

KIC 005812973

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})
005812973-01	OBS	No	0.717425	131.540313	30.9	1.987	7.6	6.9	13.60	6223	8.85	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005812973-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

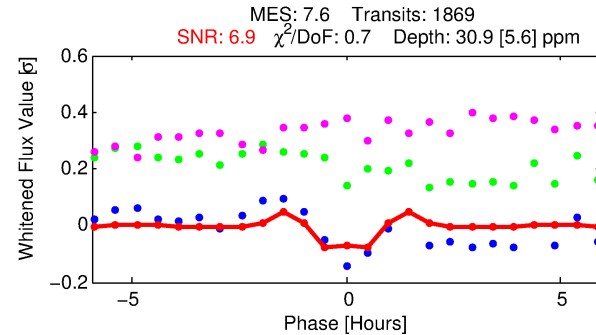
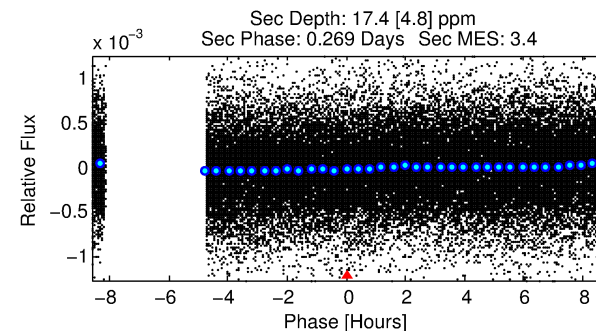
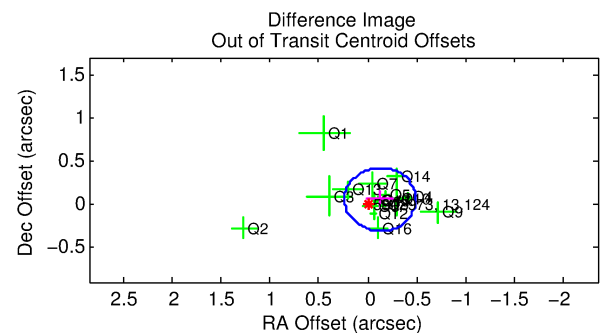
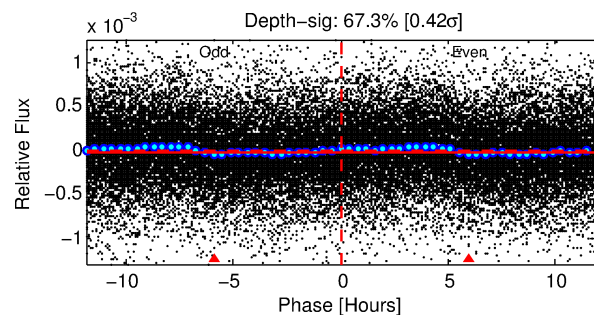
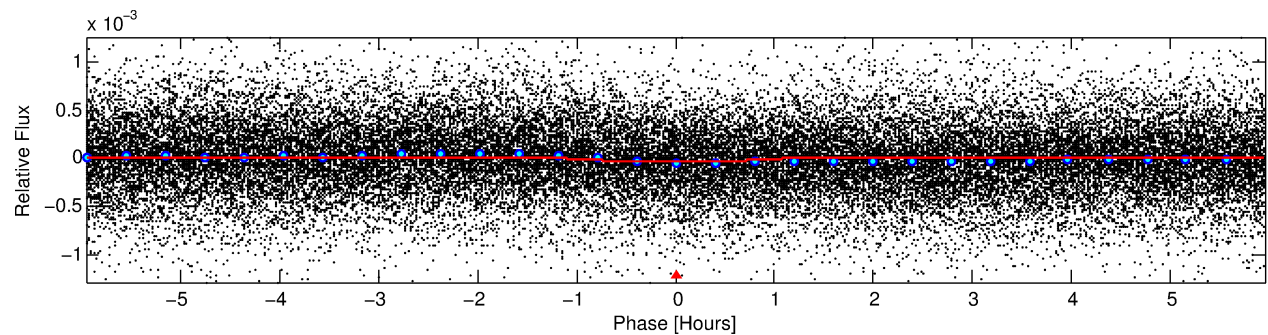
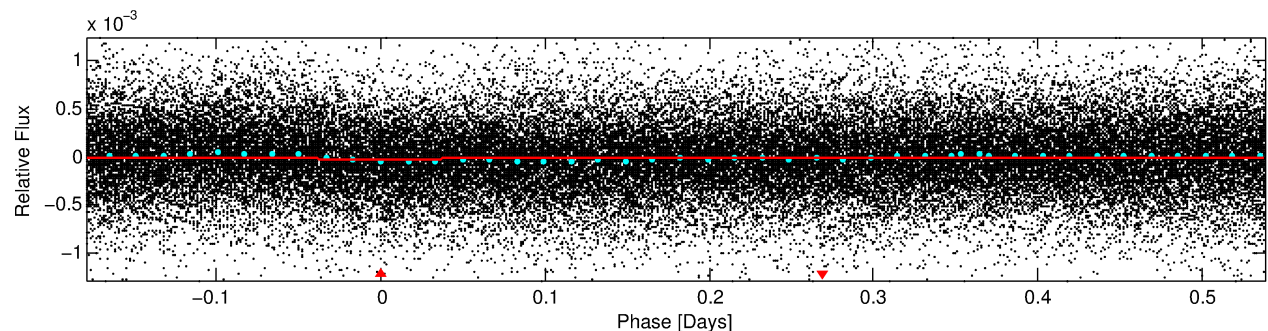
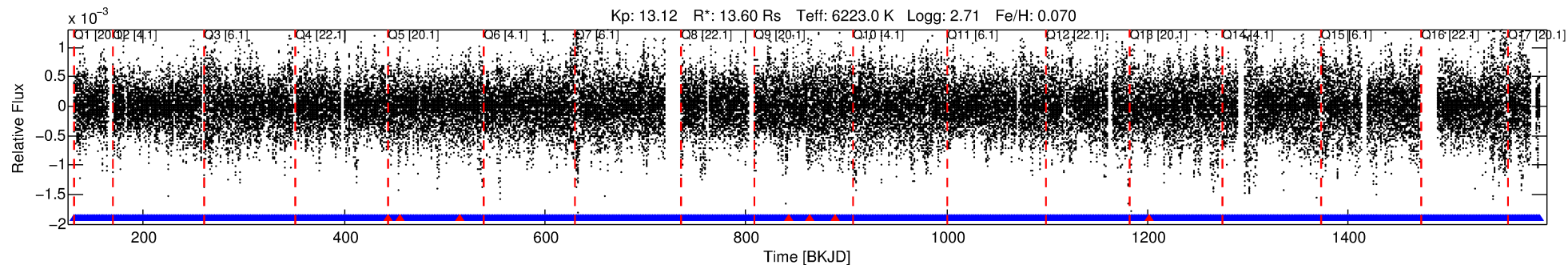
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005812973-01

No Significant Match Found

DV One-Page Summary

KIC: 5812973 Candidate: 1 of 1 Period: 0.717 d



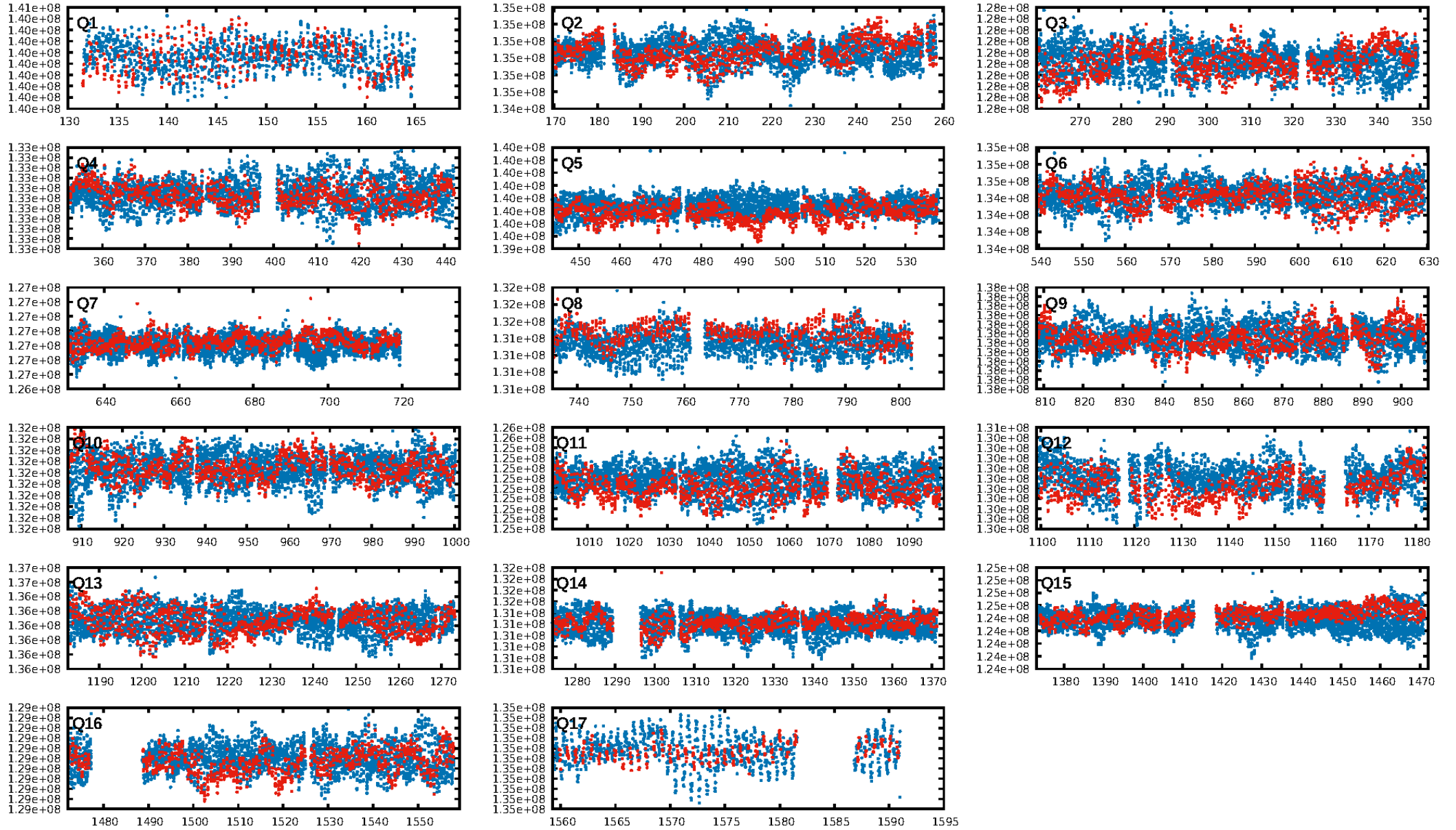
DV Fit Results:

Period = 0.71742 [0.00001] d
Epoch = 131.5403 [0.0020] BKJD
Rp/R* = 0.0060 [0.0021]
a/R* = 1.57 [1.74]
b = 0.90 [0.41]
Seff = N/A
Teq = N/A
Rp = 8.85 [4.64] Re
a = N/A
Ag = N/A
Teffp = N/A

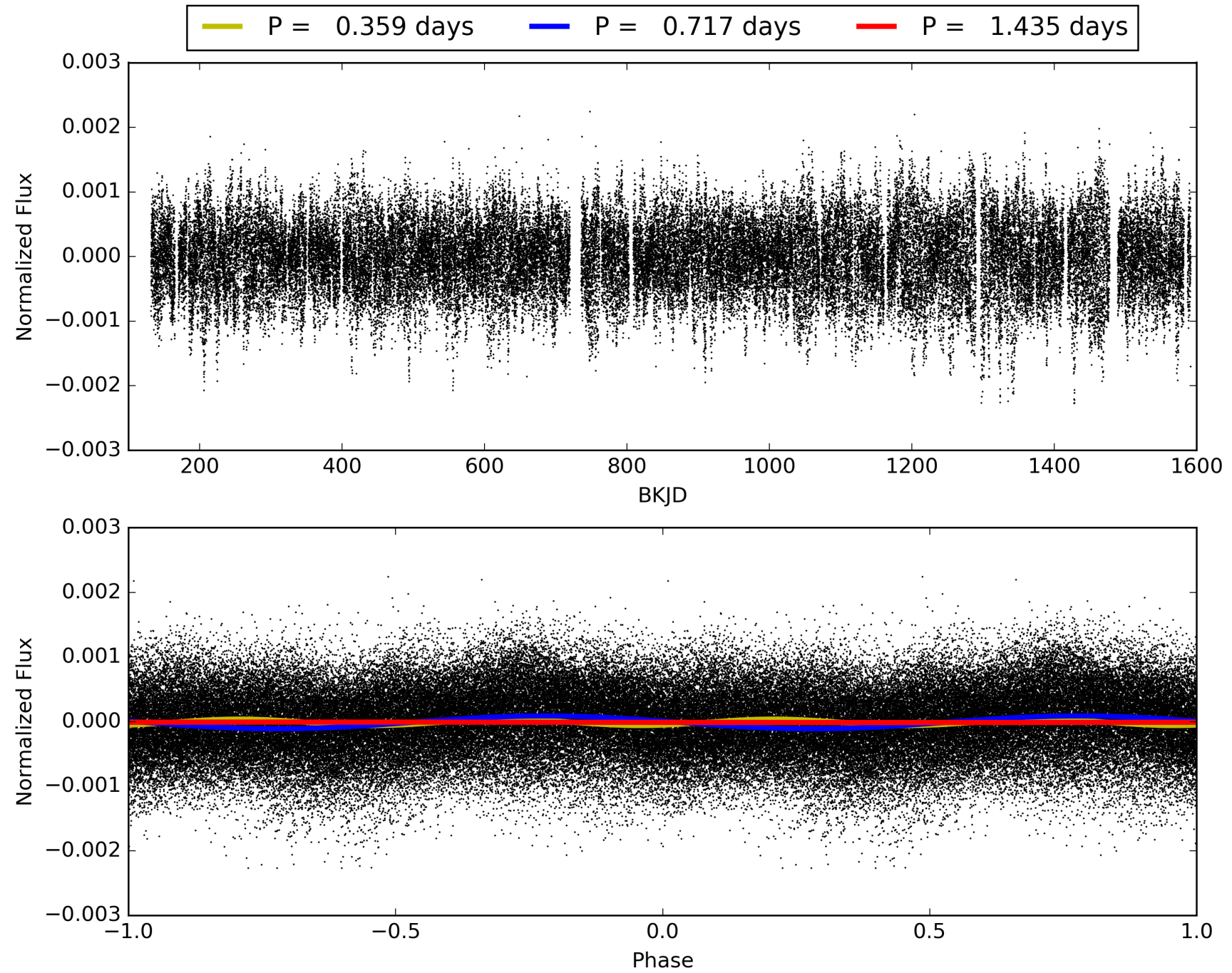
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.97e-21
RollingBand-fgt: 0.99 [1775/1784]
GhostDiagnostic-chr: 2.778
Centroid-sig: 27.2%
Centroid-so: 0.873 arcsec [1.23 σ]
OotOffset-rm: 0.136 arcsec [1.12 σ]
KicOffset-rm: 0.138 arcsec [1.50 σ]
OotOffset-st: 4/4/4 [16]
KicOffset-st: 4/4/4 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005812973-01, PDC Light Curves

