

KIC 009579860

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})
009579860-01	OBS	6208.01	2.151220	131.743709	170.6	2.384	19.6	20.6	8.18	4748	11.42	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009579860-01	OBS	FP	0.00	0	0	1	0	PLANET_IN_STAR—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

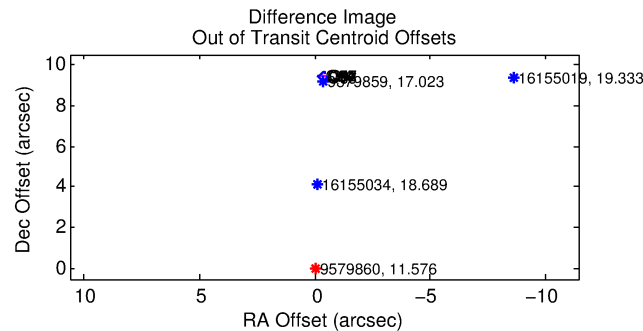
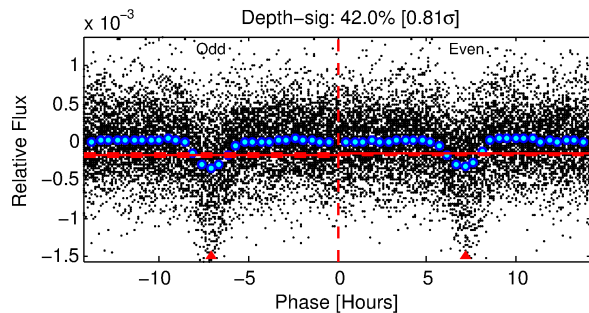
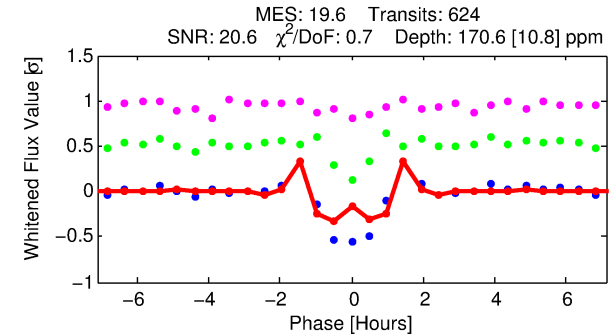
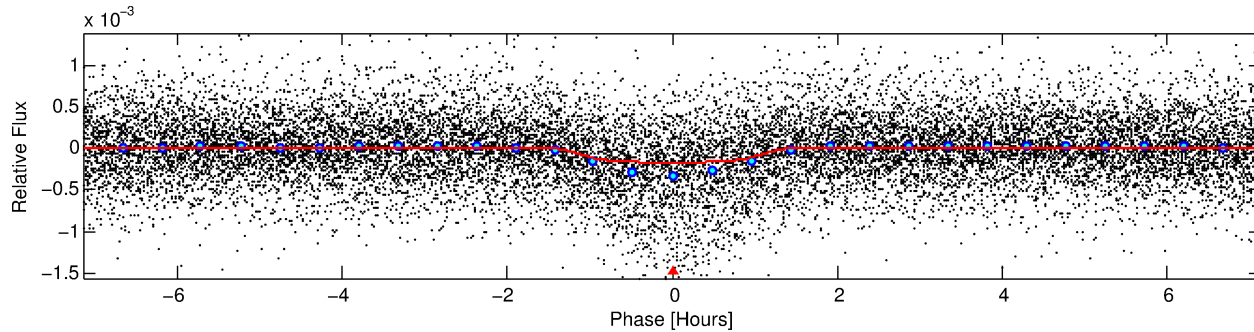
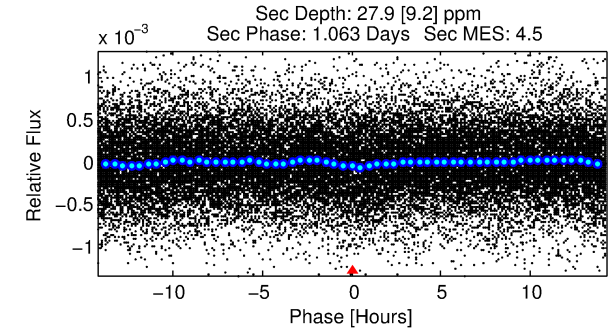
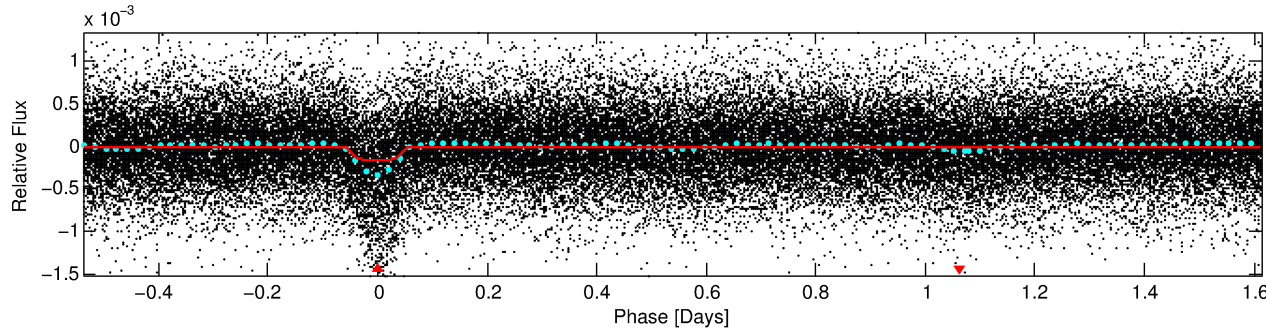
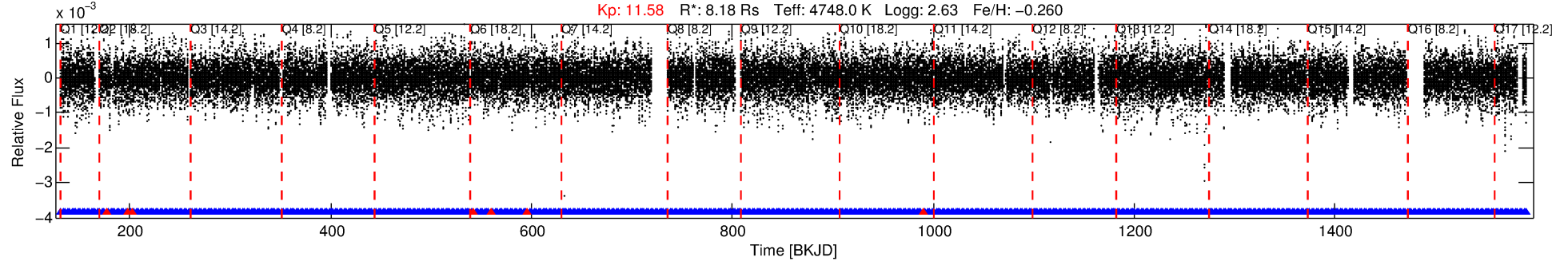
Ephemeris Match Information For 009579860-01

