

KIC 008651452

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})
008651452-01	OBS	No	0.645951	131.966820	49.1	0.776	12.7	10.8	1.80	7179	1.49	26753.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008651452-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

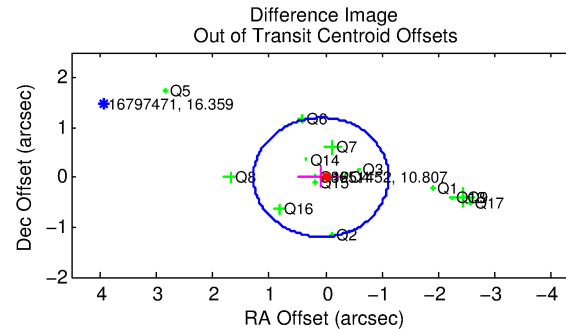
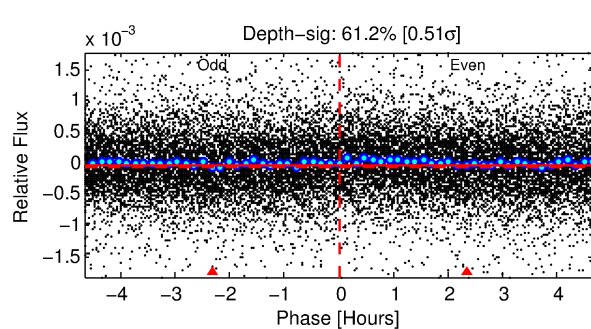
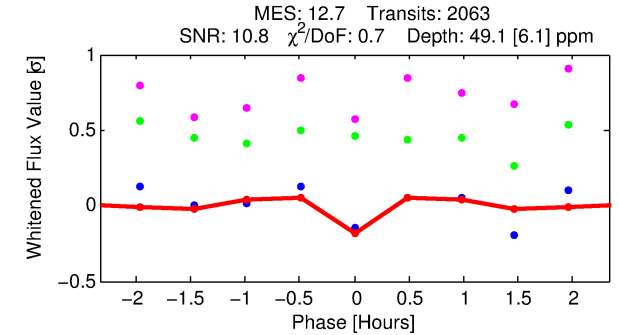
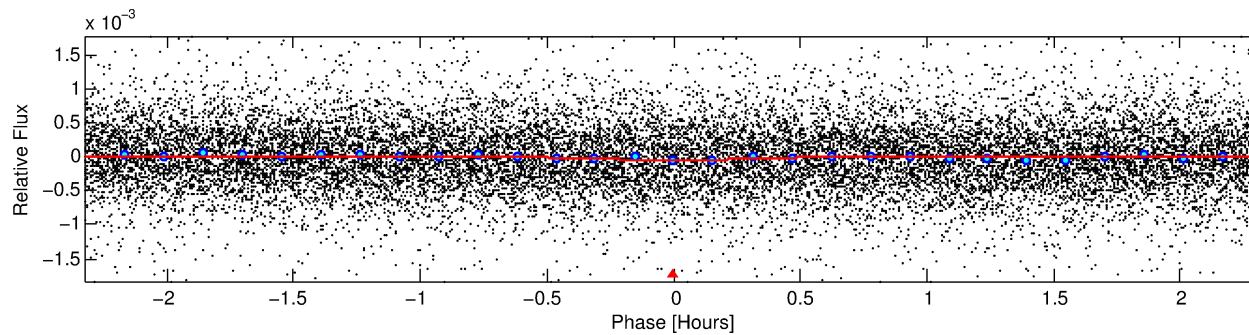
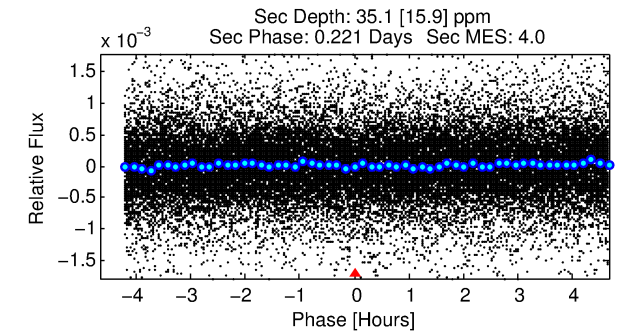
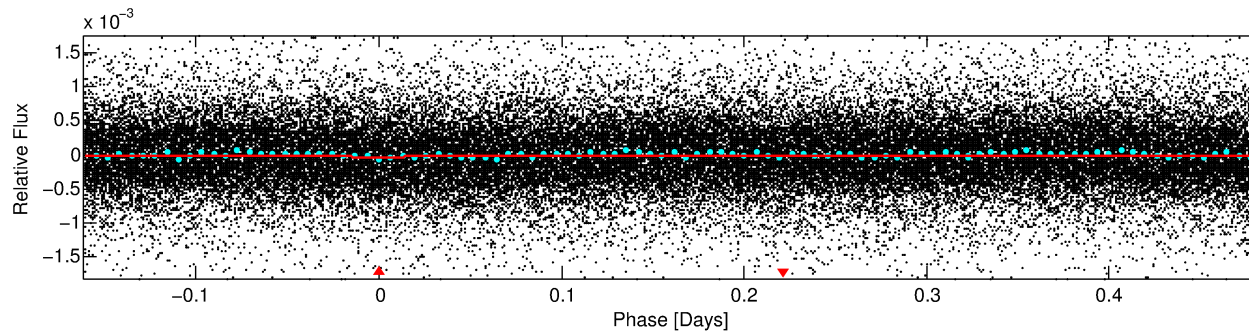
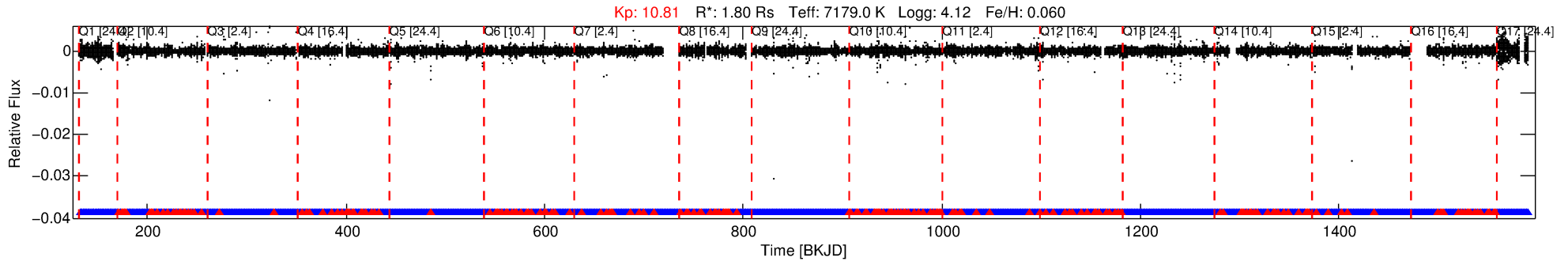
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008651452-01

No Significant Match Found

DV One-Page Summary

KIC: 8651452 Candidate: 1 of 1 Period: 0.646 d



DV Fit Results:

Period = 0.64595 [0.00001] d
Epoch = 131.9668 [0.0008] BKJD
Rp/R* = 0.0076 [0.0012]
a/R* = 2.94 [2.42]
b = 0.91 [0.18]
Seff = 26753.89 [10500.23]
Teq = 3261 [320] K
Rp = 1.49 [0.52] Re
a = 0.0170 [0.0043] AU
Ag = 2.50 [1.65] [0.91σ]
Teffp = 6342 [911] K [3.19σ]

