

KIC 009347066

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})
009347066-01	OBS	7933.01	20.004770	139.055277	136.9	2.936	7.6	8.1	0.85	5299	1.23	26.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009347066-01	OBS	FP	0.00	0	0	1	0	HALO_GHOST

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

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

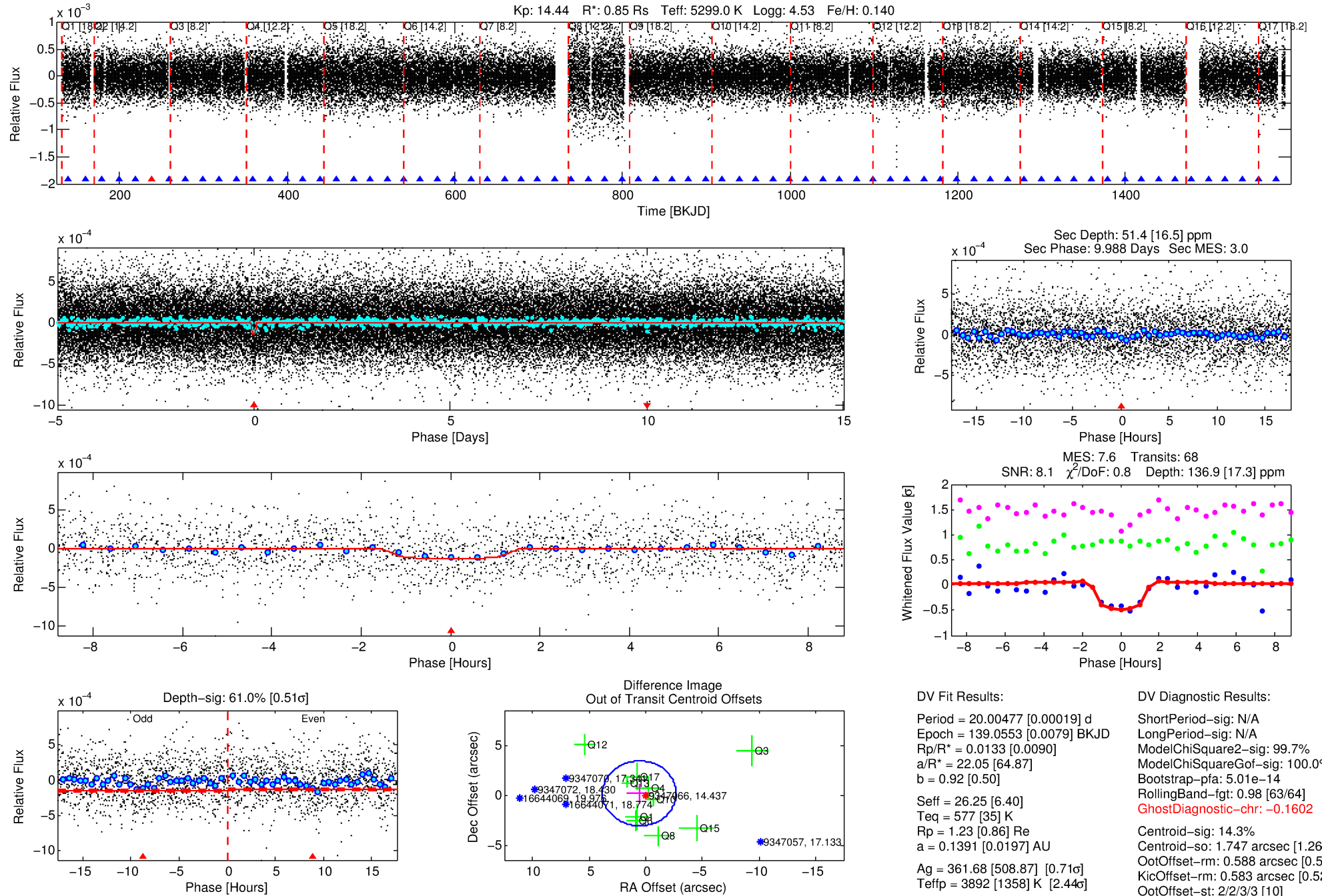
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009347066-01

No Significant Match Found

DV One-Page Summary

KIC: 9347066 Candidate: 1 of 1 Period: 20.005 d



DV Fit Results:

Period = 20.00477 [0.00019] d
Epoch = 139.0553 [0.0079] BKJD
Rp/R* = 0.0133 [0.0090]
a/R* = 22.05 [64.87]
b = 0.92 [0.50]
Seff = 26.25 [6.40]
Teff = 577 [35] K
Rp = 1.23 [0.86] Re
a = 0.1391 [0.0197] AU
Ag = 361.68 [508.87] [0.71 σ]
Teffp = 3892 [1358] K [2.44 σ]

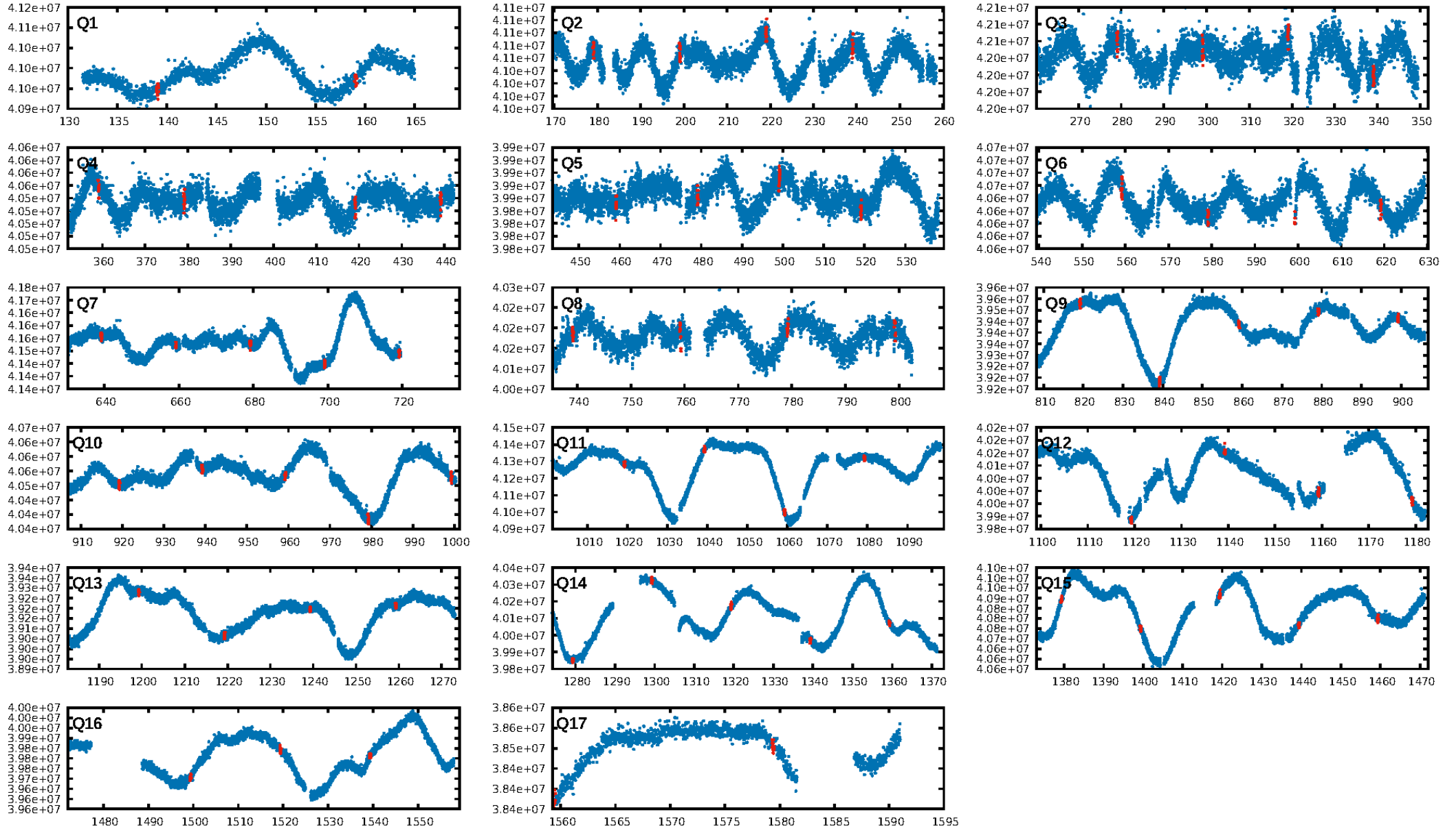
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.01e-14
RollingBand-fgt: 0.98 [63/64]
GhostDiagnostic-chr: -0.1602
Centroid-sig: 14.3%
Centroid-so: 1.747 arcsec [1.26 σ]
OotOffset-rm: 0.588 arcsec [0.54 σ]
KicOffset-rm: 0.583 arcsec [0.52 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

