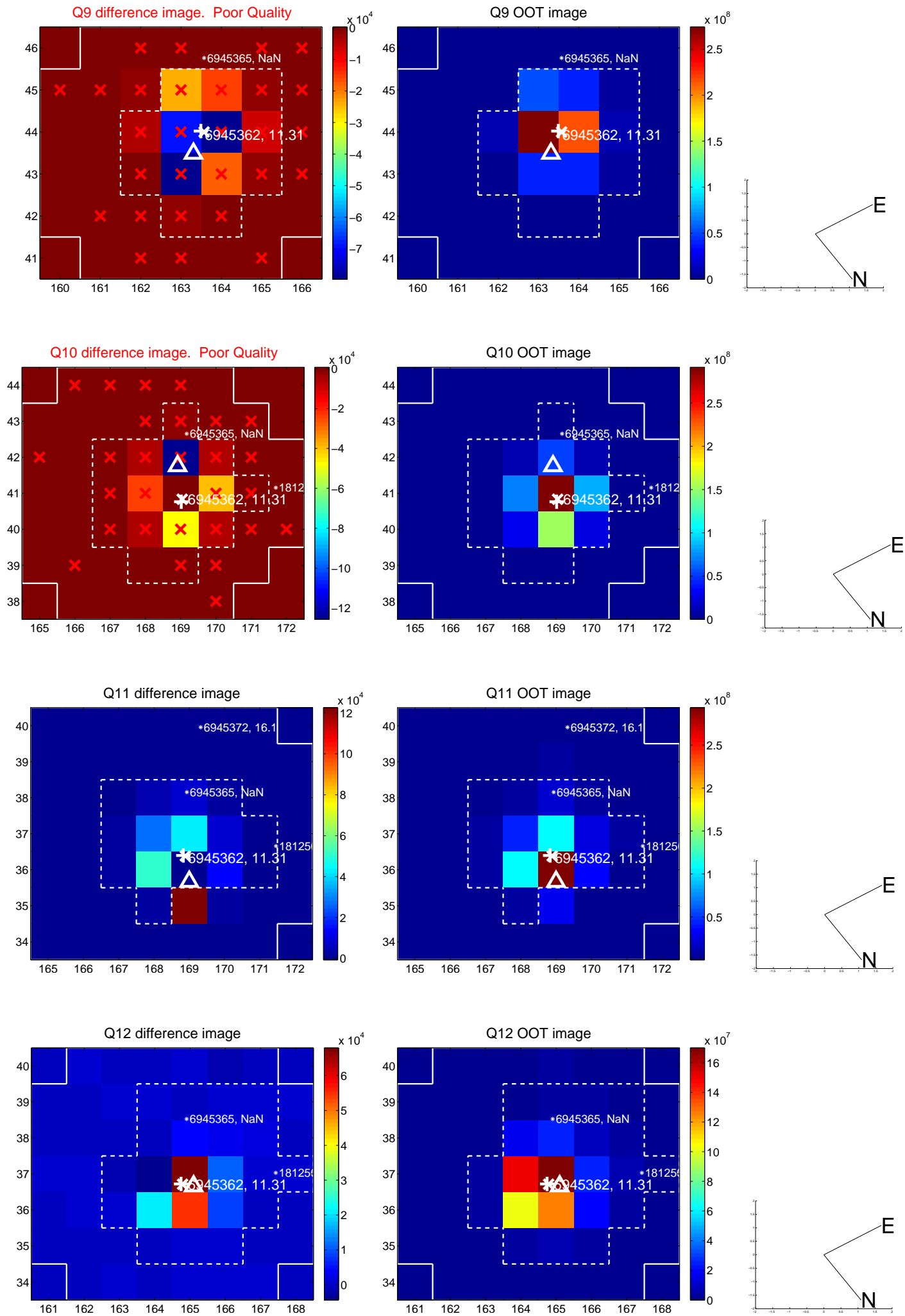
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



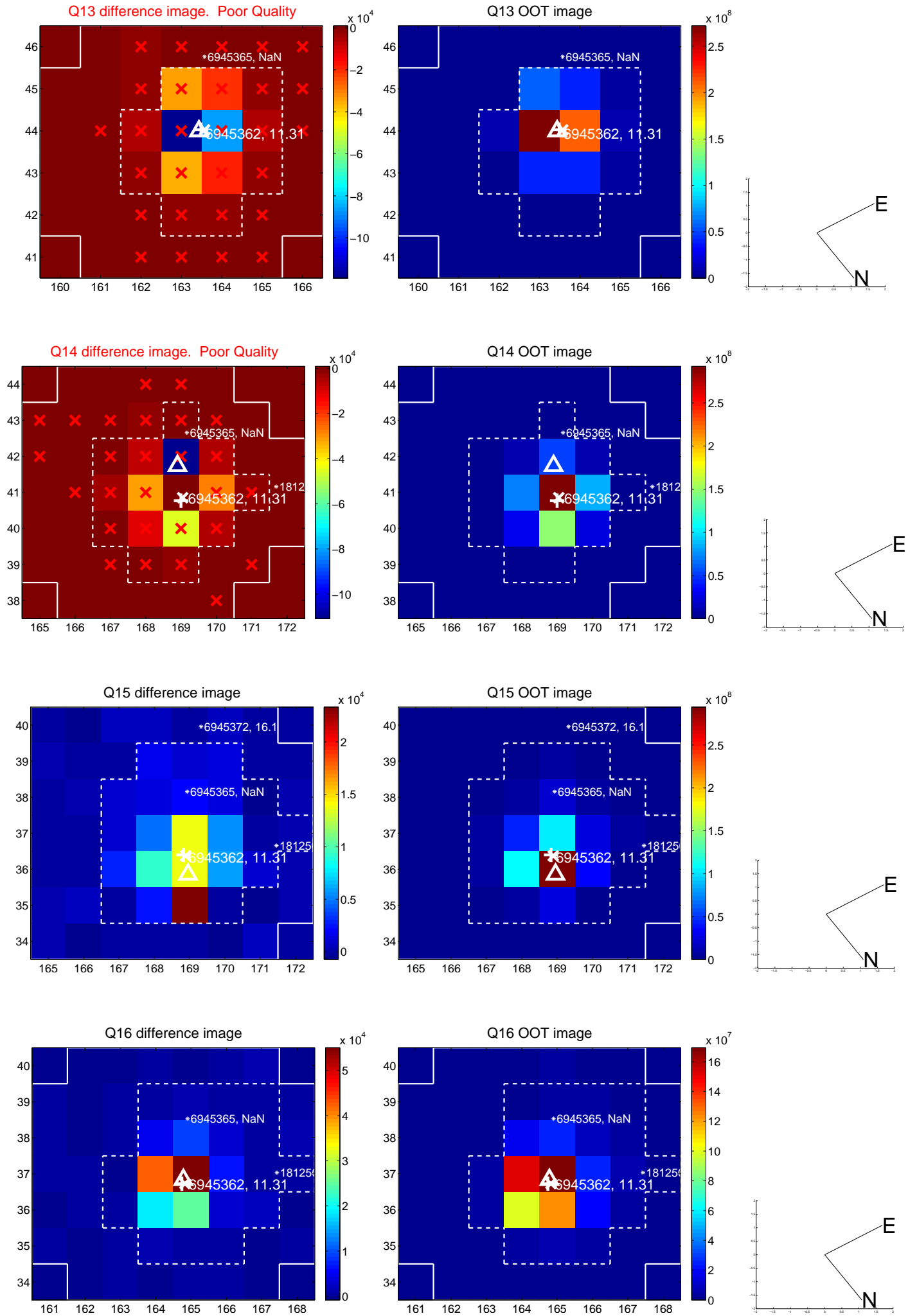
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



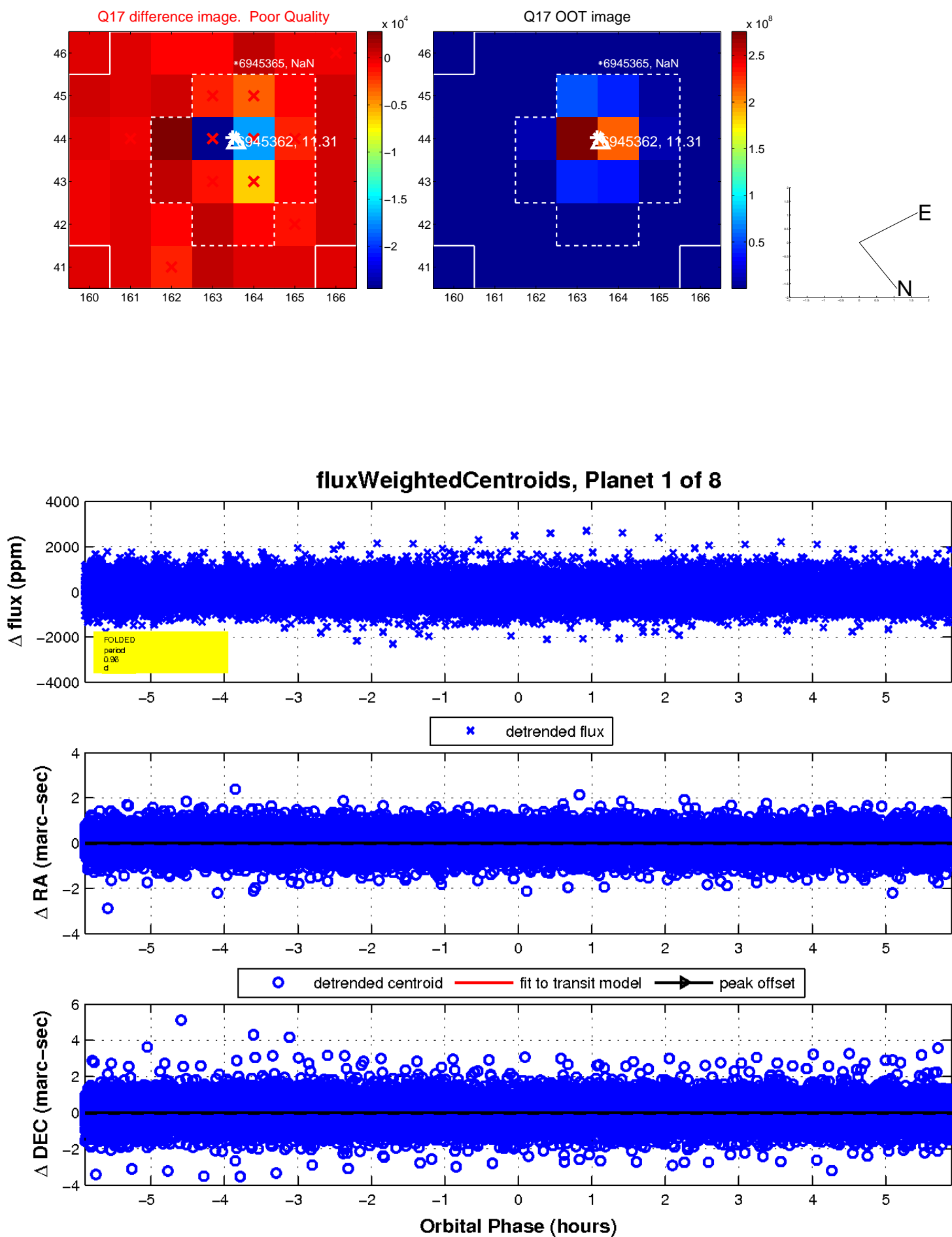
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

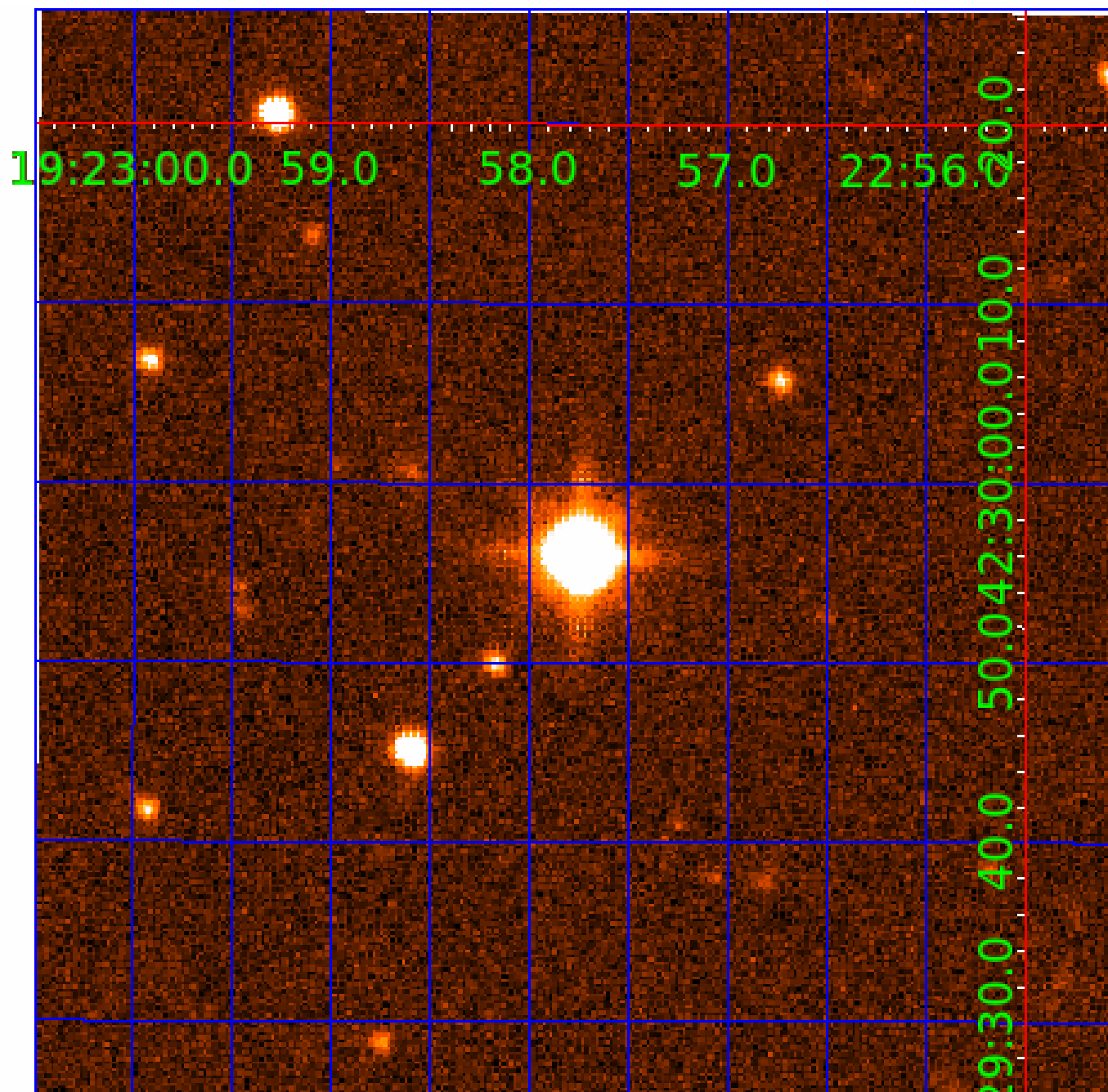


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

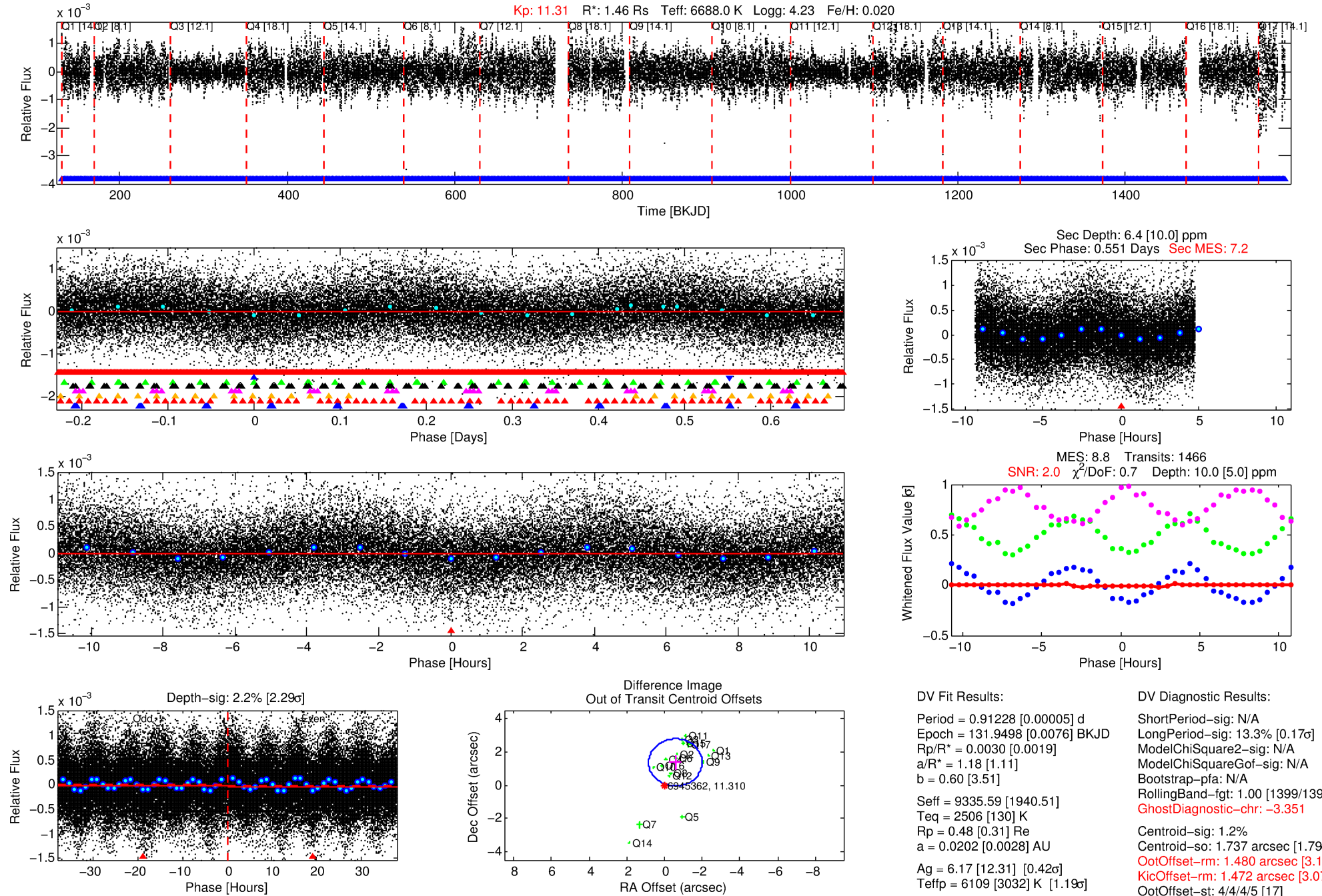
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-02

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 2 of 8 Period: 0.912 d



DV Fit Results:

Period = 0.91228 [0.00005] d
Epoch = 131.9498 [0.0076] BKJD
Rp/R* = 0.0030 [0.0019]
a/R* = 1.18 [1.11]
b = 0.60 [3.51]
Seff = 9335.59 [1940.51]
Teq = 2506 [130] K
Rp = 0.48 [0.31] Re
a = 0.0202 [0.0028] AU
Ag = 6.17 [12.31] [0.42σ]
Teff = 6109 [3032] K [1.19σ]

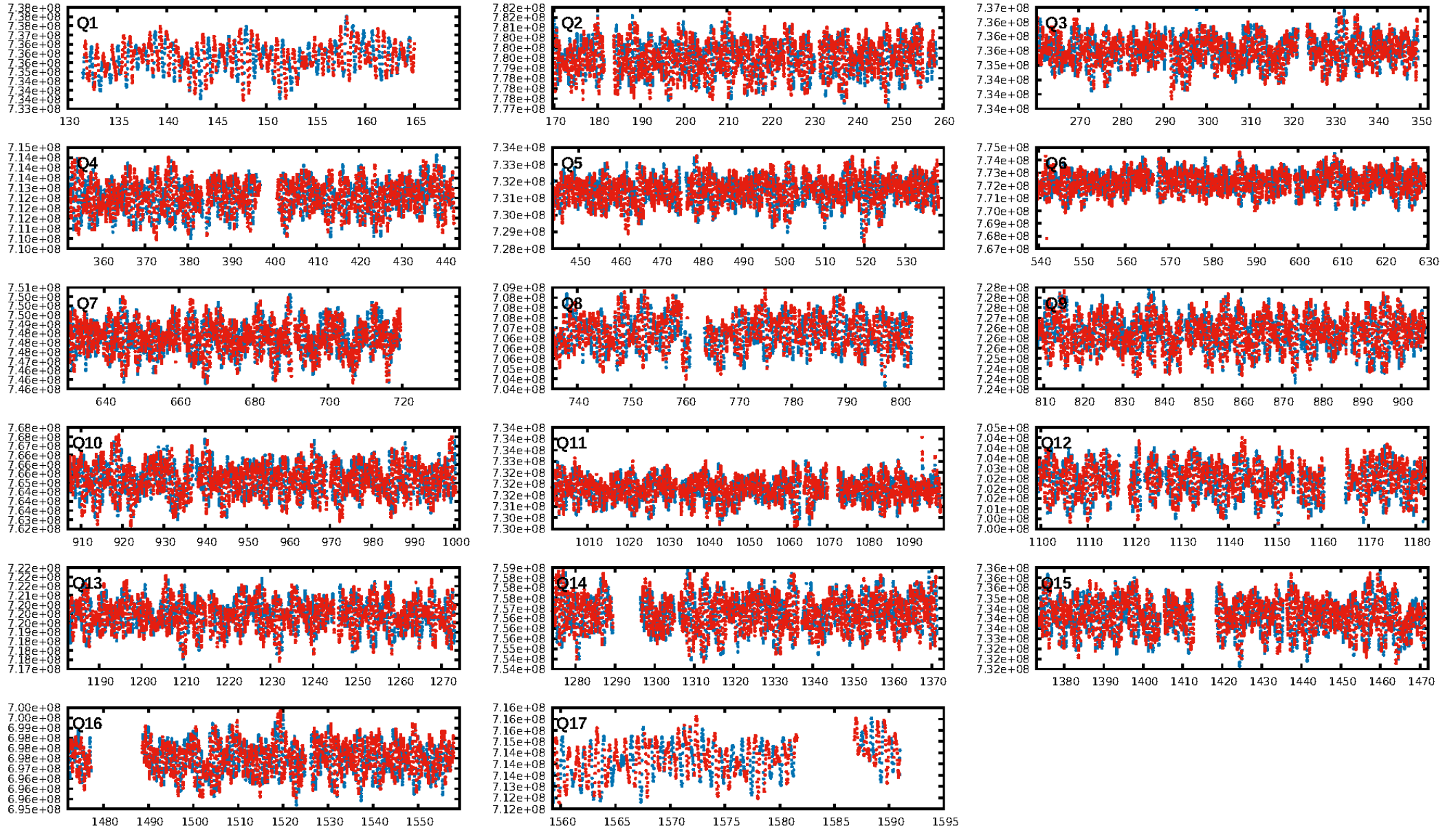
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 13.3% [0.17σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1399/1399]
GhostDiagnostic-chr: -3.351
Centroid-sig: 1.2%
Centroid-so: 1.737 arcsec [1.79σ]
OotOffset-rm: 1.480 arcsec [3.13σ]
KicOffset-rm: 1.472 arcsec [3.07σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.00 [0/17]

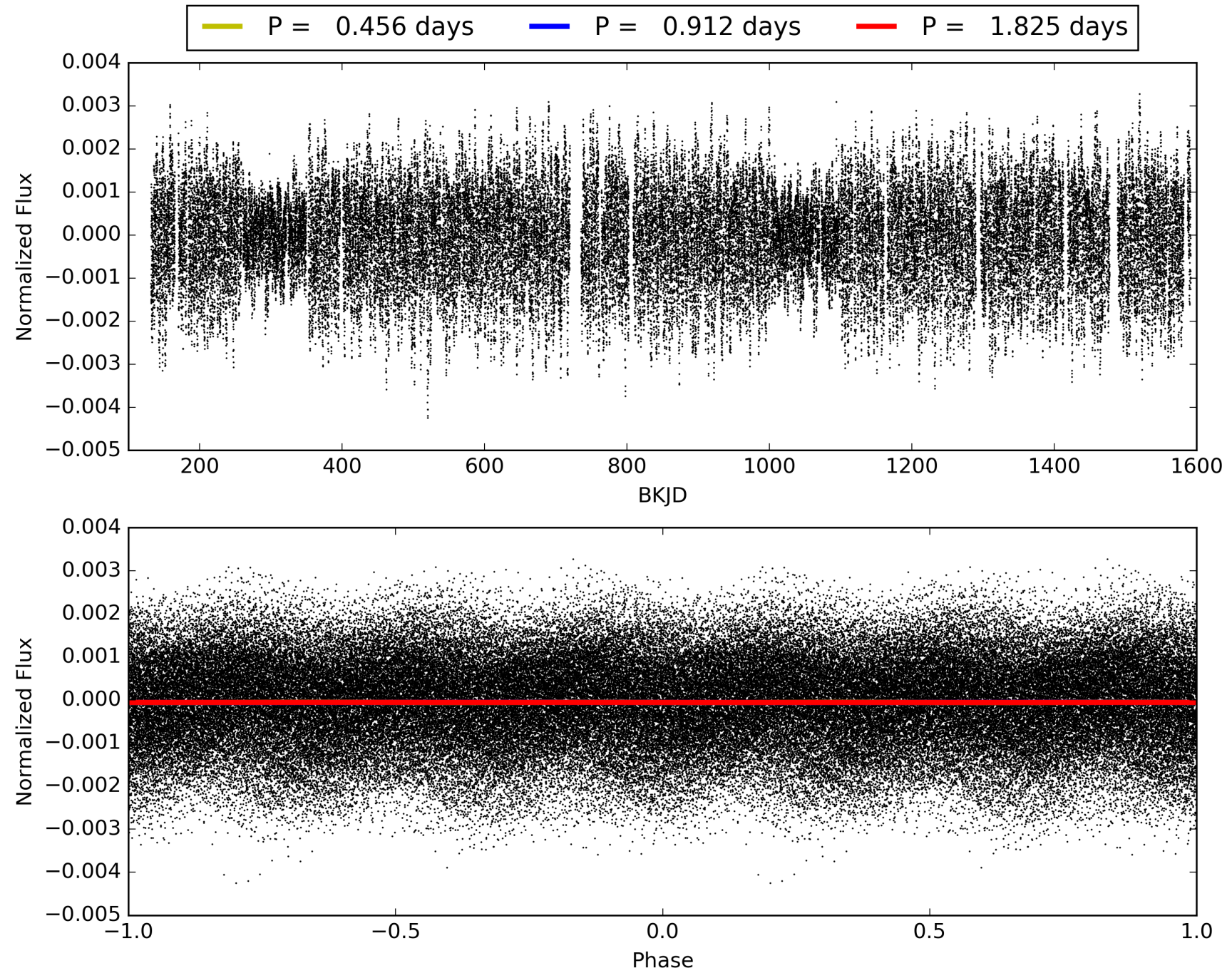
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006945362-02, PDC Light Curves

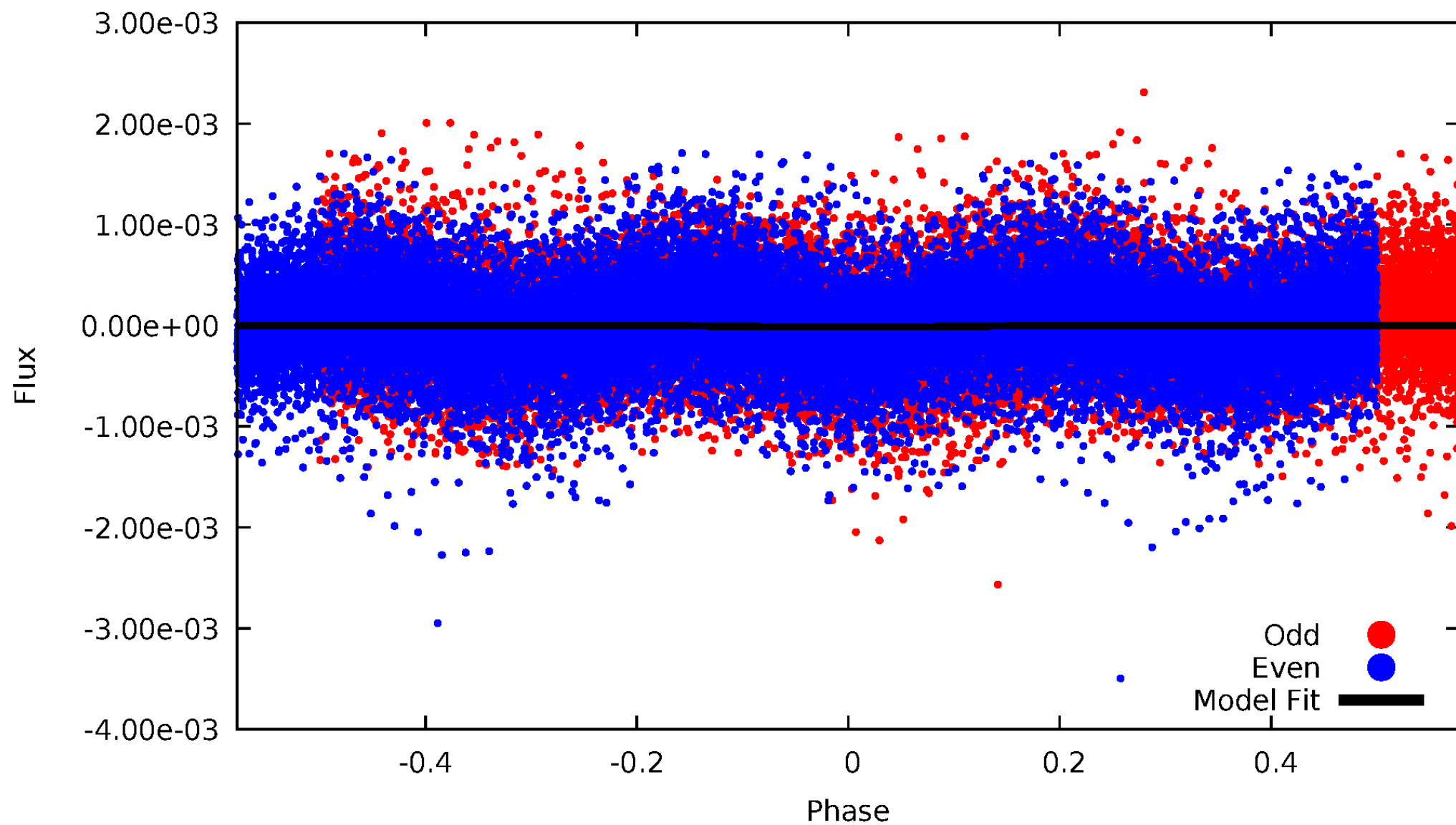


TCE 006945362-02



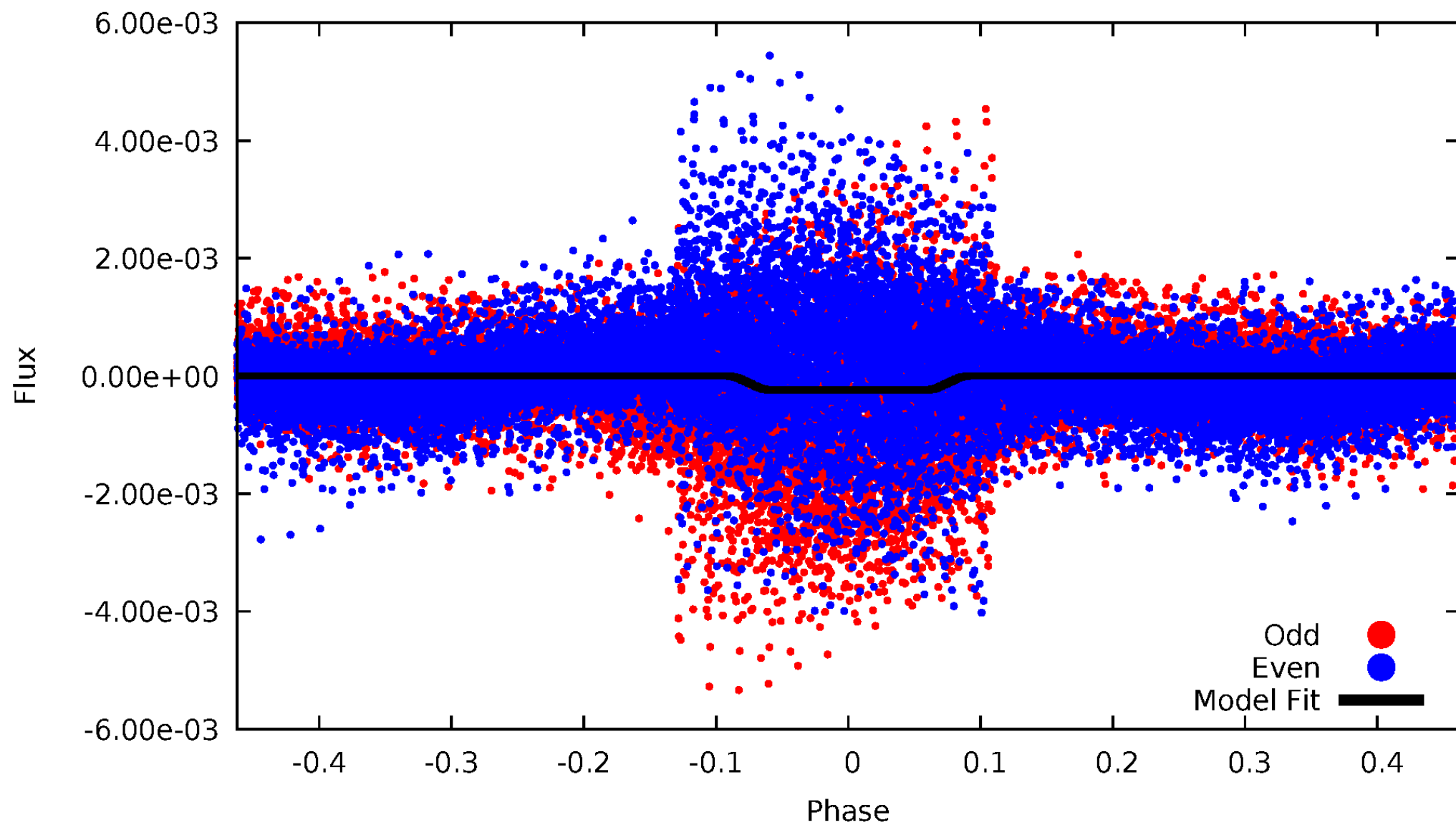
DV Odd/Even

TCE 006945362-02



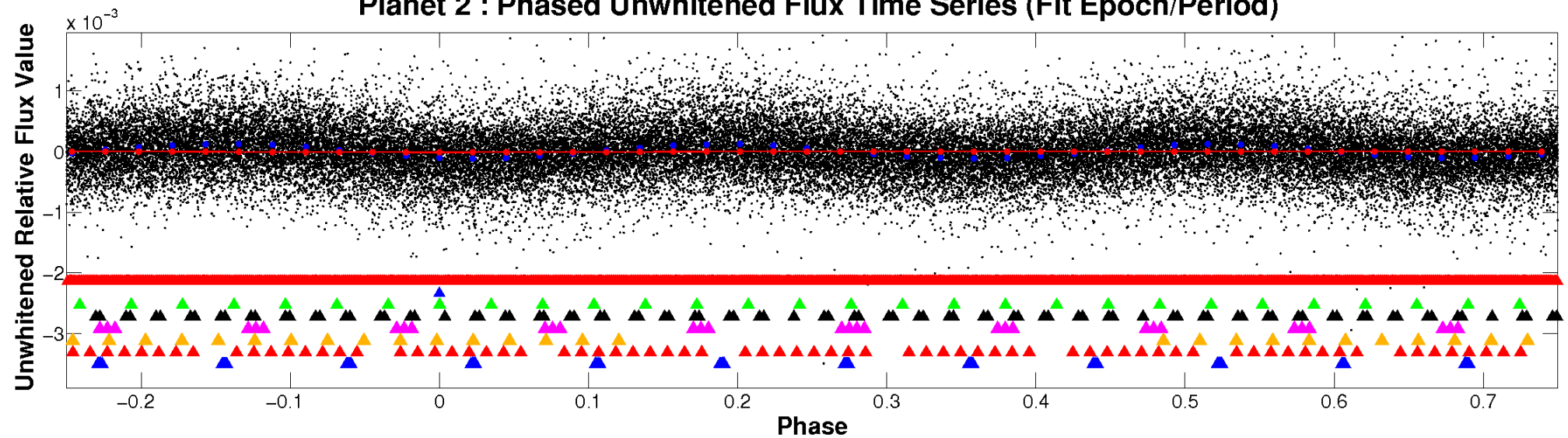
ALT Odd/Even

TCE 006945362-02

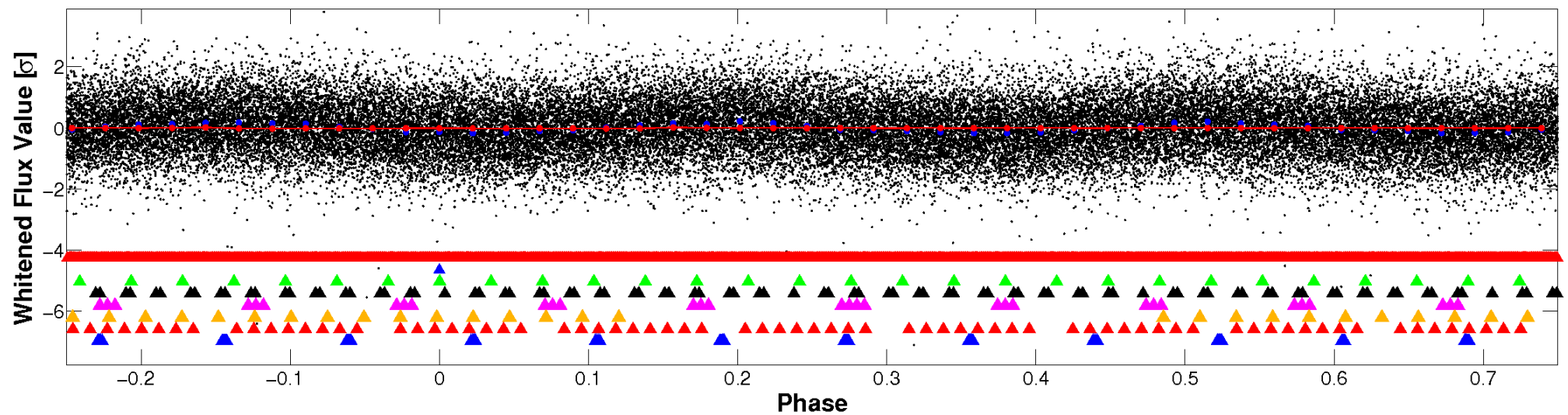


Non-Whitened Vs. Whitened Light Curve

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

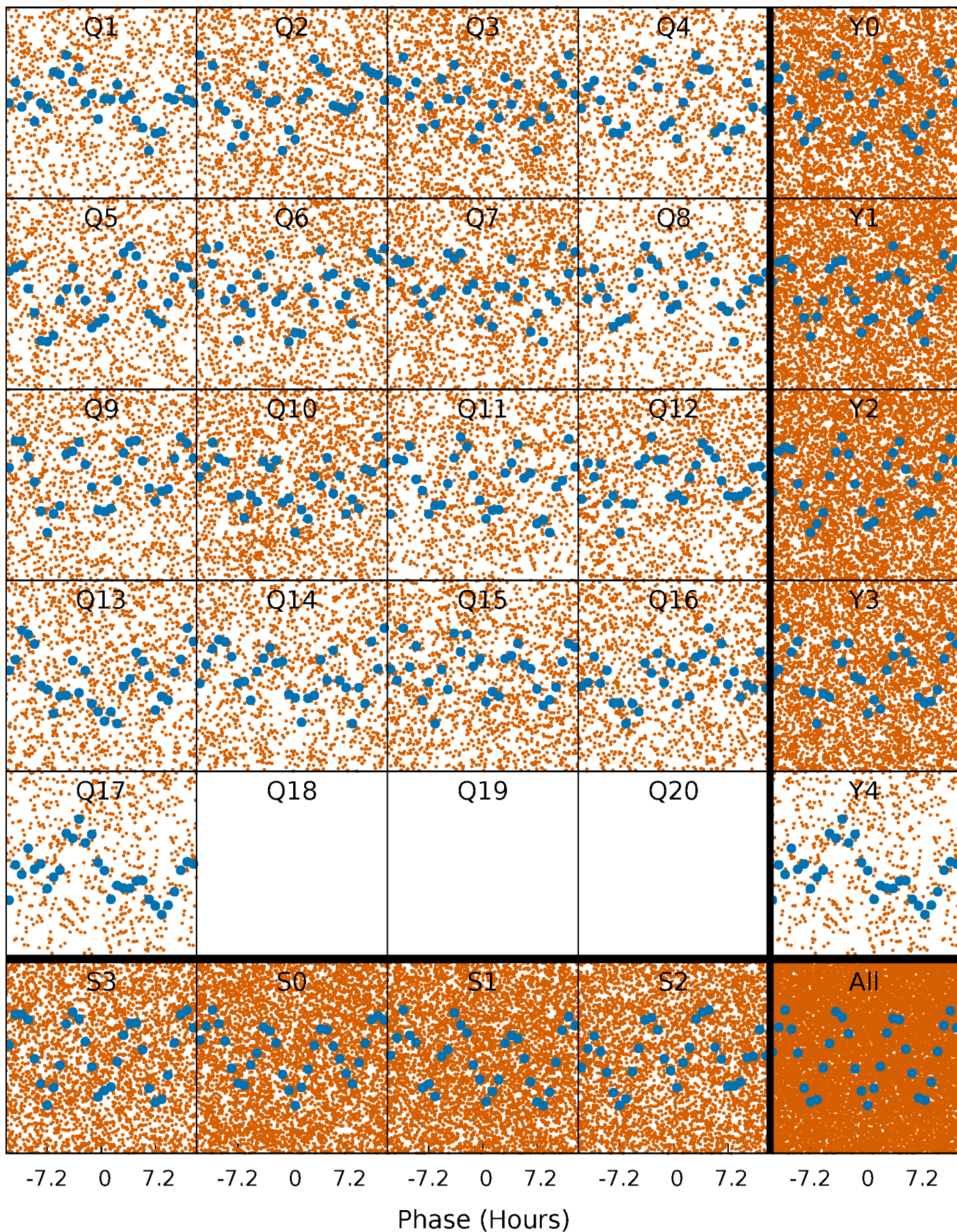


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



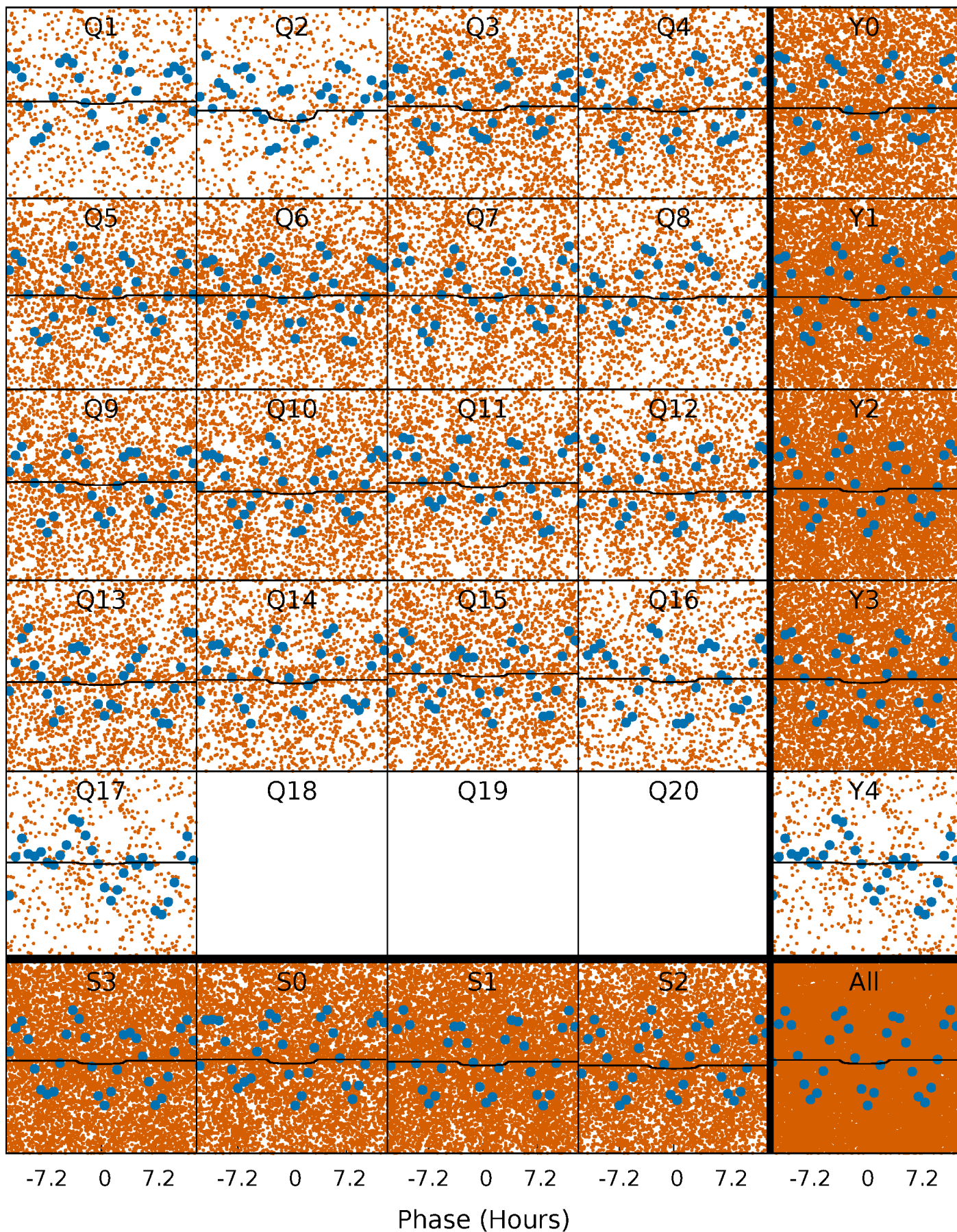
PDC Quarter-Phased Transit Curves

TCE 006945362-02 P= 0.912283 Days $T_0=131.949778$ (BKJD)



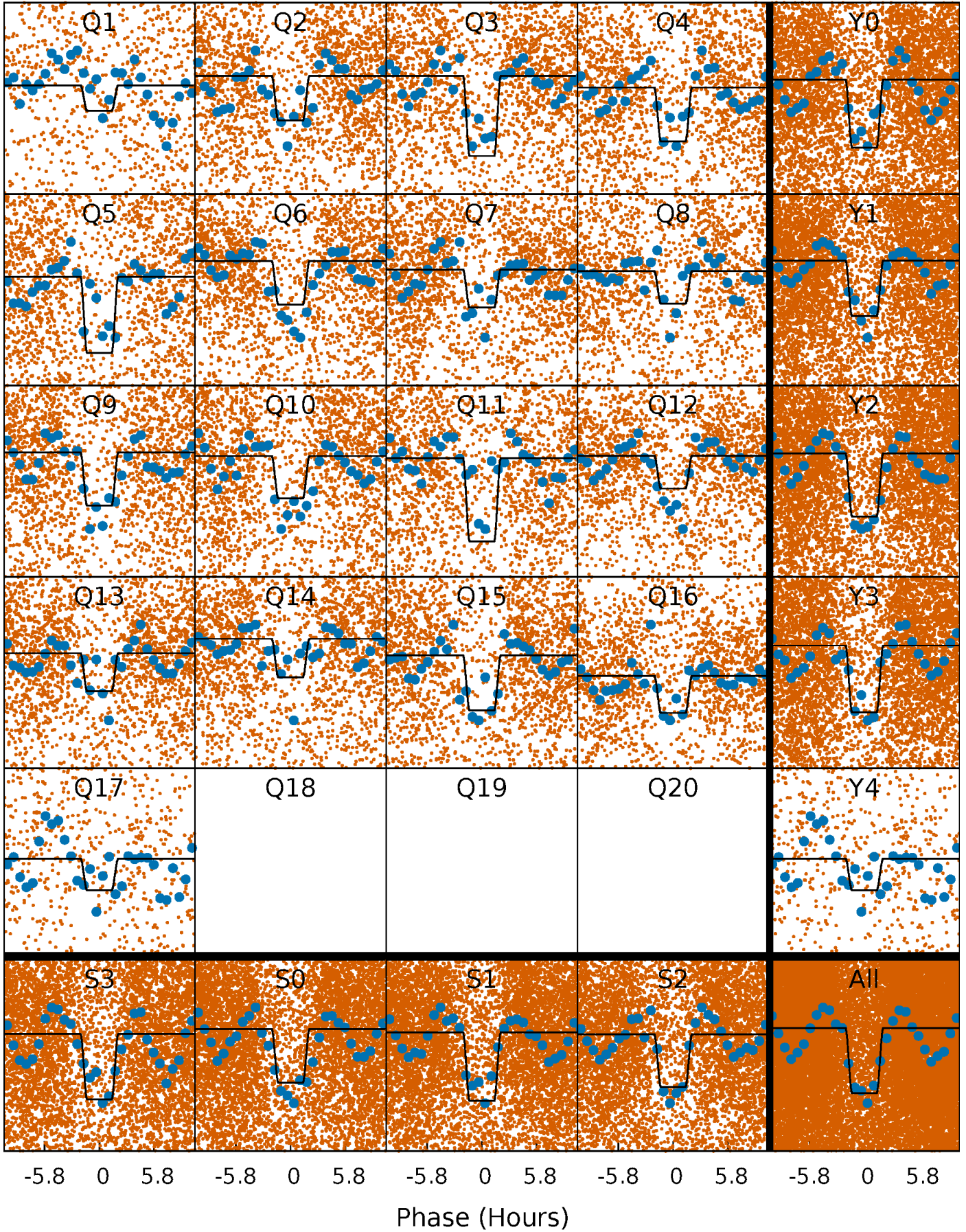
DV Quarter-Phased Transit Curves

TCE 006945362-02 P= 0.912283 Days $T_0=131.949778$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

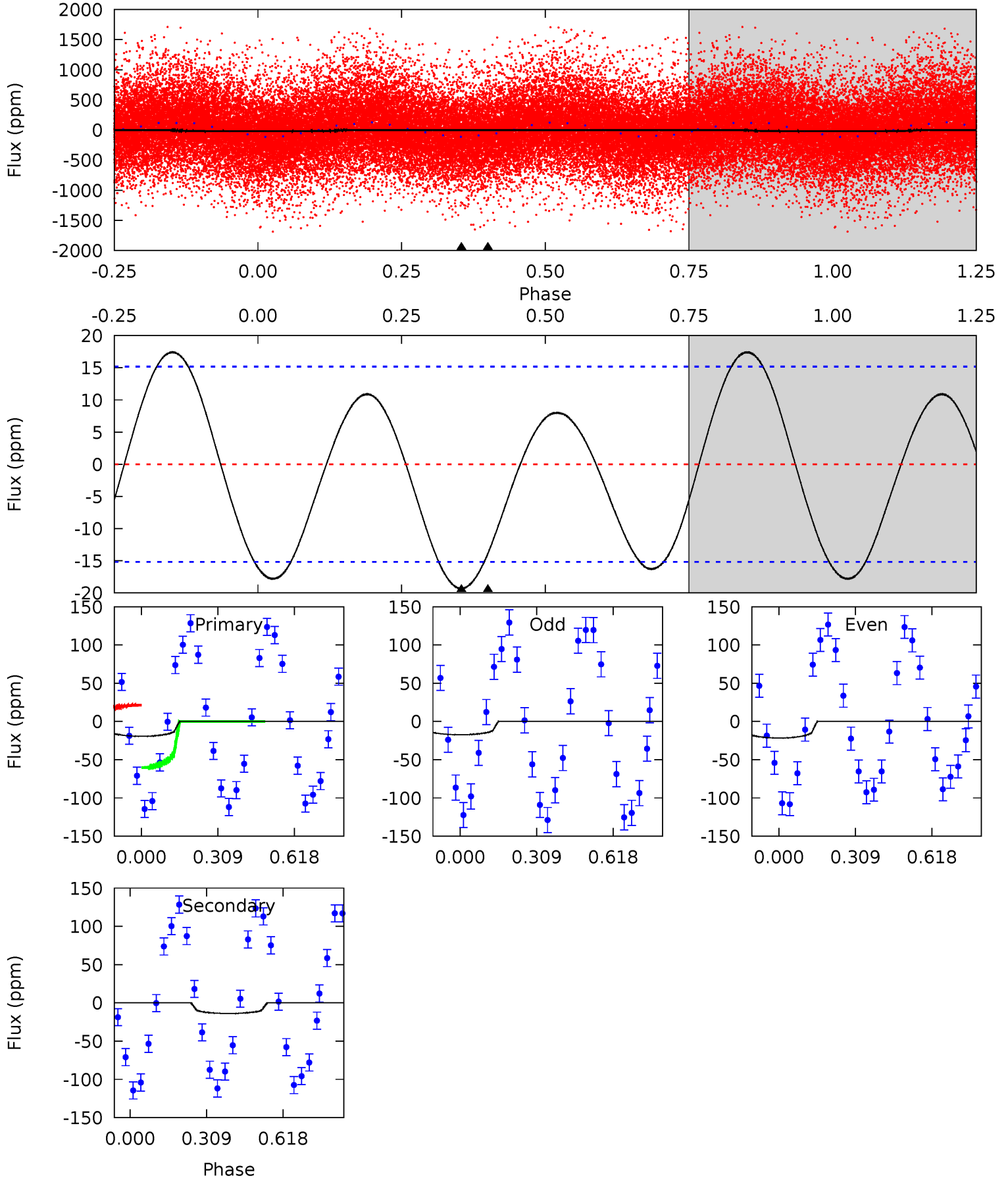
TCE 006945362-02 P= 0.912333 Days $T_0=131.929791$ (BKJD)



DV Model-Shift Uniqueness Test

006945362-02, P = 0.912283 Days, E = 131.037495 Days

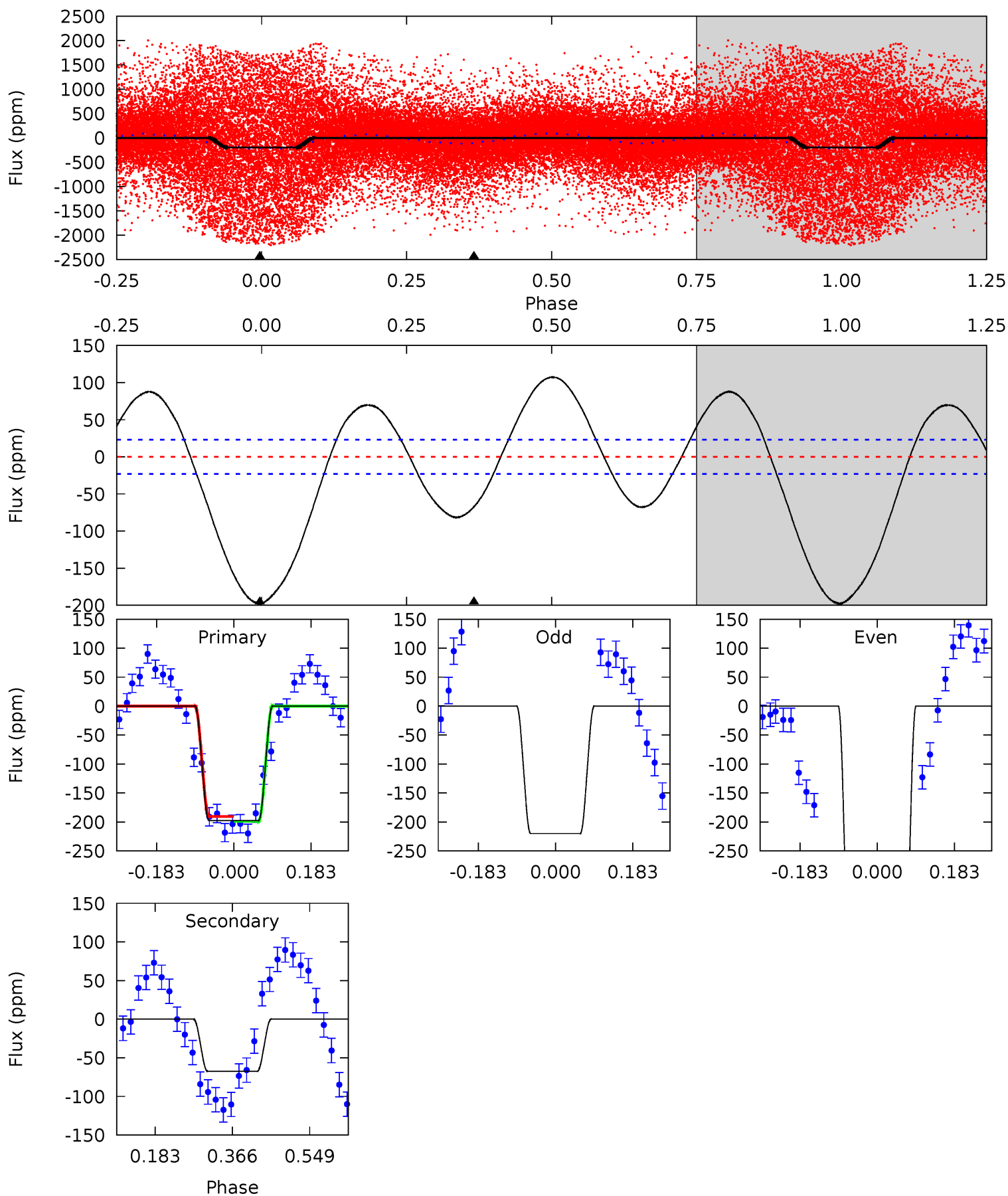
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.52	3.96	0	0	4.32	1.02	3.51	5.52	5.52	3.96	3.96	0.62	0.54	0.47	5.75



Alt Model-Shift Uniqueness Test

006945362-02, P = 0.912333 Days, E = 131.017458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.0	13.0	0	0	4.44	1.33	10.2	38.0	38.0	13.0	13.0	33.9	1.03	0.35	0.77



Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 4	$0.51^{+0.29}_{-0.27}$	3507^{+148}_{-102}	7217^{+5422}_{-1592}	12^{+45}_{-7}
Alt.	-67 ± 5	$2.50^{+0.36}_{-0.33}$	3515^{+141}_{-106}	4829^{+332}_{-289}	$2.448^{+0.849}_{-0.627}$

