

KIC 009655444

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})
009655444-01	OBS	No	4.730828	133.309935	8.6	24.797	7.6	4.5	3.10	7663	1.04	6376.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009655444-01	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.

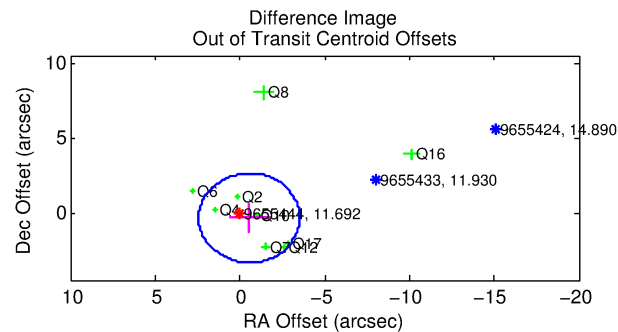
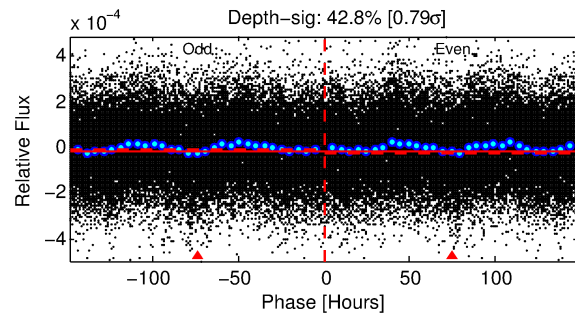
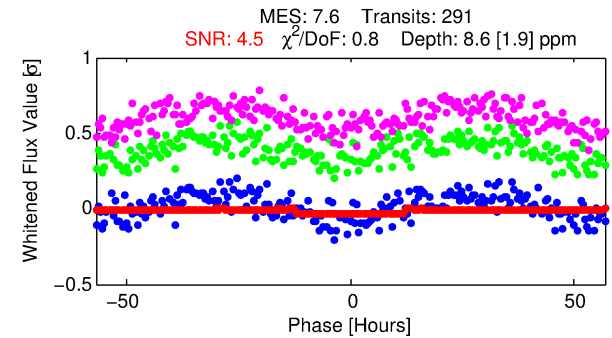
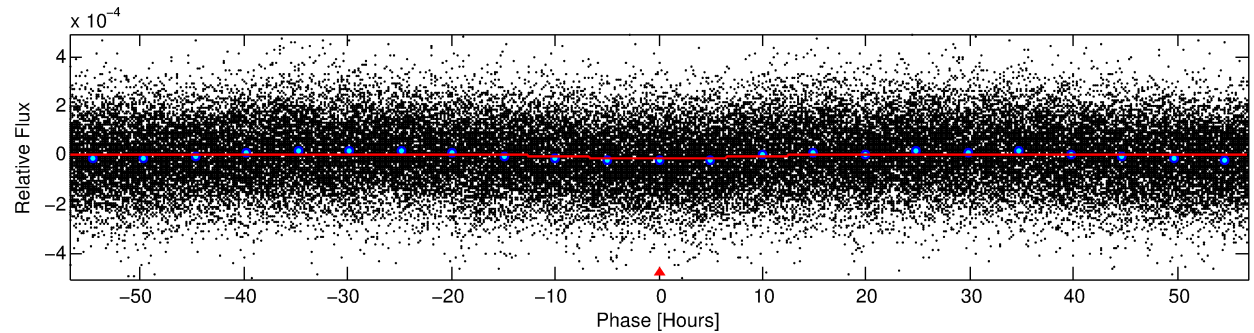
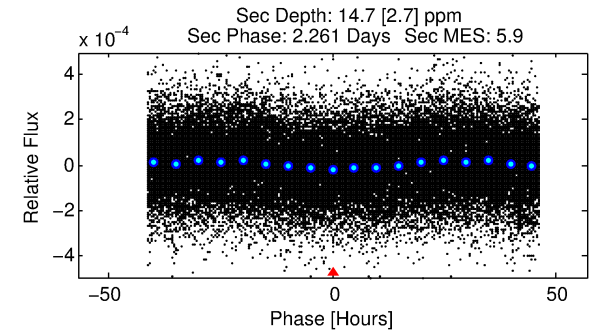
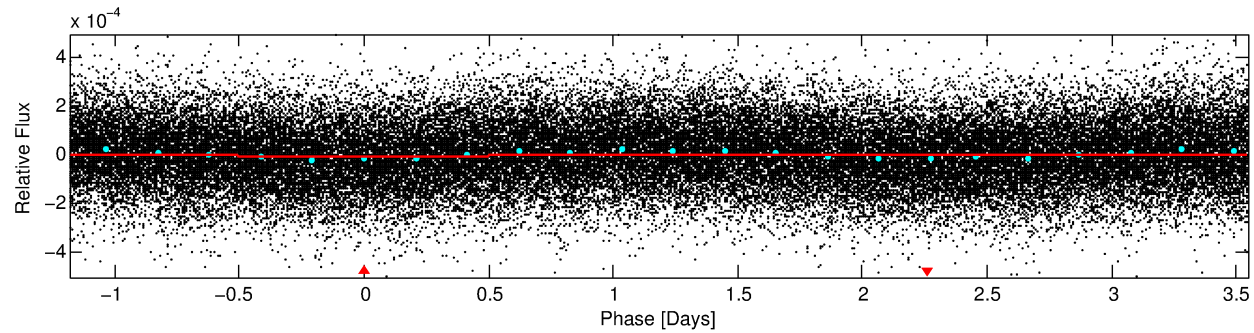
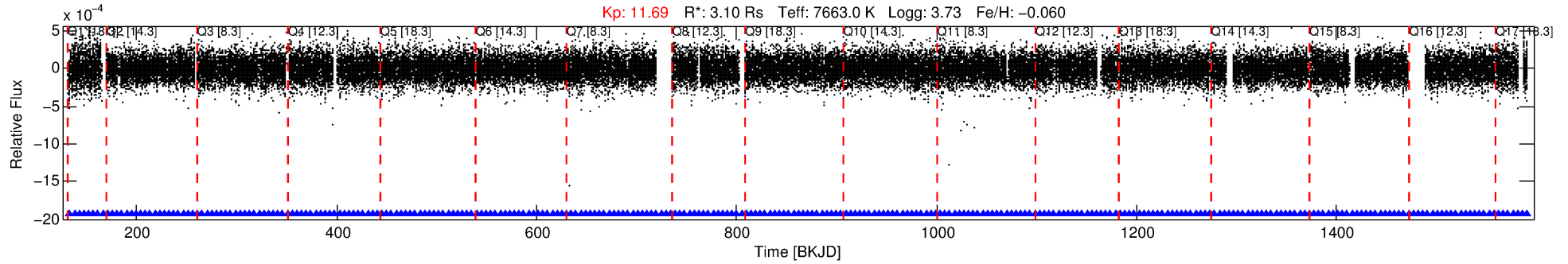
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009655444-01

No Significant Match Found

DV One-Page Summary

KIC: 9655444 Candidate: 1 of 1 Period: 4.731 d



DV Fit Results:

Period = 4.73083 [0.00018] d
Epoch = 133.3099 [0.0233] BKJD
Rp/R* = 0.0031 [0.0007]
a/R* = 1.18 [0.41]
b = 0.87 [0.36]
Seff = 6376.97 [4637.72]
Teq = 2279 [414] K
Rp = 1.04 [0.53] Re
a = 0.0683 [0.0302] AU
Ag = 35.00 [30.00] [1.13σ]
Teffp = 8569 [1096] K [5.37σ]

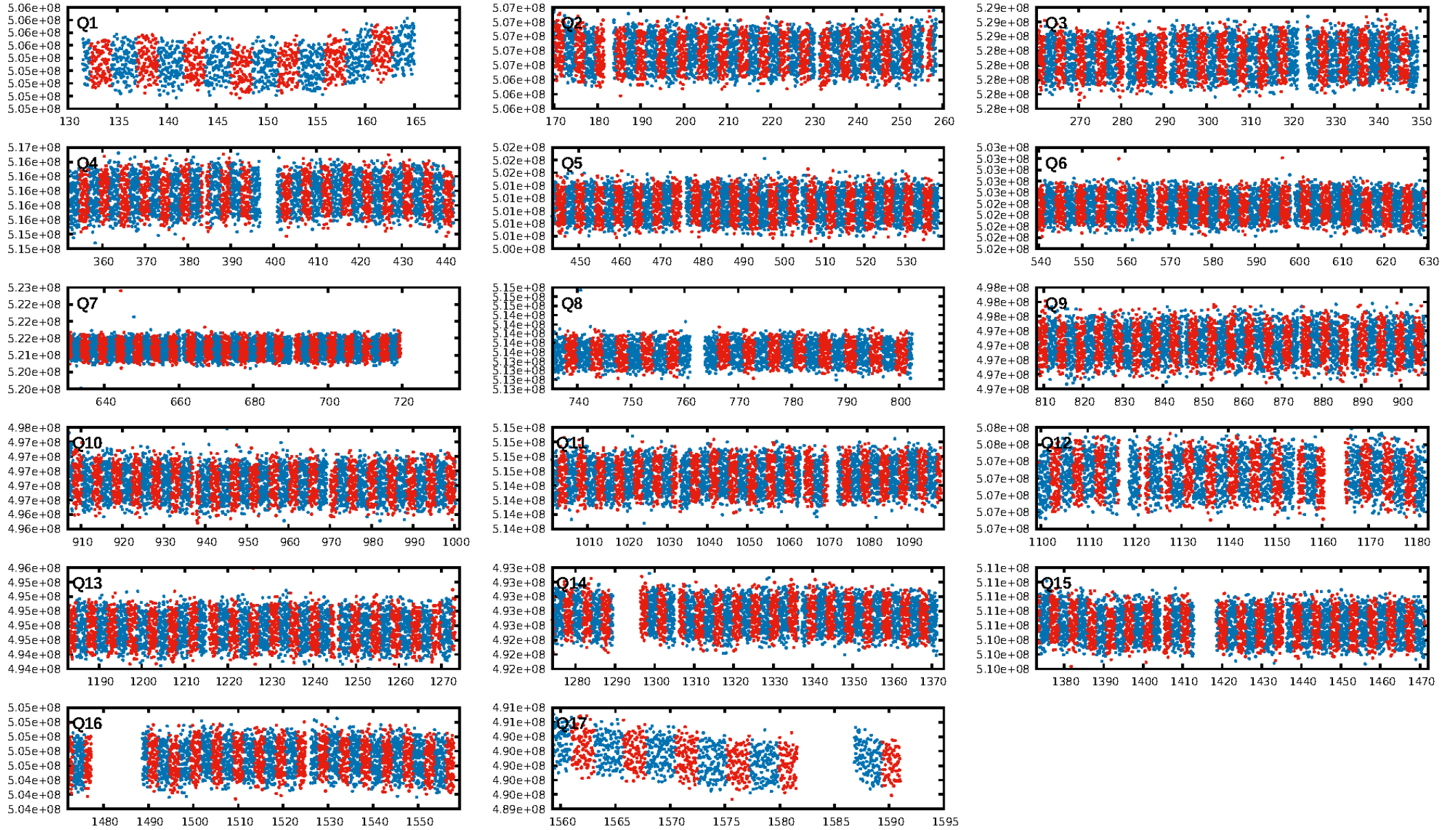
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.77e-13
RollingBand-fgt: 1.00 [278/278]
GhostDiagnostic-chr: 18.82
Centroid-sig: 0.6%
Centroid-so: 3.959 arcsec [1.57σ]
OotOffset-rm: 0.652 arcsec [0.66σ]
KicOffset-rm: 0.925 arcsec [0.86σ]
OotOffset-st: 3/1/4/1 [9]
KicOffset-st: 3/1/4/1 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

