

KIC 003445406

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})
003445406-01	OBS	No	0.669337	132.064303	25.8	1.892	8.2	8.1	1.53	7233	0.91	21042.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003445406-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

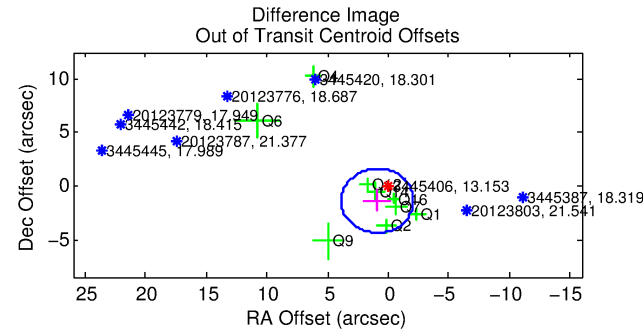
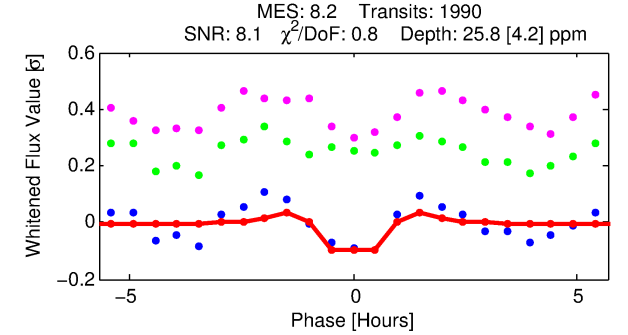
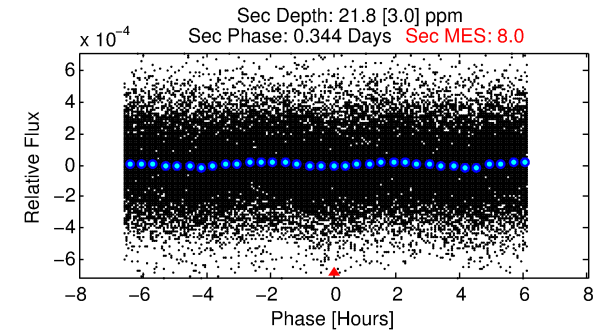
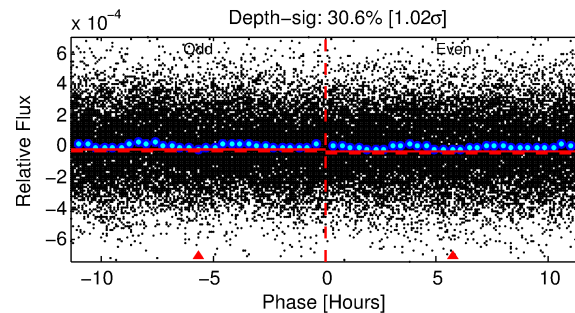
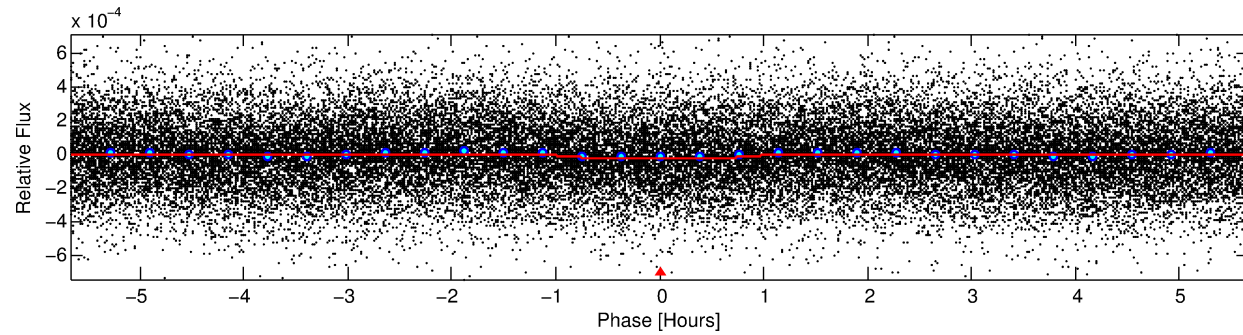
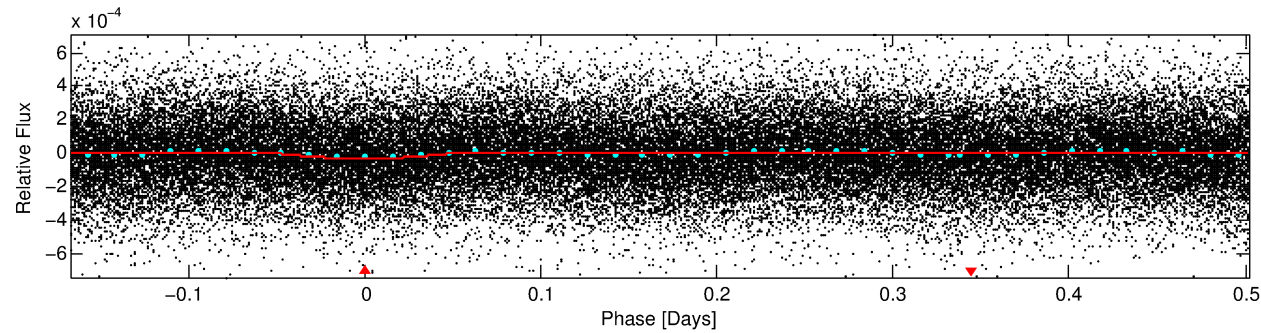
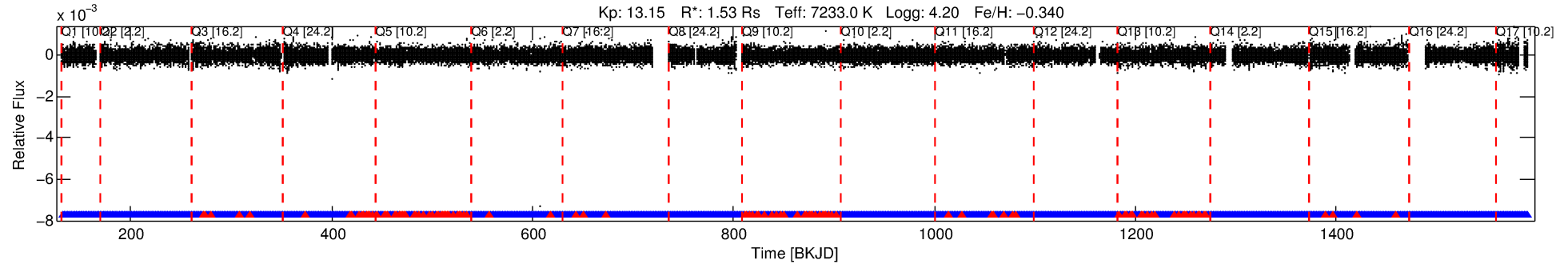
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003445406-01

No Significant Match Found

DV One-Page Summary

KIC: 3445406 Candidate: 1 of 1 Period: 0.669 d



DV Fit Results:

Period = 0.66934 [0.00001] d
Epoch = 132.0643 [0.0023] BKJD
Rp/R* = 0.0054 [0.0018]
a/R* = 1.50 [1.76]
b = 0.91 [0.42]
Seff = 21042.75 [8274.08]
Teq = 3071 [302] K
Rp = 0.91 [0.41] Re
a = 0.0165 [0.0041] AU
Ag = 3.99 [3.09] [0.97σ]
Teffp = 6713 [1188] K [2.97σ]