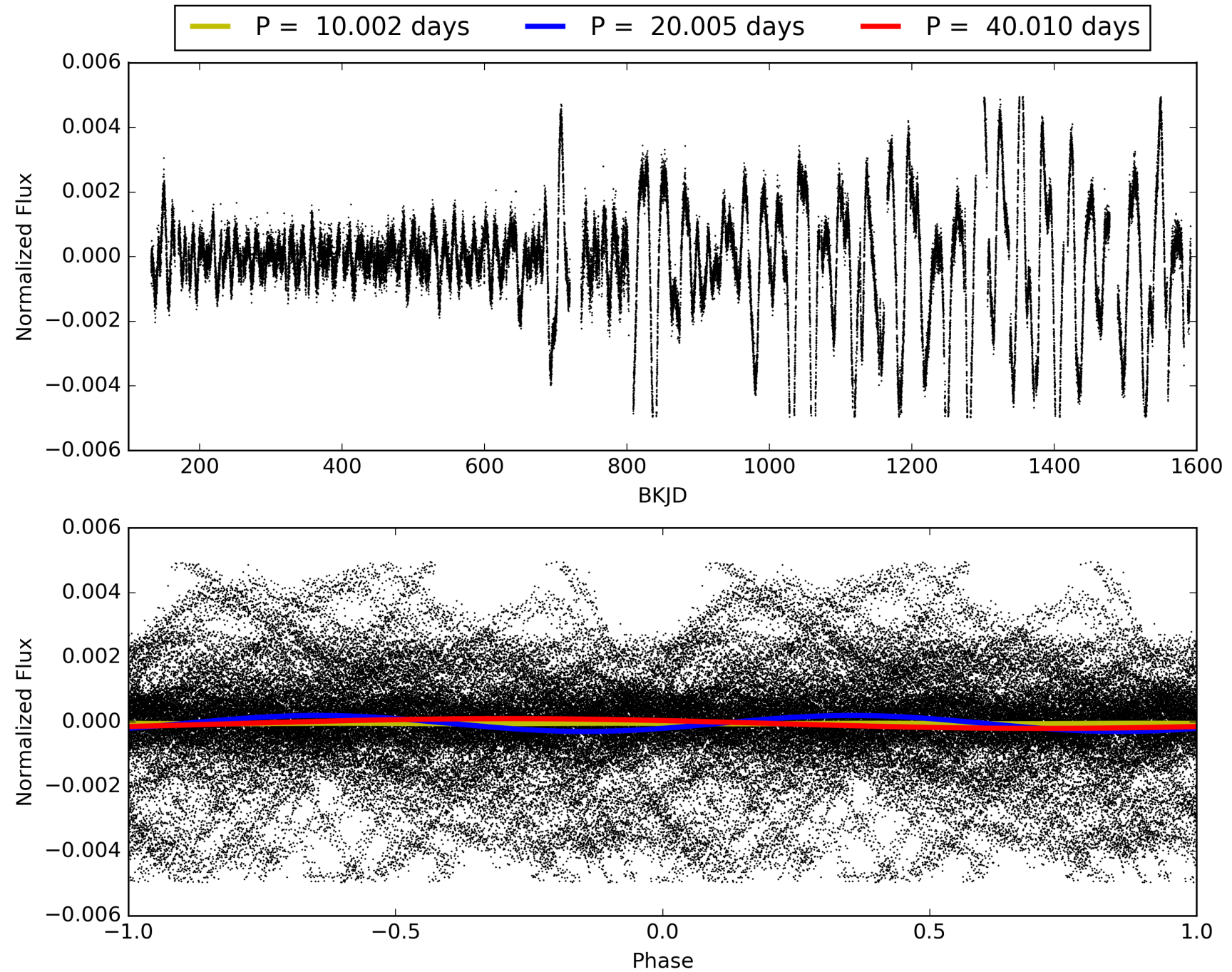
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:48:41 Z

