

KIC 008004903

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})
008004903-01	OBS	2594.01	11.254040	136.889392	448.4	4.803	15.2	16.2	1.12	5995	2.52	147.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008004903-01	OBS	PC	0.99	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.

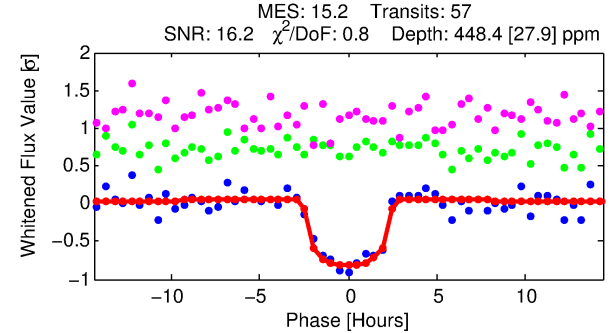
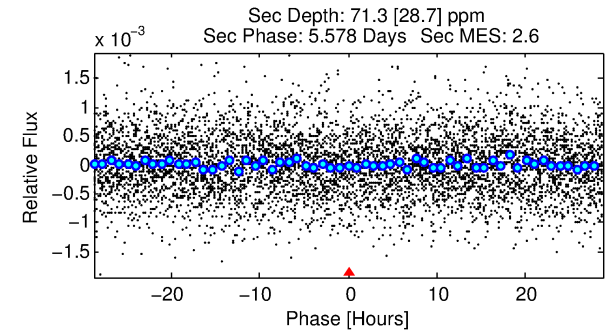
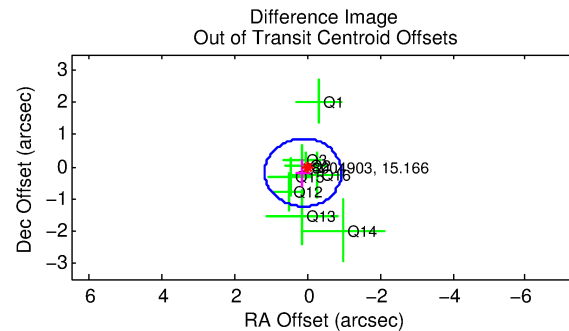
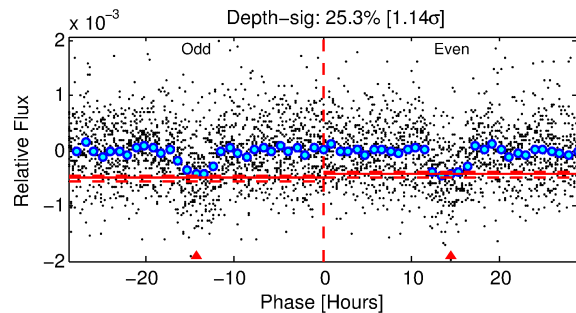
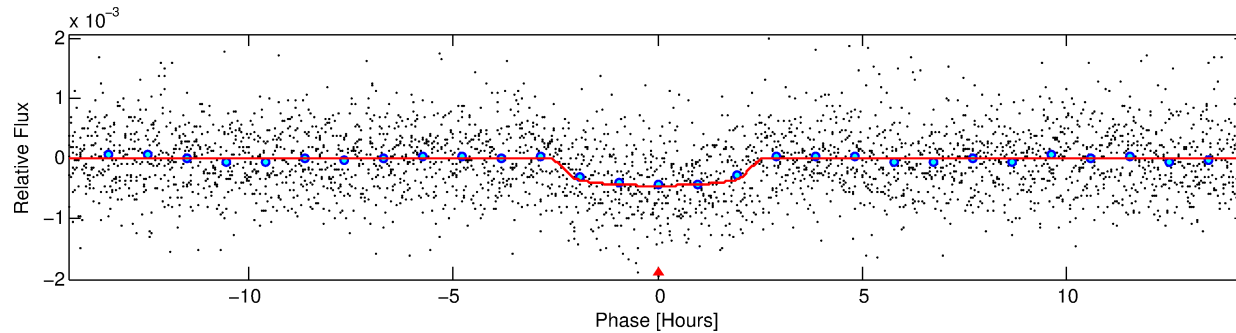
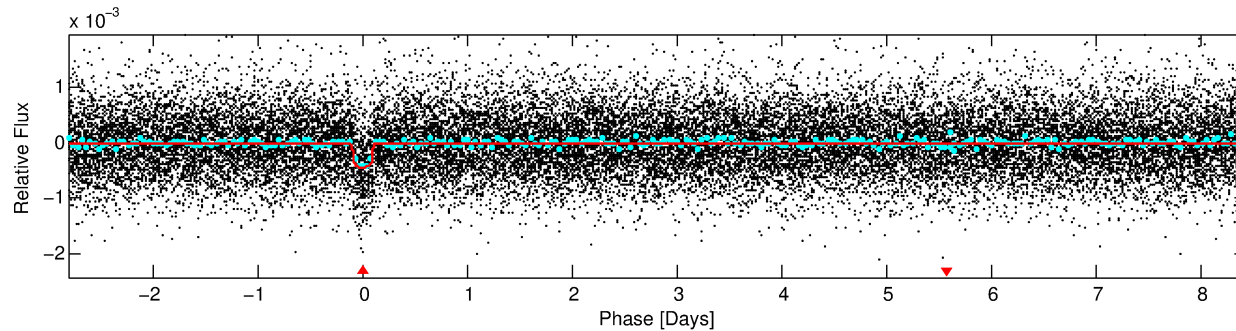
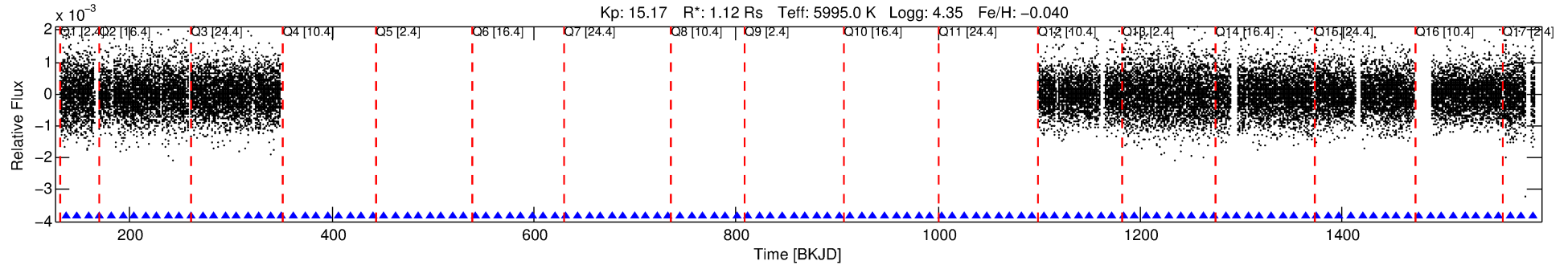
Ephemeris Match Information For 008004903-01

No Significant Match Found

DV One-Page Summary

KIC: 8004903 Candidate: 1 of 1 Period: 11.254 d

KOI: K02594.01 Corr: 0.987



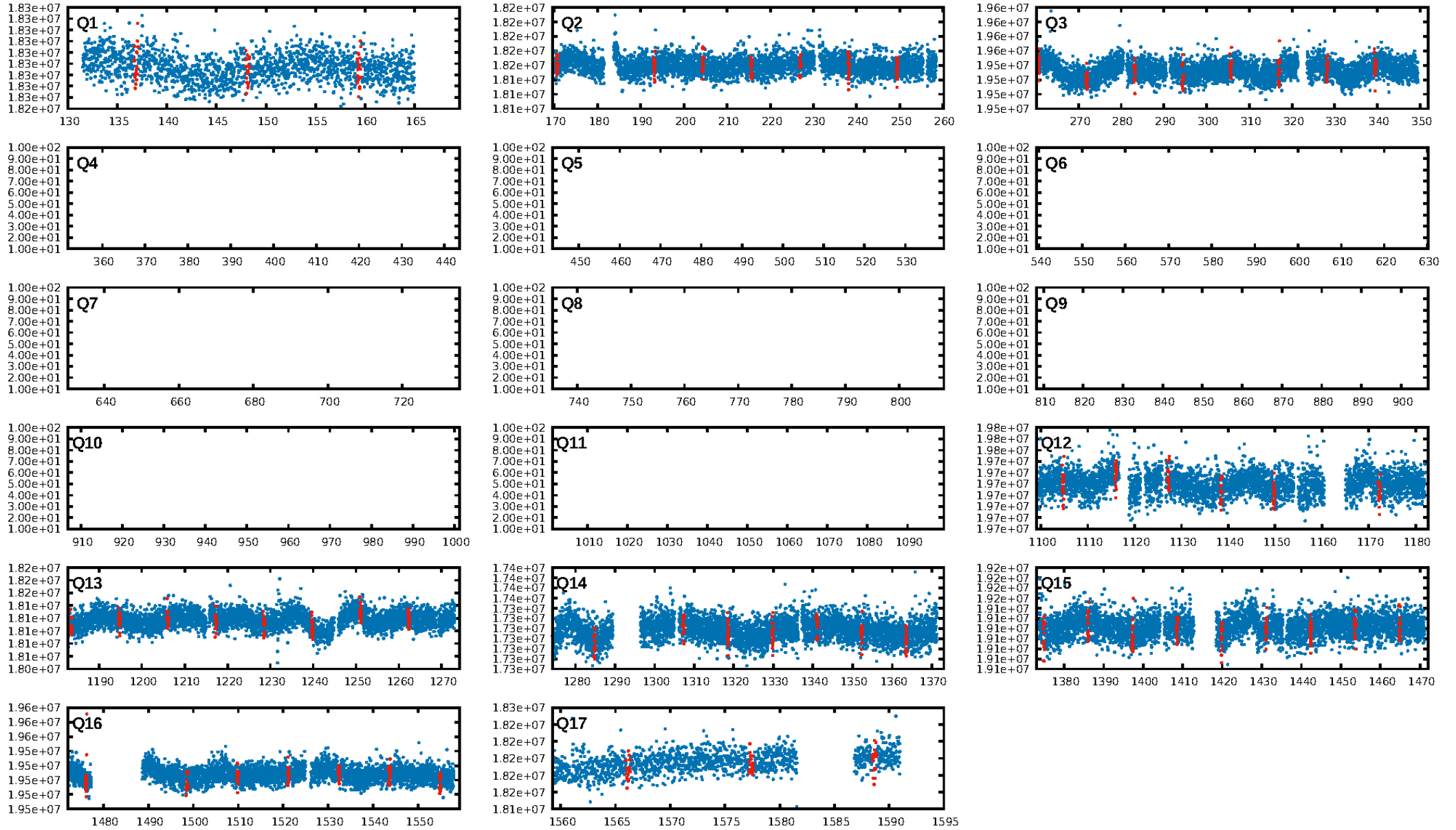
DV Fit Results:

Period = 11.25404 [0.00006] d
Epoch = 136.8894 [0.0057] BKJD
Rp/R* = 0.0207 [0.0121]
a/R* = 13.43 [37.18]
b = 0.69 [2.11]
Seff = 147.44 [56.45]
Teq = 889 [85] K
Rp = 2.53 [1.67] Re
a = 0.0991 [0.0250] AU
Ag = 60.40 [78.00] [0.76 σ]
Teffp = 3830 [1195] K [2.46 σ]

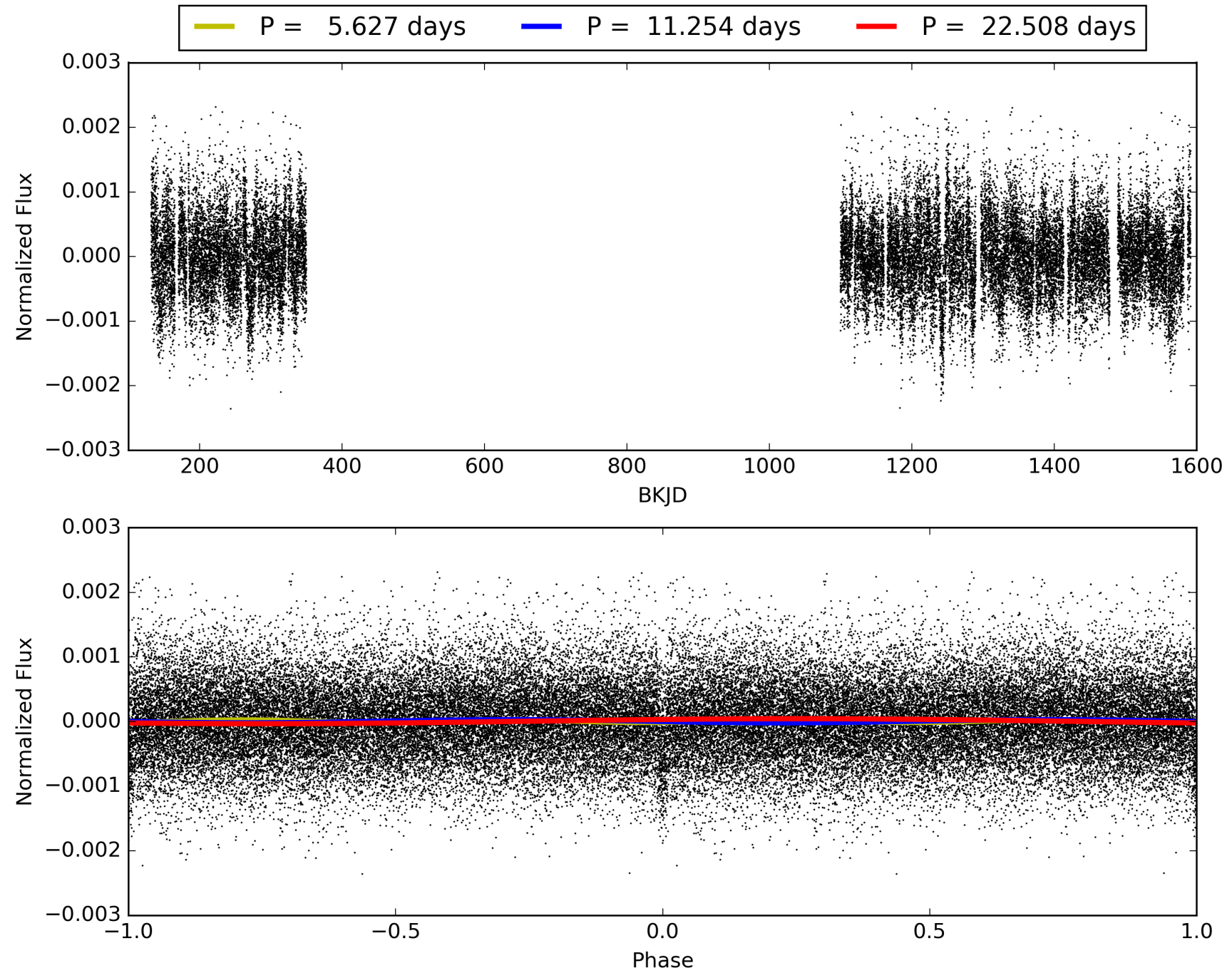
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.07e-51
RollingBand-fgt: 1.00 [51/51]
GhostDiagnostic-chr: 4.952
Centroid-sig: 94.2%
Centroid-so: 1.446 arcsec [1.60 σ]
OotOffset-rm: 0.221 arcsec [0.63 σ]
KicOffset-rm: 0.309 arcsec [0.77 σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 008004903-01, PDC Light Curves