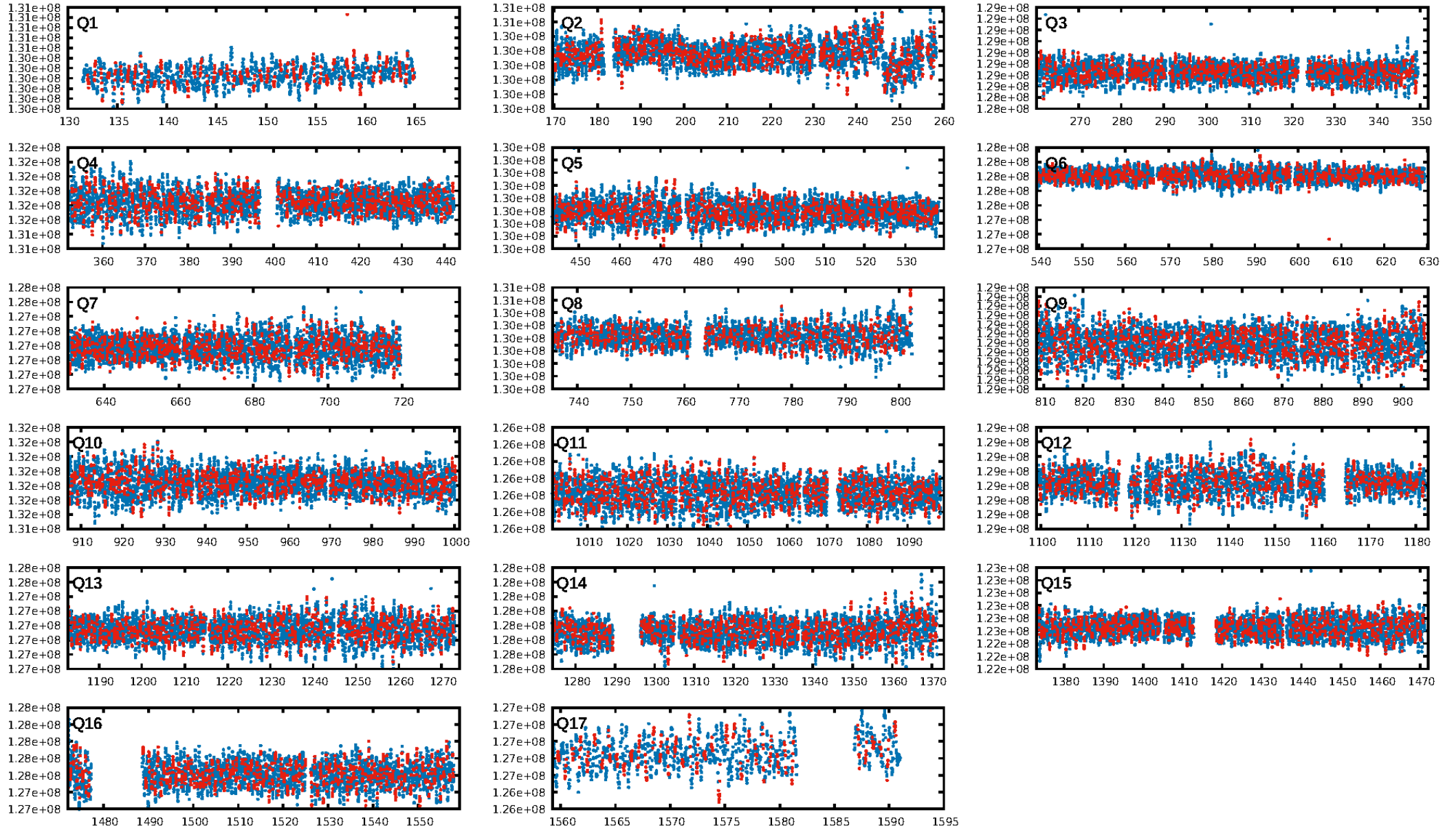
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.43e-15
RollingBand-fgt: 0.94 [1780/1901]
GhostDiagnostic-chr: 1.381
Centroid-sig: 0.3%
Centroid-so: 2.196 arcsec [2.10σ]
OotOffset-rm: 1.641 arcsec [1.65σ]
KicOffset-rm: 1.729 arcsec [1.54σ]
OotOffset-st: 3/1/3/2 [9]
KicOffset-st: 3/1/3/2 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

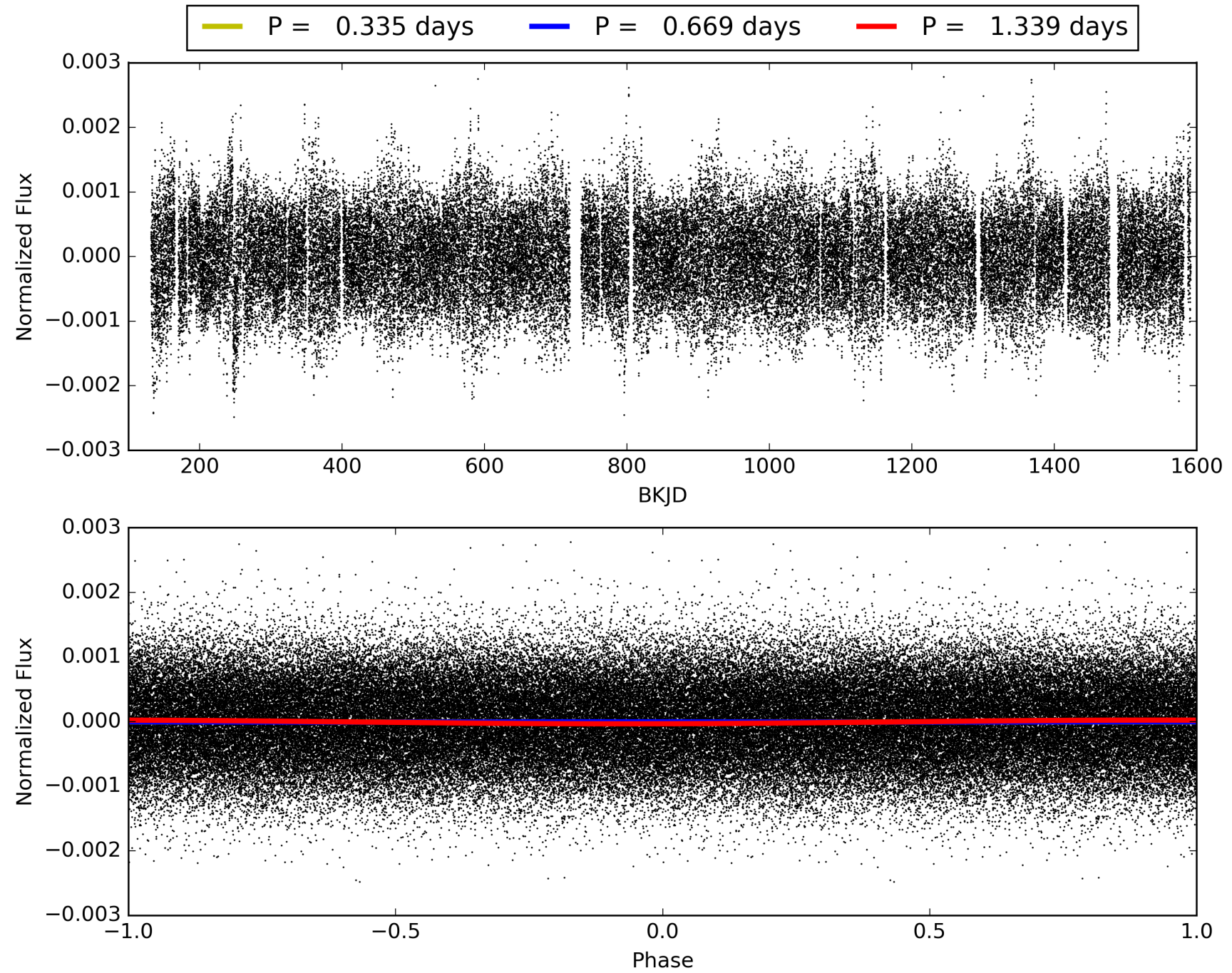
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:01:49 Z

