

KIC 010600540

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})
010600540-01	OBS	No	1.457915	132.675873	38.9	2.082	9.2	7.4	3.03	8406	2.19	40827.50
010600540-02	OBS	No	0.822780	131.841435	30.7	2.238	7.3	6.9	3.03	8406	1.95	87542.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010600540-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010600540-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

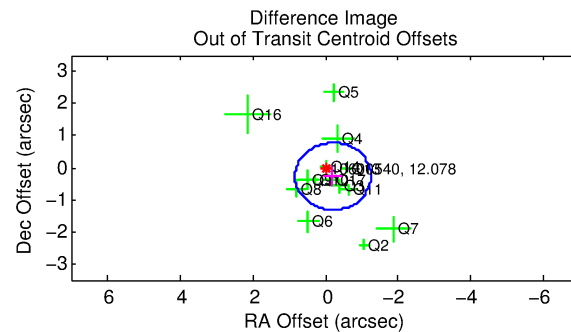
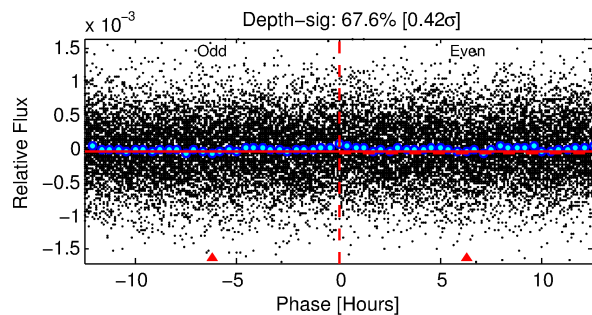
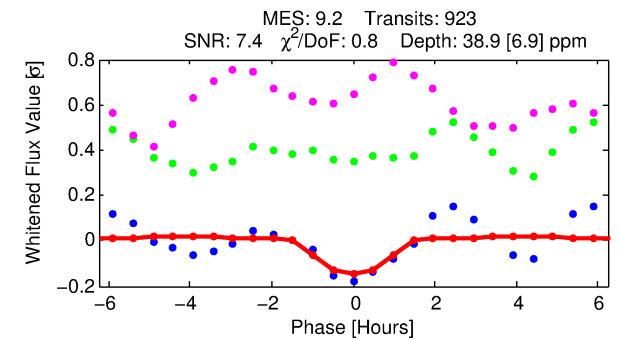
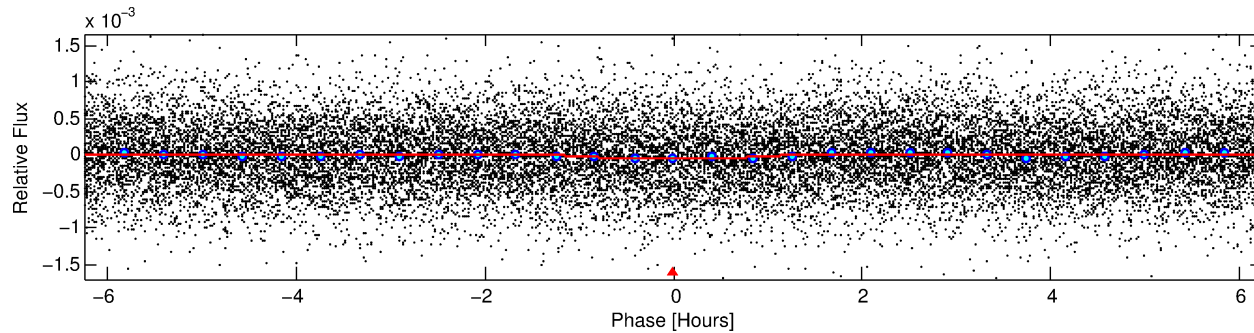
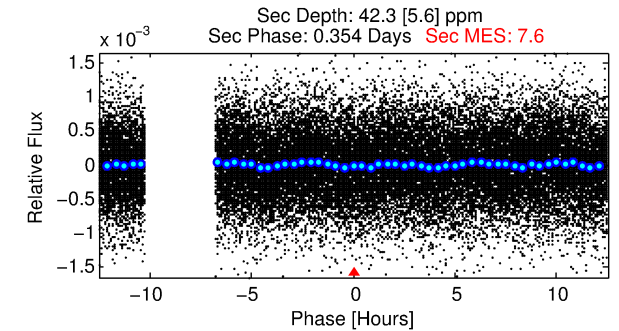
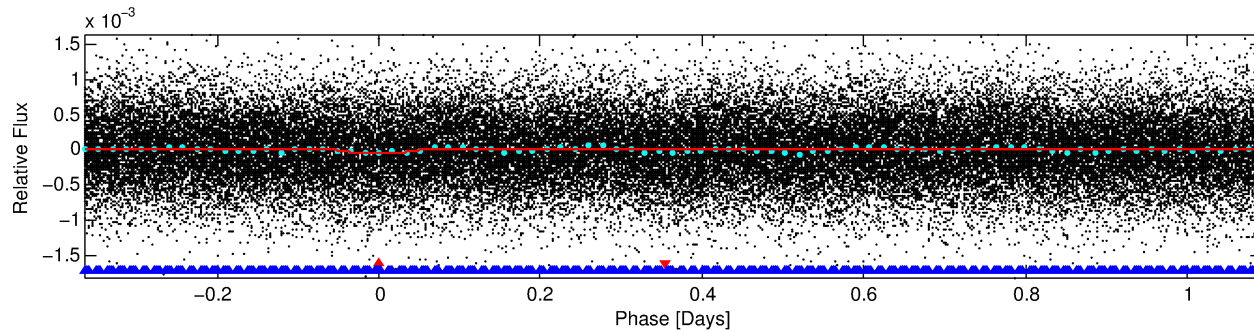
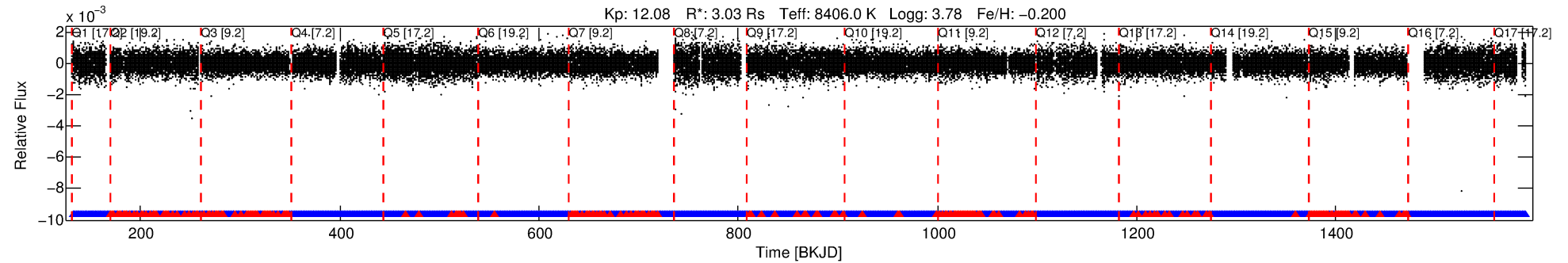
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010600540-01

No Significant Match Found

DV One-Page Summary

KIC: 10600540 Candidate: 1 of 2 Period: 1.458 d



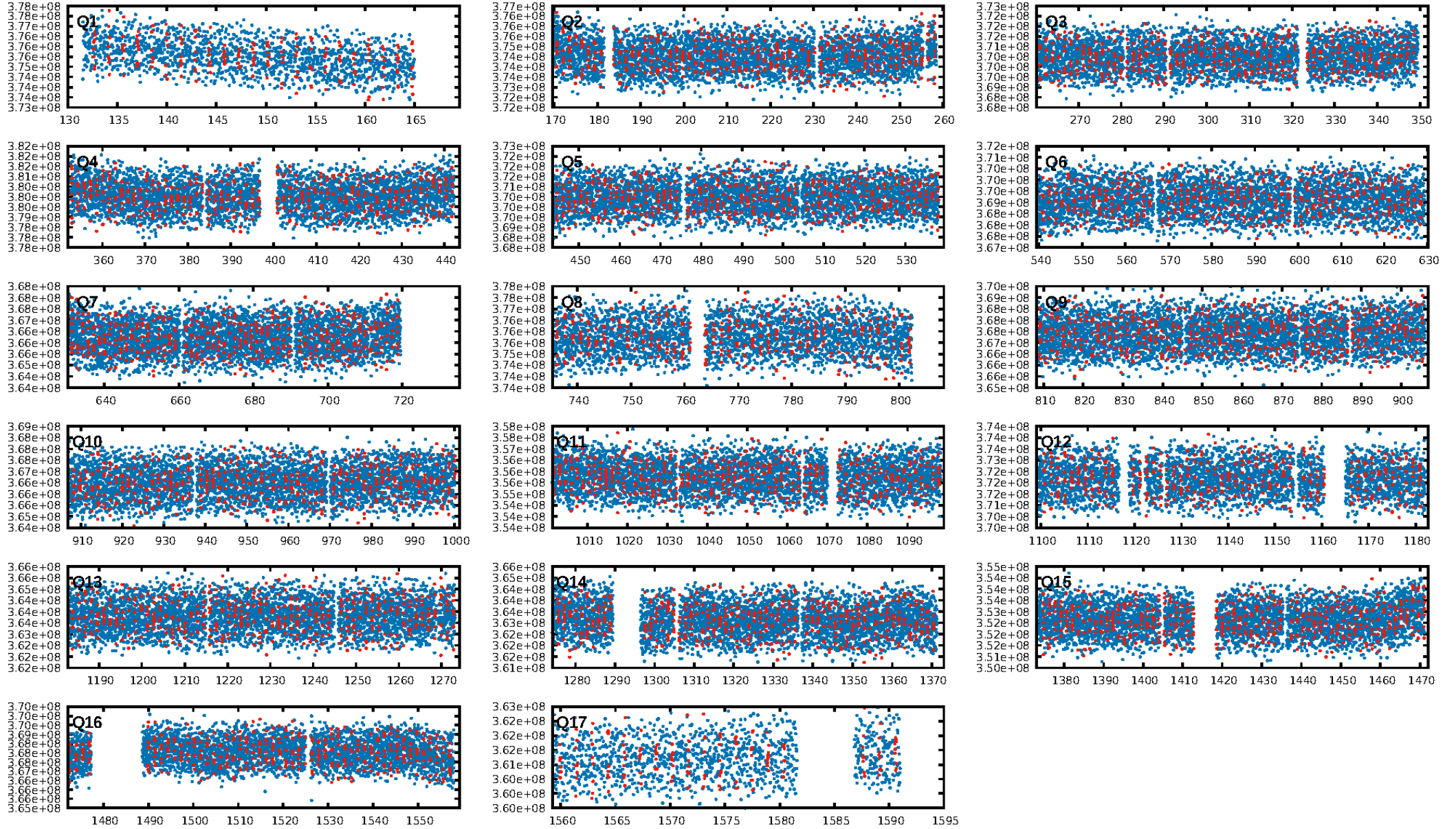
DV Fit Results:

Period = 1.45791 [0.00002] d
Epoch = 132.6759 [0.0050] BKJD
Rp/R* = 0.0066 [0.0045]
a/R* = 2.63 [9.89]
b = 0.90 [0.99]
Seff = 40827.50 [29536.55]
Teff = 3625 [656] K
Rp = 2.19 [1.81] Re
a = 0.0318 [0.0141] AU
Ag = 4.88 [7.50] [0.52 σ]
Teffp = 8331 [2872] K [1.60 σ]

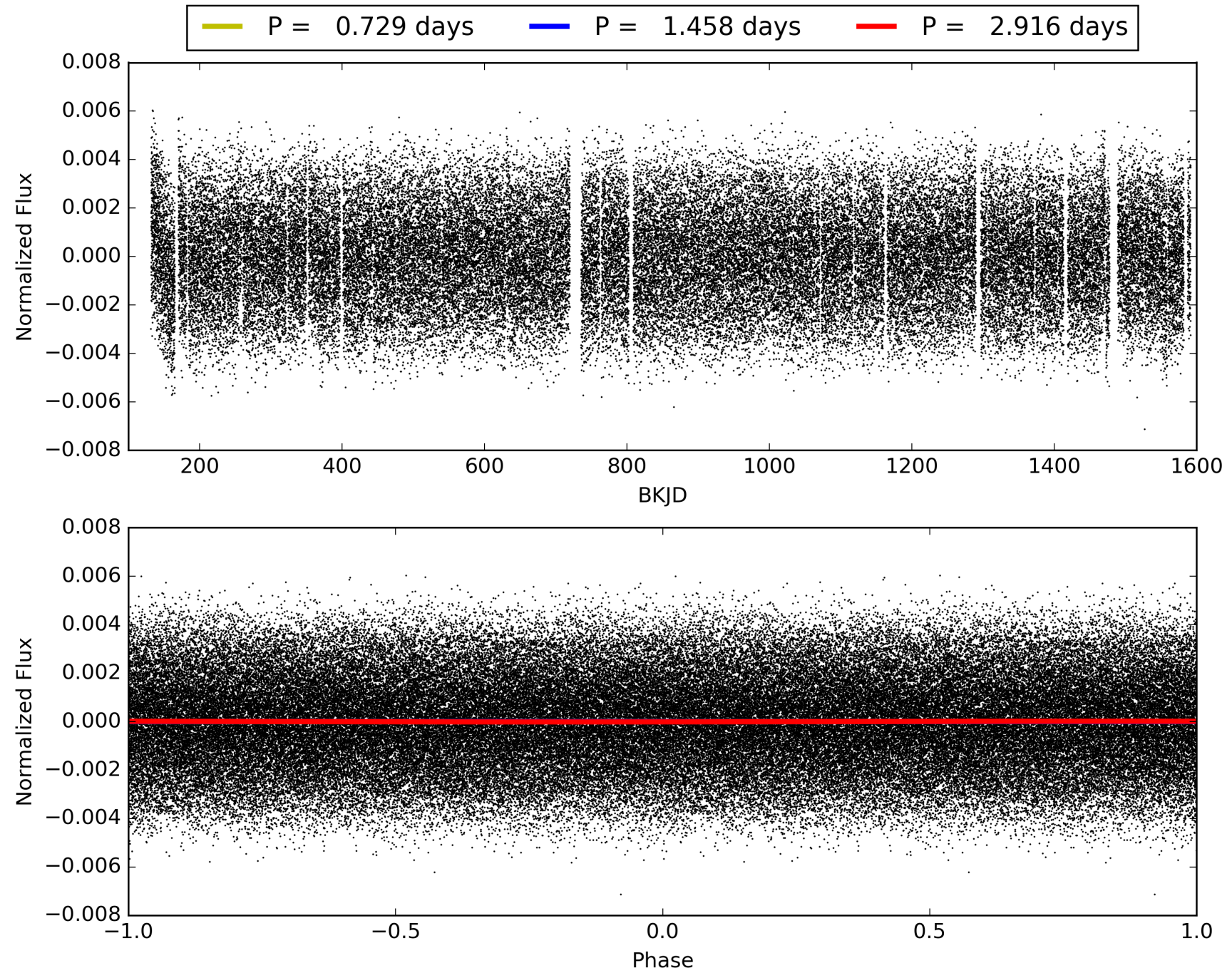
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.99 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.59e-26
RollingBand-fgt: 0.78 [684/882]
GhostDiagnostic-chr: 0.5969
Centroid-sig: 45.1%
Centroid-so: 0.445 arcsec [1.10 σ]
OotOffset-rm: 0.338 arcsec [0.97 σ]
KicOffset-rm: 0.434 arcsec [1.17 σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010600540-01, PDC Light Curves

