

KIC 005446821

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})
005446821-01	OBS	No	0.646631	131.739268	287.3	7.760	205.2	8.9	0.74	4518	1.75	1170.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005446821-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

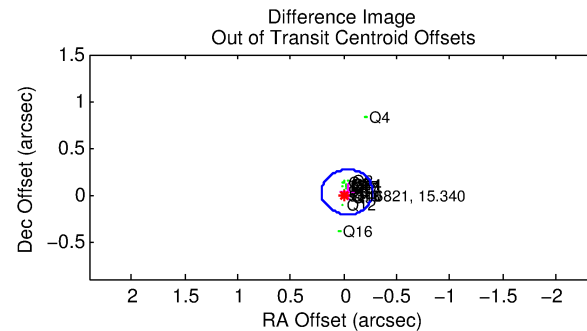
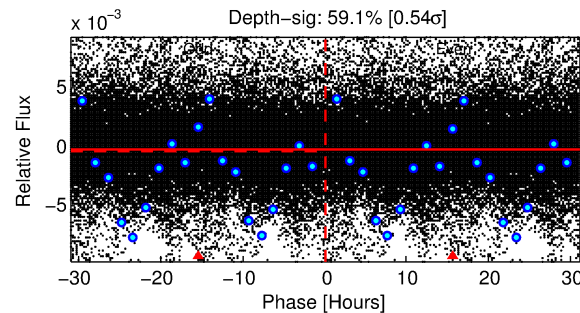
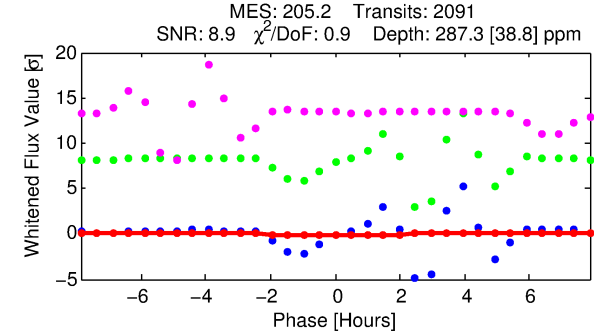
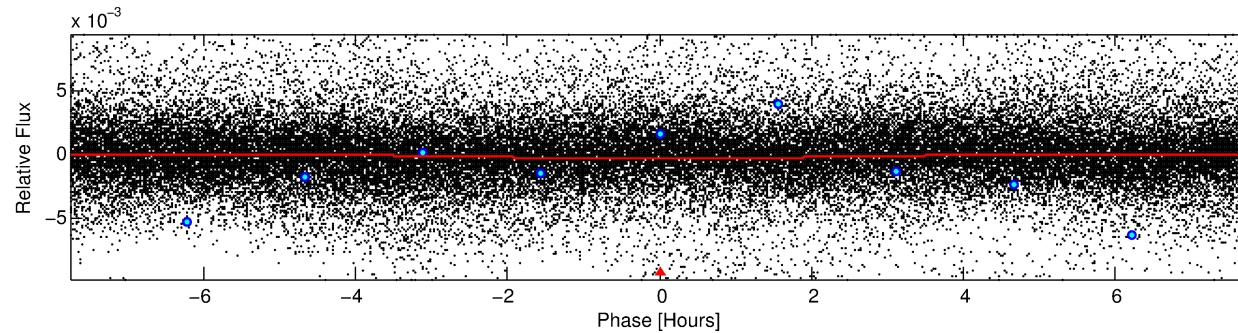
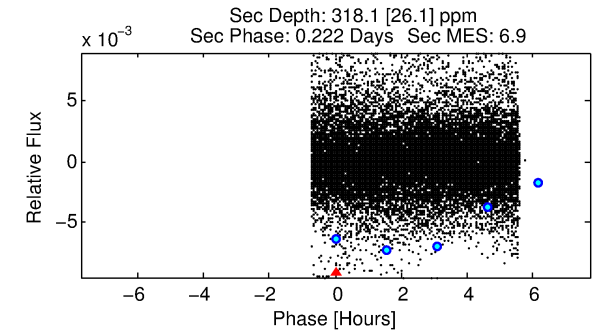
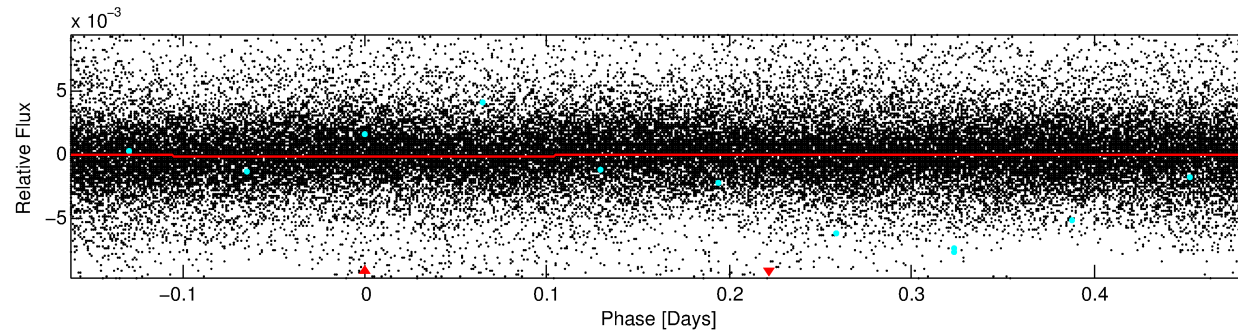
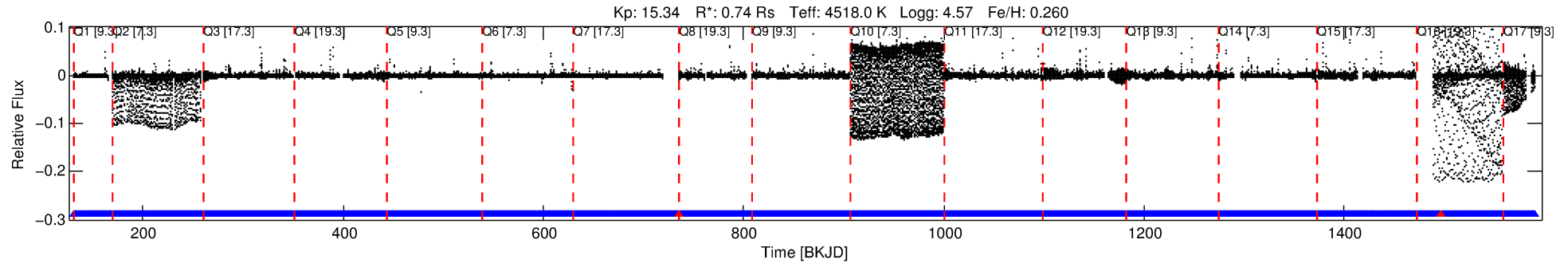
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005446821-01

No Significant Match Found

DV One-Page Summary

KIC: 5446821 Candidate: 1 of 1 Period: 0.647 d



DV Fit Results:

Period = 0.64663 [0.00002] d
Epoch = 131.7393 [0.0045] BKJD
Rp/R* = 0.0218 [0.0016]
a/R* = 1.01 [0.00]
b = 0.97 [0.01]
Seff = 1170.87 [190.00]
Teff = 1492 [61] K
Rp = 1.75 [0.19] Re
a = 0.0132 [0.0010] AU
Ag = 9.88 [1.95] [4.54σ]
Teffp = 4088 [210] K [11.87σ]

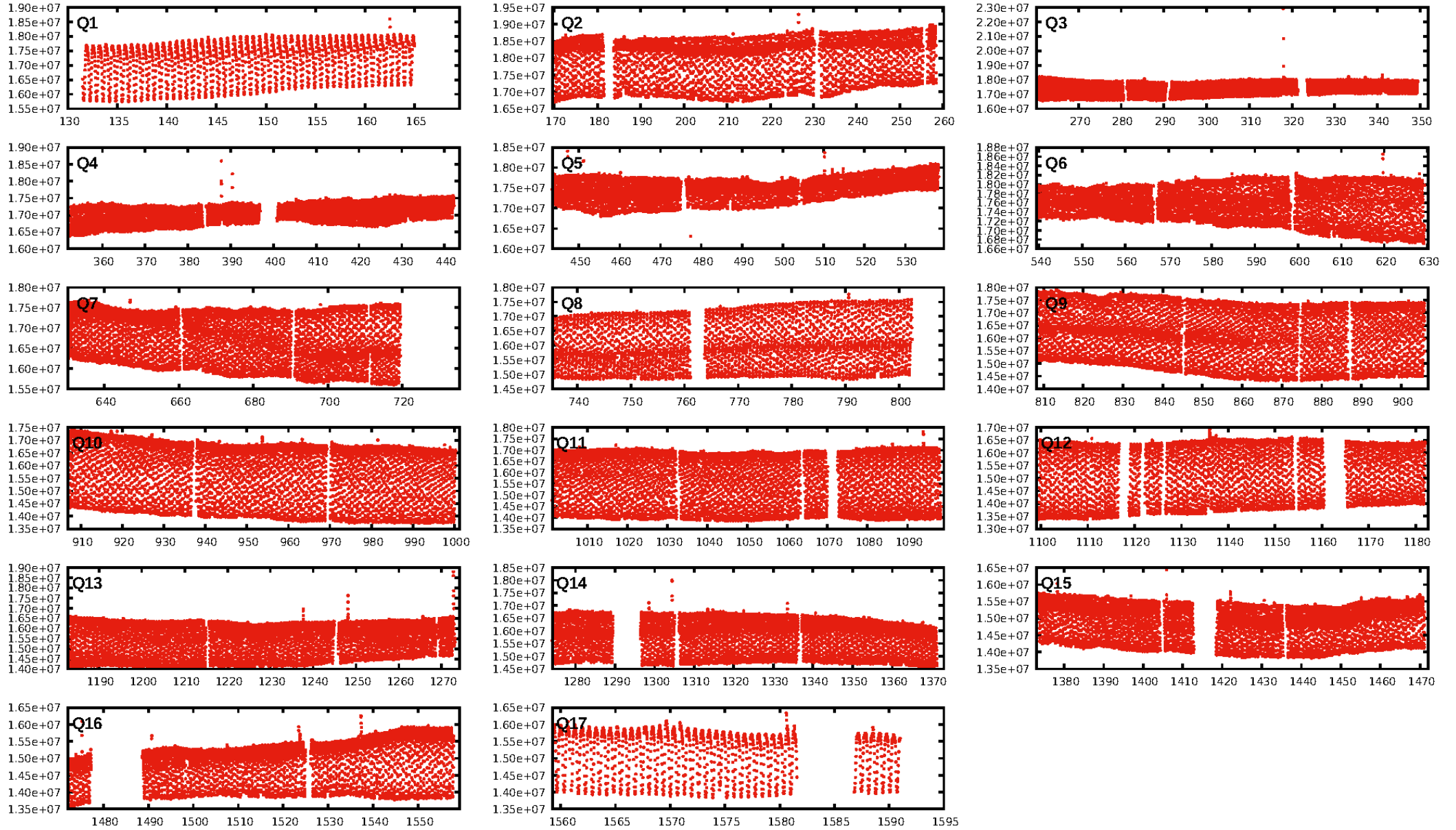
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1996/1998]
GhostDiagnostic-chr: 2.462
Centroid-sig: 2.4%
Centroid-so: 0.371 arcsec [1.98σ]
OotOffset-rm: 0.046 arcsec [0.57σ]
KicOffset-rm: 0.093 arcsec [1.09σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

