

KIC 004575908

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})
004575908-01	OBS	No	2.060061	132.474199	48.6	15.303	8.4	8.8	2.03	7716	1.61	9229.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004575908-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

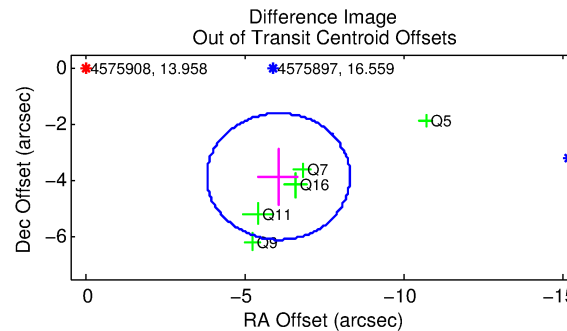
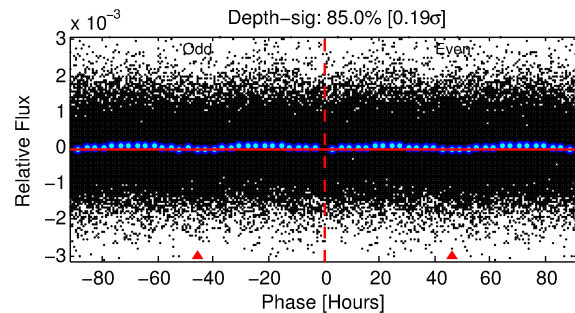
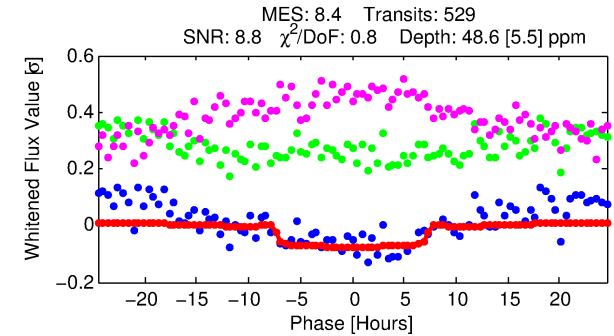
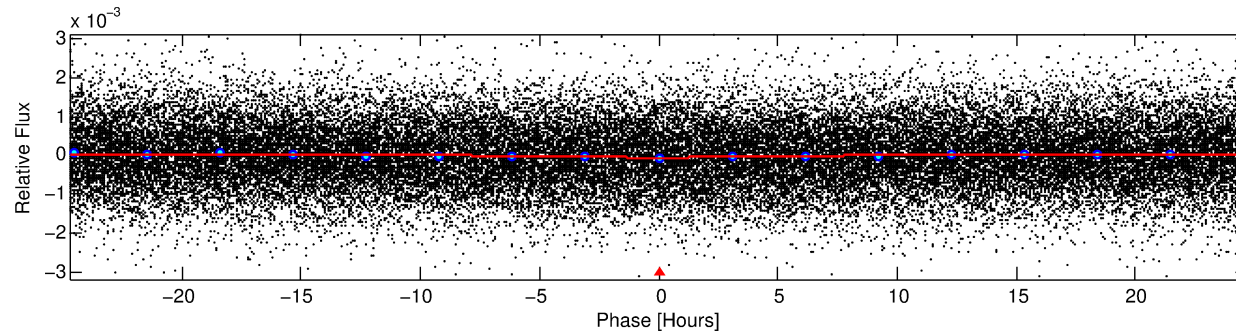
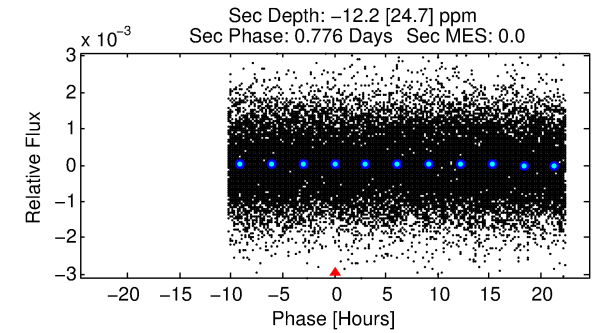
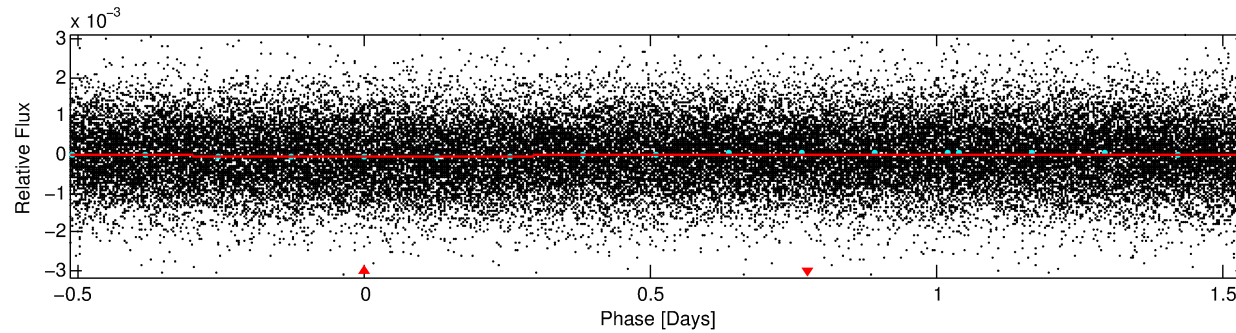
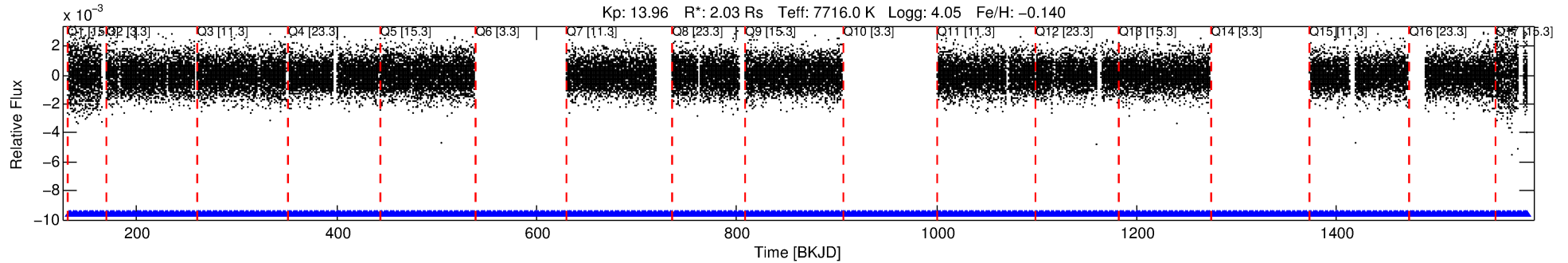
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004575908-01

No Significant Match Found

DV One-Page Summary

KIC: 4575908 Candidate: 1 of 1 Period: 2.060 d



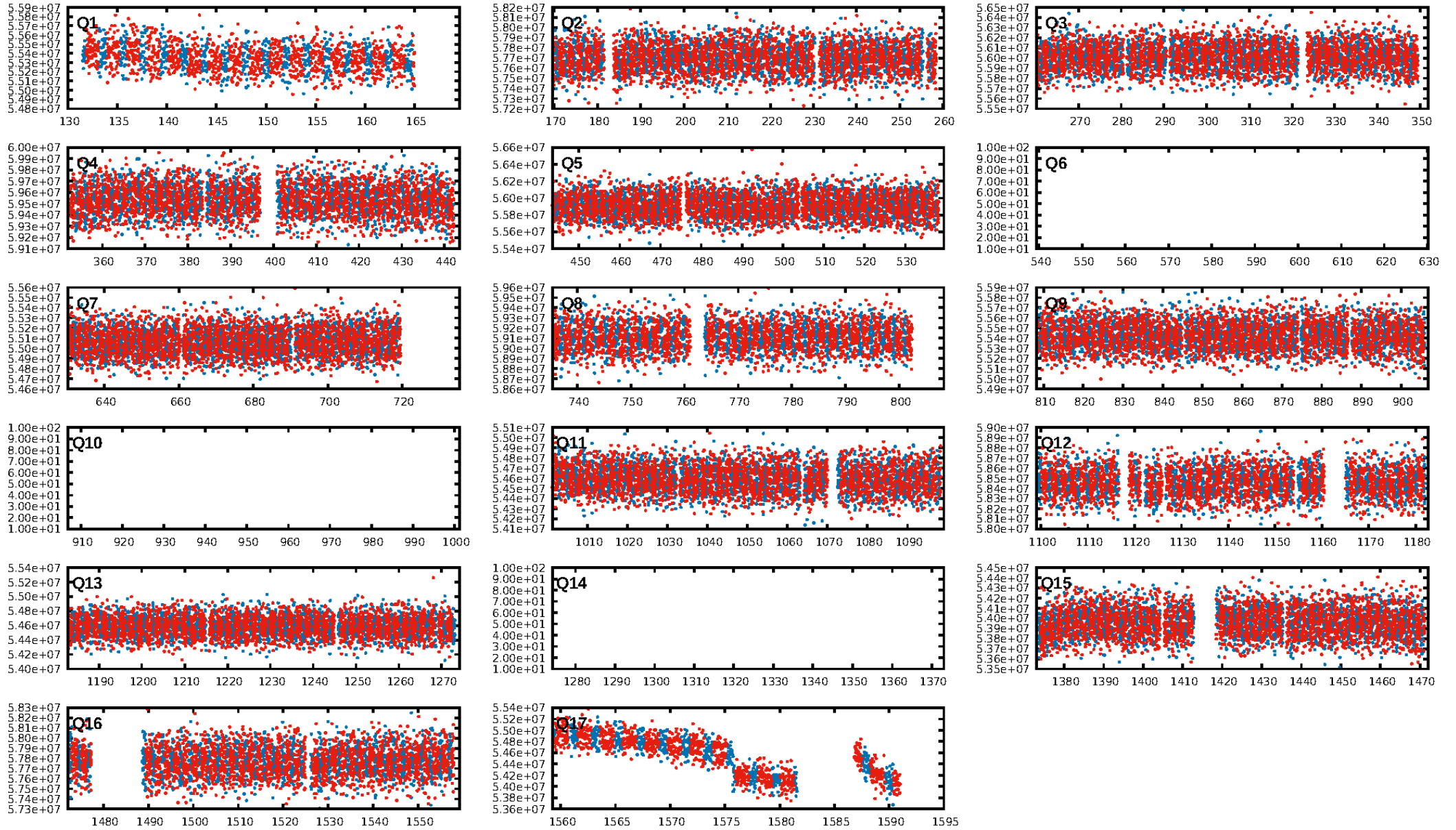
DV Fit Results:

Period = 2.06006 [0.00006] d
Epoch = 132.4742 [0.0181] BKJD
Rp/R* = 0.0073 [0.0029]
a/R* = 1.06 [0.30]
b = 0.87 [0.68]
Seff = 9229.80 [3419.53]
Teq = 2499 [231] K
Rp = 1.61 [0.75] Re
a = 0.0376 [0.0083] AU
Ag = N/A
Teffp = N/A

