

KIC 008959745

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})
008959745-01	OBS	No	2.774308	132.421299	10.1	22.370	8.5	11.0	1.92	8115	0.64	6673.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008959745-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

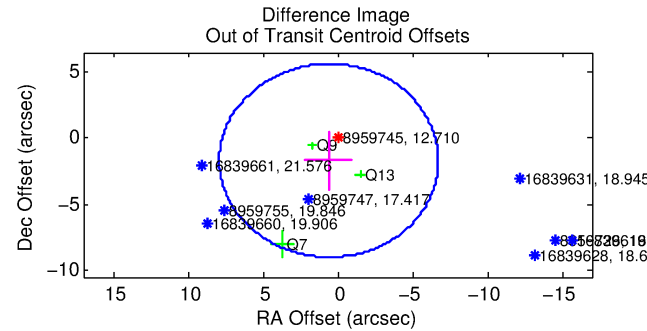
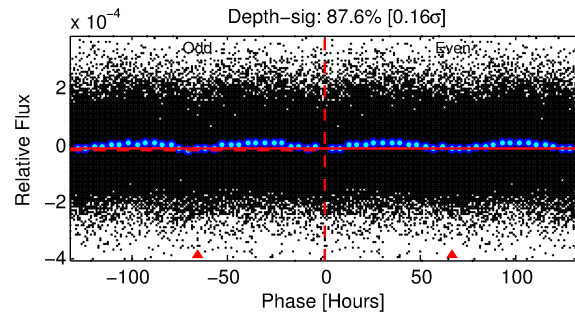
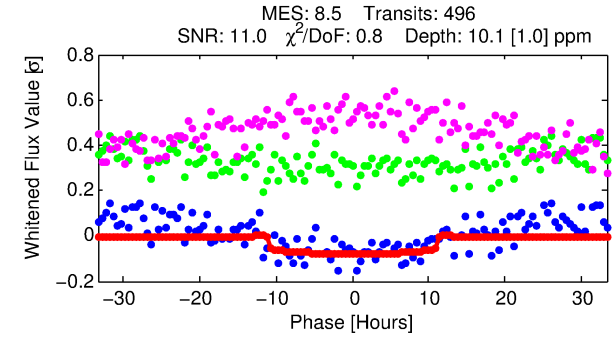
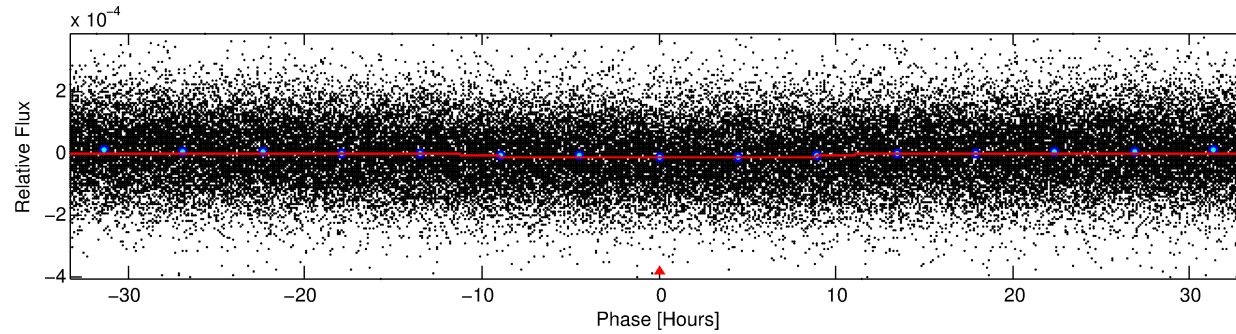
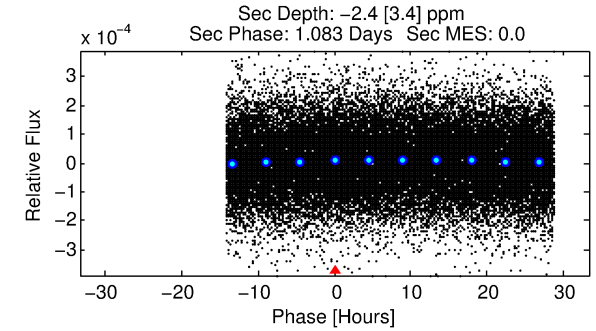
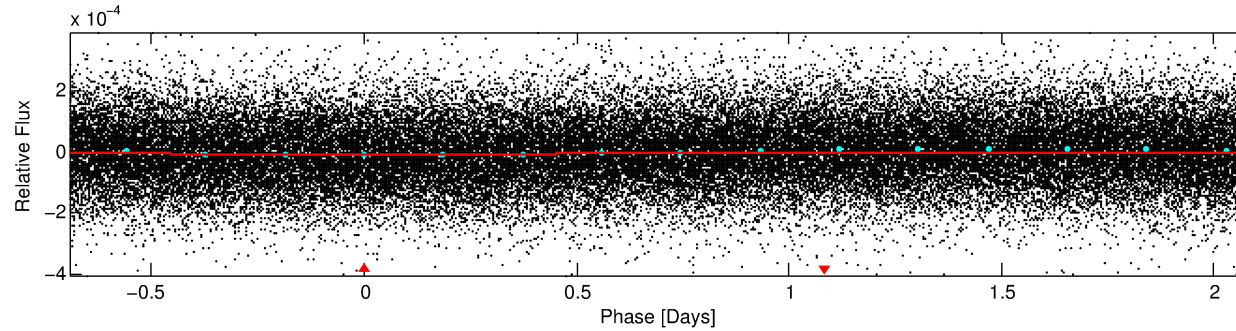
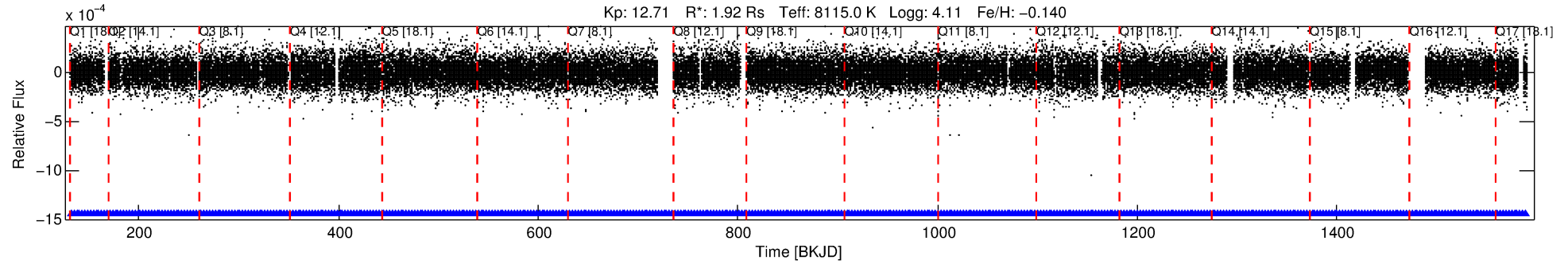
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008959745-01

No Significant Match Found

DV One-Page Summary

KIC: 8959745 Candidate: 1 of 1 Period: 2.774 d



DV Fit Results:

Period = 2.77431 [0.00007] d
Epoch = 132.4213 [0.0141] BKJD
Rp/R* = 0.0030 [0.0023]
a/R* = 1.11 [0.95]
b = 0.54 [5.93]
Seff = 6673.36 [2217.43]
Teq = 2305 [191] K
Rp = 0.64 [0.50] Re
a = 0.0464 [0.0090] AU
Ag = N/A
Teffp = N/A