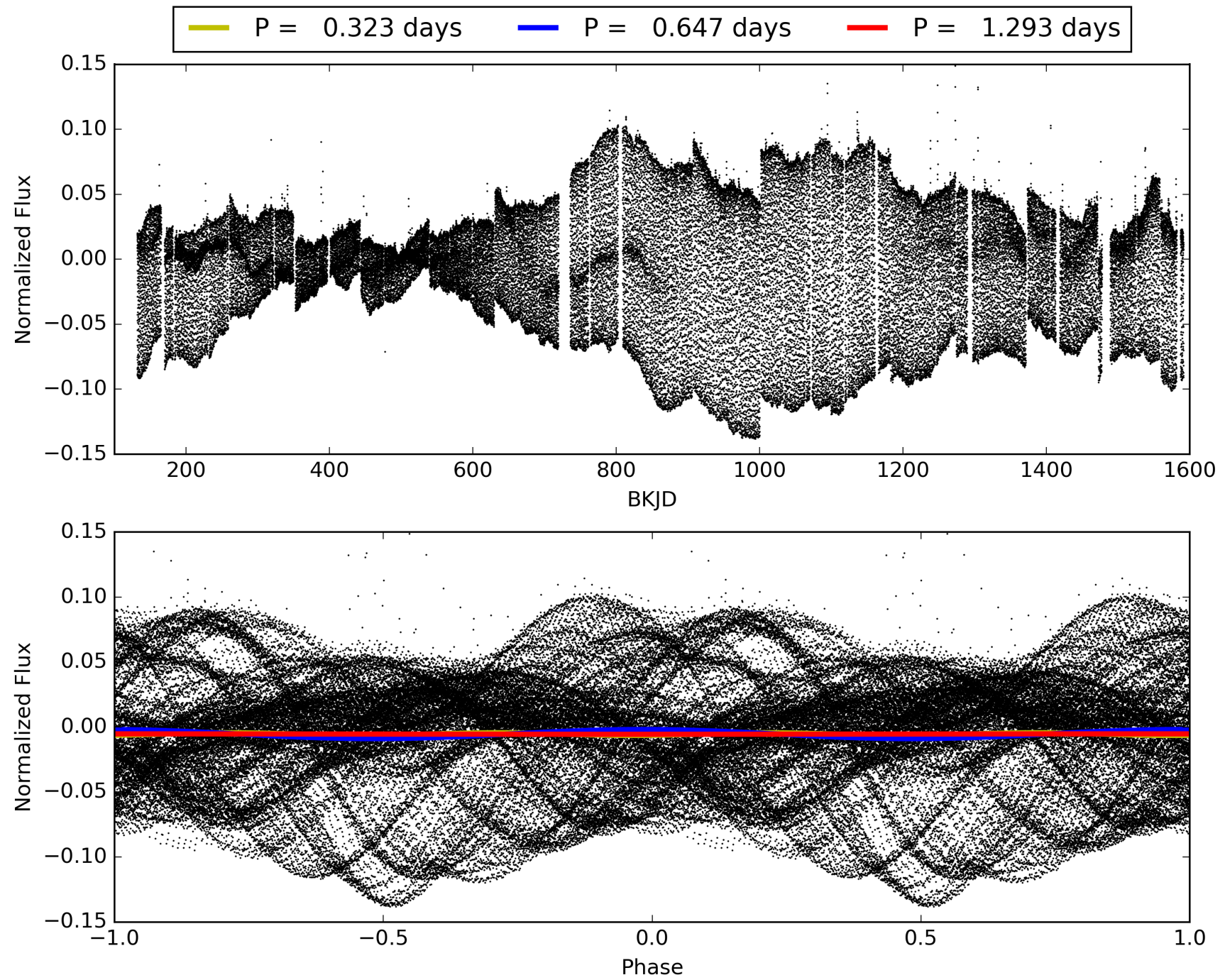
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:44:59 Z

