

KIC 009777089

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})
009777089-01	OBS	7962.01	19.229999	132.580699	108.4	4.989	7.5	7.7	1.71	6654	2.06	209.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009777089-01	OBS	FP	0.00	1	0	1	1	MOD_NONUNIQ_ALT—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.

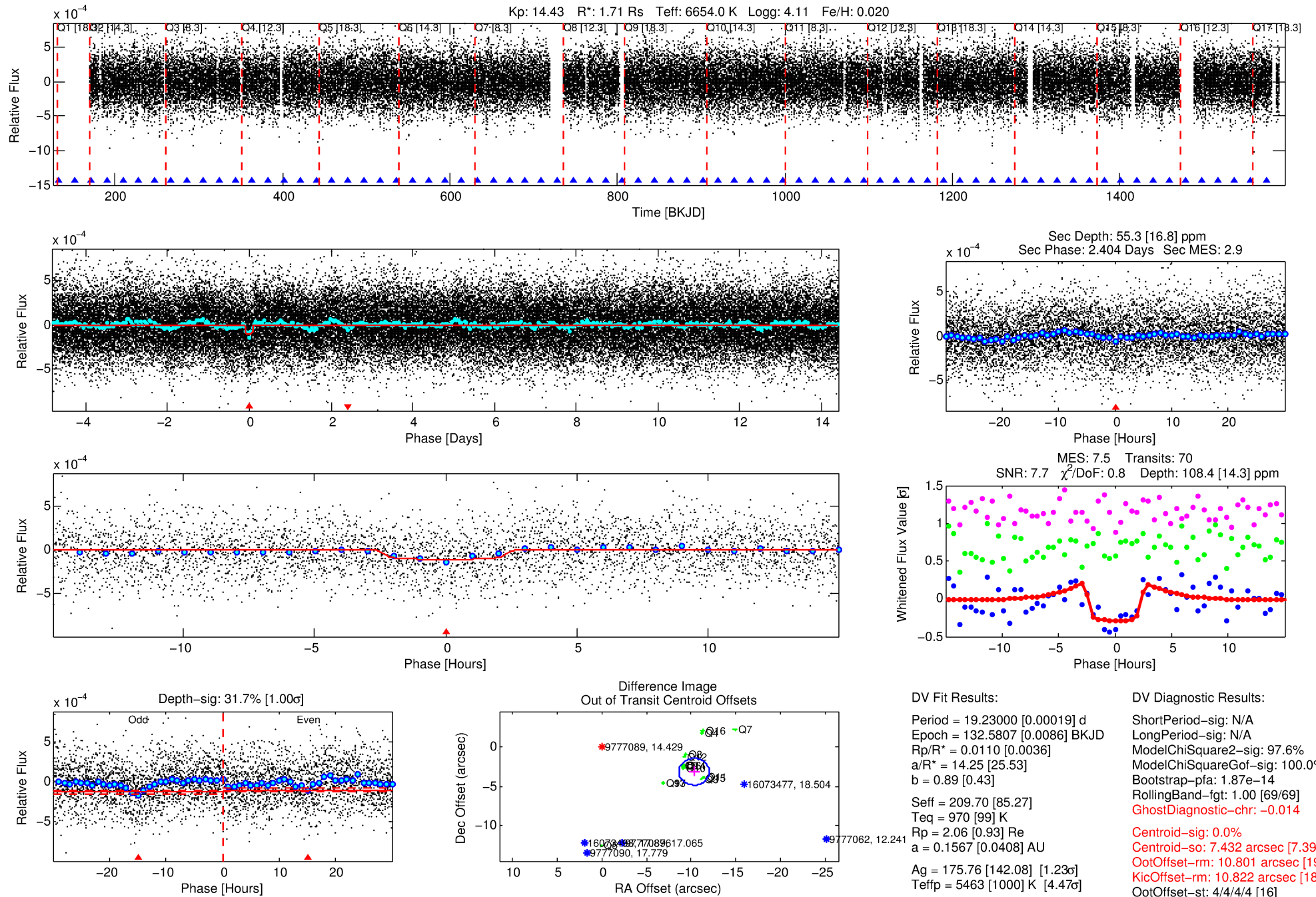
Ephemeris Match Information For 009777089-01

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
009777089-01	9777089	009777062-01	9777062	1:1	27.7	-7	0	12.24	14.43	2469.20	Direct-PRF	0	0.04	0.01

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

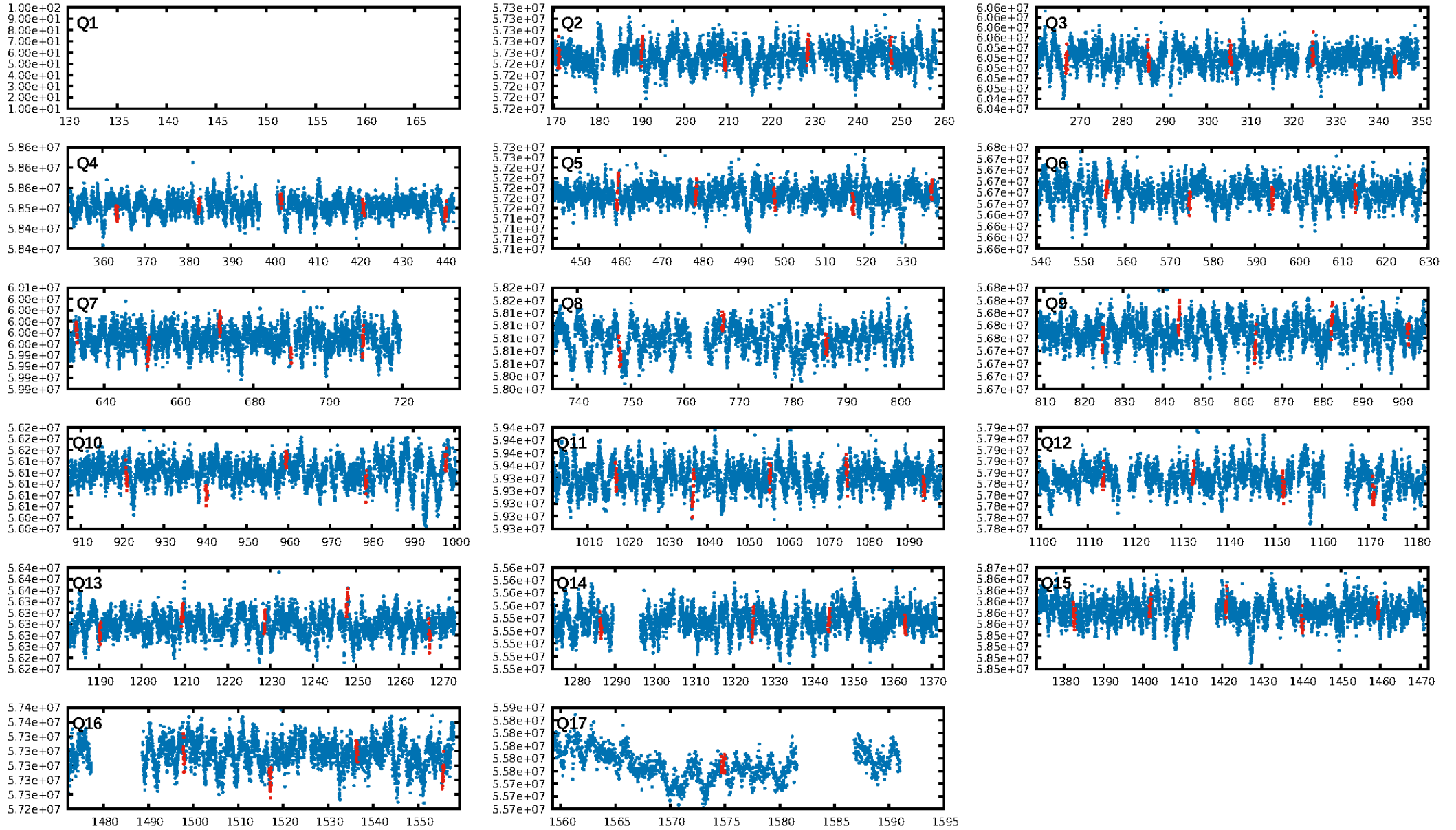
KIC: 9777089 Candidate: 1 of 1 Period: 19.230 d



