

KIC 010604592

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})
010604592-01	OBS	4447.01	2.186616	131.945609	119.6	1.595	11.6	13.4	0.77	4904	1.03	345.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010604592-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

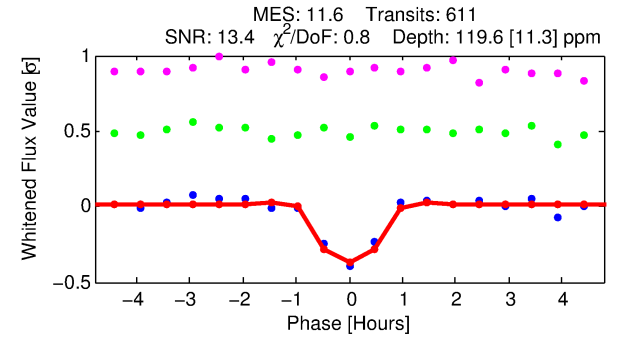
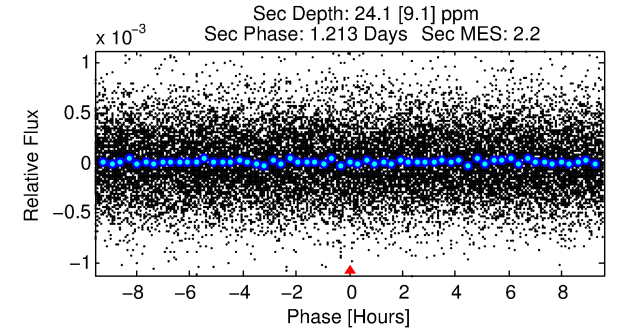
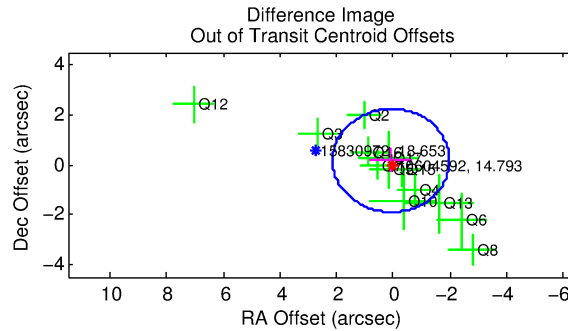
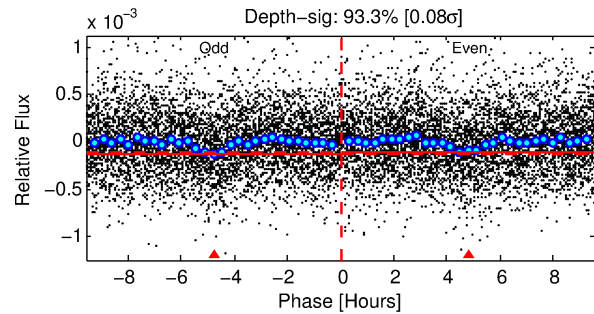
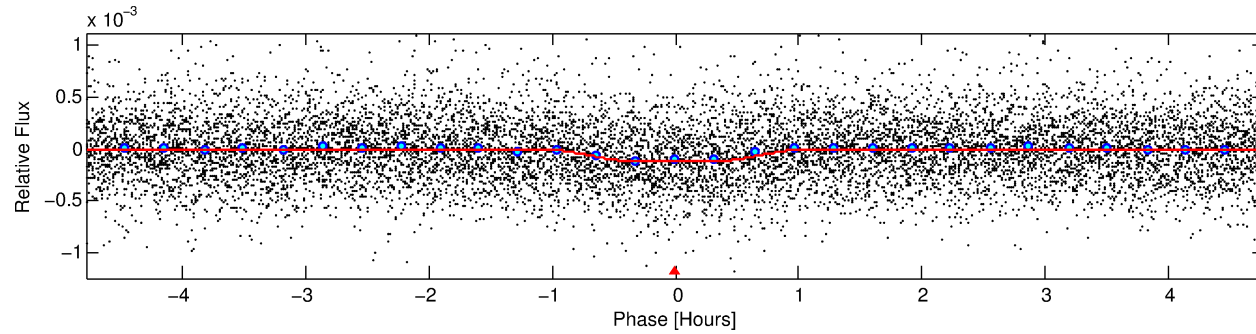
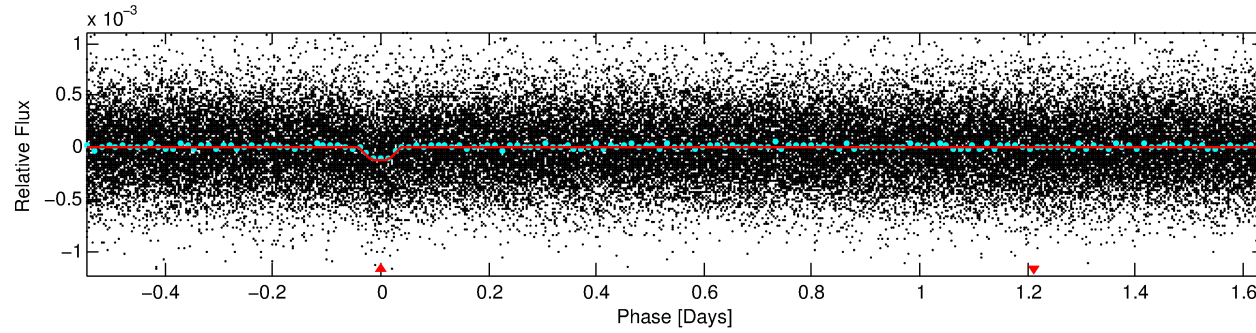
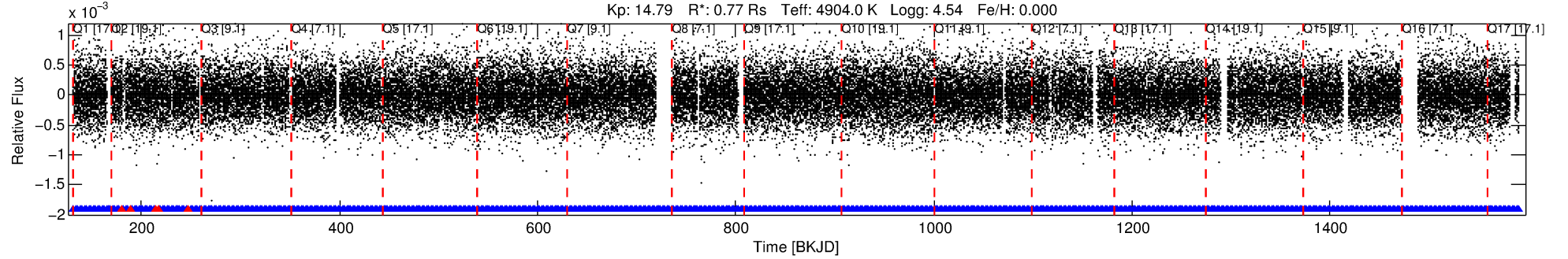
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010604592-01

No Significant Match Found

DV One-Page Summary

KIC: 10604592 Candidate: 1 of 1 Period: 2.187 d
KOI: K04447.01 Corr: 0.953



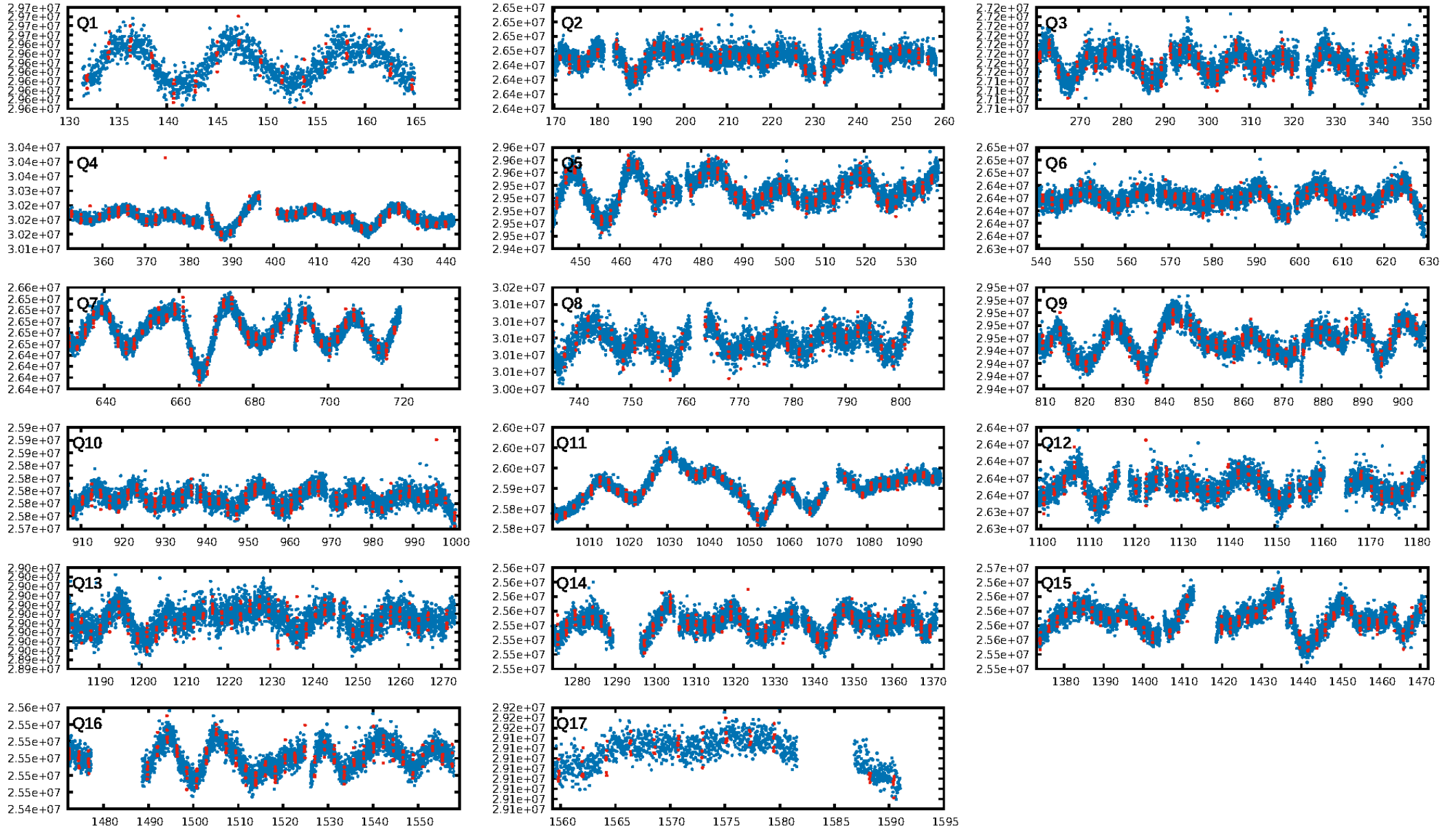
DV Fit Results:

Period = 2.18662 [0.00001] d
Epoch = 131.9456 [0.0018] BKJD
Rp/R* = 0.0123 [0.0084]
a/R* = 4.96 [12.82]
b = 0.90 [0.59]
Seff = 345.52 [63.41]
Teff = 1099 [50] K
Rp = 1.03 [0.72] Re
a = 0.0299 [0.0027] AU
Ag = 11.09 [15.89] [0.63 σ]
Teffp = 3102 [1110] K [1.80 σ]

