

KIC 010485165

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})
010485165-01	OBS	No	0.890545	131.745249	46.8	2.064	9.4	9.9	1.07	6280	0.86	4609.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010485165-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

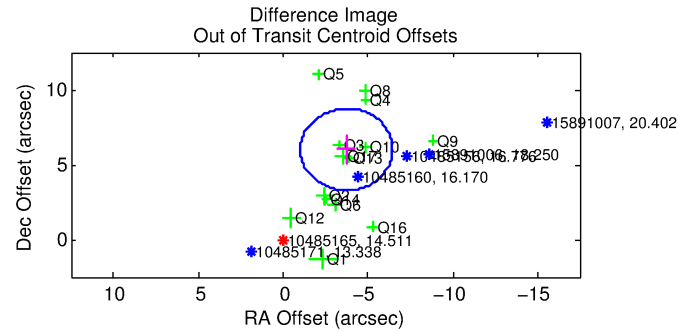
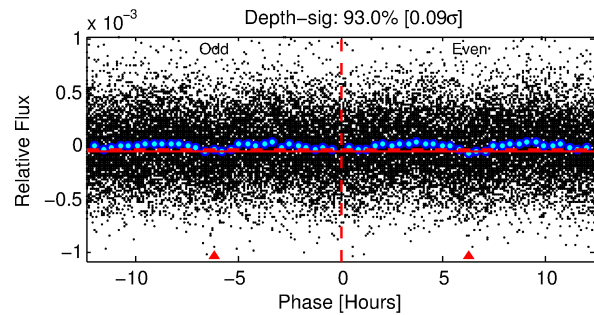
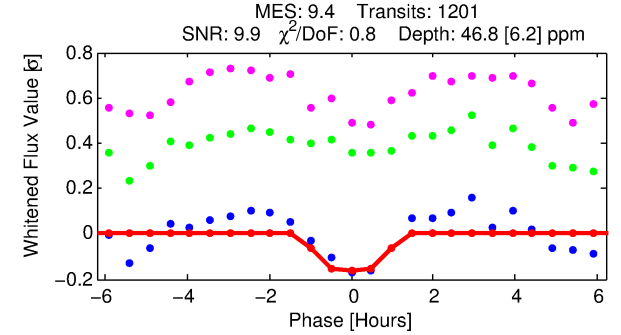
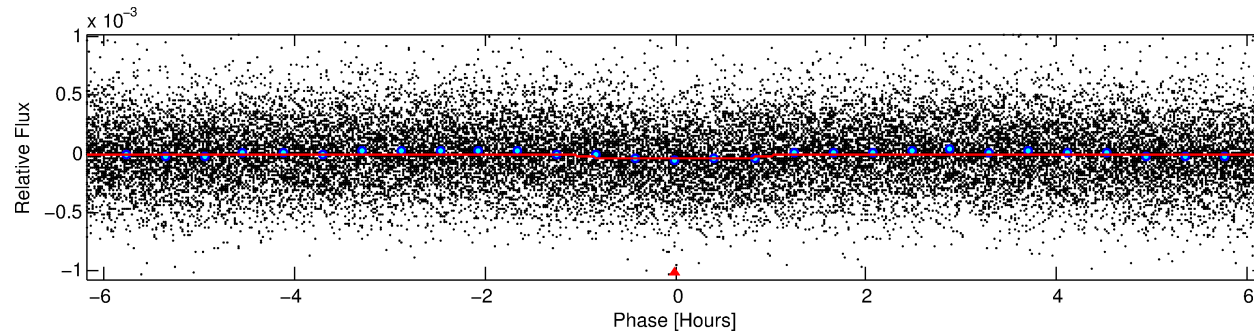
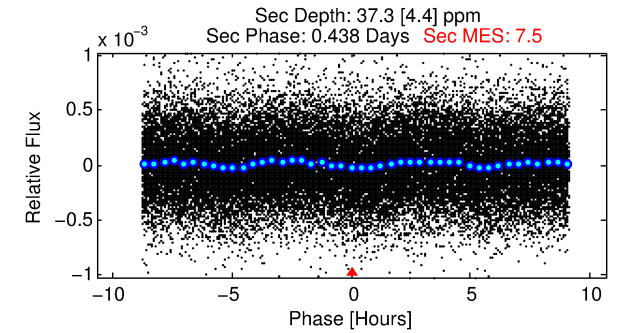
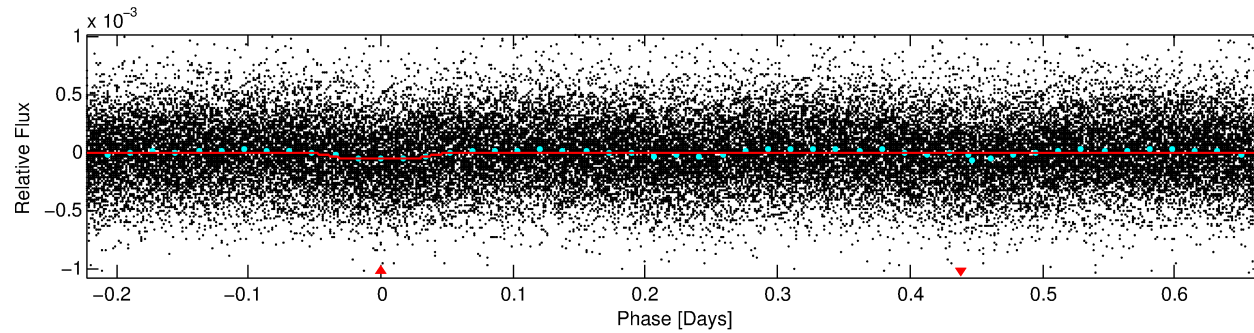
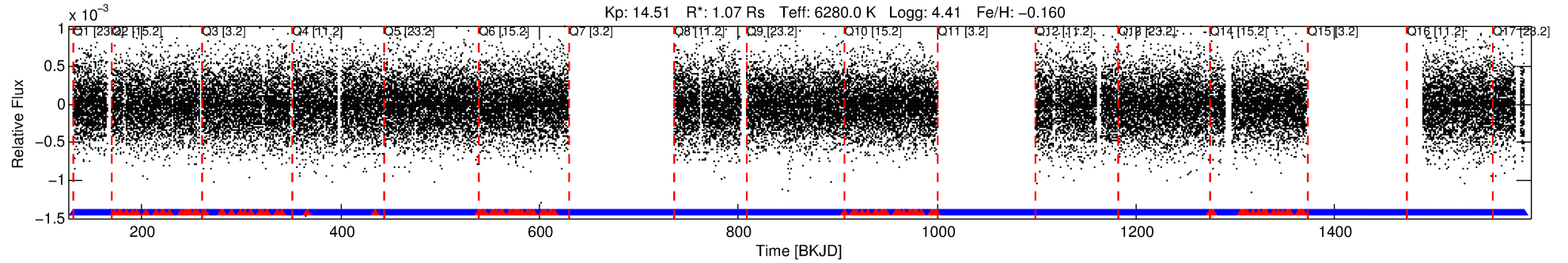
Ephemeris Match Information For 010485165-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010485165-01	10485165	T-Cyg1-03567-pri	10485137	2:1	66.5	13	-10	11.88	14.51	7889.00	Direct-PRF	0	1.51	1.72

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10485165 Candidate: 1 of 1 Period: 0.891 d



DV Fit Results:

Period = 0.89054 [0.00001] d
Epoch = 131.7452 [0.0029] BKJD
Rp/R* = 0.0074 [0.0036]
a/R* = 1.74 [3.18]
b = 0.90 [0.56]
Seff = 4609.96 [1935.50]
Teff = 2101 [221] K
Rp = 0.86 [0.51] Re
a = 0.0185 [0.0052] AU
Ag = 9.55 [10.19] [0.84 σ]
Teffp = 5710 [1430] K [2.49 σ]

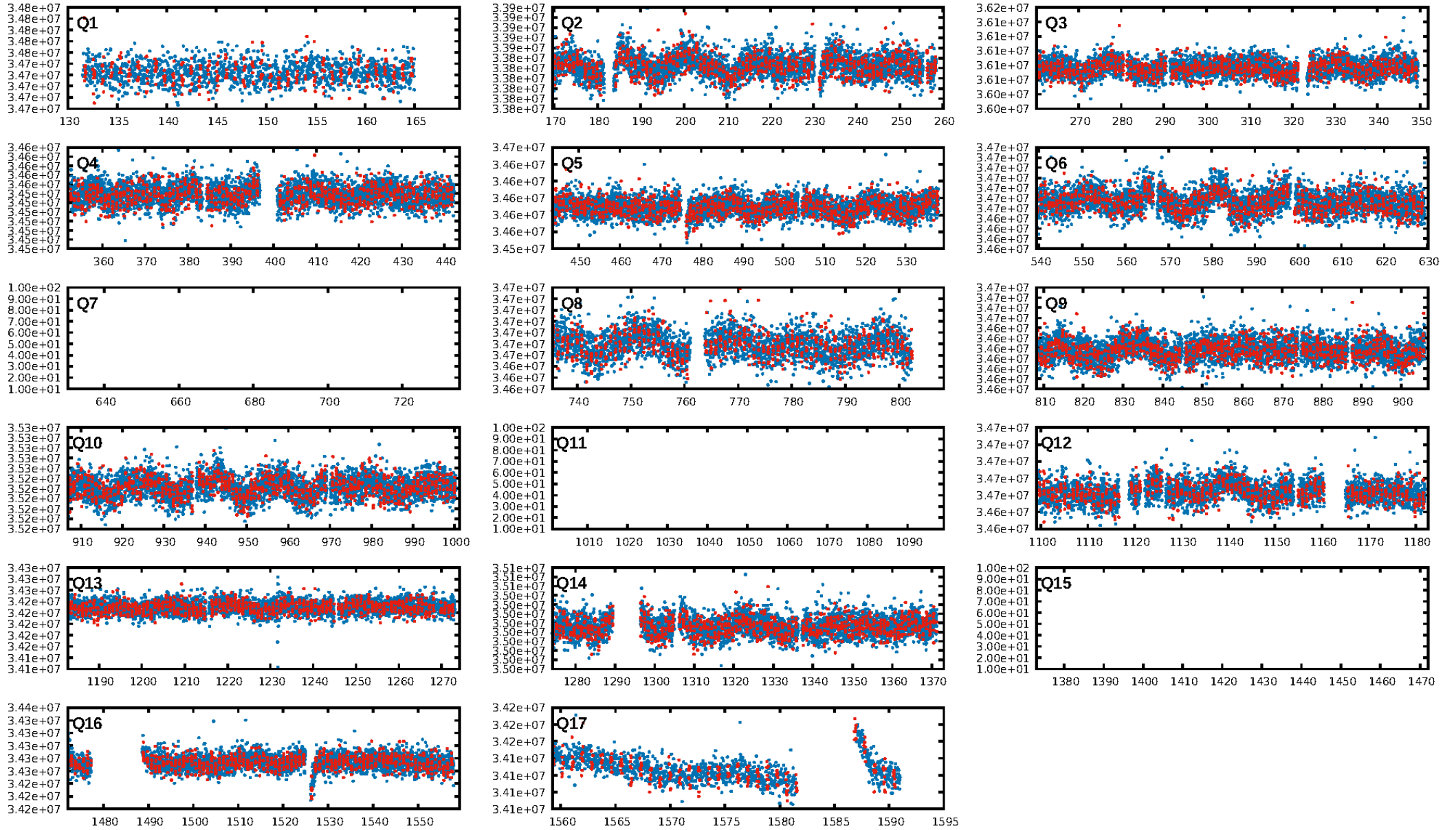
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.16e-20
RollingBand-fgt: 0.90 [1023/1132]
GhostDiagnostic-chr: 0.2933
Centroid-sig: 0.0%
Centroid-so: 2.736 arcsec [3.04 σ]
OotOffset-rm: 7.078 arcsec [7.79 σ]
KicOffset-rm: 6.515 arcsec [6.72 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