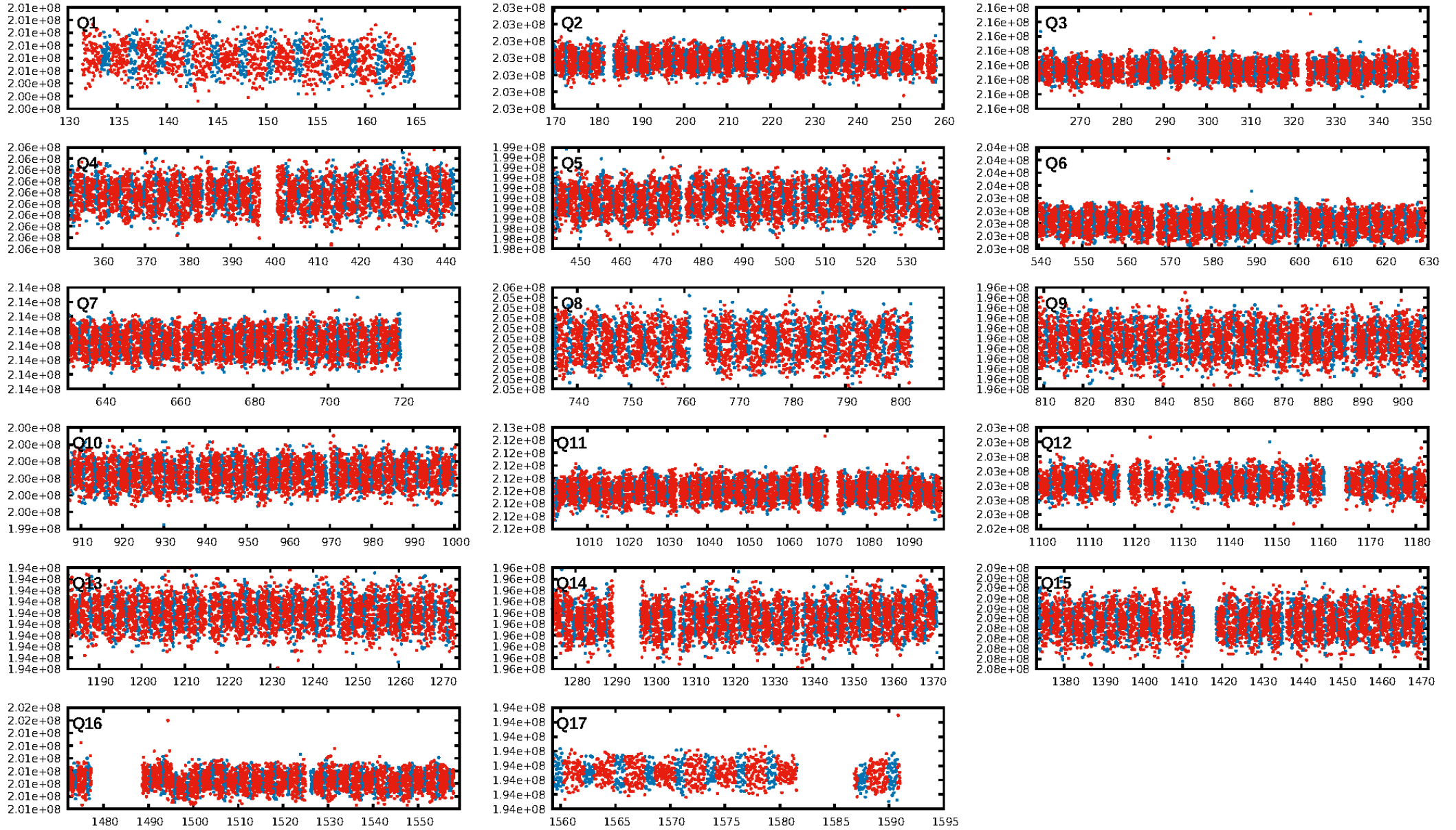
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [475/475]
GhostDiagnostic-chr: 3.49
Centroid-sig: 27.0%
Centroid-so: 1.231 arcsec [1.21σ]
OotOffset-rm: 1.789 arcsec [0.73σ]
KicOffset-rm: 1.741 arcsec [1.14σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [17/17]

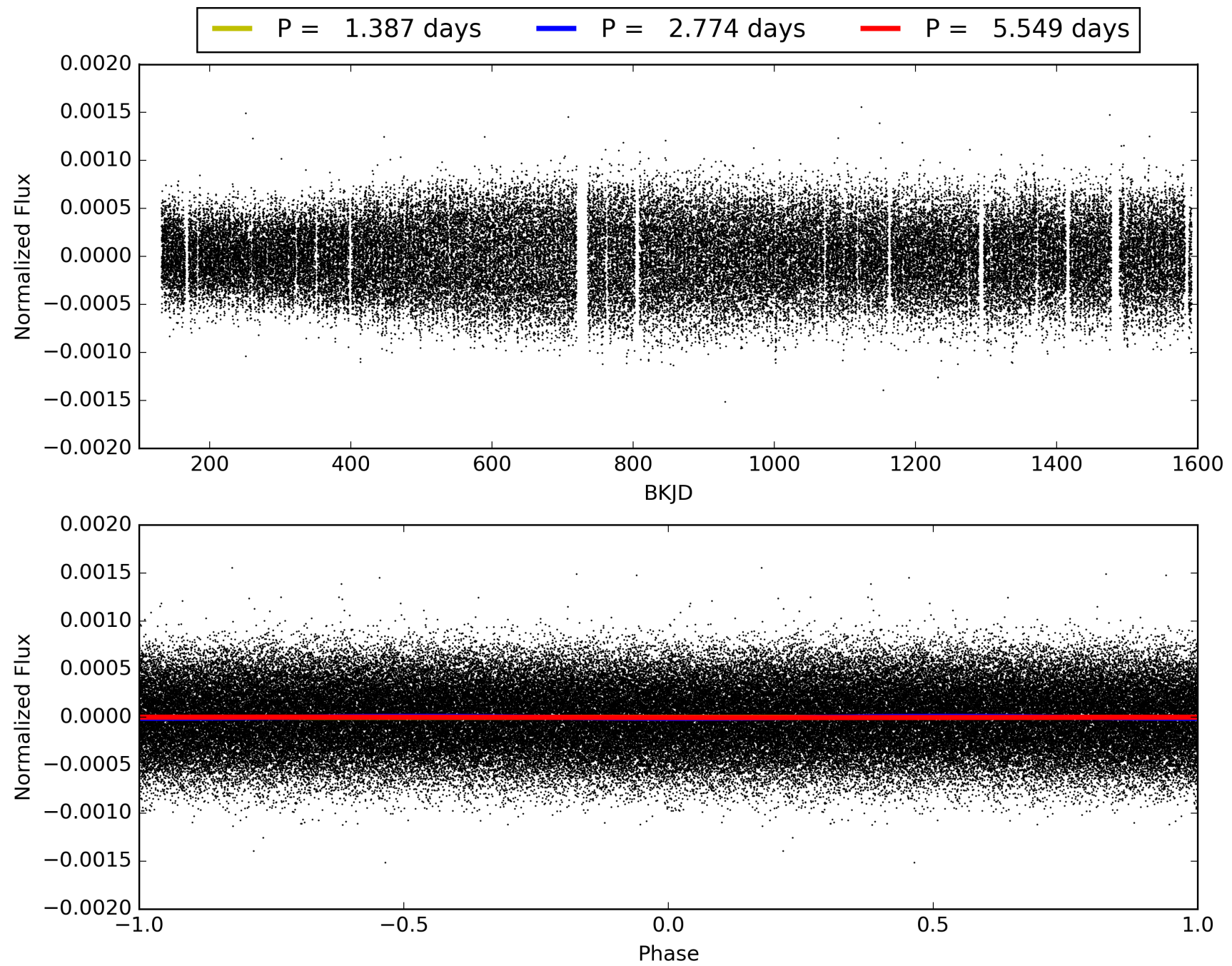
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:45:12 Z