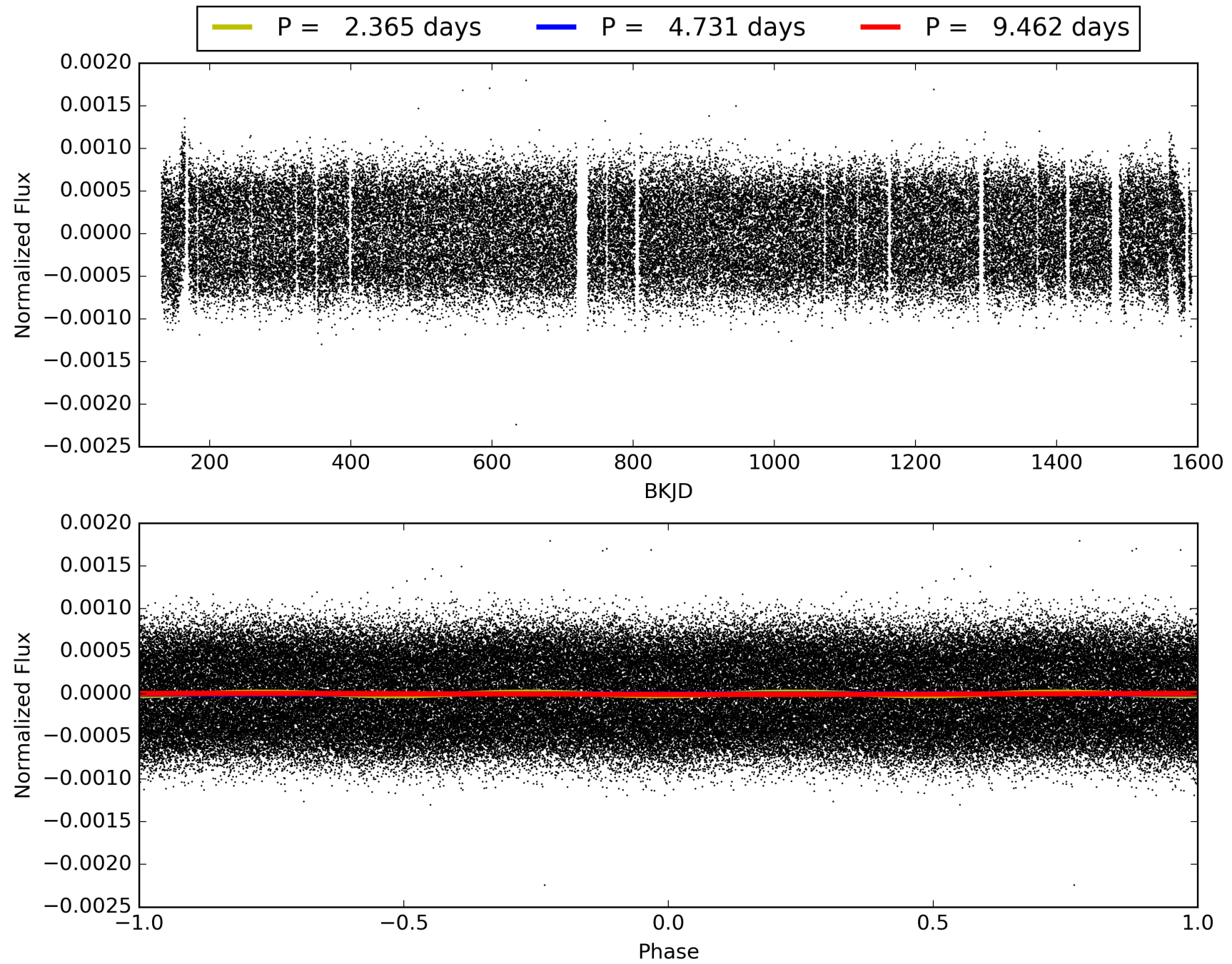
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:27:17 Z

