

KIC 009077124

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})
009077124-01	OBS	0926.01	3.166318	132.976228	933.4	3.425	60.5	70.6	1.00	6007	3.61	622.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009077124-01	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.

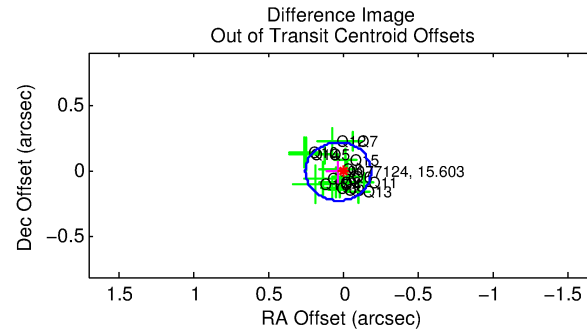
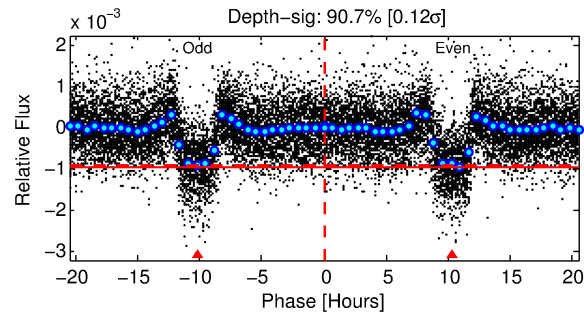
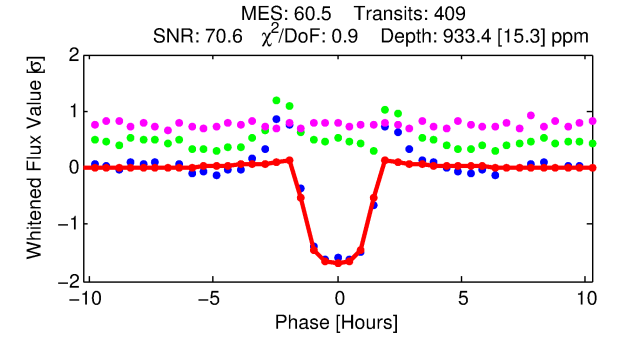
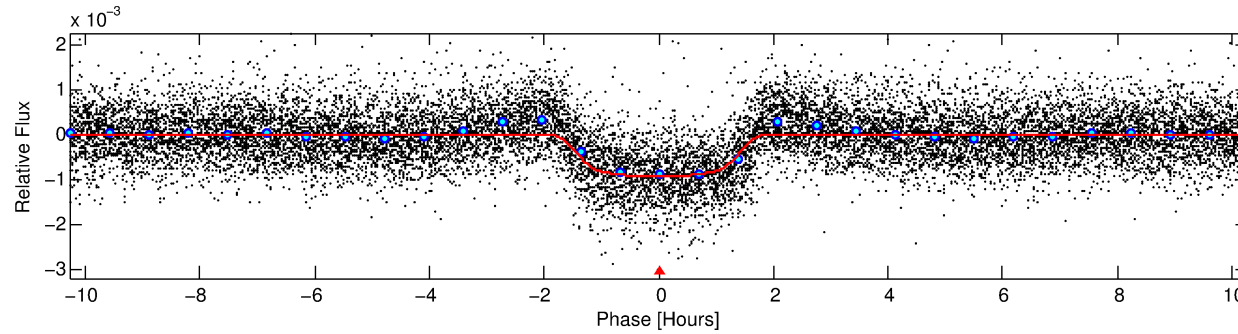
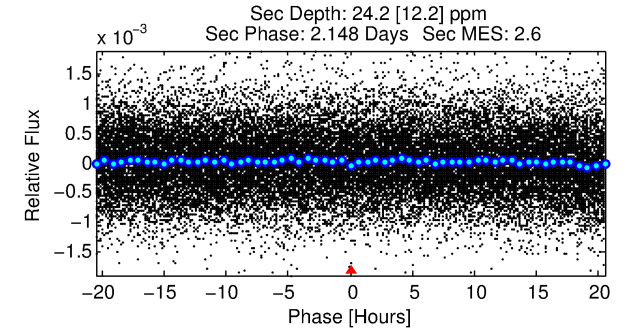
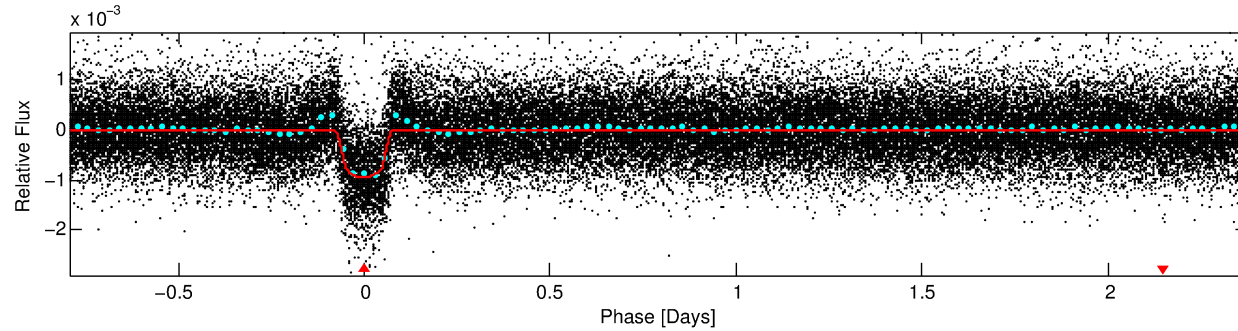
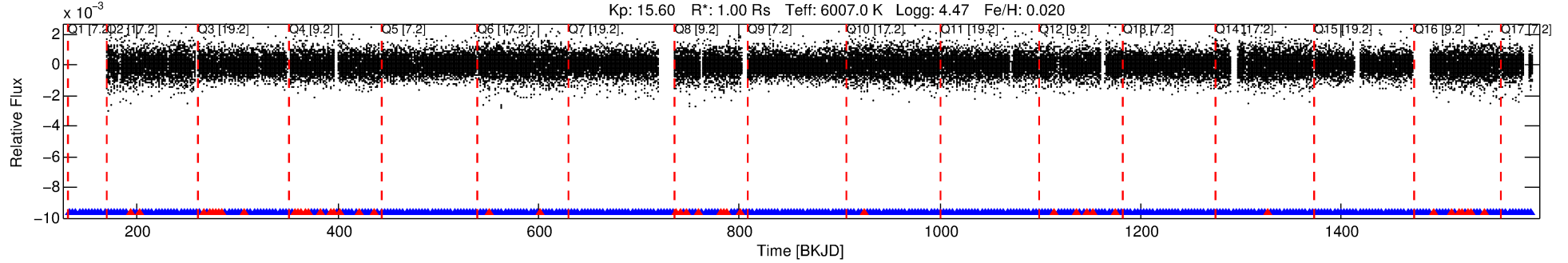
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009077124-01

No Significant Match Found

DV One-Page Summary

KIC: 9077124 Candidate: 1 of 1 Period: 3.166 d
KOI: K00926.01 Corr: 0.968



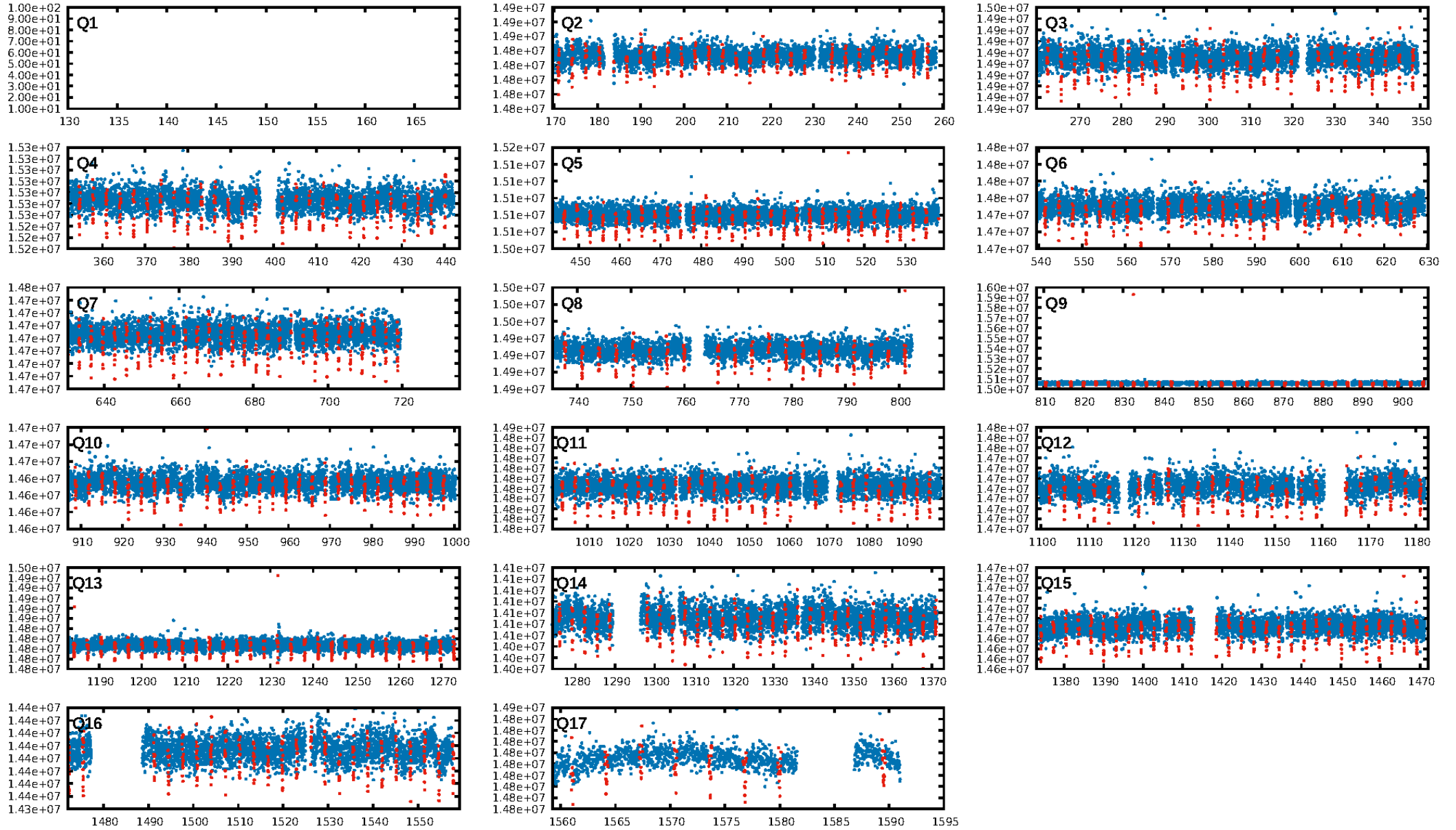
DV Fit Results:

Period = 3.16632 [0.00000] d
Epoch = 132.9762 [0.0008] BKJD
Rp/R* = 0.0331 [0.0009]
a/R* = 3.71 [0.41]
b = 0.90 [0.03]
Seff = 622.60 [254.28]
Teff = 1274 [130] K
Rp = 3.61 [1.15] Re
a = 0.0432 [0.0115] AU
Ag = 1.91 [1.21] [0.75σ]
Teffp = 2315 [303] K [3.15σ]

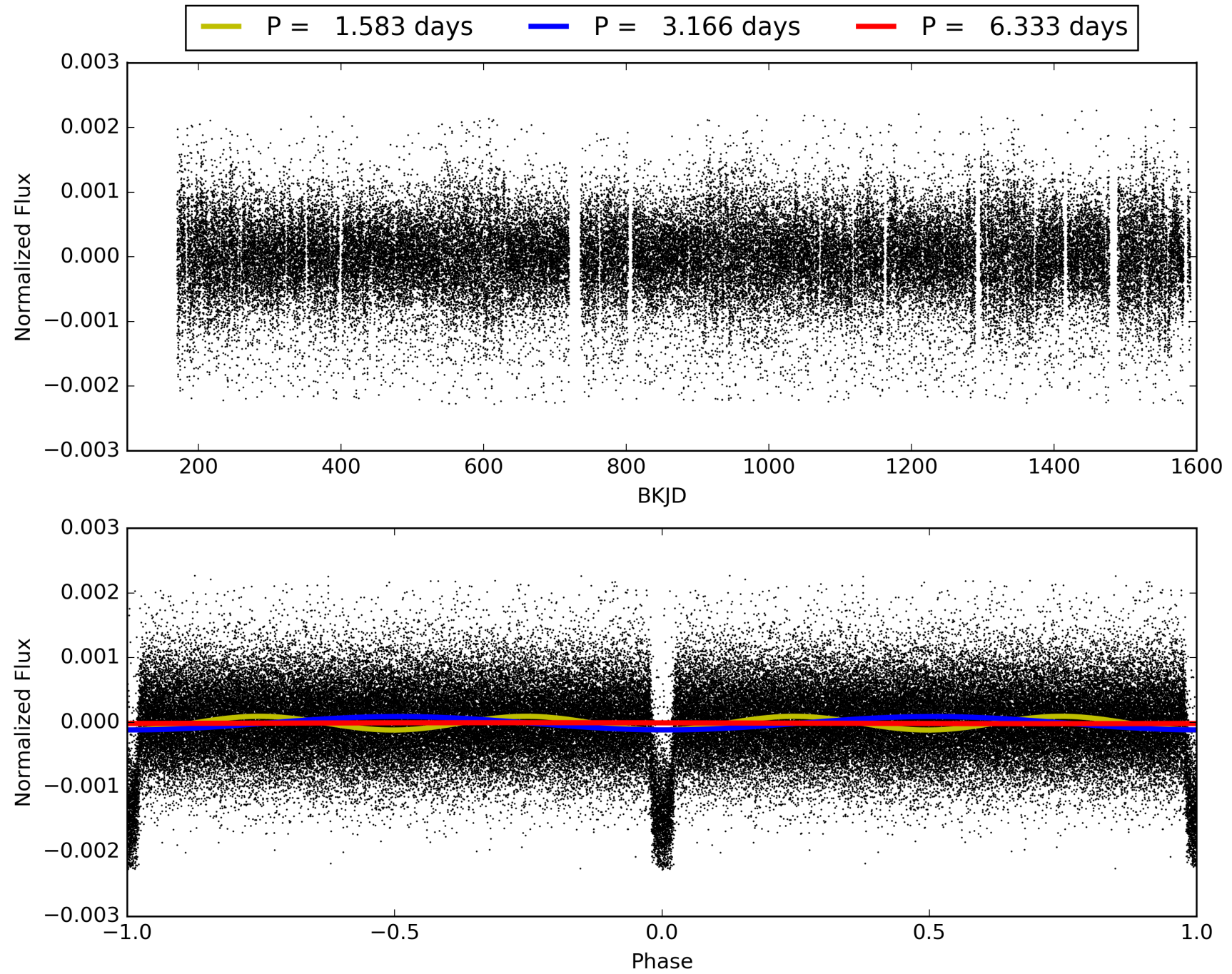
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.89 [357/401]
GhostDiagnostic-chr: 4.62
Centroid-sig: 24.8%
Centroid-so: 0.186 arcsec [0.94σ]
OotOffset-rm: 0.030 arcsec [0.41σ]
KicOffset-rm: 0.073 arcsec [0.96σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 009077124-01, PDC Light Curves

