

KIC 008571022

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})
008571022-01	OBS	No	0.790328	132.313252	14.9	7.808	10.1	10.5	2.09	7861	0.82	35840.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008571022-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

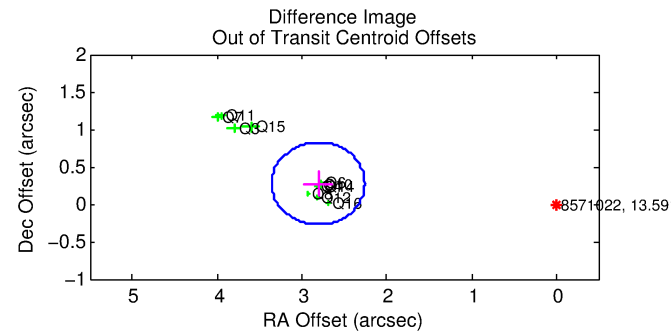
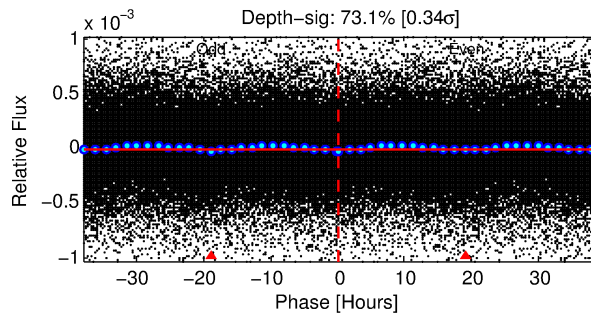
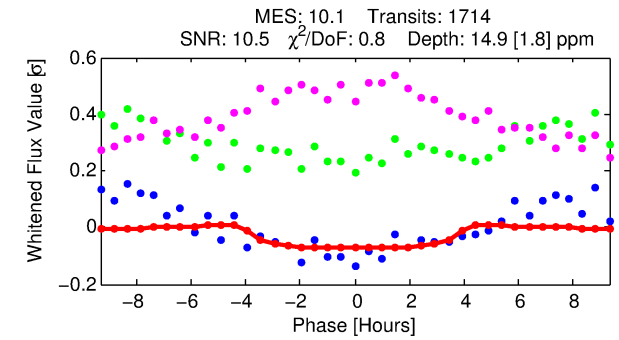
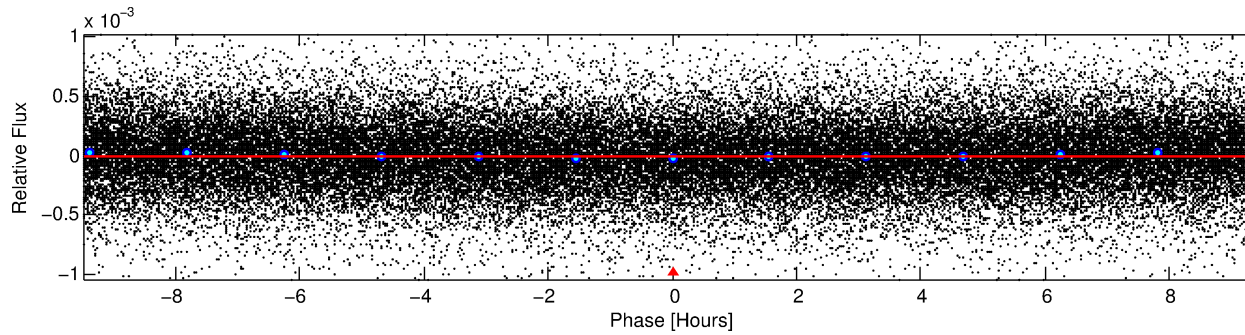
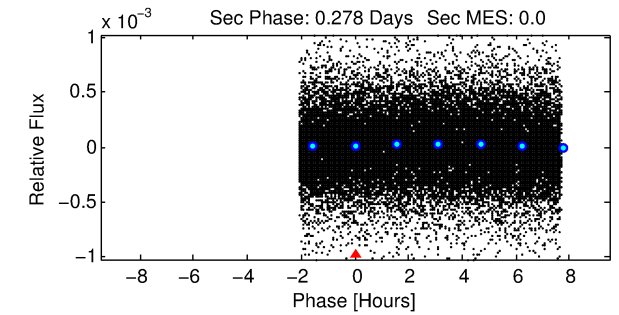
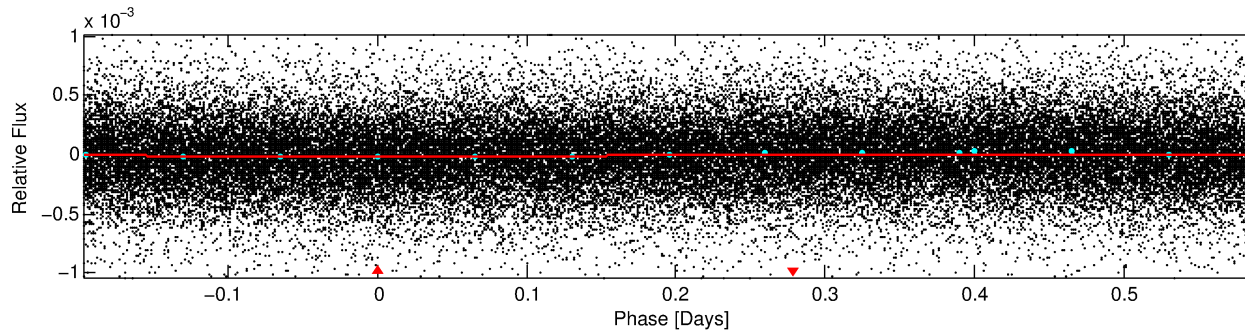
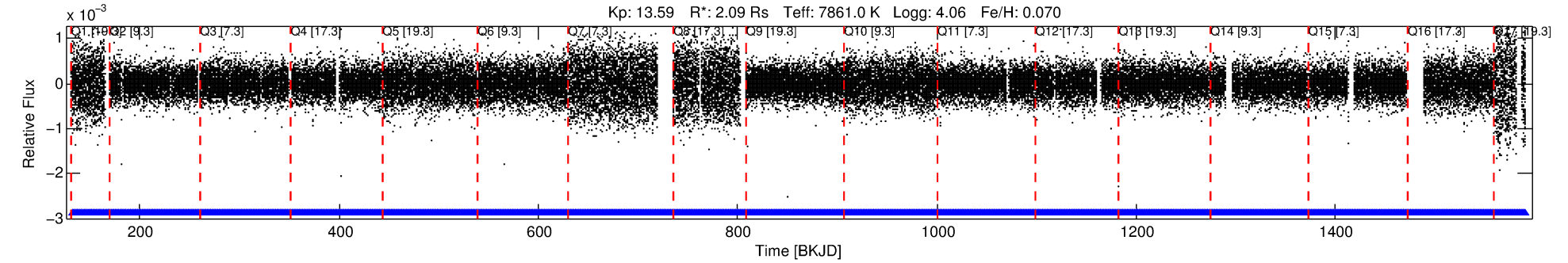
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008571022-01

No Significant Match Found

DV One-Page Summary

KIC: 8571022 Candidate: 1 of 1 Period: 0.790 d



DV Fit Results:

Period = 0.79033 [0.00001] d
Epoch = 132.3133 [0.0083] BKJD
Rp/R* = 0.0036 [0.0043]
a/R* = 1.04 [0.59]
b = 0.03 [235.48]
Seff = 35840.98 [12034.73]
Teq = 3508 [295] K
Rp = 0.82 [1.00] Re
a = 0.0205 [0.0041] AU
Ag = N/A
Teffp = N/A

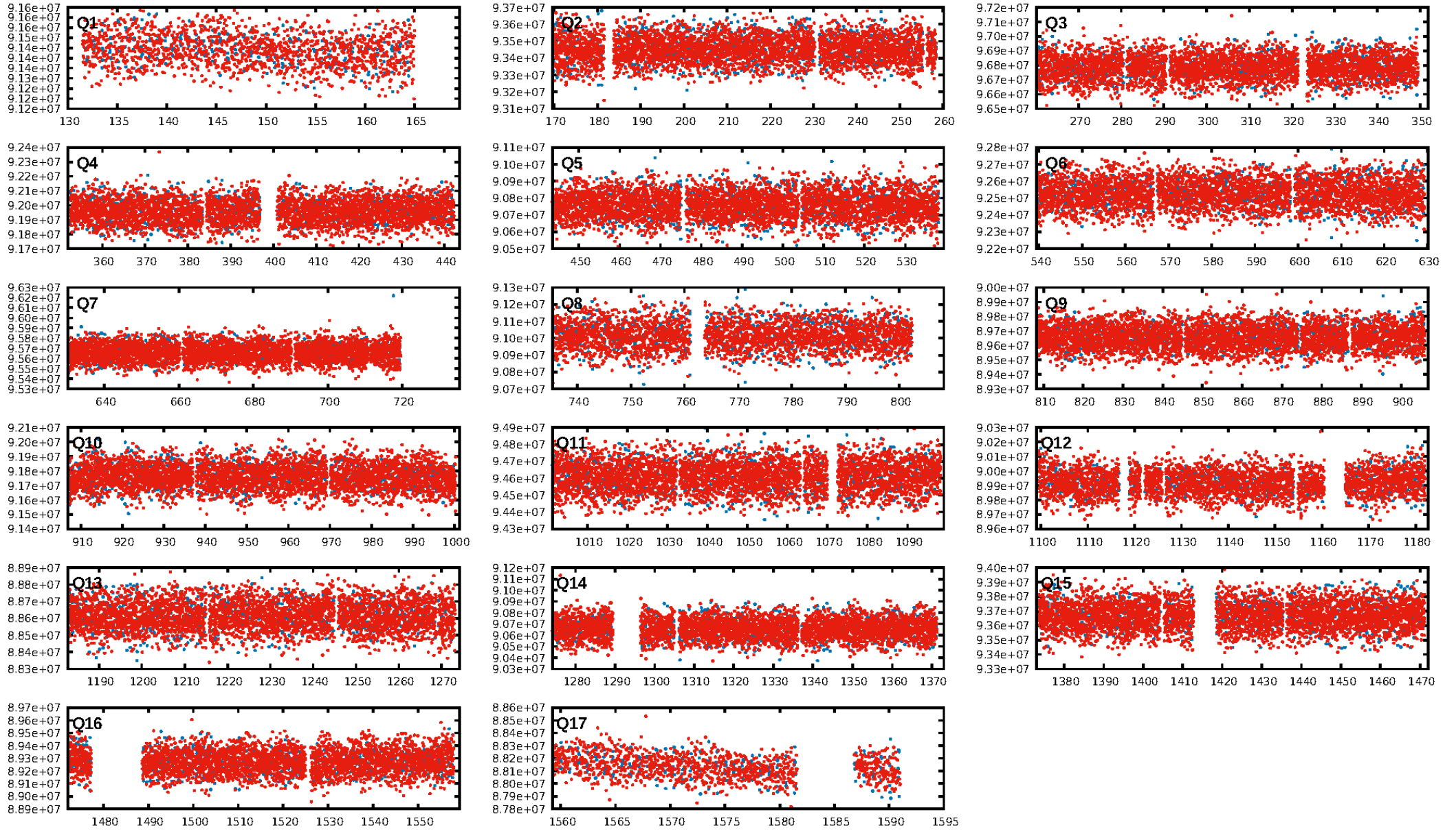
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1638/1638]
GhostDiagnostic-chr: 3.805
Centroid-sig: 5.6%
Centroid-so: 2.576 arcsec [2.16σ]
OotOffset-rm: 2.819 arcsec [15.39σ]
KicOffset-rm: 2.672 arcsec [15.52σ]
OotOffset-st: 3/4/4/0 [11]
KicOffset-st: 3/4/4/0 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 1.00 [17/17]