No Significant Match Found

DV One-Page Summary

KIC: 9579860 Candidate: 1 of 1 Period: 2.151 d
KOI: K06208.01 Corr: 0.959

Kp: 11.58 R*: 8.18 Rs Teff: 4748.0 K Logg: 2.63 Fe/H: -0.260



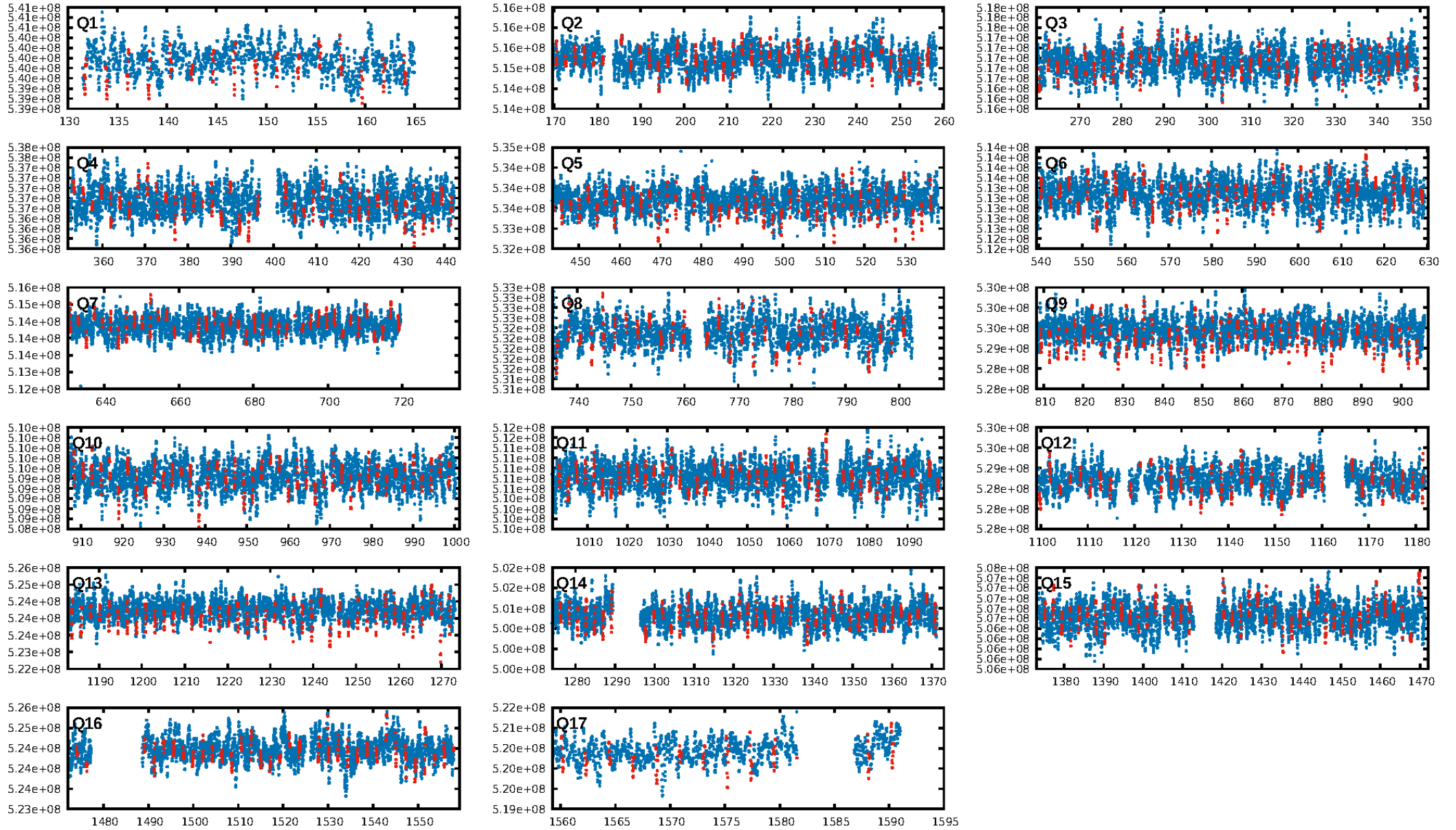
DV Fit Results:

Period = 2.15122 [0.00000] d
Epoch = 131.7437 [0.0005] BKJD
Rp/R* = 0.0128 [0.0019]
a/R* = 5.09 [2.61]
b = 0.70 [0.39]
Seff = N/A
Teq = N/A
Rp = 11.42 [2.68] Re
a = N/A
Ag = N/A
Teffp = N/A

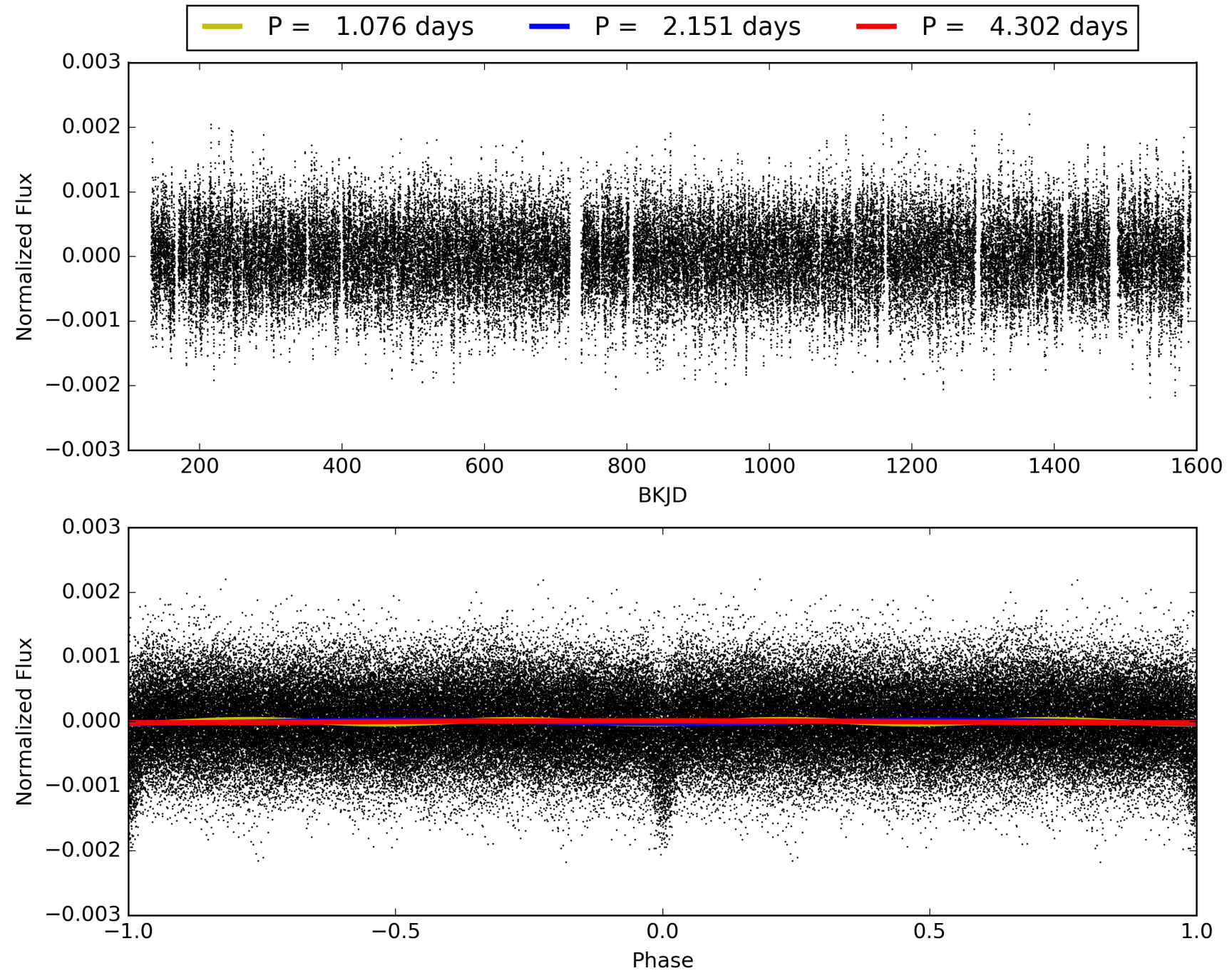
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.25e-77
RollingBand-fgt: 0.99 [589/596]
GhostDiagnostic-chr: -0.02078
Centroid-sig: 0.0%
Centroid-so: 42.751 arcsec [390.98σ]
OotOffset-rm: 9.423 arcsec [140.56σ]
KicOffset-rm: 9.460 arcsec [139.13σ]
OotOffset-st: 4/0/4/5 [13]
KicOffset-st: 4/0/4/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009579860-01, PDC Light Curves

