

KIC 006066416

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})
006066416-01	OBS	1057.01	1.303818	131.625504	25.9	2.777	22.0	21.4	1.52	6802	0.90	7772.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006066416-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—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 006066416-01

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
006066416-01	6066416	3649.01	6066379	1:1	14.8	2	-3	15.47	11.55	5137.30	Direct-PRF	0	2.58	1.25

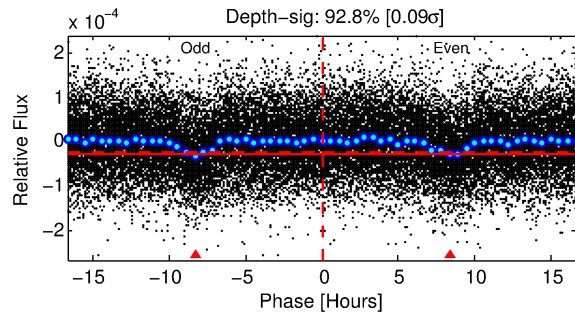
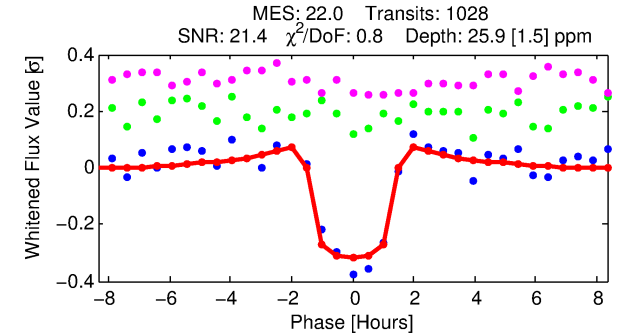
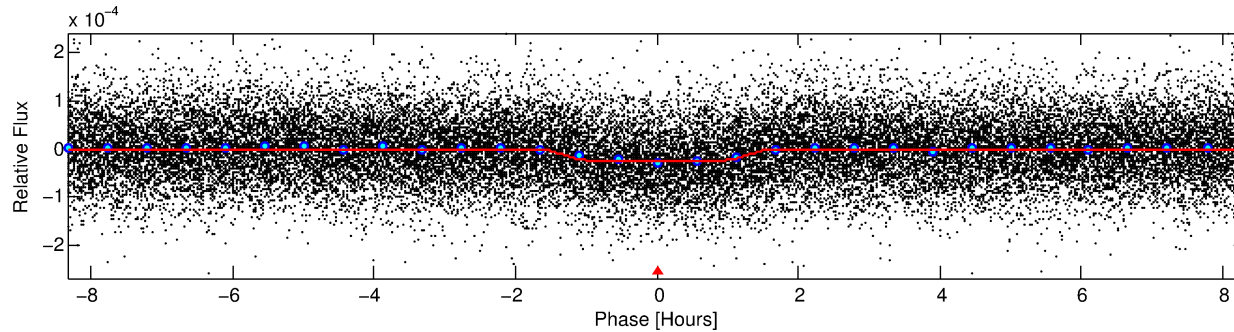
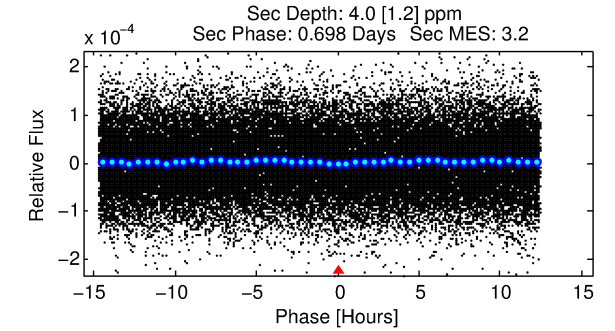
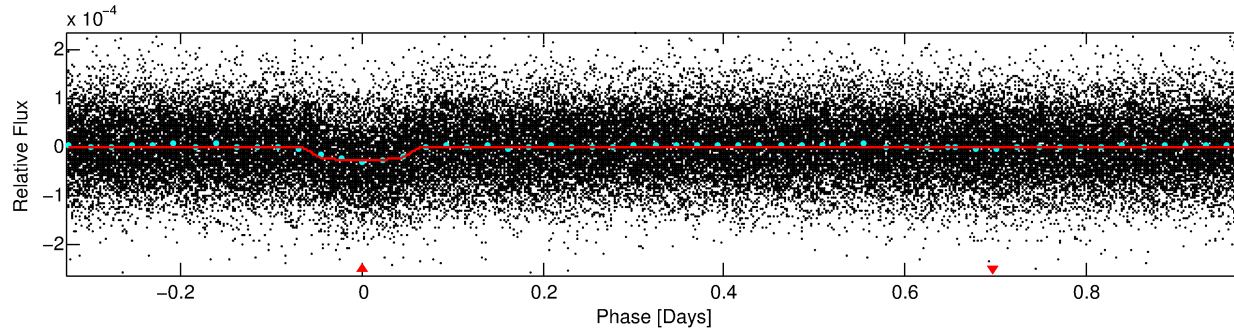
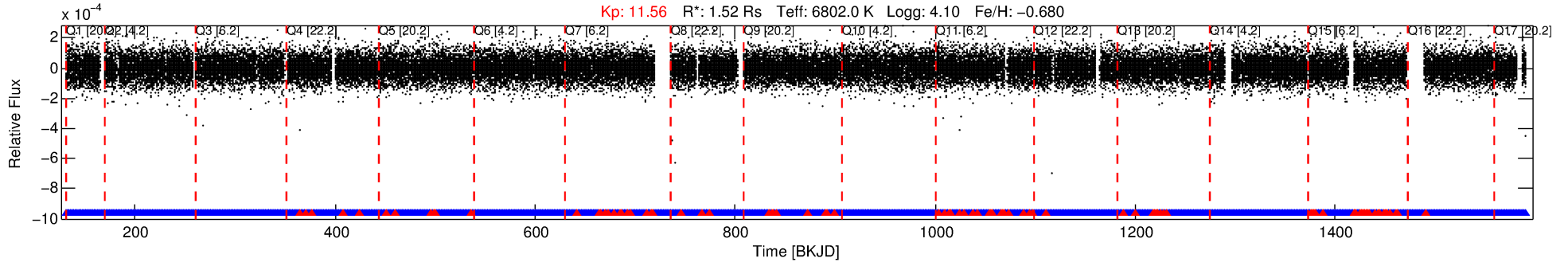
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 6066416 Candidate: 1 of 1 Period: 1.304 d

KOI: K01057.01 Corr: 0.833

Kp: 11.56 R*: 1.52 Rs Teff: 6802.0 K Logg: 4.10 Fe/H: -0.680



DV Fit Results:

Period = 1.30382 [0.00001] d
Epoch = 131.6255 [0.0014] BKJD
Rp/R* = 0.0054 [0.0007]
a/R* = 1.84 [0.93]
b = 0.90 [0.15]
Seff = 7772.68 [3115.11]
Teq = 2394 [240] K
Rp = 0.90 [0.25] Re
a = 0.0239 [0.0057] AU
Ag = 1.53 [0.84] [0.64σ]
Teffp = 4119 [428] K [3.51σ]

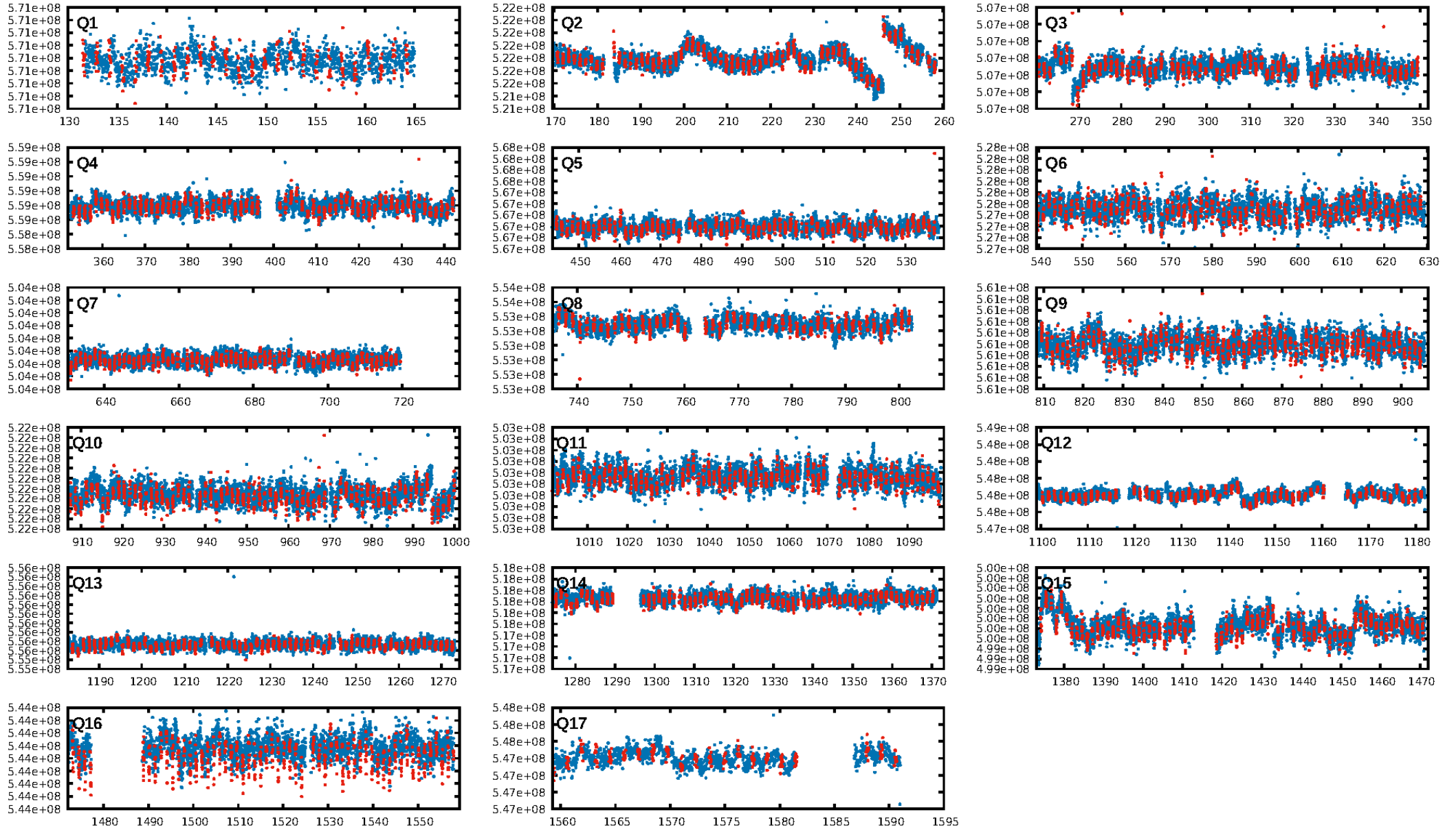
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.78e-98
RollingBand-fgt: 0.91 [889/981]
GhostDiagnostic-chr: -0.1744
Centroid-sig: 0.0%
Centroid-so: 81.603 arcsec [140.69σ]
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]

