

KIC 004066066

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})
004066066-01	OBS	No	2.686833	132.815537	15.4	21.431	10.5	5.3	3.12	6878	1.41	9401.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004066066-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

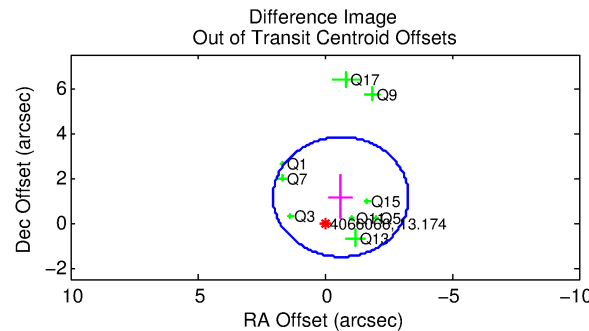
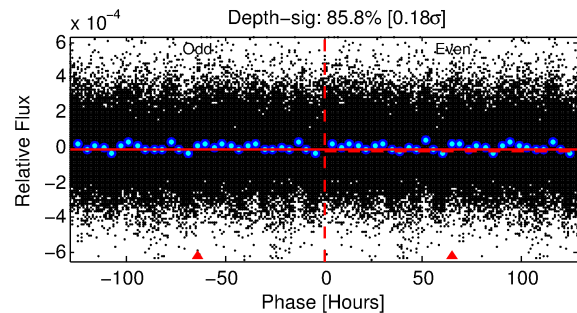
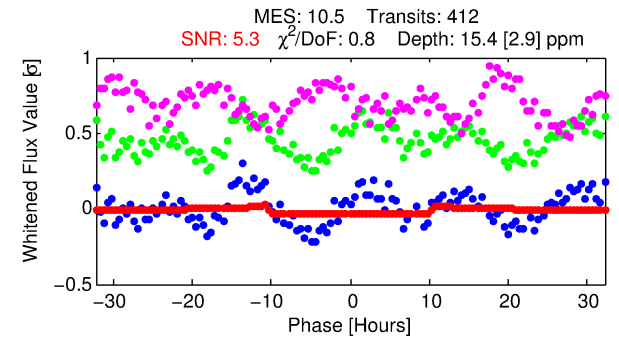
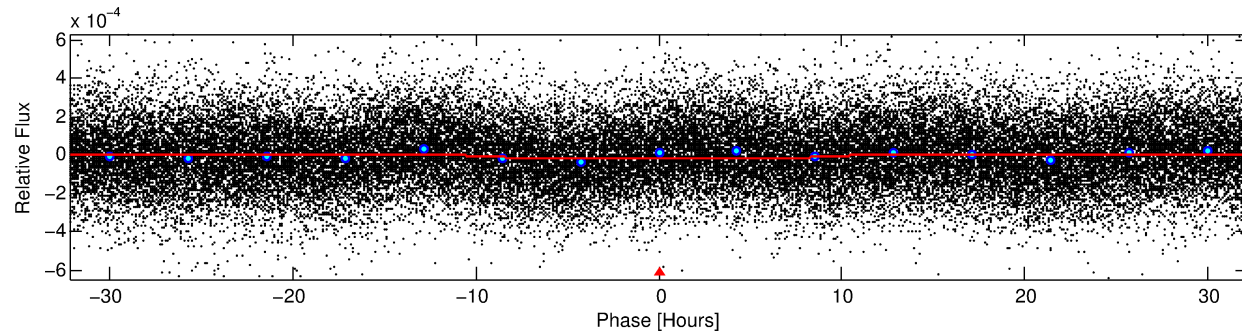
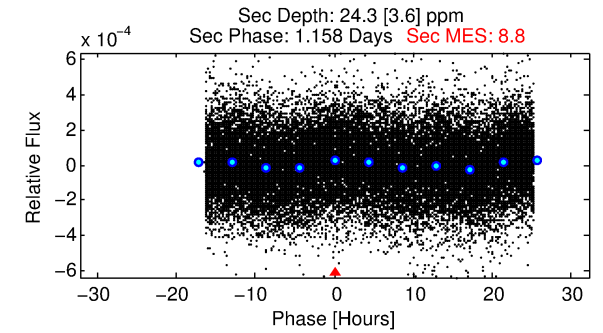
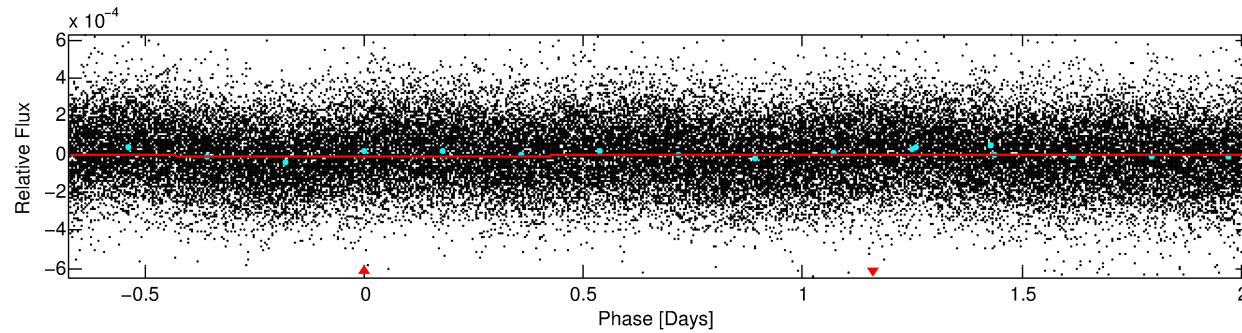
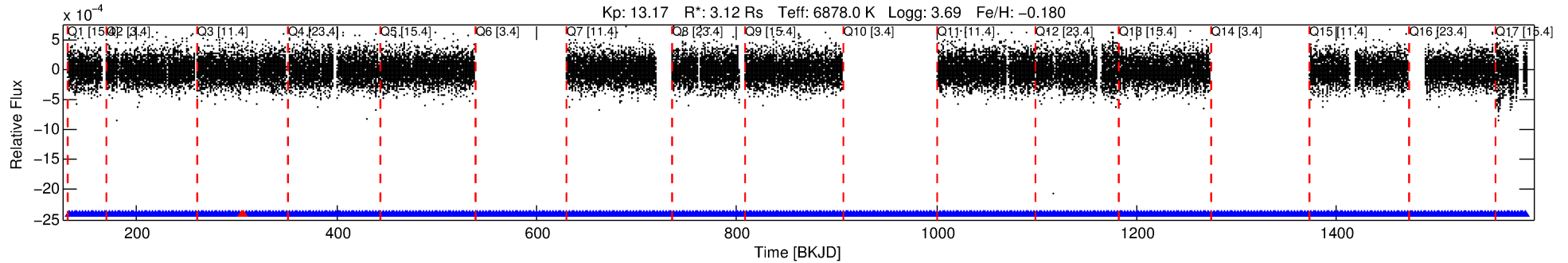
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004066066-01

No Significant Match Found

DV One-Page Summary

KIC: 4066066 Candidate: 1 of 1 Period: 2.687 d



DV Fit Results:

Period = 2.68683 [0.00008] d
Epoch = 132.8155 [0.0172] BKJD
Rp/R* = 0.0041 [0.0011]
a/R* = 1.04 [0.13]
b = 0.88 [0.41]
Seff = 9401.39 [4972.38]
Teff = 2511 [332] K
Rp = 1.41 [0.63] Re
a = 0.0456 [0.0150] AU
Ag = 14.08 [10.72] [1.22σ]
Teffp = 7520 [1087] K [4.41σ]

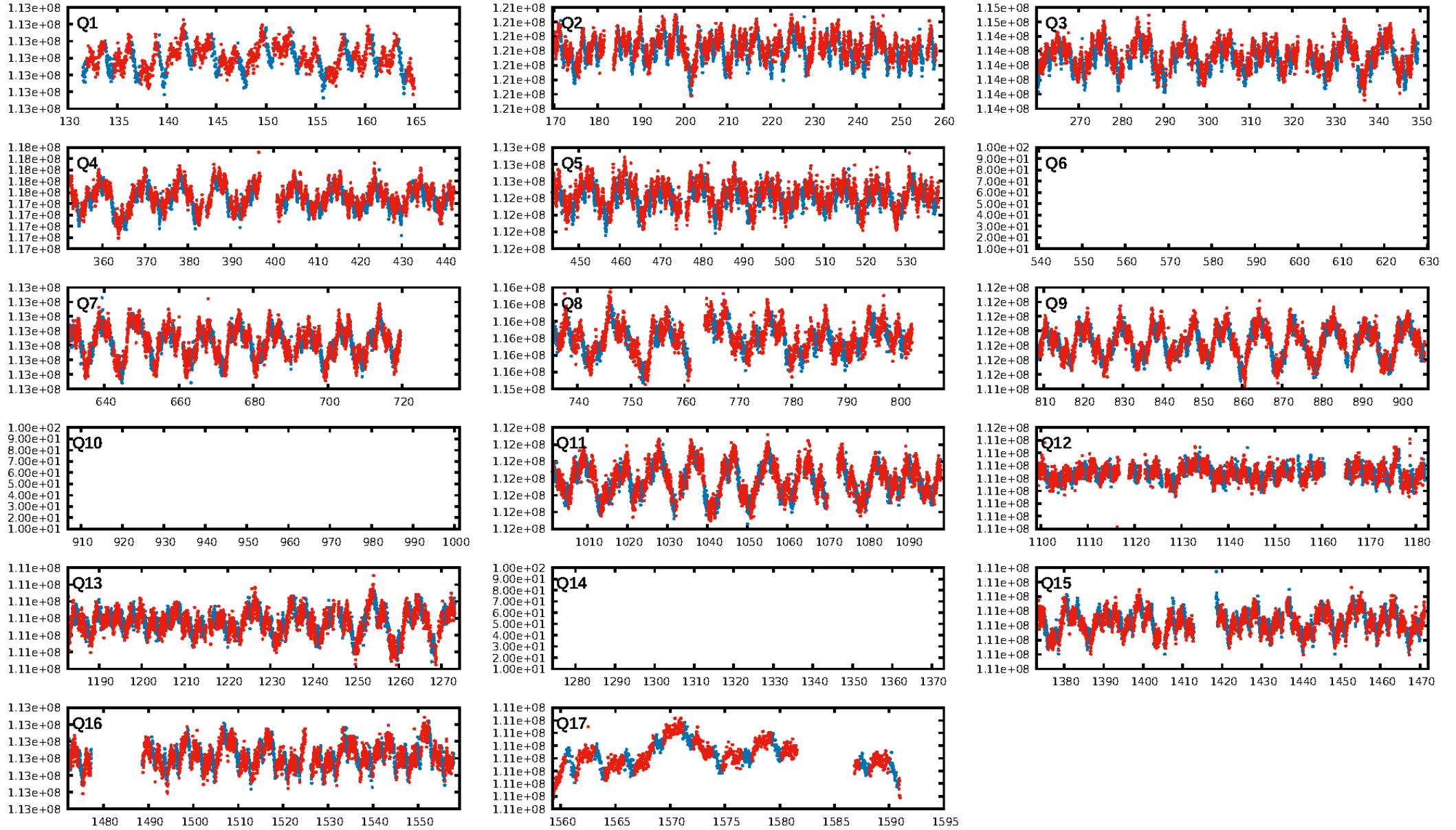
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [386/388]
GhostDiagnostic-chr: 0.4885
Centroid-sig: 5.7%
Centroid-so: 1.597 arcsec [1.44σ]
OotOffset-rm: 1.314 arcsec [1.48σ]
KicOffset-rm: 1.316 arcsec [1.65σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [14/14]