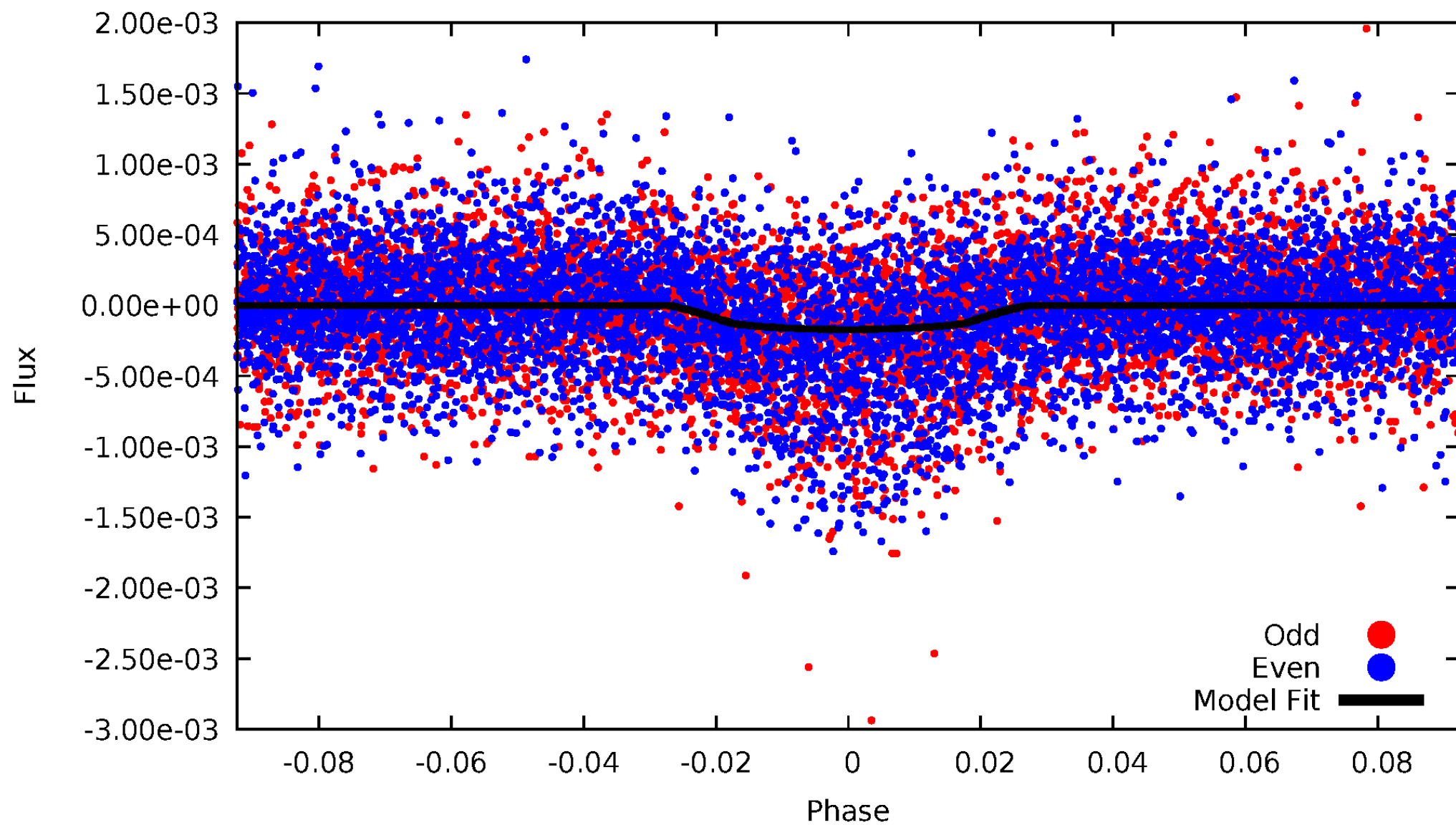


TCE 009579860-01



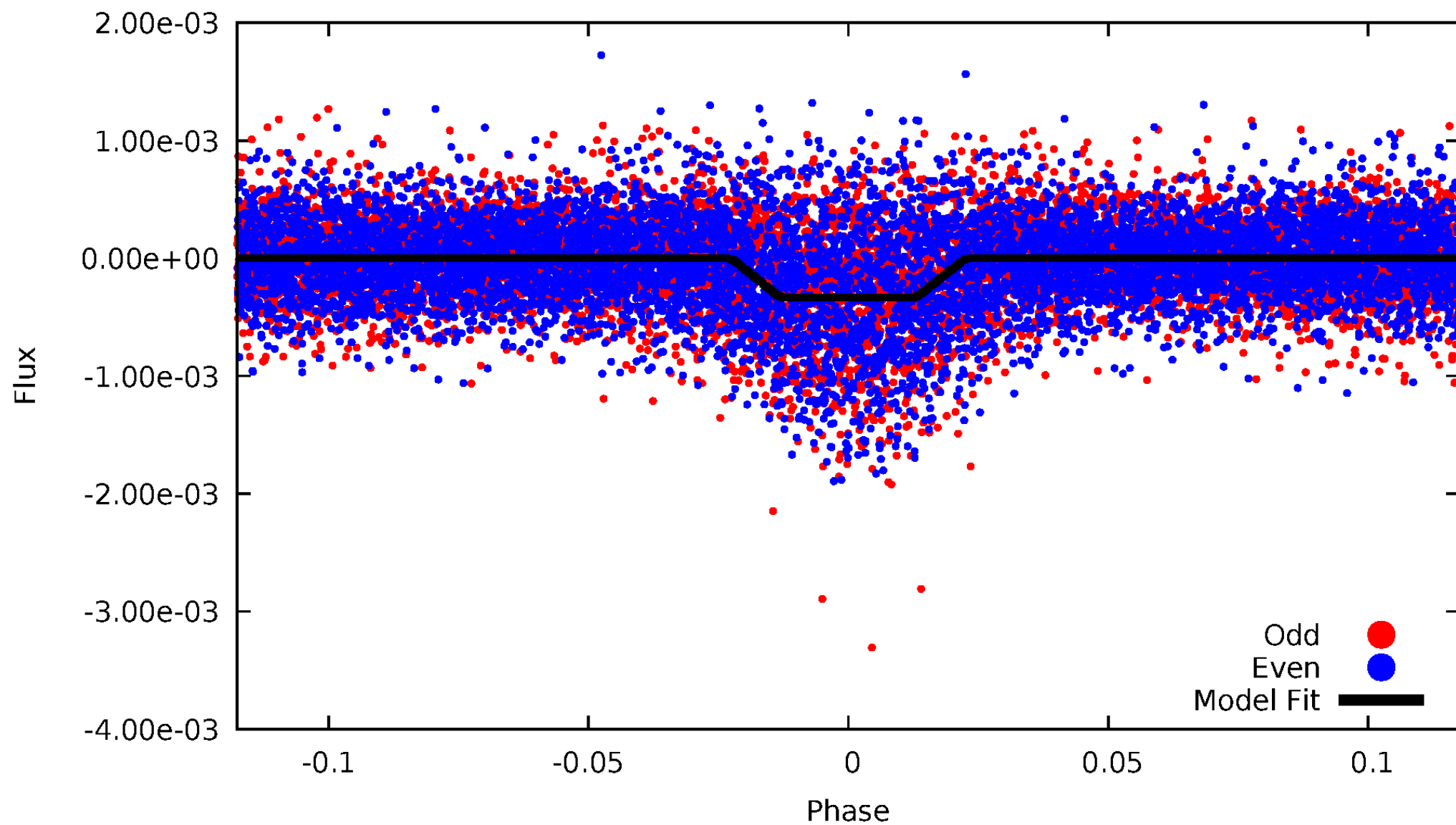
DV Odd/Even

TCE 009579860-01



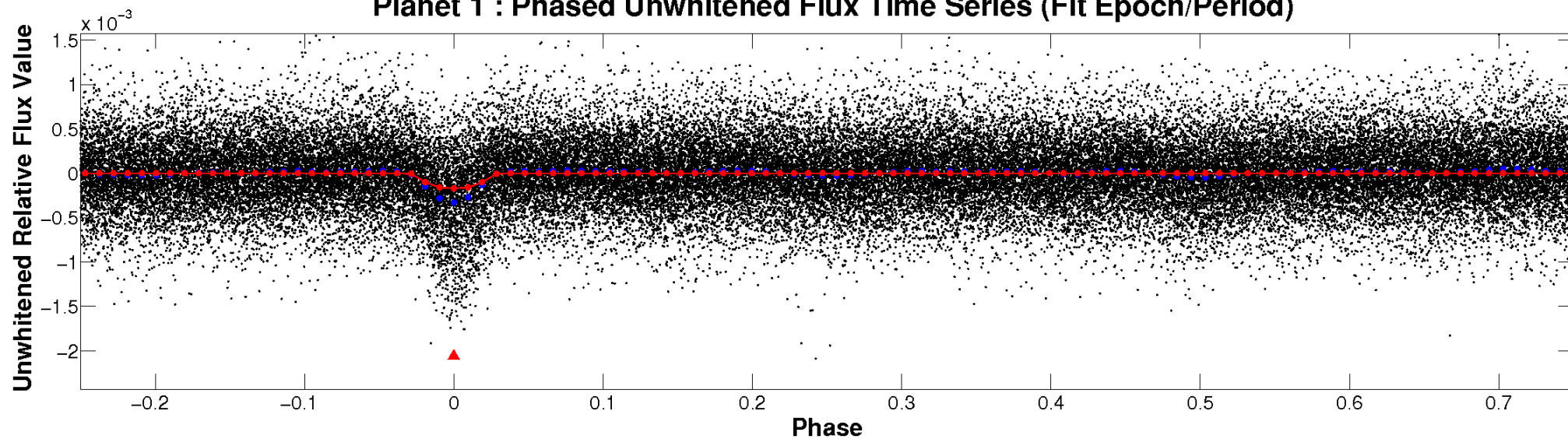
ALT Odd/Even

TCE 009579860-01

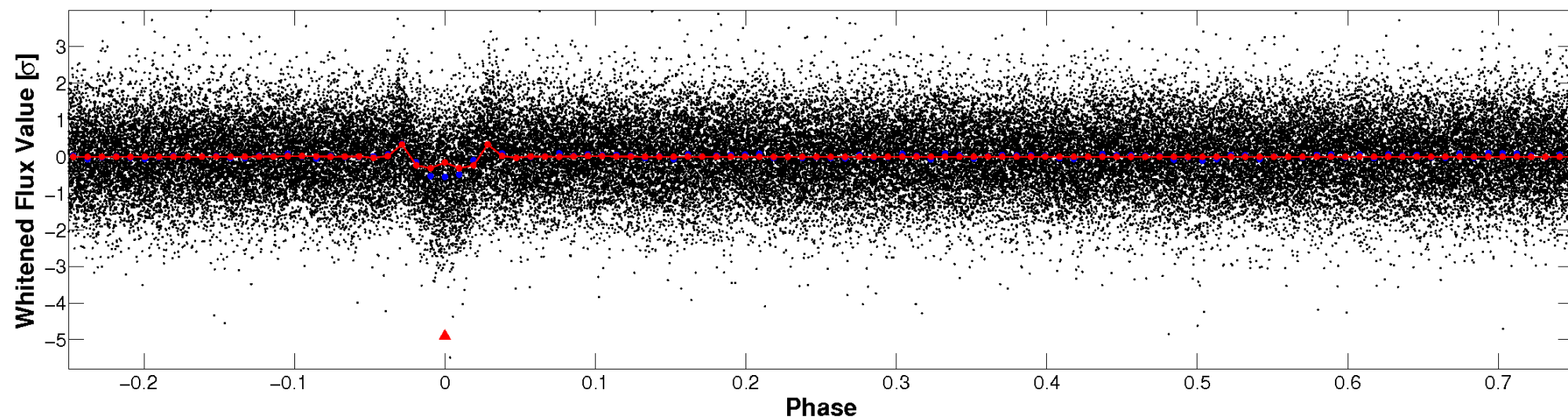


Non-Whitened Vs. Whitened Light Curve