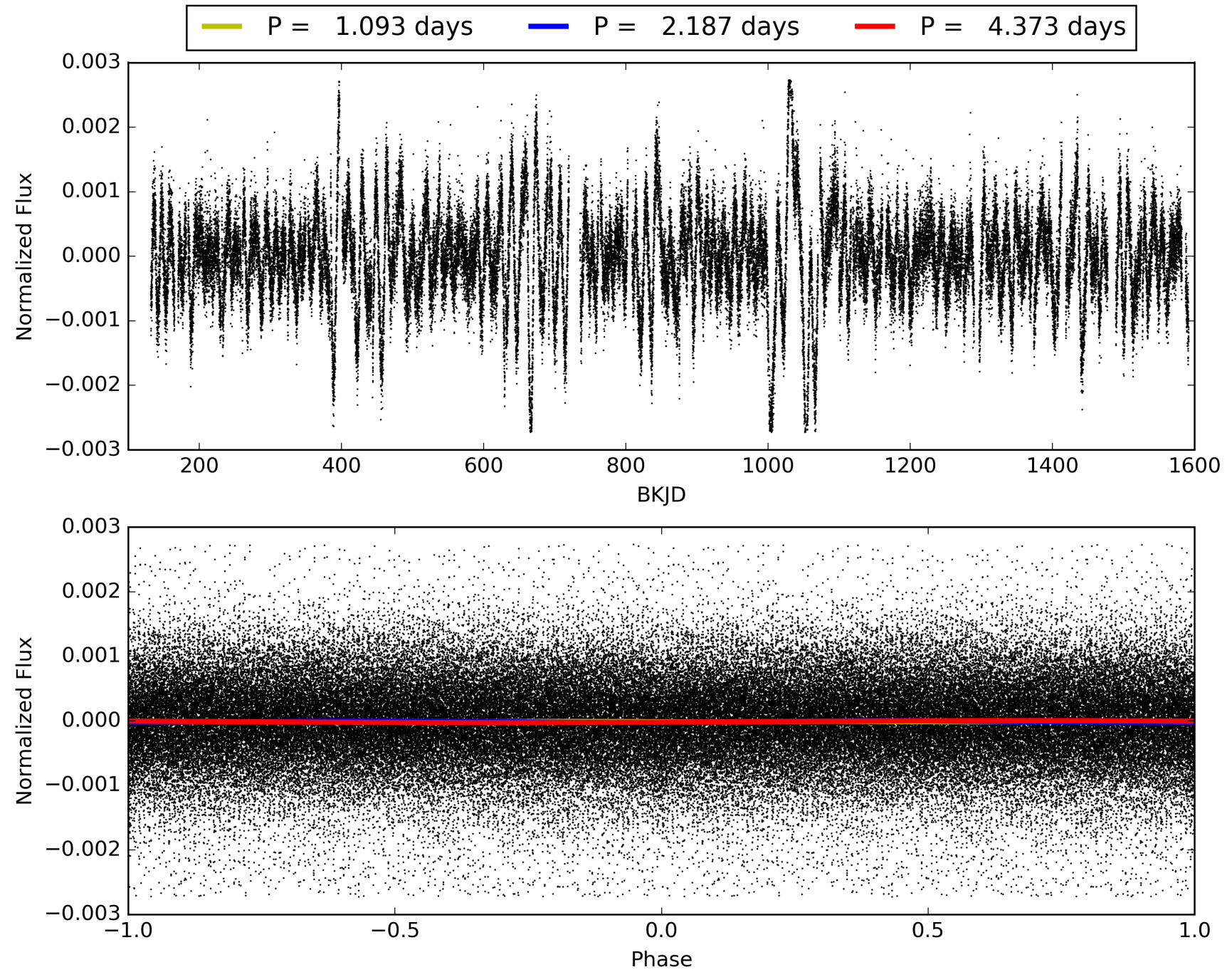
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.06e-29
RollingBand-fgt: 0.99 [578/583]
GhostDiagnostic-chr: -11.44
Centroid-sig: 30.8%
Centroid-so: 1.253 arcsec [1.45 σ]
OotOffset-rm: 0.182 arcsec [0.26 σ]
KicOffset-rm: 0.373 arcsec [0.50 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010604592-01, PDC Light Curves

