

KIC 004756092

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})
004756092-01	OBS	No	0.542042	131.921338	48.3	6.183	11.5	22.1	1.07	6230	0.78	8532.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004756092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

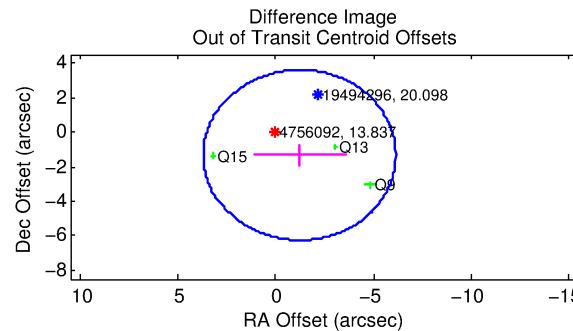
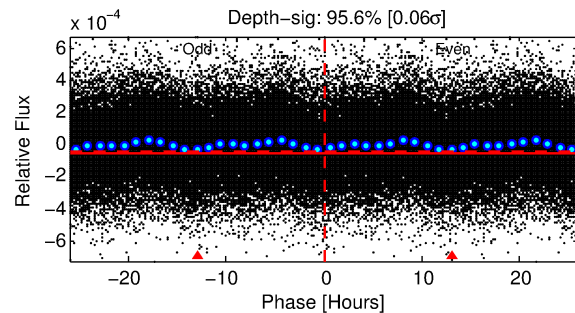
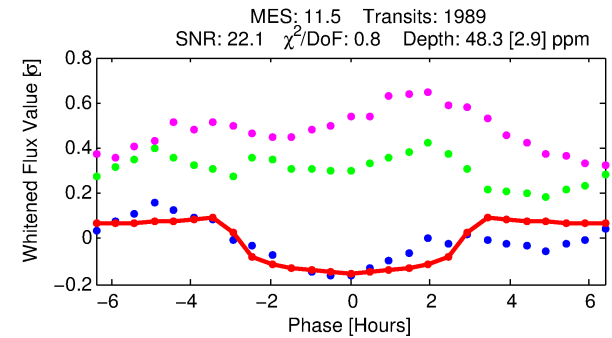
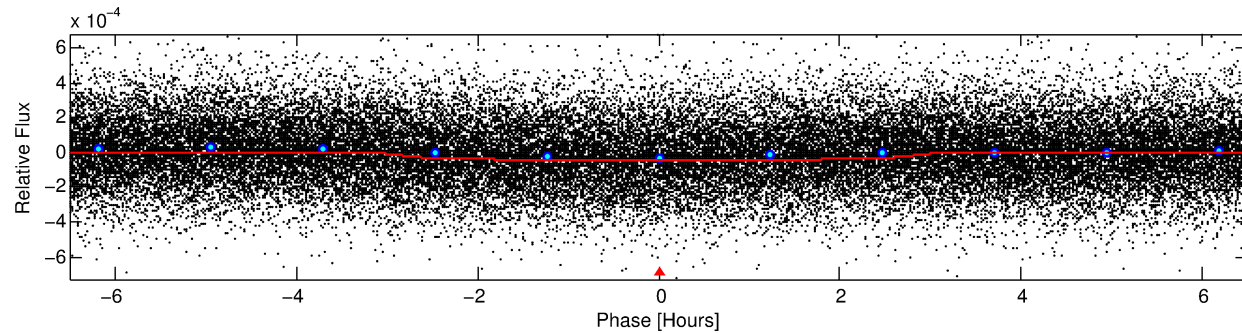
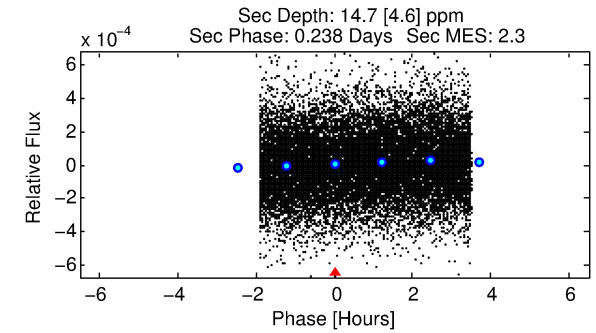
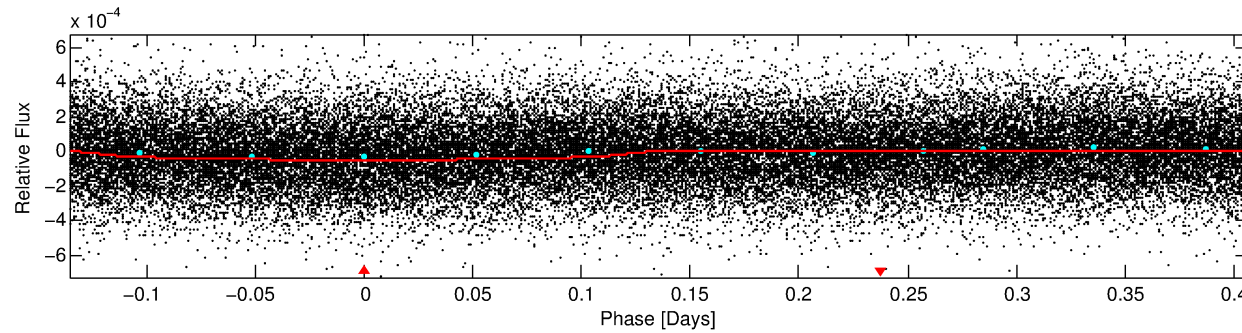
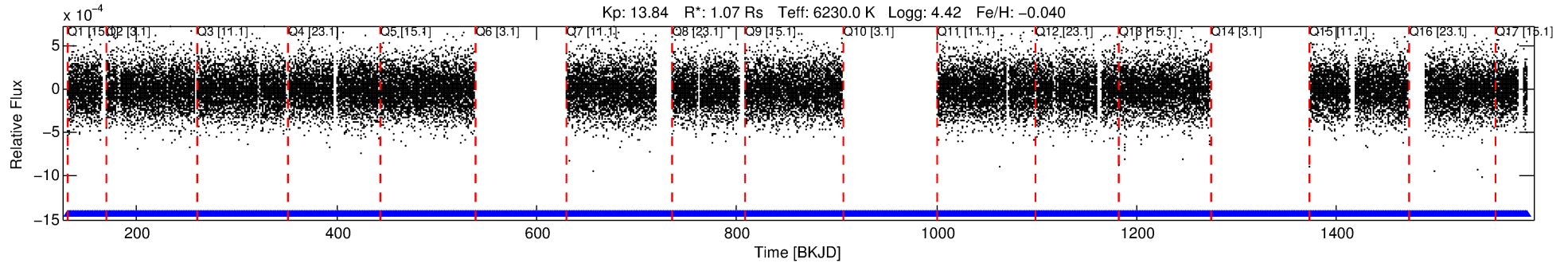
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004756092-01

No Significant Match Found

DV One-Page Summary

KIC: 4756092 Candidate: 1 of 1 Period: 0.542 d



DV Fit Results:

Period = 0.54204 [0.00000] d
Epoch = 131.9213 [0.0022] BKJD
Rp/R* = 0.0066 [0.0017]
a/R* = 1.01 [0.02]
b = 0.59 [1.48]
Seff = 8532.46 [3791.72]
Teff = 2451 [272] K
Rp = 0.78 [0.33] Re
a = 0.0135 [0.0039] AU
Ag = 2.43 [1.80] [0.80σ]
Teffp = 4731 [737] K [2.90σ]

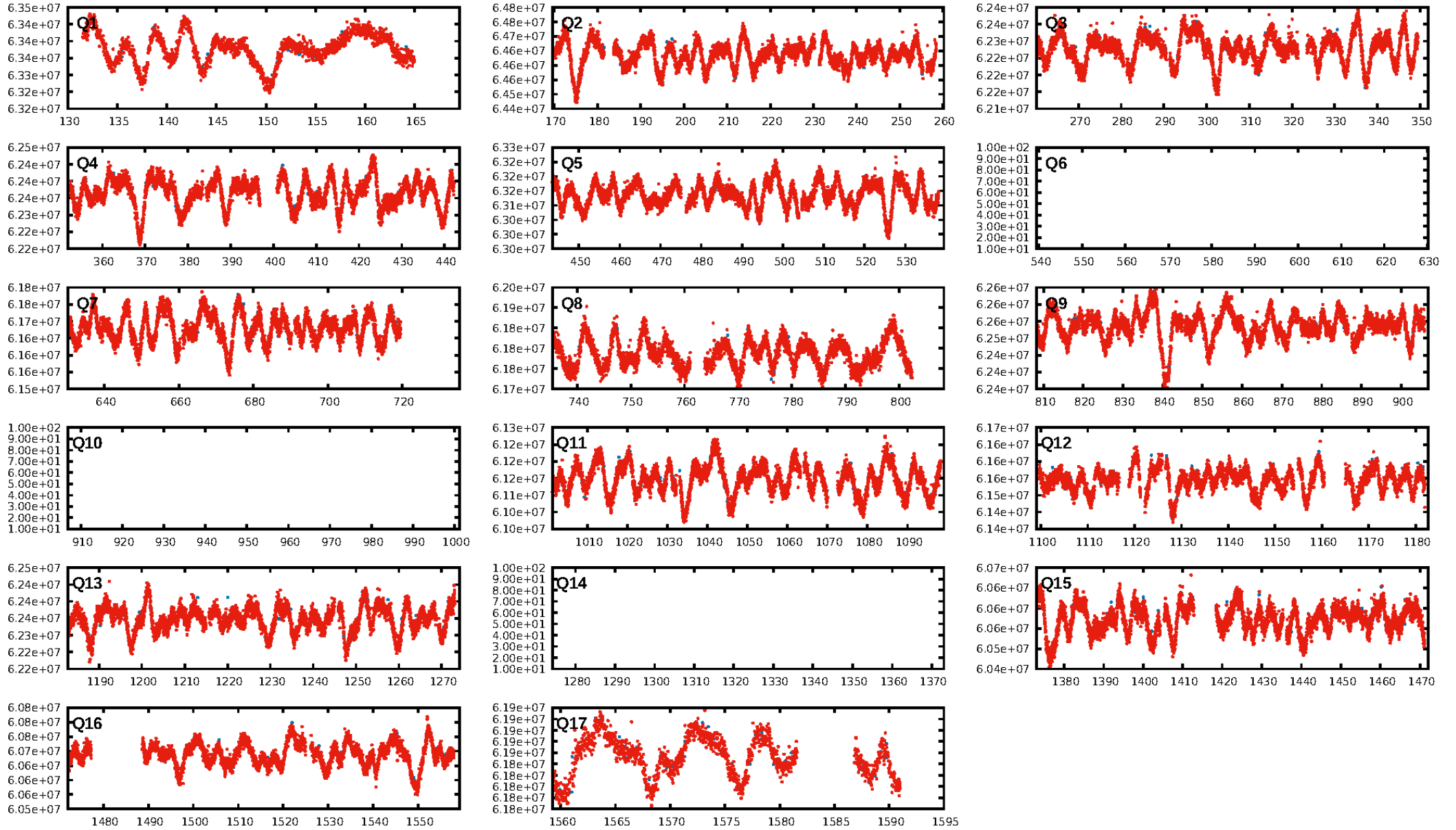
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1875/1875]
GhostDiagnostic-chr: 4.553
Centroid-sig: 45.9%
Centroid-so: 0.415 arcsec [0.98σ]
OotOffset-rm: 1.803 arcsec [1.10σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 1.748 arcsec [1.05σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [14/14]

