

KIC 009591182

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})
009591182-01	OBS	No	0.976145	132.309480	33.6	3.526	7.5	6.2	13.44	6698	9.14	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009591182-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

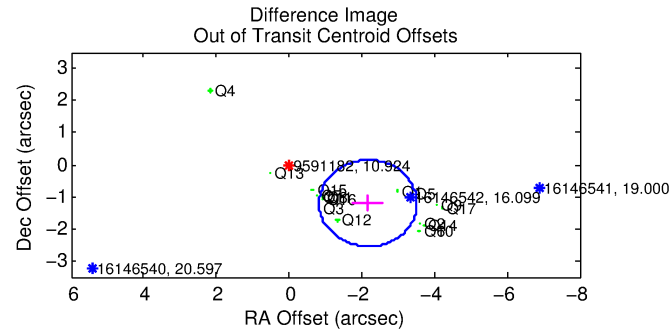
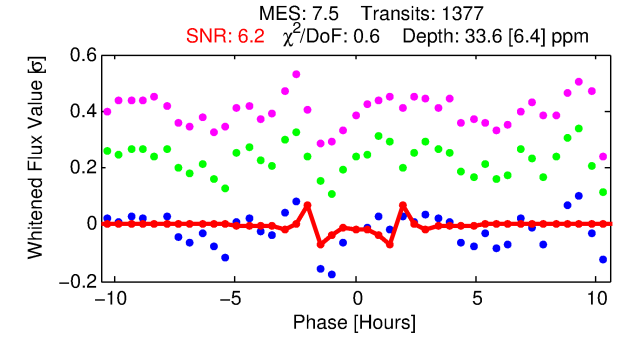
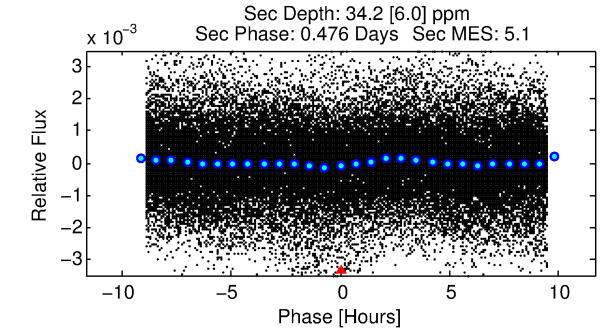
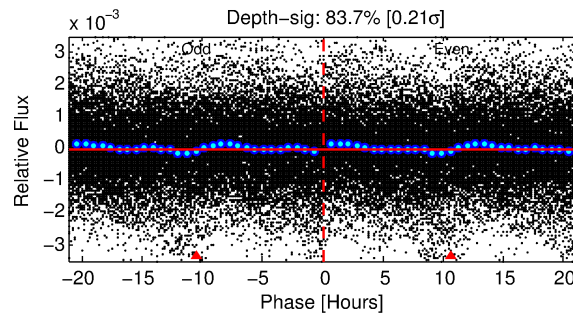
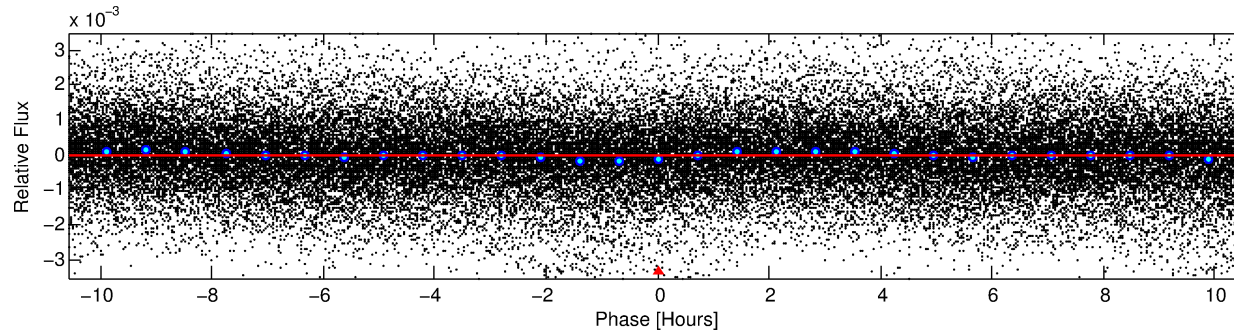
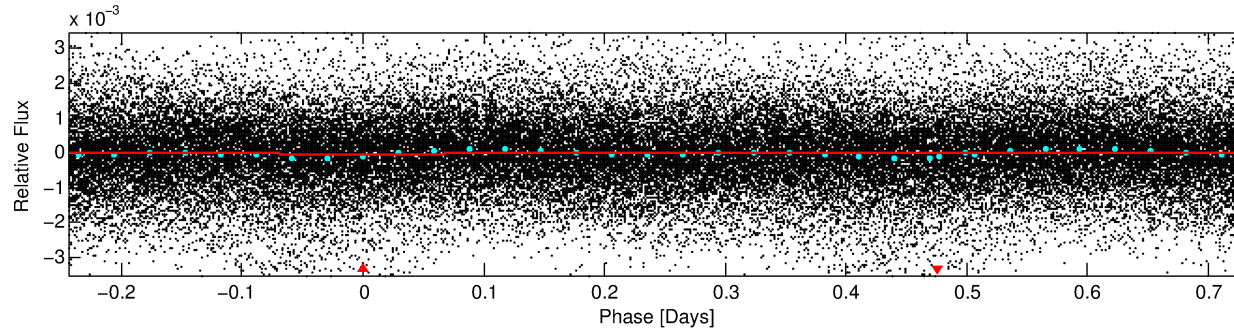
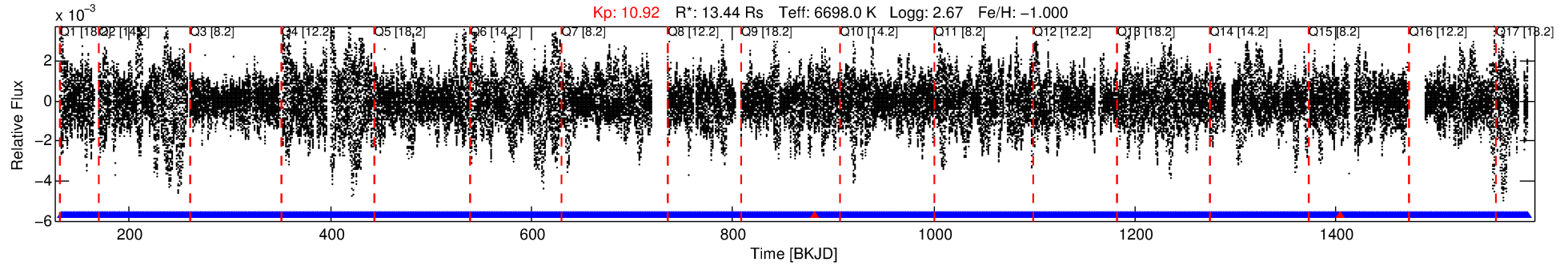
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009591182-01

No Significant Match Found

DV One-Page Summary

KIC: 9591182 Candidate: 1 of 1 Period: 0.976 d



DV Fit Results:

Period = 0.97614 [0.00001] d
Epoch = 132.3095 [0.0014] BKJD
Rp/R* = 0.0062 [0.0011]
a/R* = 1.34 [0.47]
b = 0.90 [0.17]
Seff = N/A
Teq = N/A
Rp = 9.14 [3.48] Re
a = N/A
Ag = N/A
Teffp = N/A

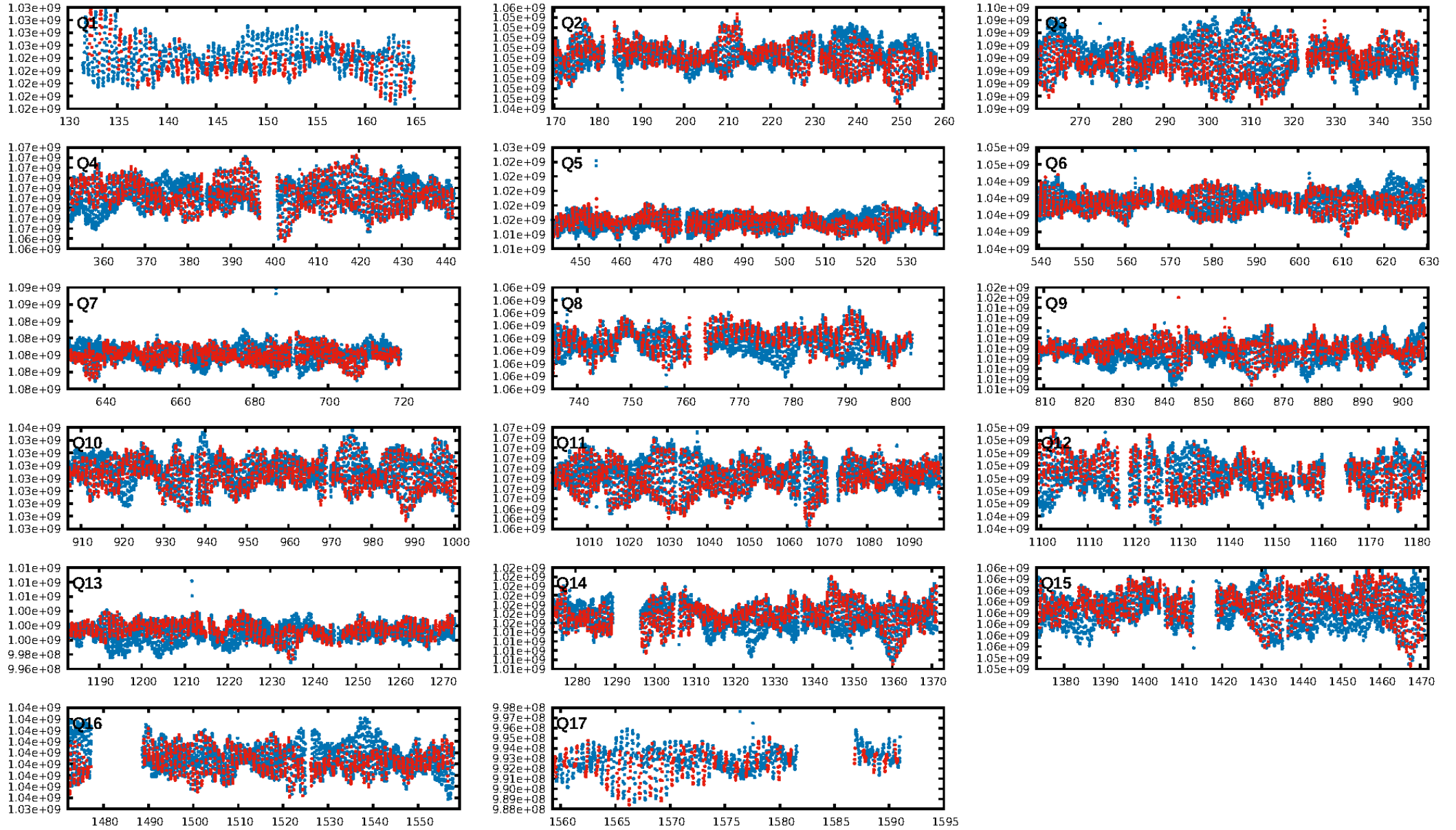
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.94e-89
RollingBand-fgt: 1.00 [1313/1315]
GhostDiagnostic-chr: 1.678
Centroid-sig: 0.1%
Centroid-so: 0.720 arcsec [1.45 σ]
OotOffset-rm: 2.480 arcsec [5.53 σ]
KicOffset-rm: 2.845 arcsec [7.16 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

