

KIC 009449455

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})
009449455-01	OBS	No	0.852501	131.568400	28.8	4.335	10.2	9.7	1.45	6793	0.84	12002.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009449455-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

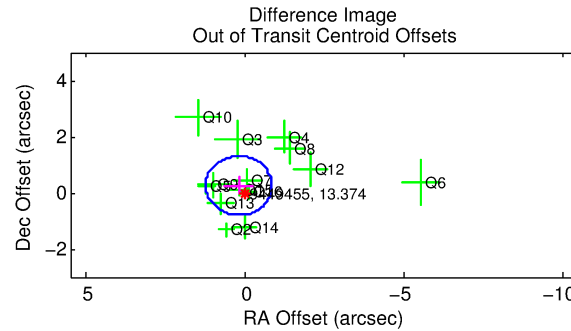
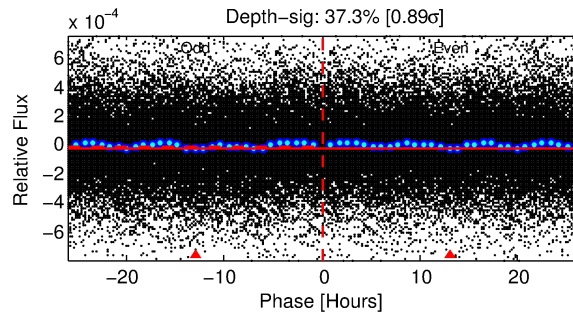
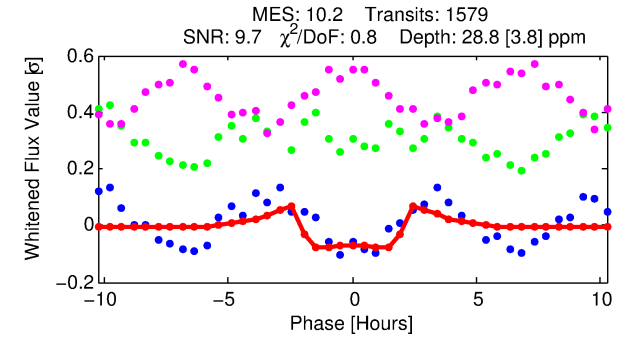
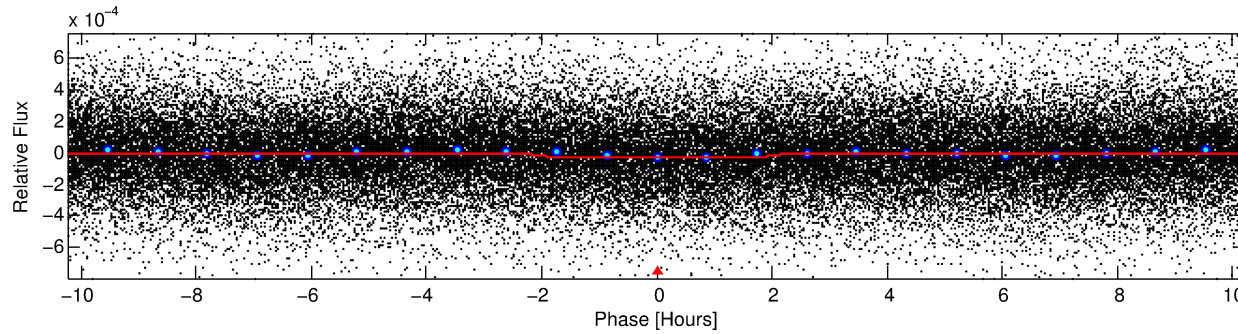
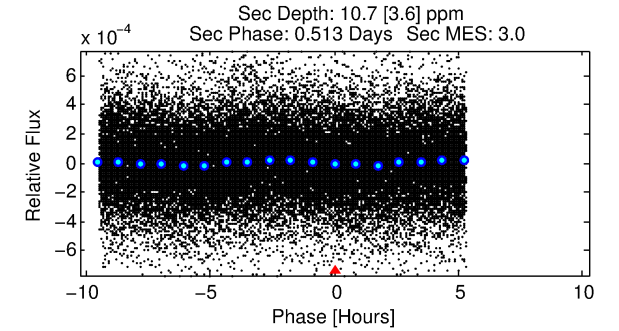
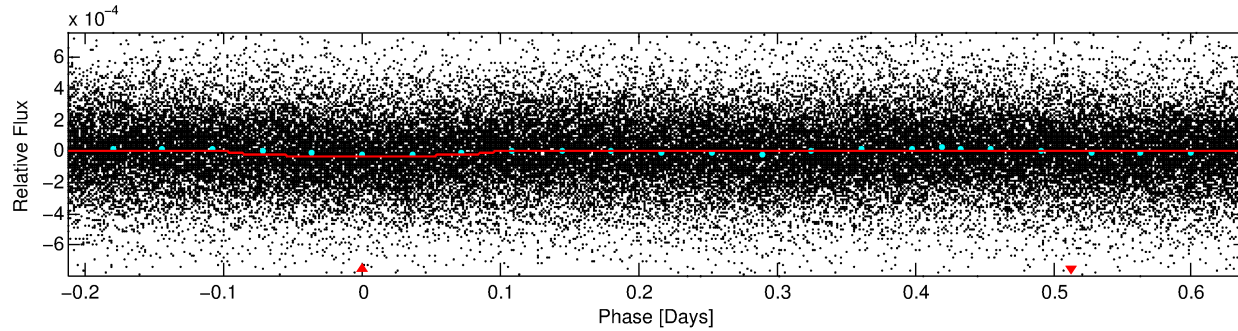
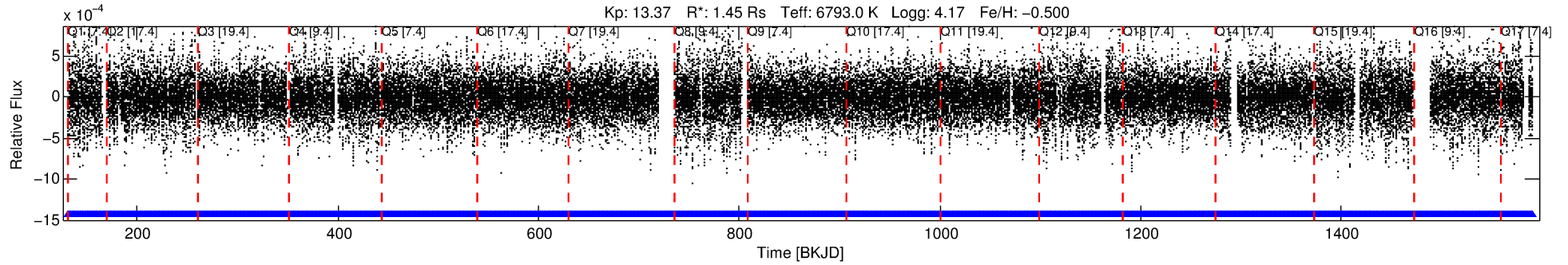
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009449455-01

No Significant Match Found

DV One-Page Summary

KIC: 9449455 Candidate: 1 of 1 Period: 0.853 d



DV Fit Results:

Period = 0.85250 [0.00001] d
Epoch = 131.5684 [0.0025] BKJD
Rp/R* = 0.0053 [0.0016]
a/R* = 1.34 [1.02]
b = 0.73 [1.13]
Seff = 12002.10 [4808.93]
Teq = 2669 [267] K
Rp = 0.84 [0.34] Re
a = 0.0183 [0.0044] AU
Ag = 2.78 [2.17] [0.82σ]
Teffp = 5329 [944] K [2.71σ]

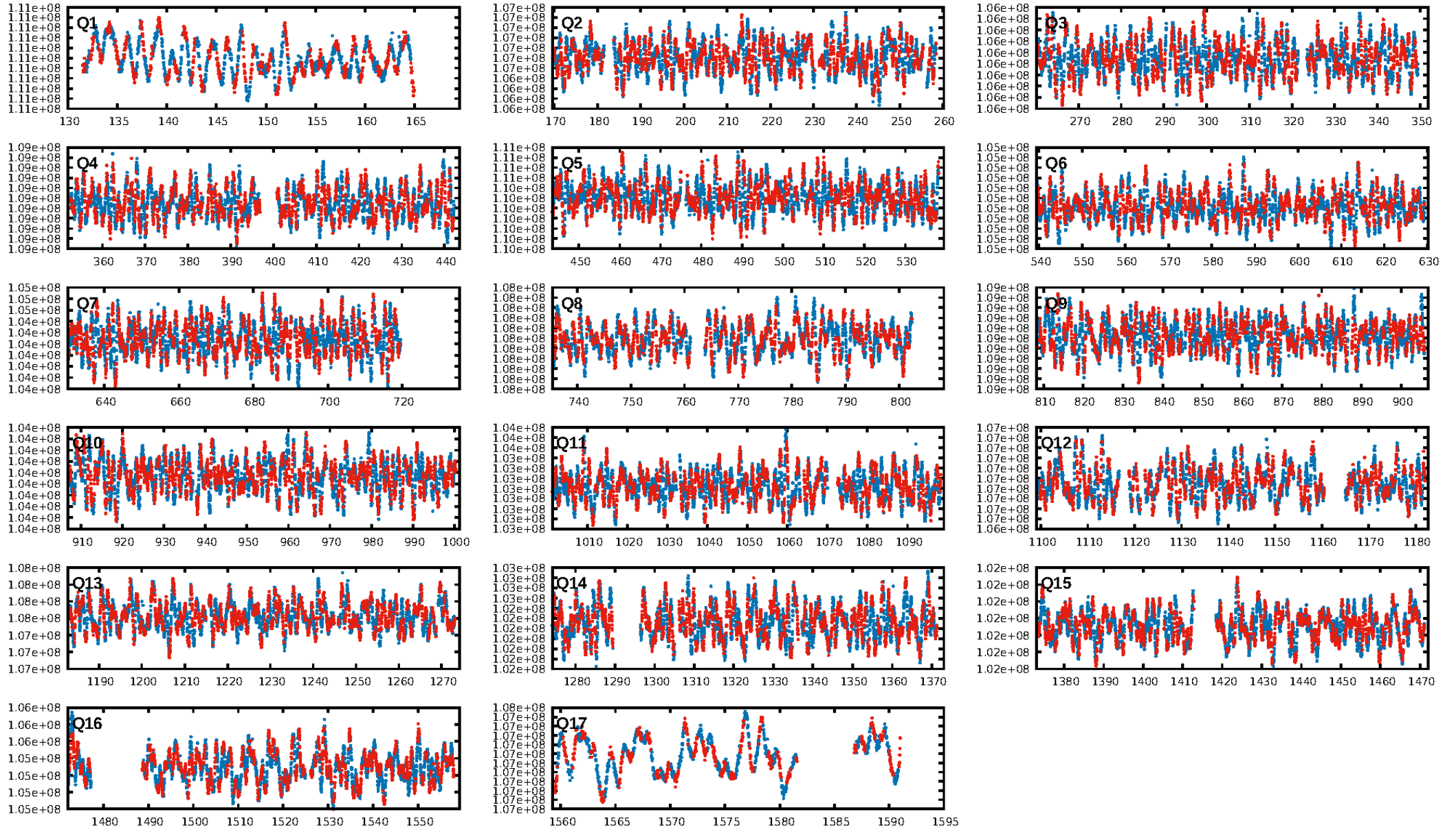
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.24e-27
RollingBand-fgt: 1.00 [1506/1506]
GhostDiagnostic-chr: 2.018
Centroid-sig: 0.2%
Centroid-so: 1.144 arcsec [2.04σ]
OotOffset-rm: 0.321 arcsec [0.92σ]
KicOffset-rm: 0.362 arcsec [1.29σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

