

KIC 004848216

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})
004848216-01	OBS	No	1.267786	132.195005	92.9	8.623	12.8	13.7	1.36	7277	1.79	7495.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004848216-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

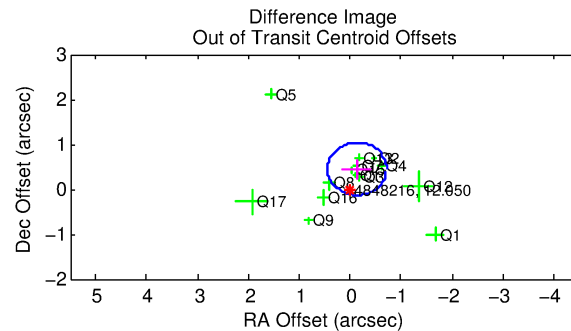
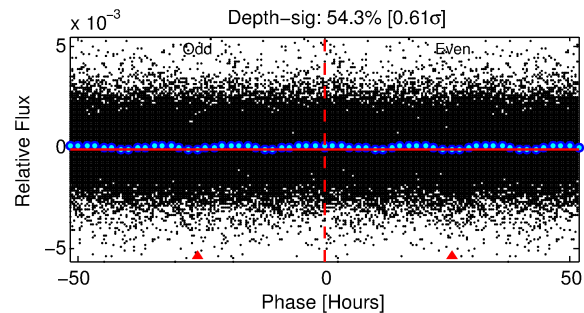
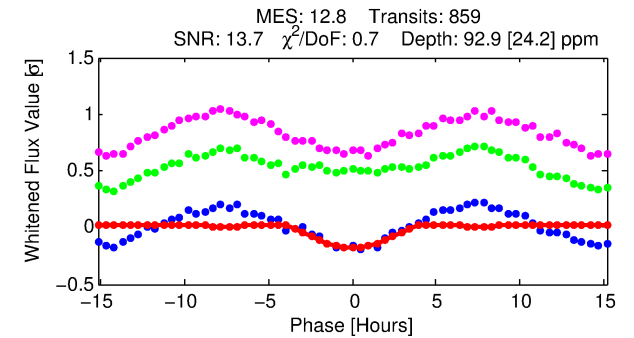
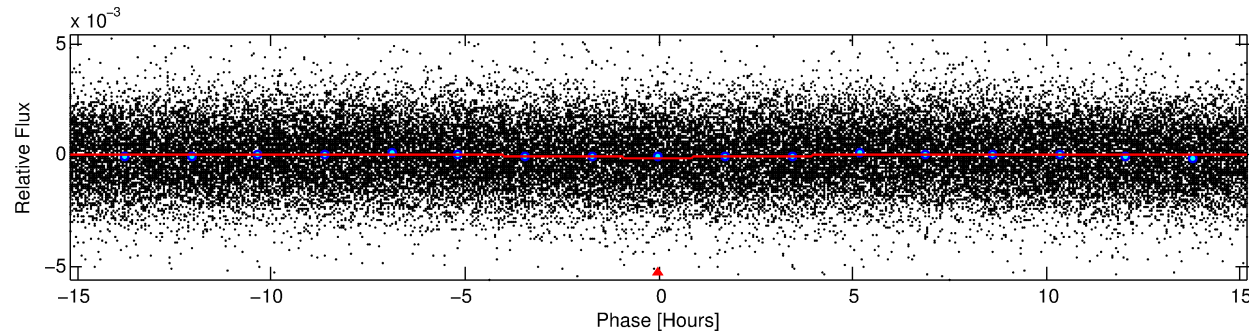
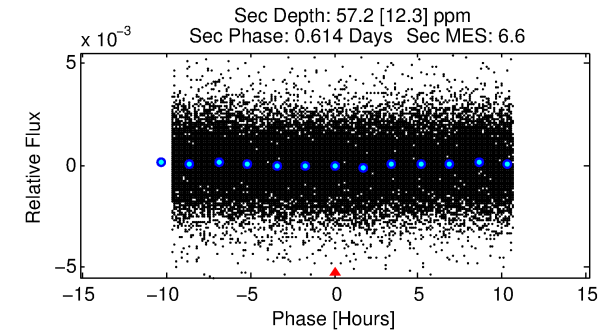
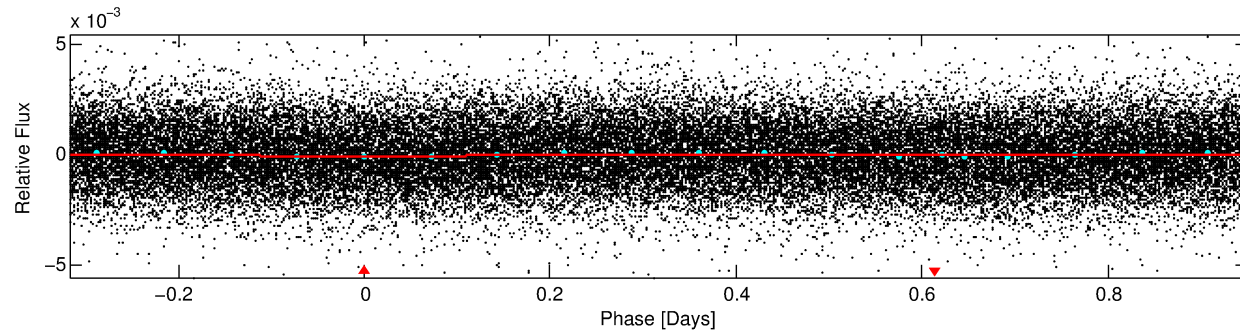
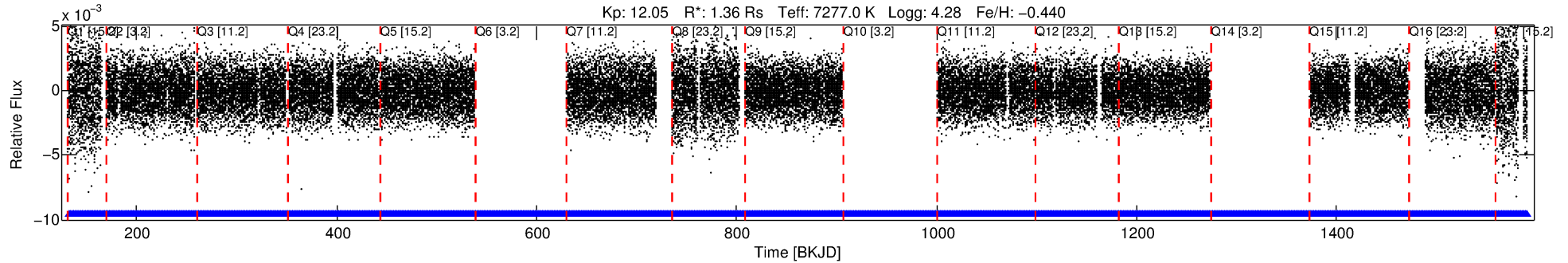
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004848216-01

No Significant Match Found

DV One-Page Summary

KIC: 4848216 Candidate: 1 of 1 Period: 1.268 d



DV Fit Results:

Period = 1.26779 [0.00002] d
Epoch = 132.1950 [0.0095] BKJD
Rp/R* = 0.0121 [0.0024]
a/R* = 1.03 [0.01]
b = 0.99 [0.01]
Seff = 7495.30 [2994.57]
Teq = 2373 [237] K
Rp = 1.79 [0.66] Re
a = 0.0249 [0.0064] AU
Ag = 6.10 [3.58] [1.42σ]
Teffp = 5764 [685] K [4.68σ]