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

TCE 003445406-01, PDC Light Curves

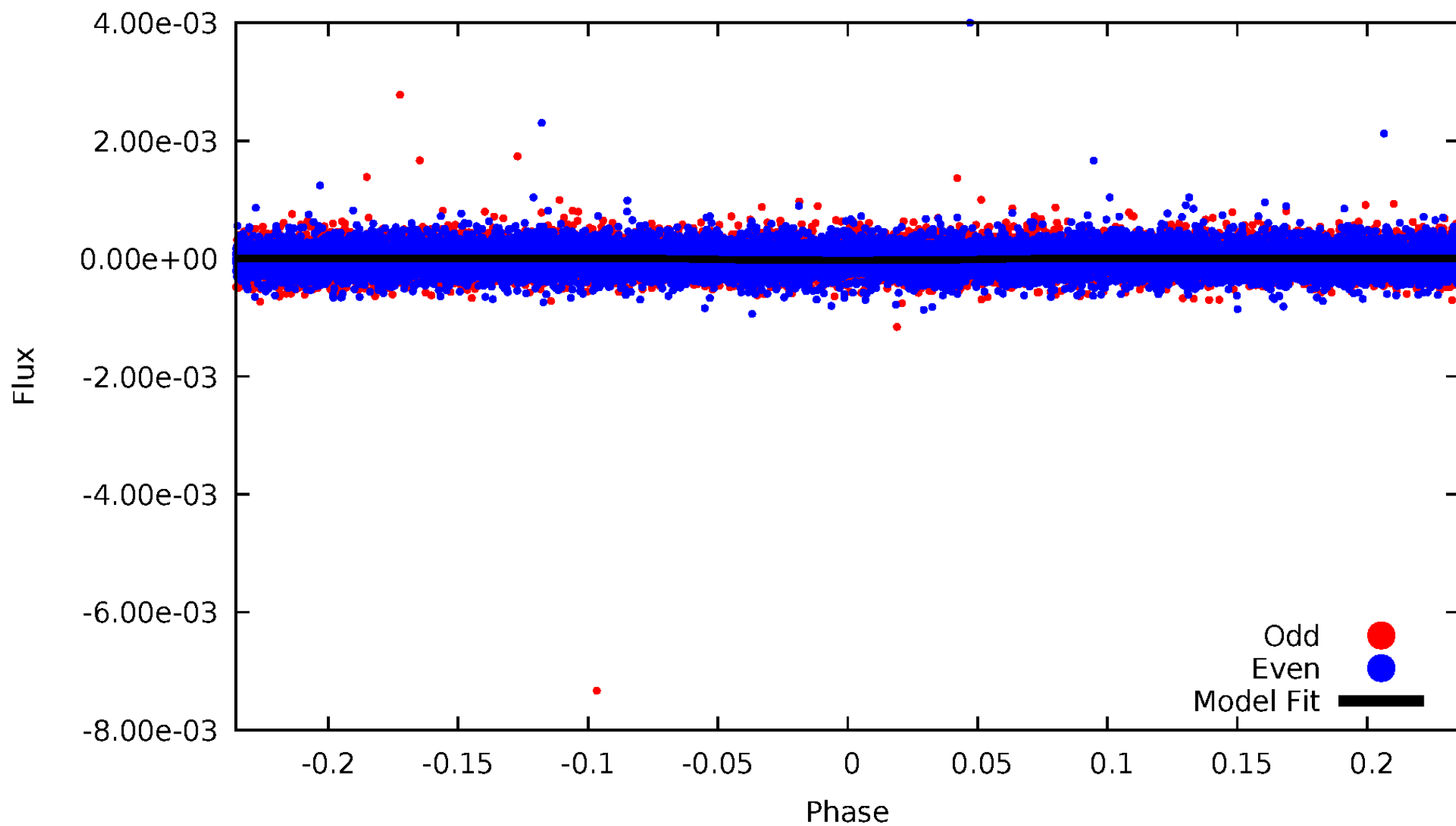


TCE 003445406-01



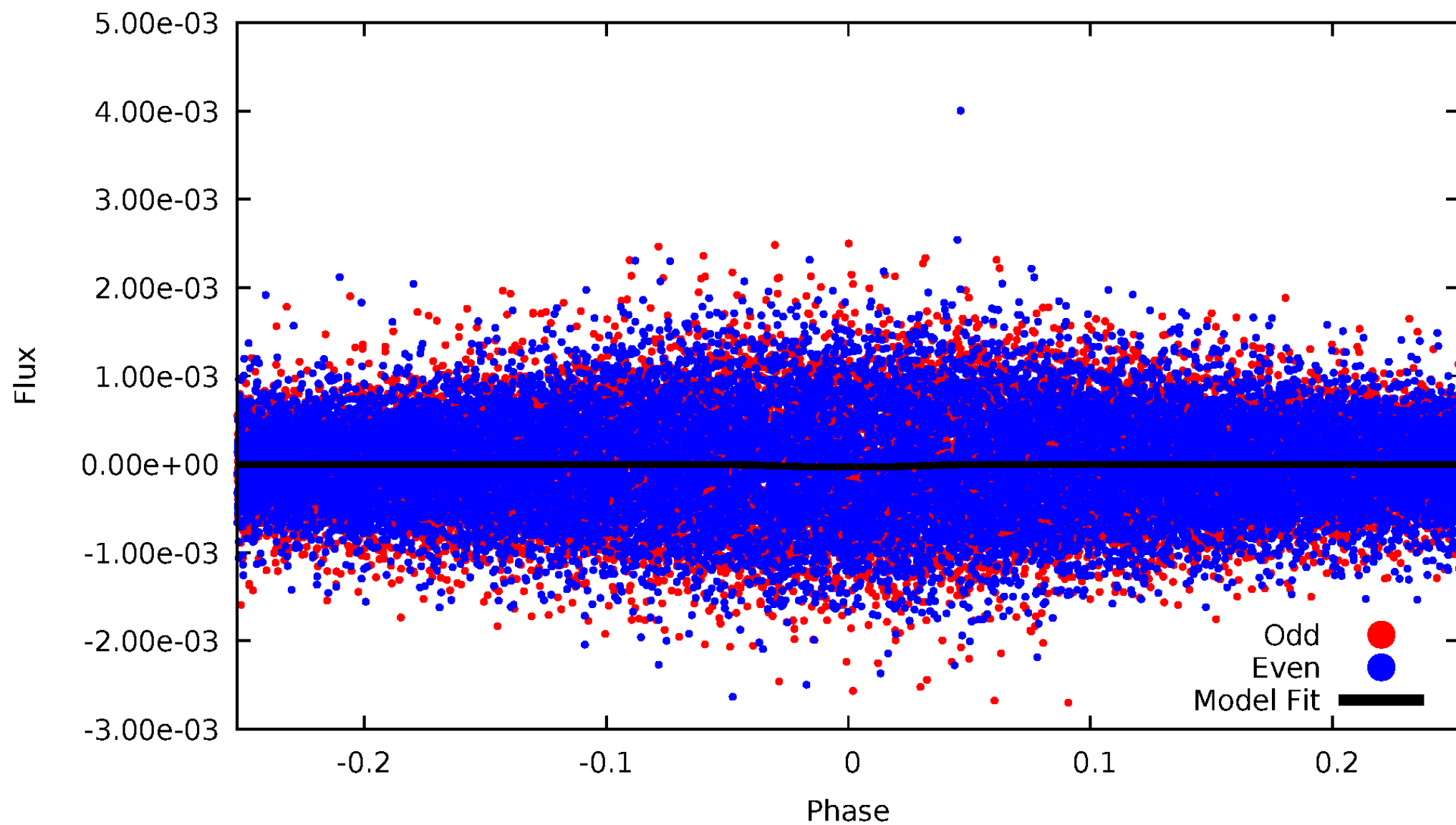
DV Odd/Even

TCE 003445406-01

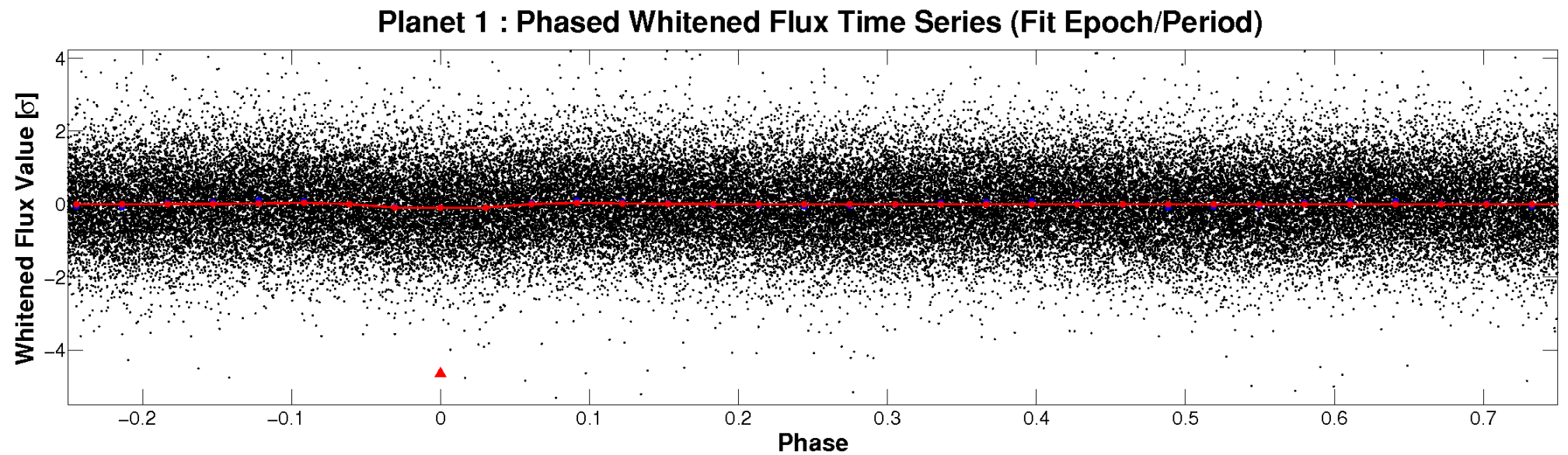
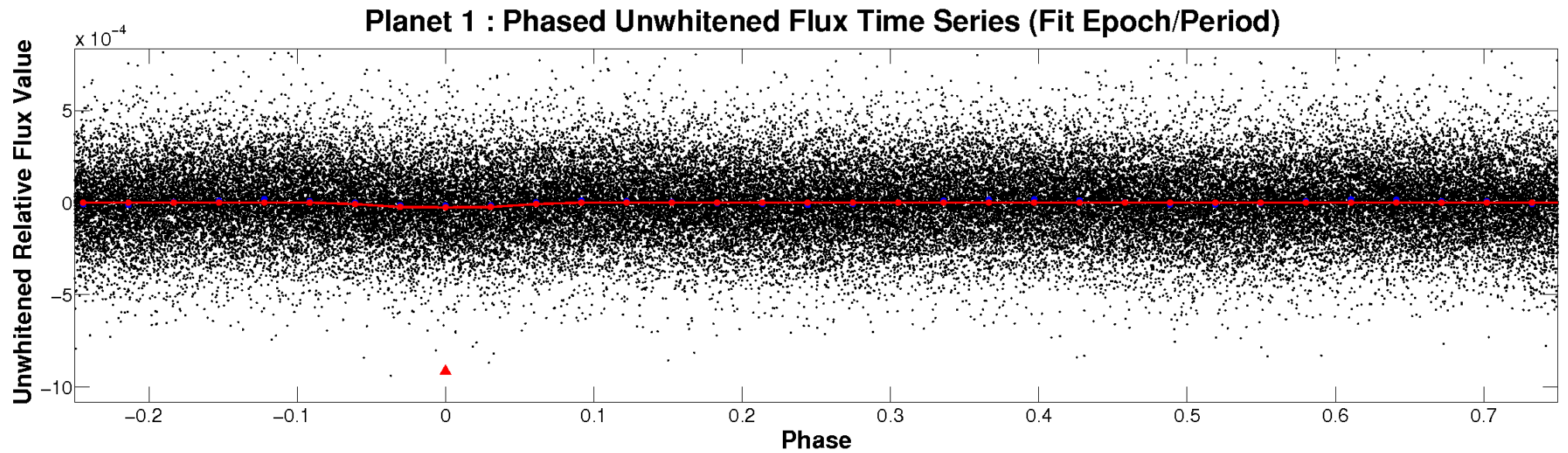