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

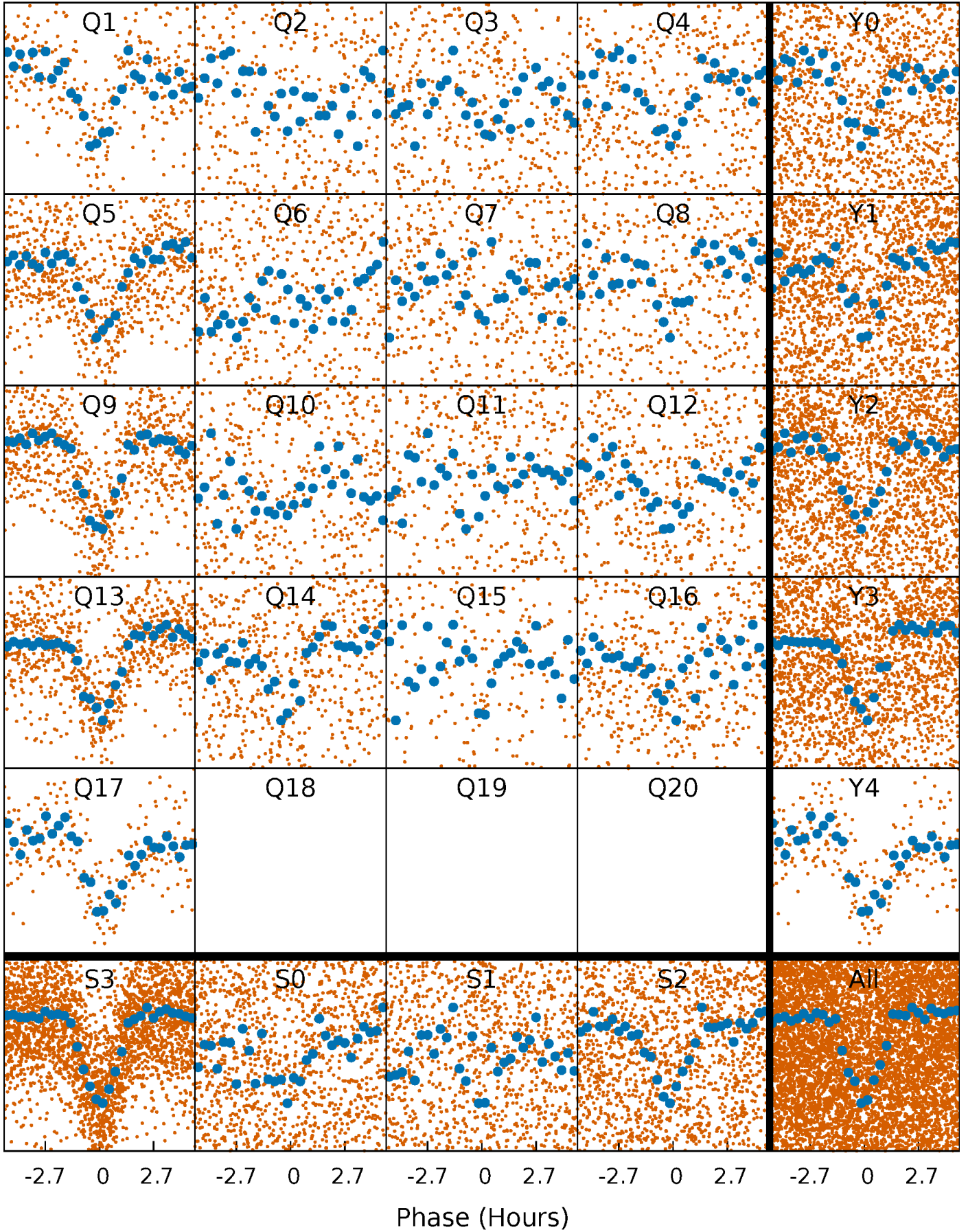


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



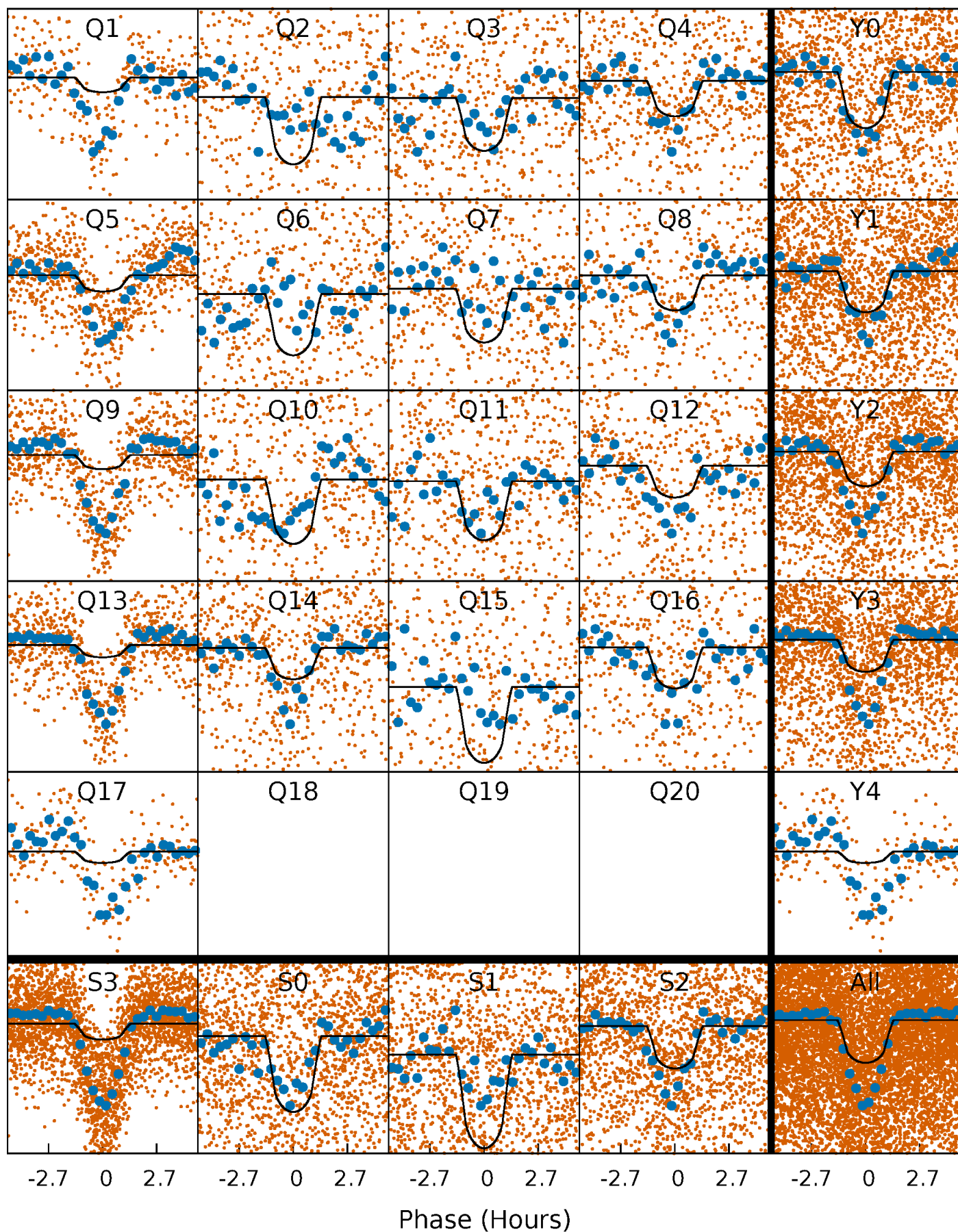
PDC Quarter-Phased Transit Curves

TCE 009579860-01 P= 2.151220 Days $T_0=131.743709$ (BKJD)



