

KIC 009491961

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})
009491961-01	OBS	No	0.663477	131.605610	3.6	5.743	8.9	3.1	4.31	6552	0.82	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009491961-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL--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.

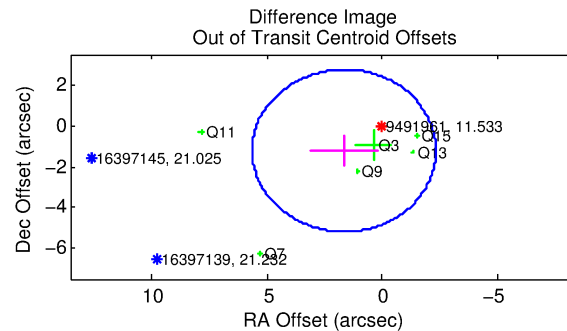
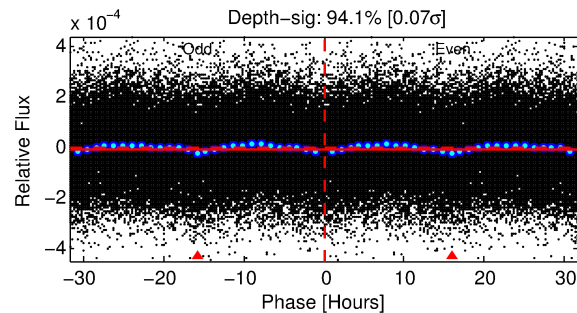
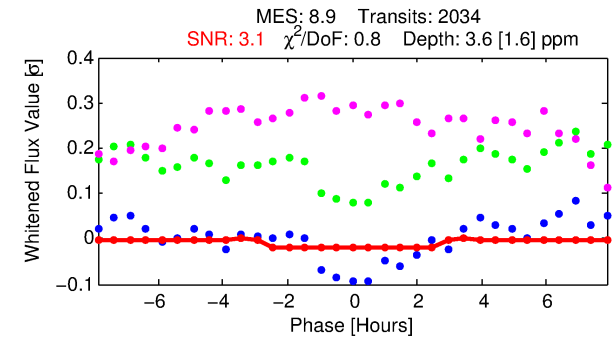
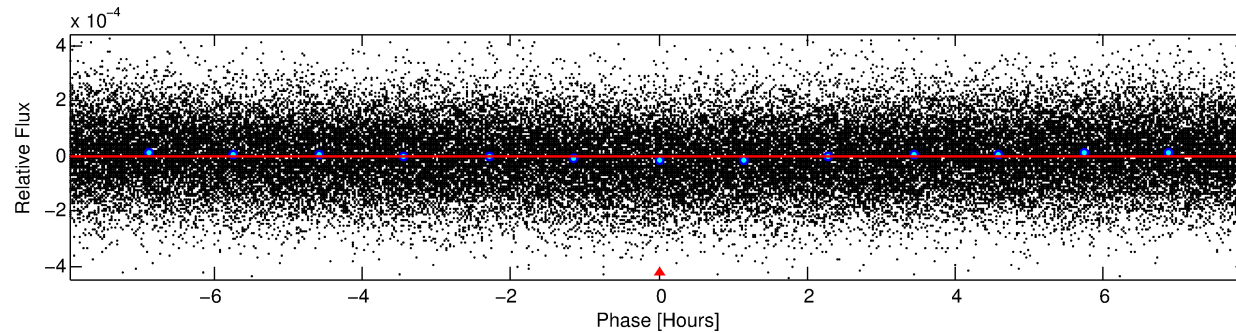
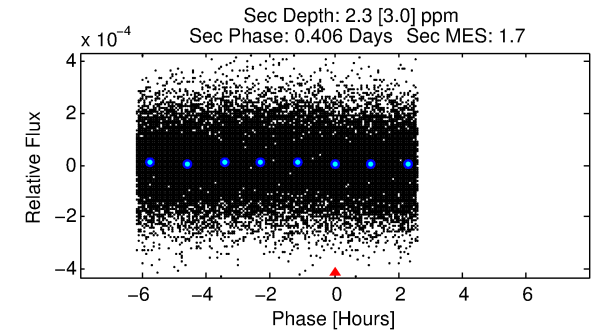
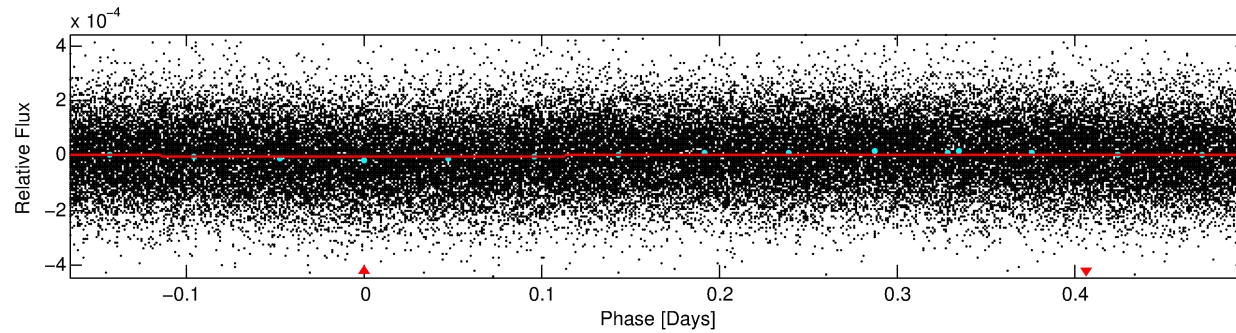
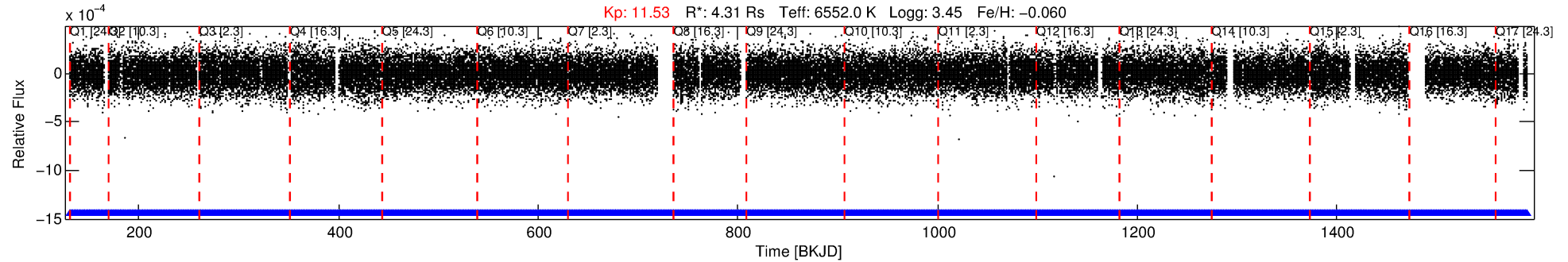
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009491961-01

No Significant Match Found

DV One-Page Summary

KIC: 9491961 Candidate: 1 of 1 Period: 0.663 d



DV Fit Results:

Period = 0.66348 [0.00004] d
Epoch = 131.6056 [0.0149] BKJD
Rp/R* = 0.0017 [0.0039]
a/R* = 1.11 [2.40]
b = 0.03 [469.97]
Seff = N/A
Teq = N/A
Rp = 0.82 [1.85] Re
a = N/A
Ag = N/A
Teffp = N/A

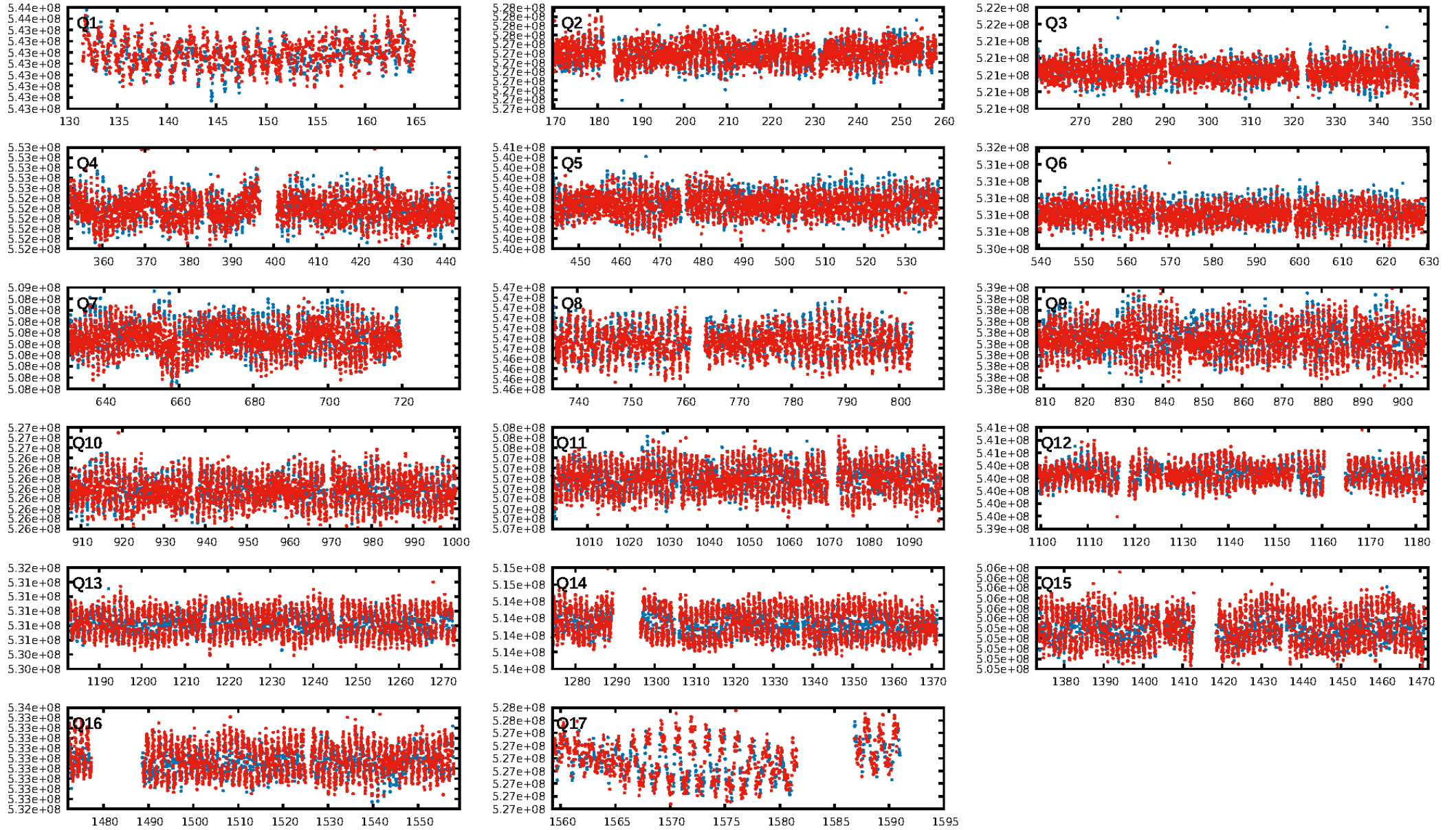
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1943/1943]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.061 arcsec [1.56σ]
KicOffset-rm: 2.113 arcsec [1.55σ]
OotOffset-st: 0/4/0/2 [6]
KicOffset-st: 0/4/0/2 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 1.00 [17/17]