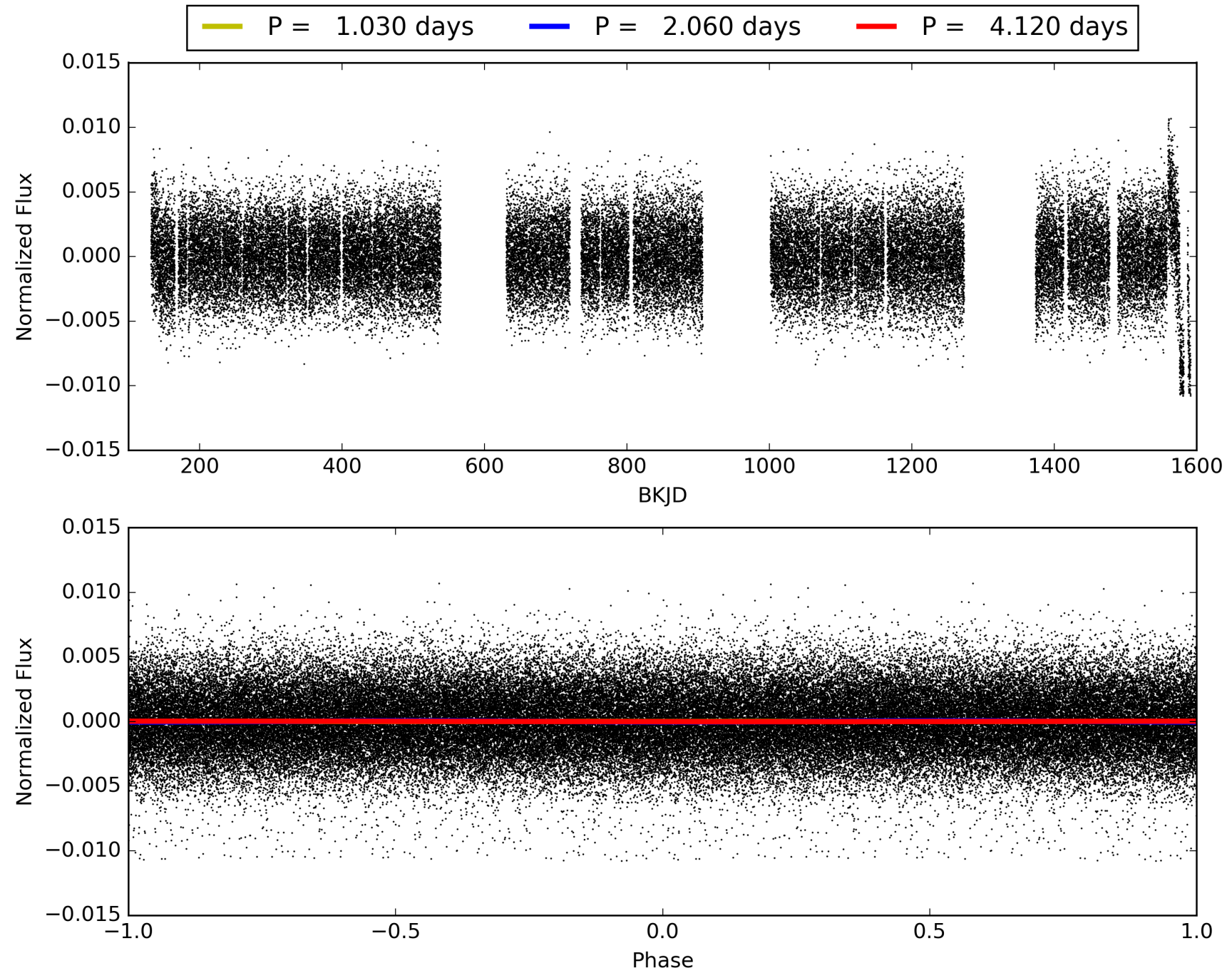
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.65e-64
RollingBand-fgt: 1.00 [499/499]
GhostDiagnostic-chr: 56.9
Centroid-sig: 3.9%
Centroid-so: 0.917 arcsec [1.55σ]
OotOffset-rm: 7.171 arcsec [9.55σ]
KicOffset-st: 0.2/1/2 [5]
KicOffset-st: 0.2/1/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004575908-01, PDC Light Curves

