

KIC 006891513

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})
006891513-01	OBS	4413.01	9.939618	140.839949	375.2	2.689	11.0	11.8	0.94	5798	1.95	106.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006891513-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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 006891513-01

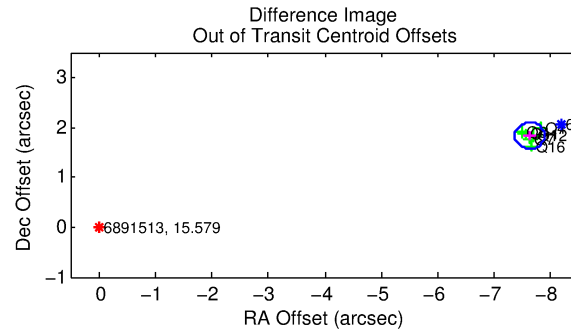
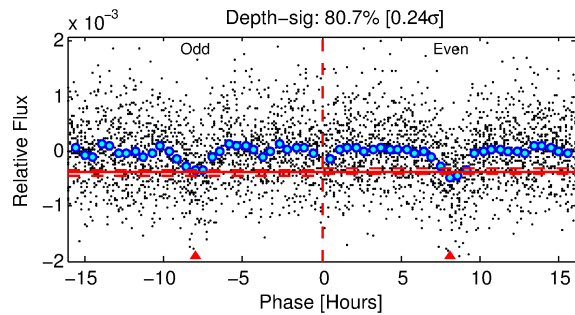
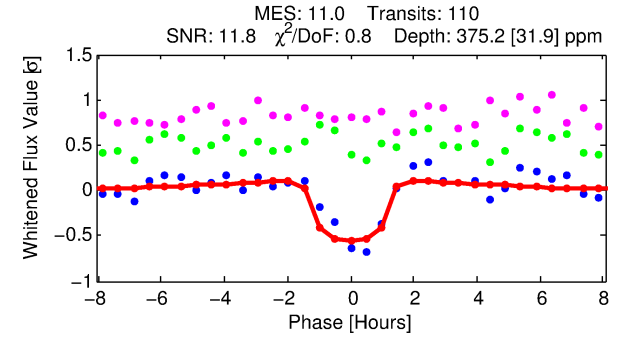
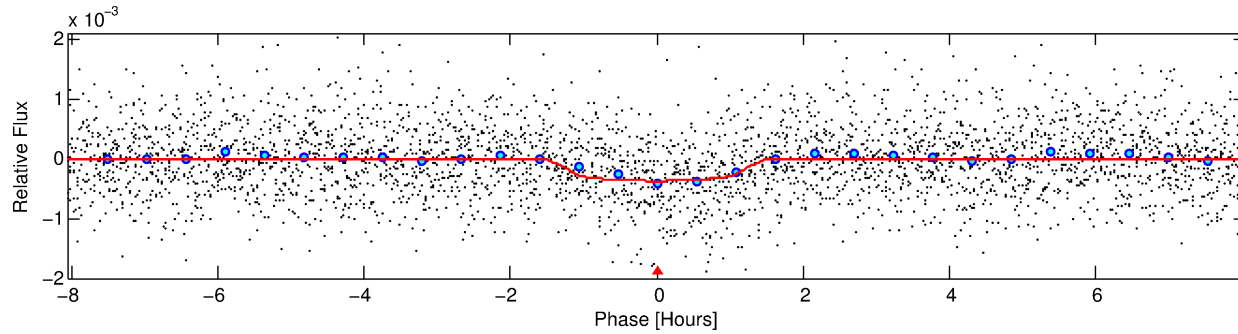
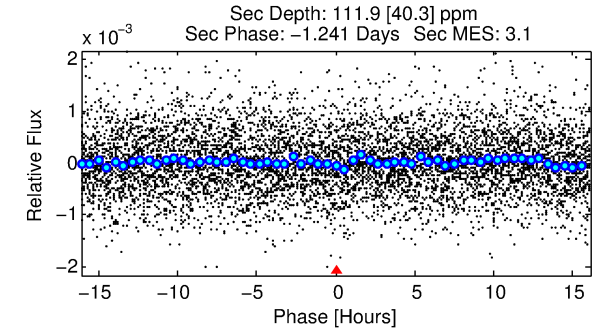
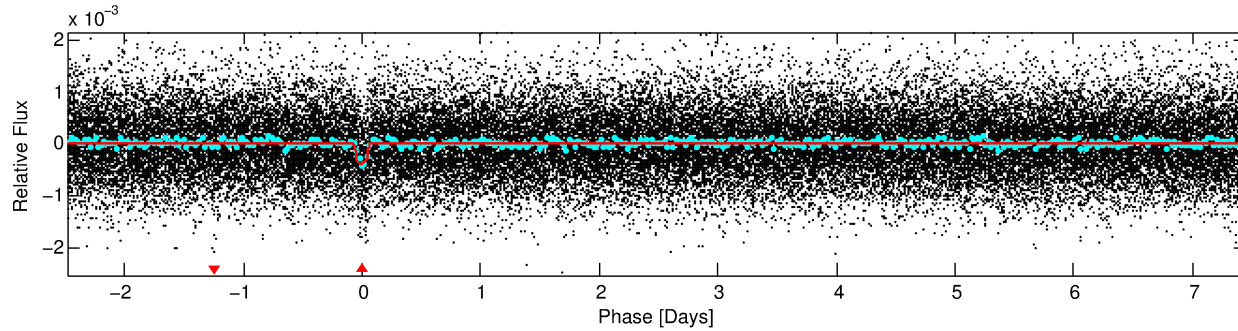
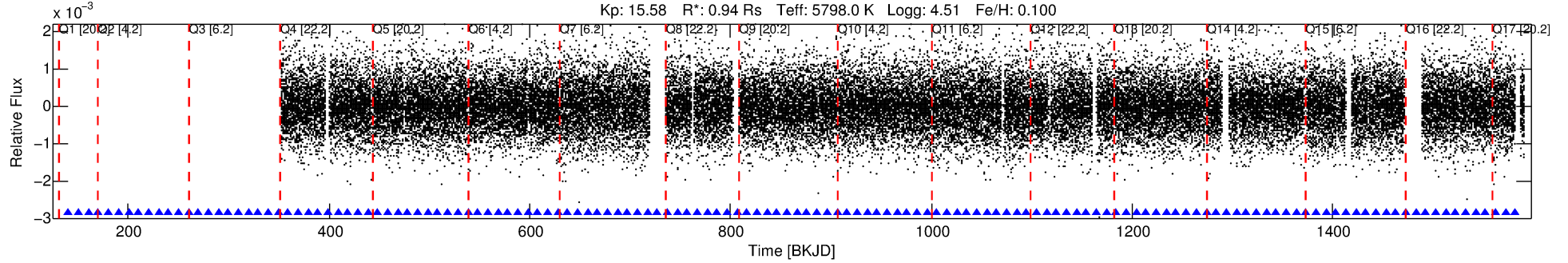
No Significant Match Found

DV One-Page Summary

KIC: 6891513 Candidate: 1 of 1 Period: 9.940 d

KOI: K04413.01 Corr: 0.854

Kp: 15.58 R*: 0.94 Rs Teff: 5798.0 K Logg: 4.51 Fe/H: 0.100



DV Fit Results:

Period = 9.93962 [0.00006] d
Epoch = 140.8399 [0.0051] BKJD
Rp/R* = 0.0190 [0.0177]
a/R* = 20.67 [83.40]
b = 0.71 [2.88]
Seff = 106.80 [44.88]
Teq = 820 [86] K
Rp = 1.95 [1.91] Re
a = 0.0916 [0.0244] AU
Ag = 135.35 [261.61] [0.51σ]
Teff = 4323 [2050] K [1.71σ]

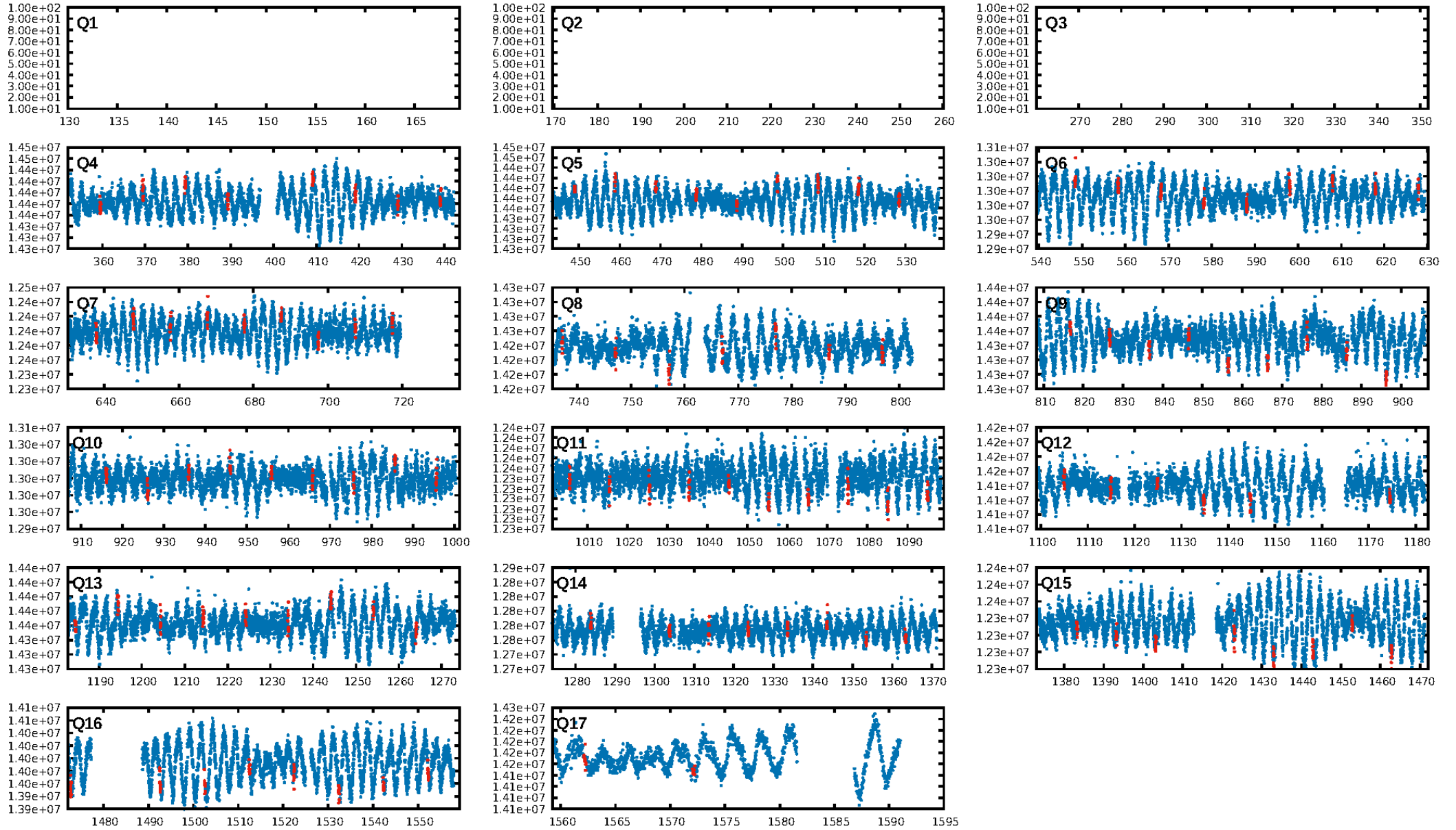
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.3%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.48e-27
RollingBand-fgt: 1.00 [108/108]
GhostDiagnostic-chr: -0.3343
Centroid-sig: 0.0%
Centroid-so: 41.520 arcsec [32.32σ]
OotOffset-rm: 7.840 arcsec [88.78σ]
KicOffset-rm: 8.115 arcsec [91.03σ]
OotOffset-st: 0/2/4/0 [6]
KicOffset-st: 0/2/4/0 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [14/14]