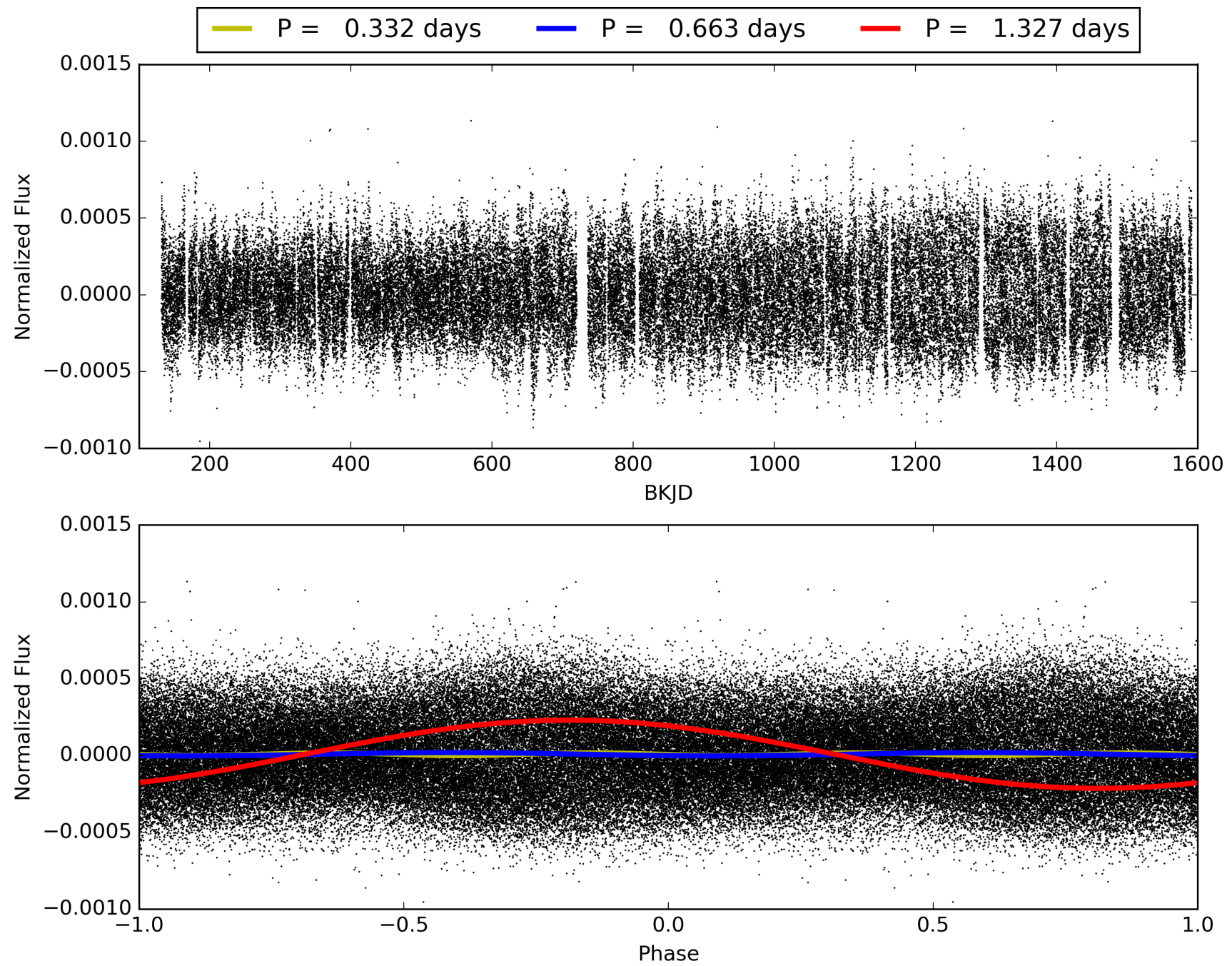
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:07:33 Z

