

KIC 009244768

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})
009244768-01	OBS	No	2.343946	132.587483	30.1	24.982	9.9	5.5	3.31	5842	1.80	7529.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009244768-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_FEW_DIFFS

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

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

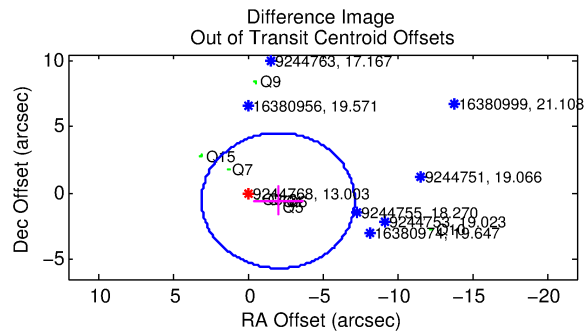
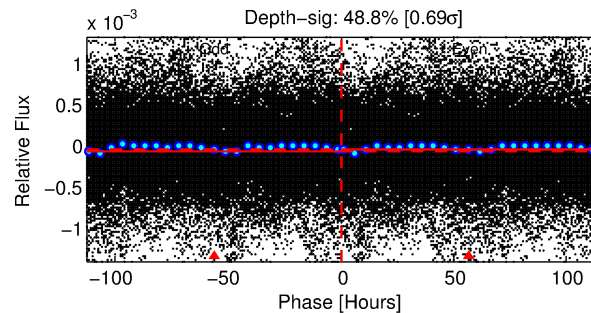
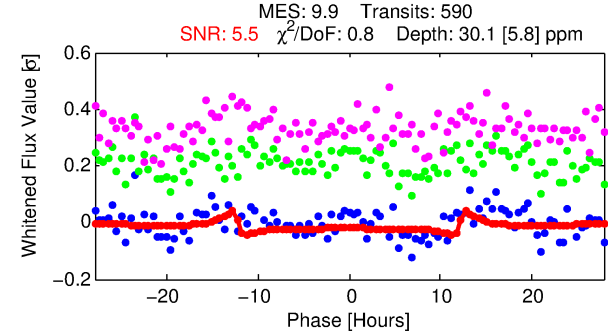
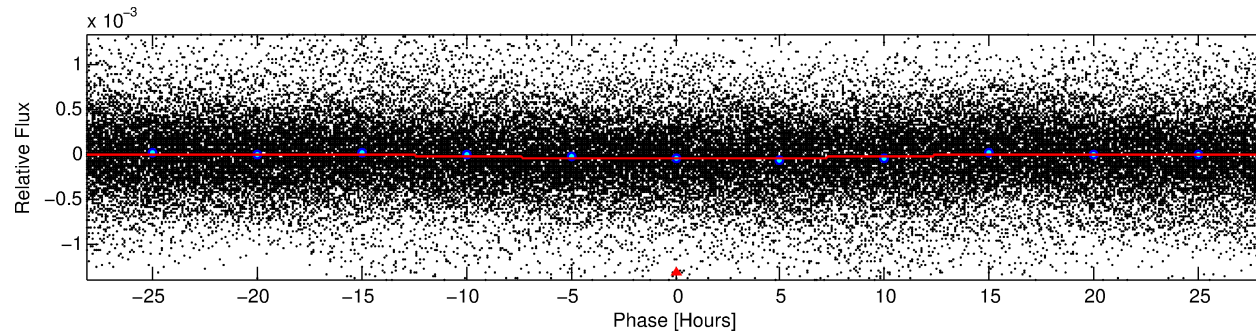
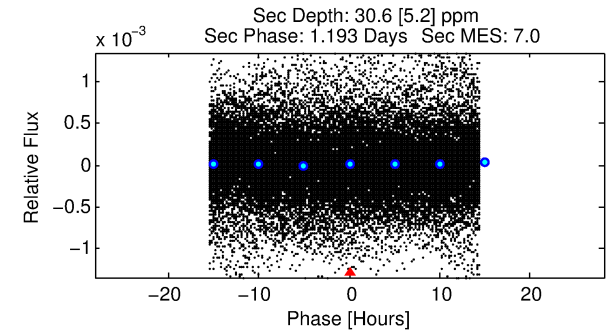
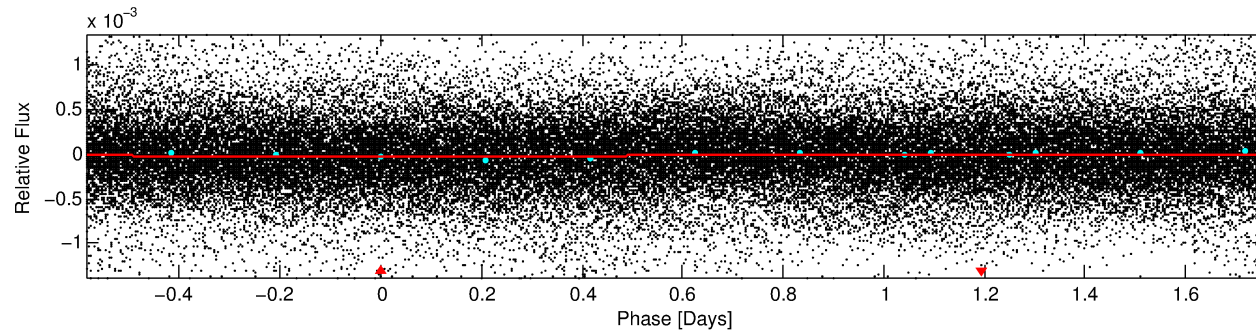
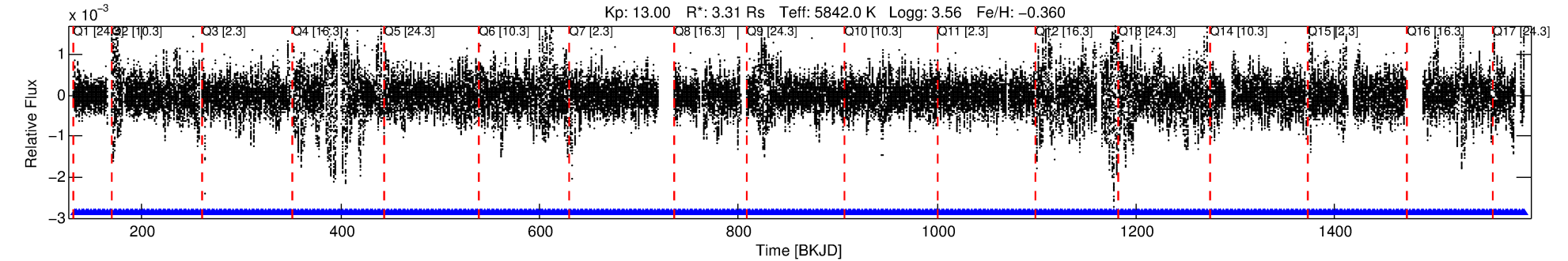
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009244768-01

No Significant Match Found

DV One-Page Summary

KIC: 9244768 Candidate: 1 of 1 Period: 2.344 d



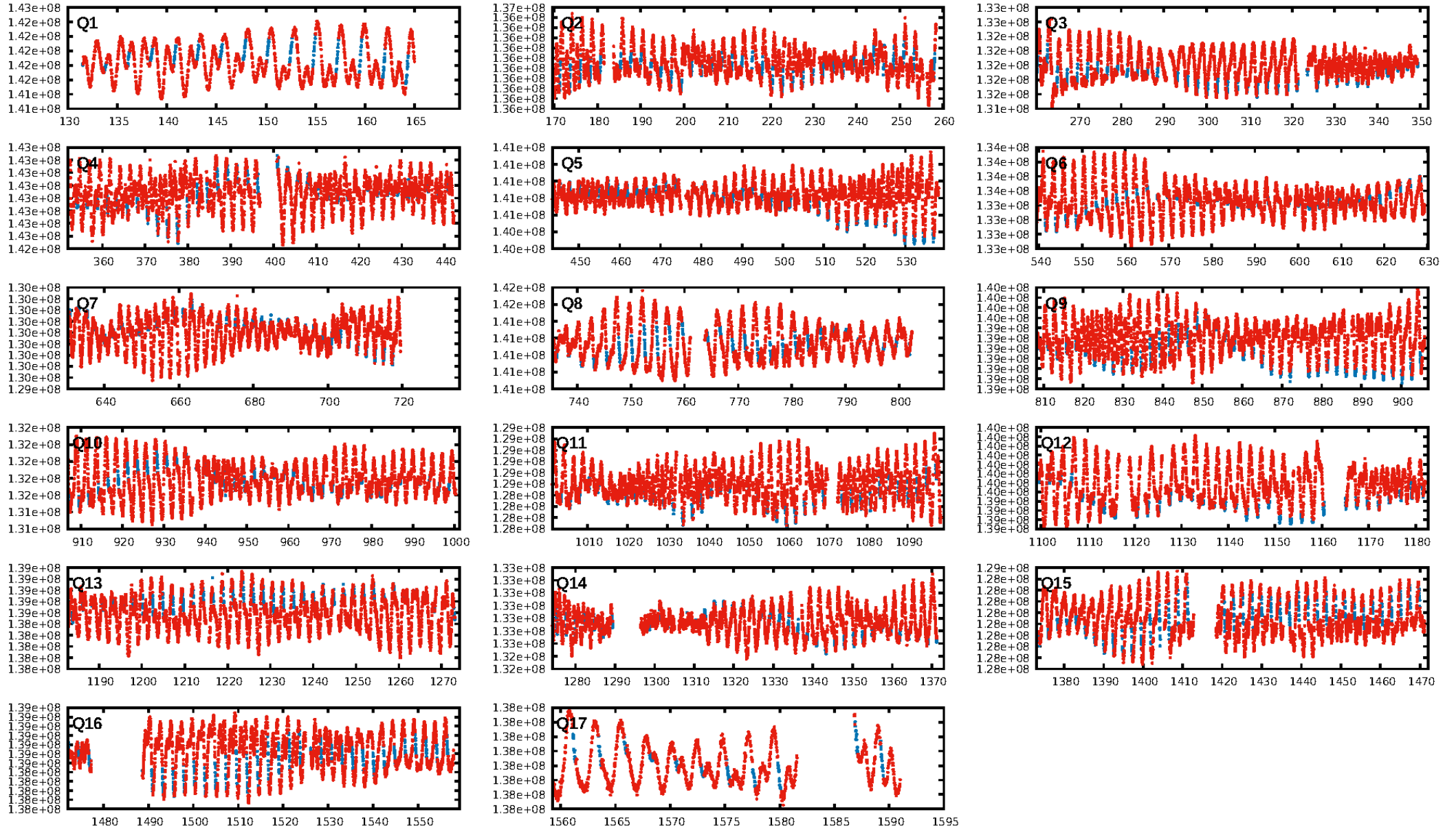
DV Fit Results:

Period = 2.34395 [0.00004] d
Epoch = 132.5875 [0.0087] BKJD
Rp/R* = 0.0050 [0.0019]
a/R* = 1.02 [0.08]
b = 0.01 [132.40]
Seff = 7529.15 [4641.54]
Teff = 2375 [366] K
Rp = 1.80 [1.06] Re
a = 0.0389 [0.0153] AU
Ag = 7.83 [7.82] [0.87σ]
Teffp = 6142 [1235] K [2.92σ]