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

TCE 009655444-01, PDC Light Curves

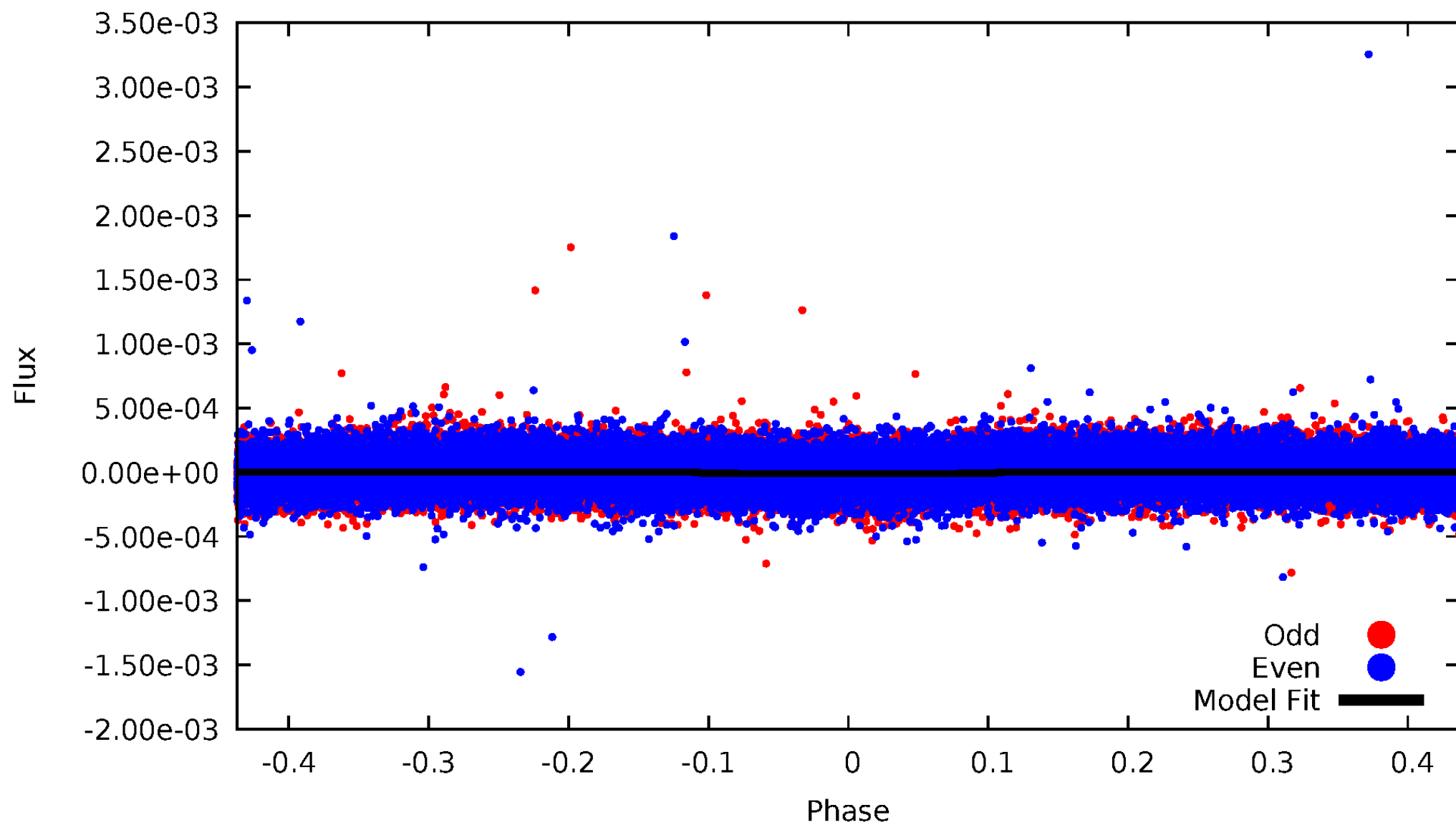


TCE 009655444-01



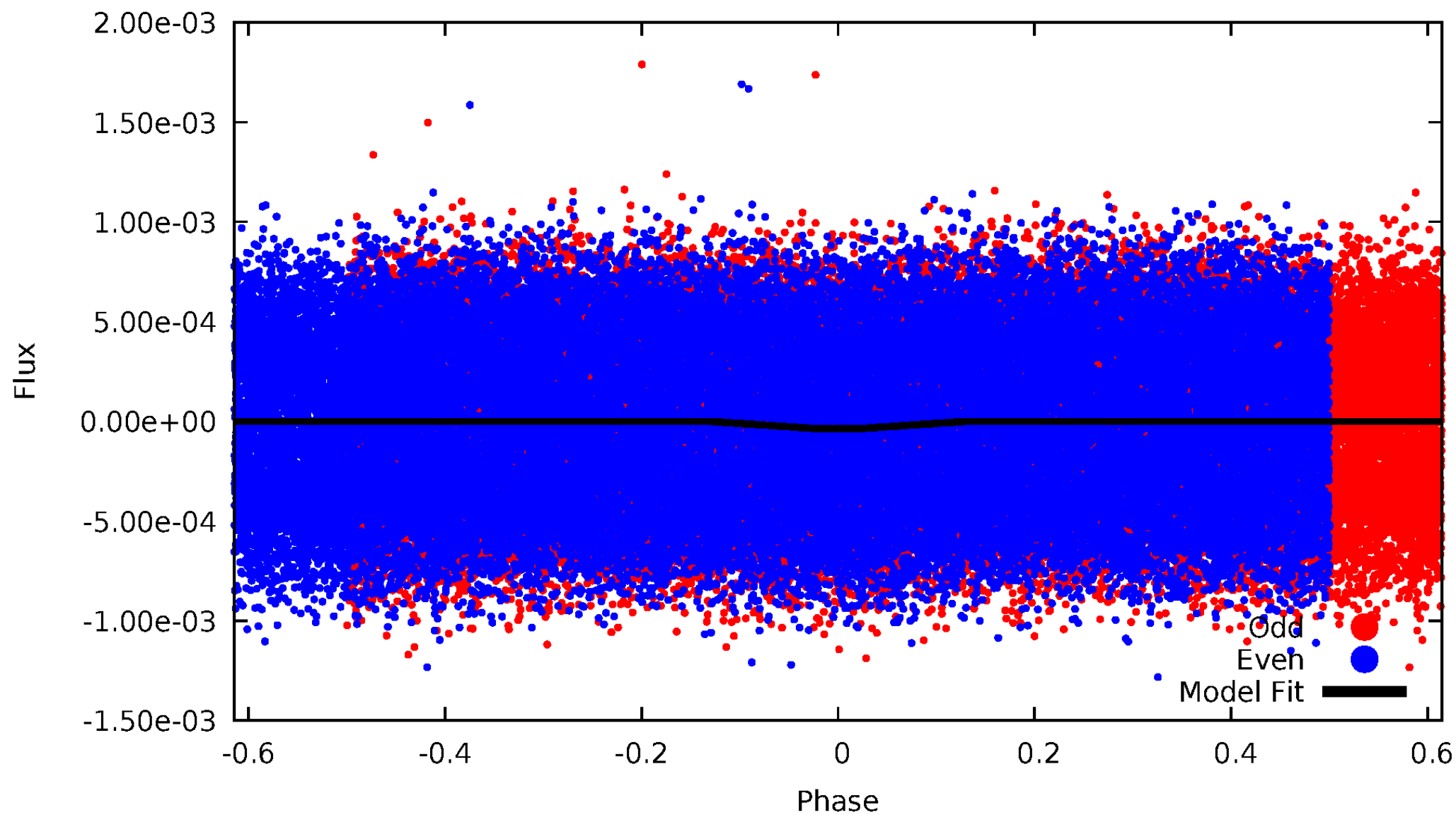
DV Odd/Even

TCE 009655444-01

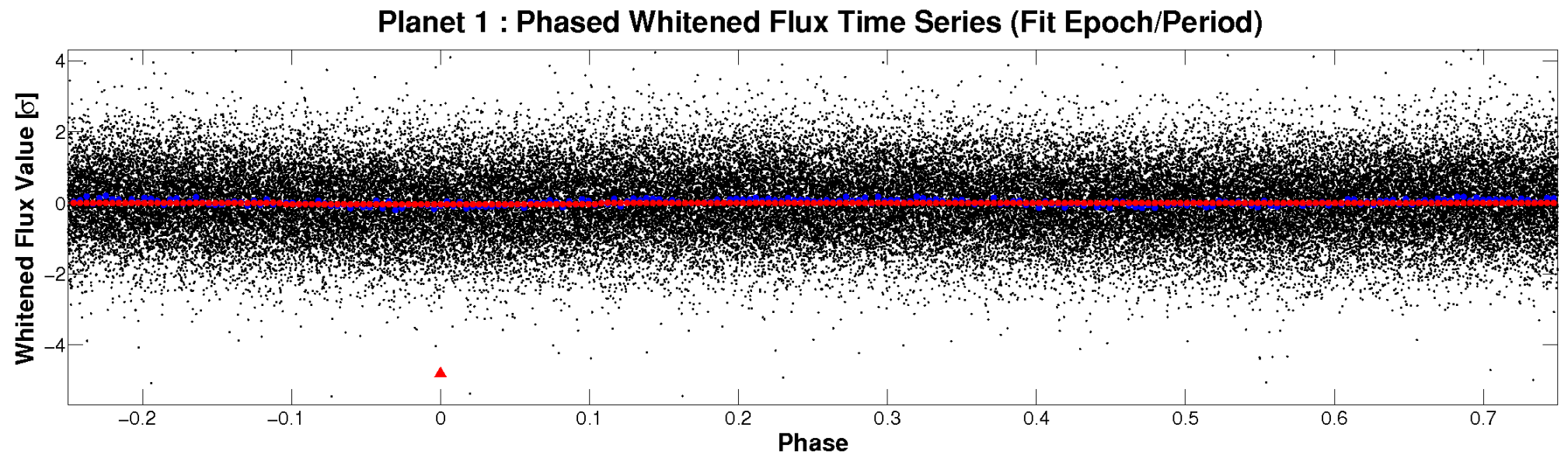
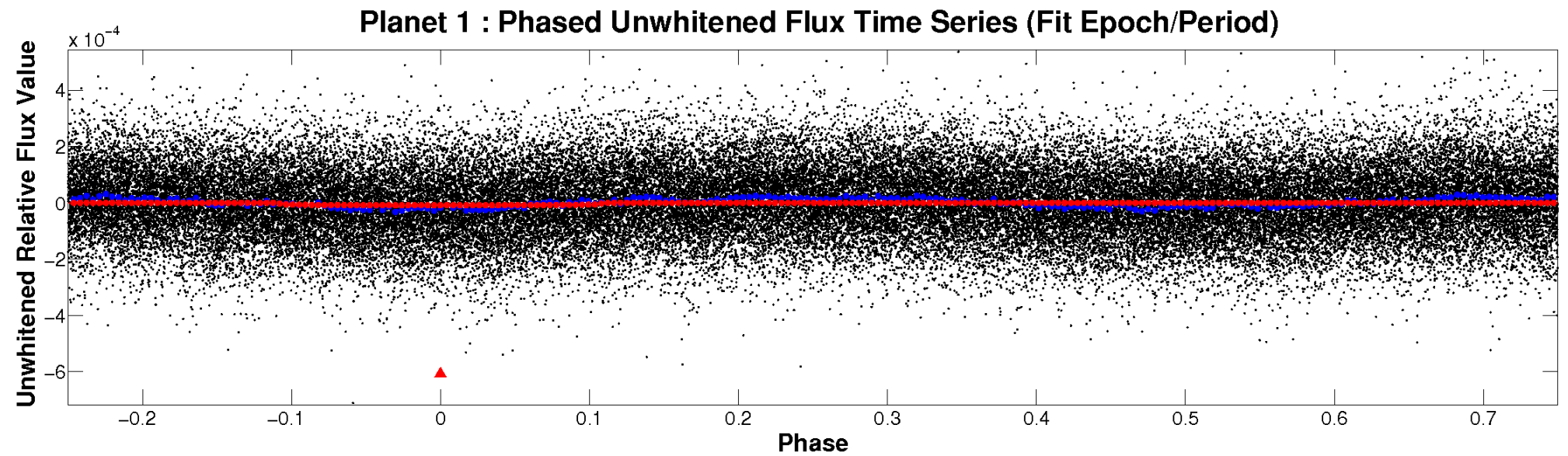


