

KIC 010549643

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})
010549643-01	OBS	No	0.572380	131.838308	12.9	2.199	8.3	9.9	2.18	7334	0.91	47356.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010549643-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

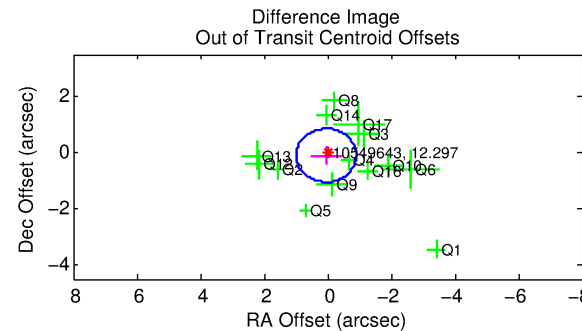
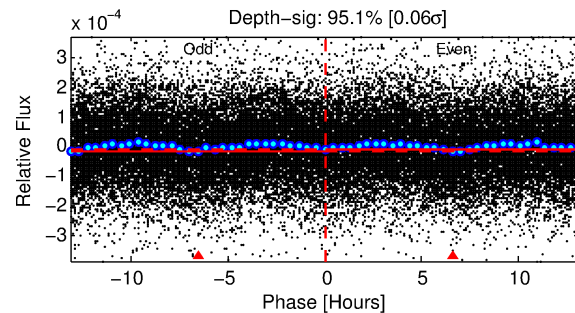
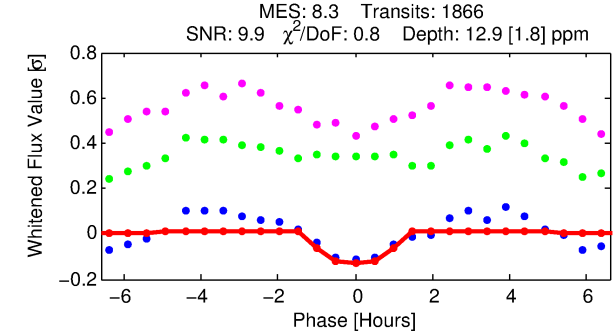
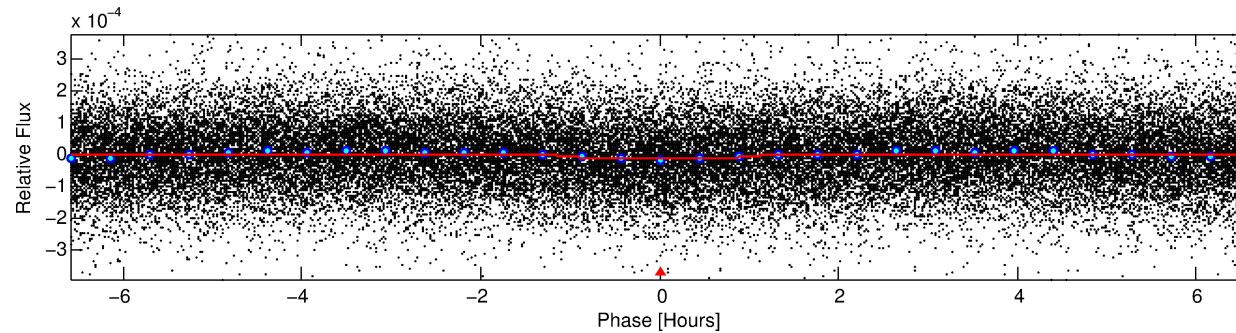
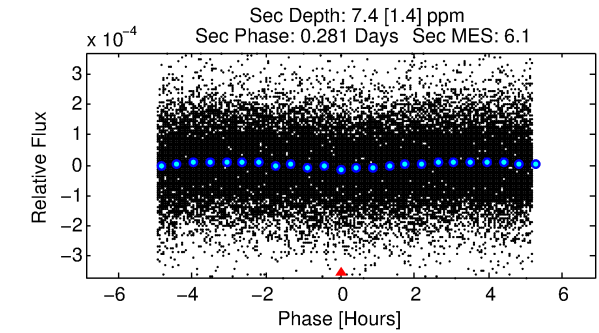
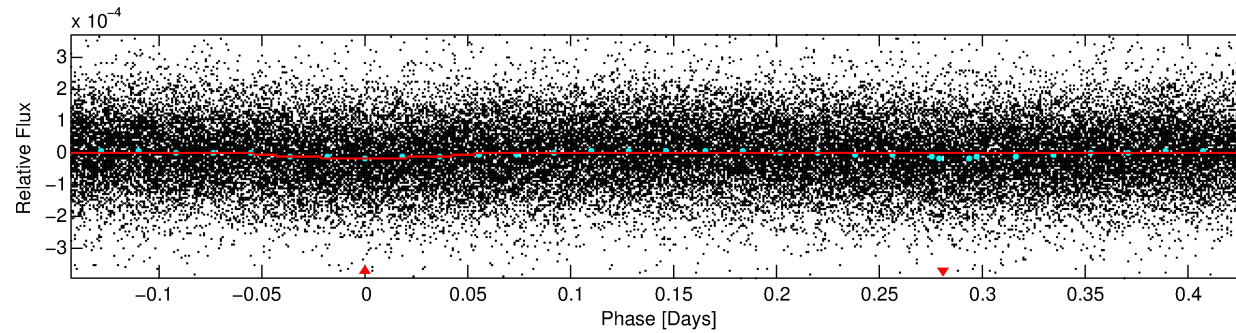
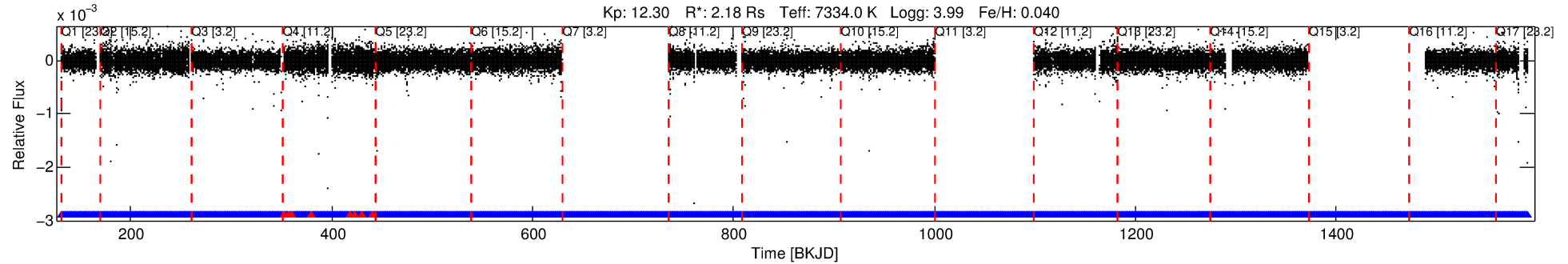
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010549643-01

No Significant Match Found

DV One-Page Summary

KIC: 10549643 Candidate: 1 of 1 Period: 0.572 d



DV Fit Results:

Period = 0.57238 [0.00001] d
Epoch = 131.8383 [0.0029] BKJD
Rp/R* = 0.0038 [0.0011]
a/R* = 1.29 [0.92]
b = 0.90 [0.38]
Seff = 47356.65 [10829.87]
Teq = 3762 [215] K
Rp = 0.91 [0.31] Re
a = 0.0162 [0.0025] AU
Ag = 1.29 [0.82] [0.36σ]
Teffp = 6202 [927] K [2.56σ]

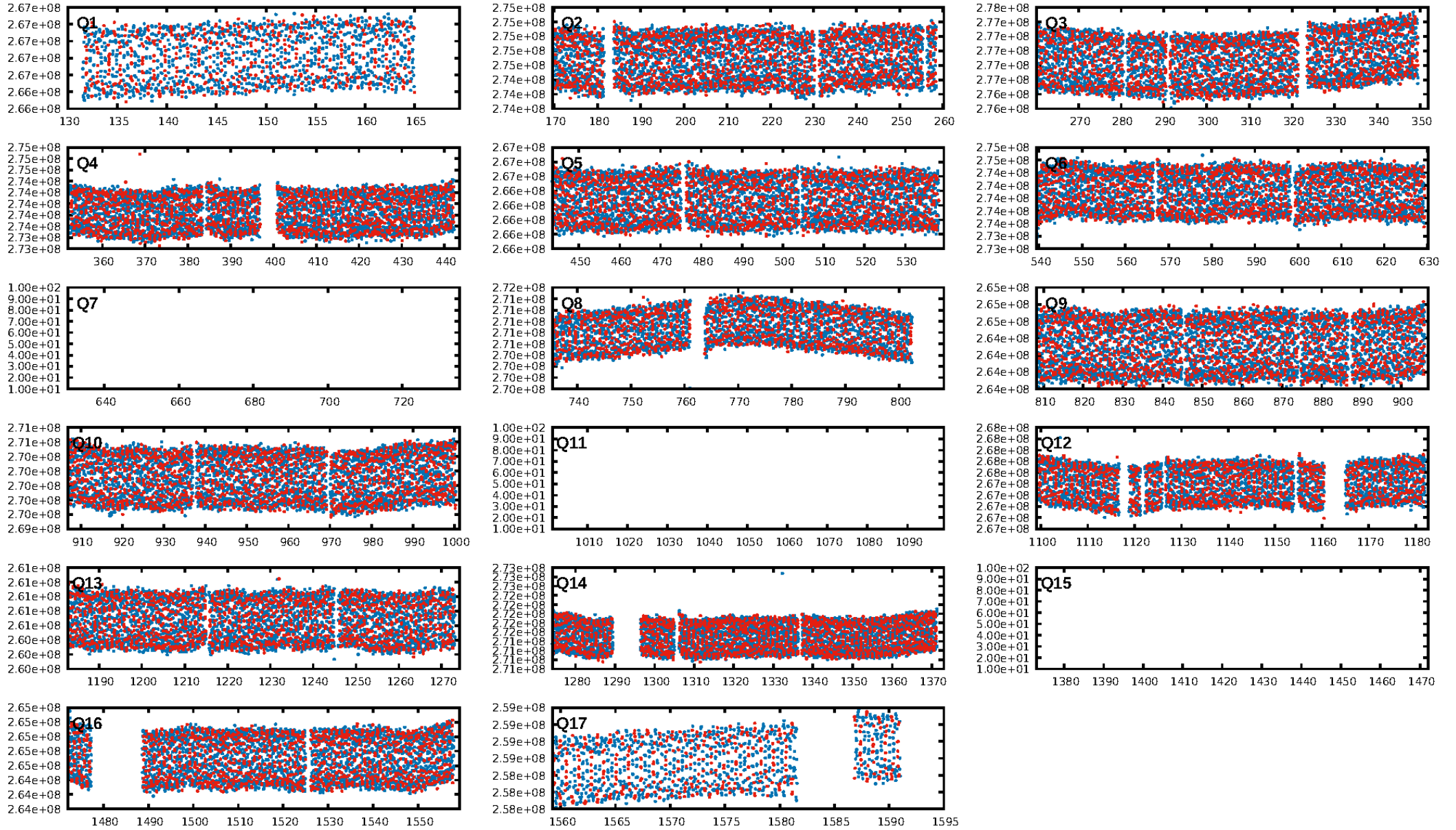
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.33e-13
RollingBand-fgt: 1.00 [1752/1760]
GhostDiagnostic-chr: 4.714
Centroid-sig: 0.9%
Centroid-so: 2.168 arcsec [2.32σ]
OotOffset-rm: 0.111 arcsec [0.35σ]
KicOffset-rm: 0.220 arcsec [0.60σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

