

KIC 010745159

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})
010745159-01	OBS	No	1.128958	132.210870	0.6	10.135	10.3	1.1	2.72	7368	0.22	27260.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010745159-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

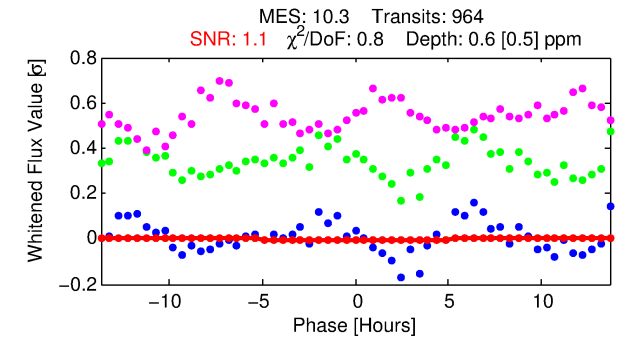
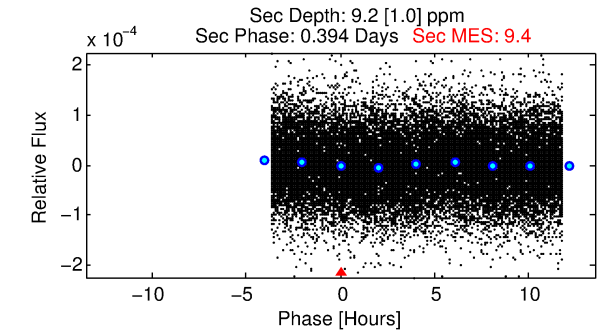
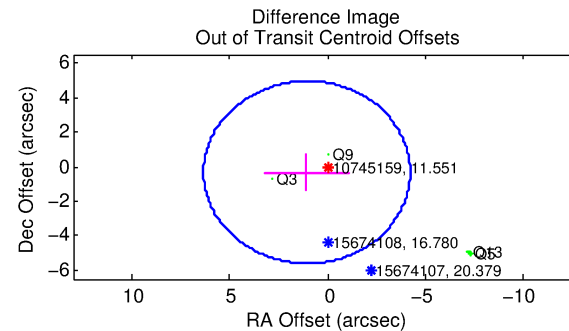
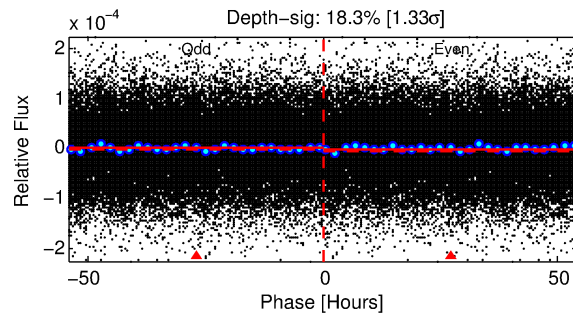
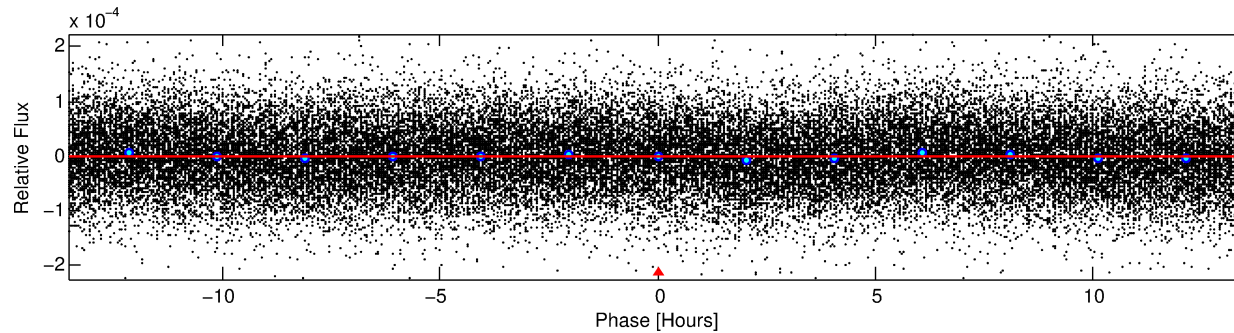
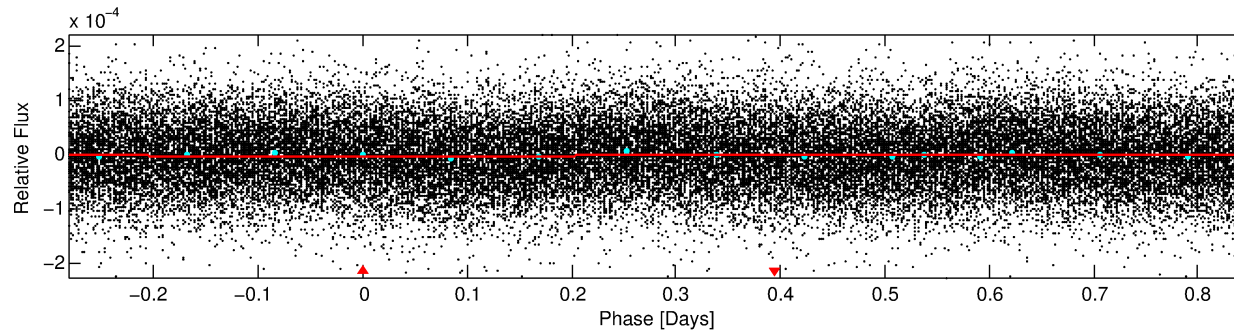
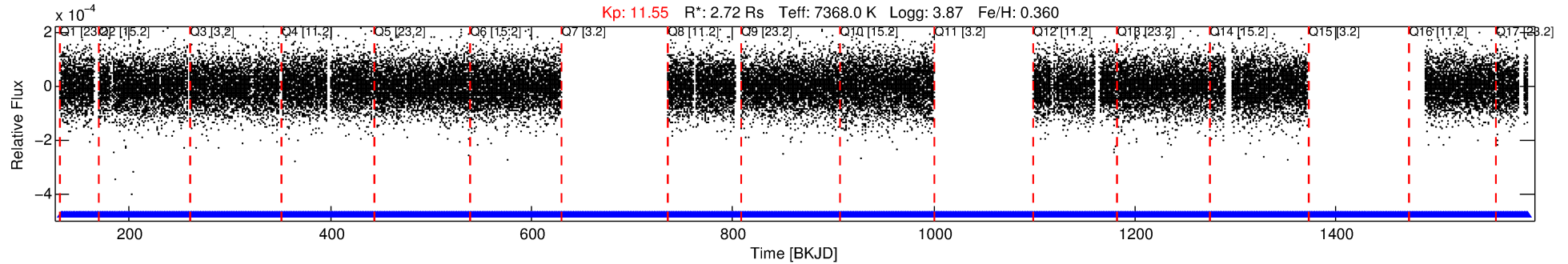
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010745159-01

No Significant Match Found

DV One-Page Summary

KIC: 10745159 Candidate: 1 of 1 Period: 1.129 d



DV Fit Results:

Period = 1.12896 [0.00021] d
Epoch = 132.2109 [0.0797] BKJD
Rp/R* = 0.0007 [0.0032]
a/R* = 1.06 [3.05]
b = 0.54 [34.04]
Seff = 27260.08 [7773.17]
Teq = 3276 [234] K
Rp = 0.22 [0.94] Re
a = 0.0268 [0.0050] AU
Ag = 77.16 [671.28] [0.11 σ]
Teffp = 15014 [32638] K [0.36 σ]

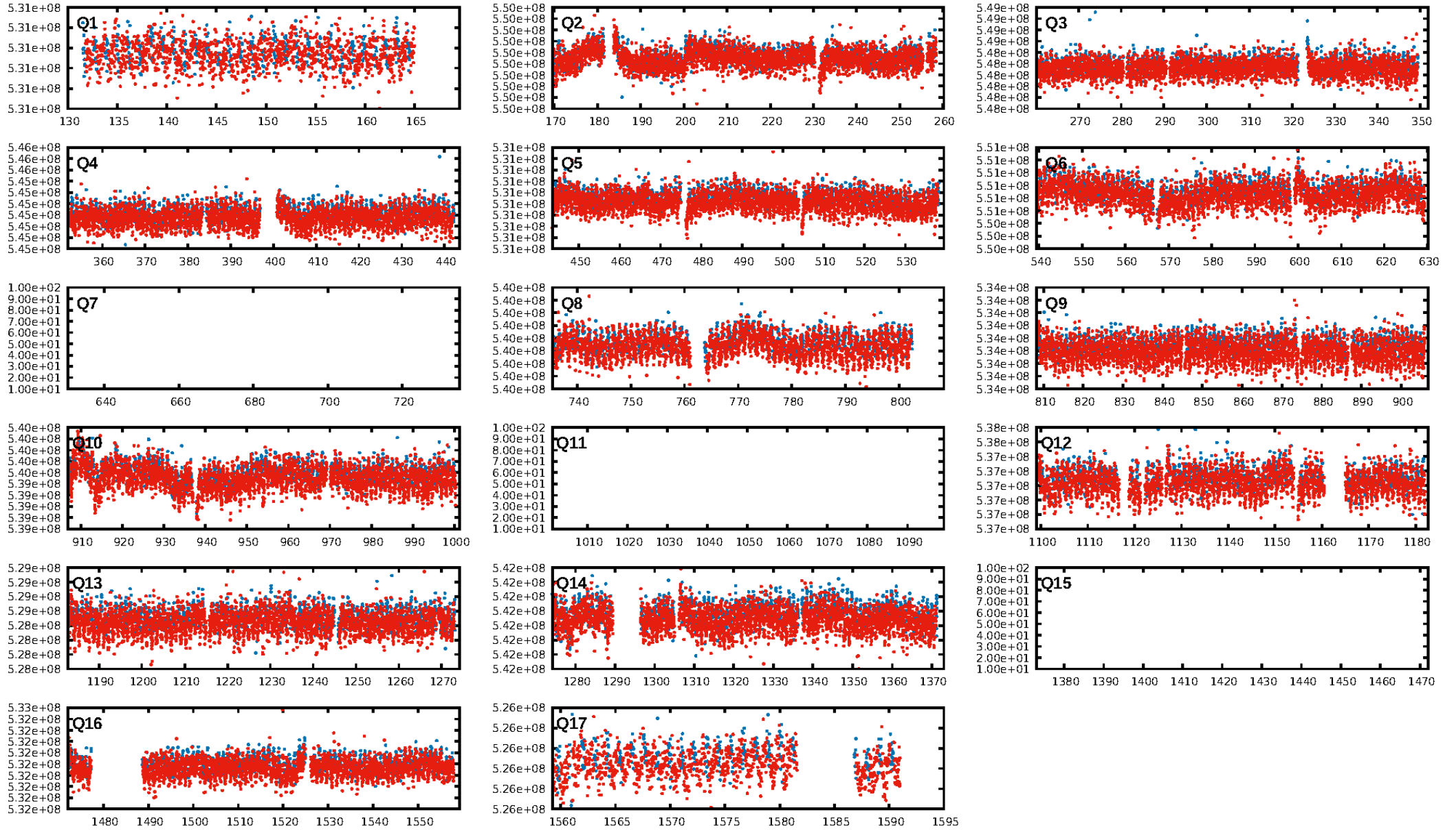
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [909/909]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.101 arcsec [0.63 σ]
Centroid-so: N/A
OotOffset-st: 0/1/0/3 [4]
KicOffset-rm: 1.173 arcsec [0.74 σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [14/14]