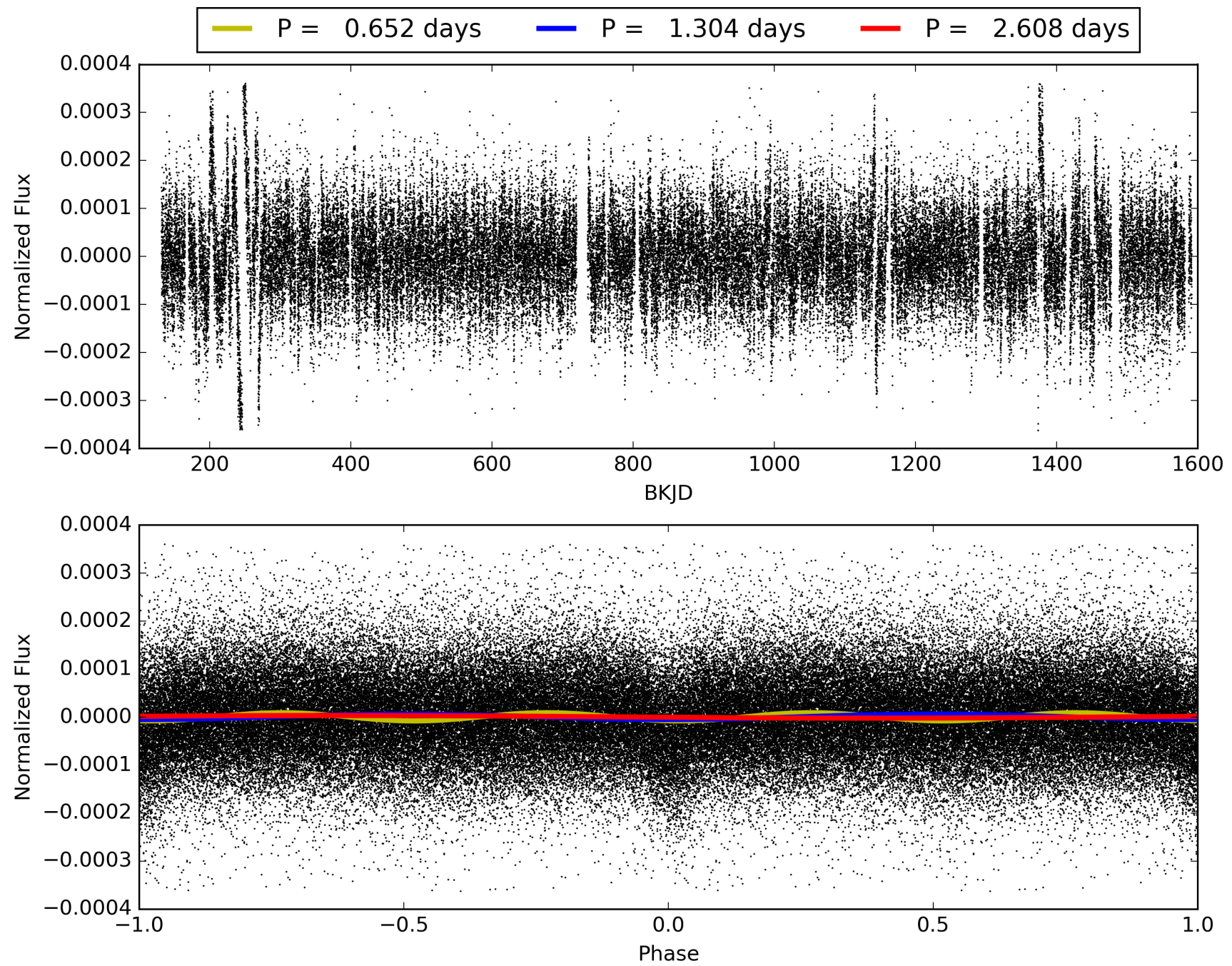
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:22:31 Z