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

TCE 005446821-01, PDC Light Curves

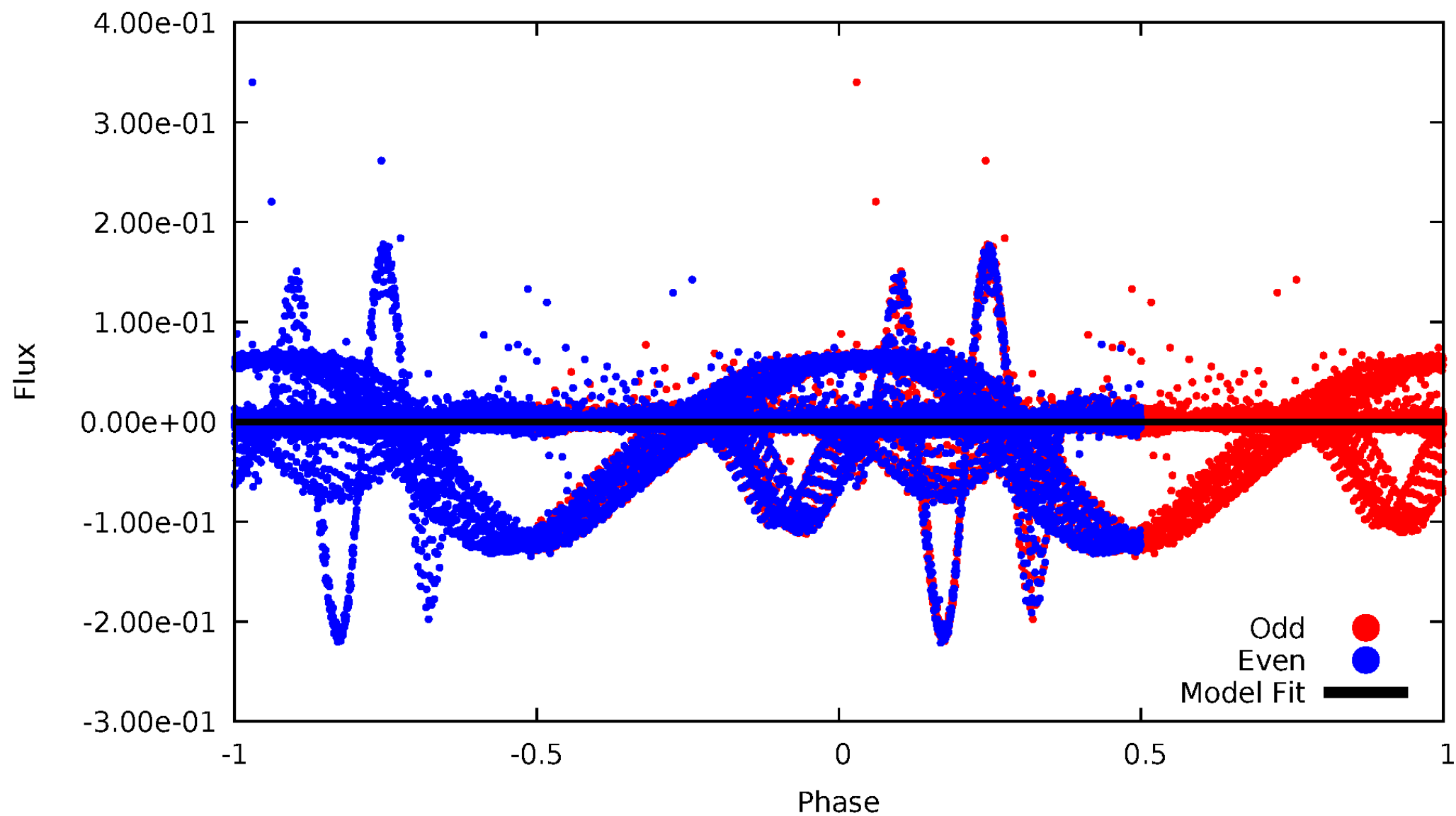


TCE 005446821-01



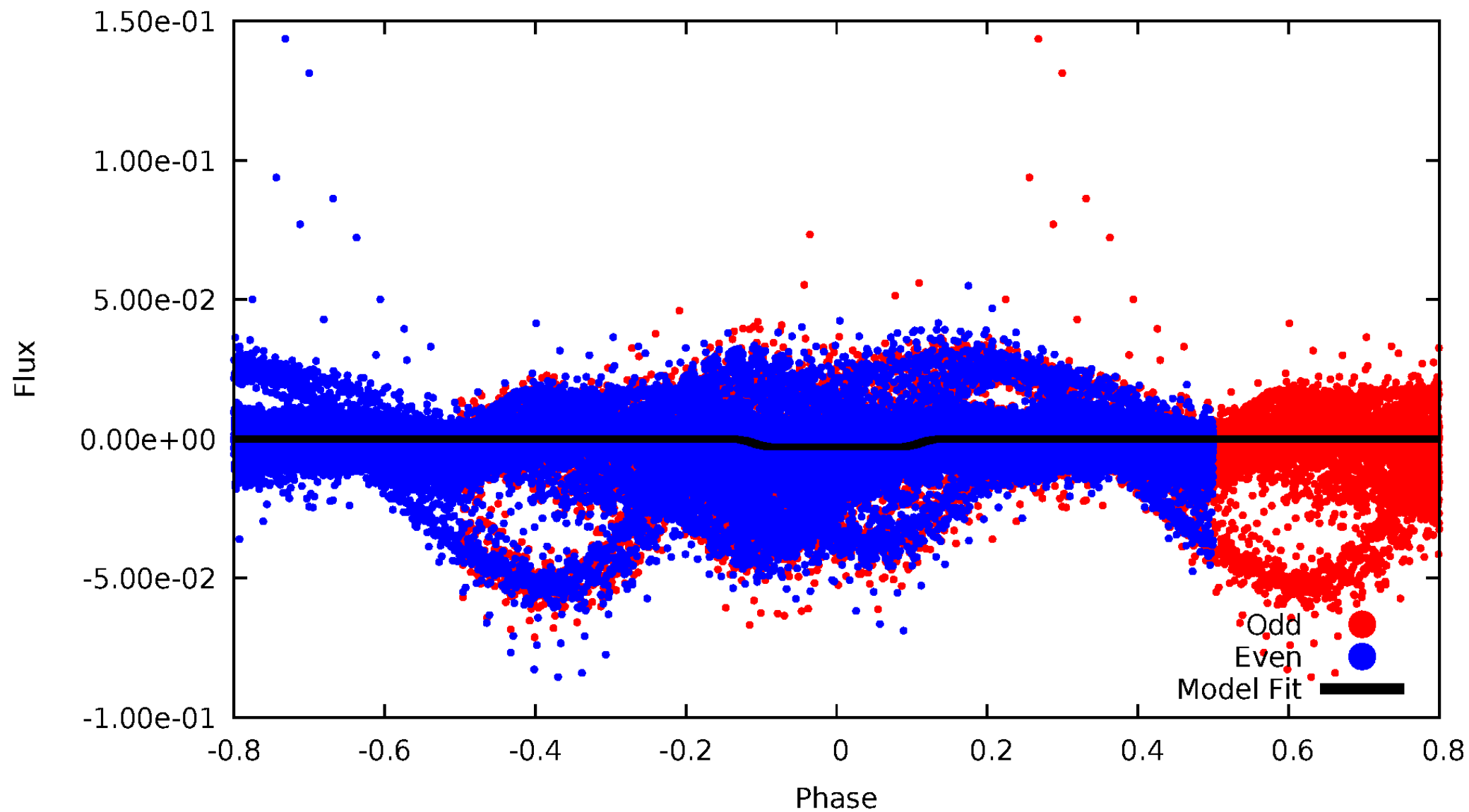
DV Odd/Even

TCE 005446821-01



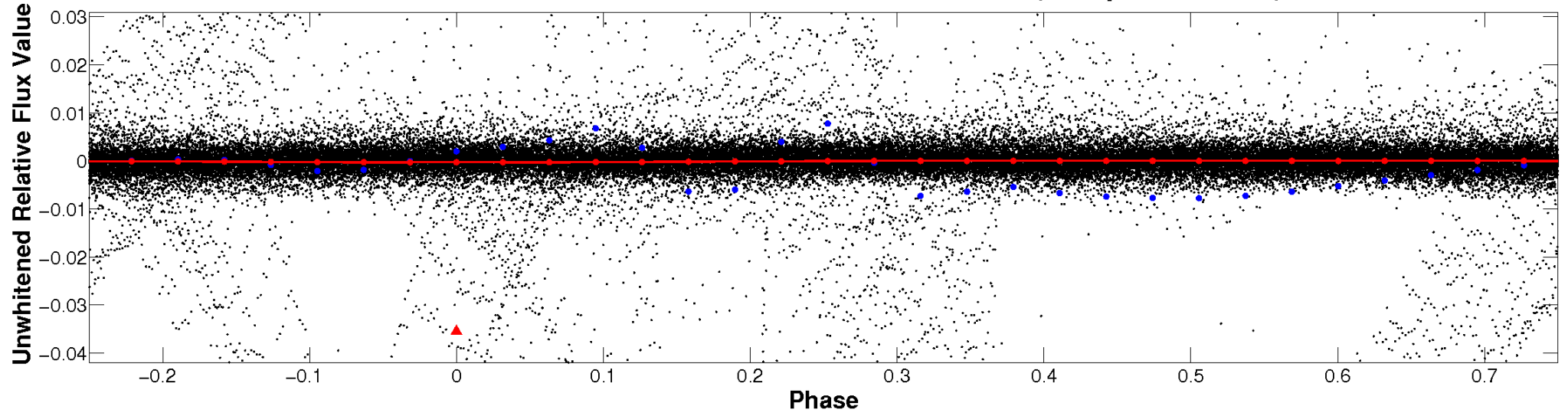
ALT Odd/Even

TCE 005446821-01

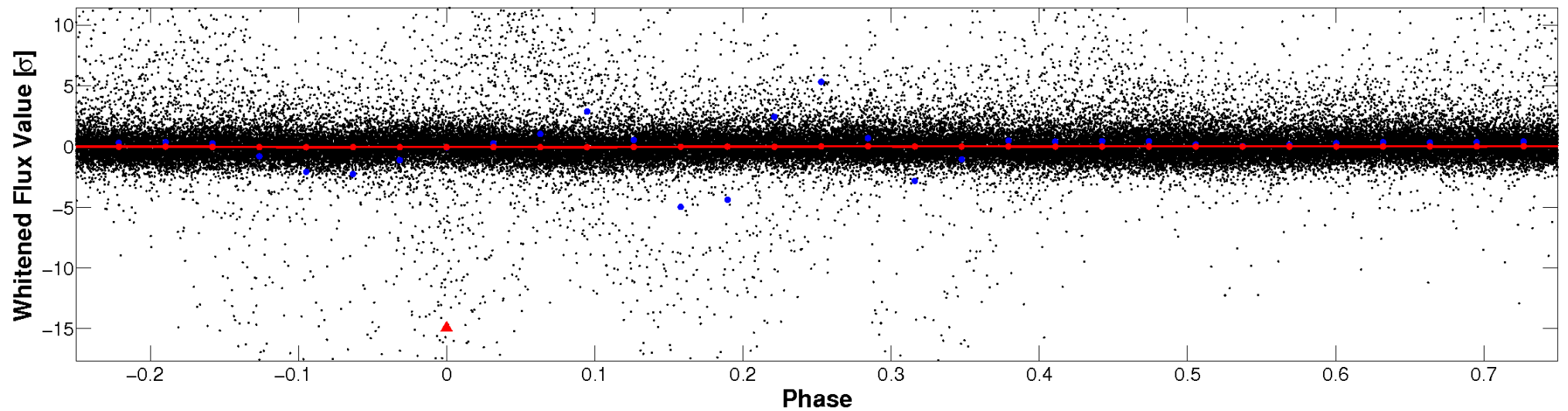


Non-Whitened Vs. Whitened Light Curve

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

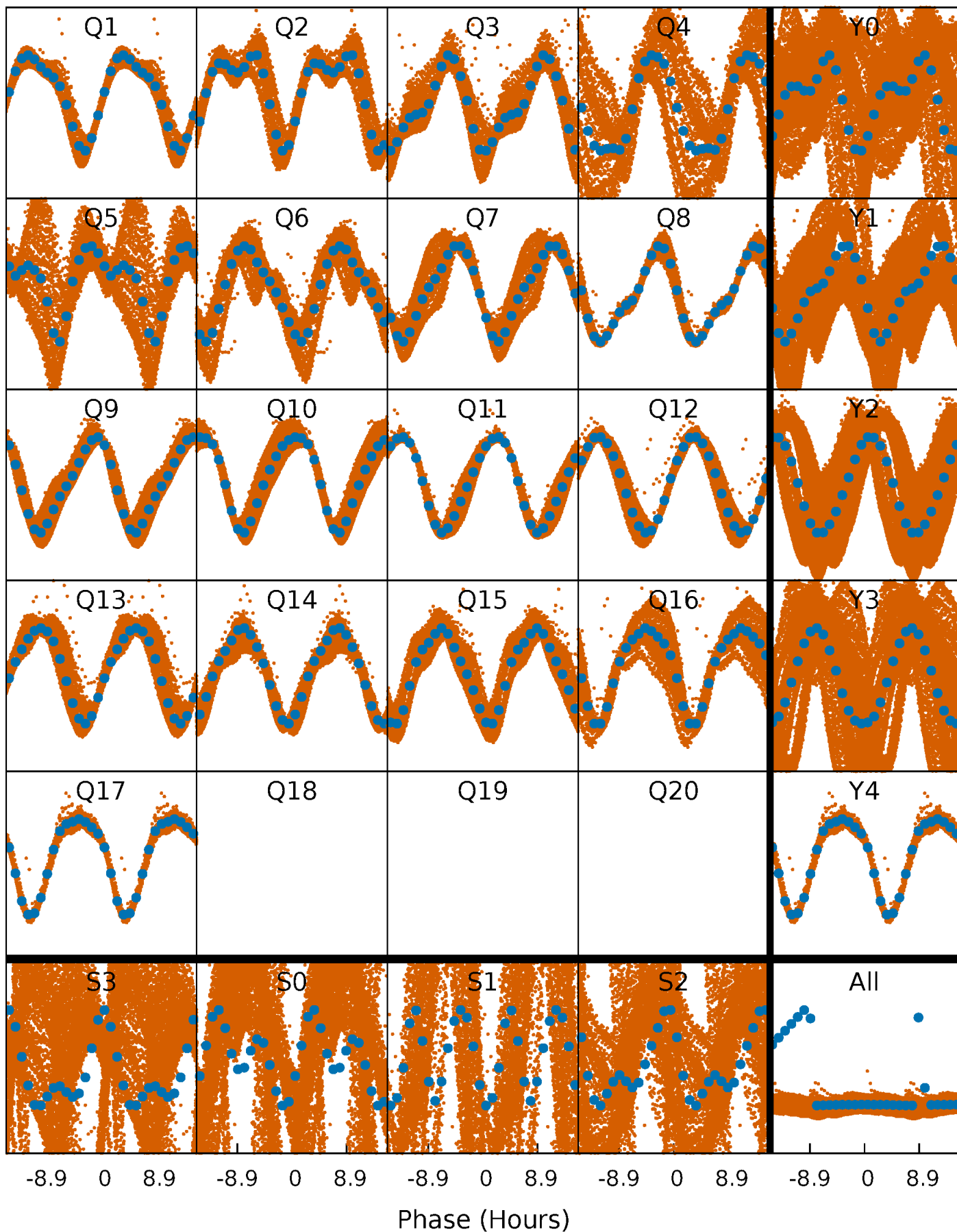


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



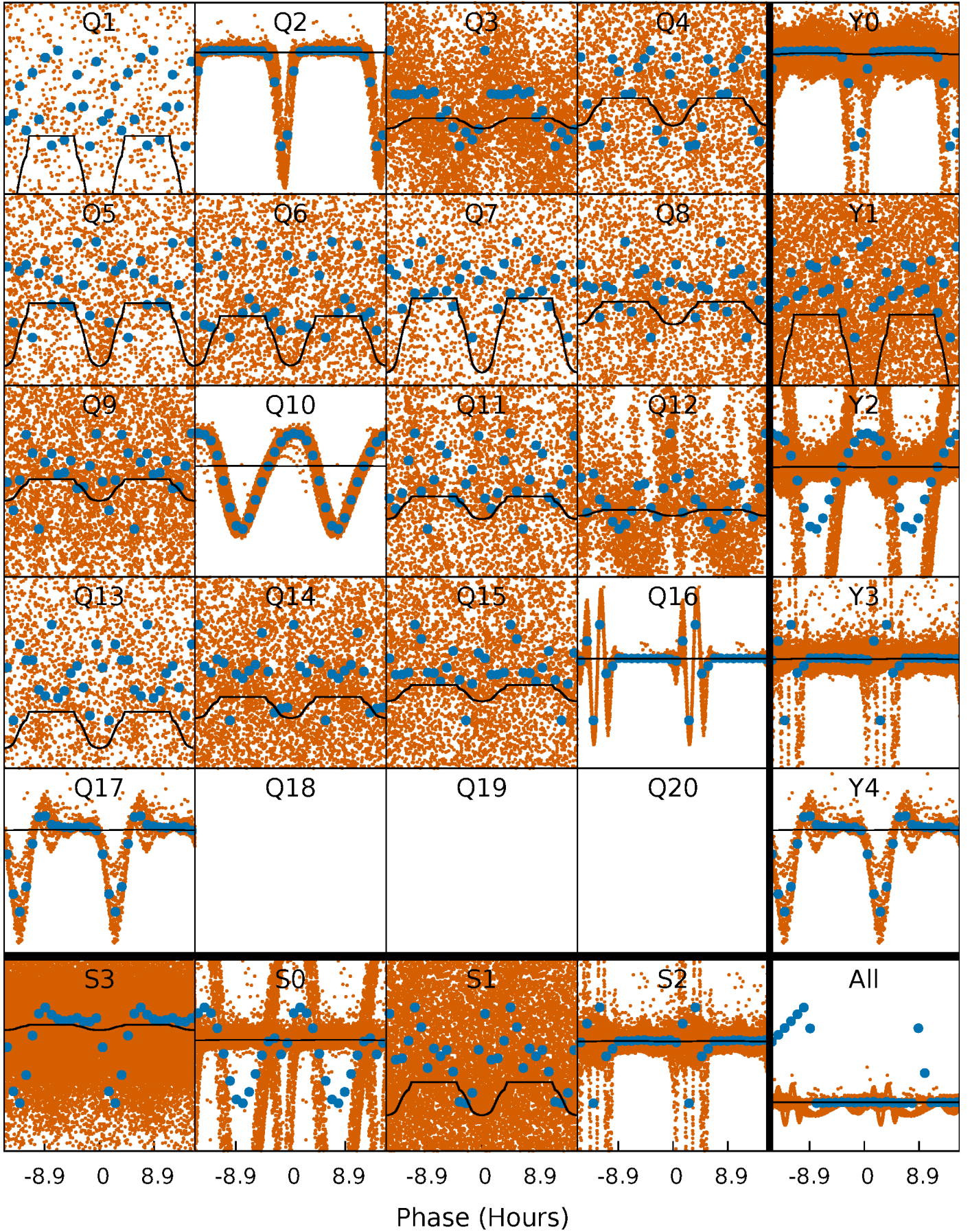
PDC Quarter-Phased Transit Curves

TCE 005446821-01 P= 0.646631 Days $T_0=131.739268$ (BKJD)