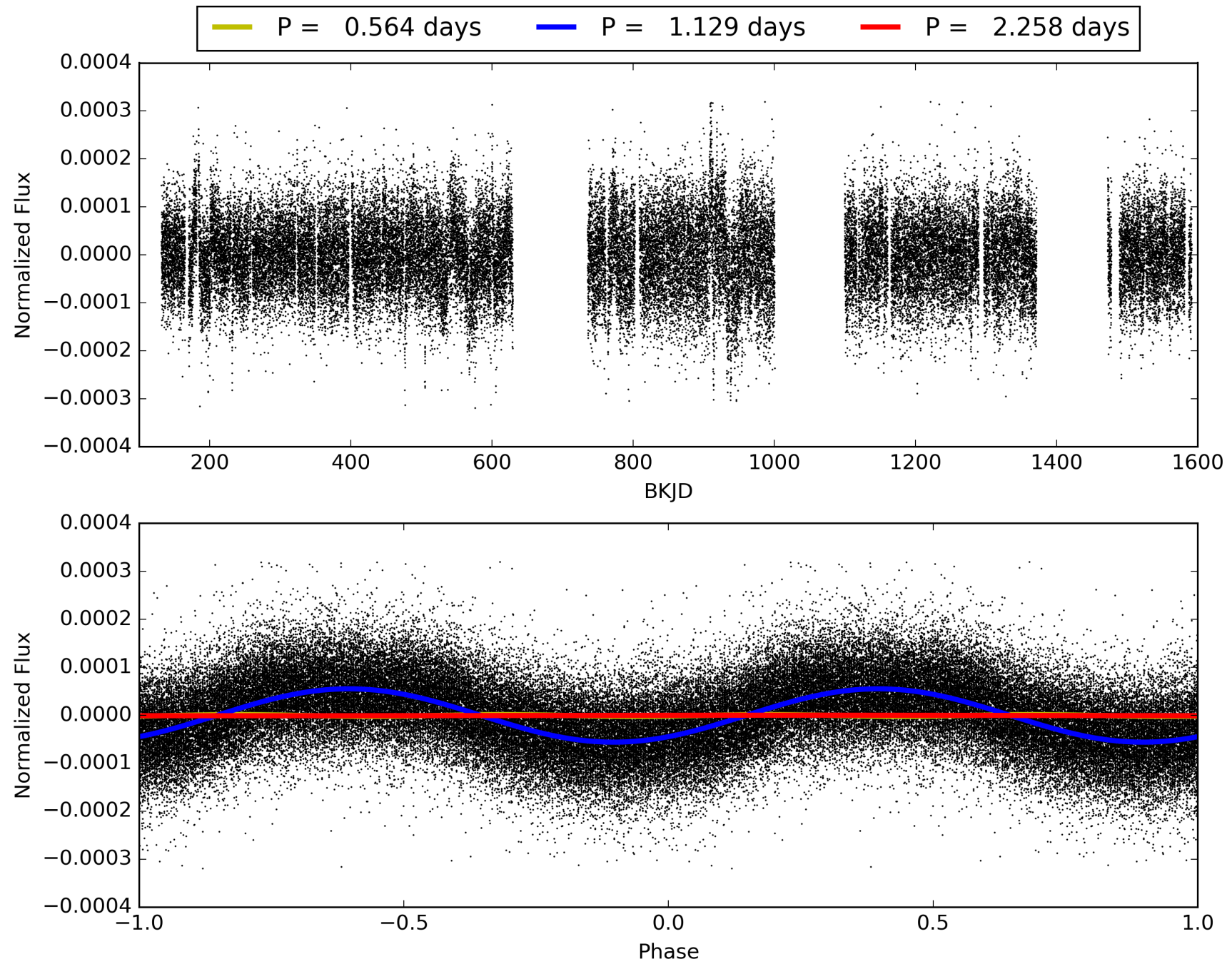
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:25:30 Z