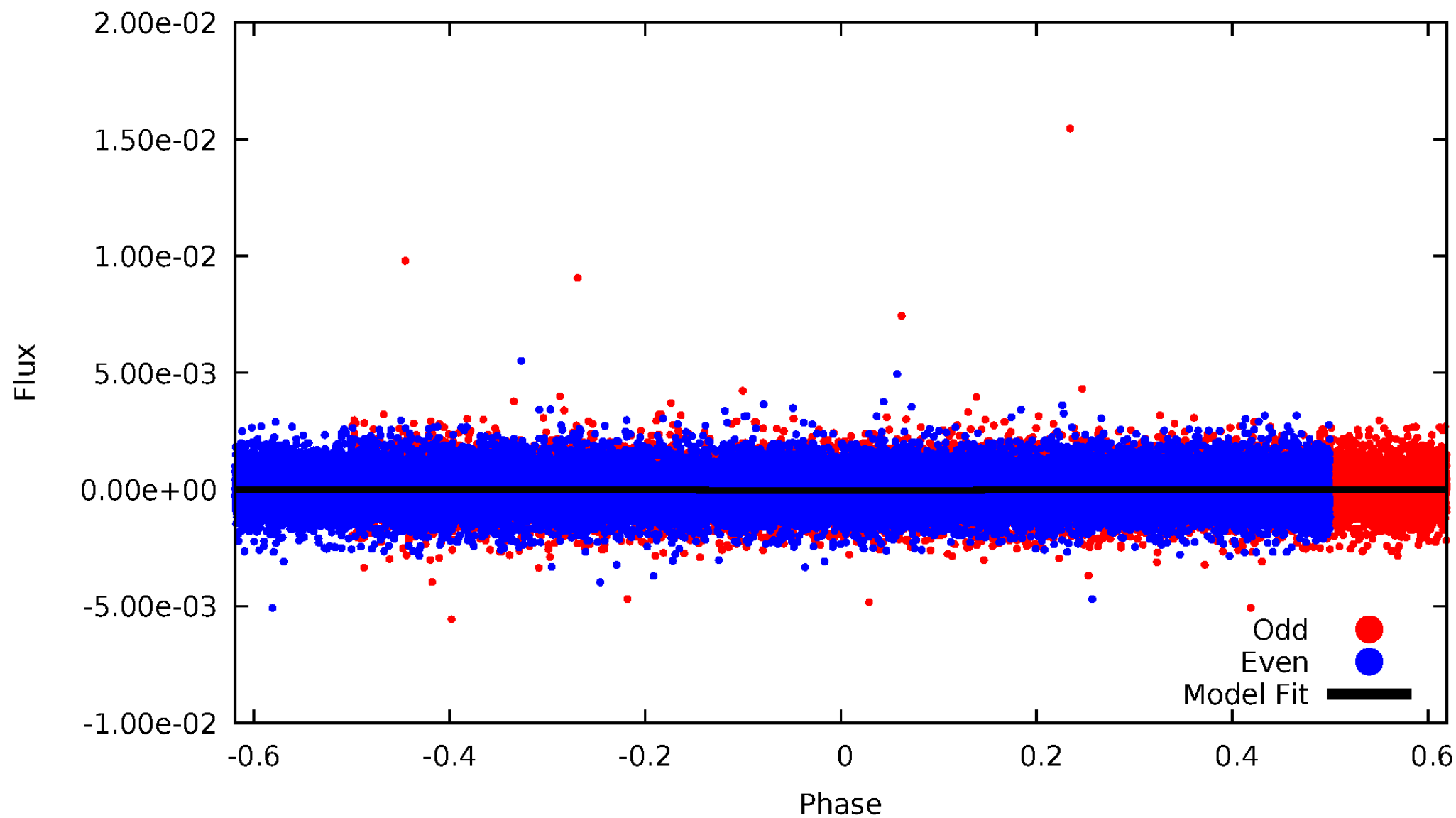


TCE 004575908-01



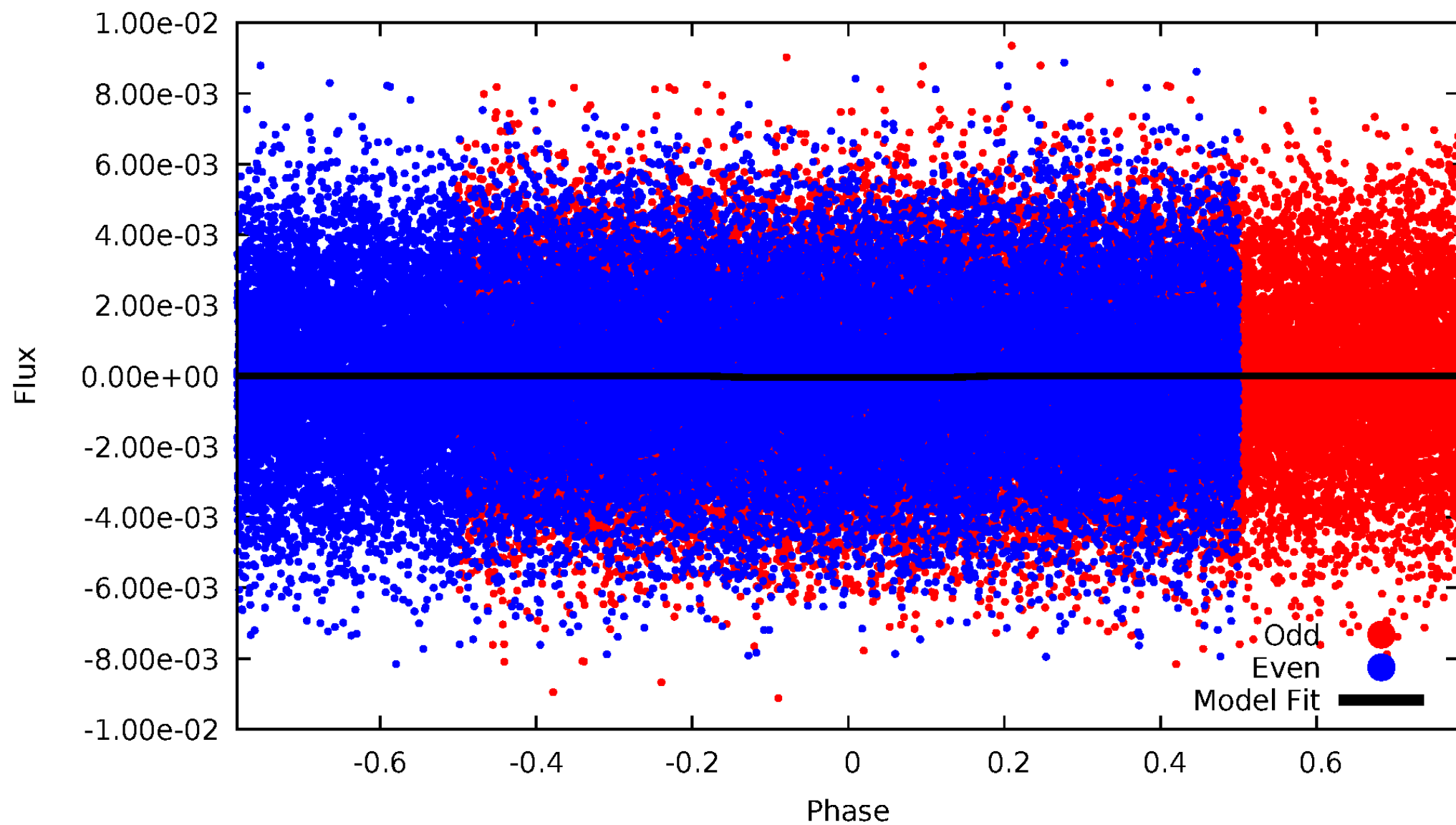
DV Odd/Even

TCE 004575908-01



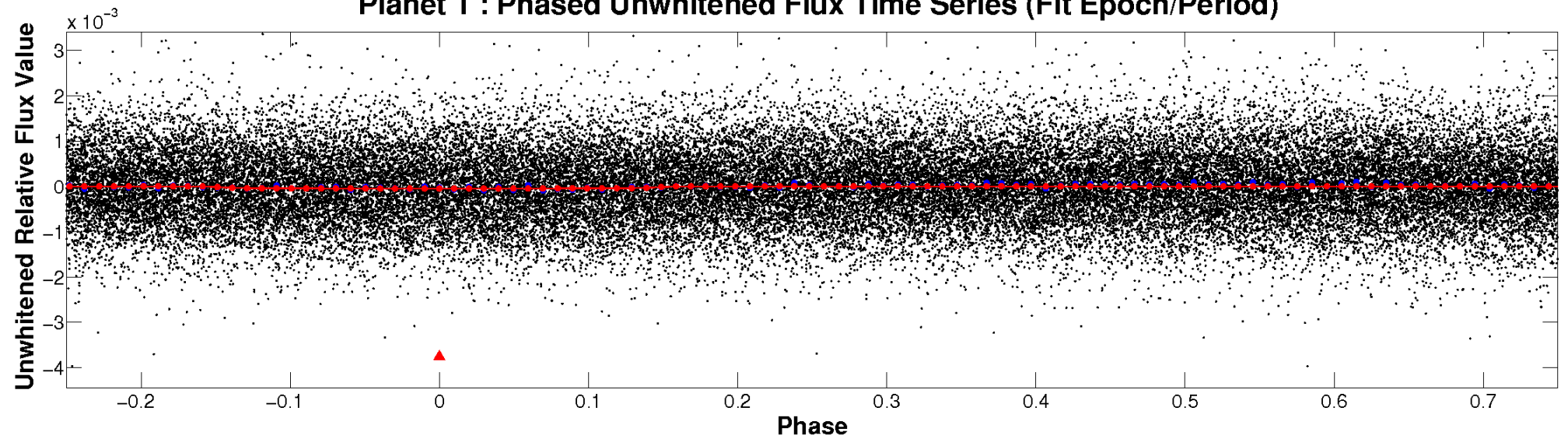
ALT Odd/Even

TCE 004575908-01

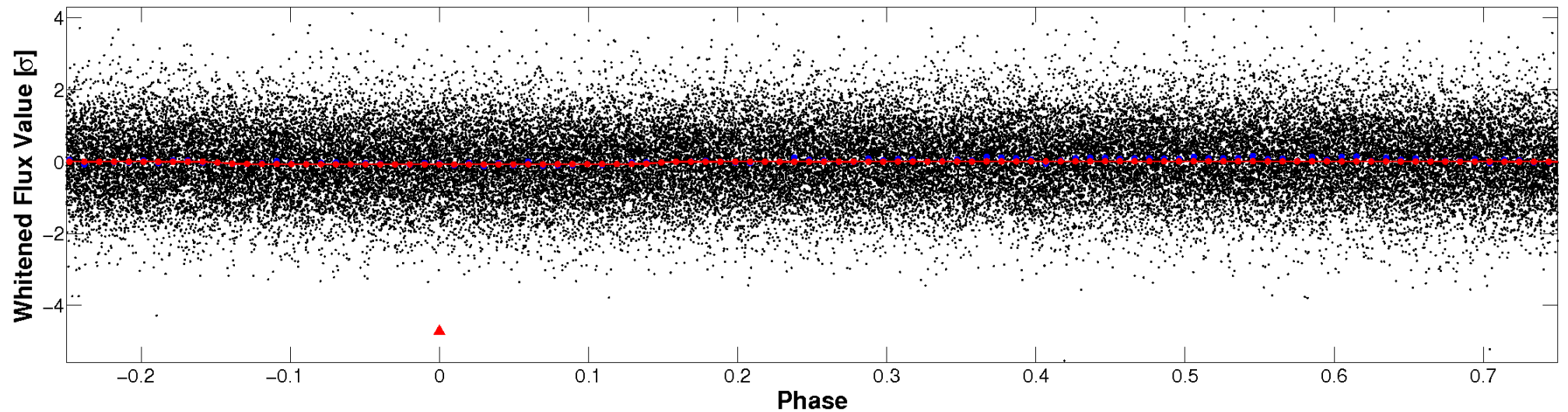


Non-Whitened Vs. Whitened Light Curve

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

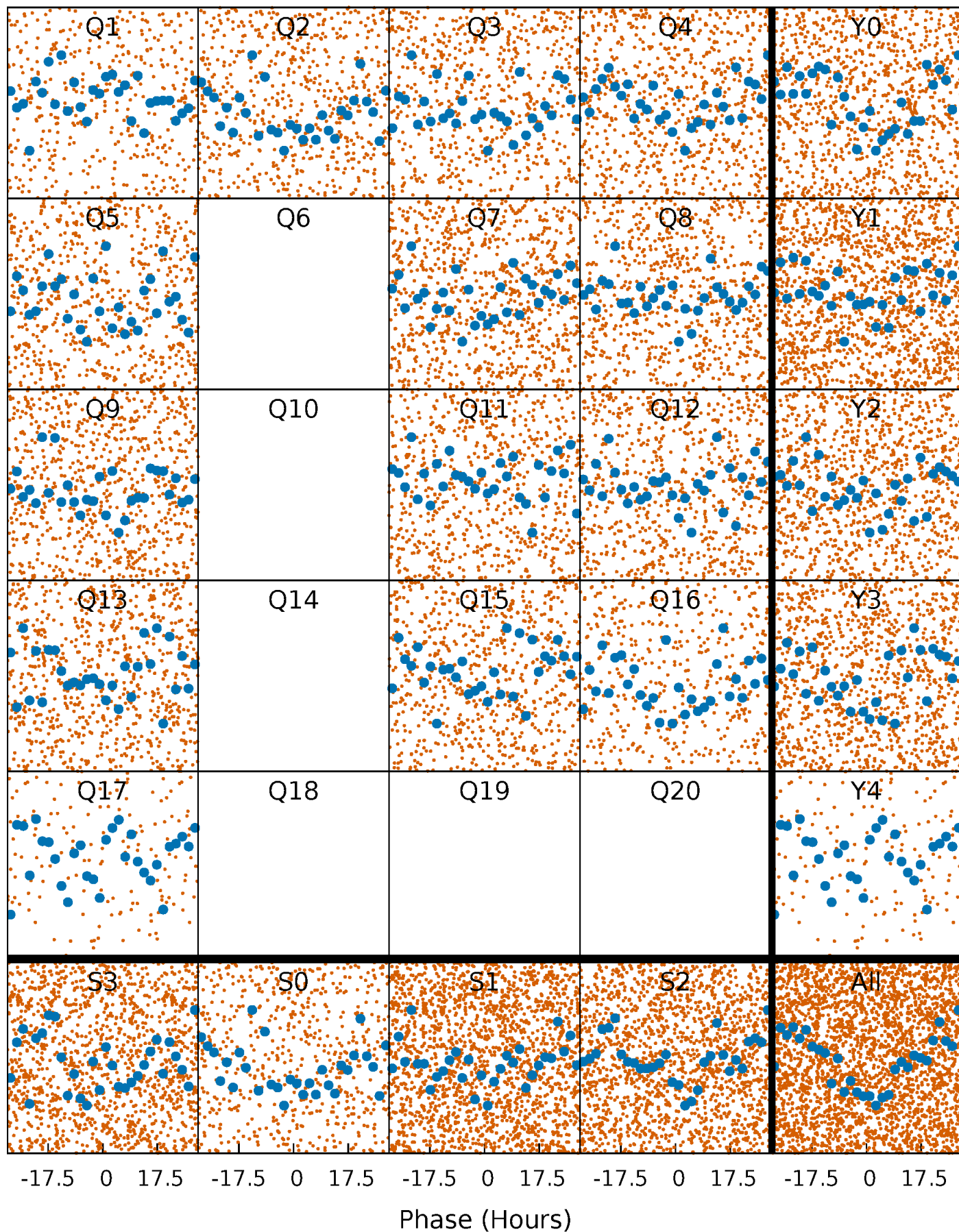


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