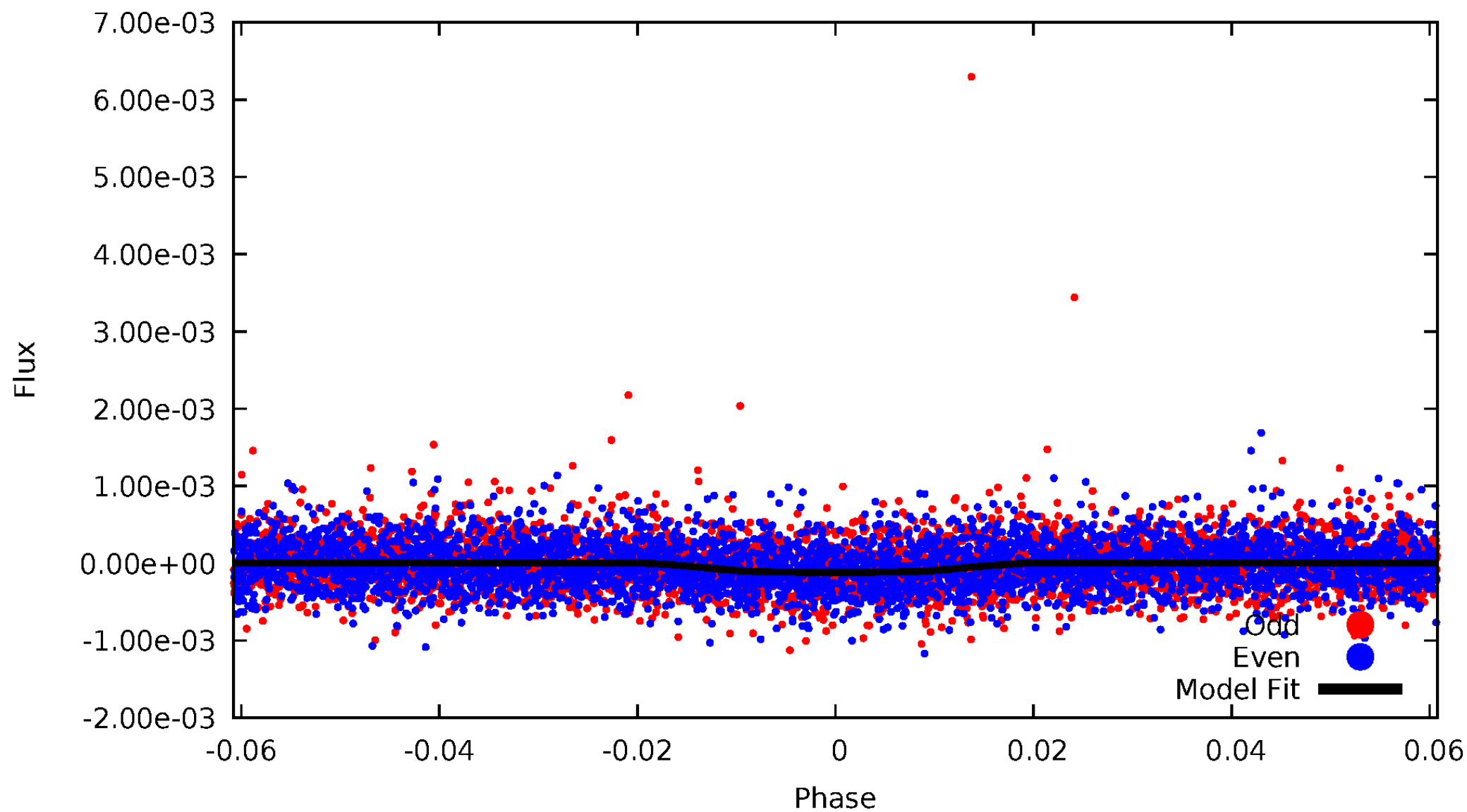


TCE 010604592-01



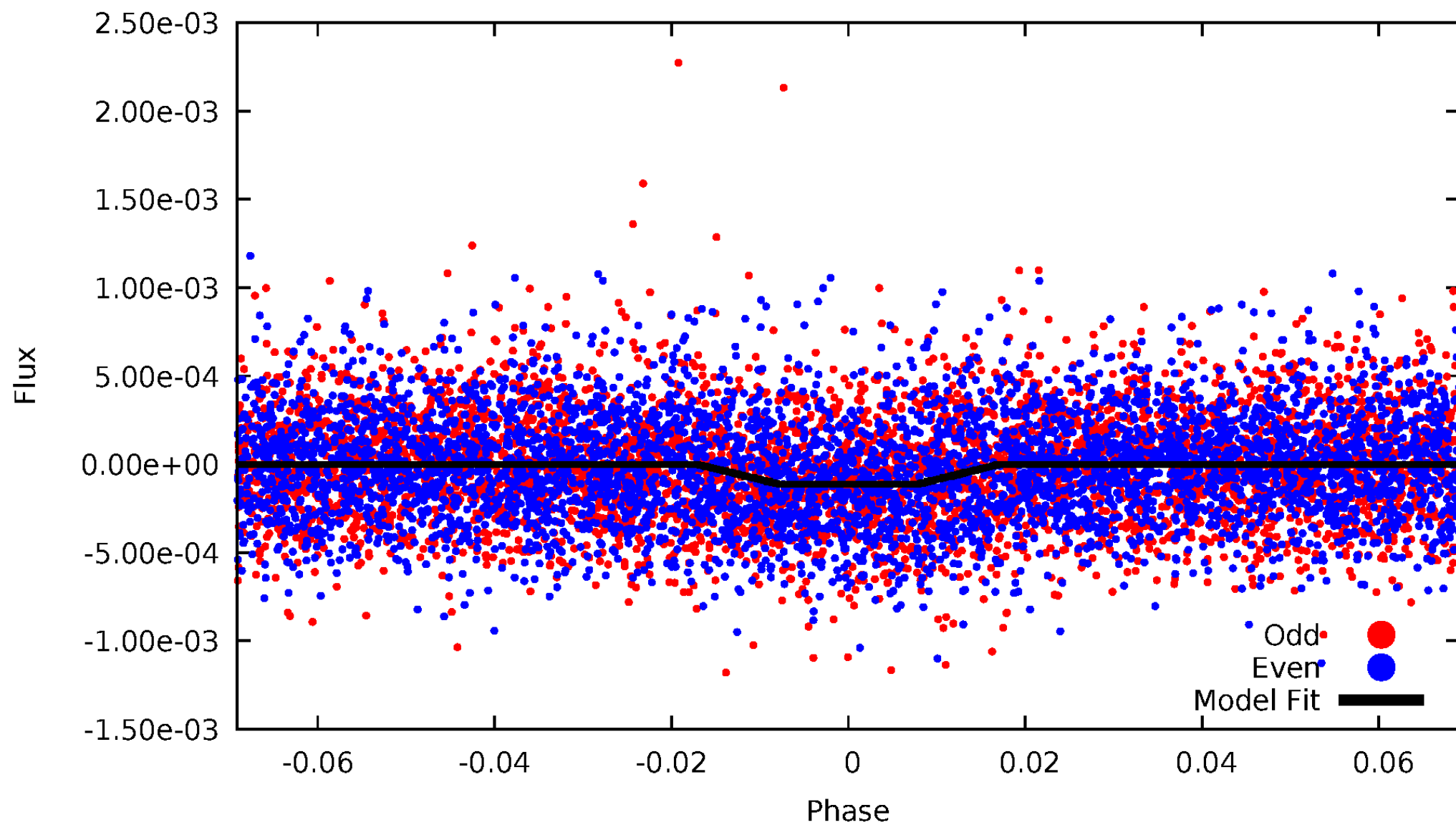
DV Odd/Even

TCE 010604592-01

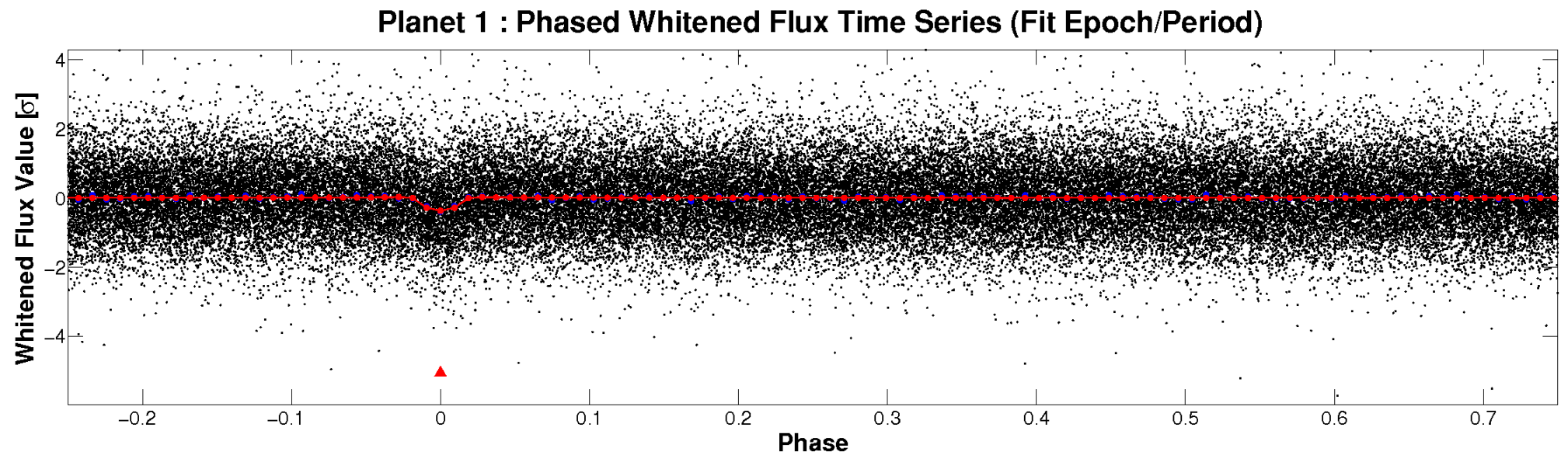
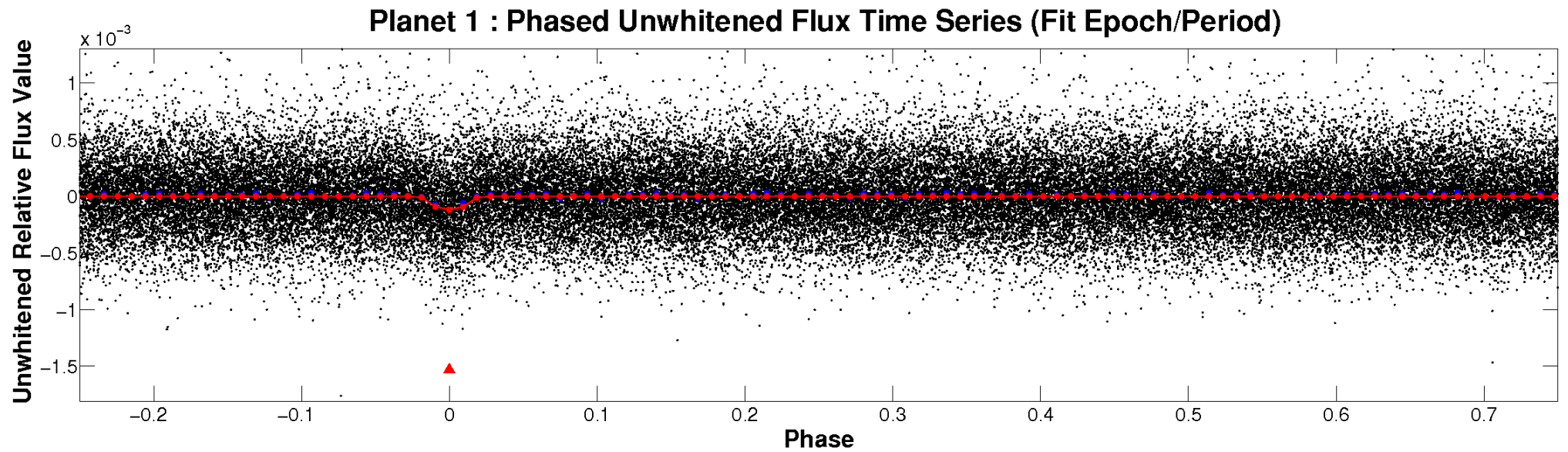


ALT Odd/Even

TCE 010604592-01

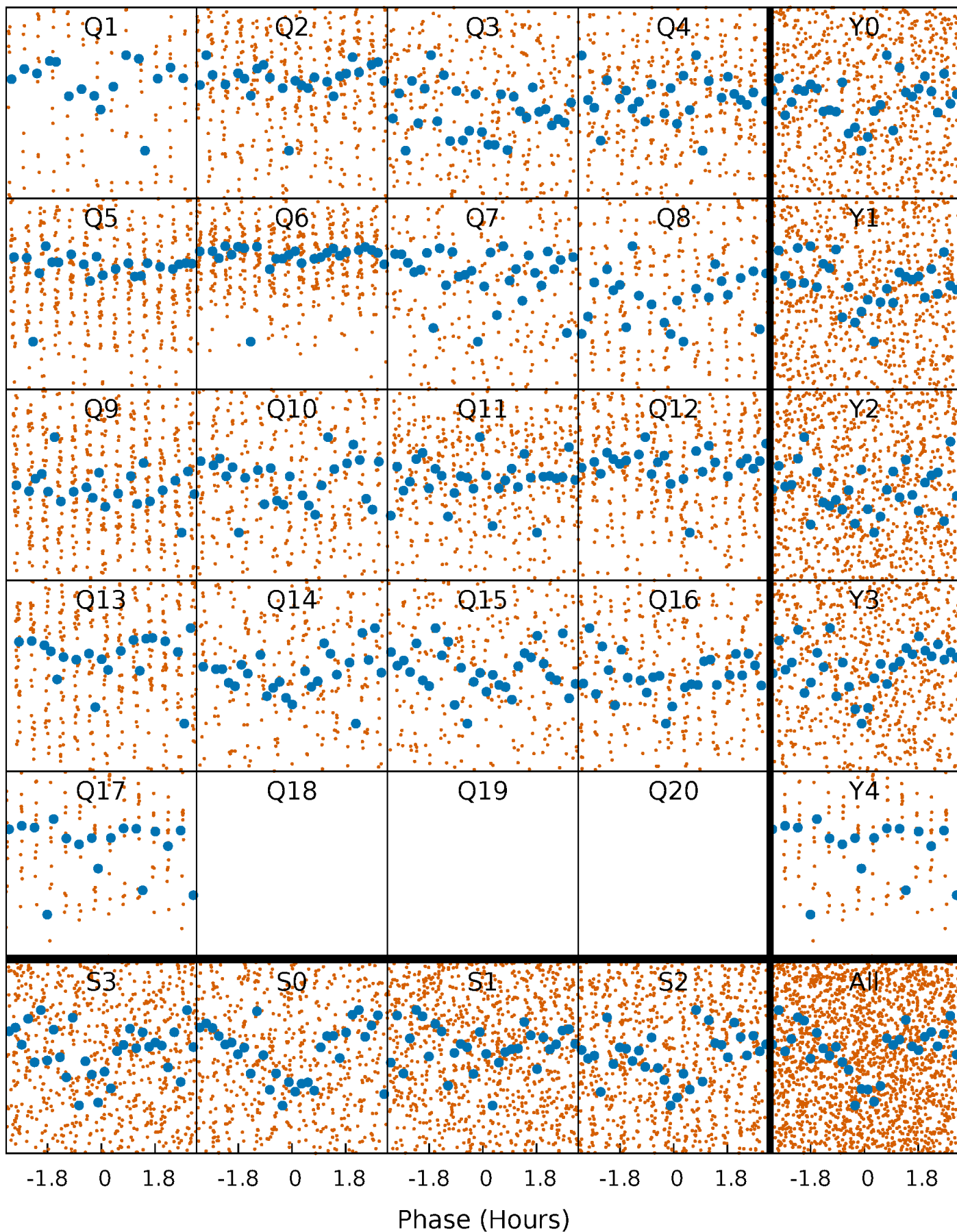


Non-Whitened Vs. Whitened Light Curve



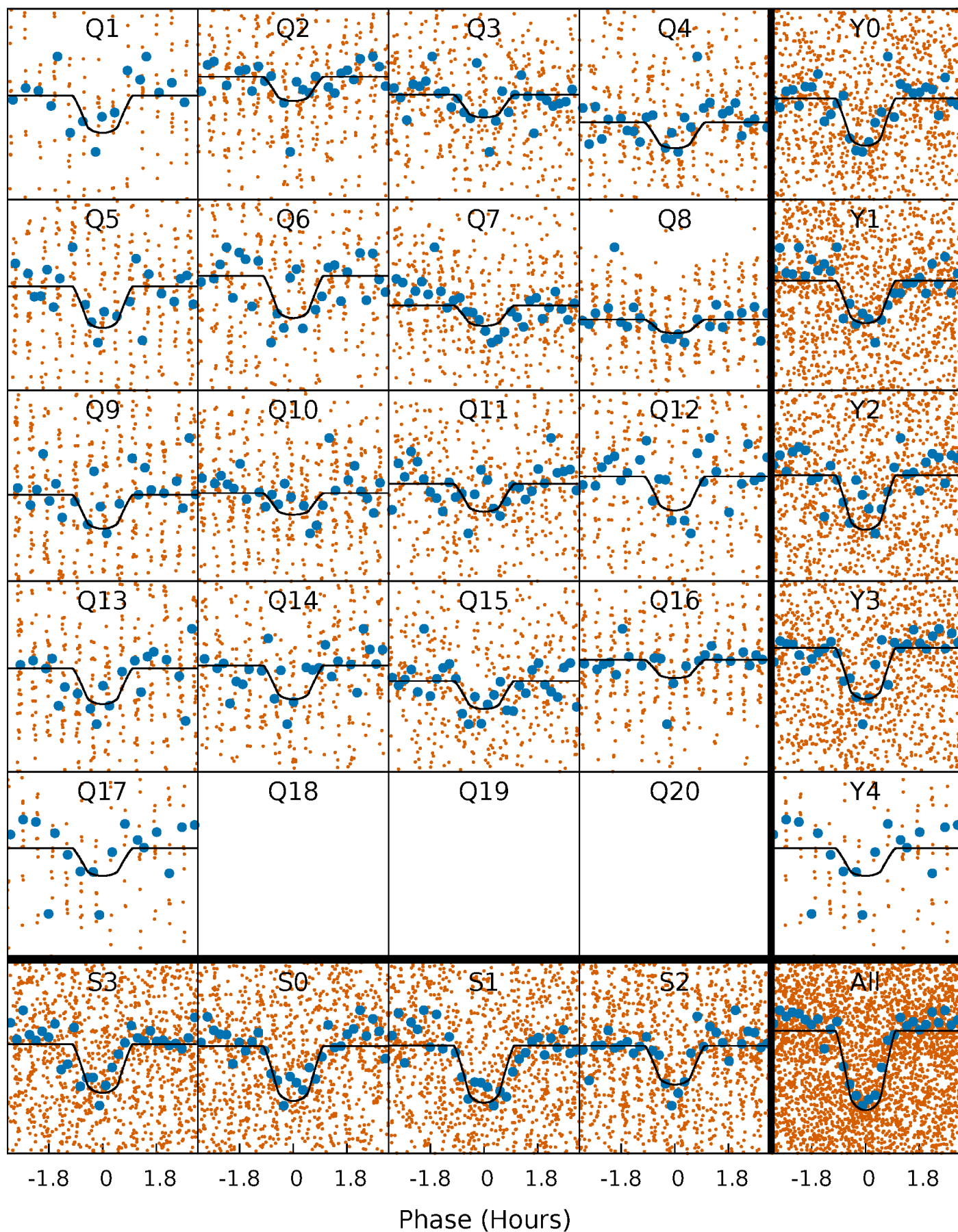
PDC Quarter-Phased Transit Curves

TCE 010604592-01 P= 2.186616 Days $T_0=131.945609$ (BKJD)