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 $A_{obs} \gg 1.0$

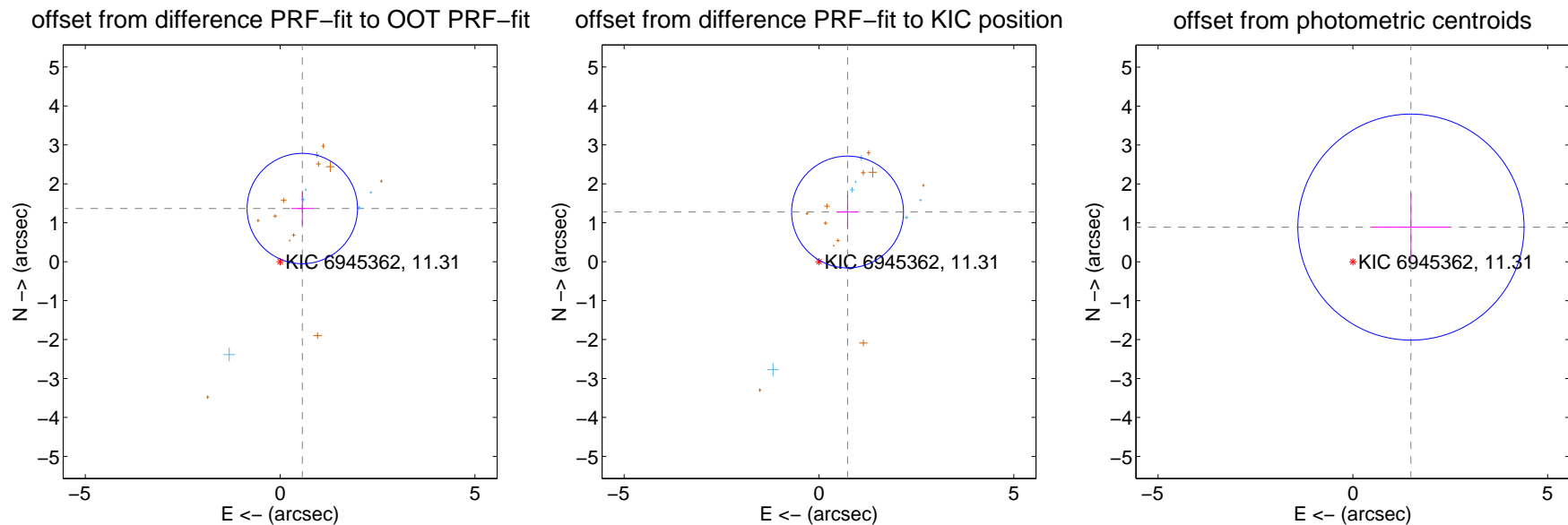
DV Centroid Data

Supplemental centroid analysis for 006945362-02. **Kepler magnitude: 11.31.** Transit SNR 2.02

There are 6 quarters with good PRF difference image offsets

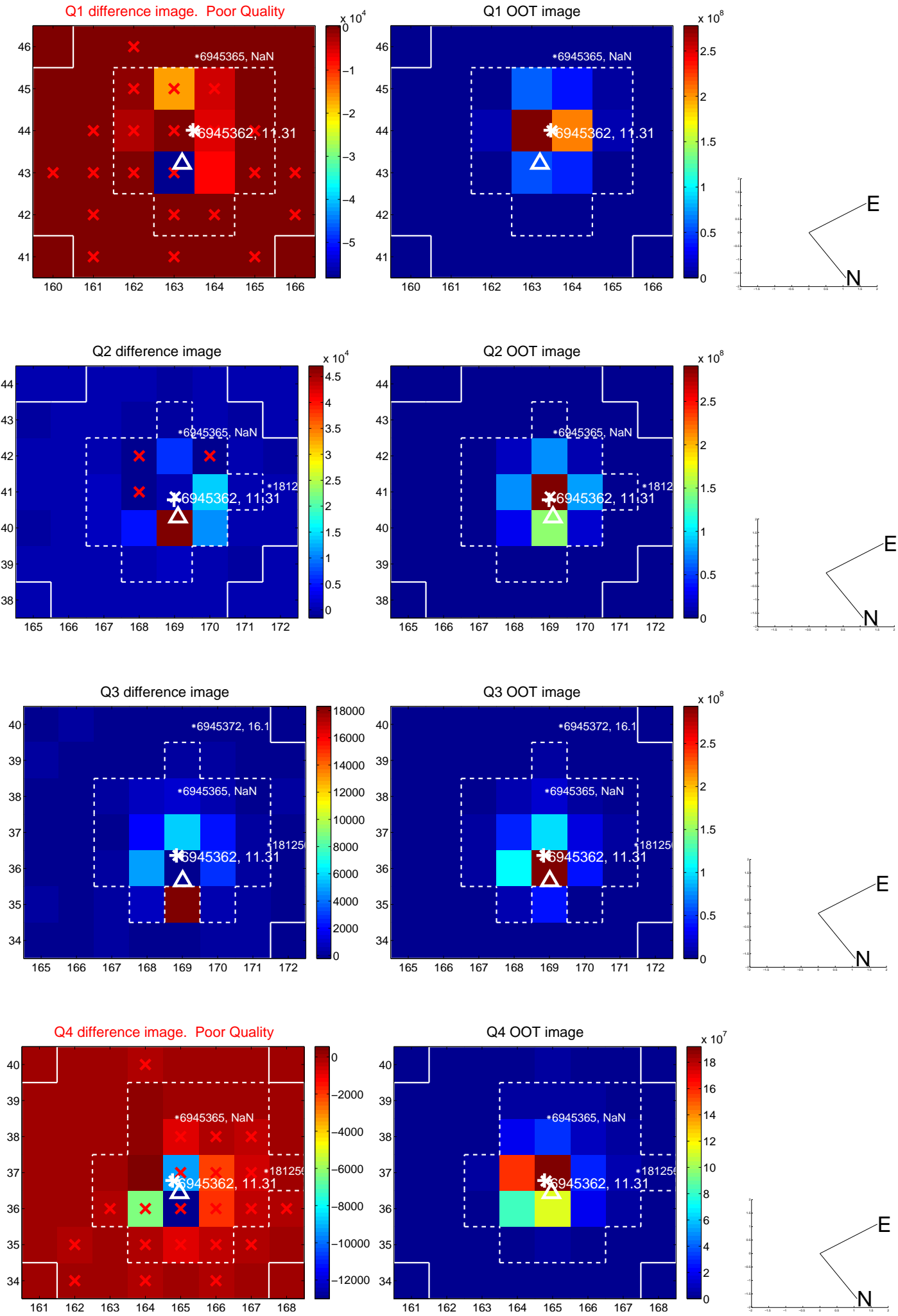
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.480 ± 0.472	3.13	-0.570 ± 0.281	1.365 ± 0.427
PRF-fit source offset from KIC position	1.472 ± 0.479	3.07	-0.733 ± 0.275	1.276 ± 0.439
photometric centroid source offset	1.74 ± 0.97	1.79	-1.49 ± 1.00	0.89 ± 0.88

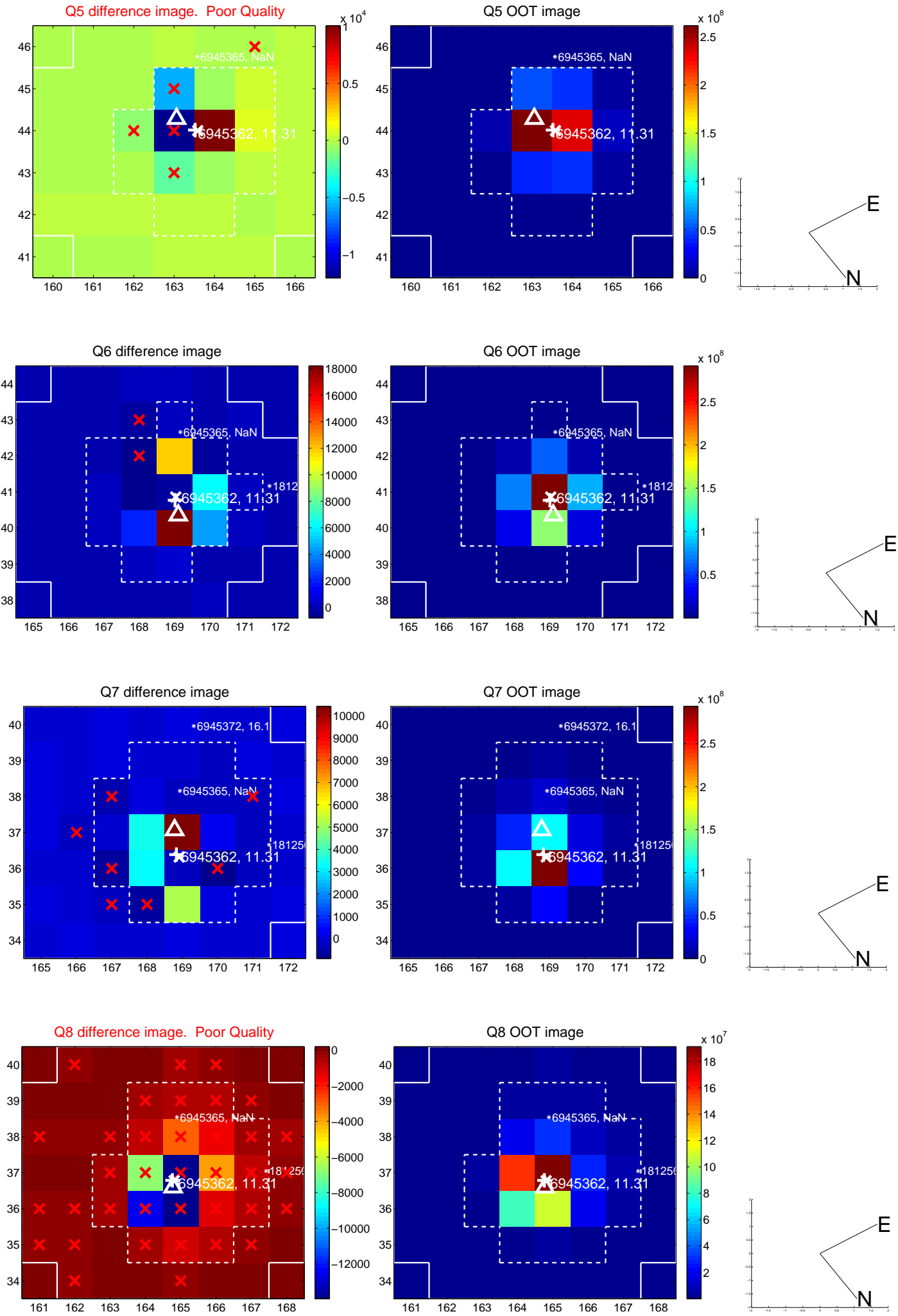


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

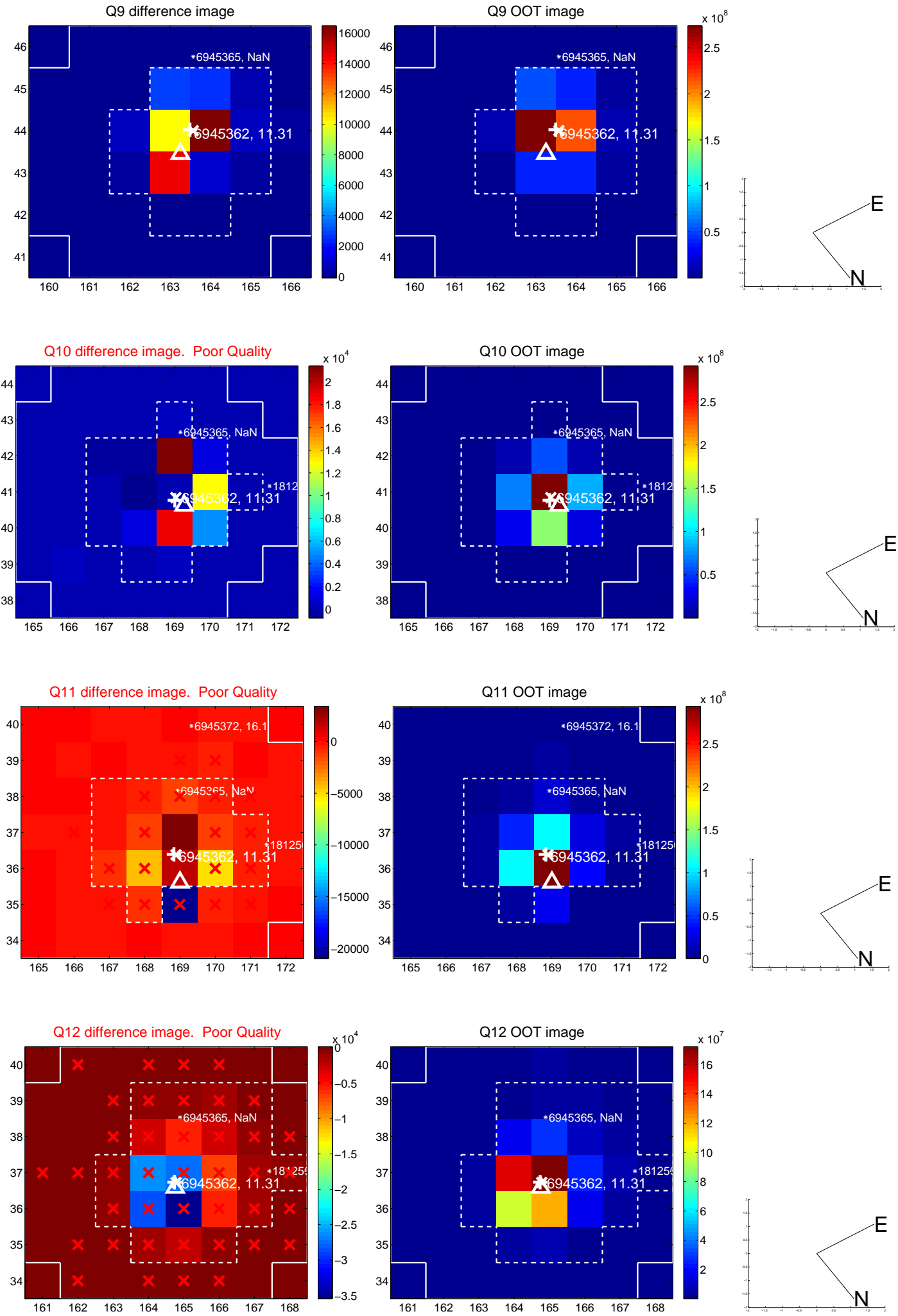
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



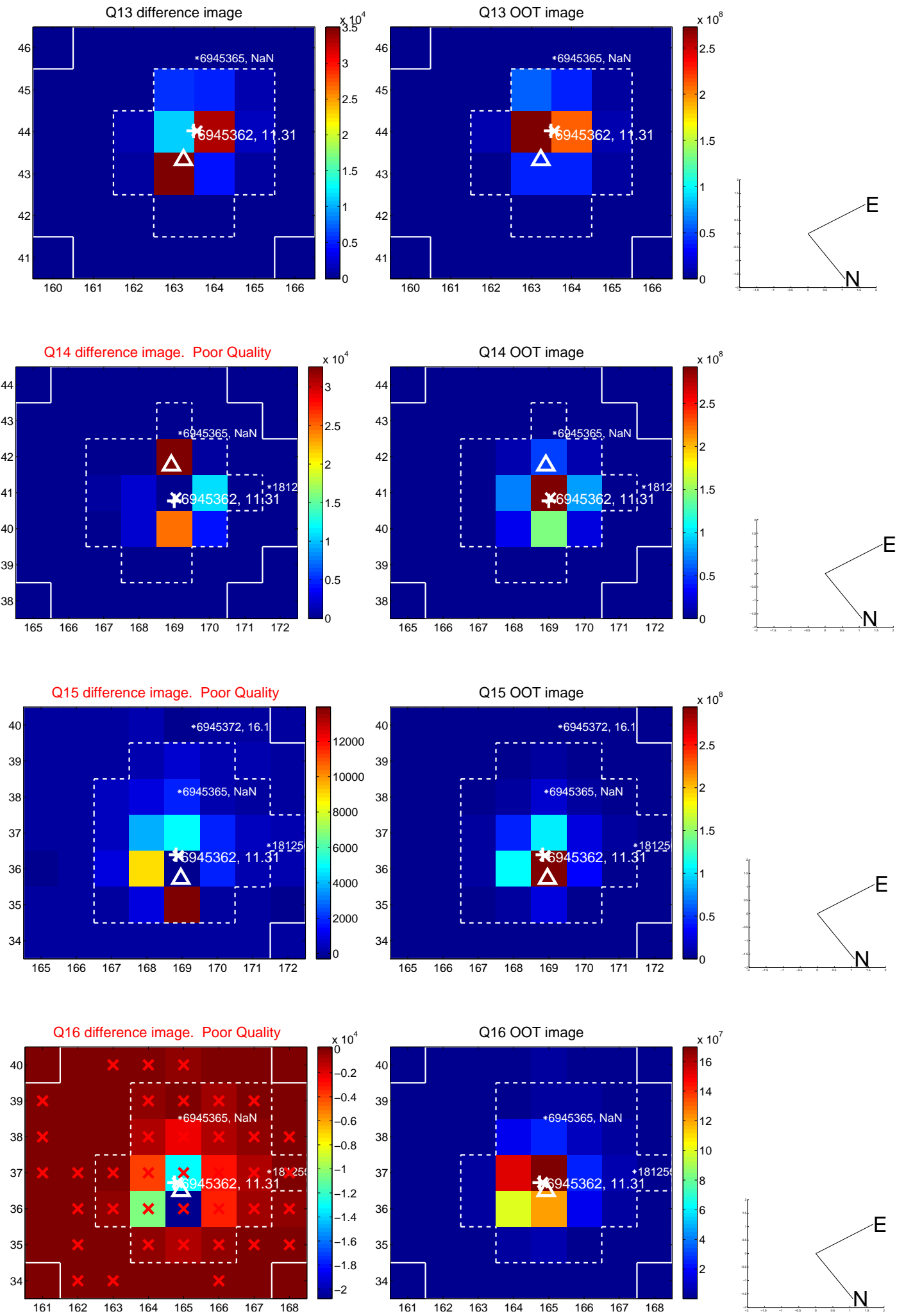
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



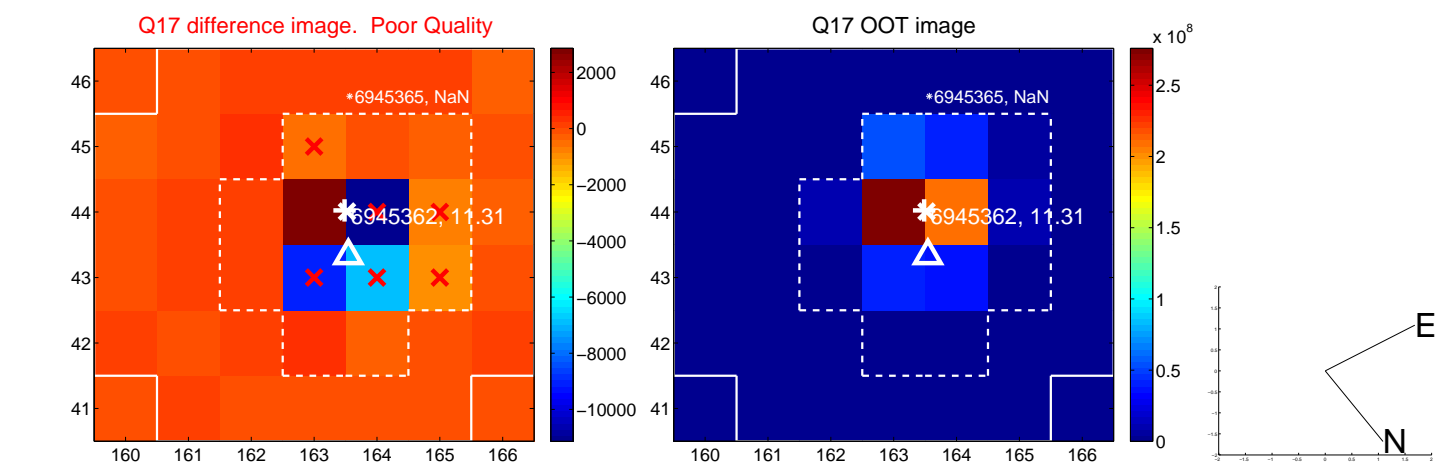
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



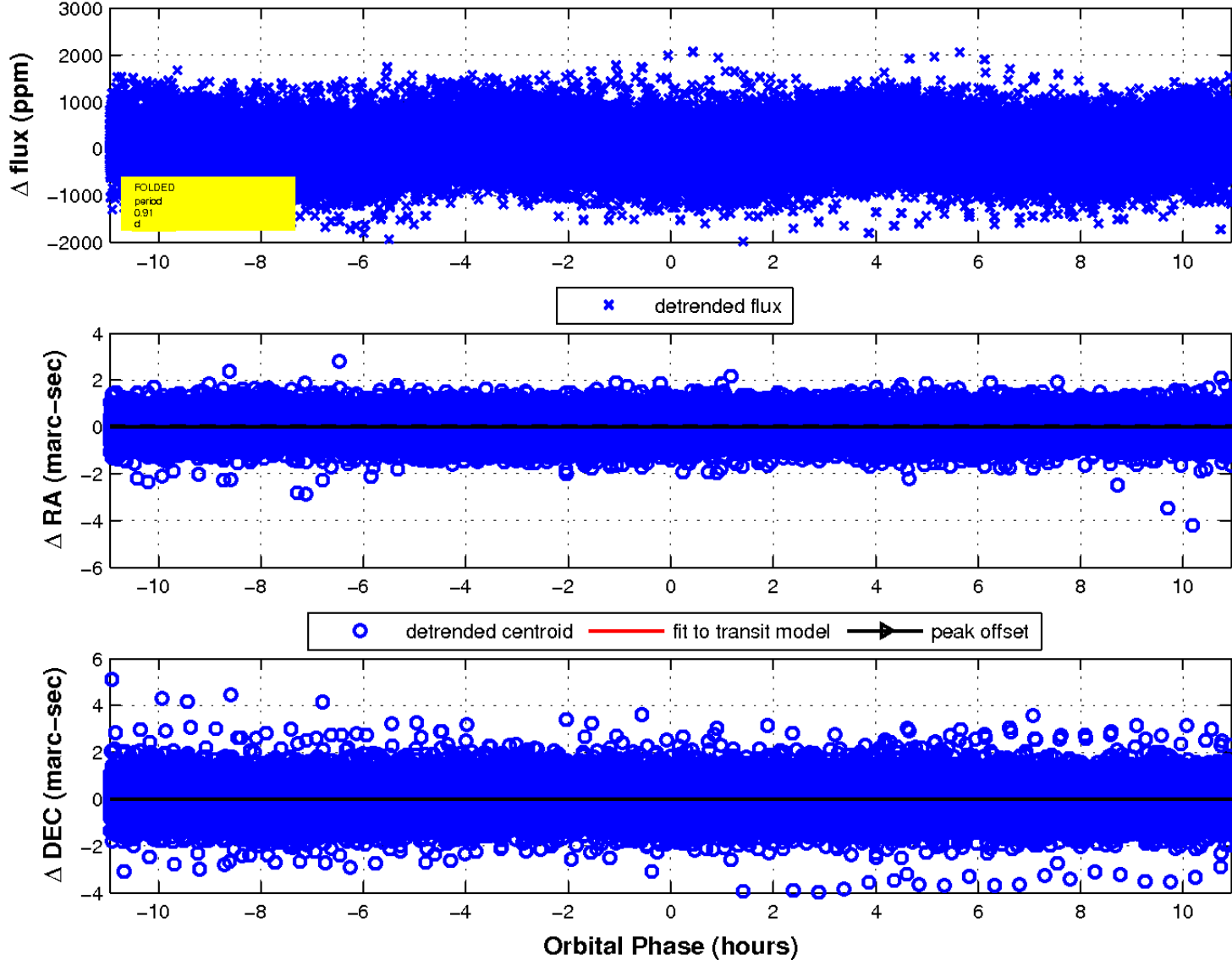
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

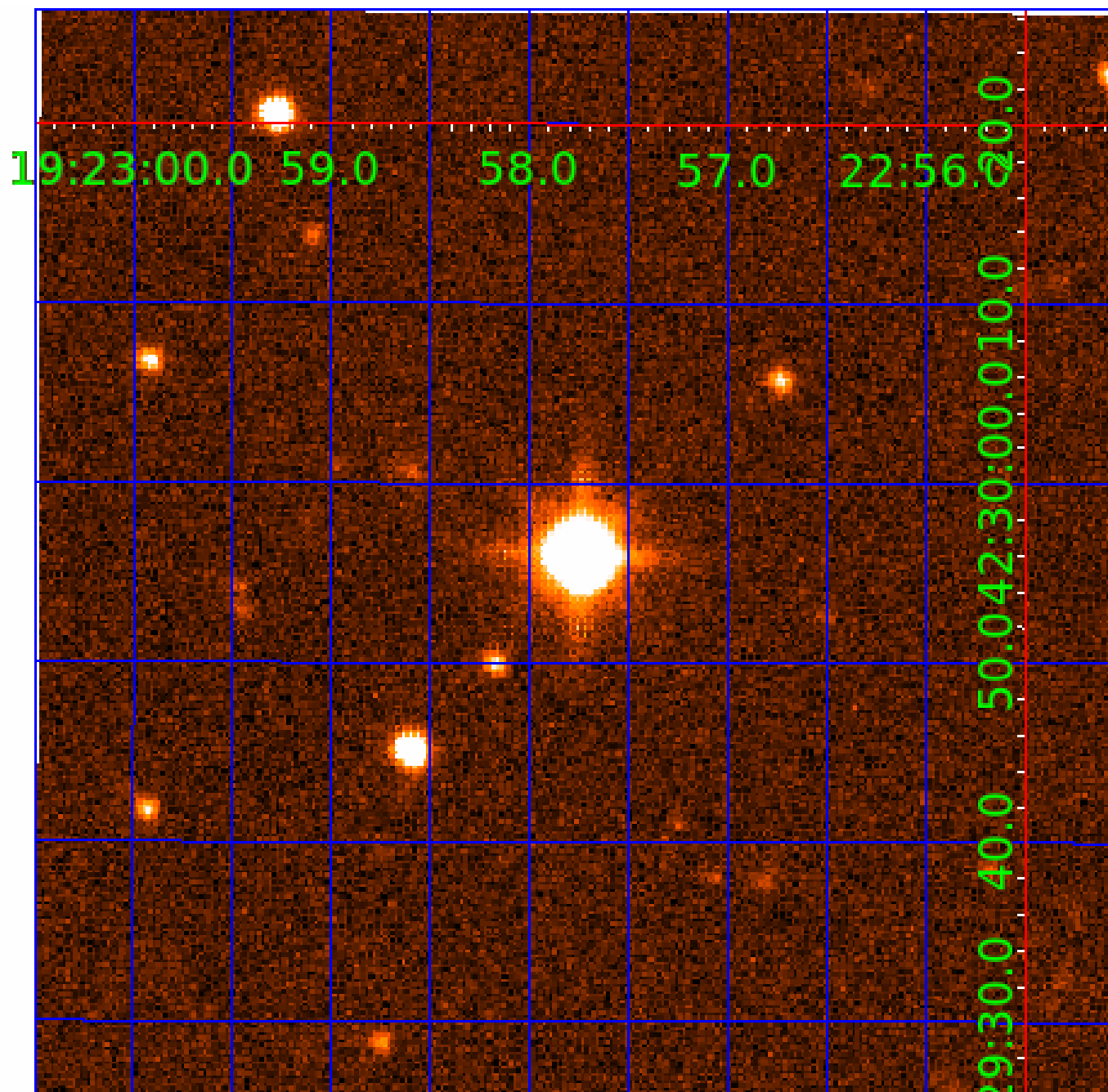


fluxWeightedCentroids, Planet 2 of 8



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

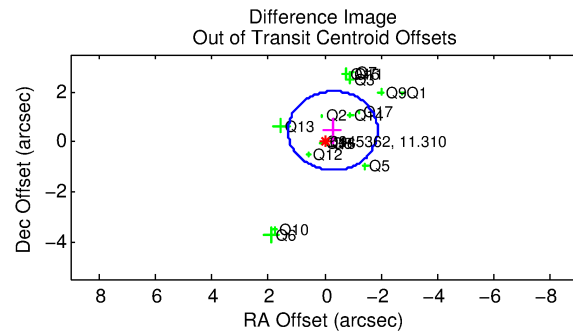
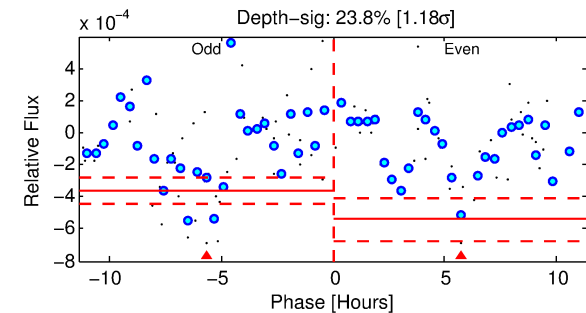
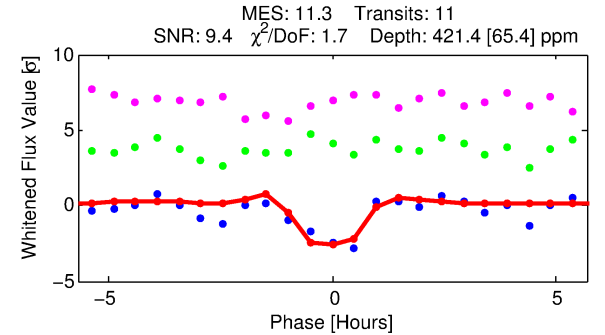
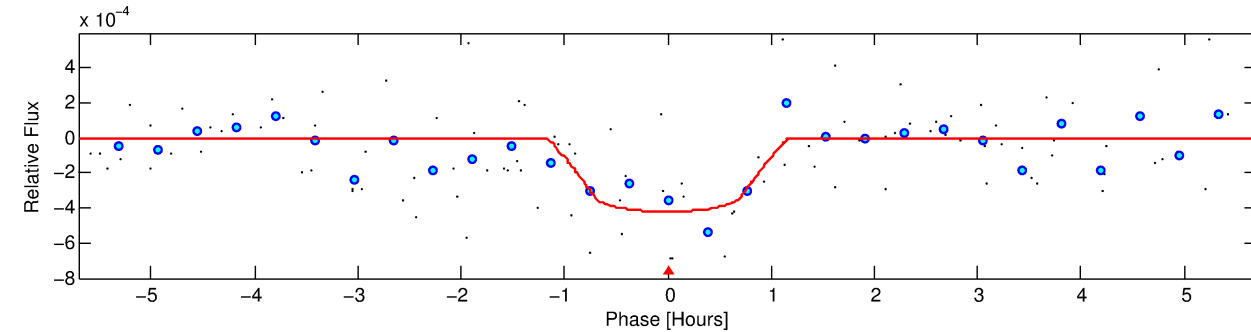
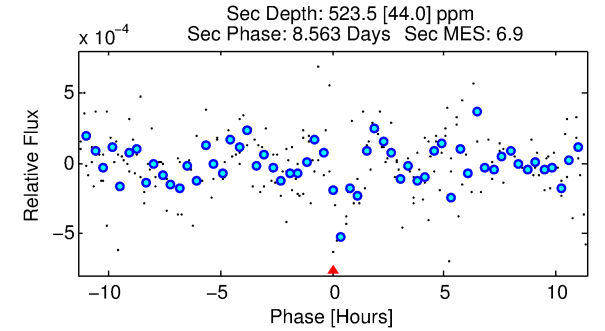
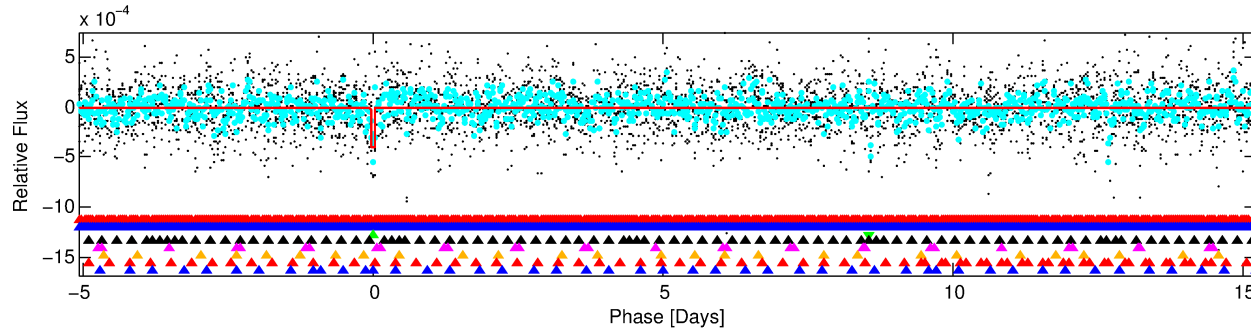
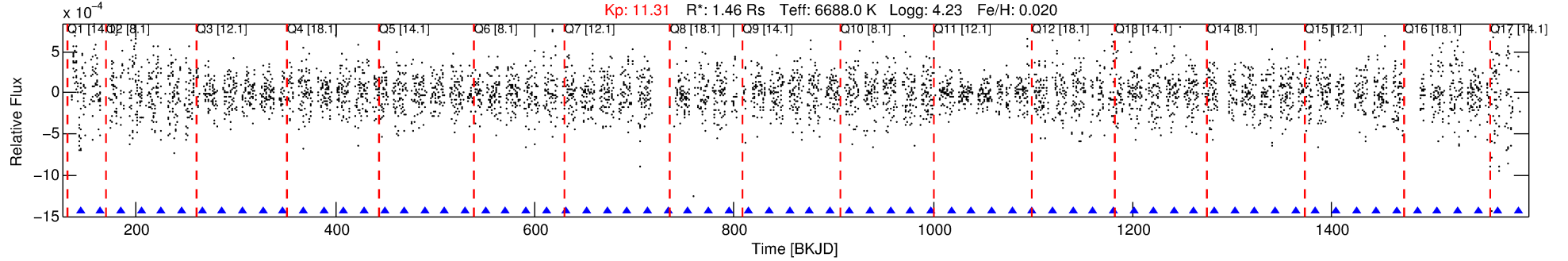
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-03

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 3 of 8 Period: 20.322 d



DV Fit Results:

Period = 20.32189 [0.00016] d
Epoch = 144.2817 [0.0066] BKJD
Rp/R* = 0.0190 [0.0254]
a/R* = 83.20 [592.54]
b = 0.01 [1268.74]
Seff = 148.95 [30.96]
Teff = 891 [46] K
Rp = 3.02 [4.08] Re
a = 0.1602 [0.0225] AU
Ag = 809.36 [2176.07] [0.37σ]
Teffp = 7346 [4925] K [1.31σ]

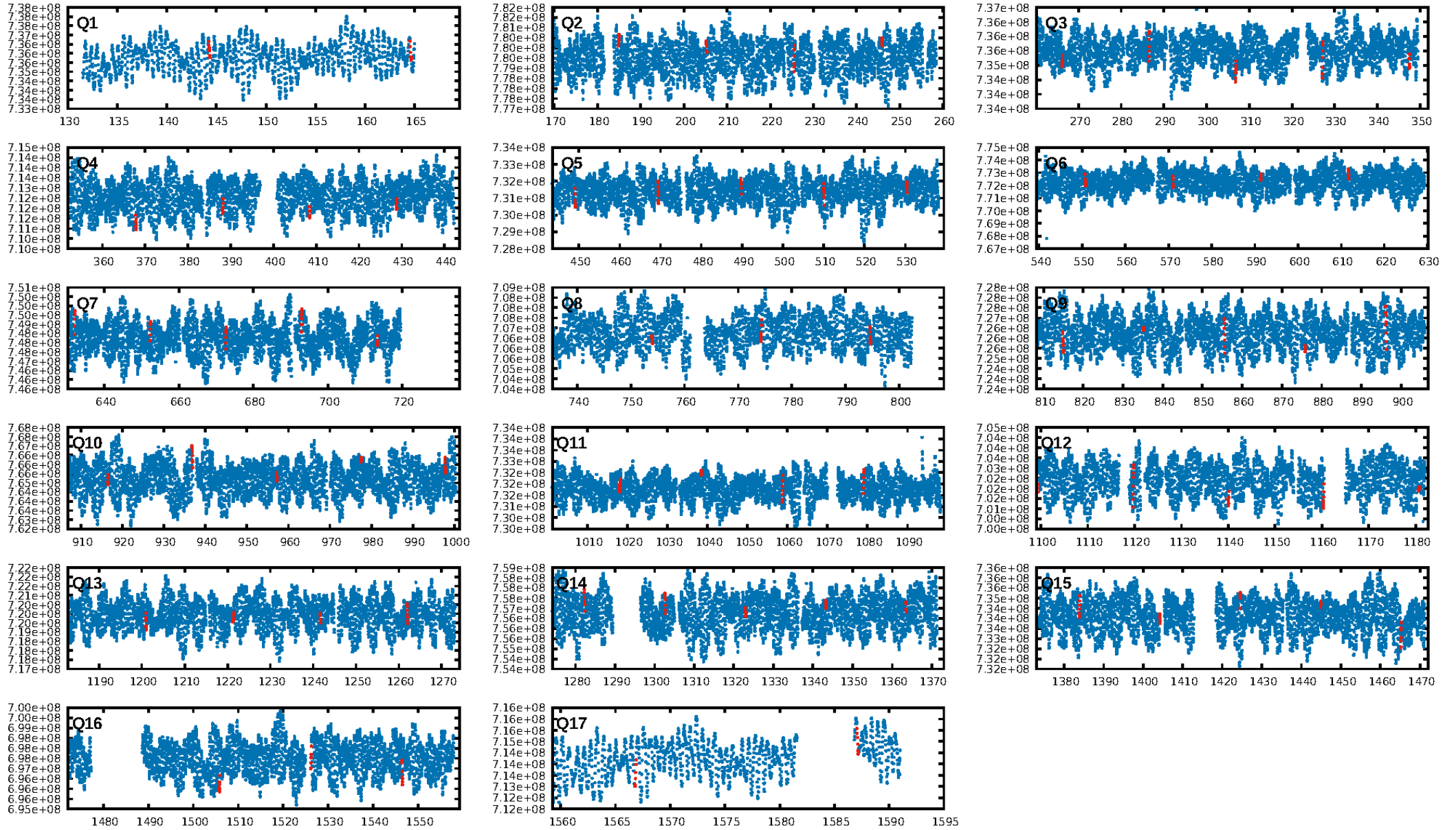
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.23σ]
LongPeriod-sig: 100.0% [92.36σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 44.61
Centroid-sig: 6.9%
Centroid-so: 0.058 arcsec [0.37σ]
OotOffset-rm: 0.524 arcsec [0.99σ]
KicOffset-rm: 0.590 arcsec [1.23σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.12 [2/17]

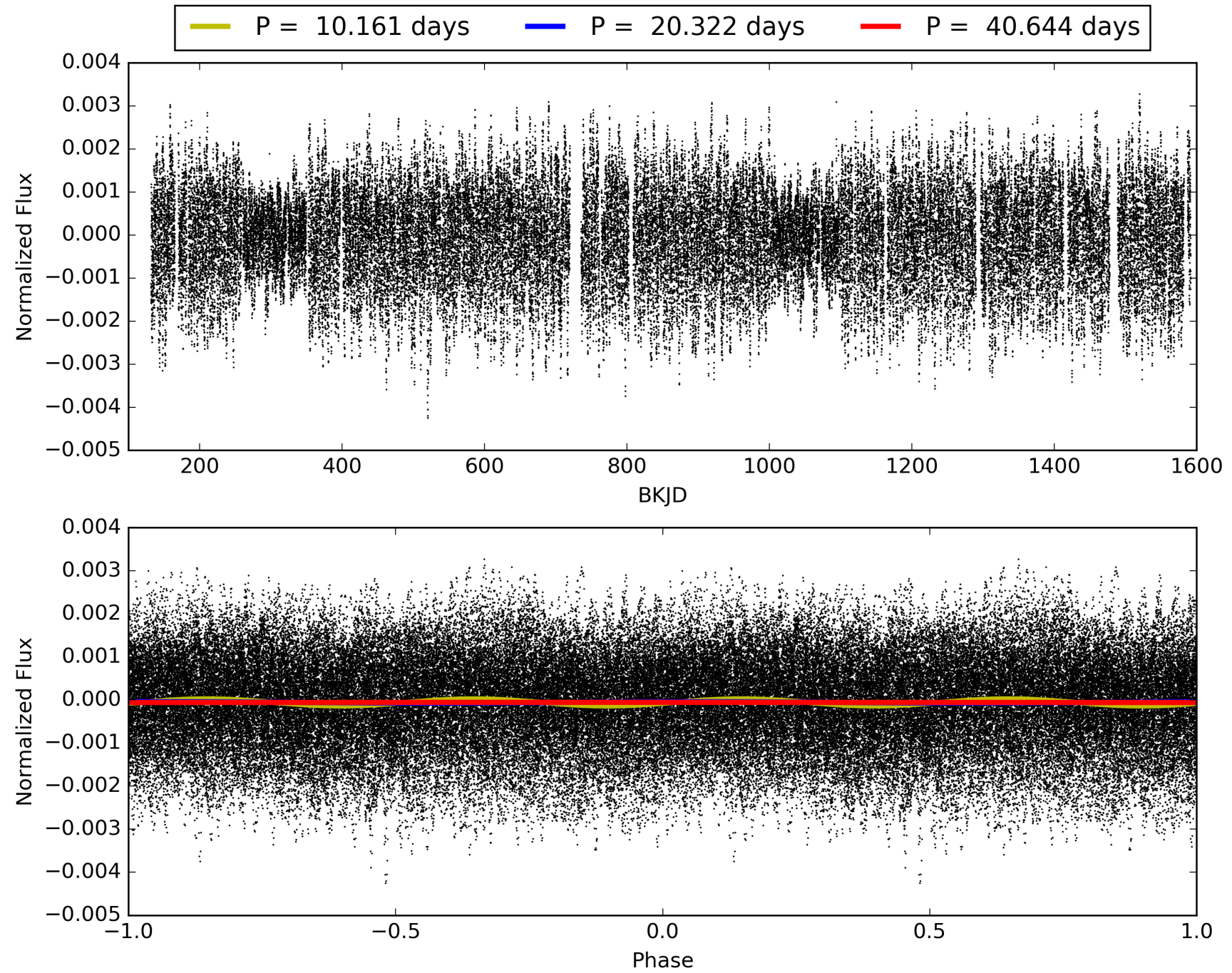
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:34 Z

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

TCE 006945362-03, PDC Light Curves

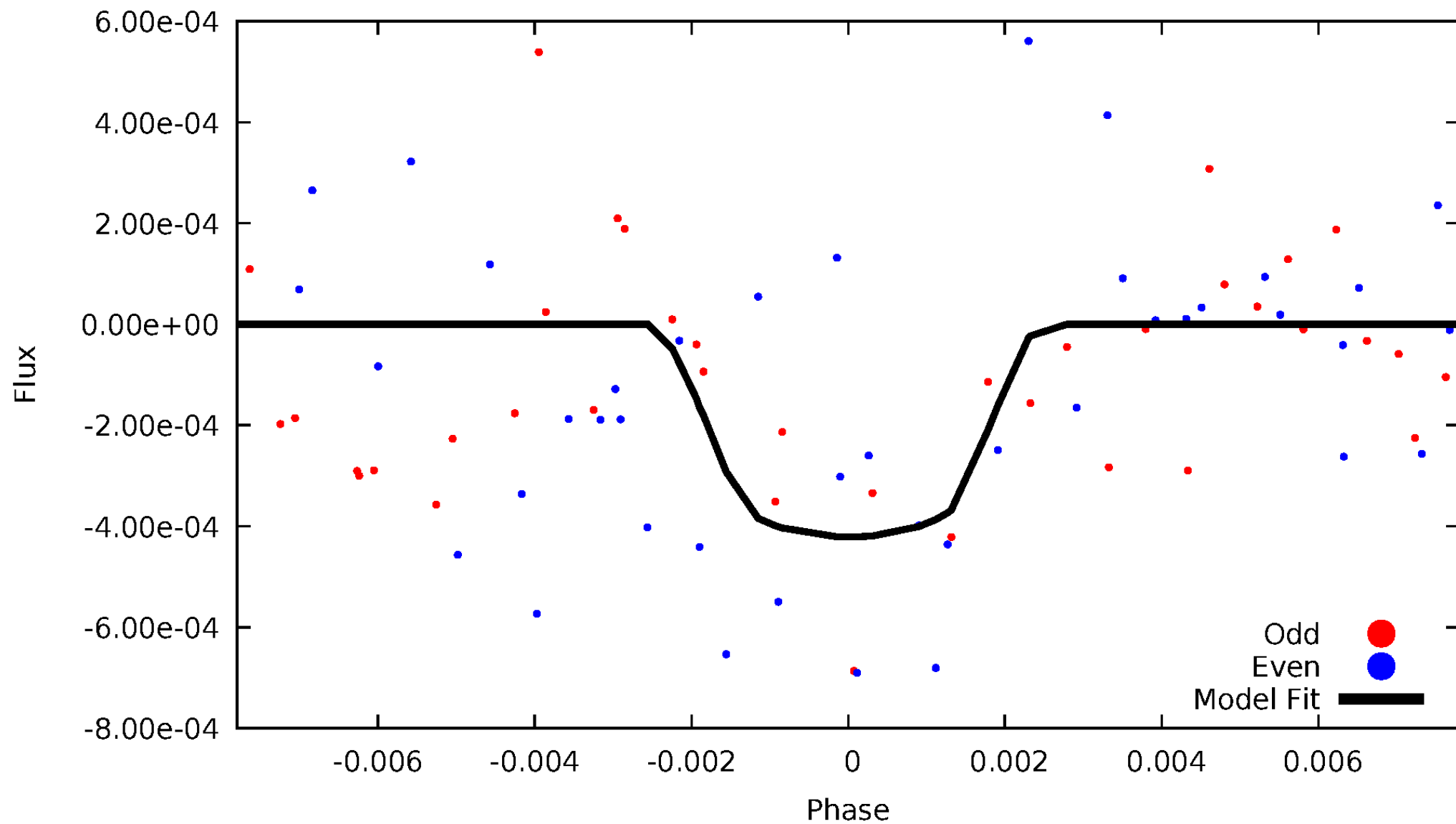


TCE 006945362-03



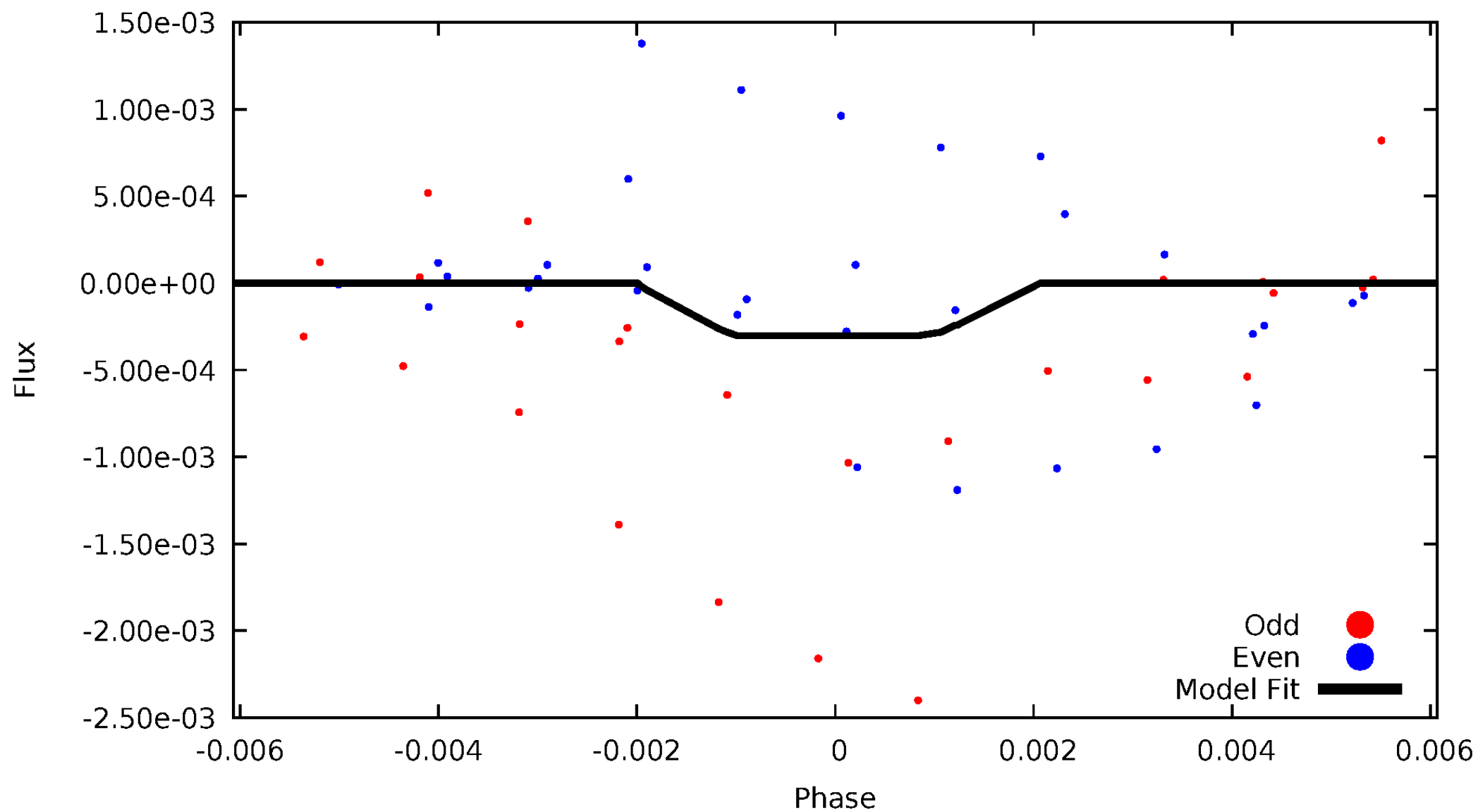
DV Odd/Even

TCE 006945362-03



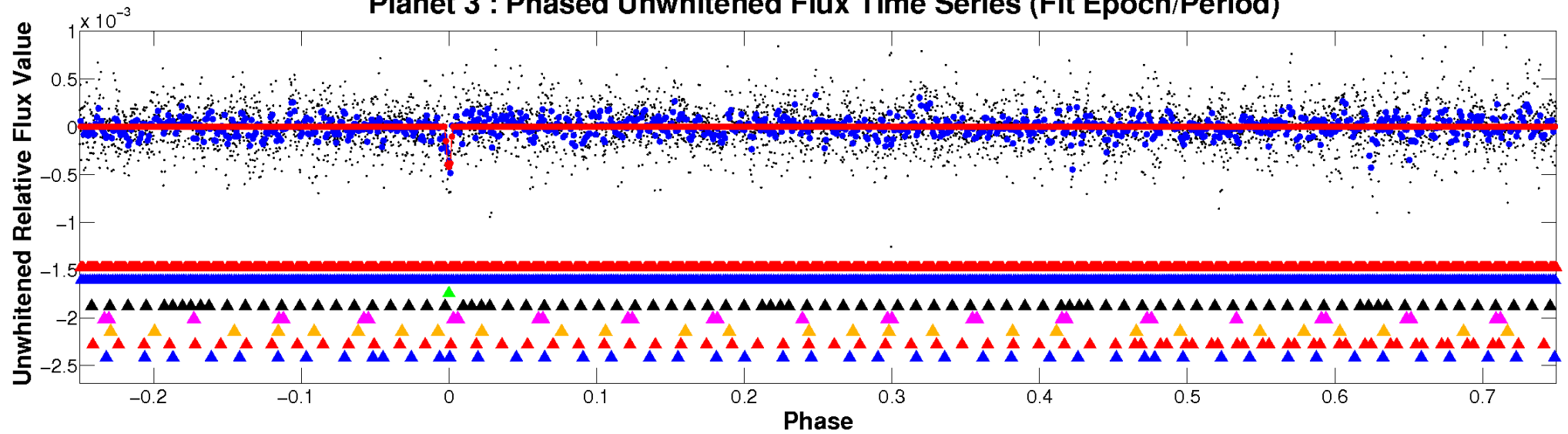
ALT Odd/Even

TCE 006945362-03

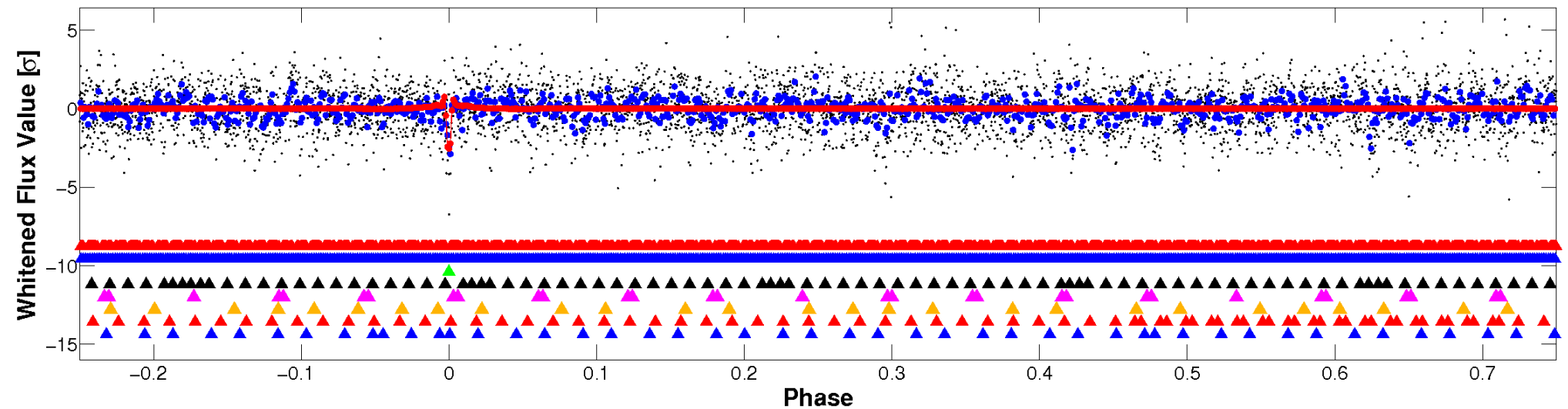


Non-Whitened Vs. Whitened Light Curve

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

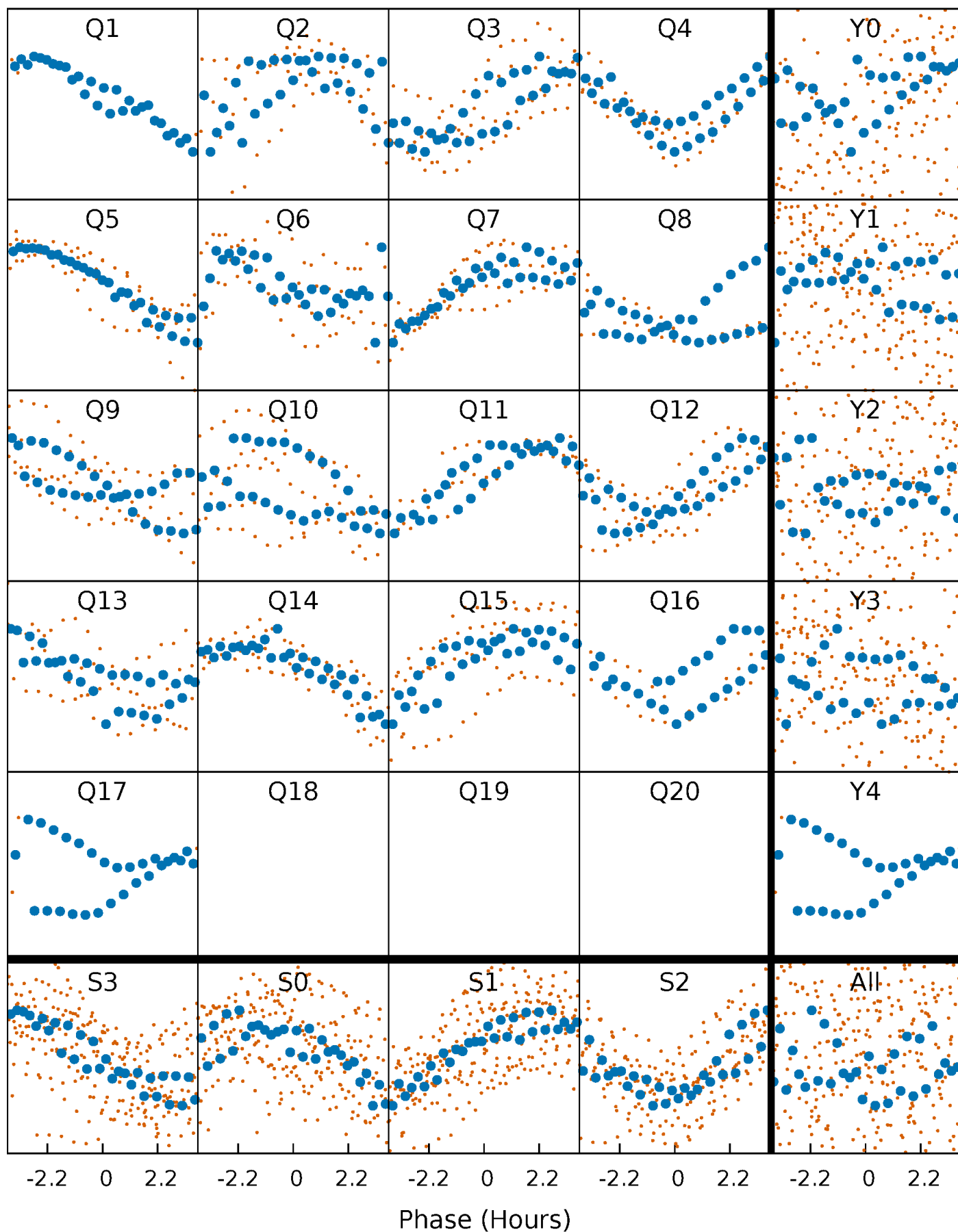


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



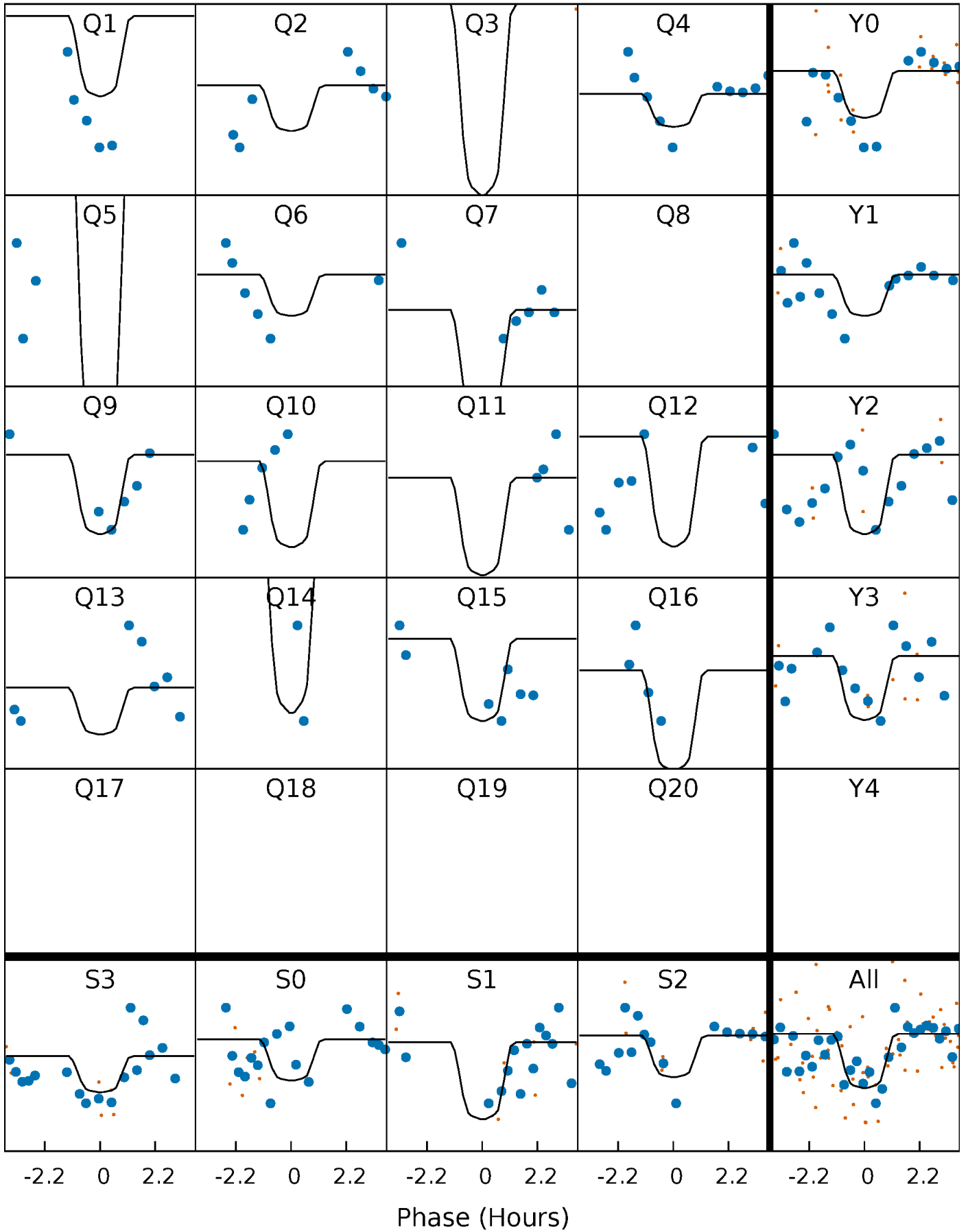
PDC Quarter-Phased Transit Curves

TCE 006945362-03 P= 20.321891 Days $T_0=144.281723$ (BKJD)