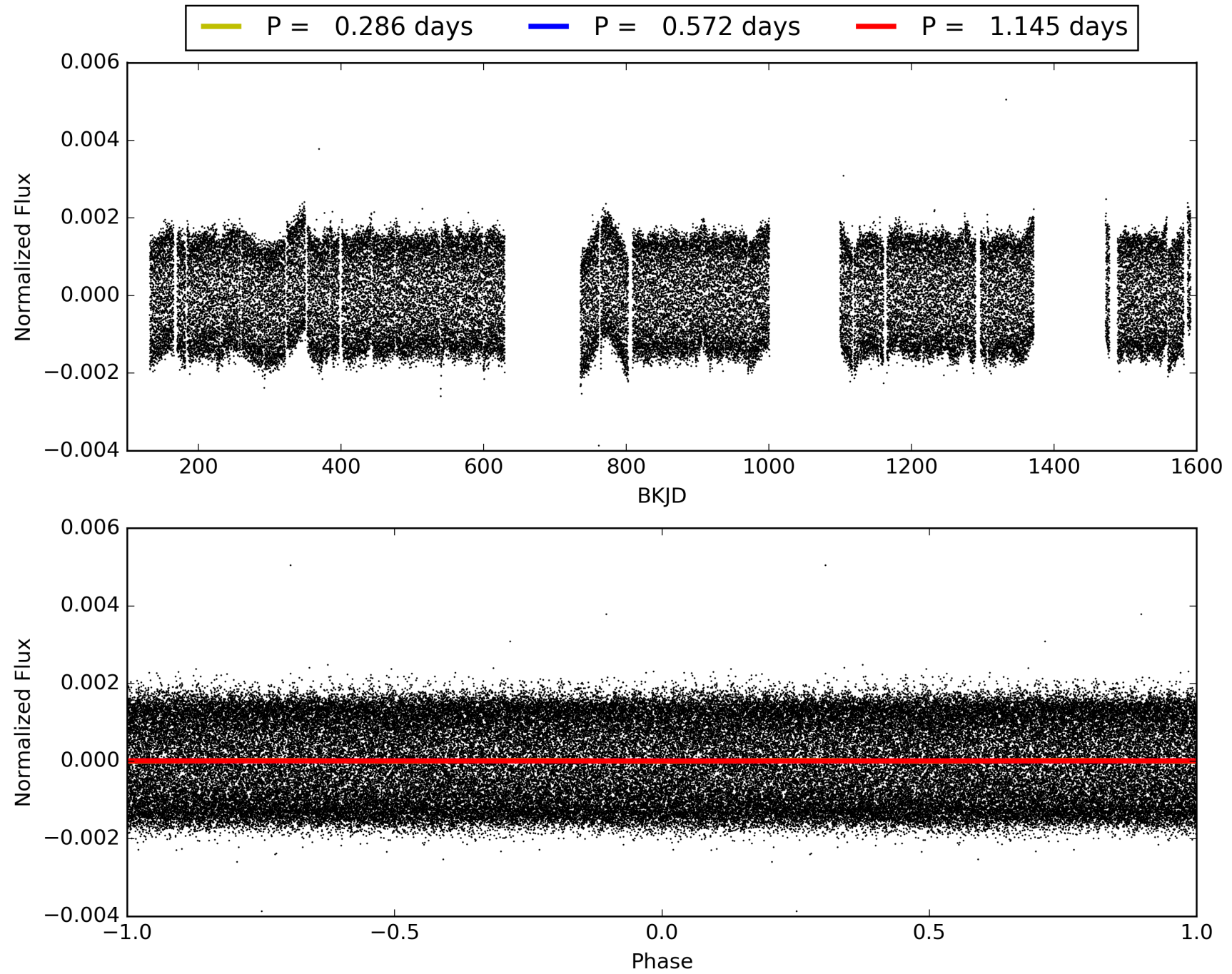
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:52:36 Z