ALT Odd/Even

TCE 003445406-01

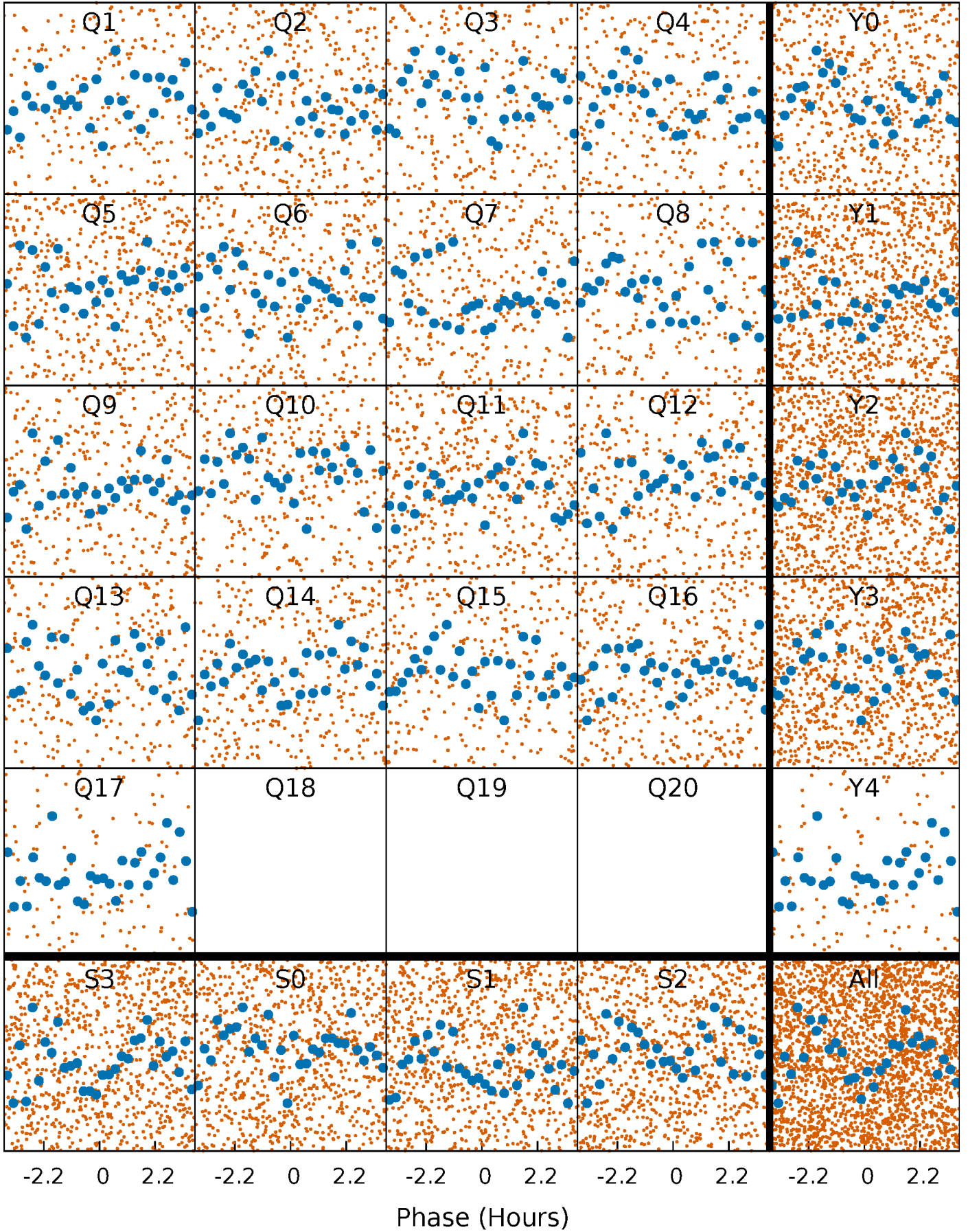


Non-Whitened Vs. Whitened Light Curve



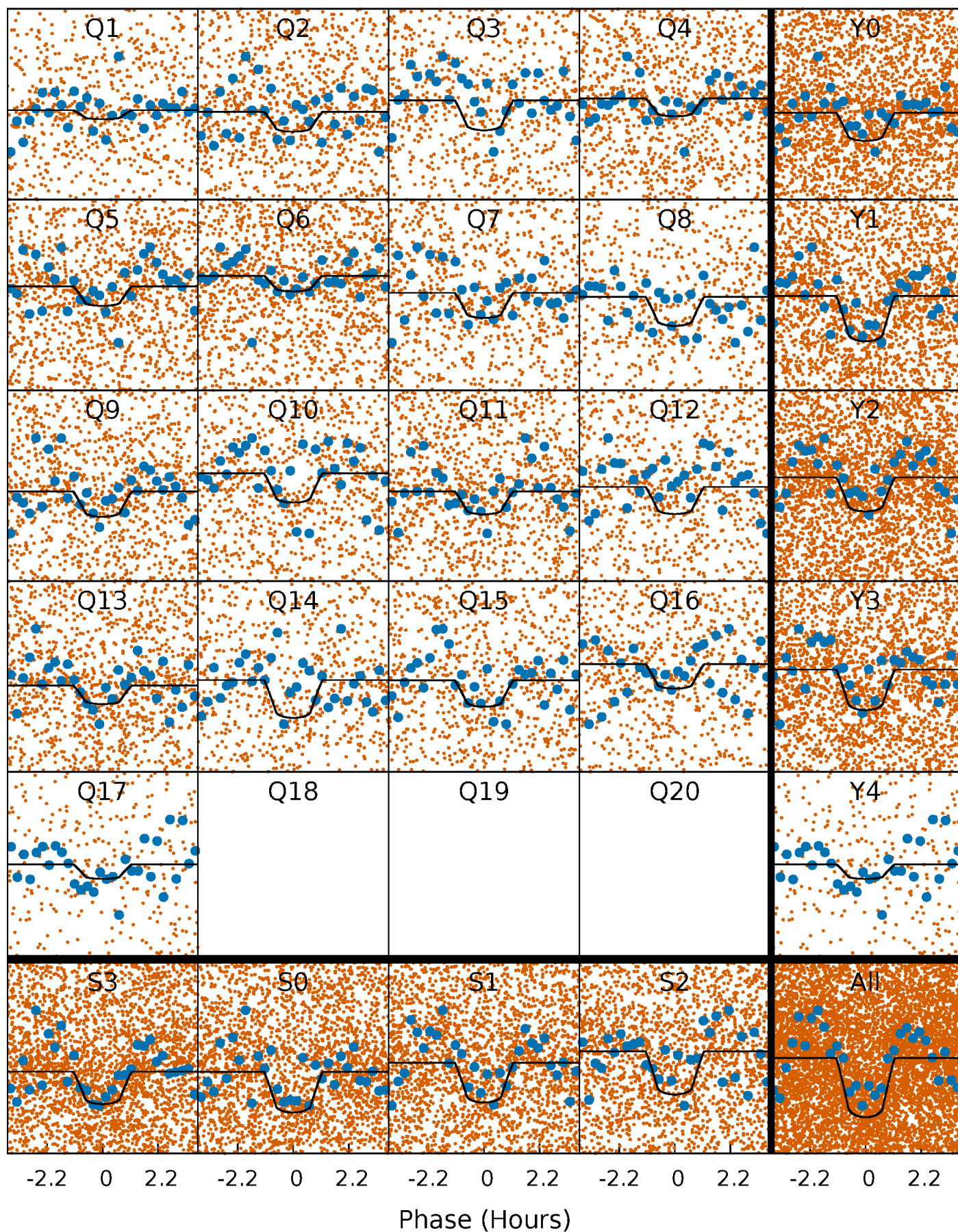
PDC Quarter-Phased Transit Curves

TCE 003445406-01 P= 0.669337 Days $T_0=132.064303$ (BKJD)



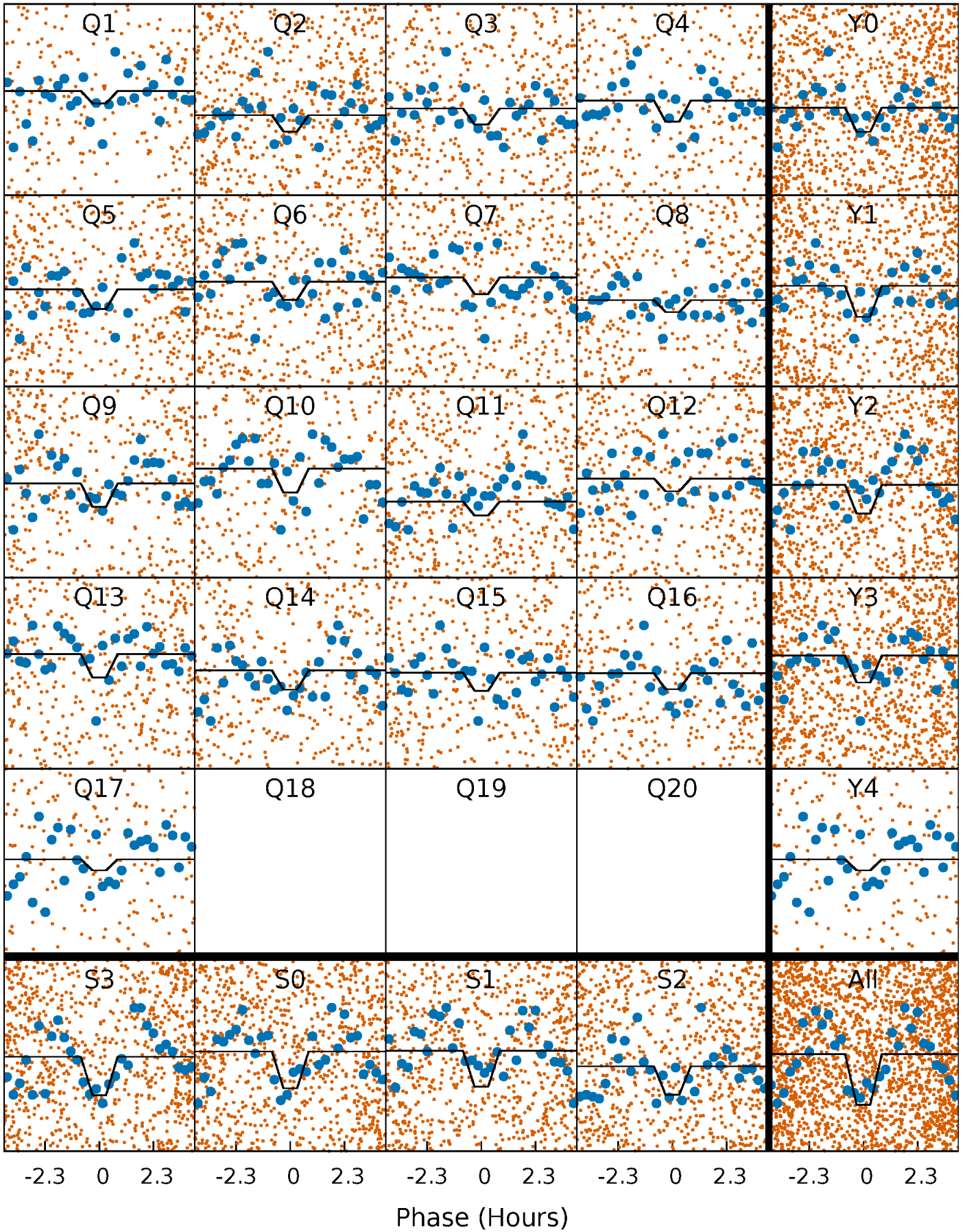
DV Quarter-Phased Transit Curves

TCE 003445406-01 P= 0.669337 Days $T_0=132.064303$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

