

KIC 011670605

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})
011670605-01	OBS	No	36.960904	140.729711	81.4	33.984	9.1	9.7	1.10	6029	1.05	29.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011670605-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_UNCERTAIN

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

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

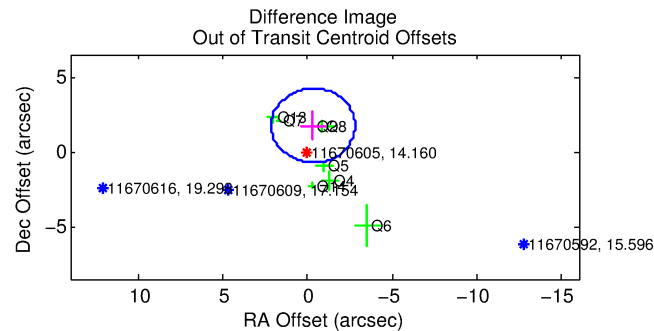
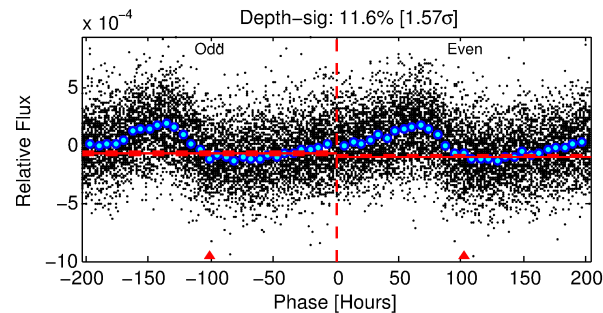
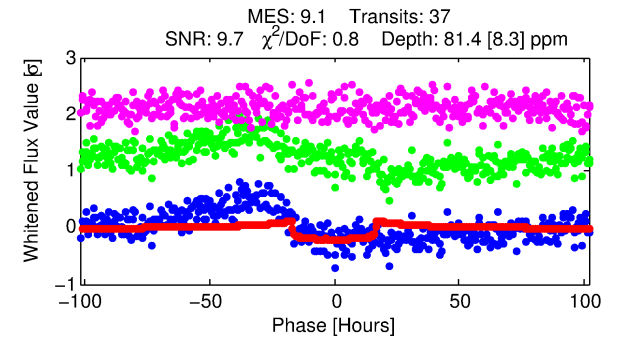
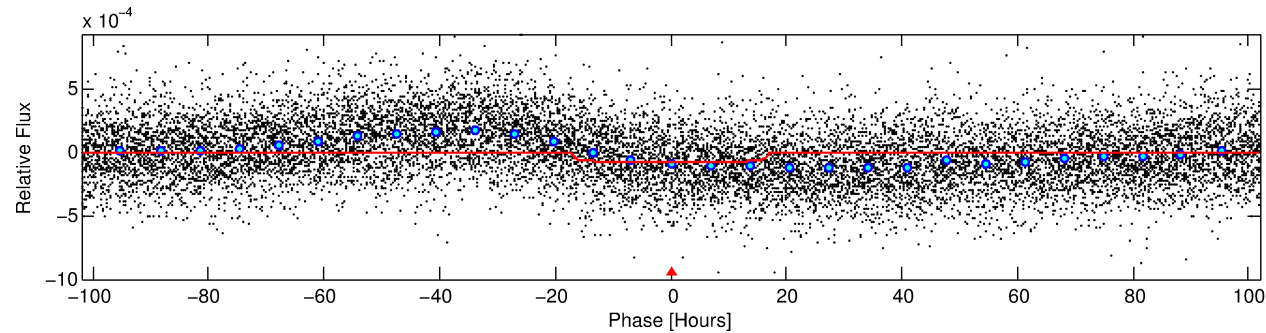
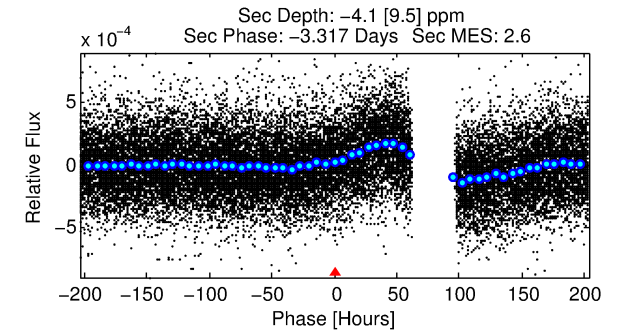
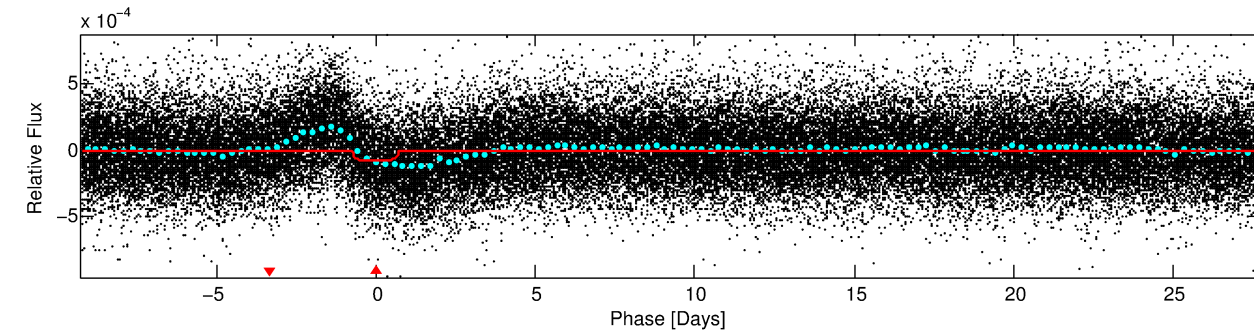
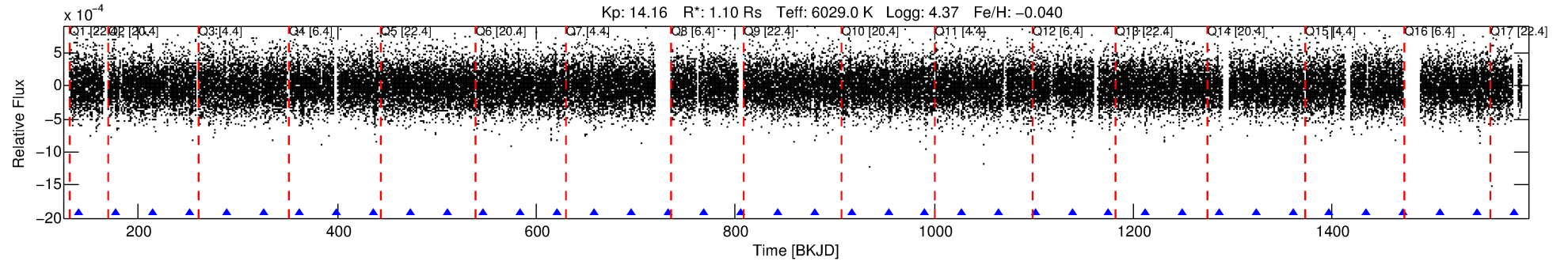
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011670605-01

No Significant Match Found

DV One-Page Summary

KIC: 11670605 Candidate: 1 of 1 Period: 36.961 d



DV Fit Results:

Period = 36.96090 [0.00118] d
Epoch = 140.7297 [0.0273] BKJD
Rp/R* = 0.0087 [0.0017]
a/R* = 6.37 [5.48]
b = 0.66 [0.75]
Seff = 29.68 [11.42]
Teff = 595 [57] K
Rp = 1.05 [0.38] Re
a = 0.2197 [0.0553] AU
Ag = N/A
Teffp = N/A

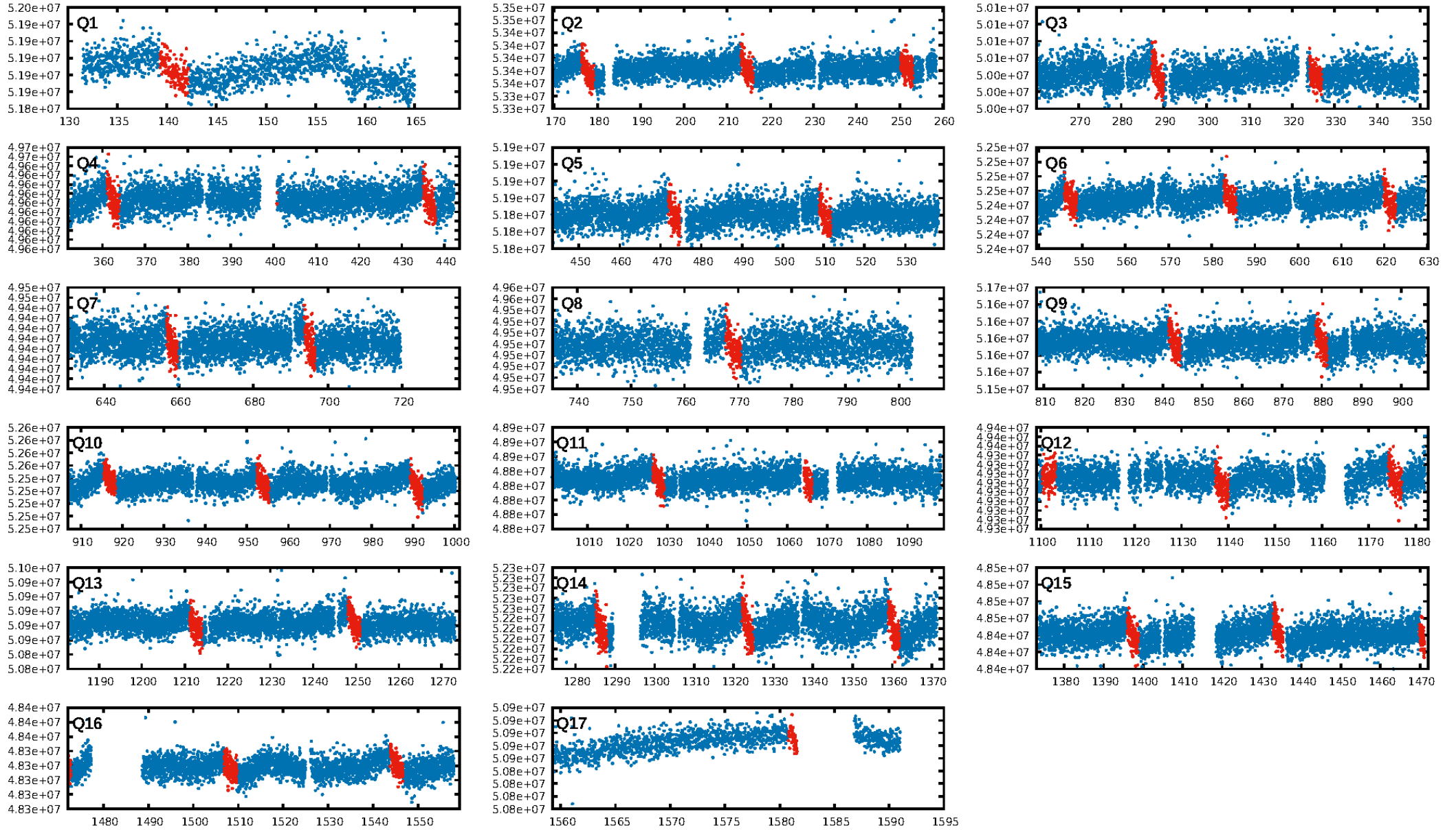
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.15e-20
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: 0.4202
Centroid-sig: 42.8%
Centroid-so: 0.919 arcsec [0.95σ]
OotOffset-rm: 1.775 arcsec [2.15σ]
KicOffset-rm: 1.788 arcsec [1.95σ]
OotOffset-st: 3/1/2/2 [8]
KicOffset-st: 3/1/2/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [12/12]