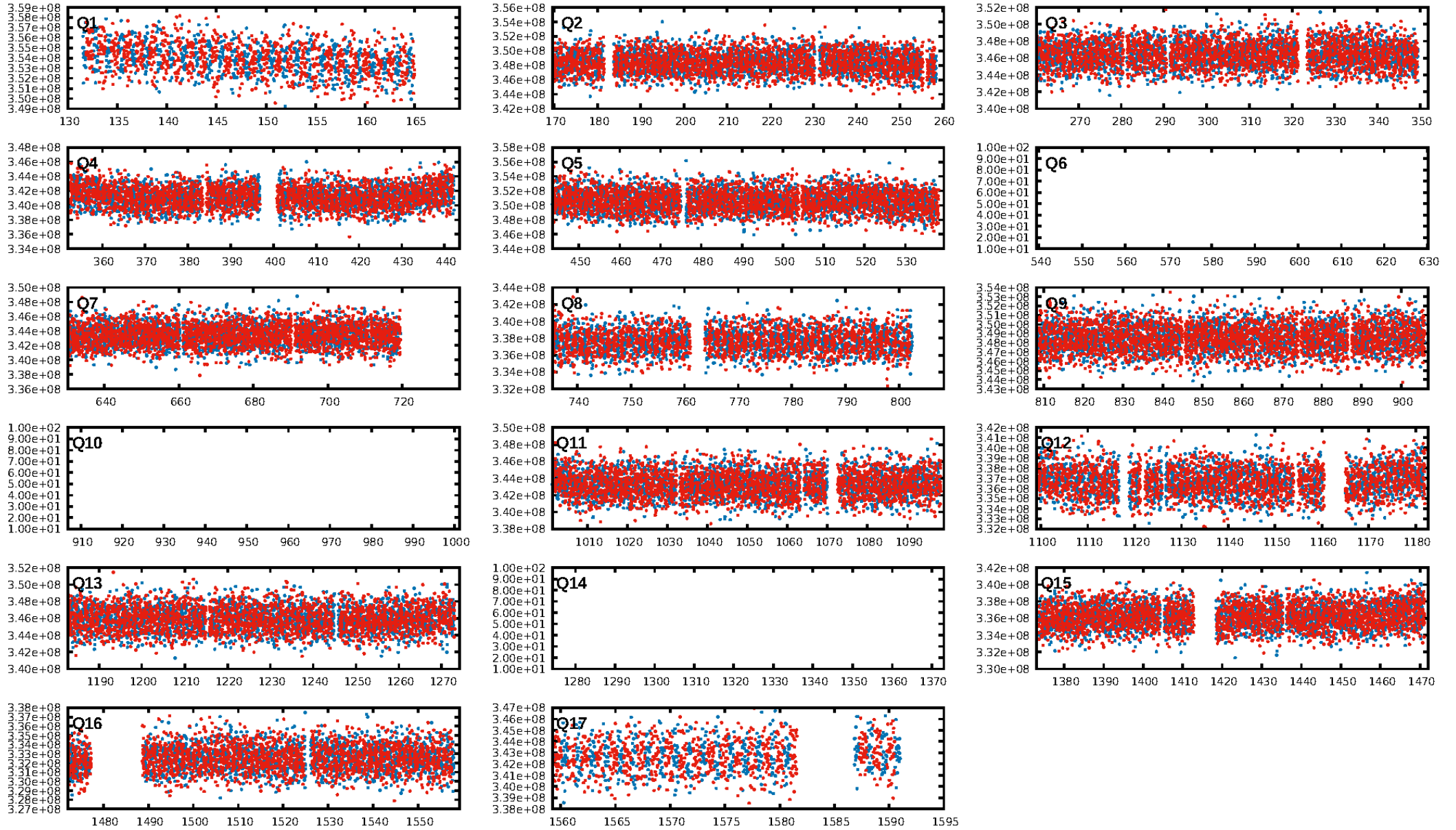
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.28e-59
RollingBand-fgt: 1.00 [811/811]
GhostDiagnostic-chr: 0.9047
Centroid-sig: 51.4%
Centroid-so: 0.245 arcsec [1.63σ]
OotOffset-rm: 0.471 arcsec [2.42σ]
KicOffset-rm: 0.688 arcsec [3.49σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

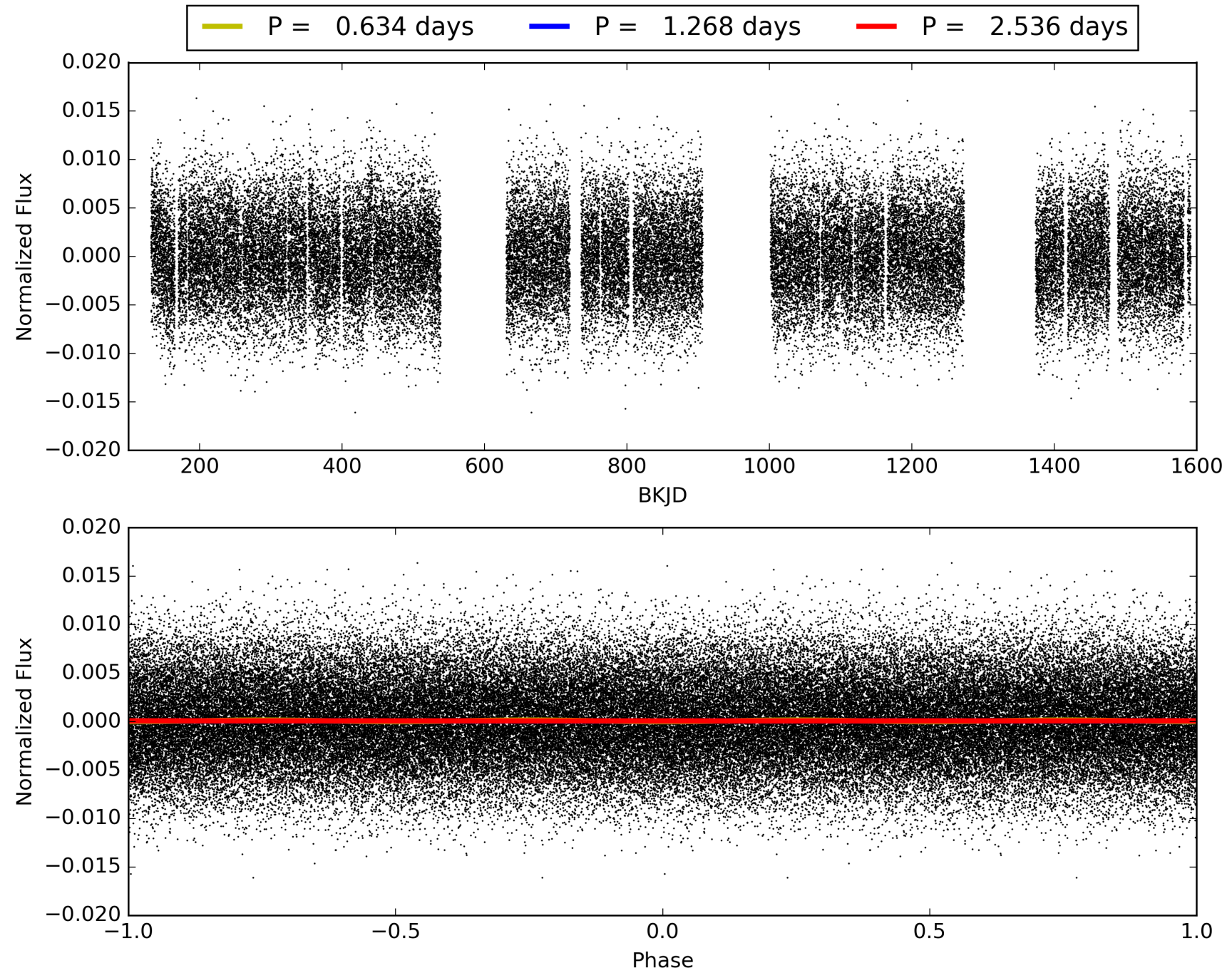
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:11:45 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004848216-01, PDC Light Curves