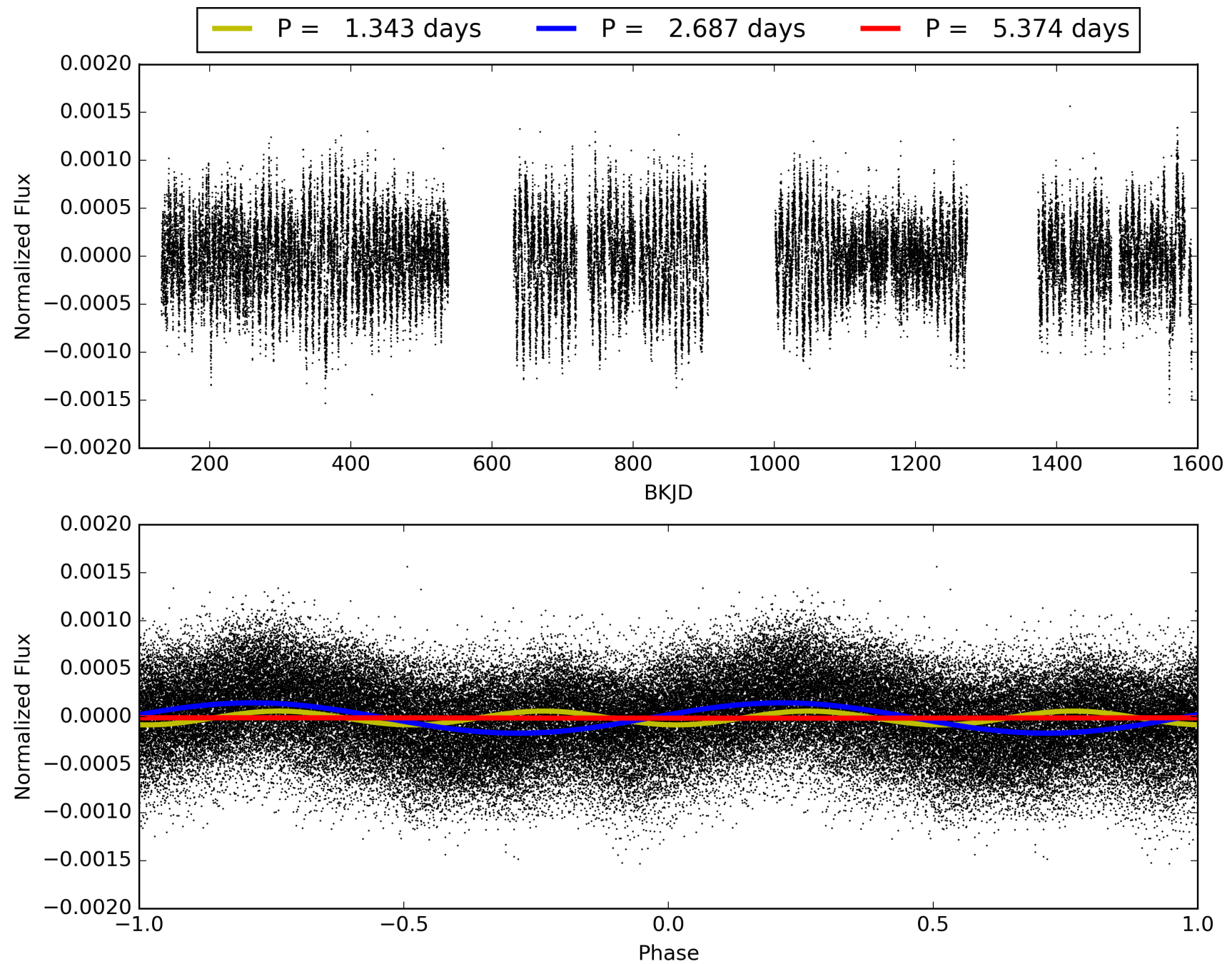
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:49:50 Z

