

KIC 004830605

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})
004830605-01	OBS	1660.01	35.636313	164.177163	455.9	4.844	14.5	14.9	0.89	5926	2.09	19.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004830605-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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.

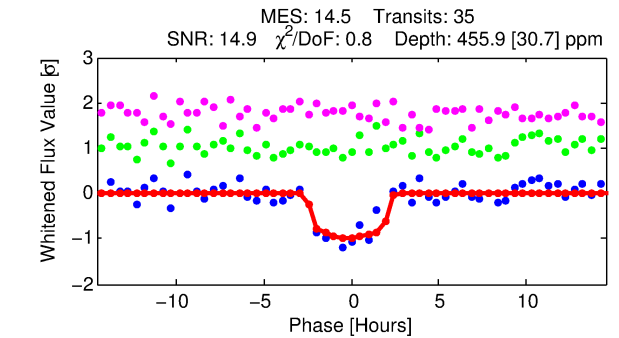
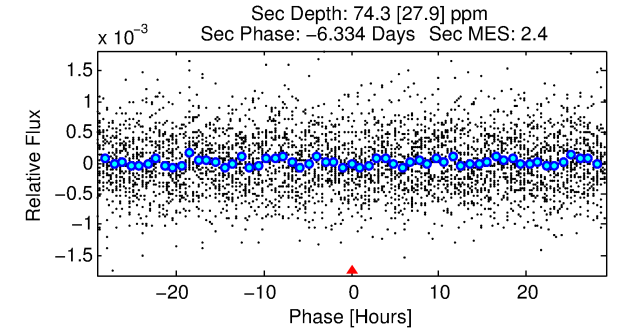
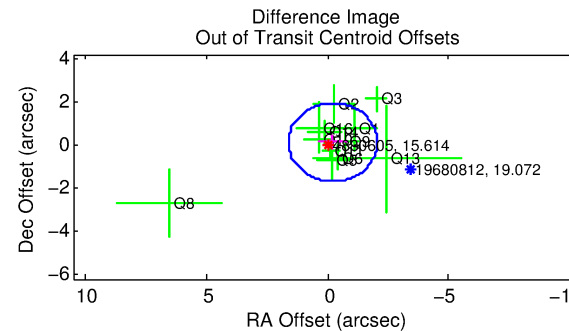
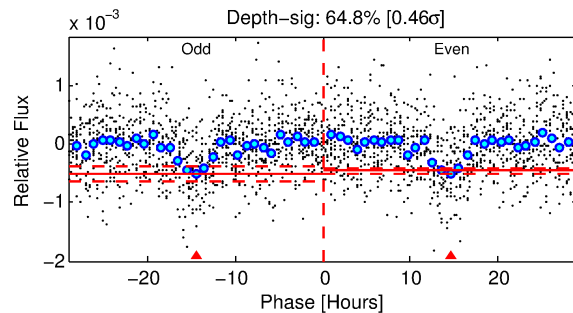
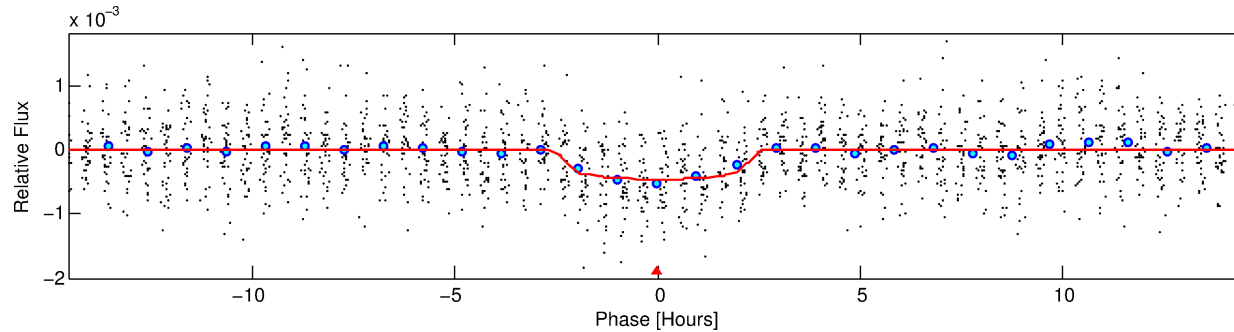
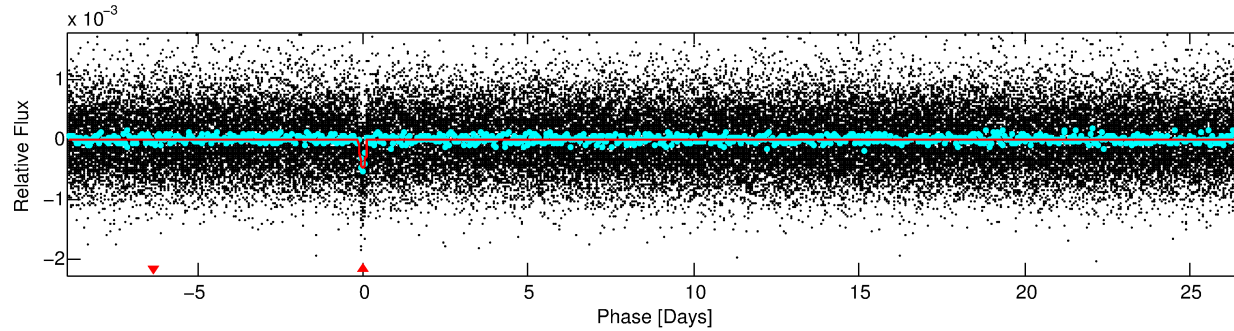
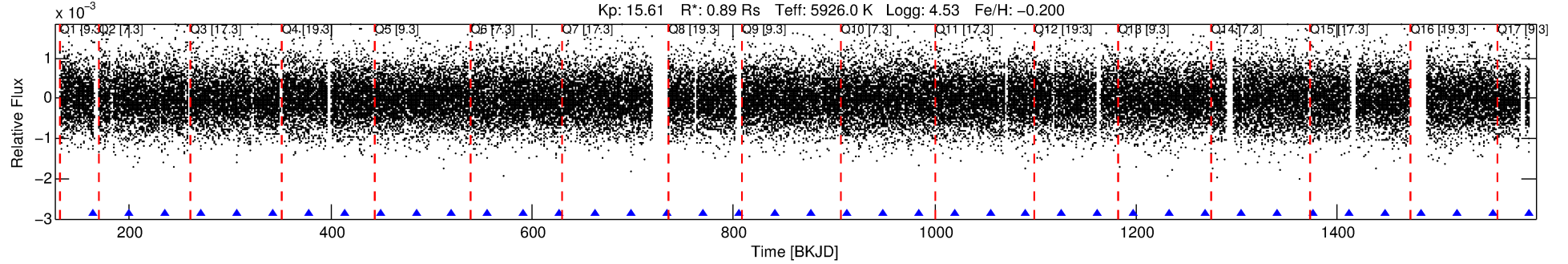
Ephemeris Match Information For 004830605-01