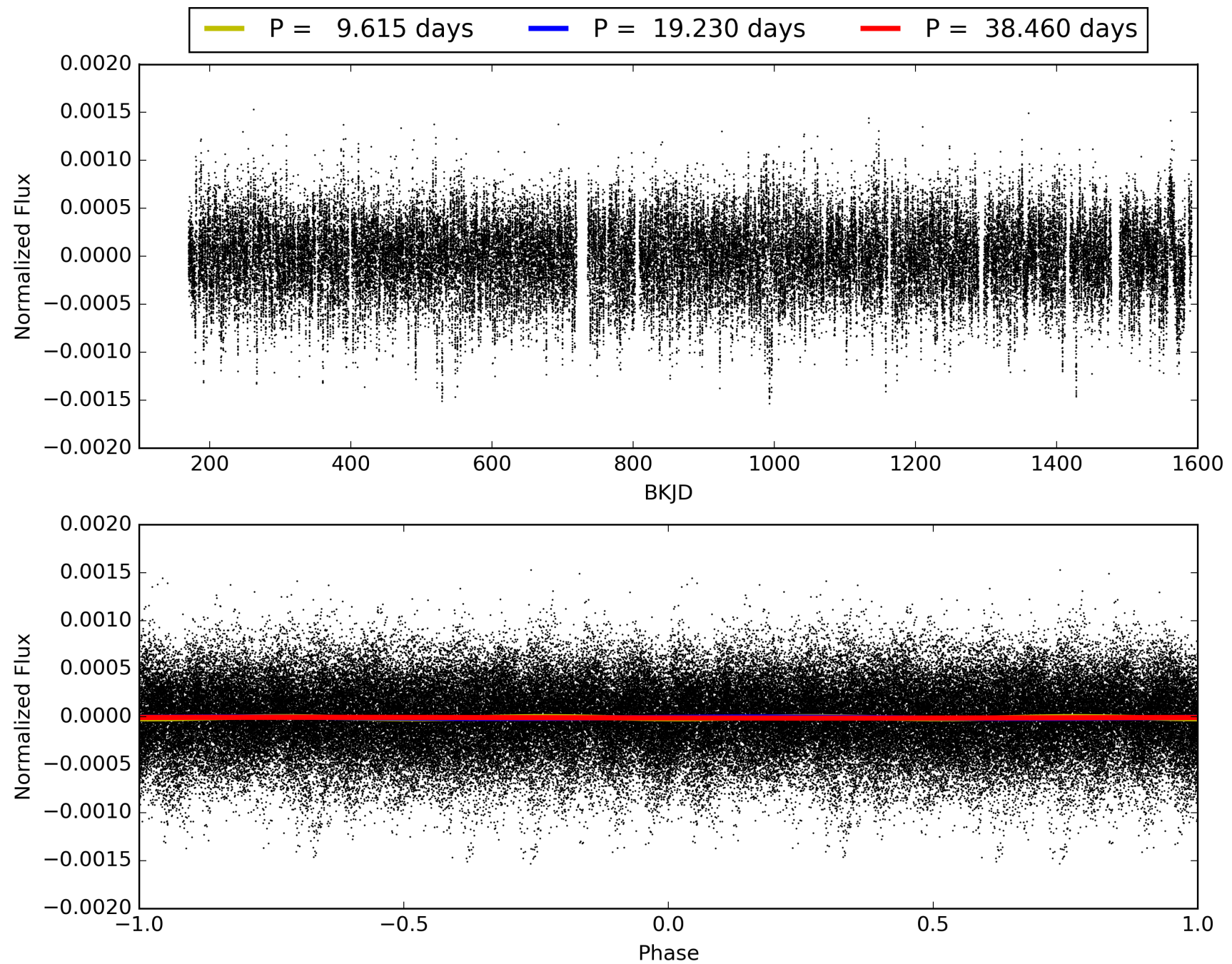
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:59:03 Z