ALT Odd/Even

TCE 009655444-01

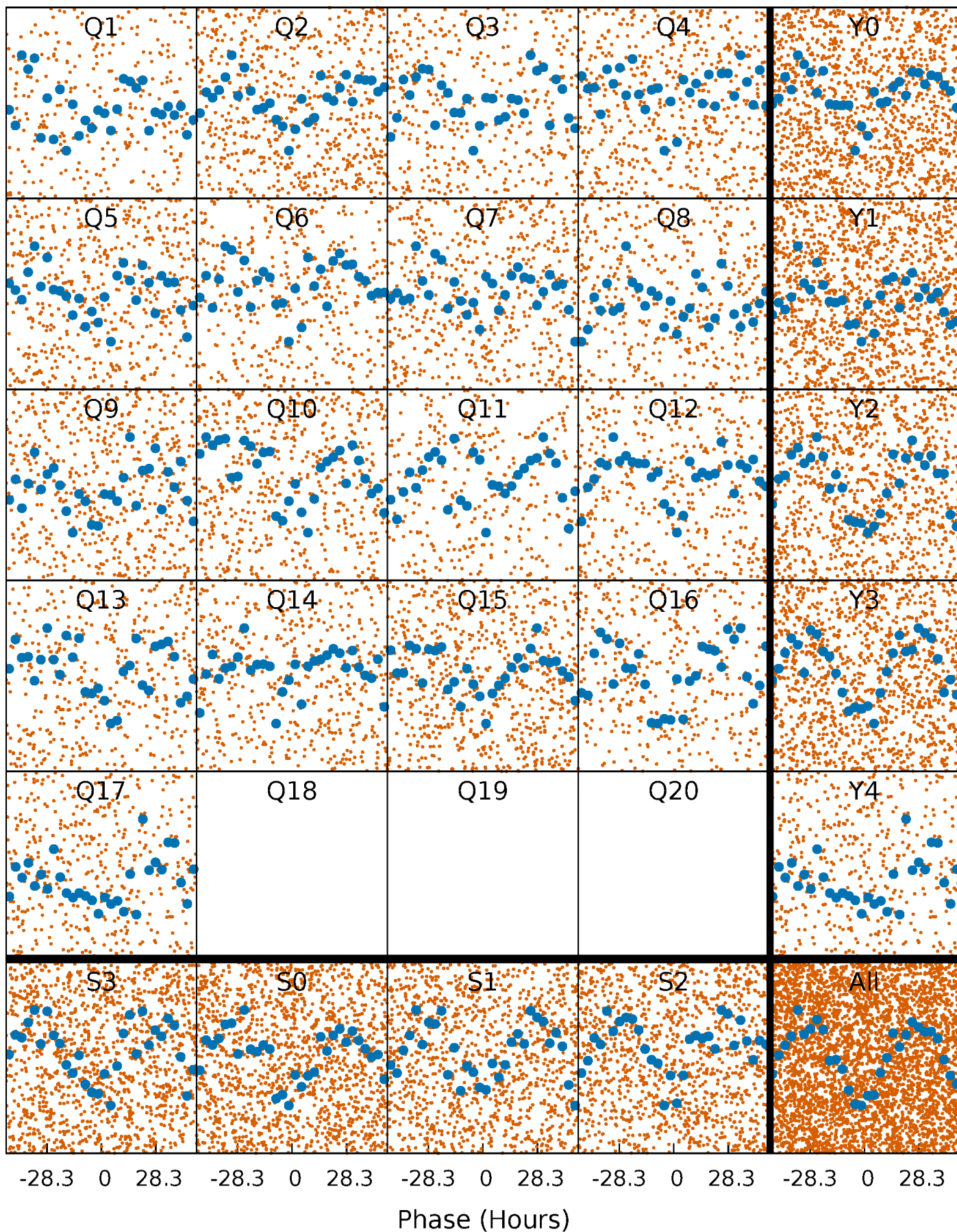


Non-Whitened Vs. Whitened Light Curve



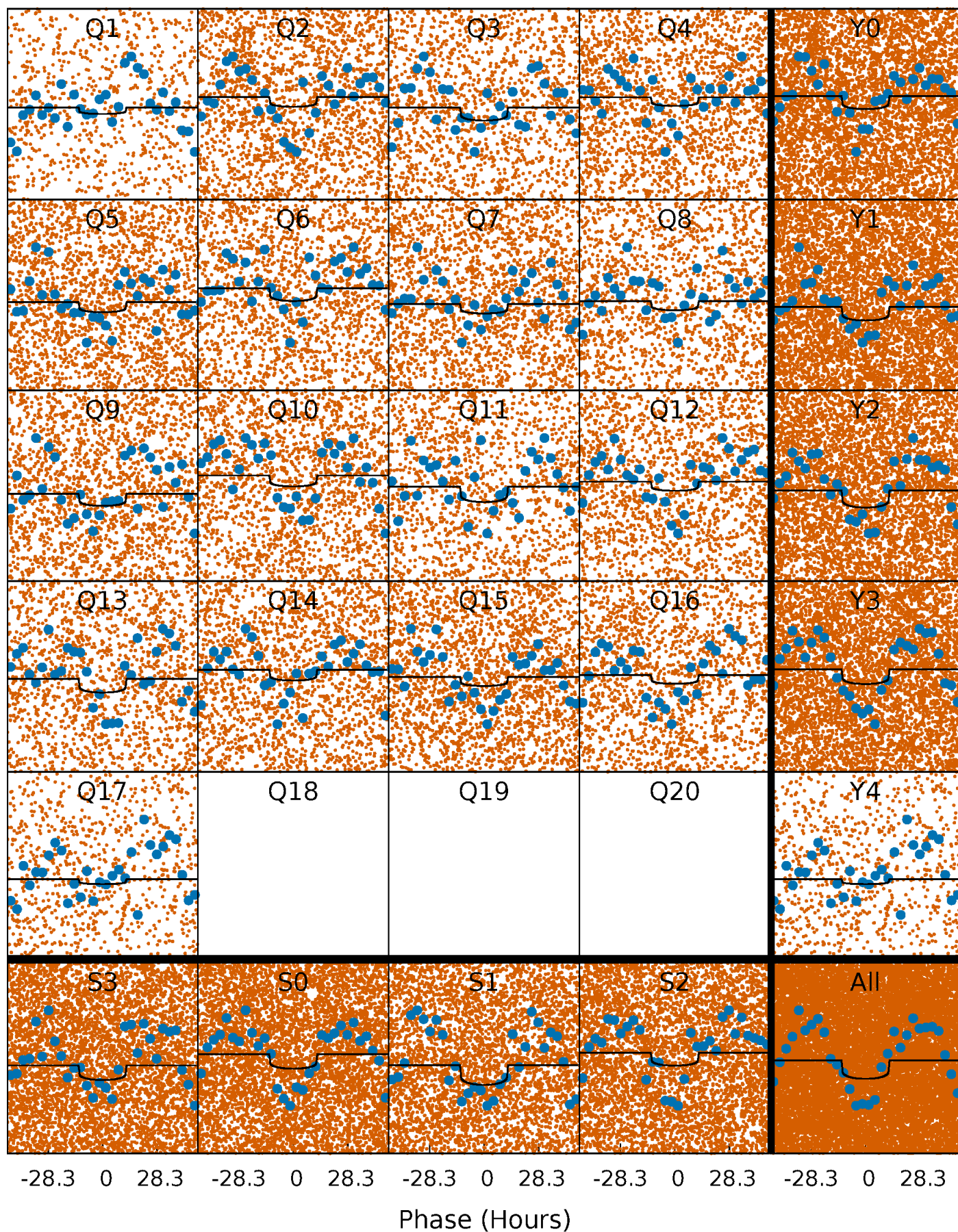
PDC Quarter-Phased Transit Curves

TCE 009655444-01 P= 4.730828 Days $T_0=133.309935$ (BKJD)



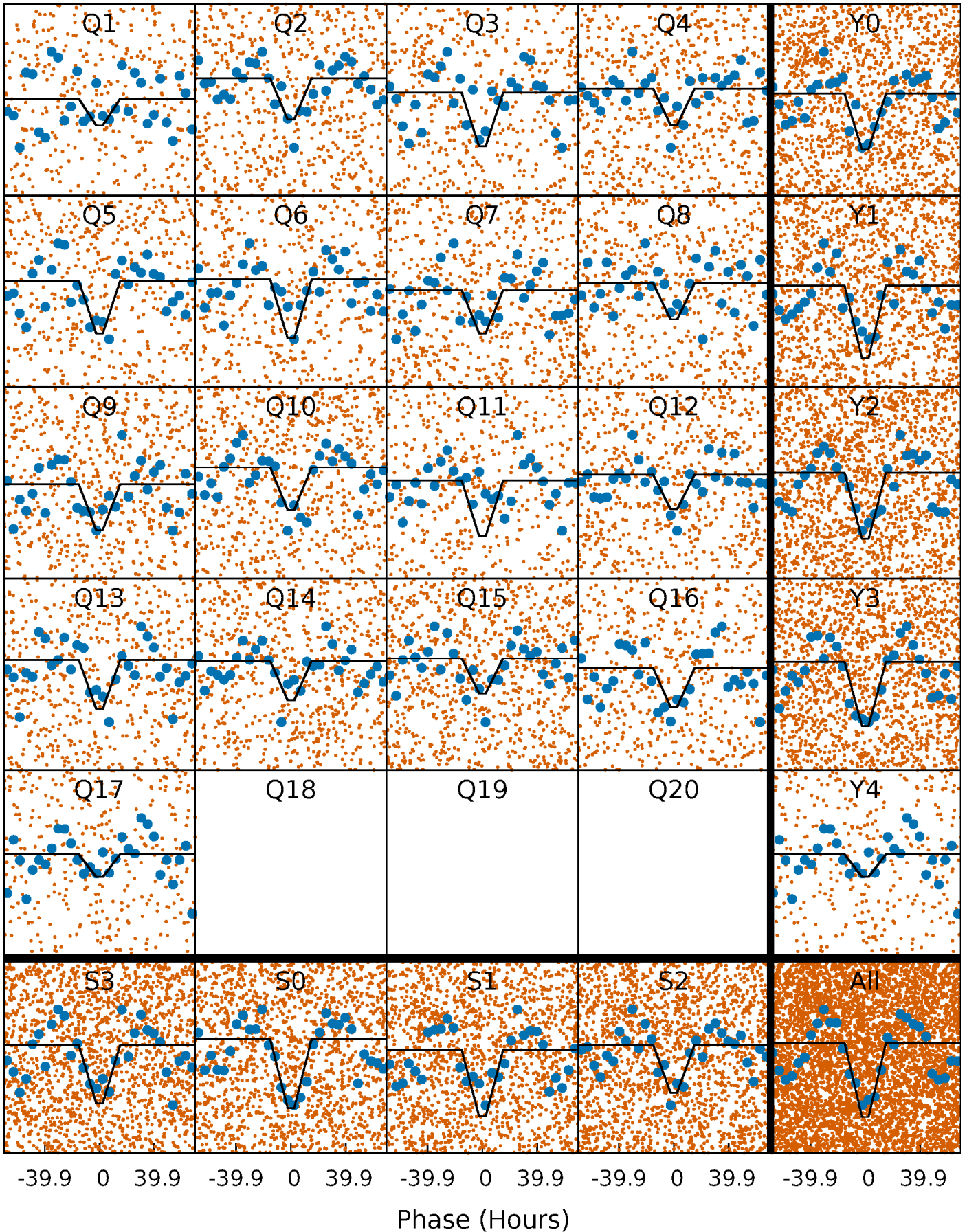
DV Quarter-Phased Transit Curves

TCE 009655444-01 P= 4.730828 Days $T_0=133.309935$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

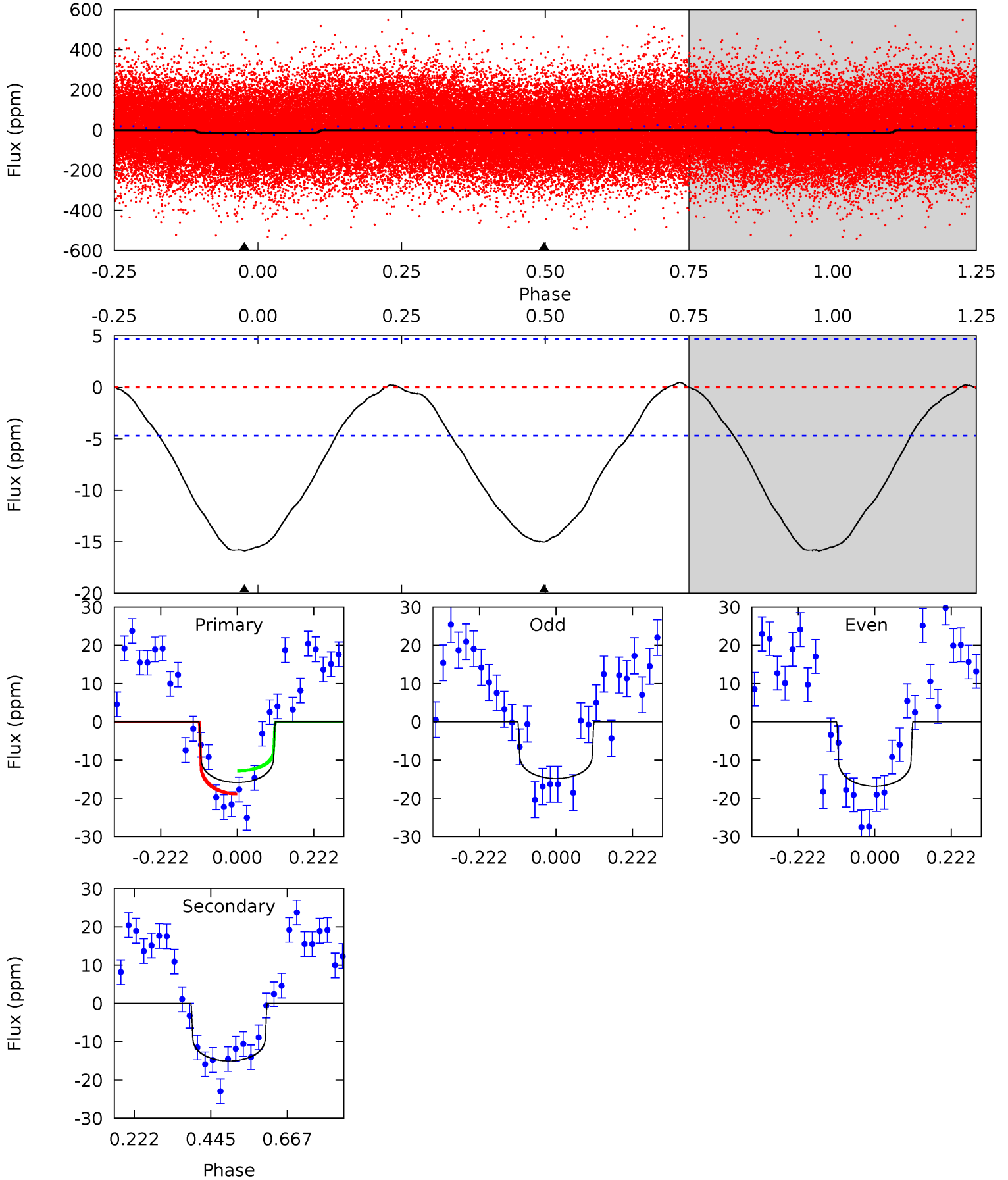
TCE 009655444-01 P= 4.731382 Days $T_0=133.134504$ (BKJD)