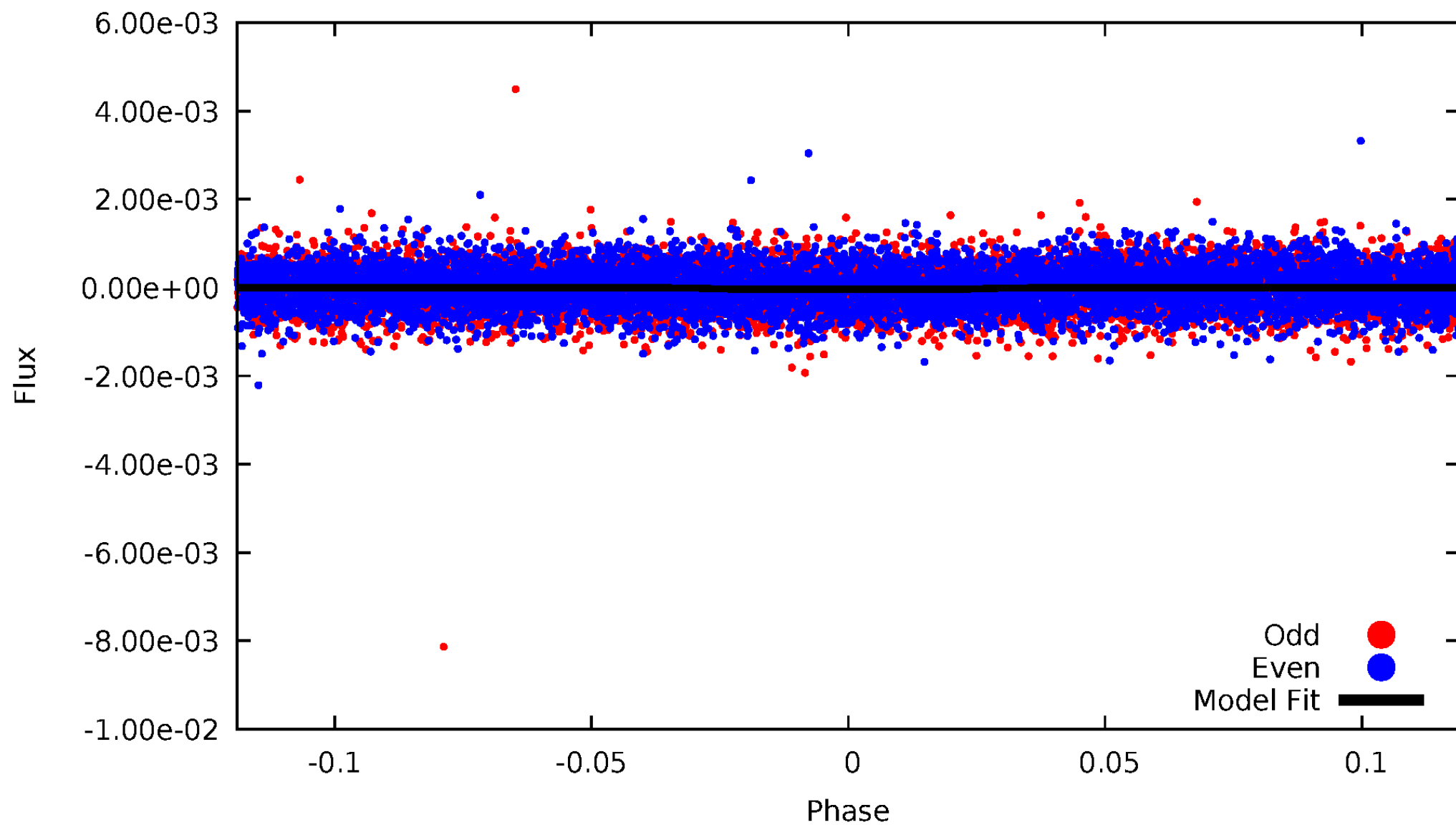


TCE 010600540-01



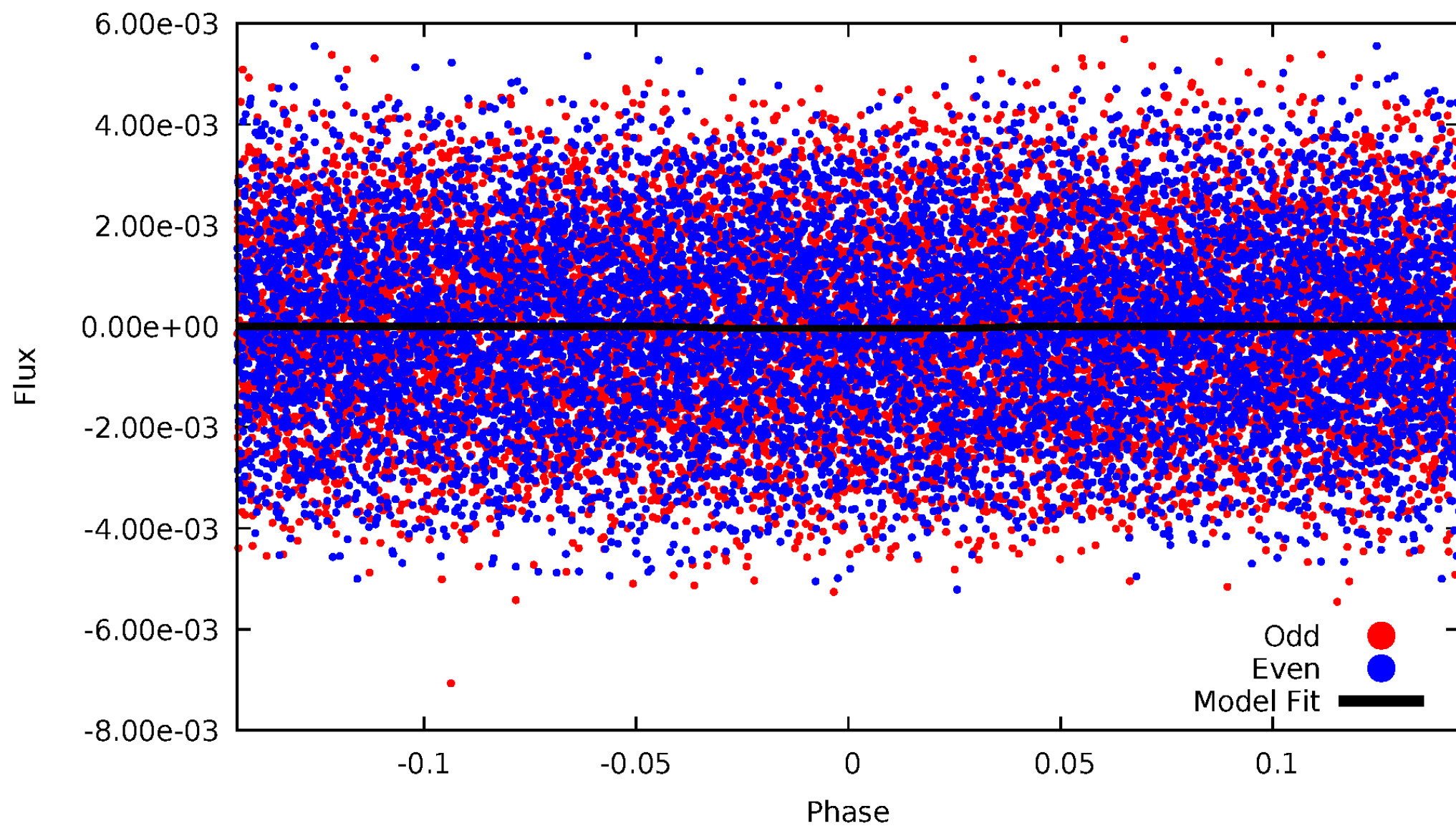
DV Odd/Even

TCE 010600540-01

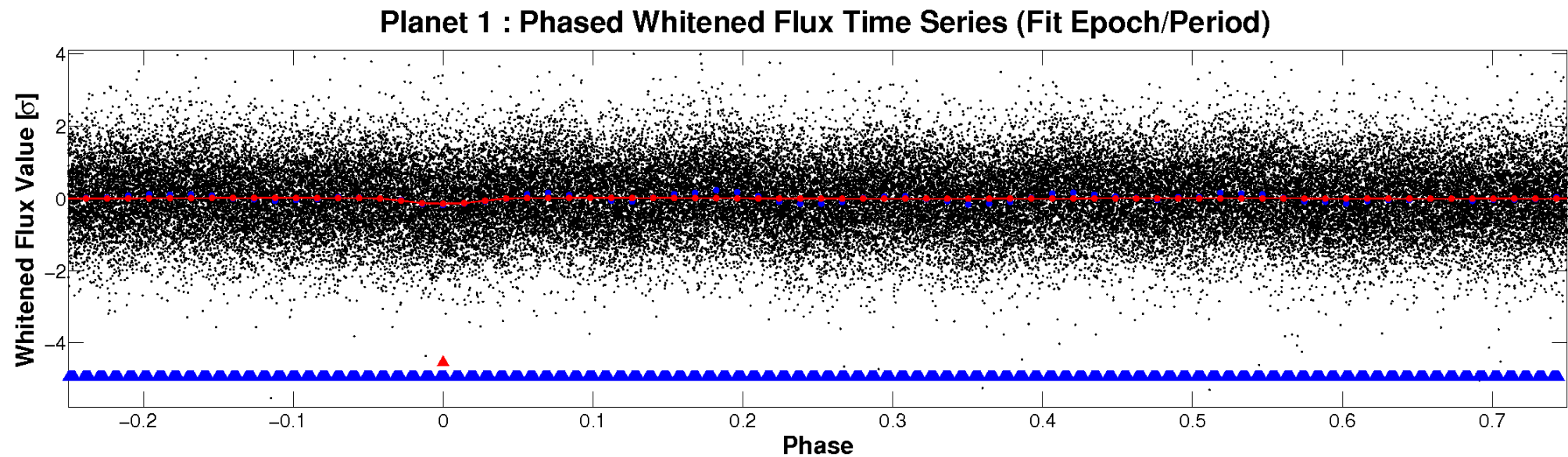
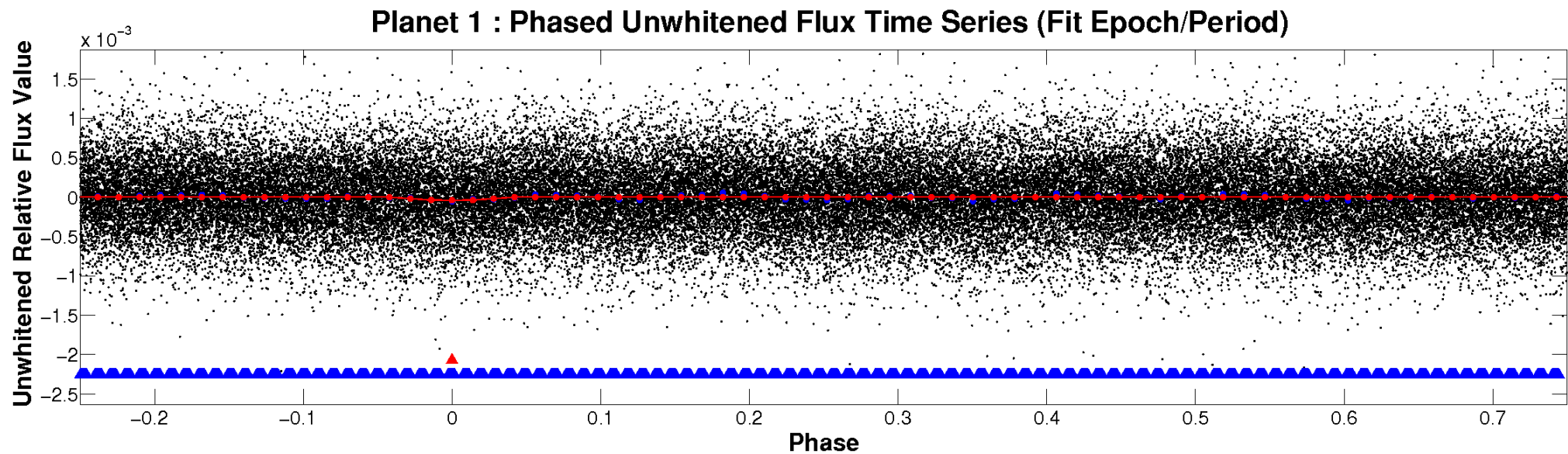


ALT Odd/Even

TCE 010600540-01

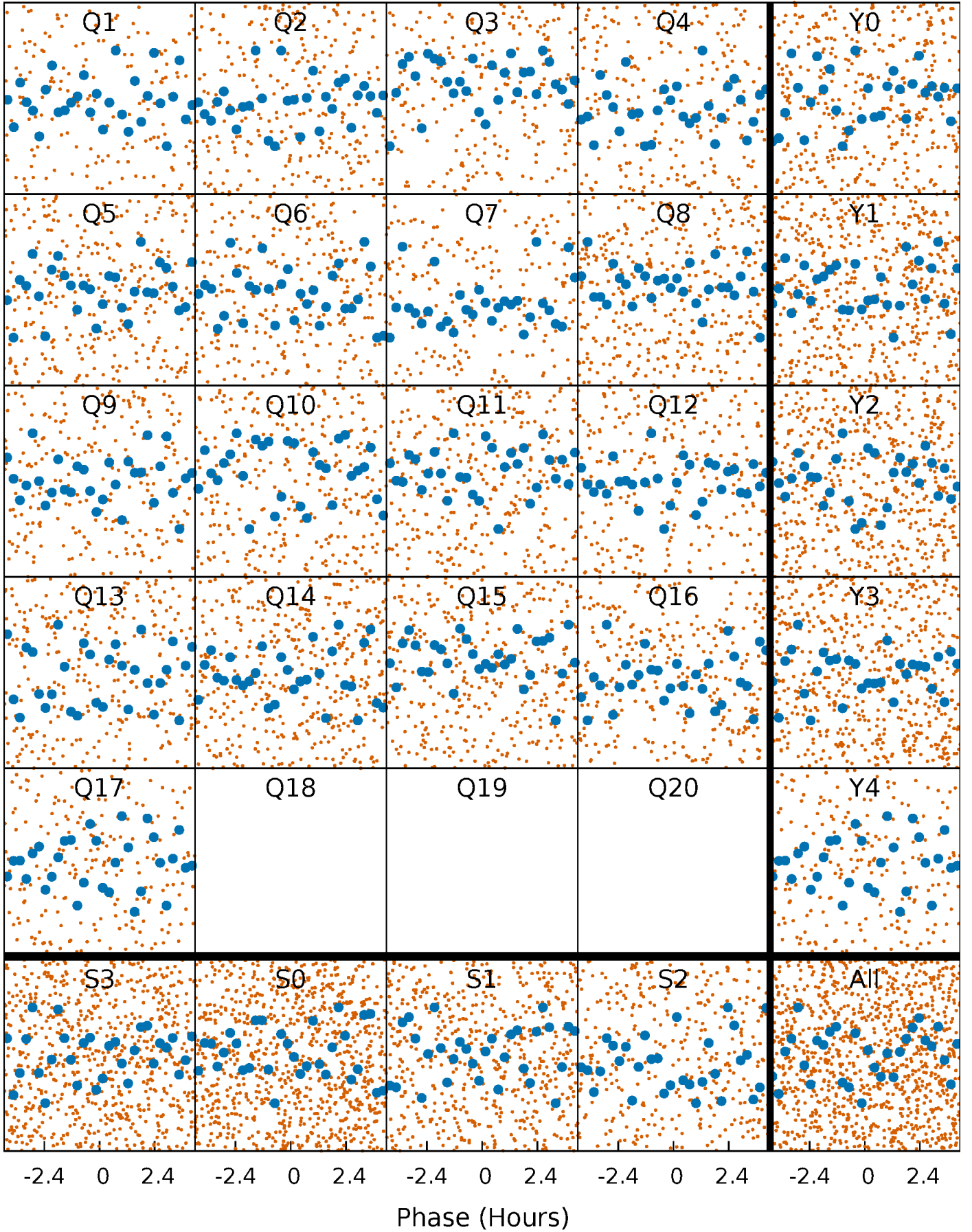


Non-Whitened Vs. Whitened Light Curve



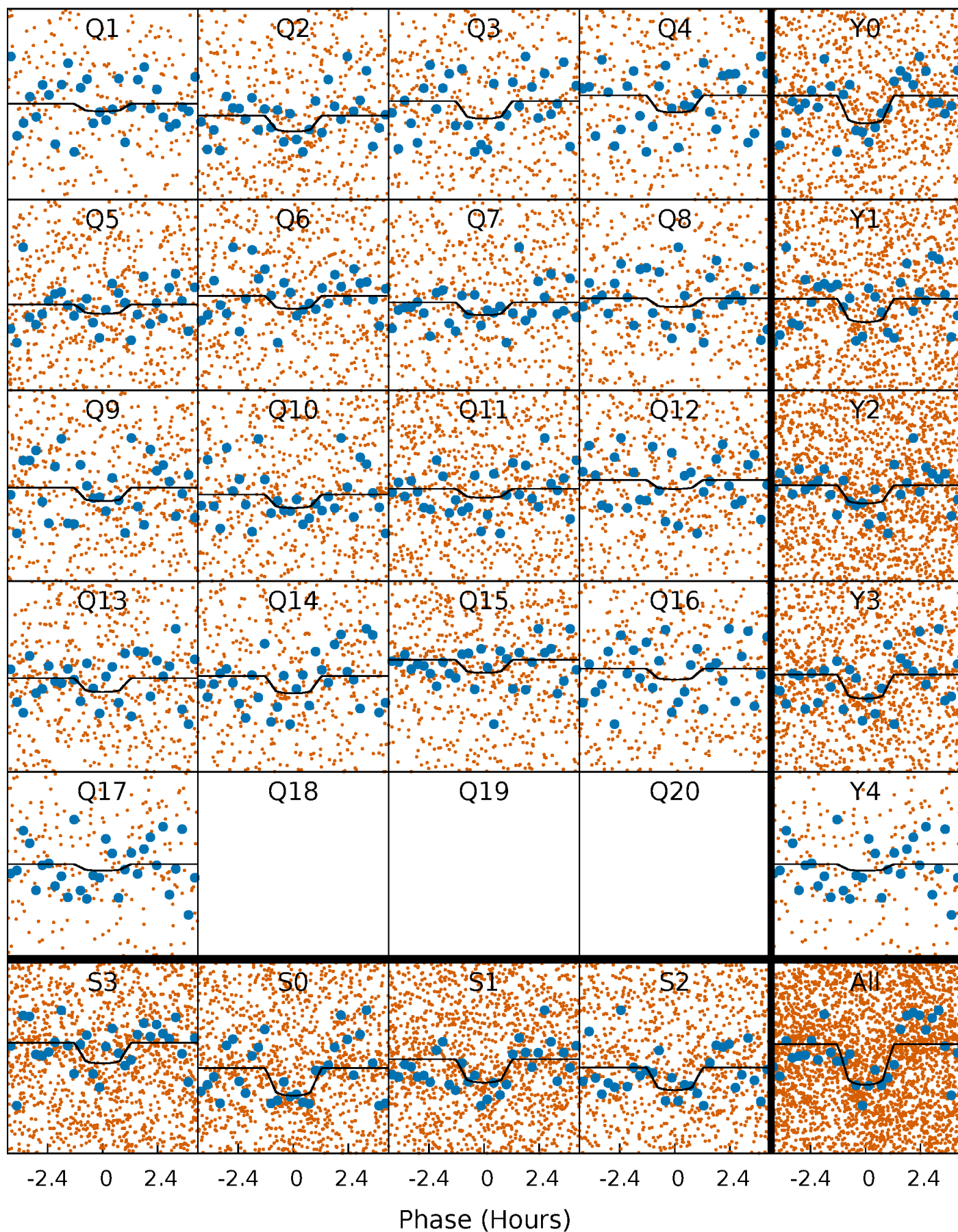
PDC Quarter-Phased Transit Curves

TCE 010600540-01 P= 1.457915 Days $T_0=132.675873$ (BKJD)