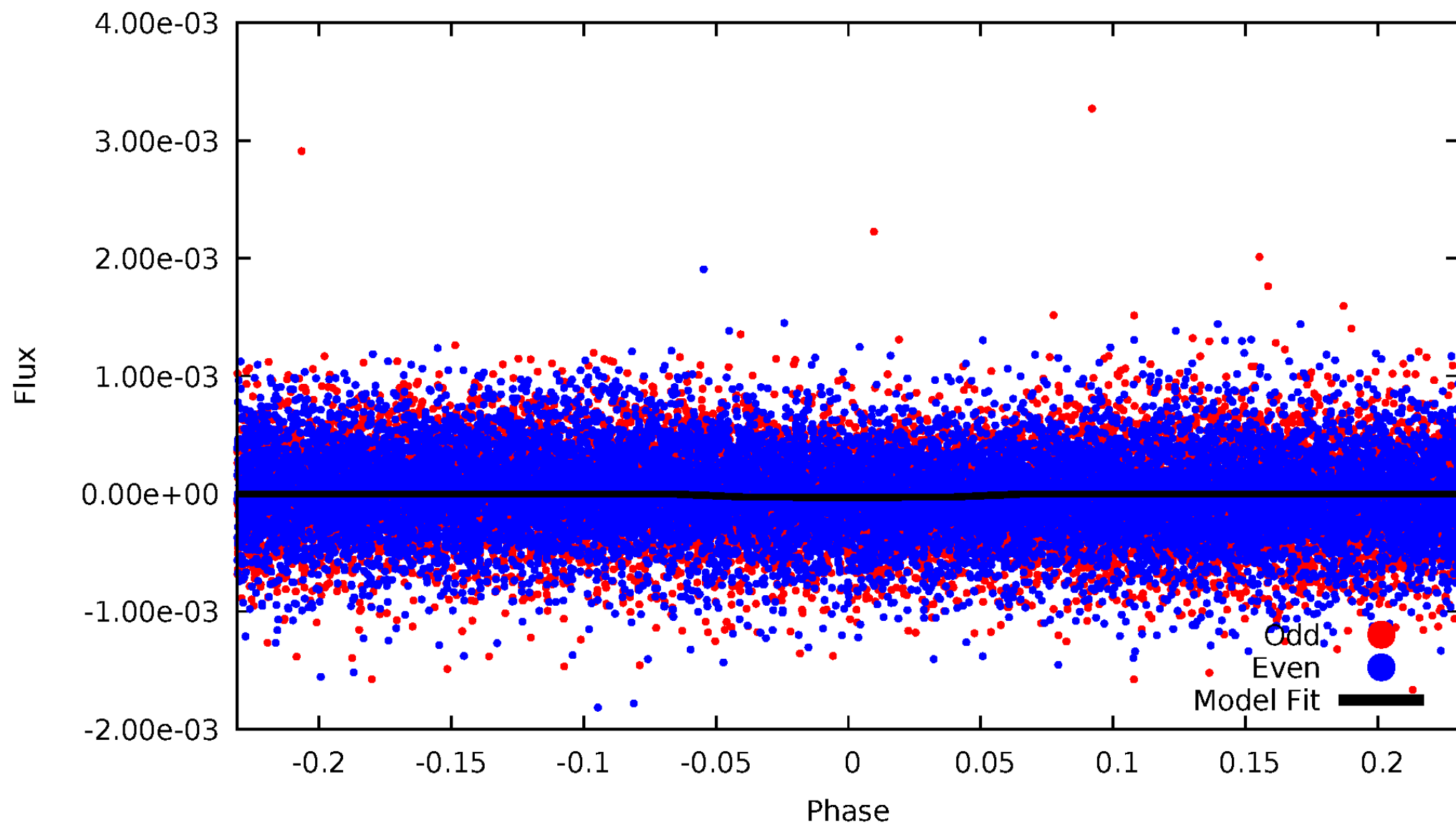


TCE 005812973-01



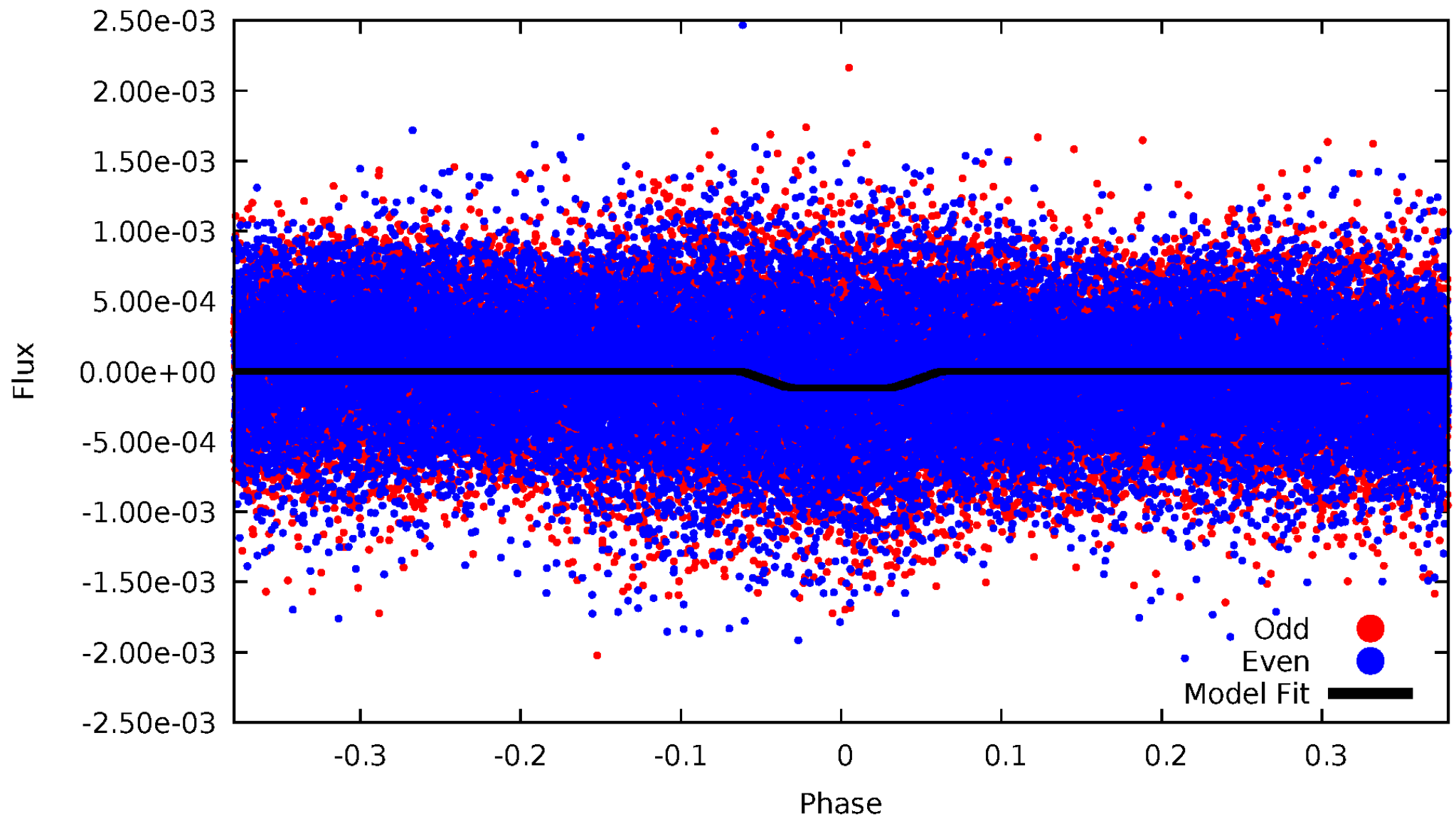
DV Odd/Even

TCE 005812973-01

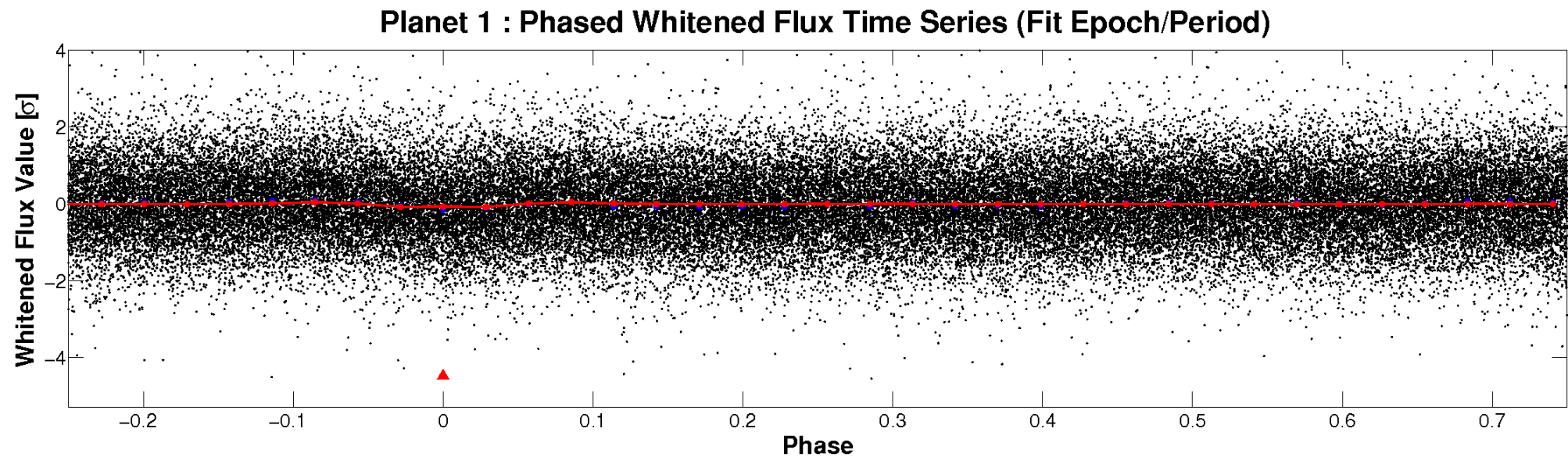
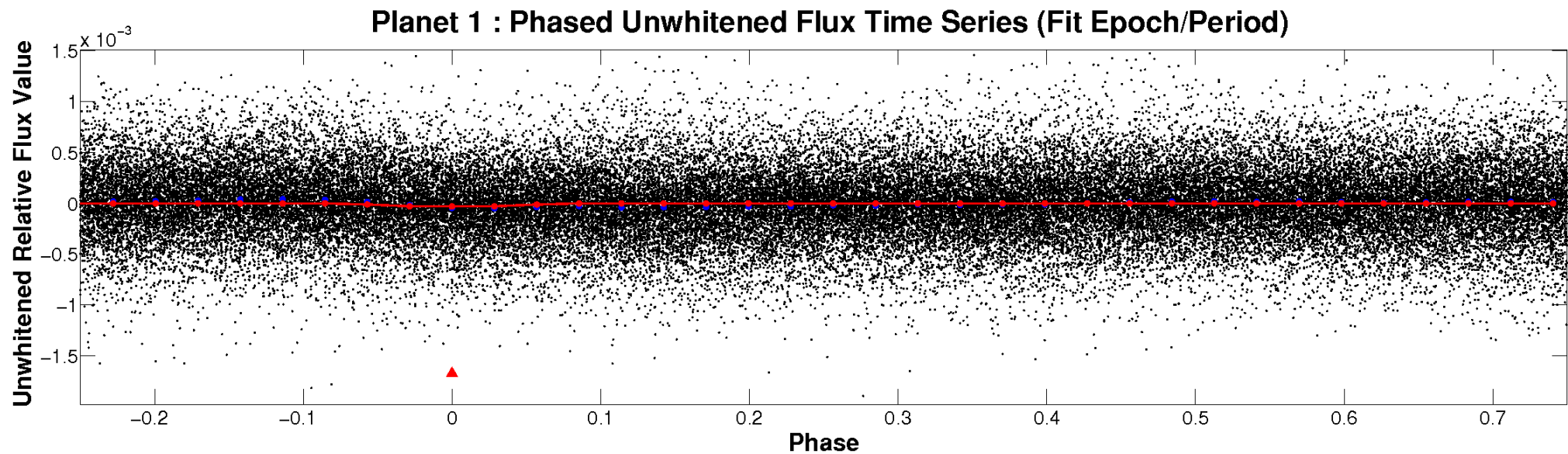