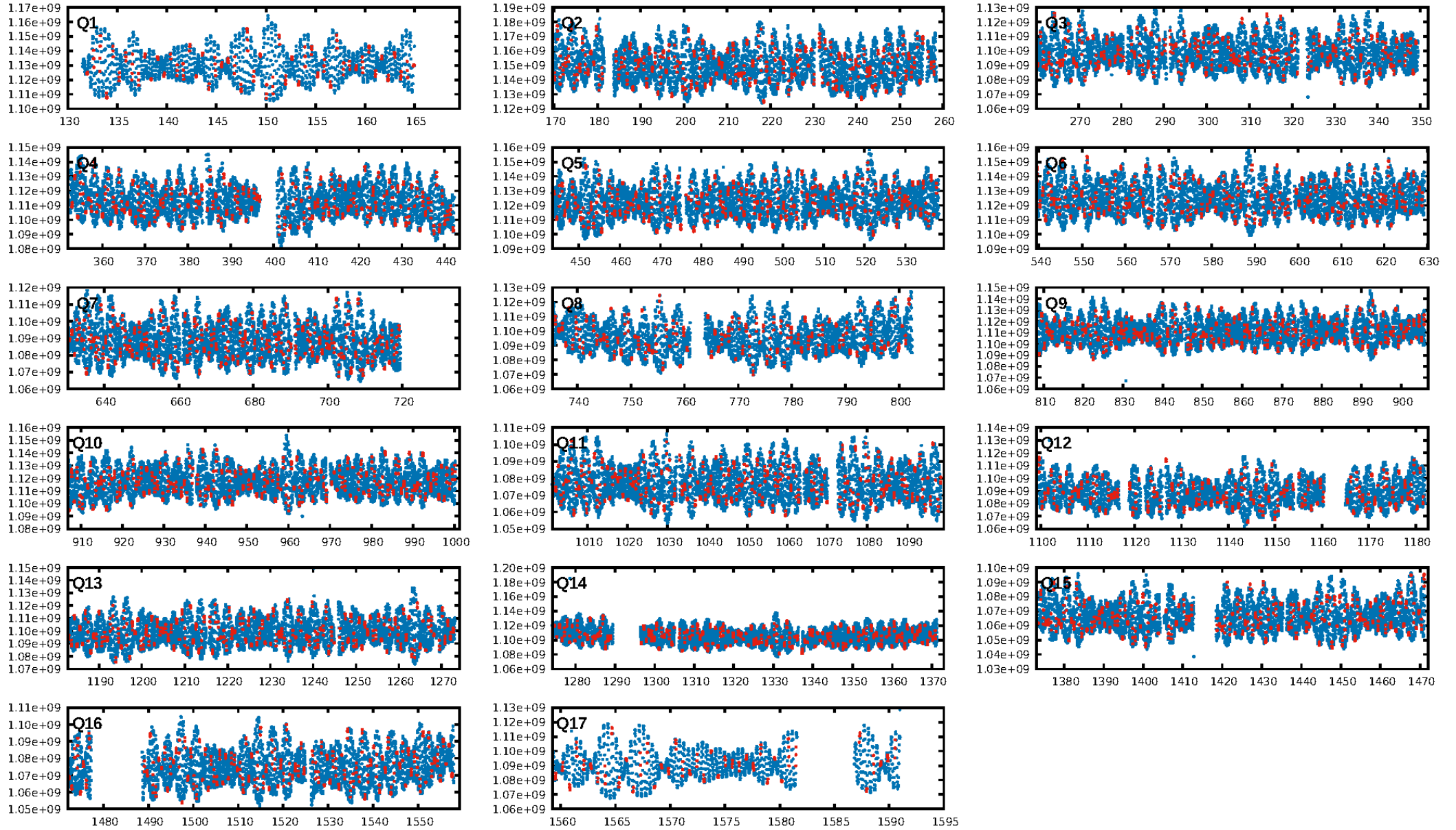
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.48e-31
RollingBand-fgt: 0.89 [1751/1970]
GhostDiagnostic-chr: 0.4206
Centroid-sig: N/A
Centroid-so: 0.638 arcsec [1.18σ]
OotOffset-rm: 0.081 arcsec [0.20σ]
KicOffset-rm: 0.197 arcsec [0.46σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

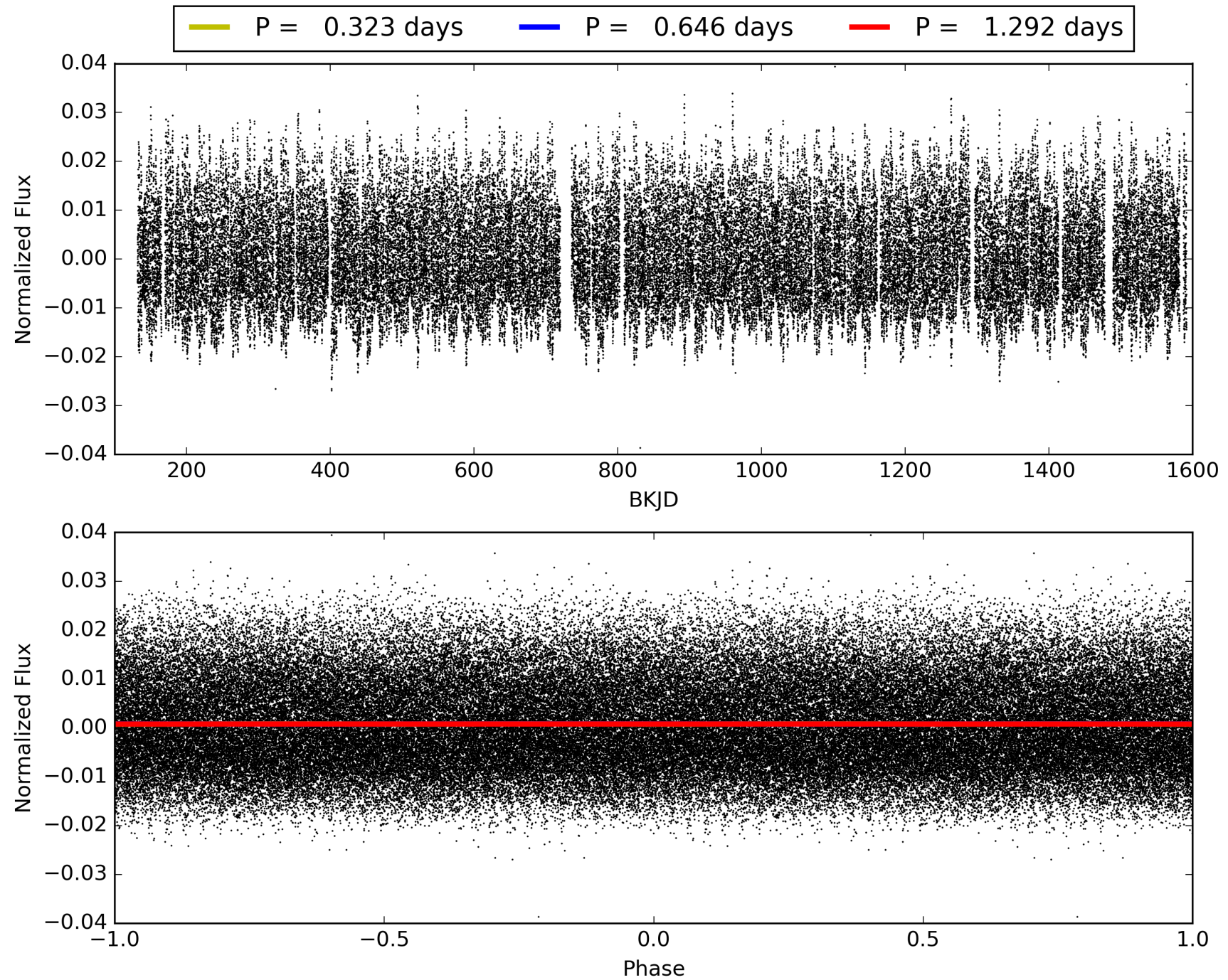
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:22:04 Z

