

KIC 007592922

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})
007592922-01	OBS	6890.01	2.158871	131.981876	92.2	1.954	8.3	9.4	0.71	5269	0.79	385.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007592922-01	OBS	PC	0.95	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.

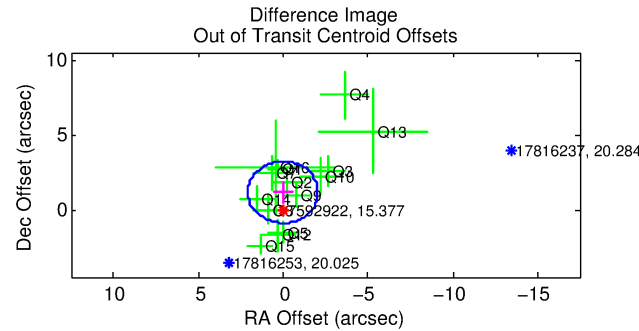
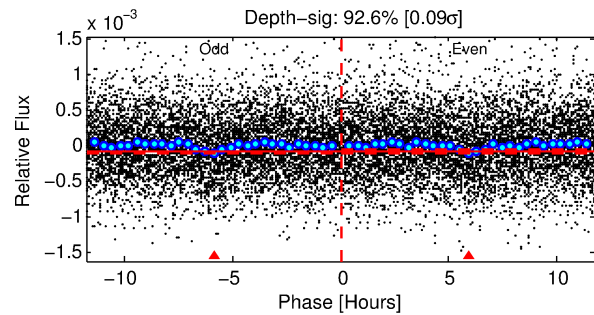
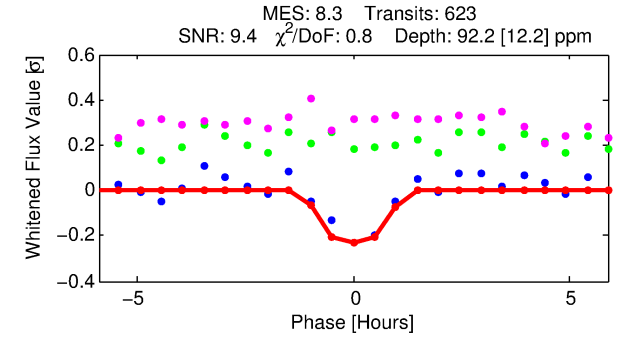
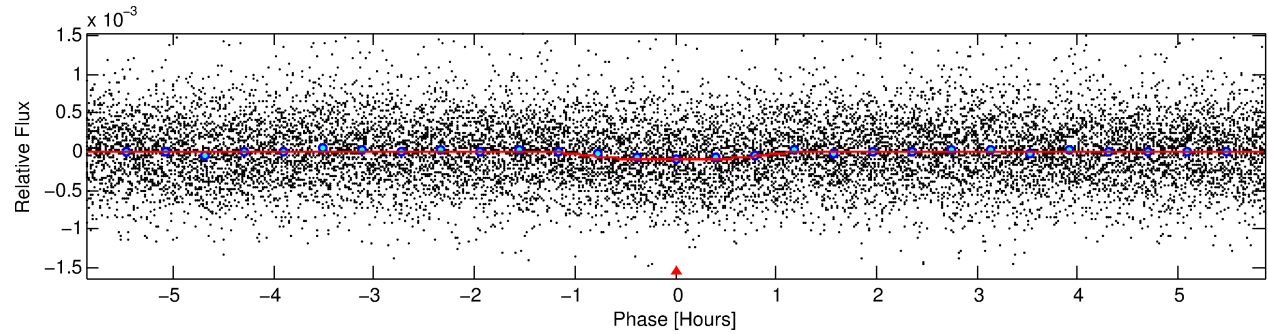
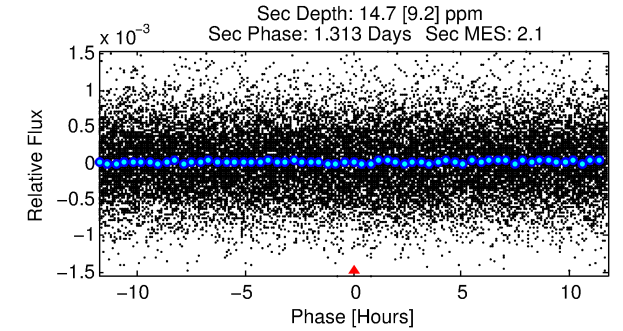
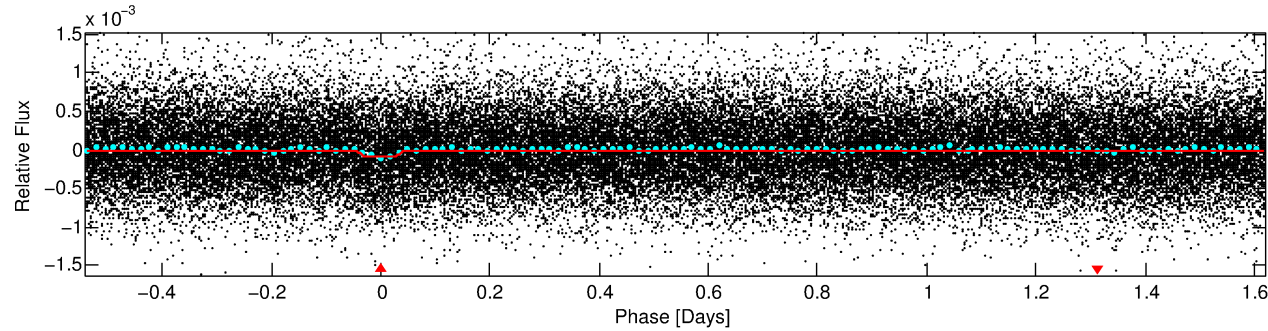
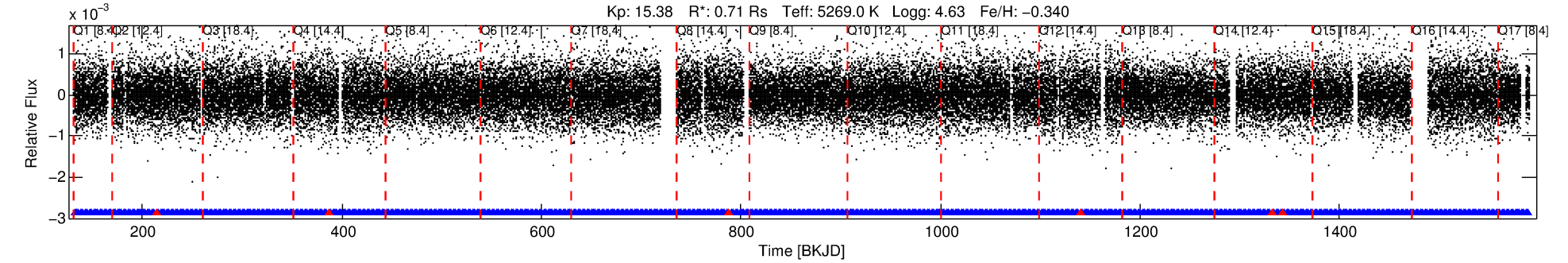
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007592922-01

No Significant Match Found

DV One-Page Summary

KIC: 7592922 Candidate: 1 of 1 Period: 2.159 d
KOI: K06890.01 Corr: 0.942



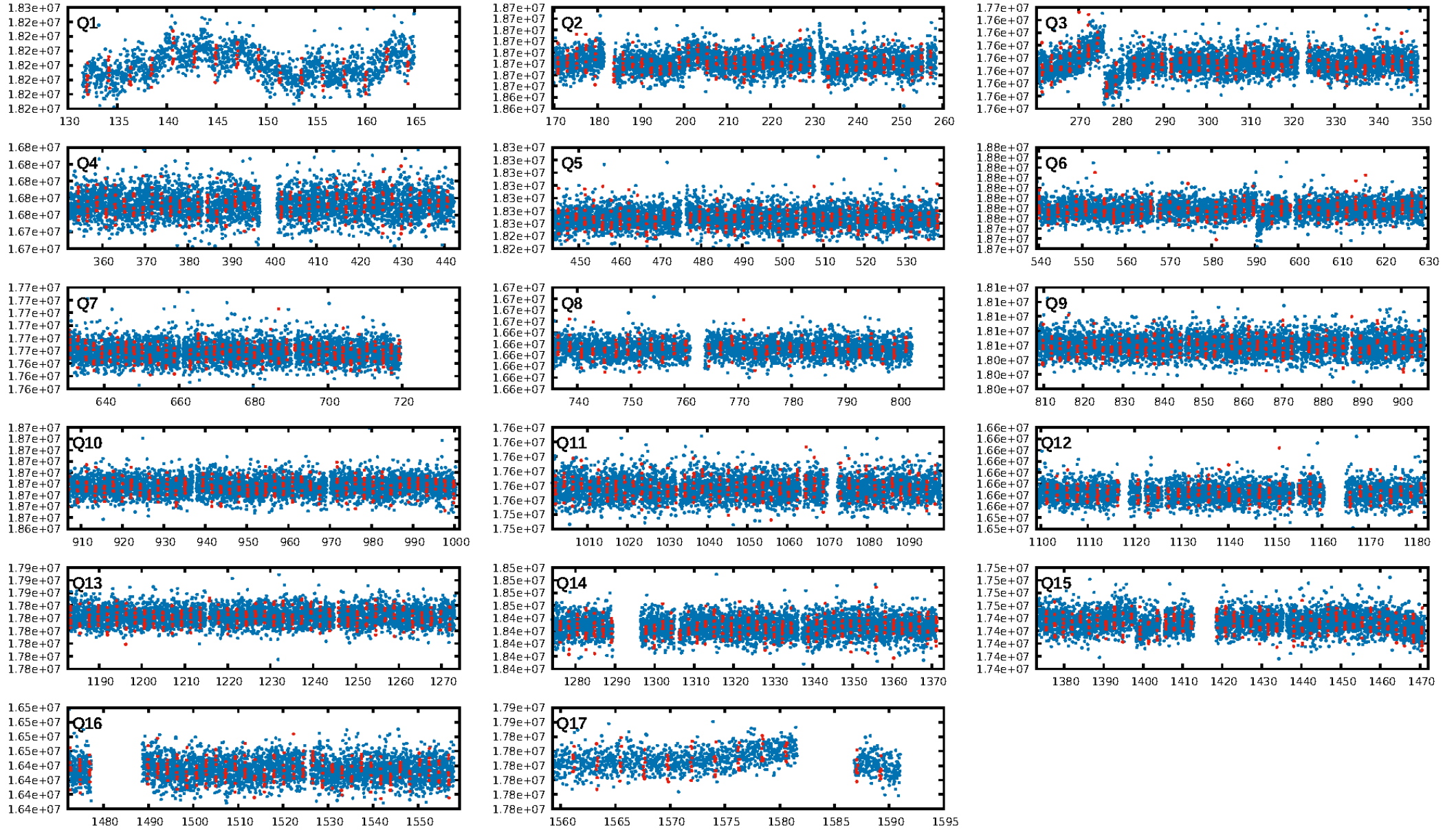
DV Fit Results:

Period = 2.15887 [0.00002] d
Epoch = 131.9819 [0.0036] BKJD
Rp/R* = 0.0102 [0.0096]
a/R* = 4.60 [17.26]
b = 0.86 [1.25]
Seff = 385.68 [74.71]
Teff = 1130 [55] K
Rp = 0.79 [0.75] Re
a = 0.0302 [0.0035] AU
Ag = 11.72 [23.27] [0.46σ]
Teffp = 3233 [1602] K [1.31σ]

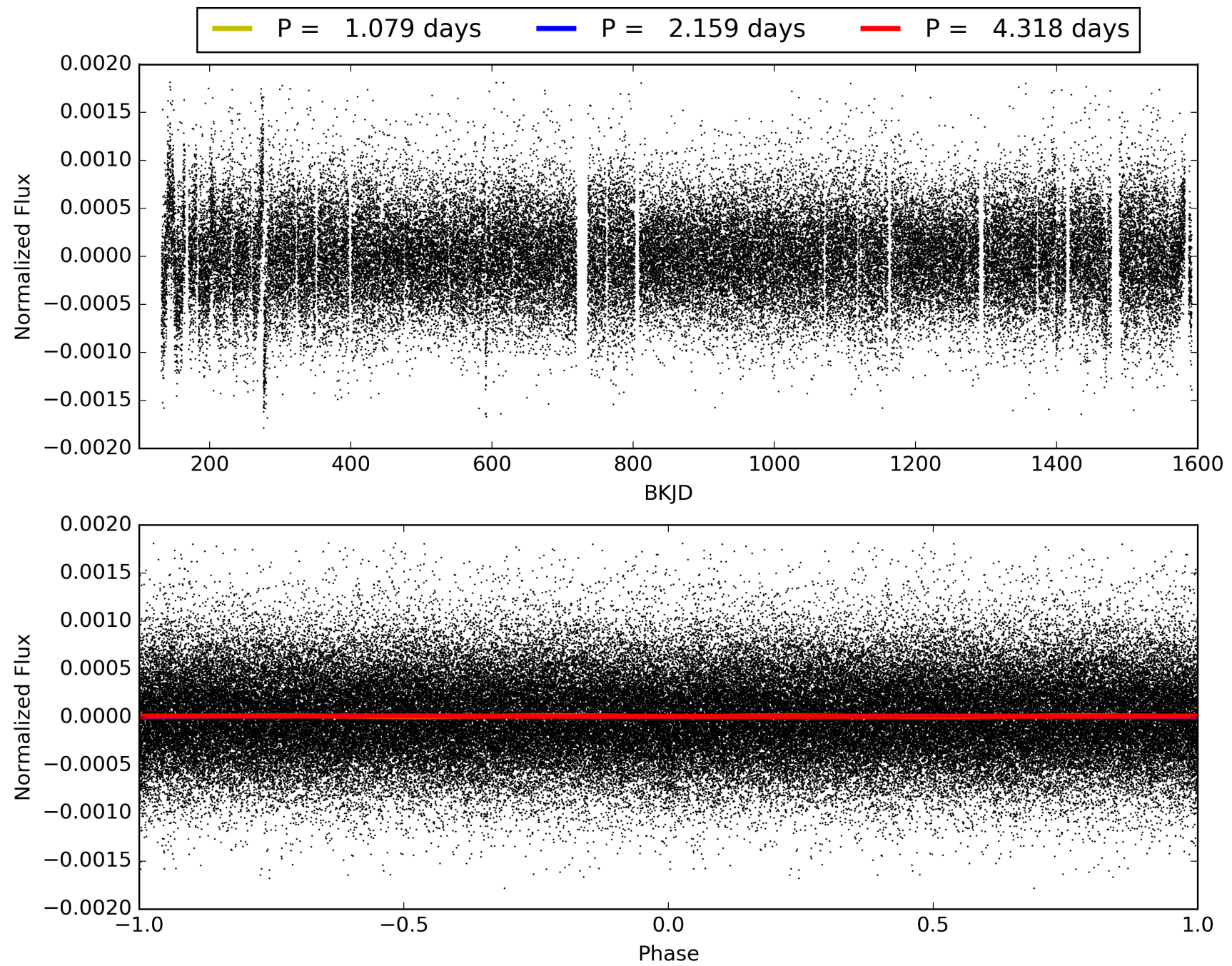
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.58e-17
RollingBand-fgt: 0.99 [589/595]
GhostDiagnostic-chr: 1.589
Centroid-sig: 3.9%
Centroid-so: 2.256 arcsec [1.42σ]
OotOffset-rm: 1.160 arcsec [1.69σ]
KicOffset-rm: 1.024 arcsec [1.49σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007592922-01, PDC Light Curves