No Significant Match Found

DV One-Page Summary

KIC: 4830605 Candidate: 1 of 1 Period: 35.636 d
KOI: K01660.01 Corr: 0.984

Kp: 15.61 R*: 0.89 Rs Teff: 5926.0 K Logg: 4.53 Fe/H: -0.200



DV Fit Results:

Period = 35.63631 [0.00030] d
Epoch = 164.1772 [0.0064] BKJD
Rp/R* = 0.0216 [0.0098]
a/R* = 36.62 [80.43]
b = 0.79 [1.07]
Seff = 19.65 [6.44]
Teq = 537 [44] K
Rp = 2.09 [1.08] Re
a = 0.2103 [0.0436] AU
Ag = 415.59 [429.28] [0.97σ]
Teffp = 3748 [932] K [3.44σ]

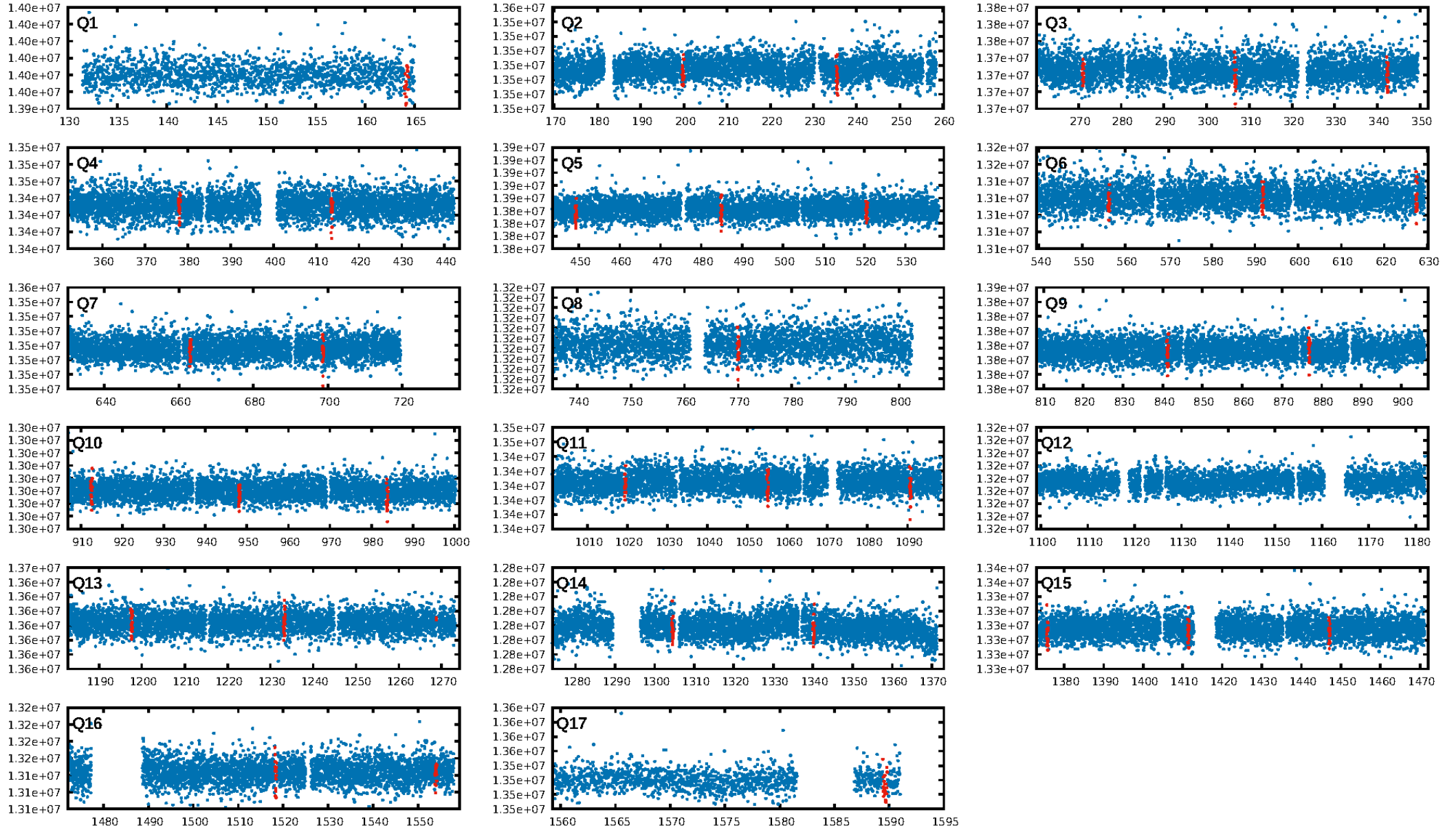
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.64e-47
RollingBand-fgt: 1.00 [33/33]
GhostDiagnostic-chr: 1.697
Centroid-sig: 38.7%
Centroid-so: 0.811 arcsec [0.83σ]
OotOffset-rm: 0.255 arcsec [0.42σ]
KicOffset-rm: 0.421 arcsec [0.72σ]
OotOffset-st: 4/2/2/4 [12]
KicOffset-st: 4/2/2/4 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [16/16]

