

KIC 008646141

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})
008646141-01	OBS	No	2.974721	133.531824	40.4	20.478	12.7	14.5	2.92	6613	2.56	6337.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008646141-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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 008646141-01

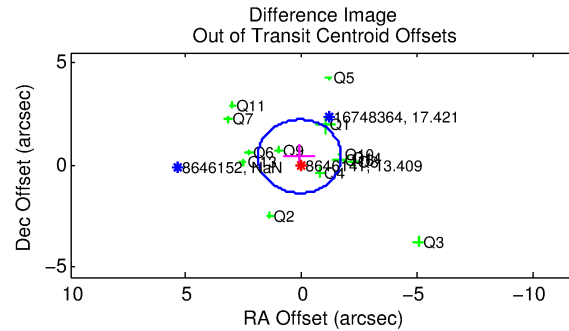
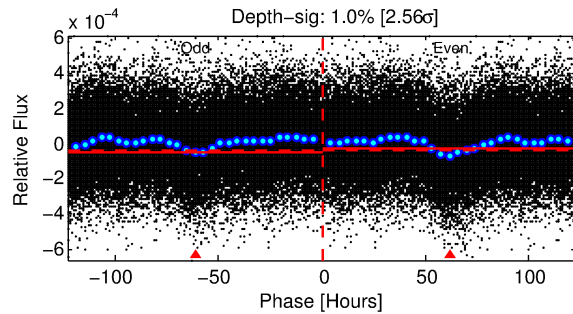
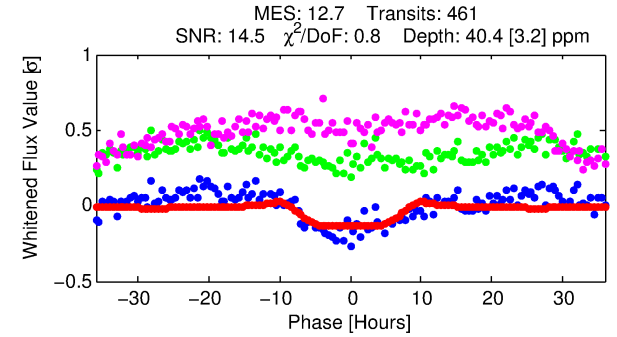
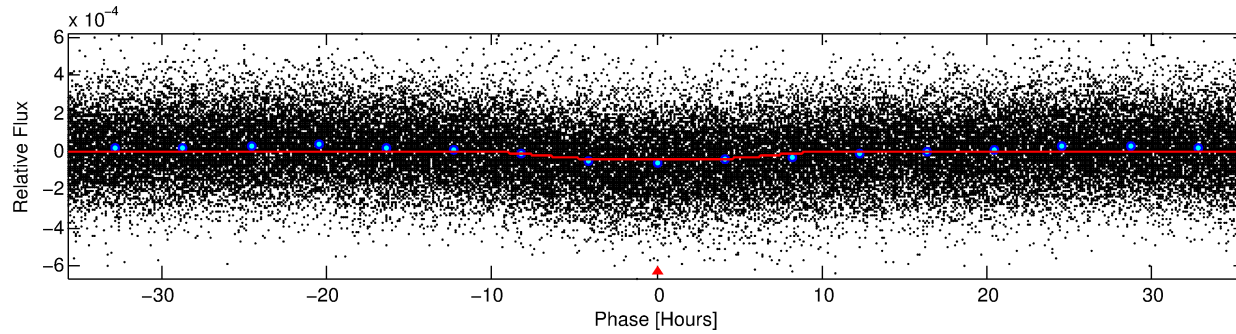
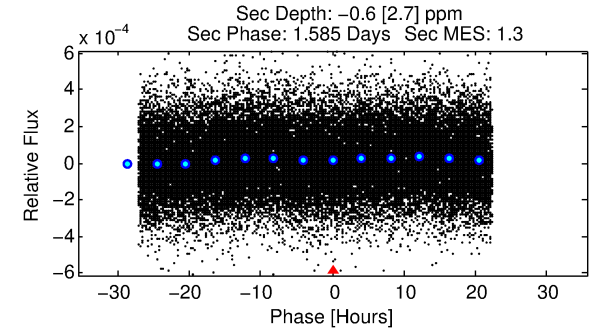
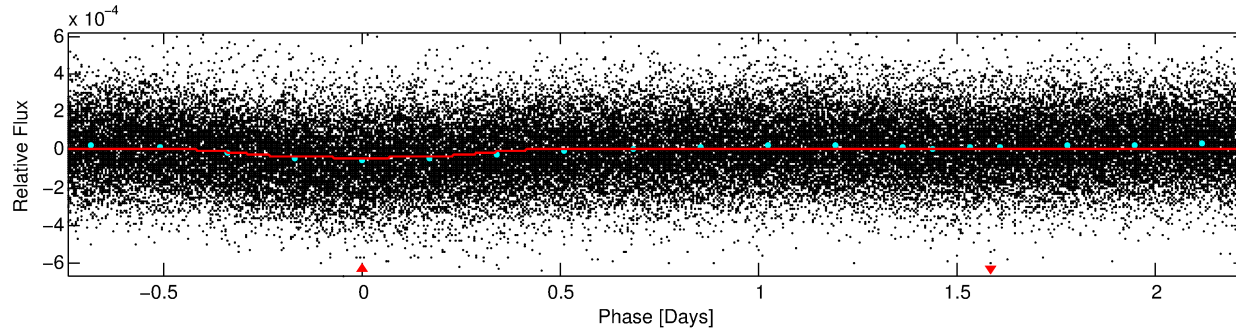
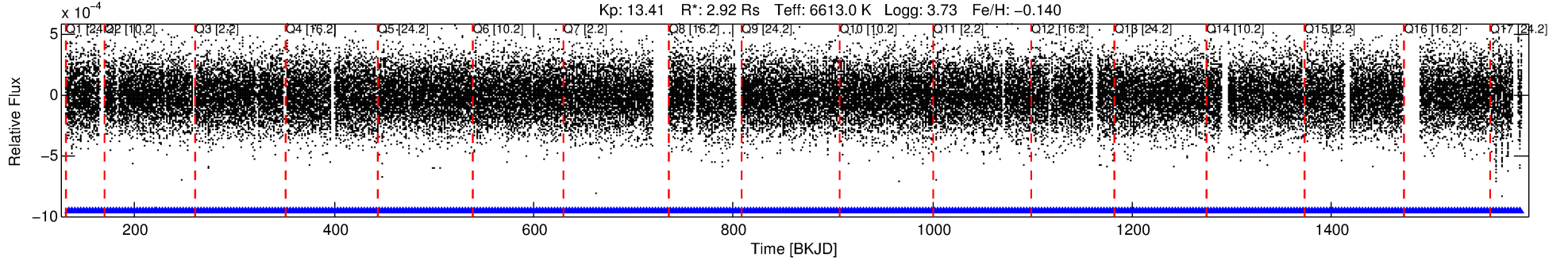
No Significant Match Found

DV One-Page Summary

KIC: 8646141 Candidate: 1 of 1 Period: 2.975 d

KOI: K06185 Corr: No Ephemeris Match

Kp: 13.41 R*: 2.92 Rs Teff: 6613.0 K Logg: 3.73 Fe/H: -0.140



DV Fit Results:

Period = 2.97472 [0.00010] d
Epoch = 133.5318 [0.0267] BKJD
Rp/R* = 0.0080 [0.0004]
a/R* = 1.02 [0.00]
b = 0.99 [0.00]
Seff = 6337.97 [3540.26]
Teq = 2275 [318] K
Rp = 2.55 [0.99] Re
a = 0.0480 [0.0168] AU
Ag = N/A
Teffp = N/A

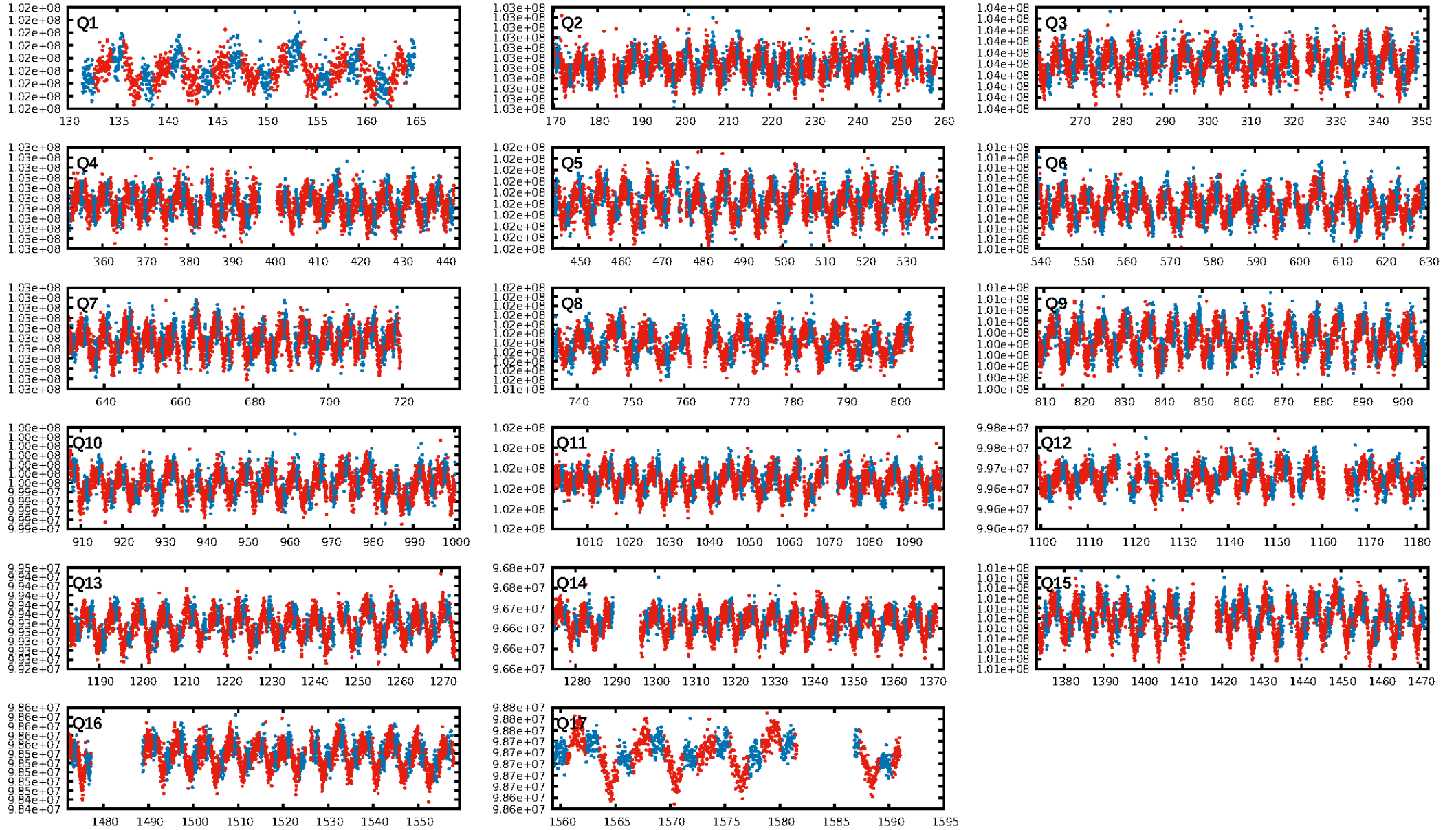
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [441/441]
GhostDiagnostic-chr: 2.337
Centroid-sig: 0.0%
Centroid-so: 1.721 arcsec [2.75σ]
OotOffset-rm: 0.416 arcsec [0.69σ]
KicOffset-rm: 1.097 arcsec [2.25σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [17/17]