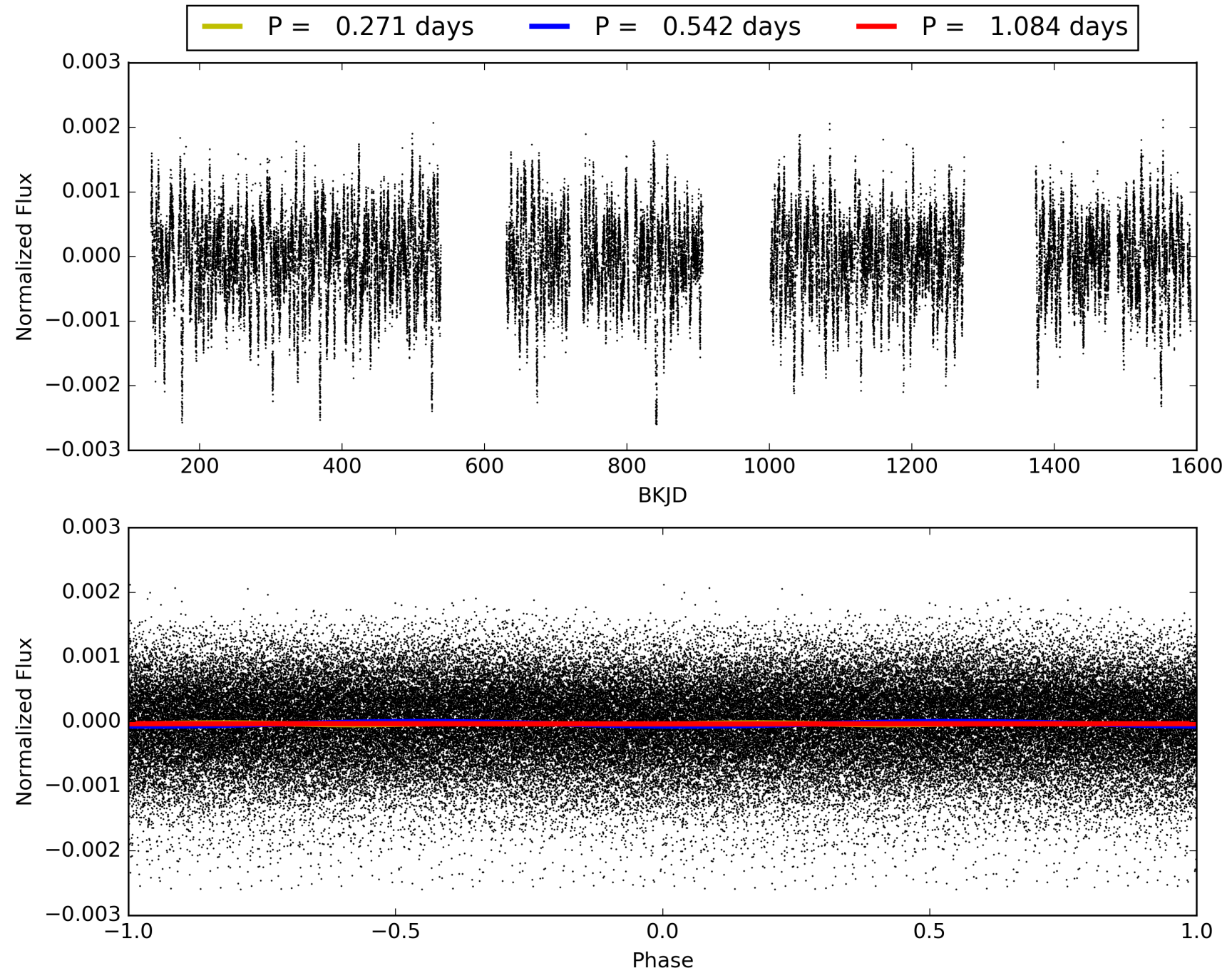
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:48:03 Z