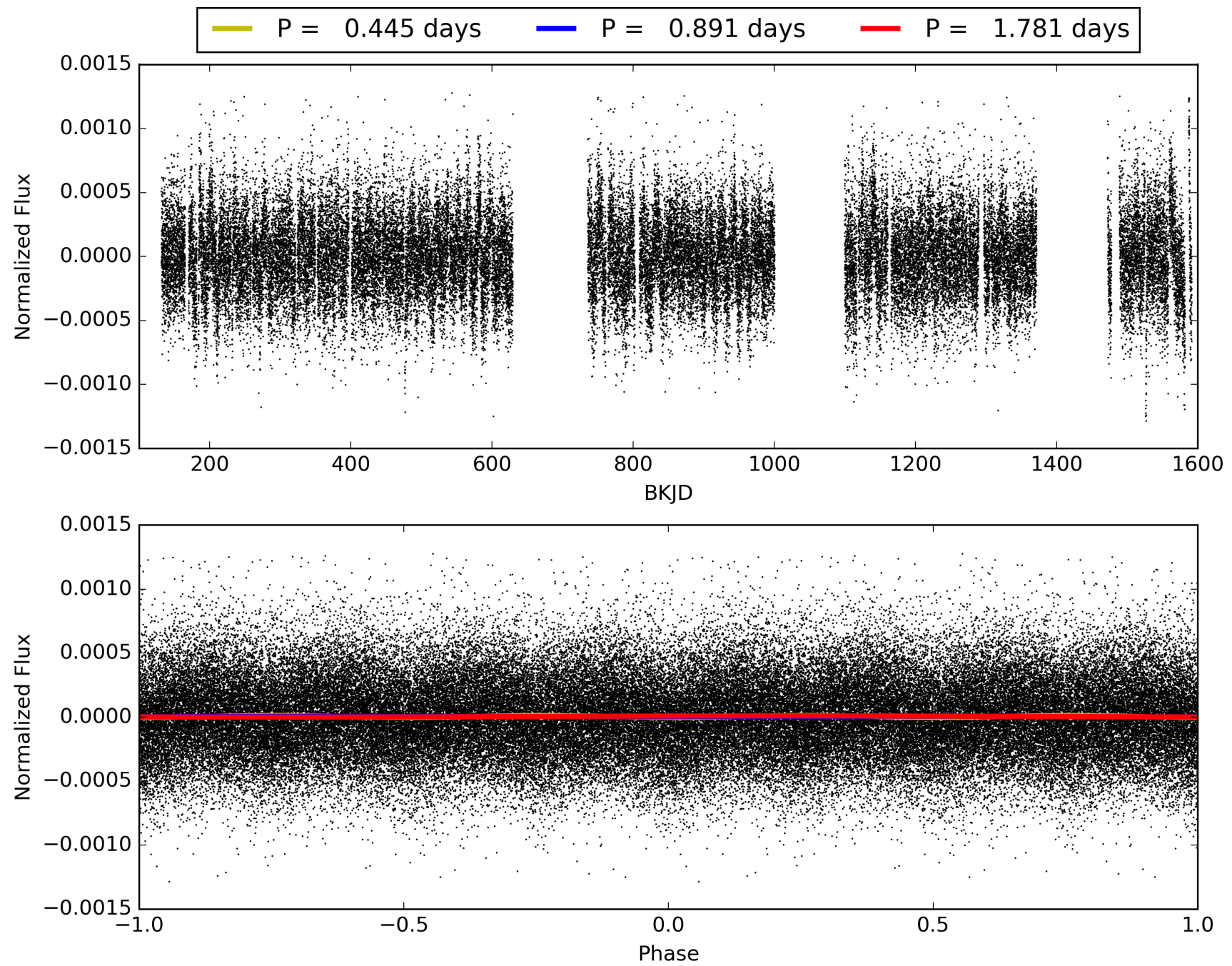
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:16:28 Z

