

KIC 008892157

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})
008892157-01	OBS	2224.01	3.730871	132.900282	183.3	2.980	21.7	22.9	0.95	5709	1.53	383.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008892157-01	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.

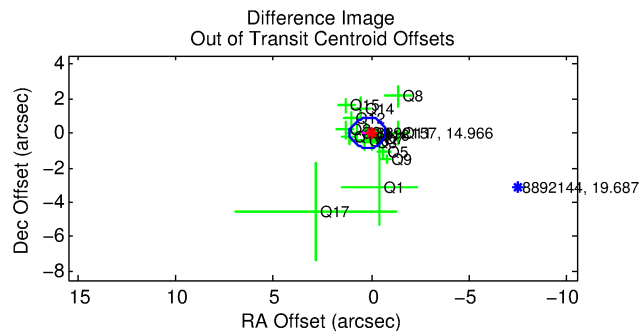
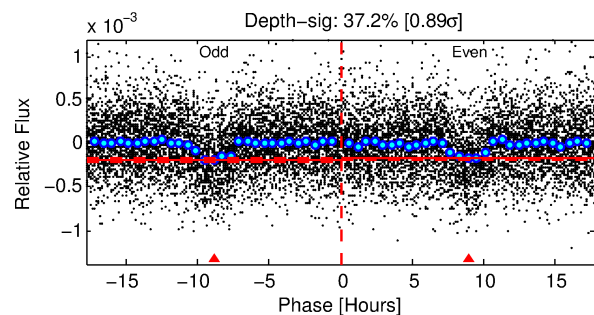
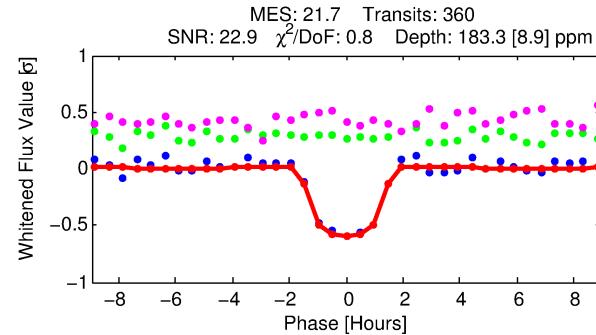
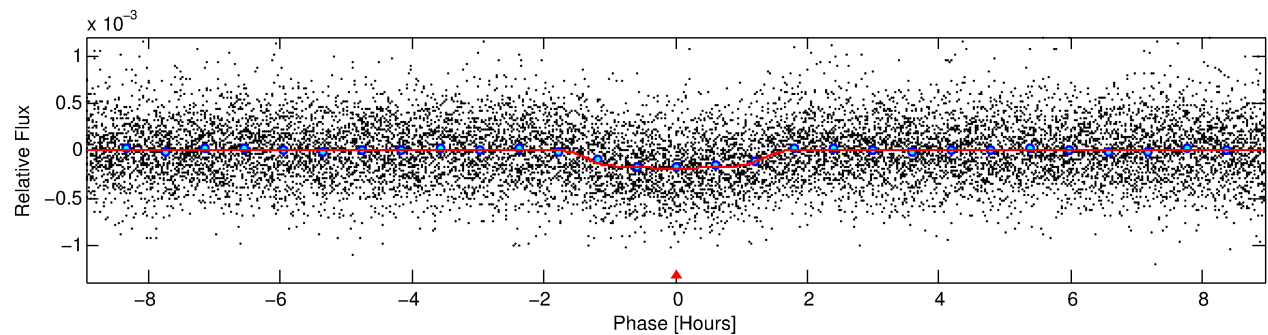
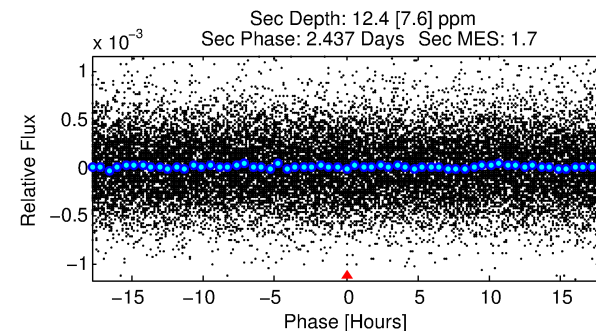
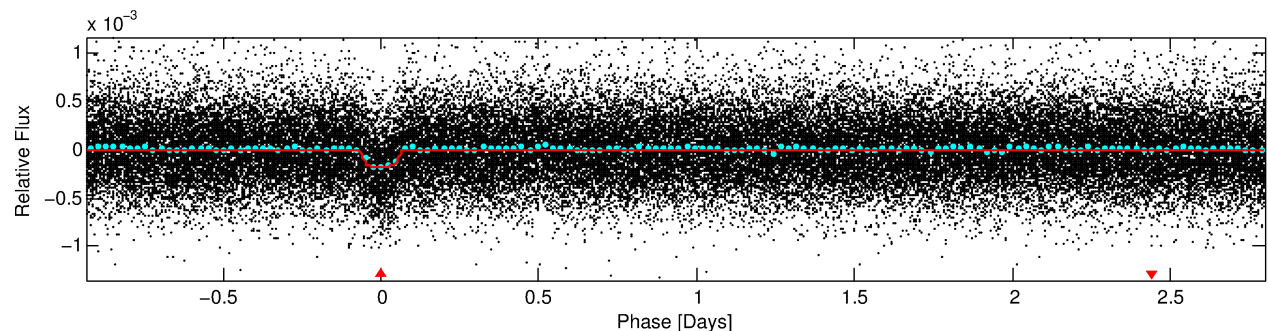
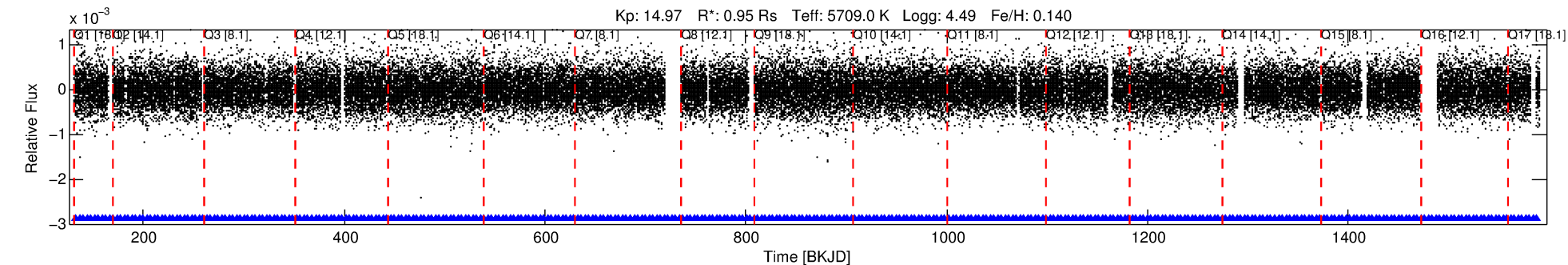
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008892157-01

No Significant Match Found

DV One-Page Summary

KIC: 8892157 Candidate: 1 of 1 Period: 3.731 d
KOI: K02224.01 Corr: 0.968



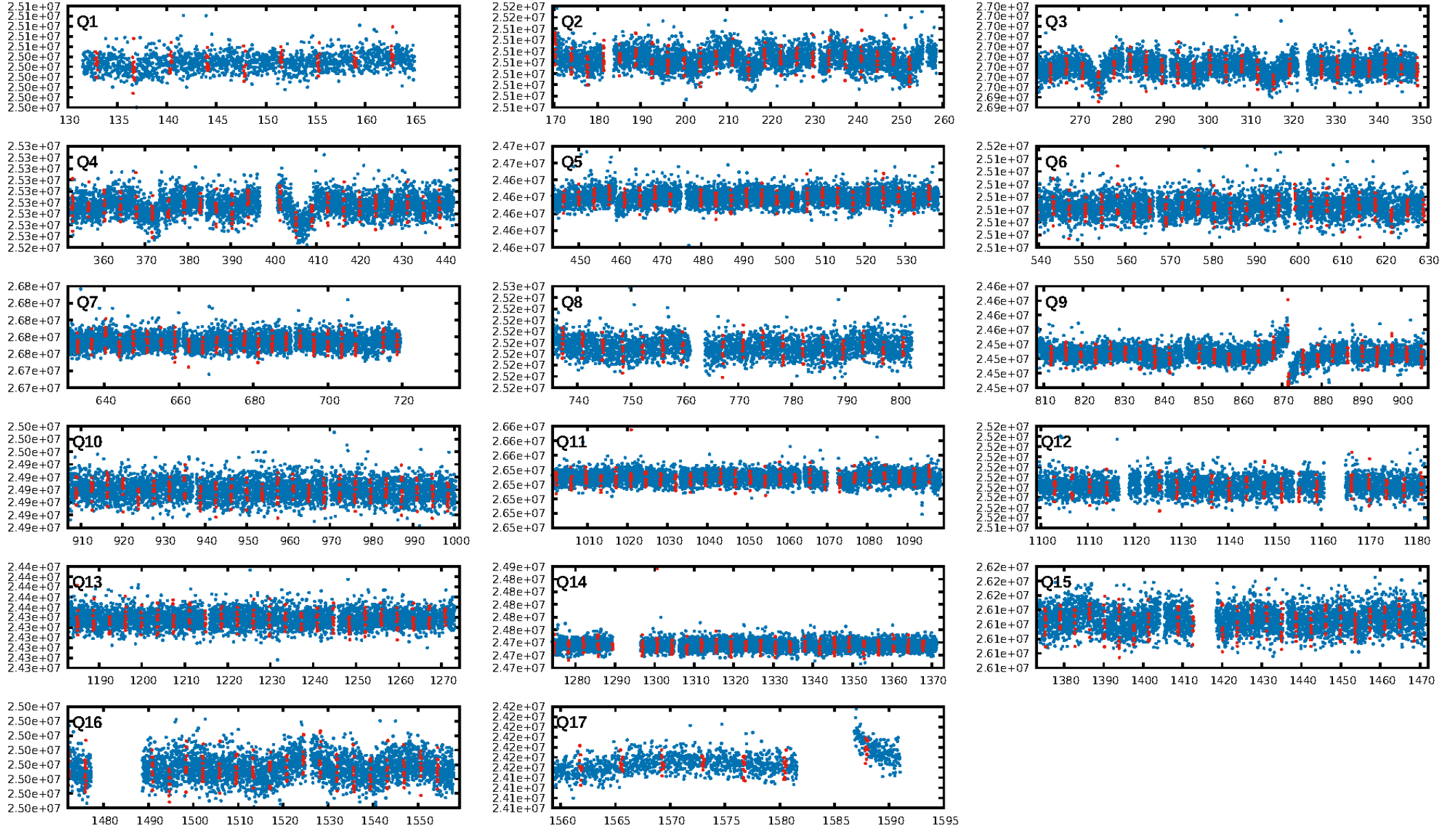
DV Fit Results:

Period = 3.73087 [0.00001] d
Epoch = 132.9003 [0.0022] BKJD
Rp/R* = 0.0148 [0.0041]
a/R* = 4.60 [5.68]
b = 0.90 [0.28]
Seff = 383.59 [83.52]
Teff = 1128 [61] K
Rp = 1.53 [0.49] Re
a = 0.0473 [0.0064] AU
Ag = 6.50 [5.55] [0.99σ]
Teffp = 2786 [578] K [2.85σ]

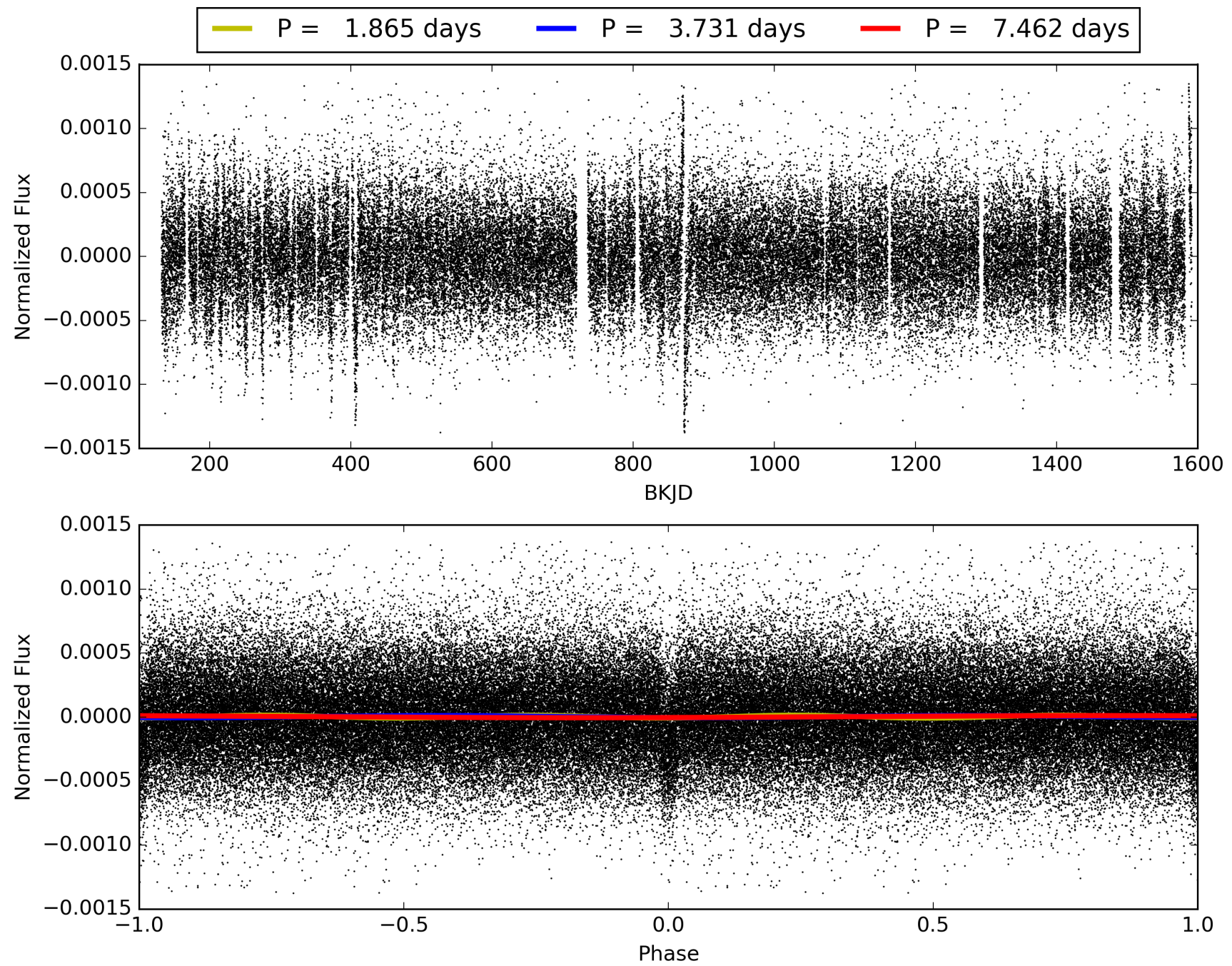
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.47e-100
RollingBand-fgt: 1.00 [344/344]
GhostDiagnostic-chr: 4.621
Centroid-sig: 75.5%
Centroid-so: 0.197 arcsec [0.29σ]
OotOffset-rm: 0.194 arcsec [0.65σ]
KicOffset-rm: 0.070 arcsec [0.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008892157-01, PDC Light Curves

