

KIC 004164369

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})
004164369-01	OBS	No	1.009439	132.451855	0.0	1.406	7.8	0.0	1.45	6061	0.02	5614.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004164369-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

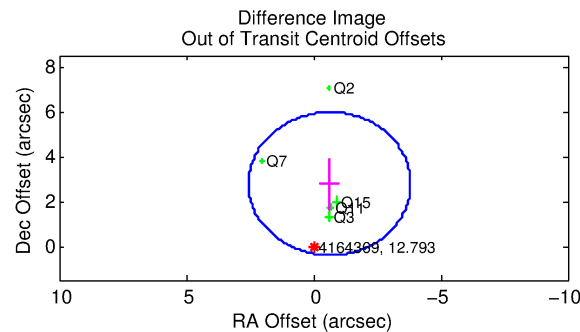
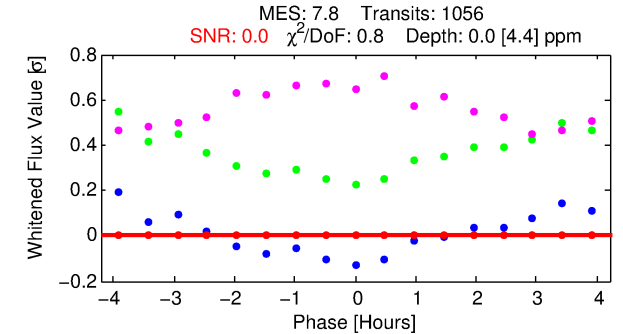
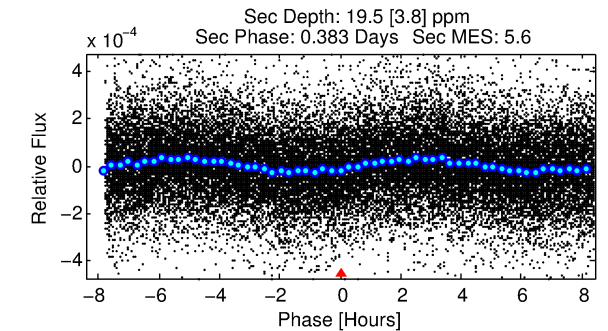
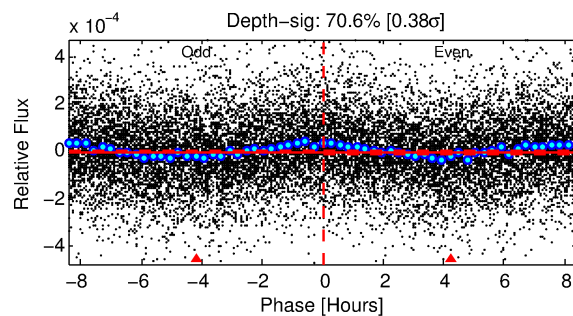
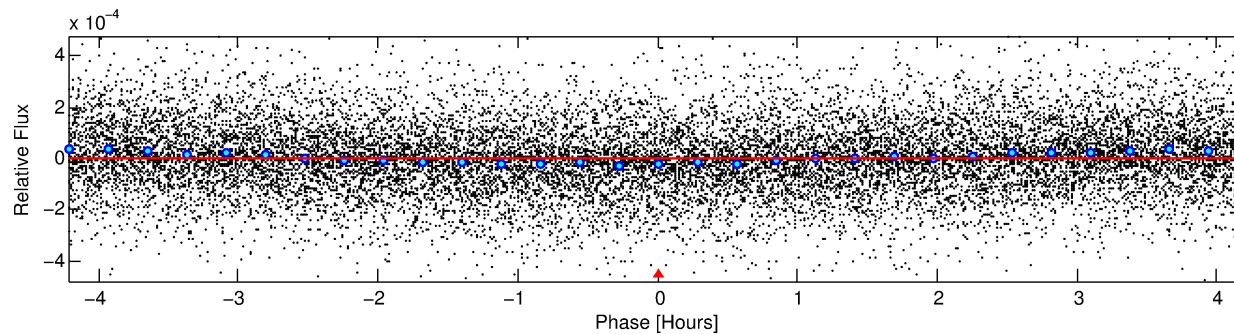
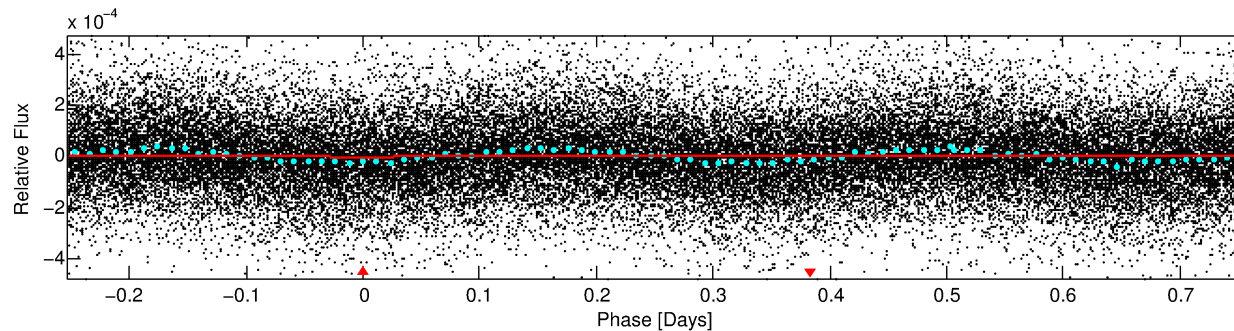
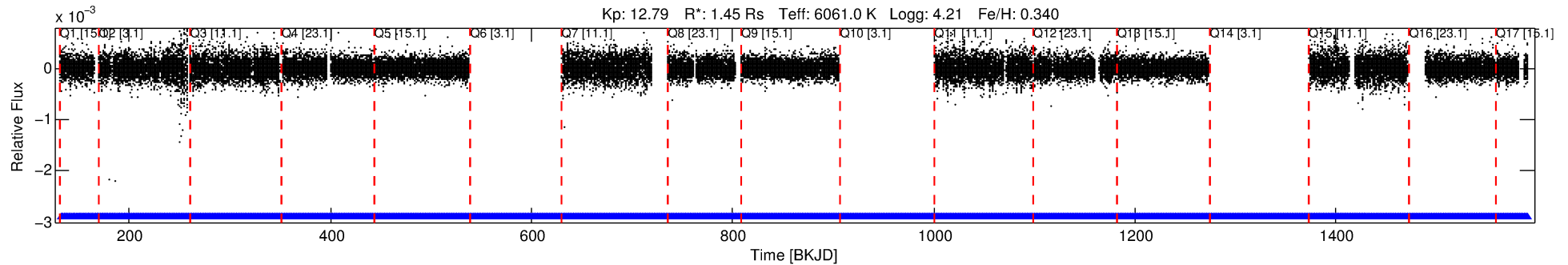
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004164369-01

No Significant Match Found

DV One-Page Summary

KIC: 4164369 Candidate: 1 of 1 Period: 1.009 d



DV Fit Results:

Period = 1.00944 [0.03858] d
Epoch = 132.4519 [7.0784] BKJD
Rp/R* = 0.0001 [0.0306]
a/R* = 1.46 [110.94]
b = 0.98 [6.48]
Seff = 5614.06 [1446.69]
Teq = 2207 [142] K
Rp = 0.02 [4.83] Re
a = 0.0212 [0.0035] AU
Ag = 14672.55 [7804471.67] [0.00 σ]
Teff = 37559 [4994803] K [0.01 σ]

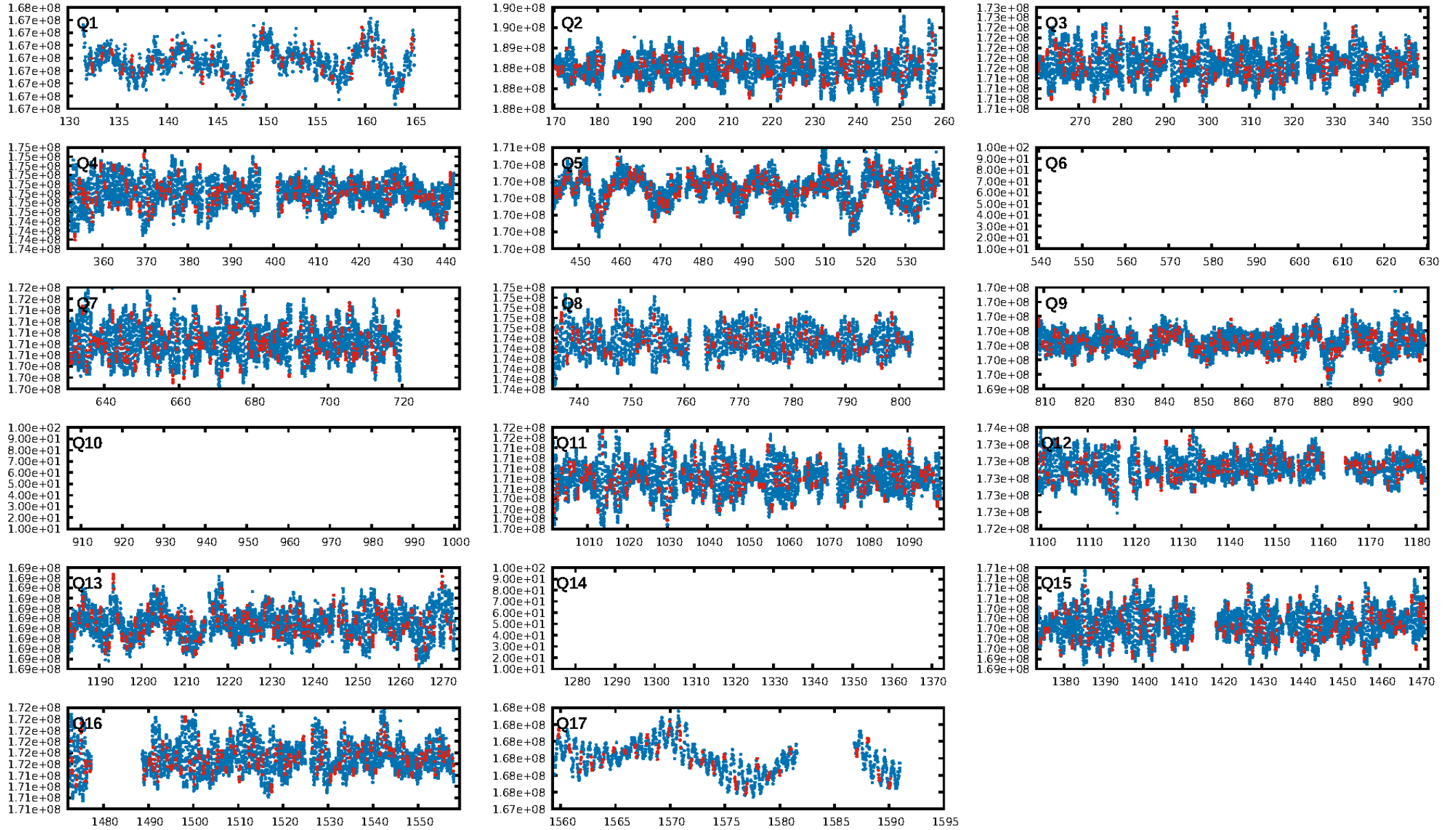
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.80e-16
RollingBand-fgt: 1.00 [997/997]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.851 arcsec [2.68 σ]
KicOffset-rm: 6.191 arcsec [5.76 σ]
OotOffset-st: 1/4/0/0 [5]
KicOffset-st: 1/4/0/0 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [14/14]

