

KIC 008777609

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})
008777609-01	OBS	No	0.652212	132.058212	40.1	3.827	10.5	6.1	13.09	6388	8.48	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008777609-01	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.

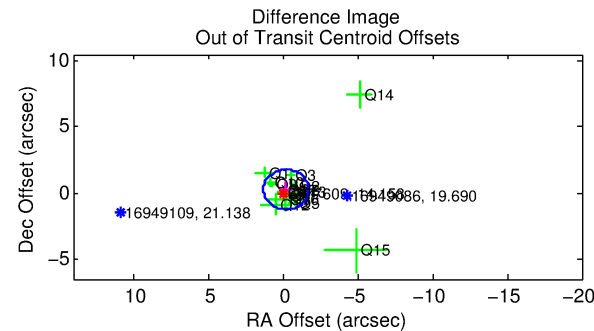
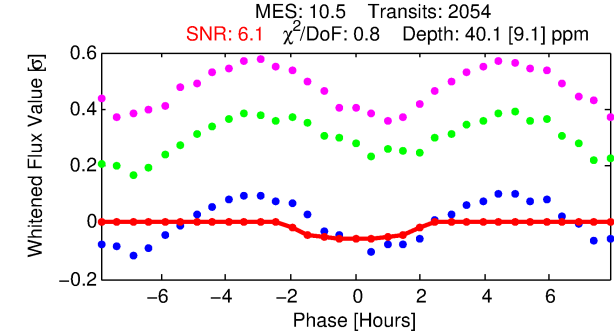
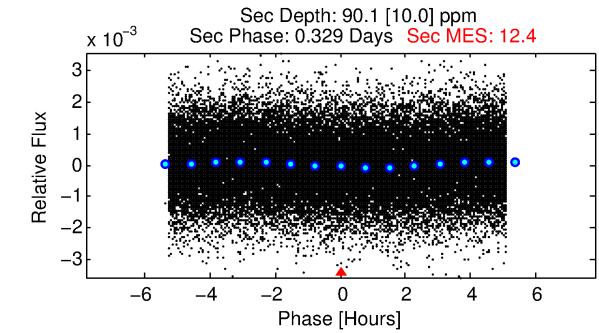
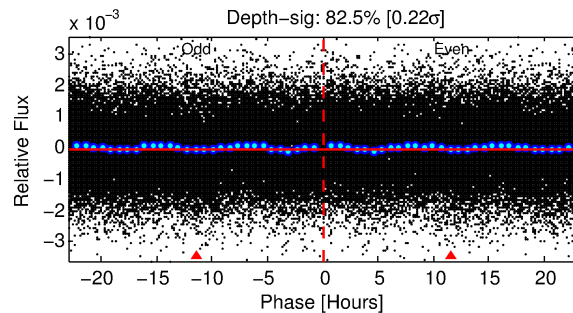
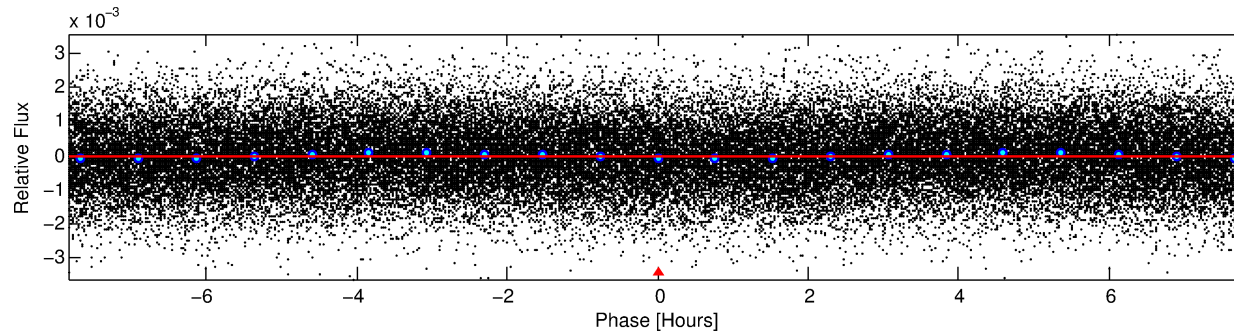
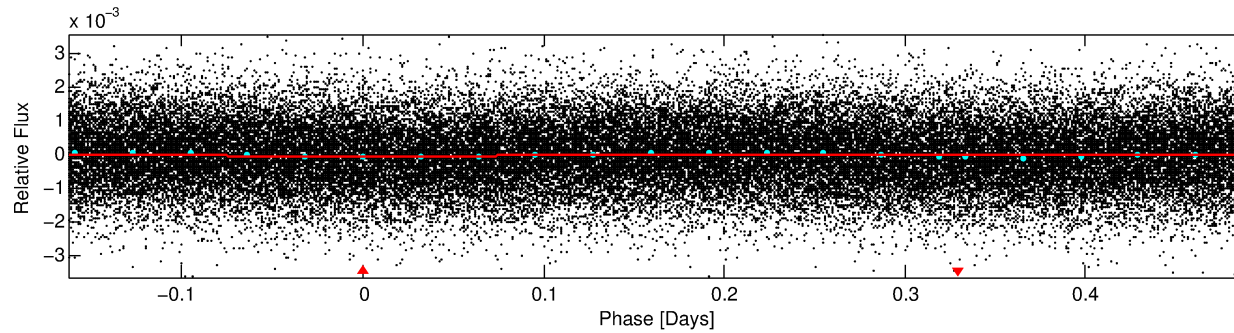
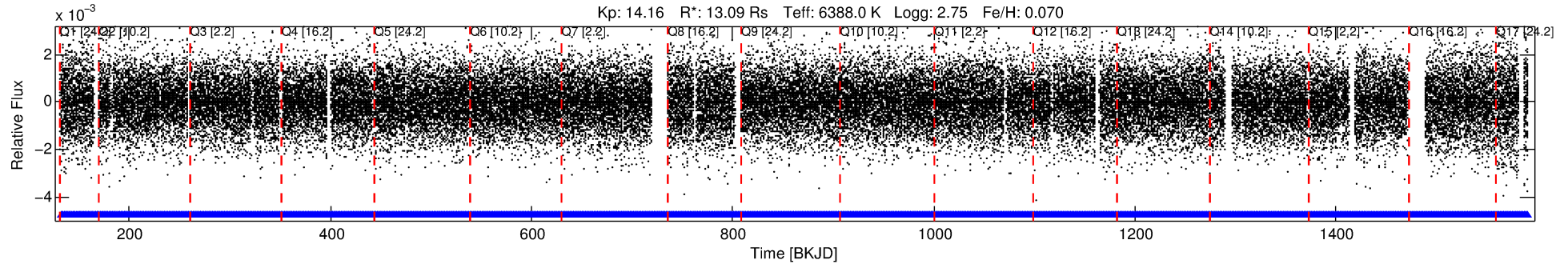
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008777609-01

No Significant Match Found

DV One-Page Summary

KIC: 8777609 Candidate: 1 of 1 Period: 0.652 d



DV Fit Results:

Period = 0.65221 [0.00002] d
Epoch = 132.0582 [0.0087] BKJD
Rp/R* = 0.0059 [0.0090]
a/R* = 1.38 [5.20]
b = 0.41 [16.13]
Seff = N/A
Teq = N/A
Rp = 8.48 [13.59] Re
a = N/A
Ag = N/A
Teffp = N/A