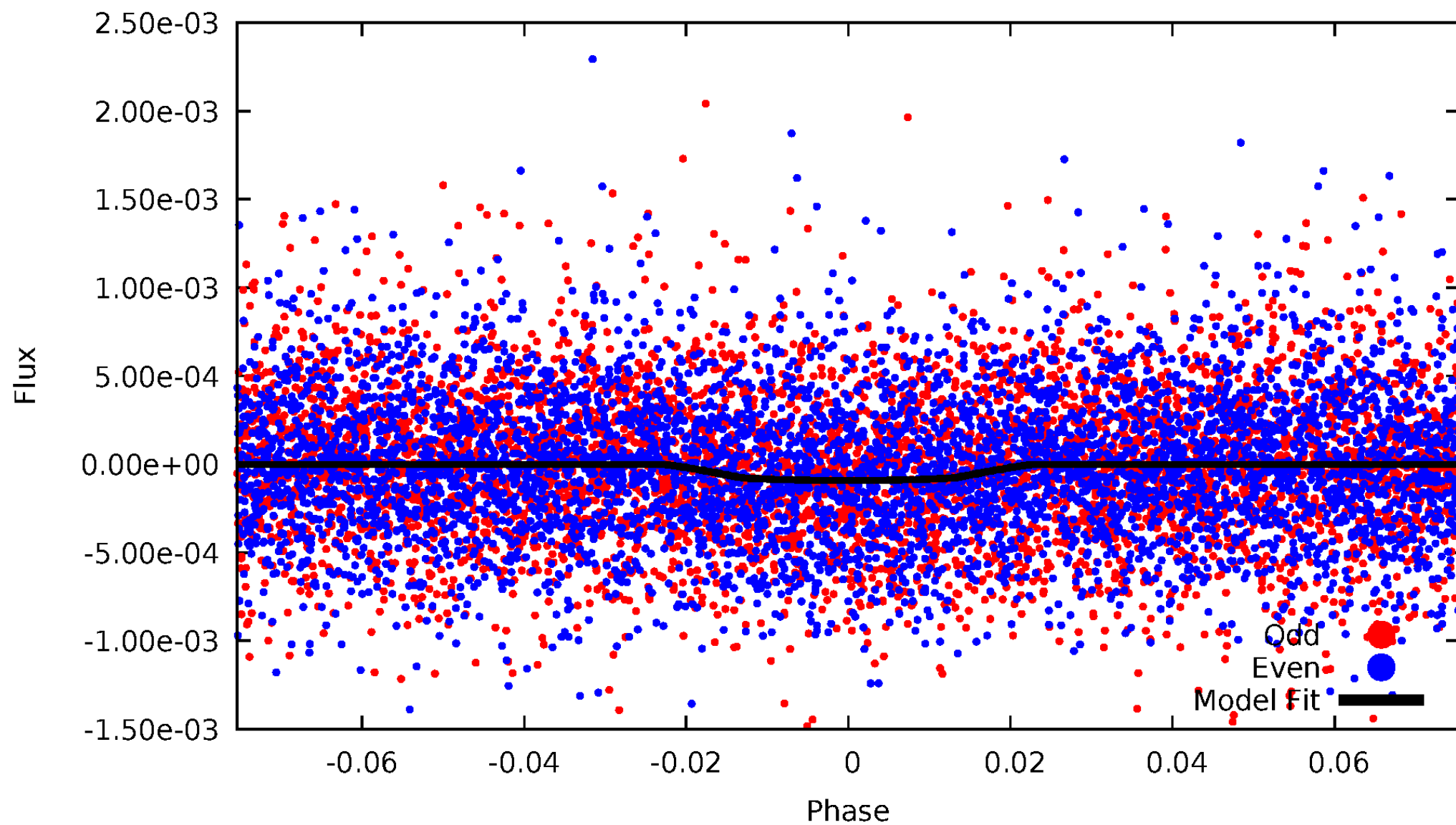


TCE 007592922-01



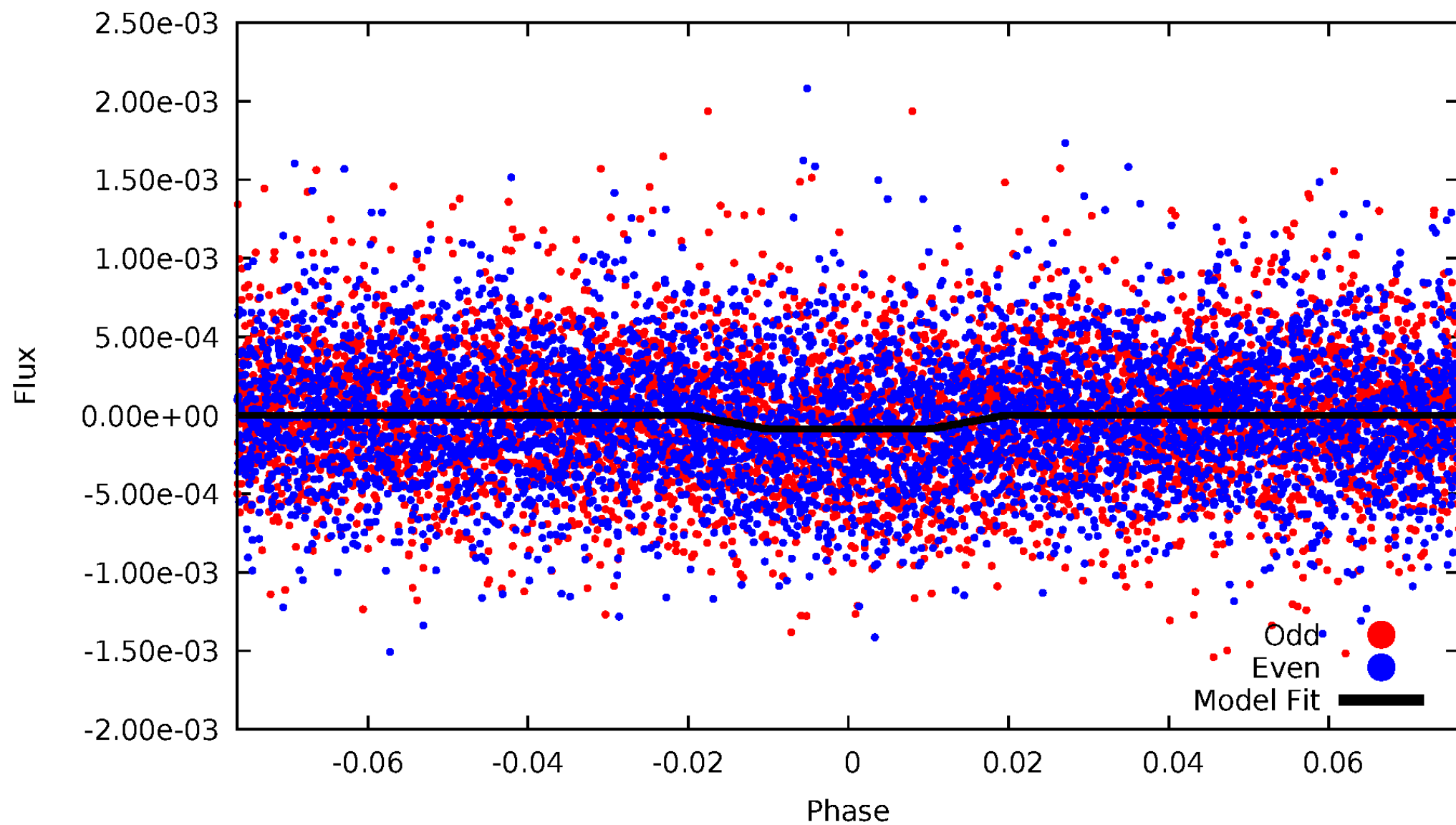
DV Odd/Even

TCE 007592922-01



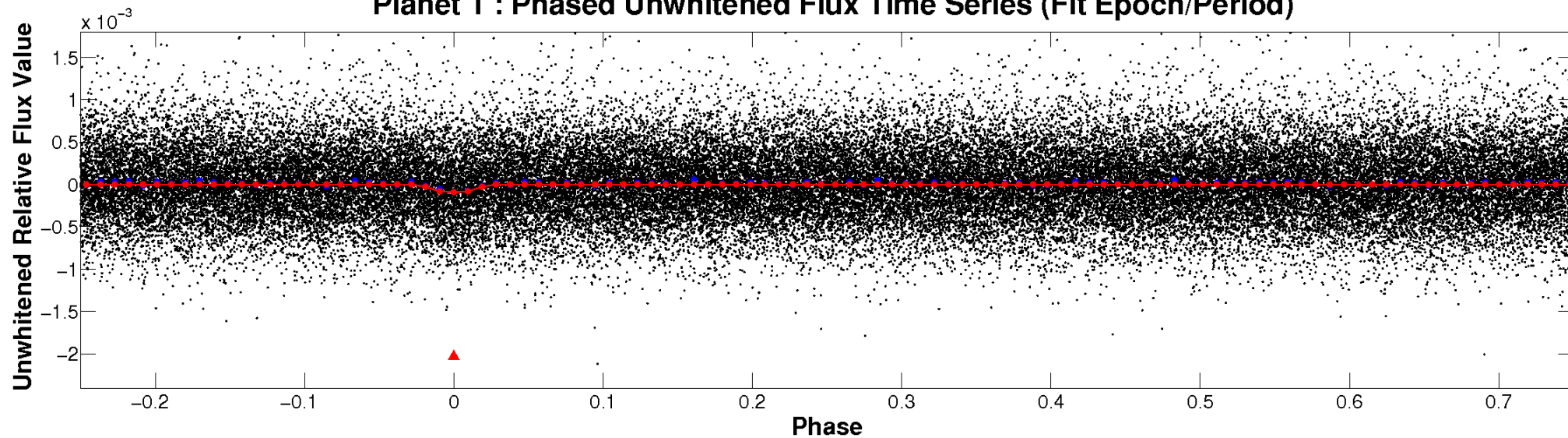
ALT Odd/Even

TCE 007592922-01

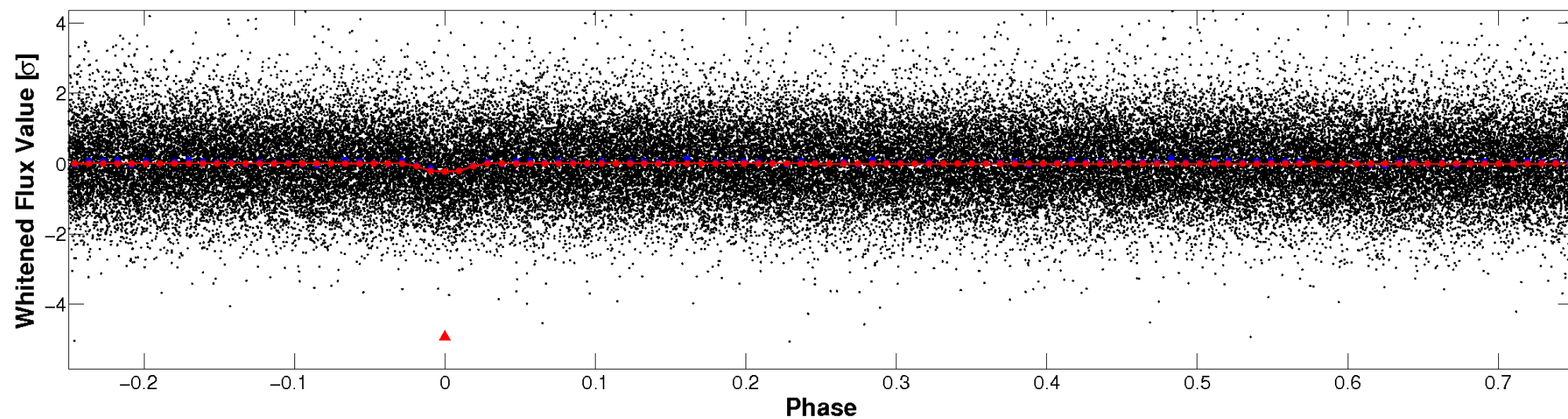


Non-Whitened Vs. Whitened Light Curve

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

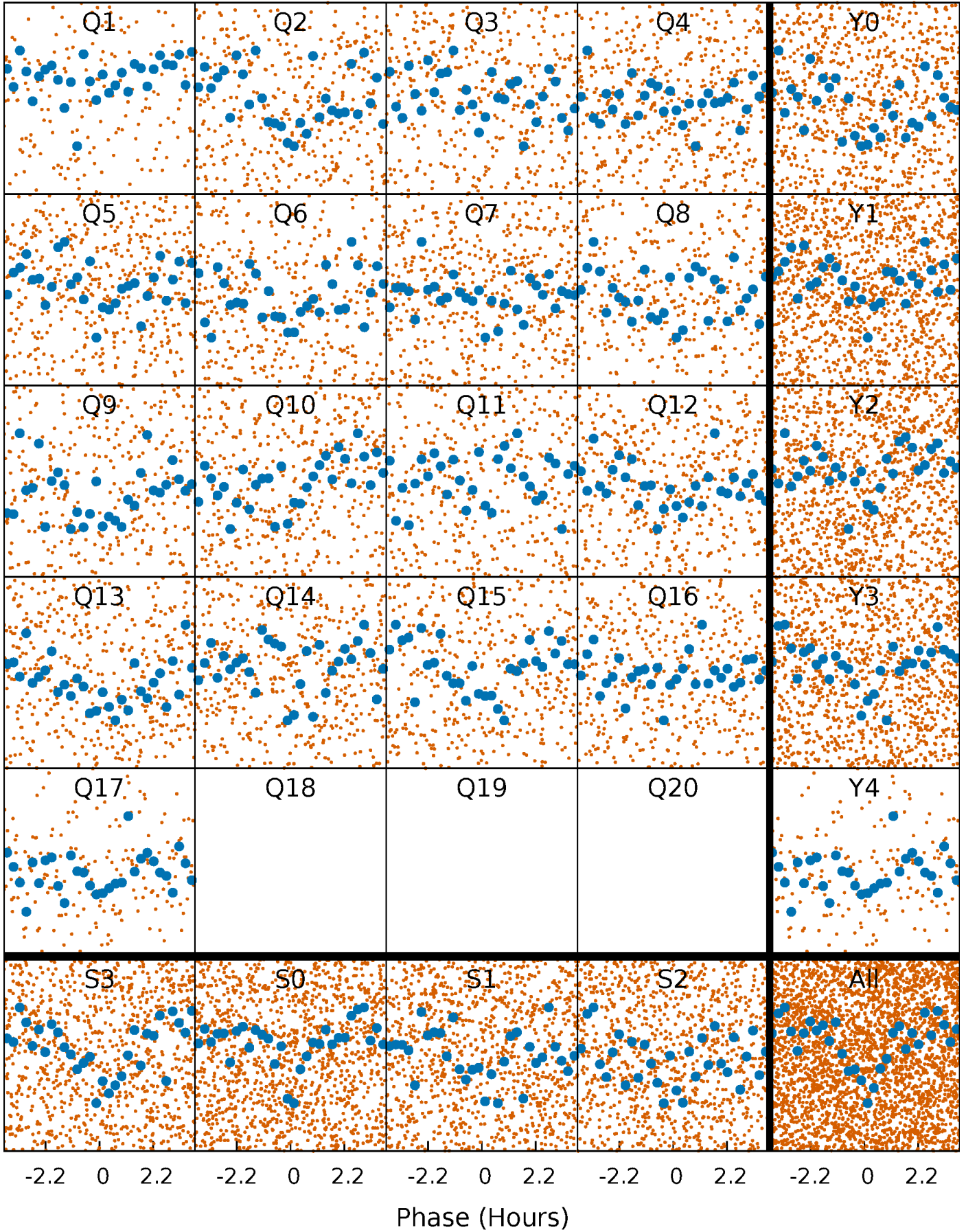


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