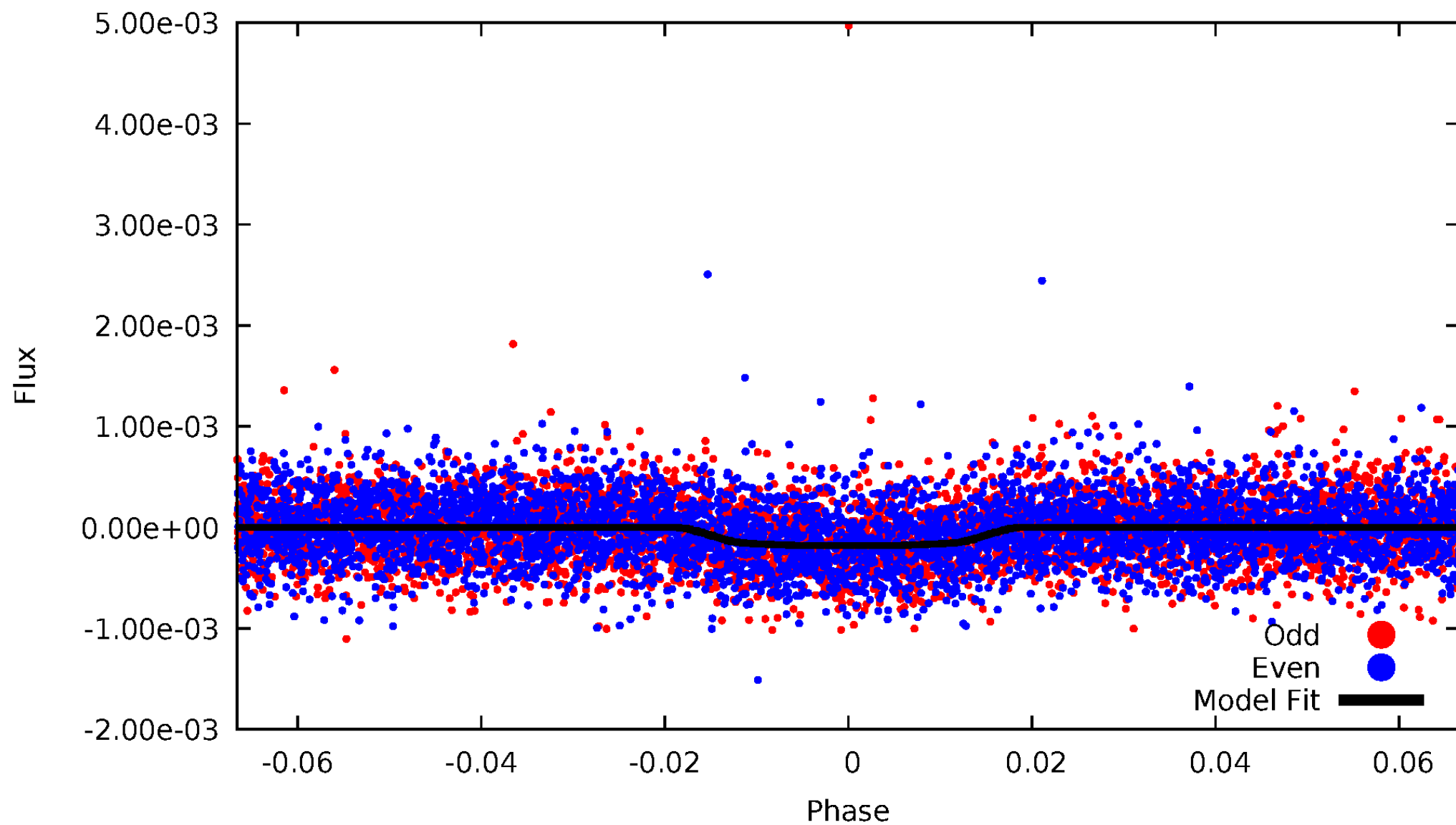


TCE 008892157-01



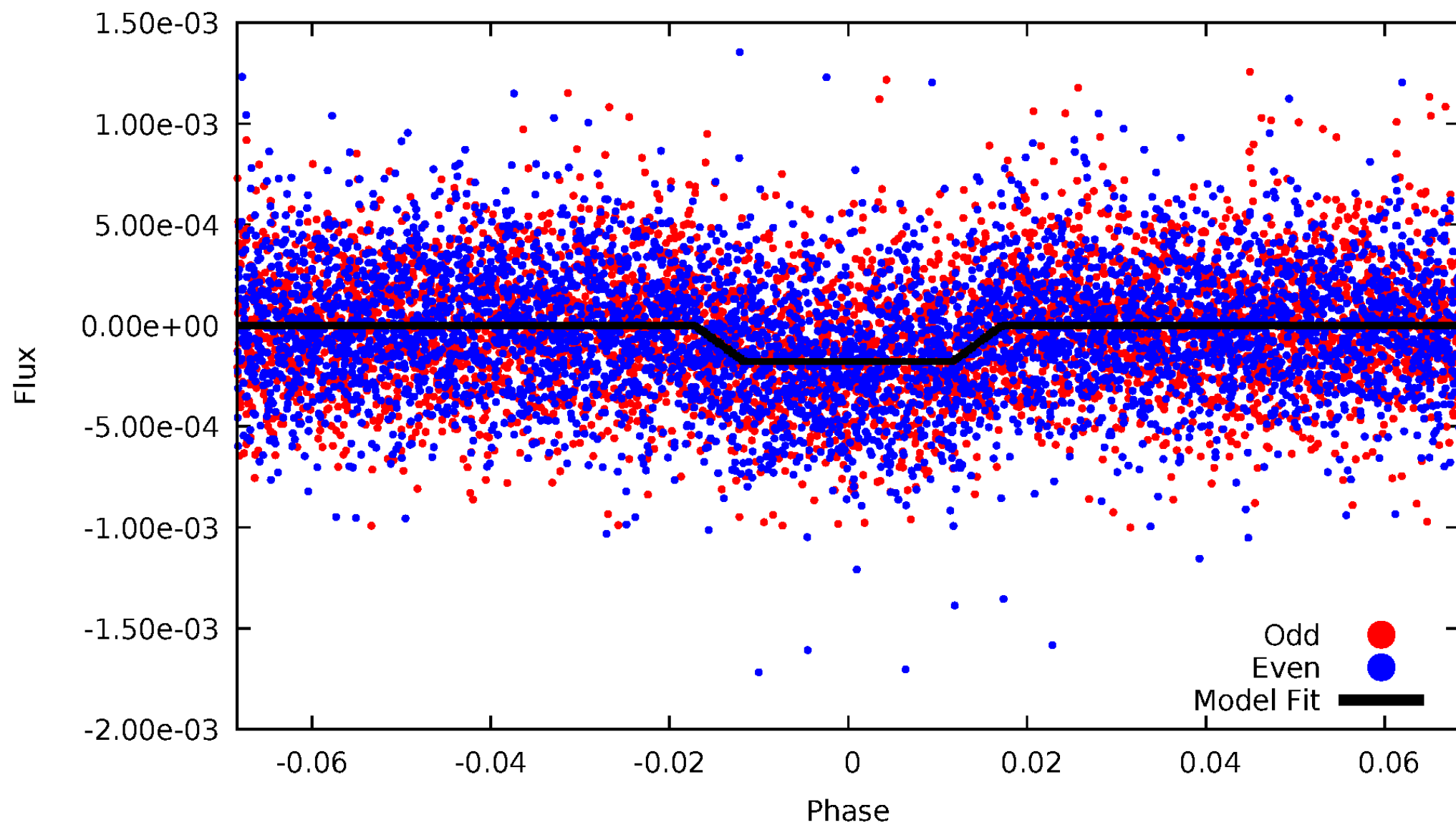
DV Odd/Even

TCE 008892157-01

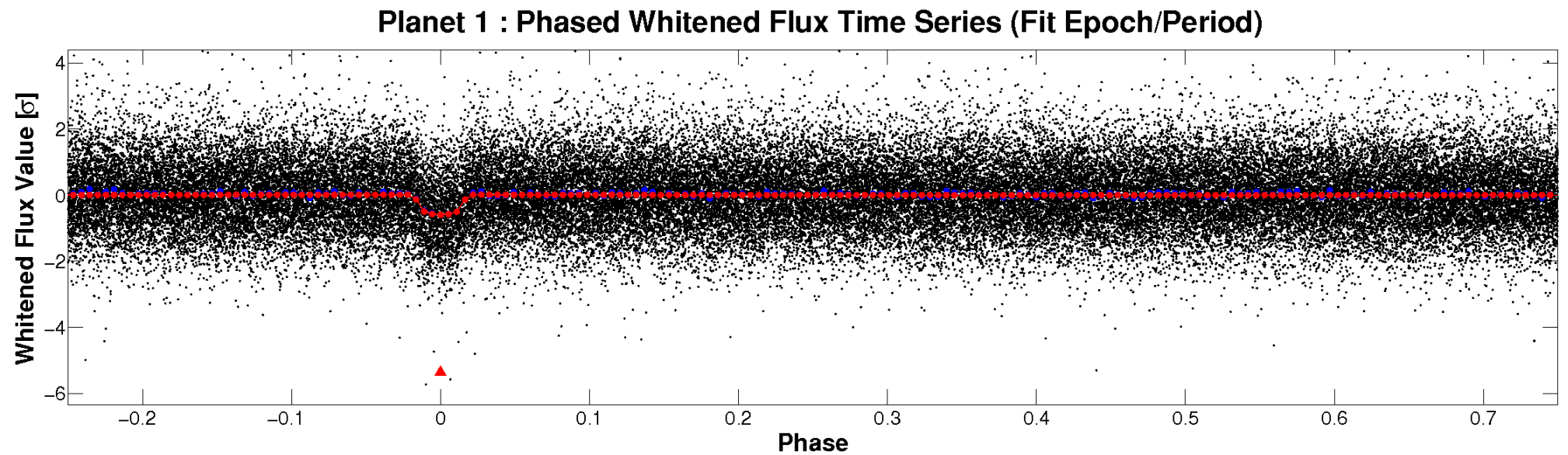
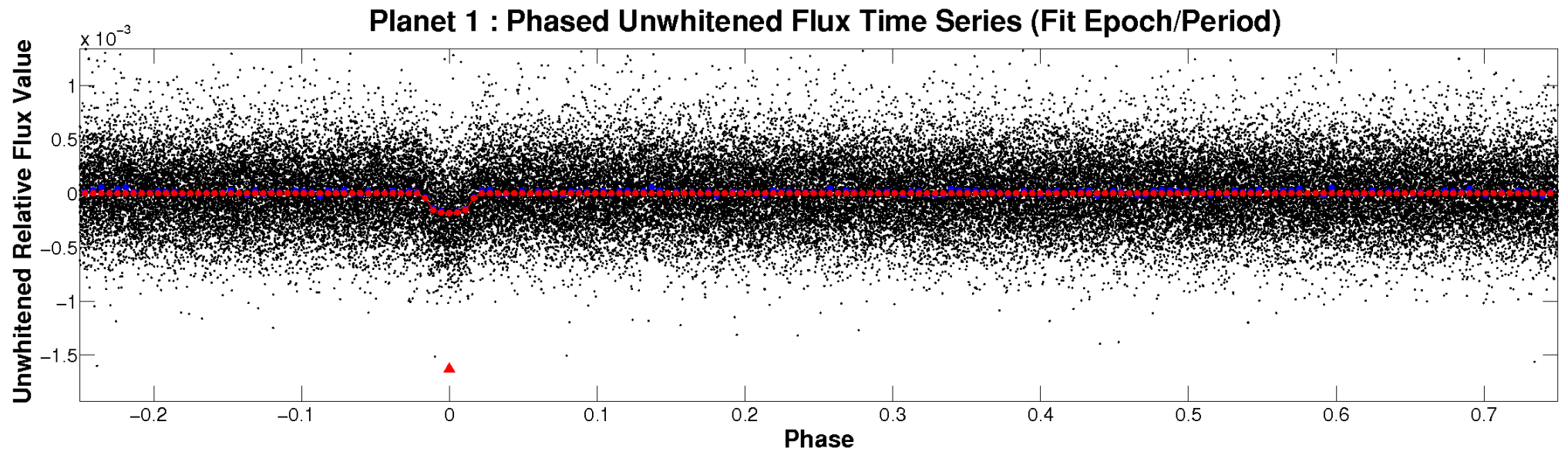


