

KIC 010074737

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})
010074737-01	OBS	No	1.922319	131.686305	0.0	0.886	8.0	0.0	1.68	7123	0.01	5306.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010074737-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—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.

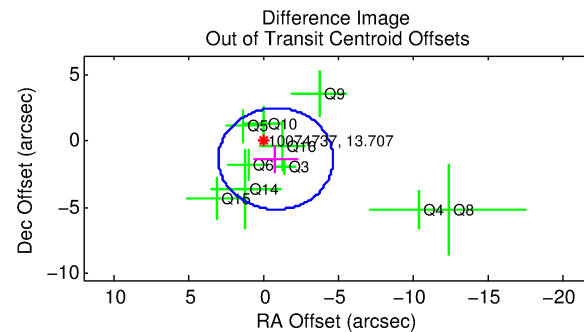
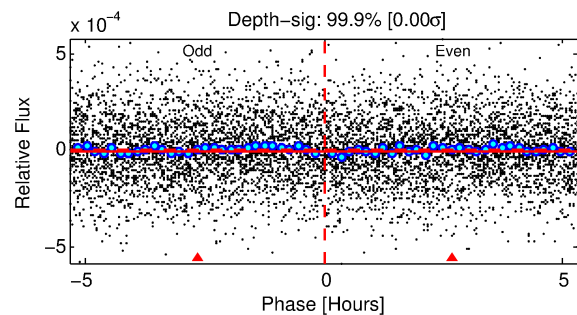
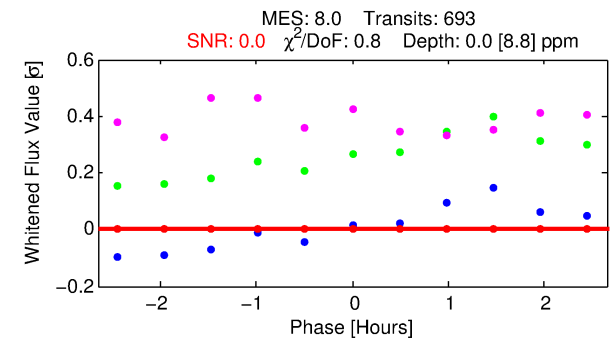
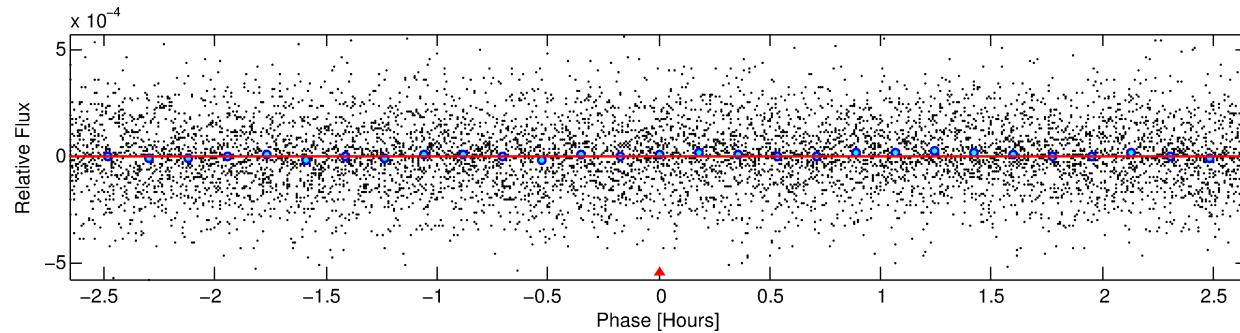
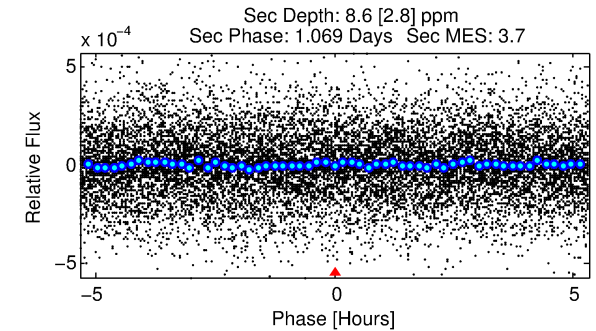
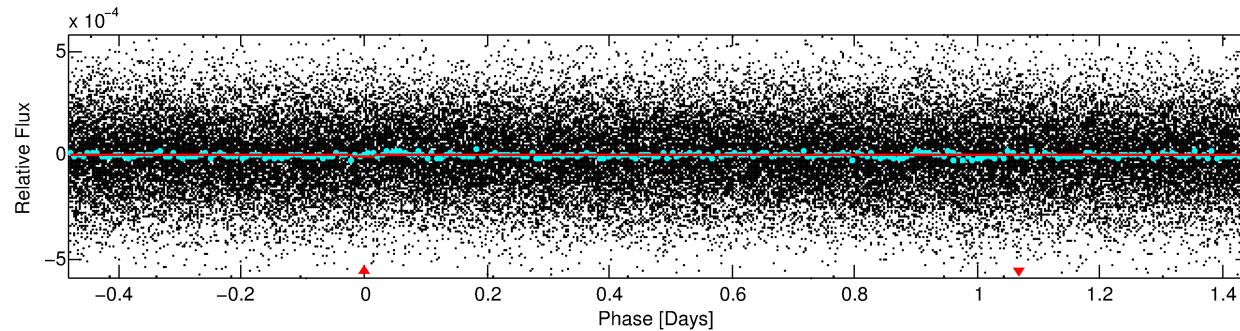
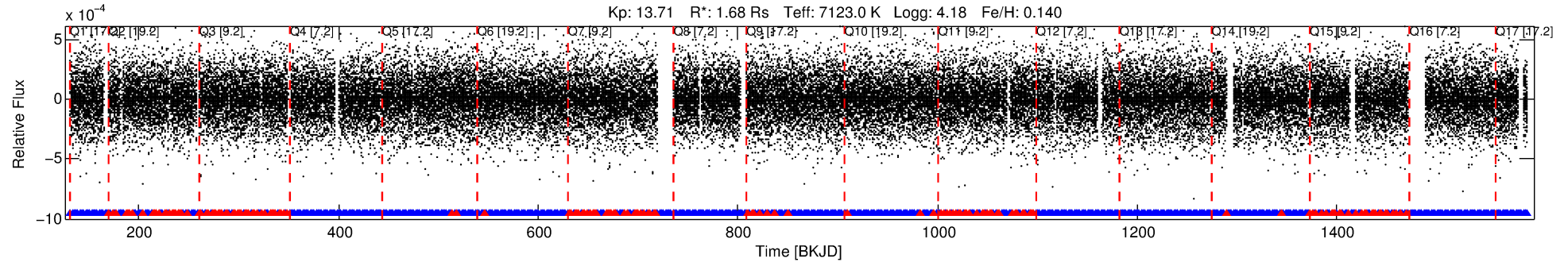
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010074737-01

No Significant Match Found

DV One-Page Summary

KIC: 10074737 Candidate: 1 of 1 Period: 1.922 d



DV Fit Results:

Period = 1.92232 [0.59573] d
Epoch = 131.6863 [91.4547] BKJD
Rp/R* = 0.0000 [0.1938]
a/R* = 1.22 [2375.12]
b = 1.00 [11.94]
Seff = 5306.69 [3110.52]
Teq = 2176 [319] K
Rp = 0.01 [35.55] Re
a = 0.0350 [0.0119] AU
Ag = 78746.22 [651836125.14] [0.00σ]
Teffp = 56368 [116651851] K [0.00σ]

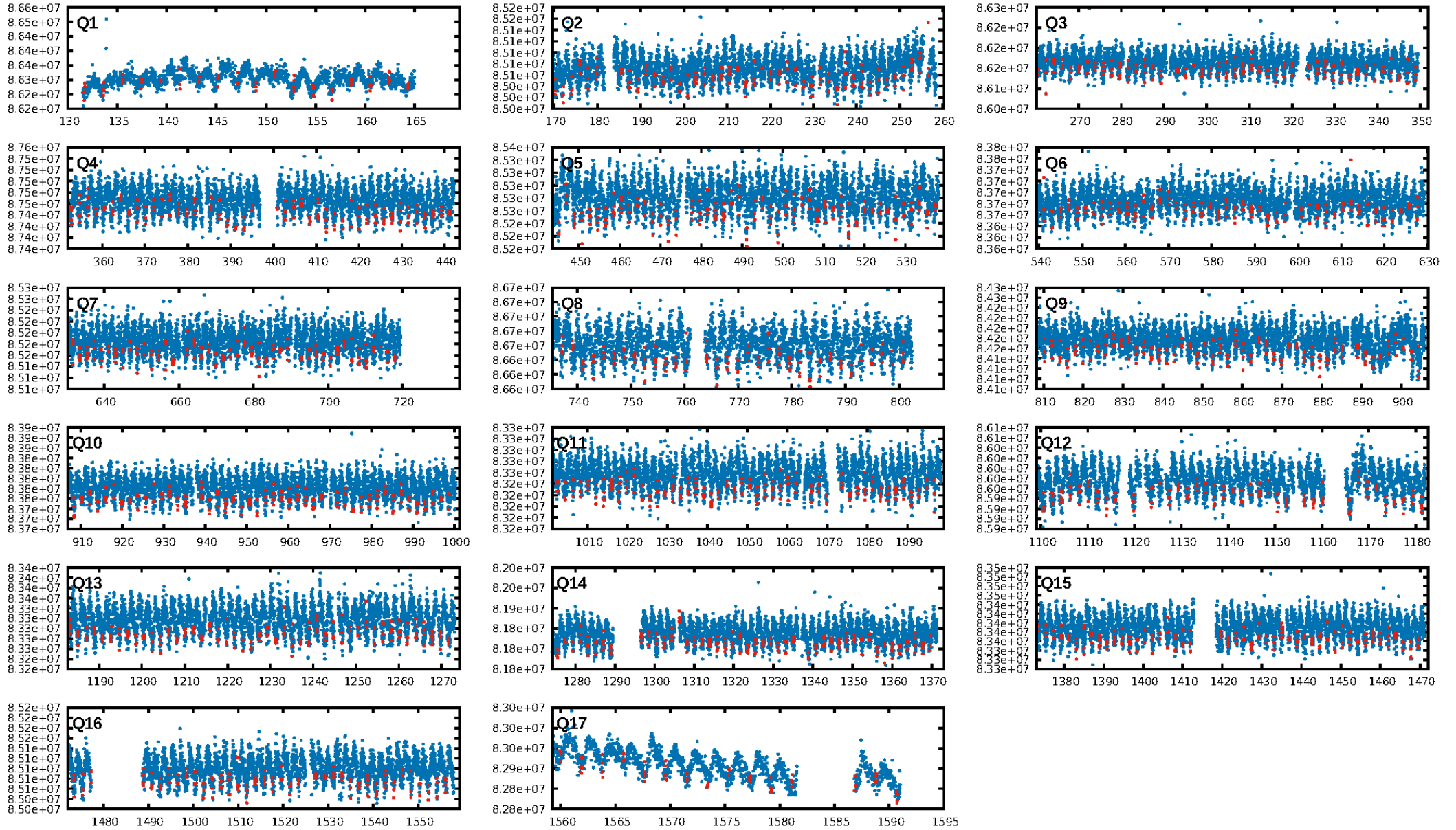
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.35e-15
RollingBand-fgt: 0.77 [508/660]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.586 arcsec [1.24σ]
KicOffset-rm: 1.722 arcsec [1.33σ]
OotOffset-st: 3/2/3/2 [10]
KicOffset-st: 3/2/3/2 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