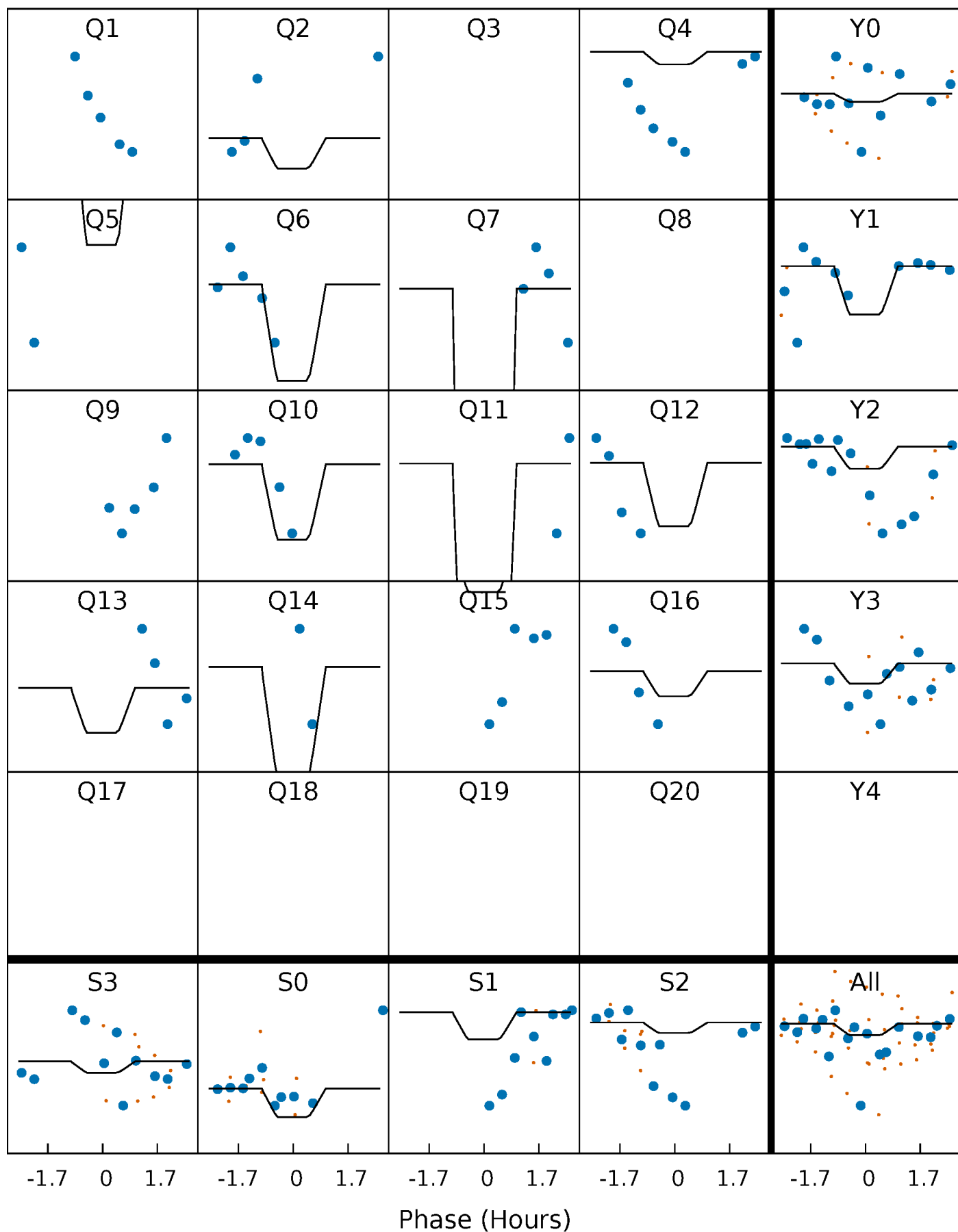
DV Quarter-Phased Transit Curves

TCE 006945362-03 P= 20.321891 Days $T_0=144.281723$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

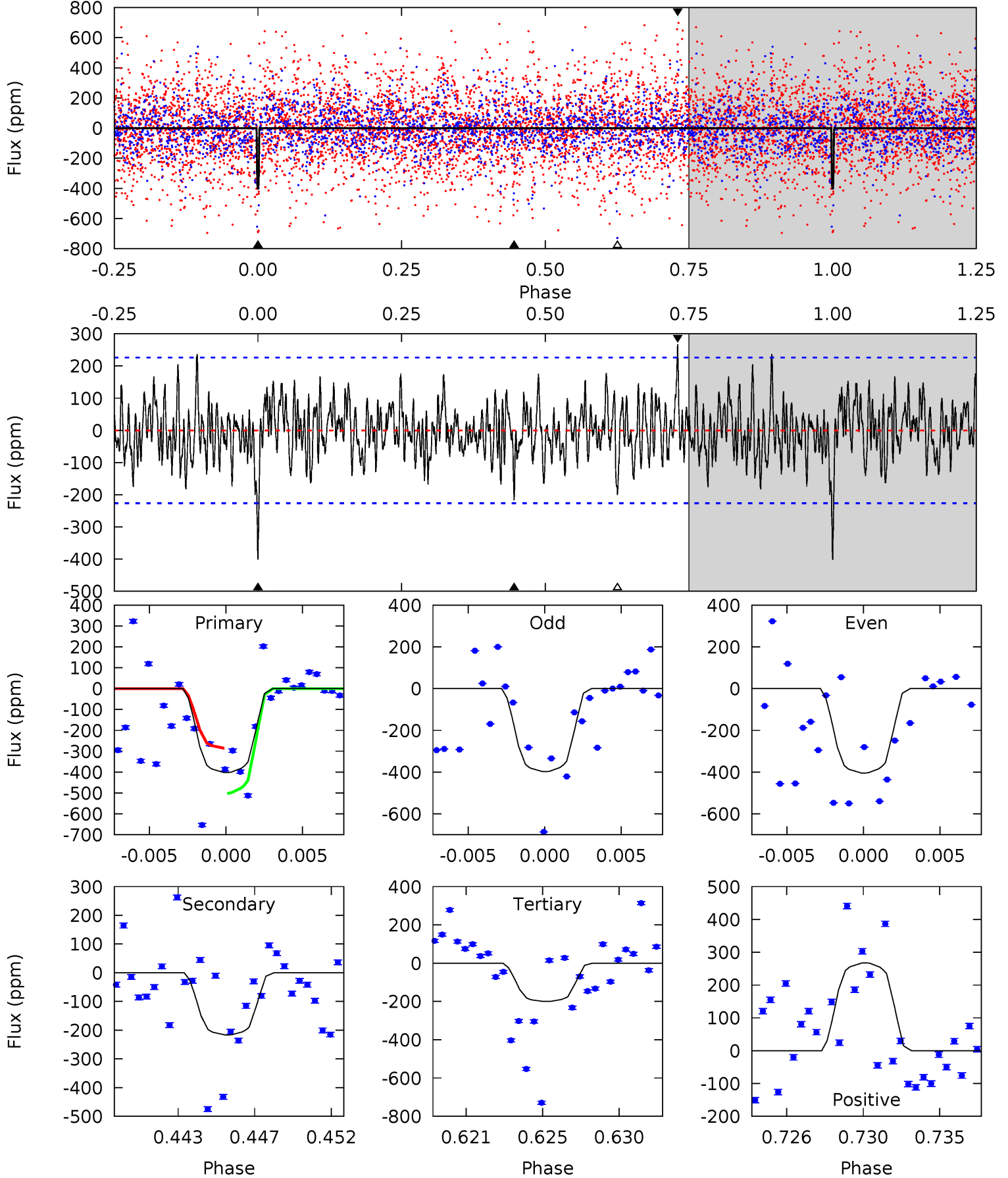
TCE 006945362-03 P= 20.322244 Days $T_0=144.262355$ (BKJD)



DV Model-Shift Uniqueness Test

006945362-03, P = 20.321891 Days, E = 123.959832 Days

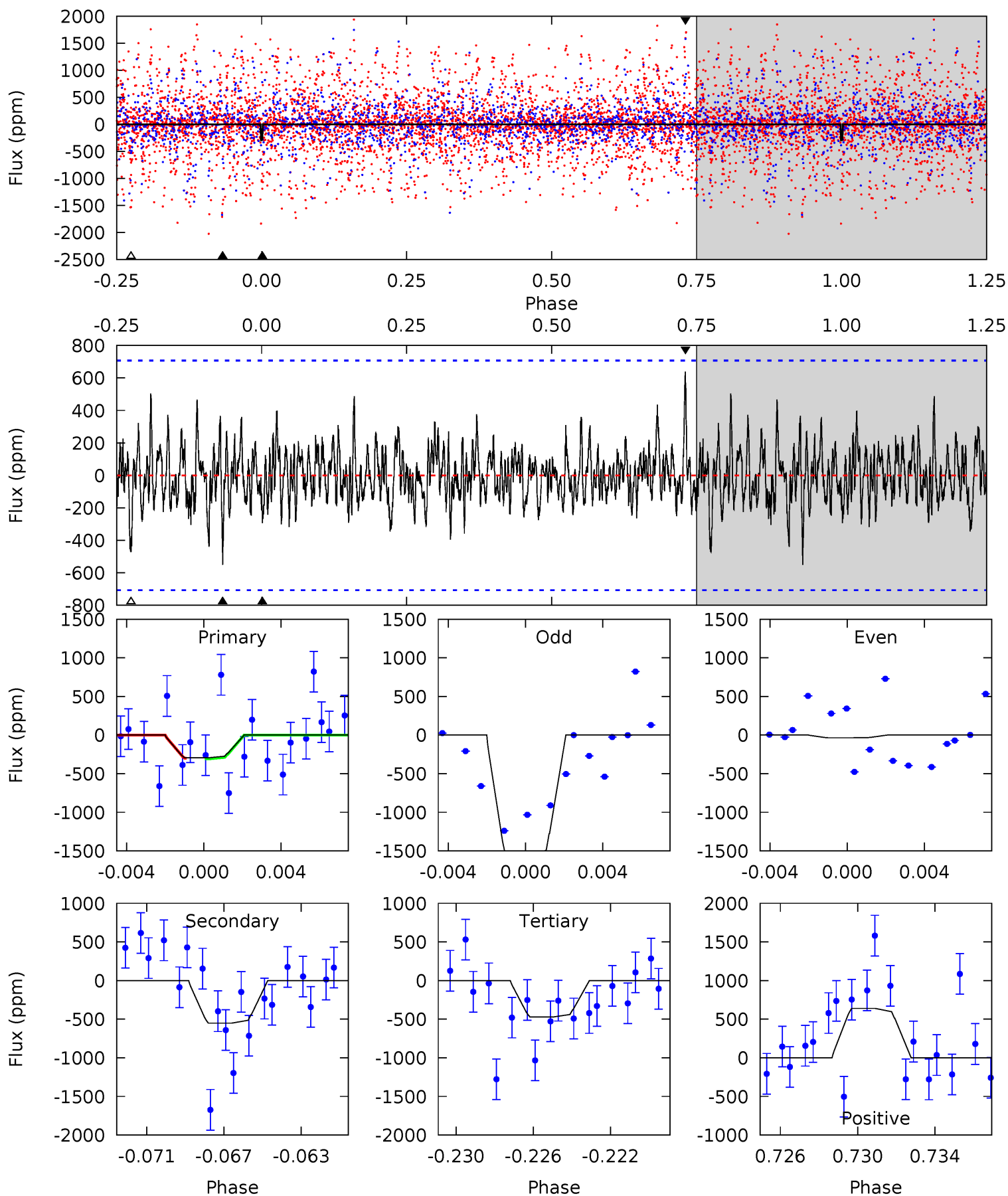
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	4.95	4.57	6.12	5.17	2.84	1.62	4.62	3.07	0.38	-1.17	0.07	0.94	0.40	2.49



Alt Model-Shift Uniqueness Test

006945362-03, P = 20.322244 Days, E = 123.940111 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.16	4.05	3.47	4.70	5.20	2.88	1.04	-1.30	-2.54	0.59	-0.65	5.03	1.01	0.54	0



Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-217 ± 44	$4.11^{+3.53}_{-2.68}$	1245^{+51}_{-36}	5127^{+3711}_{-1121}	176^{+1333}_{-124}
Alt.	-551 ± 136	$4.15^{+3.44}_{-2.79}$	1249^{+48}_{-36}	6325^{+7289}_{-1549}	442^{+3804}_{-314}

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 $A_{obs} \gg 1.0$

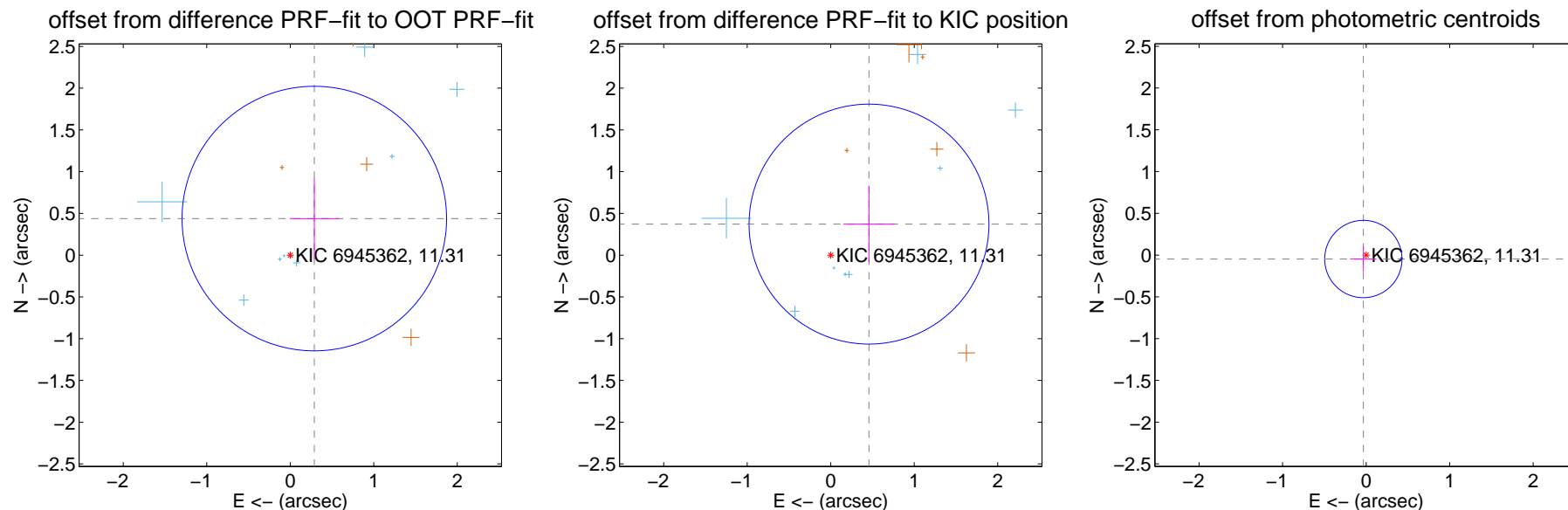
DV Centroid Data

Supplemental centroid analysis for 006945362-03. **Kepler magnitude: 11.31.** Transit SNR 9.40

There are 8 quarters with good PRF difference image offsets

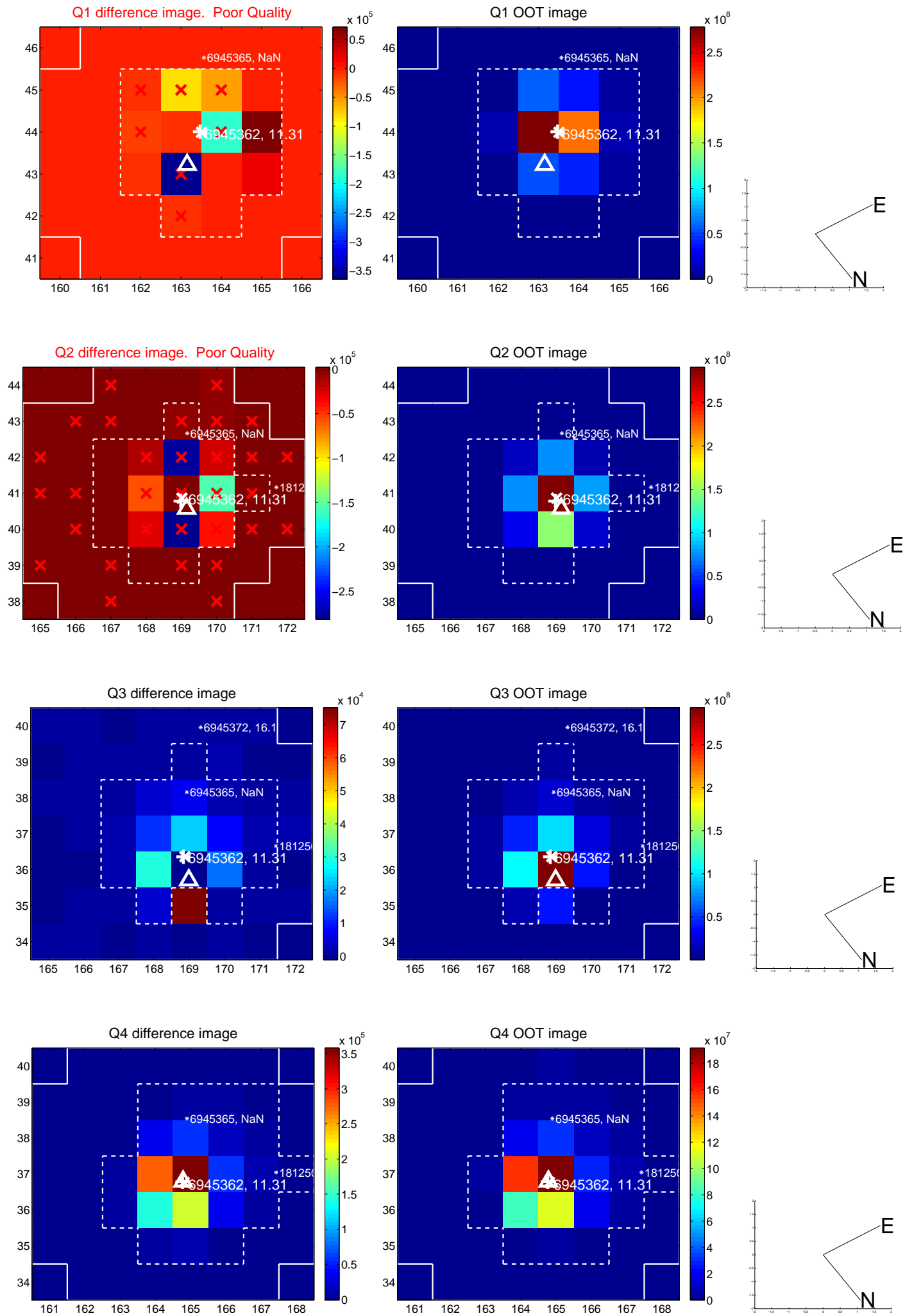
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.524 ± 0.528	0.99	-0.288 ± 0.295	0.438 ± 0.485
PRF-fit source offset from KIC position	0.590 ± 0.479	1.23	-0.458 ± 0.307	0.372 ± 0.455
photometric centroid source offset	0.06 ± 0.15	0.37	0.03 ± 0.16	-0.05 ± 0.15

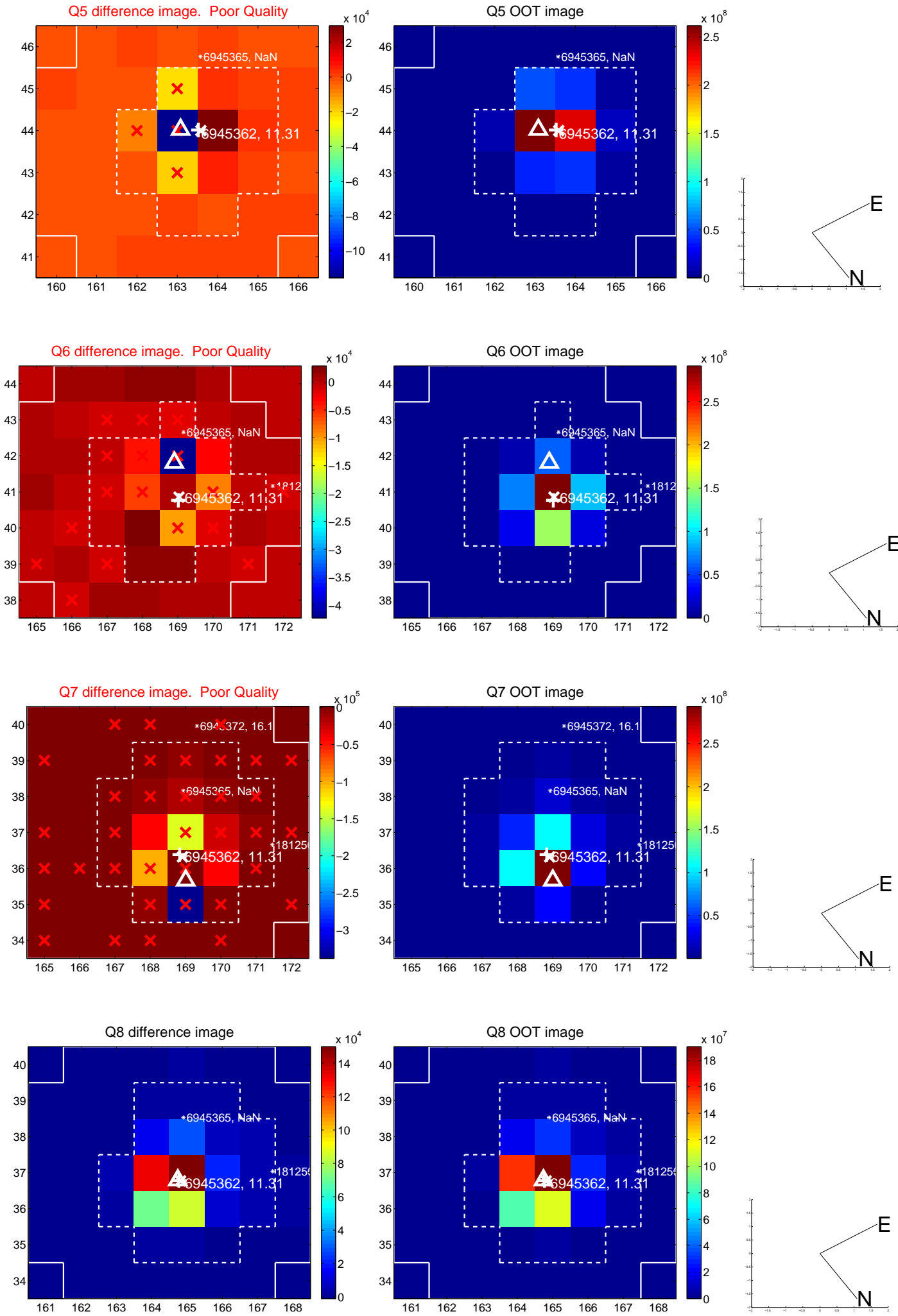


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

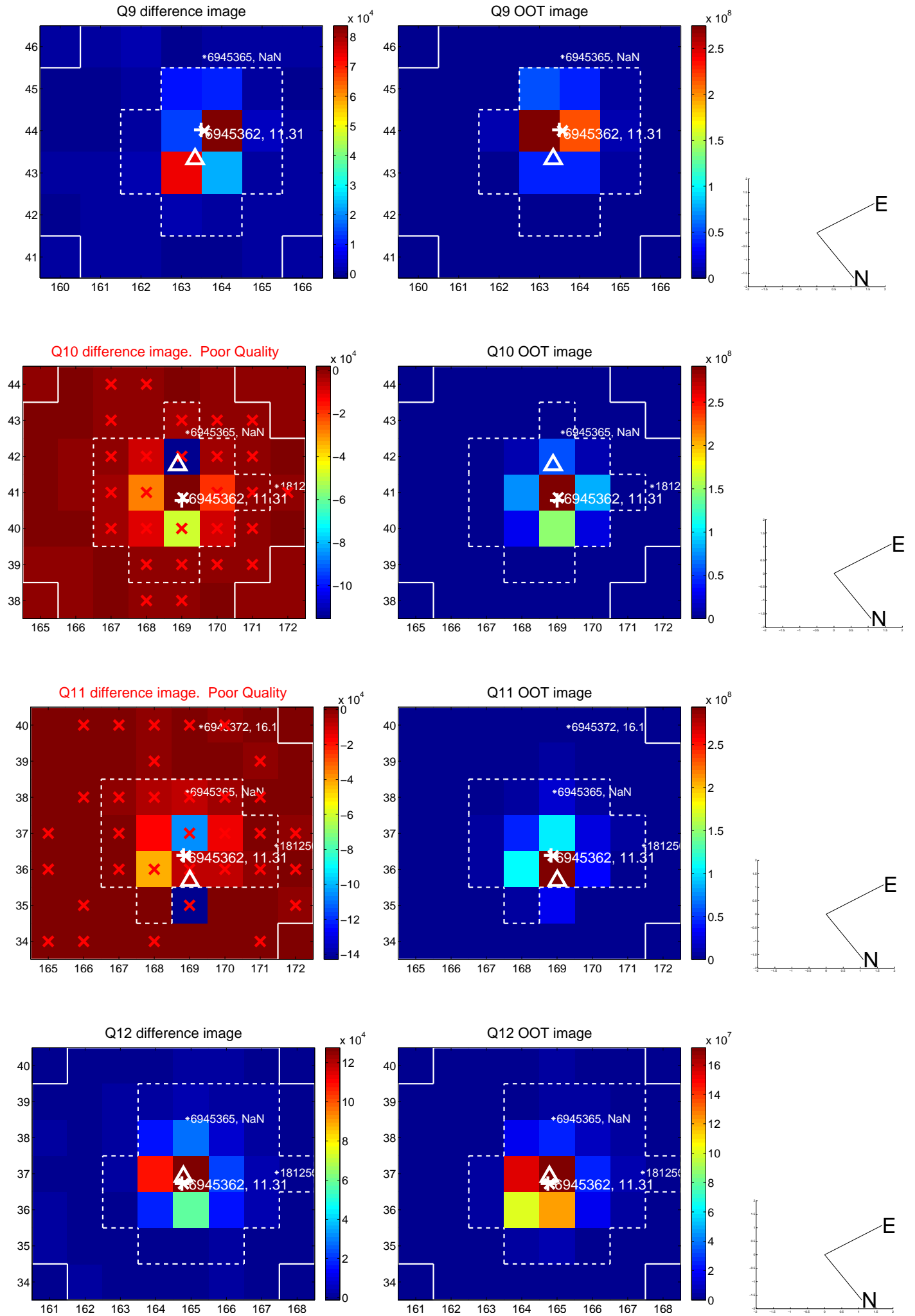
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



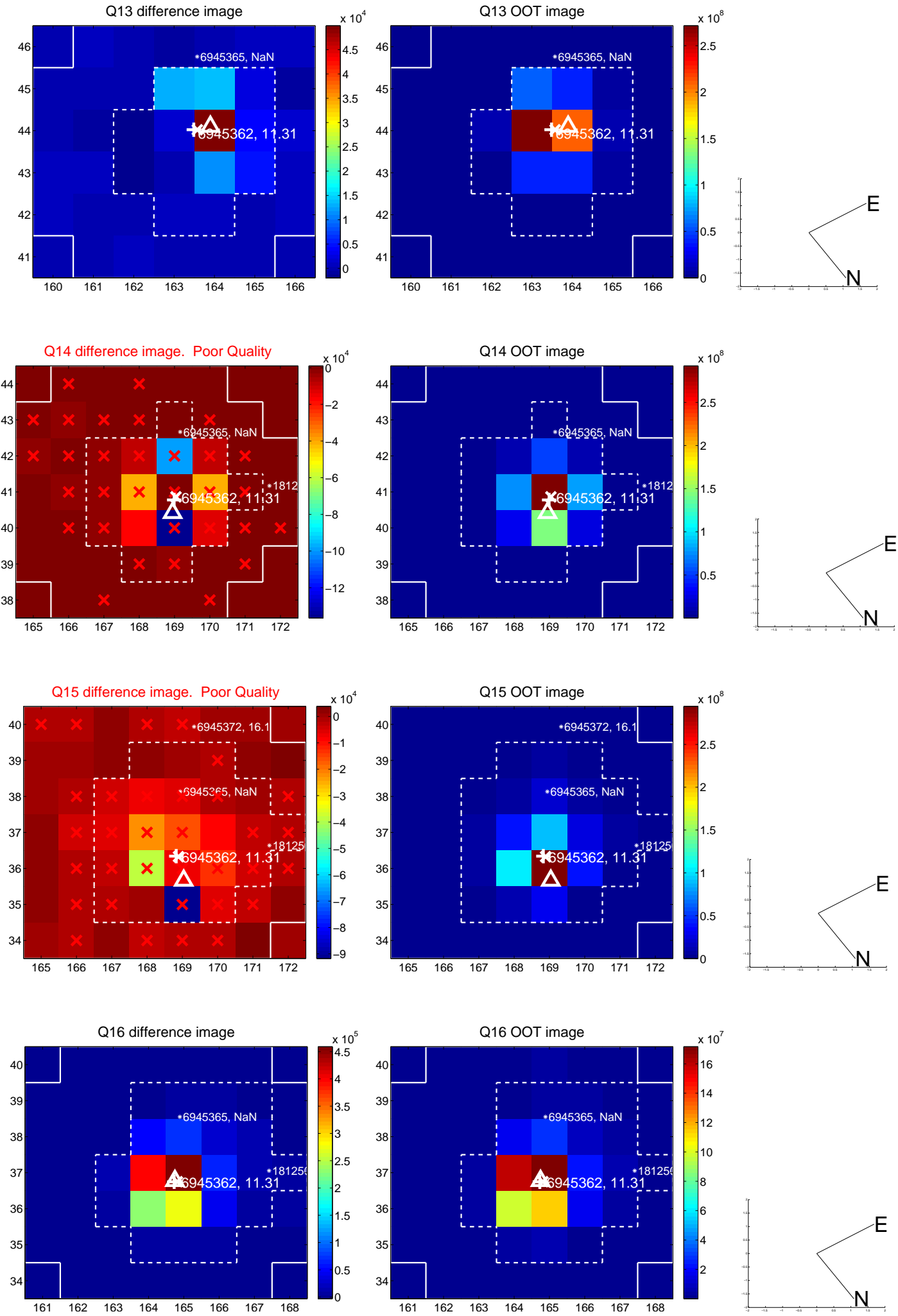
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



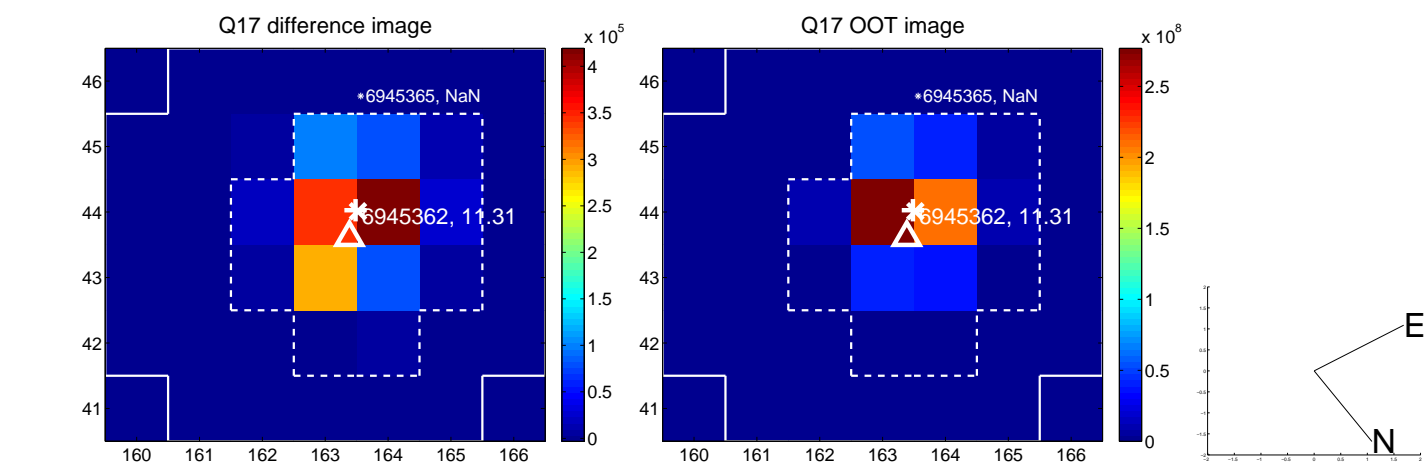
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



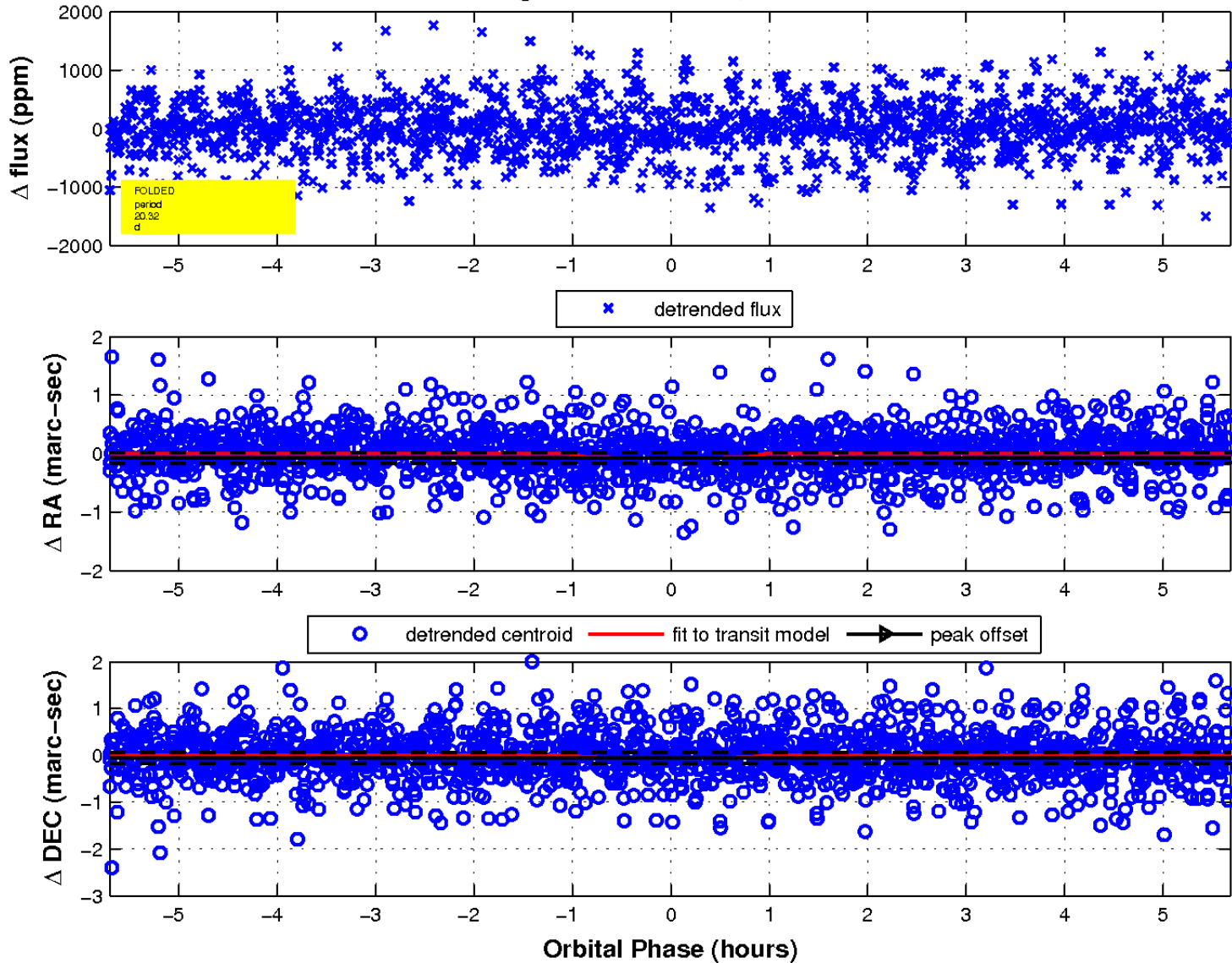
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

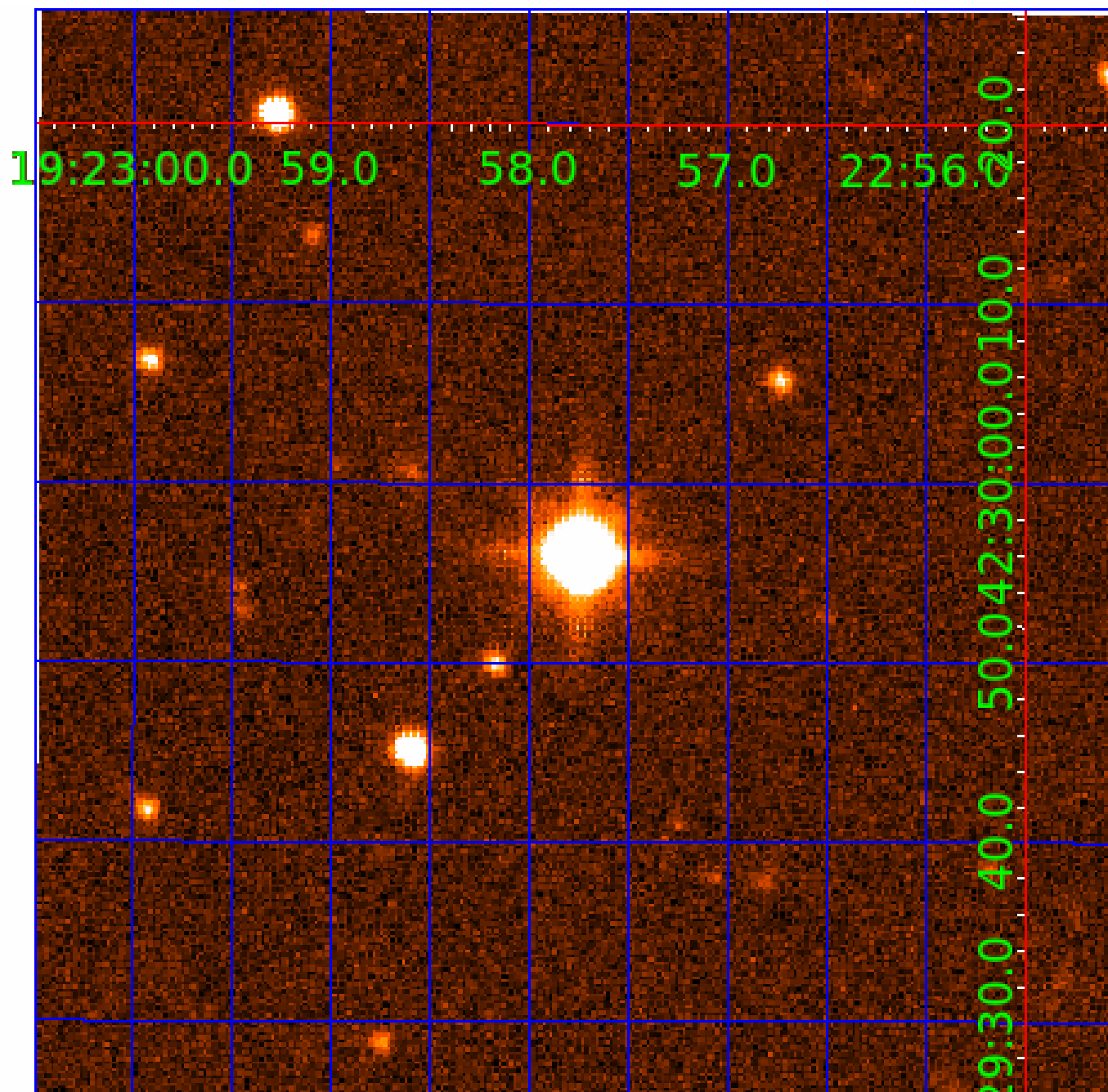


fluxWeightedCentroids, Planet 3 of 8



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

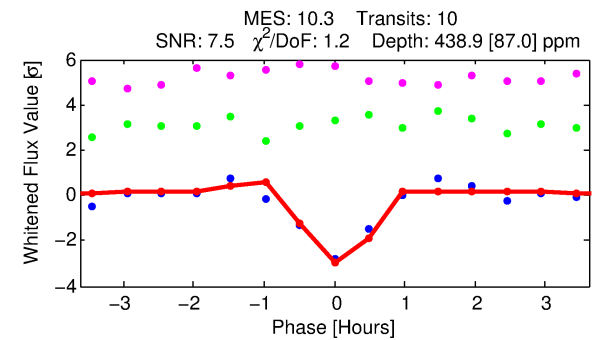
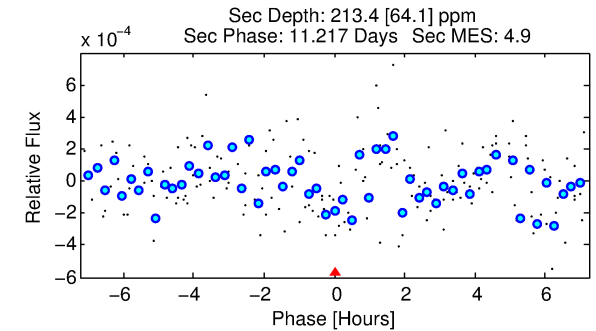
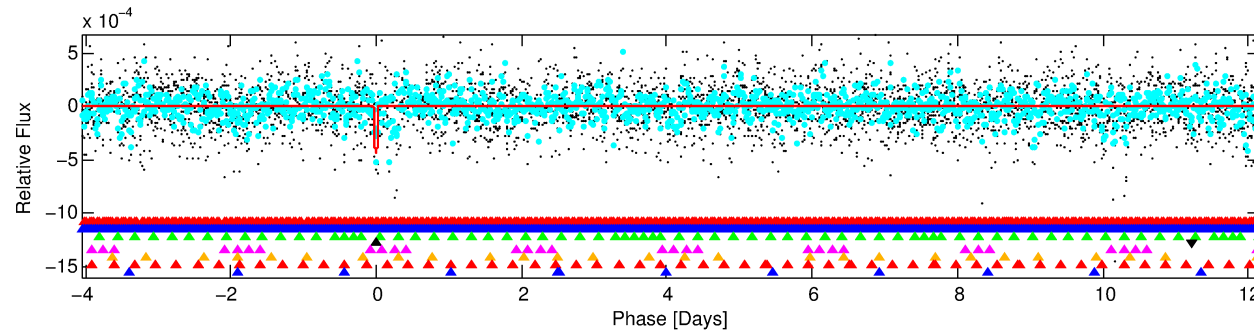
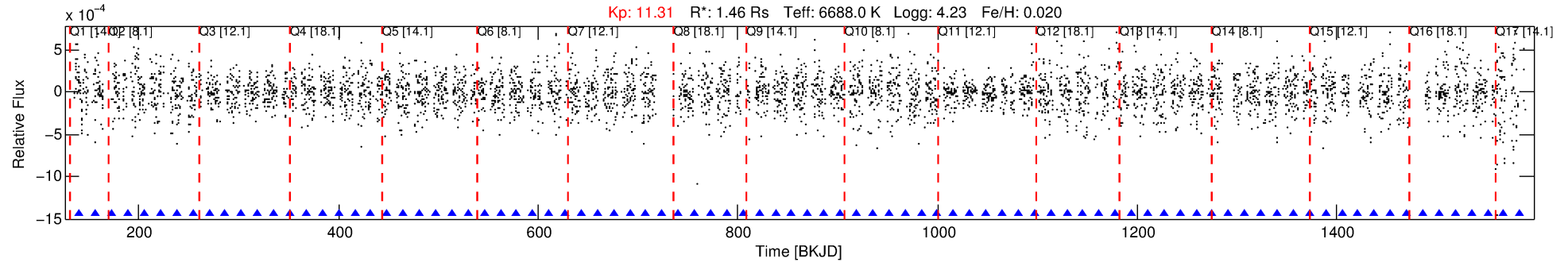
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-04

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 4 of 8 Period: 16.208 d

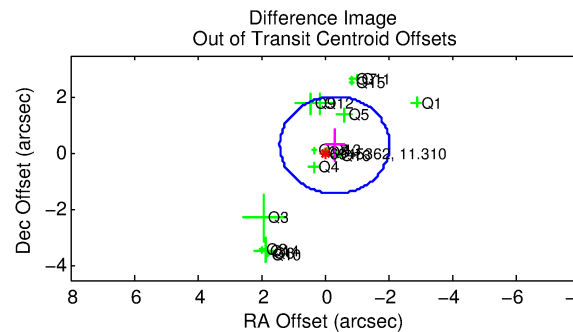
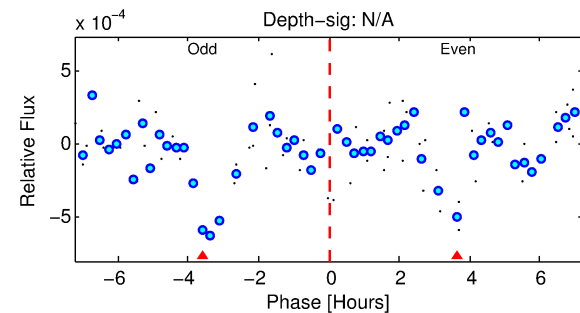
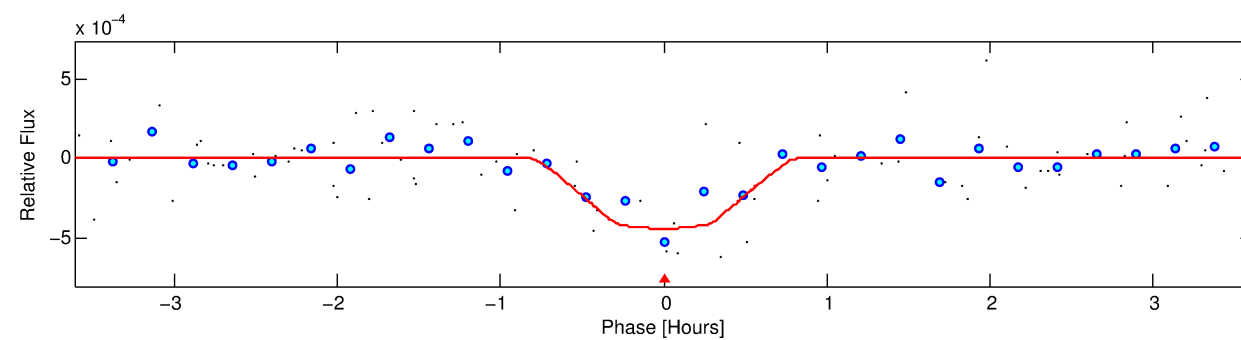


DV Fit Results:

Period = 16.20753 [0.00016] d
Epoch = 140.8650 [0.0075] BKJD
Rp/R* = 0.0220 [0.0283]
a/R* = 55.91 [409.71]
b = 0.87 [2.15]
Seff = 201.38 [41.86]
Teq = 961 [50] K
Rp = 3.50 [4.55] Re
a = 0.1377 [0.0193] AU
Ag = 181.39 [471.37] [0.38σ]
Teffp = 5450 [3531] K [1.27σ]

DV Diagnostic Results:

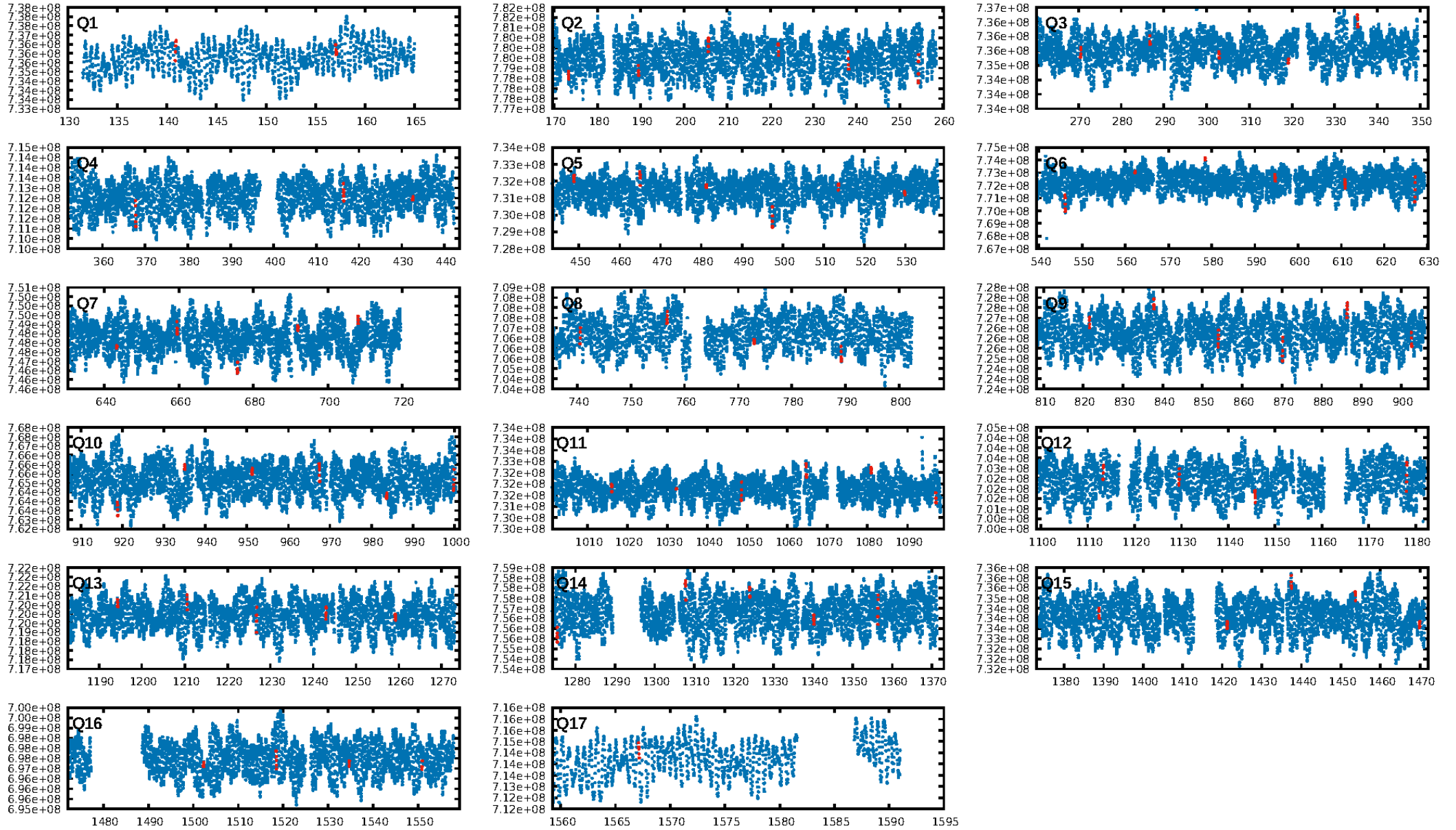
ShortPeriod-sig: 100.0% [158.79σ]
LongPeriod-sig: 100.0% [41.74σ]
ModelChiSquare2-sig: 52.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.118
Centroid-sig: 27.2%
Centroid-so: 0.096 arcsec [0.59σ]
OotOffset-rm: 0.438 arcsec [0.76σ]
KicOffset-rm: 0.517 arcsec [1.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 0.35 [6/17]



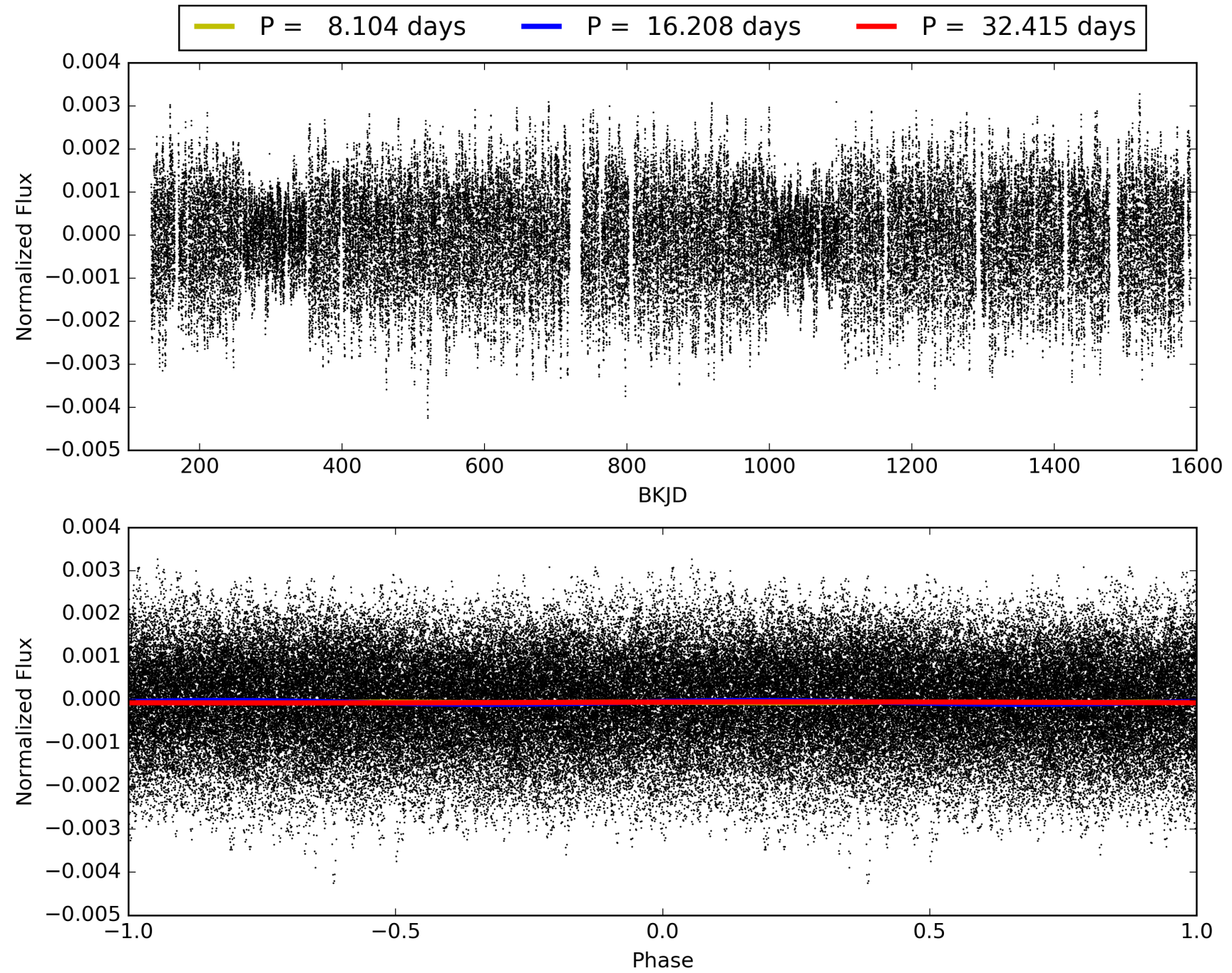
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:37 Z