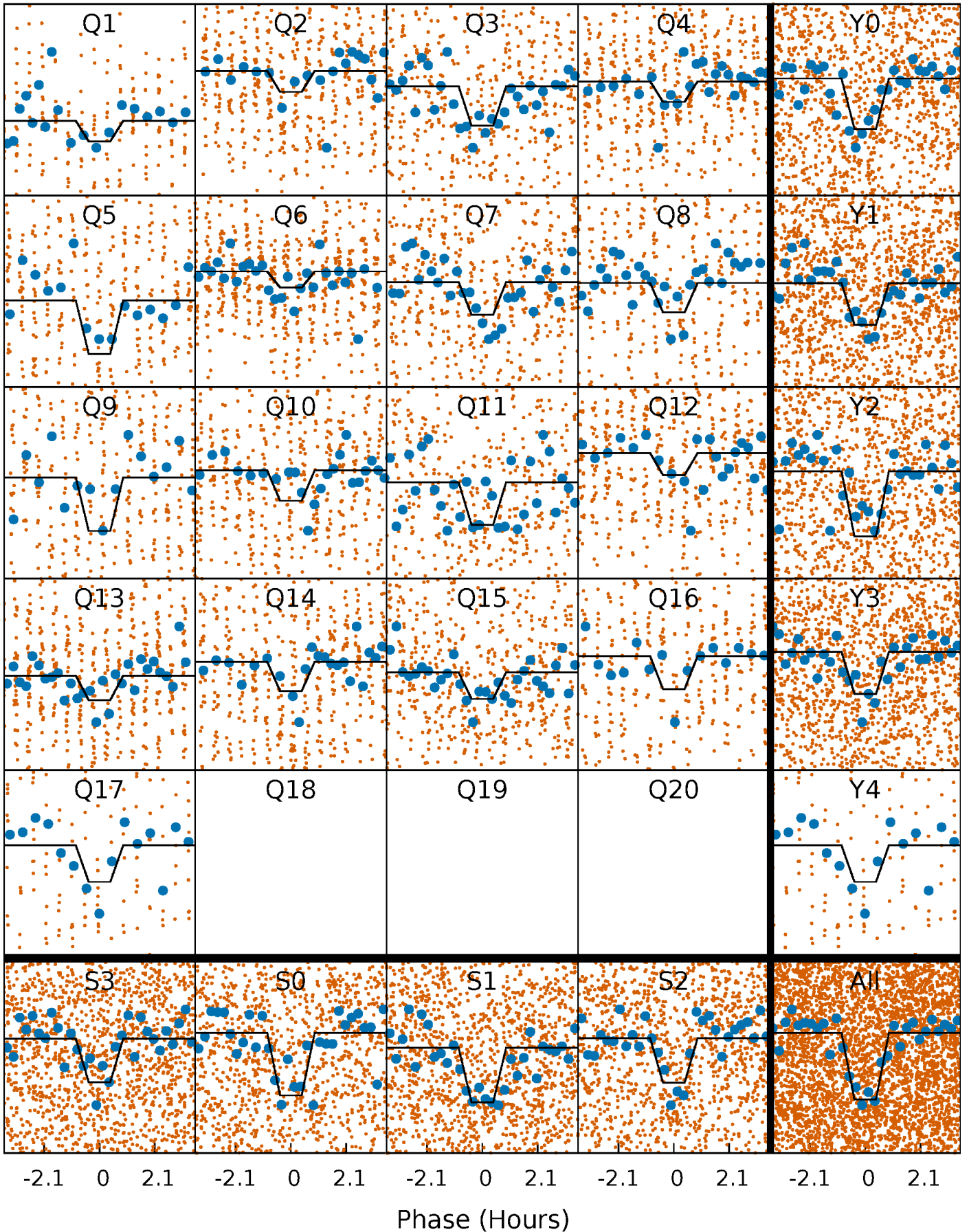
DV Quarter-Phased Transit Curves

TCE 010604592-01 P= 2.186616 Days $T_0=131.945609$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

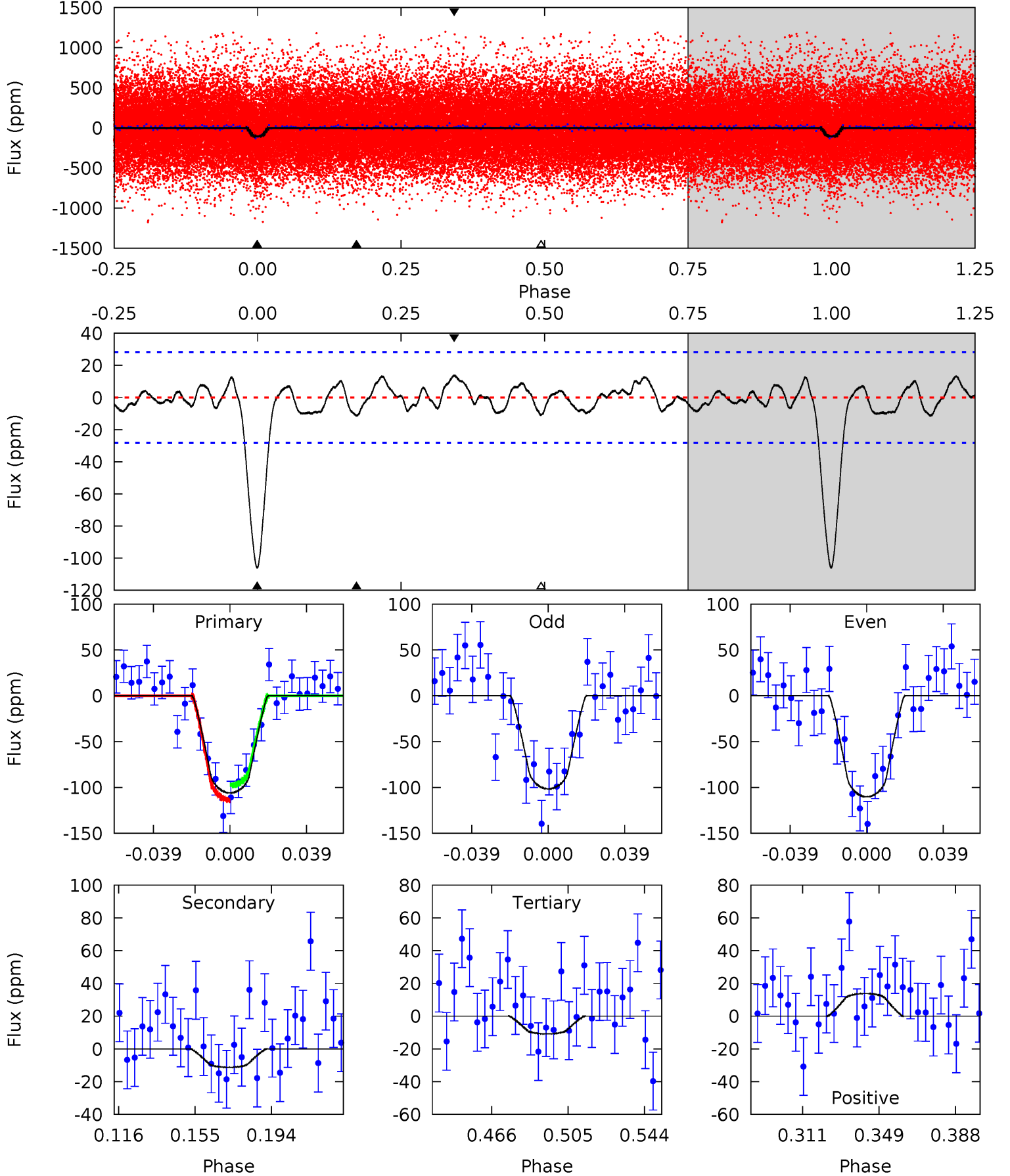
TCE 010604592-01 P= 2.186602 Days $T_0=131.948344$ (BKJD)