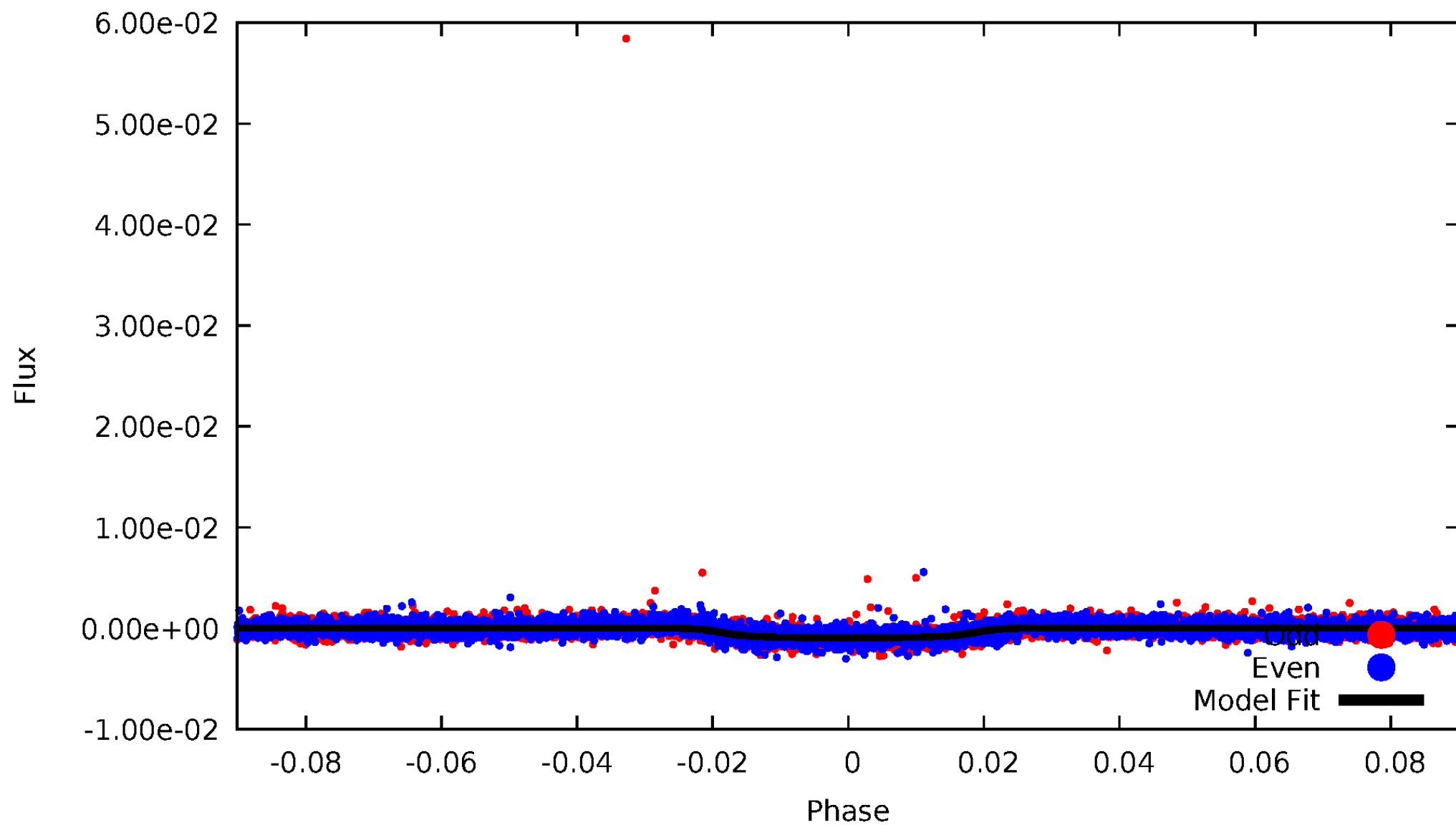


TCE 009077124-01



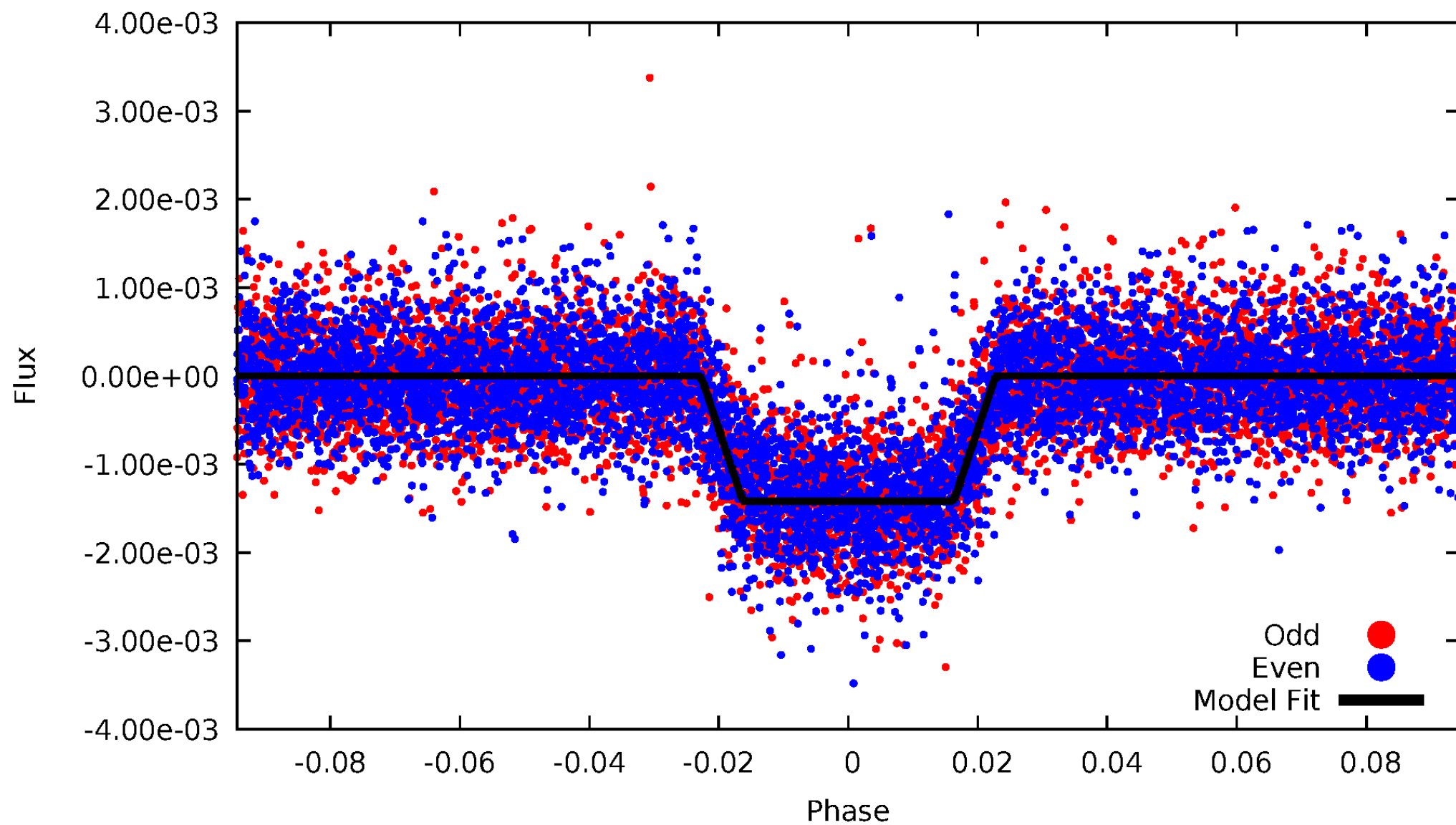
DV Odd/Even

TCE 009077124-01

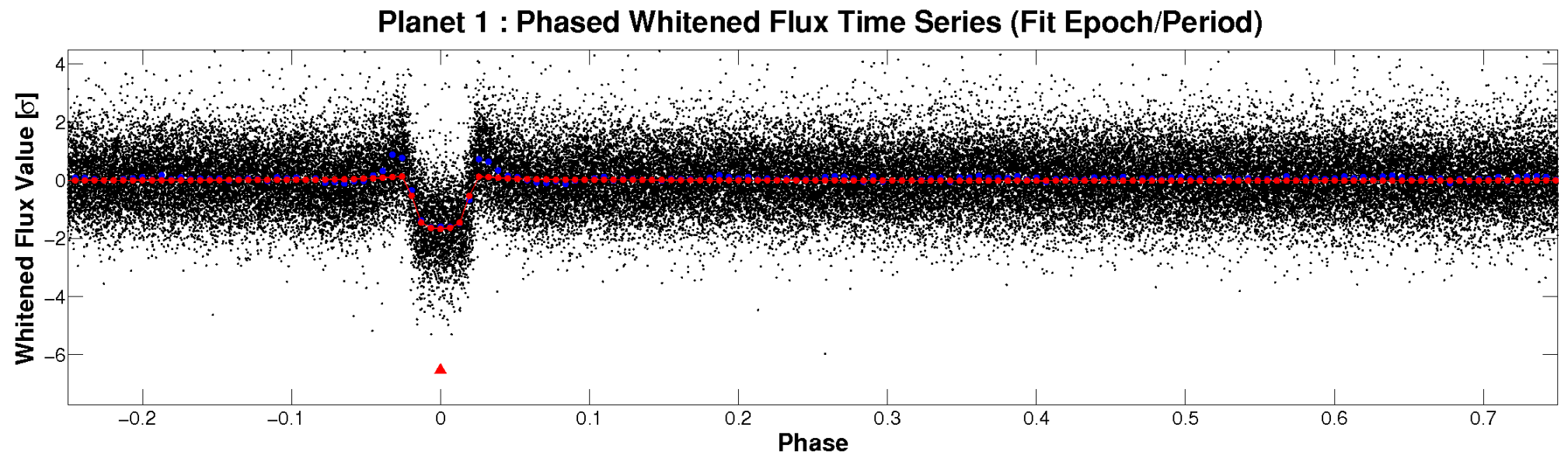
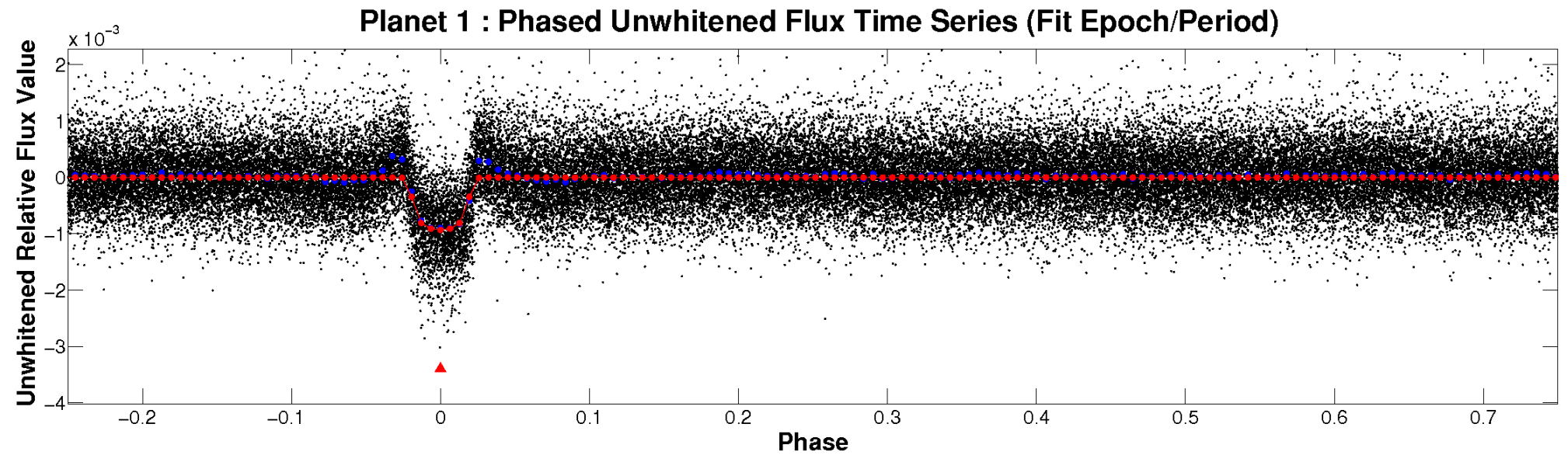