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

TCE 010485165-01, PDC Light Curves

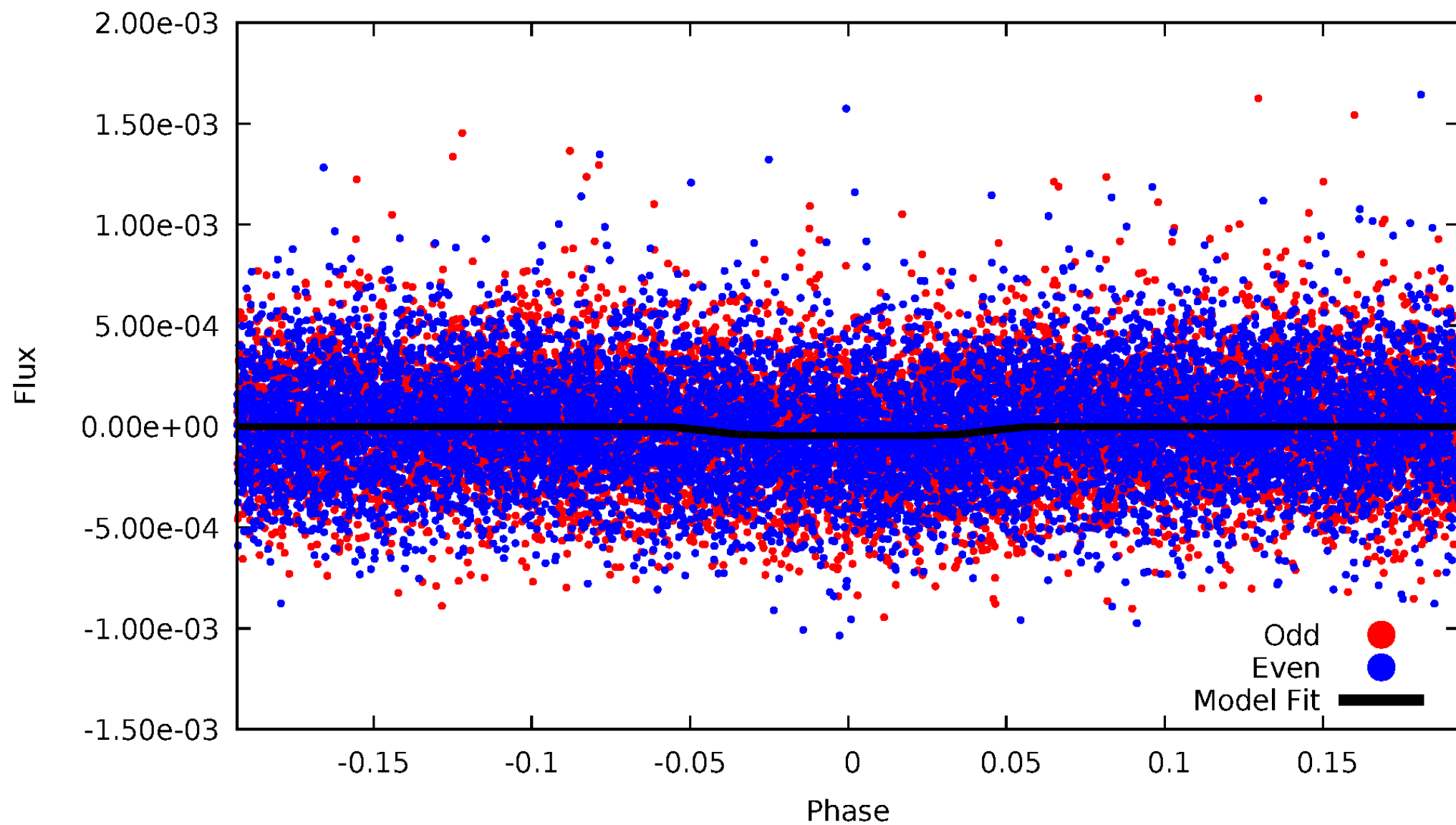


TCE 010485165-01



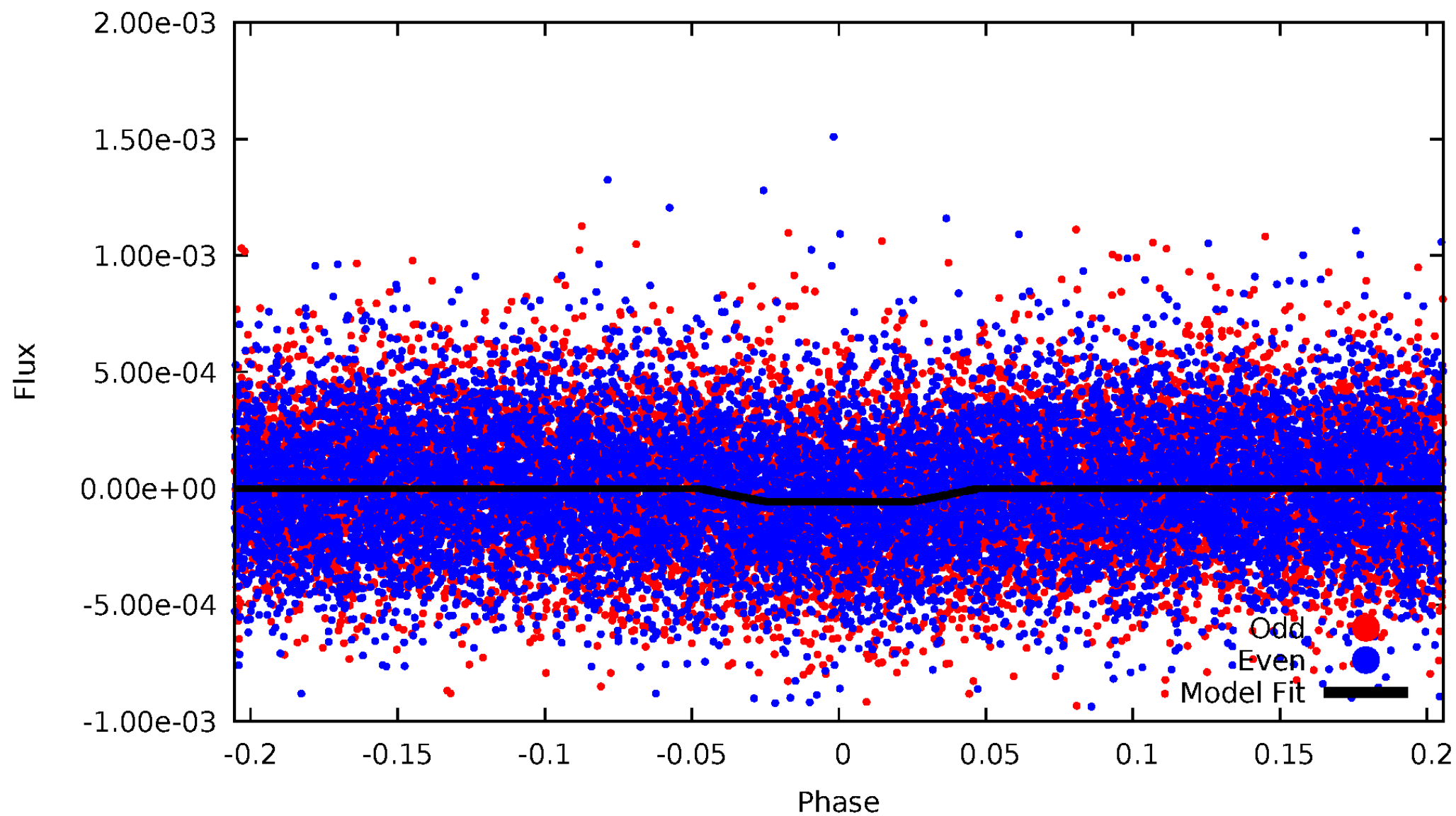
DV Odd/Even

TCE 010485165-01



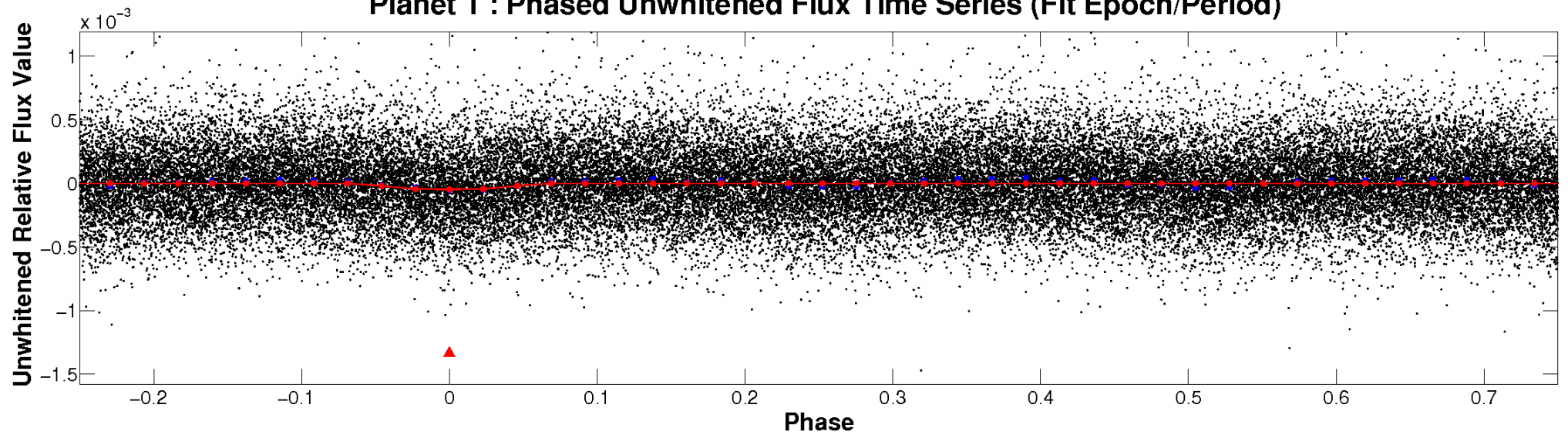
ALT Odd/Even

TCE 010485165-01

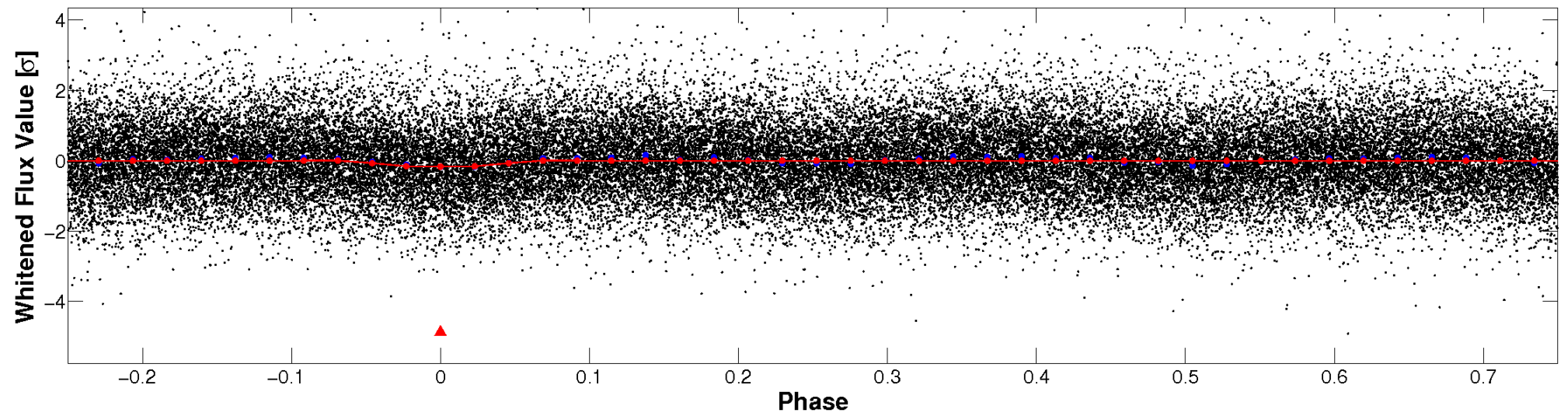


Non-Whitened Vs. Whitened Light Curve

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