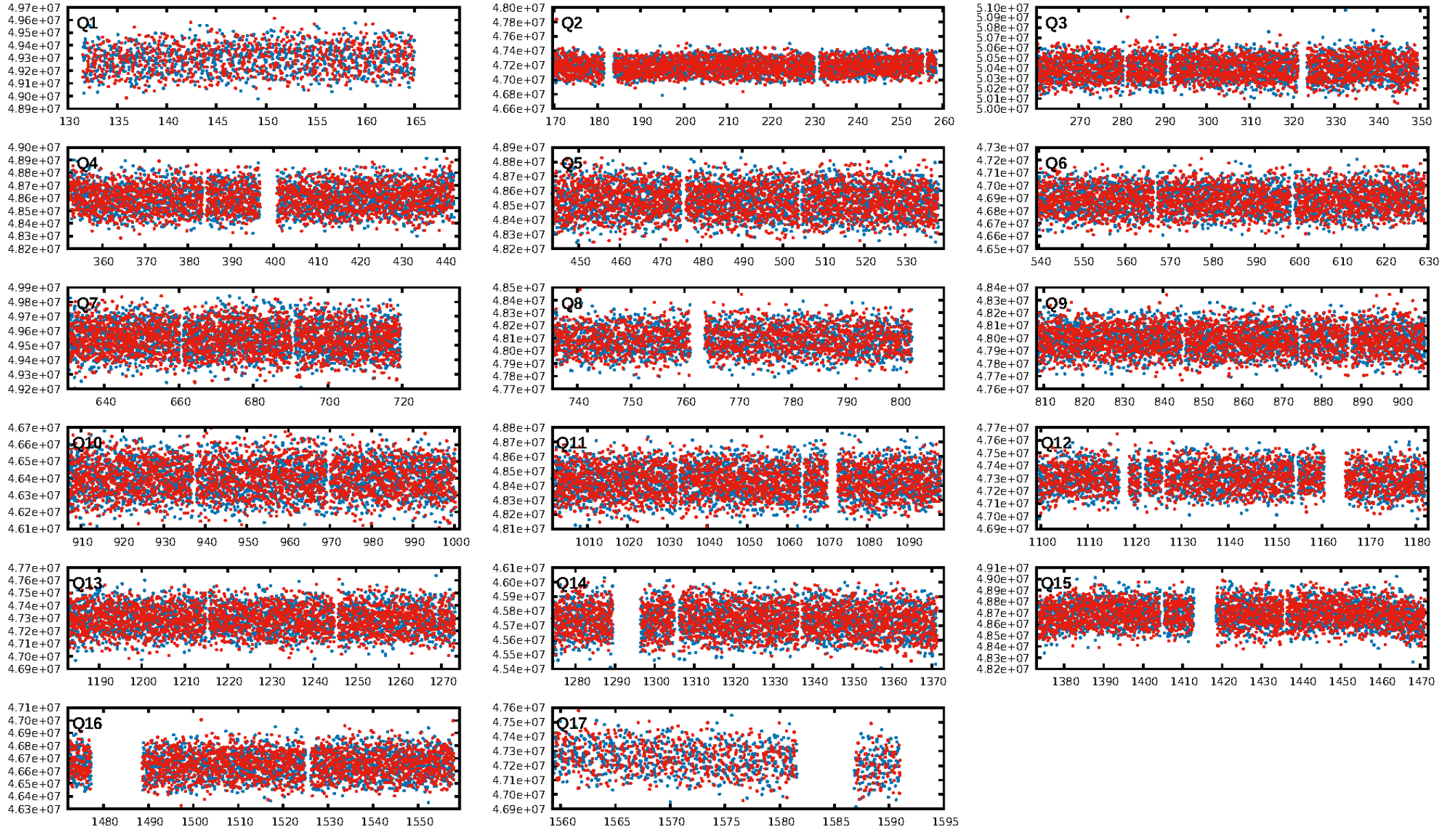
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.13e-17
RollingBand-fgt: 1.00 [1962/1962]
GhostDiagnostic-chr: 2.585
Centroid-sig: 36.2%
Centroid-so: 0.800 arcsec [0.95 σ]
OotOffset-rm: 0.336 arcsec [0.67 σ]
KicOffset-rm: 0.230 arcsec [0.48 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 1.00 [17/17]

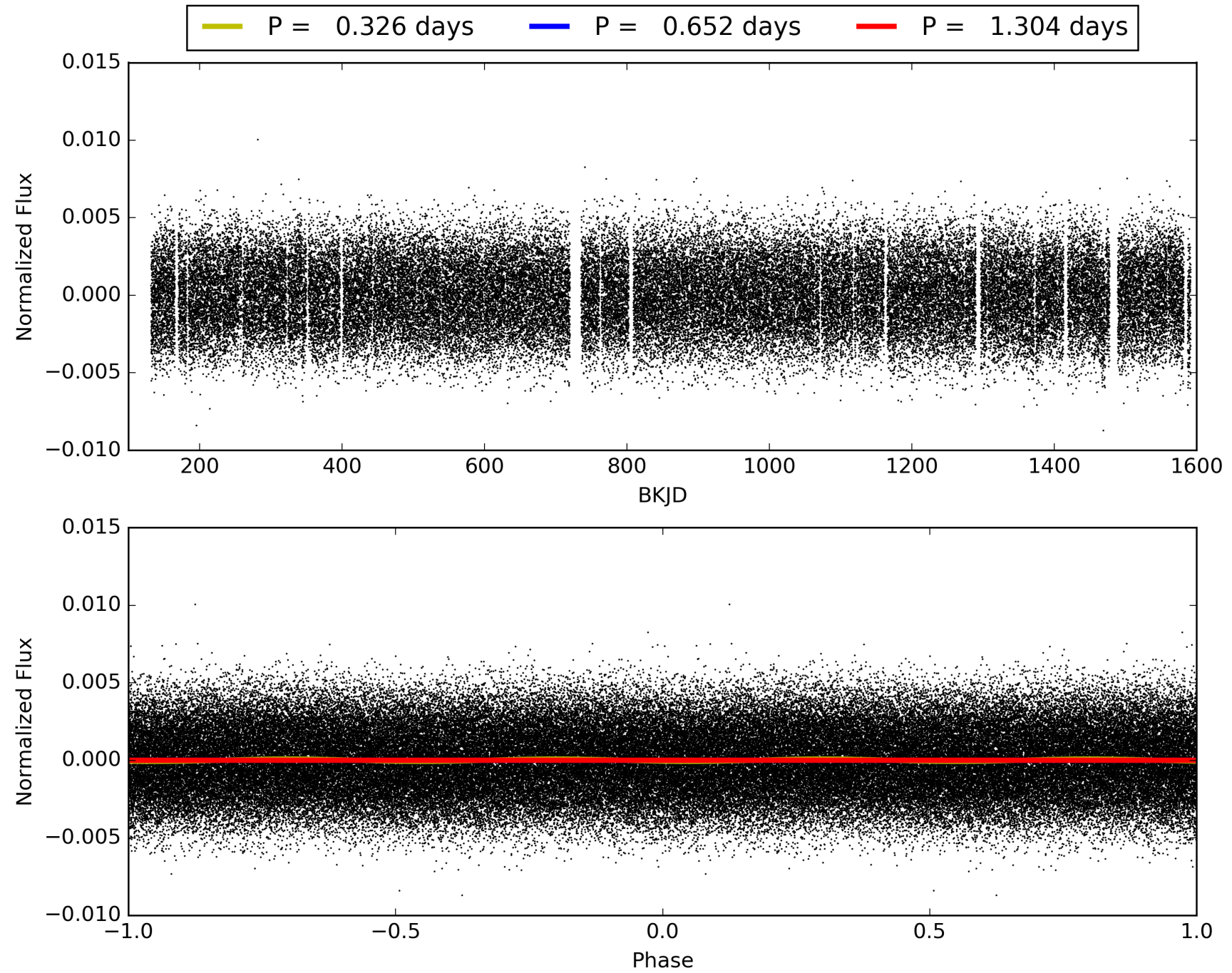
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:44:55 Z