ALT Odd/Even

TCE 009077124-01

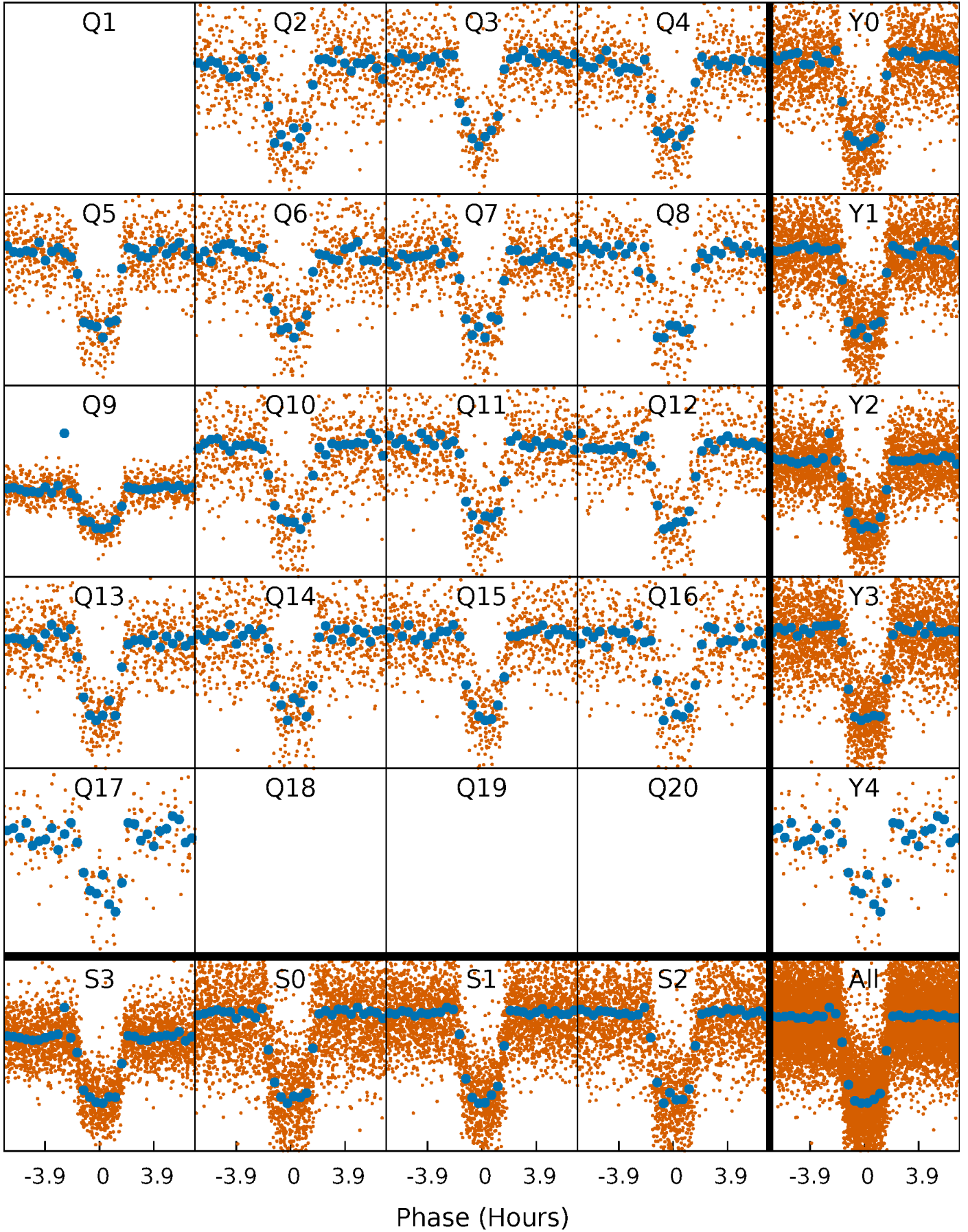


Non-Whitened Vs. Whitened Light Curve



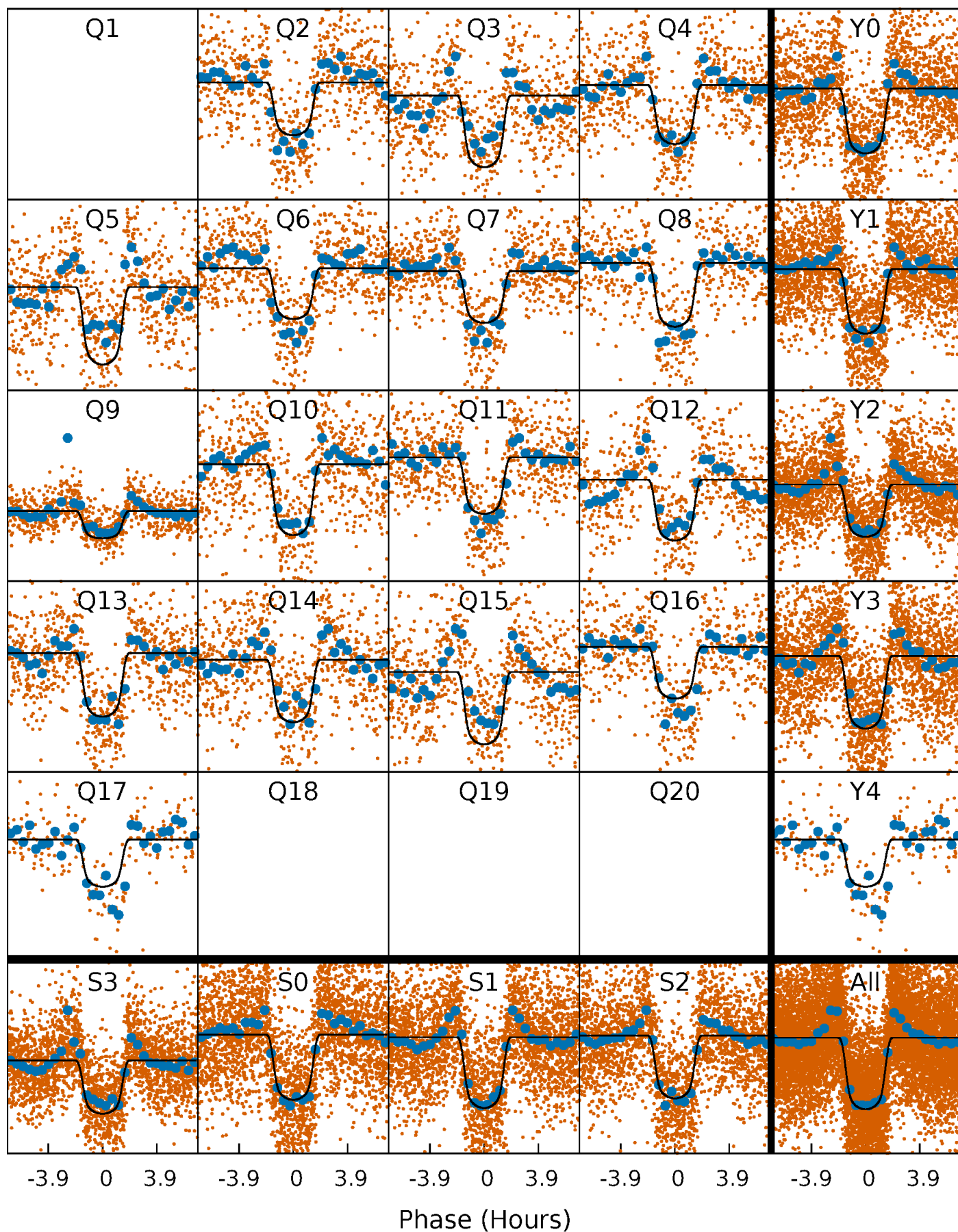
PDC Quarter-Phased Transit Curves

TCE 009077124-01 P= 3.166318 Days $T_0=132.976228$ (BKJD)



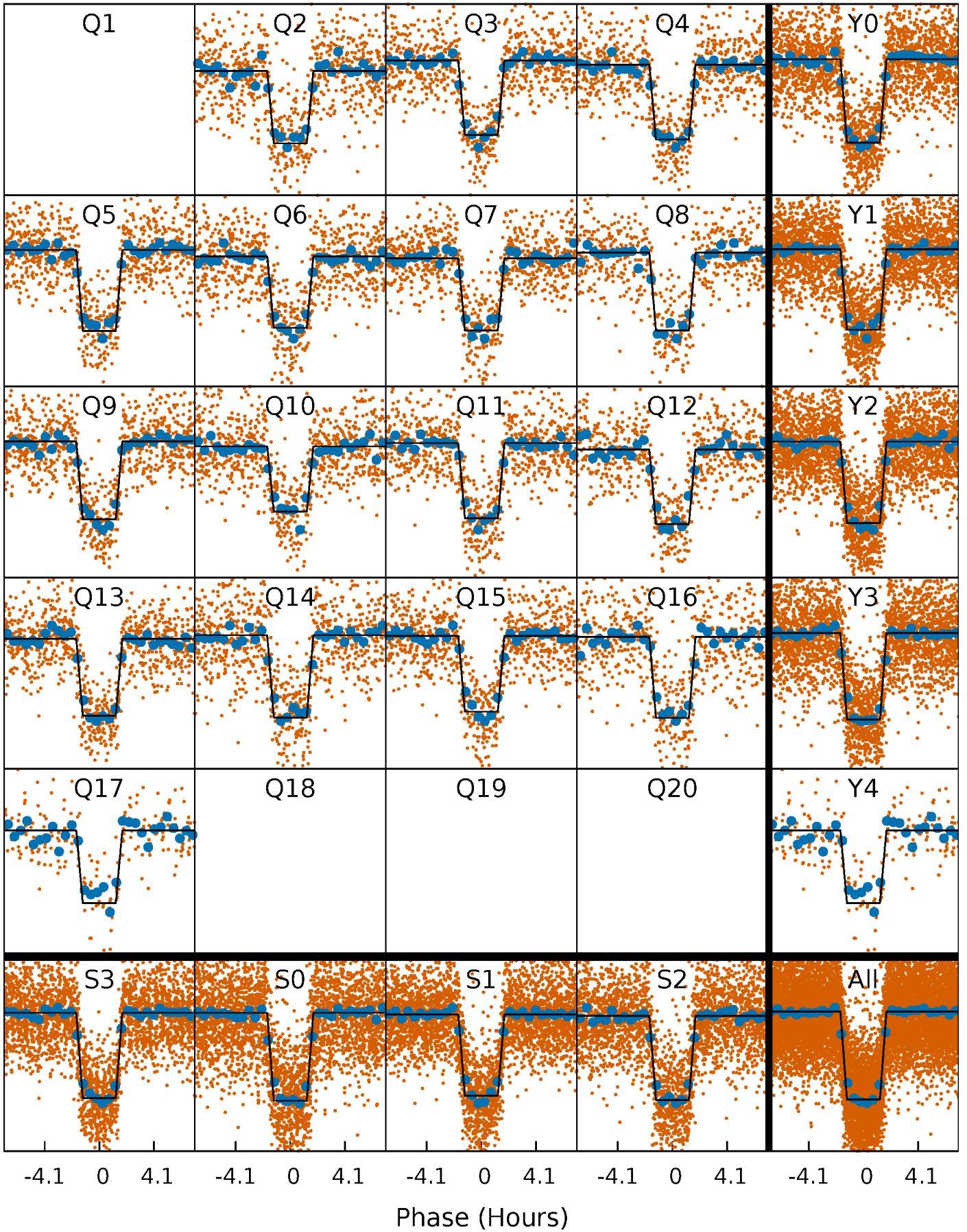
DV Quarter-Phased Transit Curves

TCE 009077124-01 P= 3.166318 Days $T_0=132.976228$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

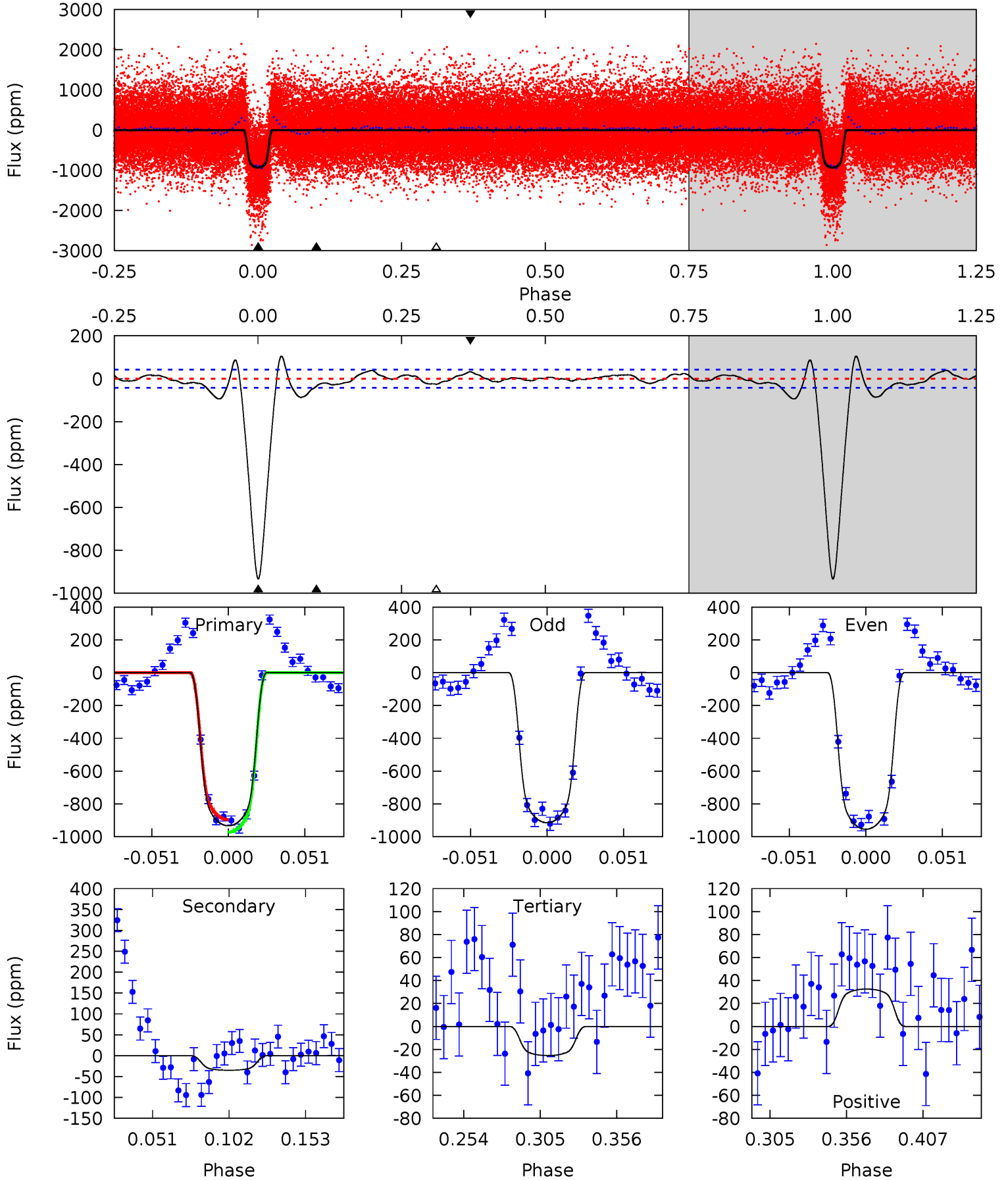
TCE 009077124-01 P= 3.166343 Days $T_0=132.972240$ (BKJD)