ALT Odd/Even

TCE 008892157-01

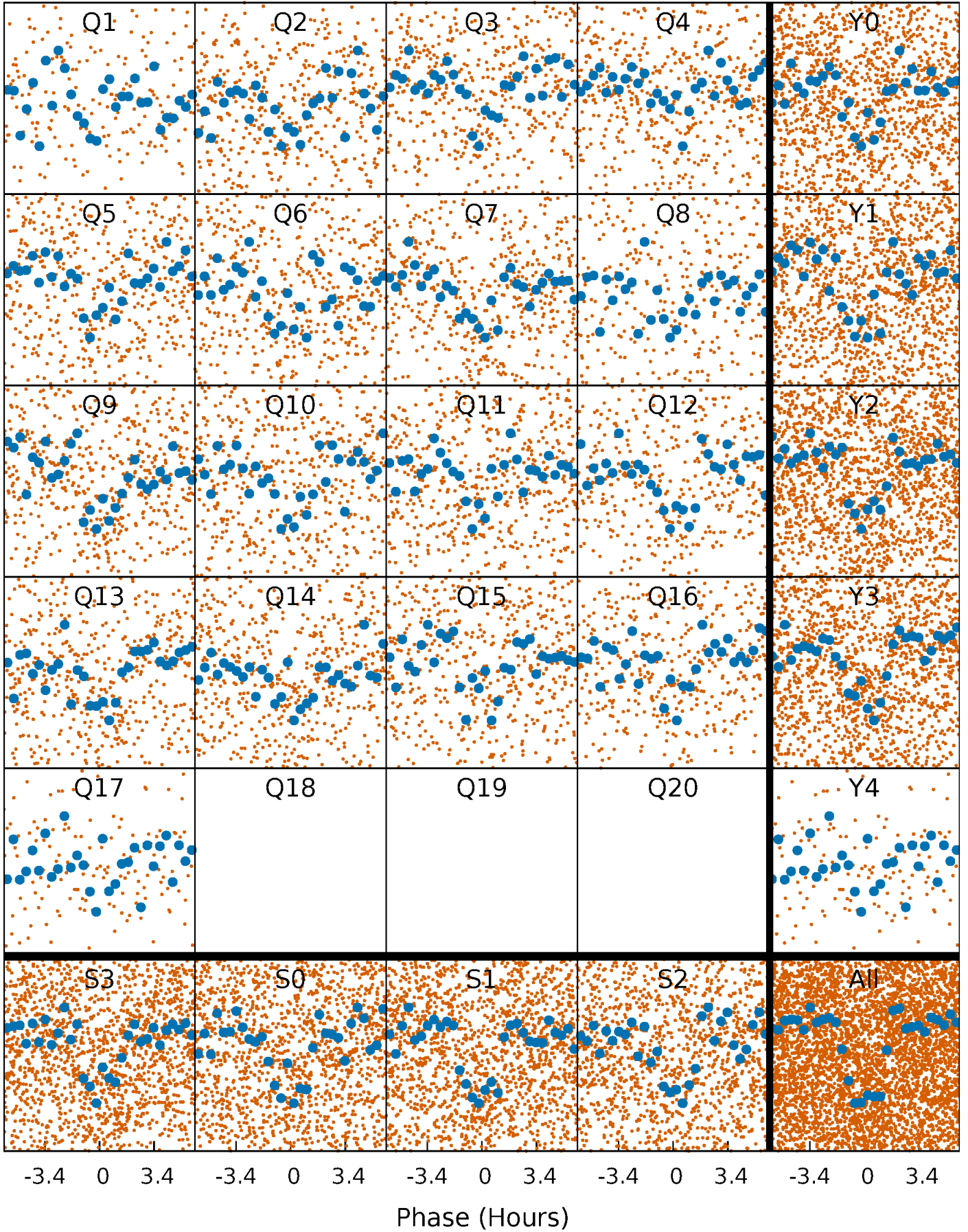


Non-Whitened Vs. Whitened Light Curve



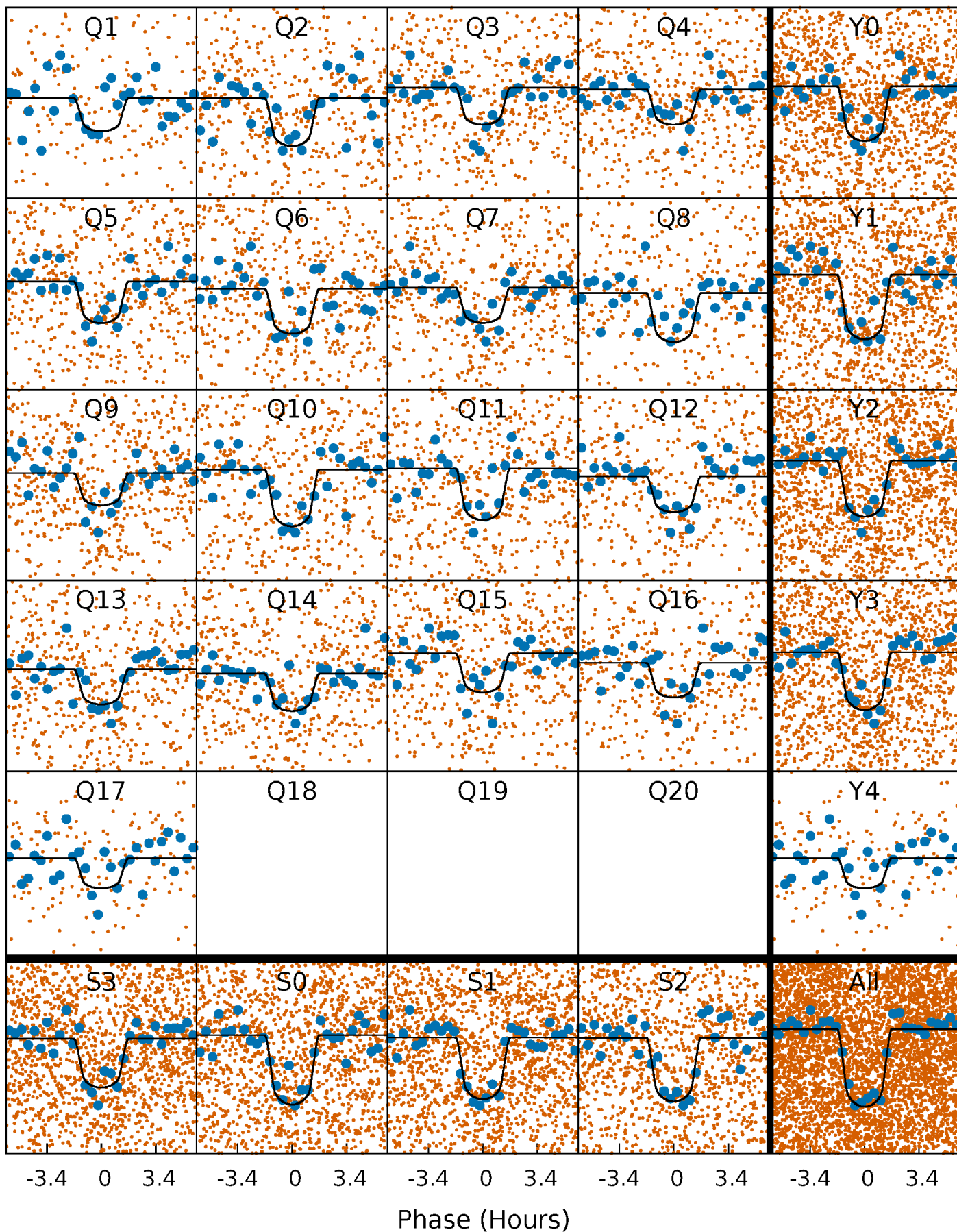
PDC Quarter-Phased Transit Curves

TCE 008892157-01 P= 3.730871 Days $T_0=132.900282$ (BKJD)



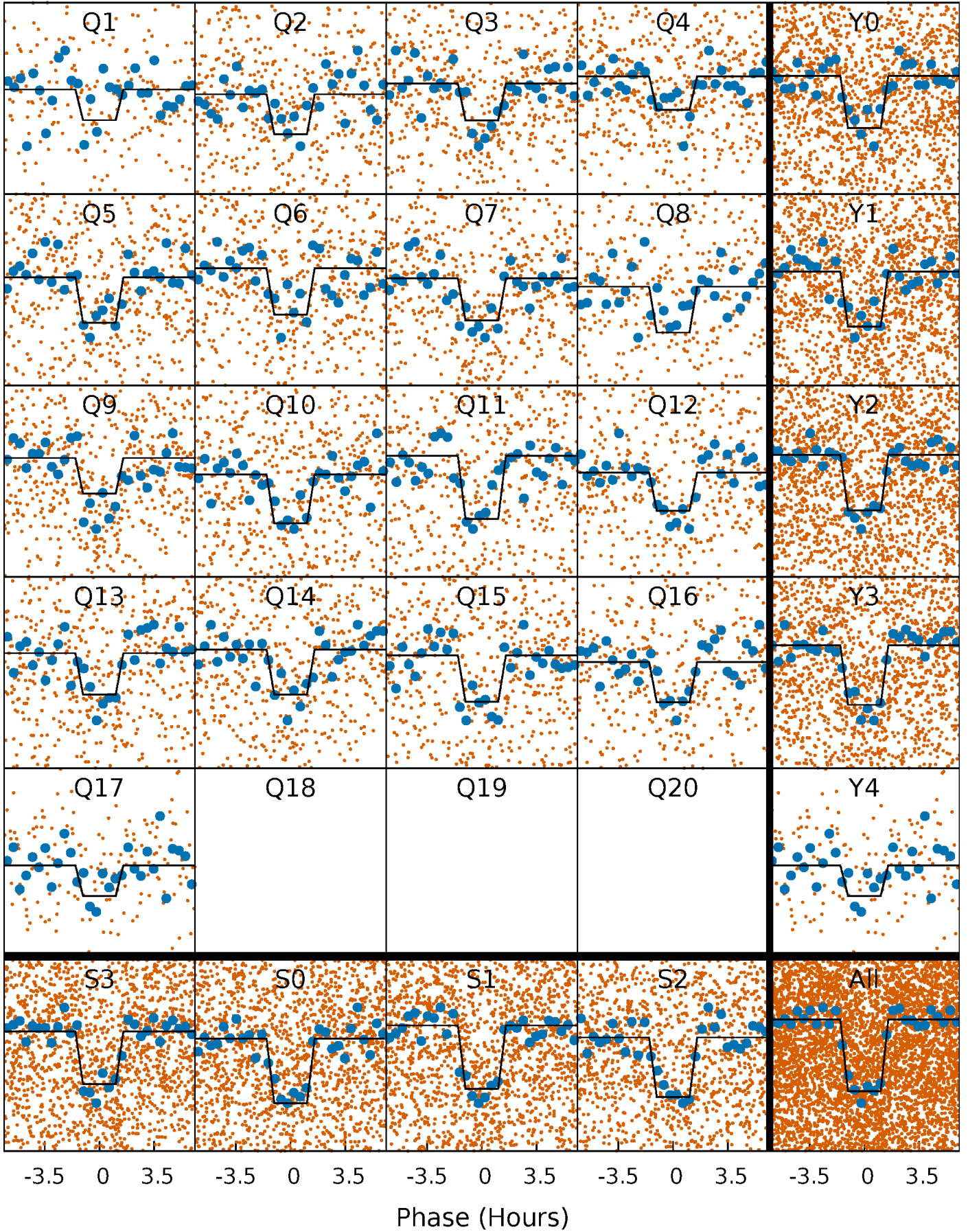
DV Quarter-Phased Transit Curves

TCE 008892157-01 P= 3.730871 Days $T_0=132.900282$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

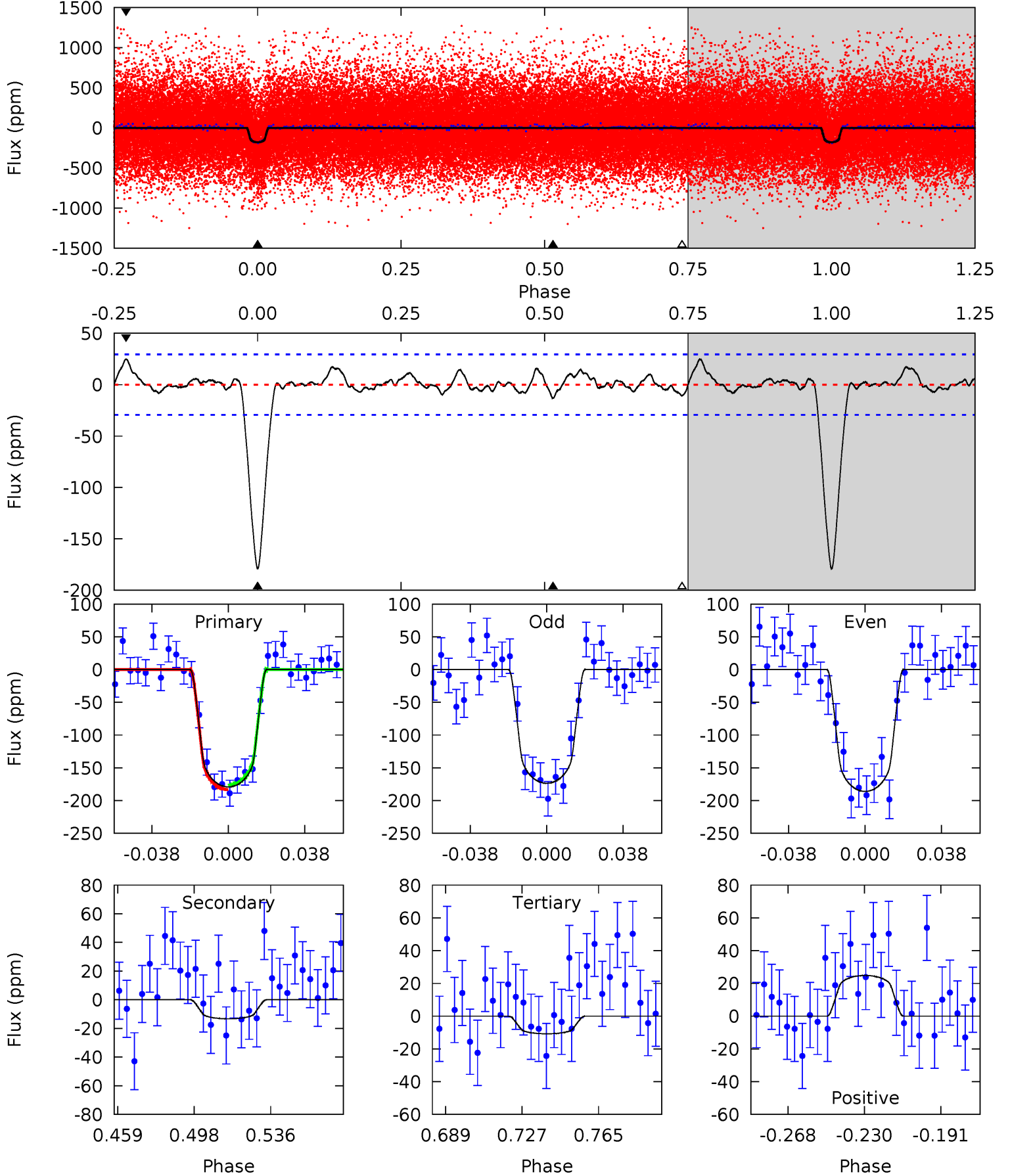
TCE 008892157-01 P= 3.730904 Days $T_0=132.894384$ (BKJD)