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

TCE 008959745-01, PDC Light Curves

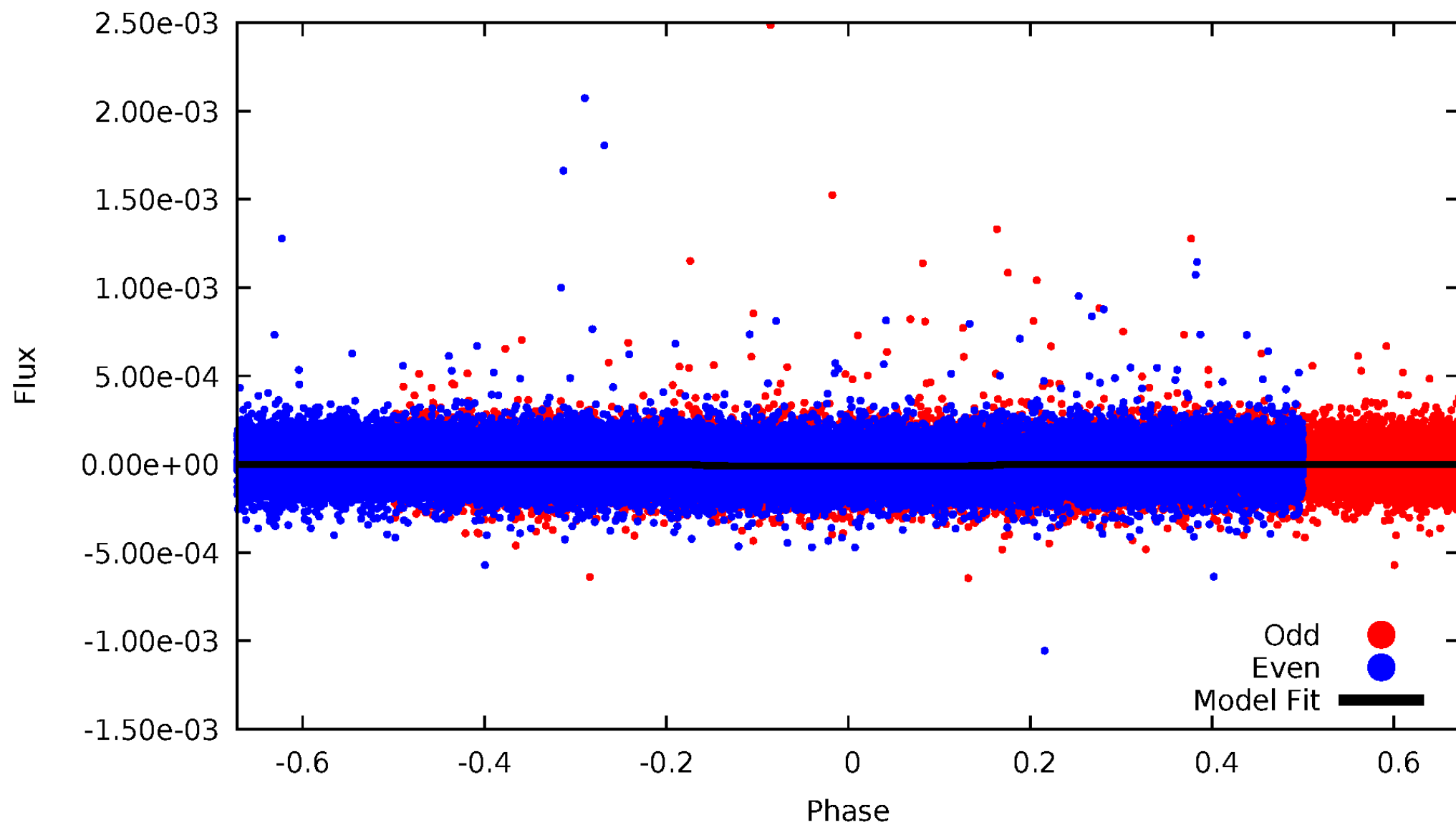


TCE 008959745-01



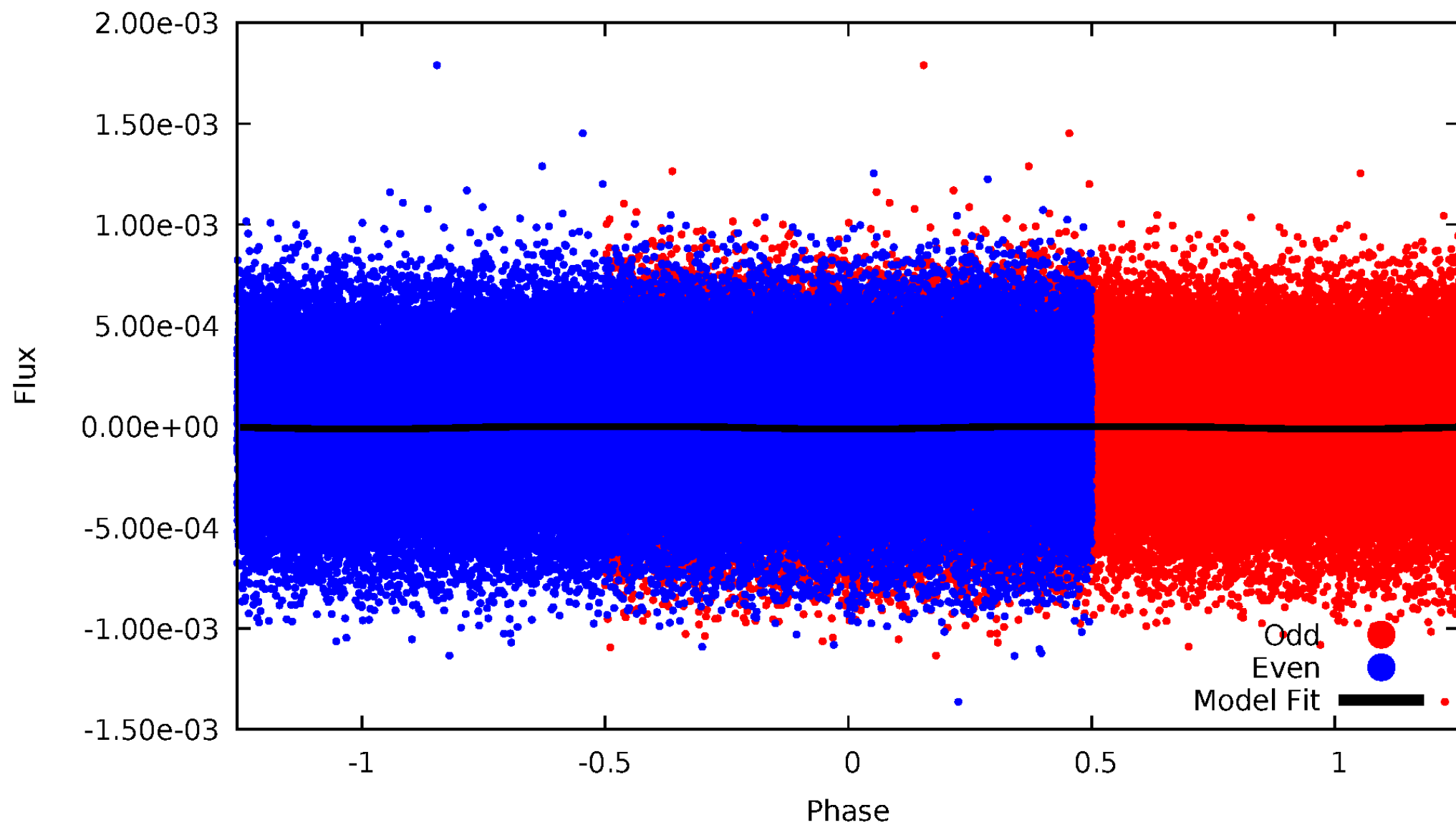
DV Odd/Even

TCE 008959745-01

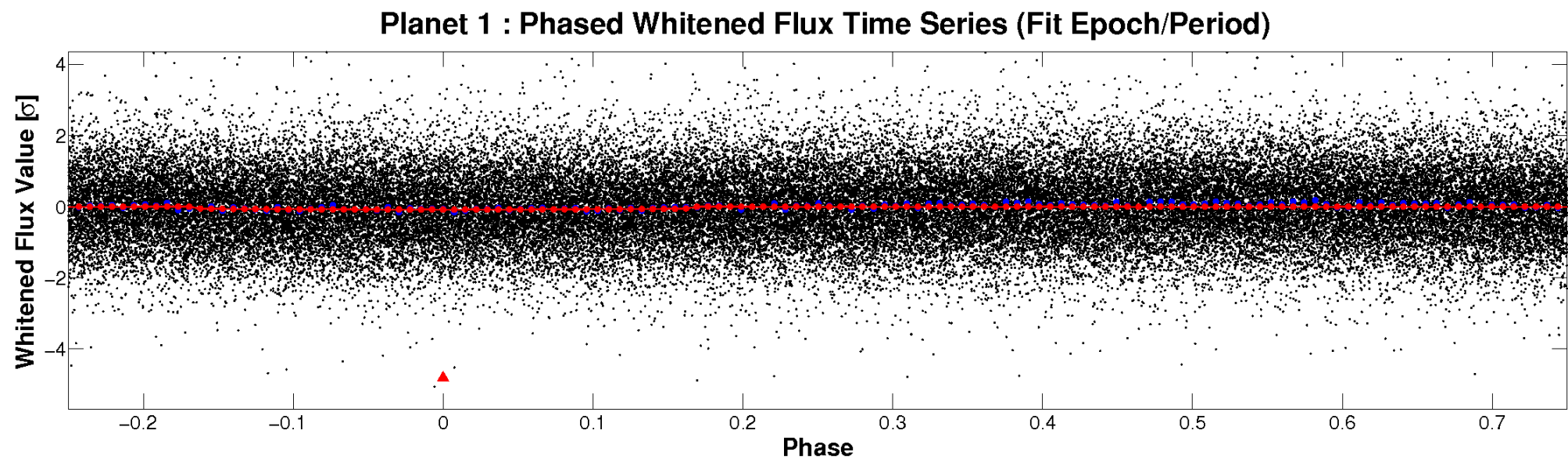
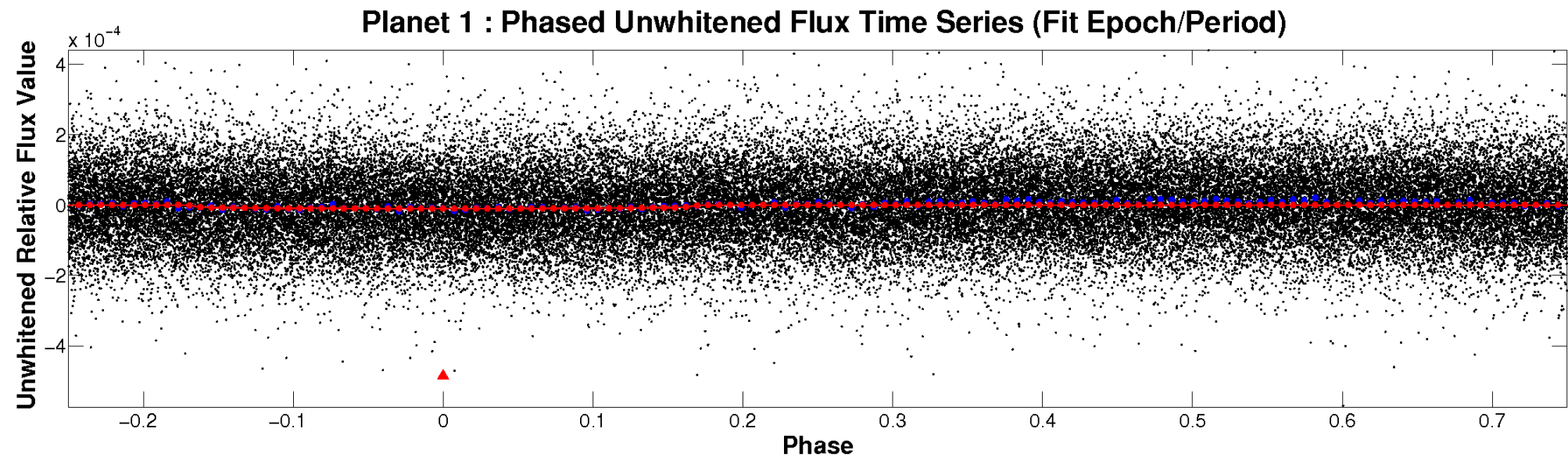