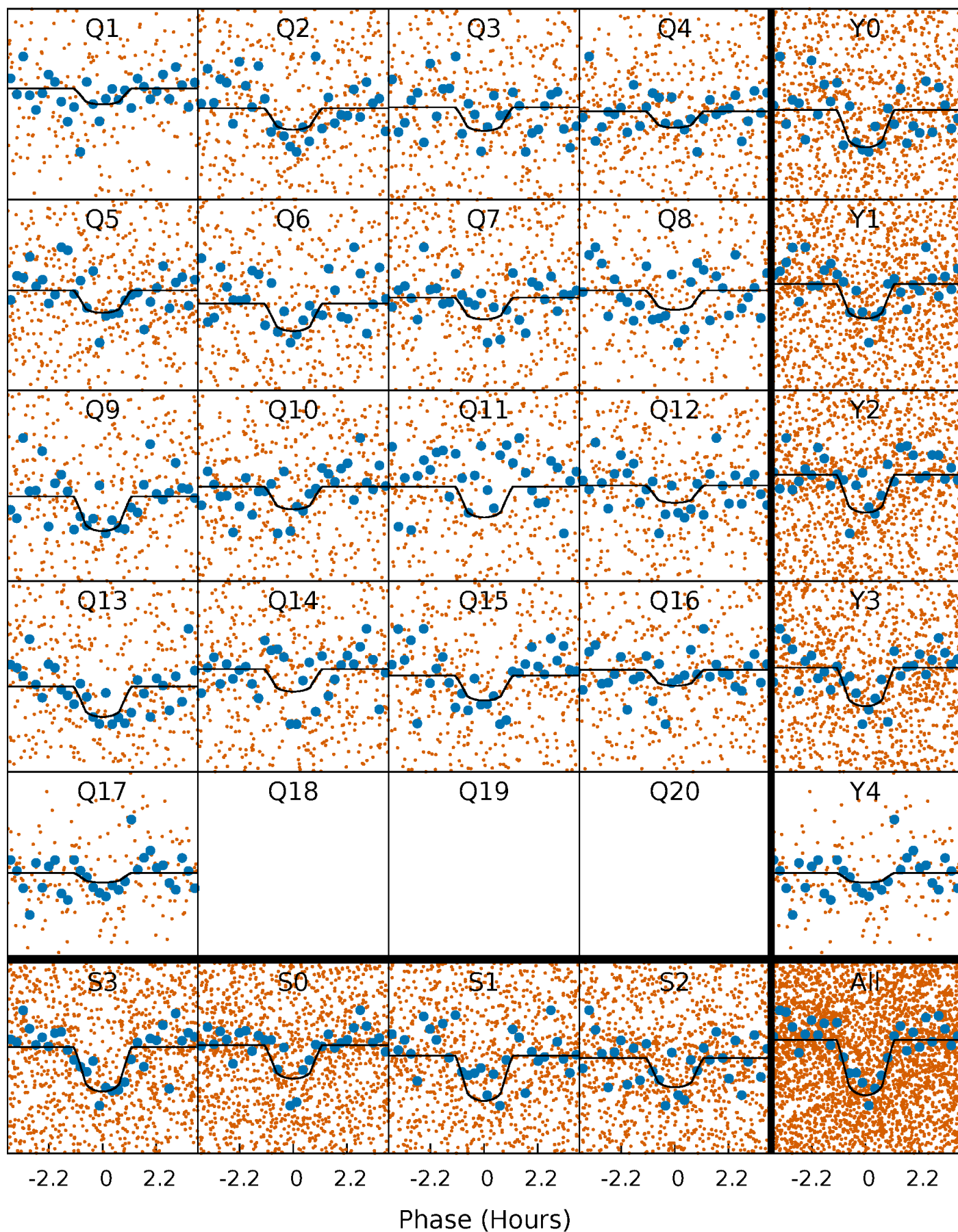
PDC Quarter-Phased Transit Curves

TCE 007592922-01 P= 2.158871 Days $T_0=131.981876$ (BKJD)



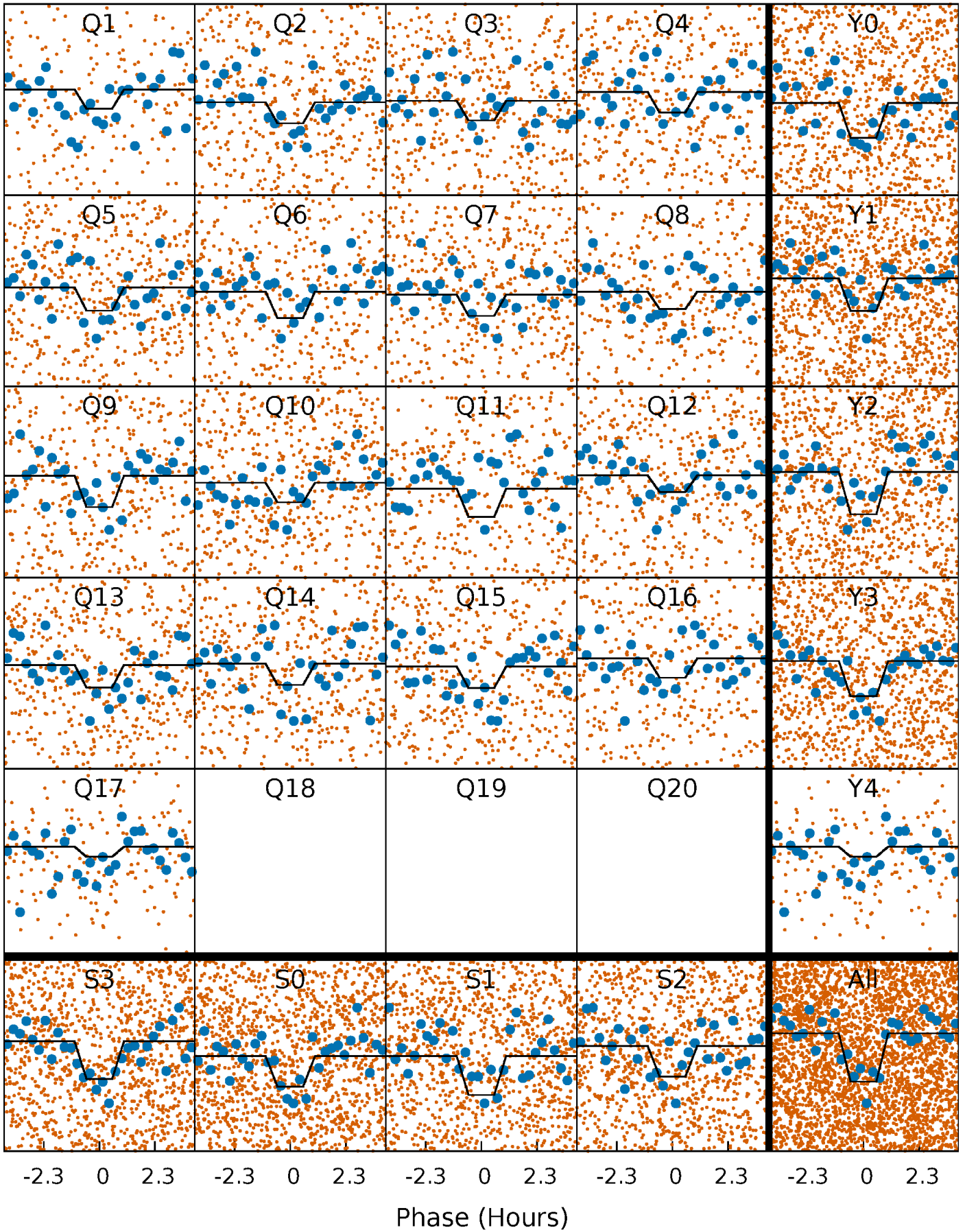
DV Quarter-Phased Transit Curves

TCE 007592922-01 P= 2.158871 Days $T_0=131.981876$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

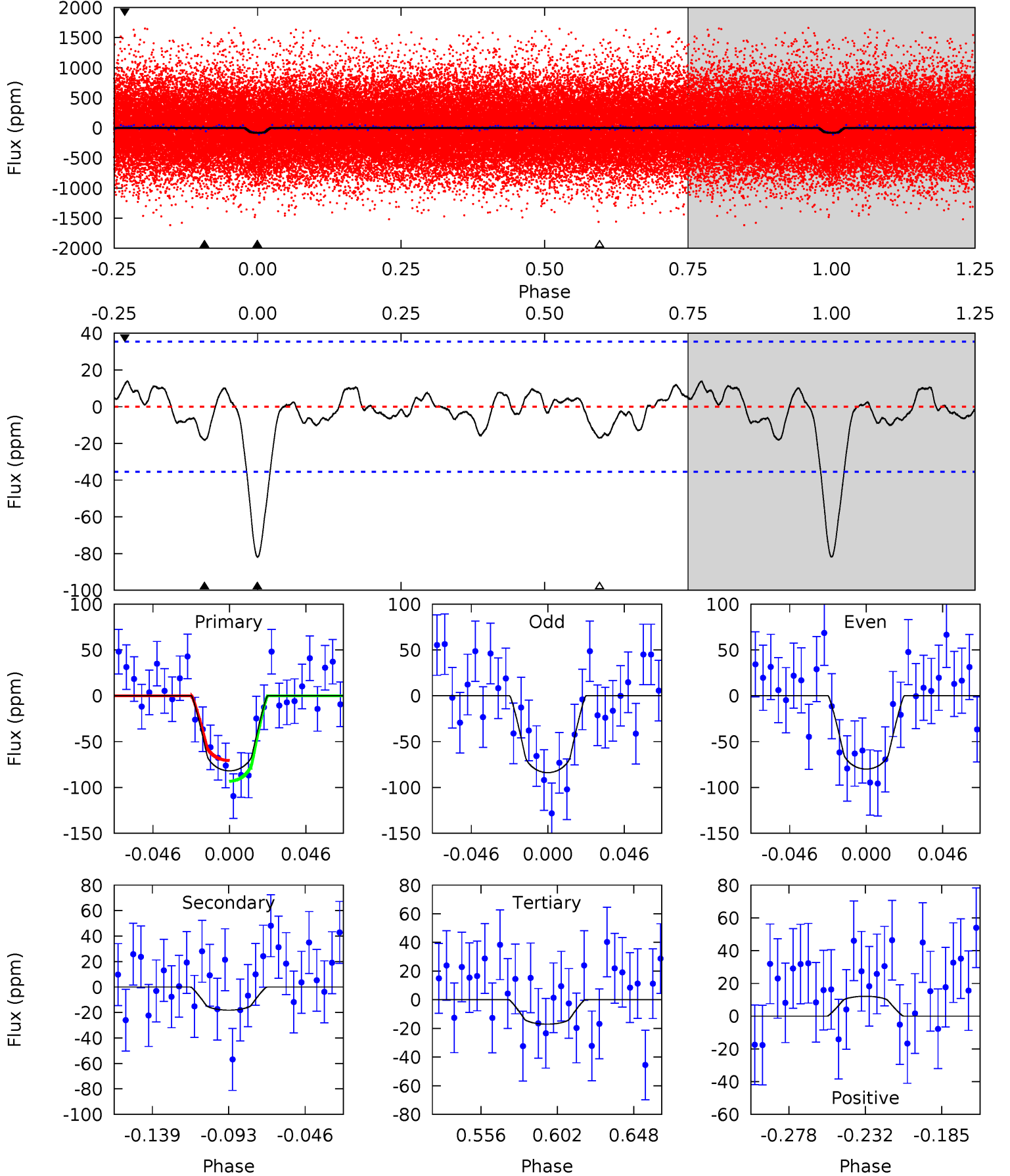
TCE 007592922-01 P= 2.158891 Days $T_0=131.976601$ (BKJD)