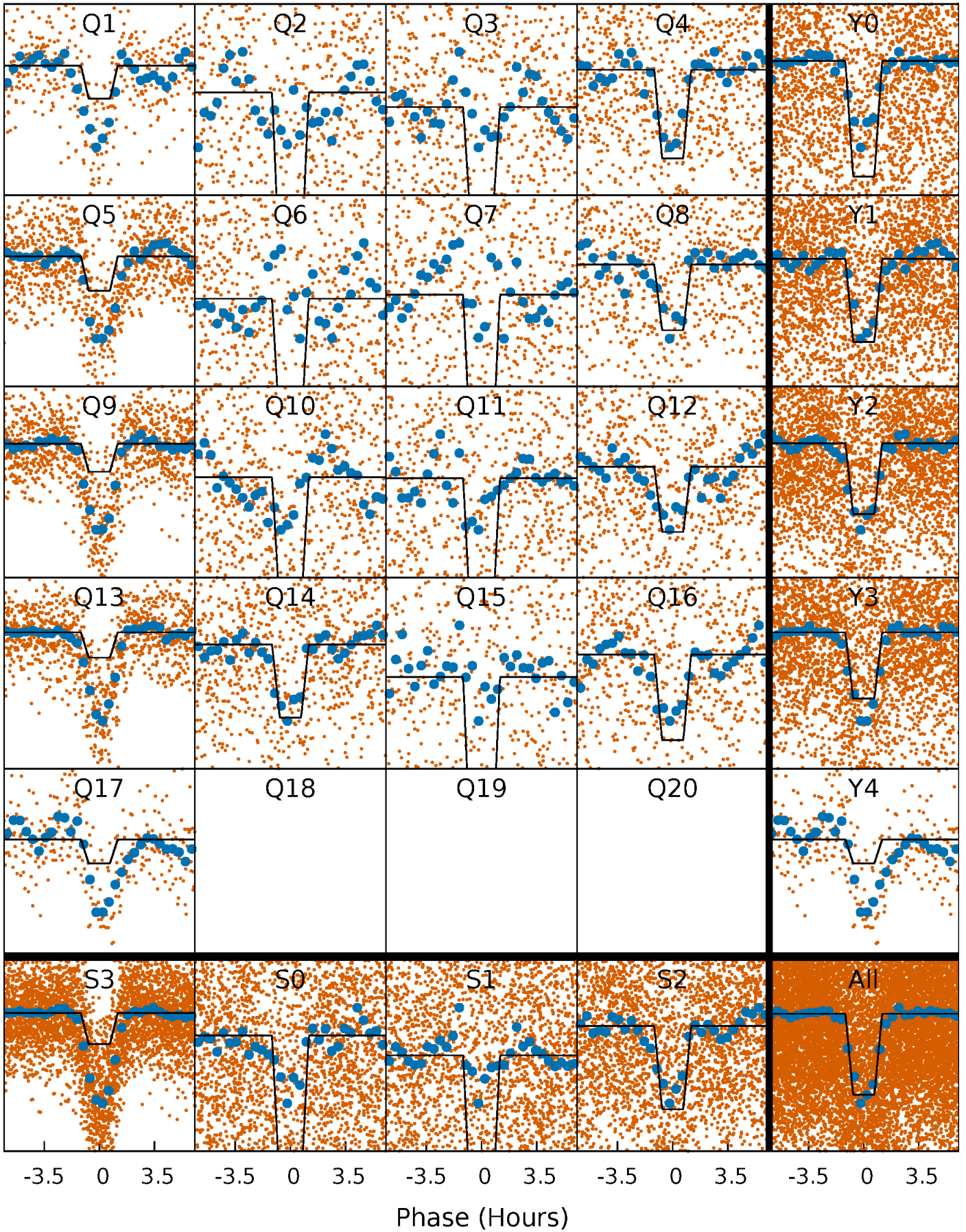
DV Quarter-Phased Transit Curves

TCE 009579860-01 P= 2.151220 Days $T_0=131.743709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

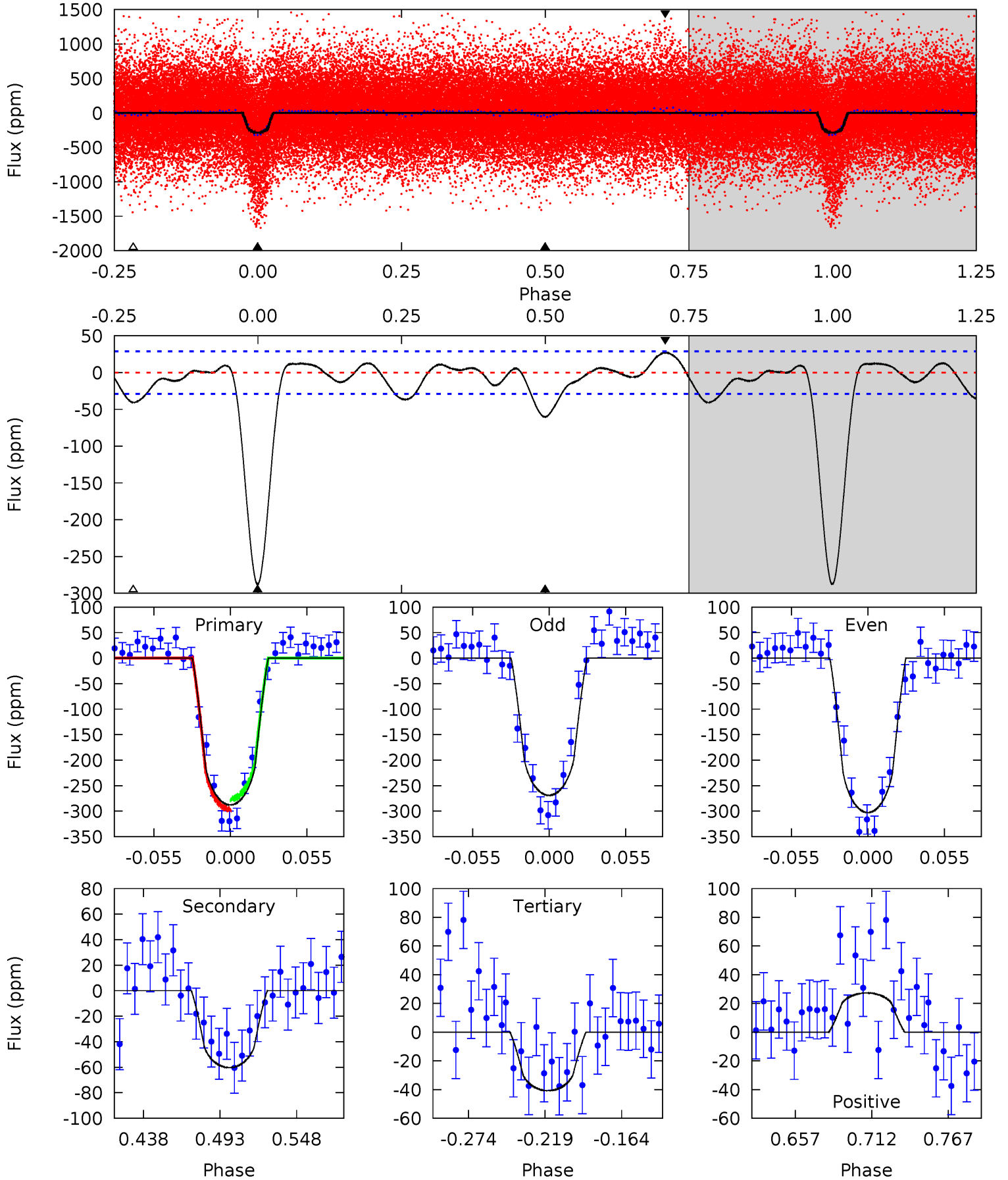
TCE 009579860-01 P= 2.151219 Days $T_0=131.741977$ (BKJD)