ALT Odd/Even

TCE 008959745-01

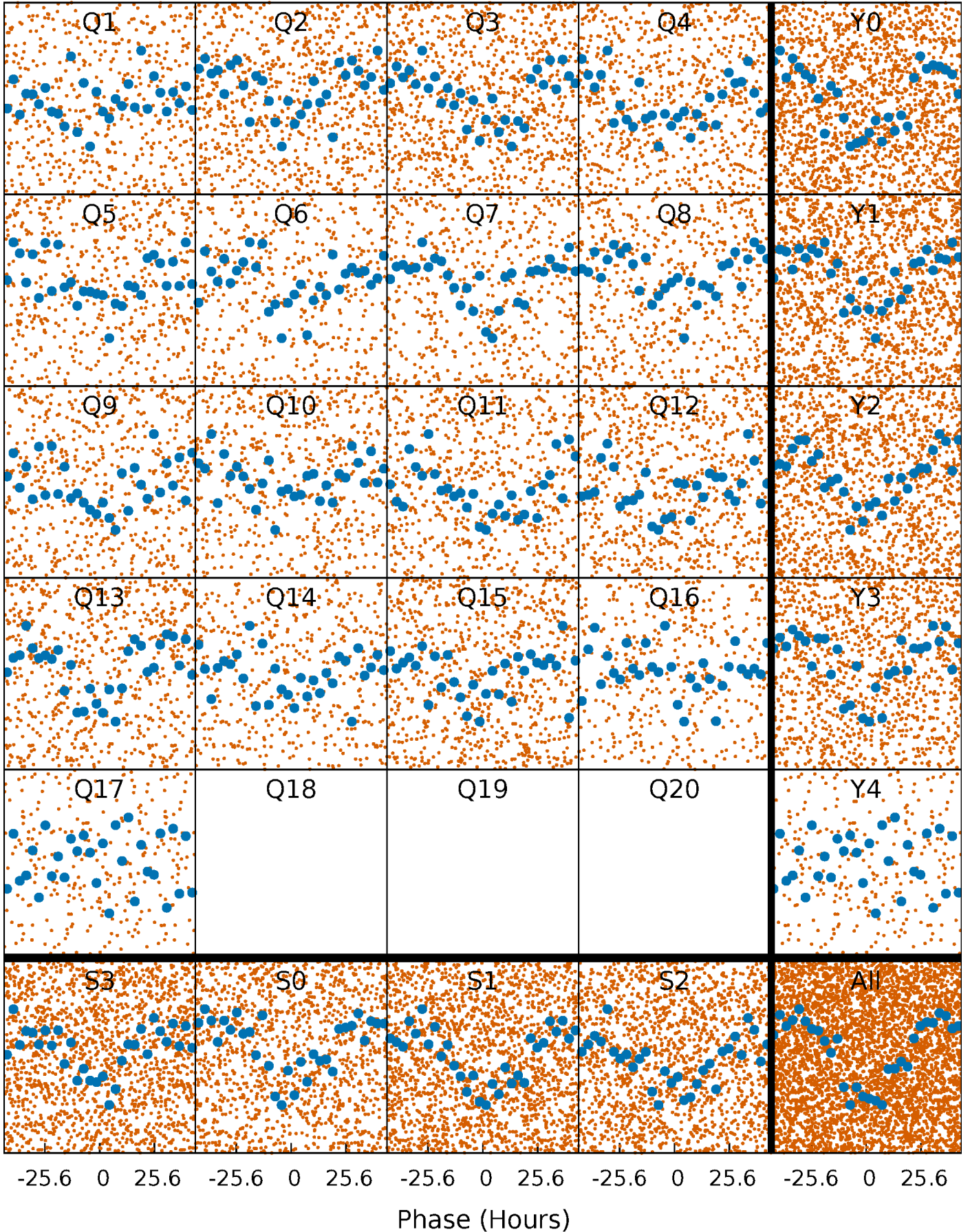


Non-Whitened Vs. Whitened Light Curve



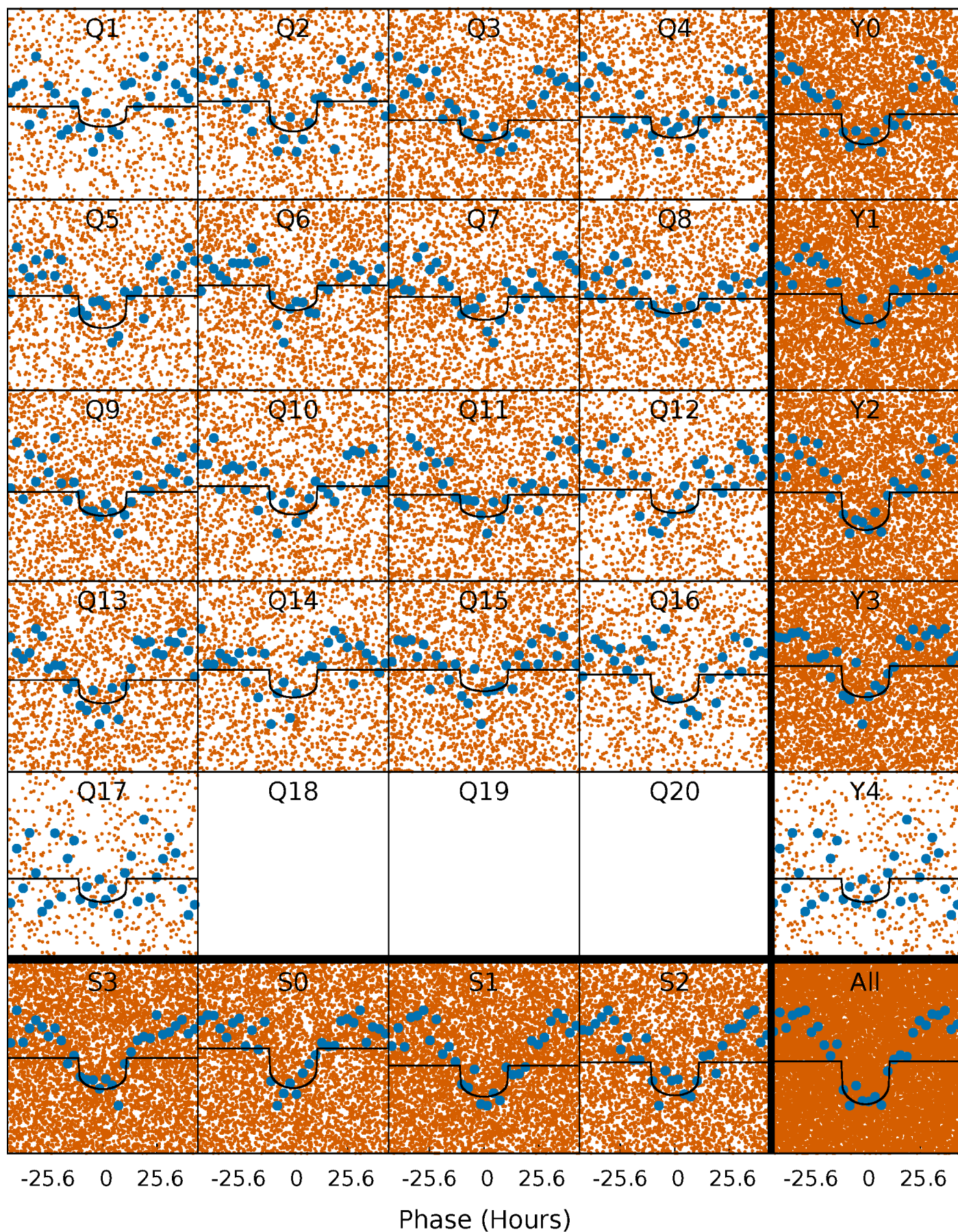
PDC Quarter-Phased Transit Curves

TCE 008959745-01 P= 2.774308 Days $T_0=132.421299$ (BKJD)



