

KIC 006066403

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})
006066403-01	OBS	1045.01	1.303814	131.626369	168.8	2.500	52.0	43.2	0.90	5758	1.41	1591.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006066403-01	OBS	FP	0.00	0	0	1	1	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 006066403-01

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
006066403-01	6066403	3649.01	6066379	1:1	12.2	3	-1	15.47	13.55	790.36	Direct-PRF	0	2.87	1.31

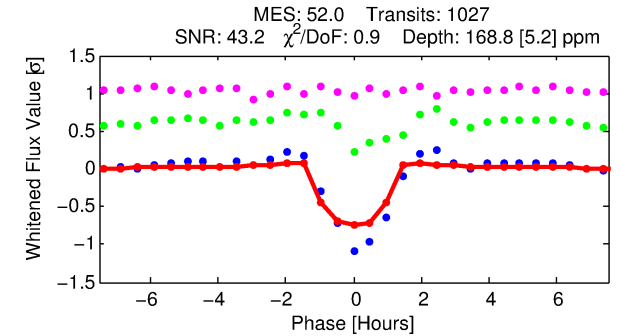
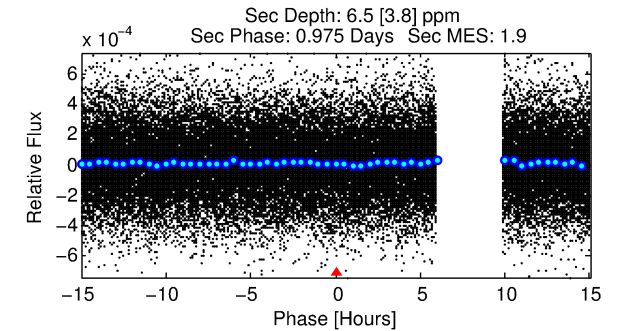
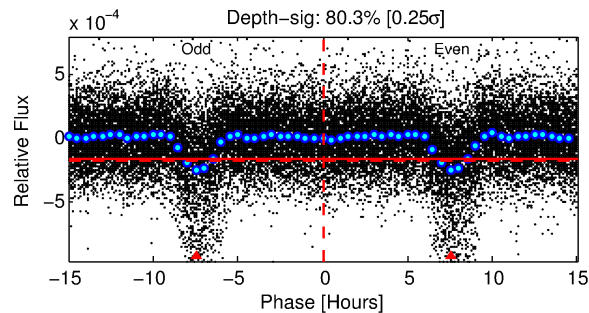
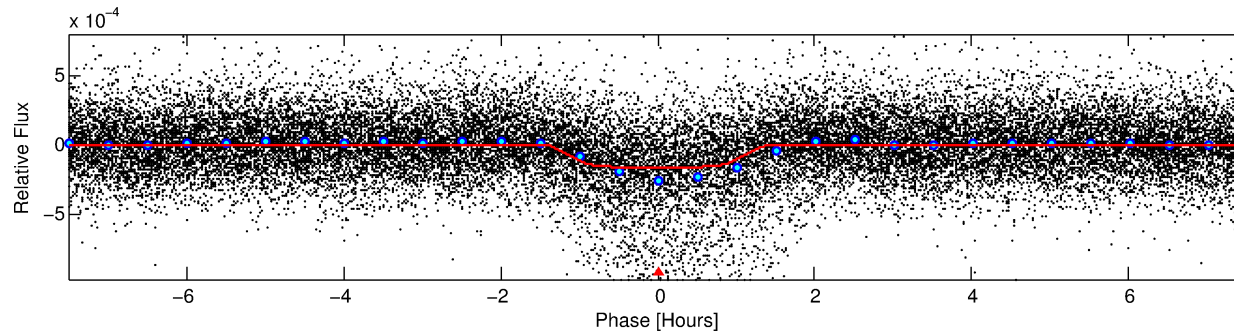
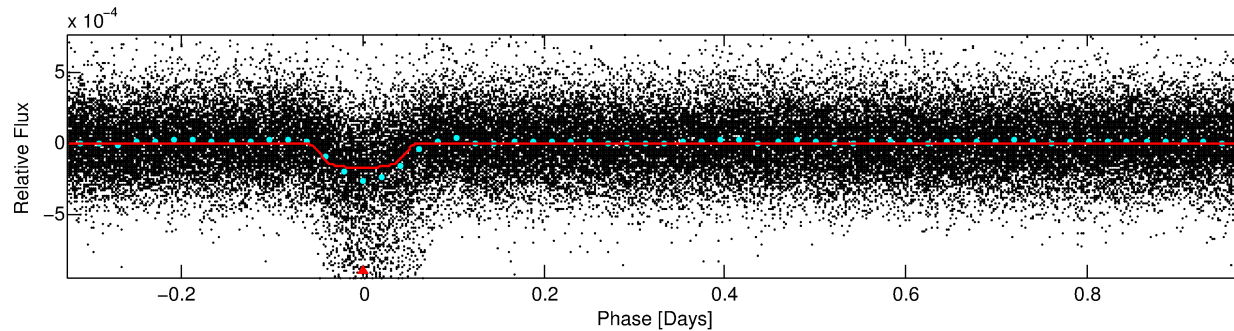
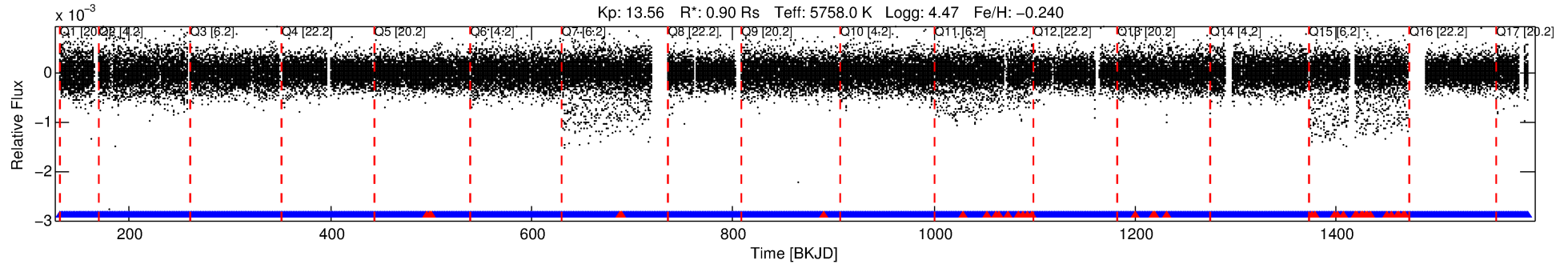
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 6066403 Candidate: 1 of 1 Period: 1.304 d

KOI: K01045.01 Corr: 0.797

Kp: 13.56 R*: 0.90 Rs Teff: 5758.0 K Logg: 4.47 Fe/H: -0.240



DV Fit Results:

Period = 1.30381 [0.00000] d
Epoch = 131.6264 [0.0007] BKJD
Rp/R* = 0.0143 [0.0018]
a/R* = 2.02 [0.95]
b = 0.91 [0.12]
Seff = 1591.59 [556.31]
Teq = 1611 [141] K
Rp = 1.40 [0.42] Re
a = 0.0224 [0.0051] AU
Ag = 0.91 [0.66] [-0.14σ]
Teffp = 2433 [393] K [1.97σ]

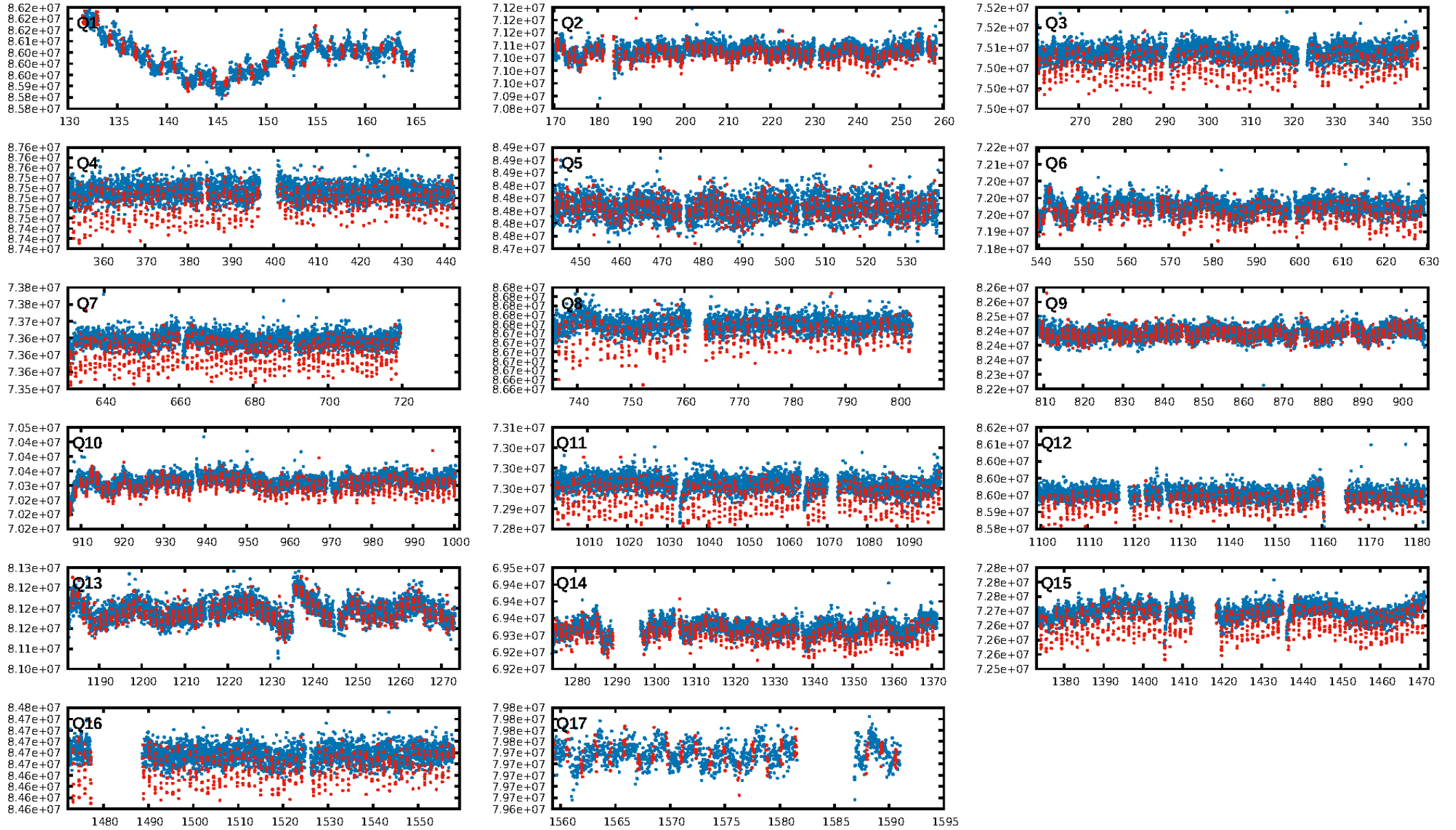
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [942/980]
GhostDiagnostic-chr: -0.6029
Centroid-sig: N/A
Centroid-so: 48.061 arcsec [384.63σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