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

TCE 009347066-01, PDC Light Curves

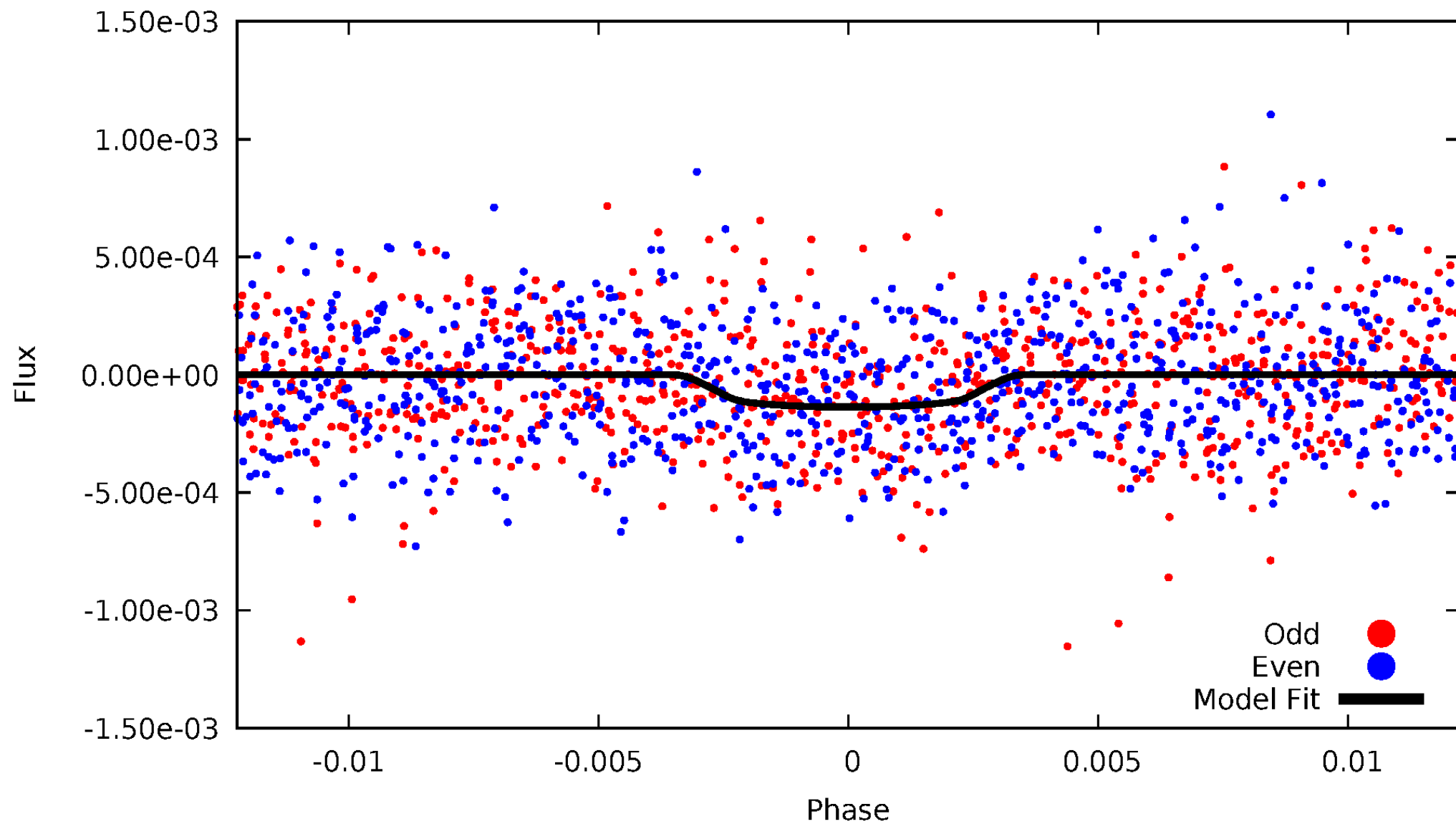


TCE 009347066-01



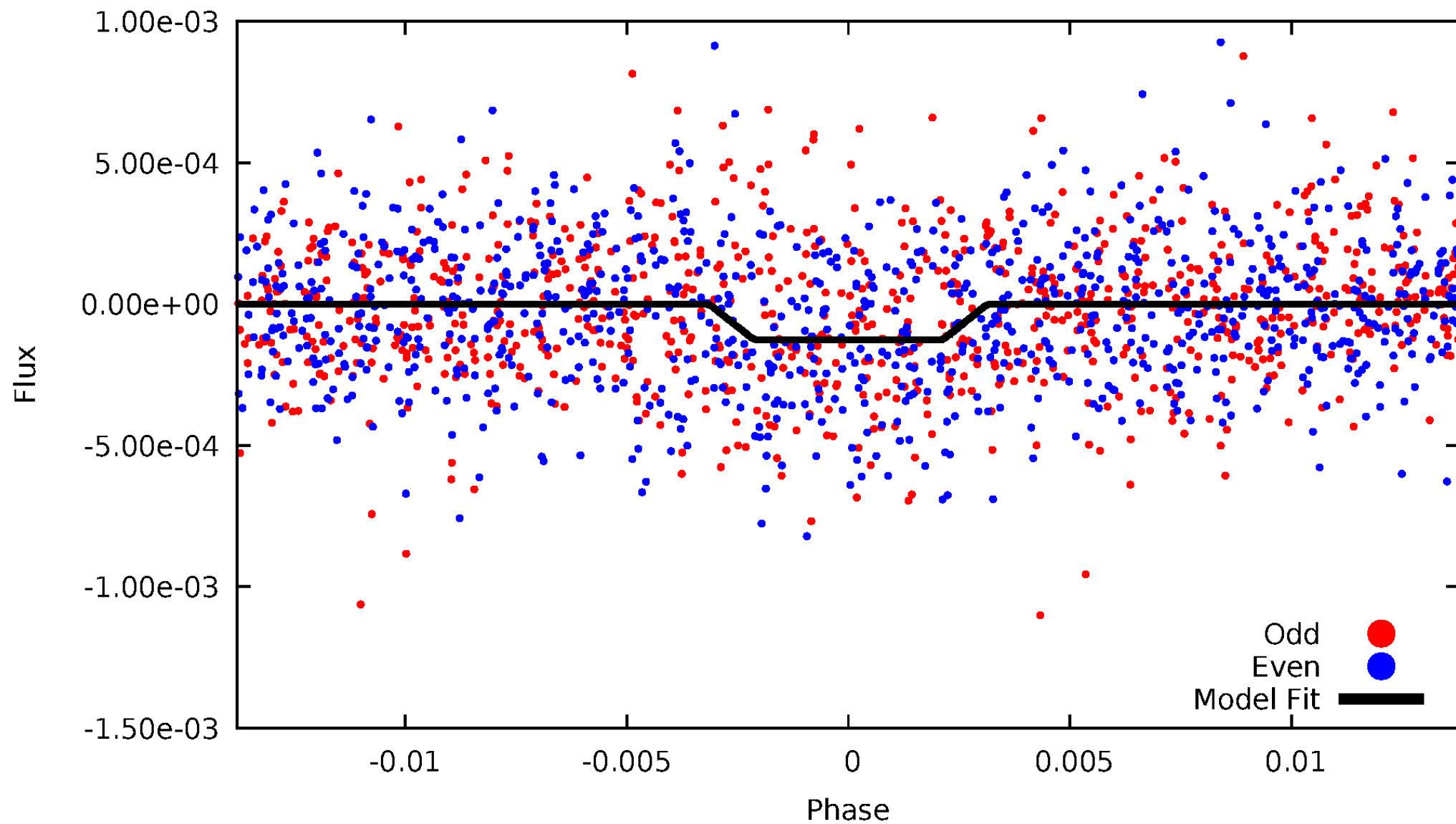
DV Odd/Even

TCE 009347066-01



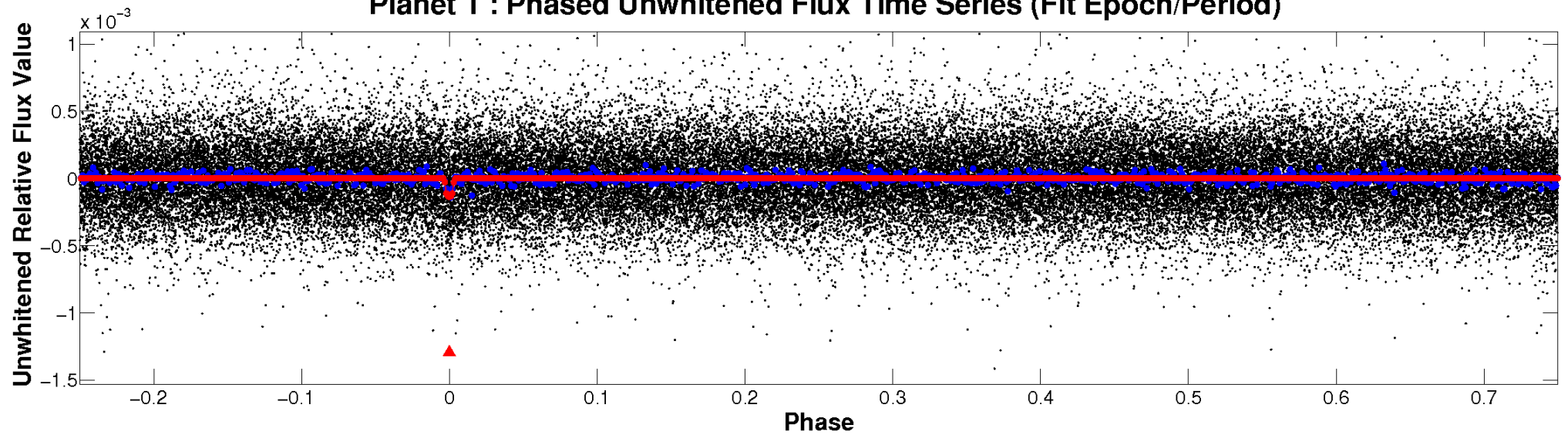
ALT Odd/Even

TCE 009347066-01

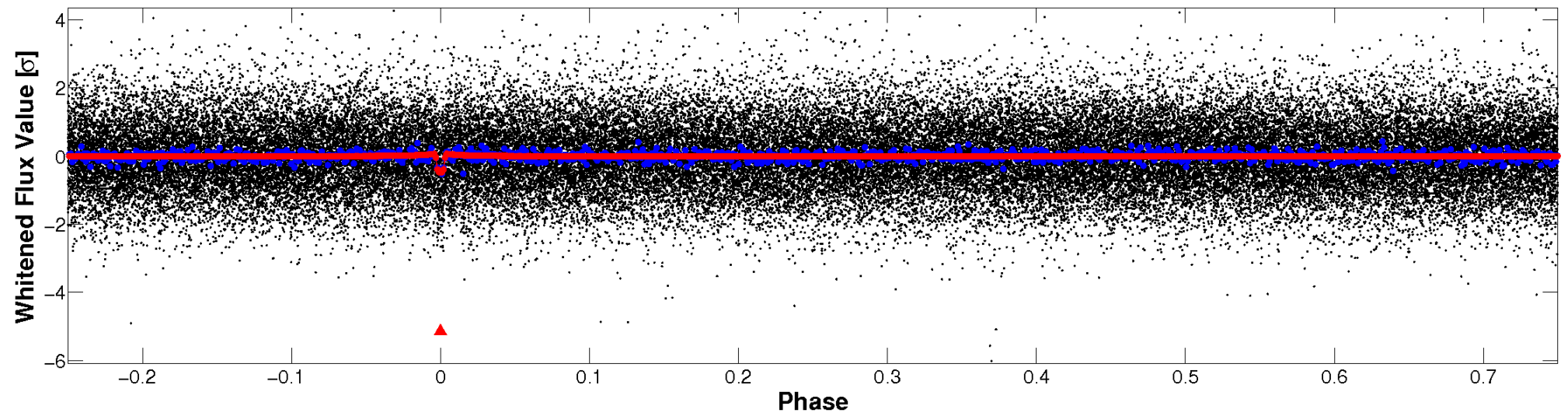


Non-Whitened Vs. Whitened Light Curve

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

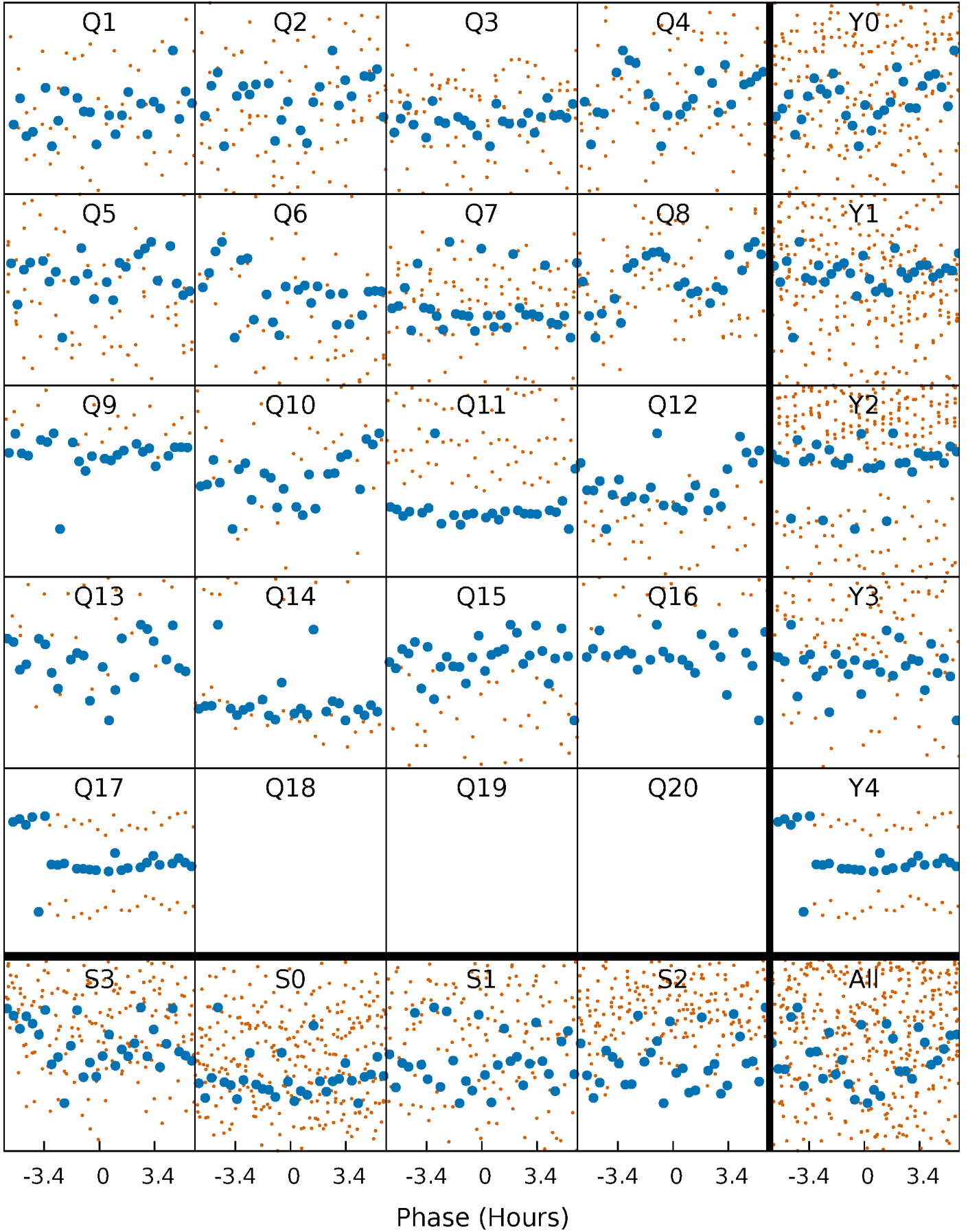