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

TCE 004756092-01, PDC Light Curves

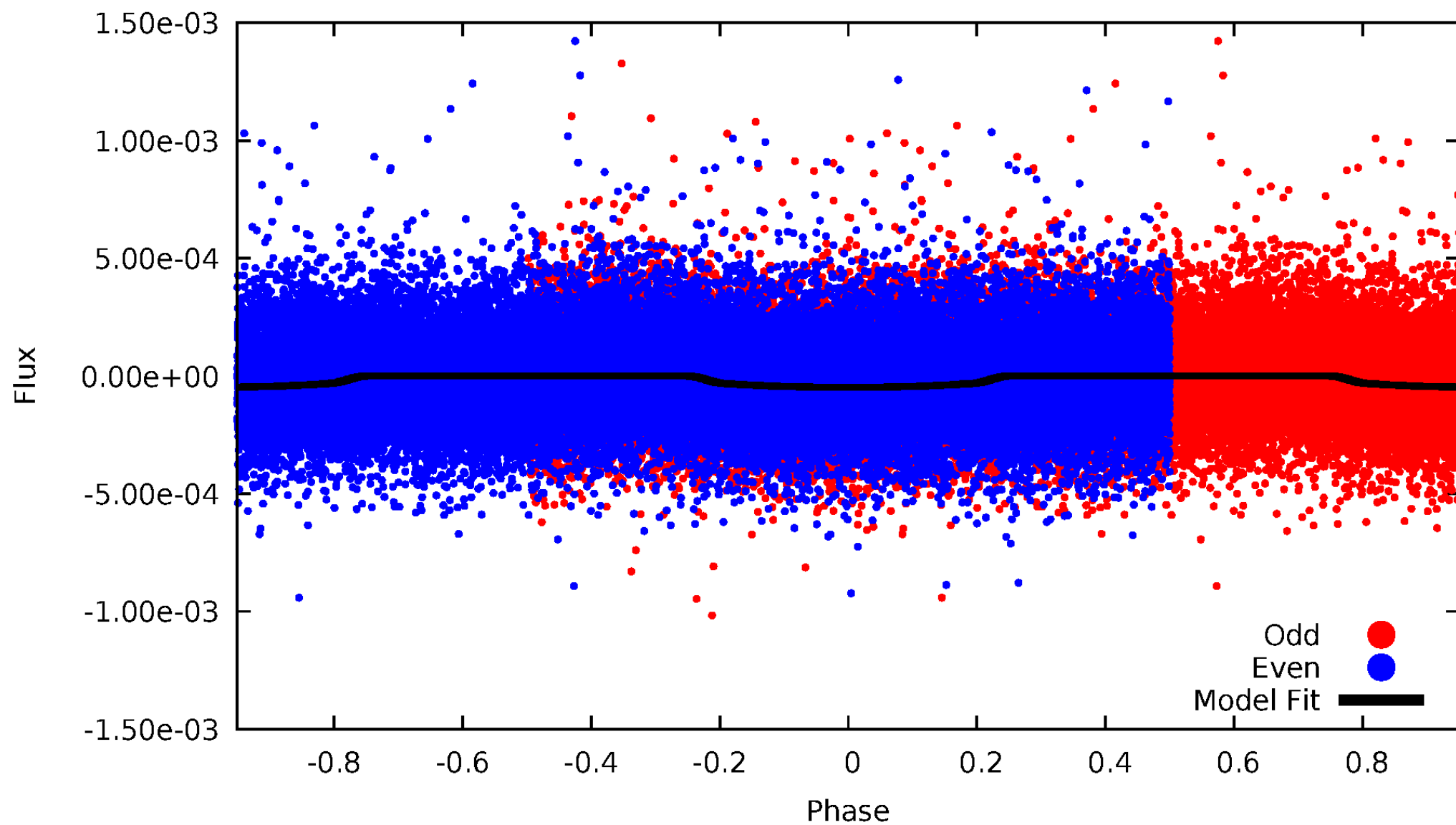


TCE 004756092-01



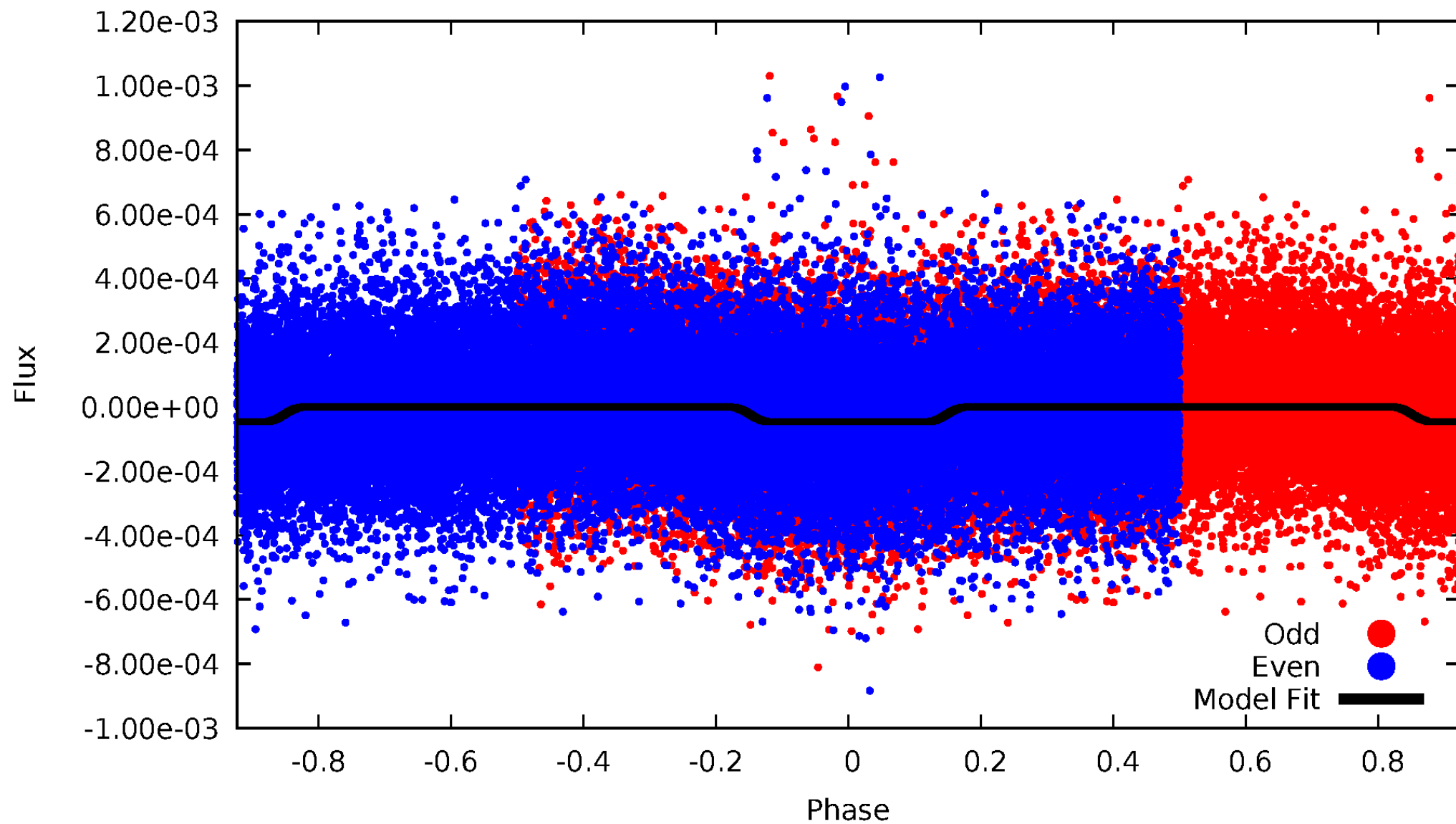
DV Odd/Even

TCE 004756092-01

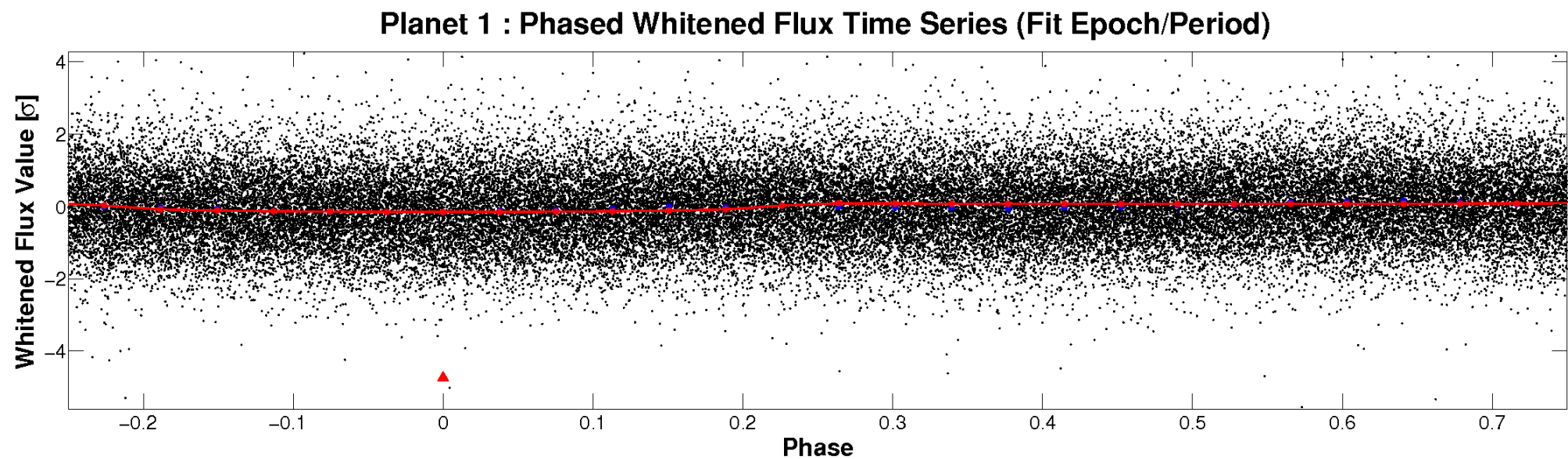
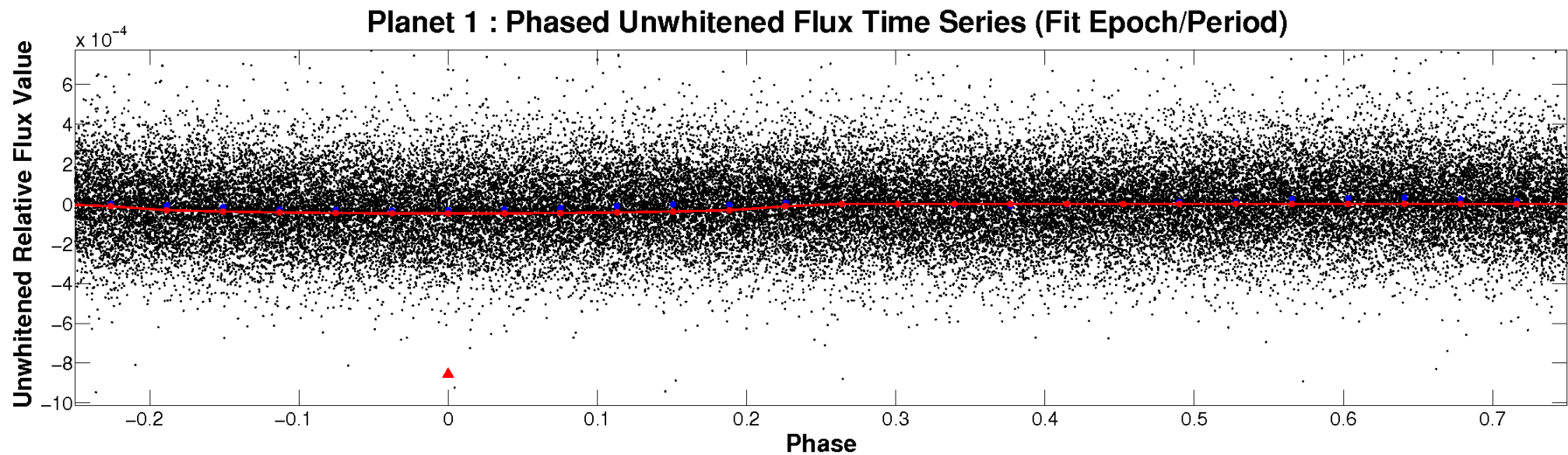