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

TCE 008777609-01, PDC Light Curves

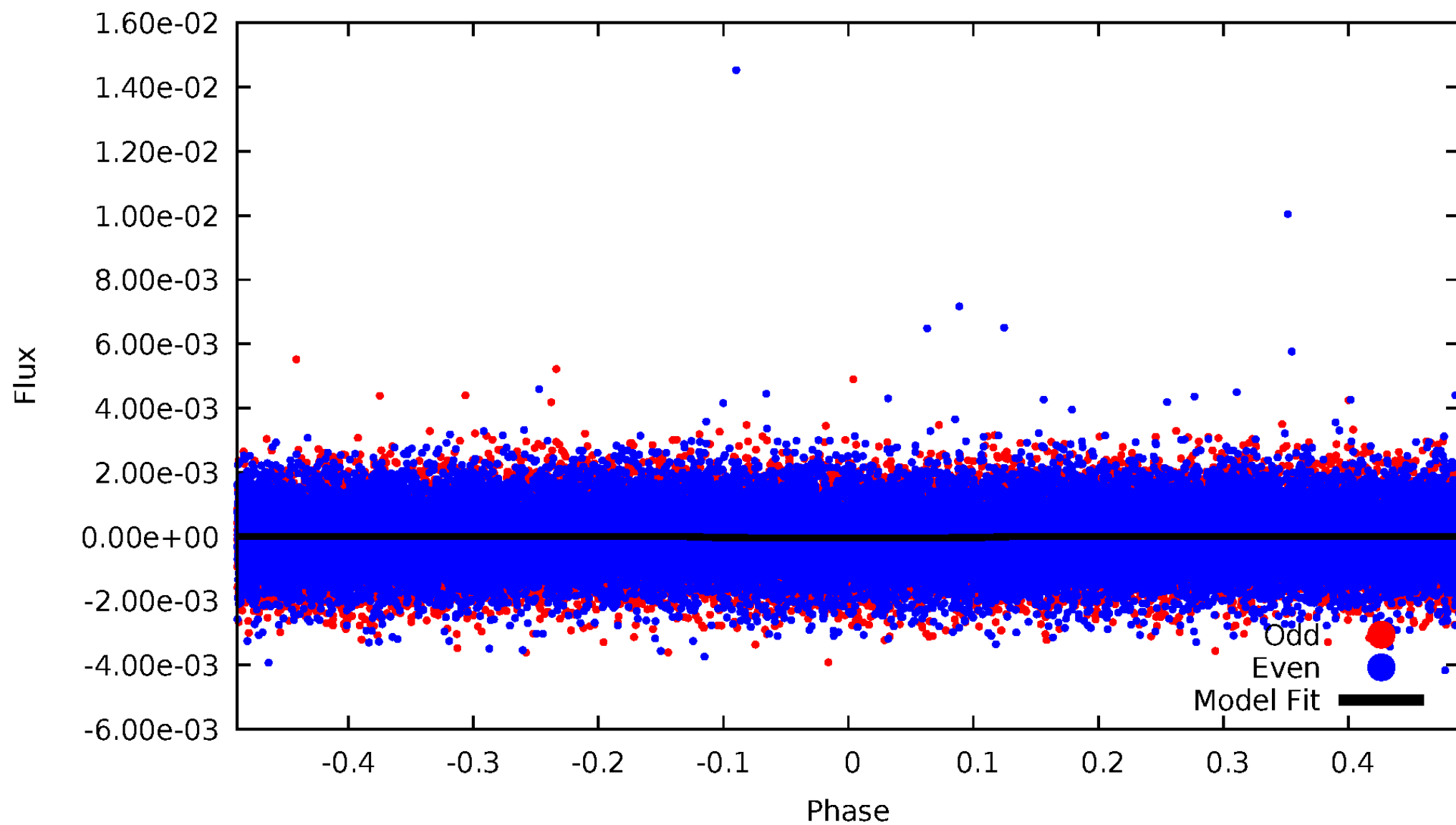


TCE 008777609-01



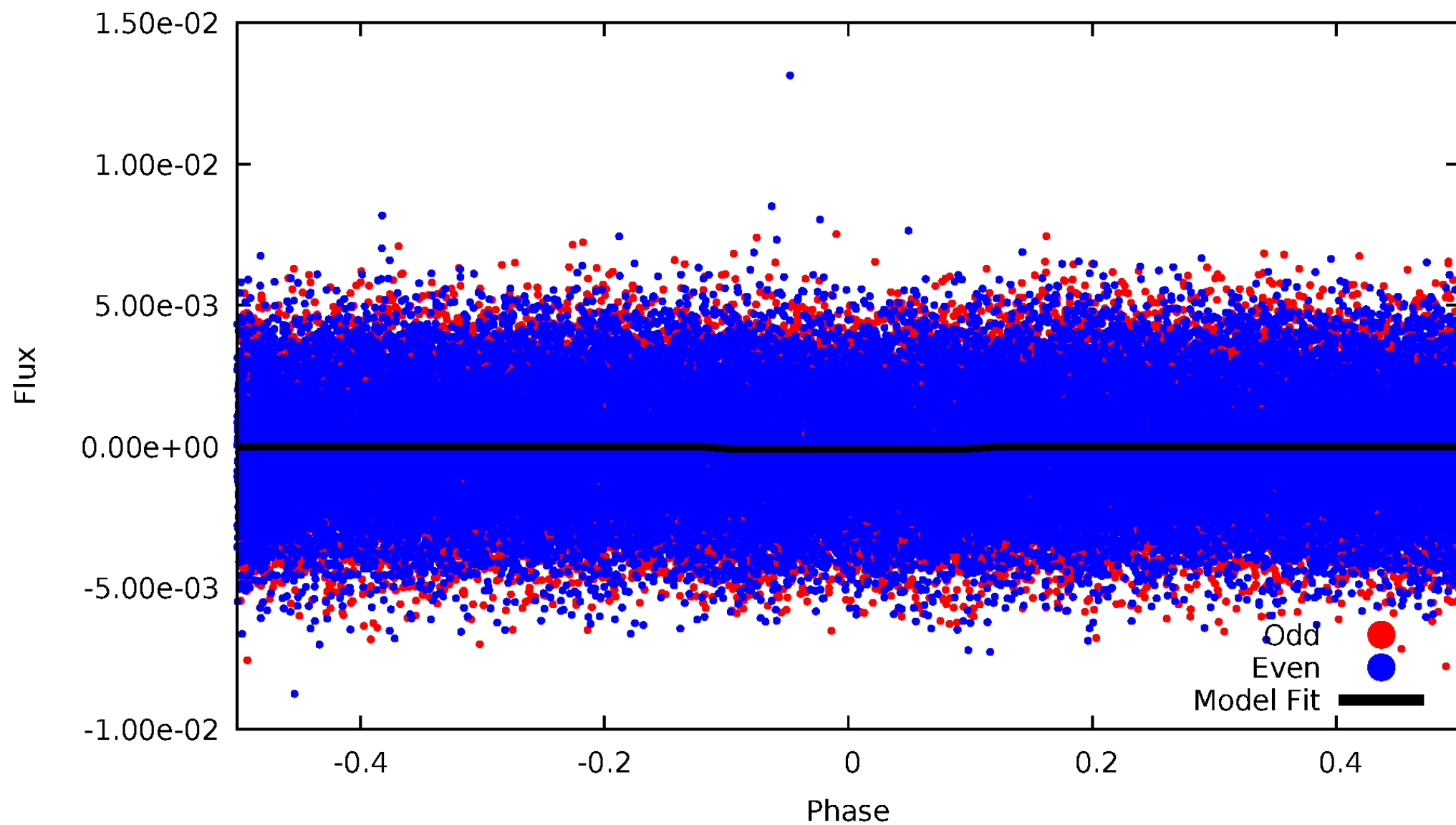
DV Odd/Even

TCE 008777609-01



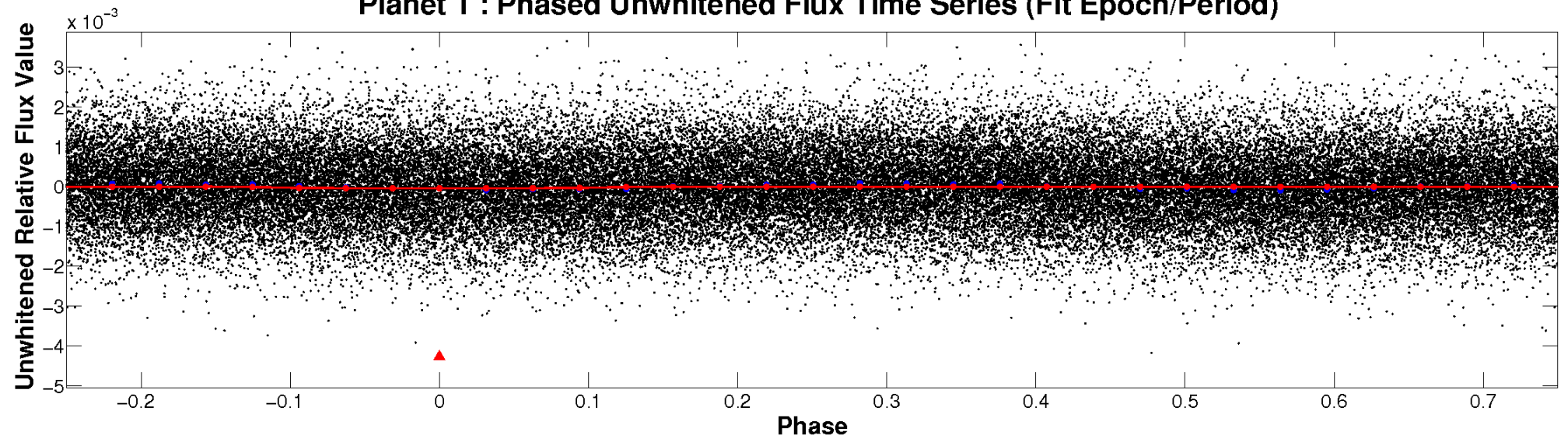
ALT Odd/Even

TCE 008777609-01

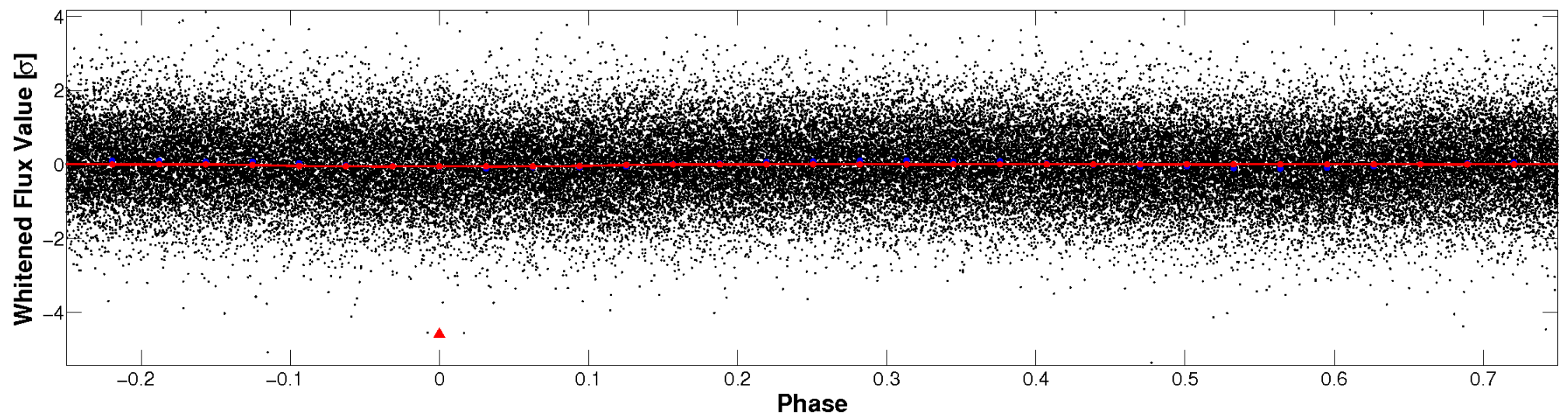