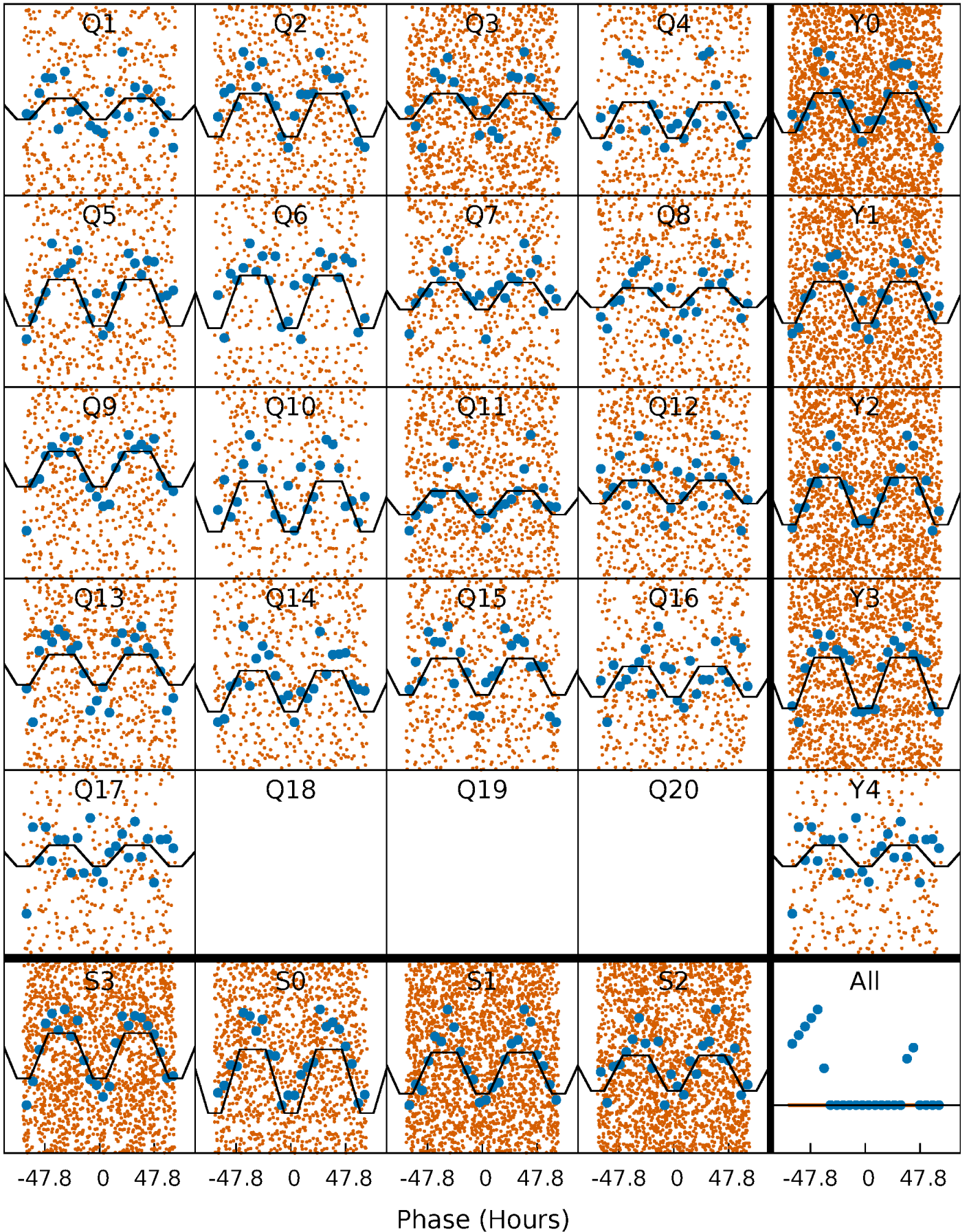
DV Quarter-Phased Transit Curves

TCE 008959745-01 P= 2.774308 Days $T_0=132.421299$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

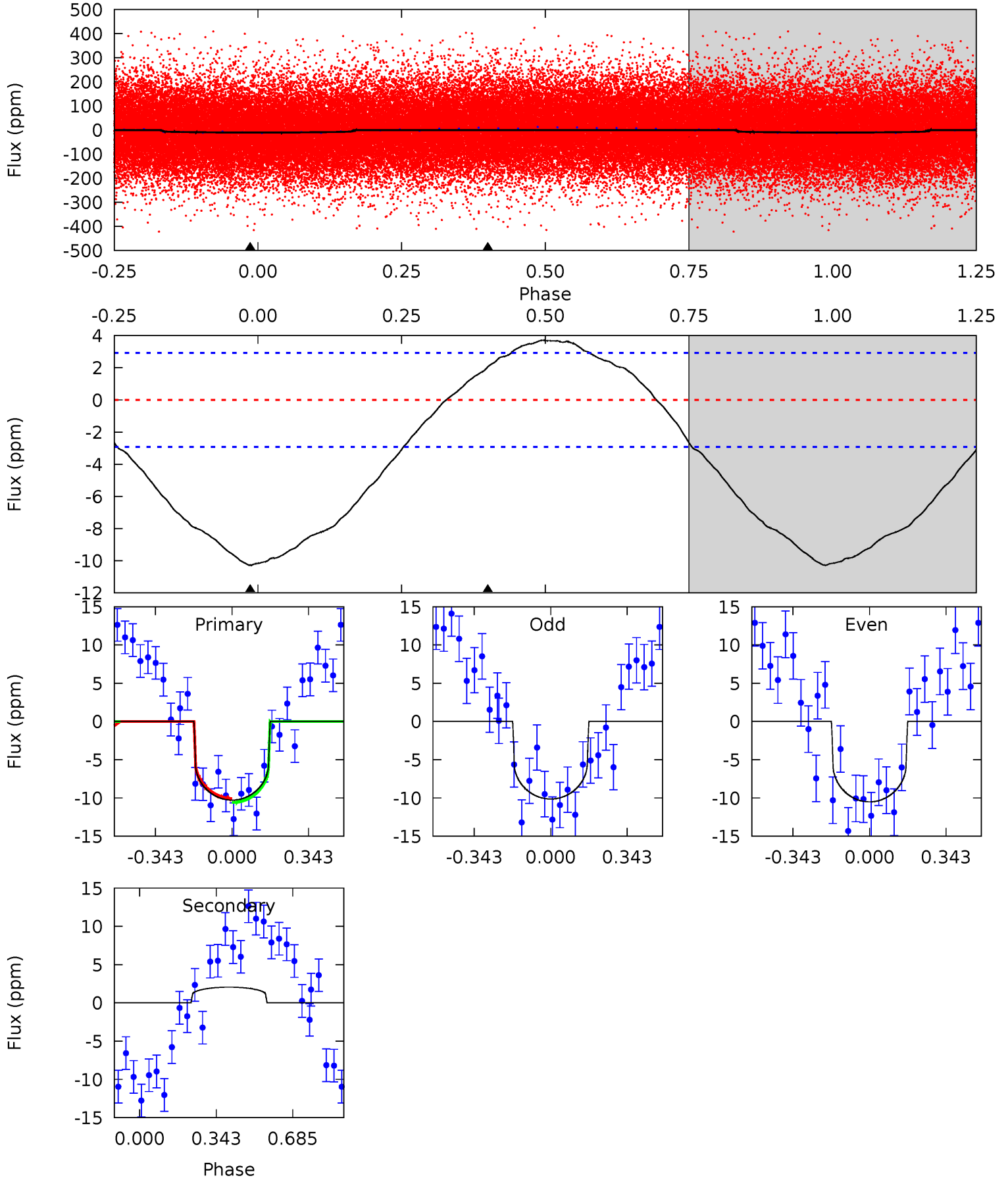
TCE 008959745-01 P= 2.774130 Days $T_0=132.458302$ (BKJD)



DV Model-Shift Uniqueness Test

008959745-01, P = 2.774308 Days, E = 129.646991 Days

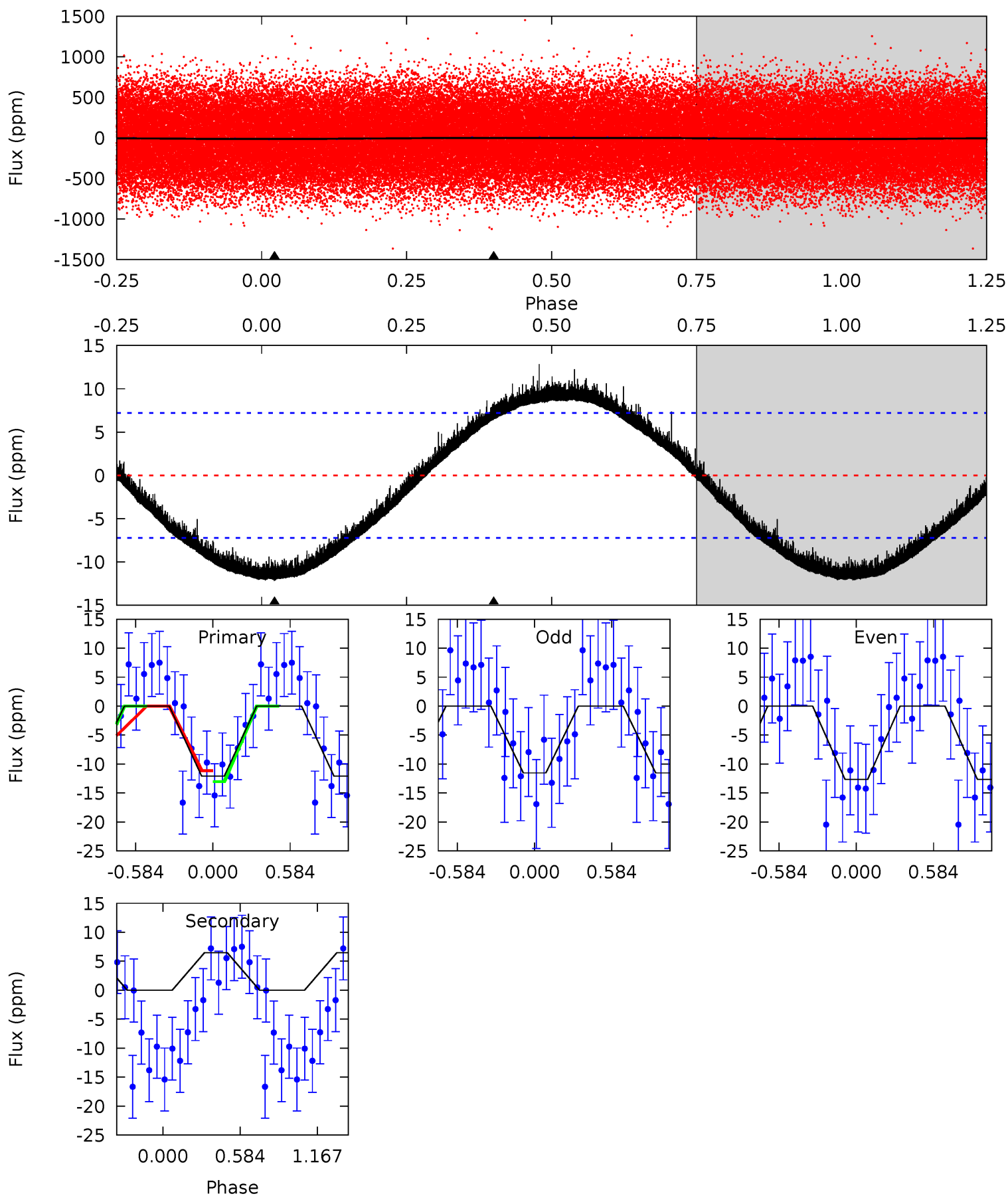
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	-3.02	0	0	4.30	0.95	1.79	15.1	15.1	-3.02	-3.02	0.27	0.76	0.27	0.39