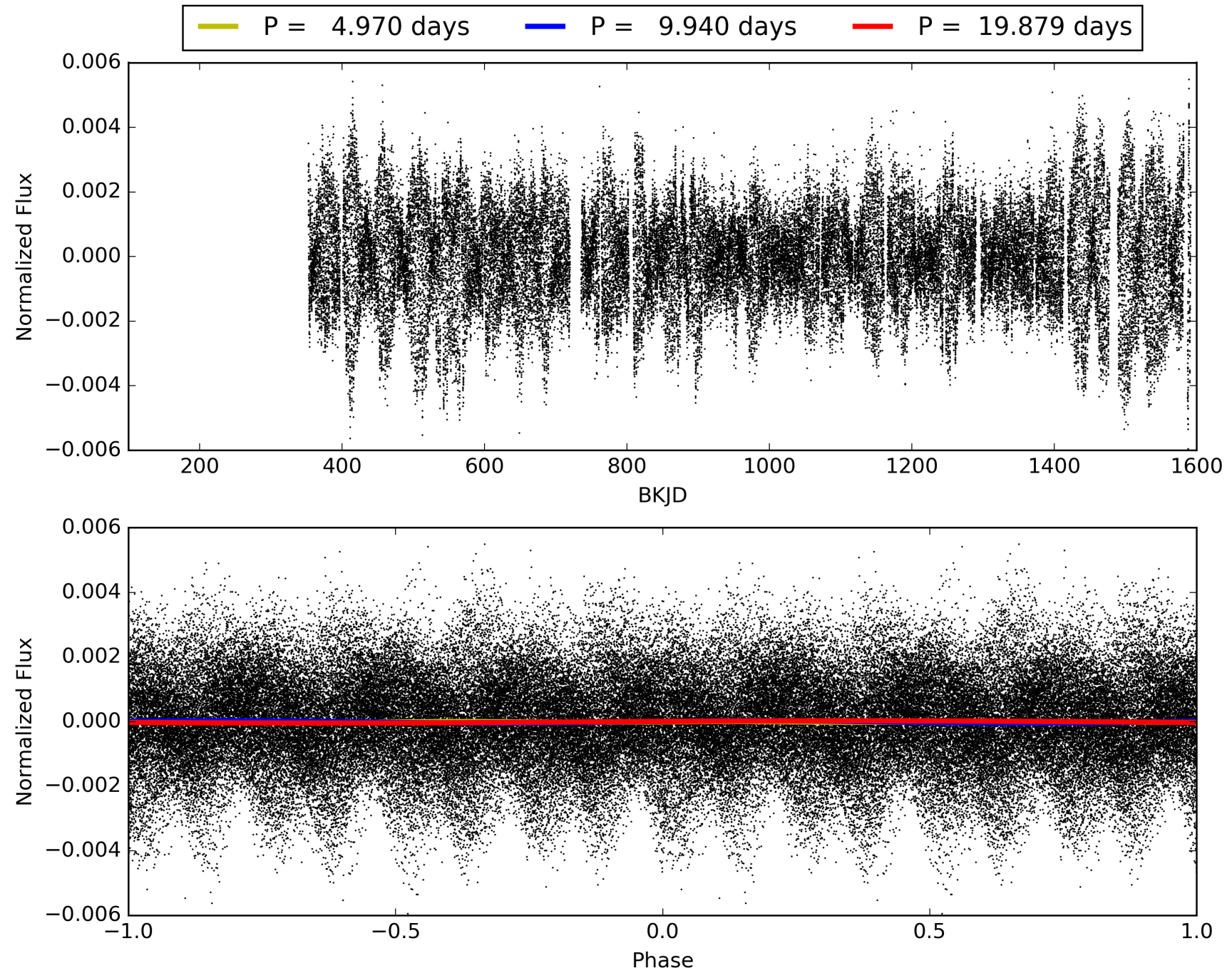
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:12:26 Z

