

KIC 003865991

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})
003865991-01	OBS	No	0.511943	131.872343	15.7	1.394	9.1	9.5	3.57	6907	1.47	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003865991-01	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.

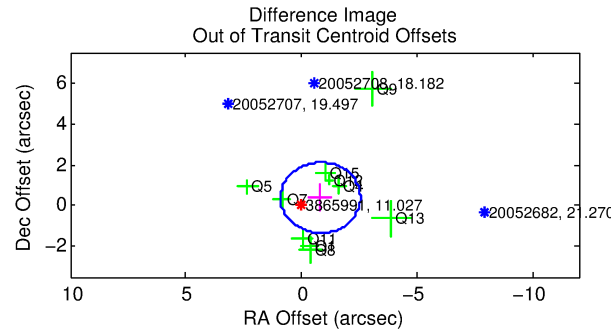
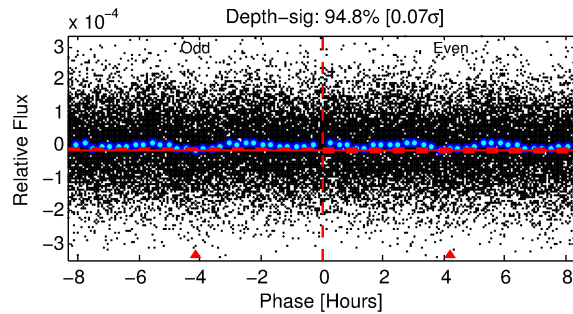
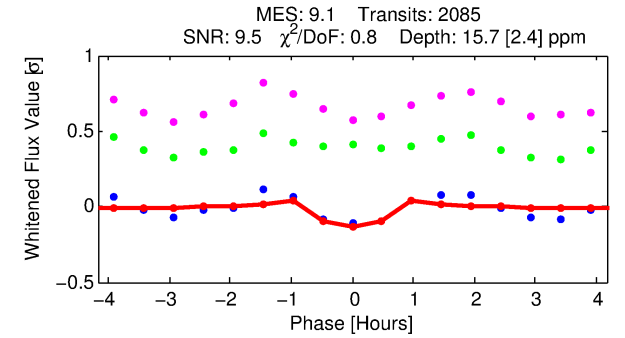
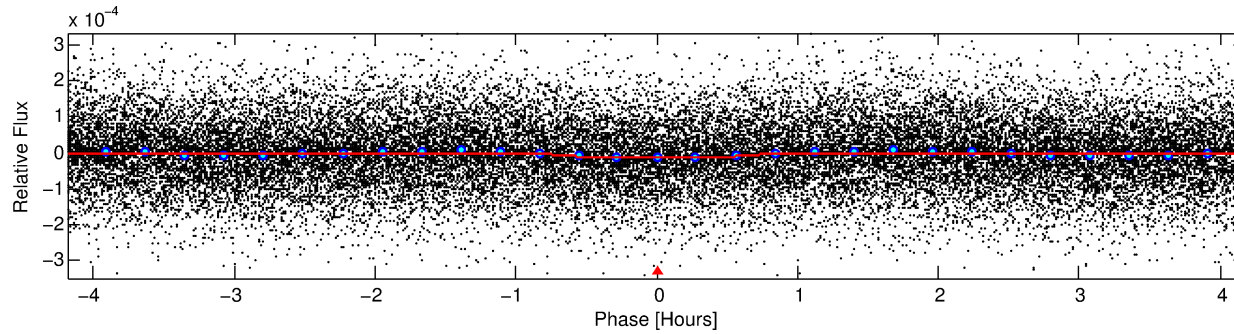
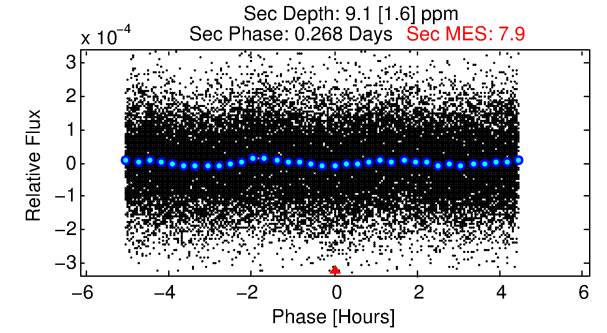
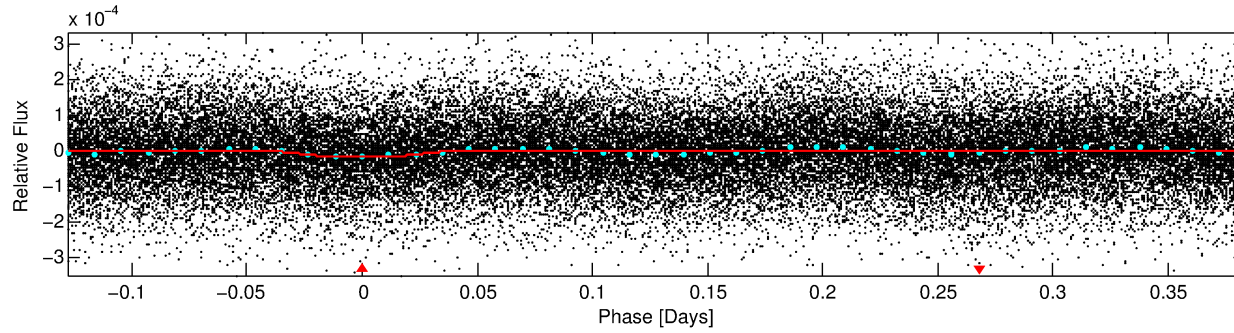
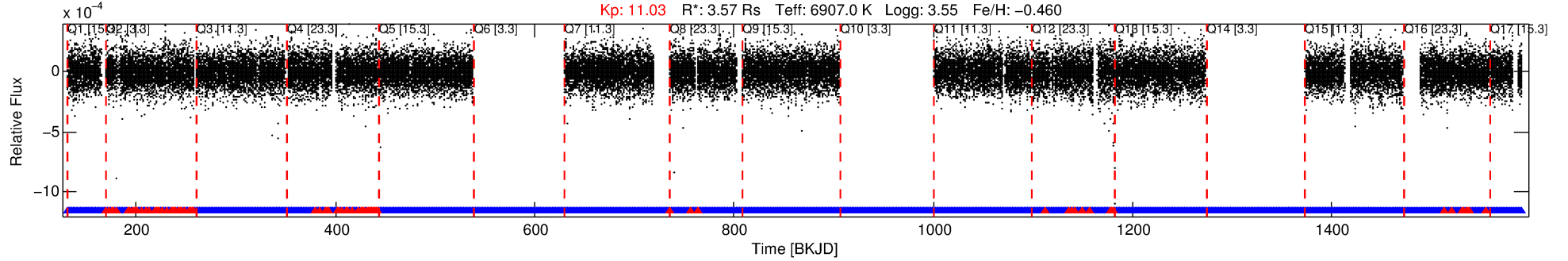
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003865991-01

No Significant Match Found

DV One-Page Summary

KIC: 3865991 Candidate: 1 of 1 Period: 0.512 d



DV Fit Results:

Period = 0.51194 [0.00001] d
Epoch = 131.8723 [0.0016] BKJD
Rp/R* = 0.0038 [0.0007]
a/R* = 2.55 [2.00]
b = 0.50 [1.41]
Seff = N/A
Teq = N/A
Rp = 1.47 [0.65] Re
a = N/A
Ag = N/A
Teffp = N/A

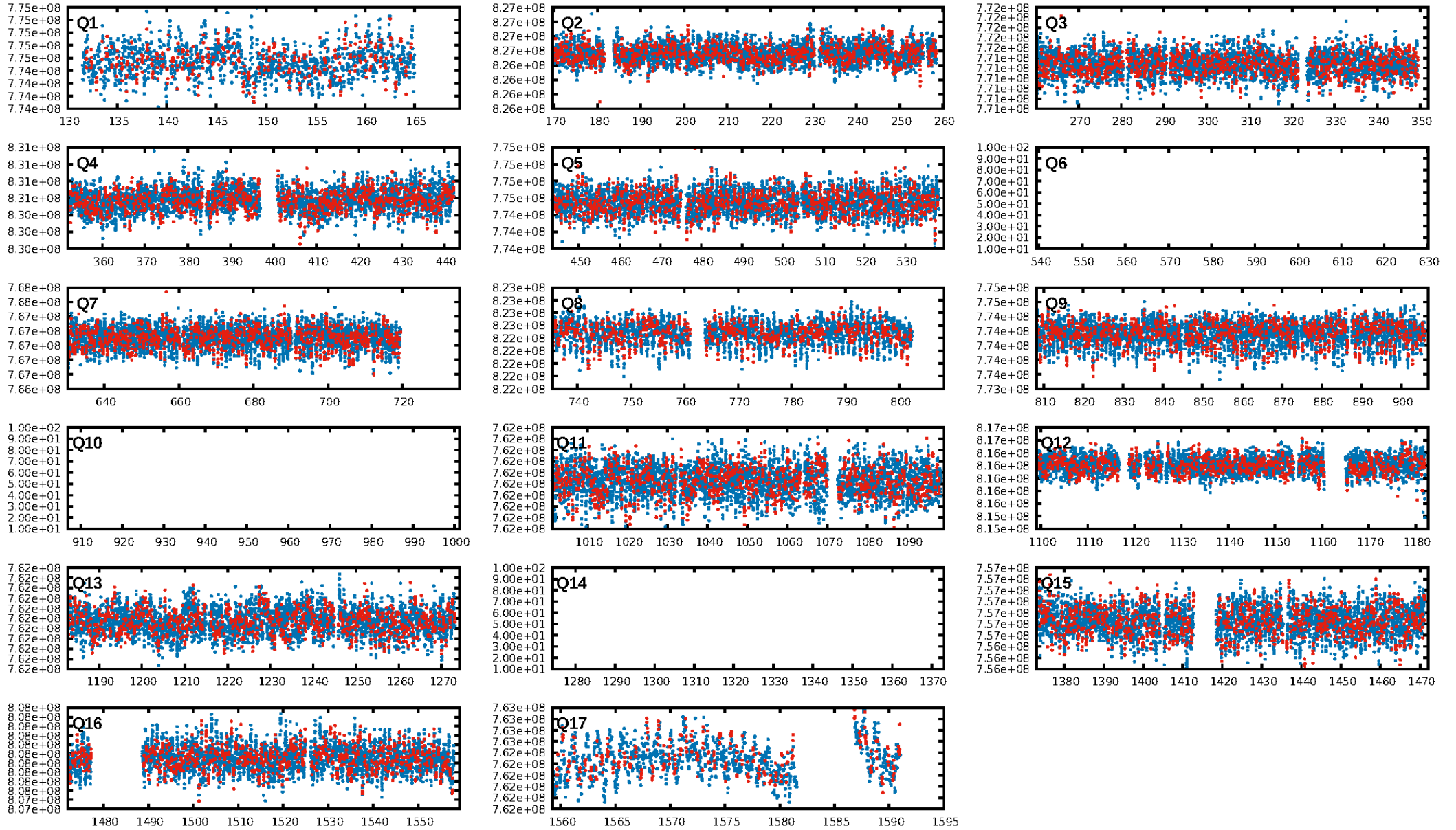
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.11e-17
RollingBand-fgt: 0.95 [1869/1968]
GhostDiagnostic-chr: 3.234
Centroid-sig: 0.4%
Centroid-so: 1.350 arcsec [2.08σ]
OotOffset-rm: 0.904 arcsec [1.57σ]
KicOffset-rm: 0.913 arcsec [1.35σ]
OotOffset-st: 0/3/3/4 [10]
KicOffset-st: 0/3/3/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [14/14]