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

TCE 006945362-04, PDC Light Curves

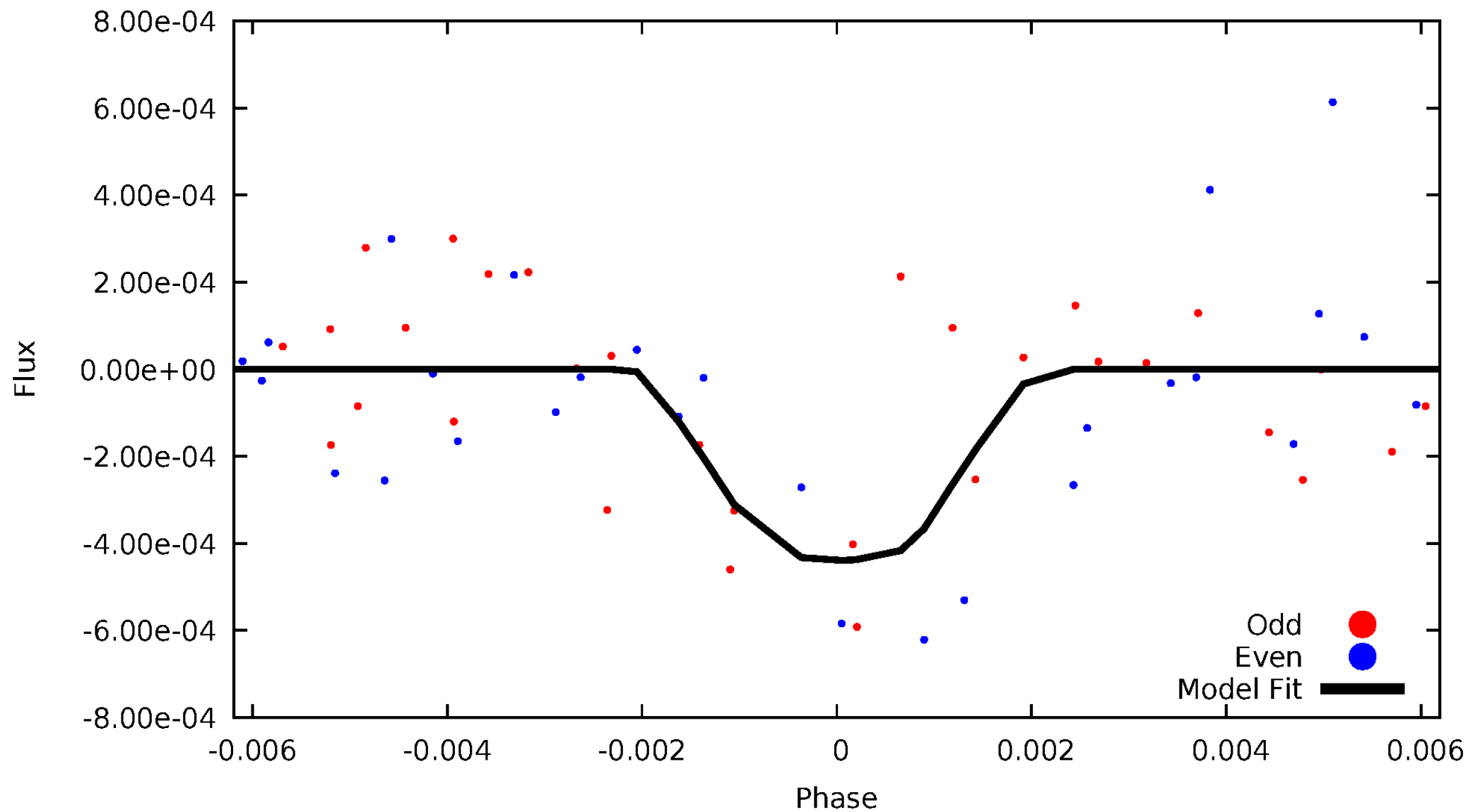


TCE 006945362-04



DV Odd/Even

TCE 006945362-04

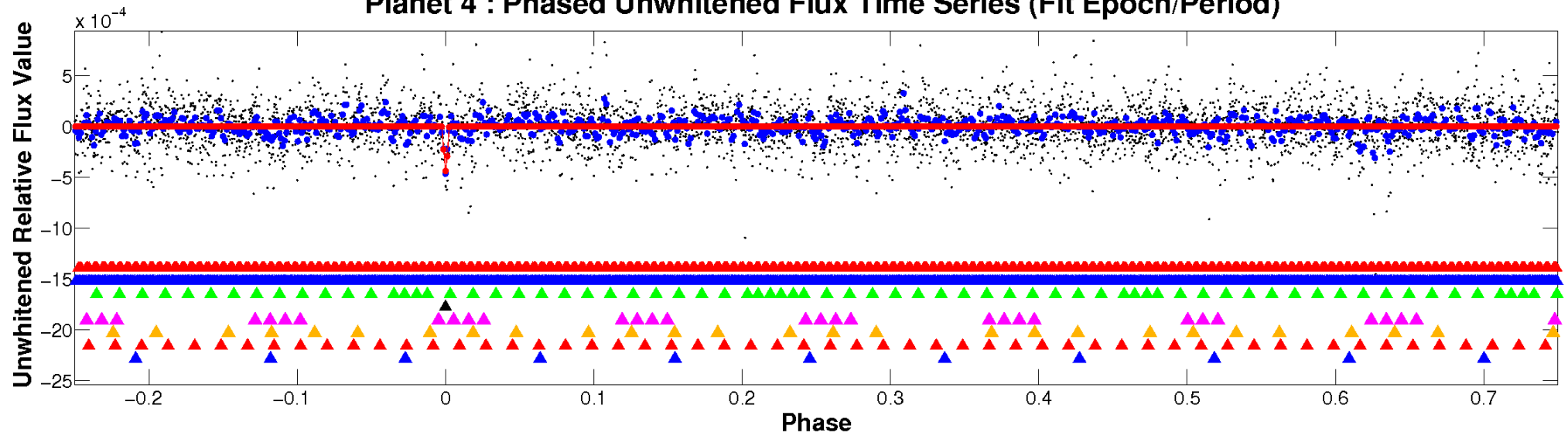


ALT Odd/Even

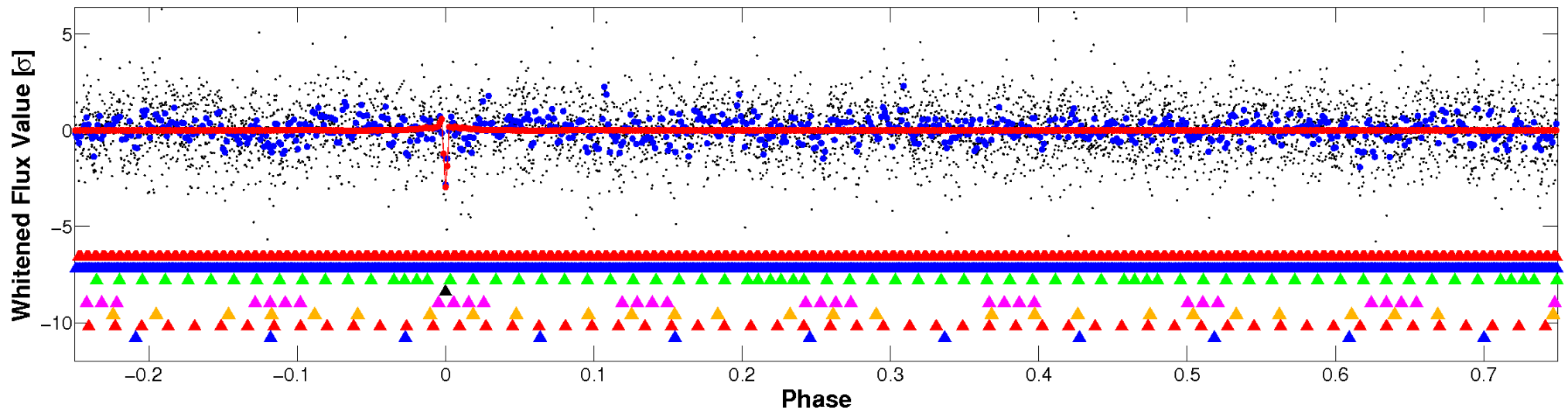
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

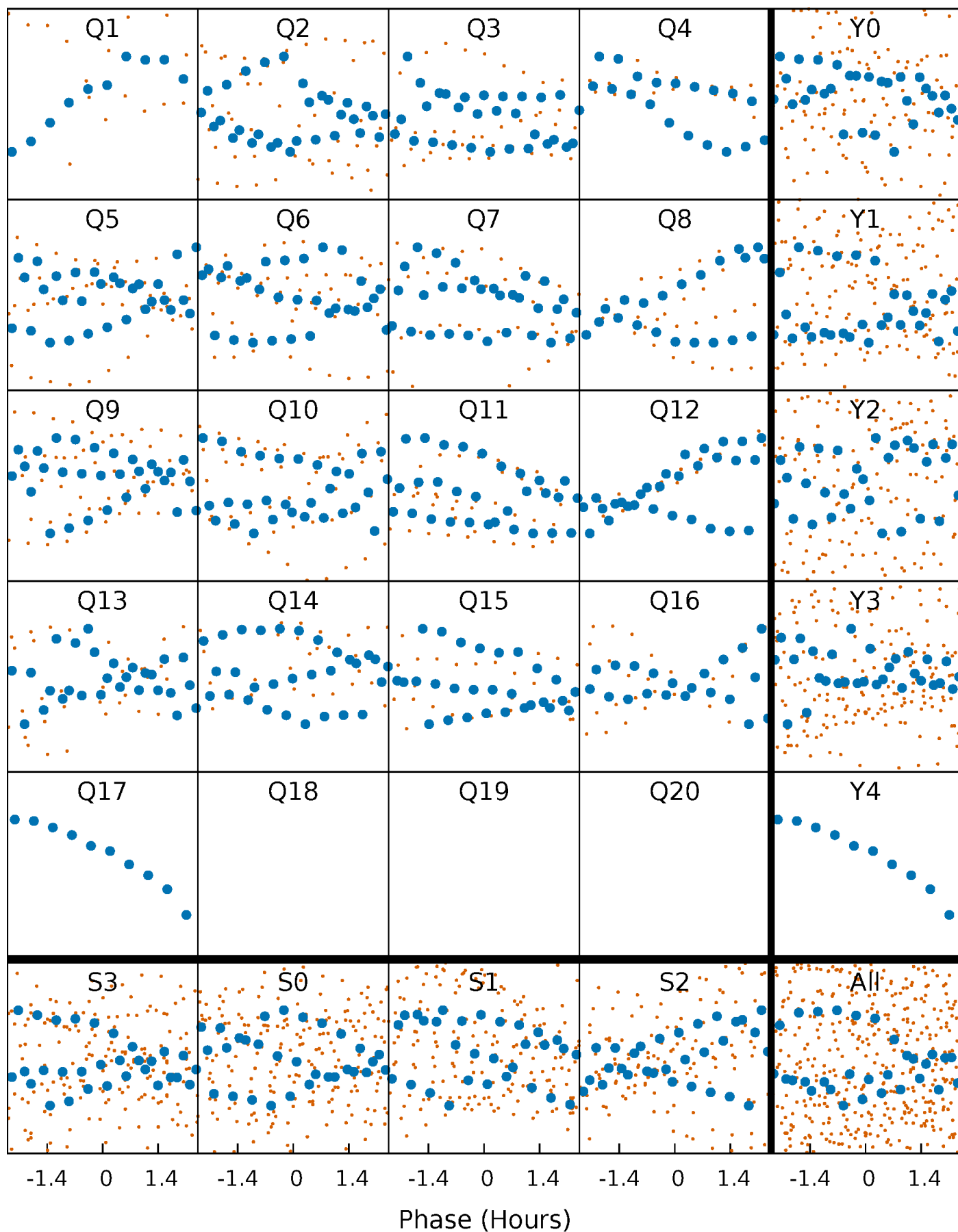


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



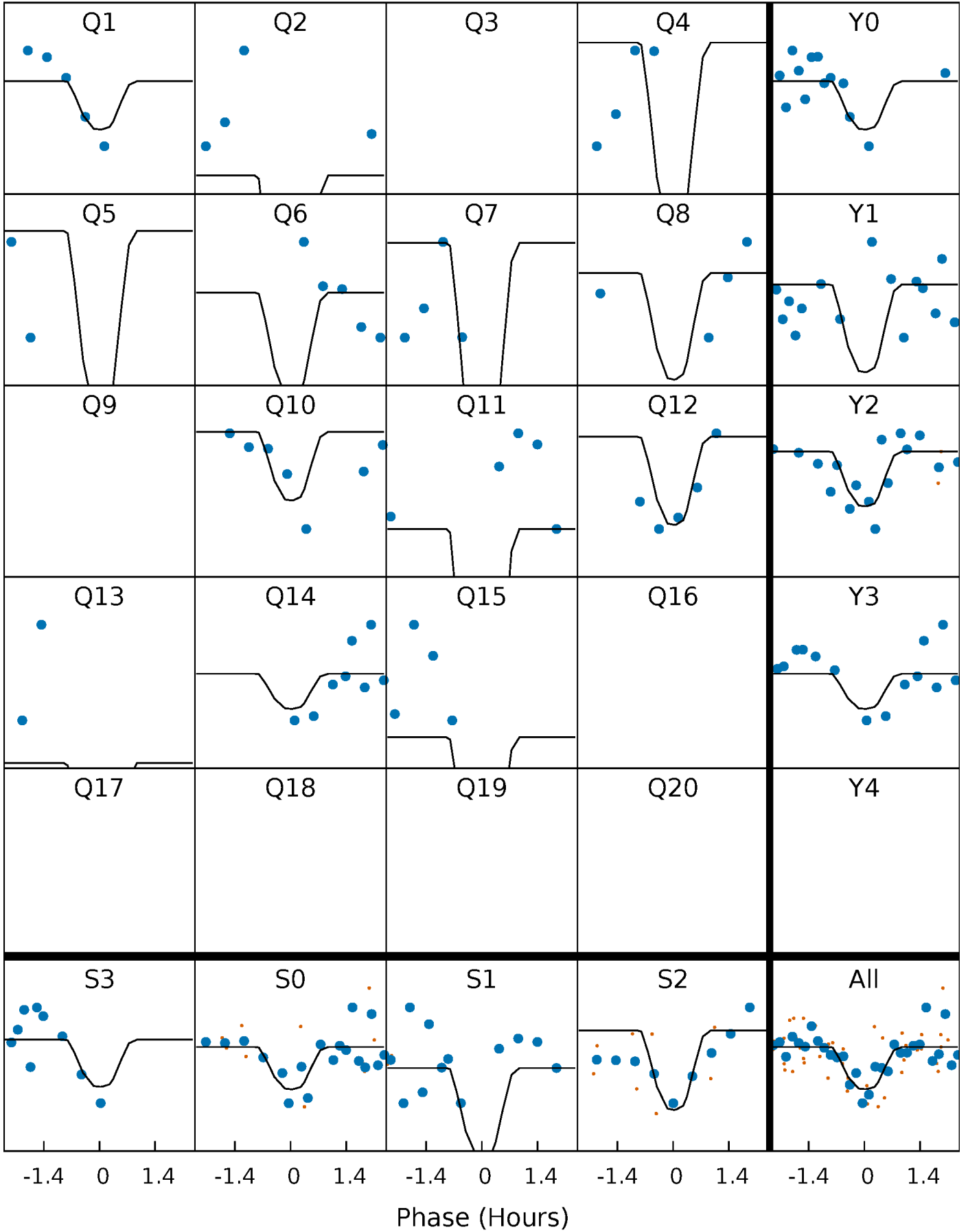
PDC Quarter-Phased Transit Curves

TCE 006945362-04 P= 16.207530 Days $T_0=140.865000$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006945362-04 P= 16.207530 Days $T_0=140.865000$ (BKJD)

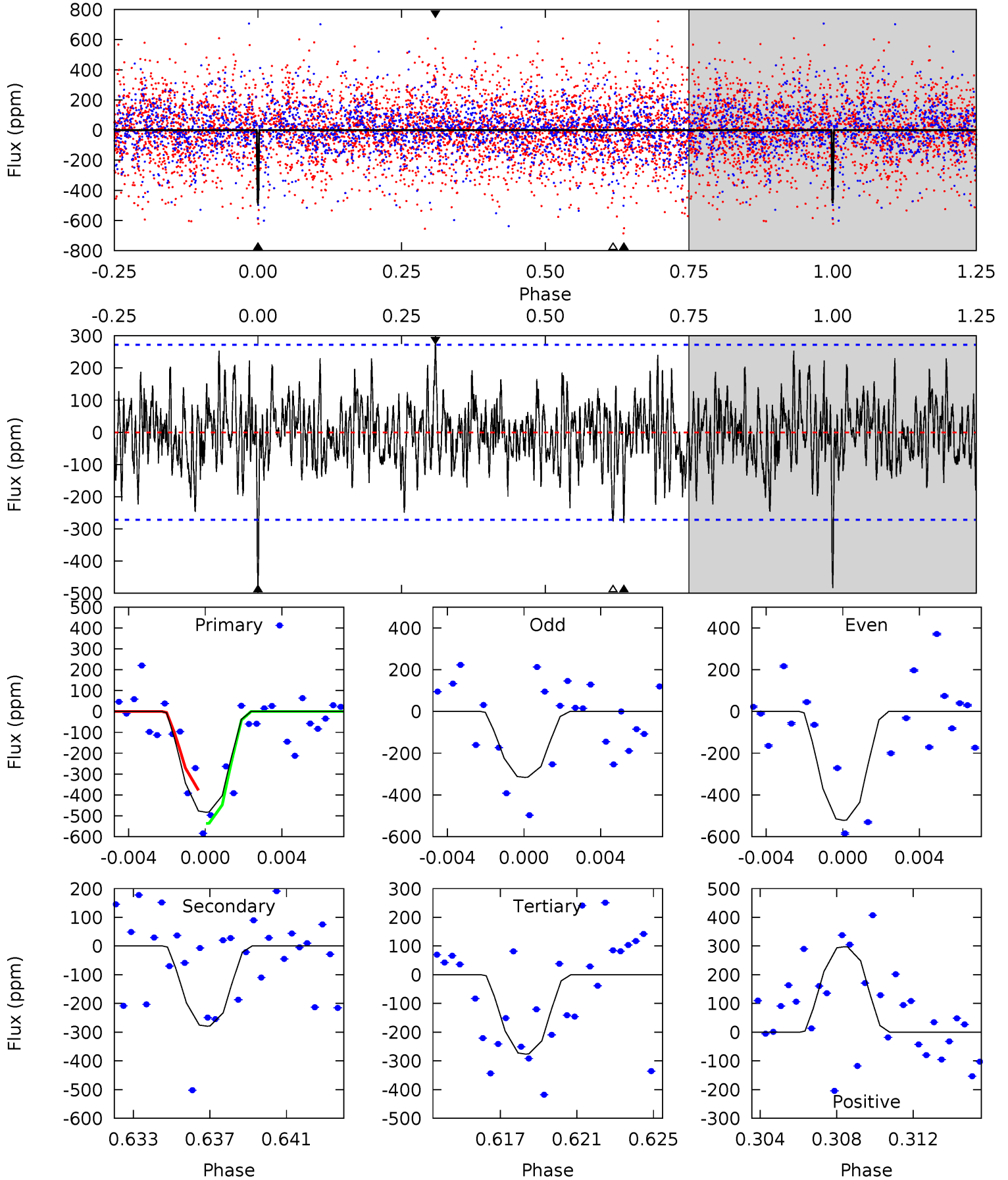


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006945362-04, P = 16.207530 Days, E = 124.657470 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.23	5.34	5.28	5.69	5.20	2.87	1.59	3.95	3.54	0.05	-0.36	1.95	0.78	0.38	1.48



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-279 ± 52	$4.87^{+4.05}_{-3.18}$	1342^{+53}_{-37}	5008^{+3858}_{-1039}	121^{+903}_{-84}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

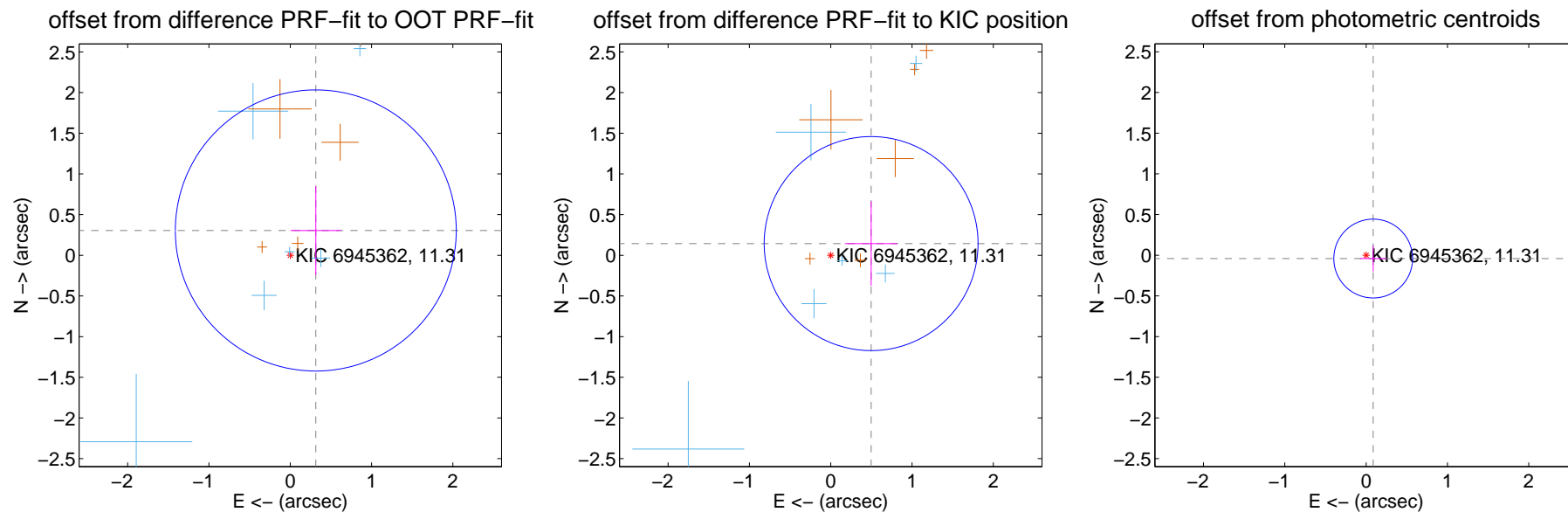
DV Centroid Data

Supplemental centroid analysis for 006945362-04. **Kepler magnitude: 11.31.** Transit SNR 7.50

There are 7 quarters with good PRF difference image offsets

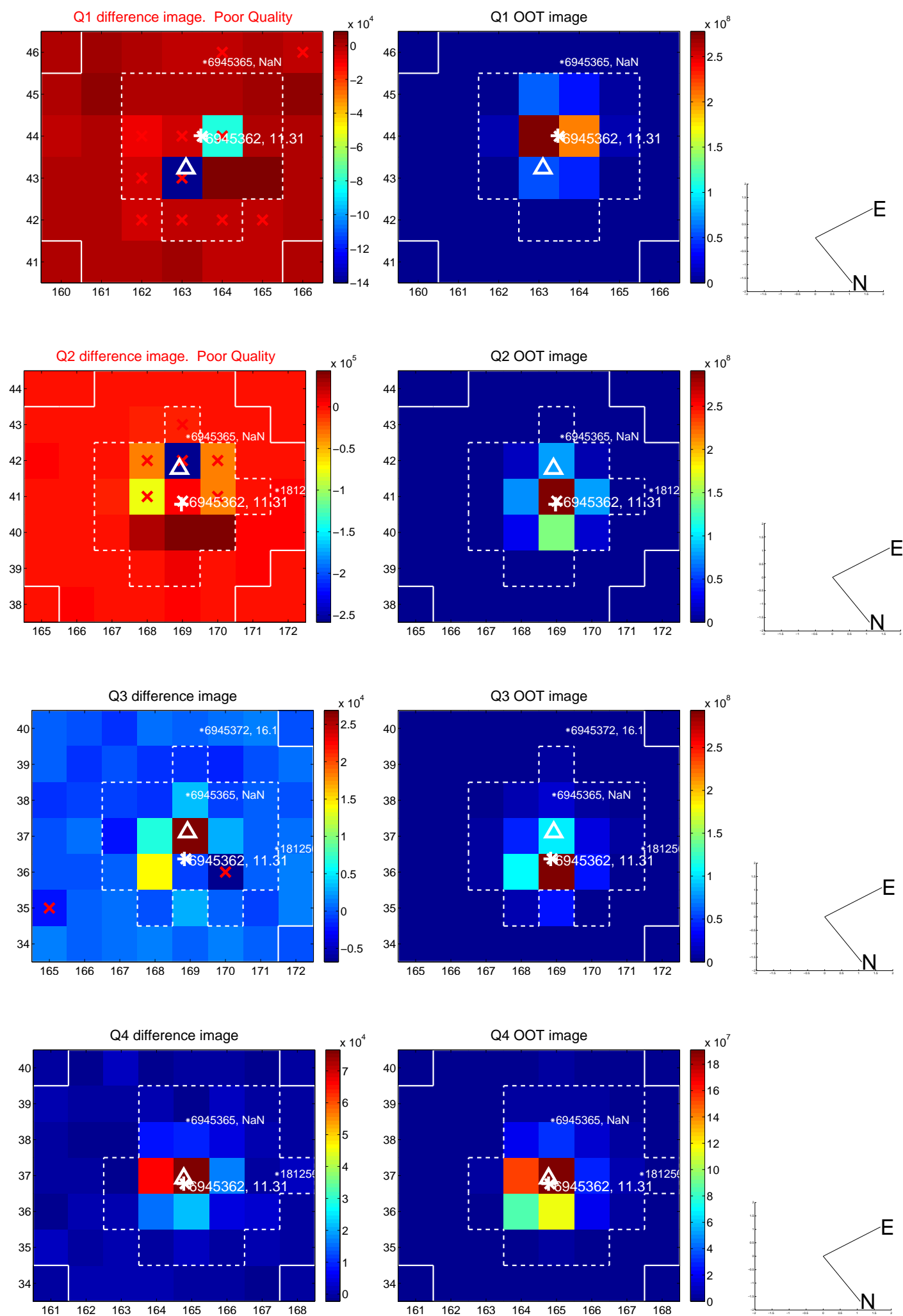
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.438 ± 0.576	0.76	-0.314 ± 0.311	0.305 ± 0.547
PRF-fit source offset from KIC position	0.517 ± 0.439	1.18	-0.497 ± 0.324	0.144 ± 0.519
photometric centroid source offset	0.10 ± 0.16	0.59	-0.09 ± 0.16	-0.04 ± 0.16

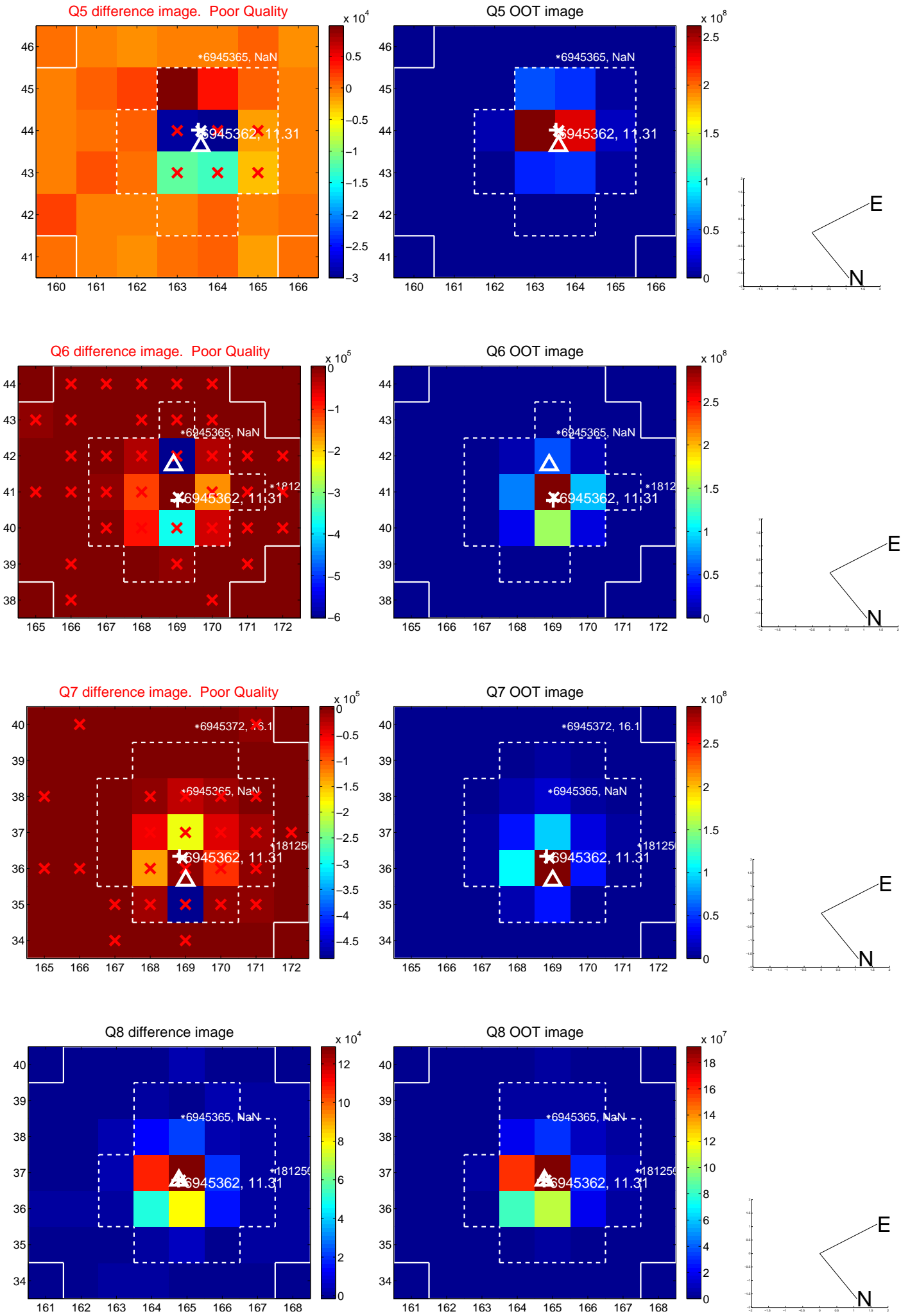


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

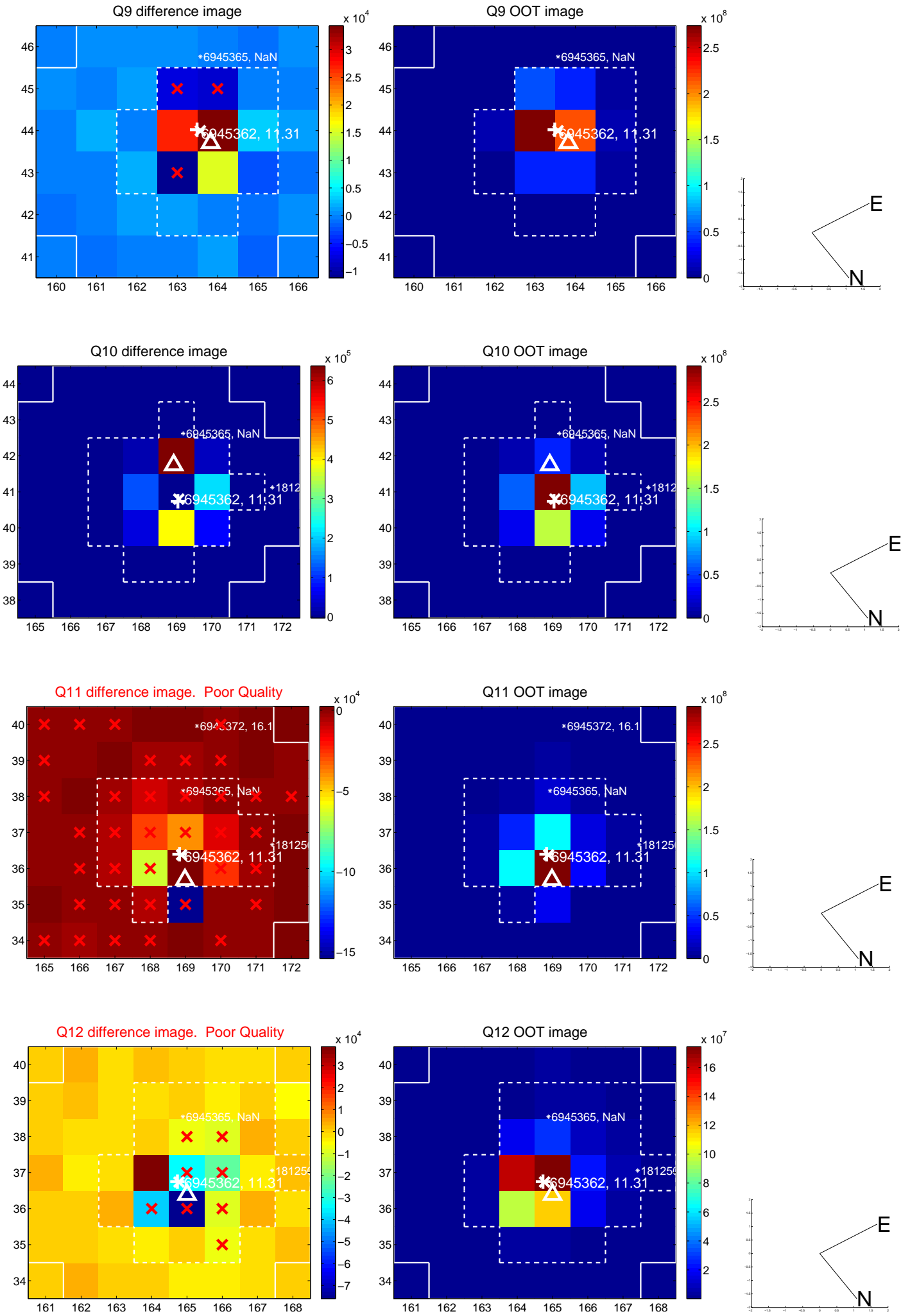
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



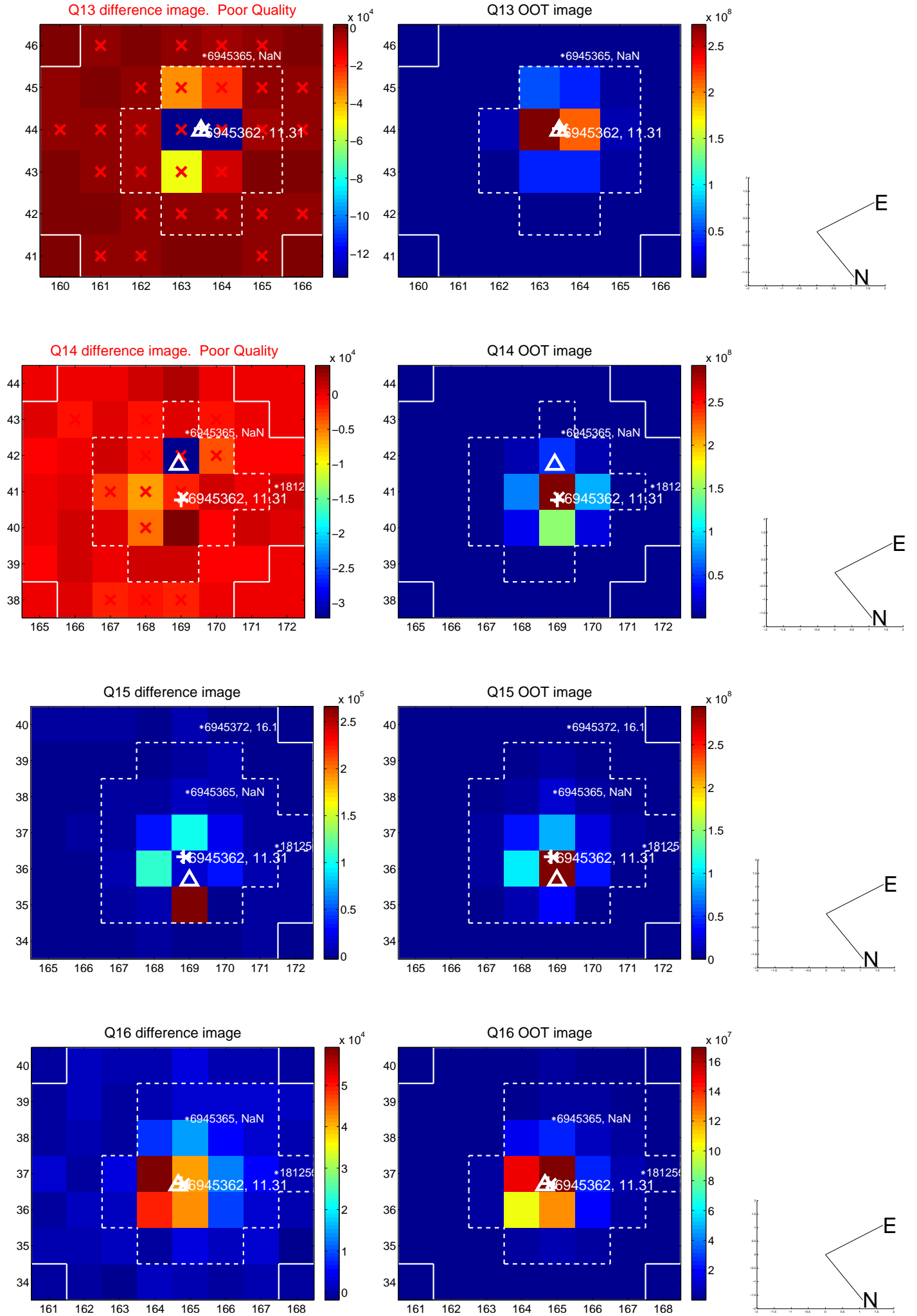
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



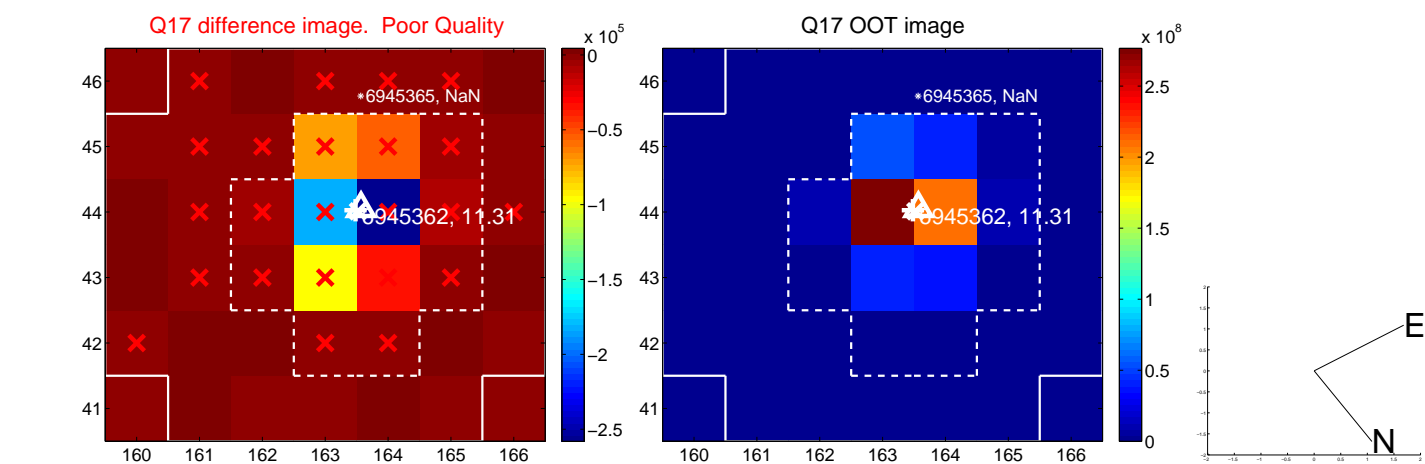
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



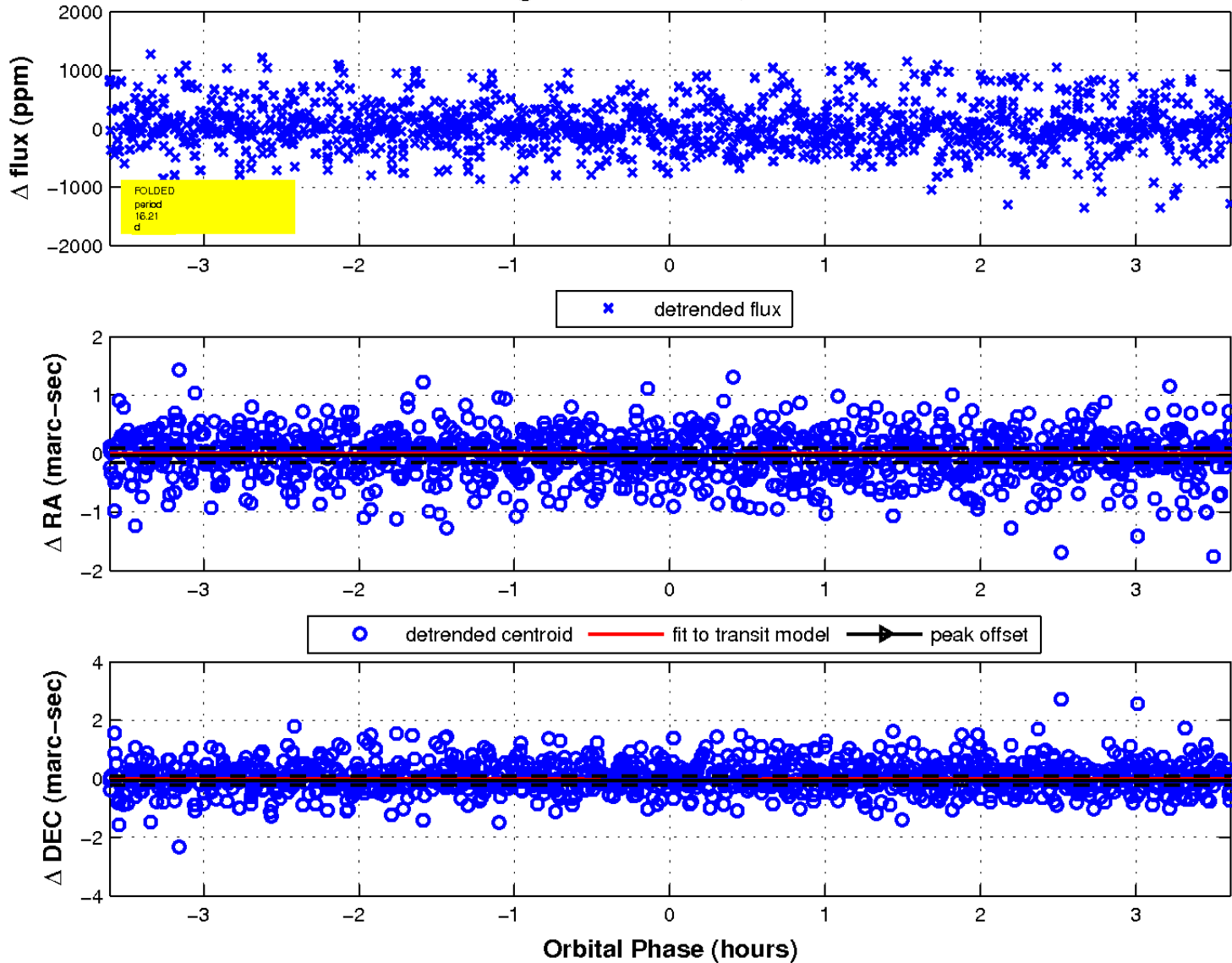
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

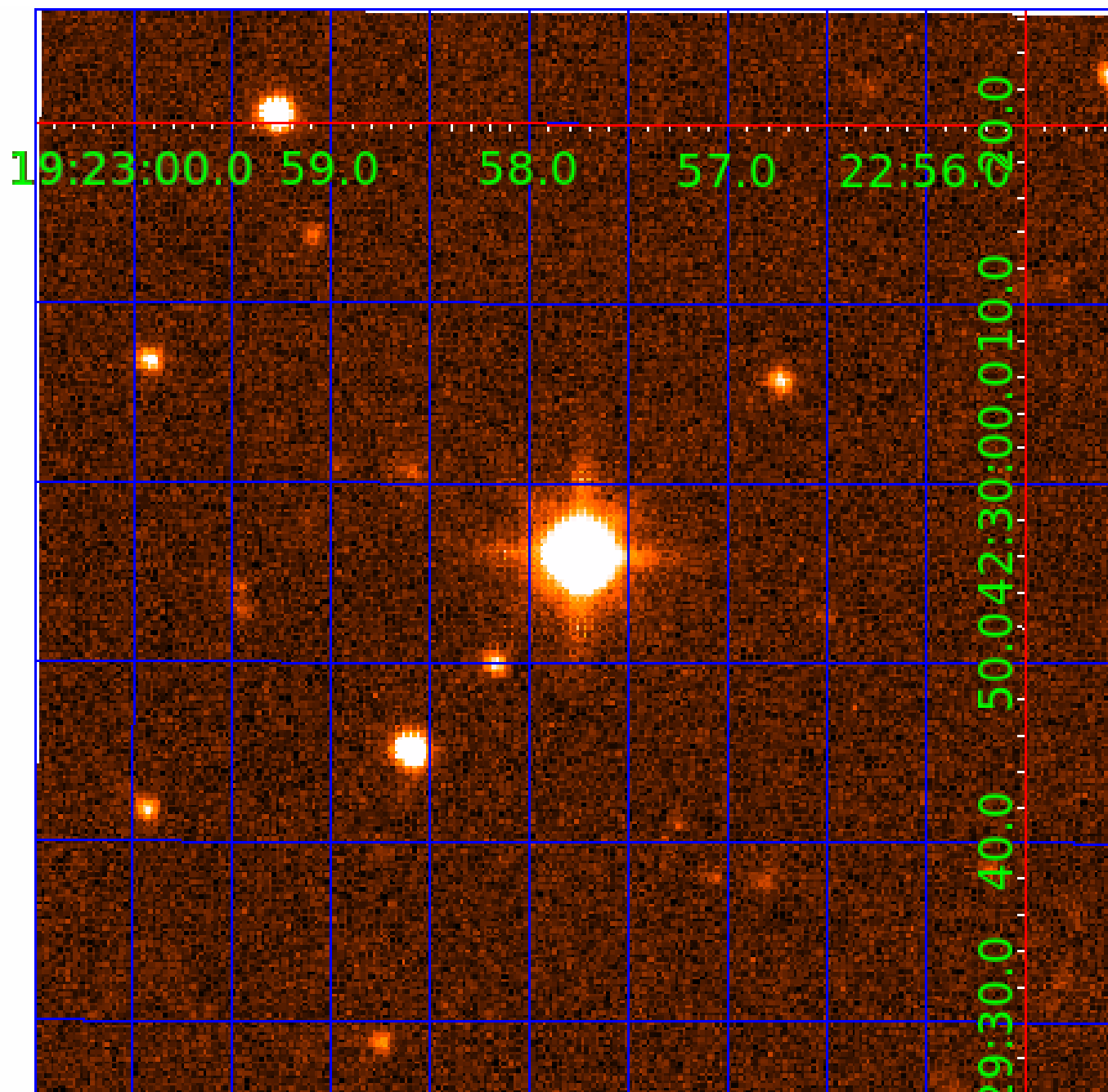


fluxWeightedCentroids, Planet 4 of 8



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

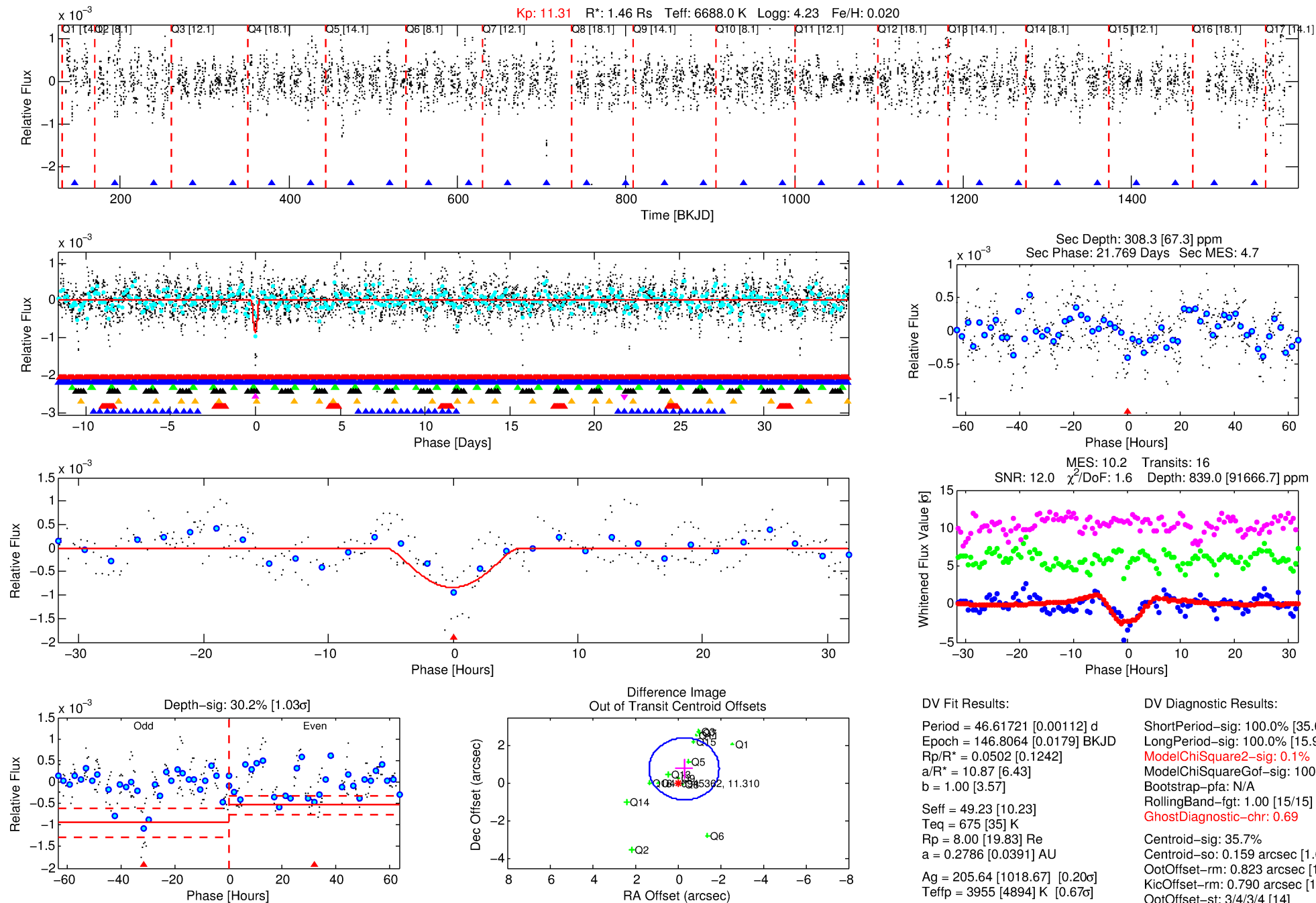
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-05

No Significant Match Found

DV One-Page Summary

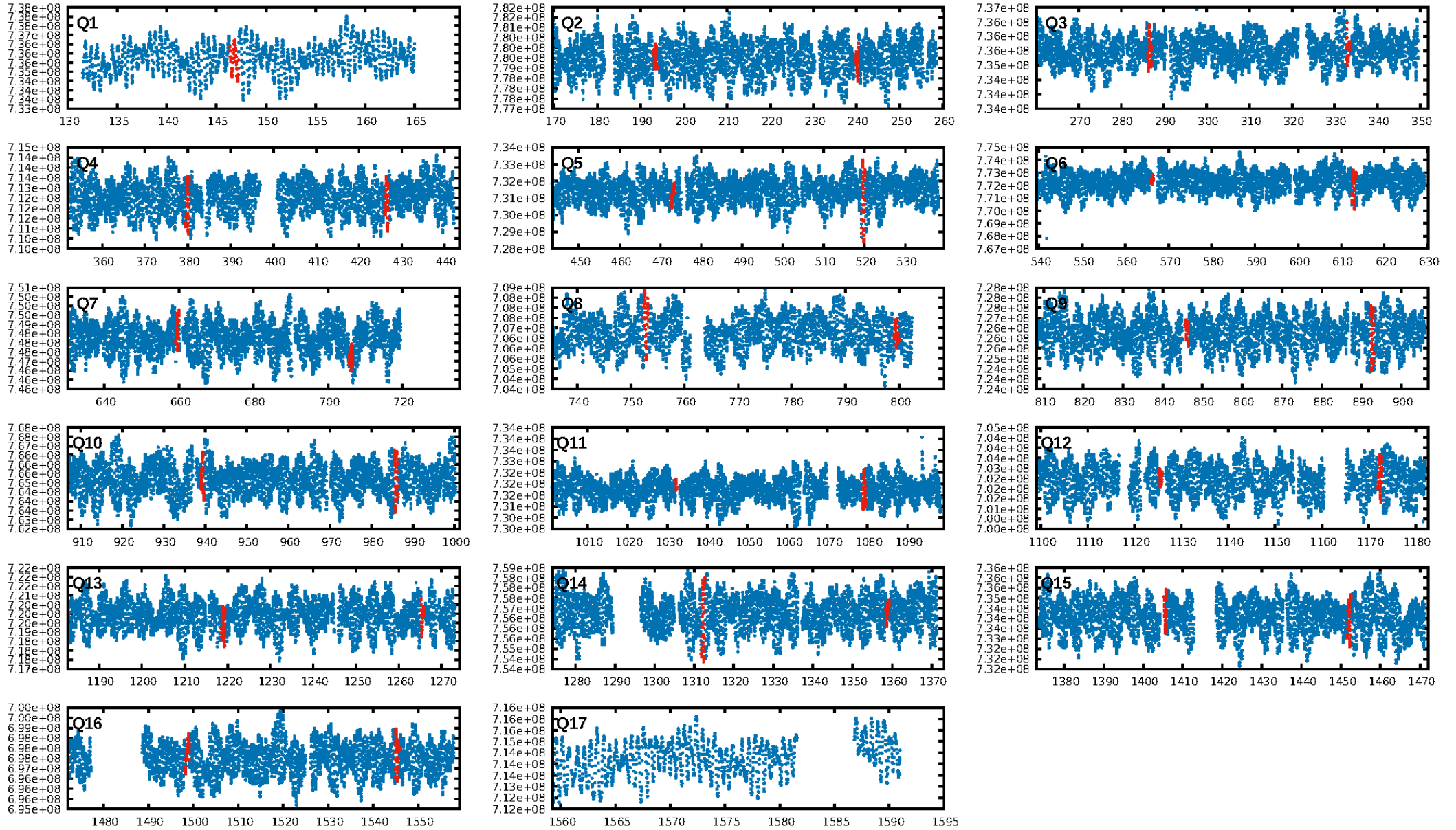
KIC: 6945362 Candidate: 5 of 8 Period: 46.617 d



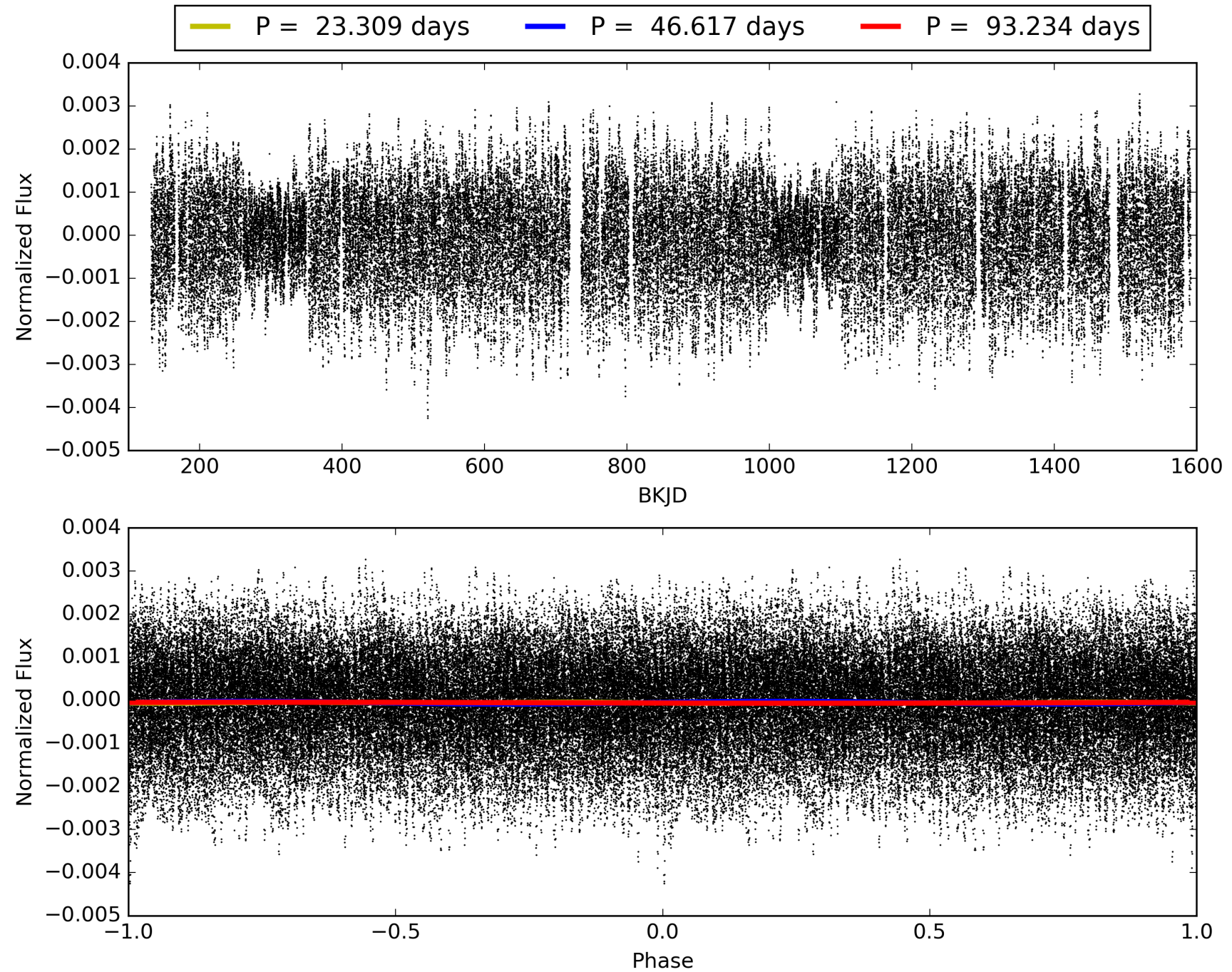
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:41 Z