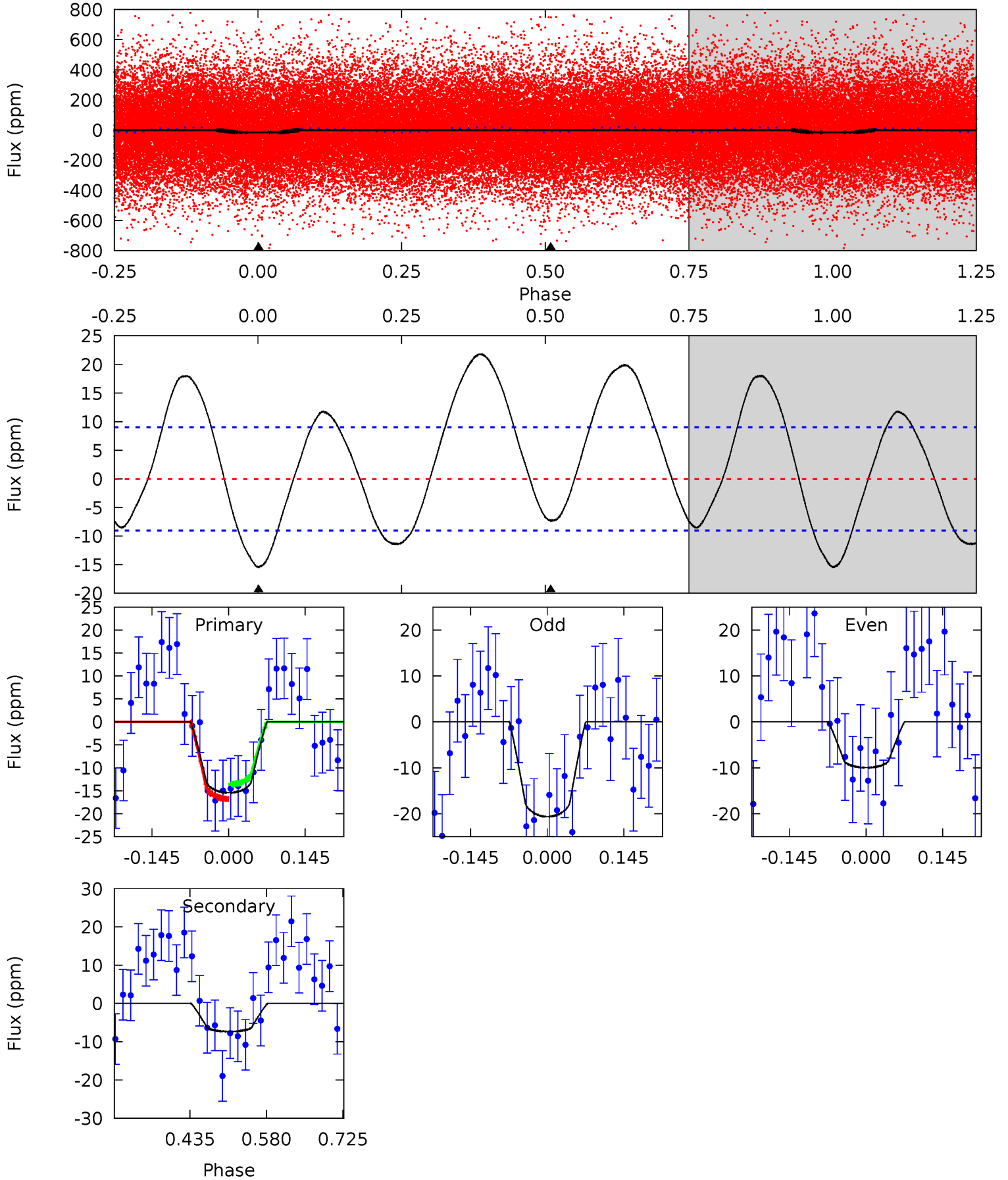
TCE 003445406-01 P= 0.669335 Days $T_0=132.064913$ (BKJD)



DV Model-Shift Uniqueness Test

003445406-01, P = 0.669337 Days, E = 131.394966 Days

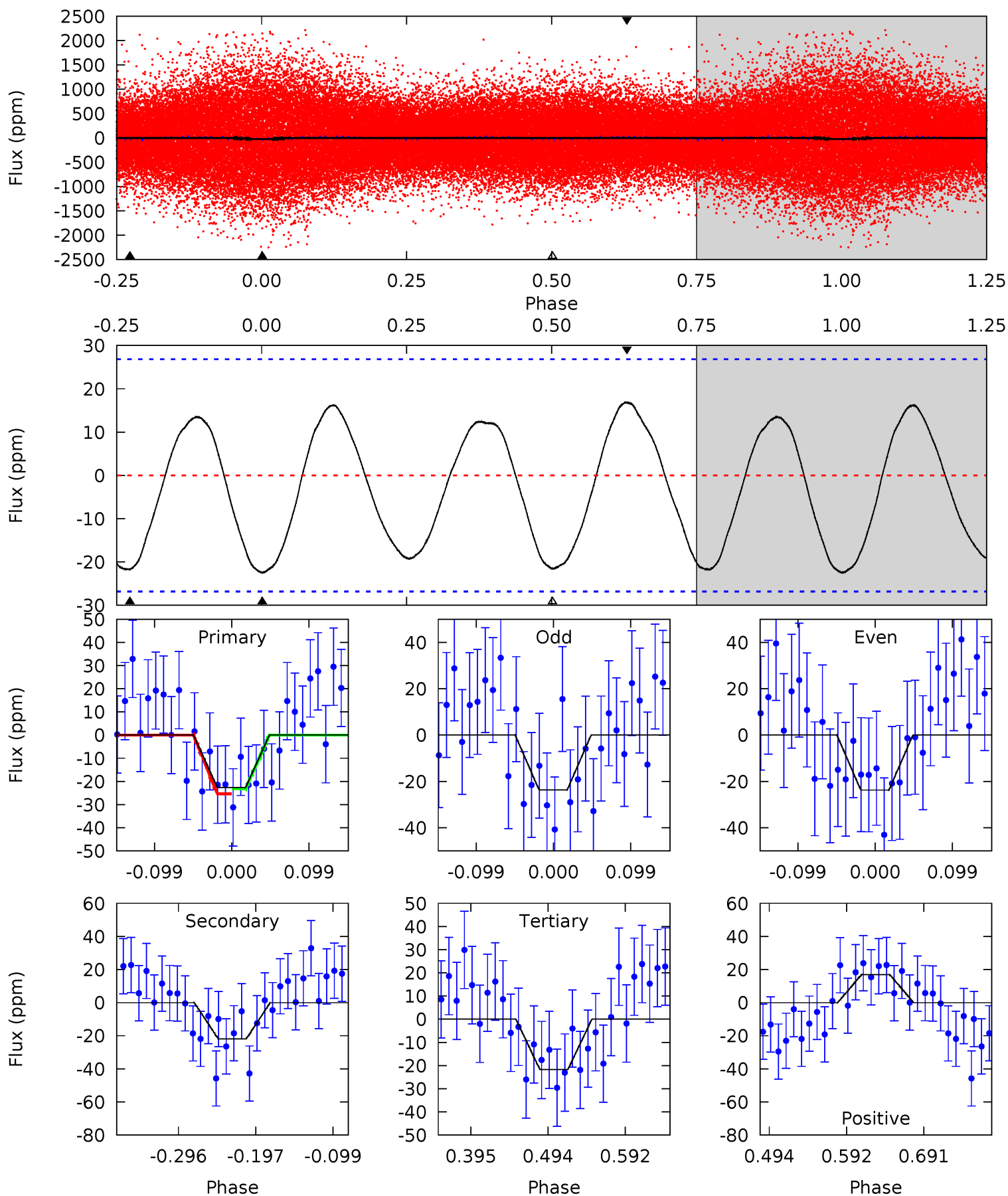
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.66	3.65	0	0	4.49	1.46	4.46	7.66	7.66	3.65	3.65	2.66	0.88	0.59	0.80



Alt Model-Shift Uniqueness Test

003445406-01, P = 0.669335 Days, E = 131.395578 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.86	3.72	3.69	2.88	4.57	1.65	2.16	0.17	0.97	0.03	0.83	0.01	0.93	0.43	0.18