DV Model-Shift Uniqueness Test

010604592-01, P = 2.186616 Days, E = 129.758993 Days

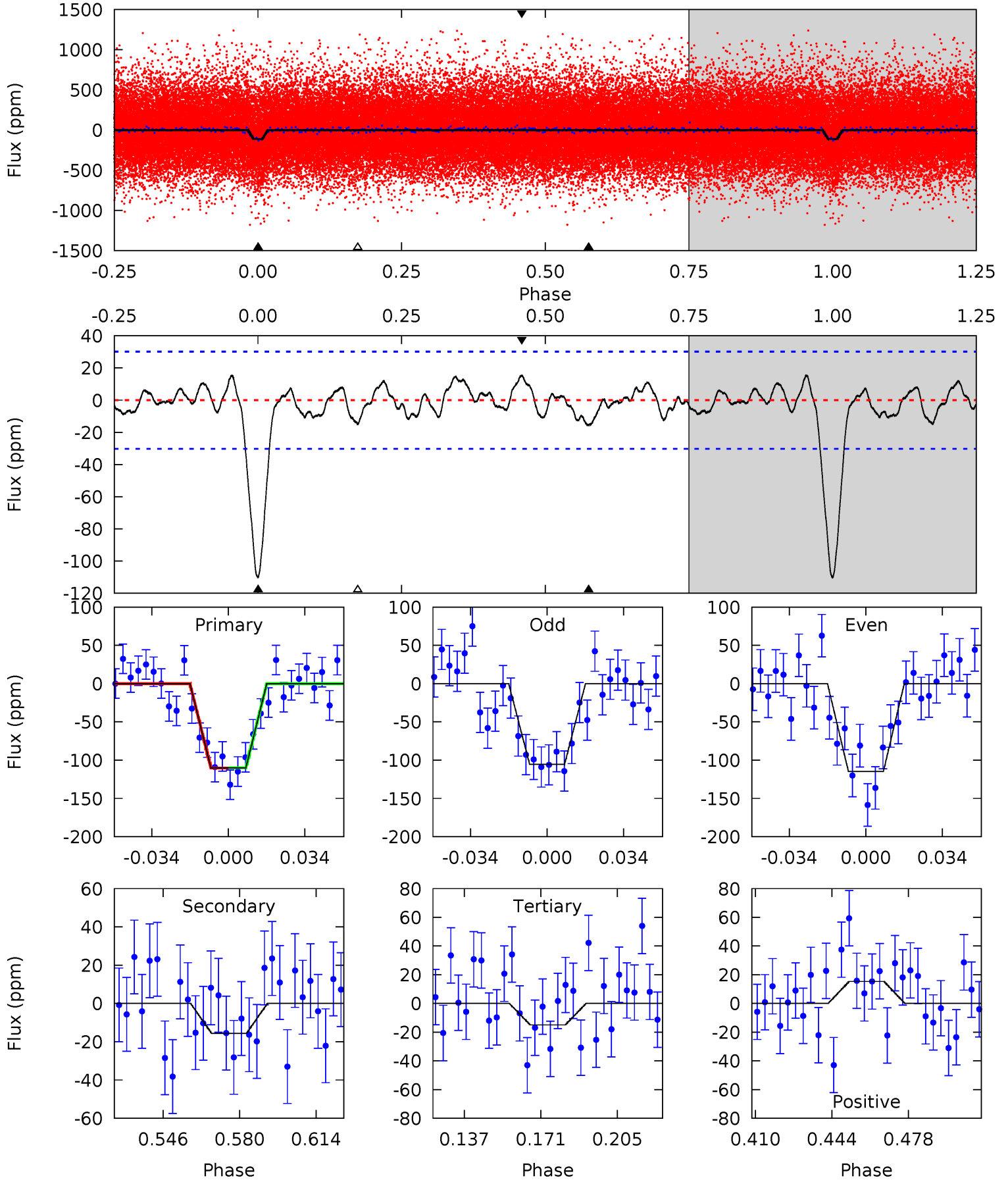
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	1.90	1.83	2.32	4.76	2.07	1.02	16.0	15.5	0.07	-0.42	0.73	0.90	0.12	1.33



Alt Model-Shift Uniqueness Test

010604592-01, P = 2.186602 Days, E = 129.761742 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	2.48	2.38	2.42	4.79	2.12	1.06	15.1	15.0	0.10	0.05	0.74	0.93	0.12	0.03



Stellar Parameters For KIC 010604592

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4904^{+148}_{-148}	$4.535^{+0.078}_{-0.048}$	$0.000^{+0.300}_{-0.300}$	$0.772^{+0.060}_{-0.080}$	$0.745^{+0.085}_{-0.054}$	$2.282^{+0.723}_{-0.382}$
	+3%/-3%	+2%/-1%	+inf%/-inf%	+8%/-10%	+11%/-7%	+32%/-17%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010604592-01 / KOI 4447.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11 ± 6	$1.11^{+0.67}_{-0.63}$	1530^{+56}_{-63}	3001^{+948}_{-512}	$4.216^{+17.734}_{-3.010}$
Alt.	-16 ± 6	$0.99^{+0.67}_{-0.63}$	1528^{+56}_{-58}	3265^{+1356}_{-508}	$7.516^{+42.509}_{-5.123}$

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

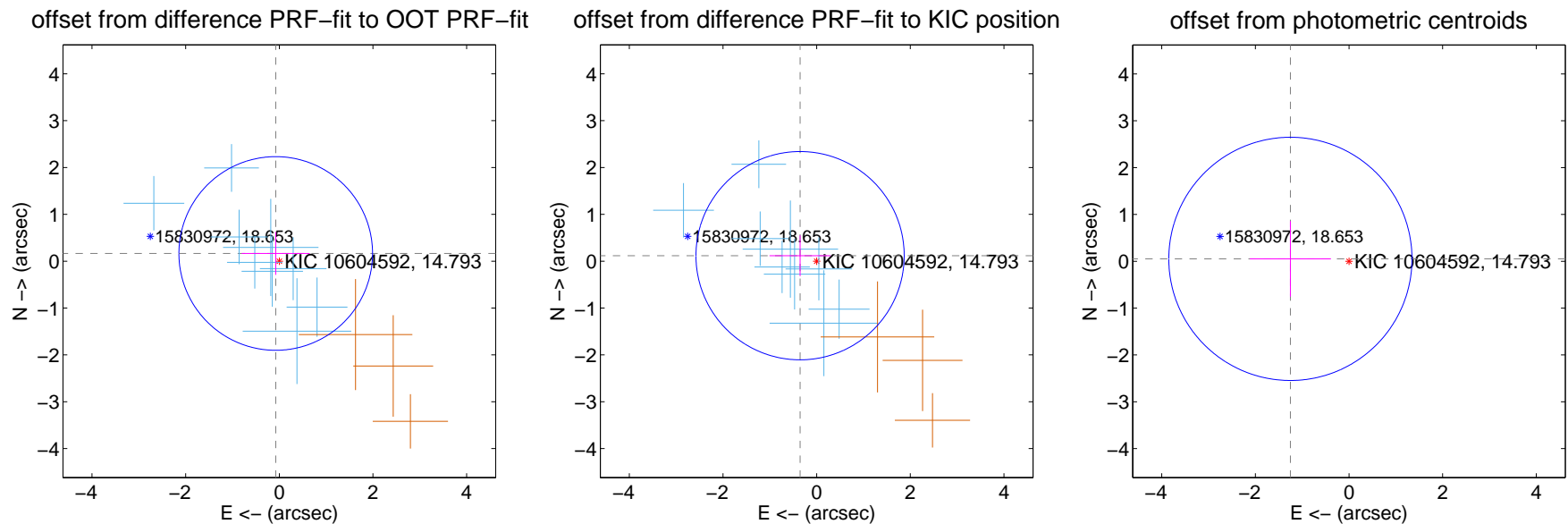
DV Centroid Data

Supplemental centroid analysis for 010604592-01. Kepler magnitude: 14.79. Transit SNR 13.36

There are 9 quarters with good PRF difference image offsets

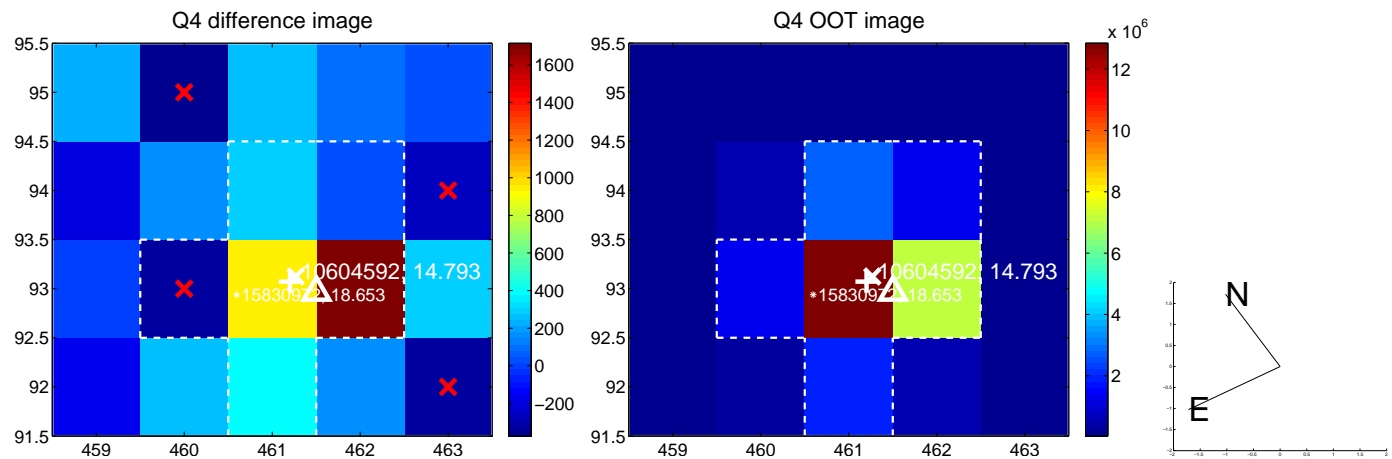
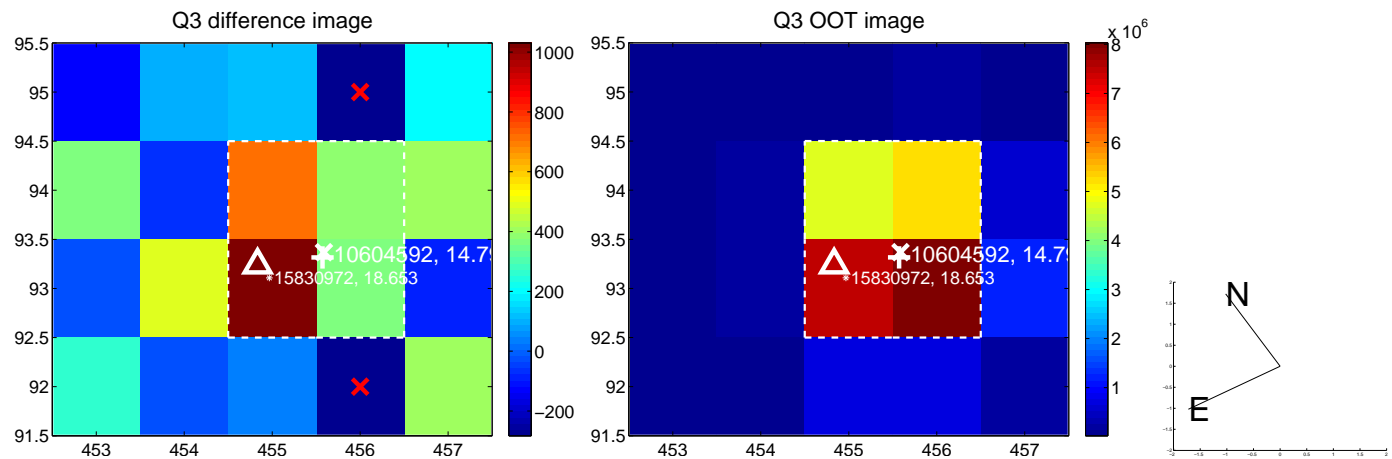
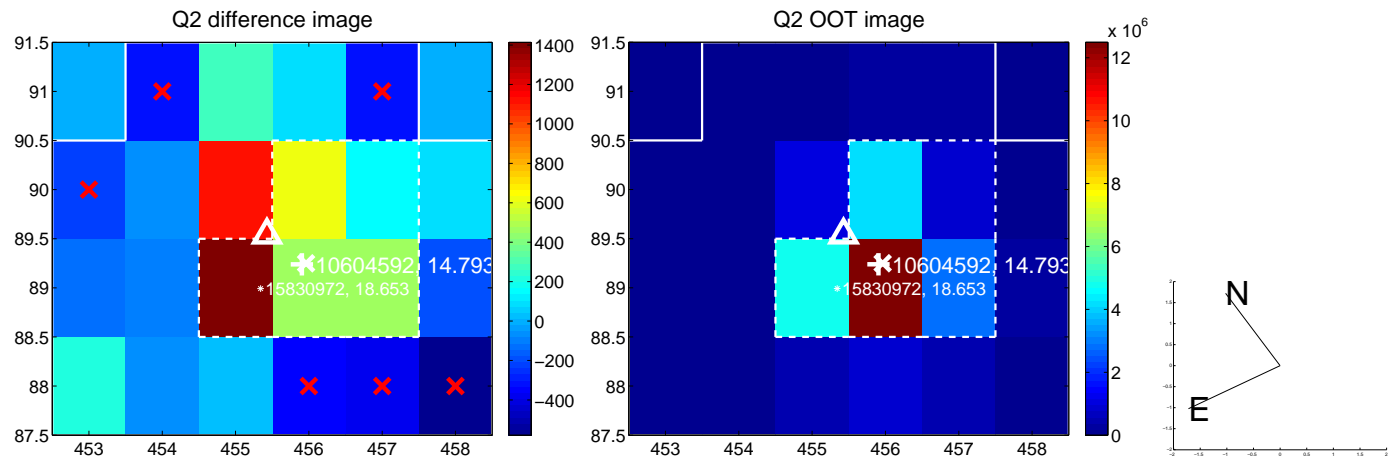
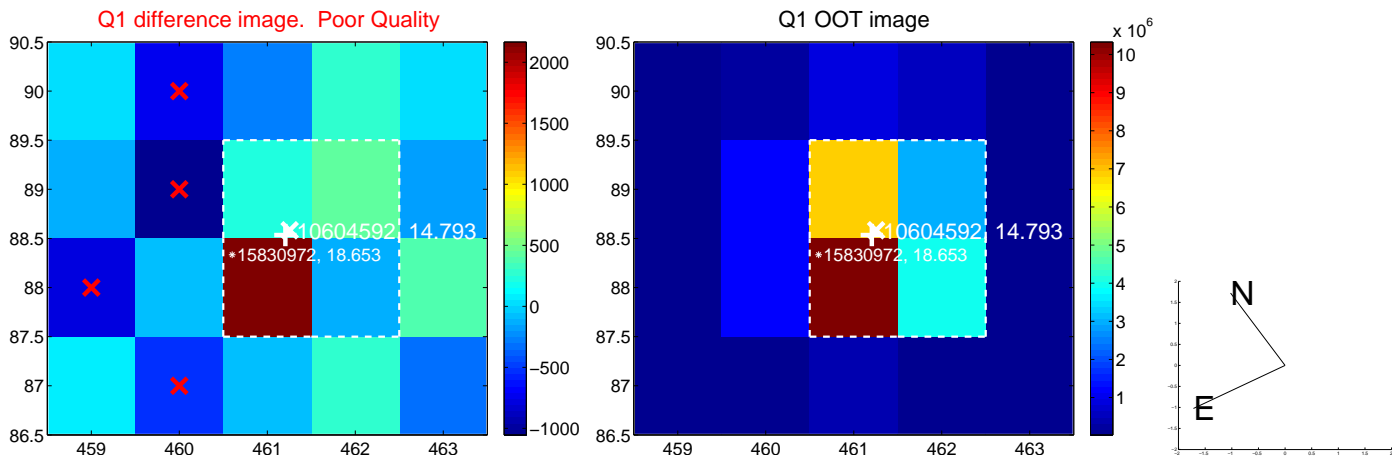
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.182 ± 0.689	0.26	0.076 ± 0.725	0.165 ± 0.456
PRF-fit source offset from KIC position	0.373 ± 0.741	0.50	0.354 ± 0.653	0.118 ± 0.435
photometric centroid source offset	1.25 ± 0.87	1.45	1.25 ± 0.87	0.05 ± 0.81