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

TCE 010549643-01, PDC Light Curves

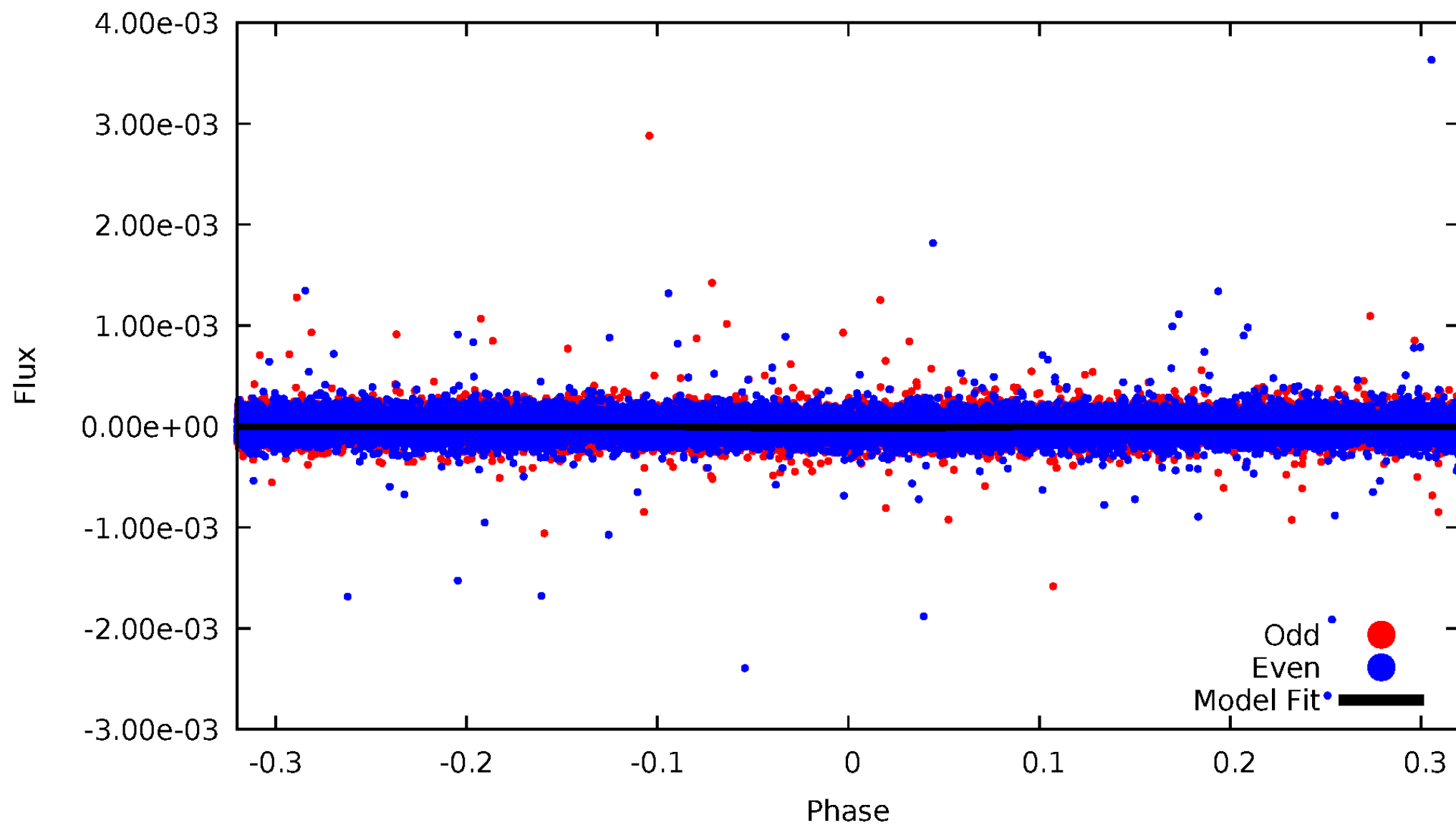


TCE 010549643-01



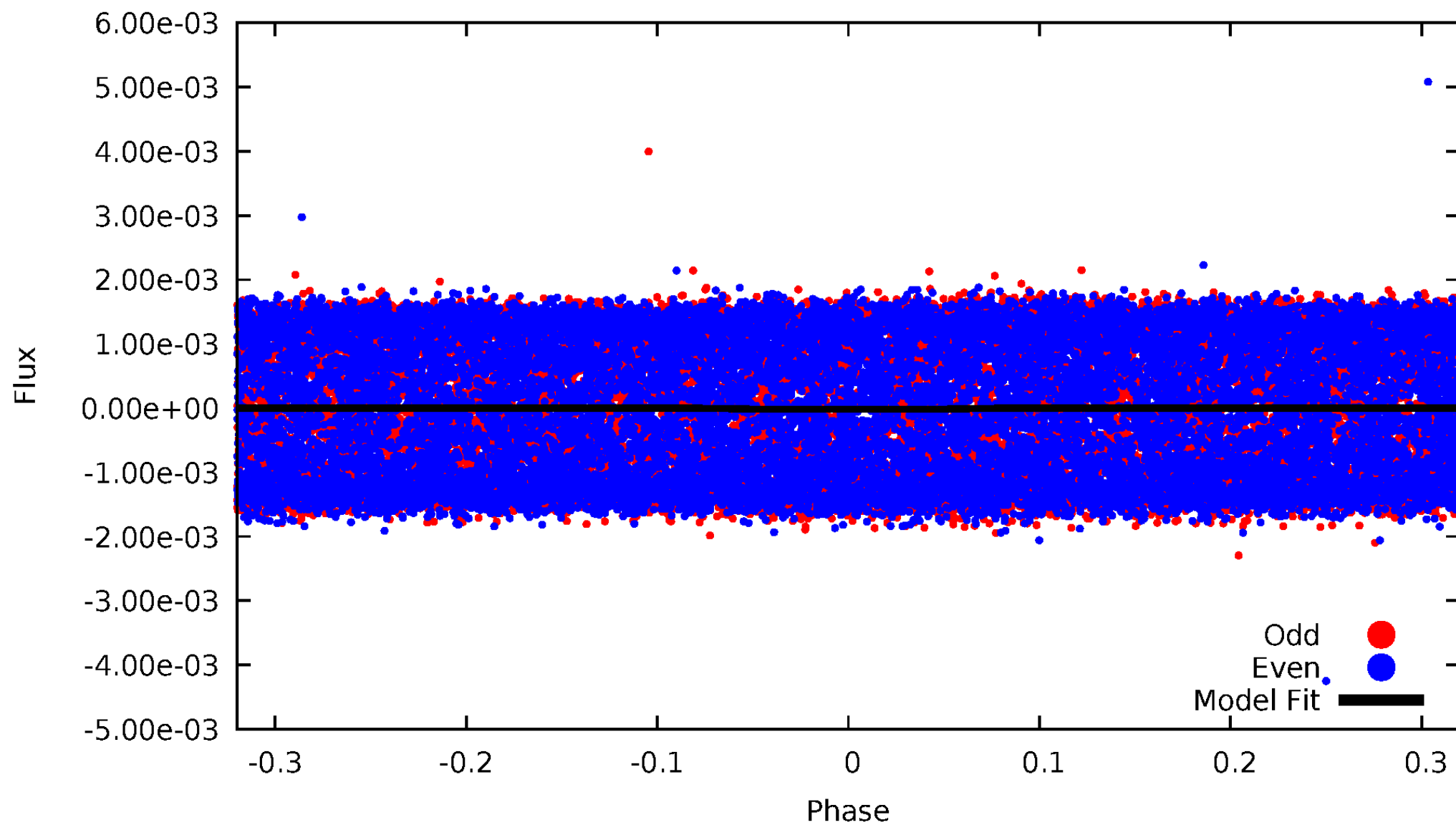
DV Odd/Even

TCE 010549643-01



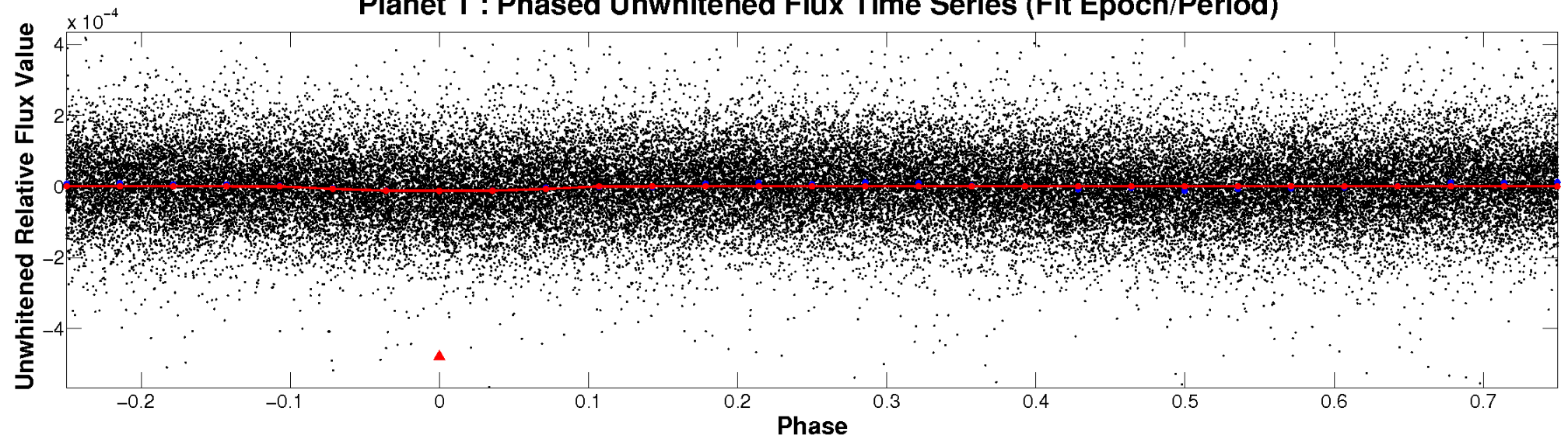
ALT Odd/Even

TCE 010549643-01

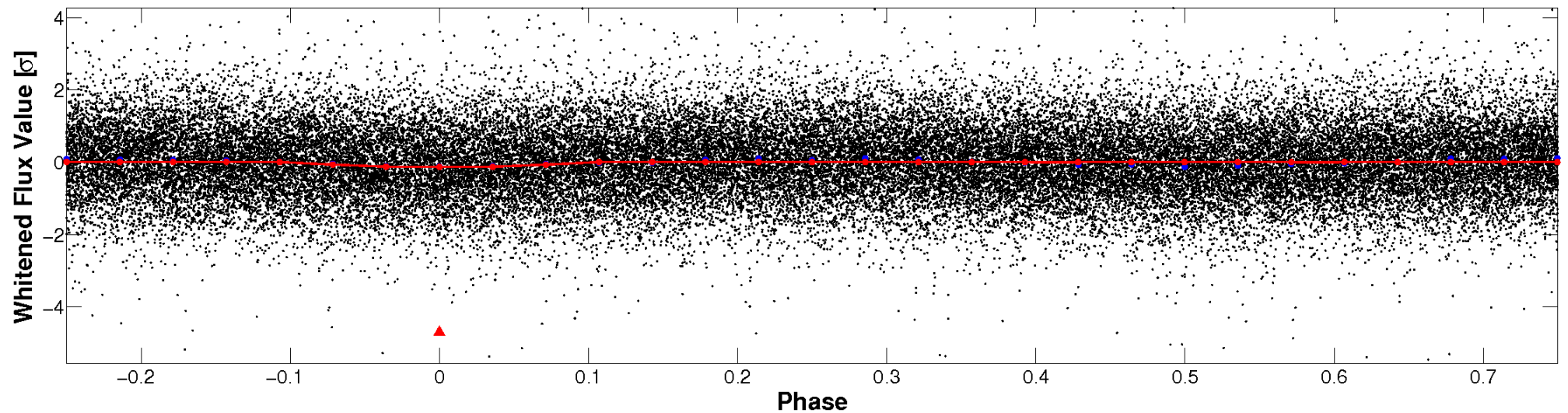


Non-Whitened Vs. Whitened Light Curve

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

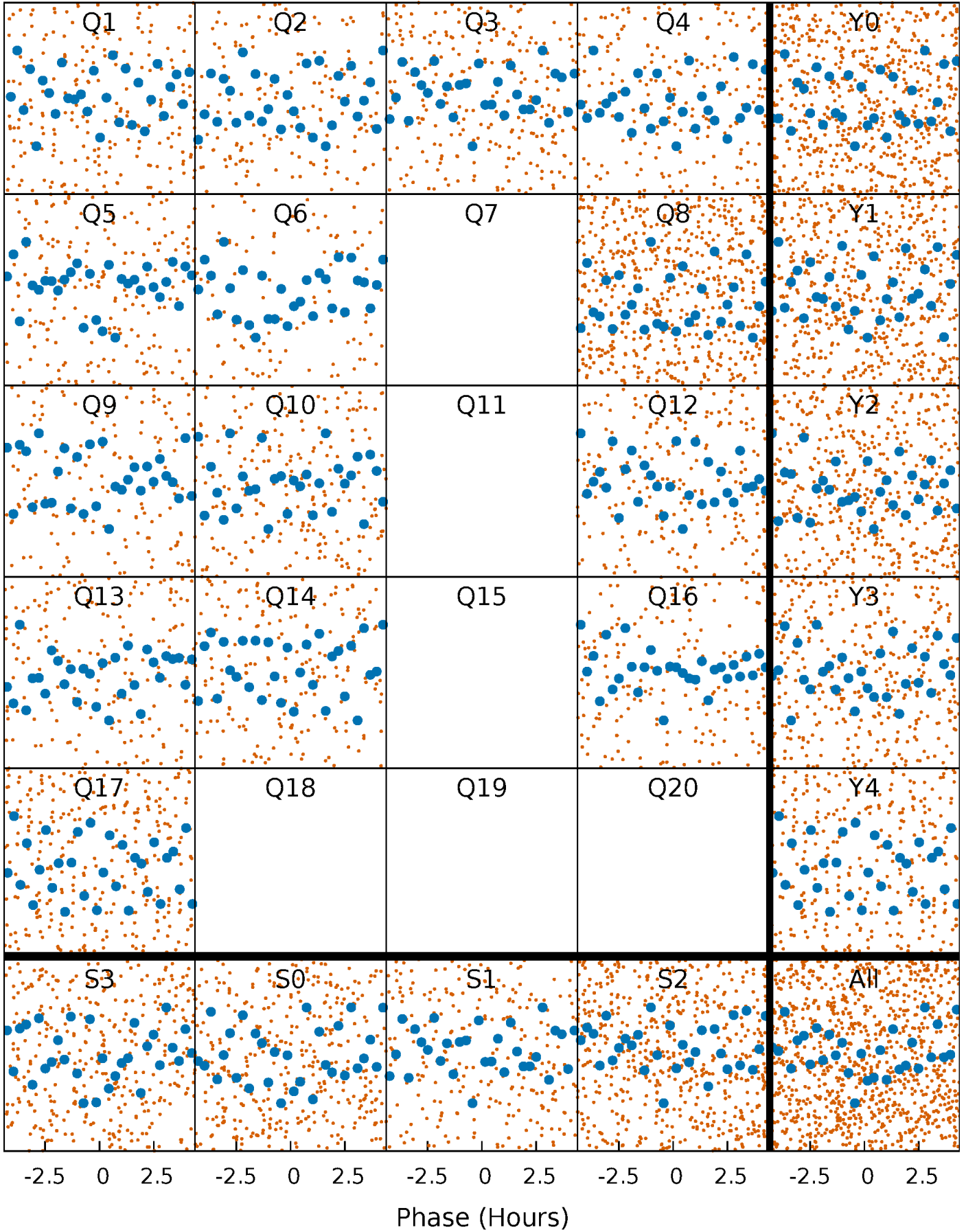