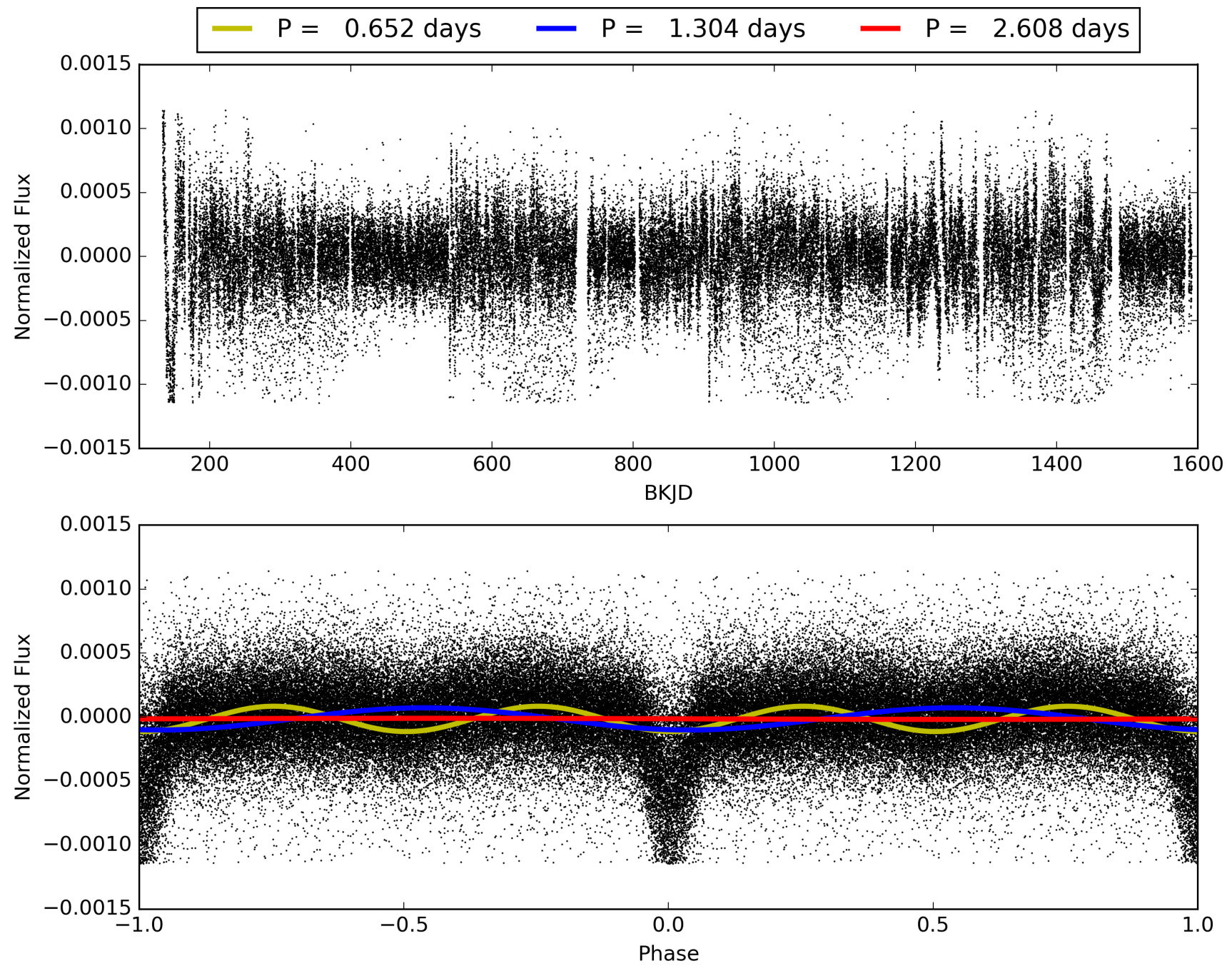
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:07:33 Z