DV Model-Shift Uniqueness Test

009579860-01, P = 2.151220 Days, E = 129.592489 Days

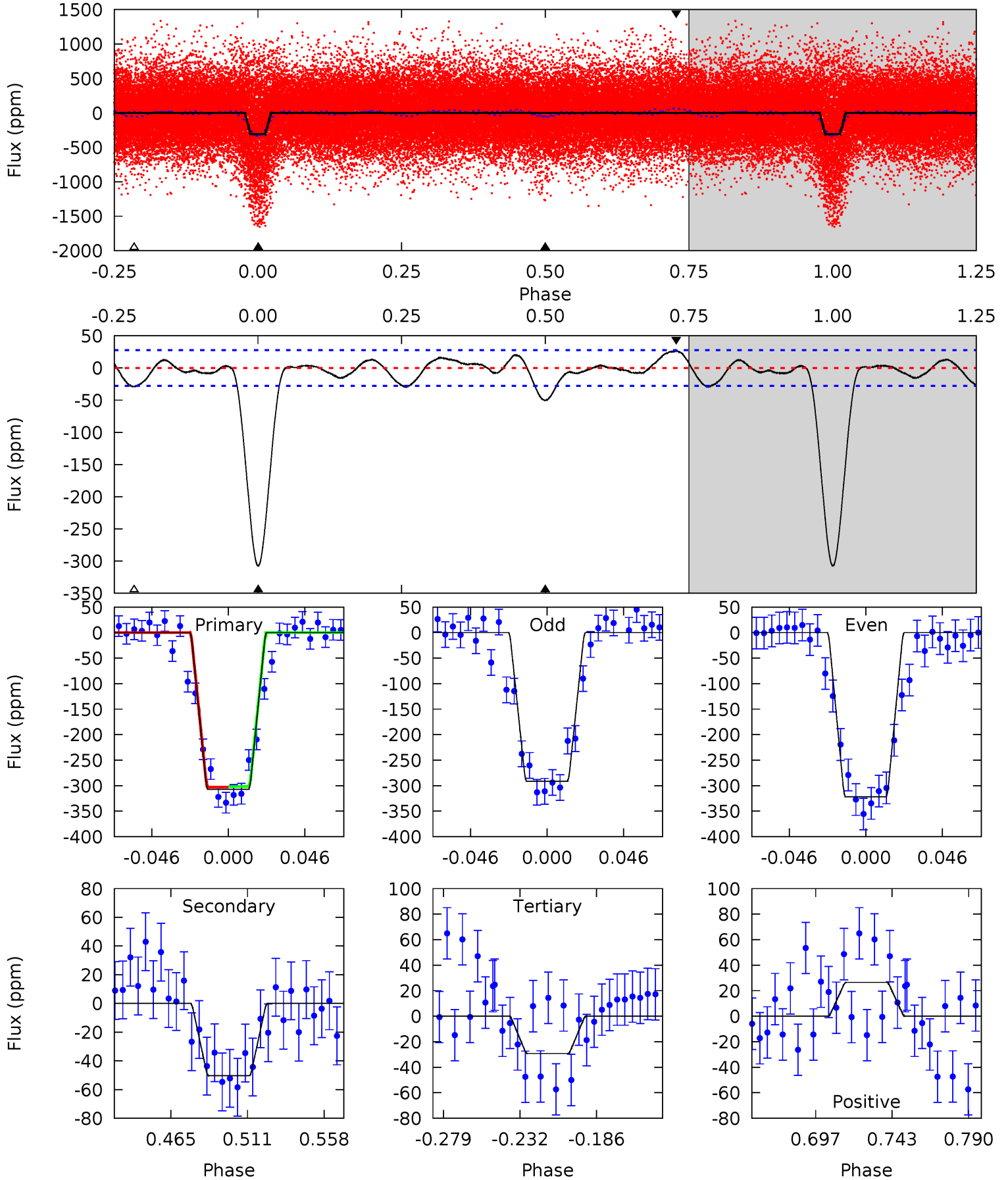
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.7	9.78	6.61	4.43	4.69	1.92	2.42	40.1	42.2	3.17	5.35	2.74	1.25	0.09	1.64



Alt Model-Shift Uniqueness Test

009579860-01, P = 2.151219 Days, E = 129.590758 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.3	8.56	4.96	4.51	4.72	1.99	2.03	47.3	47.7	3.60	4.05	2.56	1.21	0.08	0.10



Stellar Parameters For KIC 009579860

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4748^{+79}_{-64}	$2.635^{+0.030}_{-0.030}$	$-0.260^{+0.150}_{-0.100}$	$8.179^{+1.463}_{-0.522}$	$1.053^{+0.402}_{-0.107}$	$0.003^{+0.000}_{-0.000}$
	+2%/-1%	+1%/-1%	+58%/-38%	+18%/-6%	+38%/-10%	+13%/-18%
Source	PHO55	AST55	SPE55	DSEP		

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

Secondary Eclipse Parameters for KIC 009579860-01 / KOI 6208.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 6	$11.53^{+2.14}_{-1.82}$	4592^{+114}_{-95}	-2773^{+6029}_{-574}	$0.272^{+0.116}_{-0.071}$
Alt.	-50 ± 6	$16.36^{+2.28}_{-2.00}$	4599^{+114}_{-94}	-3673^{+142}_{-117}	$0.115^{+0.034}_{-0.027}$

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 $A_{obs} \gg 1.0$

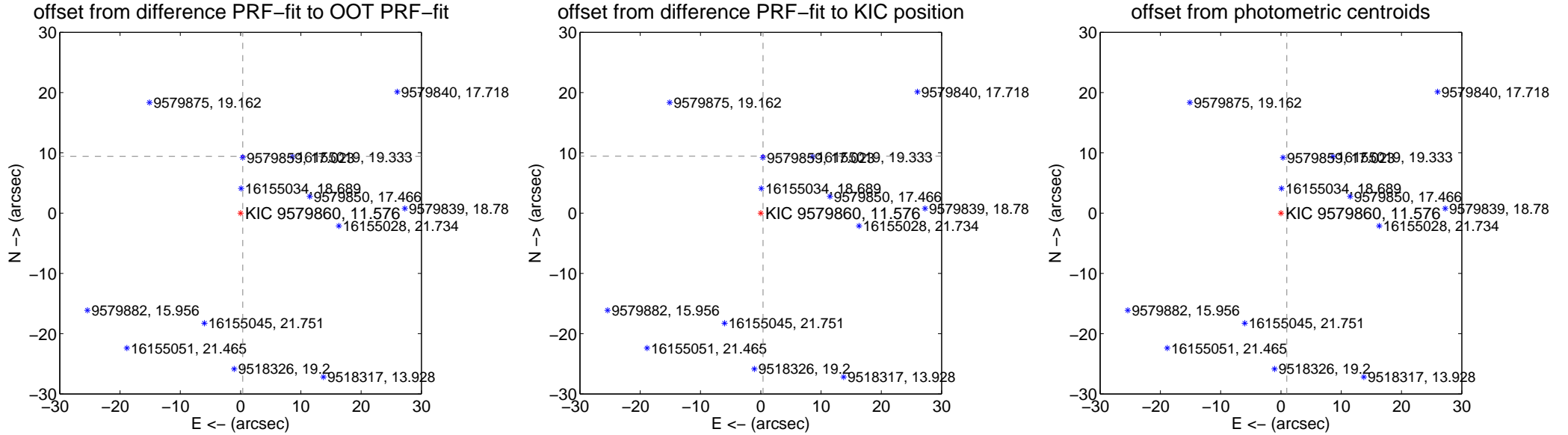
DV Centroid Data

Supplemental centroid analysis for 009579860-01. **Kepler magnitude: 11.58.** Transit SNR 20.59

There are 13 quarters with good PRF difference image offsets

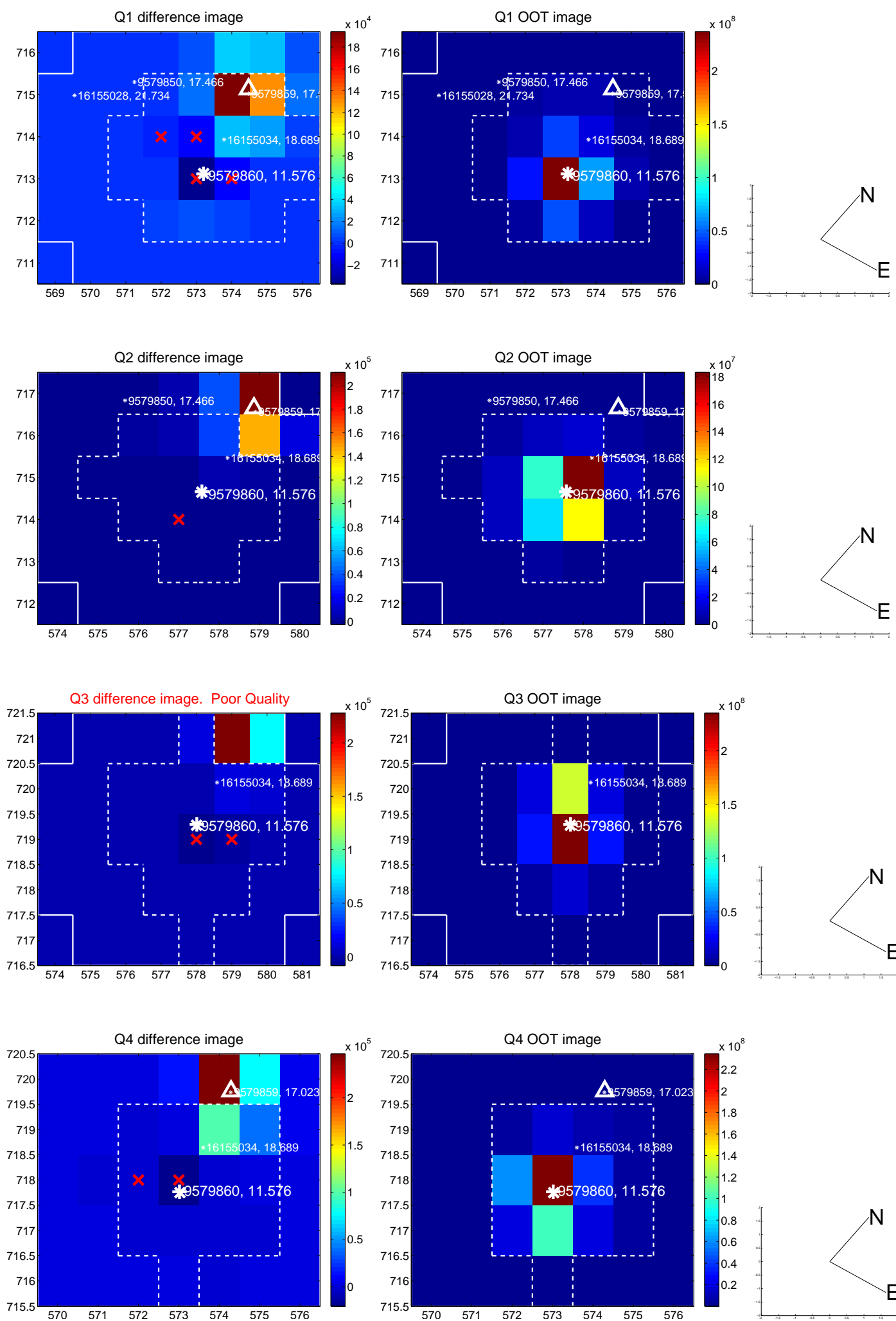
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.423 \pm 0.067	140.56	-0.355 \pm 0.067	9.416 \pm 0.067
PRF-fit source offset from KIC position	9.460 \pm 0.068	139.13	-0.376 \pm 0.069	9.453 \pm 0.068
photometric centroid source offset	42.75 \pm 0.11	390.98	-0.97 \pm 0.10	42.74 \pm 0.11