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

TCE 009777089-01, PDC Light Curves

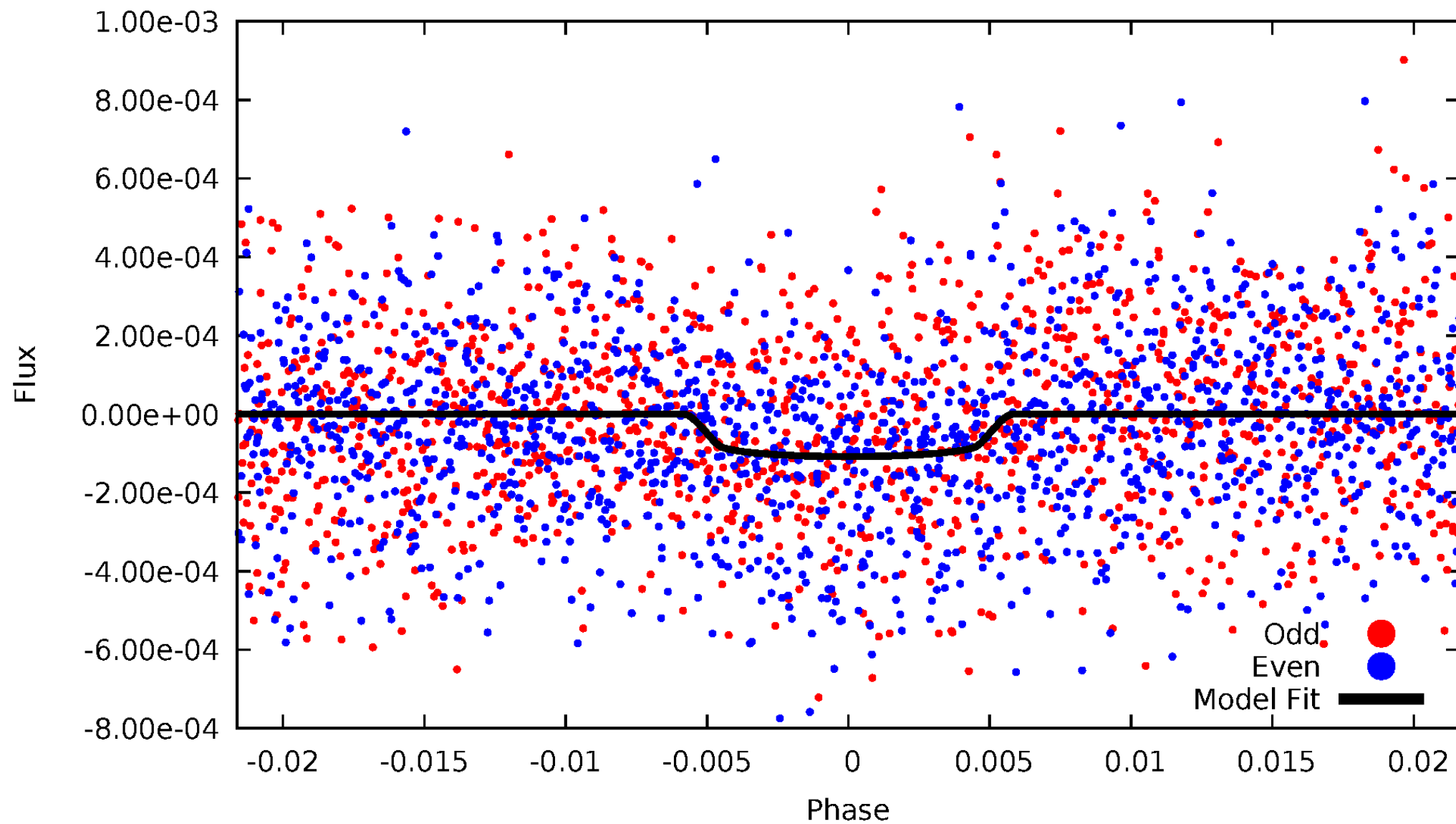


TCE 009777089-01



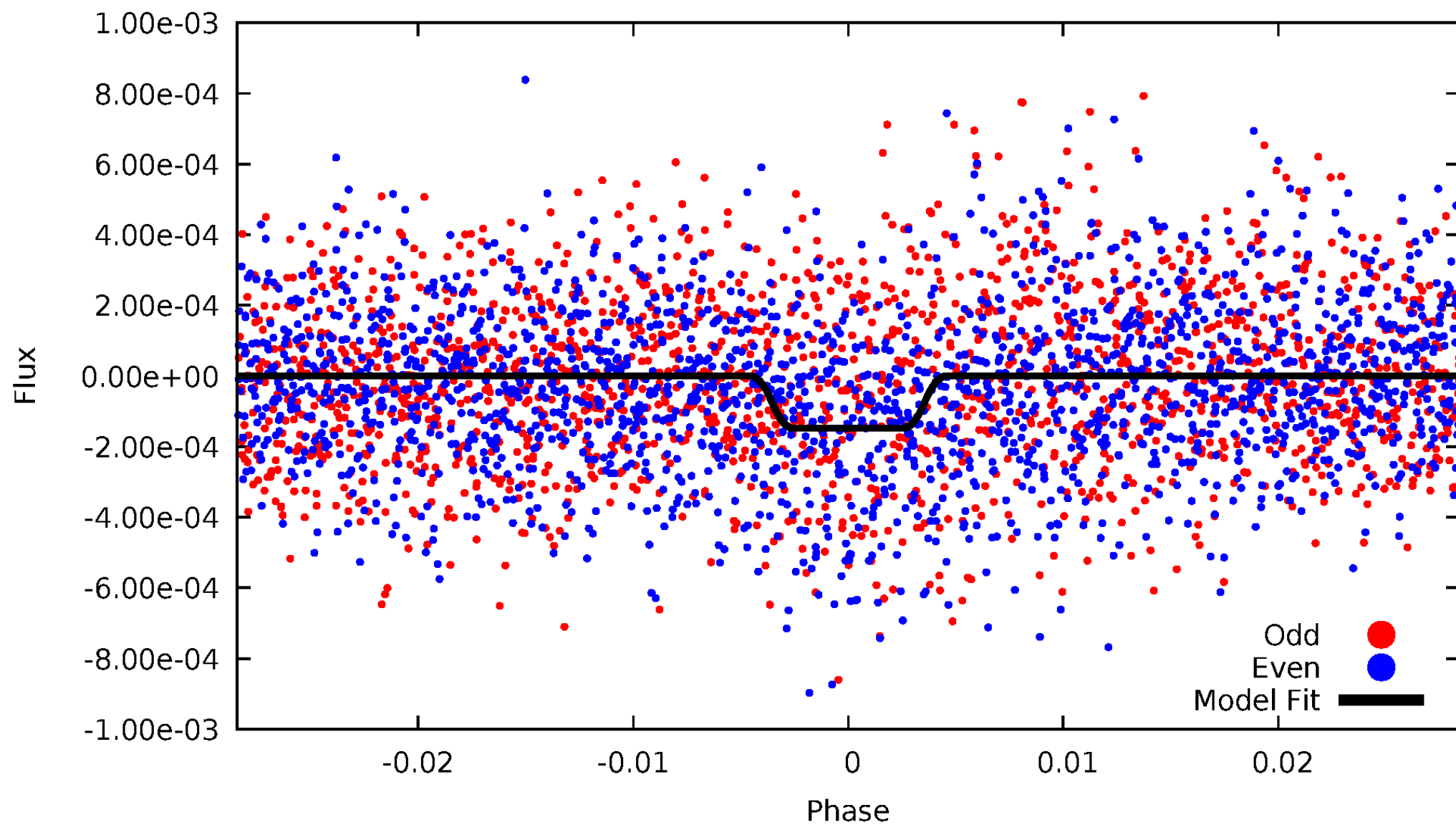
DV Odd/Even

TCE 009777089-01

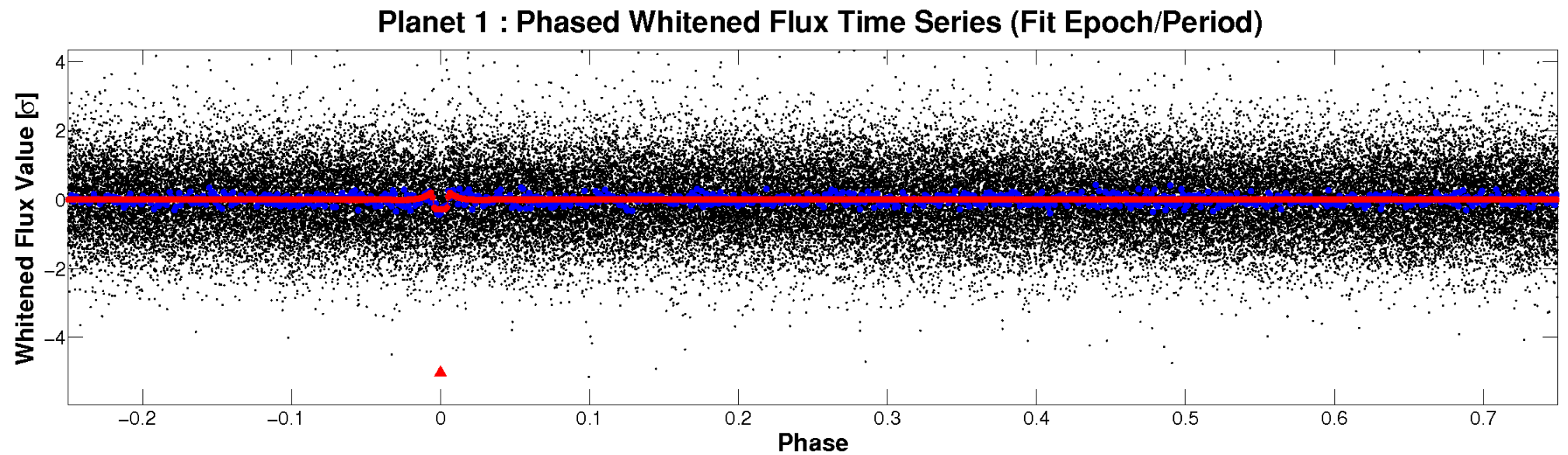
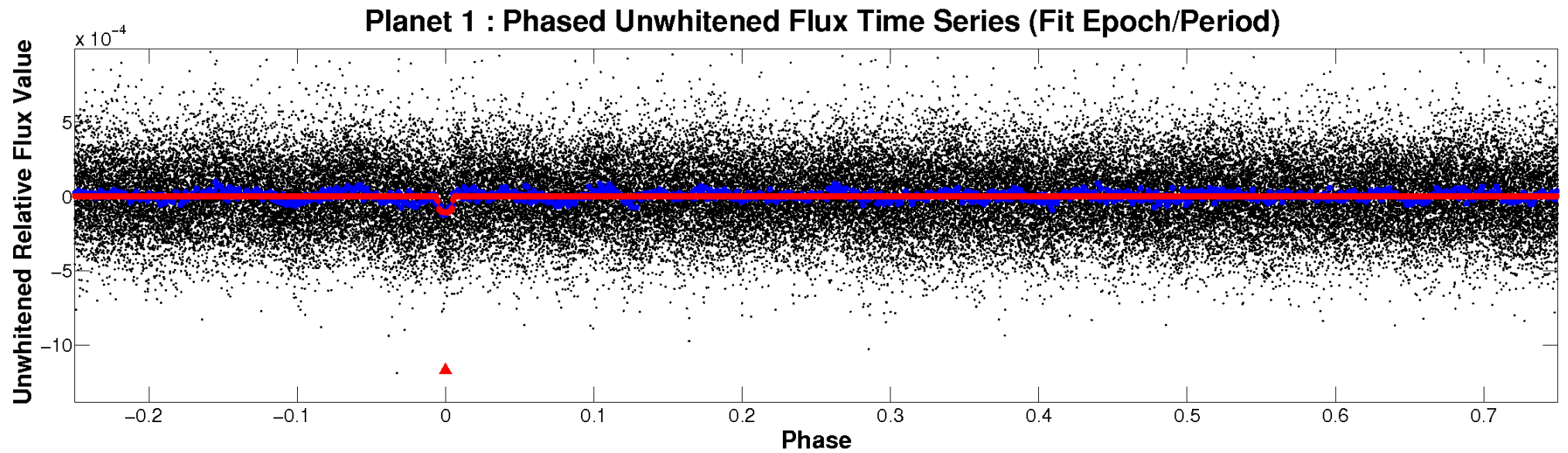