DV Model-Shift Uniqueness Test

009077124-01, P = 3.166318 Days, E = 132.976228 Days

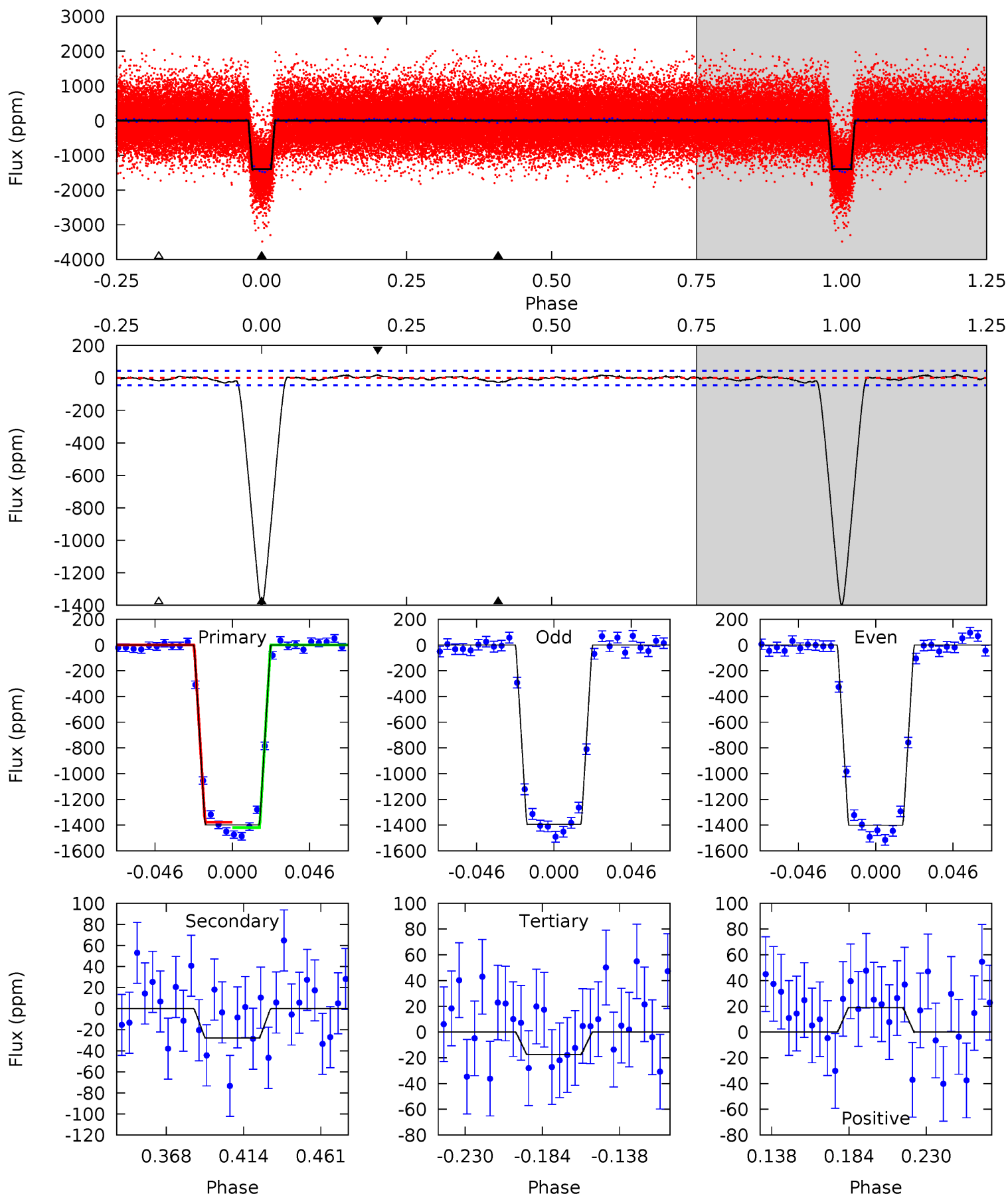
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
104.5	3.92	2.84	3.65	4.70	1.95	2.41	101.6	100.8	1.08	0.28	2.22	1.01	0.10	4.29



Alt Model-Shift Uniqueness Test

009077124-01, P = 3.166343 Days, E = 132.972240 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
150.6	3.00	1.88	2.05	4.72	1.99	0.94	148.8	148.6	1.12	0.95	0.37	0.99	0.01	2.29



Stellar Parameters For KIC 009077124

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6007^{+169}_{-211}	$4.470^{+0.052}_{-0.208}$	$0.020^{+0.250}_{-0.300}$	$0.998^{+0.318}_{-0.106}$	$1.072^{+0.130}_{-0.145}$	$1.518^{+0.433}_{-0.809}$
	+3%/-4%	+1%/-5%	+1250%/-1500%	+32%/-11%	+12%/-14%	+29%/-53%
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 009077124-01 / KOI 0926.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 9	$3.69^{+0.59}_{-0.29}$	1815^{+136}_{-86}	3090^{+139}_{-154}	$2.470^{+0.884}_{-0.738}$
Alt.	-28 ± 9	$4.24^{+0.72}_{-0.35}$	1819^{+141}_{-89}	2837^{+152}_{-203}	$1.467^{+0.610}_{-0.559}$

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

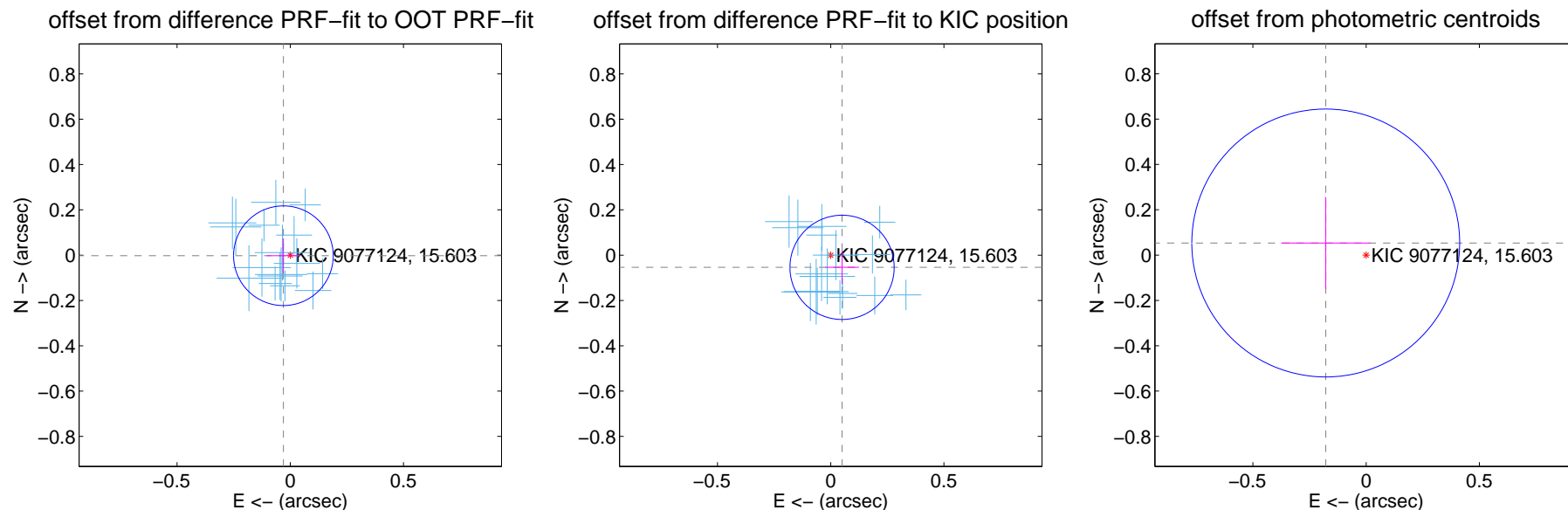
DV Centroid Data

Supplemental centroid analysis for 009077124-01. Kepler magnitude: 15.60. Transit SNR 70.63

There are 16 quarters with good PRF difference image offsets

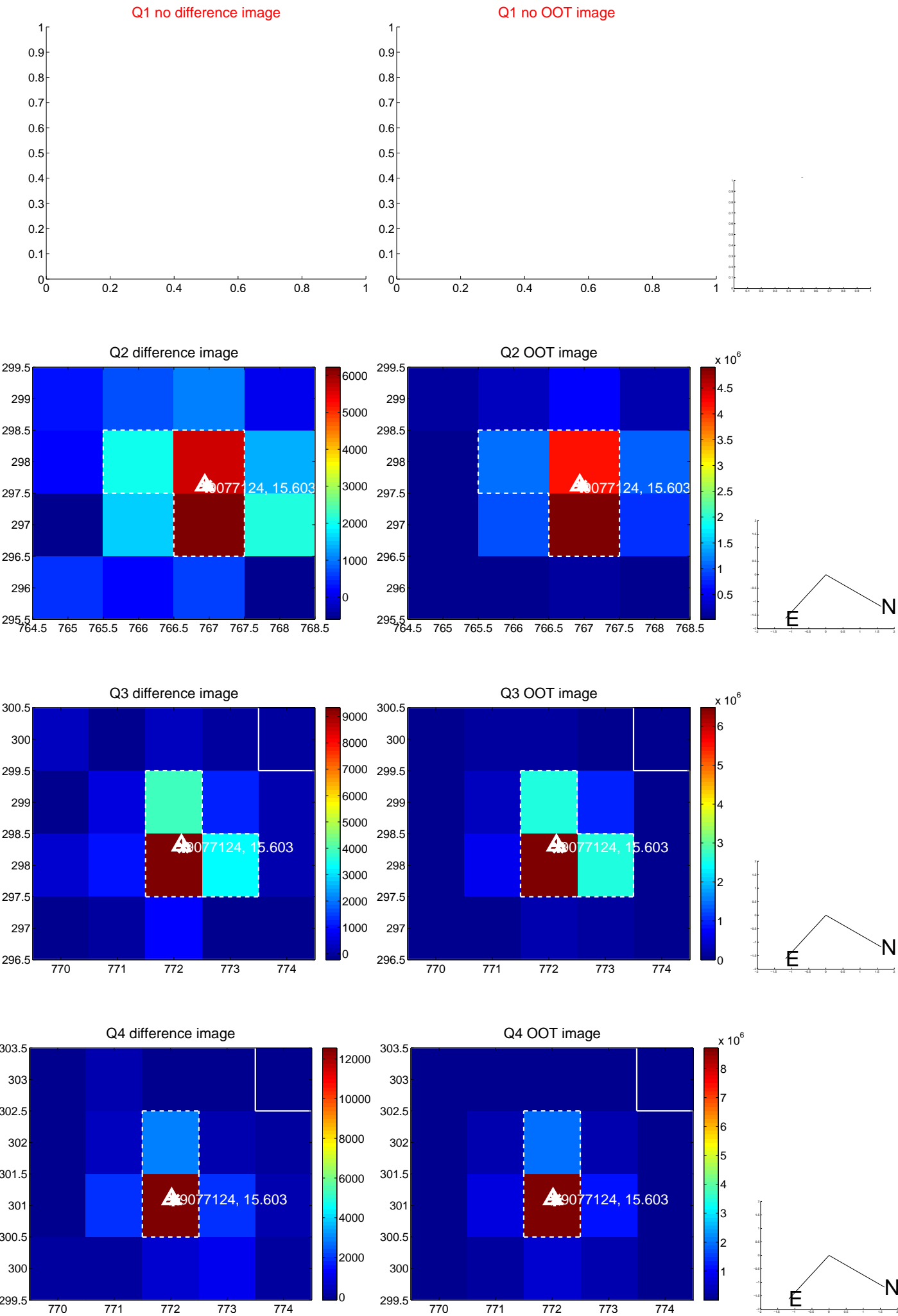
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.073	0.41	0.030 ± 0.073	-0.002 ± 0.077
PRF-fit source offset from KIC position	0.073 ± 0.077	0.96	-0.050 ± 0.075	-0.054 ± 0.074
photometric centroid source offset	0.19 ± 0.20	0.94	0.18 ± 0.20	0.05 ± 0.20