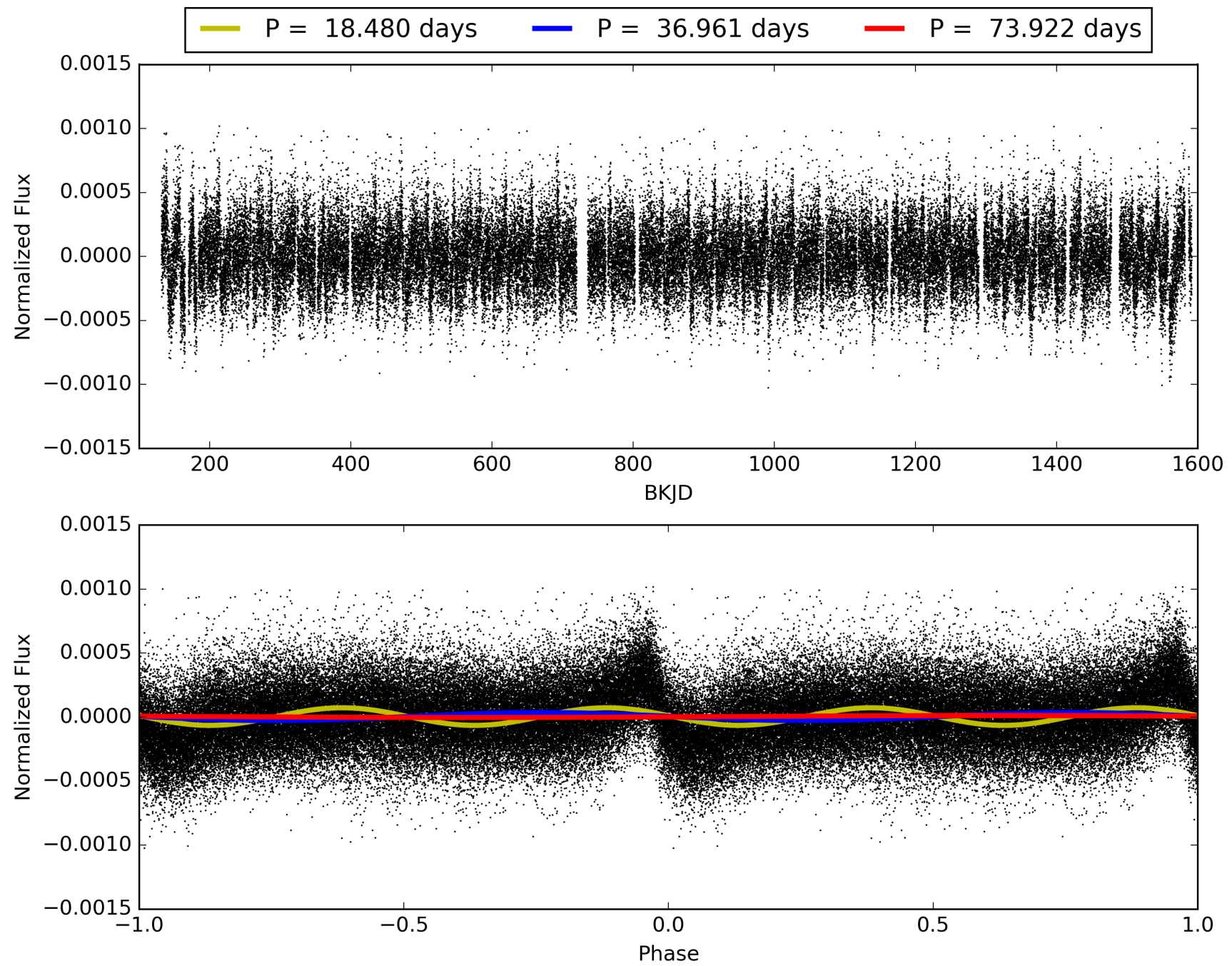
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:43:49 Z

