

KIC 005040077

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})
005040077-01	OBS	3065.01	0.896378	132.302424	140.4	0.976	11.4	12.8	0.84	5837	1.03	2540.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005040077-01	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.

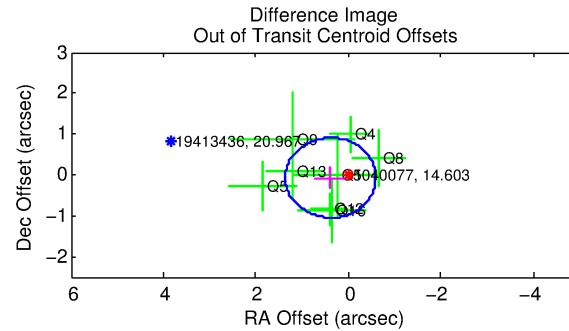
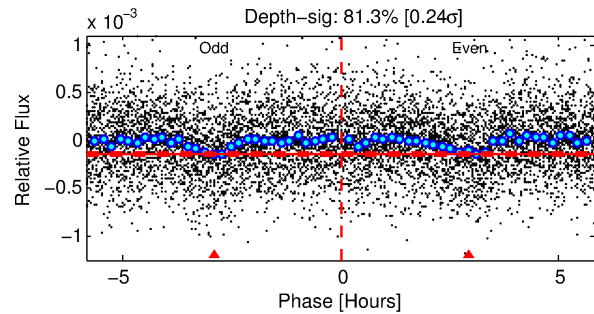
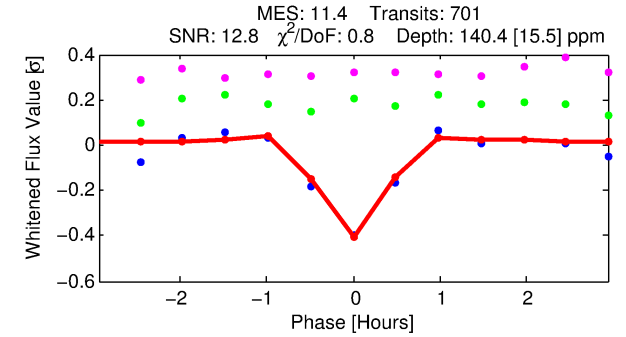
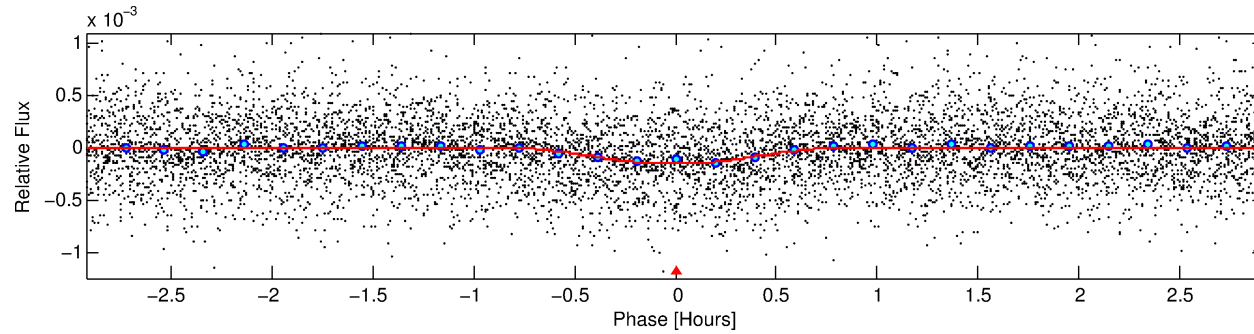
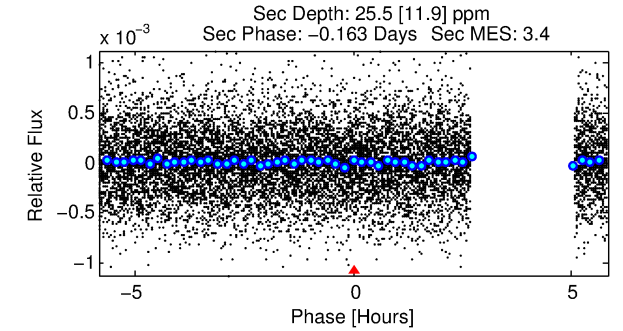
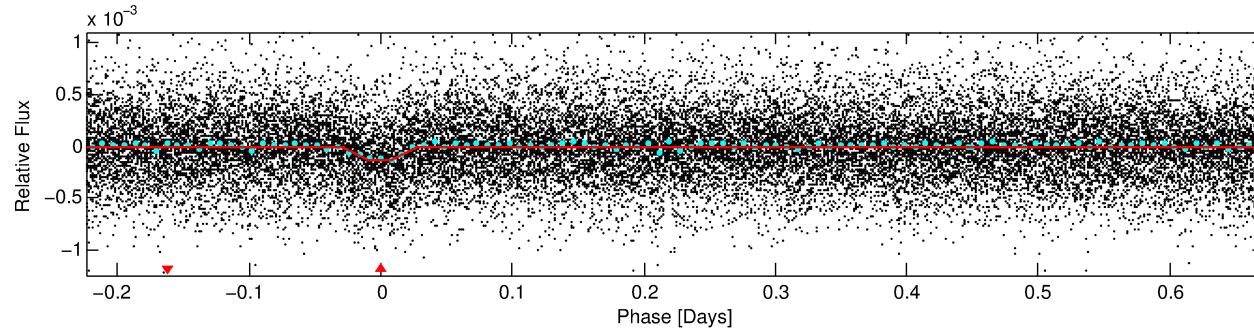
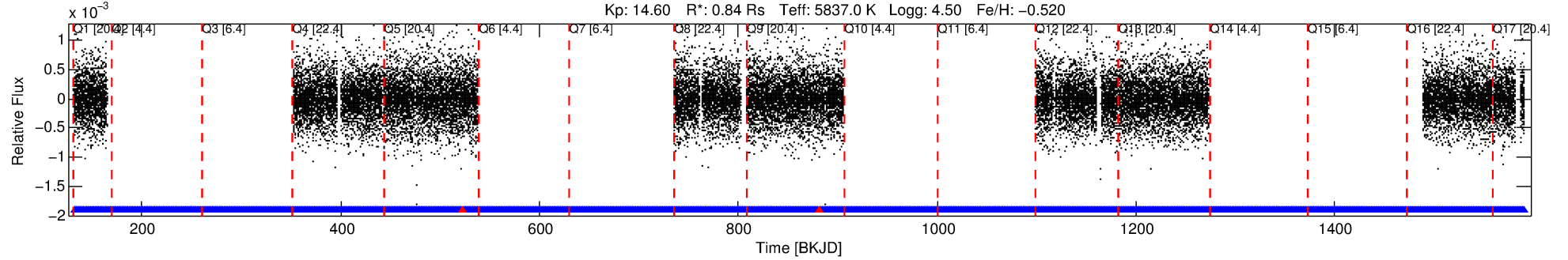
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005040077-01

No Significant Match Found

DV One-Page Summary

KIC: 5040077 Candidate: 1 of 1 Period: 0.896 d
KOI: K03065.01 Corr: 0.923



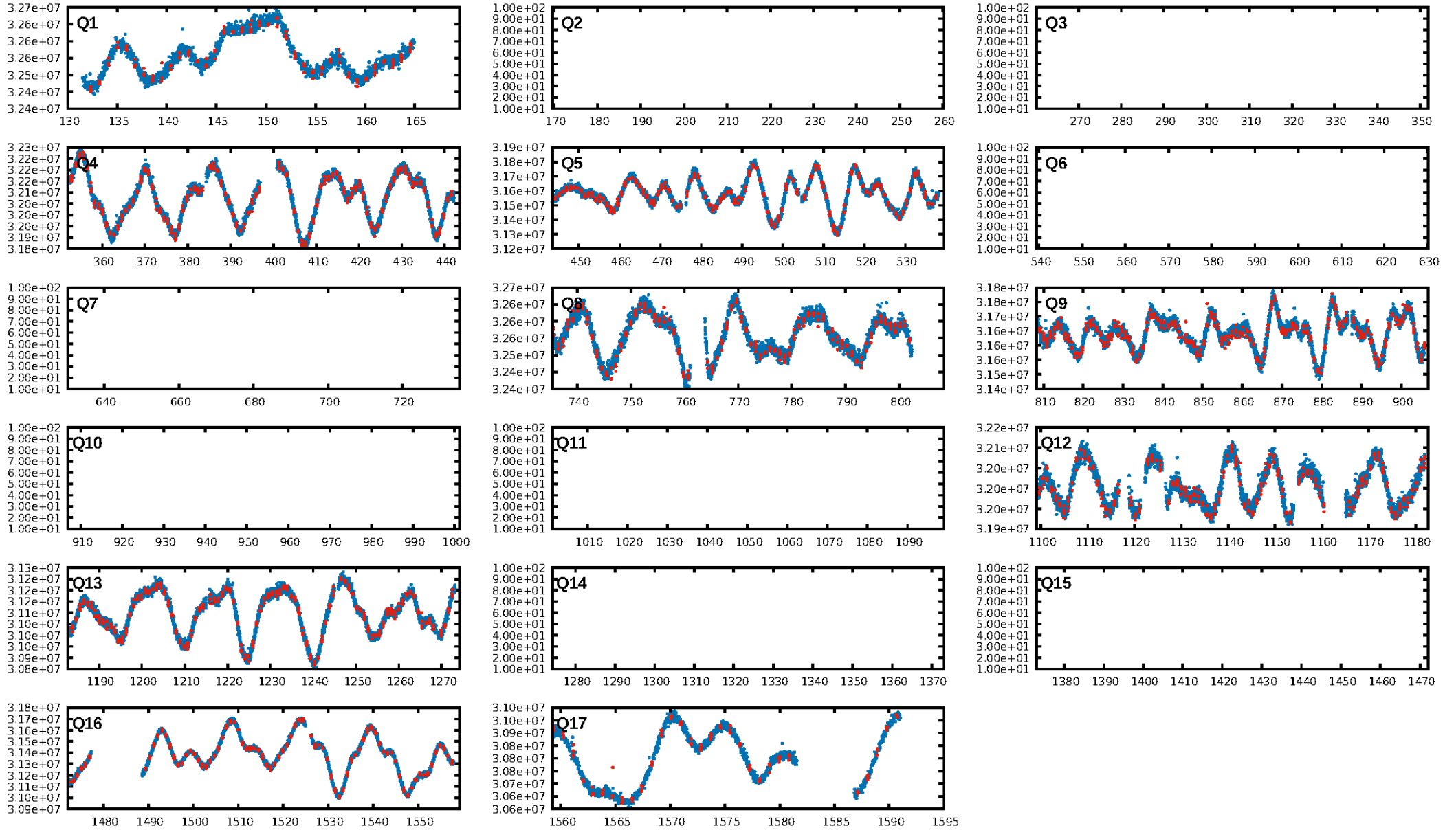
DV Fit Results:

Period = 0.89638 [0.00001] d
Epoch = 132.3024 [0.0013] BKJD
Rp/R* = 0.0112 [0.0056]
a/R* = 6.29 [14.94]
b = 0.48 [3.94]
Seff = 2540.29 [840.12]
Teff = 1810 [150] K
Rp = 1.03 [0.58] Re
a = 0.0171 [0.0036] AU
Ag = 3.82 [4.40] [0.64σ]
Teffp = 3914 [1094] K [1.91σ]

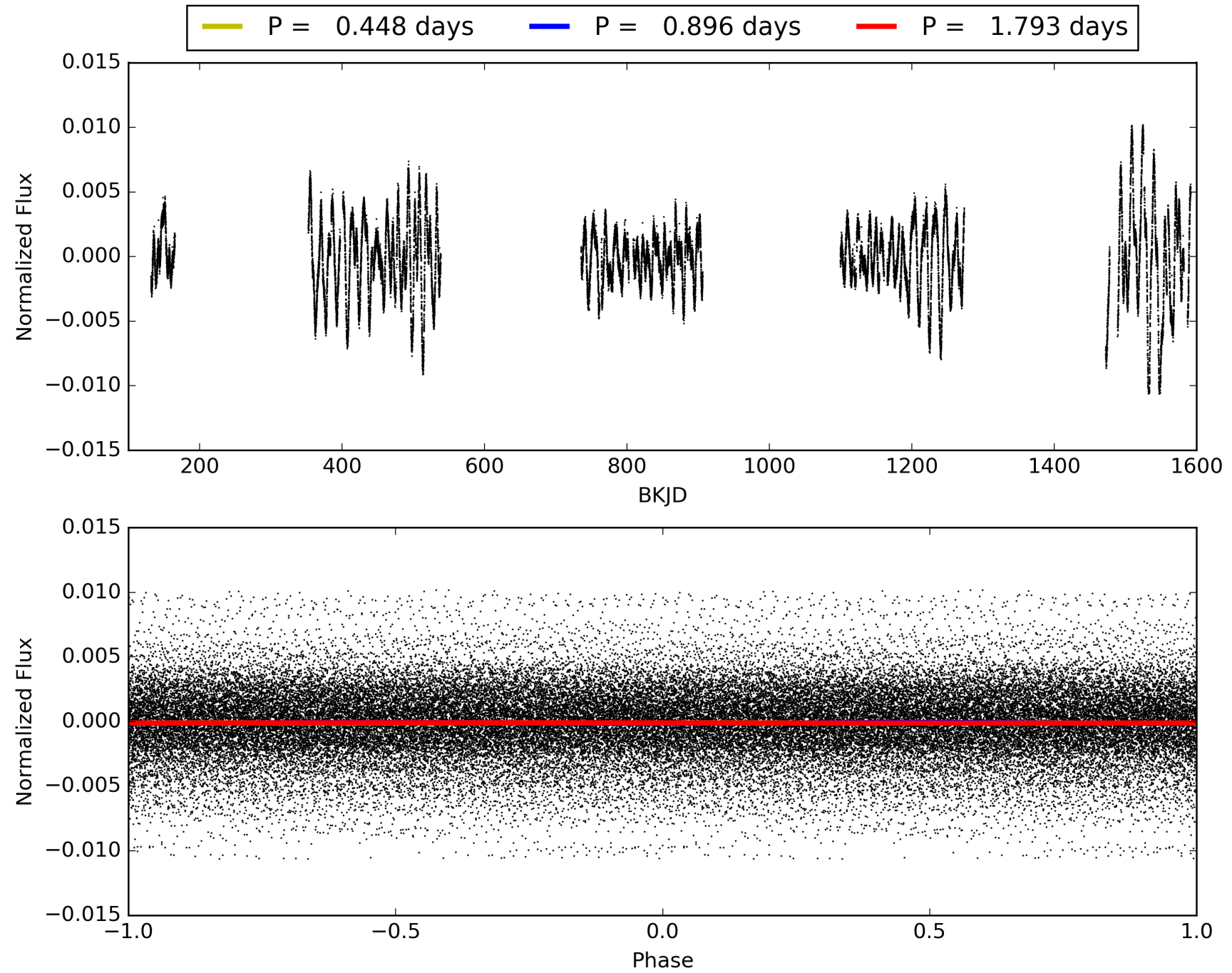
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.86e-31
RollingBand-fgt: 1.00 [632/634]
GhostDiagnostic-chr: 2.238
Centroid-sig: 0.0%
Centroid-so: 1.720 arcsec [1.74σ]
OotOffset-rm: 0.395 arcsec [1.21σ]
KicOffset-rm: 0.457 arcsec [1.41σ]
OotOffset-st: 0/0/4/4 [8]
KicOffset-st: 0/0/4/4 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 005040077-01, PDC Light Curves