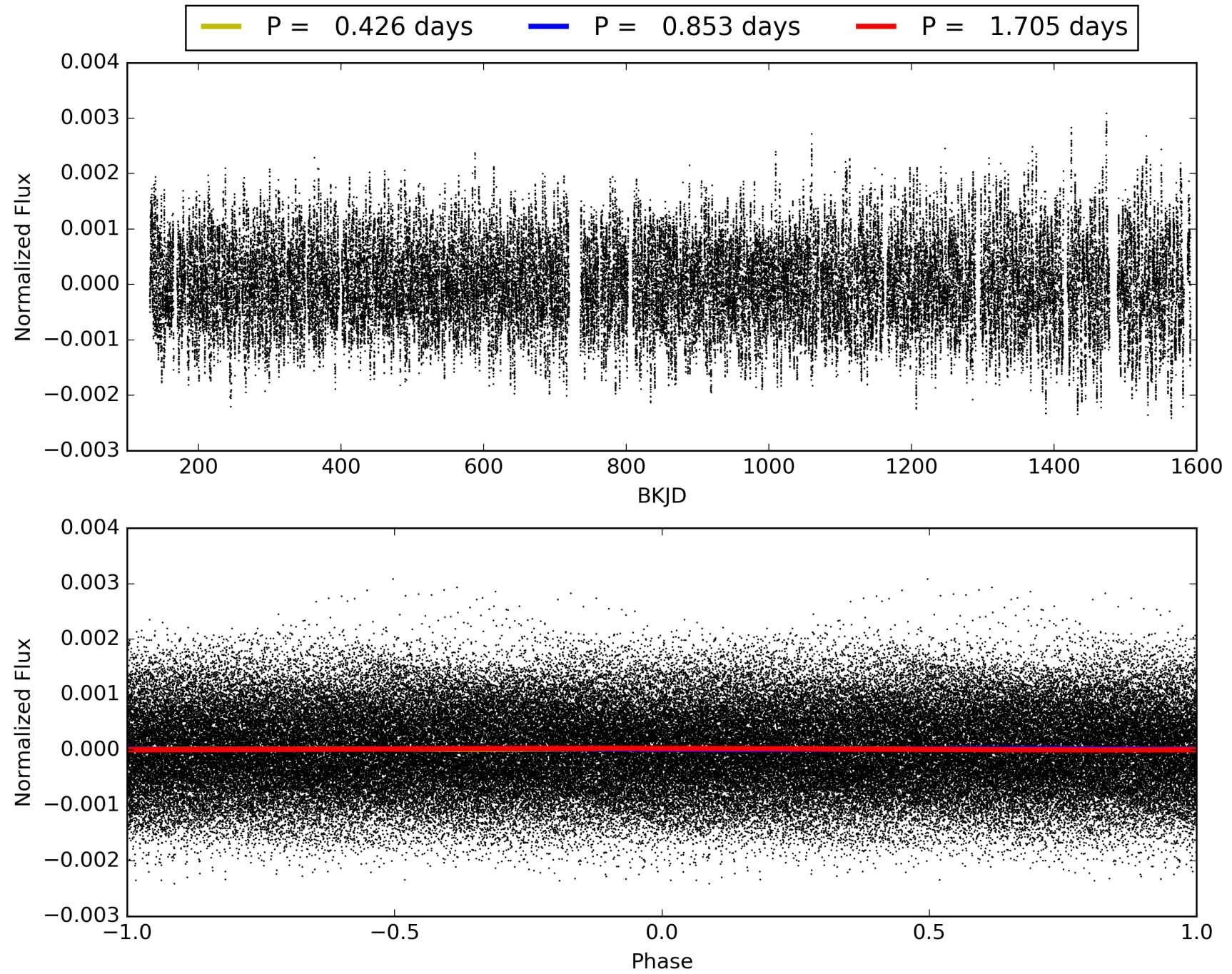
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:51:52 Z