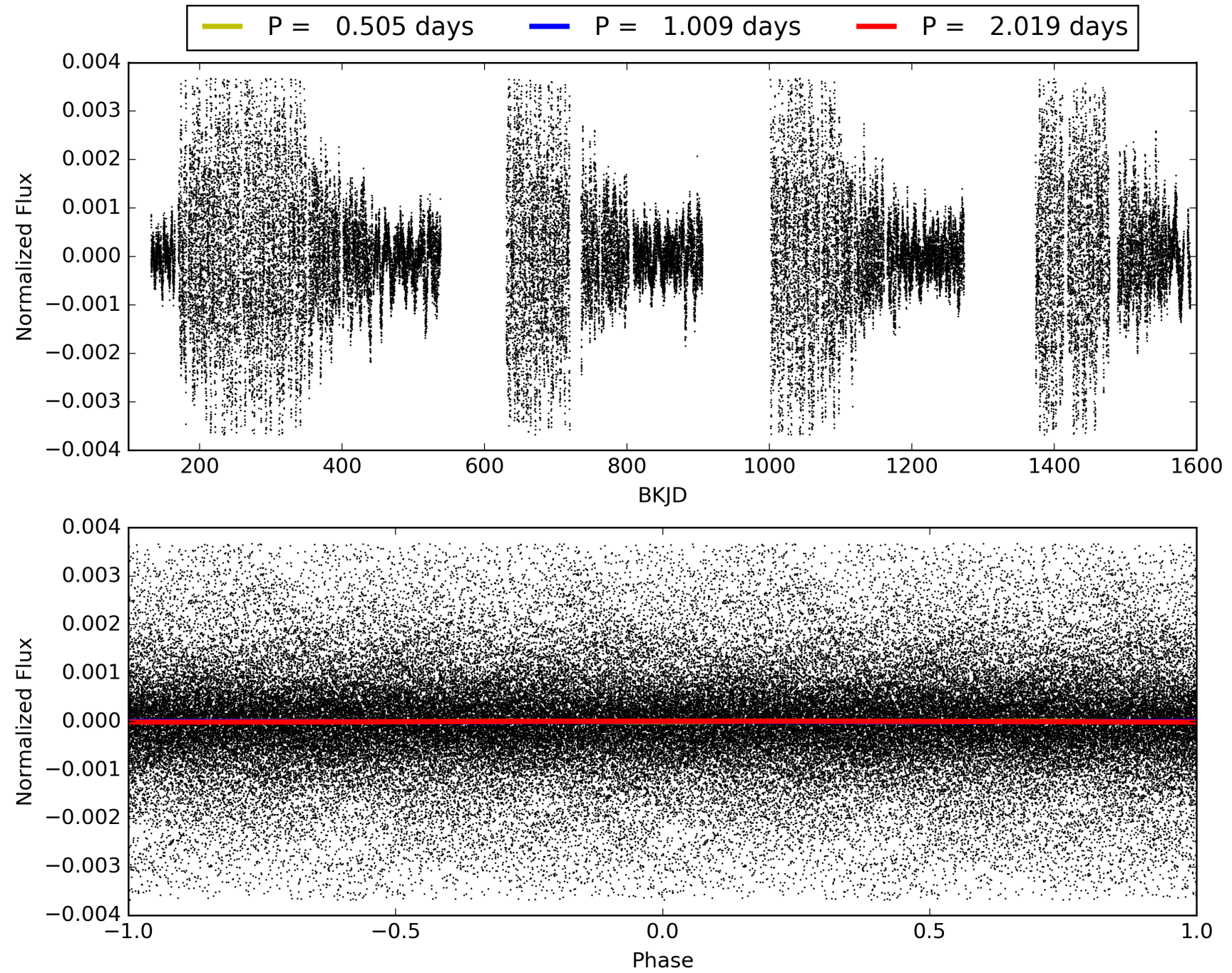
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:47:50 Z