ALT Odd/Even

TCE 009777089-01

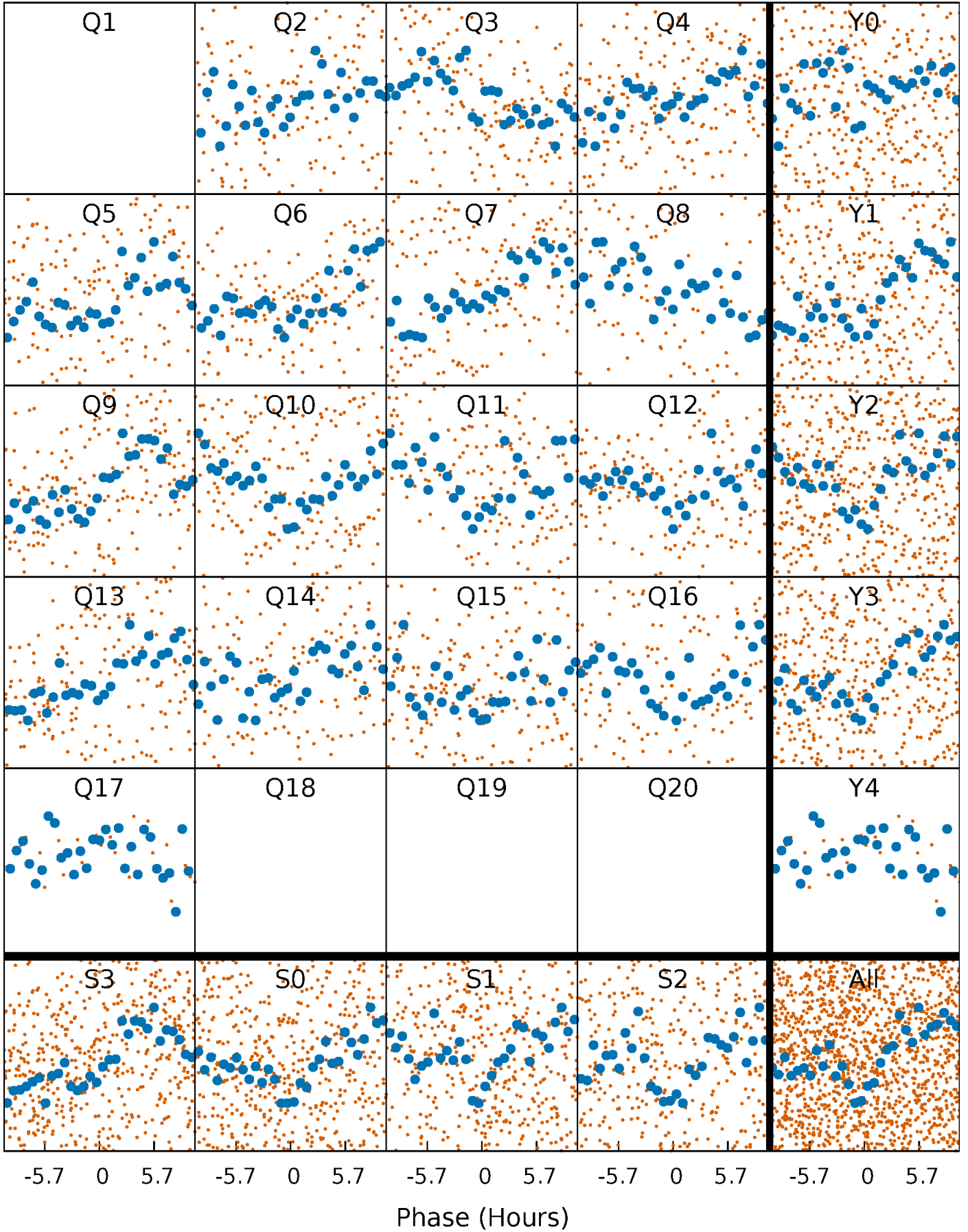


Non-Whitened Vs. Whitened Light Curve



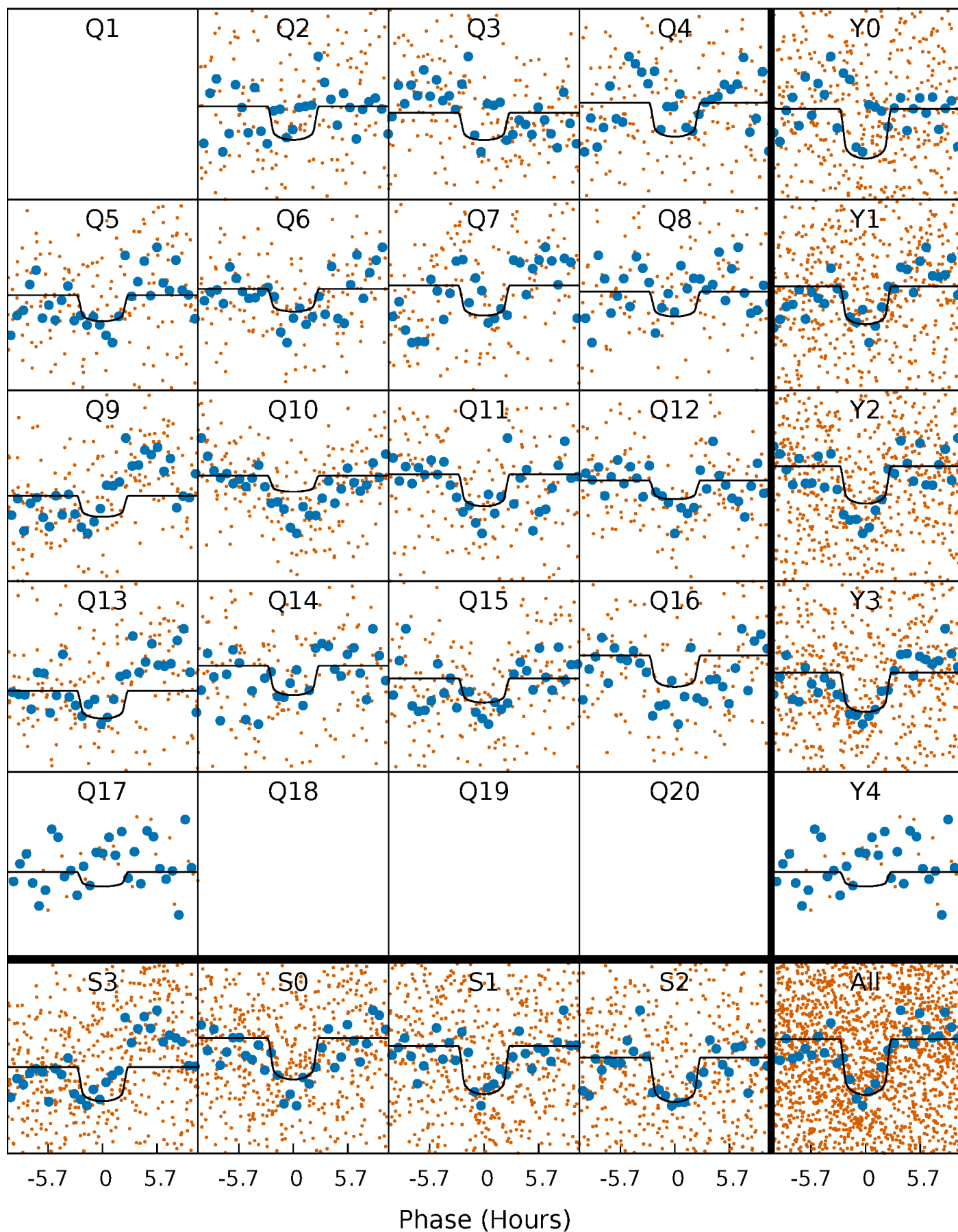
PDC Quarter-Phased Transit Curves

TCE 009777089-01 P= 19.229999 Days $T_0=132.580699$ (BKJD)



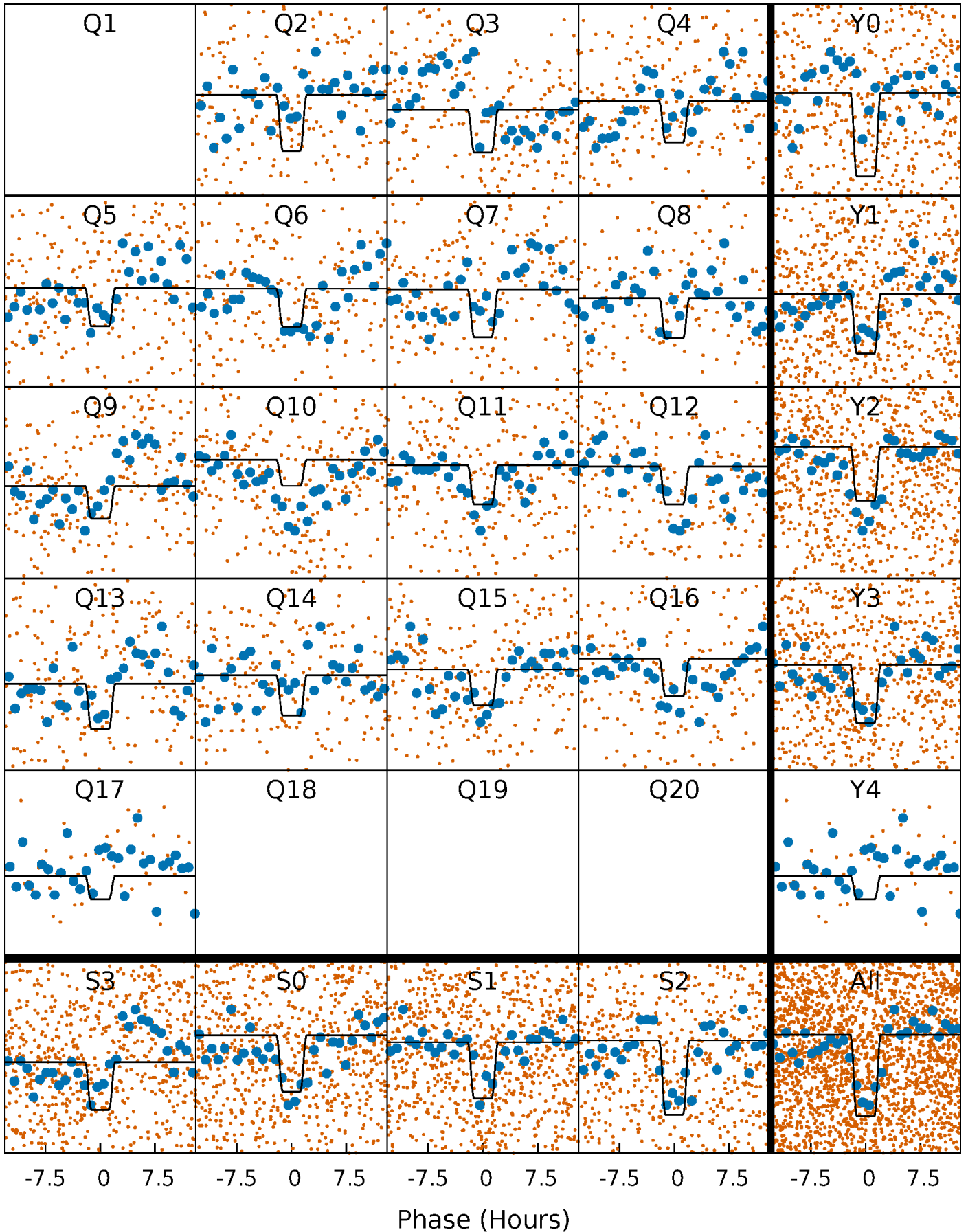
DV Quarter-Phased Transit Curves

TCE 009777089-01 P= 19.229999 Days $T_0=132.580699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