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

TCE 009449455-01, PDC Light Curves

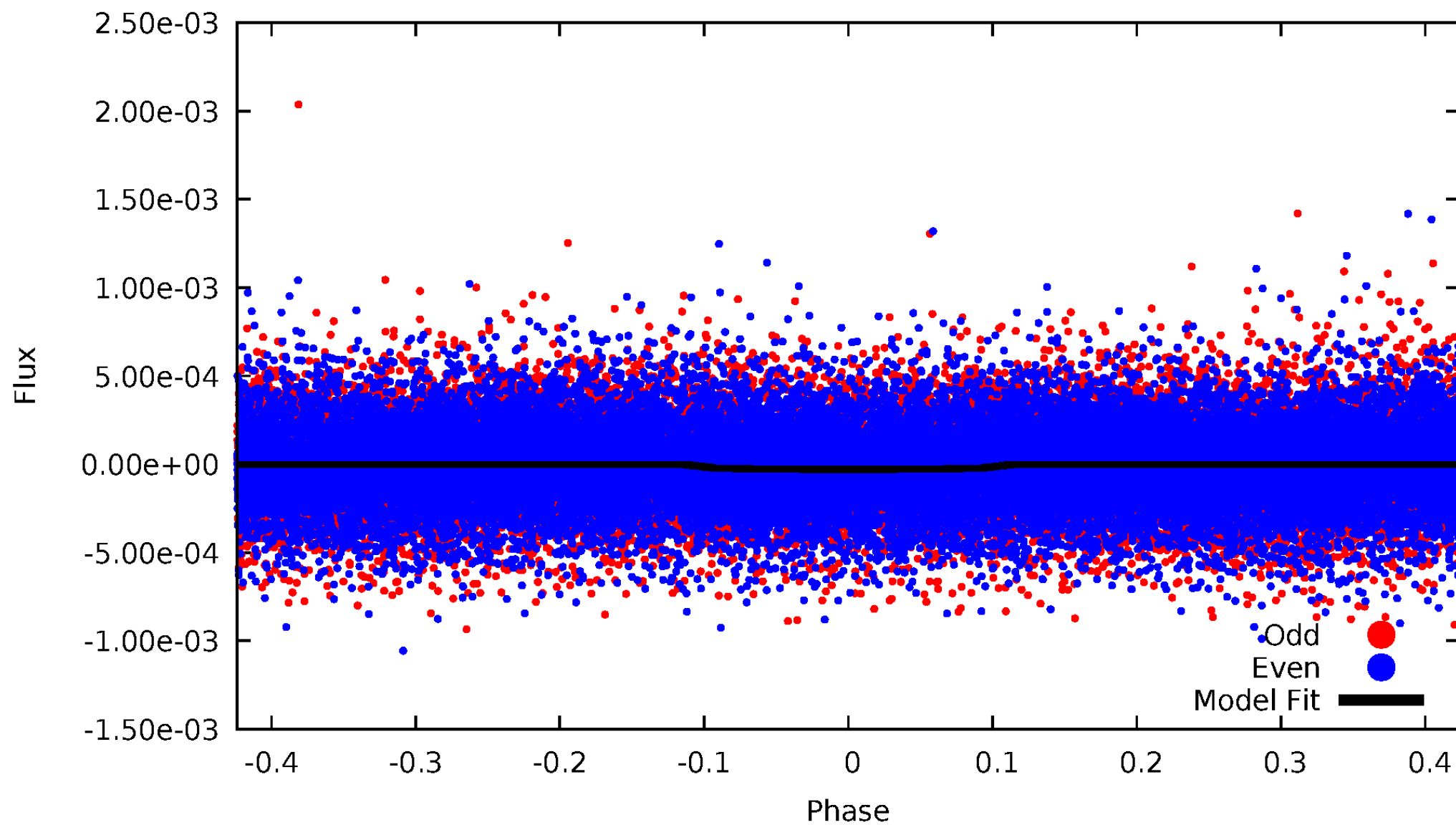


TCE 009449455-01



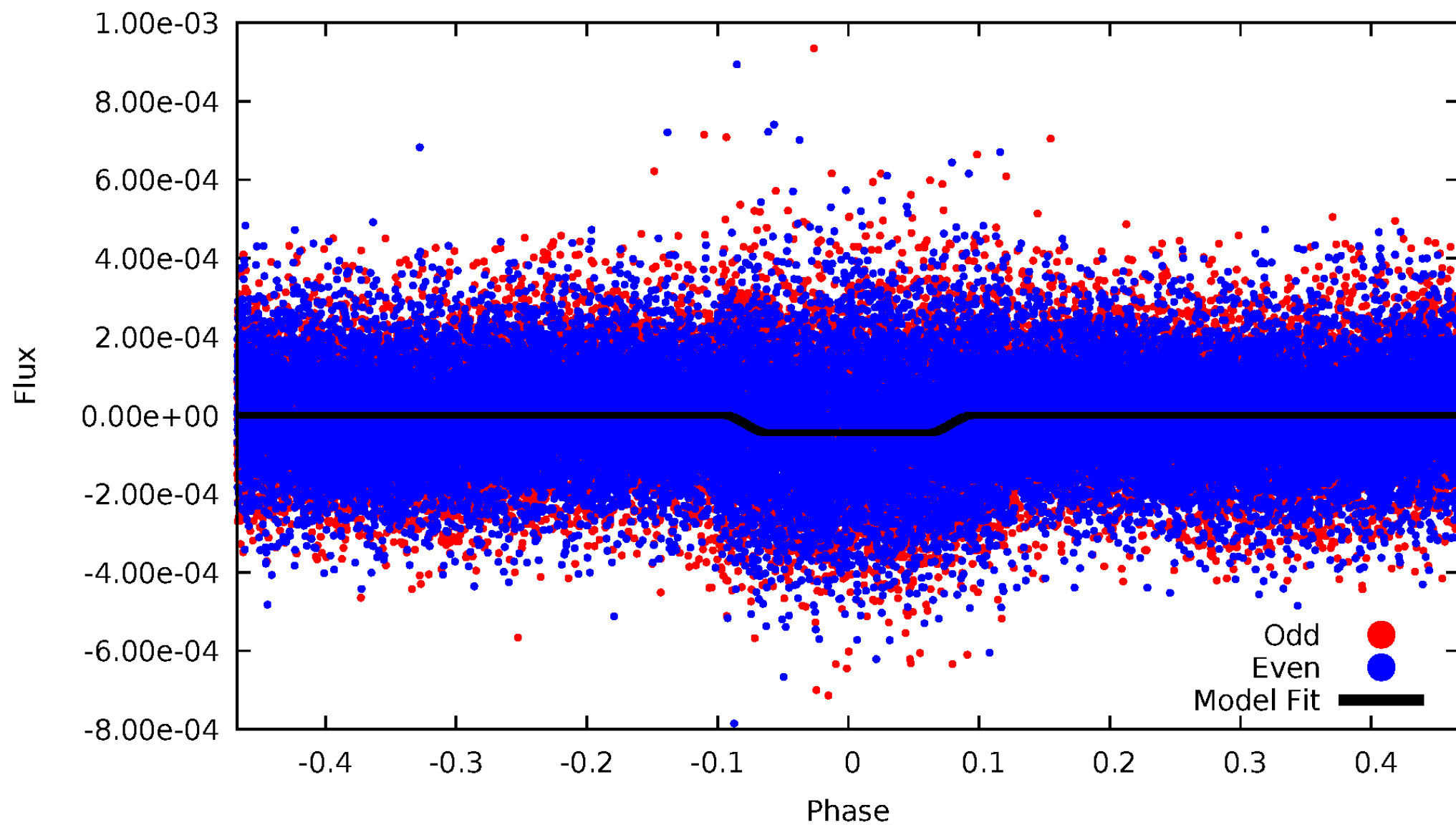
DV Odd/Even

TCE 009449455-01

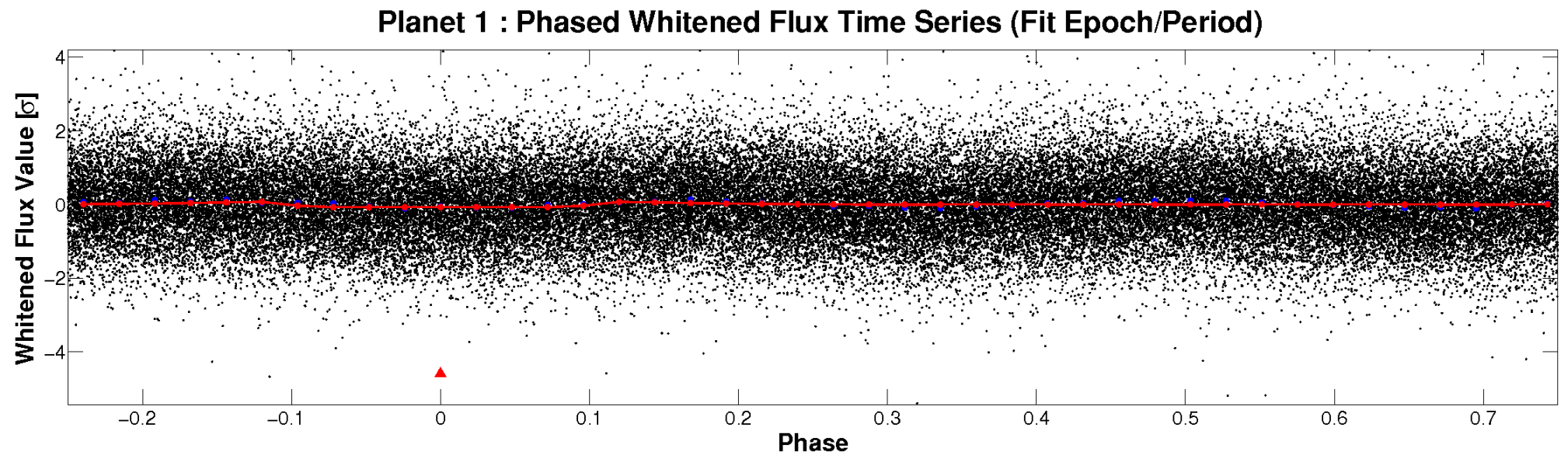
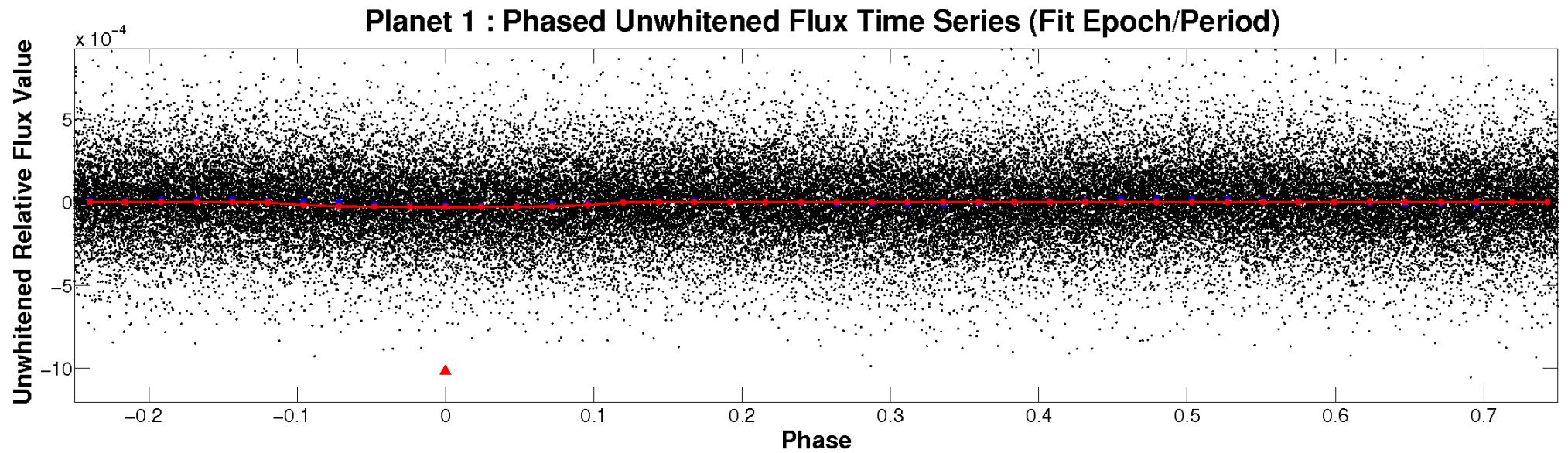