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

TCE 004066066-01, PDC Light Curves

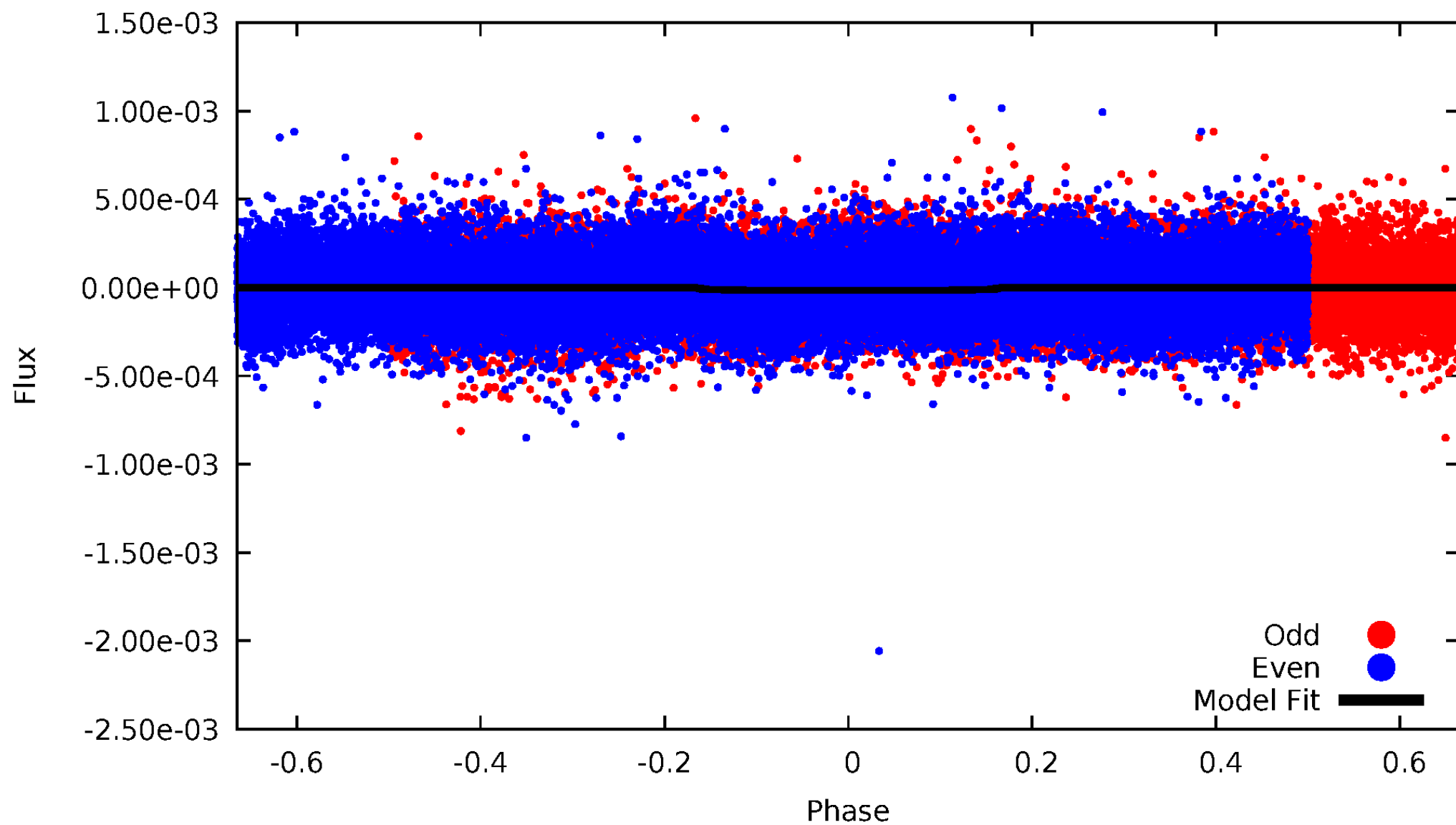


TCE 004066066-01



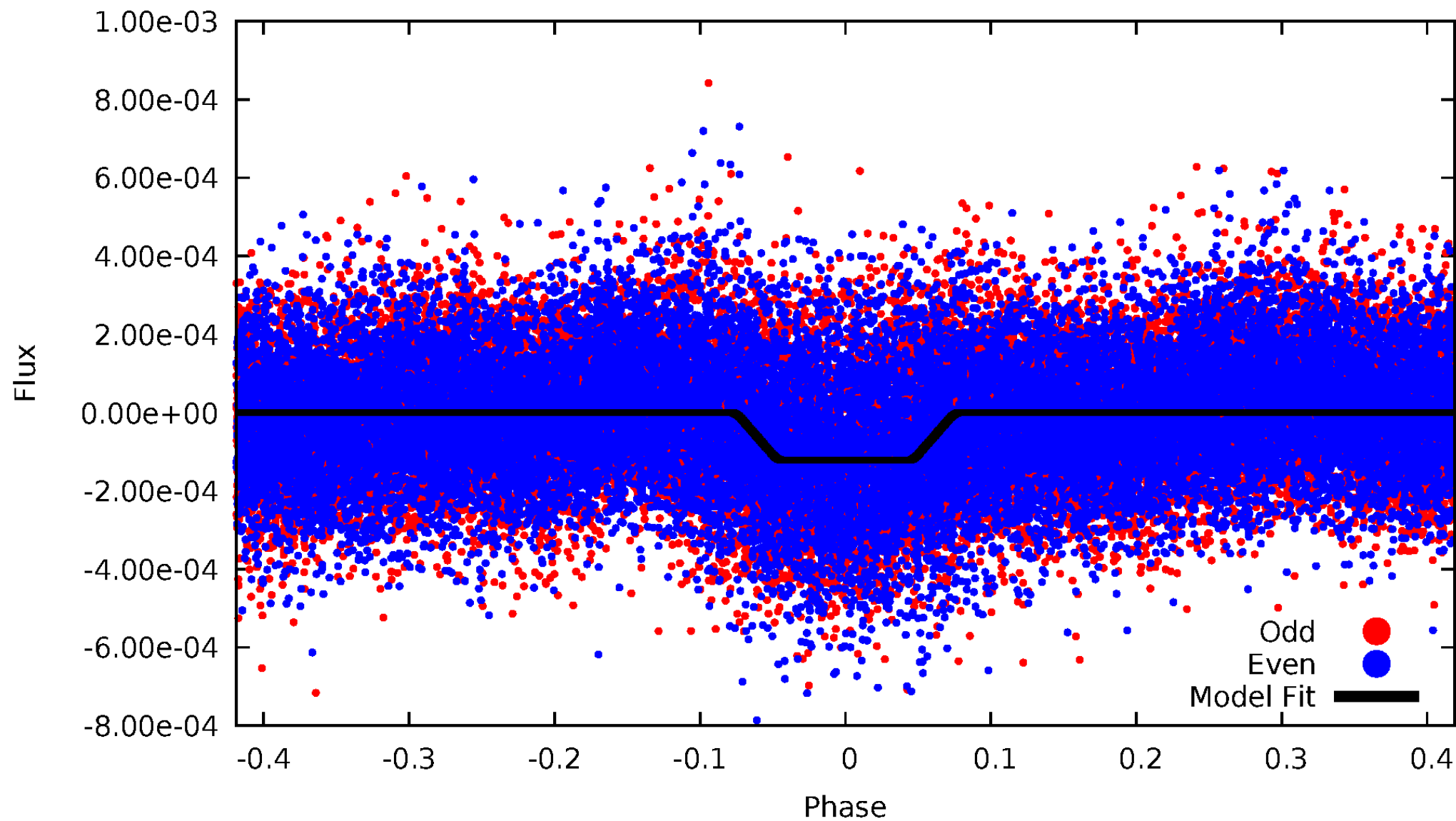
DV Odd/Even

TCE 004066066-01



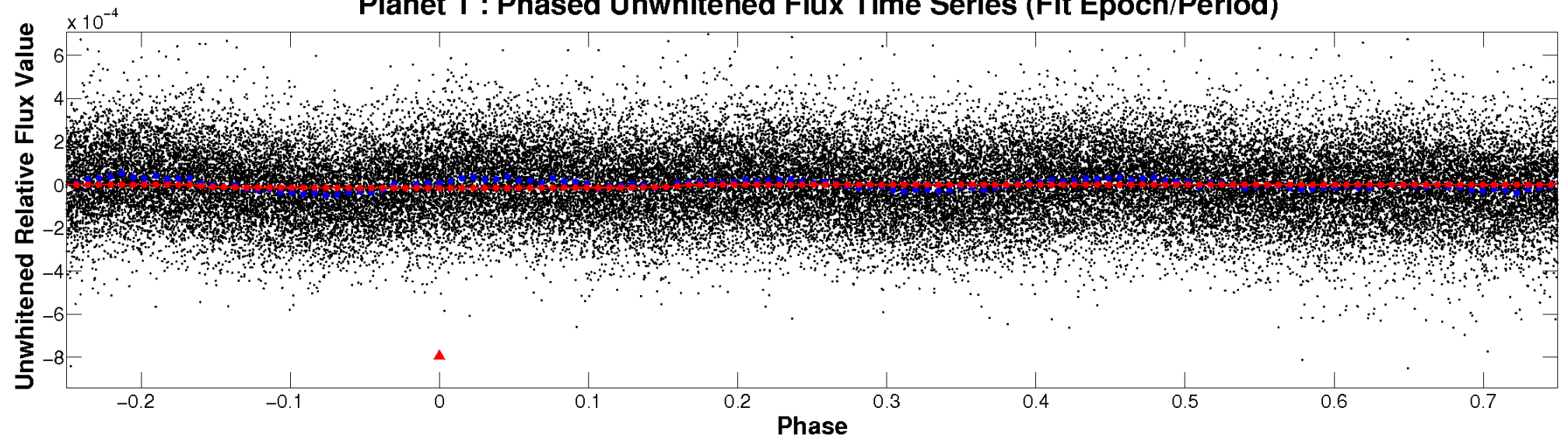
ALT Odd/Even

TCE 004066066-01

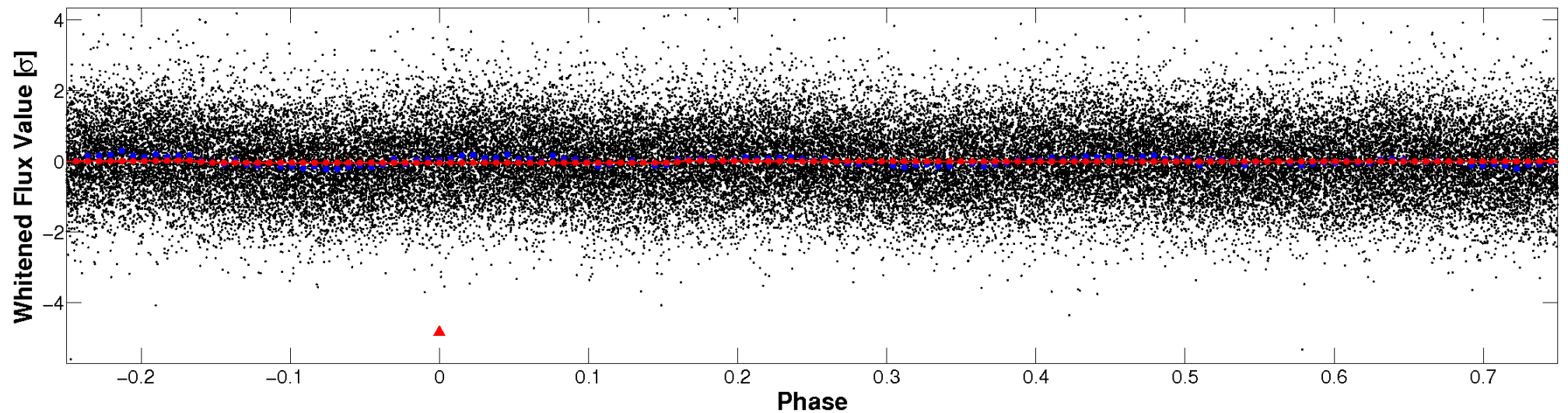


Non-Whitened Vs. Whitened Light Curve

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