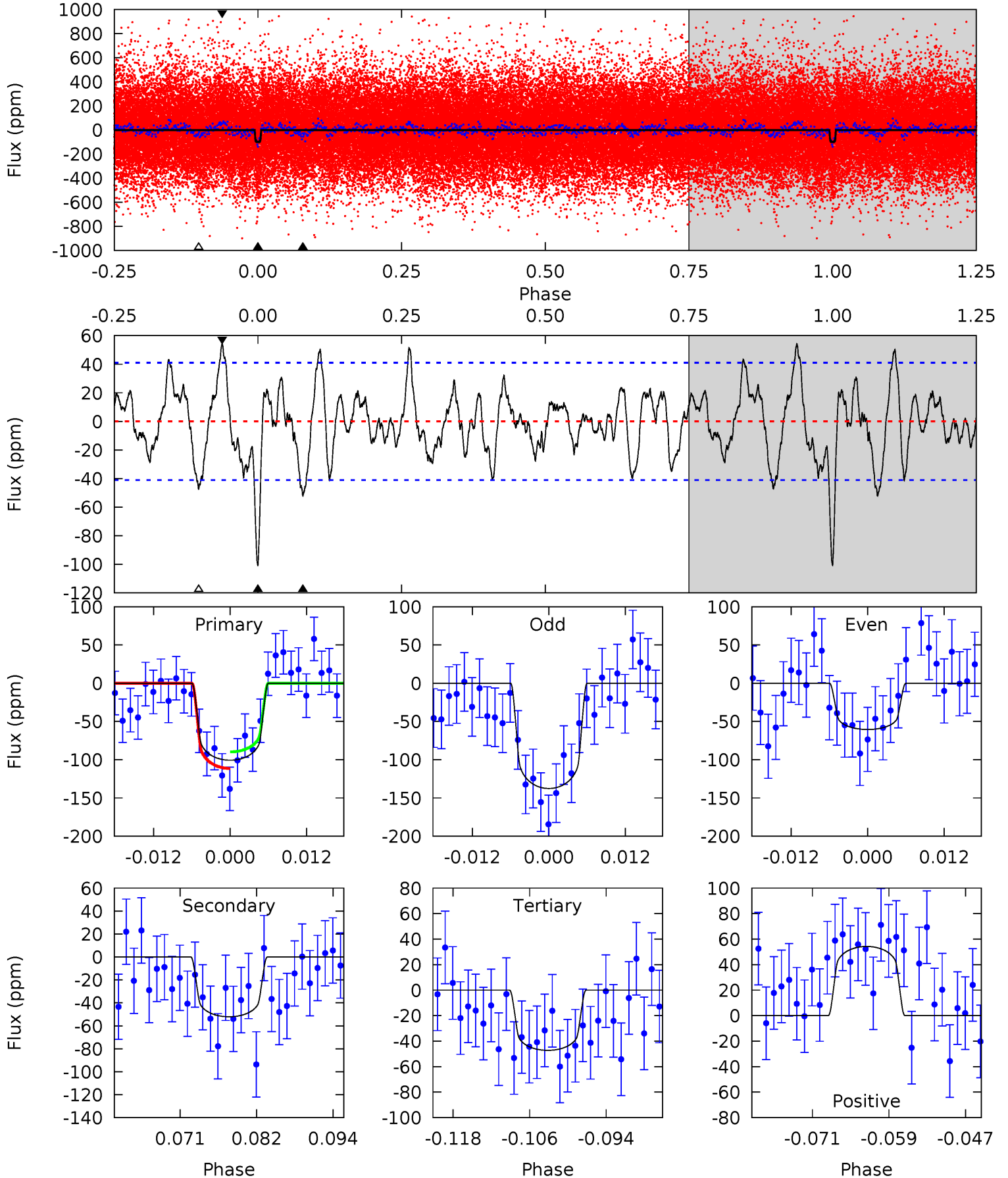
TCE 009777089-01 P= 19.230023 Days $T_0=132.567974$ (BKJD)



DV Model-Shift Uniqueness Test

009777089-01, P = 19.229999 Days, E = 132.580699 Days

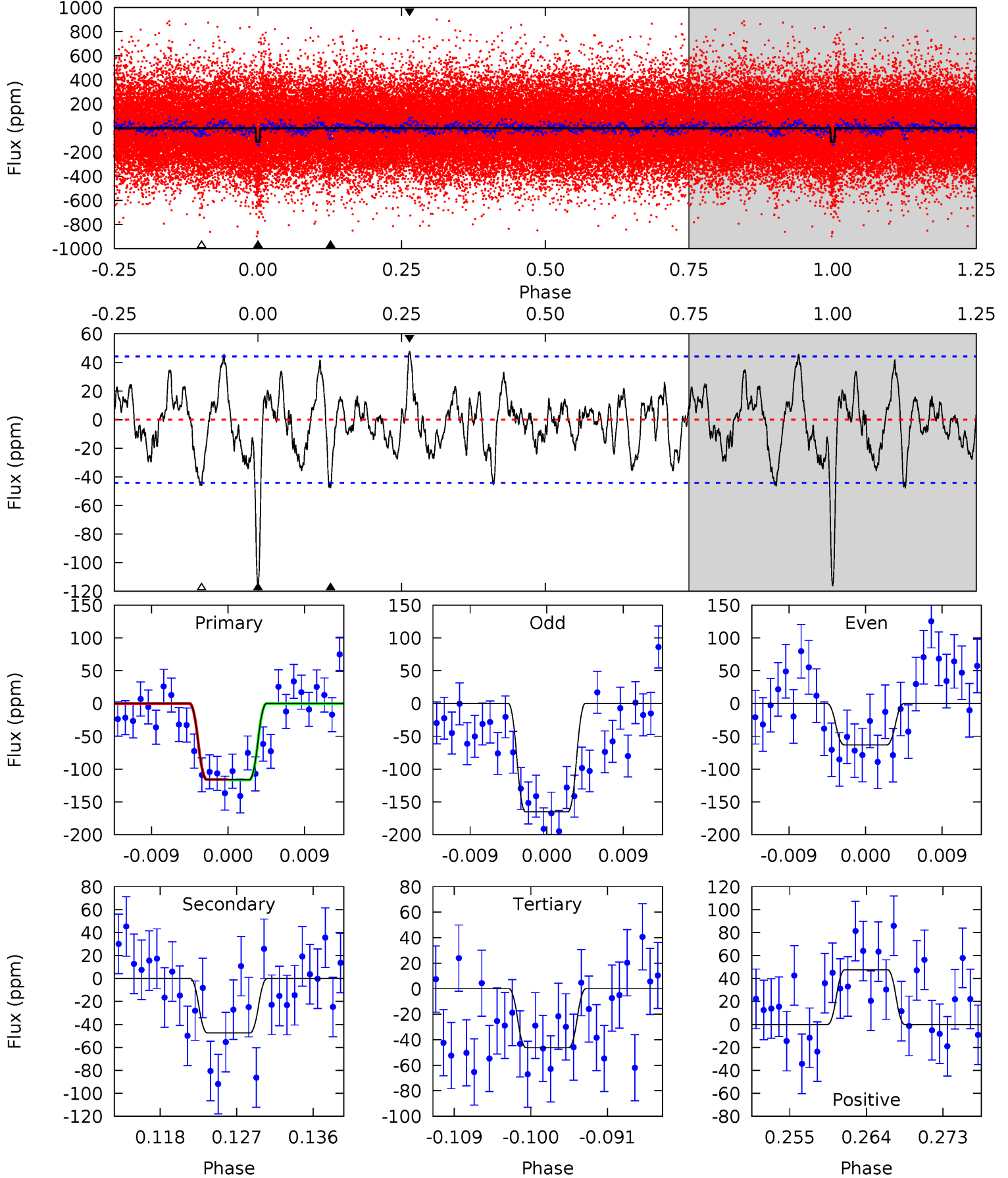
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	6.34	5.75	6.60	5.00	2.52	2.31	6.51	5.66	0.59	-0.26	4.70	0.96	0.35	1.32



Alt Model-Shift Uniqueness Test

009777089-01, P = 19.230023 Days, E = 132.567974 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.42	5.28	5.45	5.04	2.61	1.95	7.99	7.82	0.14	-0.03	5.82	1.27	0.29	0.05



Stellar Parameters For KIC 009777089

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6654^{+187}_{-258}	$4.113^{+0.204}_{-0.185}$	$0.020^{+0.250}_{-0.350}$	$1.712^{+0.534}_{-0.437}$	$1.386^{+0.204}_{-0.250}$	$0.389^{+0.410}_{-0.201}$
	+3%/-4%	+5%/-4%	+1250%/-1750%	+31%/-26%	+15%/-18%	+106%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009777089-01 / KOI 7962.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52 ± 8	$2.03^{+0.75}_{-0.67}$	1351^{+113}_{-108}	5372^{+1135}_{-630}	170^{+209}_{-82}
Alt.	-47 ± 9	$2.22^{+0.79}_{-0.68}$	1345^{+107}_{-101}	5016^{+877}_{-516}	127^{+148}_{-60}