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



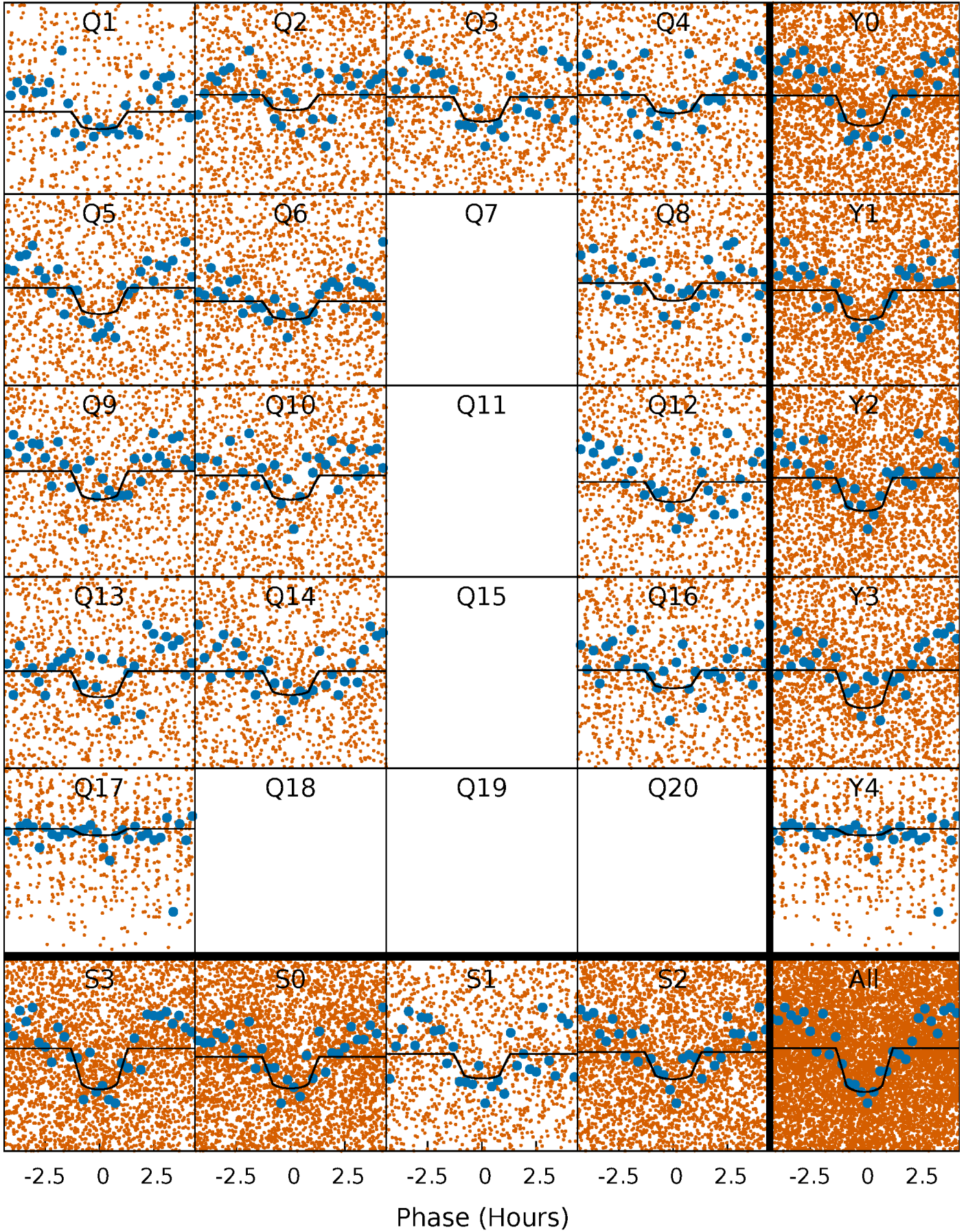
PDC Quarter-Phased Transit Curves

TCE 010549643-01 P= 0.572380 Days $T_0=131.838308$ (BKJD)



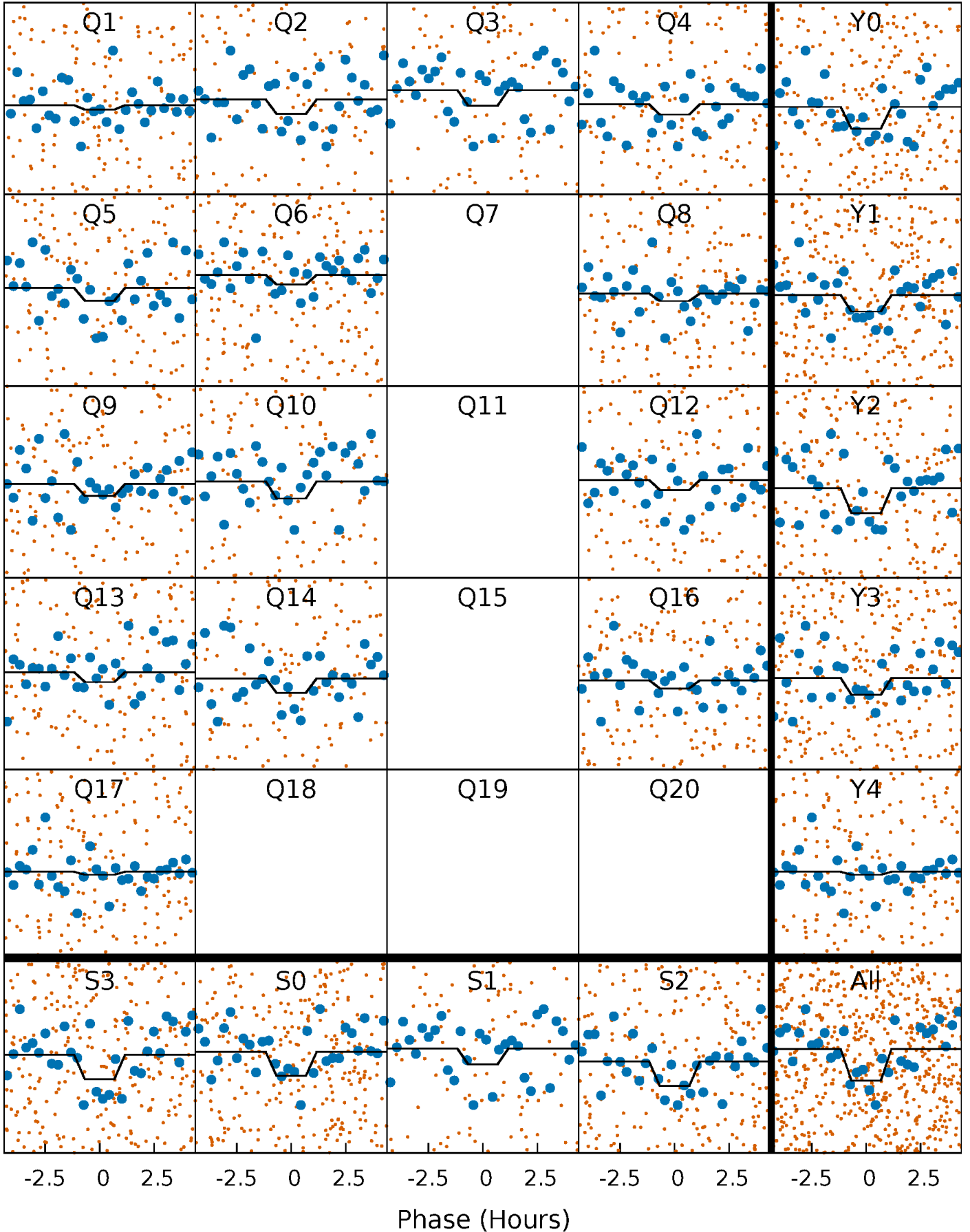
DV Quarter-Phased Transit Curves

TCE 010549643-01 P= 0.572380 Days $T_0=131.838308$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

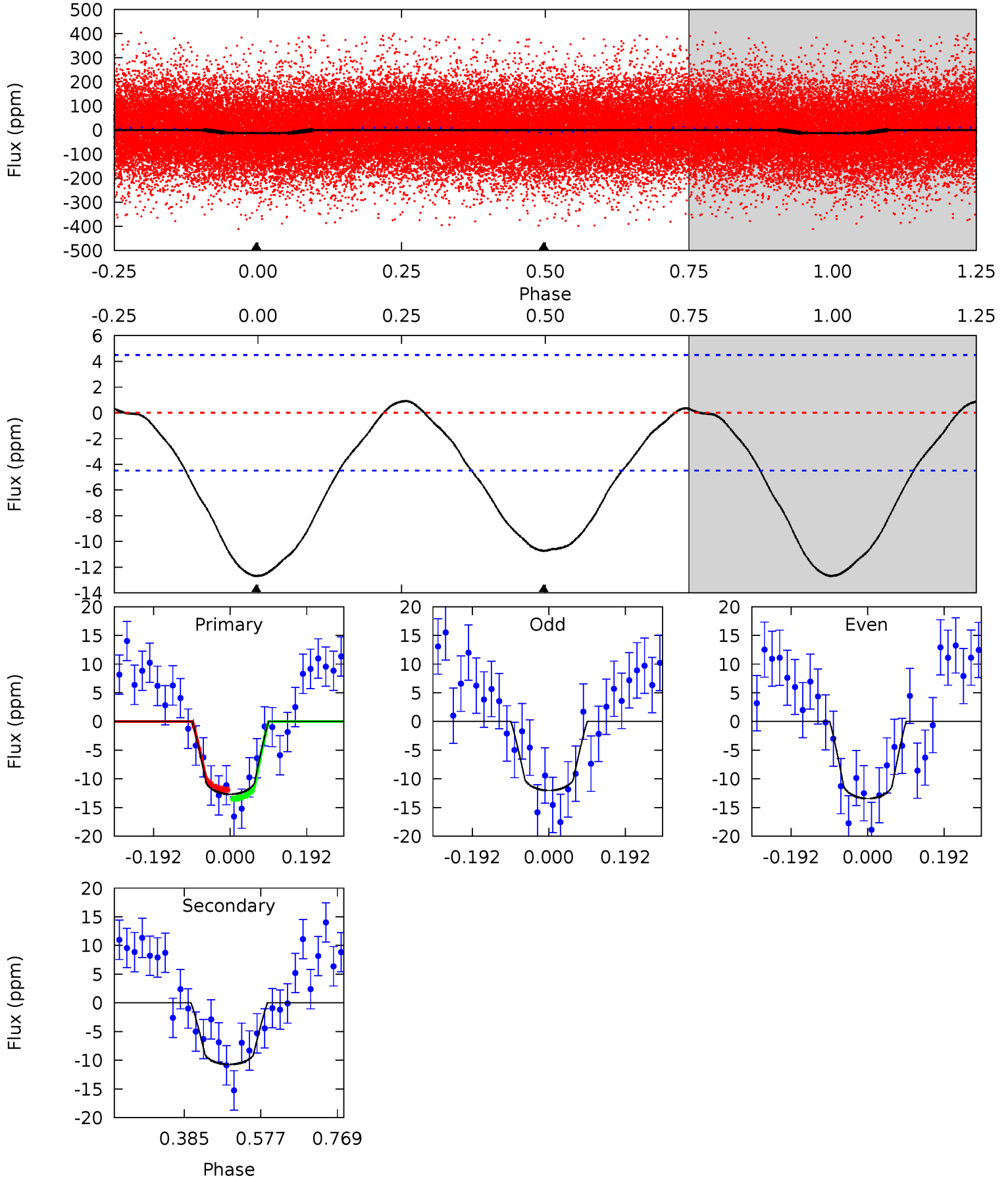
TCE 010549643-01 P= 0.572381 Days $T_0=131.838283$ (BKJD)