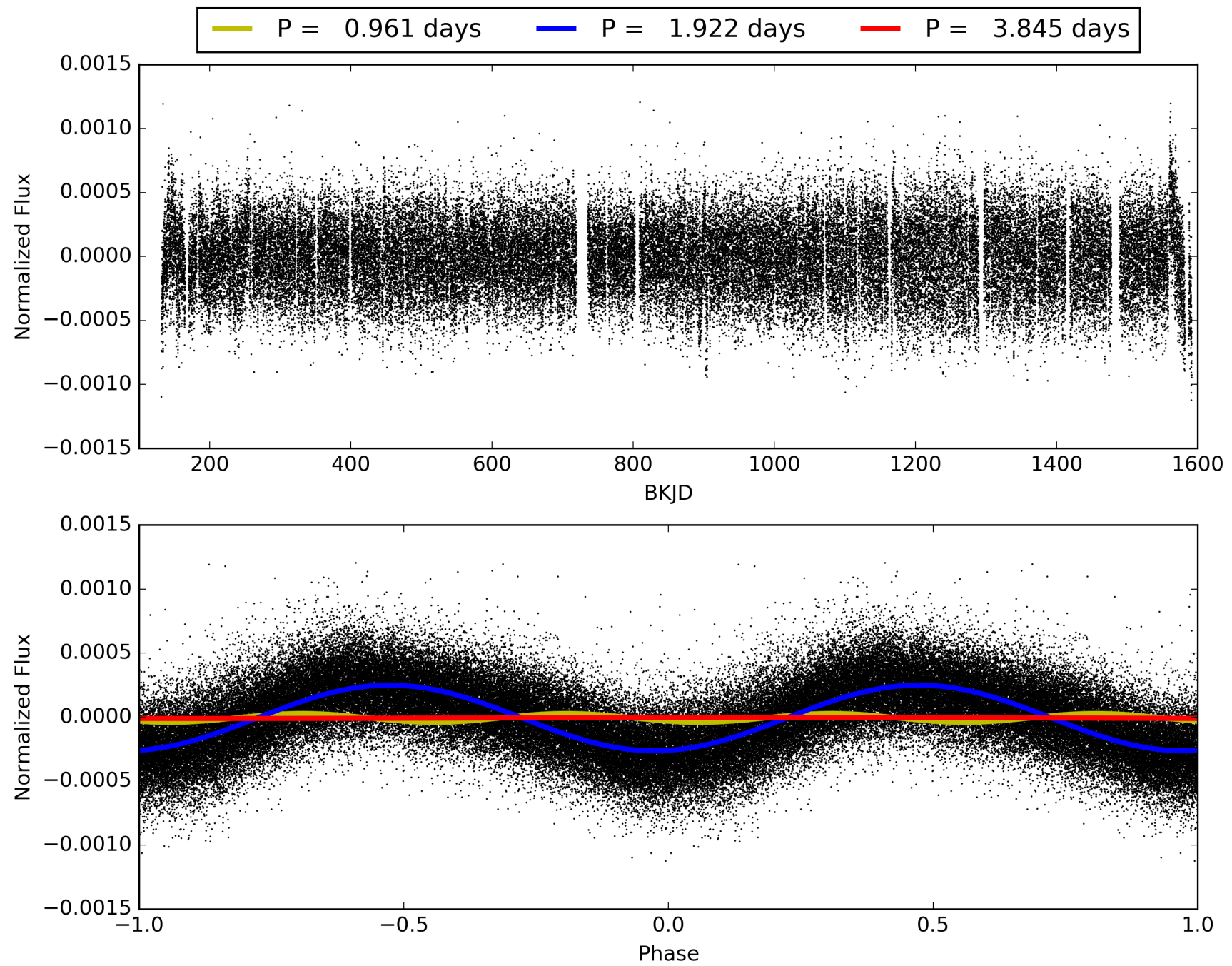
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:13:20 Z