Non-Whitened Vs. Whitened Light Curve

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

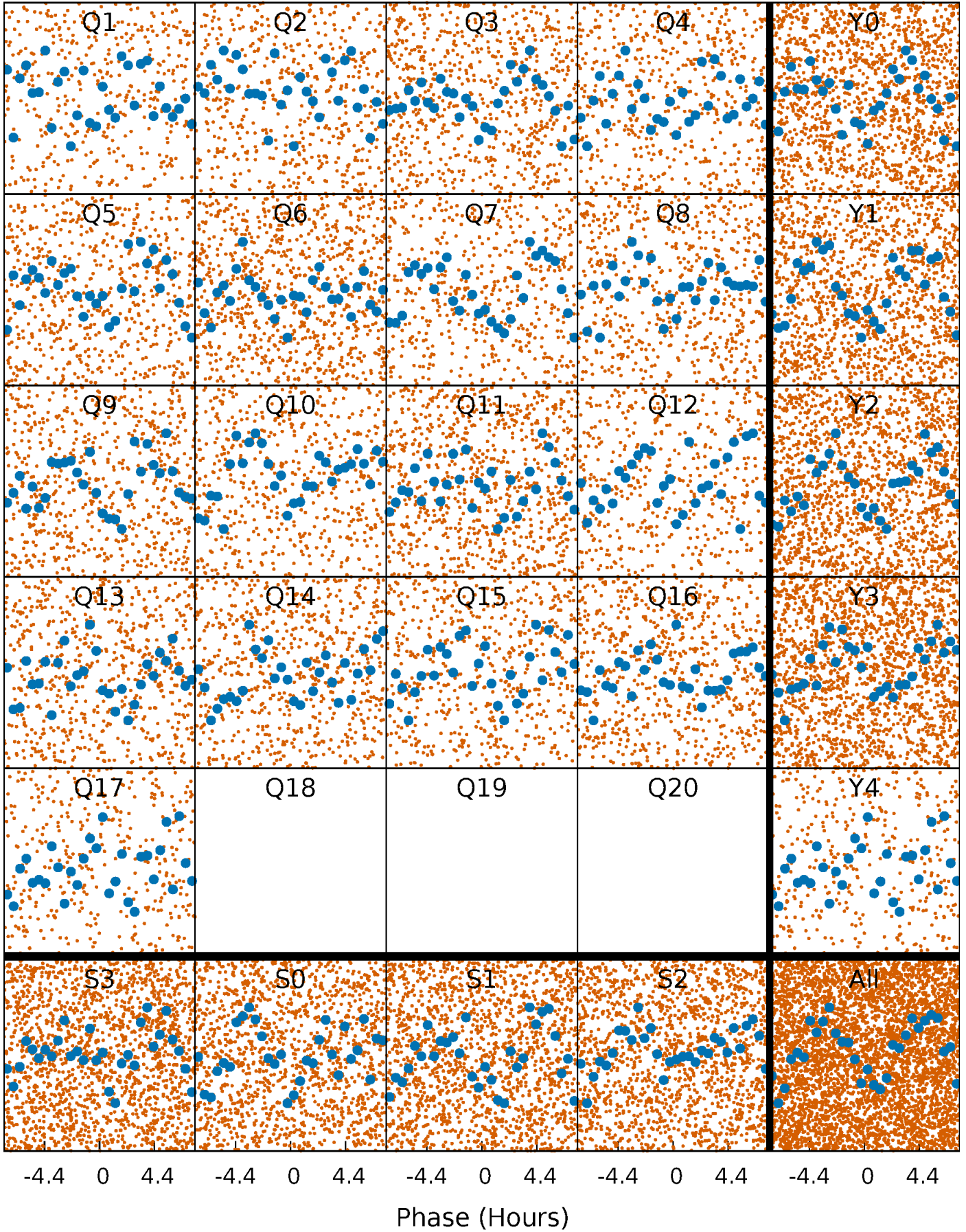


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



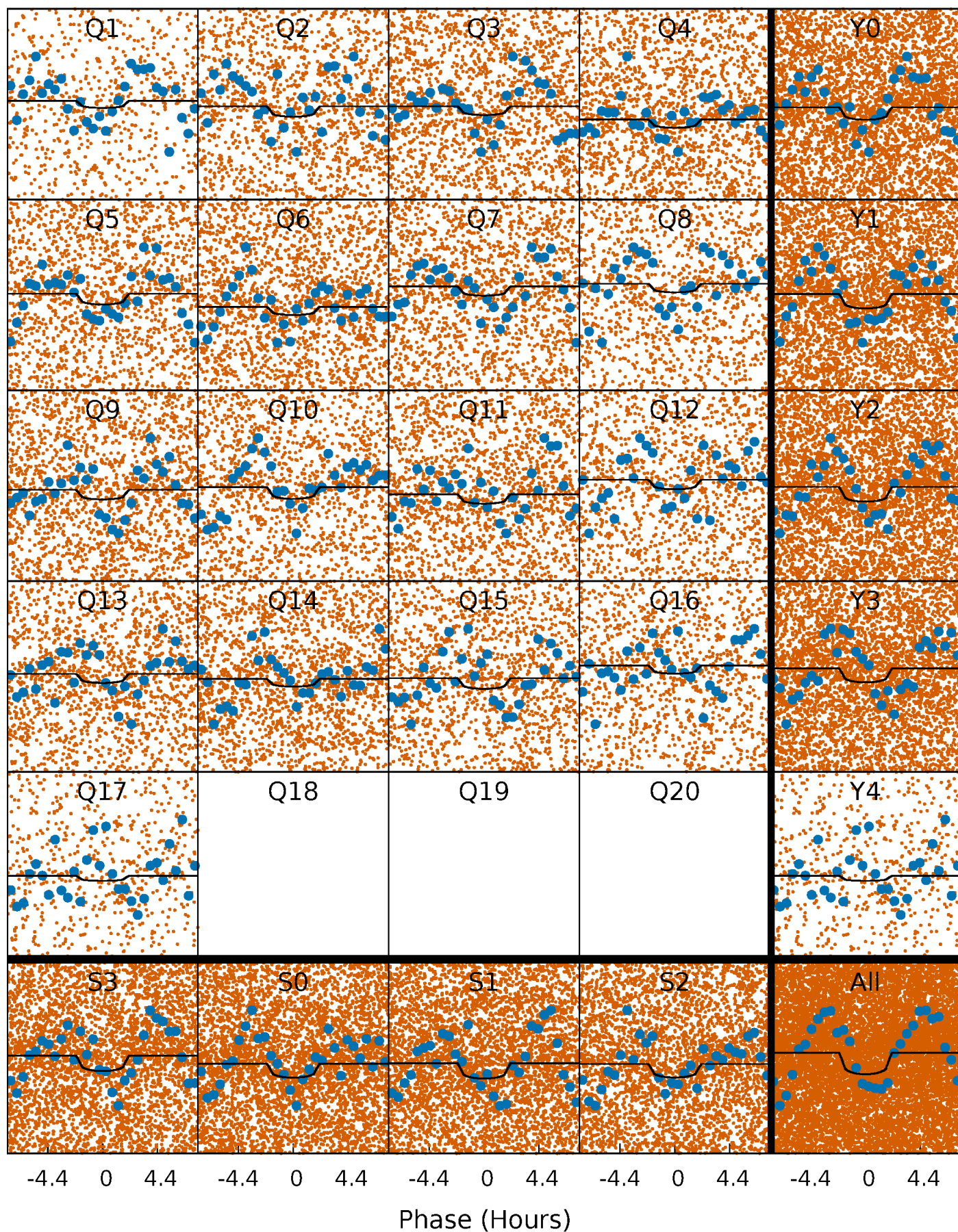
PDC Quarter-Phased Transit Curves

TCE 008777609-01 P= 0.652212 Days $T_0=132.058212$ (BKJD)