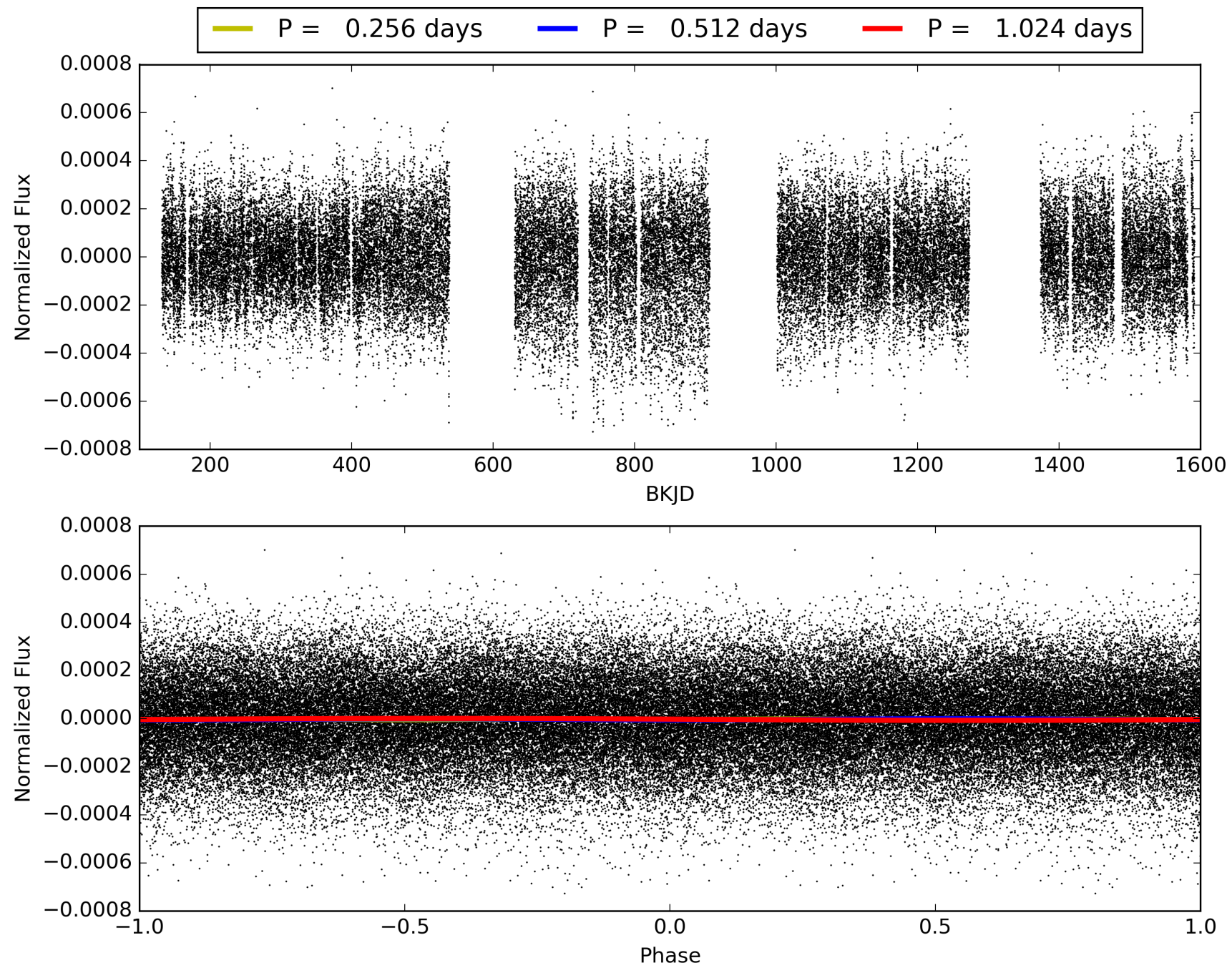
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:50:03 Z