ALT Odd/Even

TCE 004756092-01

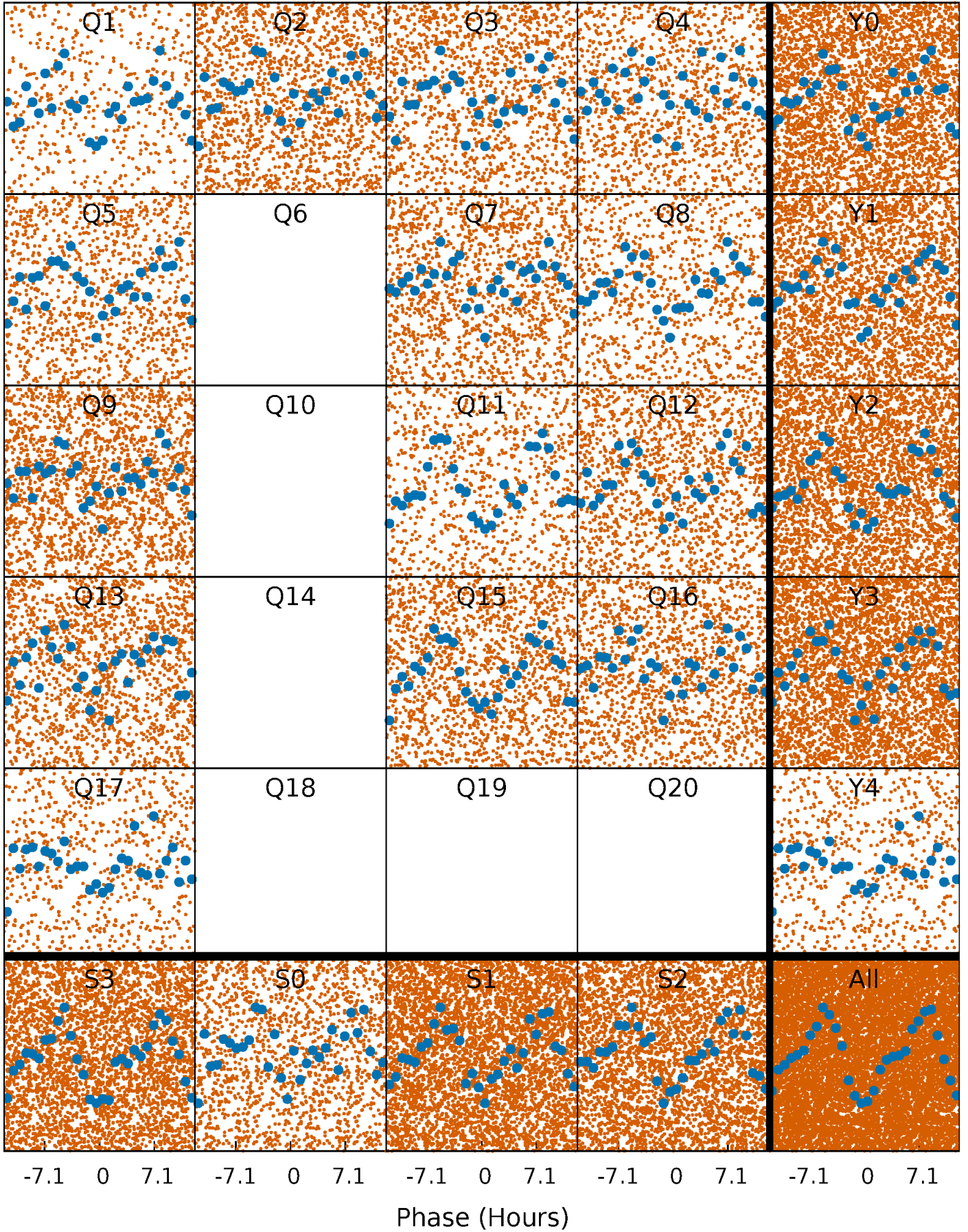


Non-Whitened Vs. Whitened Light Curve



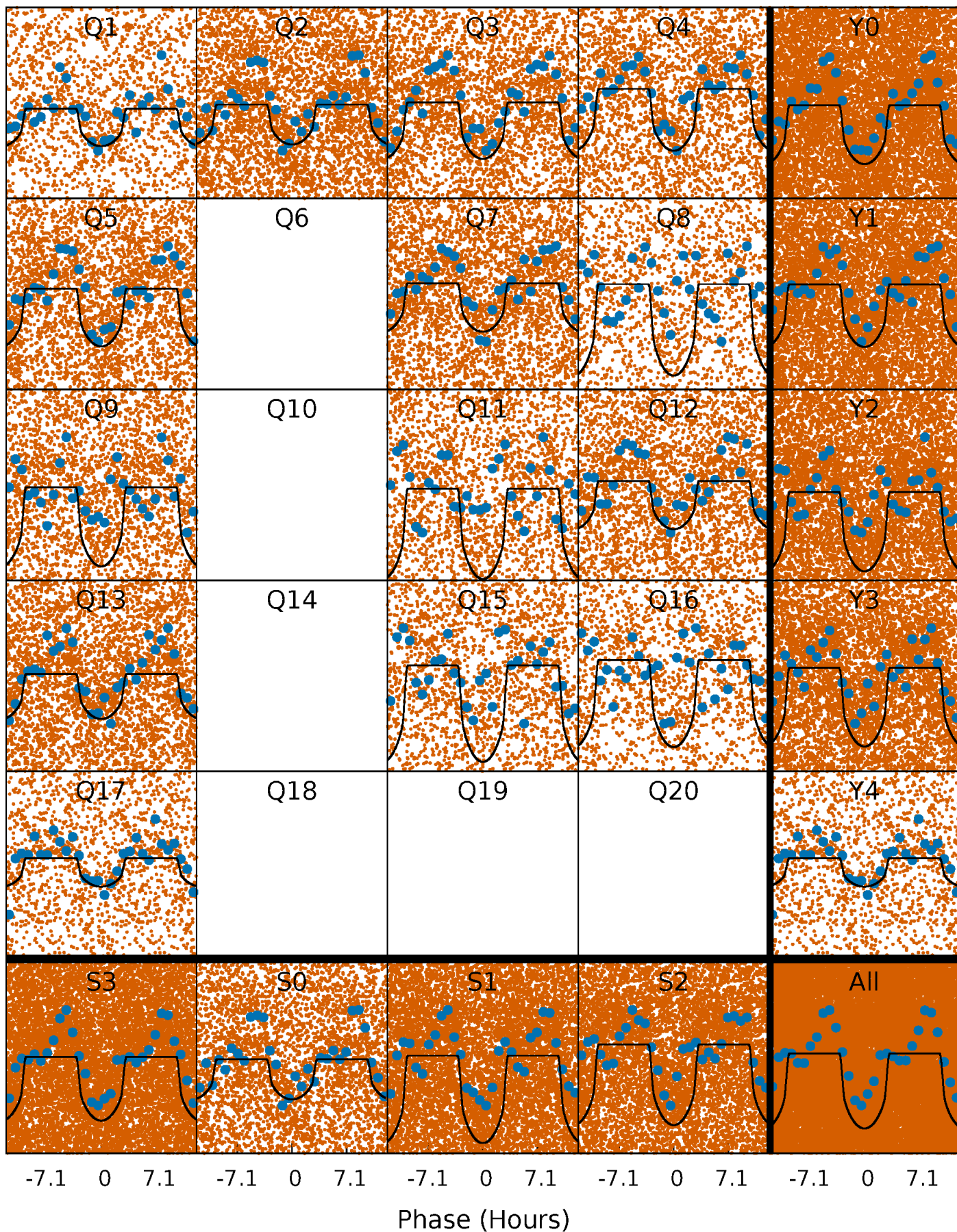
PDC Quarter-Phased Transit Curves

TCE 004756092-01 P= 0.542042 Days $T_0=131.921338$ (BKJD)



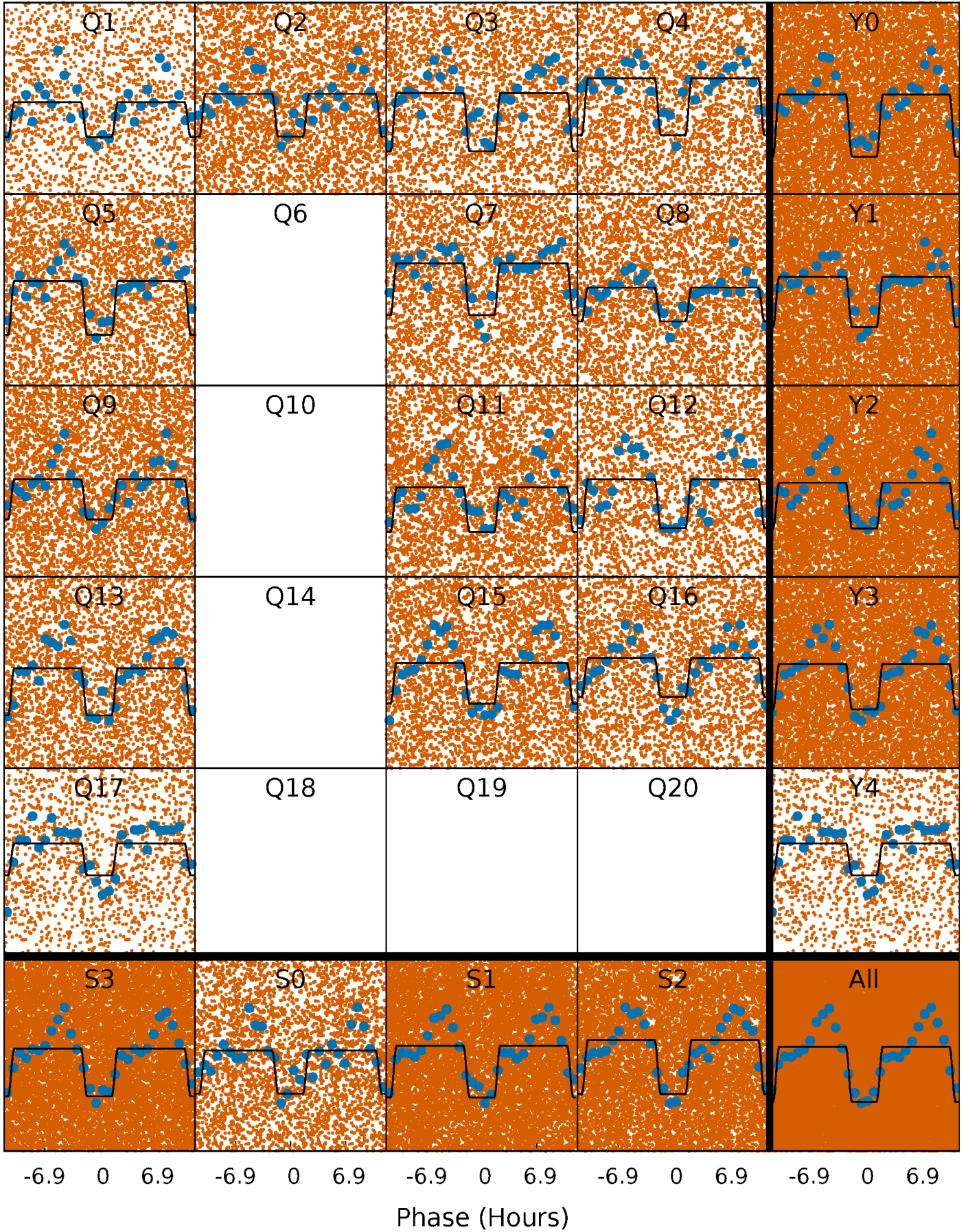
DV Quarter-Phased Transit Curves

TCE 004756092-01 P= 0.542042 Days $T_0=131.921338$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

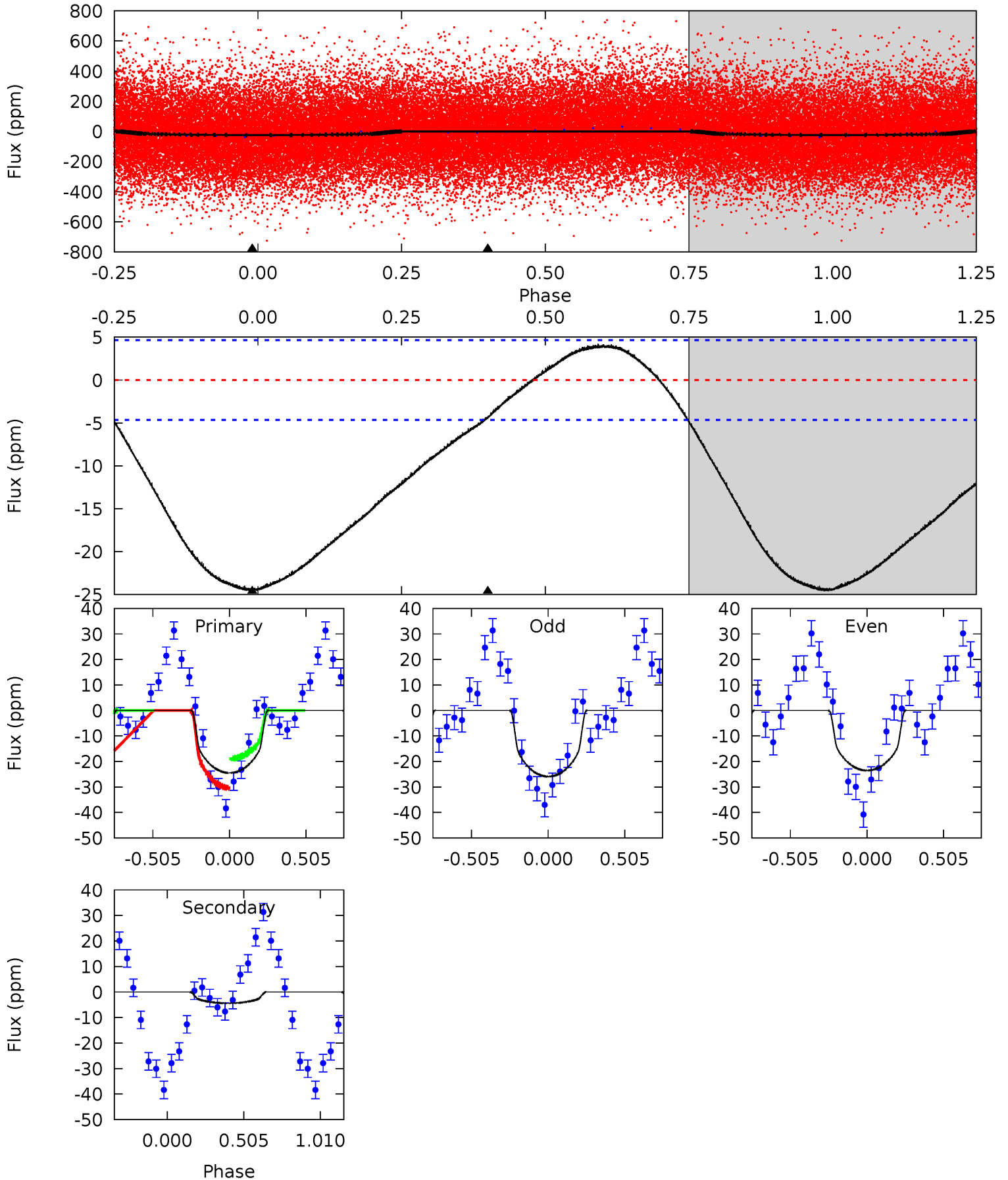
TCE 004756092-01 P= 0.542037 Days $T_0=131.921425$ (BKJD)