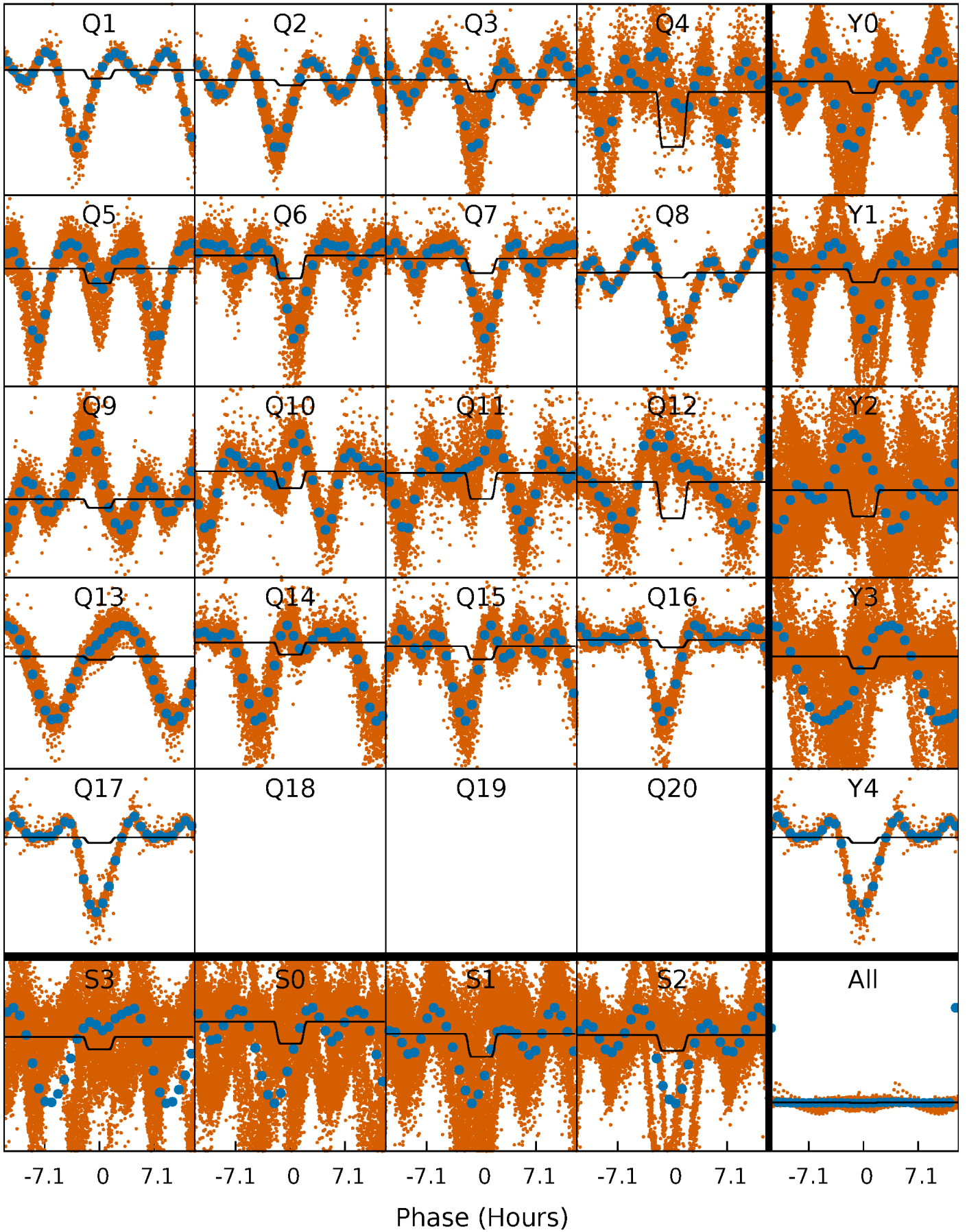
DV Quarter-Phased Transit Curves

TCE 005446821-01 P= 0.646631 Days $T_0=131.739268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

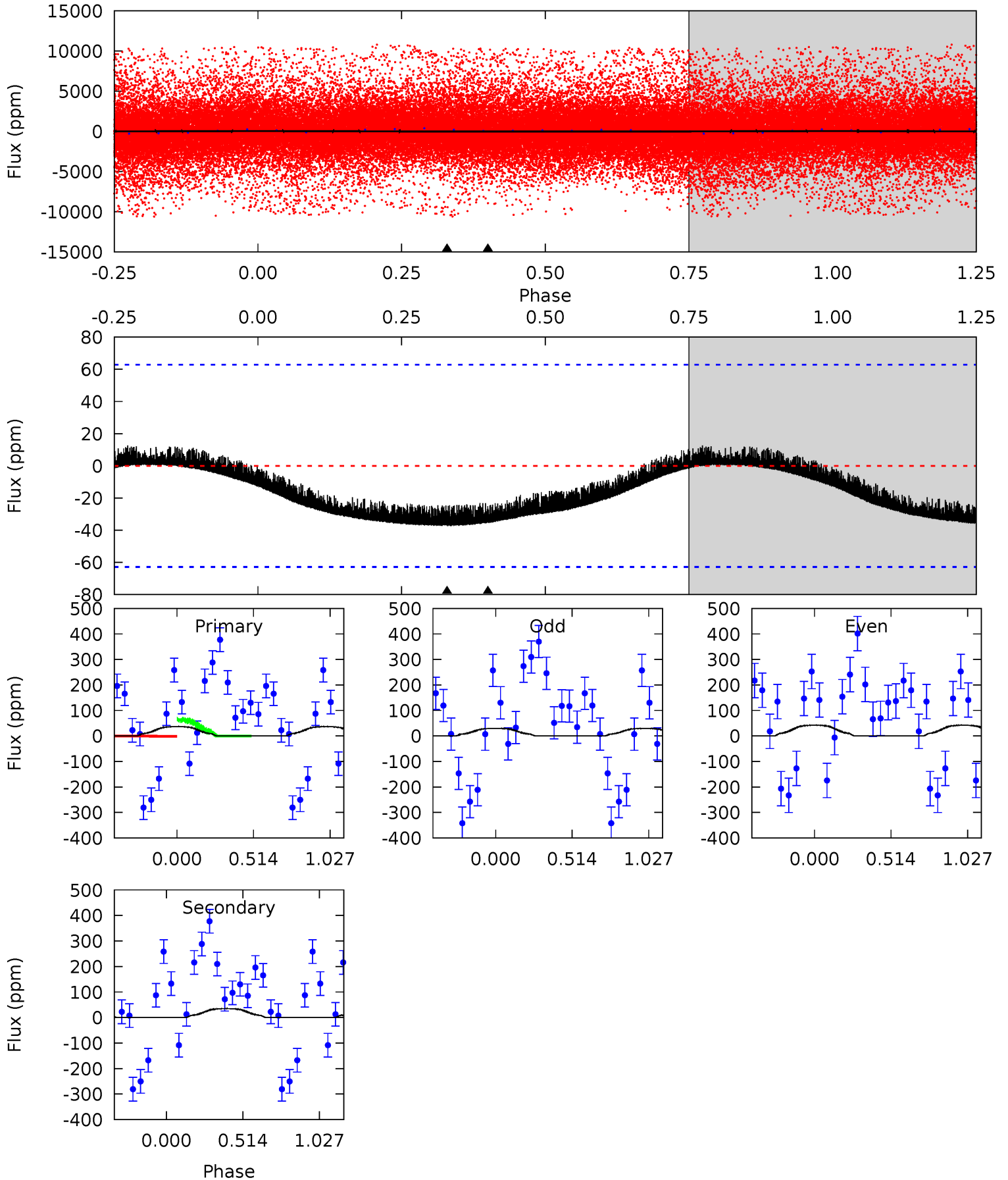
TCE 005446821-01 P= 0.646708 Days $T_0=131.742991$ (BKJD)



DV Model-Shift Uniqueness Test

005446821-01, P = 0.646631 Days, E = 131.092637 Days

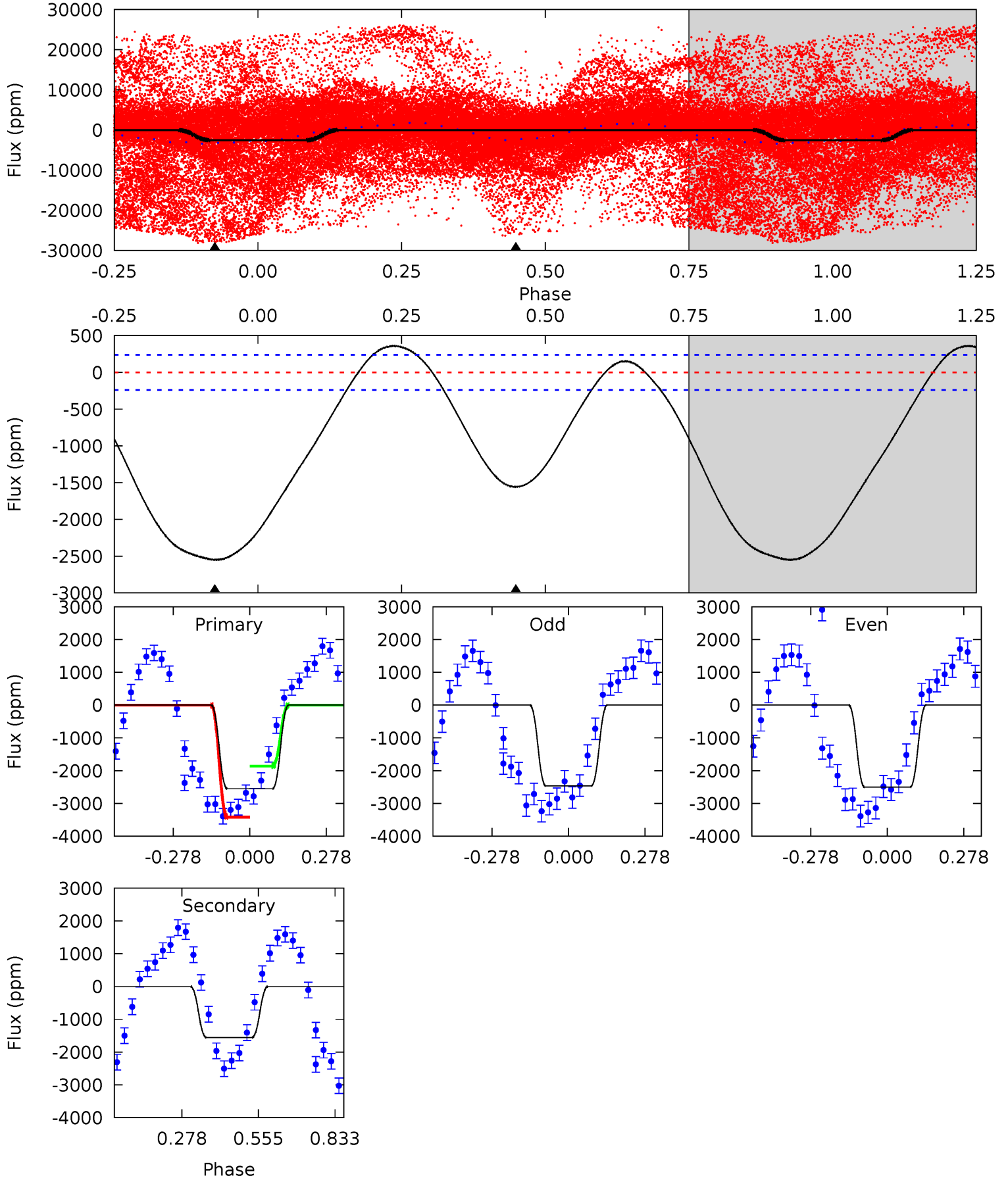
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.46	2.34	0	0	4.21	0.65	0.14	2.46	2.46	2.34	2.34	0.42	40.7	0.26	1.94