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

TCE 003865991-01, PDC Light Curves

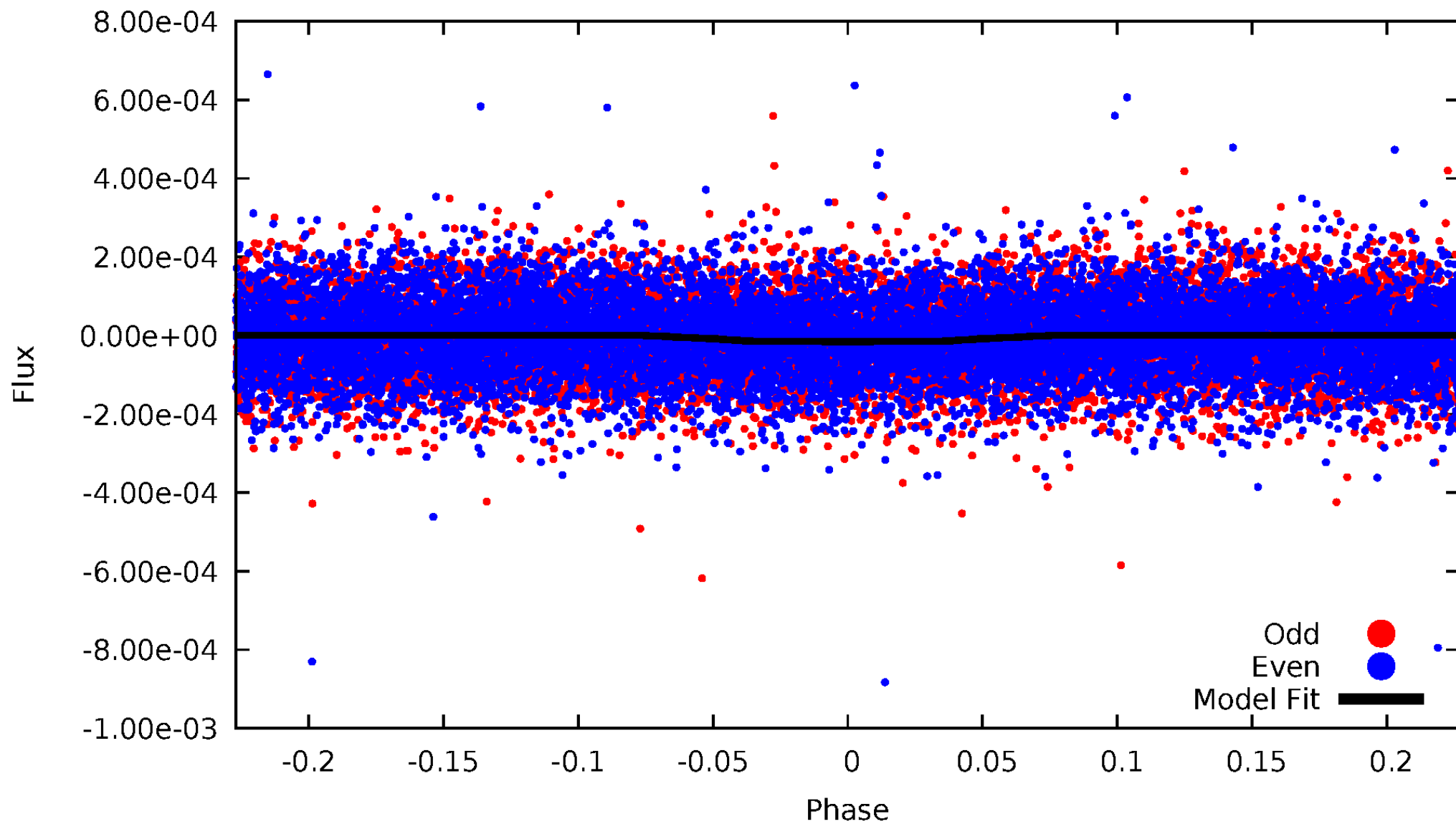


TCE 003865991-01



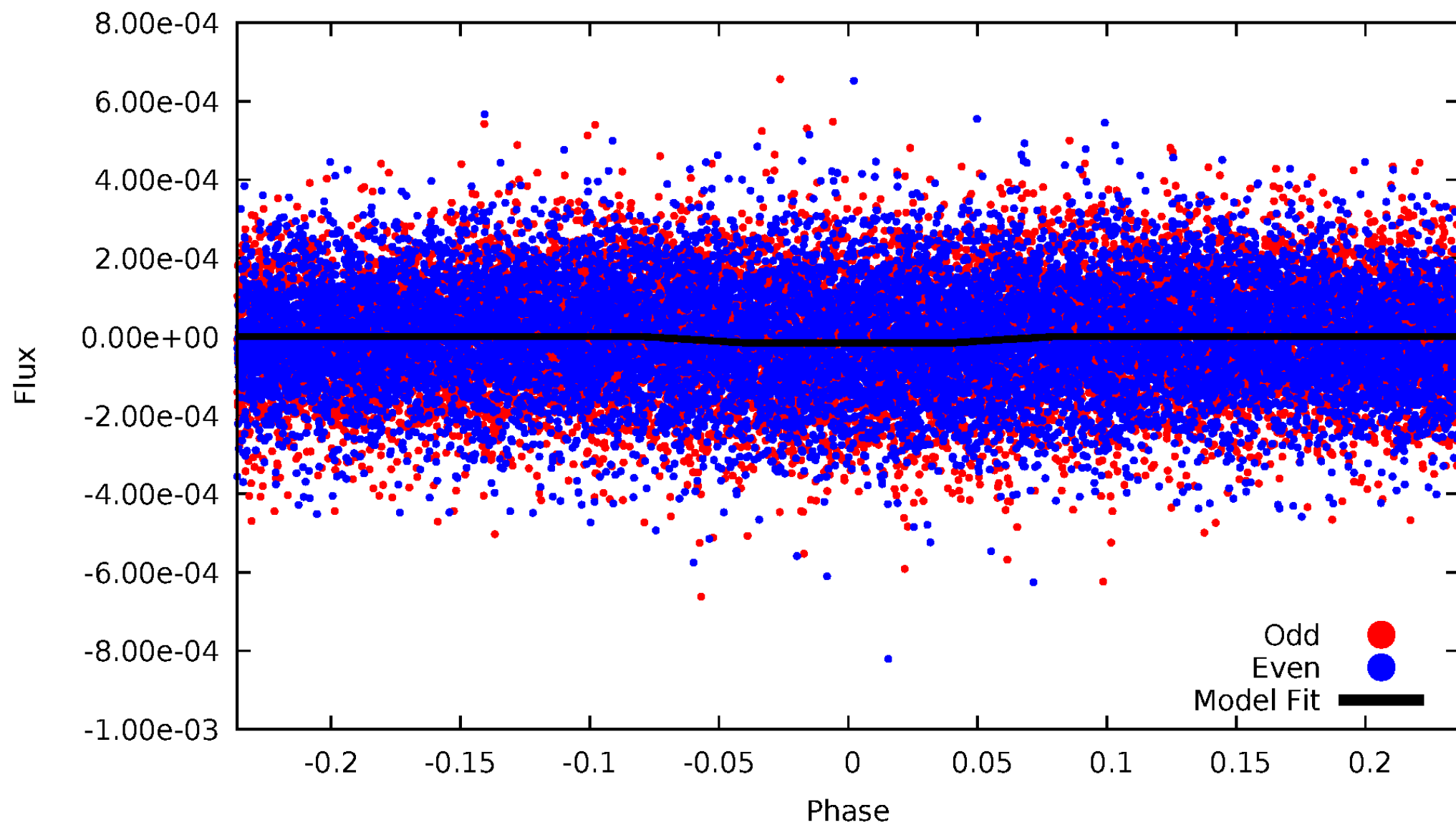
DV Odd/Even

TCE 003865991-01



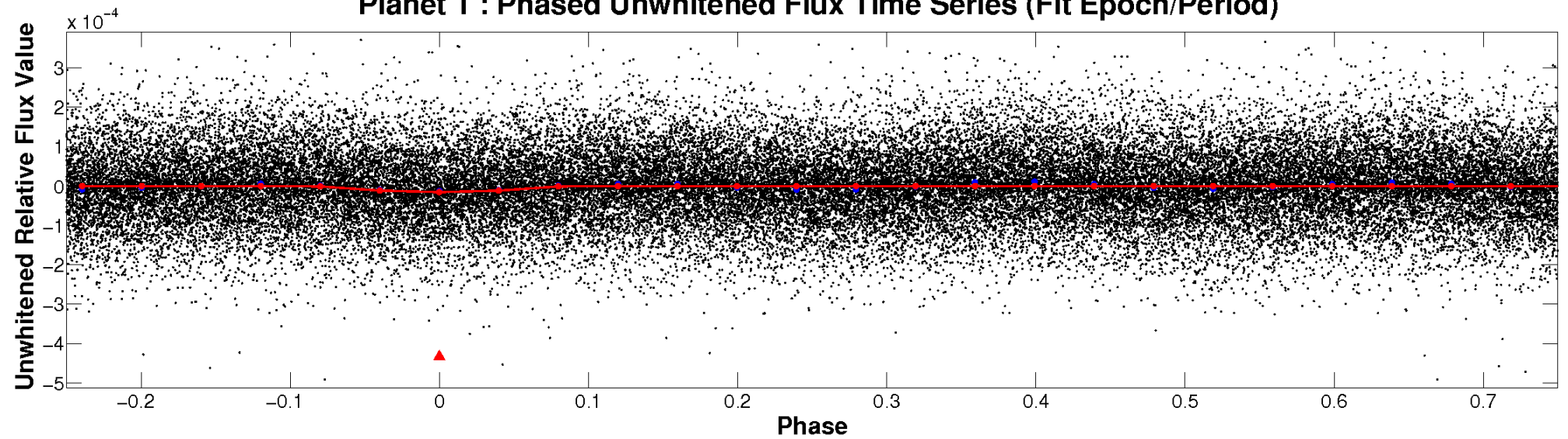
ALT Odd/Even

TCE 003865991-01

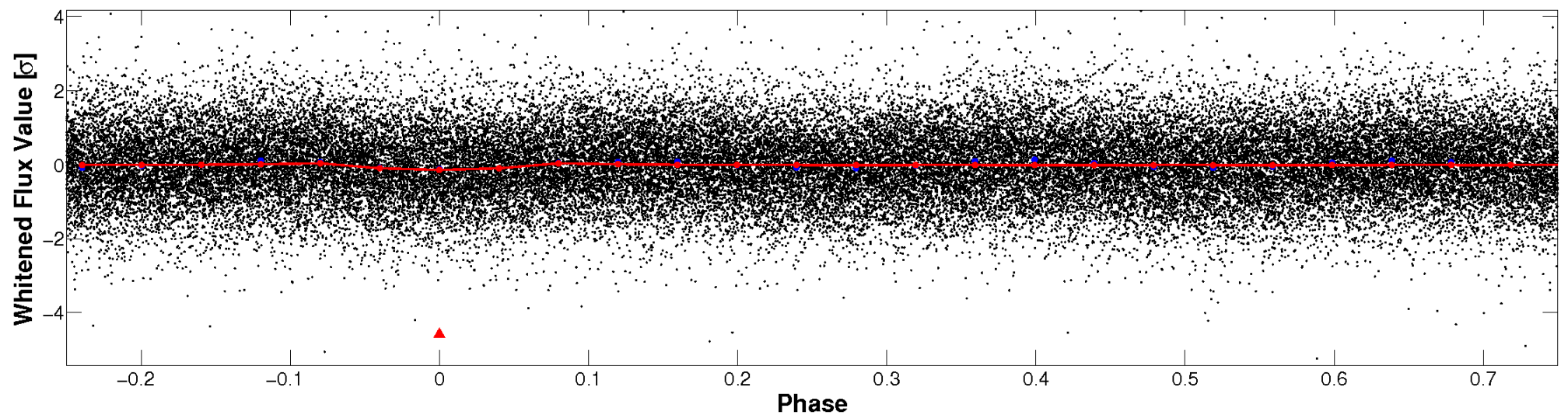


Non-Whitened Vs. Whitened Light Curve

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