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

TCE 010074737-01, PDC Light Curves

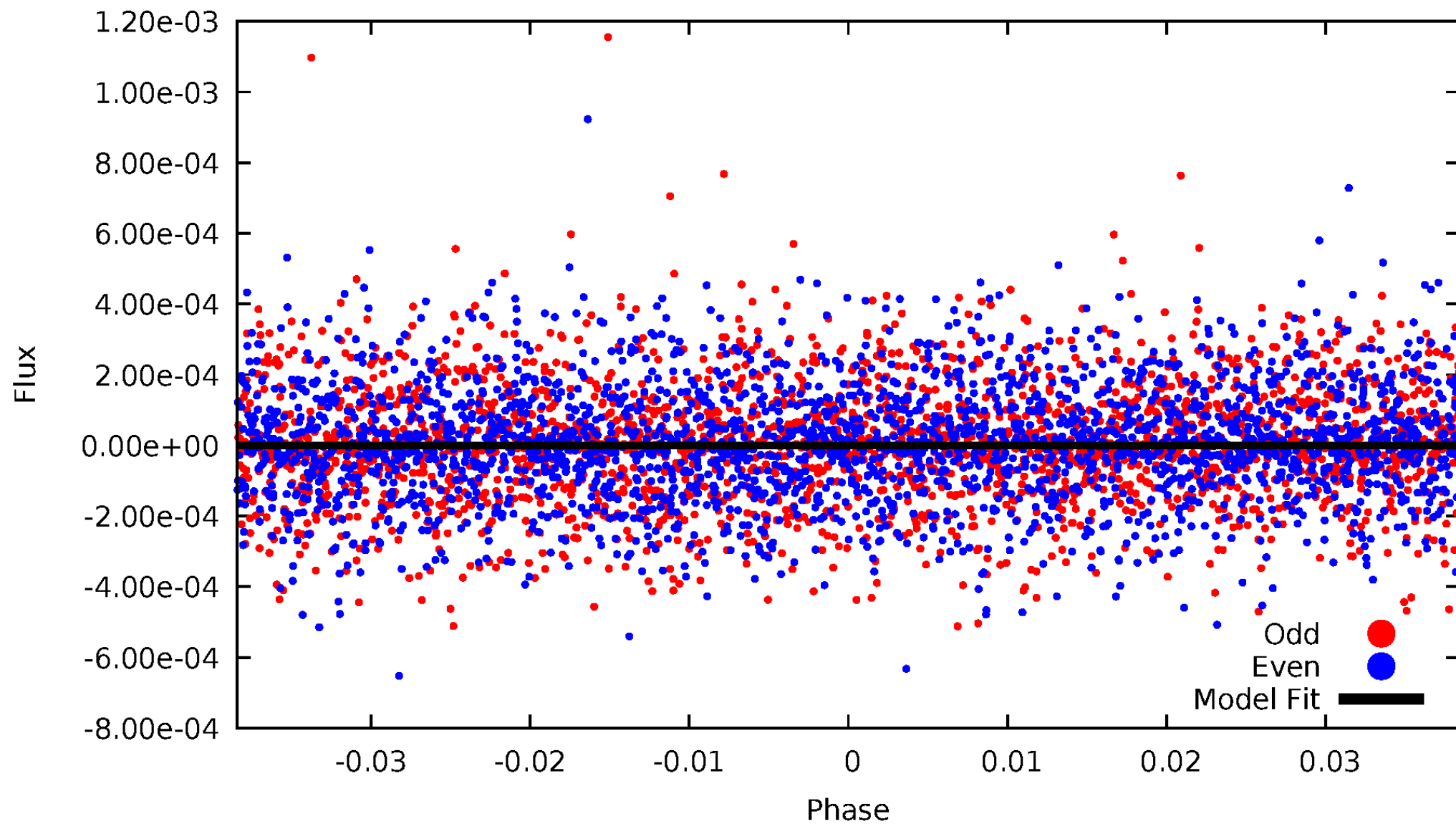


TCE 010074737-01



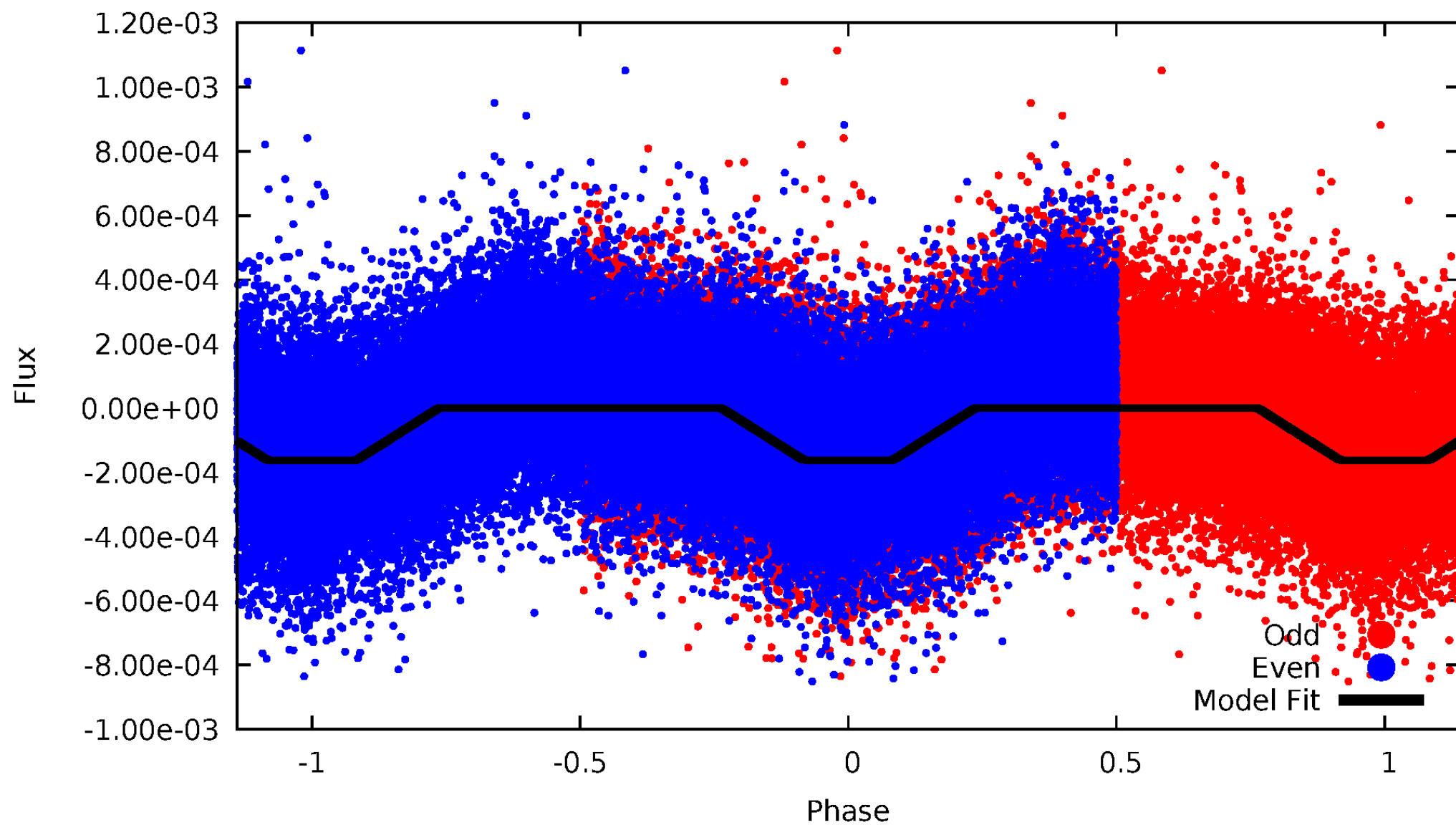
DV Odd/Even

TCE 010074737-01

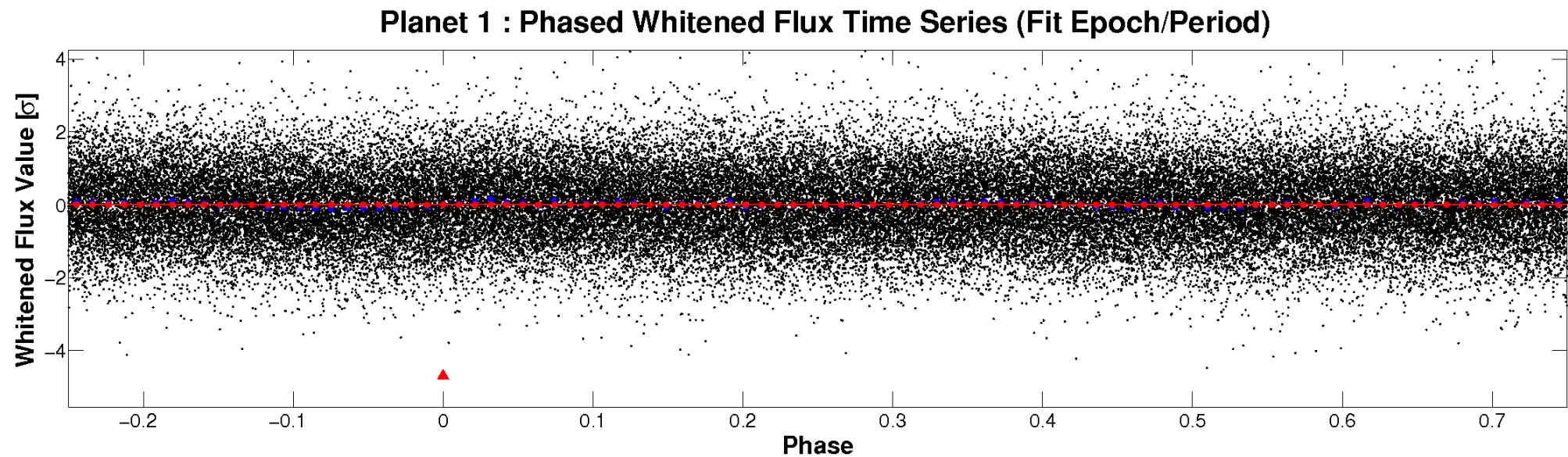
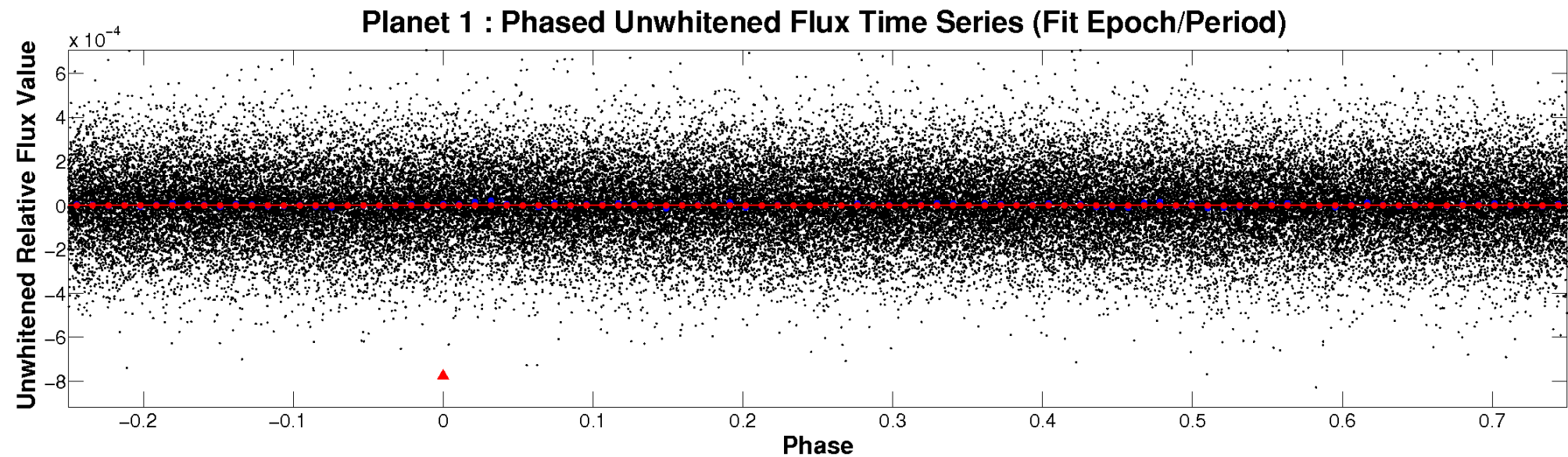