DV Model-Shift Uniqueness Test

007592922-01, P = 2.158871 Days, E = 129.823005 Days

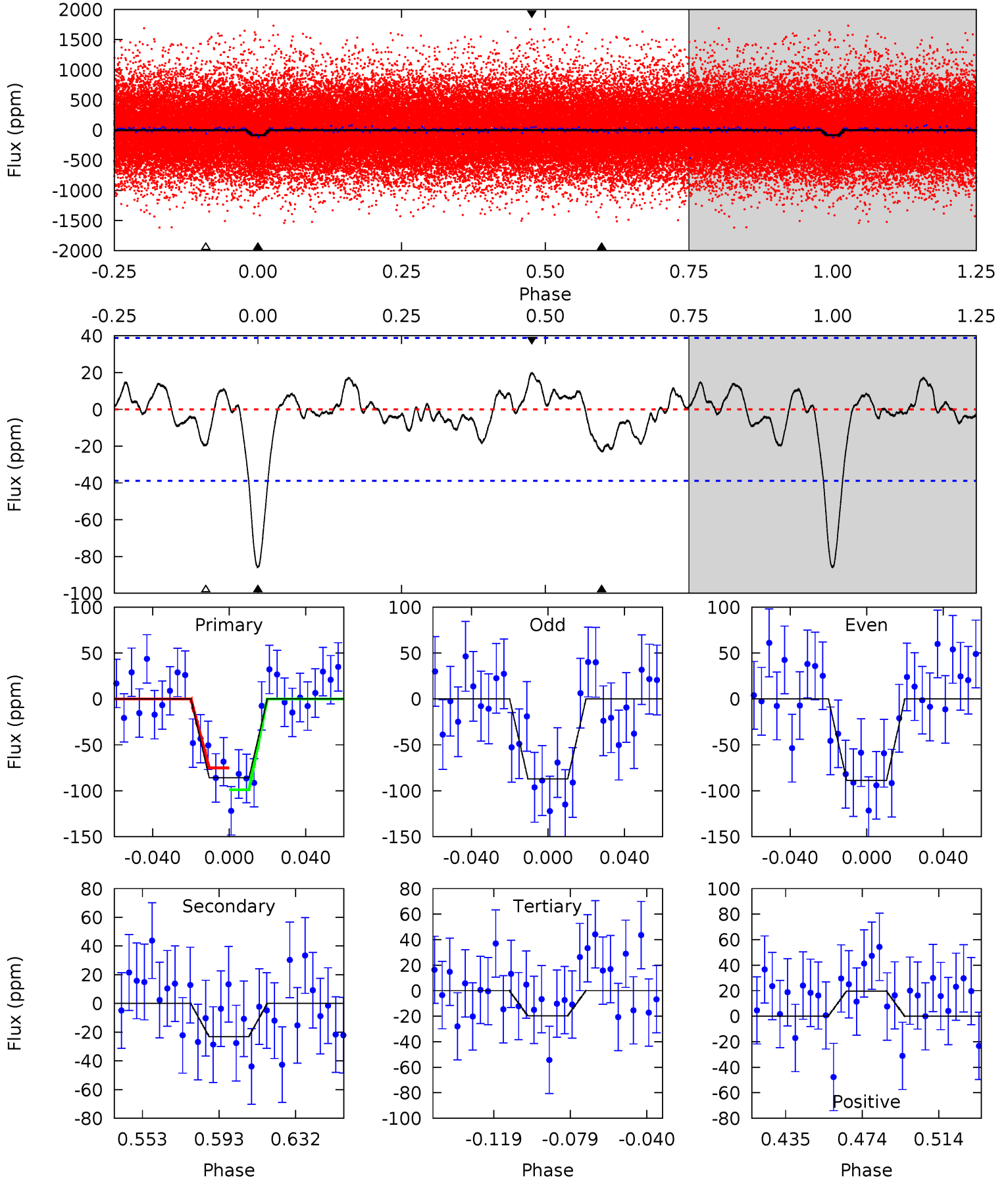
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	2.42	2.27	1.61	4.72	1.99	0.93	8.63	9.29	0.15	0.80	0.26	0.86	0.15	1.50



Alt Model-Shift Uniqueness Test

007592922-01, P = 2.158891 Days, E = 129.817710 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	2.83	2.42	2.42	4.76	2.06	1.01	8.10	8.11	0.41	0.41	0.10	0.84	0.19	1.46



Stellar Parameters For KIC 007592922

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5269^{+142}_{-142}	$4.627^{+0.036}_{-0.084}$	$-0.340^{+0.350}_{-0.300}$	$0.713^{+0.103}_{-0.060}$	$0.790^{+0.070}_{-0.085}$	$3.073^{+0.478}_{-0.879}$
	+3%/-3%	+1%/-2%	+103%/-88%	+14%/-8%	+9%/-11%	+16%/-29%
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 007592922-01 / KOI 6890.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 8	$0.92^{+0.72}_{-0.61}$	1594^{+60}_{-57}	3597^{+1757}_{-663}	11^{+78}_{-8}
Alt.	-23 ± 8	$0.94^{+0.68}_{-0.59}$	1592^{+58}_{-53}	3694^{+1783}_{-668}	13^{+81}_{-9}

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

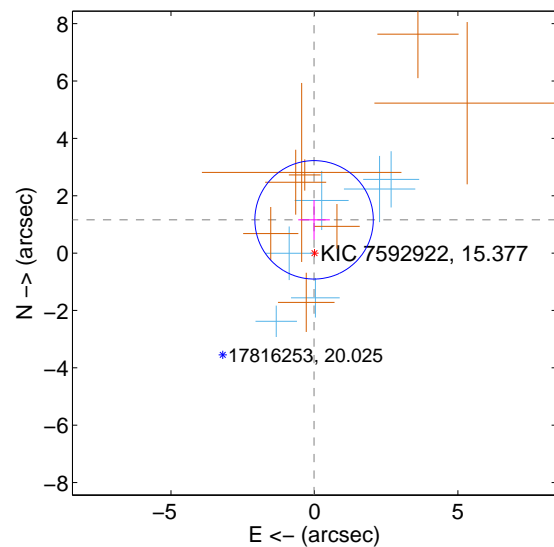
Supplemental centroid analysis for 007592922-01. Kepler magnitude: 15.38. Transit SNR 9.41

There are 6 quarters with good PRF difference image offsets

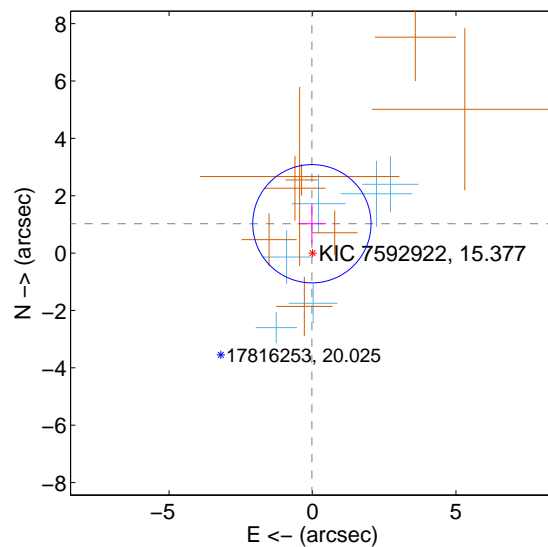
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.160 ± 0.688	1.69	0.012 ± 0.551	1.160 ± 0.693
PRF-fit source offset from KIC position	1.024 ± 0.687	1.49	0.022 ± 0.493	1.024 ± 0.694
photometric centroid source offset	2.26 ± 1.59	1.42	1.30 ± 1.55	1.84 ± 1.61

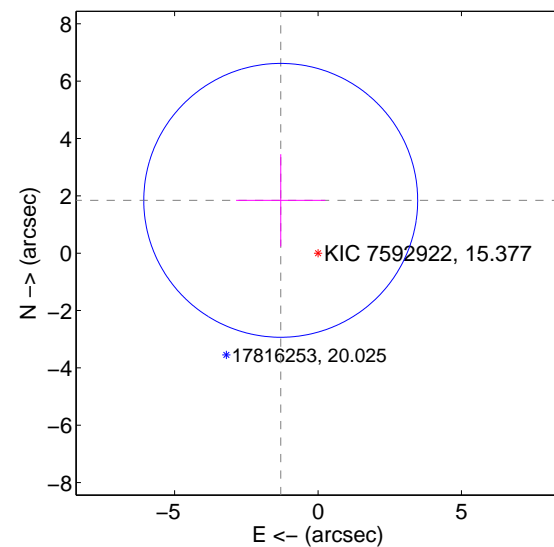
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