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

TCE 008651452-01, PDC Light Curves

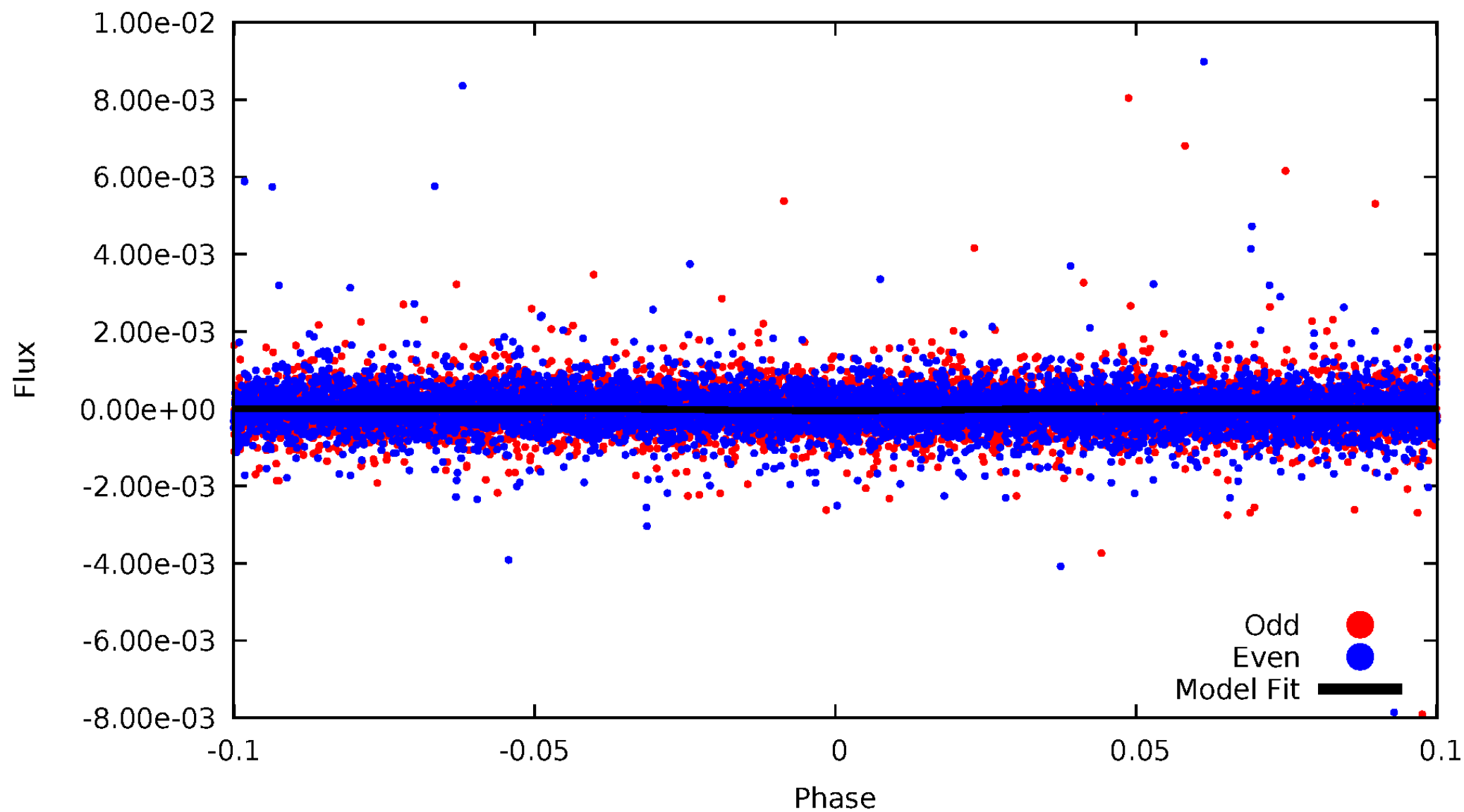


TCE 008651452-01



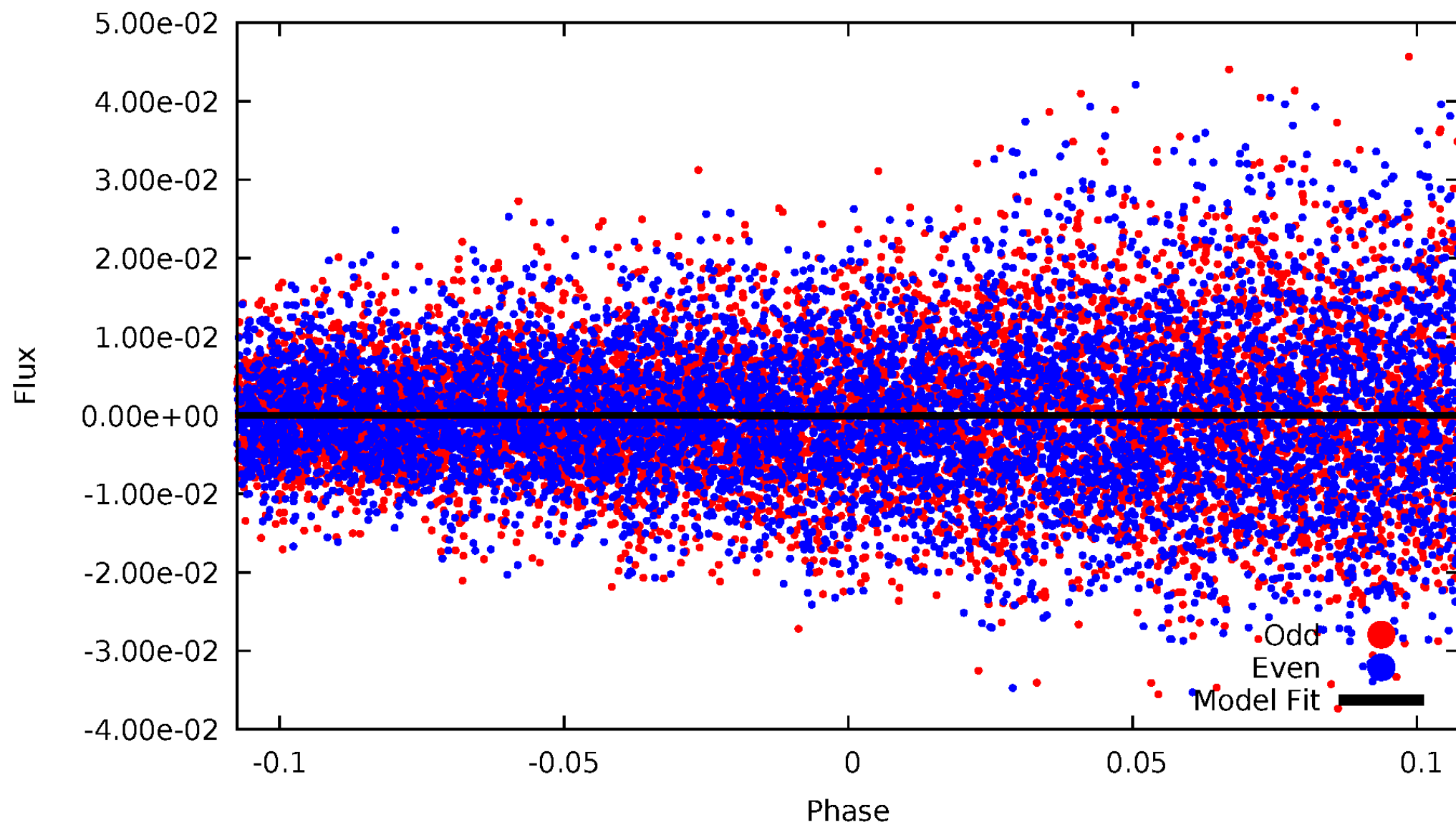
DV Odd/Even

TCE 008651452-01



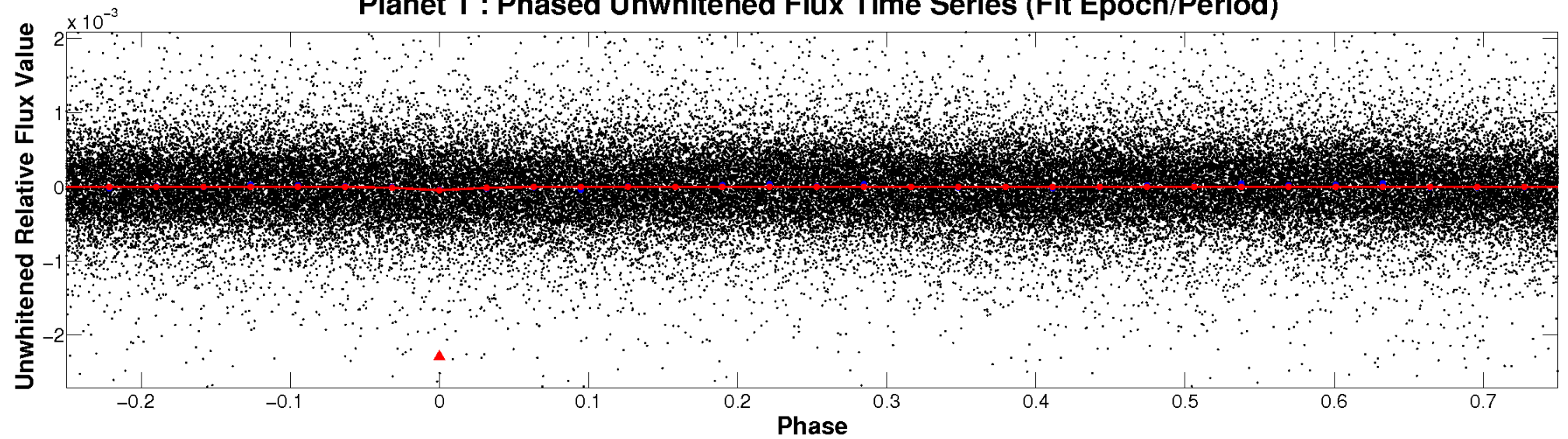
ALT Odd/Even