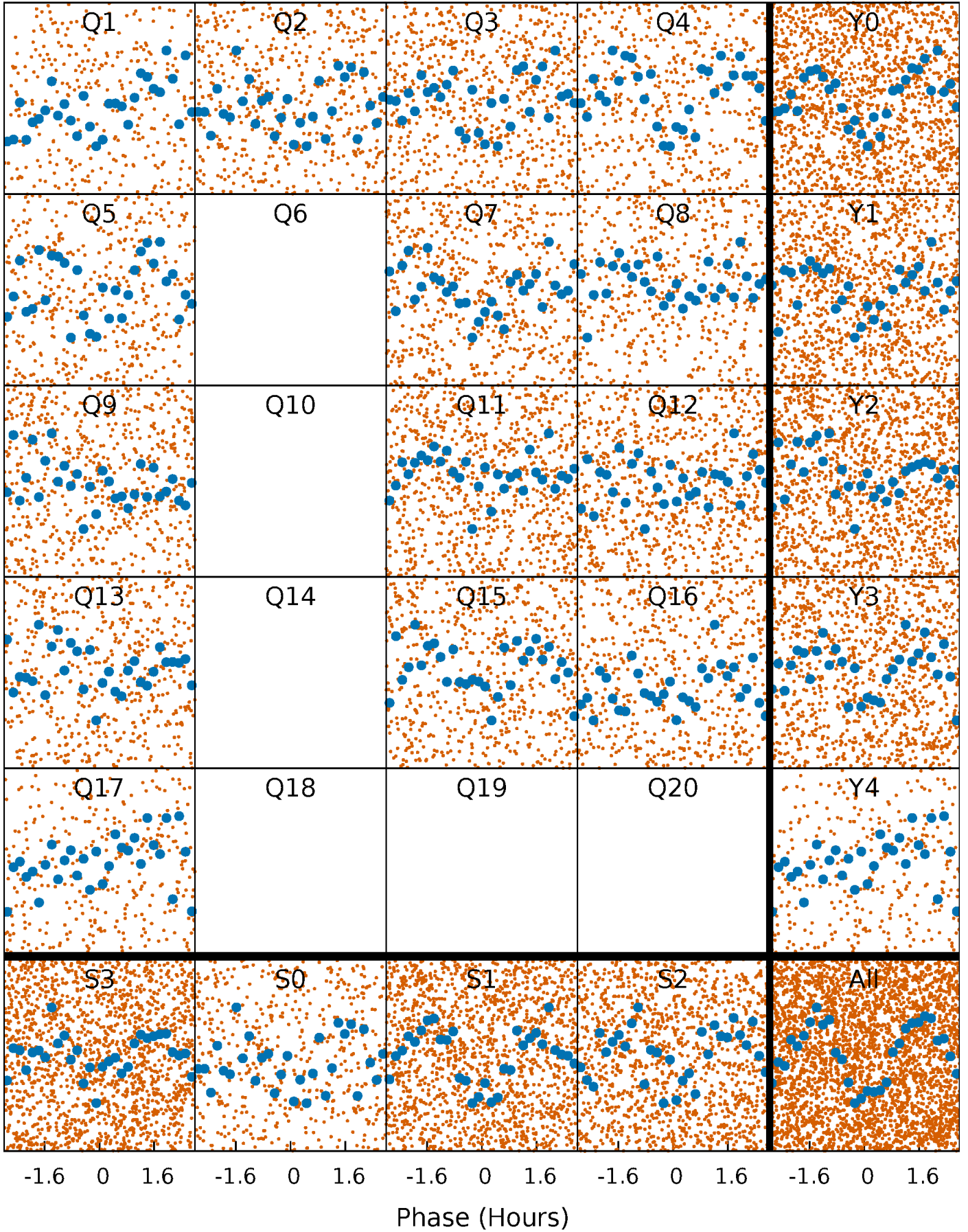


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



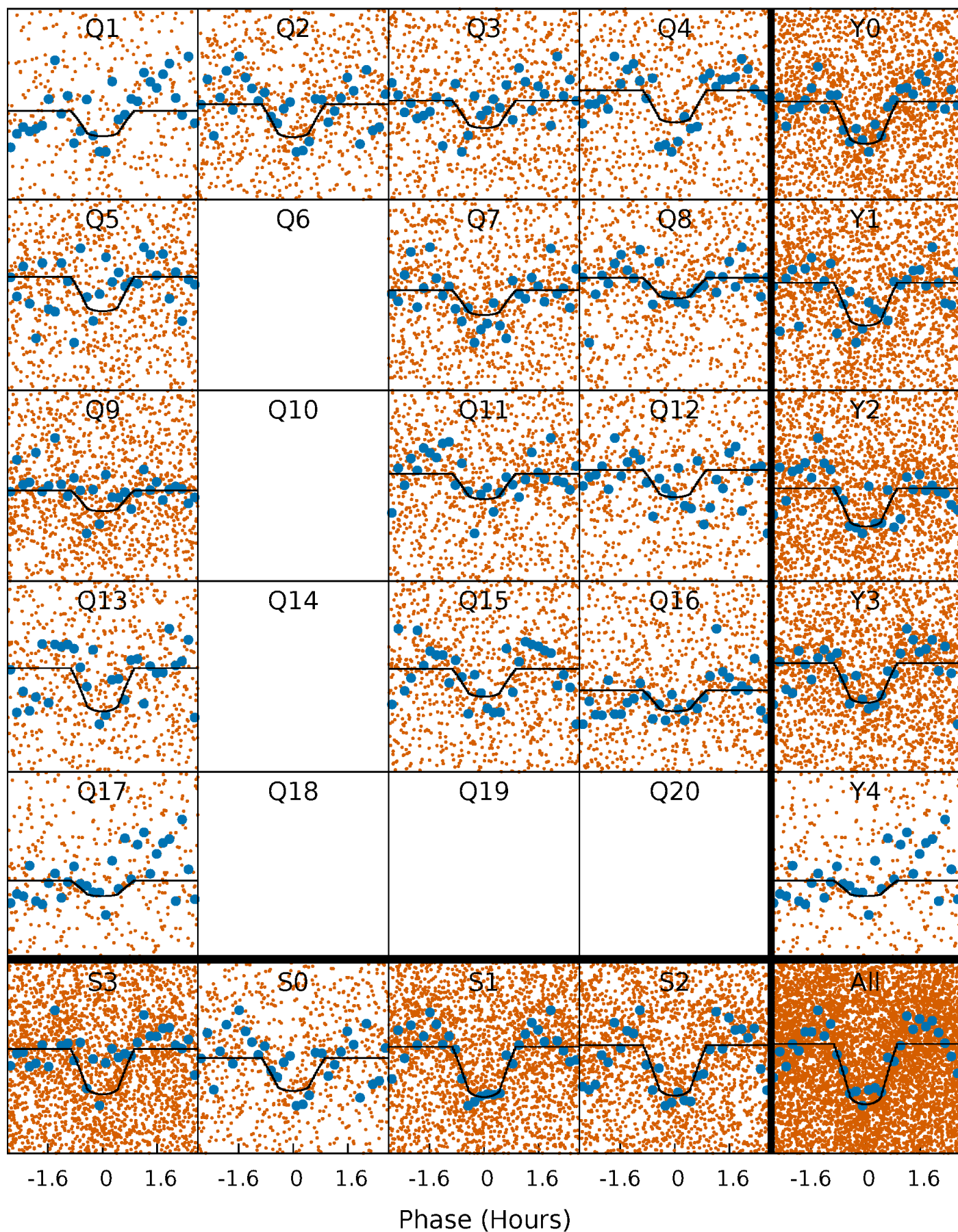
PDC Quarter-Phased Transit Curves

TCE 003865991-01 P= 0.511943 Days $T_0=131.872343$ (BKJD)



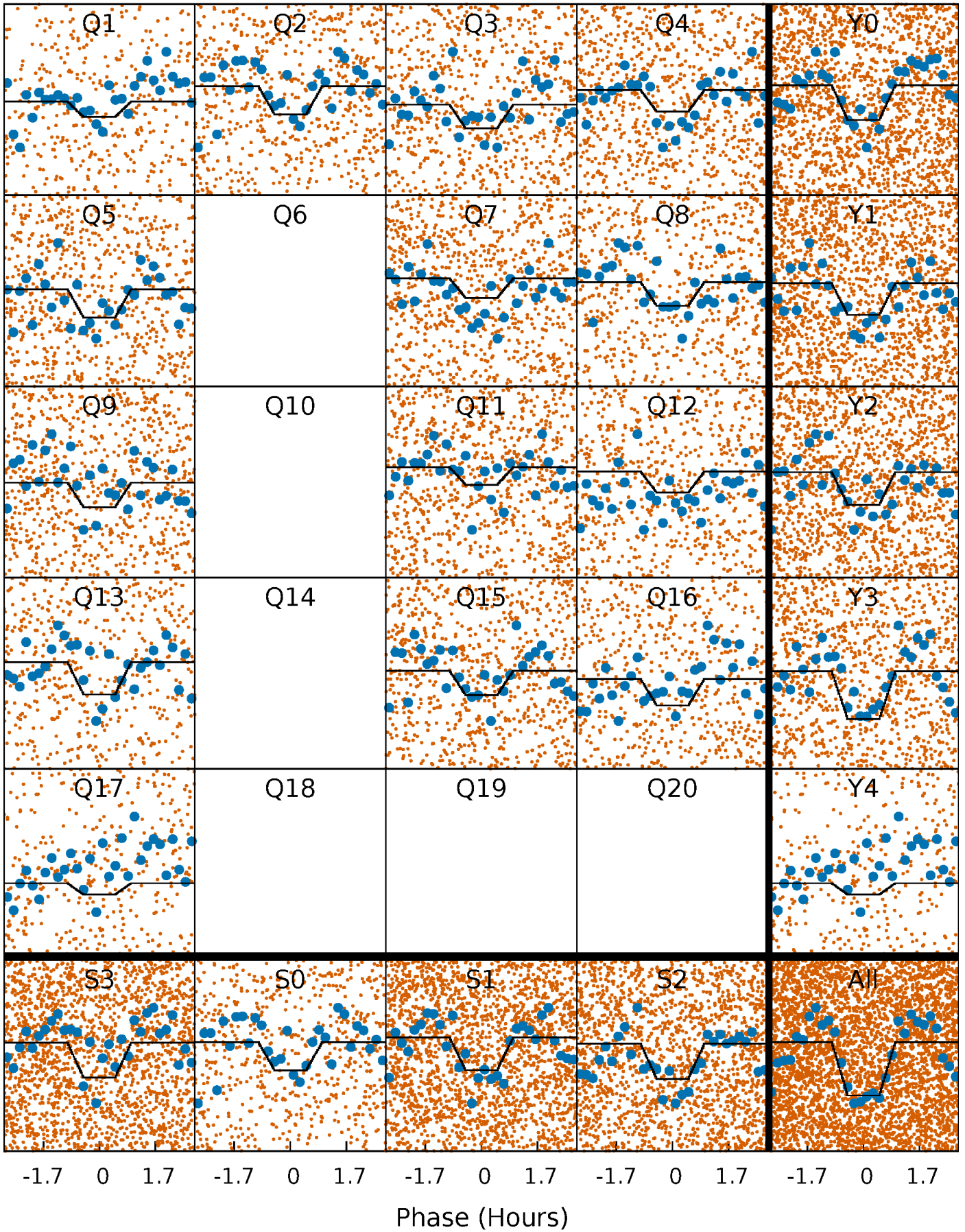
DV Quarter-Phased Transit Curves

TCE 003865991-01 P= 0.511943 Days $T_0=131.872343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