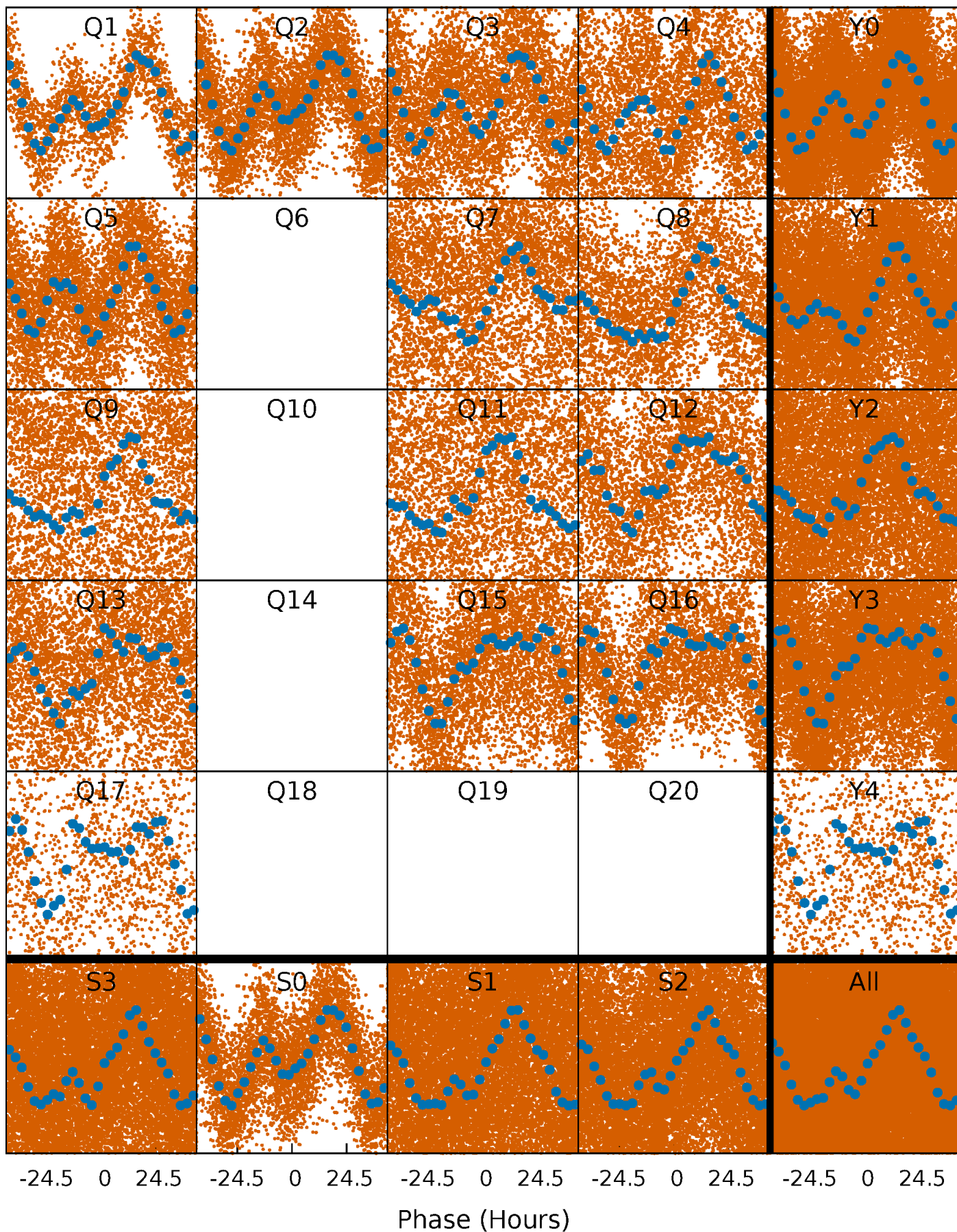


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



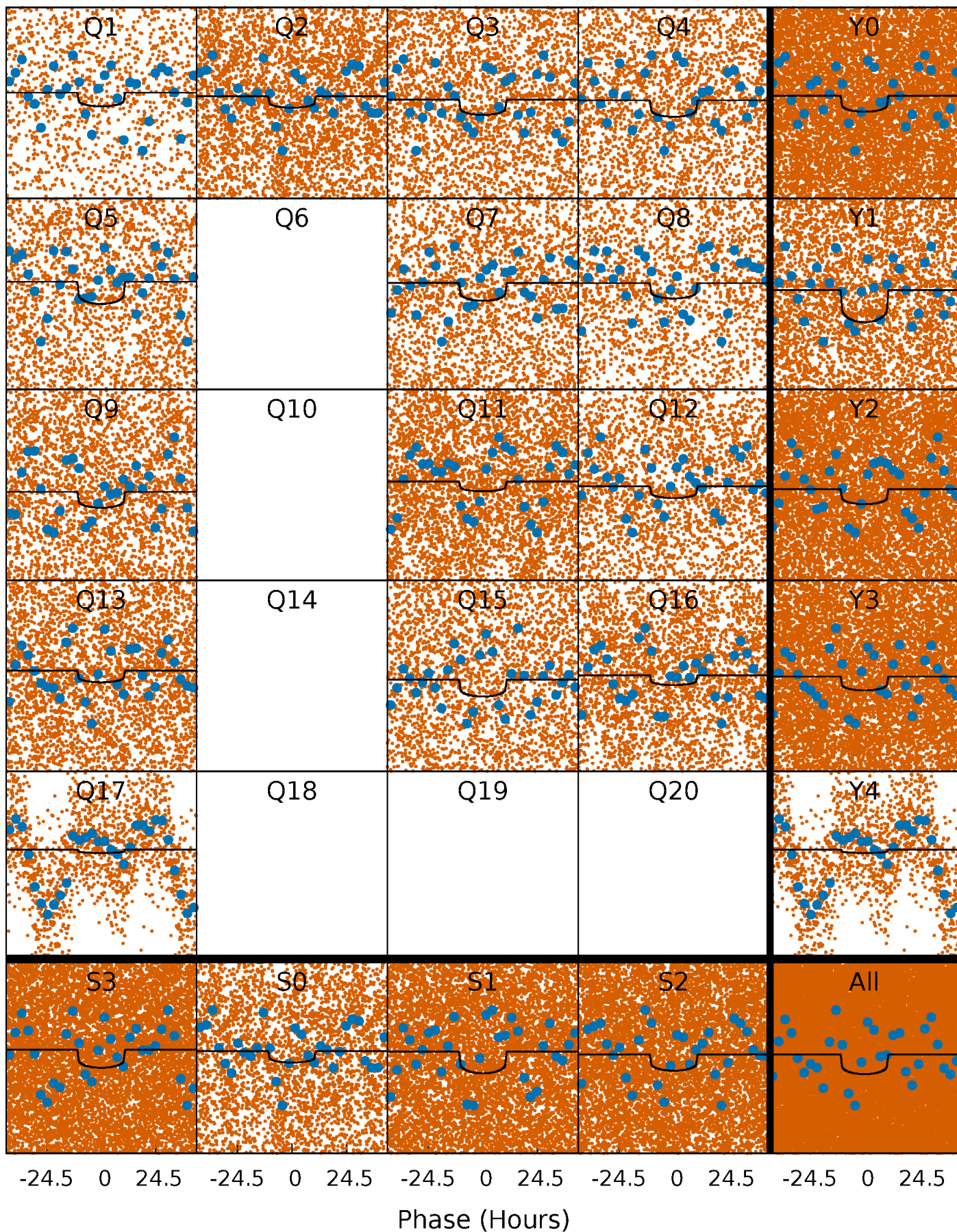
PDC Quarter-Phased Transit Curves

TCE 004066066-01 P= 2.686833 Days $T_0=132.815537$ (BKJD)



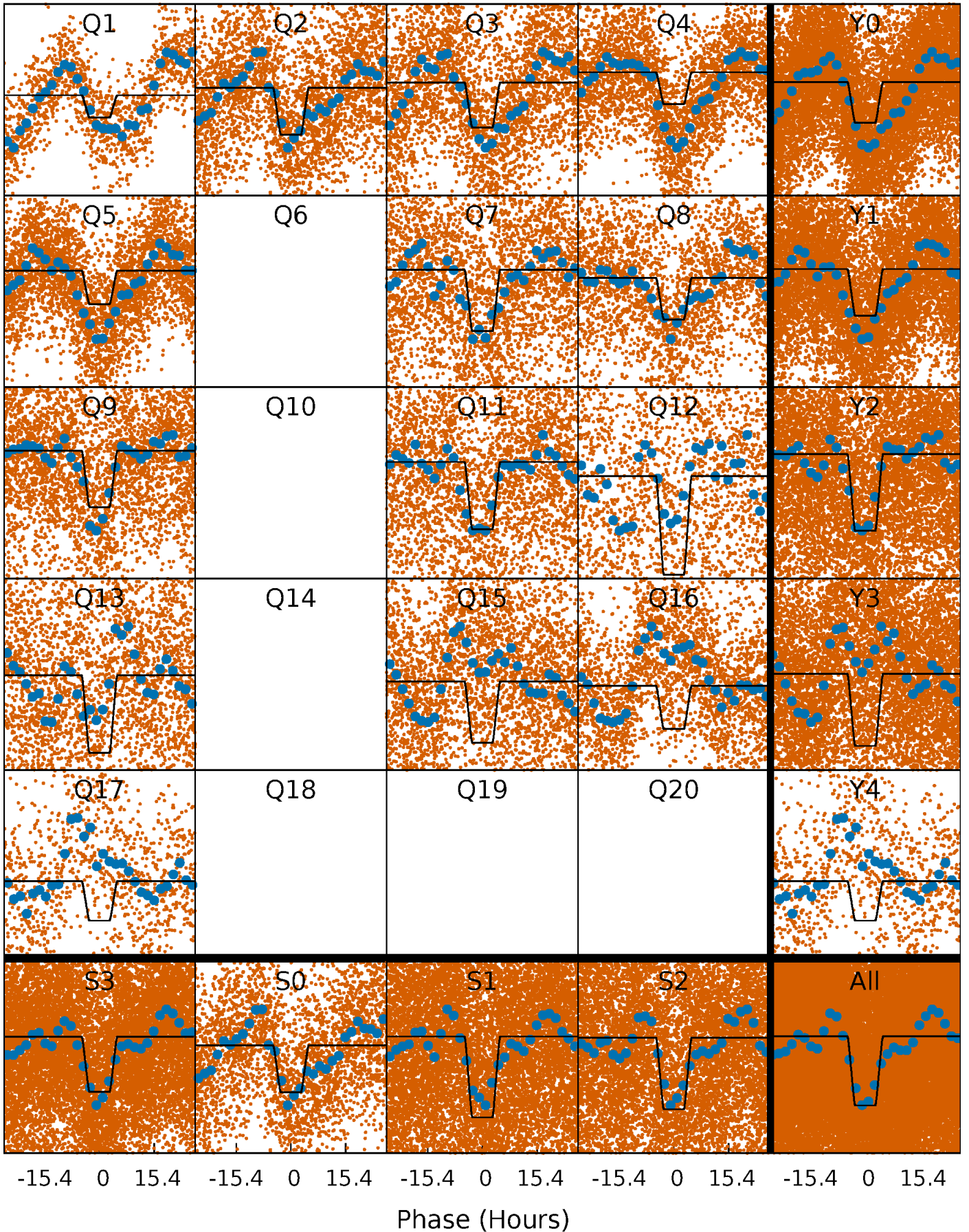
DV Quarter-Phased Transit Curves

TCE 004066066-01 P= 2.686833 Days $T_0=132.815537$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