ALT Odd/Even

TCE 005812973-01

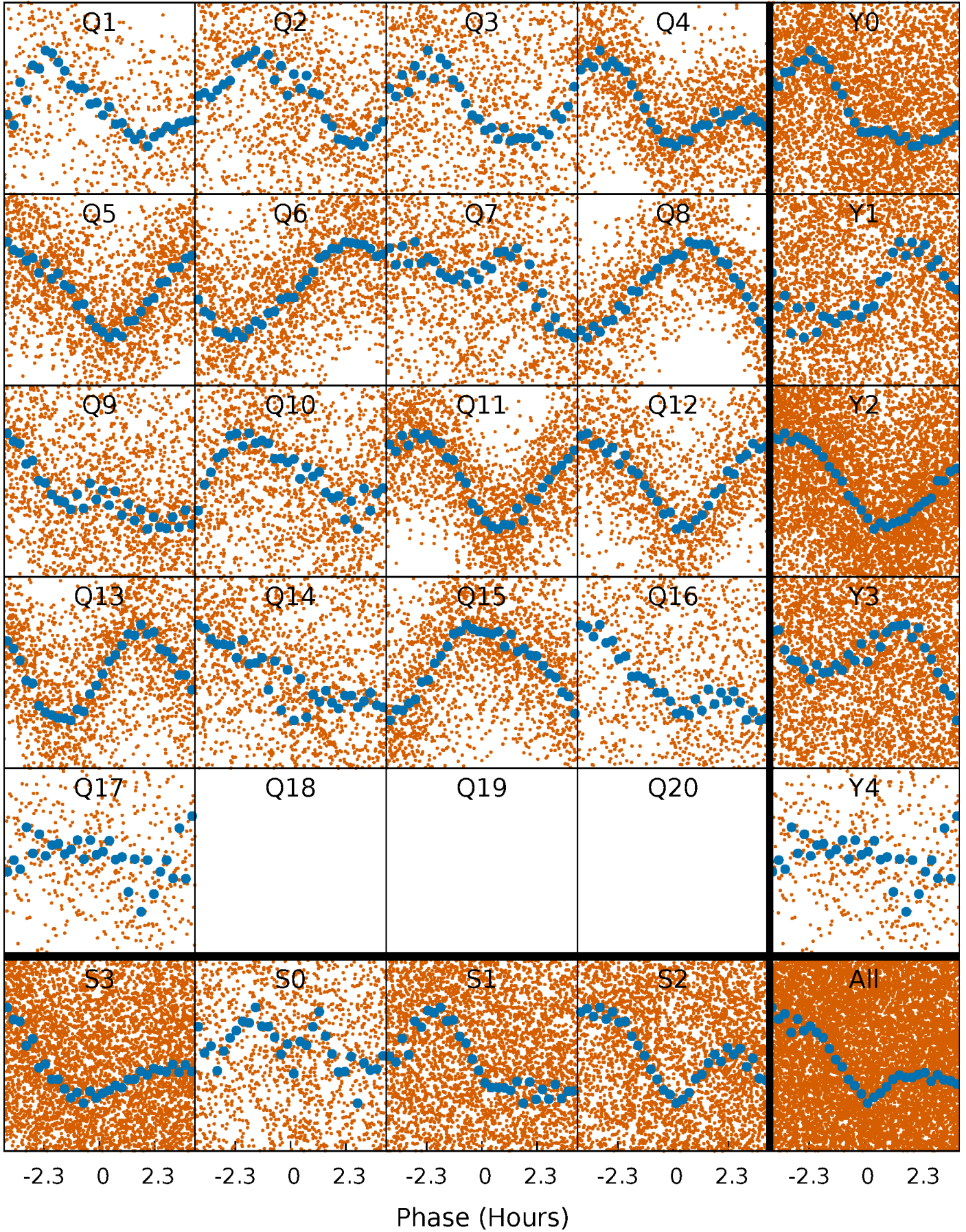


Non-Whitened Vs. Whitened Light Curve



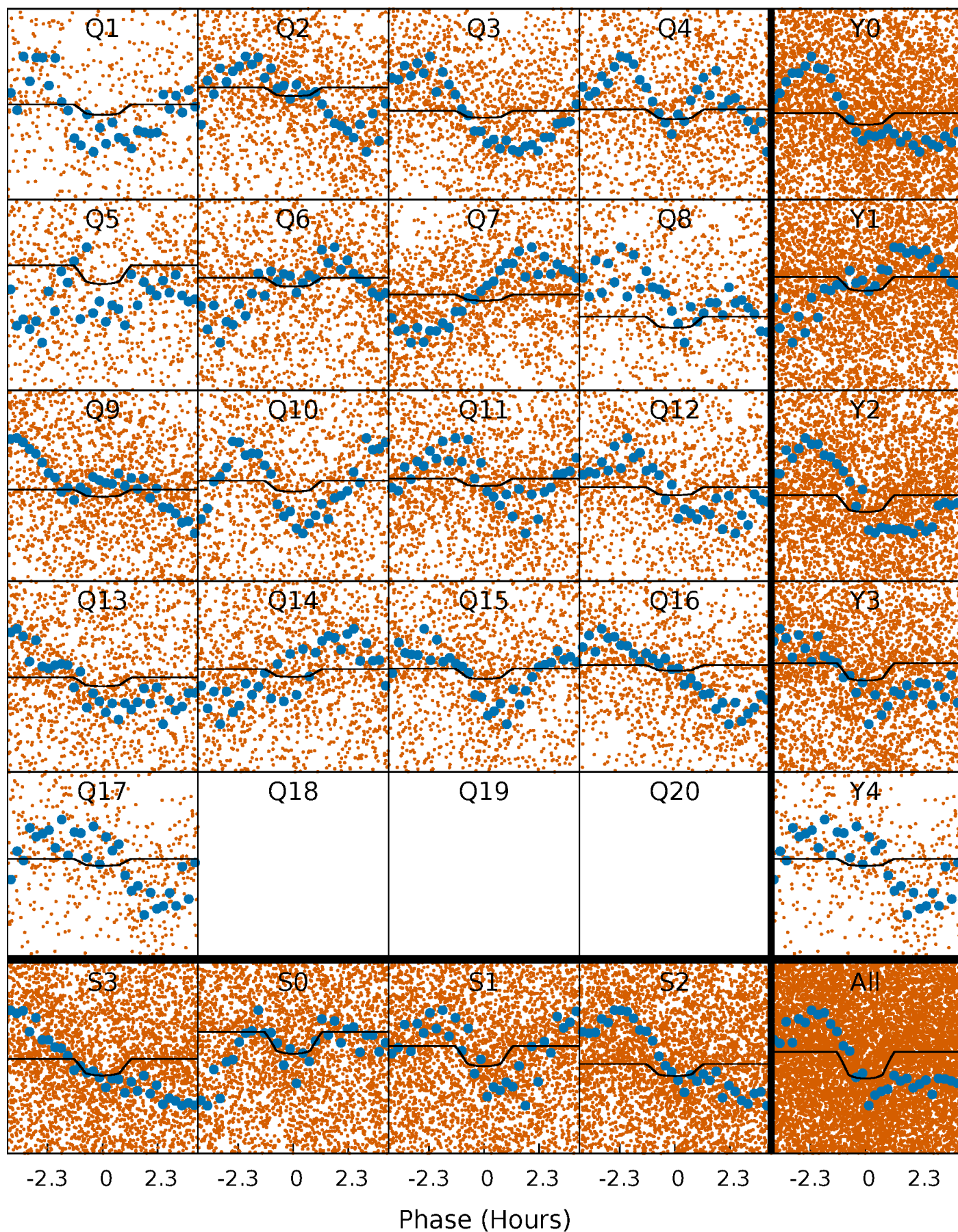
PDC Quarter-Phased Transit Curves

TCE 005812973-01 P= 0.717425 Days $T_0=131.540313$ (BKJD)



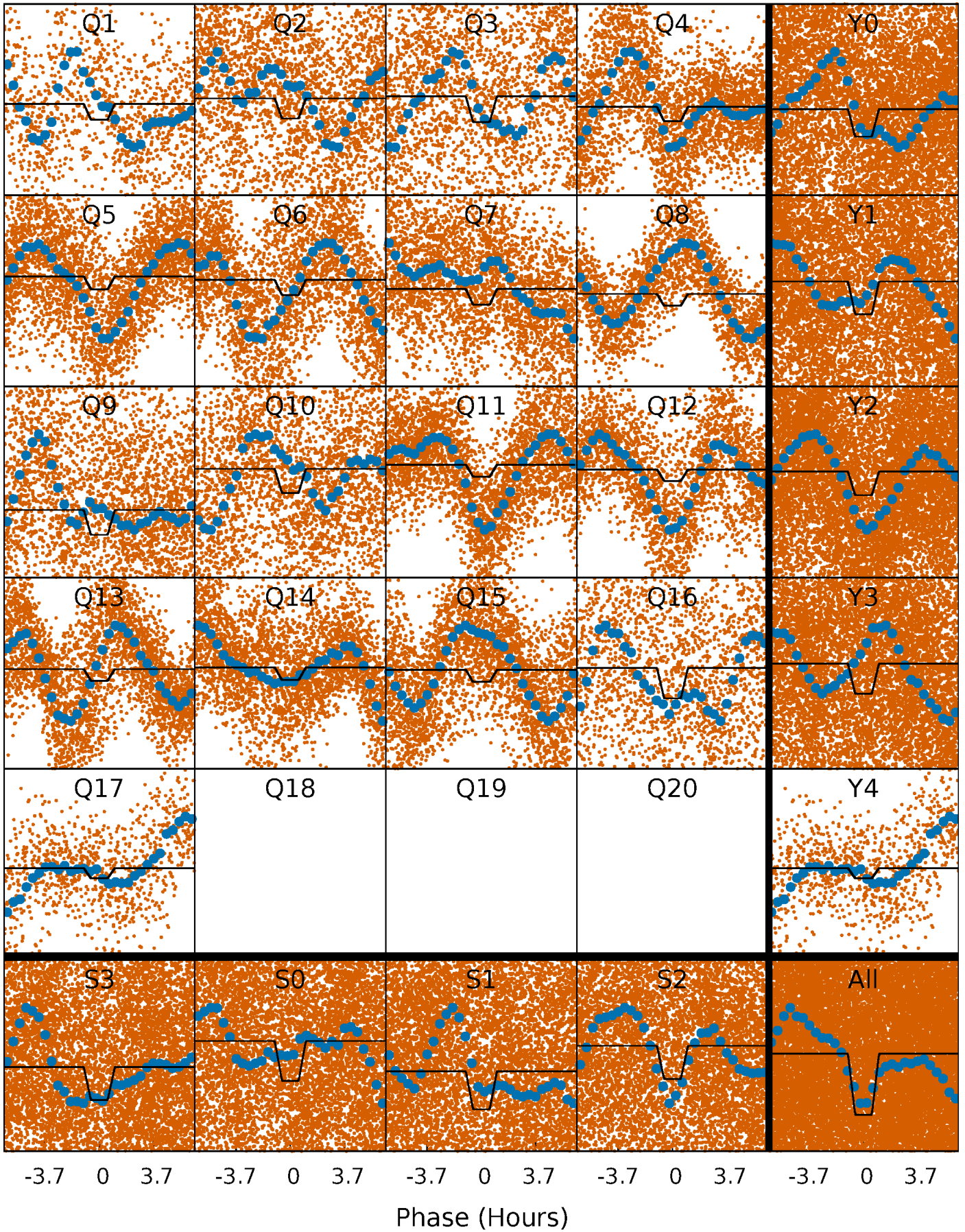
DV Quarter-Phased Transit Curves

TCE 005812973-01 P= 0.717425 Days $T_0=131.540313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