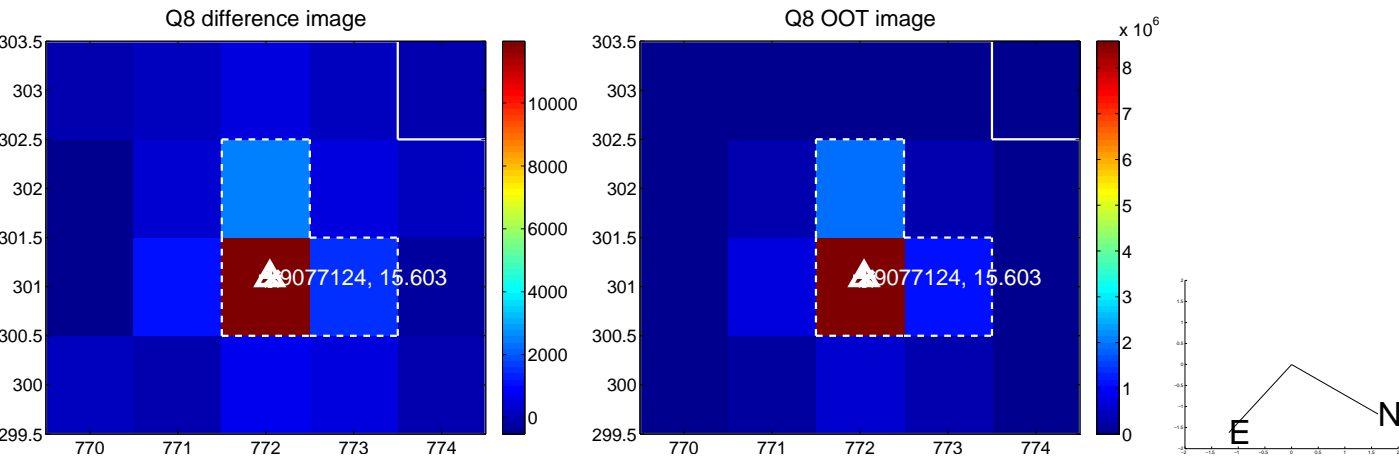
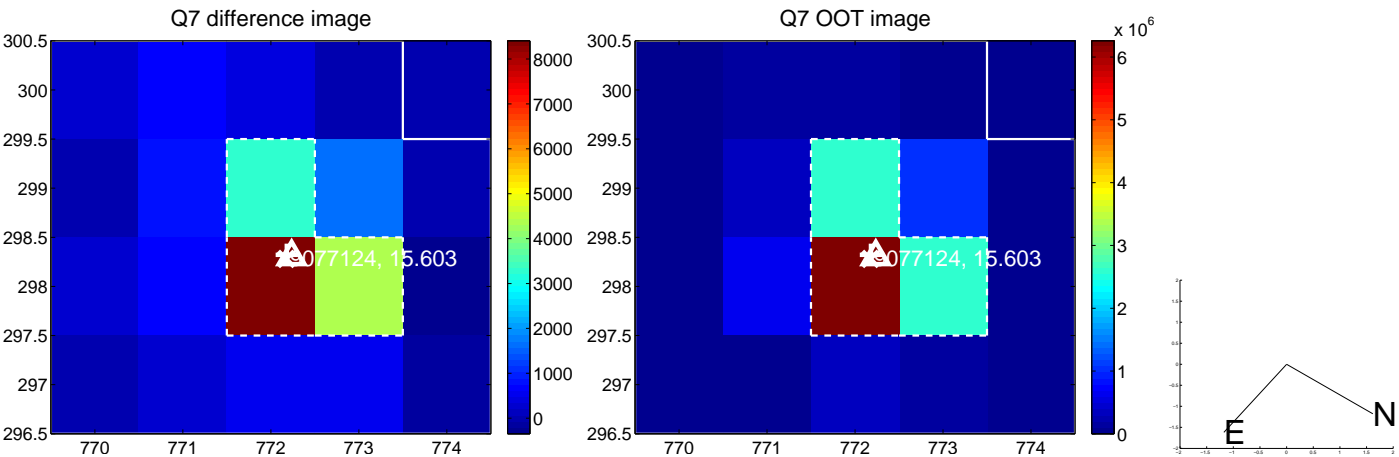
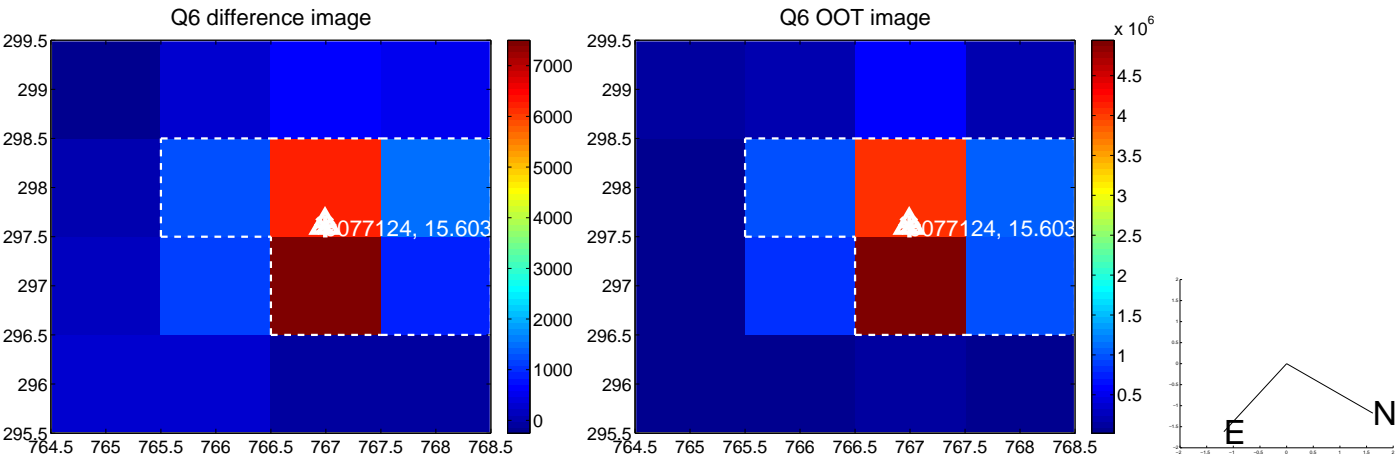
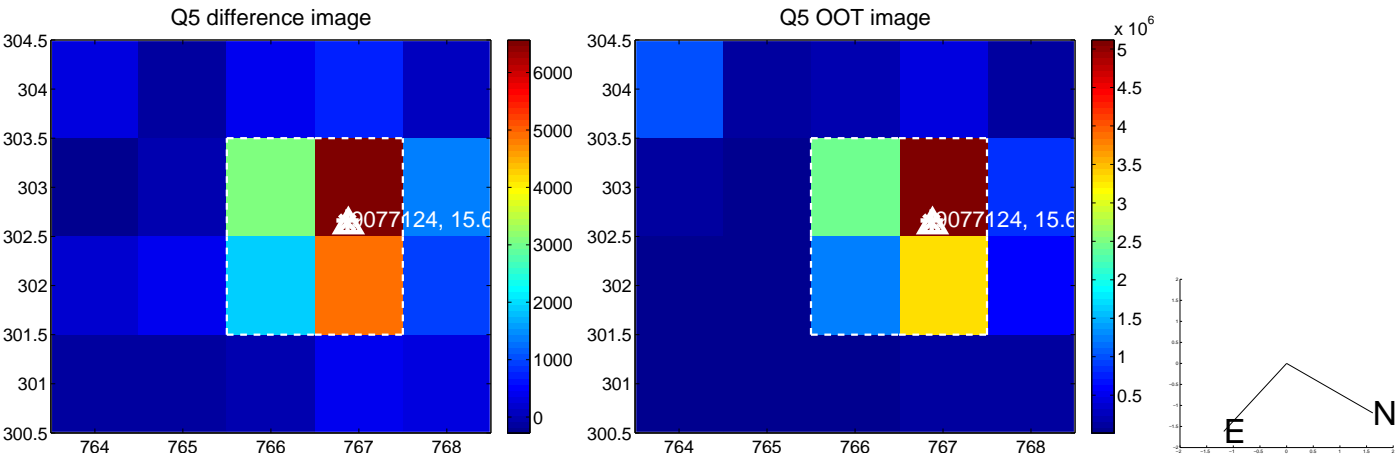