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

TCE 006066403-01, PDC Light Curves

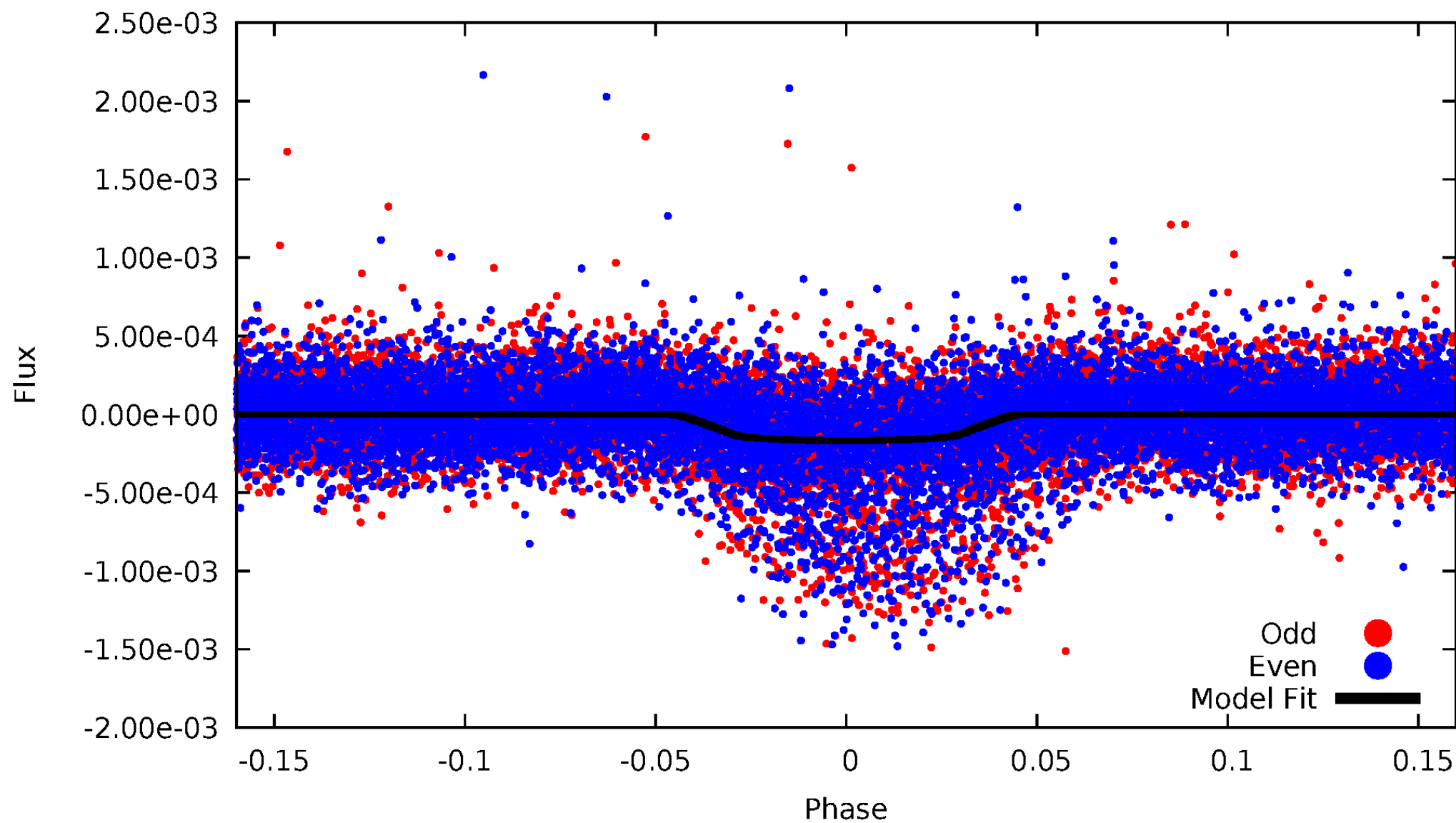


TCE 006066403-01



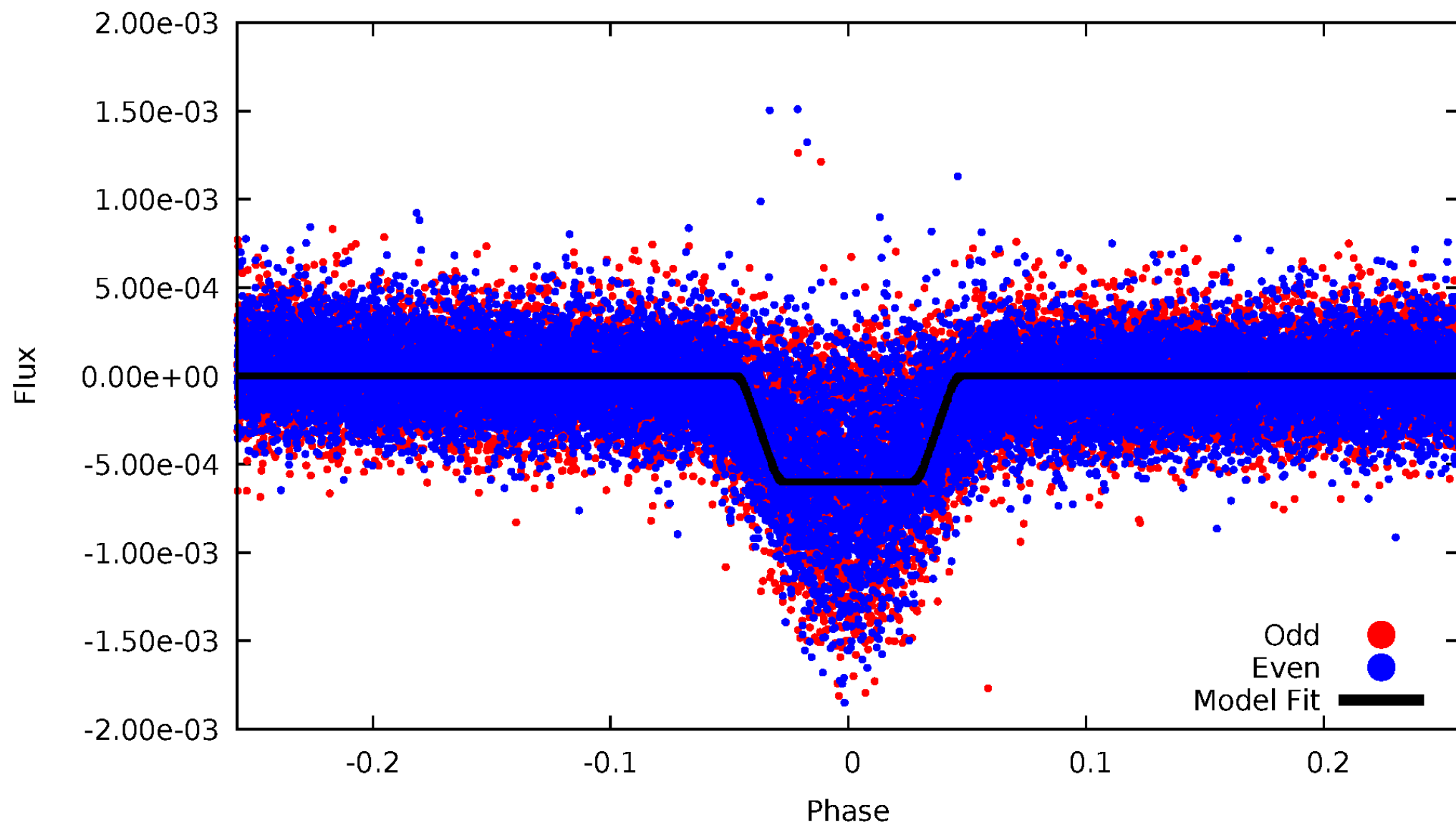
DV Odd/Even

TCE 006066403-01



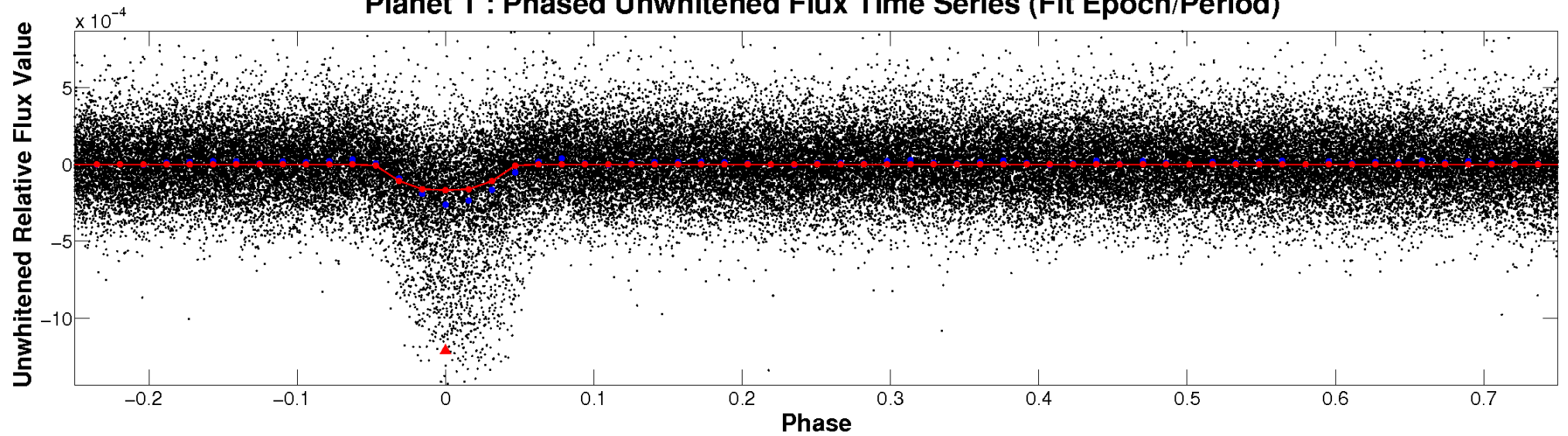
ALT Odd/Even

TCE 006066403-01

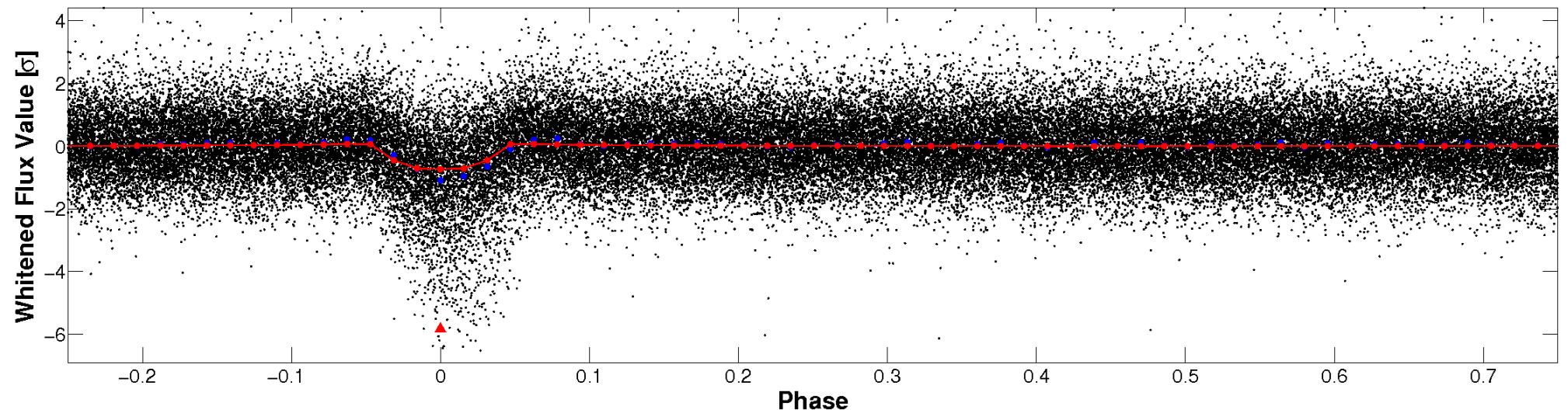


Non-Whitened Vs. Whitened Light Curve

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

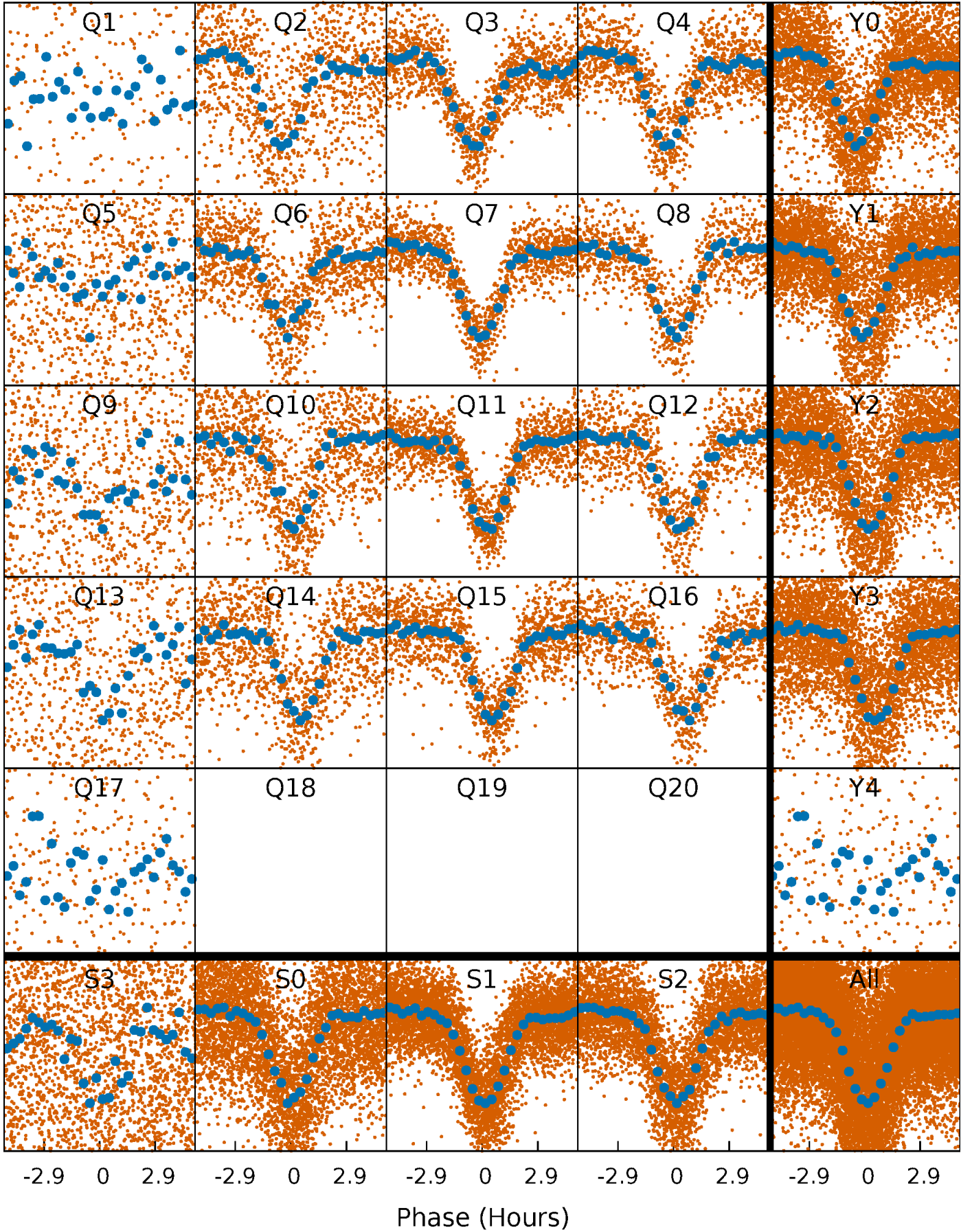


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



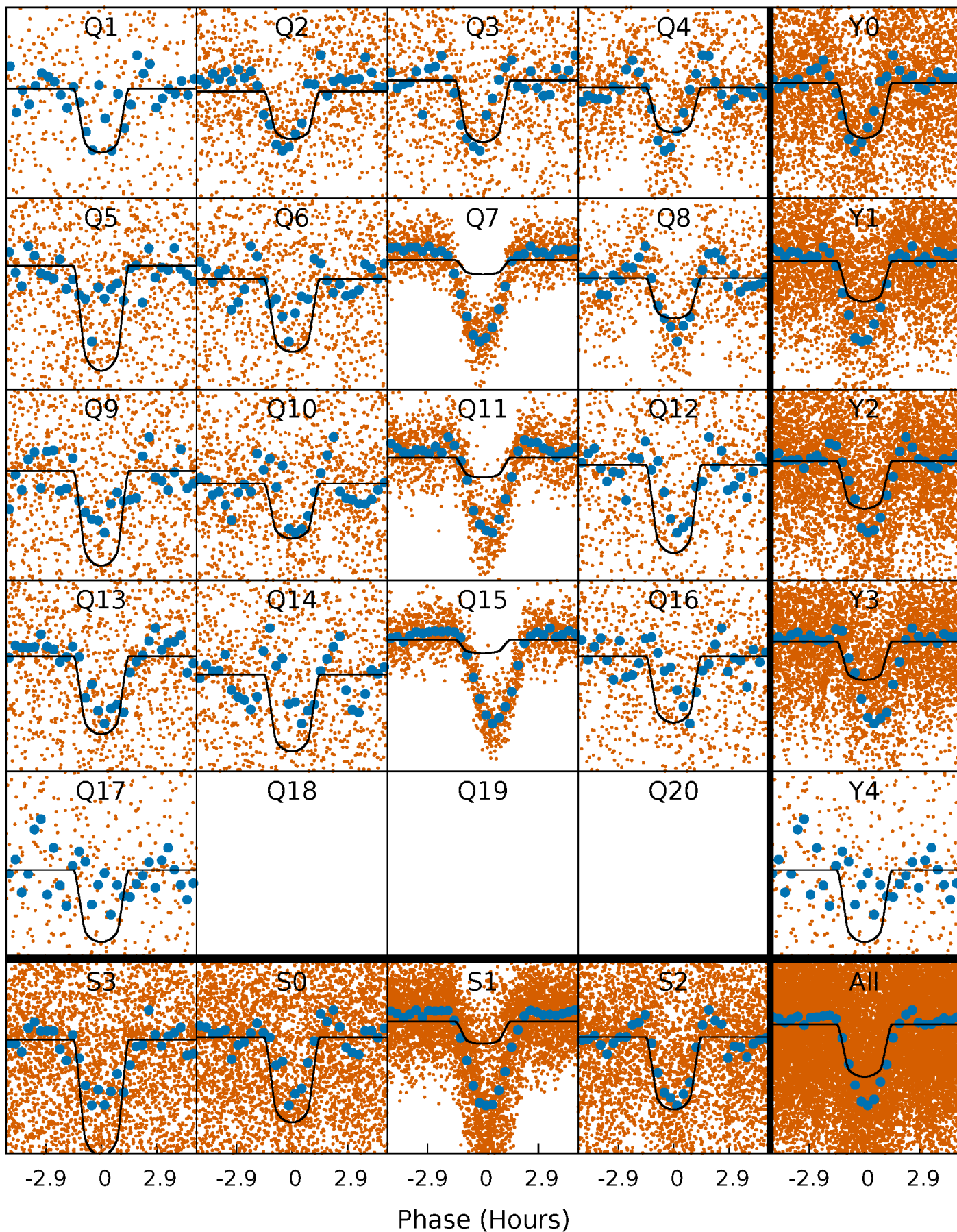
PDC Quarter-Phased Transit Curves

TCE 006066403-01 P= 1.303814 Days $T_0=131.626369$ (BKJD)