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

TCE 004164369-01, PDC Light Curves

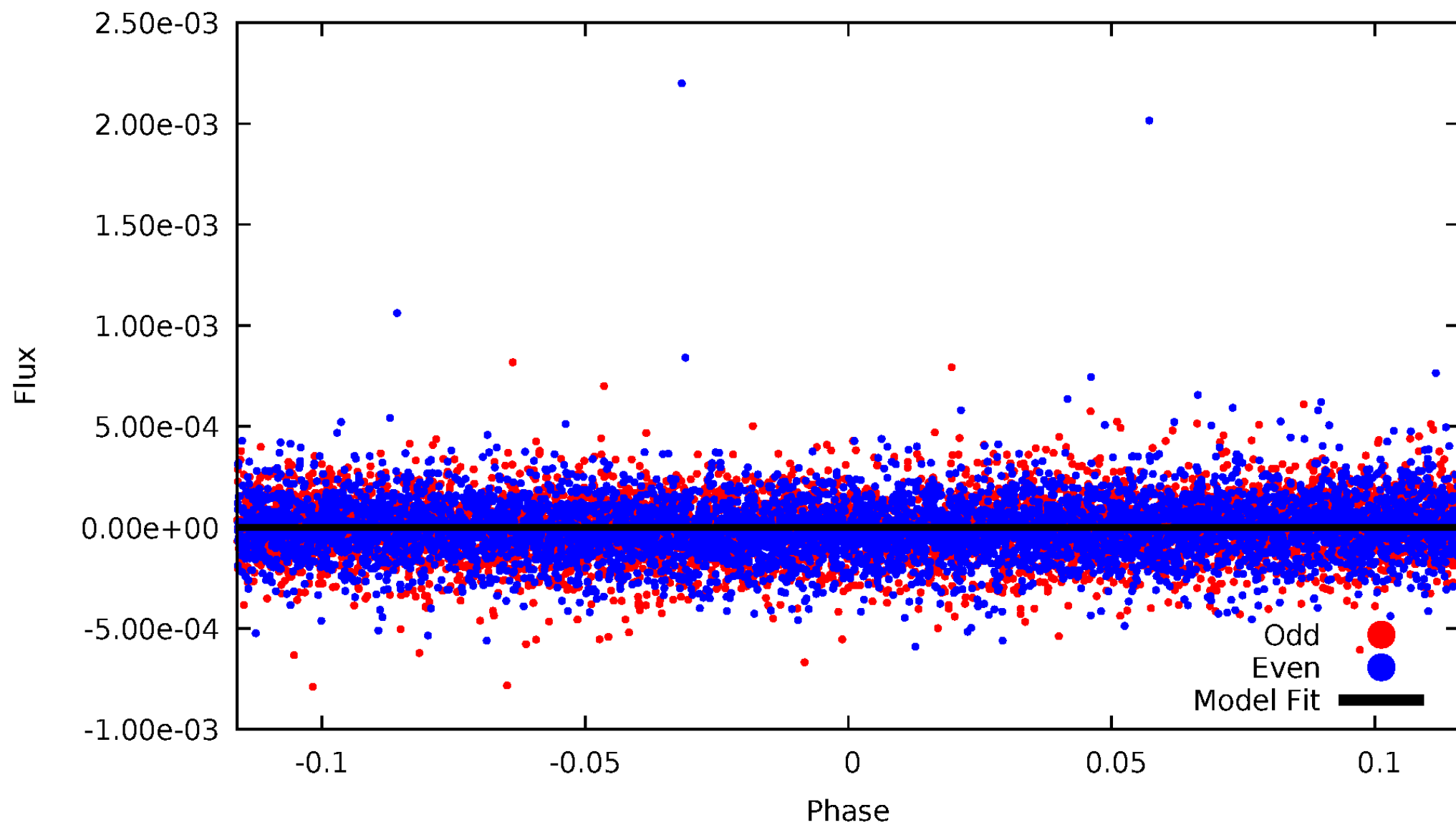


TCE 004164369-01



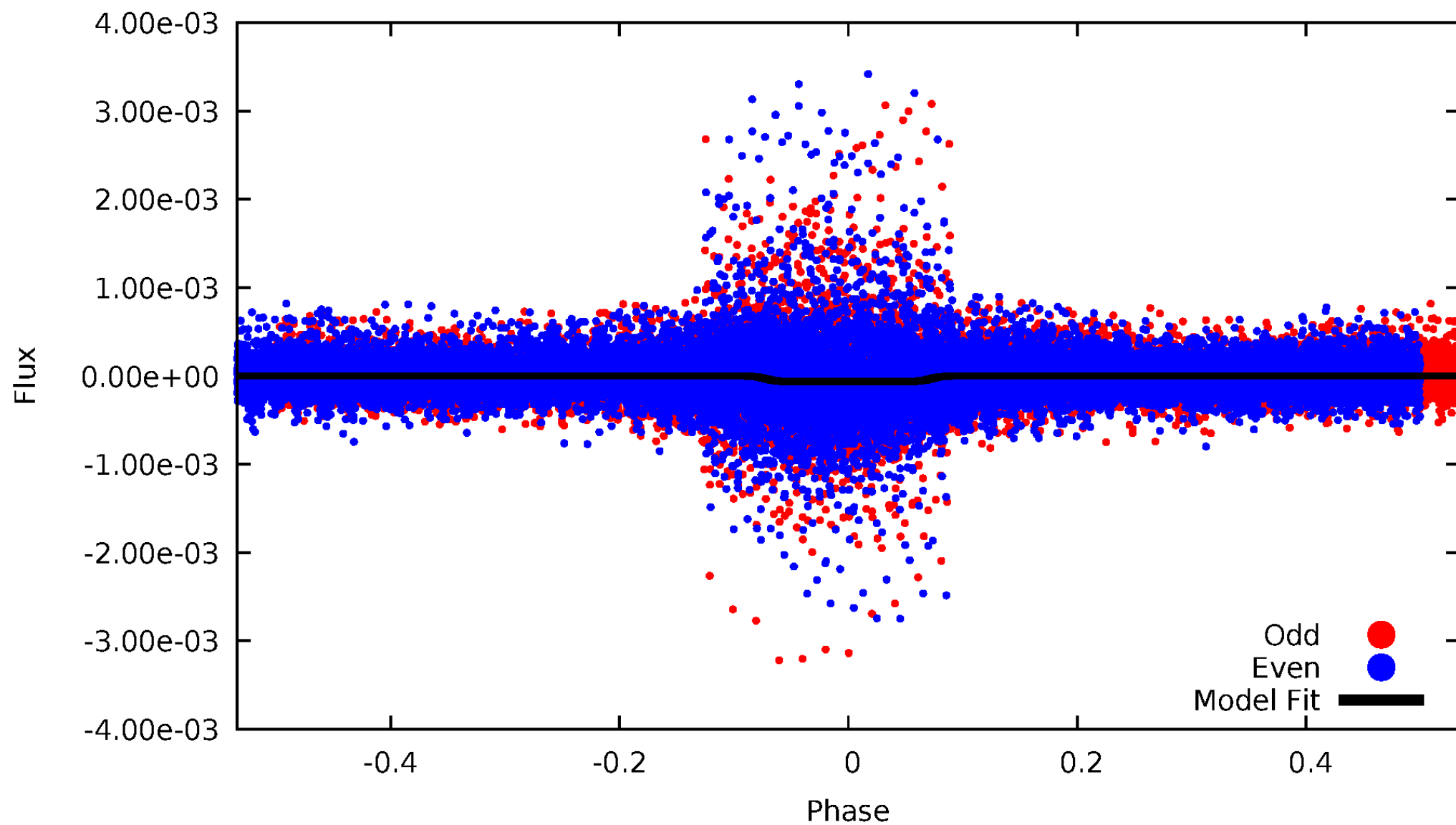
DV Odd/Even

TCE 004164369-01



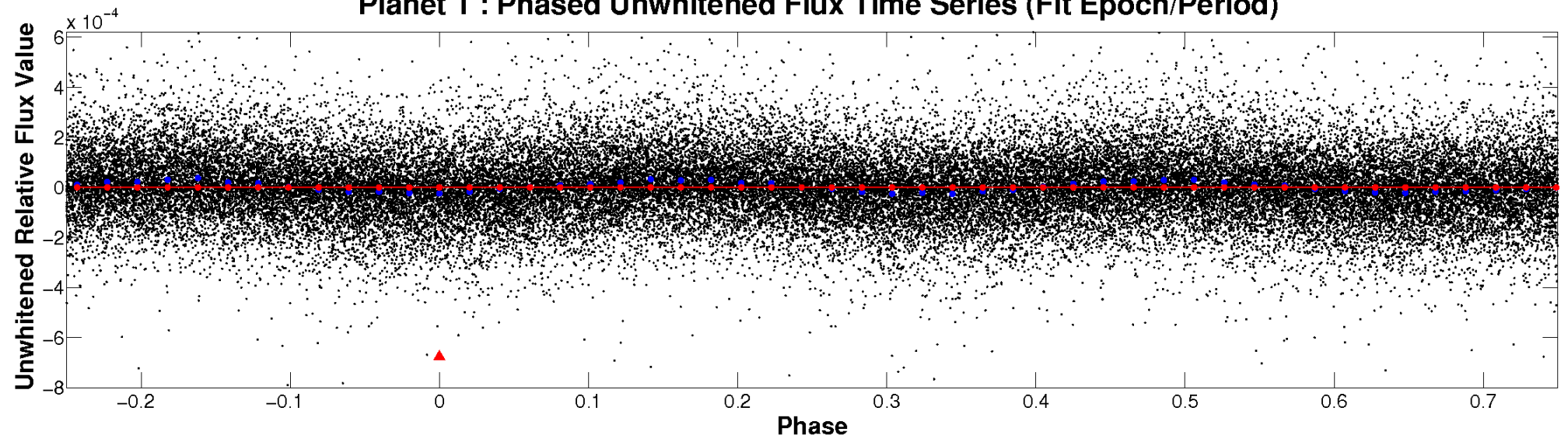
ALT Odd/Even

TCE 004164369-01

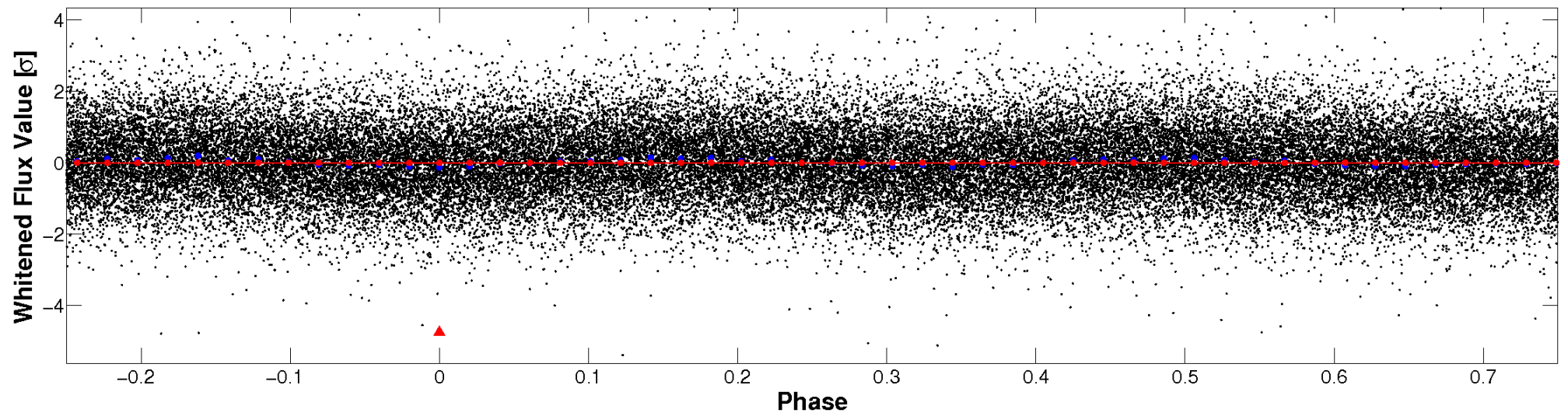


Non-Whitened Vs. Whitened Light Curve

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