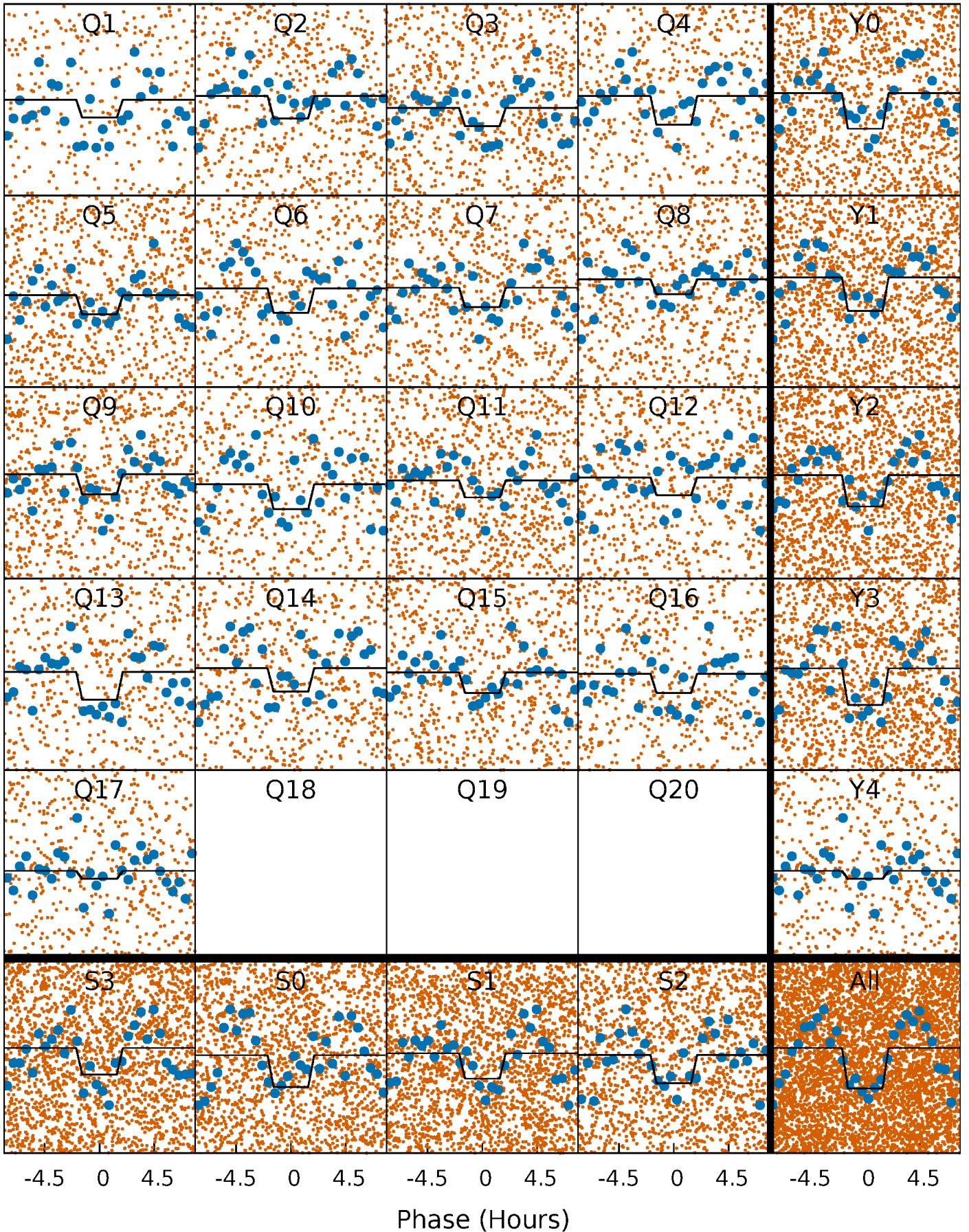
DV Quarter-Phased Transit Curves

TCE 008777609-01 P= 0.652212 Days $T_0=132.058212$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

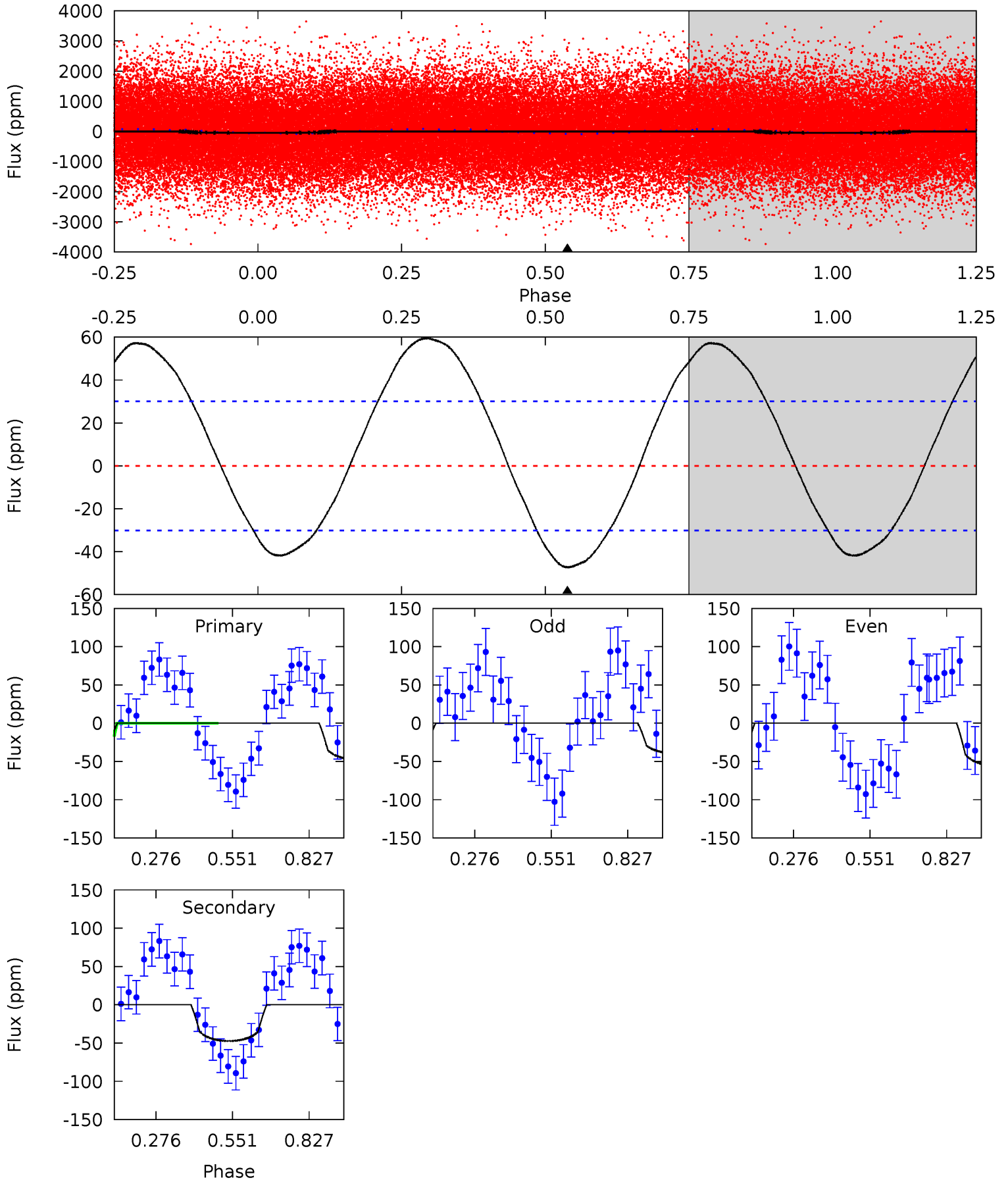
TCE 008777609-01 P= 0.652269 Days $T_0=132.027465$ (BKJD)