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

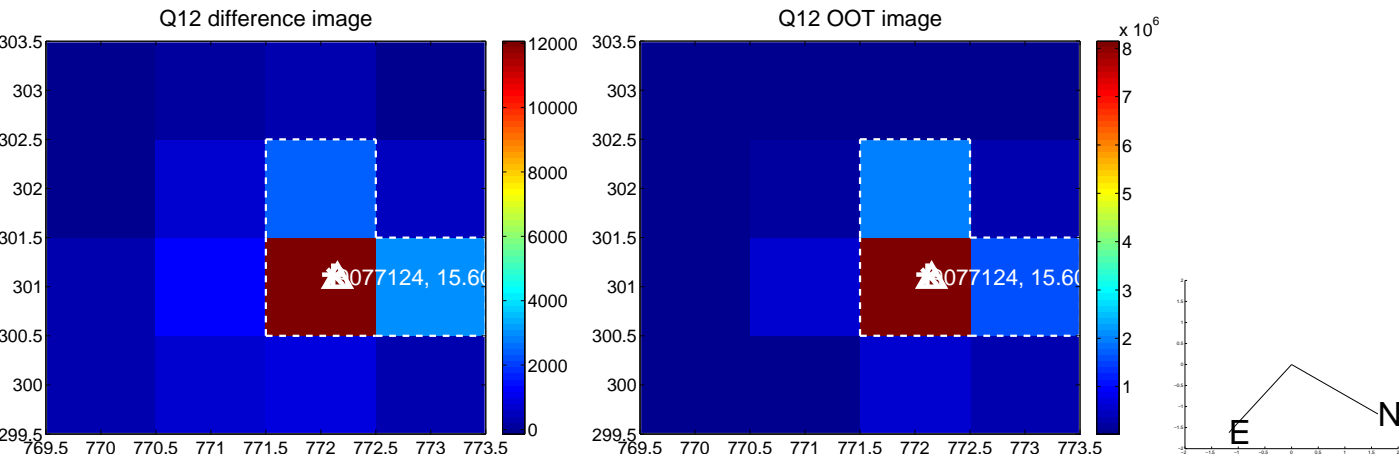
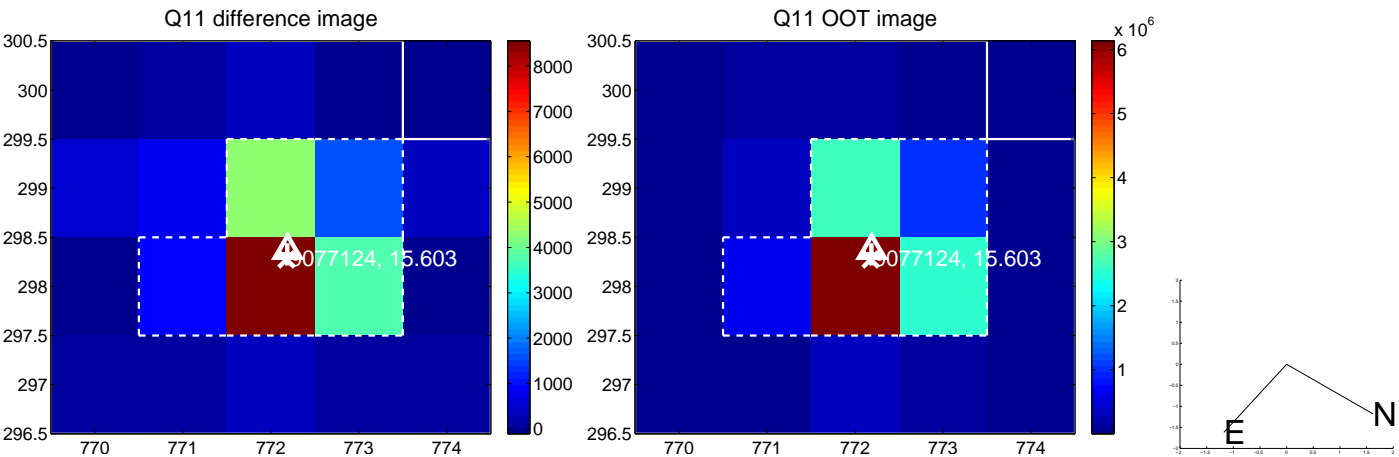
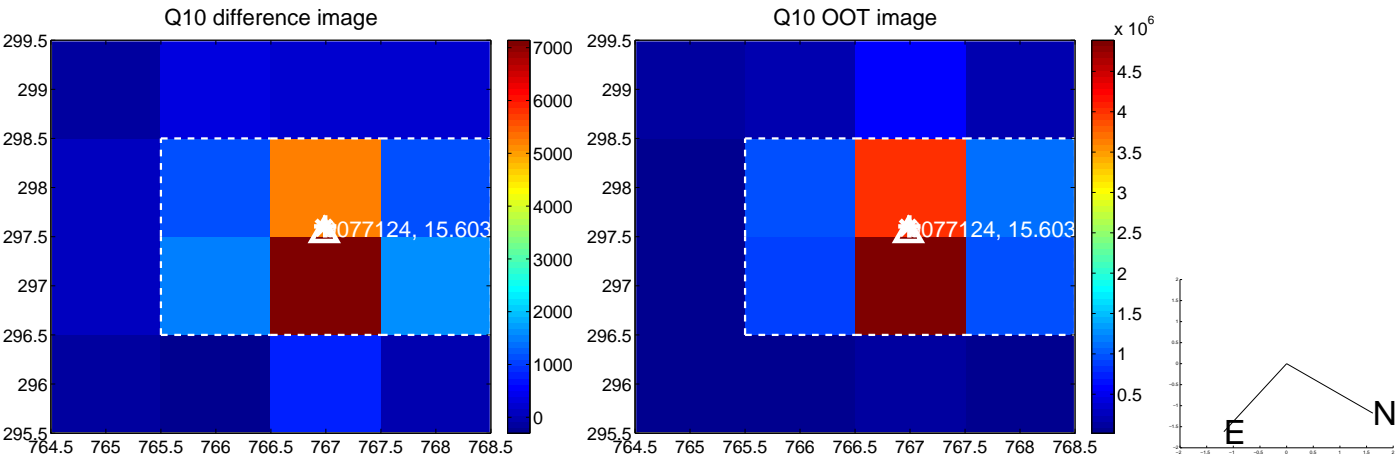
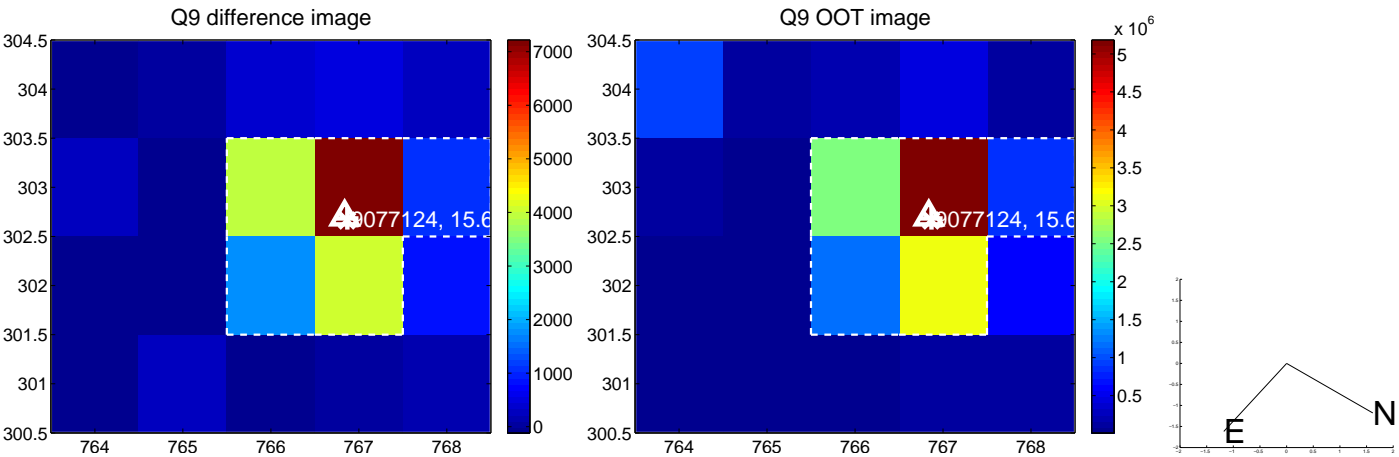
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