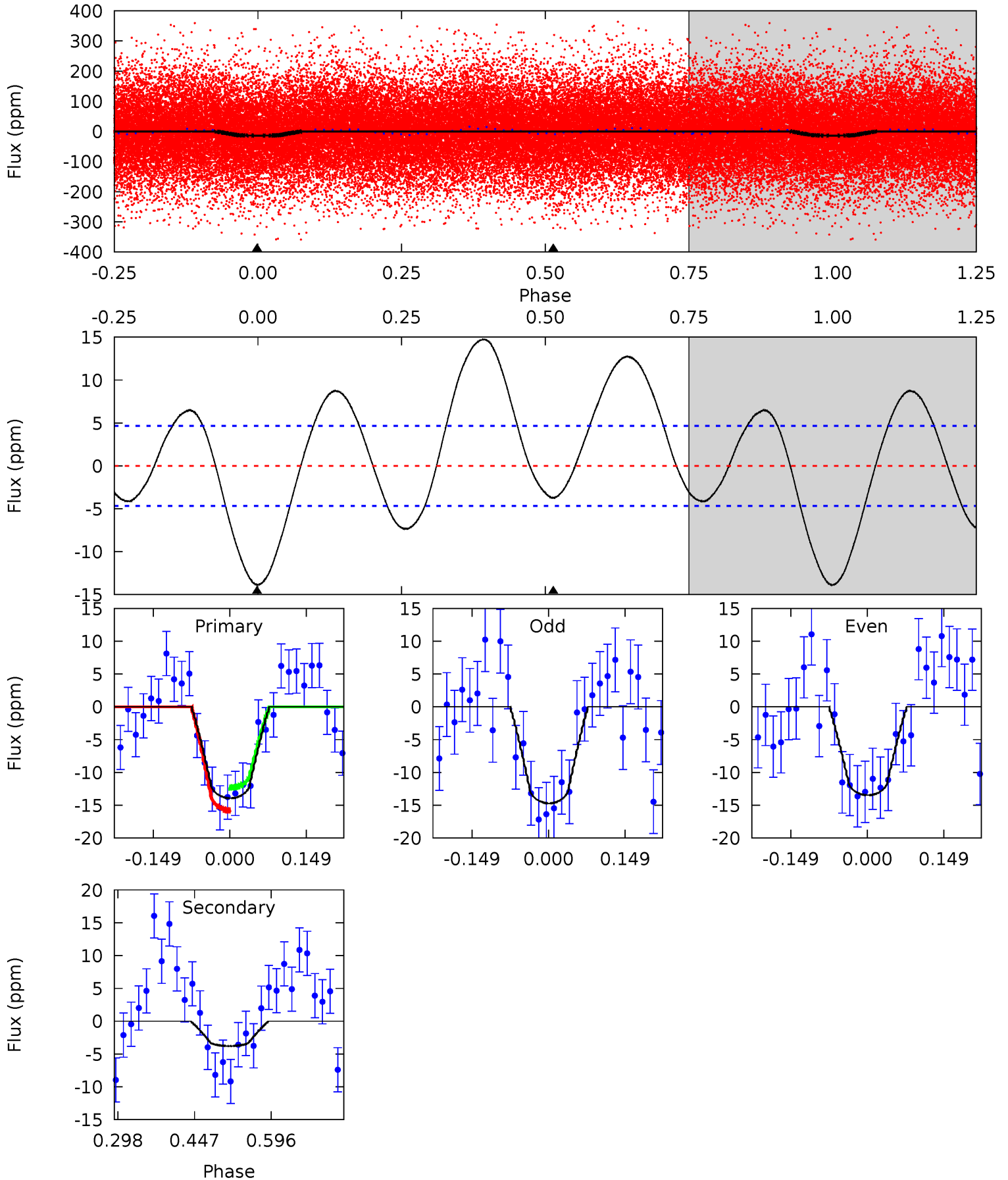
TCE 003865991-01 P= 0.511945 Days $T_0=131.871390$ (BKJD)



DV Model-Shift Uniqueness Test

003865991-01, P = 0.511943 Days, E = 131.360400 Days

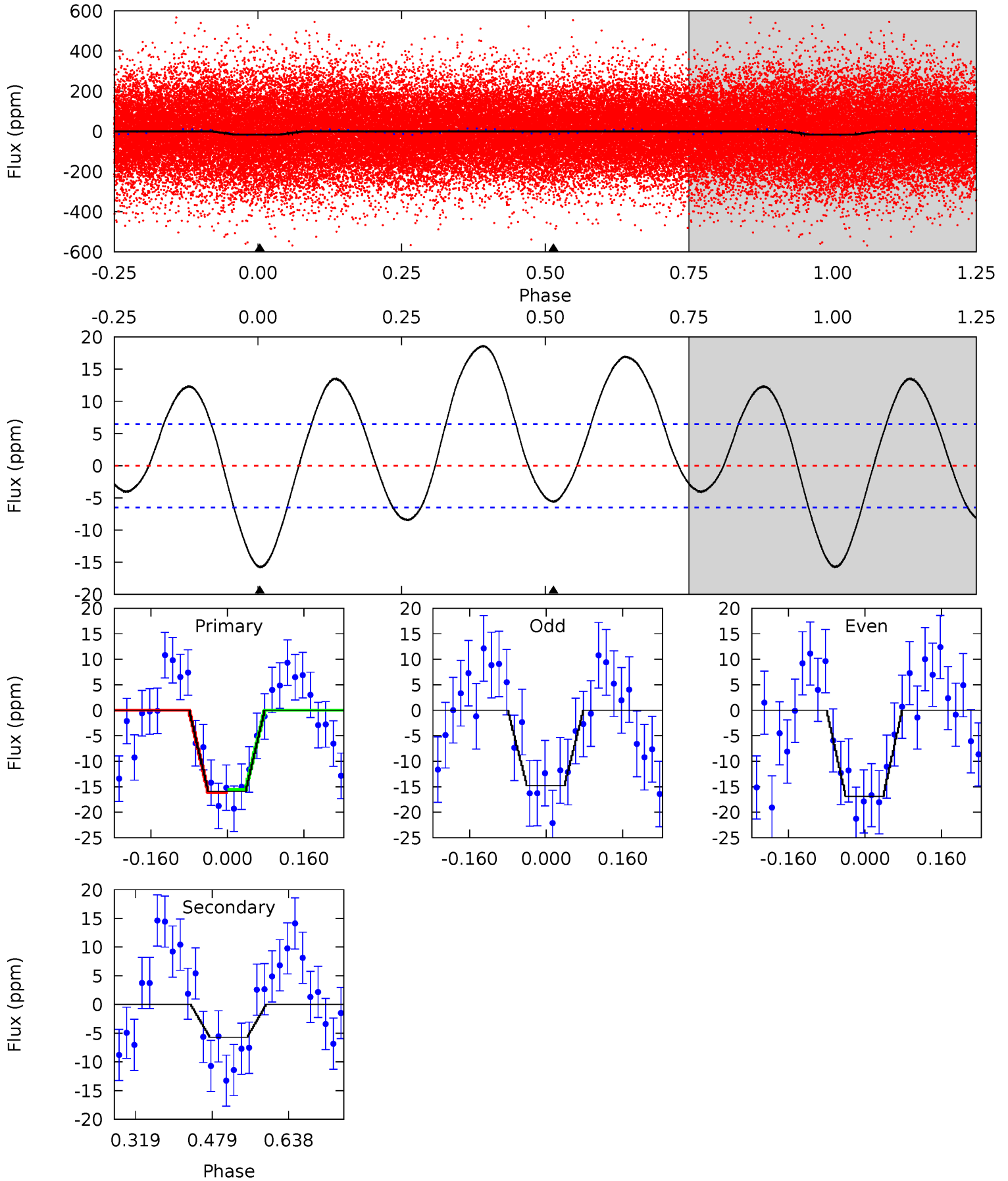
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	3.64	0	0	4.48	1.44	5.34	13.4	13.4	3.64	3.64	0.59	1.03	0.52	1.69



Alt Model-Shift Uniqueness Test

003865991-01, P = 0.511945 Days, E = 131.359445 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.93	0	0	4.47	1.41	4.33	11.0	11.0	3.93	3.93	0.72	0.86	0.54	0.20



Stellar Parameters For KIC 003865991

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6907^{+187}_{-208}	$3.554^{+0.360}_{-0.090}$	$-0.460^{+0.350}_{-0.250}$	$3.566^{+0.365}_{-1.459}$	$1.658^{+0.204}_{-0.378}$	$0.052^{+0.148}_{-0.014}$
	+3%/-3%	+10%/-3%	+76%/-54%	+10%/-41%	+12%/-23%	+286%/-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 003865991-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.37^{+0.34}_{-0.34}$	6541^{+315}_{-651}	-3887^{+8178}_{-879}	$0.236^{+0.201}_{-0.098}$
Alt.	-6 ± 1	$1.45^{+0.35}_{-0.32}$	6472^{+374}_{-605}	3400^{+1490}_{-7782}	$0.327^{+0.228}_{-0.133}$

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 $A_{obs} \gg 1.0$

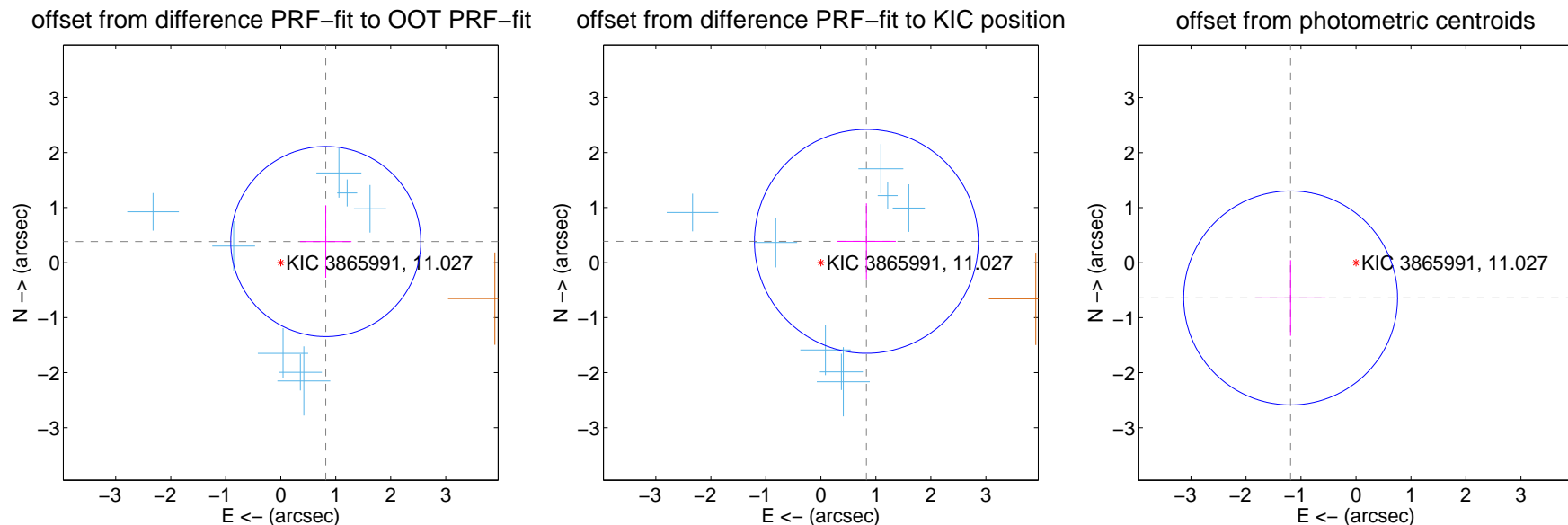
DV Centroid Data

Supplemental centroid analysis for 003865991-01. **Kepler magnitude: 11.03.** Transit SNR 9.50