DV Model-Shift Uniqueness Test

008777609-01, P = 0.652212 Days, E = 131.406000 Days

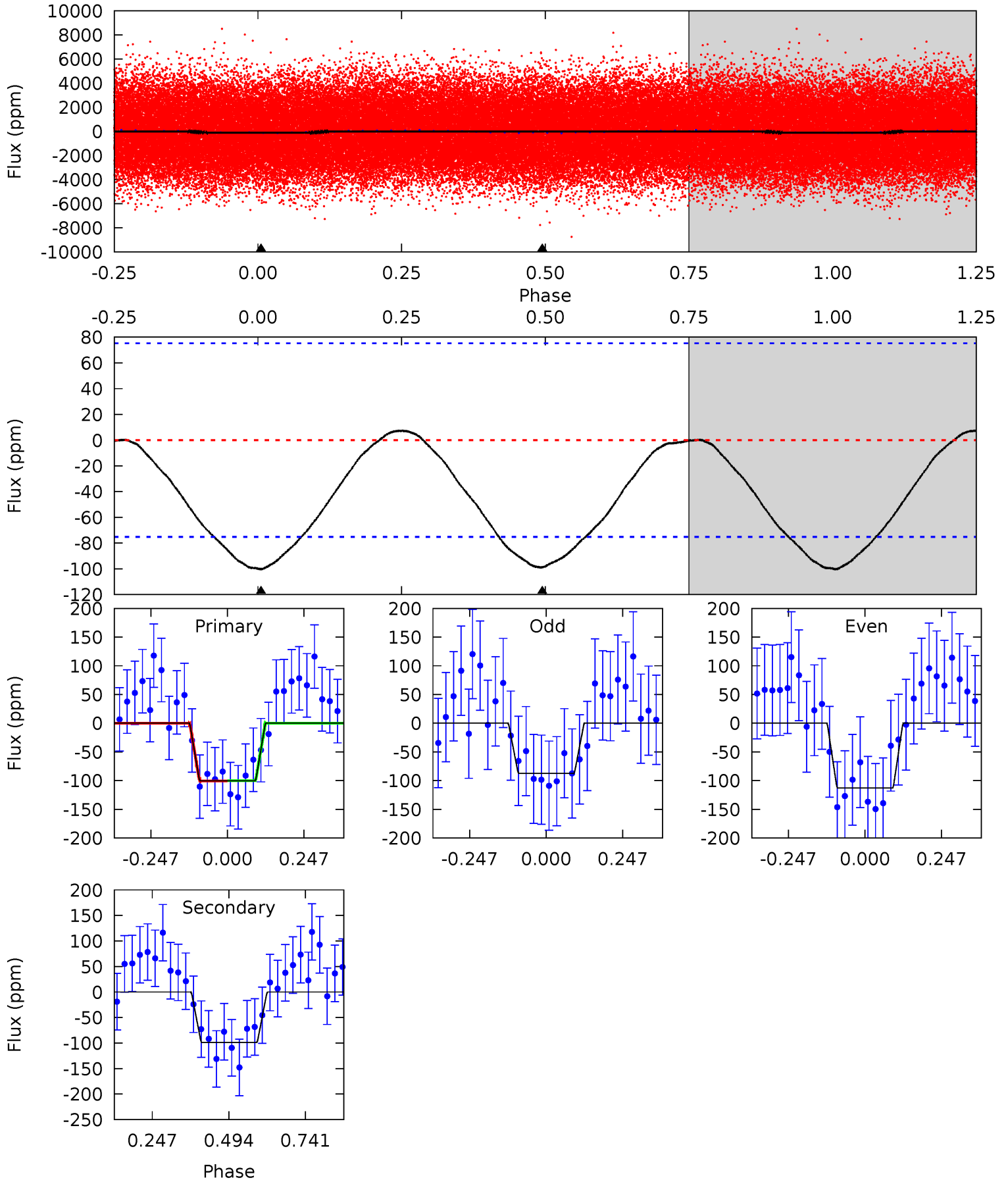
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.85	6.85	0	0	4.35	1.09	4.71	6.85	6.85	6.85	6.85	1.14	0.95	0.56	4.20



Alt Model-Shift Uniqueness Test

008777609-01, P = 0.652269 Days, E = 131.375196 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.83	5.75	0	0	4.37	1.16	0.22	5.83	5.83	5.75	5.75	0.74	0.87	0.07	0.01



Stellar Parameters For KIC 008777609

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6388^{+609}_{-1829}	$2.746^{+0.188}_{-0.525}$	$0.070^{+0.150}_{-0.550}$	$13.089^{+6.525}_{-4.015}$	$3.479^{+0.122}_{-2.190}$	$0.002^{+0.003}_{-0.002}$
	+10%/-29%	+7%/-19%	+214%/-786%	+50%/-31%	+4%/-63%	+131%/-79%
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 008777609-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 7	$12.80^{+14.86}_{-8.22}$	9669^{+2103}_{-2615}	-6504^{+13318}_{-2975}	$0.068^{+0.433}_{-0.053}$
Alt.	-99 ± 17	$16.83^{+14.79}_{-10.15}$	9534^{+2053}_{-2475}	-6411^{+12776}_{-2756}	$0.081^{+0.448}_{-0.055}$

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

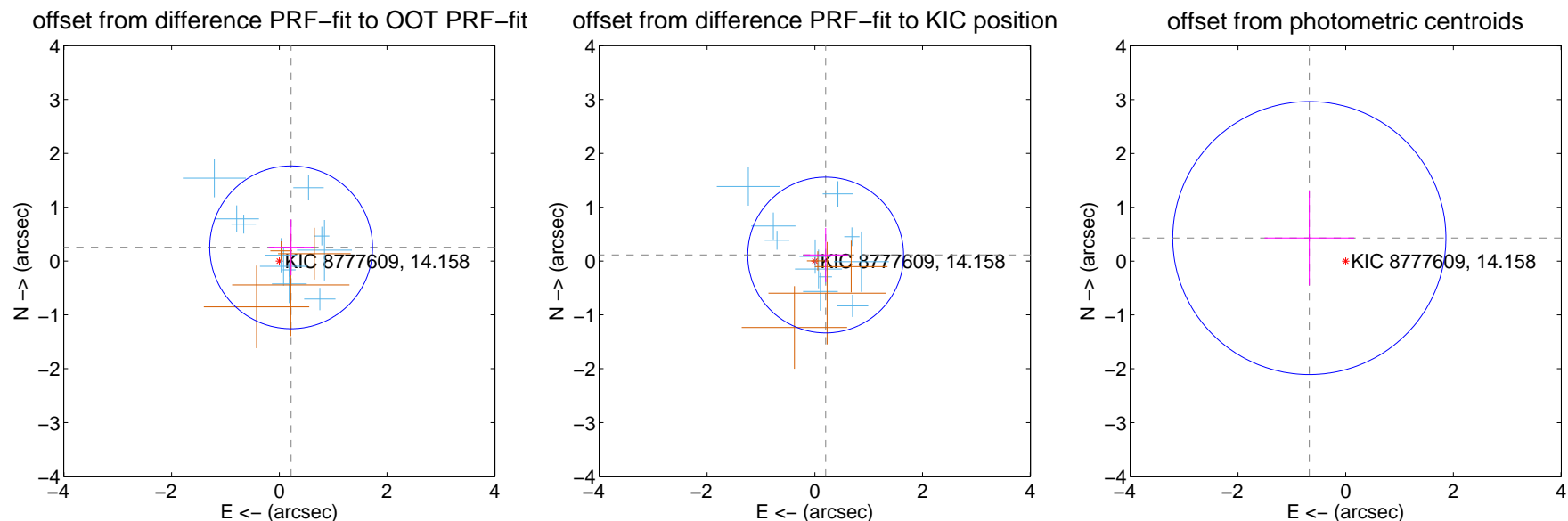
DV Centroid Data

Supplemental centroid analysis for 008777609-01. Kepler magnitude: 14.16. Transit SNR 6.06