ALT Odd/Even

TCE 010074737-01

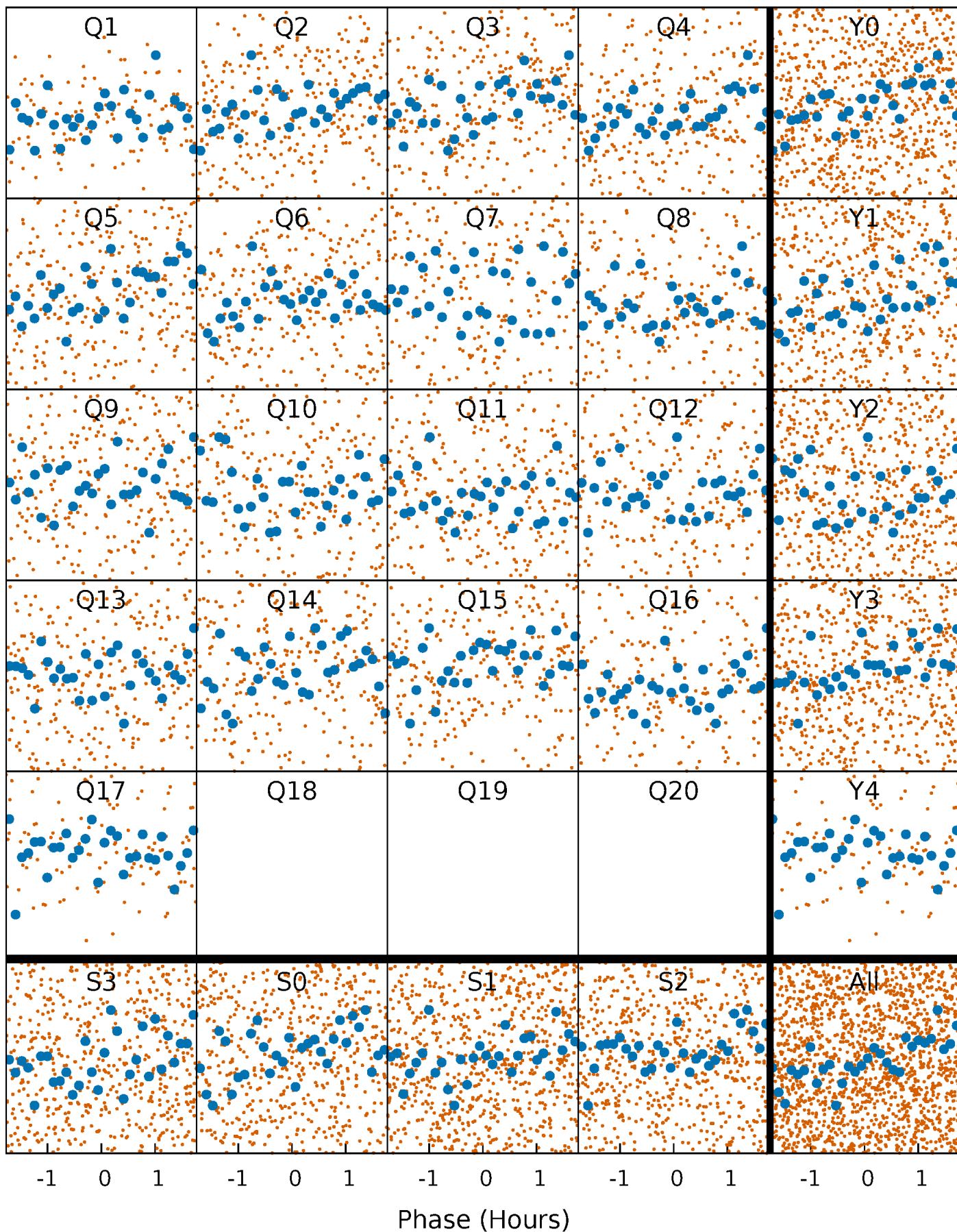


Non-Whitened Vs. Whitened Light Curve



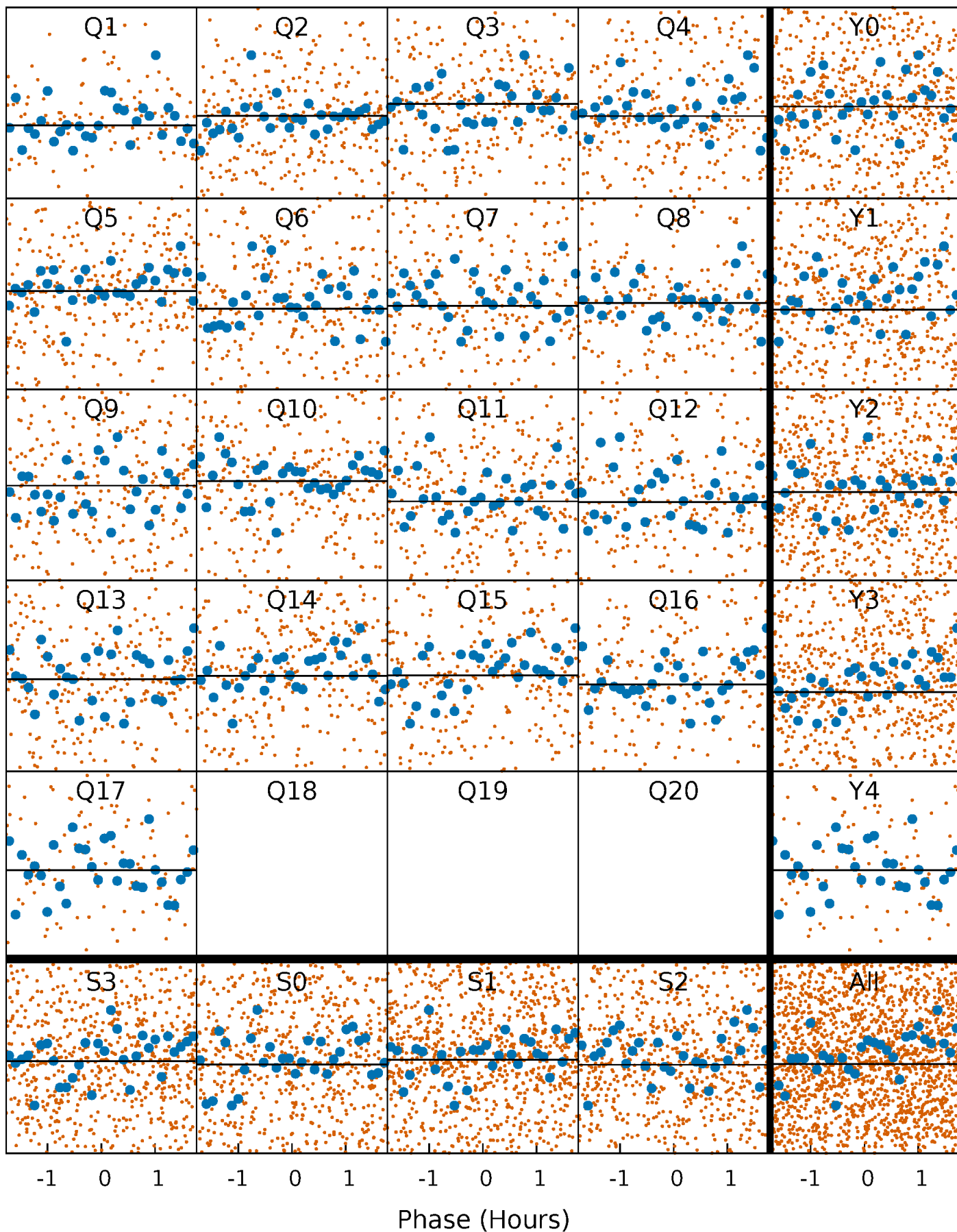
PDC Quarter-Phased Transit Curves

TCE 010074737-01 P= 1.922319 Days $T_0=131.686305$ (BKJD)



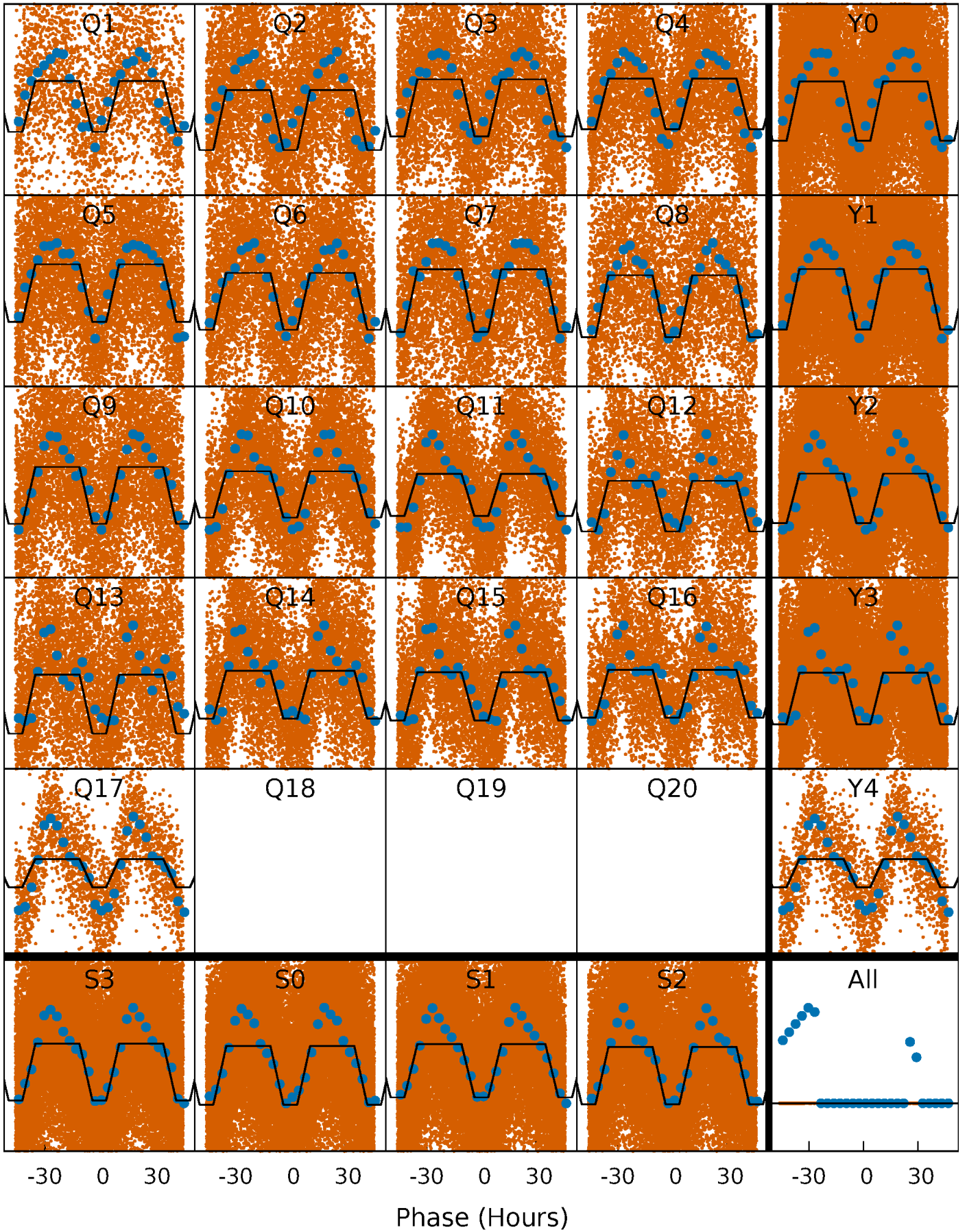
DV Quarter-Phased Transit Curves

TCE 010074737-01 P= 1.922319 Days $T_0=131.686305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

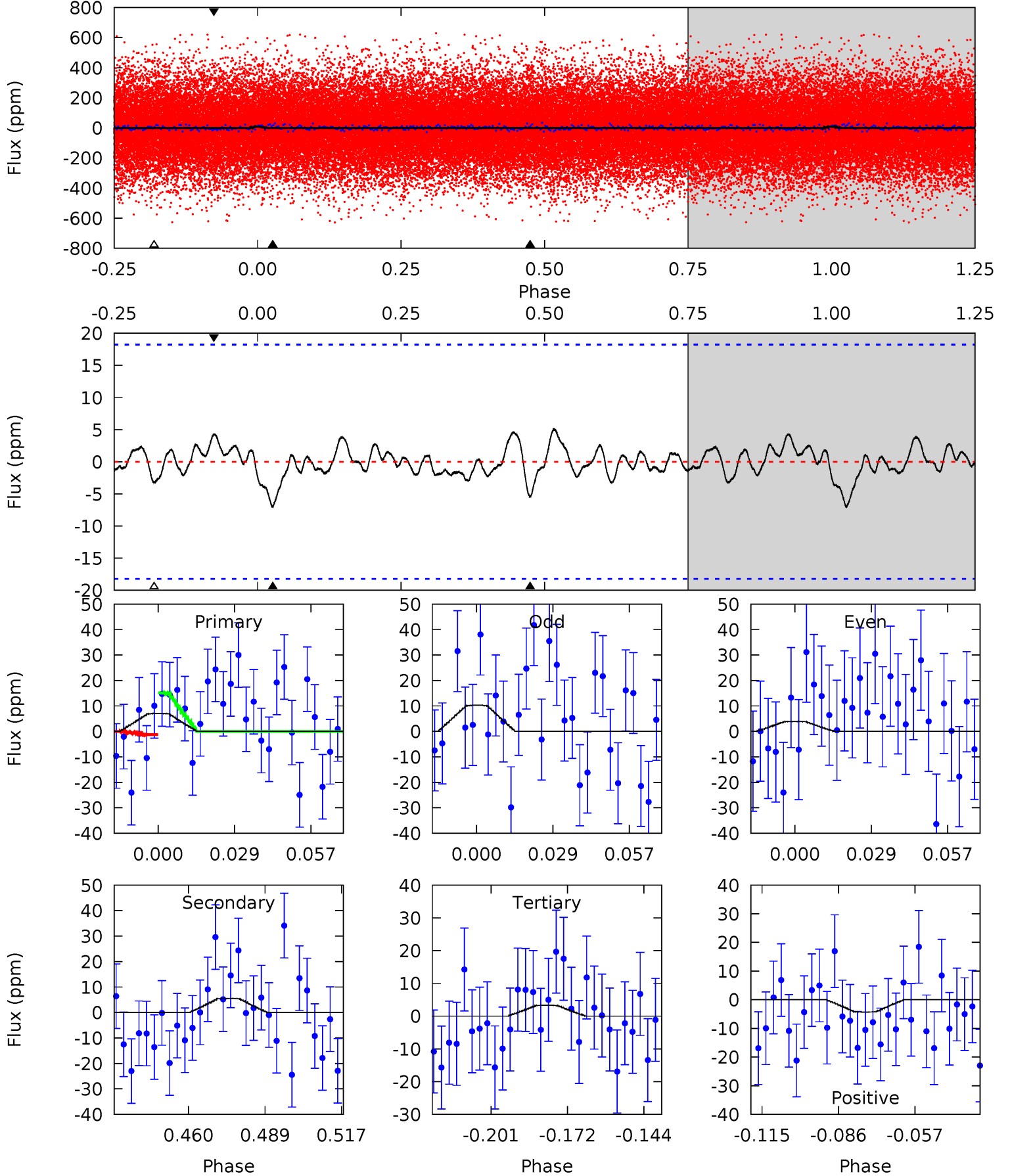
TCE 010074737-01 P= 1.922173 Days $T_0=131.706526$ (BKJD)