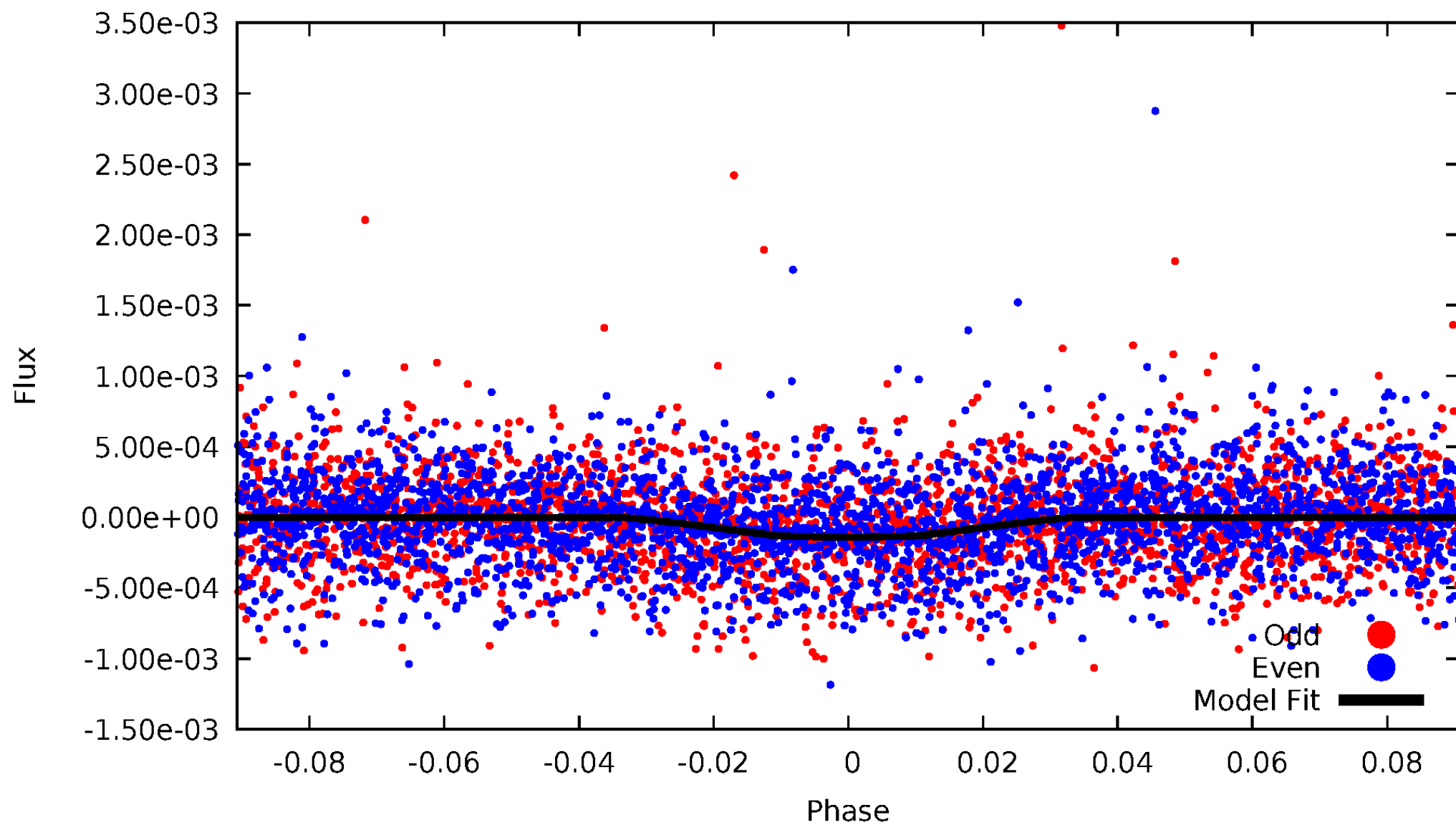


TCE 005040077-01



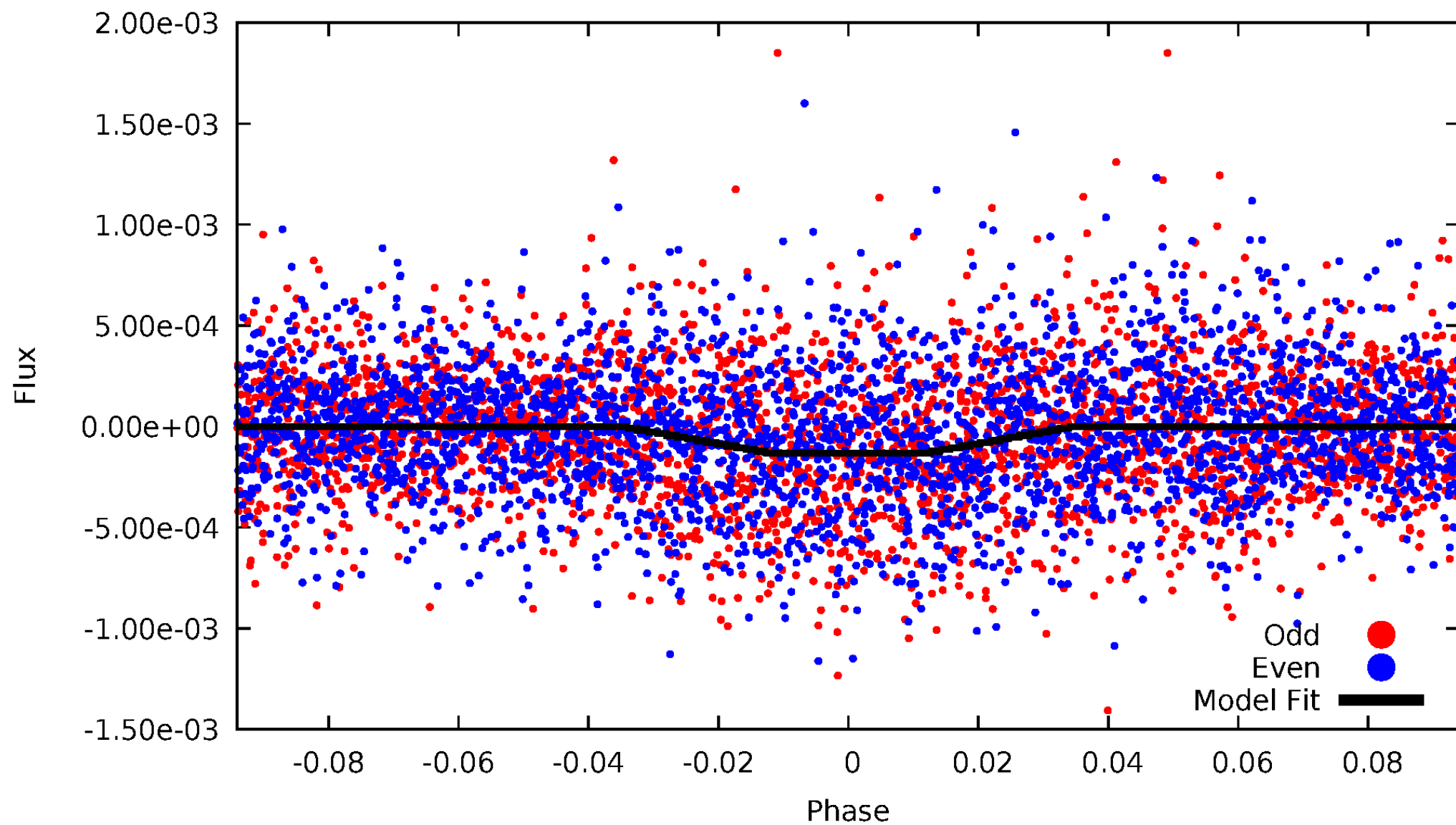
DV Odd/Even

TCE 005040077-01



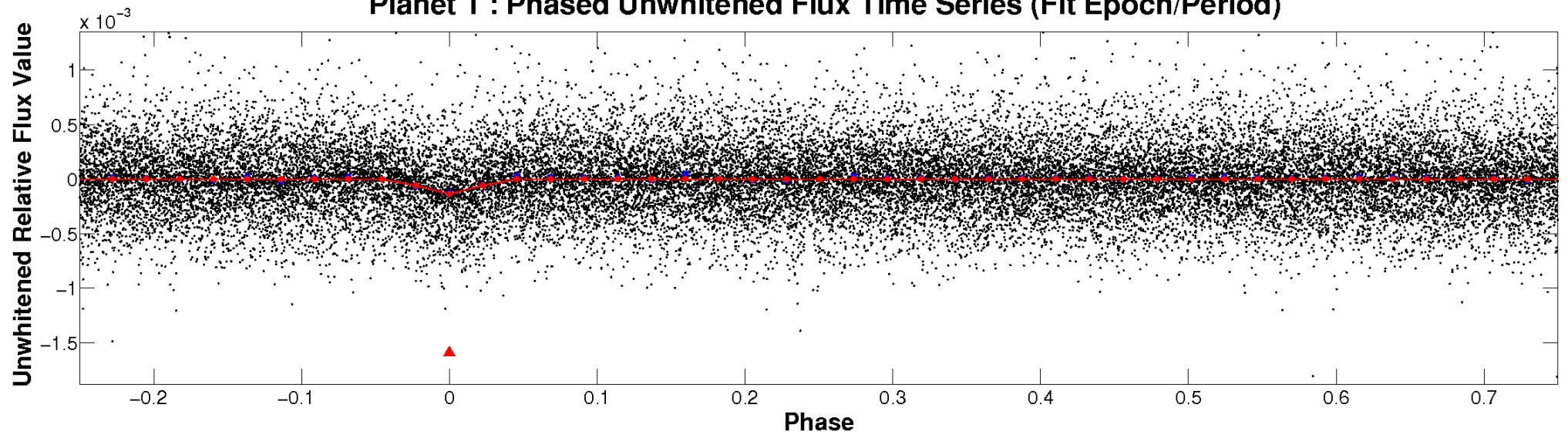
ALT Odd/Even

TCE 005040077-01

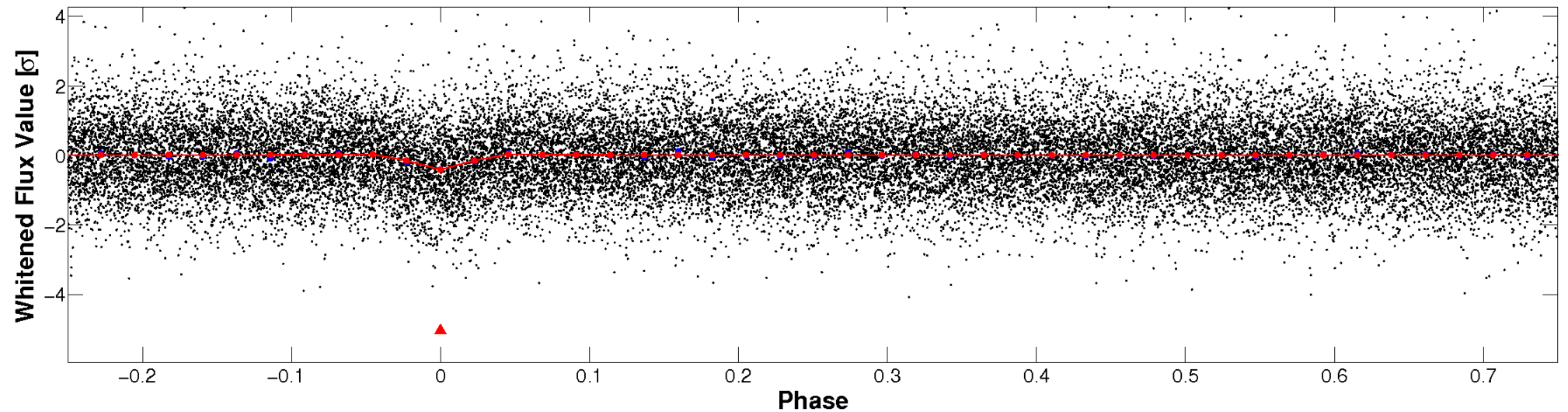


Non-Whitened Vs. Whitened Light Curve

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

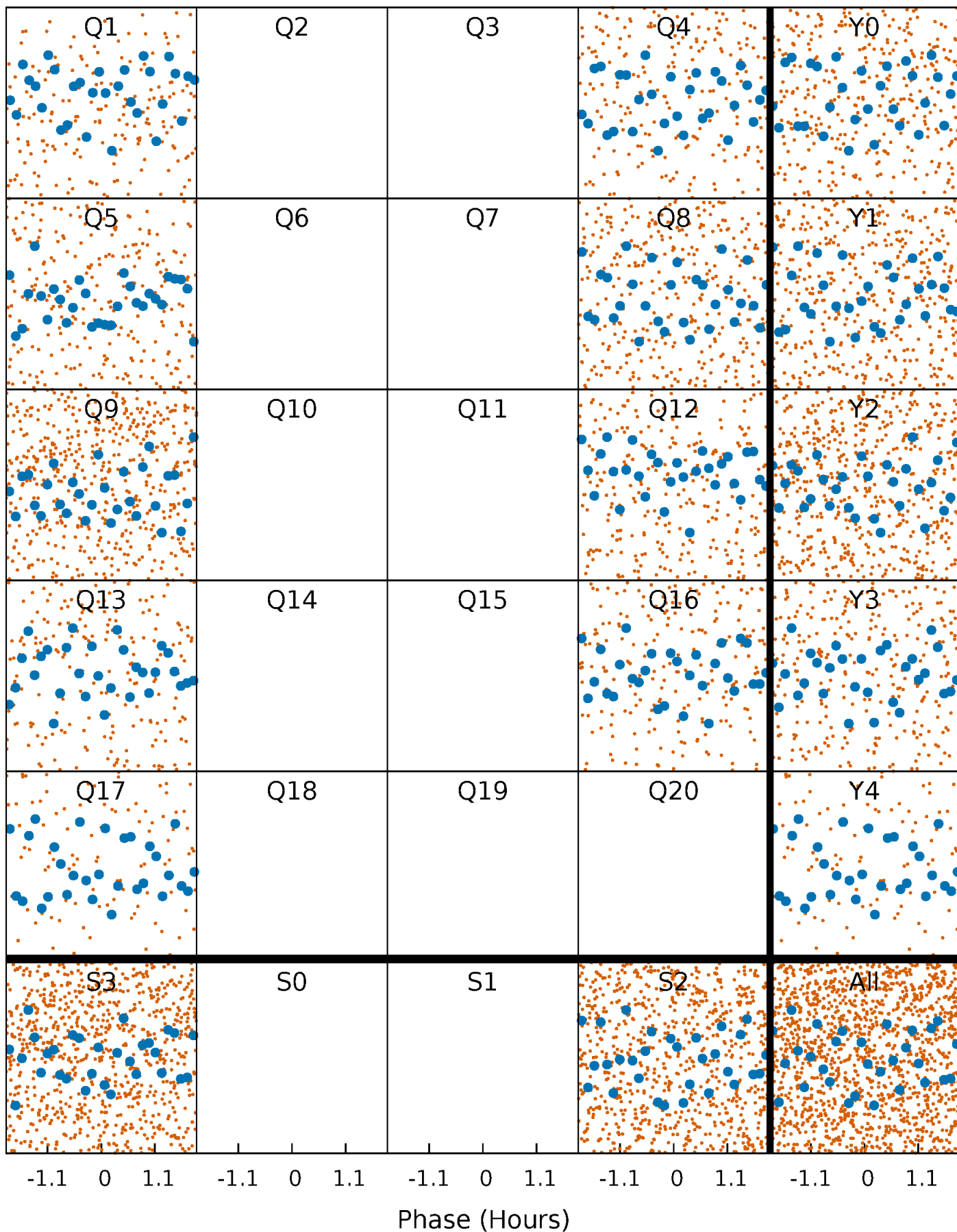


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