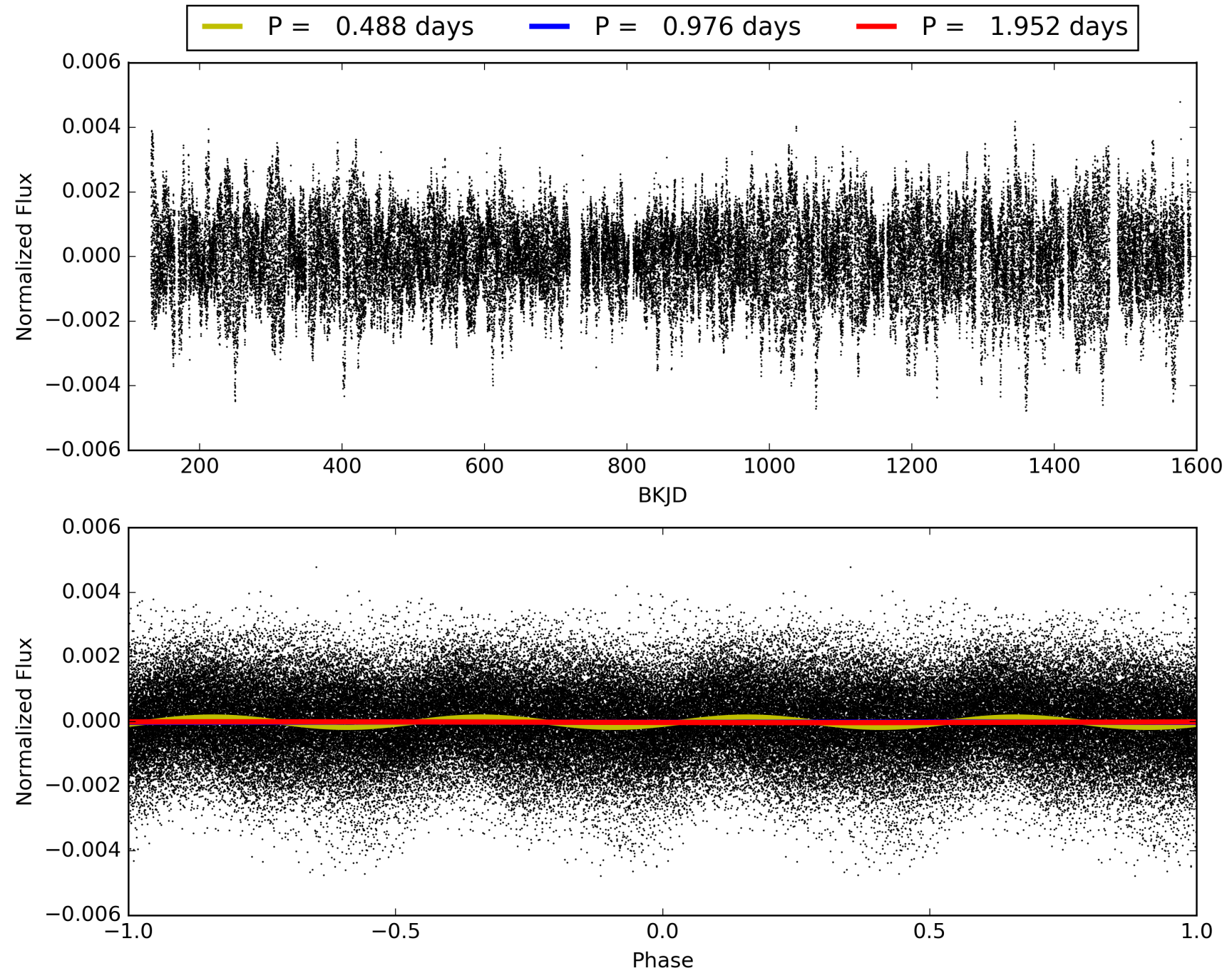
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:49:57 Z