Stellar Parameters For KIC 003445406

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7233^{+203}_{-304}	$4.196^{+0.128}_{-0.192}$	$-0.340^{+0.250}_{-0.350}$	$1.530^{+0.456}_{-0.304}$	$1.345^{+0.198}_{-0.198}$	$0.529^{+0.342}_{-0.265}$
	+3%/-4%	+3%/-5%	+74%/-103%	+30%/-20%	+15%/-15%	+65%/-50%
Source	PHO1	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 003445406-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-7 ± 2	$0.92^{+0.36}_{-0.30}$	4308^{+364}_{-283}	4749^{+1244}_{-810}	$1.221^{+1.725}_{-0.590}$
Alt.	-22 ± 6	$0.91^{+0.35}_{-0.32}$	4316^{+337}_{-293}	6485^{+2109}_{-1097}	$4.004^{+5.500}_{-2.136}$

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 $A_{obs} \gg 1.0$

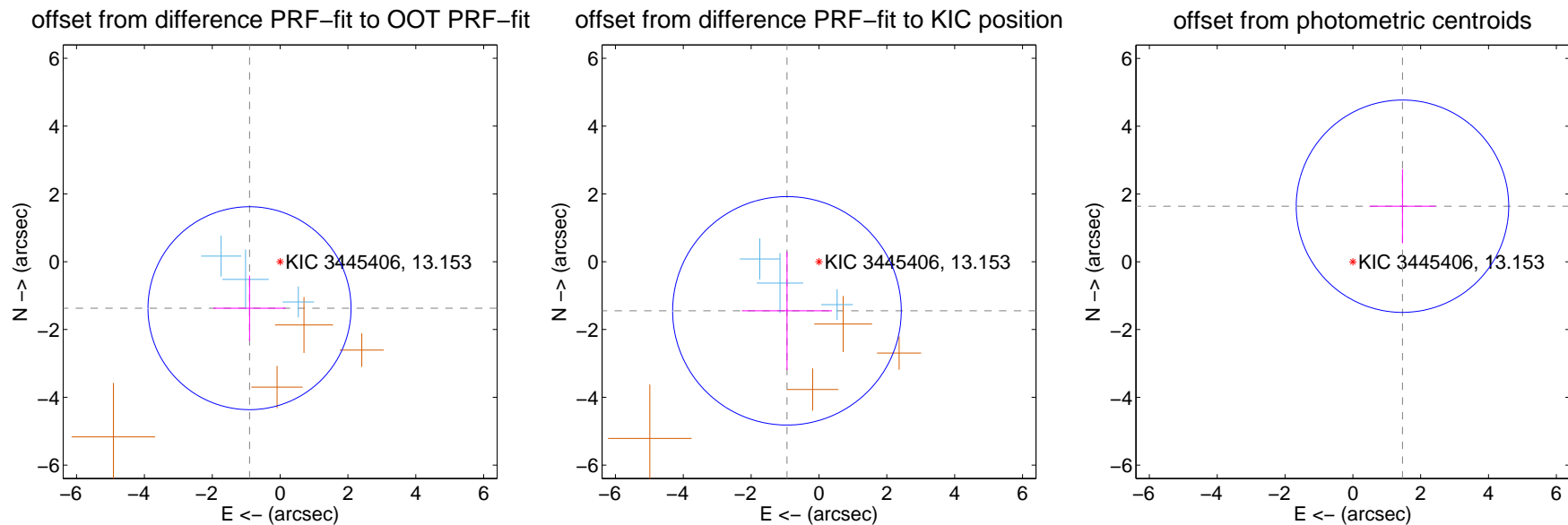
DV Centroid Data

Supplemental centroid analysis for 003445406-01. Kepler magnitude: 13.15. Transit SNR 8.11

There are 3 quarters with good PRF difference image offsets

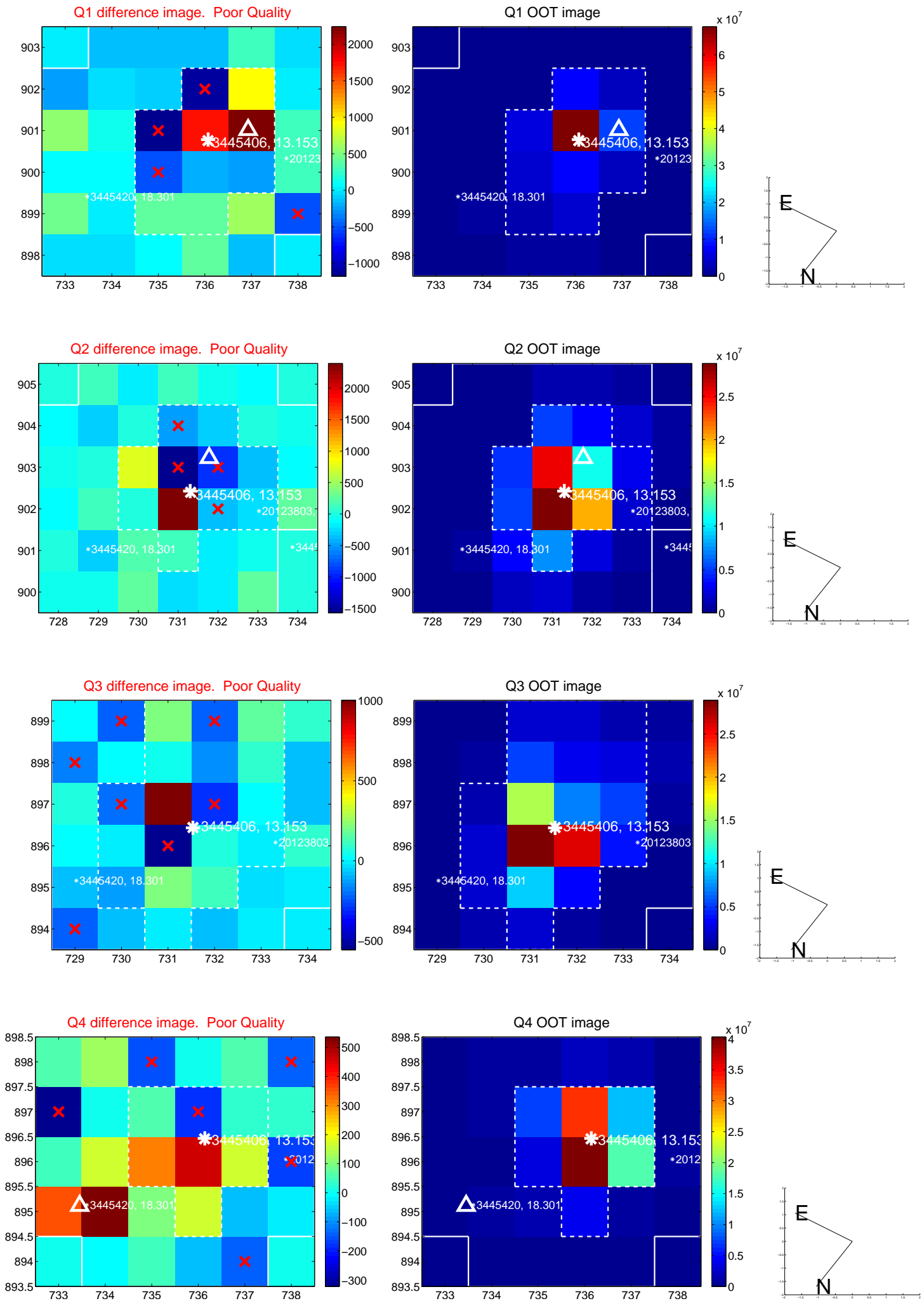
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.641 ± 0.997	1.65	0.901 ± 1.067	-1.372 ± 0.966
PRF-fit source offset from KIC position	1.729 ± 1.123	1.54	0.944 ± 1.328	-1.449 ± 1.741
photometric centroid source offset	2.20 ± 1.04	2.10	-1.46 ± 0.98	1.64 ± 1.09