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

TCE 006066416-01, PDC Light Curves

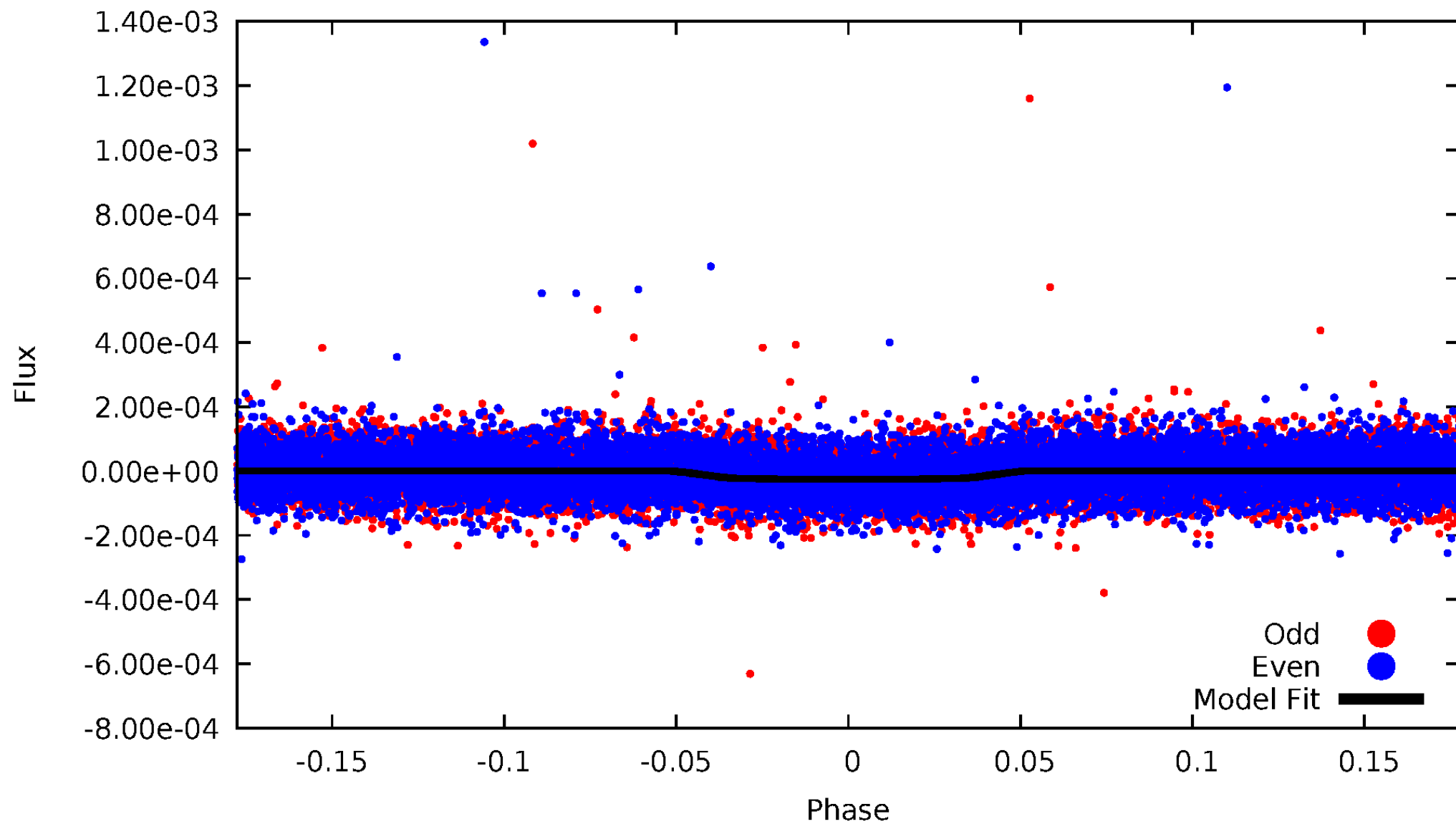


TCE 006066416-01



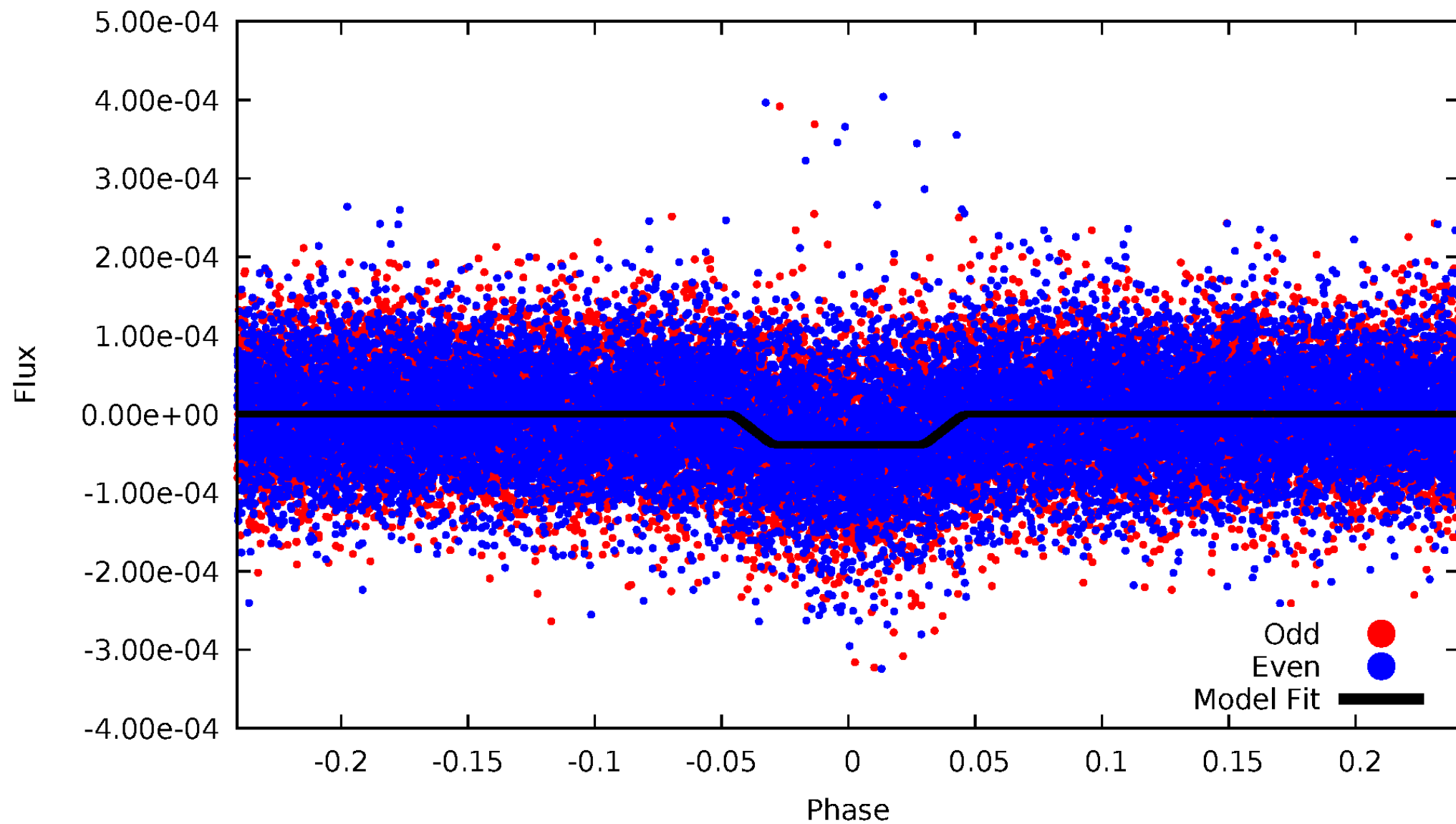
DV Odd/Even

TCE 006066416-01

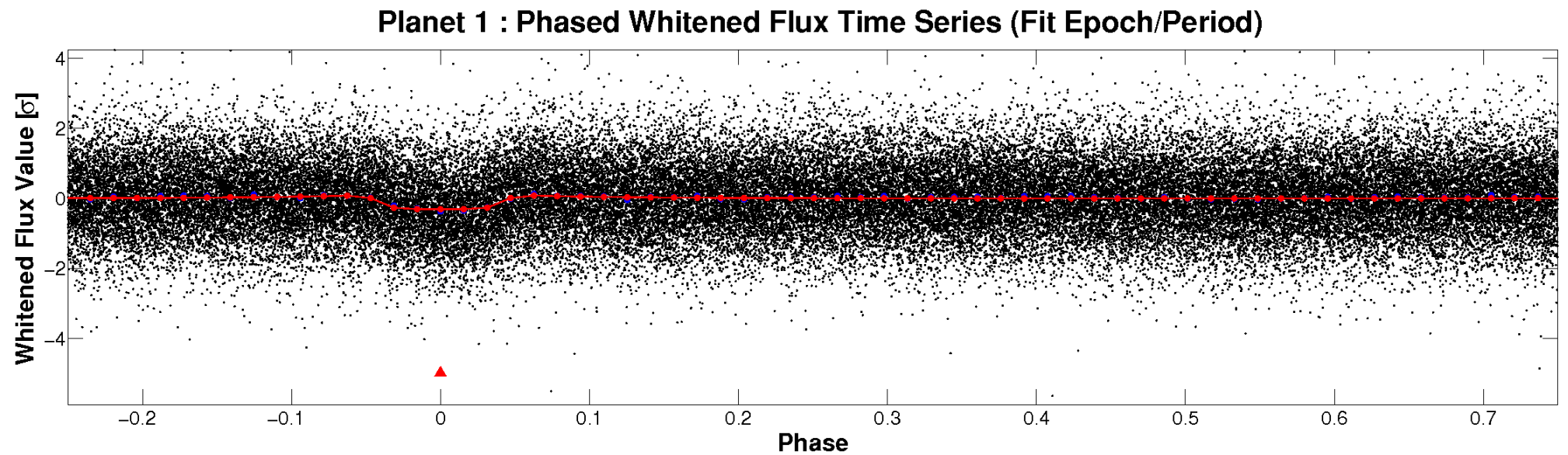
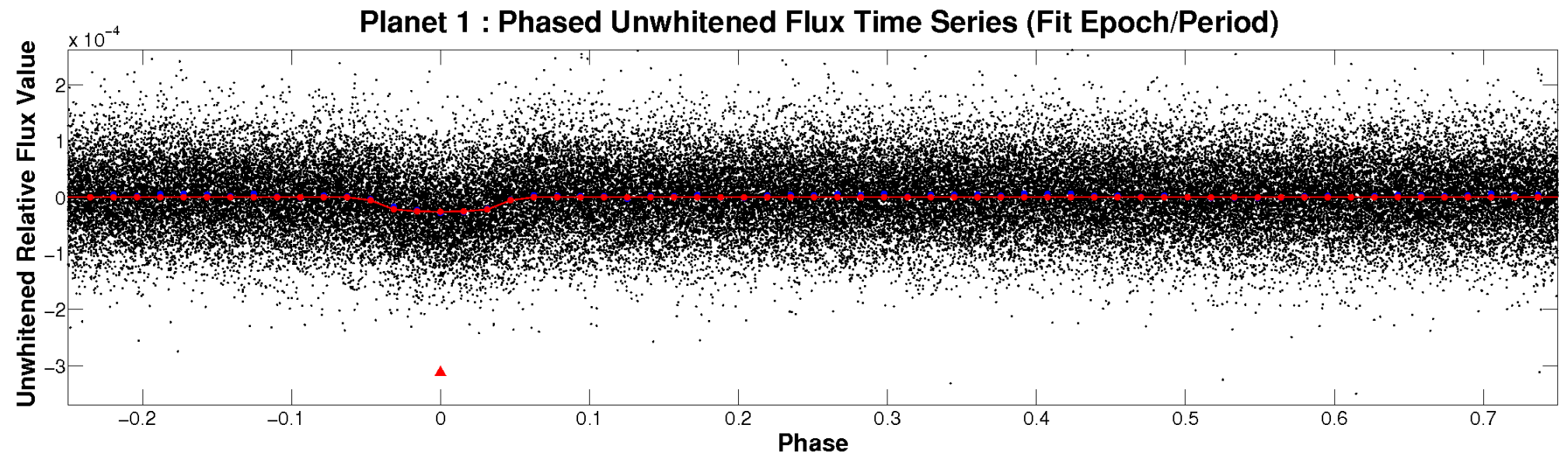