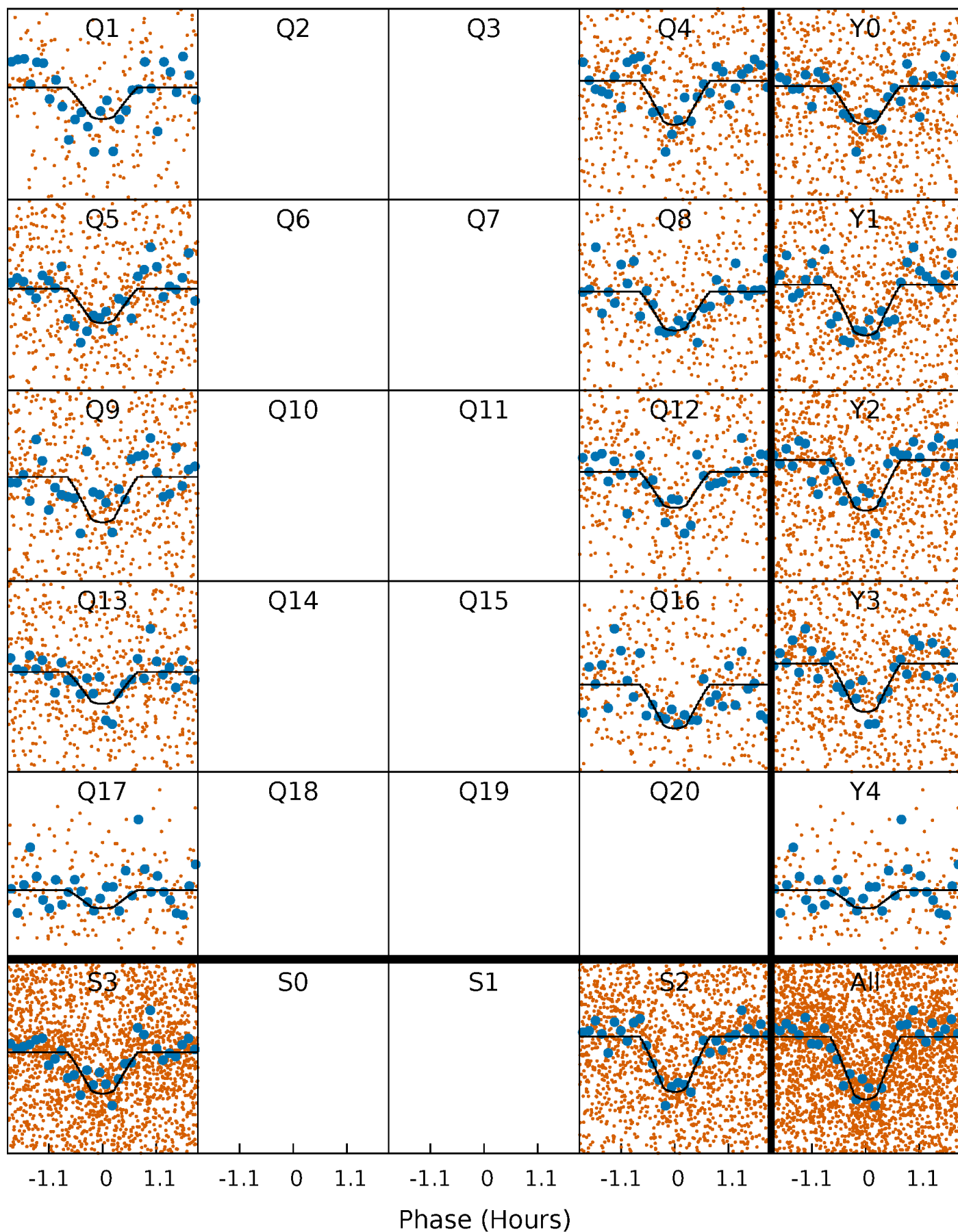
PDC Quarter-Phased Transit Curves

TCE 005040077-01 P= 0.896378 Days $T_0=132.302424$ (BKJD)



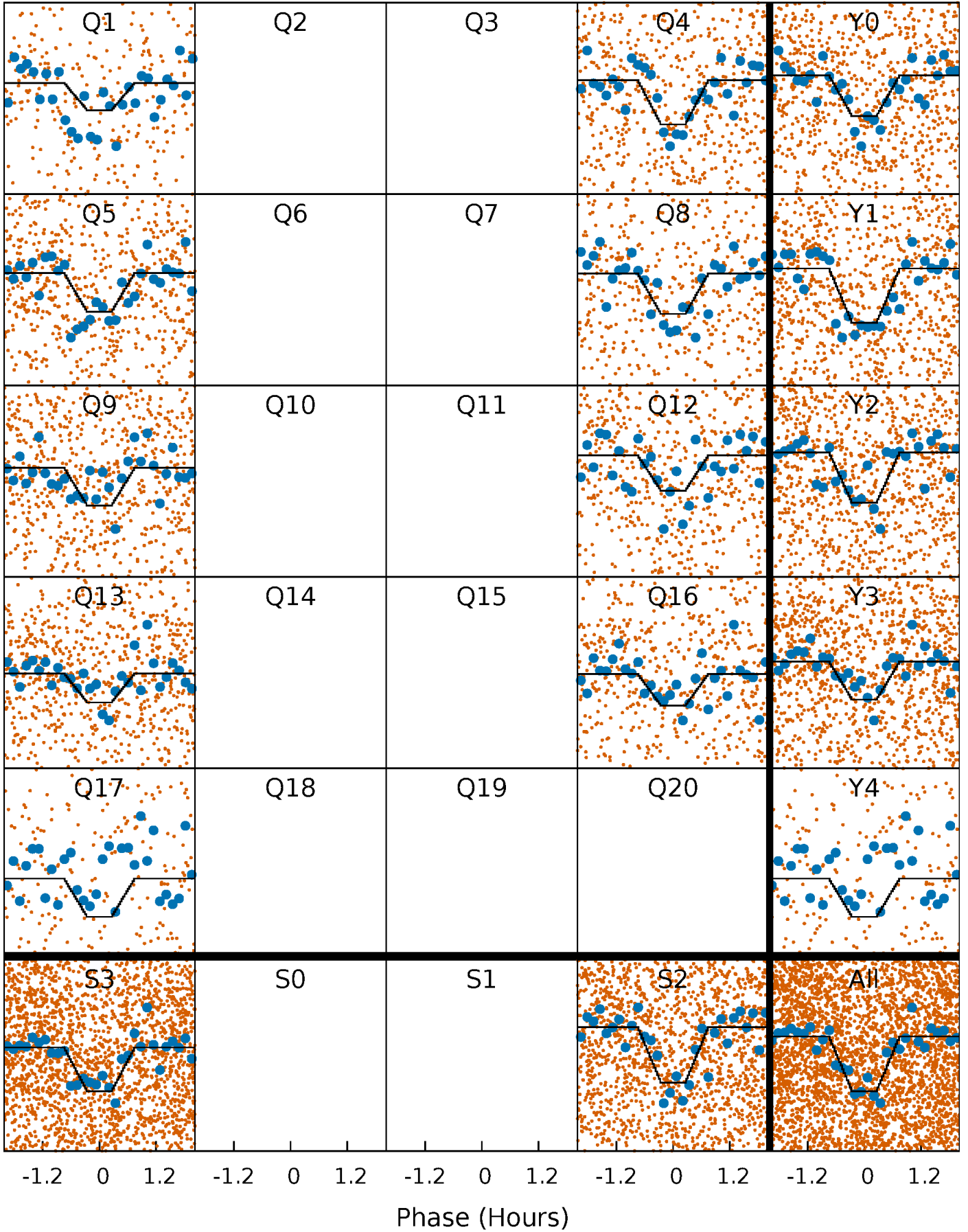
DV Quarter-Phased Transit Curves

TCE 005040077-01 P= 0.896378 Days $T_0=132.302424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

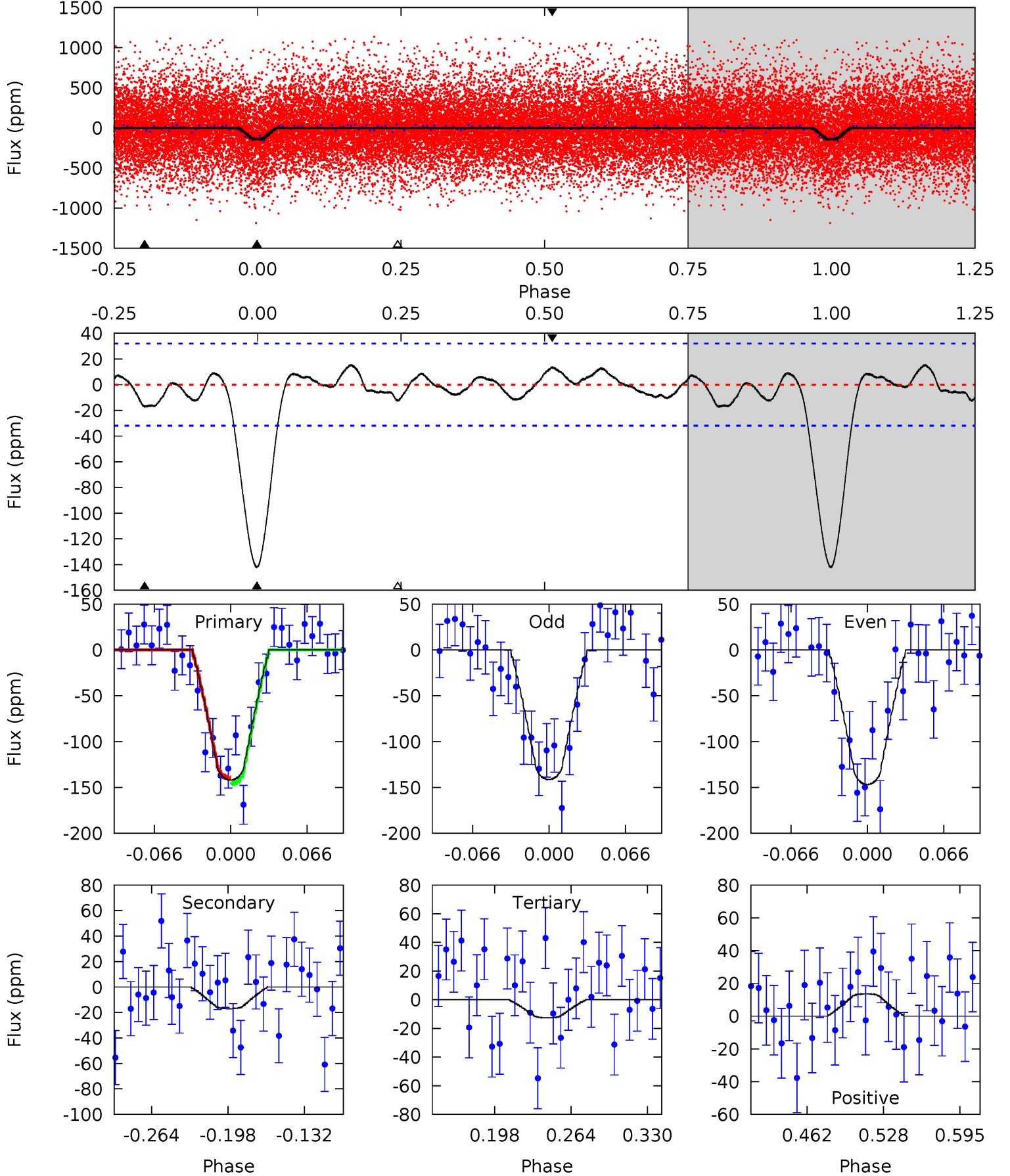
TCE 005040077-01 P= 0.896381 Days $T_0=132.298512$ (BKJD)