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

TCE 006891513-01, PDC Light Curves

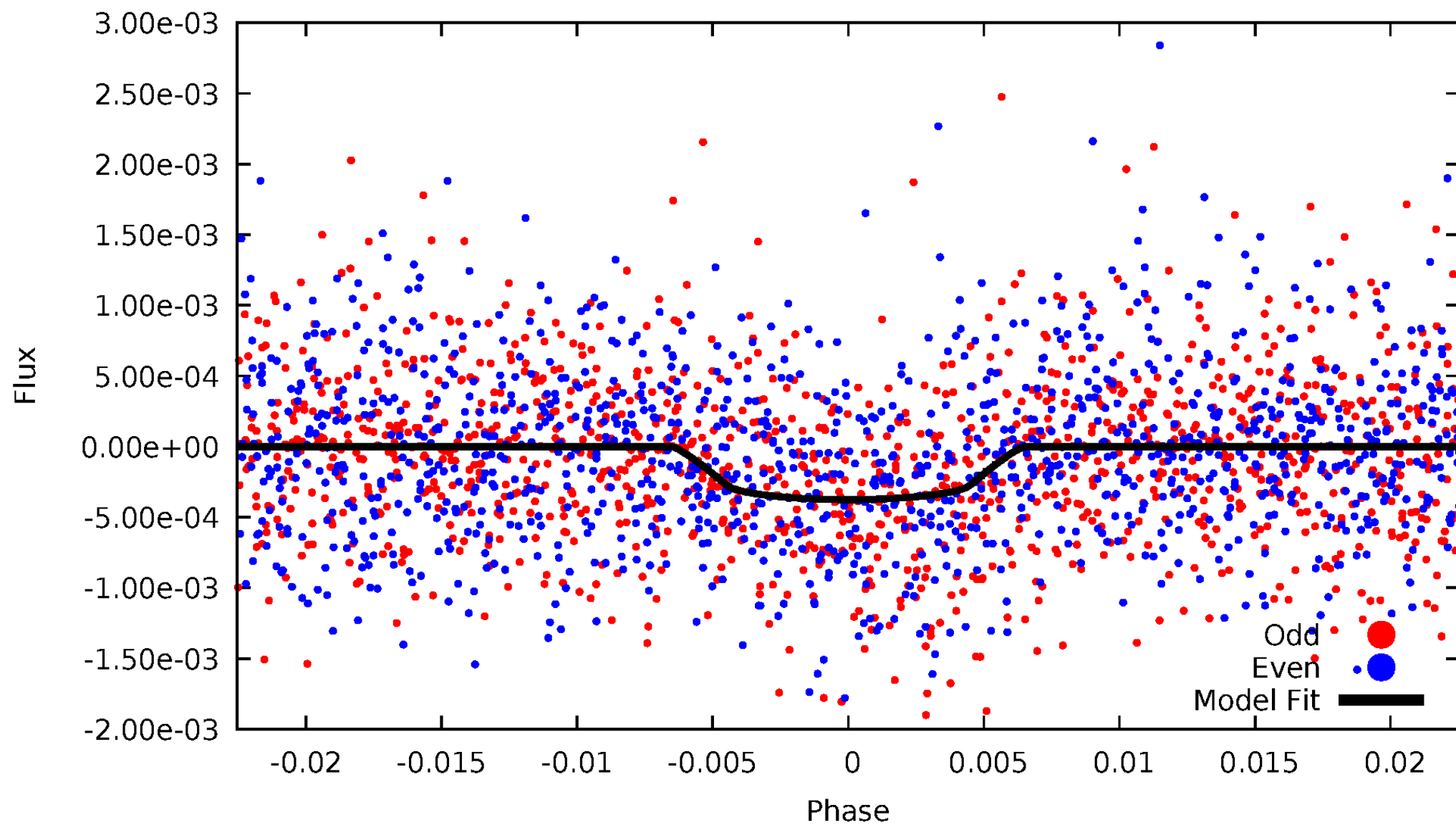


TCE 006891513-01



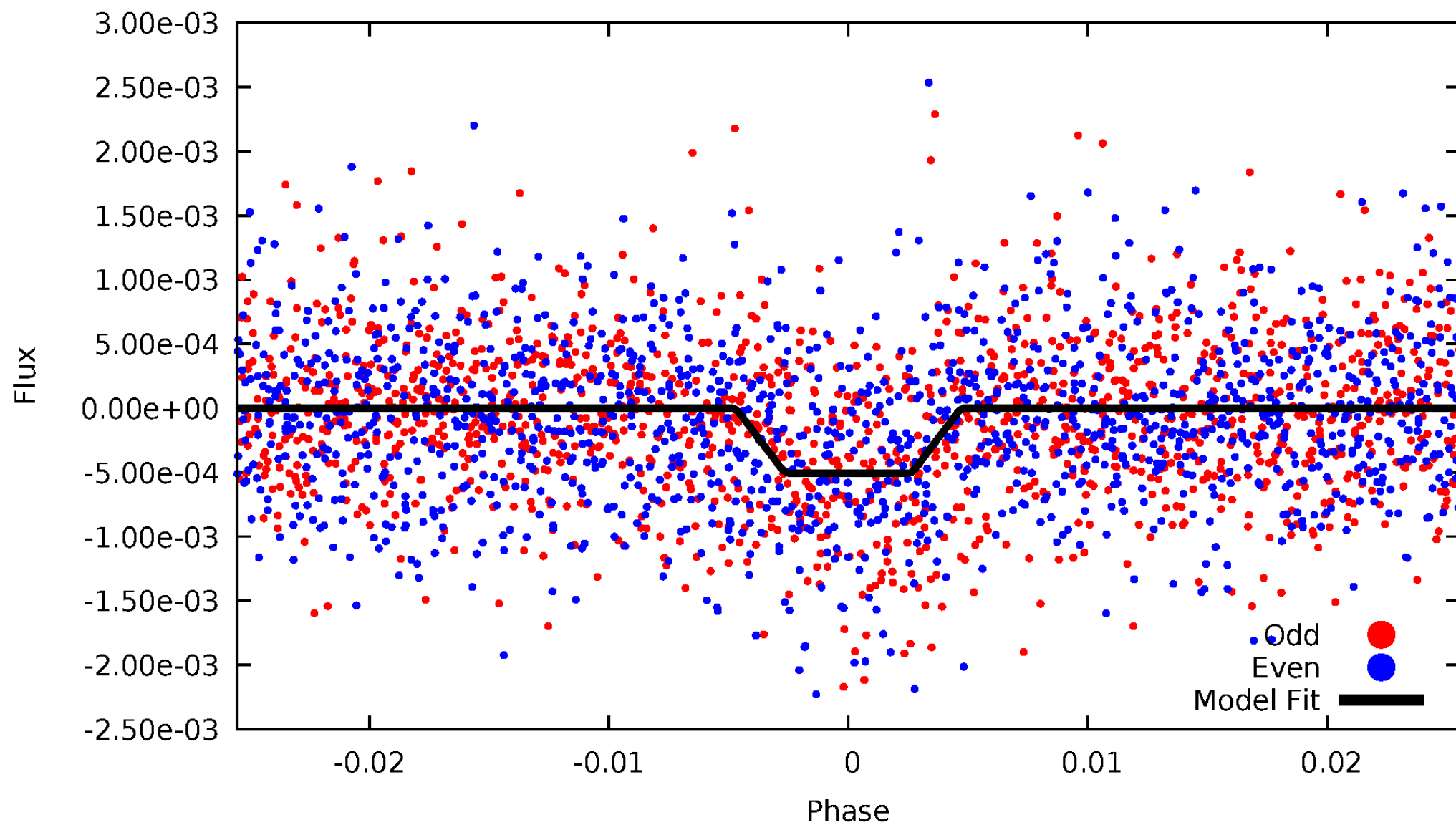
DV Odd/Even

TCE 006891513-01

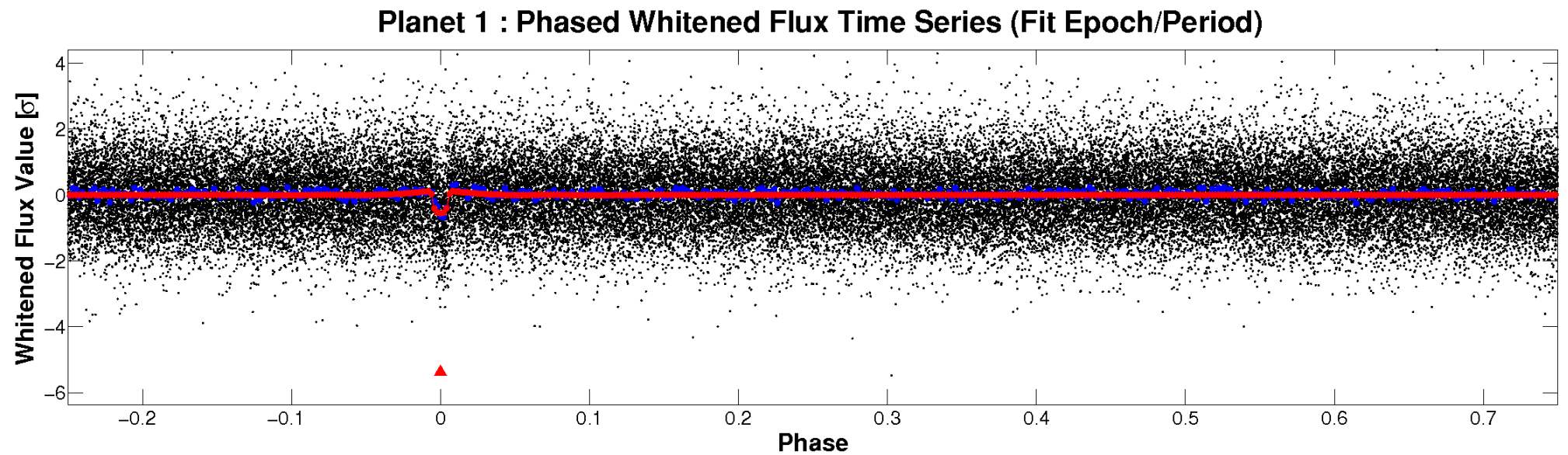
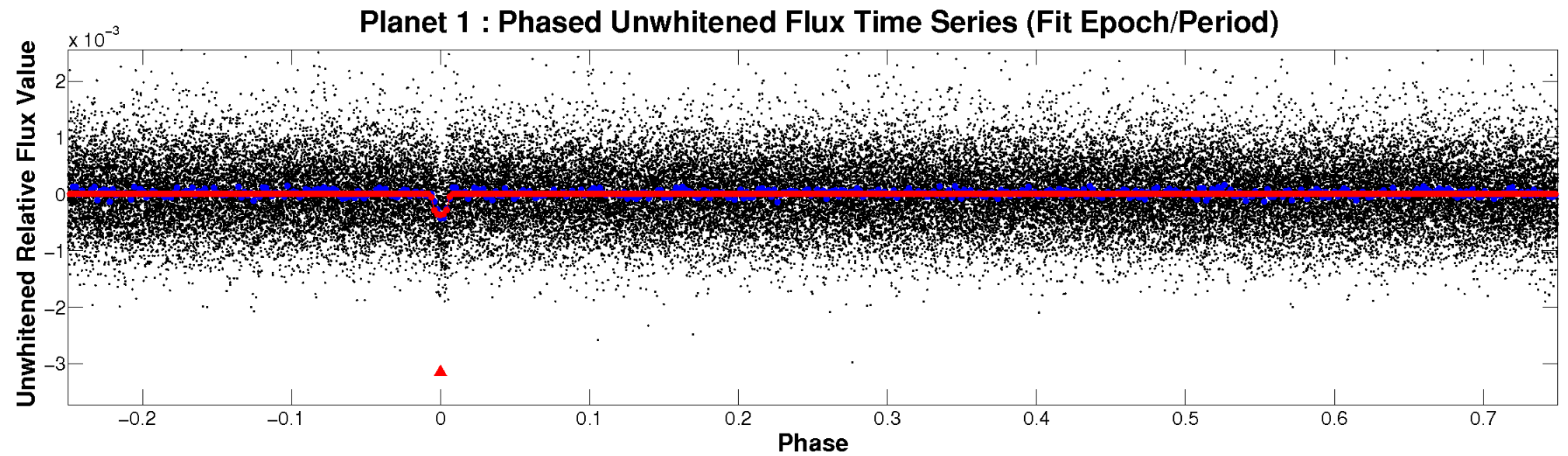