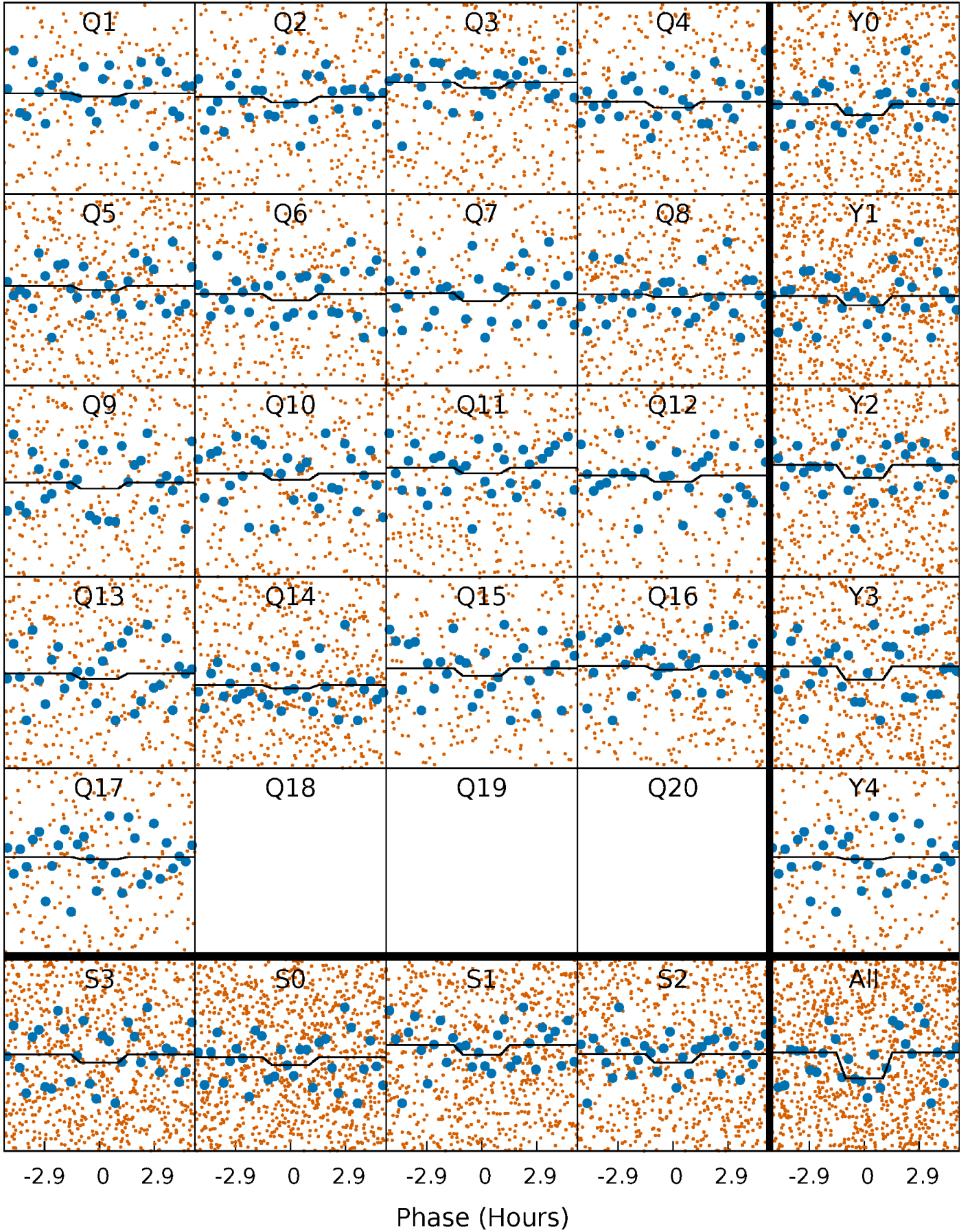
DV Quarter-Phased Transit Curves

TCE 010600540-01 P= 1.457915 Days $T_0=132.675873$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

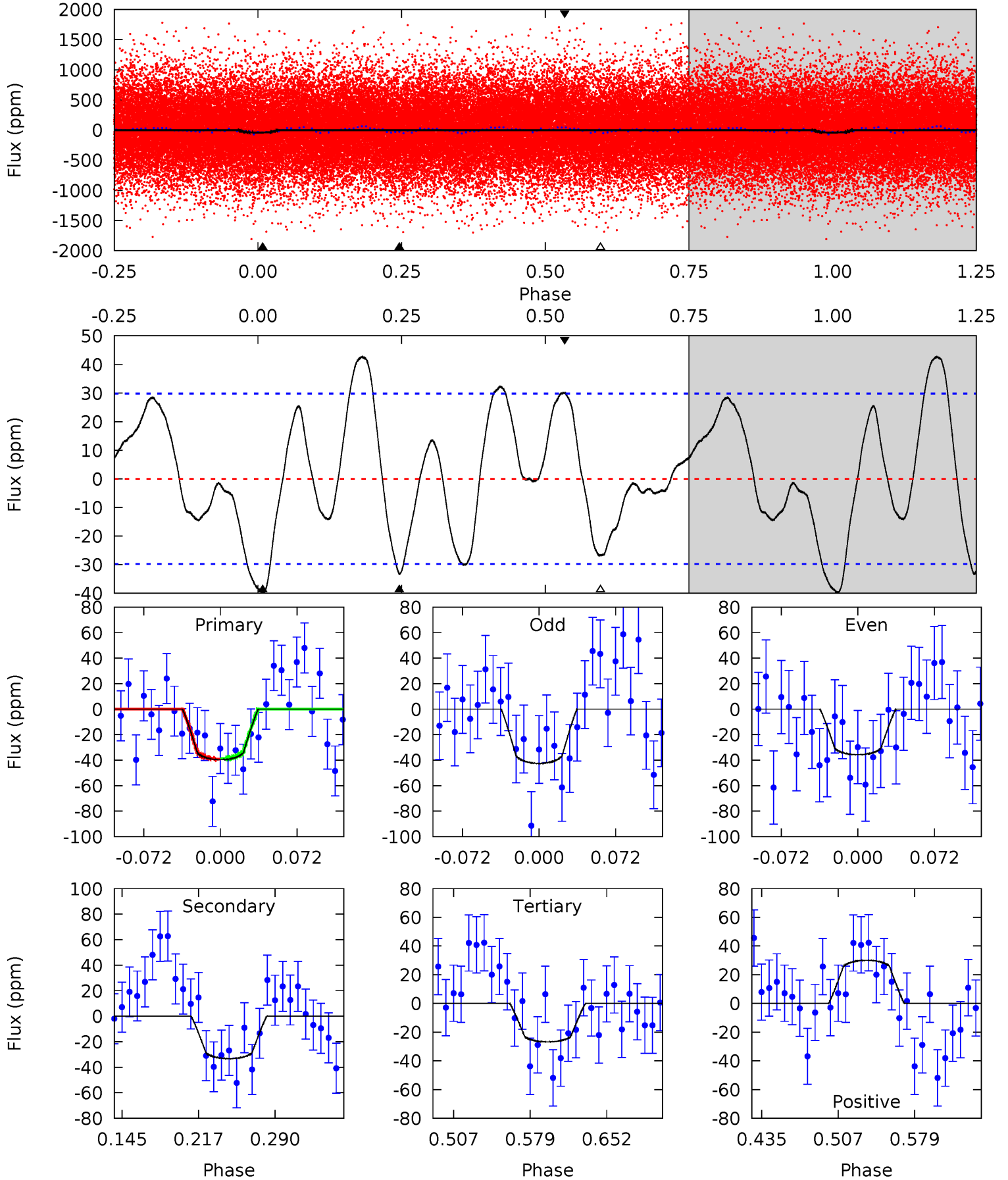
TCE 010600540-01 P= 1.457936 Days $T_0=132.677414$ (BKJD)



DV Model-Shift Uniqueness Test

010600540-01, P = 1.457915 Days, E = 131.217958 Days

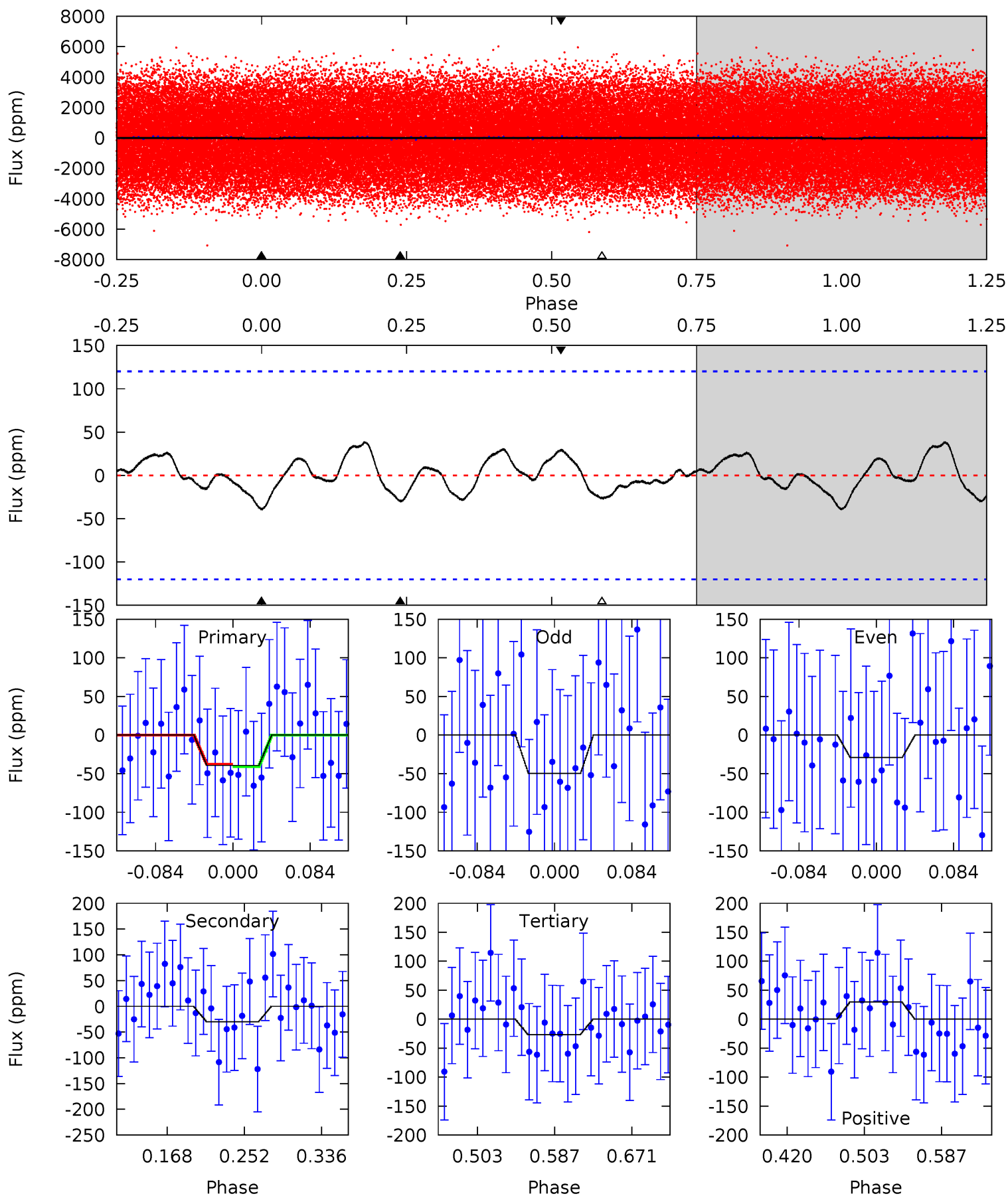
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.17	5.18	4.17	4.68	4.63	1.80	2.67	2.01	1.50	1.01	0.50	0.53	1.01	0.52	0.03



Alt Model-Shift Uniqueness Test

010600540-01, P = 1.457936 Days, E = 131.219478 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.51	1.15	1.03	1.14	4.60	1.73	0.60	0.47	0.37	0.12	0.01	0.39	0.84	0.49	0.06



Stellar Parameters For KIC 010600540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8406^{+206}_{-383}	$3.777^{+0.408}_{-0.076}$	$-0.200^{+0.250}_{-0.350}$	$3.034^{+0.712}_{-1.424}$	$2.009^{+0.317}_{-0.515}$	$0.101^{+0.380}_{-0.033}$
	+2%/-5%	+11%/-2%	+125%/-175%	+23%/-47%	+16%/-26%	+375%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010600540-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-33 ± 6	$2.07^{+1.48}_{-1.18}$	4830^{+376}_{-513}	7110^{+5966}_{-1676}	$4.175^{+18.786}_{-2.627}$
Alt.	-30 ± 26	$1.86^{+1.51}_{-1.07}$	4800^{+376}_{-534}	6764^{+6199}_{-4660}	$3.735^{+18.267}_{-3.428}$

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

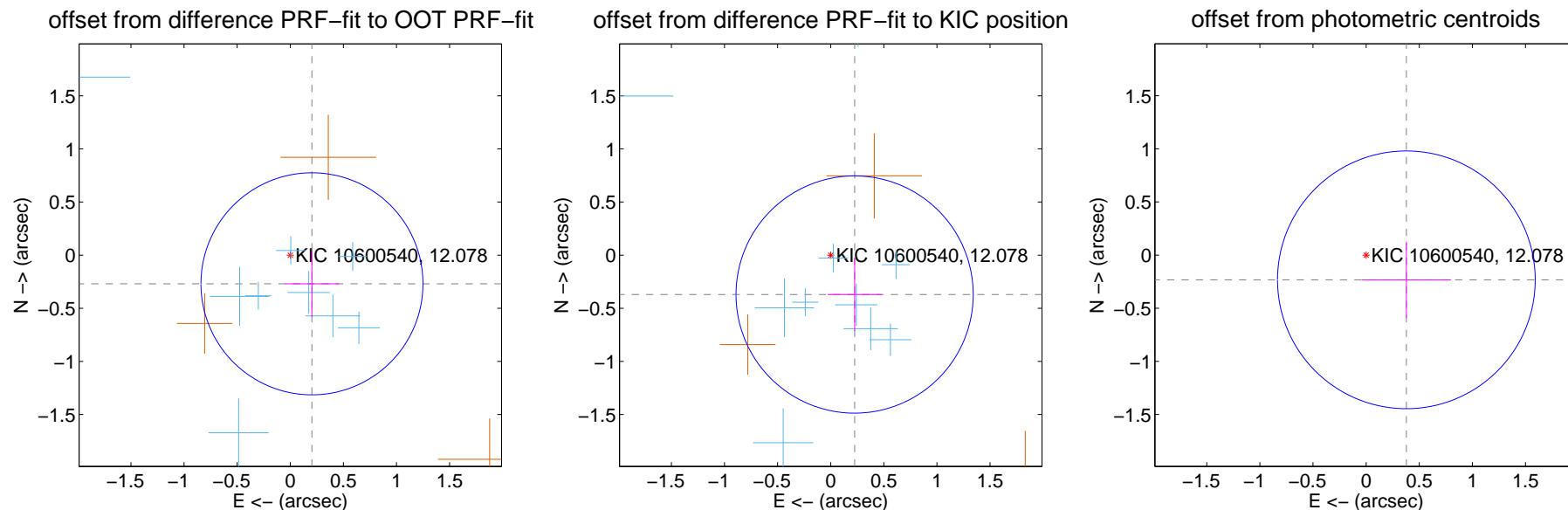
DV Centroid Data

Supplemental centroid analysis for 010600540-01. Kepler magnitude: 12.08. Transit SNR 7.41

There are 11 quarters with good PRF difference image offsets

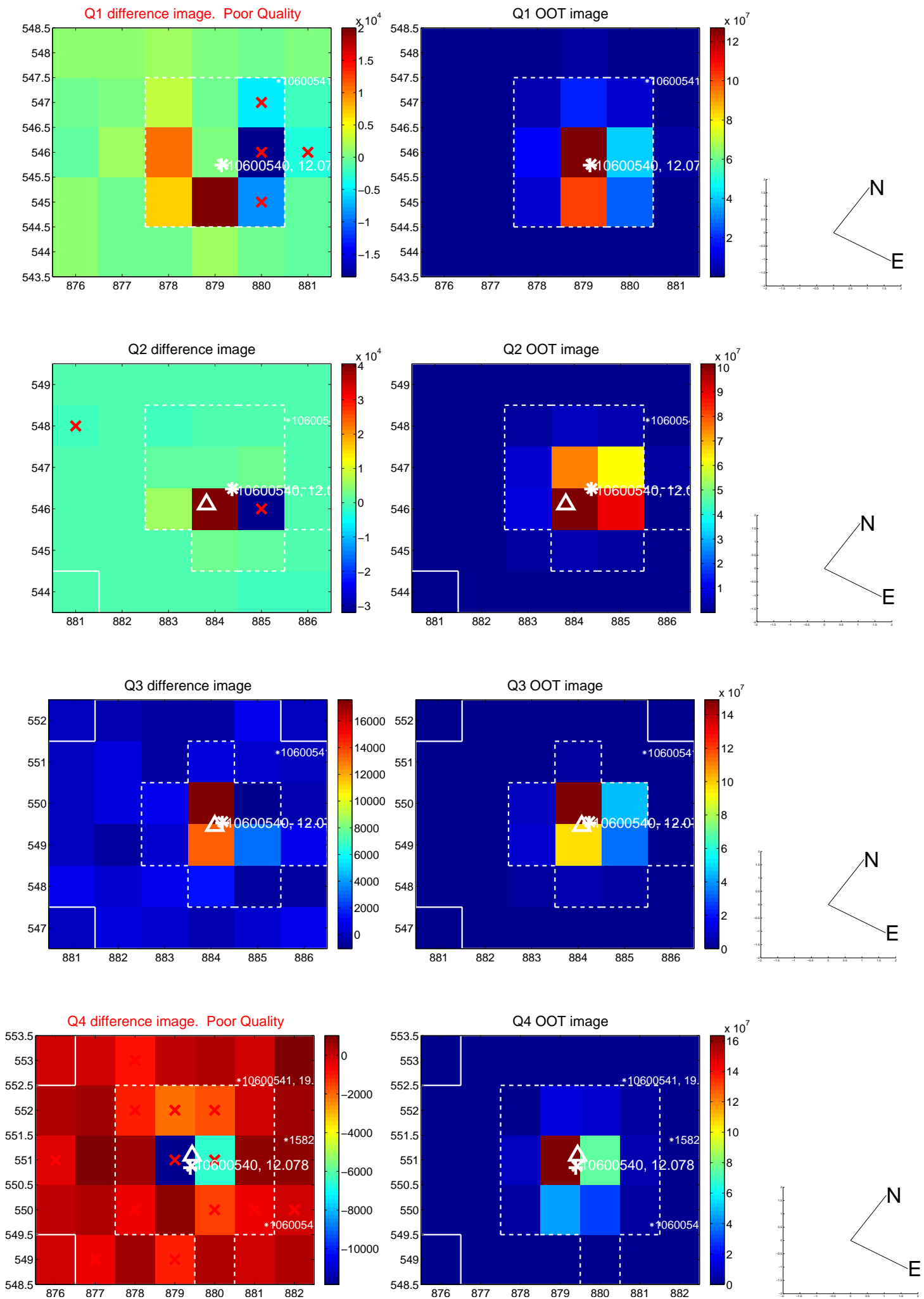
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.338 ± 0.348	0.97	-0.204 ± 0.254	-0.270 ± 0.312
PRF-fit source offset from KIC position	0.434 ± 0.372	1.17	-0.225 ± 0.253	-0.371 ± 0.342
photometric centroid source offset	0.44 ± 0.40	1.10	-0.38 ± 0.42	-0.23 ± 0.36