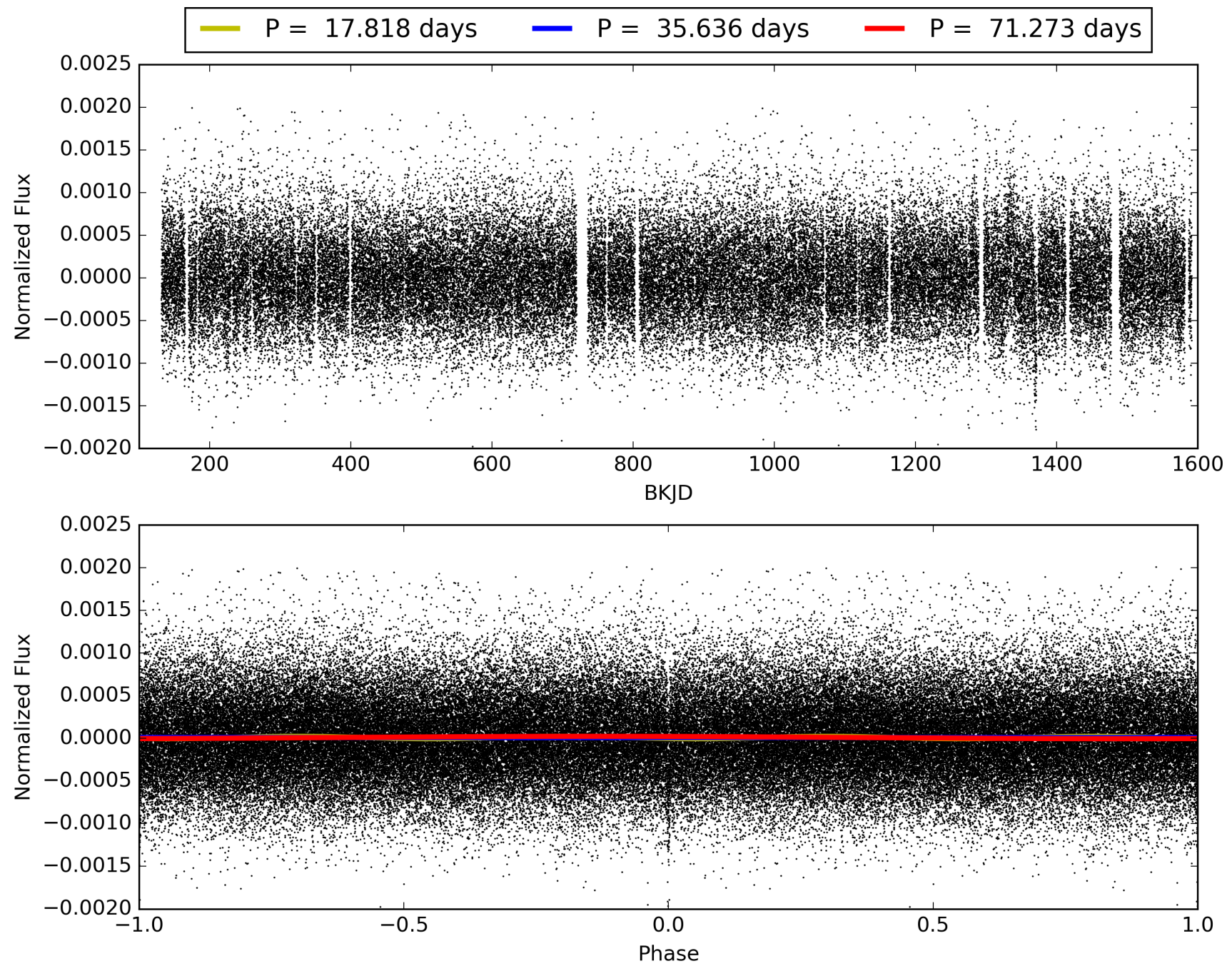
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:49:27 Z