Alt Model-Shift Uniqueness Test

008959745-01, P = 2.774130 Days, E = 129.684172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.01	-3.76	0	0	4.18	0.55	1.17	7.01	7.01	-3.76	-3.76	0.33	0.99	0.51	0.55



Stellar Parameters For KIC 008959745

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8115^{+225}_{-338}	$4.108^{+0.145}_{-0.159}$	$-0.140^{+0.200}_{-0.350}$	$1.922^{+0.438}_{-0.395}$	$1.729^{+0.155}_{-0.288}$	$0.343^{+0.259}_{-0.147}$
	+3%/-4%	+4%/-4%	+143%/-250%	+23%/-21%	+9%/-17%	+76%/-43%
Source	KIC0	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 008959745-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 1	$0.65^{+0.49}_{-0.36}$	3221^{+208}_{-208}	-5328^{+1018}_{-2858}	$-5.301^{+3.754}_{-21.059}$
Alt.	6 ± 2	$0.76^{+0.49}_{-0.41}$	3220^{+220}_{-210}	-6573^{+1330}_{-4388}	$-12.755^{+8.244}_{-48.051}$

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

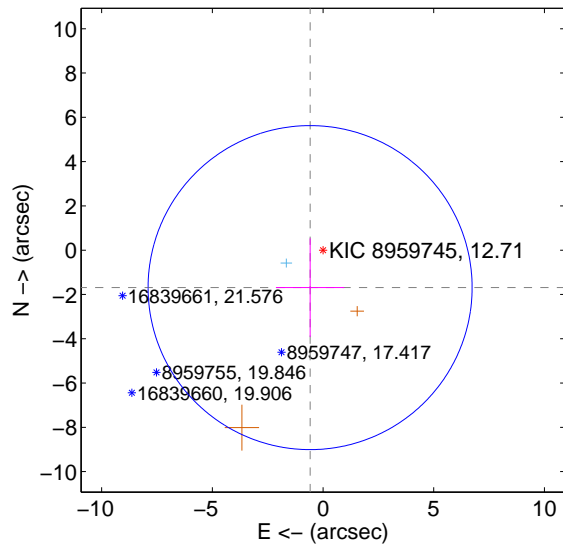
Supplemental centroid analysis for 008959745-01. Kepler magnitude: 12.71. Transit SNR 10.97

There are 1 quarters with good PRF difference image offsets

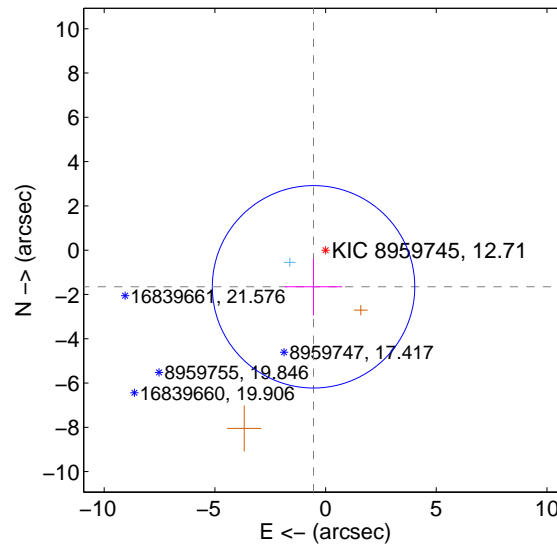
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.789 ± 2.439	0.73	0.584 ± 1.544	-1.691 ± 2.227
PRF-fit source offset from KIC position	1.741 ± 1.524	1.14	0.544 ± 1.297	-1.654 ± 1.293
photometric centroid source offset	1.23 ± 1.02	1.21	1.16 ± 1.01	0.40 ± 1.10

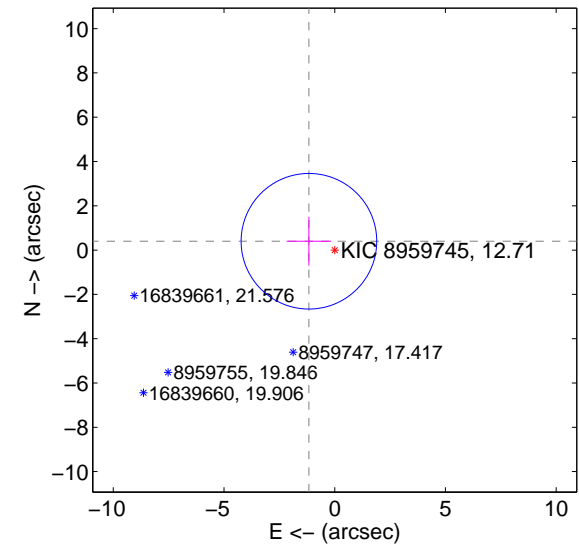
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