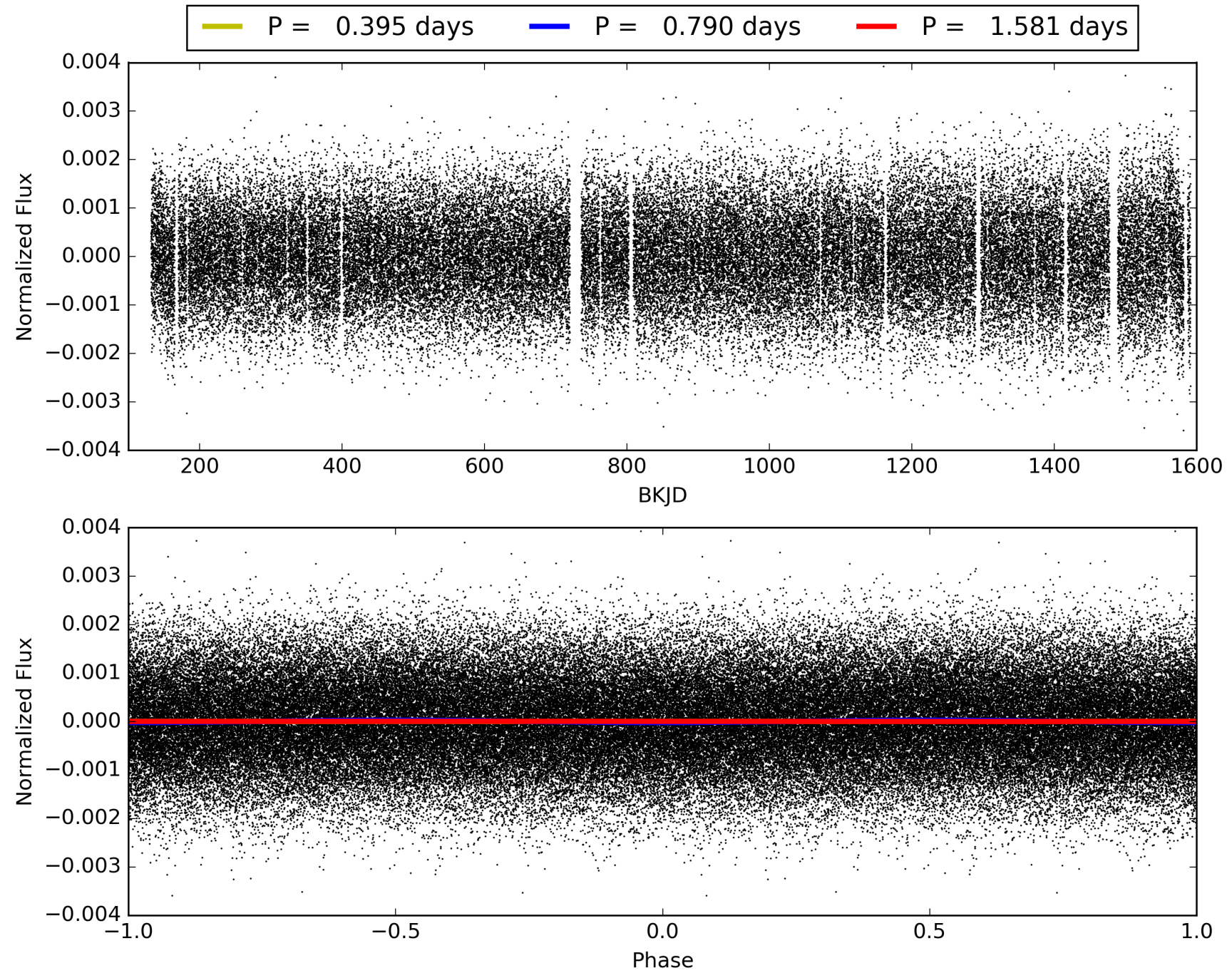
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:30:22 Z