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



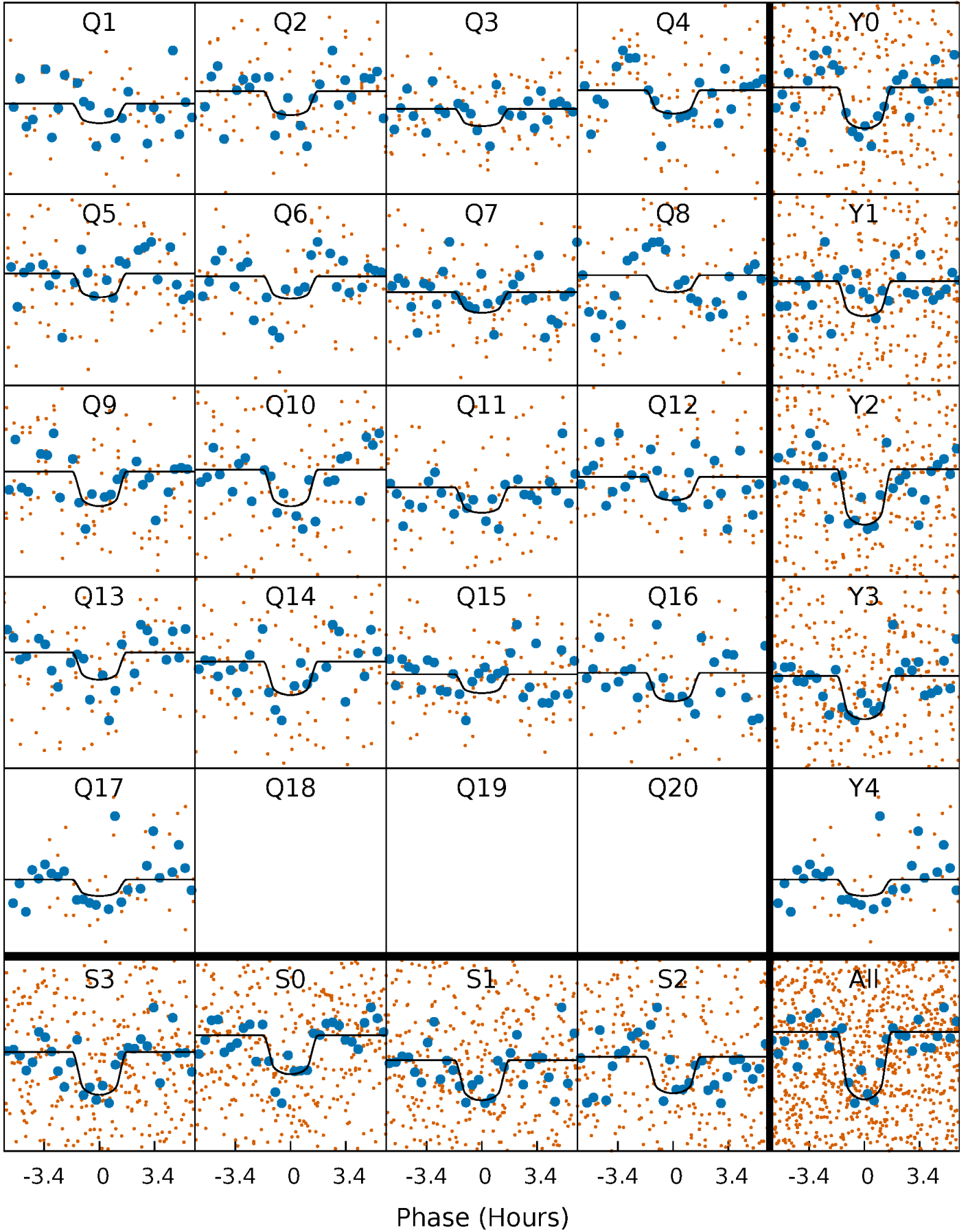
PDC Quarter-Phased Transit Curves

TCE 009347066-01 P= 20.004770 Days $T_0=139.055277$ (BKJD)



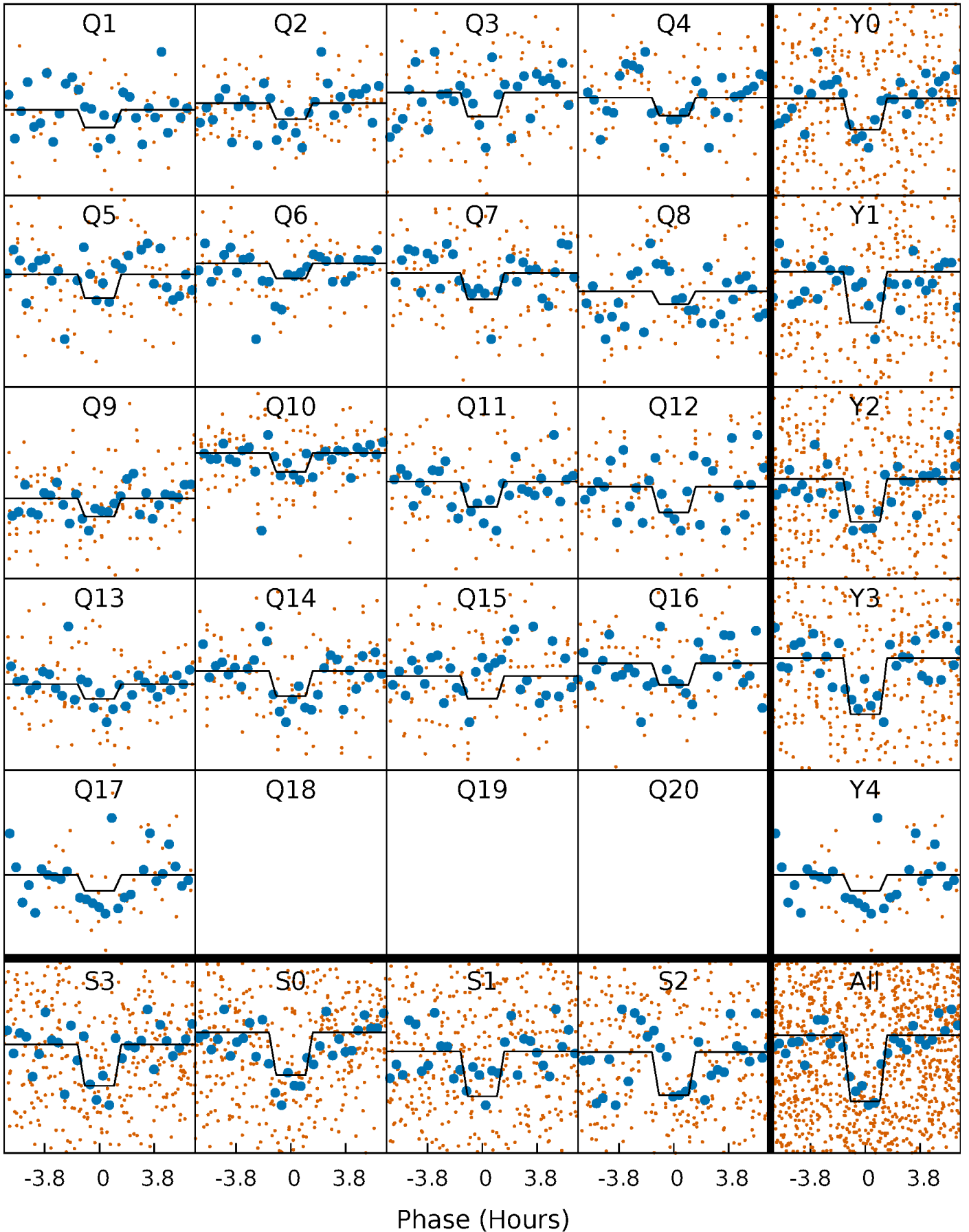
DV Quarter-Phased Transit Curves

TCE 009347066-01 P= 20.004770 Days $T_0=139.055277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

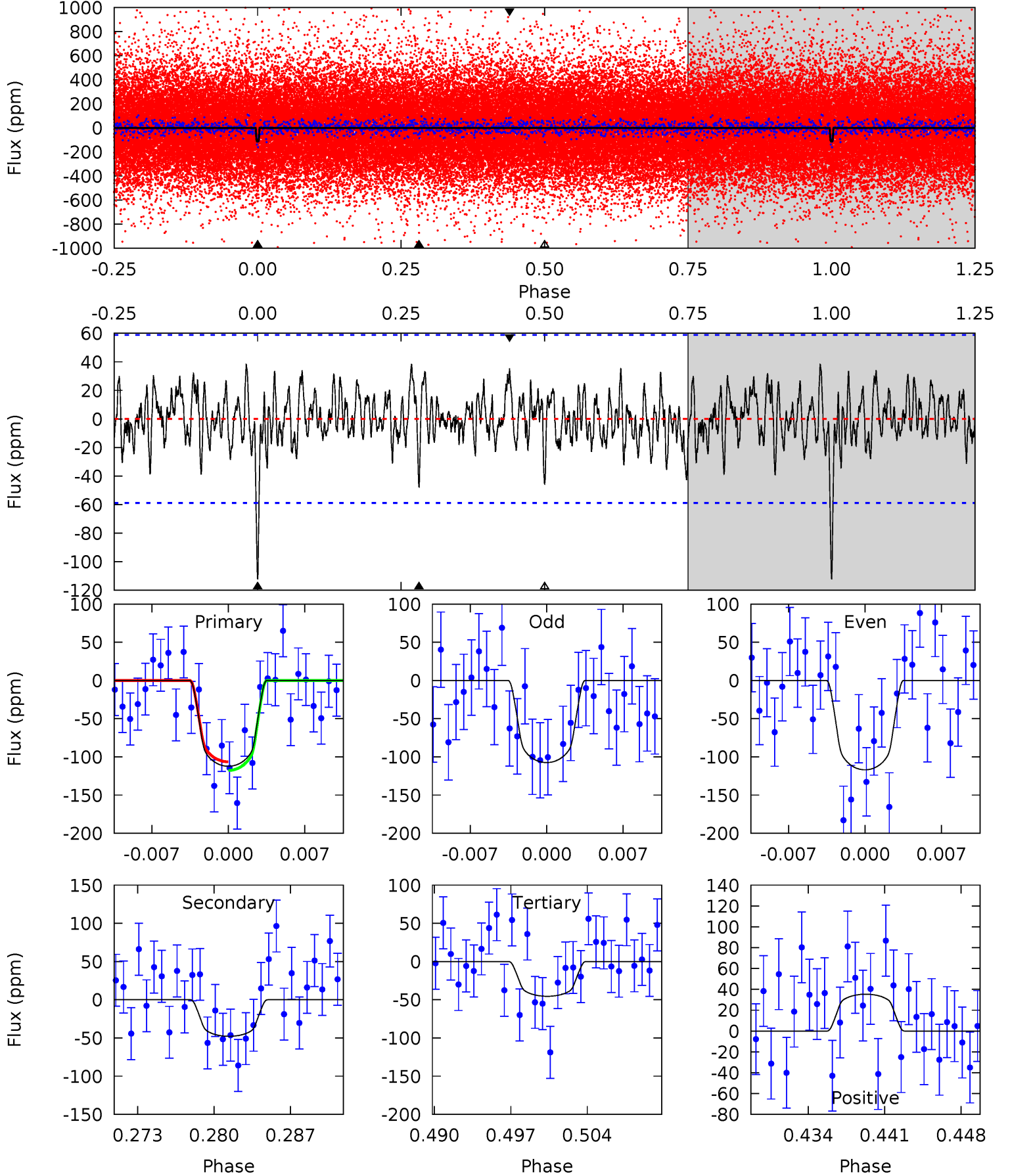
TCE 009347066-01 P= 20.004702 Days $T_0=139.058458$ (BKJD)