ALT Odd/Even

TCE 006066416-01

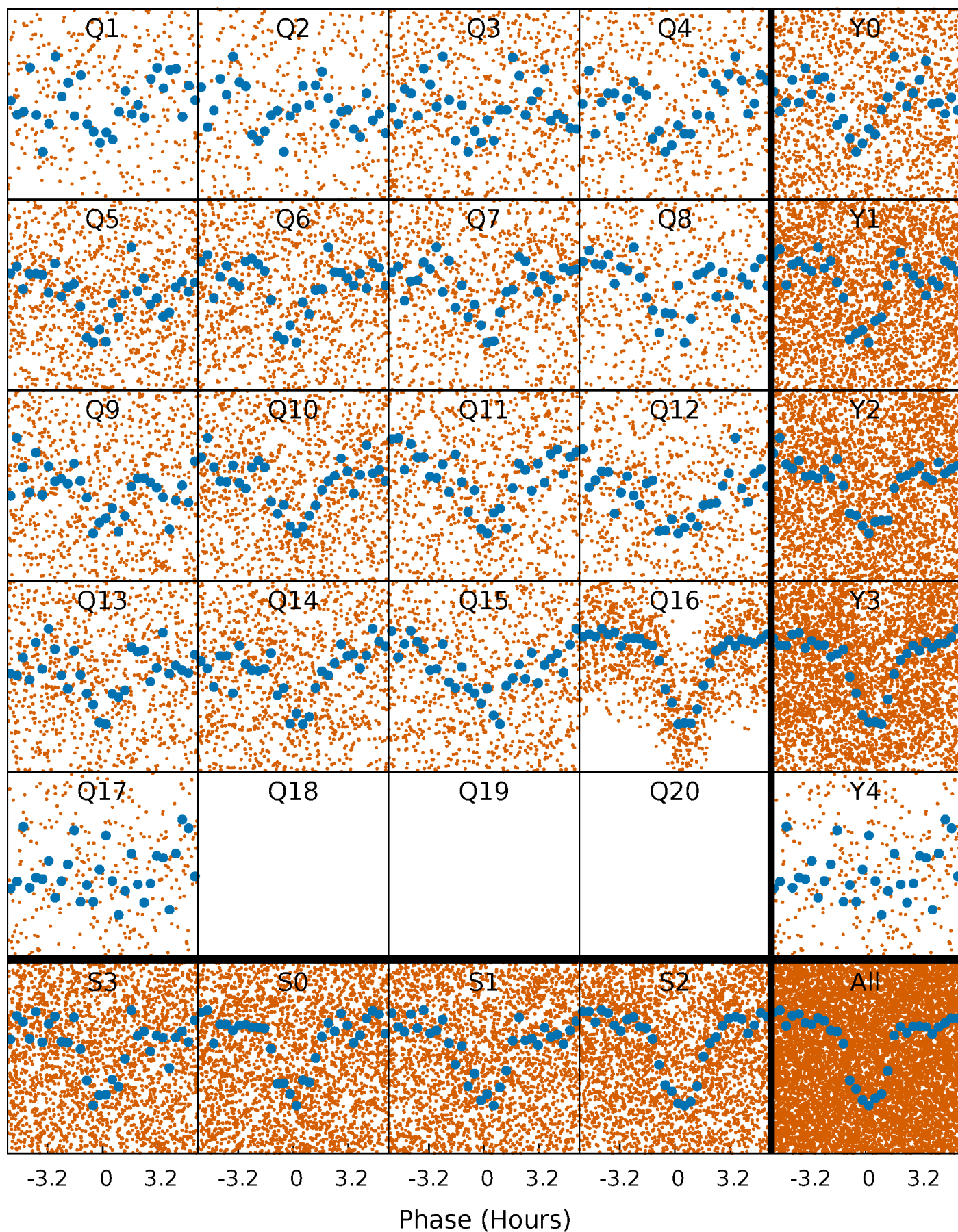


Non-Whitened Vs. Whitened Light Curve



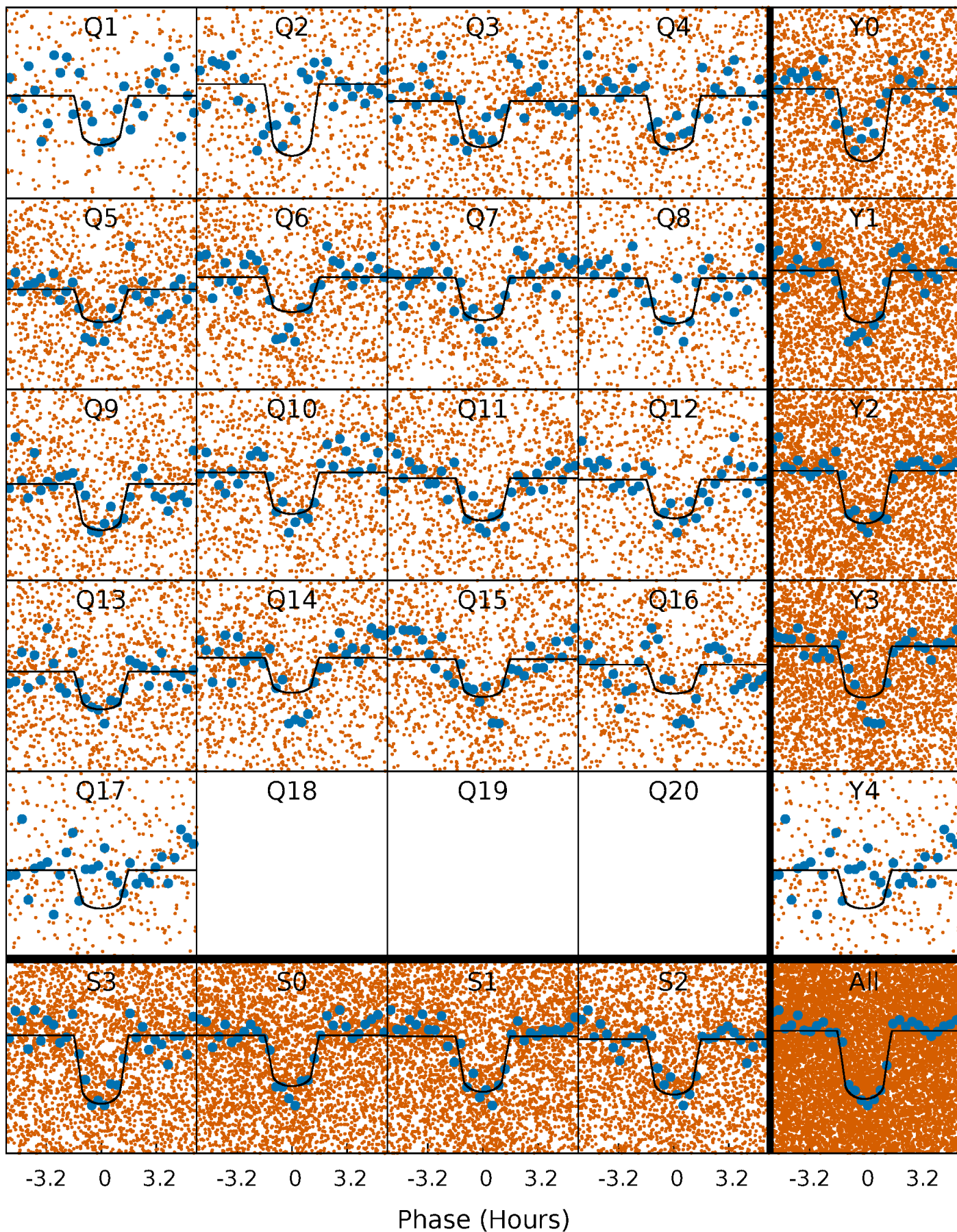
PDC Quarter-Phased Transit Curves

TCE 006066416-01 P= 1.303818 Days $T_0=131.625504$ (BKJD)



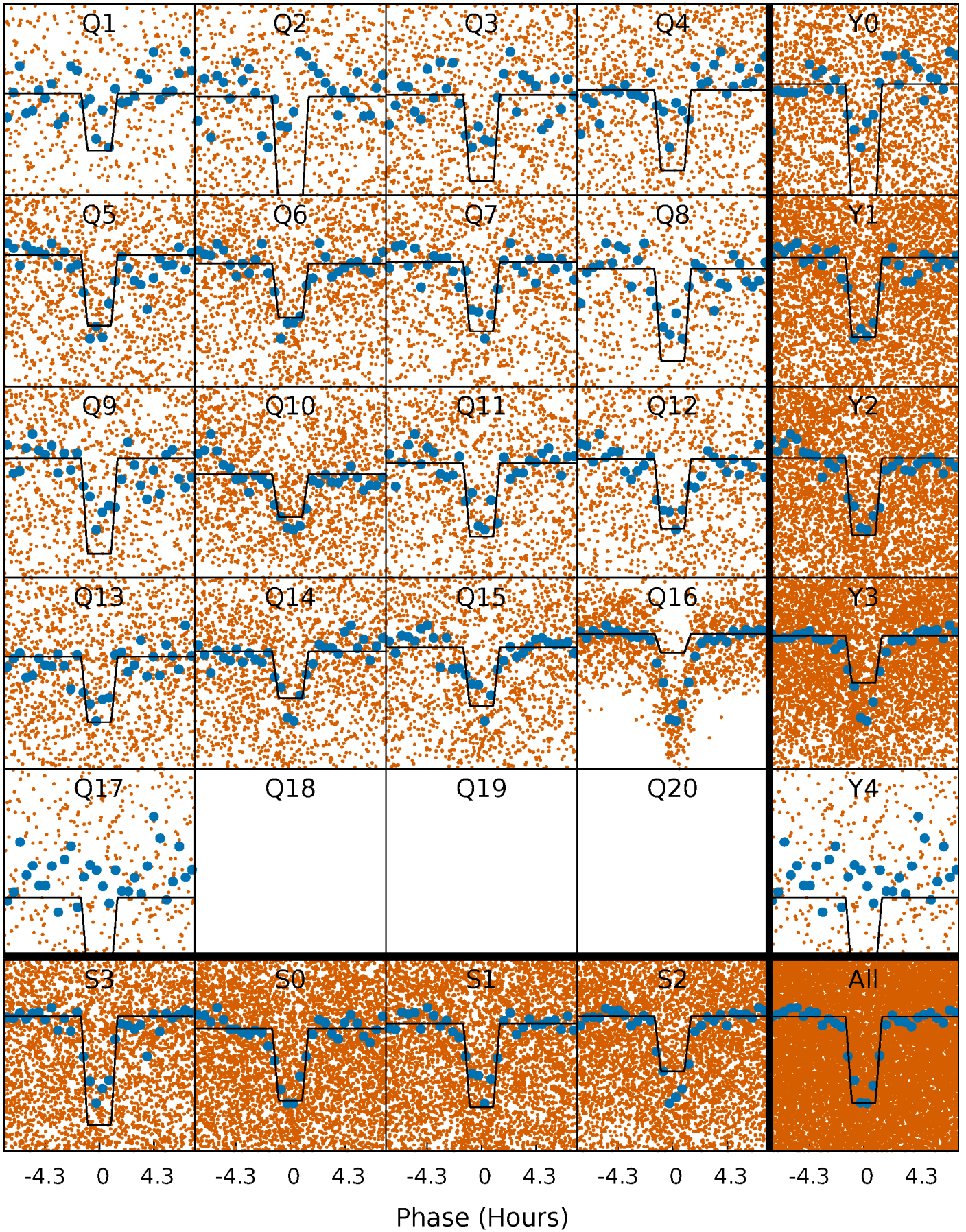
DV Quarter-Phased Transit Curves

TCE 006066416-01 P= 1.303818 Days $T_0=131.625504$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