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

TCE 008571022-01, PDC Light Curves

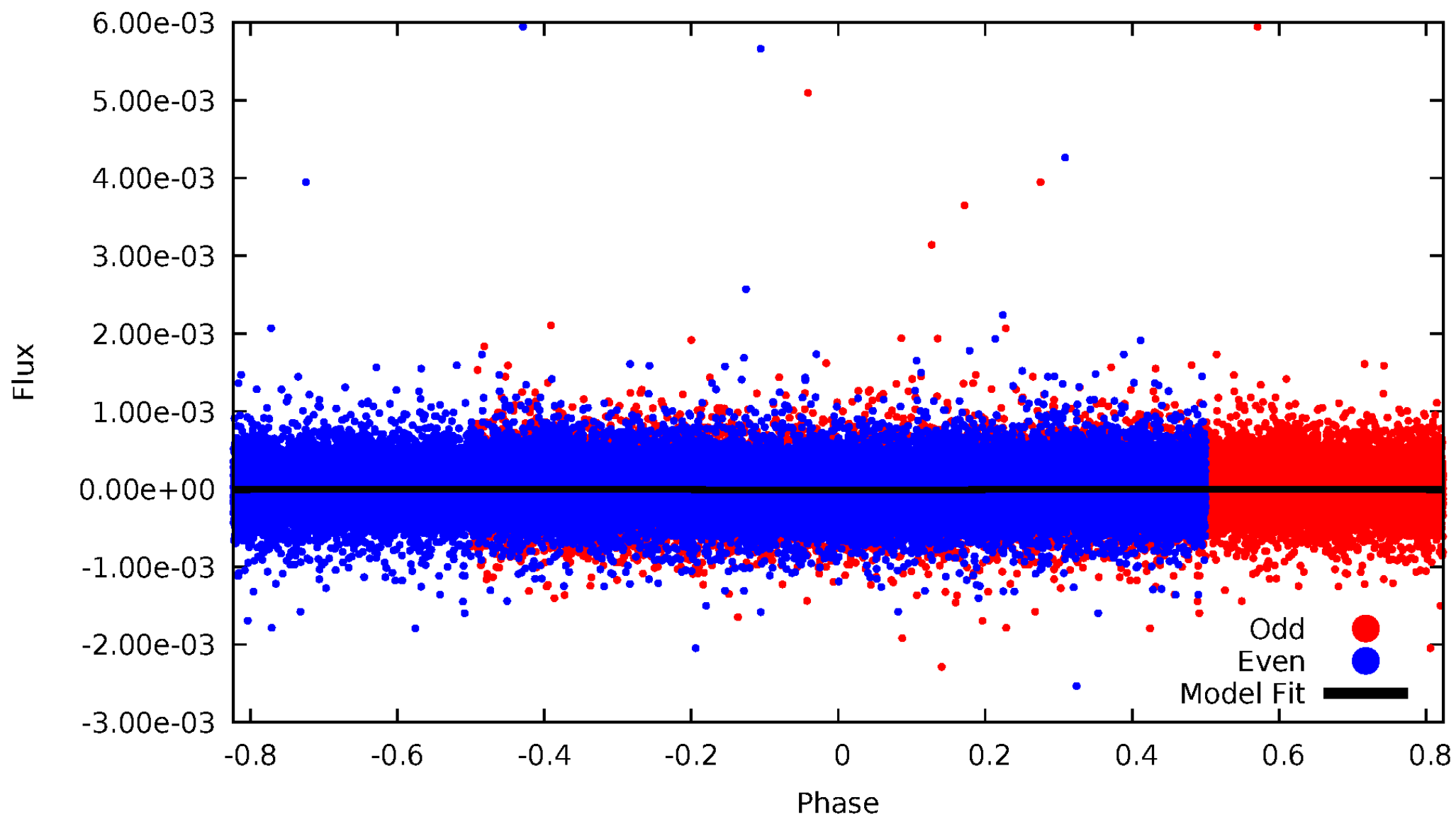


TCE 008571022-01



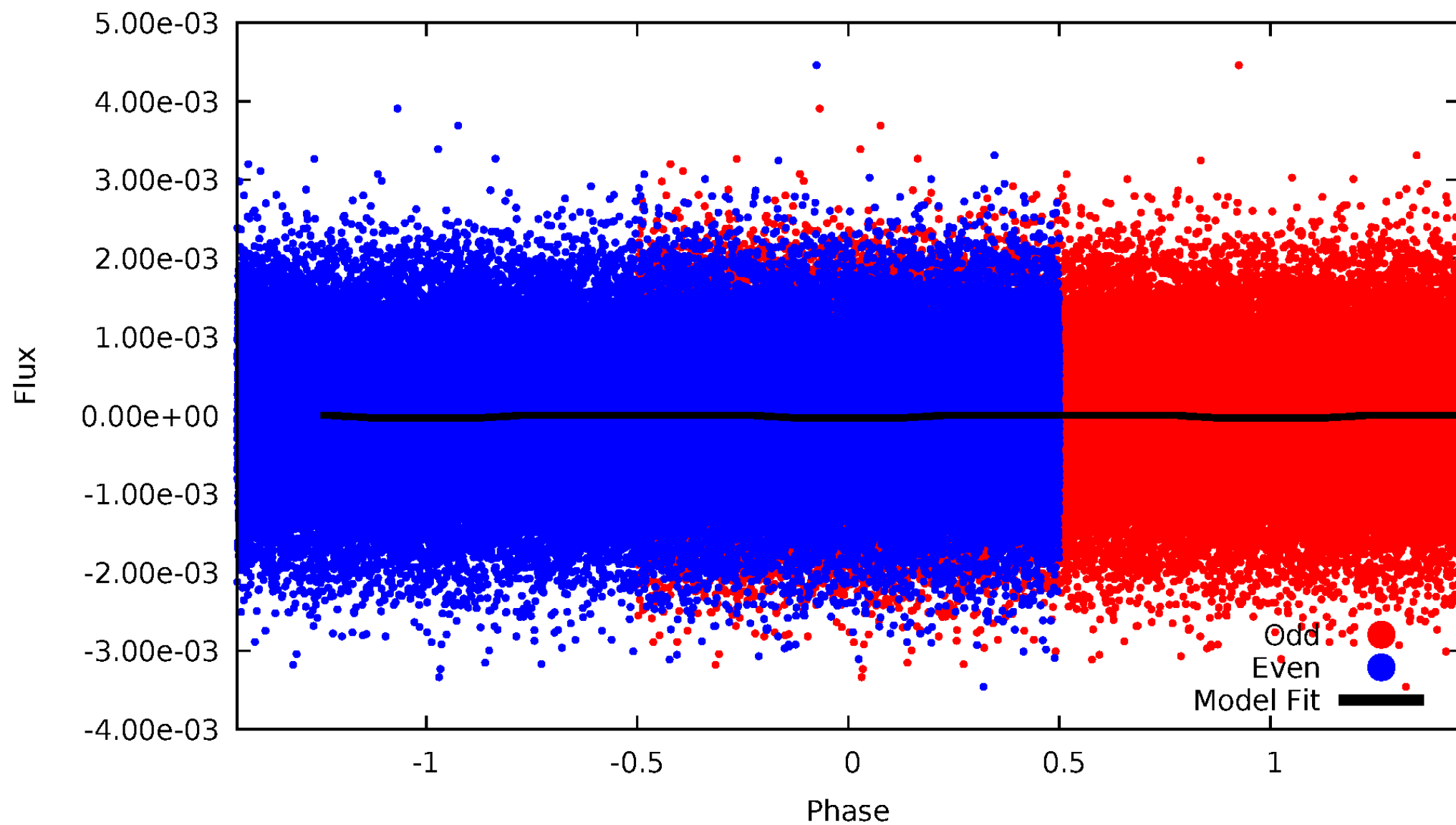
DV Odd/Even

TCE 008571022-01



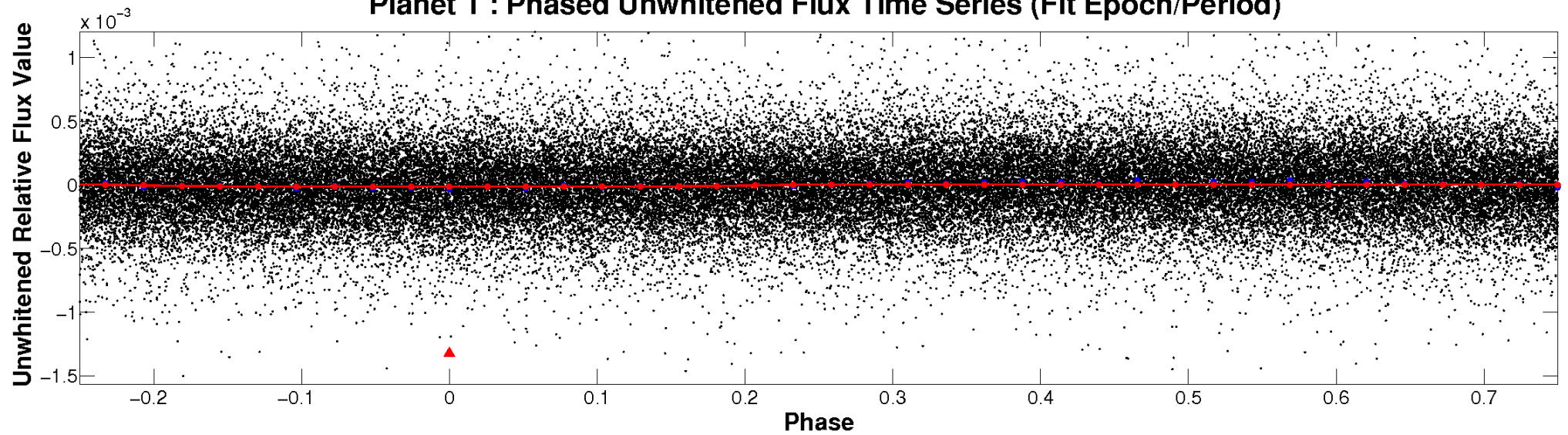
ALT Odd/Even

TCE 008571022-01

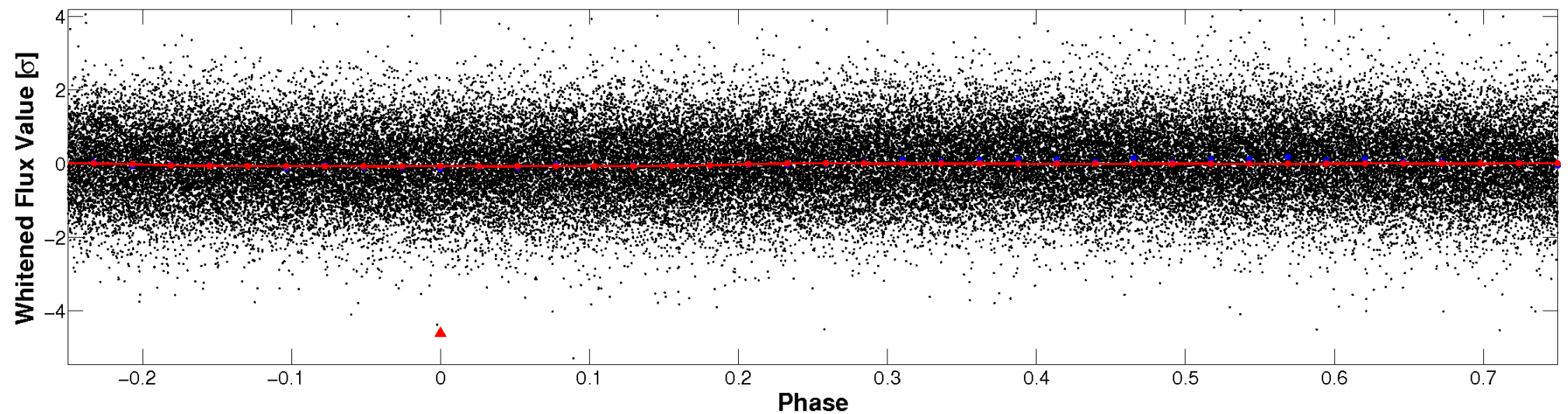


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

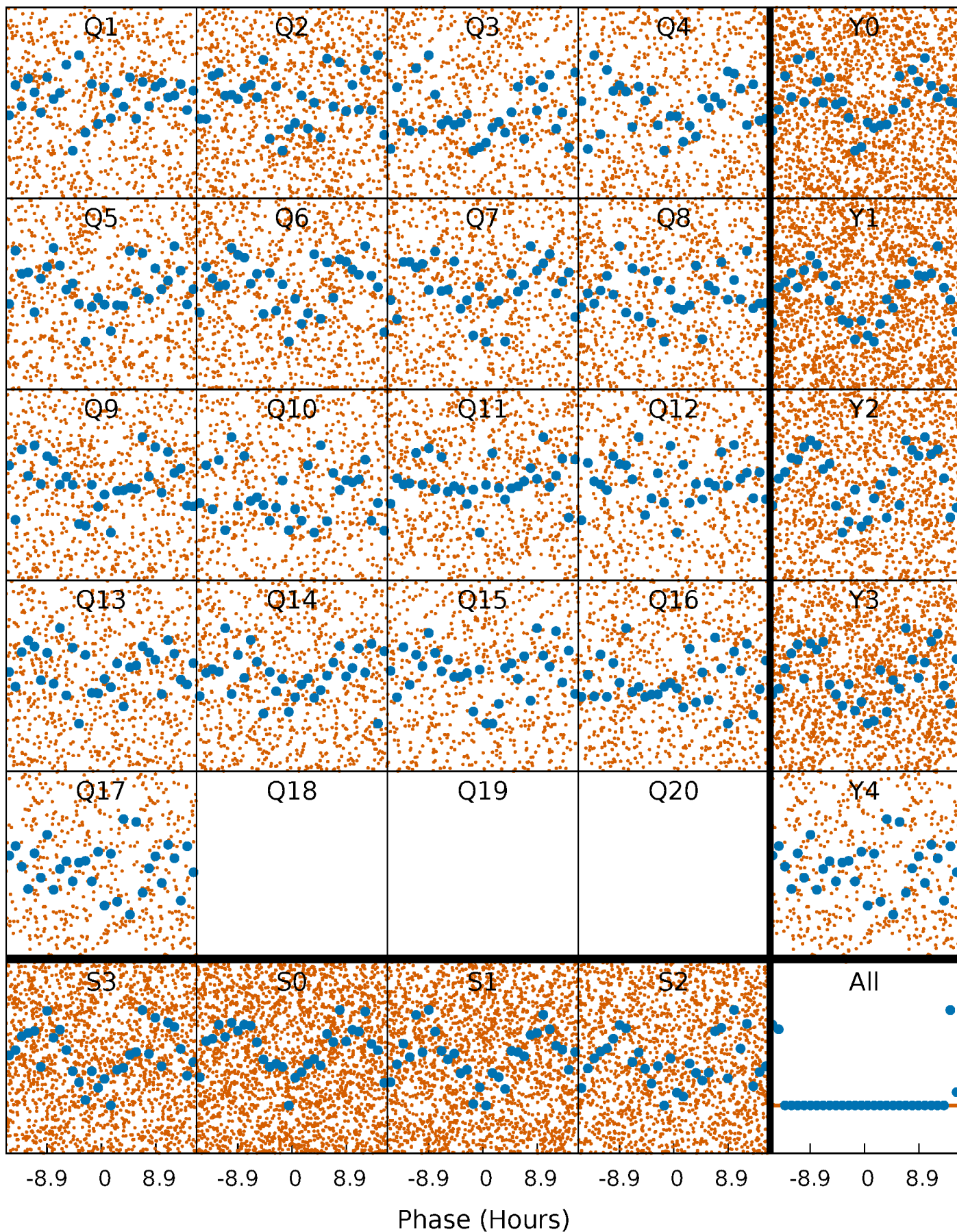