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

TCE 009491961-01, PDC Light Curves

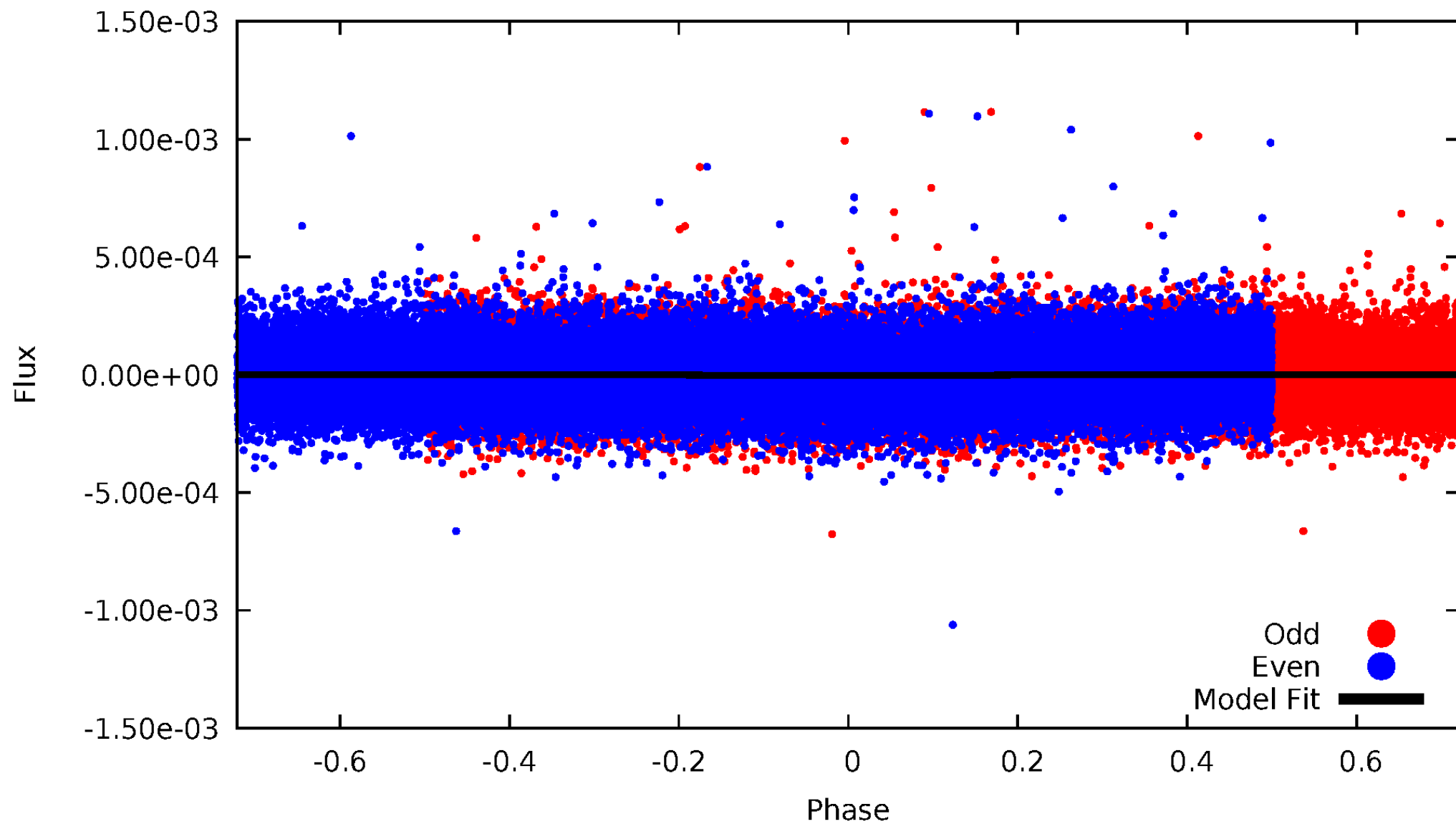


TCE 009491961-01



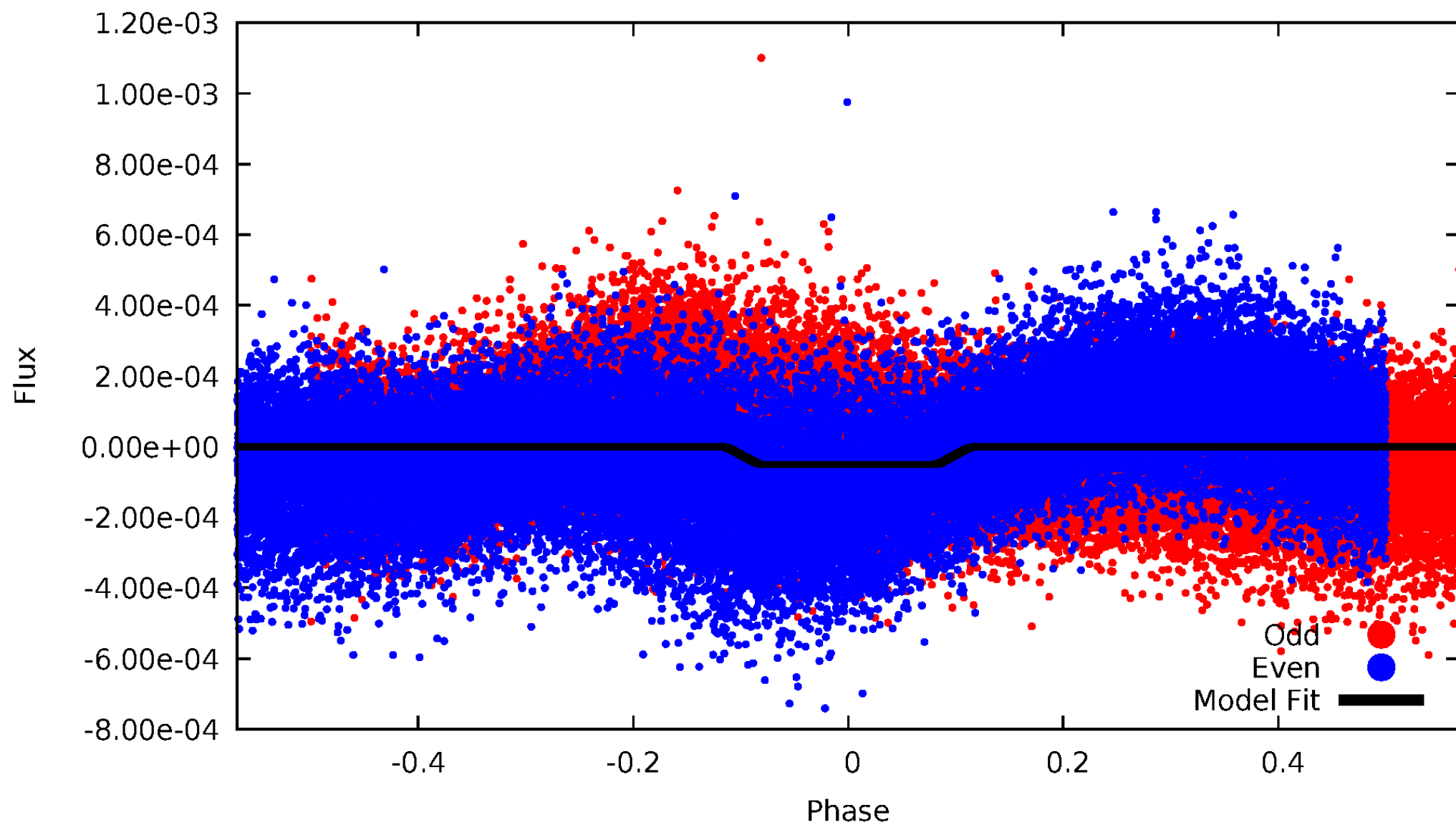
DV Odd/Even

TCE 009491961-01

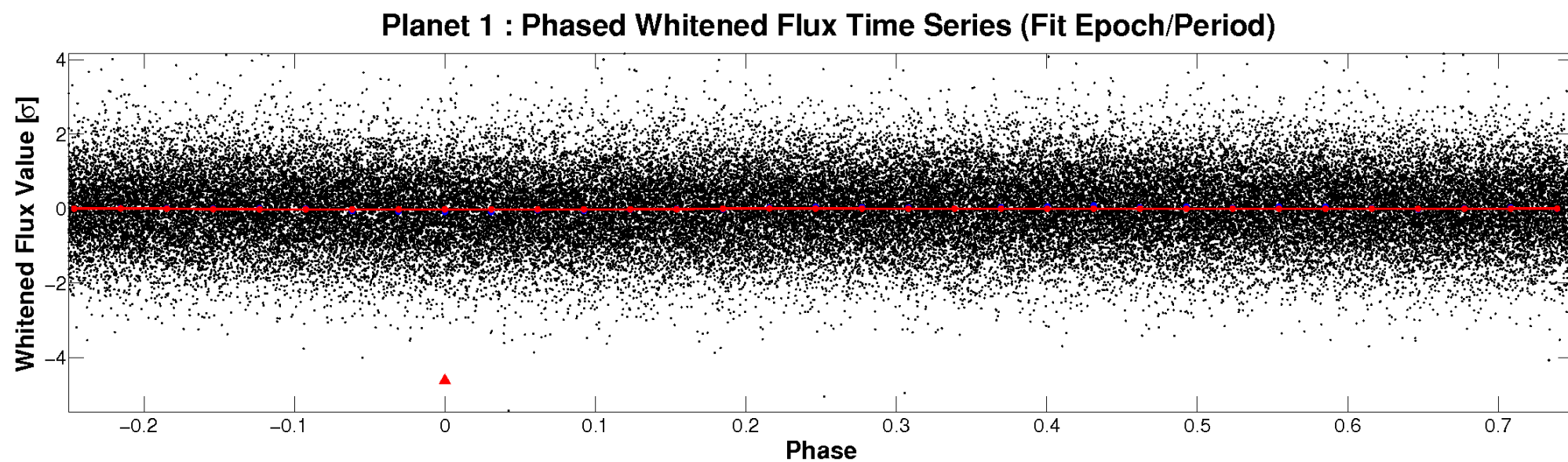
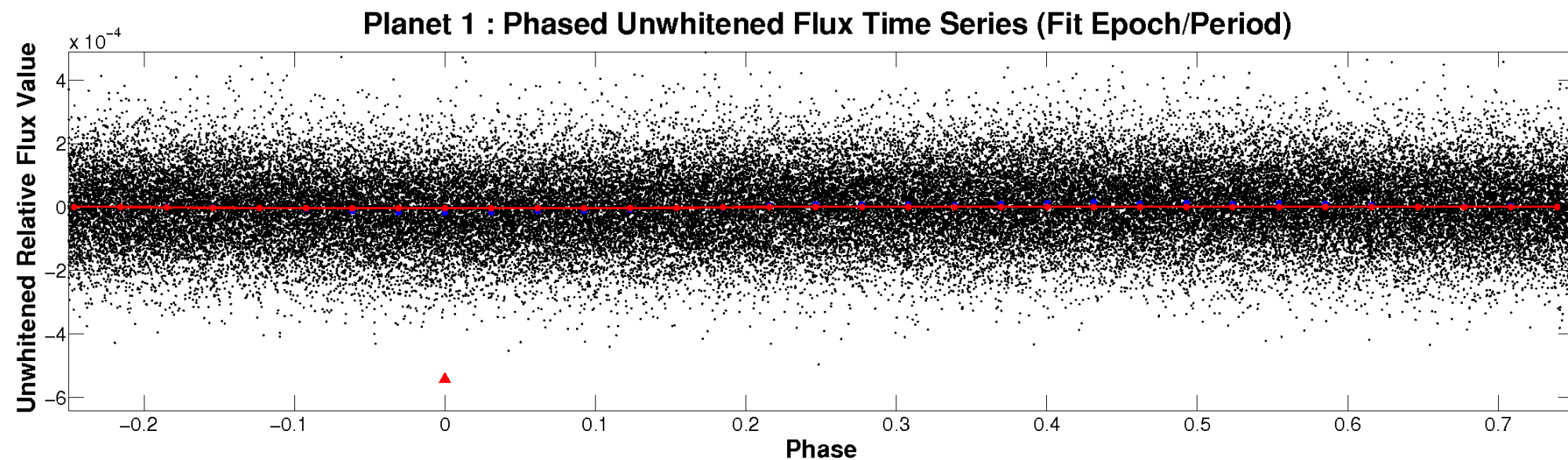