DV Model-Shift Uniqueness Test

010549643-01, P = 0.572380 Days, E = 131.265928 Days

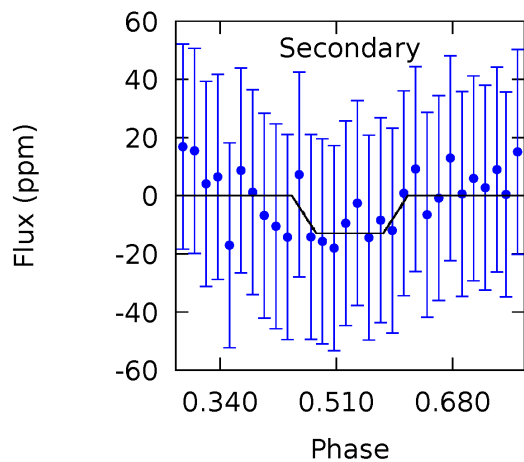
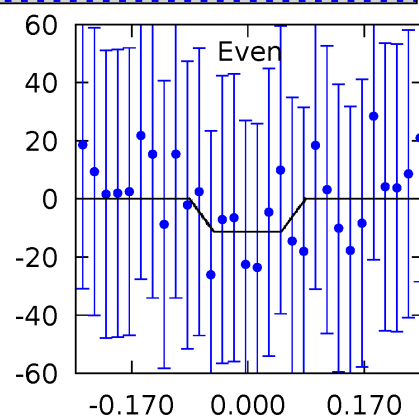
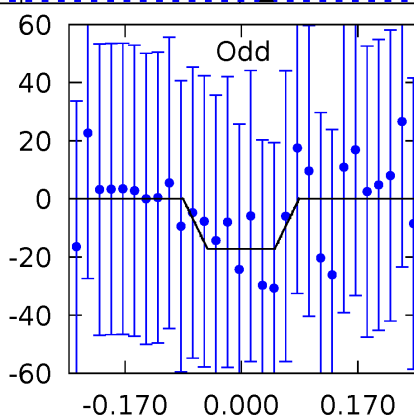
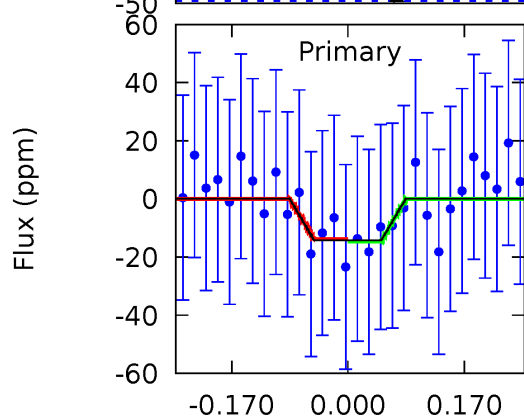
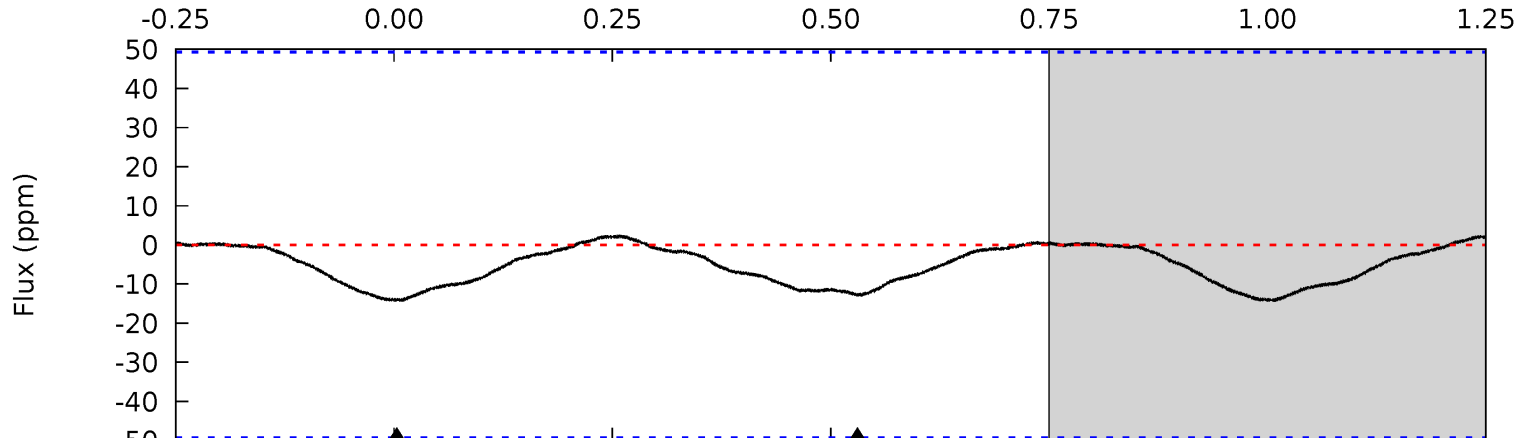
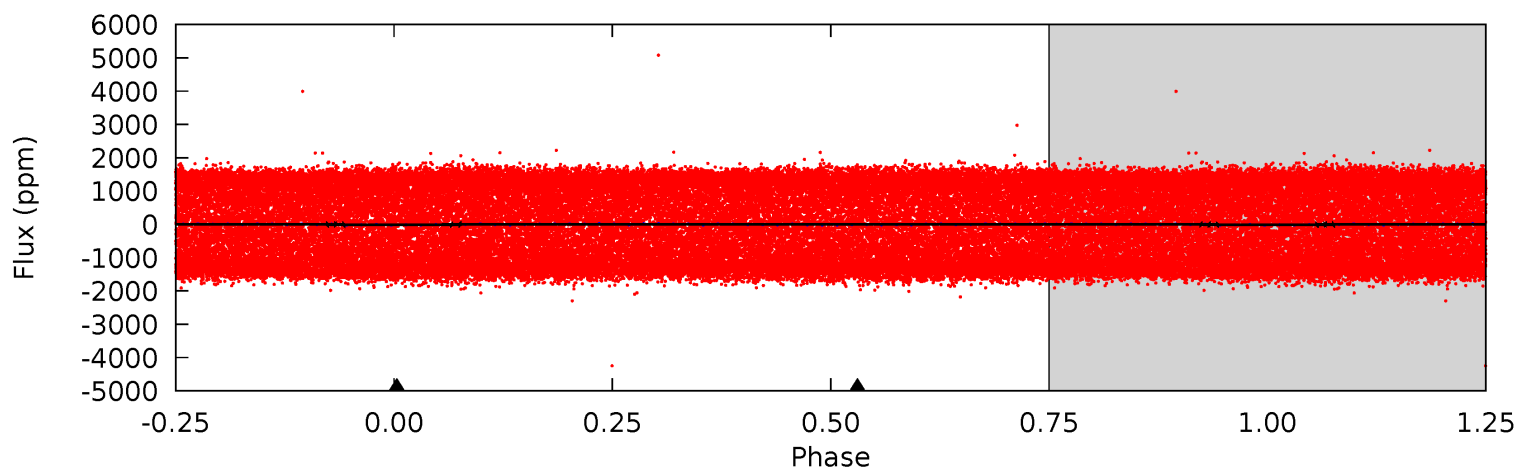
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	10.6	0	0	4.43	1.30	0.60	12.5	12.5	10.6	10.6	0.69	1.06	0.07	0.78



Alt Model-Shift Uniqueness Test

010549643-01, P = 0.572381 Days, E = 131.265902 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.29	1.17	0	0	4.45	1.37	0.12	1.29	1.29	1.17	1.17	0.26	1.11	0.14	0.03



Stellar Parameters For KIC 010549643

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7334^{+88}_{-73}	$3.994^{+0.120}_{-0.108}$	$0.040^{+0.200}_{-0.100}$	$2.183^{+0.415}_{-0.340}$	$1.713^{+0.182}_{-0.137}$	$0.232^{+0.126}_{-0.082}$
	+1%/-1%	+3%/-3%	+500%/-250%	+19%/-16%	+11%/-8%	+54%/-35%
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 010549643-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11±1	$0.92^{+0.26}_{-0.25}$	5251^{+235}_{-208}	6409^{+1349}_{-906}	$1.822^{+1.538}_{-0.714}$
Alt.	-13±11	$0.90^{+0.28}_{-0.25}$	5238^{+233}_{-224}	6832^{+2324}_{-9698}	$2.235^{+3.371}_{-1.956}$

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

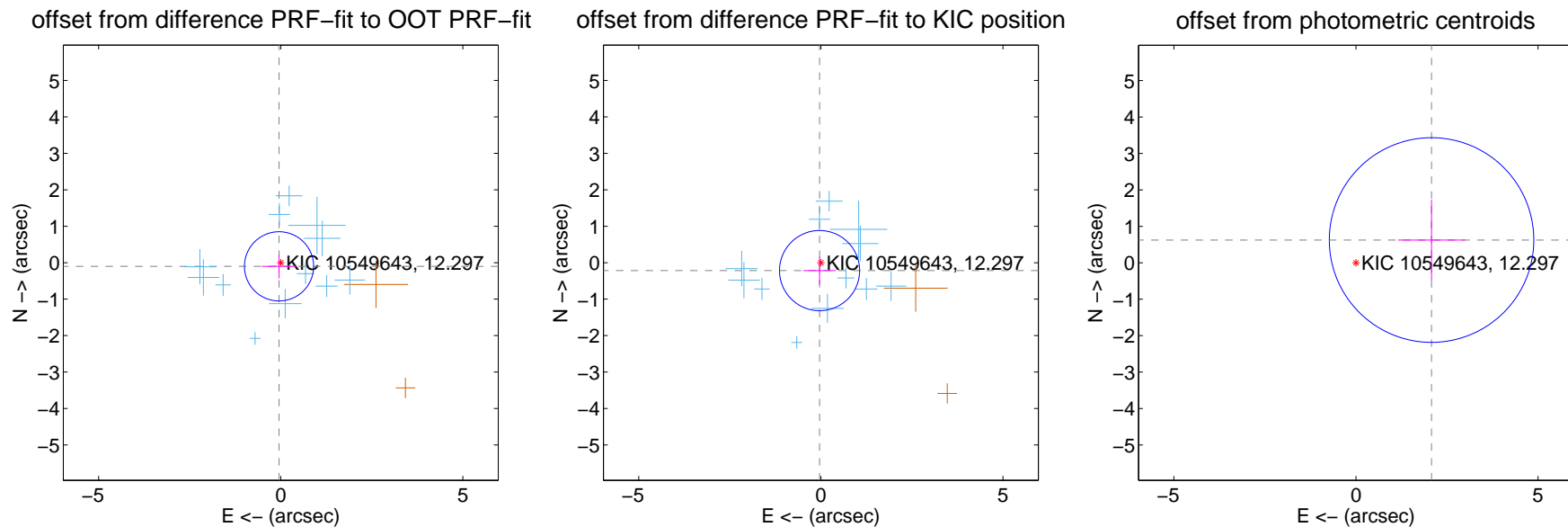
DV Centroid Data

Supplemental centroid analysis for 010549643-01. Kepler magnitude: 12.30. Transit SNR 9.86