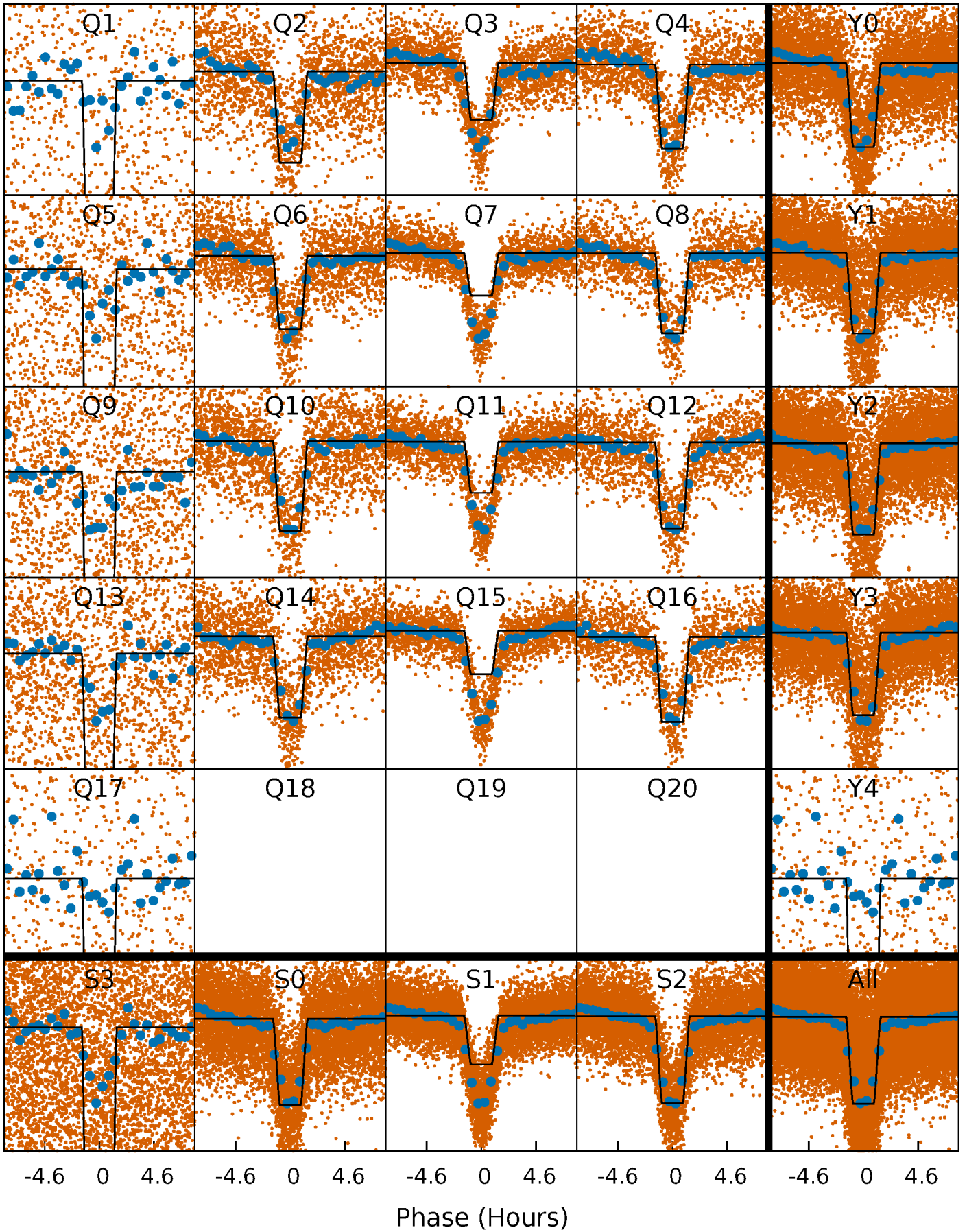
DV Quarter-Phased Transit Curves

TCE 006066403-01 P= 1.303814 Days $T_0=131.626369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

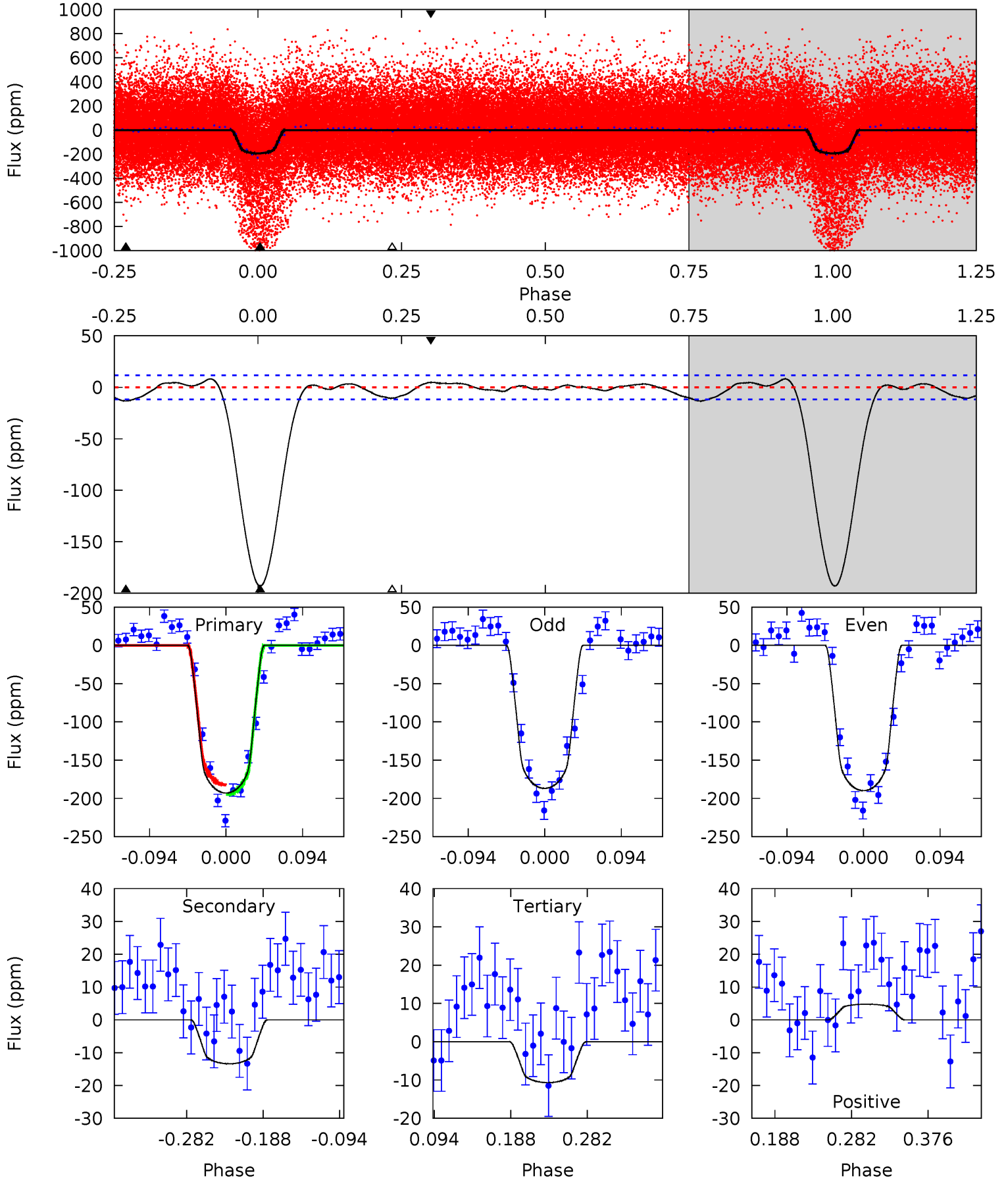
TCE 006066403-01 P= 1.303850 Days $T_0=131.611036$ (BKJD)



DV Model-Shift Uniqueness Test

006066403-01, P = 1.303814 Days, E = 130.322555 Days

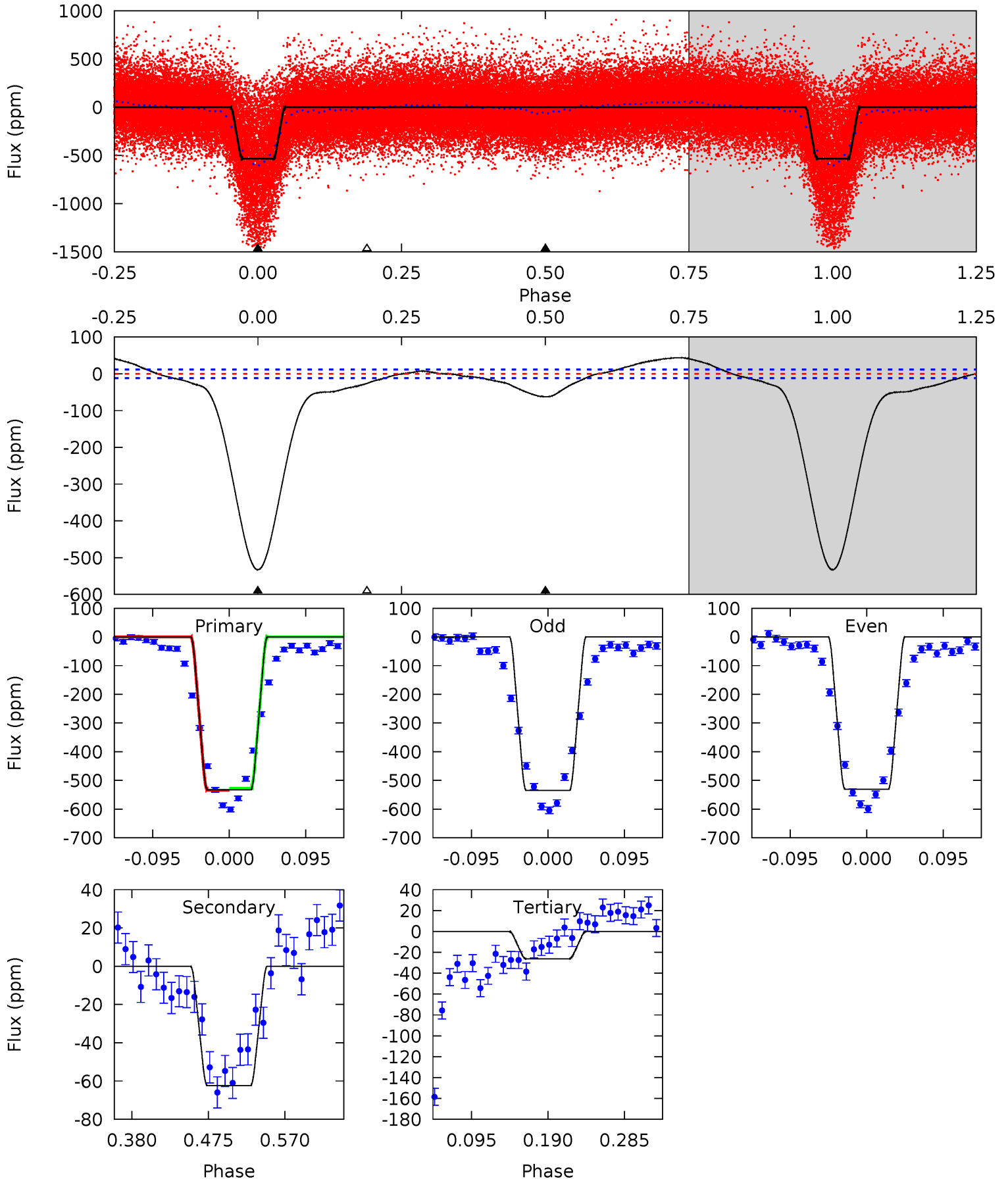
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.5	5.23	4.18	1.87	4.58	1.67	1.49	71.3	73.6	1.05	3.37	0.58	1.61	0.04	2.46