ALT Odd/Even

TCE 009491961-01

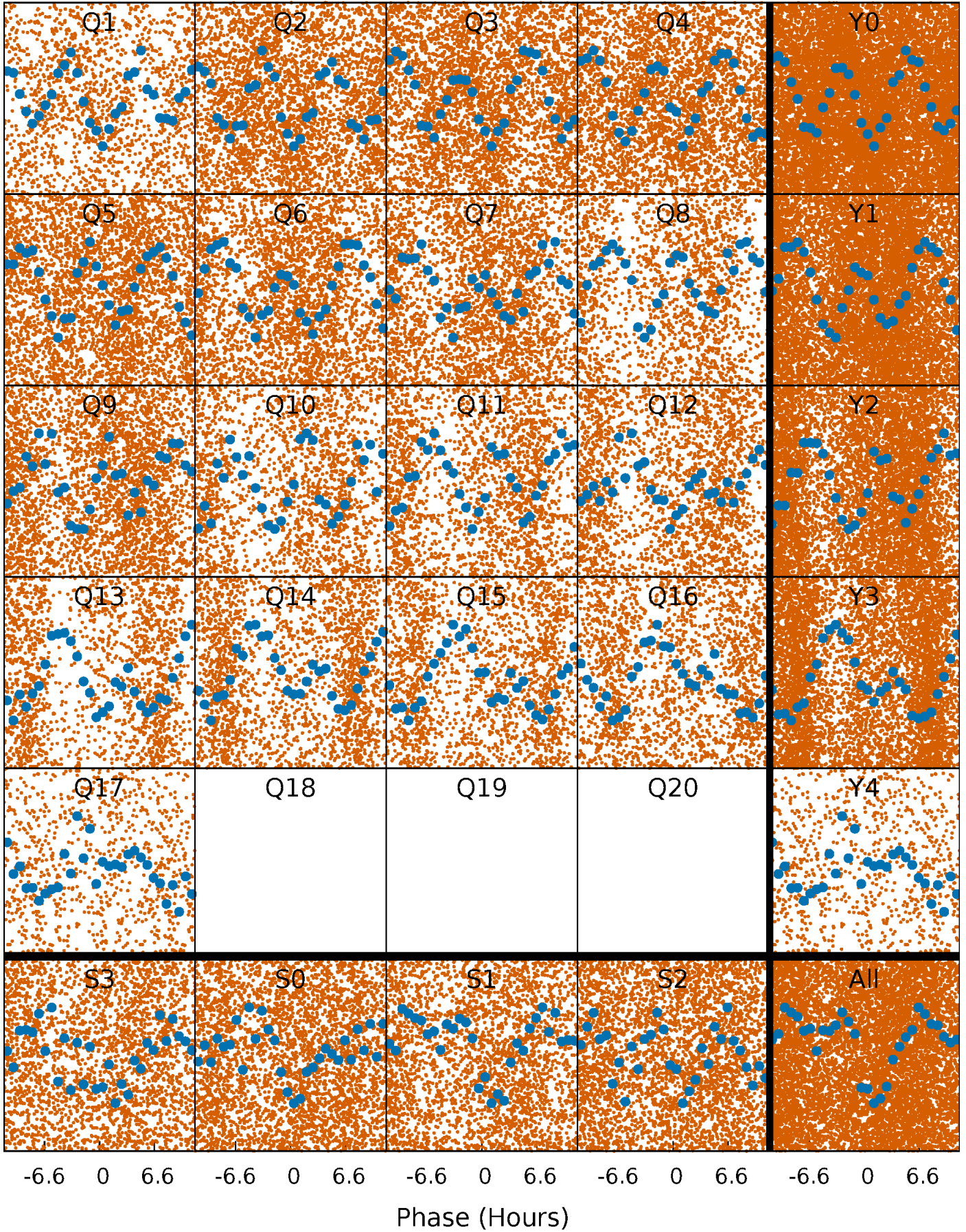


Non-Whitened Vs. Whitened Light Curve



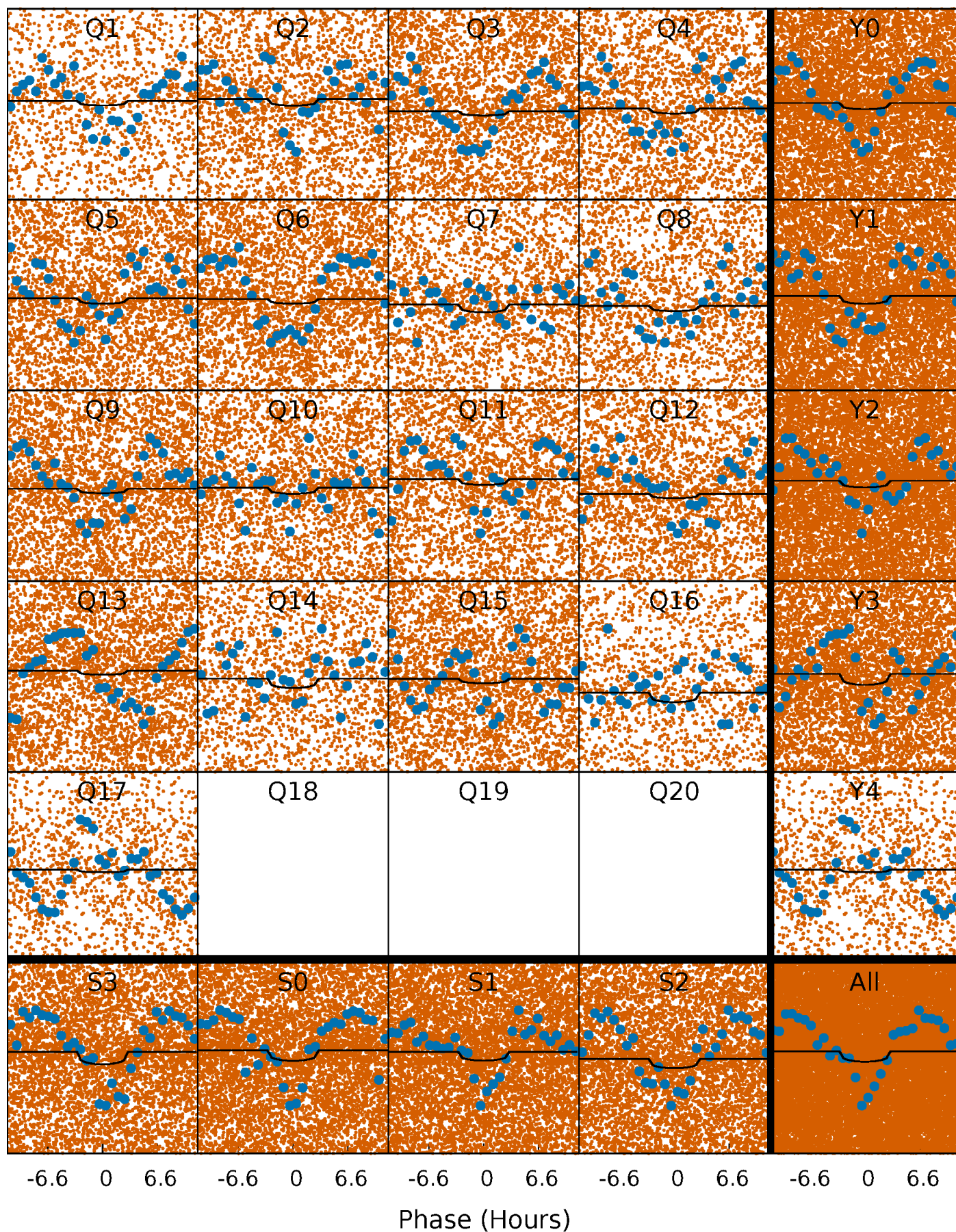
PDC Quarter-Phased Transit Curves

TCE 009491961-01 P= 0.663477 Days $T_0=131.605610$ (BKJD)



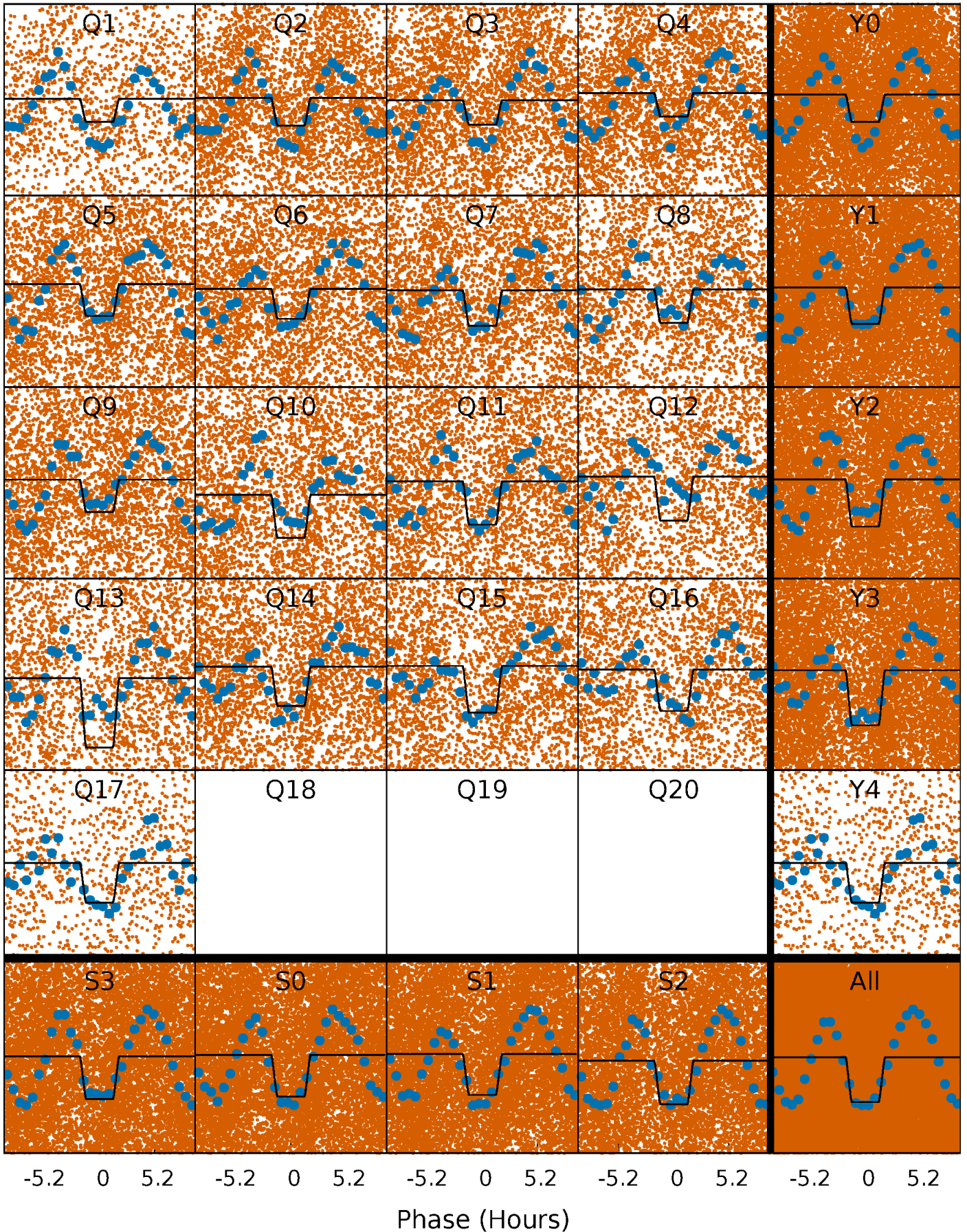
DV Quarter-Phased Transit Curves

TCE 009491961-01 P= 0.663477 Days $T_0=131.605610$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

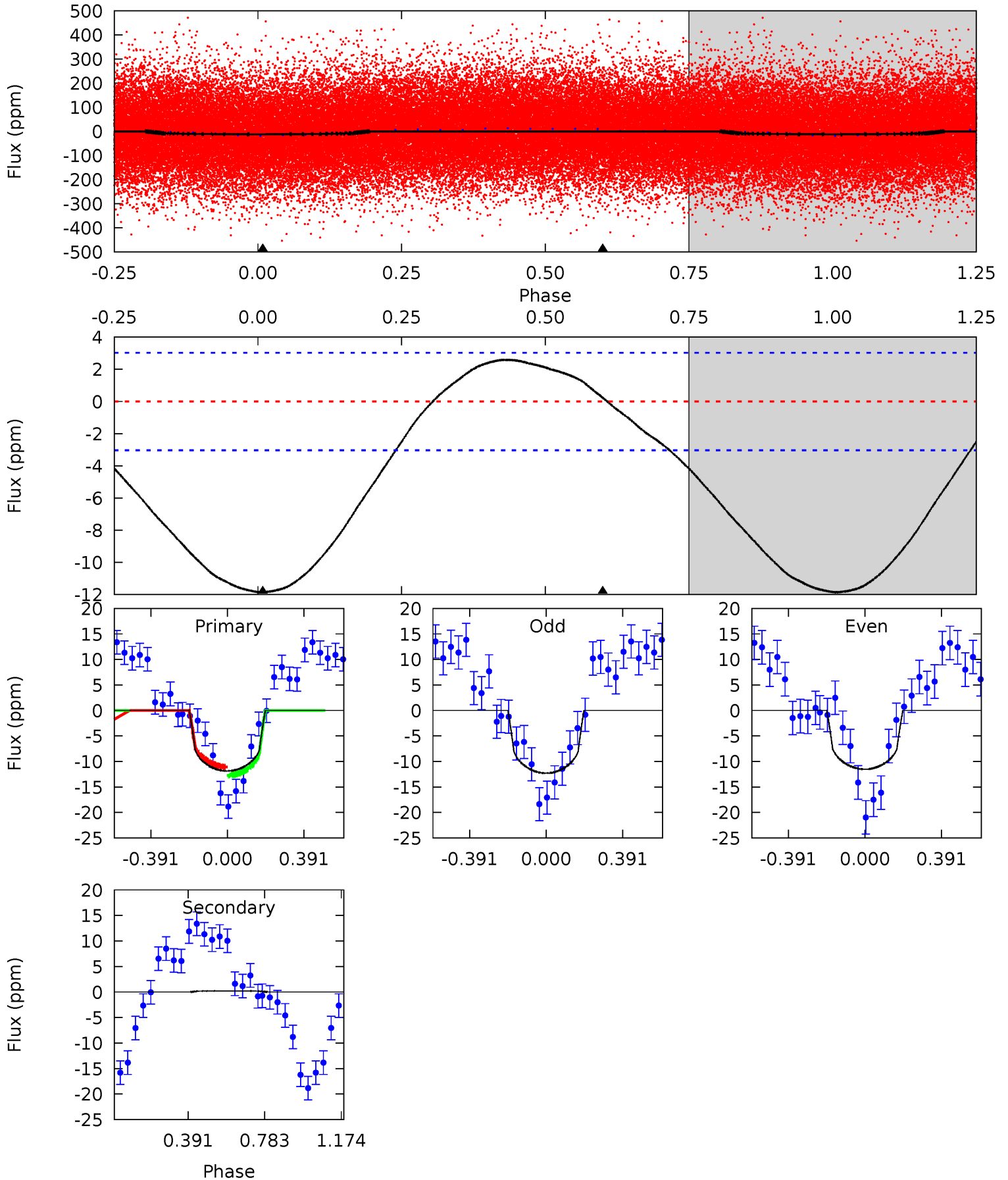
TCE 009491961-01 P= 0.663640 Days $T_0=131.611235$ (BKJD)