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

TCE 010745159-01, PDC Light Curves

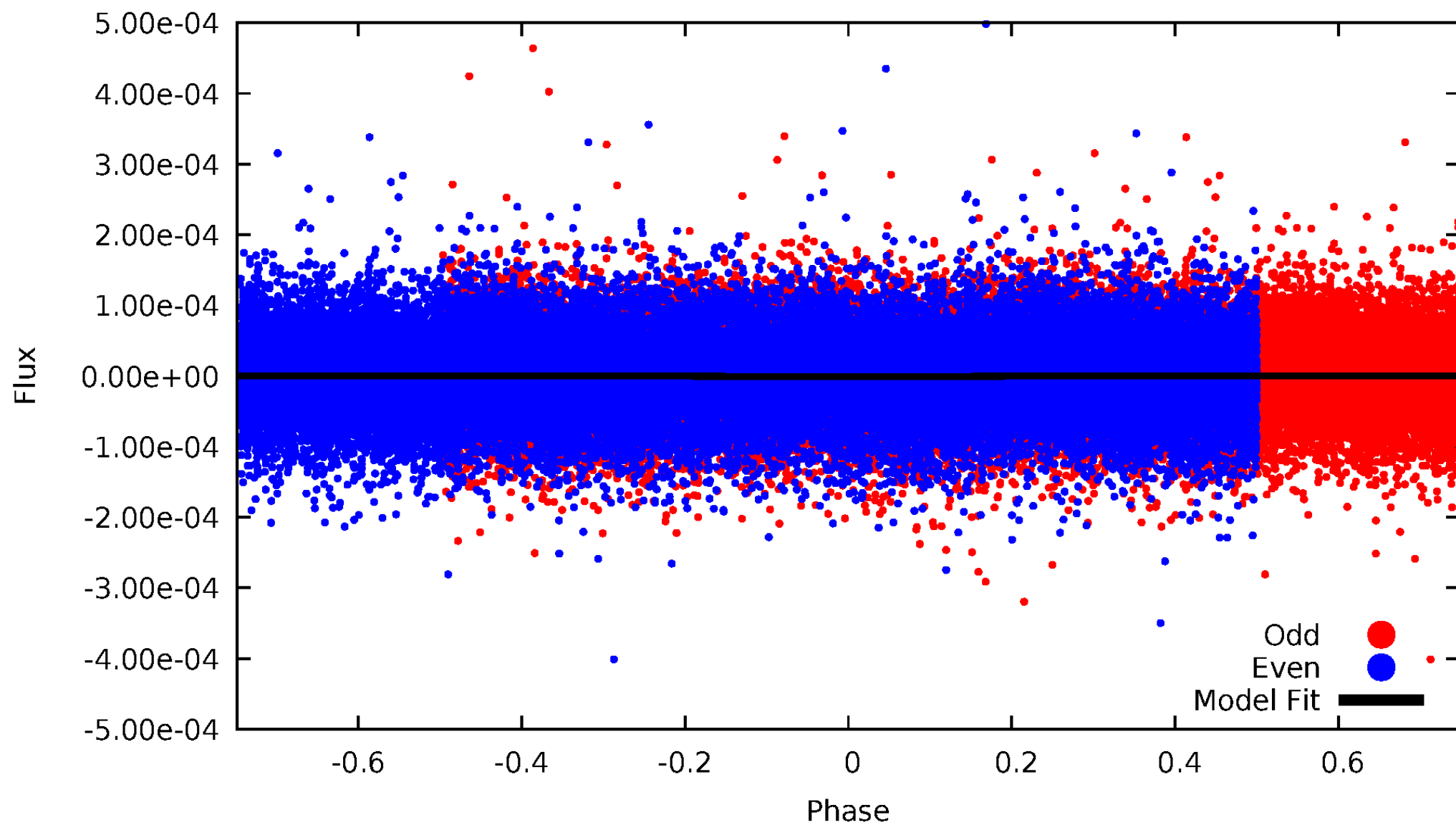


TCE 010745159-01



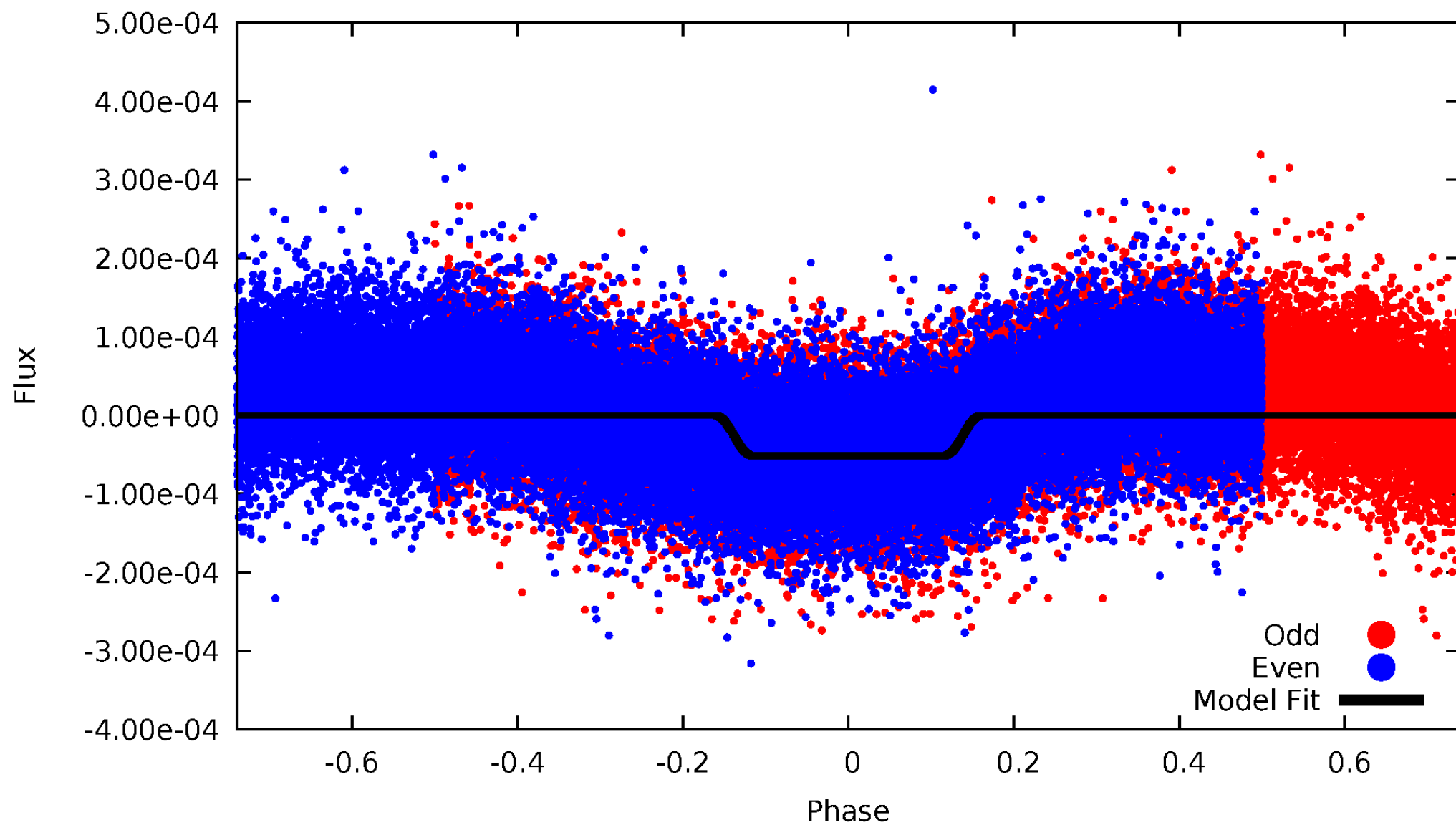
DV Odd/Even

TCE 010745159-01



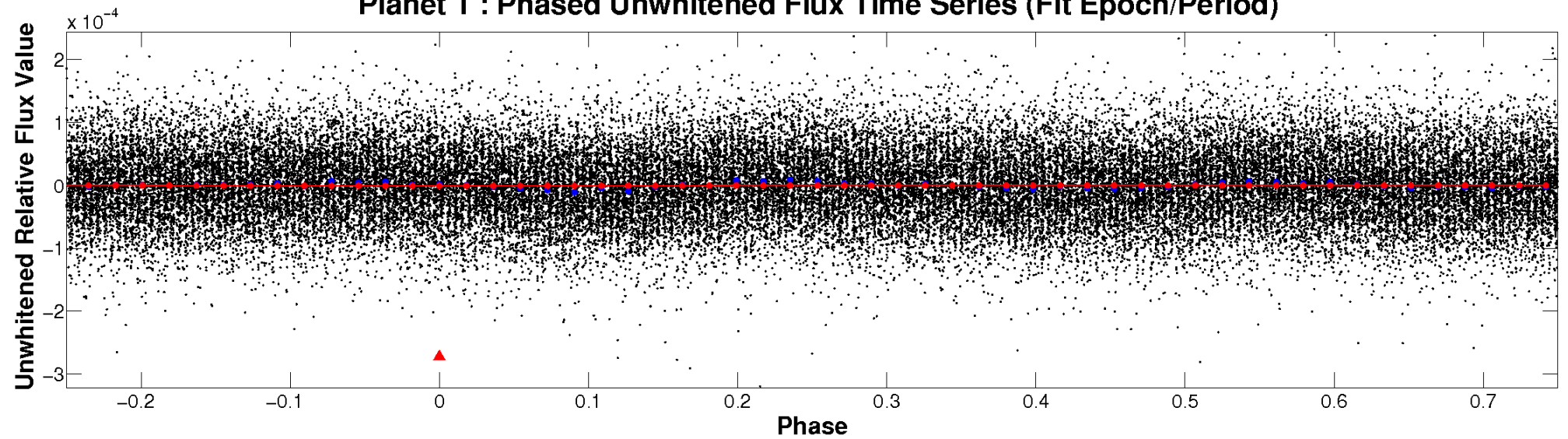
ALT Odd/Even

TCE 010745159-01

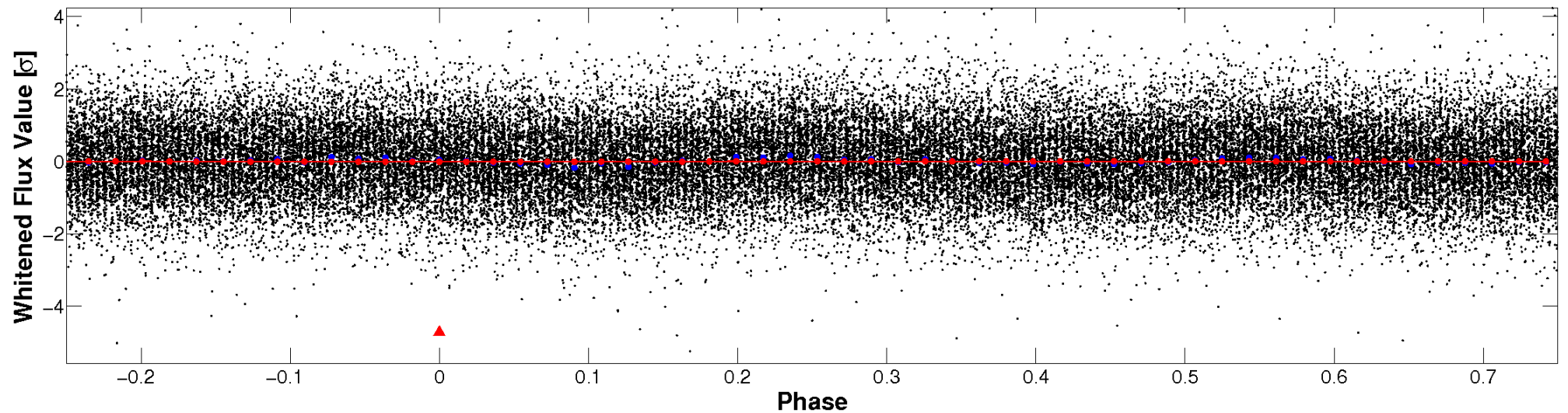


Non-Whitened Vs. Whitened Light Curve

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