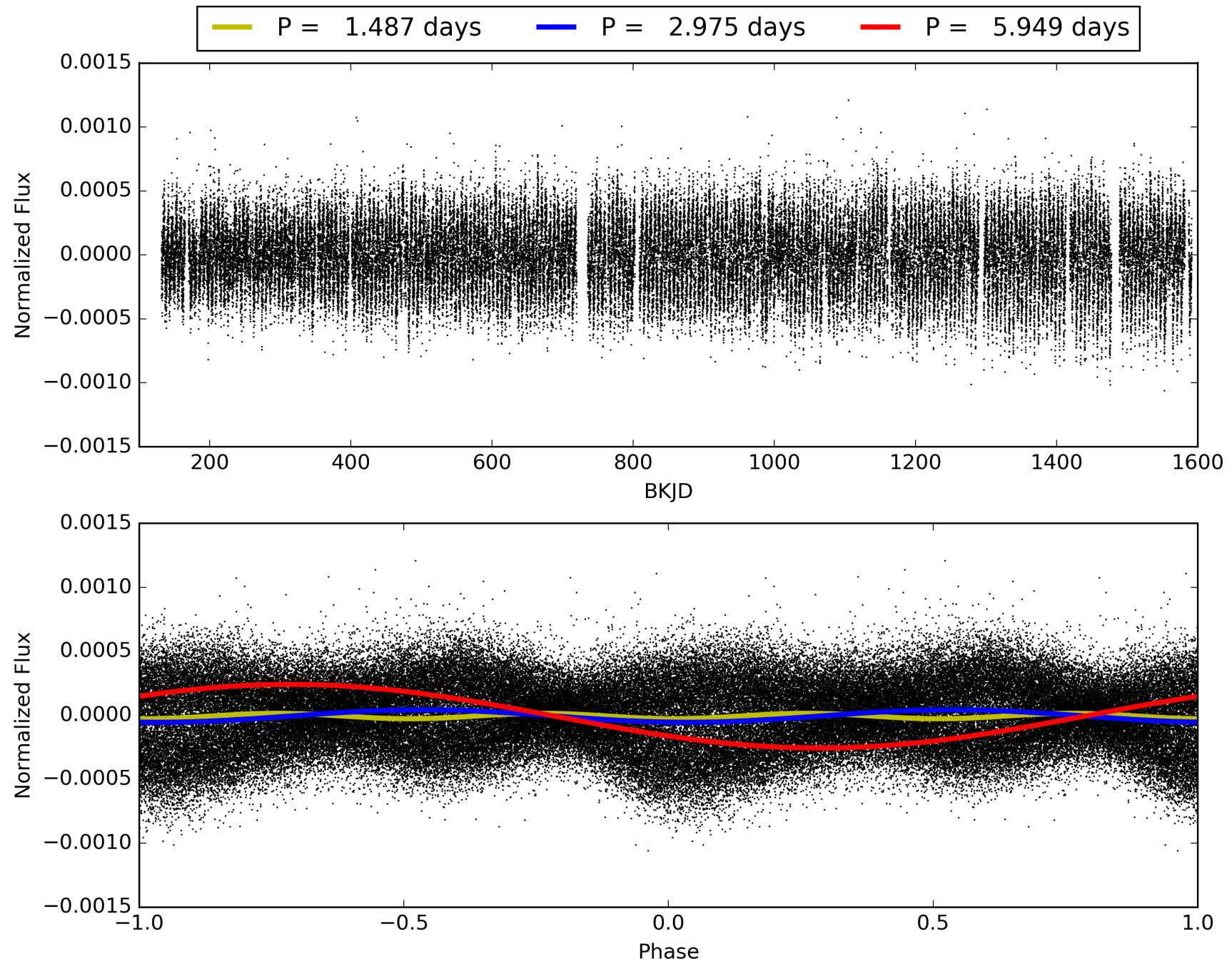
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:07:10 Z