ALT Odd/Even

TCE 006891513-01

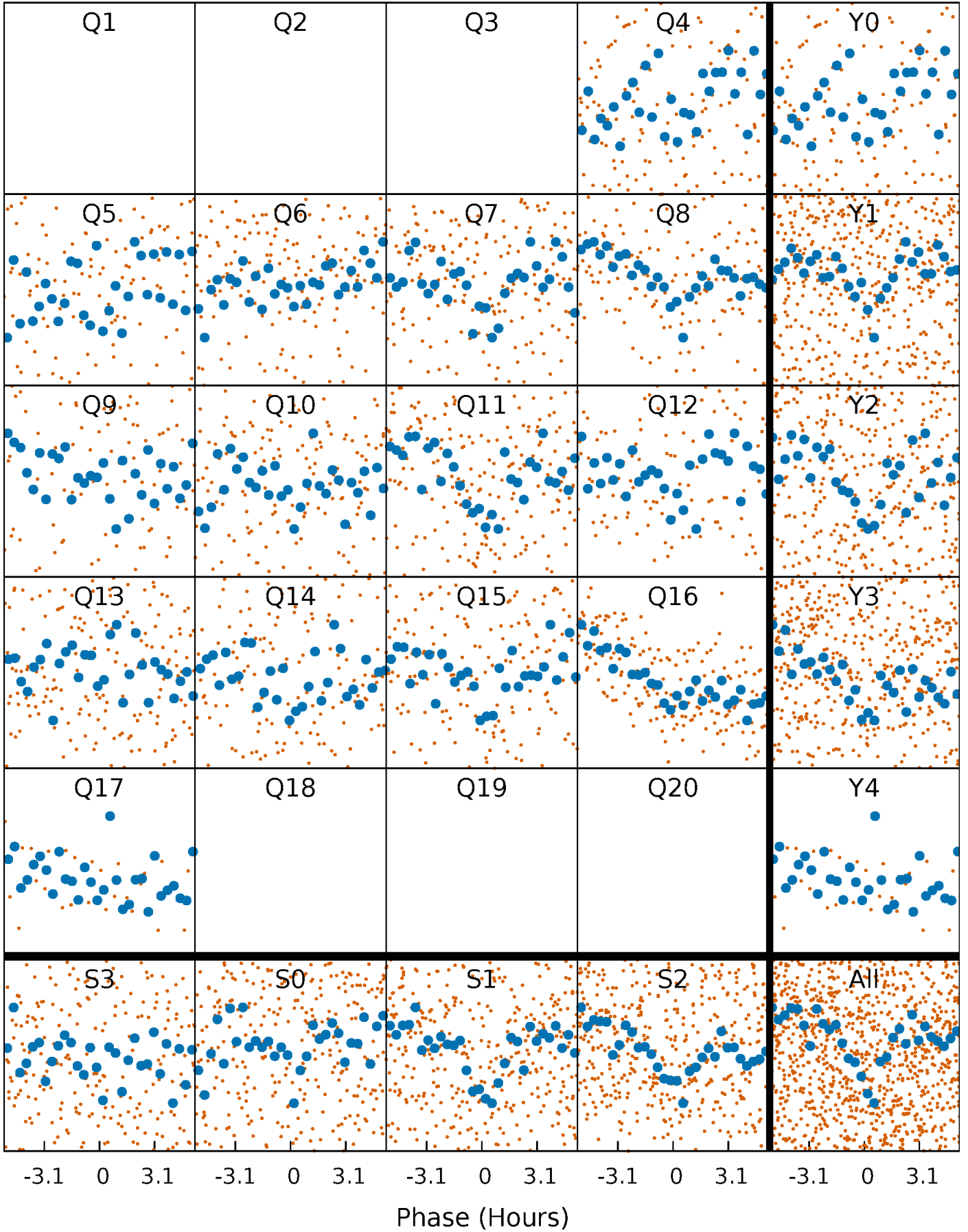


Non-Whitened Vs. Whitened Light Curve



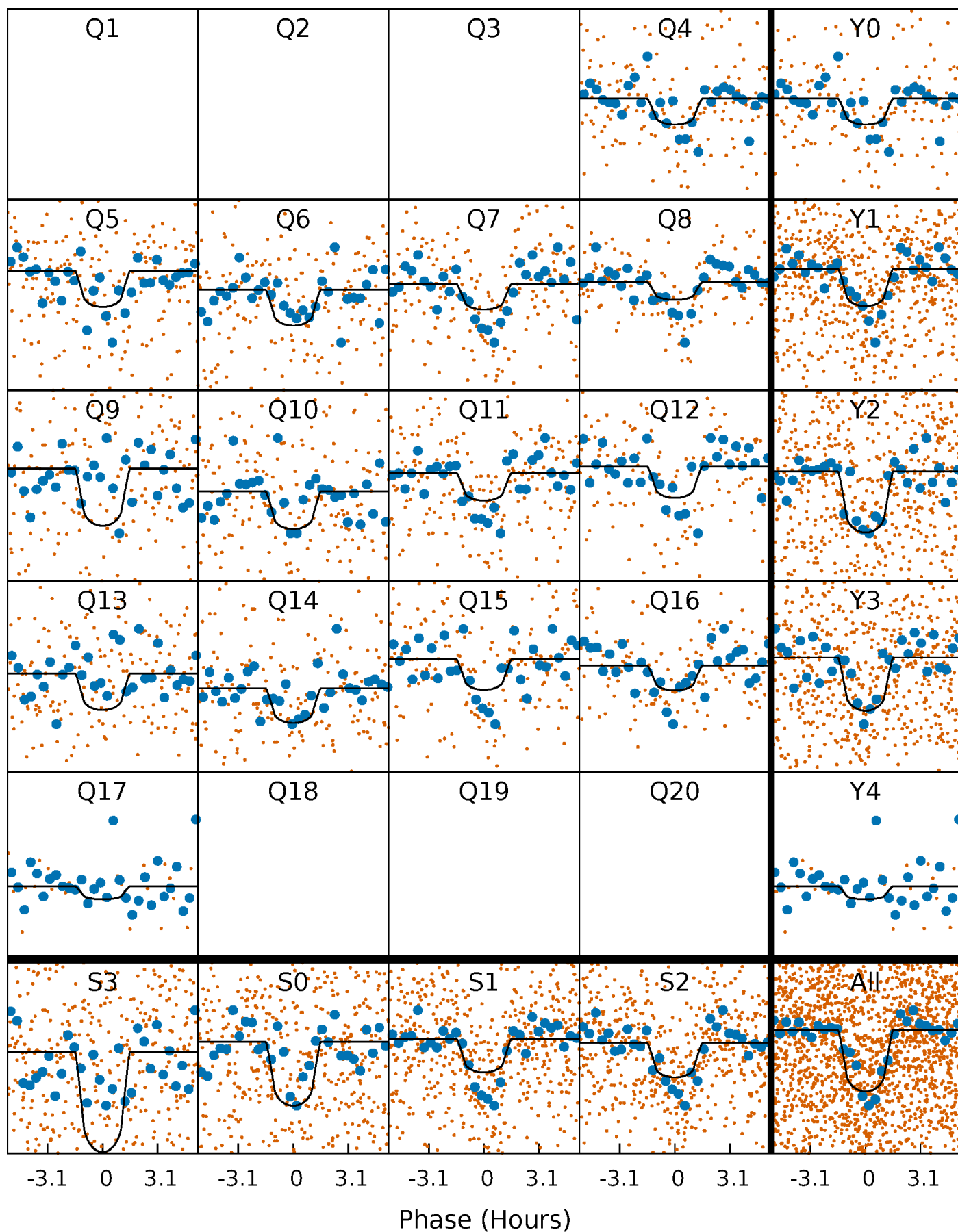
PDC Quarter-Phased Transit Curves

TCE 006891513-01 P= 9.939618 Days $T_0=140.839949$ (BKJD)



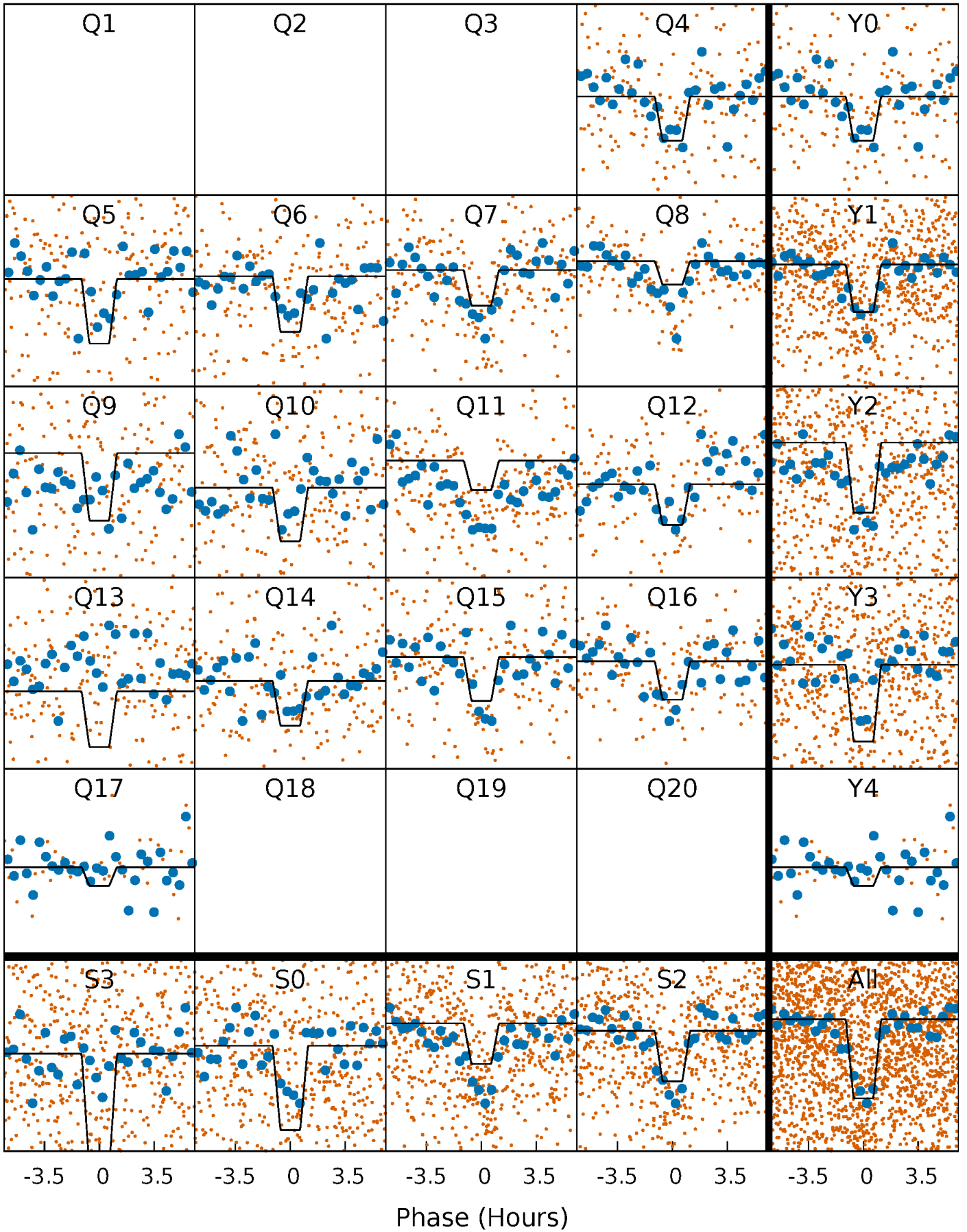
DV Quarter-Phased Transit Curves

TCE 006891513-01 P= 9.939618 Days $T_0=140.839949$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

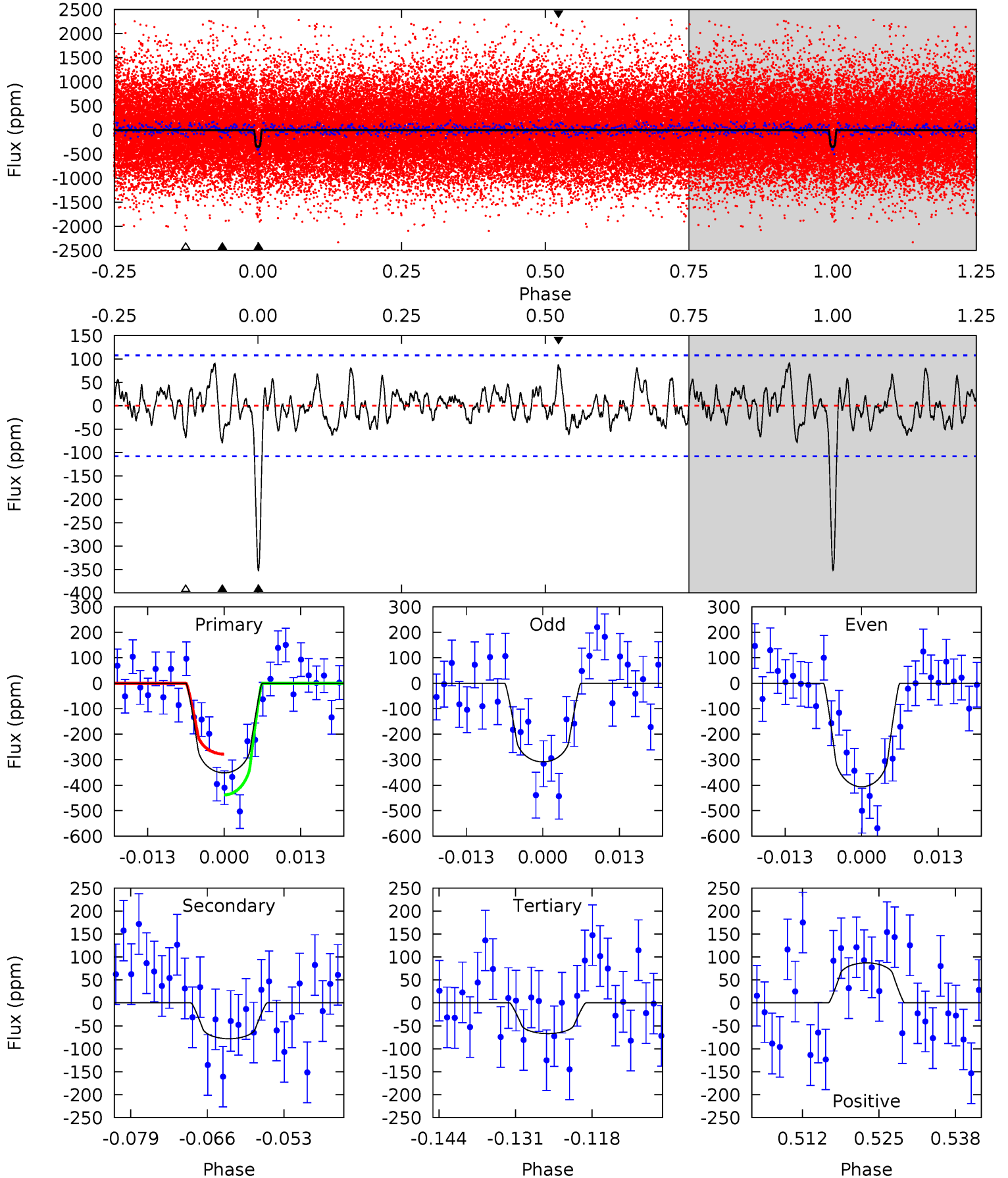
TCE 006891513-01 P= 9.939320 Days $T_0=140.872335$ (BKJD)