DV Model-Shift Uniqueness Test

008892157-01, P = 3.730871 Days, E = 129.169411 Days

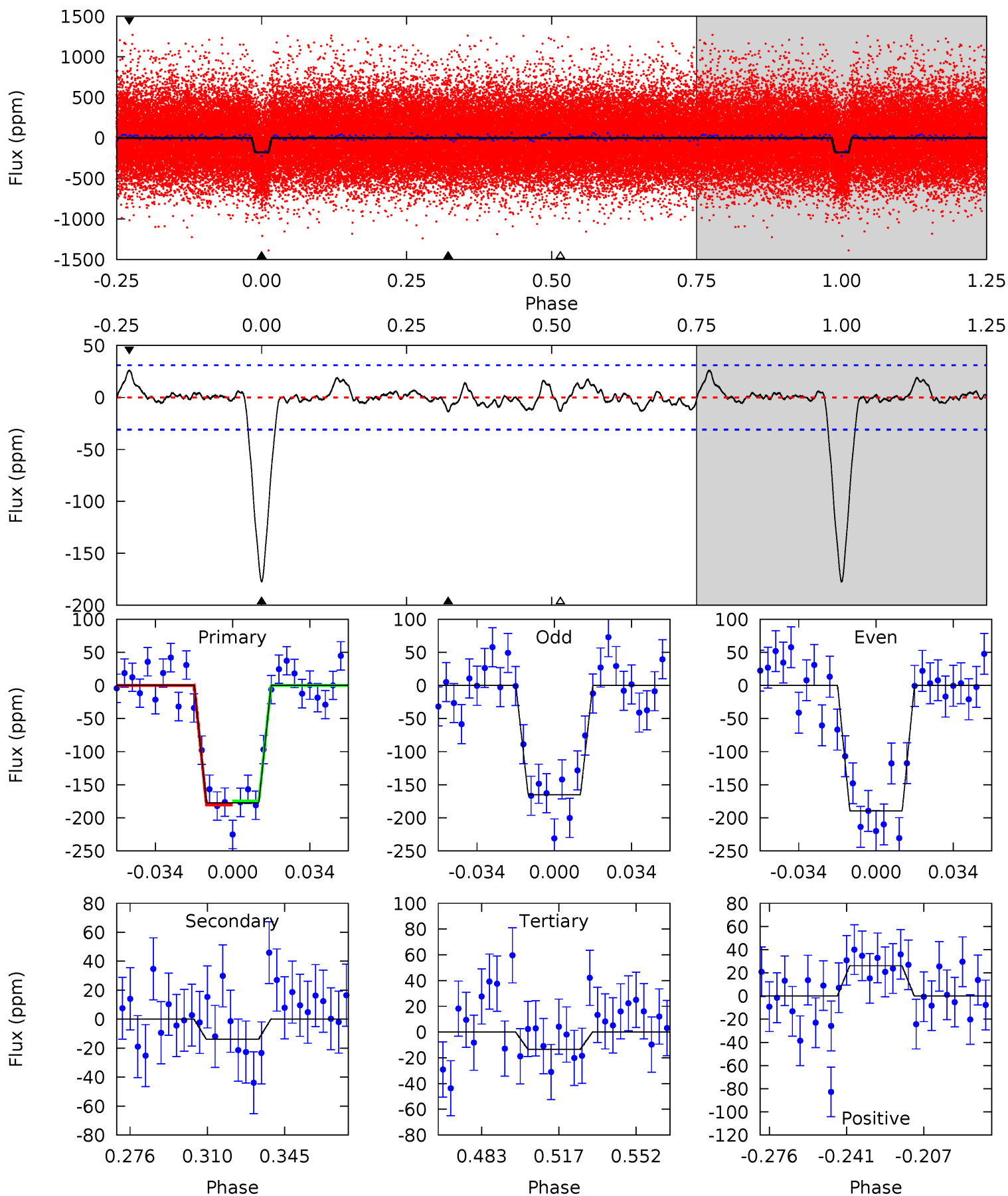
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	2.16	1.75	4.03	4.76	2.07	1.02	27.3	25.0	0.41	-1.87	1.02	0.94	0.12	0.56



Alt Model-Shift Uniqueness Test

008892157-01, P = 3.730904 Days, E = 129.163480 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	2.13	2.07	4.02	4.78	2.11	1.07	25.3	23.3	0.06	-1.89	1.91	1.01	0.13	0.49



Stellar Parameters For KIC 008892157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5709^{+77}_{-85}	$4.489^{+0.030}_{-0.120}$	$0.140^{+0.150}_{-0.150}$	$0.950^{+0.142}_{-0.047}$	$1.014^{+0.052}_{-0.067}$	$1.665^{+0.236}_{-0.576}$
	+1%/-1%	+1%/-3%	+107%/-107%	+15%/-5%	+5%/-7%	+14%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008892157-01 / KOI 2224.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 6	$1.57^{+0.45}_{-0.45}$	1595^{+60}_{-40}	3351^{+436}_{-391}	$6.604^{+7.107}_{-3.641}$
Alt.	-14 ± 6	$1.39^{+0.45}_{-0.45}$	1595^{+61}_{-39}	3507^{+537}_{-455}	$8.704^{+12.109}_{-4.985}$

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 $A_{obs} \gg 1.0$

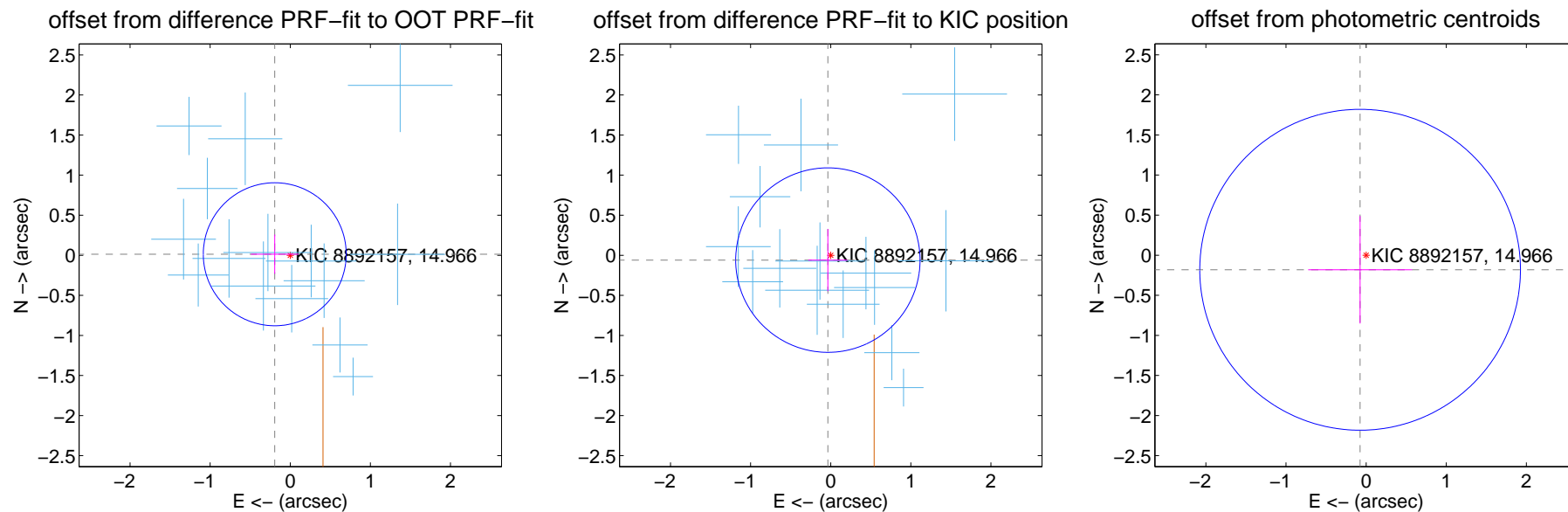
DV Centroid Data

Supplemental centroid analysis for 008892157-01. Kepler magnitude: 14.97. Transit SNR 22.95