TCE 008651452-01

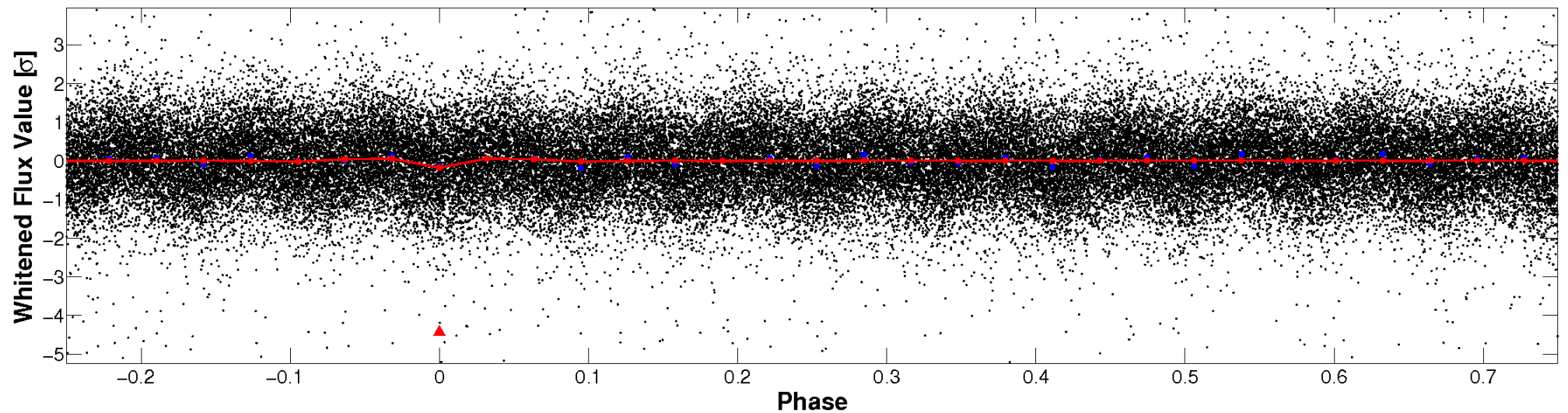


Non-Whitened Vs. Whitened Light Curve

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

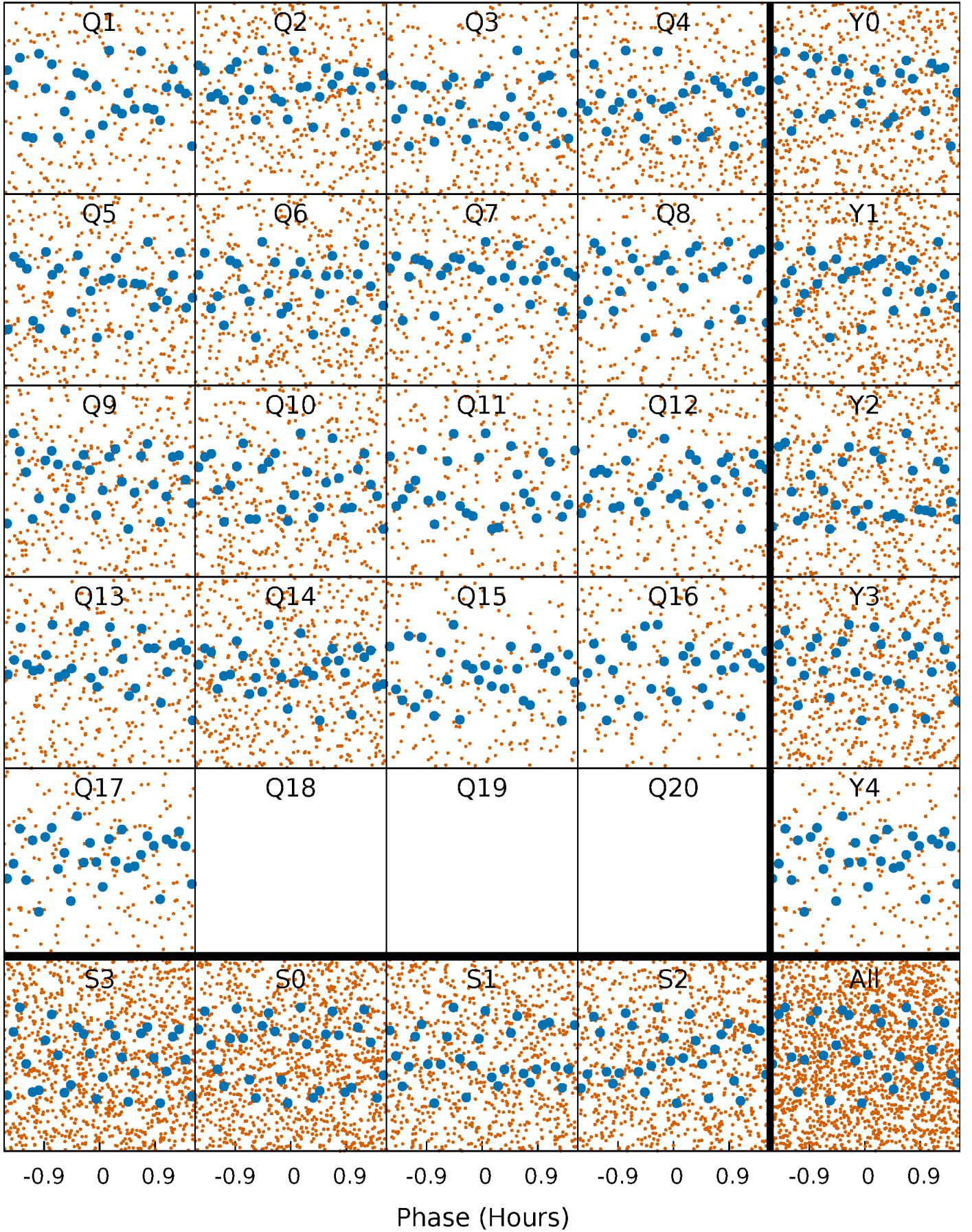


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



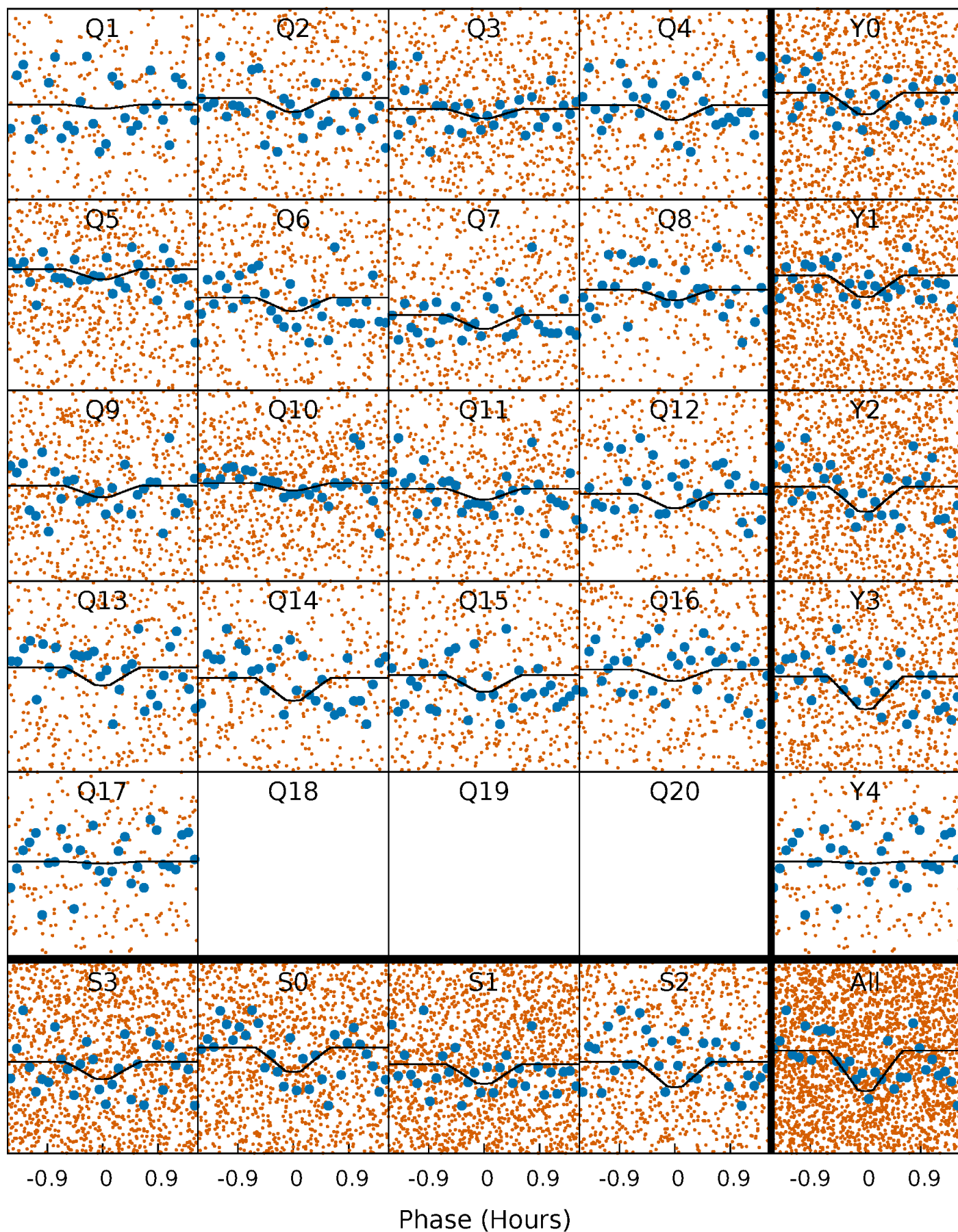