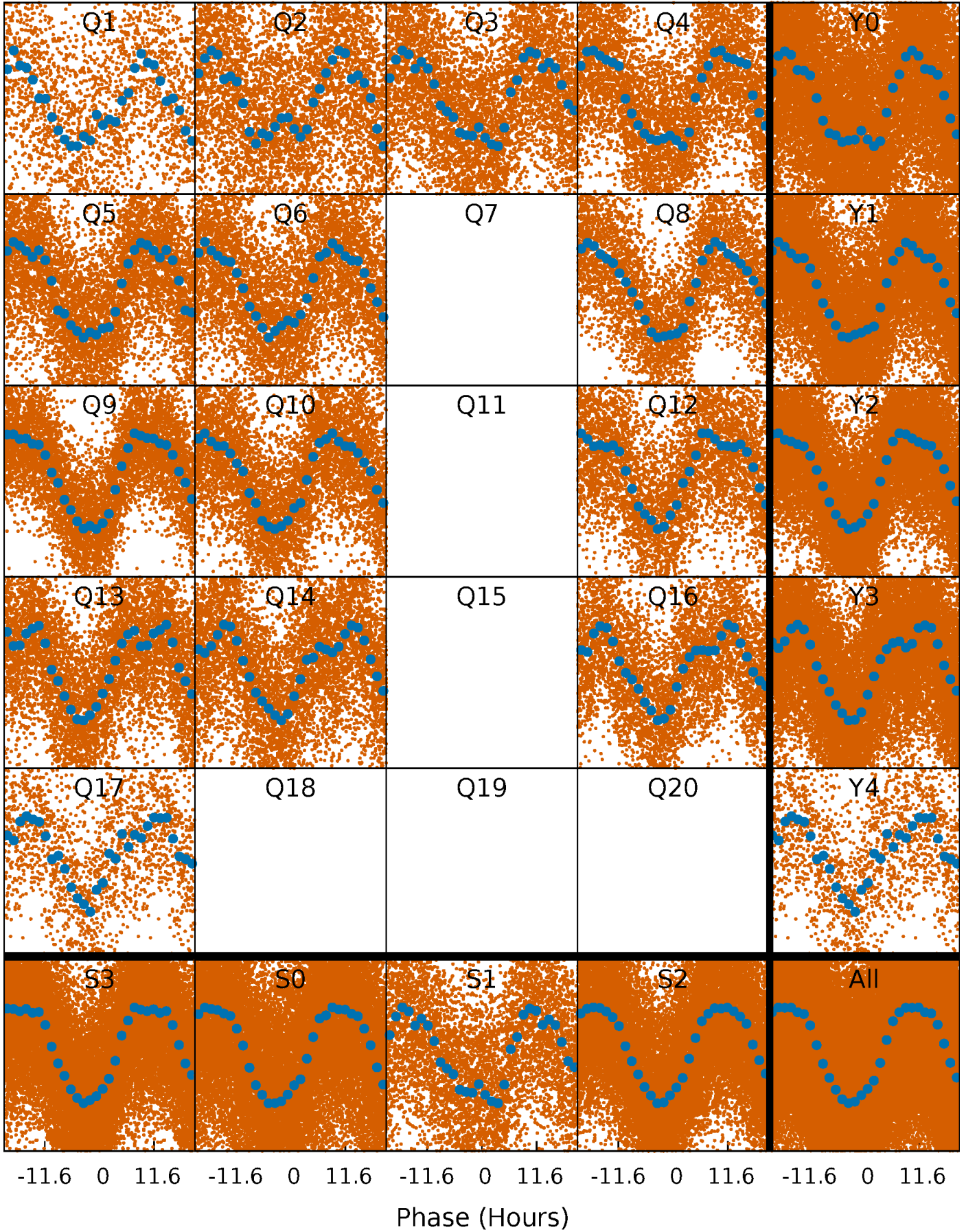


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



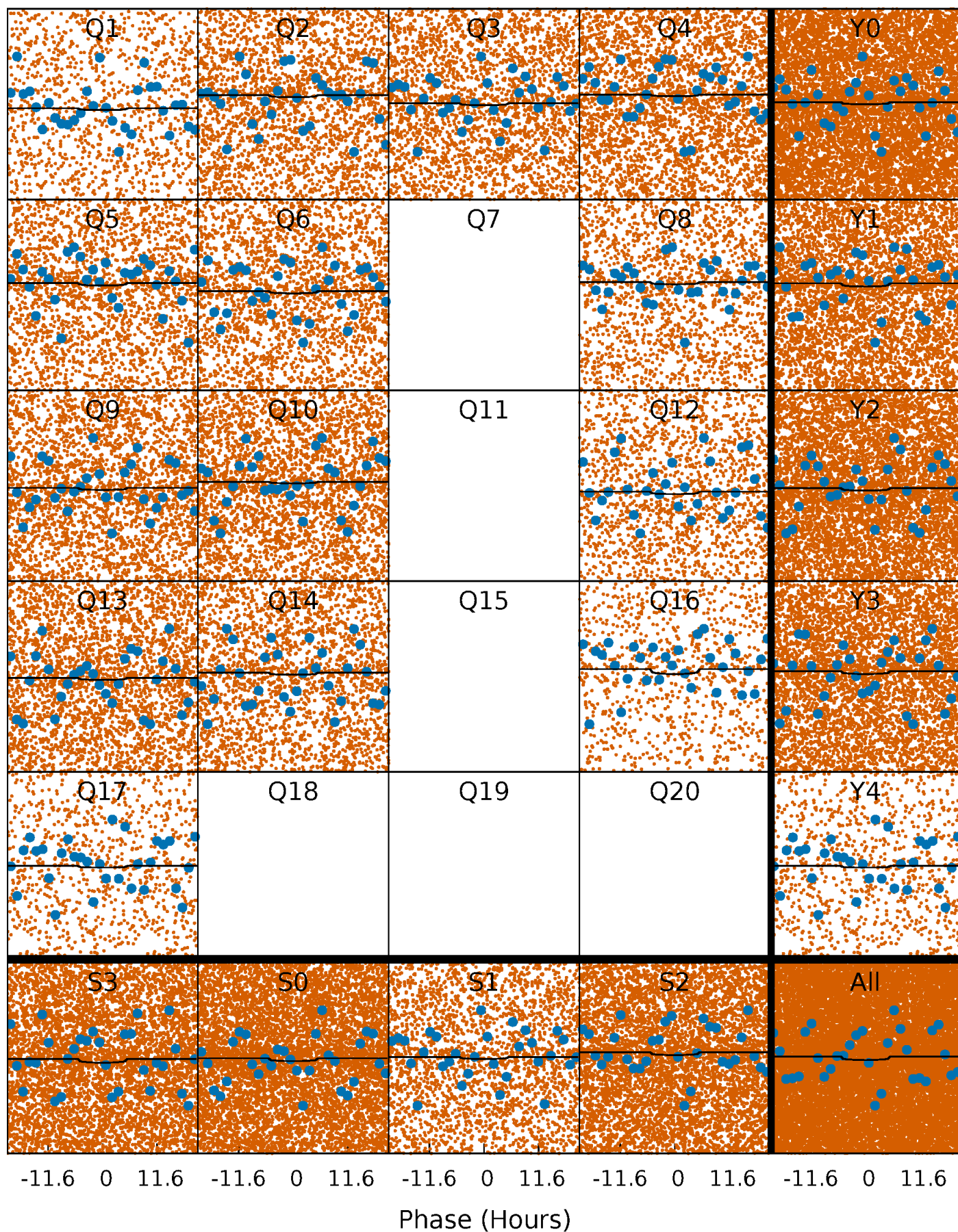
PDC Quarter-Phased Transit Curves

TCE 010745159-01 P= 1.128958 Days $T_0=132.210870$ (BKJD)



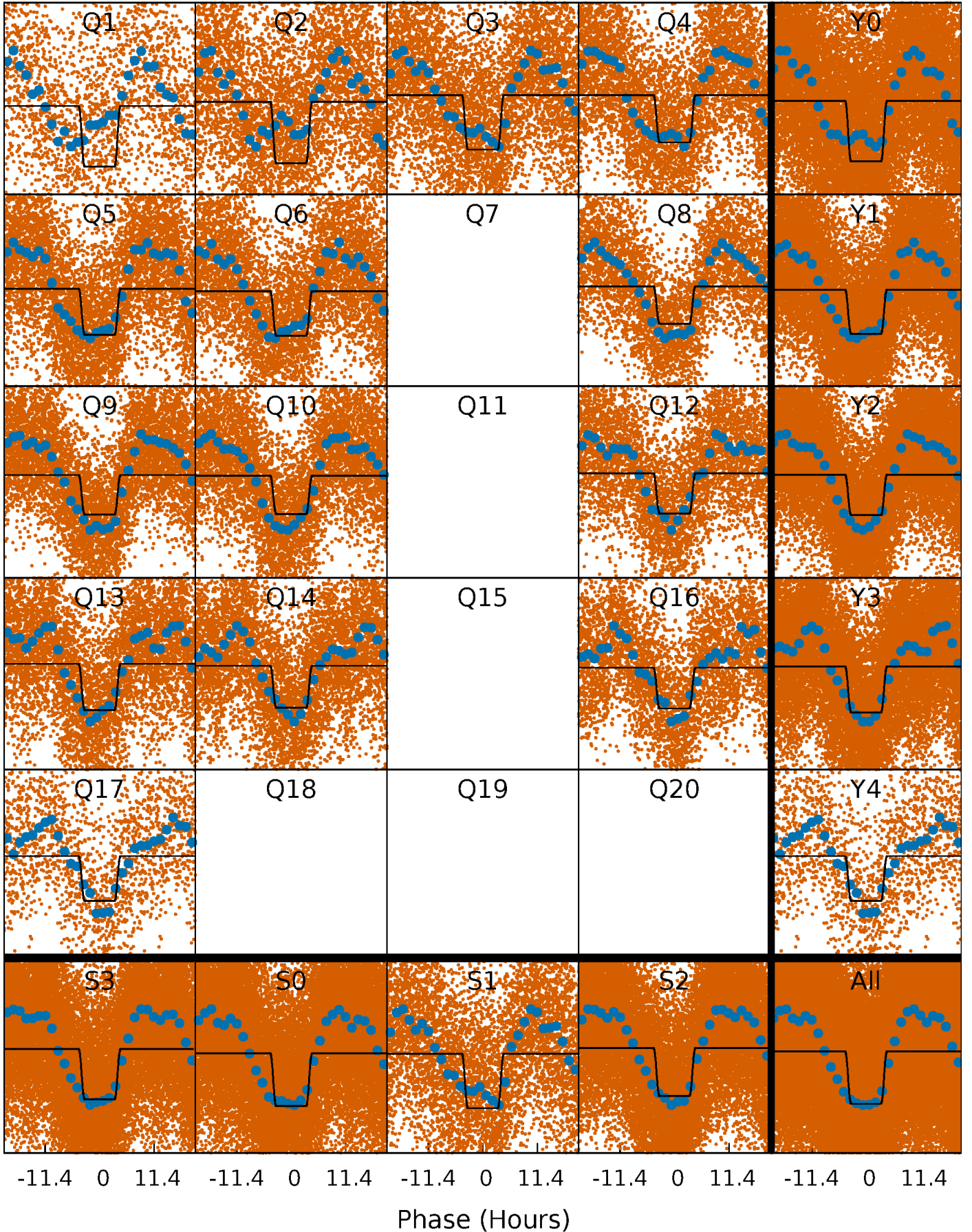
DV Quarter-Phased Transit Curves

TCE 010745159-01 P= 1.128958 Days $T_0=132.210870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