DV Model-Shift Uniqueness Test

010074737-01, P = 1.922319 Days, E = 129.763986 Days

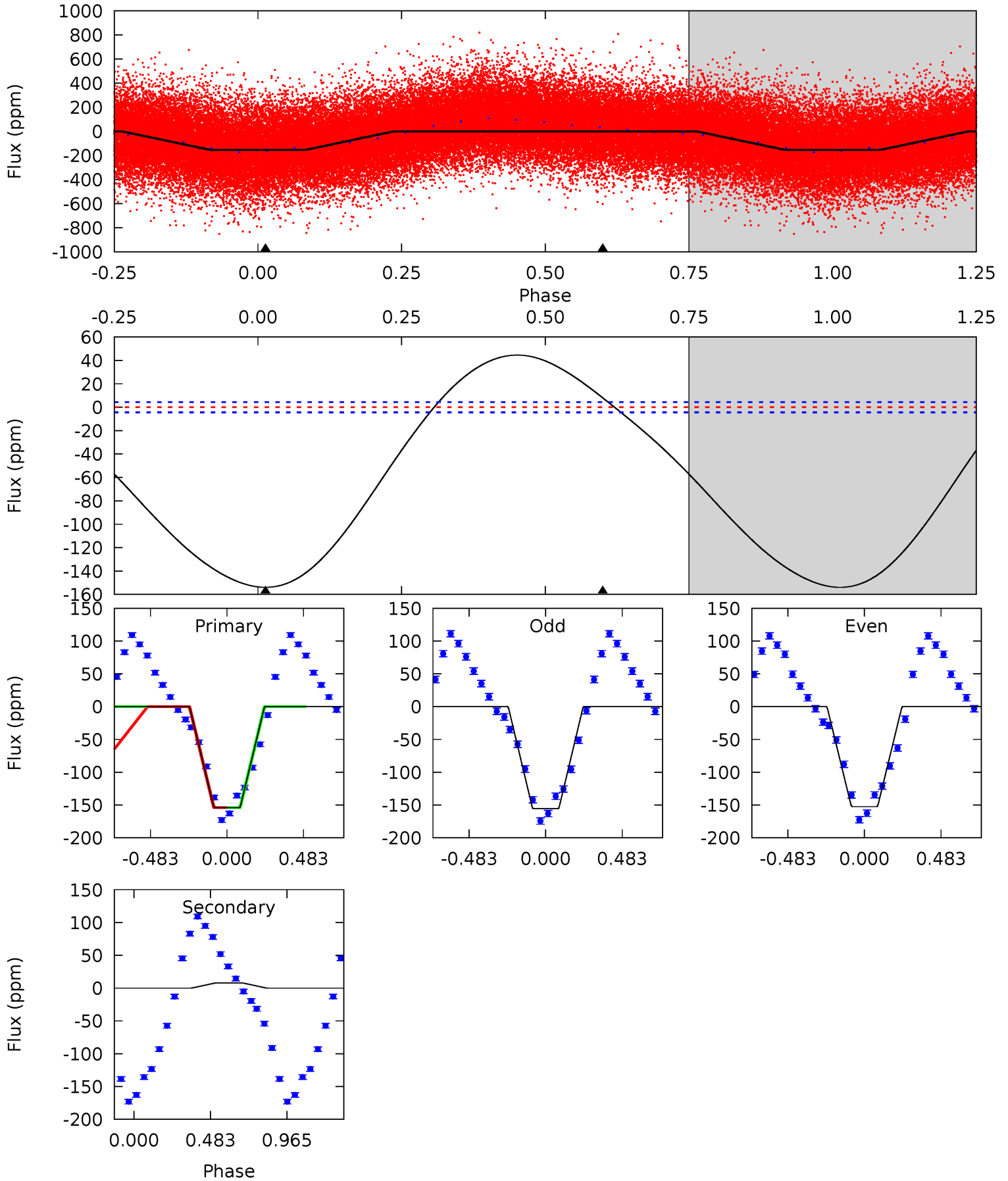
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.86	1.46	0.87	1.13	4.82	2.19	0.46	0.99	0.73	0.59	0.32	0.85	0.84	0.42	1.85



Alt Model-Shift Uniqueness Test

010074737-01, P = 1.922173 Days, E = 129.784353 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
147.4	-7.69	0	0	4.22	0.70	16.6	147.4	147.4	-7.69	-7.69	1.55	1.02	0.22	0.04



Stellar Parameters For KIC 010074737

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7123^{+197}_{-296}	$4.178^{+0.087}_{-0.203}$	$0.140^{+0.200}_{-0.350}$	$1.681^{+0.553}_{-0.276}$	$1.552^{+0.214}_{-0.214}$	$0.461^{+0.212}_{-0.230}$
	+3%/-4%	+2%/-5%	+143%/-250%	+33%/-16%	+14%/-14%	+46%/-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 010074737-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 4	$24.19^{+27.87}_{-17.29}$	3105^{+458}_{-343}	-3092^{+249}_{-284}	$0.005^{+0.062}_{-0.004}$
Alt.	8 ± 1	$25.88^{+29.32}_{-18.56}$	3103^{+446}_{-338}	-3204^{+212}_{-347}	$-0.008^{+0.006}_{-0.101}$

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 $A_{obs} \gg 1.0$

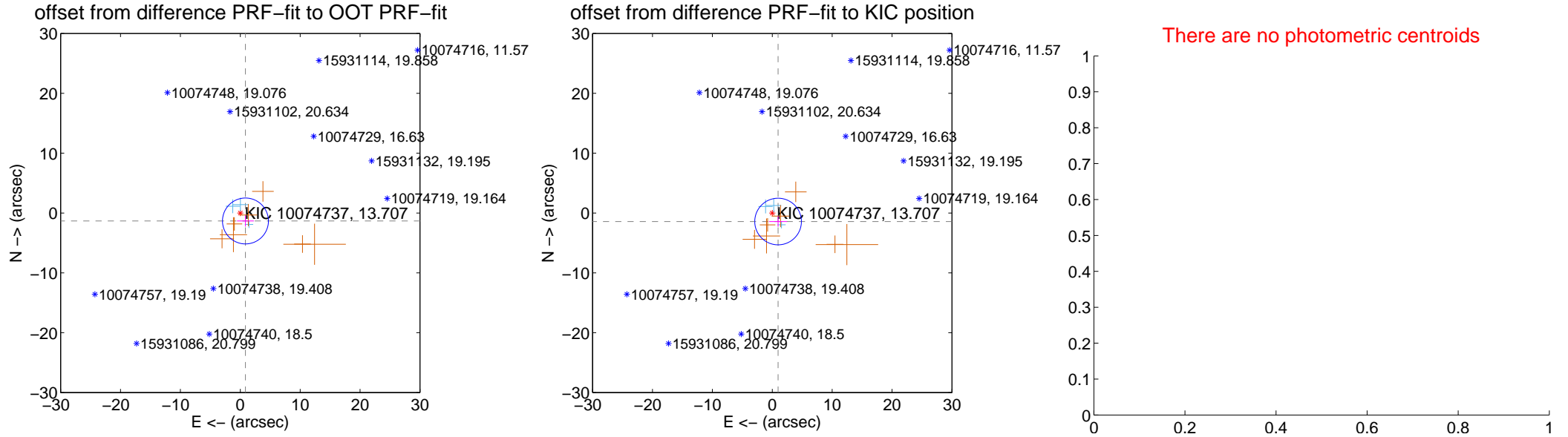
DV Centroid Data

Supplemental centroid analysis for 010074737-01. Kepler magnitude: 13.71. Transit SNR 0.00