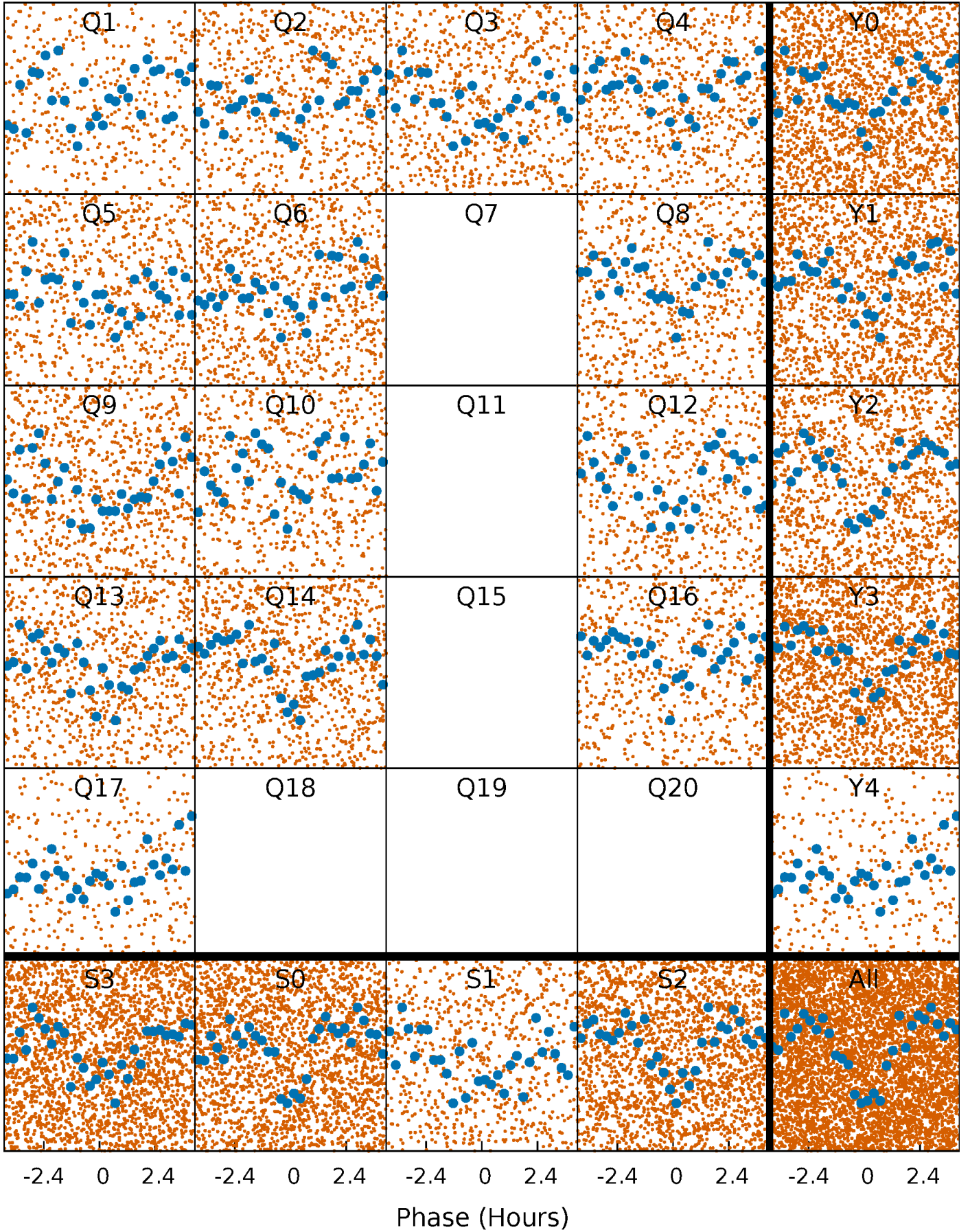


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



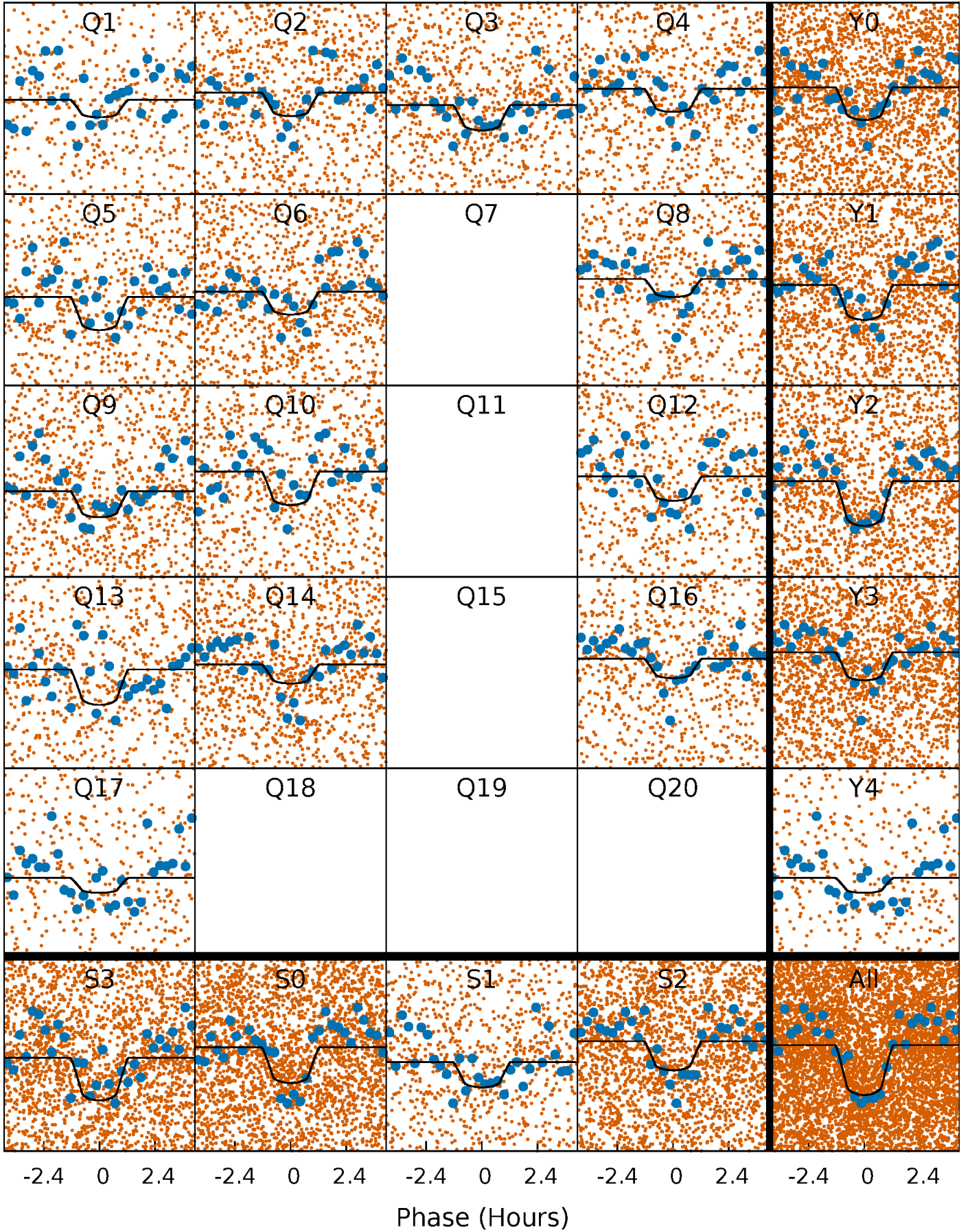
PDC Quarter-Phased Transit Curves

TCE 010485165-01 P= 0.890545 Days $T_0=131.745249$ (BKJD)



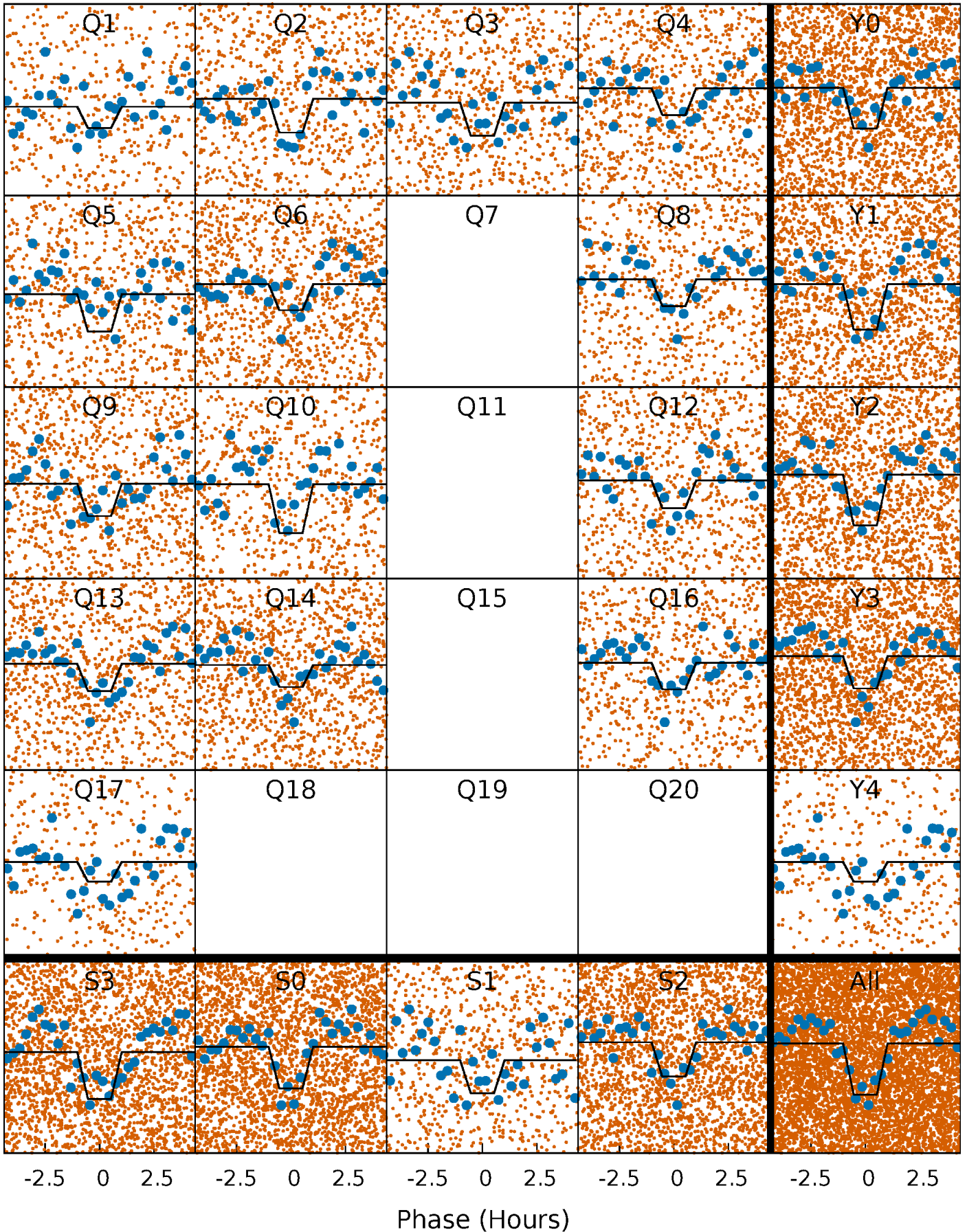
DV Quarter-Phased Transit Curves

TCE 010485165-01 P= 0.890545 Days $T_0=131.745249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