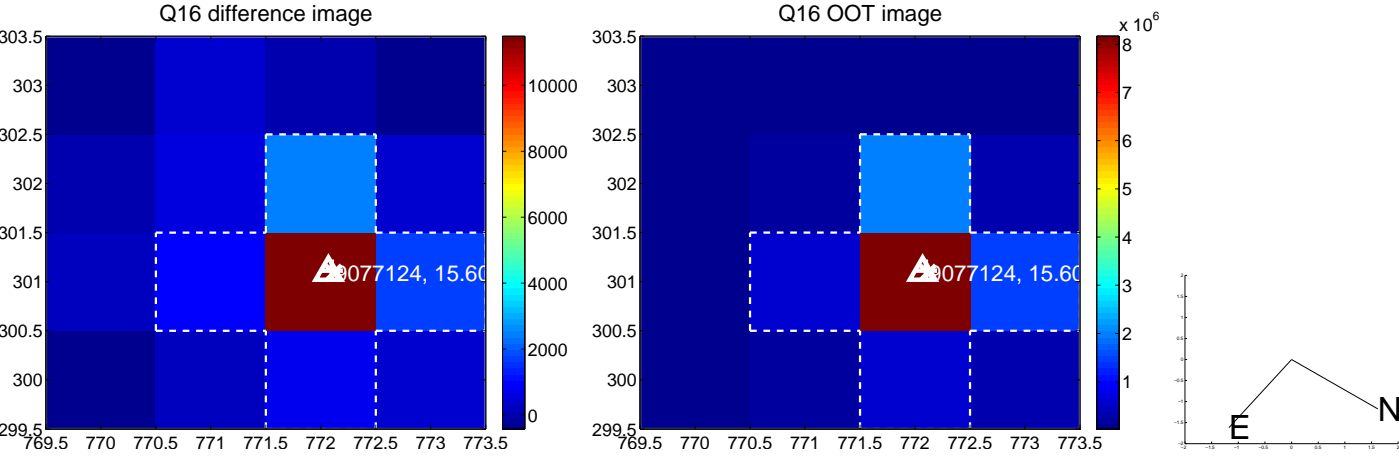
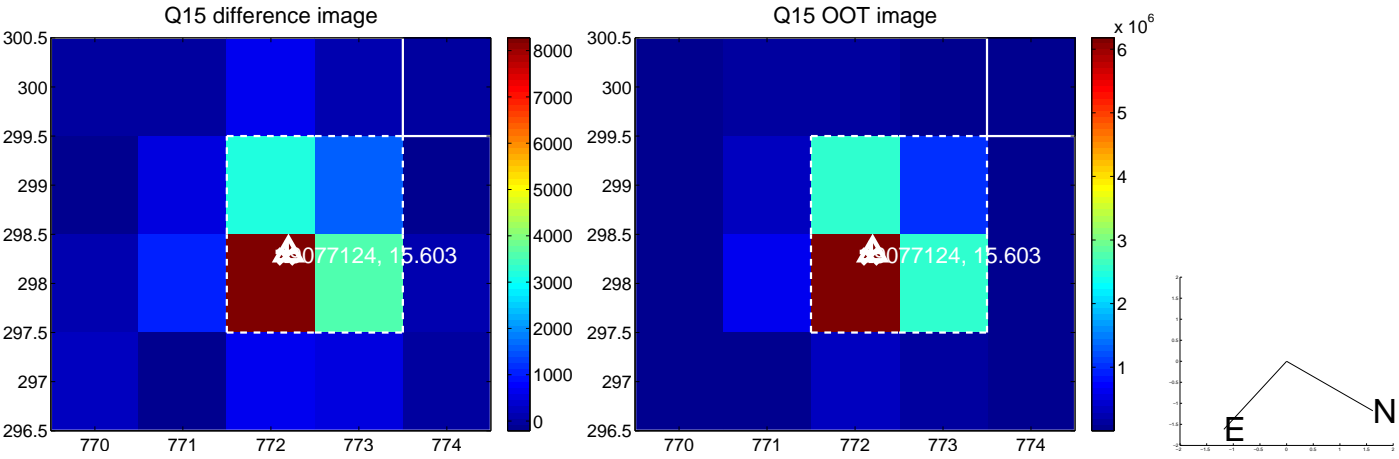
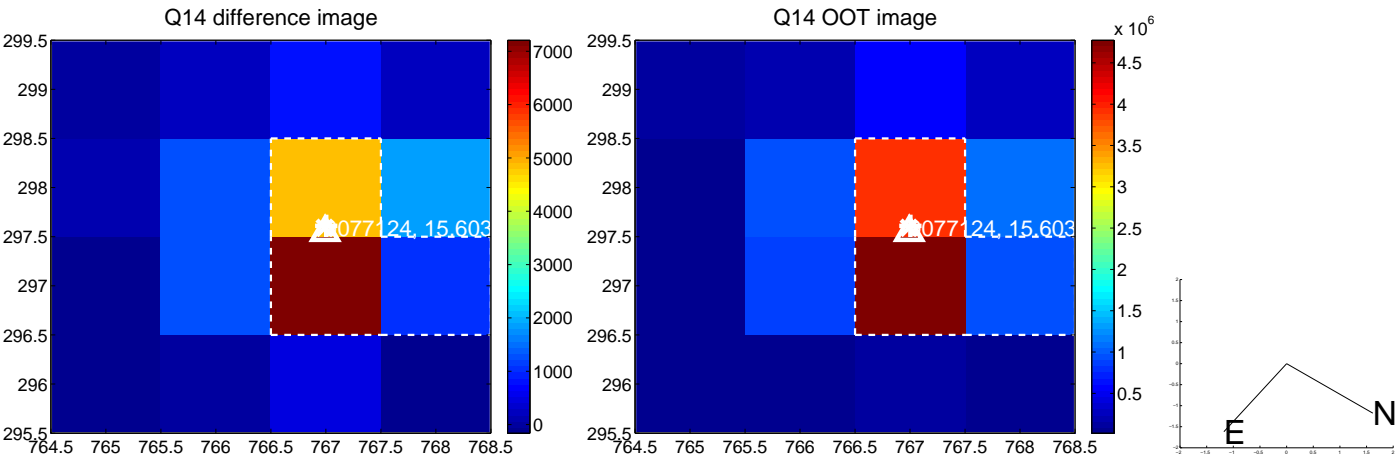
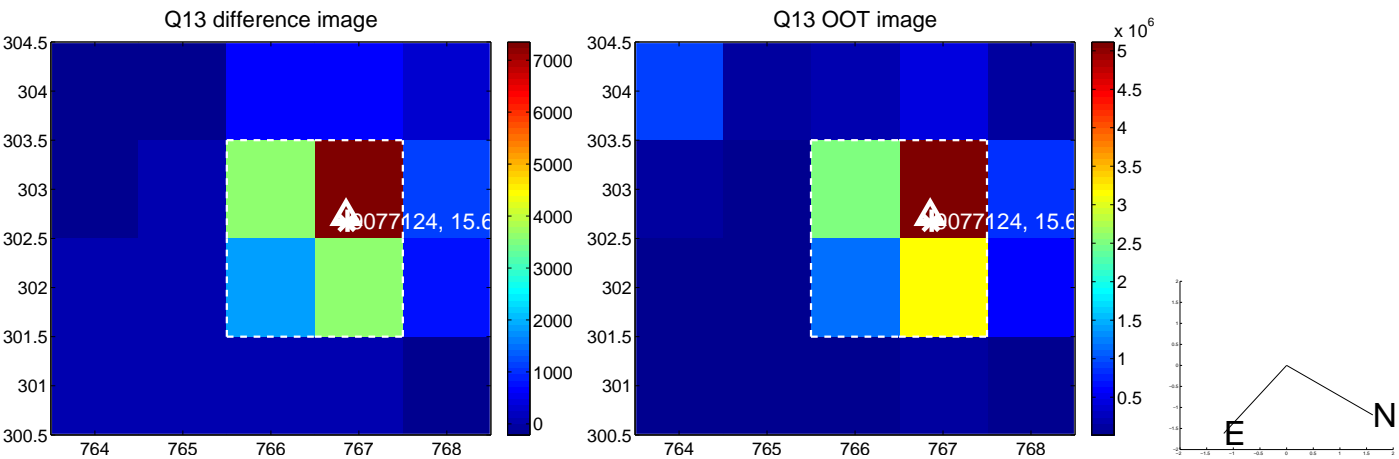
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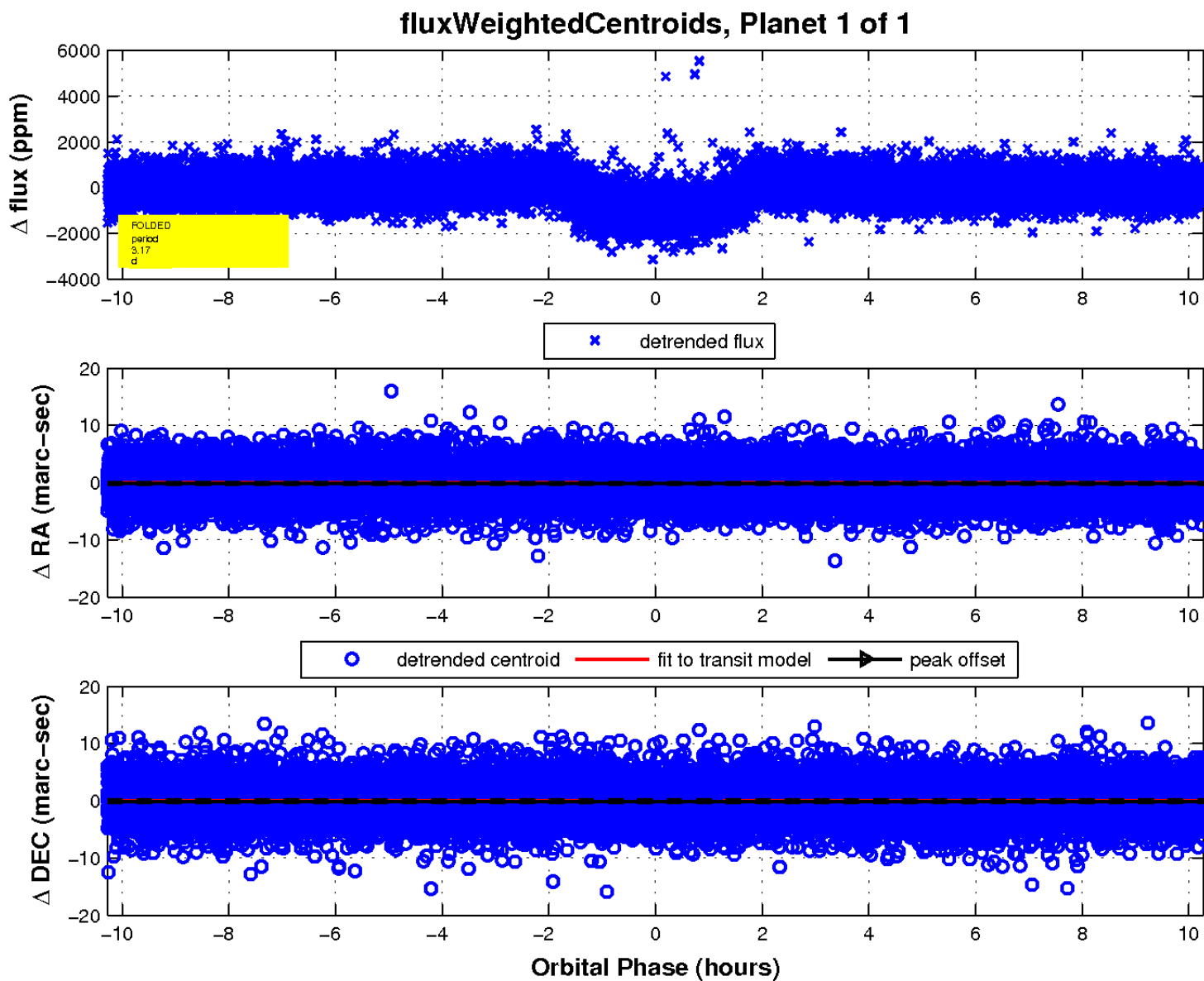
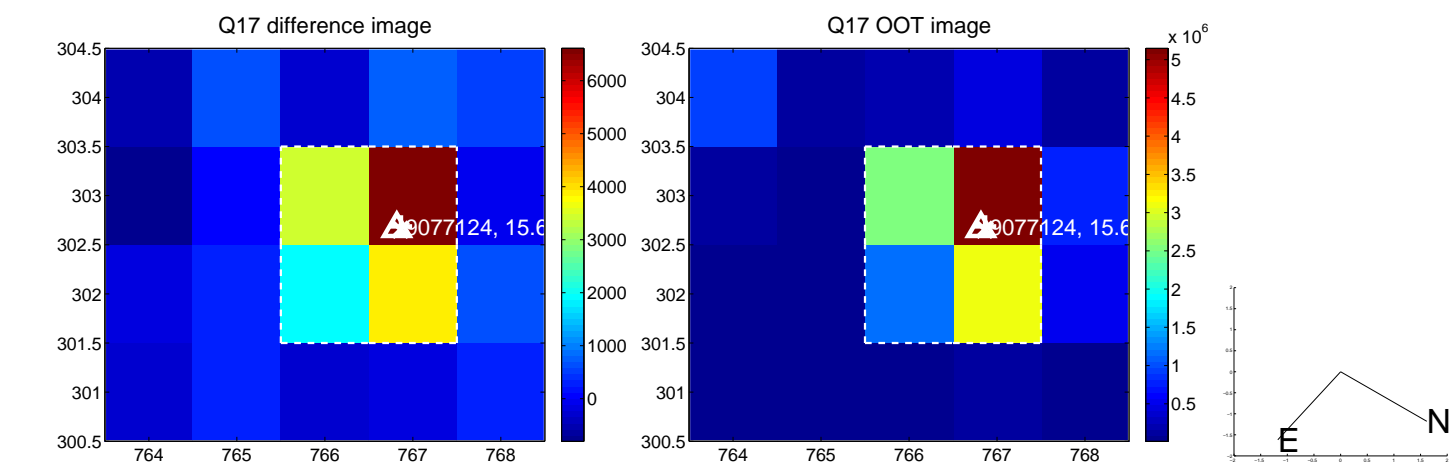
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UKIRT Image

Declination