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

TCE 009591182-01, PDC Light Curves

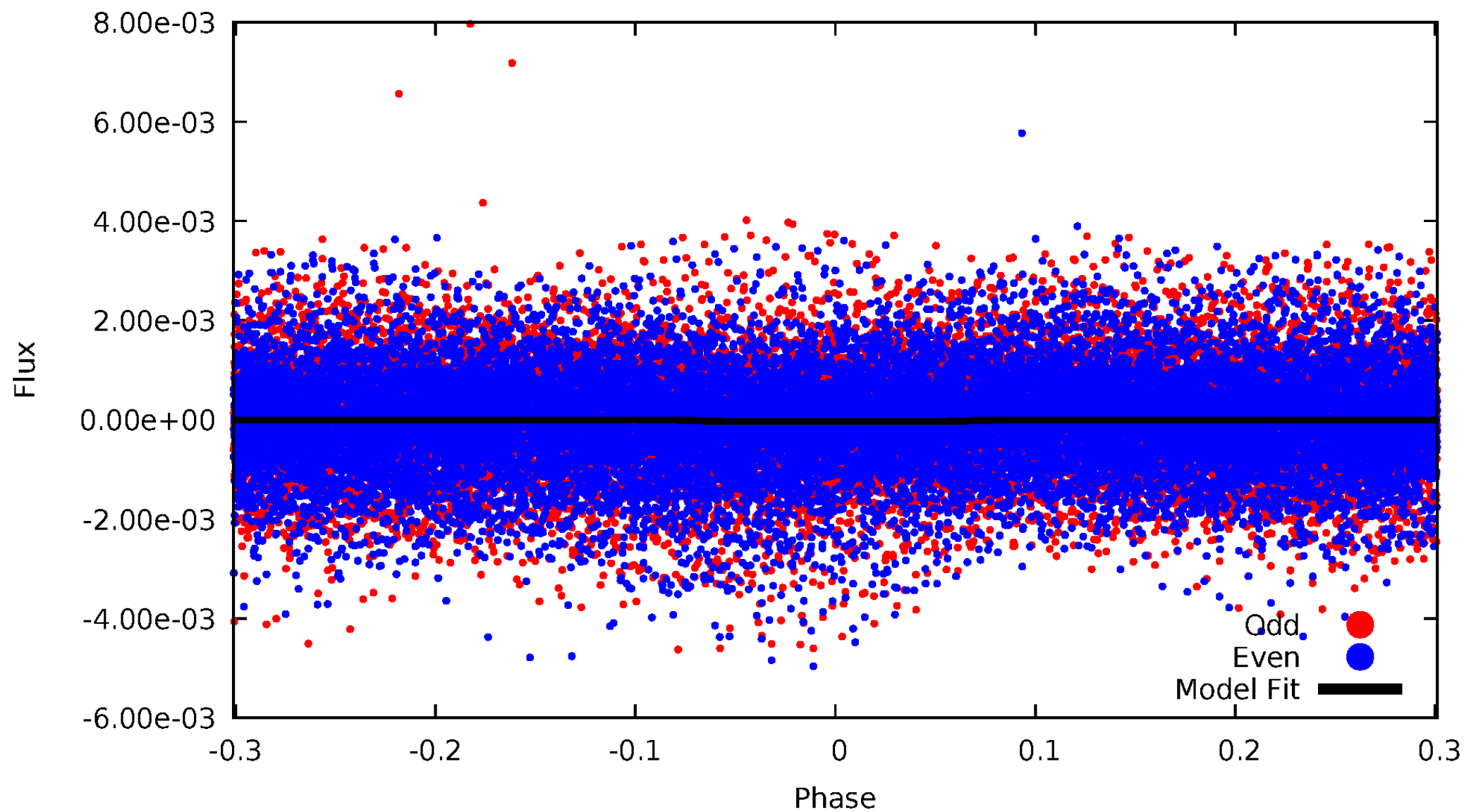


TCE 009591182-01



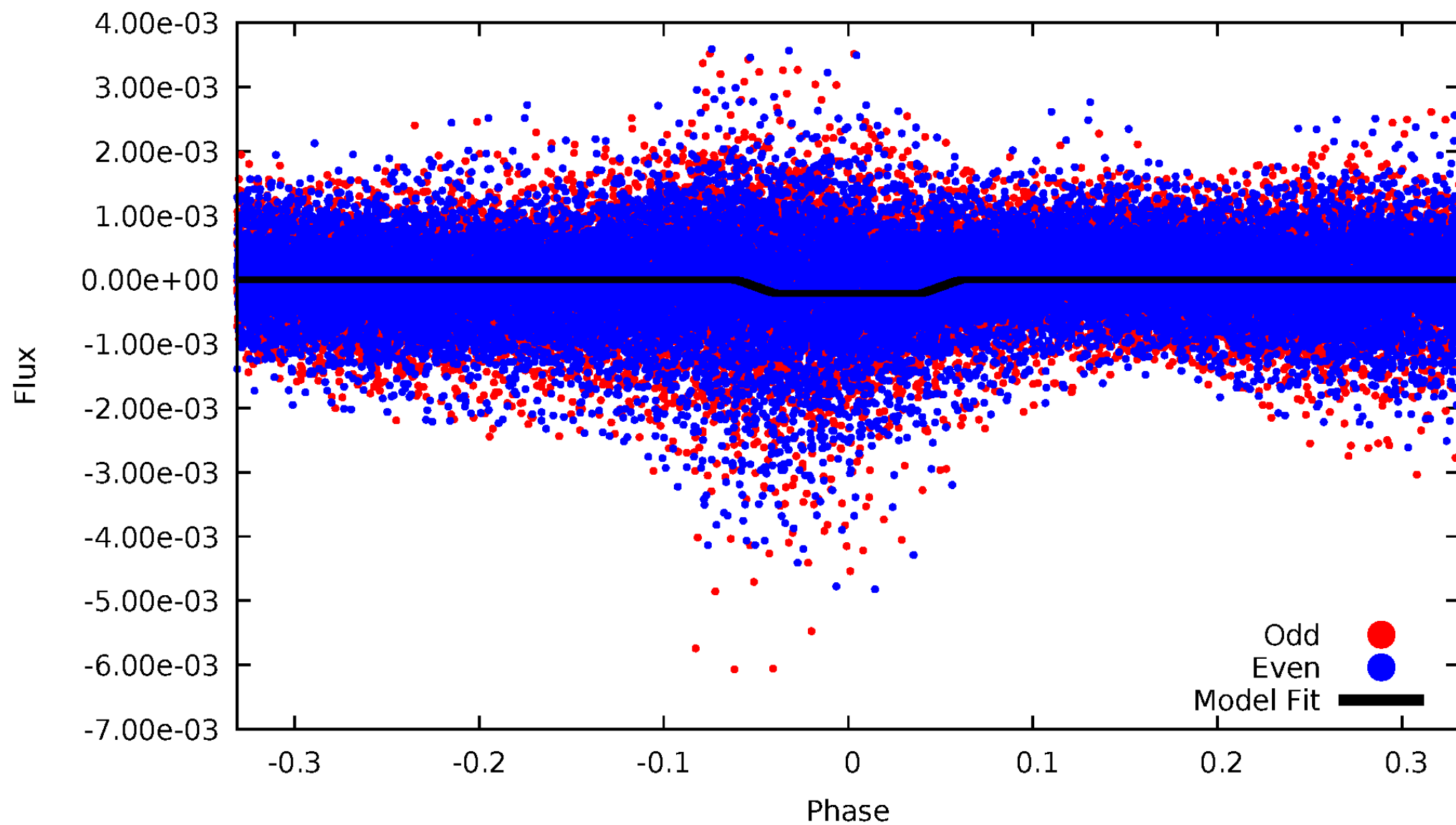
DV Odd/Even

TCE 009591182-01

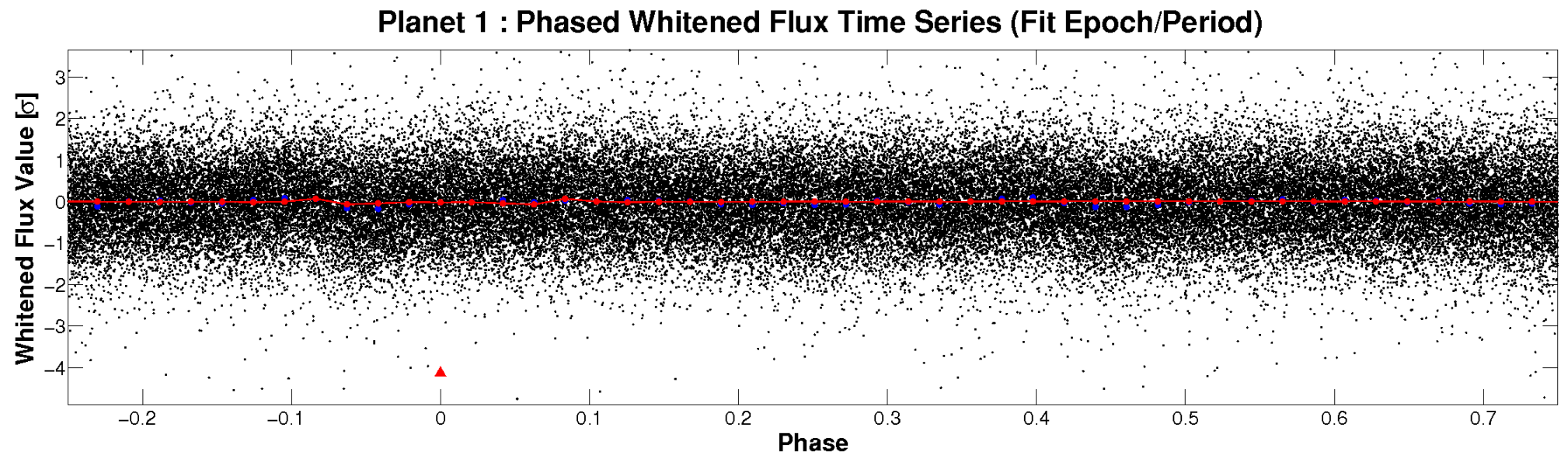
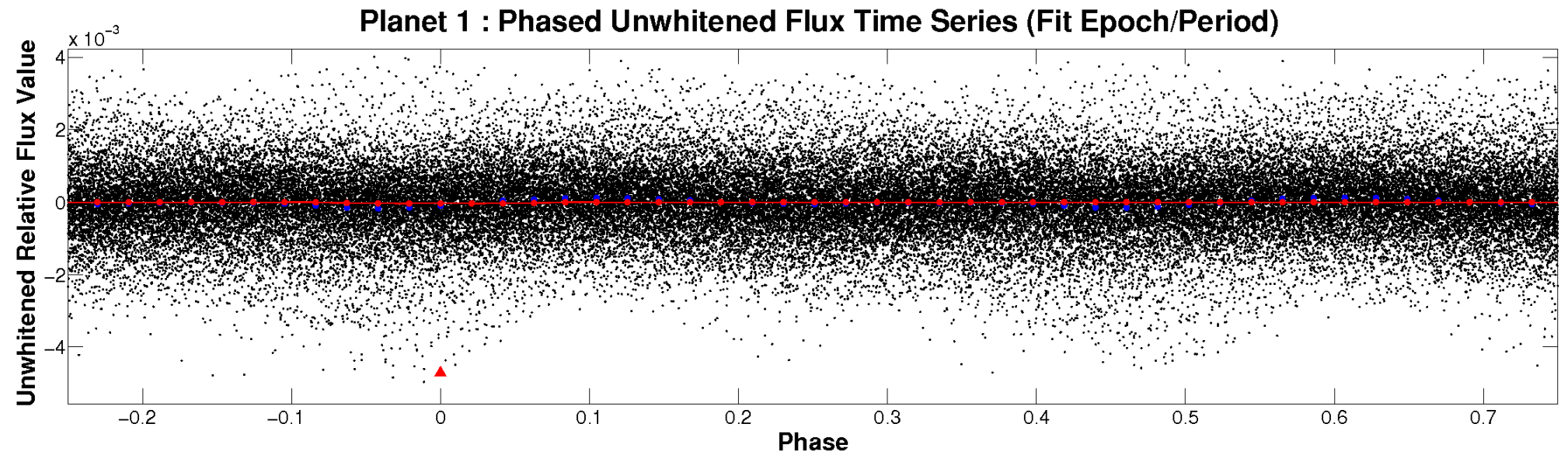