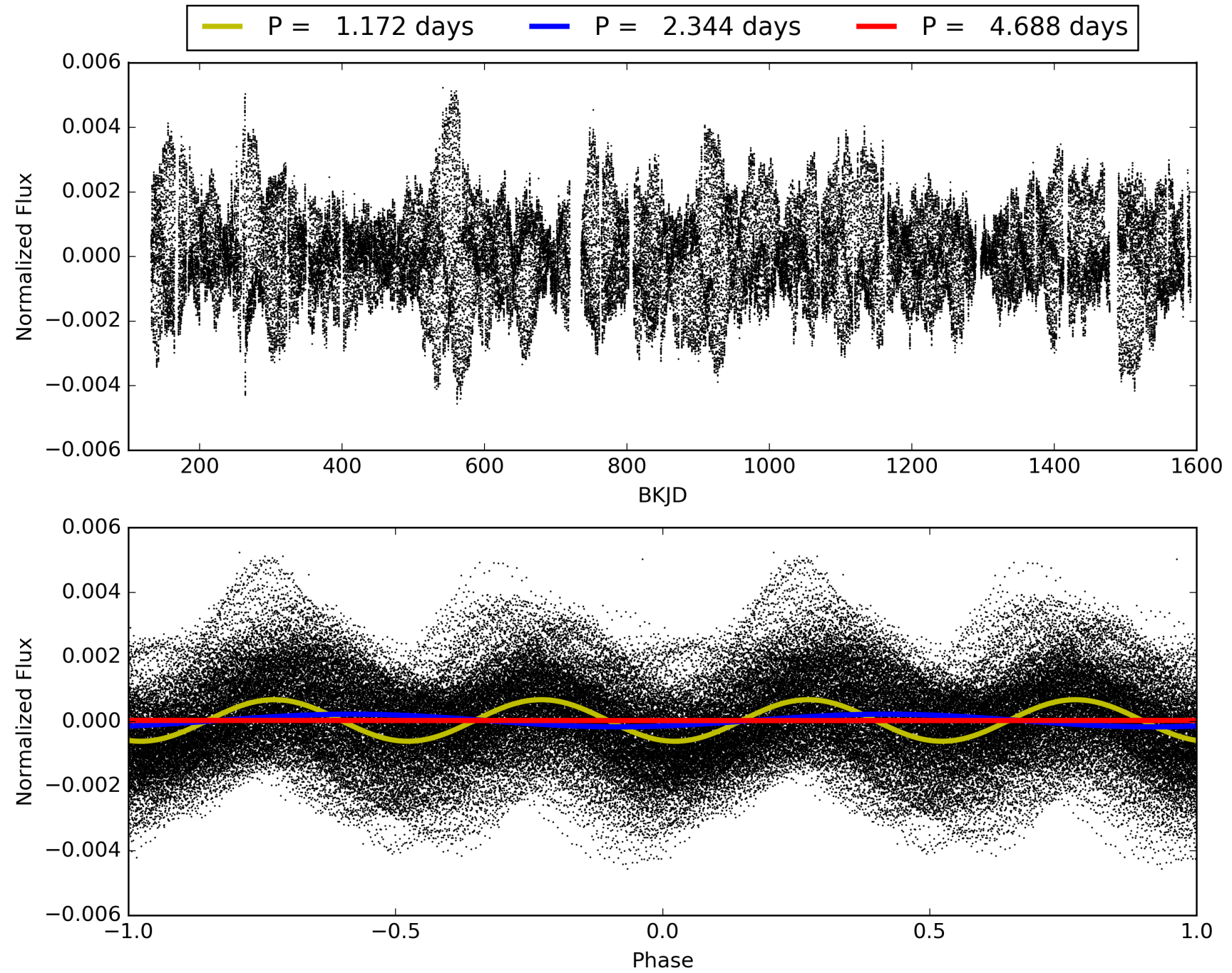
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [563/563]
GhostDiagnostic-chr: -0.6054
Centroid-sig: 0.0%
Centroid-so: 2.651 arcsec [4.66σ]
OotOffset-rm: 2.120 arcsec [1.24σ]
KicOffset-rm: 2.092 arcsec [1.35σ]
OotOffset-st: 2/3/0/4 [9]
KicOffset-st: 2/3/0/4 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009244768-01, PDC Light Curves