DV Model-Shift Uniqueness Test

004756092-01, P = 0.542042 Days, E = 131.379296 Days

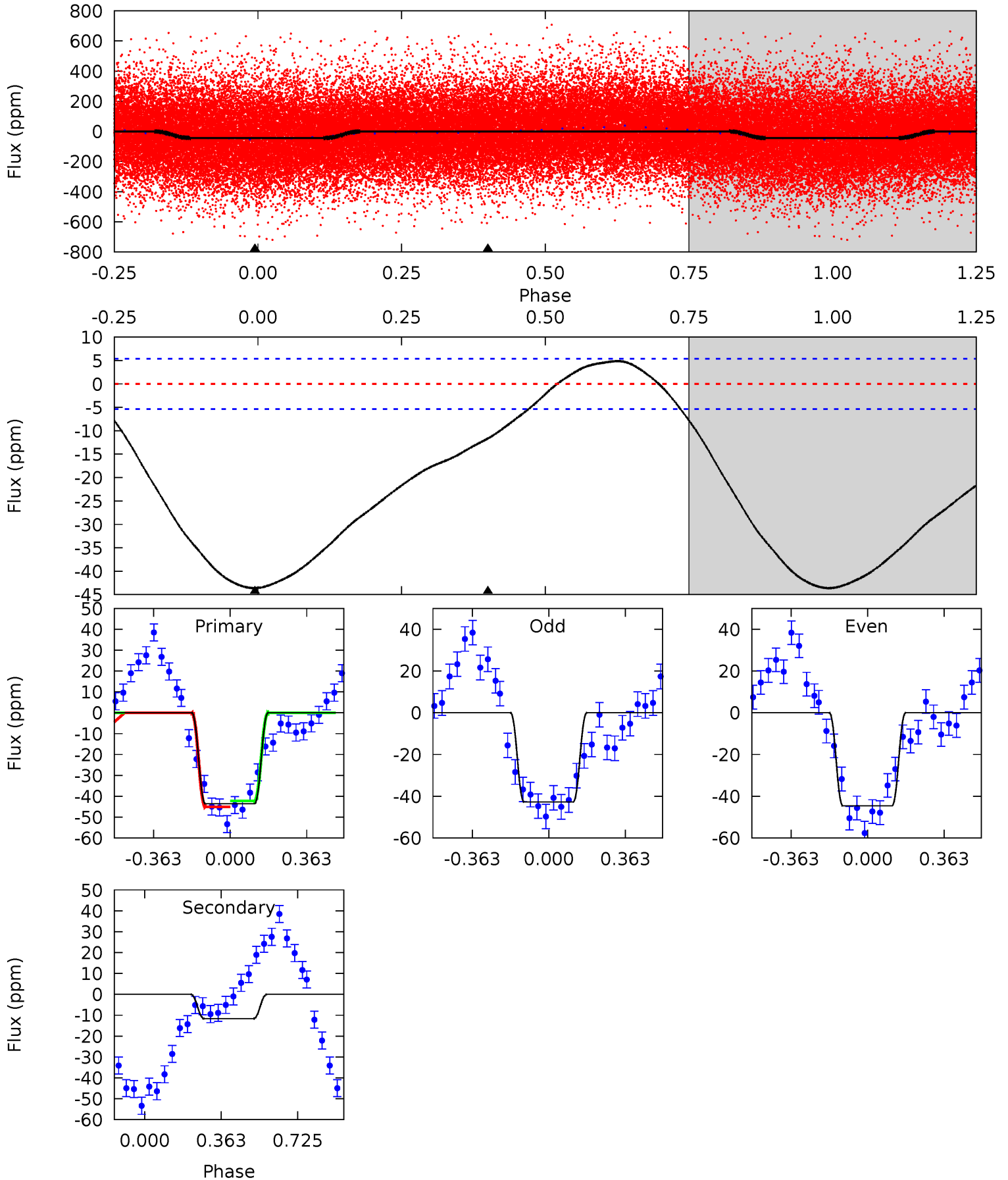
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.2	3.99	0	0	4.21	0.67	2.01	22.2	22.2	3.99	3.99	1.07	1.19	0.15	5.10



Alt Model-Shift Uniqueness Test

004756092-01, P = 0.542037 Days, E = 131.379388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.8	9.31	0	0	4.29	0.91	2.77	34.8	34.8	9.31	9.31	0.75	1.01	0.10	1.07



Stellar Parameters For KIC 004756092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+152}_{-217}	$4.425^{+0.058}_{-0.232}$	$-0.040^{+0.250}_{-0.300}$	$1.075^{+0.365}_{-0.122}$	$1.121^{+0.158}_{-0.142}$	$1.271^{+0.392}_{-0.738}$
	+2%/-3%	+1%/-5%	+625%/-750%	+34%/-11%	+14%/-13%	+31%/-58%
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 004756092-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$0.82^{+0.23}_{-0.23}$	3496^{+260}_{-179}	3476^{+601}_{-837}	$0.649^{+0.604}_{-0.302}$
Alt.	-12 ± 1	$0.84^{+0.27}_{-0.22}$	3522^{+272}_{-207}	4390^{+711}_{-546}	$1.608^{+1.467}_{-0.703}$

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

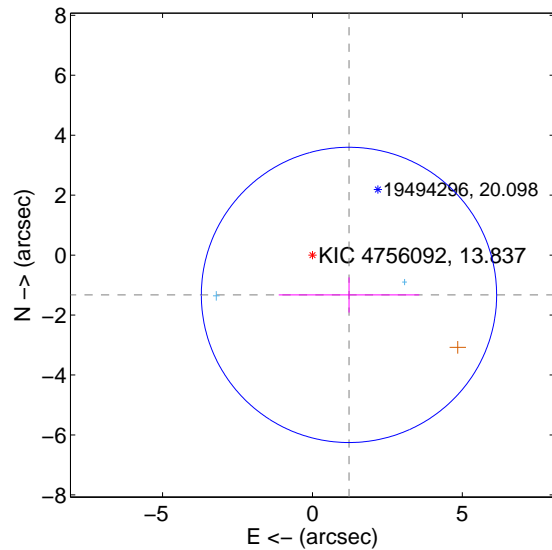
Supplemental centroid analysis for 004756092-01. Kepler magnitude: 13.84. Transit SNR 22.06

There are 2 quarters with good PRF difference image offsets

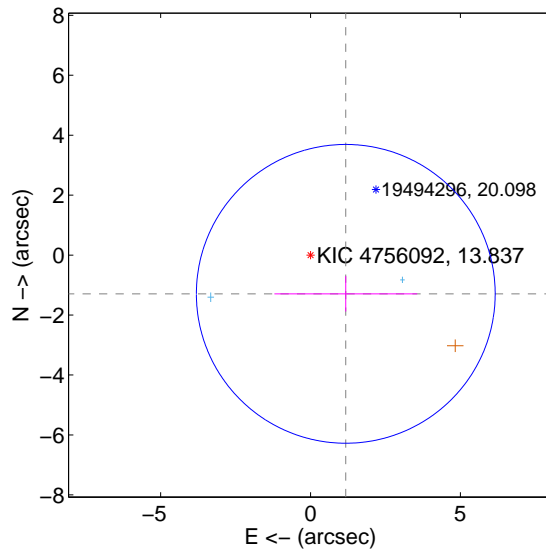
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.803 ± 1.642	1.10	-1.219 ± 2.343	-1.328 ± 0.587
PRF-fit source offset from KIC position	1.748 ± 1.662	1.05	-1.176 ± 2.382	-1.293 ± 0.590
photometric centroid source offset	0.42 ± 0.42	0.98	-0.39 ± 0.42	0.13 ± 0.46

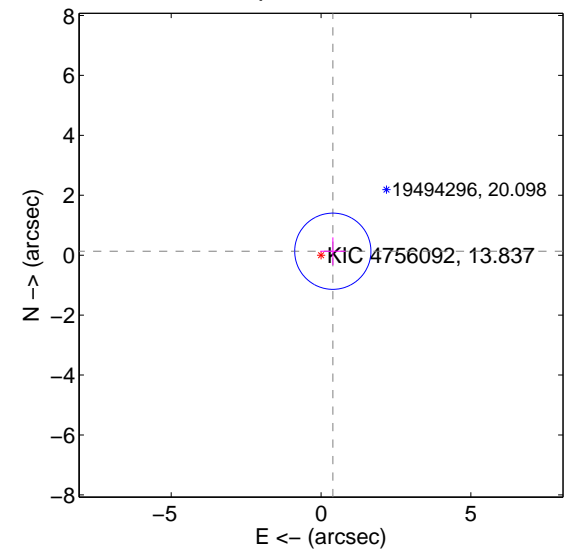
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