DV Model-Shift Uniqueness Test

009491961-01, P = 0.663477 Days, E = 130.942133 Days

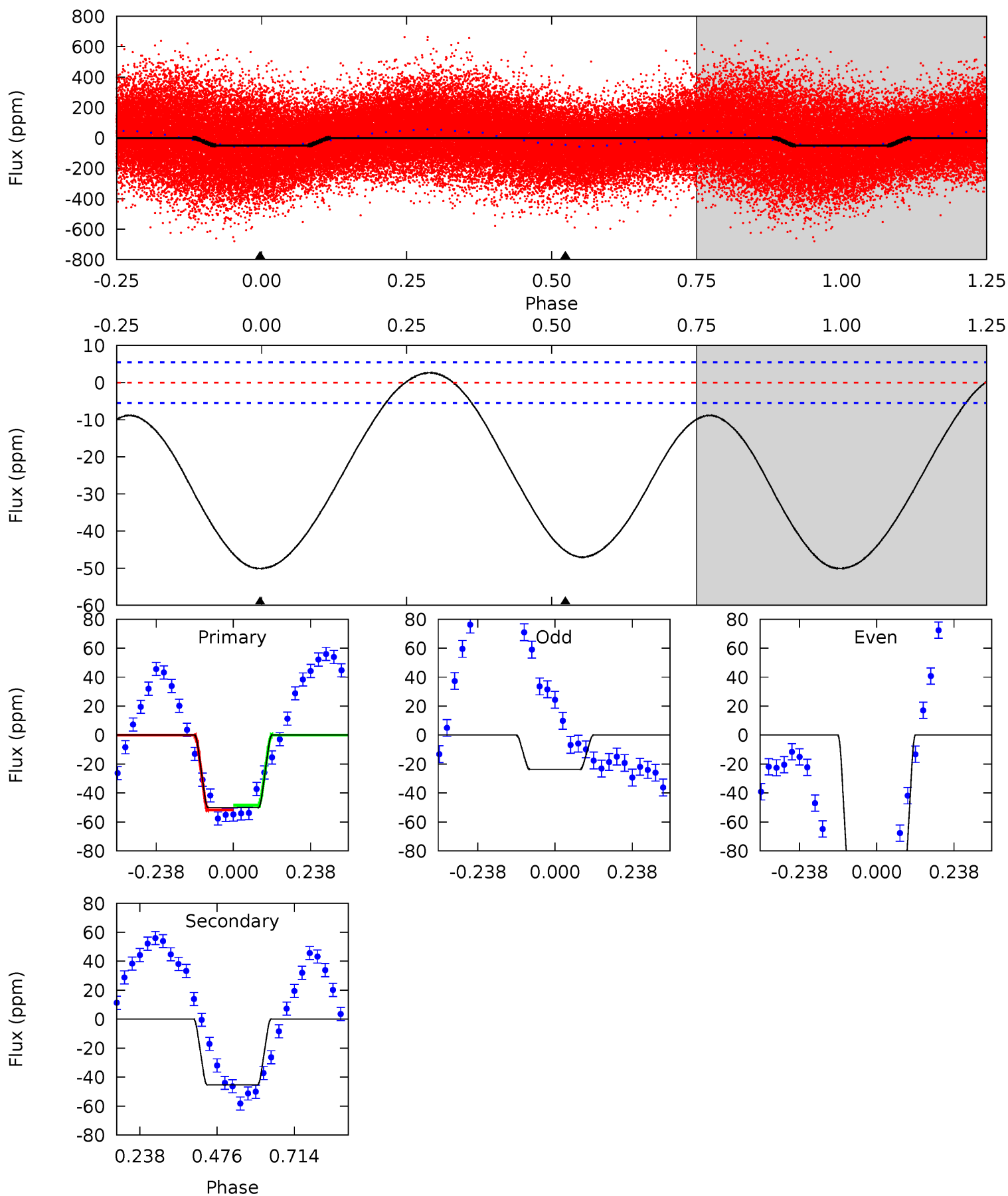
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	-0.32	0	0	4.27	0.86	1.56	16.7	16.7	-0.32	-0.32	0.55	1.09	0.18	1.19



Alt Model-Shift Uniqueness Test

009491961-01, P = 0.663640 Days, E = 130.947595 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.2	36.3	0	0	4.38	1.18	3.69	40.2	40.2	36.3	36.3	40.9	1.02	0.05	1.23



Stellar Parameters For KIC 009491961

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6552^{+164}_{-164}	$3.450^{+0.352}_{-0.088}$	$-0.060^{+0.300}_{-0.250}$	$4.307^{+0.587}_{-1.644}$	$1.907^{+0.139}_{-0.371}$	$0.034^{+0.089}_{-0.009}$
	+3%/-3%	+10%/-3%	+500%/-417%	+14%/-38%	+7%/-19%	+264%/-27%
Source	PHO1	FLK73	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 009491961-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1	$1.52^{+1.48}_{-1.06}$	6094^{+325}_{-599}	-5125^{+670}_{-624}	$-0.011^{+0.057}_{-0.196}$
Alt.	-45 ± 1	$3.14^{+1.81}_{-1.64}$	6047^{+356}_{-590}	5503^{+4220}_{-2007}	$0.846^{+3.049}_{-0.507}$

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

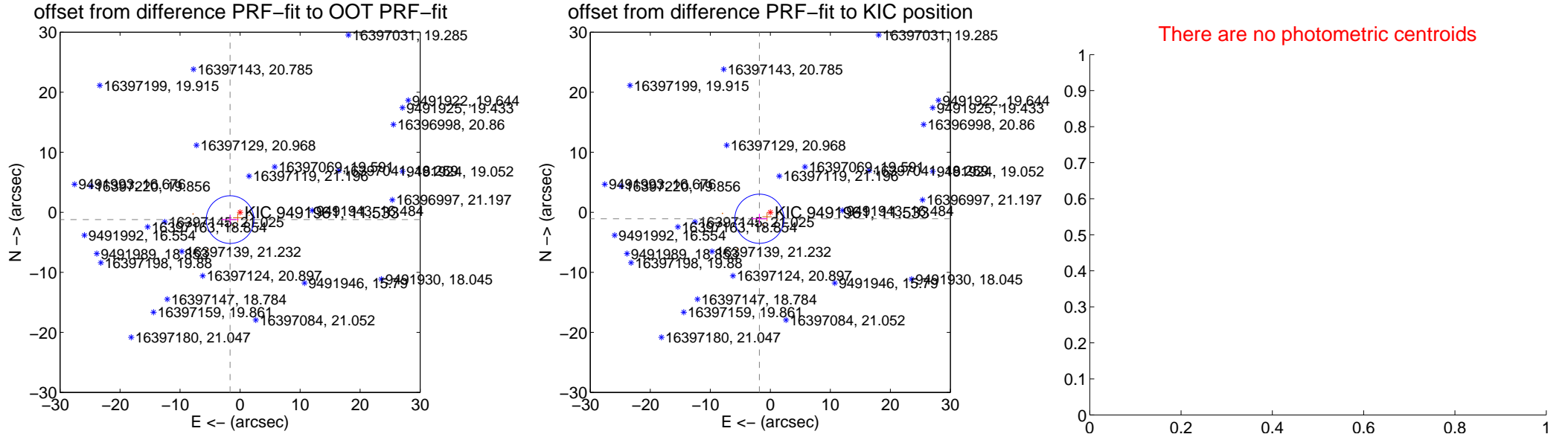
DV Centroid Data

Supplemental centroid analysis for 009491961-01. **Kepler magnitude: 11.53.** Transit SNR 3.10