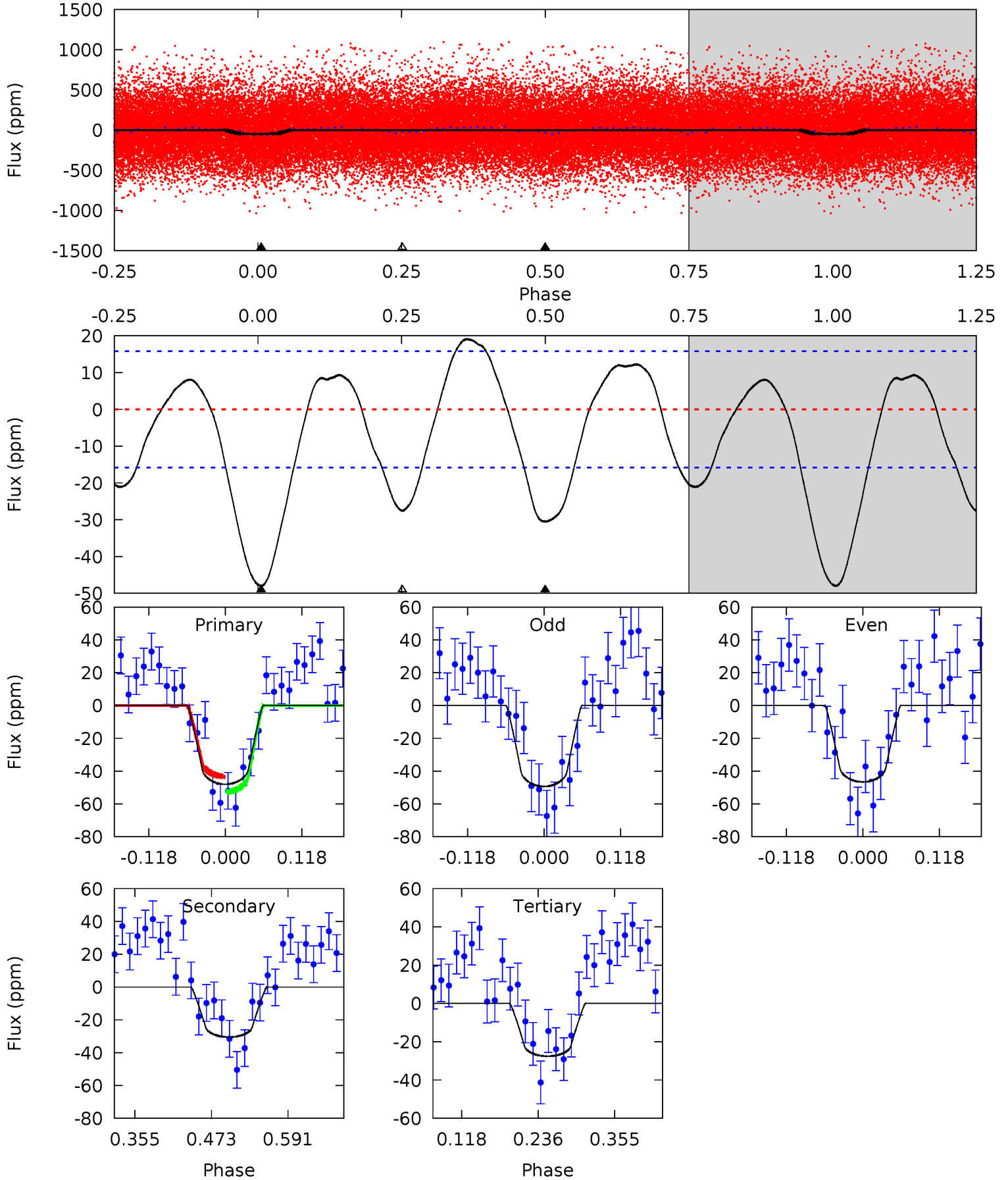
TCE 010485165-01 P= 0.890551 Days $T_0=131.745280$ (BKJD)



DV Model-Shift Uniqueness Test

010485165-01, P = 0.890545 Days, E = 130.854704 Days

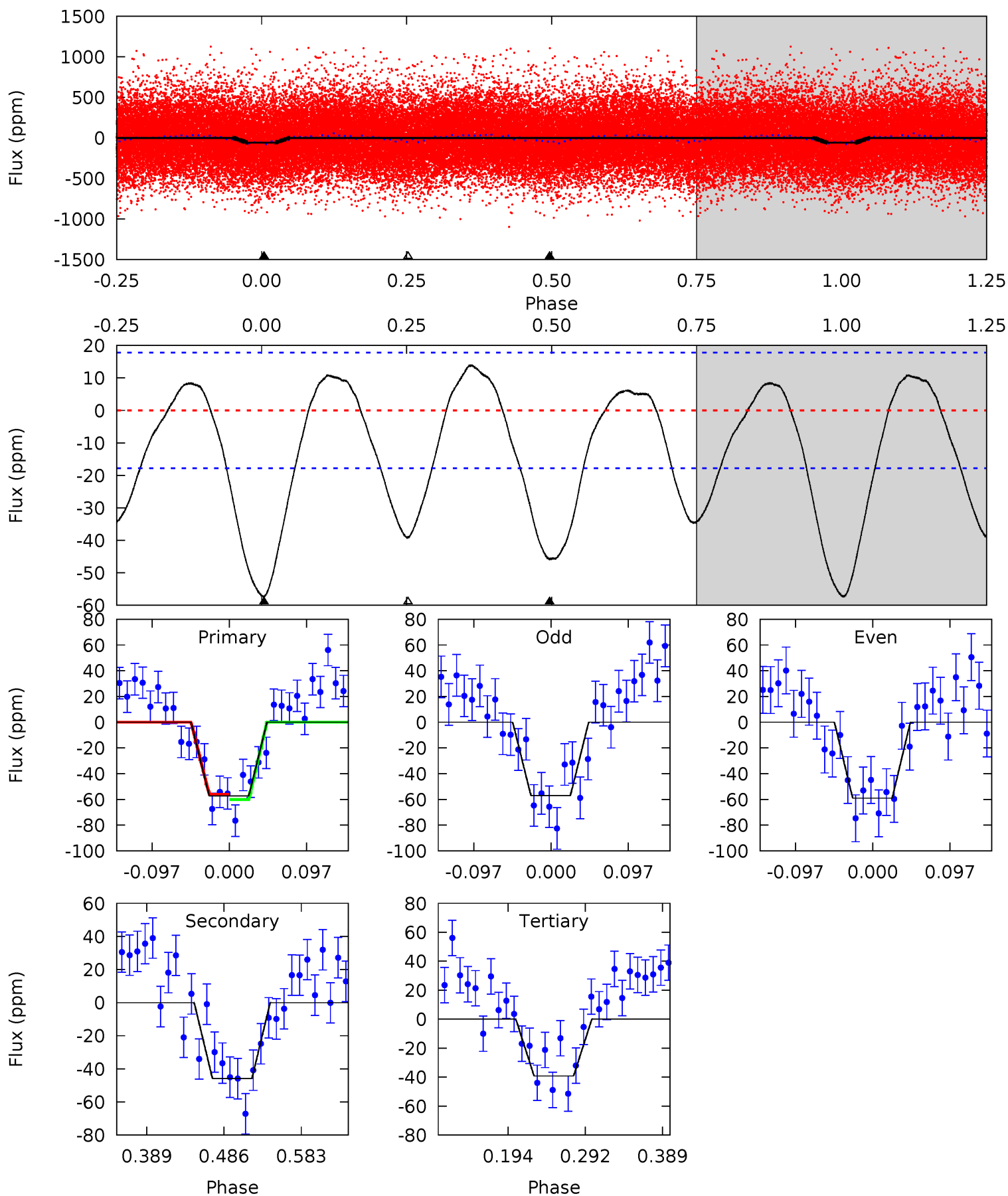
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	8.73	7.90	0	4.53	1.56	3.91	5.84	13.7	0.83	8.73	0.39	0.97	0.28	1.35



Alt Model-Shift Uniqueness Test

010485165-01, P = 0.890551 Days, E = 130.854729 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	11.8	10.1	0	4.57	1.66	4.15	4.66	14.7	1.71	11.8	0.26	0.88	0.19	0.51



Stellar Parameters For KIC 010485165

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6280^{+169}_{-225}	$4.412^{+0.070}_{-0.210}$	$-0.160^{+0.250}_{-0.300}$	$1.066^{+0.364}_{-0.121}$	$1.065^{+0.173}_{-0.129}$	$1.236^{+0.390}_{-0.666}$
	+3%/-4%	+2%/-5%	+156%/-188%	+34%/-11%	+16%/-12%	+32%/-54%
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 010485165-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 3	$0.92^{+0.42}_{-0.41}$	2979^{+246}_{-148}	5379^{+1980}_{-858}	$6.843^{+15.196}_{-3.665}$
Alt.	-46 ± 4	$0.97^{+0.44}_{-0.43}$	2985^{+222}_{-165}	5788^{+2048}_{-953}	$9.448^{+20.980}_{-5.174}$

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

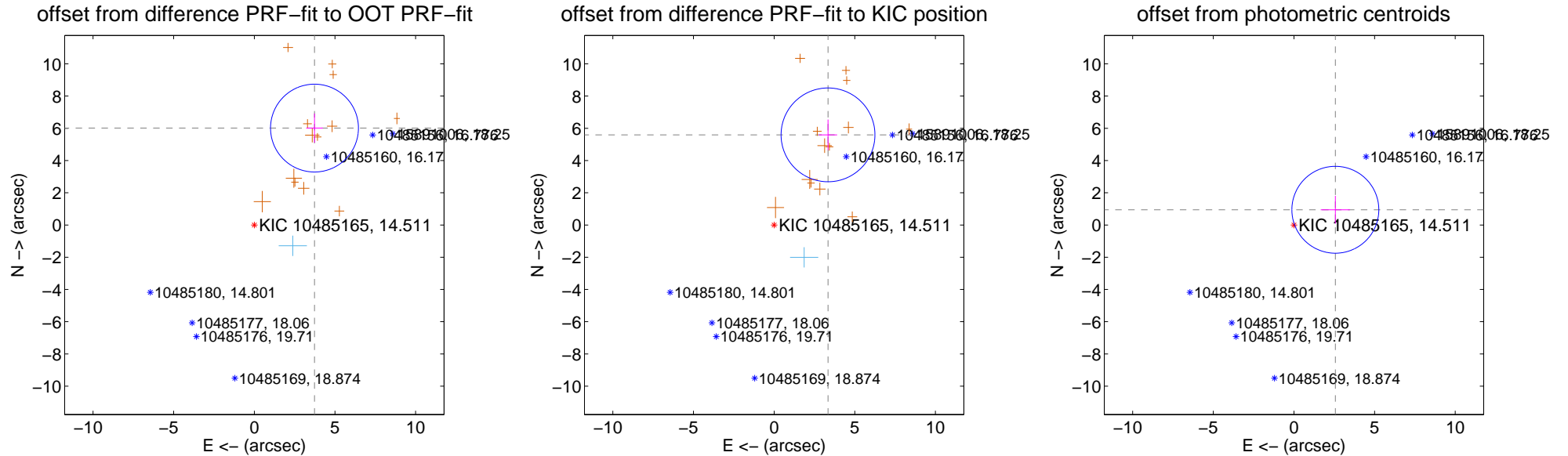
DV Centroid Data

Supplemental centroid analysis for 010485165-01. Kepler magnitude: 14.51. Transit SNR 9.86