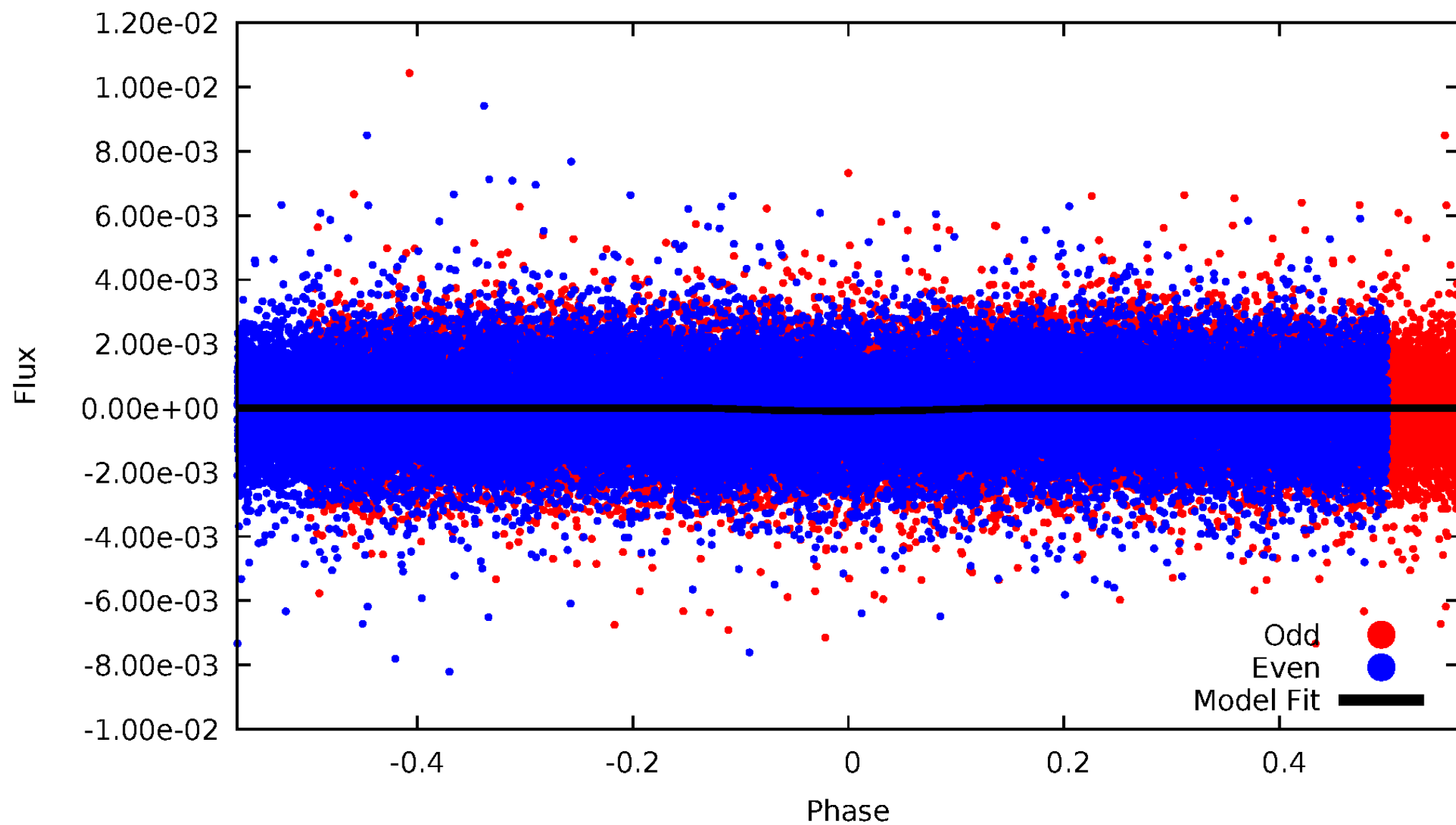


TCE 004848216-01



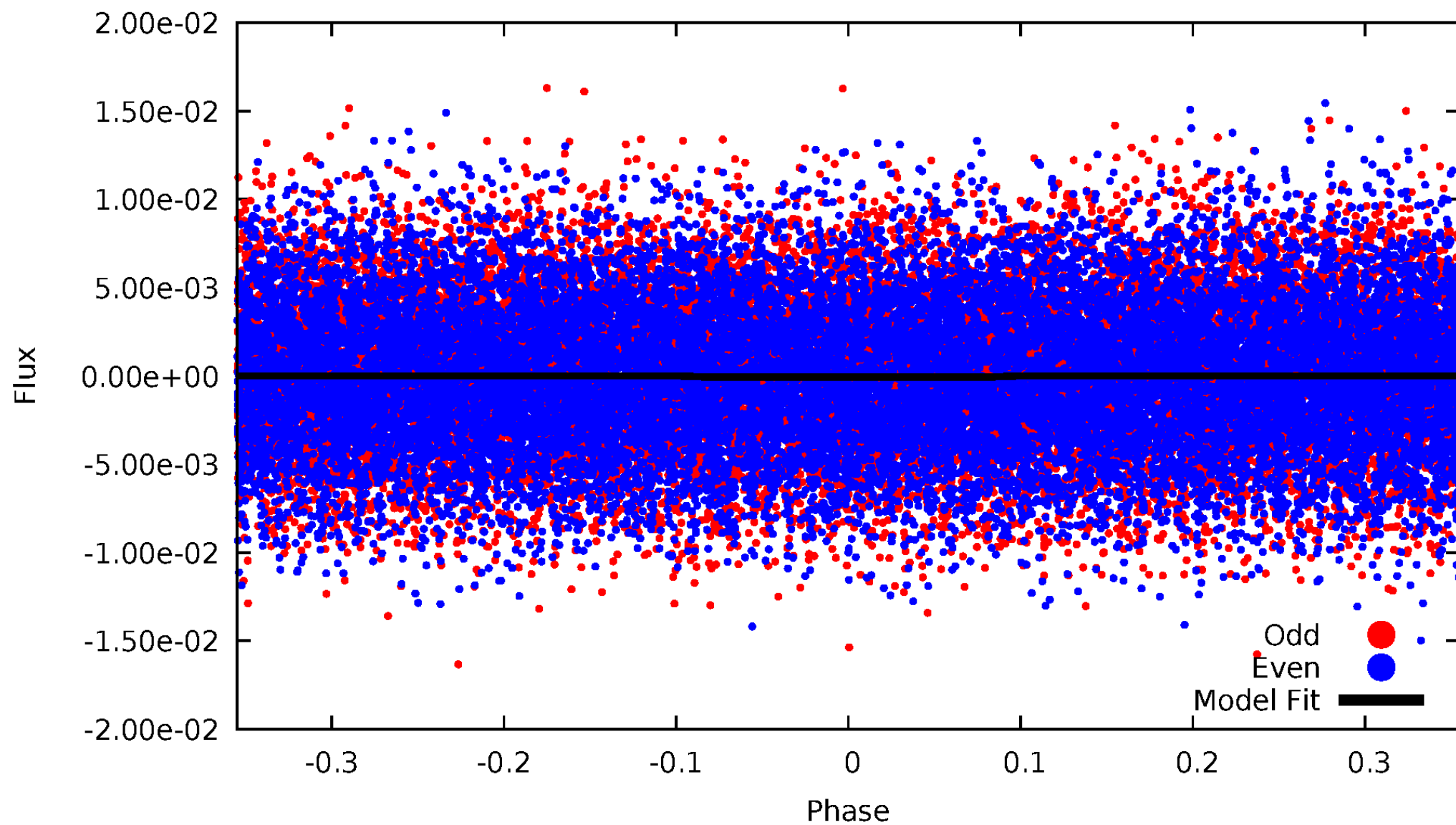
DV Odd/Even

TCE 004848216-01

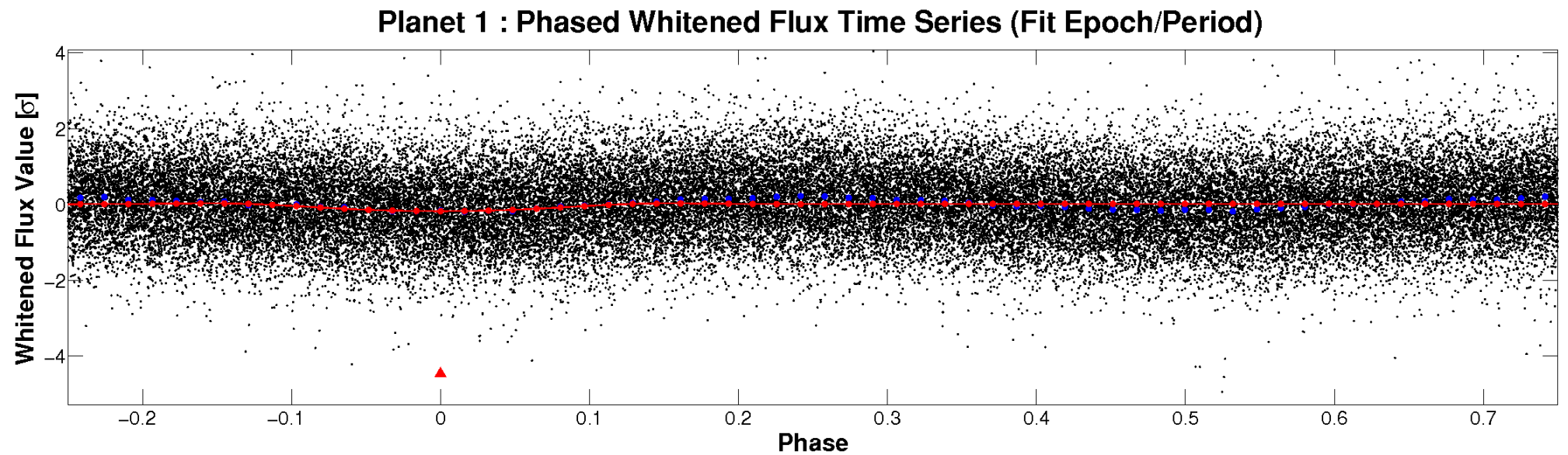
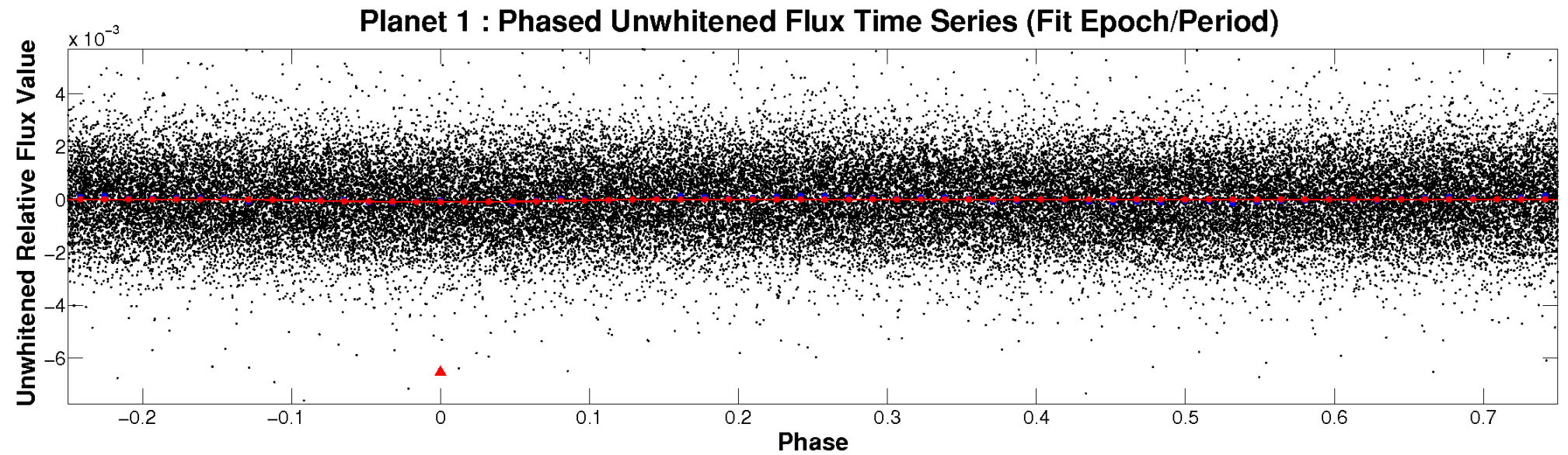