There are 0 quarters with good PRF difference image offsets

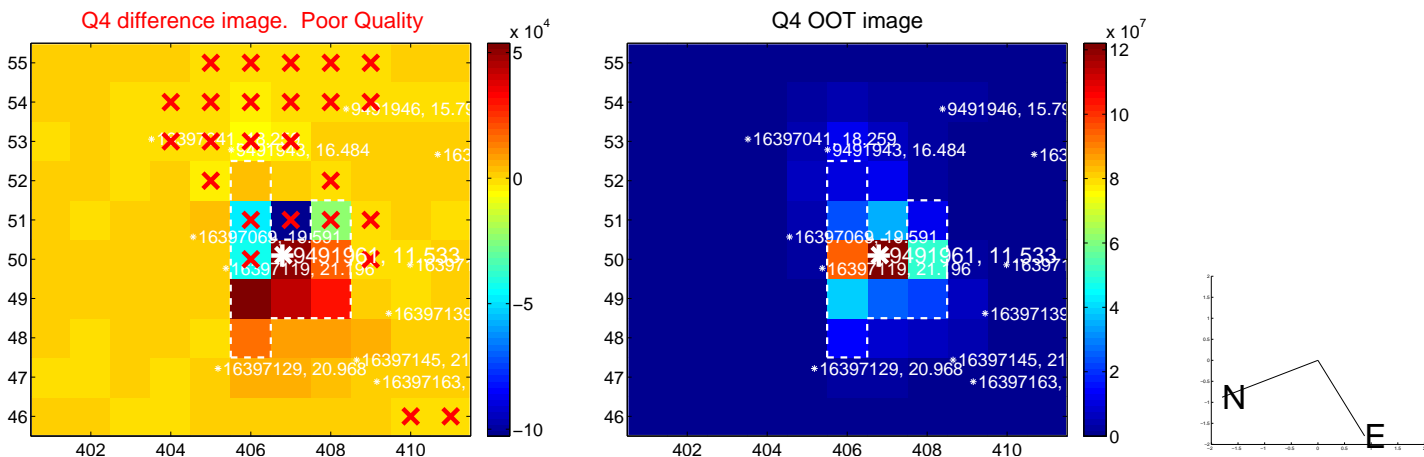
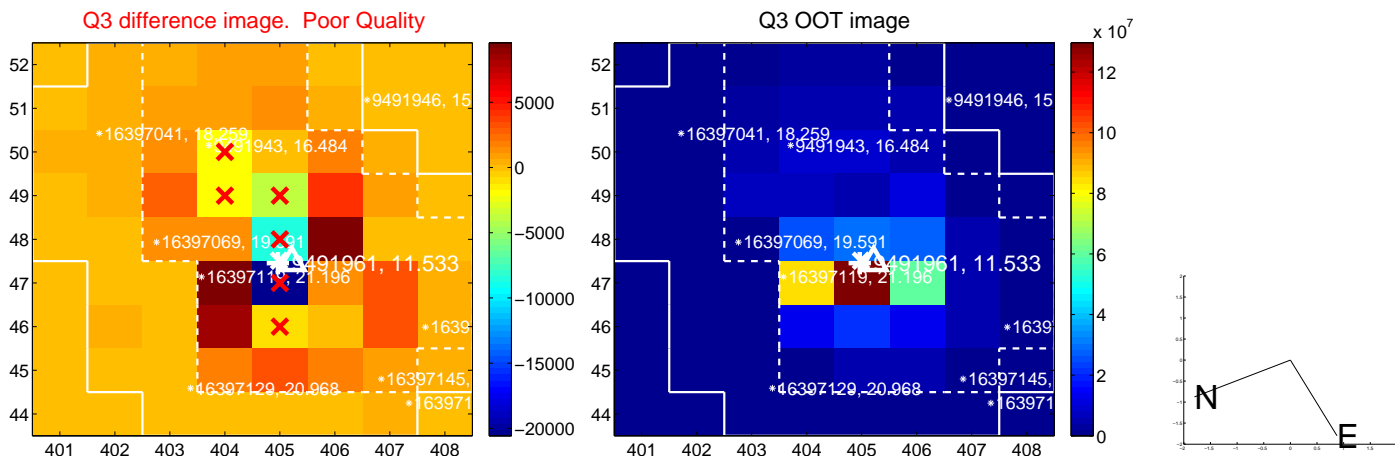
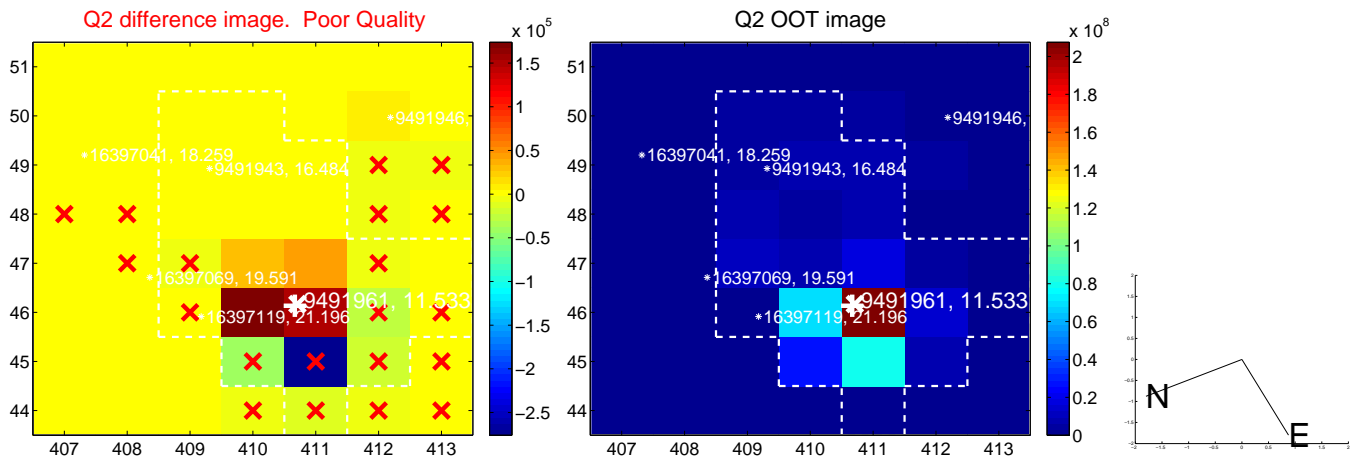
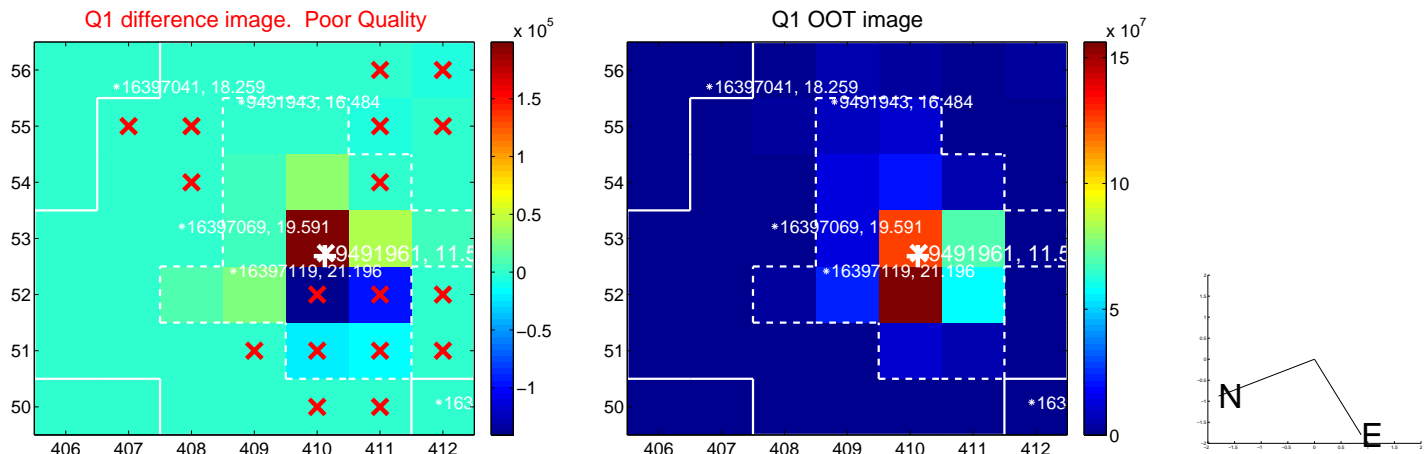
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.061 ± 1.324	1.56	1.663 ± 1.429	-1.217 ± 0.757
PRF-fit source offset from KIC position	2.113 ± 1.365	1.55	1.819 ± 1.313	-1.075 ± 0.829
photometric centroid source offset	—	—	—	—

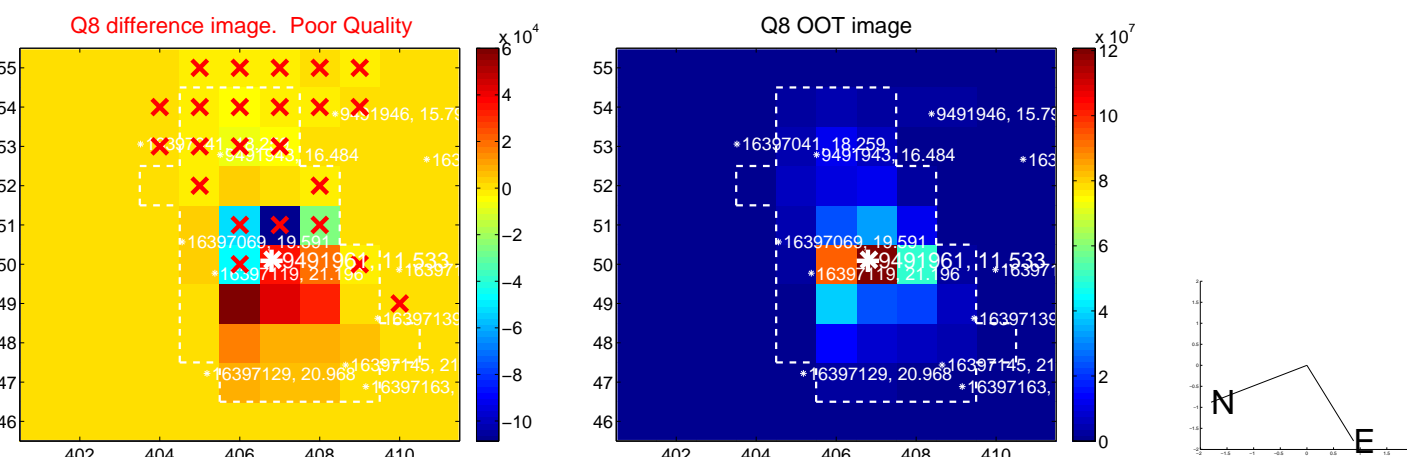
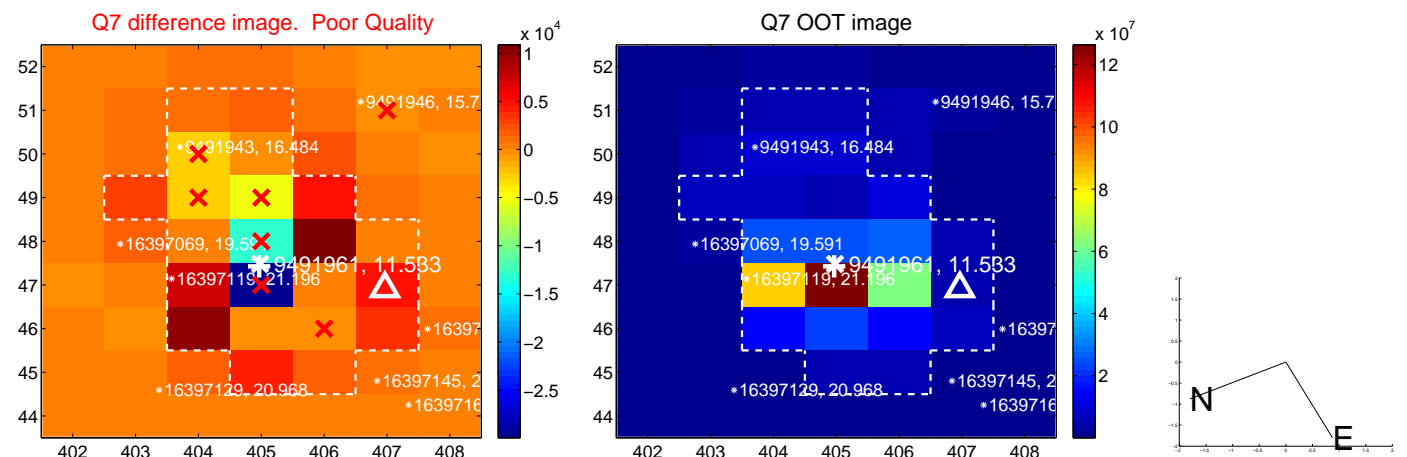
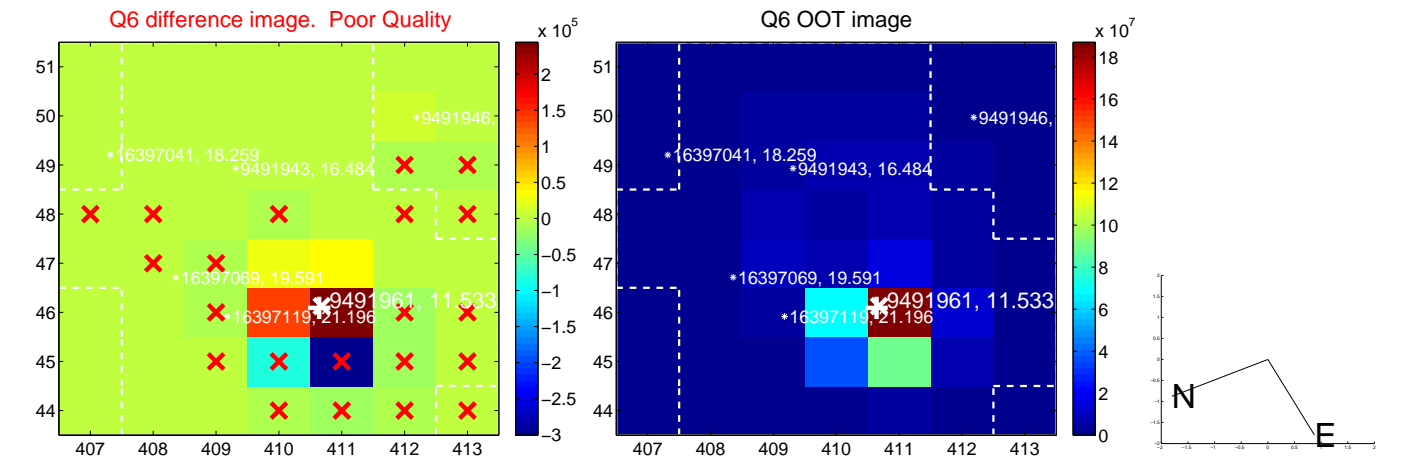
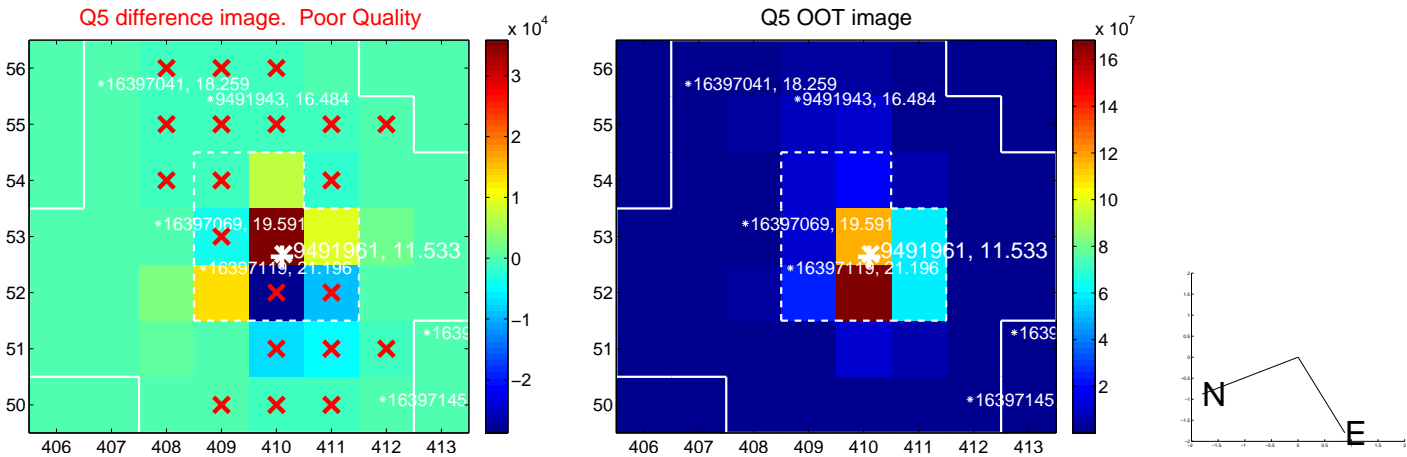