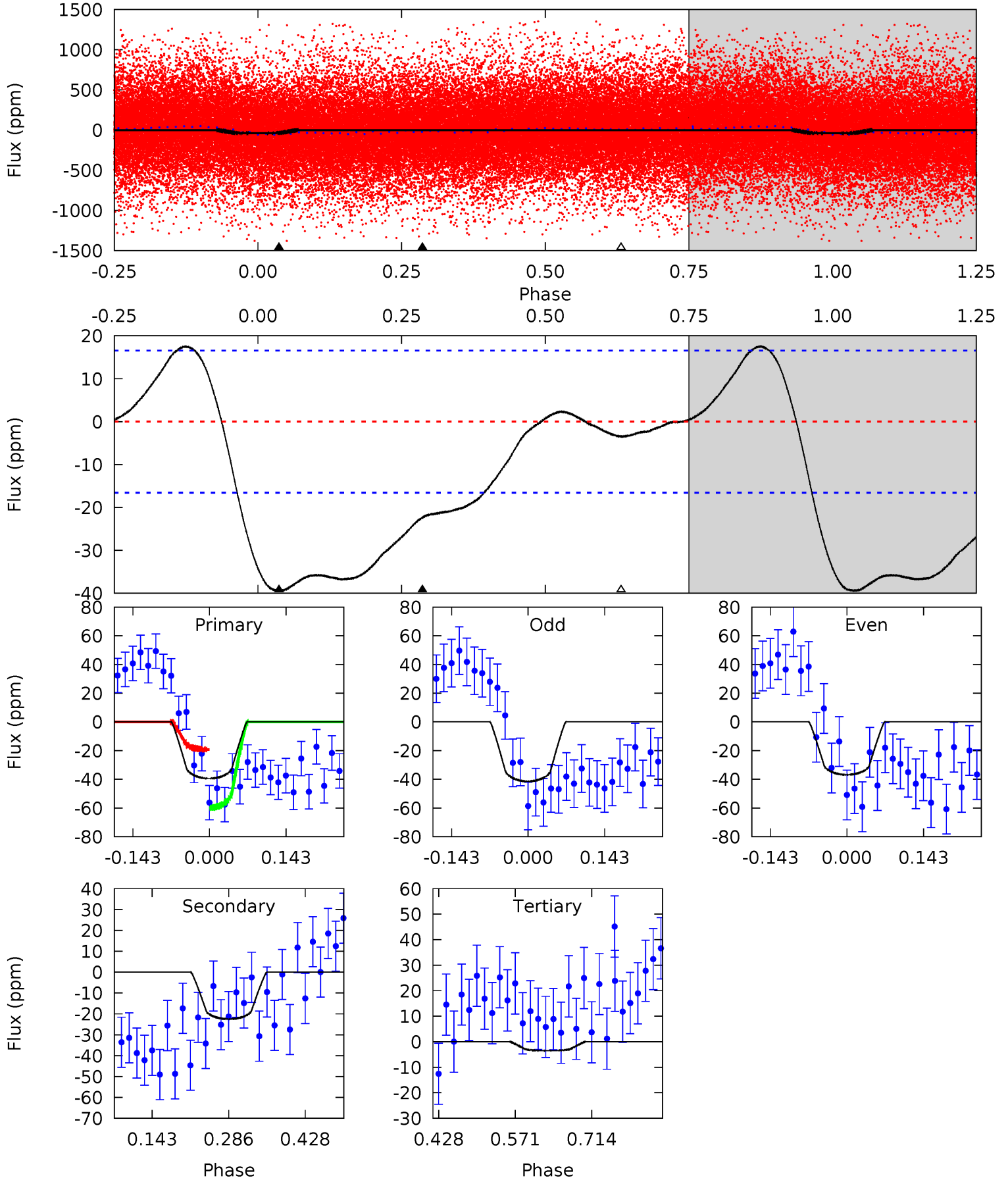
TCE 005812973-01 P= 0.717447 Days $T_0=131.527941$ (BKJD)



DV Model-Shift Uniqueness Test

005812973-01, P = 0.717425 Days, E = 130.822888 Days

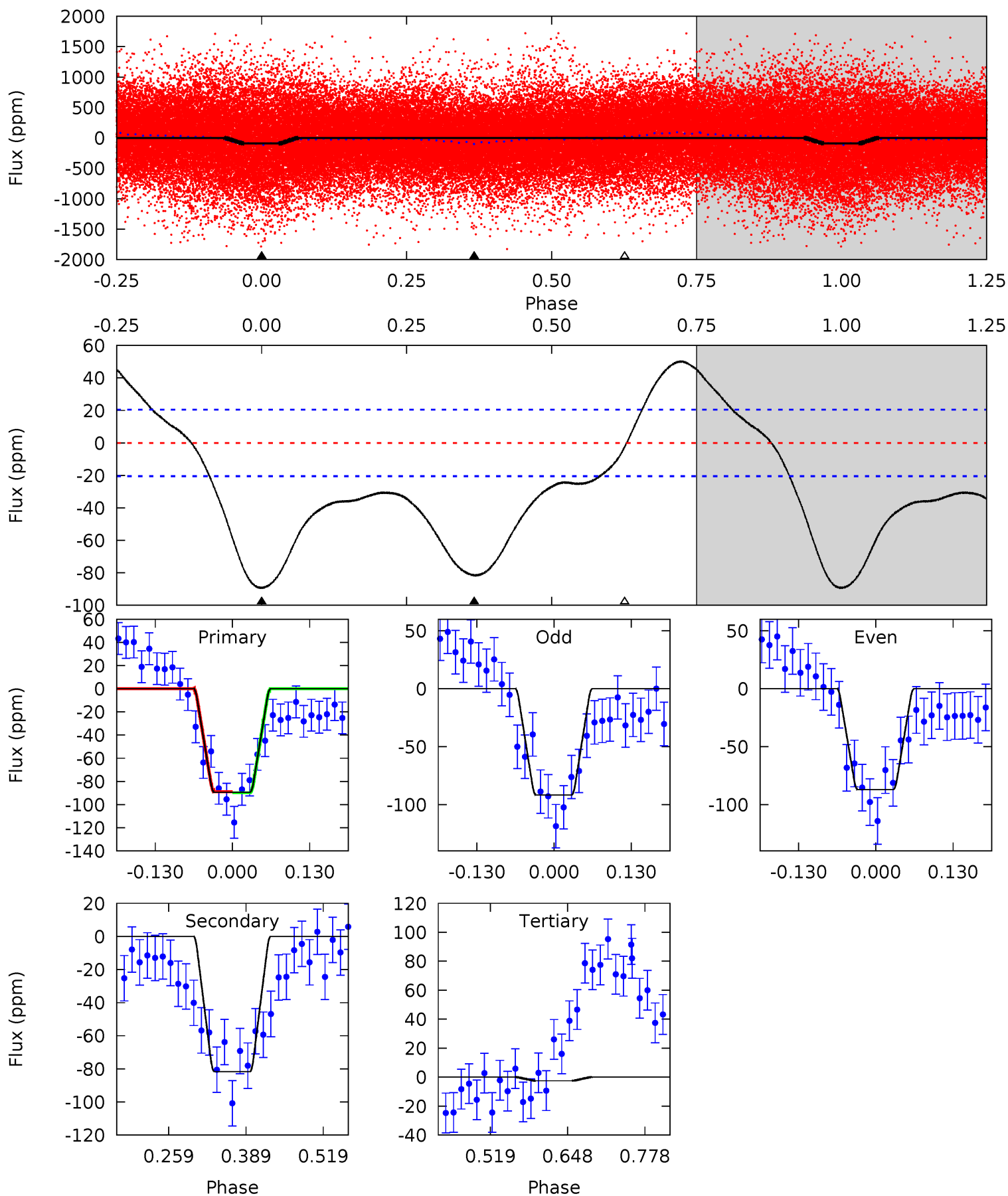
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	6.09	0.95	0	4.49	1.47	1.77	9.73	10.7	5.13	6.09	0.63	2.06	0.31	5.49



Alt Model-Shift Uniqueness Test

005812973-01, P = 0.717447 Days, E = 130.810494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	18.0	0.55	0	4.51	1.52	6.63	19.2	19.7	17.5	18.0	0.52	1.01	0.36	0.11



Stellar Parameters For KIC 005812973

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6223^{+479}_{-1439}	$2.712^{+0.184}_{-0.225}$	$0.070^{+0.150}_{-0.500}$	$13.602^{+3.571}_{-5.356}$	$3.480^{+0.113}_{-2.268}$	$0.002^{+0.002}_{-0.001}$
	+8%/-23%	+7%/-8%	+214%/-714%	+26%/-39%	+3%/-65%	+126%/-48%
Source	PHO1	FLK73	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 005812973-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 4	$8.64^{+4.10}_{-3.23}$	9080^{+1149}_{-1959}	-6388^{+2190}_{-1560}	$0.088^{+0.123}_{-0.046}$
Alt.	-82 ± 5	$15.76^{+4.31}_{-3.70}$	8957^{+1312}_{-2040}	-6431^{+1655}_{-1457}	$0.097^{+0.054}_{-0.037}$

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 $A_{obs} \gg 1.0$

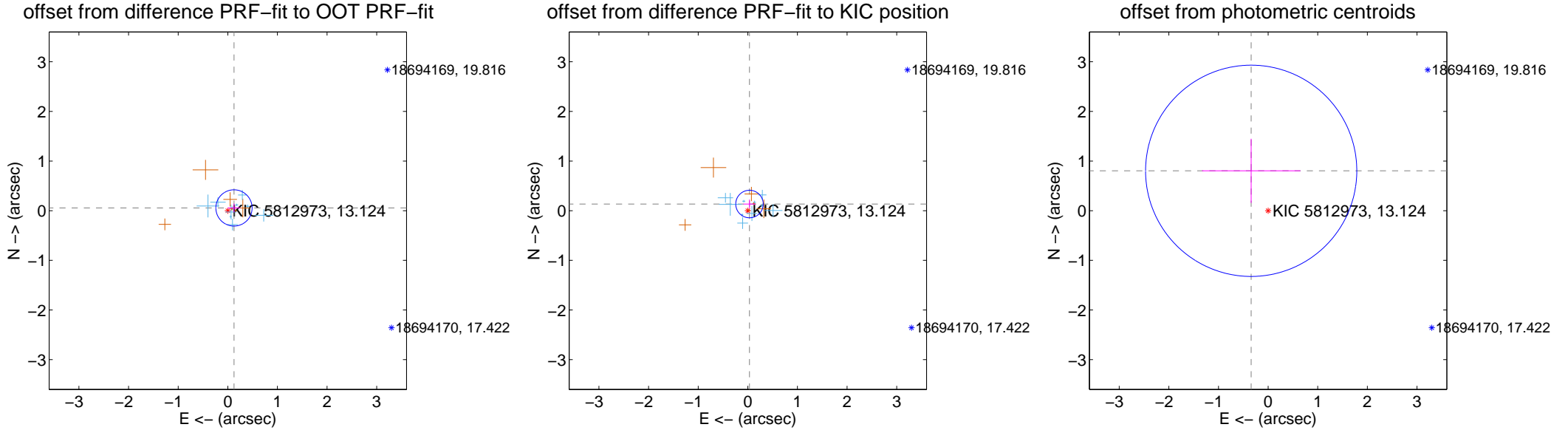
DV Centroid Data

Supplemental centroid analysis for 005812973-01. Kepler magnitude: 13.12. Transit SNR 6.93