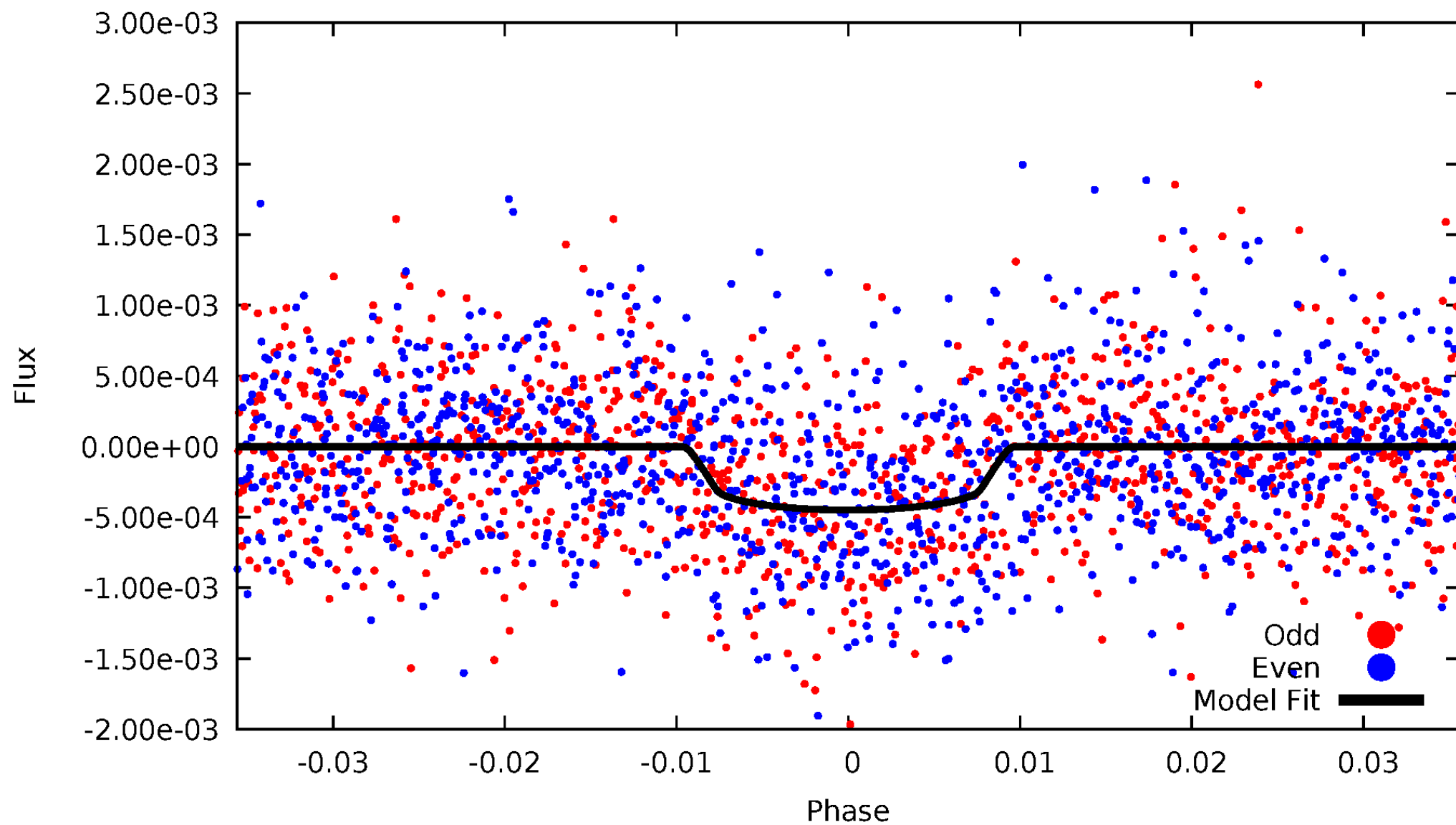


TCE 008004903-01



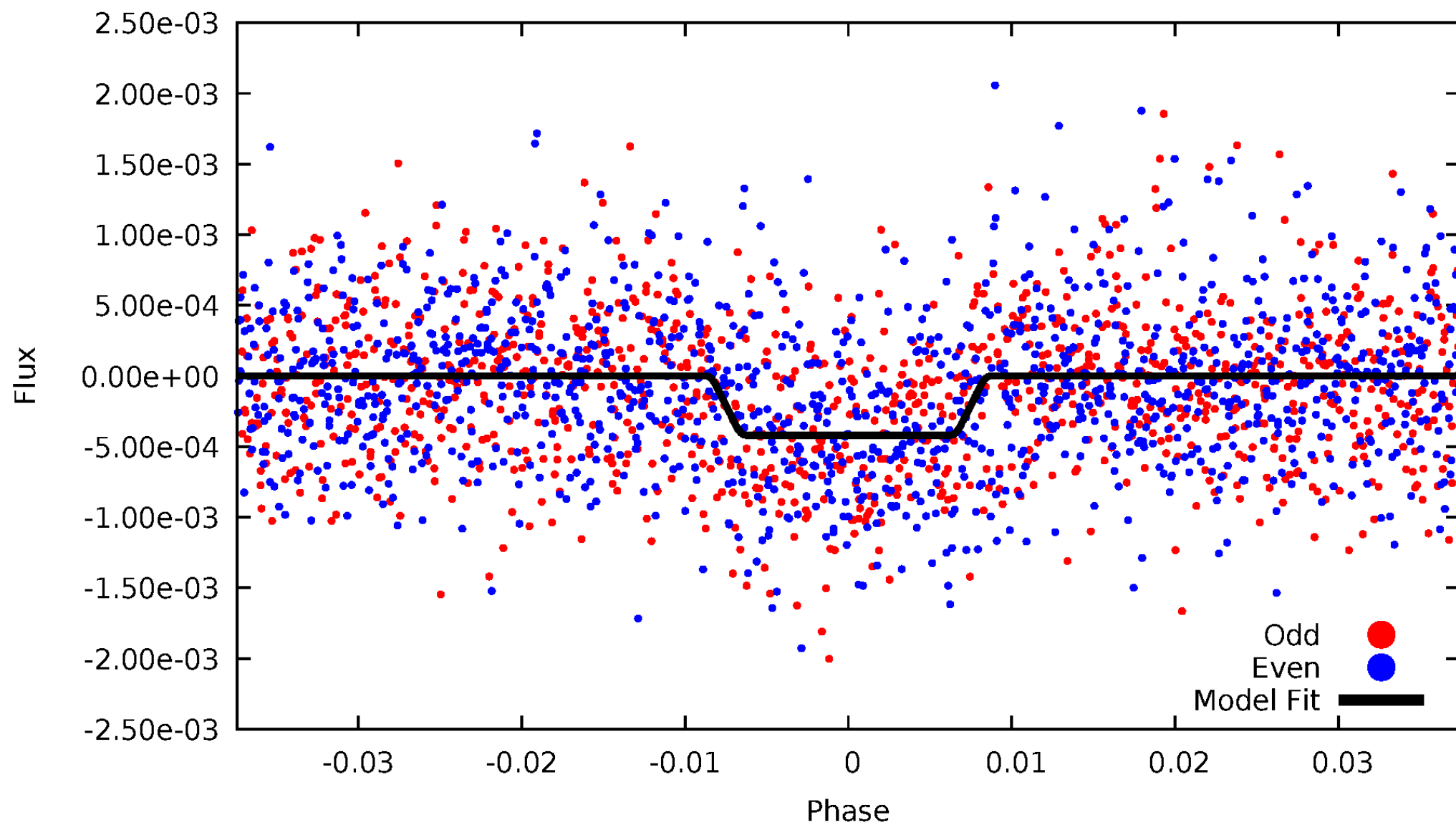
DV Odd/Even

TCE 008004903-01

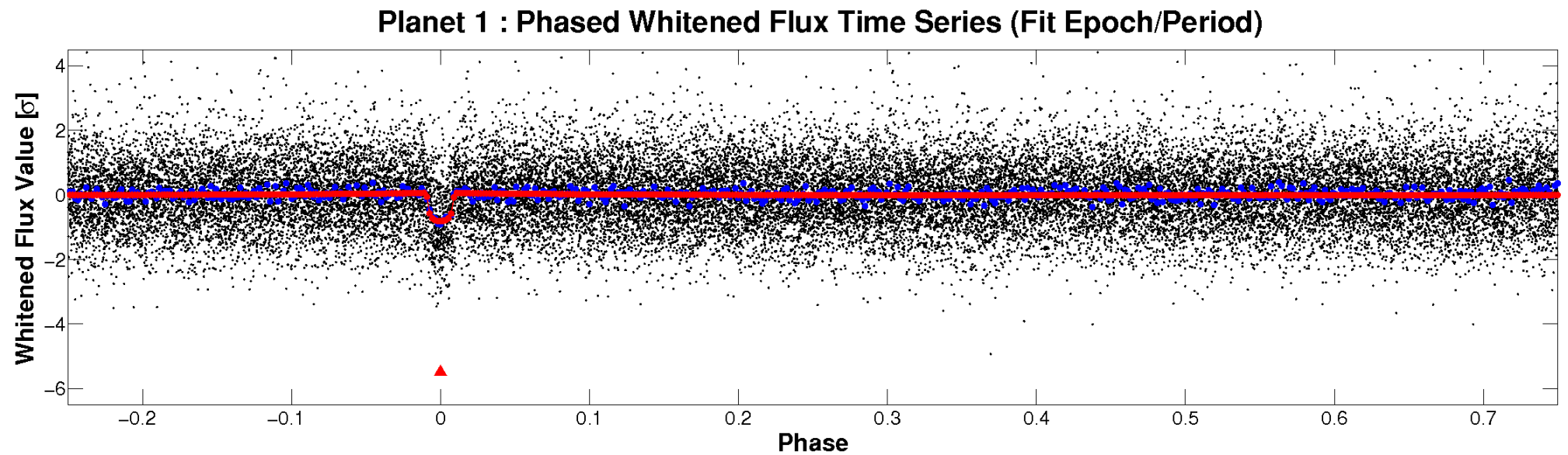
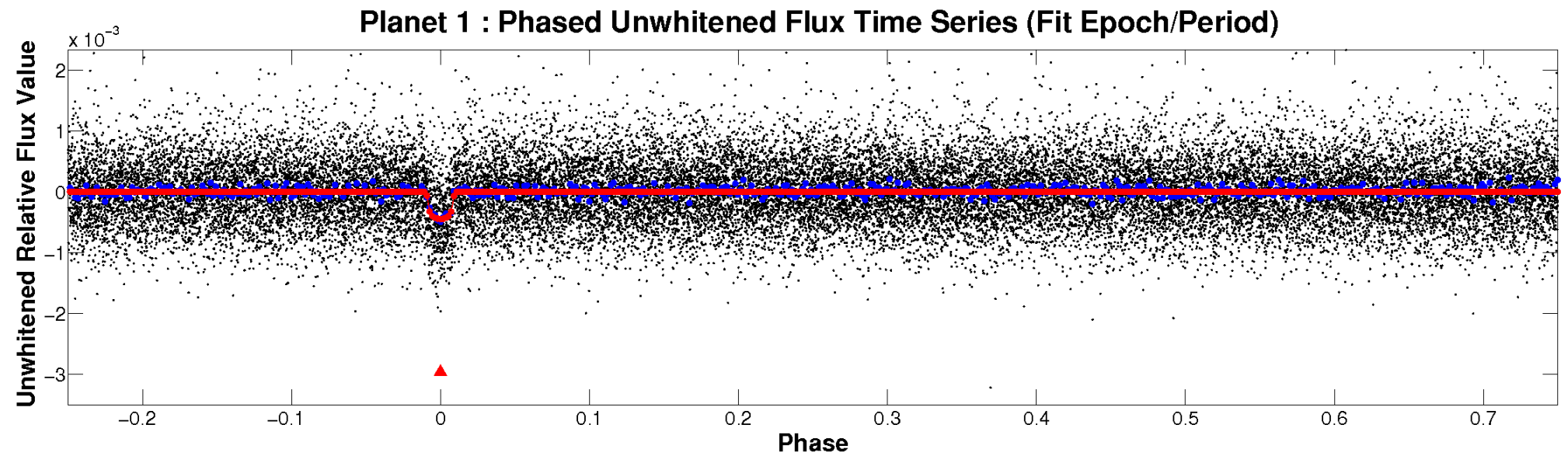