There are 1 quarters with good PRF difference image offsets

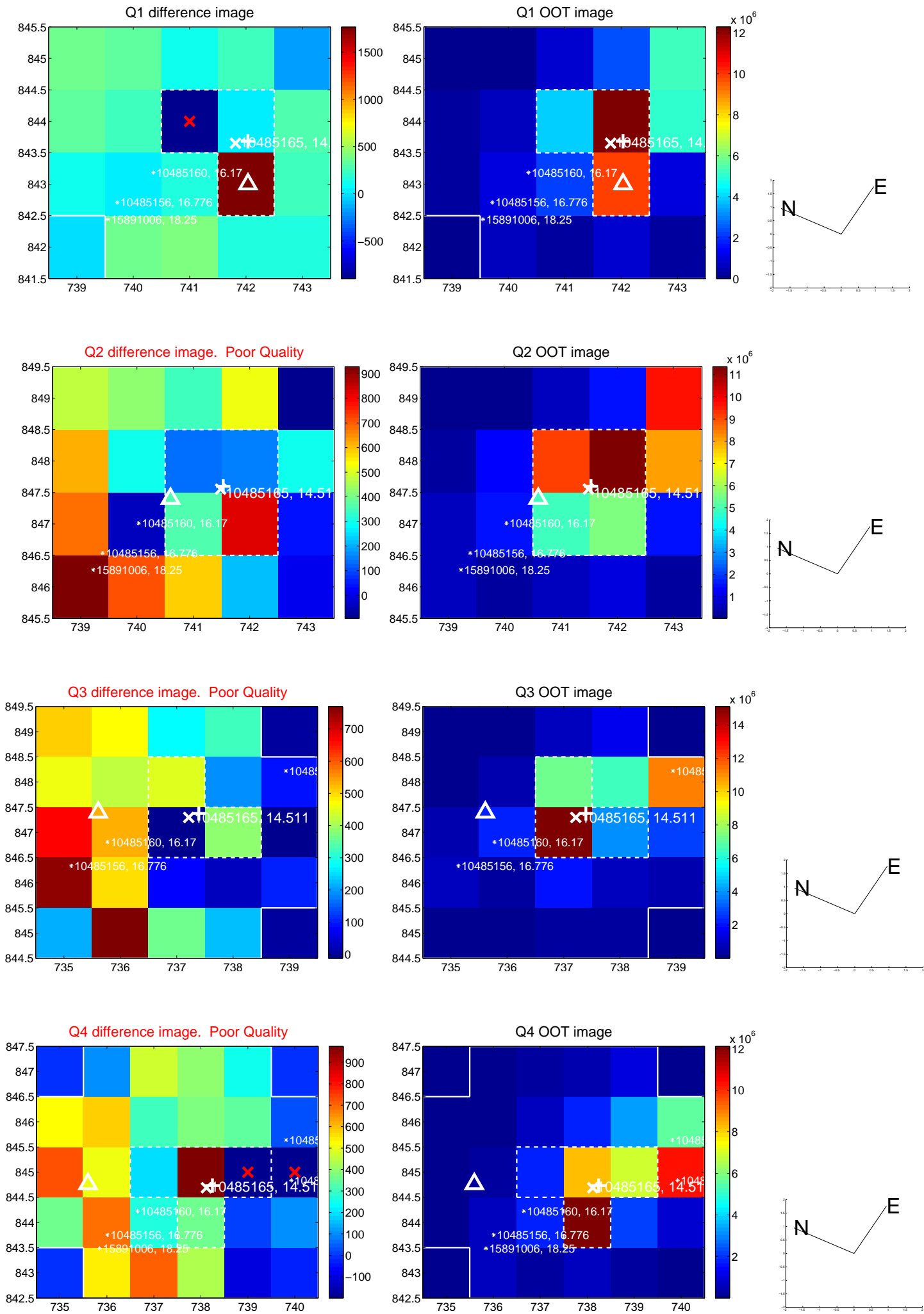
The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.078 ± 0.908	7.79	-3.731 ± 0.512	6.014 ± 0.905
PRF-fit source offset from KIC position	6.515 ± 0.970	6.72	-3.341 ± 0.564	5.593 ± 0.950
photometric centroid source offset	2.74 ± 0.90	3.04	-2.57 ± 0.90	0.95 ± 0.86