Alt Model-Shift Uniqueness Test

005446821-01, P = 0.646708 Days, E = 131.096283 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.6	28.5	0	0	4.35	1.09	3.52	46.6	46.6	28.5	28.5	0.40	6.84	0.12	13.0



Stellar Parameters For KIC 005446821

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4518^{+137}_{-137}	$4.565^{+0.060}_{-0.020}$	$0.260^{+0.150}_{-0.300}$	$0.738^{+0.026}_{-0.062}$	$0.729^{+0.048}_{-0.048}$	$2.552^{+0.642}_{-0.184}$
	+3%/-3%	+1%/-0%	+58%/-115%	+4%/-8%	+7%/-7%	+25%/-7%
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 005446821-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 15	$1.74^{+0.14}_{-0.15}$	2064^{+75}_{-69}	2812^{+223}_{-316}	$1.103^{+0.545}_{-0.492}$
Alt.	-1558 ± 55	$4.29^{+0.18}_{-0.23}$	2073^{+68}_{-74}	4018^{+123}_{-127}	$8.269^{+0.866}_{-0.701}$

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 $A_{\text{obs}} \gg 1.0$

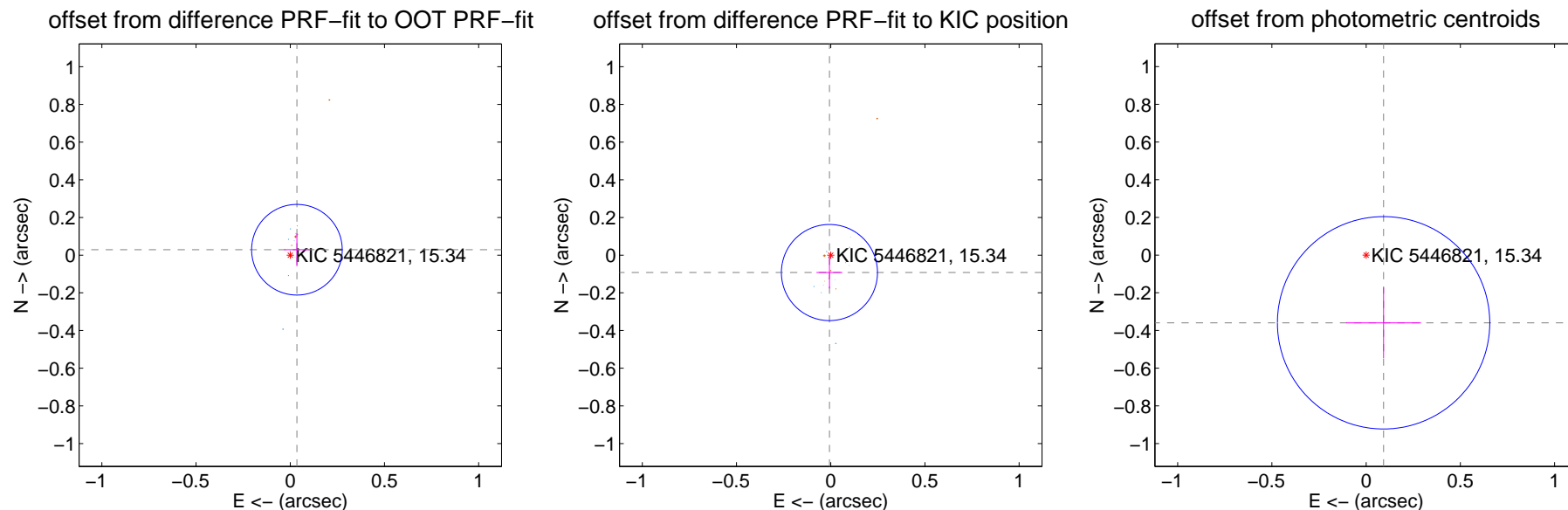
DV Centroid Data

Supplemental centroid analysis for 005446821-01. Kepler magnitude: 15.34. Transit SNR 8.91

There are 9 quarters with good PRF difference image offsets

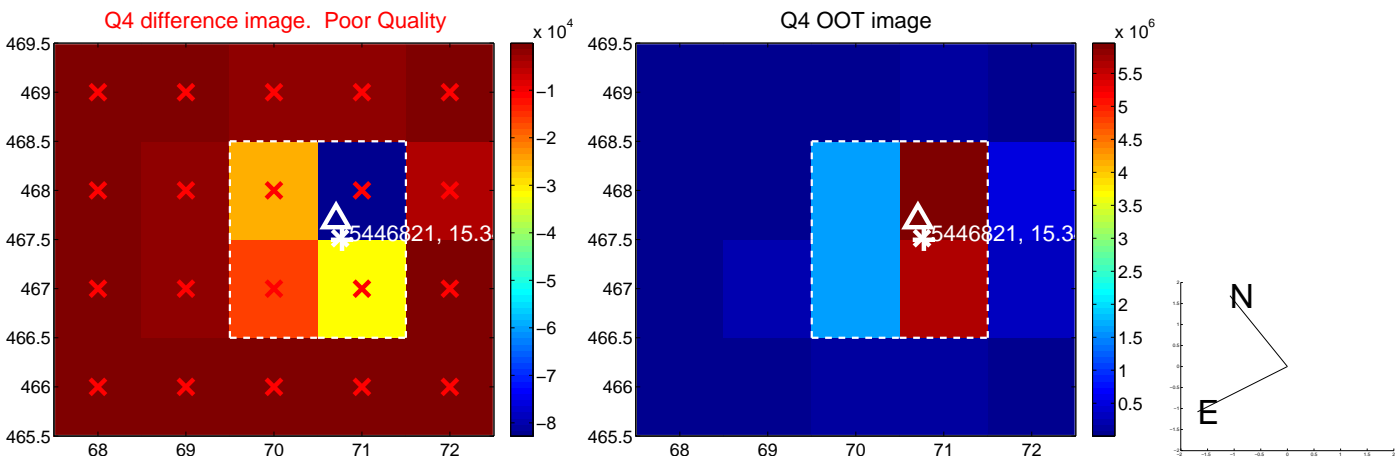
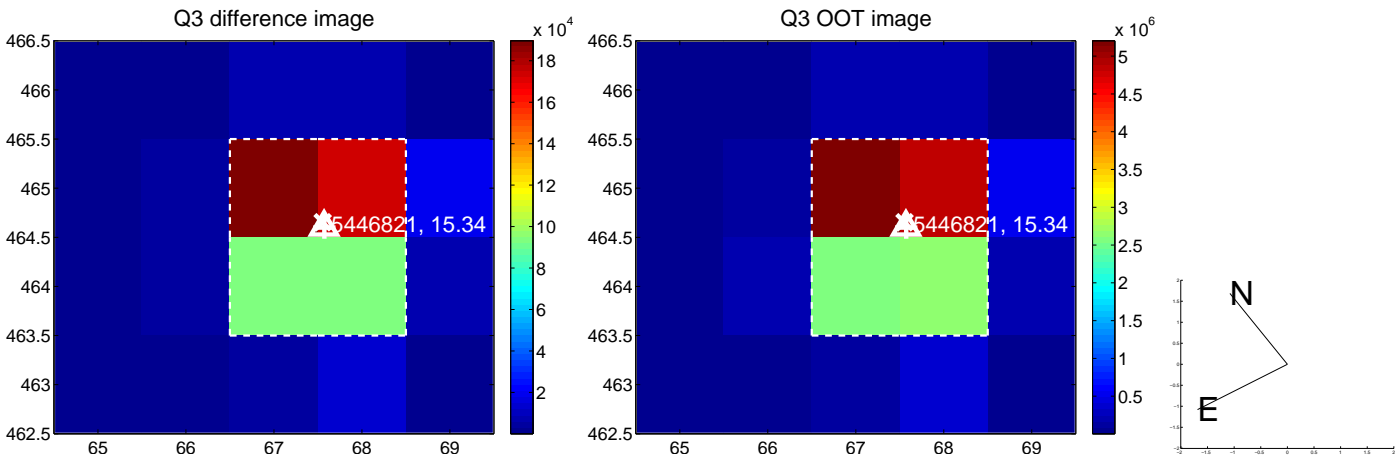
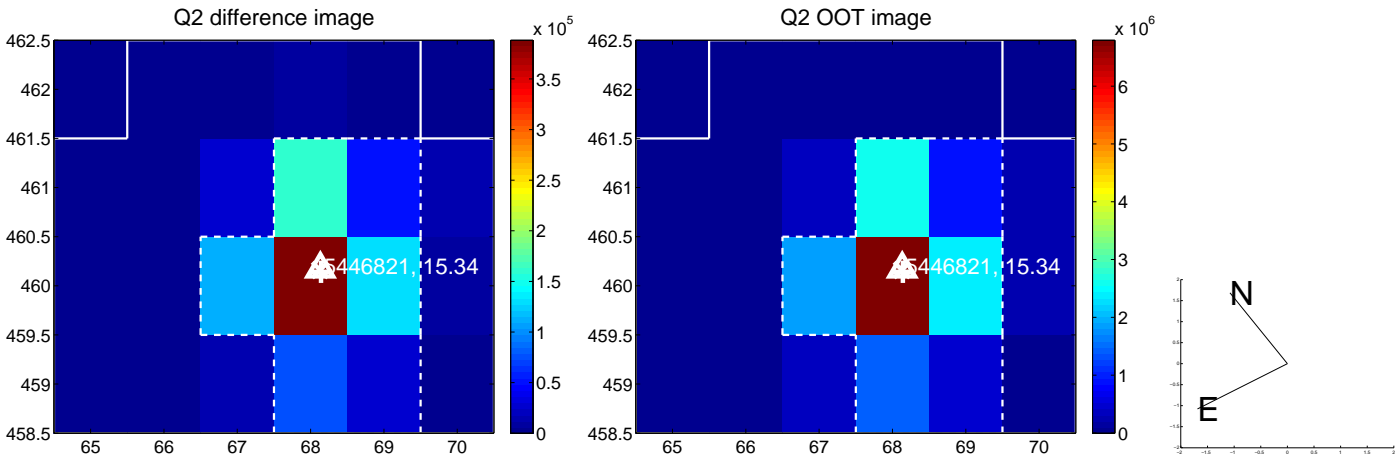
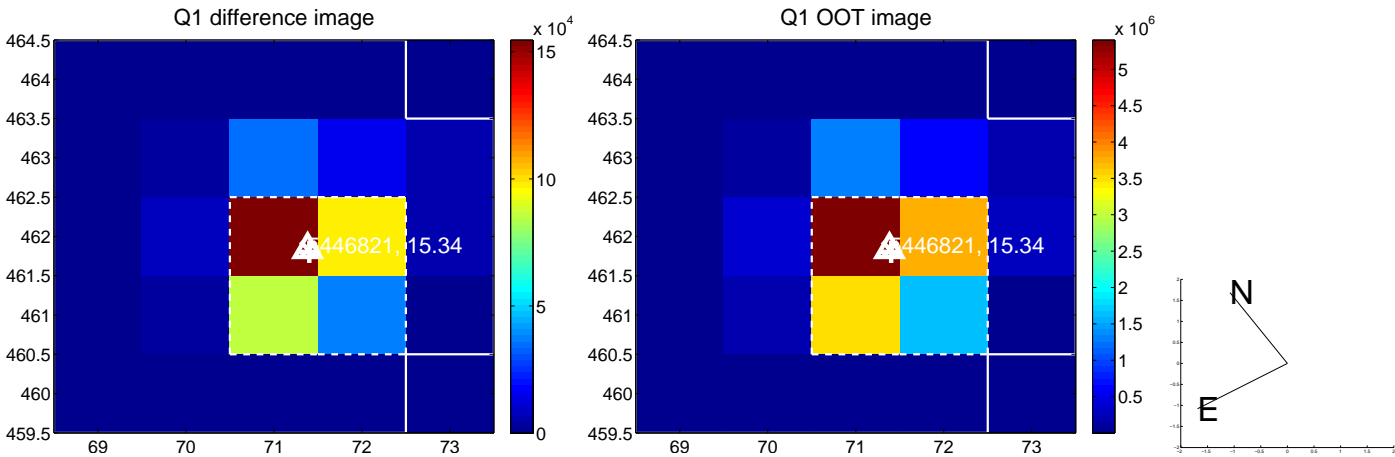
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.080	0.57	-0.035 ± 0.068	0.029 ± 0.087
PRF-fit source offset from KIC position	0.093 ± 0.085	1.09	0.007 ± 0.069	-0.092 ± 0.085
photometric centroid source offset	0.37 ± 0.19	1.98	-0.09 ± 0.20	-0.36 ± 0.19