ALT Odd/Even

TCE 004848216-01

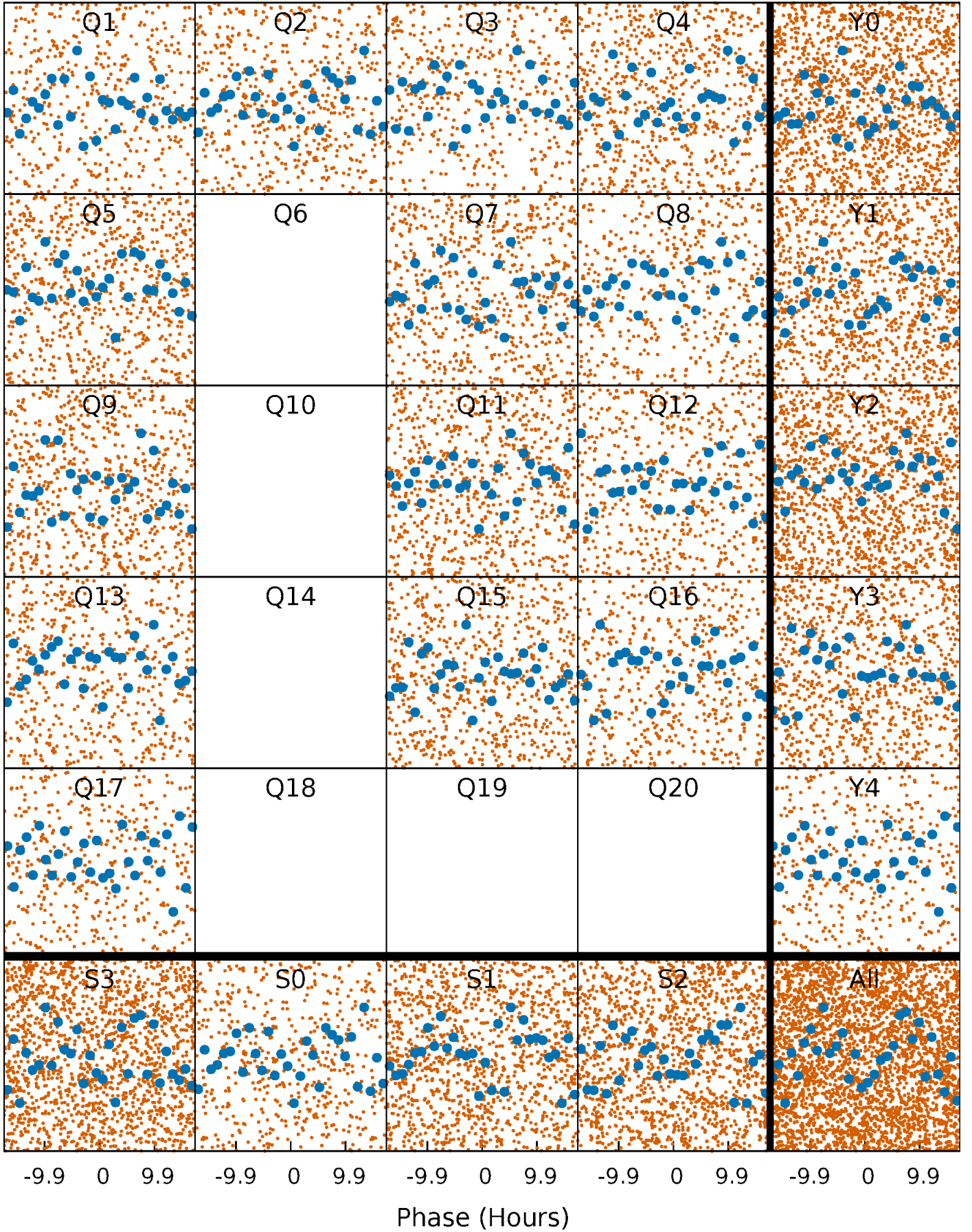


Non-Whitened Vs. Whitened Light Curve



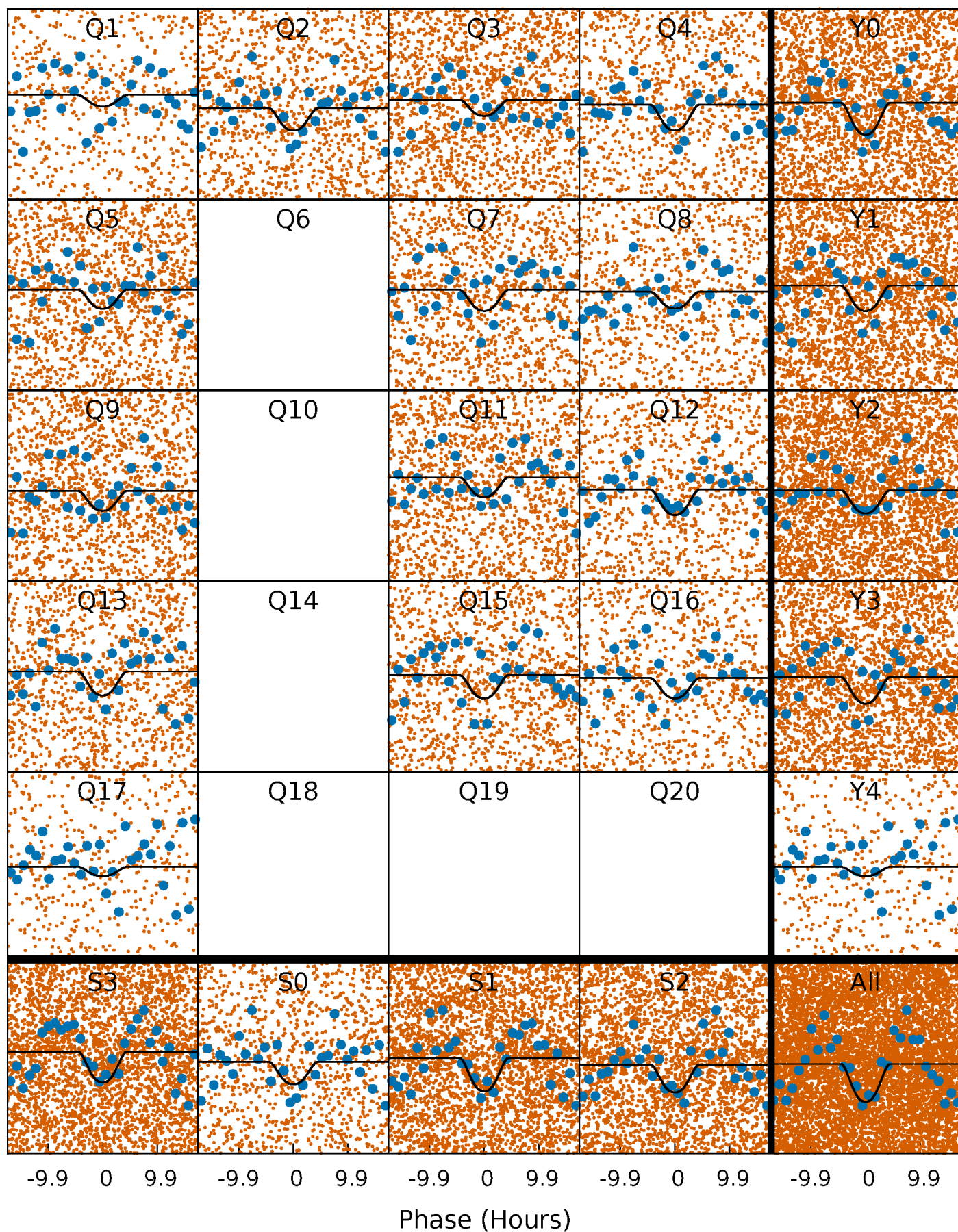
PDC Quarter-Phased Transit Curves

TCE 004848216-01 P= 1.267786 Days $T_0=132.195006$ (BKJD)