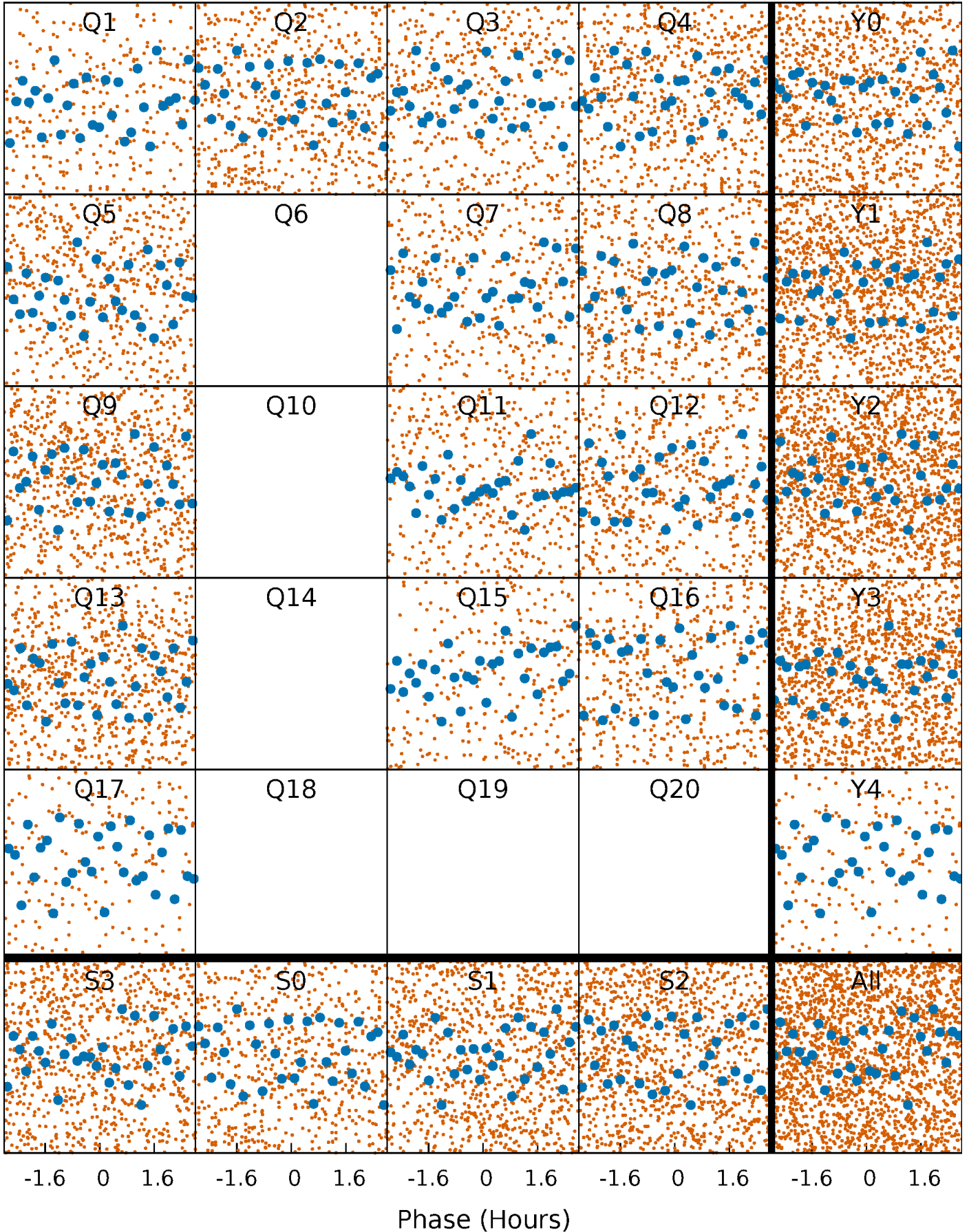


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



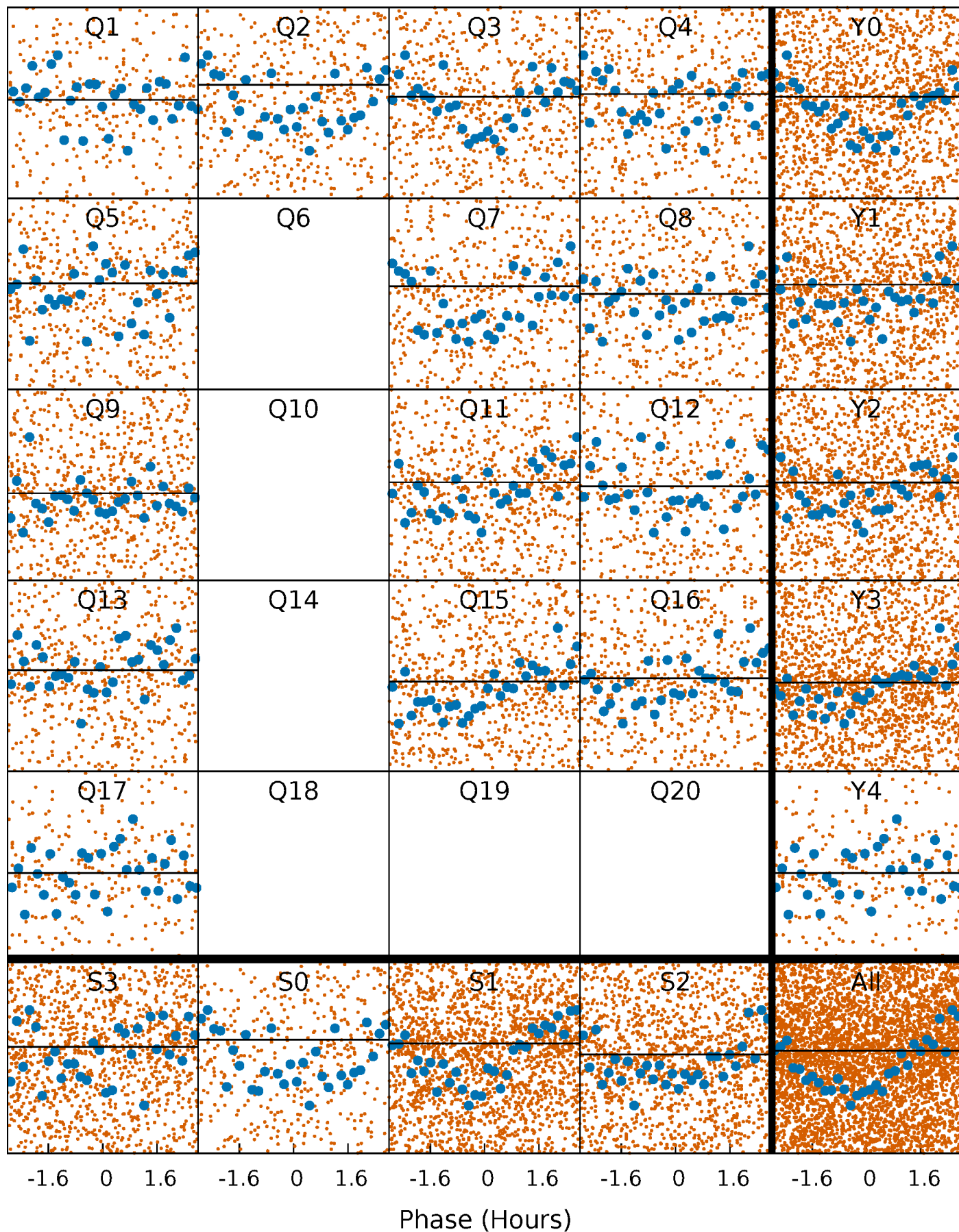
PDC Quarter-Phased Transit Curves

TCE 004164369-01 P= 1.009439 Days $T_0=132.451855$ (BKJD)



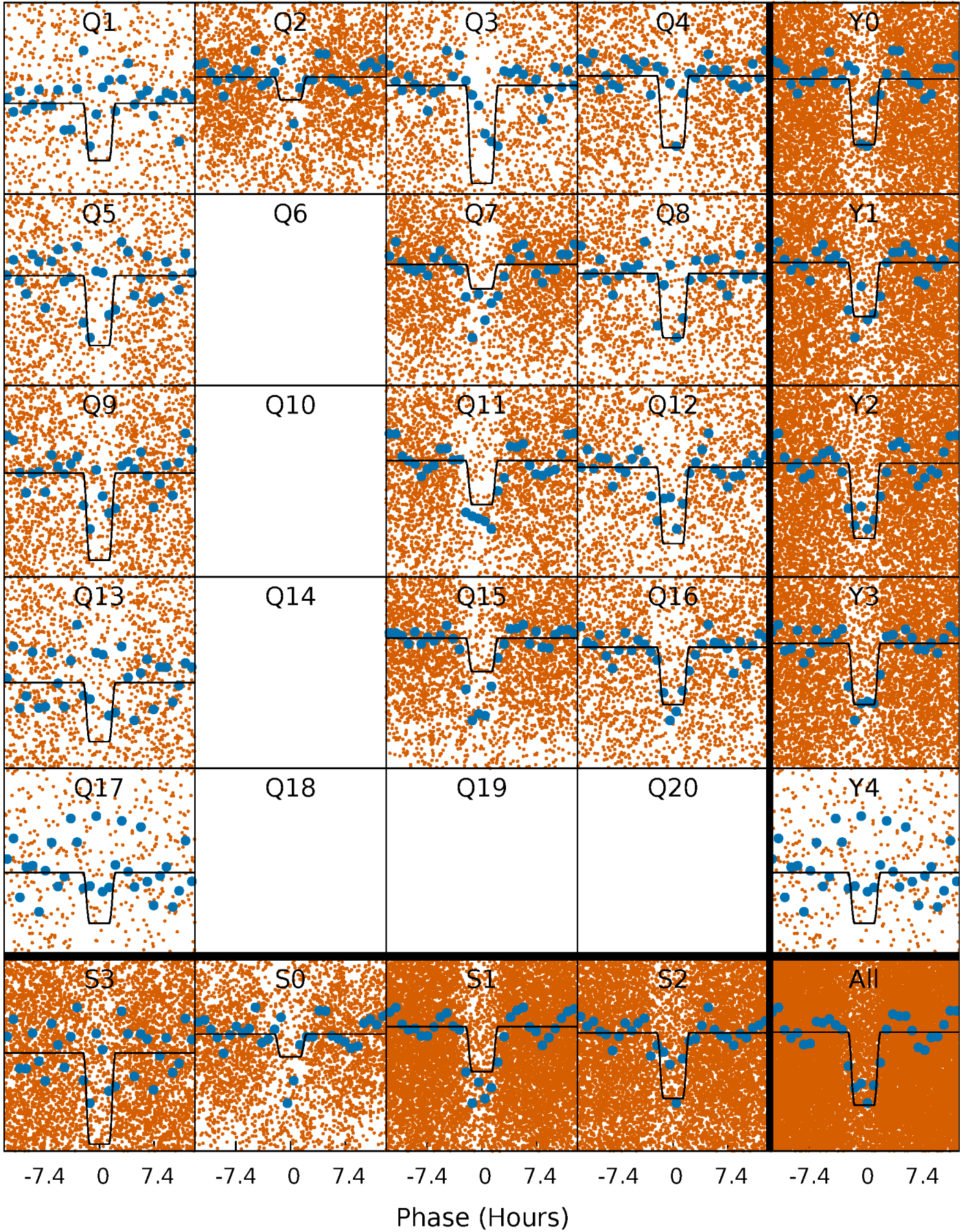
DV Quarter-Phased Transit Curves

TCE 004164369-01 P= 1.009439 Days $T_0=132.451855$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