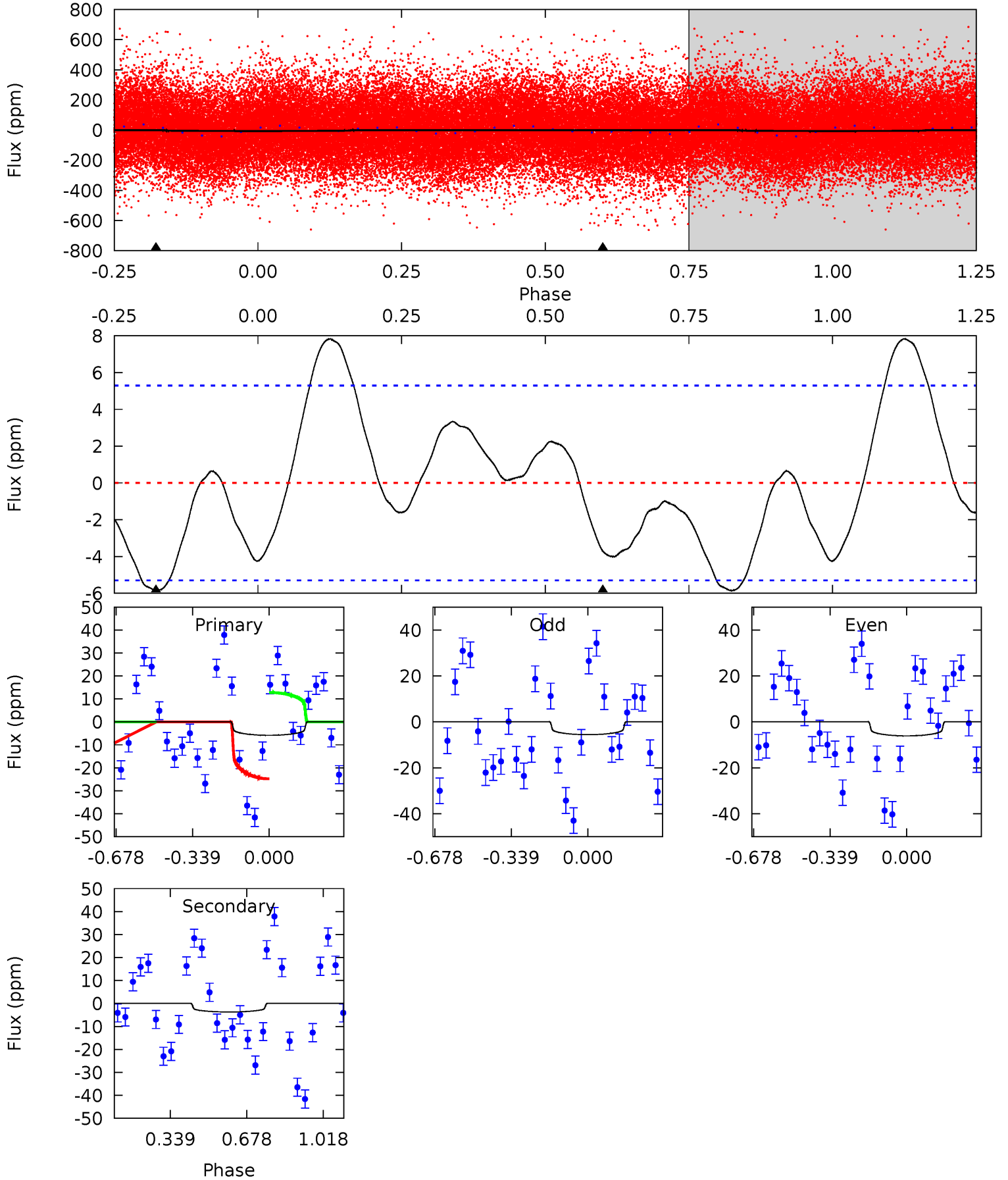
TCE 004066066-01 P= 2.686720 Days $T_0=132.665692$ (BKJD)



DV Model-Shift Uniqueness Test

004066066-01, P = 2.686833 Days, E = 130.128704 Days

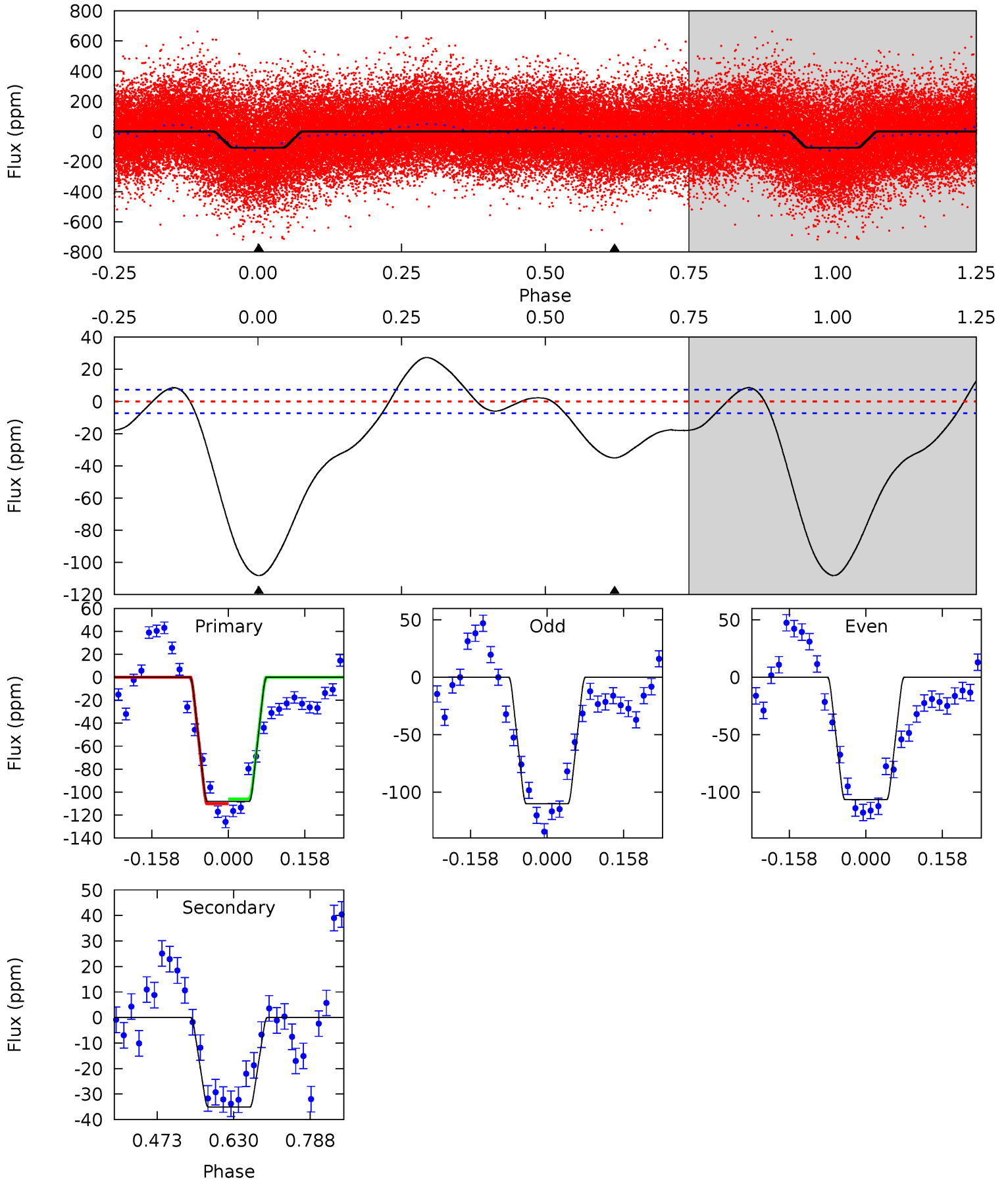
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.75	3.01	0	0	4.30	0.96	1.98	4.75	4.75	3.01	3.01	0.22	0.97	0.57	4.90



Alt Model-Shift Uniqueness Test

004066066-01, P = 2.686720 Days, E = 129.978972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.0	21.4	0	0	4.47	1.41	8.95	66.0	66.0	21.4	21.4	1.05	0.88	0.20	1.26



Stellar Parameters For KIC 004066066

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6878^{+184}_{-225}	$3.692^{+0.296}_{-0.074}$	$-0.180^{+0.300}_{-0.250}$	$3.120^{+0.396}_{-1.109}$	$1.747^{+0.163}_{-0.380}$	$0.081^{+0.178}_{-0.020}$
	+3%/-3%	+8%/-2%	+167%/-139%	+13%/-36%	+9%/-22%	+220%/-25%
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 004066066-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$1.33^{+0.43}_{-0.41}$	3425^{+193}_{-285}	4617^{+877}_{-607}	$2.417^{+2.717}_{-1.218}$
Alt.	-35 ± 2	$3.56^{+0.62}_{-0.66}$	3418^{+202}_{-295}	4957^{+312}_{-243}	$3.161^{+1.444}_{-0.810}$

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

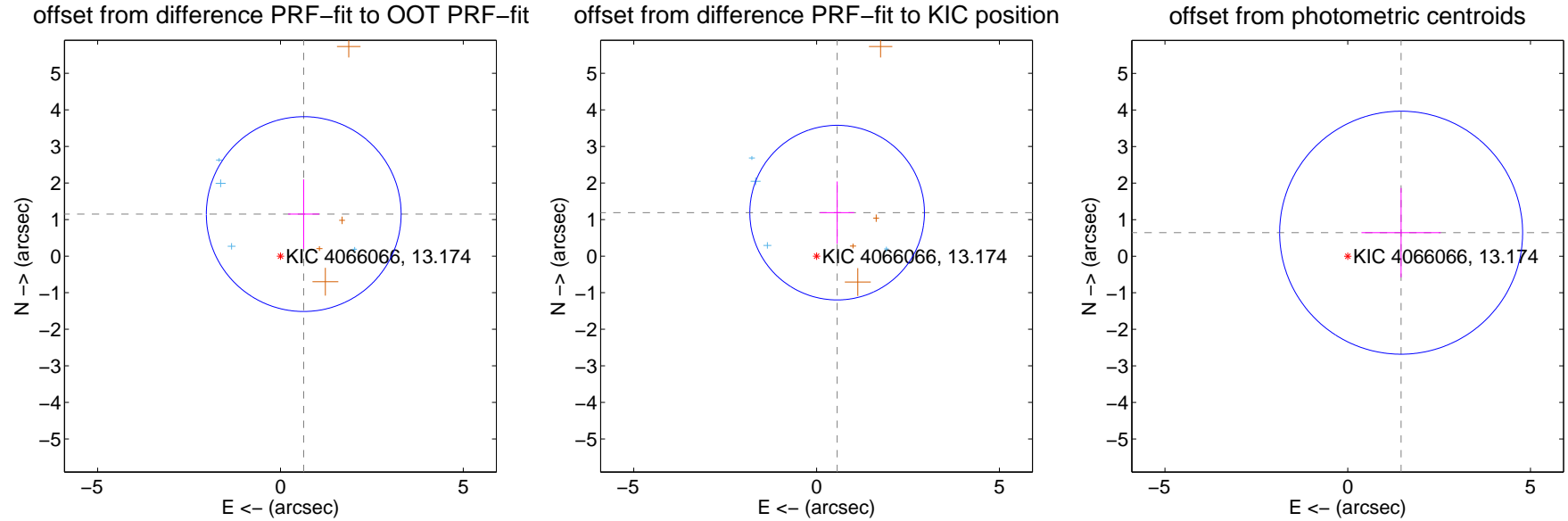
DV Centroid Data

Supplemental centroid analysis for 004066066-01. Kepler magnitude: 13.17. Transit SNR 5.28