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

TCE 008646141-01, PDC Light Curves

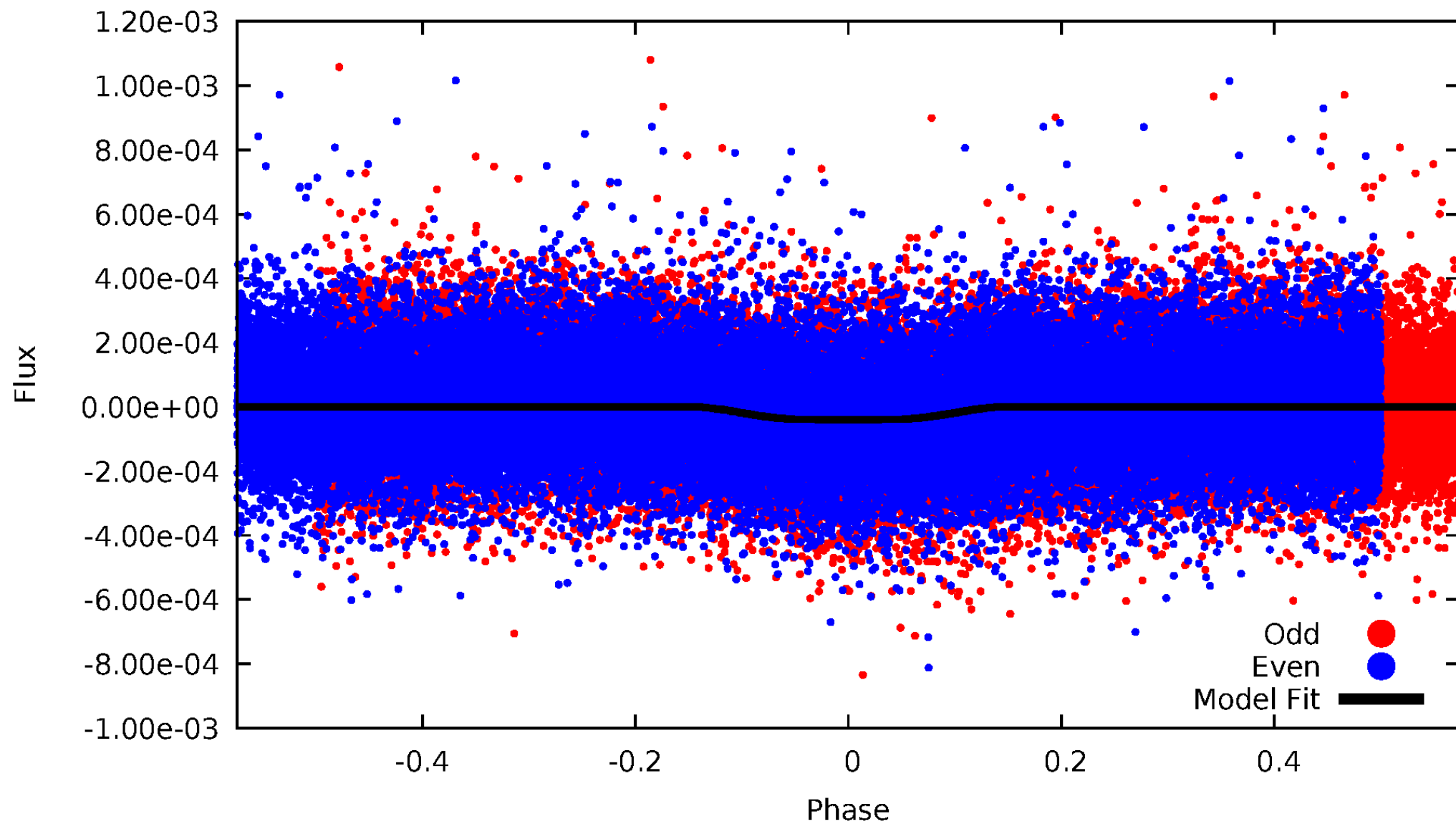


TCE 008646141-01



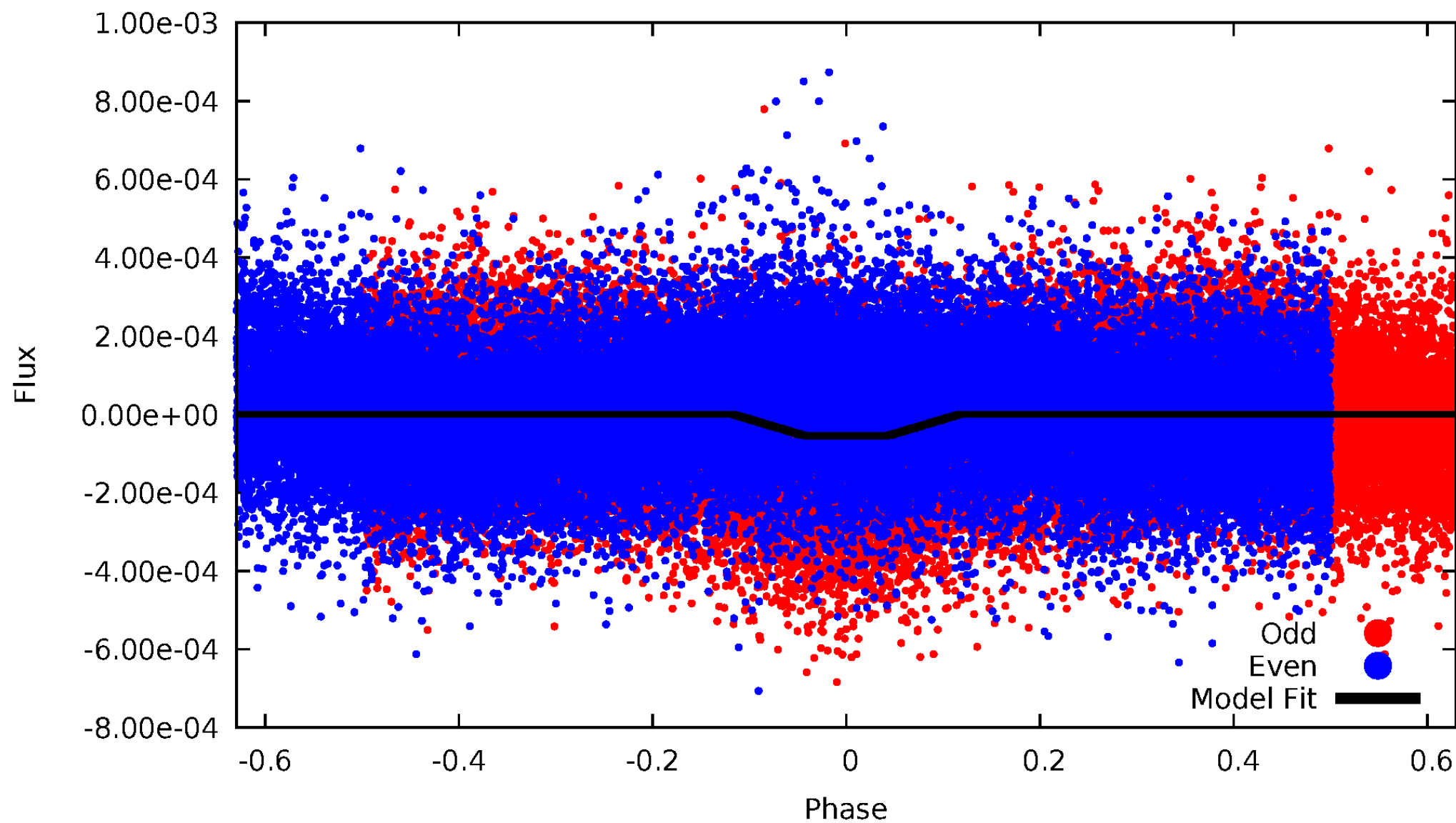
DV Odd/Even

TCE 008646141-01



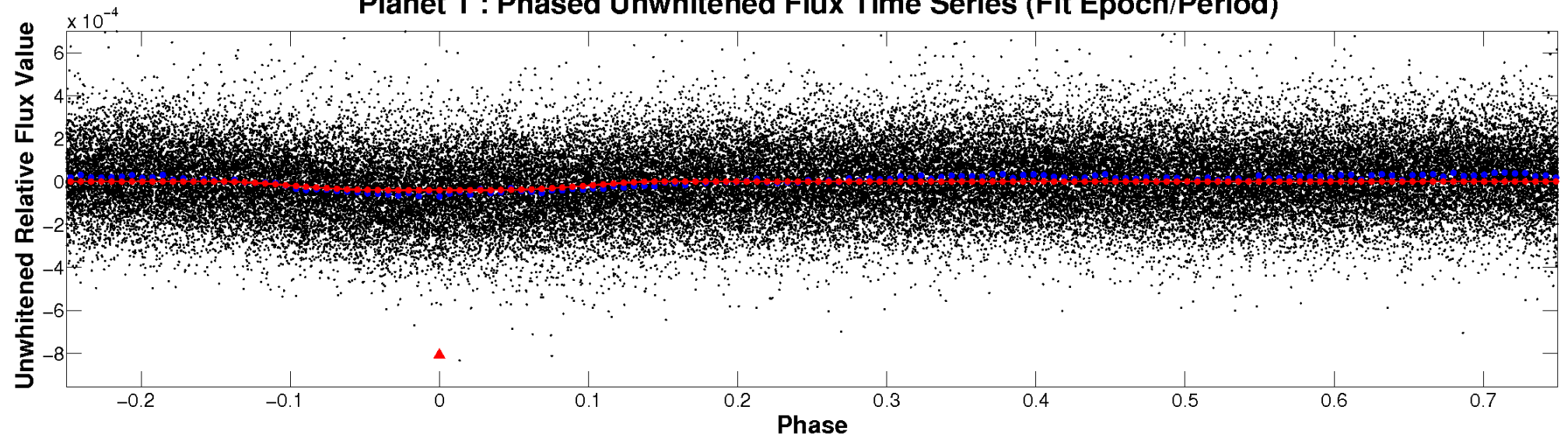
ALT Odd/Even

TCE 008646141-01

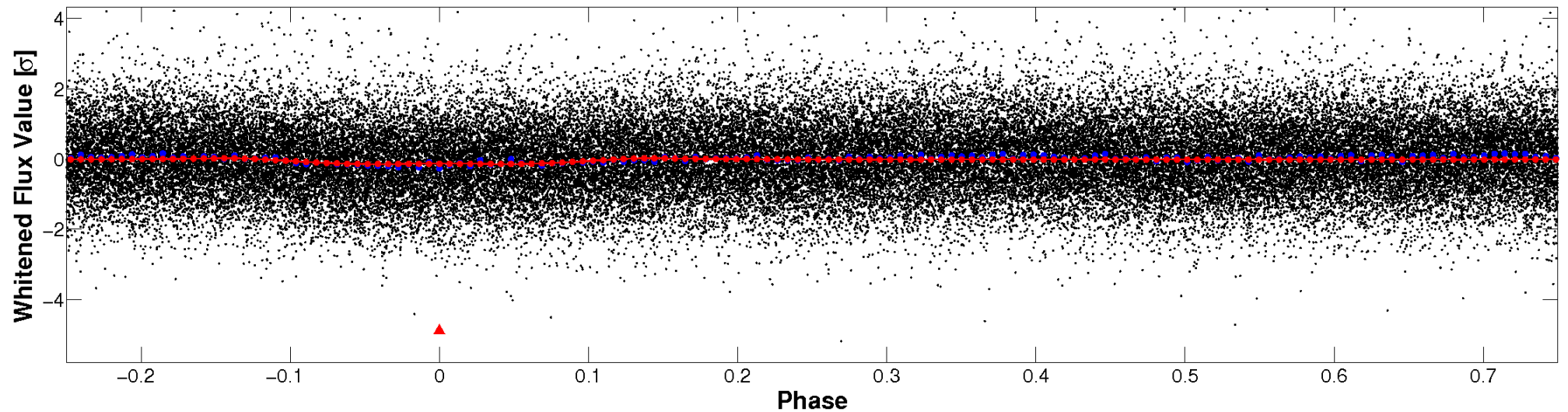


Non-Whitened Vs. Whitened Light Curve

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

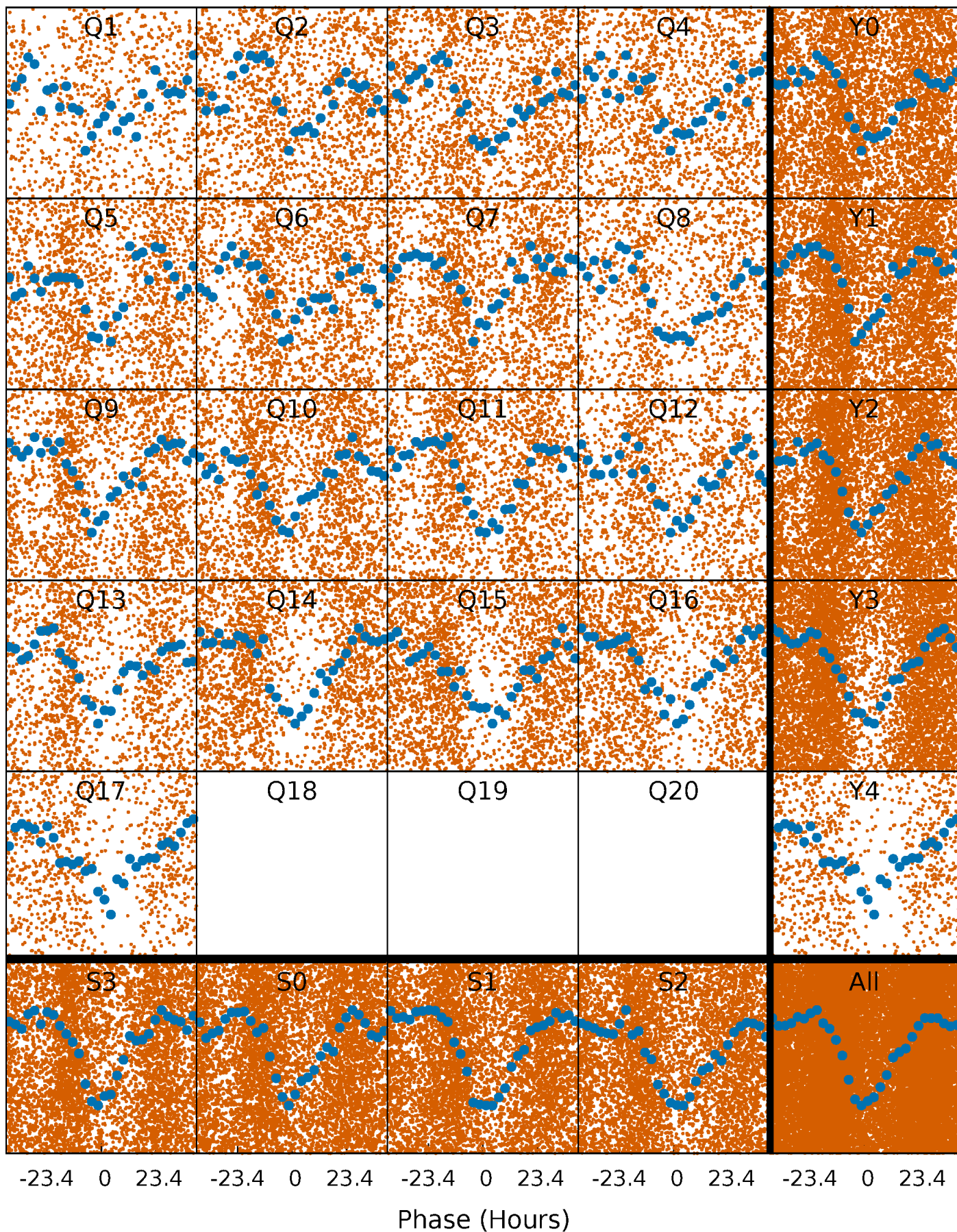