Alt Model-Shift Uniqueness Test

006066403-01, P = 1.303850 Days, E = 130.307186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
203.7	23.8	10.0	0	4.58	1.67	10.0	193.7	203.7	13.8	23.8	0.79	1.00	0.08	1.35



Stellar Parameters For KIC 006066403

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5758^{+155}_{-155}	$4.475^{+0.078}_{-0.182}$	$-0.240^{+0.300}_{-0.300}$	$0.902^{+0.244}_{-0.105}$	$0.887^{+0.110}_{-0.090}$	$1.704^{+0.655}_{-0.809}$
	+3%/-3%	+2%/-4%	+125%/-125%	+27%/-12%	+12%/-10%	+38%/-48%
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 006066403-01 / KOI 1045.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 3	$1.45^{+0.27}_{-0.23}$	2280^{+157}_{-114}	3304^{+225}_{-203}	$1.719^{+0.764}_{-0.565}$
Alt.	-62 ± 3	$2.48^{+0.38}_{-0.28}$	2283^{+153}_{-109}	3621^{+128}_{-123}	$2.799^{+0.781}_{-0.651}$

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

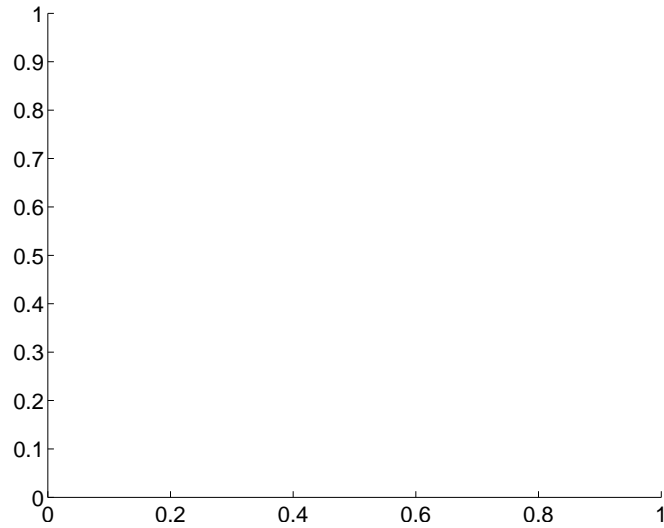
Supplemental centroid analysis for 006066403-01. Kepler magnitude: 13.55. Transit SNR 43.24

There are 0 quarters with good PRF difference image offsets

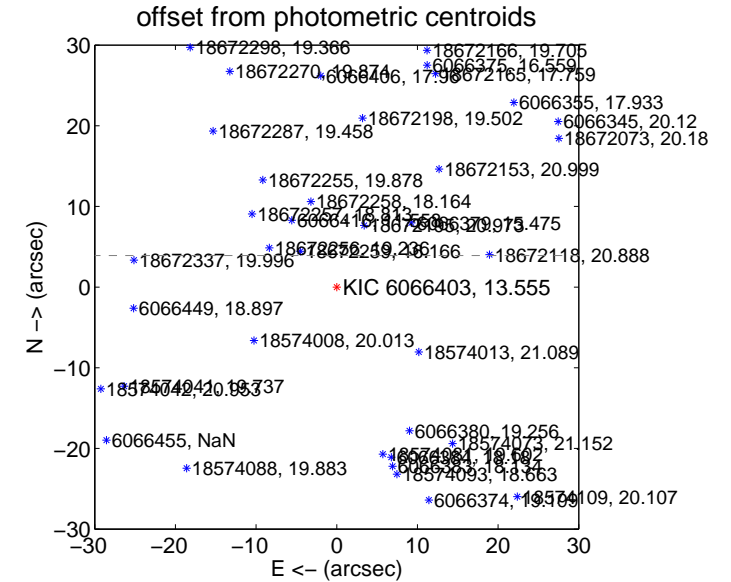
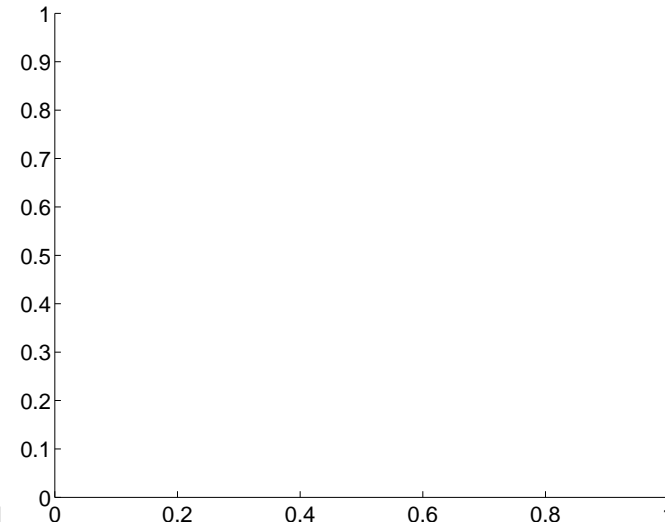
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	48.06 ± 0.12	384.63	-47.90 ± 0.12	3.91 ± 0.14

There is no PRF-fit offset from OOT-fit

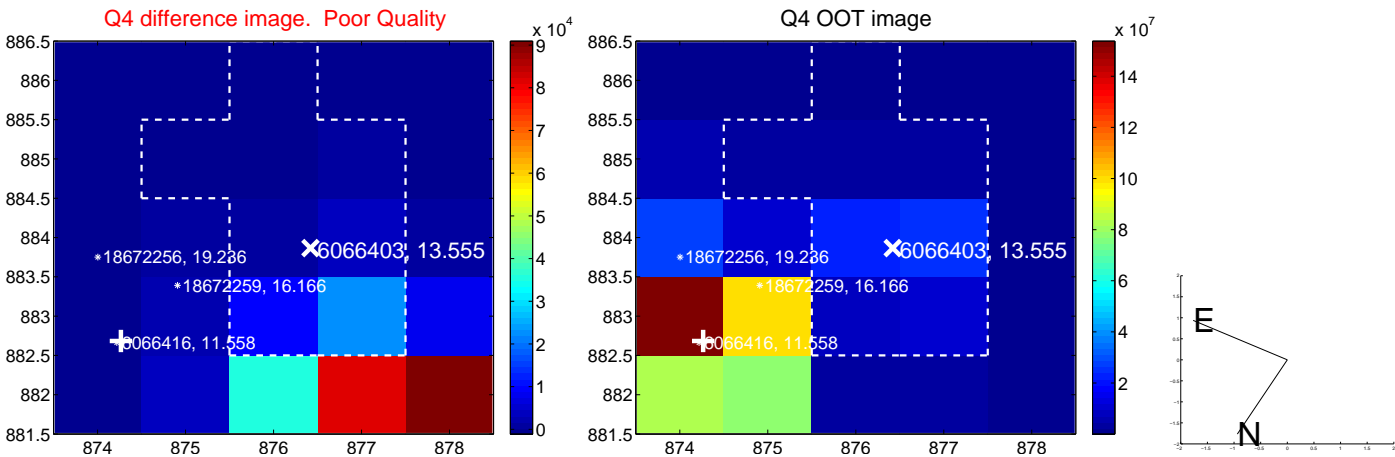
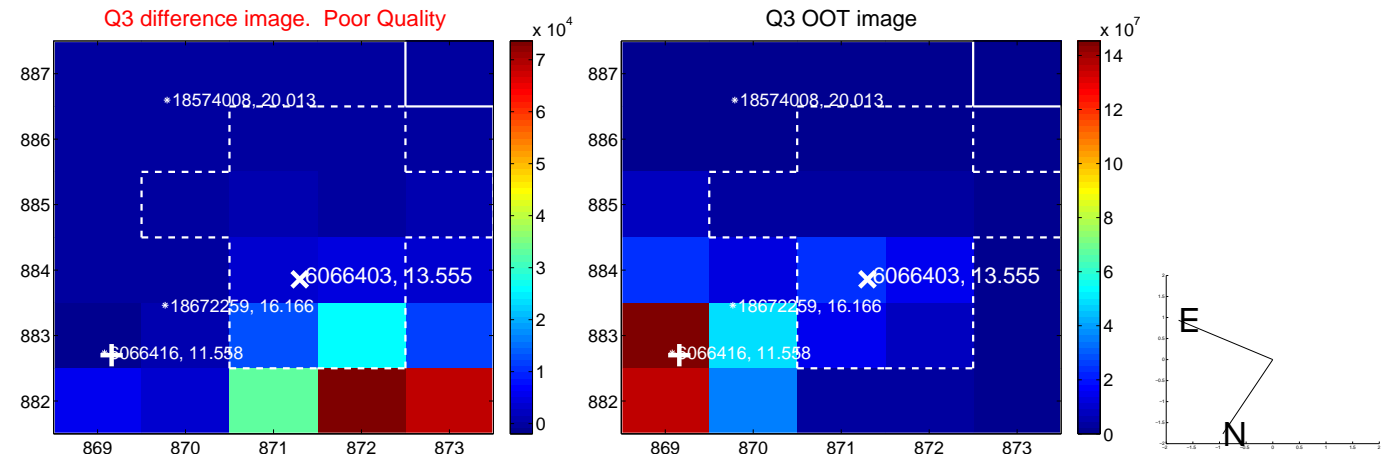
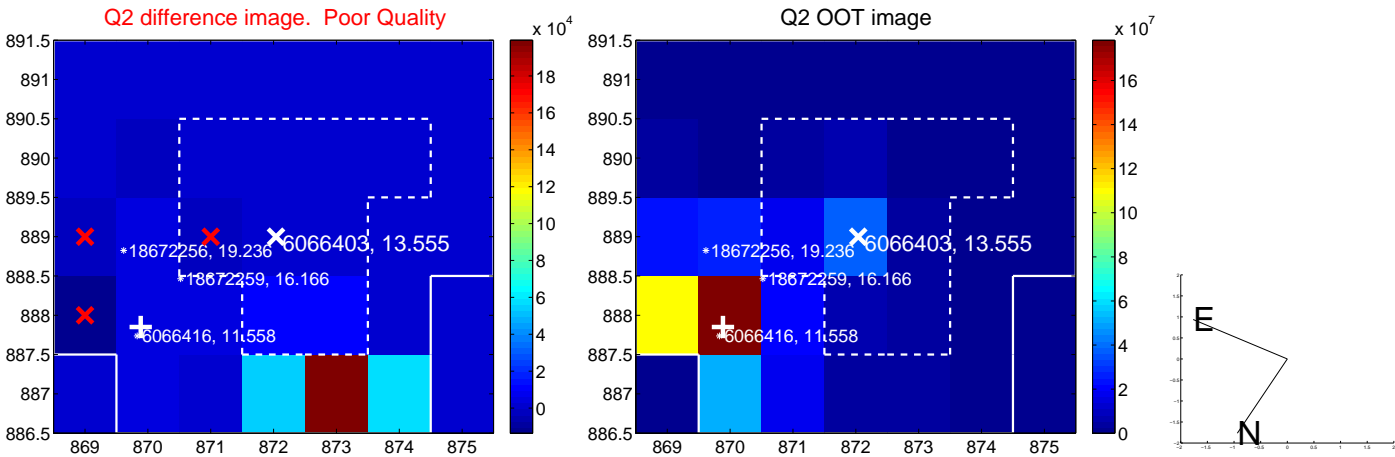
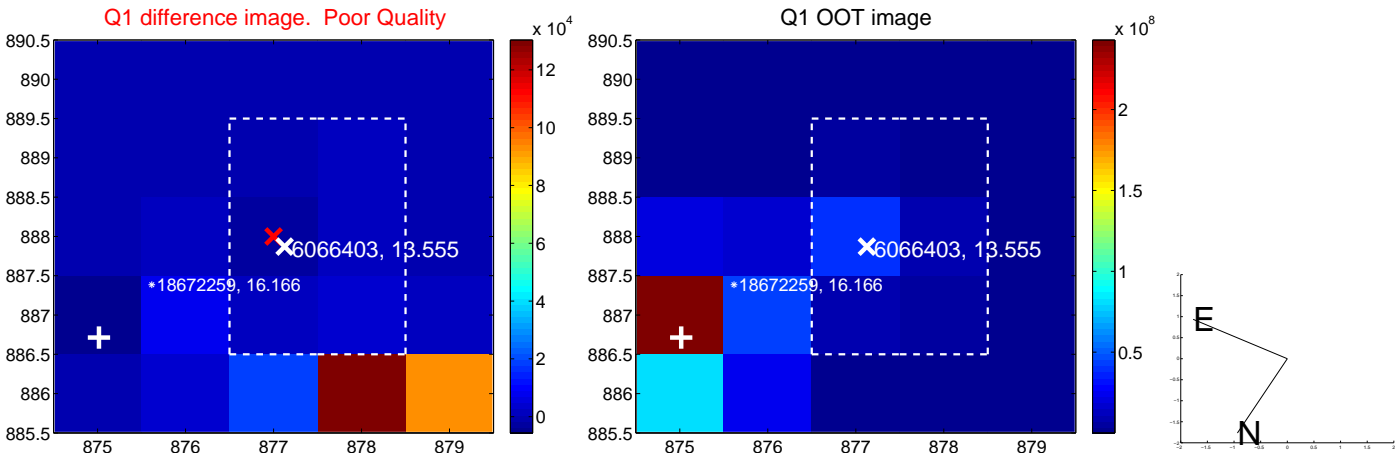