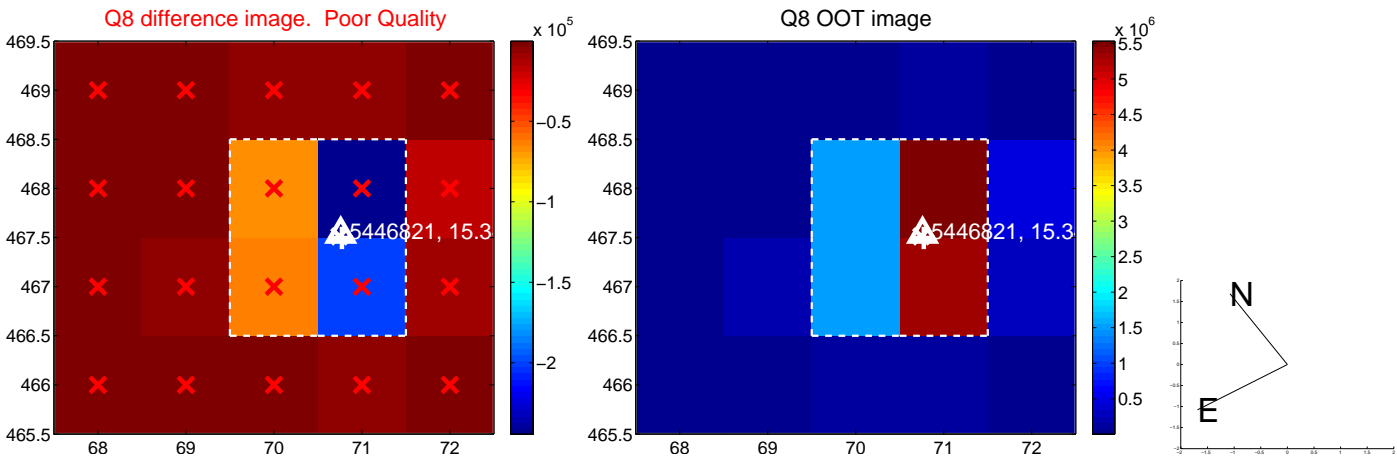
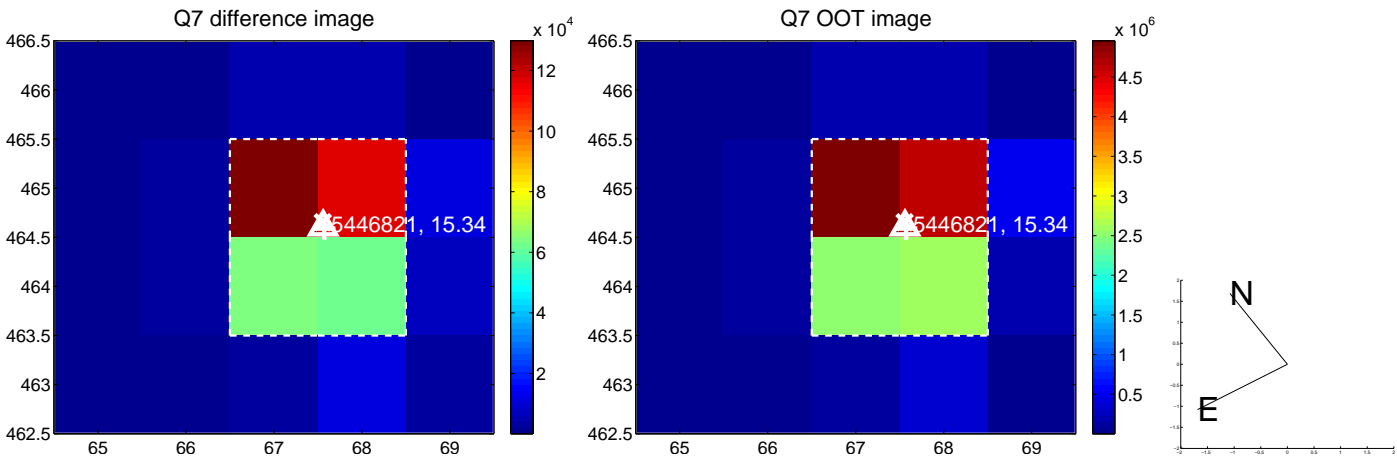
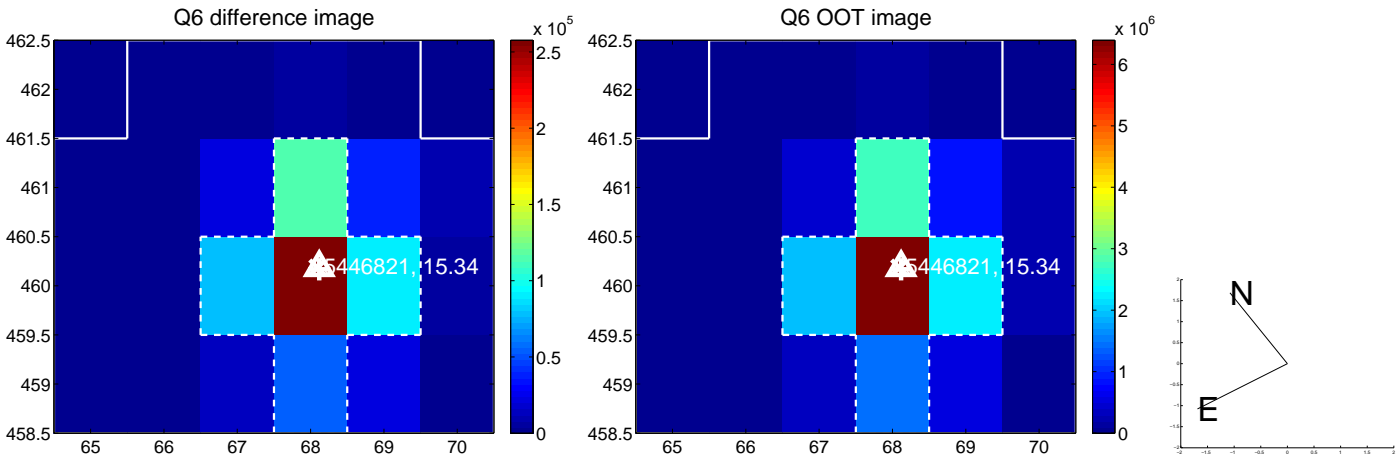
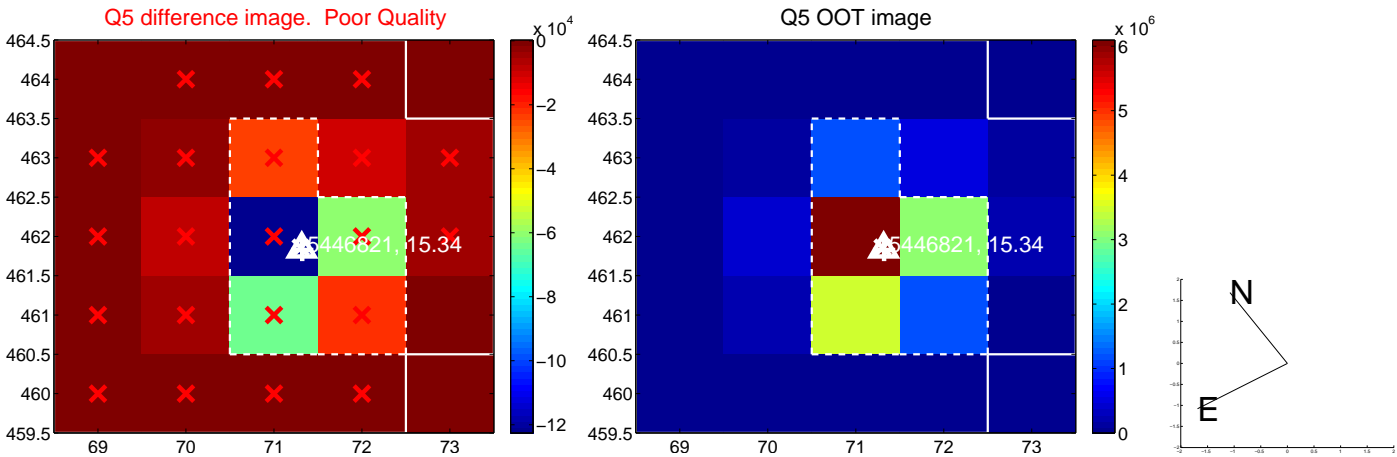