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



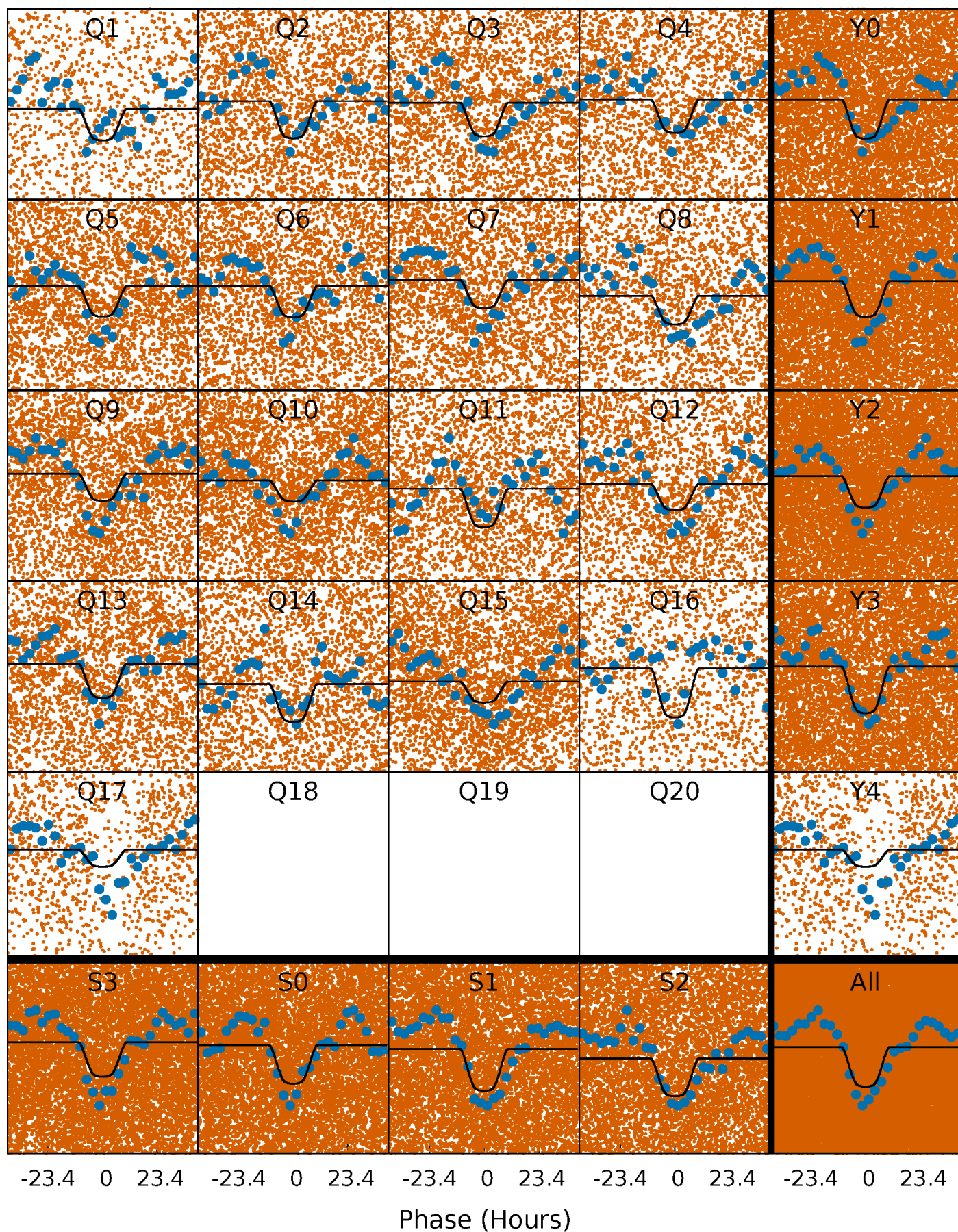
PDC Quarter-Phased Transit Curves

TCE 008646141-01 P= 2.974721 Days $T_0=133.531824$ (BKJD)



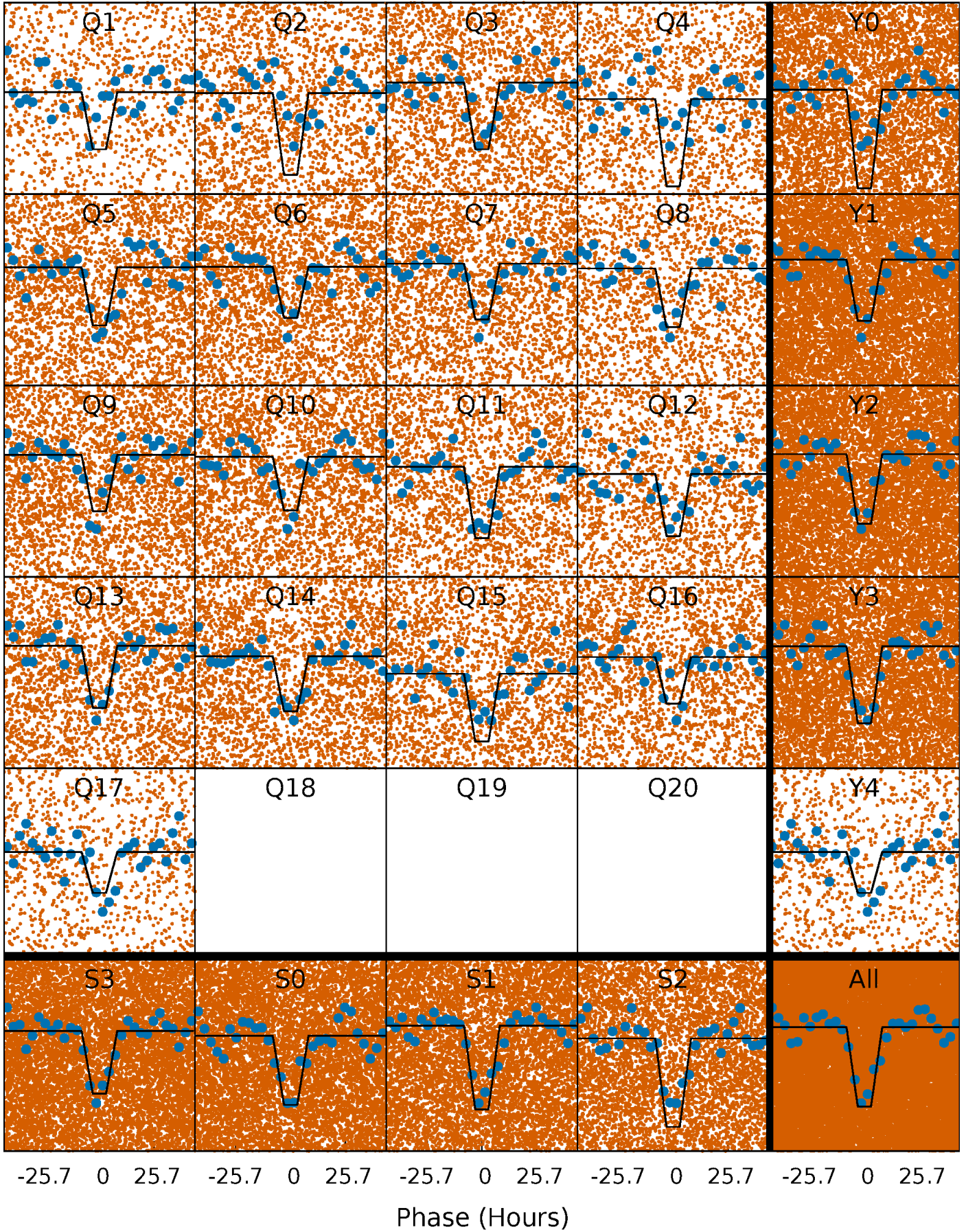
DV Quarter-Phased Transit Curves

TCE 008646141-01 P= 2.974721 Days $T_0=133.531824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

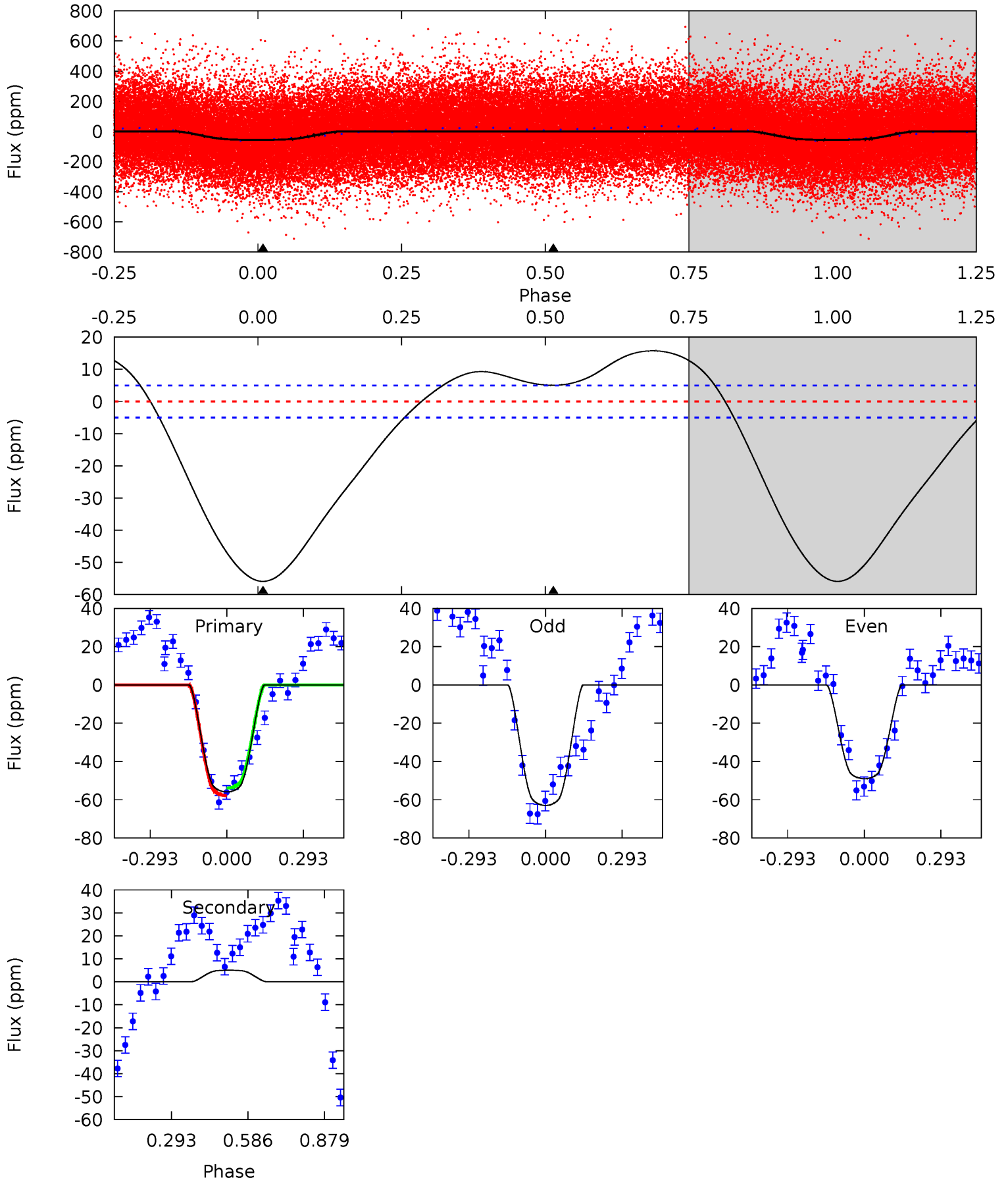
TCE 008646141-01 P= 2.974958 Days $T_0=133.425820$ (BKJD)