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

TCE 011670605-01, PDC Light Curves

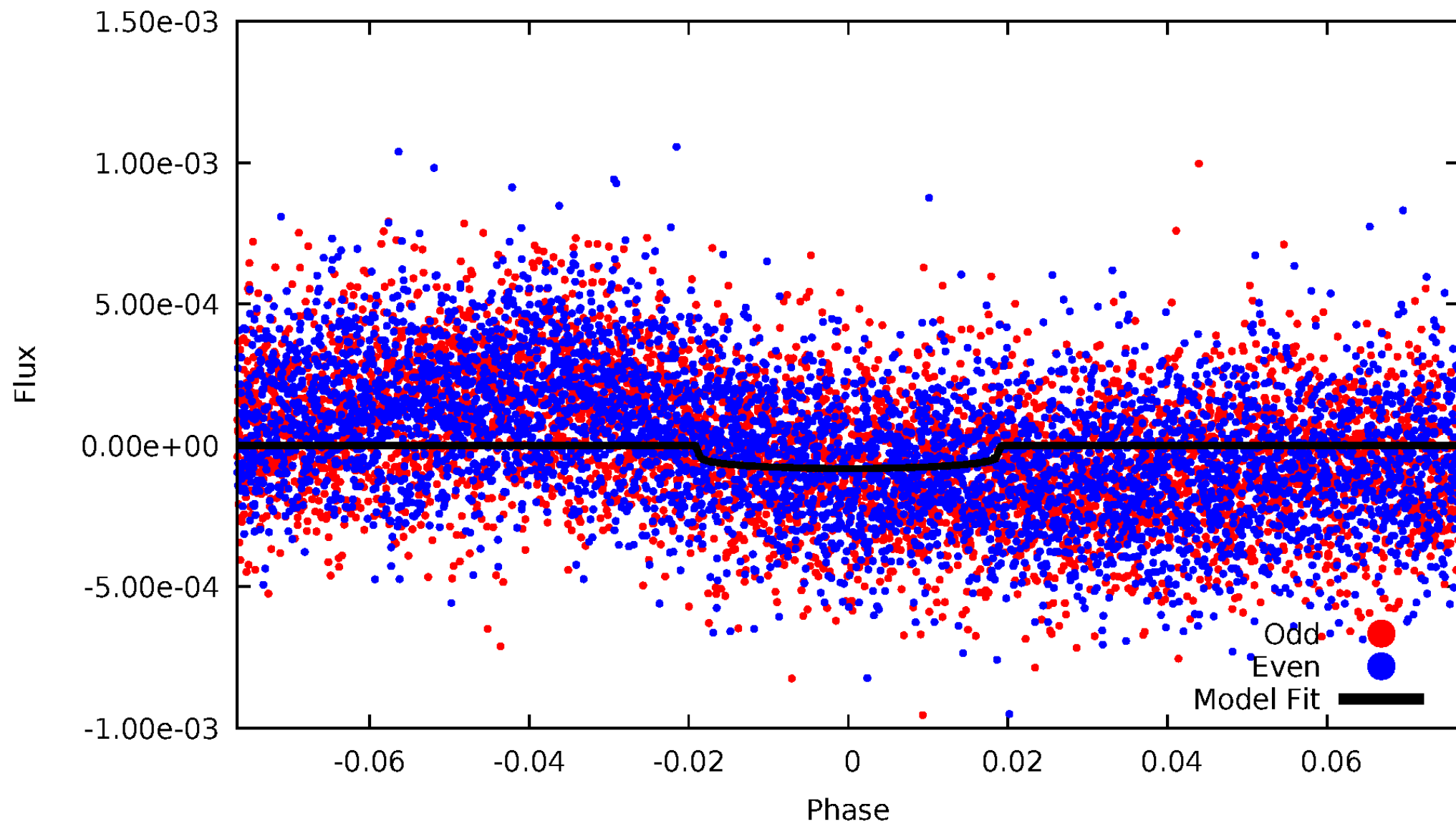


TCE 011670605-01



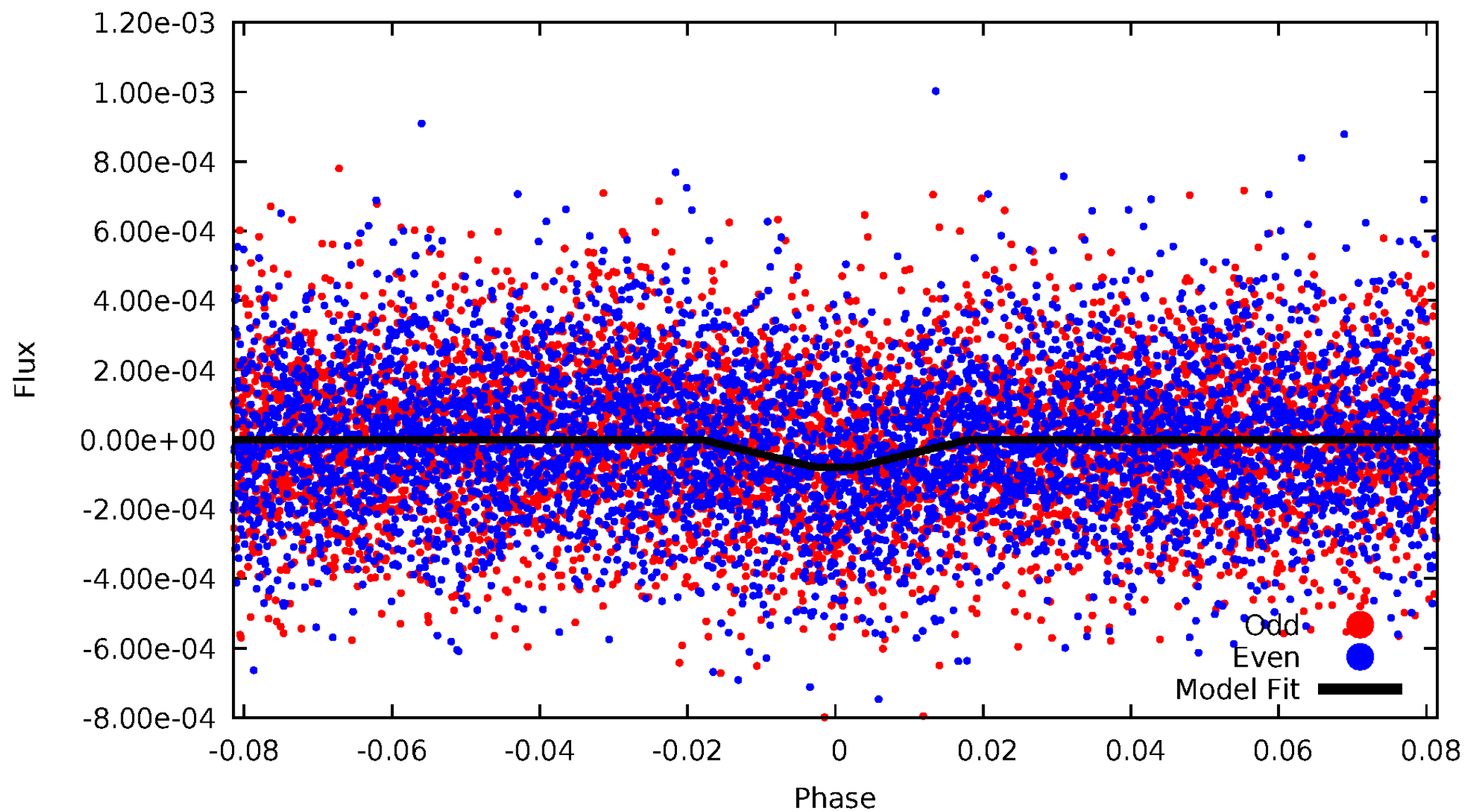
DV Odd/Even

TCE 011670605-01

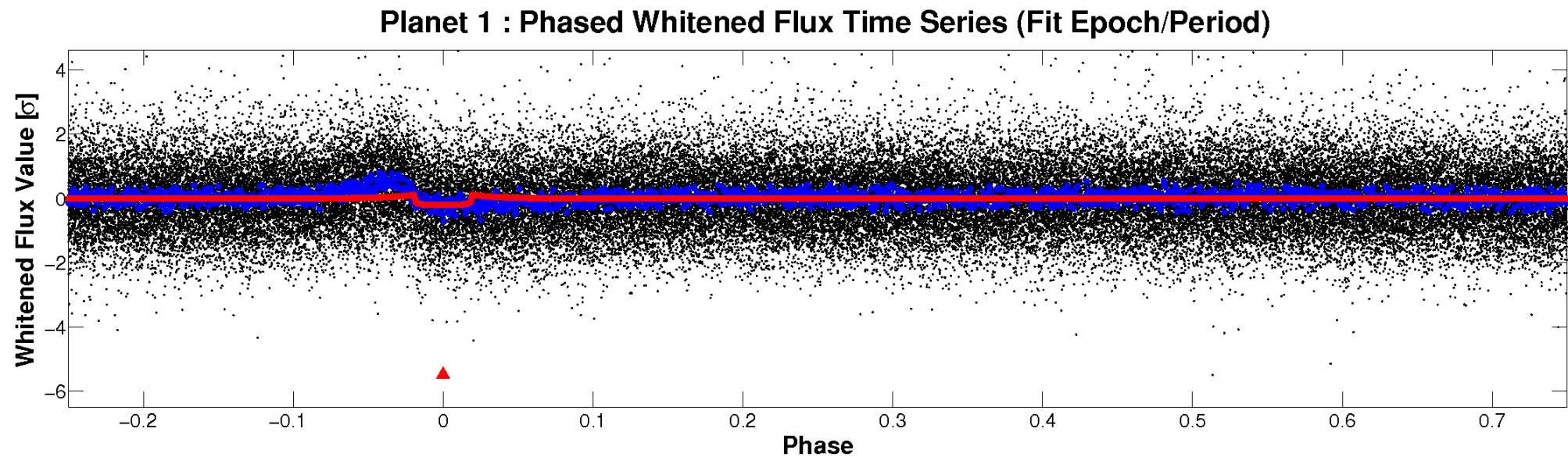
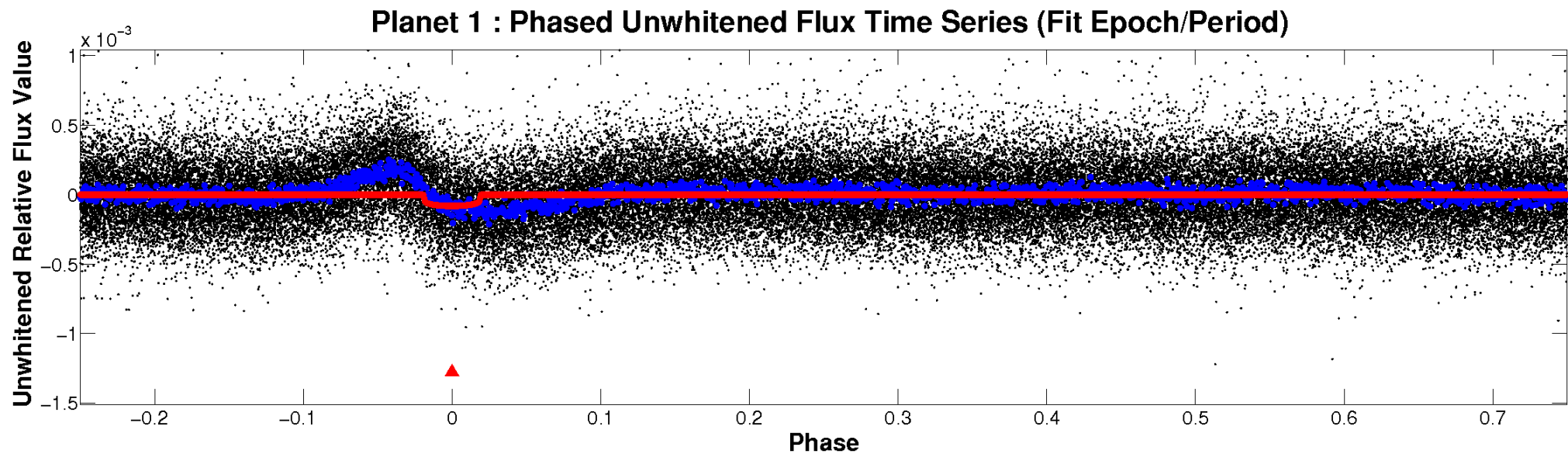