DV Model-Shift Uniqueness Test

005040077-01, P = 0.896378 Days, E = 131.406046 Days

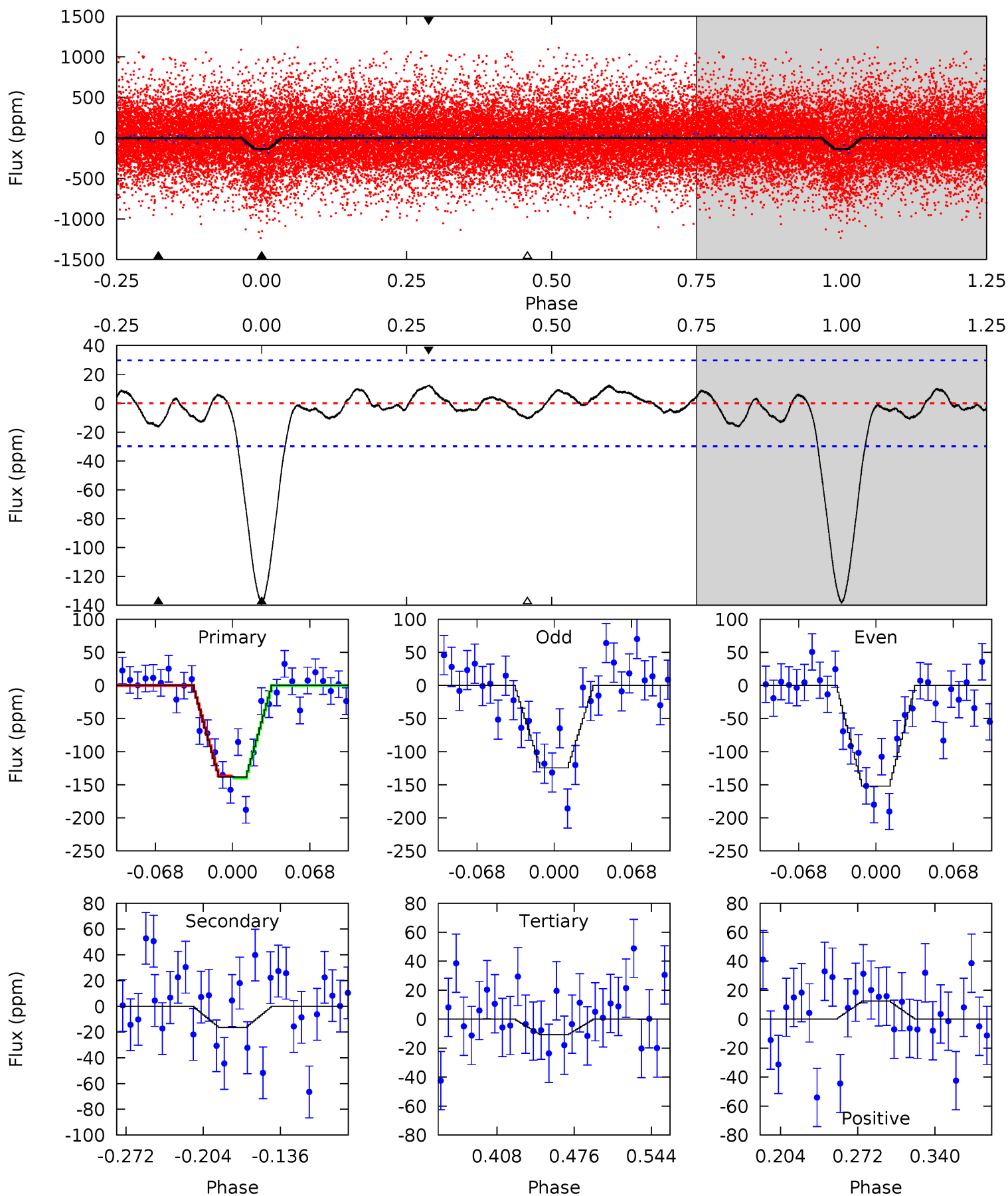
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	2.49	1.83	1.98	4.65	1.84	1.02	18.8	18.7	0.66	0.50	0.40	0.97	0.10	0.44



Alt Model-Shift Uniqueness Test

005040077-01, P = 0.896381 Days, E = 131.402131 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	2.56	1.68	1.94	4.65	1.83	0.93	20.0	19.7	0.87	0.61	2.17	0.95	0.08	0.24



Stellar Parameters For KIC 005040077

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5837^{+177}_{-195}	$4.502^{+0.075}_{-0.163}$	$-0.520^{+0.300}_{-0.300}$	$0.843^{+0.215}_{-0.092}$	$0.824^{+0.105}_{-0.070}$	$1.935^{+0.737}_{-0.873}$
	+3%/-3%	+2%/-4%	+58%/-58%	+26%/-11%	+13%/-8%	+38%/-45%
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 005040077-01 / KOI 3065.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 7	$1.07^{+0.56}_{-0.51}$	2553^{+155}_{-128}	3749^{+1205}_{-660}	$2.181^{+6.564}_{-1.304}$
Alt.	-16 ± 6	$1.11^{+0.59}_{-0.54}$	2562^{+168}_{-134}	3673^{+1191}_{-670}	$2.034^{+6.335}_{-1.279}$

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 $A_{obs} \gg 1.0$

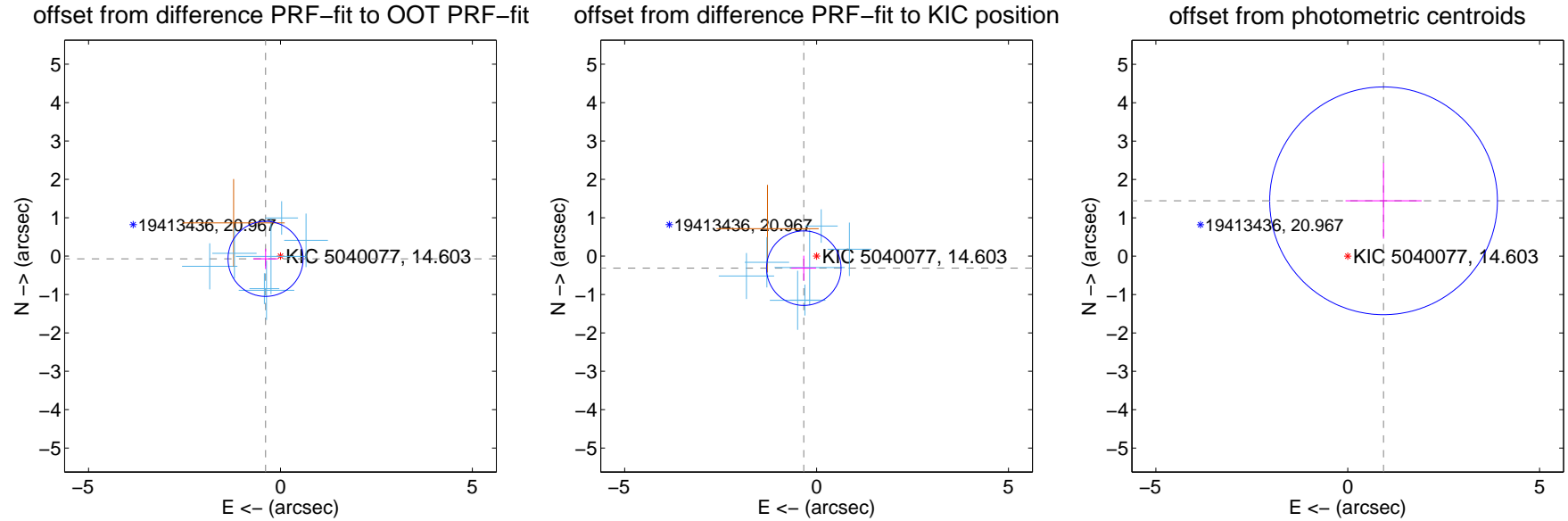
DV Centroid Data

Supplemental centroid analysis for 005040077-01. Kepler magnitude: 14.60. Transit SNR 12.77