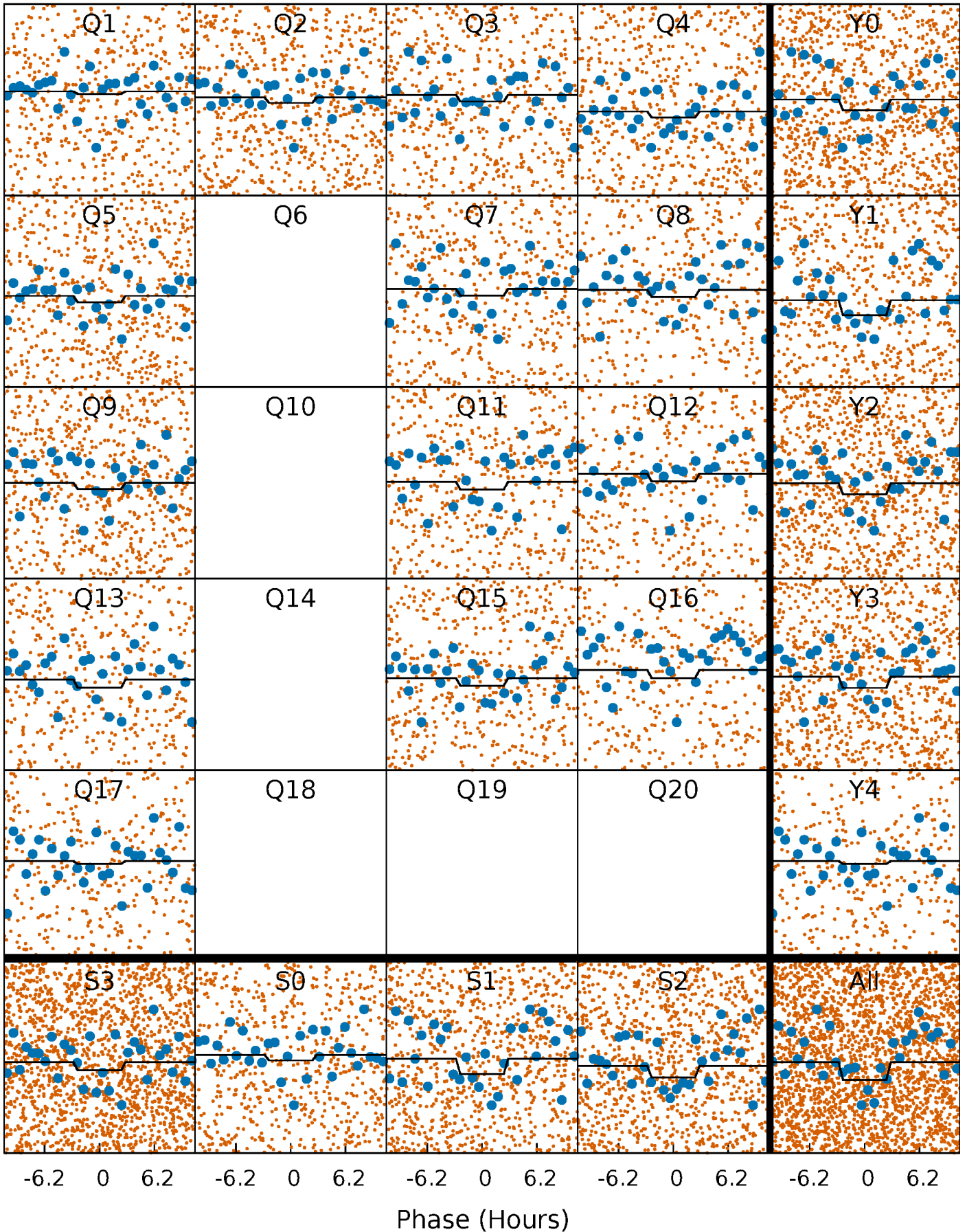
DV Quarter-Phased Transit Curves

TCE 004848216-01 P= 1.267786 Days $T_0=132.195006$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

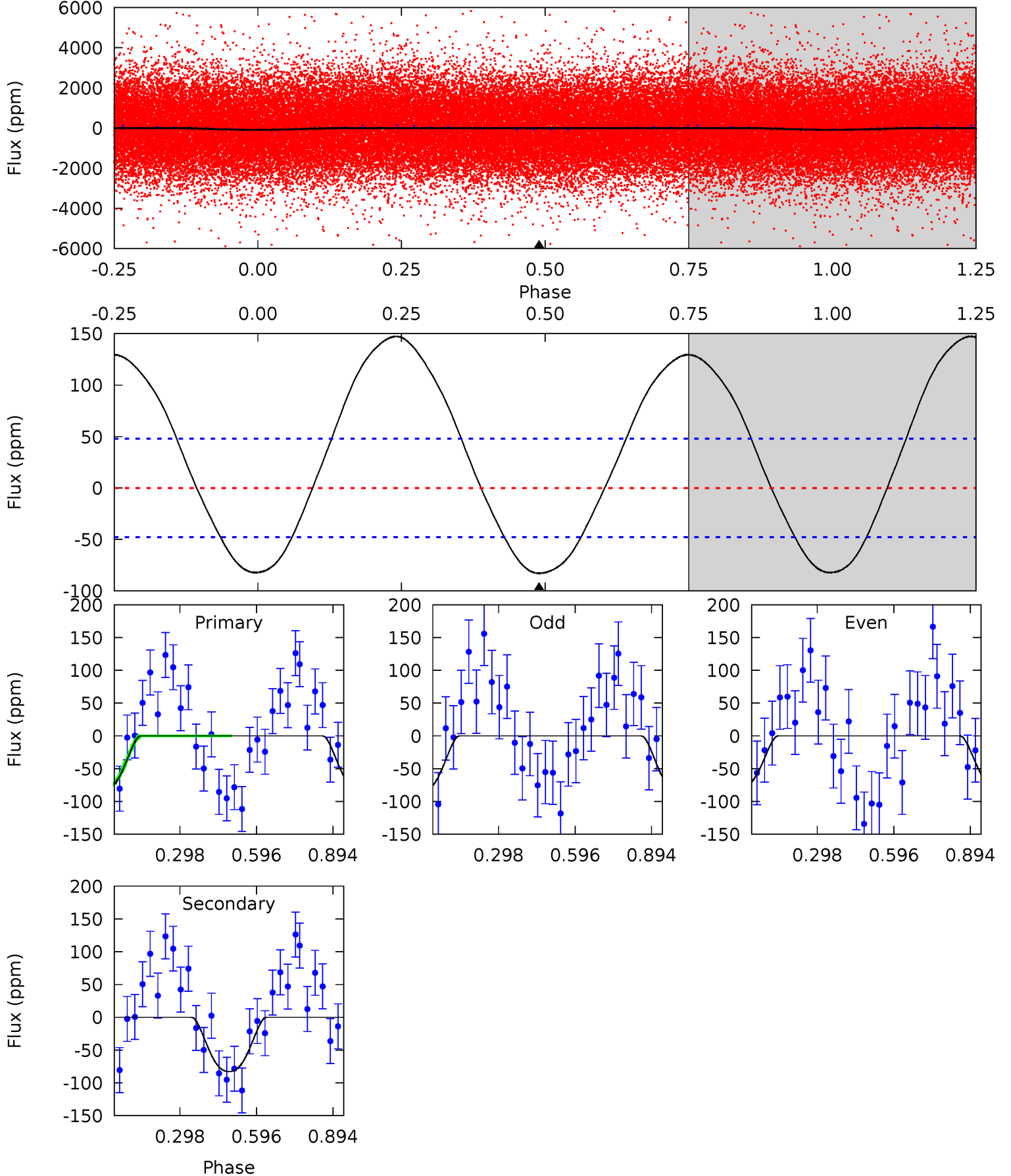
TCE 004848216-01 P= 1.267817 Days $T_0=132.183053$ (BKJD)



DV Model-Shift Uniqueness Test

004848216-01, P = 1.267786 Days, E = 130.927220 Days

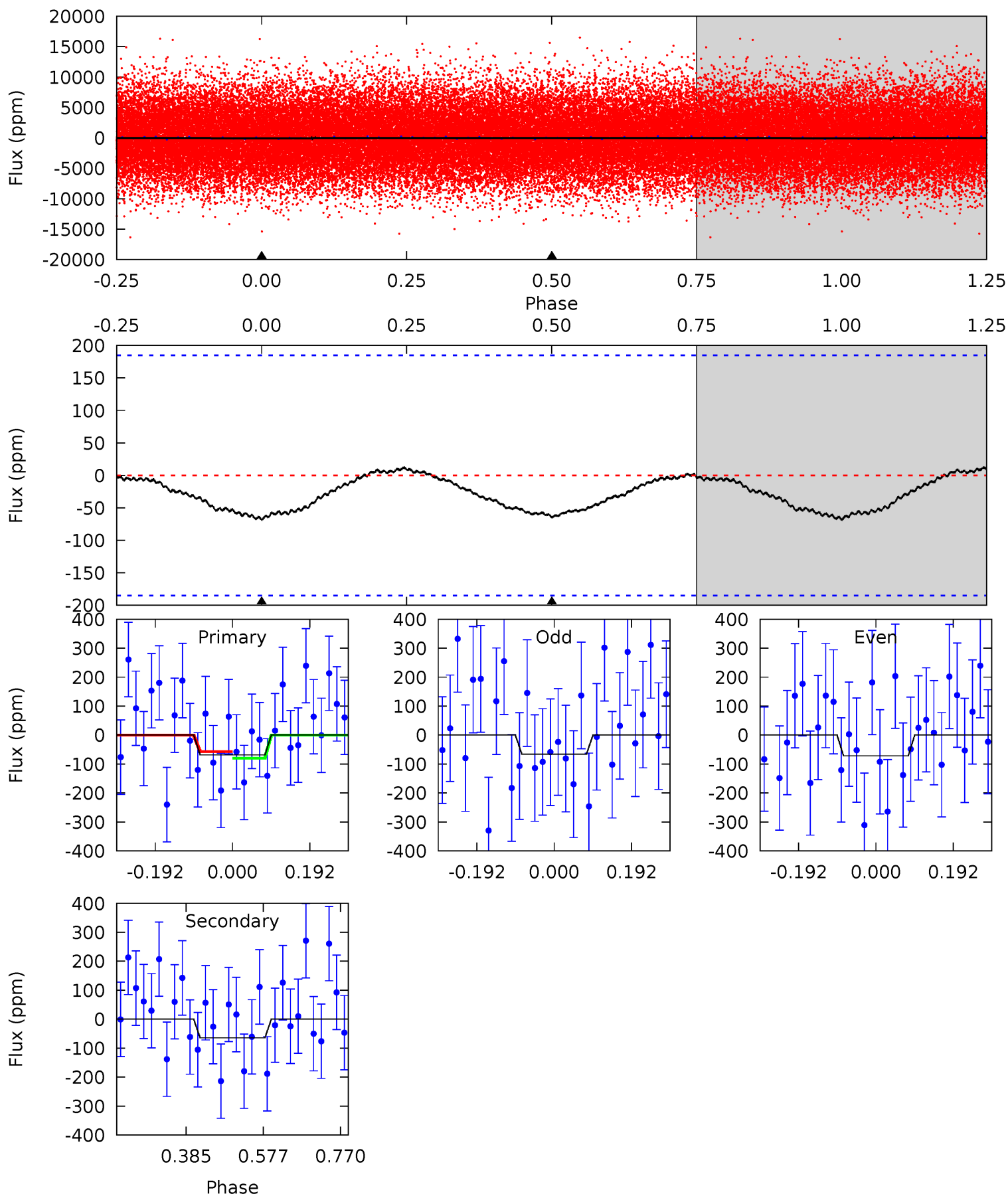
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.50	7.50	0	0	4.33	1.04	6.17	7.50	7.50	7.50	7.50	0.27	0.89	0.64	0.10