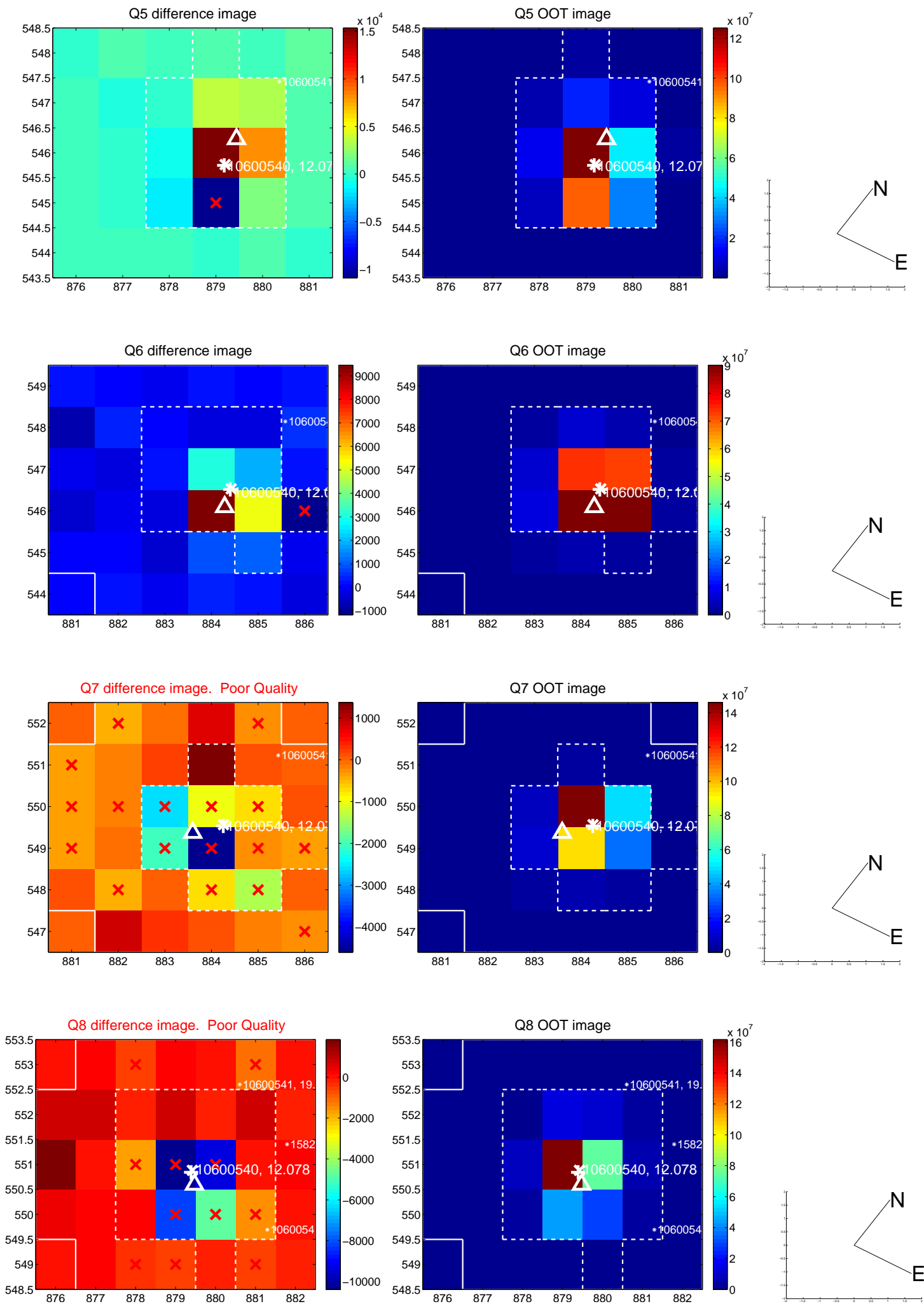


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

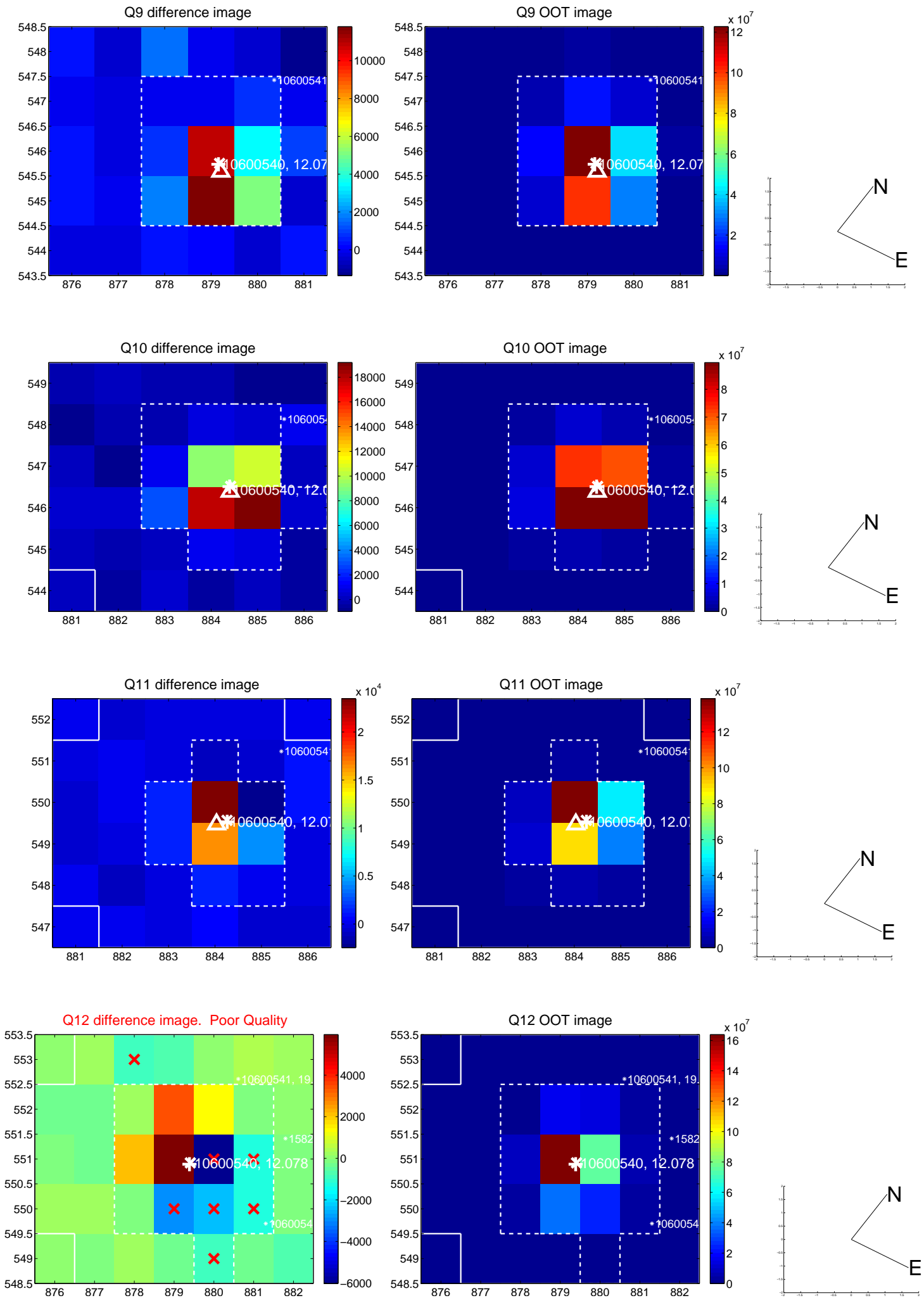
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



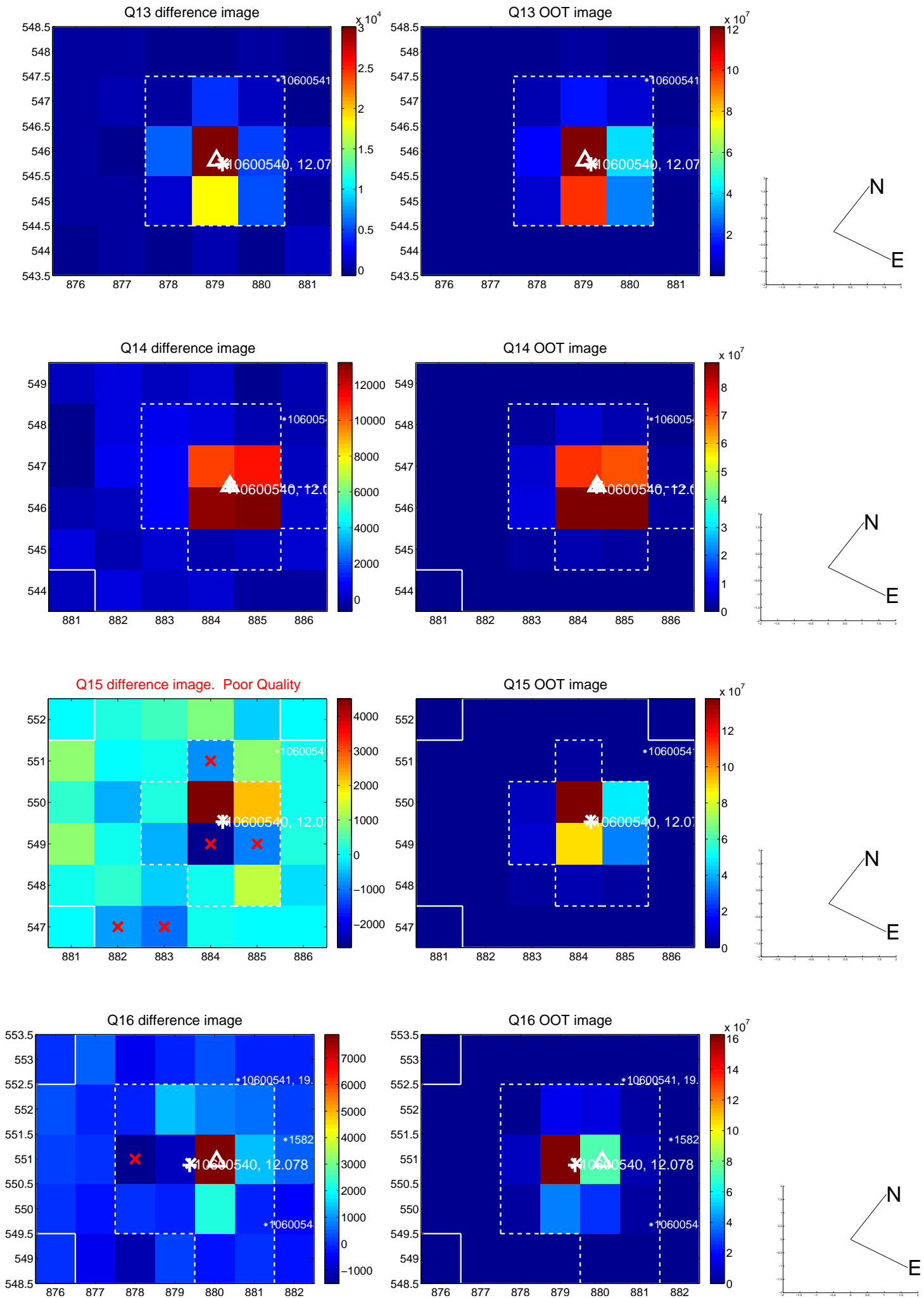
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



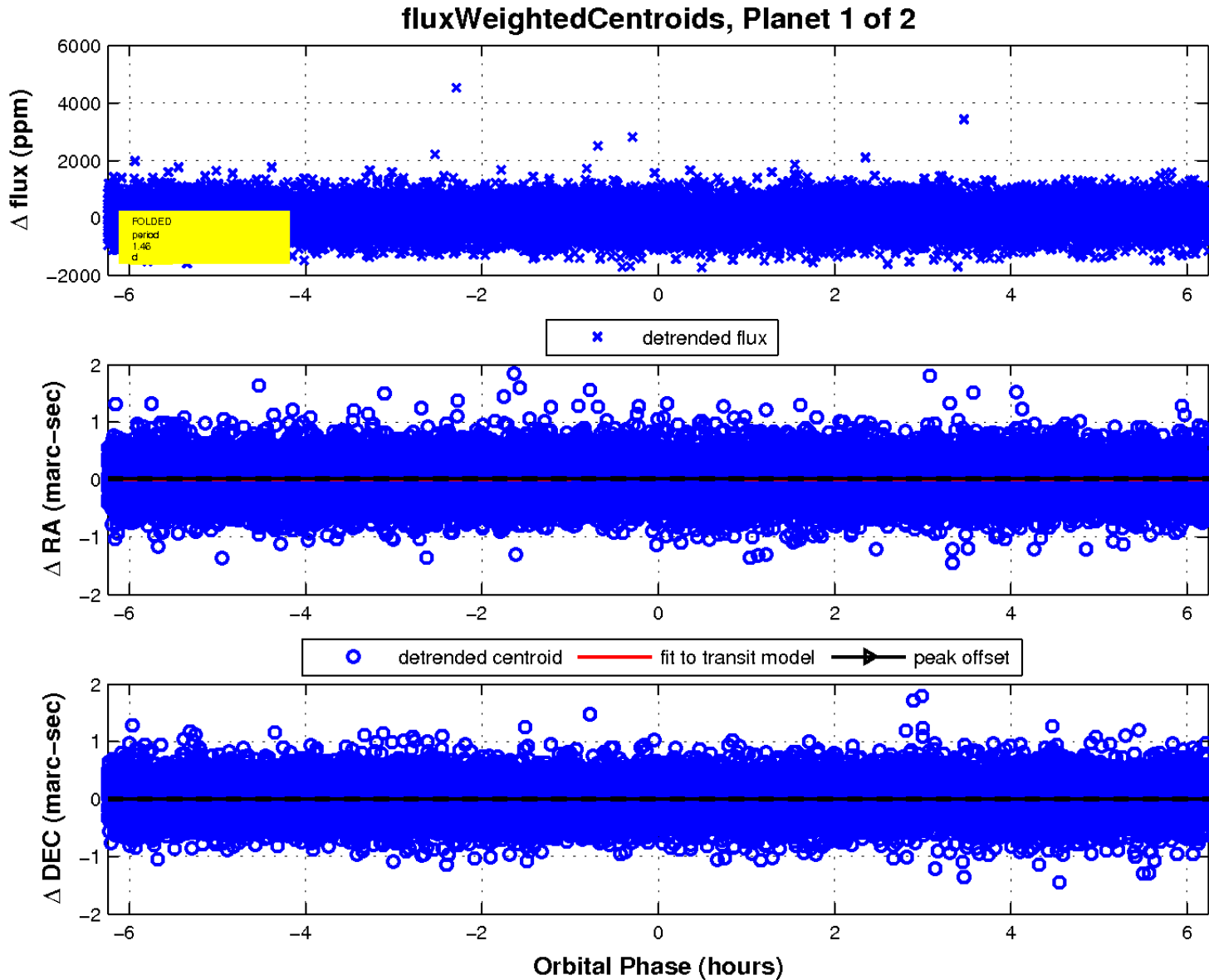
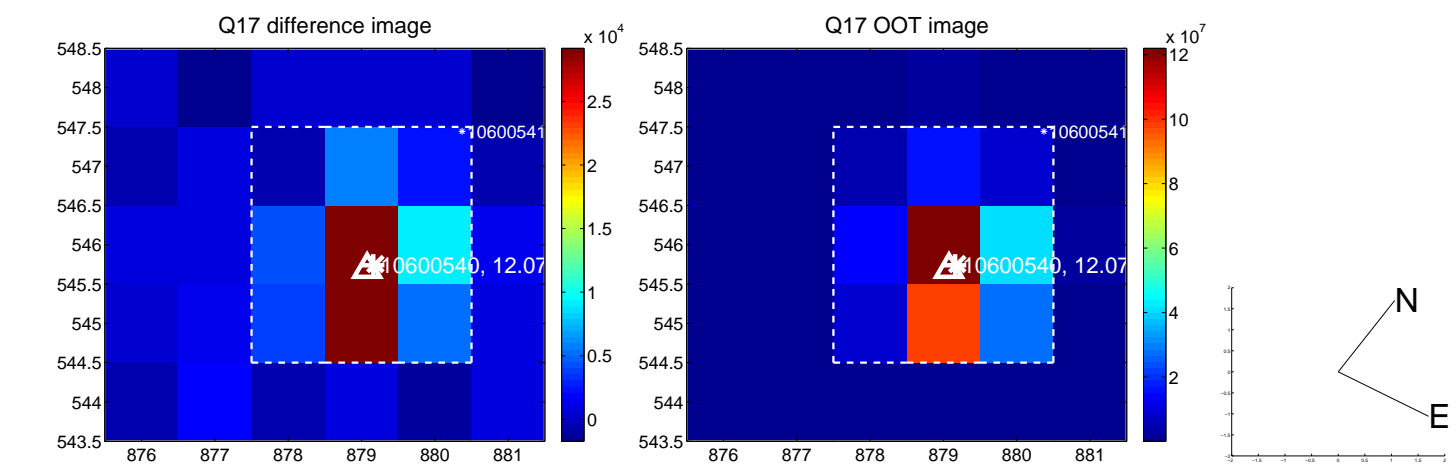
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