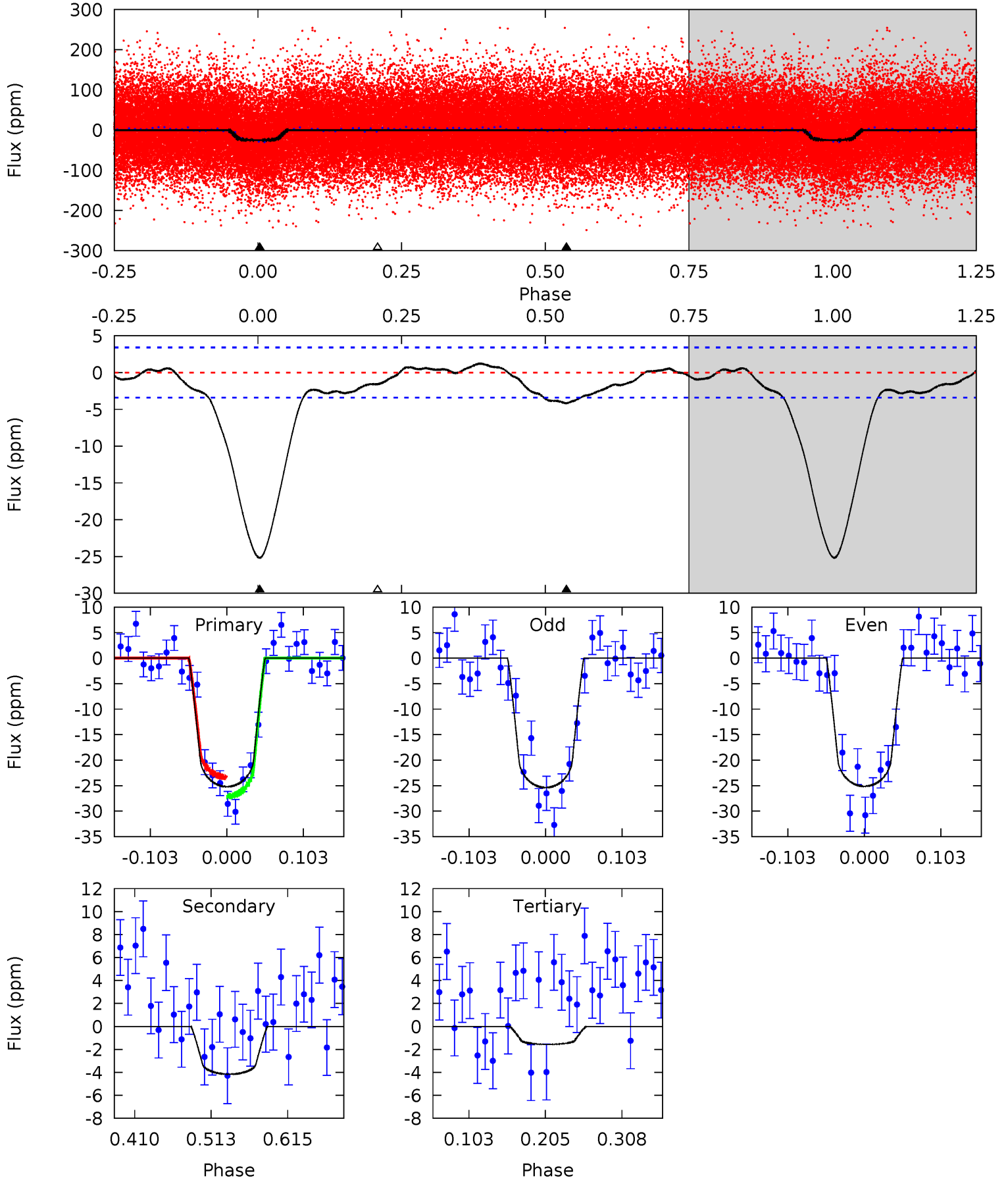
TCE 006066416-01 P= 1.303843 Days $T_0=131.614693$ (BKJD)



DV Model-Shift Uniqueness Test

006066416-01, P = 1.303818 Days, E = 130.321686 Days

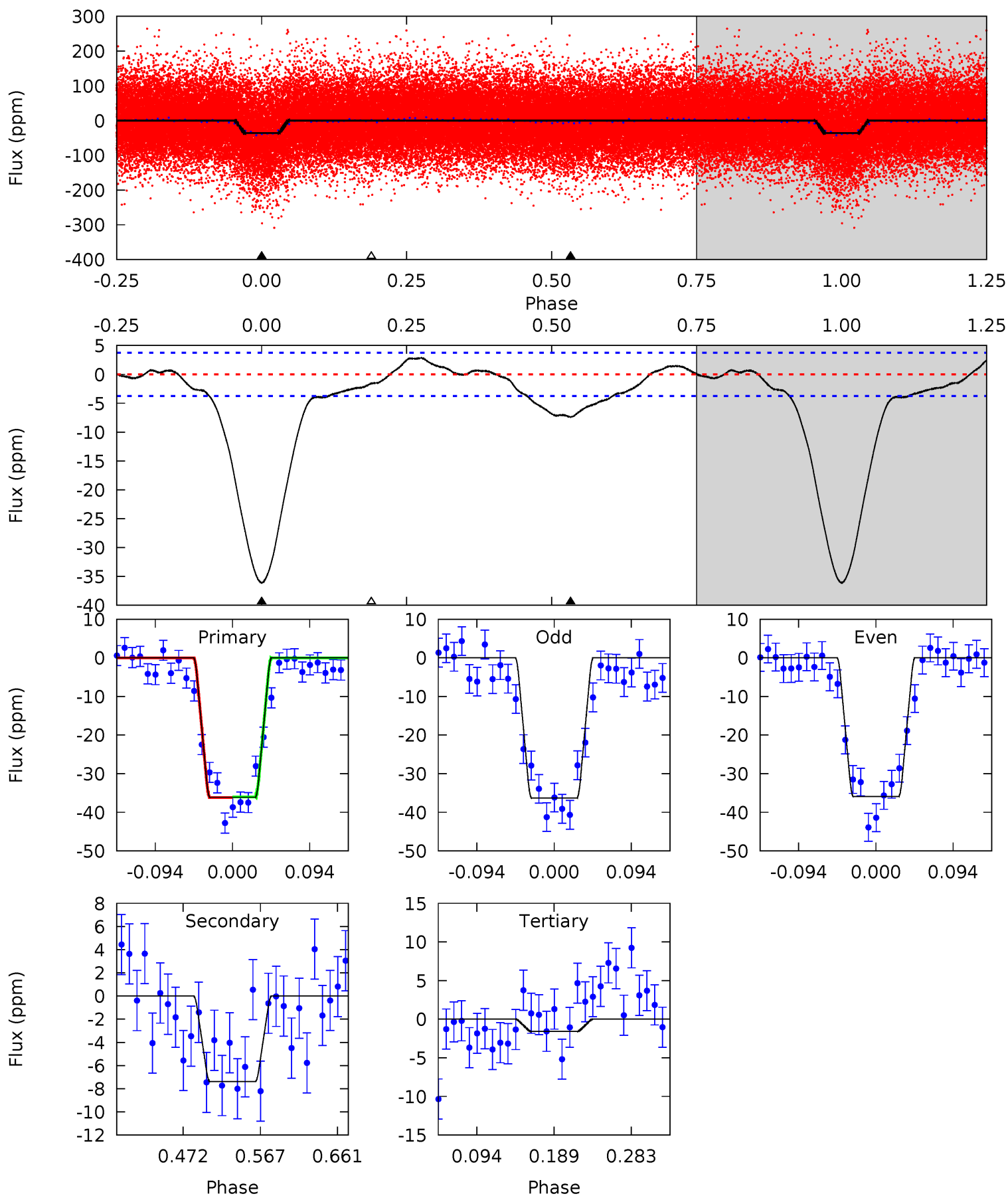
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.7	5.56	2.09	0	4.56	1.63	1.55	31.6	33.7	3.47	5.56	0.17	1.02	0.05	2.52



Alt Model-Shift Uniqueness Test

006066416-01, P = 1.303843 Days, E = 130.310850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.2	9.04	1.95	0	4.58	1.67	2.08	42.2	44.2	7.09	9.04	0.25	1.11	0.07	0.10



Stellar Parameters For KIC 006066416

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6802^{+183}_{-224}	$4.103^{+0.221}_{-0.119}$	$-0.680^{+0.300}_{-0.300}$	$1.521^{+0.313}_{-0.383}$	$1.069^{+0.162}_{-0.122}$	$0.428^{+0.543}_{-0.152}$
	+3%/-3%	+5%/-3%	+44%/-44%	+21%/-25%	+15%/-11%	+127%/-36%
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 006066416-01 / KOI 1057.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$0.89^{+0.17}_{-0.15}$	3307^{+199}_{-240}	4175^{+320}_{-297}	$1.633^{+0.852}_{-0.511}$
Alt.	-7 ± 1	$1.01^{+0.19}_{-0.16}$	3293^{+214}_{-244}	4474^{+290}_{-245}	$2.274^{+1.009}_{-0.641}$

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

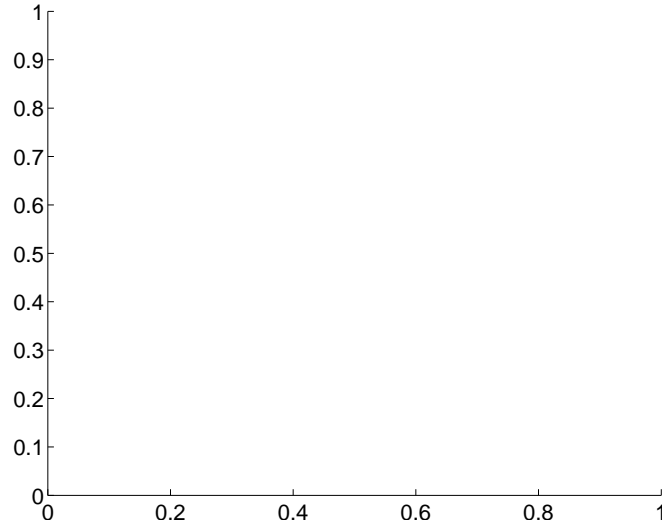
Supplemental centroid analysis for 006066416-01. **Kepler magnitude: 11.56.** Transit SNR 21.40