DV Model-Shift Uniqueness Test

009347066-01, $P = 20.004770$ Days, $E = 119.050507$ Days

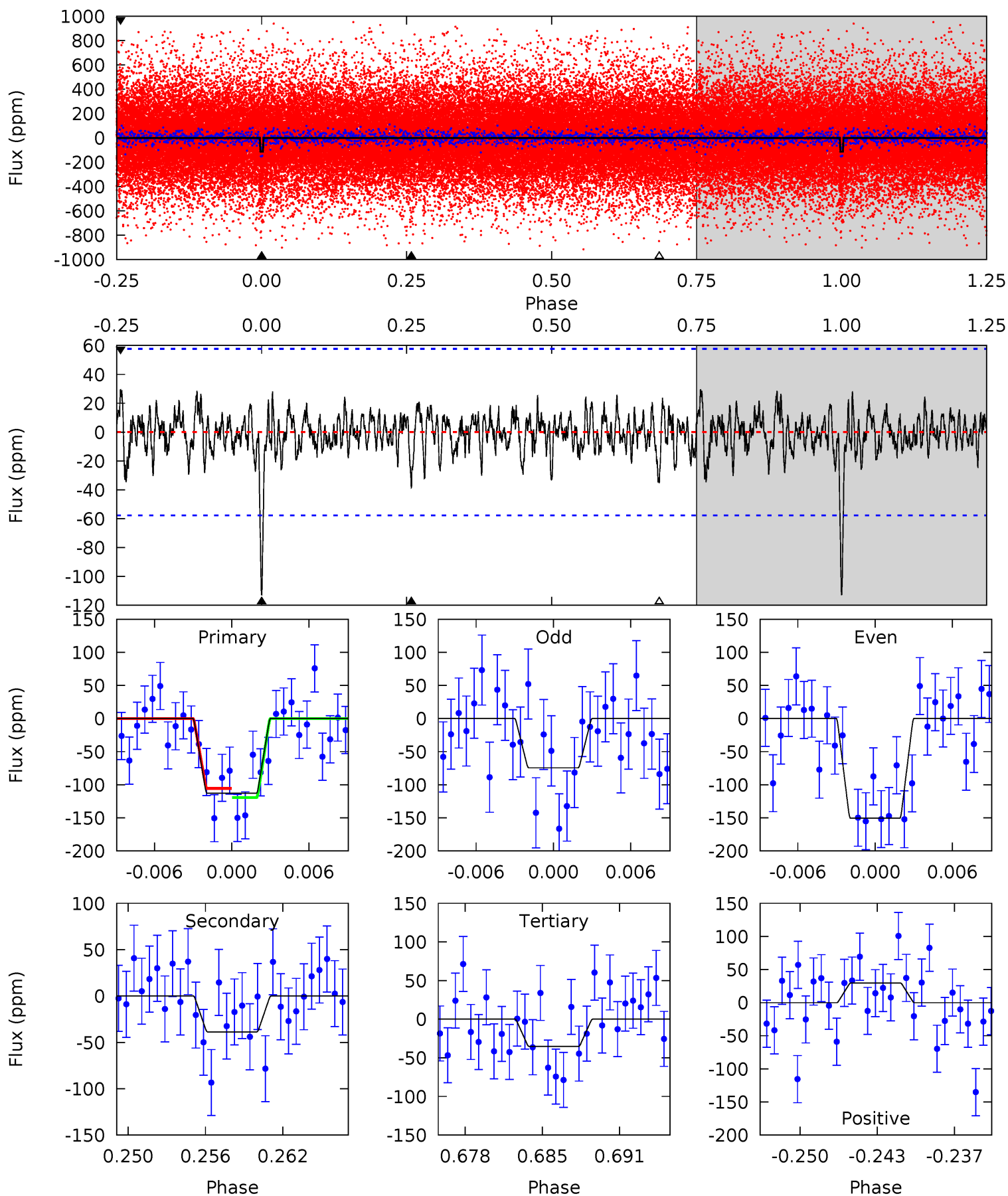
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	4.14	3.94	3.06	5.09	2.70	1.25	5.78	6.66	0.21	1.08	0.41	0.88	0.26	0.49



Alt Model-Shift Uniqueness Test

009347066-01, P = 20.004702 Days, E = 119.053756 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.00	3.42	3.13	2.63	5.11	2.73	0.99	6.87	7.37	0.29	0.80	3.39	1.05	0.21	0.61



Stellar Parameters For KIC 009347066

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5299^{+159}_{-159}	$4.534^{+0.043}_{-0.119}$	$0.140^{+0.250}_{-0.300}$	$0.848^{+0.138}_{-0.074}$	$0.896^{+0.069}_{-0.083}$	$2.069^{+0.411}_{-0.715}$
	+3%/-3%	+1%/-3%	+179%/-214%	+16%/-9%	+8%/-9%	+20%/-35%
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 009347066-01 / KOI 7933.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-48 ± 12	$1.34^{+0.85}_{-0.75}$	817^{+38}_{-33}	3978^{+1555}_{-615}	280^{+1191}_{-182}
Alt.	-39 ± 11	$1.11^{+0.81}_{-0.62}$	816^{+39}_{-32}	4080^{+1777}_{-701}	332^{+1376}_{-231}

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 $A_{obs} \gg 1.0$

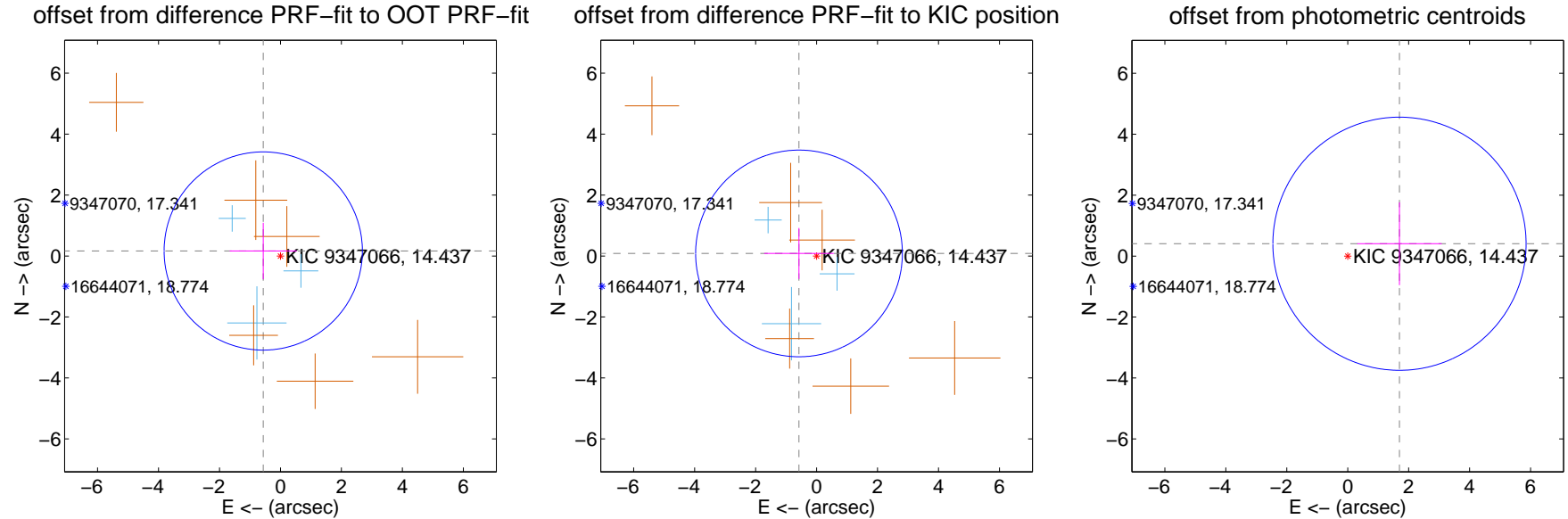
DV Centroid Data

Supplemental centroid analysis for 009347066-01. Kepler magnitude: 14.44. Transit SNR 8.11