PDC Quarter-Phased Transit Curves

TCE 008651452-01 P= 0.645951 Days $T_0=131.966820$ (BKJD)



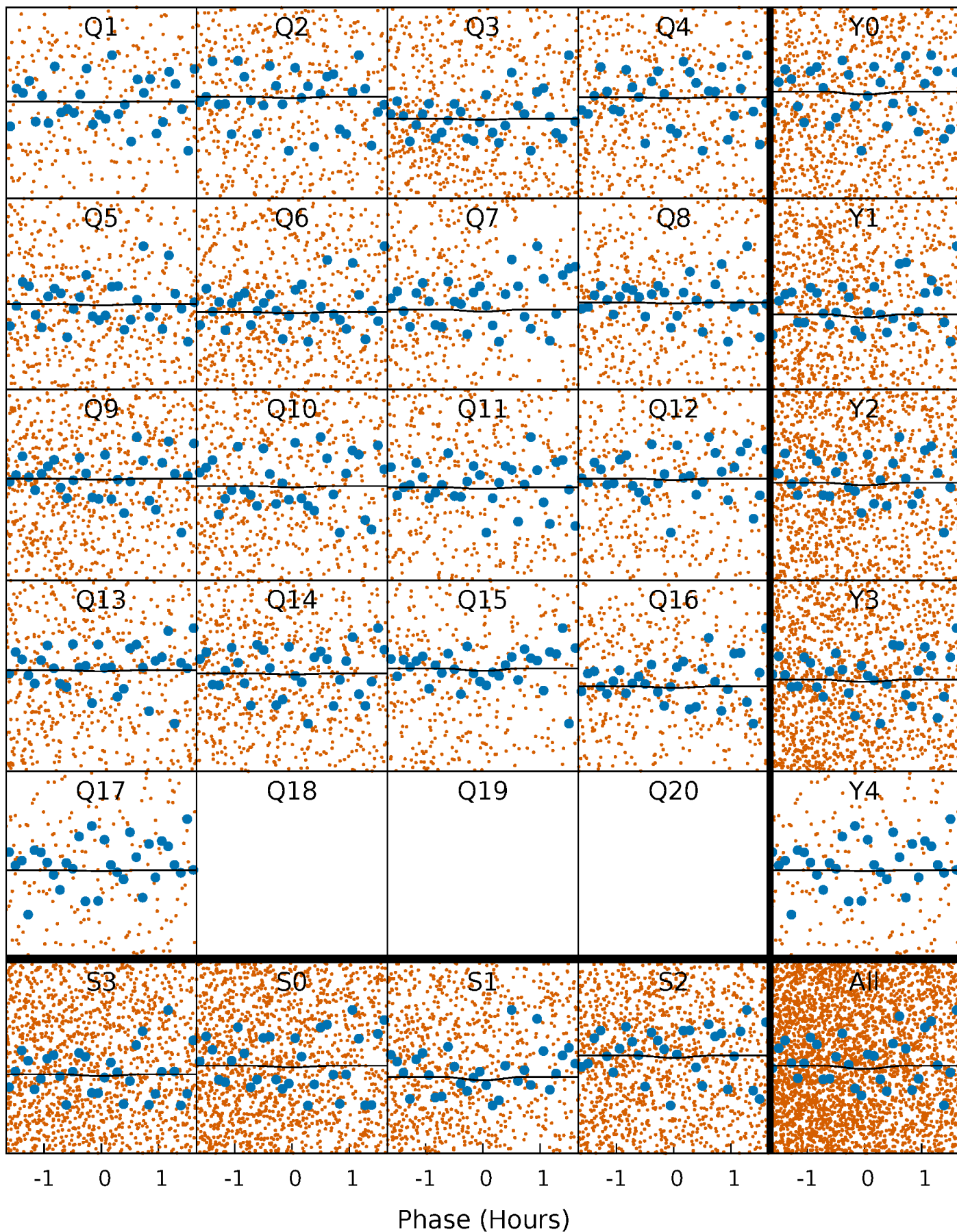
DV Quarter-Phased Transit Curves

TCE 008651452-01 P= 0.645951 Days $T_0=131.966820$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