ALT Odd/Even

TCE 009449455-01

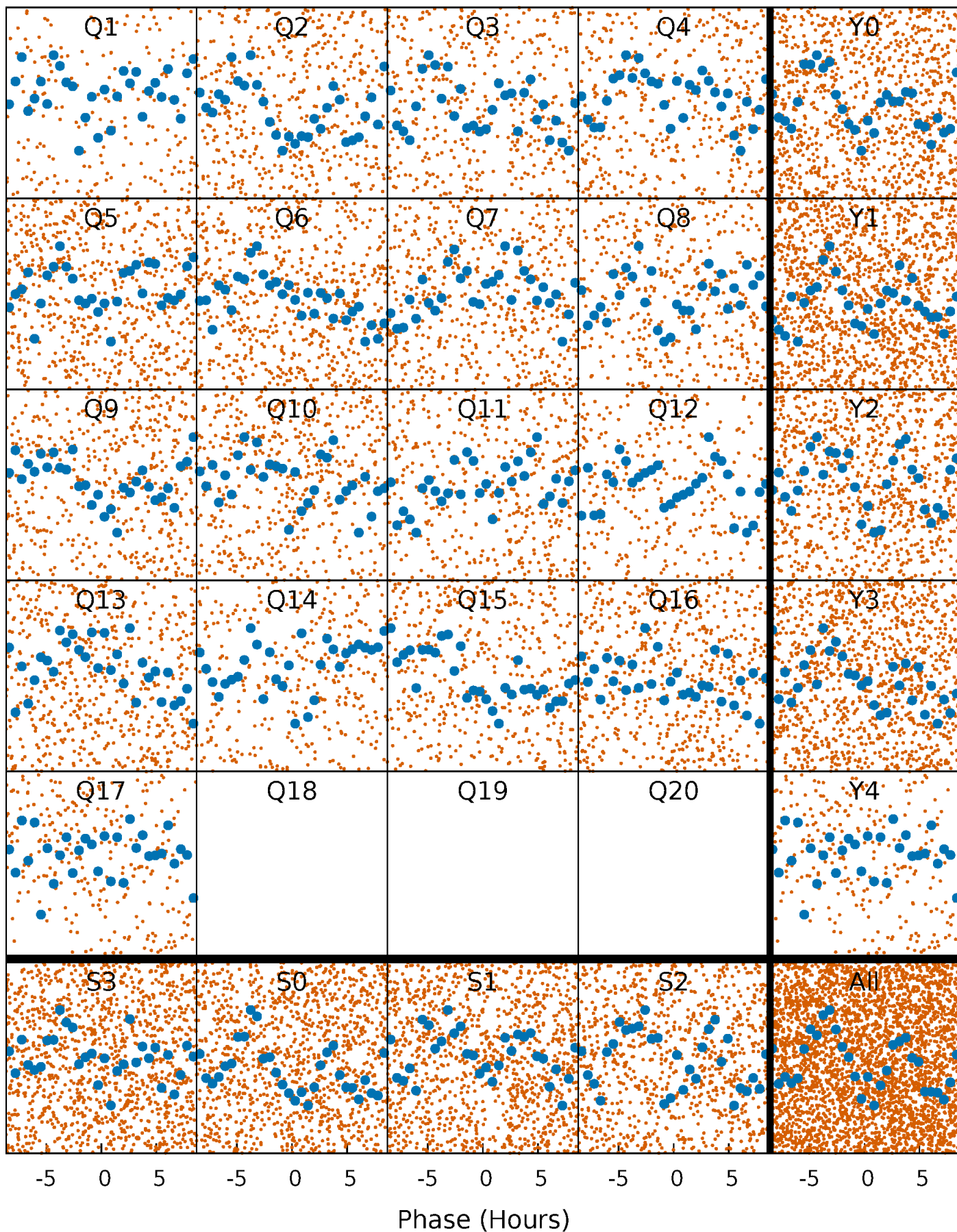


Non-Whitened Vs. Whitened Light Curve



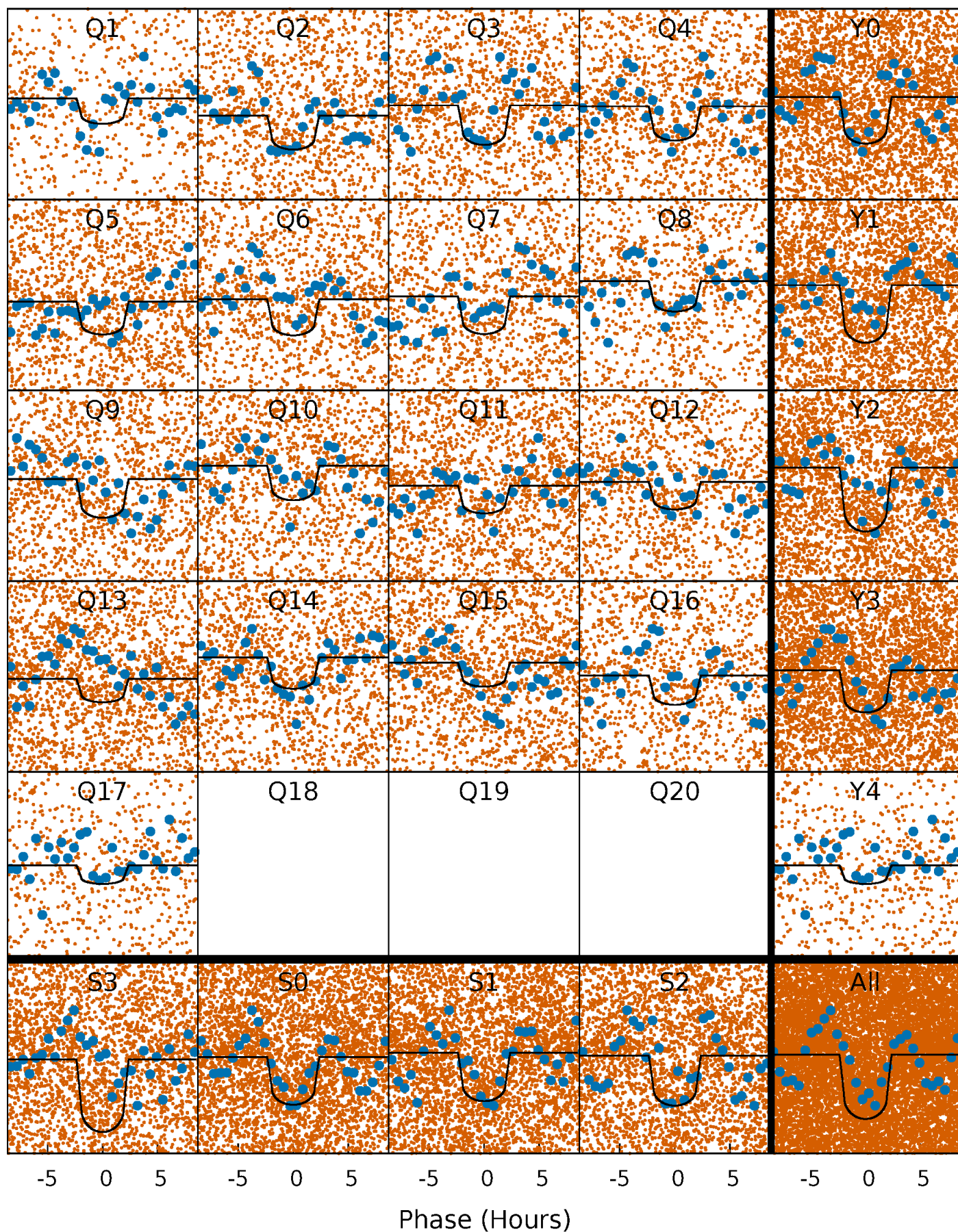
PDC Quarter-Phased Transit Curves

TCE 009449455-01 P= 0.852501 Days $T_0=131.568400$ (BKJD)



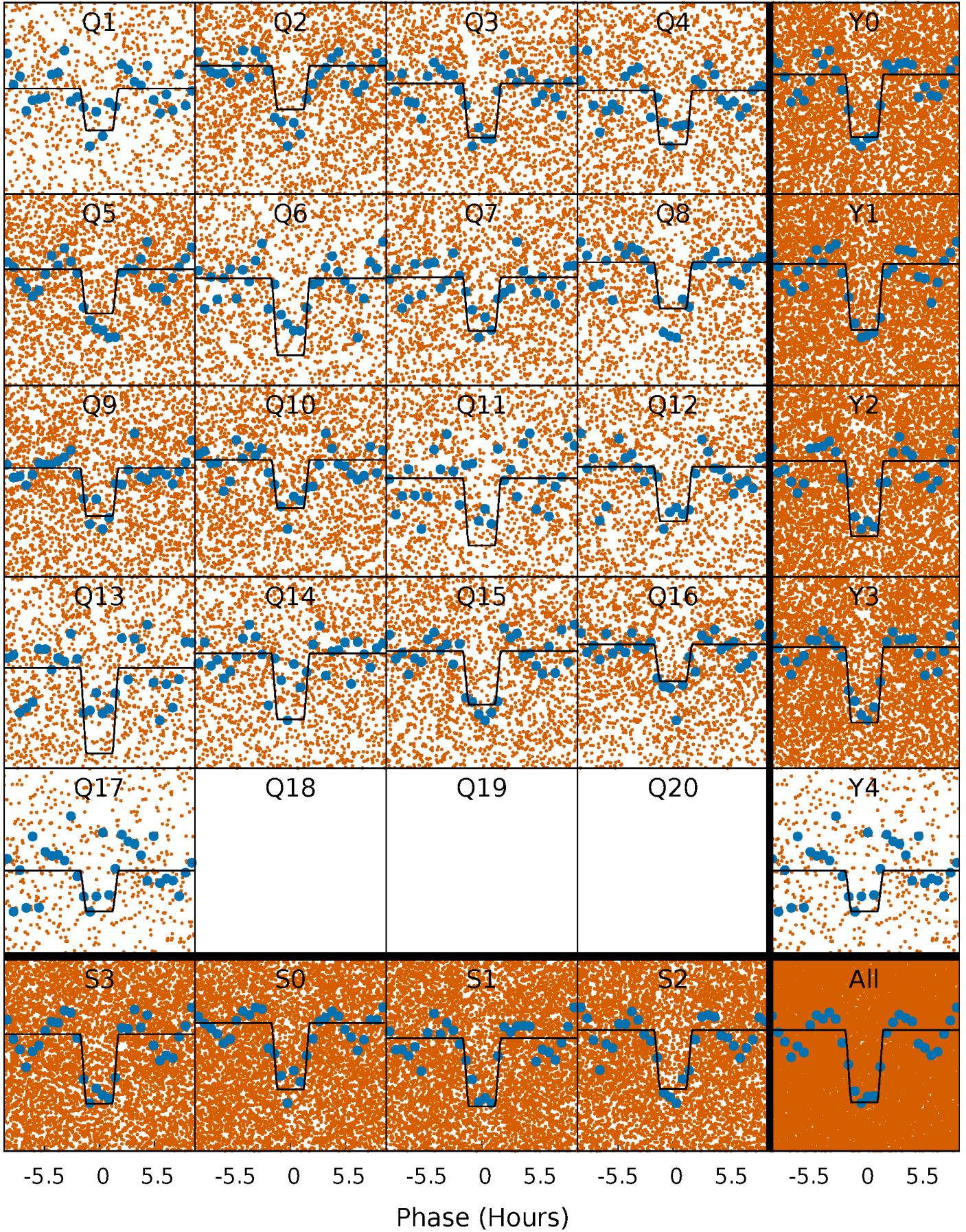
DV Quarter-Phased Transit Curves

TCE 009449455-01 P= 0.852501 Days $T_0=131.568400$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