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

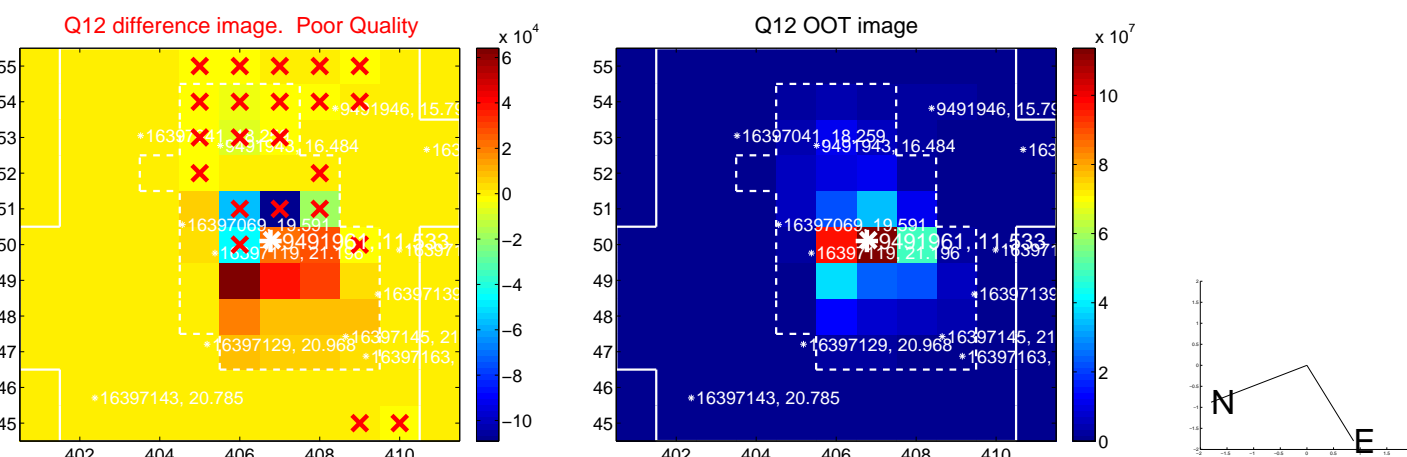
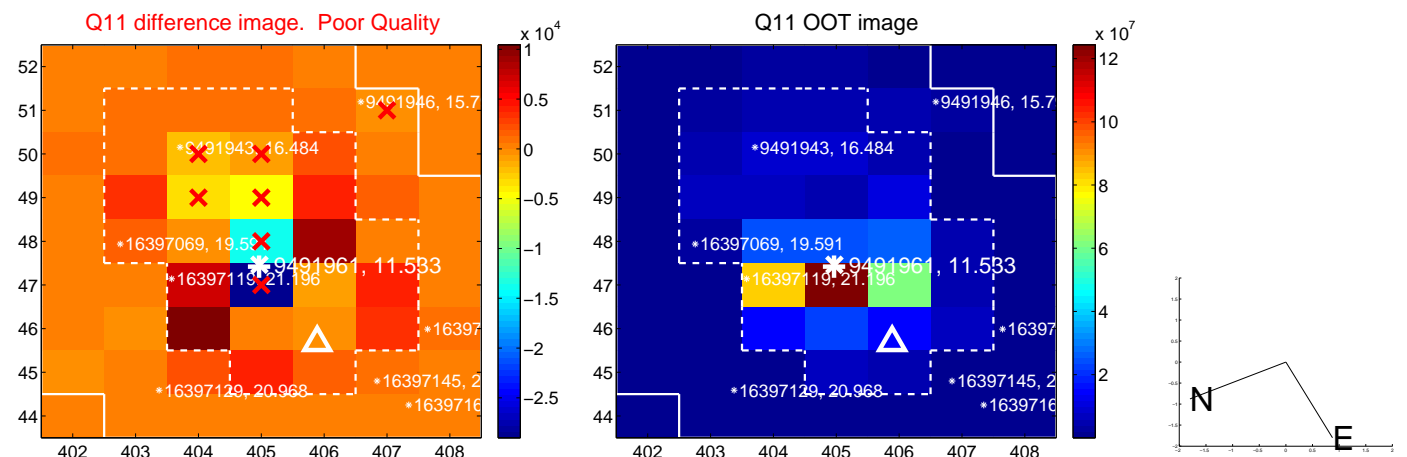
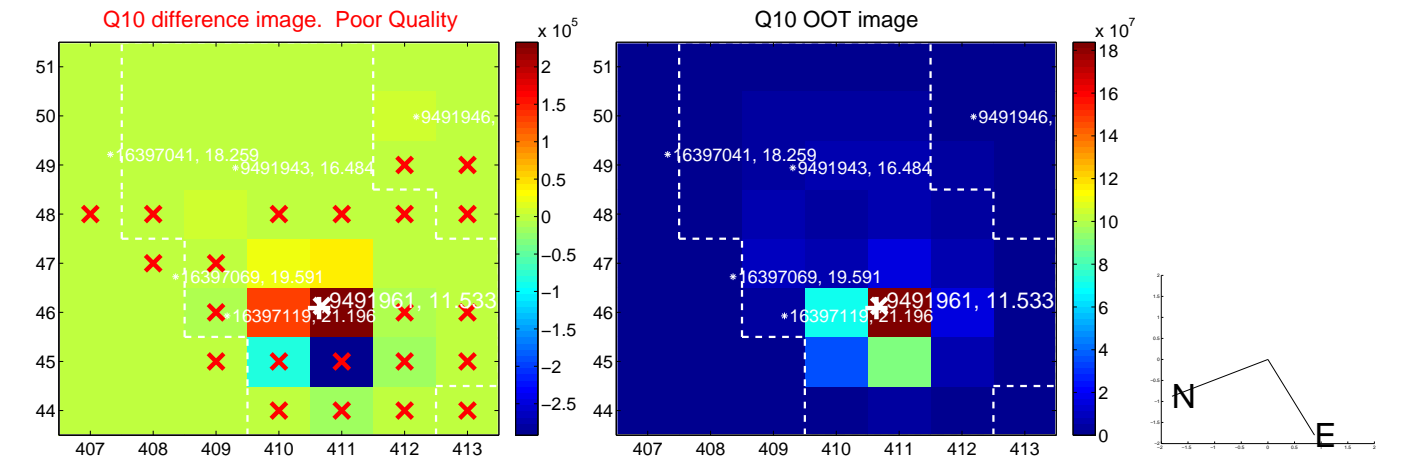
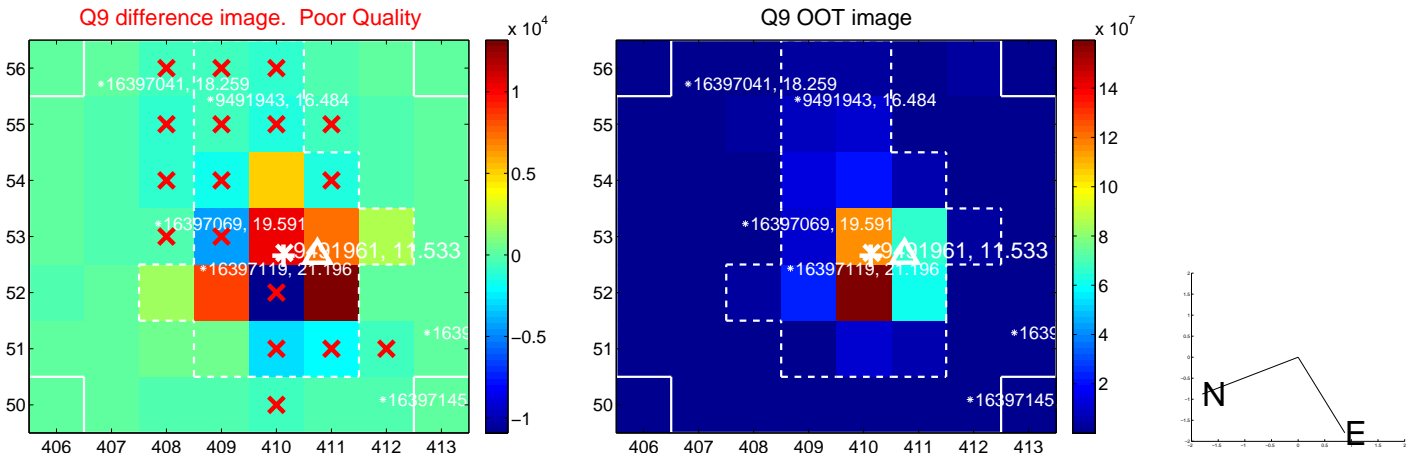
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