ALT Odd/Even

TCE 008004903-01

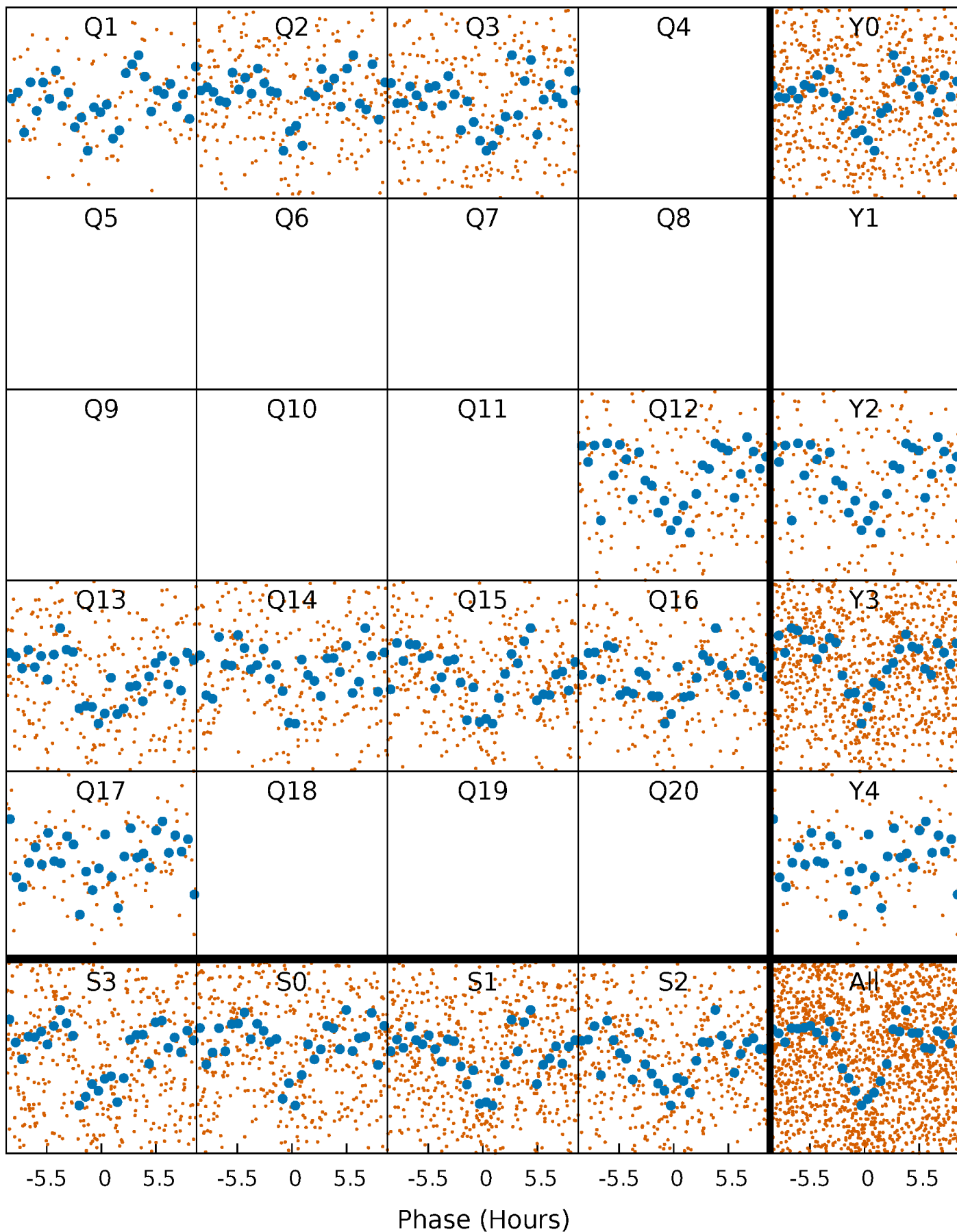


Non-Whitened Vs. Whitened Light Curve



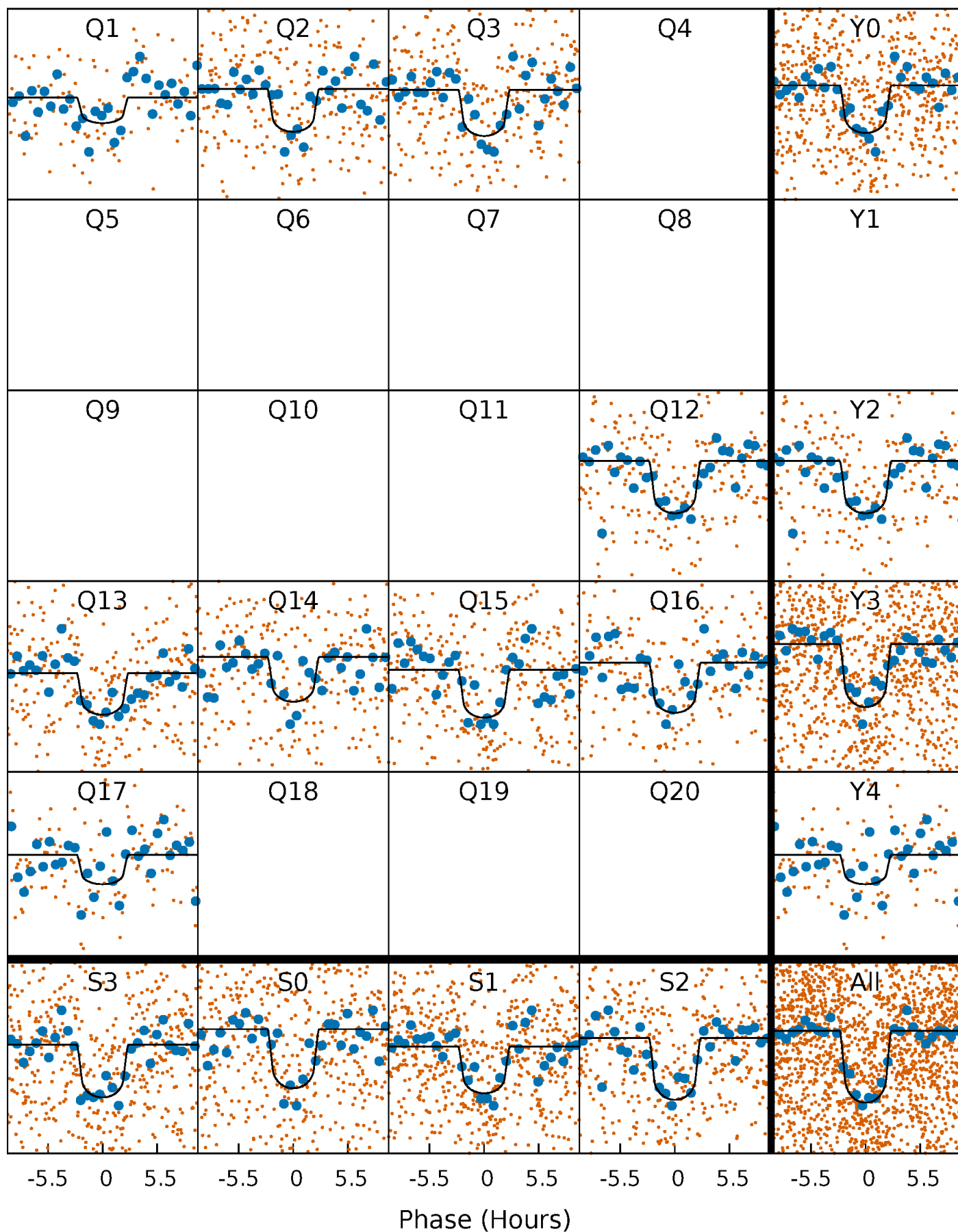
PDC Quarter-Phased Transit Curves

TCE 008004903-01 P= 11.254040 Days $T_0=136.889392$ (BKJD)



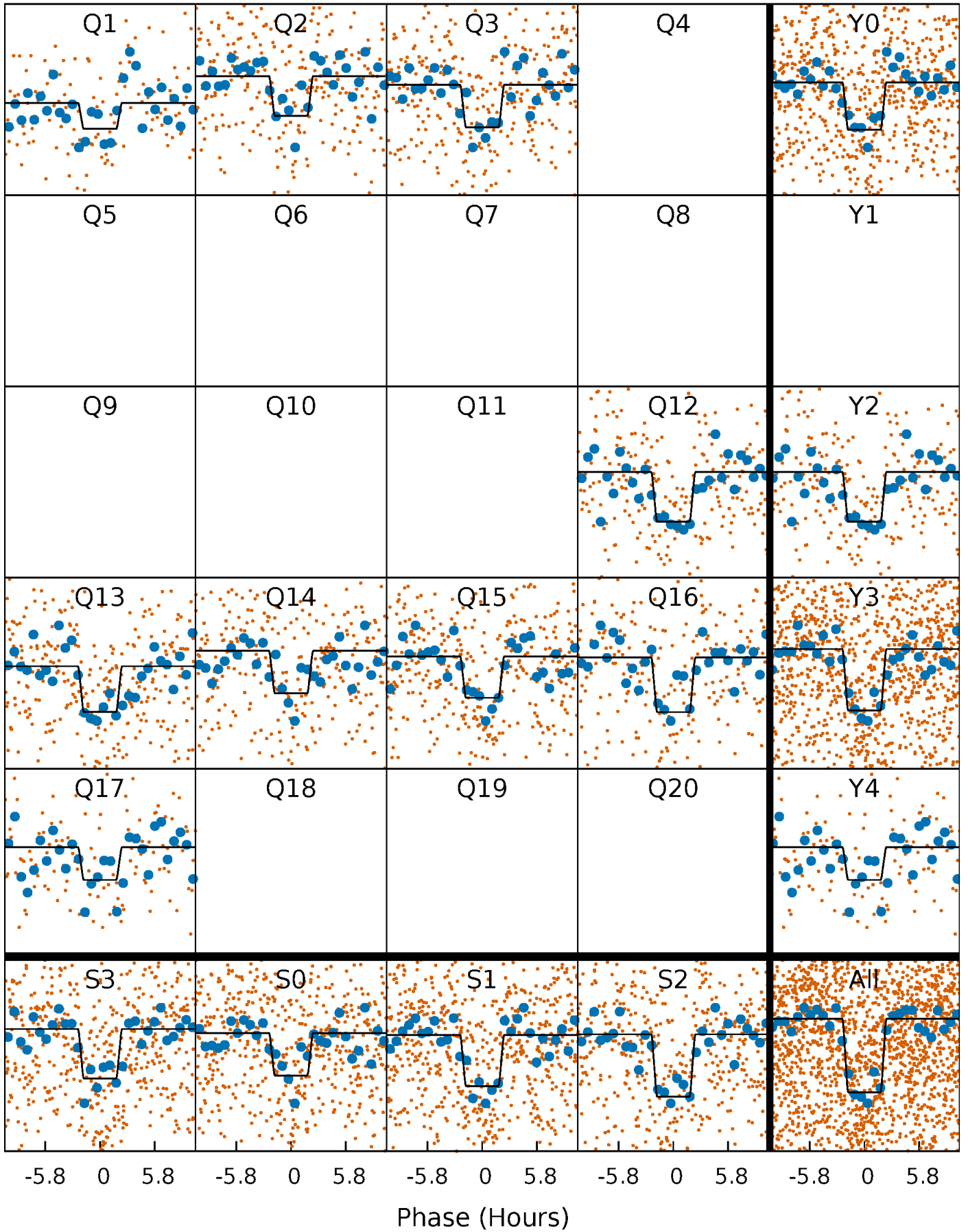
DV Quarter-Phased Transit Curves

TCE 008004903-01 P= 11.254040 Days $T_0=136.889392$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