There are 4 quarters with good PRF difference image offsets

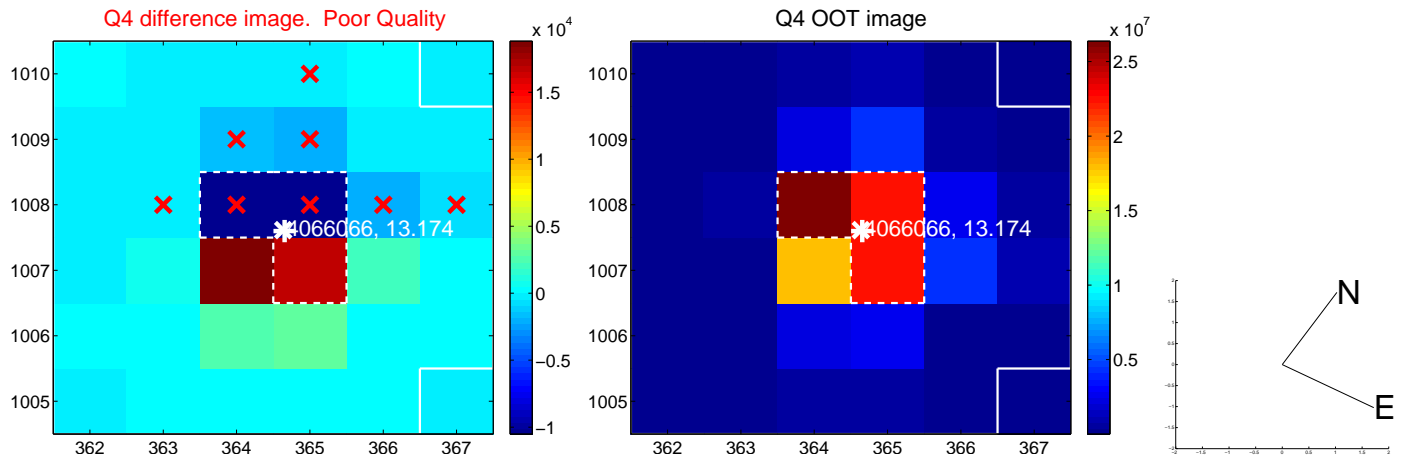
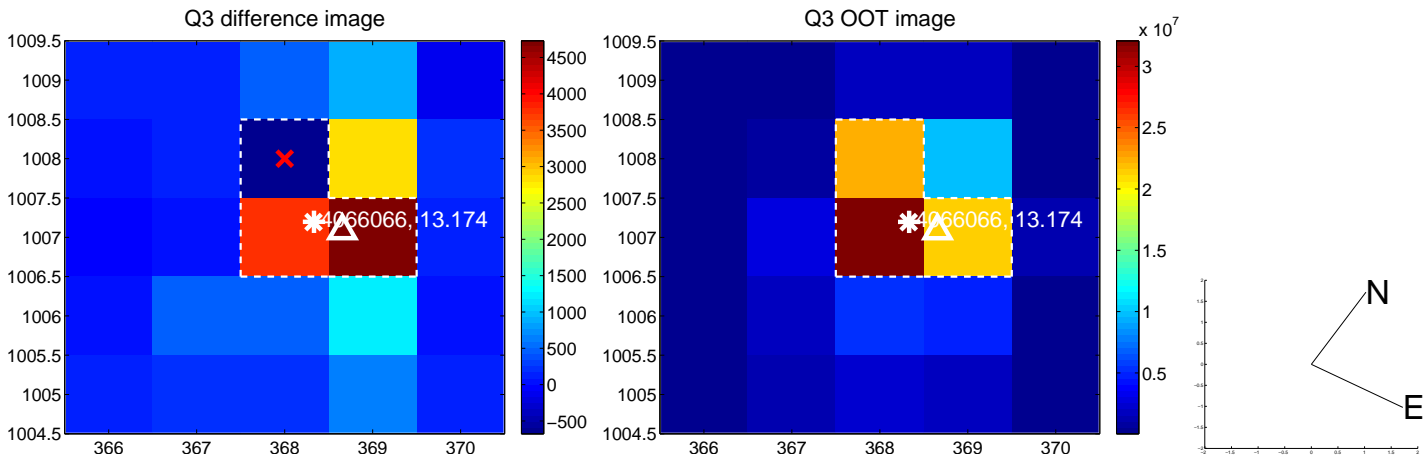
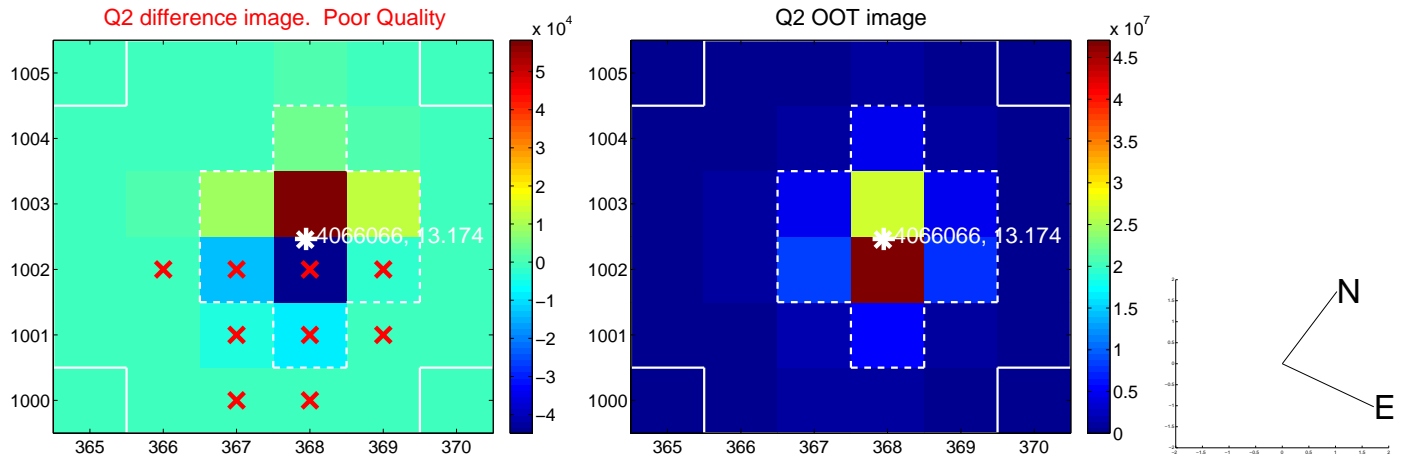
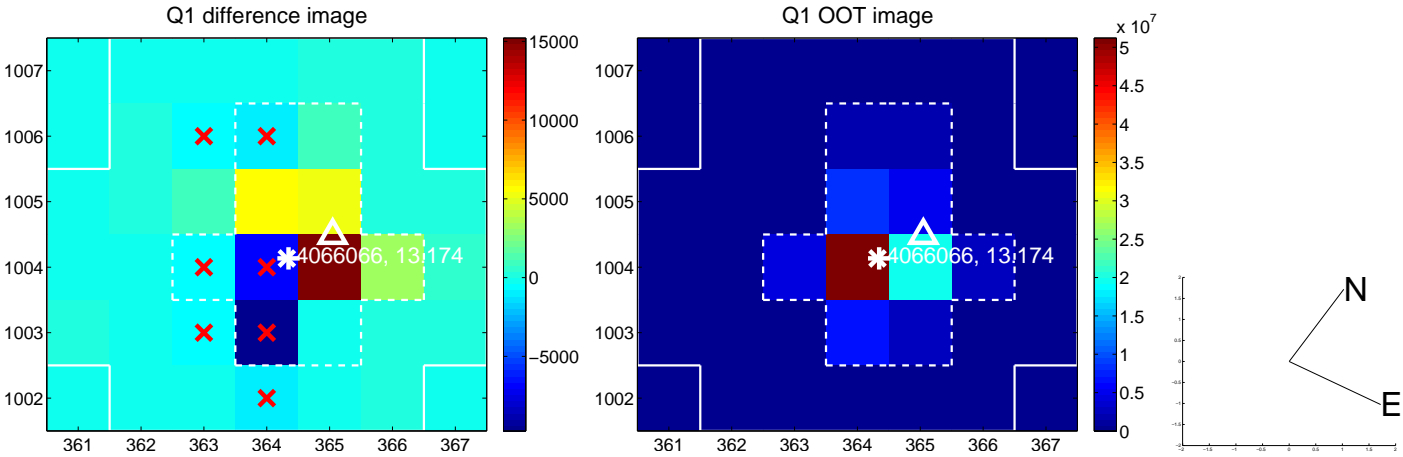
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.314 ± 0.888	1.48	-0.637 ± 0.426	1.150 ± 0.951
PRF-fit source offset from KIC position	1.316 ± 0.796	1.65	-0.562 ± 0.467	1.190 ± 0.851
photometric centroid source offset	1.60 ± 1.11	1.44	-1.46 ± 1.08	0.64 ± 1.22