DV Model-Shift Uniqueness Test

009655444-01, P = 4.730828 Days, E = 128.579107 Days

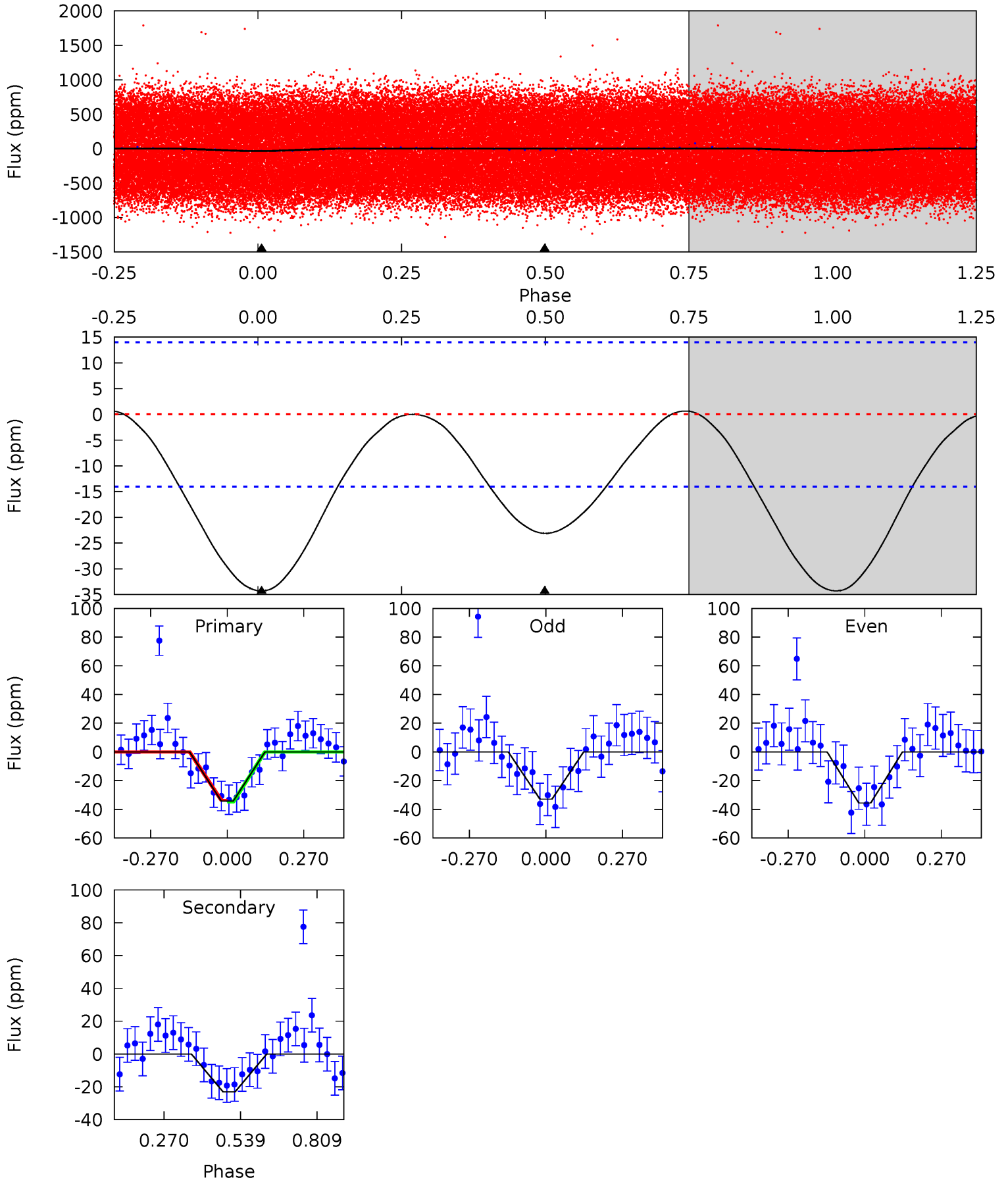
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	14.0	0	0	4.39	1.22	0.33	14.8	14.8	14.0	14.0	0.94	0.96	0.03	2.84



Alt Model-Shift Uniqueness Test

009655444-01, P = 4.731382 Days, E = 128.403122 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	7.17	0	0	4.35	1.10	0.17	10.6	10.6	7.17	7.17	0.41	0.52	0.02	0.19



Stellar Parameters For KIC 009655444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7663^{+213}_{-320}	$3.733^{+0.416}_{-0.073}$	$-0.060^{+0.200}_{-0.350}$	$3.105^{+0.355}_{-1.422}$	$1.905^{+0.104}_{-0.415}$	$0.090^{+0.331}_{-0.021}$
	+3%/-4%	+11%/-2%	+333%/-583%	+11%/-46%	+5%/-22%	+369%/-24%
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 009655444-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$0.95^{+0.29}_{-0.27}$	3088^{+199}_{-348}	8738^{+1720}_{-1140}	43^{+40}_{-18}
Alt.	-23 ± 3	$1.93^{+0.37}_{-0.48}$	3085^{+210}_{-357}	6620^{+574}_{-493}	16^{+10}_{-5}

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 $A_{obs} \gg 1.0$

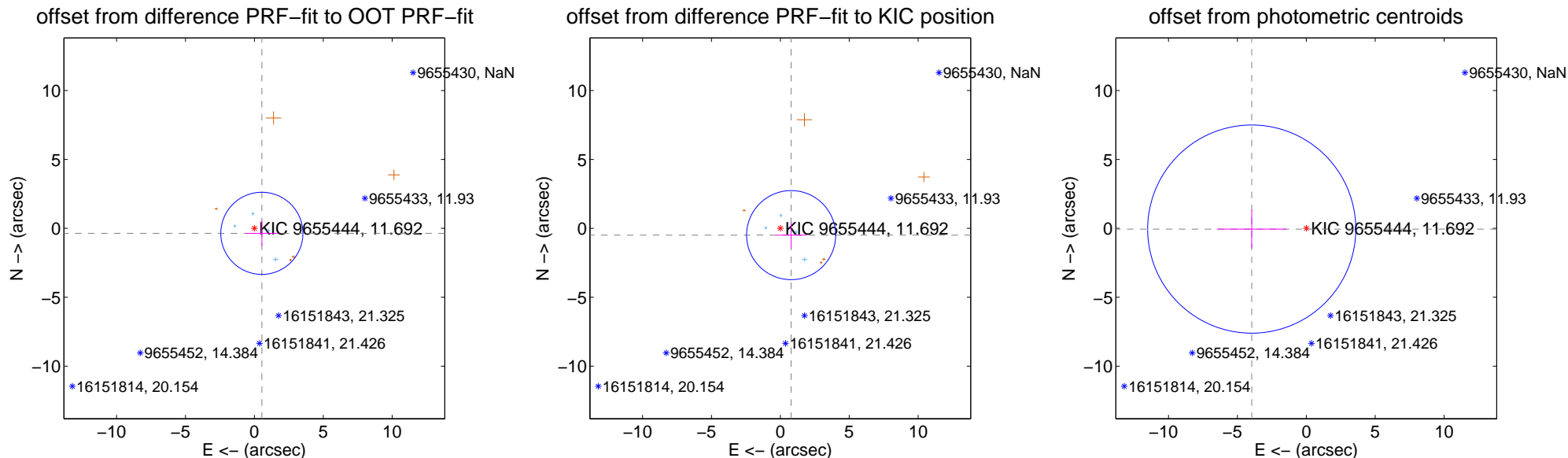
DV Centroid Data

Supplemental centroid analysis for 009655444-01. **Kepler magnitude: 11.69.** Transit SNR 4.47

There are 4 quarters with good PRF difference image offsets

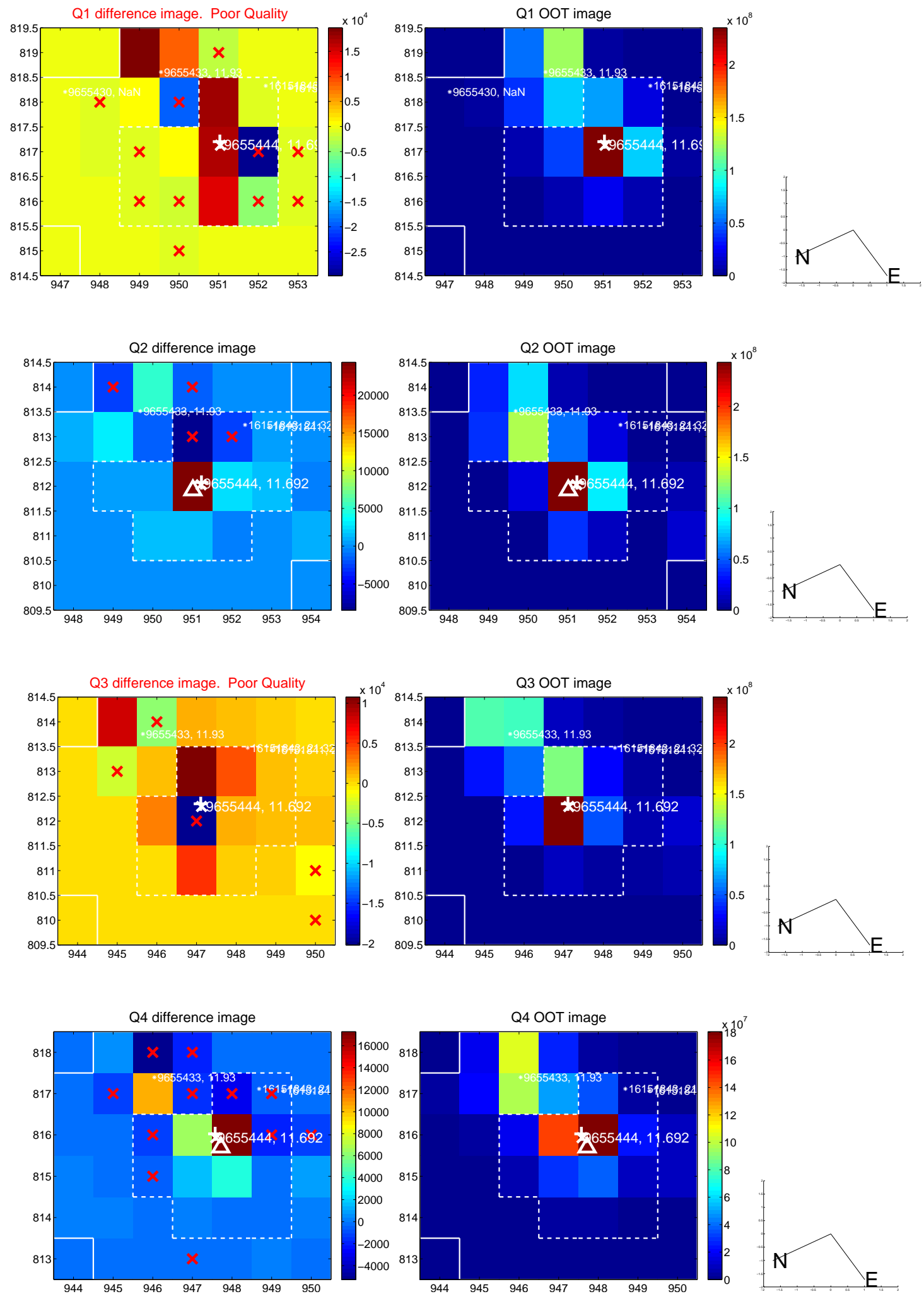
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.652 ± 0.993	0.66	-0.543 ± 1.156	-0.361 ± 0.896
PRF-fit source offset from KIC position	0.925 ± 1.077	0.86	-0.784 ± 1.133	-0.491 ± 0.956
photometric centroid source offset	3.96 ± 2.52	1.57	3.96 ± 2.52	-0.05 ± 1.40