There are 7 quarters with good PRF difference image offsets

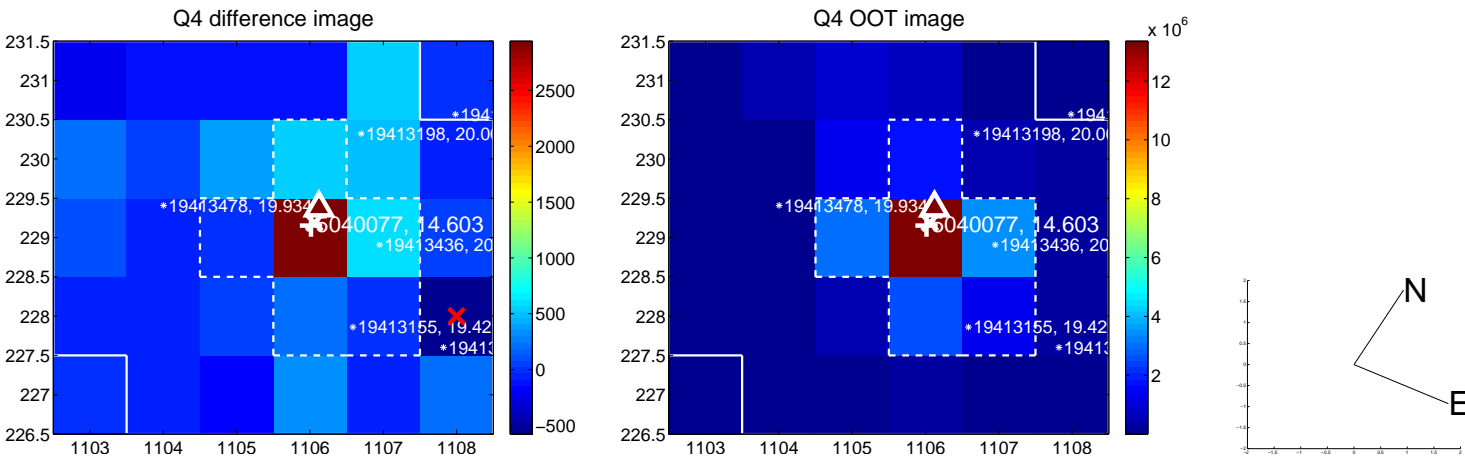
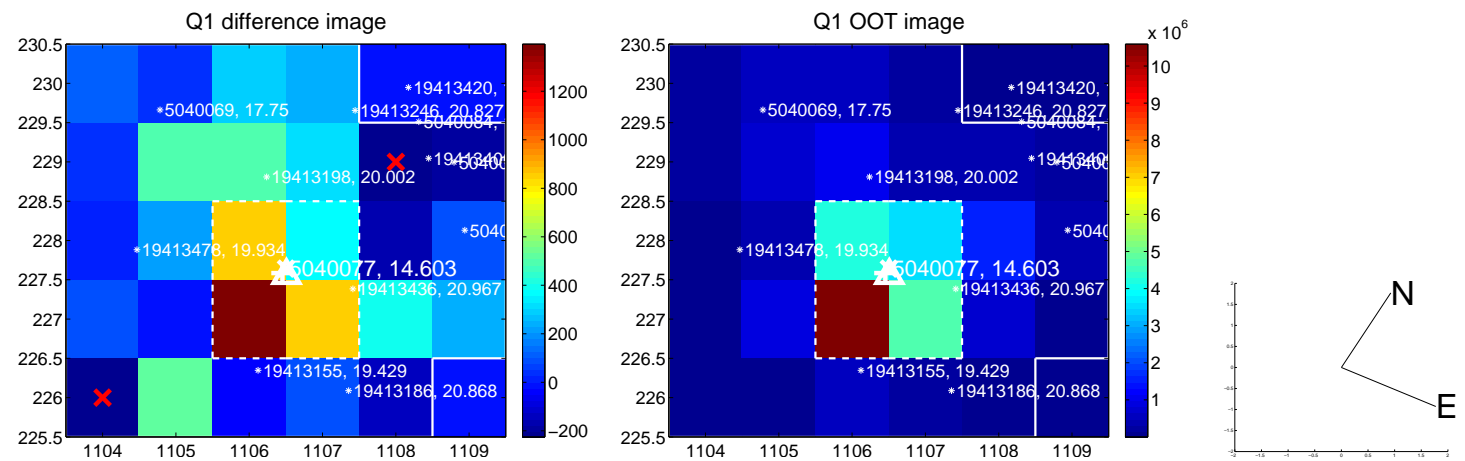
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.395 ± 0.326	1.21	0.388 ± 0.321	-0.071 ± 0.265
PRF-fit source offset from KIC position	0.457 ± 0.324	1.41	0.334 ± 0.322	-0.313 ± 0.325
photometric centroid source offset	1.72 ± 0.99	1.74	-0.93 ± 0.99	1.44 ± 0.99

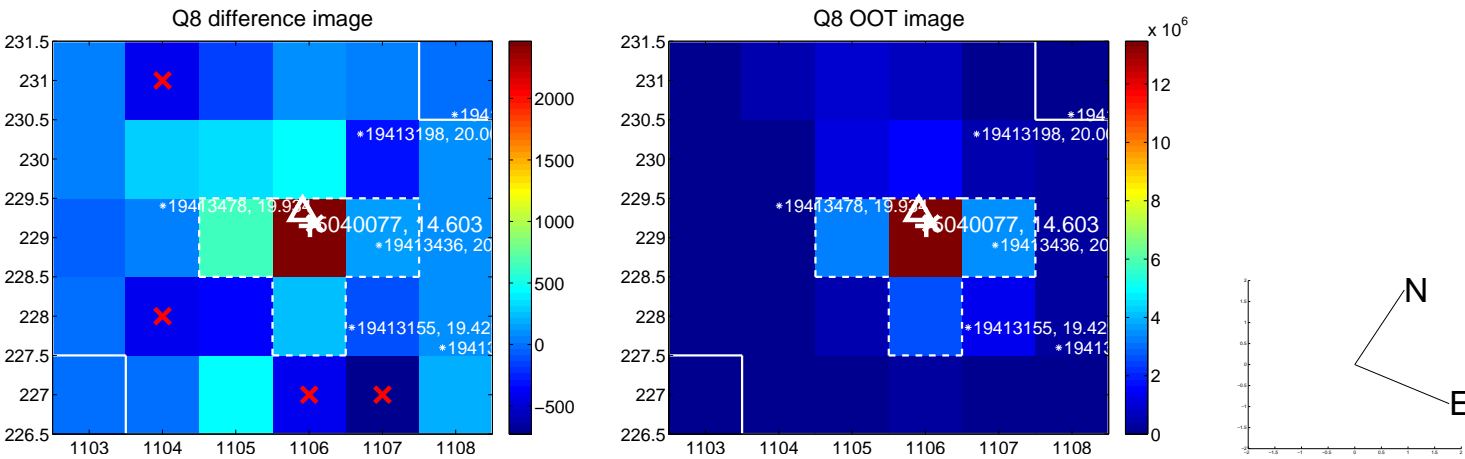
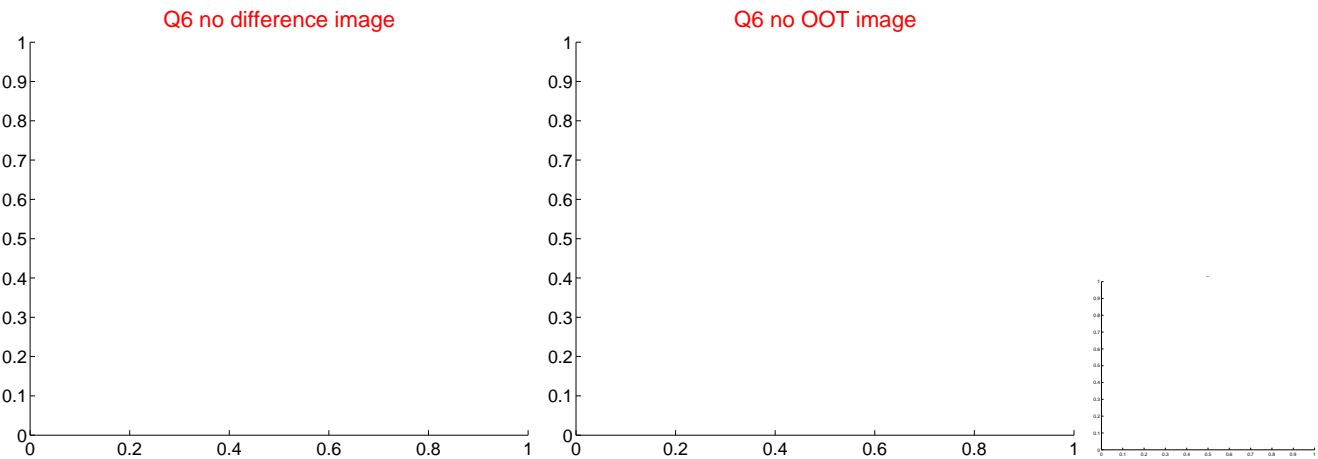
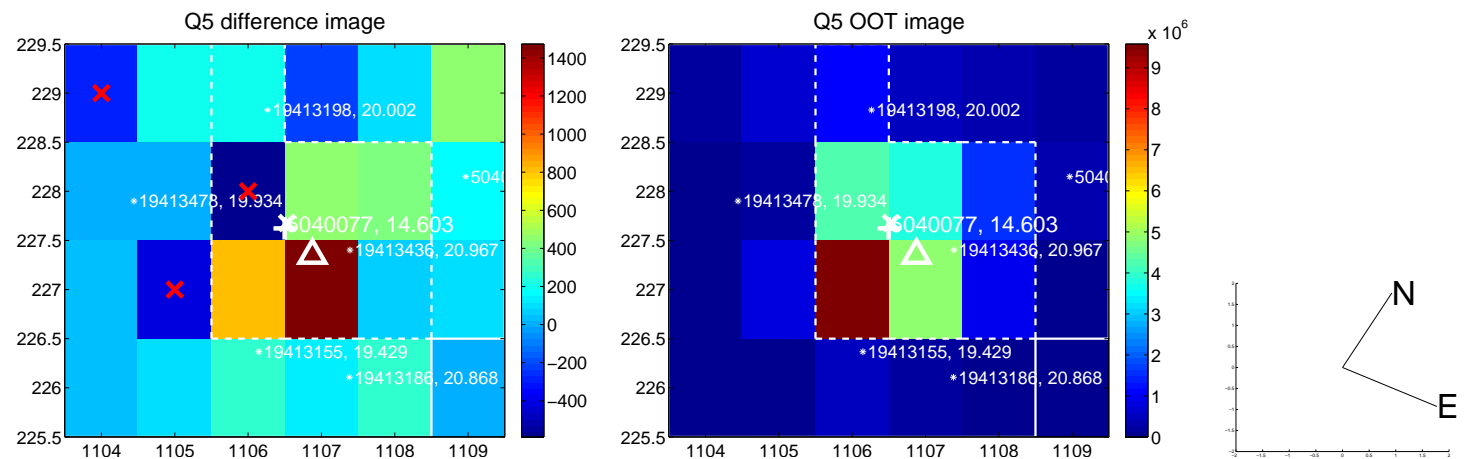