There are 3 quarters with good PRF difference image offsets

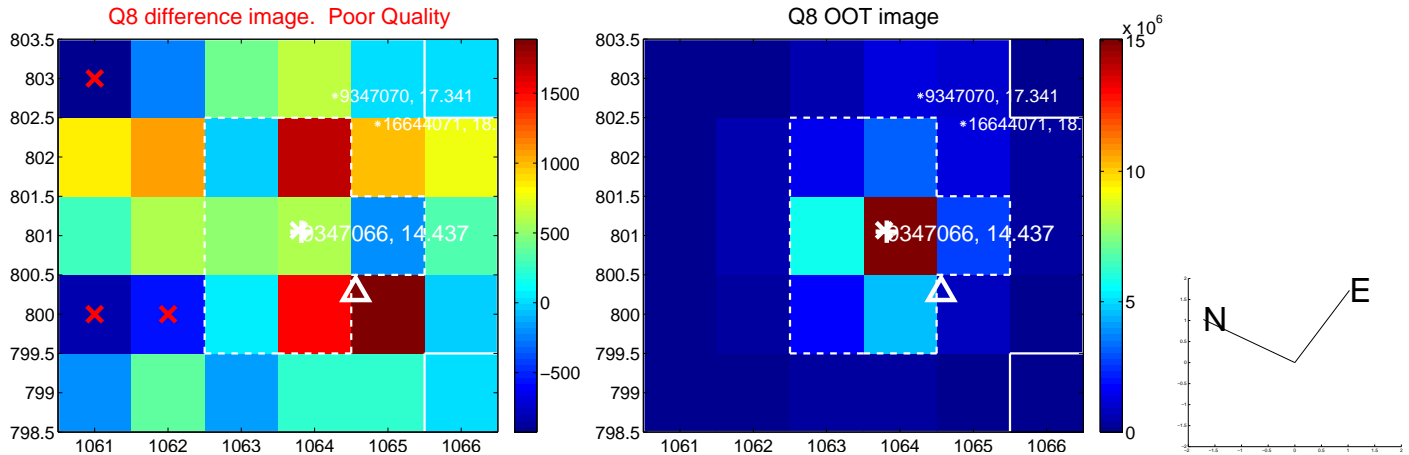
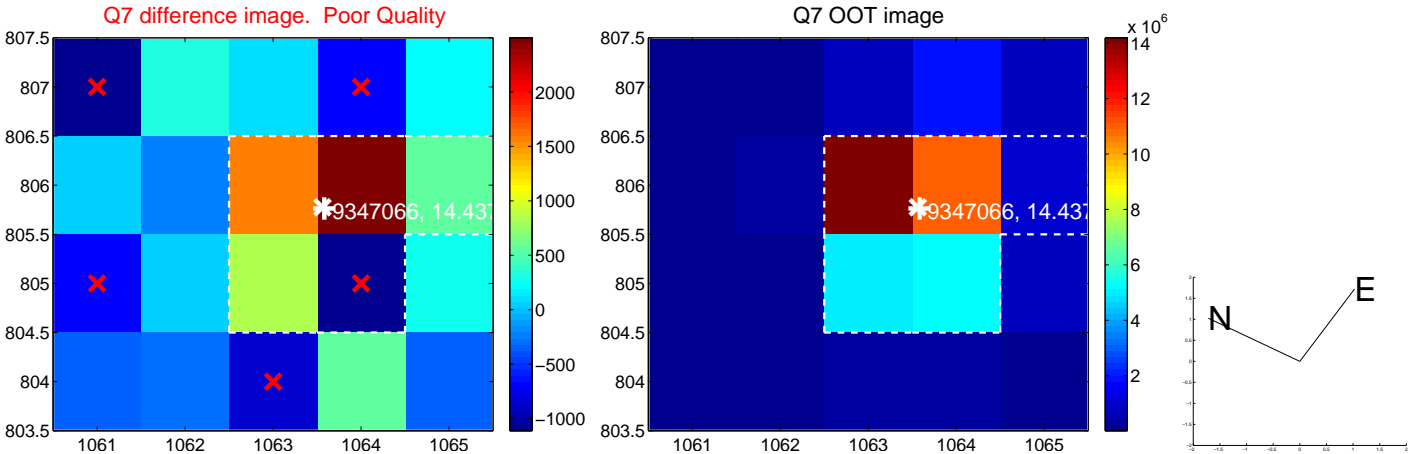
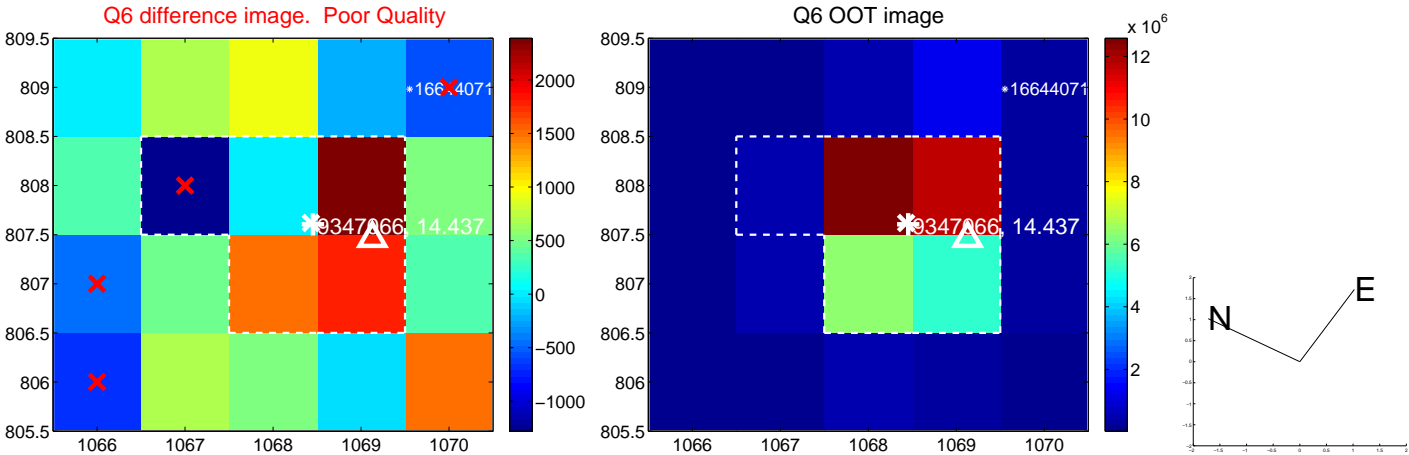
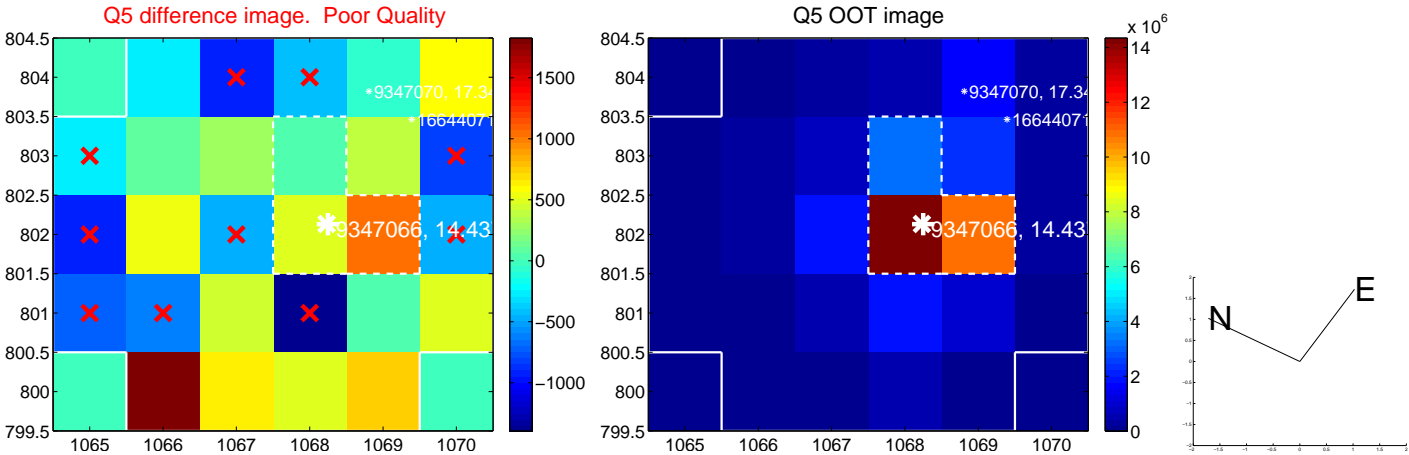
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.588 ± 1.084	0.54	0.565 ± 1.101	0.165 ± 0.926
PRF-fit source offset from KIC position	0.583 ± 1.130	0.52	0.577 ± 1.141	0.085 ± 0.836
photometric centroid source offset	1.75 ± 1.39	1.26	-1.70 ± 1.39	0.41 ± 1.36