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



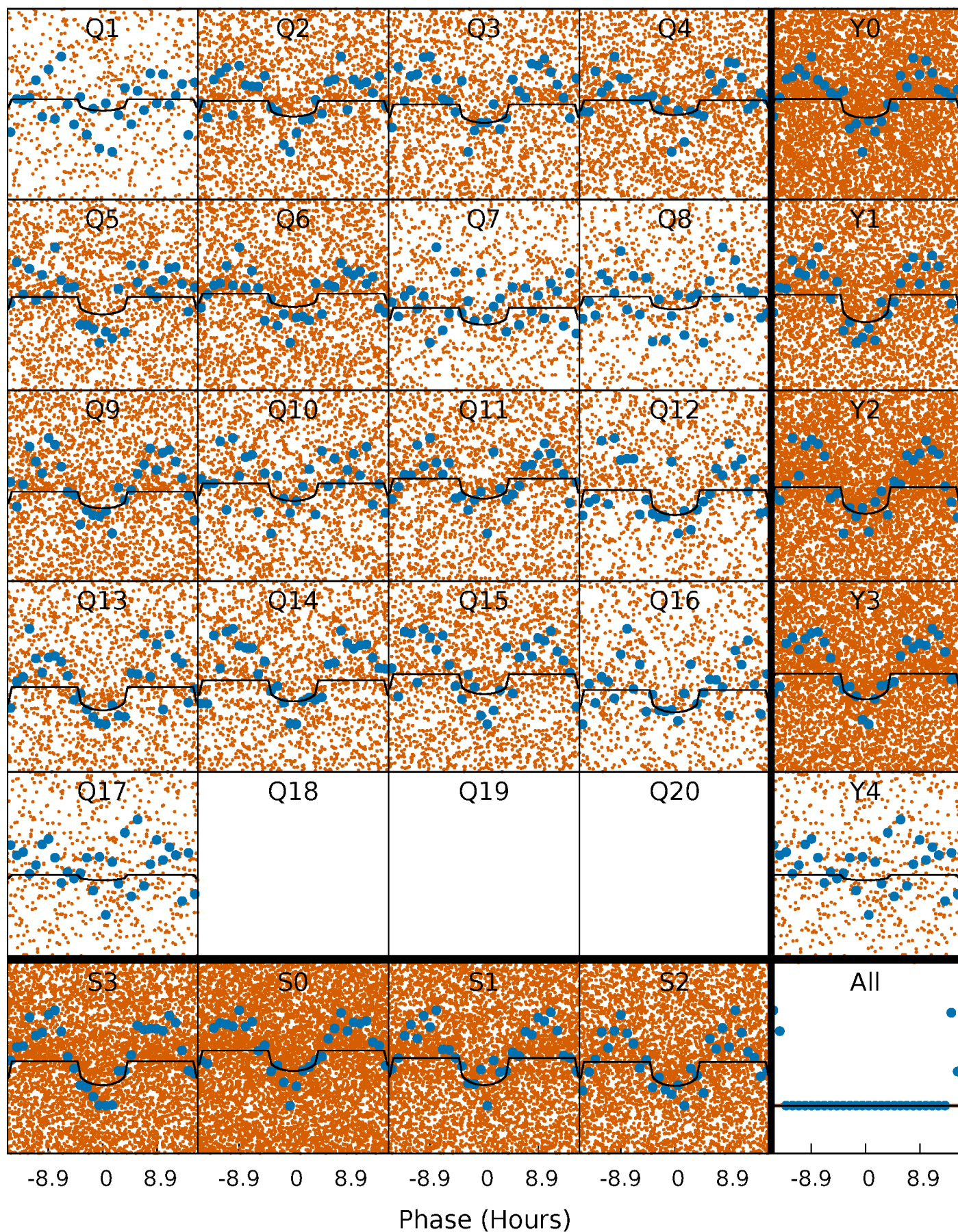
PDC Quarter-Phased Transit Curves

TCE 008571022-01 P= 0.790328 Days $T_0=132.313252$ (BKJD)



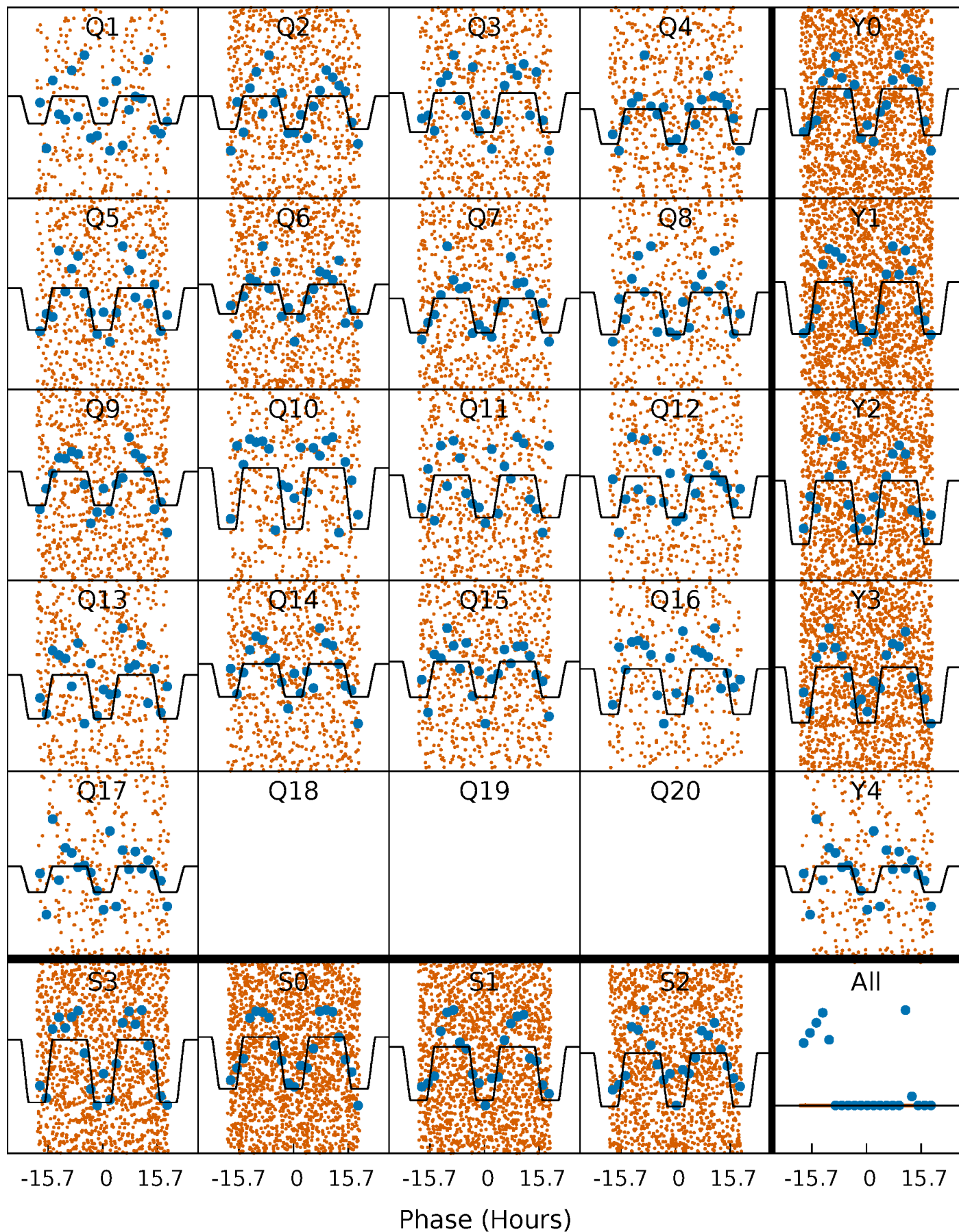
DV Quarter-Phased Transit Curves

TCE 008571022-01 P= 0.790328 Days $T_0=132.313252$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

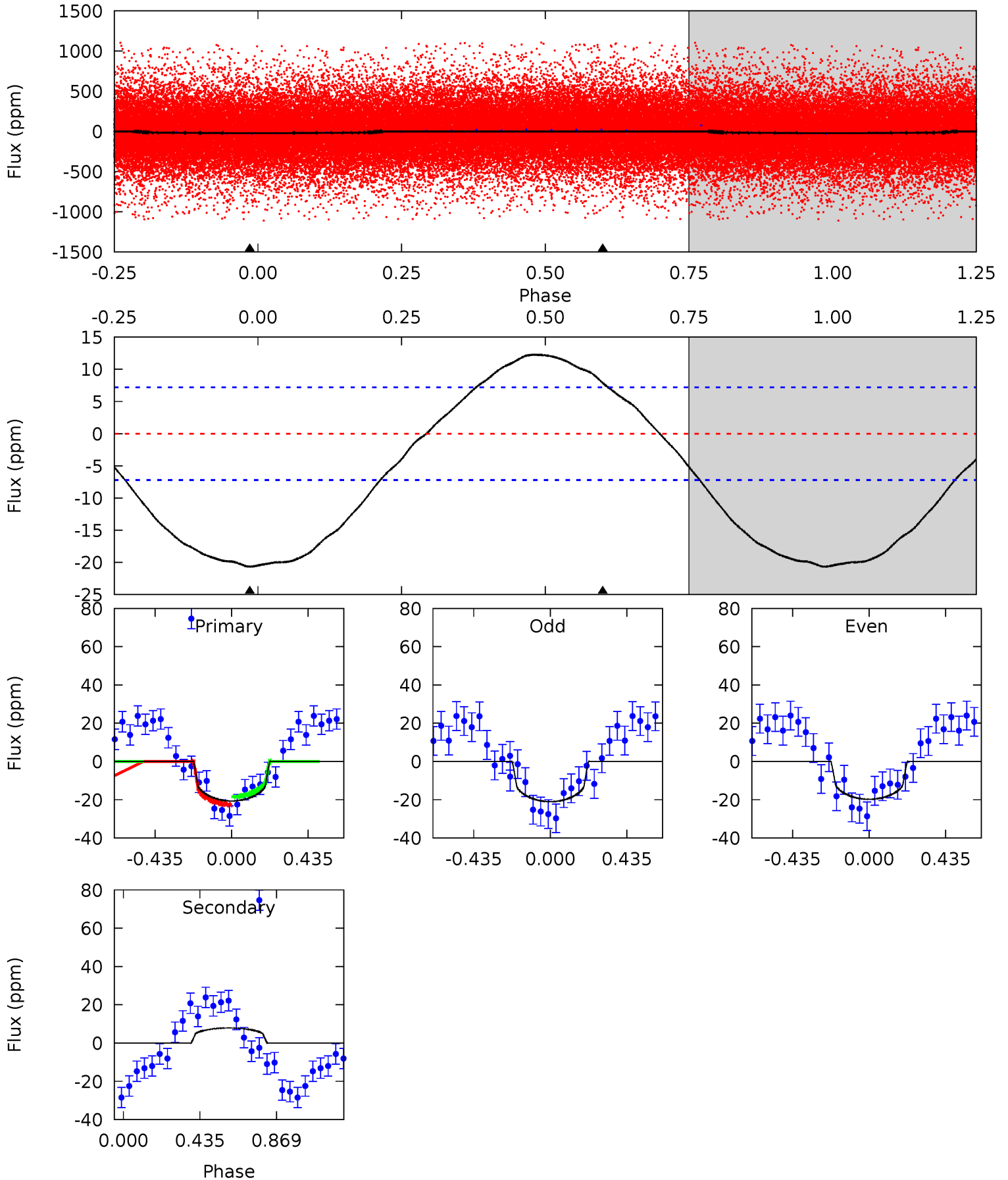
TCE 008571022-01 P= 0.790373 Days $T_0=132.275556$ (BKJD)