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

TCE 004830605-01, PDC Light Curves

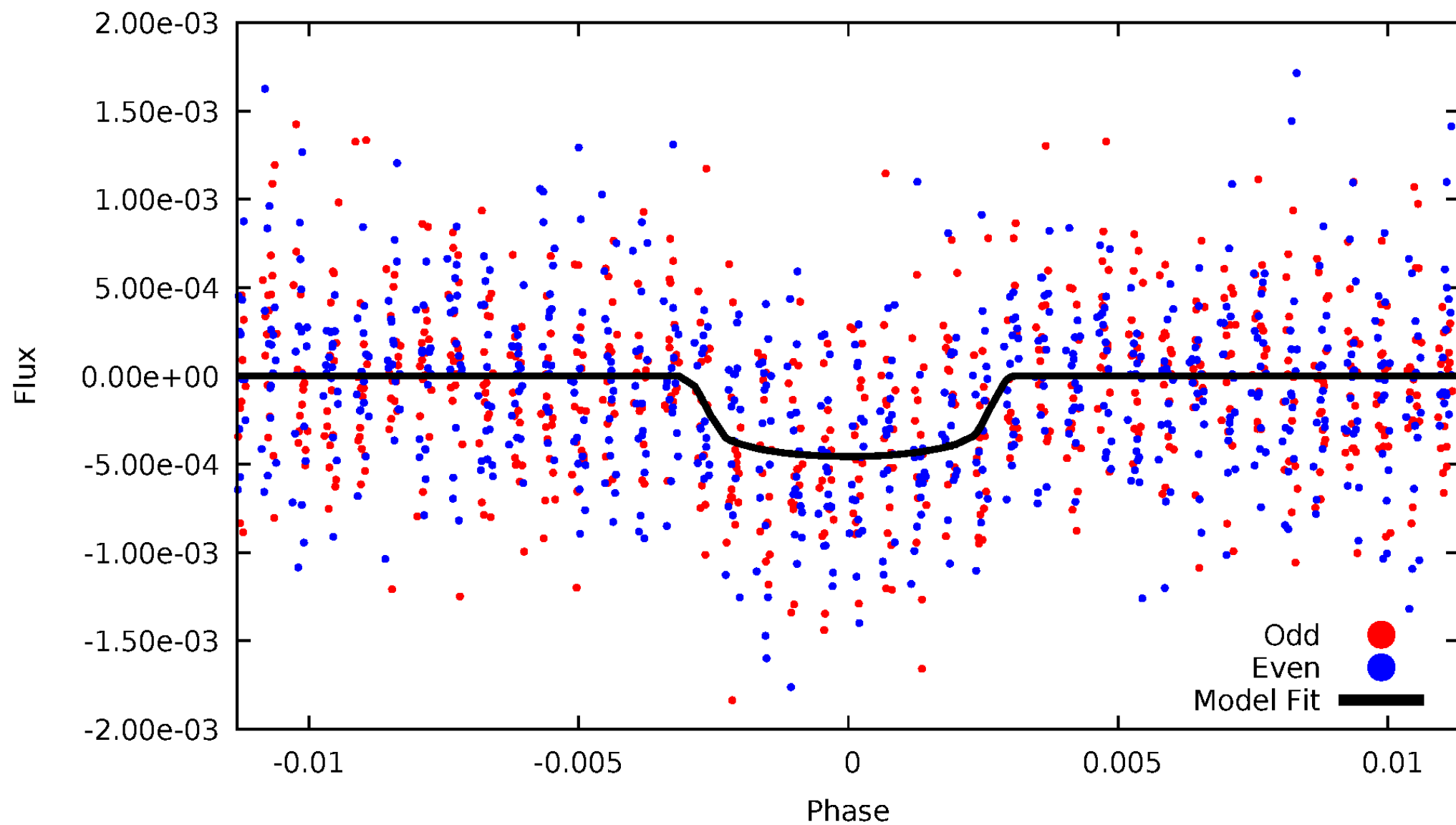


TCE 004830605-01