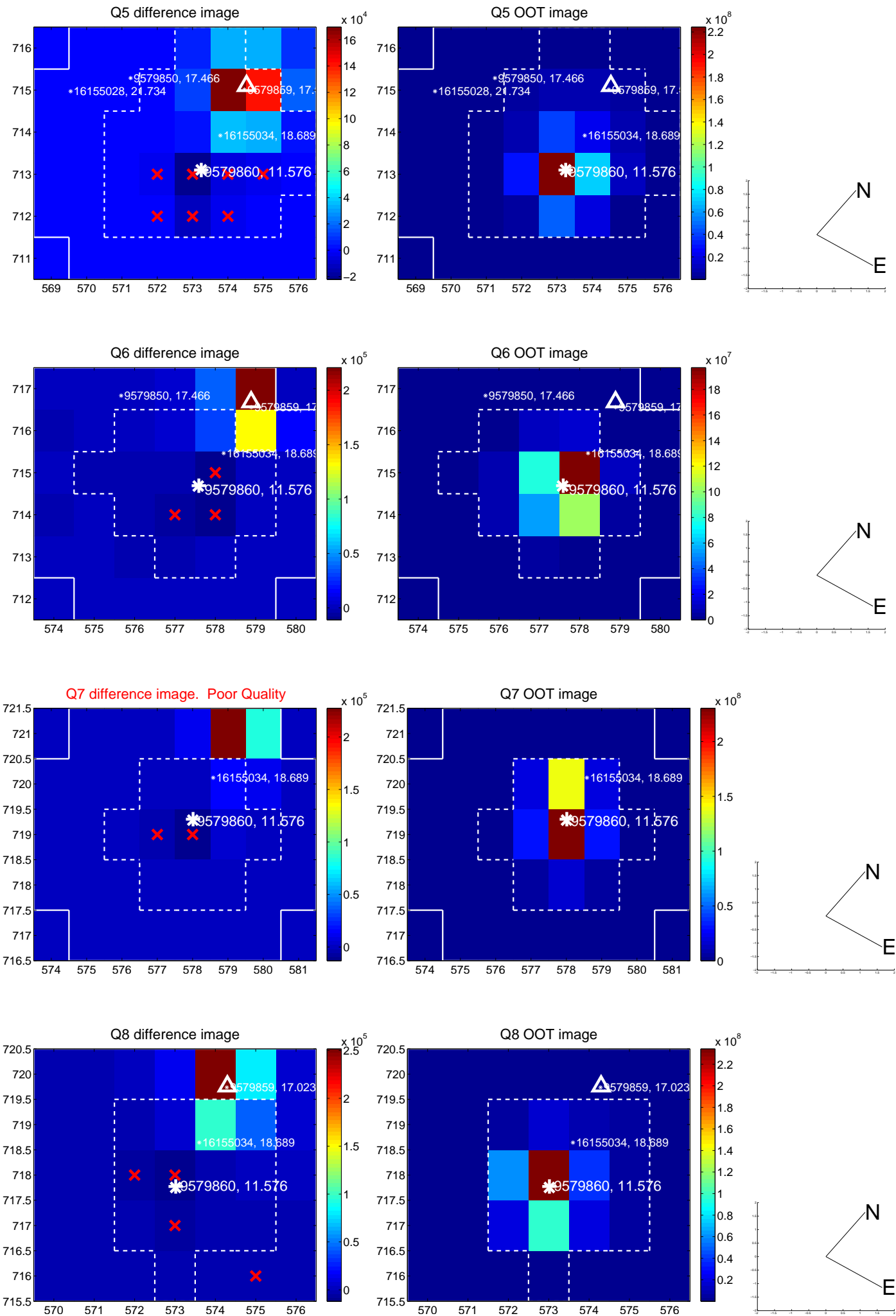


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

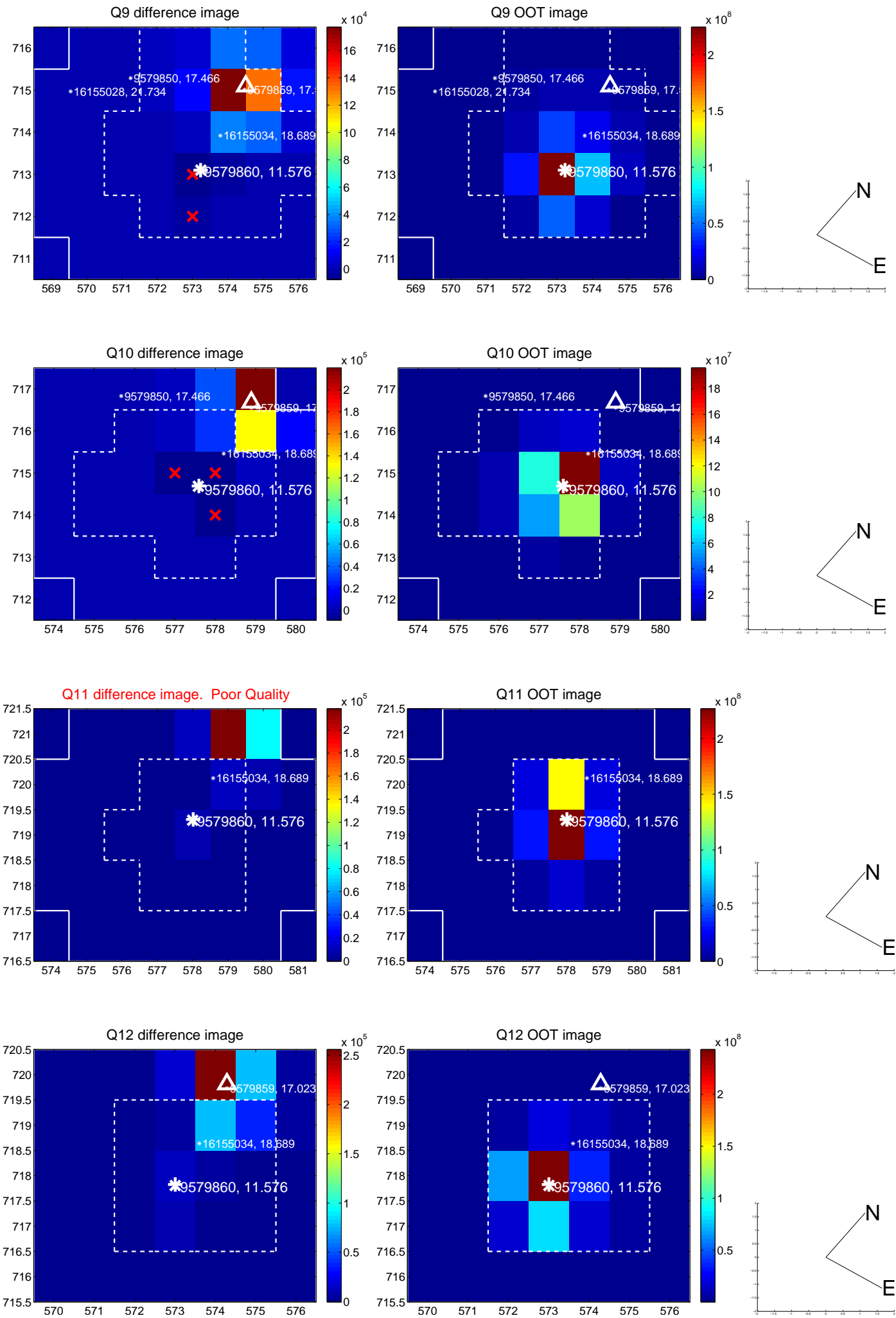
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