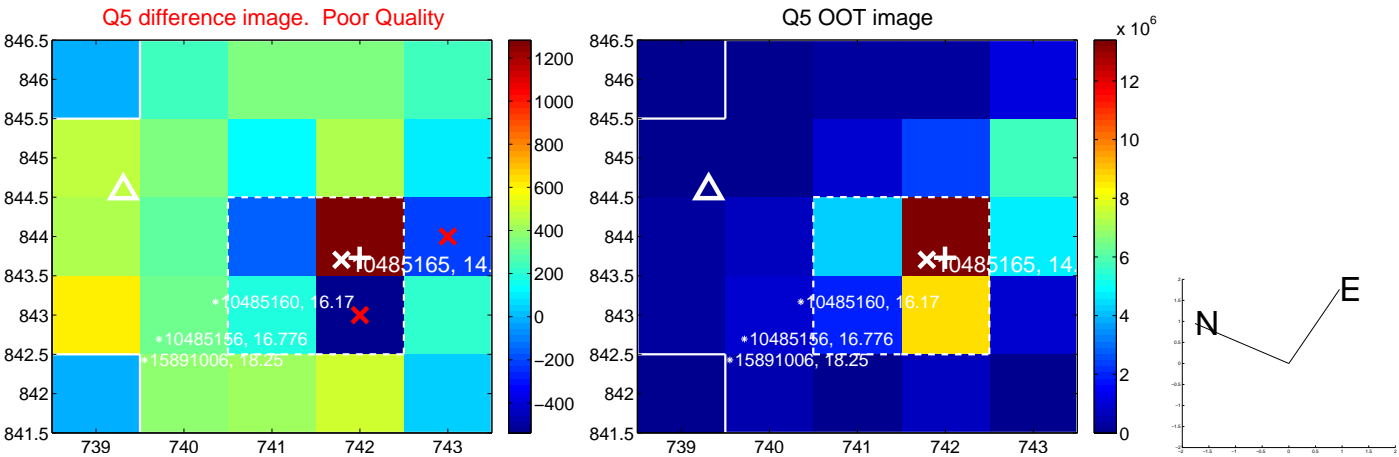


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

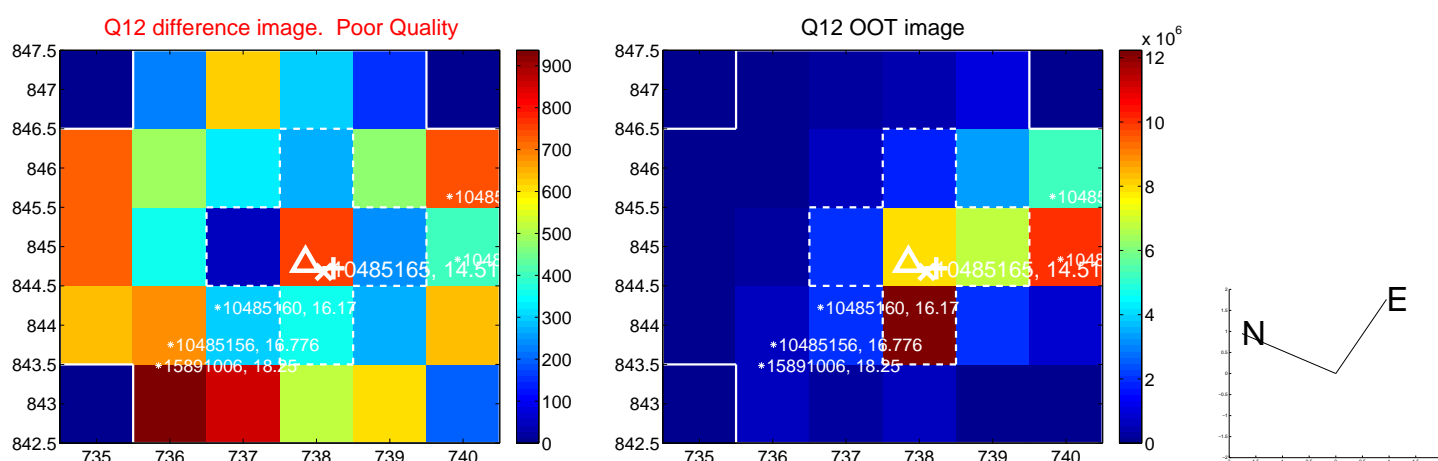
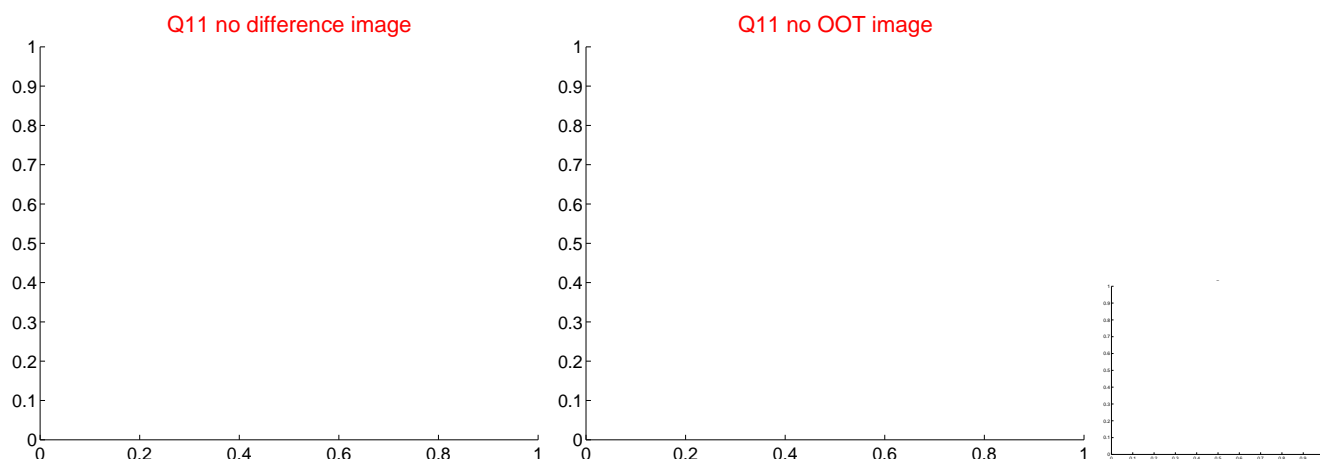
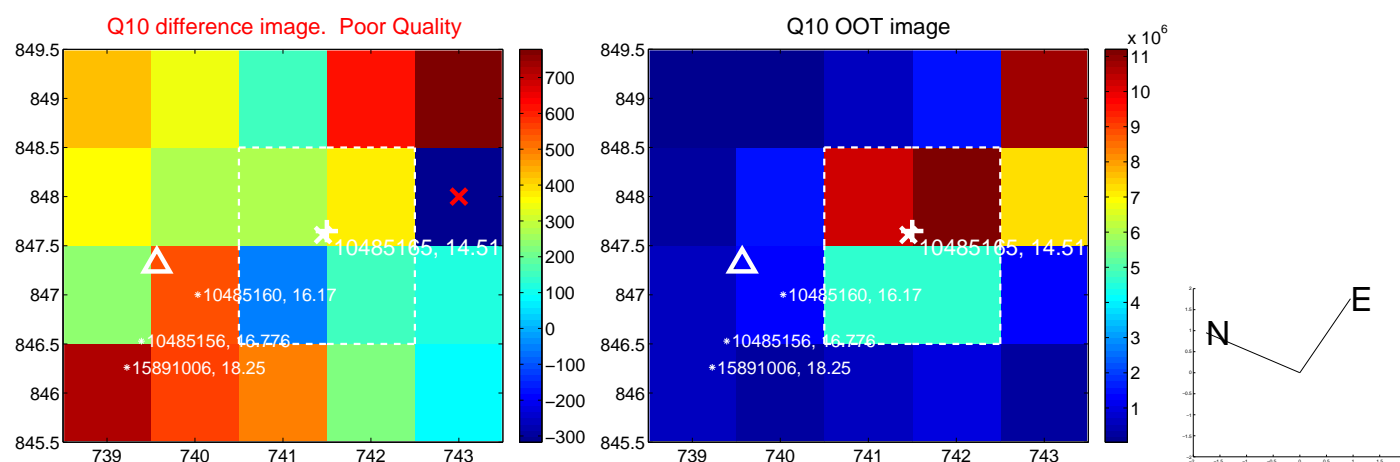
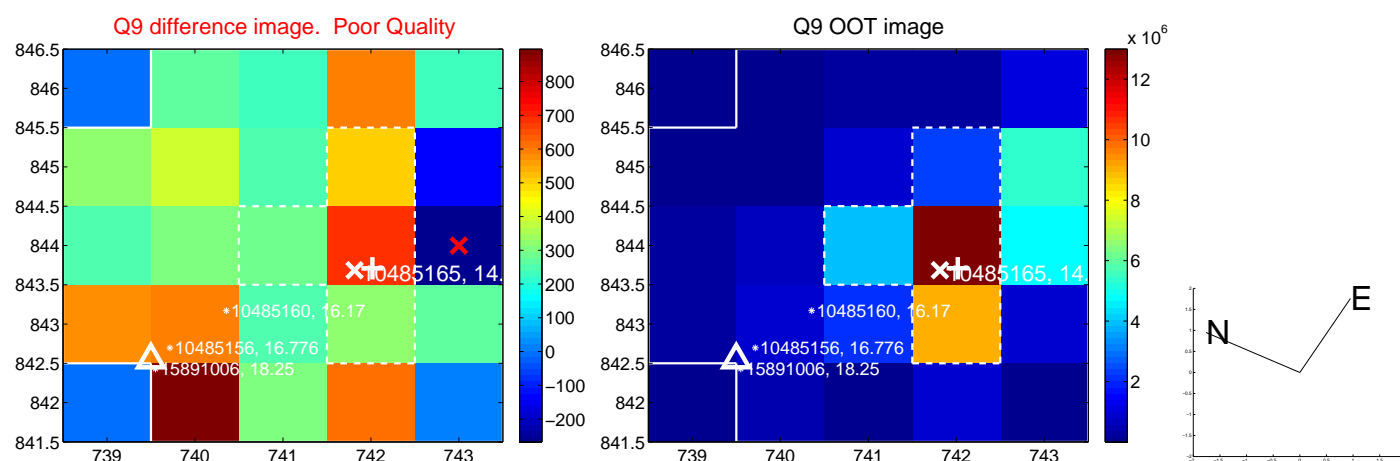
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