DV Model-Shift Uniqueness Test

006891513-01, P = 9.939618 Days, E = 140.839949 Days

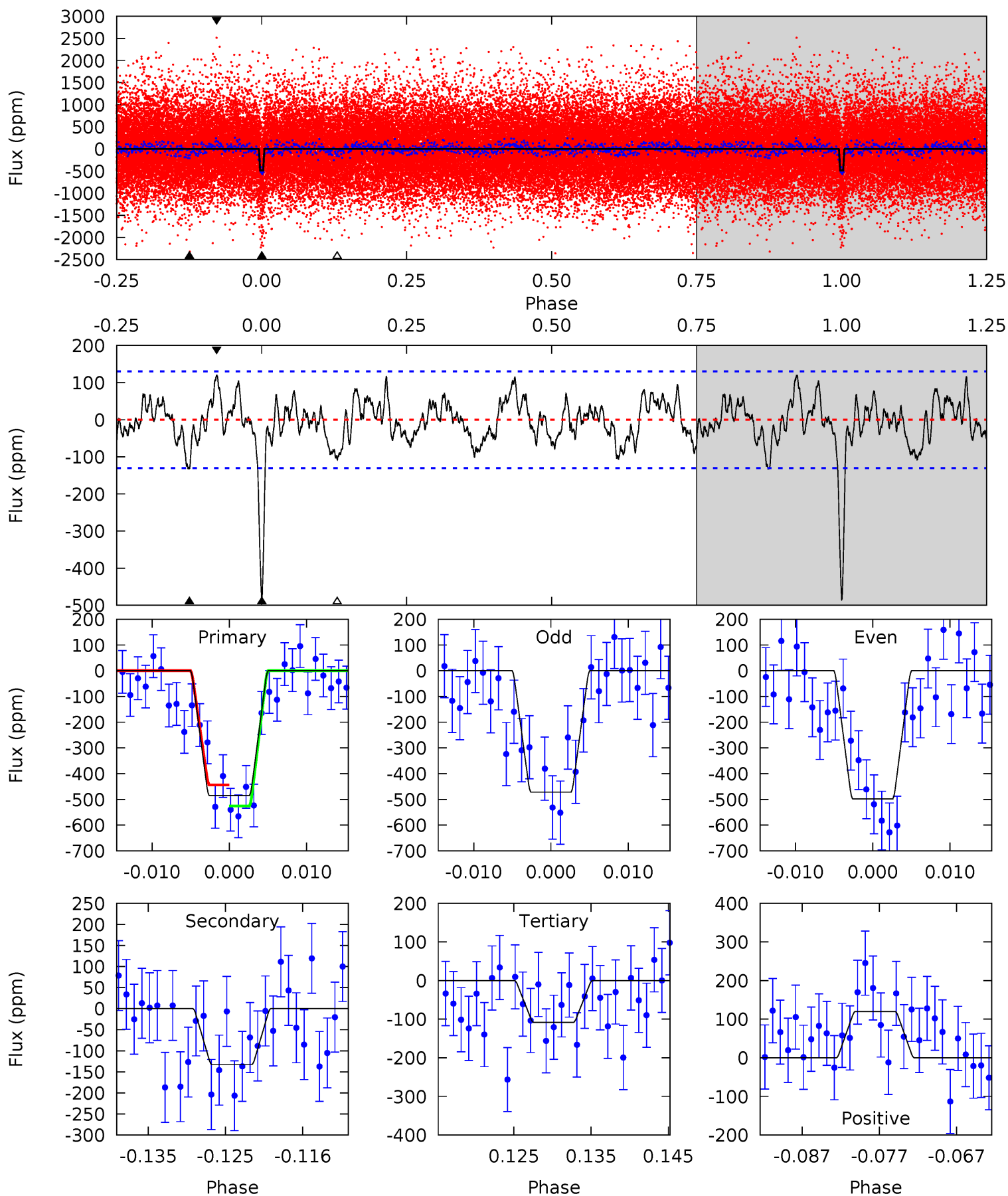
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	3.60	3.08	4.02	4.97	2.48	1.33	13.1	12.2	0.51	-0.42	2.25	1.13	0.21	3.69



Alt Model-Shift Uniqueness Test

006891513-01, P = 9.939320 Days, E = 140.872335 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	5.13	4.17	4.63	5.03	2.59	1.79	14.6	14.1	0.95	0.50	0.50	0.97	0.20	1.58



Stellar Parameters For KIC 006891513

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+162}_{-203}	$4.507^{+0.039}_{-0.221}$	$0.100^{+0.250}_{-0.300}$	$0.941^{+0.289}_{-0.096}$	$1.038^{+0.112}_{-0.125}$	$1.753^{+0.375}_{-0.946}$
	+3%/-4%	+1%/-5%	+250%/-300%	+31%/-10%	+11%/-12%	+21%/-54%
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 006891513-01 / KOI 4413.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-78 ± 22	$2.46^{+1.86}_{-1.63}$	1177^{+82}_{-55}	3941^{+2113}_{-681}	57^{+403}_{-39}
Alt.	-133 ± 26	$2.79^{+1.84}_{-1.63}$	1175^{+96}_{-57}	4186^{+1771}_{-696}	77^{+361}_{-50}

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

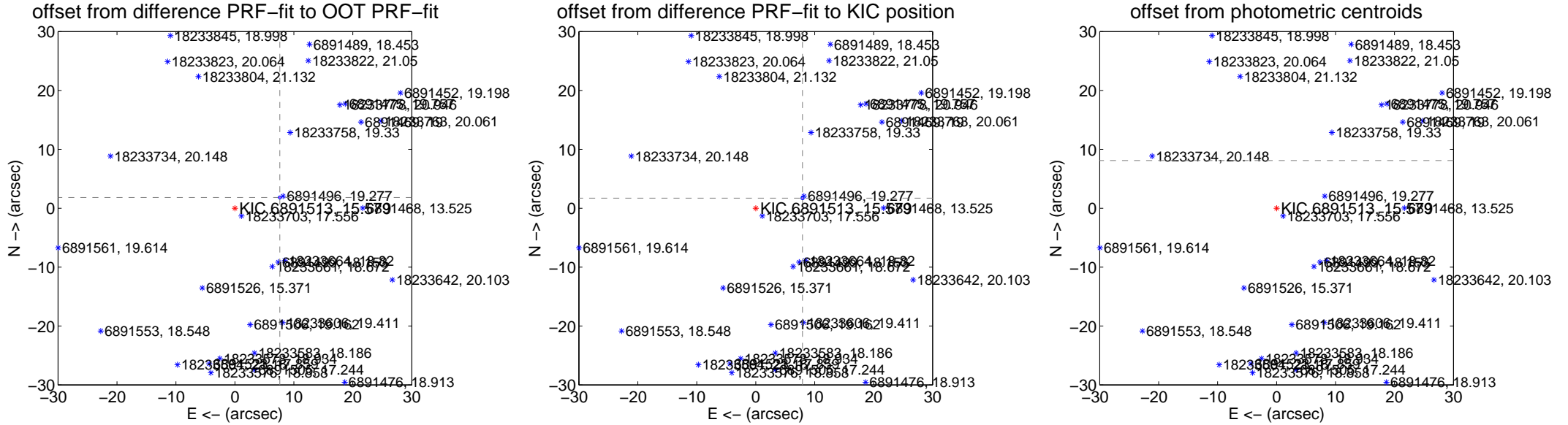
DV Centroid Data

Supplemental centroid analysis for 006891513-01. Kepler magnitude: 15.58. Transit SNR 11.81

There are 6 quarters with good PRF difference image offsets

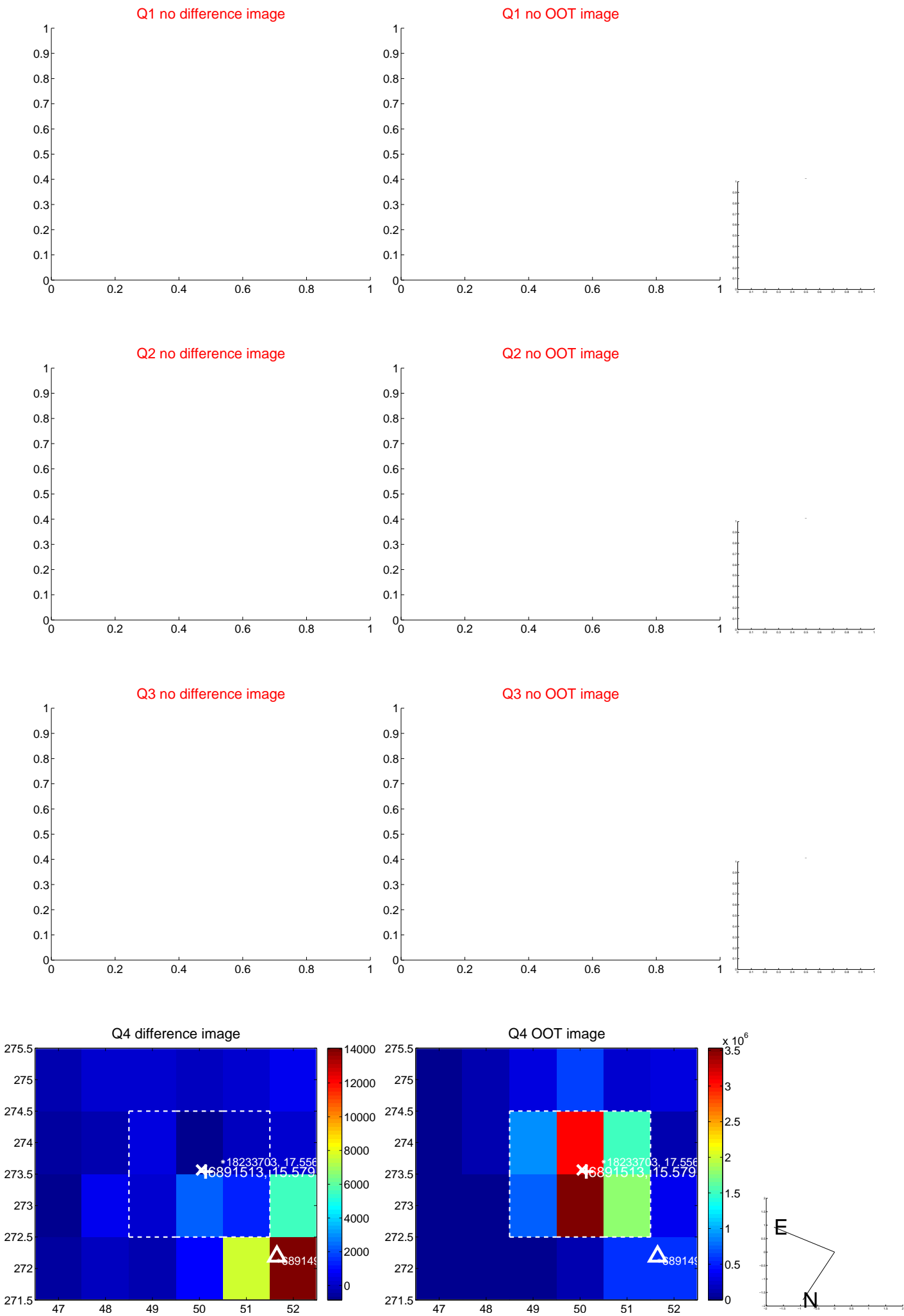
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.840 \pm 0.088	88.78	-7.623 \pm 0.089	1.830 \pm 0.082
PRF-fit source offset from KIC position	8.115 \pm 0.089	91.03	-7.934 \pm 0.089	1.704 \pm 0.081
photometric centroid source offset	41.52 \pm 1.28	32.32	-40.72 \pm 1.29	8.11 \pm 1.24