ALT Odd/Even

TCE 009591182-01

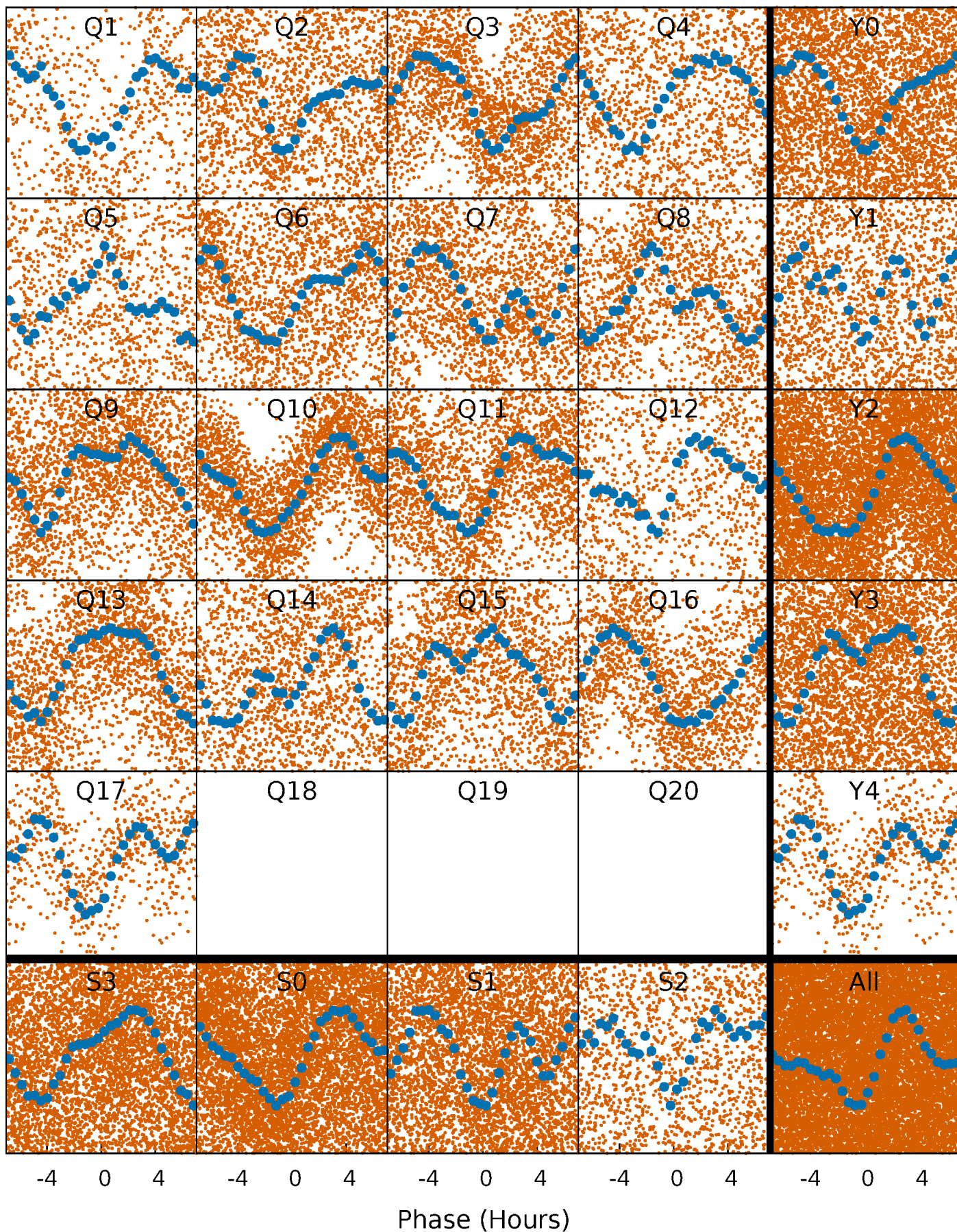


Non-Whitened Vs. Whitened Light Curve



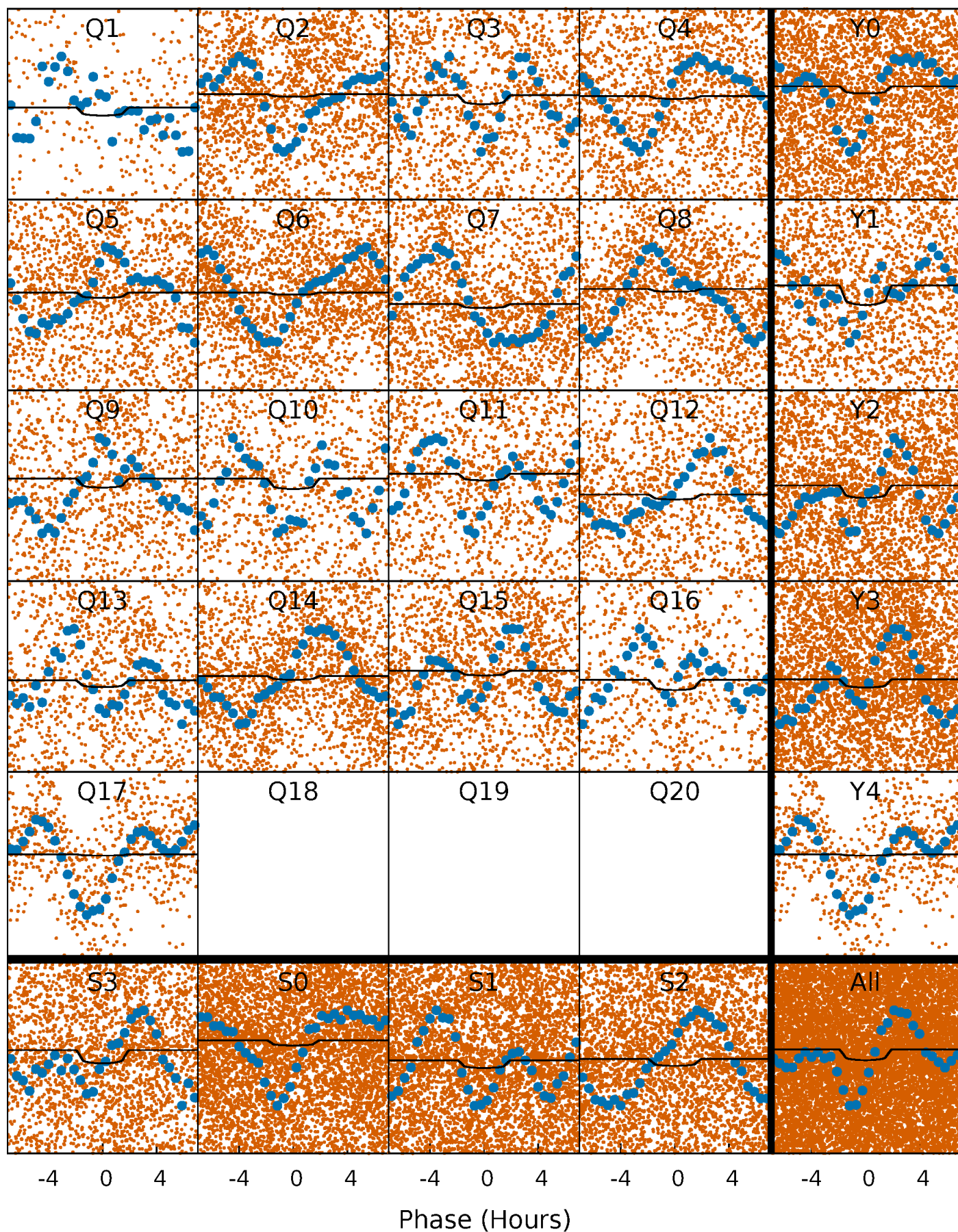
PDC Quarter-Phased Transit Curves

TCE 009591182-01 P= 0.976145 Days $T_0=132.309480$ (BKJD)



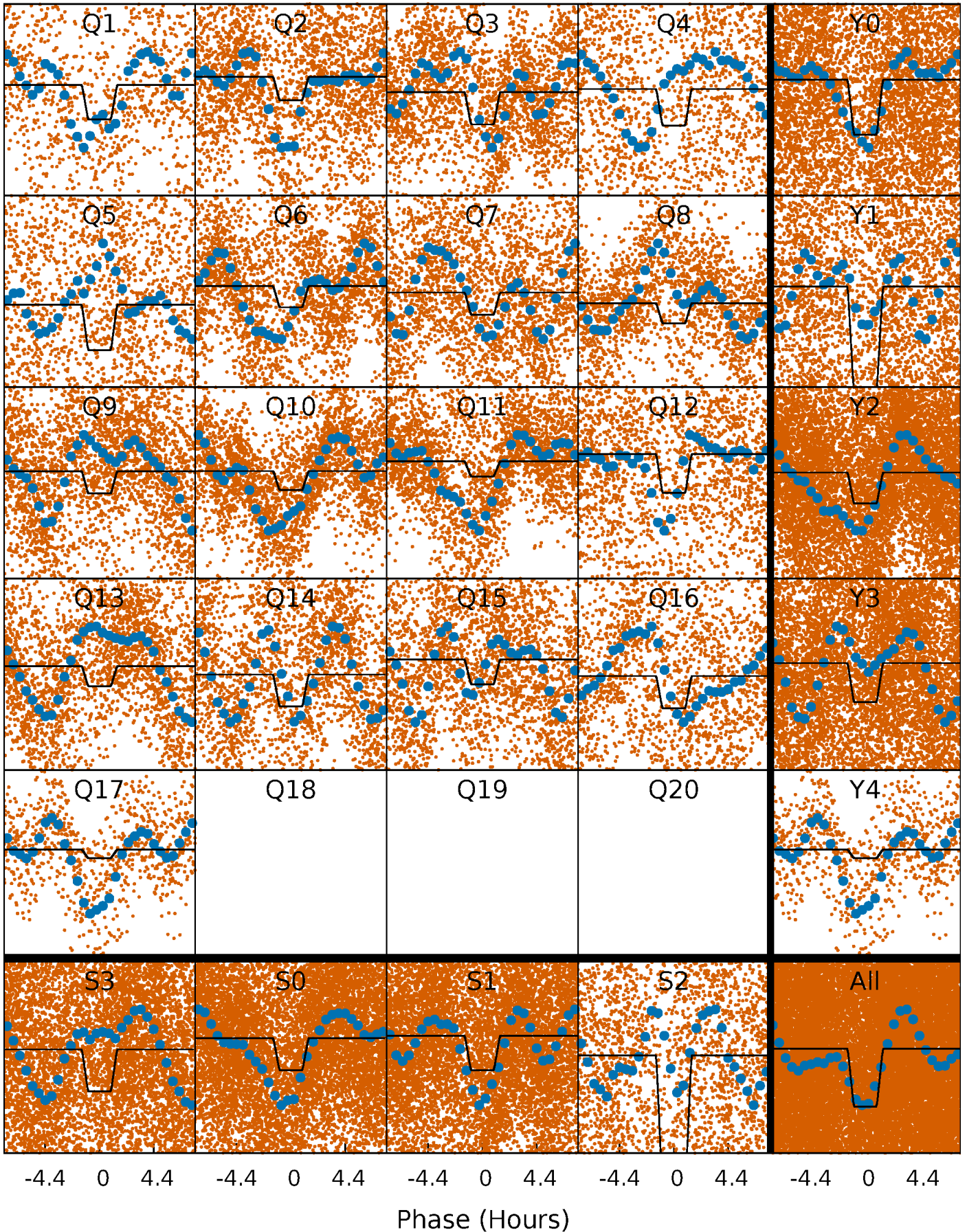
DV Quarter-Phased Transit Curves

TCE 009591182-01 P= 0.976145 Days $T_0=132.309480$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

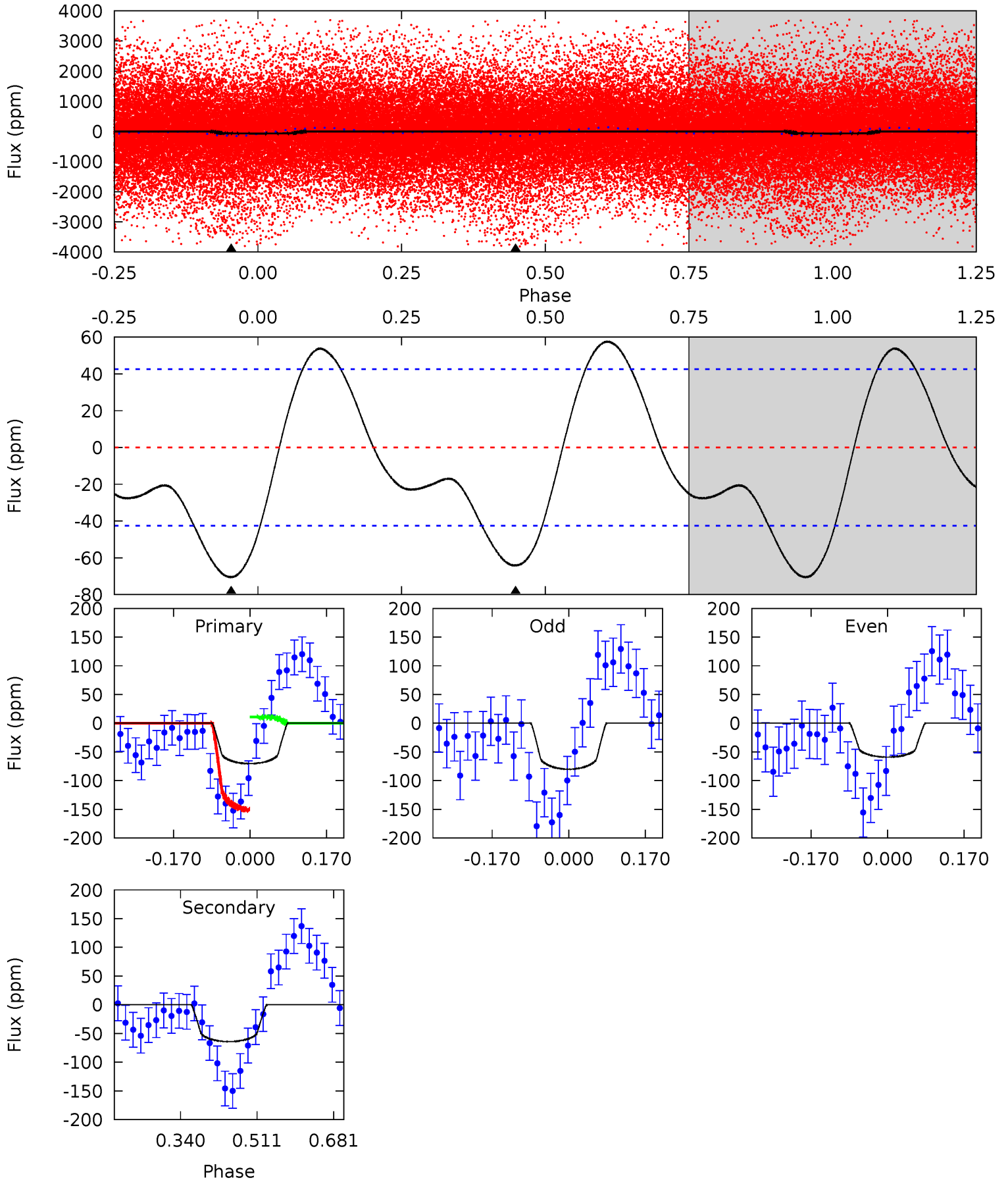
TCE 009591182-01 P= 0.976132 Days $T_0=132.303608$ (BKJD)