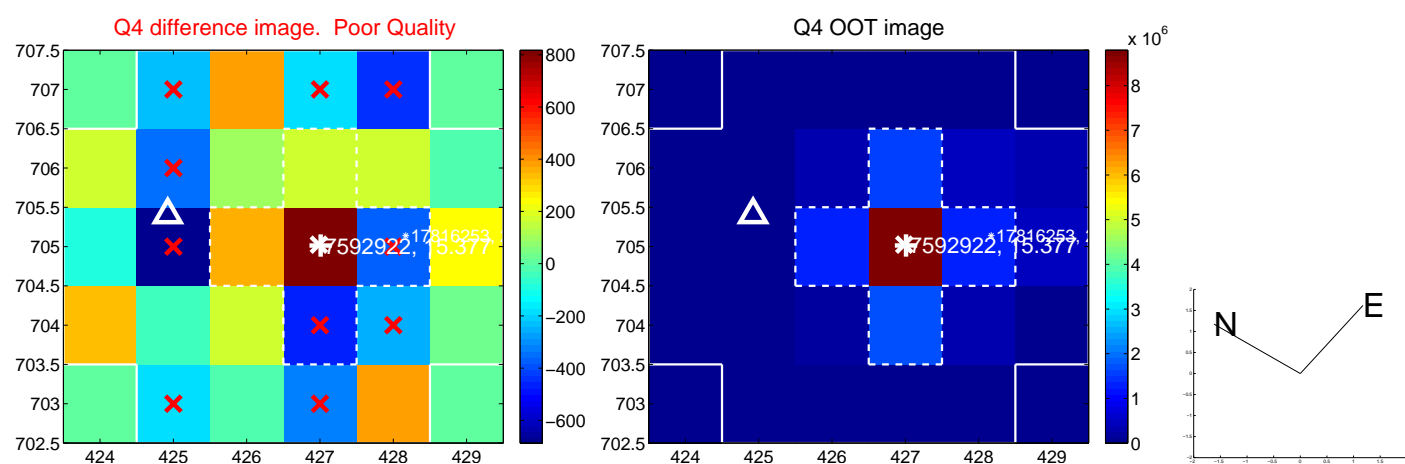
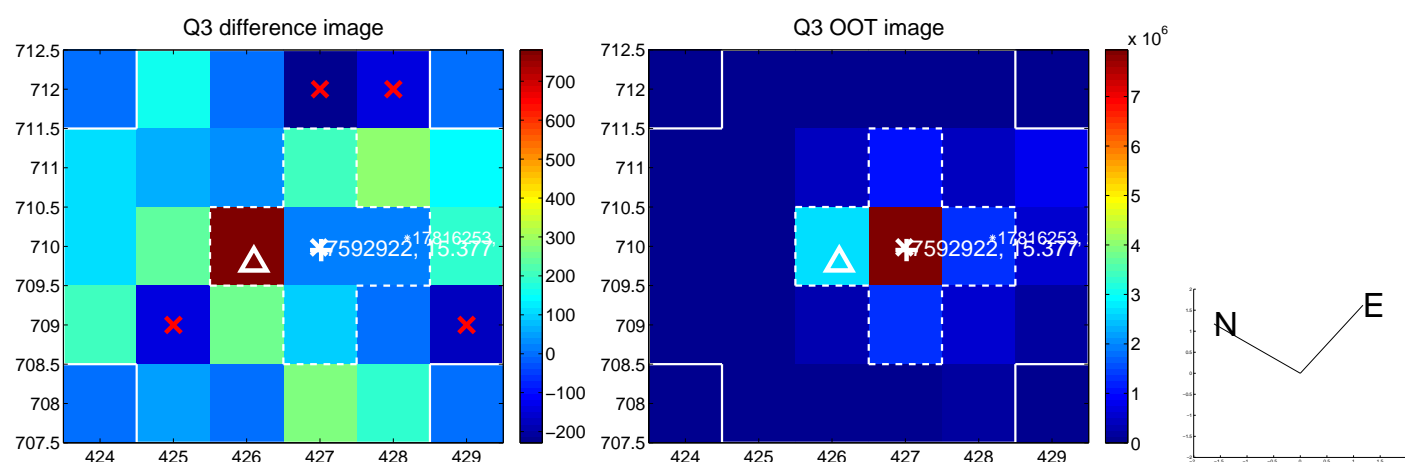
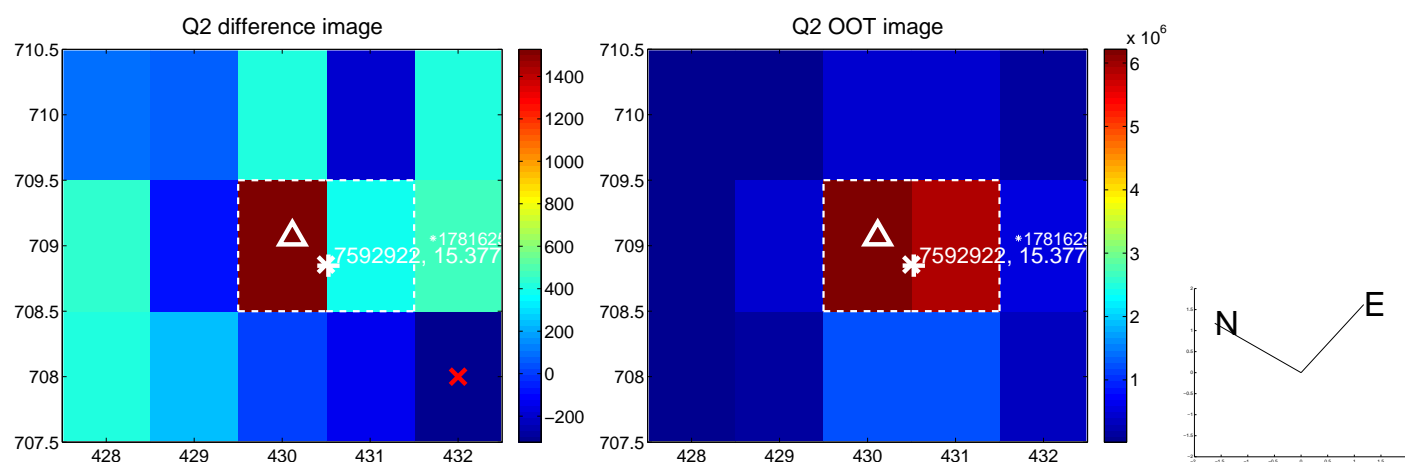
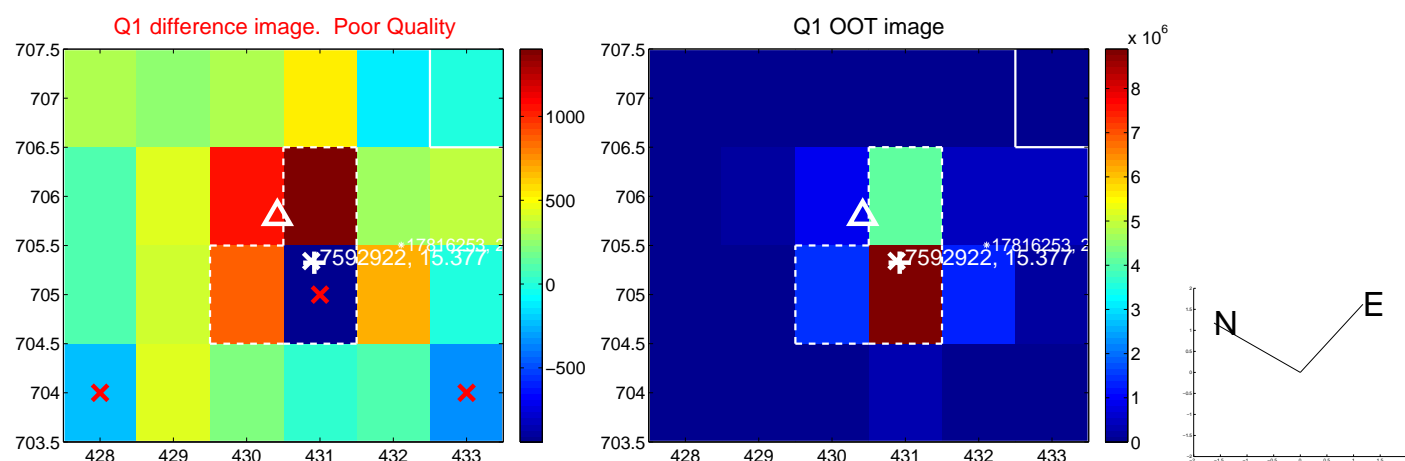