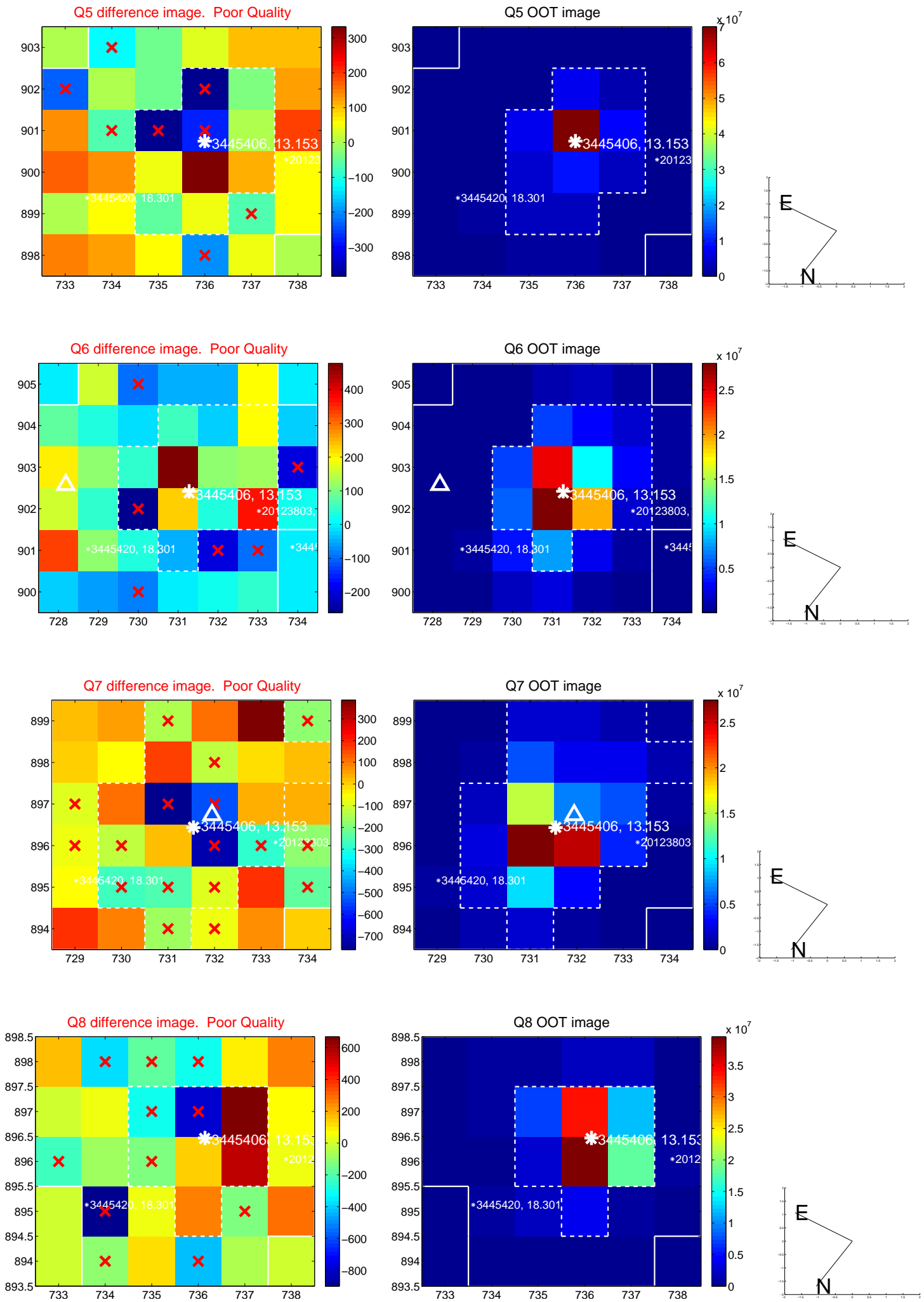


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

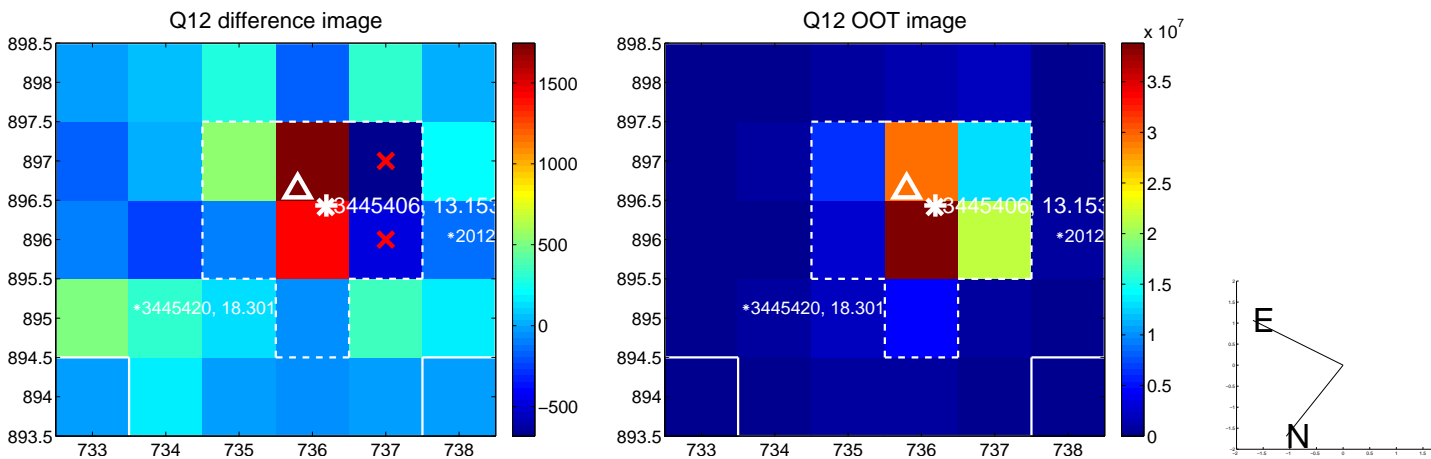
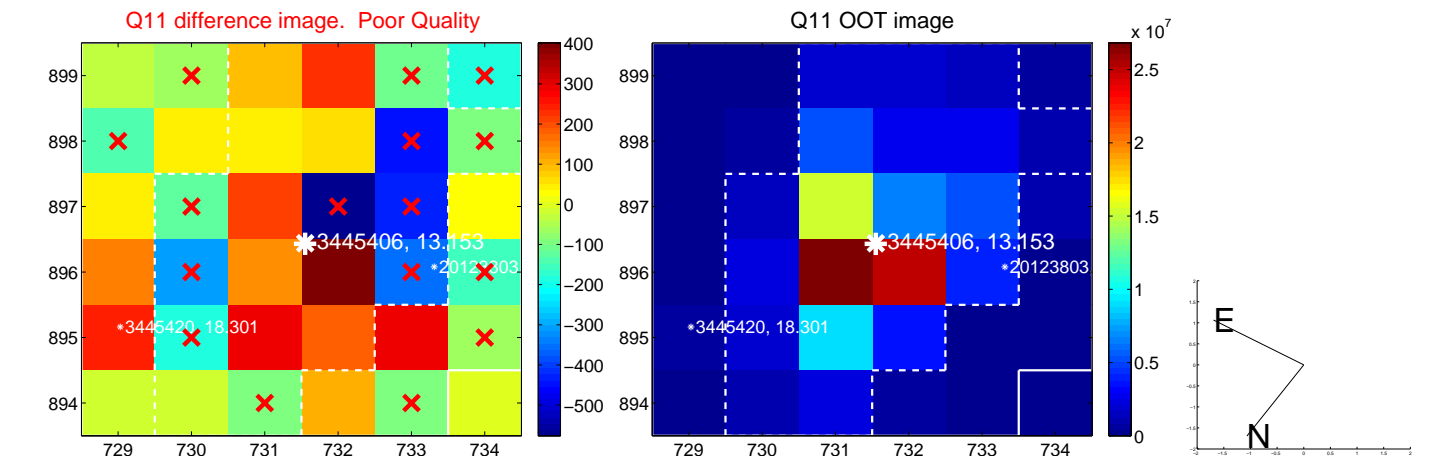
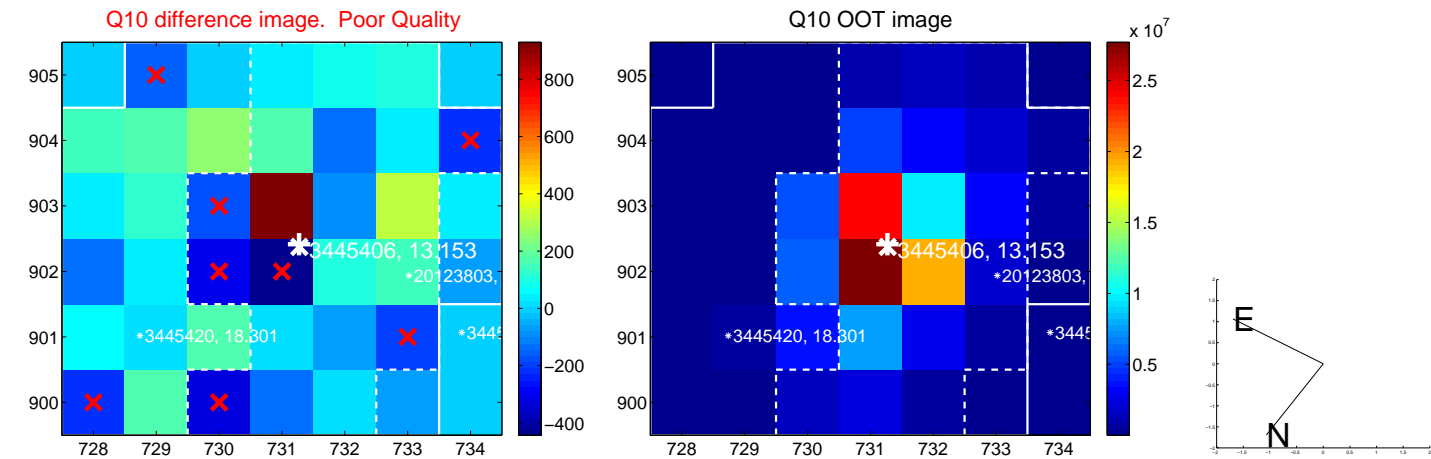
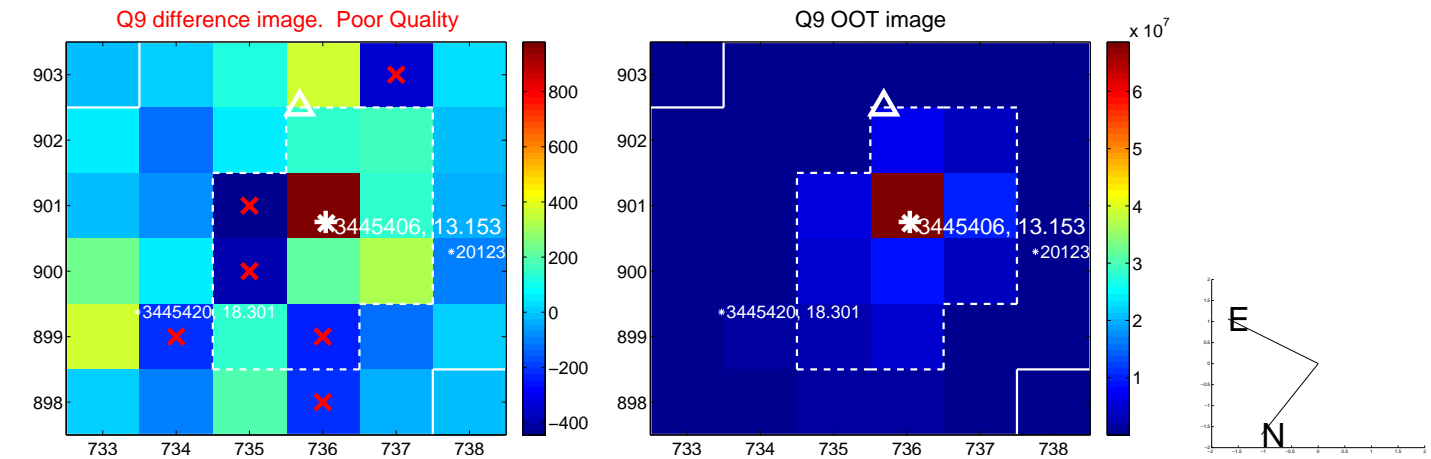
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