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

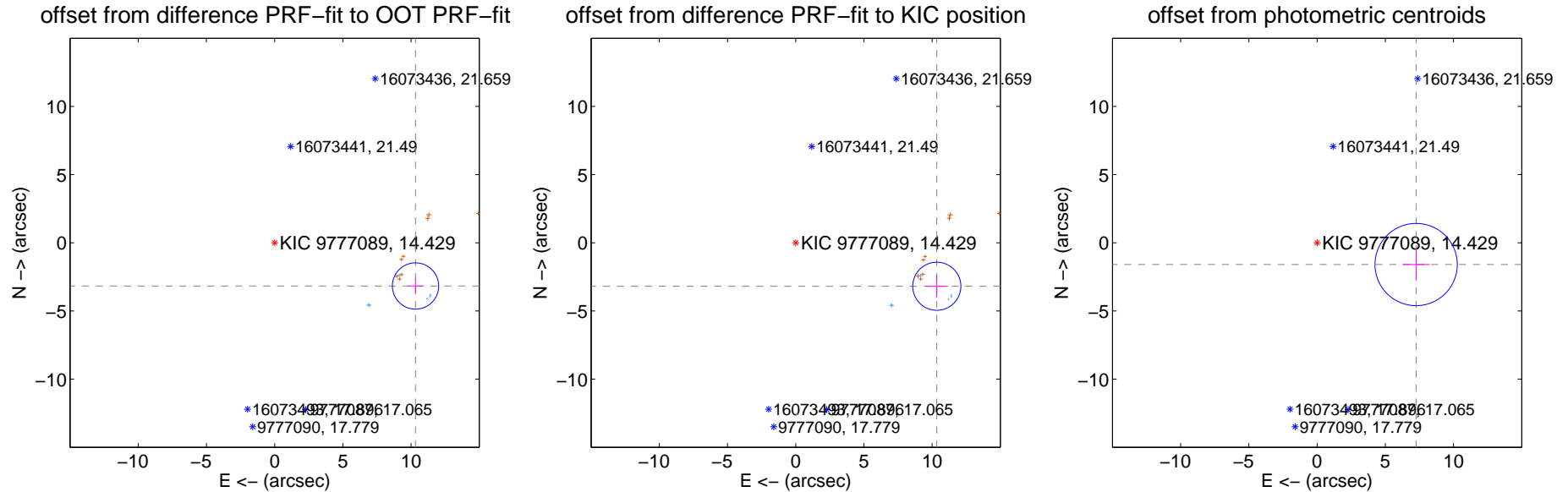
DV Centroid Data

Supplemental centroid analysis for 009777089-01. Kepler magnitude: 14.43. Transit SNR 7.70

There are 8 quarters with good PRF difference image offsets

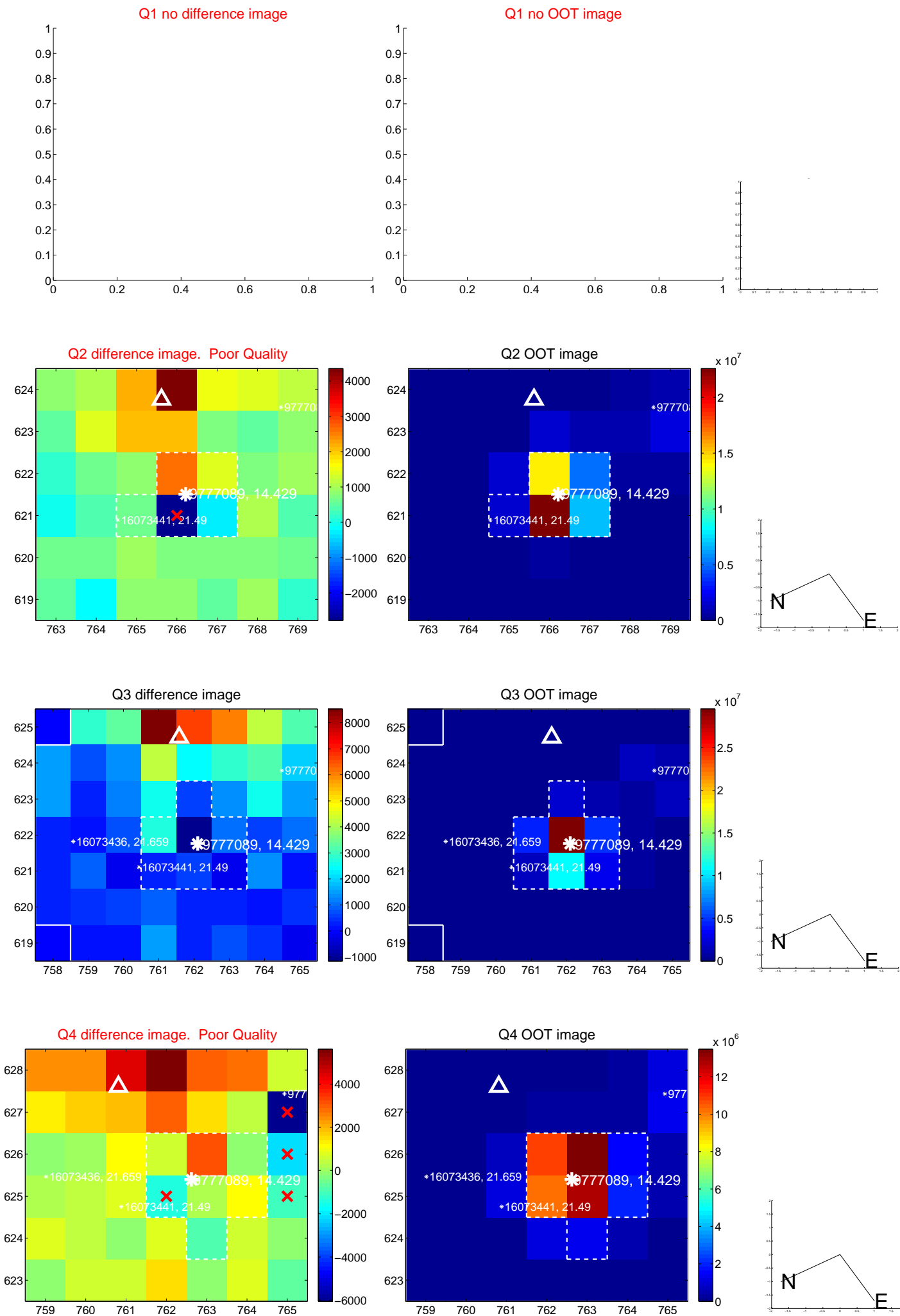
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.801 ± 0.566	19.09	-10.326 ± 0.566	-3.170 ± 0.563
PRF-fit source offset from KIC position	10.822 ± 0.588	18.41	-10.341 ± 0.823	-3.189 ± 0.848
photometric centroid source offset	7.43 ± 1.01	7.39	-7.26 ± 1.00	-1.60 ± 1.16