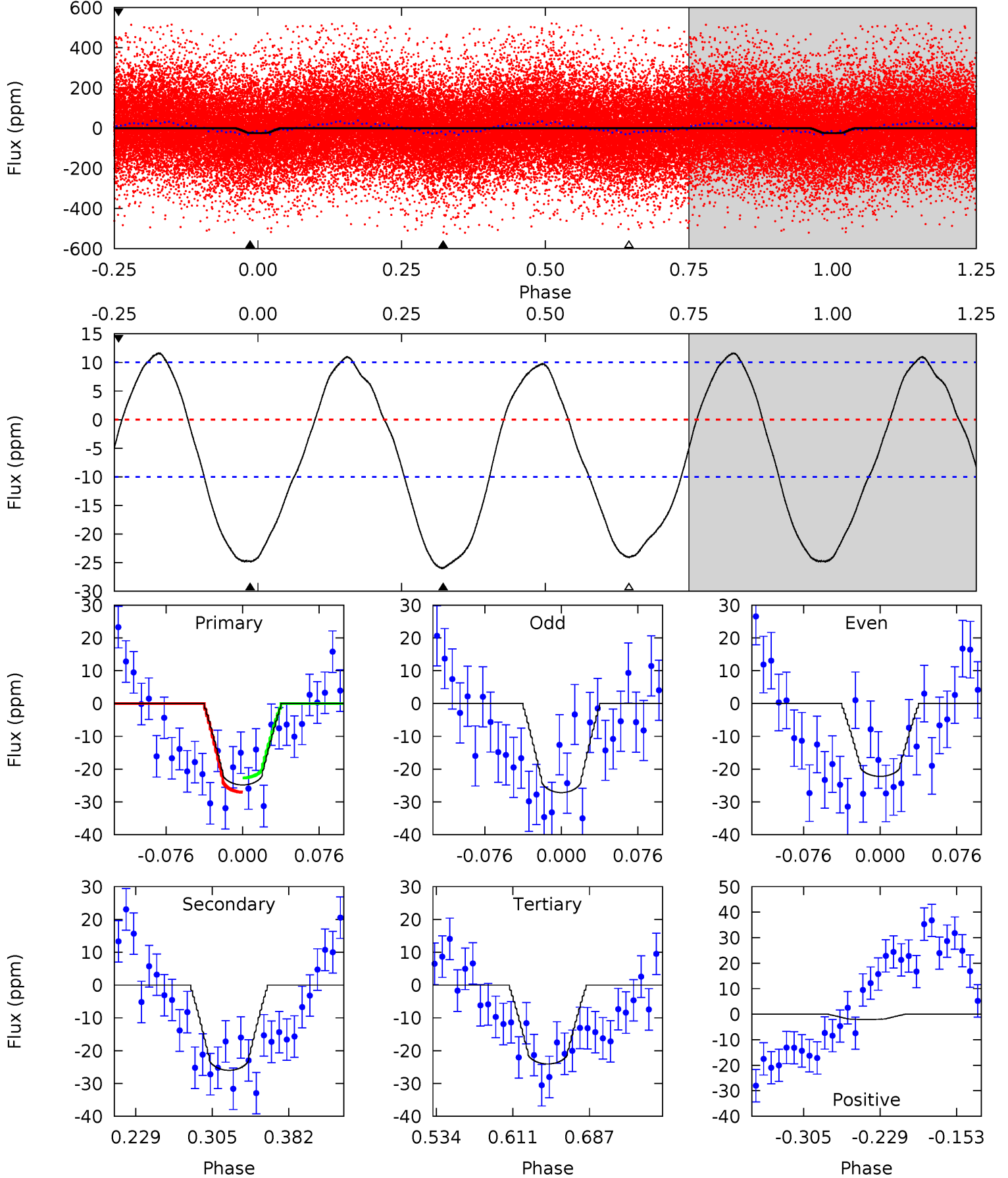
TCE 004164369-01 P= 1.009398 Days $T_0=132.471964$ (BKJD)



DV Model-Shift Uniqueness Test

004164369-01, P = 1.009439 Days, E = 131.442416 Days

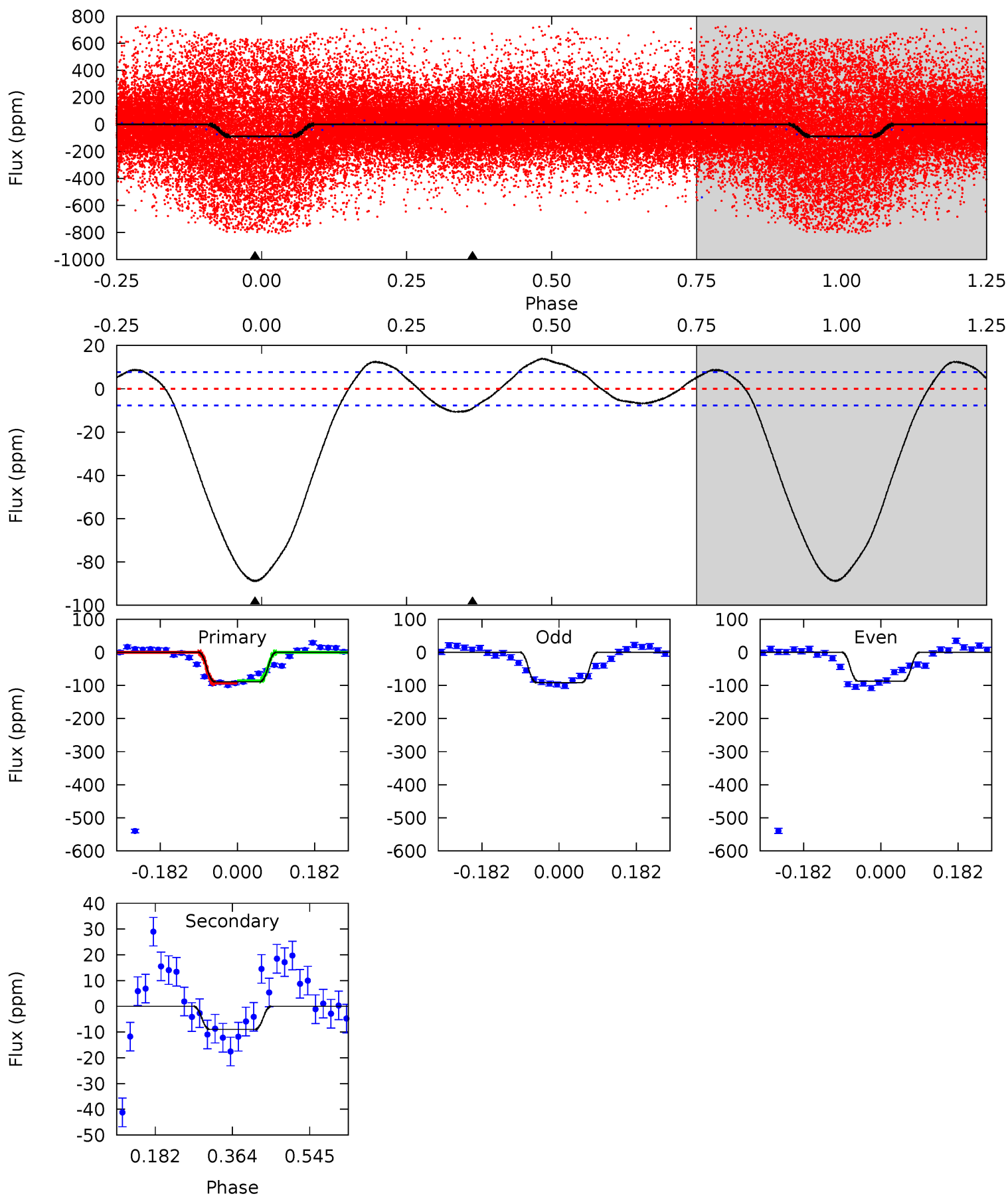
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	12.0	11.1	-0.95	4.62	1.77	5.00	0.36	12.4	0.89	12.9	1.14	1.20	0.31	1.01



Alt Model-Shift Uniqueness Test

004164369-01, P = 1.009398 Days, E = 131.462566 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.1	5.18	0	0	4.44	1.34	3.29	51.1	51.1	5.18	5.18	1.28	0.54	0.13	2.09



Stellar Parameters For KIC 004164369

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6061^{+72}_{-90}	$4.215^{+0.137}_{-0.125}$	$0.340^{+0.100}_{-0.150}$	$1.447^{+0.275}_{-0.225}$	$1.251^{+0.088}_{-0.088}$	$0.582^{+0.338}_{-0.213}$
	+1%/-1%	+3%/-3%	+29%/-44%	+19%/-16%	+7%/-7%	+58%/-37%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004164369-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 2	$3.12^{+3.57}_{-2.19}$	3072^{+168}_{-147}	3191^{+2271}_{-6051}	$0.633^{+6.346}_{-0.488}$
Alt.	-9 ± 2	$4.24^{+3.79}_{-2.79}$	3082^{+163}_{-152}	-2891^{+6478}_{-224}	$0.123^{+0.890}_{-0.090}$

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

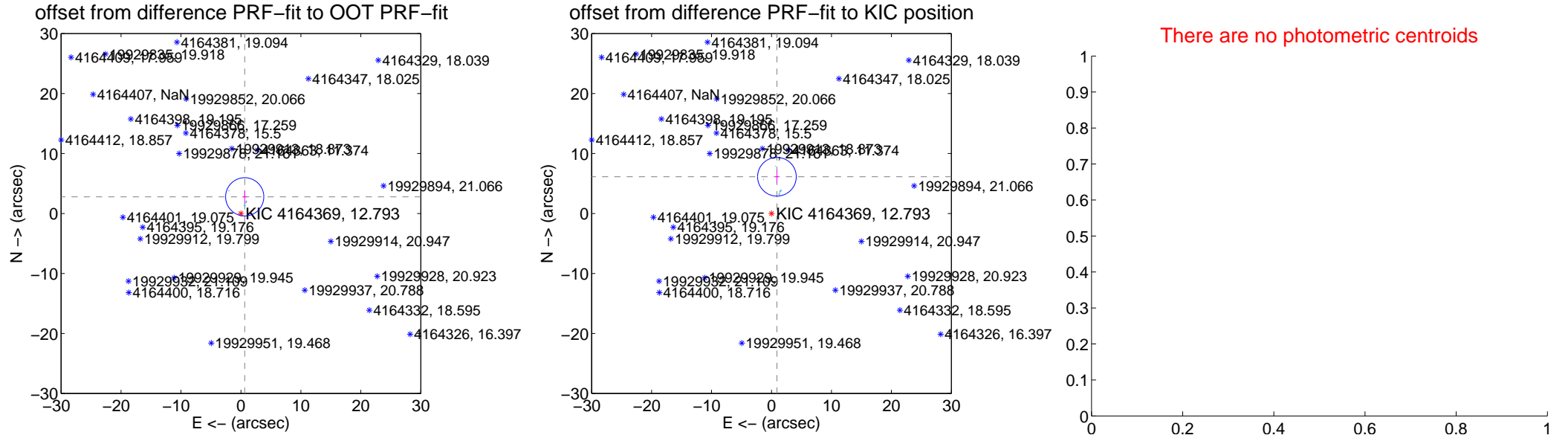
DV Centroid Data

Supplemental centroid analysis for 004164369-01. Kepler magnitude: 12.79. Transit SNR 0.00