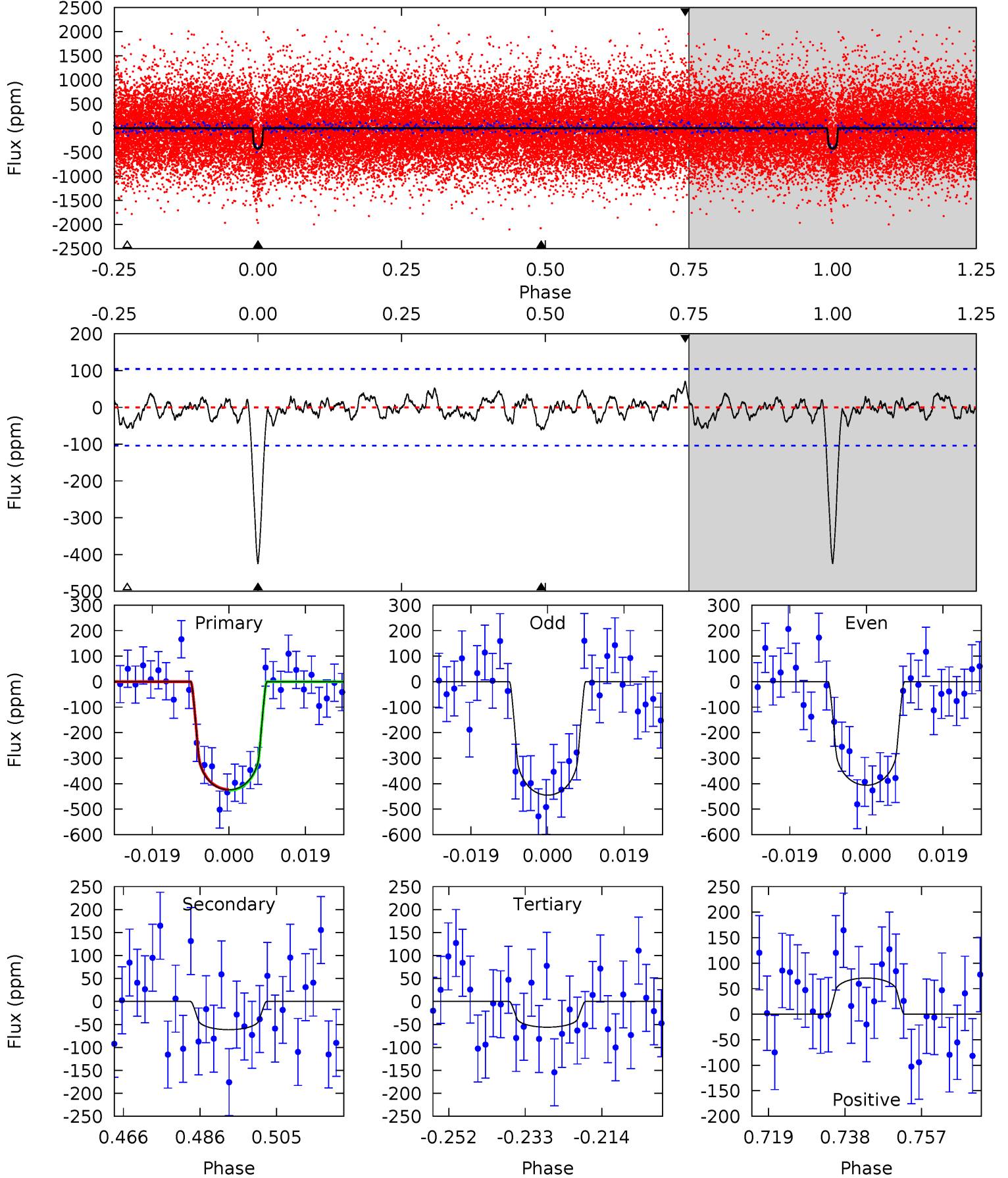
TCE 008004903-01 P= 11.253832 Days $T_0=136.905636$ (BKJD)



DV Model-Shift Uniqueness Test

008004903-01, P = 11.254040 Days, E = 125.635352 Days

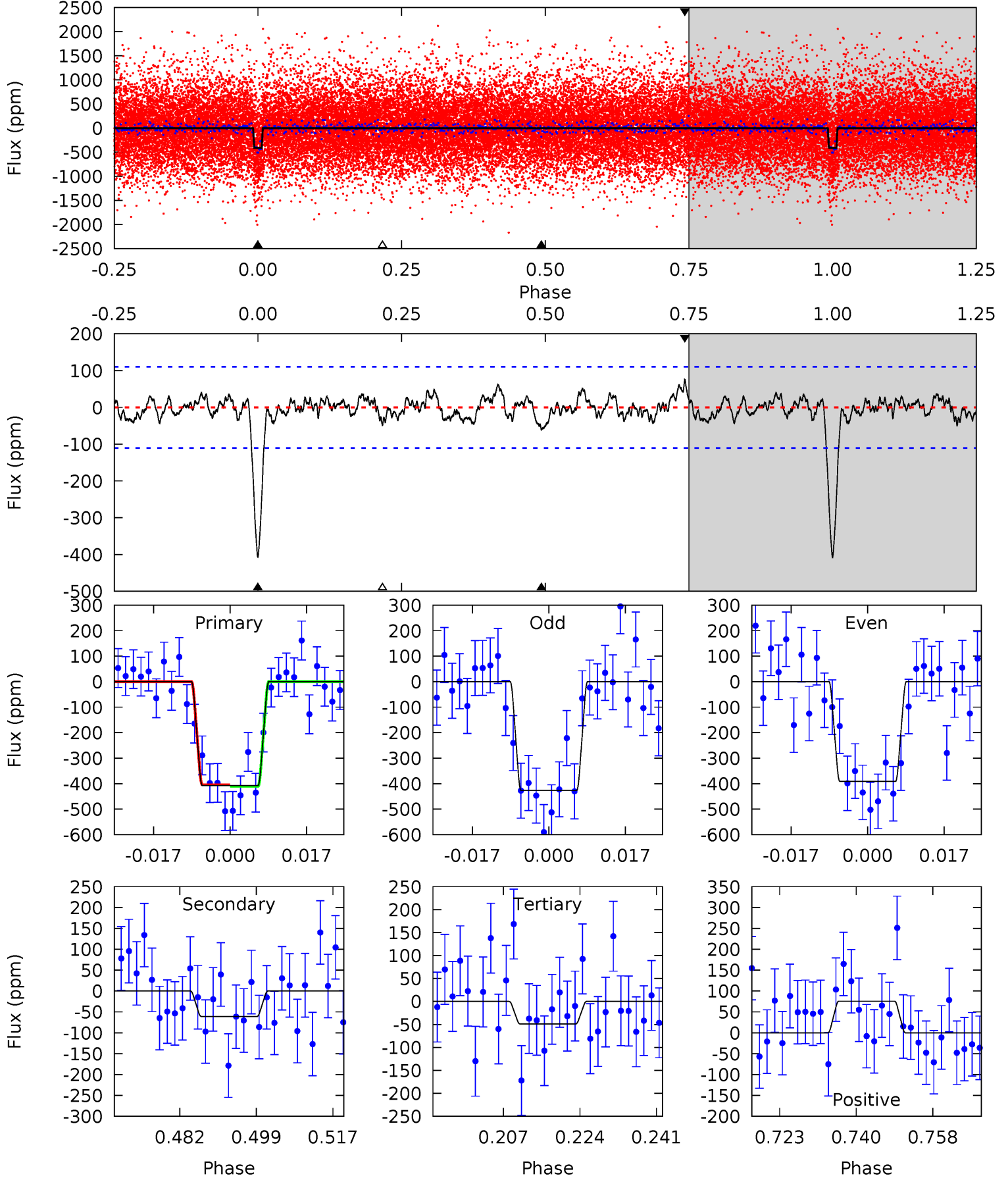
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	2.89	2.63	3.33	4.90	2.34	1.04	17.3	16.6	0.26	-0.44	0.91	1.00	0.14	0.08



Alt Model-Shift Uniqueness Test

008004903-01, P = 11.253832 Days, E = 125.651804 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	2.72	2.18	3.37	4.92	2.38	1.01	16.0	14.8	0.54	-0.66	0.78	1.06	0.16	0.13



Stellar Parameters For KIC 008004903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5995^{+163}_{-199}	$4.351^{+0.112}_{-0.192}$	$-0.040^{+0.250}_{-0.300}$	$1.118^{+0.344}_{-0.185}$	$1.022^{+0.145}_{-0.130}$	$1.031^{+0.600}_{-0.506}$
	+3%/-3%	+3%/-4%	+625%/-750%	+31%/-17%	+14%/-13%	+58%/-49%
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 008004903-01 / KOI 2594.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 21	$2.76^{+1.41}_{-1.44}$	1254^{+107}_{-70}	3943^{+1307}_{-602}	44^{+151}_{-28}
Alt.	-61 ± 22	$2.67^{+1.59}_{-1.38}$	1246^{+95}_{-66}	3923^{+1395}_{-620}	44^{+166}_{-28}