DV Model-Shift Uniqueness Test

008571022-01, P = 0.790328 Days, E = 130.732596 Days

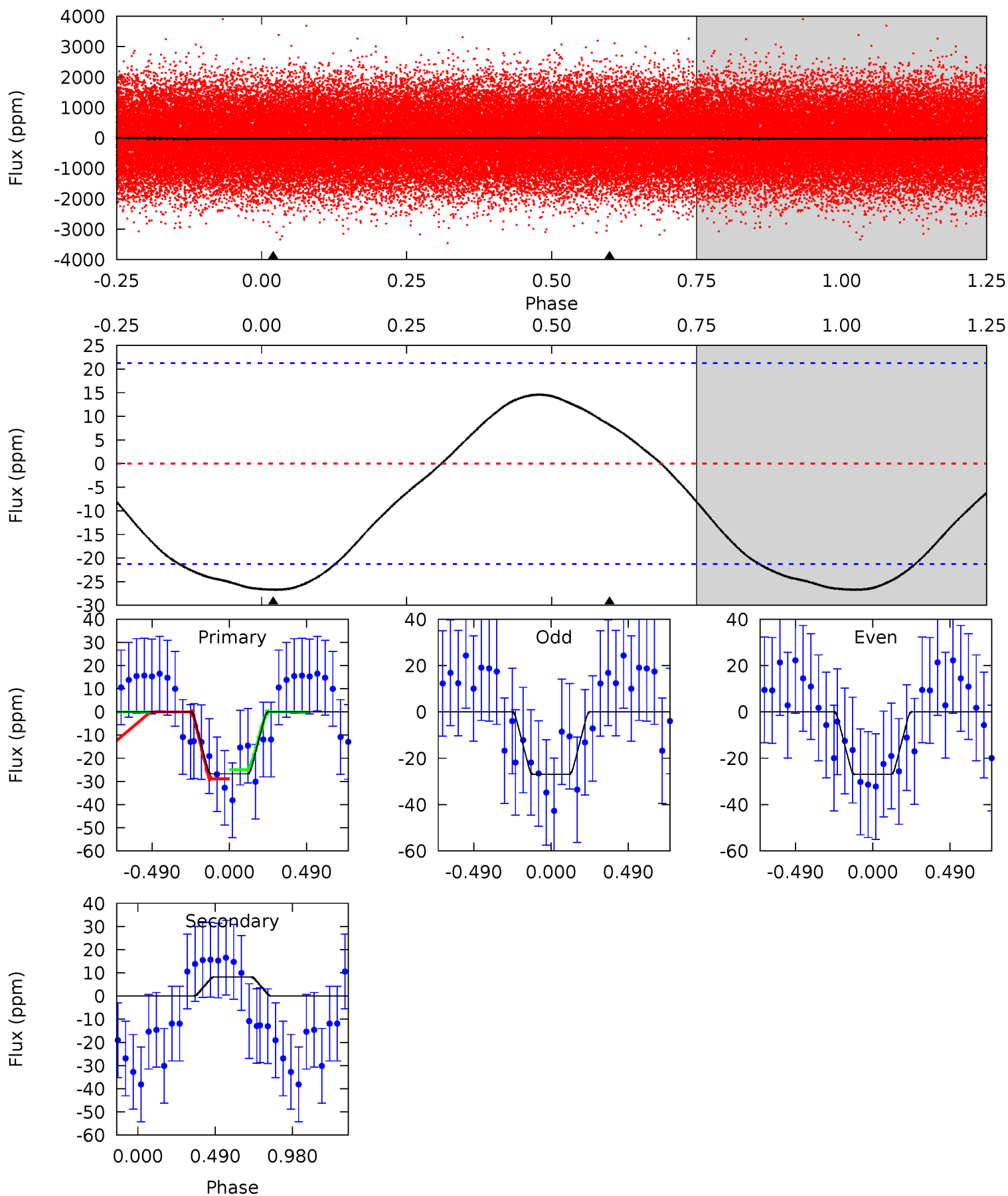
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	-4.65	0	0	4.25	0.78	1.48	12.2	12.2	-4.65	-4.65	0.37	0.92	0.37	1.23



Alt Model-Shift Uniqueness Test

008571022-01, P = 0.790373 Days, E = 131.485183 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.30	-1.62	0	0	4.22	0.69	0.64	5.30	5.30	-1.62	-1.62	0.01	1.00	0.35	0.39



Stellar Parameters For KIC 008571022

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7861^{+216}_{-351}	$4.058^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.400}$	$2.094^{+0.477}_{-0.524}$	$1.829^{+0.138}_{-0.321}$	$0.281^{+0.229}_{-0.127}$
	+3%/-4%	+4%/-4%	+214%/-571%	+23%/-25%	+8%/-18%	+82%/-45%
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 008571022-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	8 ± 2	$1.11^{+0.94}_{-0.73}$	4915^{+324}_{-339}	-6106^{+1109}_{-5255}	$-1.392^{+0.983}_{-11.354}$
Alt.	8 ± 5	$1.35^{+1.02}_{-0.79}$	4902^{+321}_{-357}	-5534^{+840}_{-2933}	$-0.912^{+0.682}_{-5.118}$

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

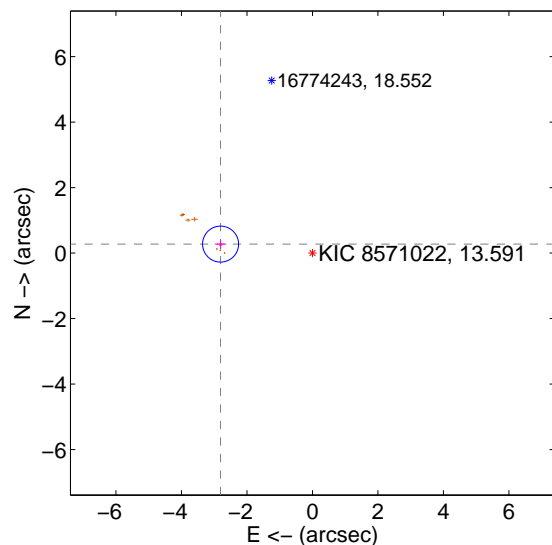
Supplemental centroid analysis for 008571022-01. Kepler magnitude: 13.59. Transit SNR 10.45

There are 0 quarters with good PRF difference image offsets

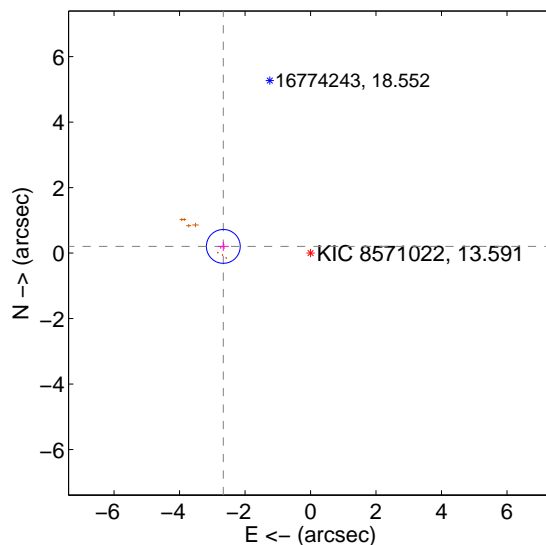
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.819 \pm 0.183	15.39	2.806 \pm 0.172	0.275 \pm 0.154
PRF-fit source offset from KIC position	2.672 \pm 0.172	15.52	2.664 \pm 0.165	0.205 \pm 0.138
photometric centroid source offset	2.58 \pm 1.19	2.16	-2.49 \pm 1.21	-0.65 \pm 0.94

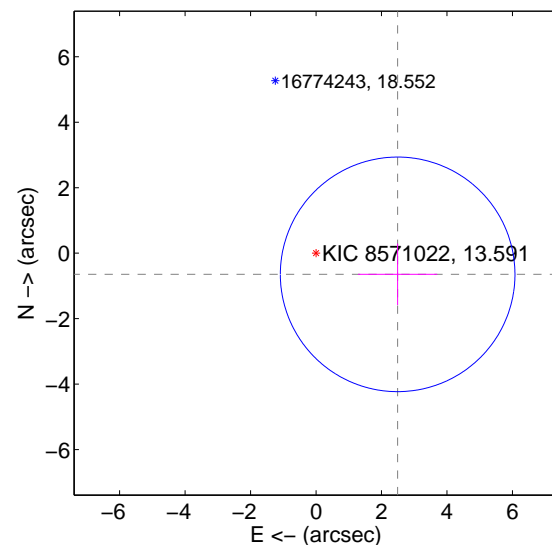
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