There are 5 quarters with good PRF difference image offsets

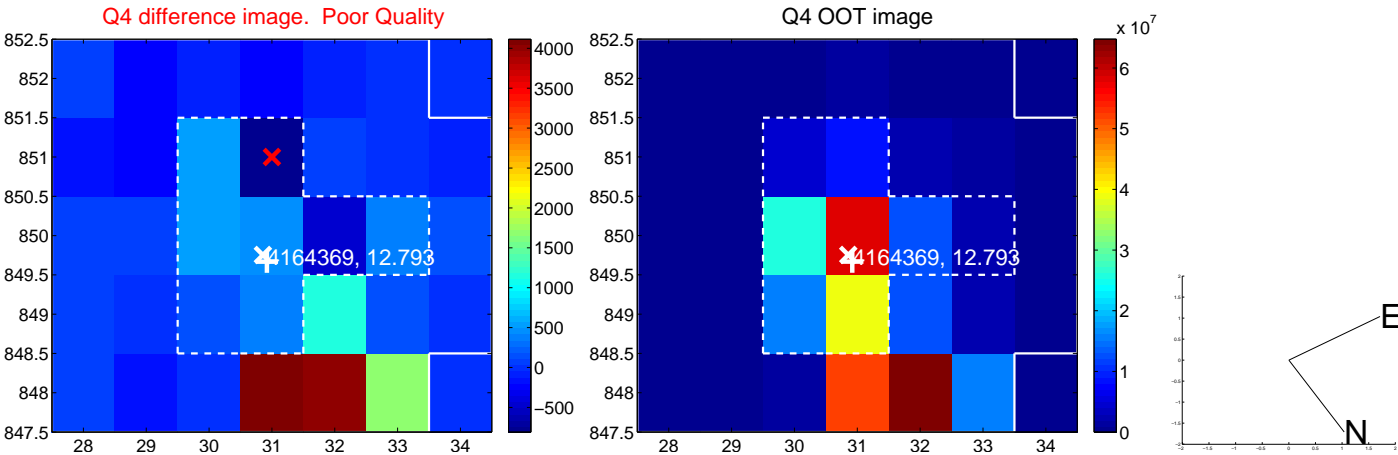
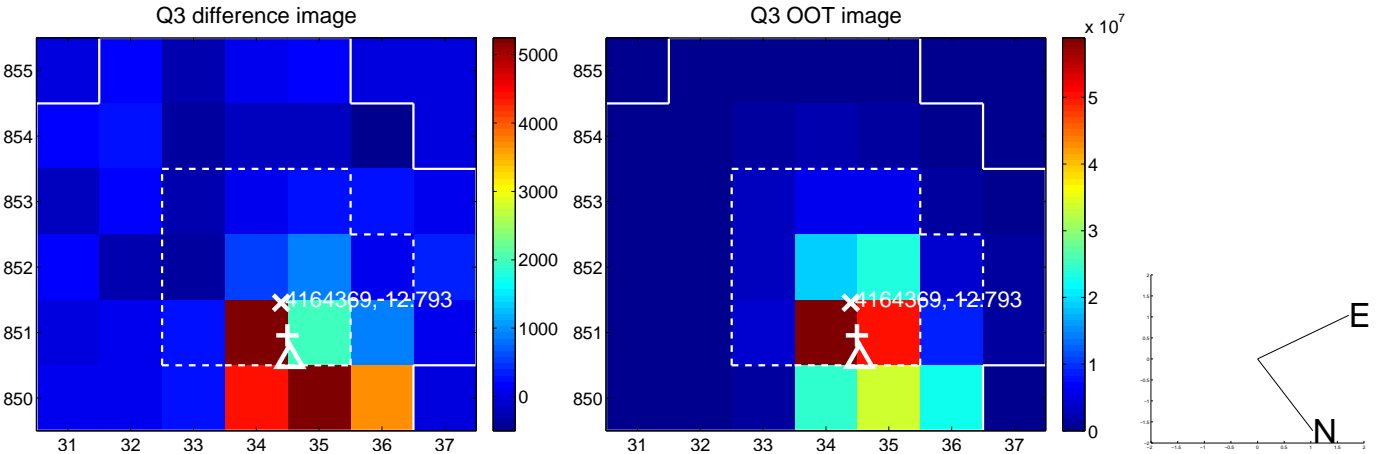
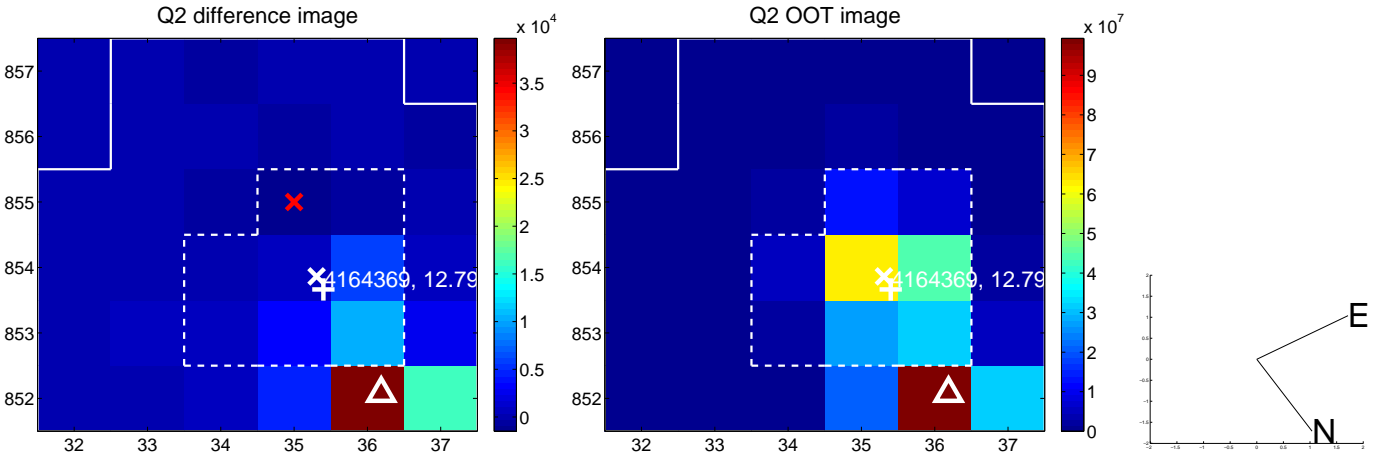
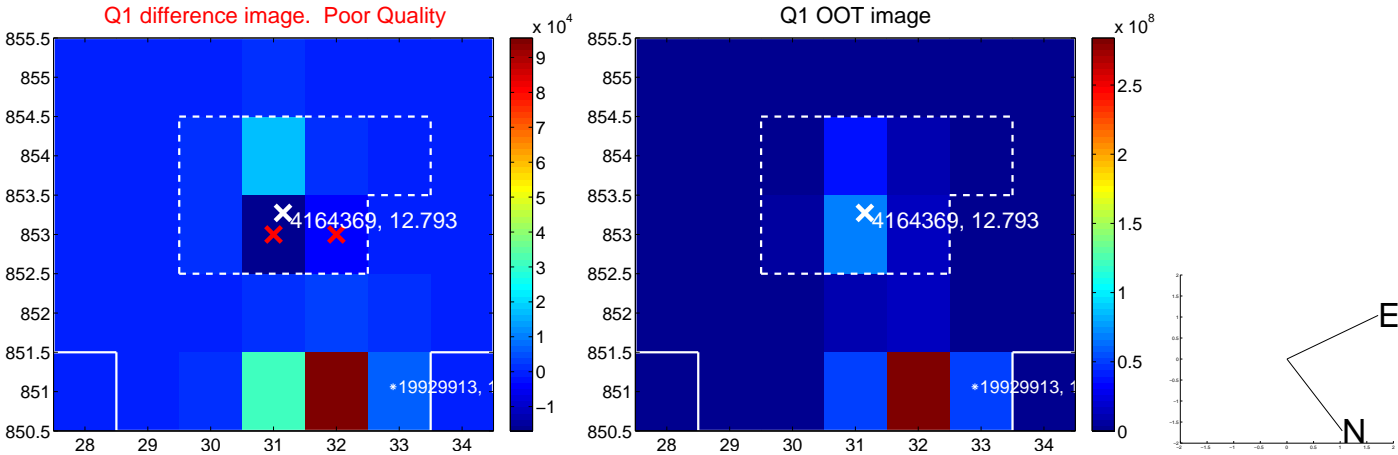
The direct PRF centroid is offset from the target star catalog position by about 1.97 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.851 ± 1.062	2.68	-0.630 ± 0.390	2.781 ± 1.115
PRF-fit source offset from KIC position	6.191 ± 1.074	5.76	-0.905 ± 0.291	6.125 ± 1.085
photometric centroid source offset	—	—	—	—