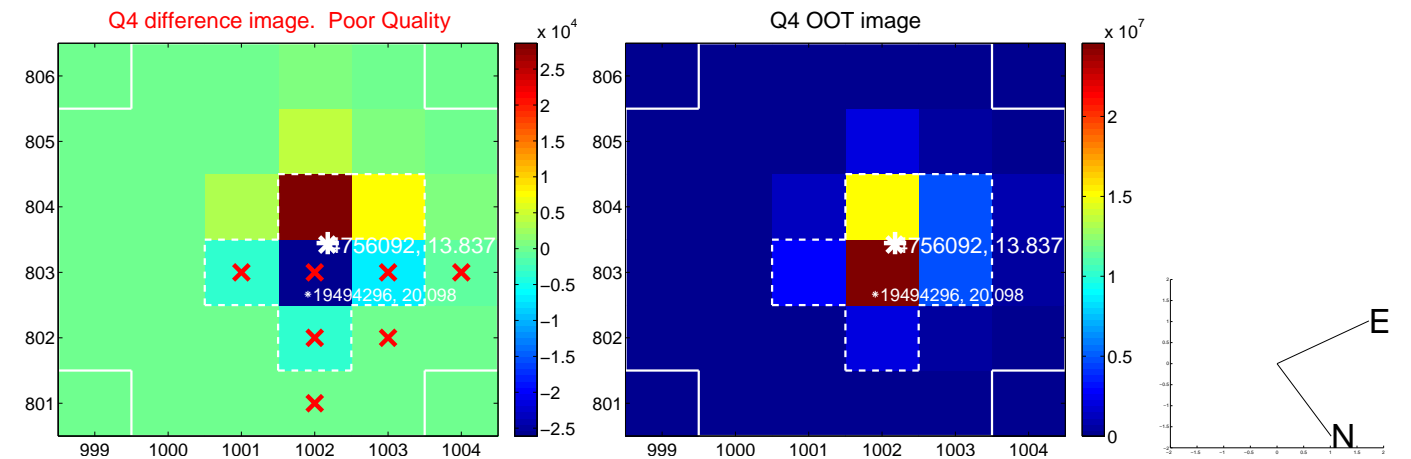
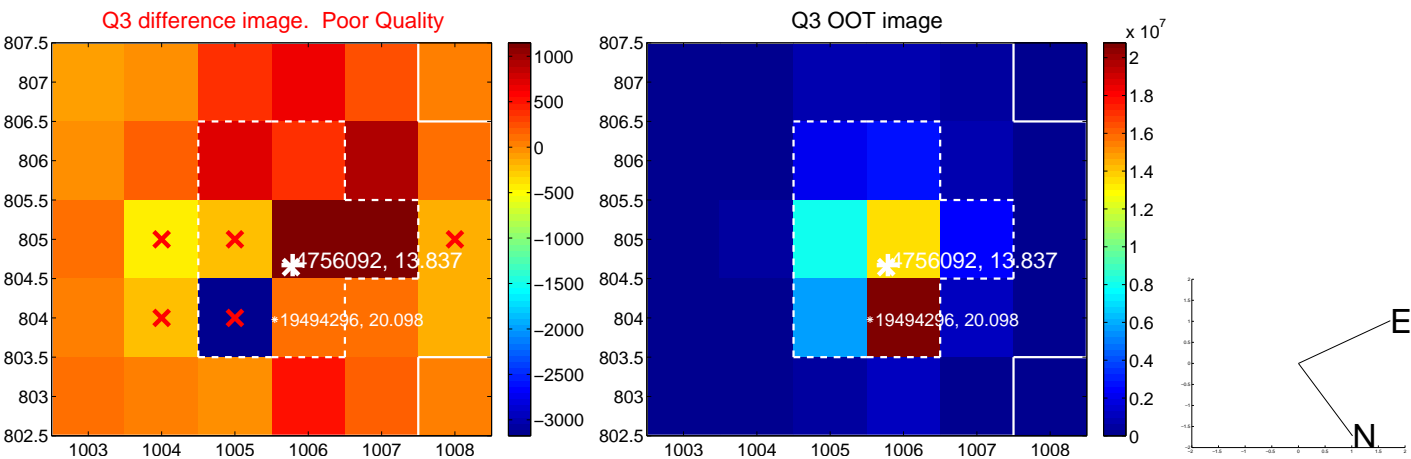
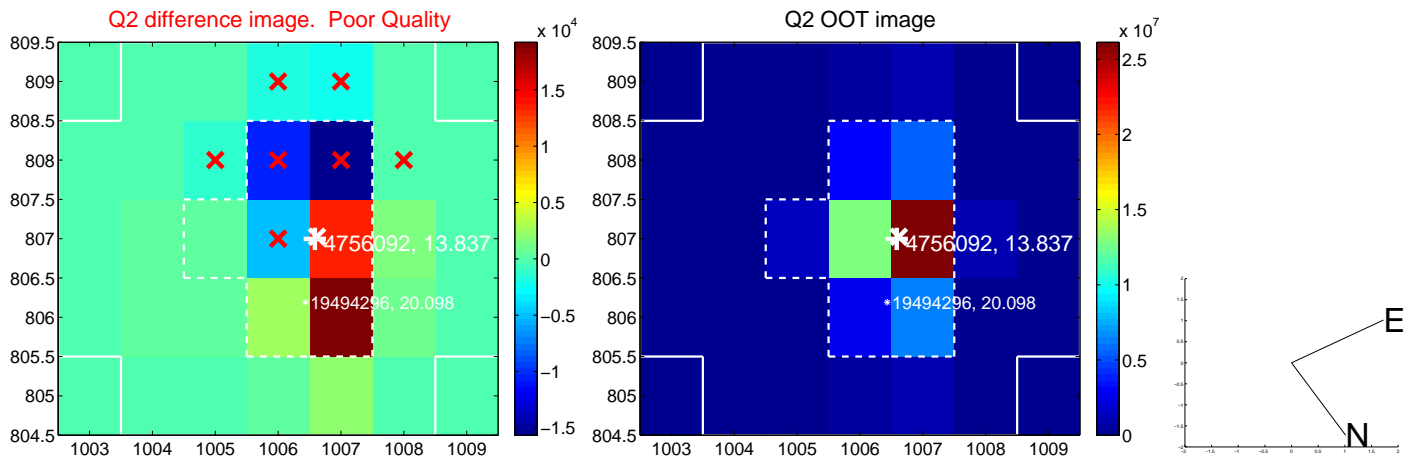
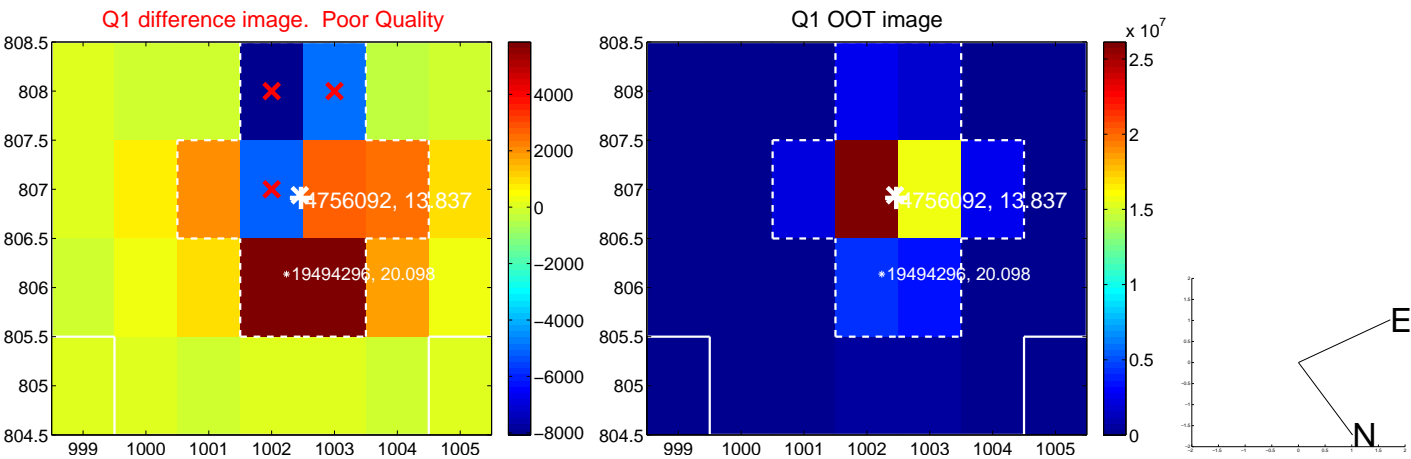


offset from photometric centroids

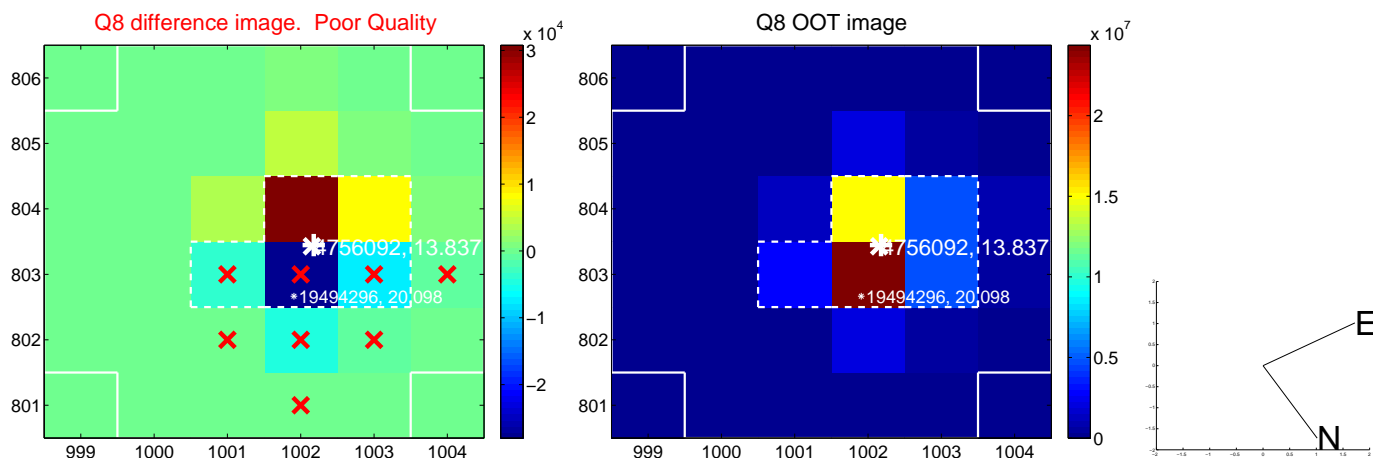
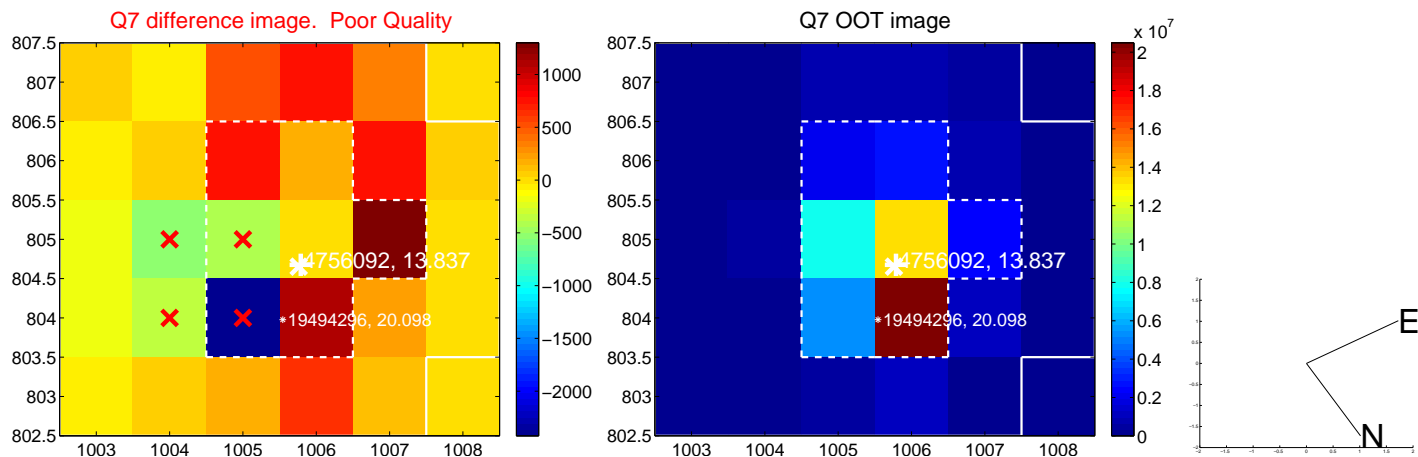
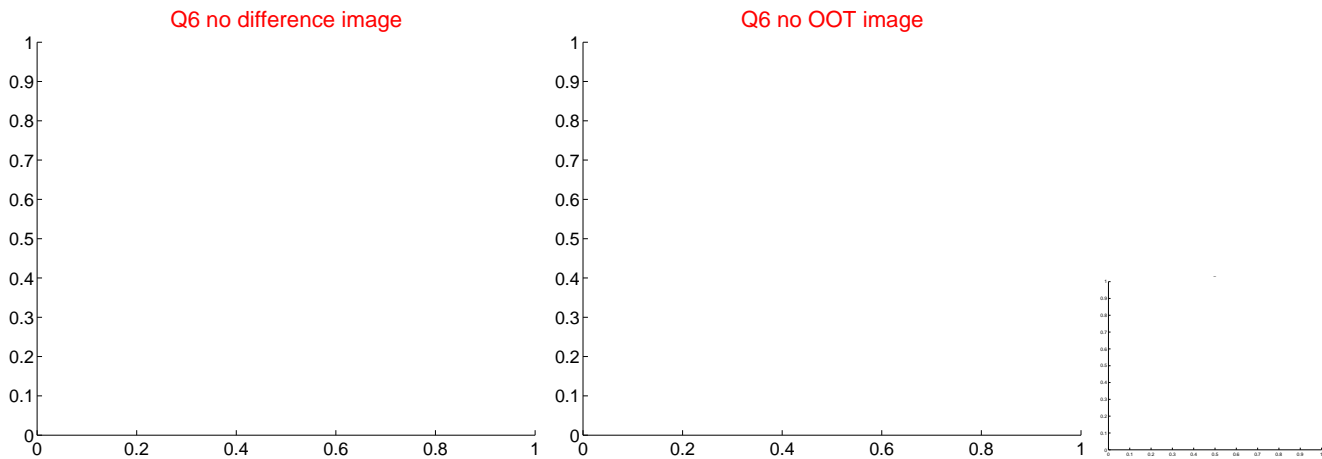
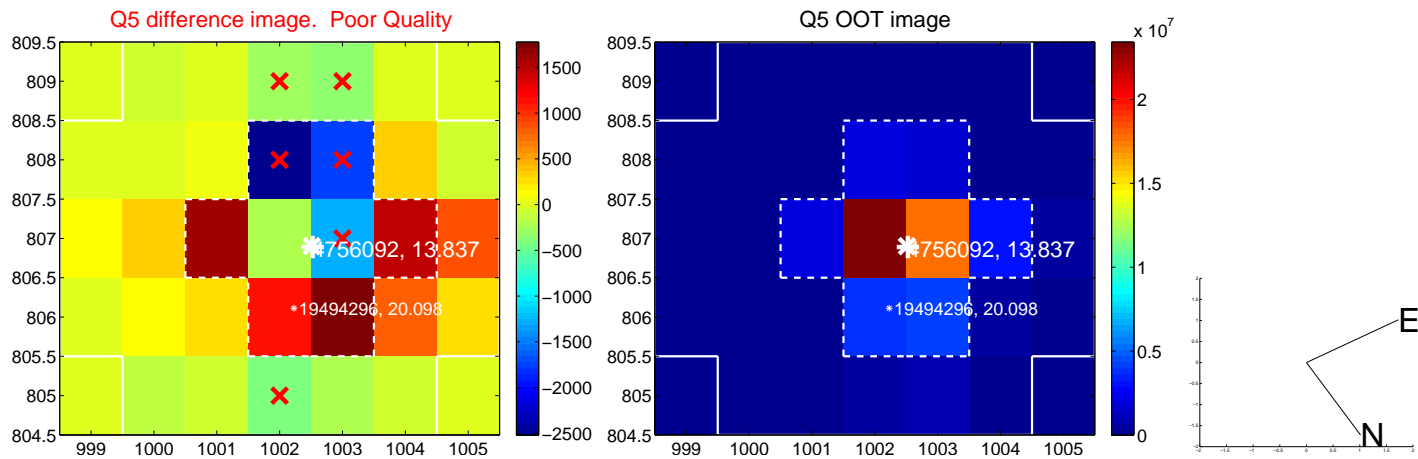