offset from photometric centroids

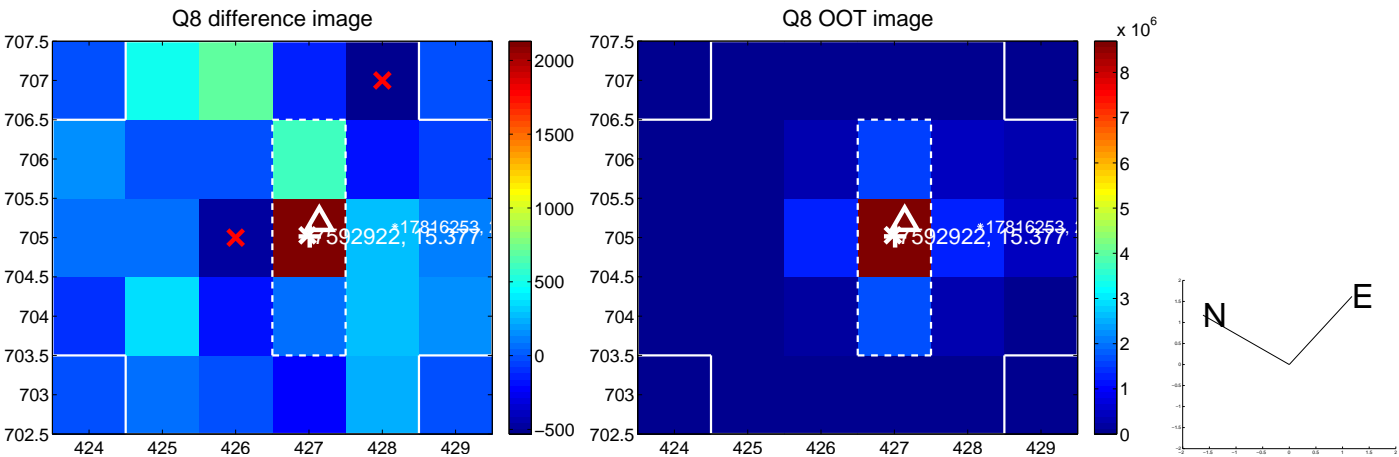
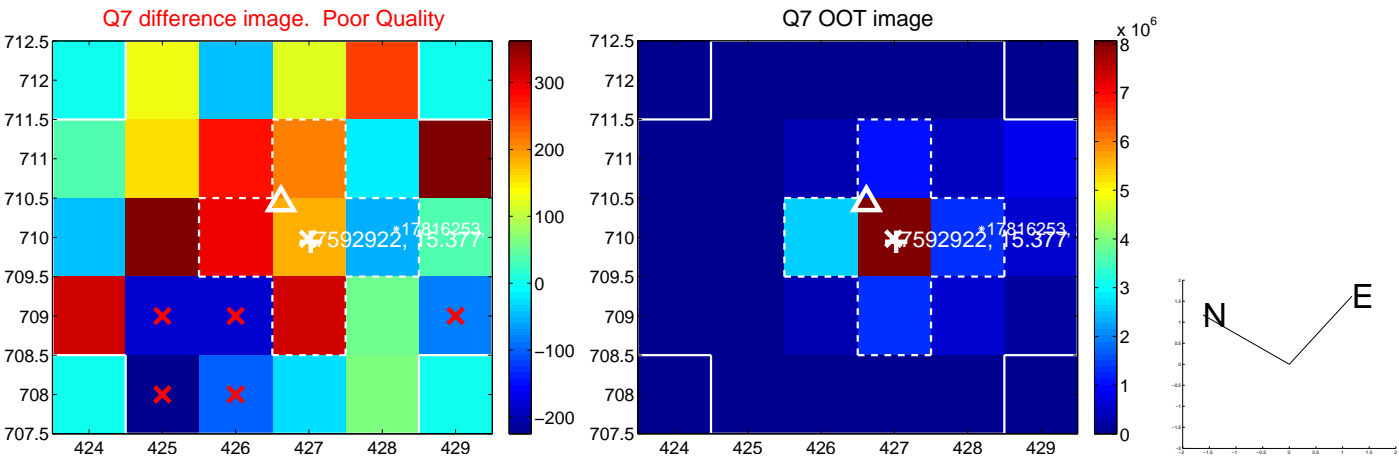
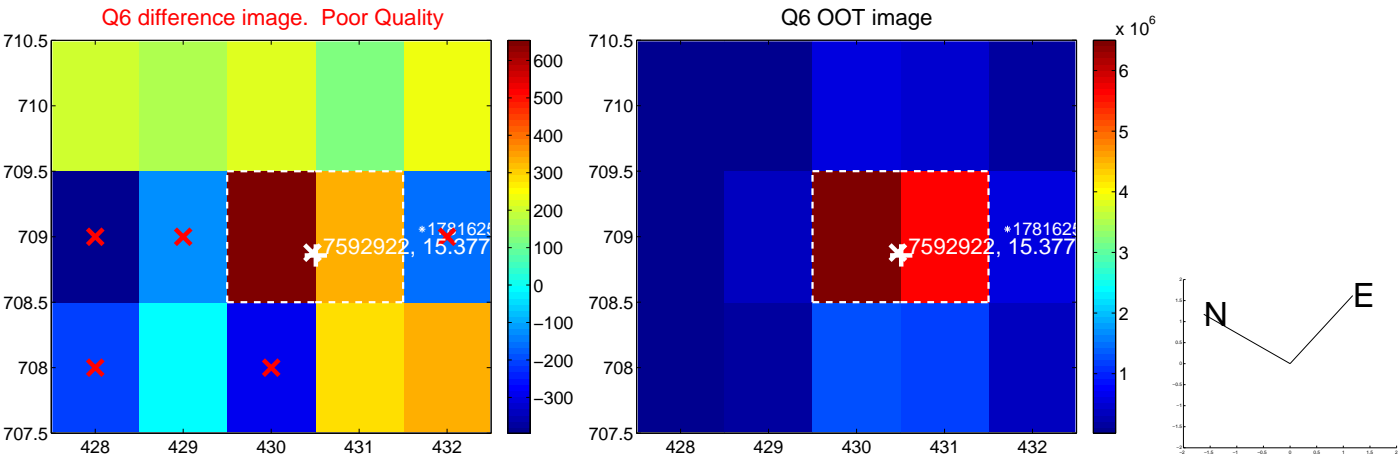
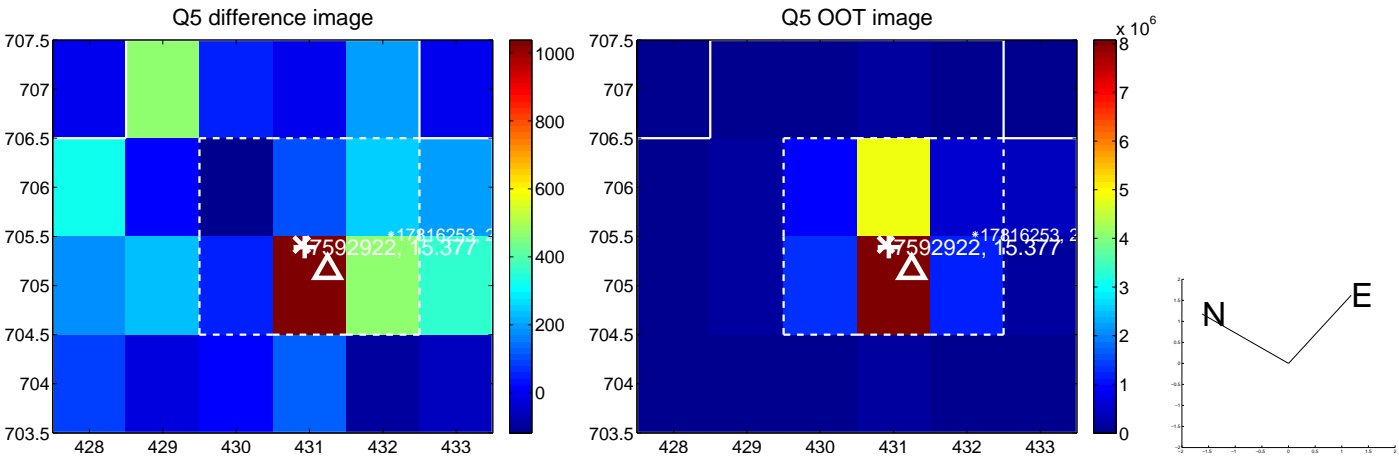


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

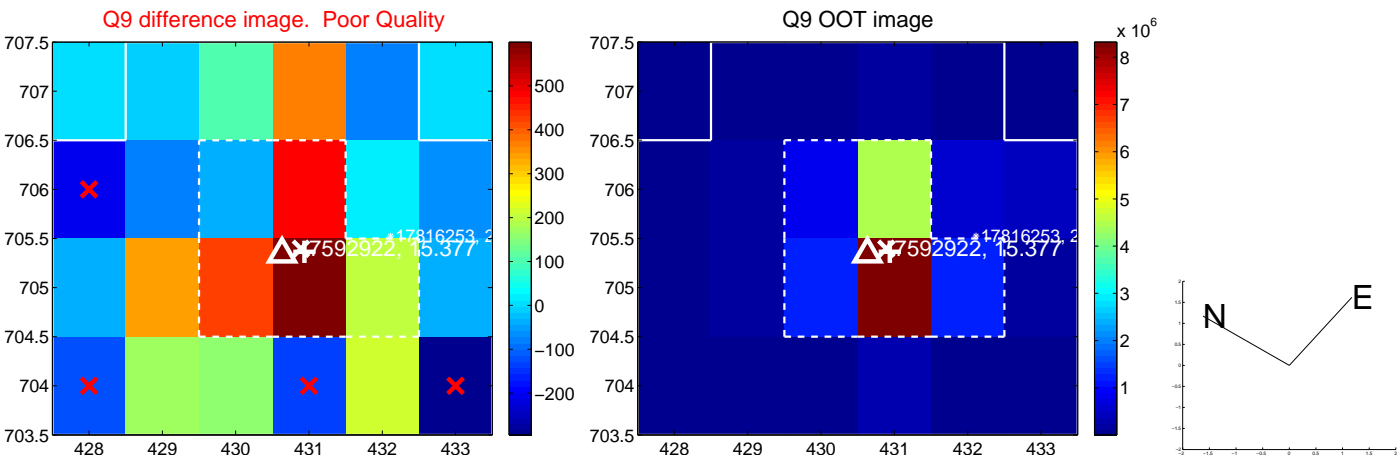
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