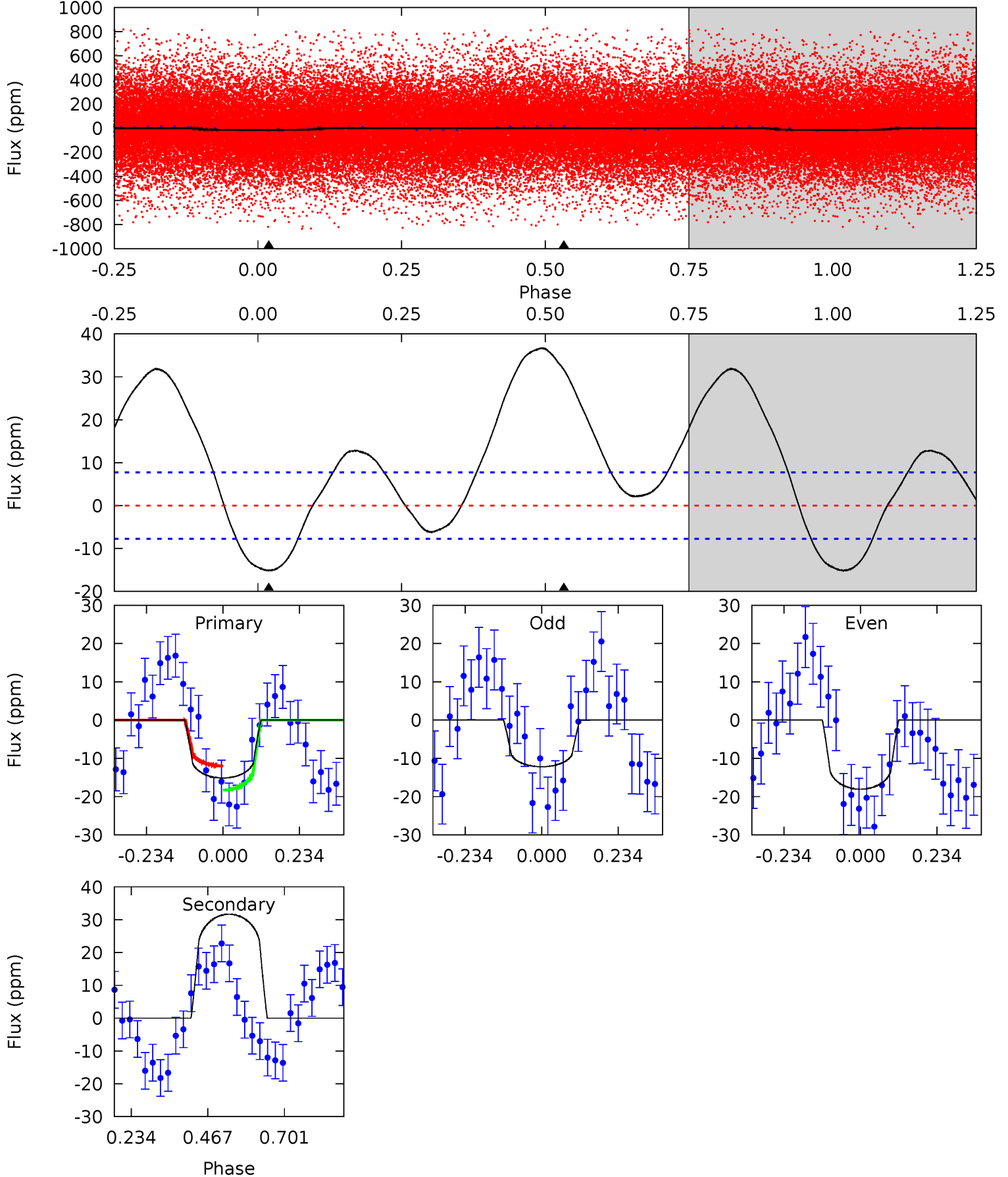
TCE 009449455-01 P= 0.852532 Days $T_0=131.543515$ (BKJD)



DV Model-Shift Uniqueness Test

009449455-01, P = 0.852501 Days, E = 130.715899 Days

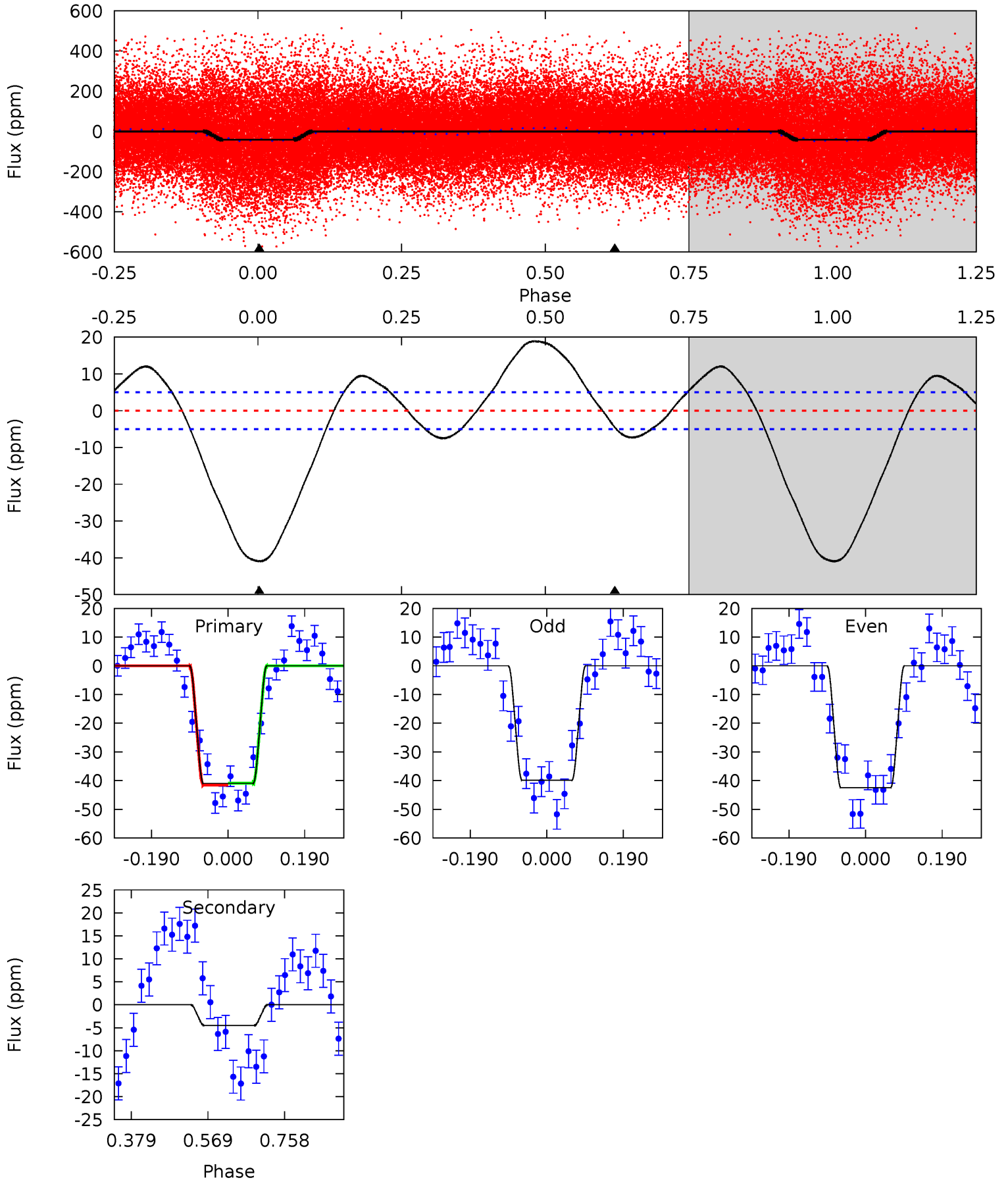
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.58	-18.0	0	0	4.38	1.19	7.75	8.58	8.58	-18.0	-18.0	1.69	0.96	0.71	1.80



Alt Model-Shift Uniqueness Test

009449455-01, P = 0.852532 Days, E = 130.690983 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.2	4.00	0	0	4.43	1.31	5.04	36.2	36.2	4.00	4.00	1.13	0.97	0.32	0.30



Stellar Parameters For KIC 009449455

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6793^{+214}_{-285}	$4.166^{+0.204}_{-0.167}$	$-0.500^{+0.250}_{-0.300}$	$1.454^{+0.404}_{-0.367}$	$1.128^{+0.178}_{-0.146}$	$0.517^{+0.587}_{-0.239}$
	+3%/-4%	+5%/-4%	+50%/-60%	+28%/-25%	+16%/-13%	+113%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 009449455-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	32 ± 2	$0.84^{+0.28}_{-0.27}$	3720^{+279}_{-280}	-7110^{+966}_{-1648}	$-8.376^{+3.728}_{-9.554}$
Alt.	-5 ± 1	$1.04^{+0.35}_{-0.28}$	3698^{+283}_{-289}	3741^{+629}_{-708}	$0.756^{+0.721}_{-0.348}$