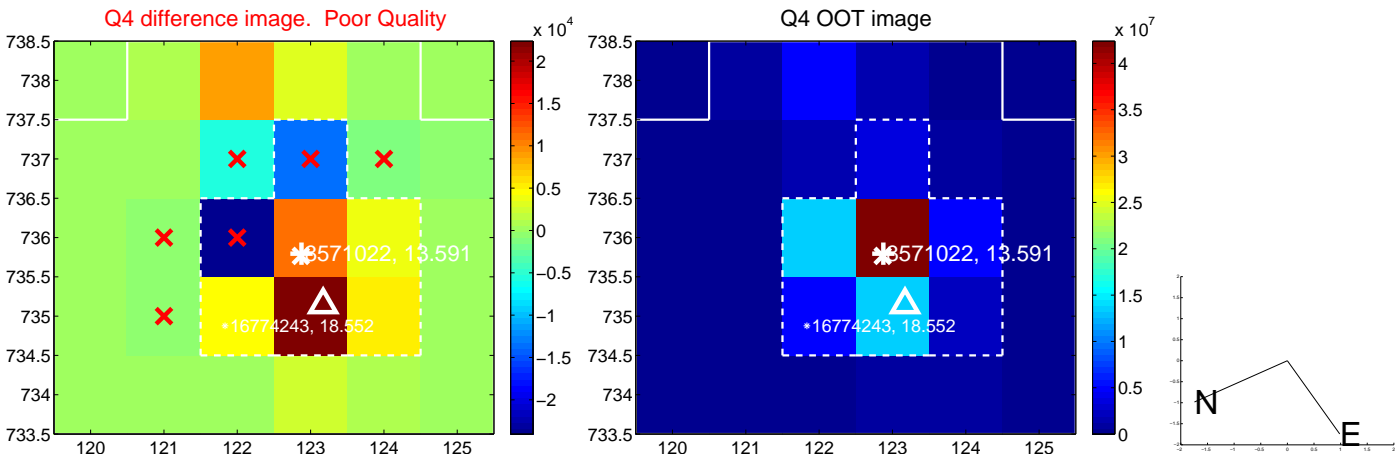
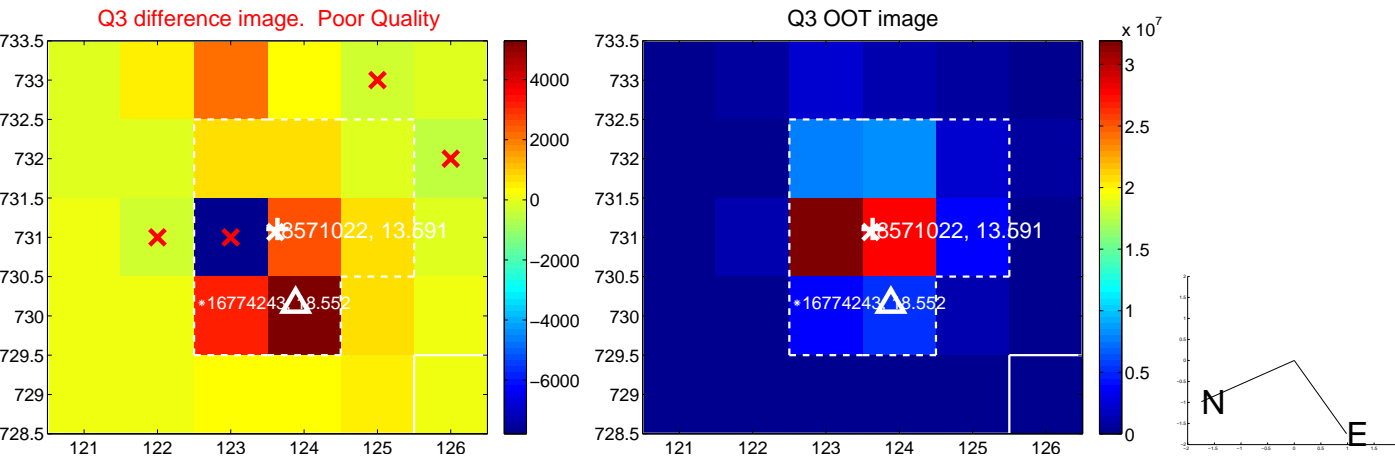
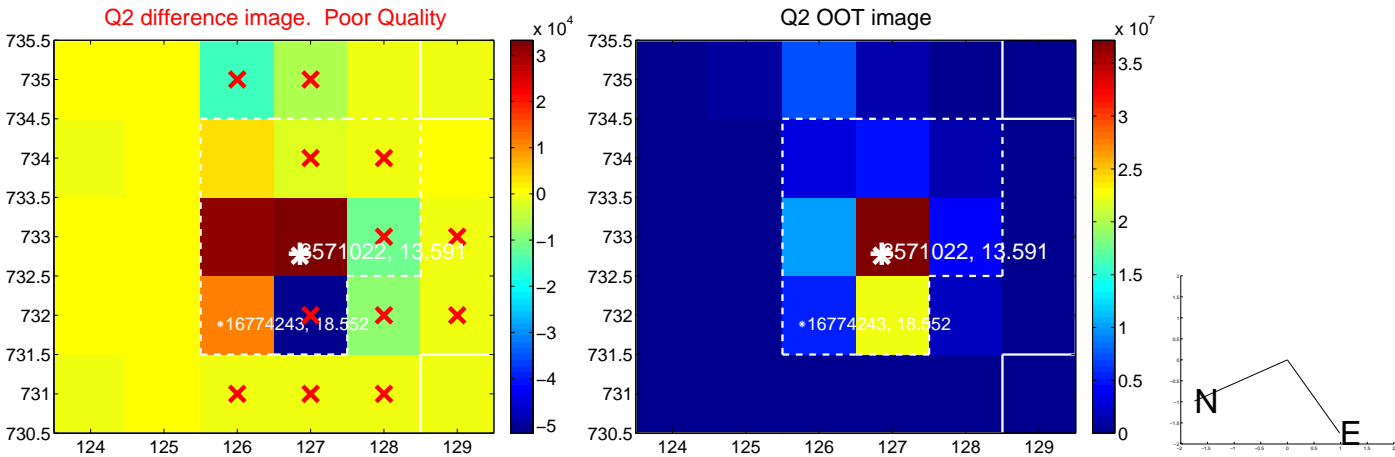
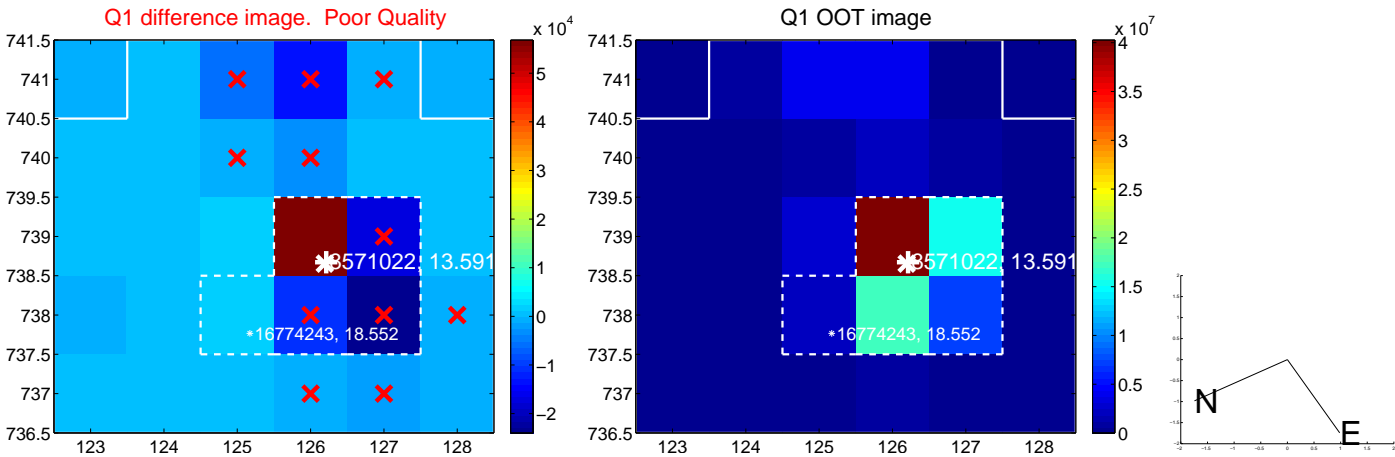