There is no PRF-fit offset from KIC

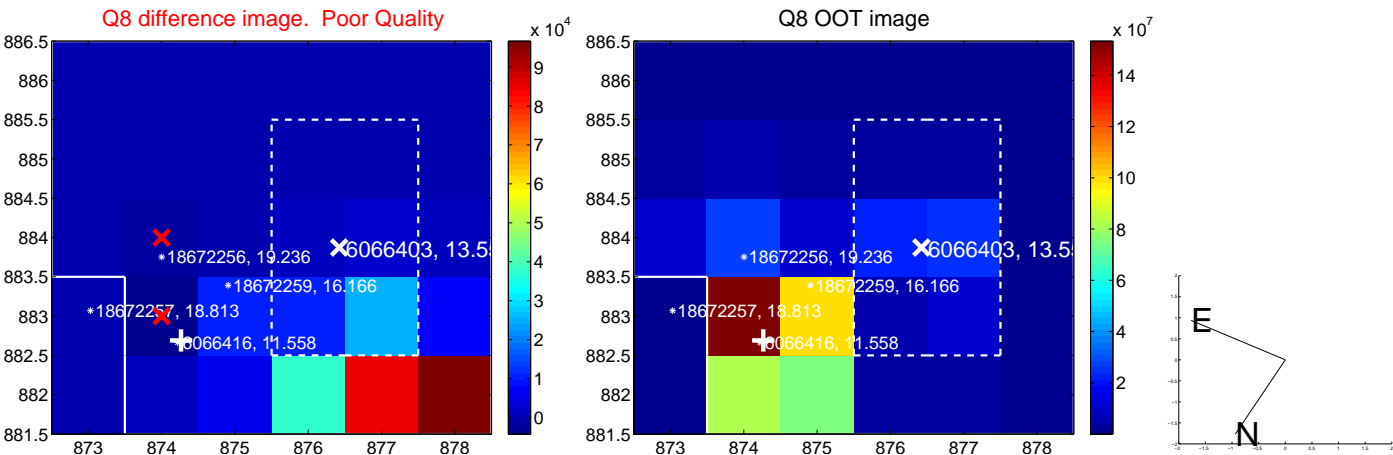
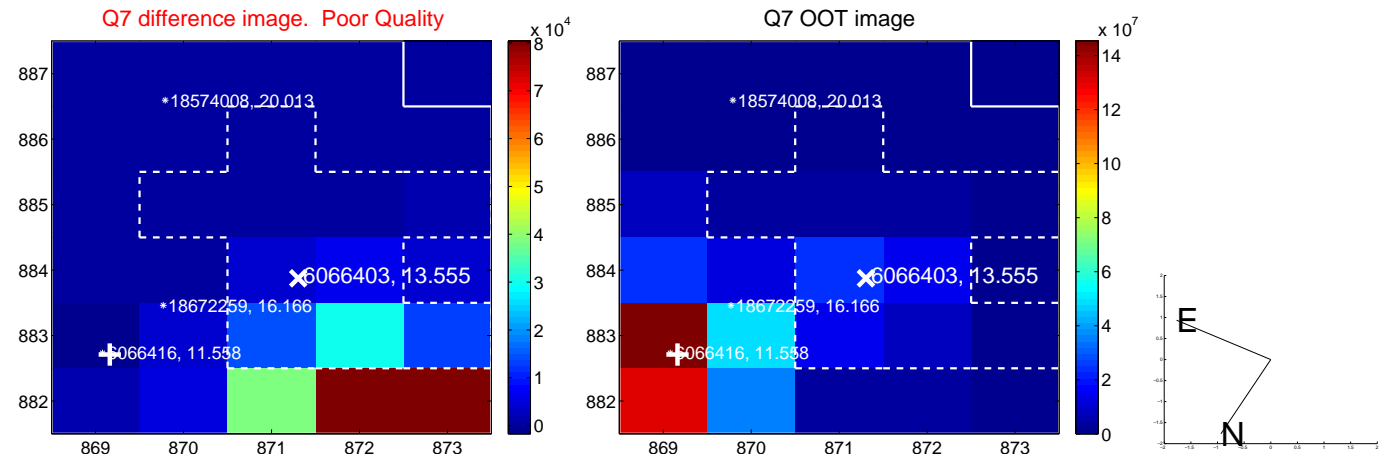
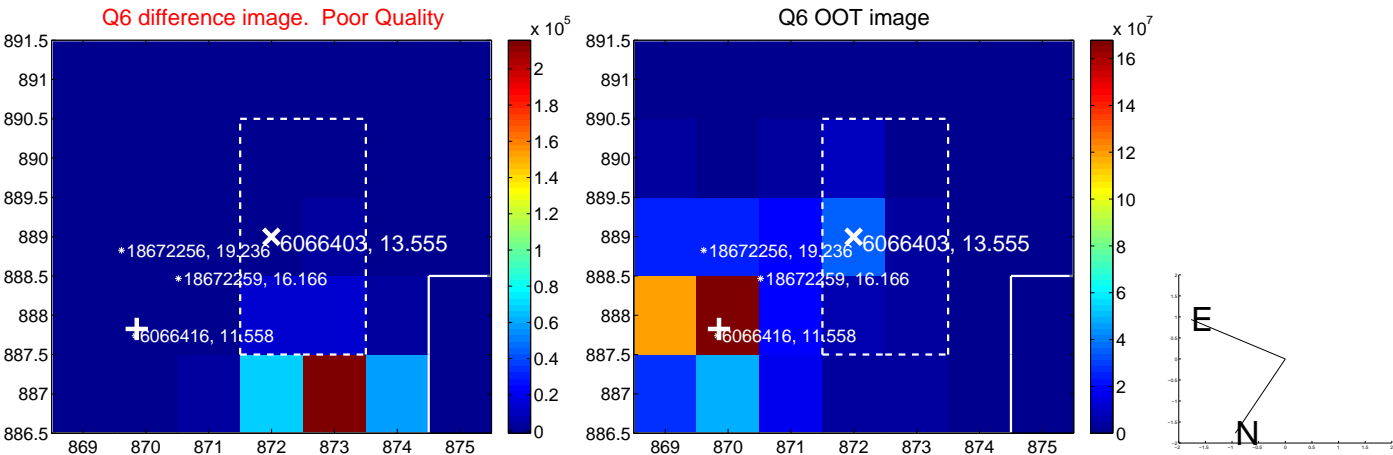
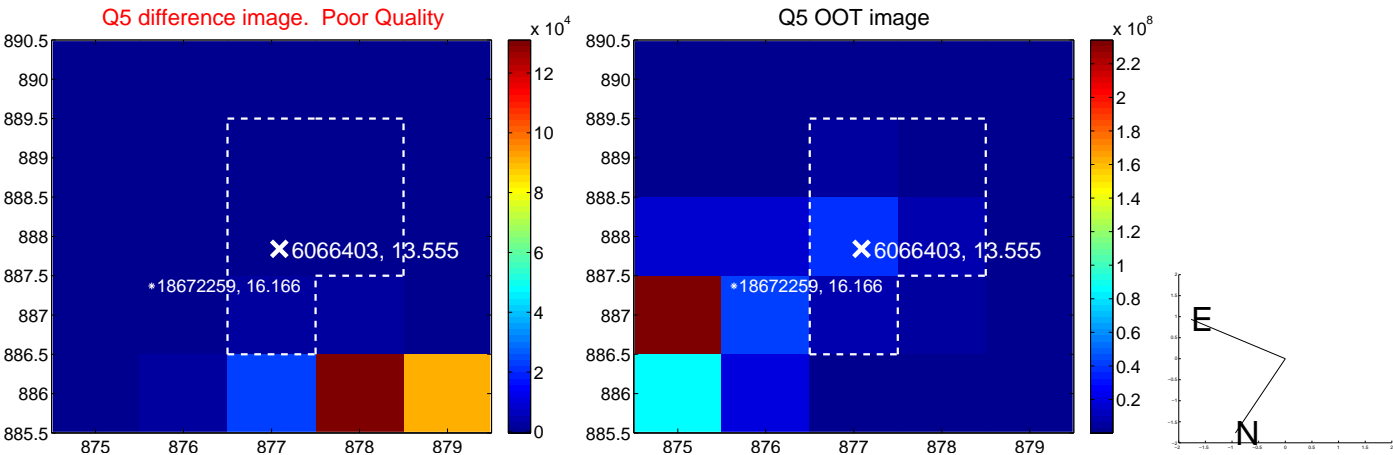