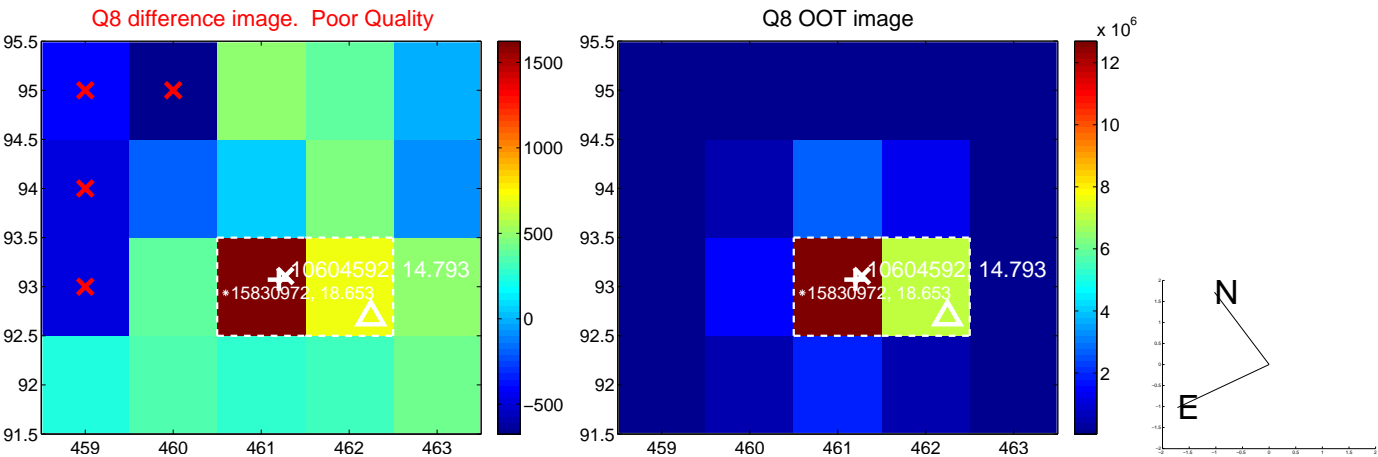
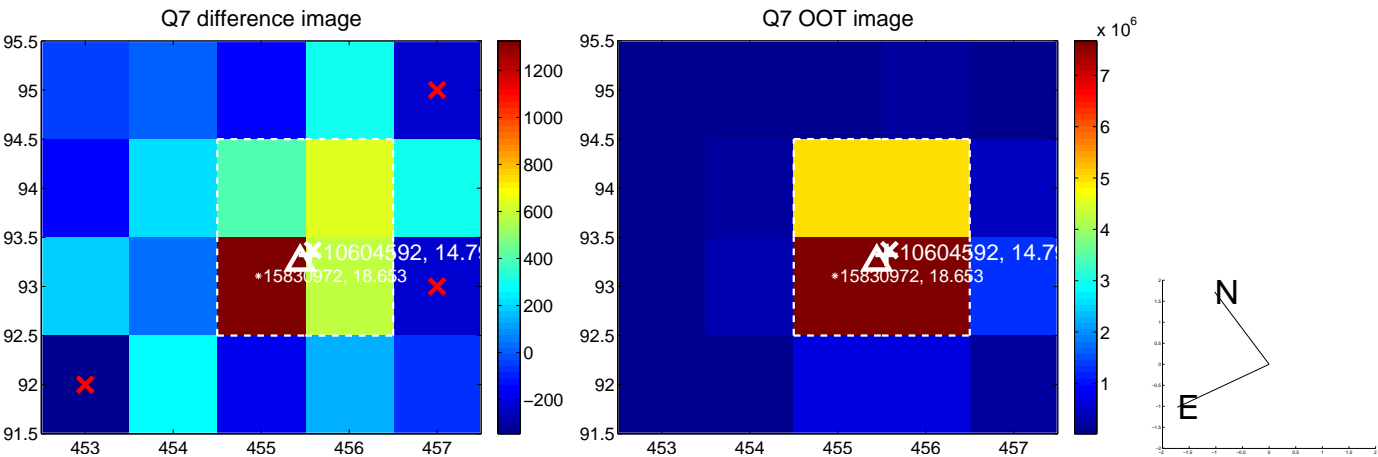
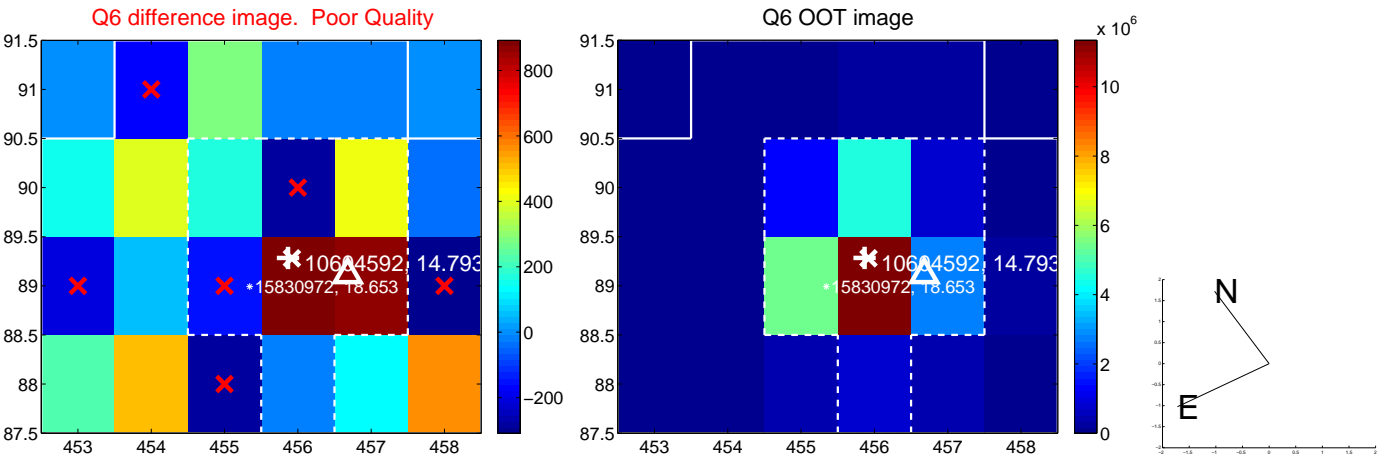
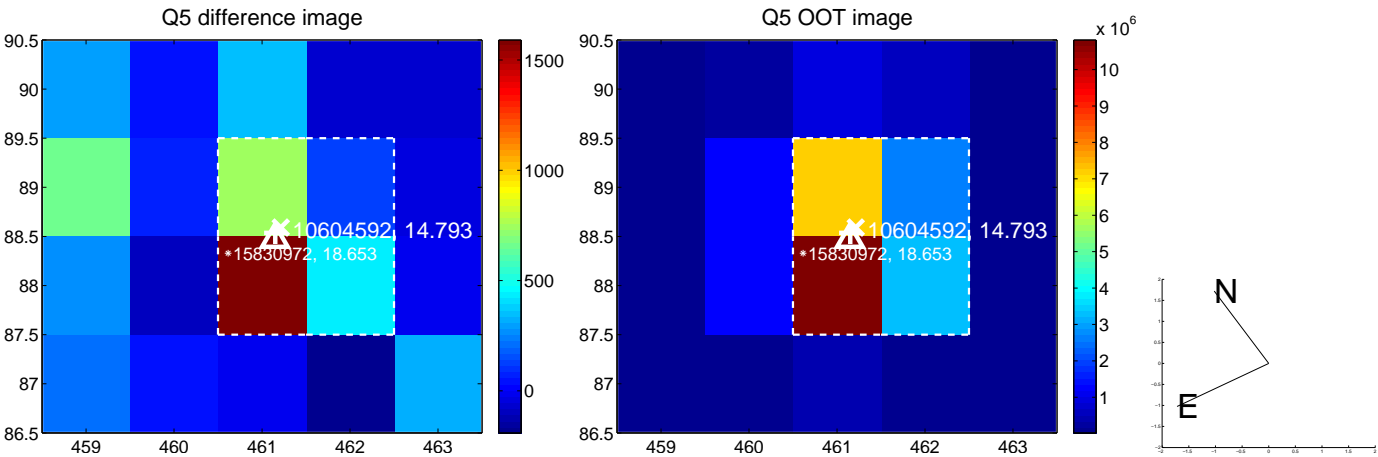