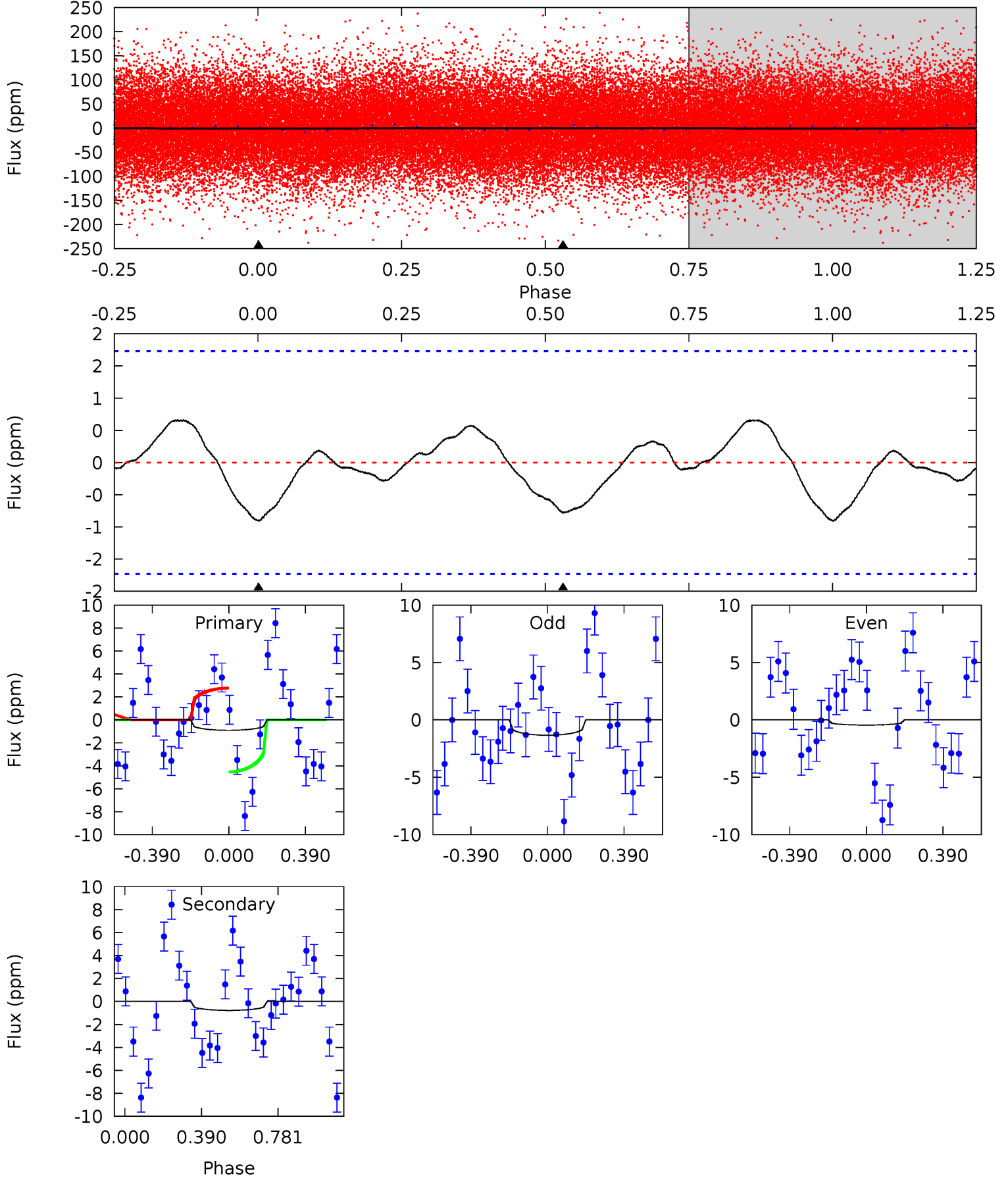
TCE 010745159-01 P= 1.128827 Days $T_0=132.238451$ (BKJD)



DV Model-Shift Uniqueness Test

010745159-01, P = 1.128958 Days, E = 131.081912 Days

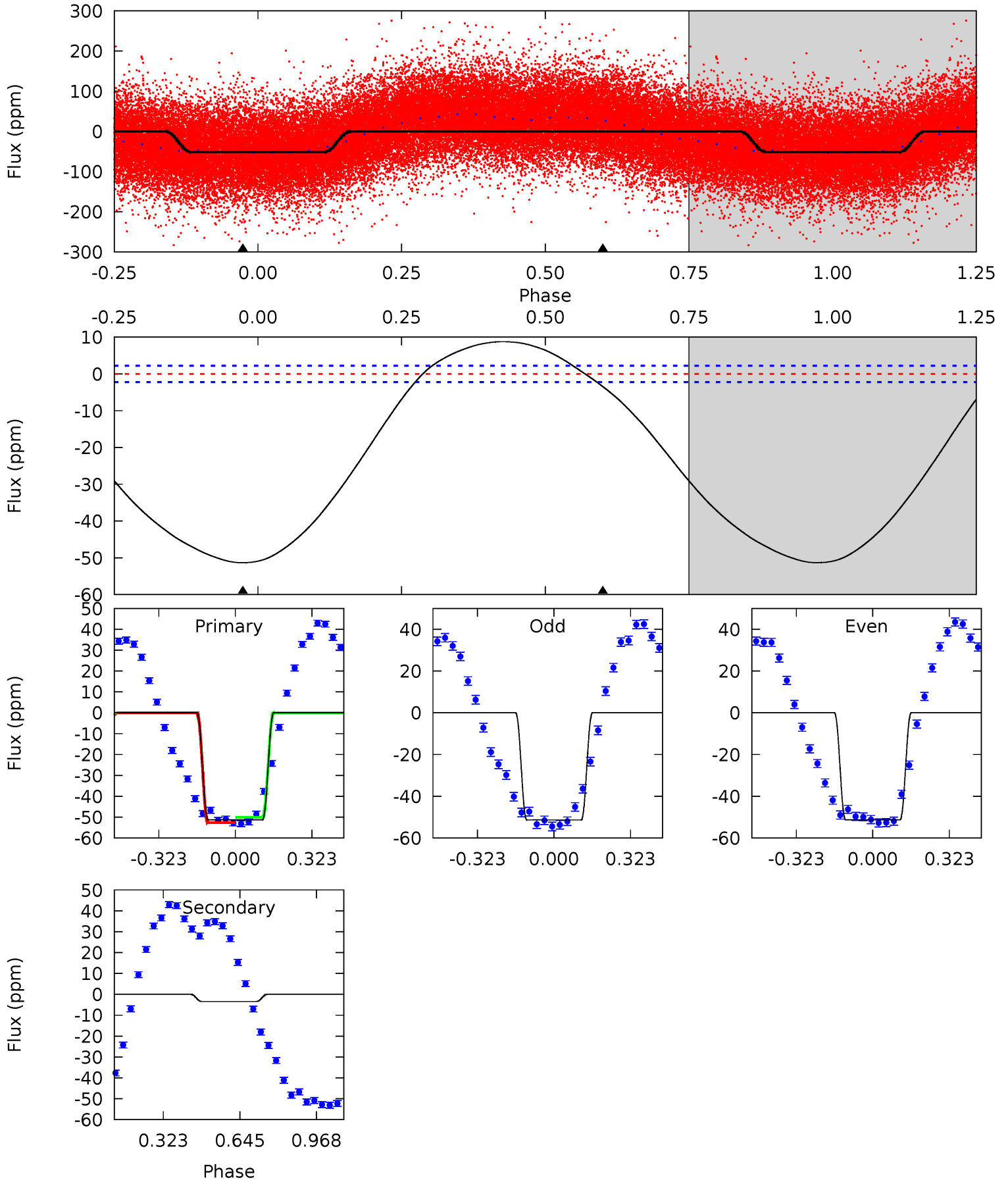
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.24	1.92	0	0	4.27	0.86	0.32	2.24	2.24	1.92	1.92	1.12	1.11	0.42	2.19



Alt Model-Shift Uniqueness Test

010745159-01, P = 1.128827 Days, E = 131.109624 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.3	6.66	0	0	4.31	0.99	8.59	99.3	99.3	6.66	6.66	0.02	0.99	0.15	2.73



Stellar Parameters For KIC 010745159

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7368^{+65}_{-98}	$3.872^{+0.156}_{-0.084}$	$0.360^{+0.050}_{-0.150}$	$2.724^{+0.297}_{-0.594}$	$2.015^{+0.112}_{-0.224}$	$0.140^{+0.119}_{-0.032}$
	+1%/-1%	+4%/-2%	+14%/-42%	+11%/-22%	+6%/-11%	+85%/-23%
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 010745159-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 0	$0.75^{+0.69}_{-0.51}$	4577^{+145}_{-230}	3725^{+3480}_{-7442}	$0.501^{+4.224}_{-0.396}$
Alt.	-3 ± 1	$2.08^{+0.93}_{-0.86}$	4569^{+141}_{-218}	2237^{+2324}_{-5822}	$0.306^{+0.617}_{-0.158}$

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 $A_{obs} \gg 1.0$

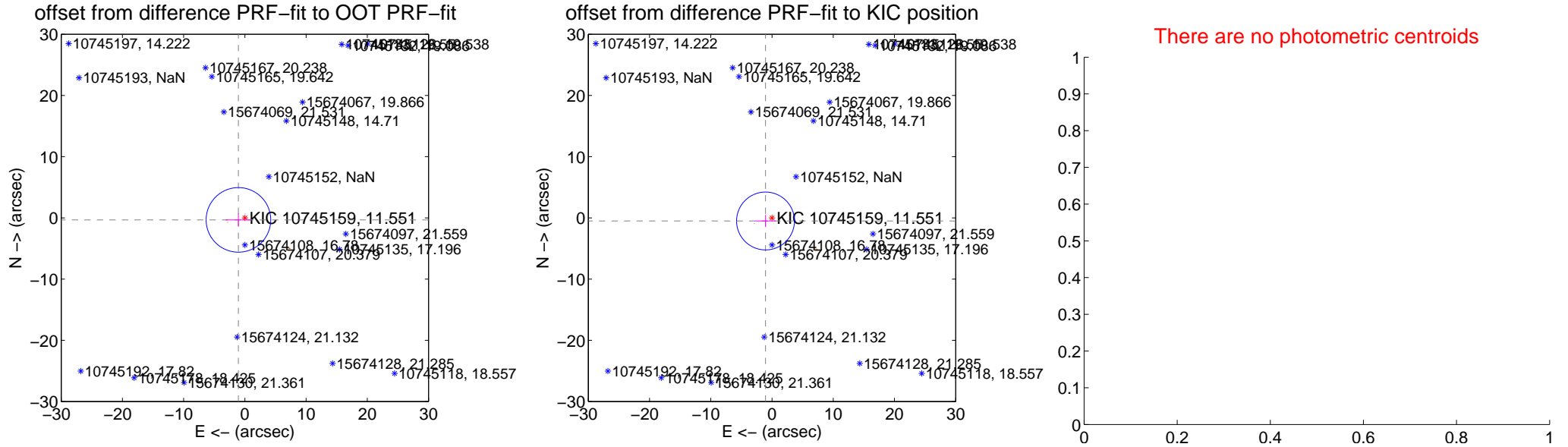
DV Centroid Data

Supplemental centroid analysis for 010745159-01. **Kepler magnitude: 11.55.** Transit SNR 1.15