There are 10 quarters with good PRF difference image offsets

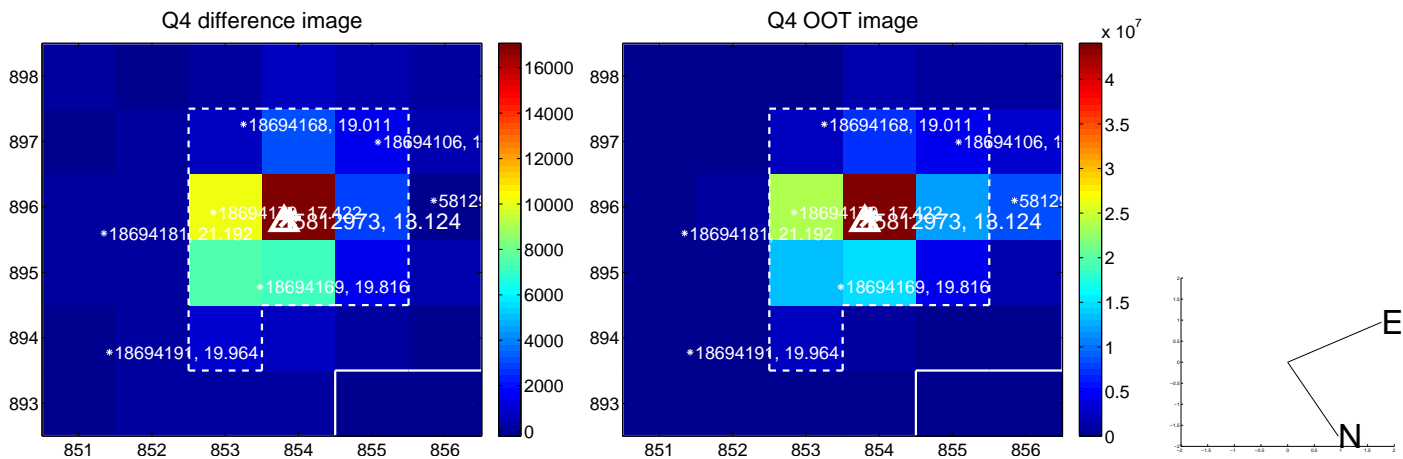
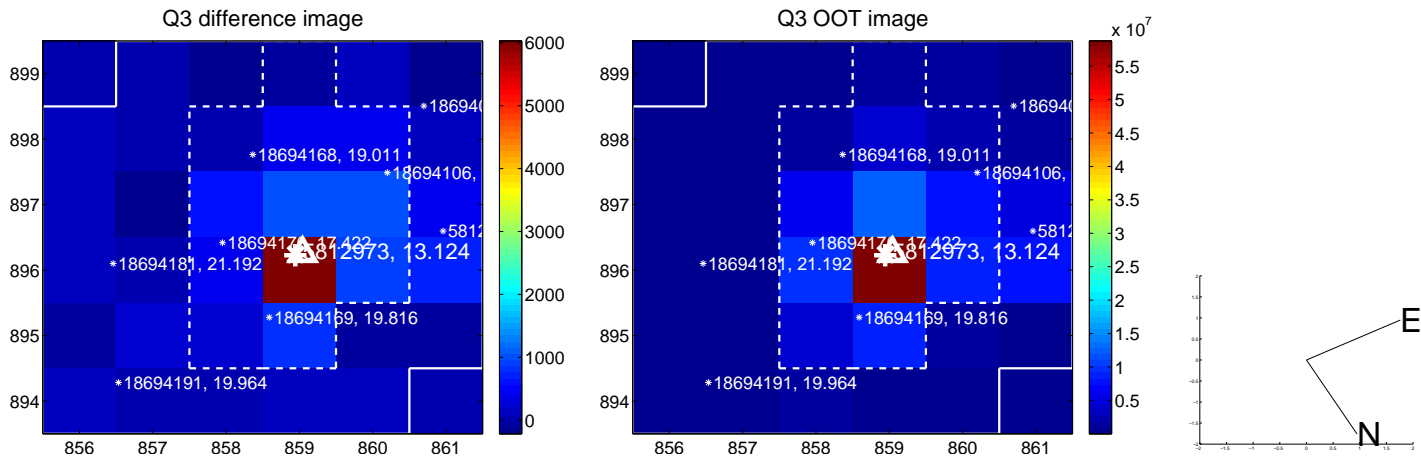
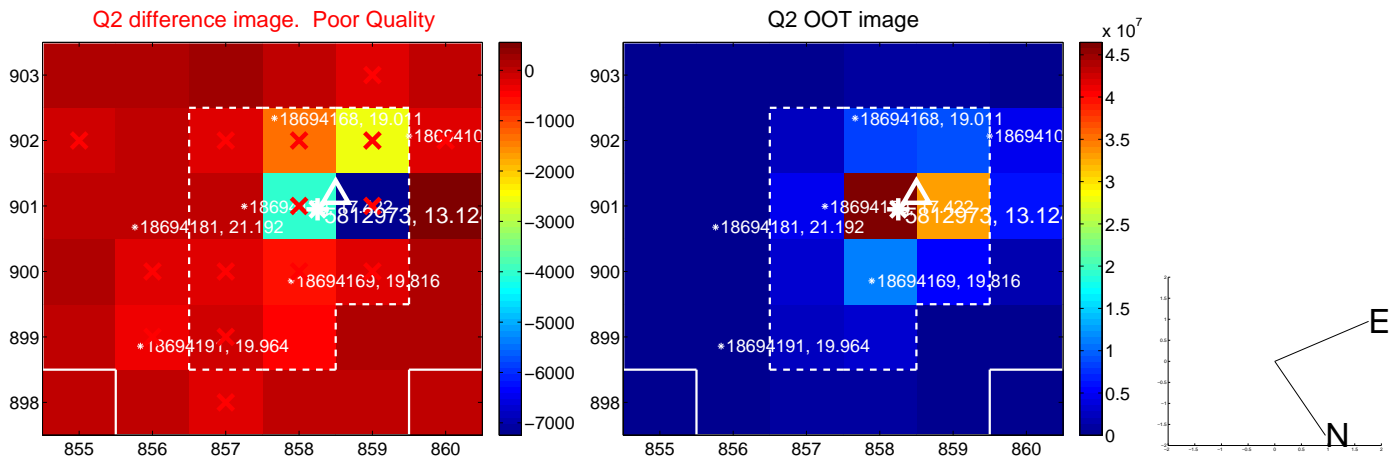
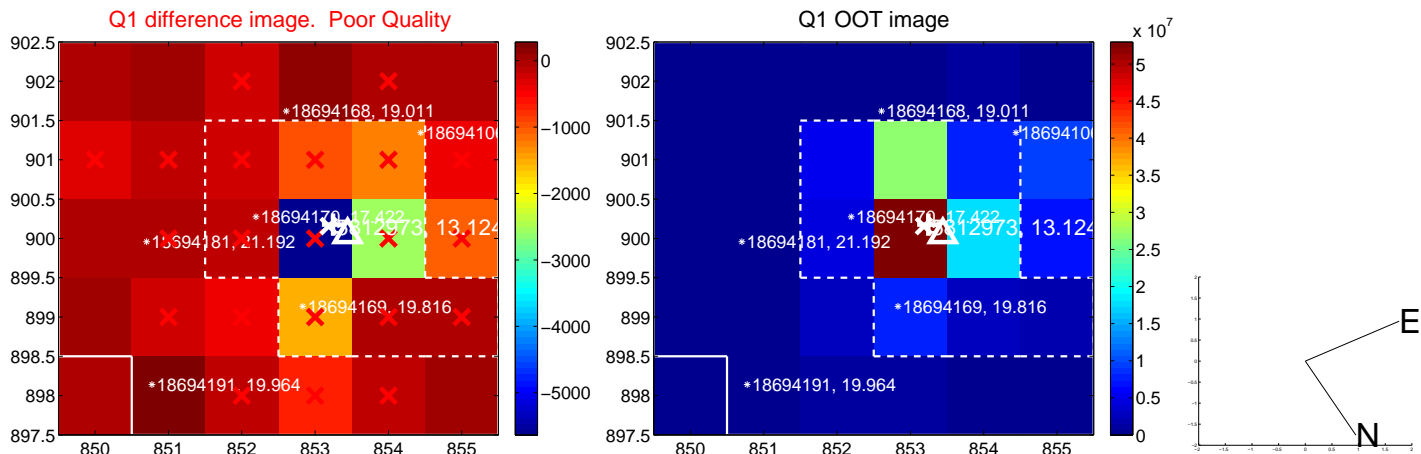
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.136 ± 0.122	1.12	-0.124 ± 0.127	0.056 ± 0.089
PRF-fit source offset from KIC position	0.138 ± 0.092	1.50	-0.034 ± 0.121	0.134 ± 0.090
photometric centroid source offset	0.87 ± 0.71	1.23	0.34 ± 0.99	0.80 ± 0.65