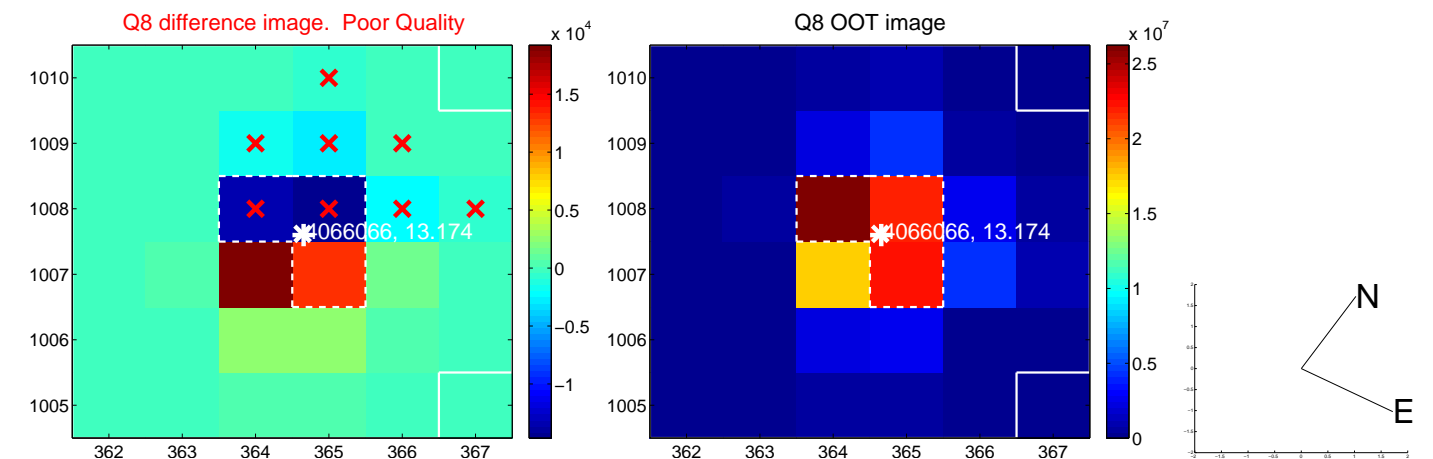
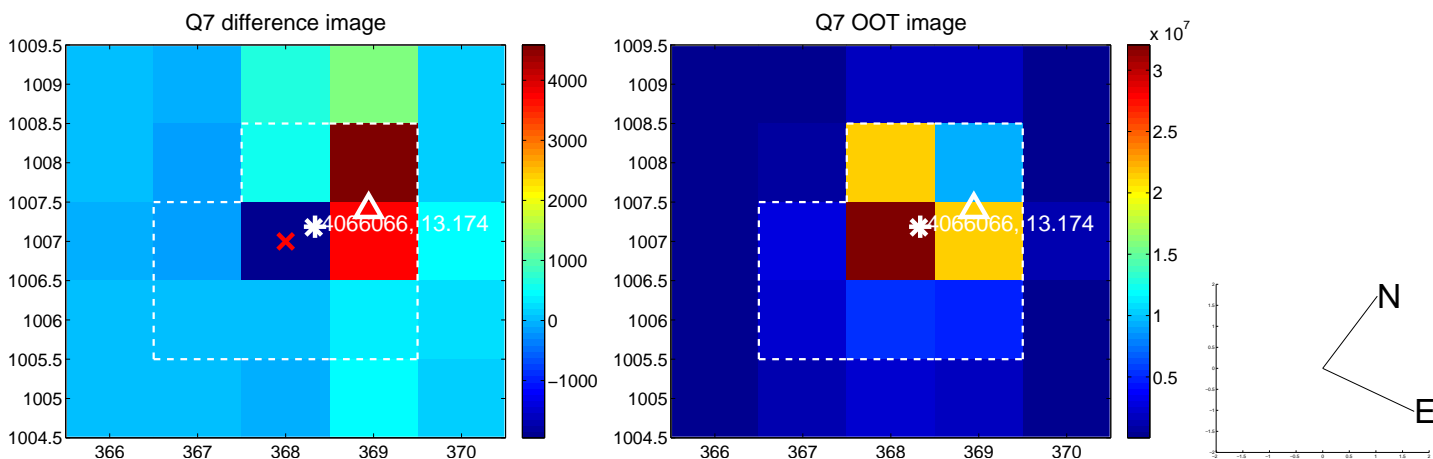
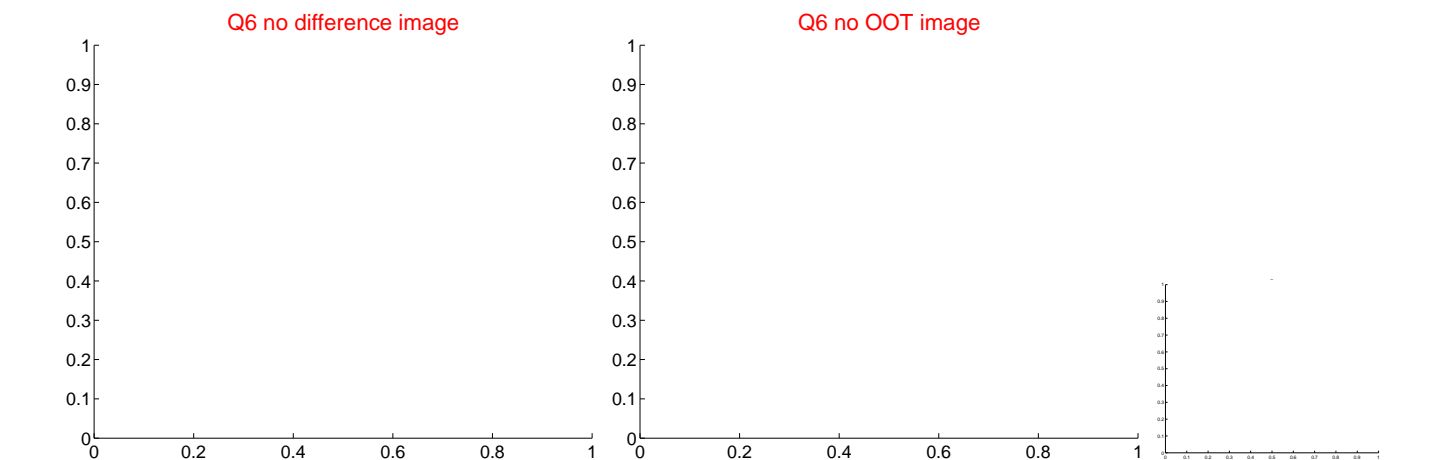
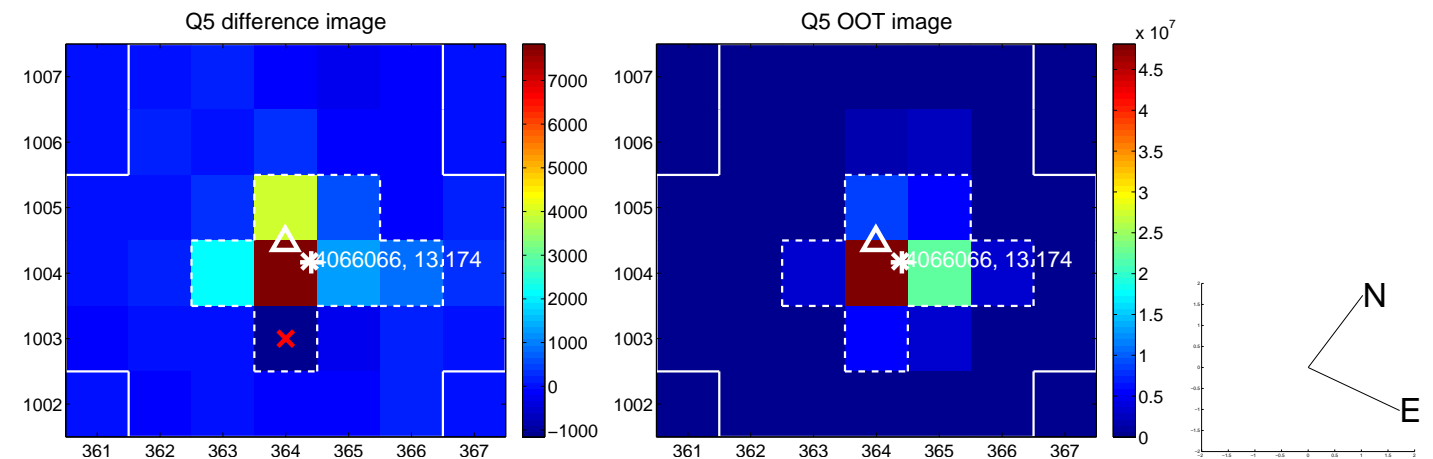


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

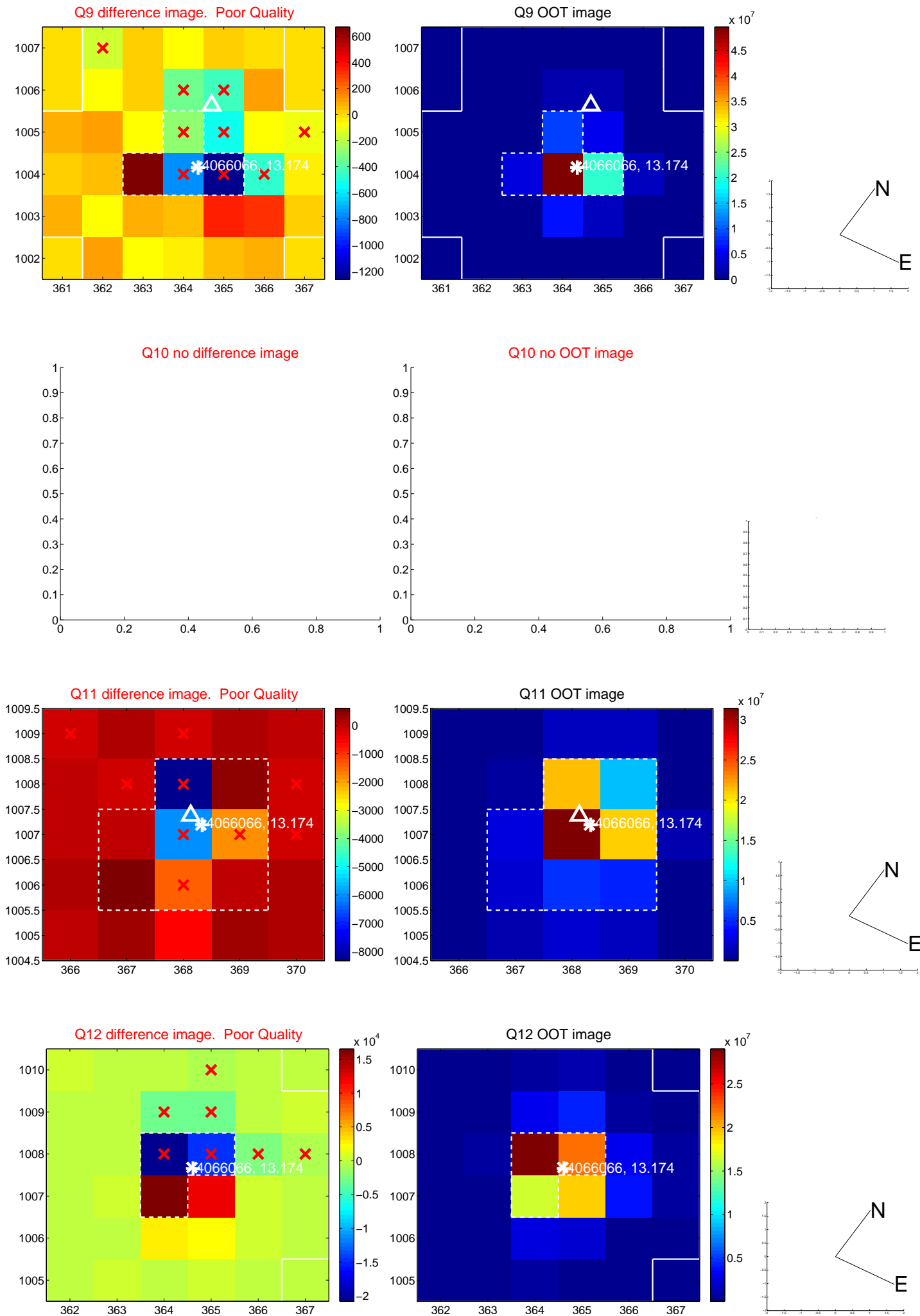
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