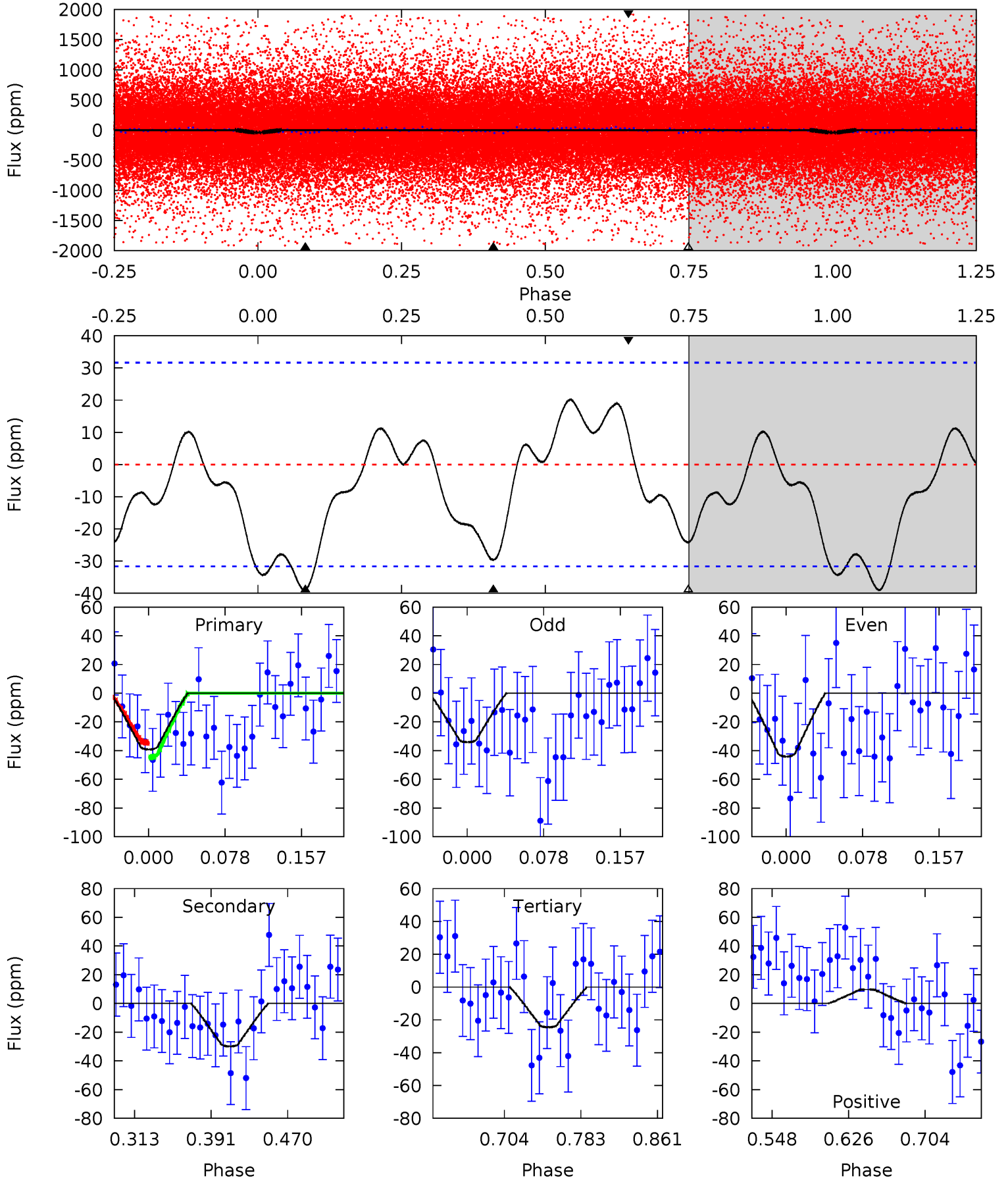
TCE 008651452-01 P= 0.645957 Days $T_0=131.966194$ (BKJD)



DV Model-Shift Uniqueness Test

008651452-01, P = 0.645951 Days, E = 131.320869 Days

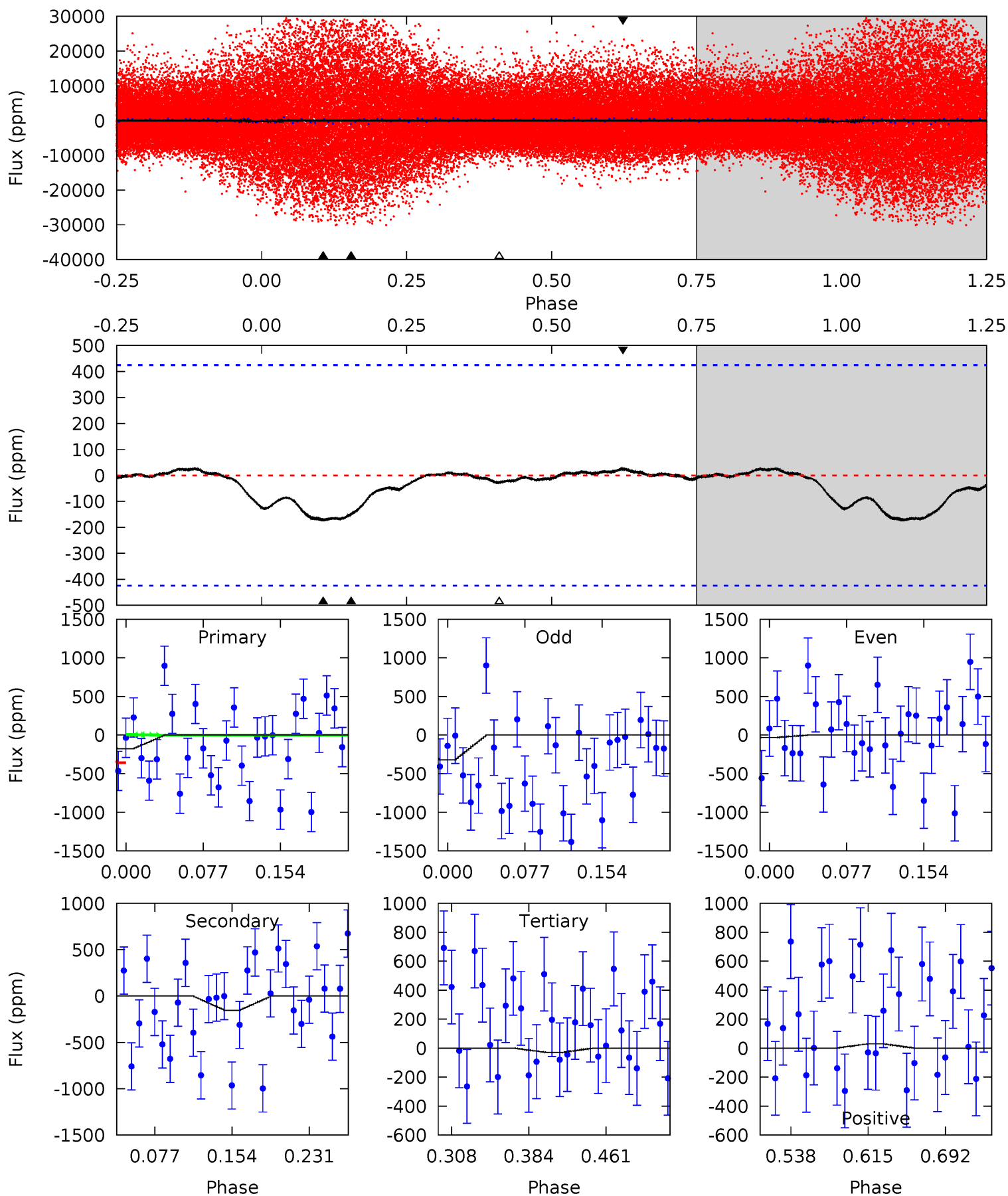
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.73	4.36	3.57	1.42	4.62	1.76	1.80	2.15	4.31	0.79	2.94	0.74	0.72	0.34	0.76



Alt Model-Shift Uniqueness Test

008651452-01, P = 0.645957 Days, E = 131.320237 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.92	1.67	0.33	0.32	4.62	1.77	0.34	1.60	1.60	1.34	1.35	1.55	-0.29	0.14	2.03