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

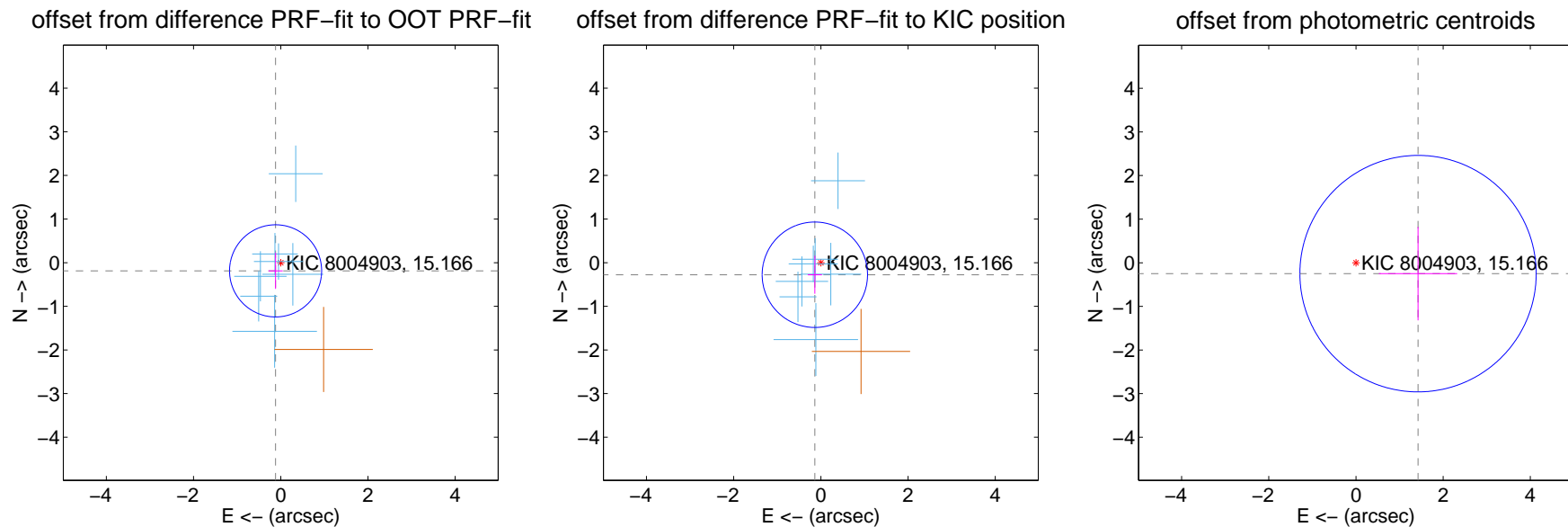
DV Centroid Data

Supplemental centroid analysis for 008004903-01. Kepler magnitude: 15.17. Transit SNR 16.22

There are 7 quarters with good PRF difference image offsets

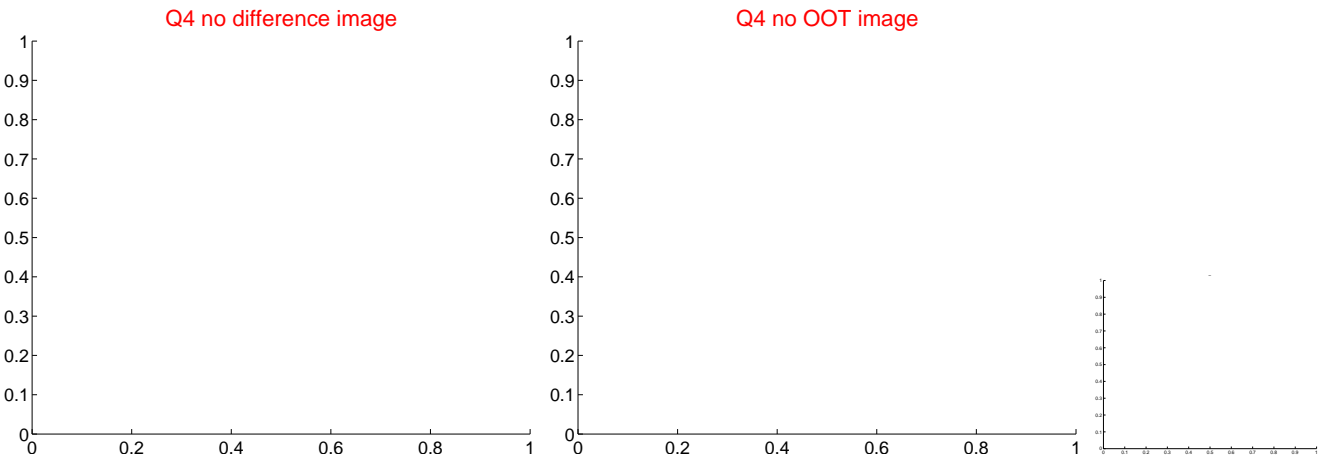
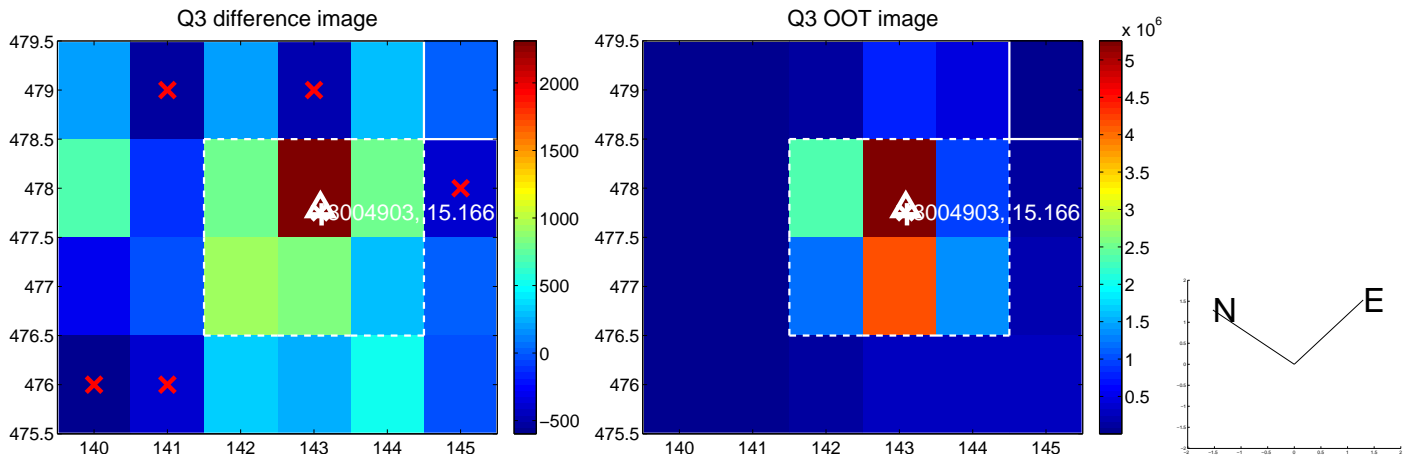
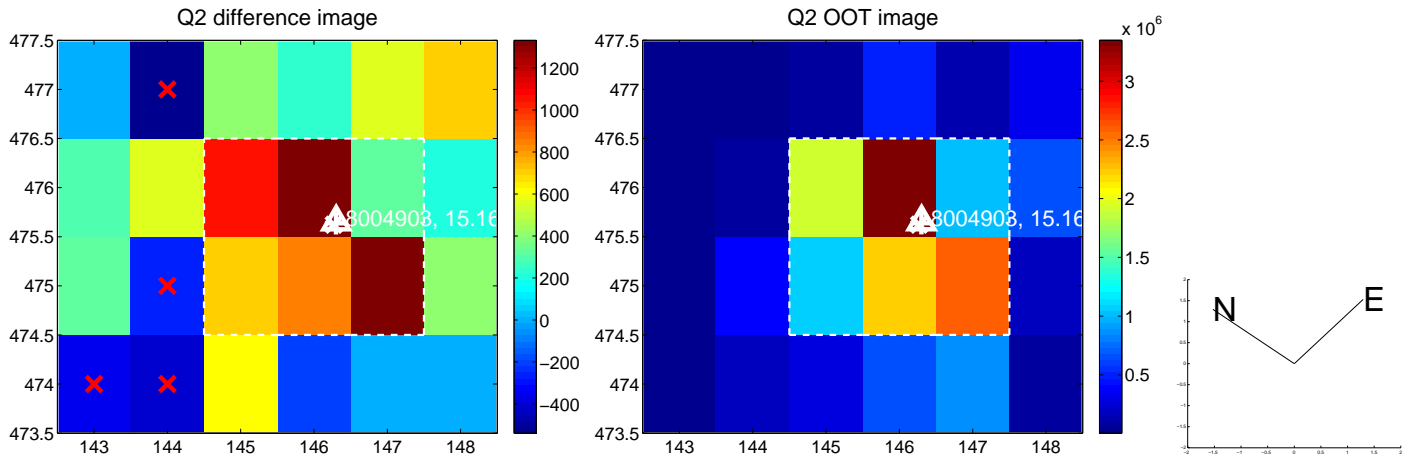
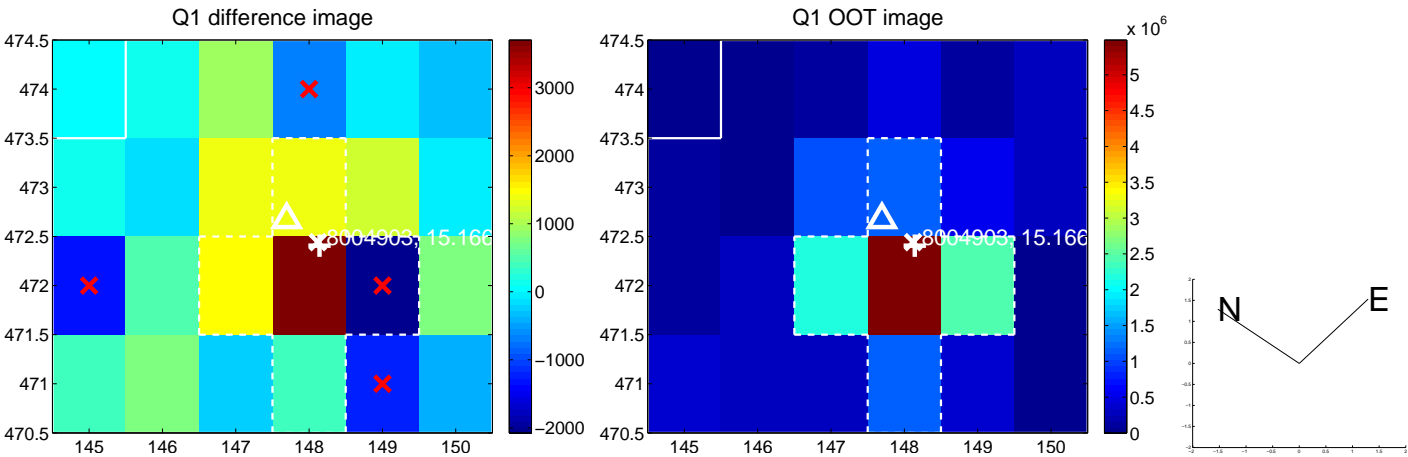
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.221 ± 0.352	0.63	0.118 ± 0.165	-0.187 ± 0.413
PRF-fit source offset from KIC position	0.309 ± 0.403	0.77	0.138 ± 0.162	-0.276 ± 0.436
photometric centroid source offset	1.45 ± 0.90	1.60	-1.42 ± 0.90	-0.25 ± 1.07



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.