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

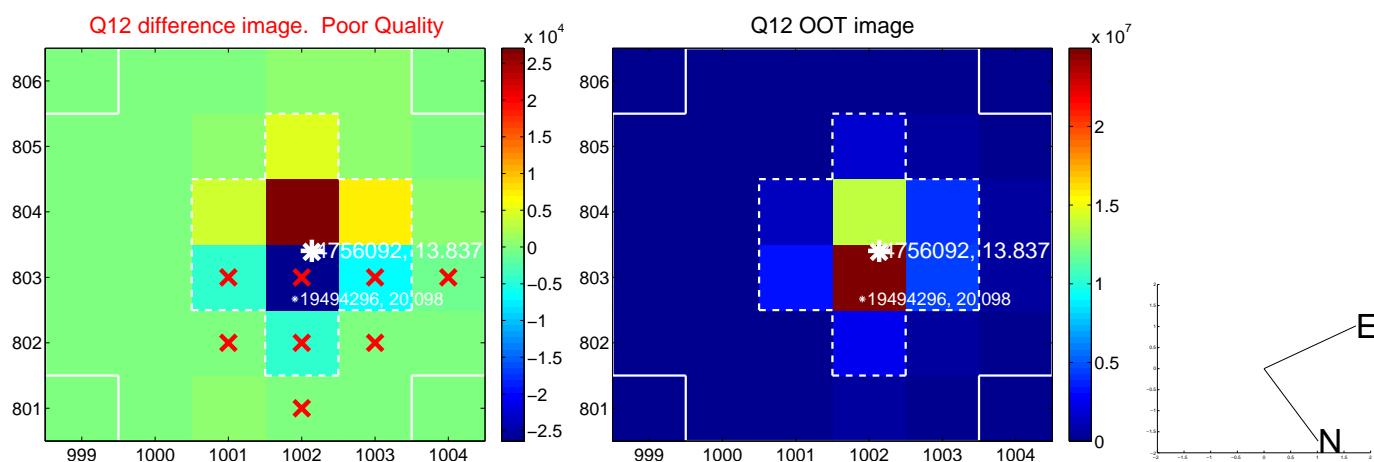
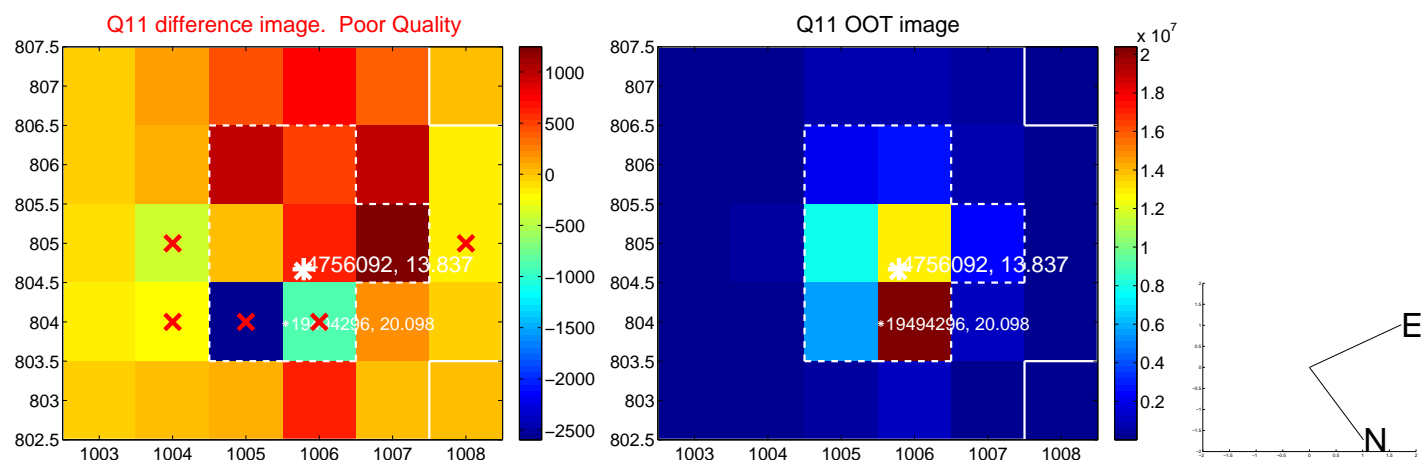
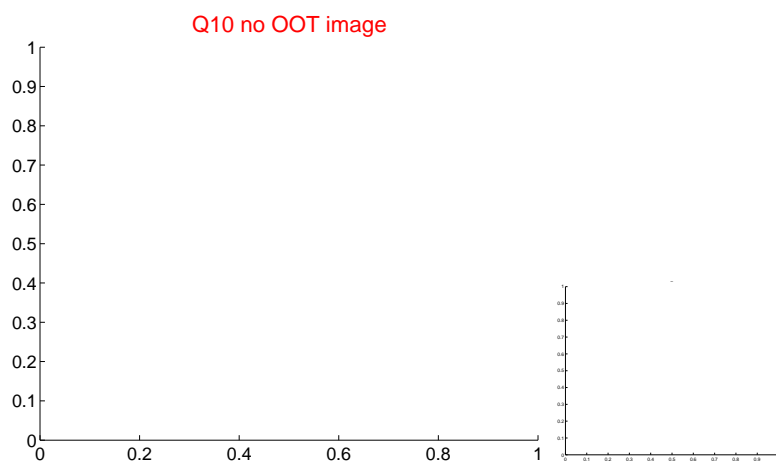
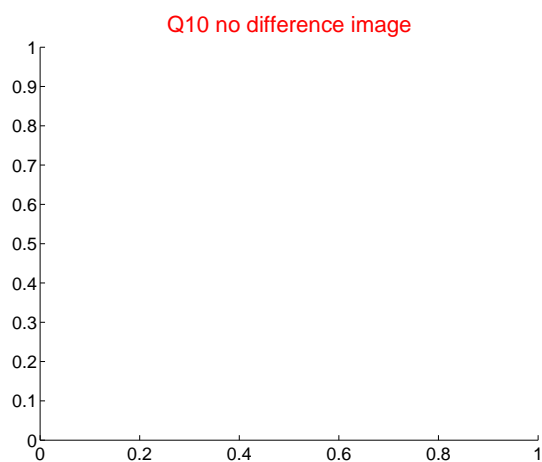
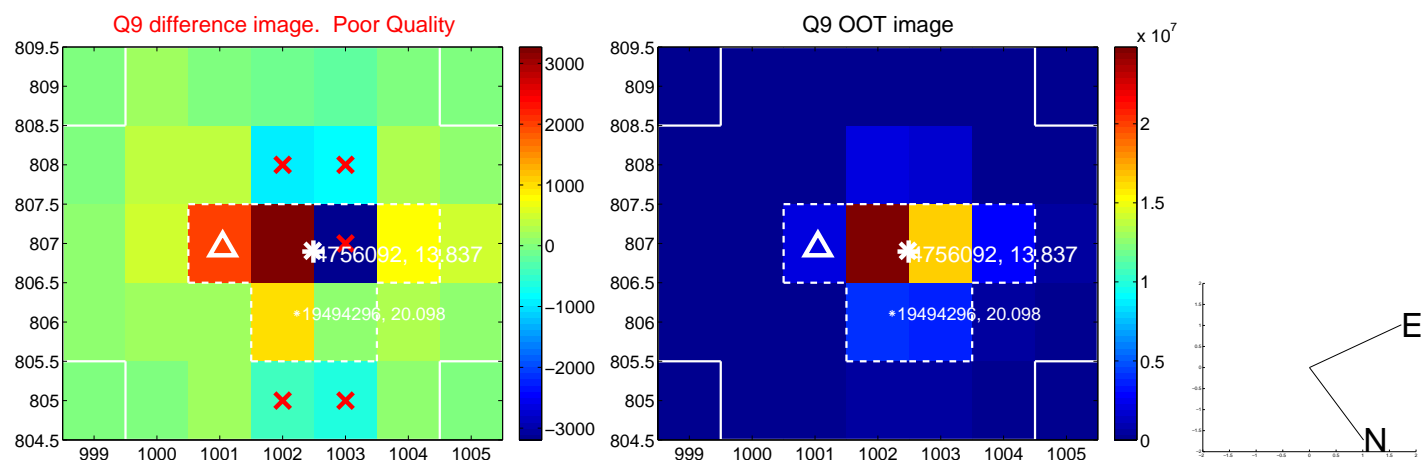
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