DV Model-Shift Uniqueness Test

009591182-01, P = 0.976145 Days, E = 131.333335 Days

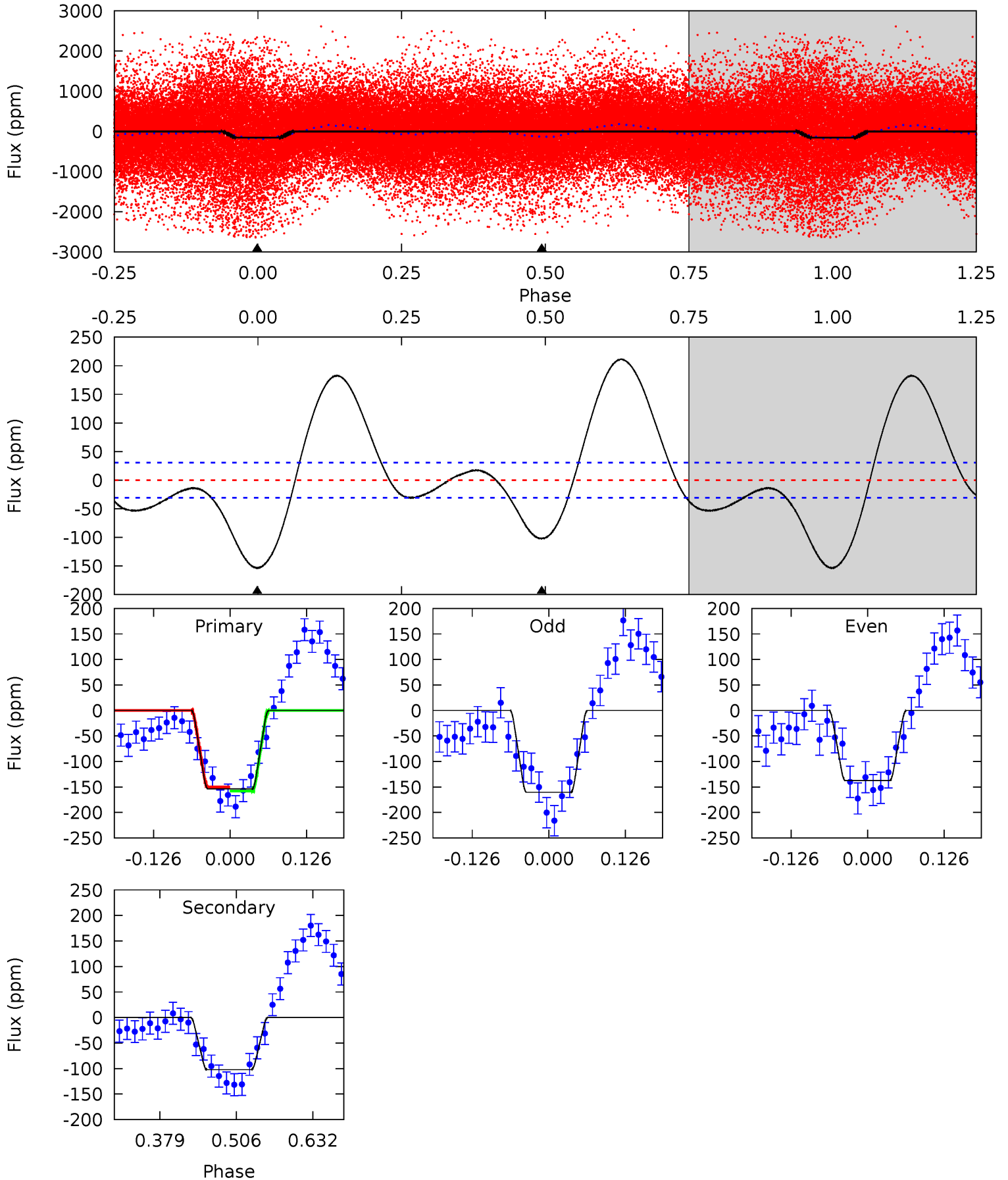
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.38	6.72	0	0	4.45	1.37	2.90	7.38	7.38	6.72	6.72	1.10	3.70	0.45	7.31



Alt Model-Shift Uniqueness Test

009591182-01, P = 0.976132 Days, E = 131.327476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	15.1	0	0	4.52	1.53	12.8	22.7	22.7	15.1	15.1	1.68	1.55	0.58	0.60



Stellar Parameters For KIC 009591182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6698^{+177}_{-216}	$2.672^{+0.420}_{-0.150}$	$-1.000^{+0.450}_{-0.550}$	$13.437^{+3.052}_{-4.578}$	$3.092^{+0.143}_{-0.906}$	$0.002^{+0.006}_{-0.001}$
	+3%/-3%	+16%/-6%	+45%/-55%	+23%/-34%	+5%/-29%	+322%/-44%
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 009591182-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-64 ± 10	$8.32^{+2.47}_{-2.20}$	8791^{+739}_{-943}	5119^{+2081}_{-10542}	$0.376^{+0.301}_{-0.152}$
Alt.	-102 ± 7	$20.33^{+3.80}_{-4.51}$	8834^{+716}_{-912}	-6491^{+1083}_{-803}	$0.102^{+0.061}_{-0.026}$

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

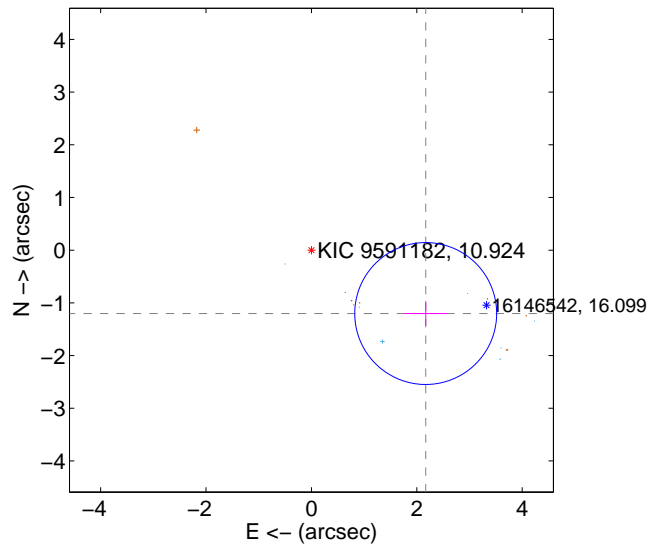
Supplemental centroid analysis for 009591182-01. **Kepler magnitude: 10.92**. Transit SNR 6.22

There are 7 quarters with good PRF difference image offsets

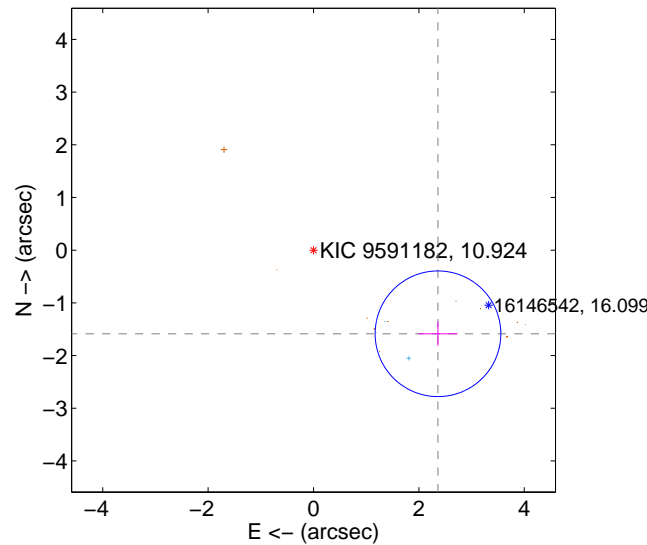
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.480 ± 0.449	5.53	-2.169 ± 0.417	-1.203 ± 0.234
PRF-fit source offset from KIC position	2.845 ± 0.397	7.16	-2.362 ± 0.372	-1.587 ± 0.229
photometric centroid source offset	0.72 ± 0.50	1.45	0.40 ± 0.60	0.60 ± 0.44

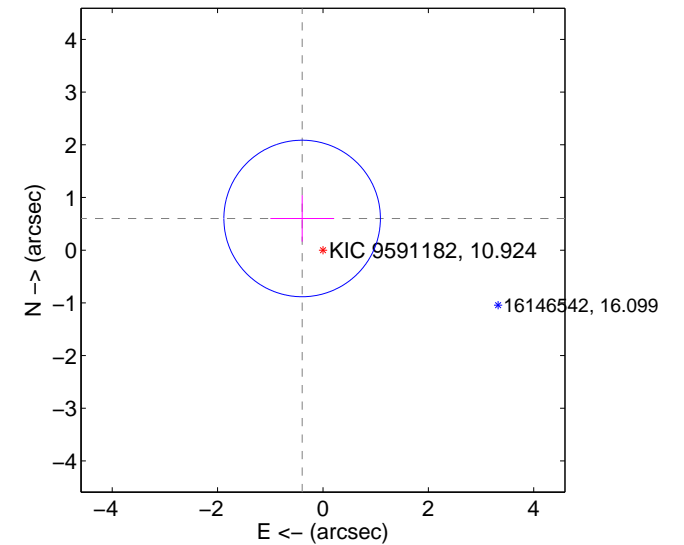
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