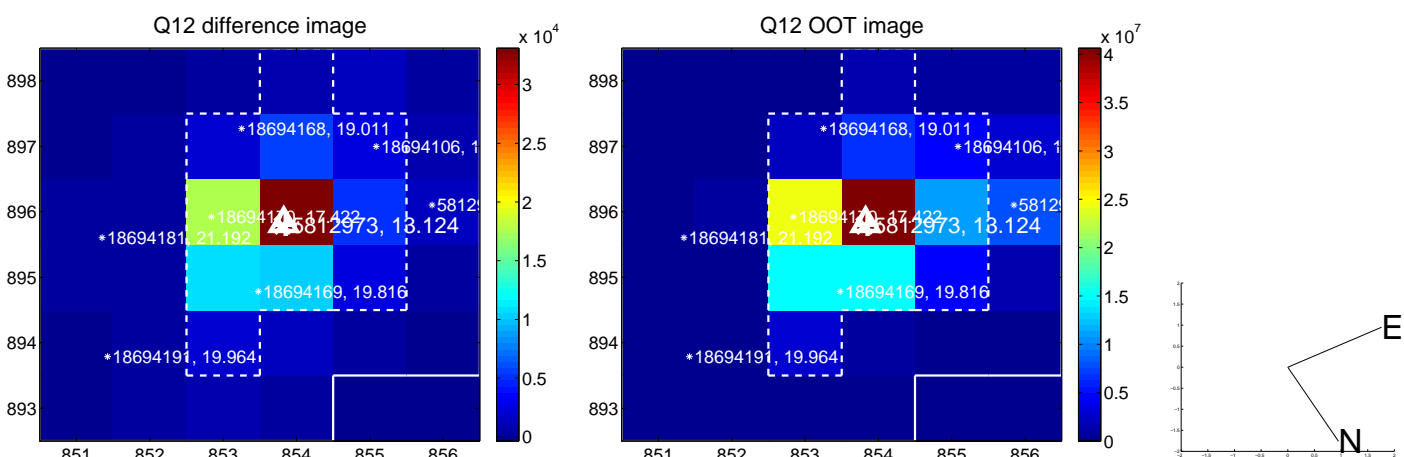
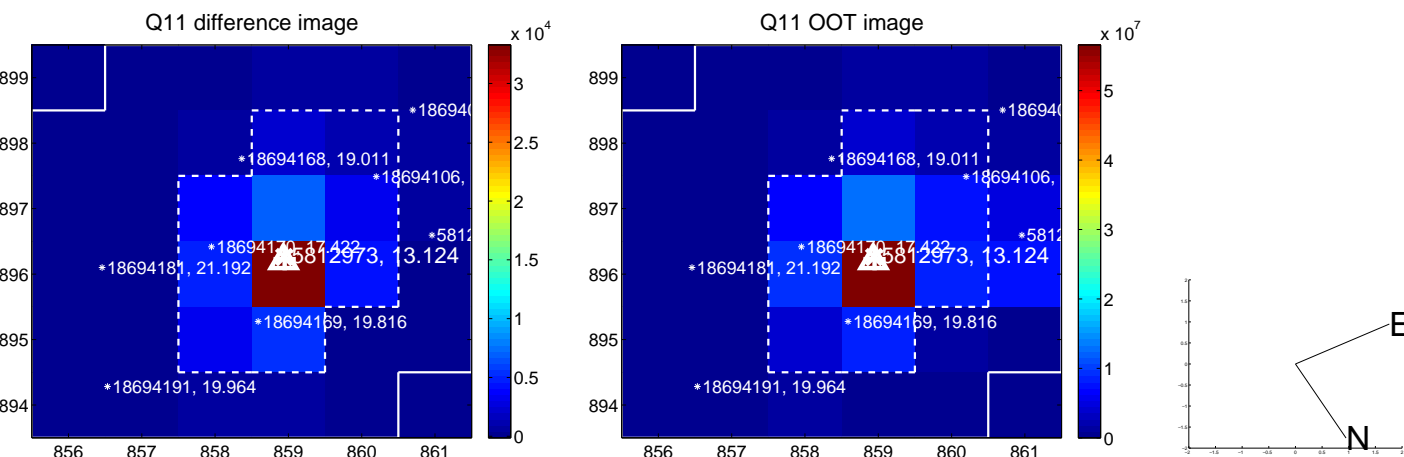
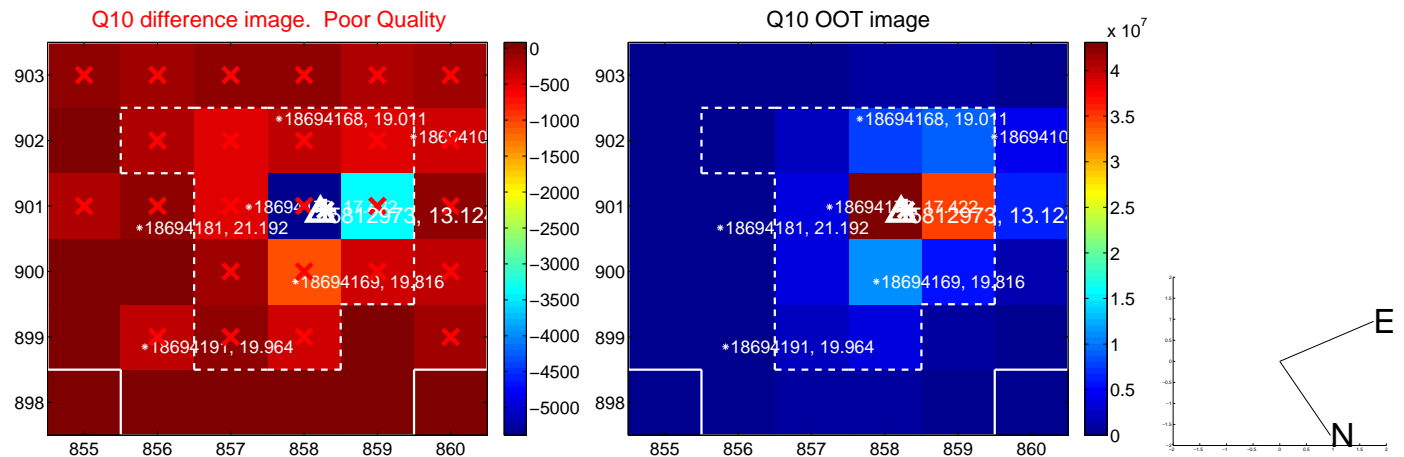
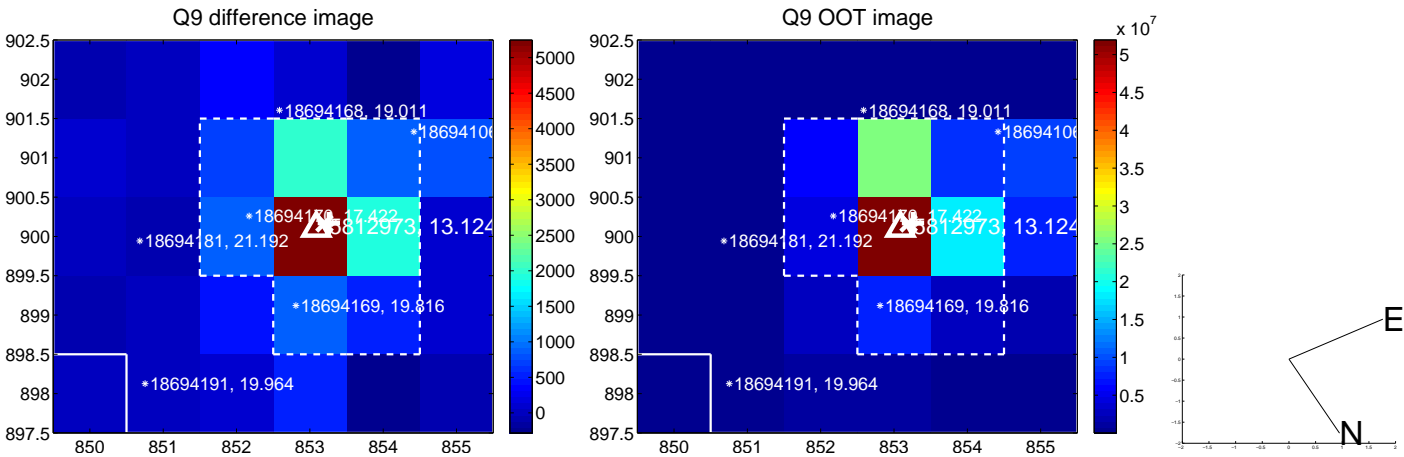