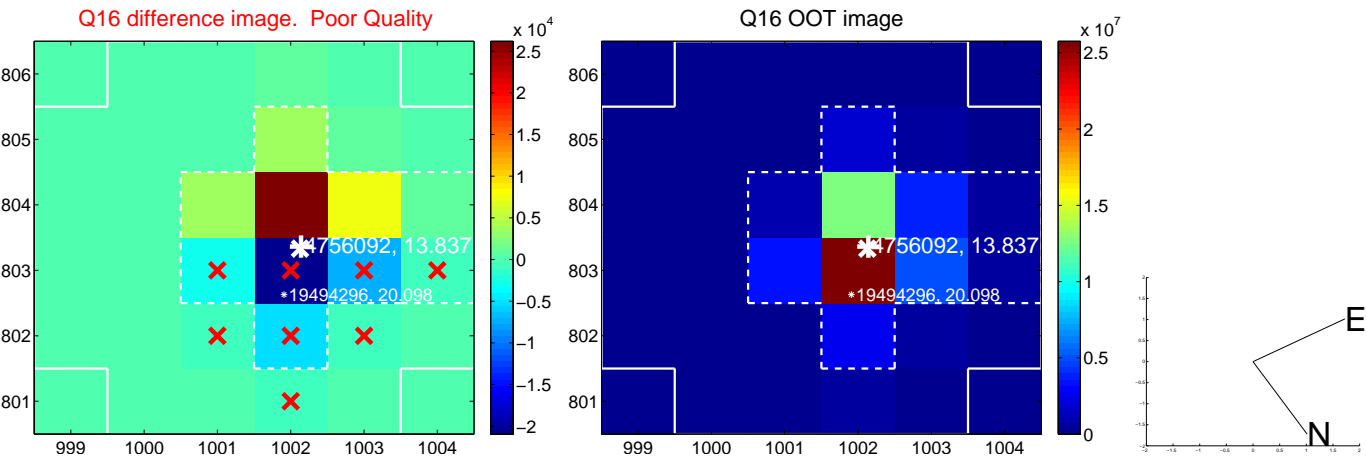
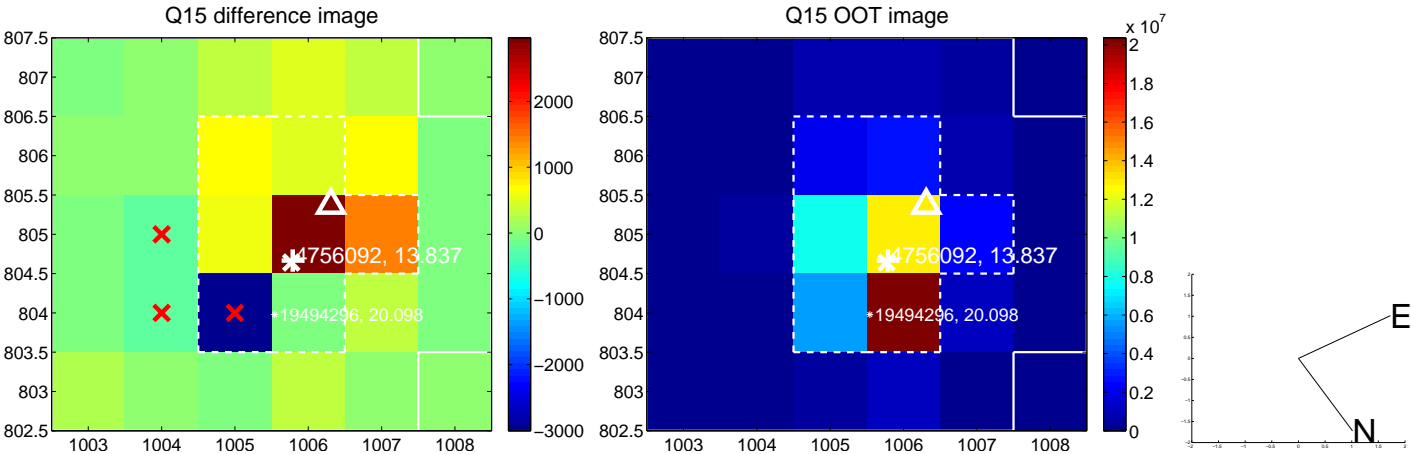
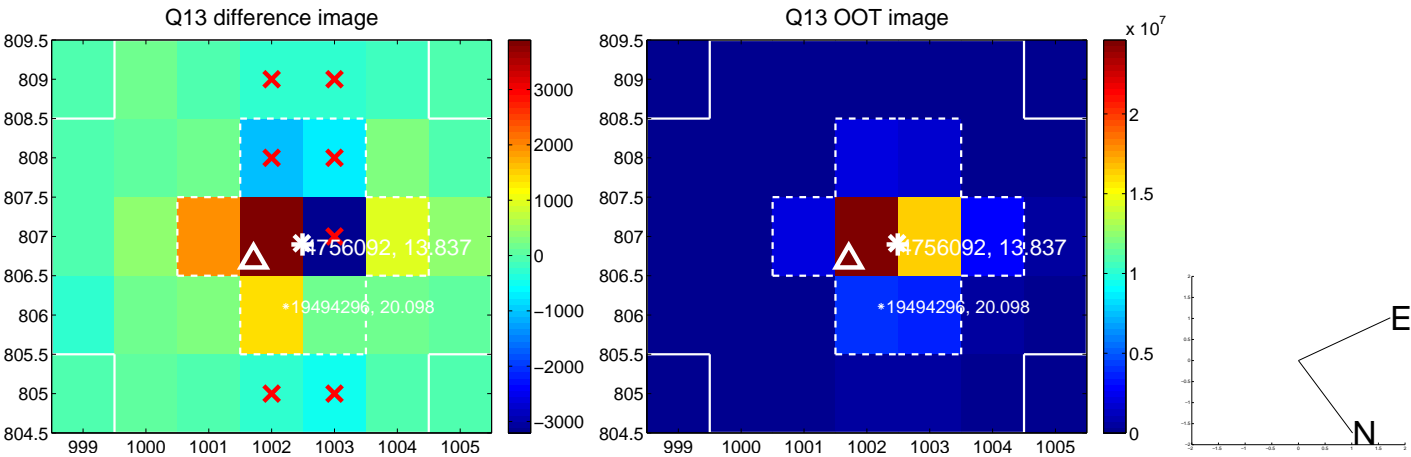
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



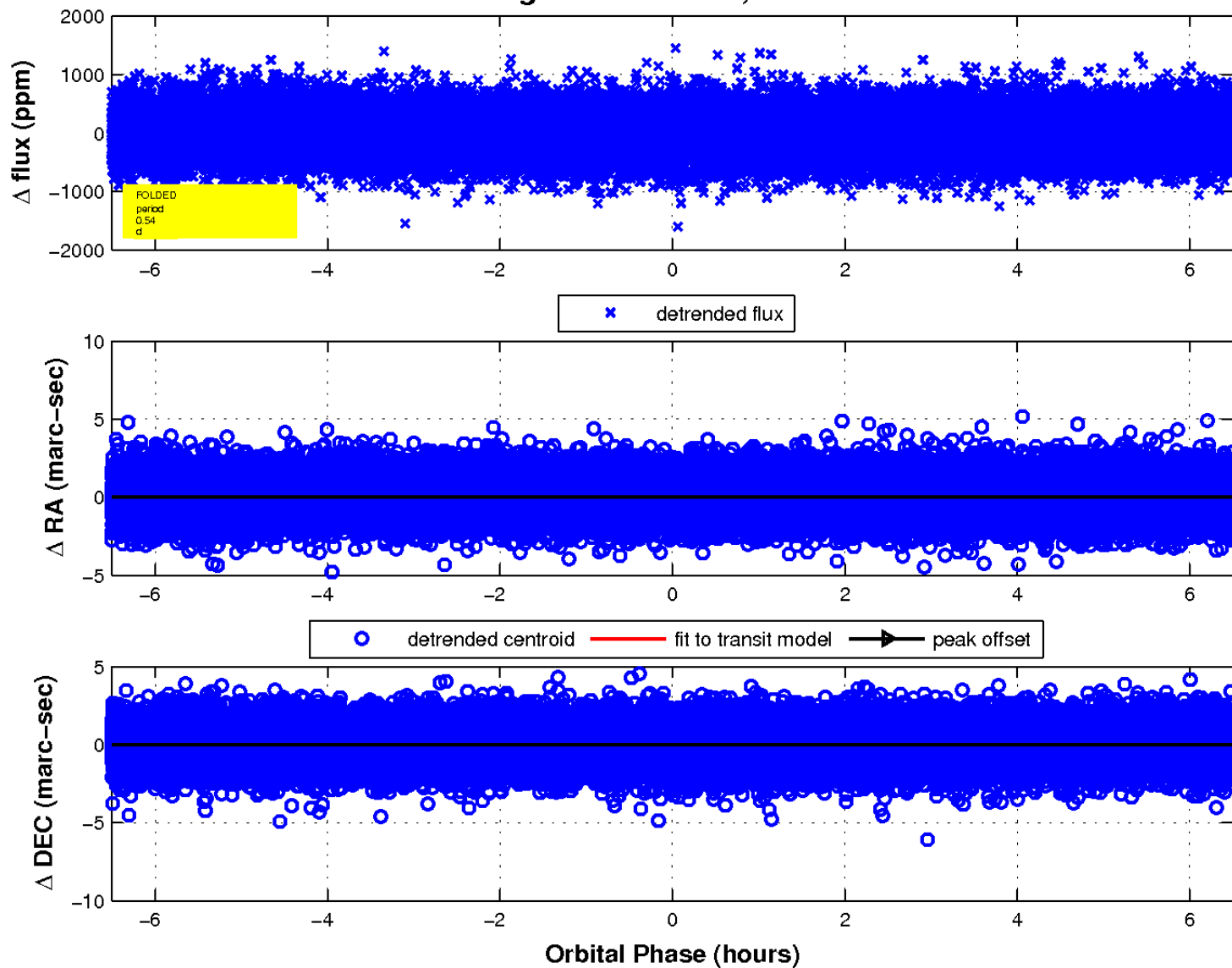
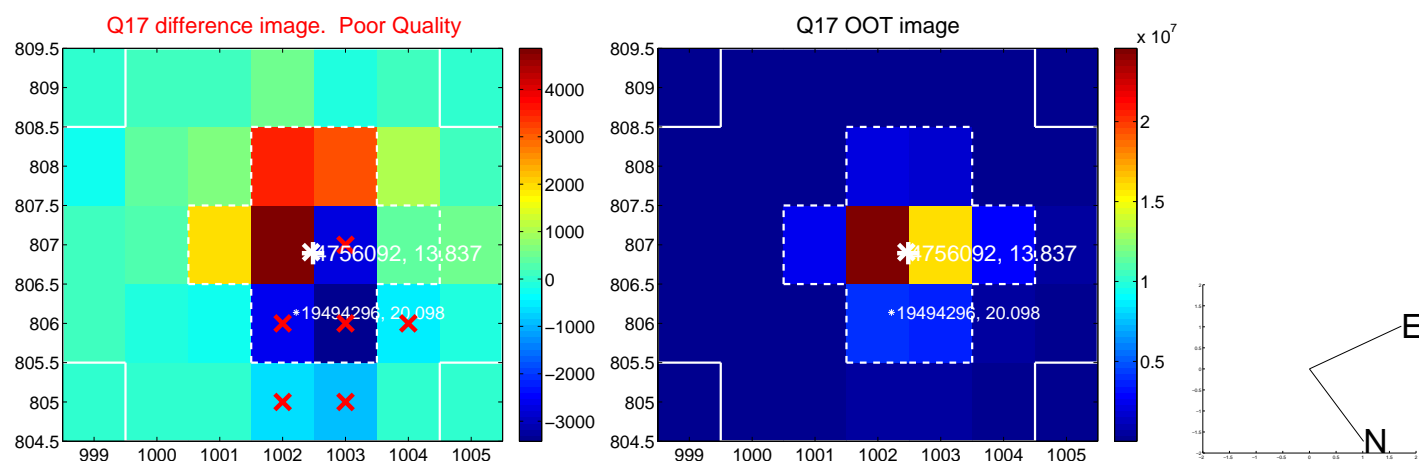
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