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

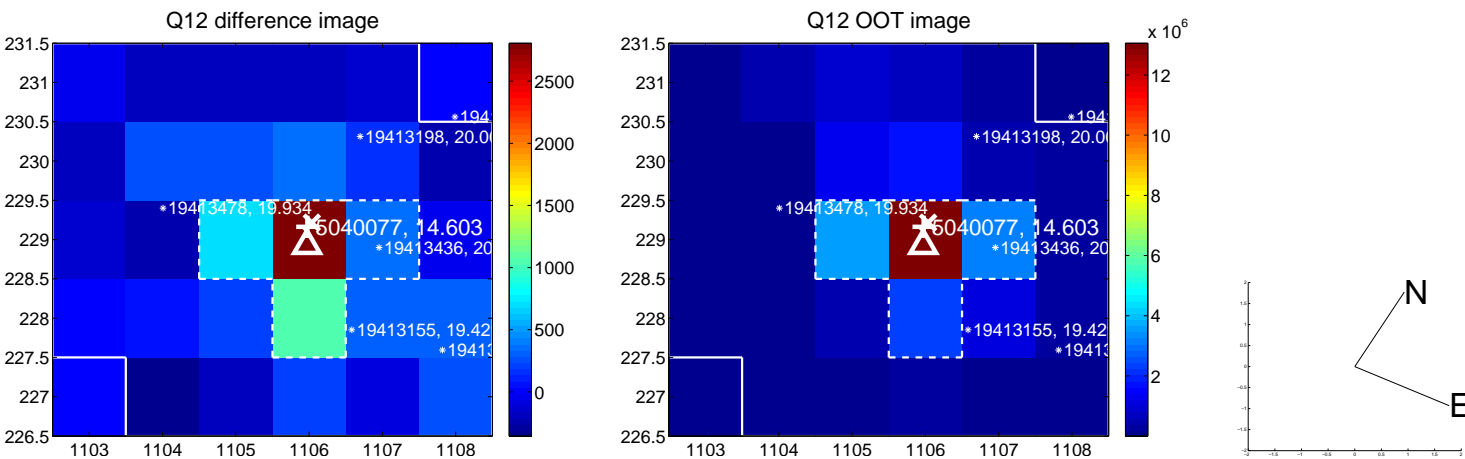
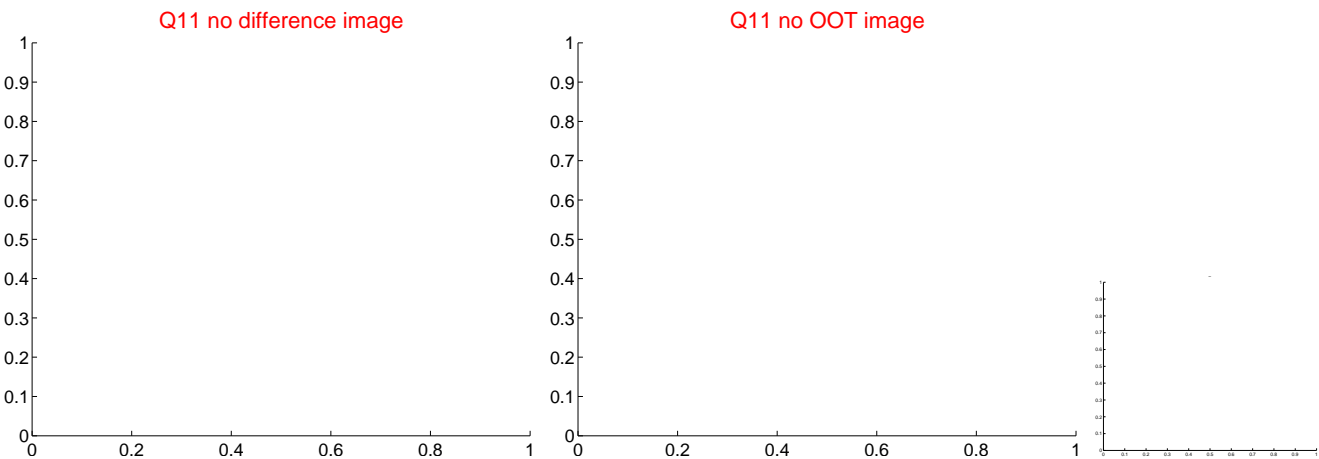
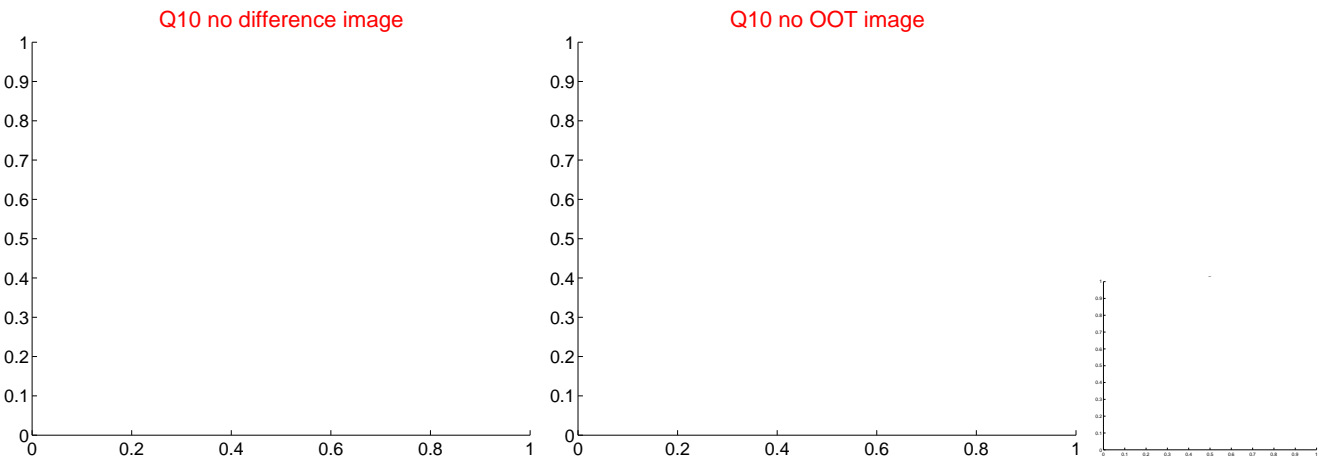
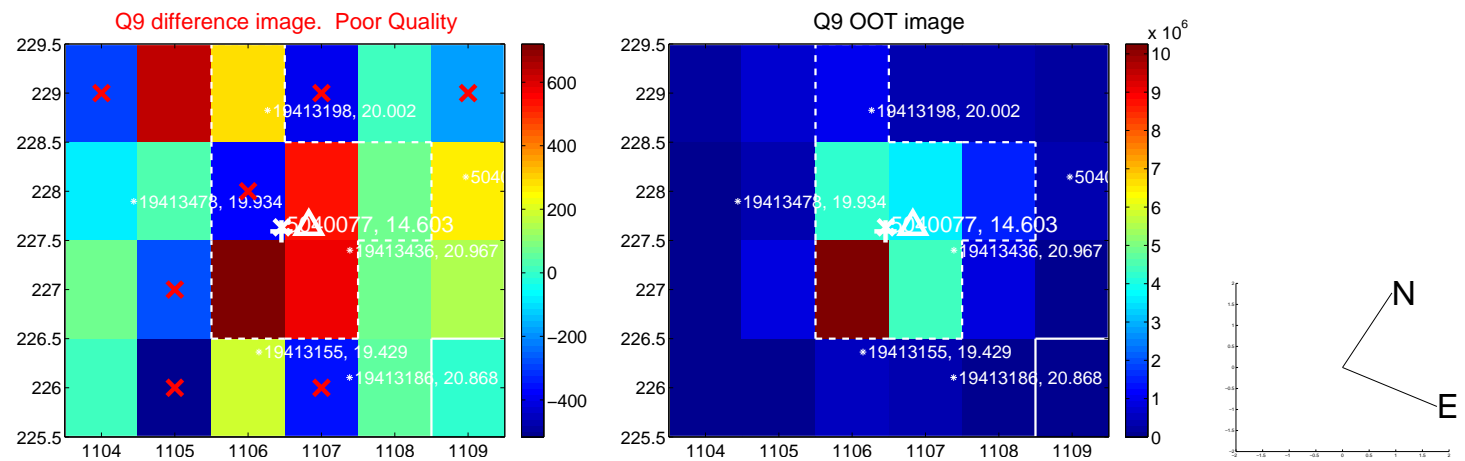
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