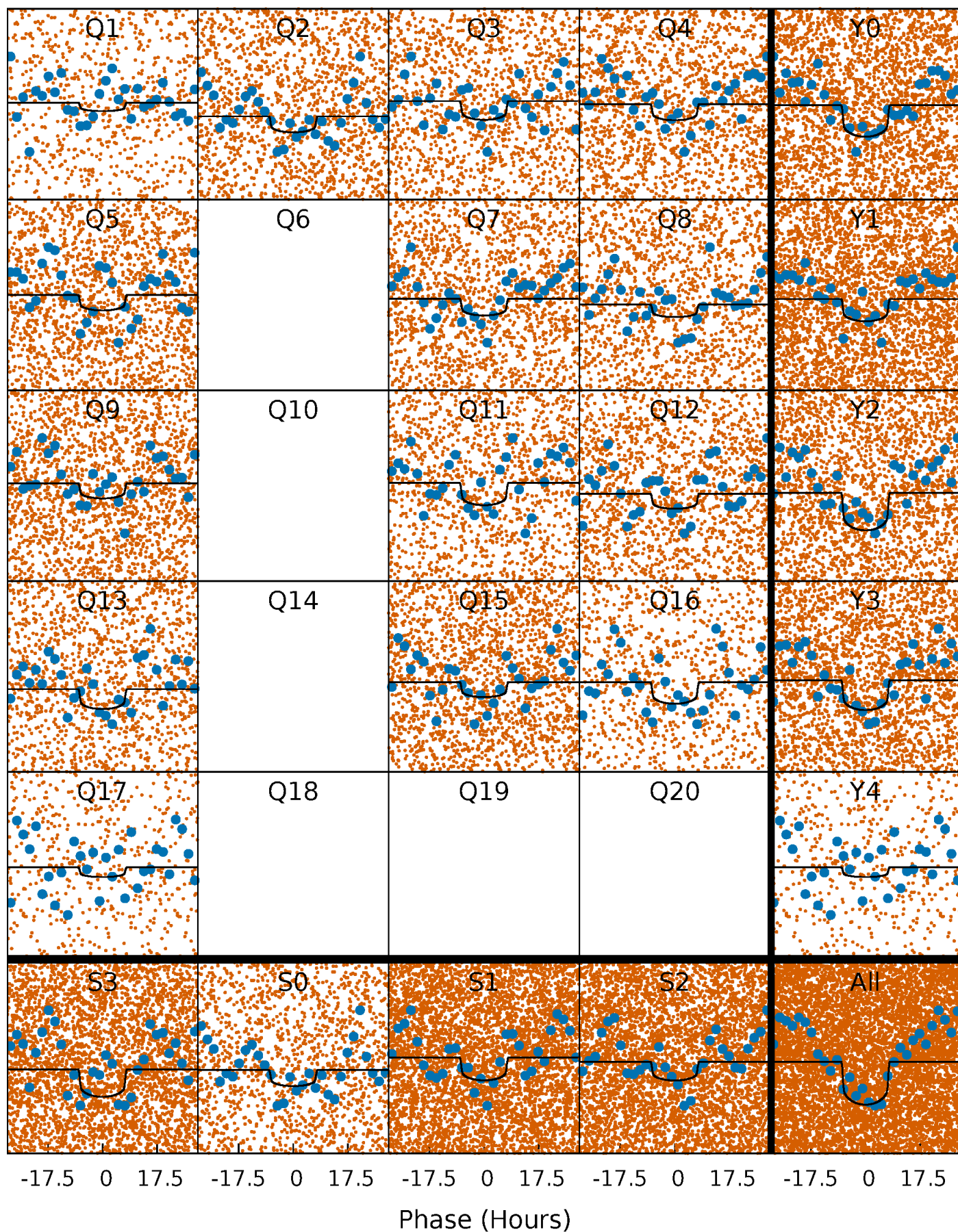
PDC Quarter-Phased Transit Curves

TCE 004575908-01 P= 2.060061 Days $T_0=132.474199$ (BKJD)



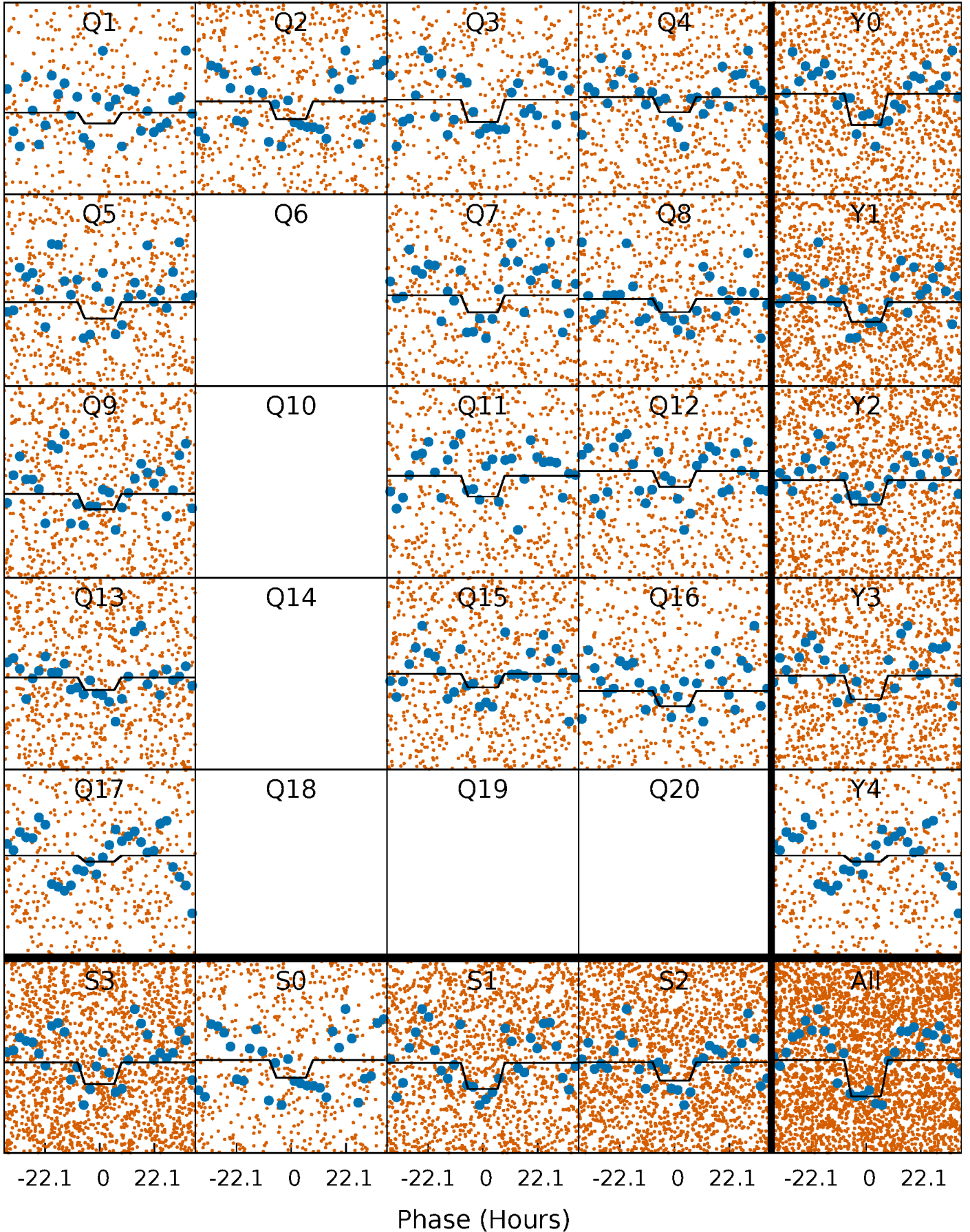
DV Quarter-Phased Transit Curves

TCE 004575908-01 P= 2.060061 Days $T_0=132.474199$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

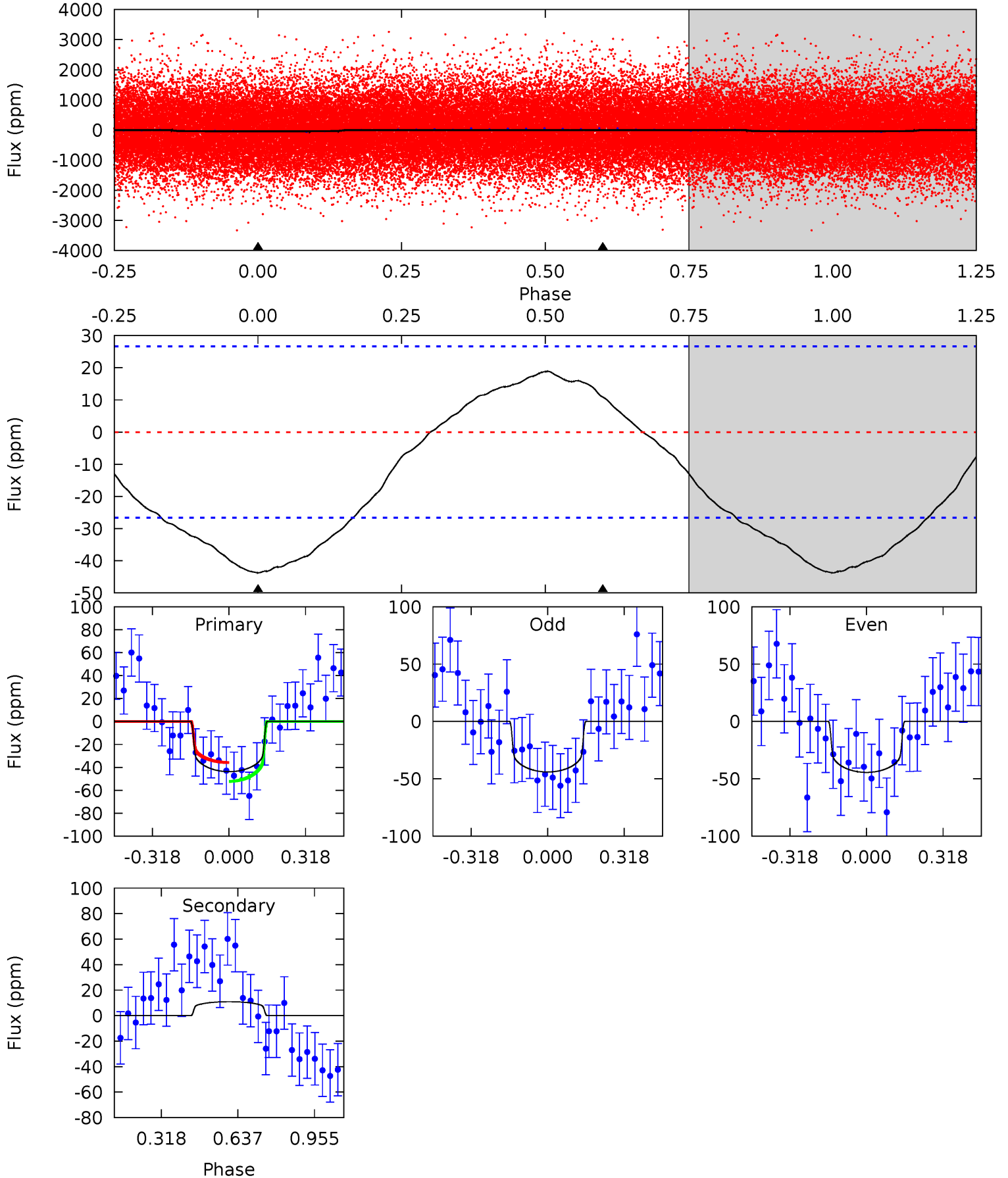
TCE 004575908-01 $P = 2.060003$ Days $T_0 = 132.474779$ (BKJD)