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

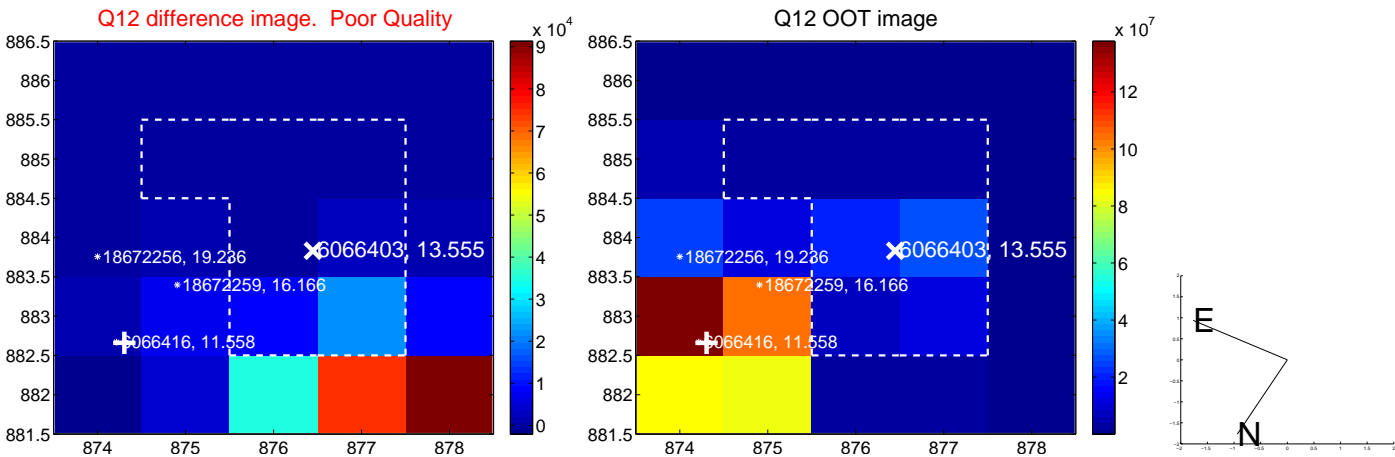
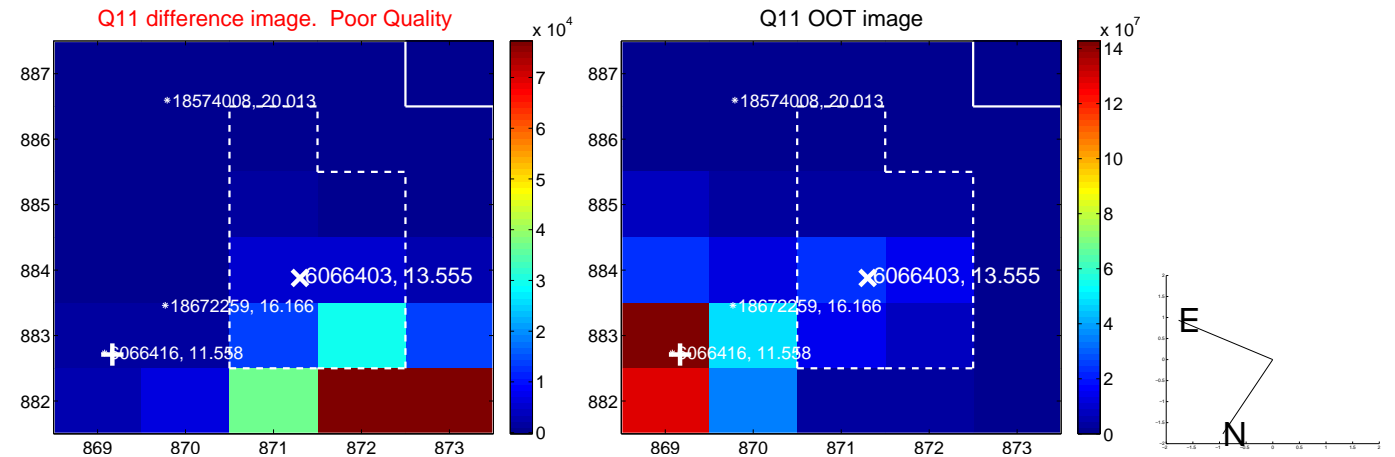
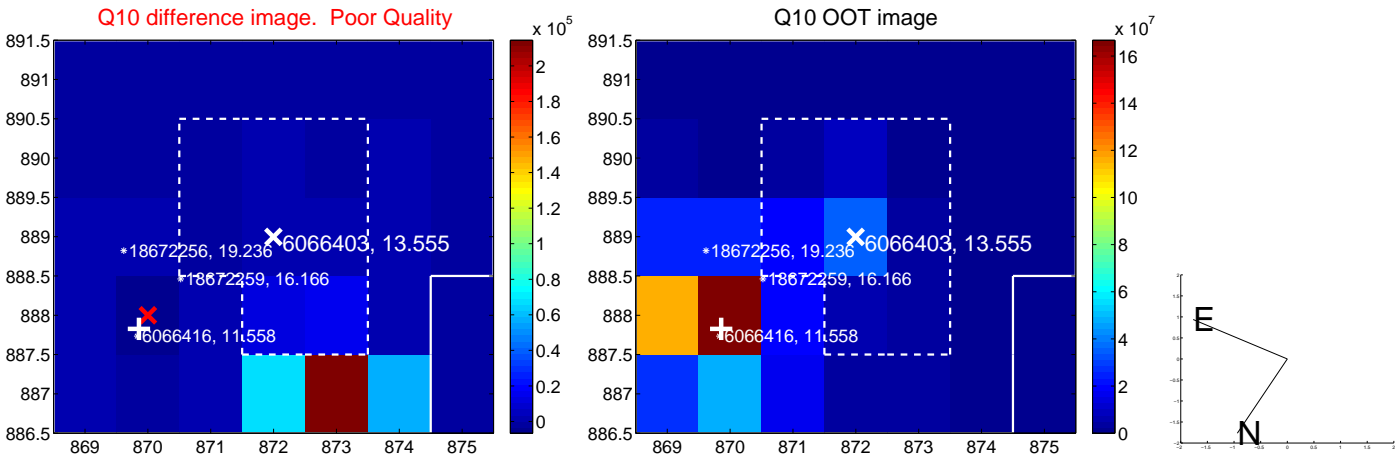
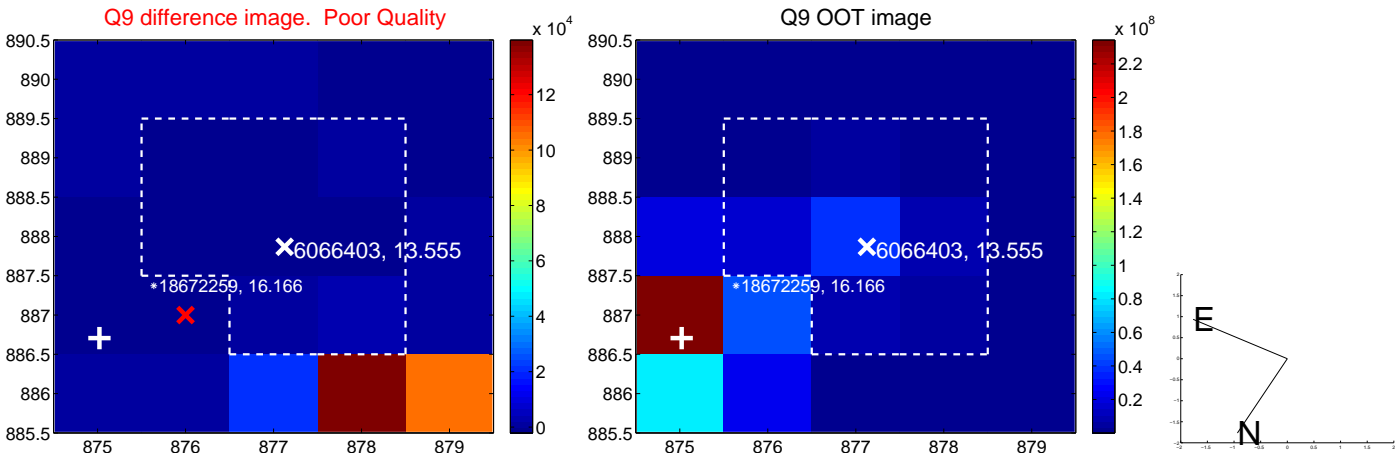
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