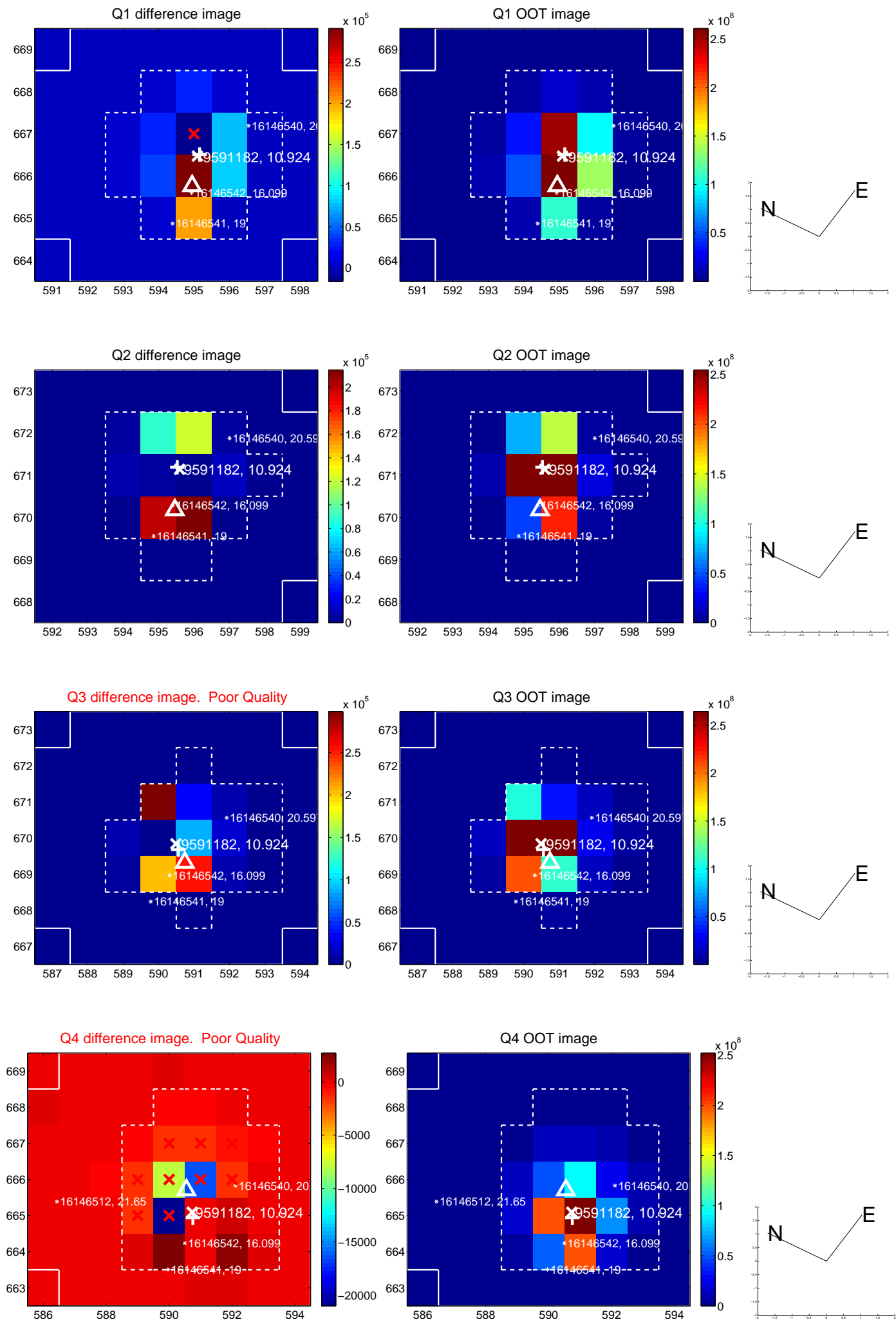


offset from photometric centroids

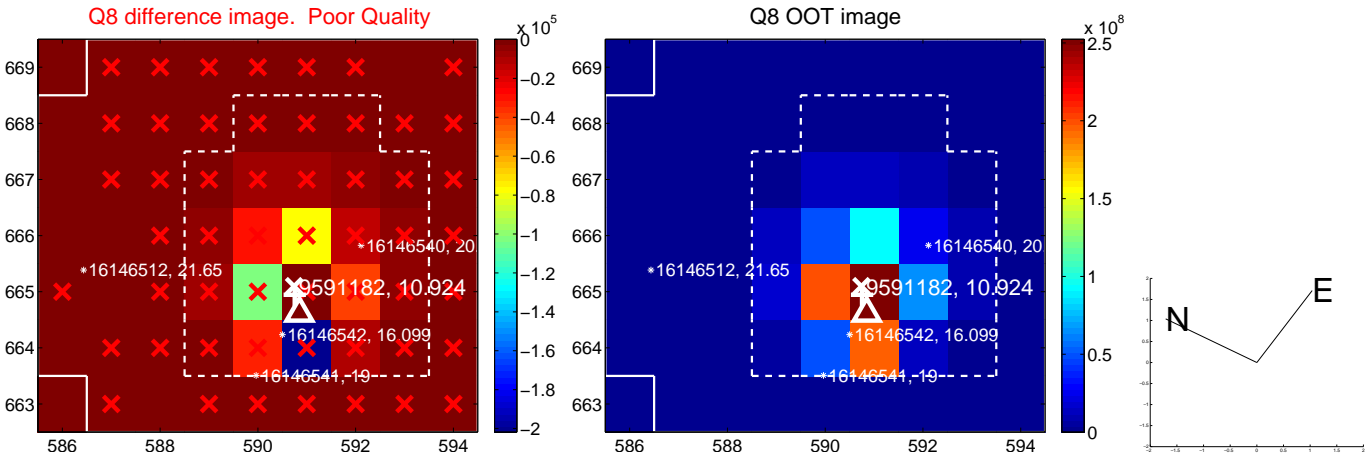
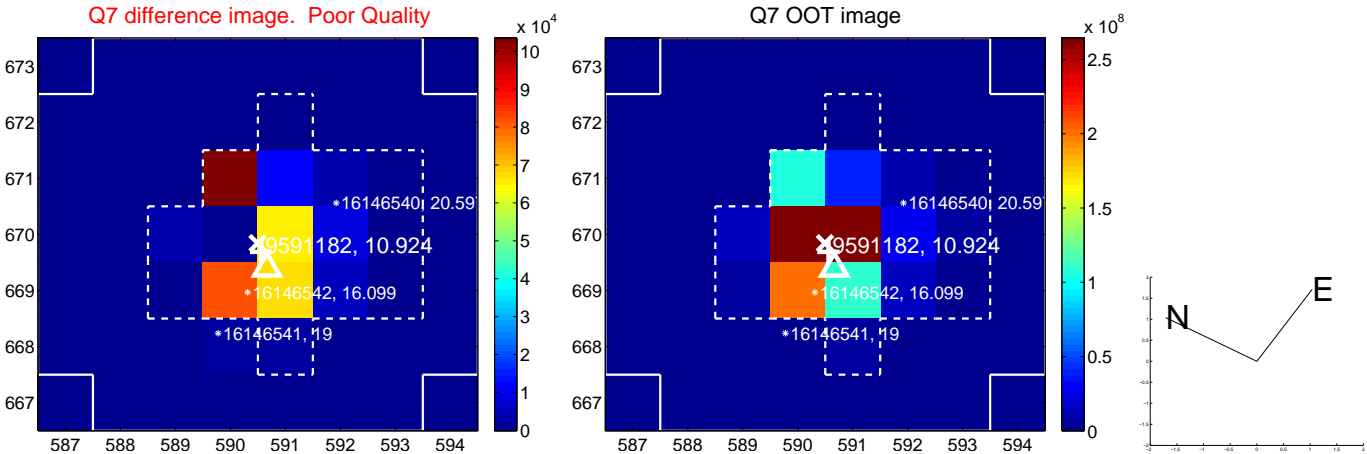
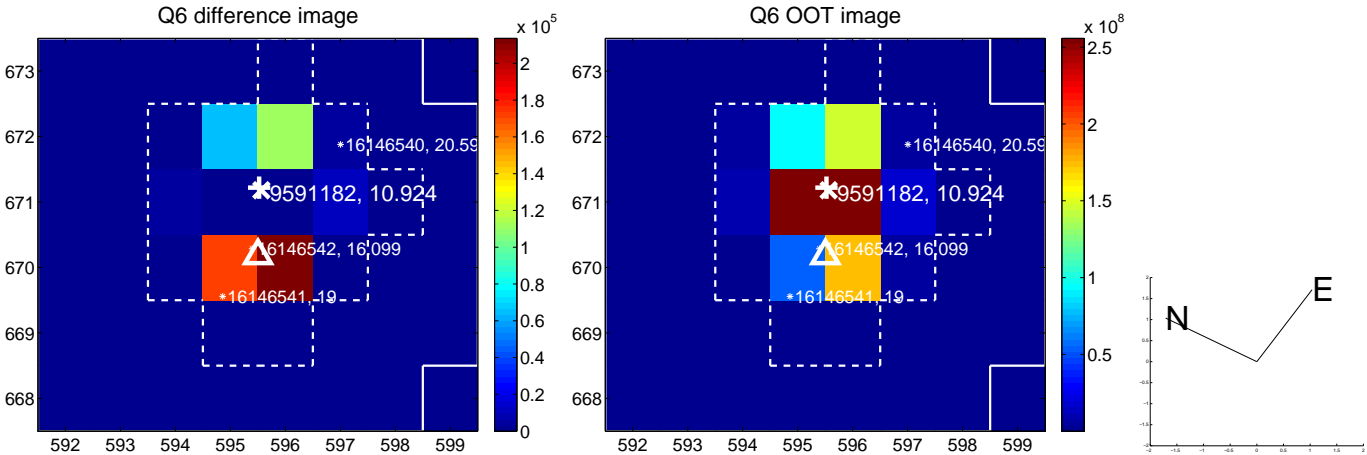
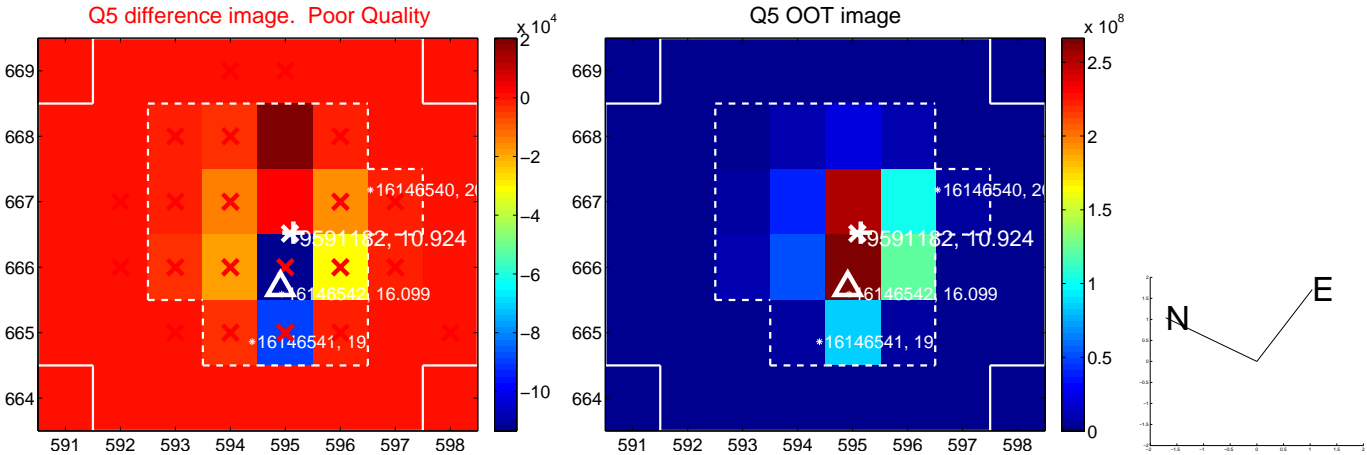