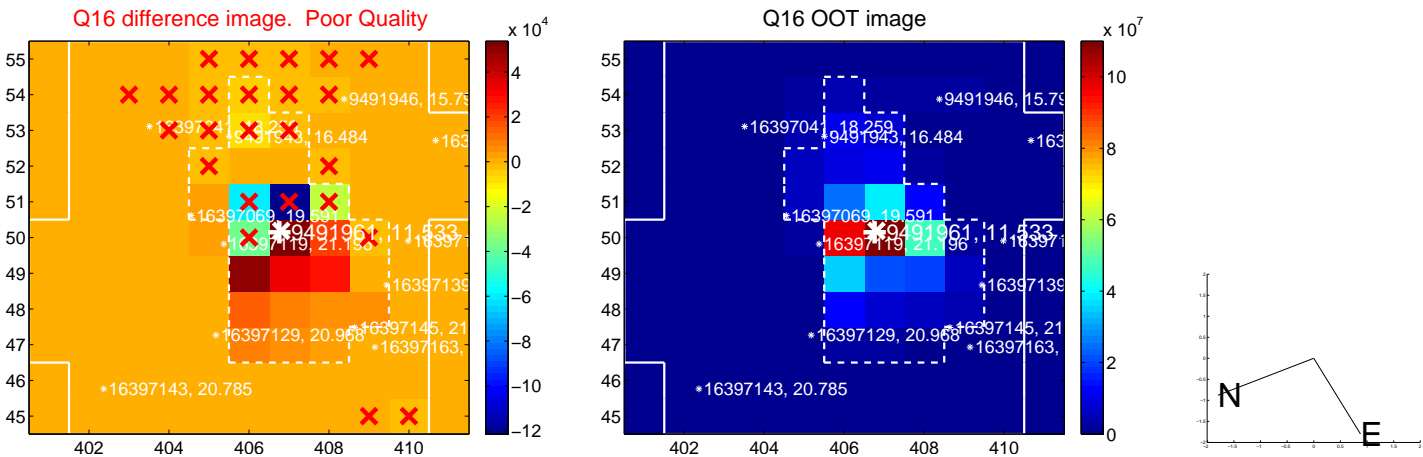
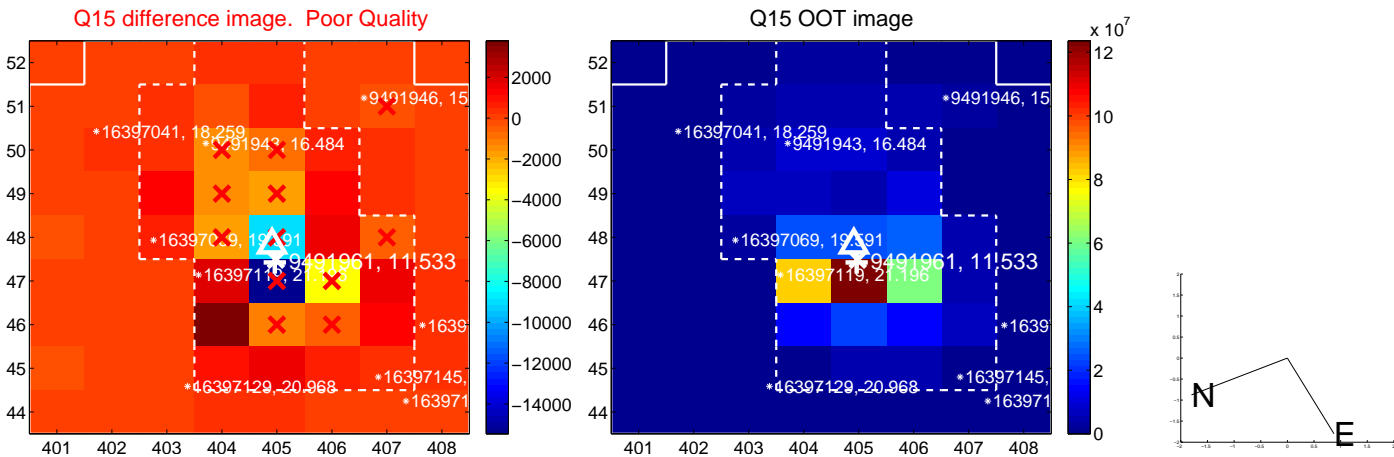
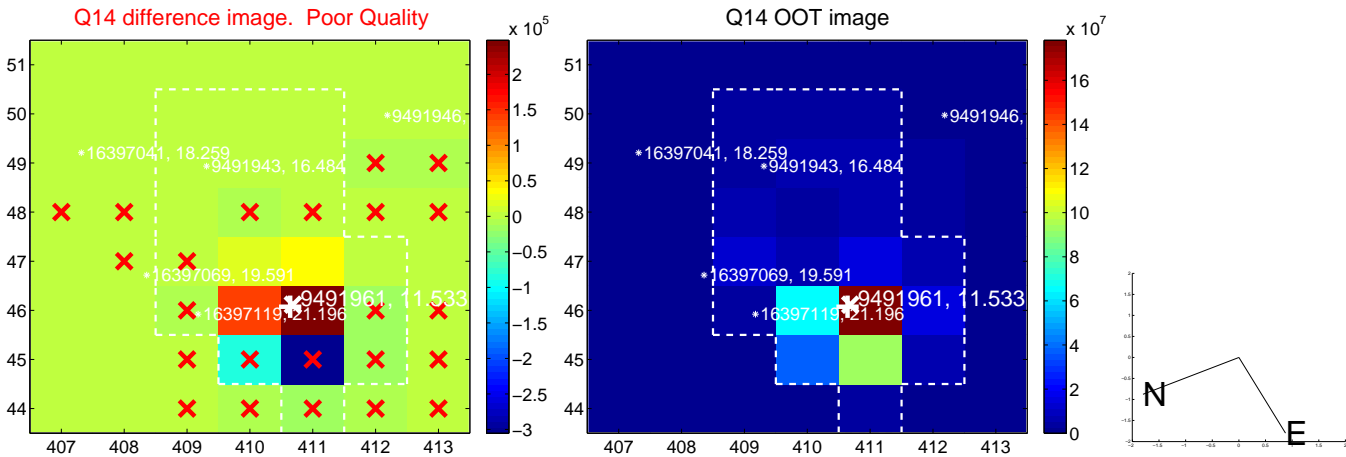
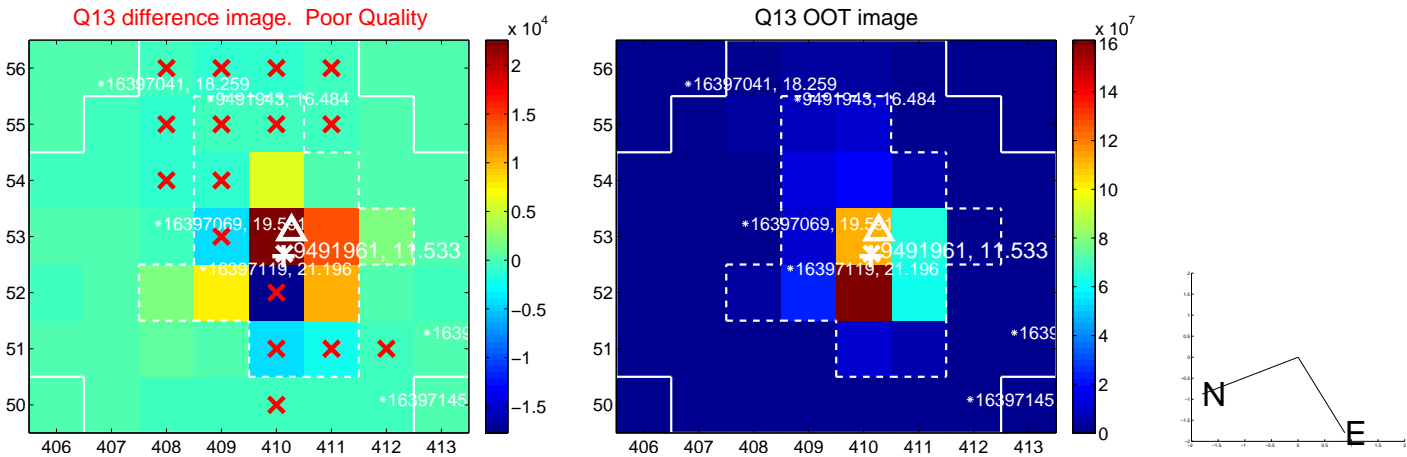
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



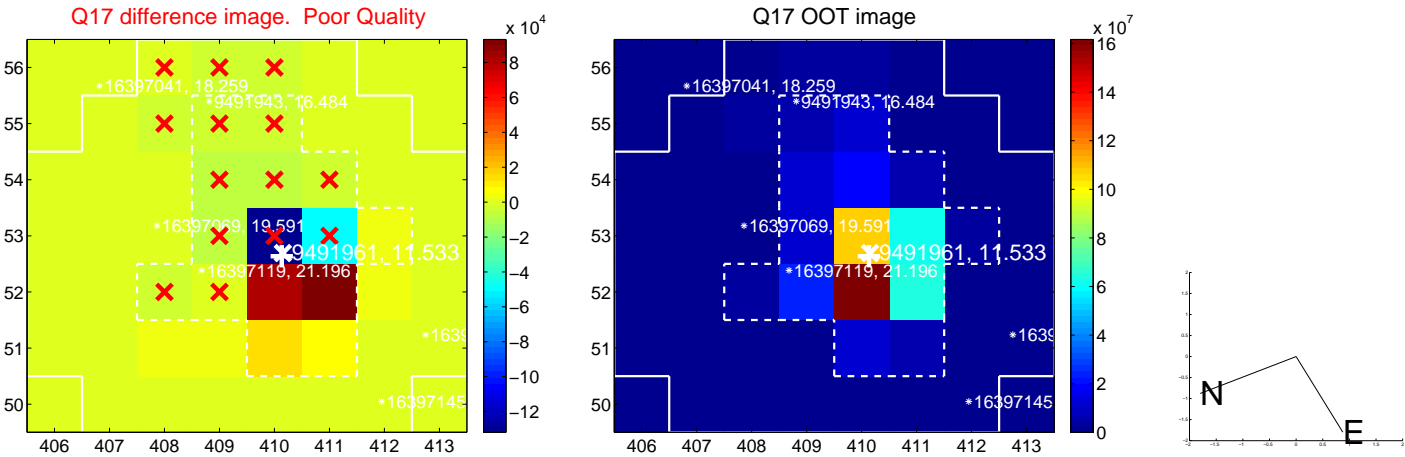
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