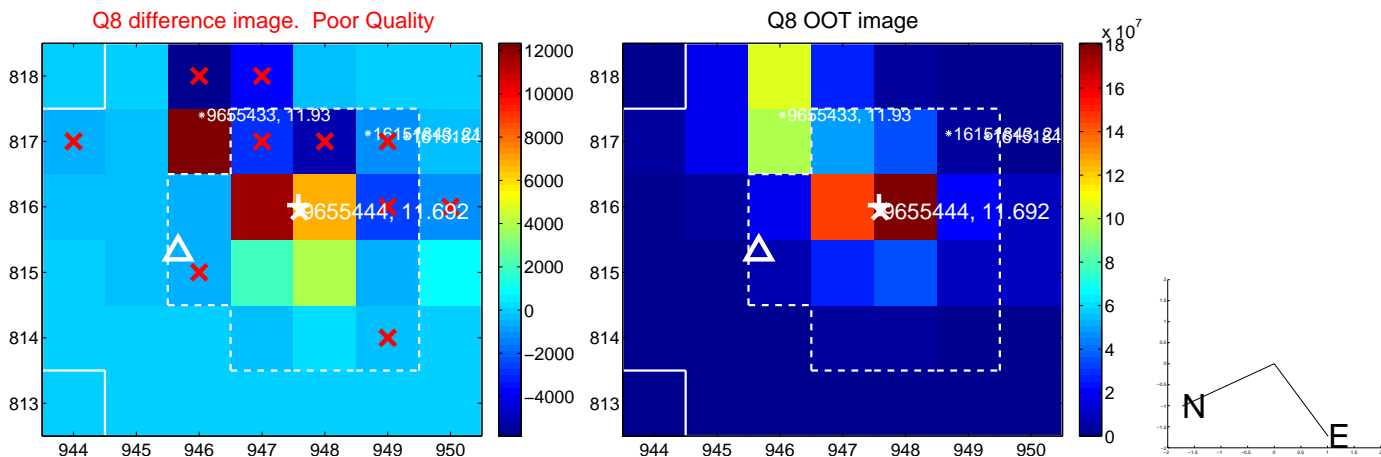
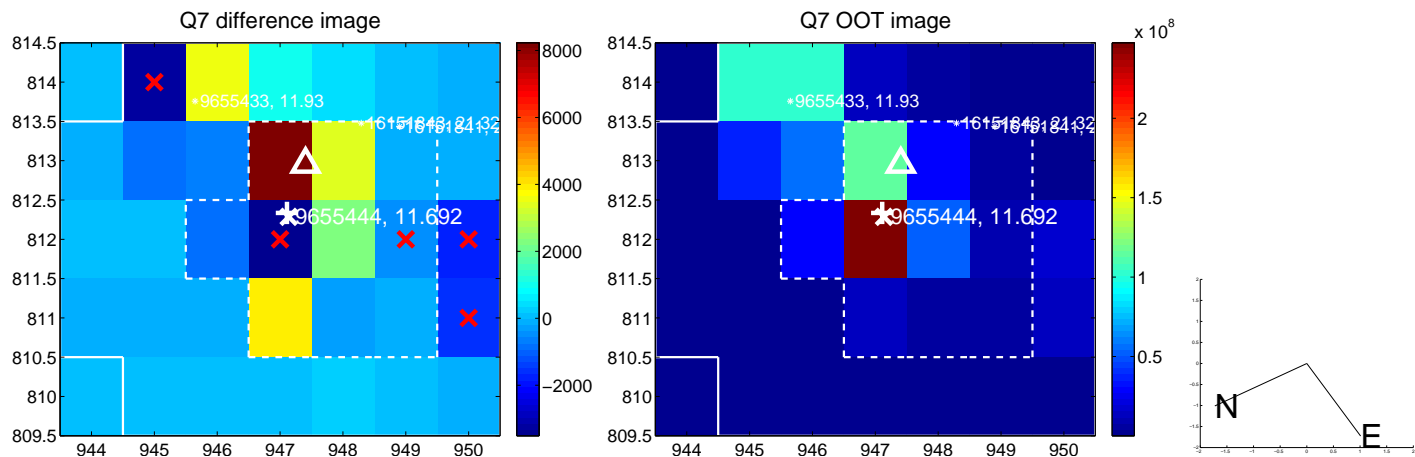
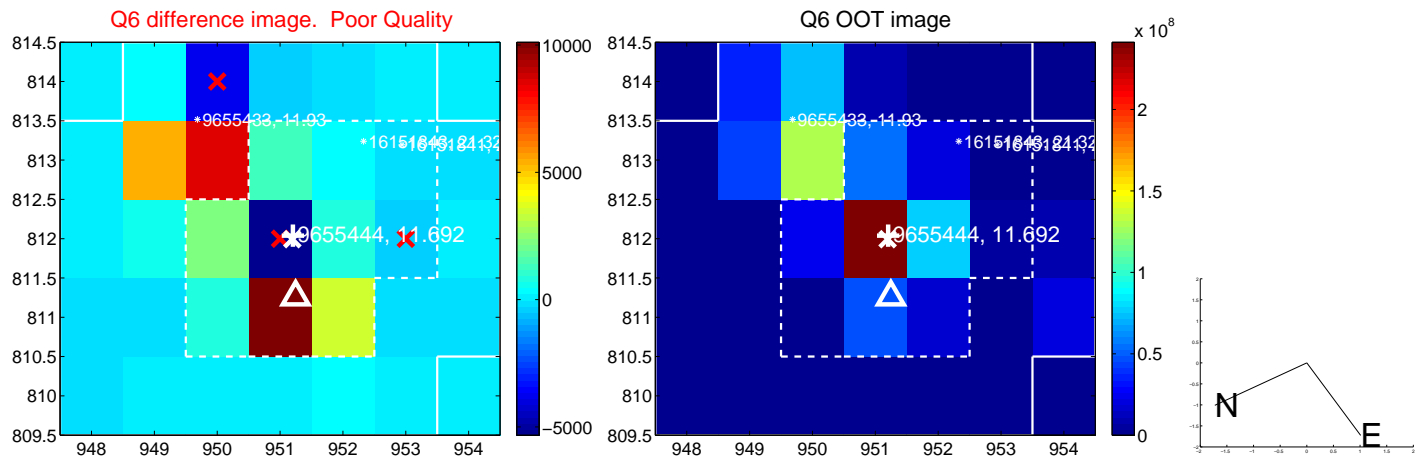
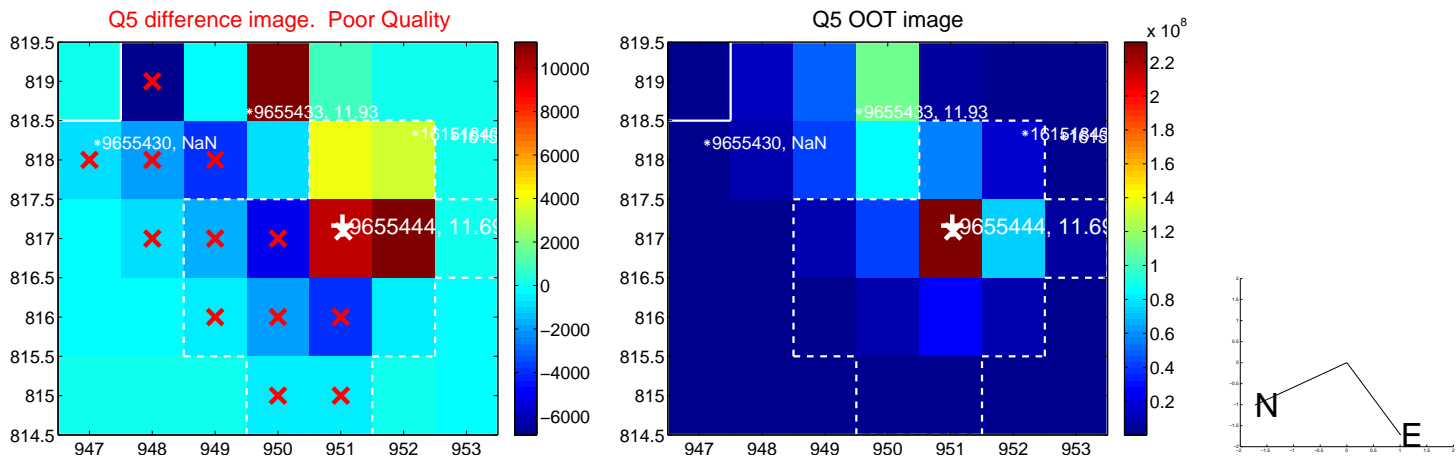