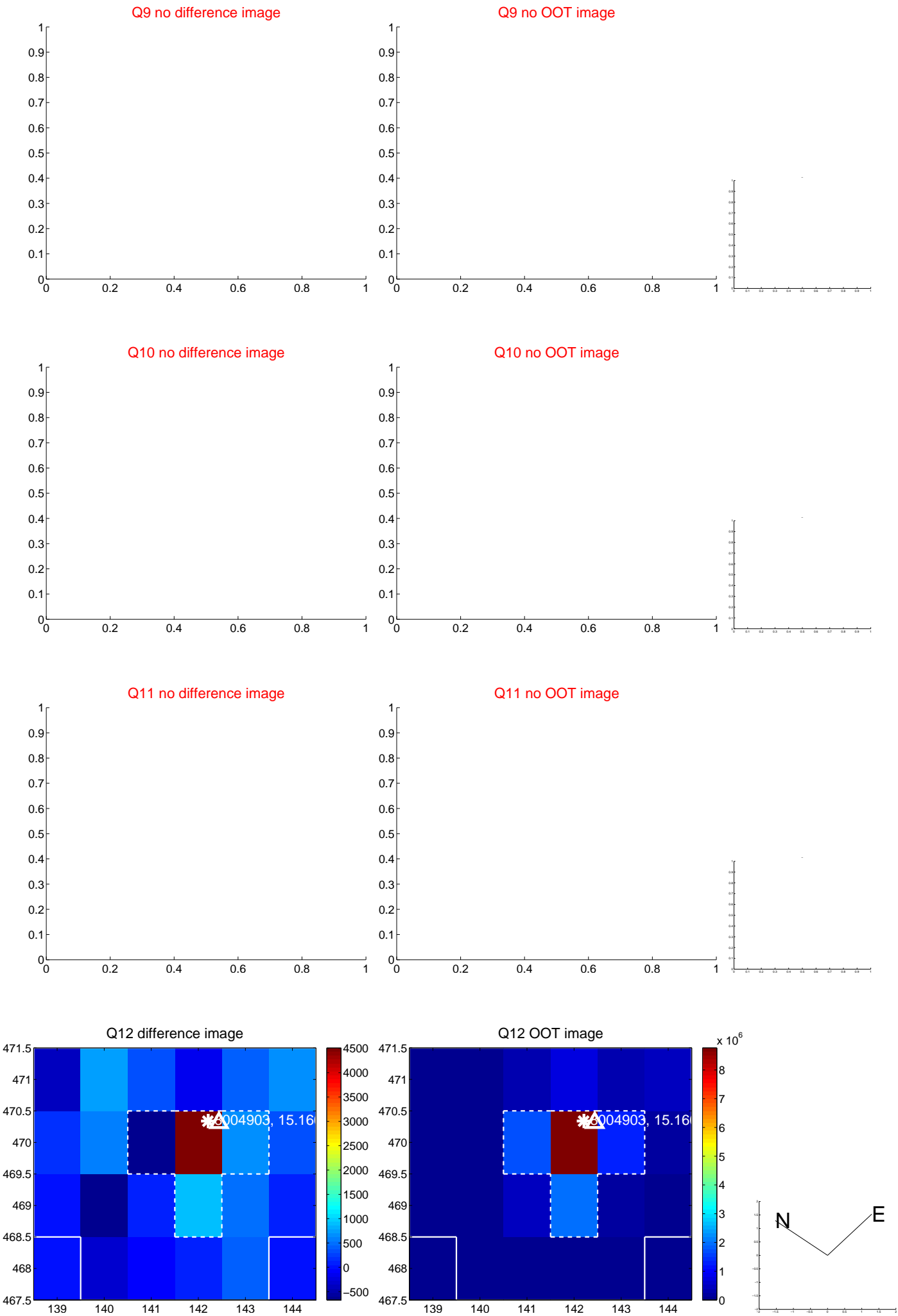
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