There are 15 quarters with good PRF difference image offsets

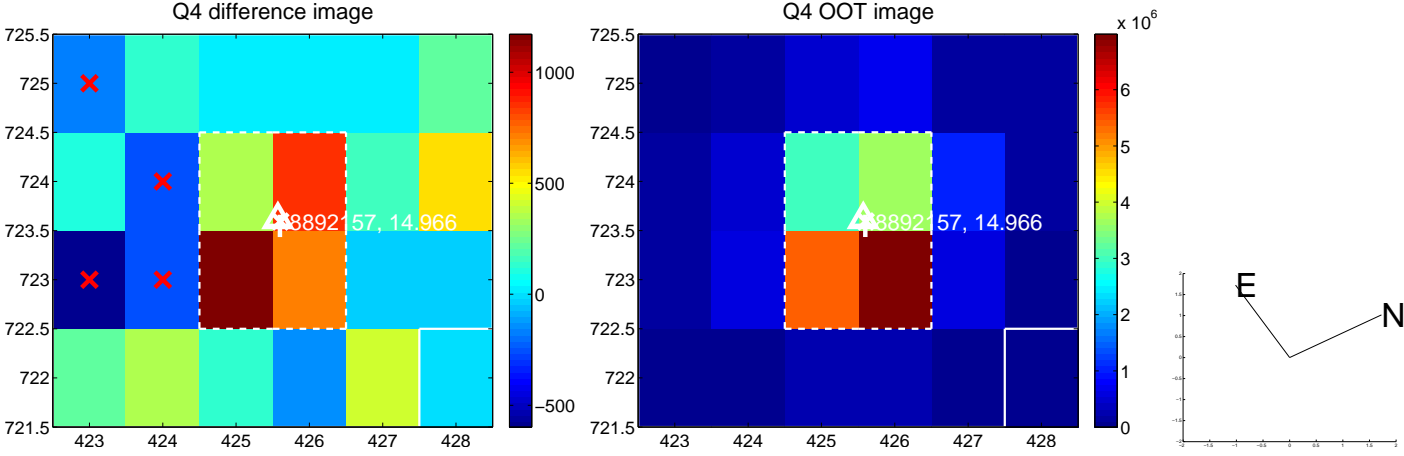
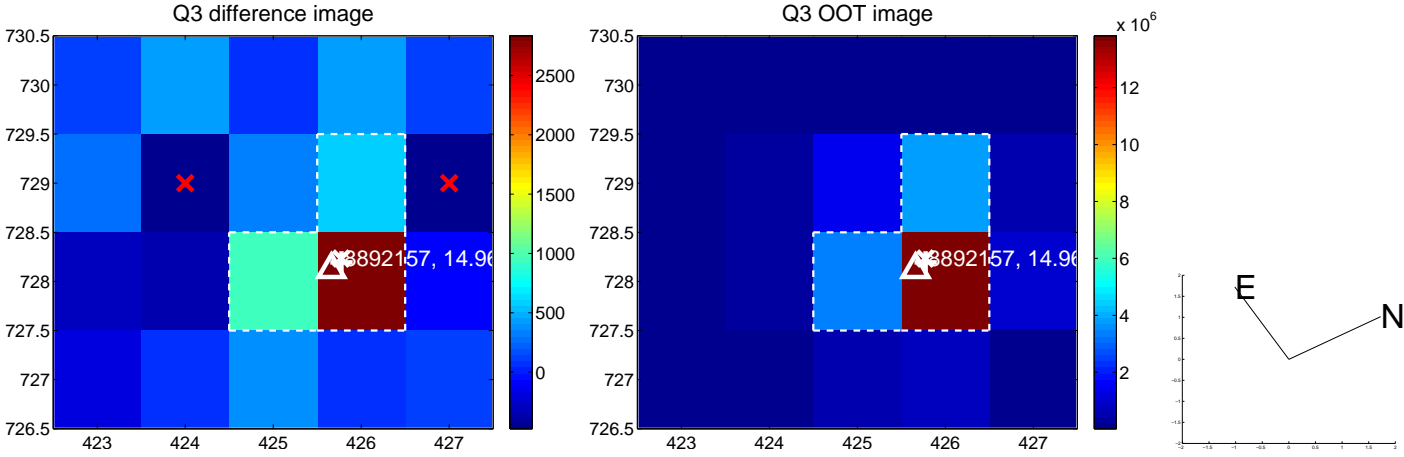
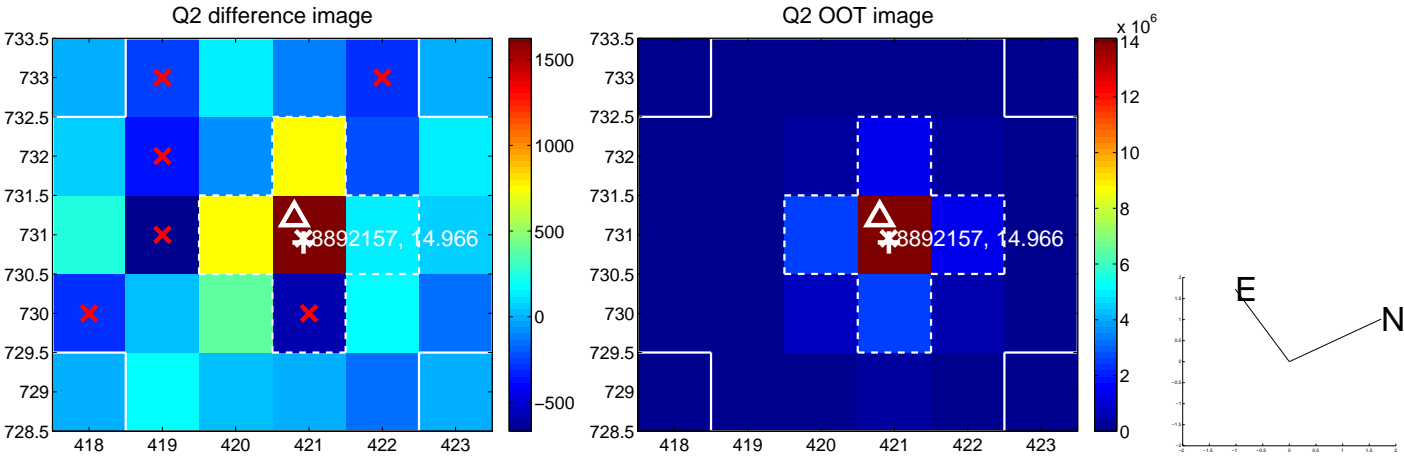
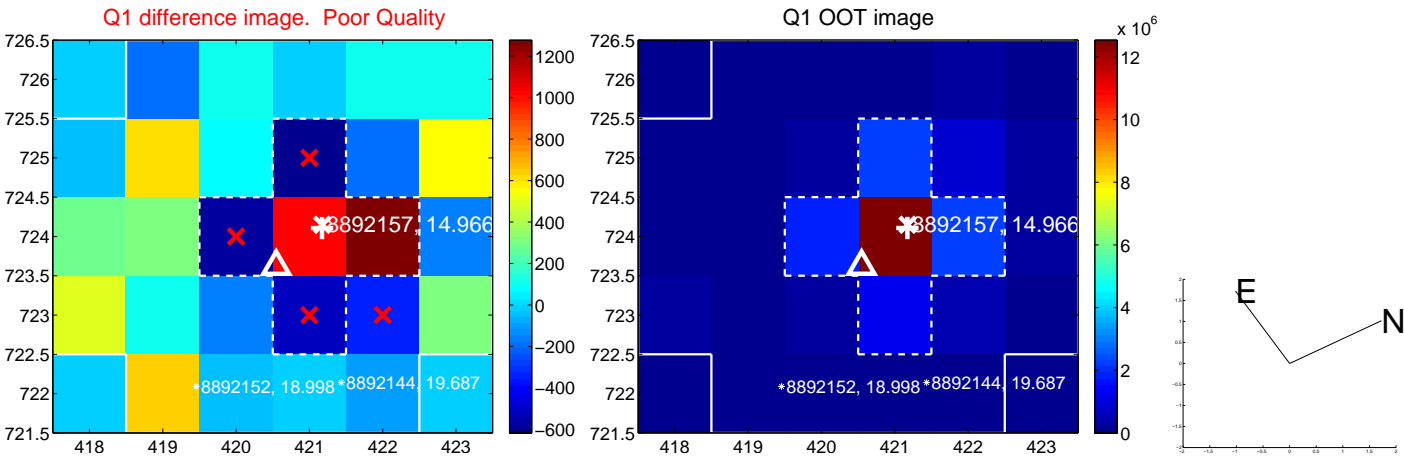
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.194 ± 0.297	0.65	0.194 ± 0.298	0.013 ± 0.245
PRF-fit source offset from KIC position	0.070 ± 0.384	0.18	0.036 ± 0.244	-0.060 ± 0.388
photometric centroid source offset	0.20 ± 0.67	0.29	0.08 ± 0.65	-0.18 ± 0.67