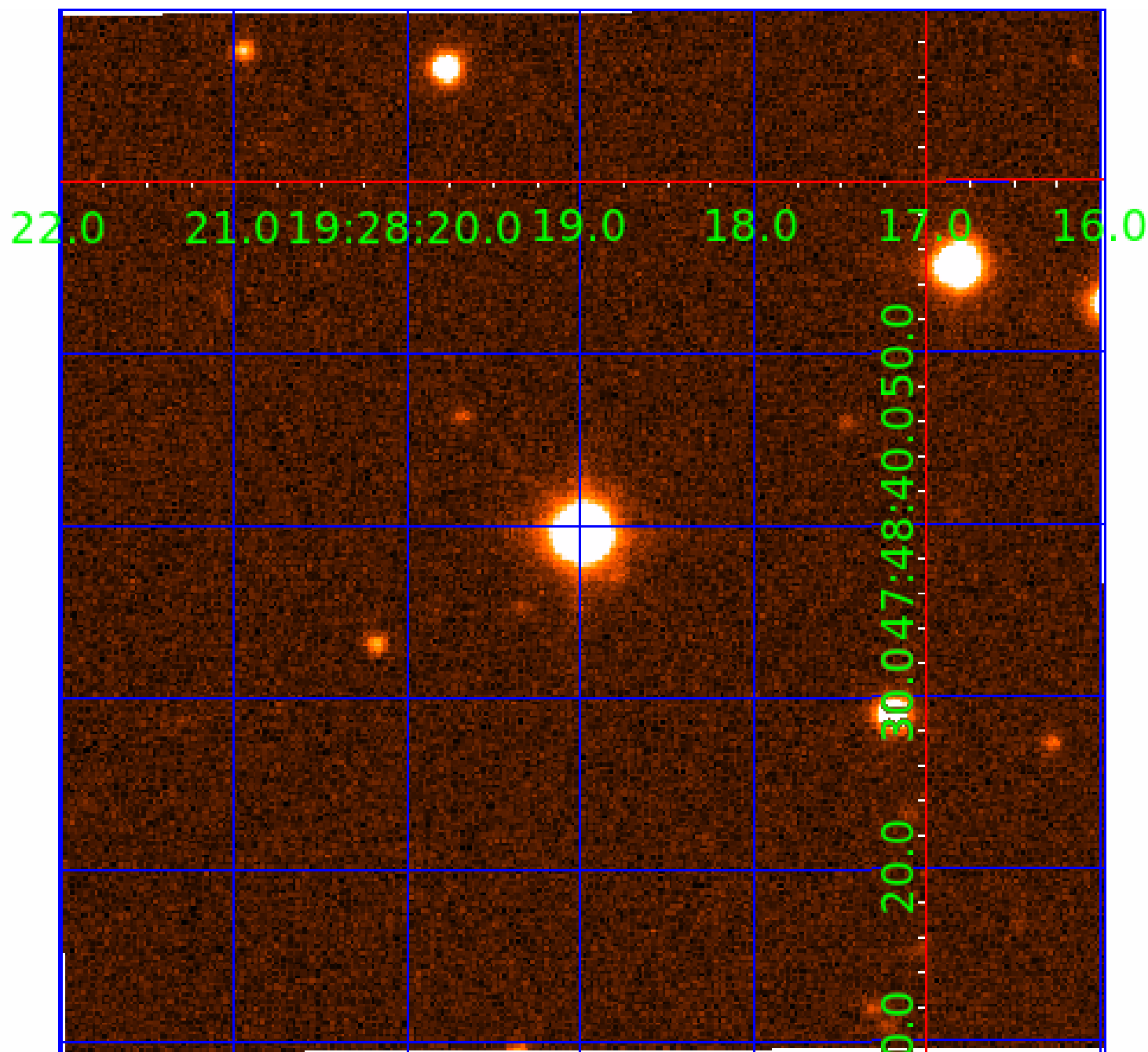


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010600540

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})
010600540-01	OBS	No	1.457915	132.675873	38.9	2.082	9.2	7.4	3.03	8406	2.19	40827.50
010600540-02	OBS	No	0.822780	131.841435	30.7	2.238	7.3	6.9	3.03	8406	1.95	87542.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010600540-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010600540-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

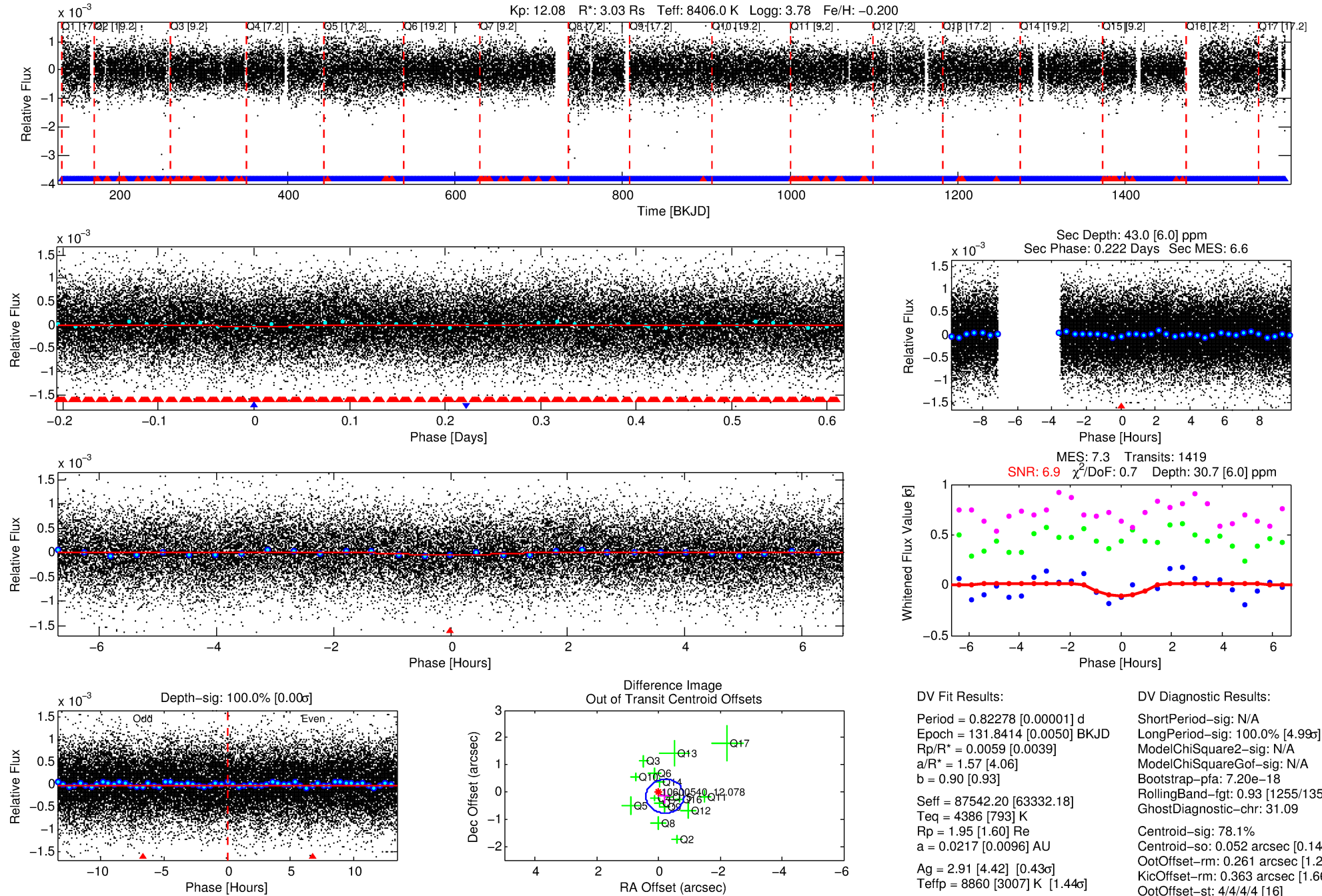
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010600540-02

No Significant Match Found

DV One-Page Summary

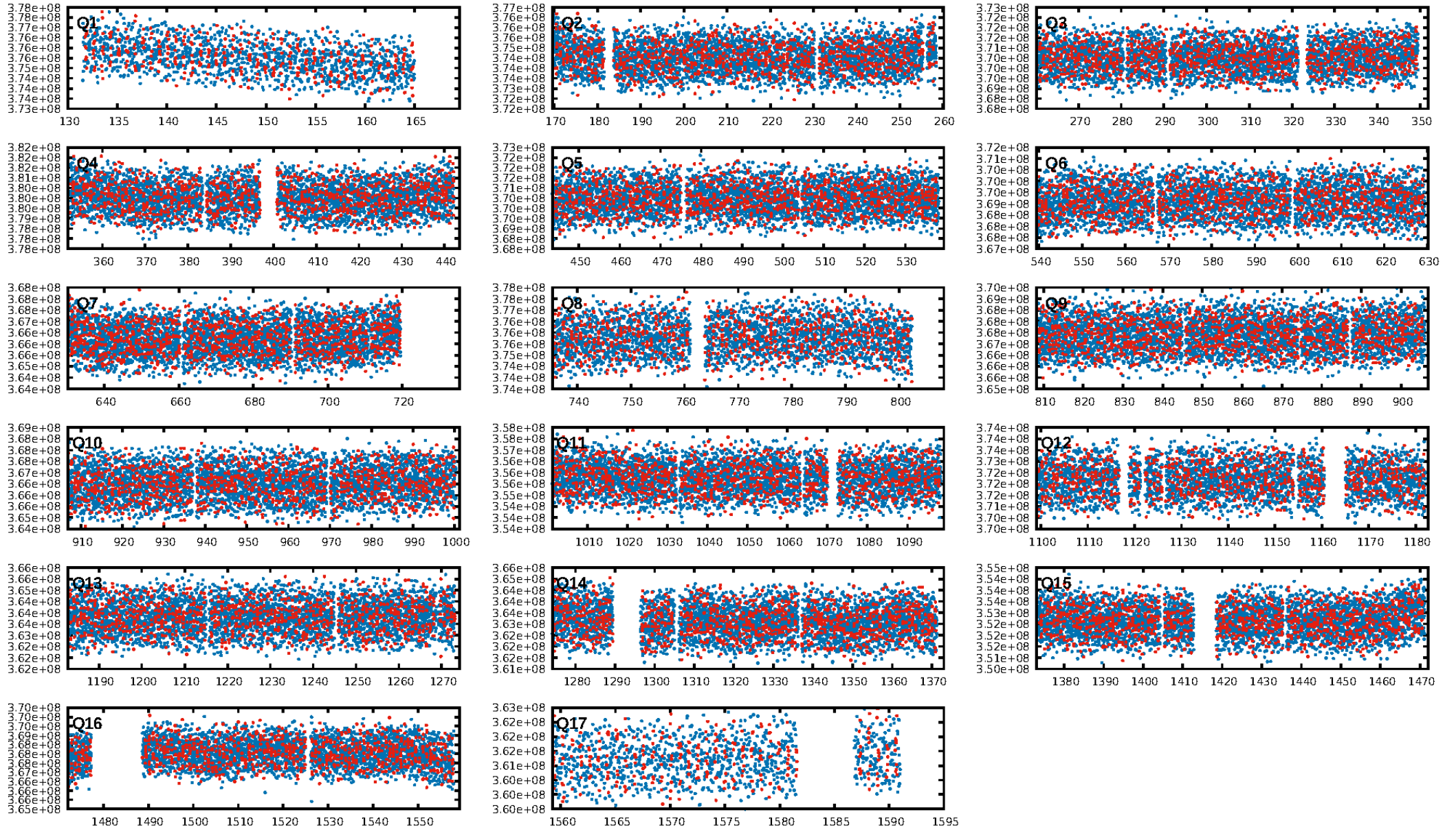
KIC: 10600540 Candidate: 2 of 2 Period: 0.823 d



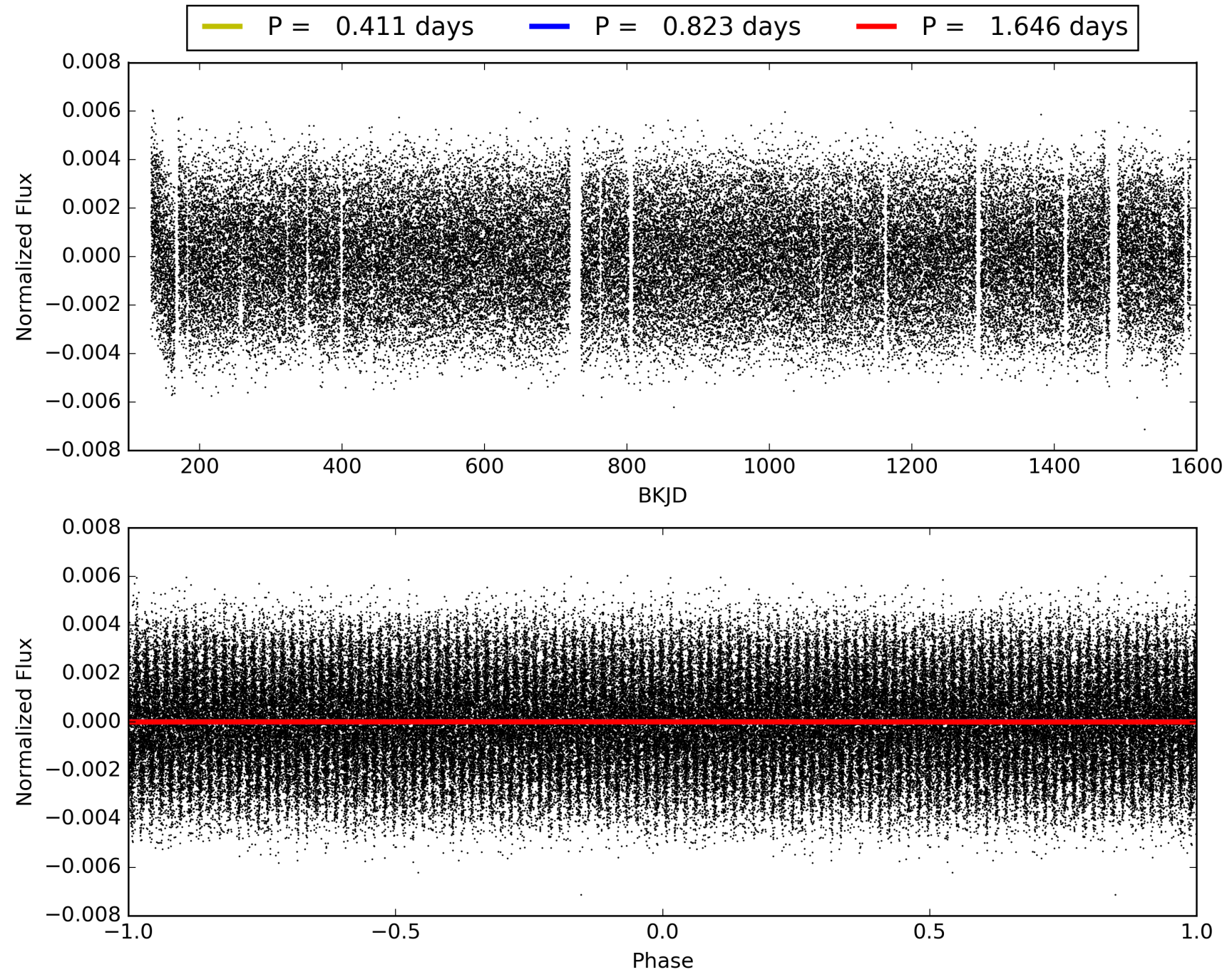
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:14:43 Z