Stellar Parameters For KIC 008651452

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7179^{+175}_{-275}	$4.122^{+0.128}_{-0.192}$	$0.060^{+0.200}_{-0.350}$	$1.802^{+0.565}_{-0.377}$	$1.567^{+0.226}_{-0.249}$	$0.377^{+0.239}_{-0.195}$
	+2%/-4%	+3%/-5%	+333%/-583%	+31%/-21%	+14%/-16%	+63%/-52%
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 008651452-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-30 ± 7	$1.52^{+0.35}_{-0.28}$	4589^{+382}_{-300}	5759^{+747}_{-588}	$1.988^{+1.197}_{-0.723}$
Alt.	-154 ± 92	$1.85^{+0.38}_{-0.33}$	4583^{+362}_{-271}	8283^{+2097}_{-1995}	$6.623^{+6.038}_{-4.038}$

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 $A_{obs} \gg 1.0$

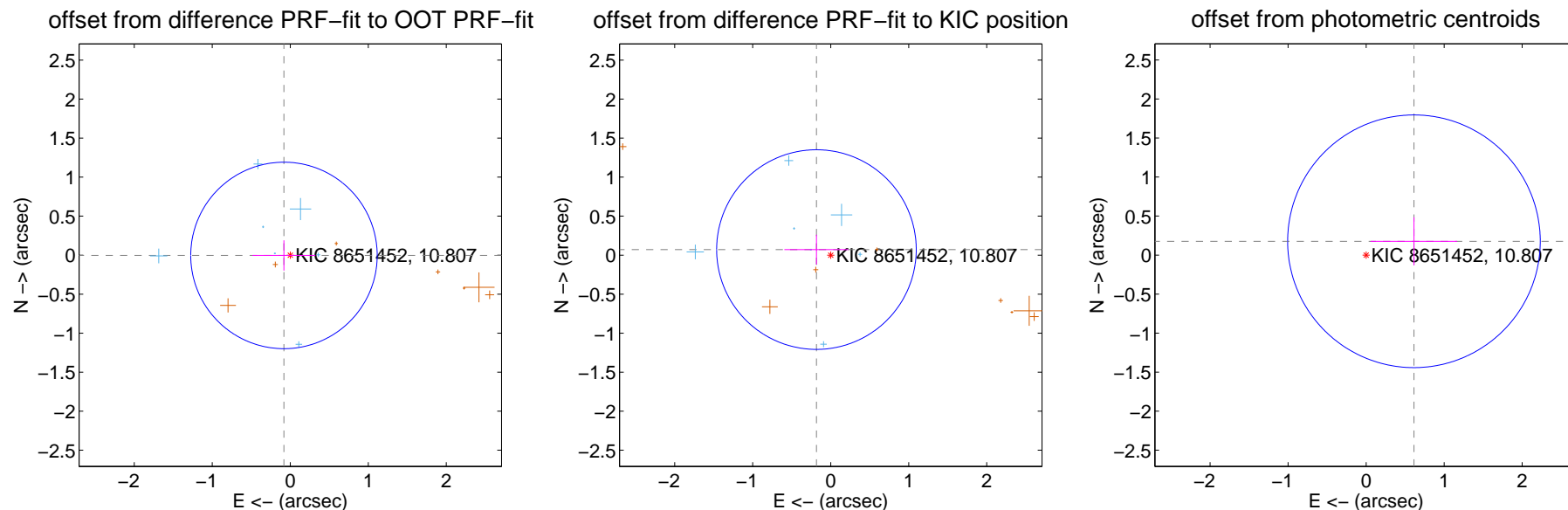
DV Centroid Data

Supplemental centroid analysis for 008651452-01. **Kepler magnitude: 10.81.** Transit SNR 10.77

There are 7 quarters with good PRF difference image offsets

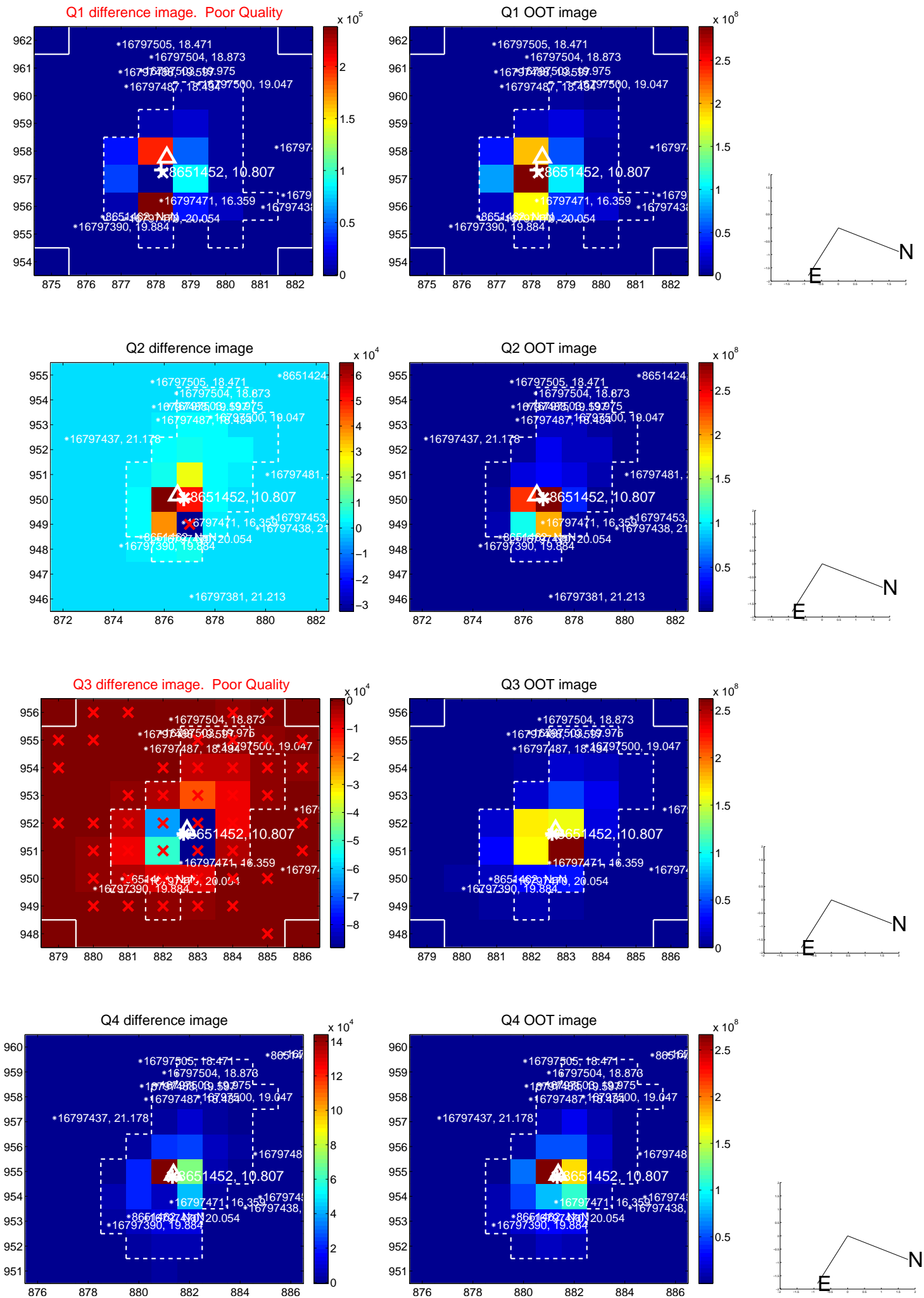
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.081 ± 0.398	0.20	0.081 ± 0.404	-0.004 ± 0.194
PRF-fit source offset from KIC position	0.197 ± 0.426	0.46	0.183 ± 0.411	0.072 ± 0.191
photometric centroid source offset	0.64 ± 0.54	1.18	-0.61 ± 0.55	0.18 ± 0.31