There are 0 quarters with good PRF difference image offsets

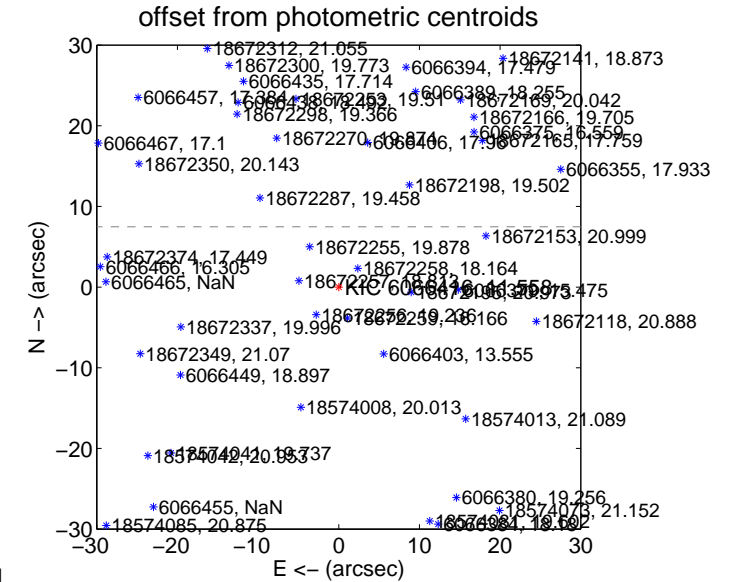
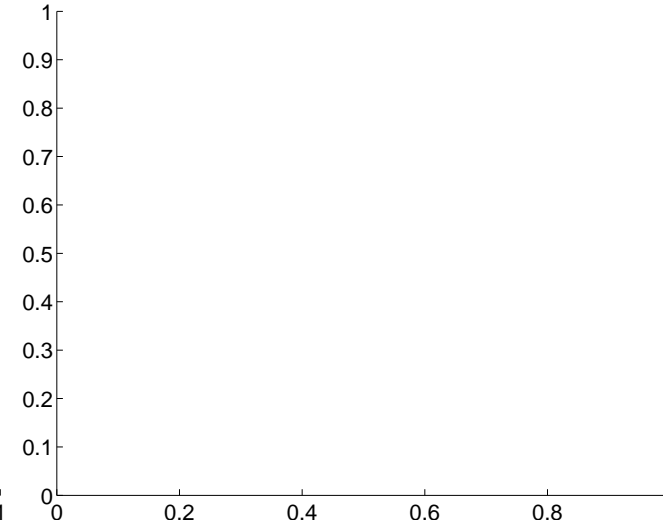
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	81.60 \pm 0.58	140.69	-81.26 \pm 0.58	7.48 \pm 0.49