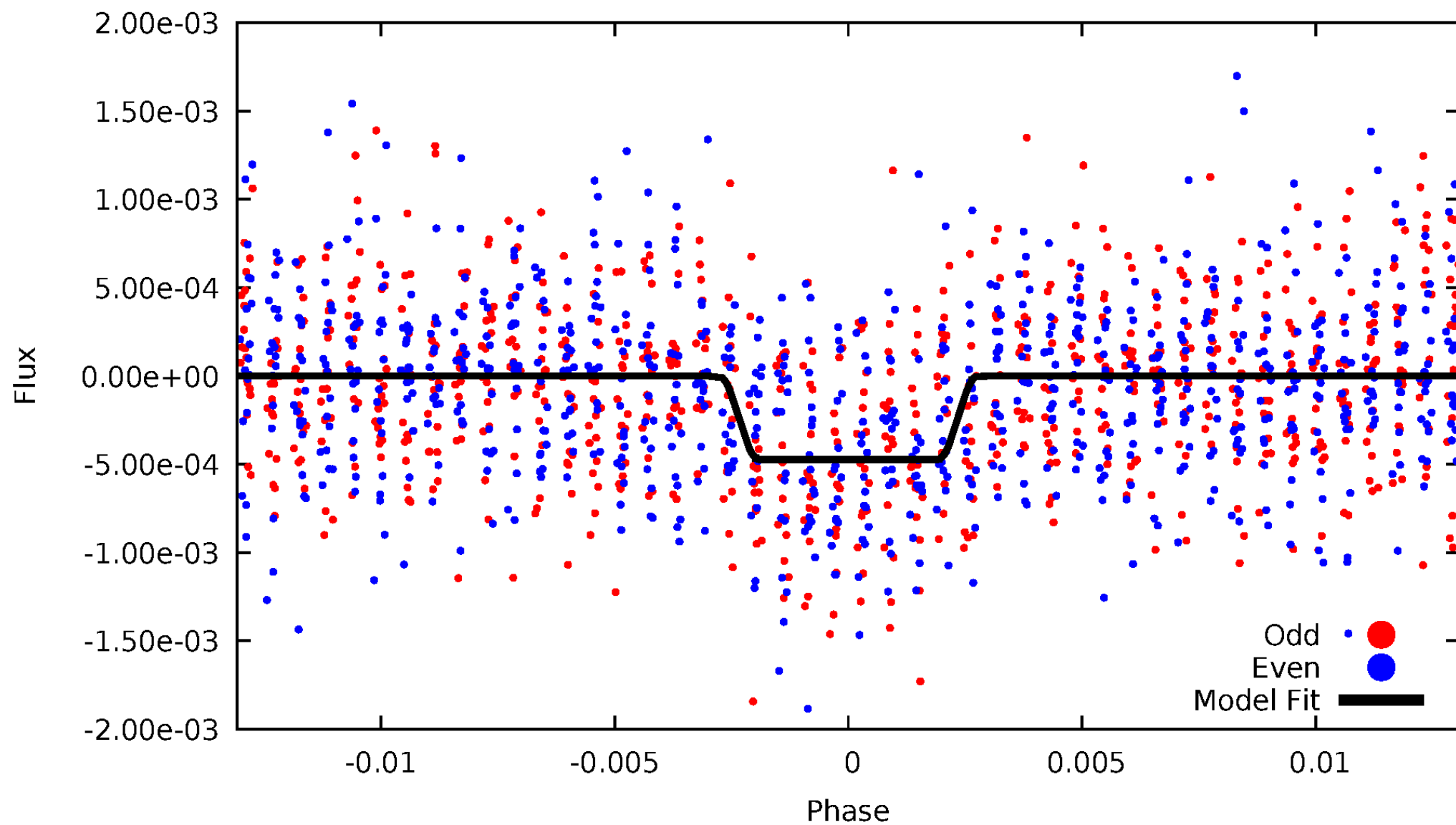
DV Odd/Even

TCE 004830605-01



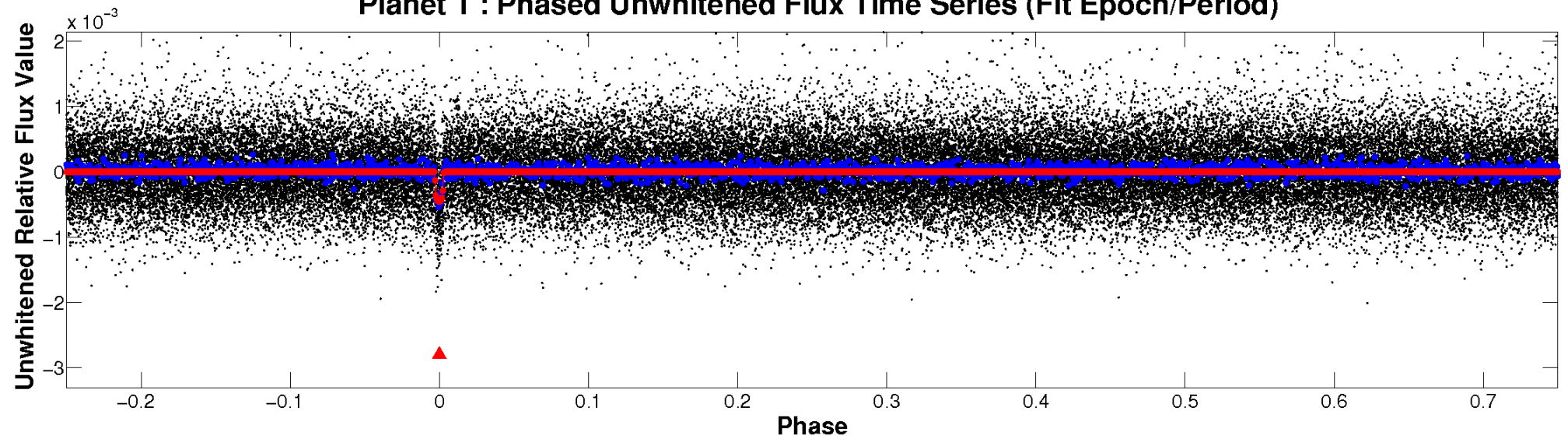
ALT Odd/Even

TCE 004830605-01

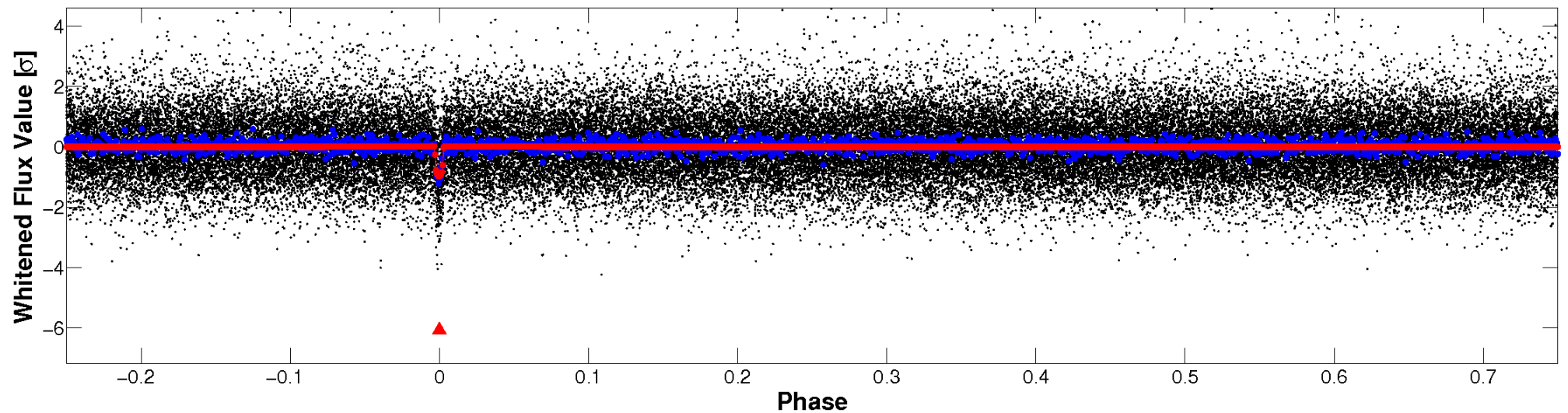