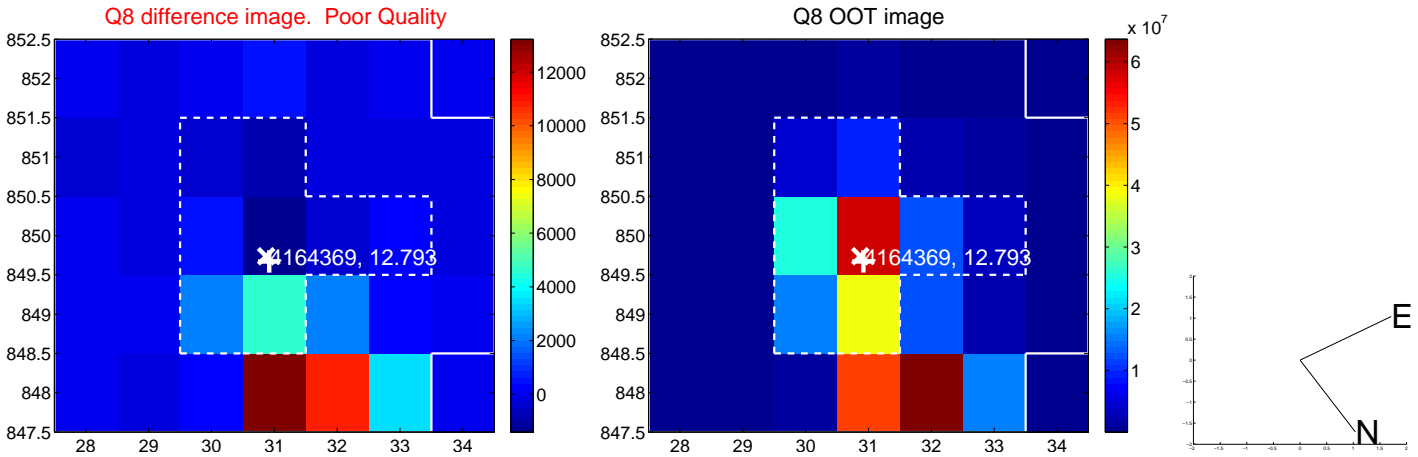
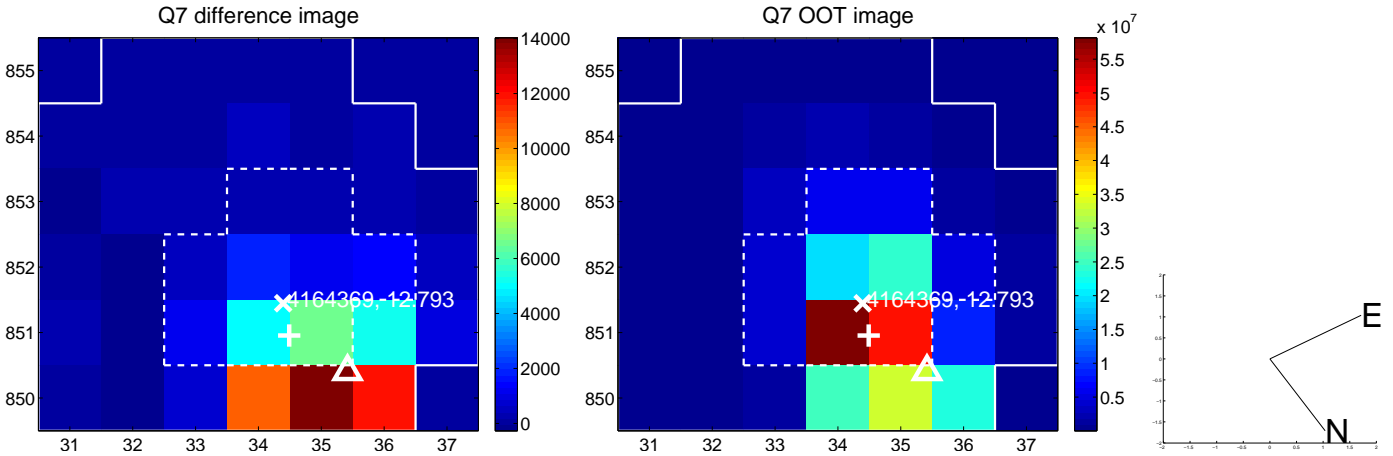
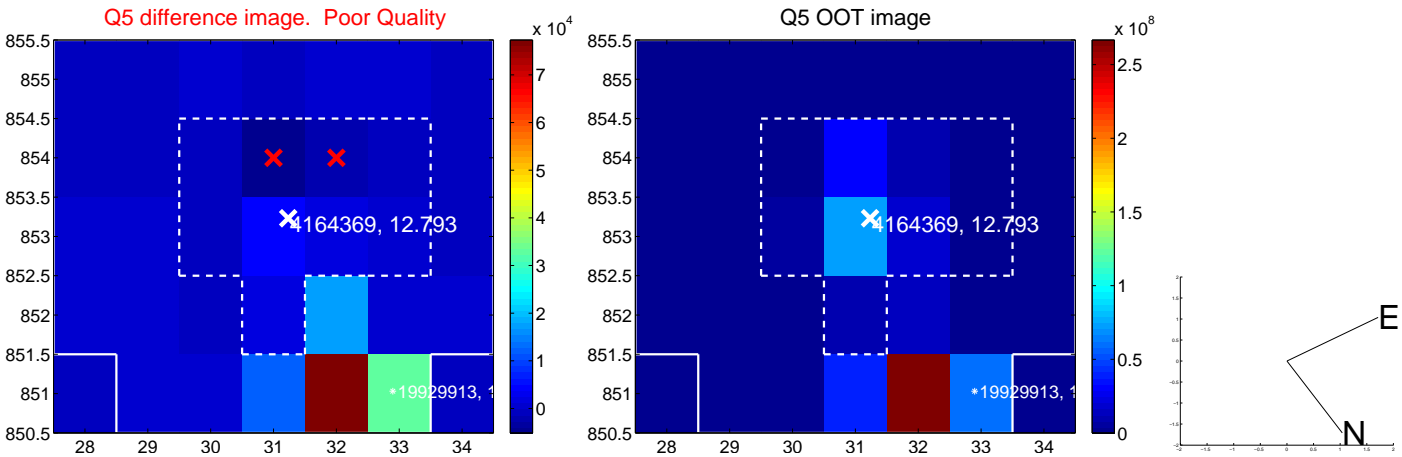


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

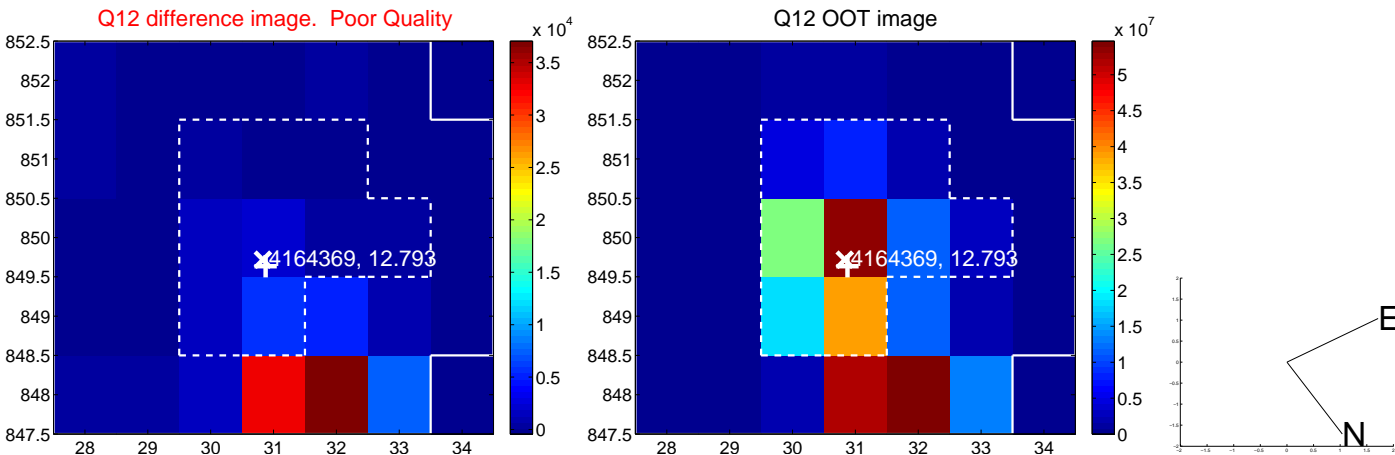
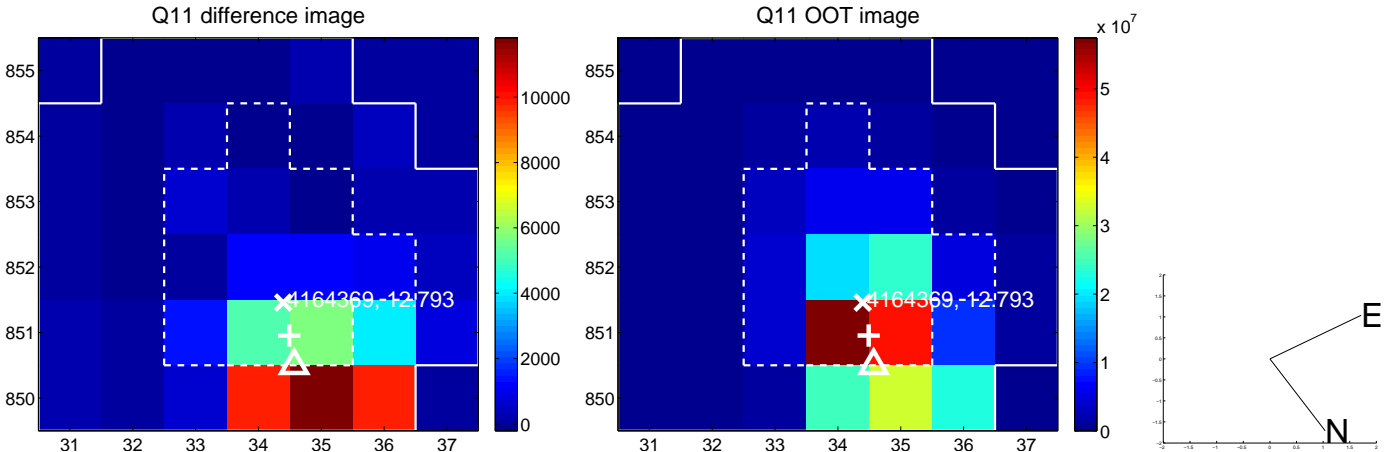
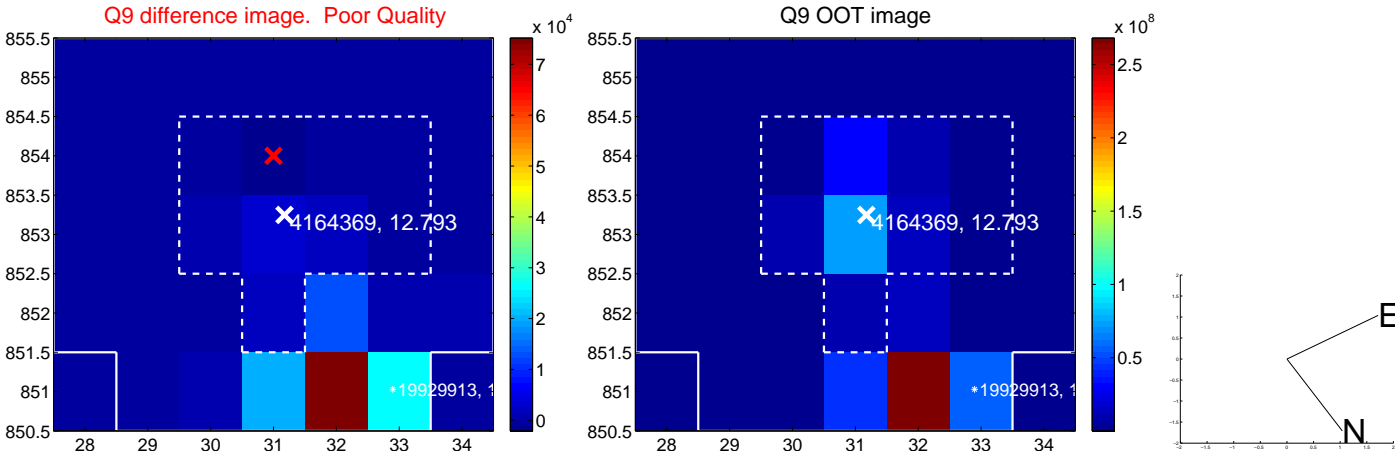
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