ALT Odd/Even

TCE 011670605-01

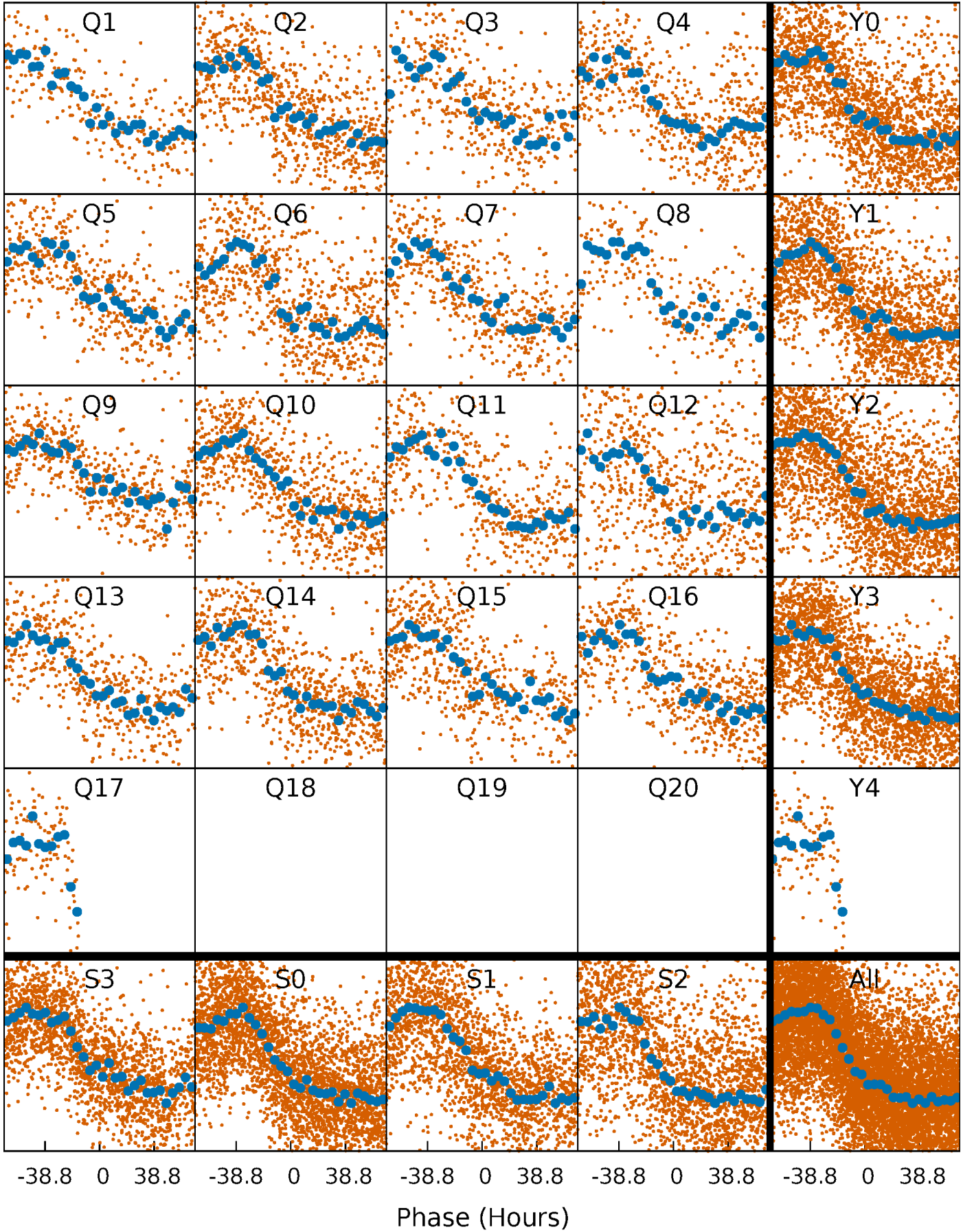


Non-Whitened Vs. Whitened Light Curve



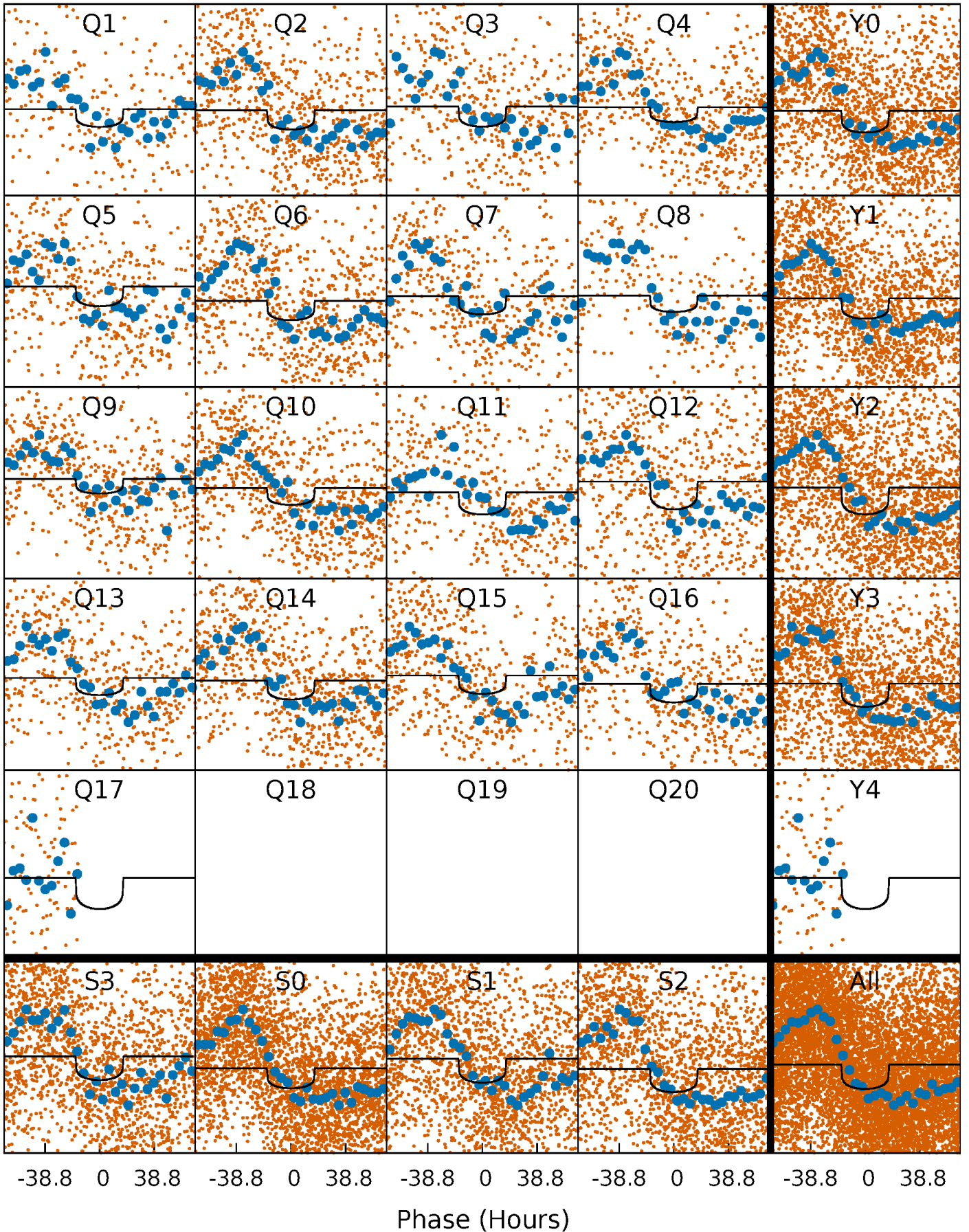
PDC Quarter-Phased Transit Curves

TCE 011670605-01 P= 36.960904 Days $T_0=140.729711$ (BKJD)



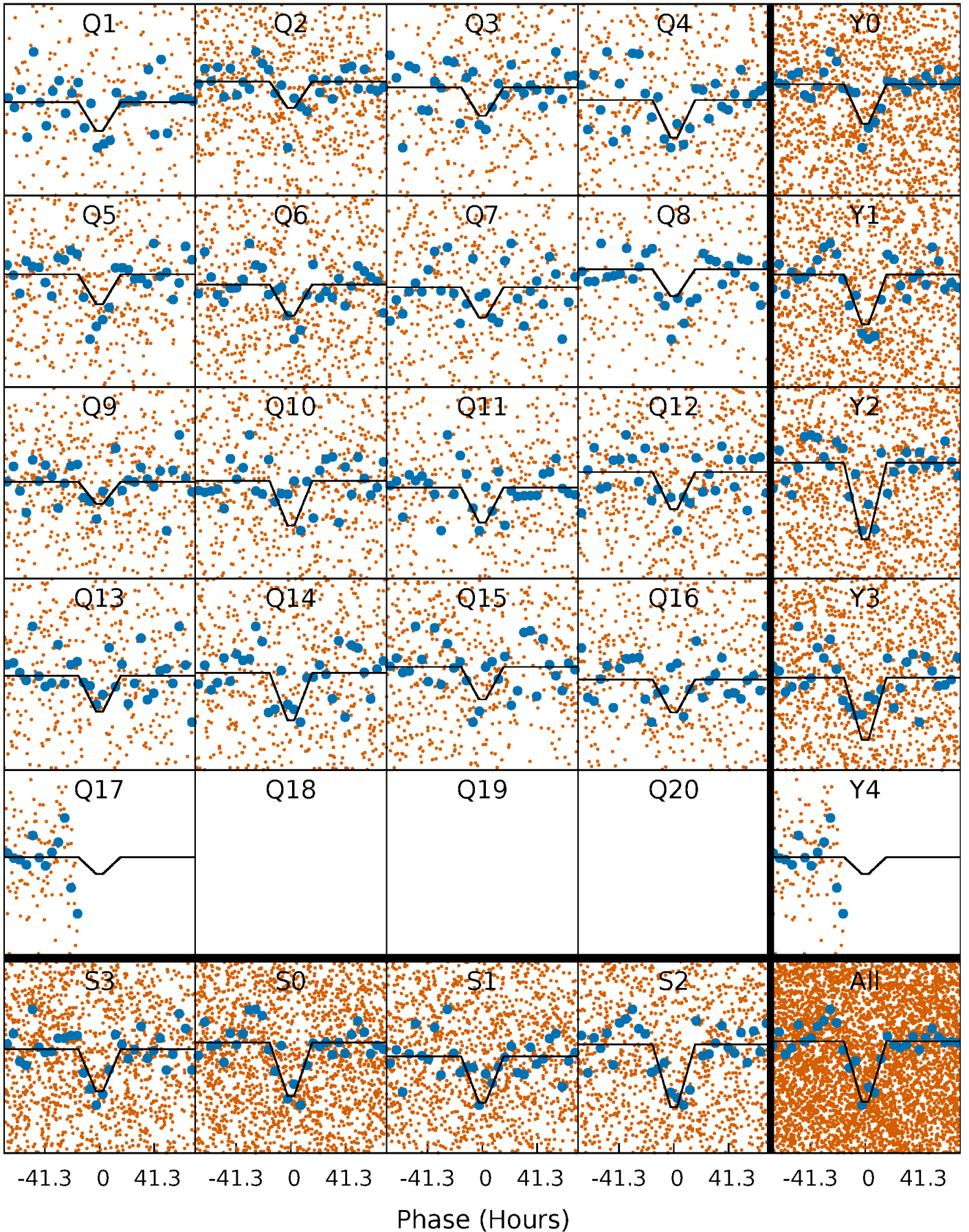
DV Quarter-Phased Transit Curves

TCE 011670605-01 P= 36.960904 Days $T_0=140.729711$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

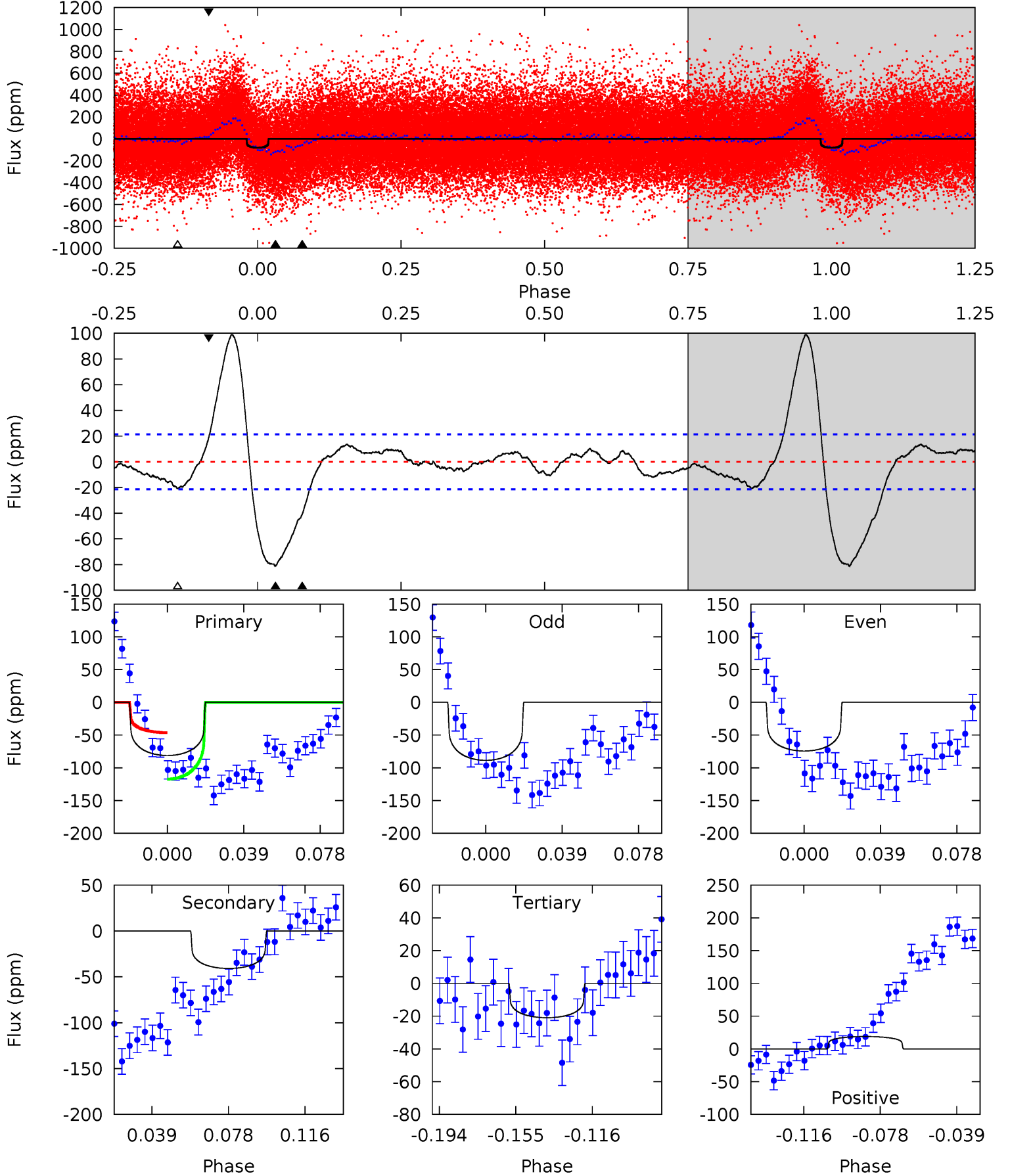
TCE 011670605-01 P= 36.972245 Days $T_0=140.374310$ (BKJD)