offset from photometric centroids

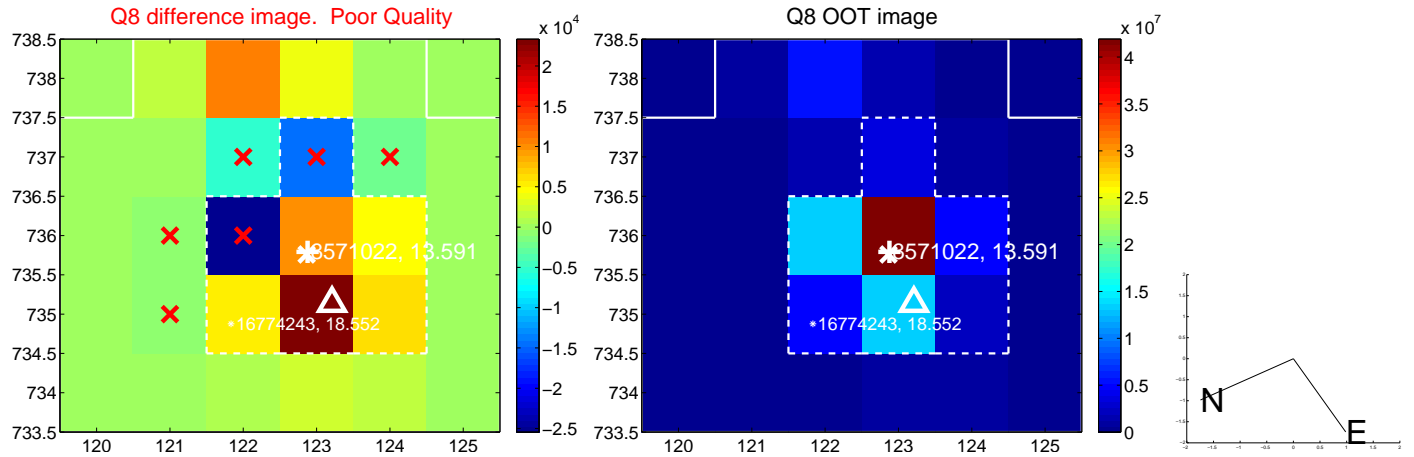
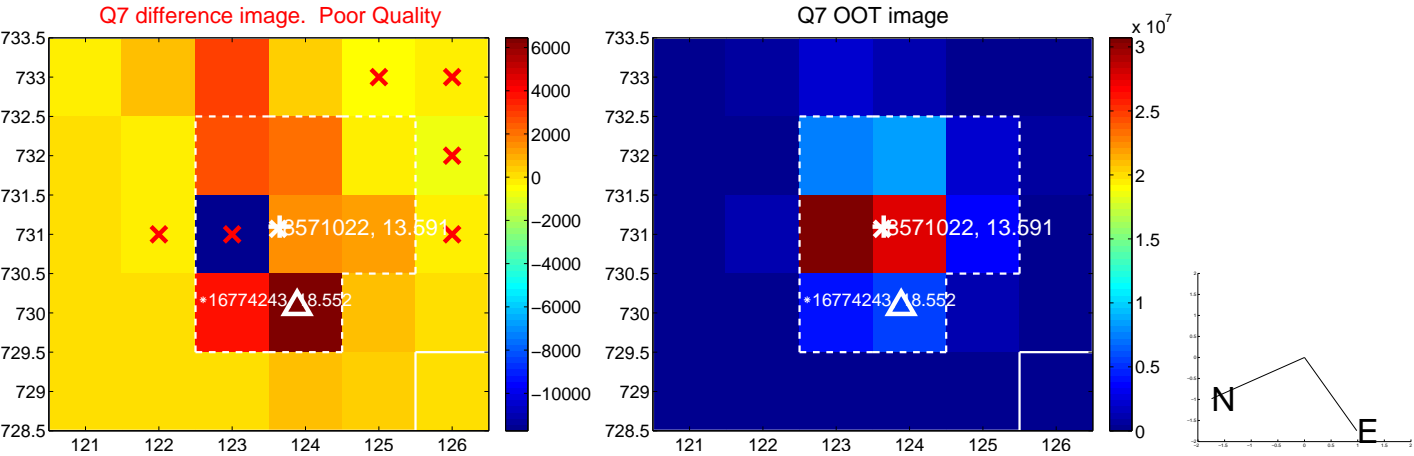
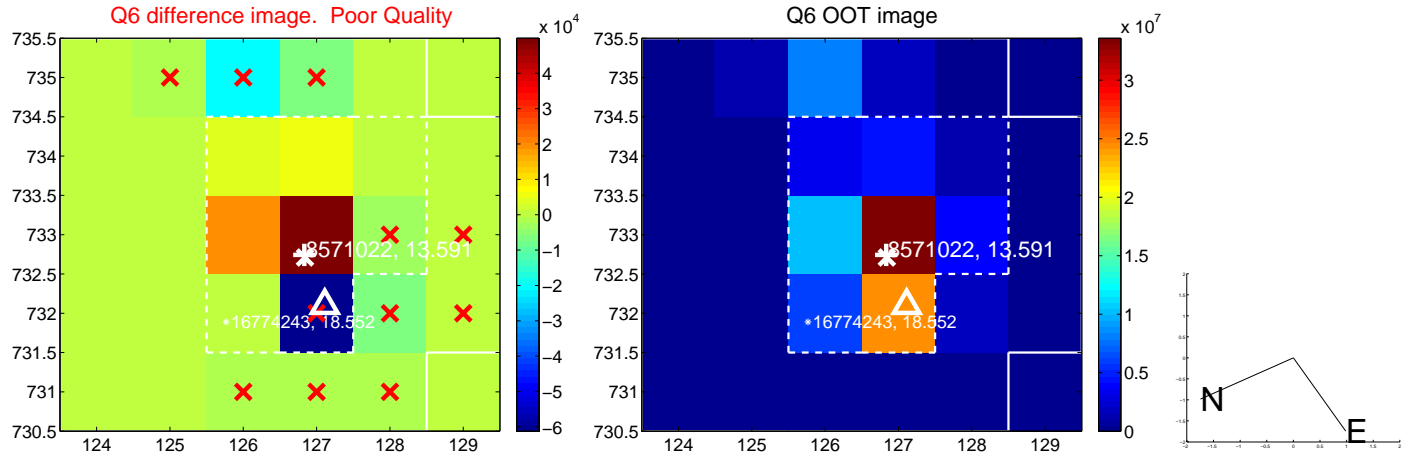
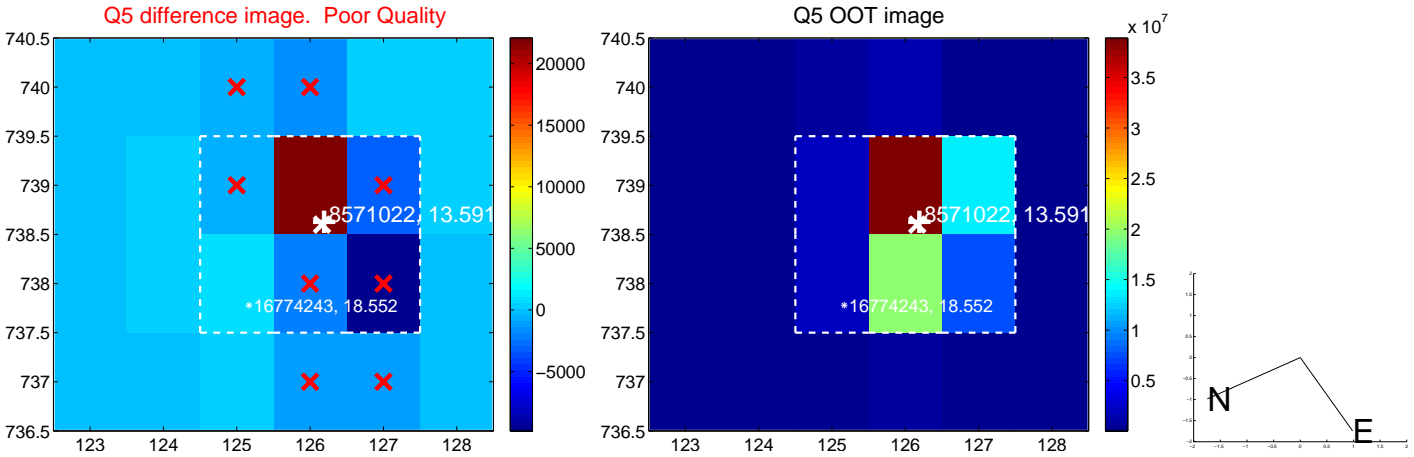


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

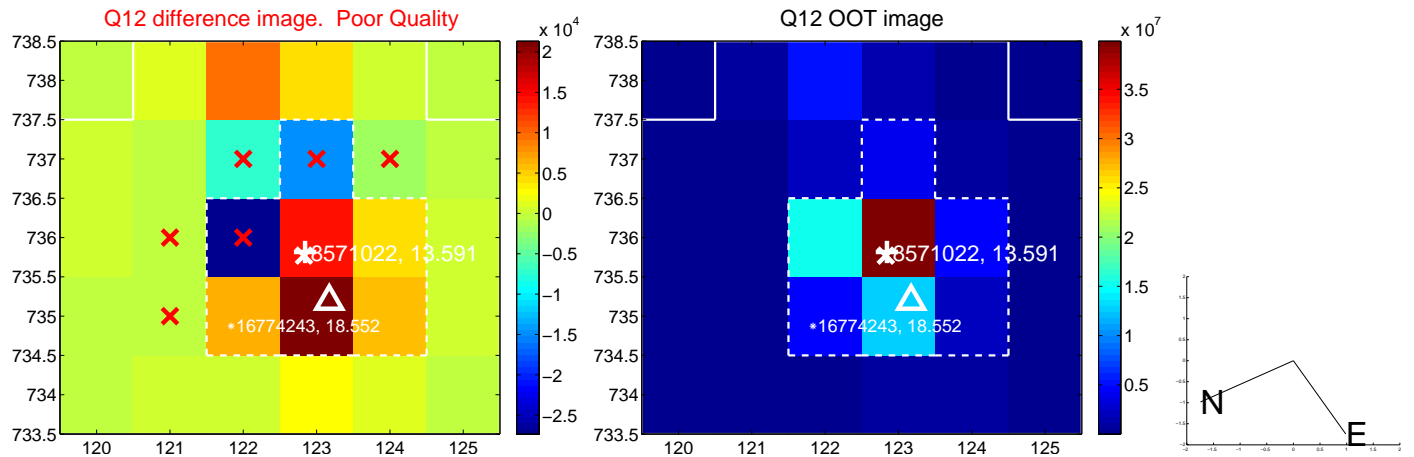
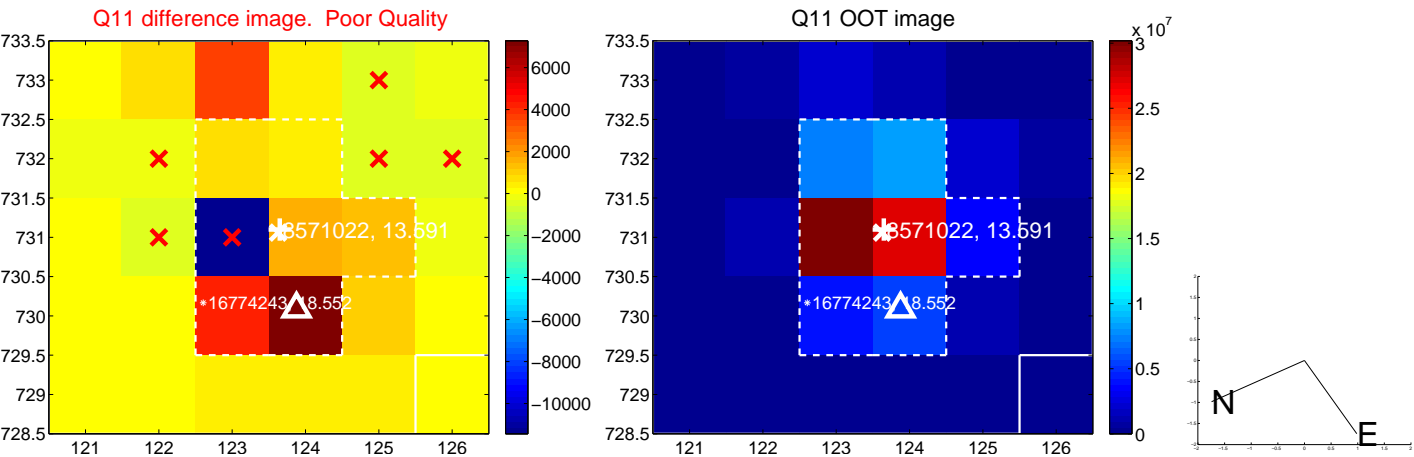
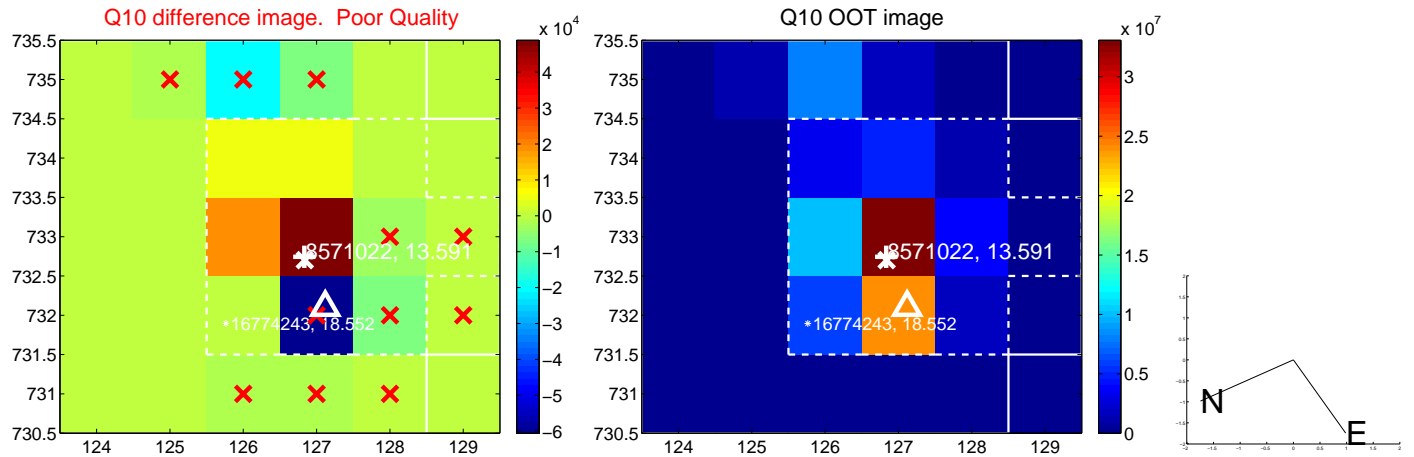
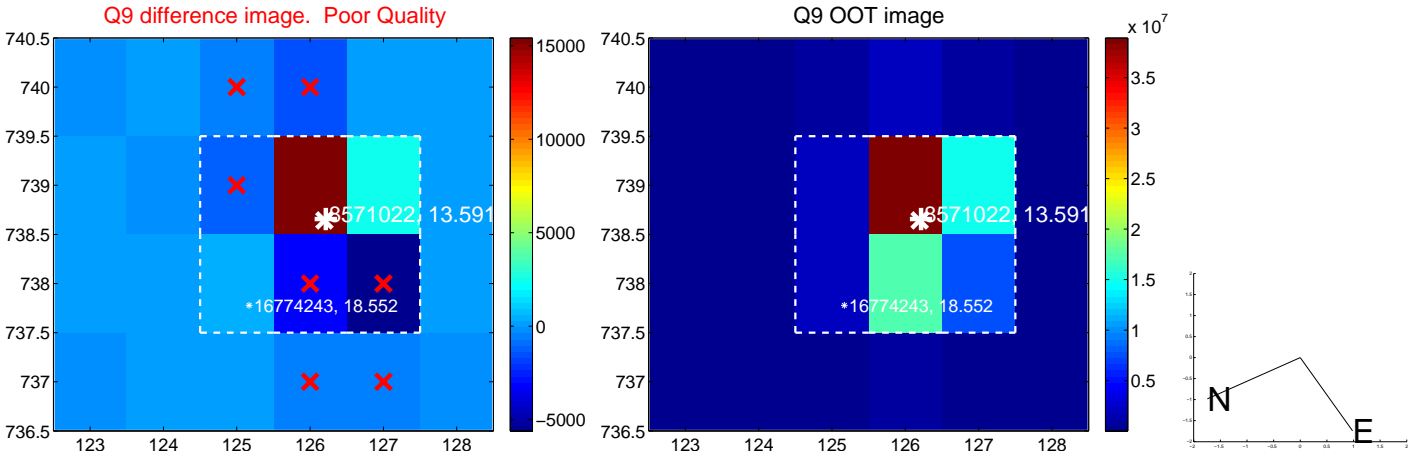
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