Alt Model-Shift Uniqueness Test

004848216-01, P = 1.267817 Days, E = 130.915236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.64	1.55	0	0	4.43	1.30	0.13	1.64	1.64	1.55	1.55	0.07	0.91	0.15	0.27



Stellar Parameters For KIC 004848216

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+207}_{-259}	$4.278^{+0.087}_{-0.203}$	$-0.440^{+0.250}_{-0.350}$	$1.359^{+0.419}_{-0.194}$	$1.280^{+0.196}_{-0.161}$	$0.718^{+0.336}_{-0.368}$
	+3%/-4%	+2%/-5%	+57%/-80%	+31%/-14%	+15%/-13%	+47%/-51%
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 004848216-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-83 ± 11	$1.87^{+0.50}_{-0.43}$	3362^{+250}_{-181}	6133^{+861}_{-602}	$8.013^{+5.492}_{-3.085}$
Alt.	-65 ± 42	$1.18^{+0.43}_{-0.36}$	3365^{+240}_{-185}	7289^{+2497}_{-1923}	14^{+21}_{-10}

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

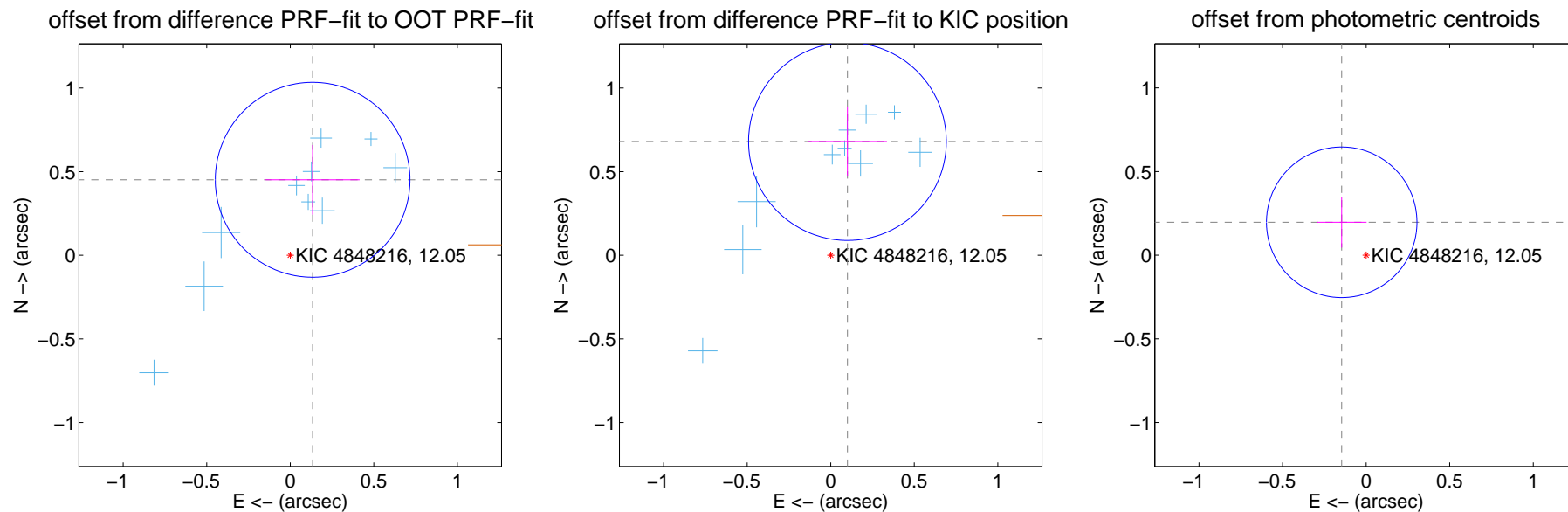
DV Centroid Data

Supplemental centroid analysis for 004848216-01. Kepler magnitude: 12.05. Transit SNR 13.73

There are 11 quarters with good PRF difference image offsets

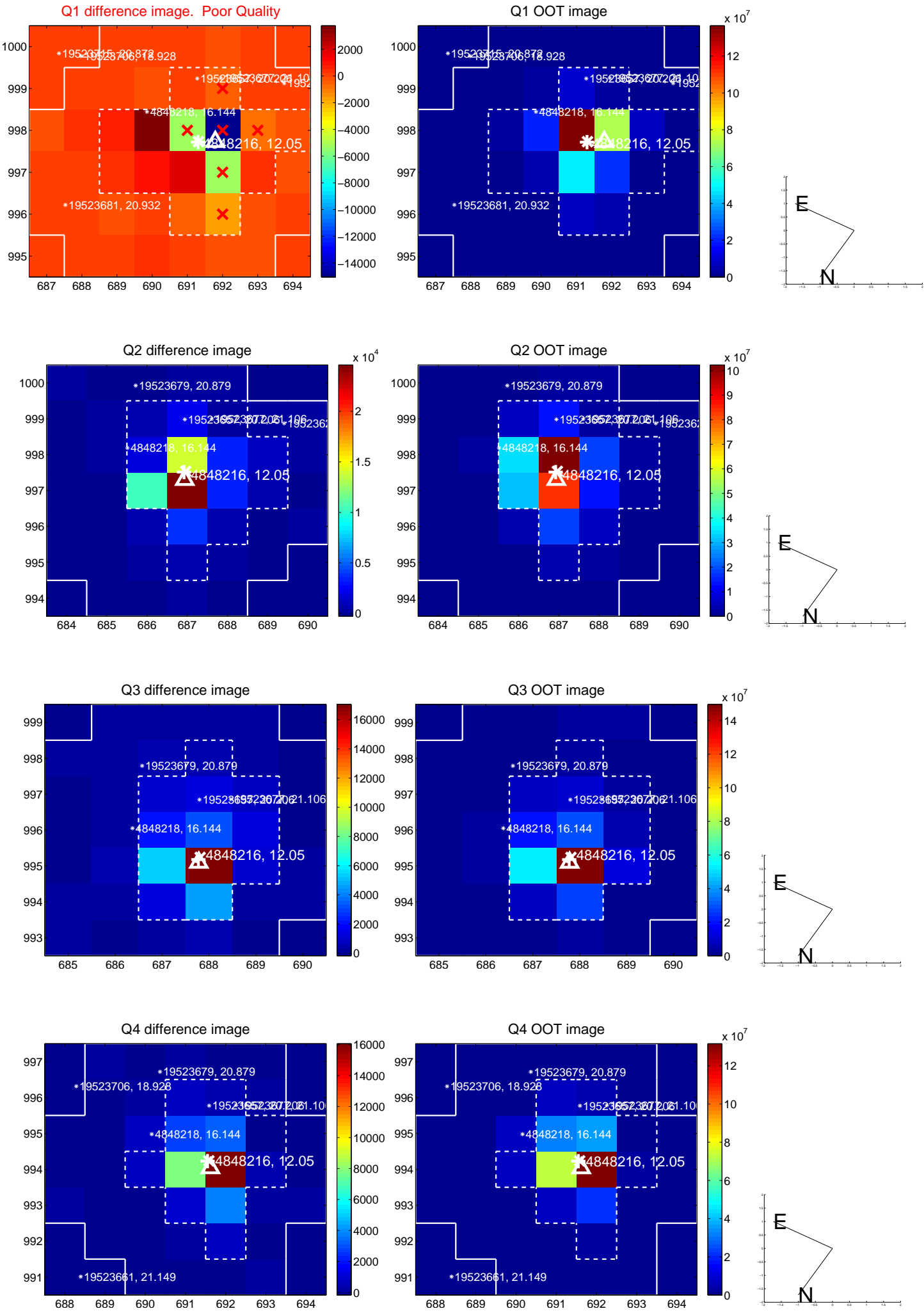
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.471 ± 0.194	2.42	-0.134 ± 0.281	0.451 ± 0.208
PRF-fit source offset from KIC position	0.688 ± 0.197	3.49	-0.100 ± 0.236	0.681 ± 0.209
photometric centroid source offset	0.25 ± 0.15	1.63	0.15 ± 0.15	0.20 ± 0.15