There are 12 quarters with good PRF difference image offsets

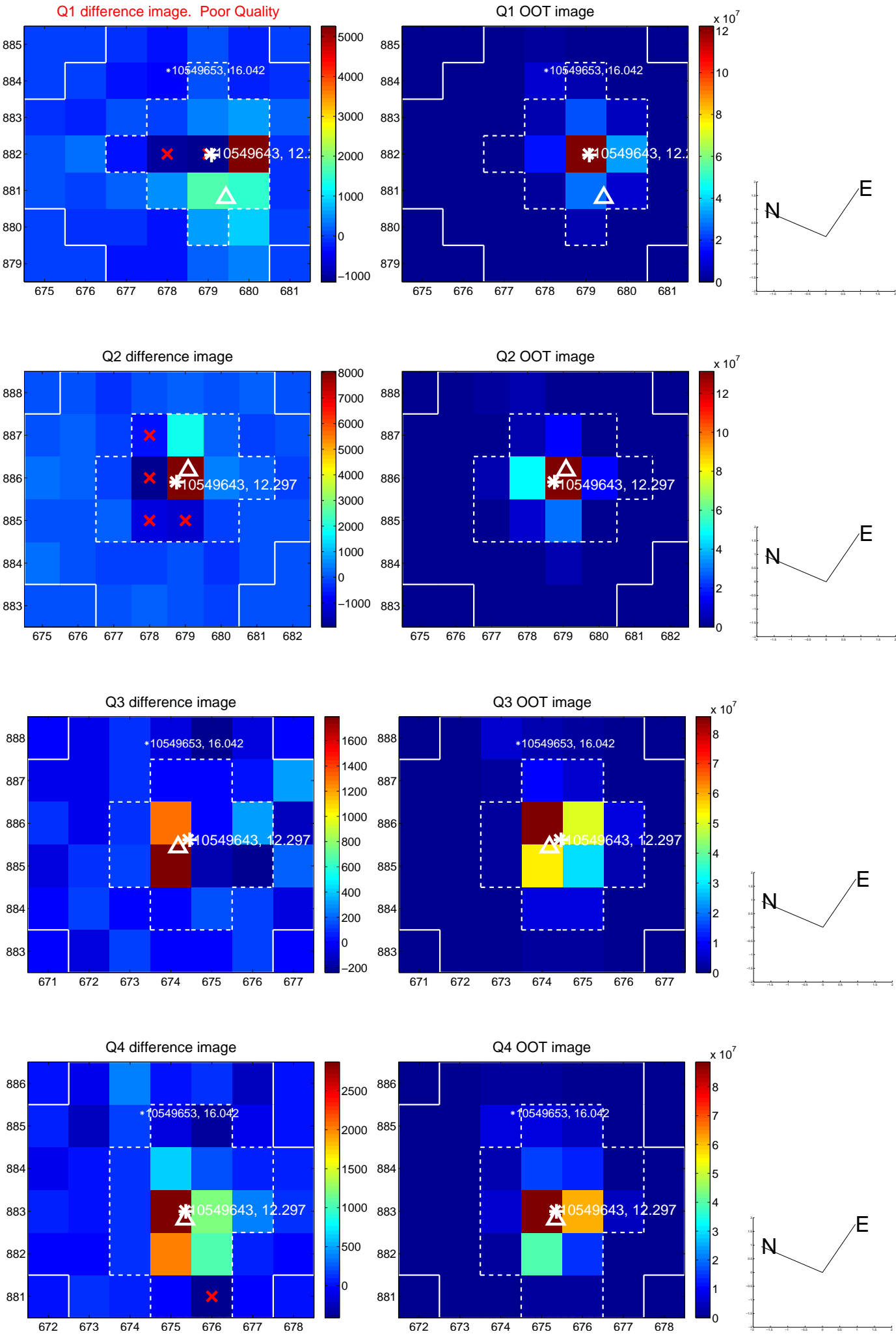
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.317	0.35	0.047 ± 0.468	-0.100 ± 0.330
PRF-fit source offset from KIC position	0.220 ± 0.367	0.60	0.036 ± 0.448	-0.217 ± 0.384
photometric centroid source offset	2.17 ± 0.94	2.32	-2.08 ± 0.92	0.62 ± 1.11

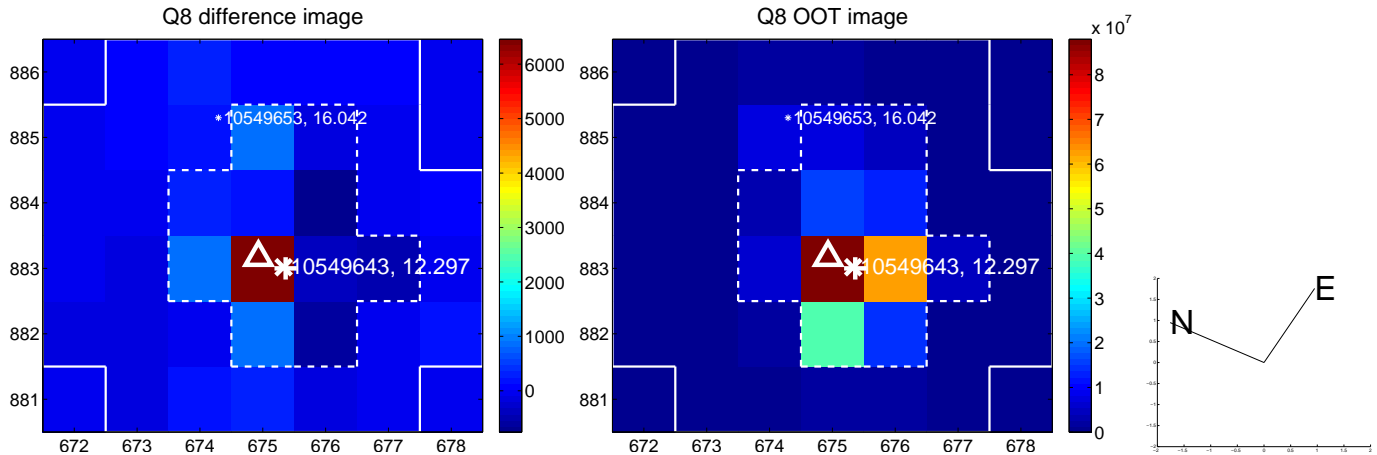
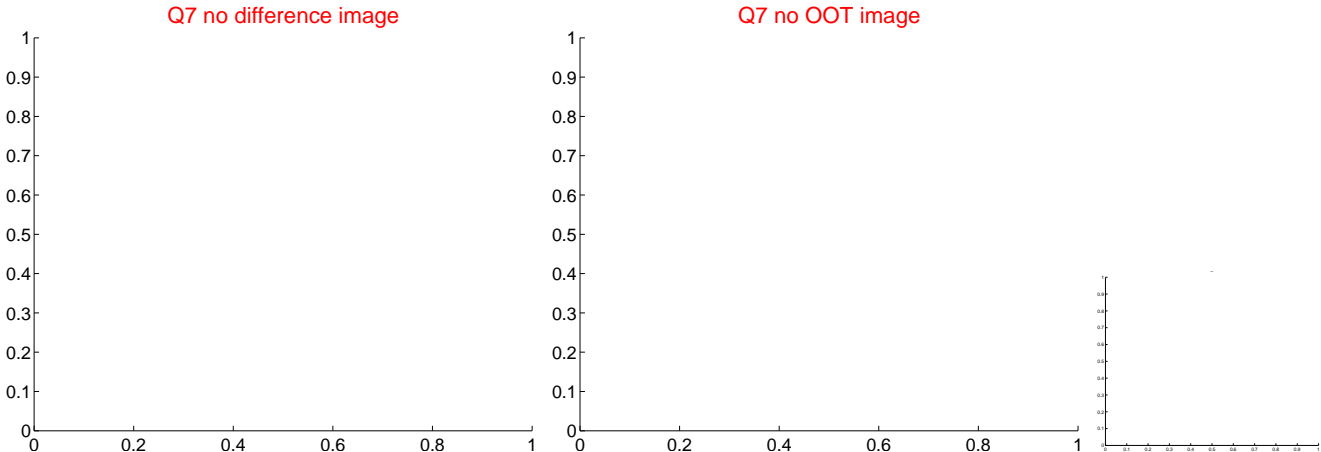
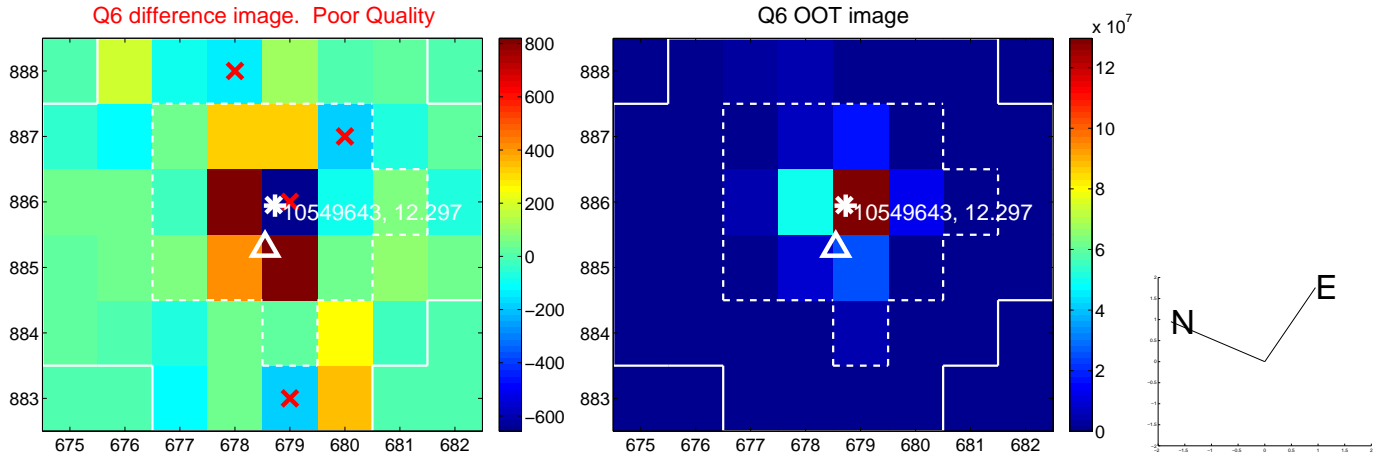
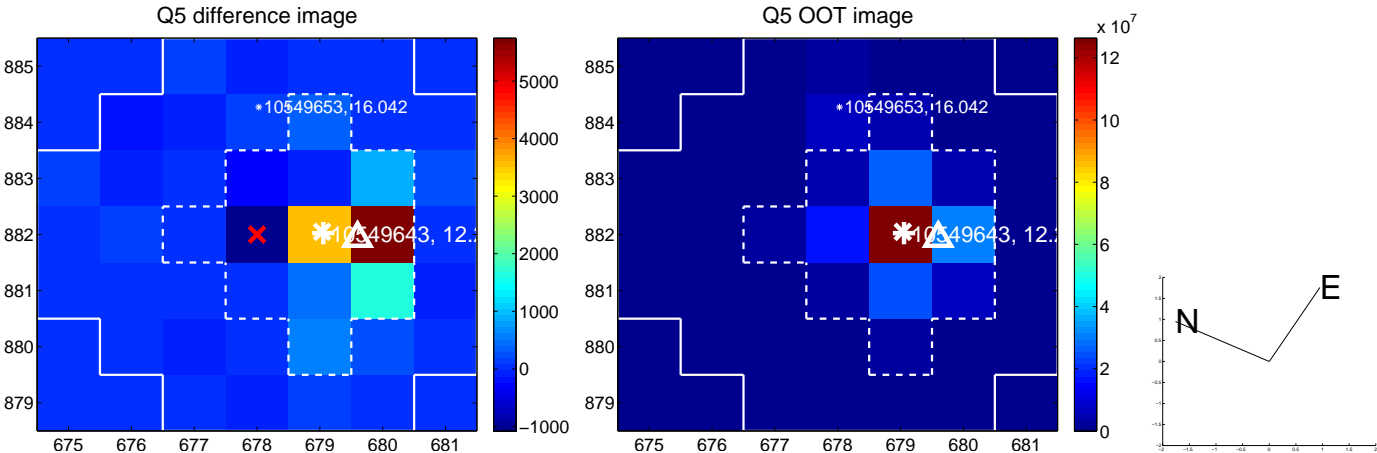