There are 11 quarters with good PRF difference image offsets

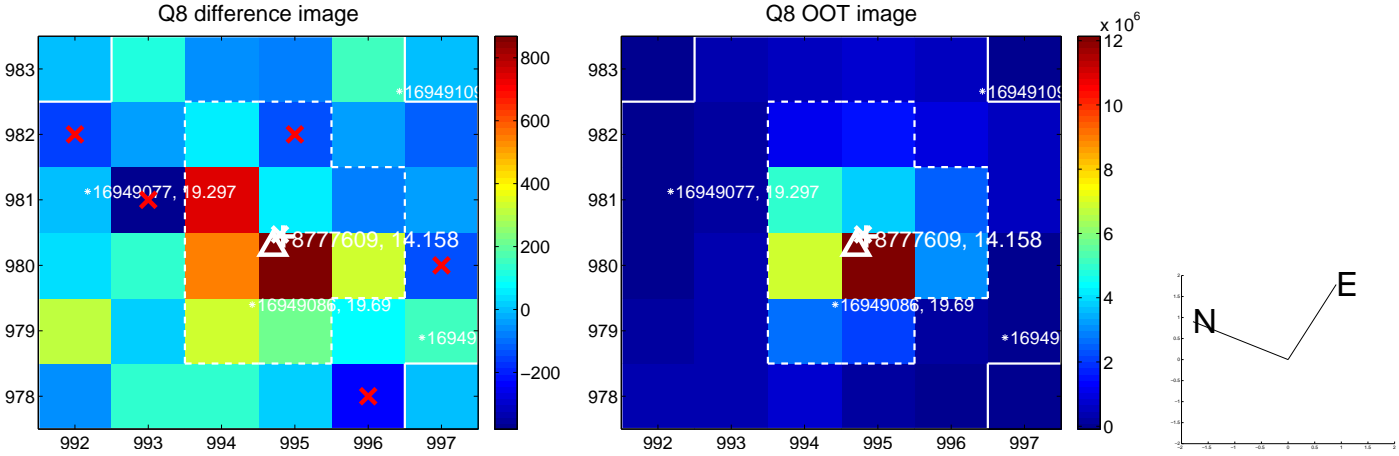
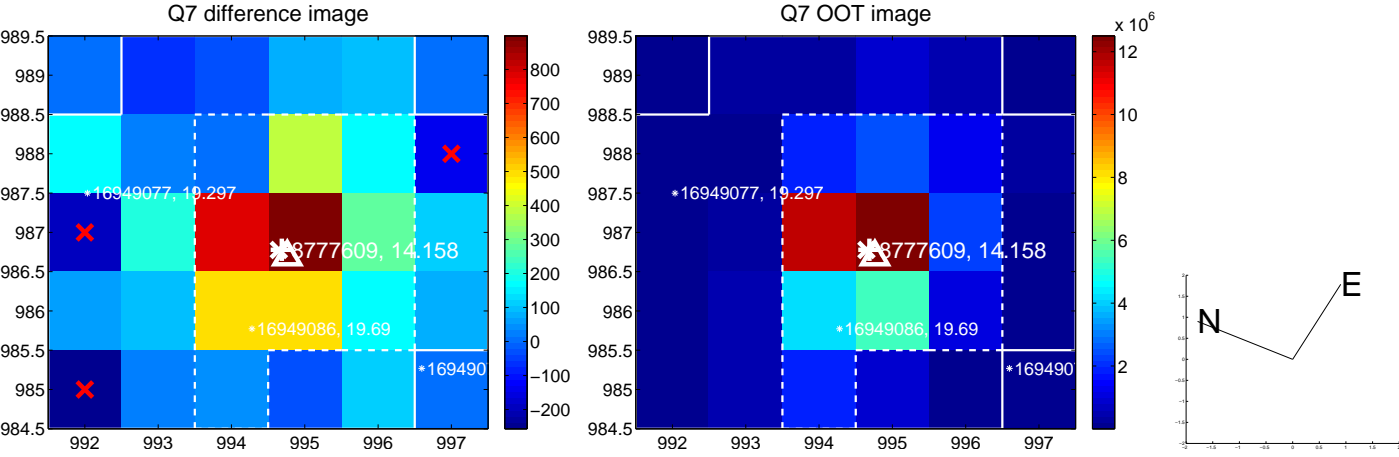
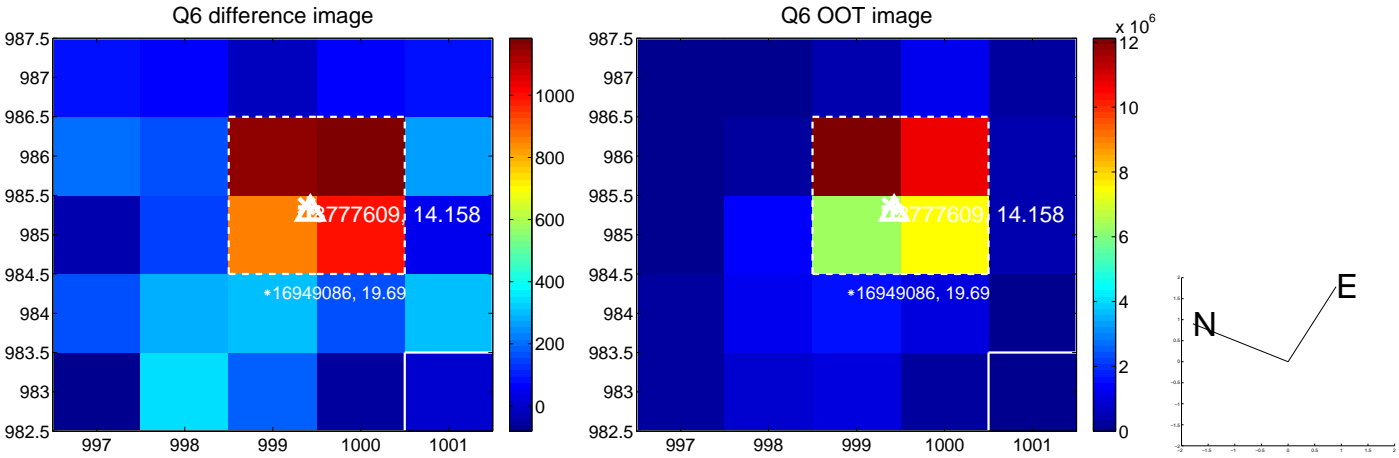
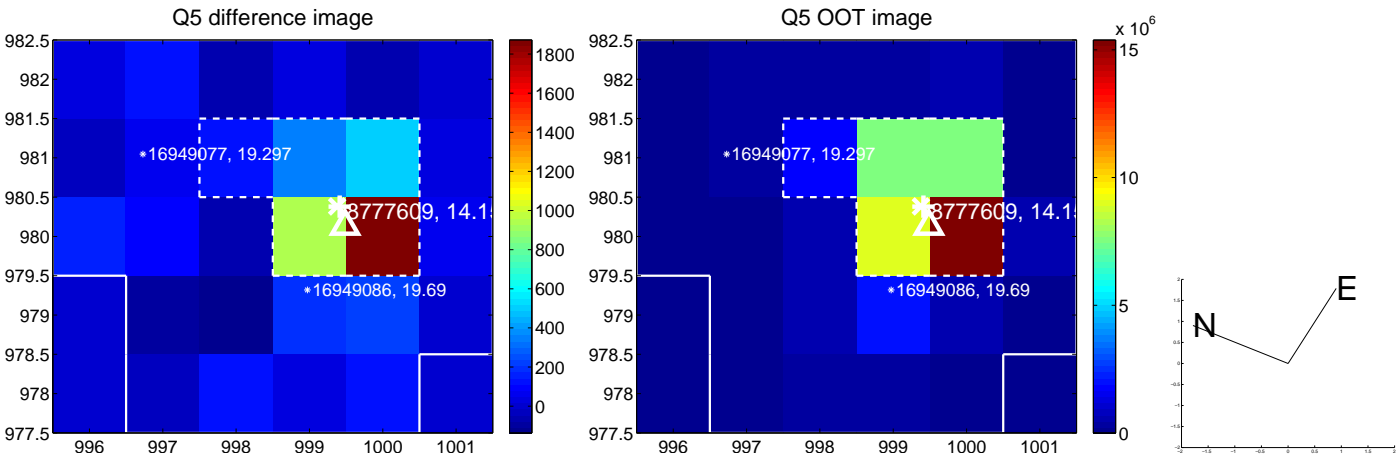
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.336 ± 0.504	0.67	-0.220 ± 0.417	0.255 ± 0.520
PRF-fit source offset from KIC position	0.230 ± 0.482	0.48	-0.201 ± 0.413	0.112 ± 0.503
photometric centroid source offset	0.80 ± 0.85	0.95	0.68 ± 0.83	0.43 ± 0.88