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

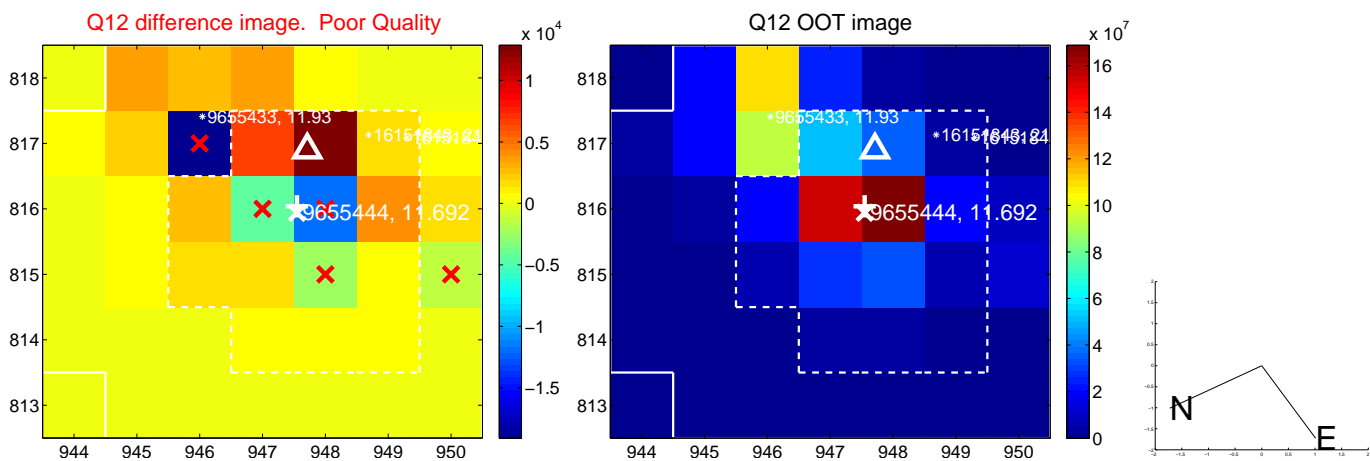
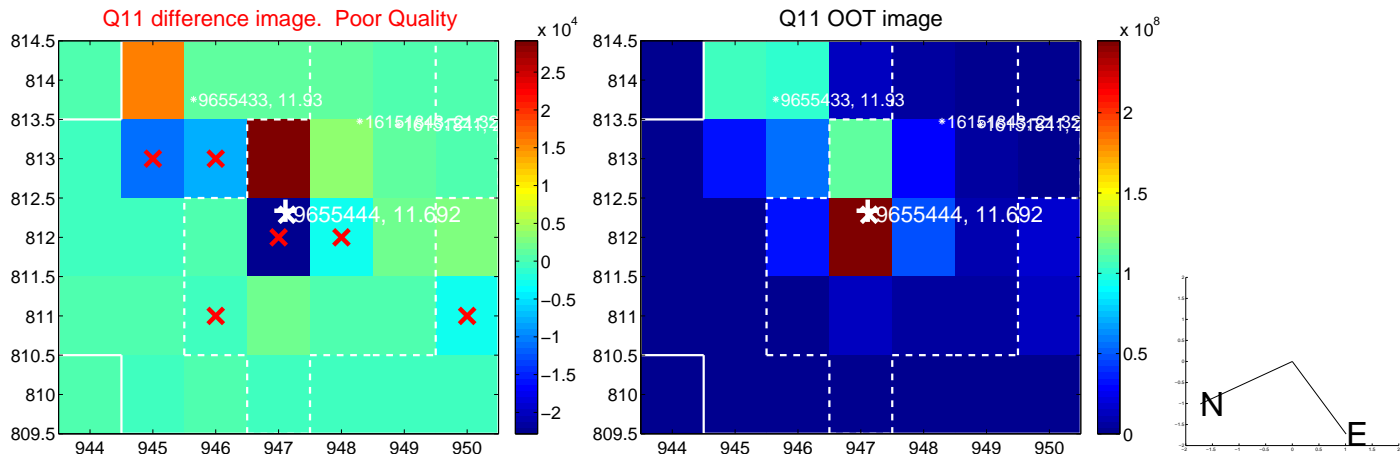
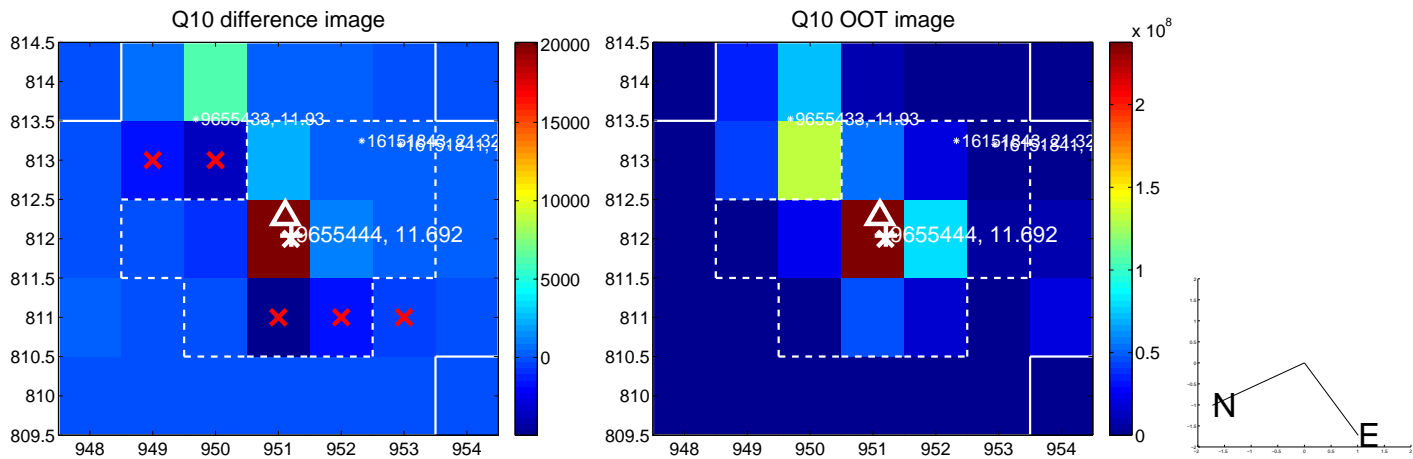
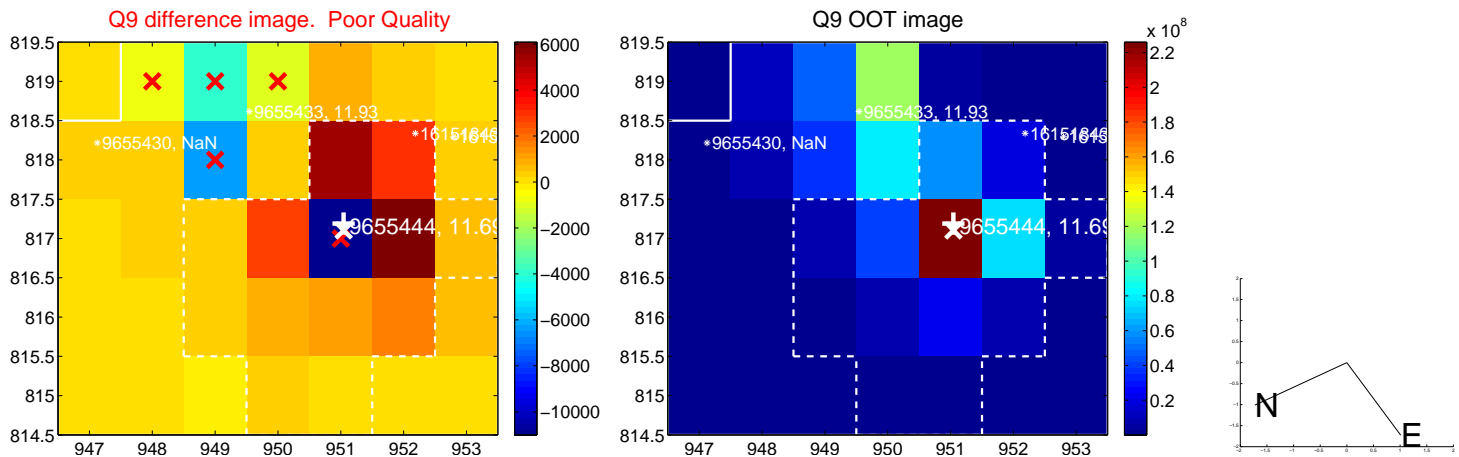
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