DV Model-Shift Uniqueness Test

011670605-01, P = 36.960904 Days, E = 103.768807 Days

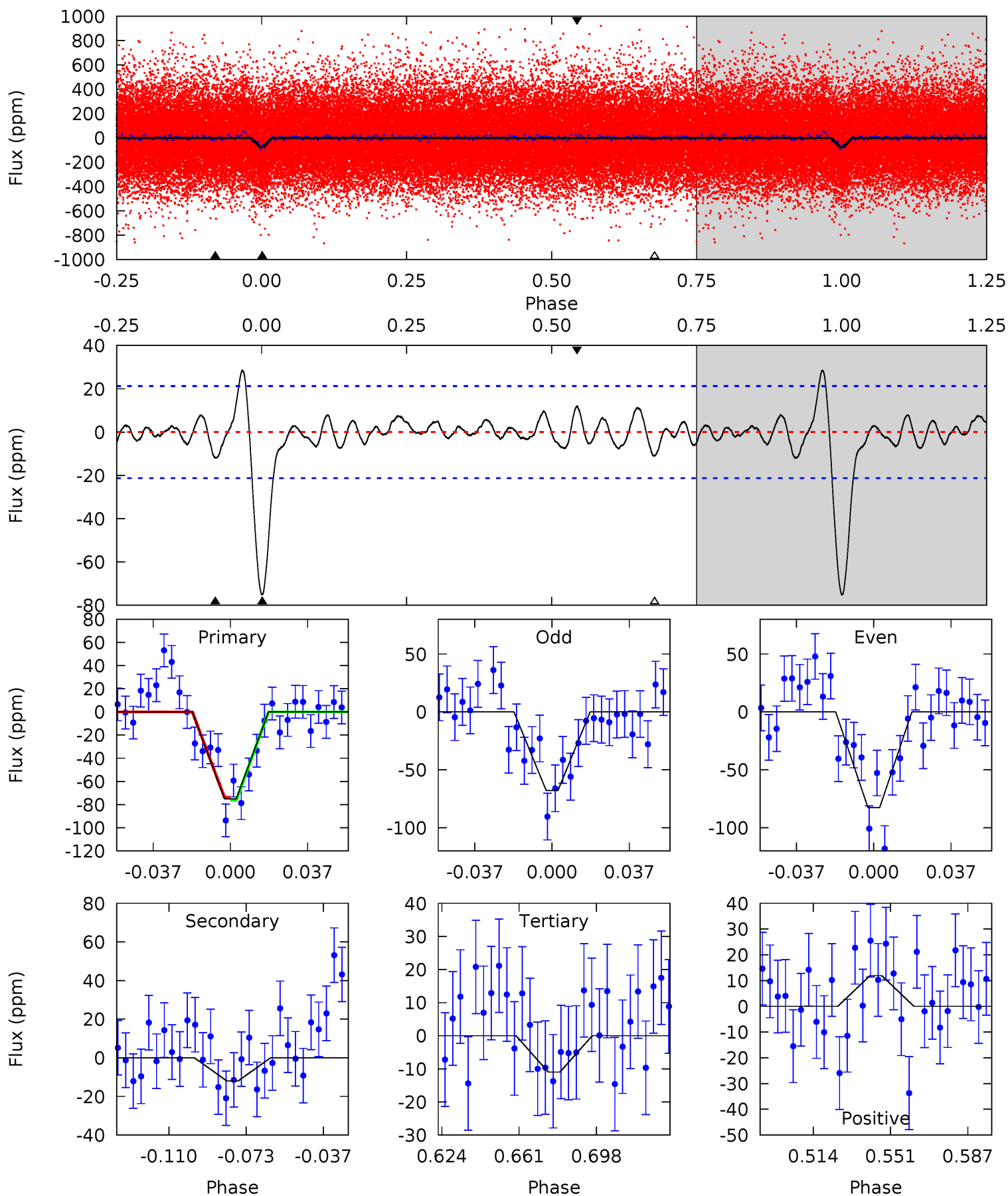
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	9.10	4.67	4.19	4.76	2.07	4.63	13.4	13.9	4.44	4.91	1.58	0.96	0.55	7.96



Alt Model-Shift Uniqueness Test

011670605-01, P = 36.972245 Days, E = 103.402065 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	2.67	2.46	2.67	4.77	2.09	1.05	14.4	14.2	0.21	0.00	1.66	1.02	0.28	0.28



Stellar Parameters For KIC 011670605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6029^{+163}_{-199}	$4.370^{+0.105}_{-0.195}$	$-0.040^{+0.250}_{-0.300}$	$1.100^{+0.334}_{-0.154}$	$1.033^{+0.159}_{-0.130}$	$1.093^{+0.519}_{-0.557}$
	+3%/-3%	+2%/-4%	+625%/-750%	+30%/-14%	+15%/-13%	+47%/-51%
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 011670605-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 4	$1.08^{+0.27}_{-0.23}$	840^{+64}_{-48}	5183^{+584}_{-393}	928^{+573}_{-343}
Alt.	-12 ± 4	$1.09^{+0.25}_{-0.22}$	840^{+60}_{-47}	4037^{+431}_{-381}	263^{+186}_{-127}

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

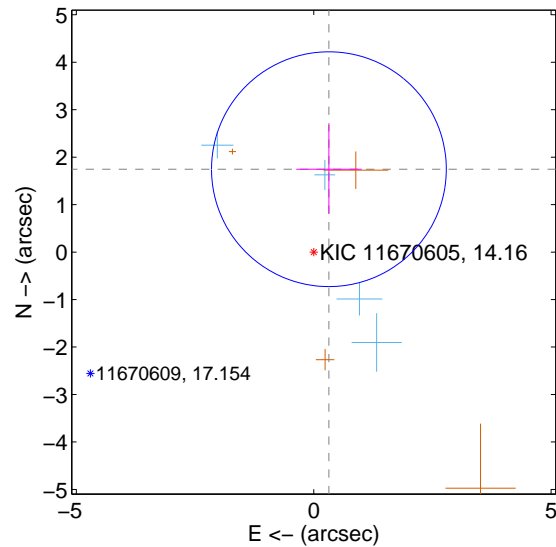
Supplemental centroid analysis for 011670605-01. Kepler magnitude: 14.16. Transit SNR 9.74

There are 4 quarters with good PRF difference image offsets

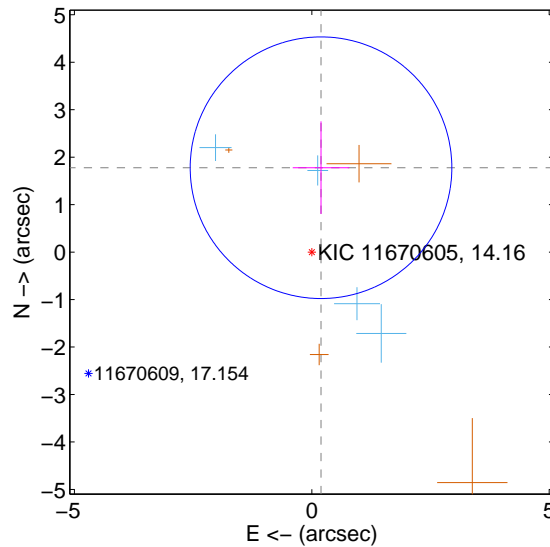
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.775 ± 0.824	2.15	-0.320 ± 0.689	1.746 ± 0.939
PRF-fit source offset from KIC position	1.788 ± 0.919	1.95	-0.194 ± 0.596	1.777 ± 0.976
photometric centroid source offset	0.92 ± 0.97	0.95	-0.63 ± 0.90	-0.67 ± 1.02

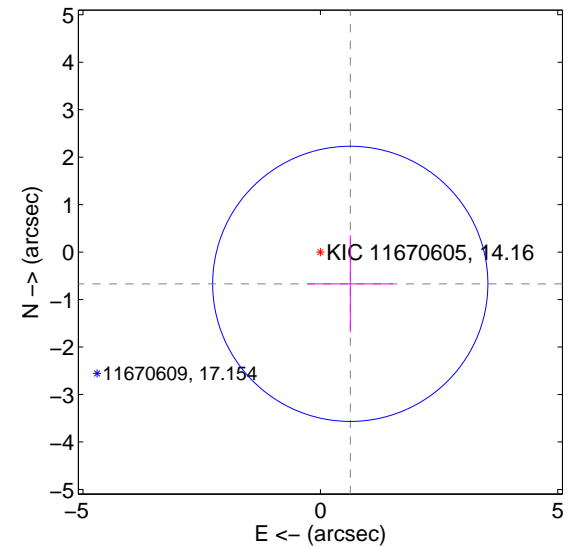
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