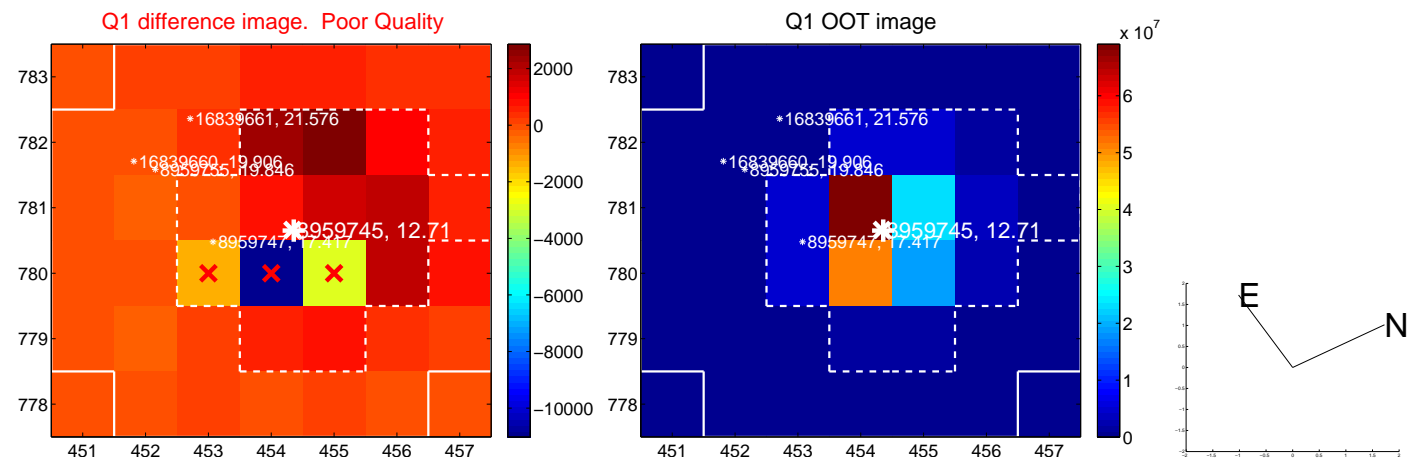


offset from photometric centroids

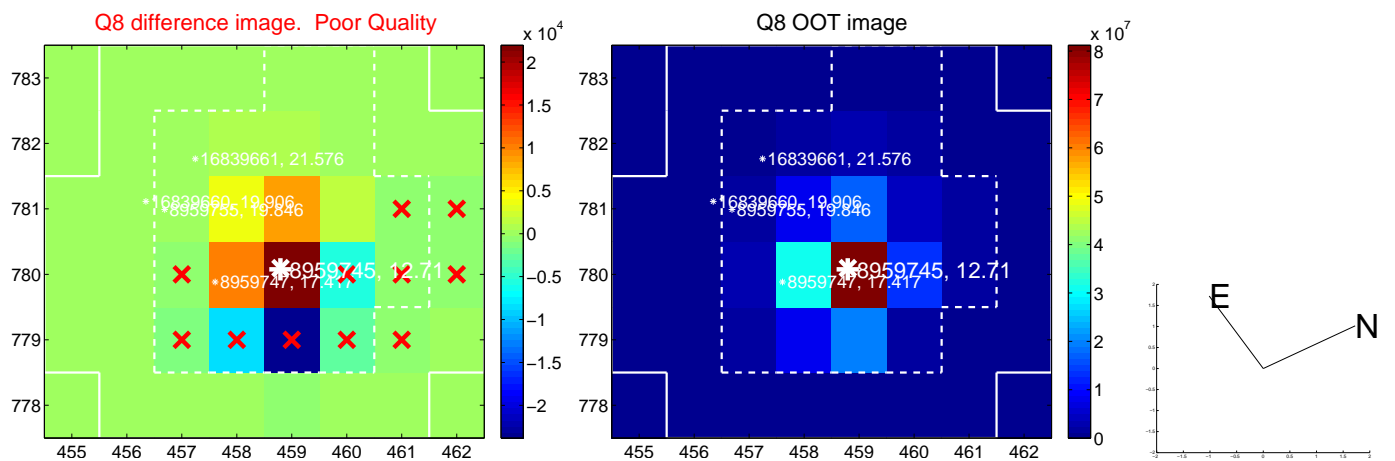
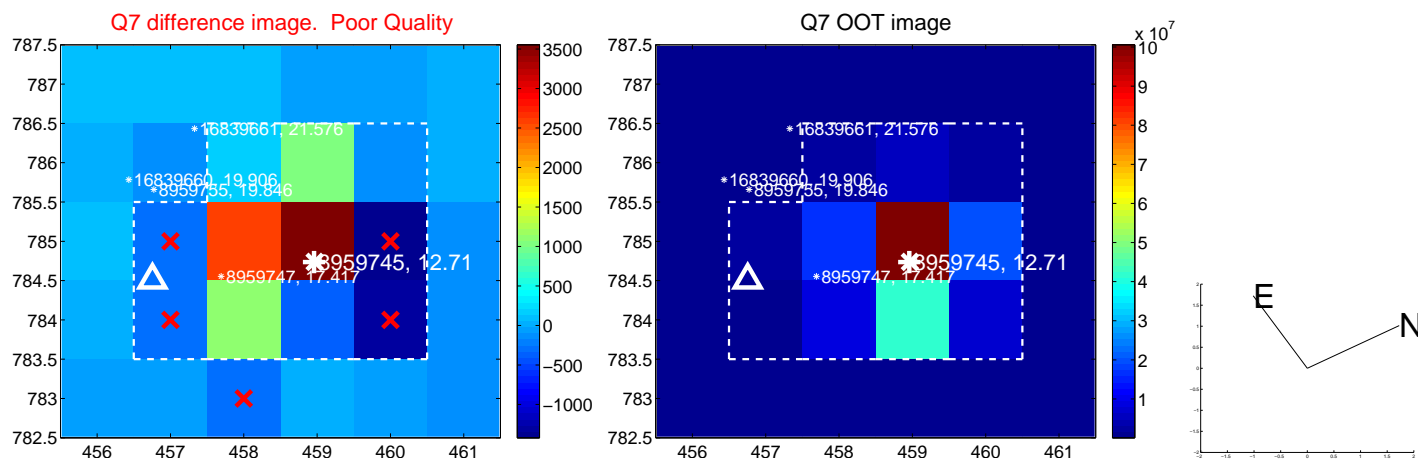
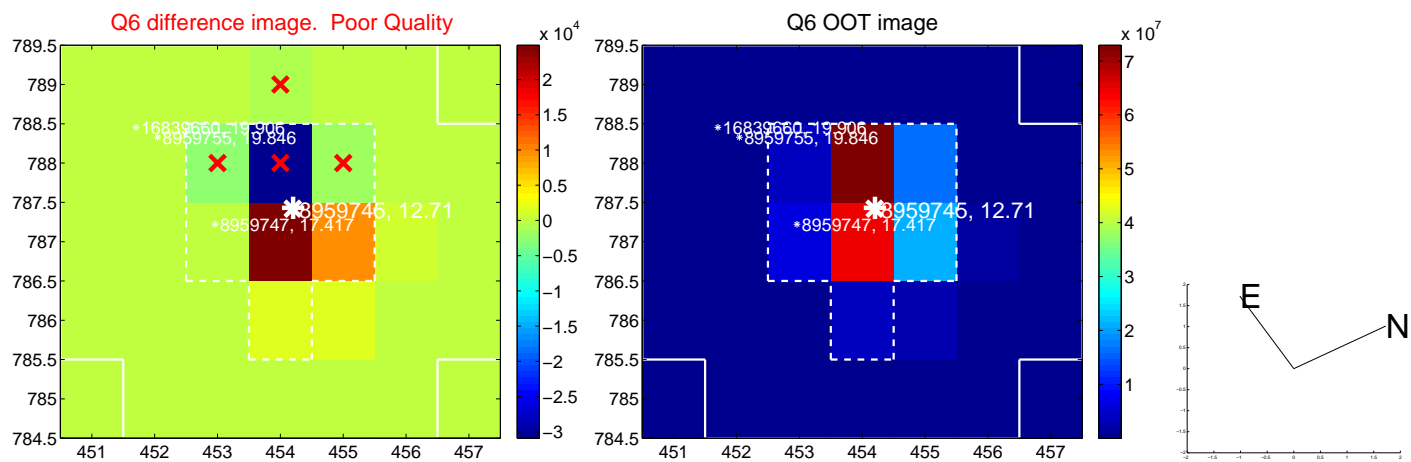
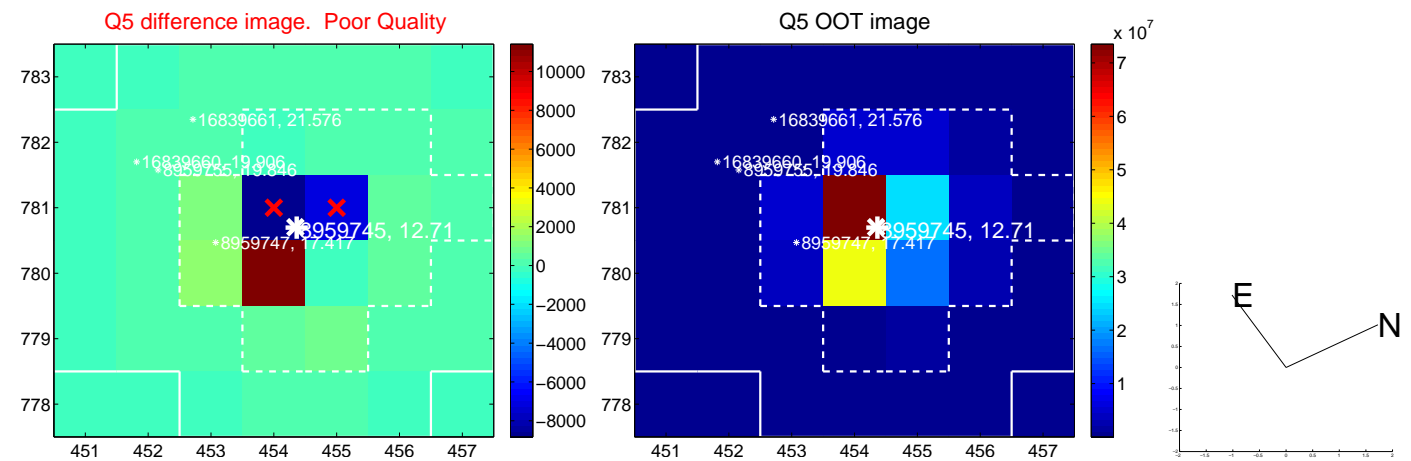


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

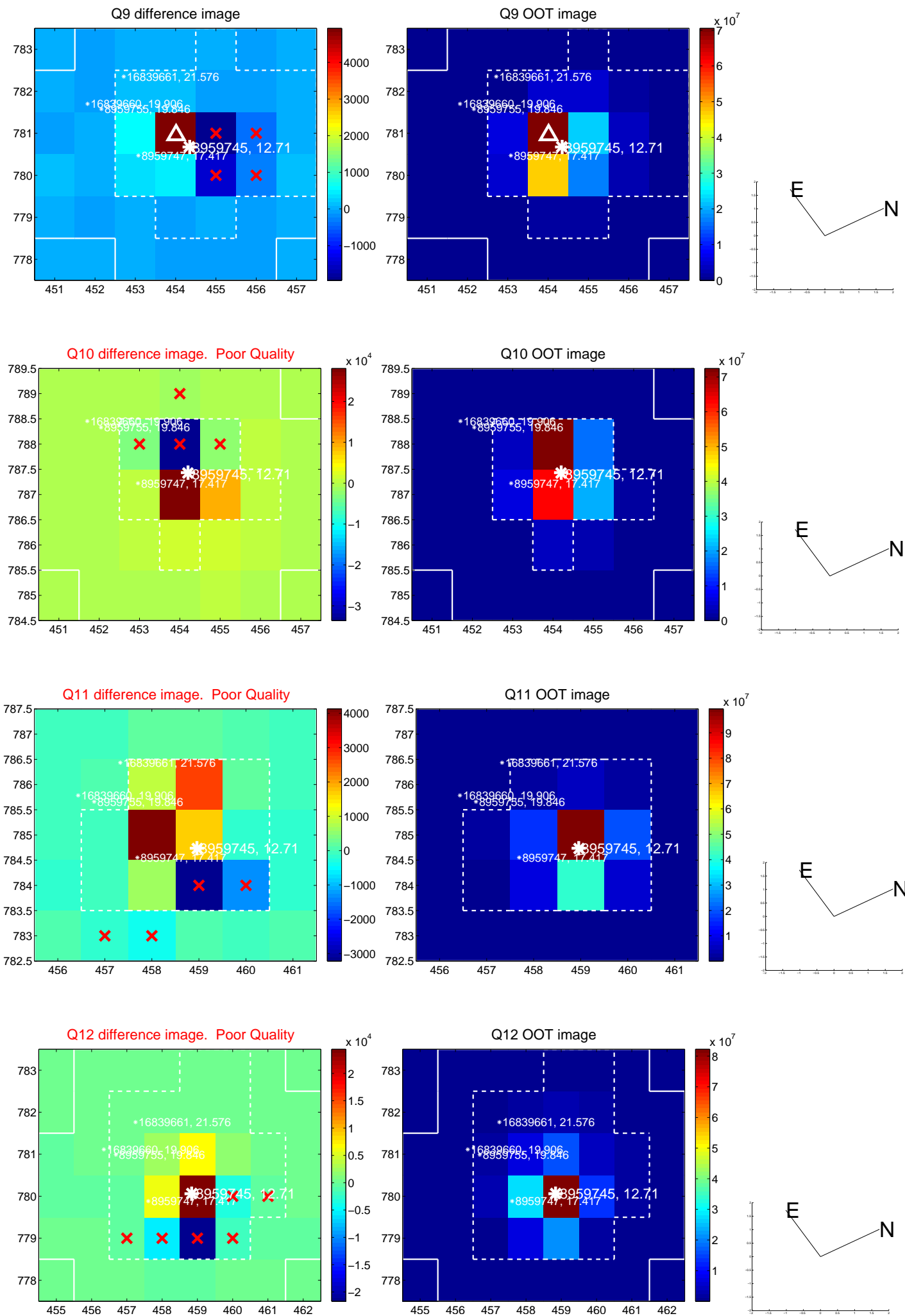
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