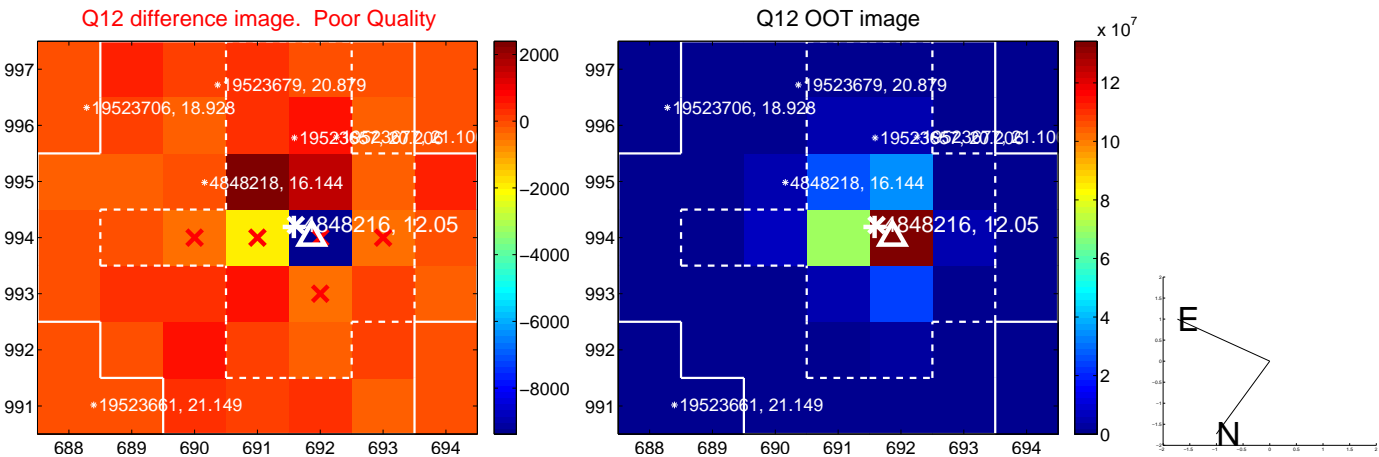
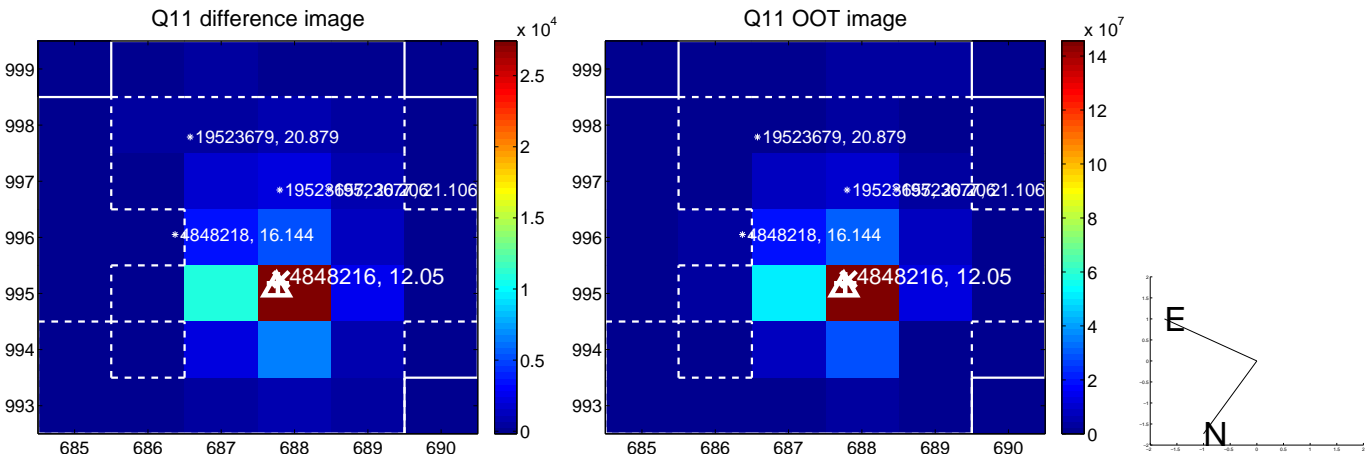
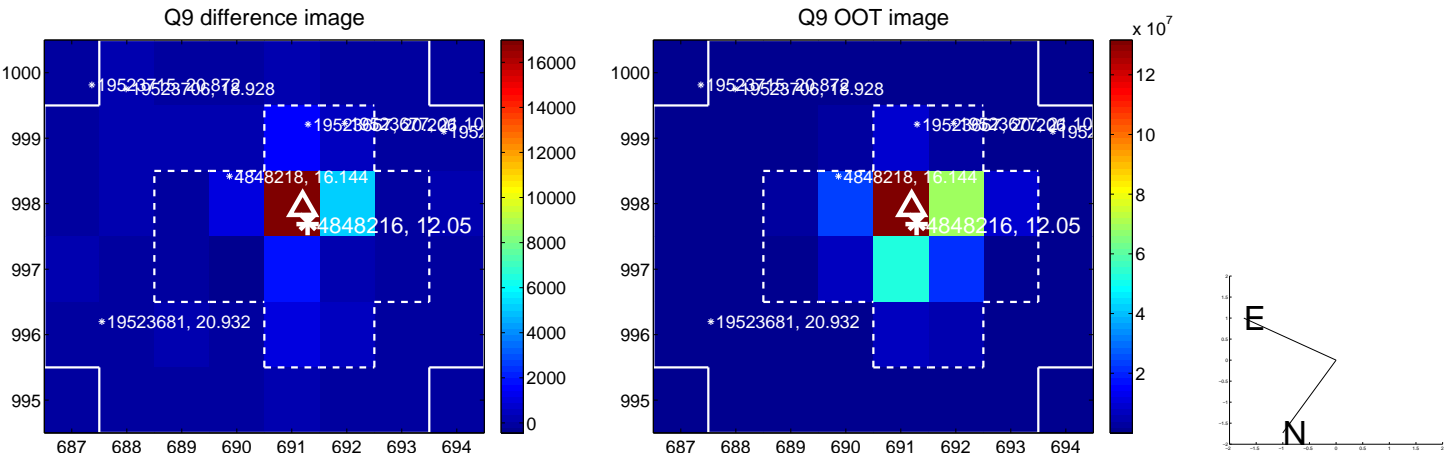