DV Model-Shift Uniqueness Test

008646141-01, P = 2.974721 Days, E = 130.557103 Days

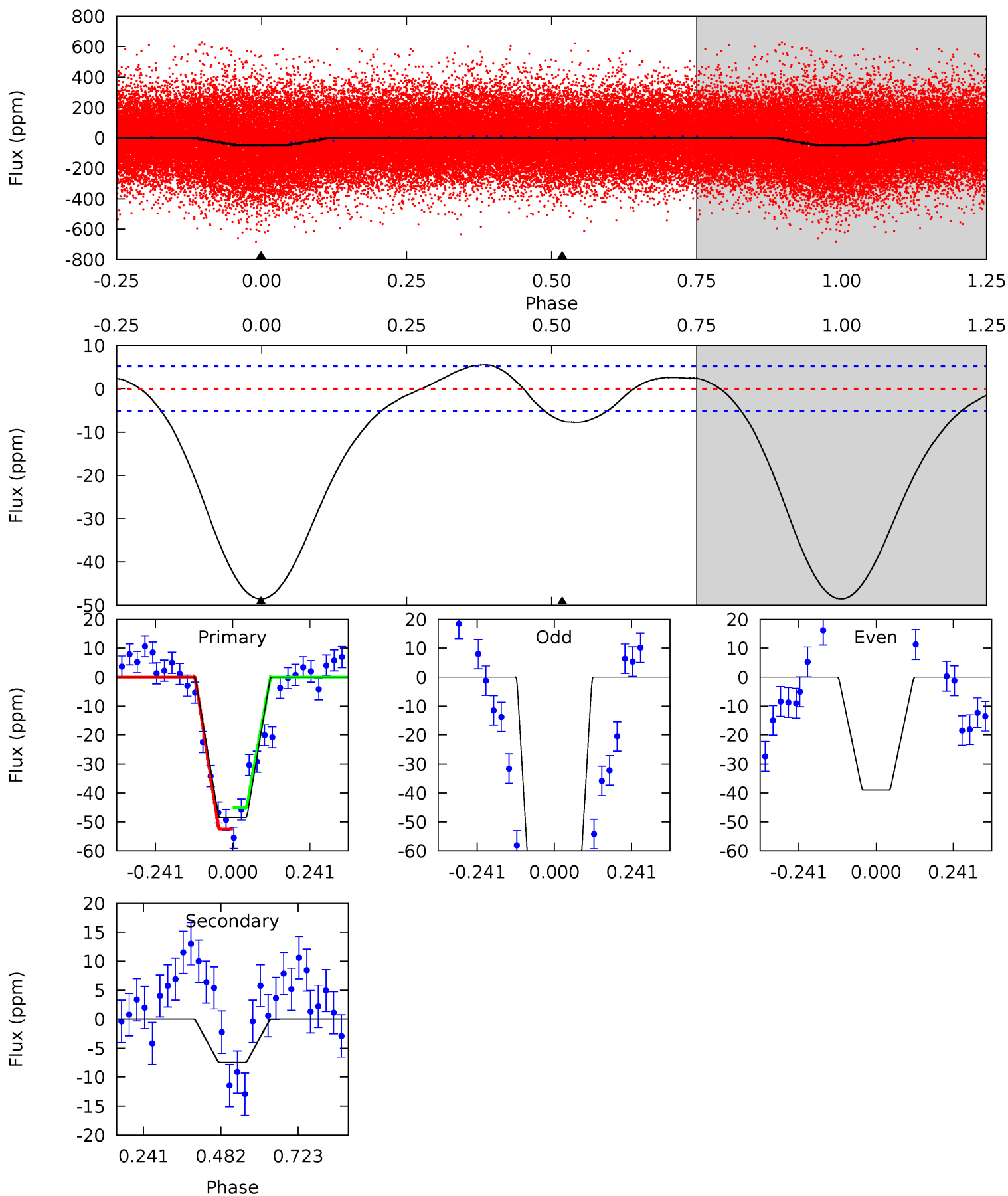
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.6	-4.39	0	0	4.33	1.05	6.88	48.6	48.6	-4.39	-4.39	6.11	0.98	0.22	1.69



Alt Model-Shift Uniqueness Test

008646141-01, P = 2.974958 Days, E = 130.450862 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.8	6.24	0	0	4.38	1.17	1.53	40.8	40.8	6.24	6.24	42.2	0.97	0.10	3.18



Stellar Parameters For KIC 008646141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6613^{+198}_{-218}	$3.729^{+0.312}_{-0.078}$	$-0.140^{+0.300}_{-0.250}$	$2.918^{+0.479}_{-1.118}$	$1.663^{+0.177}_{-0.414}$	$0.094^{+0.218}_{-0.024}$
	+3%/-3%	+8%/-2%	+214%/-179%	+16%/-38%	+11%/-25%	+231%/-26%
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 008646141-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	5 ± 1	$2.42^{+0.33}_{-0.45}$	3092^{+195}_{-265}	-4014^{+152}_{-175}	$-1.124^{+0.357}_{-0.516}$
Alt.	-7 ± 1	$2.25^{+0.29}_{-0.43}$	3094^{+193}_{-263}	4128^{+182}_{-210}	$1.901^{+0.845}_{-0.491}$

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

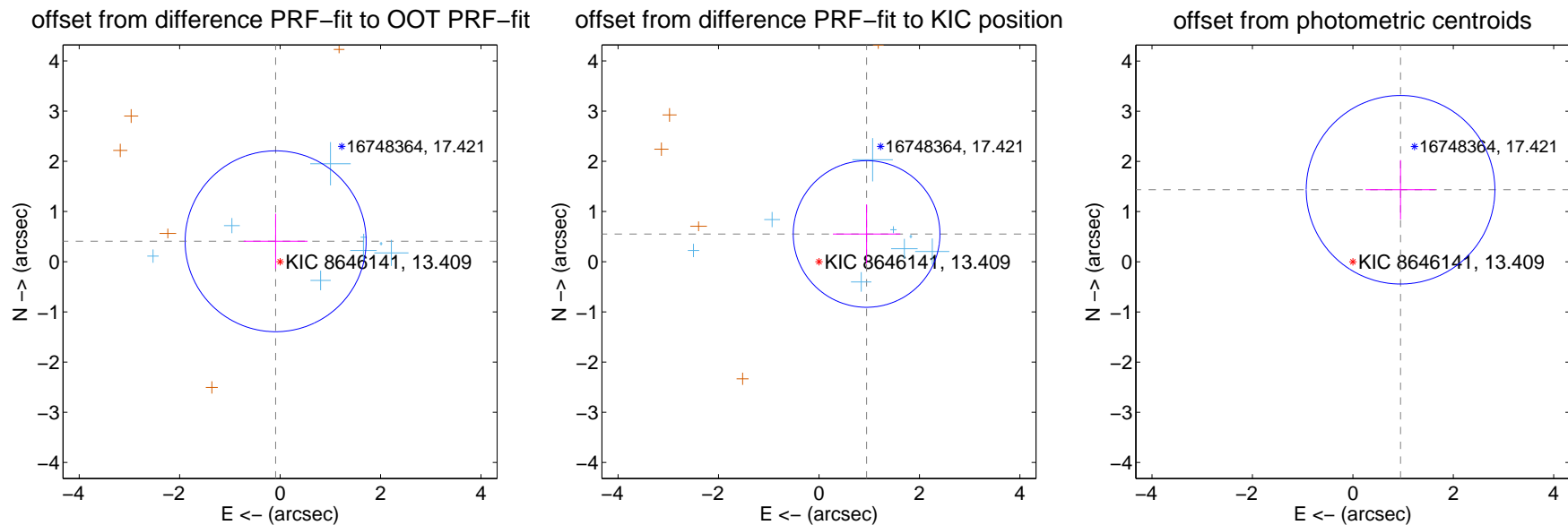
DV Centroid Data

Supplemental centroid analysis for 008646141-01. Kepler magnitude: 13.41. Transit SNR 14.47

There are 8 quarters with good PRF difference image offsets

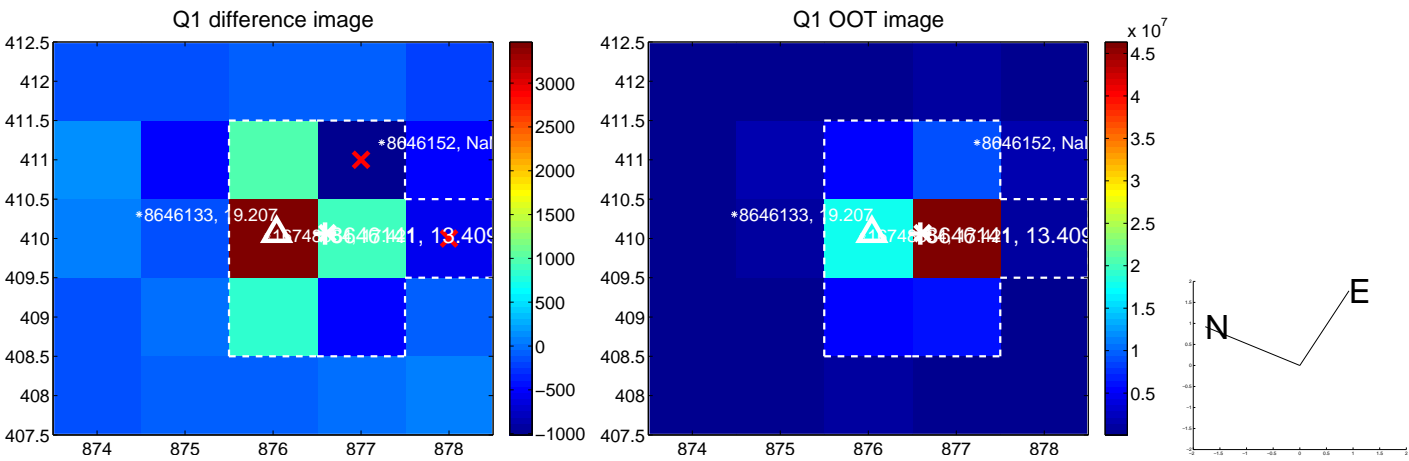
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.416 ± 0.601	0.69	0.089 ± 0.636	0.407 ± 0.549
PRF-fit source offset from KIC position	1.097 ± 0.487	2.25	-0.948 ± 0.671	0.552 ± 0.589
photometric centroid source offset	1.72 ± 0.63	2.75	-0.95 ± 0.70	1.44 ± 0.59