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

TCE 006945362-05, PDC Light Curves

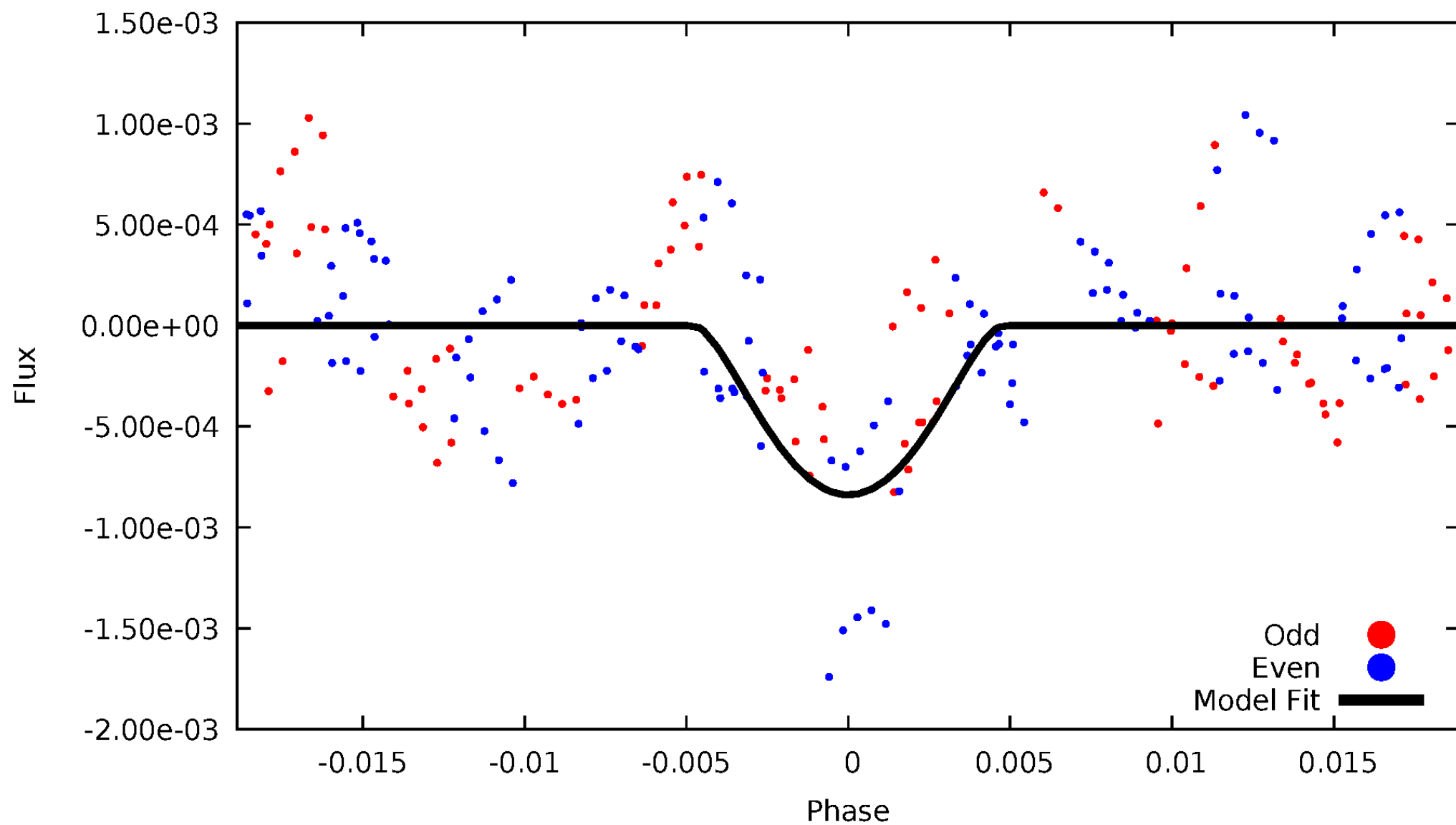


TCE 006945362-05



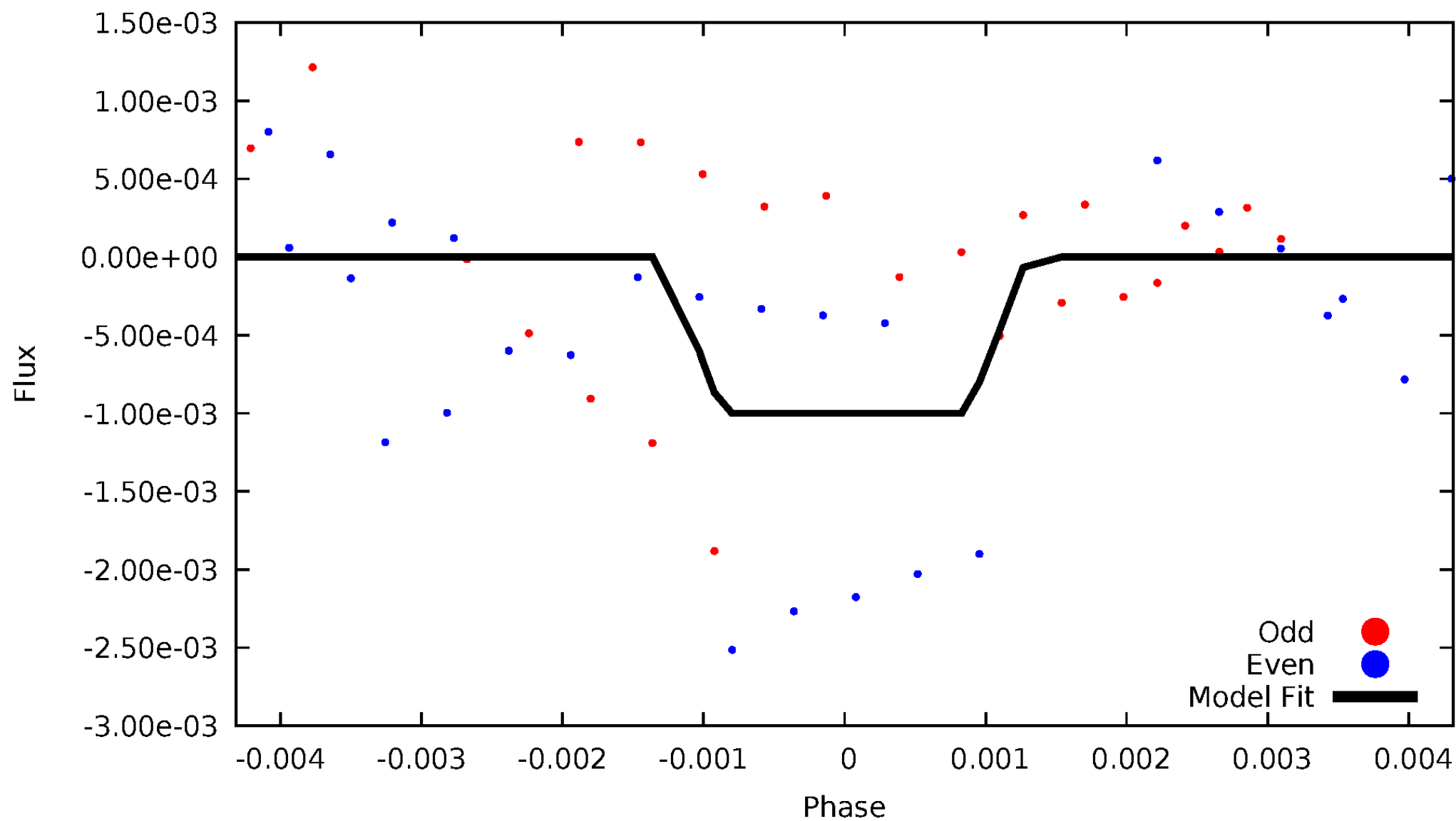
DV Odd/Even

TCE 006945362-05



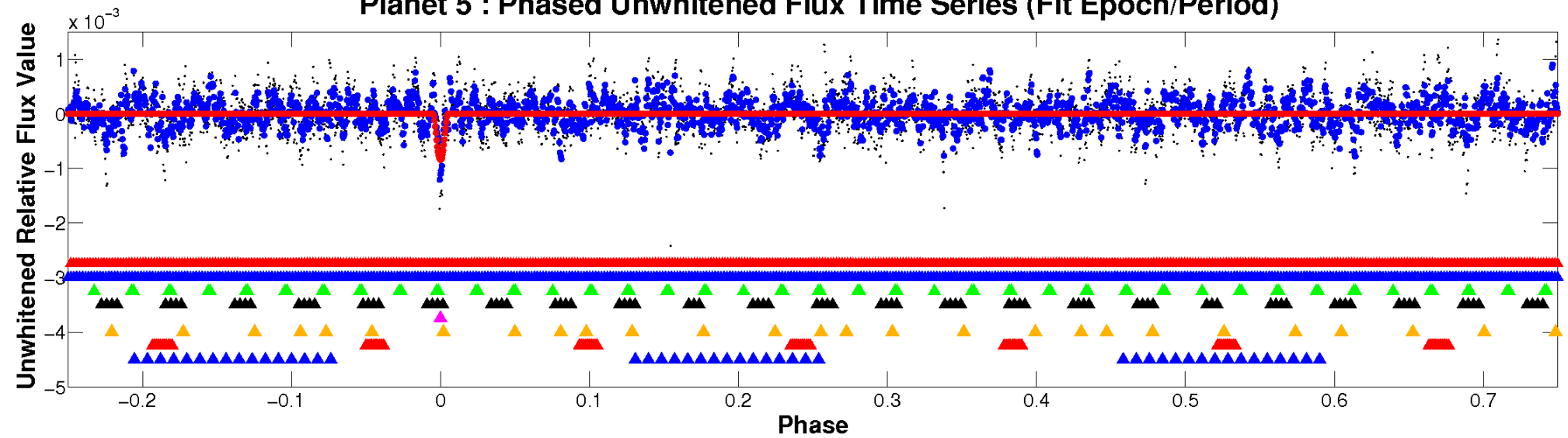
ALT Odd/Even

TCE 006945362-05

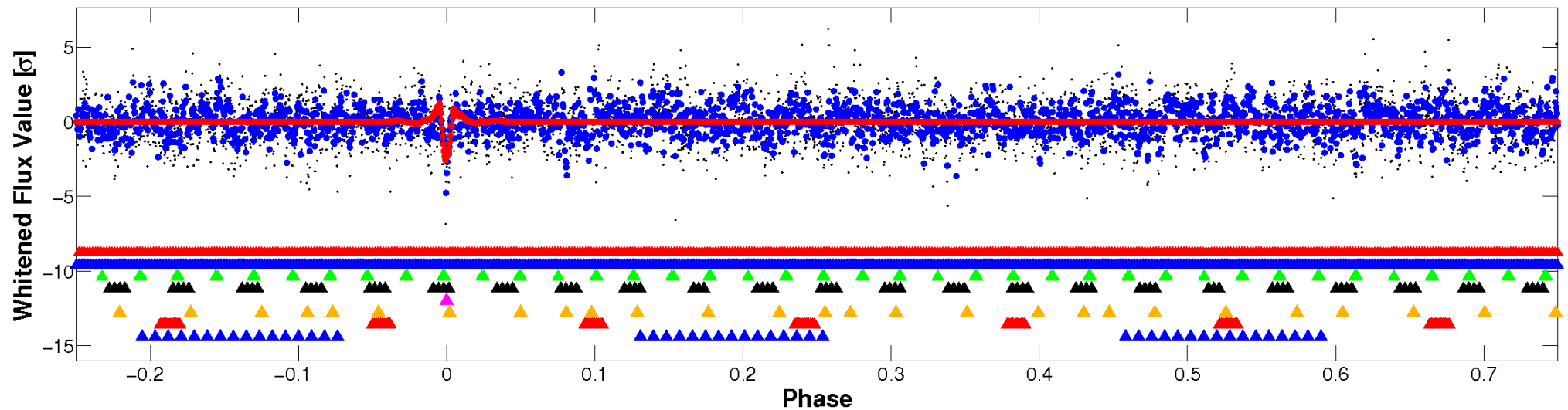


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

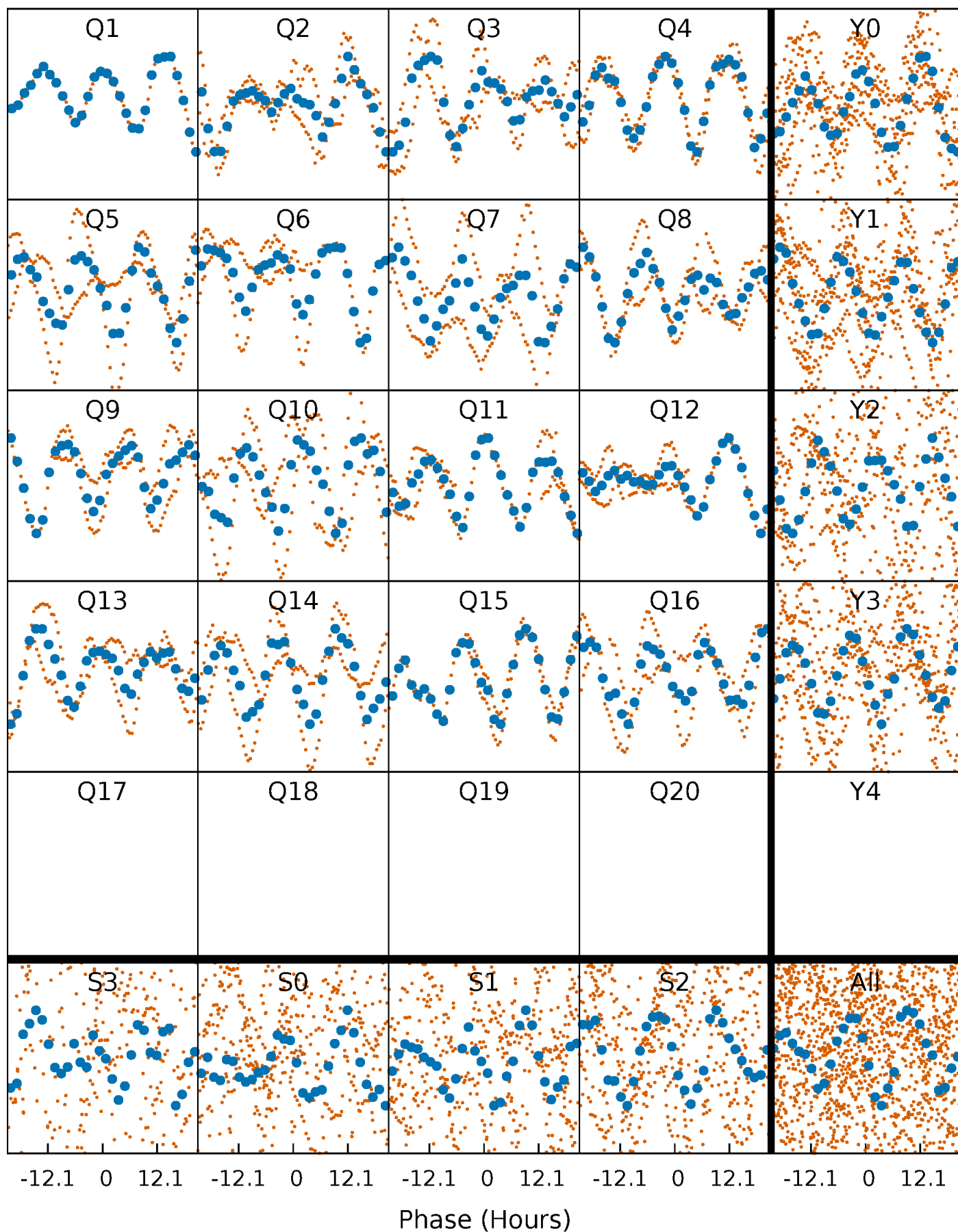


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



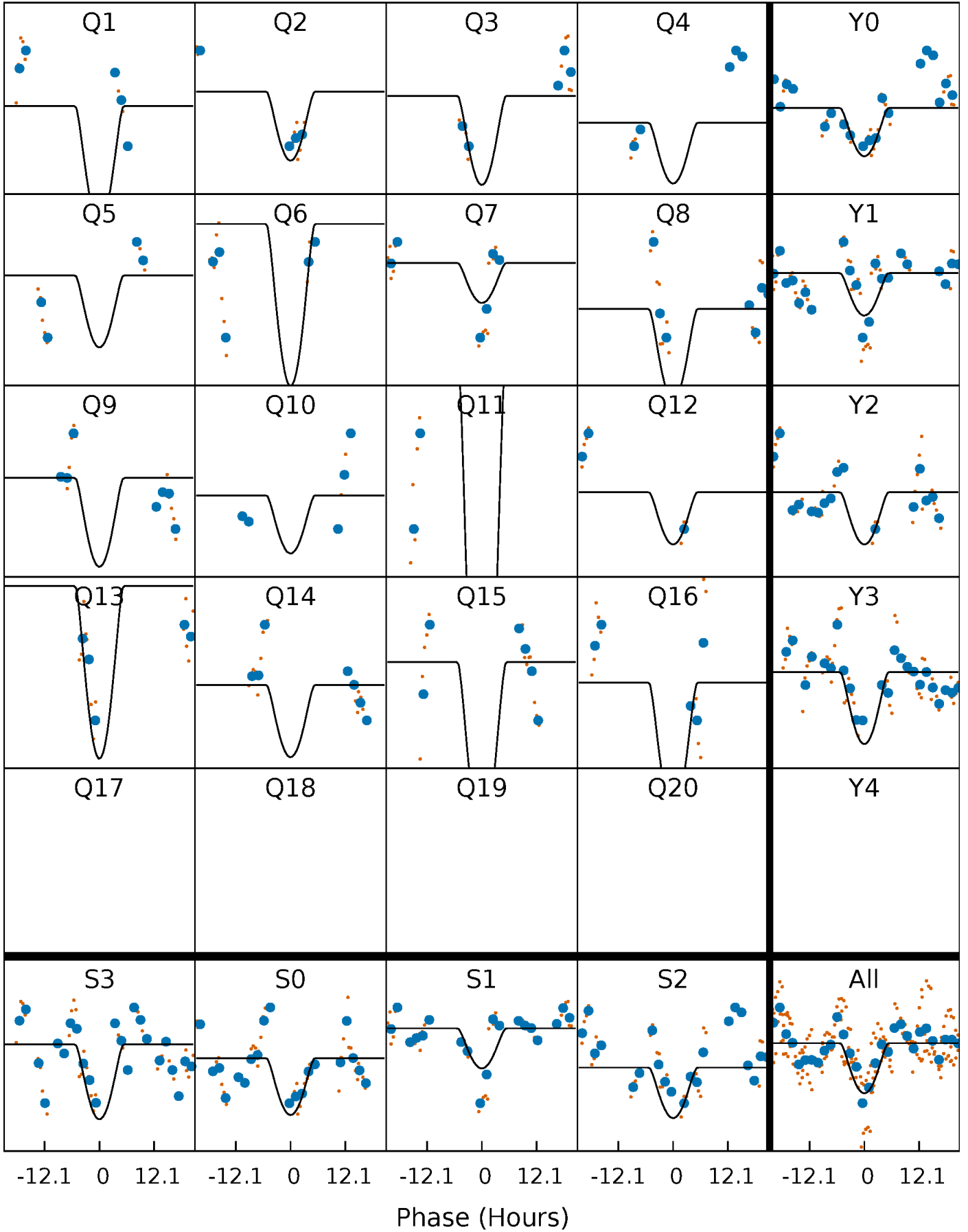
PDC Quarter-Phased Transit Curves

TCE 006945362-05 $P = 46.617212$ Days $T_0 = 146.806365$ (BKJD)



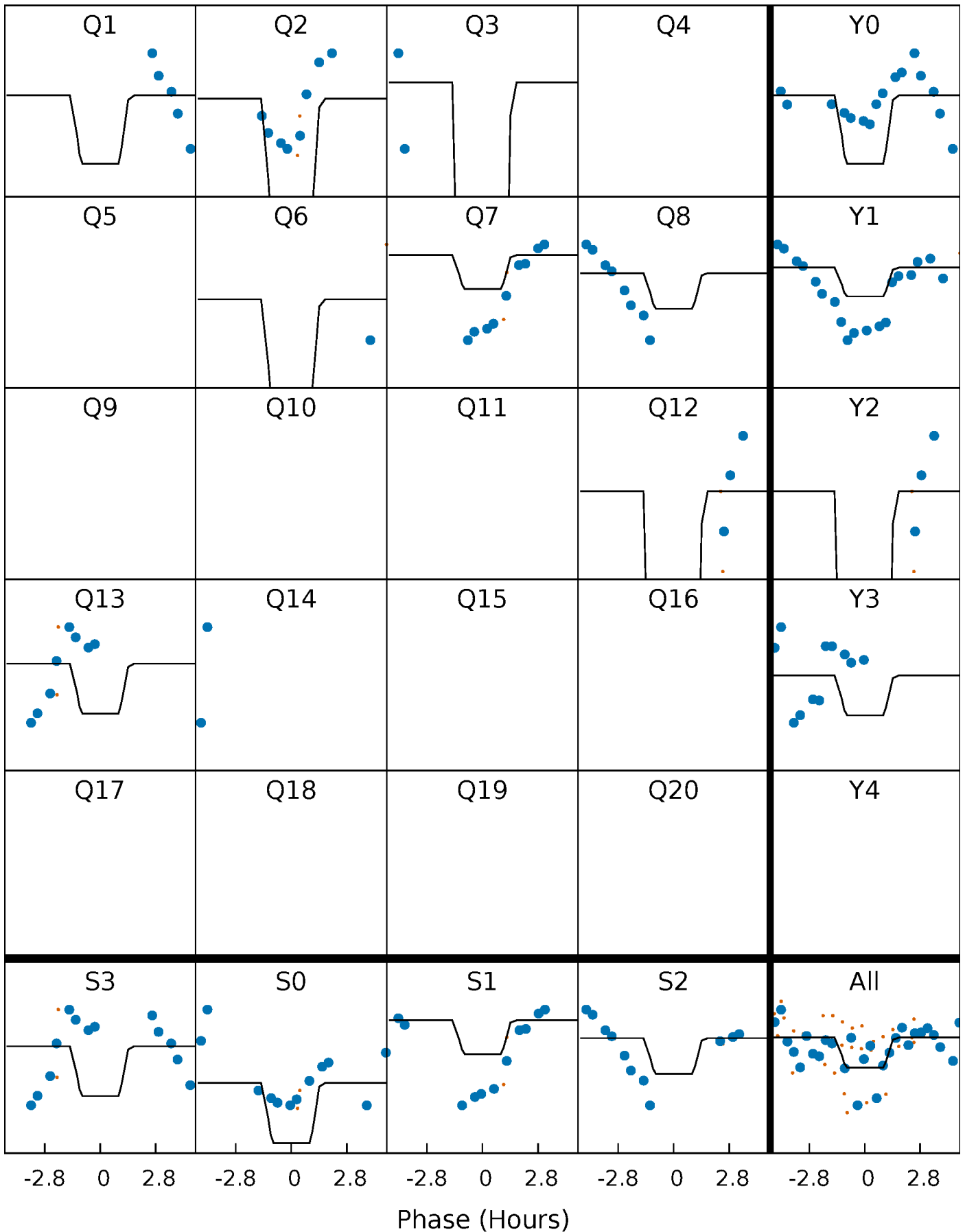
DV Quarter-Phased Transit Curves

TCE 006945362-05 $P = 46.617212$ Days $T_0 = 146.806365$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

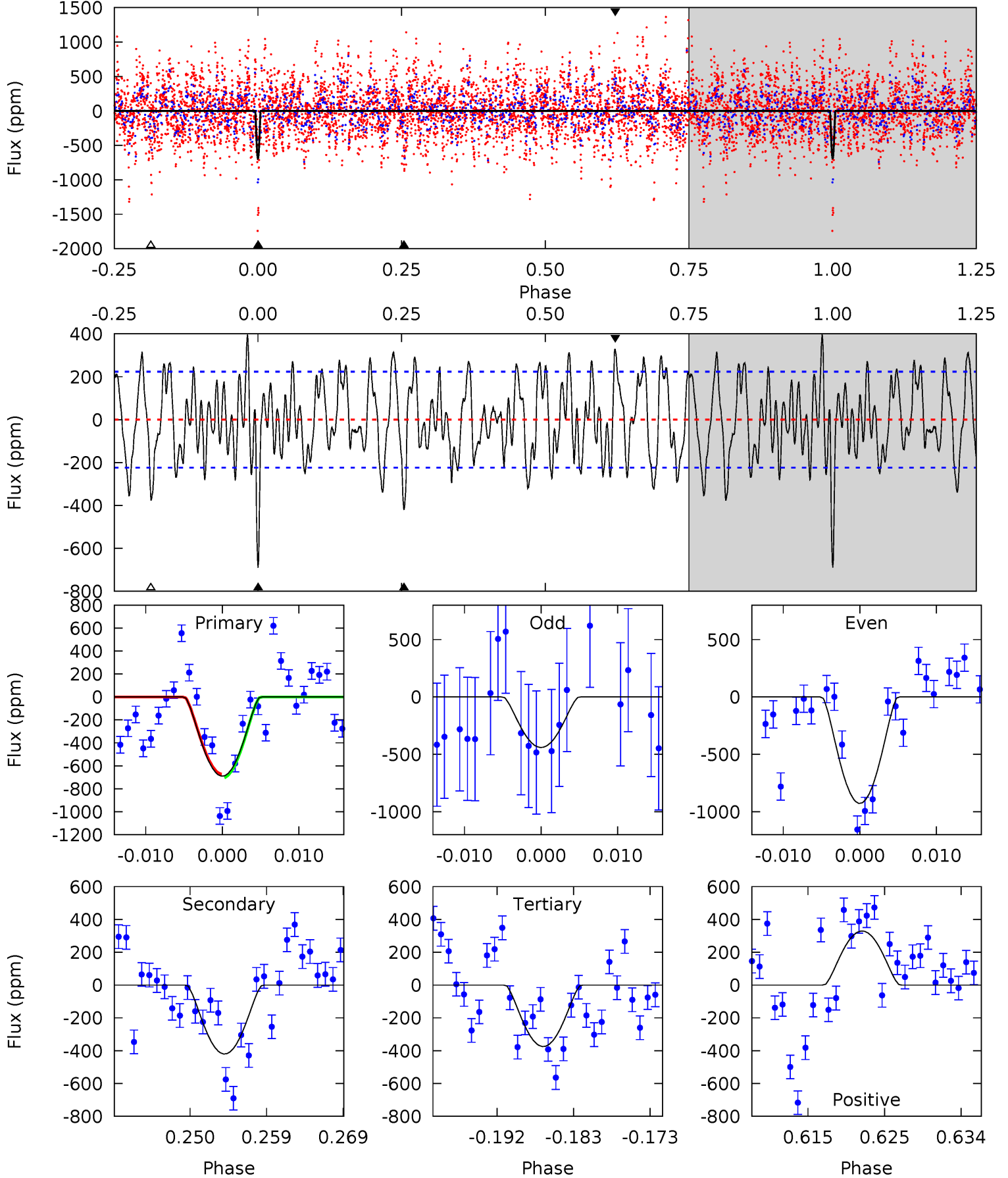
TCE 006945362-05 $P = 46.613718$ Days $T_0 = 146.857532$ (BKJD)



DV Model-Shift Uniqueness Test

006945362-05, P = 46.617212 Days, E = 100.189153 Days

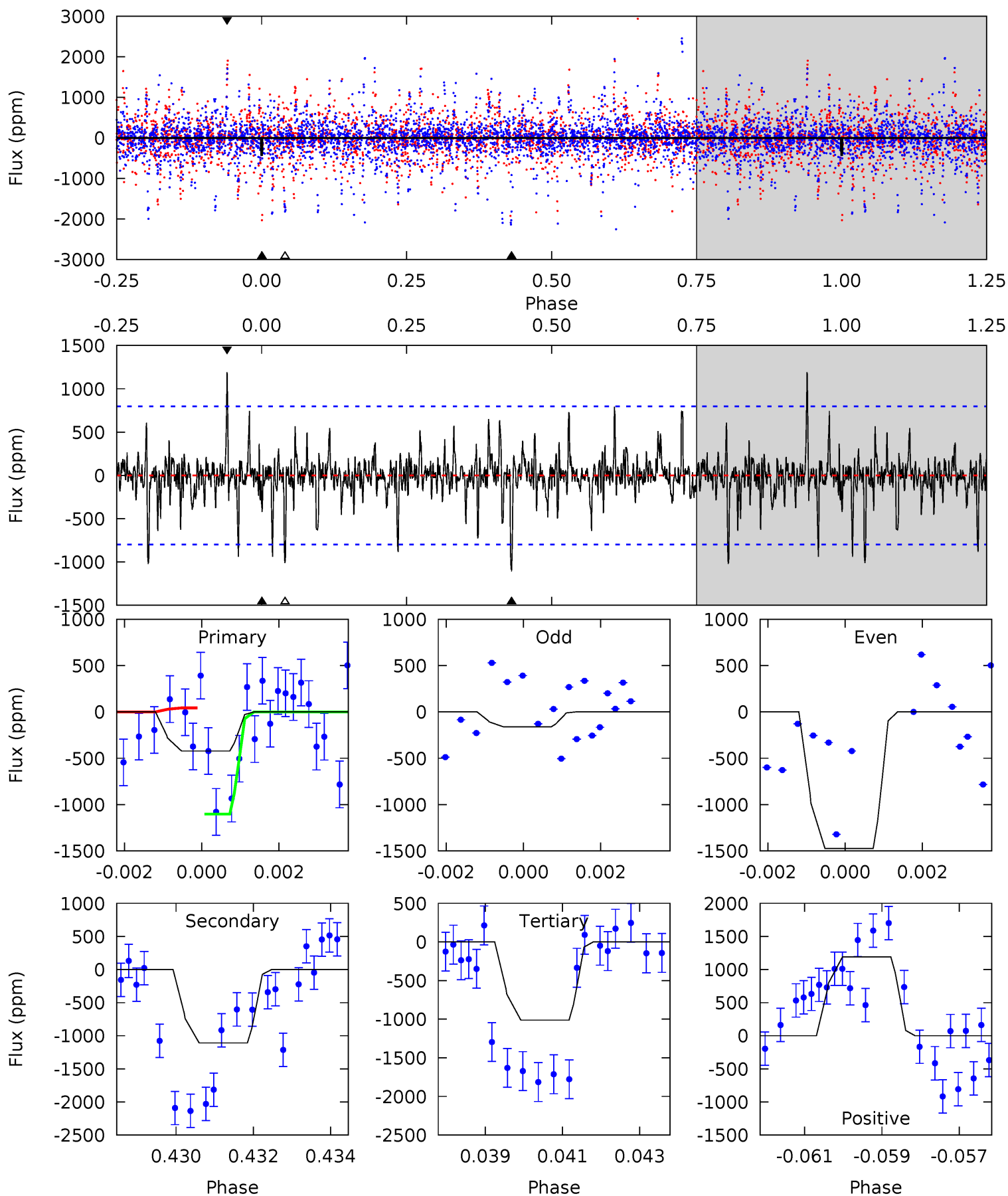
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	9.46	8.44	7.41	5.03	2.59	3.61	7.09	8.12	1.02	2.05	5.41	0.76	0.37	0.35



Alt Model-Shift Uniqueness Test

006945362-05, P = 46.613718 Days, E = 100.243814 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.80	7.37	6.72	7.92	5.30	3.05	1.33	-3.92	-5.12	0.64	-0.55	4.38	2.67	0.52	3.65



Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-420 ± 44	$17.21^{+16.21}_{-11.07}$	946^{+36}_{-28}	3420^{+1517}_{-582}	60^{+415}_{-44}
Alt.	-1109 ± 150	$15.36^{+16.20}_{-10.52}$	946^{+37}_{-28}	4209^{+2956}_{-893}	199^{+1980}_{-151}

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 $A_{obs} \gg 1.0$

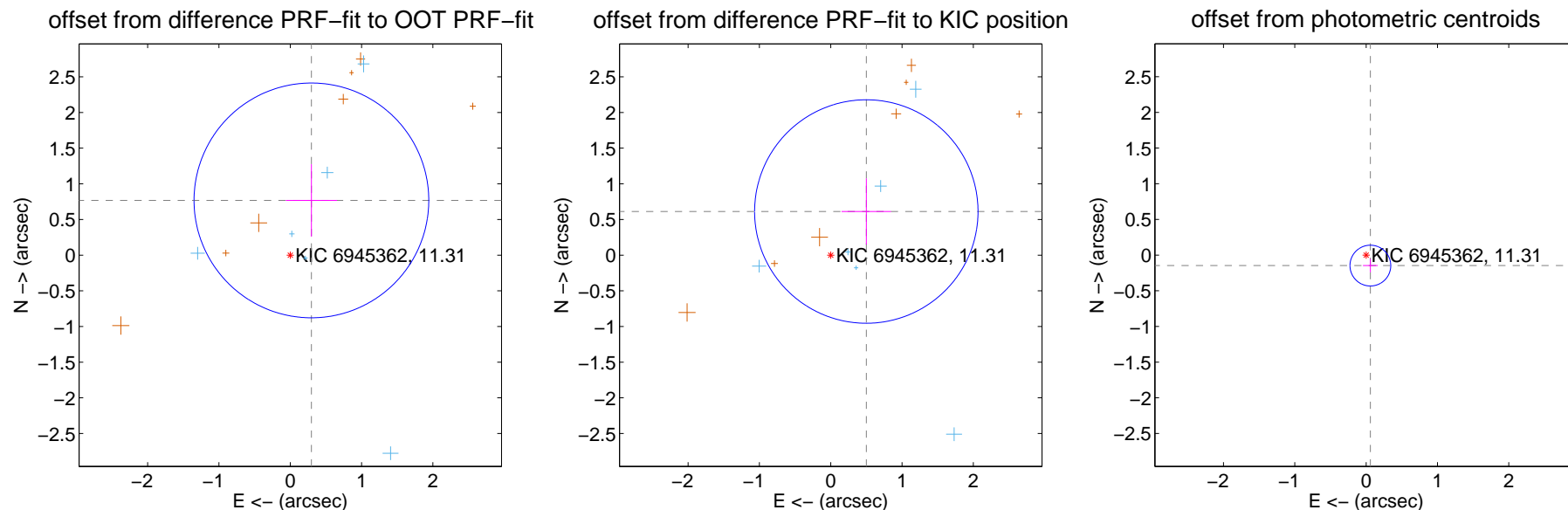
DV Centroid Data

Supplemental centroid analysis for 006945362-05. **Kepler magnitude: 11.31.** Transit SNR 11.95

There are 6 quarters with good PRF difference image offsets

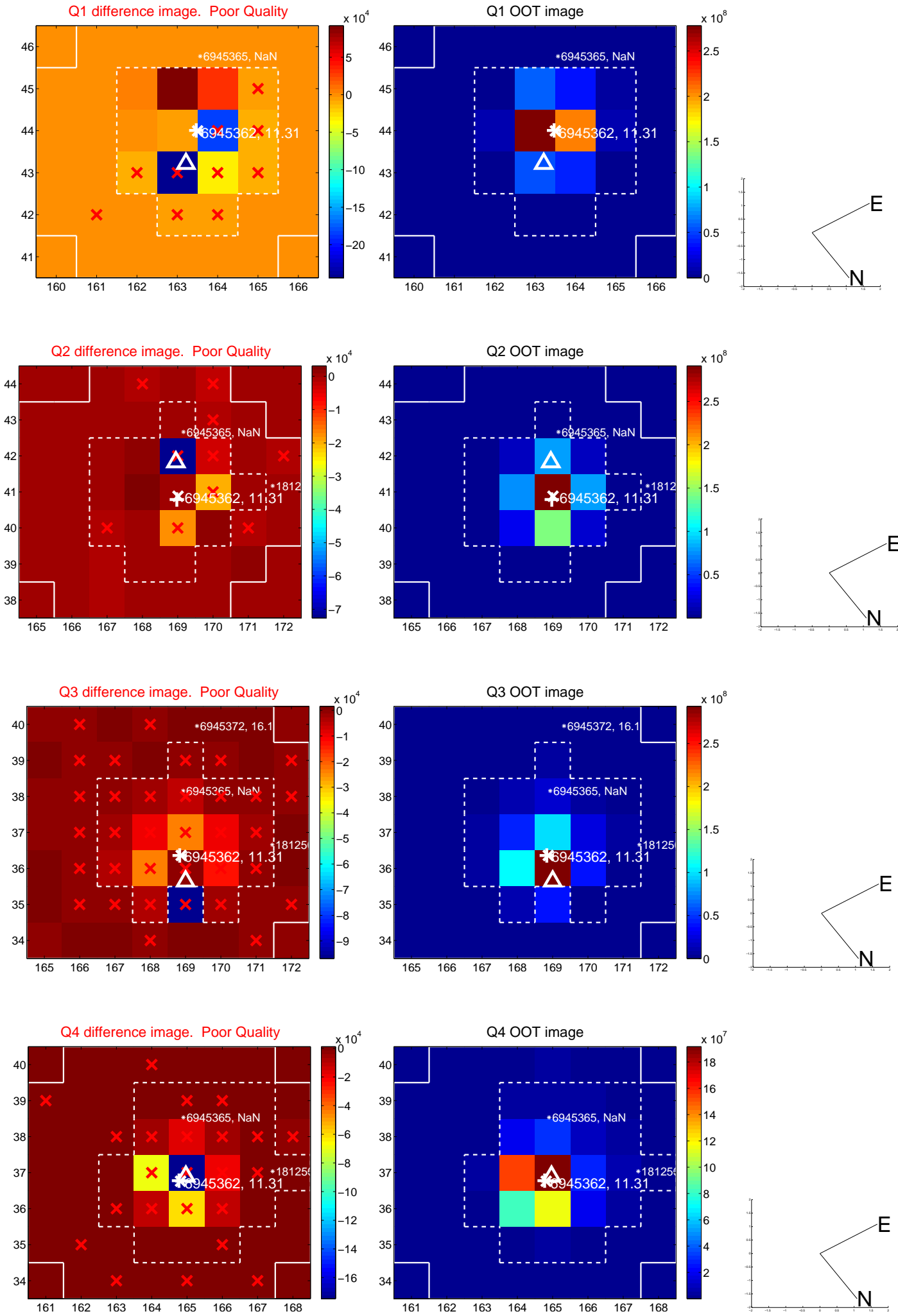
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.823 ± 0.549	1.50	-0.296 ± 0.359	0.767 ± 0.507
PRF-fit source offset from KIC position	0.790 ± 0.522	1.51	-0.499 ± 0.347	0.612 ± 0.464
photometric centroid source offset	0.16 ± 0.10	1.67	-0.06 ± 0.10	-0.15 ± 0.09

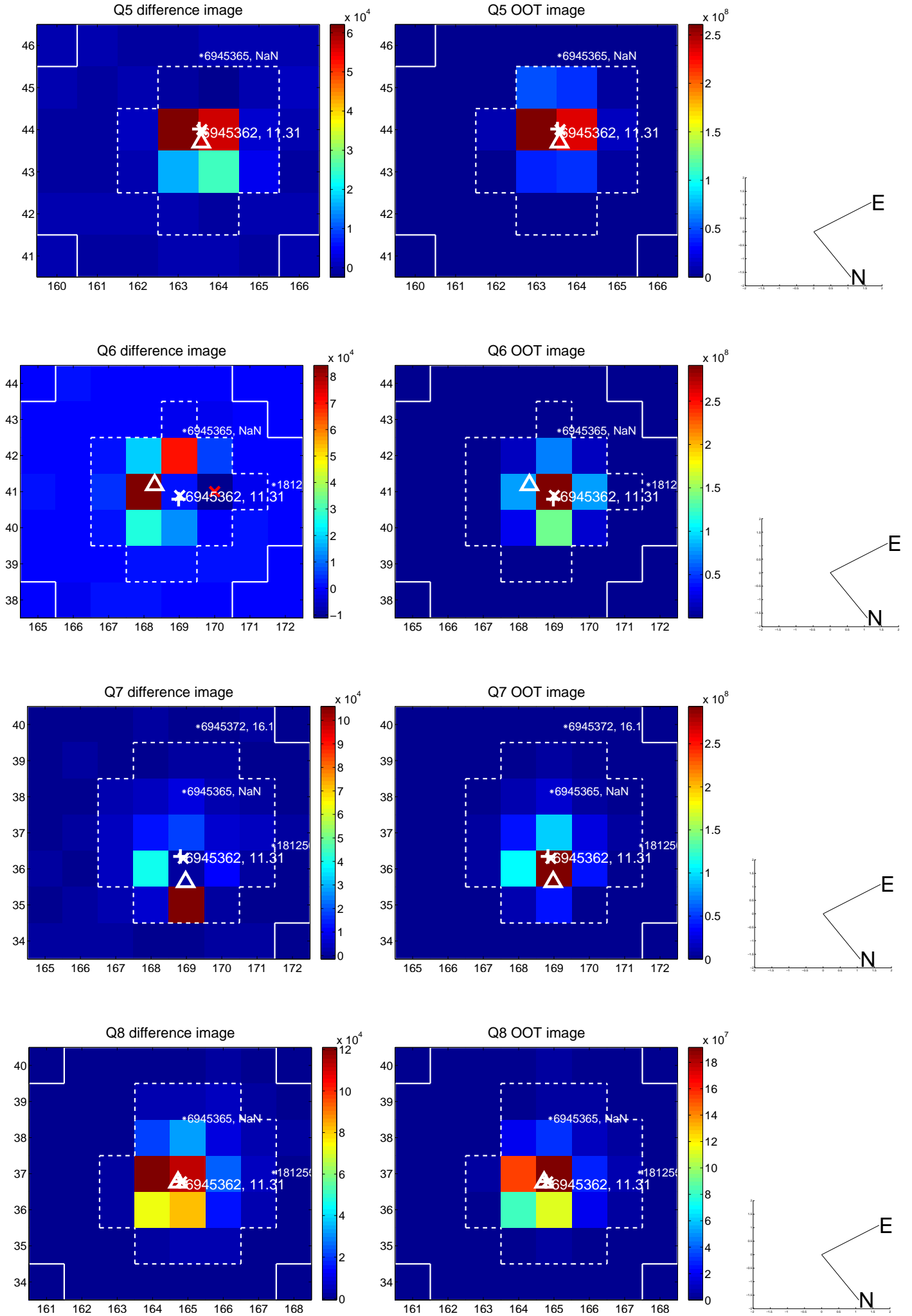


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

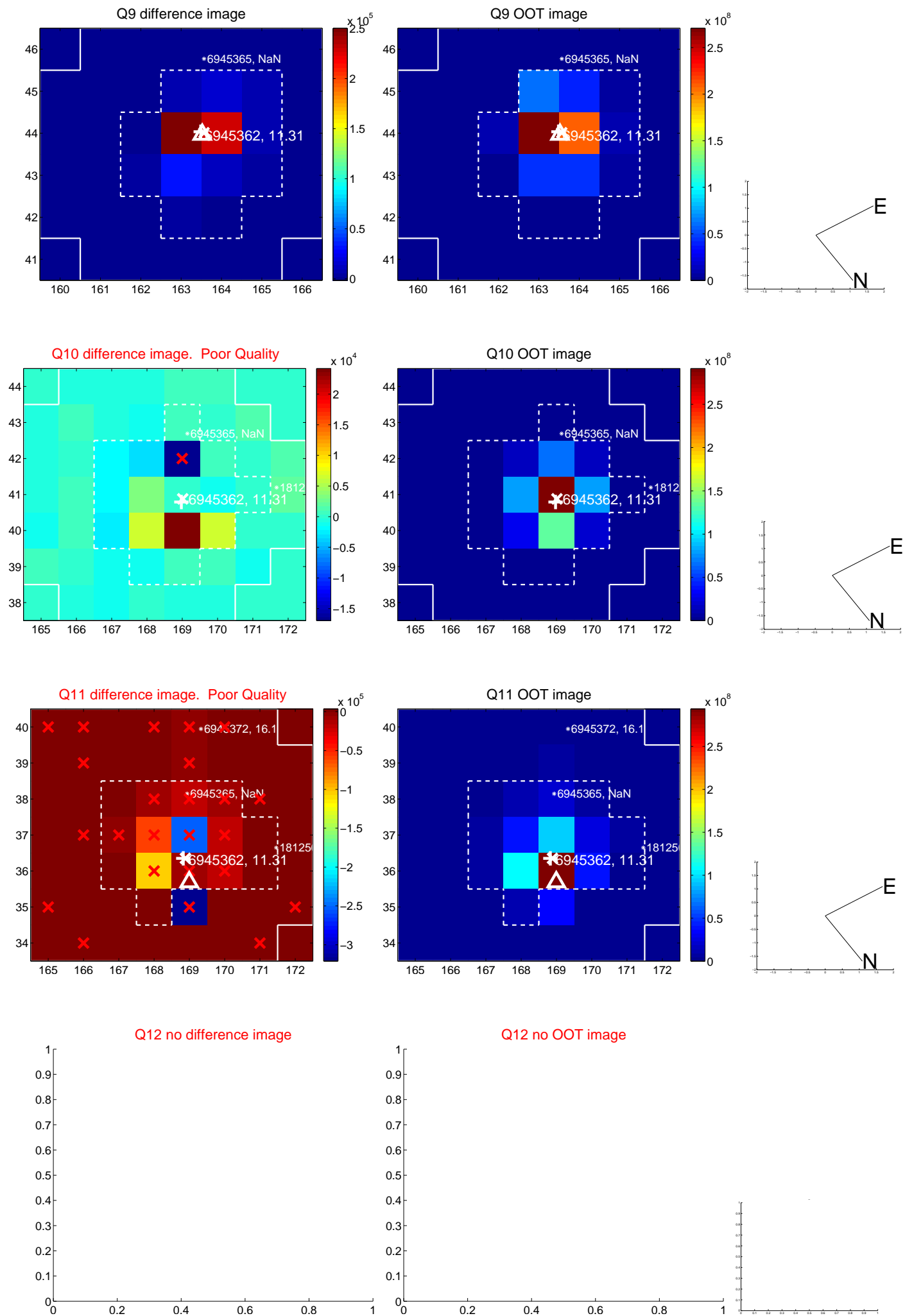
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



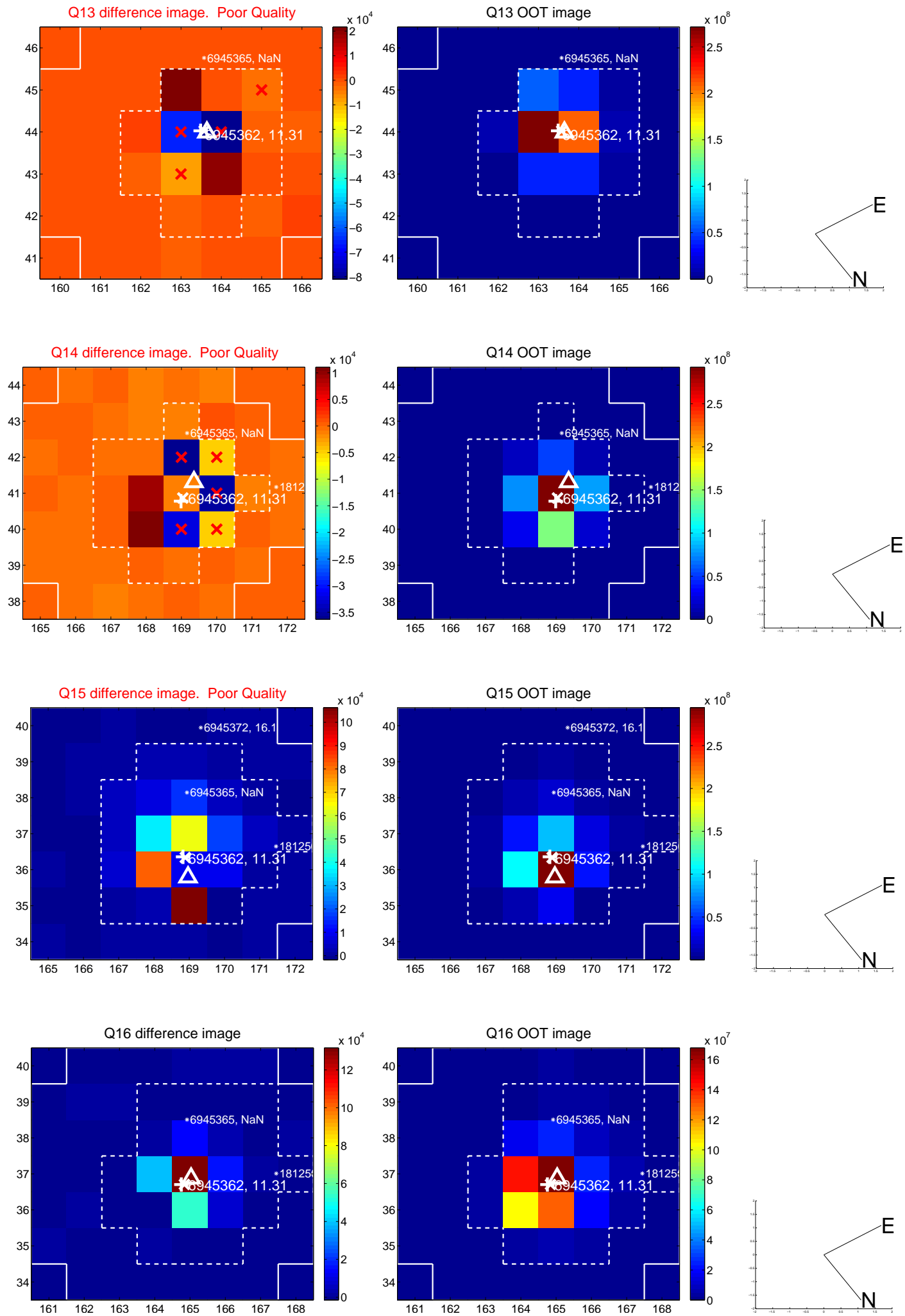
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



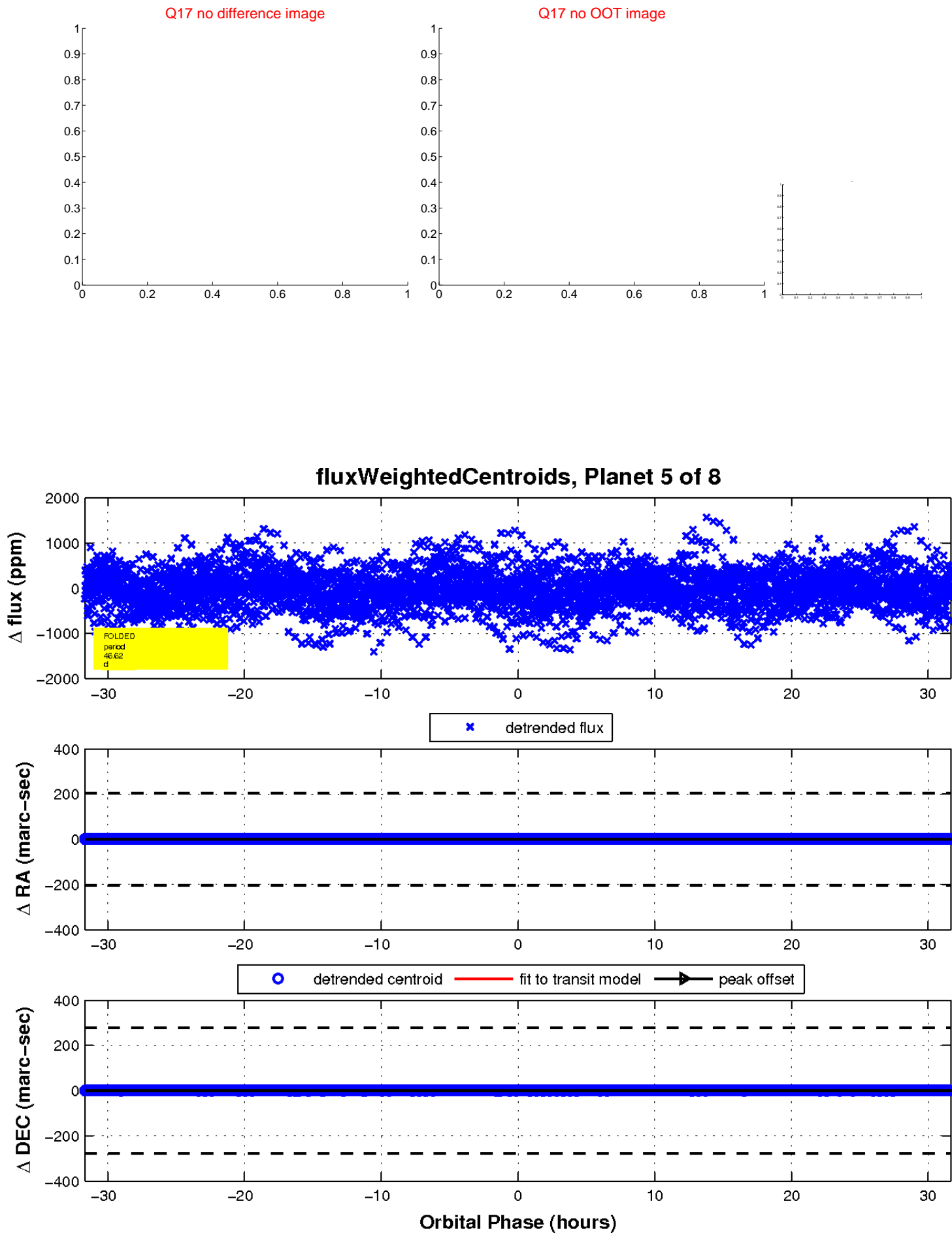
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

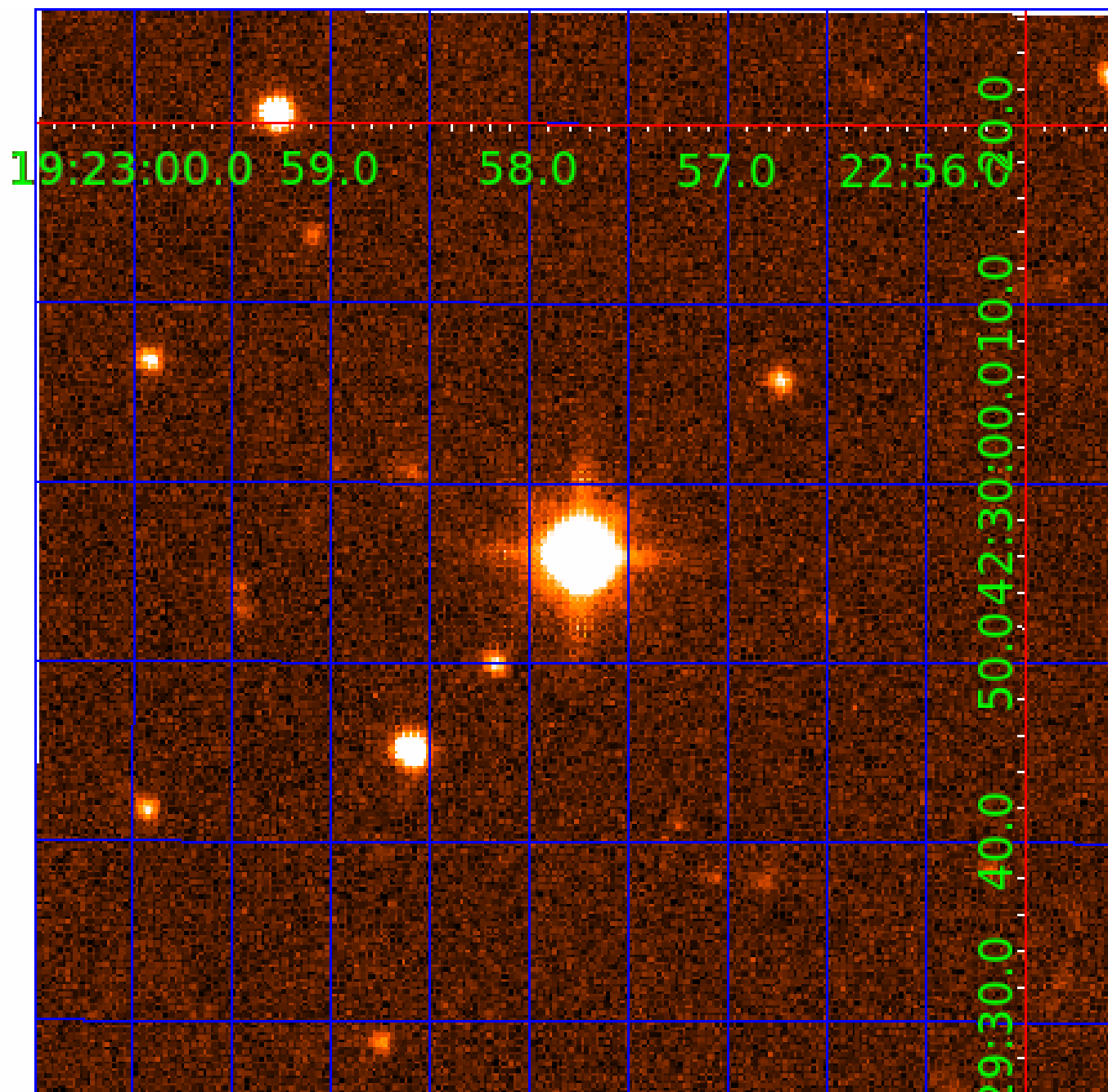


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

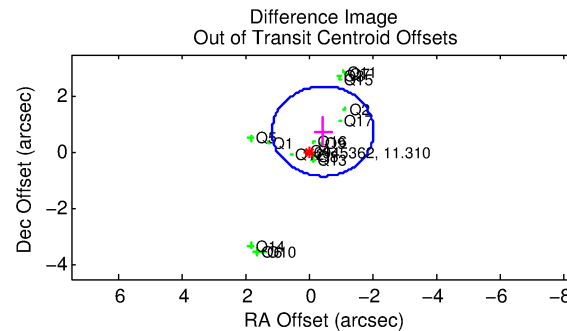
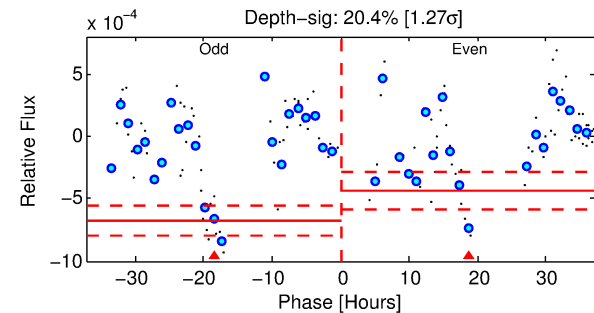
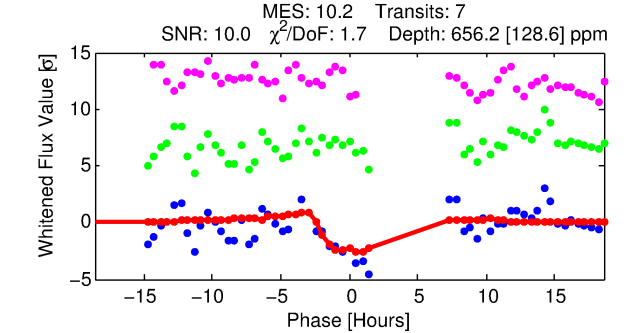
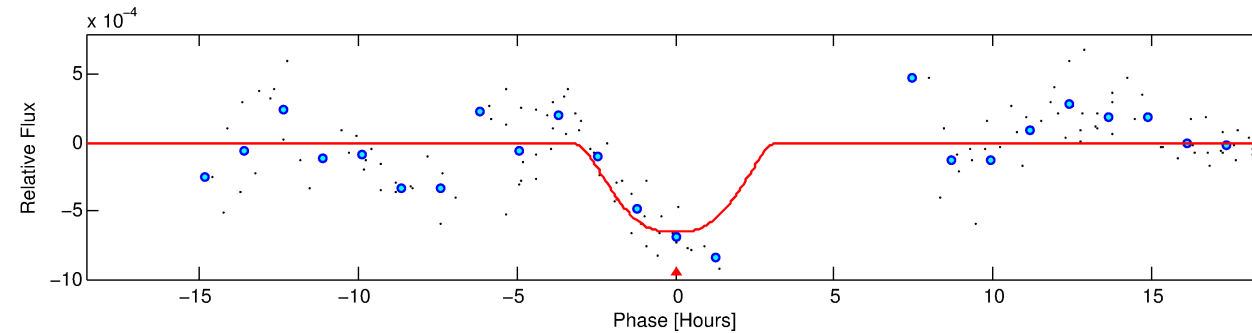
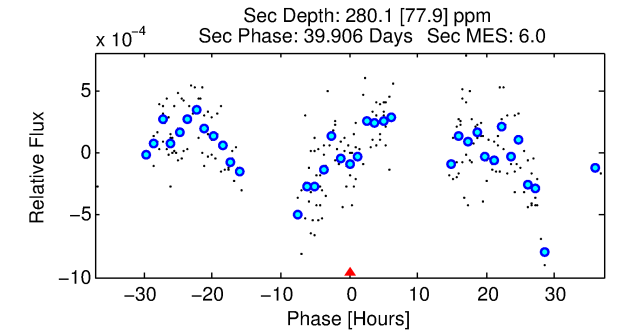
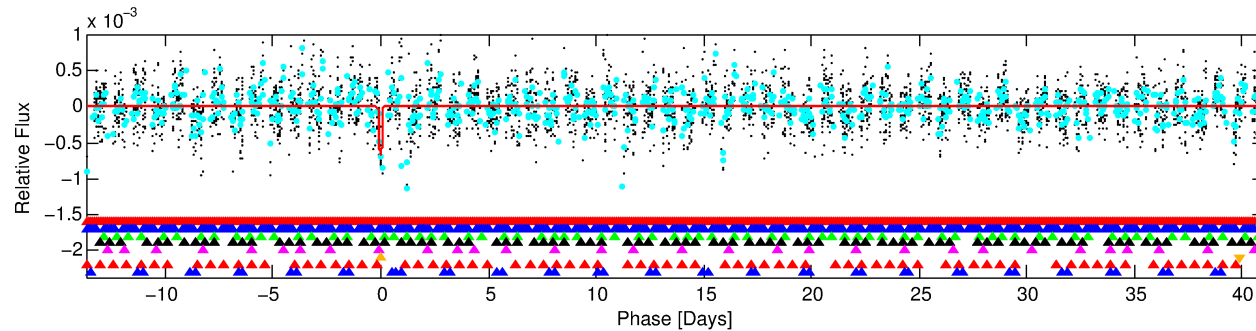
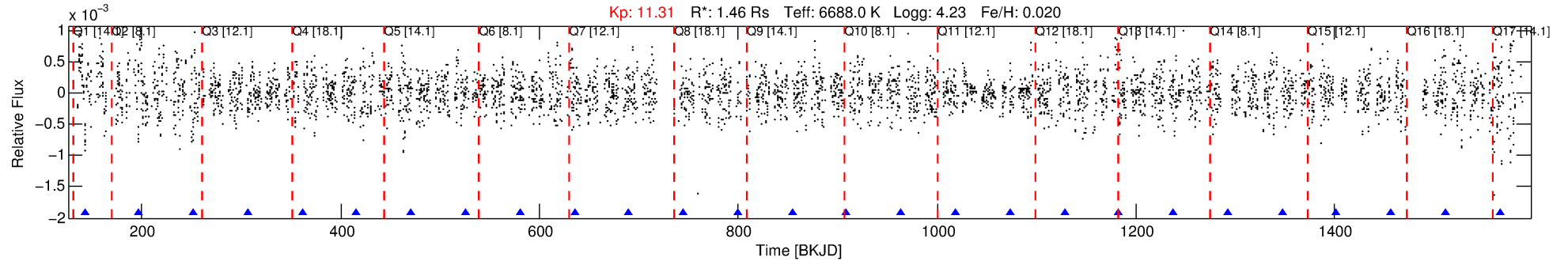
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-06