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

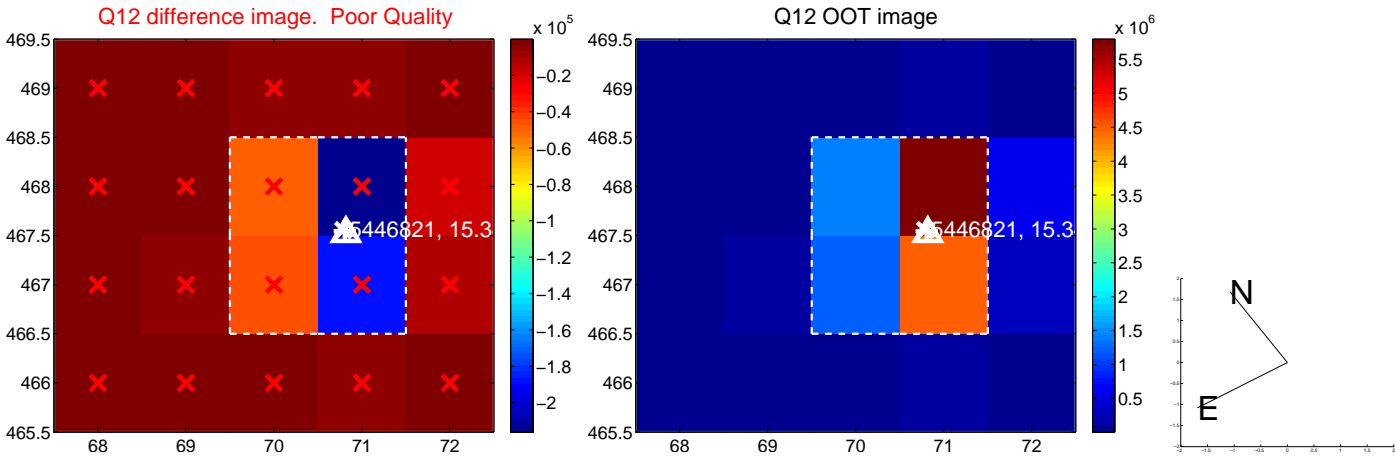
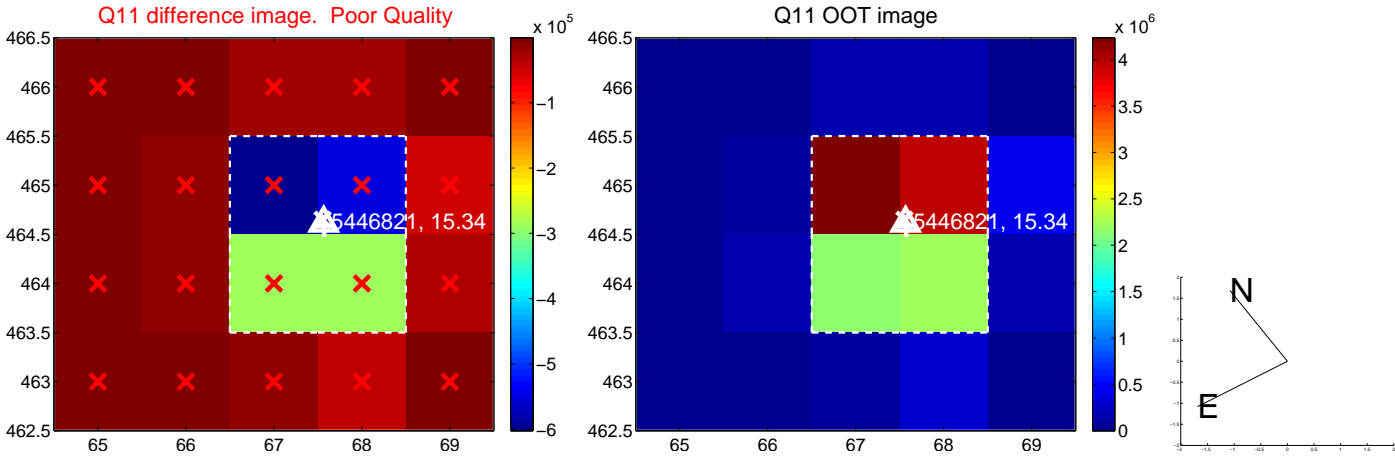
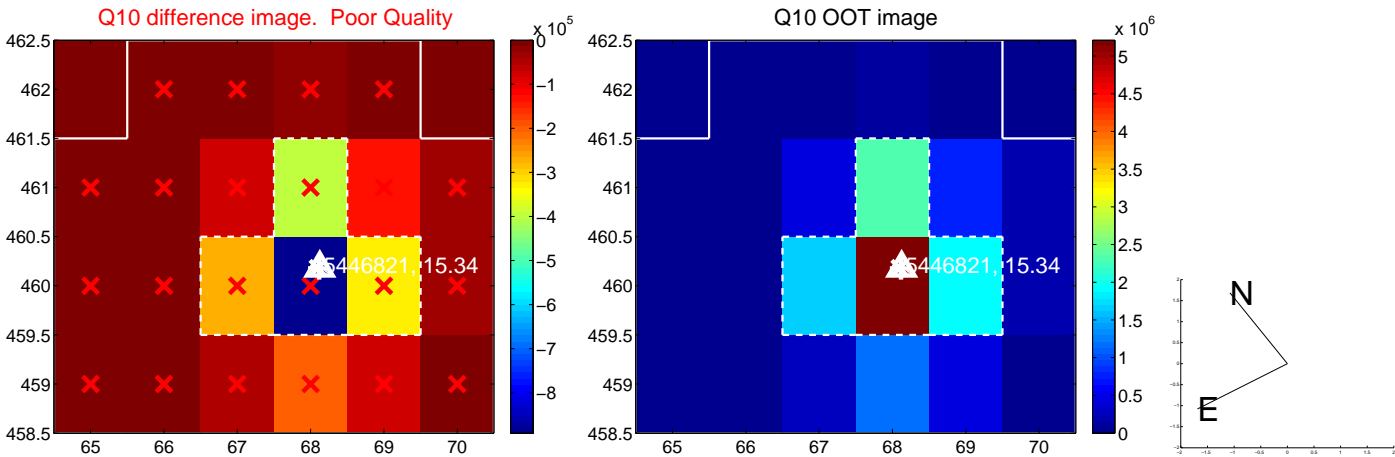
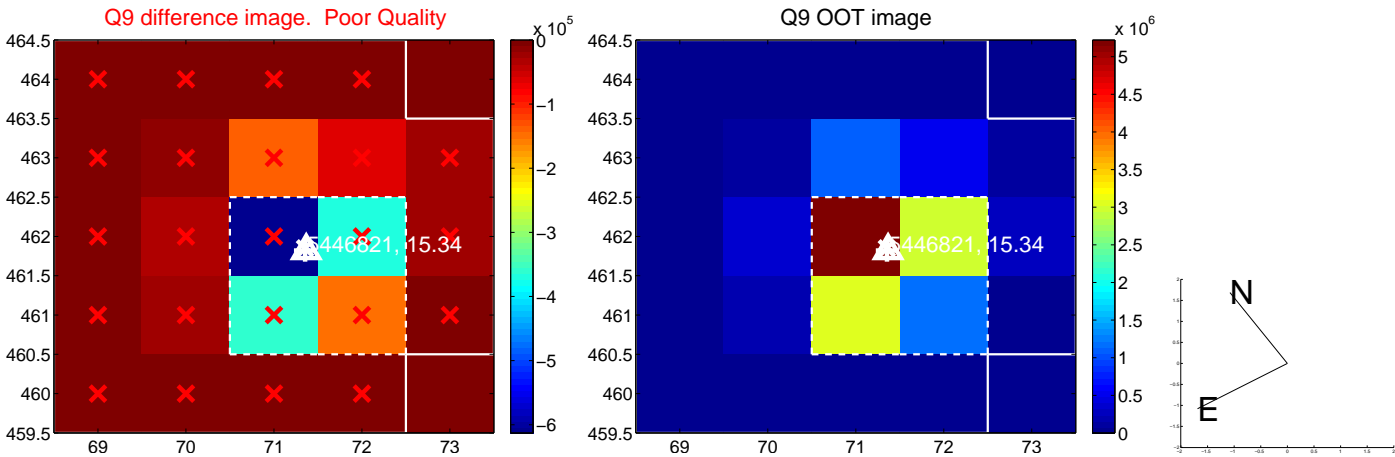
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