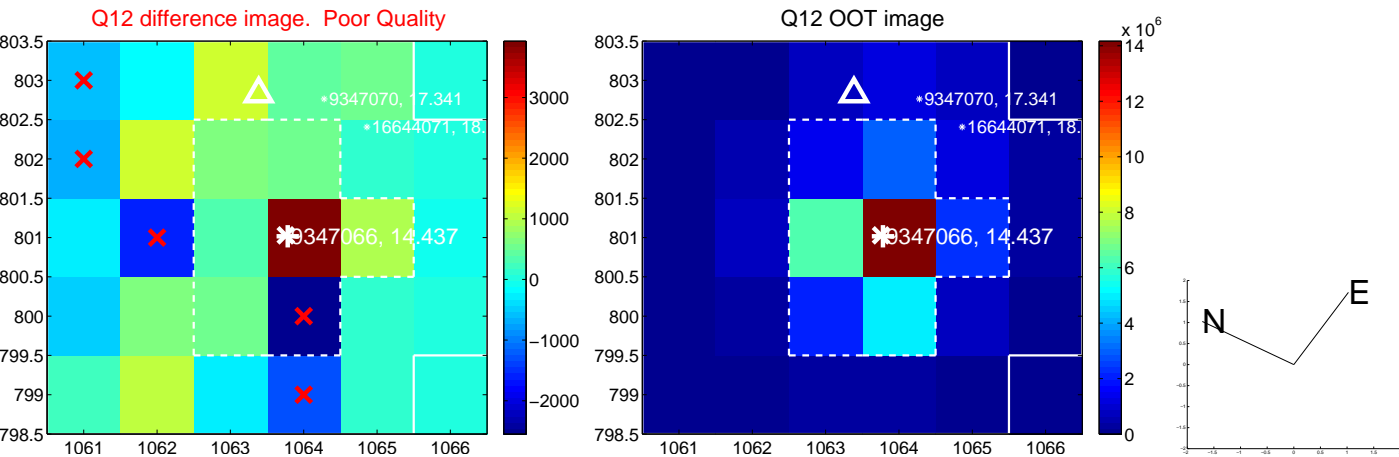
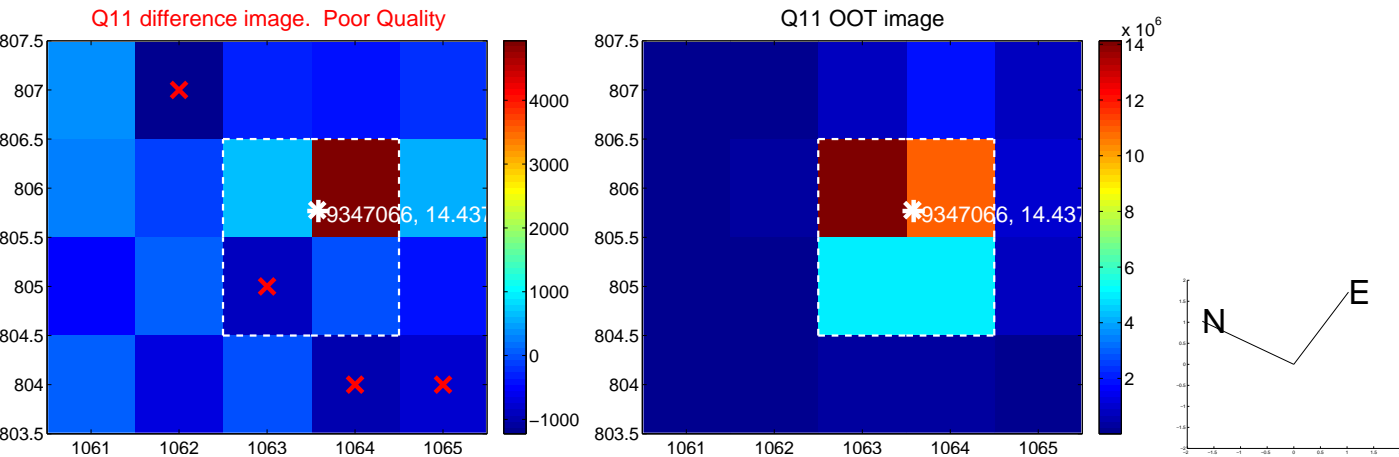
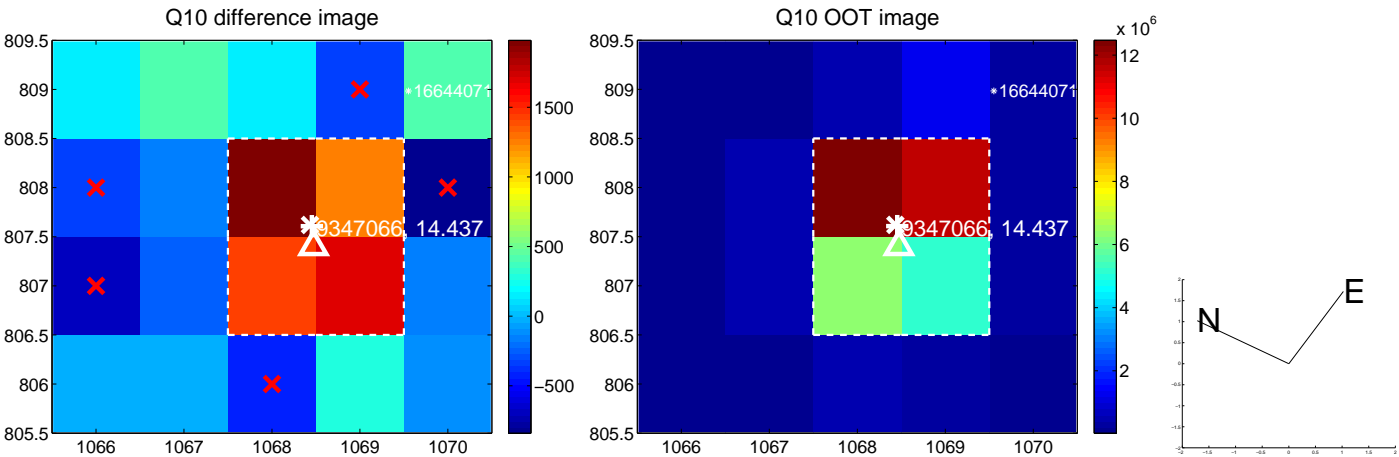
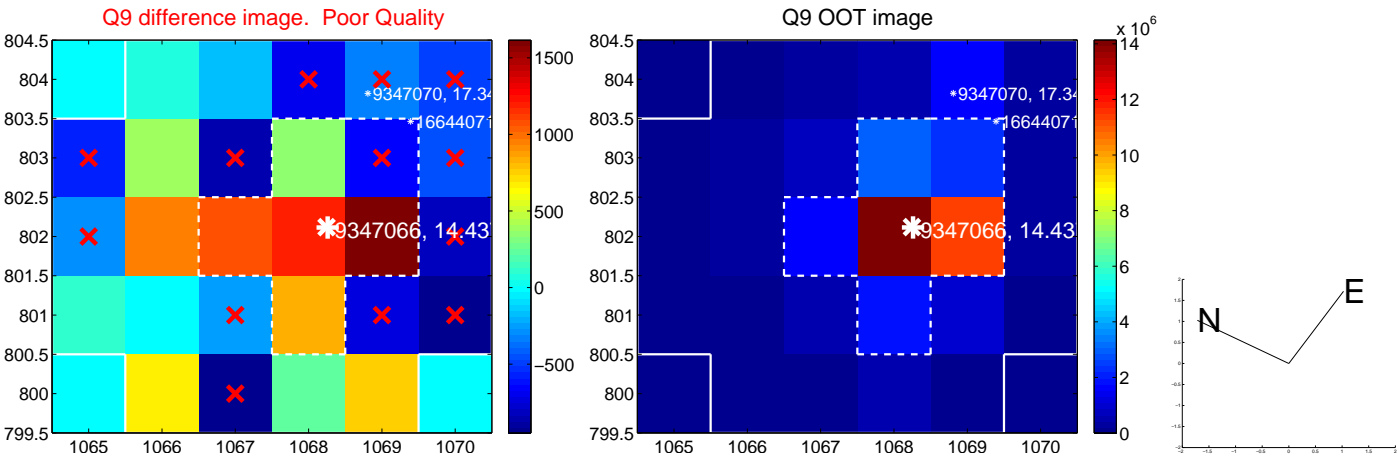


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

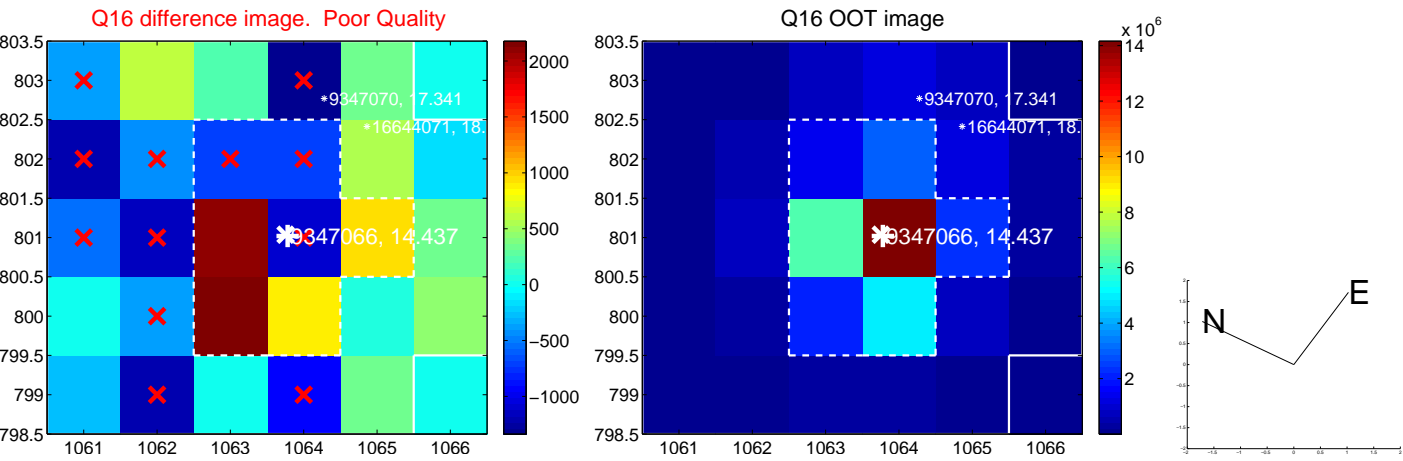
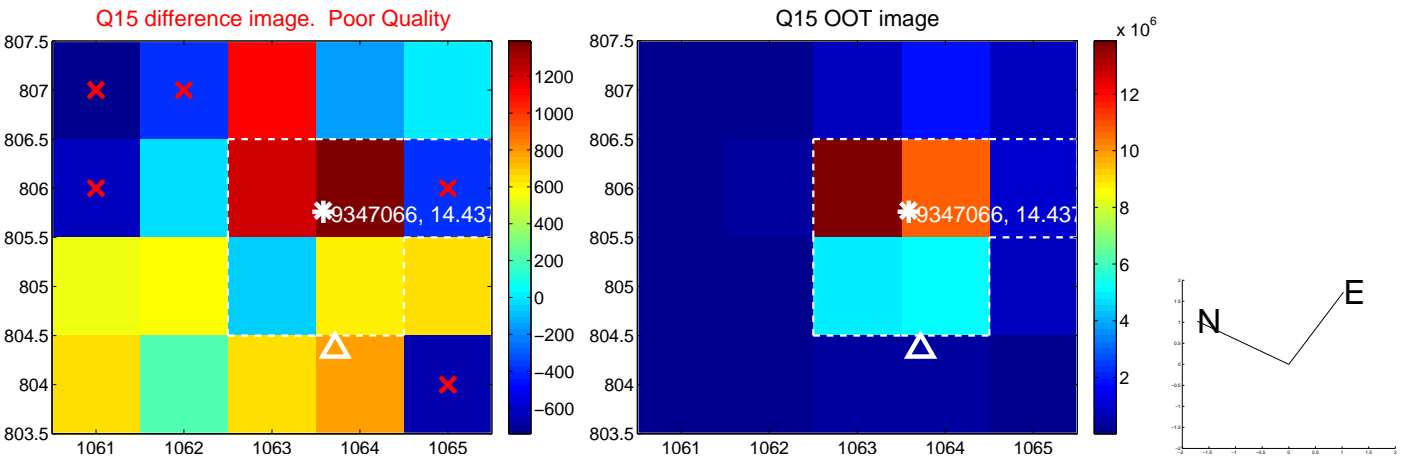
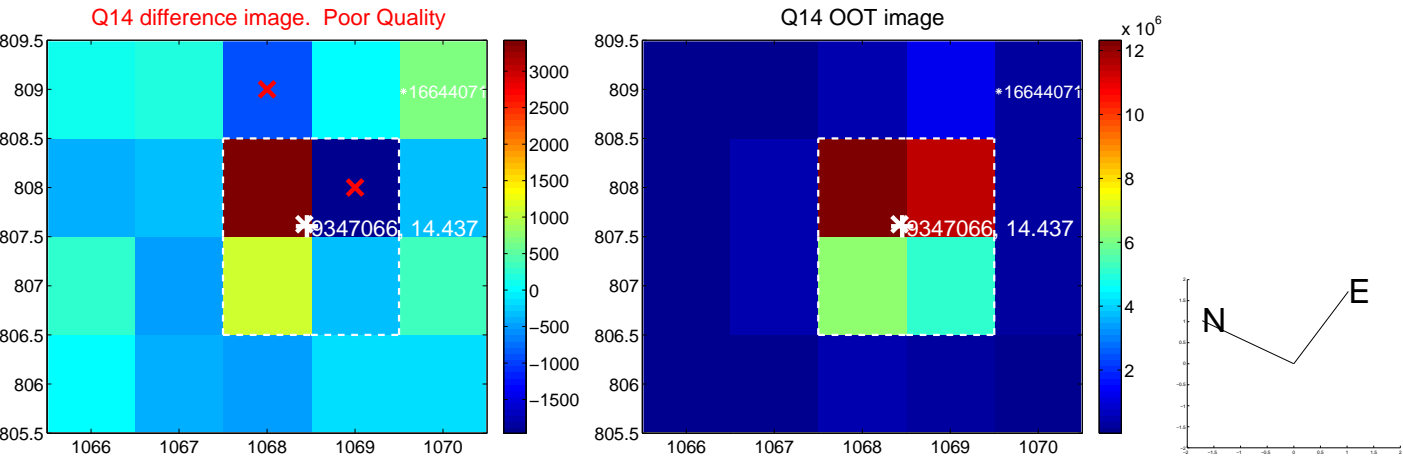
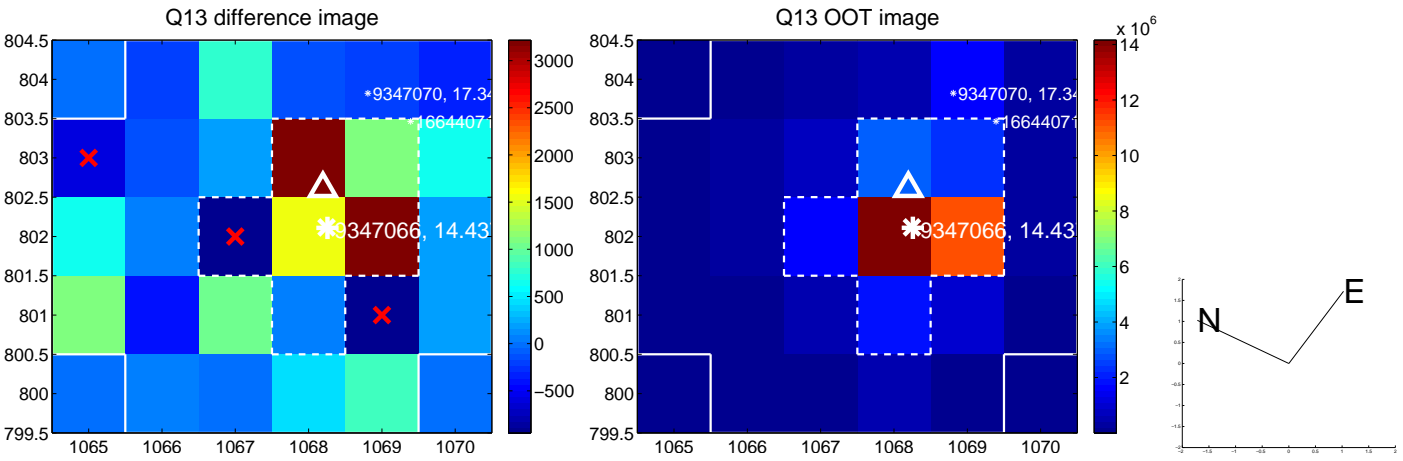
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