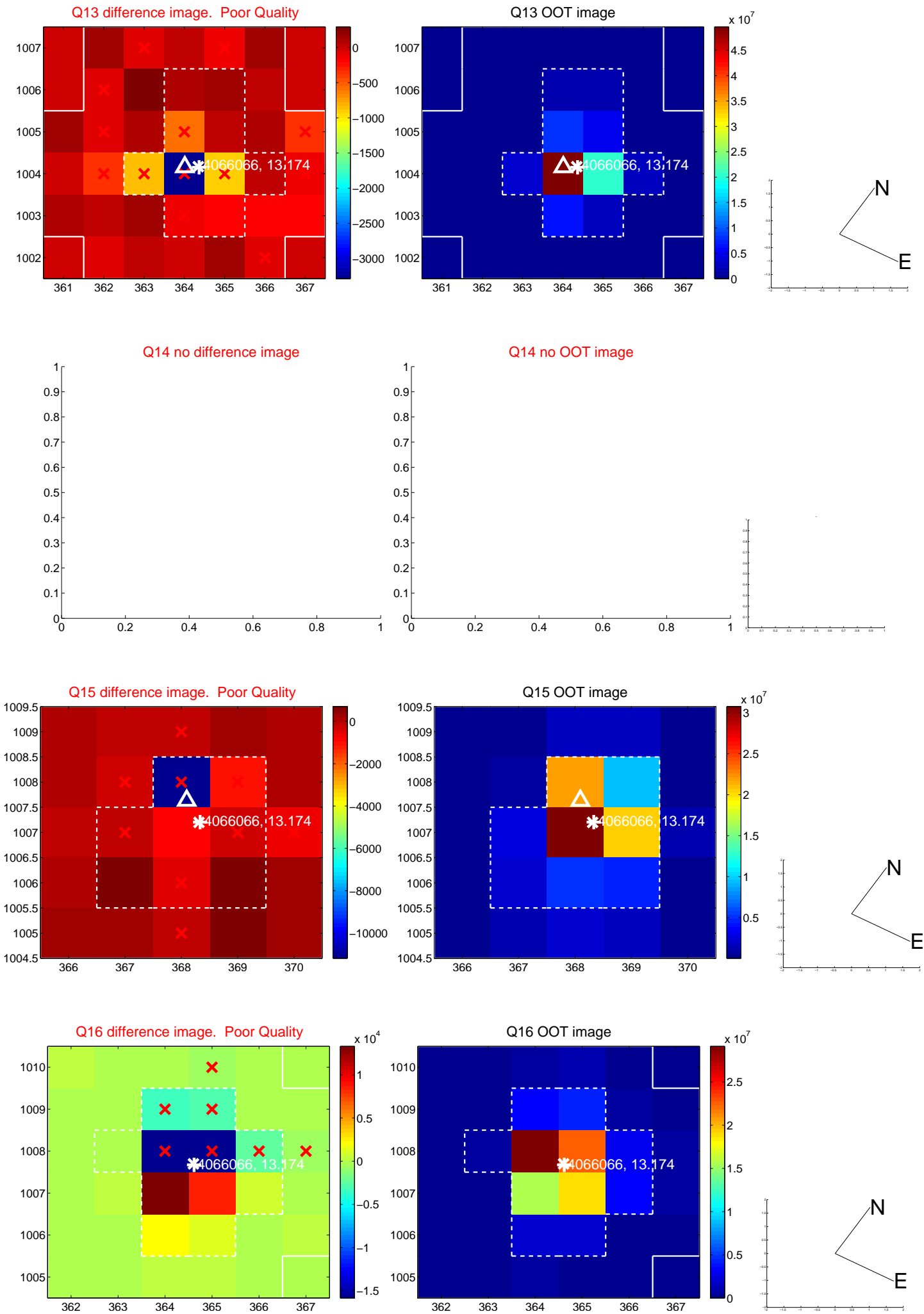
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



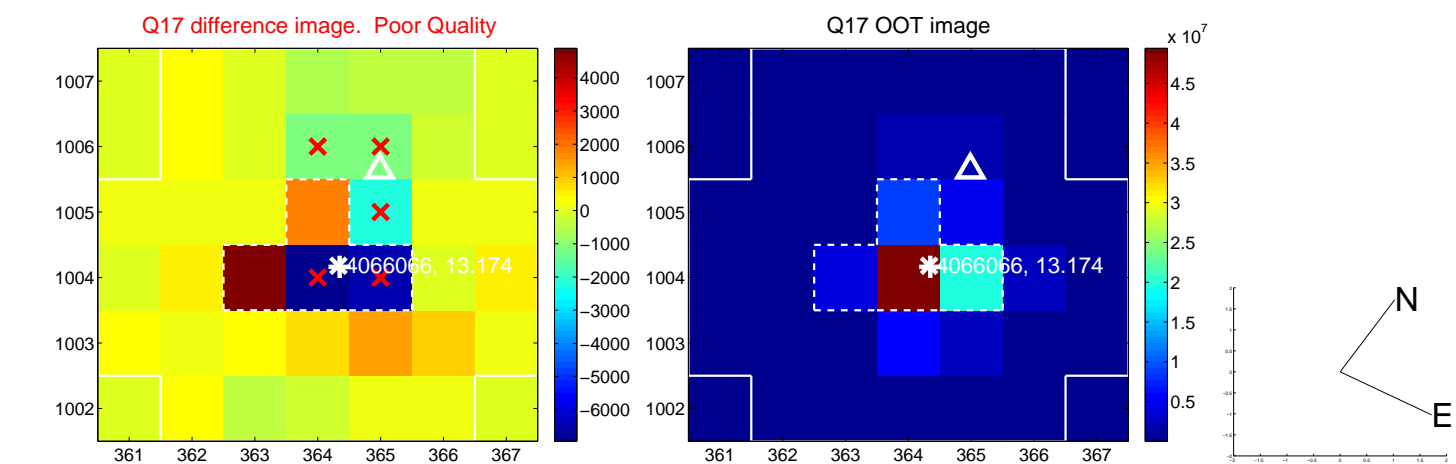
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



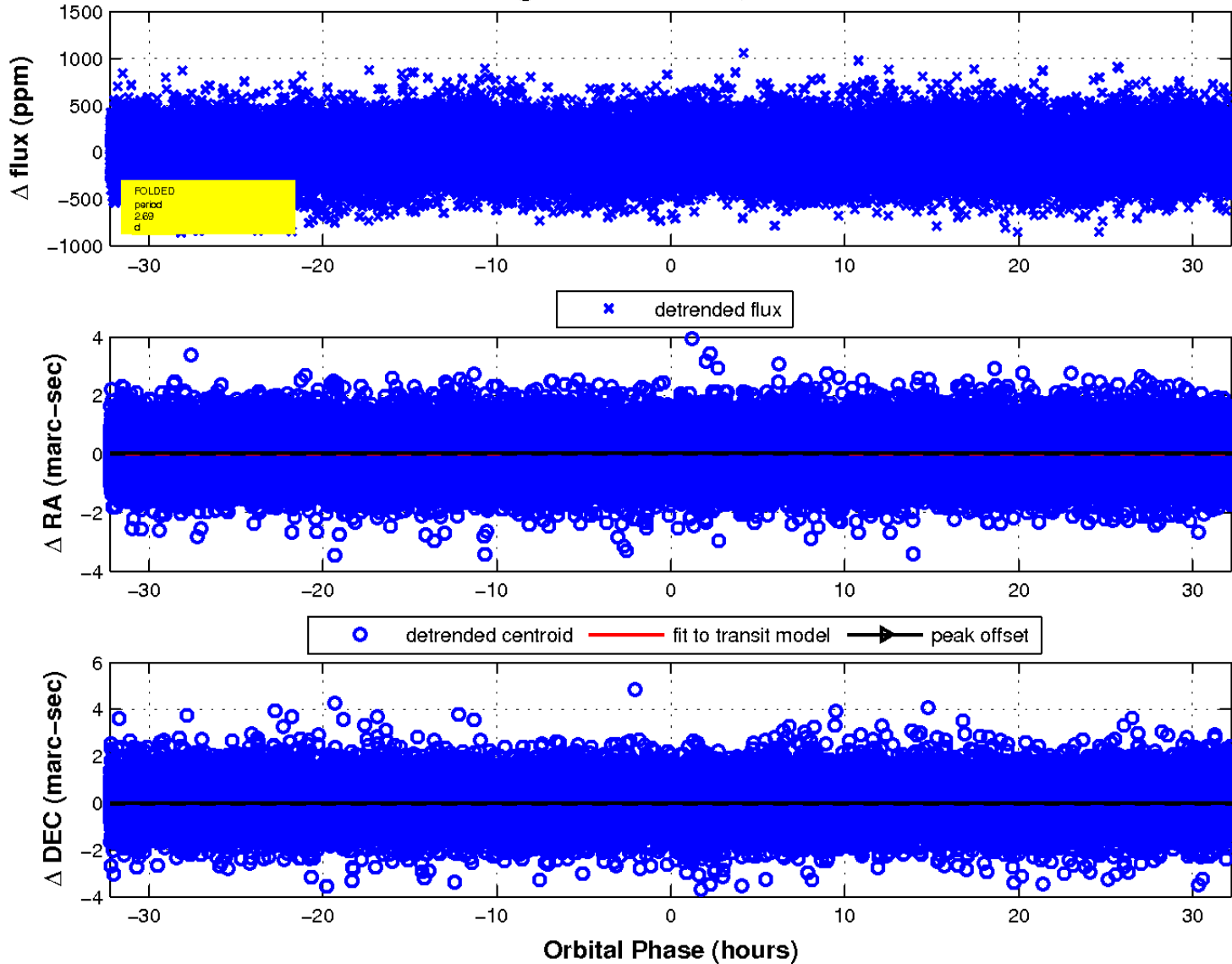
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