There are 1 quarters with good PRF difference image offsets

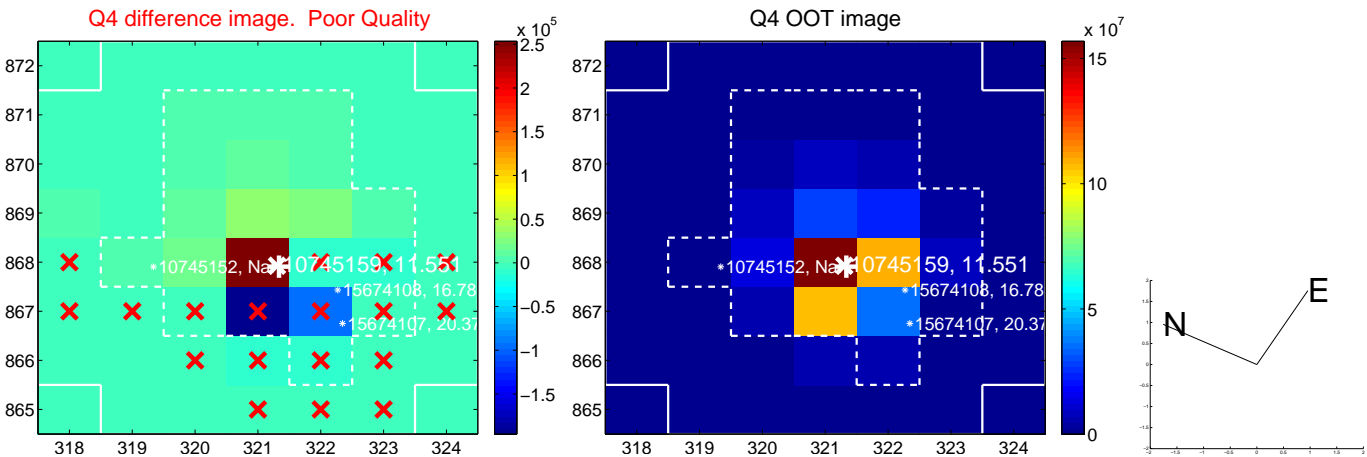
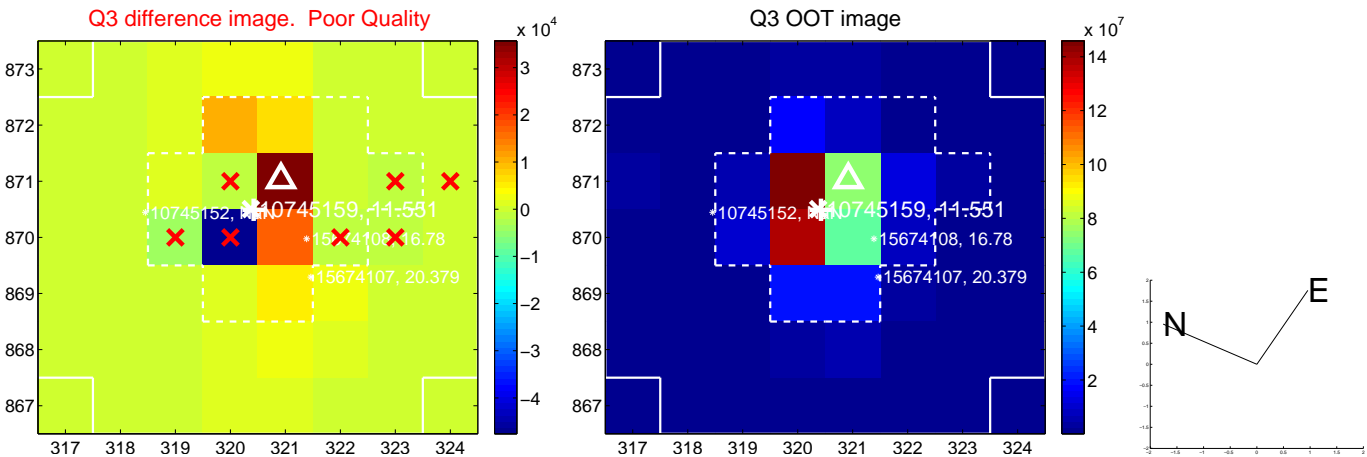
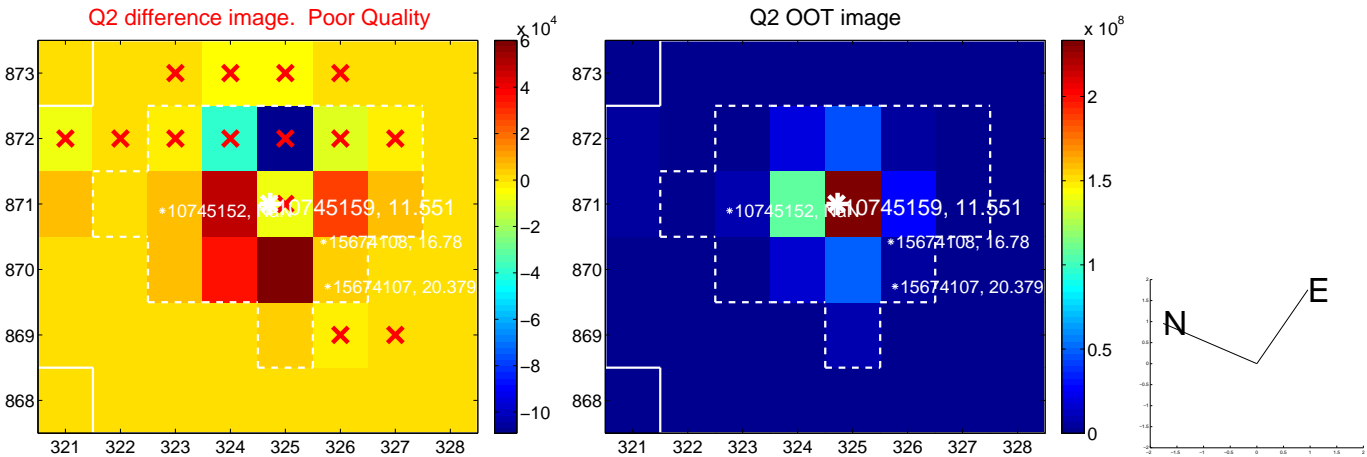
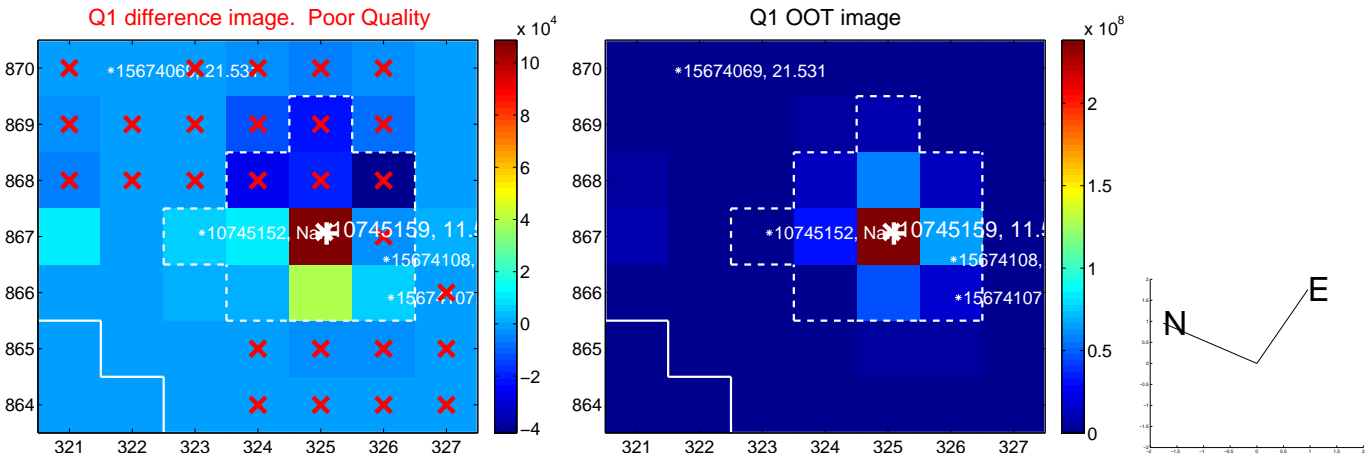
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.101 ± 1.758	0.63	1.052 ± 2.126	-0.327 ± 1.073
PRF-fit source offset from KIC position	1.173 ± 1.575	0.74	1.058 ± 1.680	-0.507 ± 0.997
photometric centroid source offset	—	—	—	—