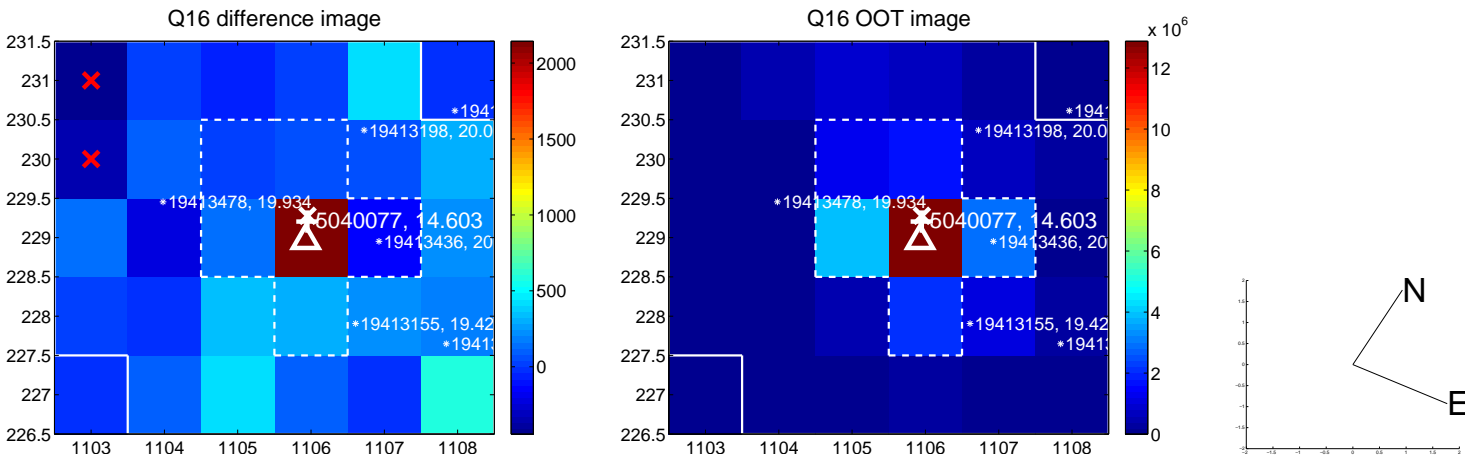
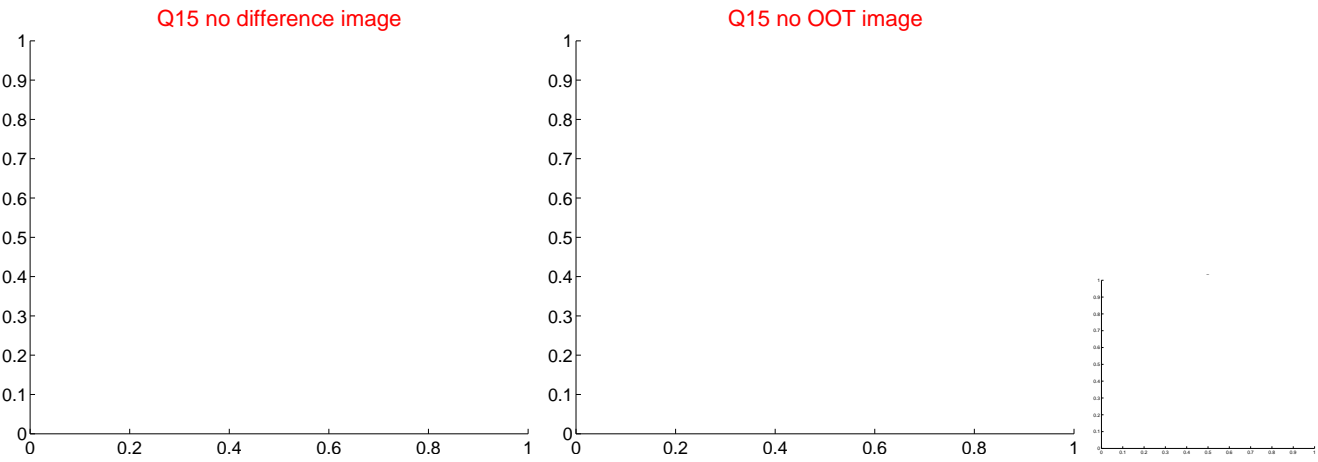
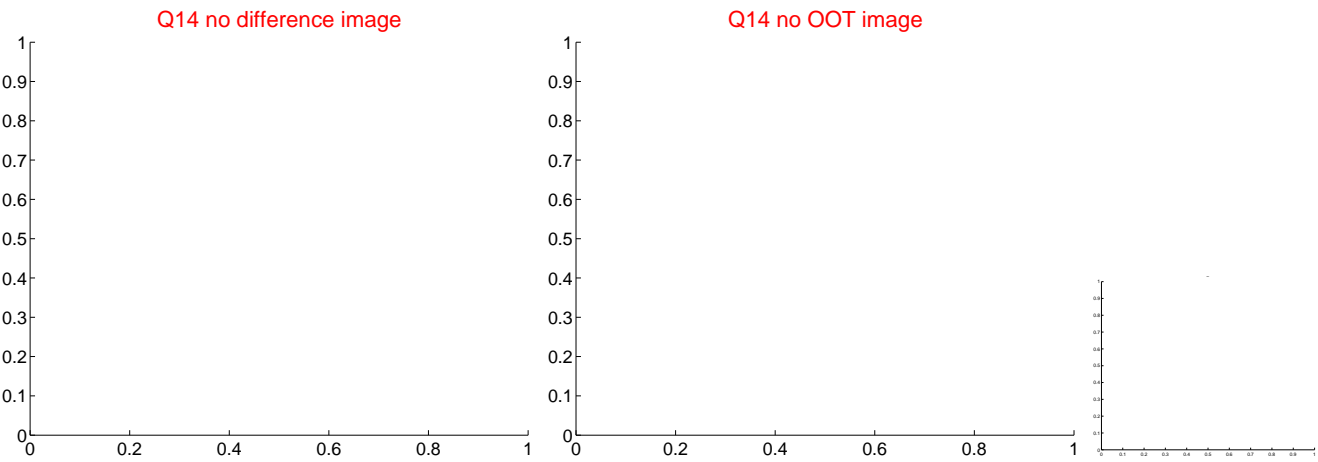
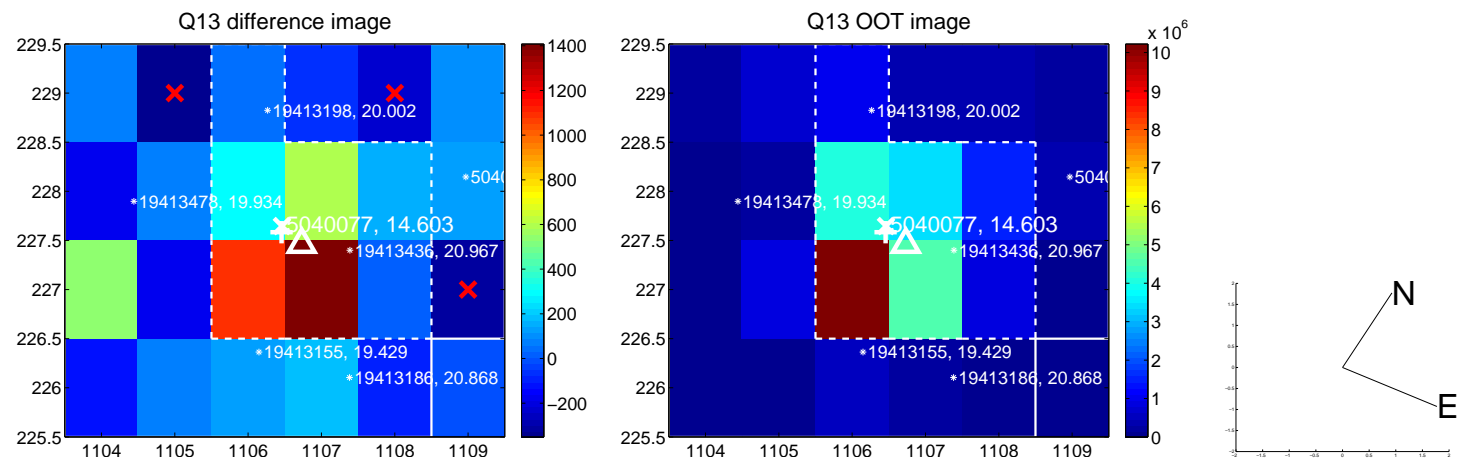
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



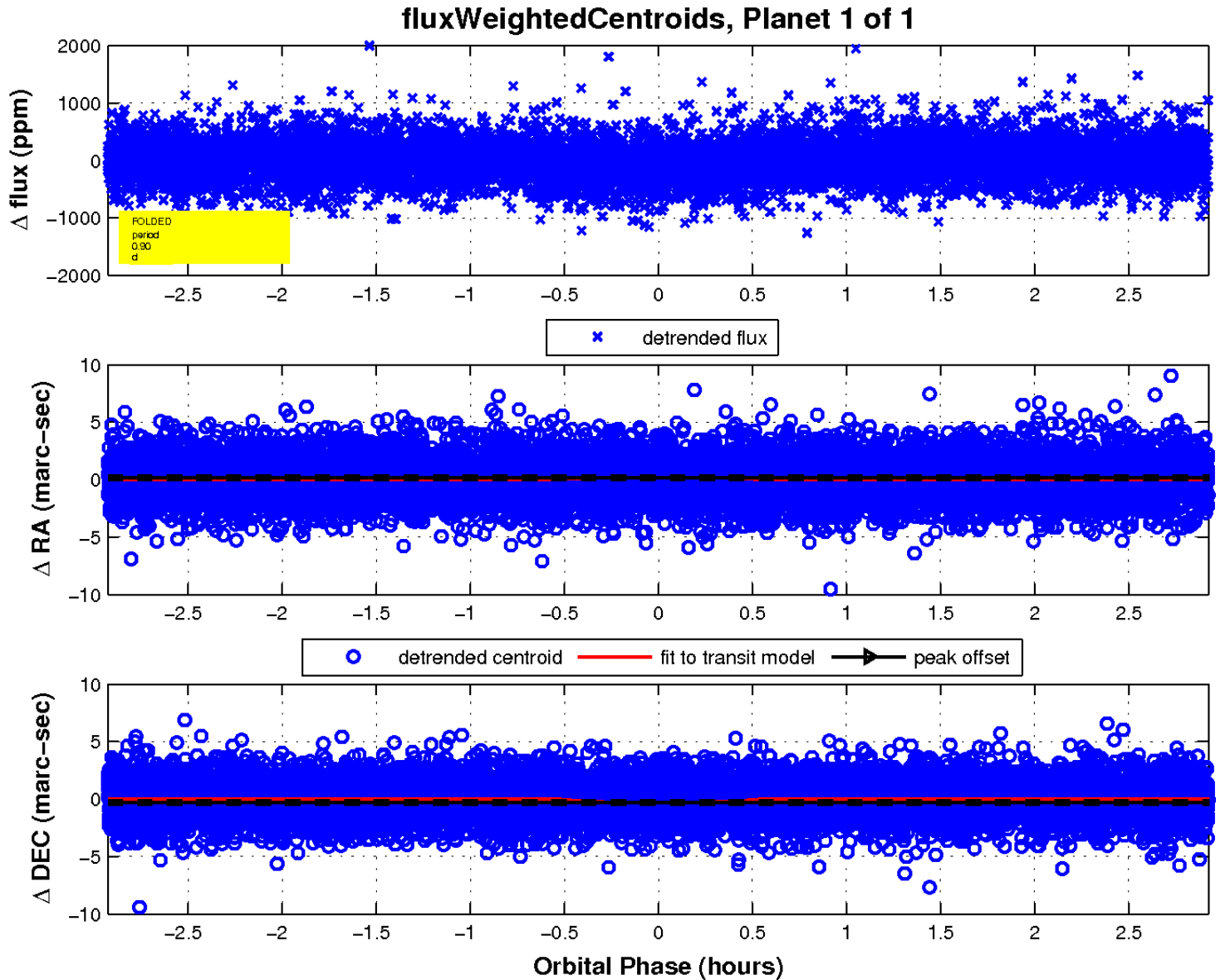
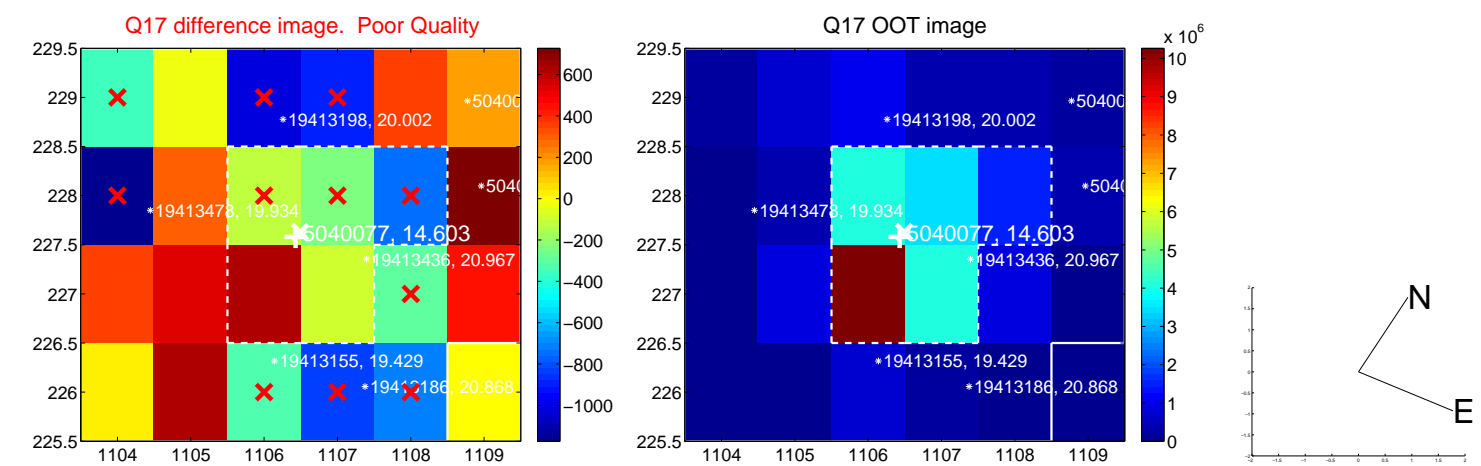
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UKIRT Image

Declination