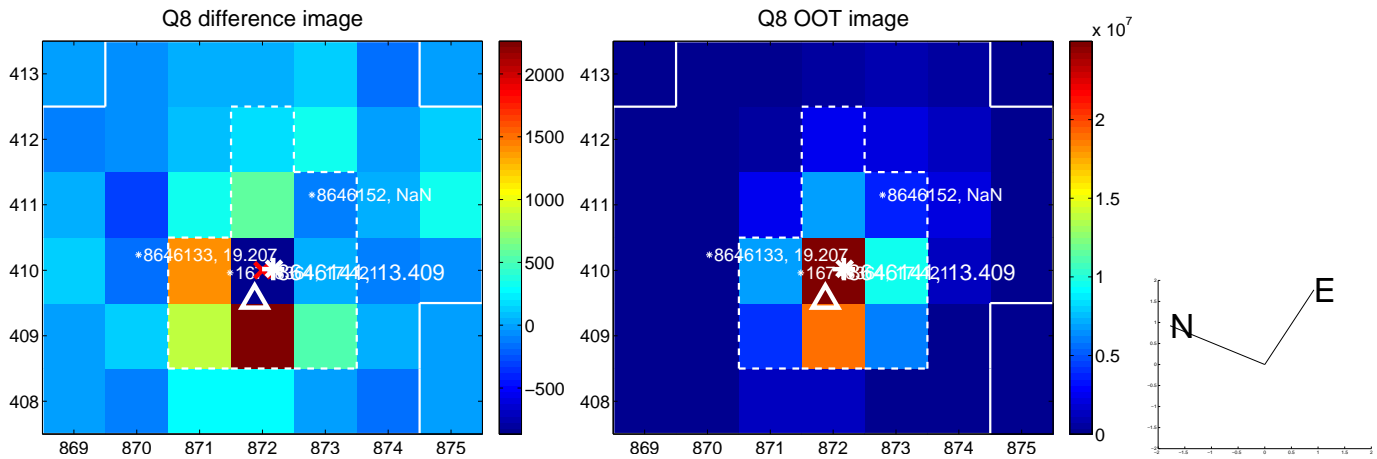
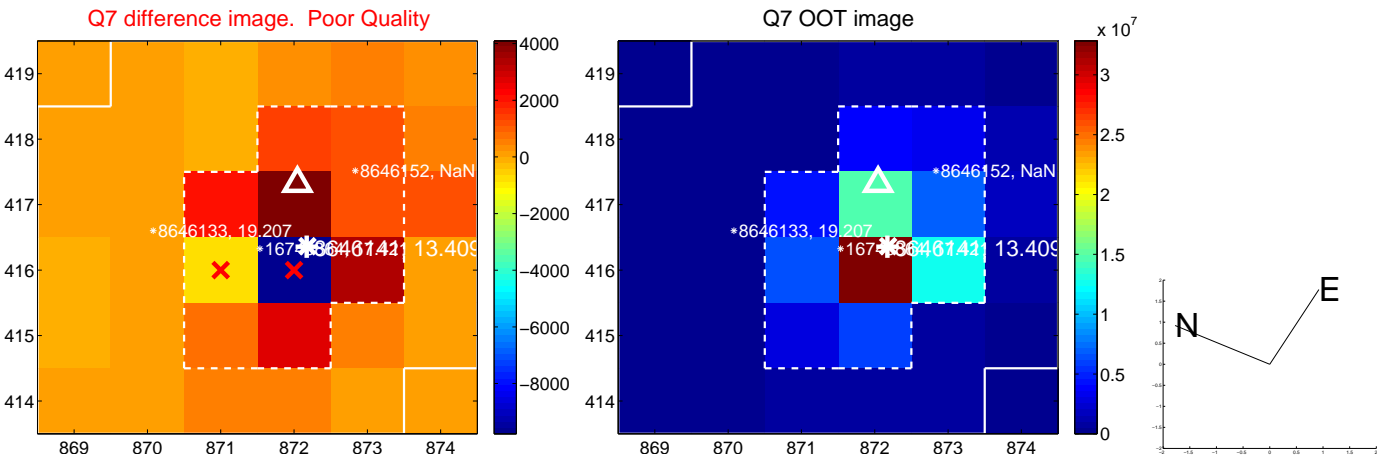
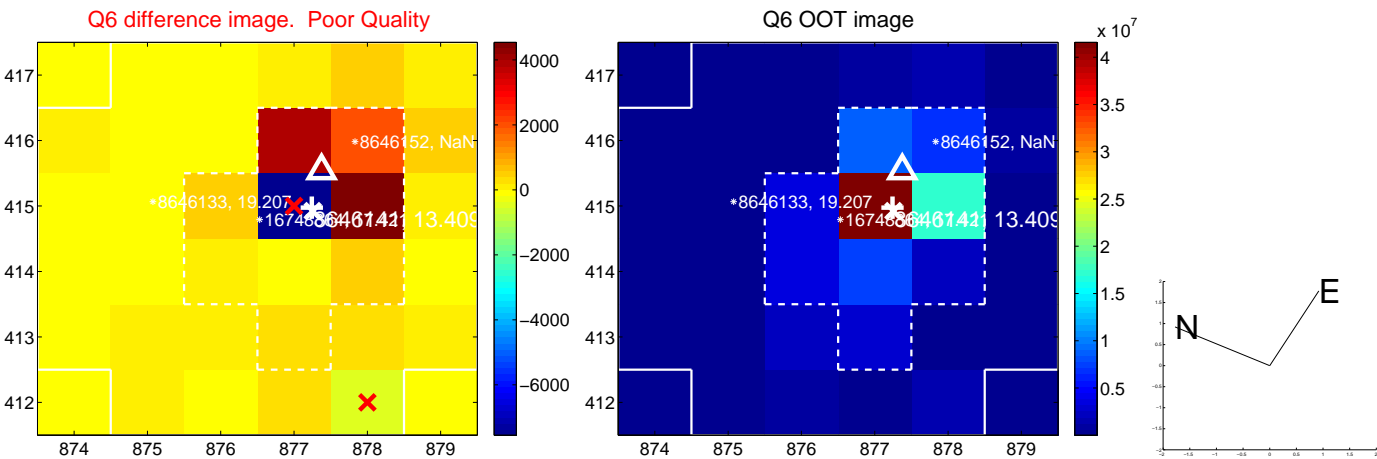
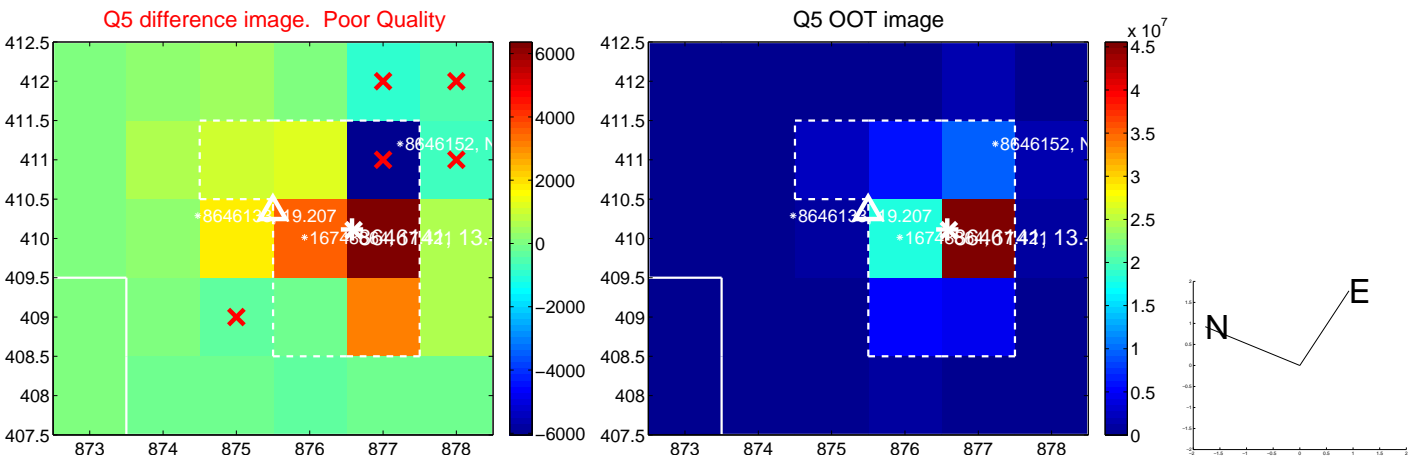