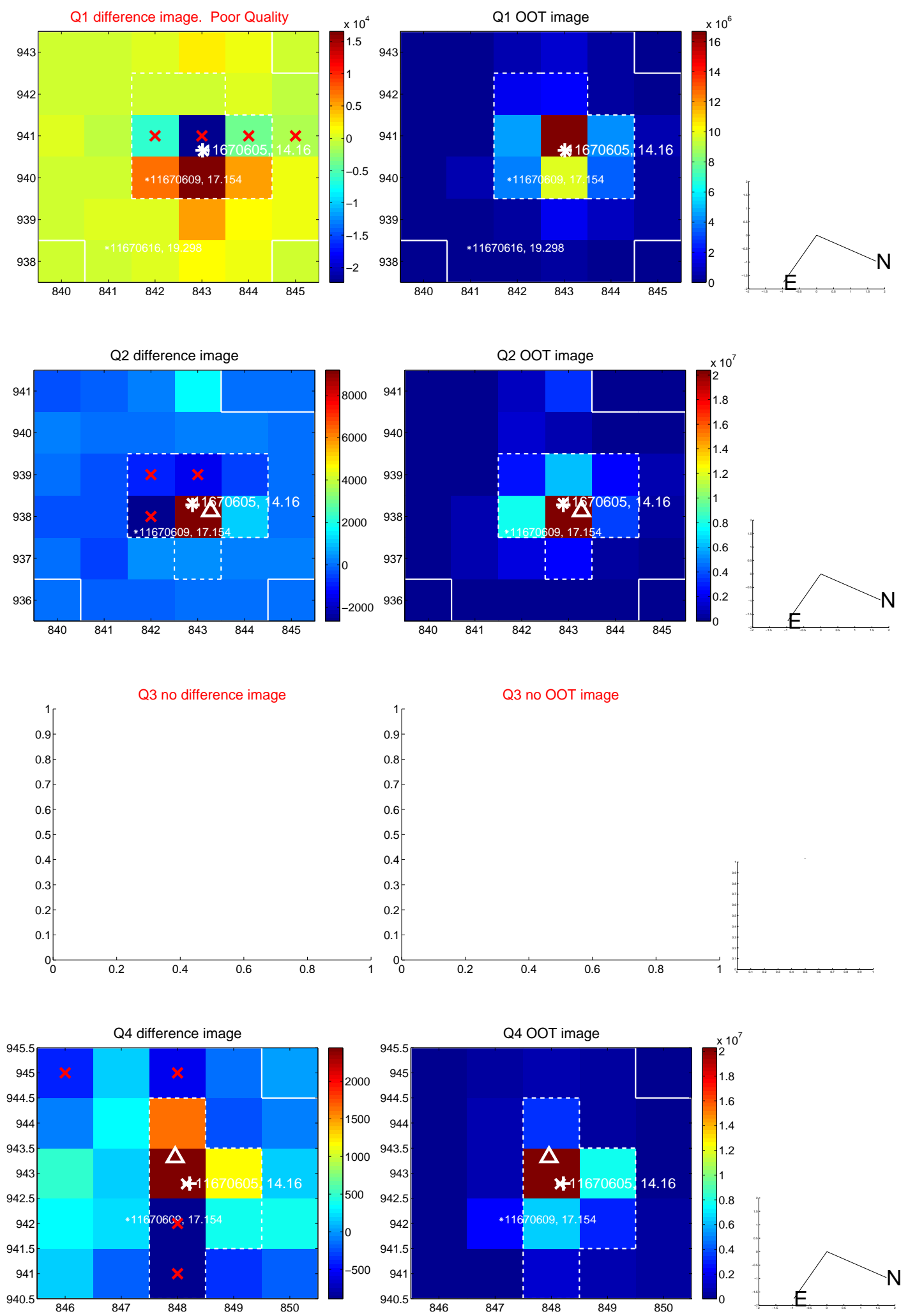


offset from photometric centroids

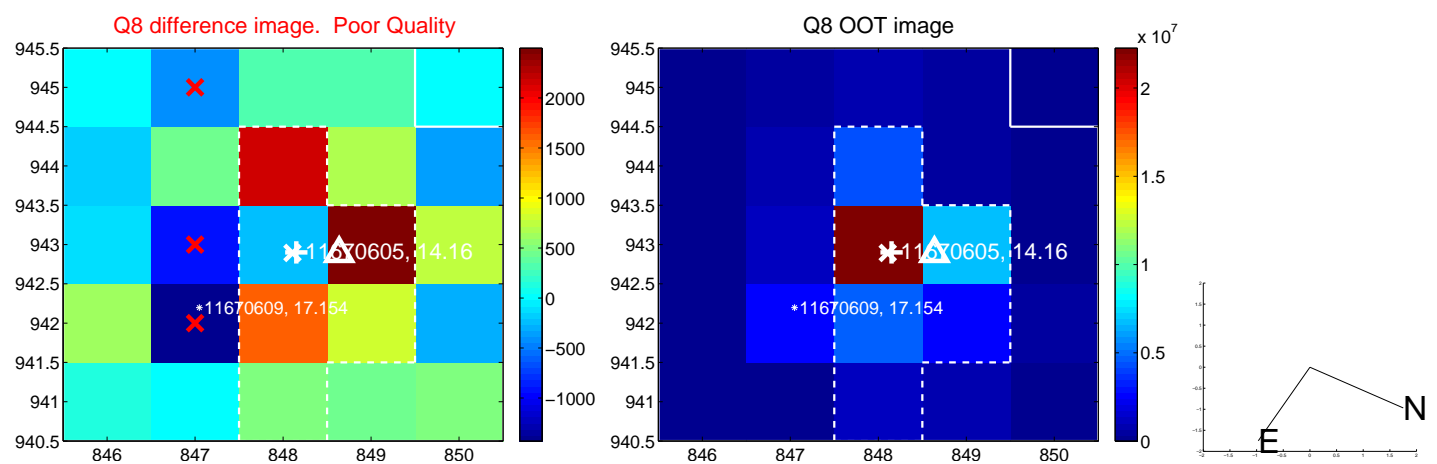
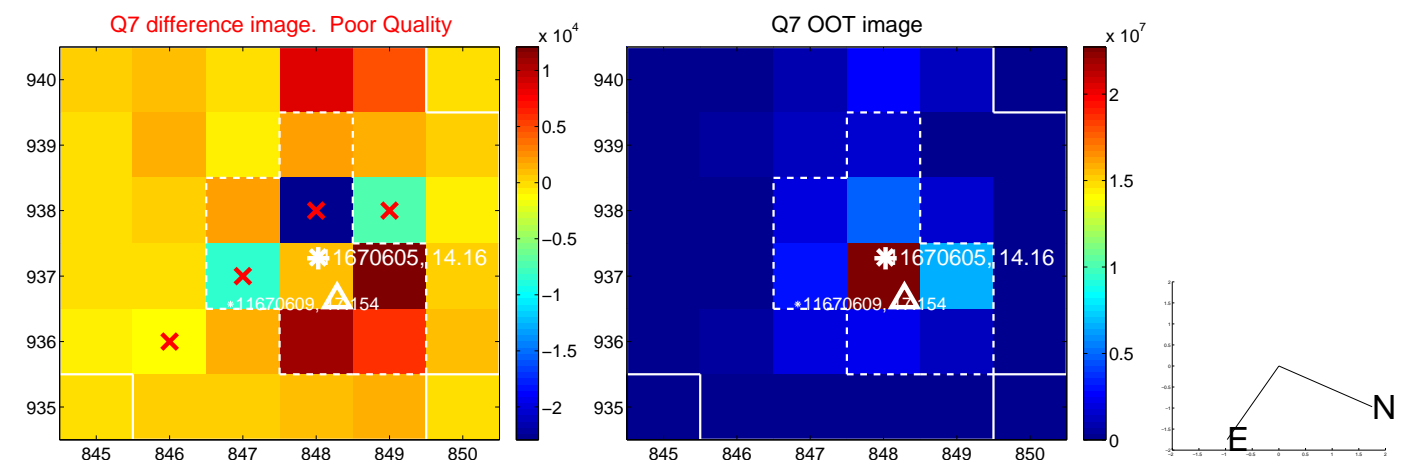
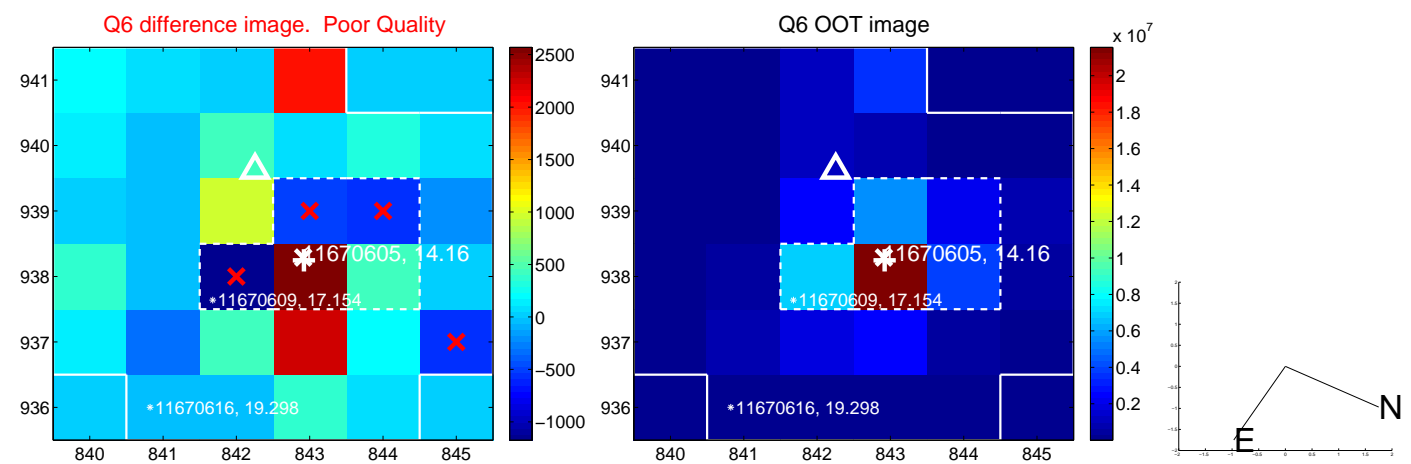
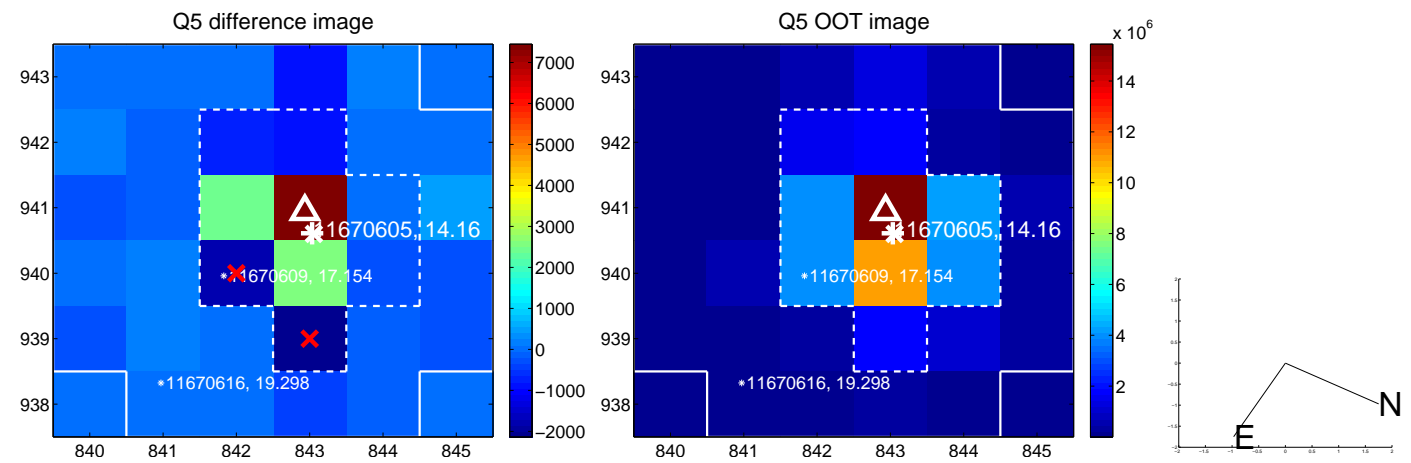