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

TCE 010600540-02, PDC Light Curves

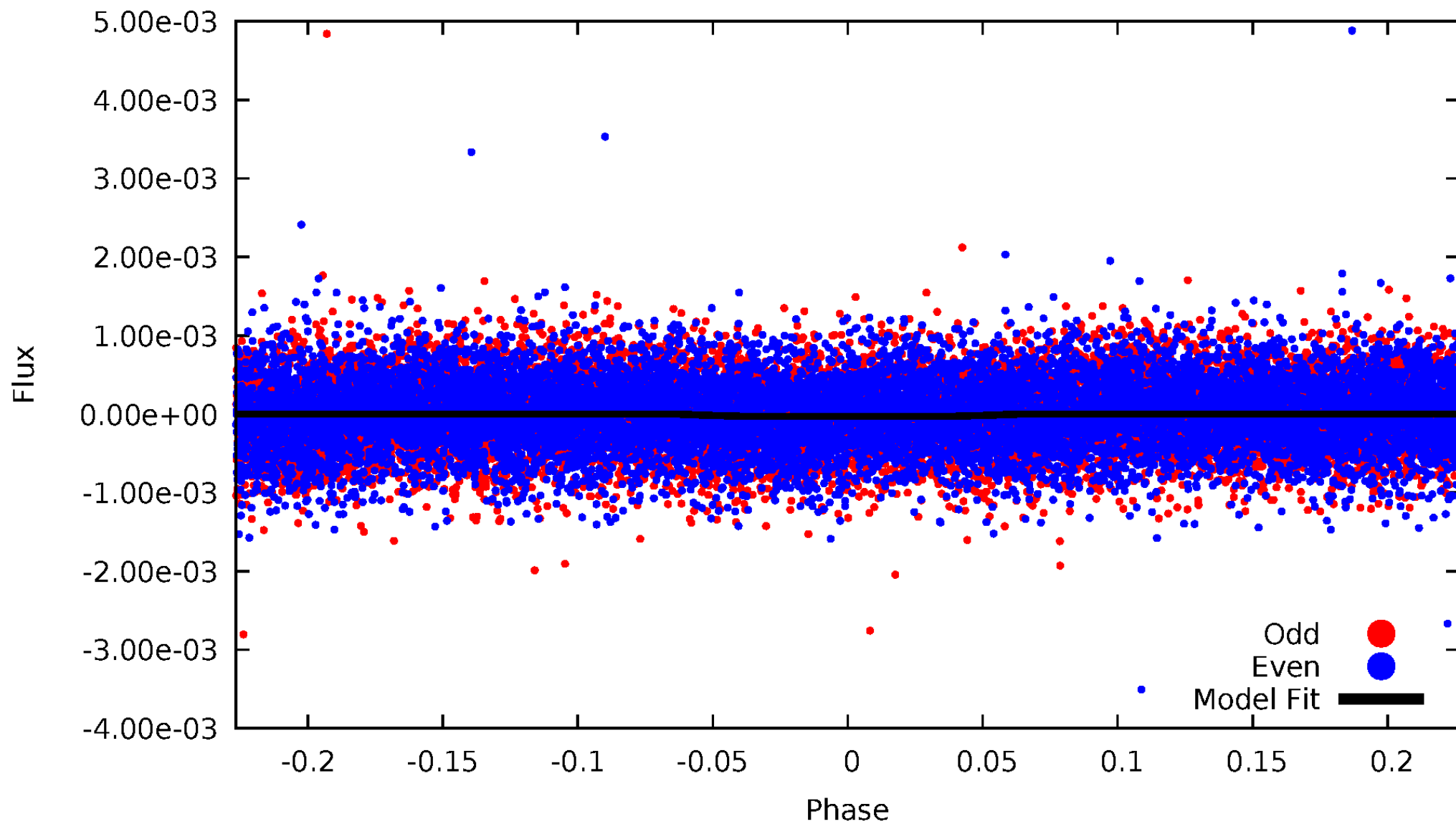


TCE 010600540-02



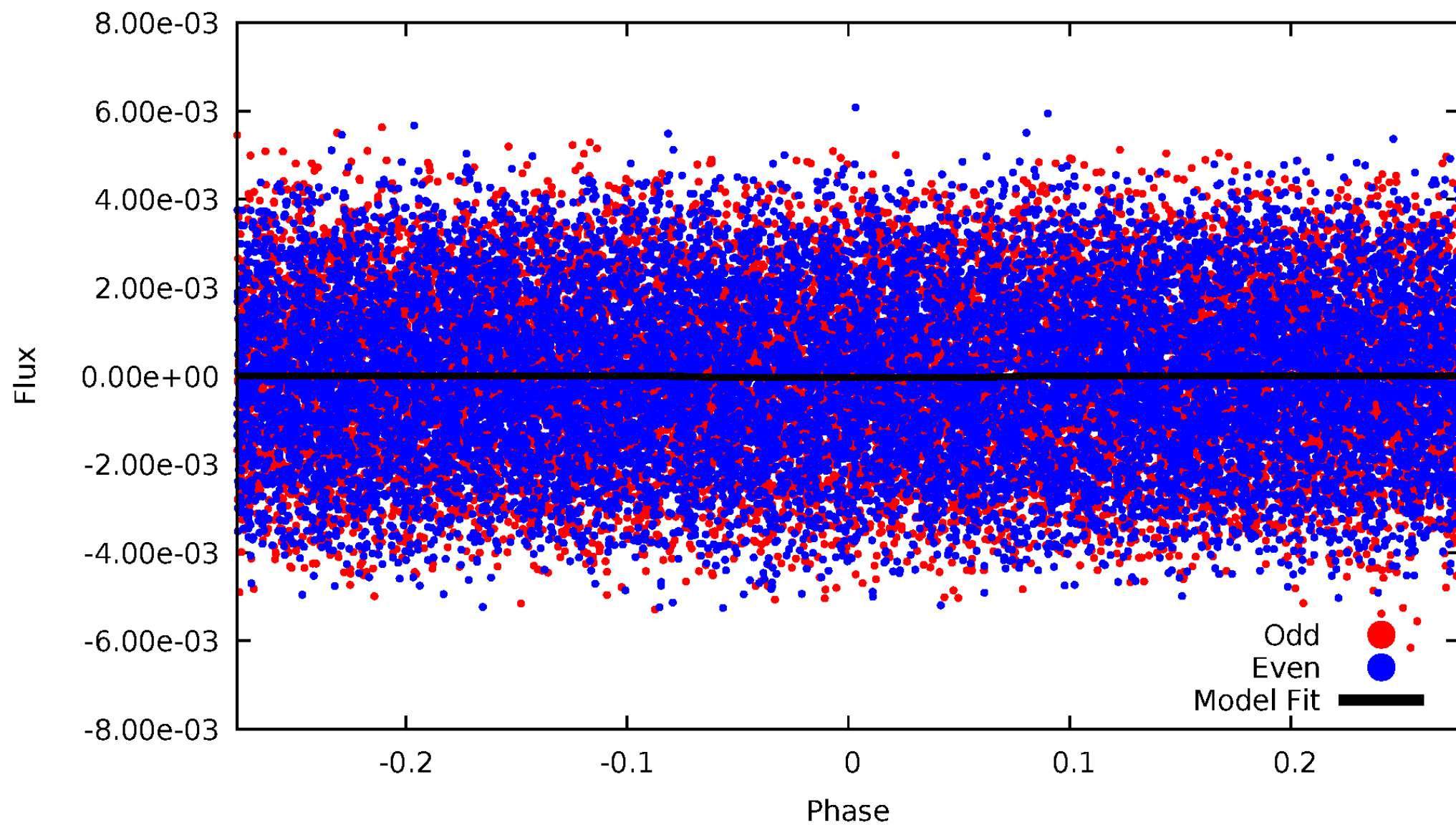
DV Odd/Even

TCE 010600540-02



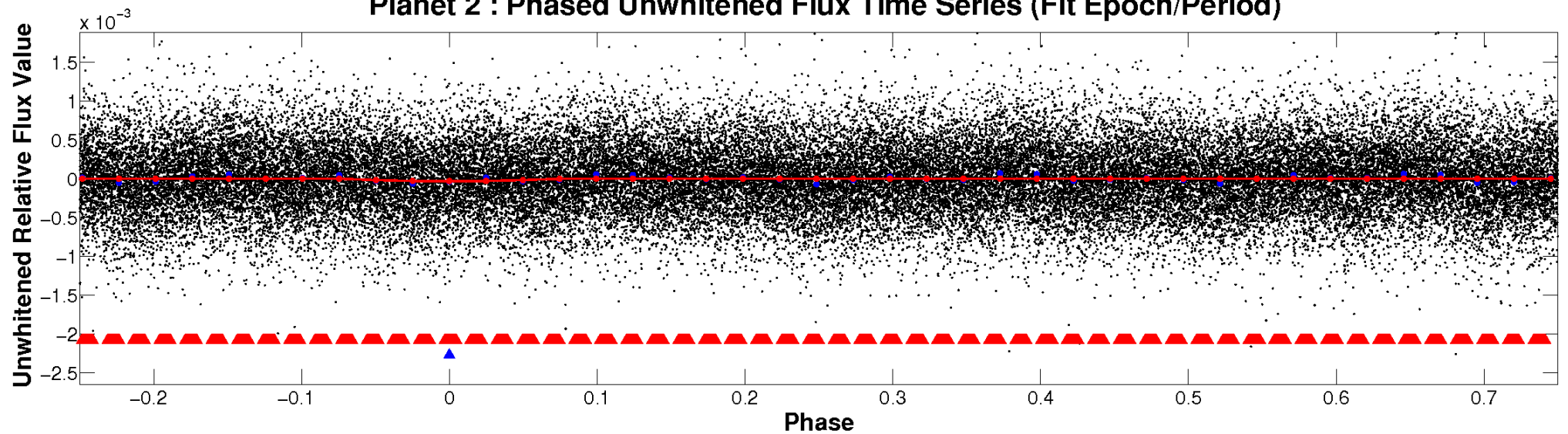
ALT Odd/Even

TCE 010600540-02

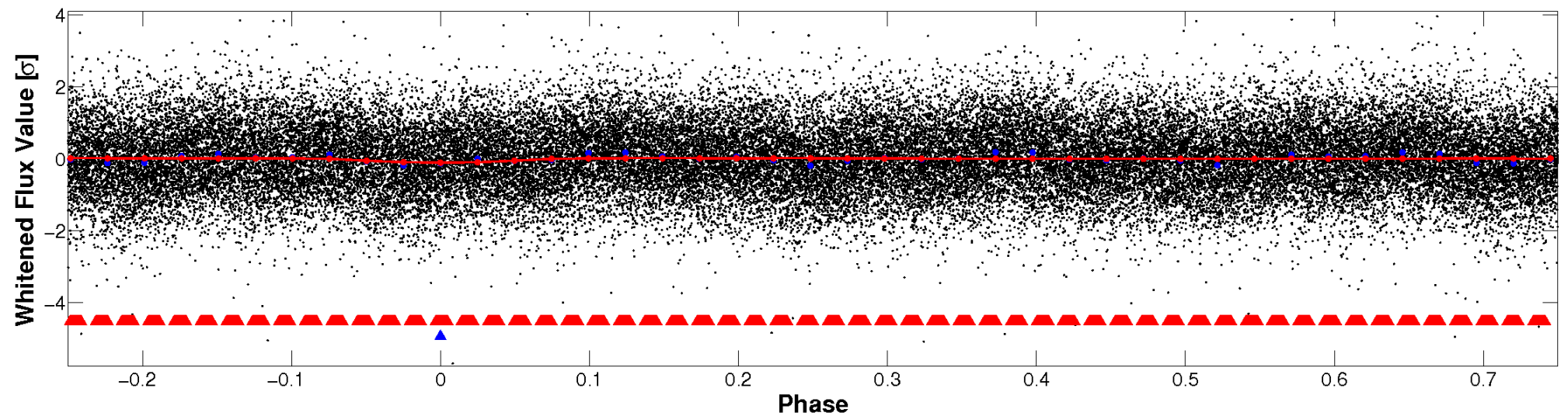


Non-Whitened Vs. Whitened Light Curve

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

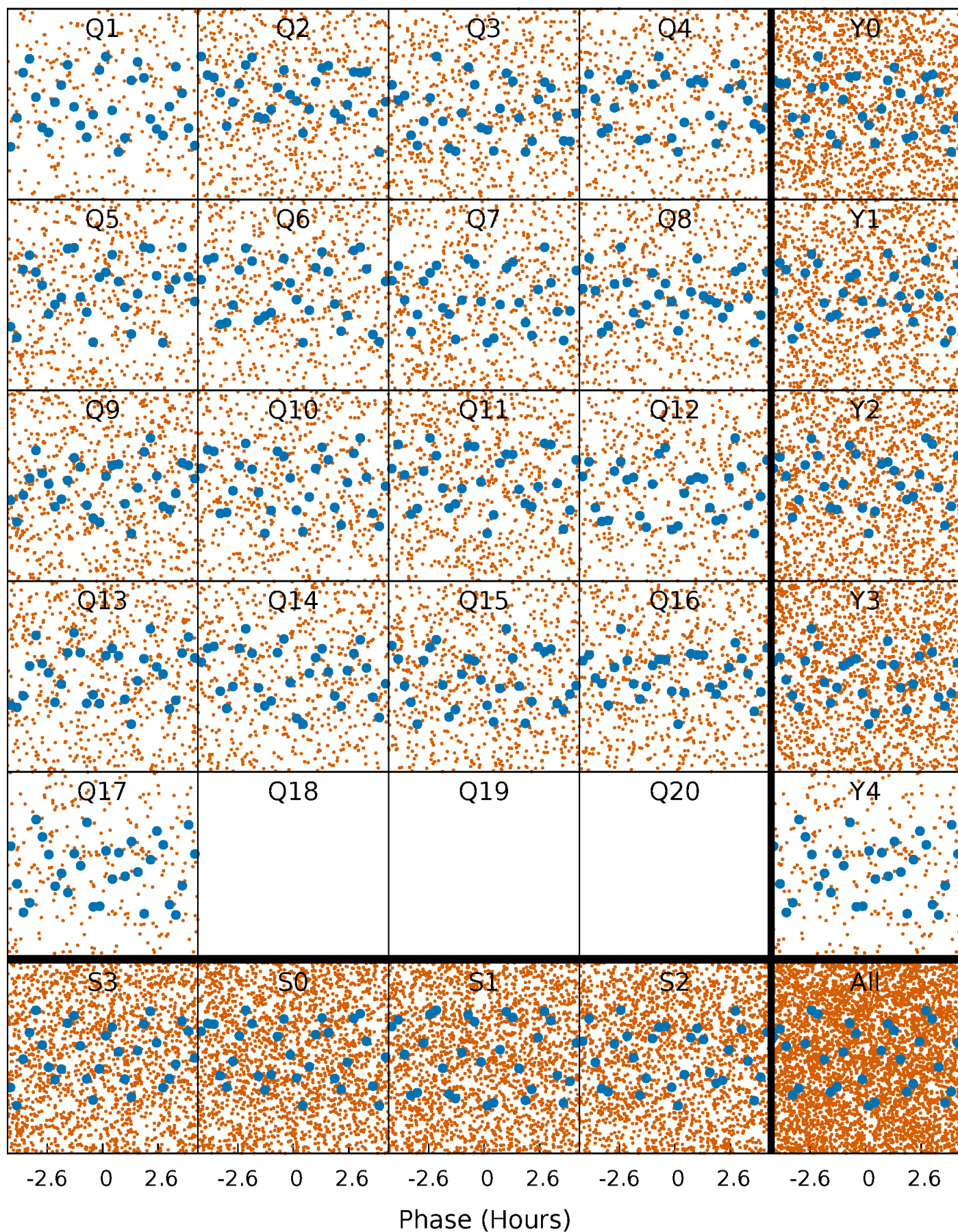


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



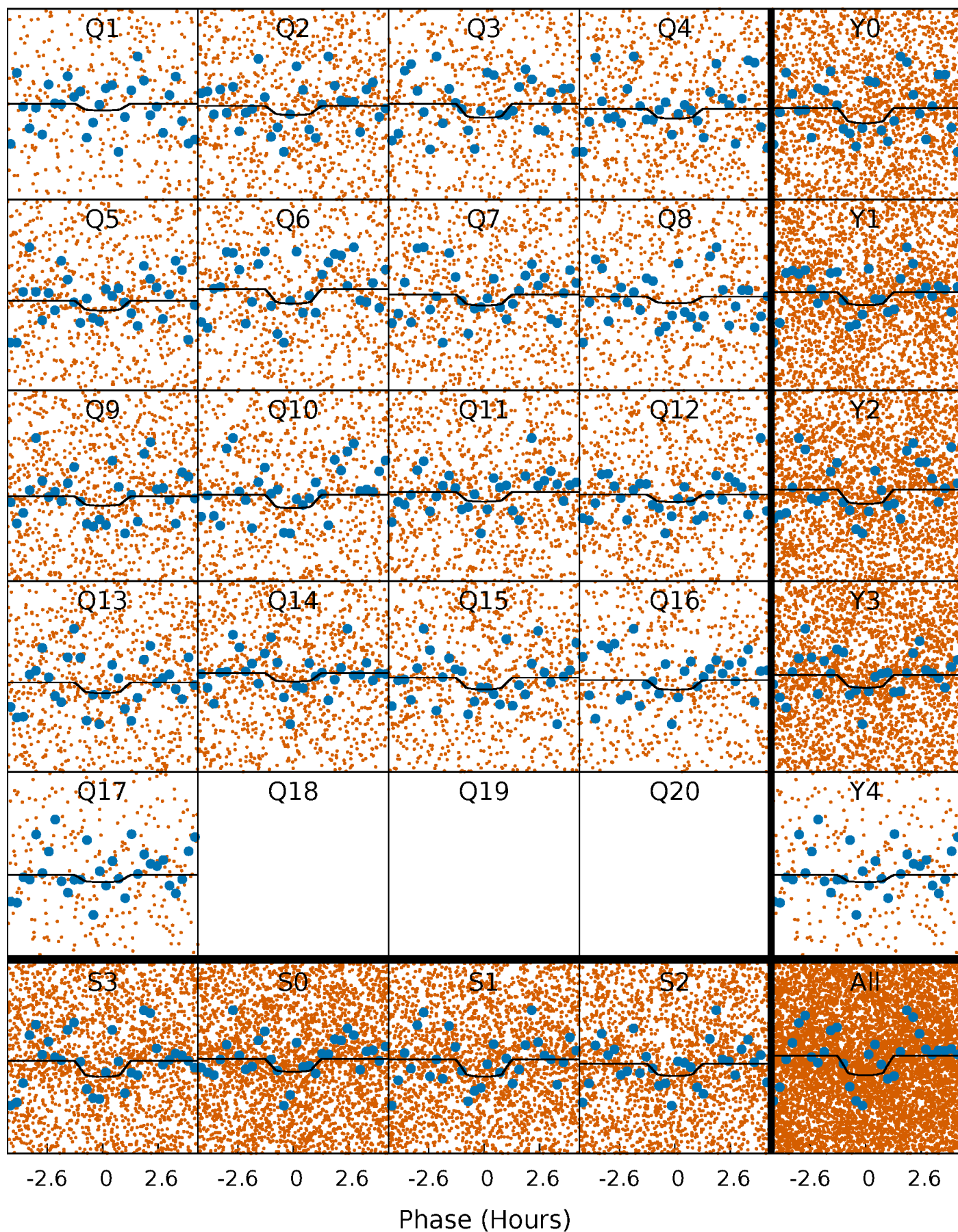
PDC Quarter-Phased Transit Curves

TCE 010600540-02 P= 0.822780 Days $T_0=131.841435$ (BKJD)