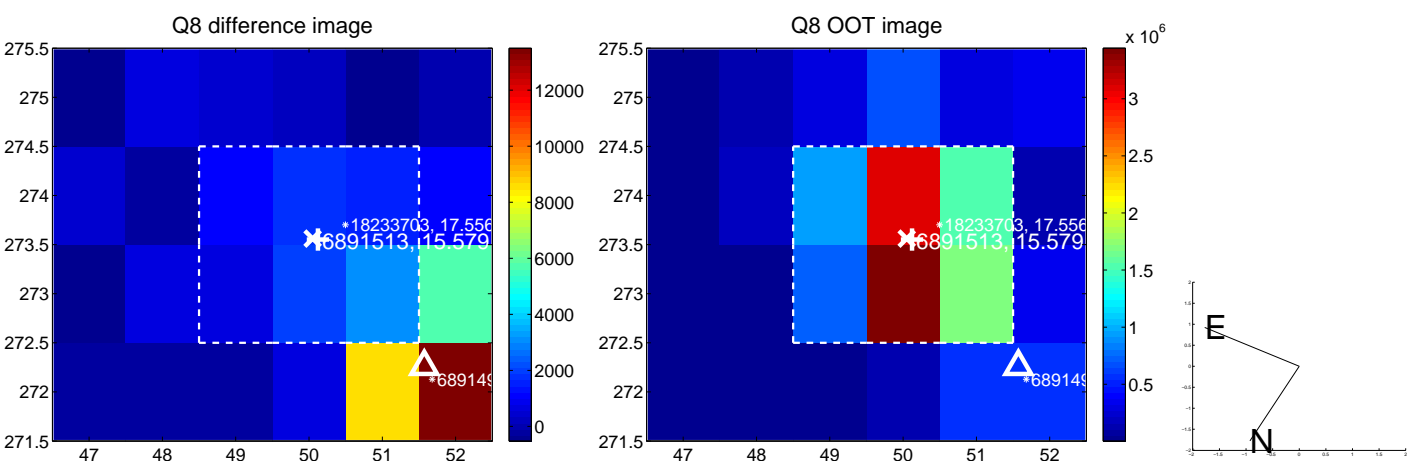
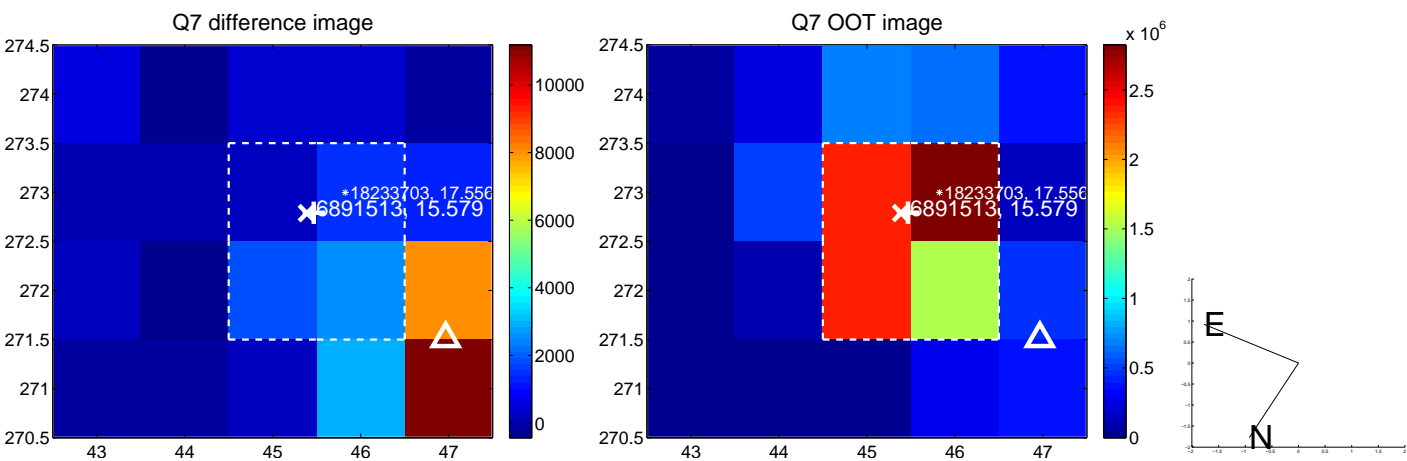
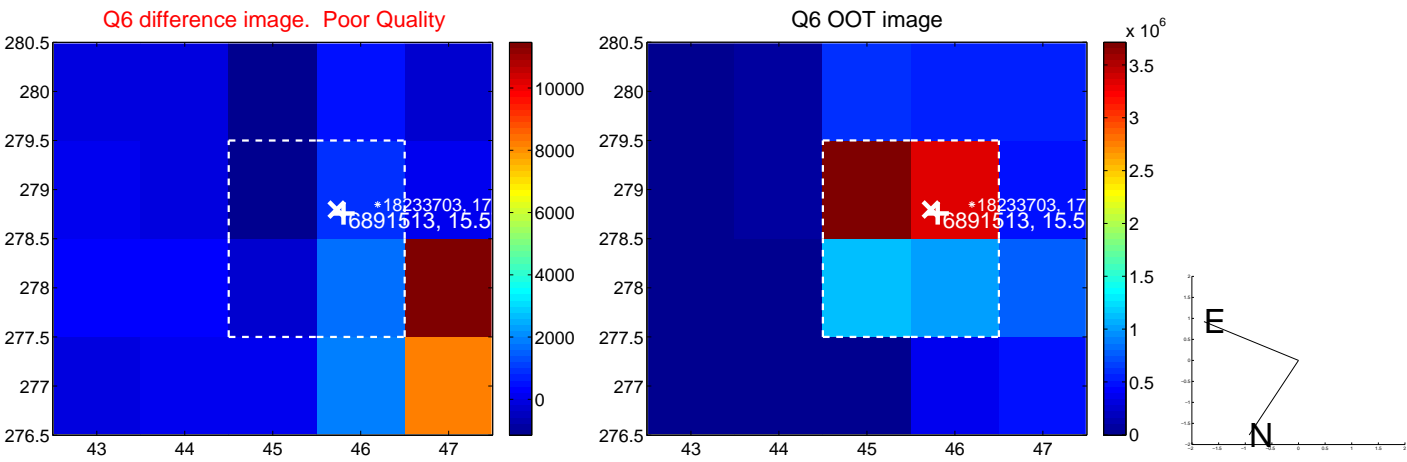
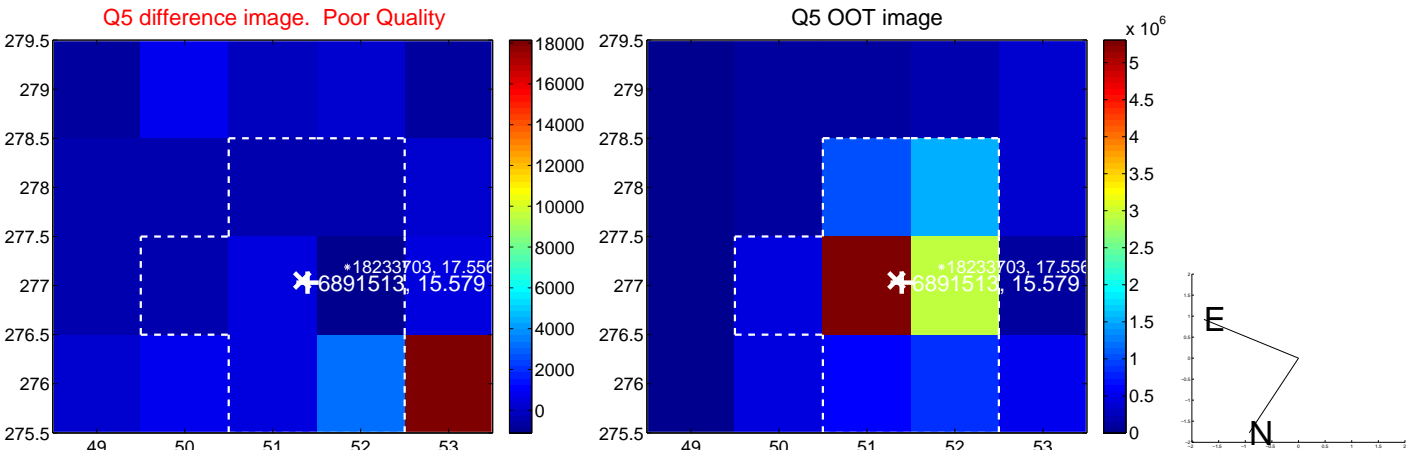