There are 3 quarters with good PRF difference image offsets

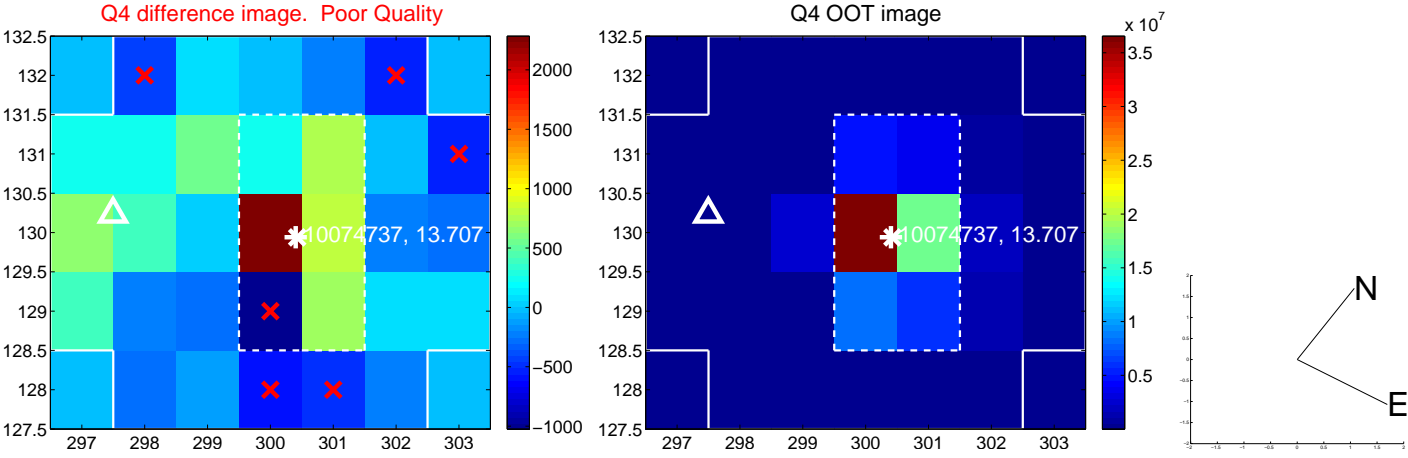
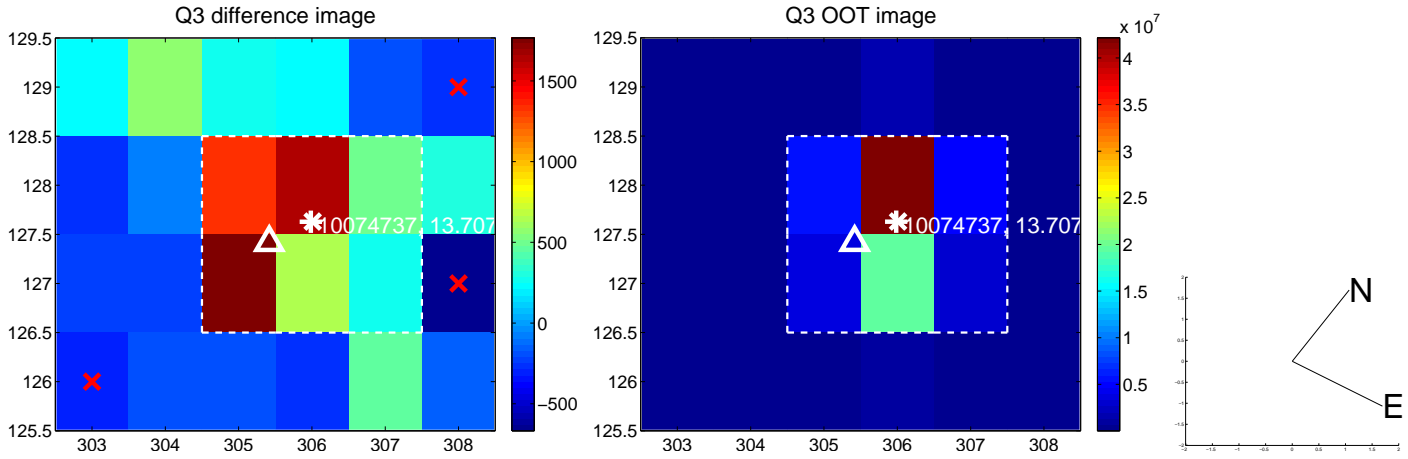
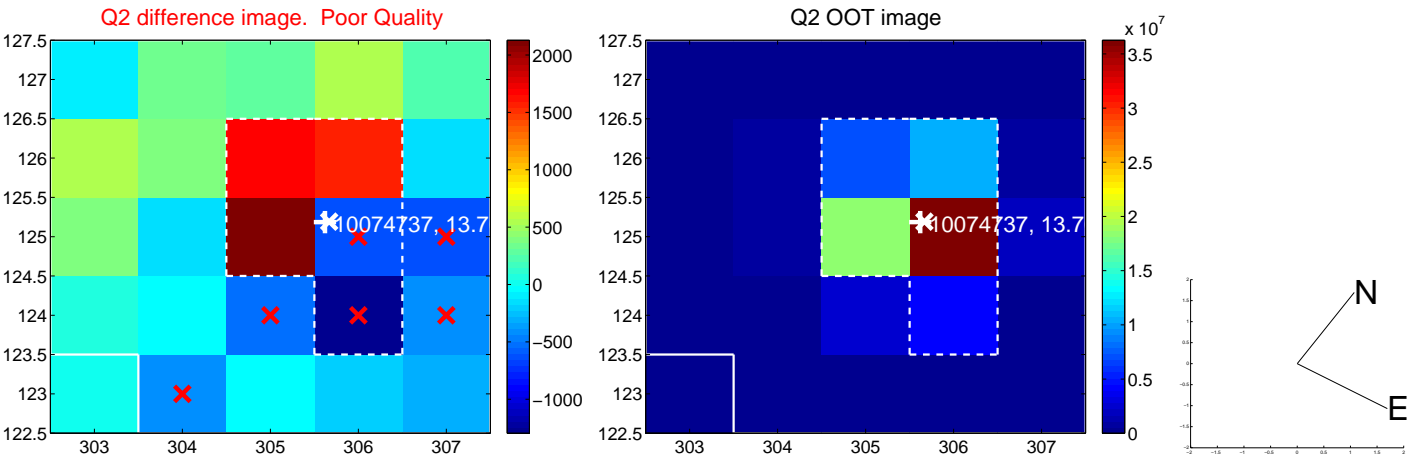
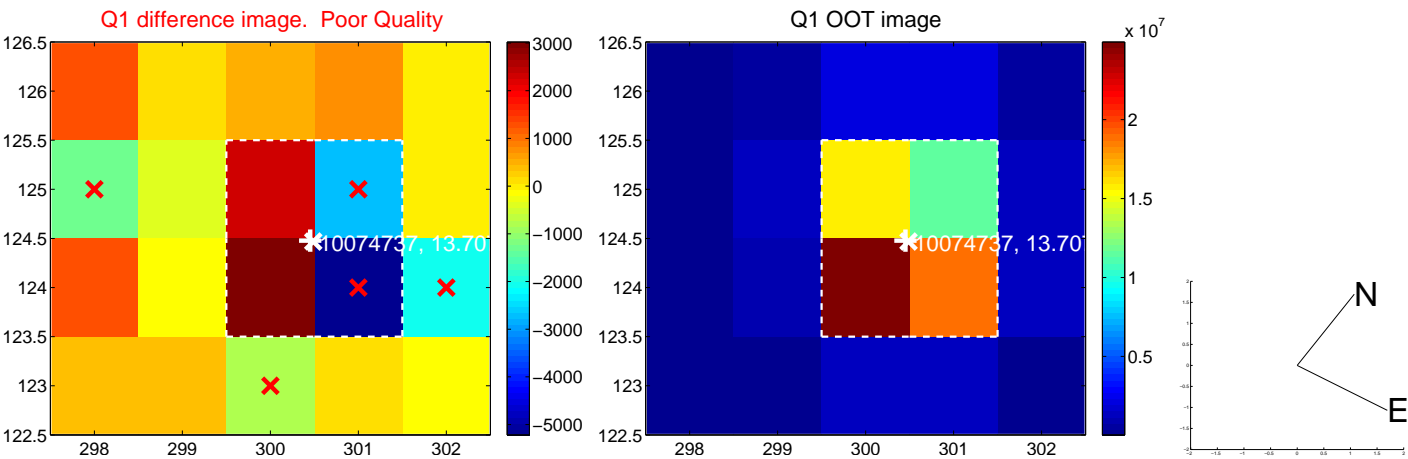
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.586 ± 1.279	1.24	-0.863 ± 1.407	-1.331 ± 0.953
PRF-fit source offset from KIC position	1.722 ± 1.298	1.33	-0.972 ± 1.502	-1.422 ± 0.888
photometric centroid source offset	—	—	—	—

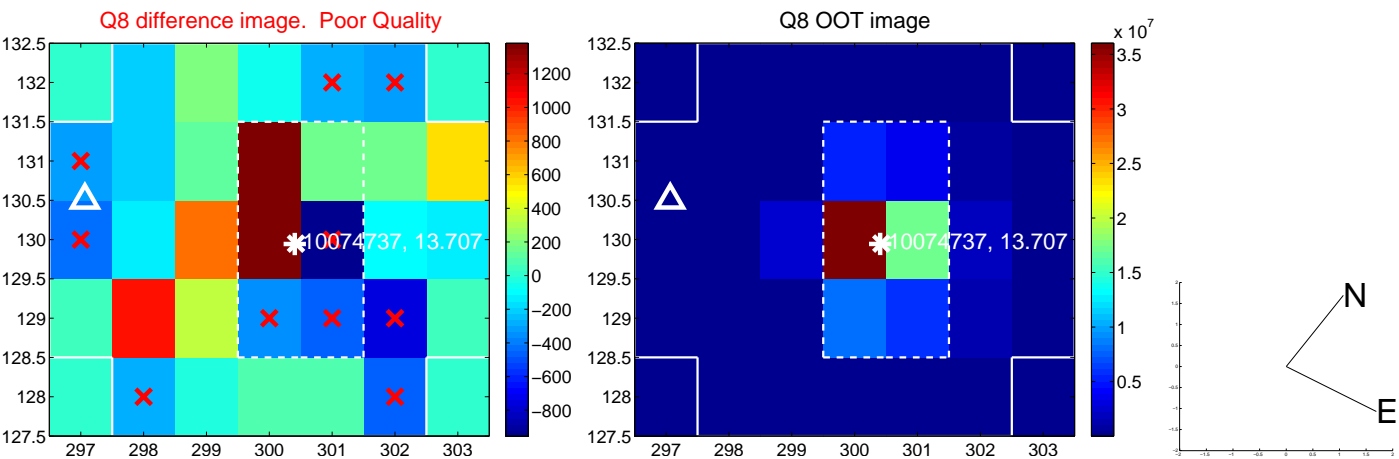
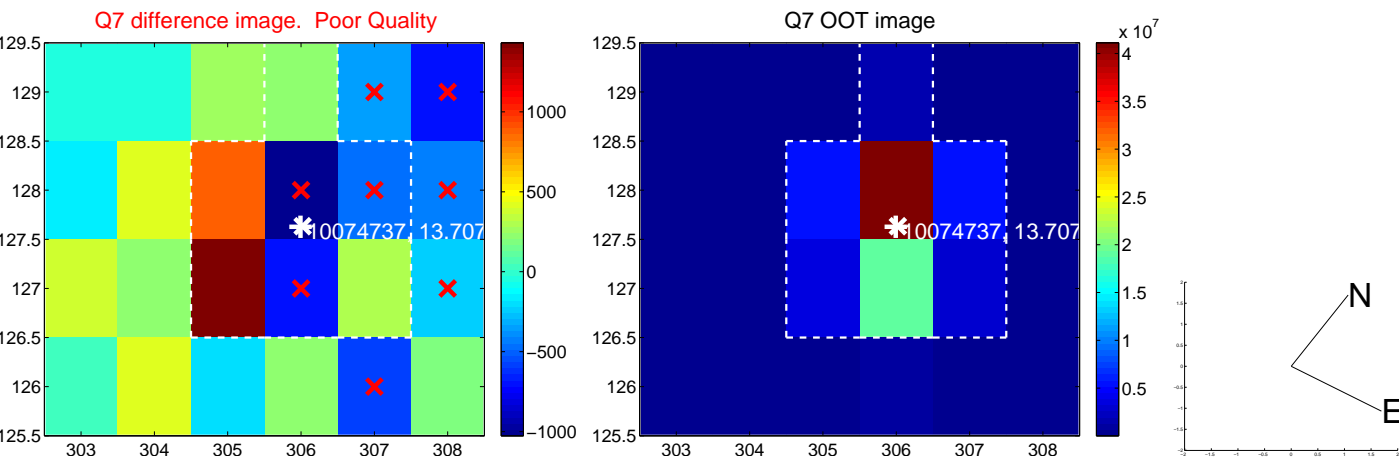
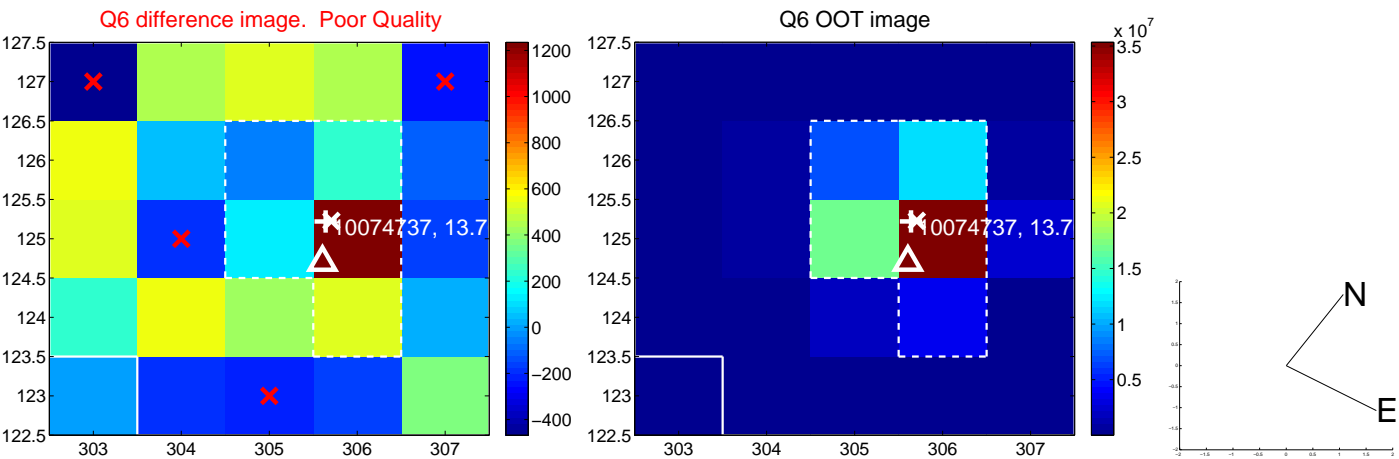
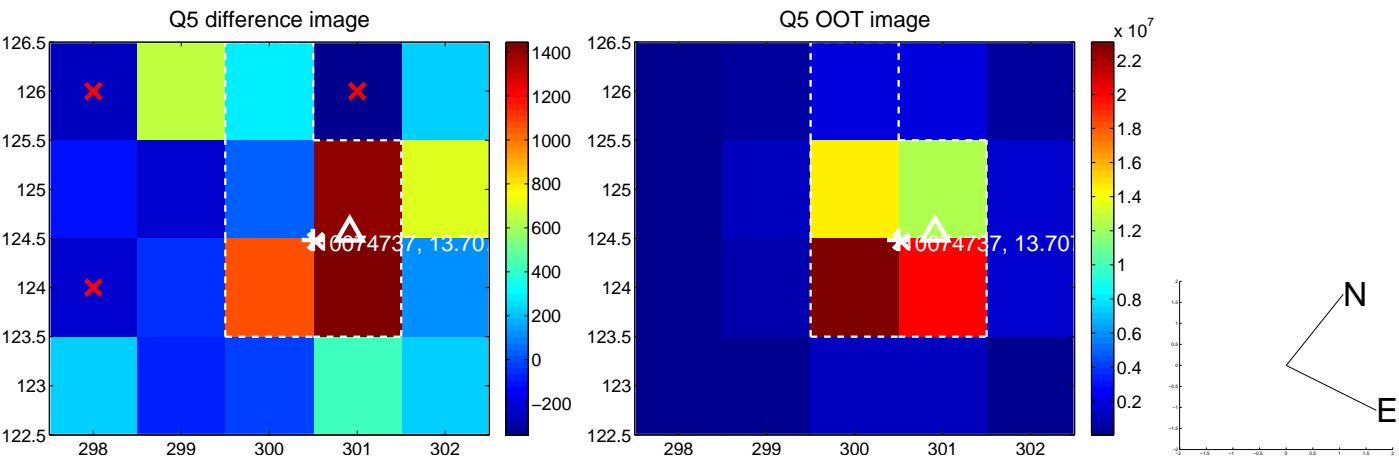