There are 8 quarters with good PRF difference image offsets

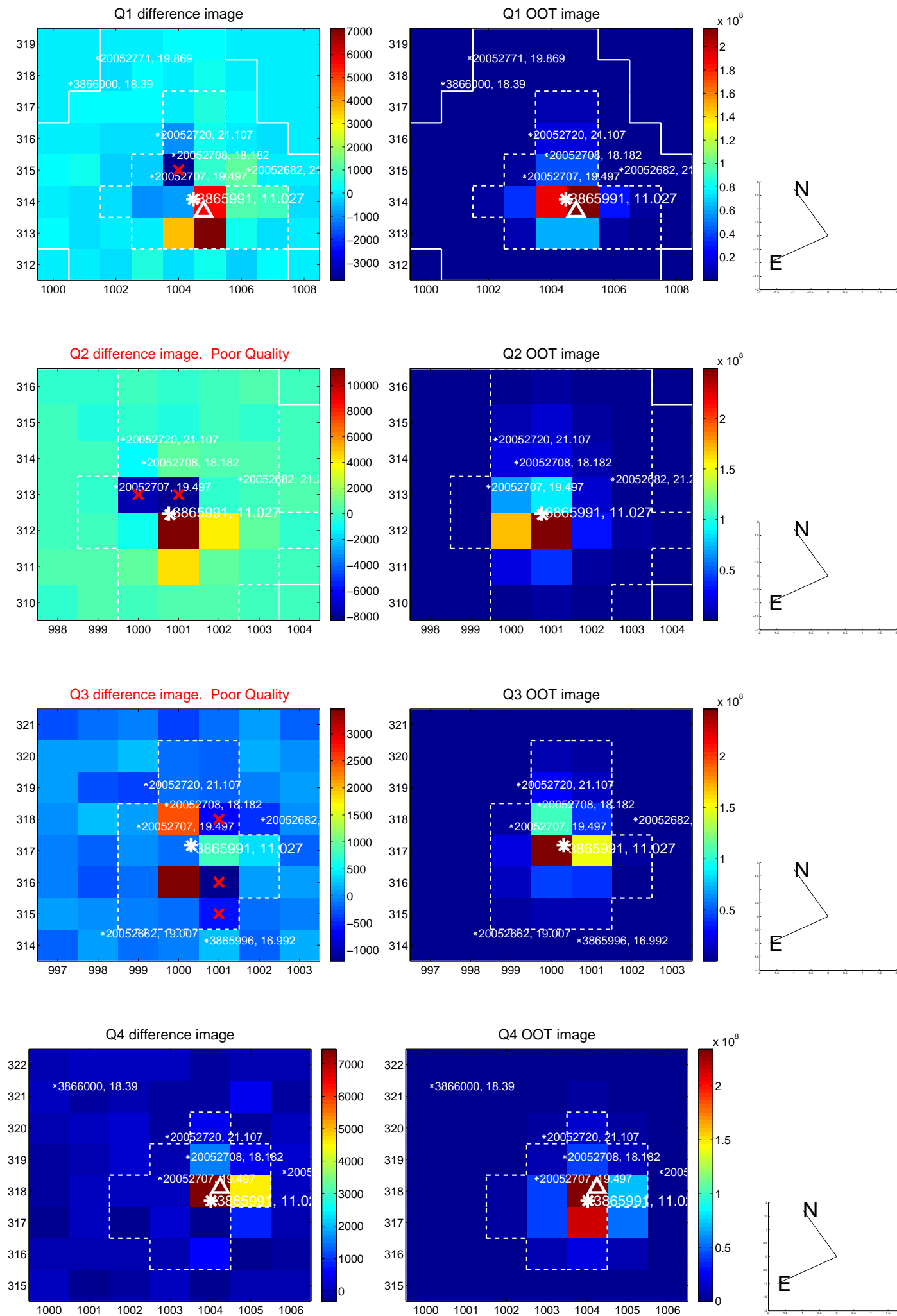
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.904 ± 0.576	1.57	-0.818 ± 0.469	0.383 ± 0.659
PRF-fit source offset from KIC position	0.913 ± 0.678	1.35	-0.828 ± 0.536	0.386 ± 0.691
photometric centroid source offset	1.35 ± 0.65	2.08	1.19 ± 0.64	-0.64 ± 0.69

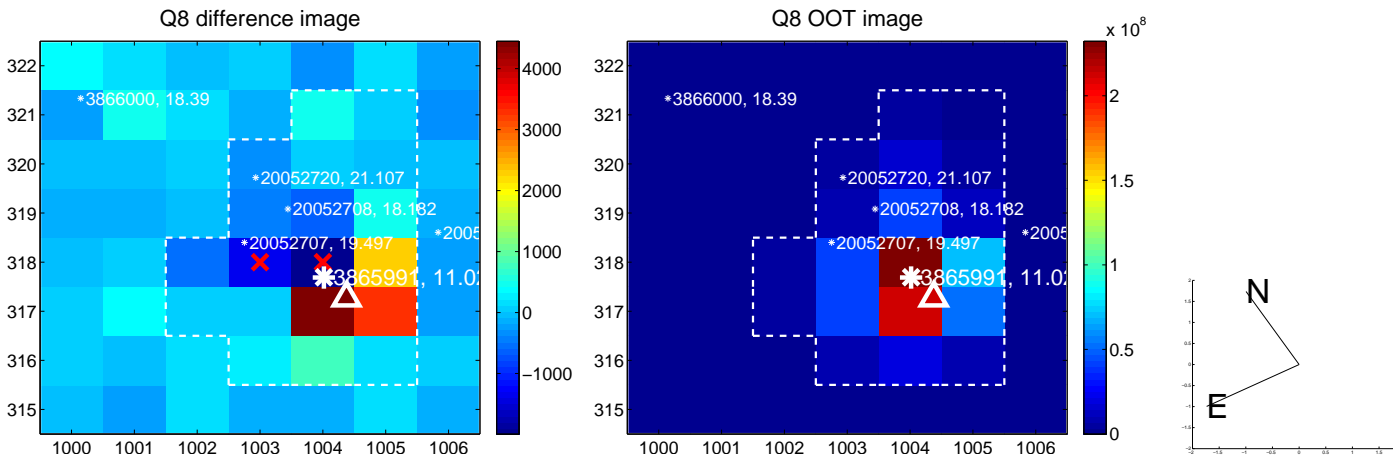
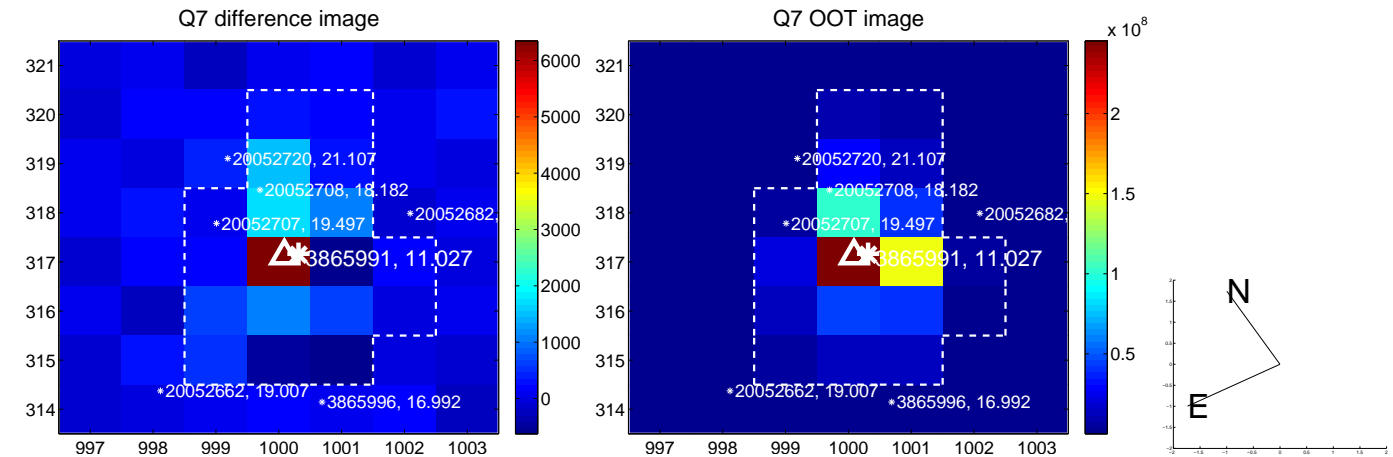
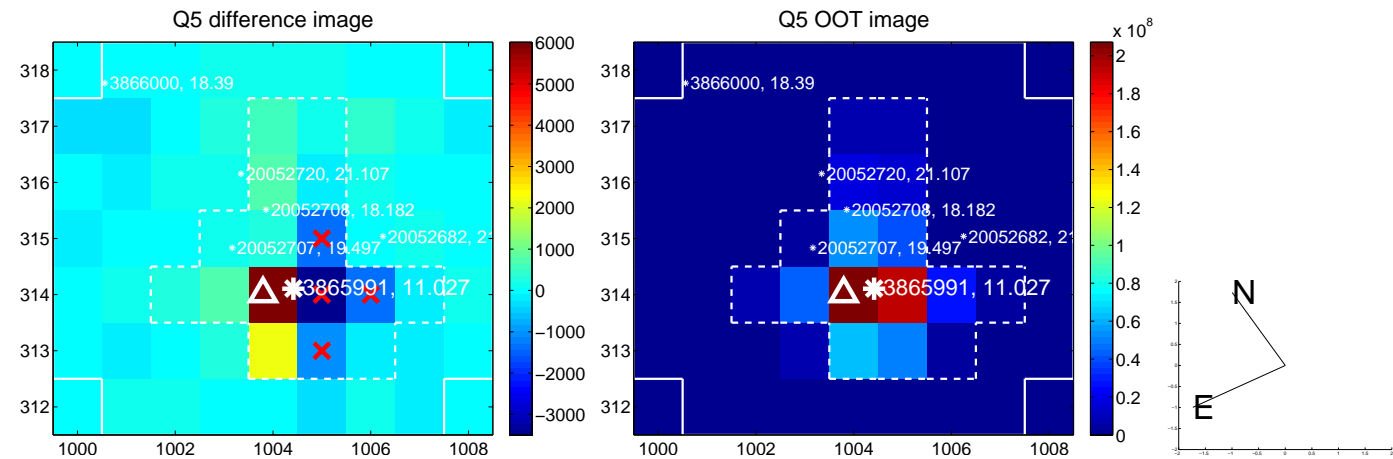