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 $A_{obs} \gg 1.0$

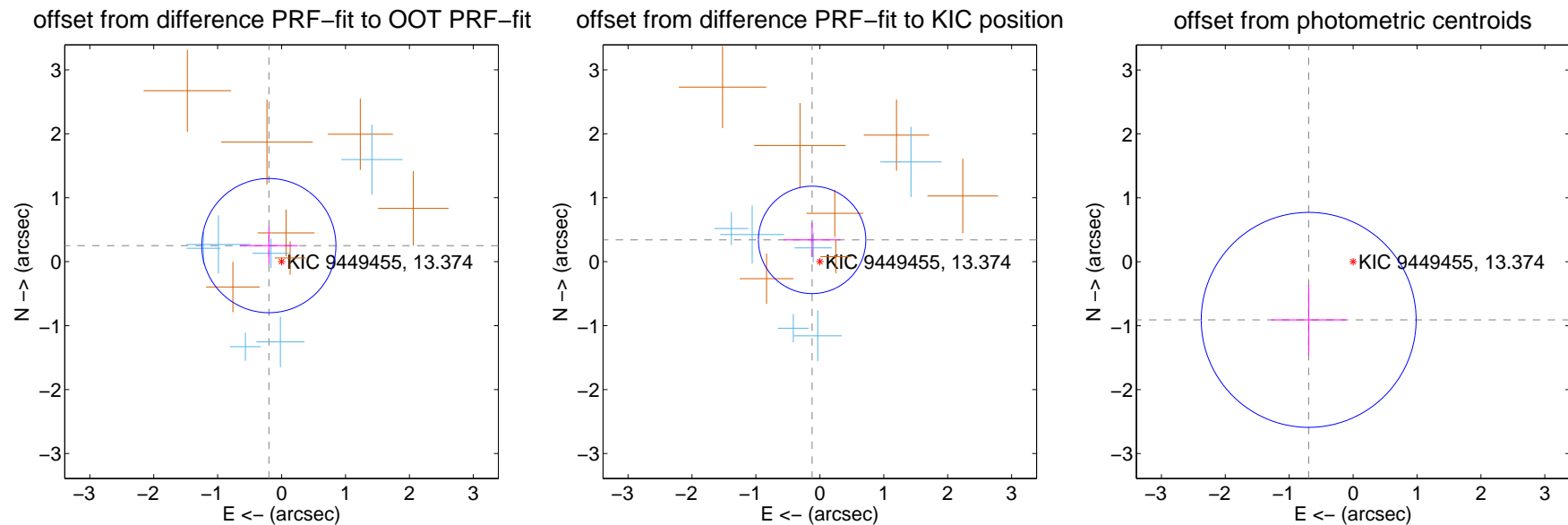
DV Centroid Data

Supplemental centroid analysis for 009449455-01. Kepler magnitude: 13.37. Transit SNR 9.75

There are 6 quarters with good PRF difference image offsets

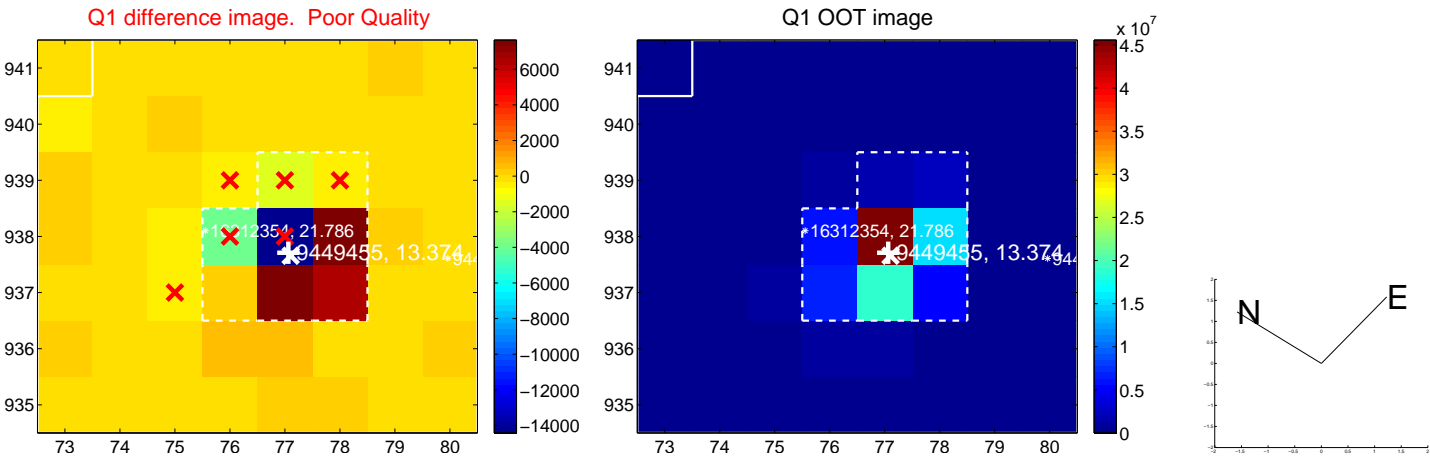
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.350	0.92	0.199 ± 0.454	0.252 ± 0.293
PRF-fit source offset from KIC position	0.362 ± 0.280	1.29	0.121 ± 0.443	0.341 ± 0.270
photometric centroid source offset	1.14 ± 0.56	2.04	0.70 ± 0.59	-0.91 ± 0.55

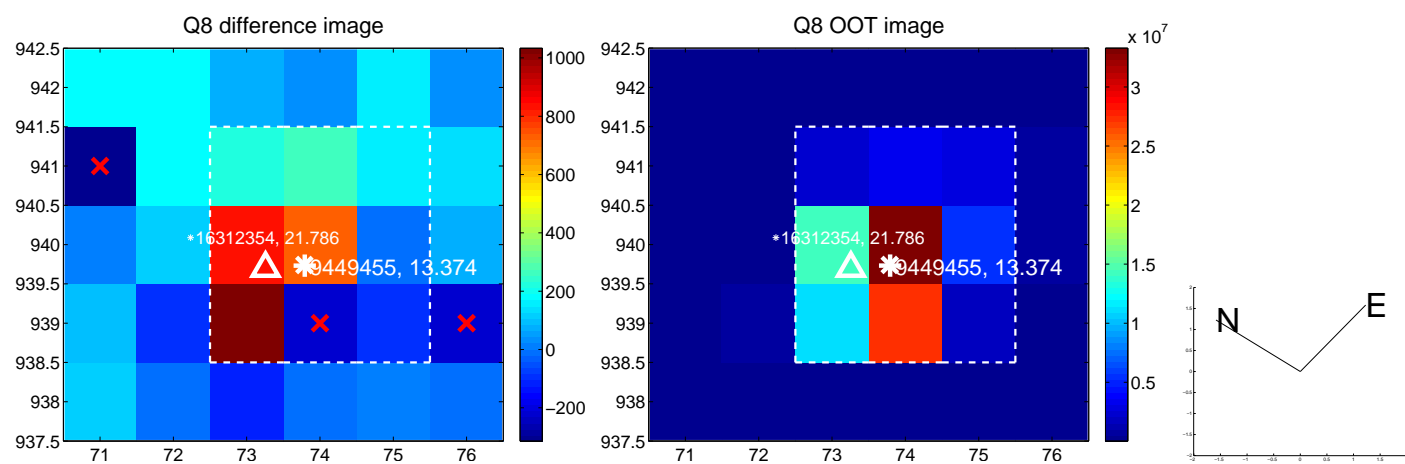
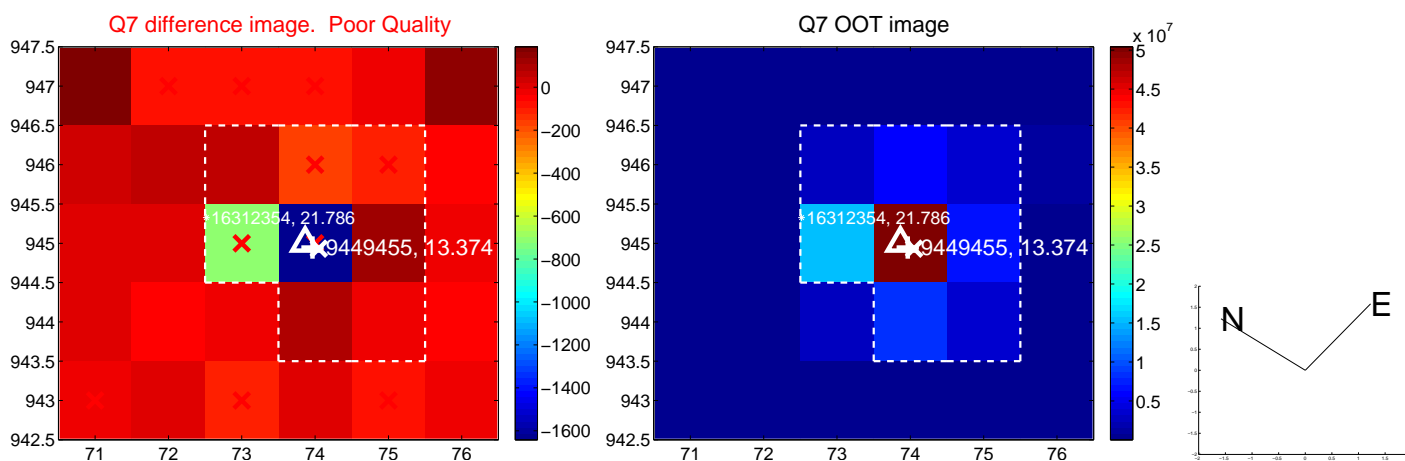
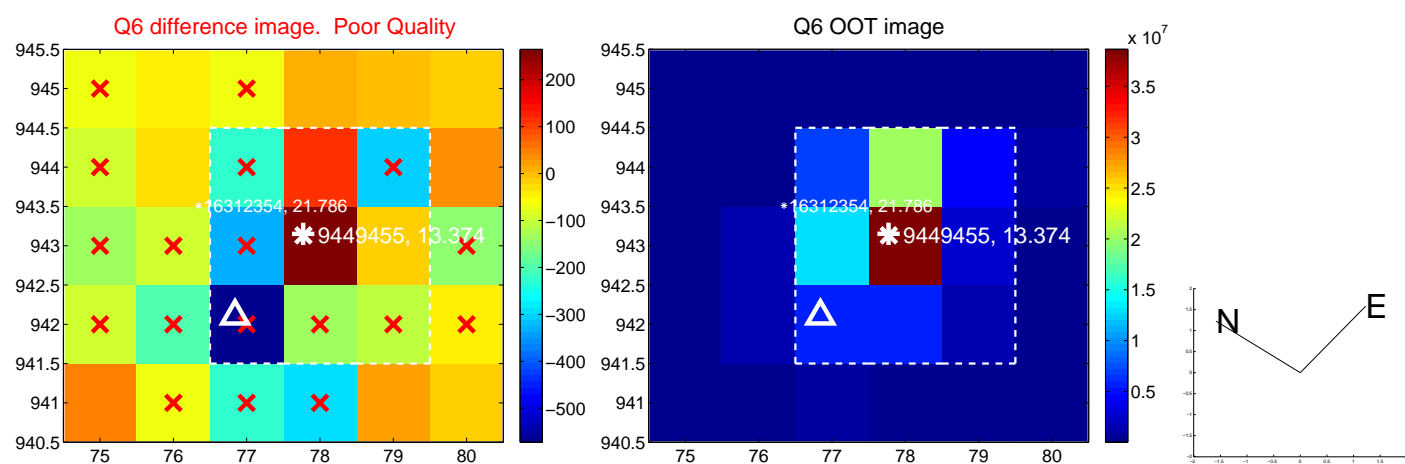
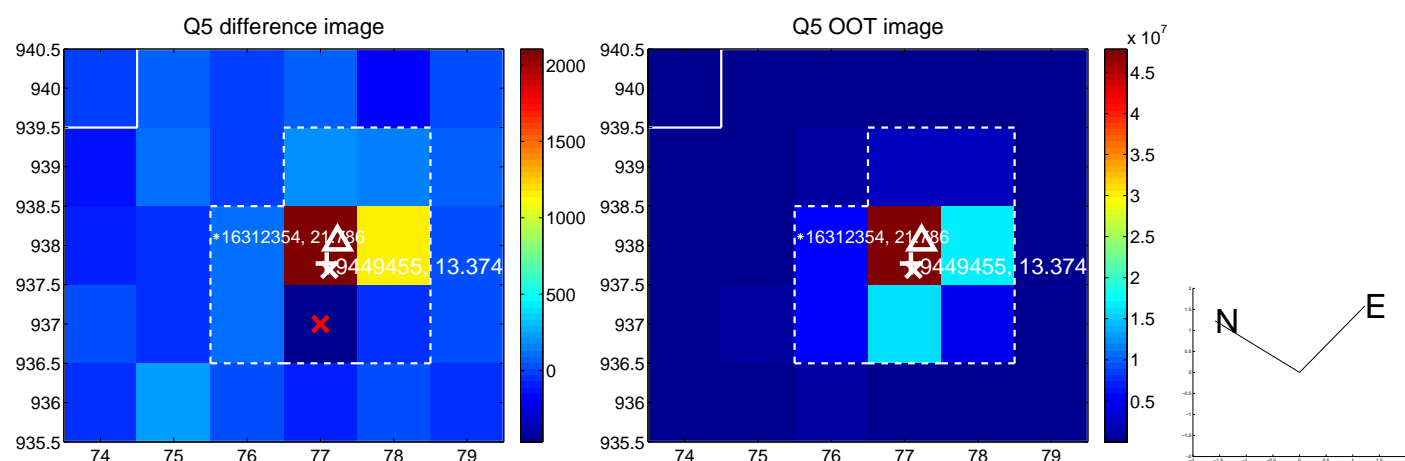