Non-Whitened Vs. Whitened Light Curve

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

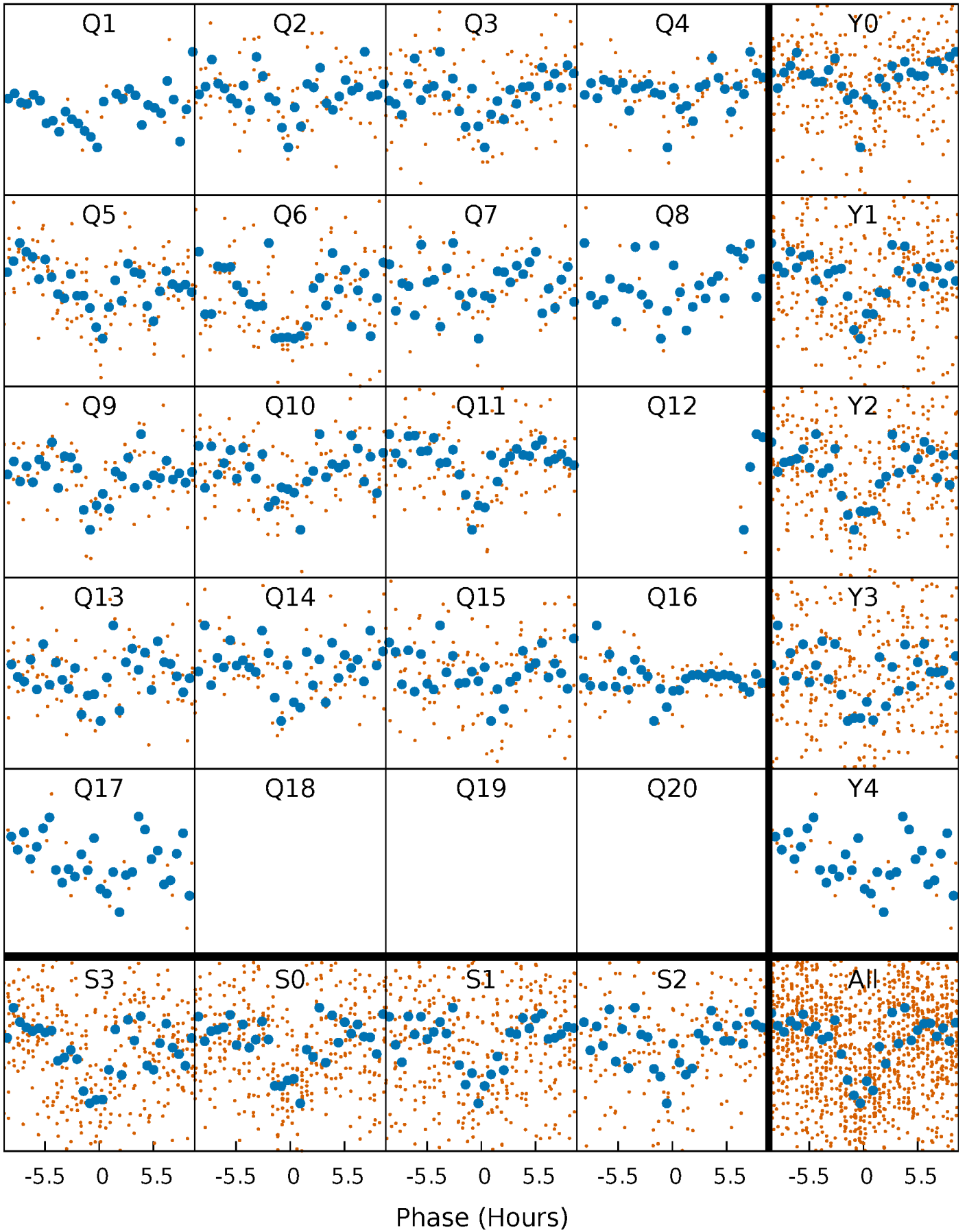