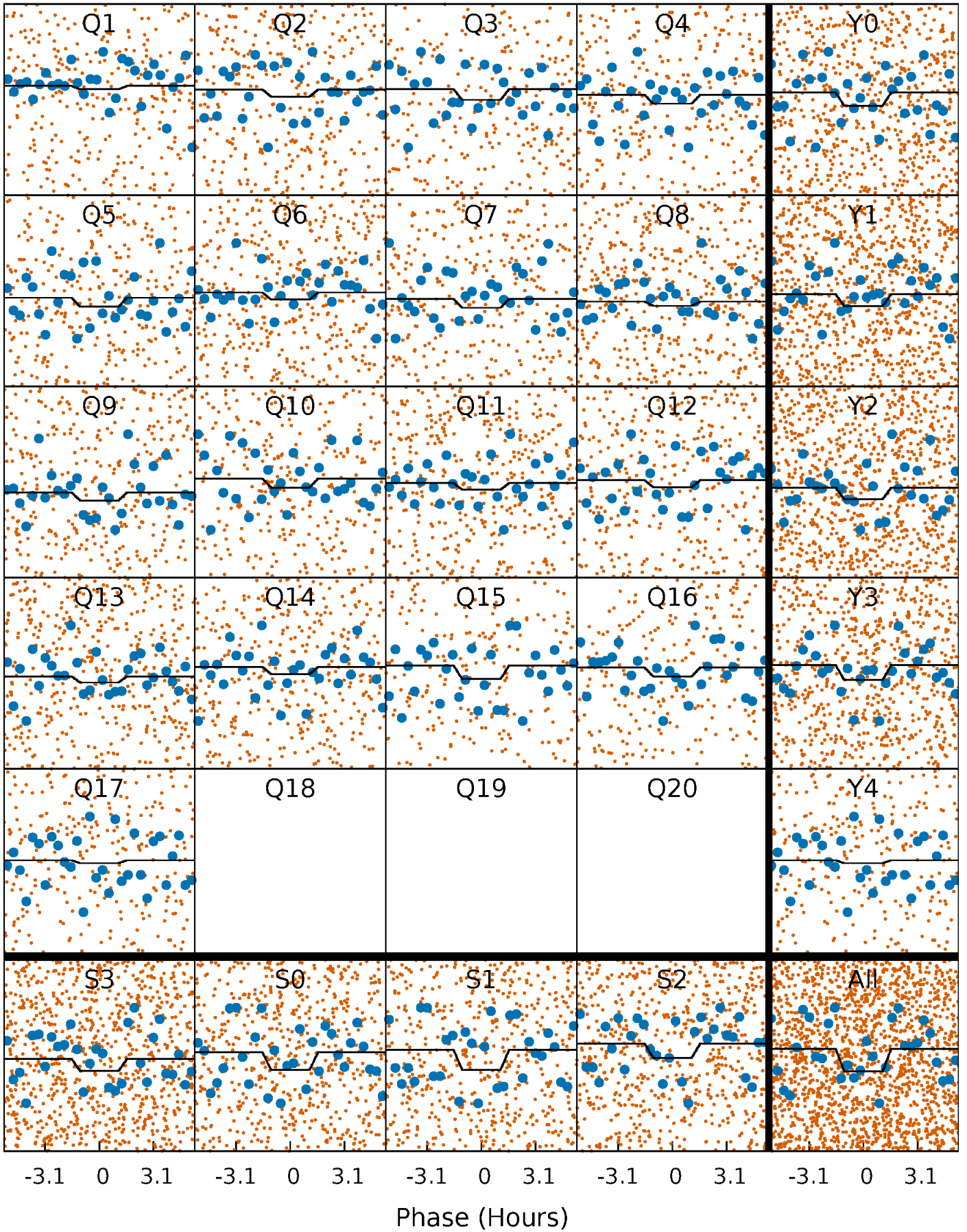
DV Quarter-Phased Transit Curves

TCE 010600540-02 $P = 0.822780$ Days $T_0 = 131.841435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

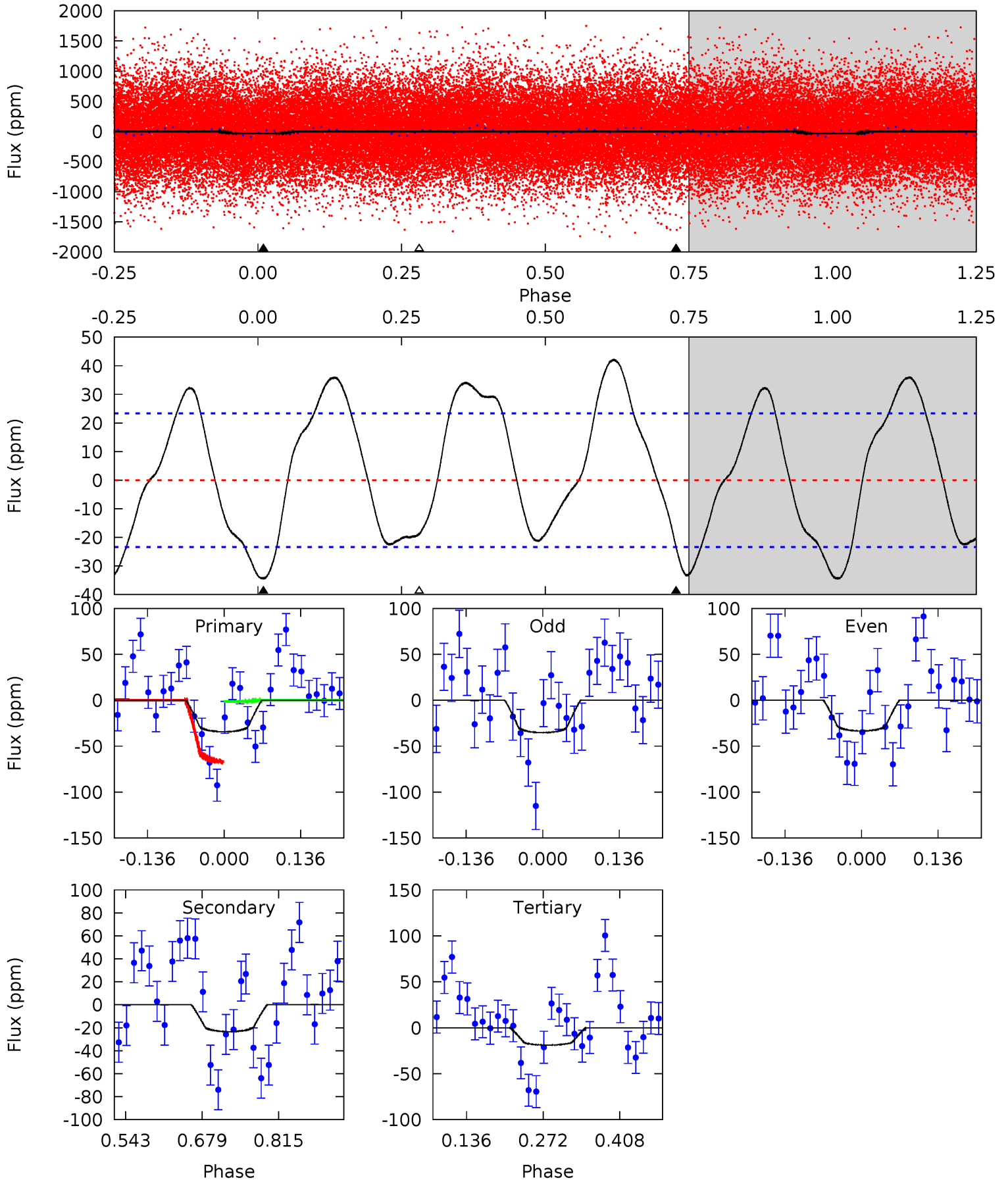
TCE 010600540-02 P= 0.822792 Days $T_0=131.843465$ (BKJD)



DV Model-Shift Uniqueness Test

010600540-02, P = 0.822780 Days, E = 131.018655 Days

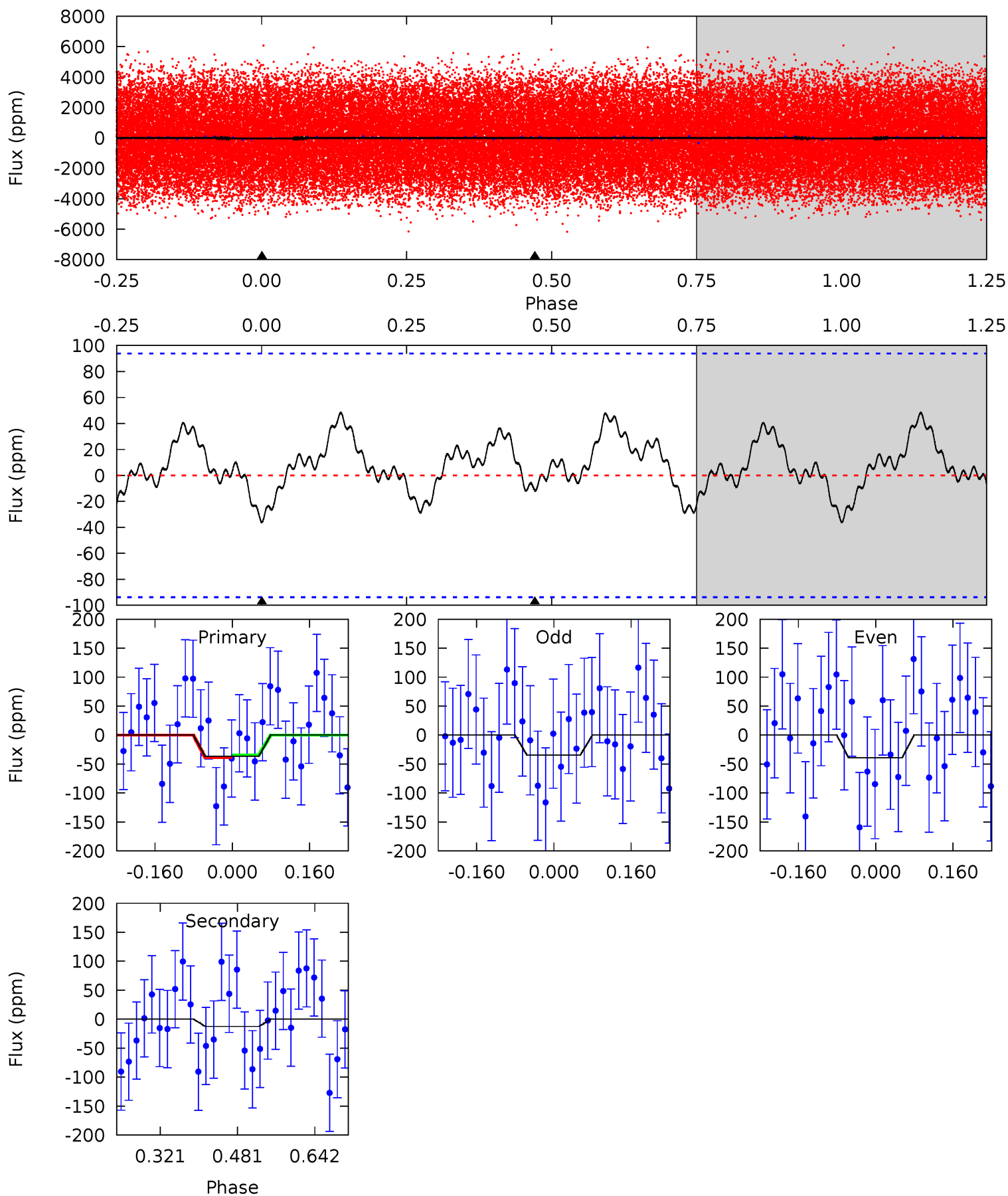
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.62	4.51	3.63	0	4.50	1.49	3.83	2.99	6.62	0.88	4.51	0.17	1.29	0.55	6.32



Alt Model-Shift Uniqueness Test

010600540-02, P = 0.822792 Days, E = 131.020673 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	0.60	0	0	4.46	1.40	0.71	1.75	1.75	0.60	0.60	0.11	0.81	0.57	0.10



Stellar Parameters For KIC 010600540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8406^{+206}_{-383}	$3.777^{+0.408}_{-0.076}$	$-0.200^{+0.250}_{-0.350}$	$3.034^{+0.712}_{-1.424}$	$2.009^{+0.317}_{-0.515}$	$0.101^{+0.380}_{-0.033}$
	+2%/-5%	+11%/-2%	+125%/-175%	+23%/-47%	+16%/-26%	+375%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010600540-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 5	$1.85^{+1.34}_{-1.08}$	5872^{+423}_{-662}	6671^{+5895}_{-1952}	$1.785^{+7.999}_{-1.210}$
Alt.	-13 ± 21	$1.79^{+1.35}_{-0.99}$	5835^{+440}_{-662}	5165^{+4582}_{-11254}	$0.779^{+5.024}_{-1.389}$

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

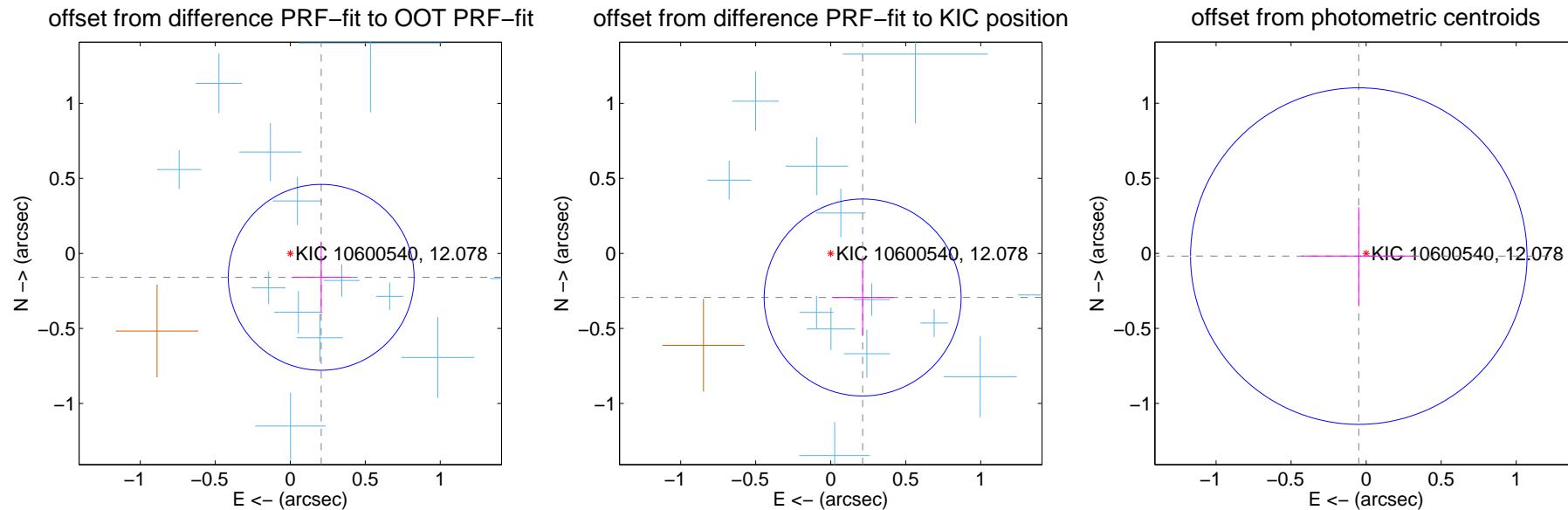
DV Centroid Data

Supplemental centroid analysis for 010600540-02. Kepler magnitude: 12.08. Transit SNR 6.86

There are 15 quarters with good PRF difference image offsets

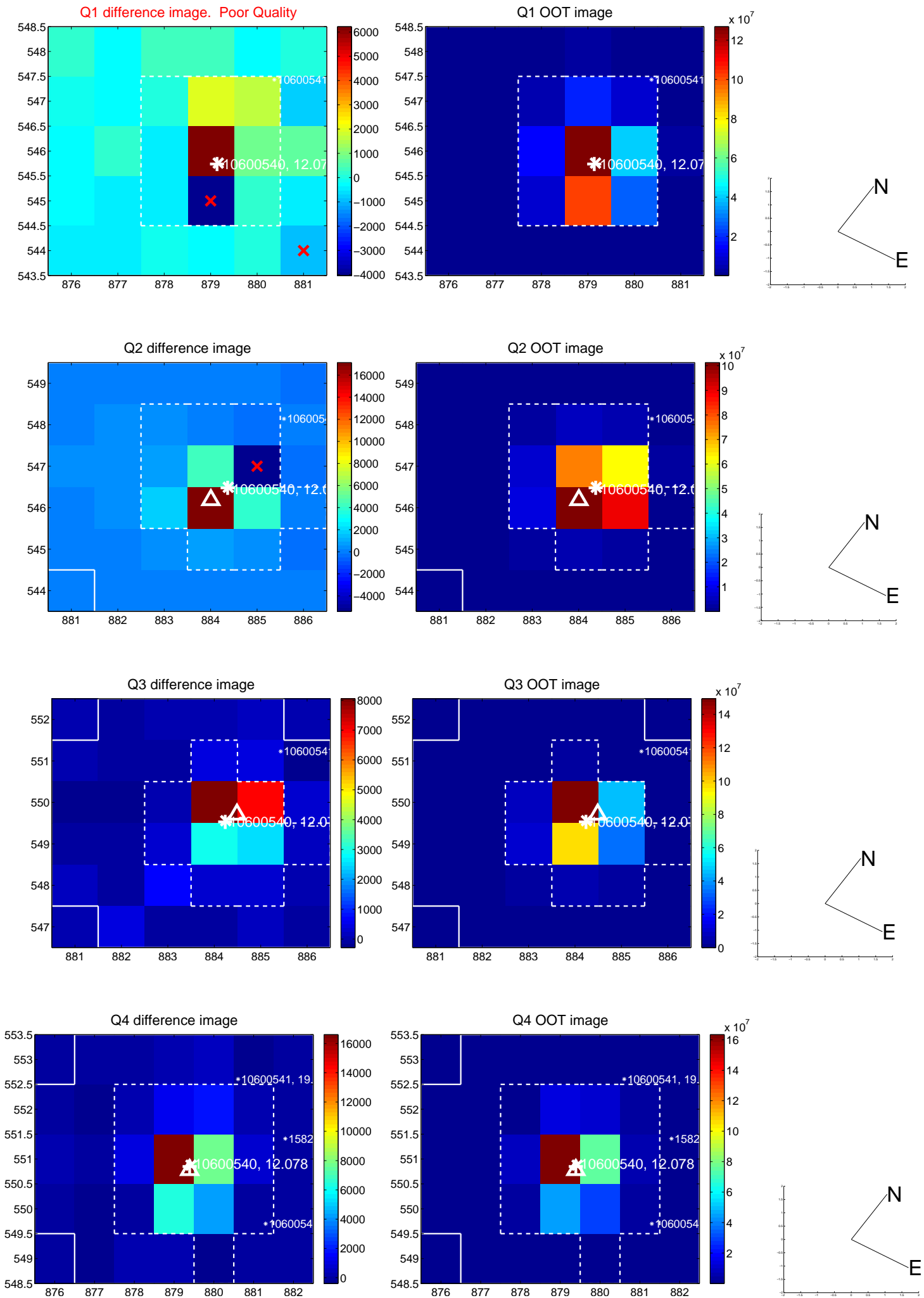
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.261 ± 0.206	1.26	-0.206 ± 0.197	-0.159 ± 0.235
PRF-fit source offset from KIC position	0.363 ± 0.219	1.66	-0.213 ± 0.204	-0.294 ± 0.256
photometric centroid source offset	0.05 ± 0.37	0.14	0.05 ± 0.38	-0.02 ± 0.33