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

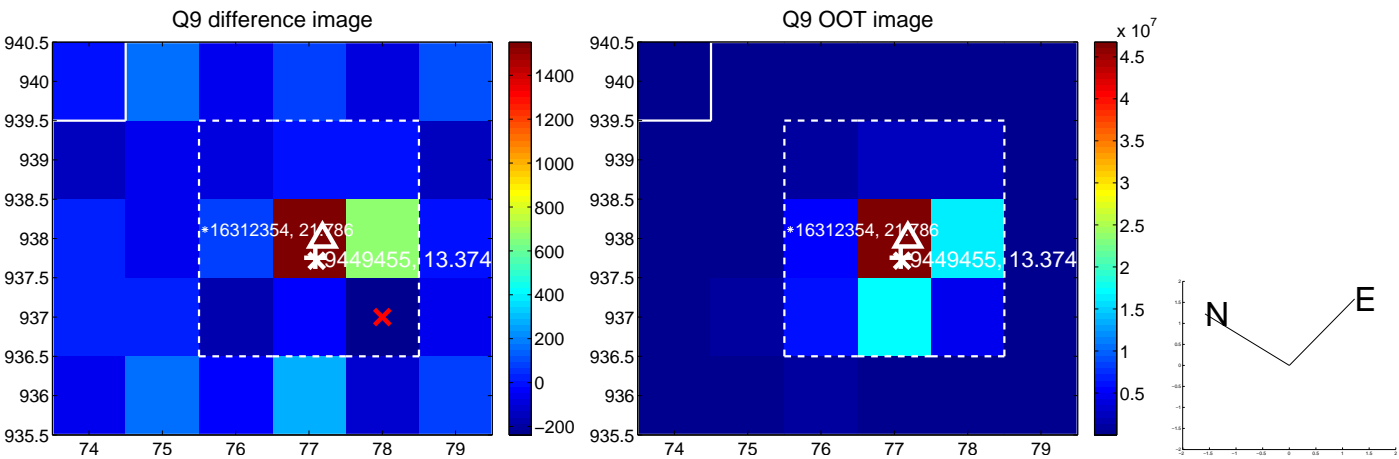
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



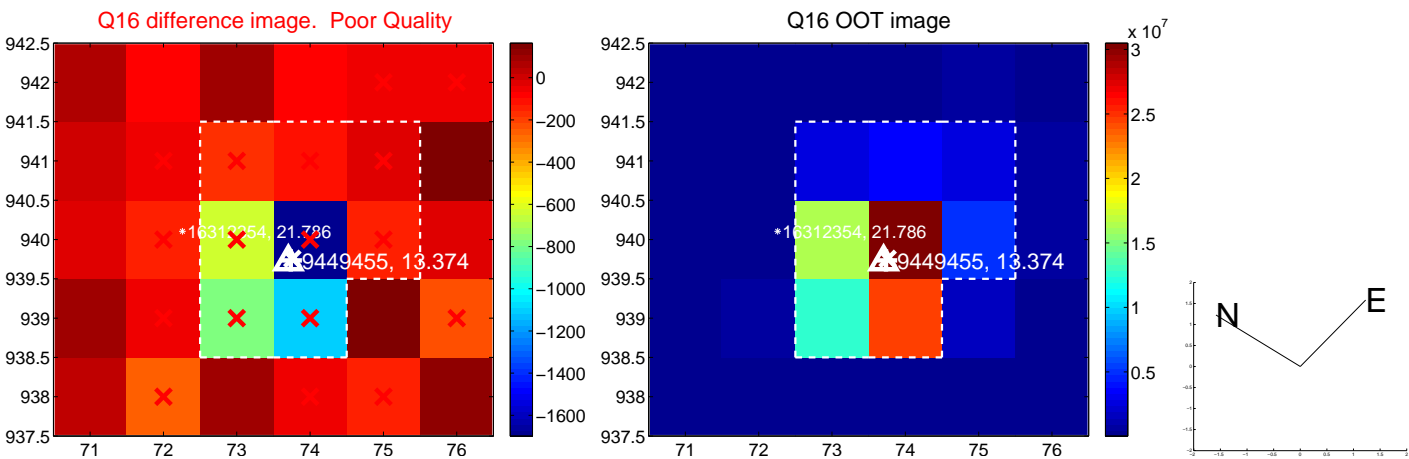
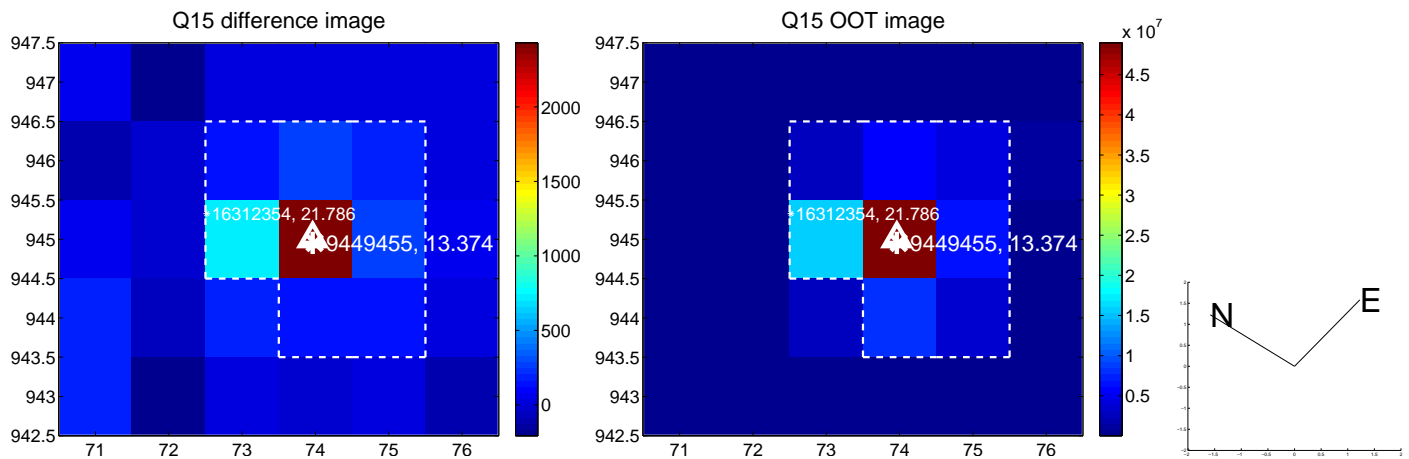
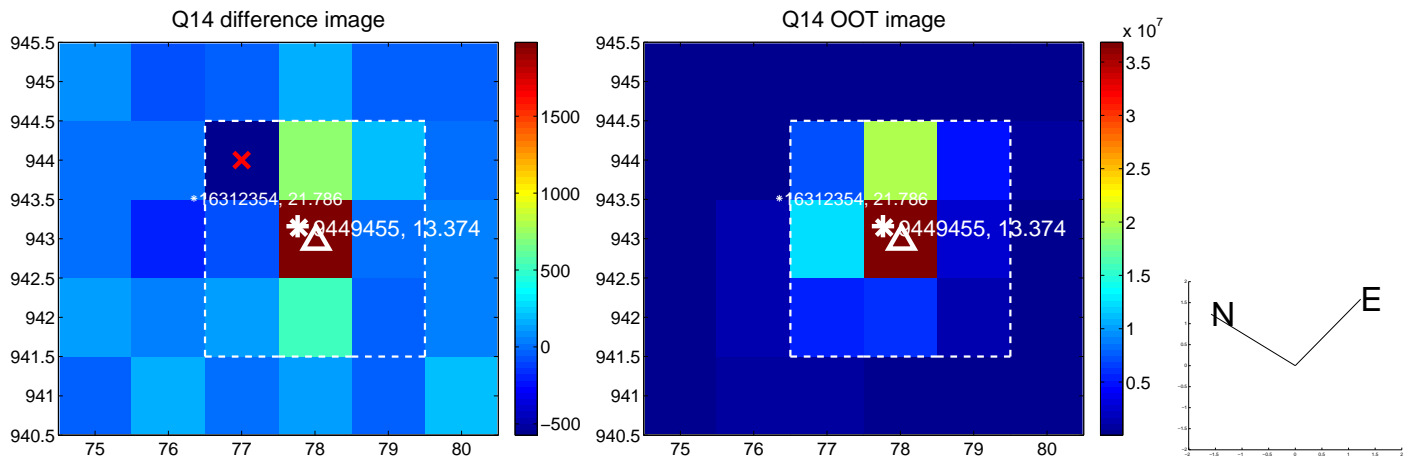
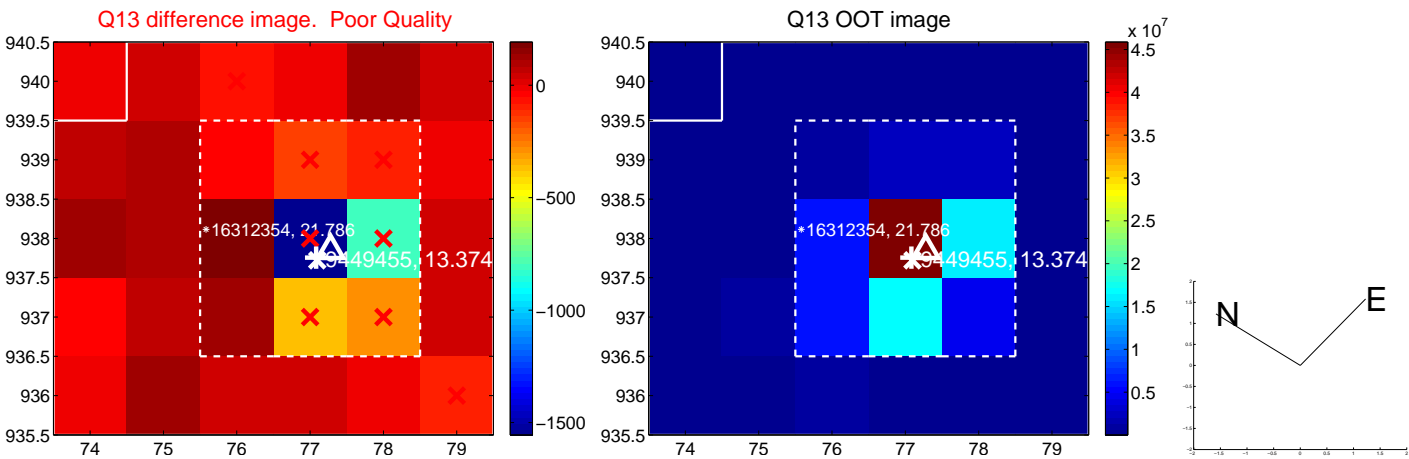
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