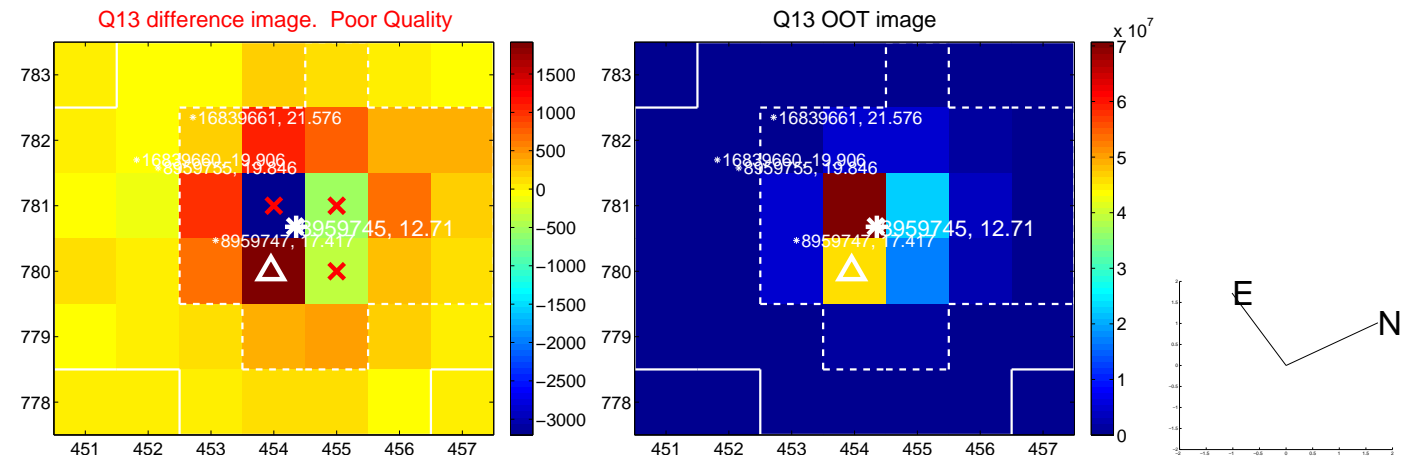
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



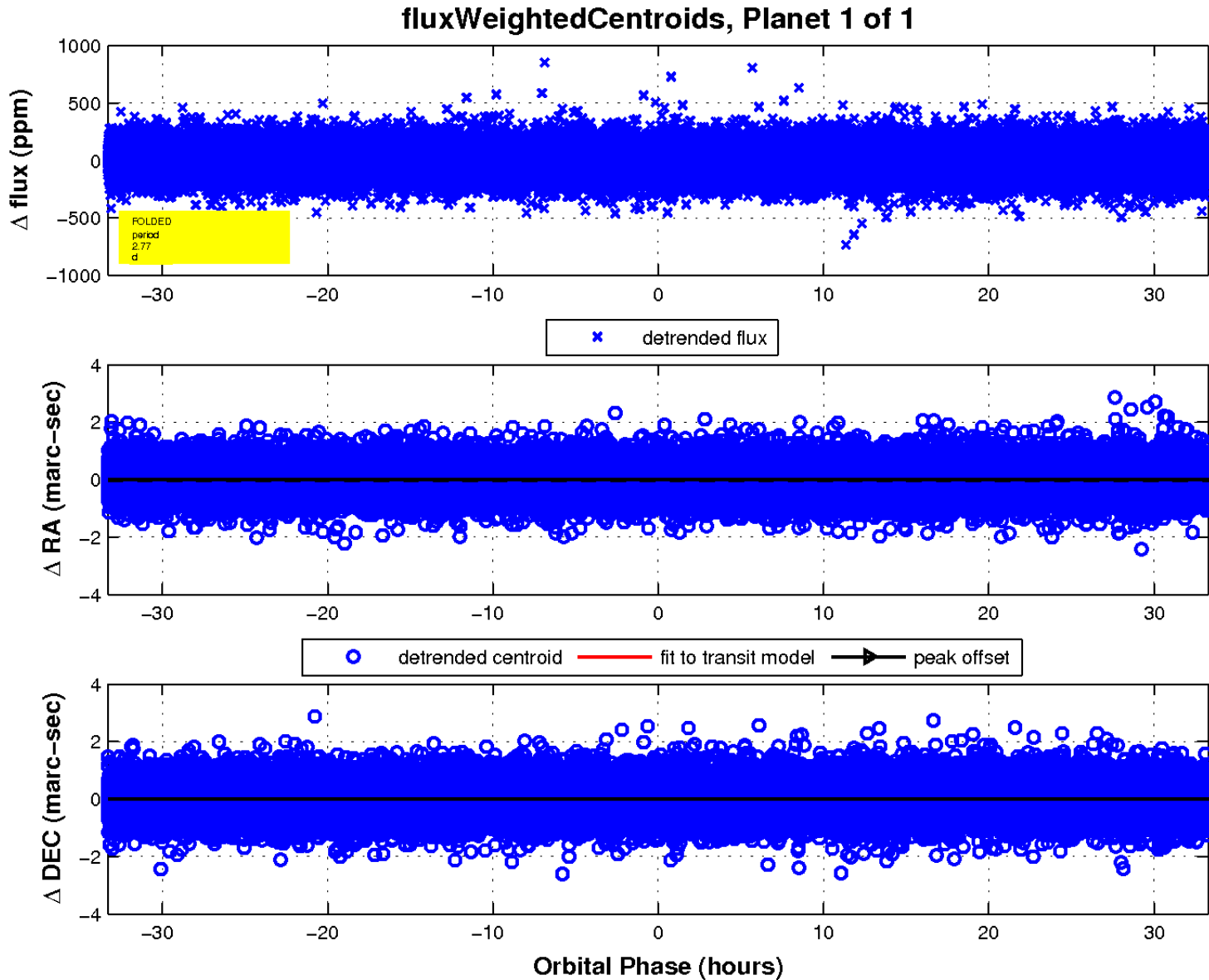
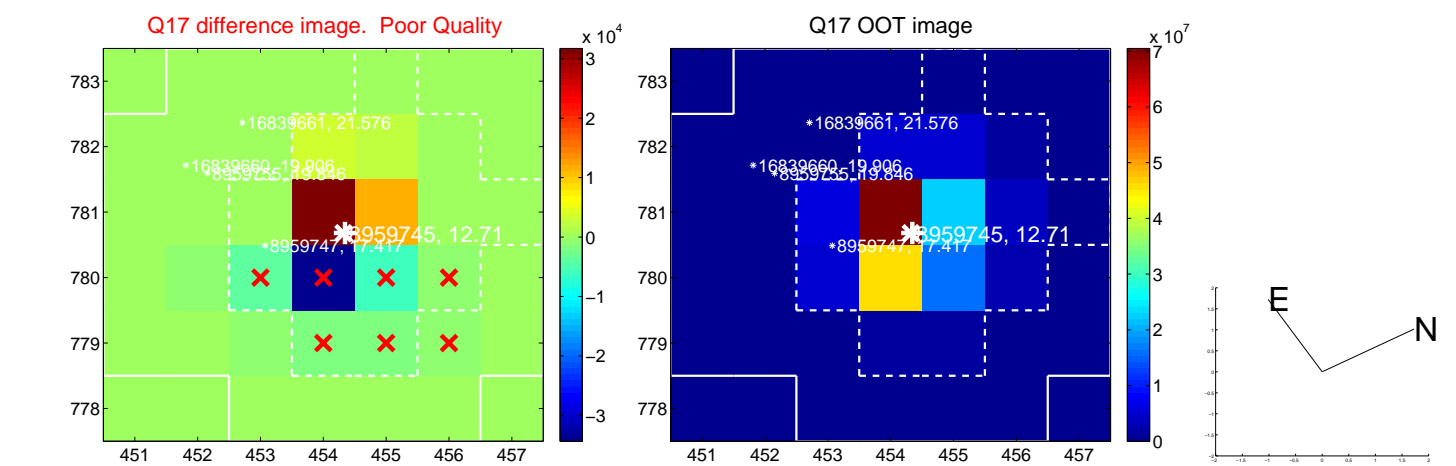
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UKIRT Image

Declination