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

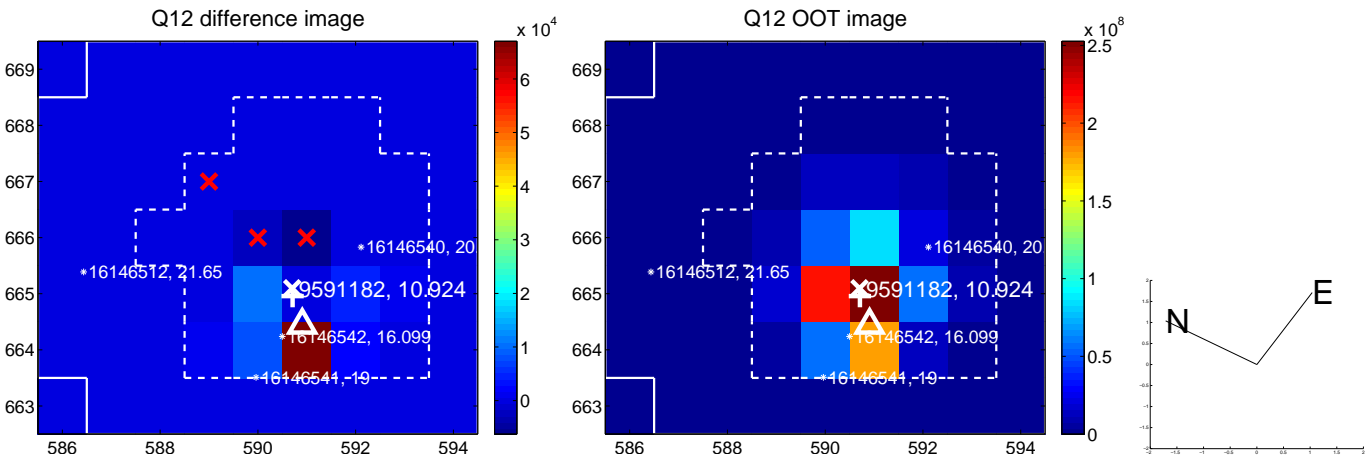
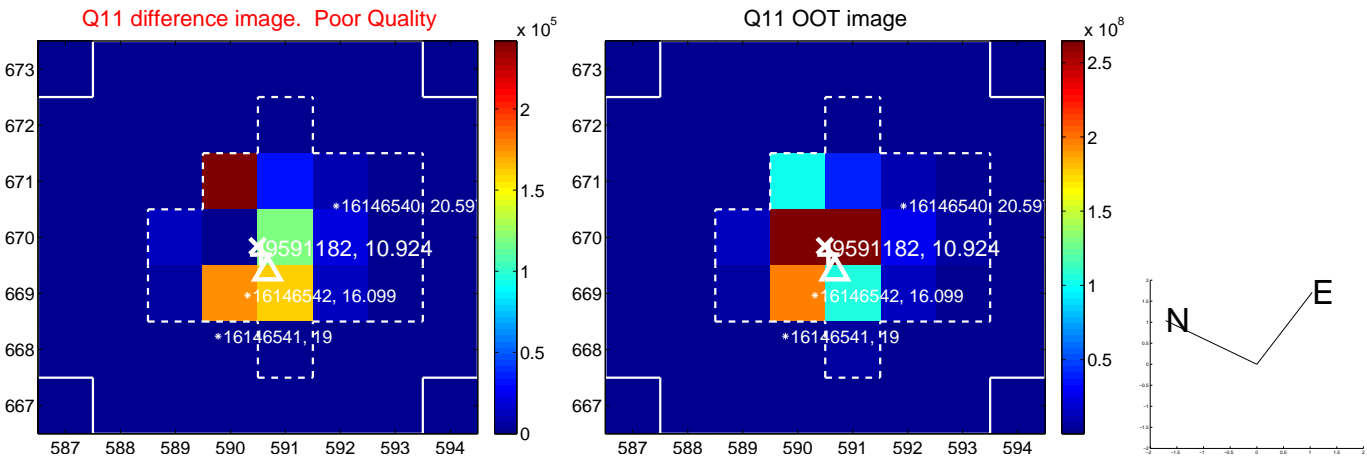
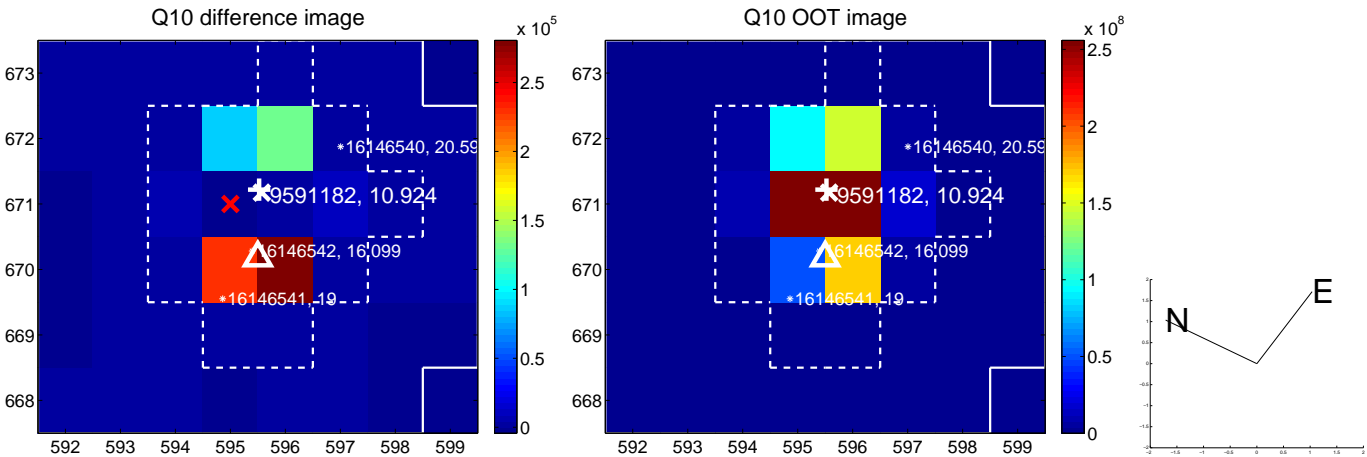
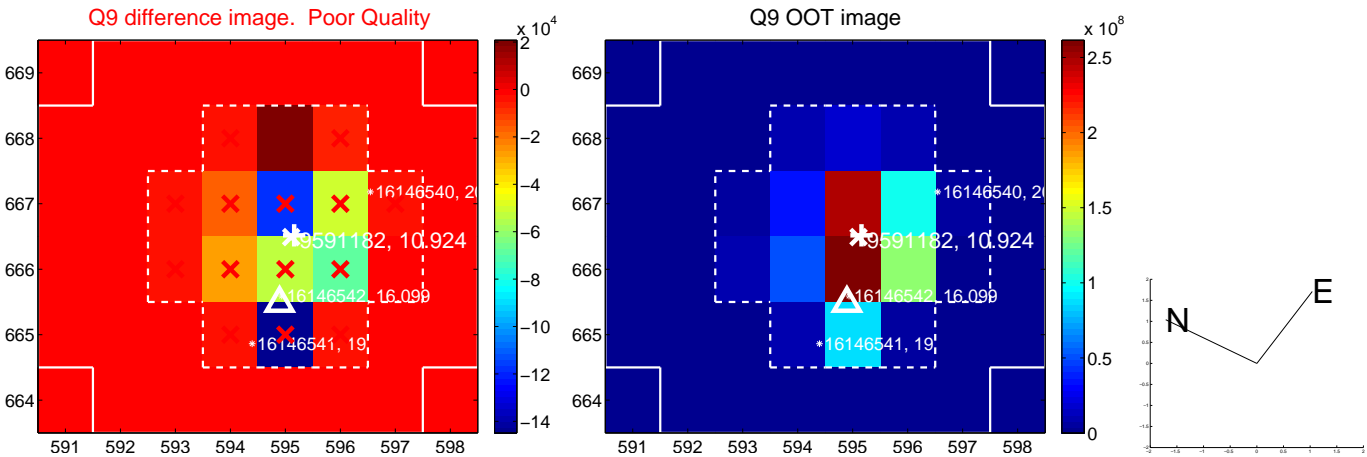
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