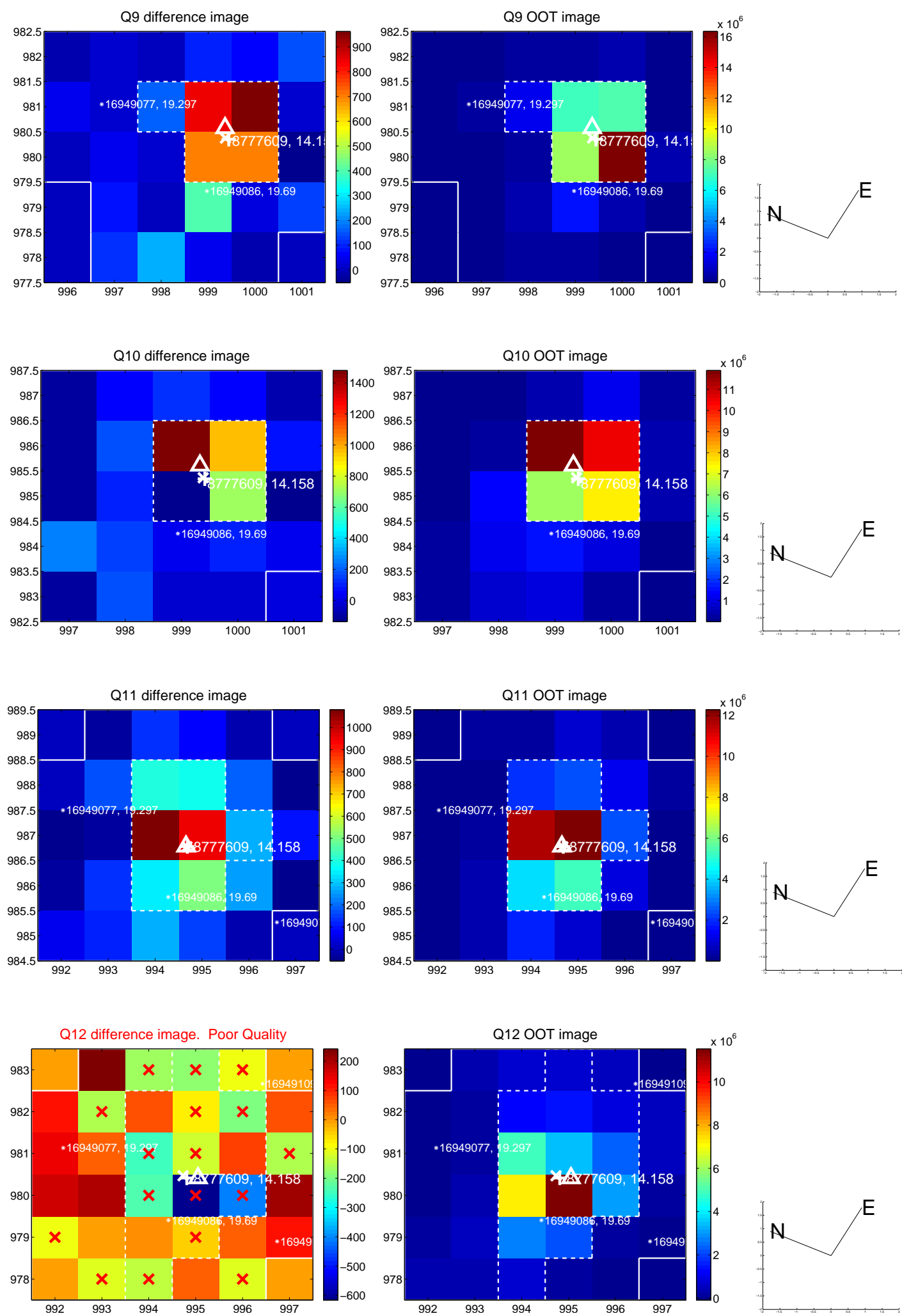


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

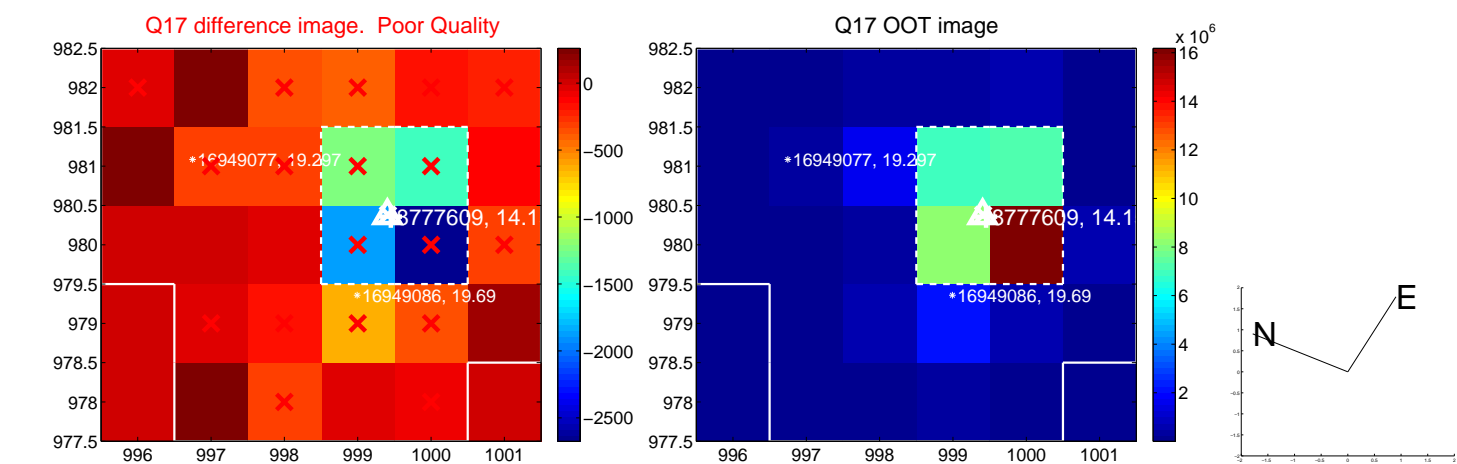
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



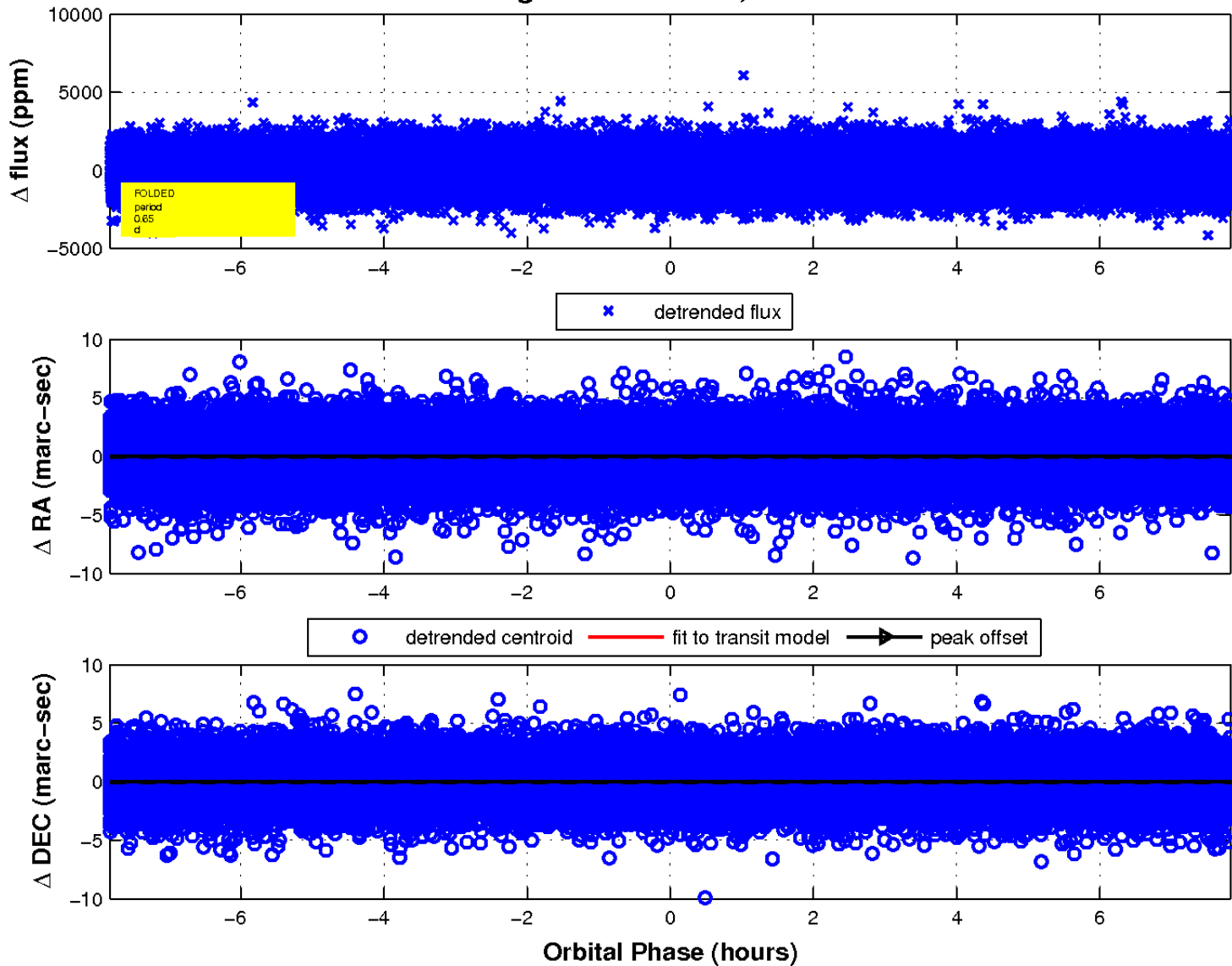
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