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 6 of 8 Period: 54.759 d



DV Fit Results:

Period = 54.75927 [0.00462] d
Epoch = 142.4279 [0.0222] BKJD
 $R_p/R^* = 0.0302$ [0.0039]
 $a/R^* = 23.71$ [7.30]
 $b = 0.97$ [0.02]
 $S_{\text{eff}} = 39.72$ [8.26]
 $T_{\text{eq}} = 640$ [33] K
 $R_p = 4.81$ [1.02] R_e
 $a = 0.3101$ [0.0435] AU
 $A_g = 639.69$ [273.77] [2.33σ]
 $T_{\text{eff}} = 4978$ [475] K [9.11σ]

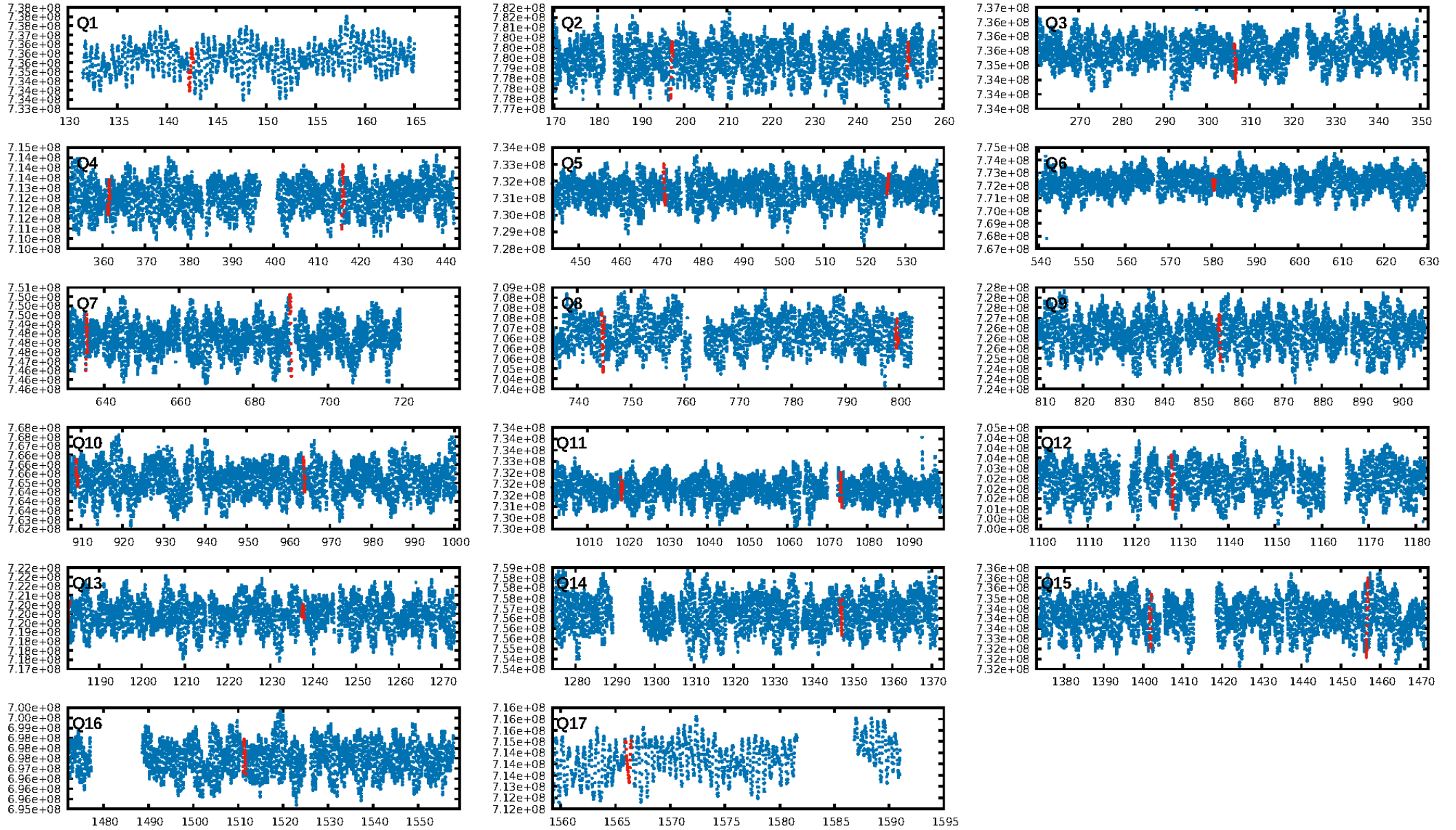
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.97σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.3229
Centroid-sig: 12.9%
Centroid-so: 0.374 arcsec [2.66σ]
OotOffset-rm: 0.868 arcsec [1.63σ]
KicOffset-rm: 0.862 arcsec [1.85σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

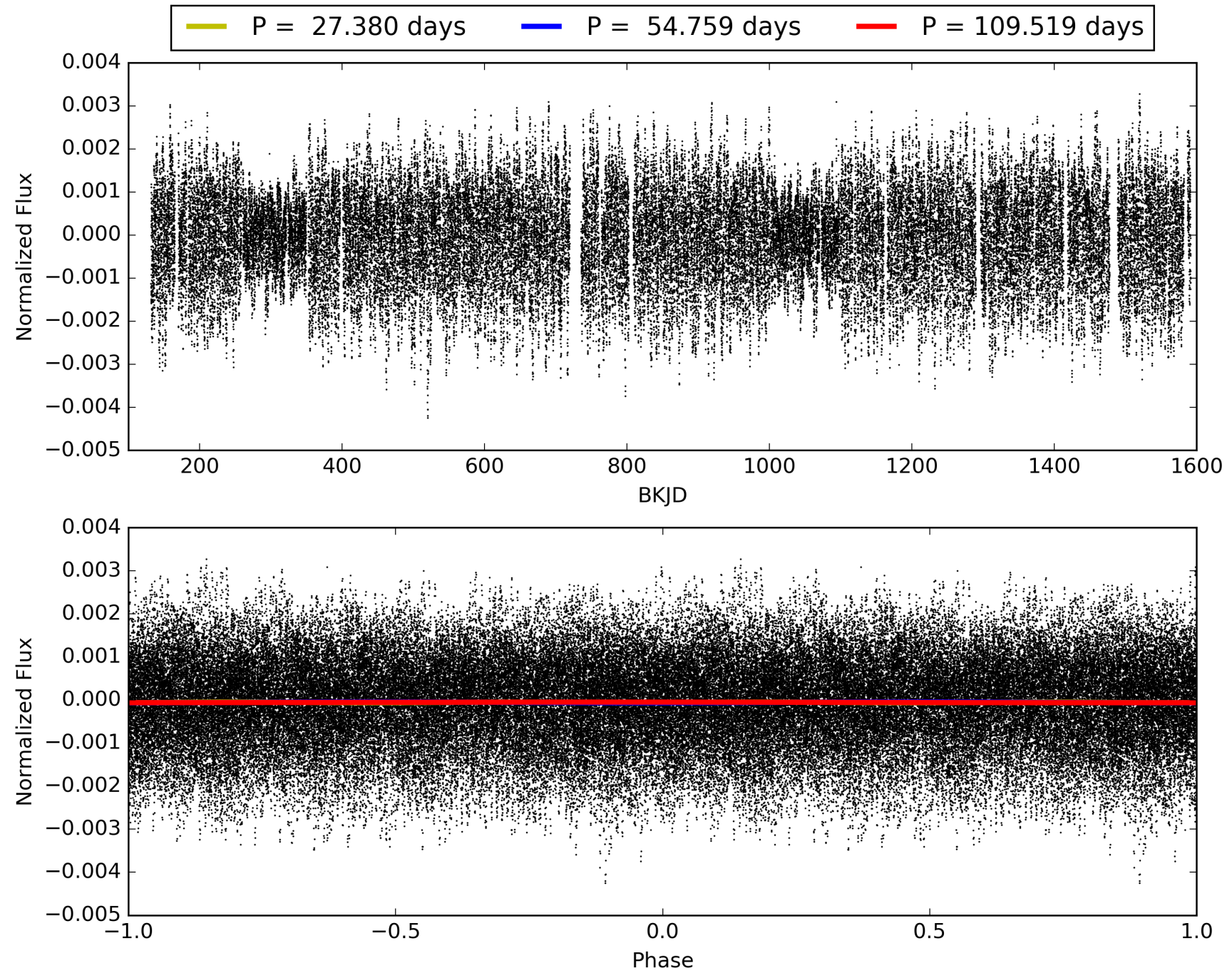
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:44 Z

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

TCE 006945362-06, PDC Light Curves

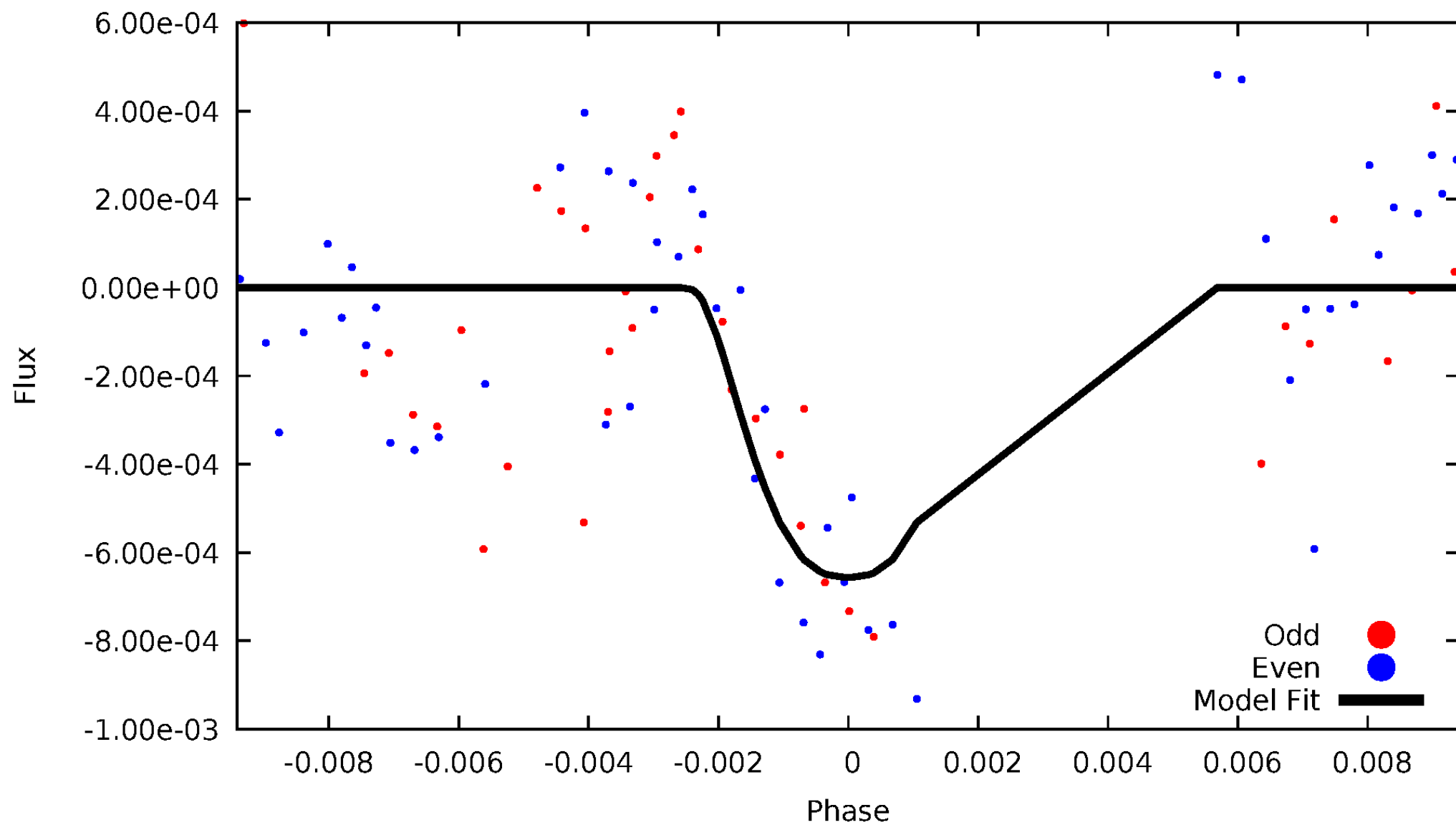


TCE 006945362-06



DV Odd/Even

TCE 006945362-06

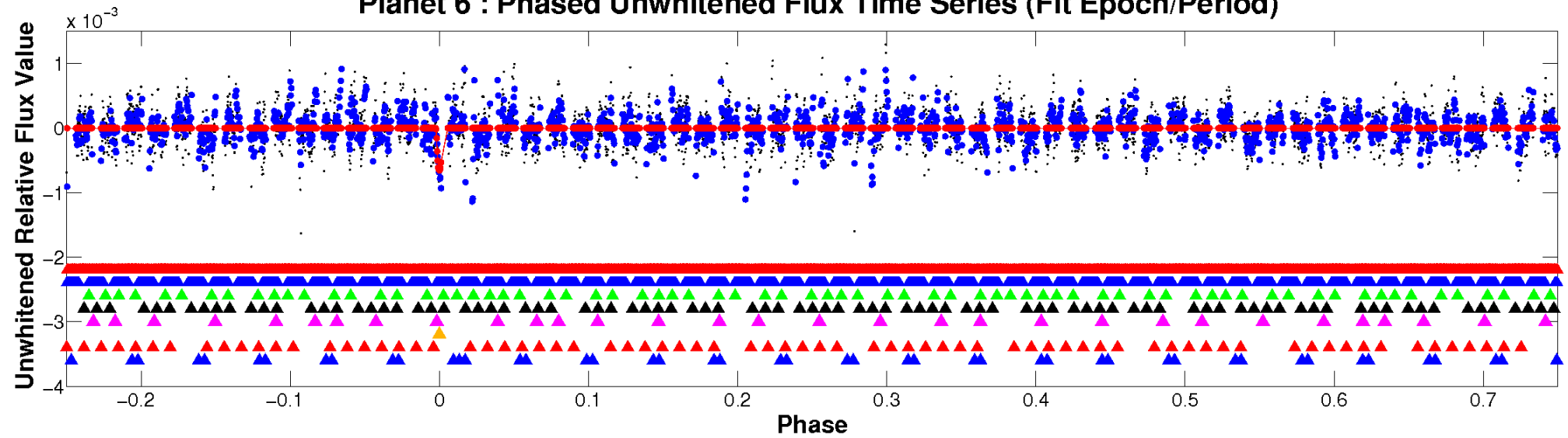


ALT Odd/Even

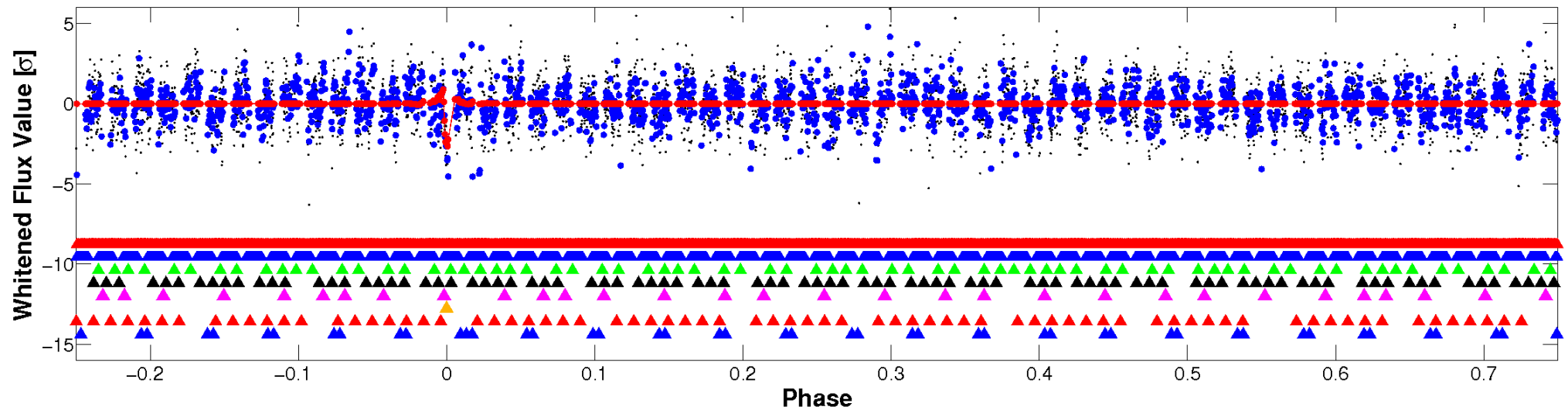
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

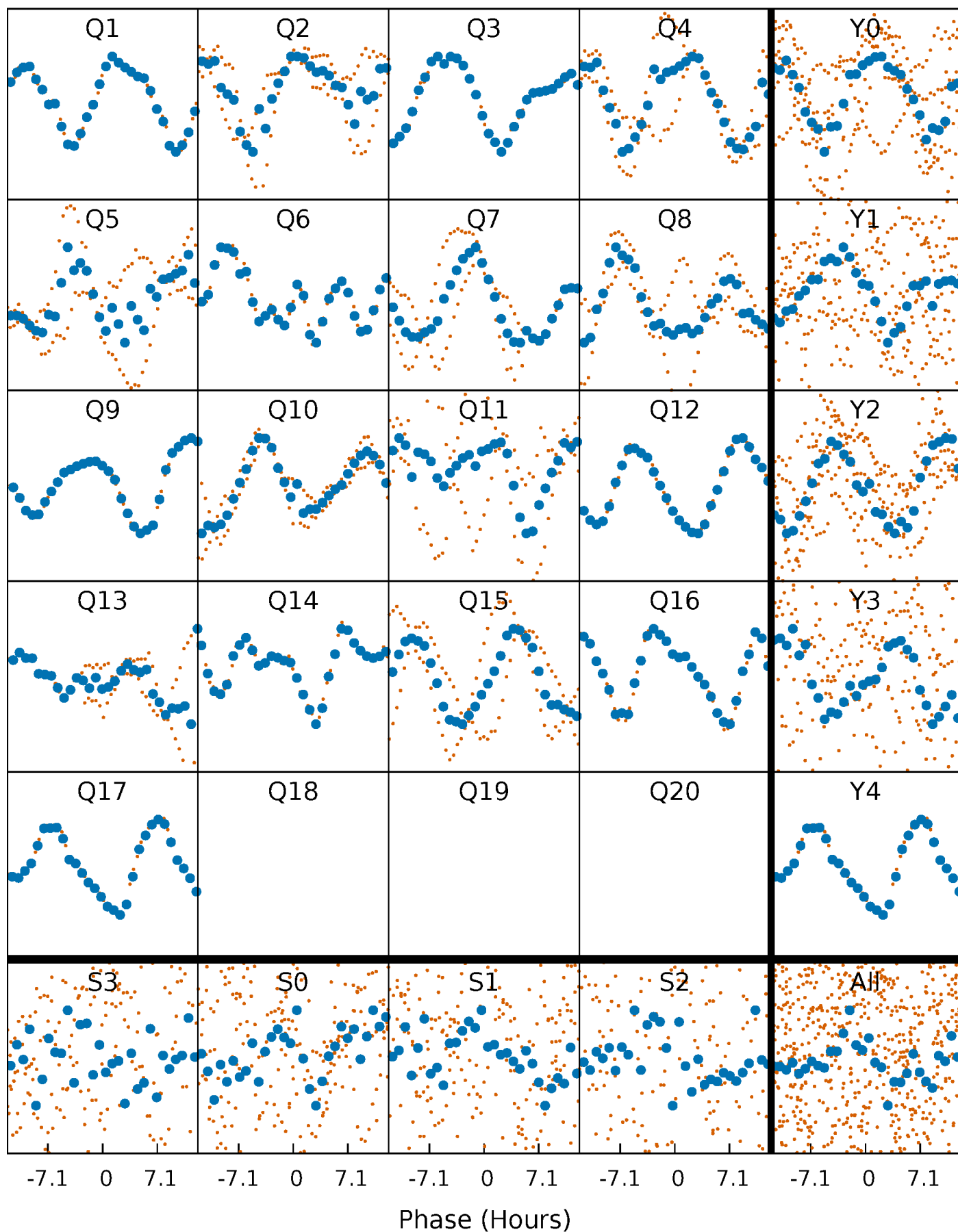


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



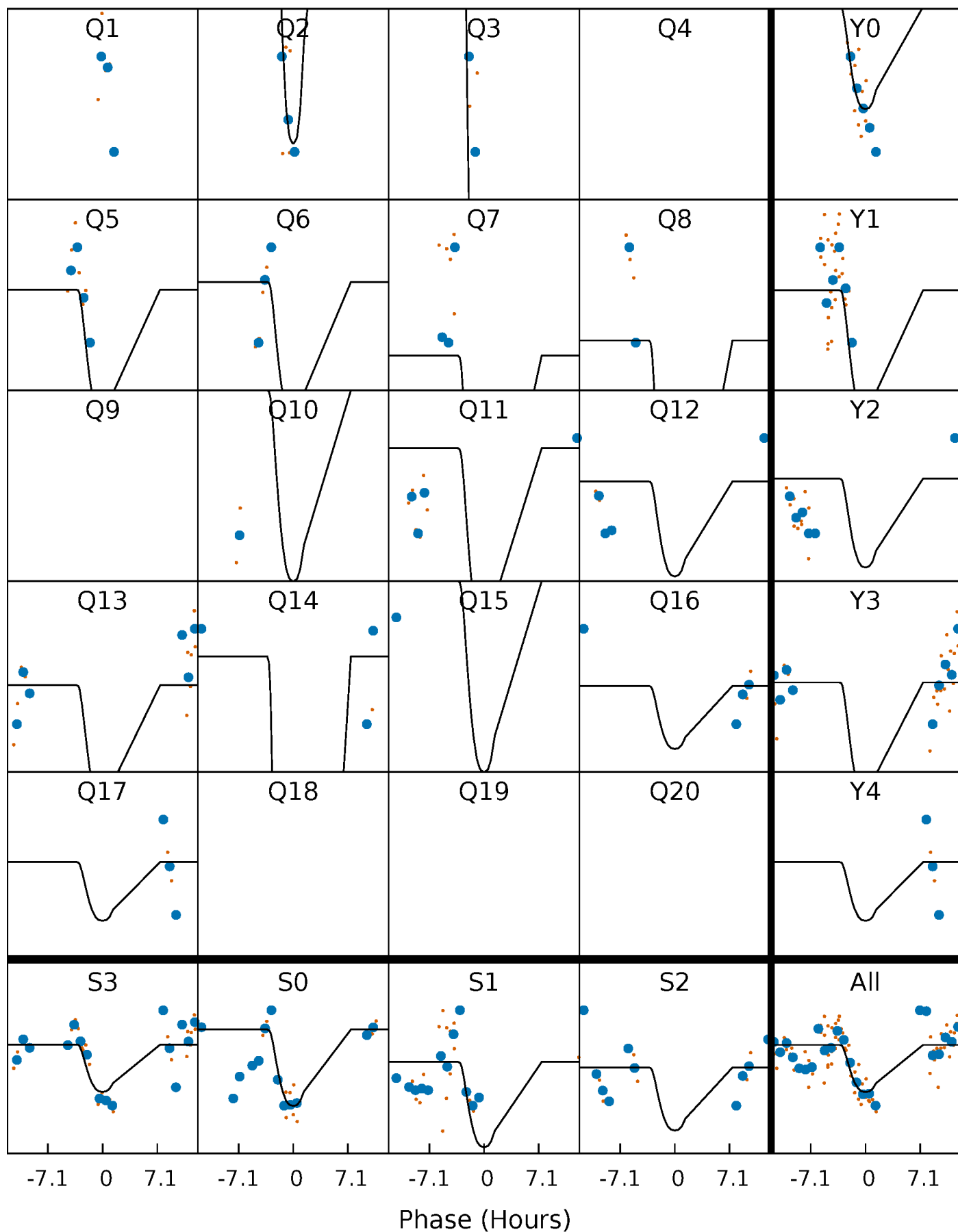
PDC Quarter-Phased Transit Curves

TCE 006945362-06 P= 54.759269 Days $T_0=142.427862$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006945362-06 P= 54.759269 Days $T_0=142.427862$ (BKJD)

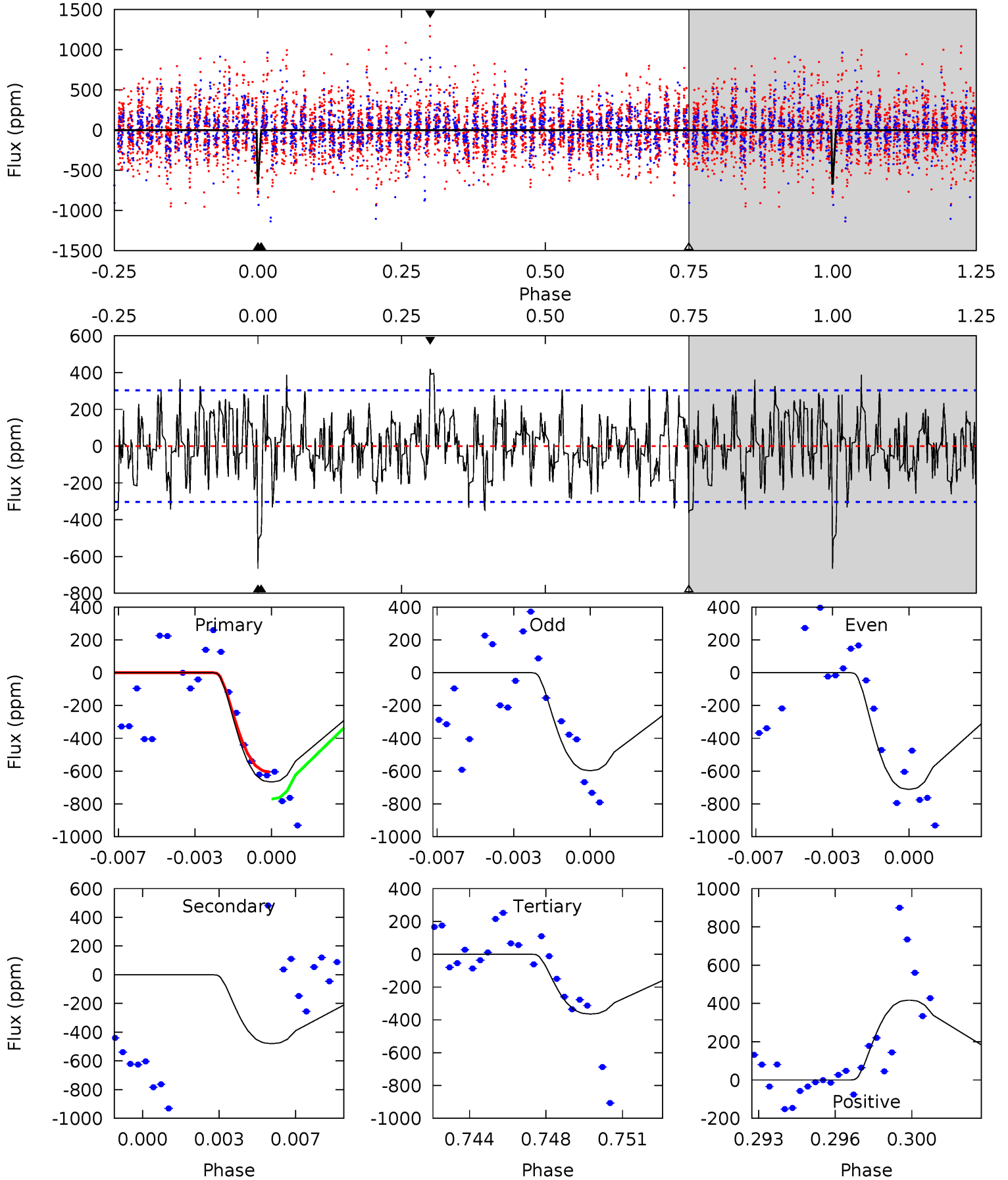


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006945362-06, P = 54.759269 Days, E = 87.668593 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	8.27	6.28	7.19	5.23	2.93	2.25	5.21	4.30	1.99	1.08	0.97	1.00	0.38	1.19



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-480 ± 58	$4.89^{+0.74}_{-0.68}$	897^{+36}_{-28}	5660^{+467}_{-335}	1057^{+399}_{-283}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

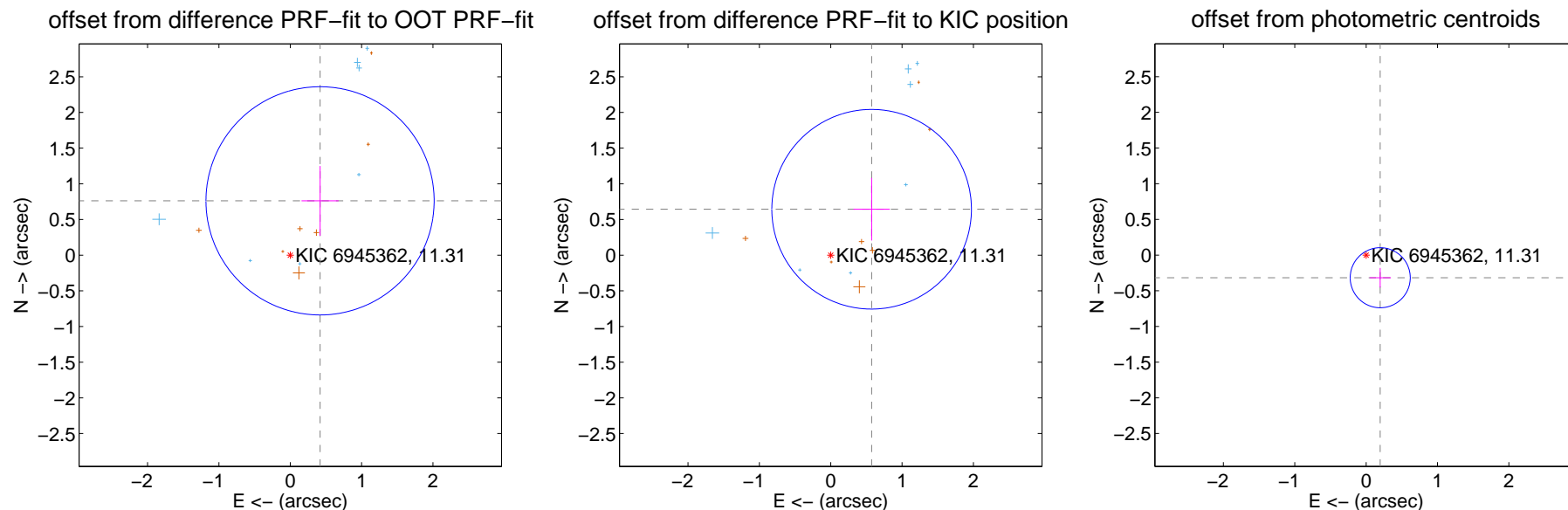
DV Centroid Data

Supplemental centroid analysis for 006945362-06. **Kepler magnitude: 11.31.** Transit SNR 10.04

There are 10 quarters with good PRF difference image offsets

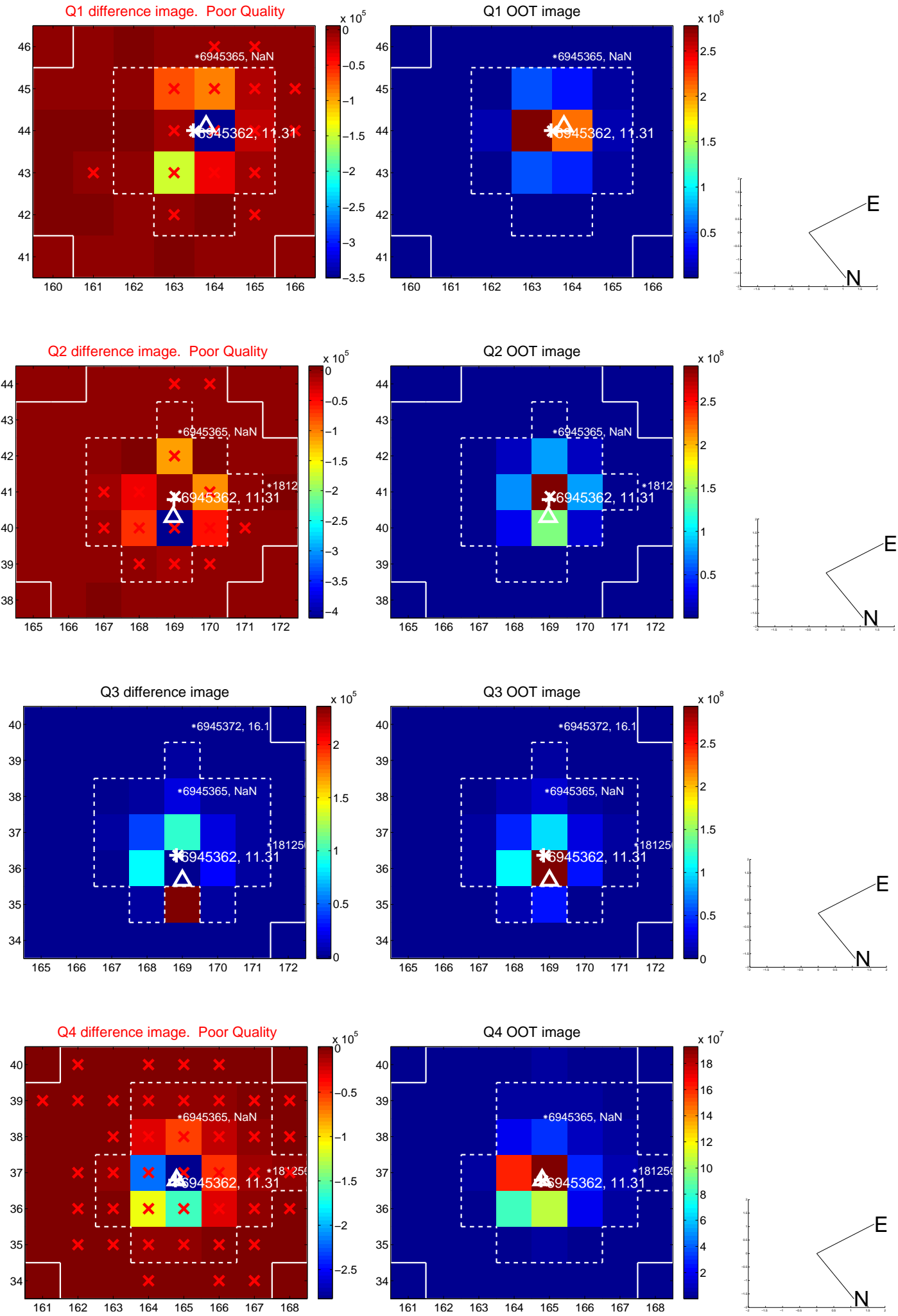
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.868 ± 0.533	1.63	-0.418 ± 0.261	0.761 ± 0.489
PRF-fit source offset from KIC position	0.862 ± 0.466	1.85	-0.573 ± 0.254	0.643 ± 0.439
photometric centroid source offset	0.37 ± 0.14	2.66	-0.20 ± 0.15	-0.32 ± 0.14

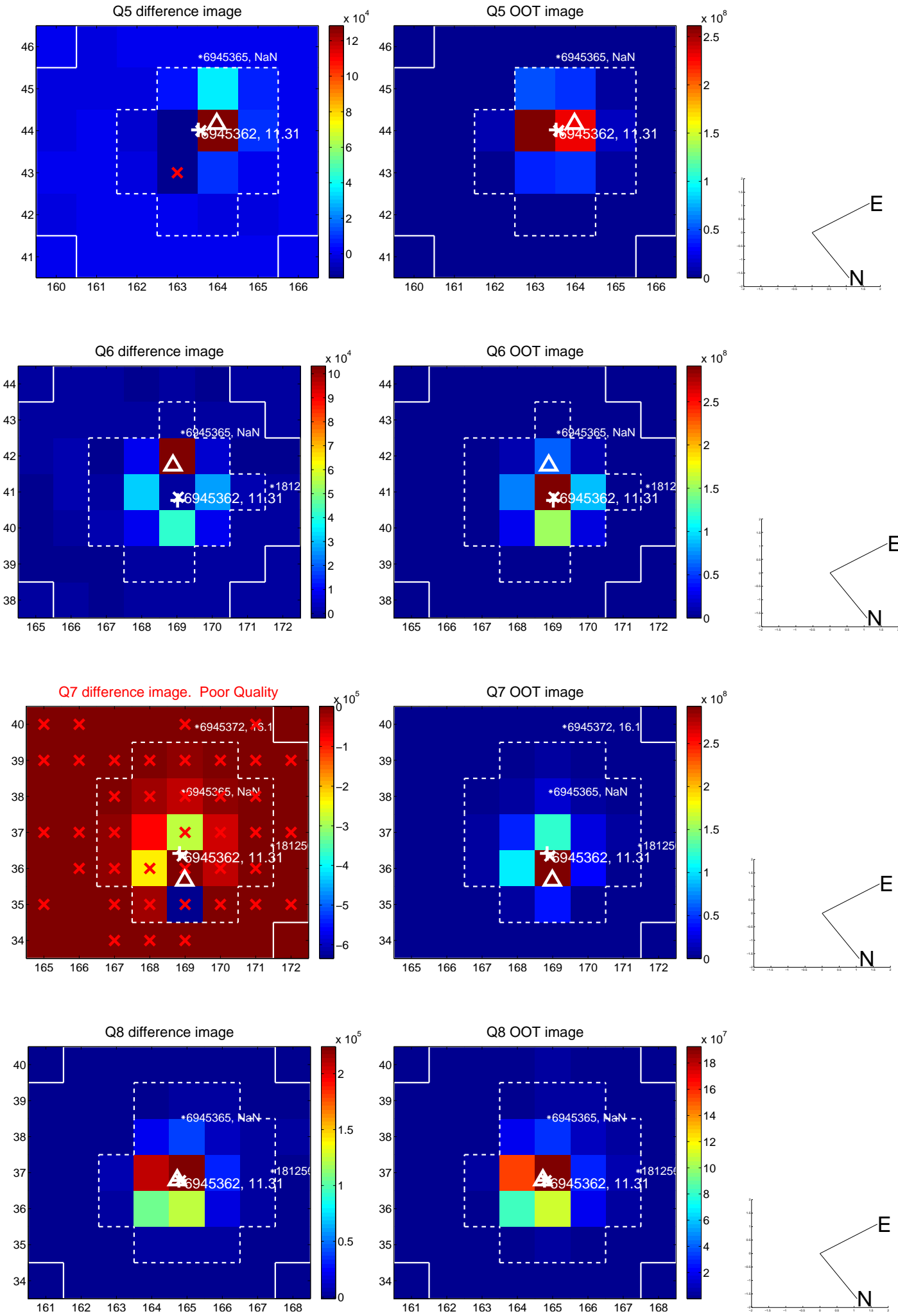


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

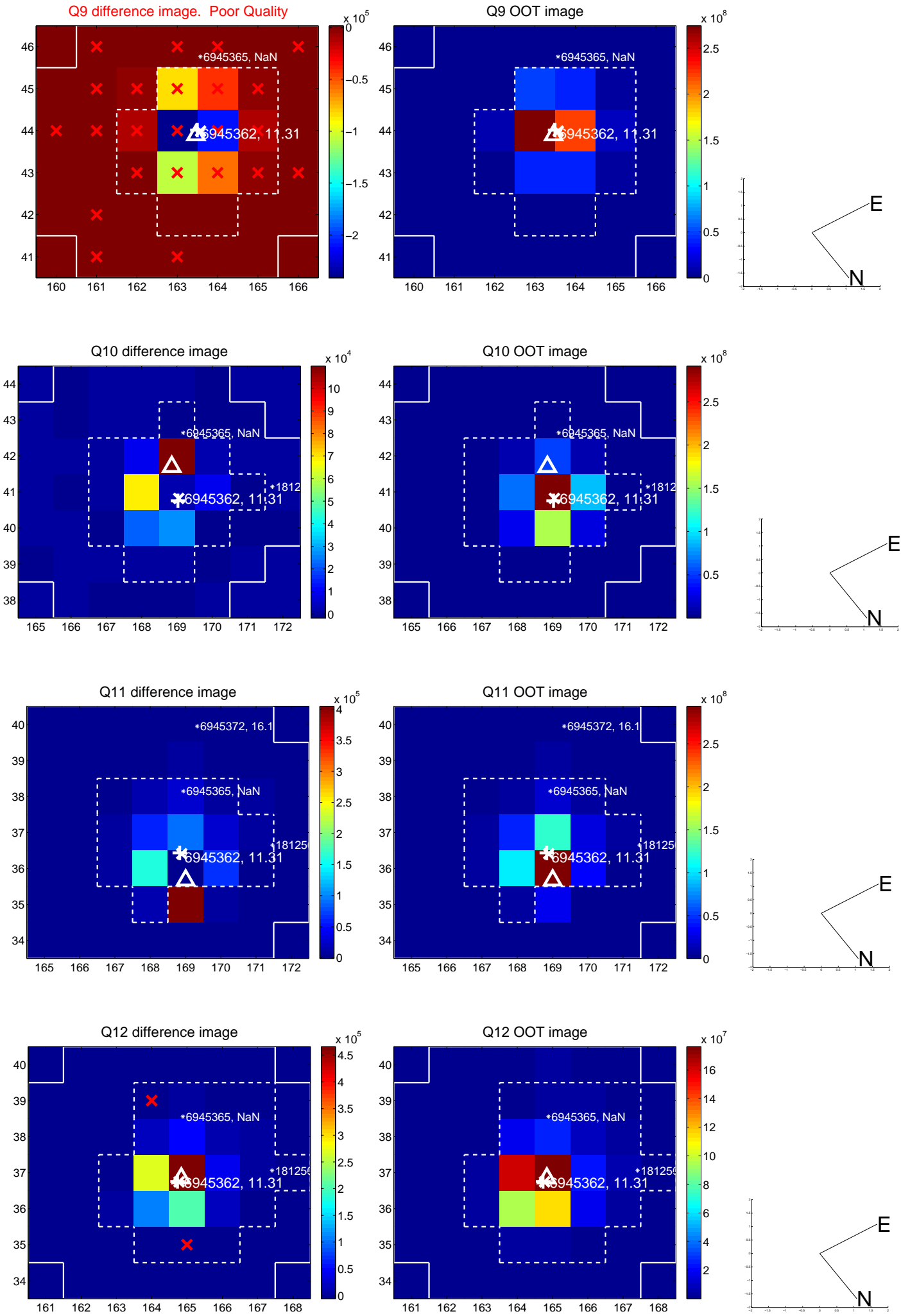
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



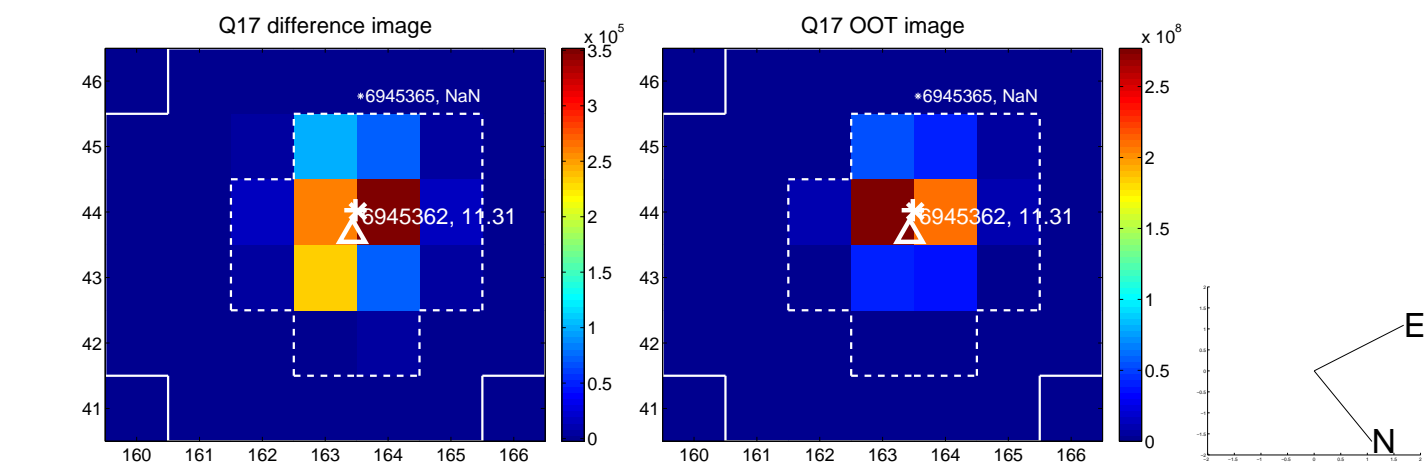
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



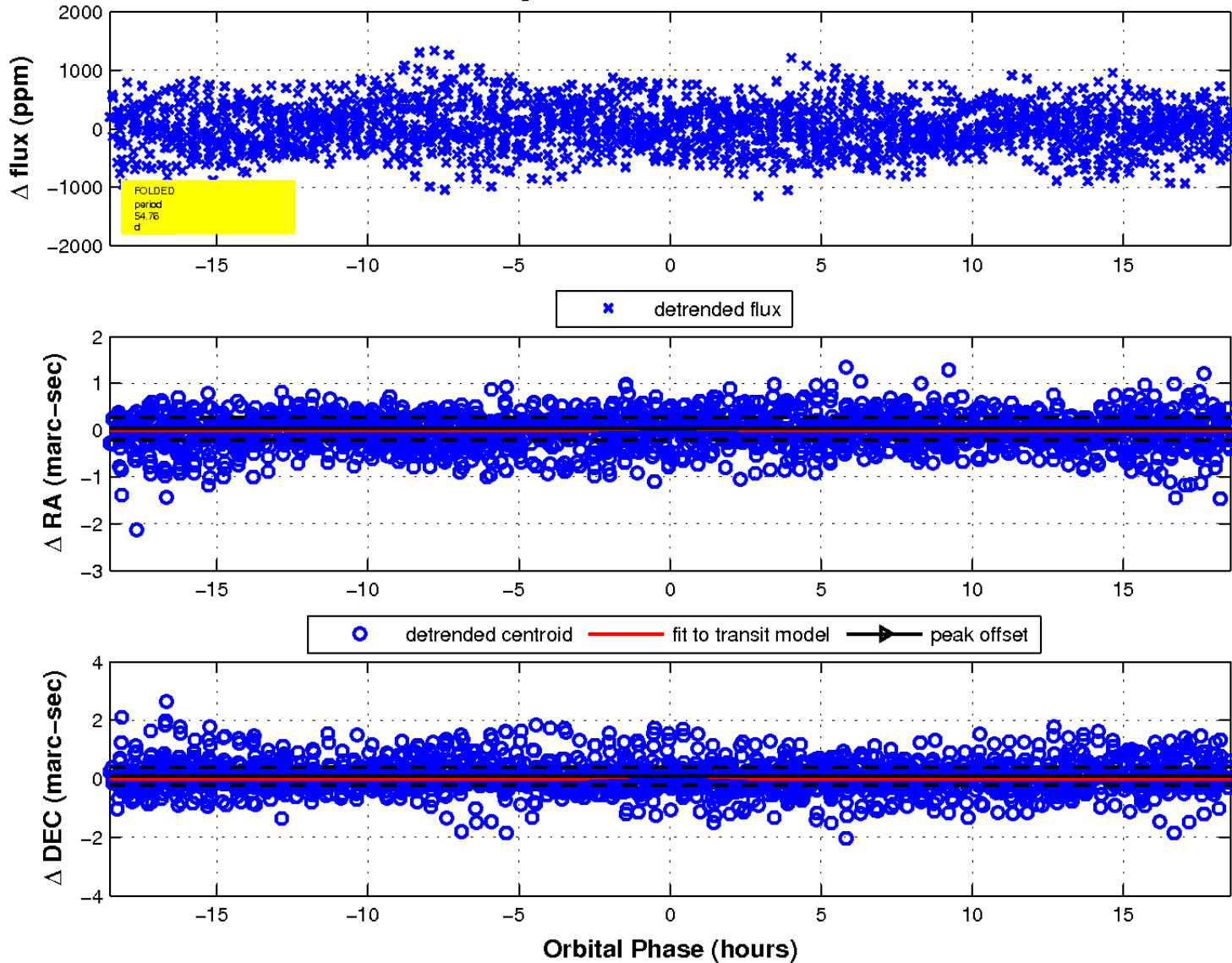
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

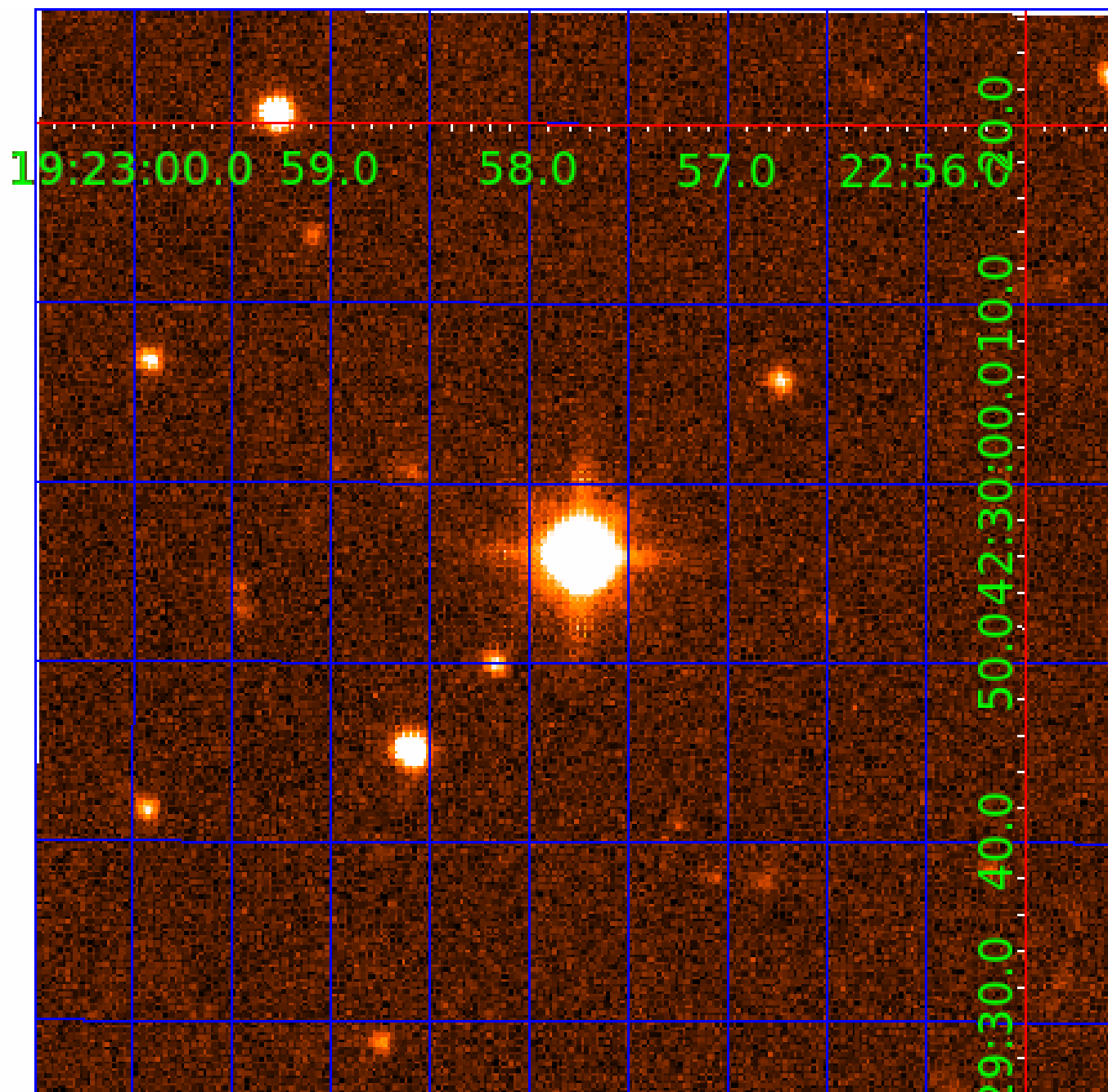


fluxWeightedCentroids, Planet 6 of 8



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
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006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

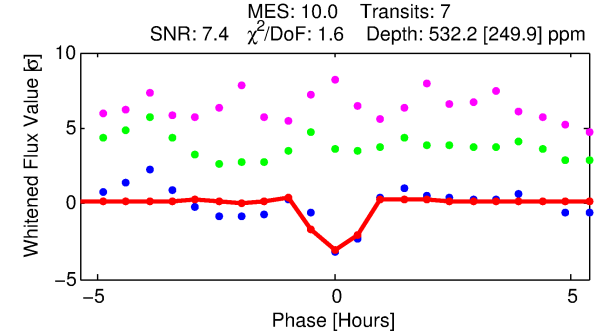
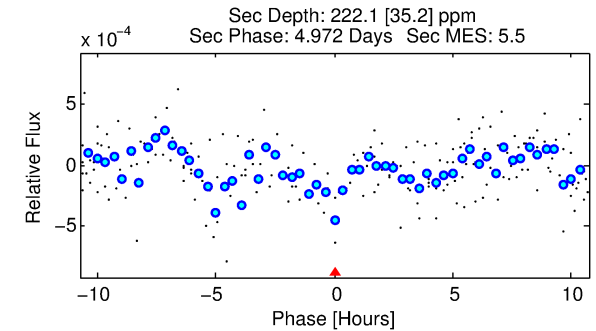
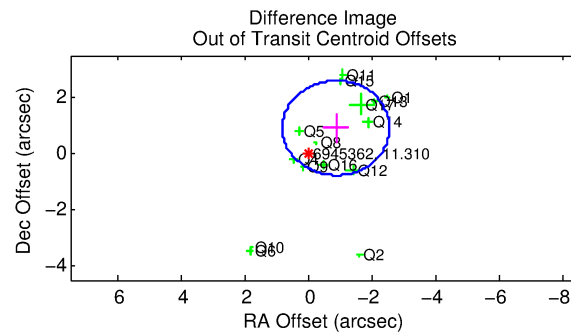
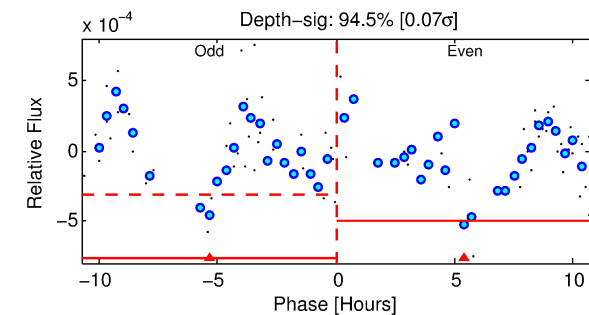
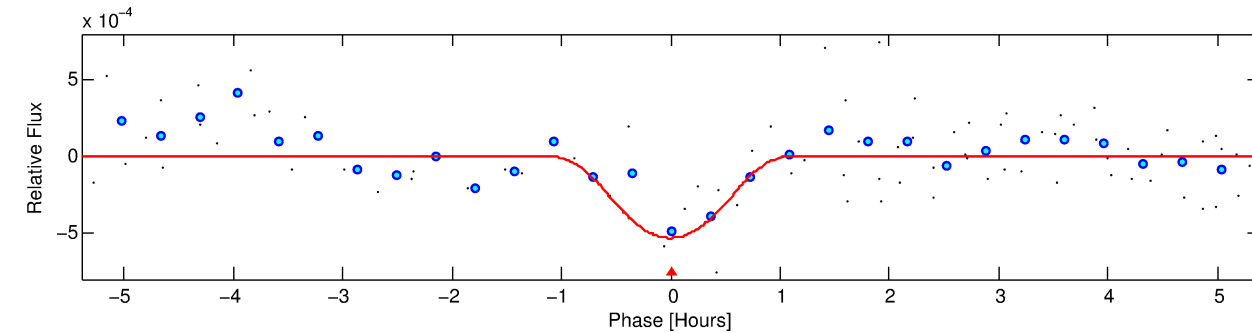
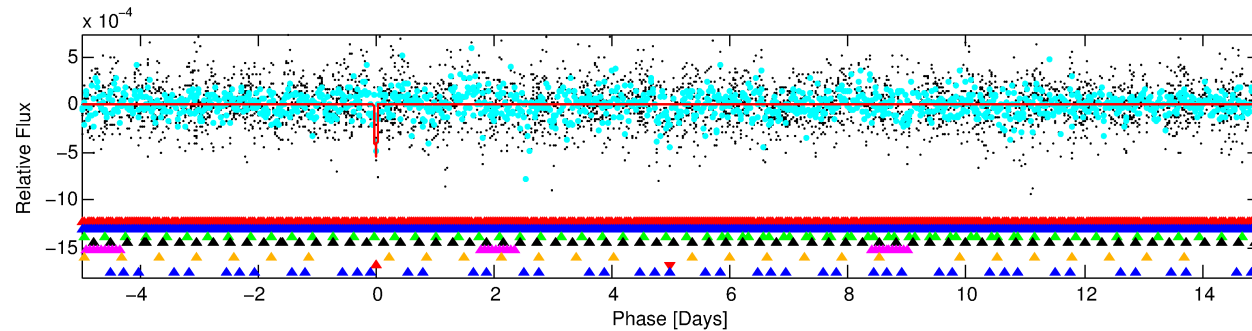
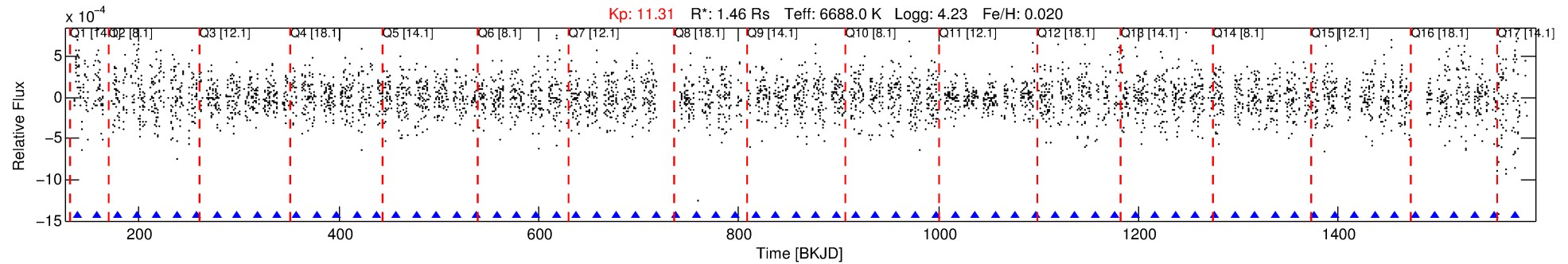
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-07

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 7 of 8 Period: 19.970 d



DV Fit Results:

Period = 19.97004 [0.00029] d
Epoch = 138.4122 [0.0068] BKJD
Rp/R* = 0.0395 [0.3701]
a/R* = 24.86 [63.85]
b = 1.00 [0.57]
Seff = 152.46 [31.69]
Teq = 896 [47] K
Rp = 6.30 [58.98] Re
a = 0.1583 [0.0222] AU
Ag = 77.27 [1447.78] [0.05 σ]
Teffp = 4107 [19239] K [0.17 σ]