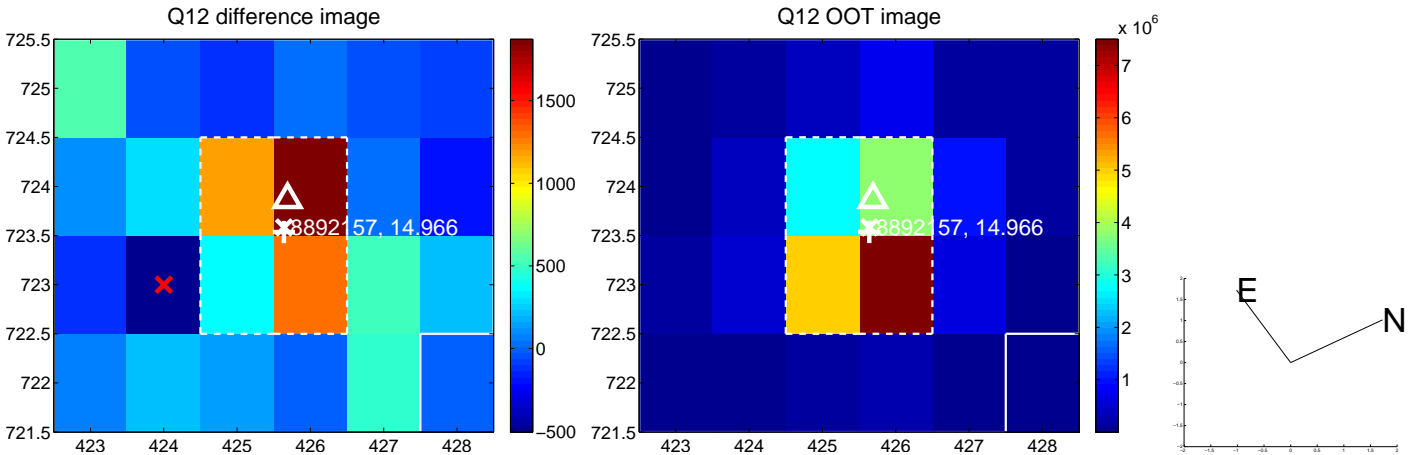
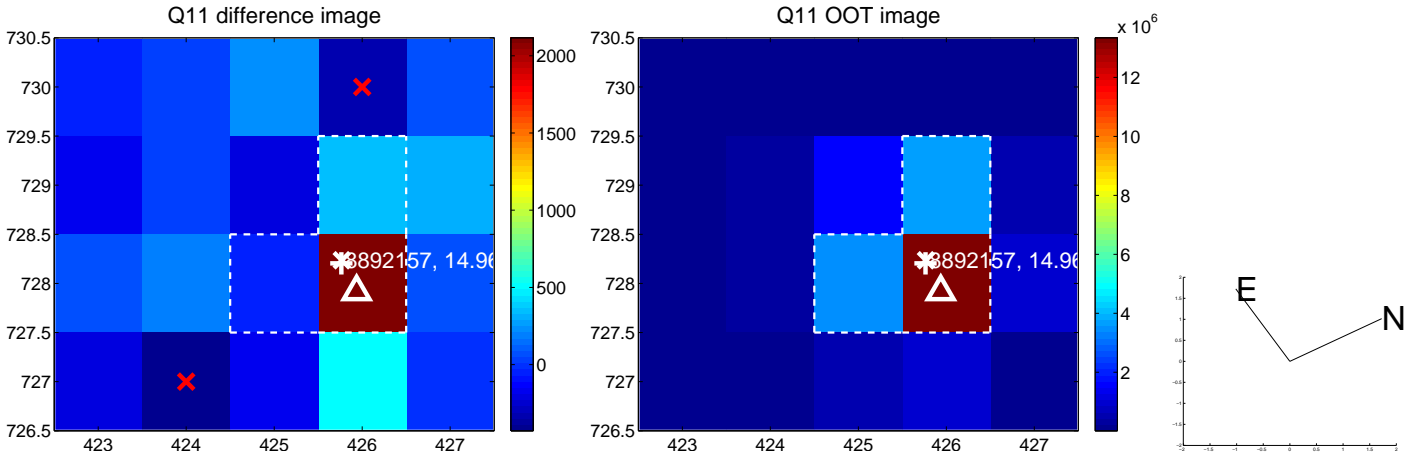
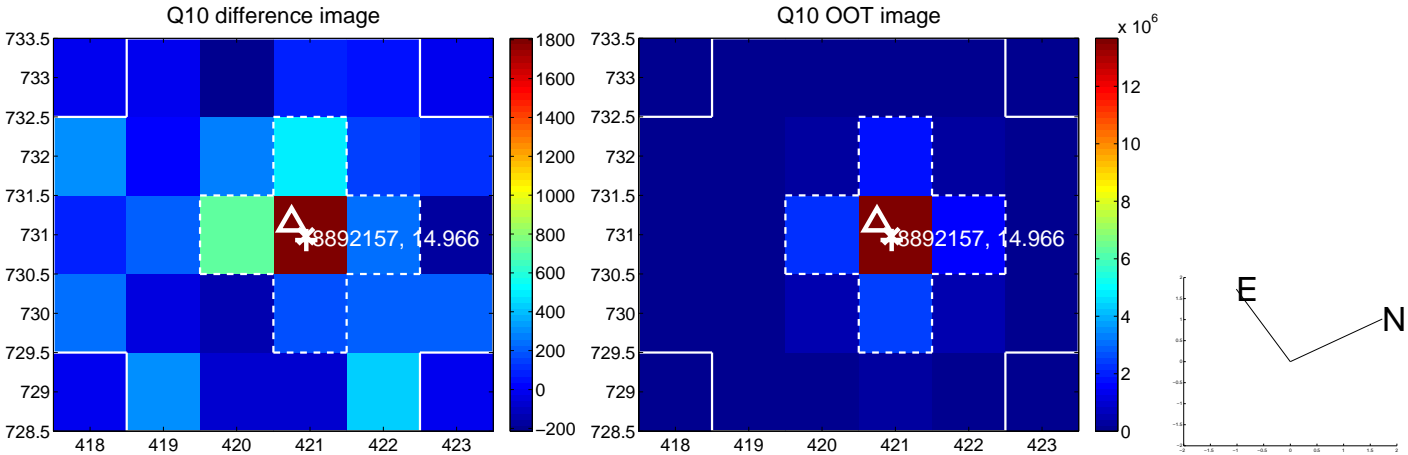
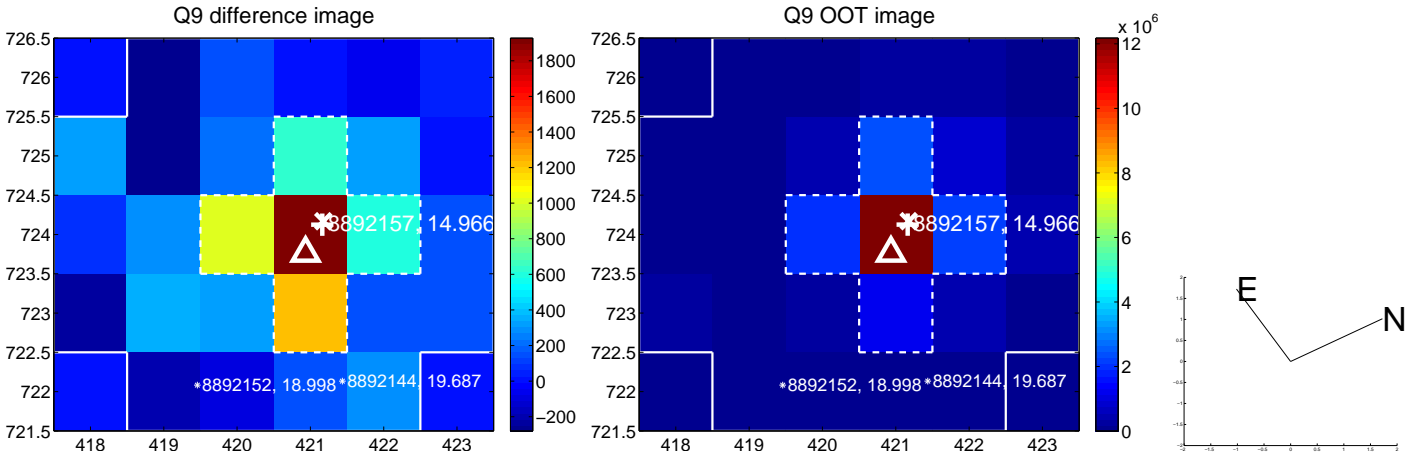