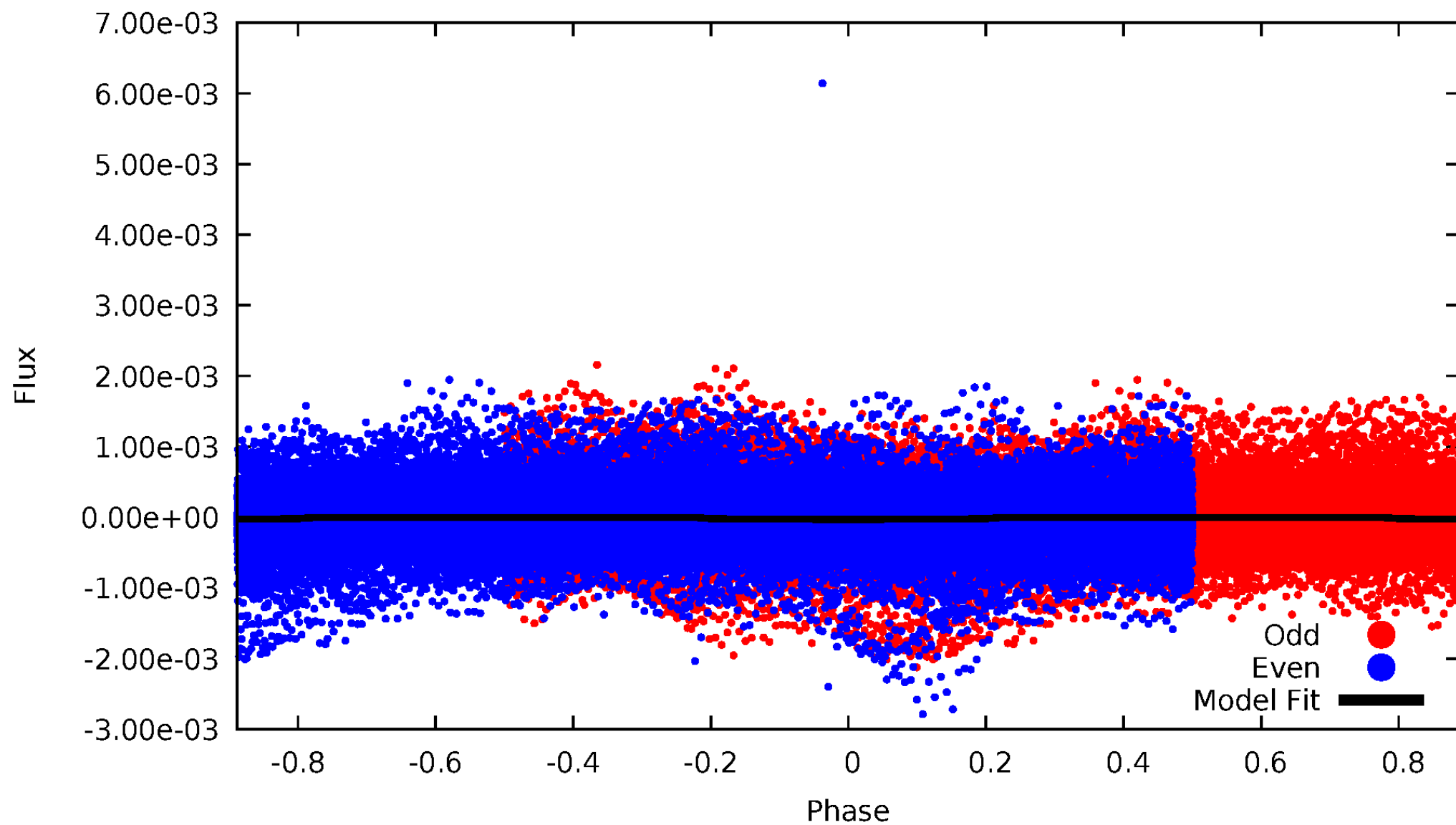


TCE 009244768-01



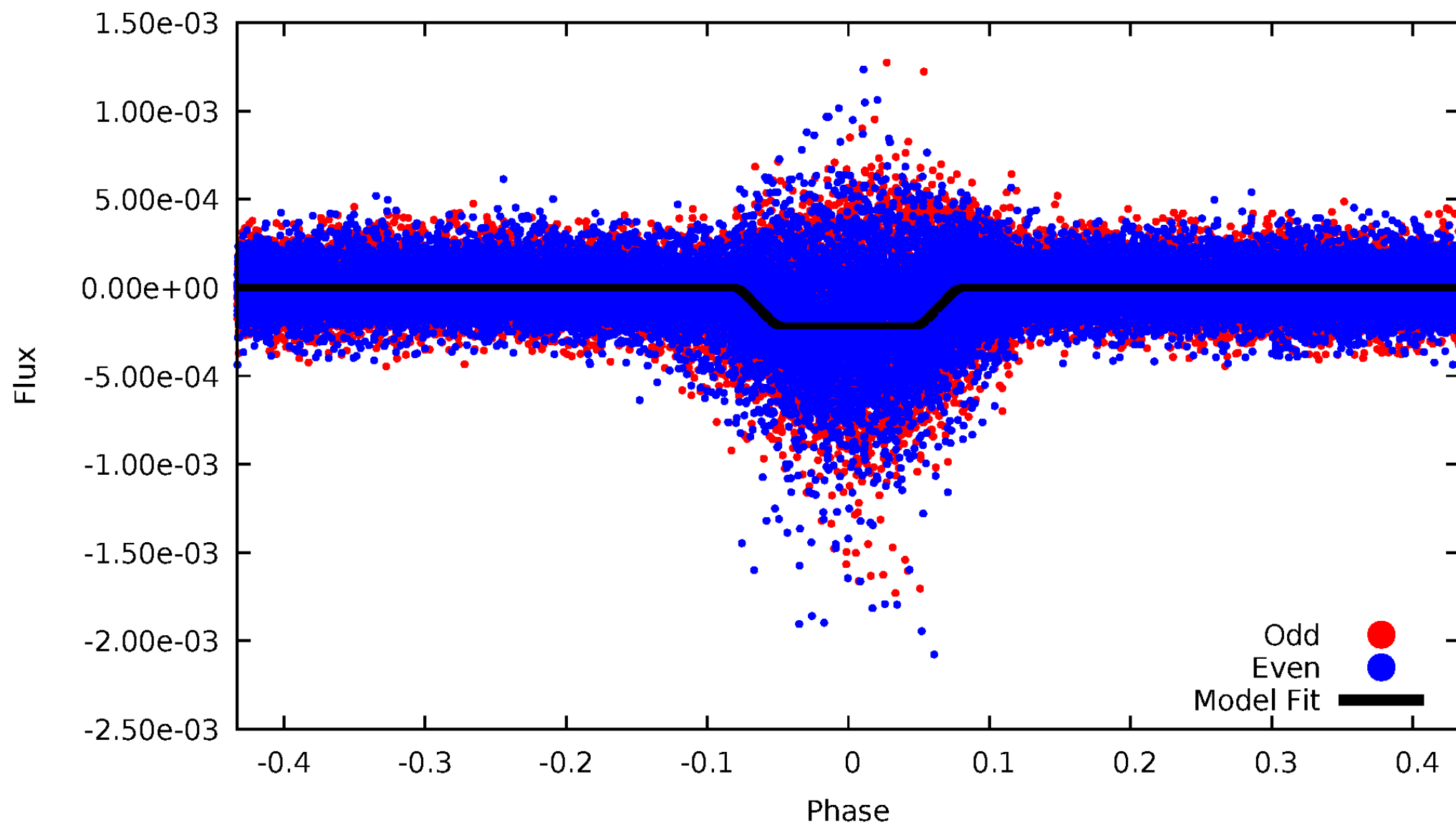
DV Odd/Even

TCE 009244768-01



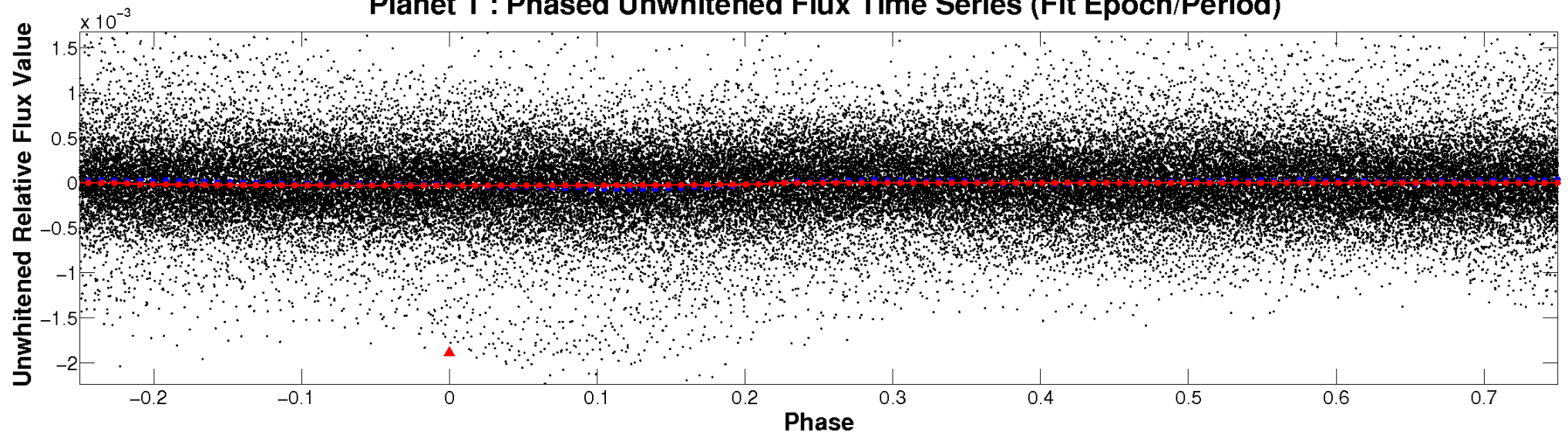
ALT Odd/Even

TCE 009244768-01

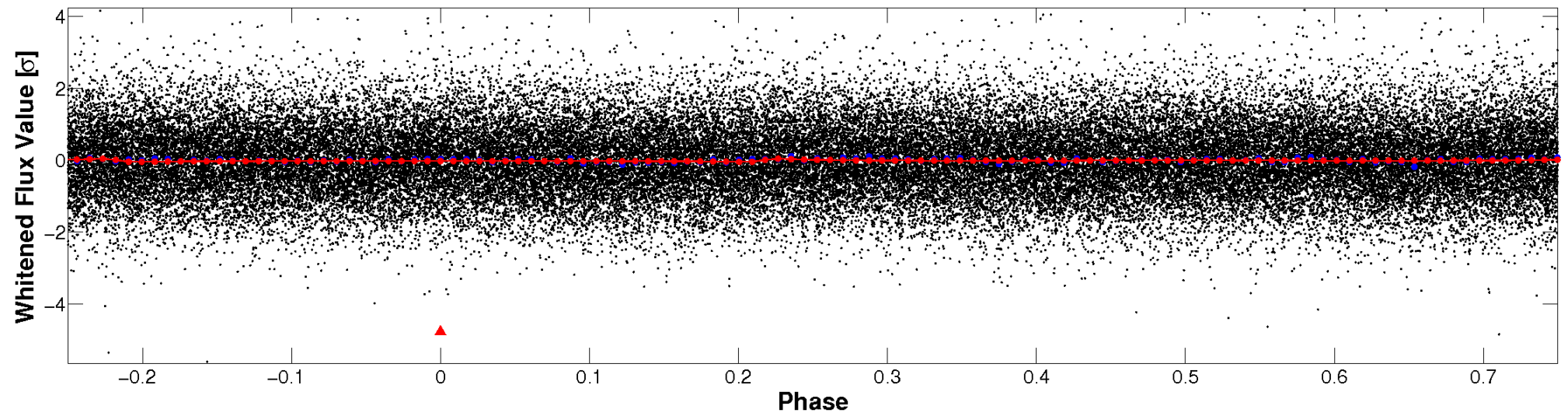


Non-Whitened Vs. Whitened Light Curve

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

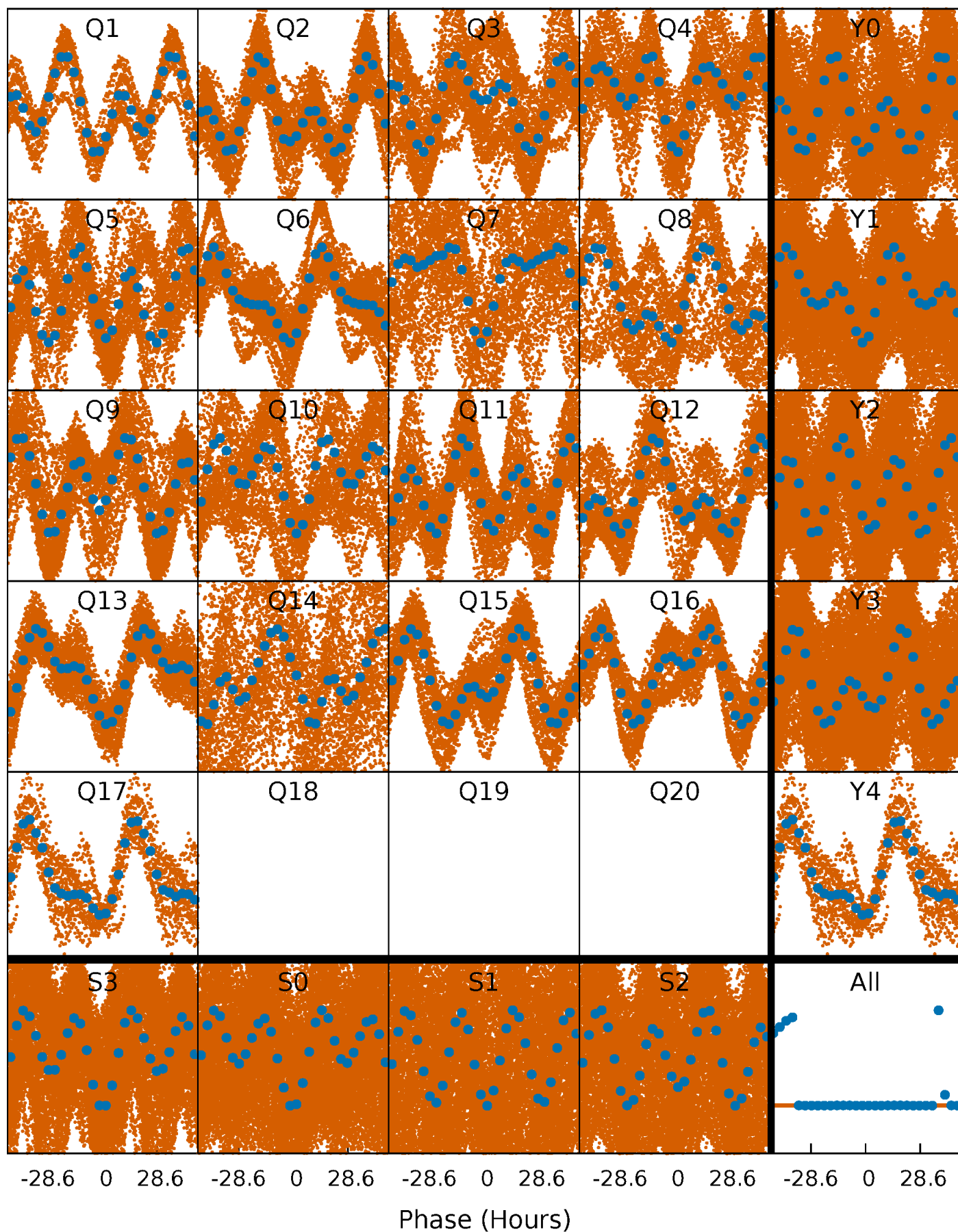


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



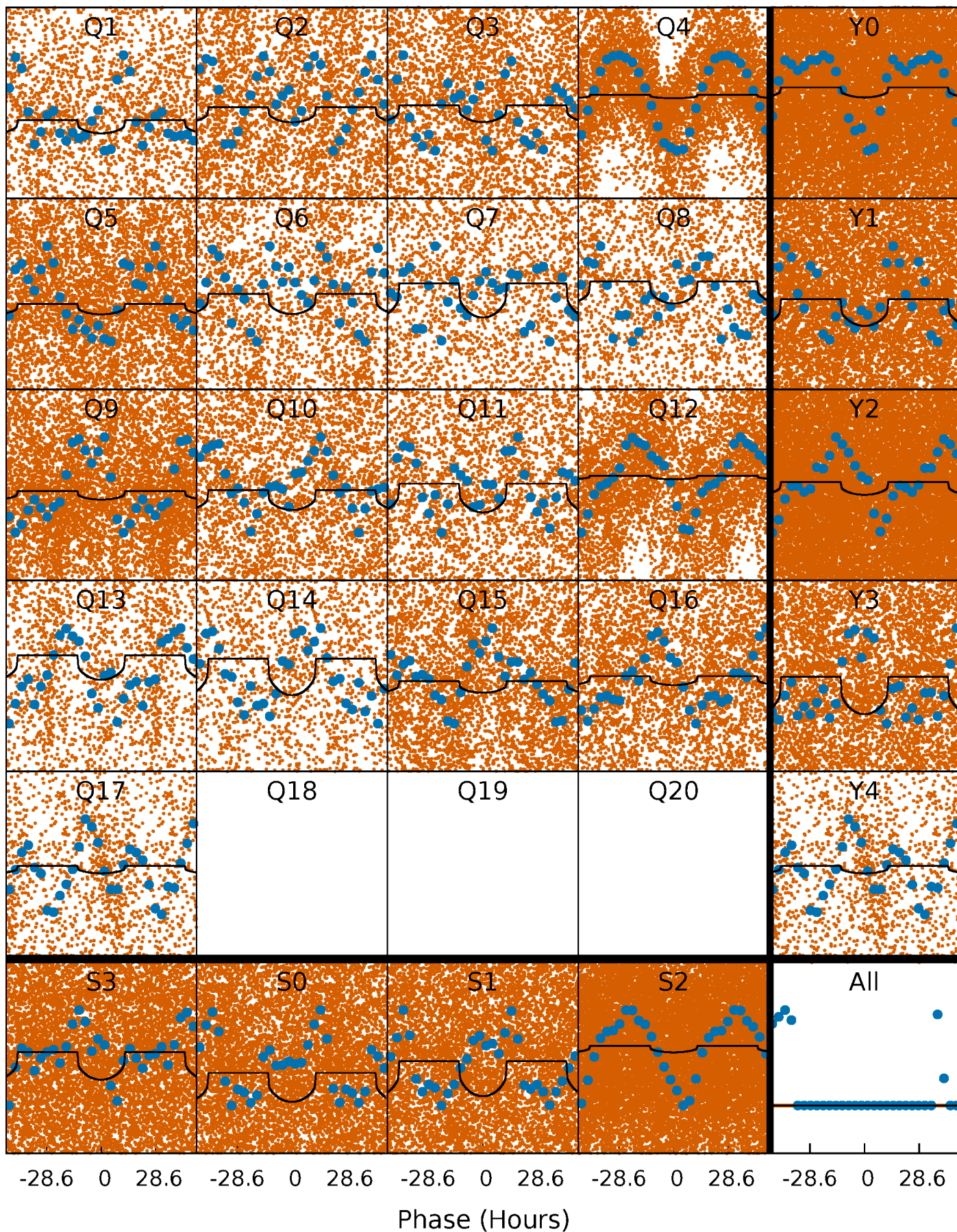
PDC Quarter-Phased Transit Curves

TCE 009244768-01 P= 2.343946 Days $T_0=132.587483$ (BKJD)