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



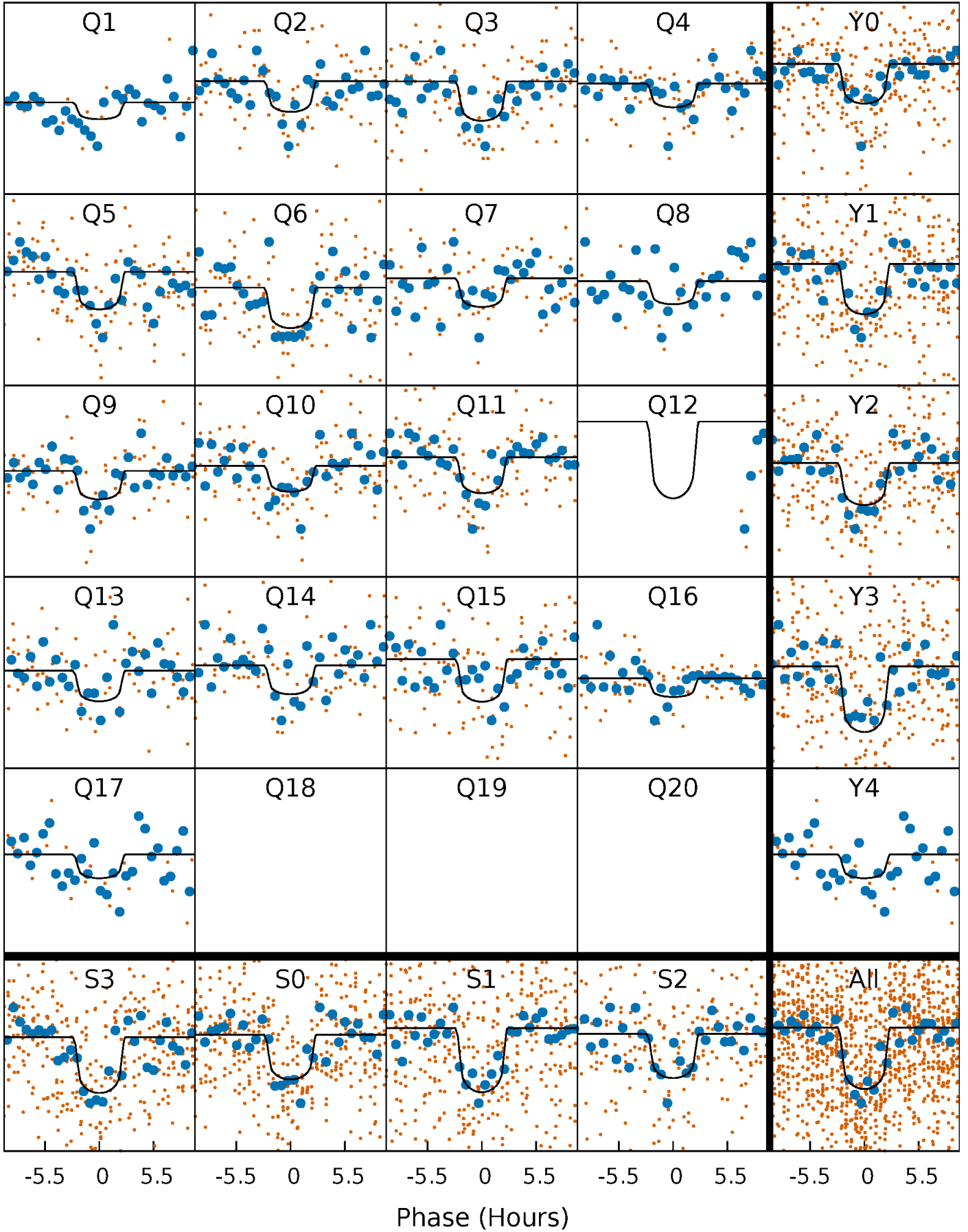
PDC Quarter-Phased Transit Curves

TCE 004830605-01 P= 35.636313 Days $T_0=164.177163$ (BKJD)