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

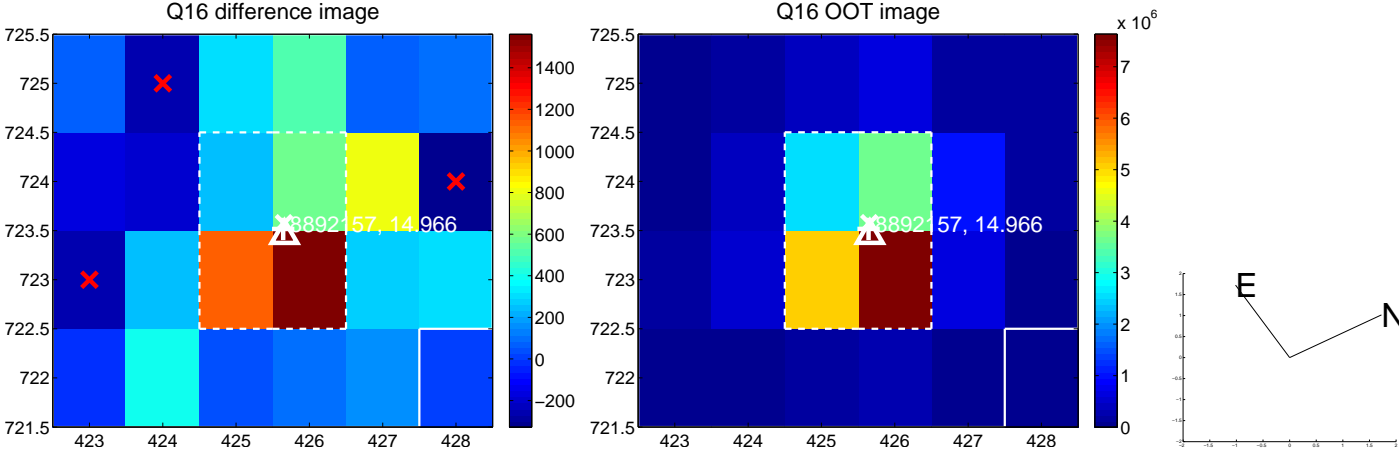
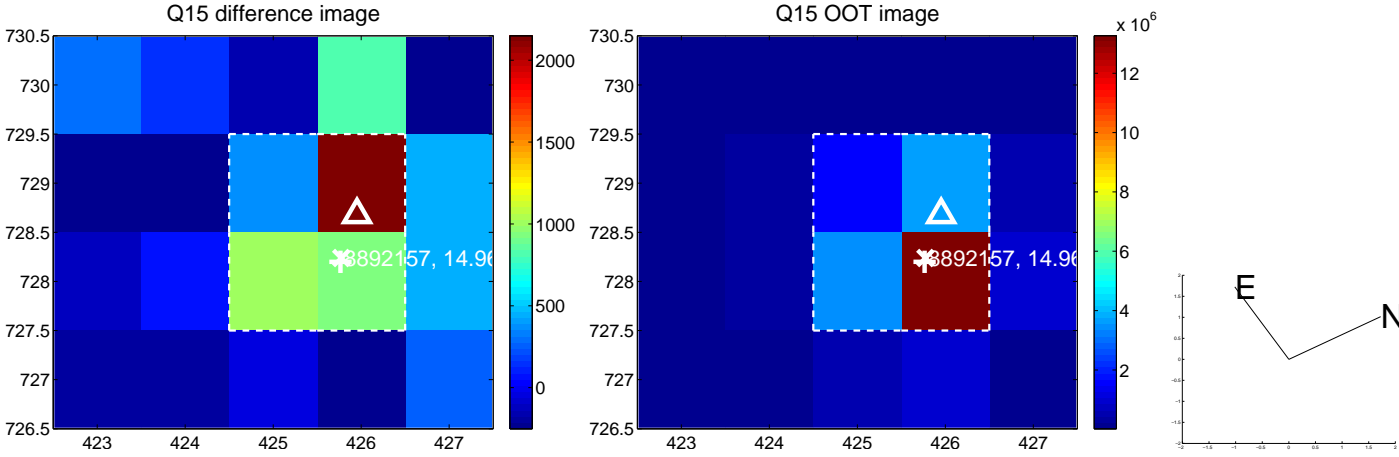
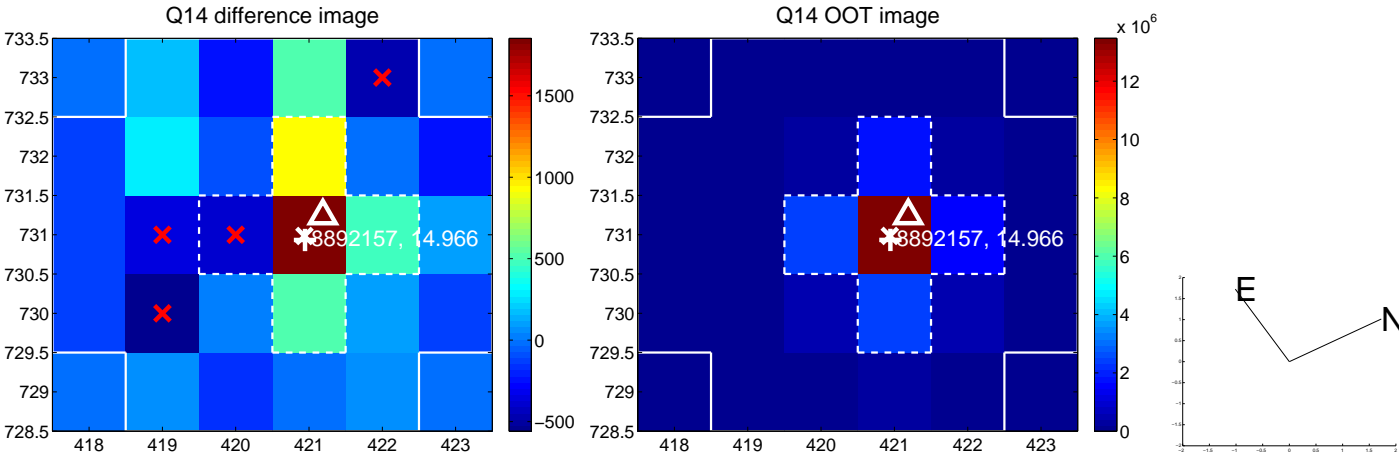
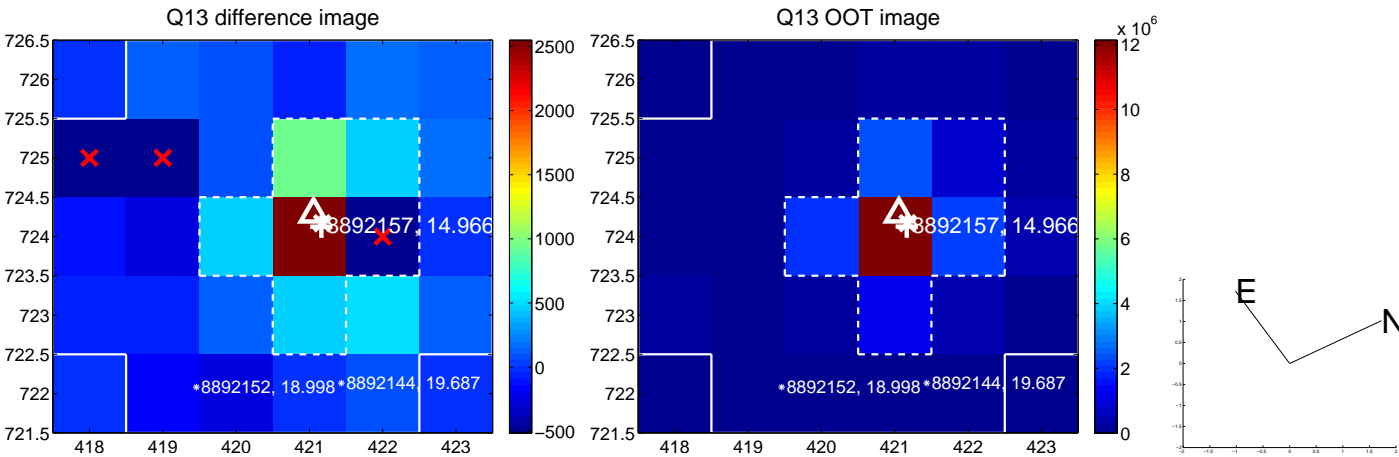
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



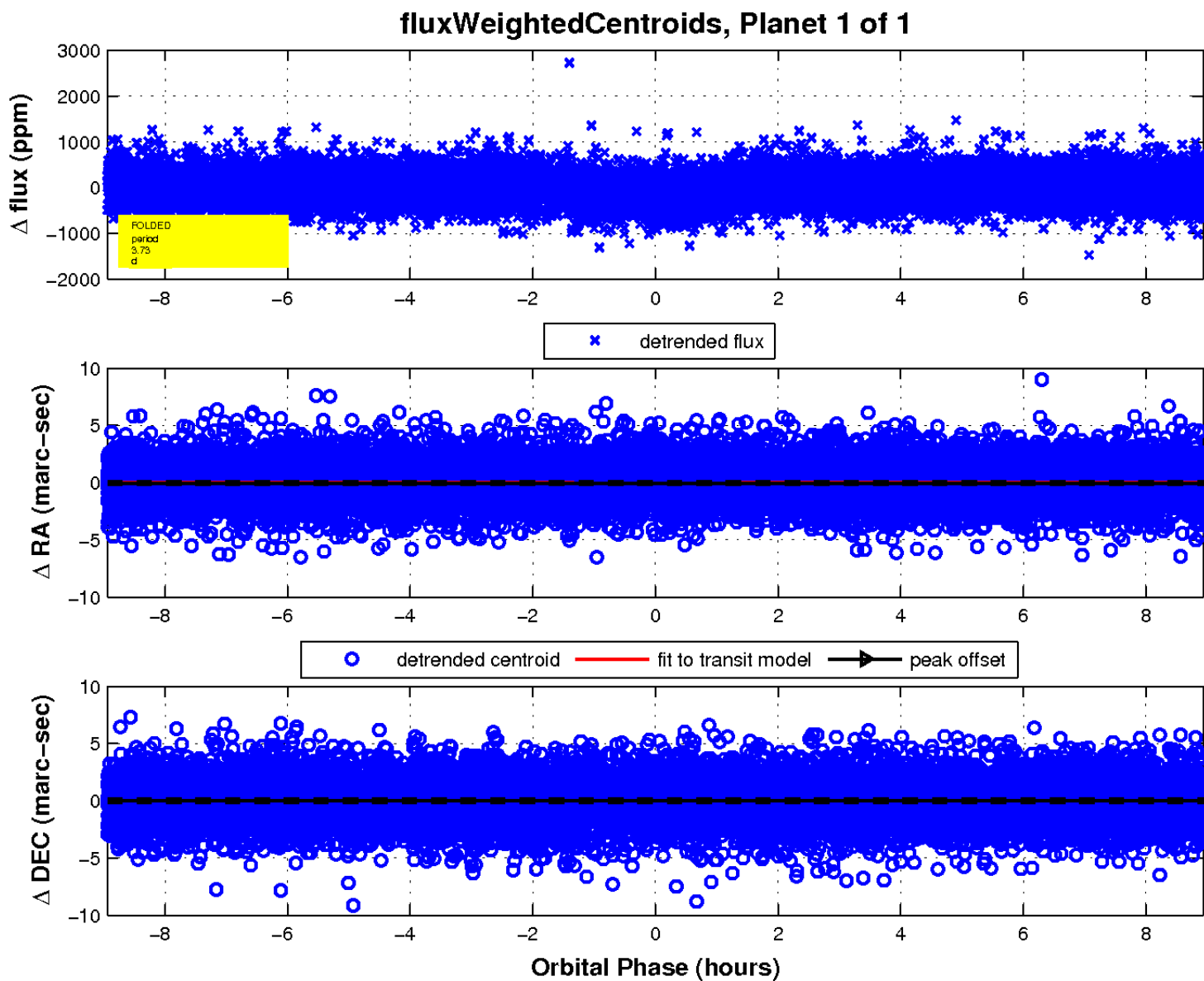
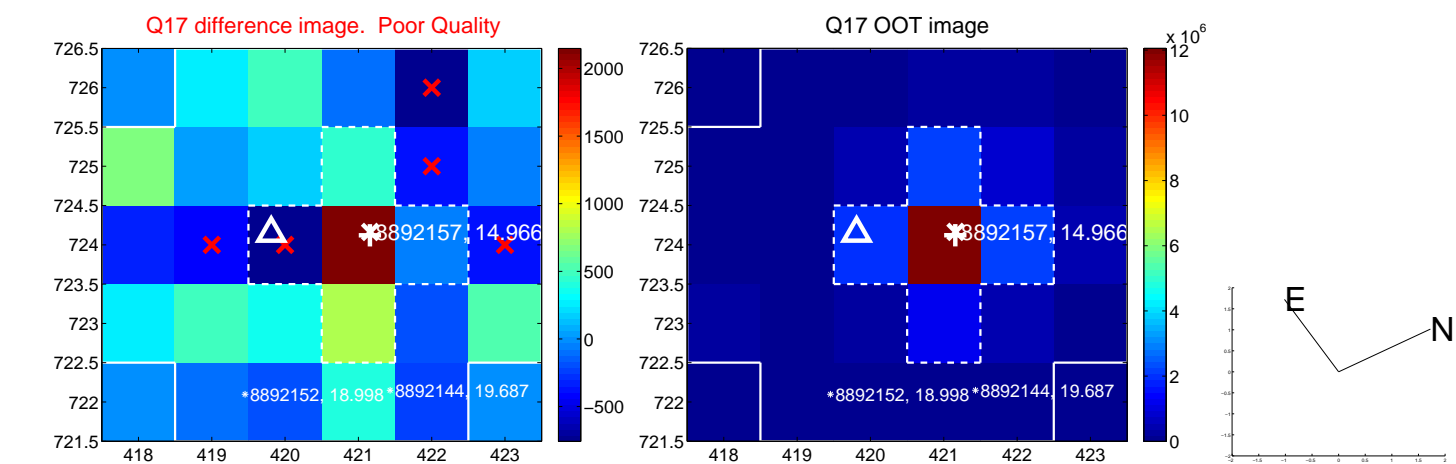
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