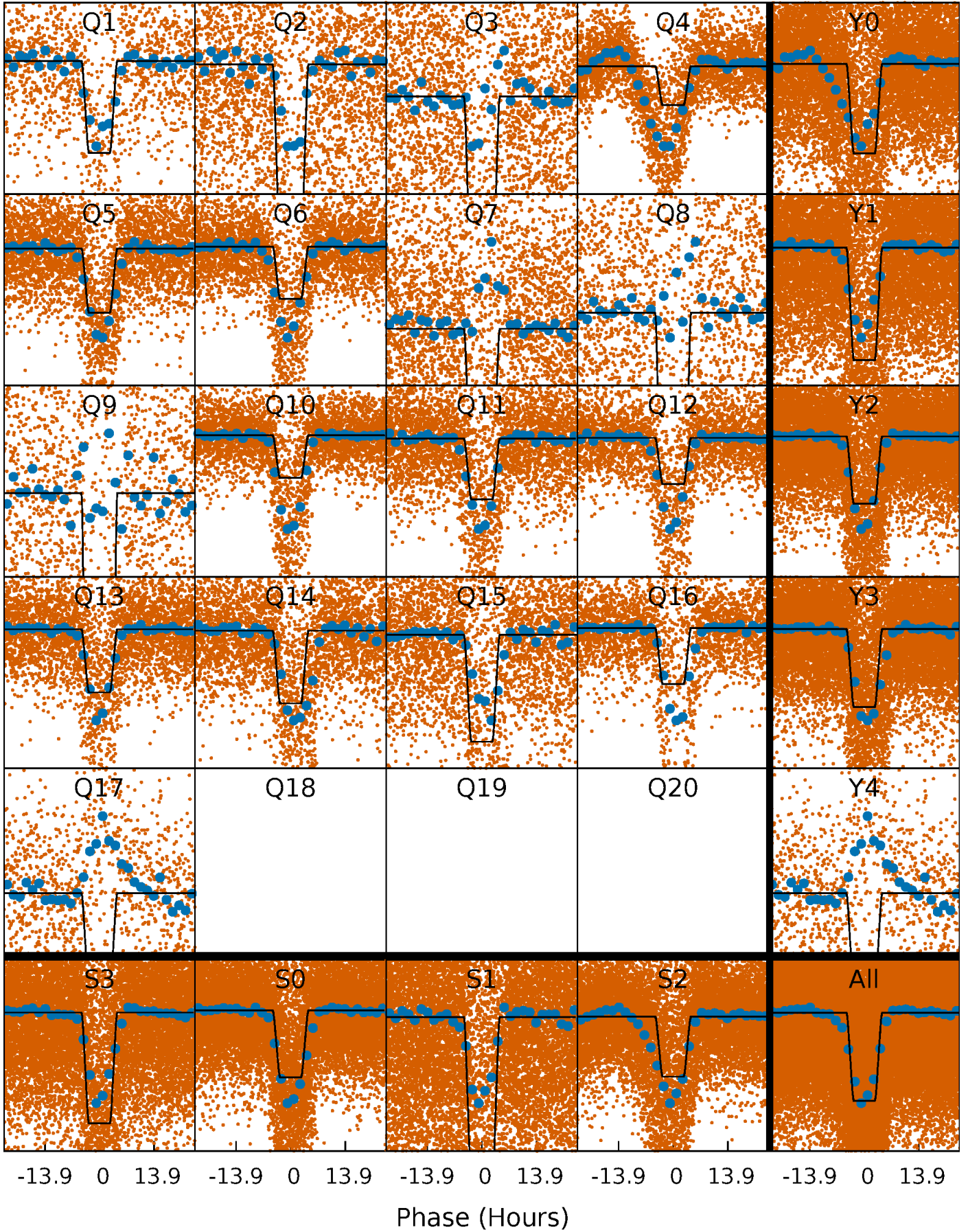
DV Quarter-Phased Transit Curves

TCE 009244768-01 P= 2.343946 Days $T_0=132.587483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

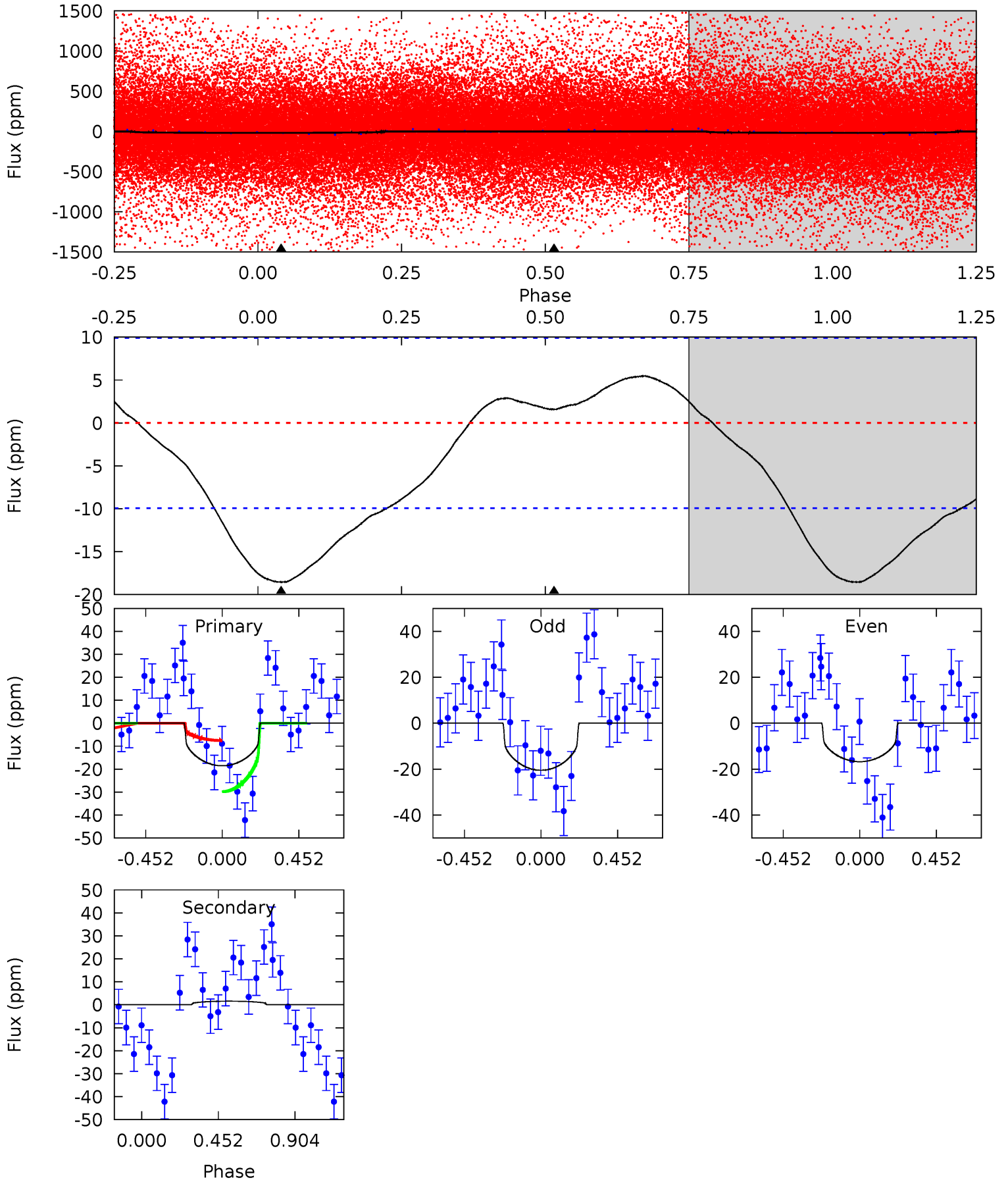
TCE 009244768-01 P= 2.344471 Days $T_0=132.672294$ (BKJD)