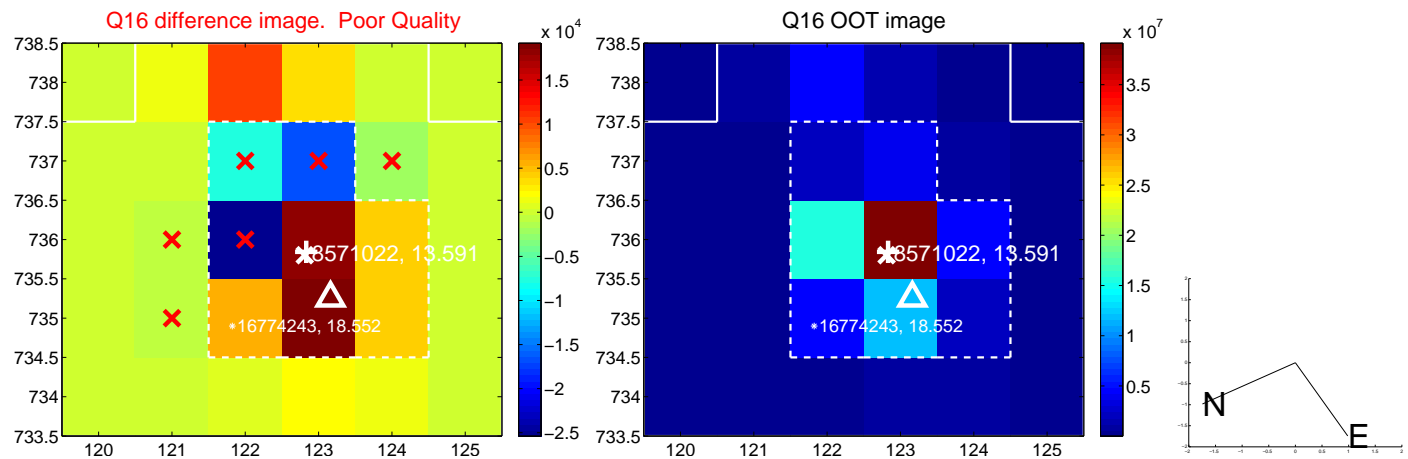
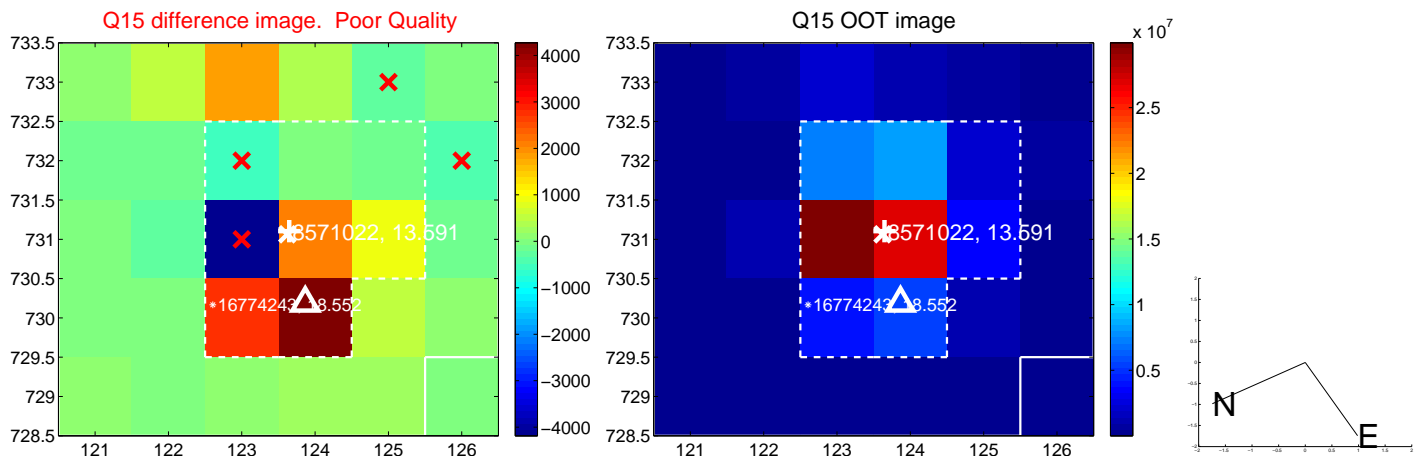
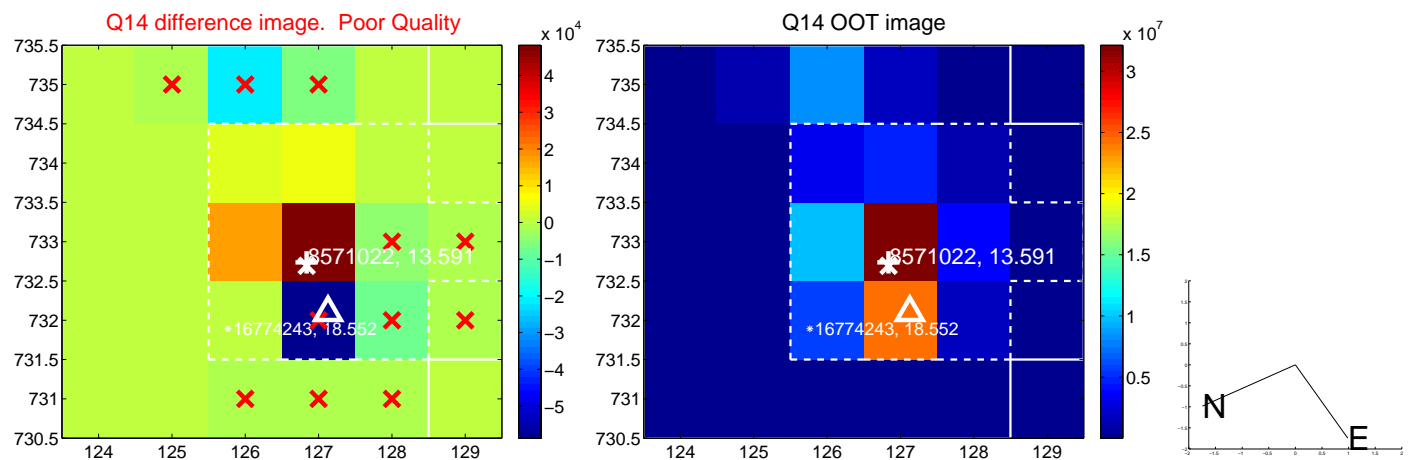
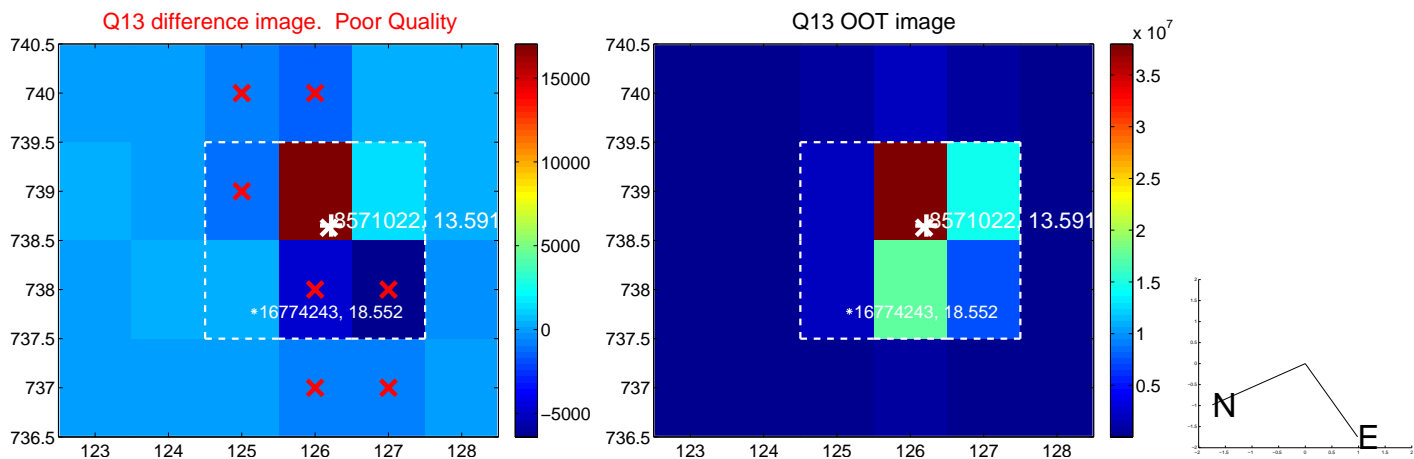
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