DV Model-Shift Uniqueness Test

004575908-01, P = 2.060061 Days, E = 130.414138 Days

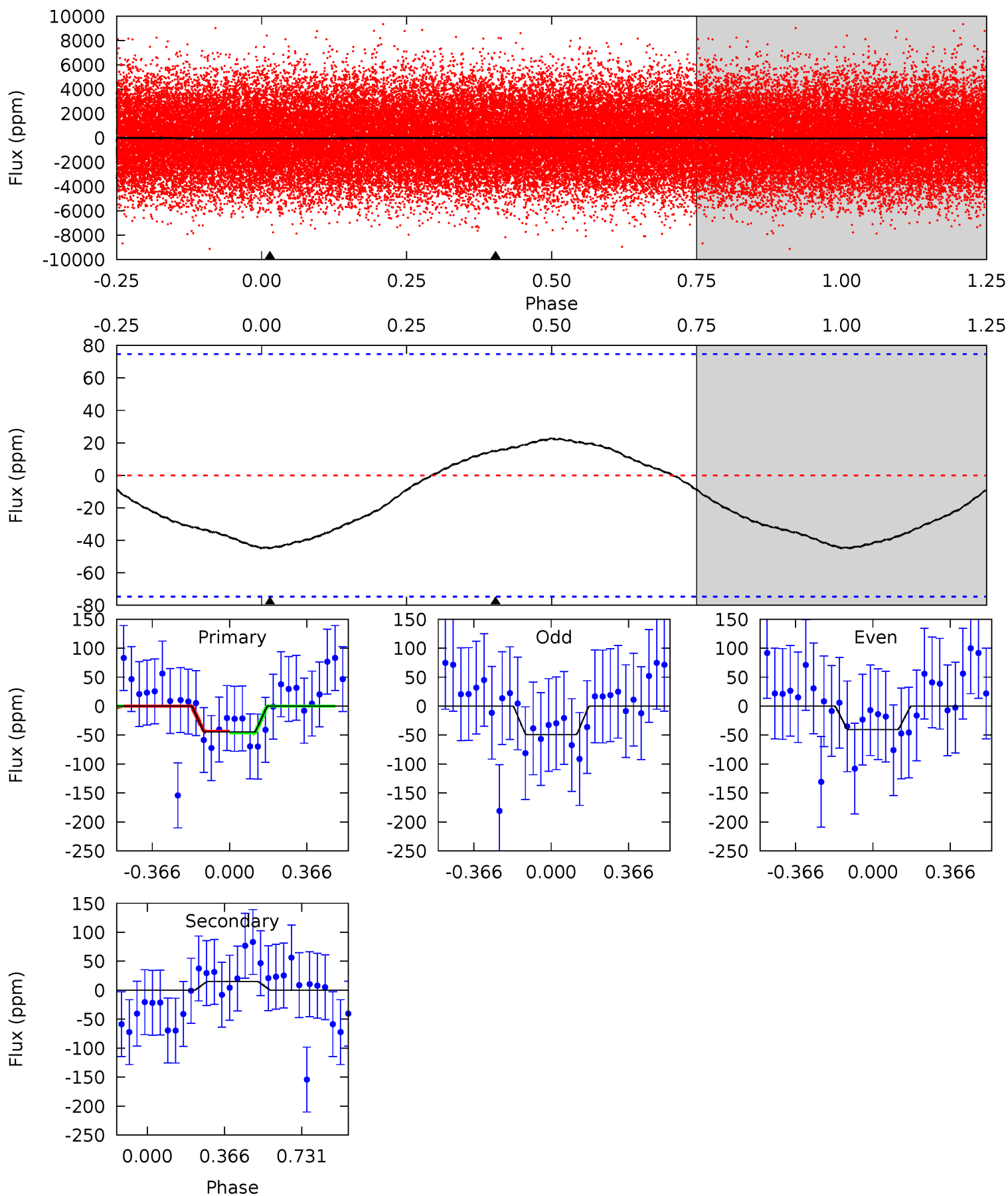
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.09	-1.77	0	0	4.32	1.00	0.70	7.09	7.09	-1.77	-1.77	0.03	0.84	0.30	1.31



Alt Model-Shift Uniqueness Test

004575908-01, P = 2.060003 Days, E = 130.414776 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.57	-0.86	0	0	4.28	0.90	0.29	2.57	2.57	-0.86	-0.86	0.25	0.89	0.34	0.09



Stellar Parameters For KIC 004575908

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7716^{+211}_{-316}	$4.047^{+0.187}_{-0.153}$	$-0.140^{+0.200}_{-0.350}$	$2.027^{+0.509}_{-0.509}$	$1.669^{+0.187}_{-0.280}$	$0.282^{+0.283}_{-0.121}$
	+3%/-4%	+5%/-4%	+143%/-250%	+25%/-25%	+11%/-17%	+100%/-43%
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 004575908-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	11 ± 6	$1.57^{+0.68}_{-0.63}$	3475^{+244}_{-252}	-5181^{+891}_{-1353}	$-3.135^{+2.089}_{-6.281}$
Alt.	15 ± 17	$1.49^{+0.65}_{-0.63}$	3459^{+265}_{-238}	-5527^{+8872}_{-2269}	$-4.481^{+5.126}_{-12.934}$

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

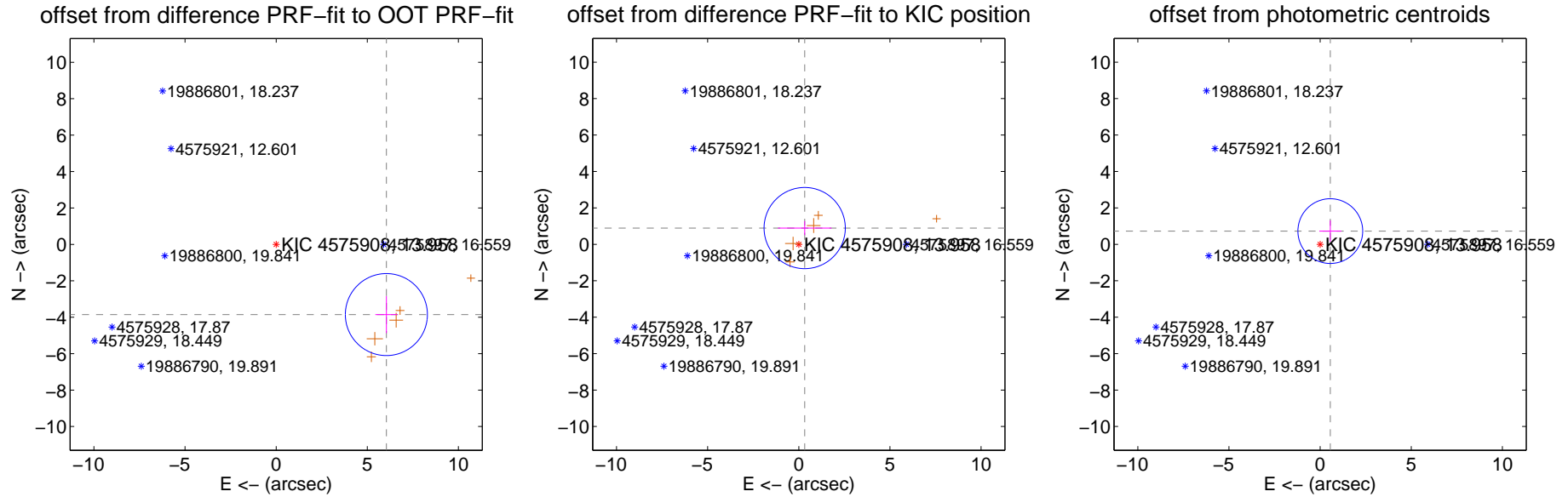
DV Centroid Data

Supplemental centroid analysis for 004575908-01. Kepler magnitude: 13.96. Transit SNR 8.81

There are 0 quarters with good PRF difference image offsets

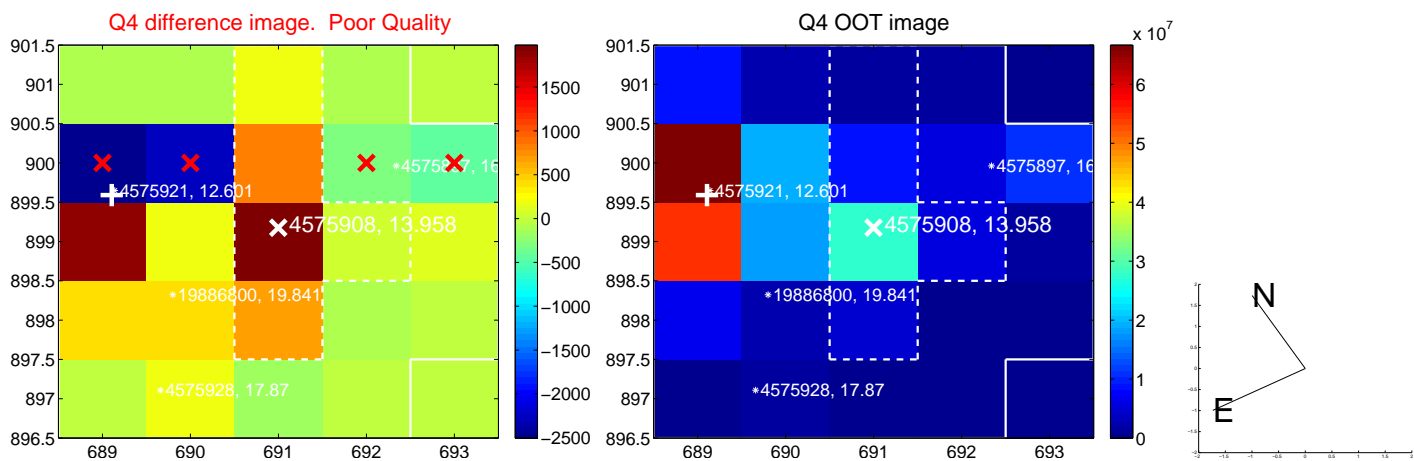
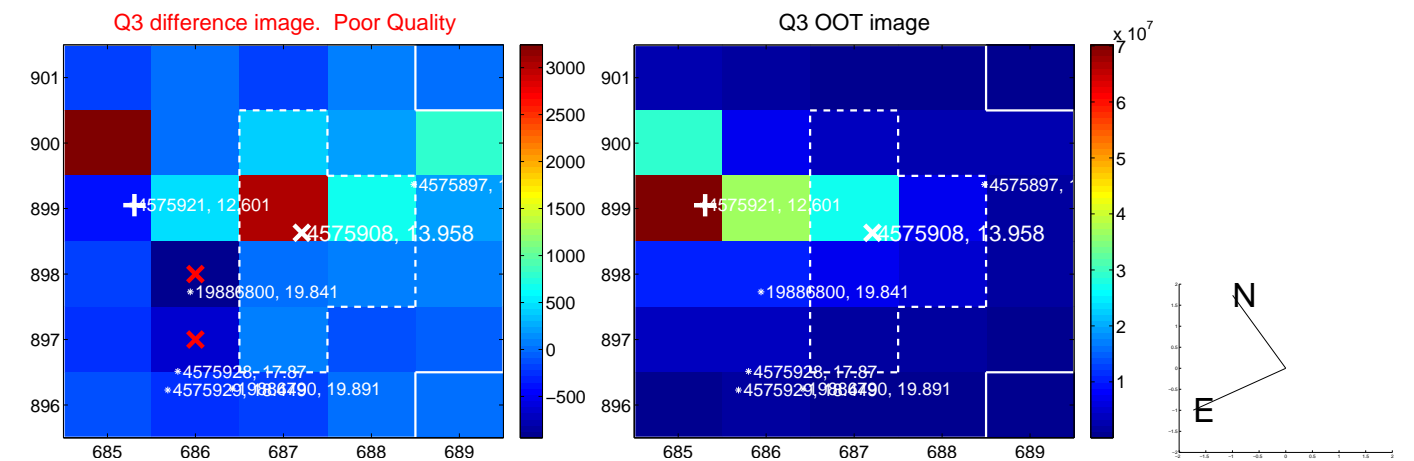
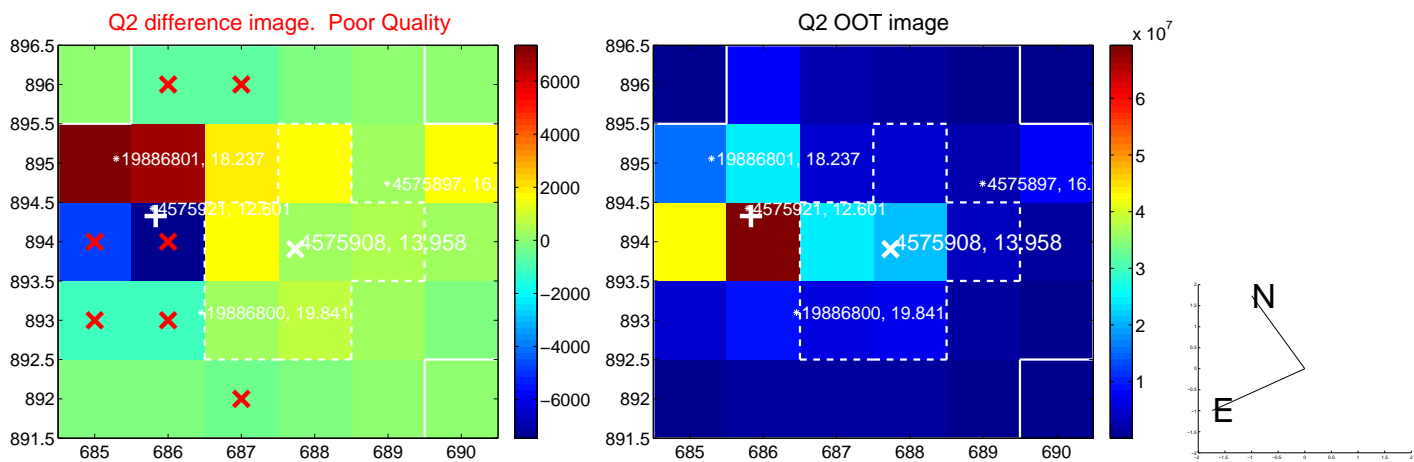
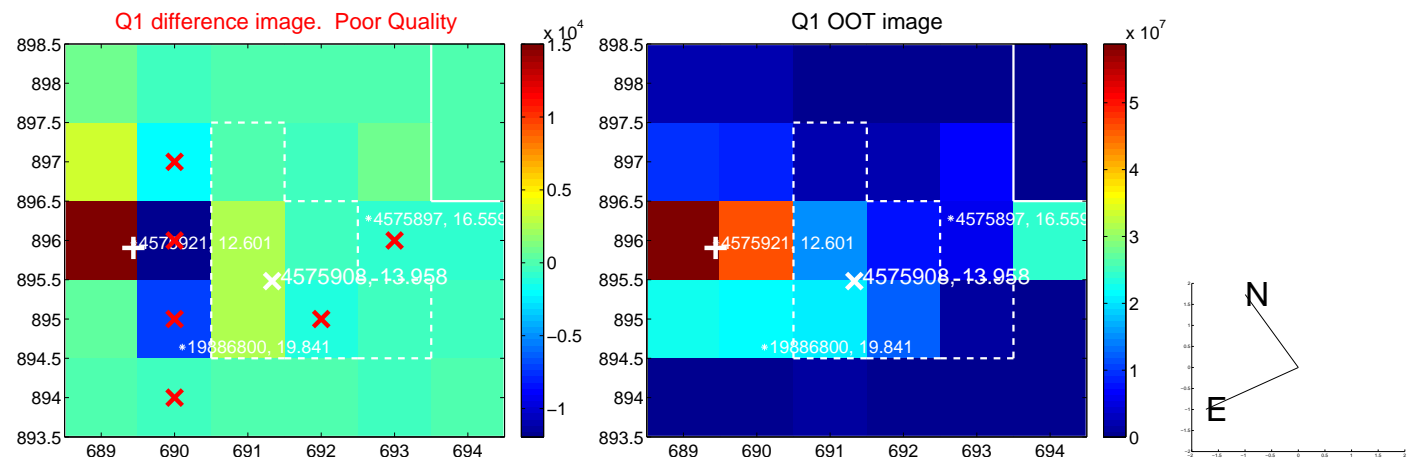
The OOT PRF centroid is offset from the target star catalog position by about 7.76 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.171 \pm 0.750	9.55	-6.047 \pm 0.610	-3.853 \pm 1.017
PRF-fit source offset from KIC position	0.949 \pm 0.743	1.28	-0.322 \pm 1.472	0.893 \pm 0.385
photometric centroid source offset	0.92 \pm 0.59	1.55	-0.56 \pm 0.60	0.73 \pm 0.59