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

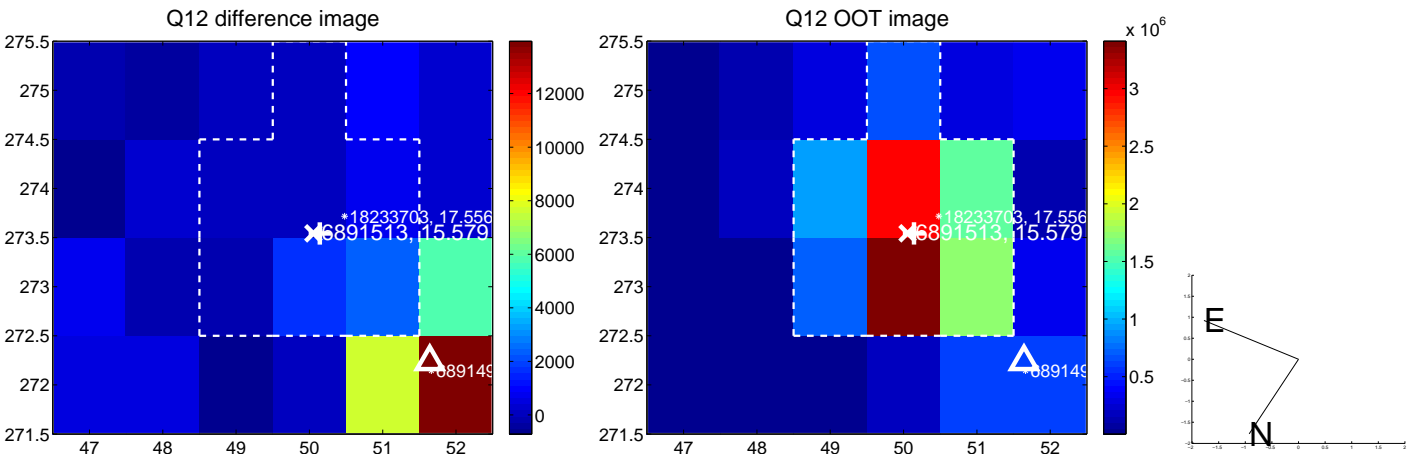
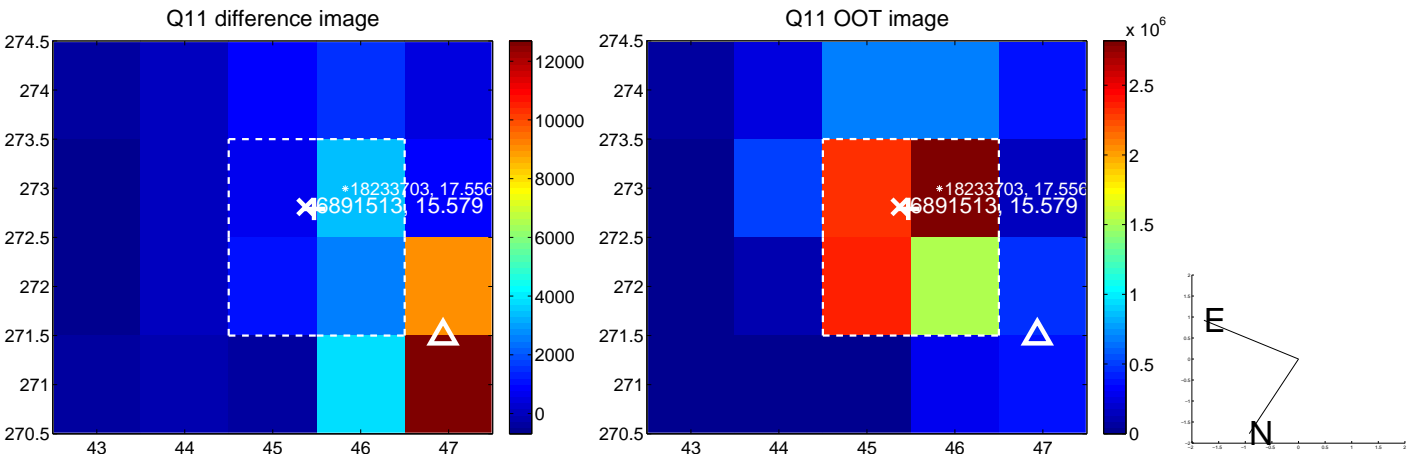
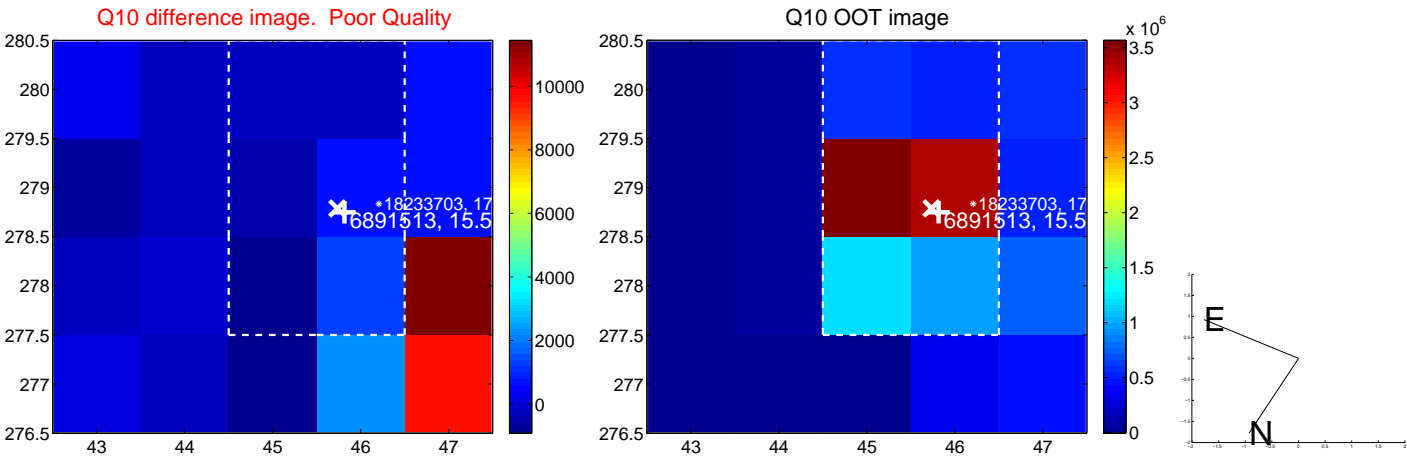
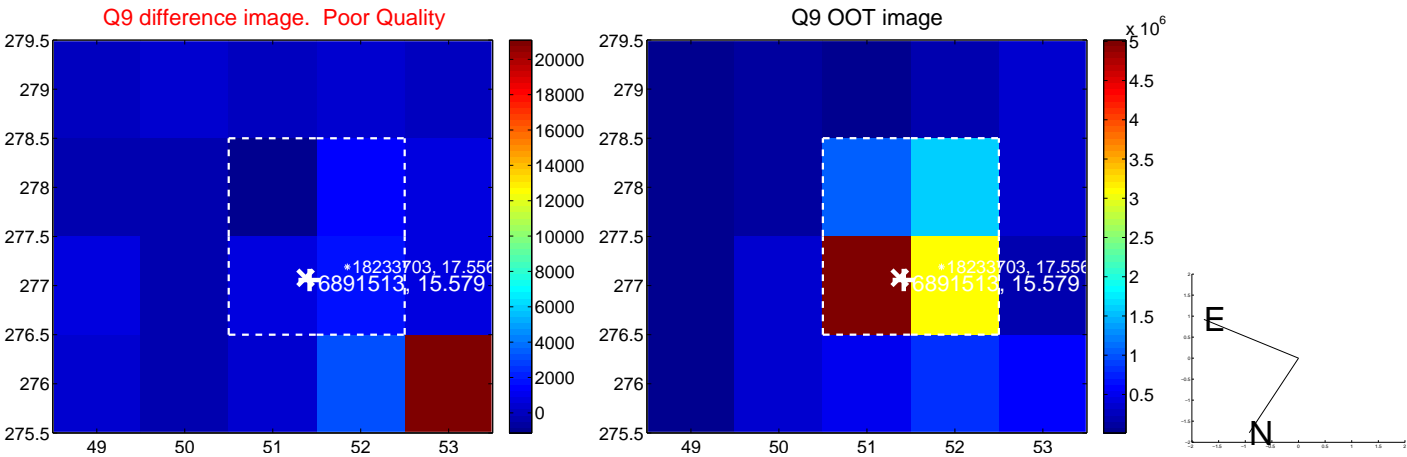
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