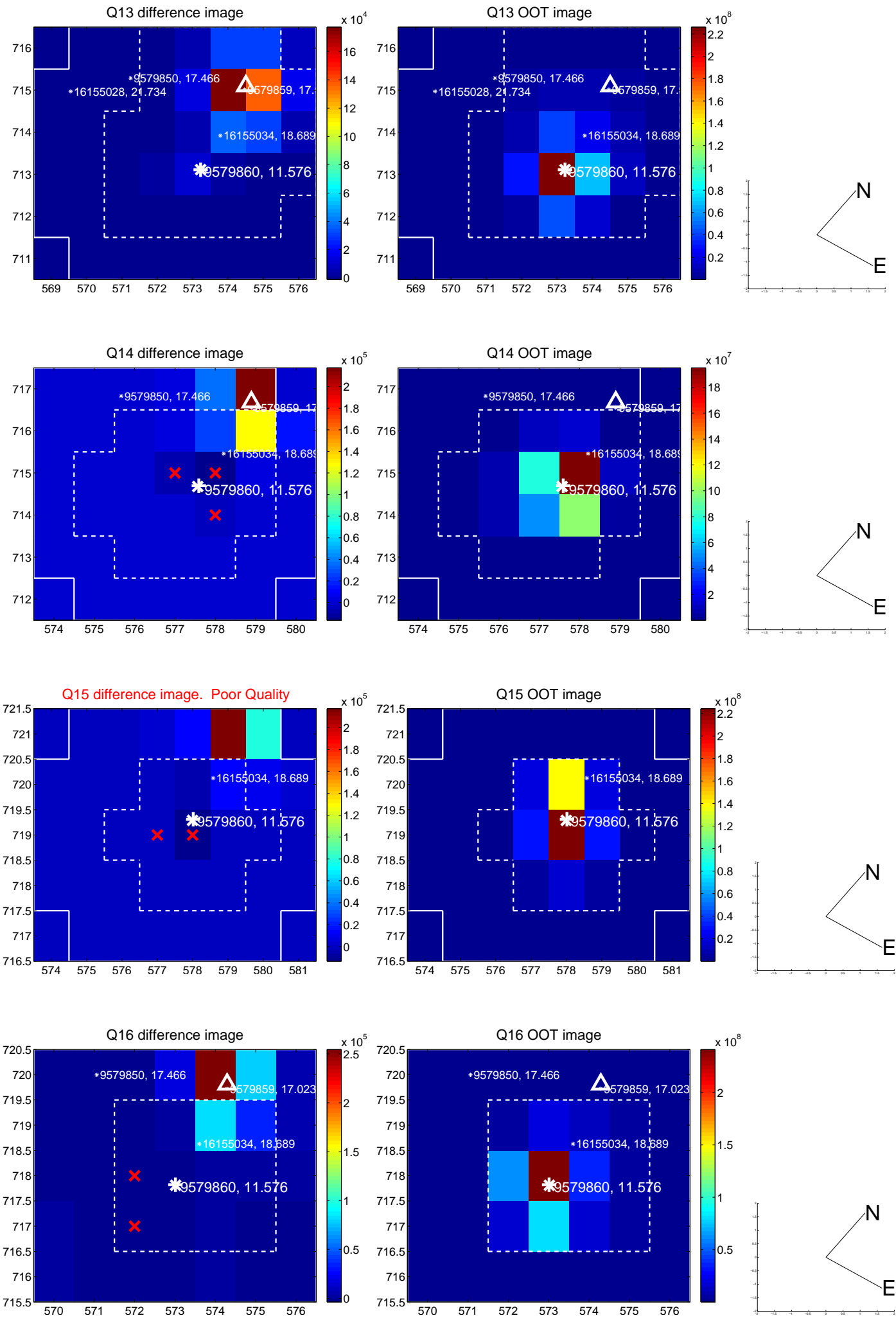
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



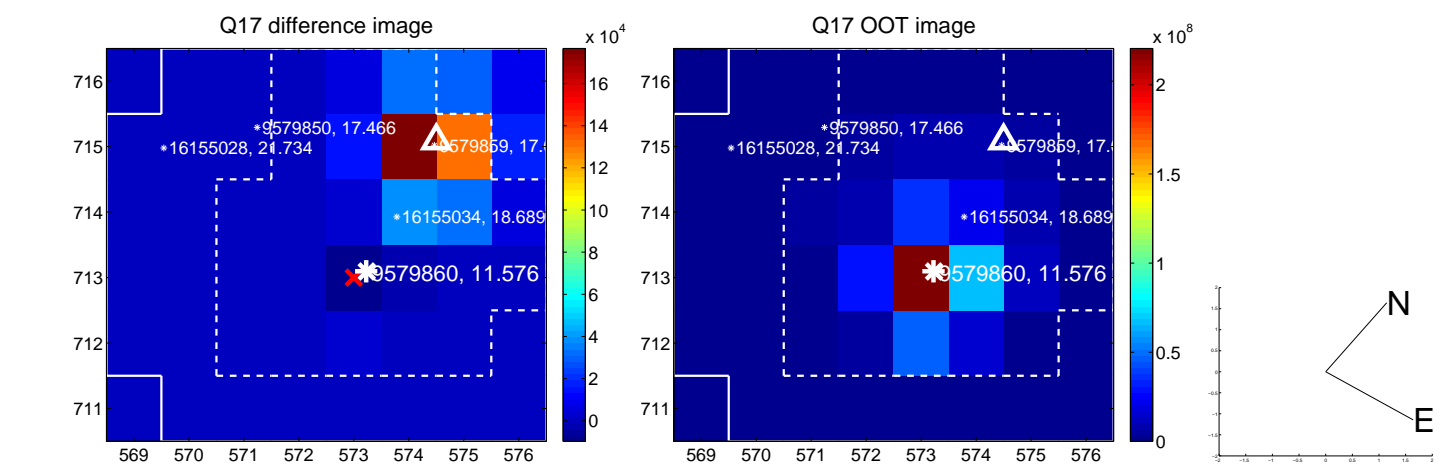
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



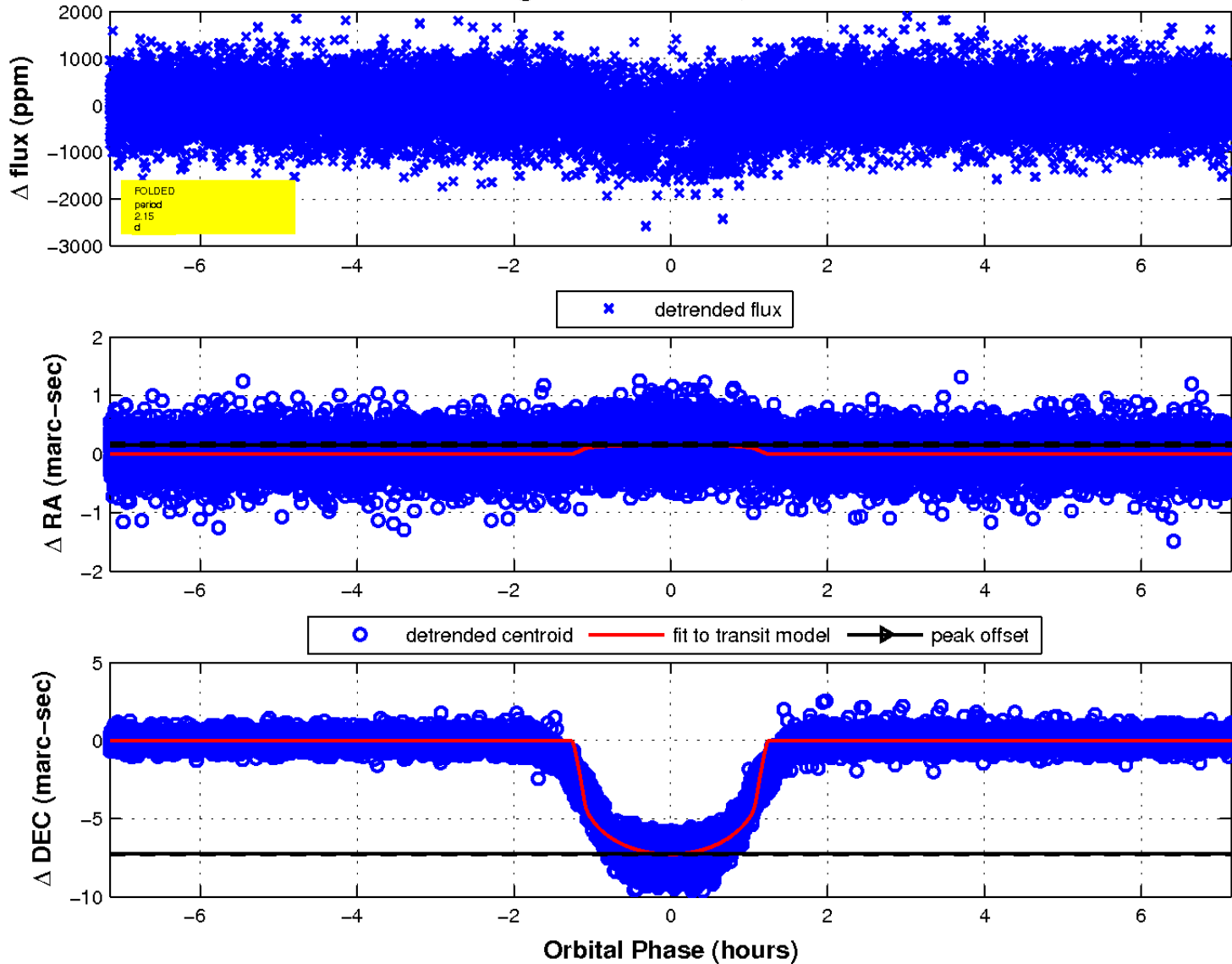
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