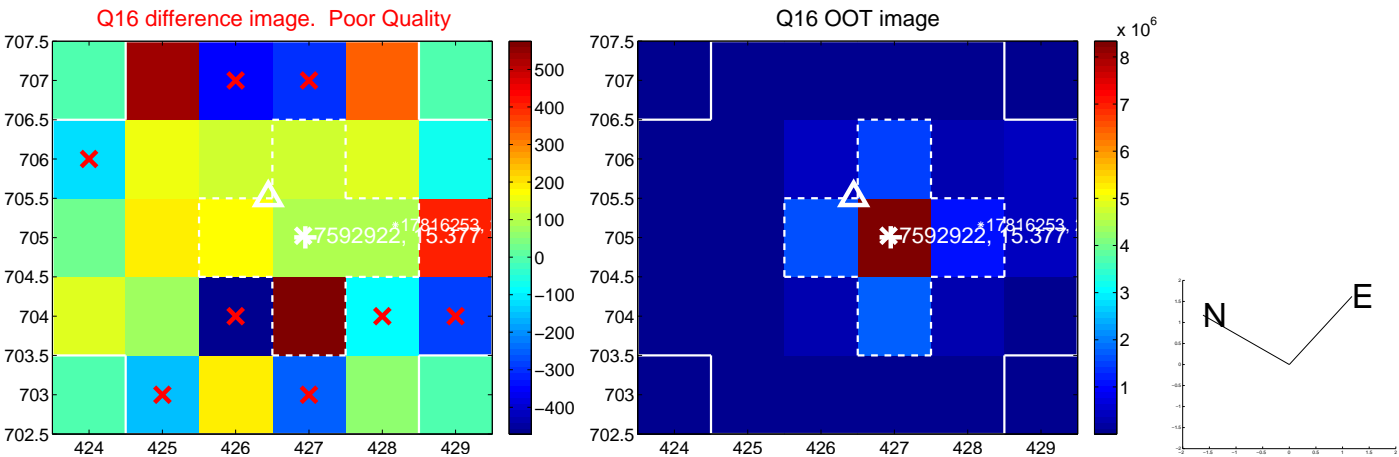
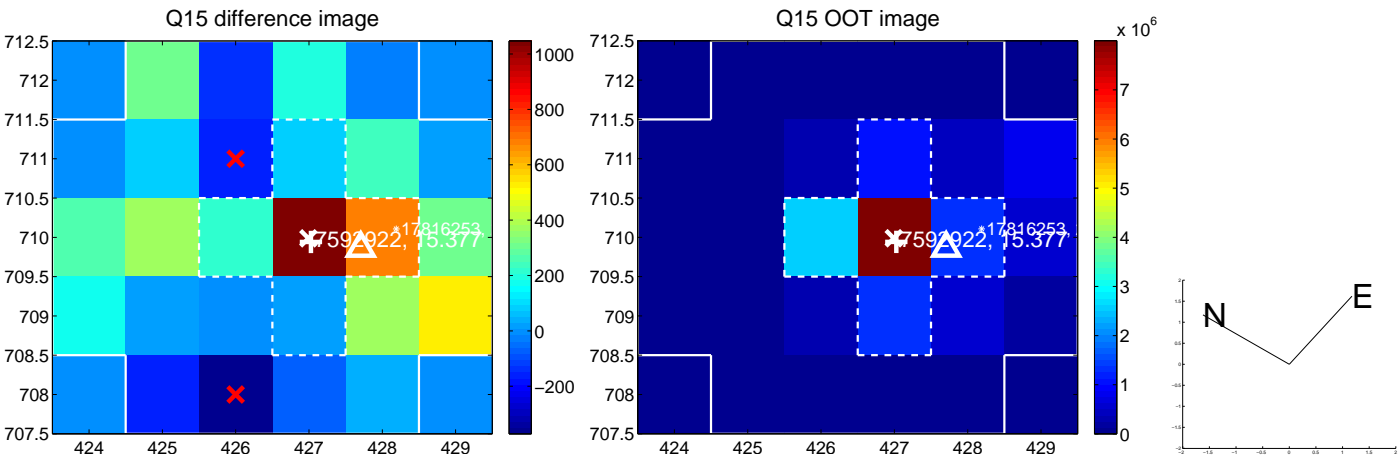
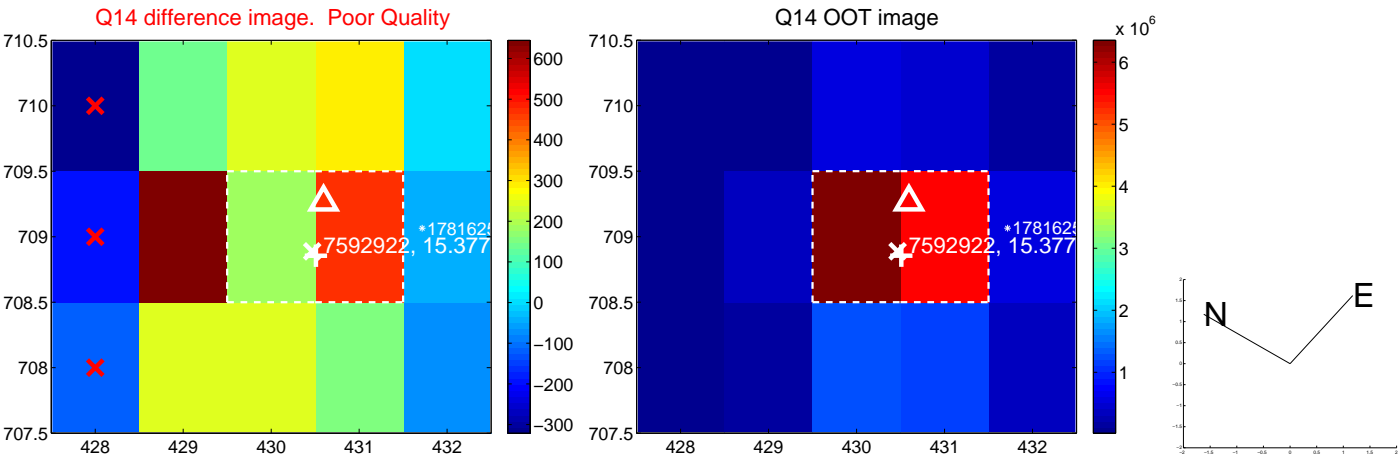
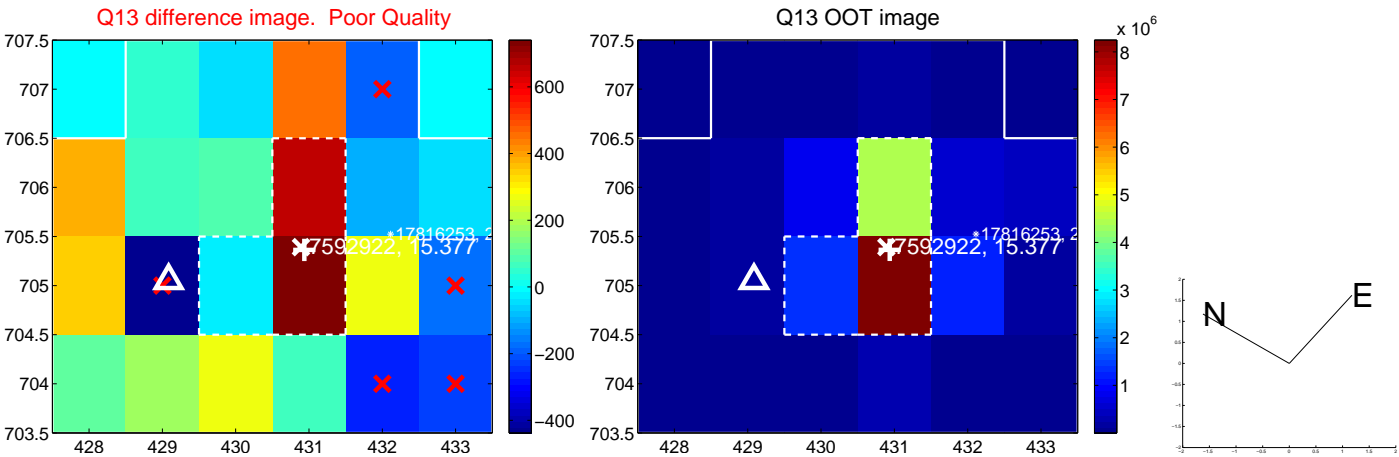
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



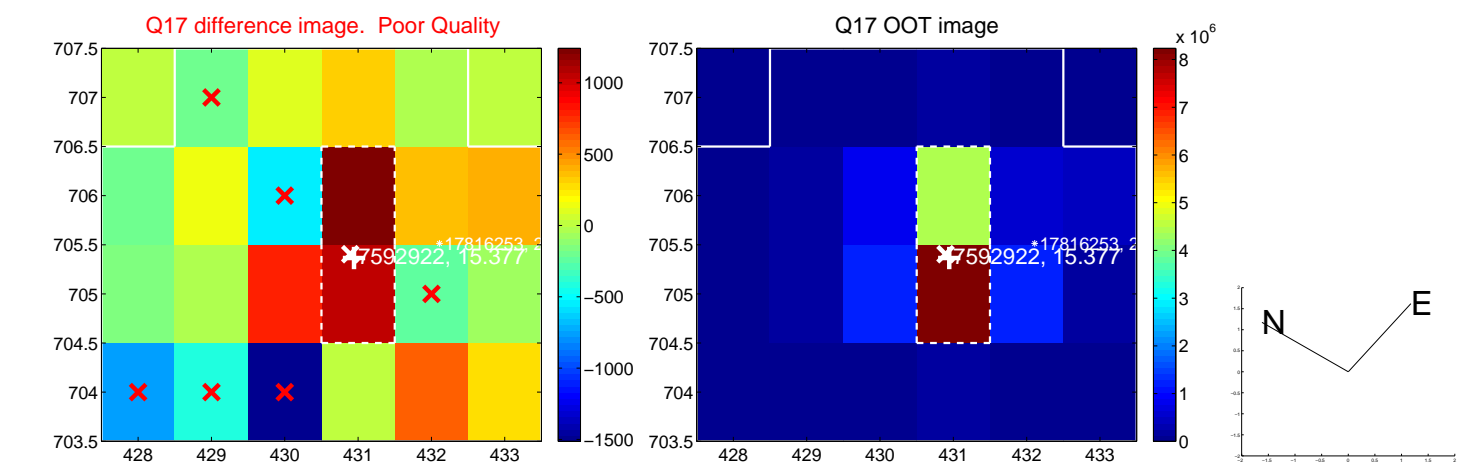
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



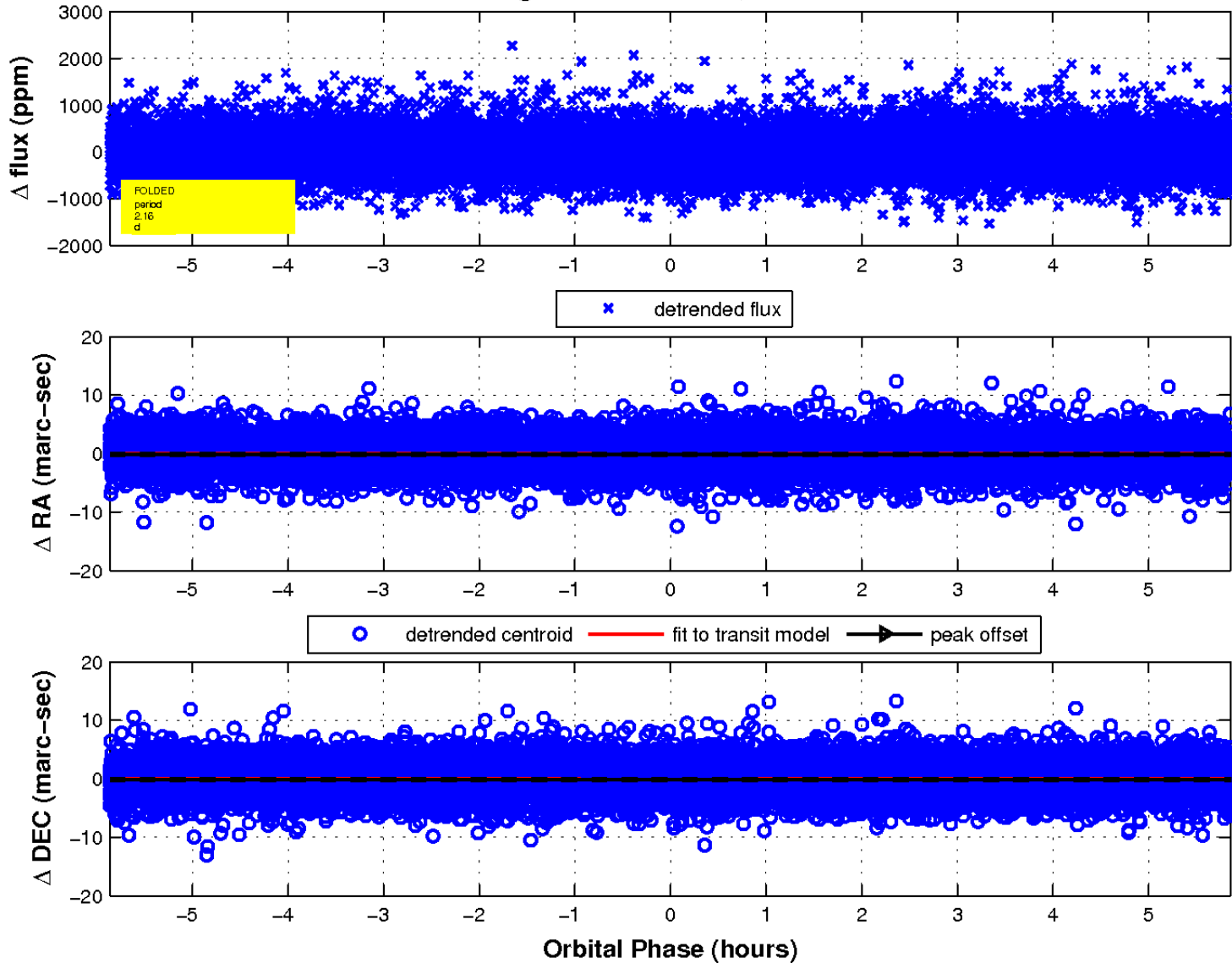
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