DV Model-Shift Uniqueness Test

009244768-01, P = 2.343946 Days, E = 130.243537 Days

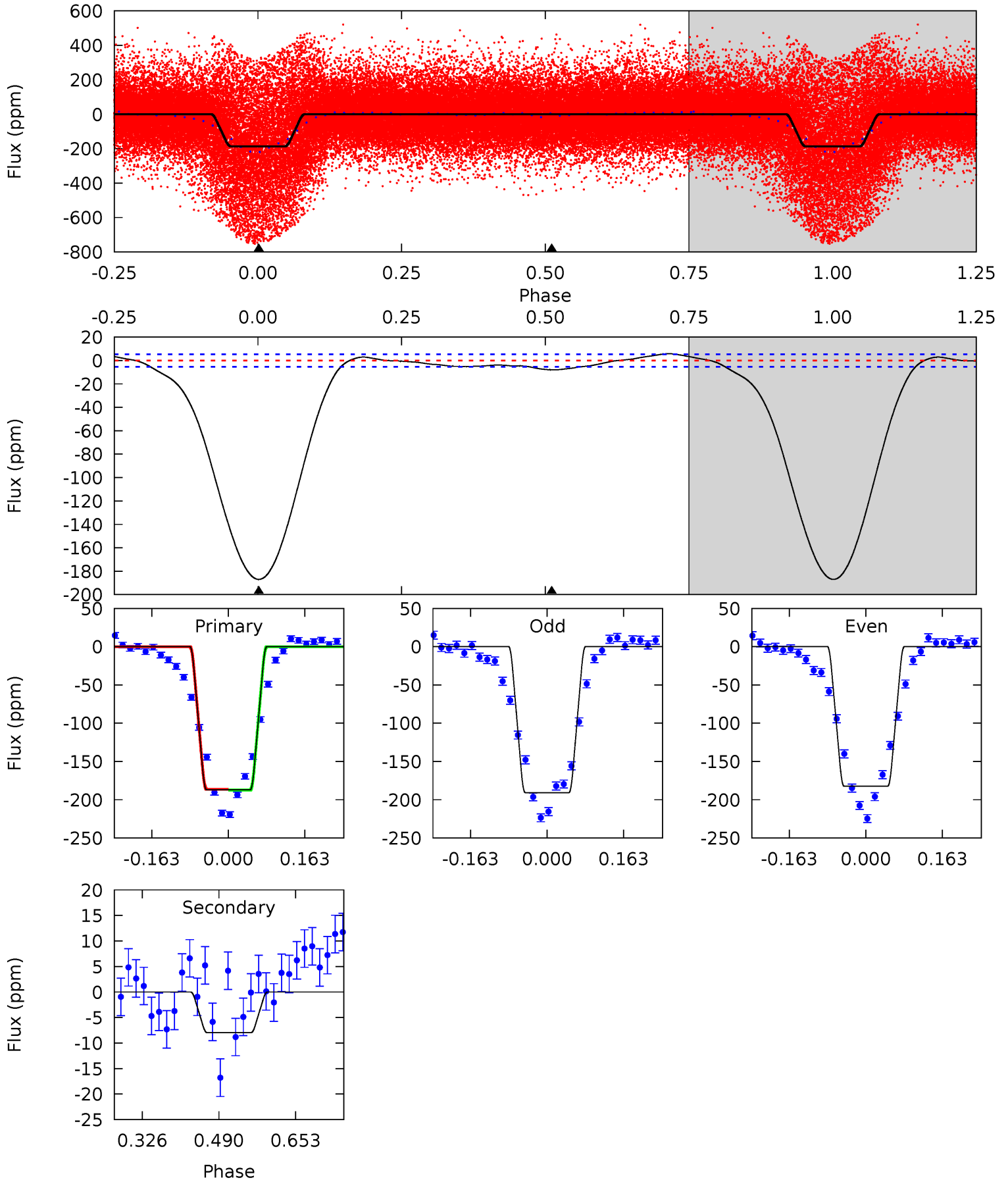
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.91	-0.67	0	0	4.24	0.75	1.61	7.91	7.91	-0.67	-0.67	0.81	1.97	0.23	4.81



Alt Model-Shift Uniqueness Test

009244768-01, P = 2.344471 Days, E = 130.327823 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
156.6	6.68	0	0	4.46	1.39	3.33	156.6	156.6	6.68	6.68	3.55	1.10	0.03	0.45



Stellar Parameters For KIC 009244768

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5842^{+157}_{-174}	$3.555^{+0.345}_{-0.115}$	$-0.360^{+0.300}_{-0.300}$	$3.306^{+0.725}_{-1.449}$	$1.432^{+0.179}_{-0.418}$	$0.056^{+0.142}_{-0.021}$
	+3%/-3%	+10%/-3%	+83%/-83%	+22%/-44%	+12%/-29%	+254%/-37%
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 009244768-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 2	$1.66^{+0.80}_{-0.74}$	3264^{+219}_{-312}	-3682^{+980}_{-712}	$-0.378^{+0.589}_{-1.264}$
Alt.	-8 ± 1	$5.02^{+1.11}_{-1.21}$	3247^{+243}_{-333}	-2467^{+5221}_{-467}	$0.259^{+0.173}_{-0.088}$

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 $A_{obs} \gg 1.0$

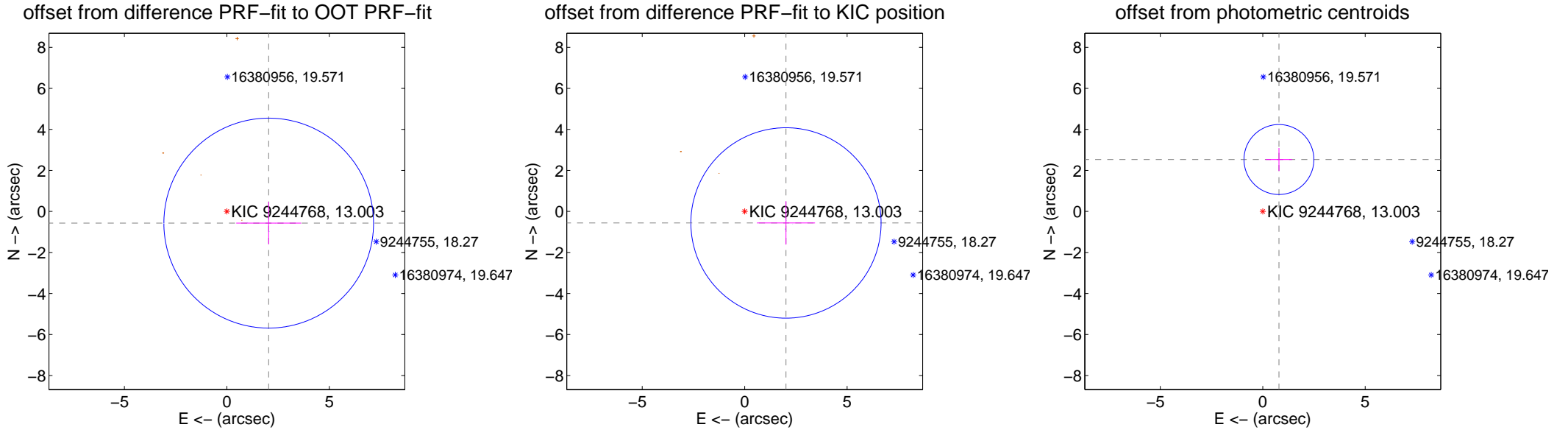
DV Centroid Data

Supplemental centroid analysis for 009244768-01. Kepler magnitude: 13.00. Transit SNR 5.47

There are 4 quarters with good PRF difference image offsets

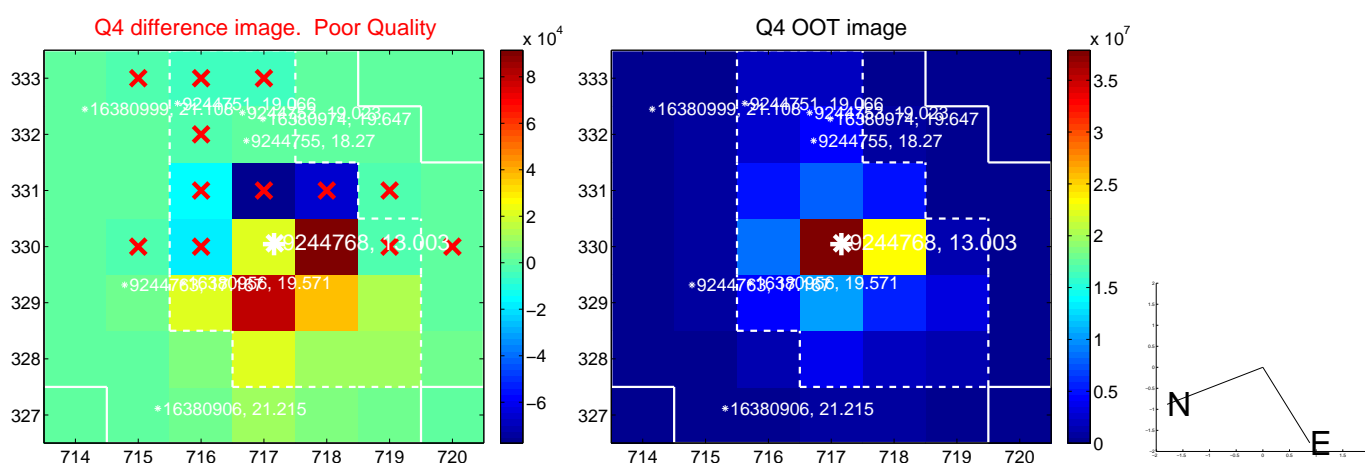
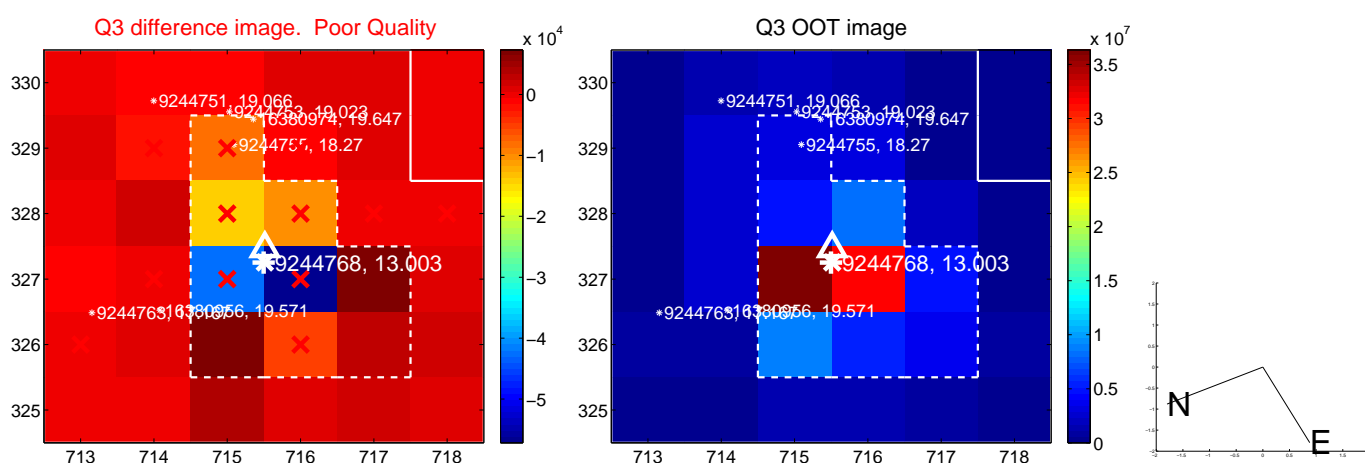
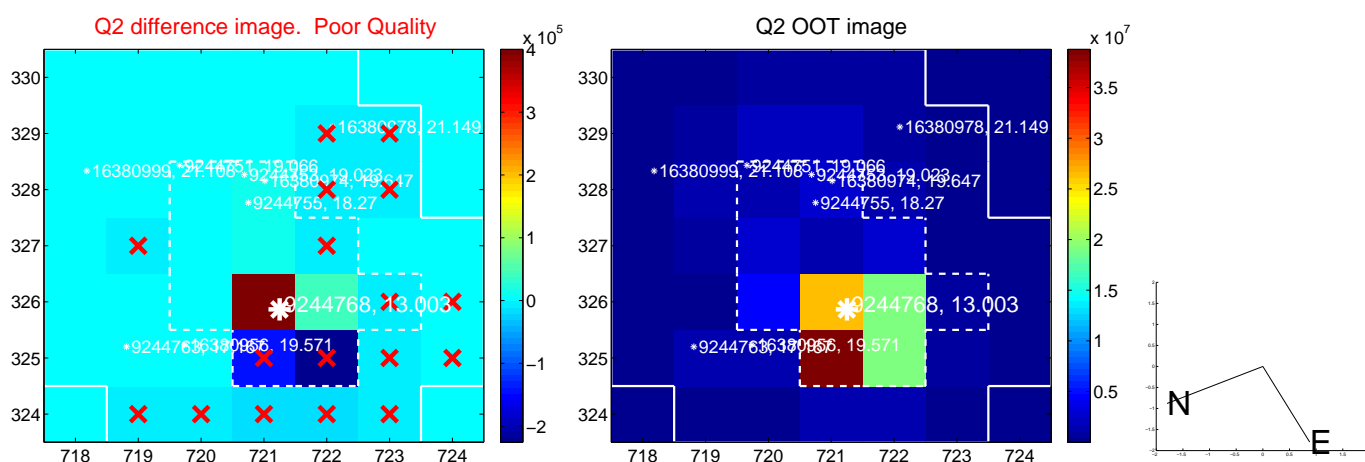
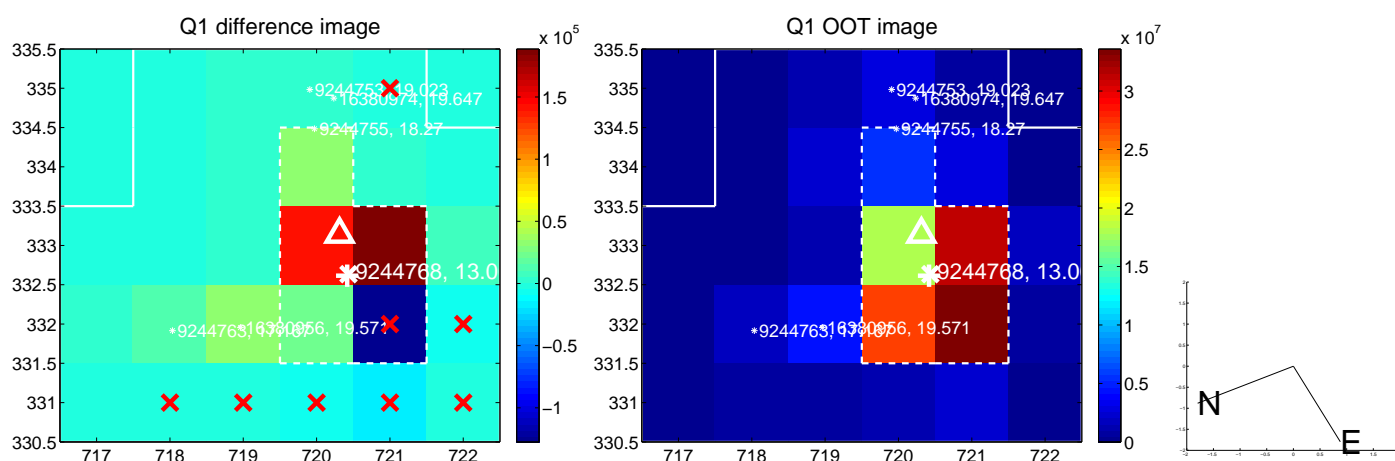
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.120 ± 1.706	1.24	-2.043 ± 1.586	-0.569 ± 1.033
PRF-fit source offset from KIC position	2.092 ± 1.547	1.35	-2.016 ± 1.417	-0.561 ± 1.056
photometric centroid source offset	2.65 ± 0.57	4.66	-0.79 ± 0.64	2.53 ± 0.56