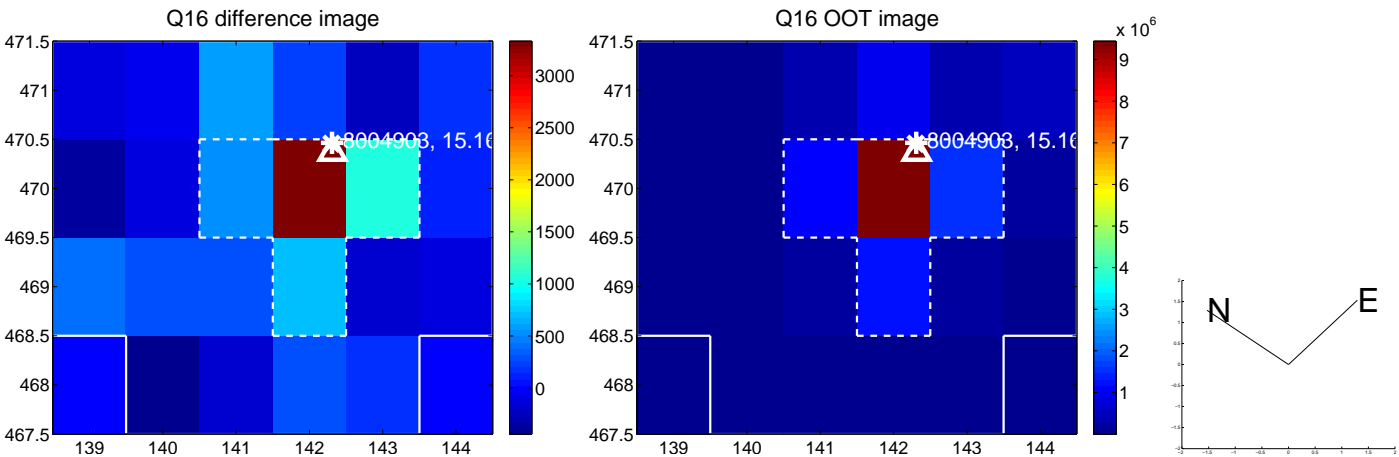
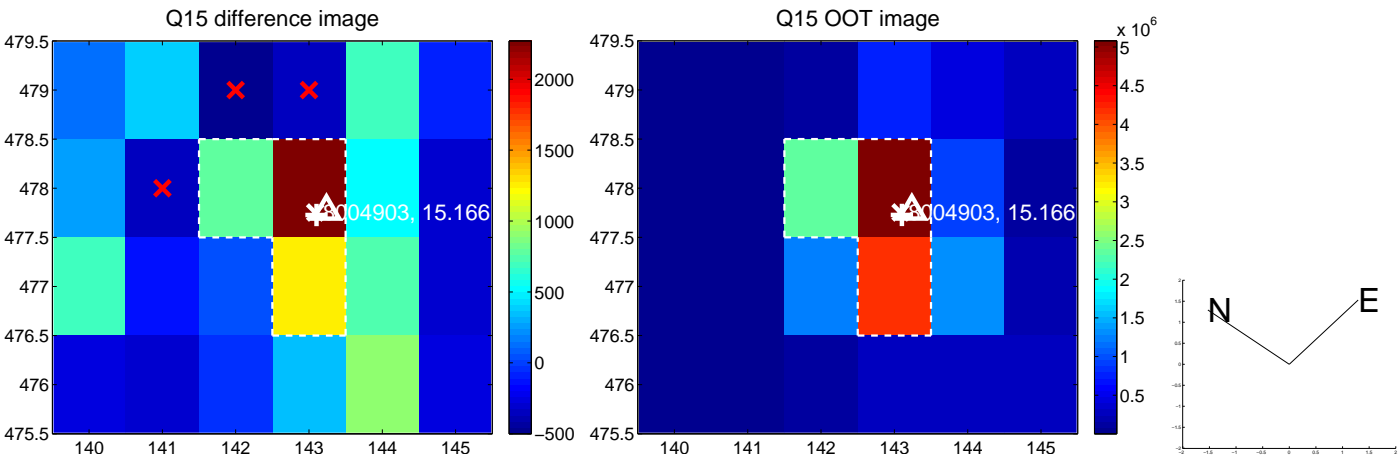
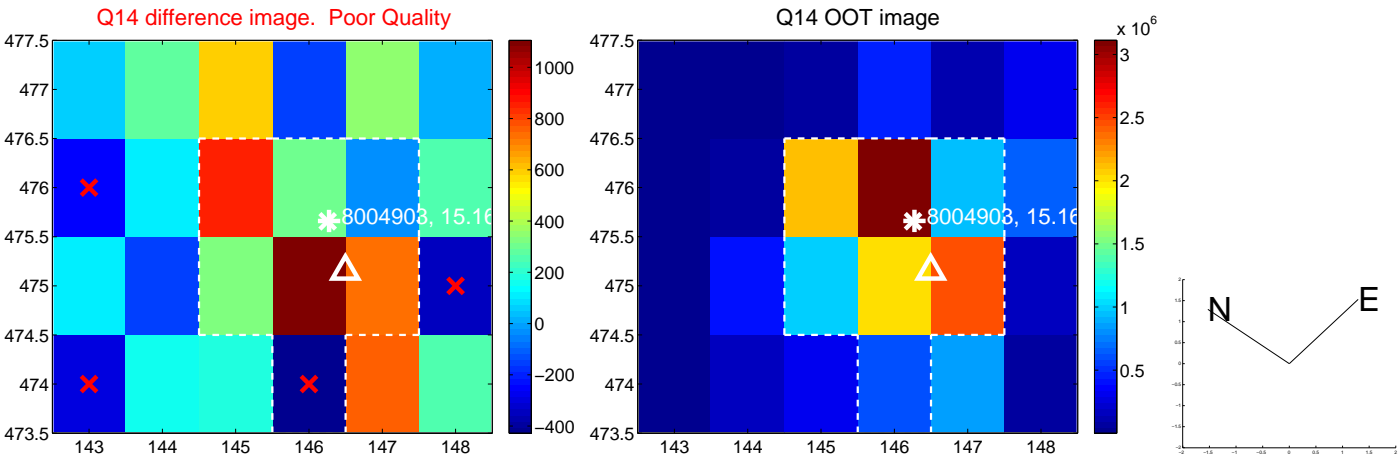
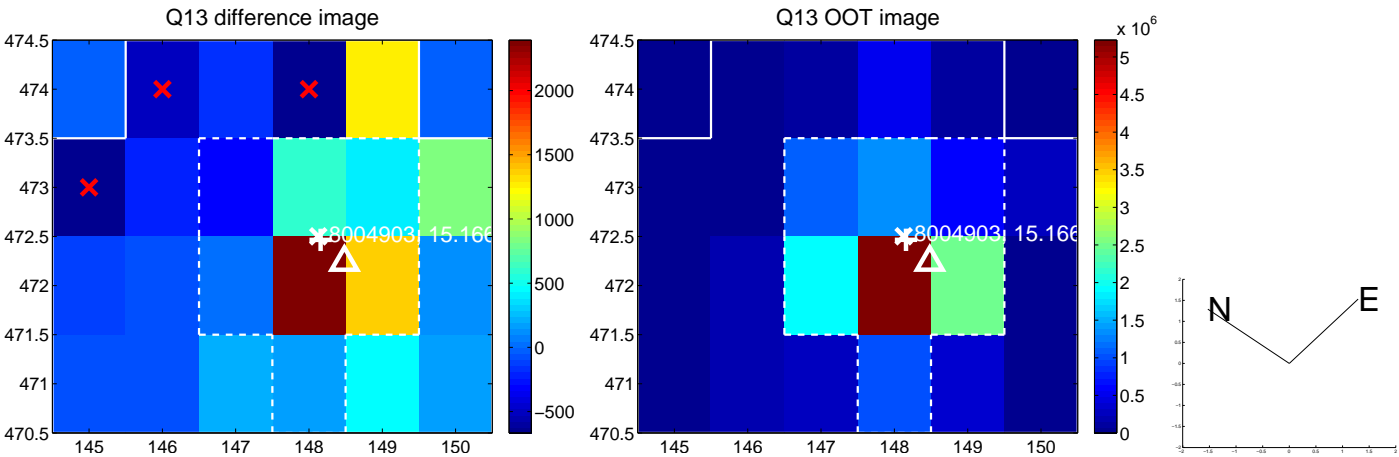
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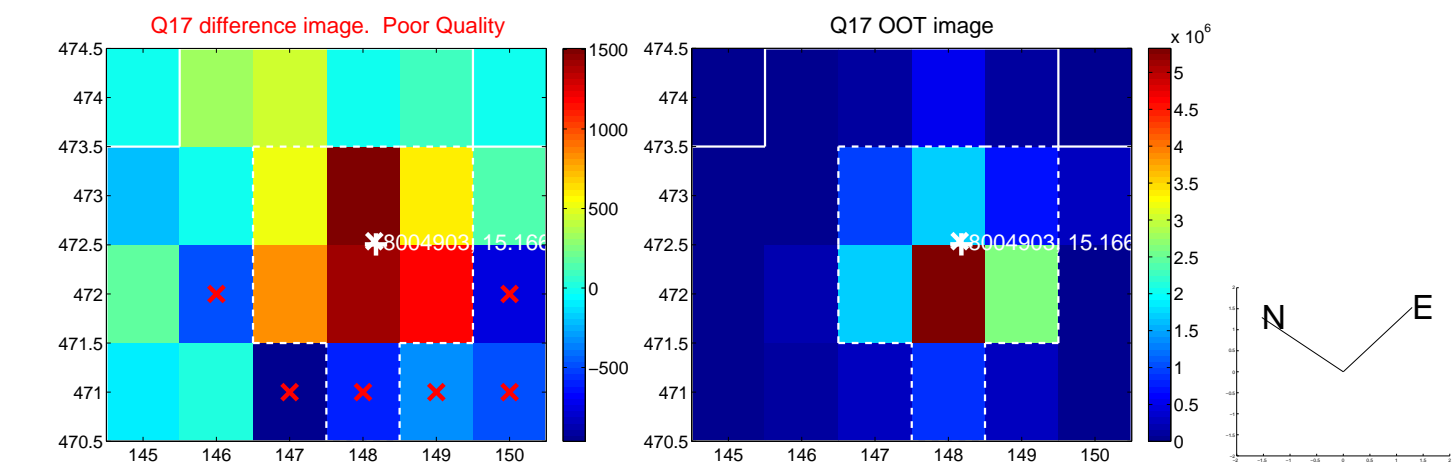
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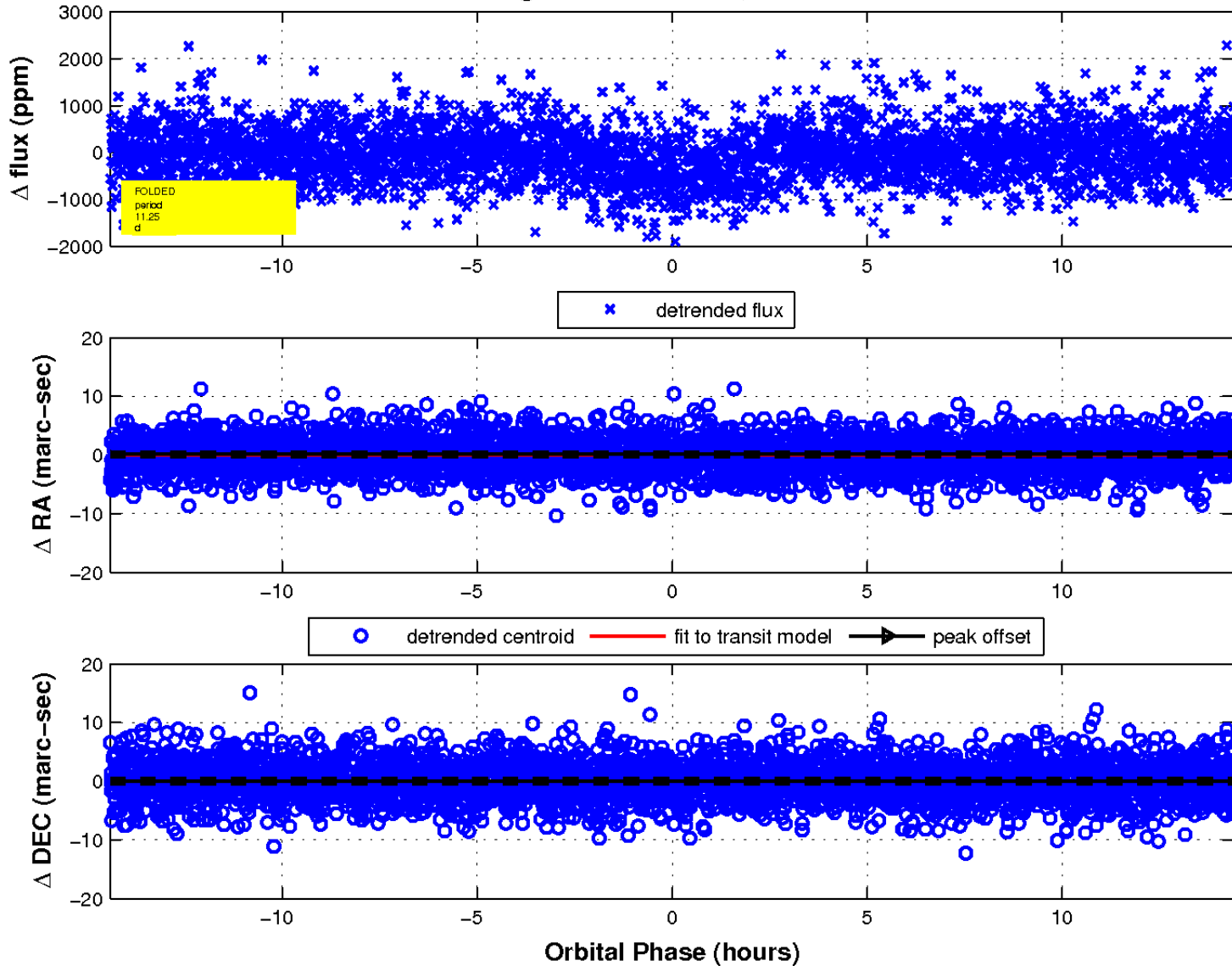
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