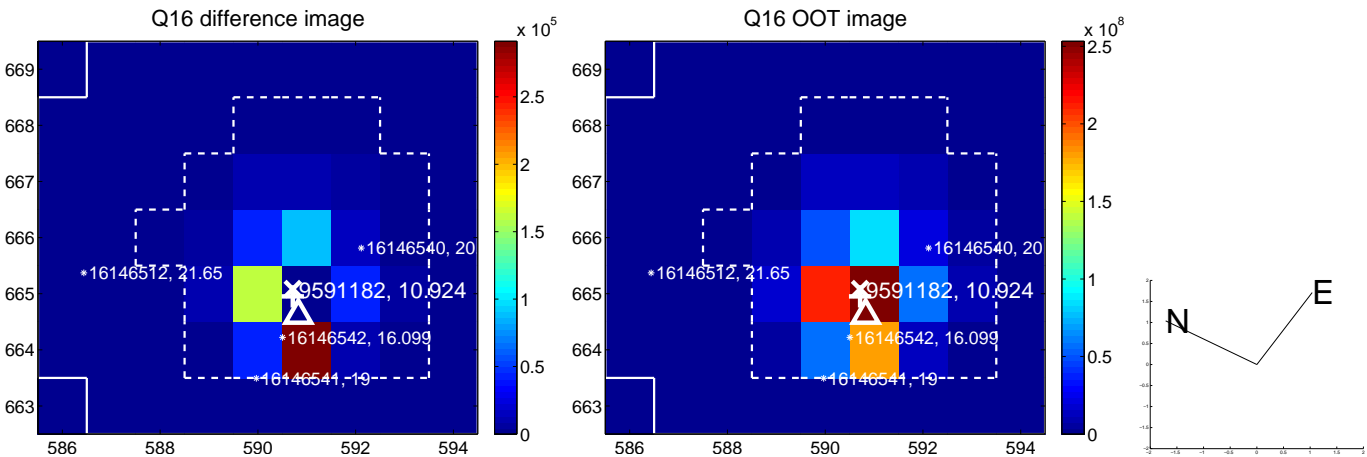
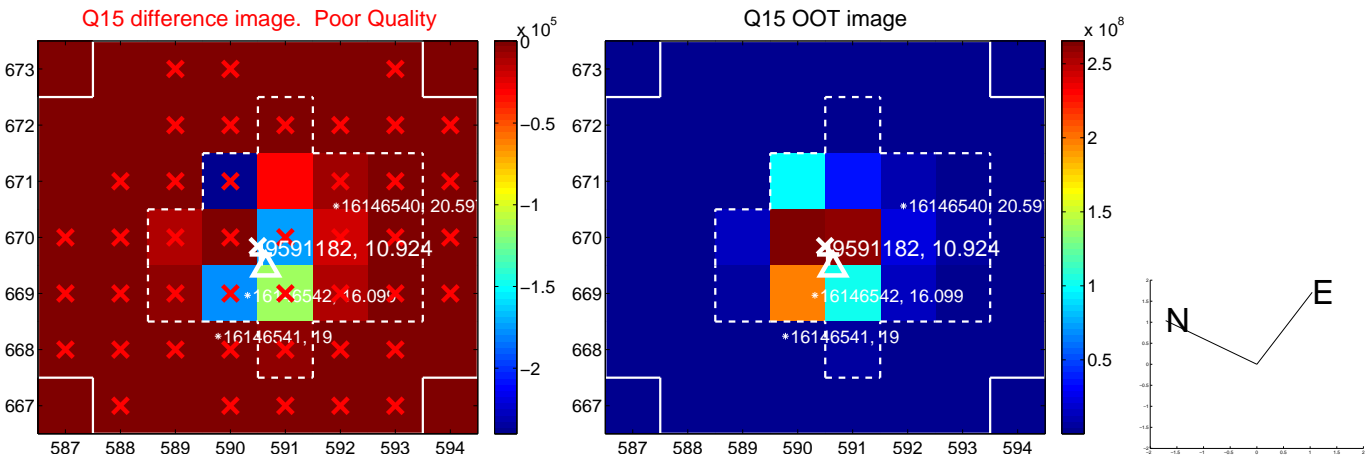
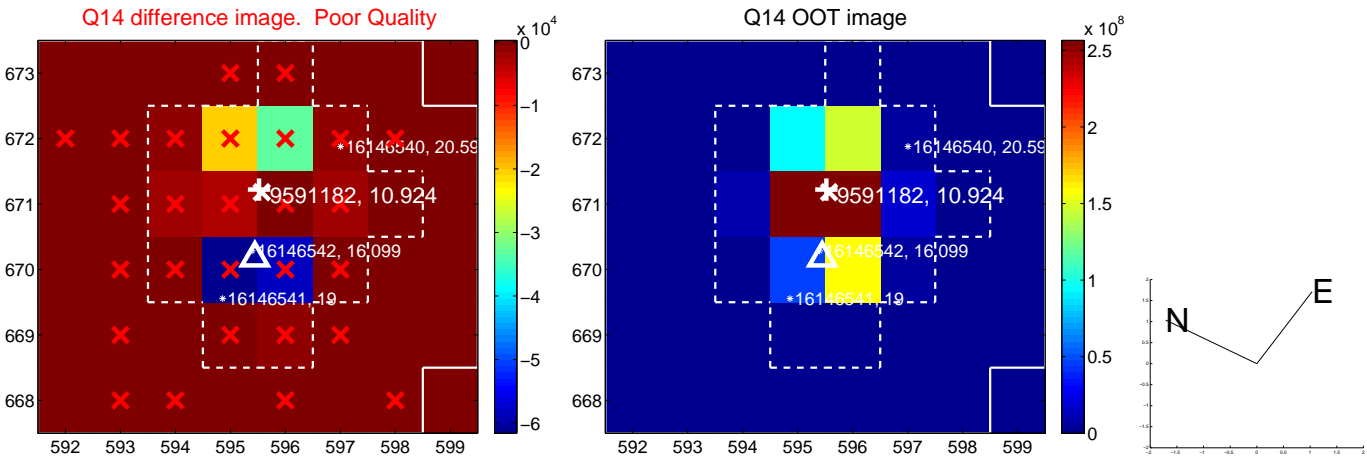
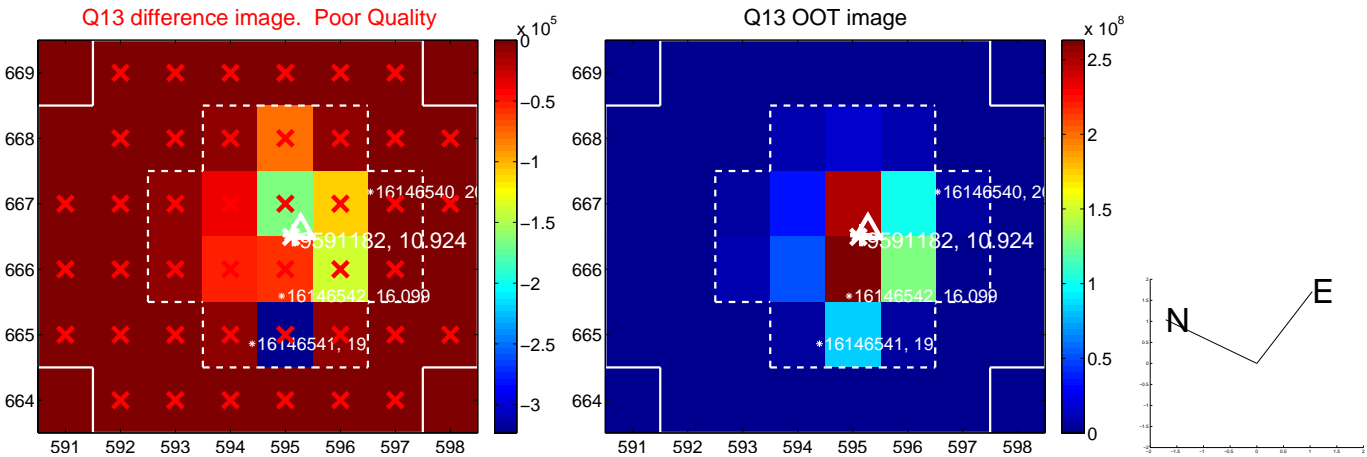
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



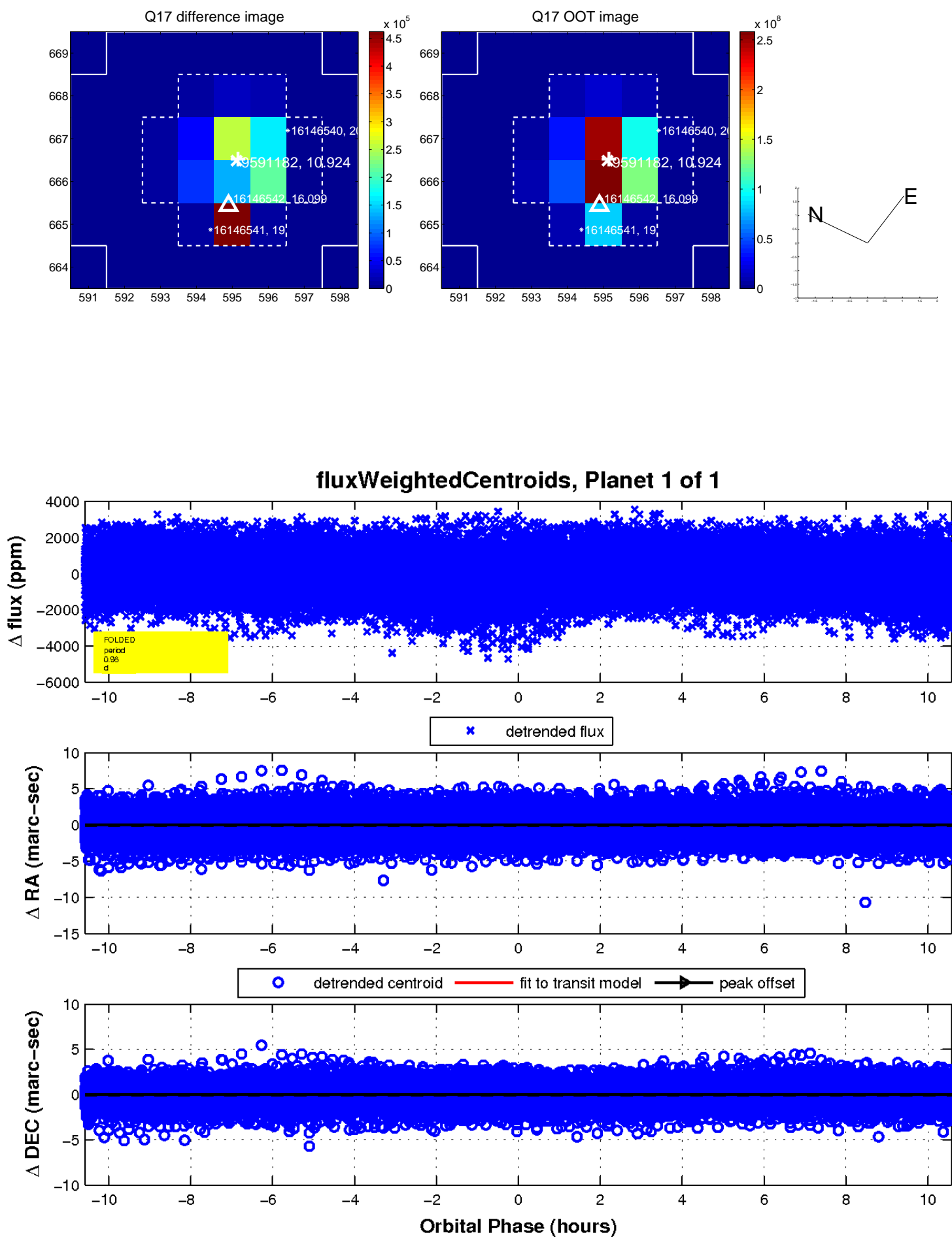
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