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

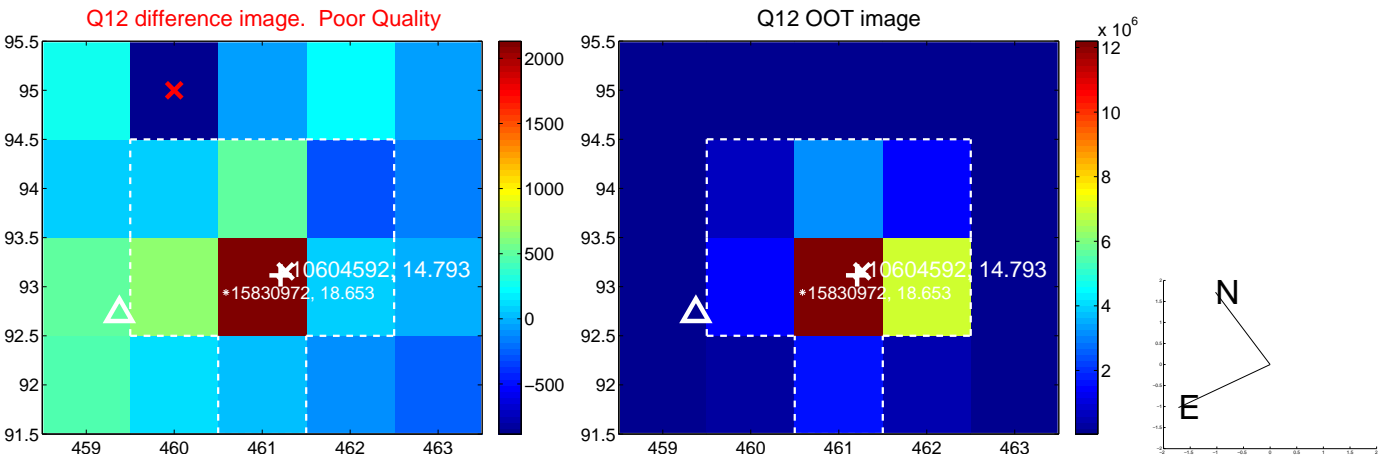
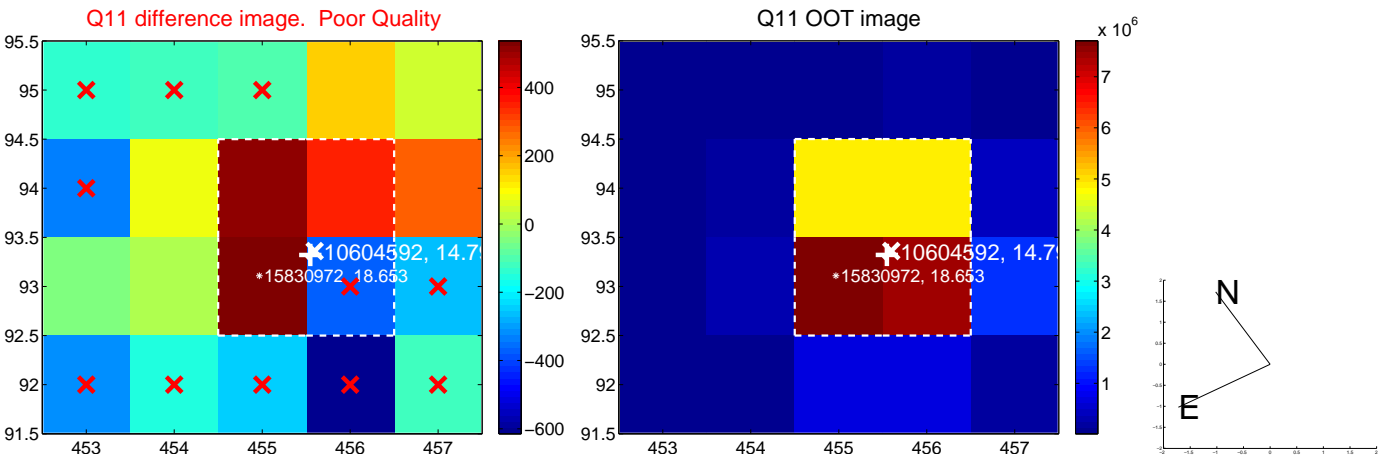
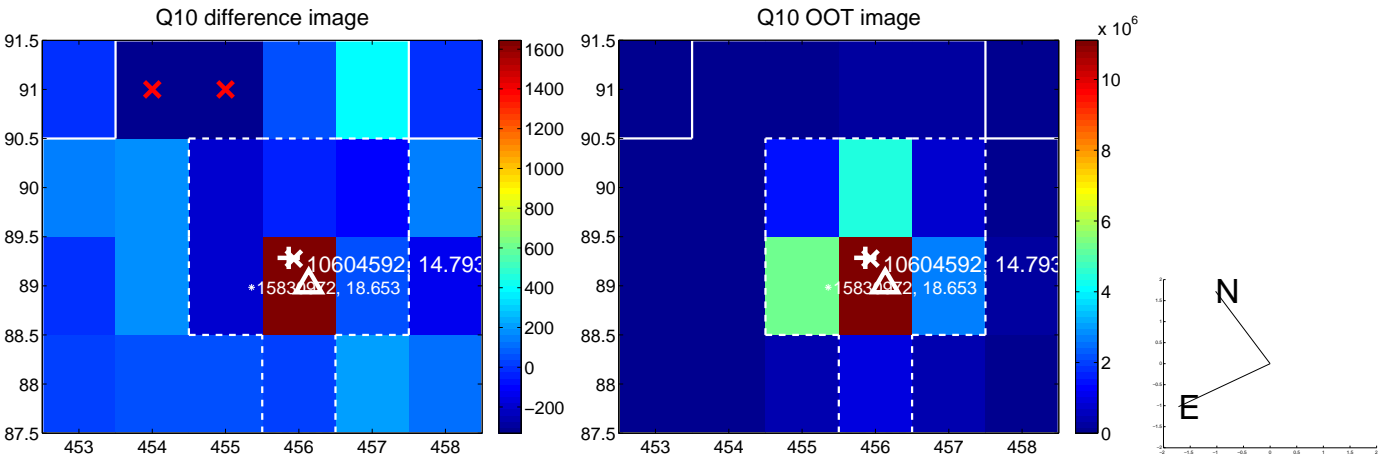
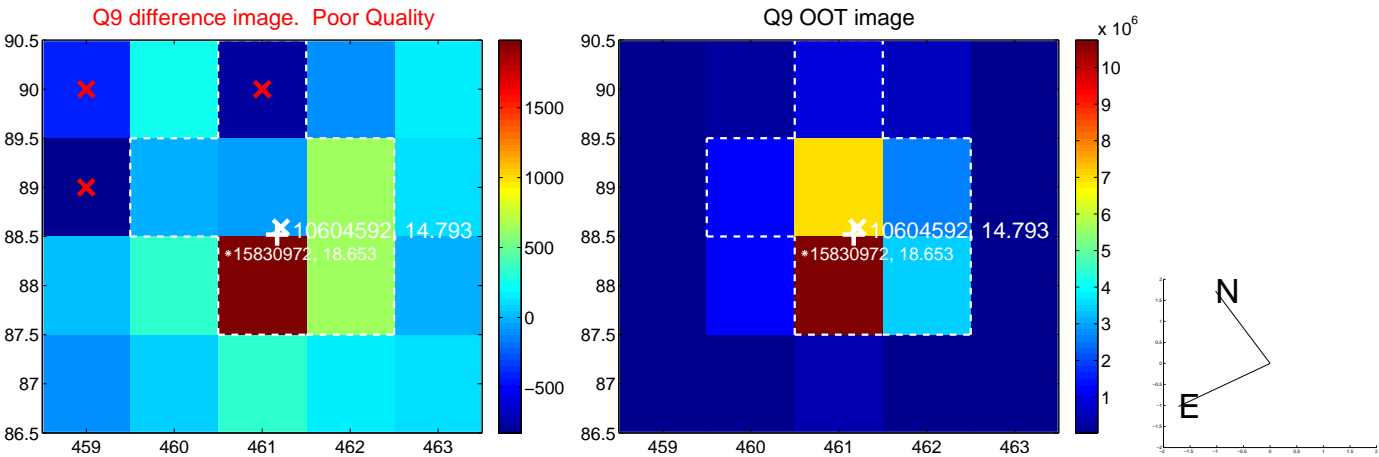
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