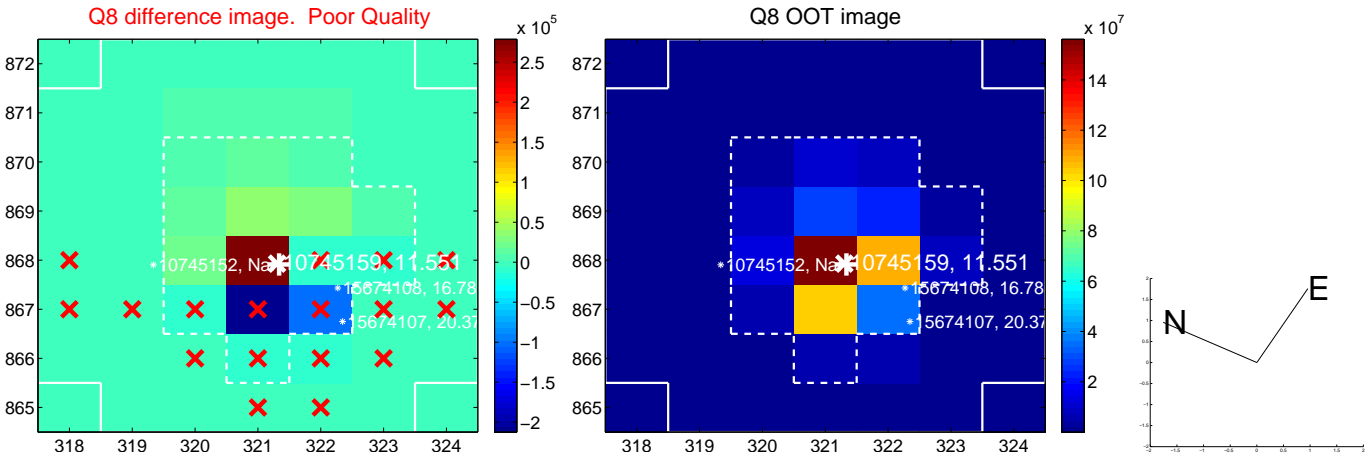
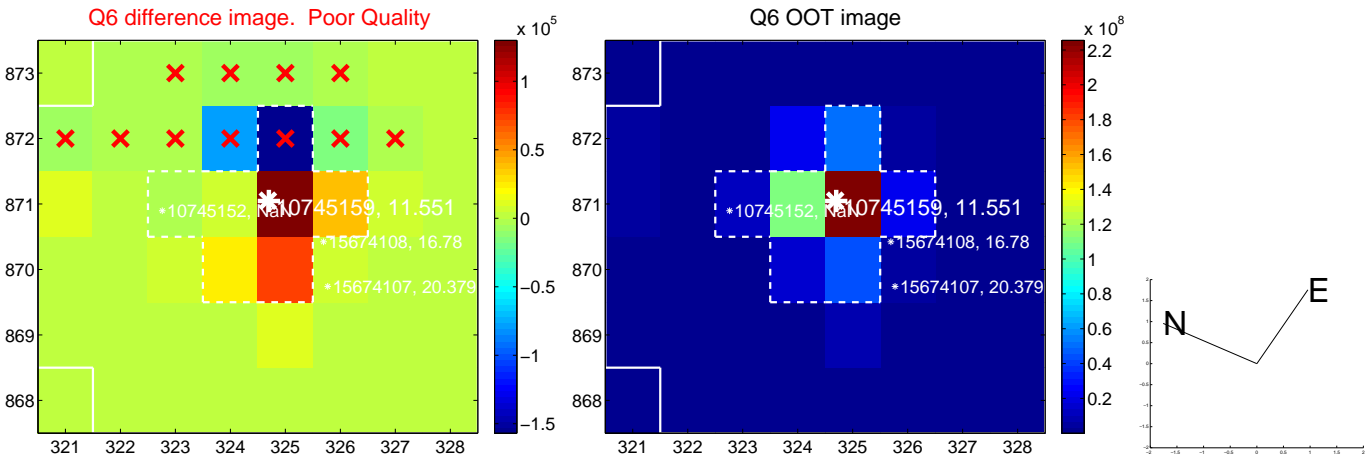
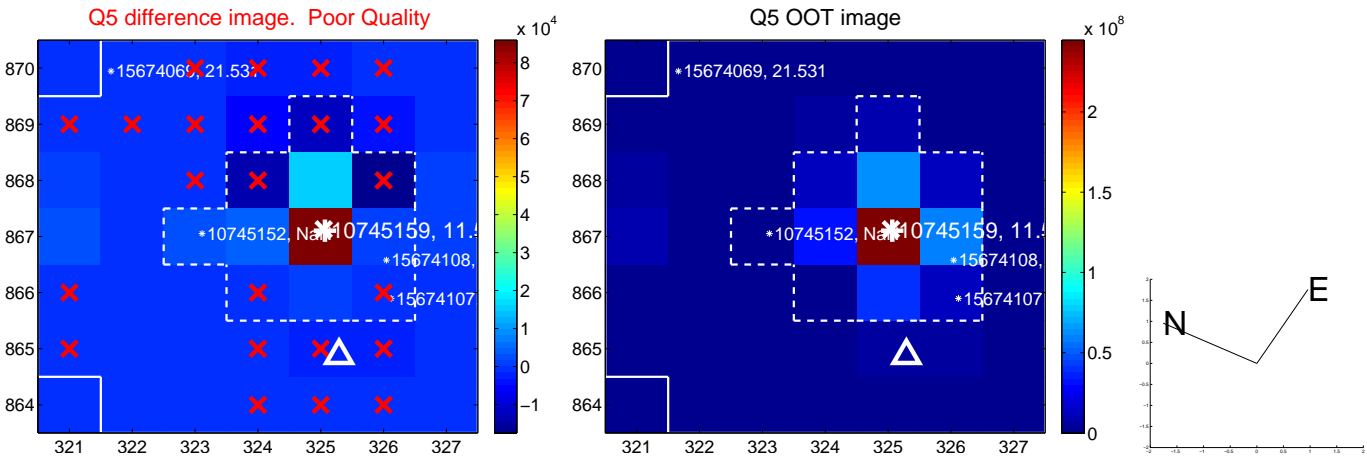


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

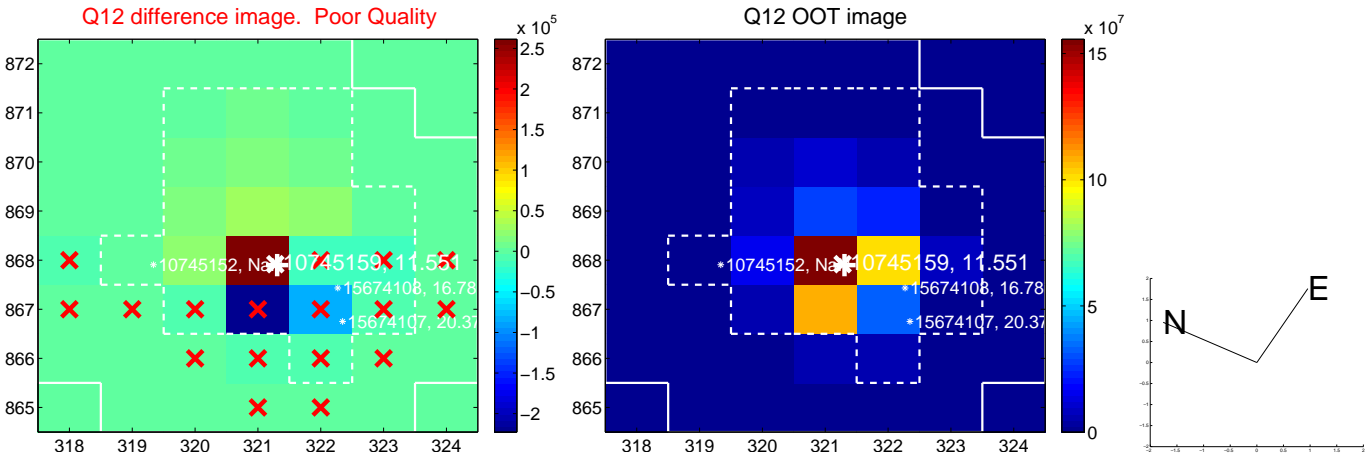
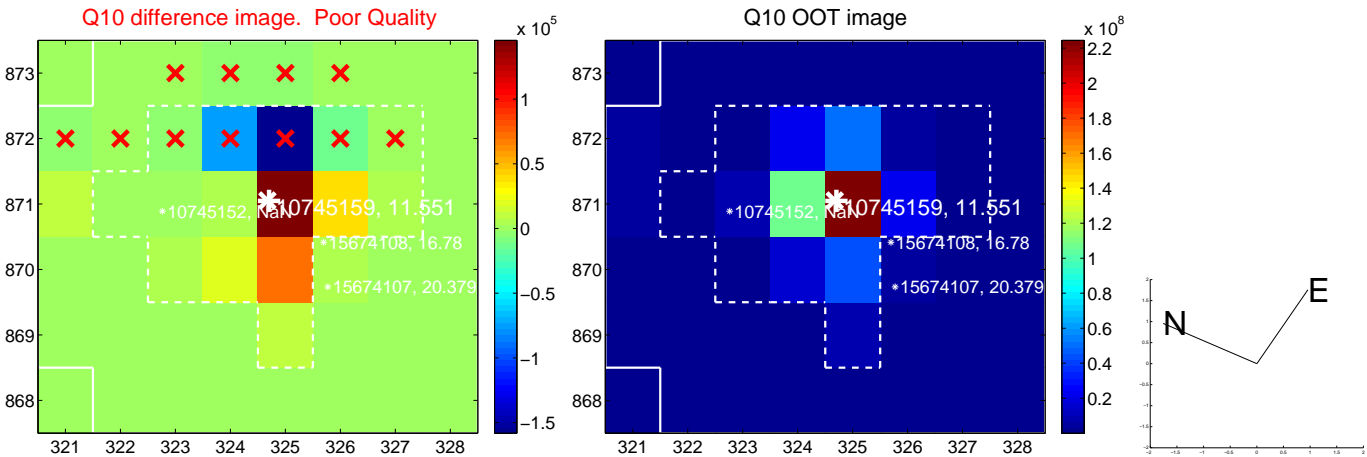
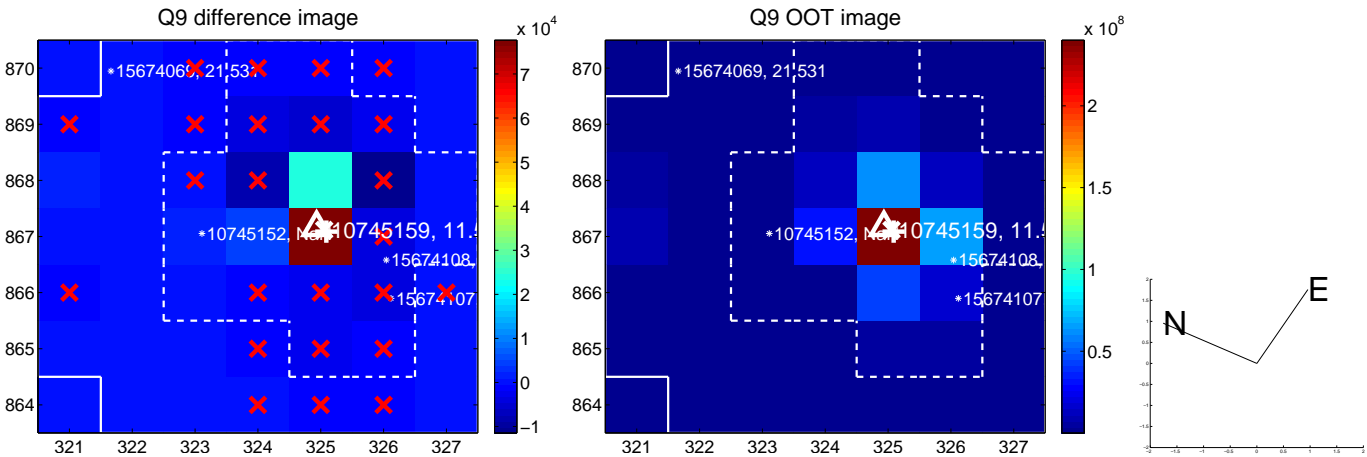
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