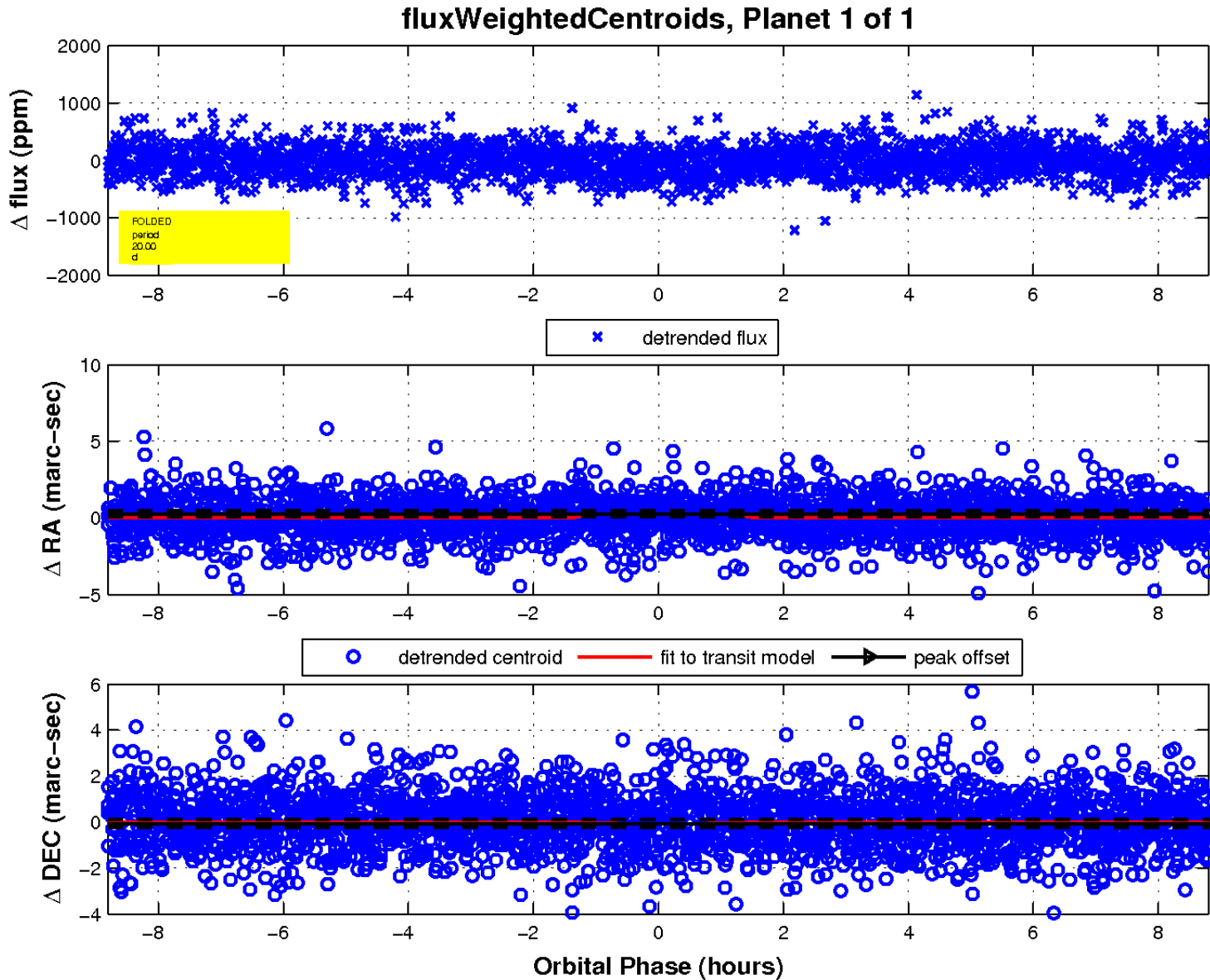
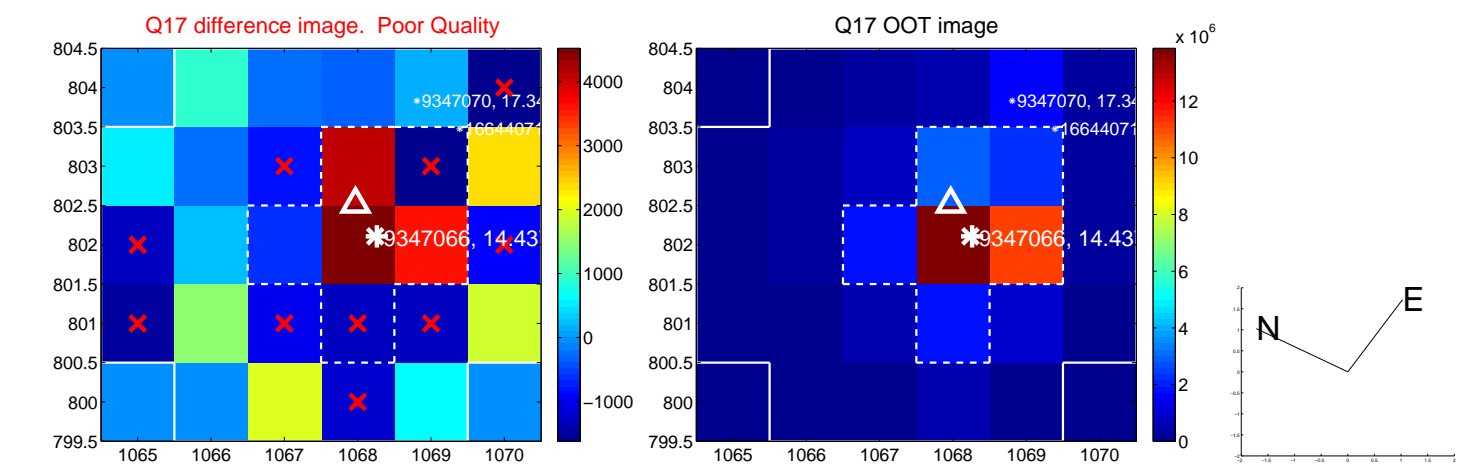
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