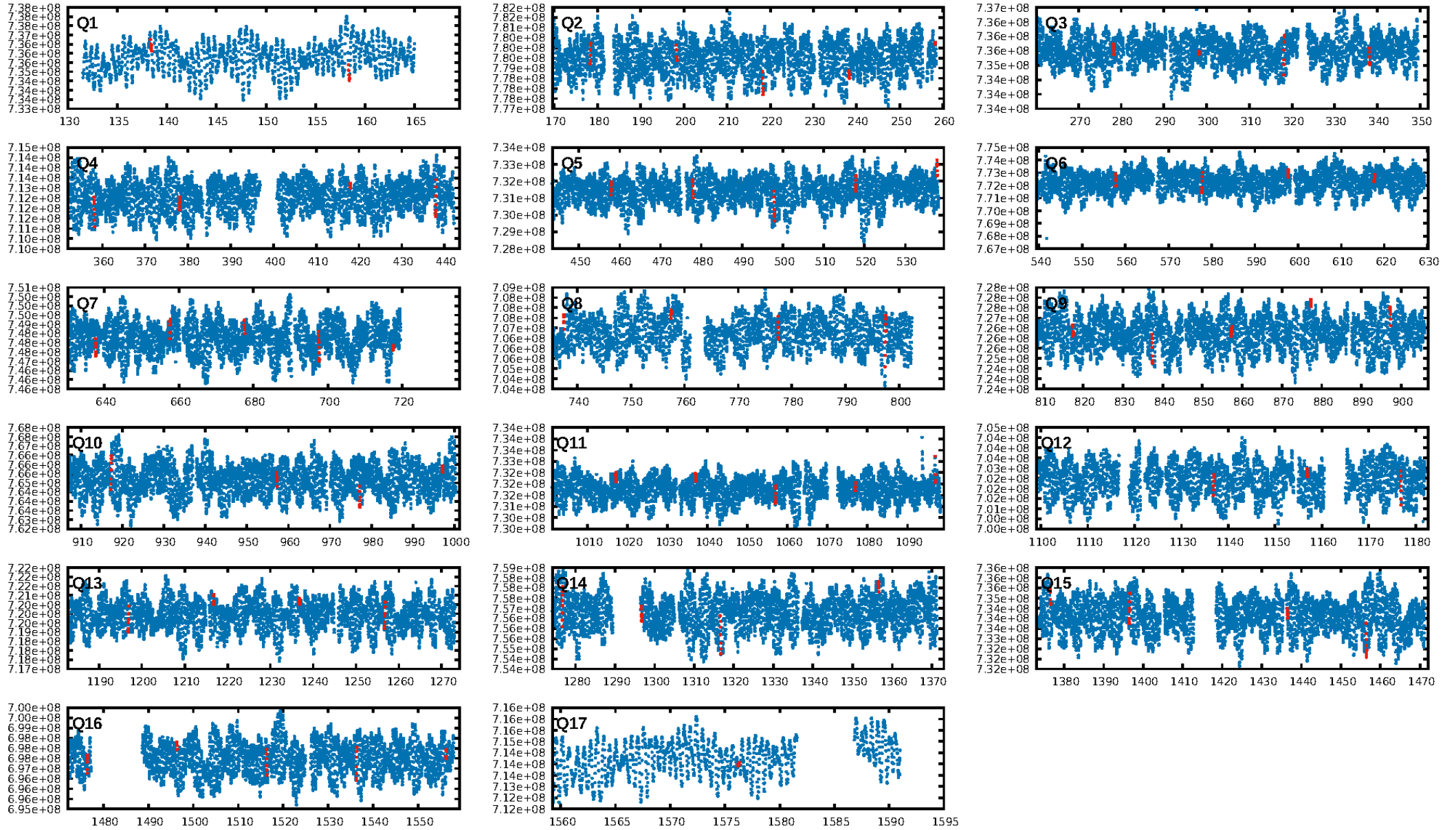
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [41.74 σ]
LongPeriod-sig: 99.9% [3.23 σ]
ModelChiSquare2-sig: 26.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.2331
Centroid-sig: 0.4%
Centroid-so: 0.412 arcsec [2.74 σ]
OotOffset-rm: 1.247 arcsec [2.22 σ]
KicOffset-rm: 1.313 arcsec [2.57 σ]
OotOffset-st: 4/2/4/5 [15]
KicOffset-st: 4/2/4/5 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 0.18 [3/17]

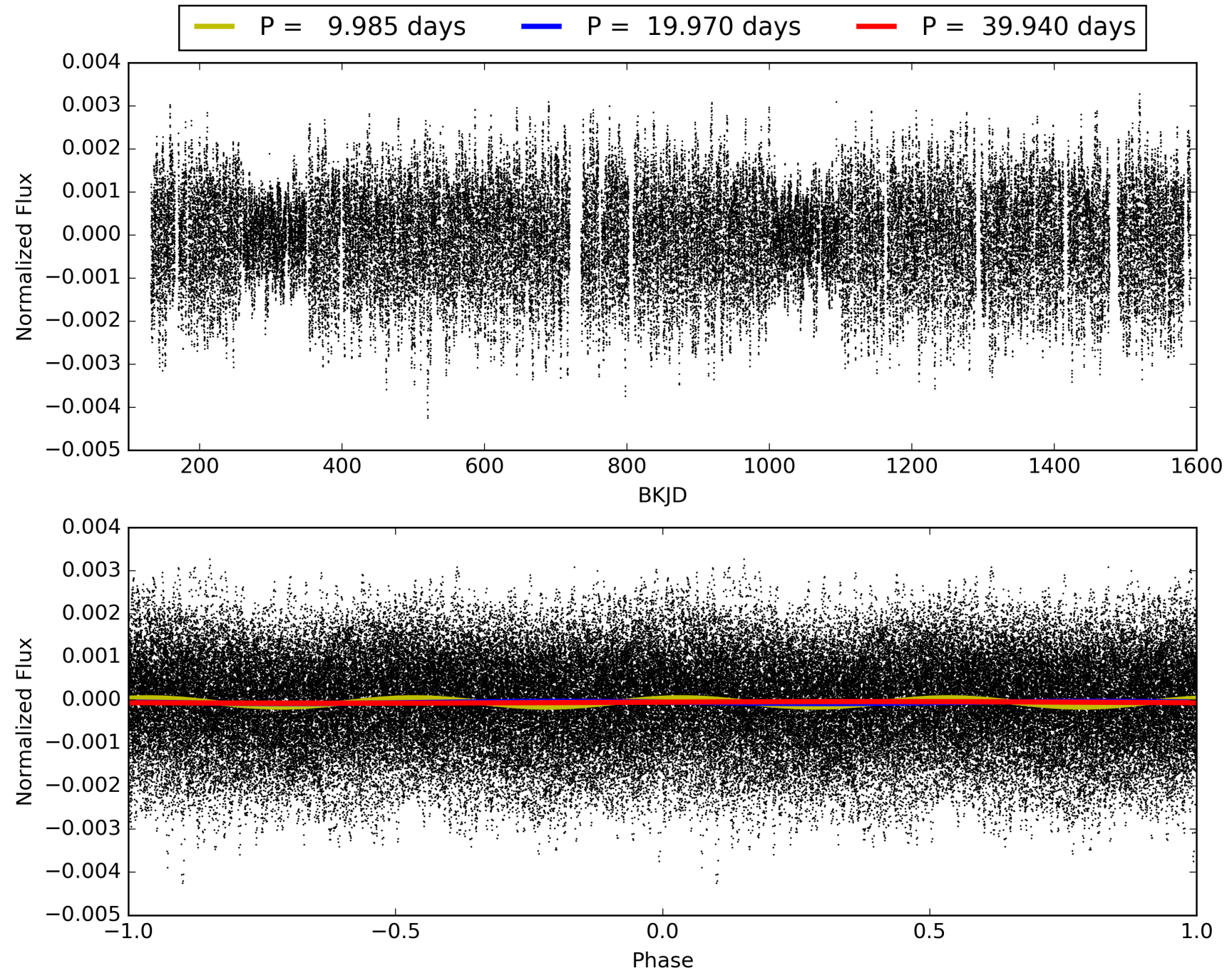
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:47 Z

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

TCE 006945362-07, PDC Light Curves

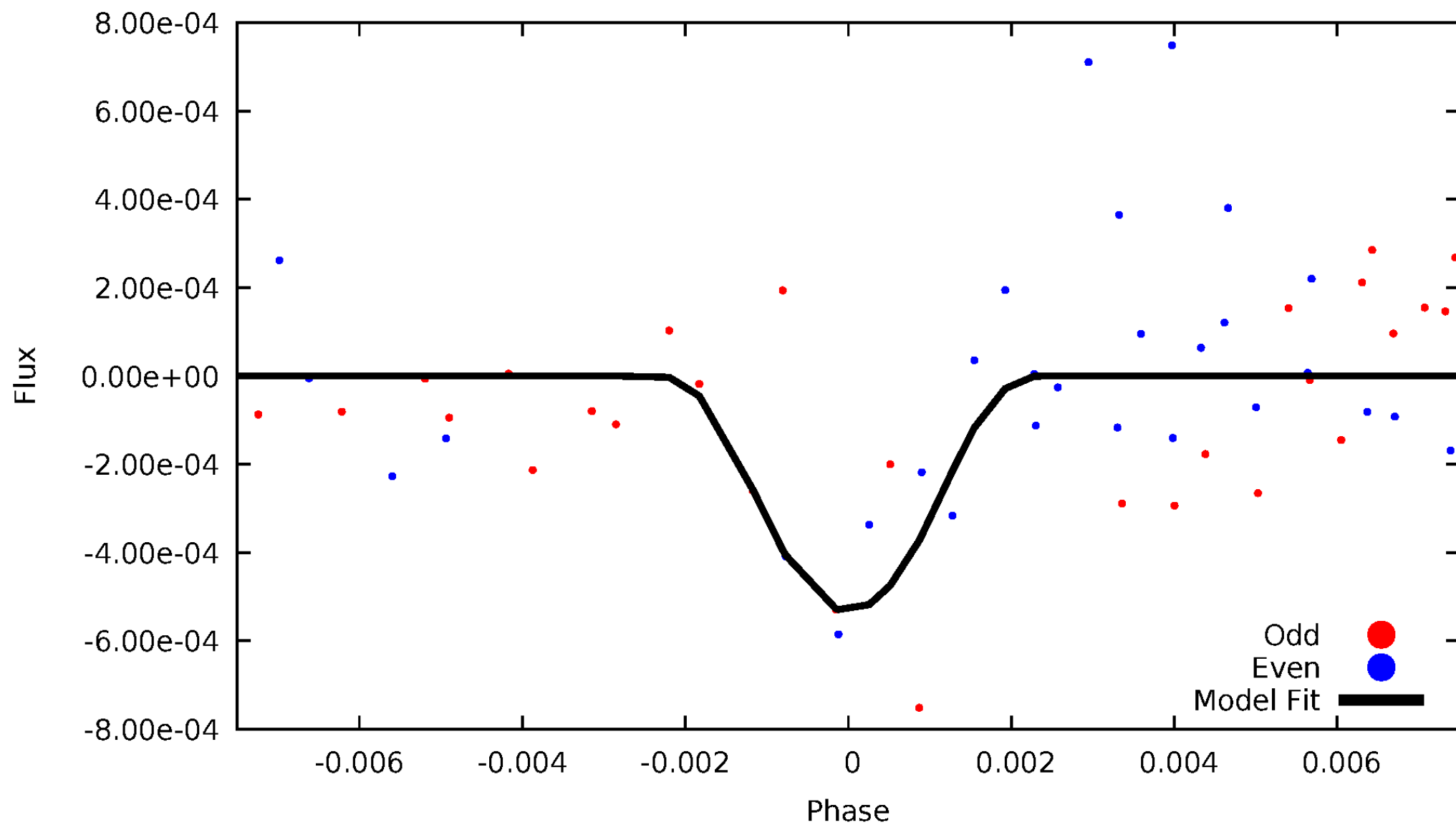


TCE 006945362-07



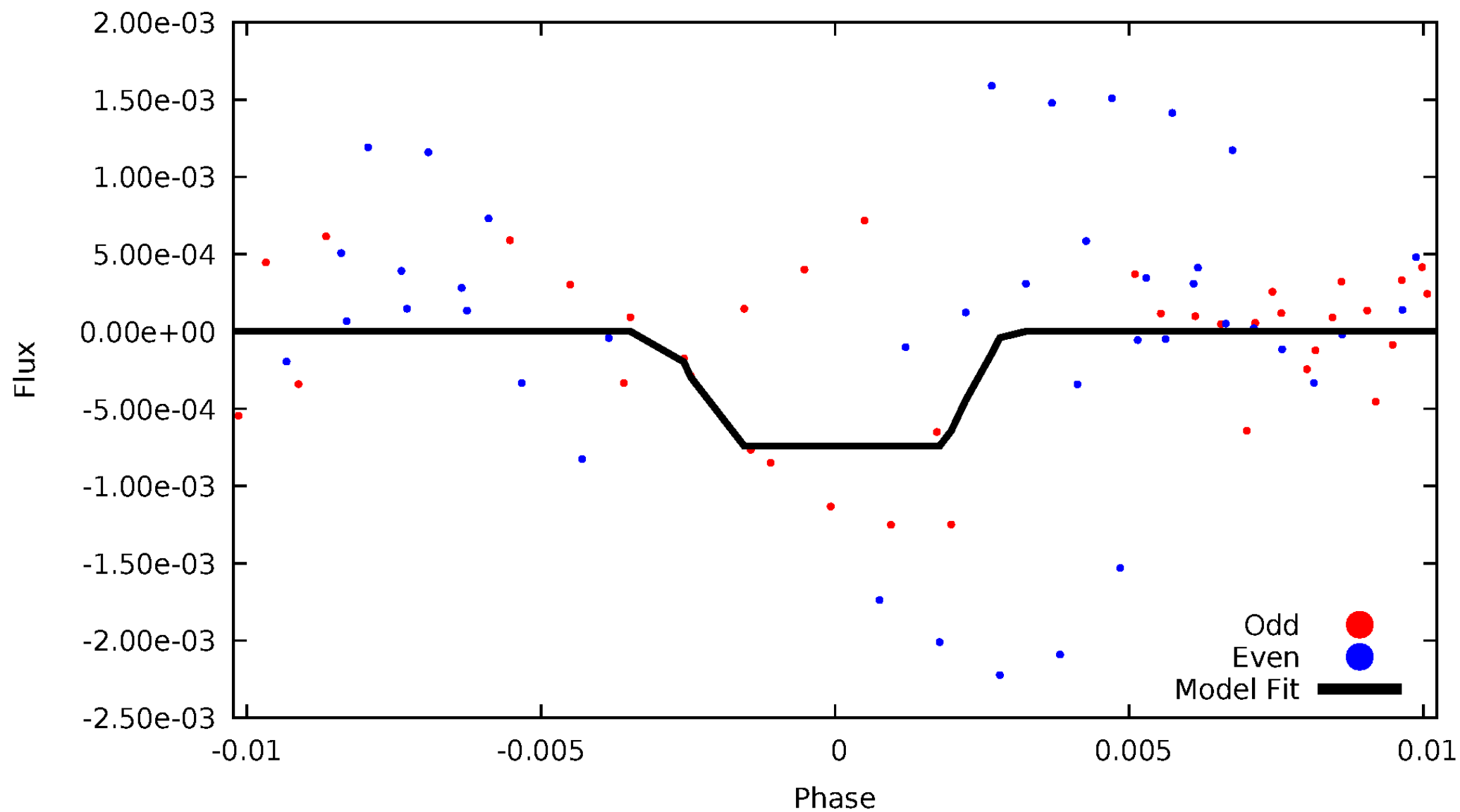
DV Odd/Even

TCE 006945362-07



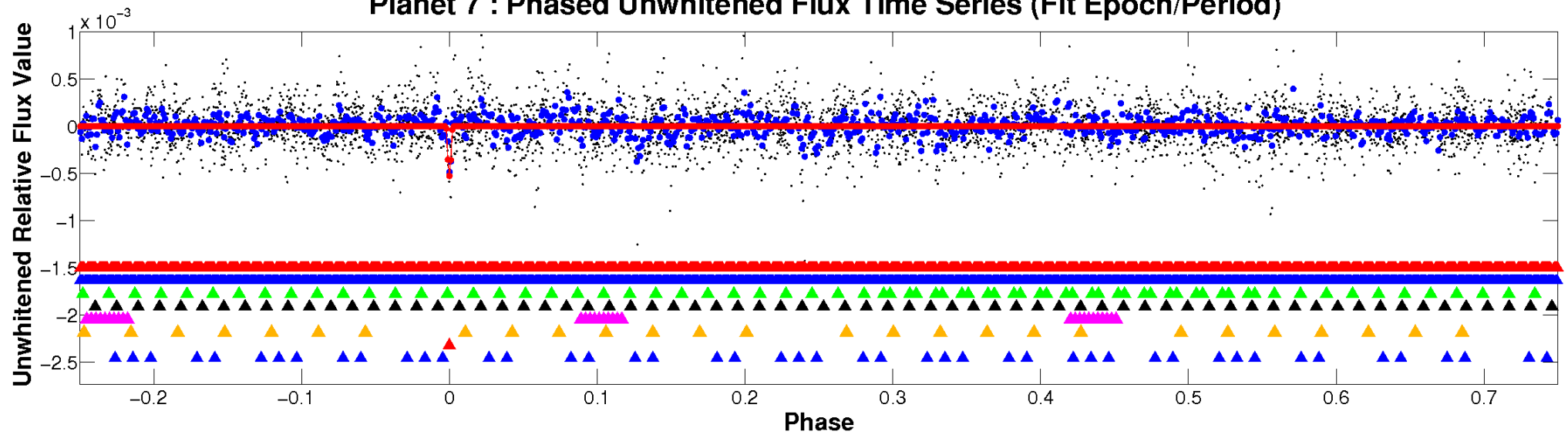
ALT Odd/Even

TCE 006945362-07

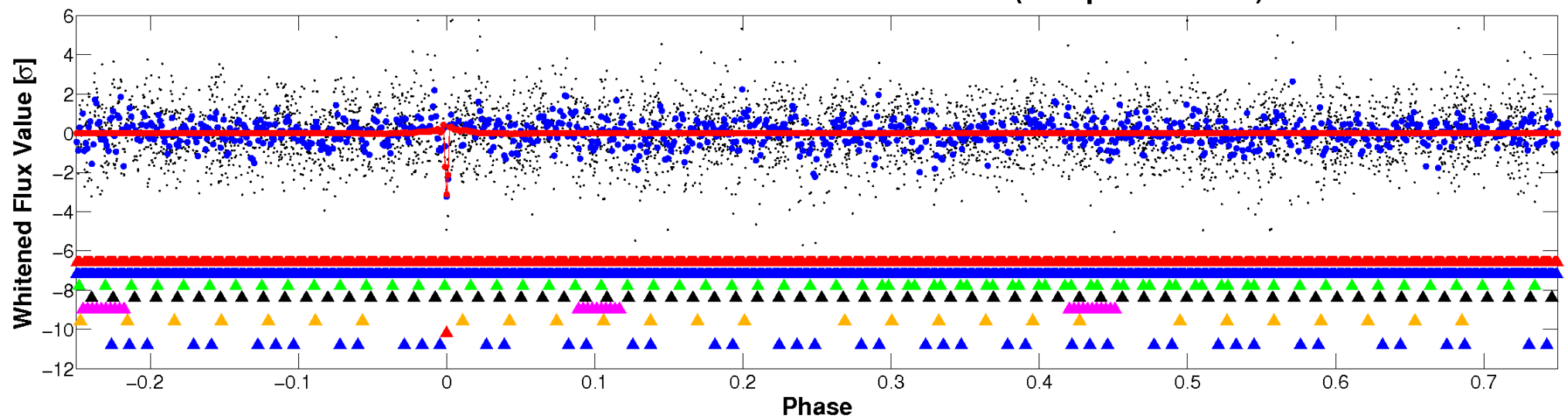


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

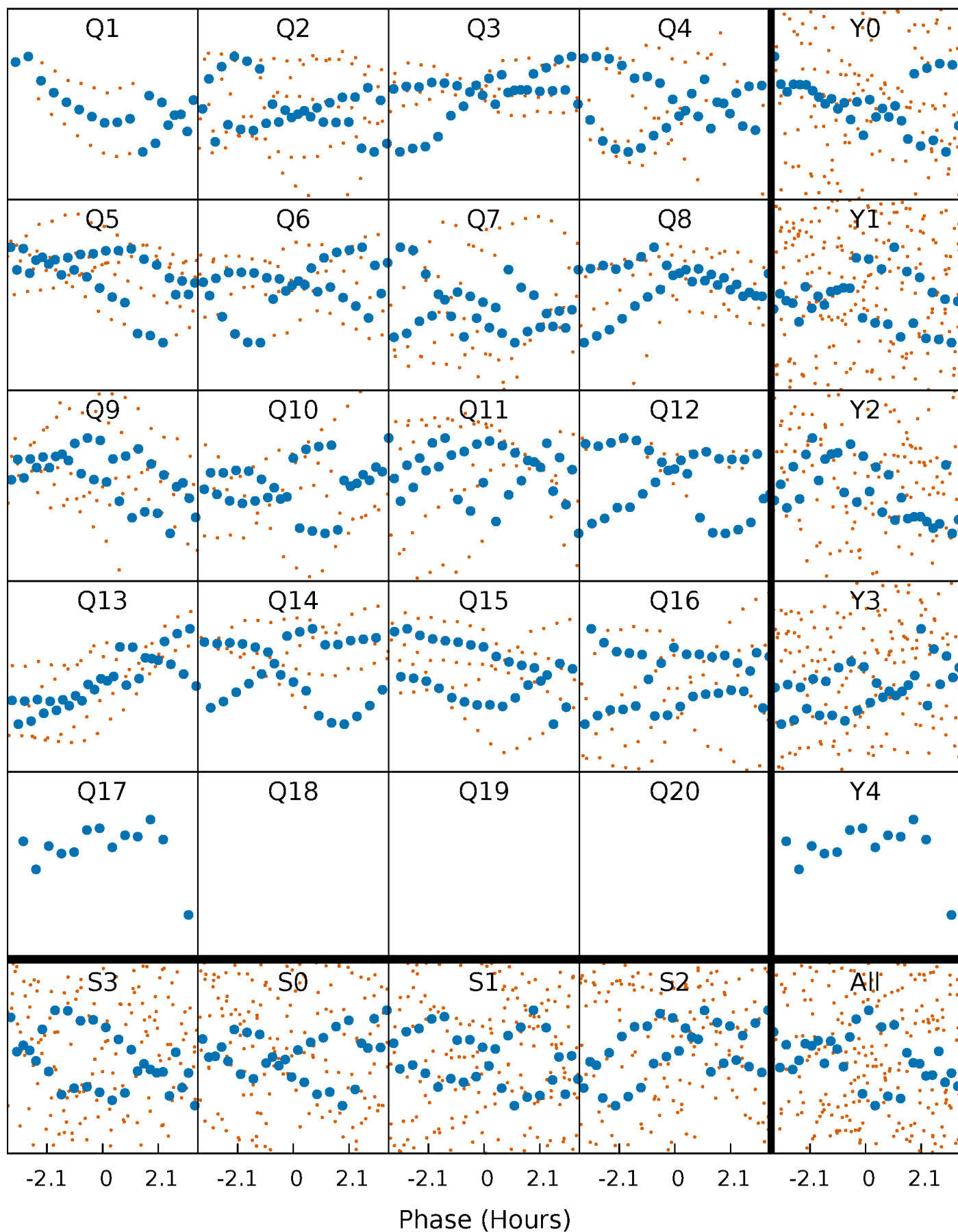


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



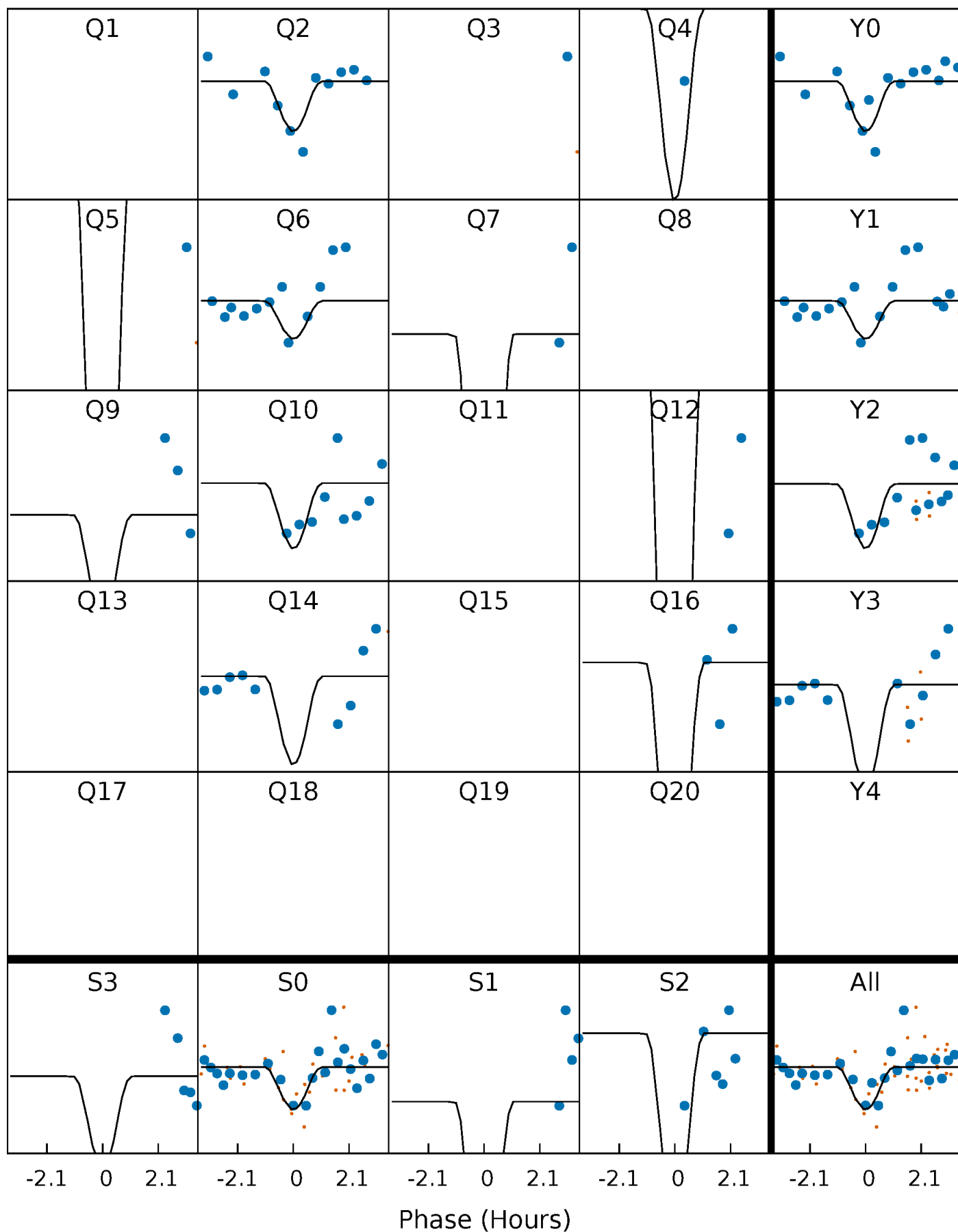
PDC Quarter-Phased Transit Curves

TCE 006945362-07 P= 19.970035 Days $T_0=138.412167$ (BKJD)



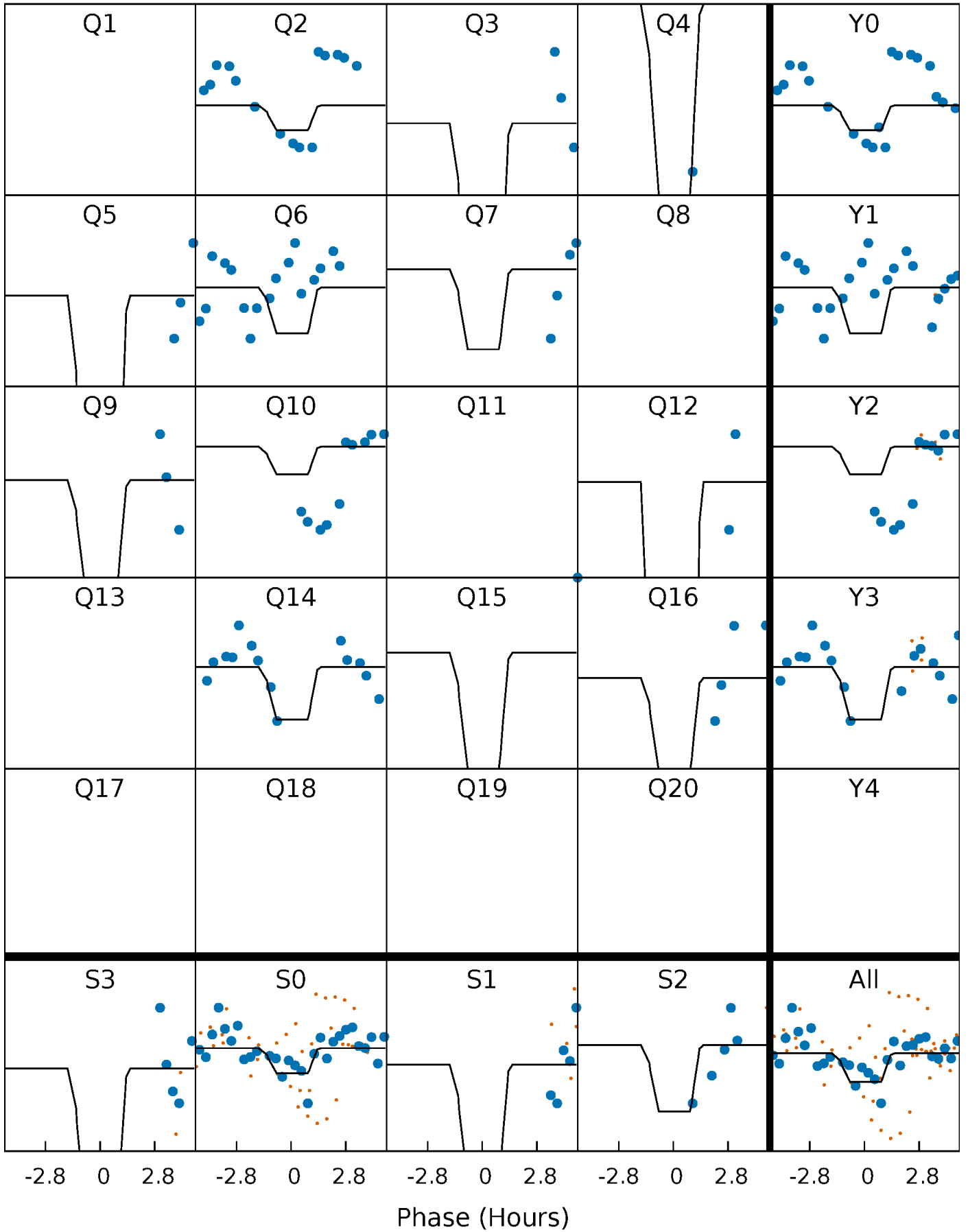
DV Quarter-Phased Transit Curves

TCE 006945362-07 P= 19.970035 Days $T_0=138.412167$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

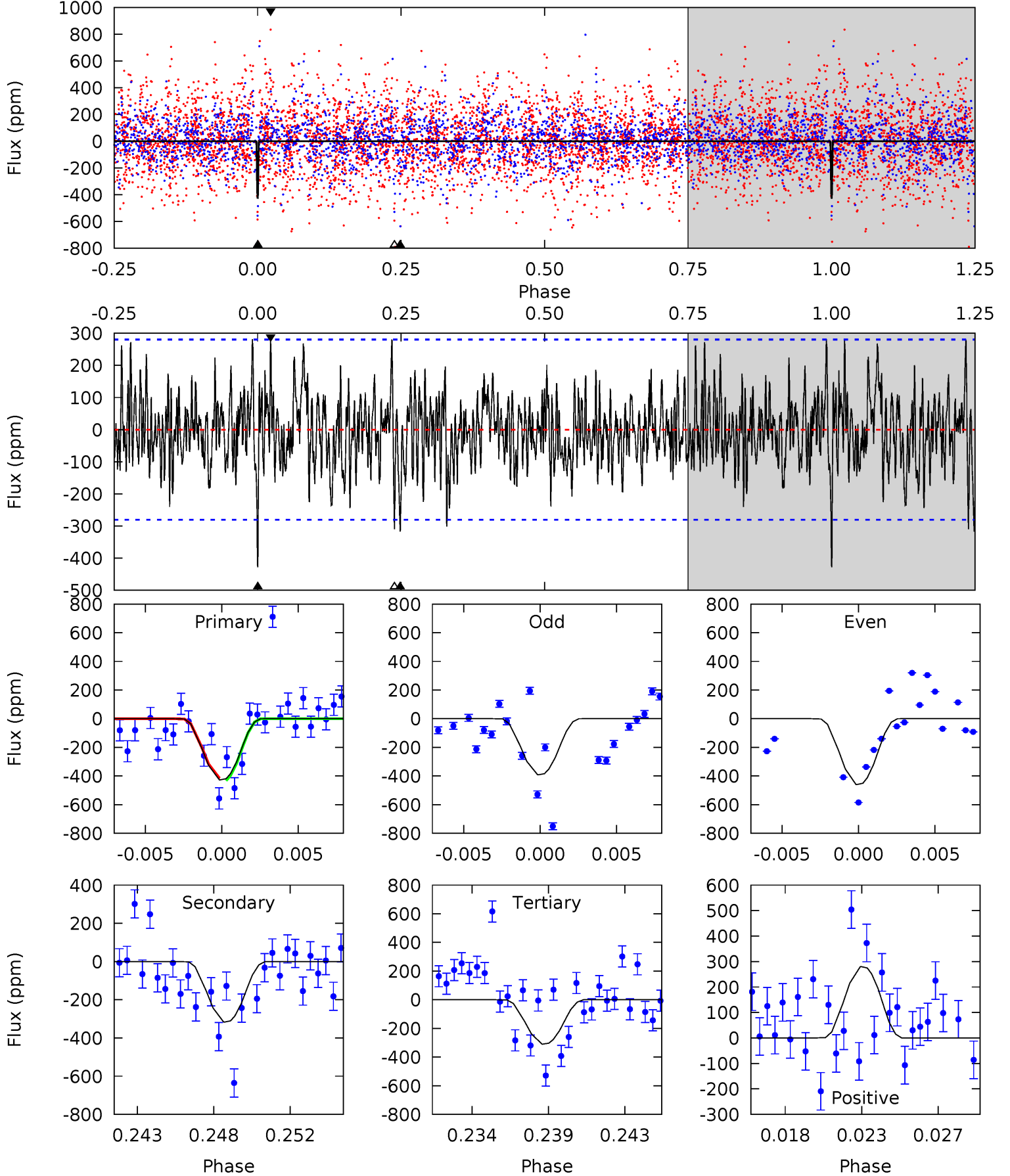
TCE 006945362-07 P= 19.969809 Days $T_0=138.391241$ (BKJD)



DV Model-Shift Uniqueness Test

006945362-07, $P = 19.970035$ Days, $E = 118.442132$ Days

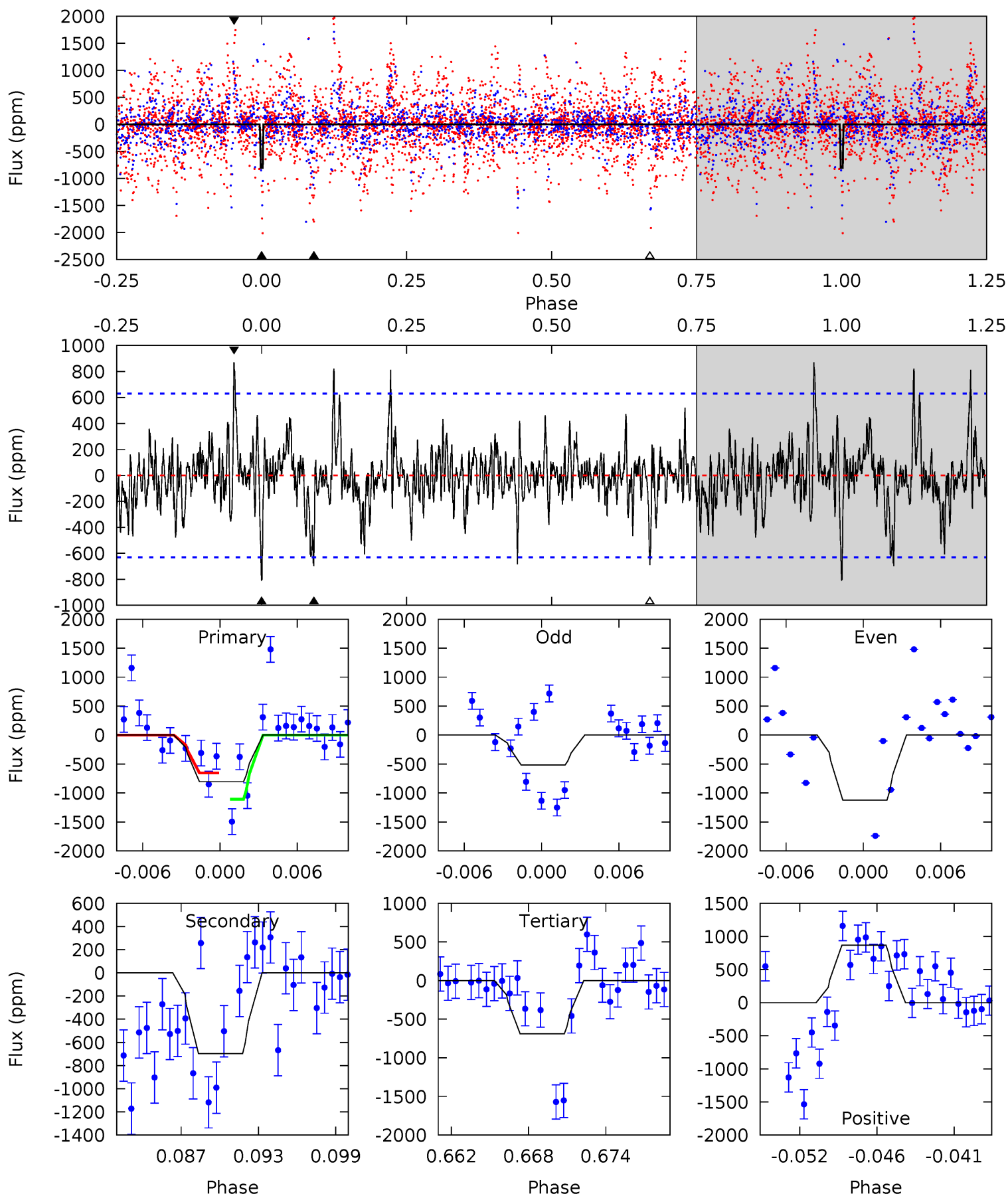
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.90	5.85	5.72	5.18	5.18	2.84	1.64	2.18	2.72	0.14	0.67	0.62	0.73	0.40	0.14



Alt Model-Shift Uniqueness Test

006945362-07, P = 19.969809 Days, E = 118.421432 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.55	5.67	5.62	7.06	5.13	2.76	1.45	0.93	-0.50	0.05	-1.38	2.28	0.91	0.52	1.81



Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-317 ± 54	$44.06^{+47.76}_{-30.92}$	1254^{+56}_{-35}	2479^{+1104}_{-511}	$2.168^{+22.069}_{-1.658}$
Alt.	-697 ± 123	$40.83^{+43.08}_{-28.31}$	1255^{+48}_{-34}	2851^{+1311}_{-527}	$5.816^{+55.499}_{-4.515}$

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 $A_{obs} \gg 1.0$

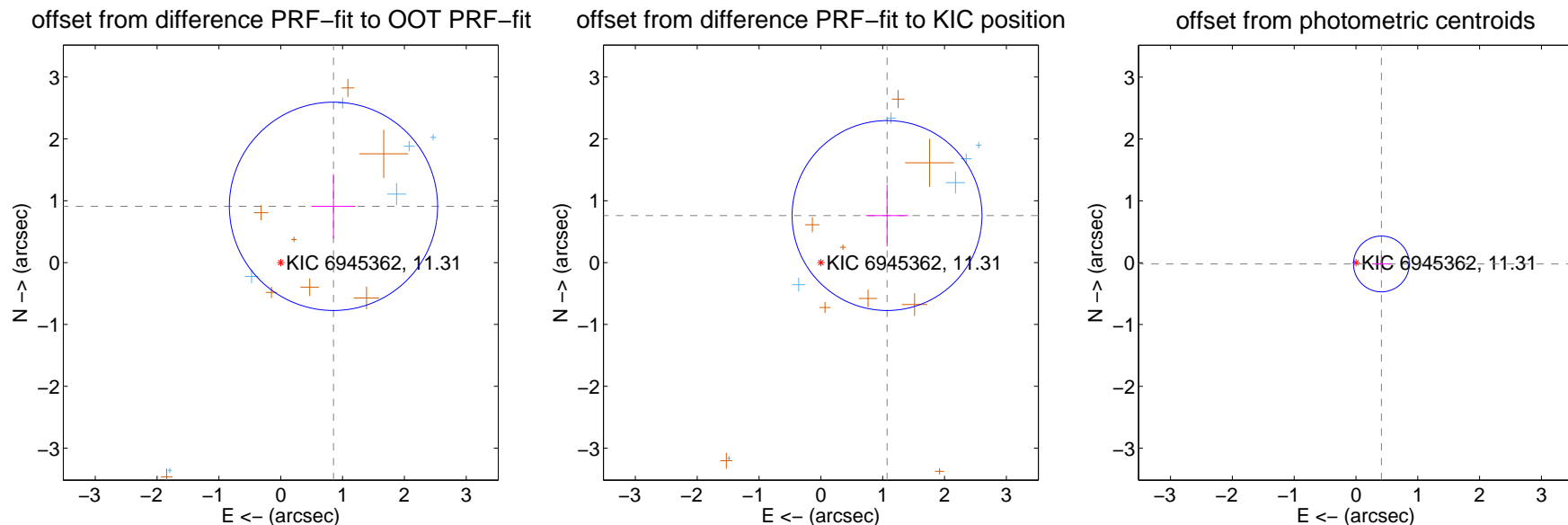
DV Centroid Data

Supplemental centroid analysis for 006945362-07. **Kepler magnitude: 11.31.** Transit SNR 7.36

There are 6 quarters with good PRF difference image offsets

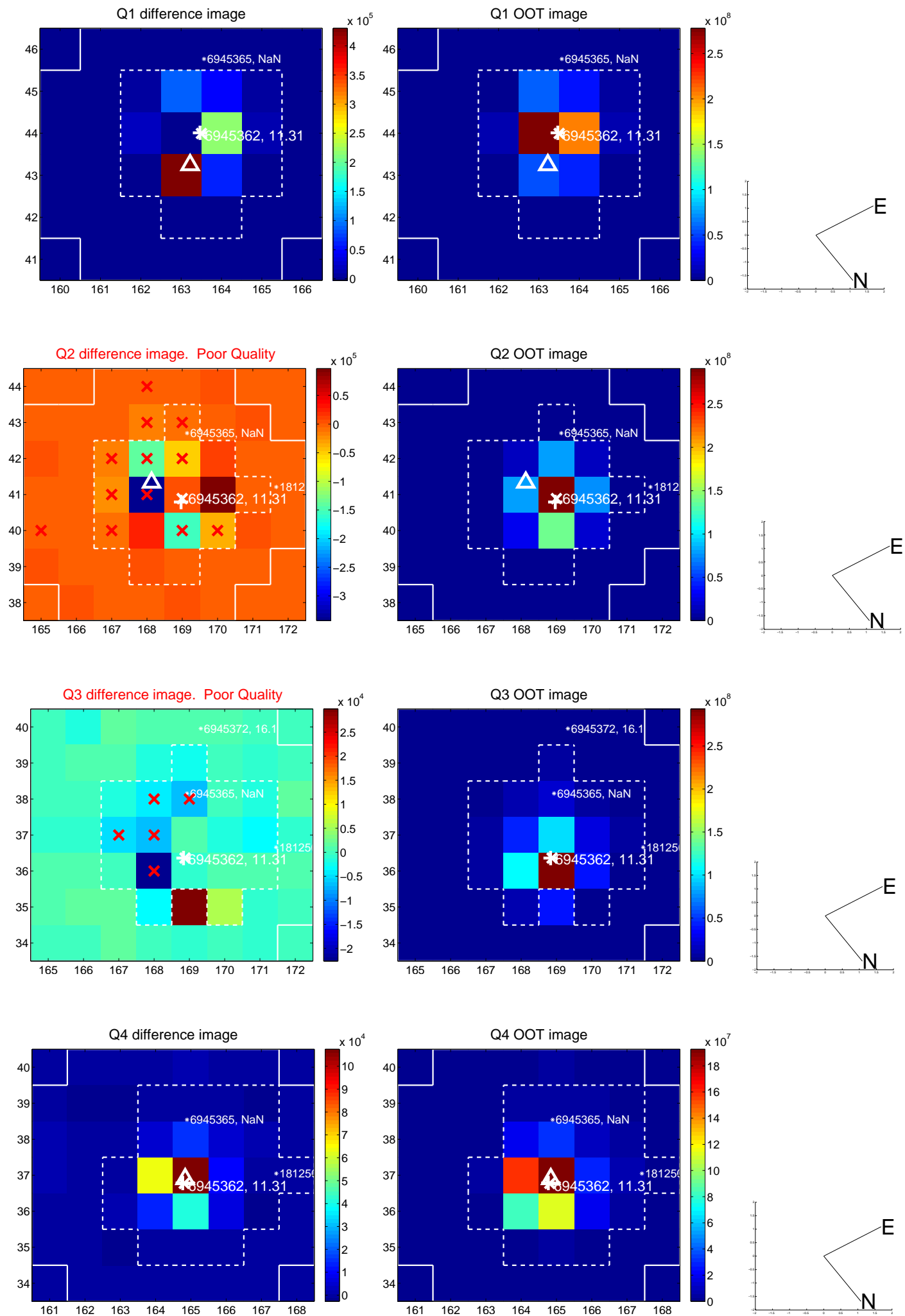
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.247 ± 0.561	2.22	-0.853 ± 0.357	0.910 ± 0.521
PRF-fit source offset from KIC position	1.313 ± 0.512	2.57	-1.071 ± 0.343	0.761 ± 0.498
photometric centroid source offset	0.41 ± 0.15	2.74	-0.41 ± 0.15	-0.02 ± 0.14

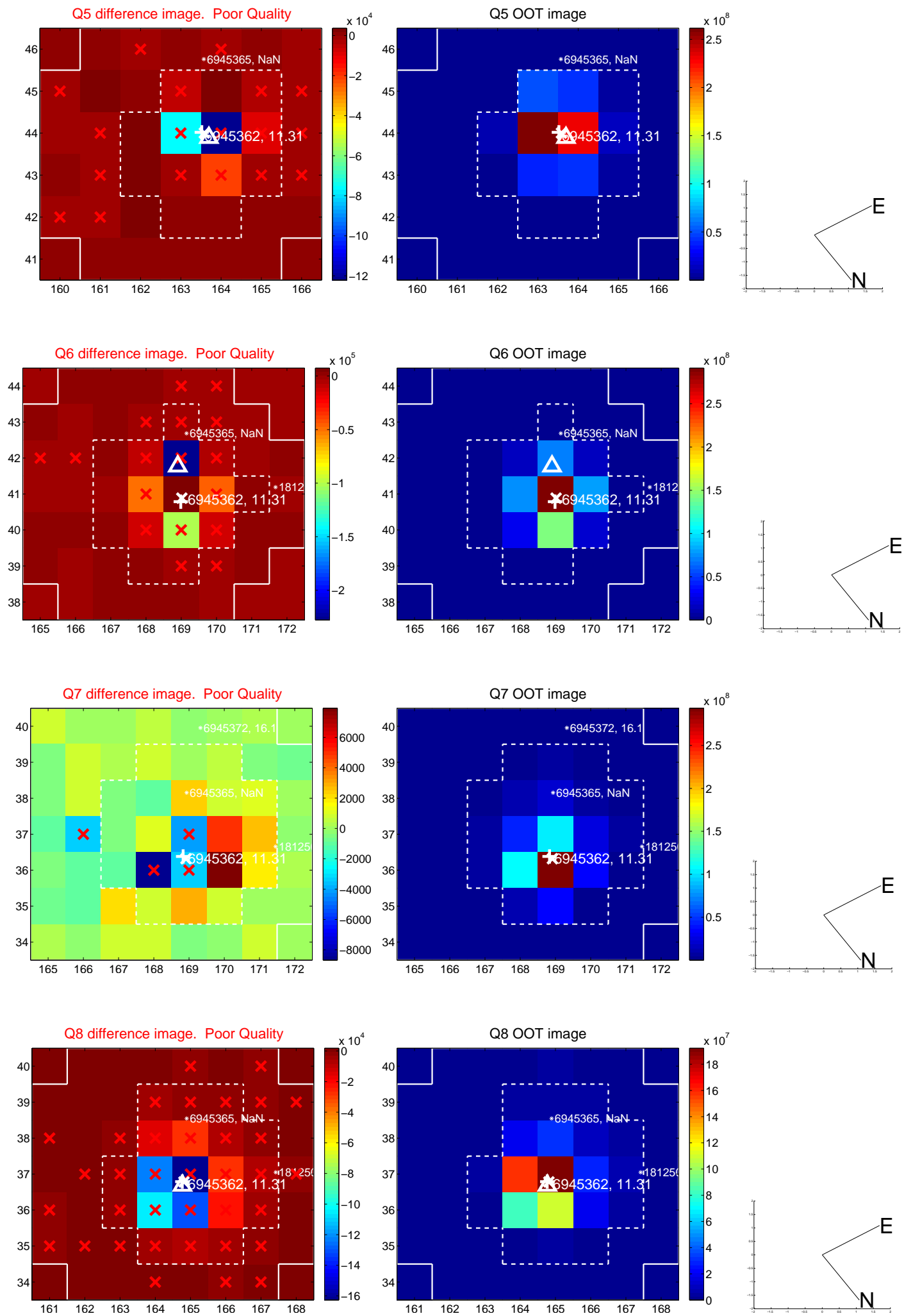


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

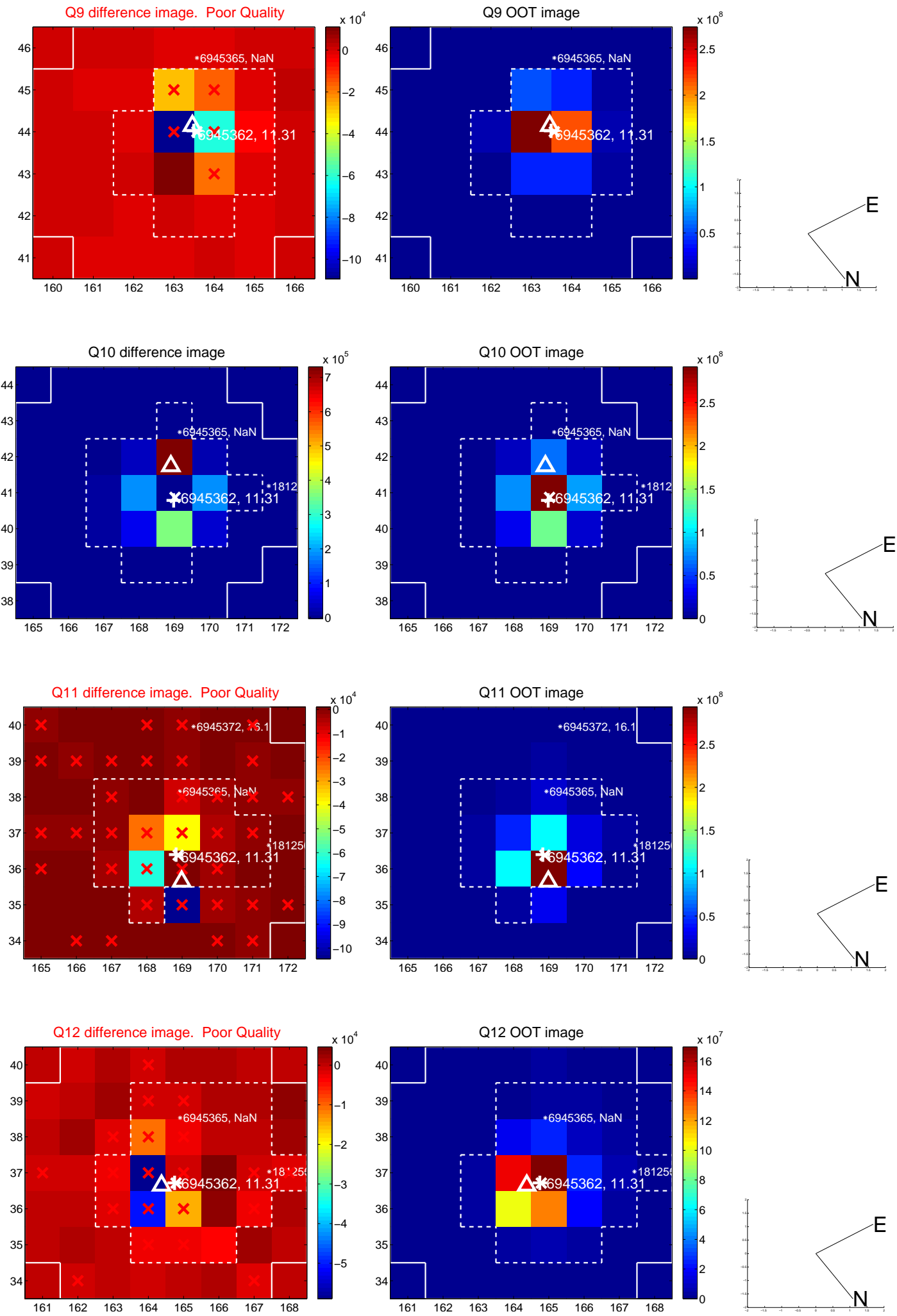
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



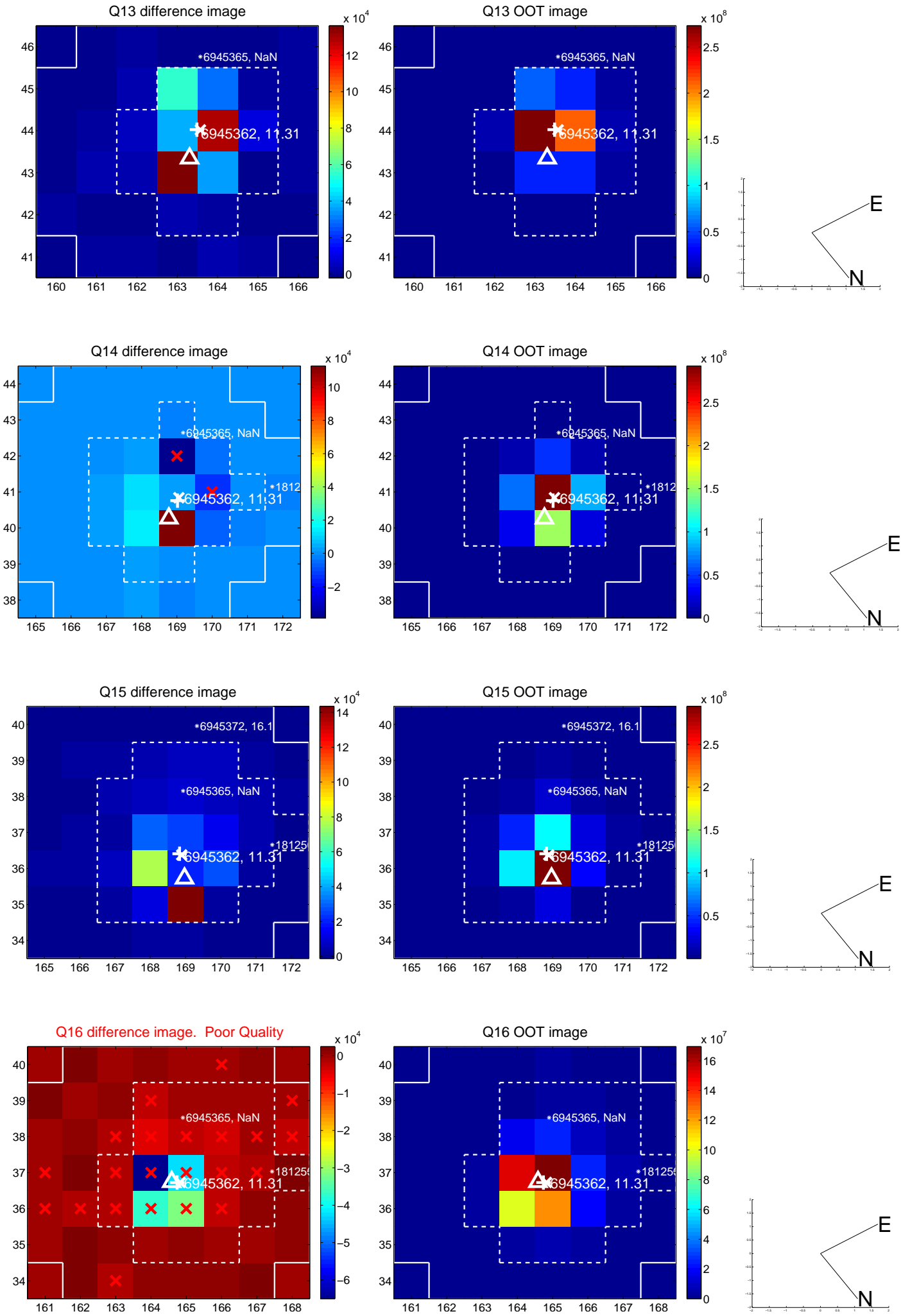
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



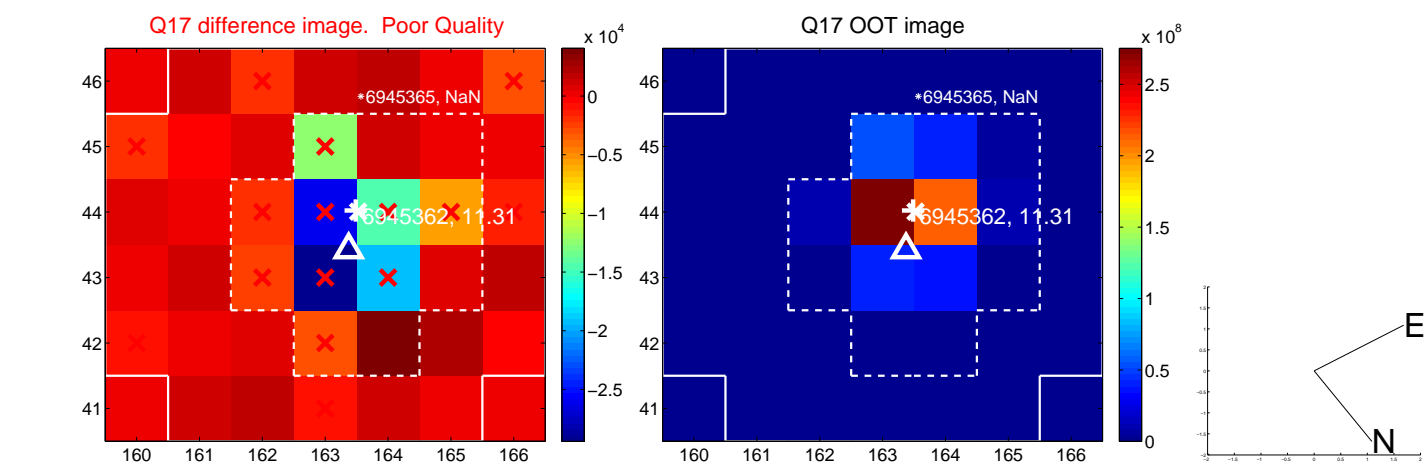
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