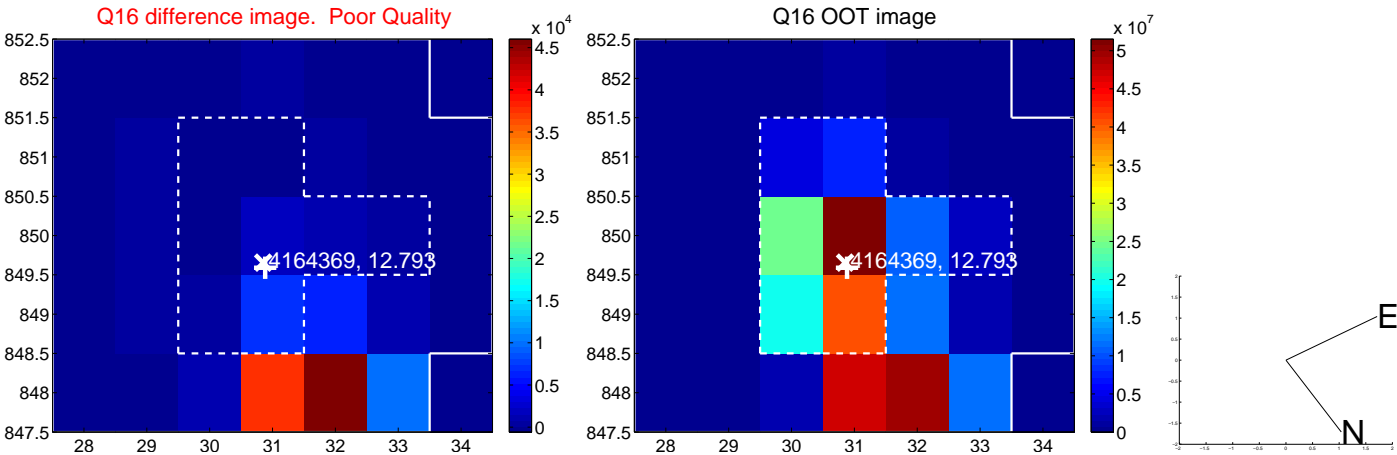
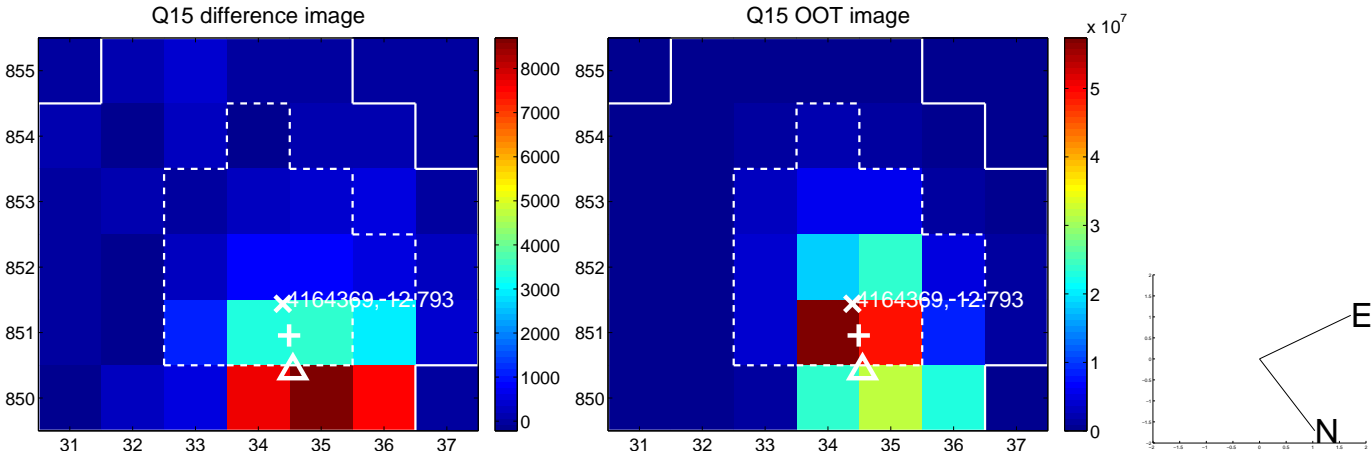
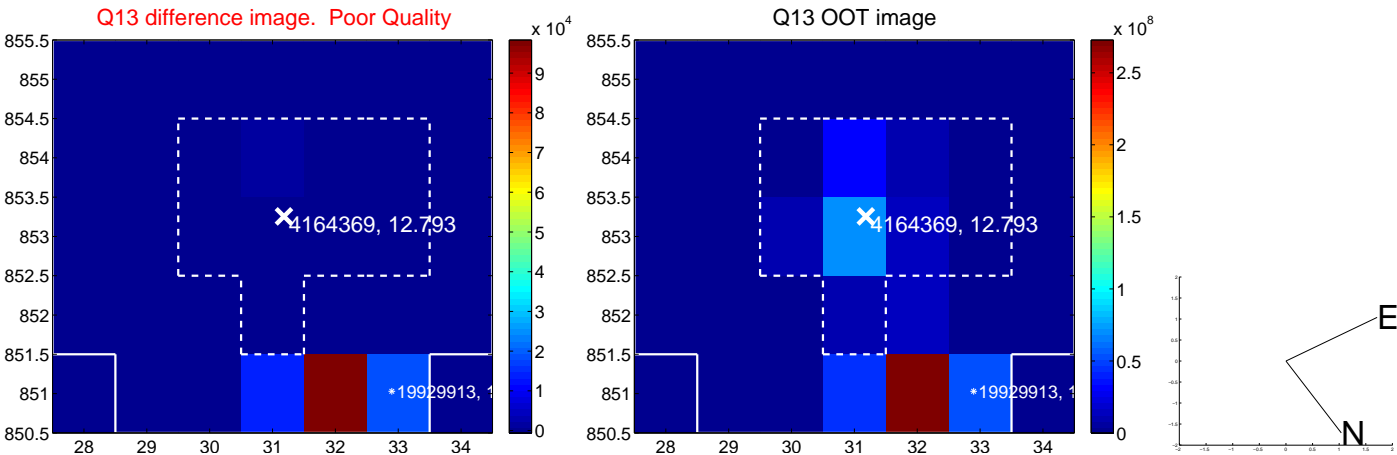
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



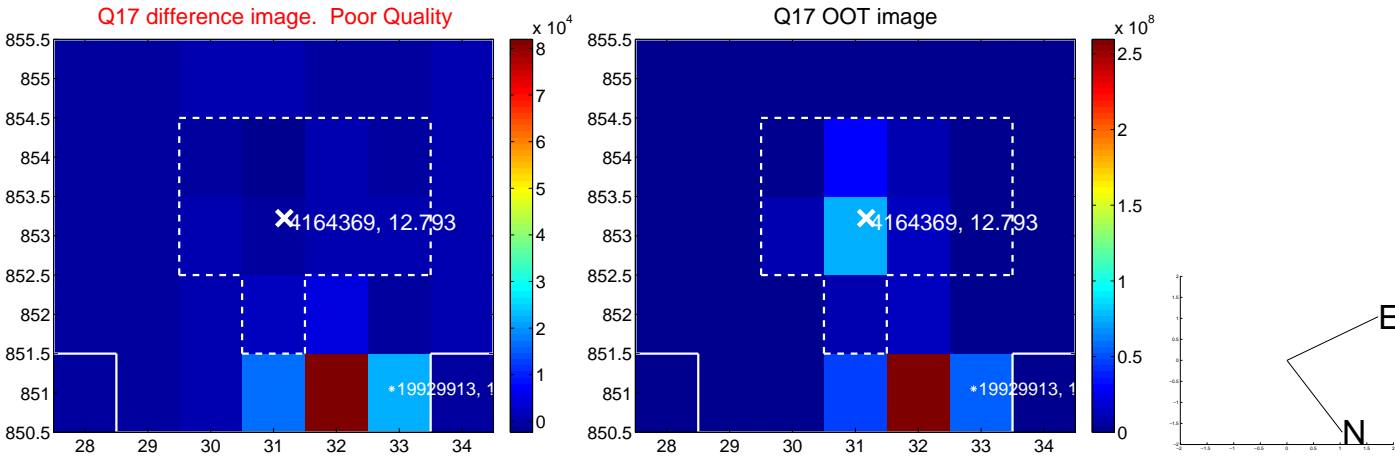
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