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

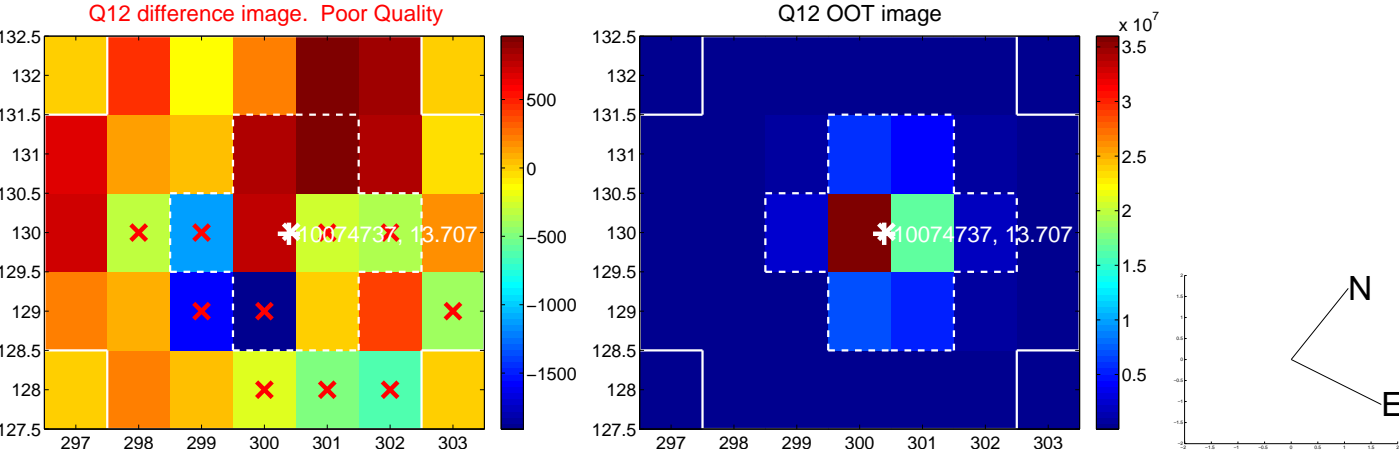
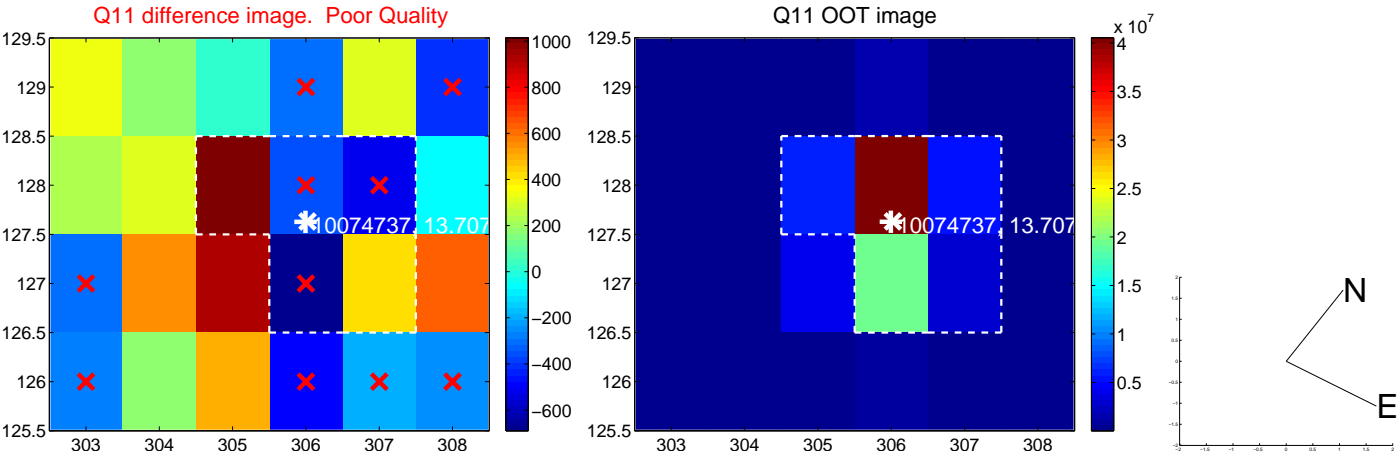
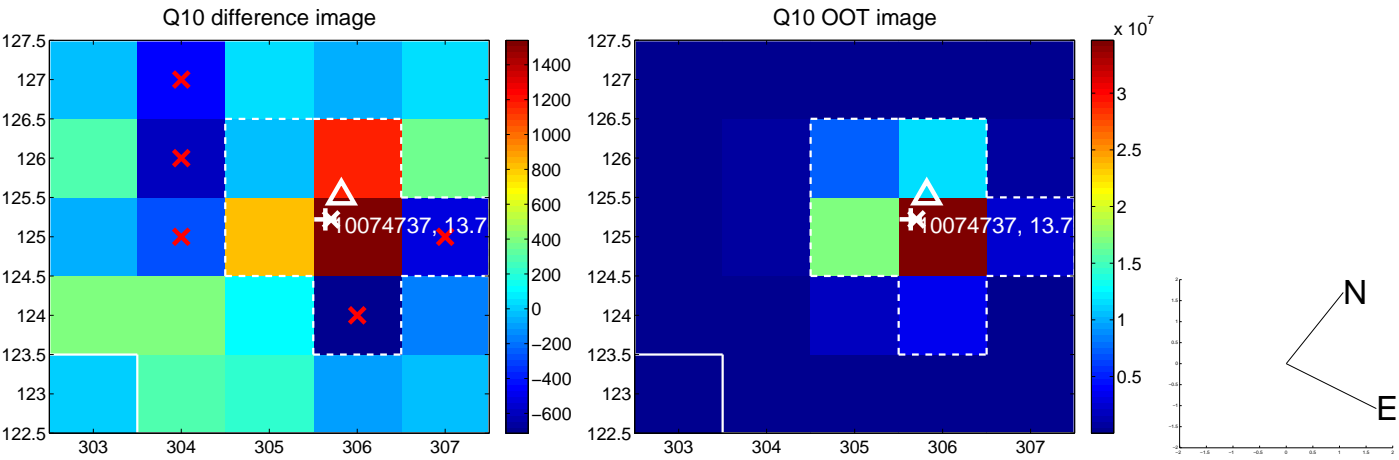
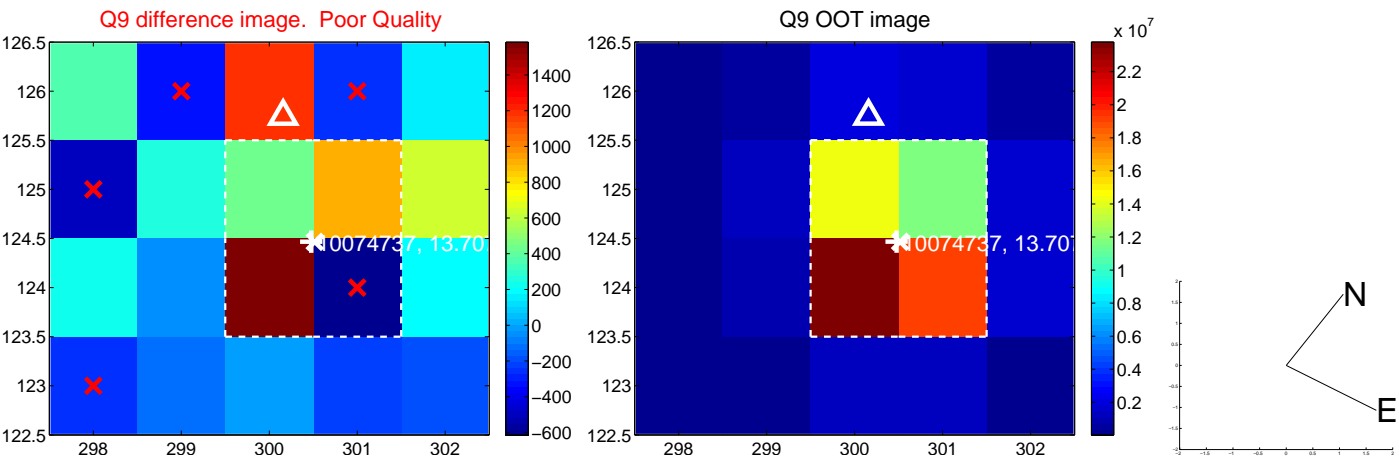
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