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

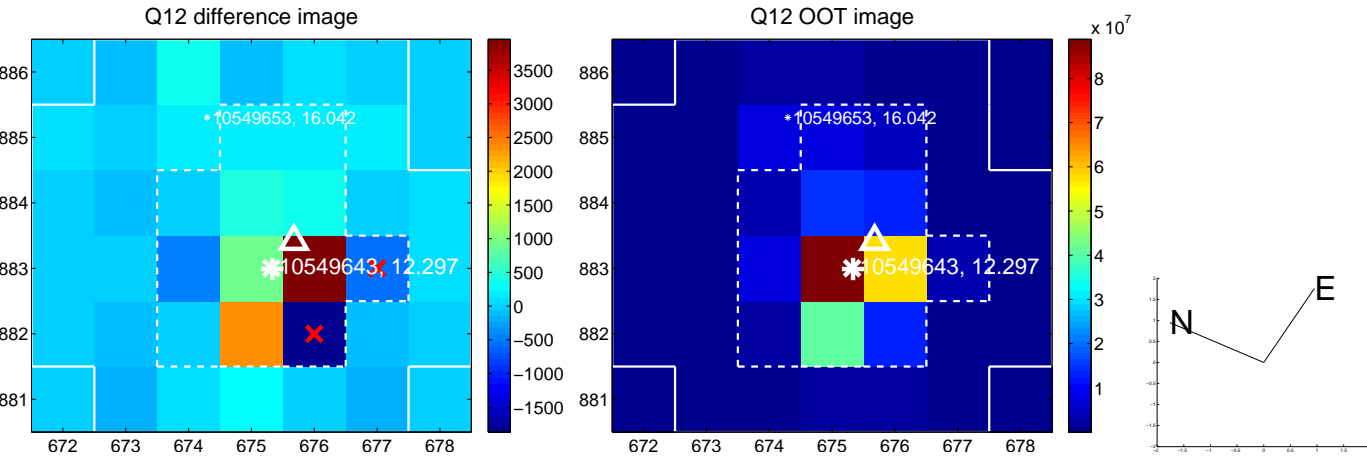
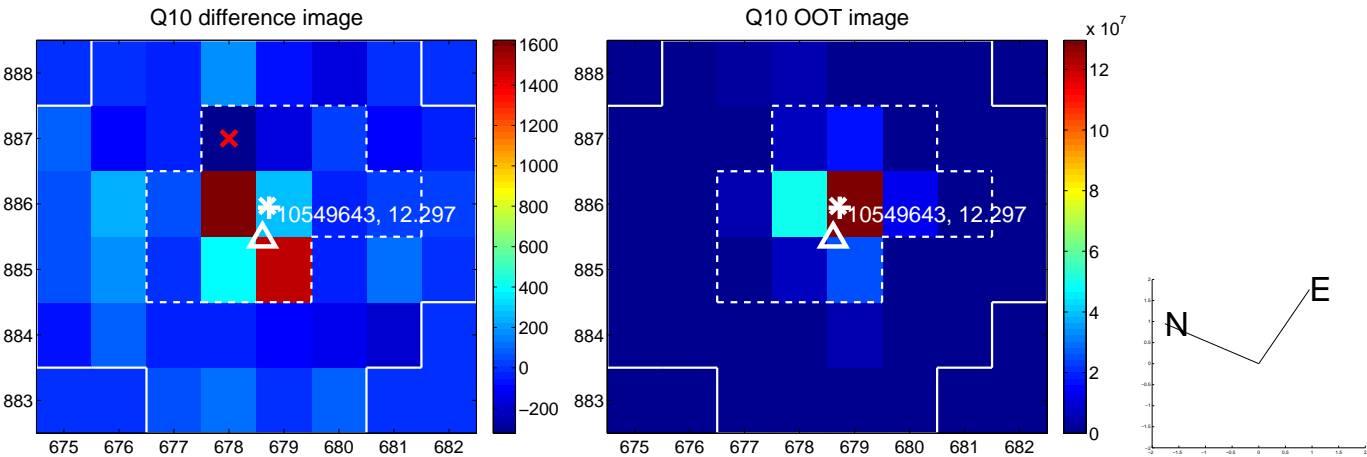
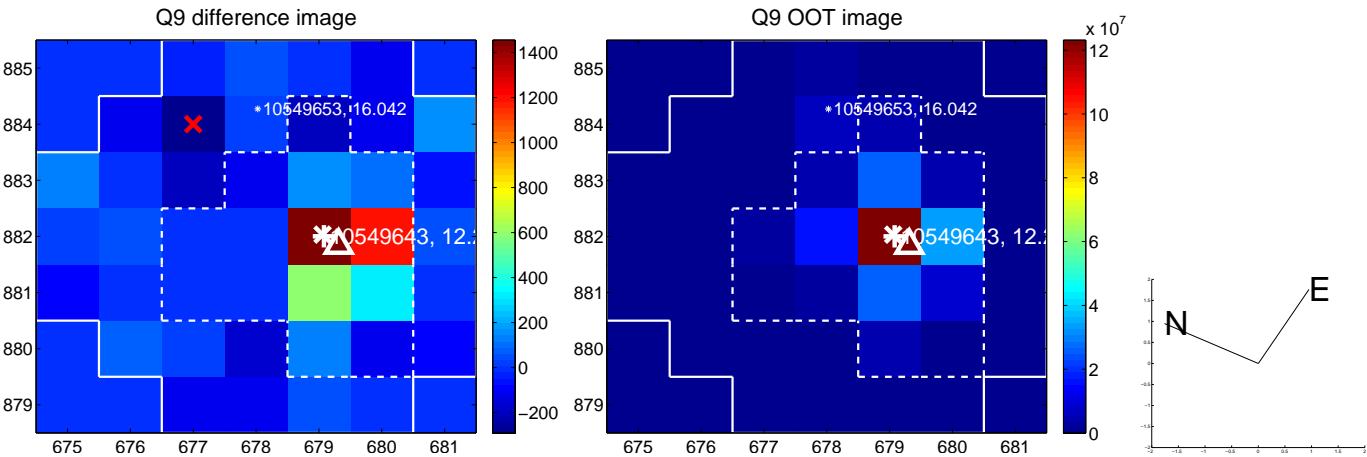
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