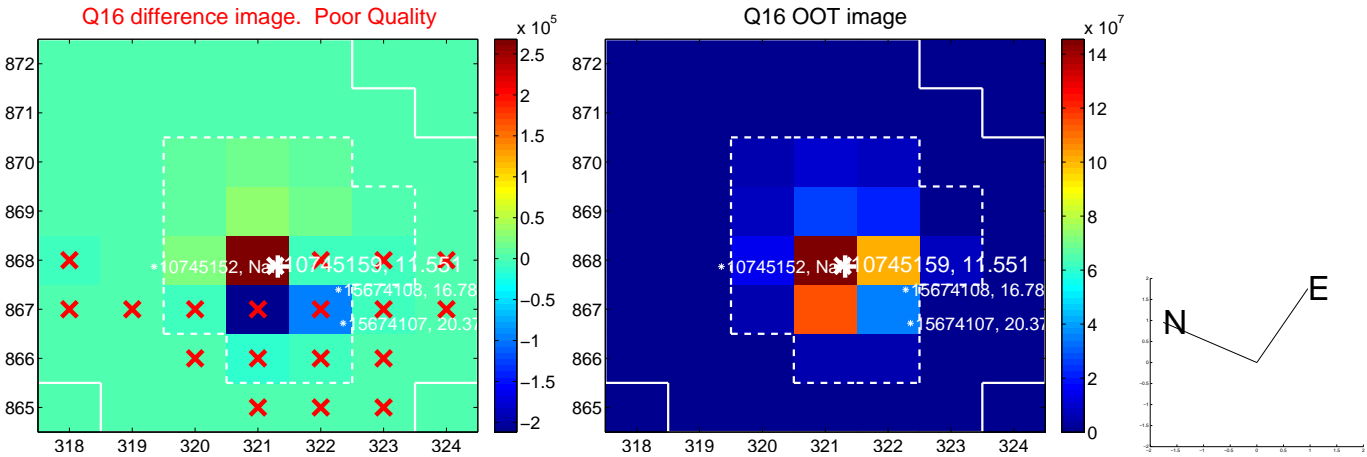
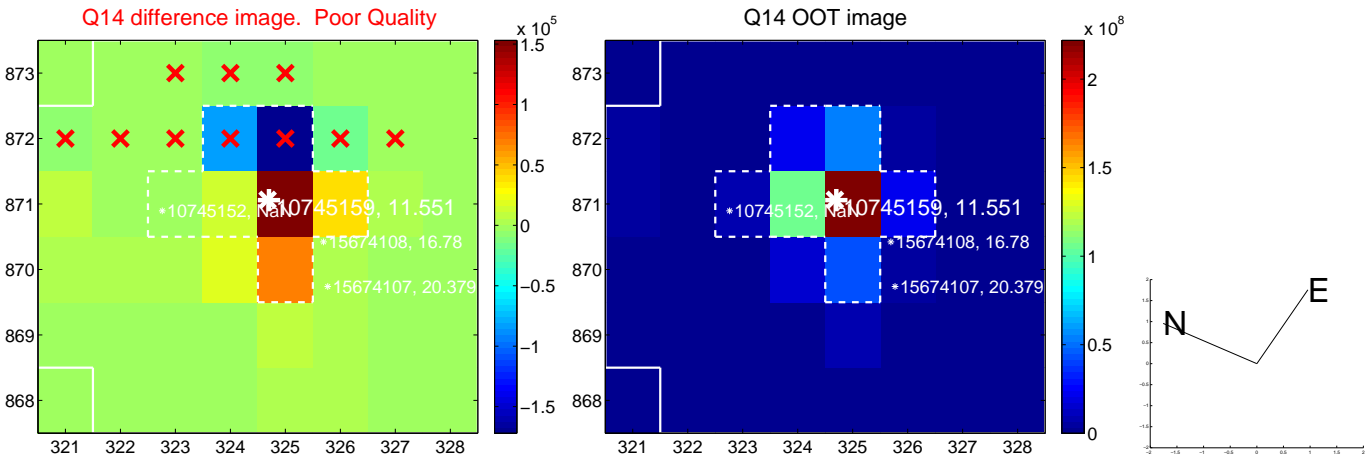
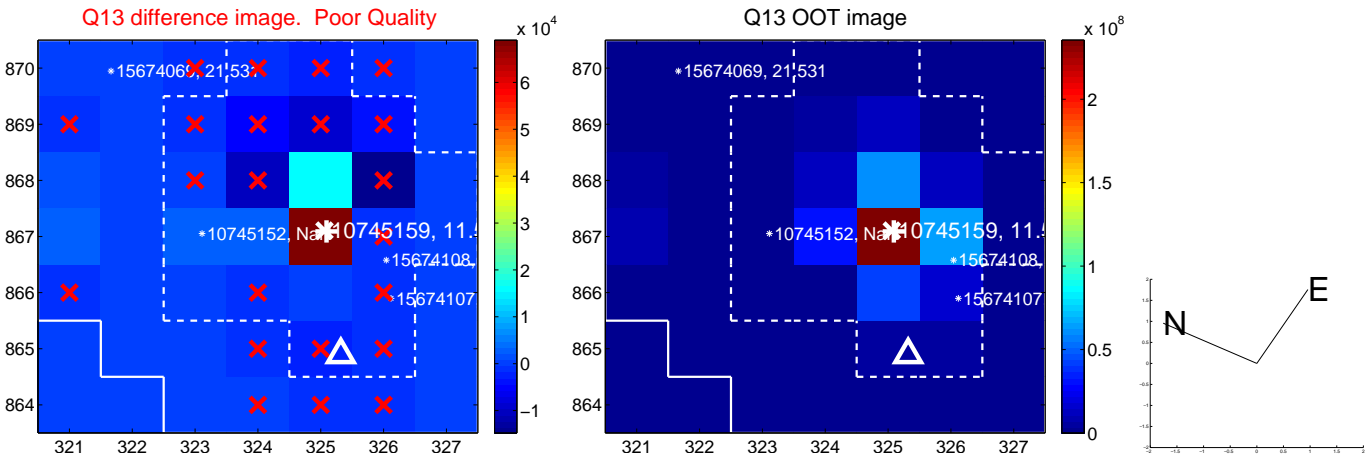
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



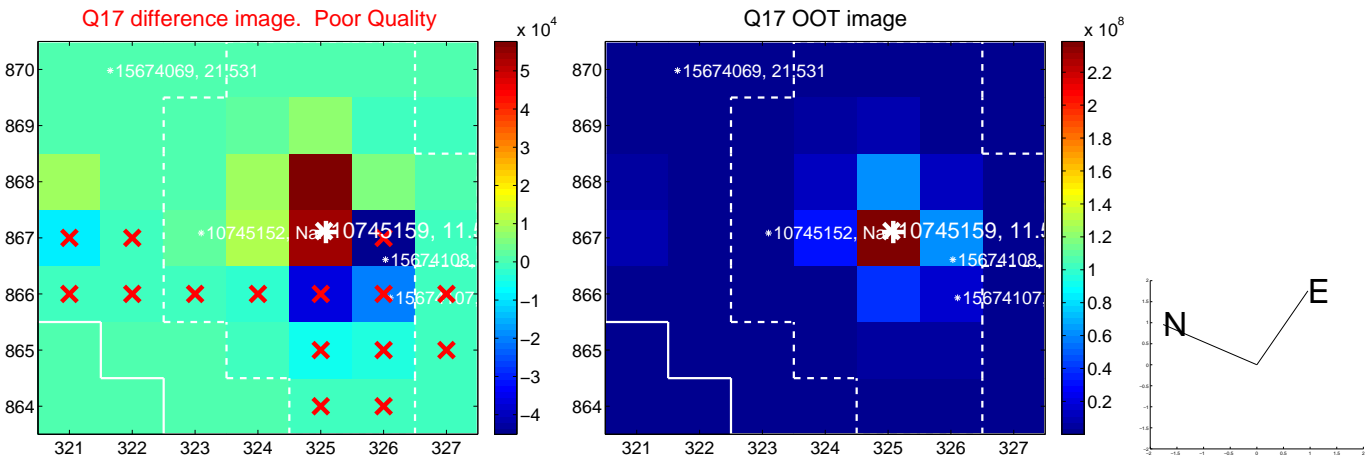
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