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

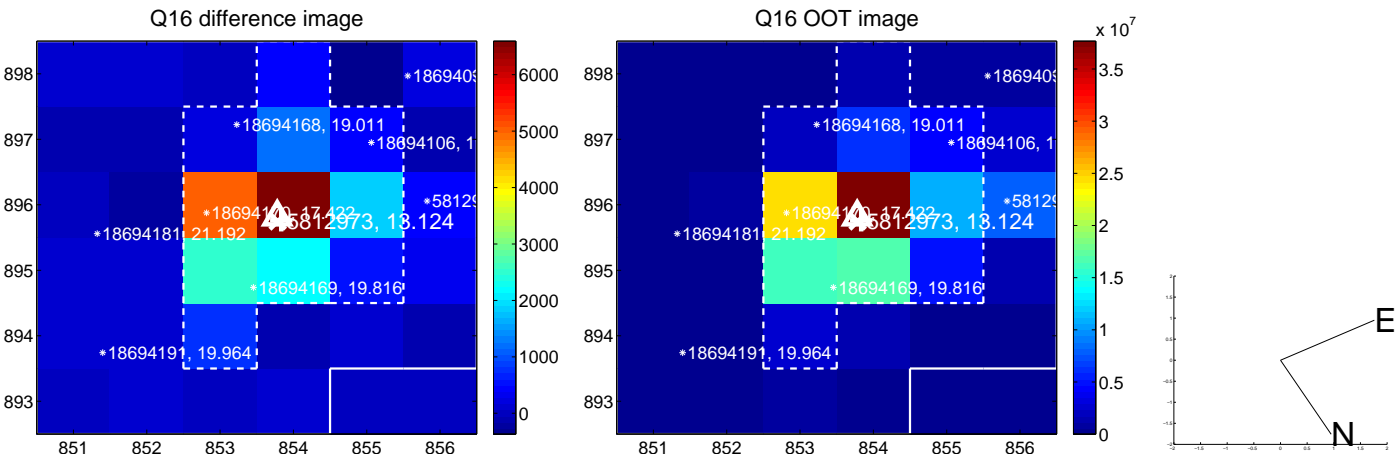
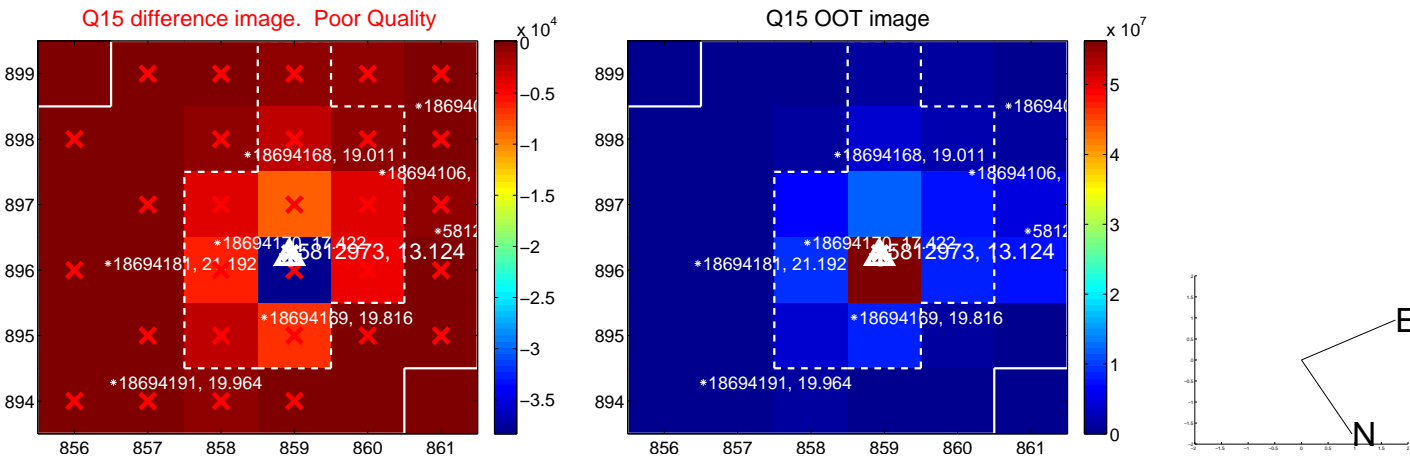
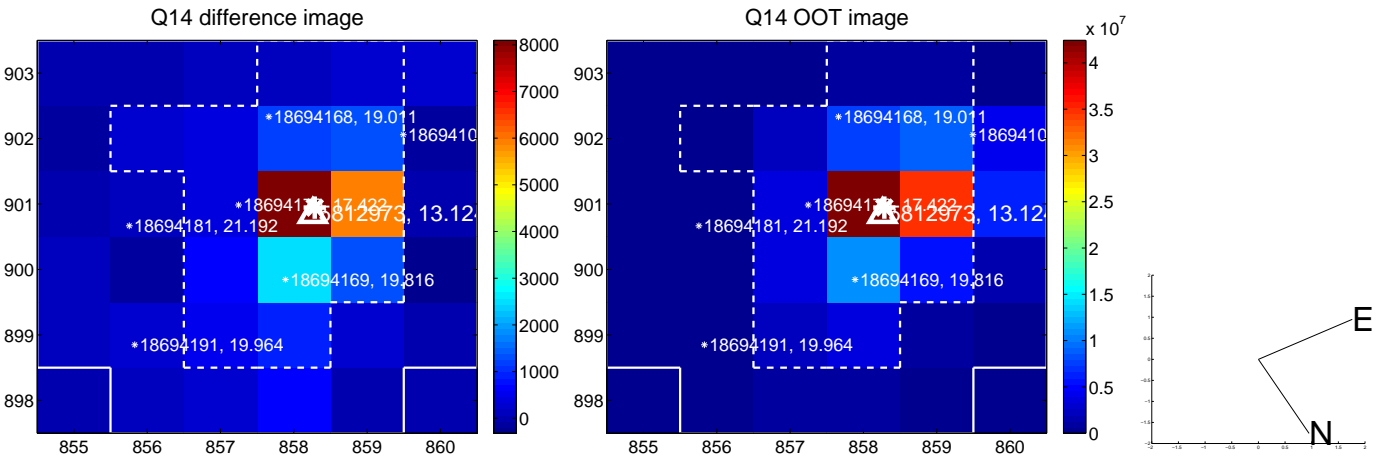
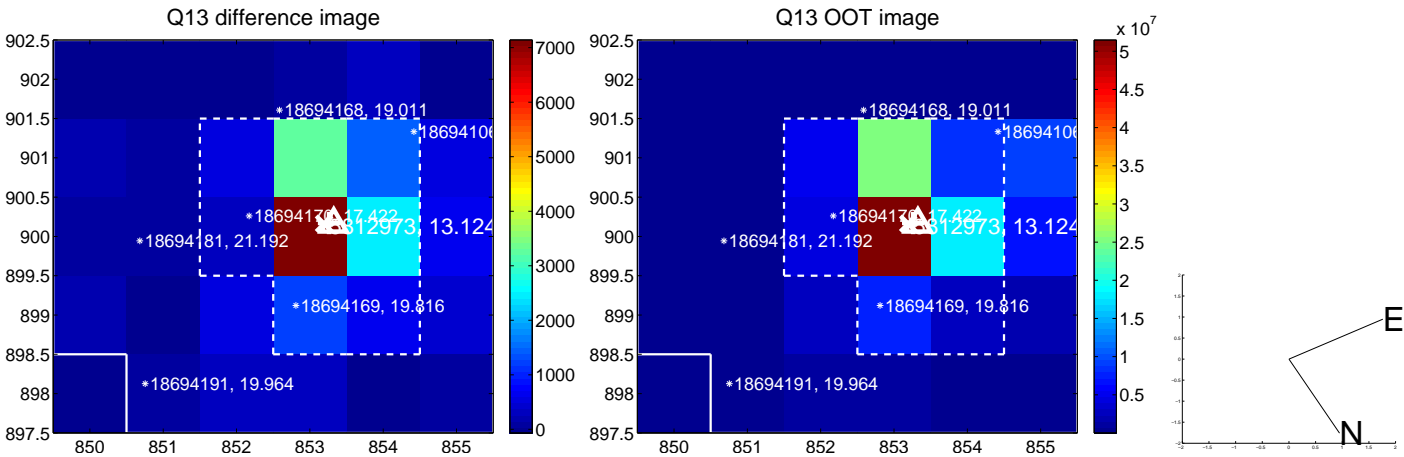
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



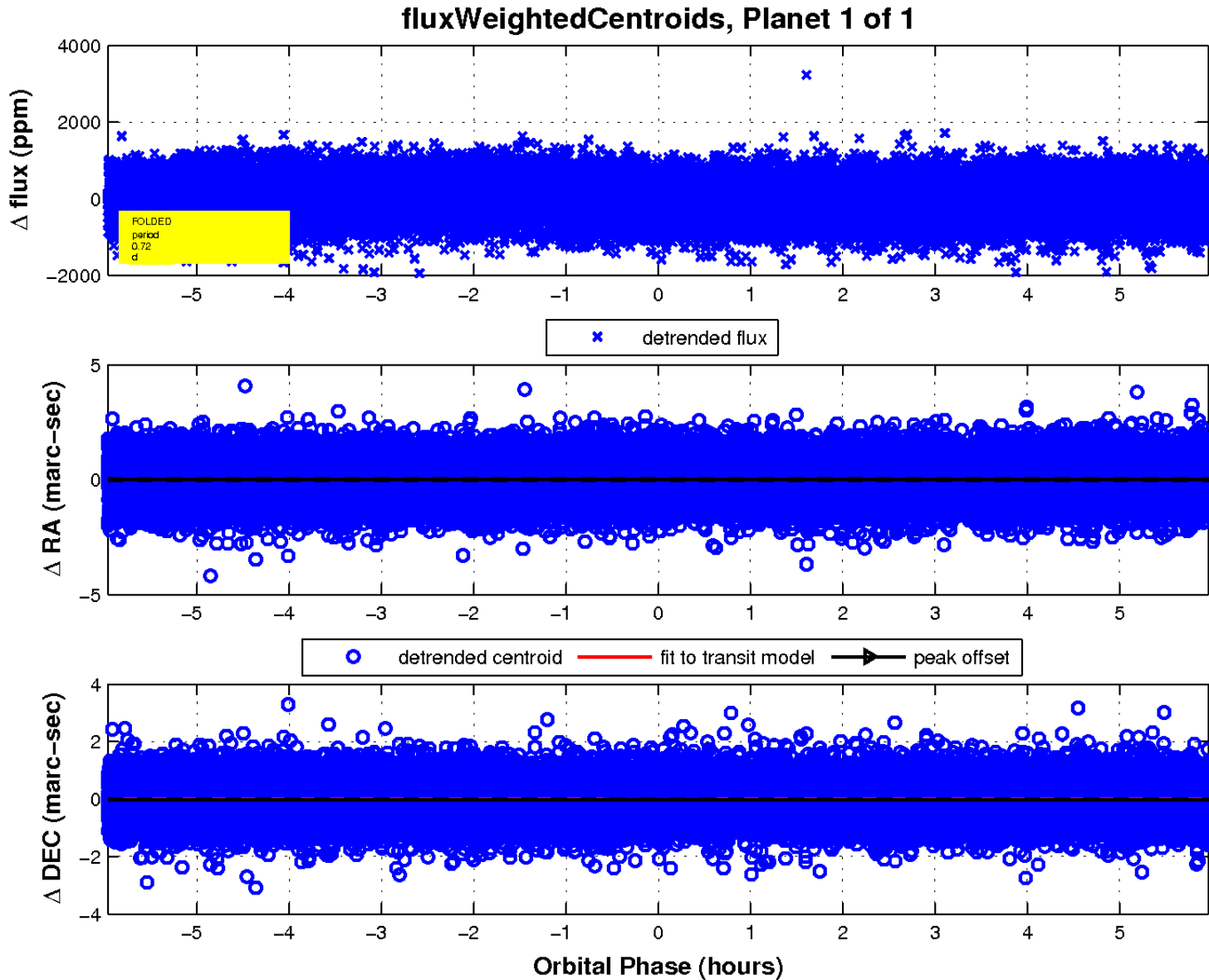
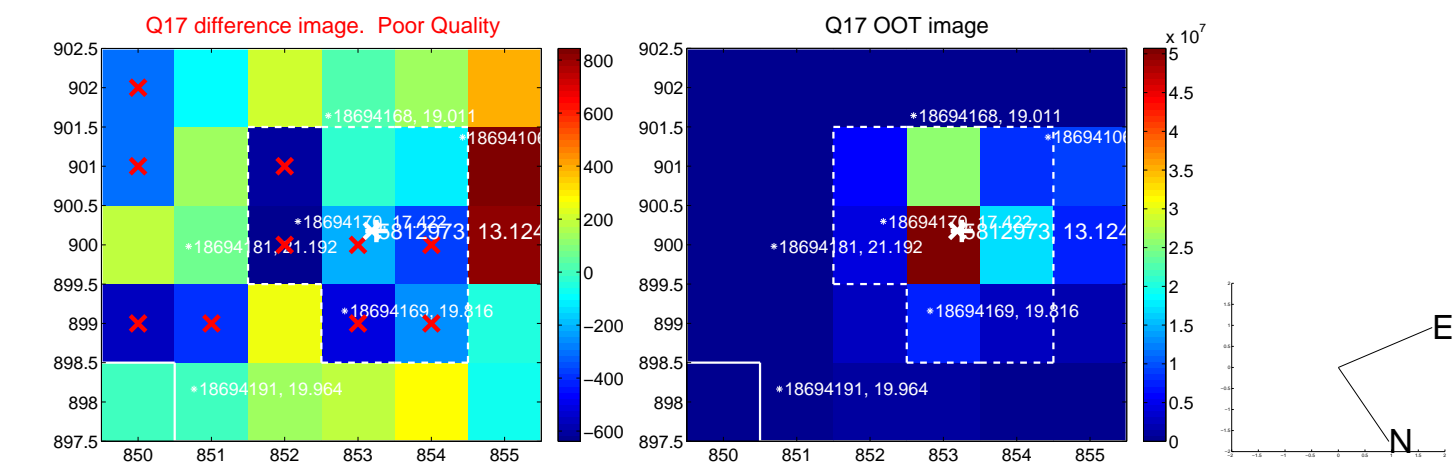
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