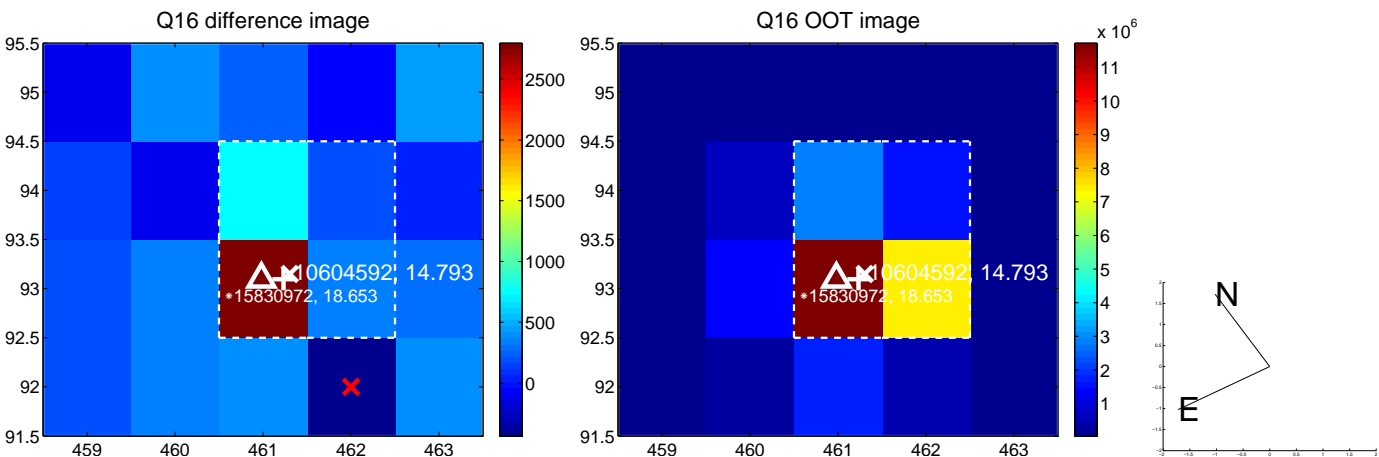
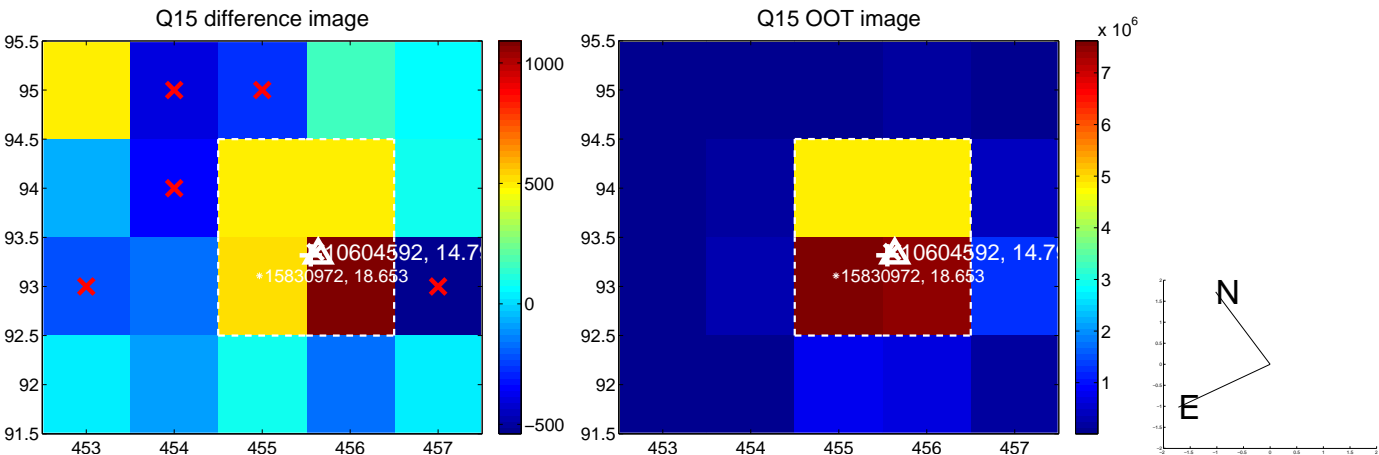
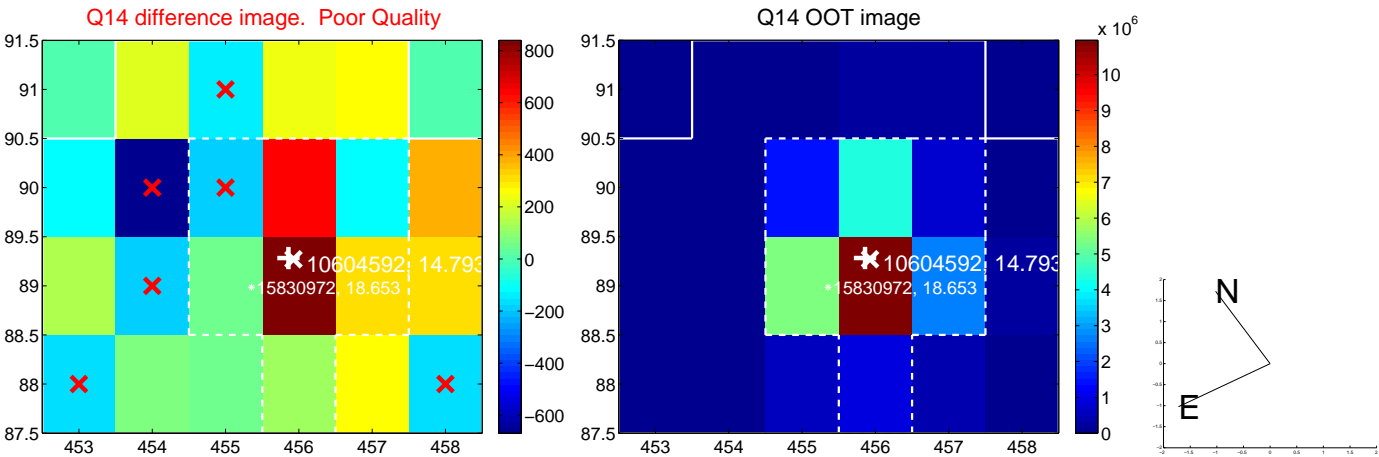
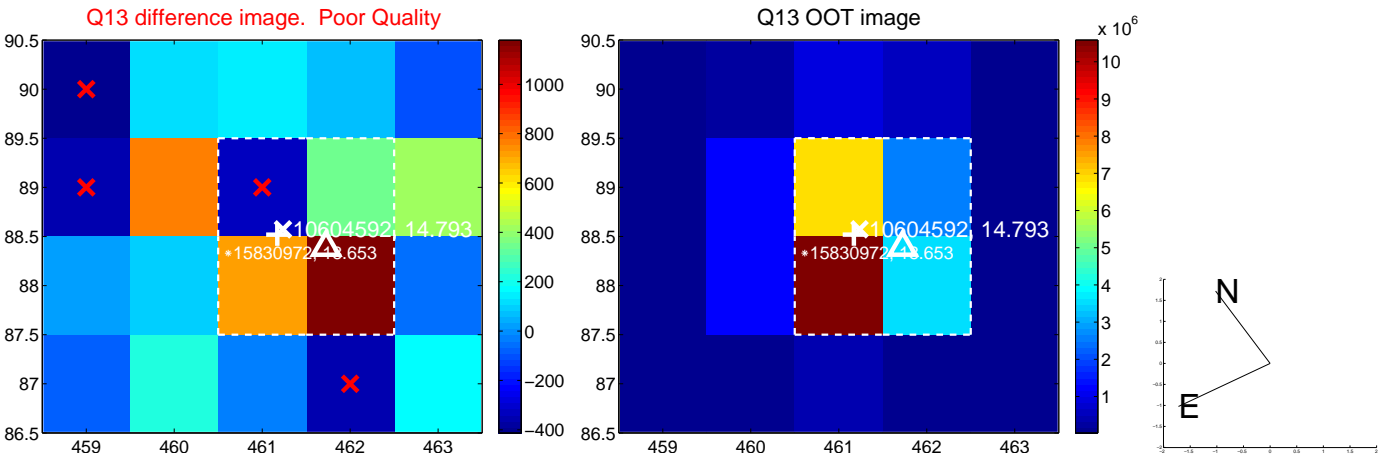
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



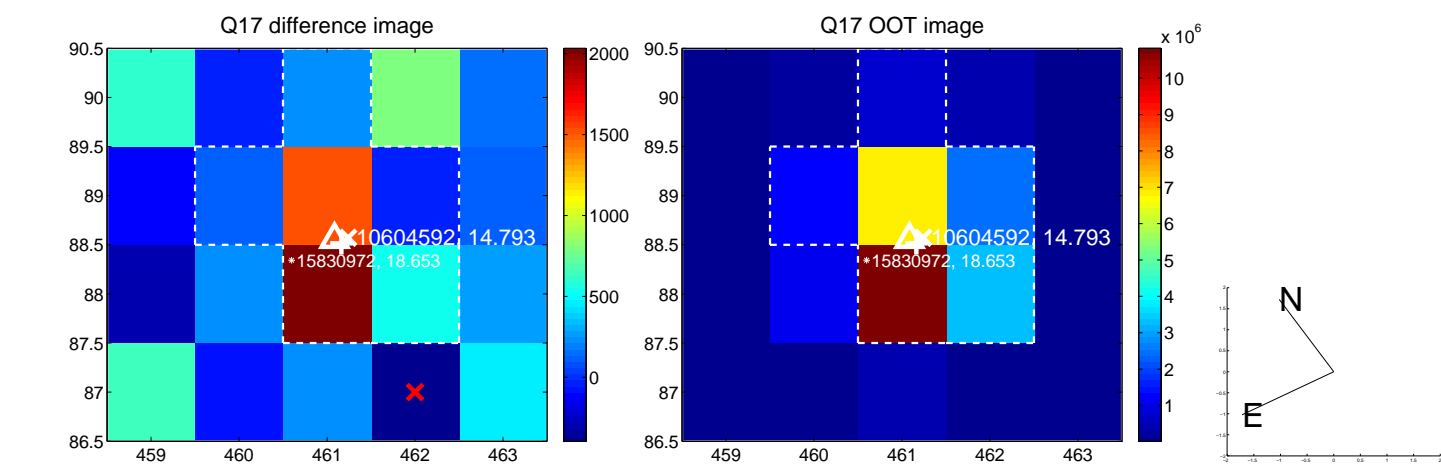
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



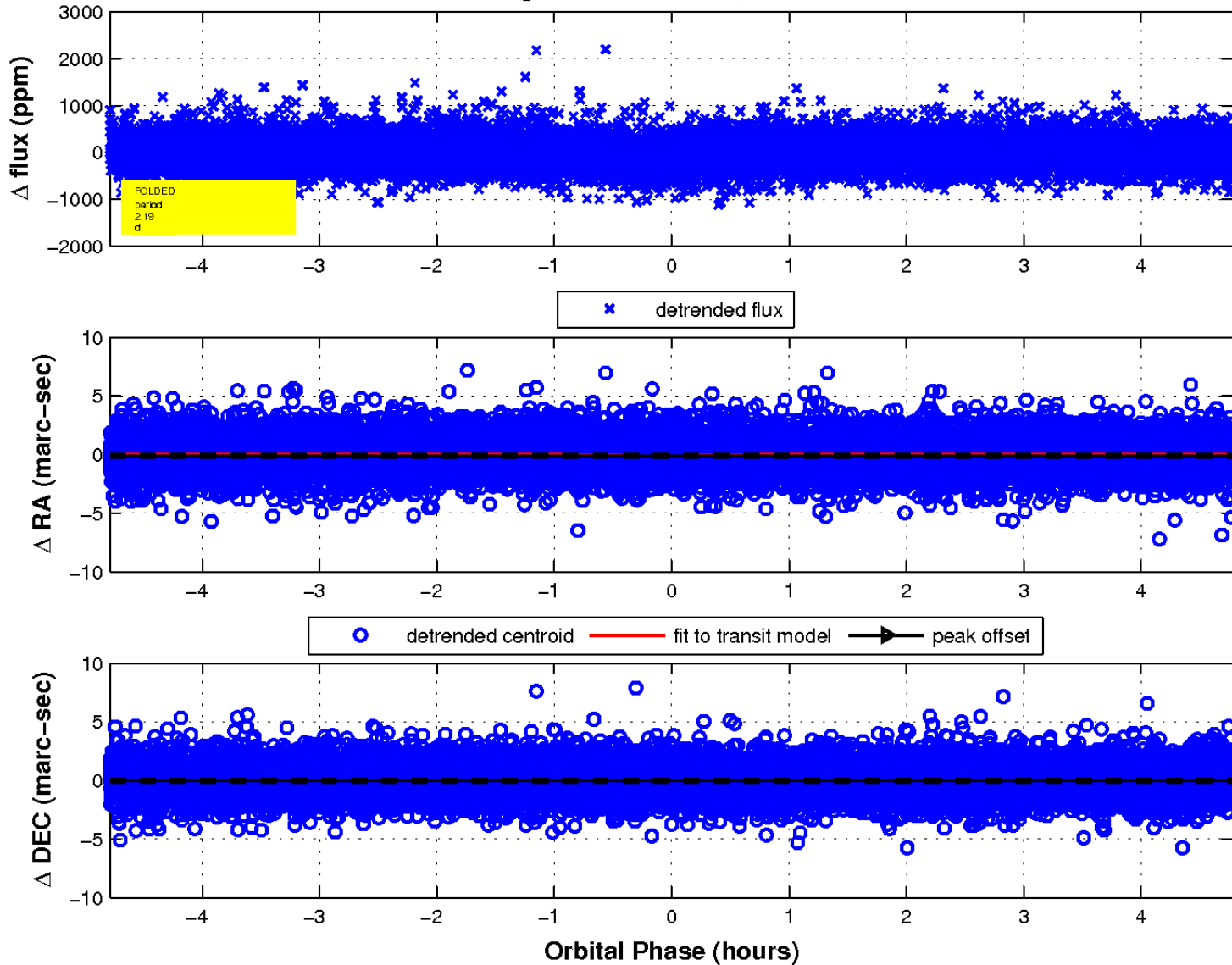
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