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

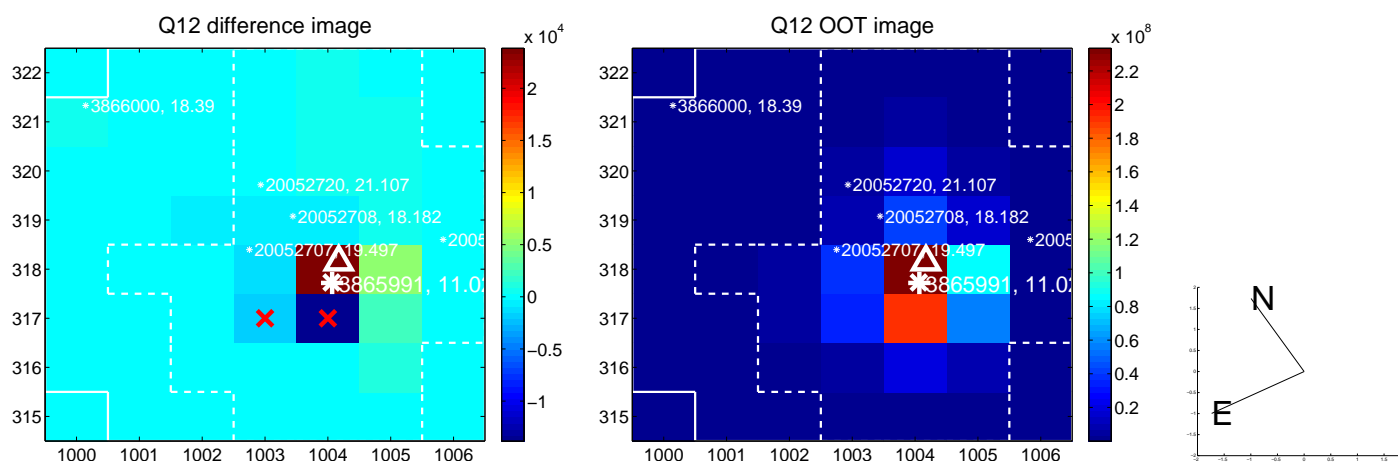
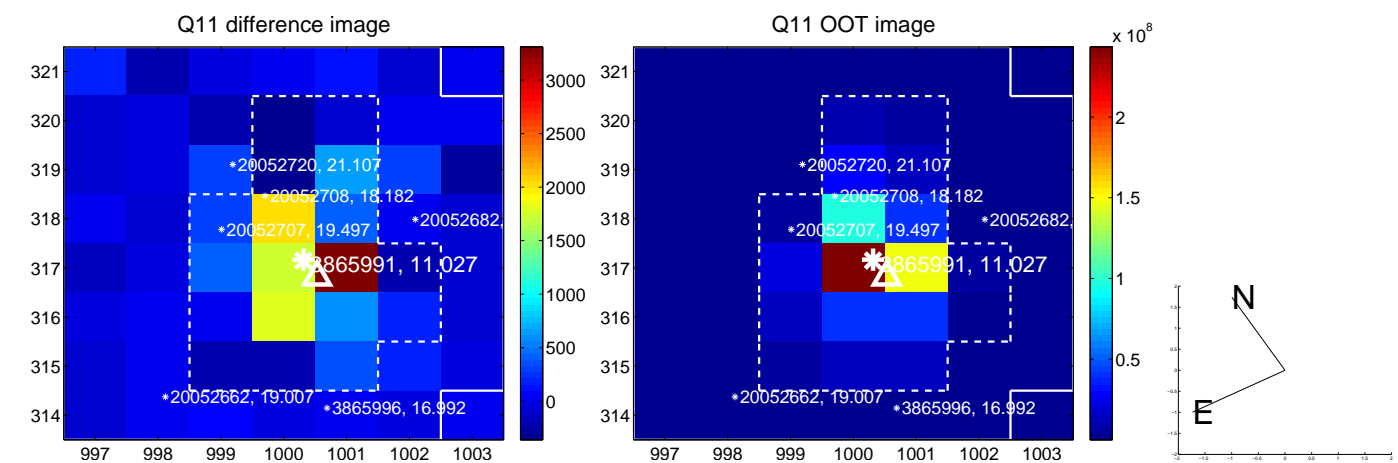
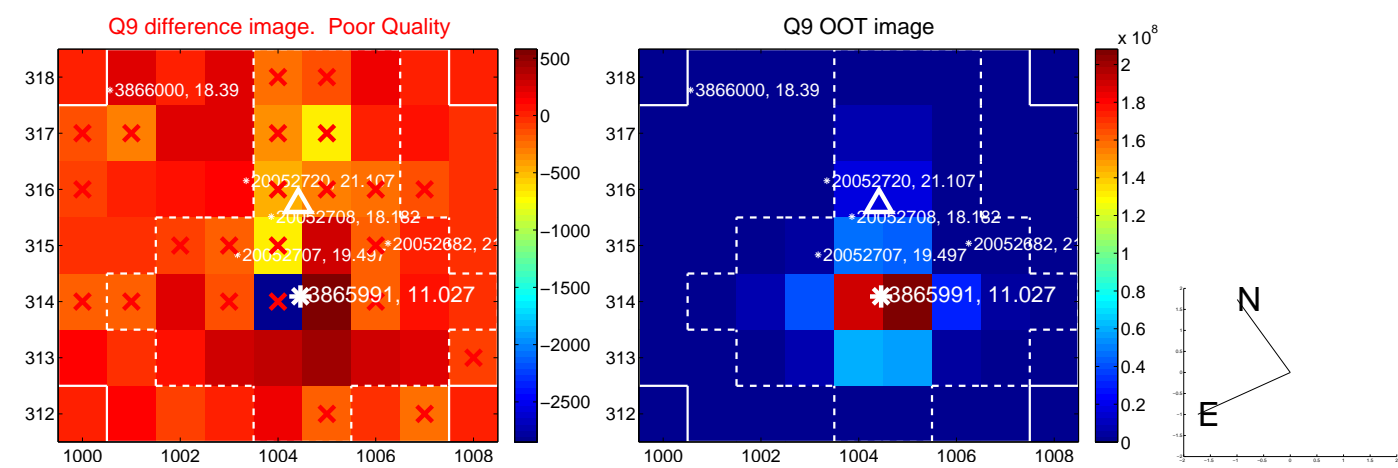
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