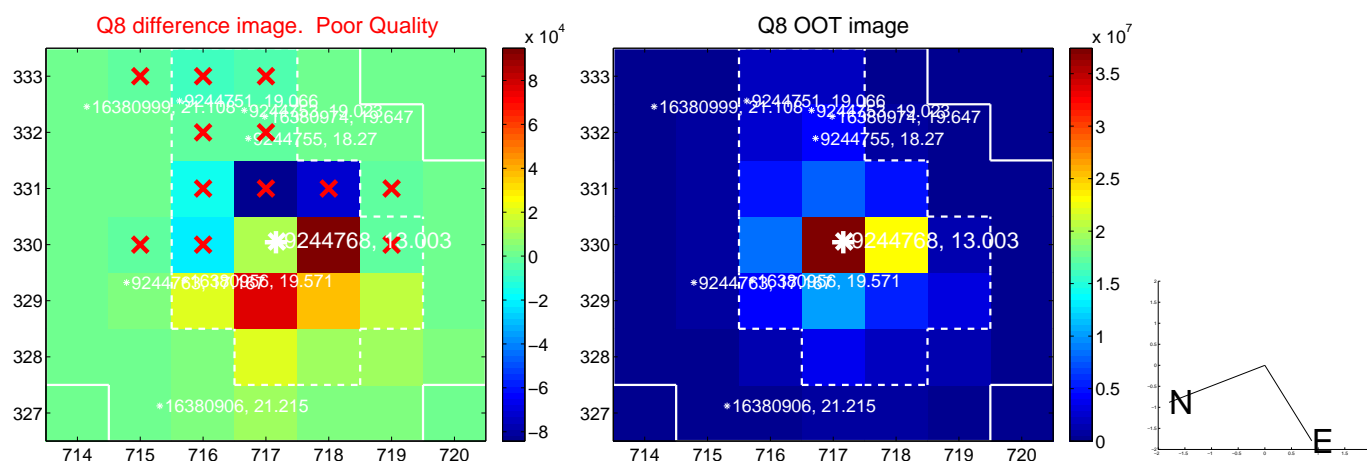
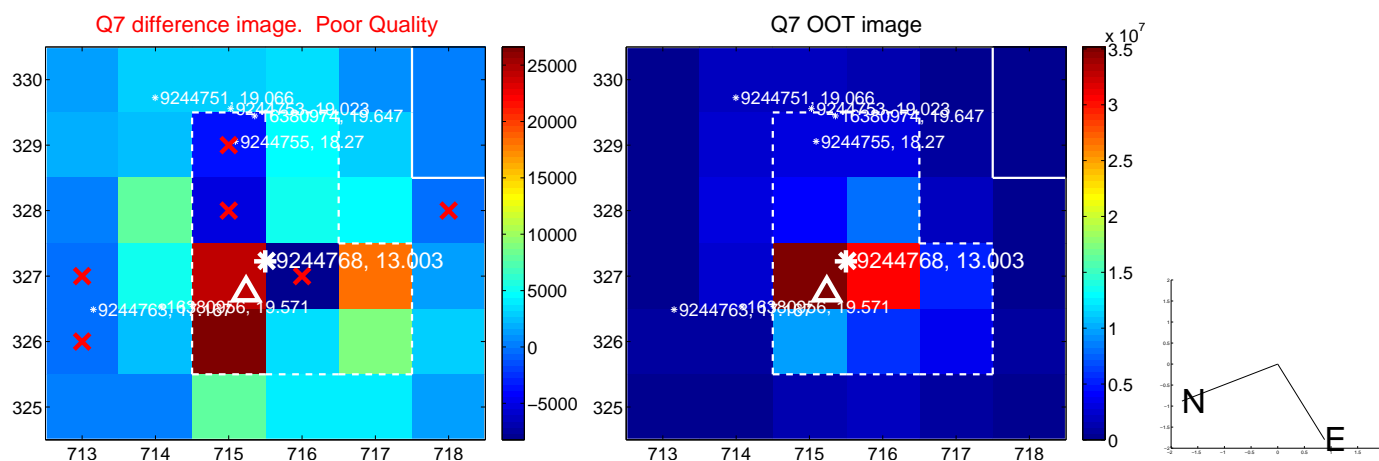
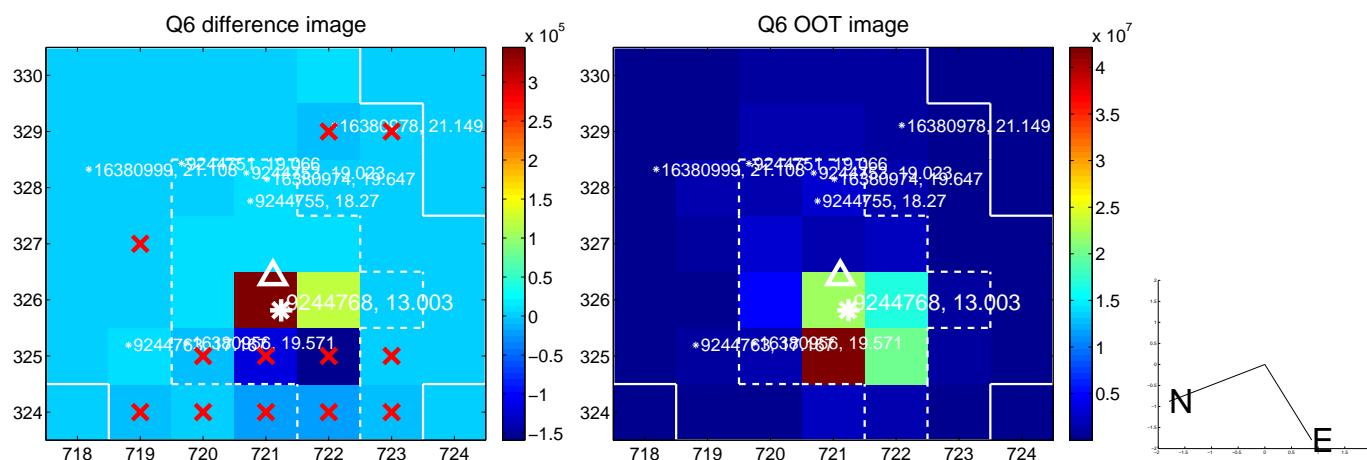
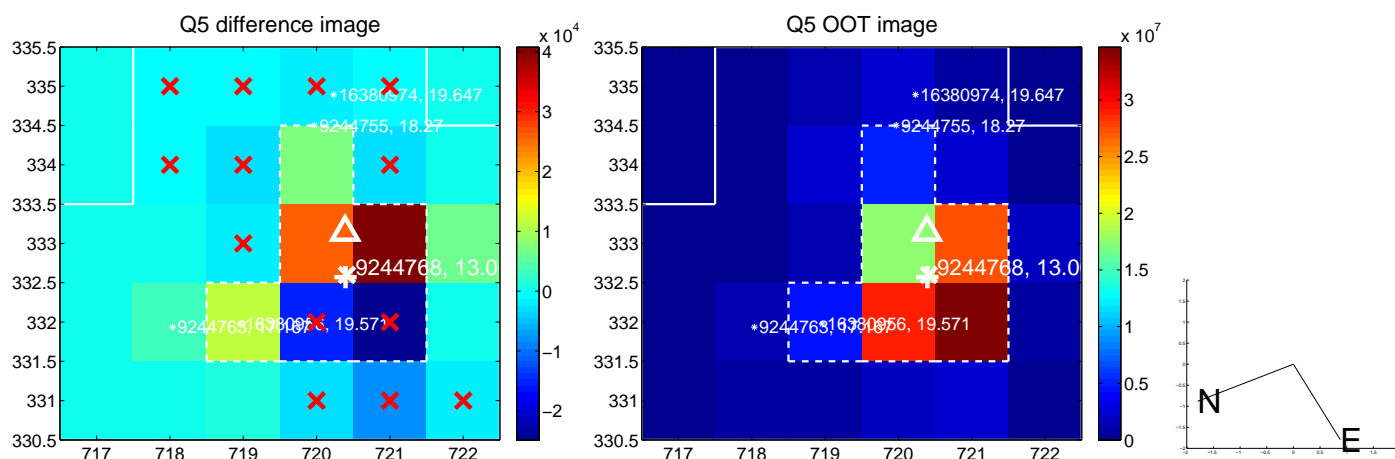