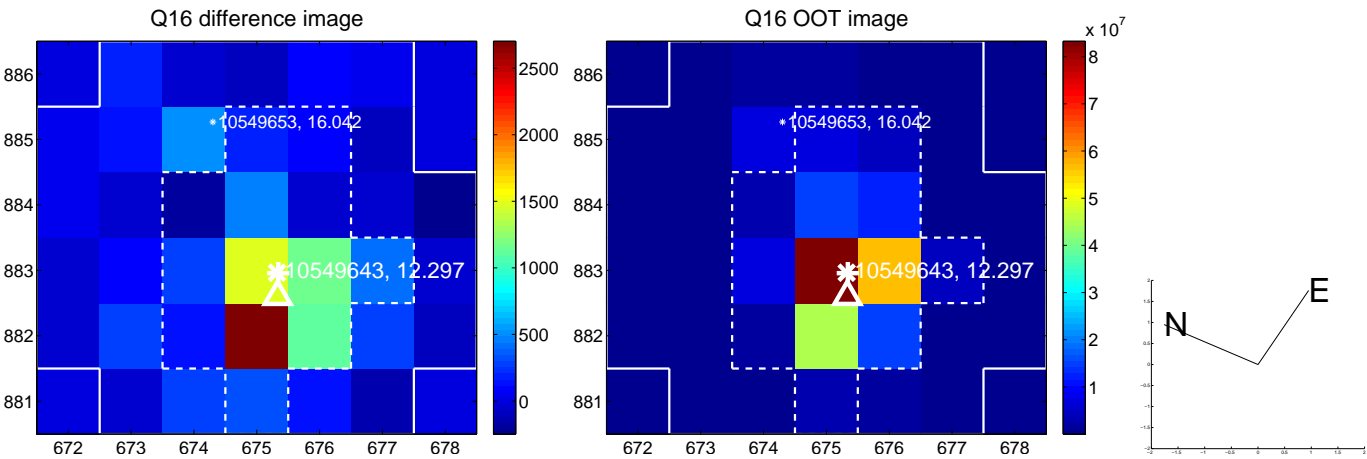
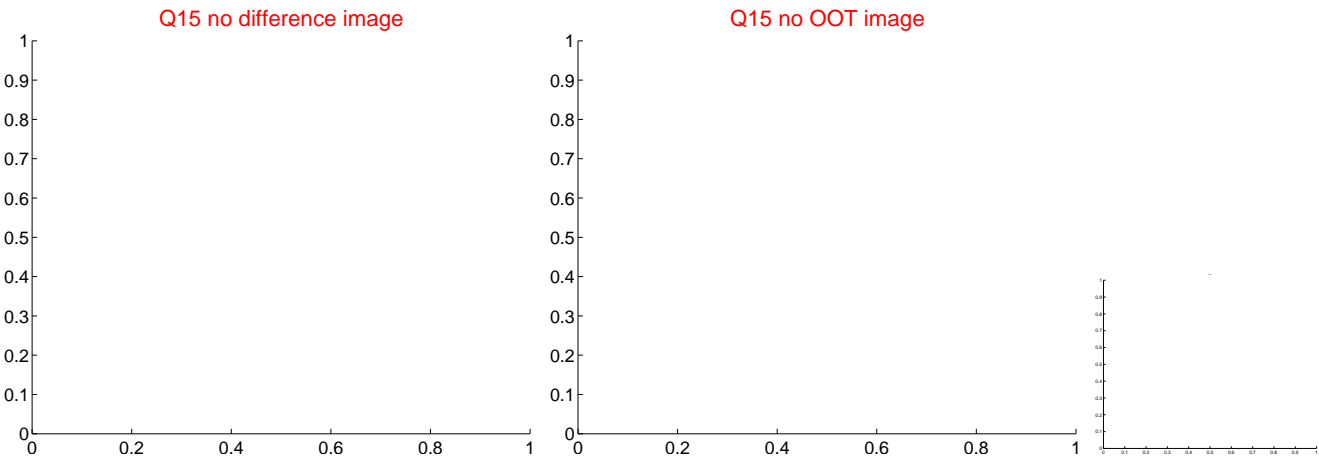
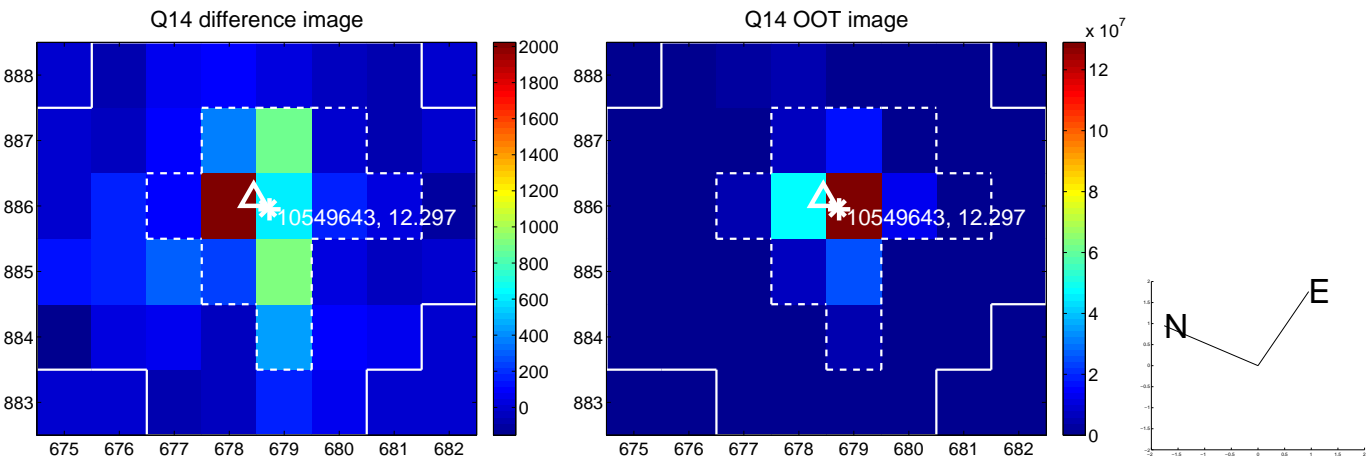
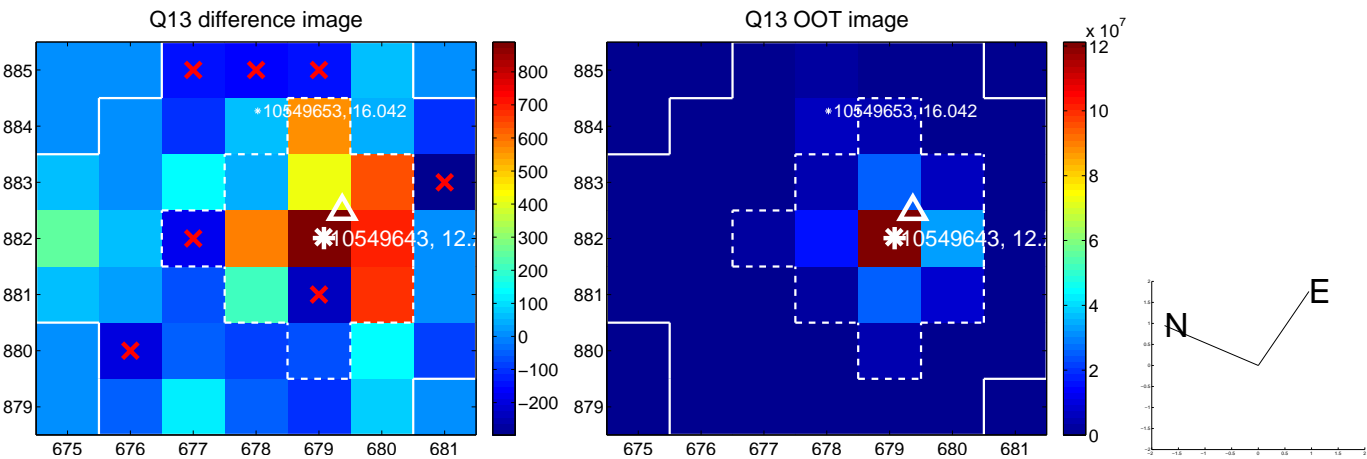
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



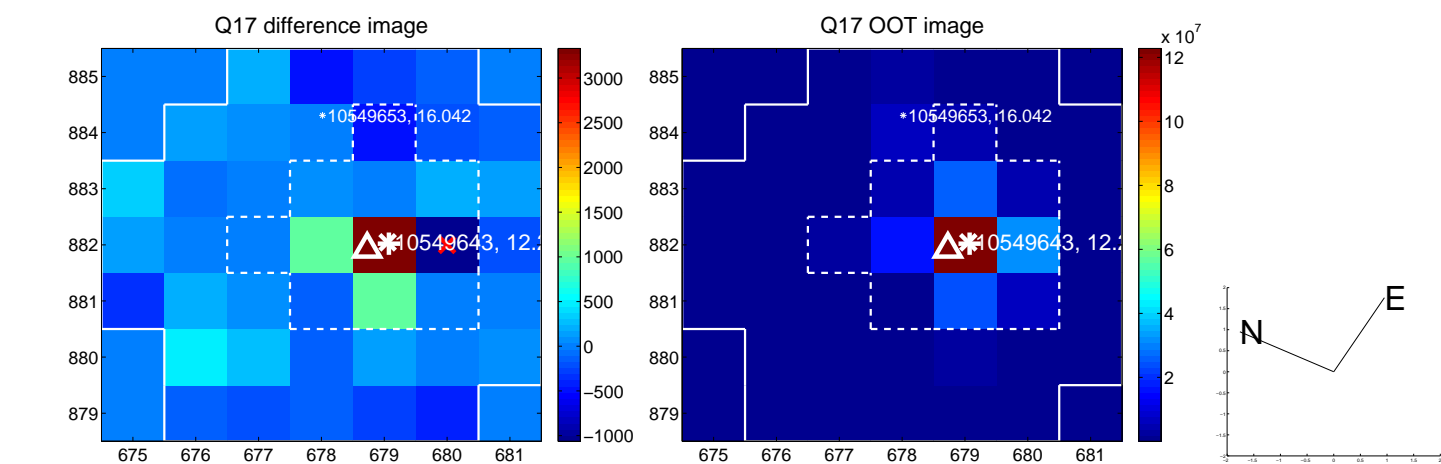
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



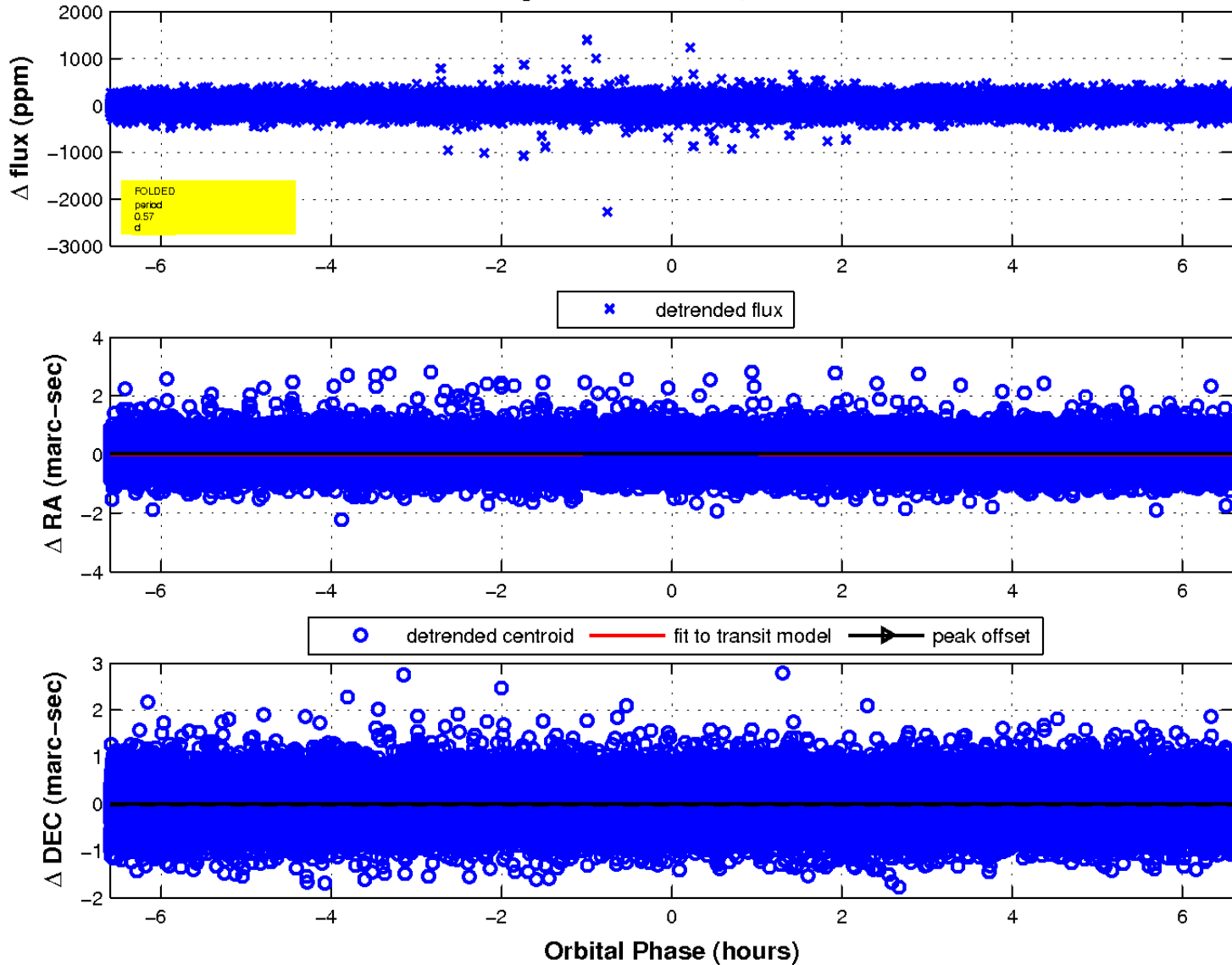
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