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

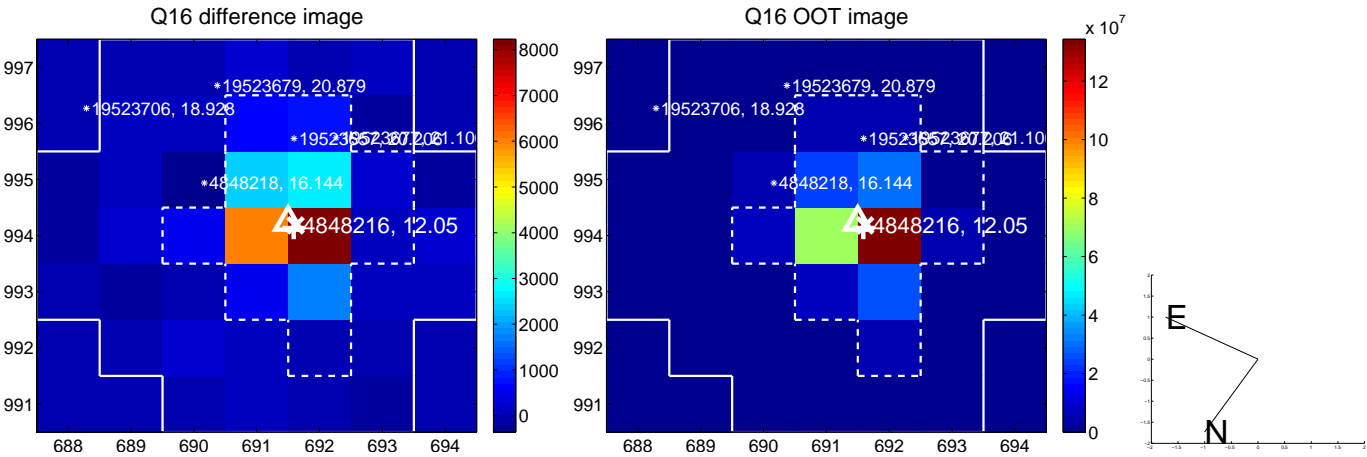
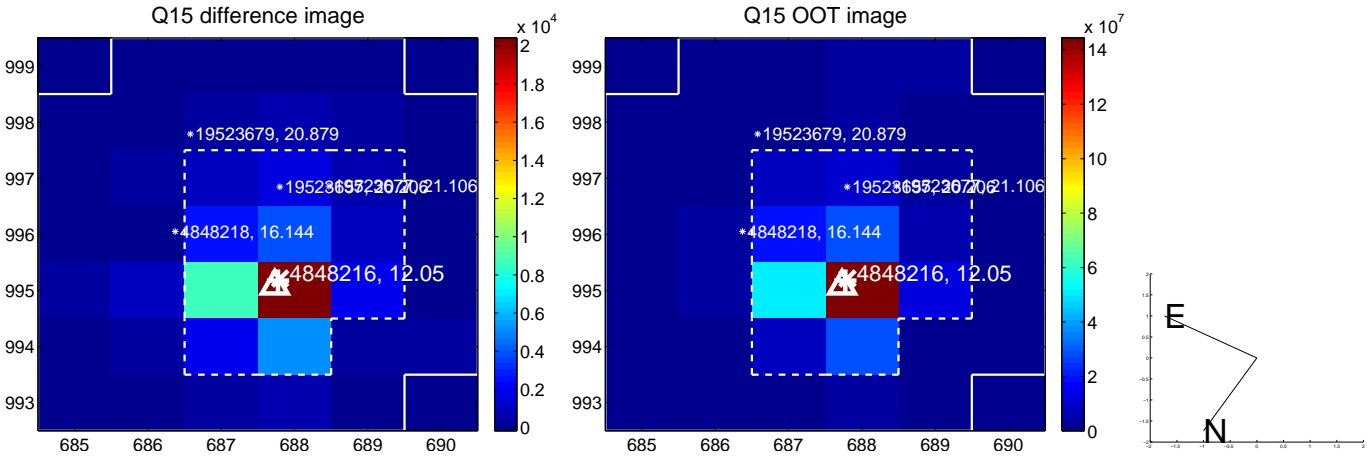
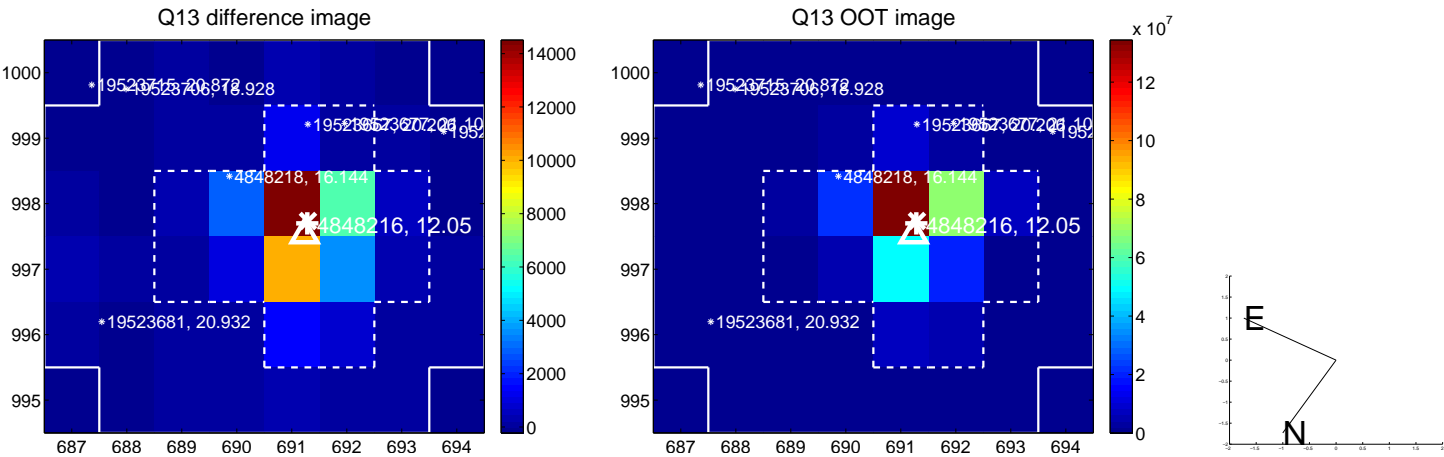
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



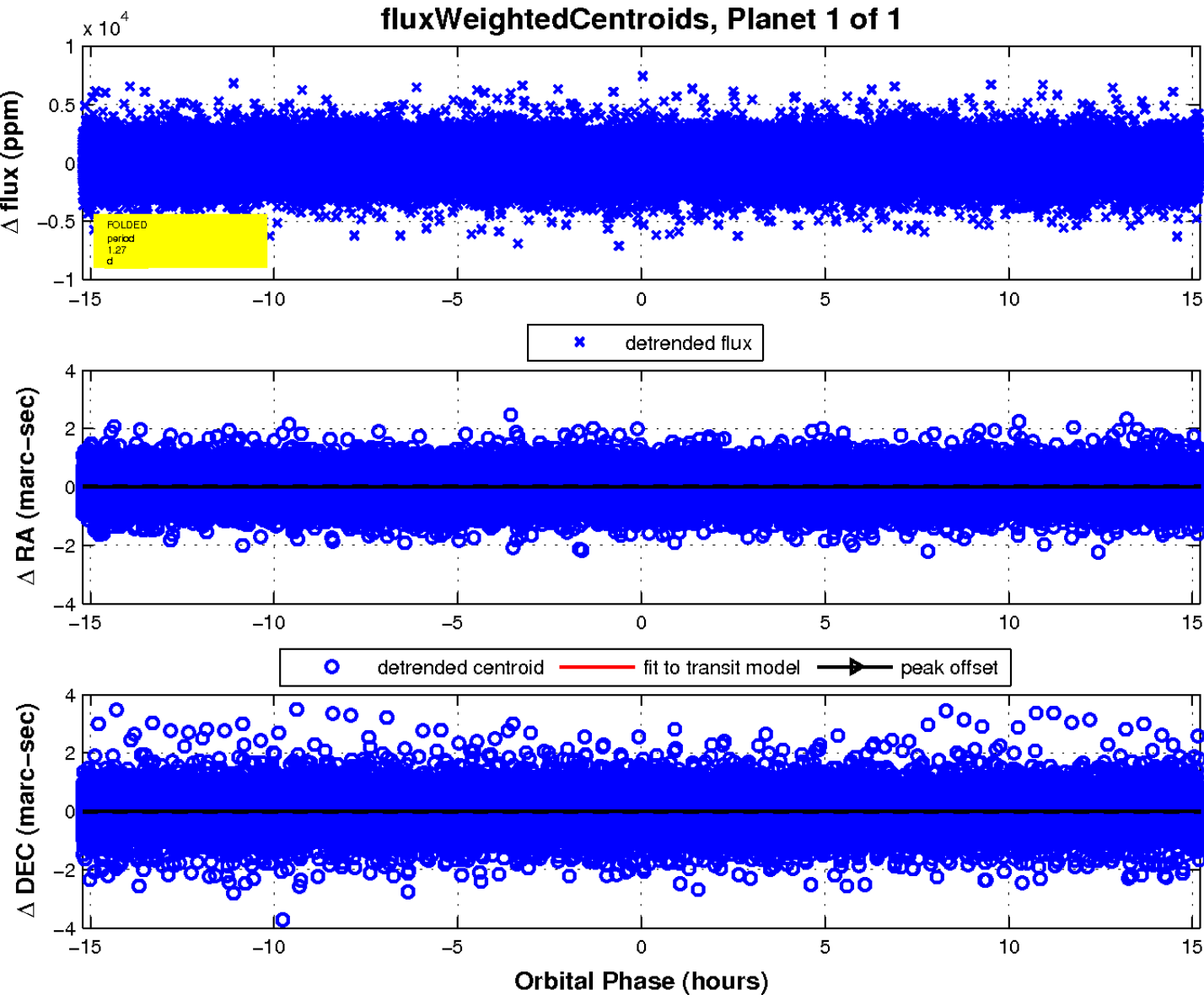
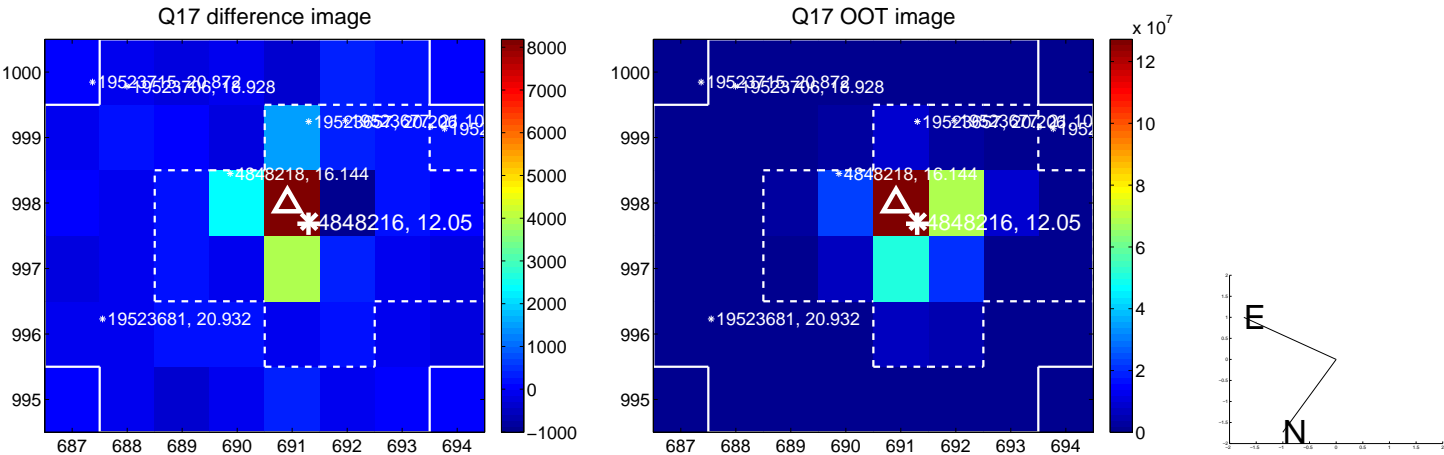
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