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

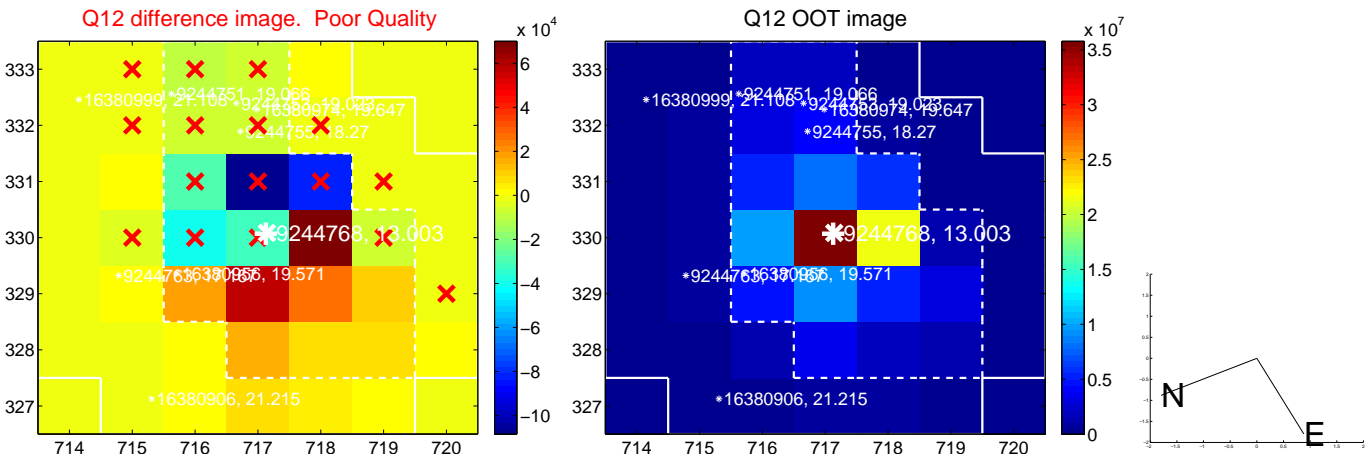
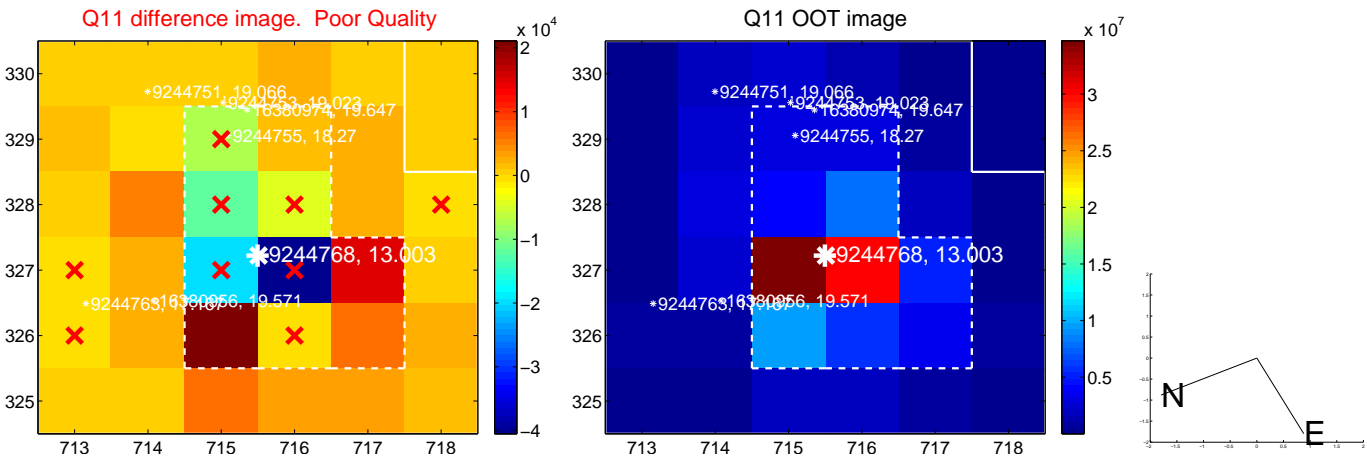
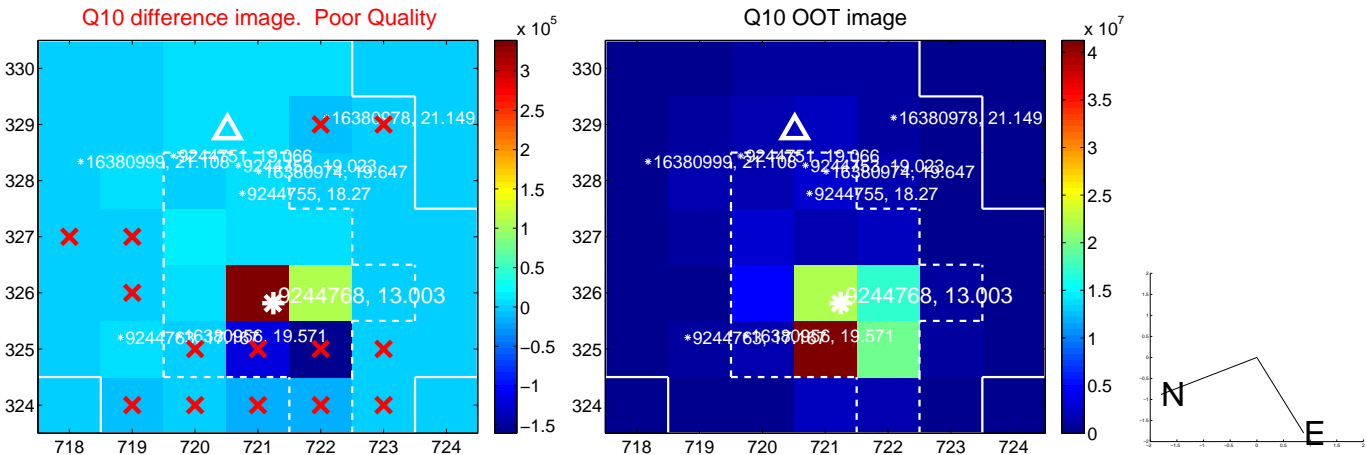
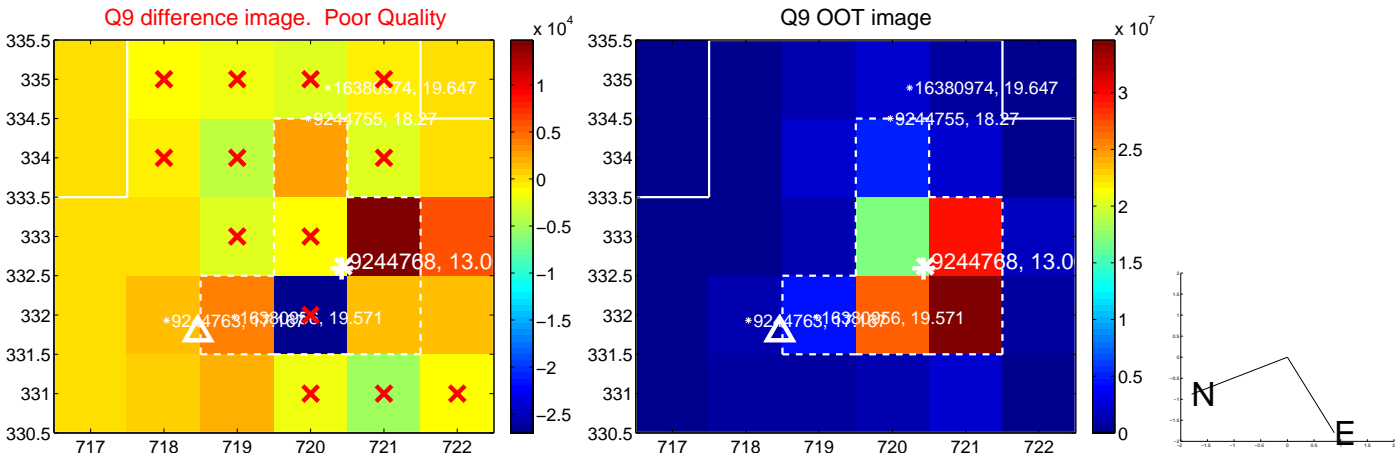
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