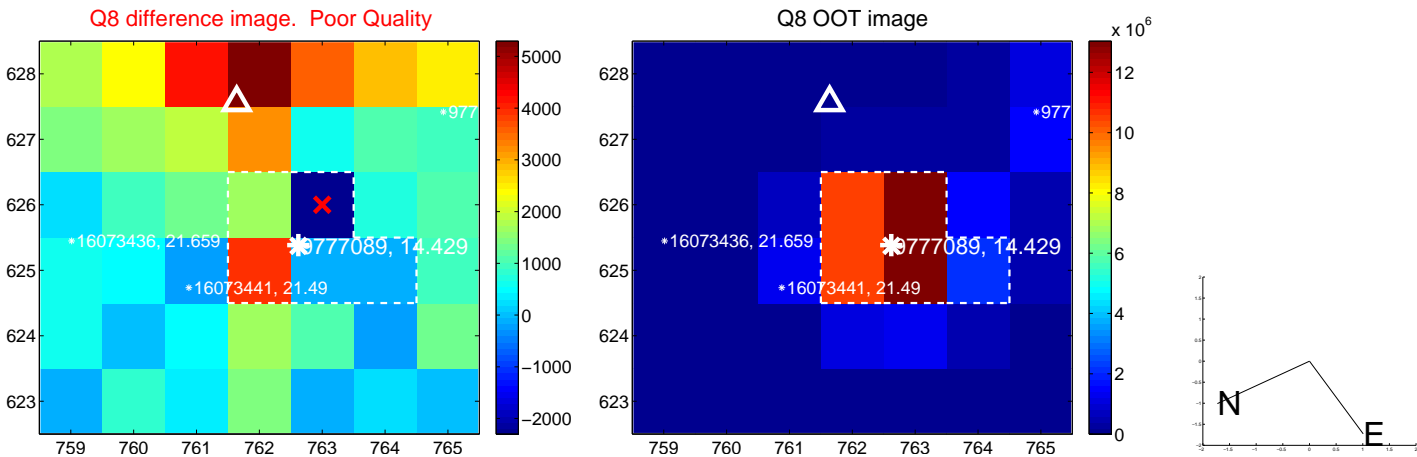
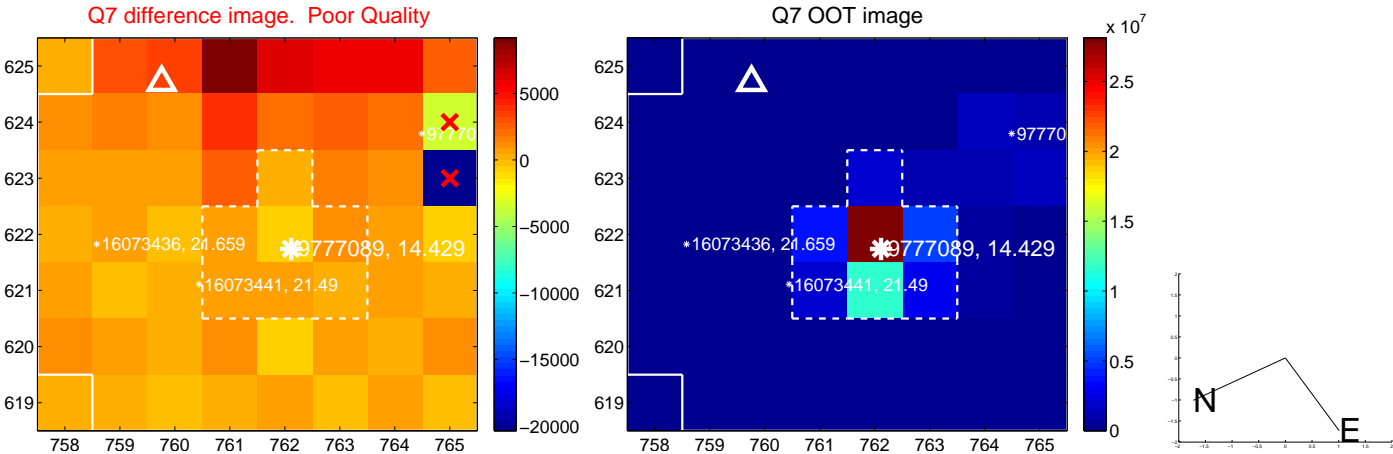
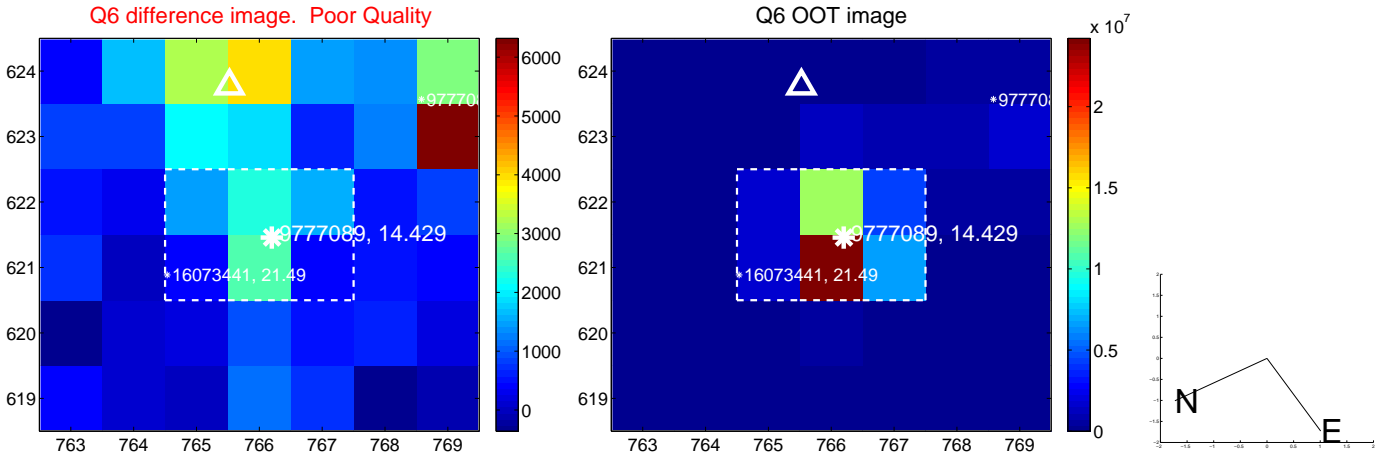
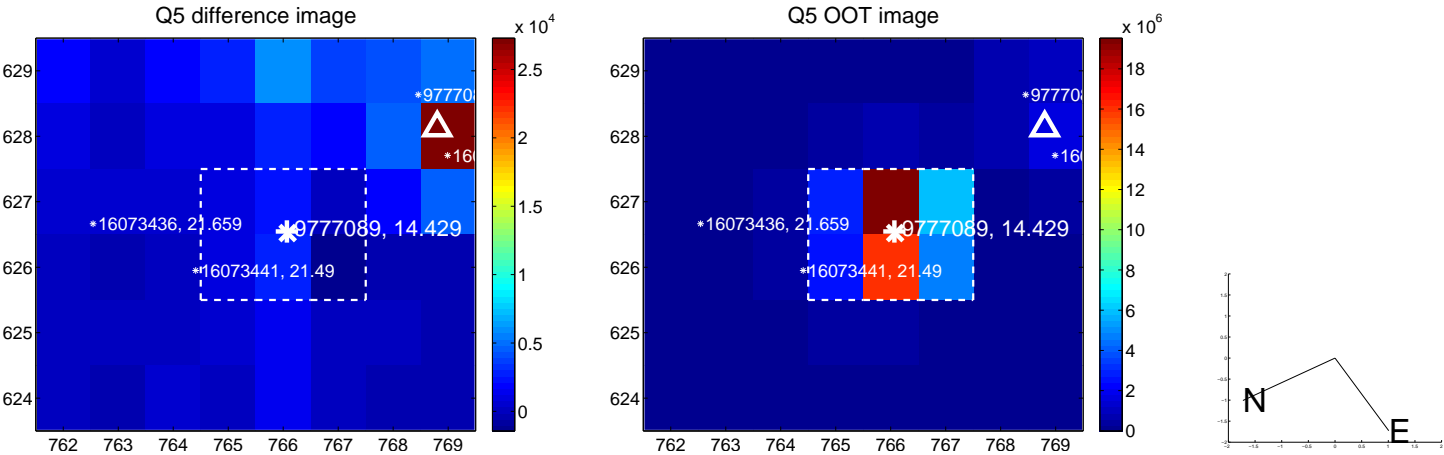


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

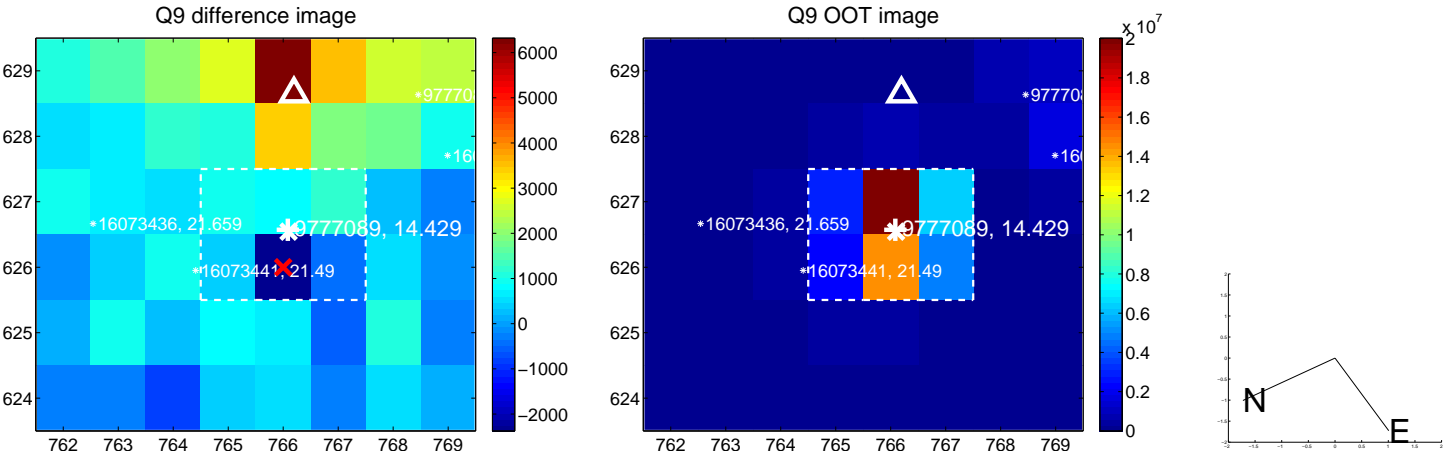
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