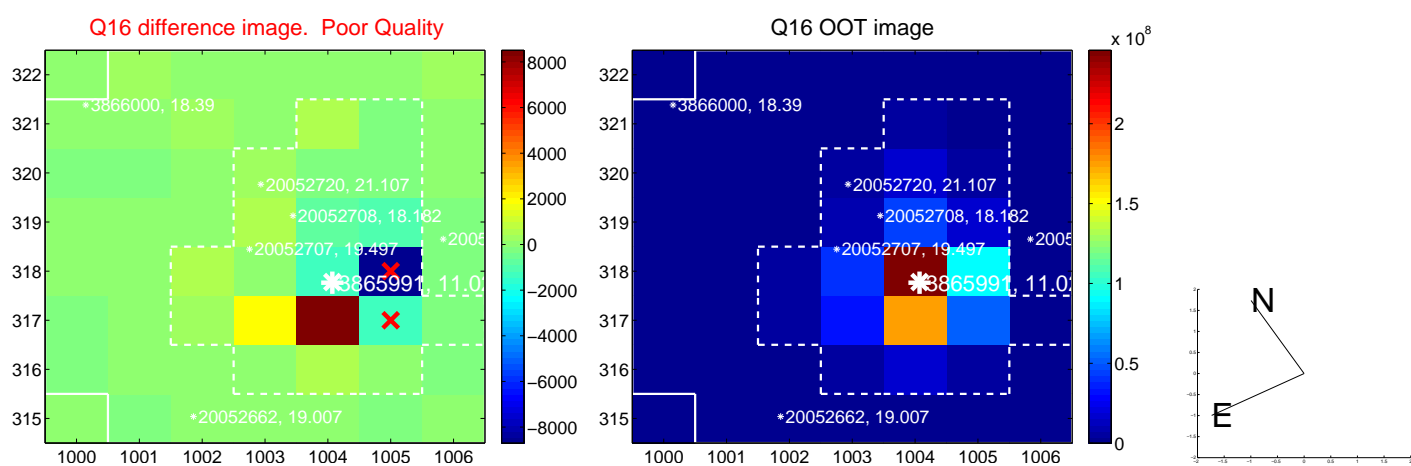
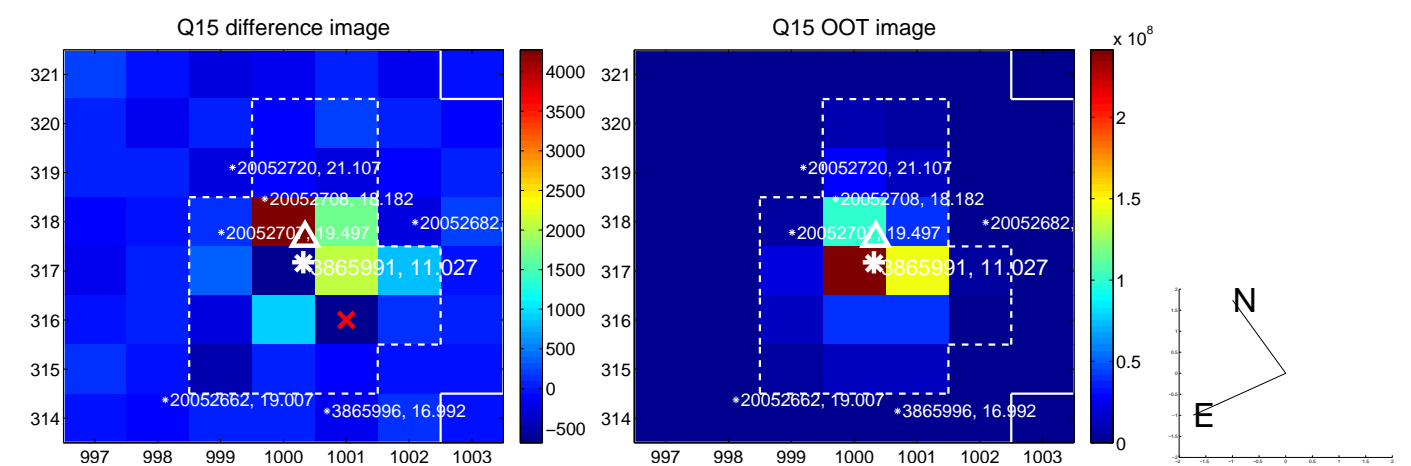
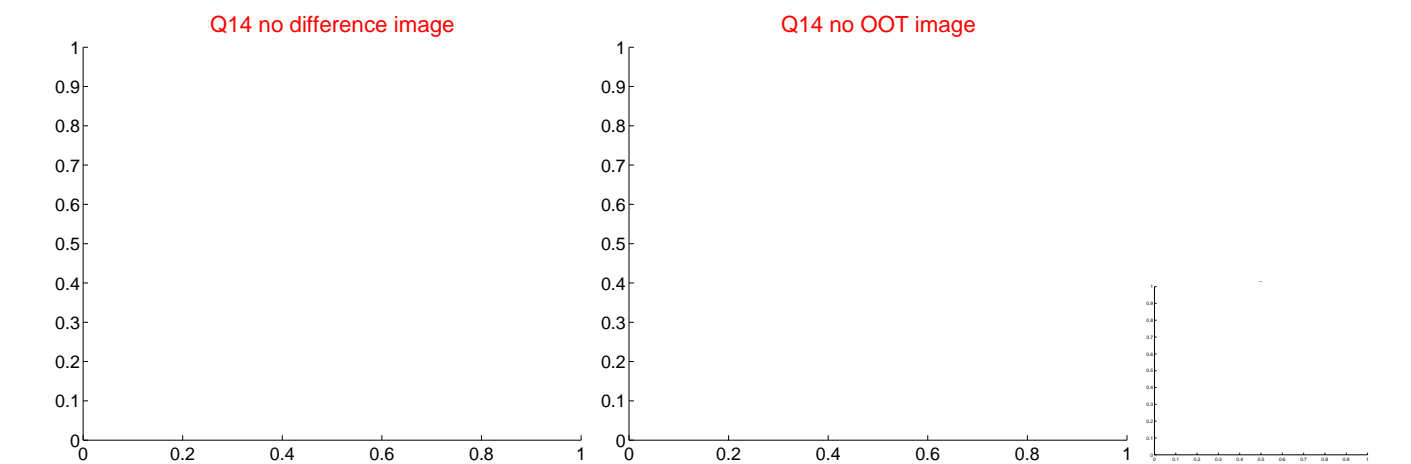
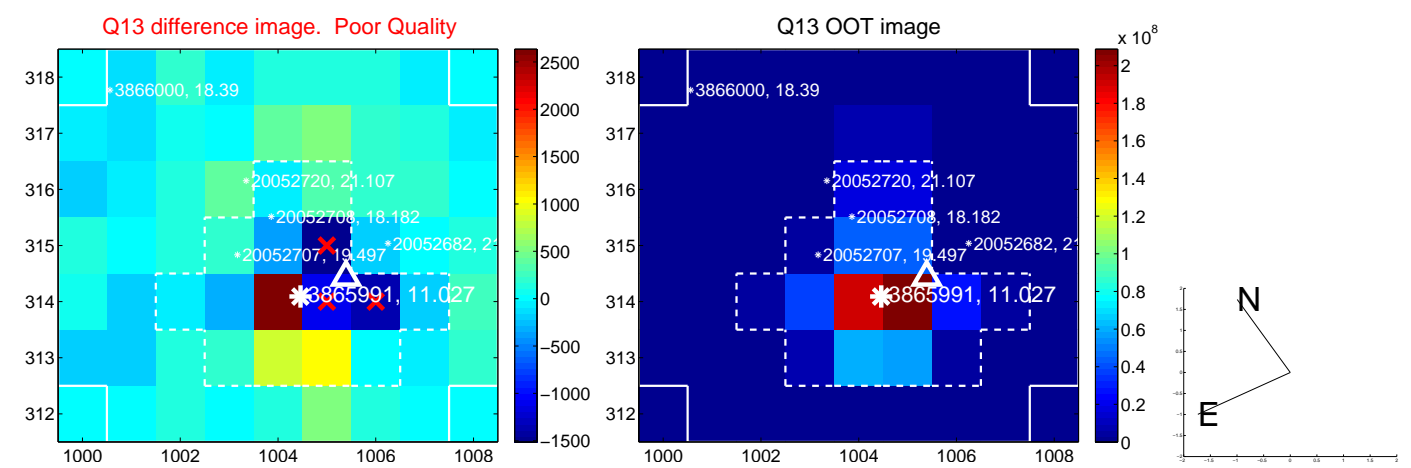
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



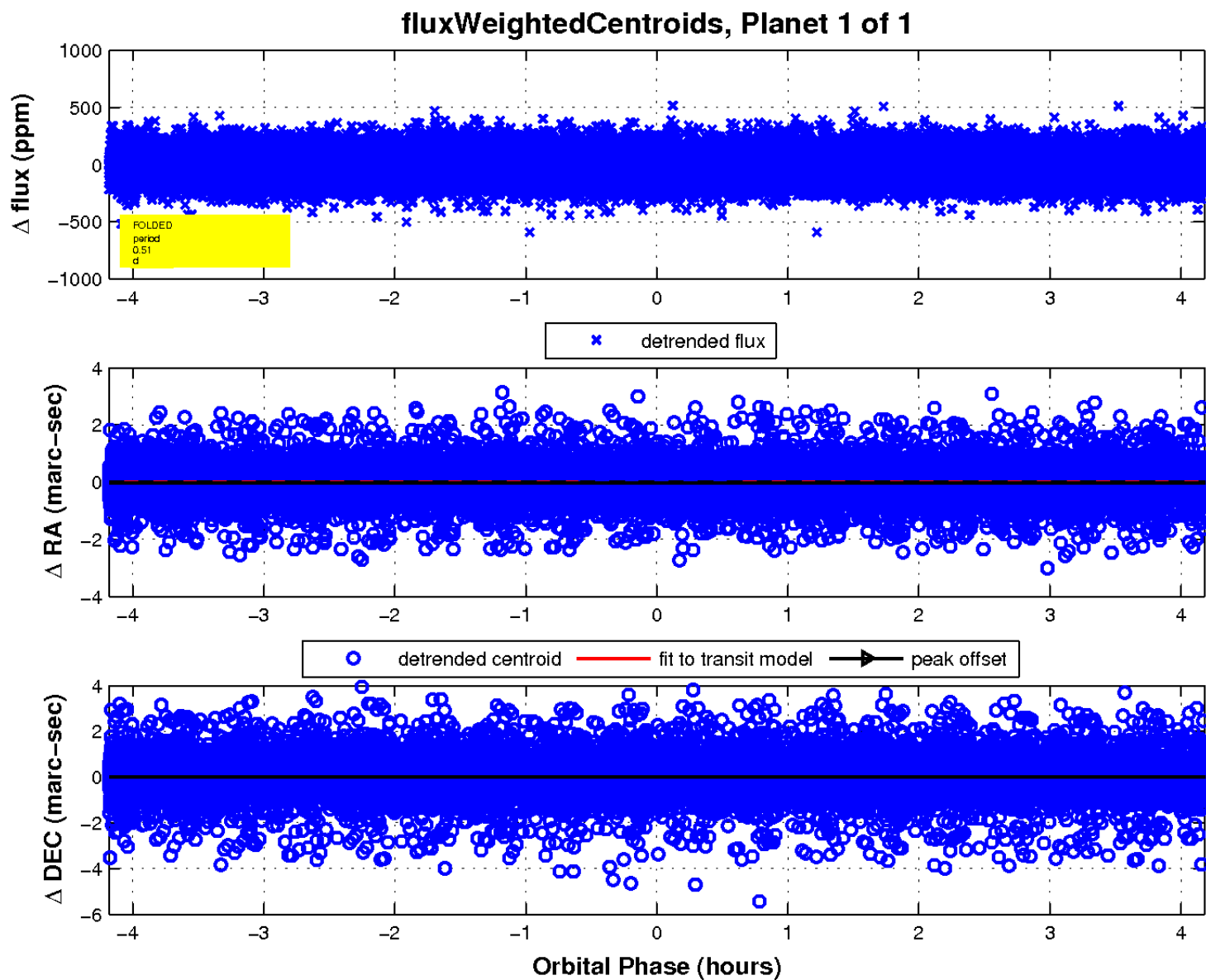
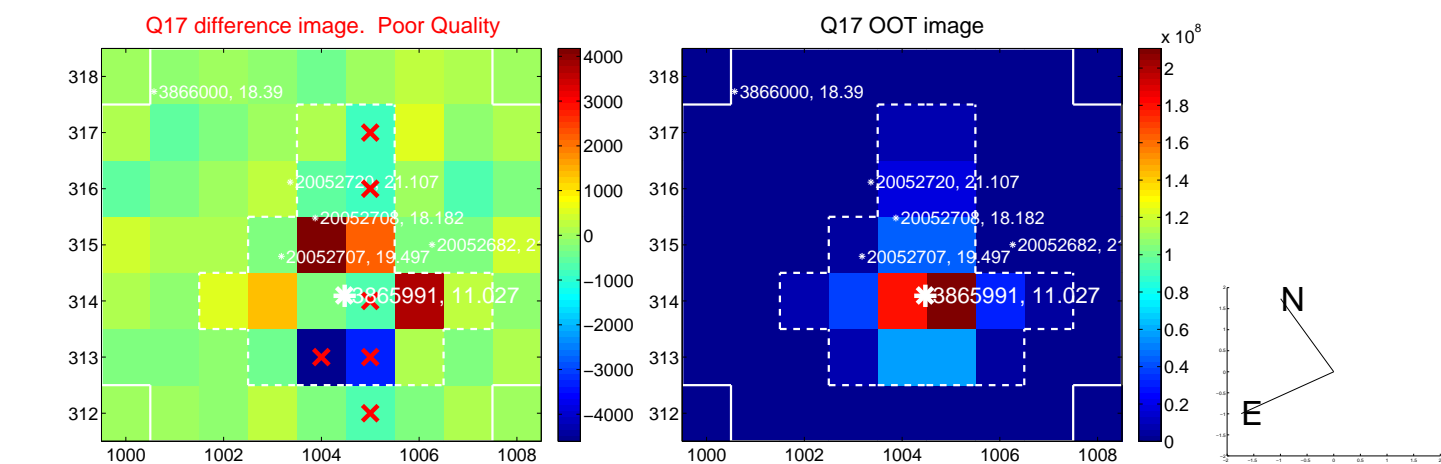
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UKIRT Image

Declination