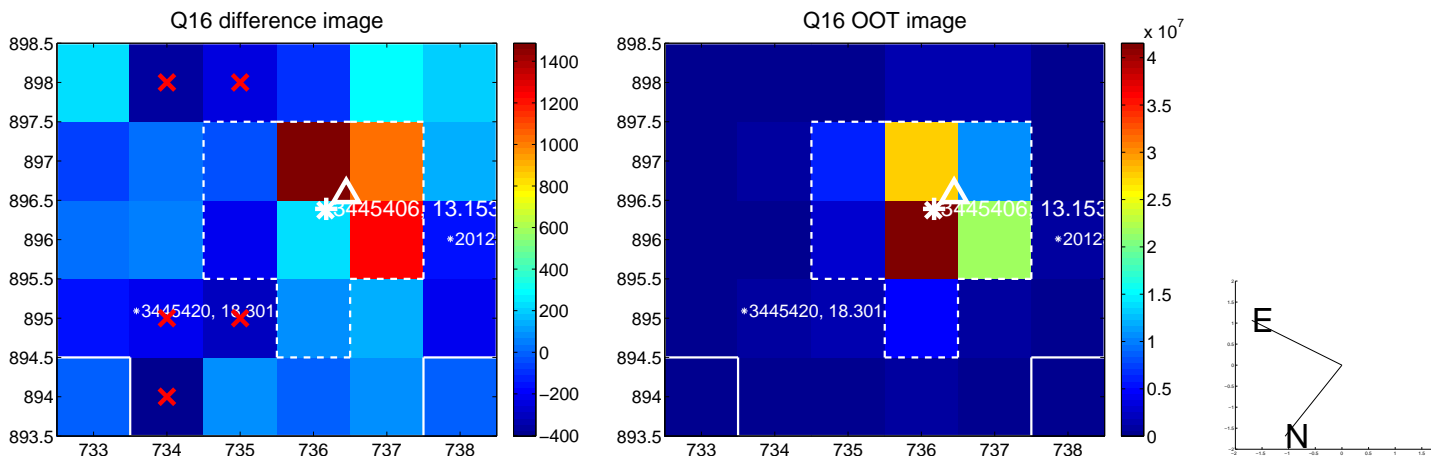
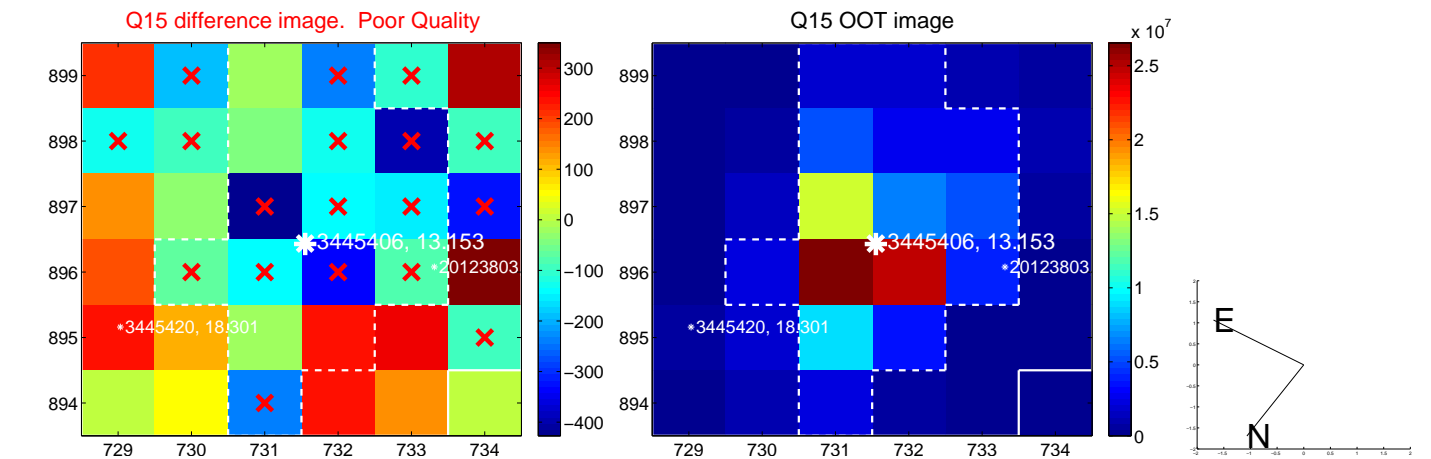
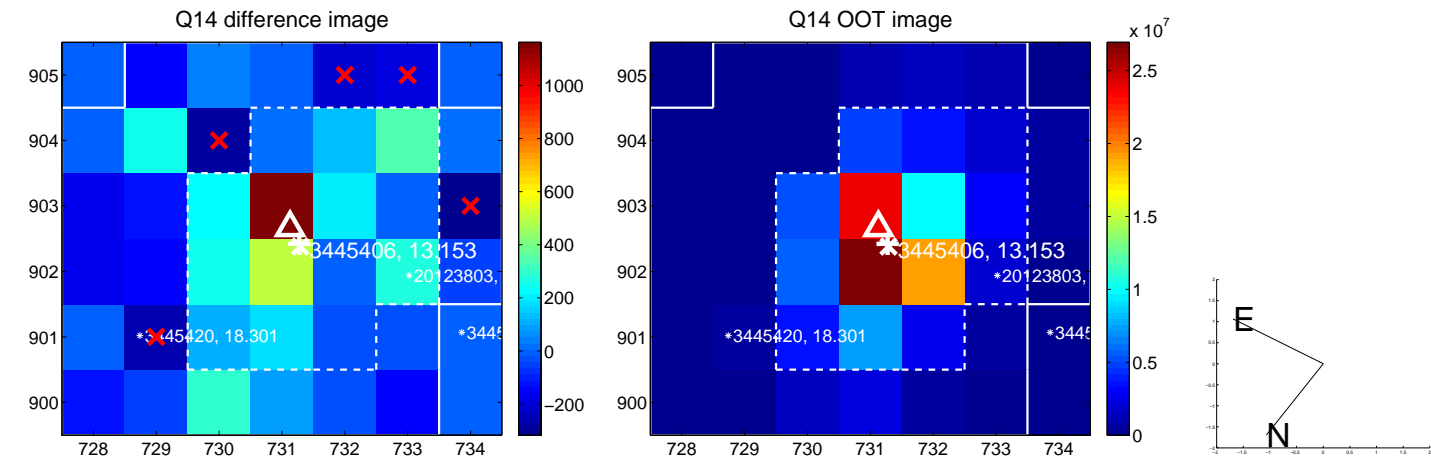
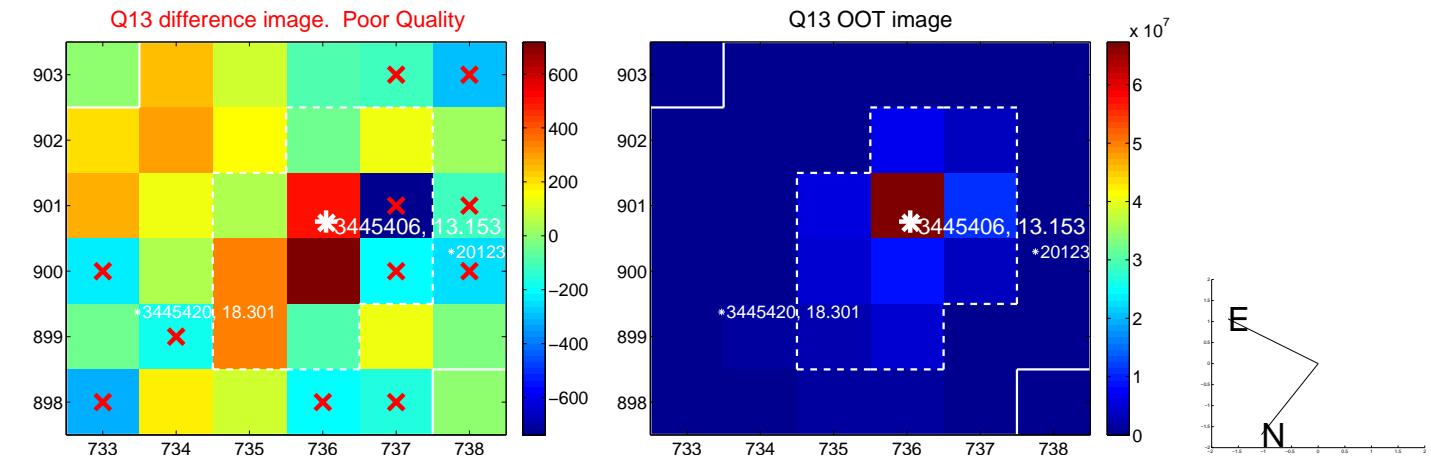
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