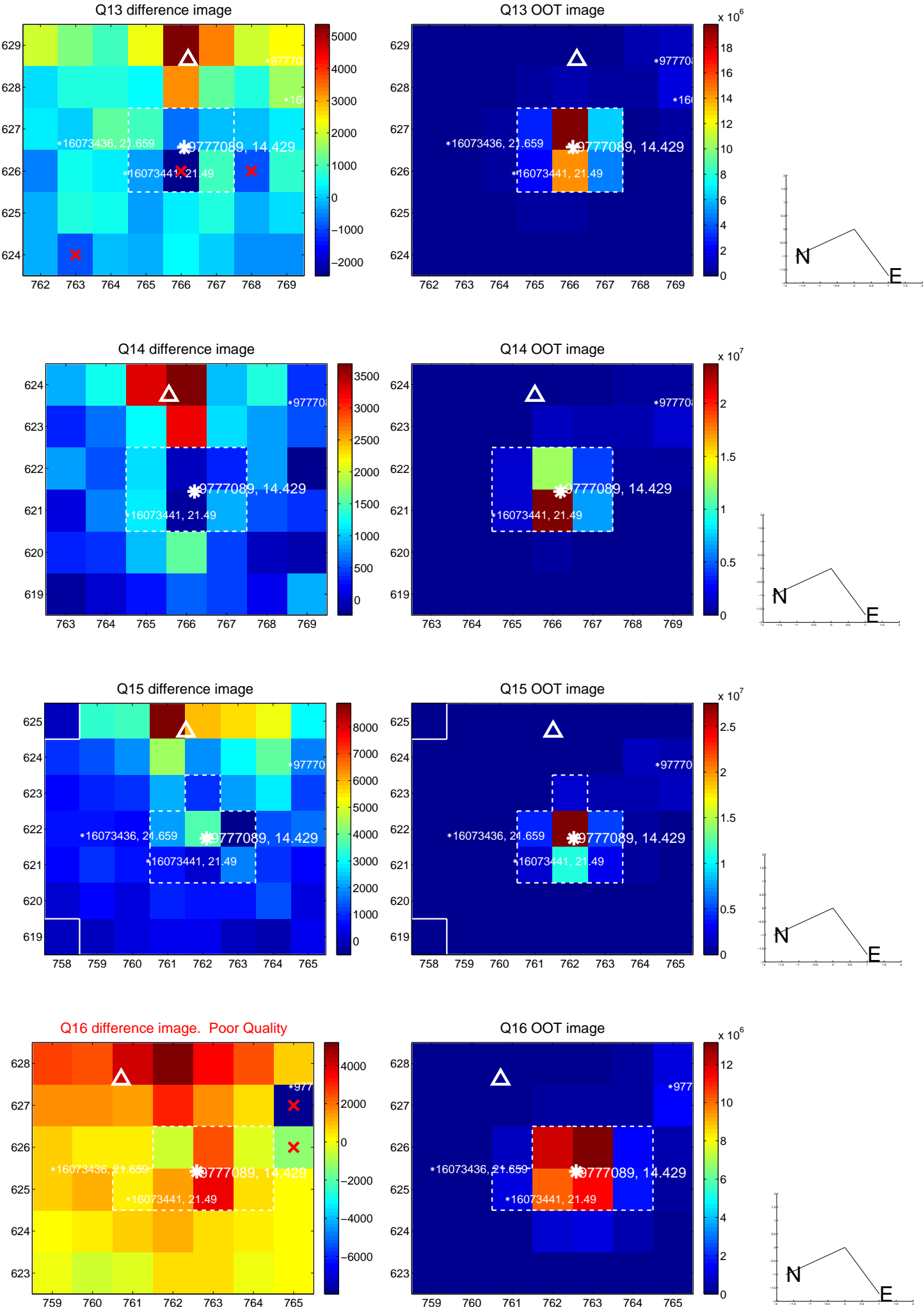
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



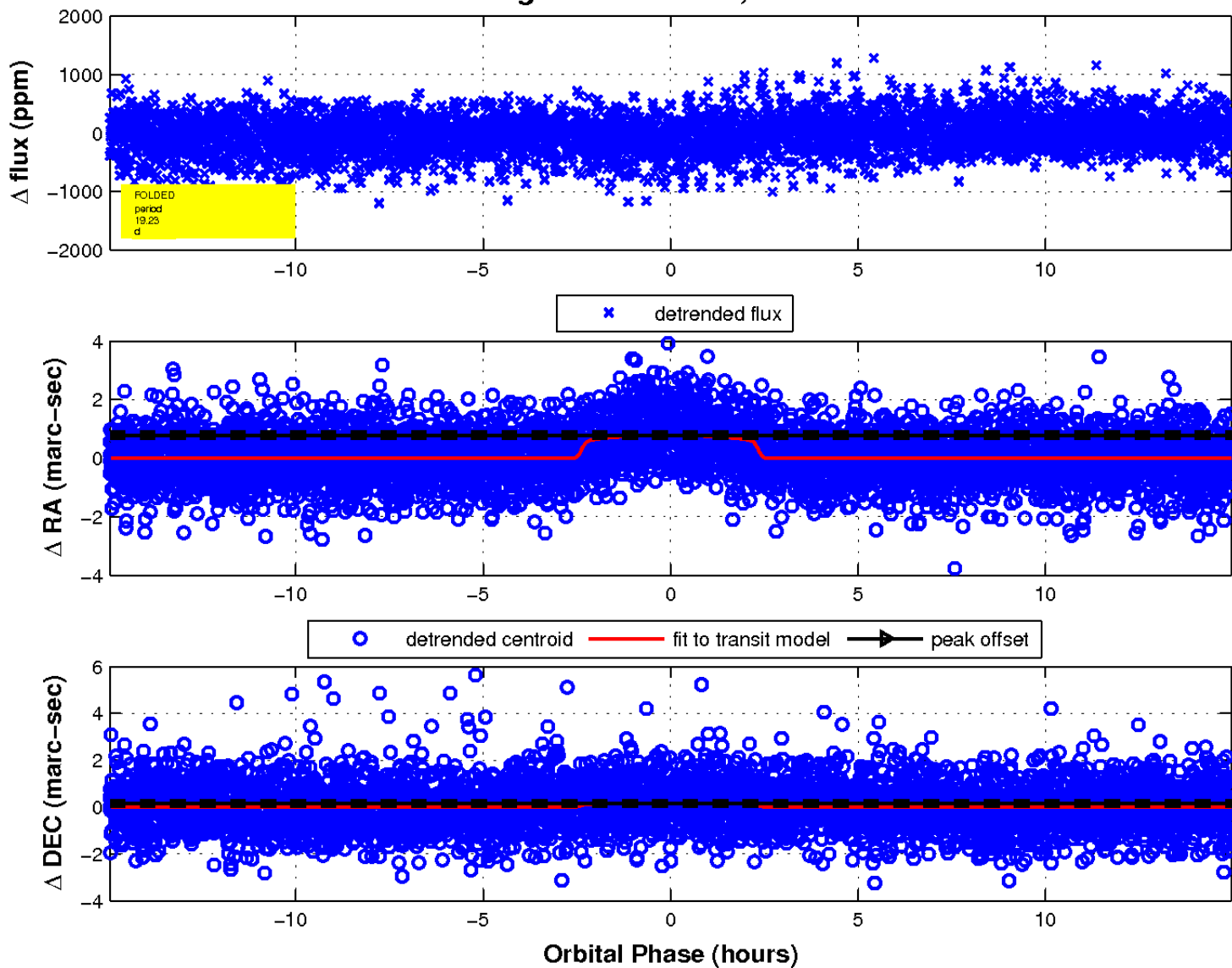
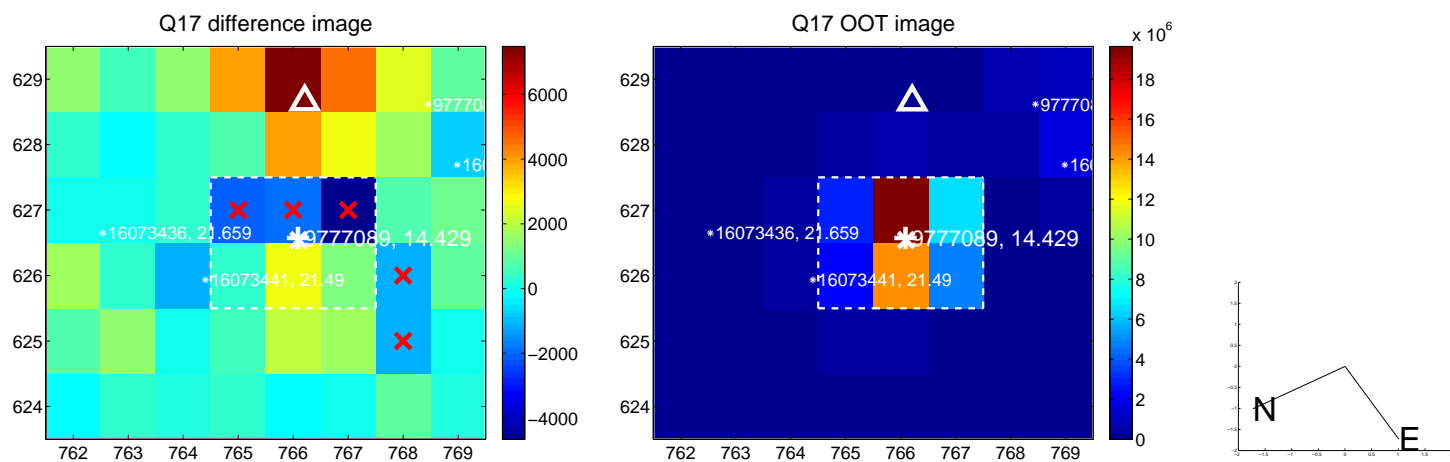
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UKIRT Image

Declination