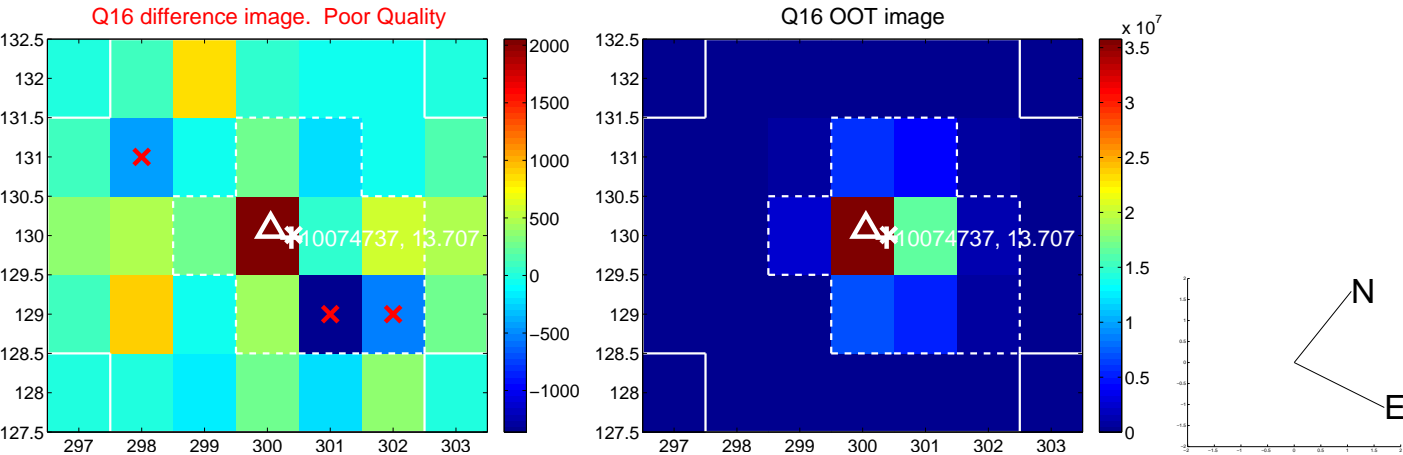
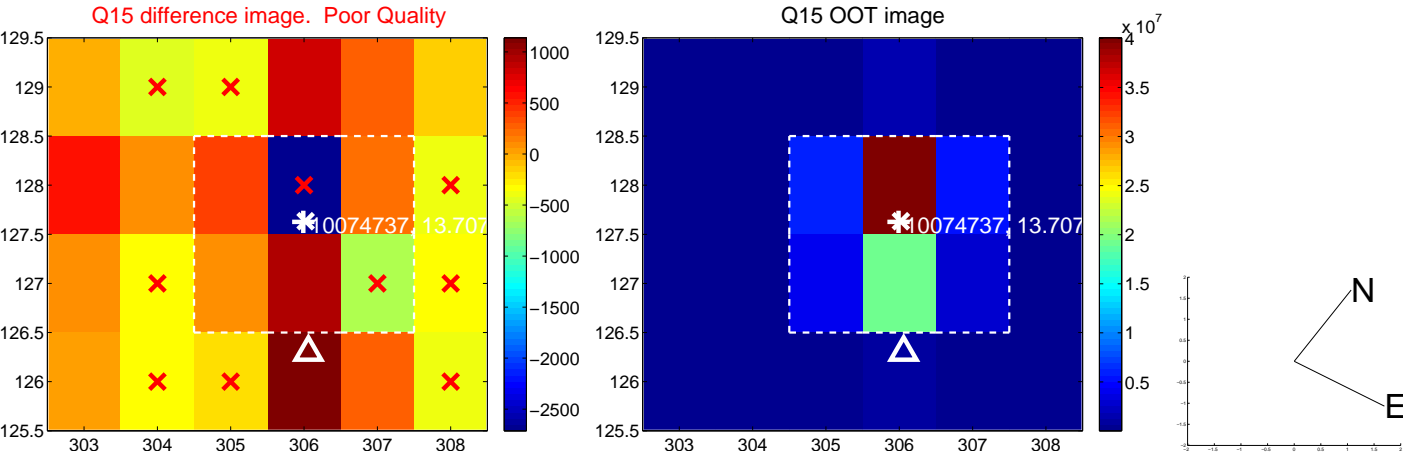
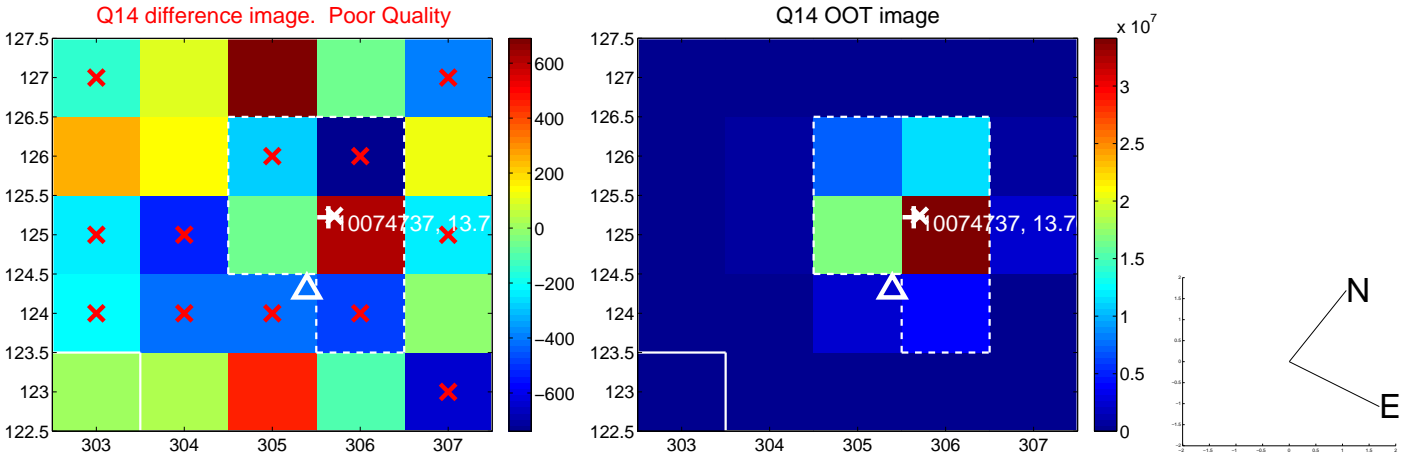
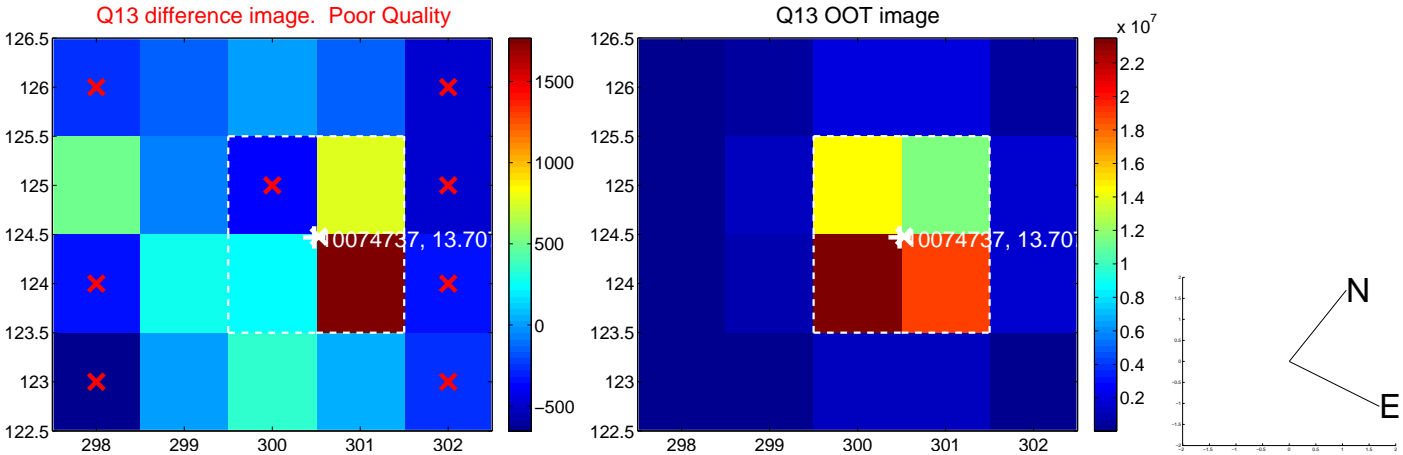
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



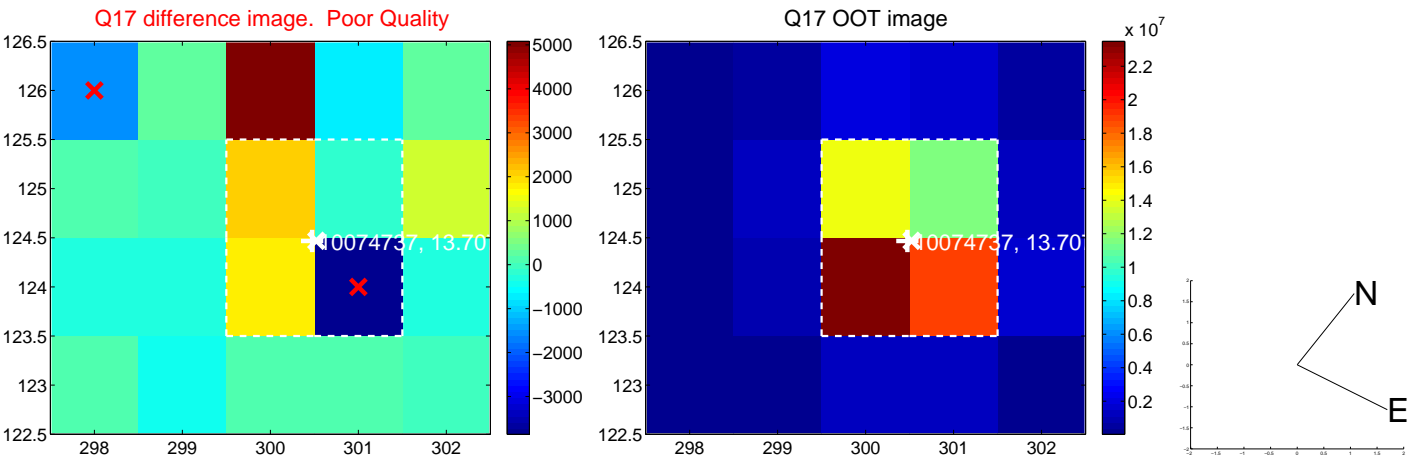
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