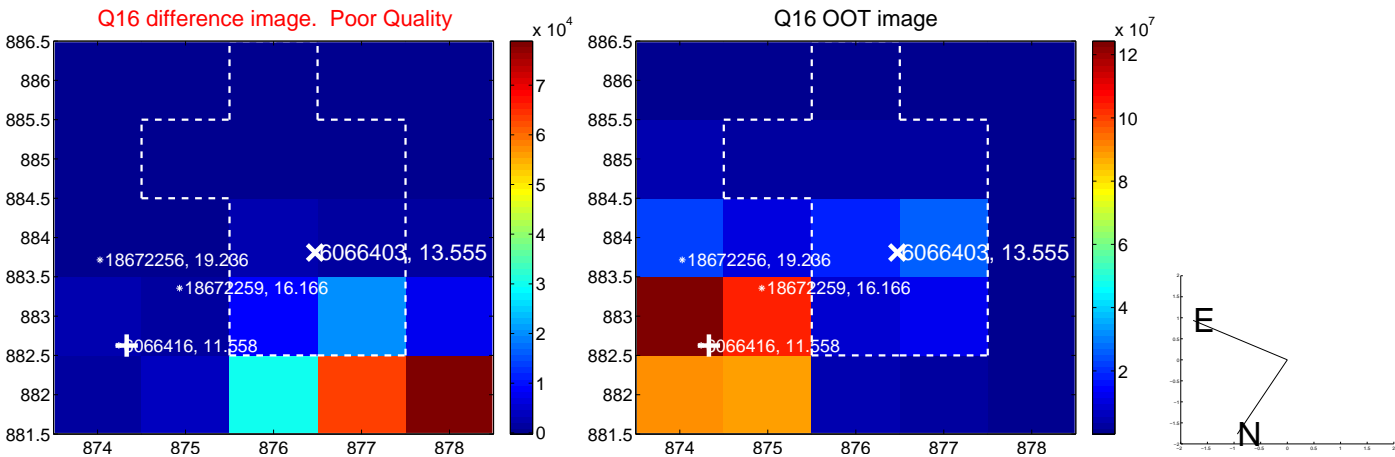
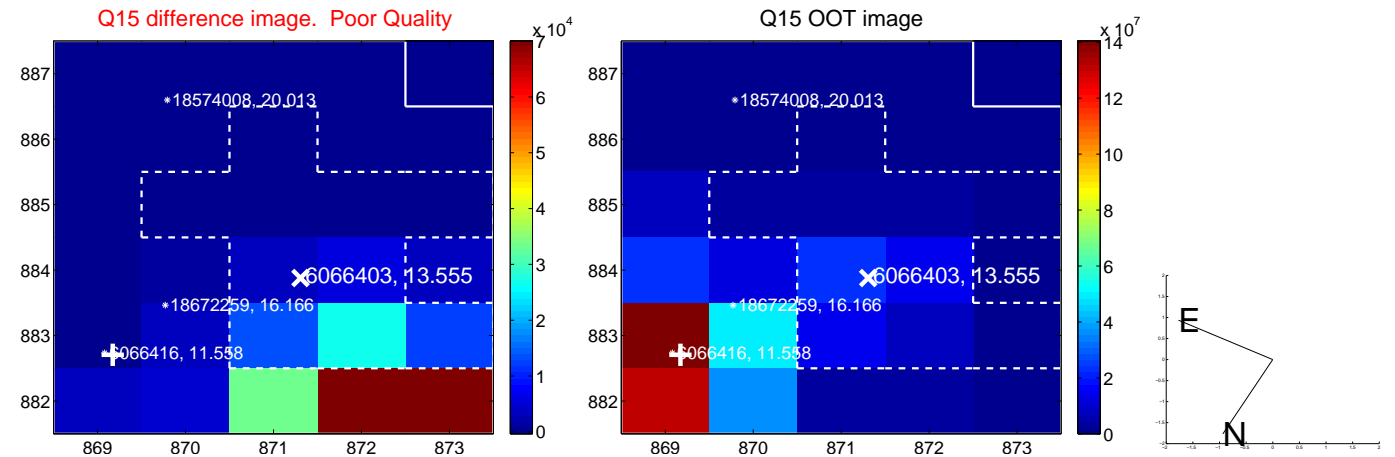
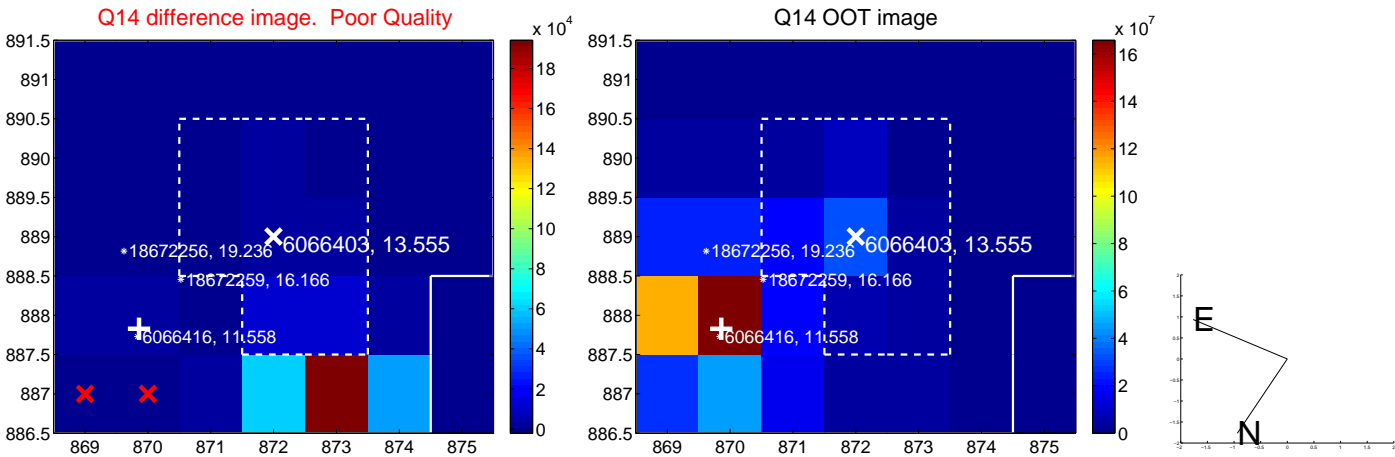
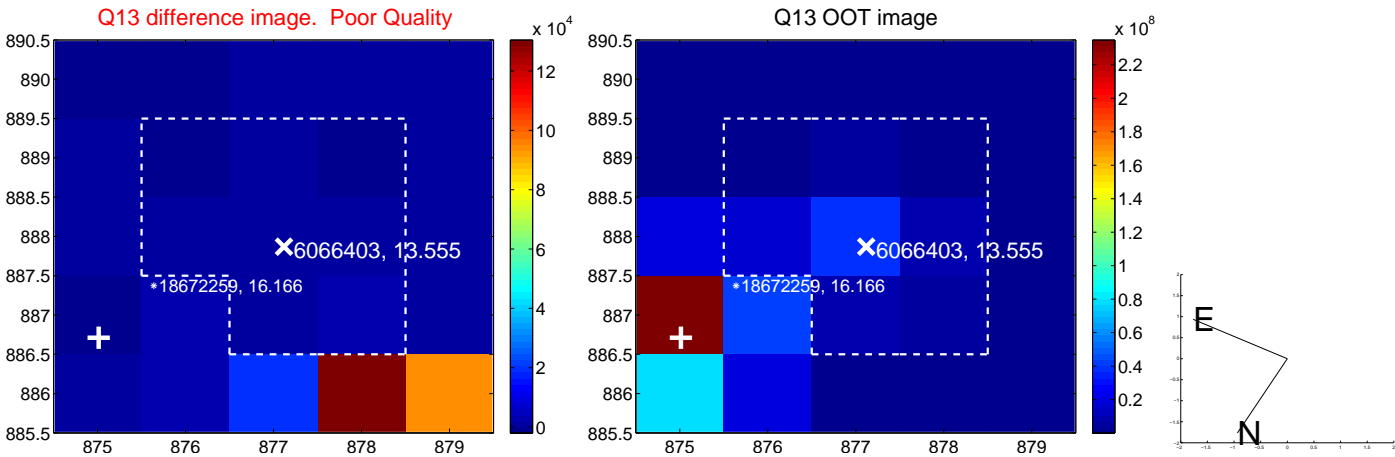
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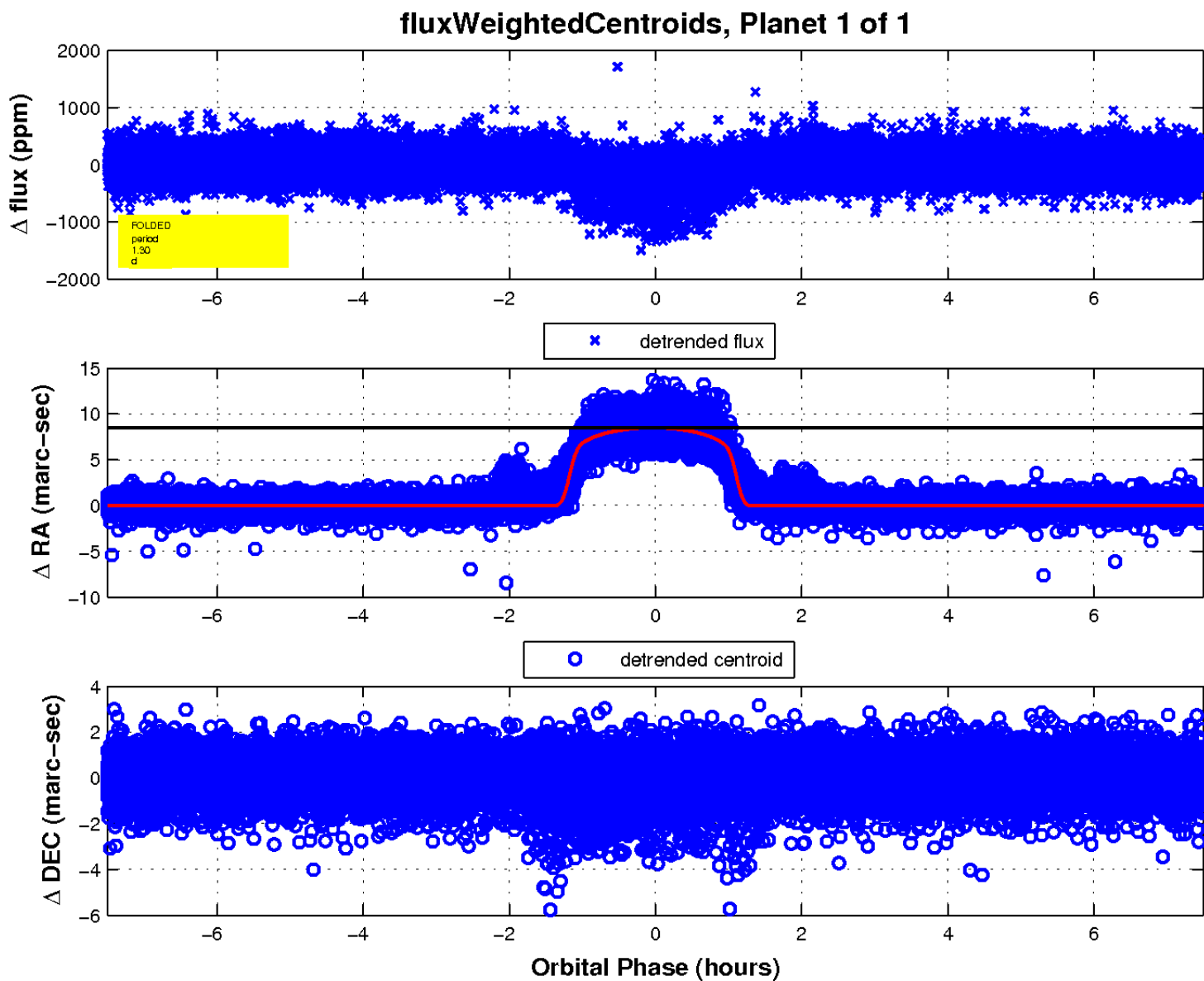
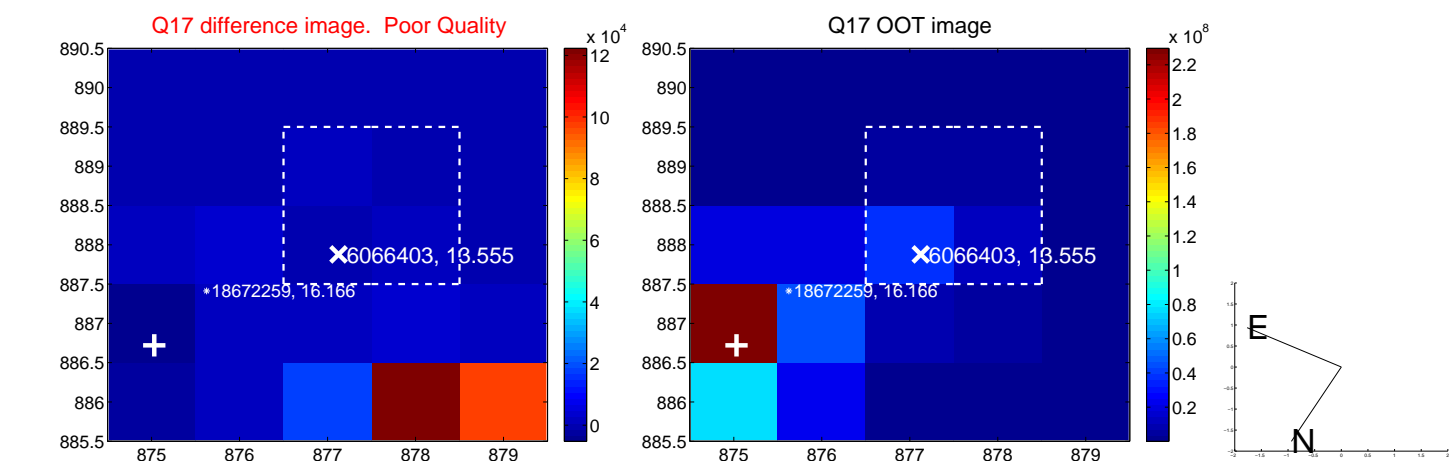
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