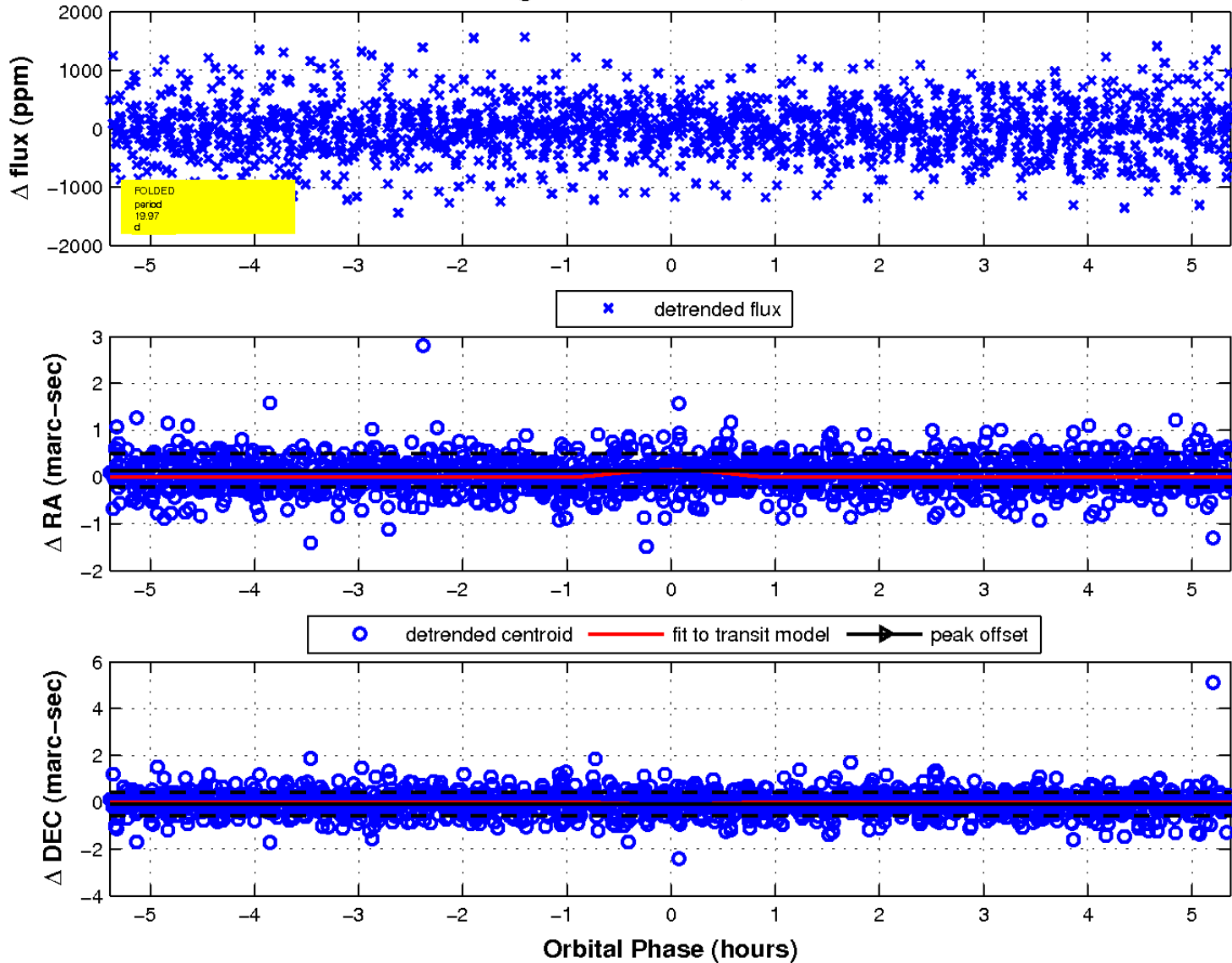
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

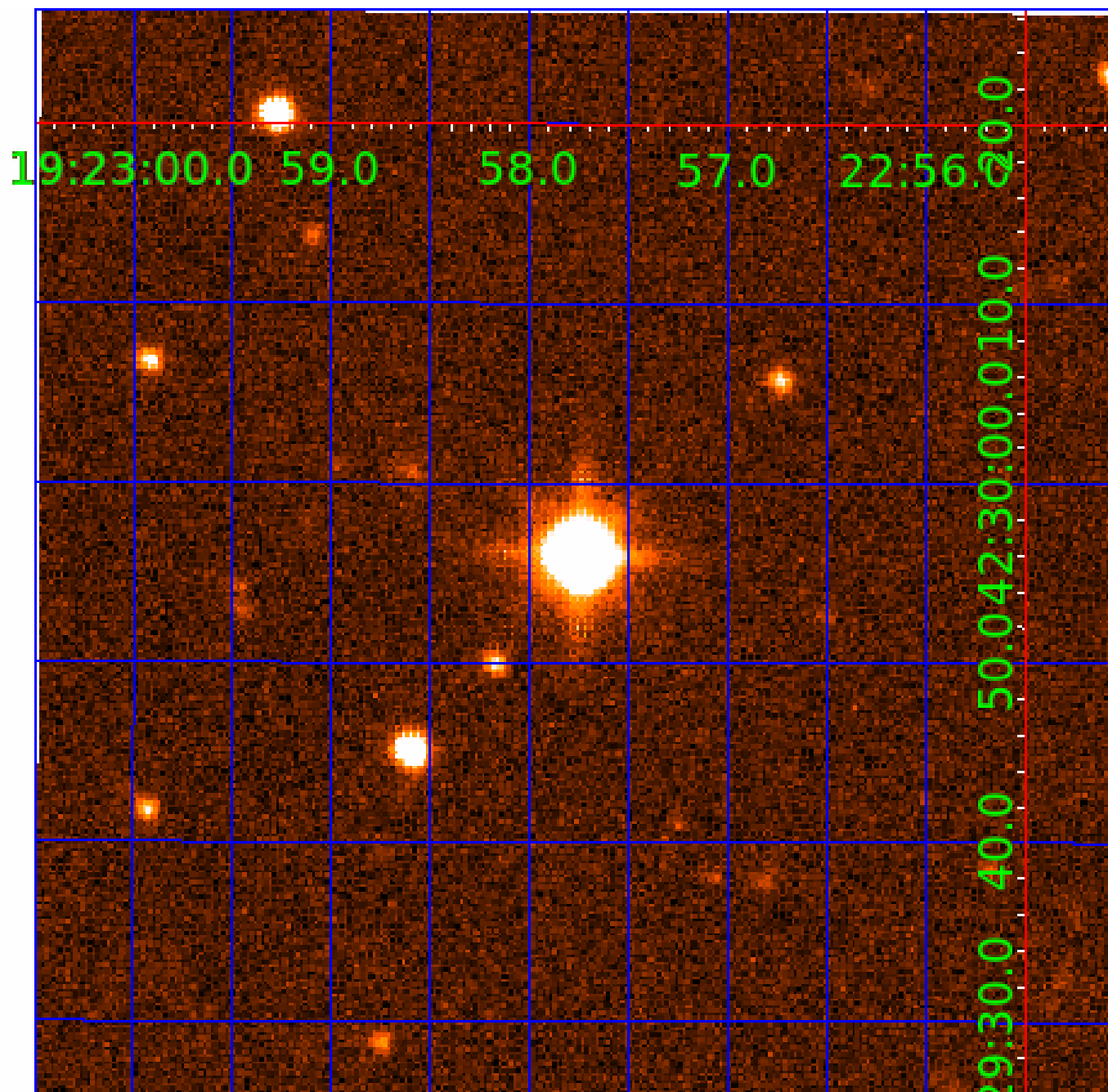


fluxWeightedCentroids, Planet 7 of 8



UKIRT Image

Declination



KIC 006945362

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})
006945362-01	OBS	No	0.958483	132.359063	34.0	1.966	9.3	8.8	1.46	6688	0.99	8740.48
006945362-02	OBS	No	0.912283	131.949778	10.0	6.329	8.8	2.0	1.46	6688	0.48	9335.59
006945362-03	OBS	No	20.321891	144.281723	421.4	1.901	11.3	9.4	1.46	6688	3.02	148.95
006945362-04	OBS	No	16.207530	140.865000	438.9	1.204	10.3	7.5	1.46	6688	3.50	201.38
006945362-05	OBS	No	46.617212	146.806365	839.0	10.560	10.2	12.0	1.46	6688	8.00	49.23
006945362-06	OBS	No	54.759269	142.427862	656.2	6.184	10.2	10.0	1.46	6688	4.81	39.72
006945362-07	OBS	No	19.970035	138.412167	532.2	1.797	10.0	7.4	1.46	6688	6.29	152.46
006945362-08	OBS	No	30.941535	143.375780	147.0	2.000	9.5	-1.0	1.46	6688	1.79	85.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945362-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006945362-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006945362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—CENT_SATURATED—HALO_GHOST
006945362-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006945362-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
006945362-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006945362-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

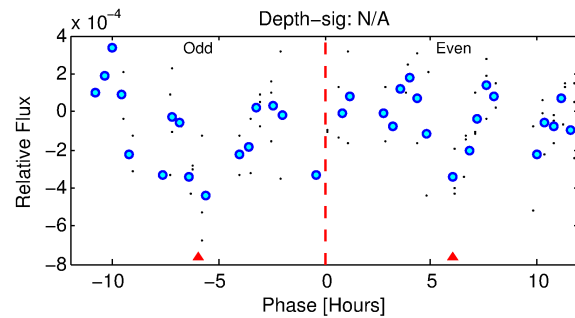
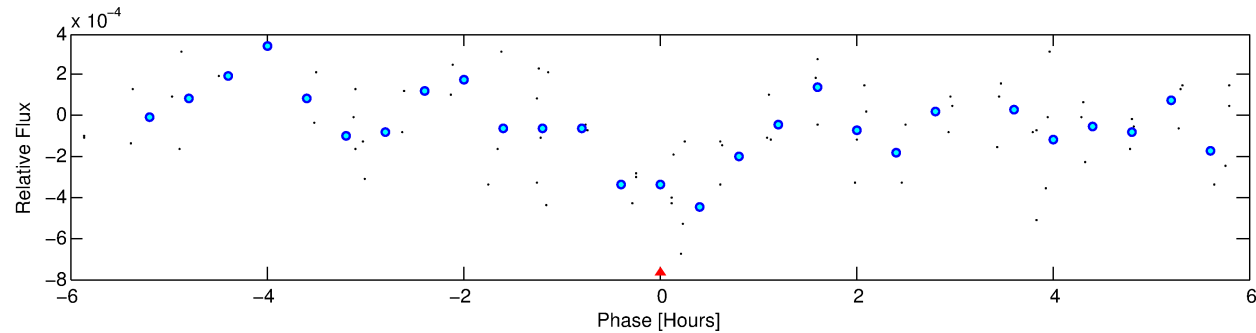
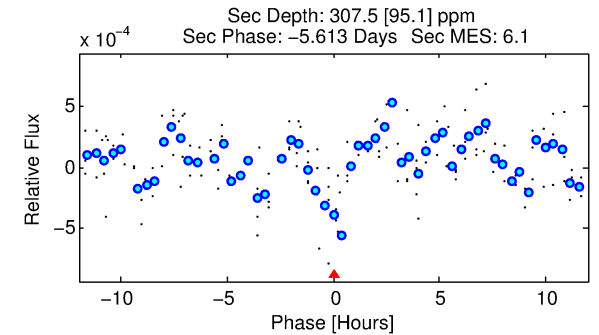
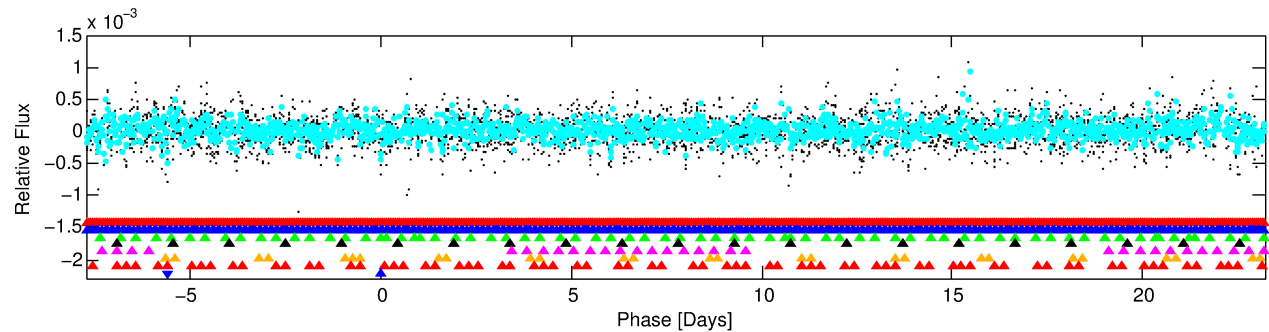
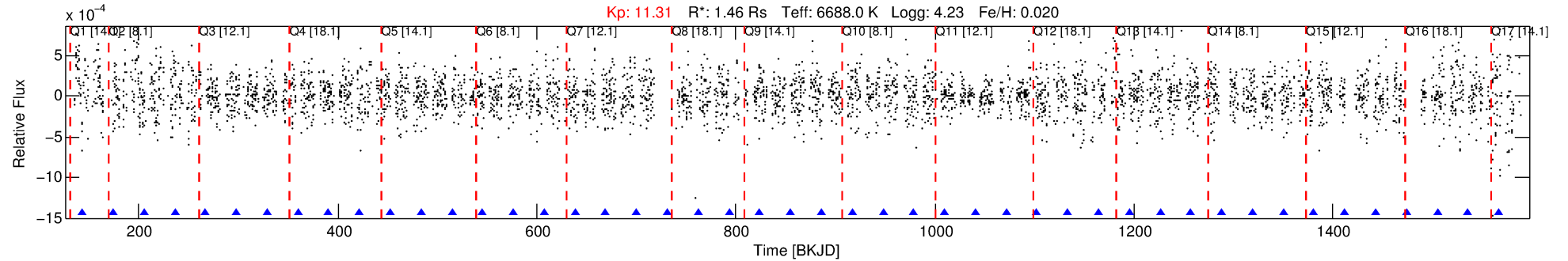
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945362-08

No Significant Match Found

DV One-Page Summary

KIC: 6945362 Candidate: 8 of 8 Period: 30.942 d



TPS TCE Results:

Period = 30.94153 d
Epoch = 143.3758 BKJD

DV fit results are unavailable

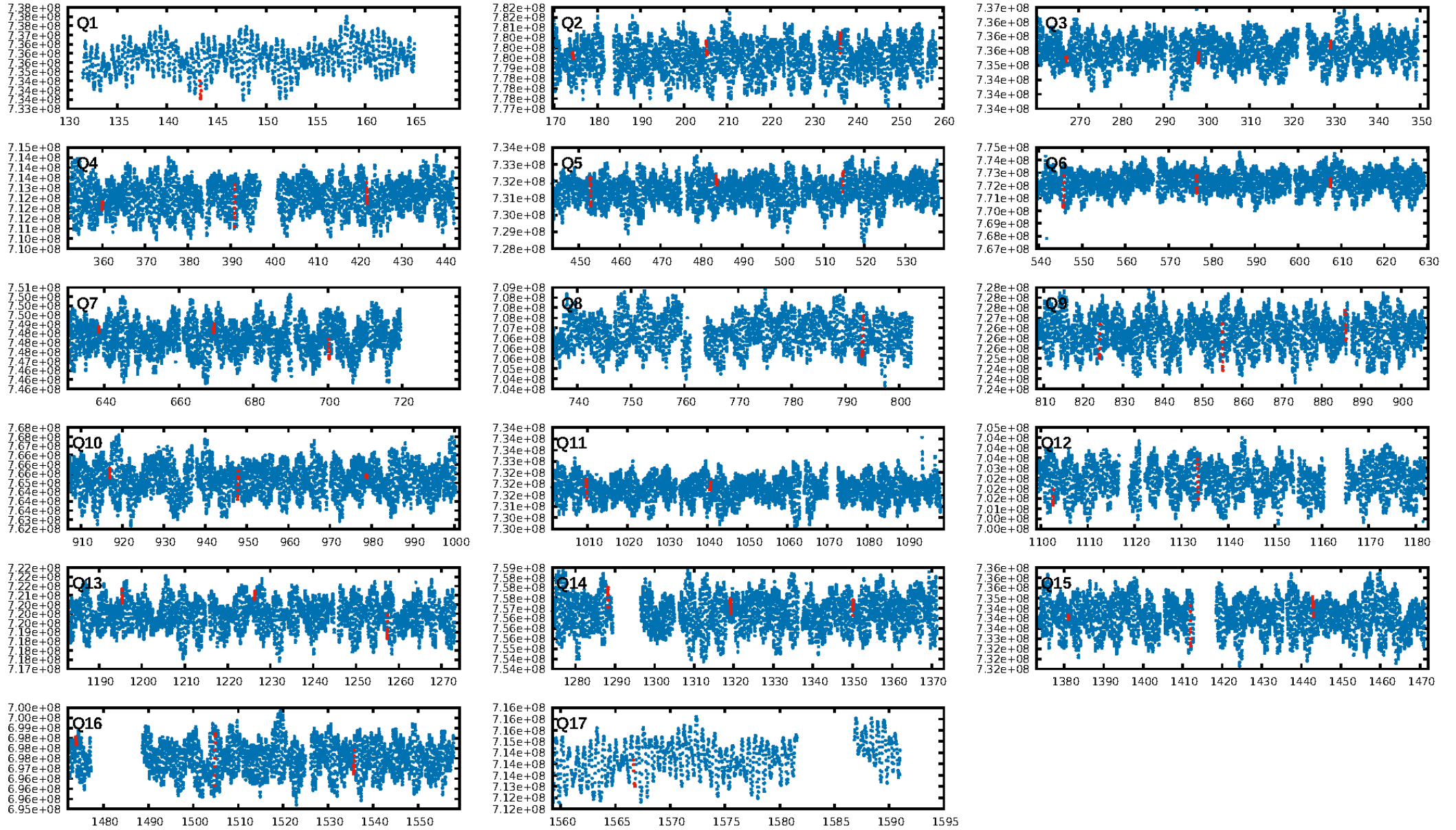
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.36σ]
LongPeriod-sig: 100.0% [35.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: N/A
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
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: N/A

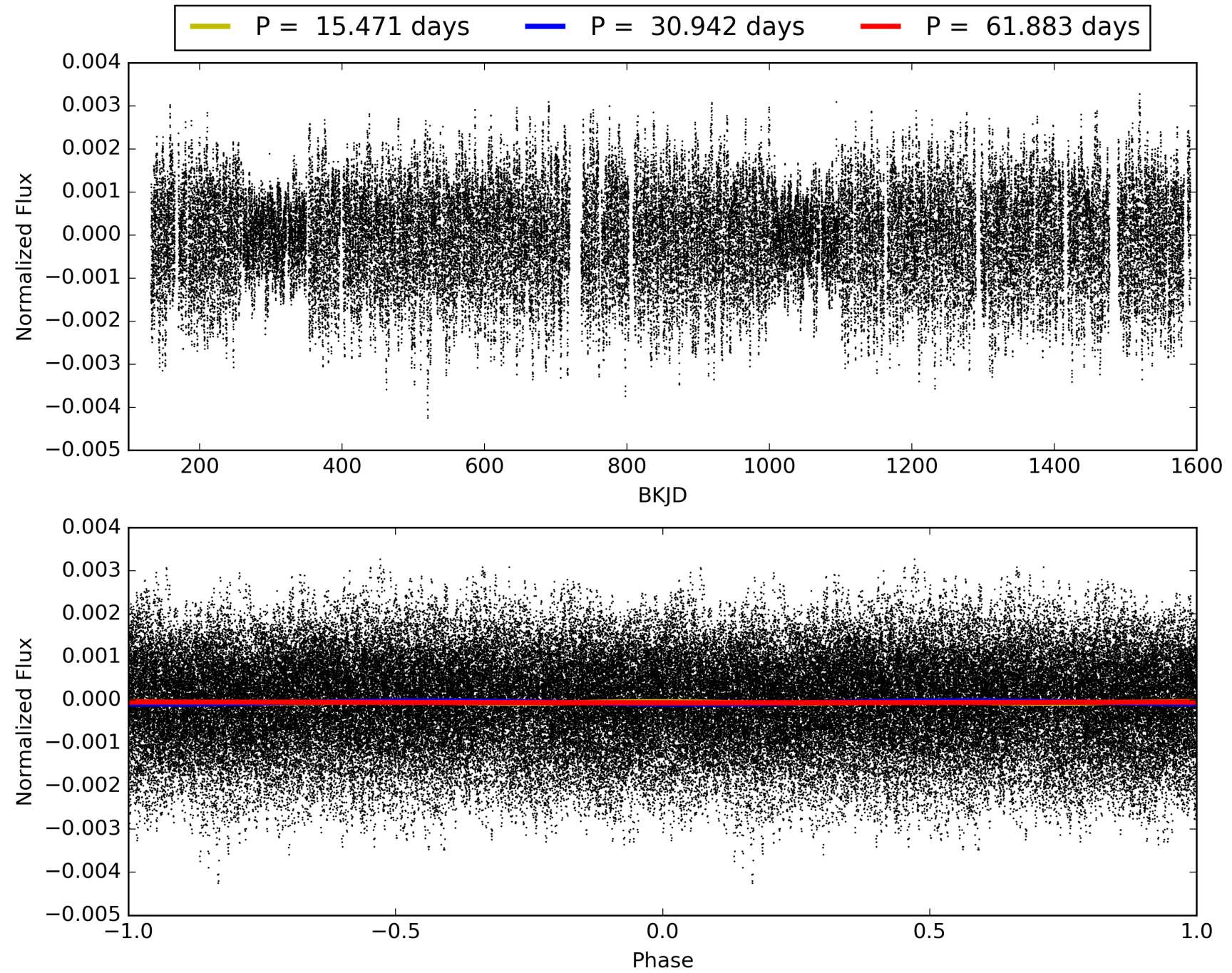
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:35:50 Z

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

TCE 006945362-08, PDC Light Curves

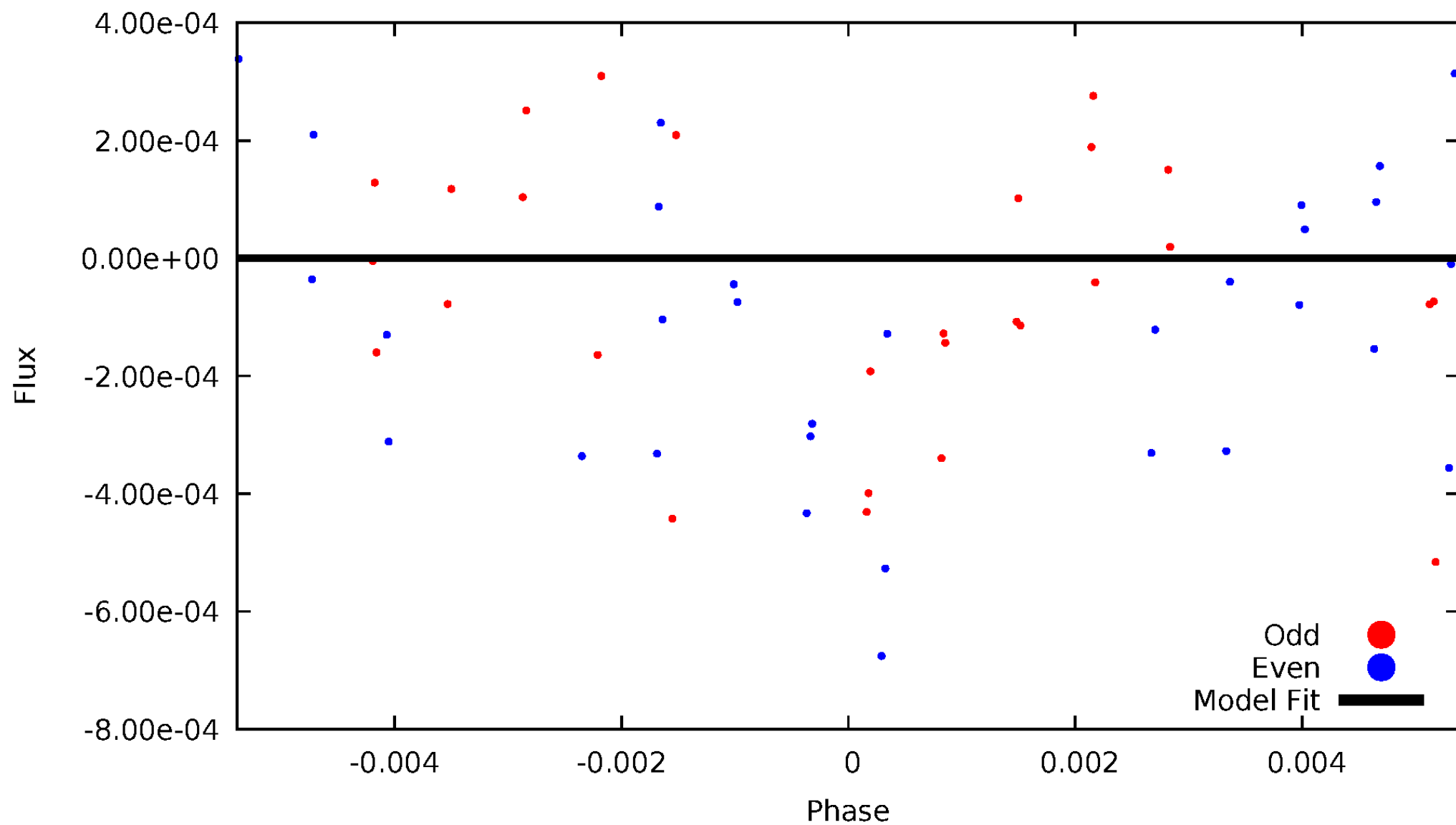


TCE 006945362-08



DV Odd/Even

TCE 006945362-08

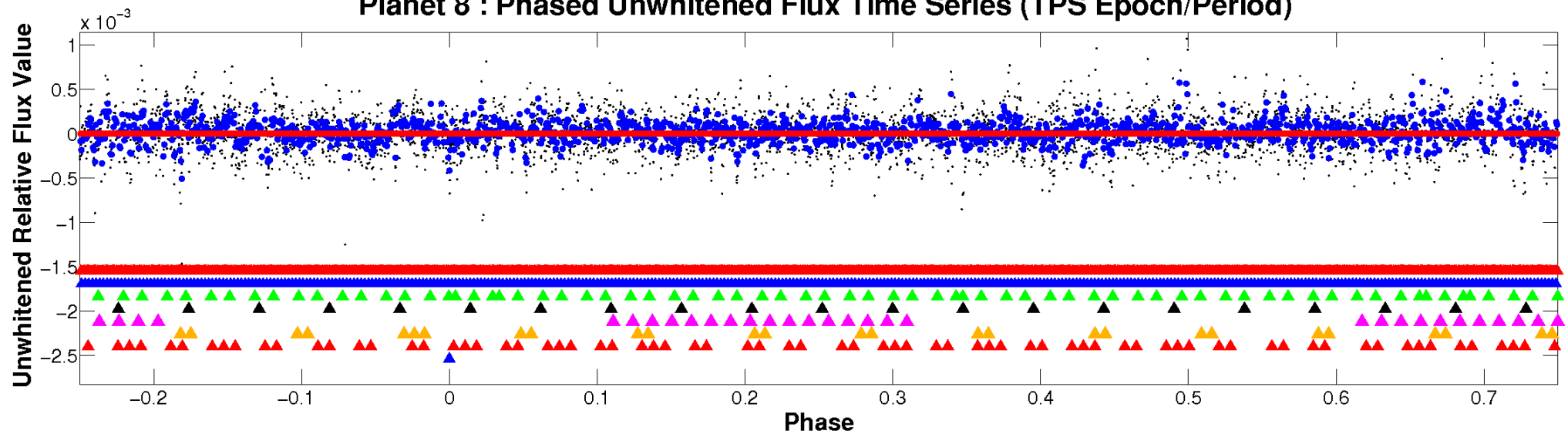


ALT Odd/Even

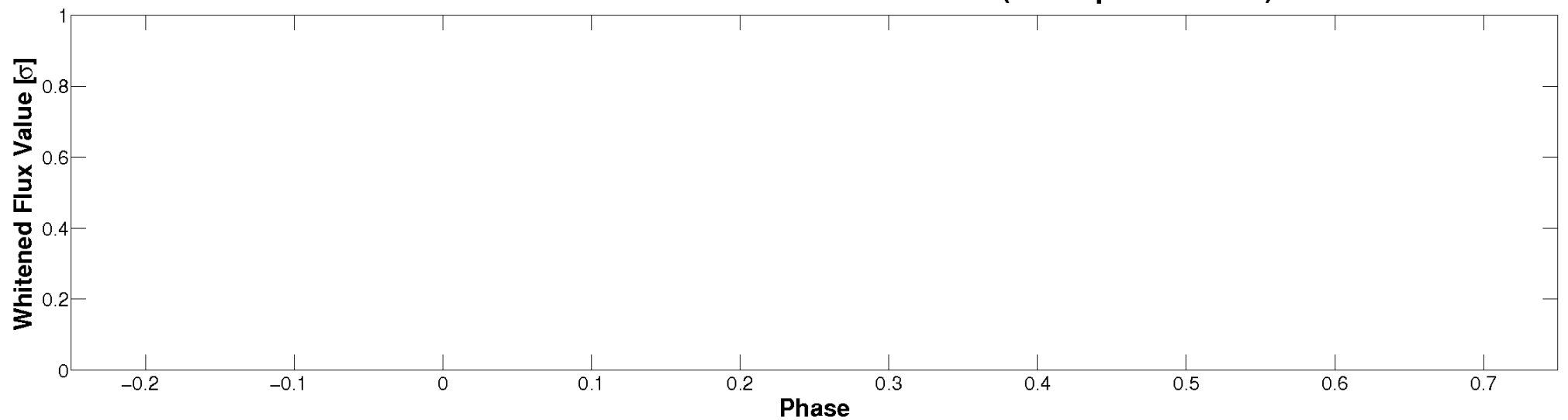
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

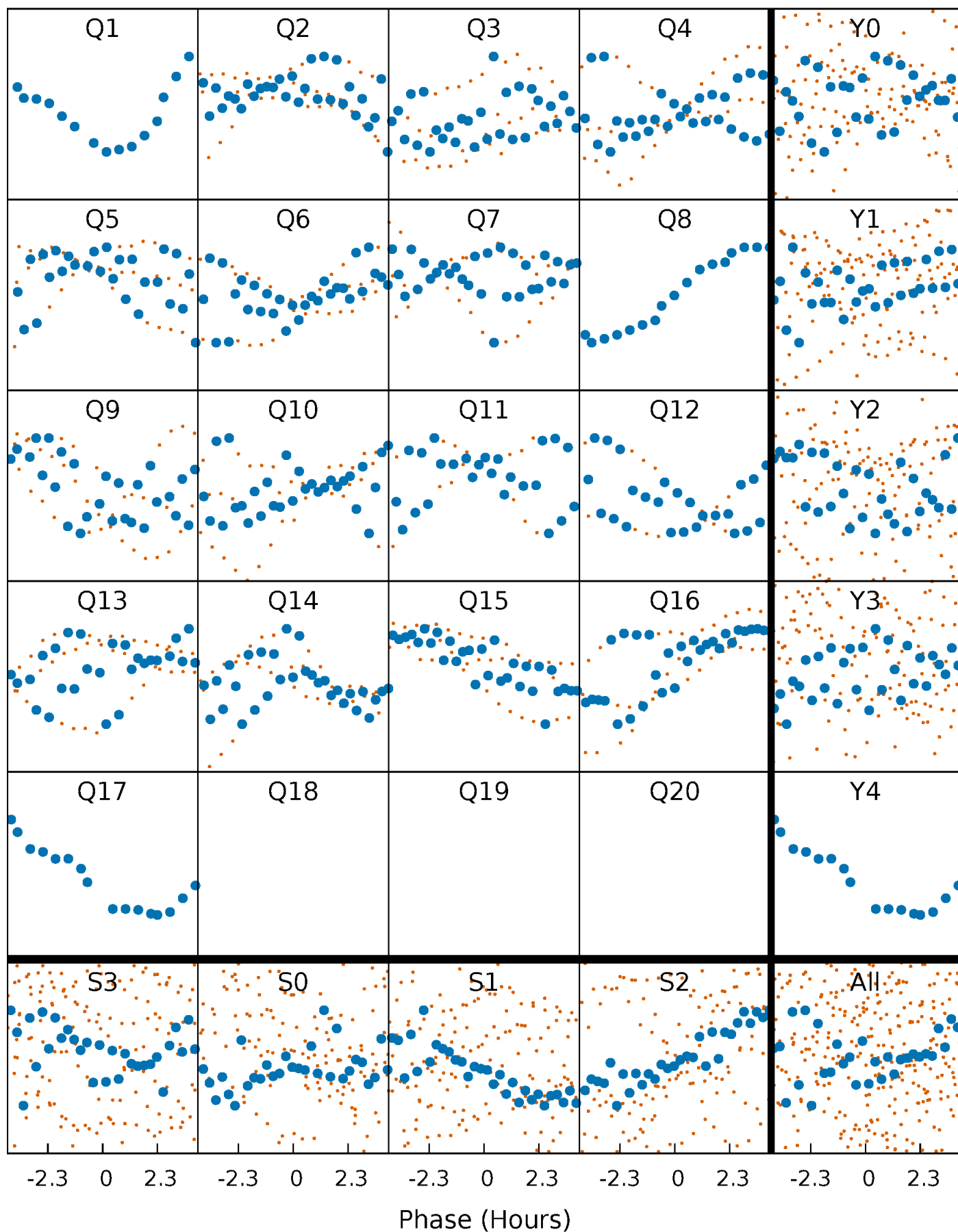


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



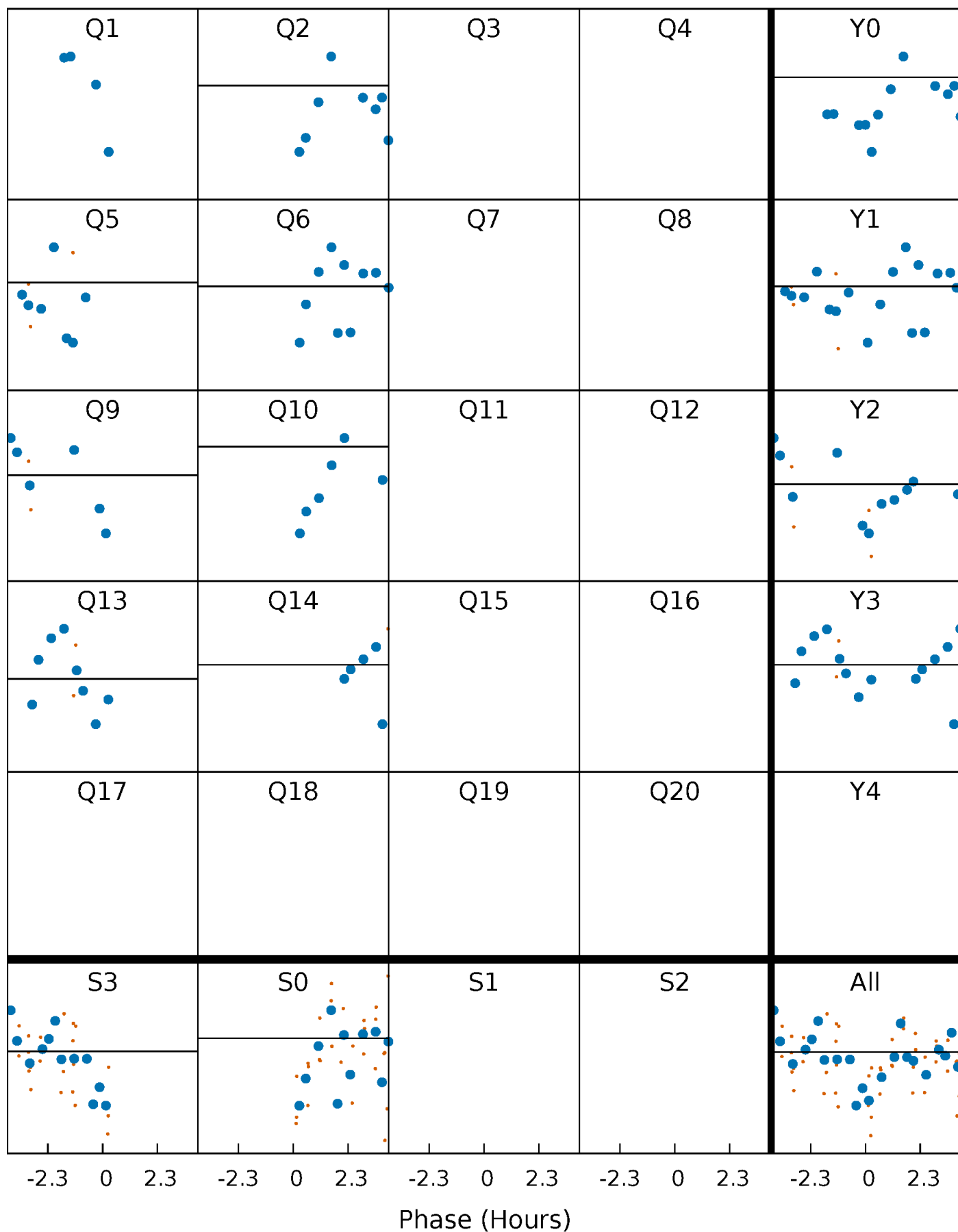
PDC Quarter-Phased Transit Curves

TCE 006945362-08 P= 30.941535 Days $T_0=143.375780$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006945362-08 P= 30.941535 Days $T_0=143.375780$ (BKJD)

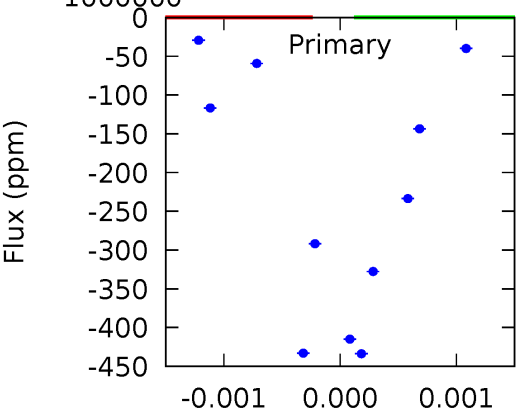
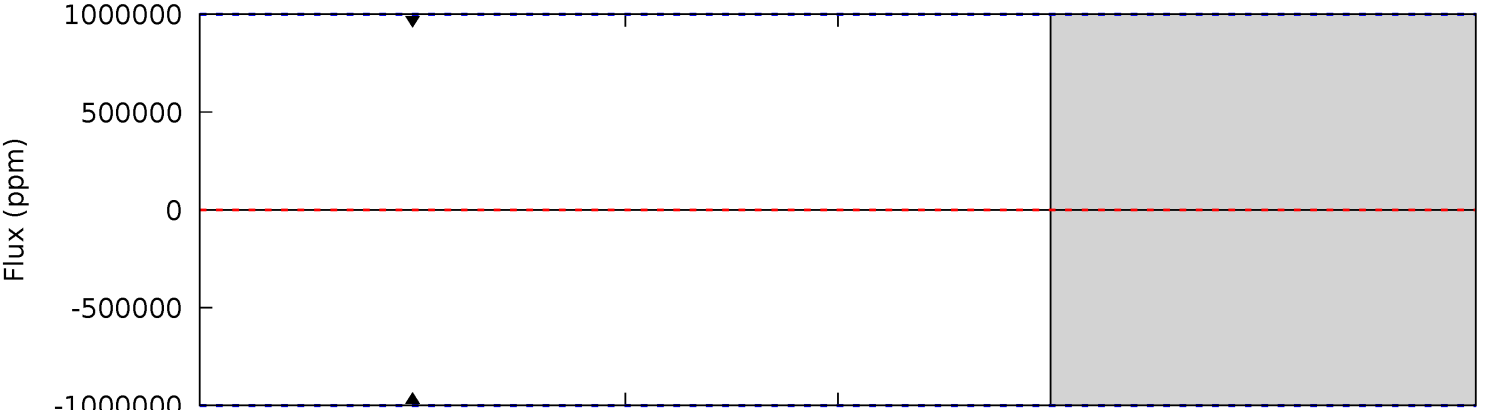
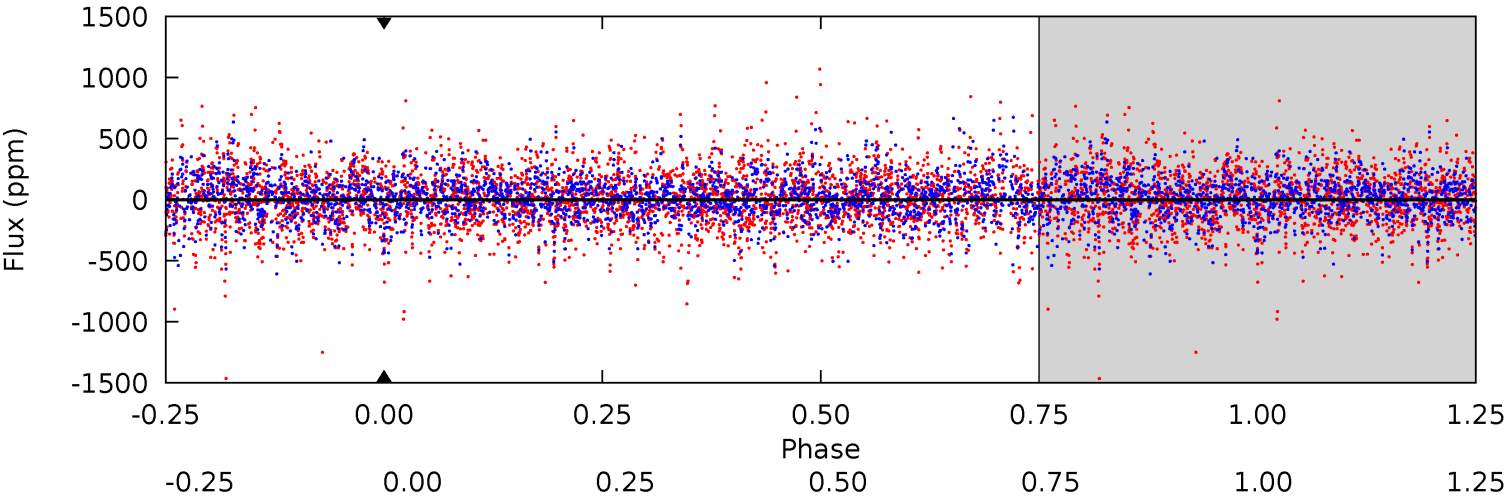


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006945362-08, P = 30.941535 Days, E = 112.434245 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

This plot does not exist for this TCE.

Stellar Parameters For KIC 006945362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6688^{+70}_{-90}	$4.232^{+0.063}_{-0.108}$	$0.020^{+0.150}_{-0.150}$	$1.460^{+0.248}_{-0.134}$	$1.329^{+0.093}_{-0.084}$	$0.601^{+0.177}_{-0.193}$
	+1%/-1%	+1%/-3%	+750%/-750%	+17%/-9%	+7%/-6%	+29%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006945362-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$11.92^{+12.54}_{-7.97}$	1087^{+44}_{-35}	5138^{+21738}_{-36549}	290^{+26256}_{-32829}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

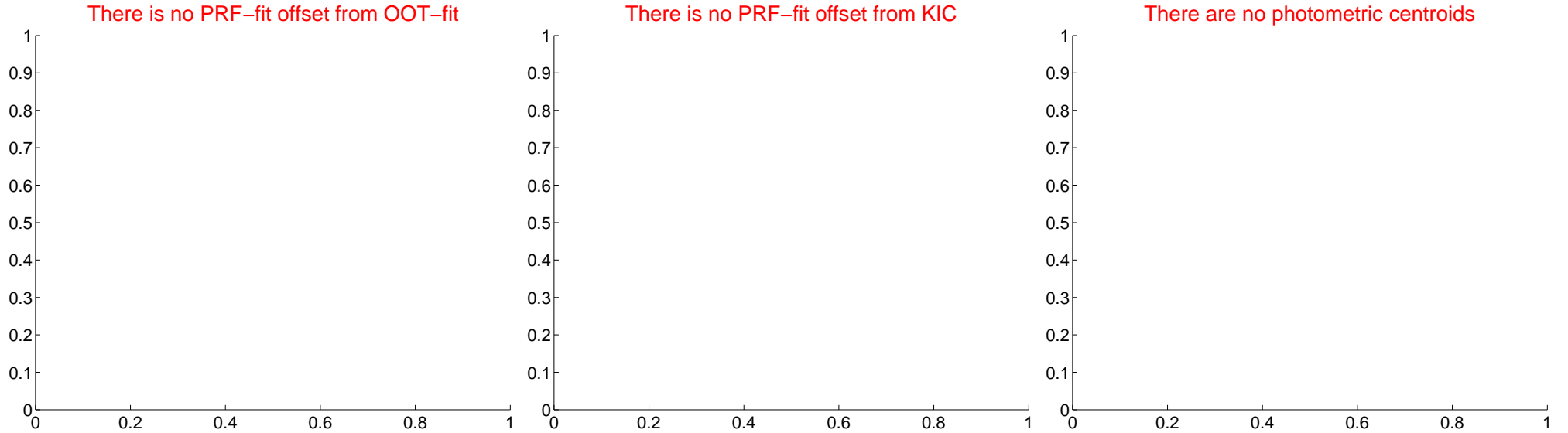
DV Centroid Data

Supplemental centroid analysis for 006945362-08. **Kepler magnitude: 11.31.** Transit SNR -1.00

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	—	—	—	—

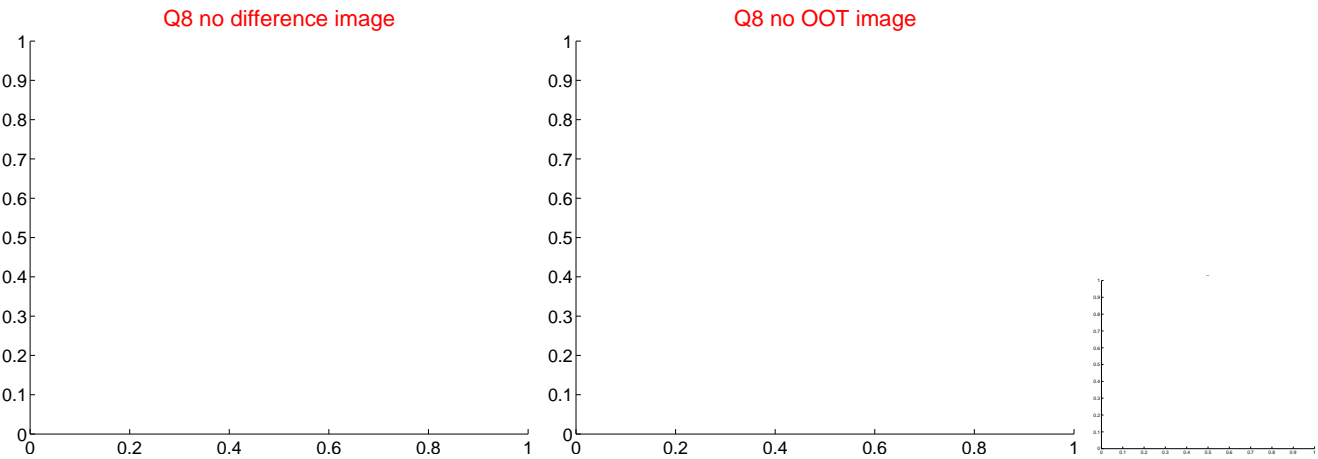
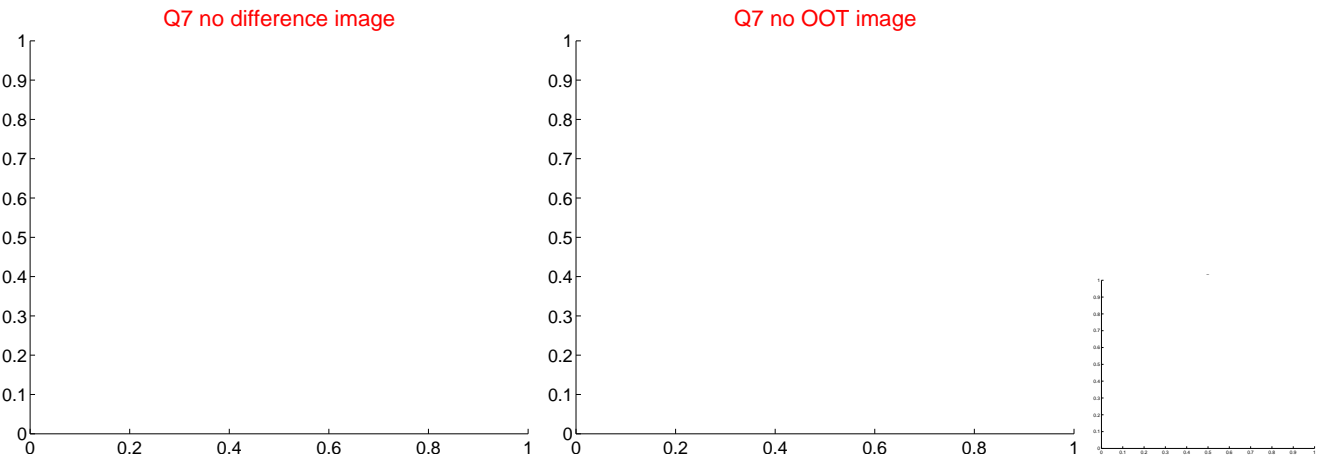
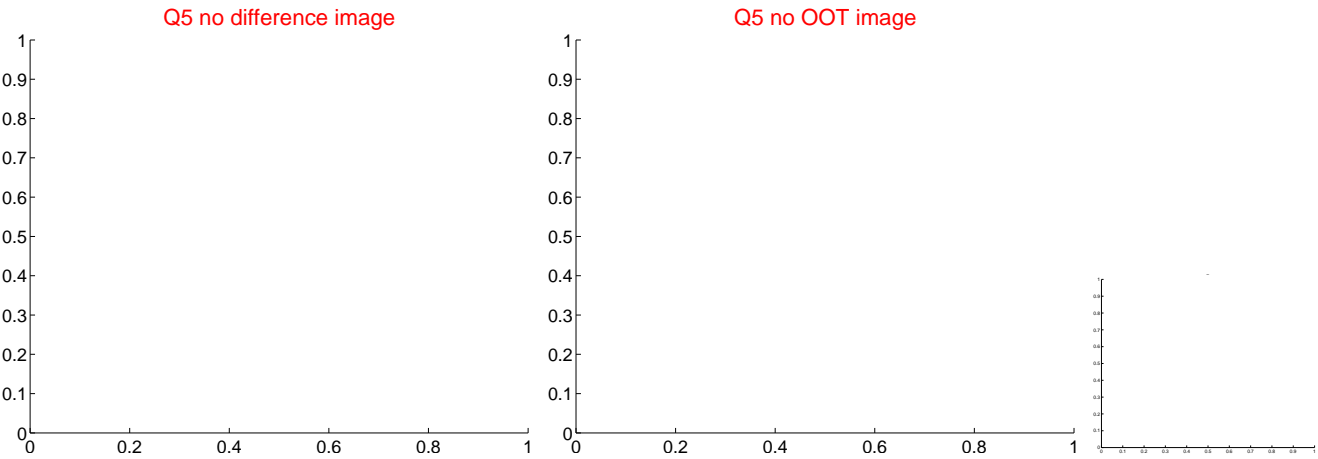


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

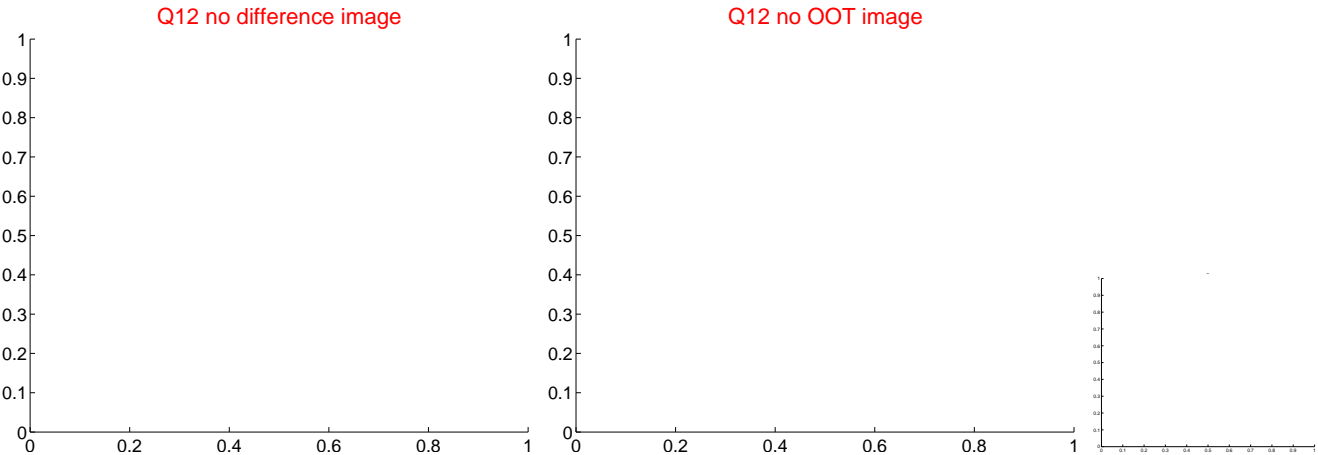
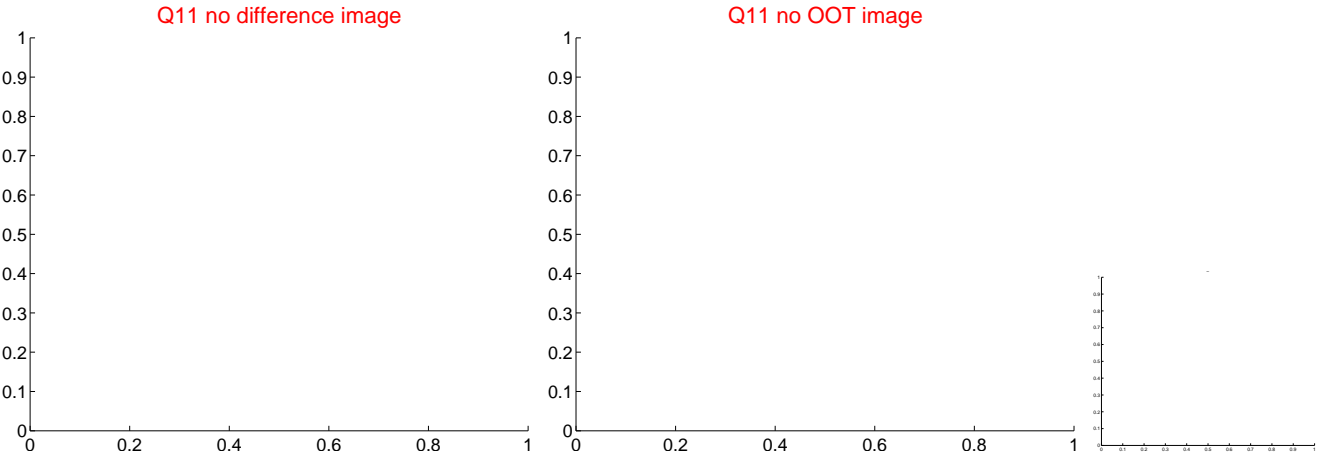
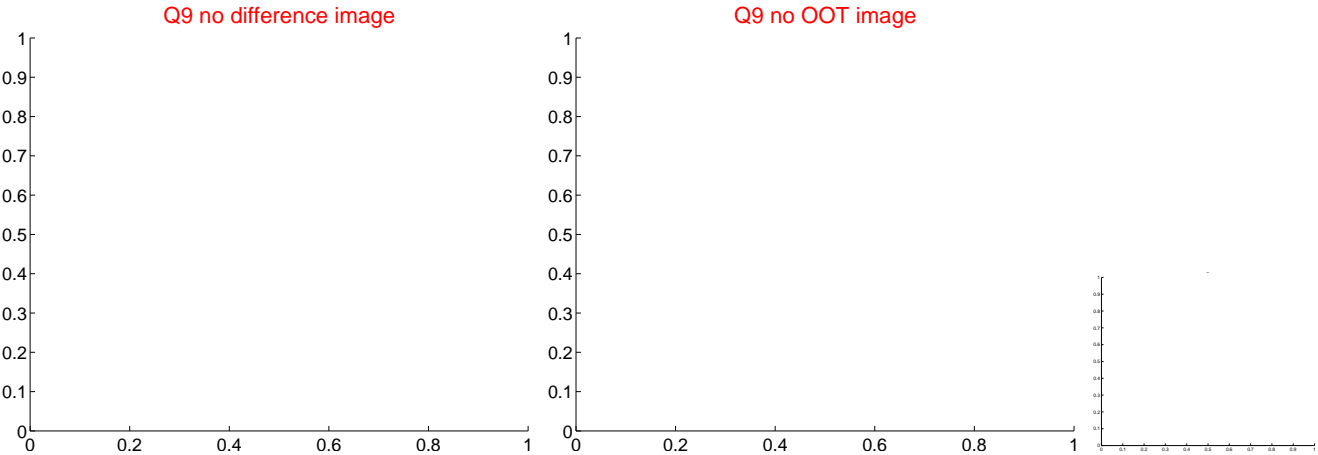
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



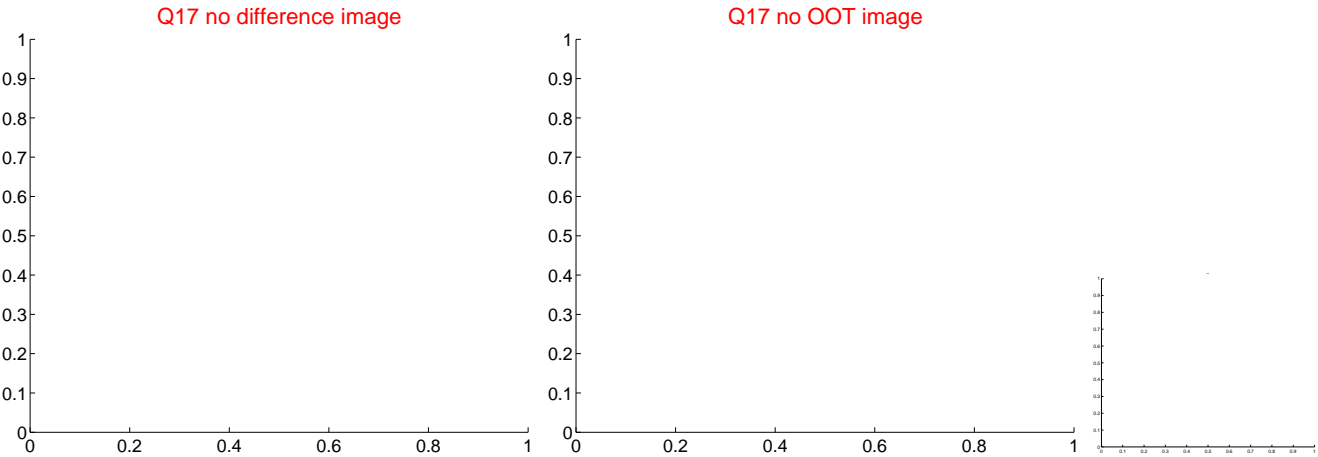
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