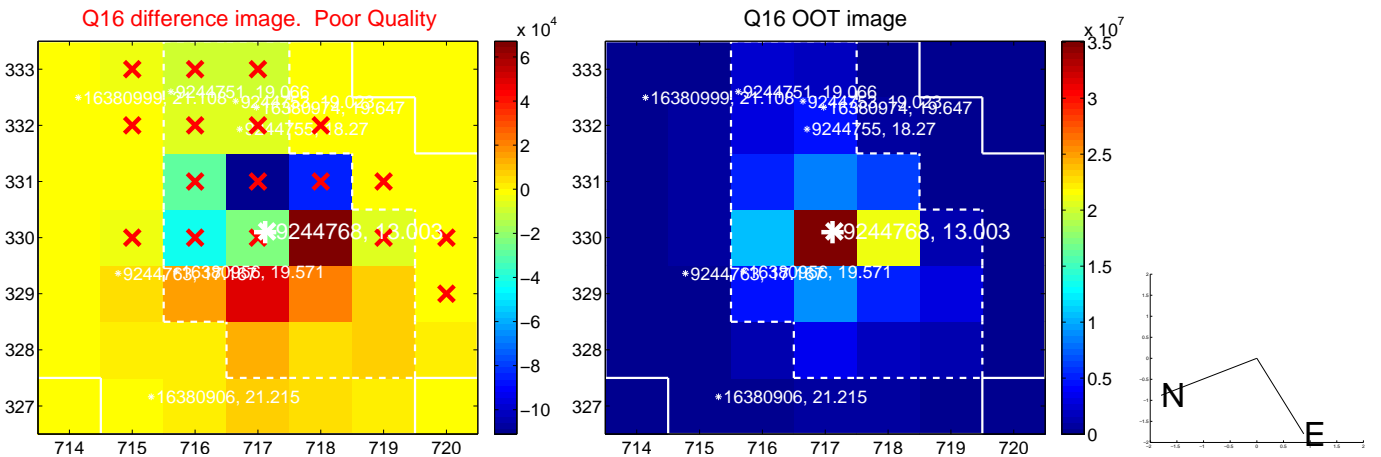
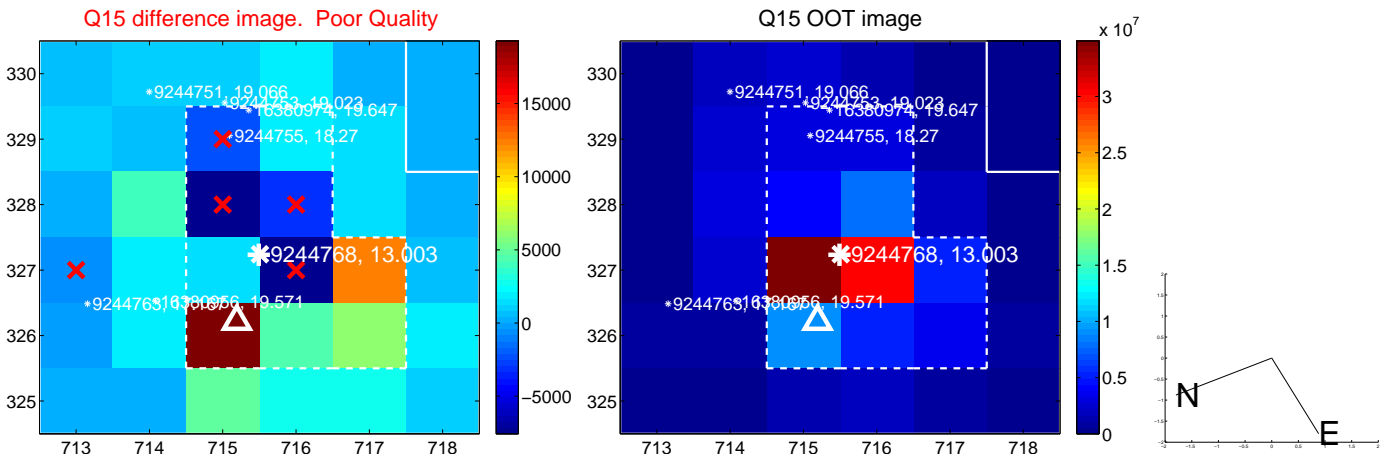
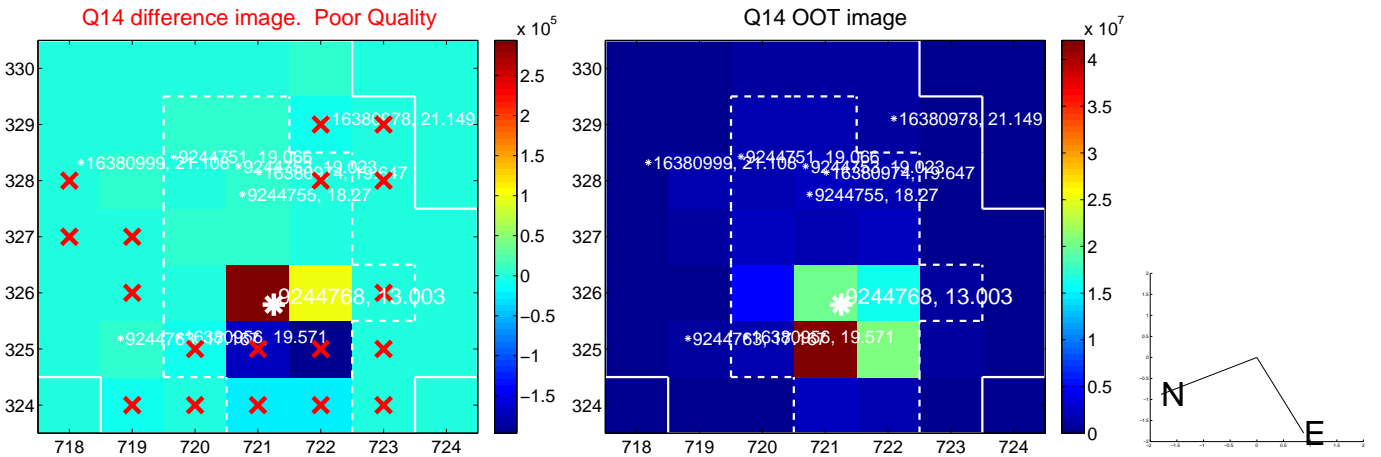
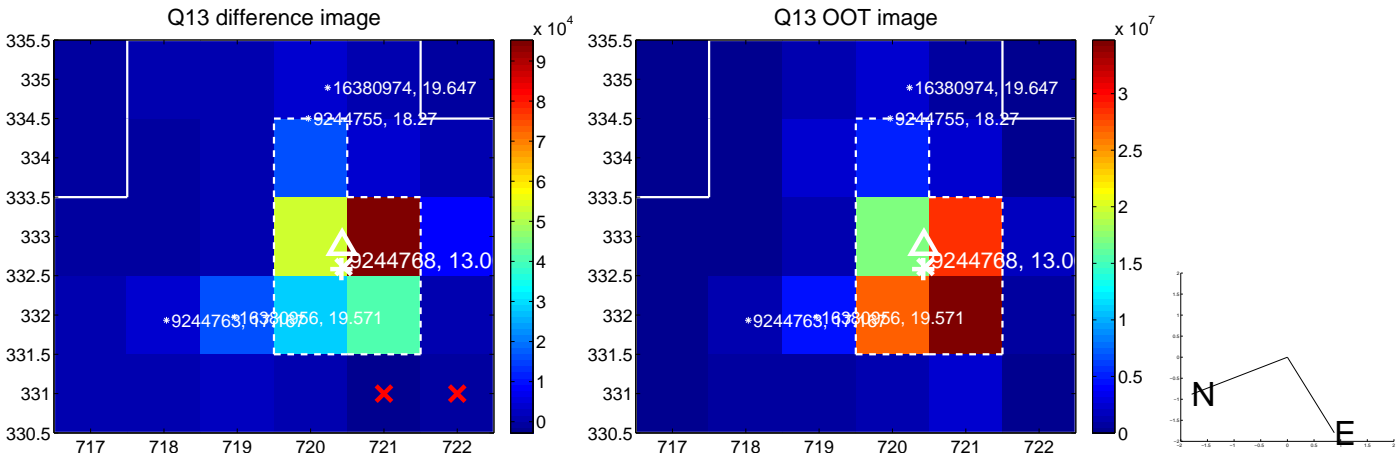
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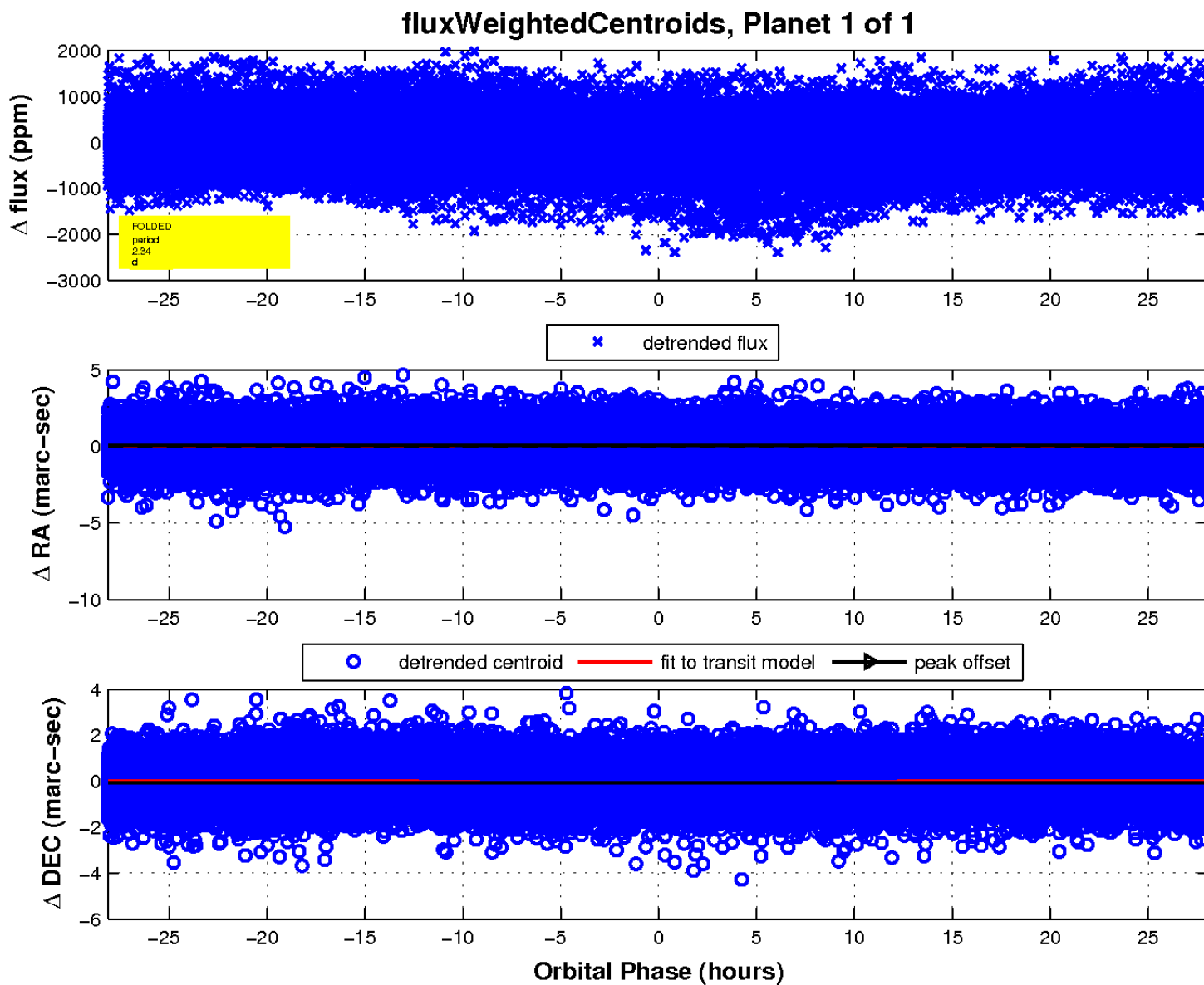
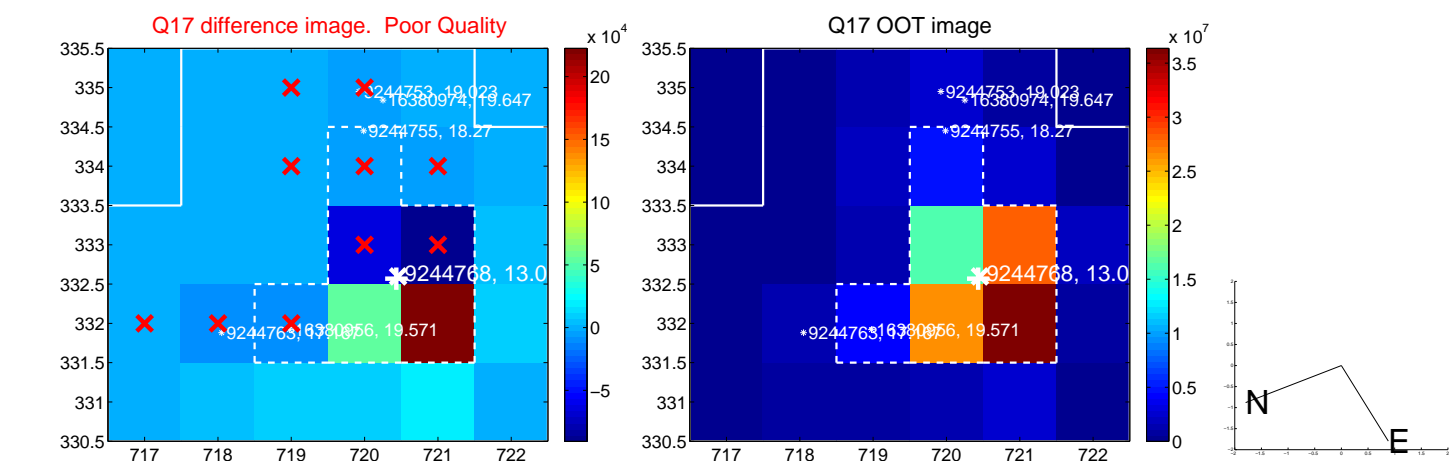
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UKIRT Image

Declination