There is no PRF-fit offset from OOT-fit

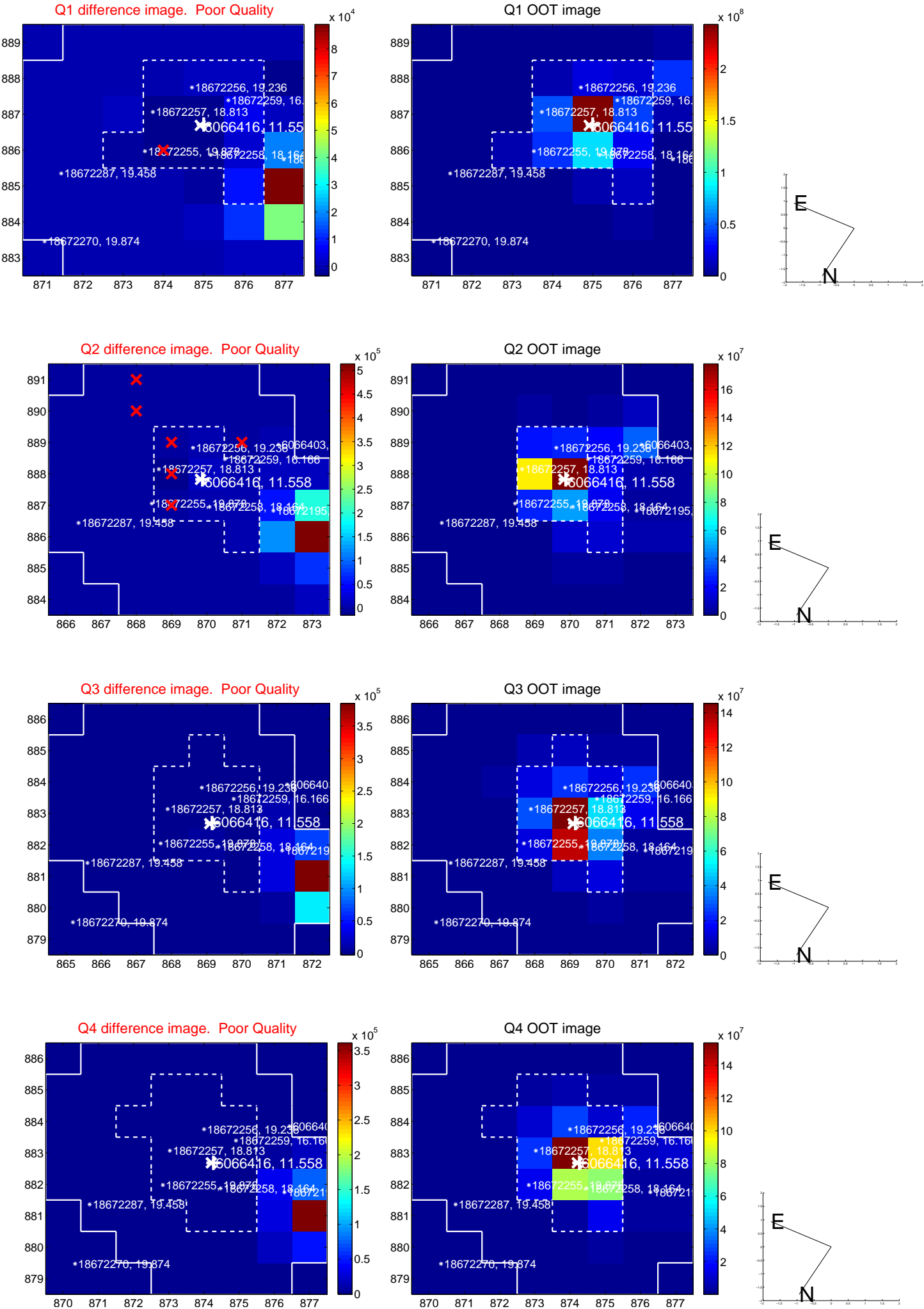


There is no PRF-fit offset from KIC

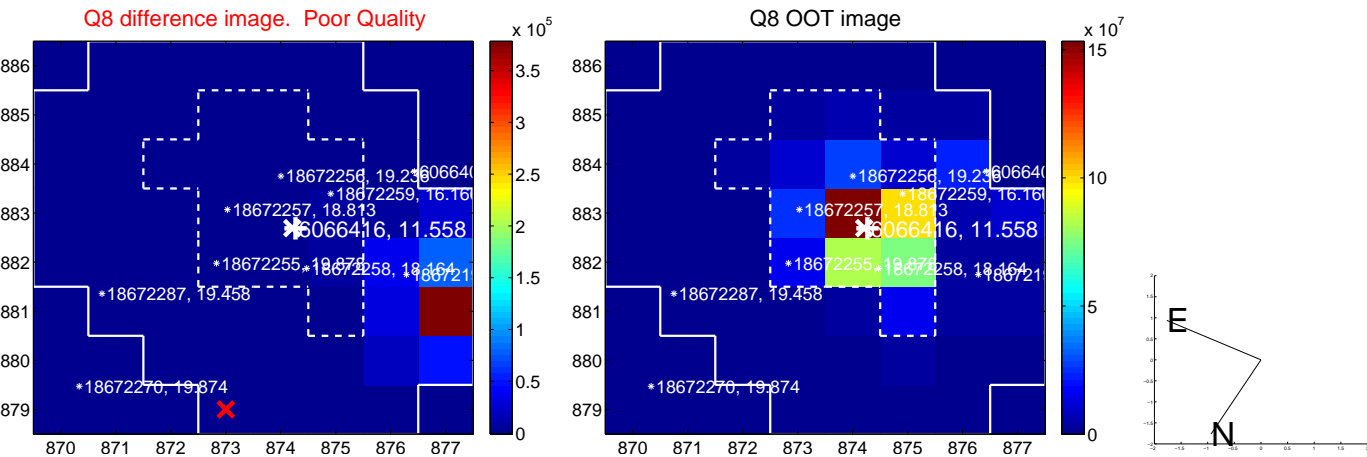
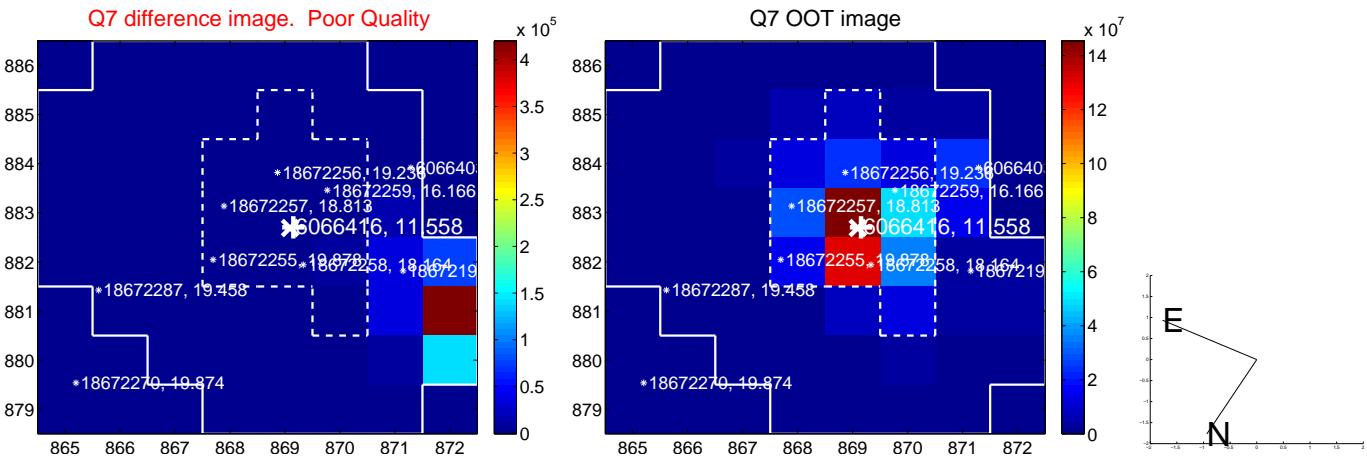
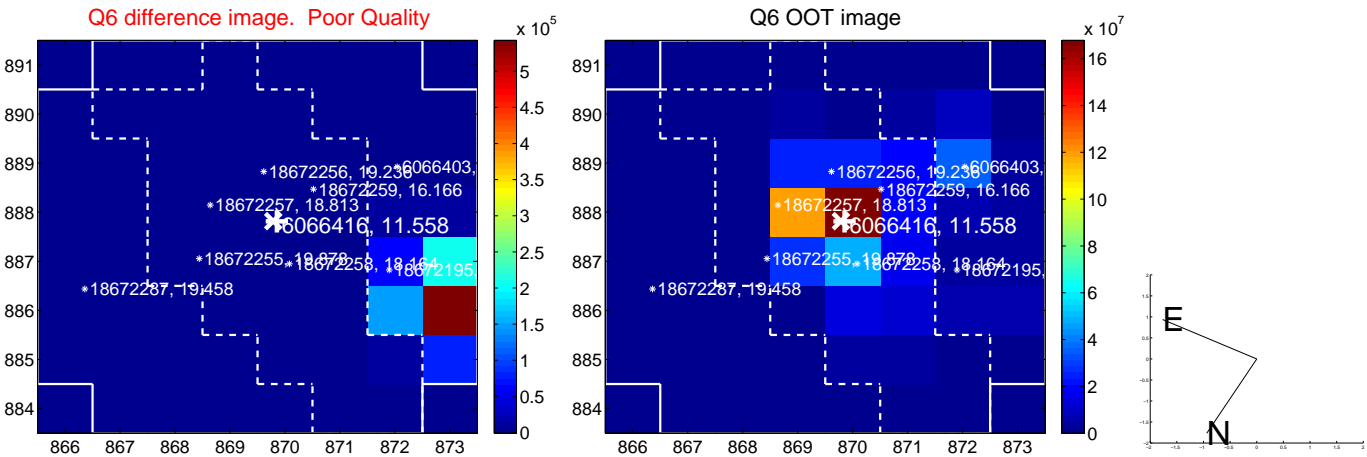
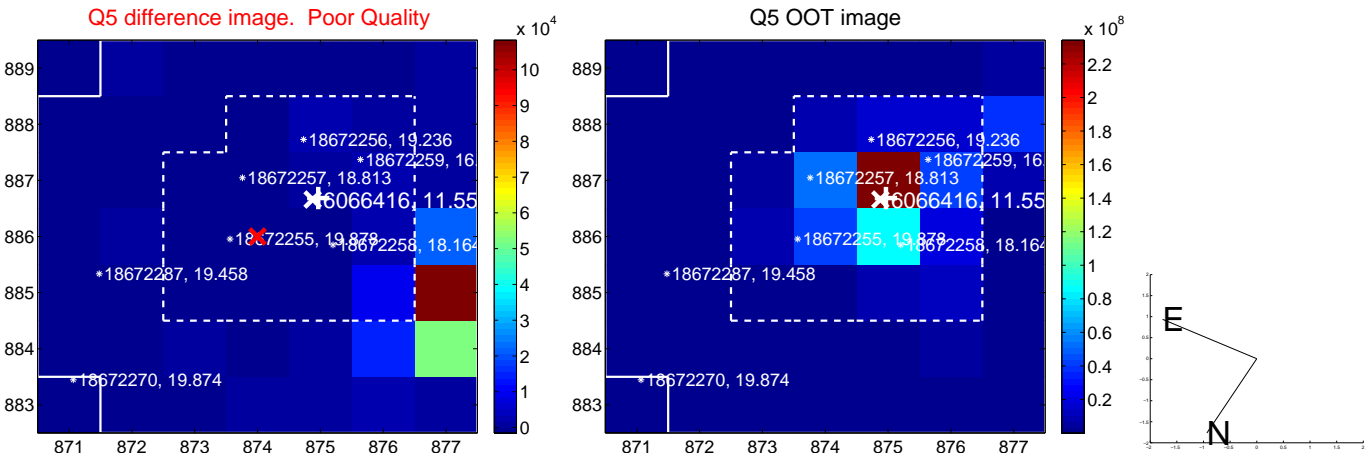


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

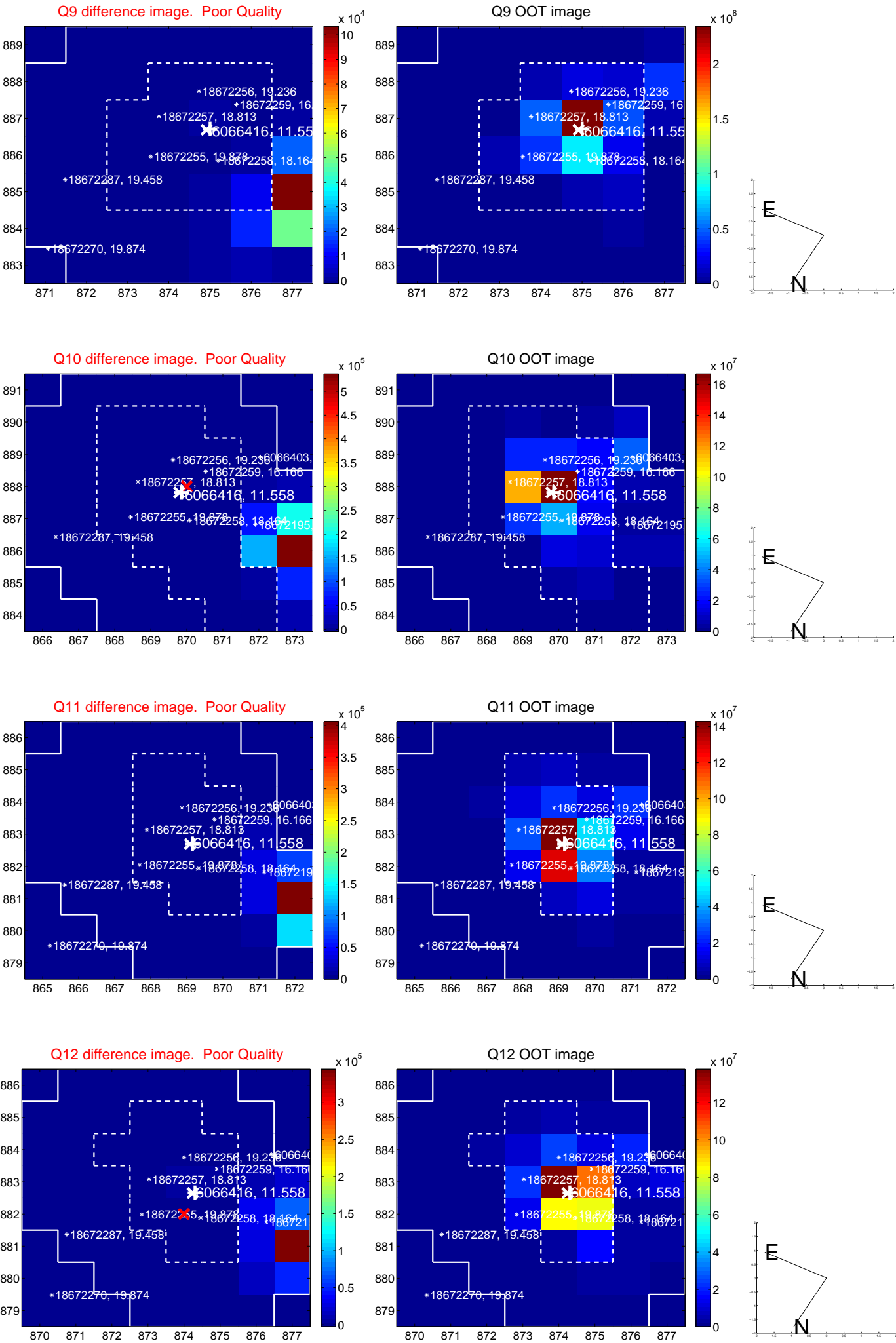
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