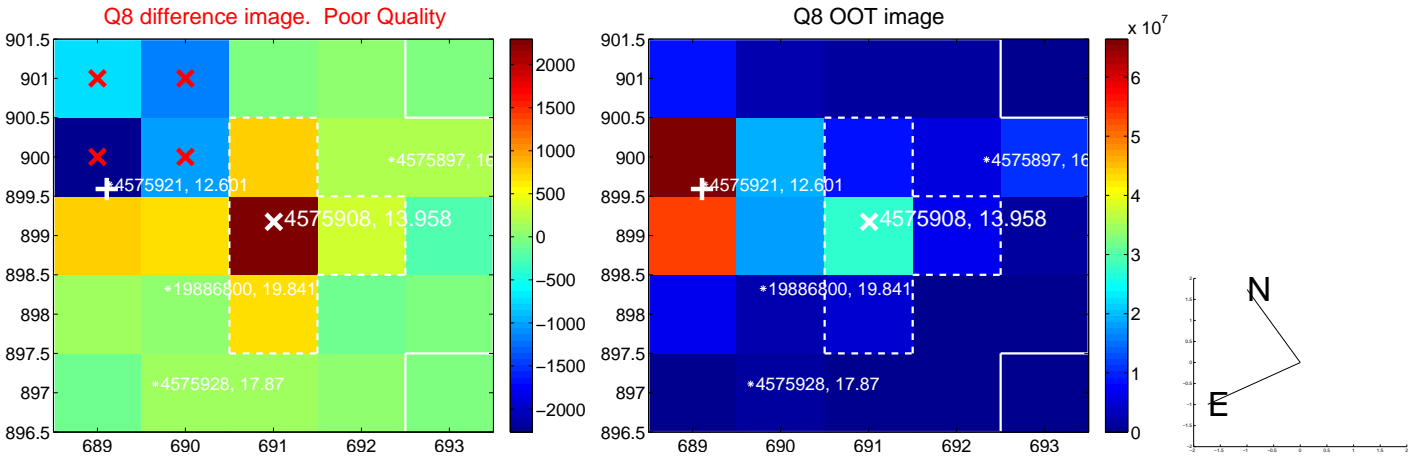
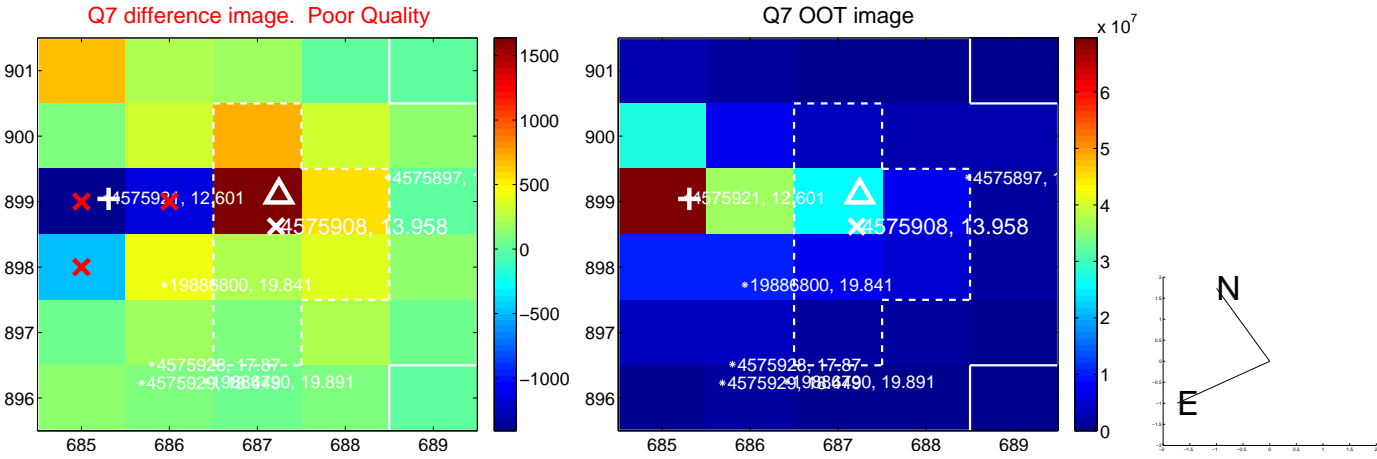
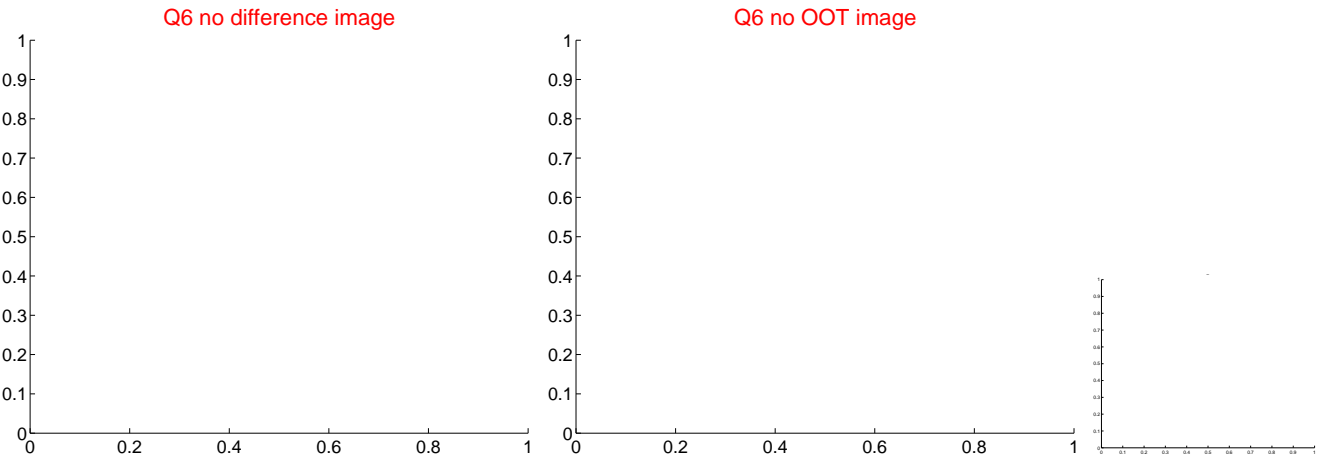
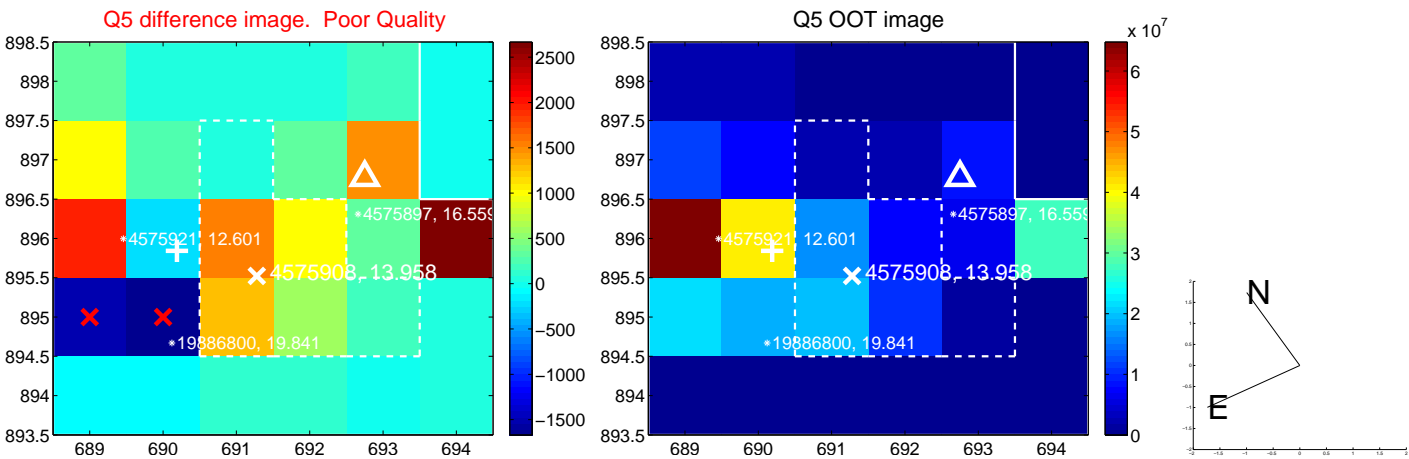