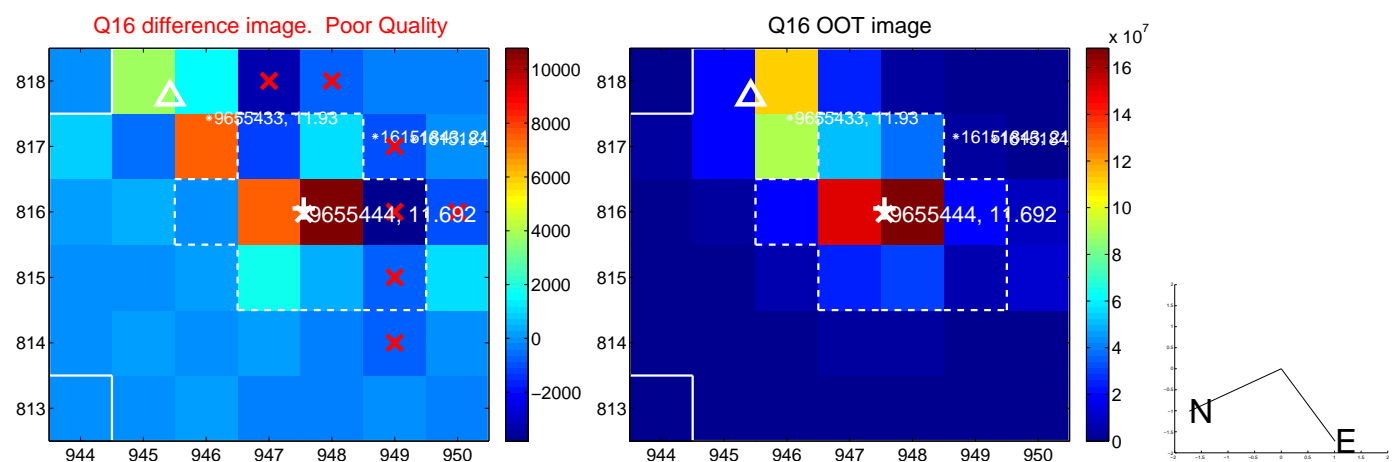
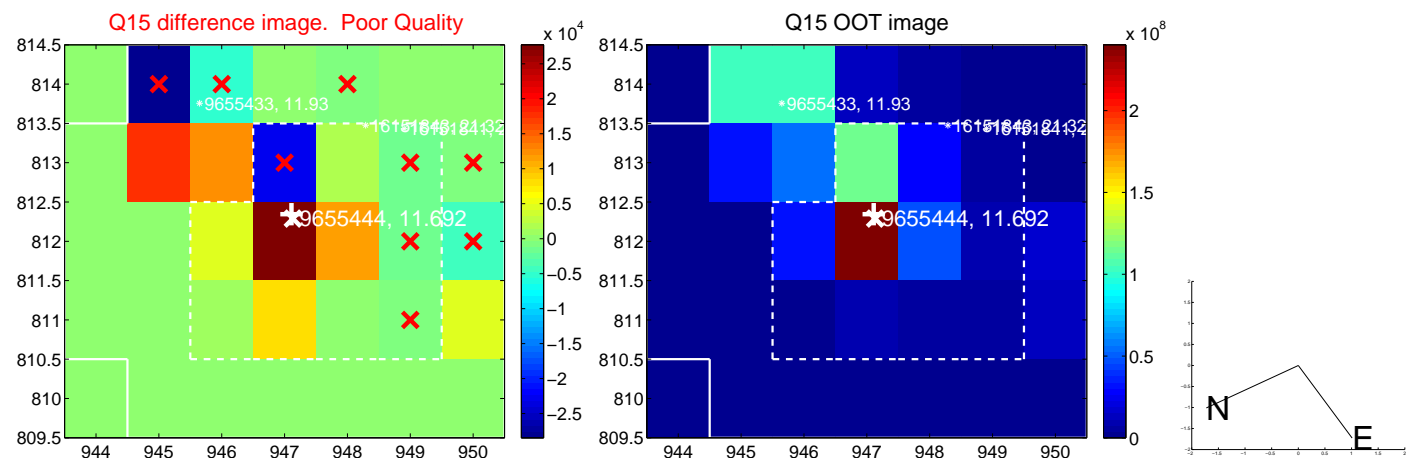
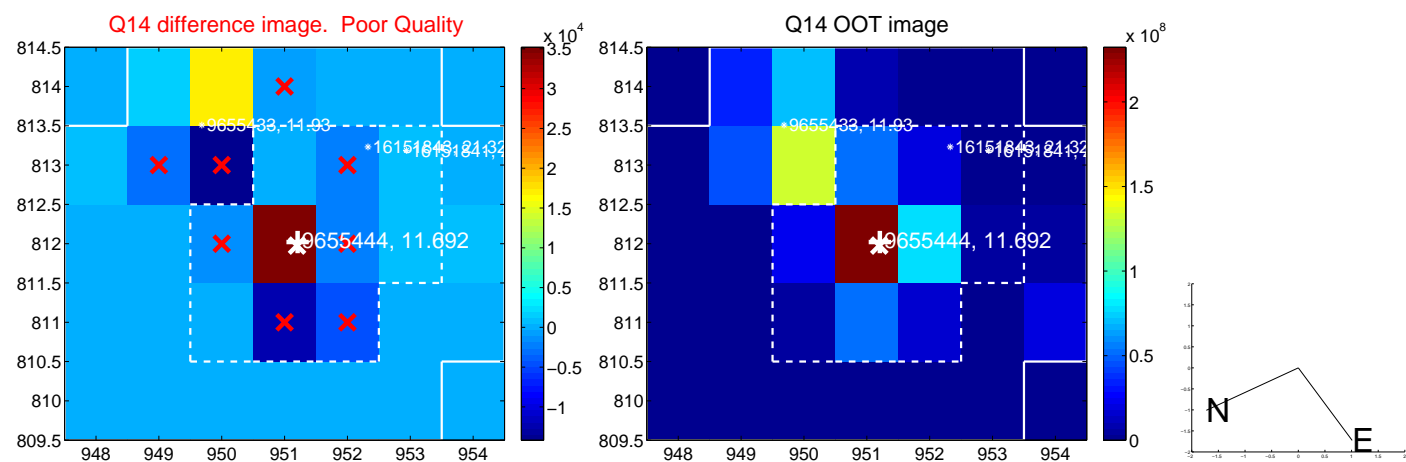
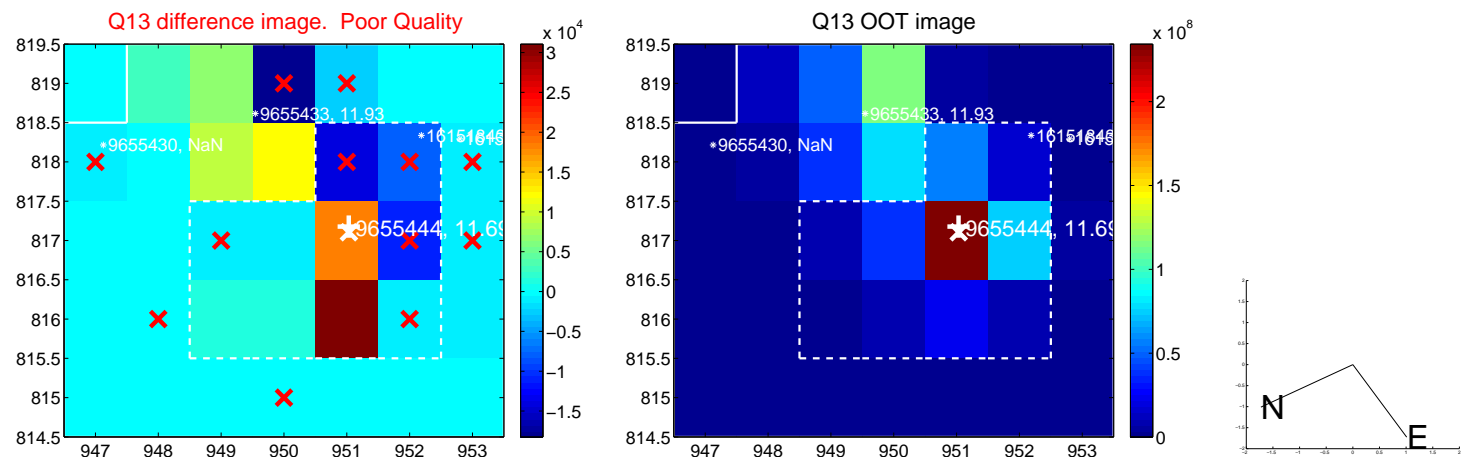
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



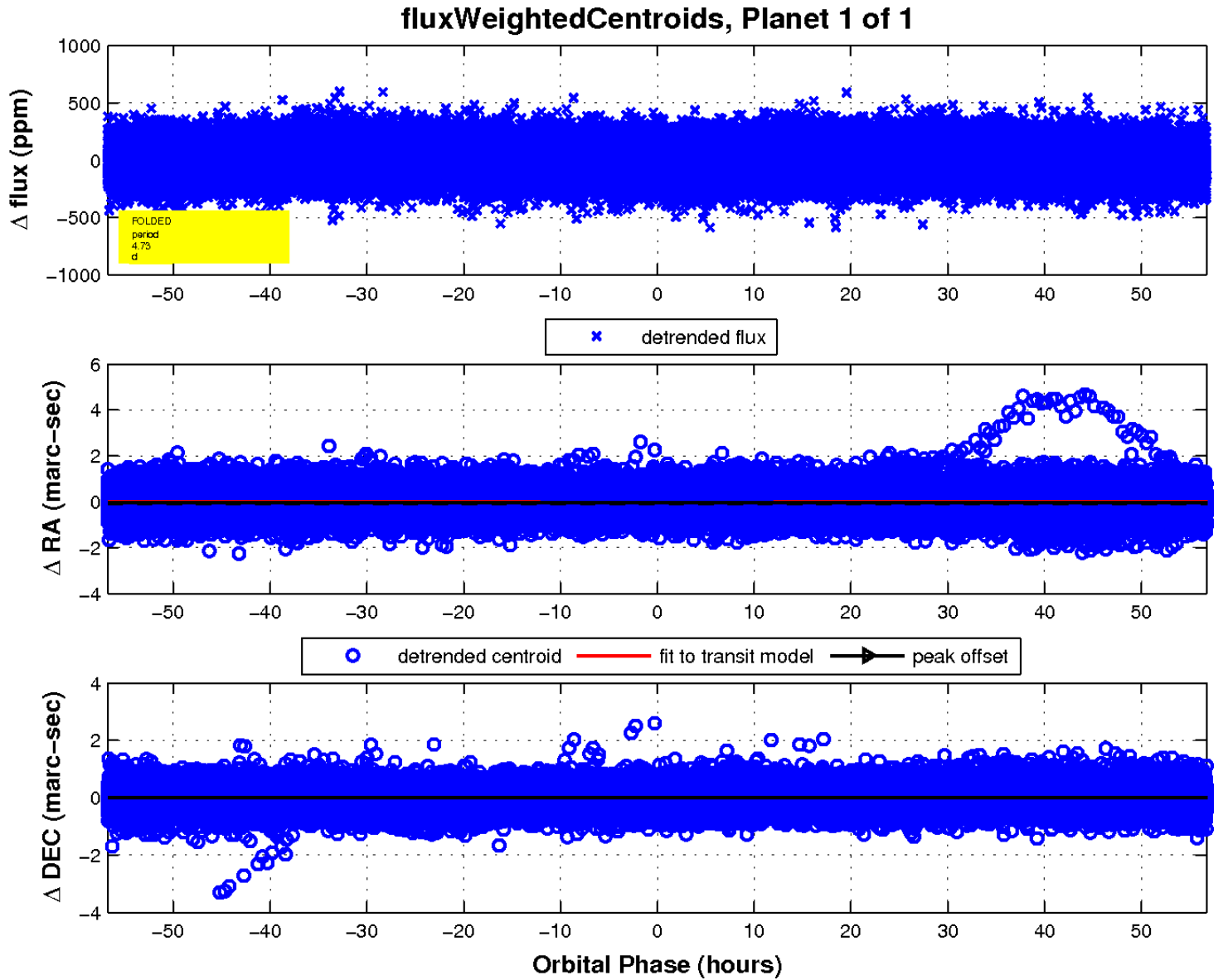
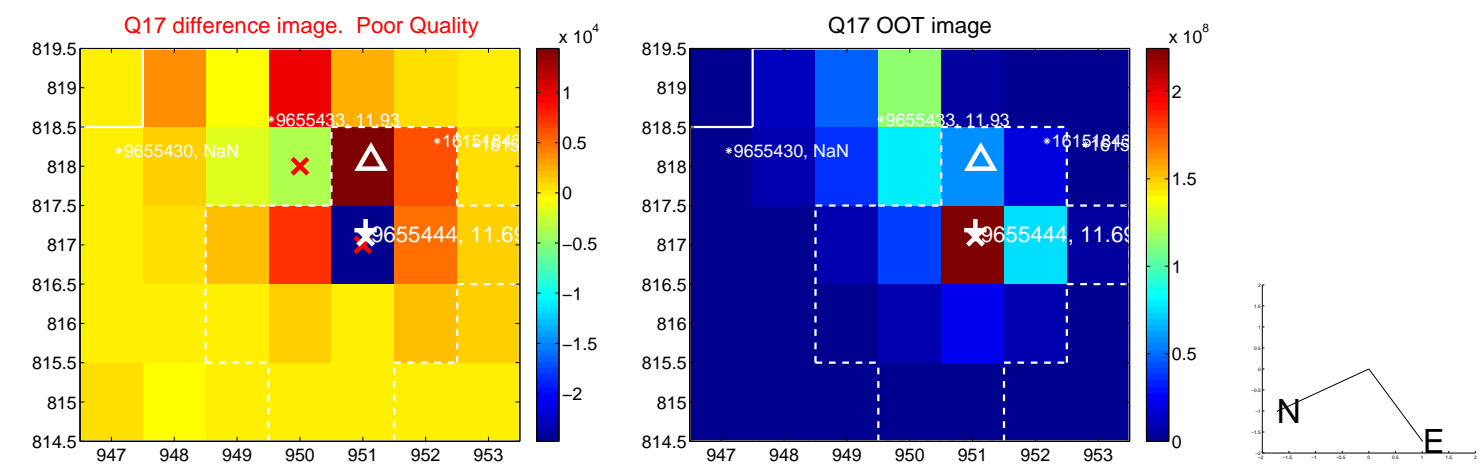
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UKIRT Image

Declination