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

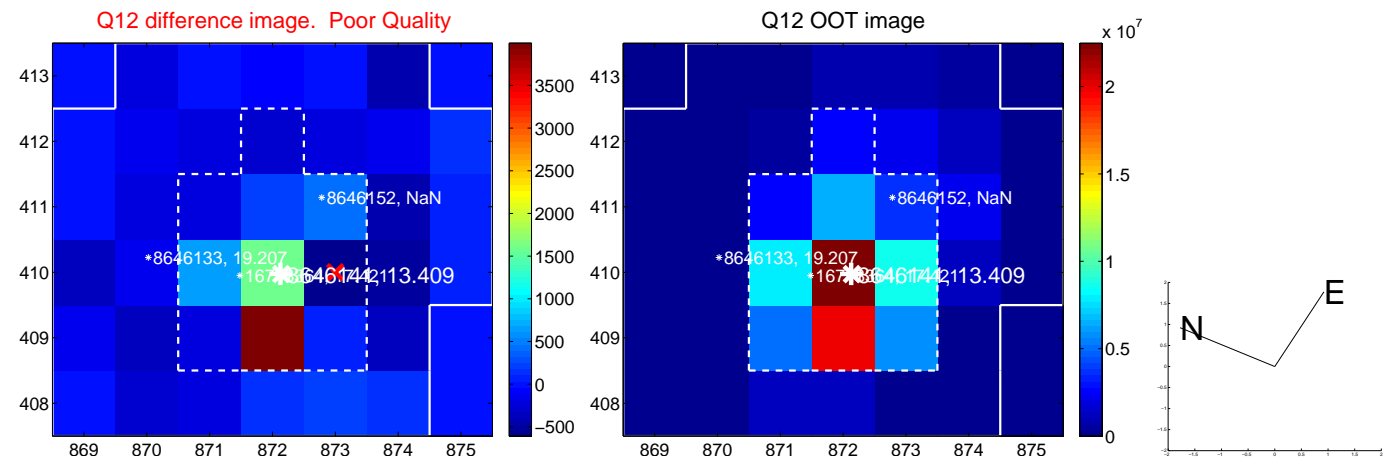
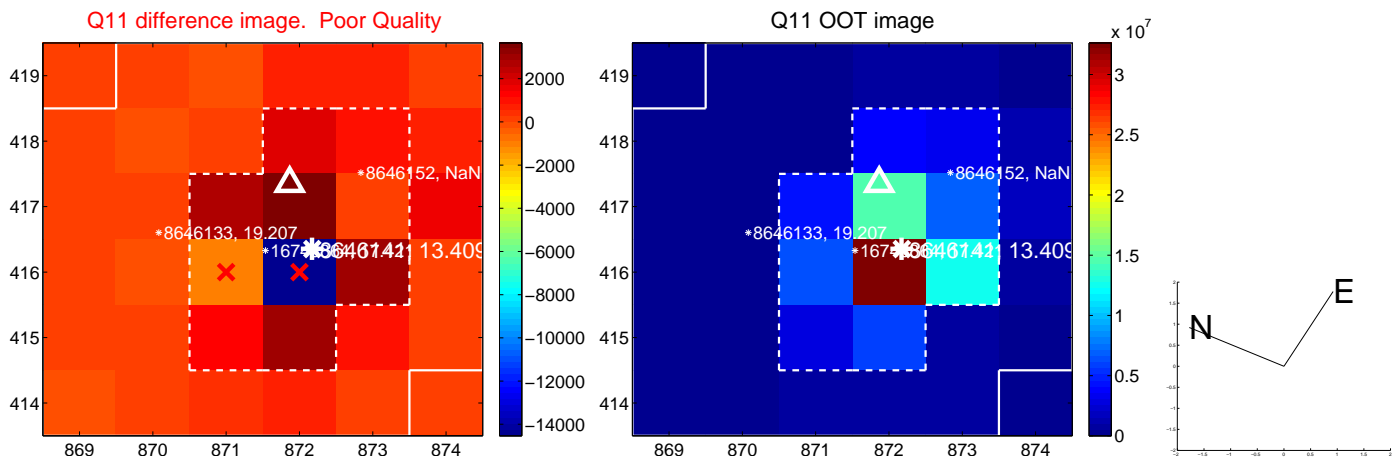
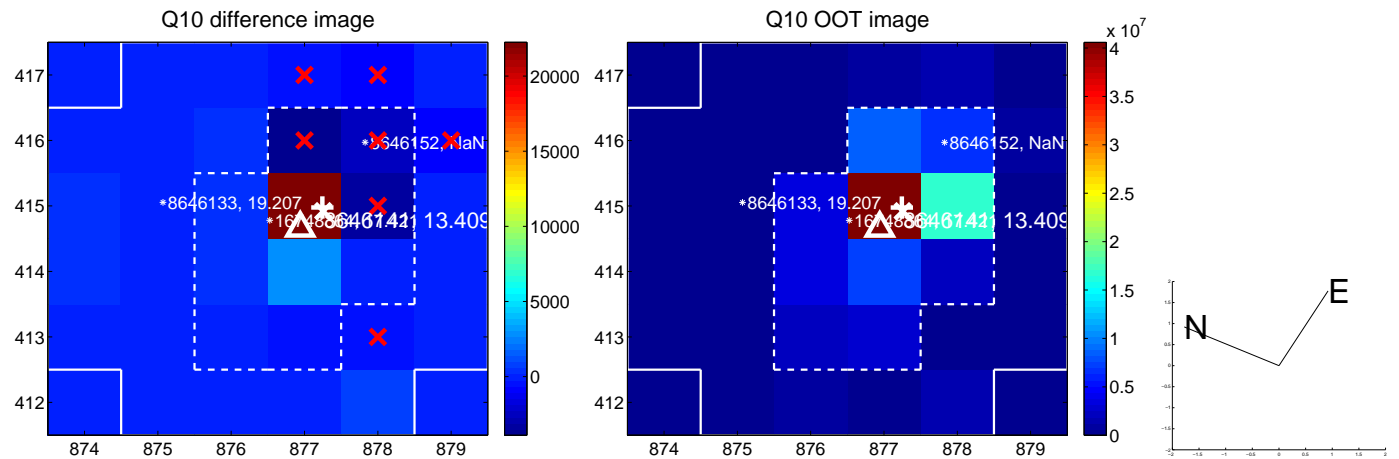
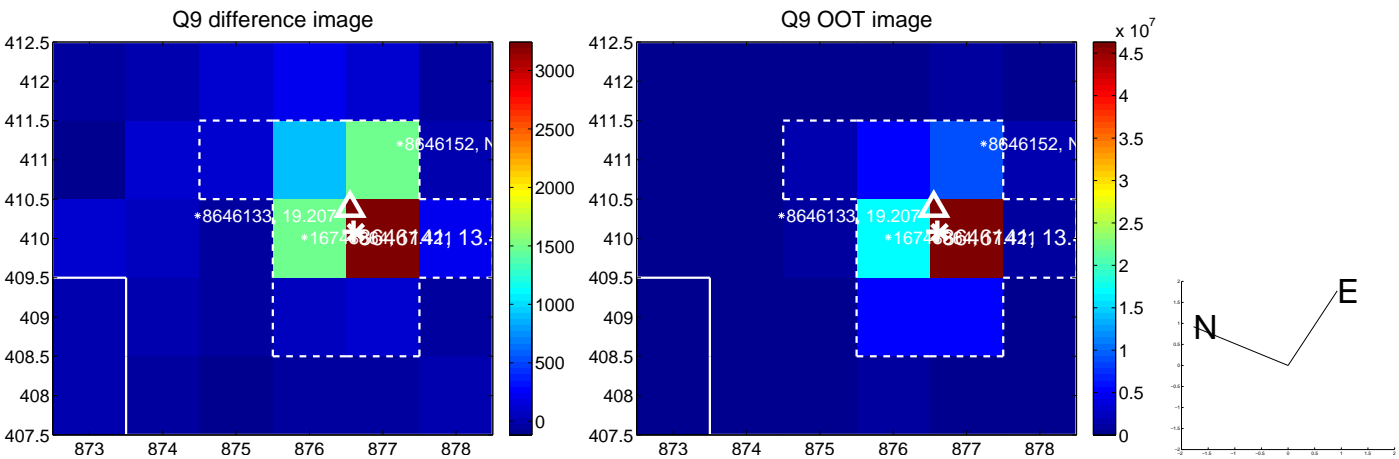
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