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

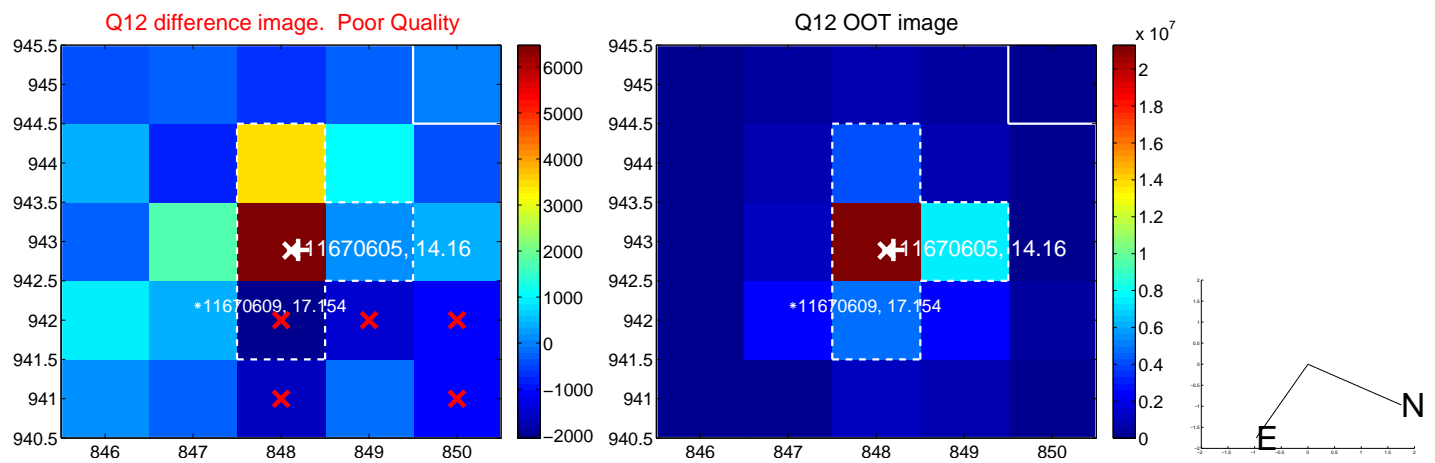
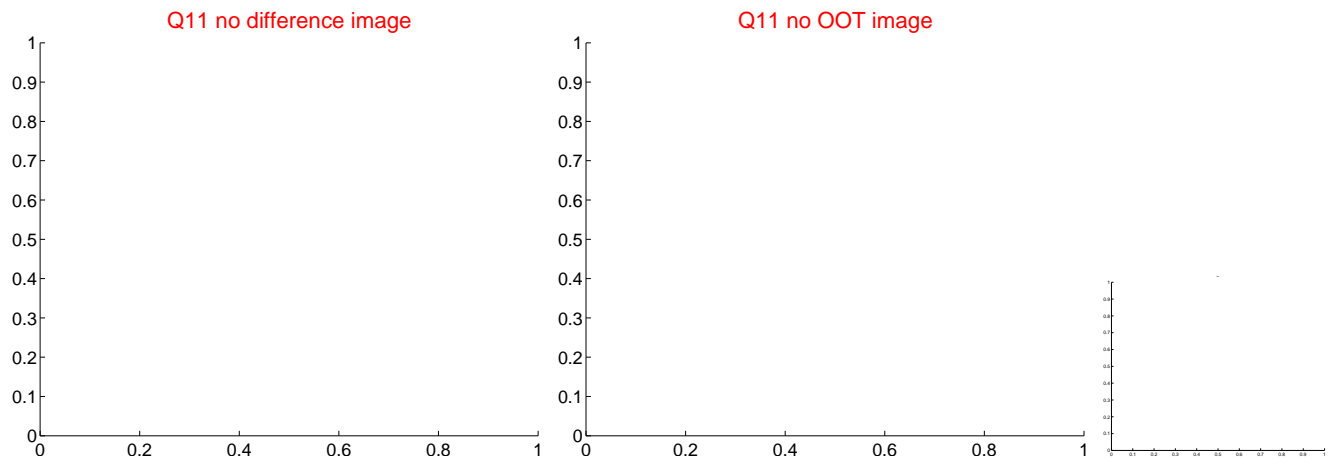
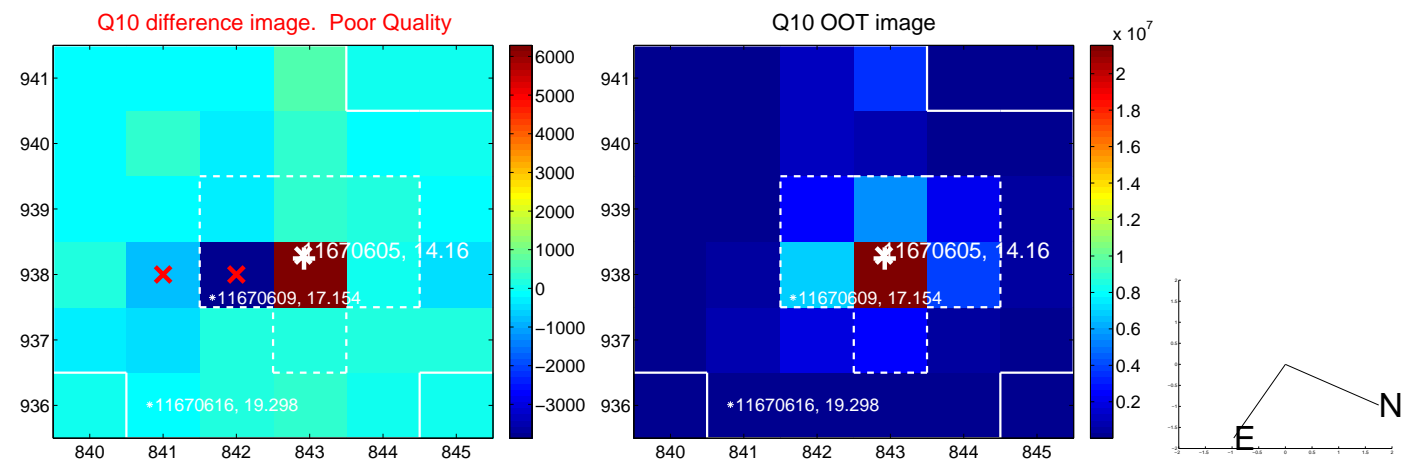
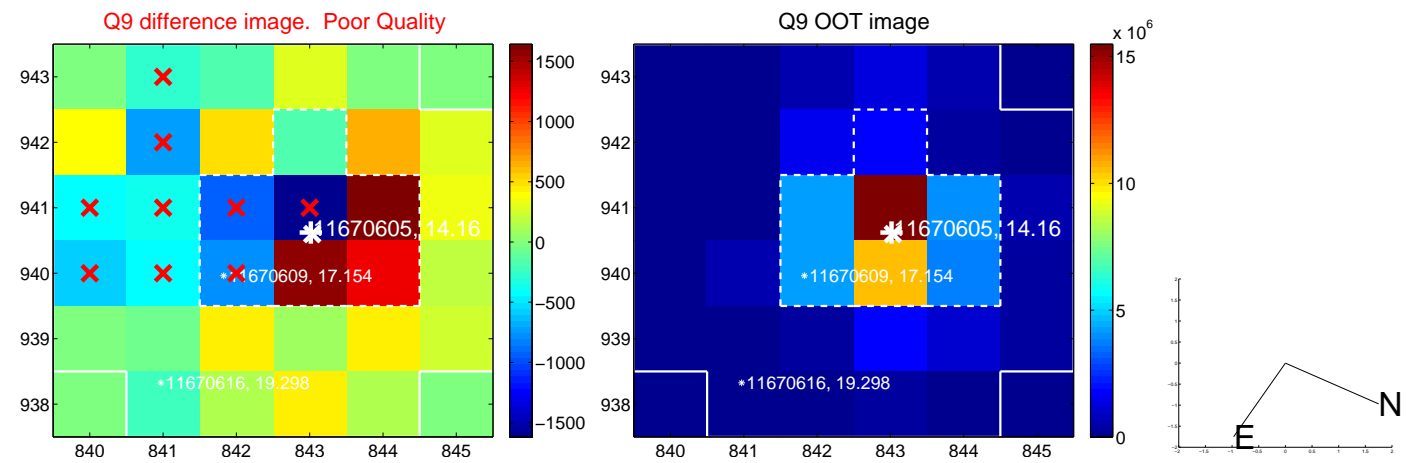
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