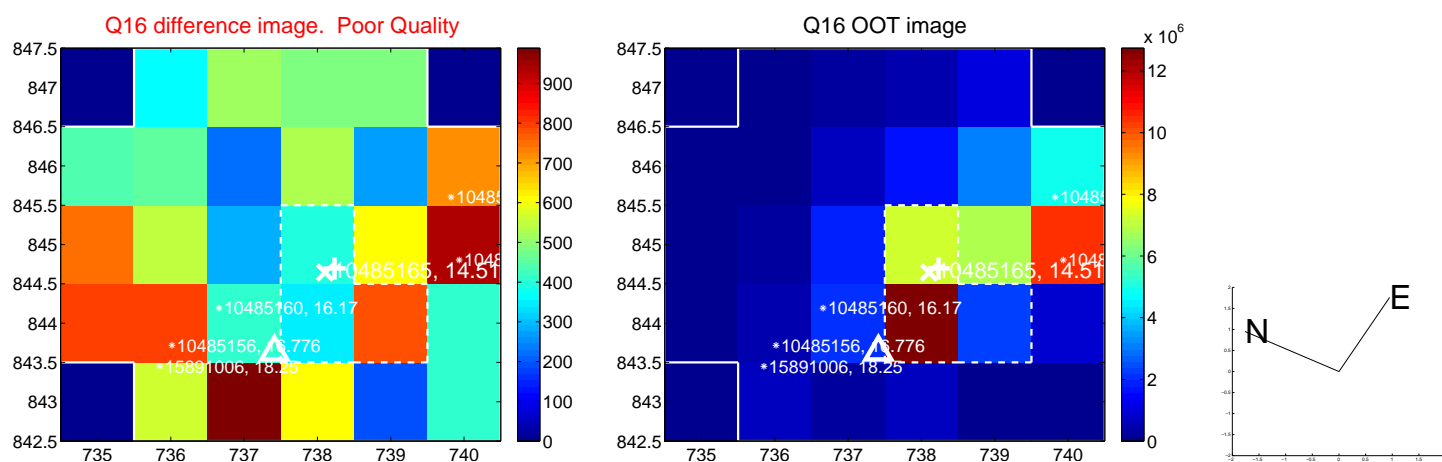
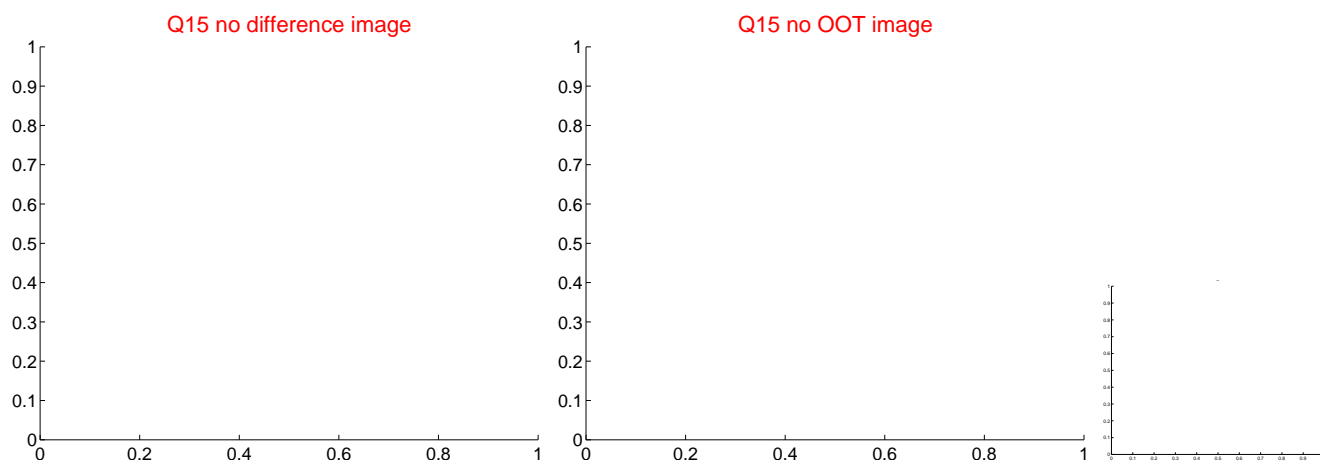
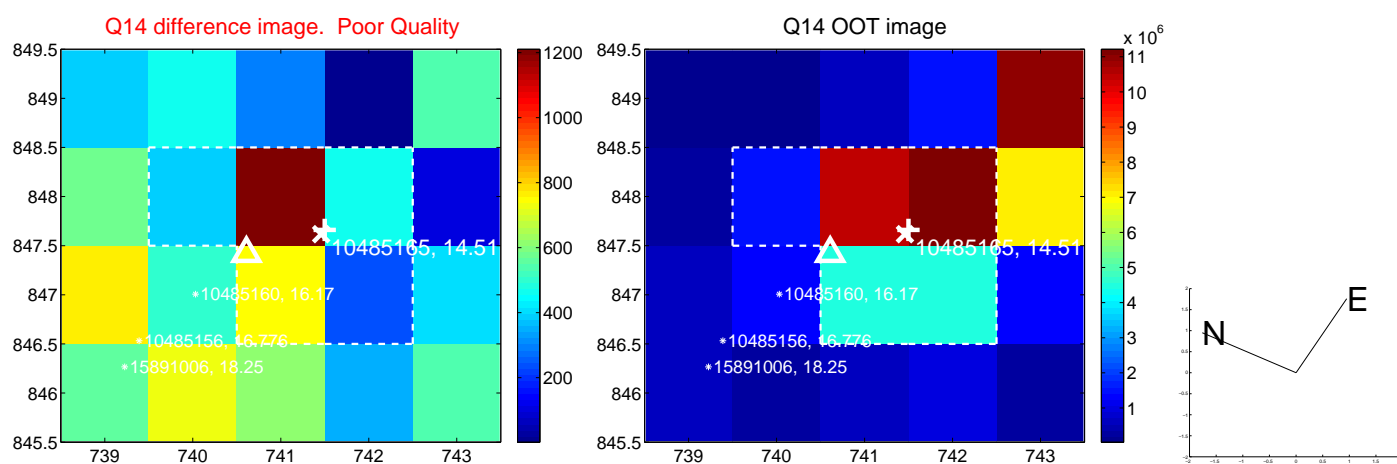
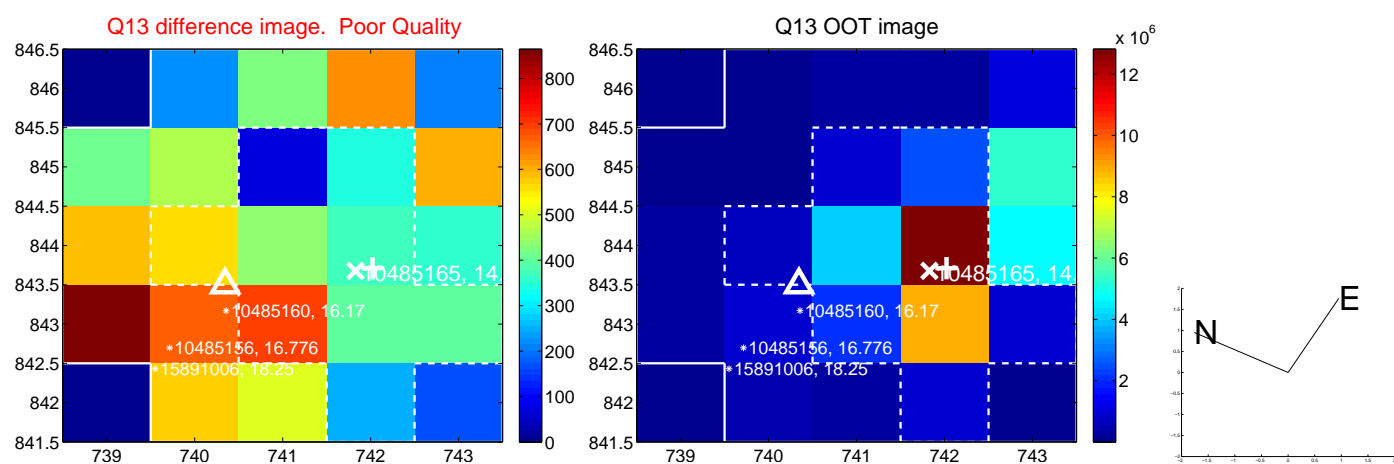
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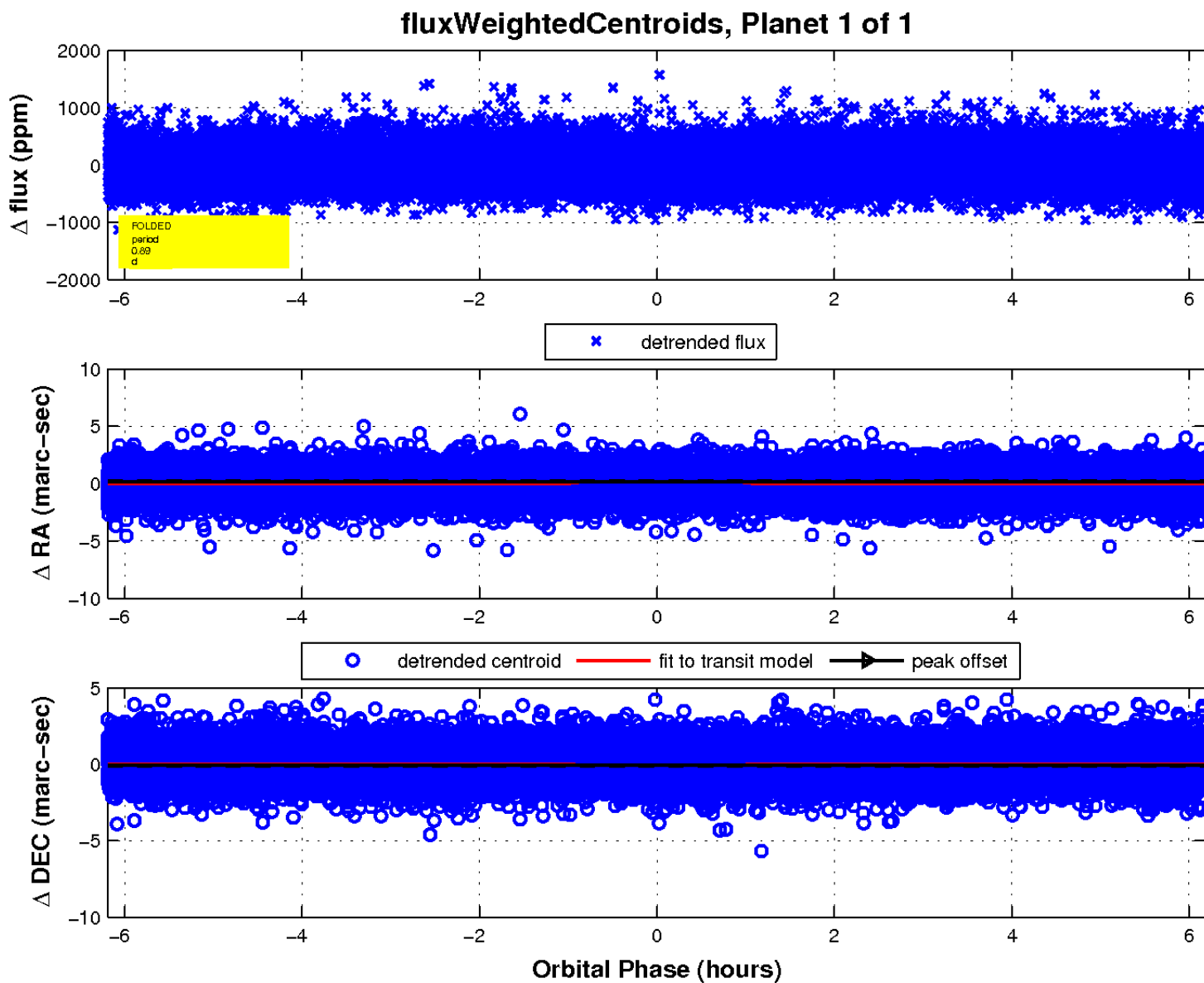
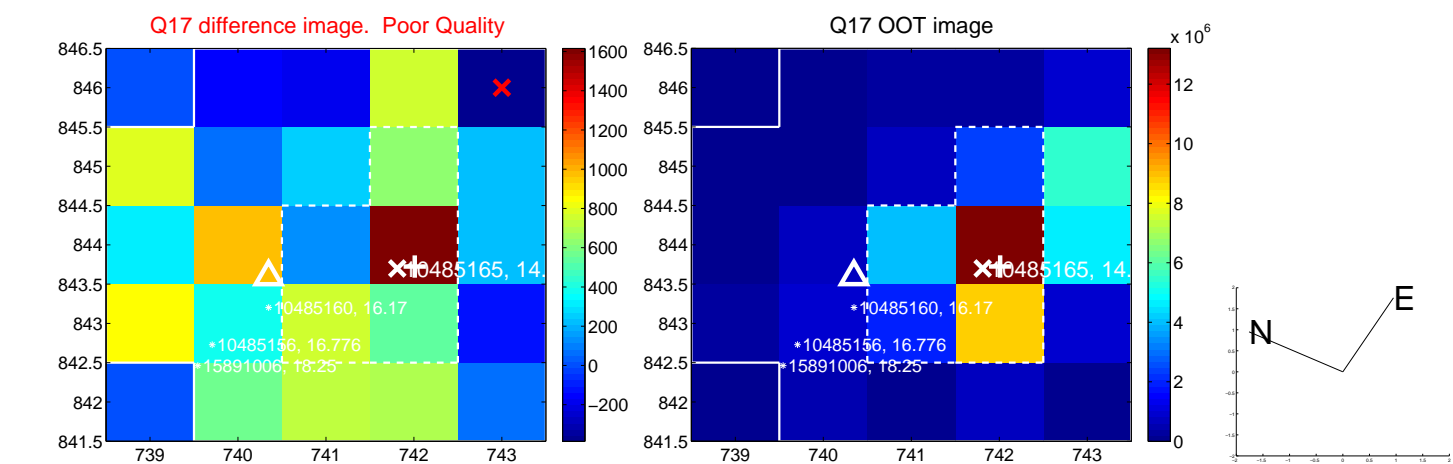
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UKIRT Image

Declination