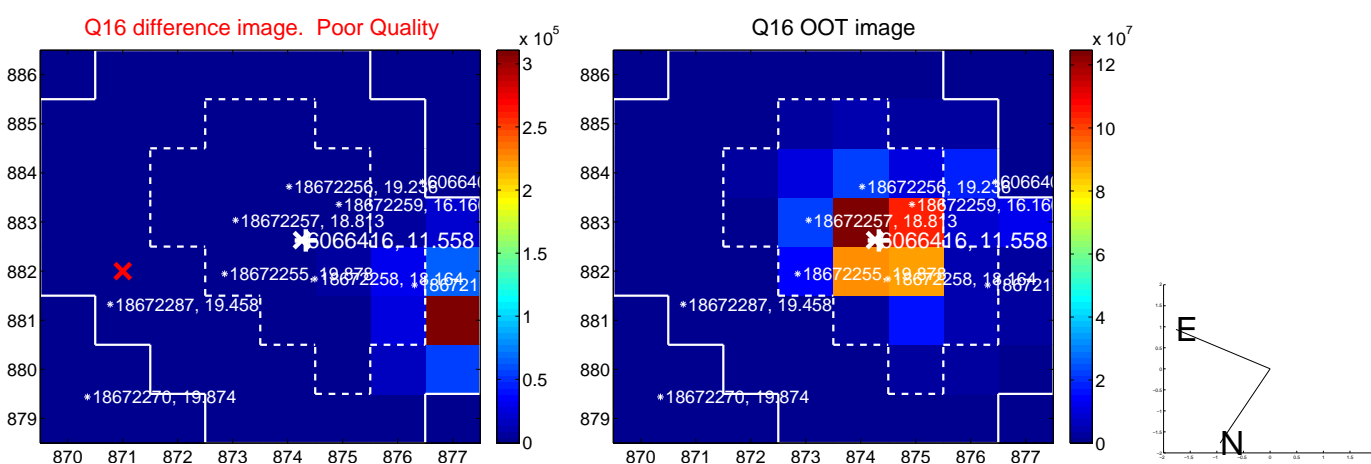
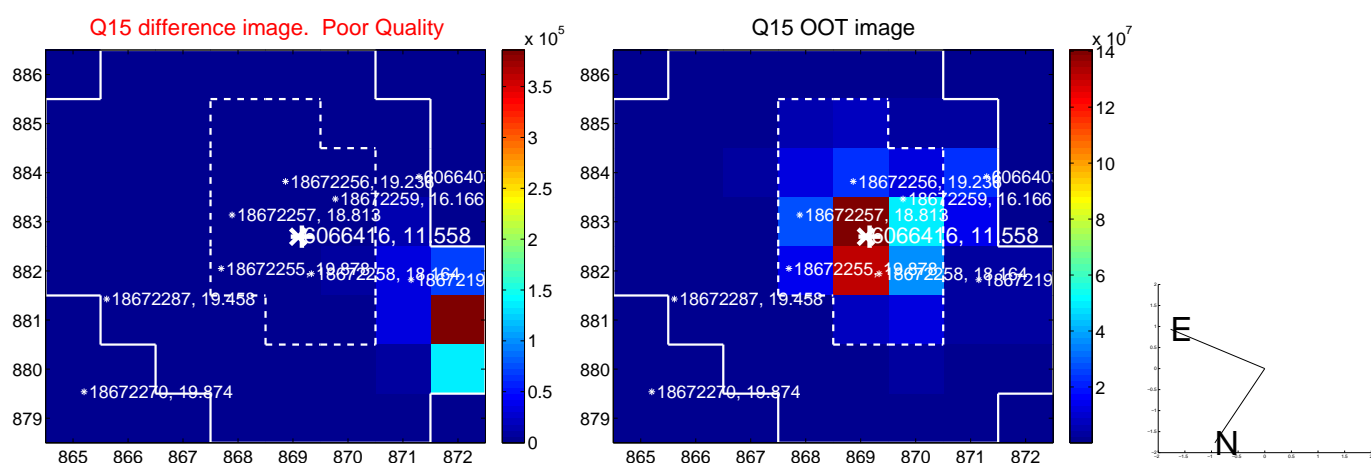
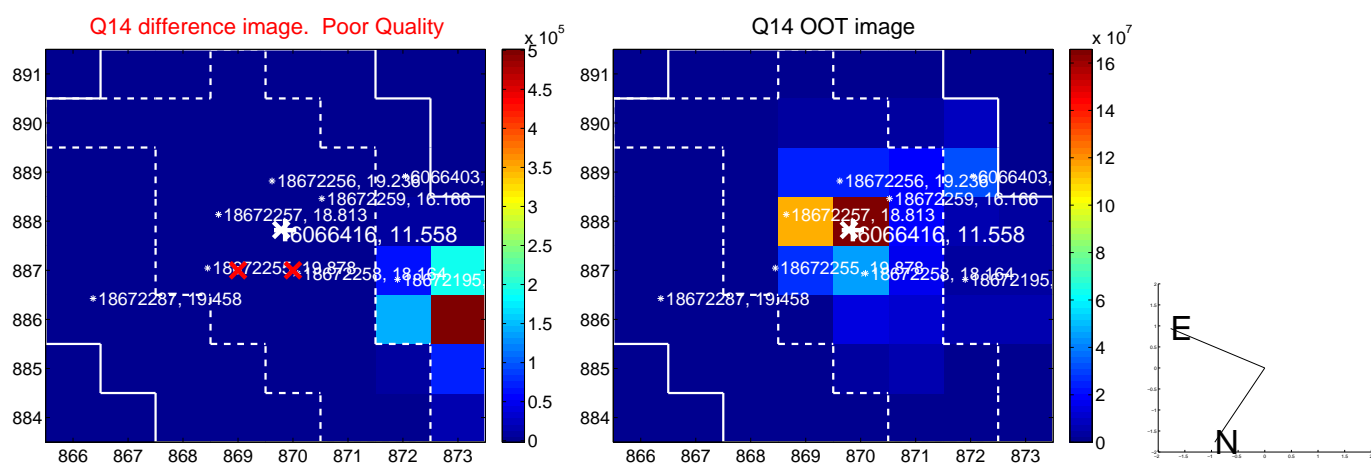
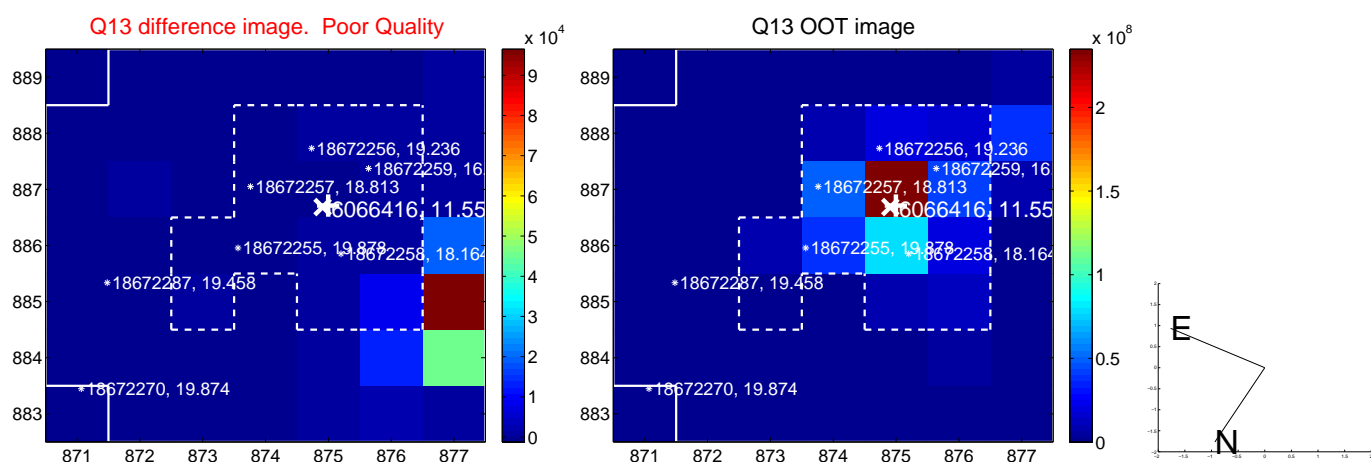
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



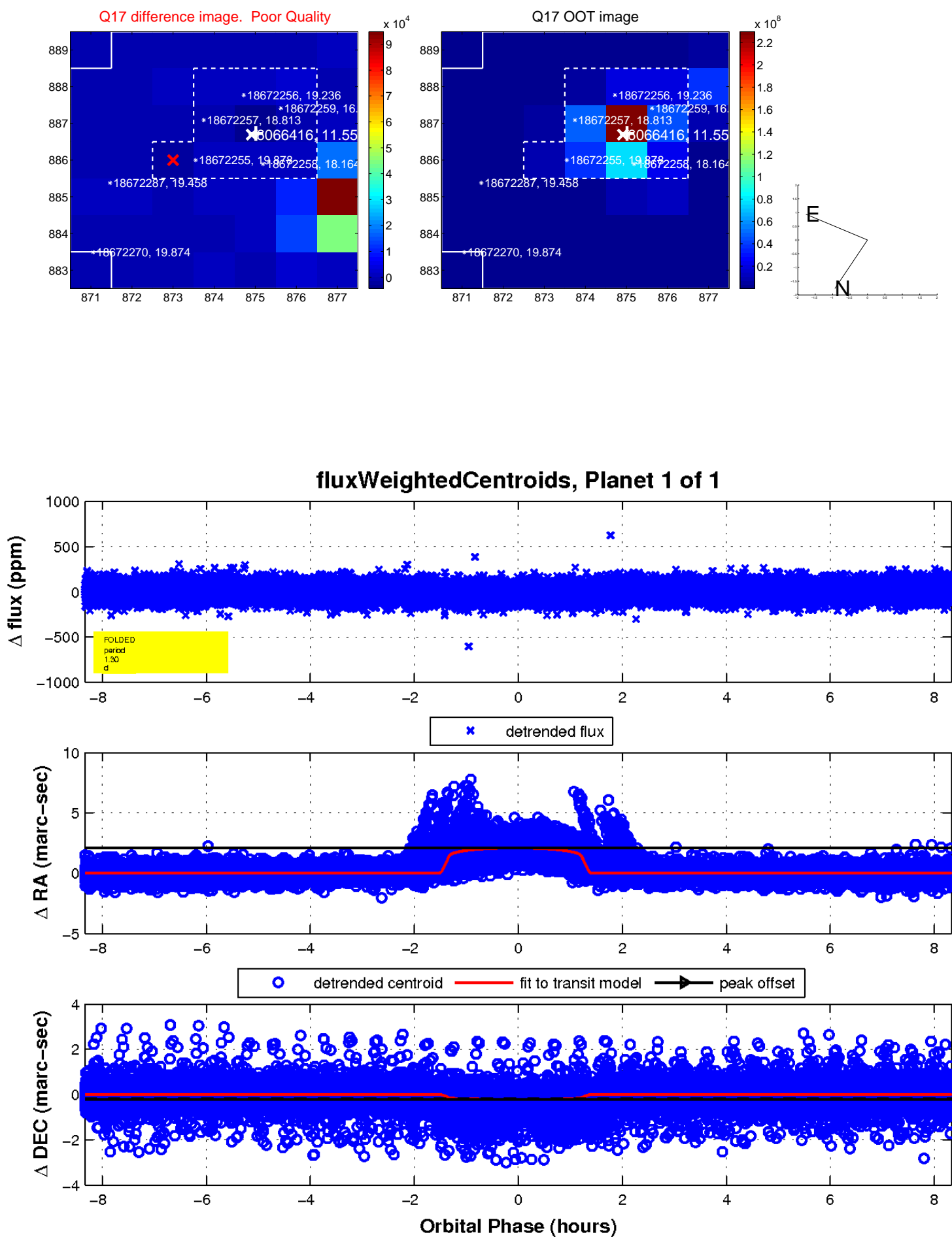
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