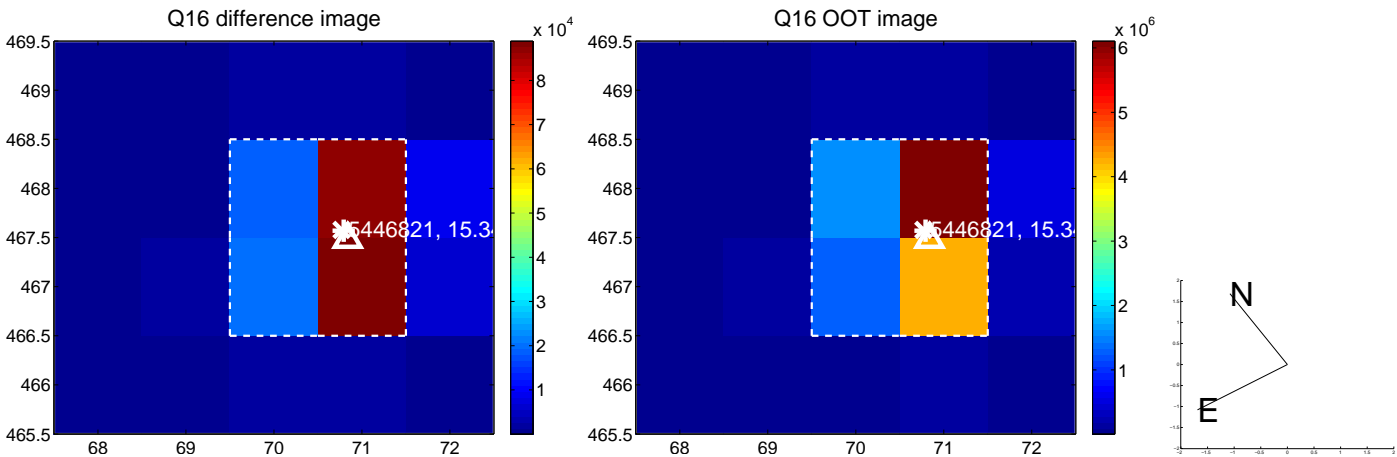
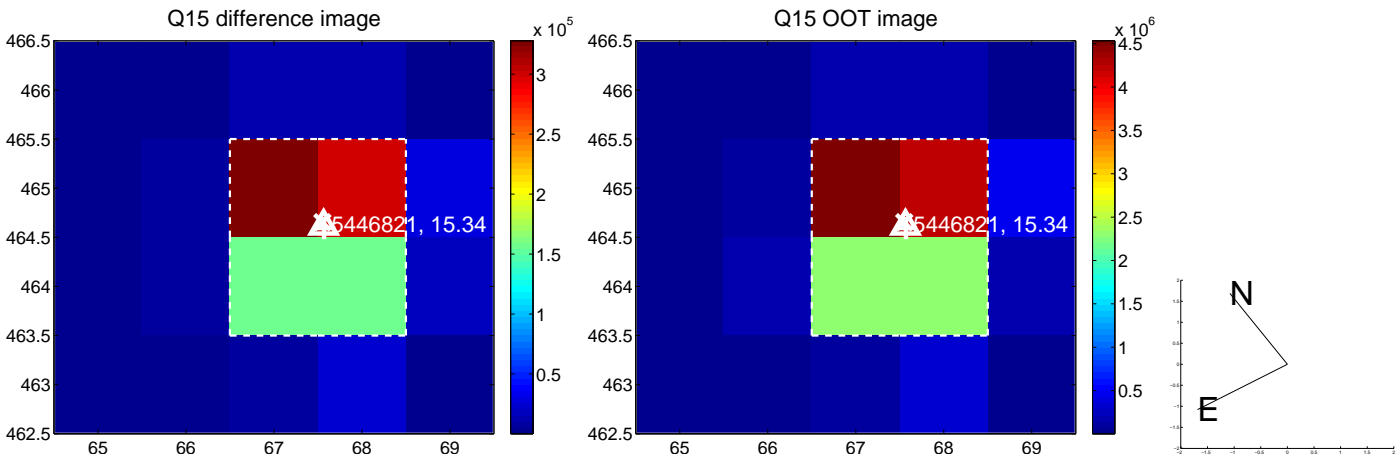
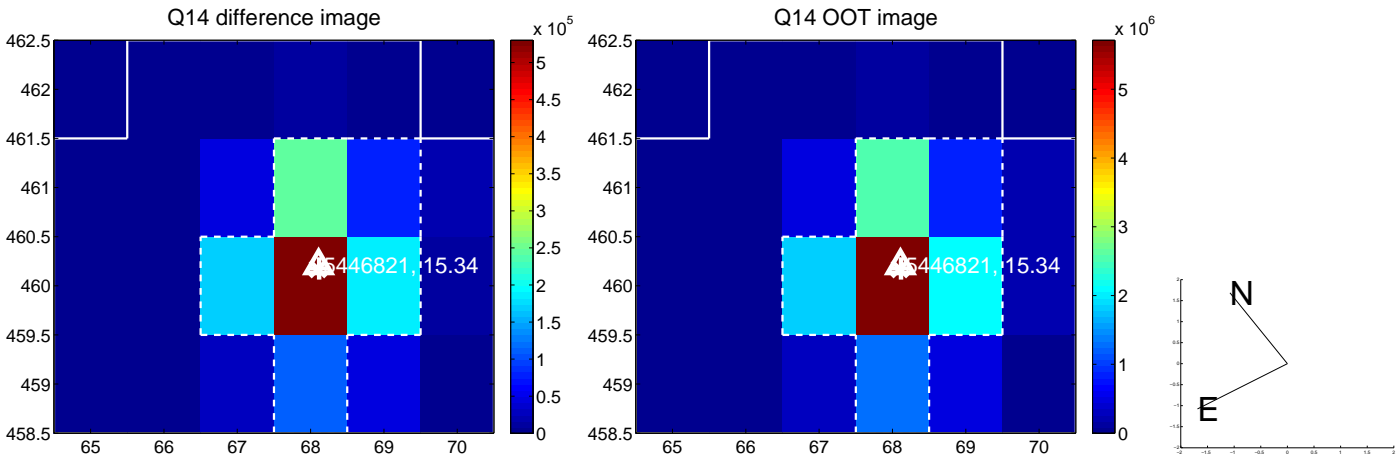
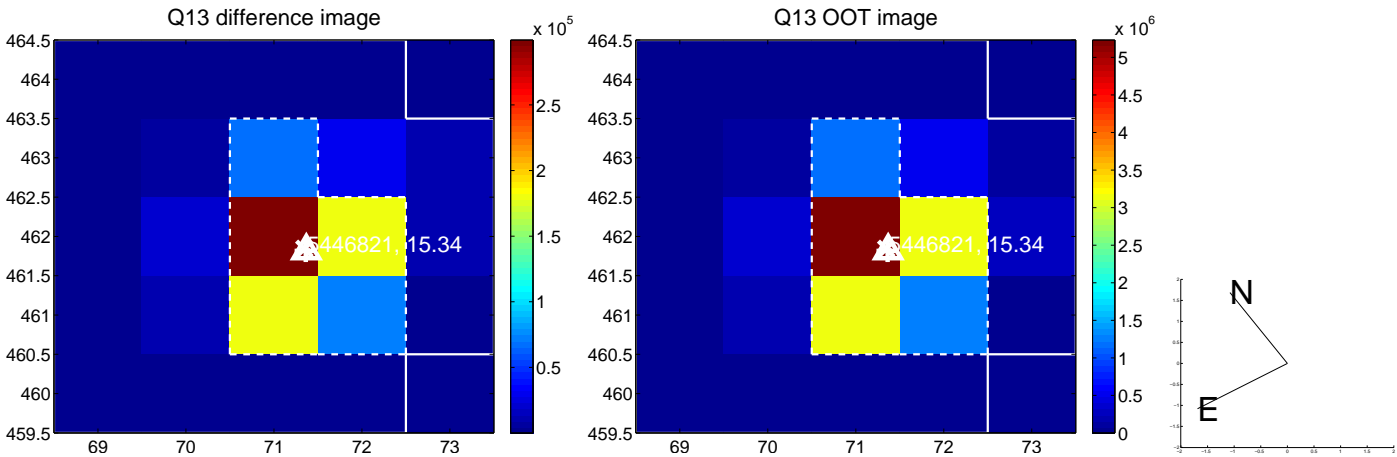
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



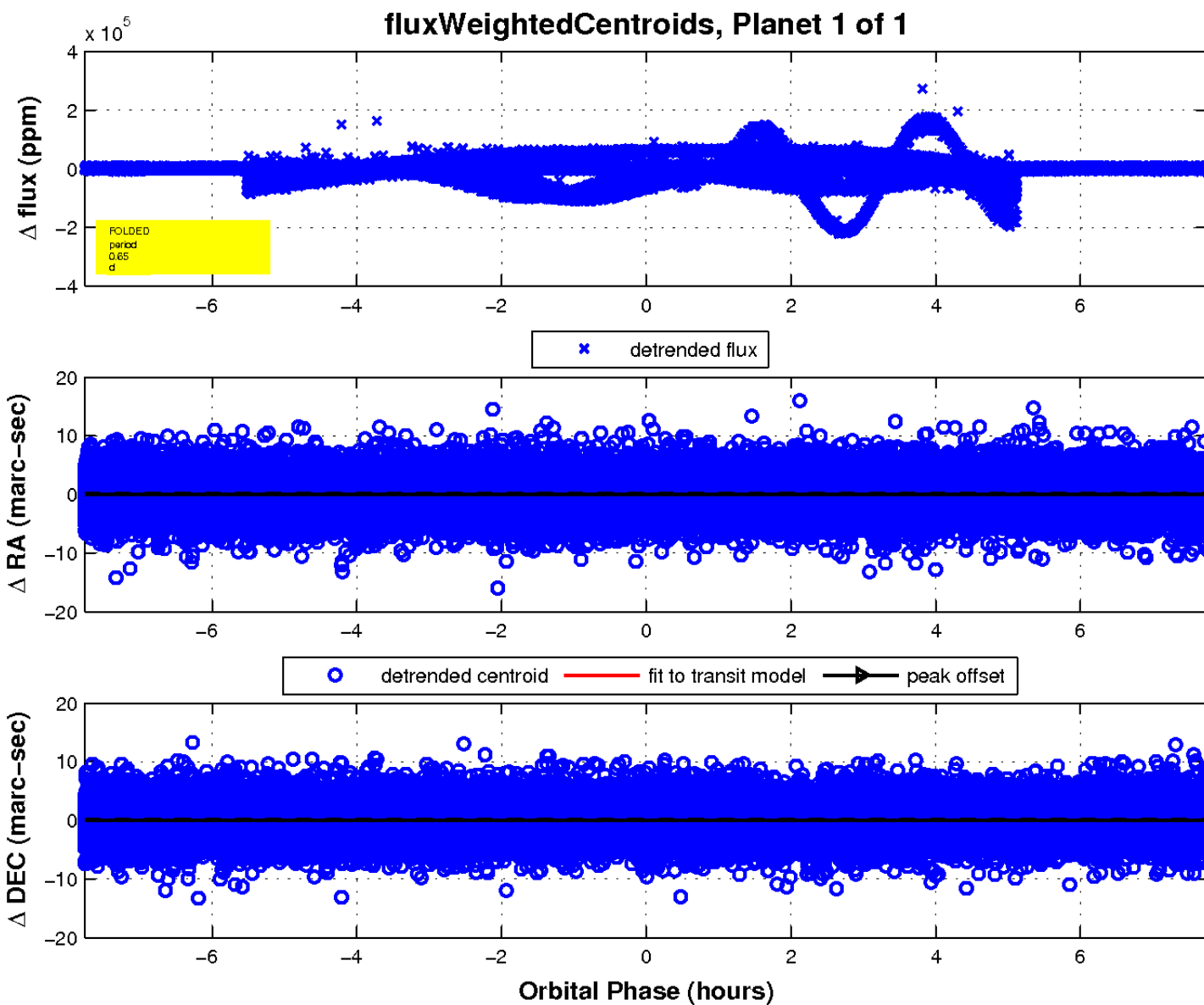
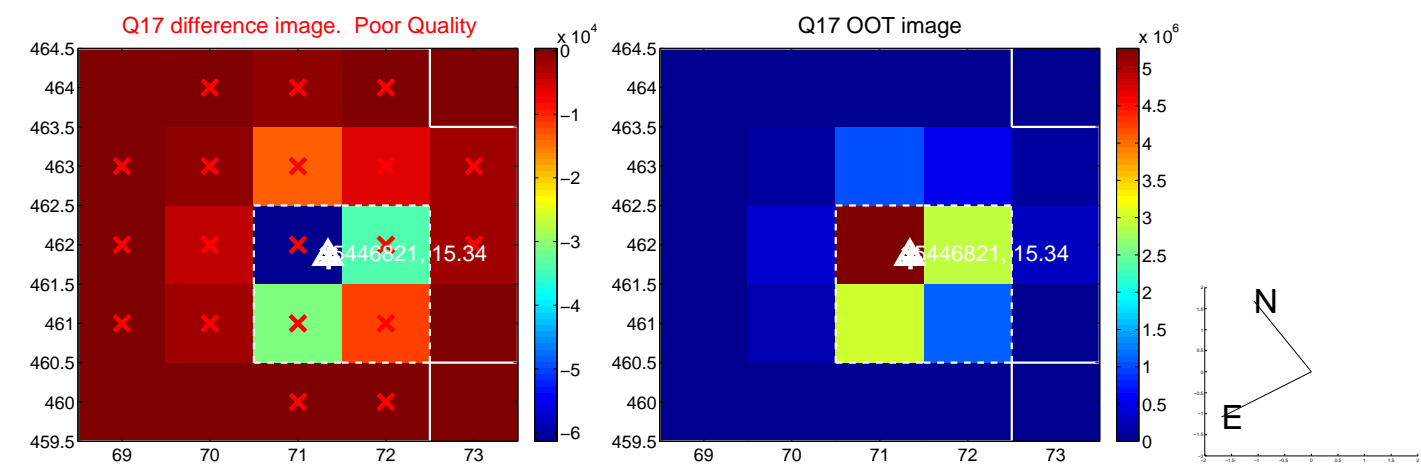
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