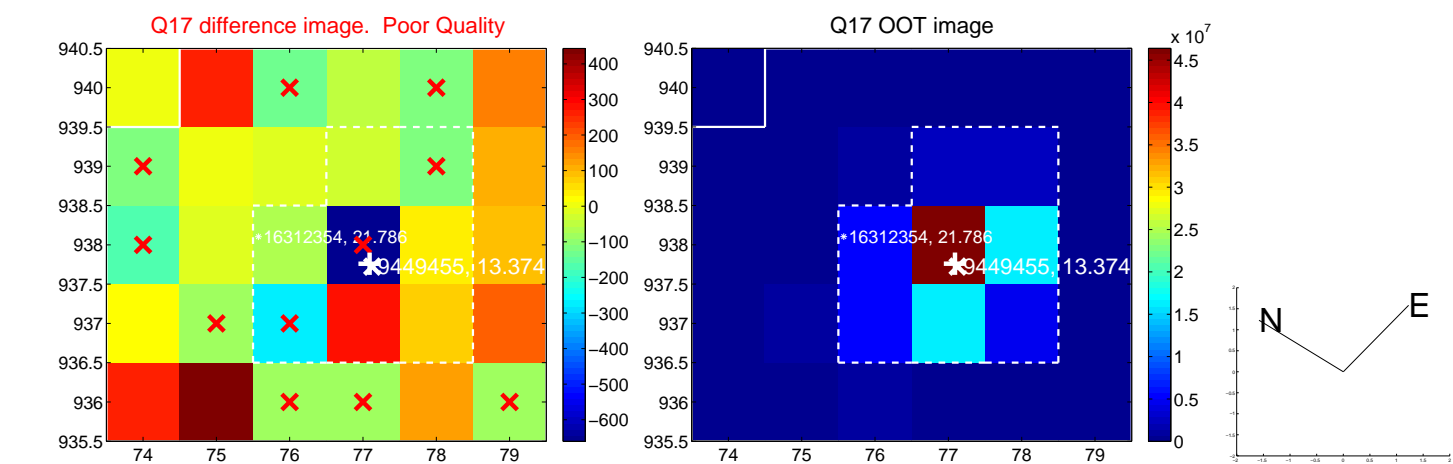
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



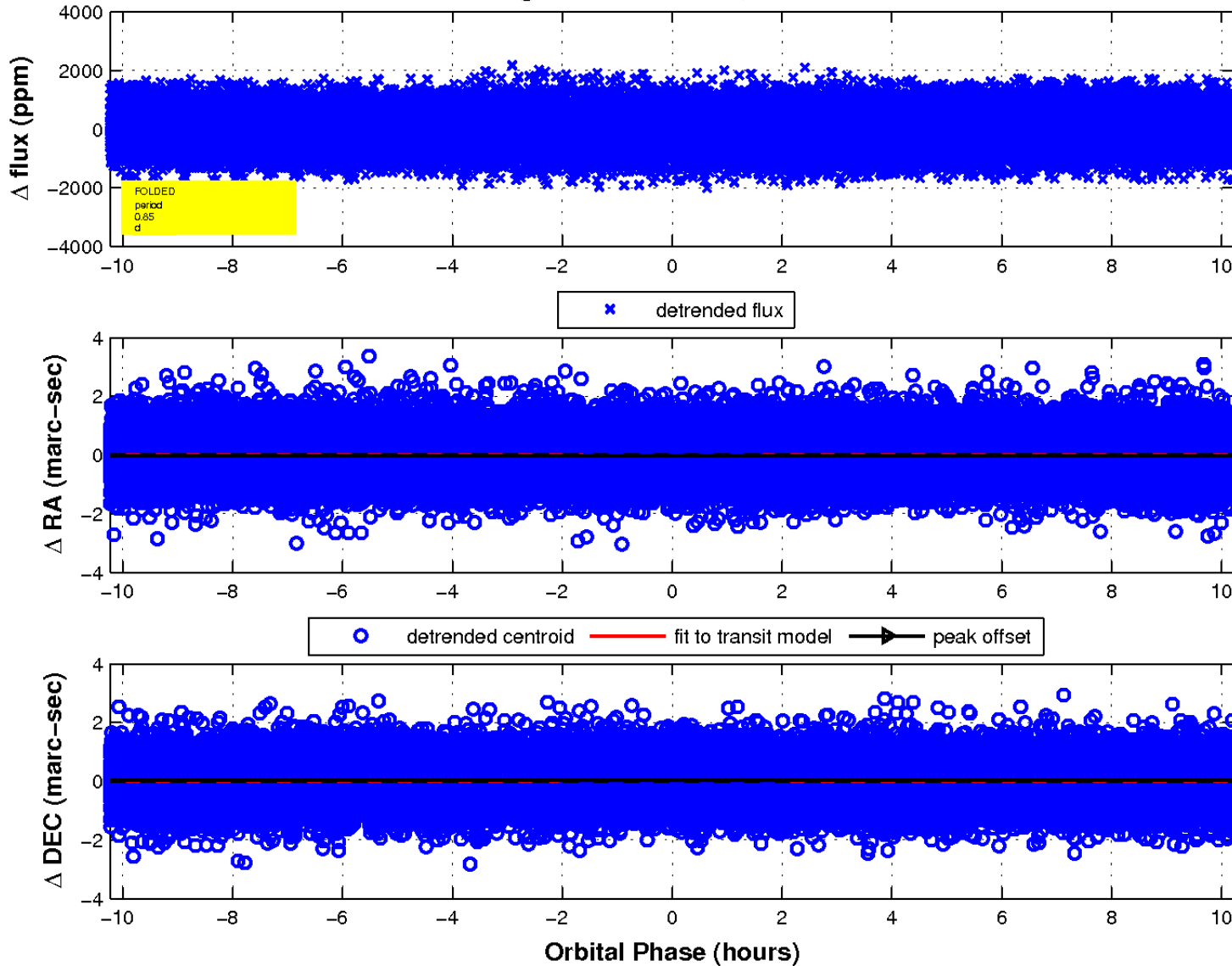
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