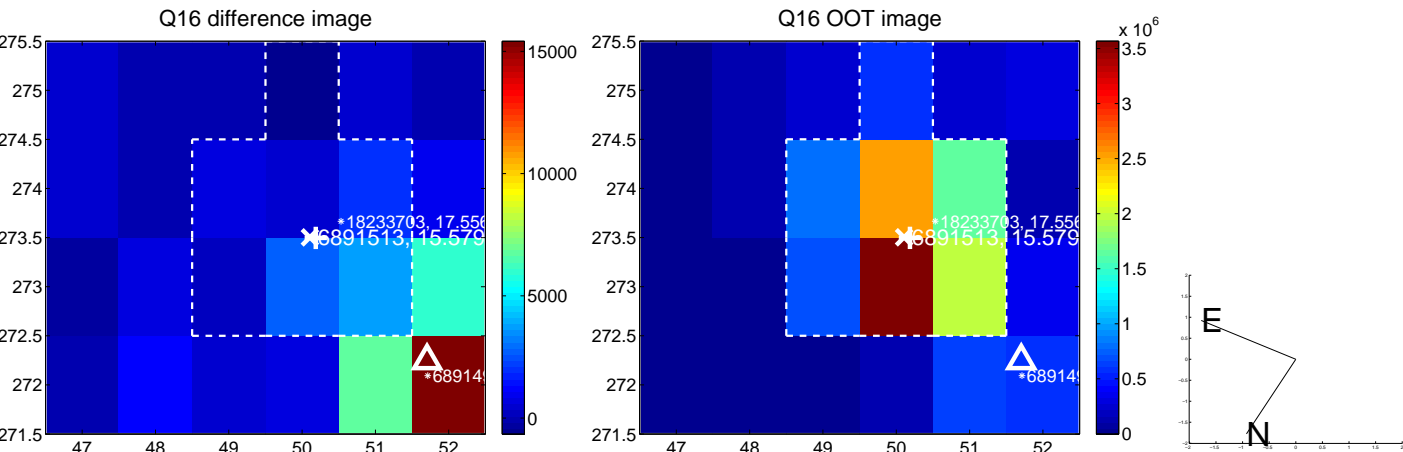
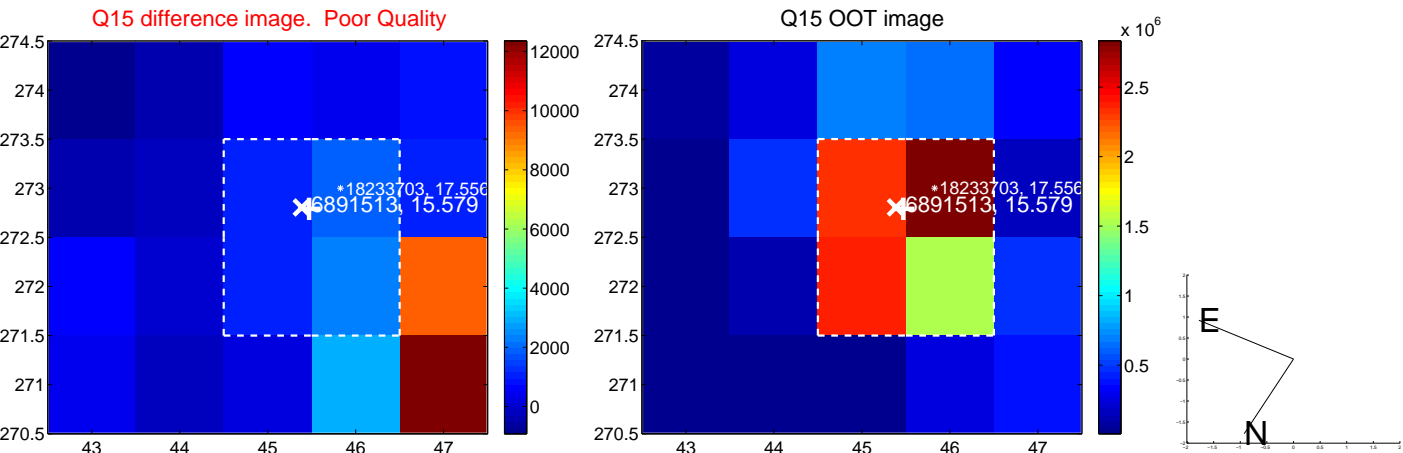
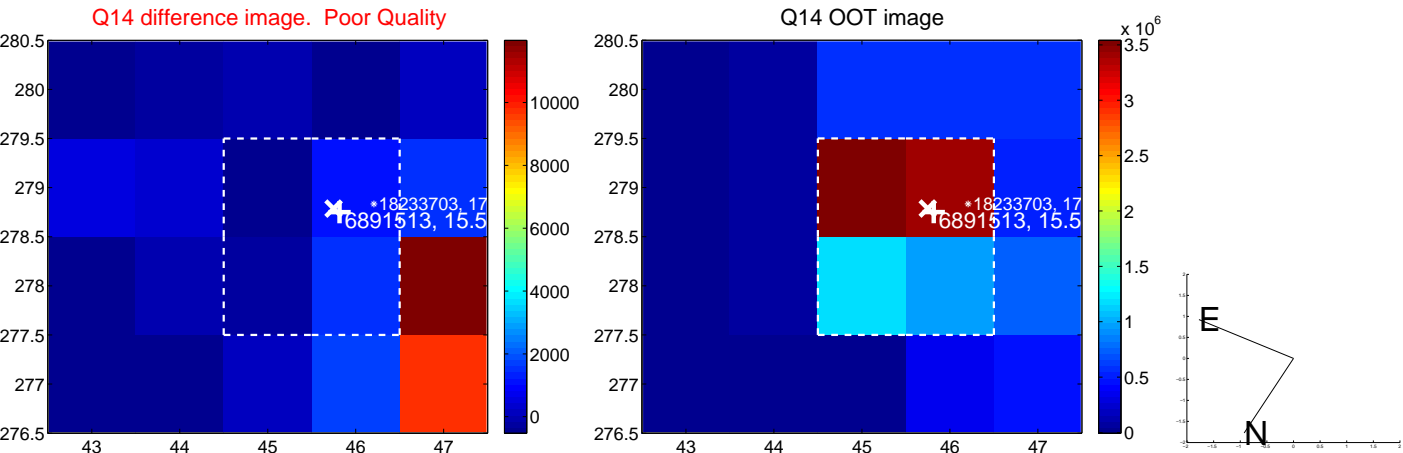
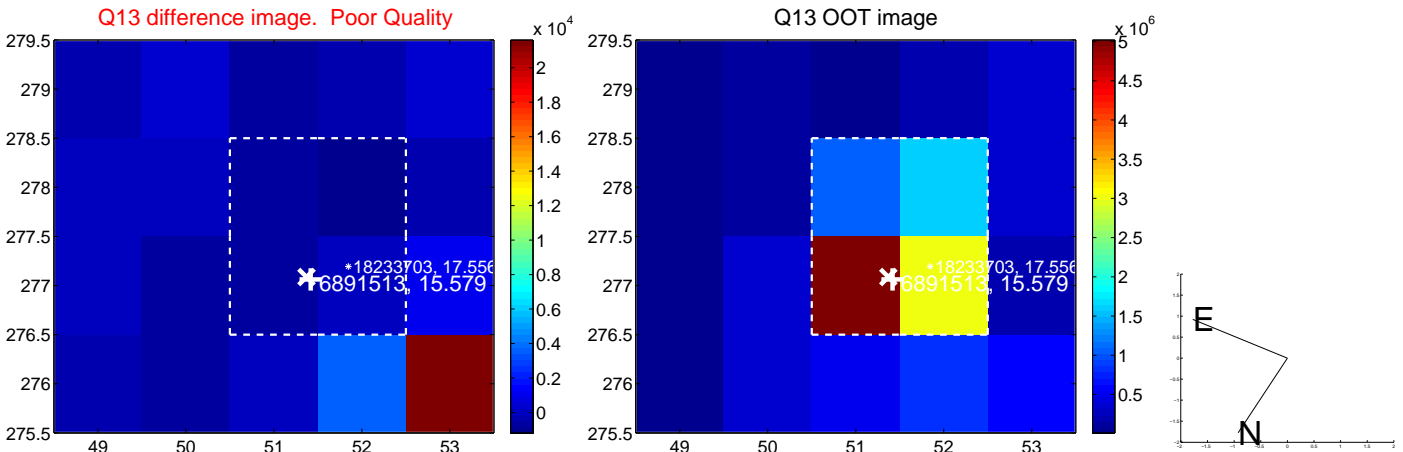
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



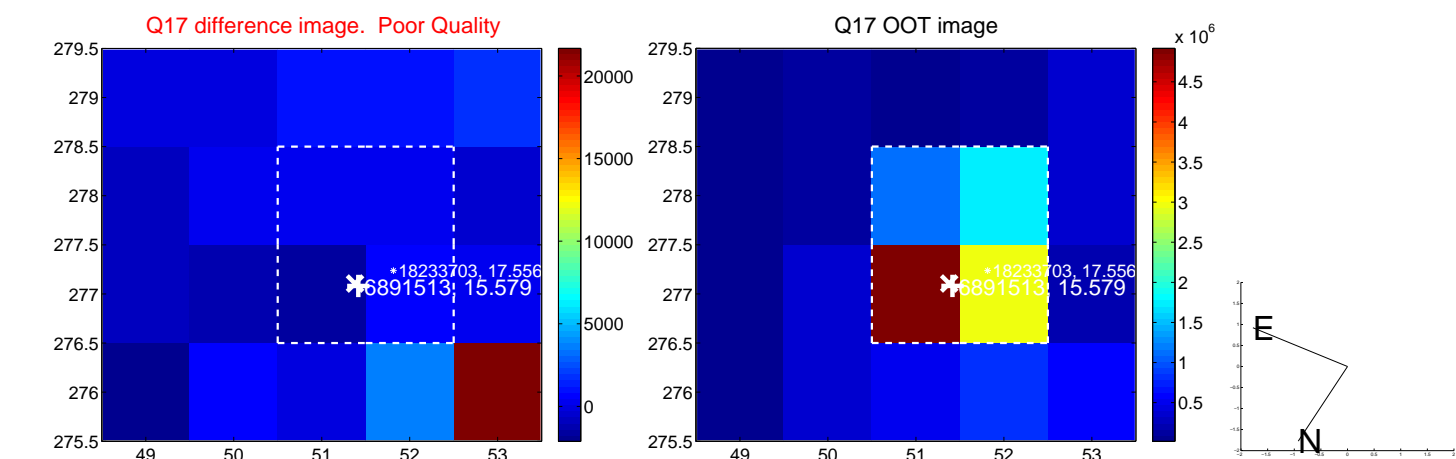
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



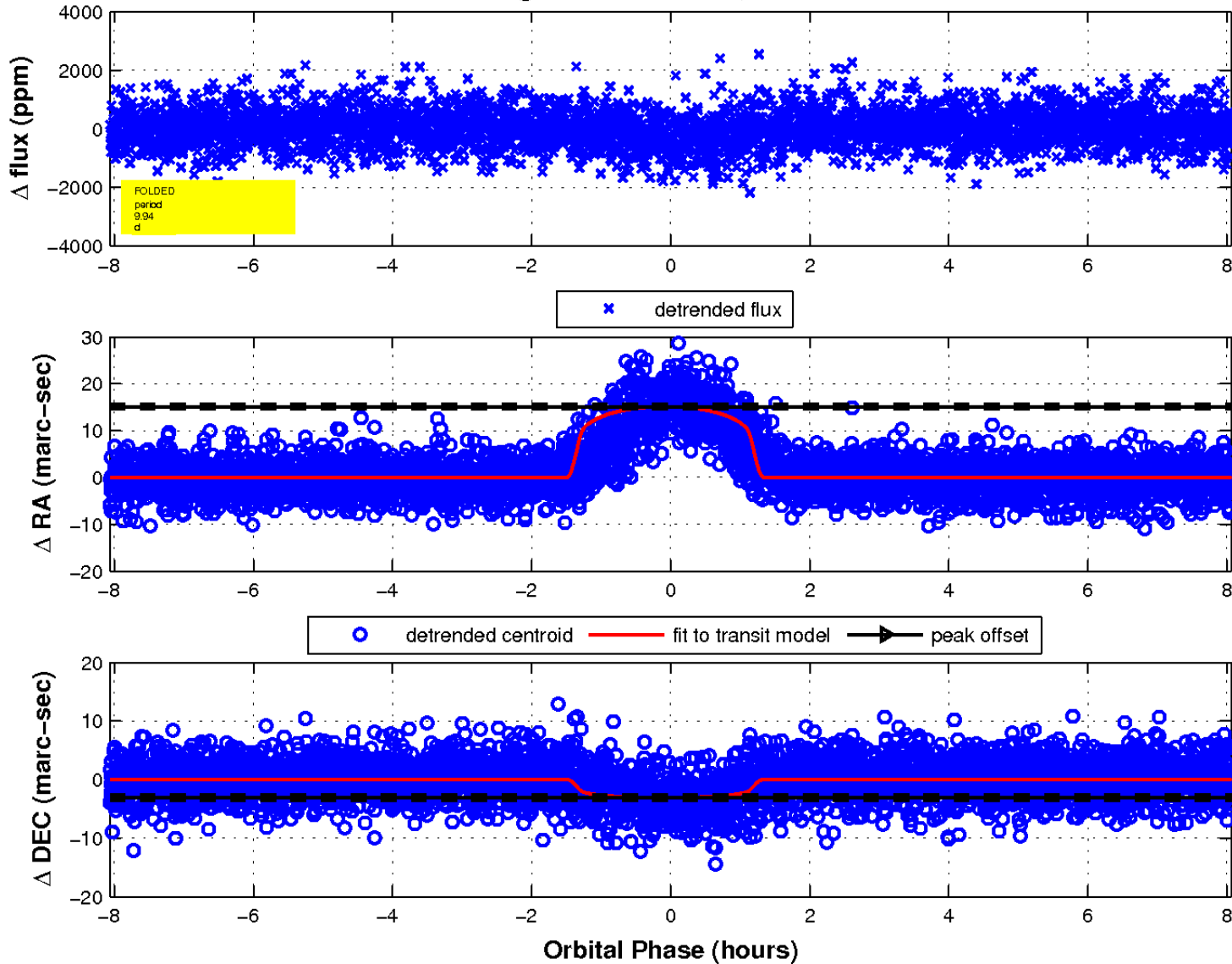
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