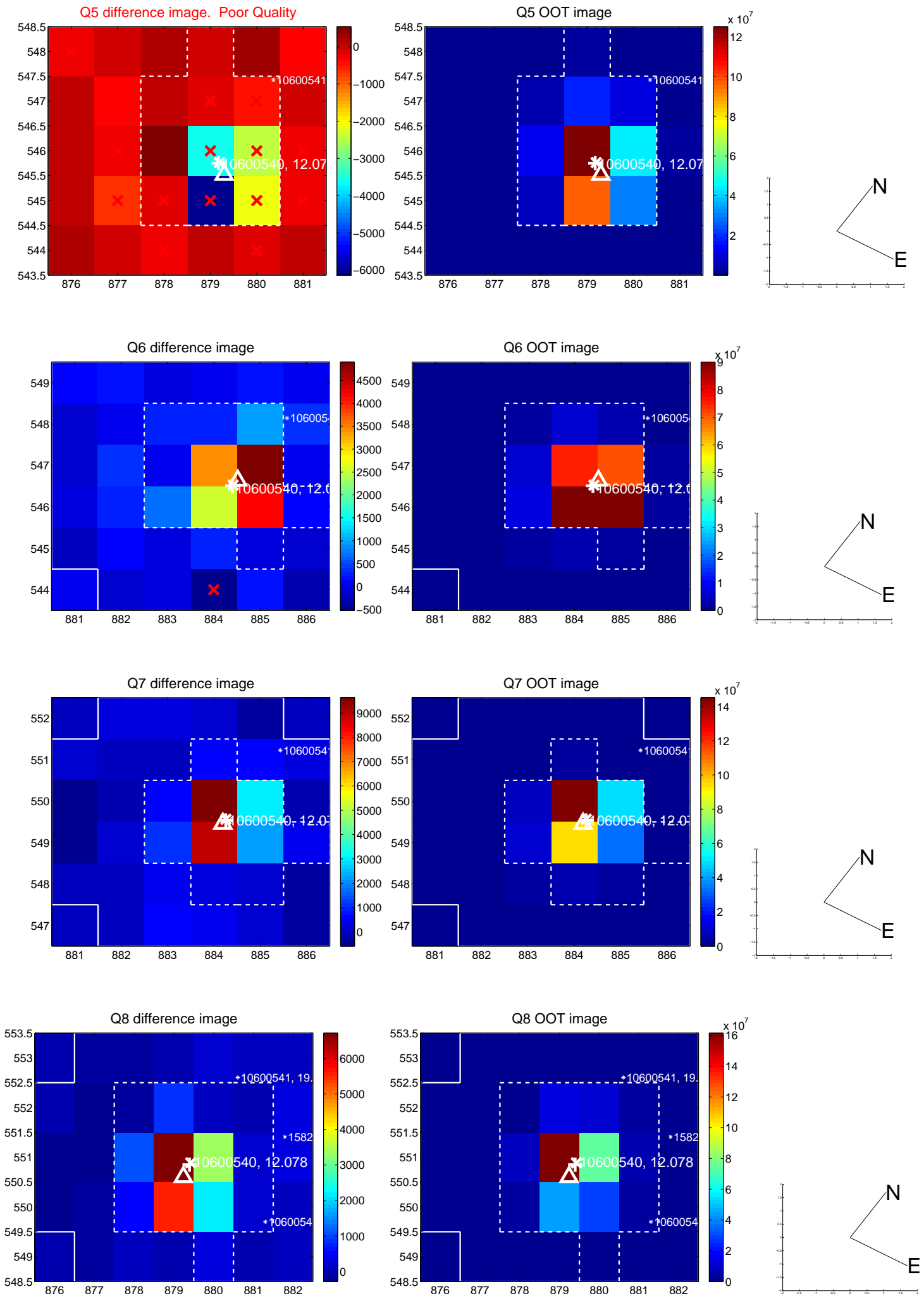


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

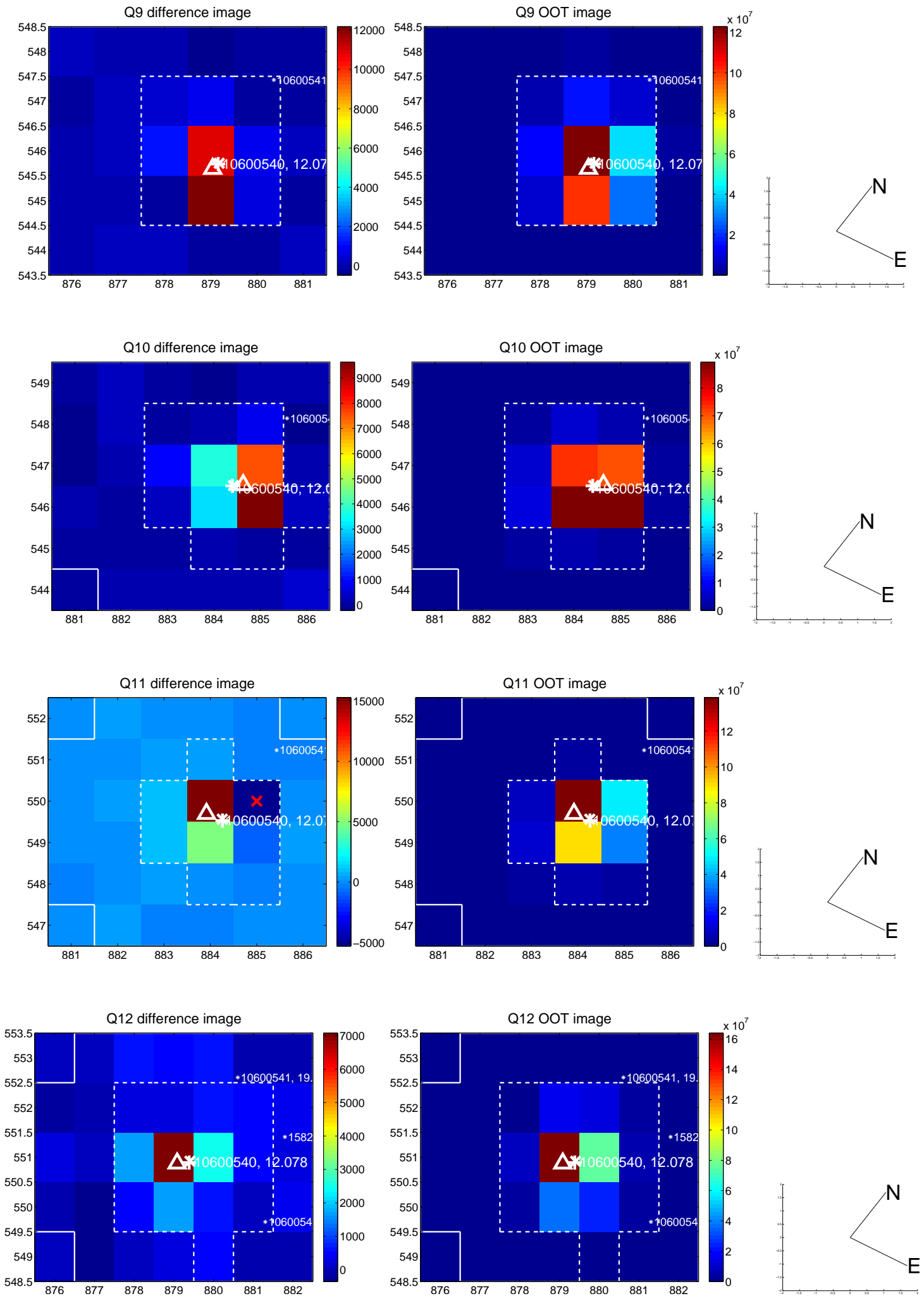
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



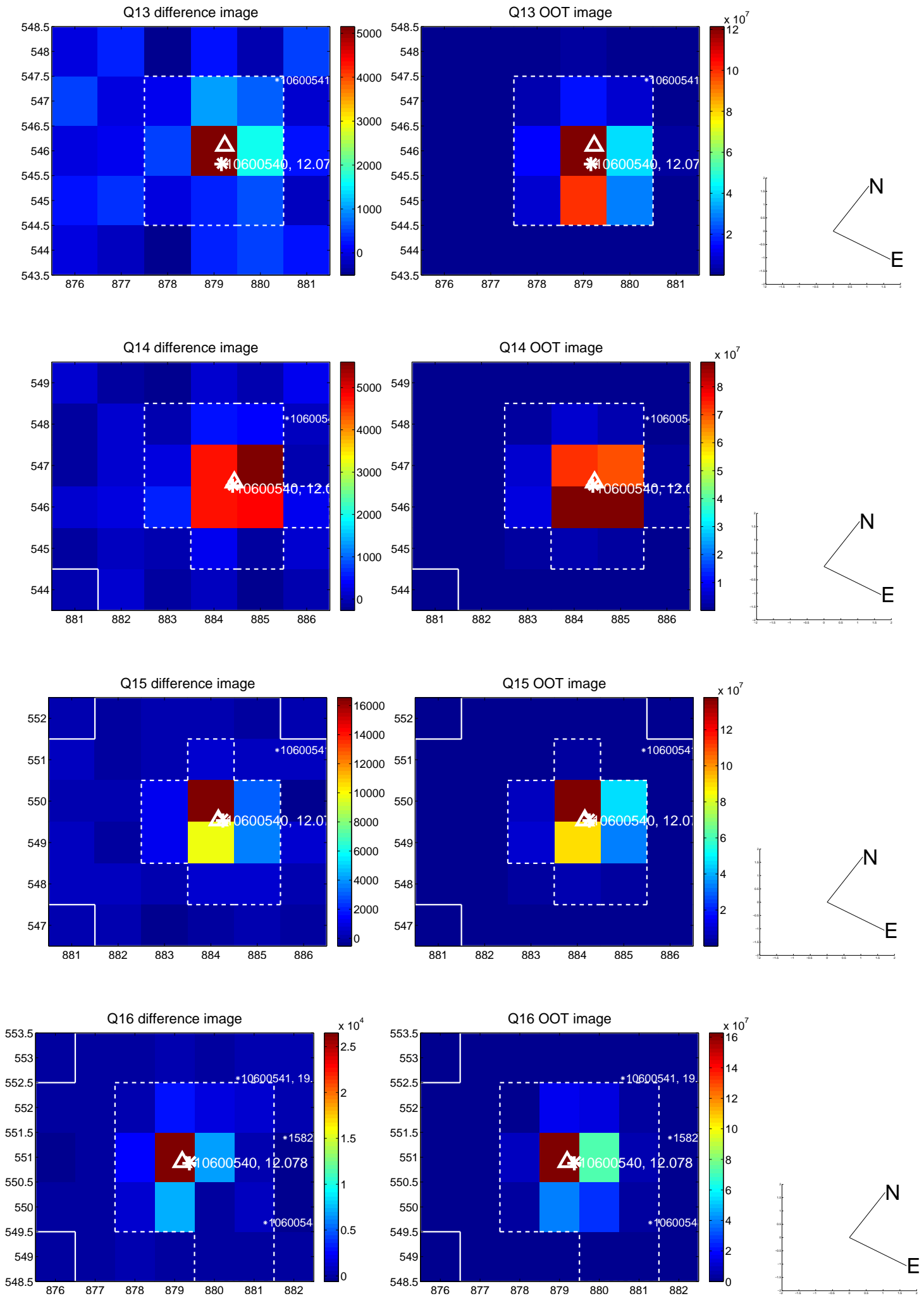
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



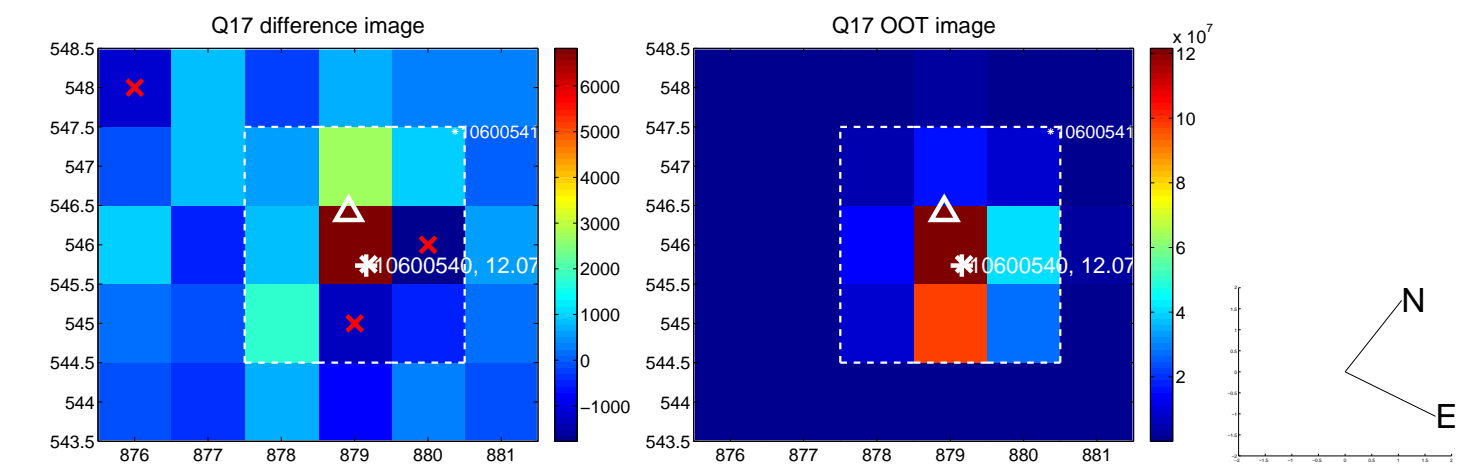
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



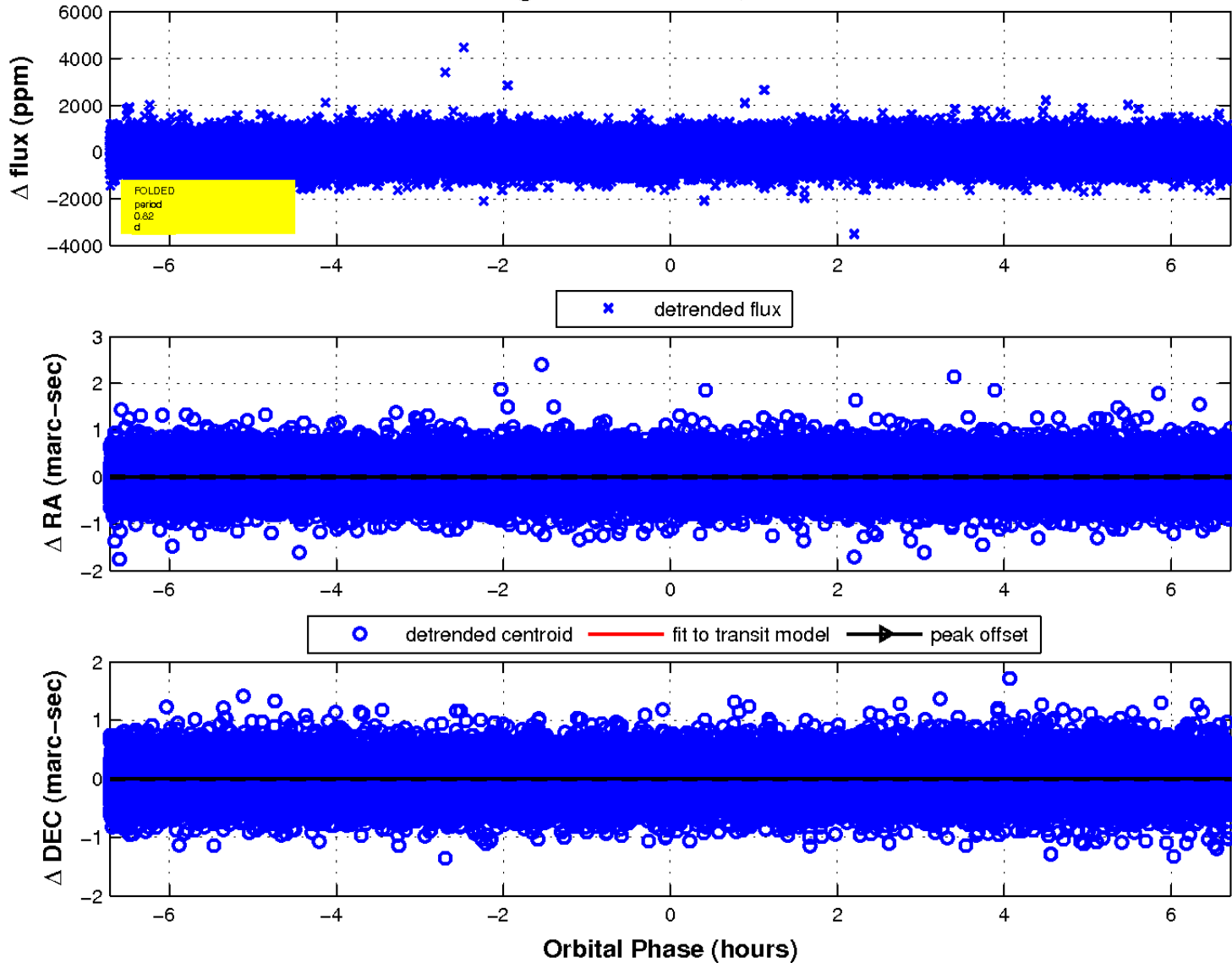
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