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

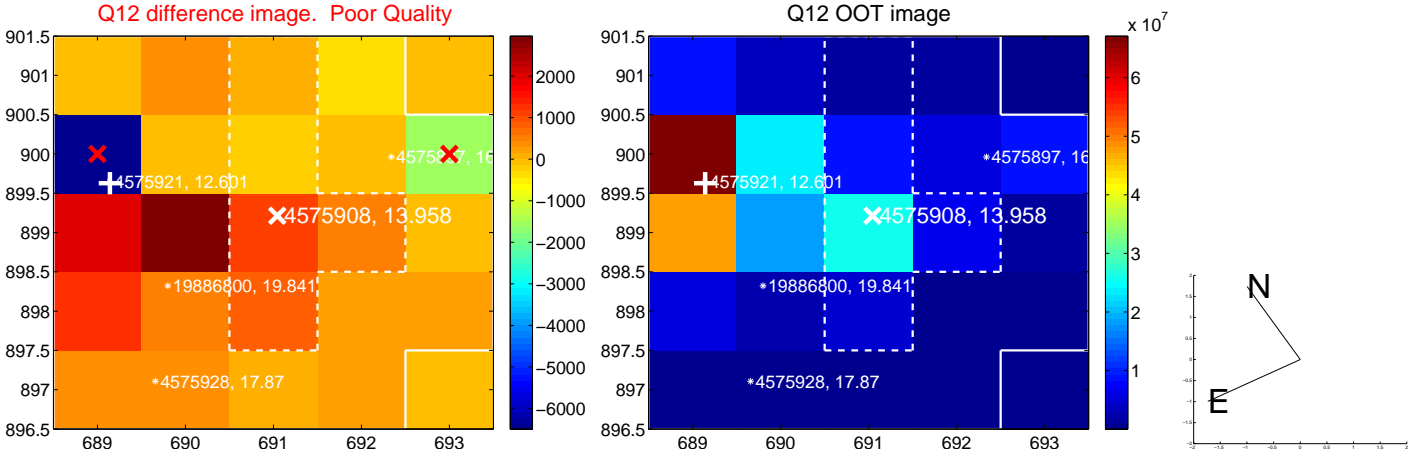
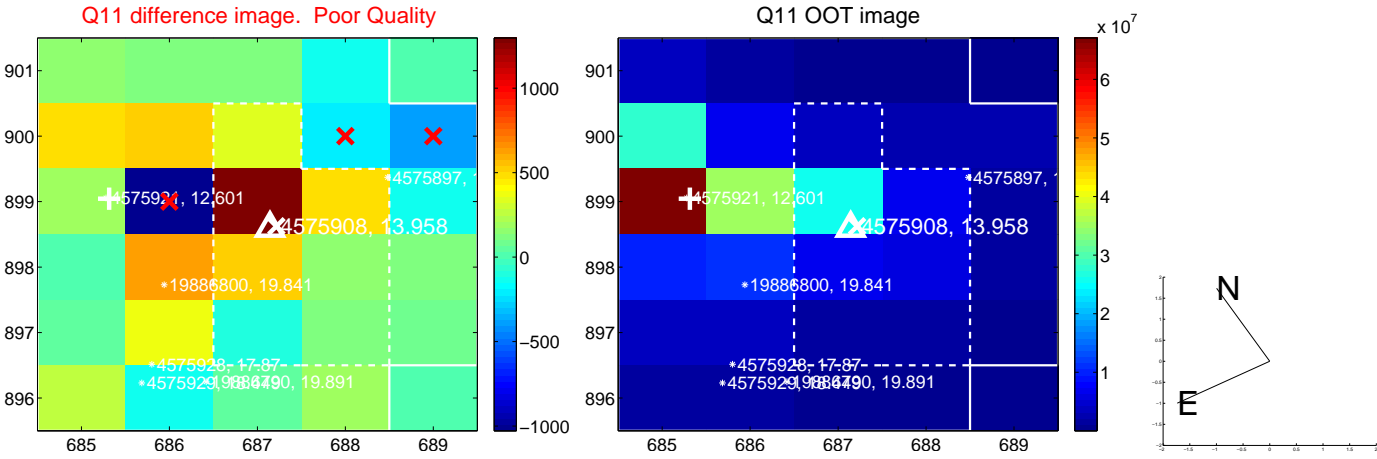
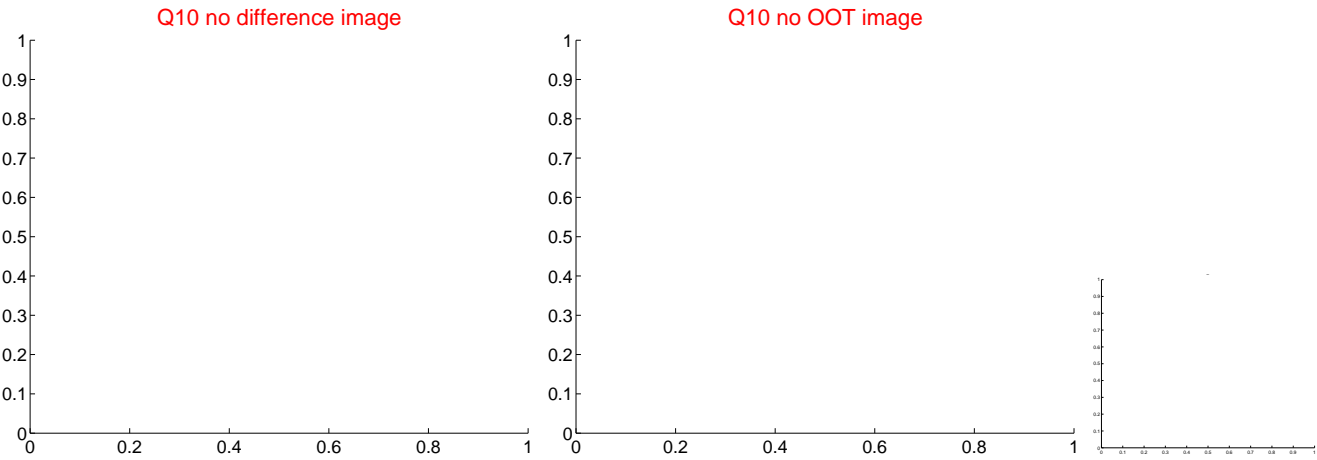
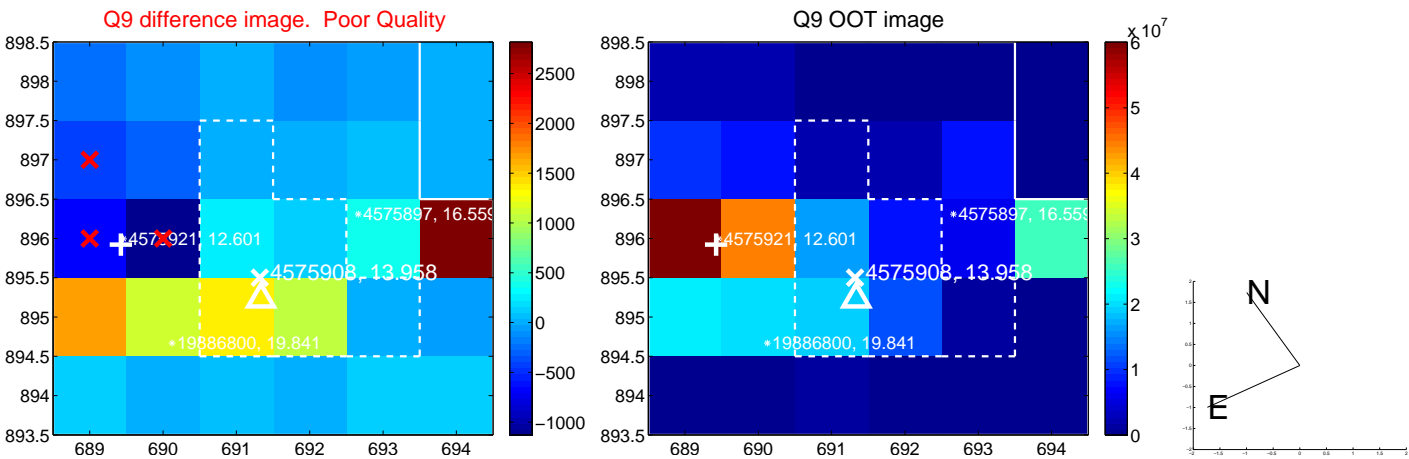
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