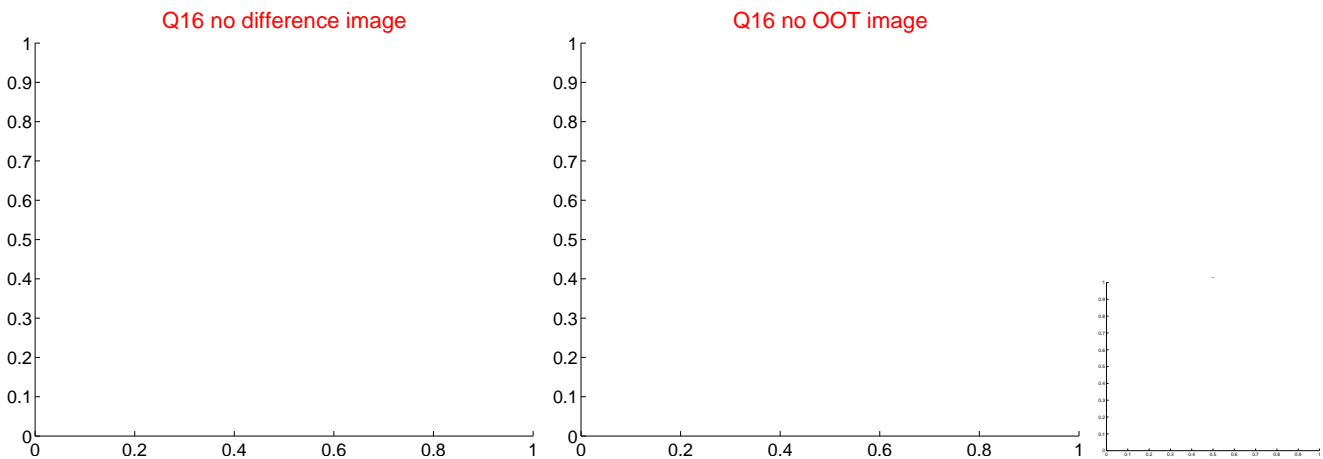
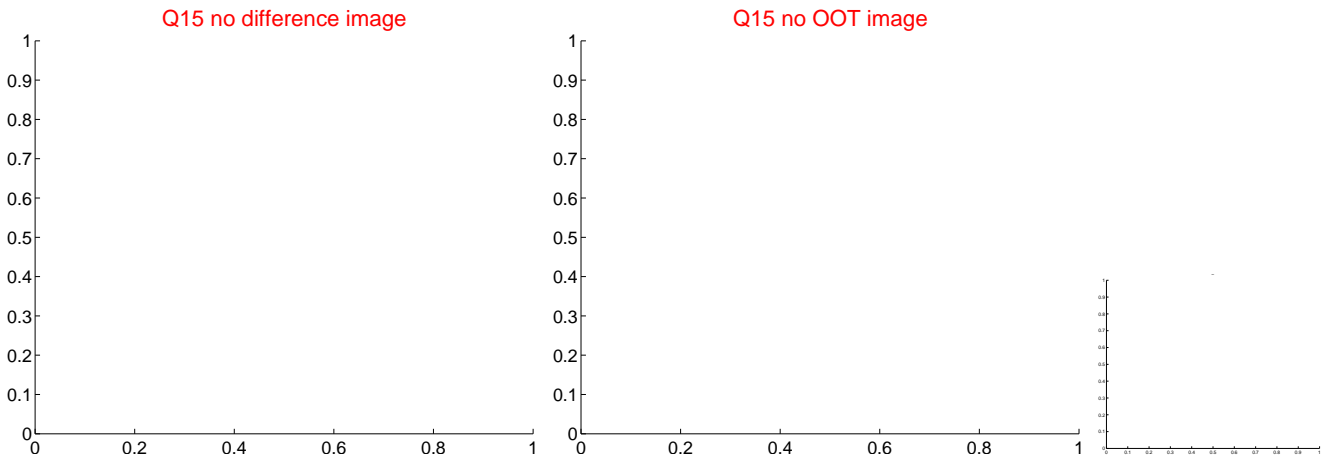
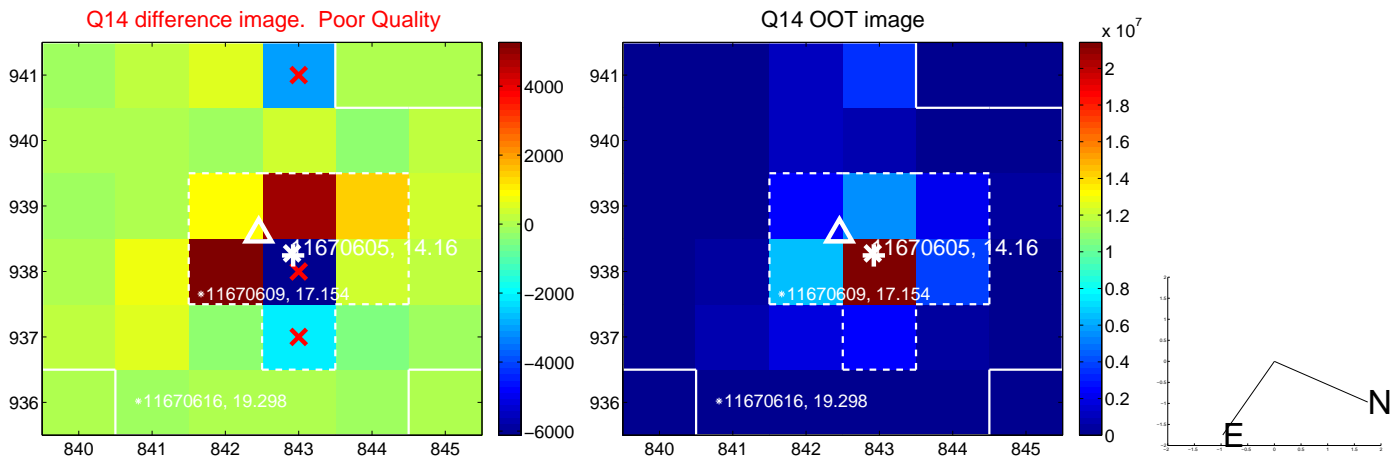
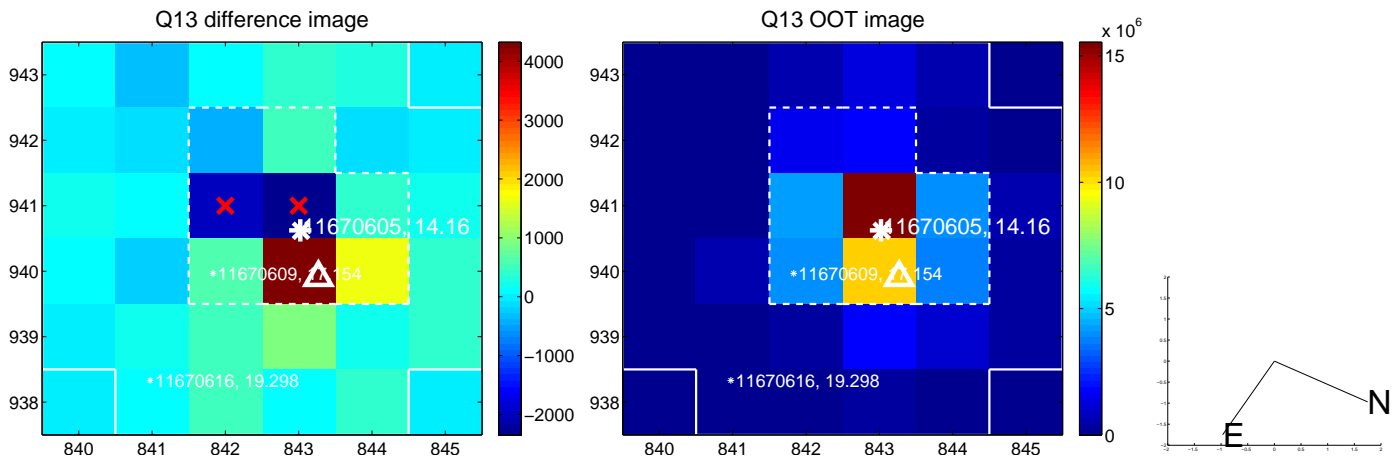
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



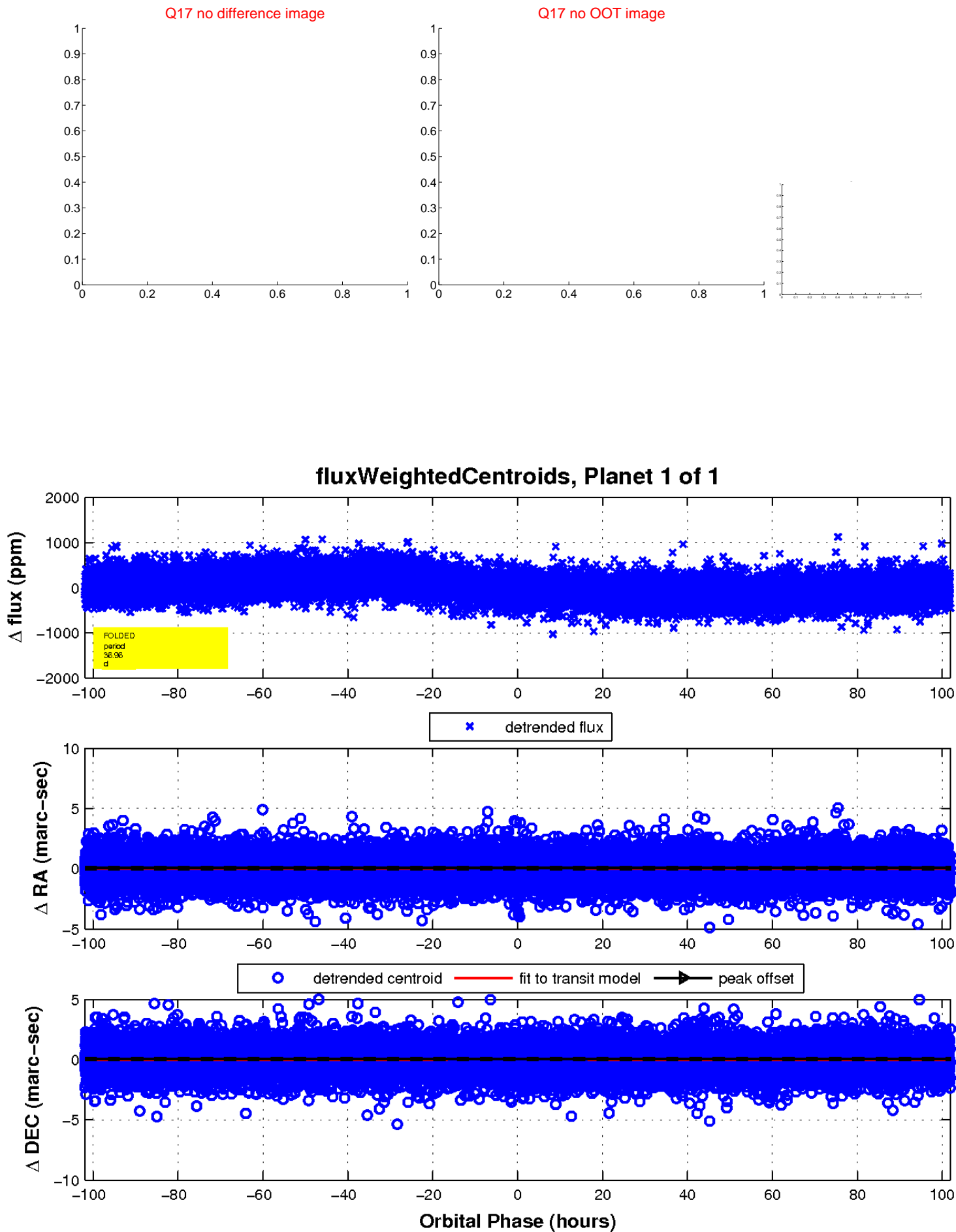
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