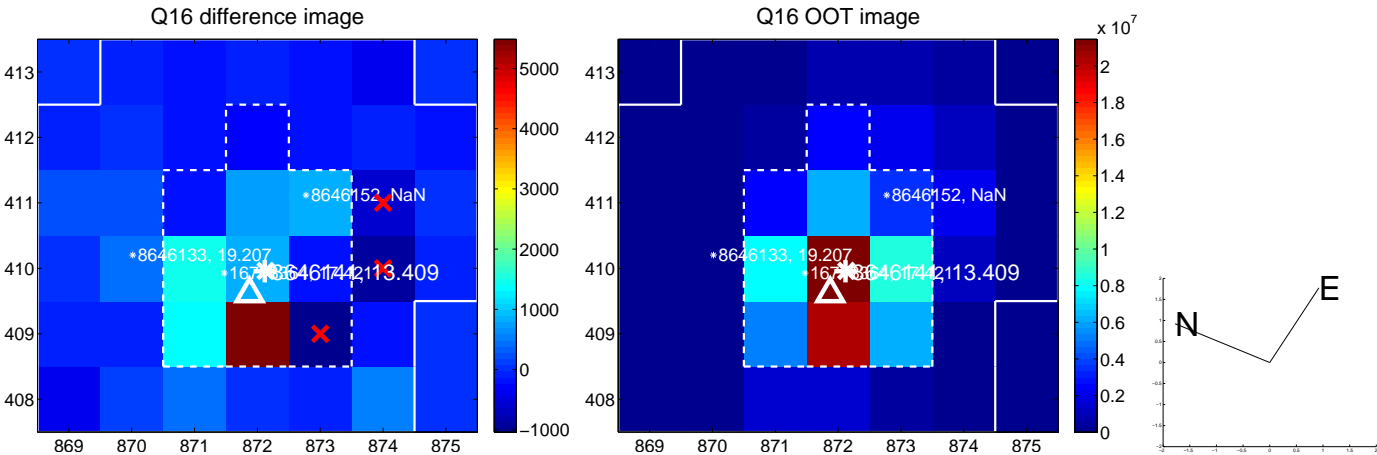
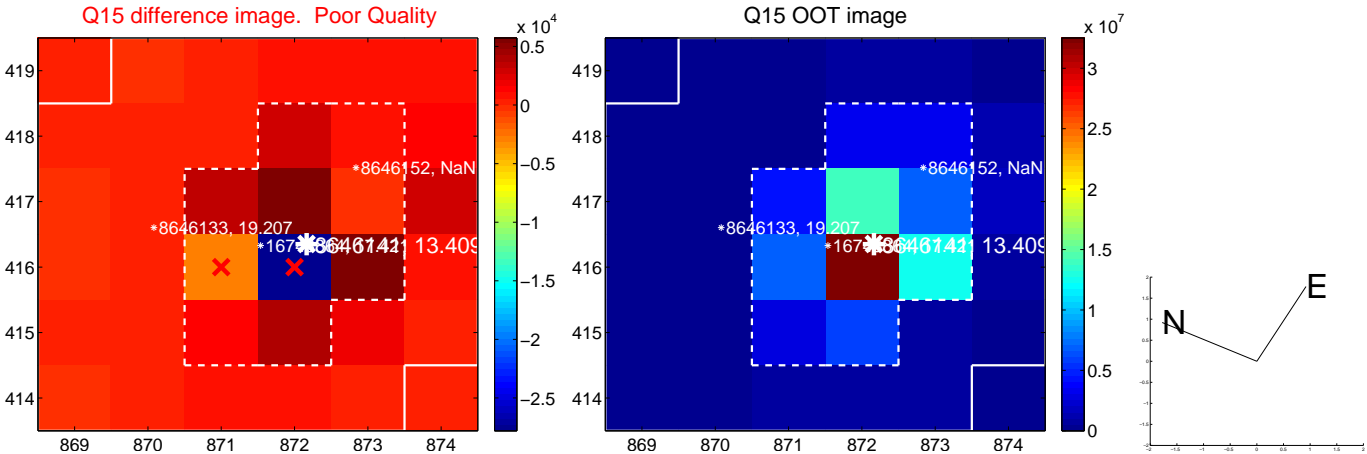
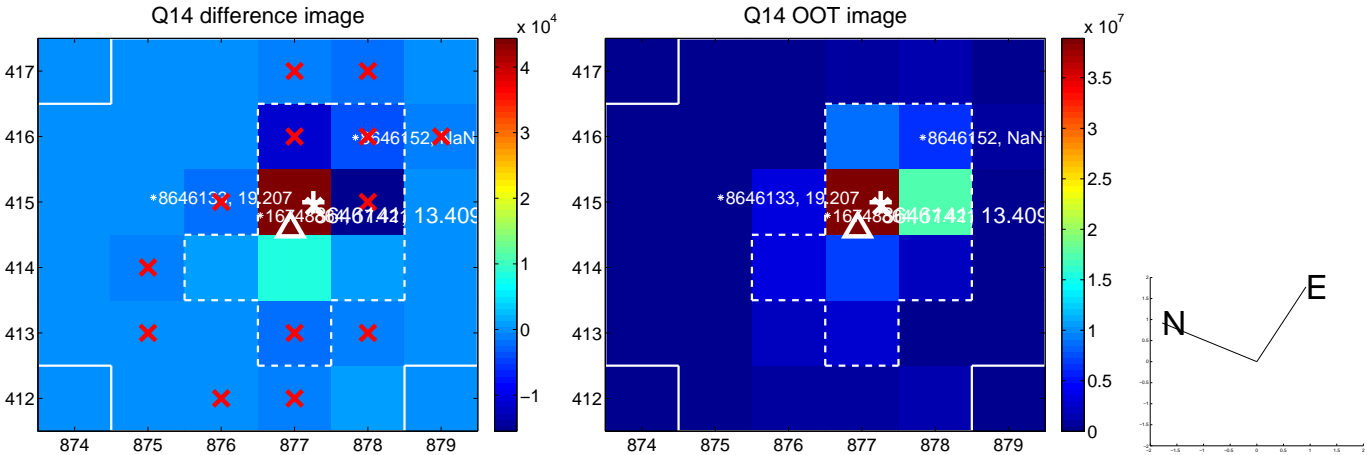
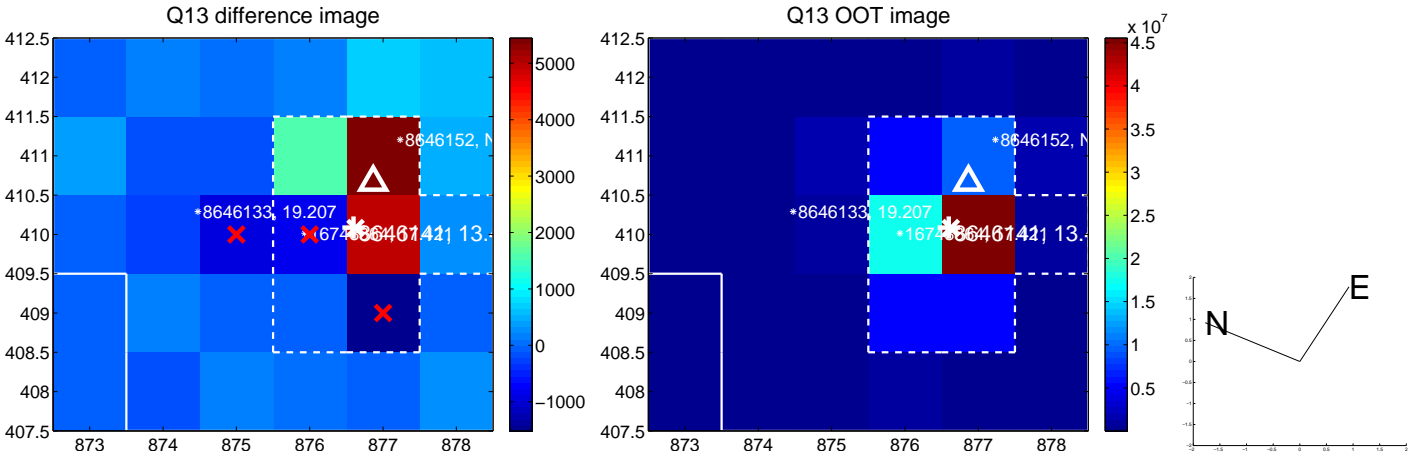
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



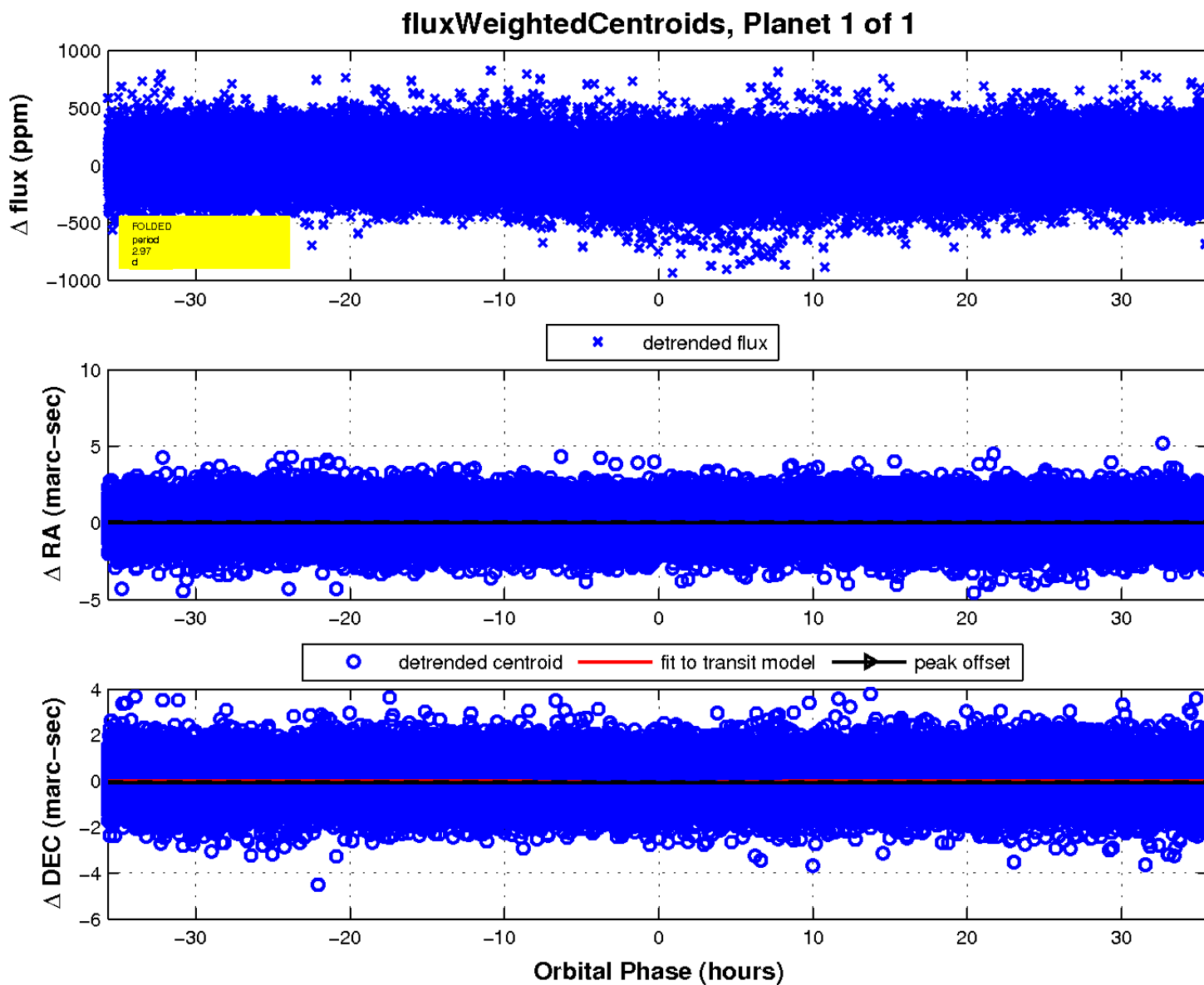
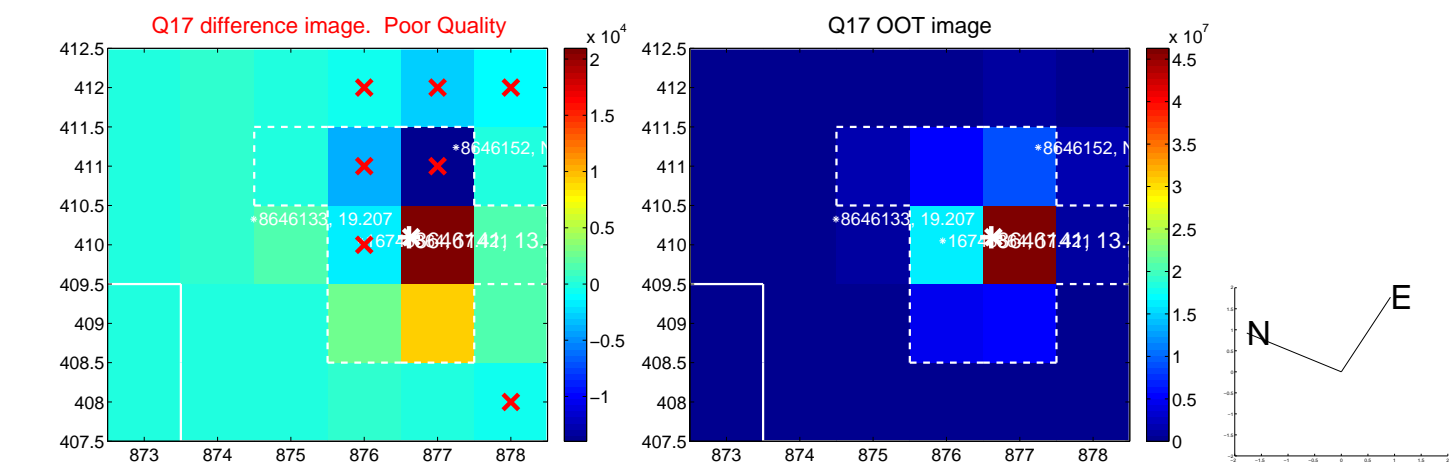
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