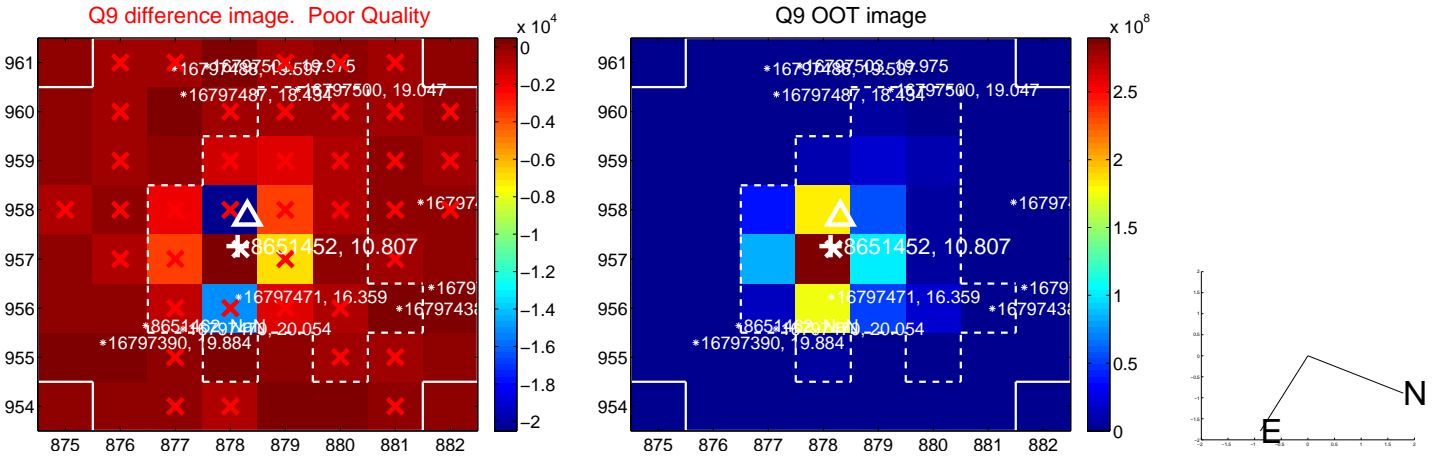


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

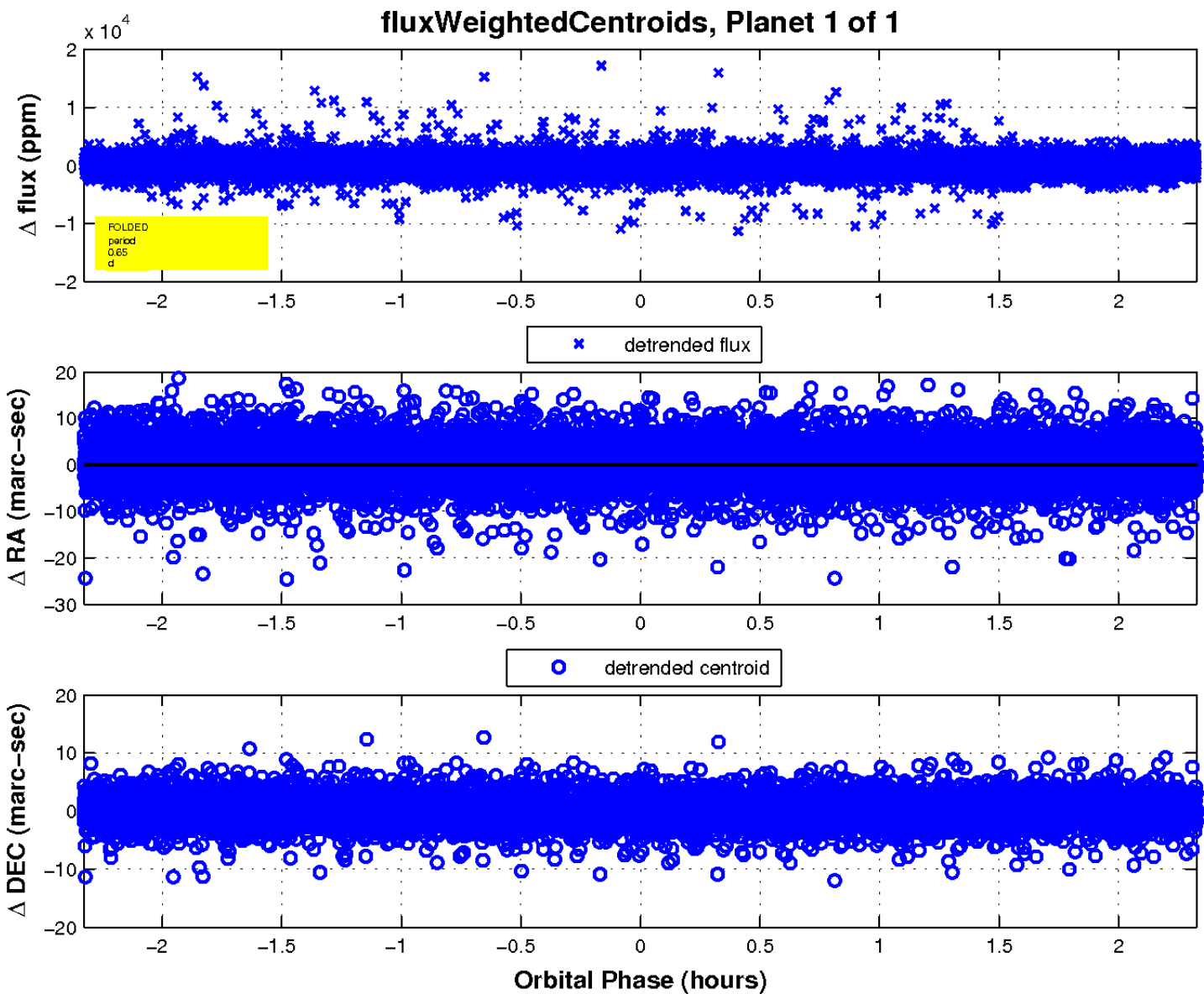
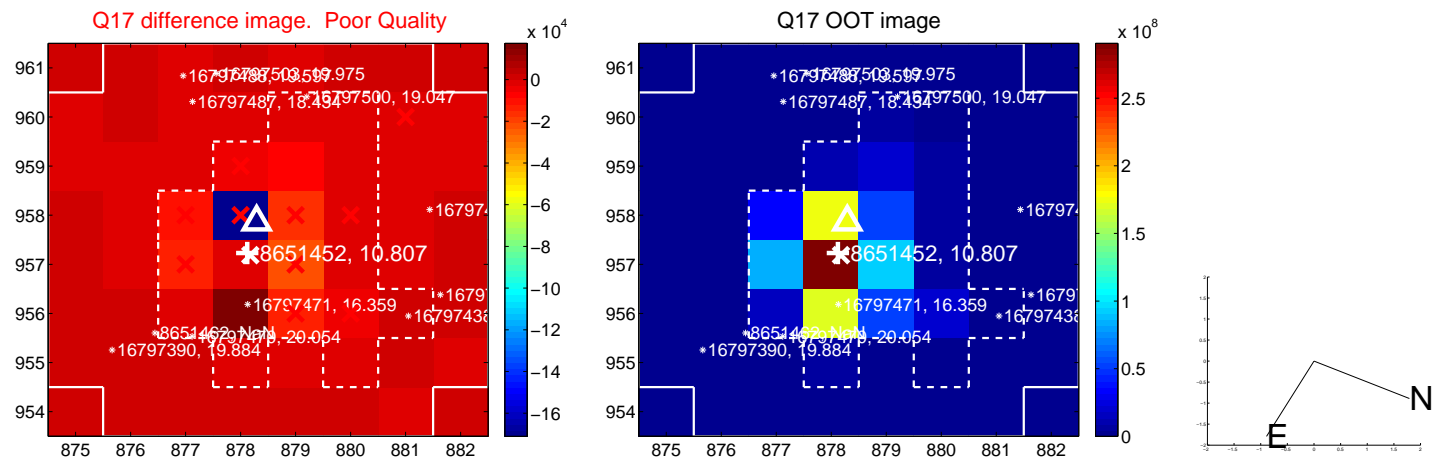
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