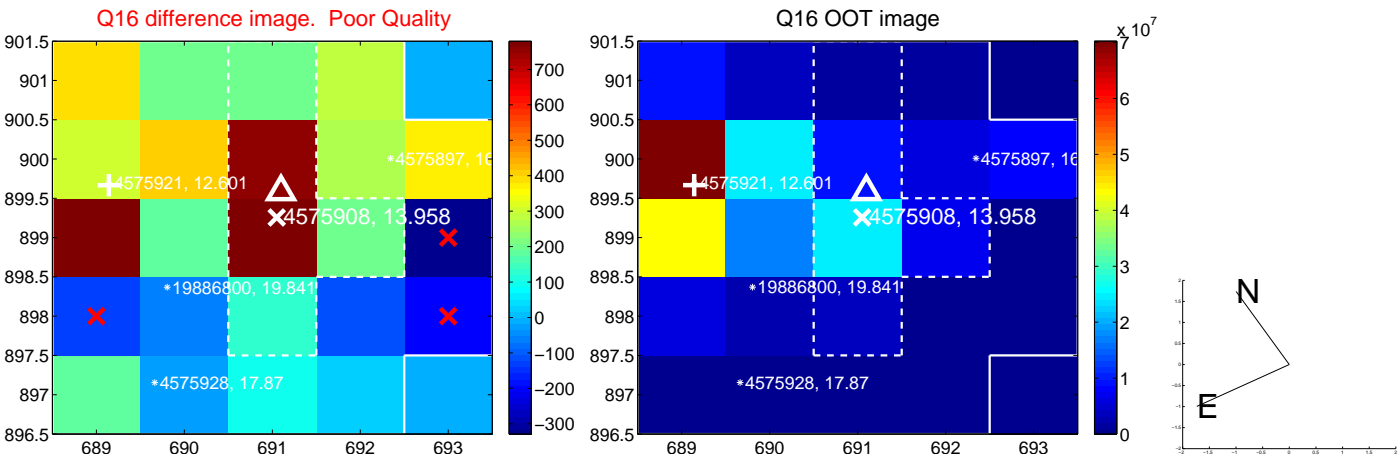
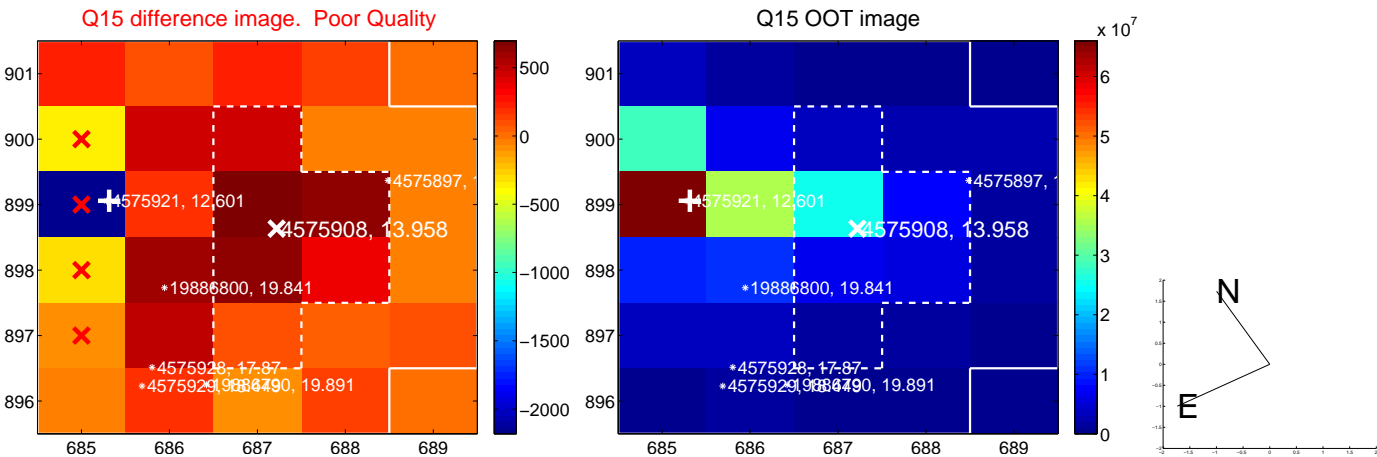
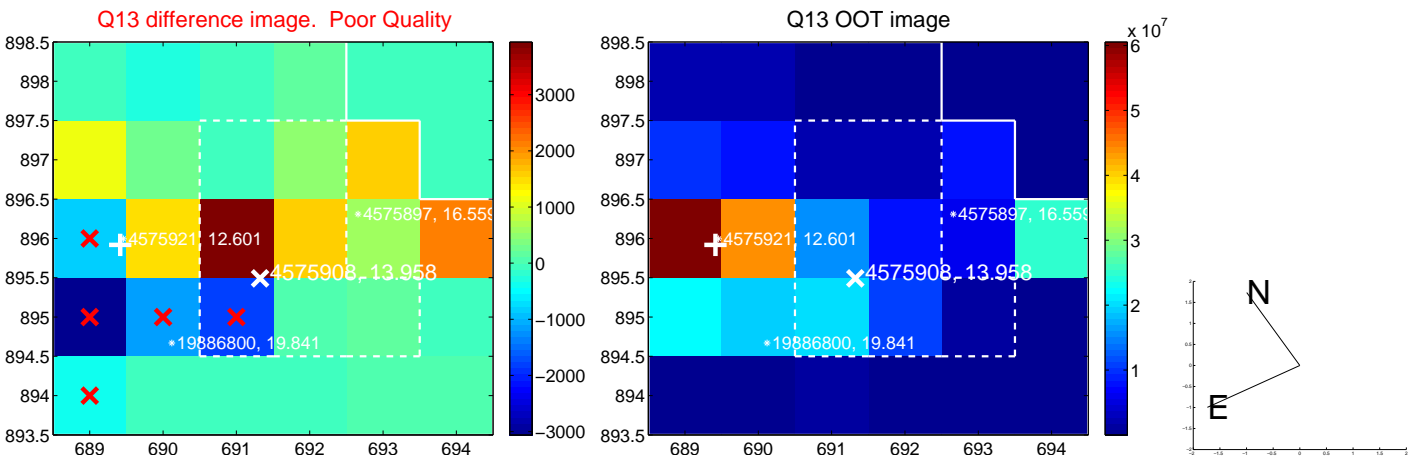
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



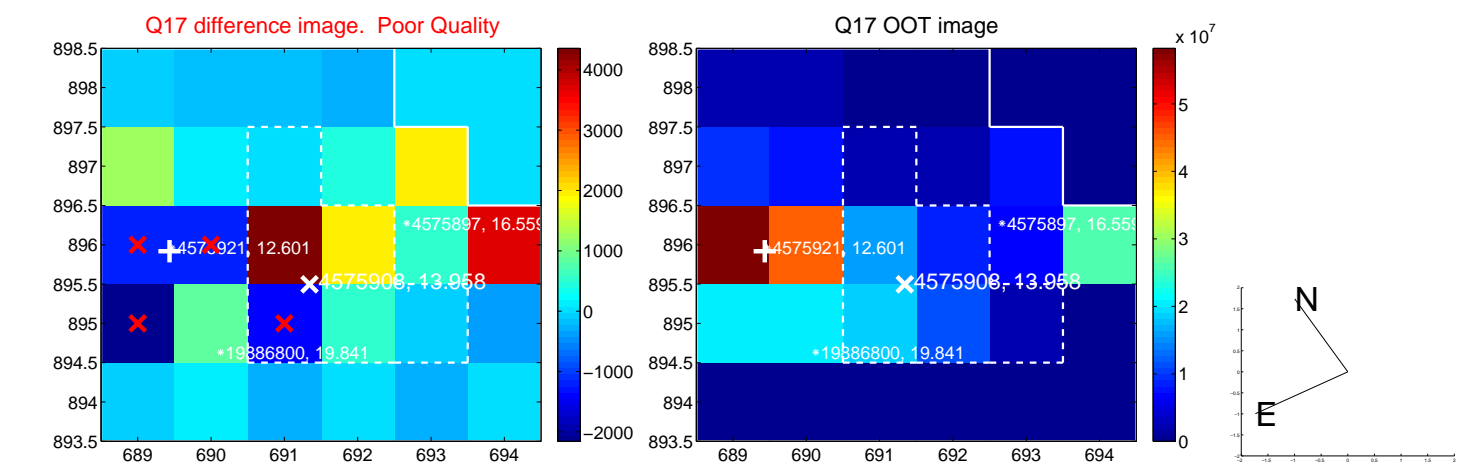
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



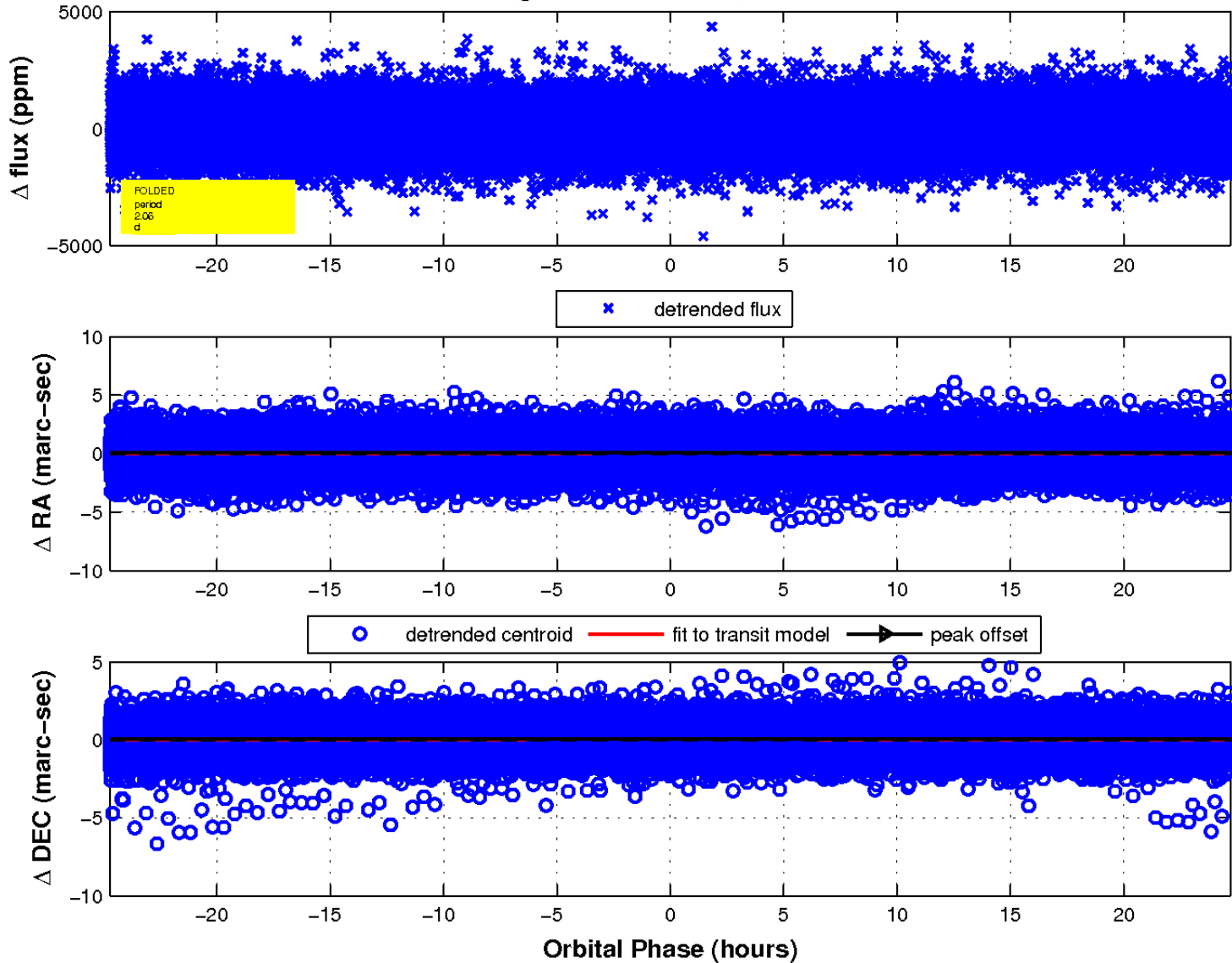
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