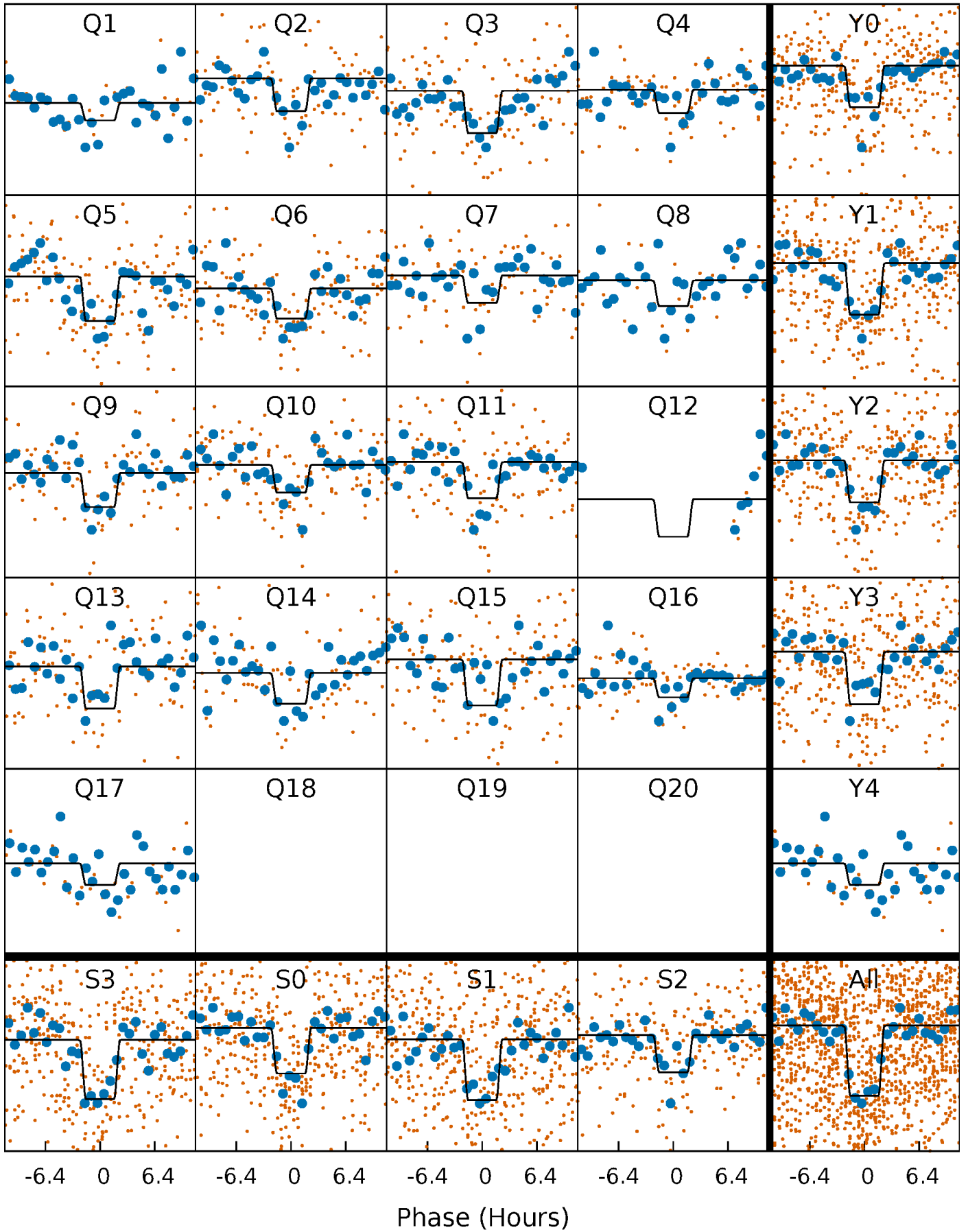
DV Quarter-Phased Transit Curves

TCE 004830605-01 P= 35.636313 Days $T_0=164.177163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

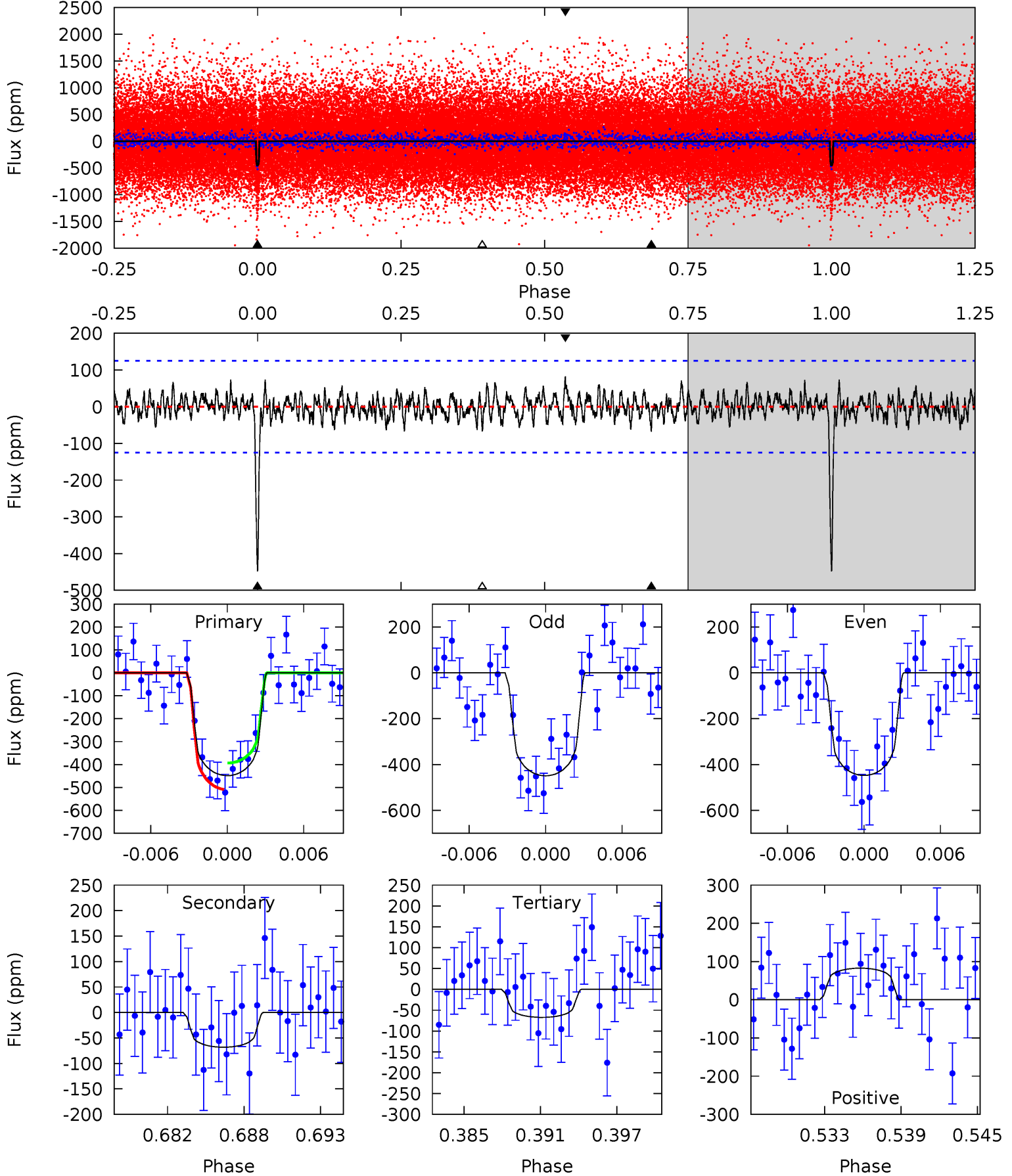
TCE 004830605-01 P= 35.636050 Days $T_0=164.176982$ (BKJD)



DV Model-Shift Uniqueness Test

004830605-01, $P = 35.636313$ Days, $E = 128.540850$ Days

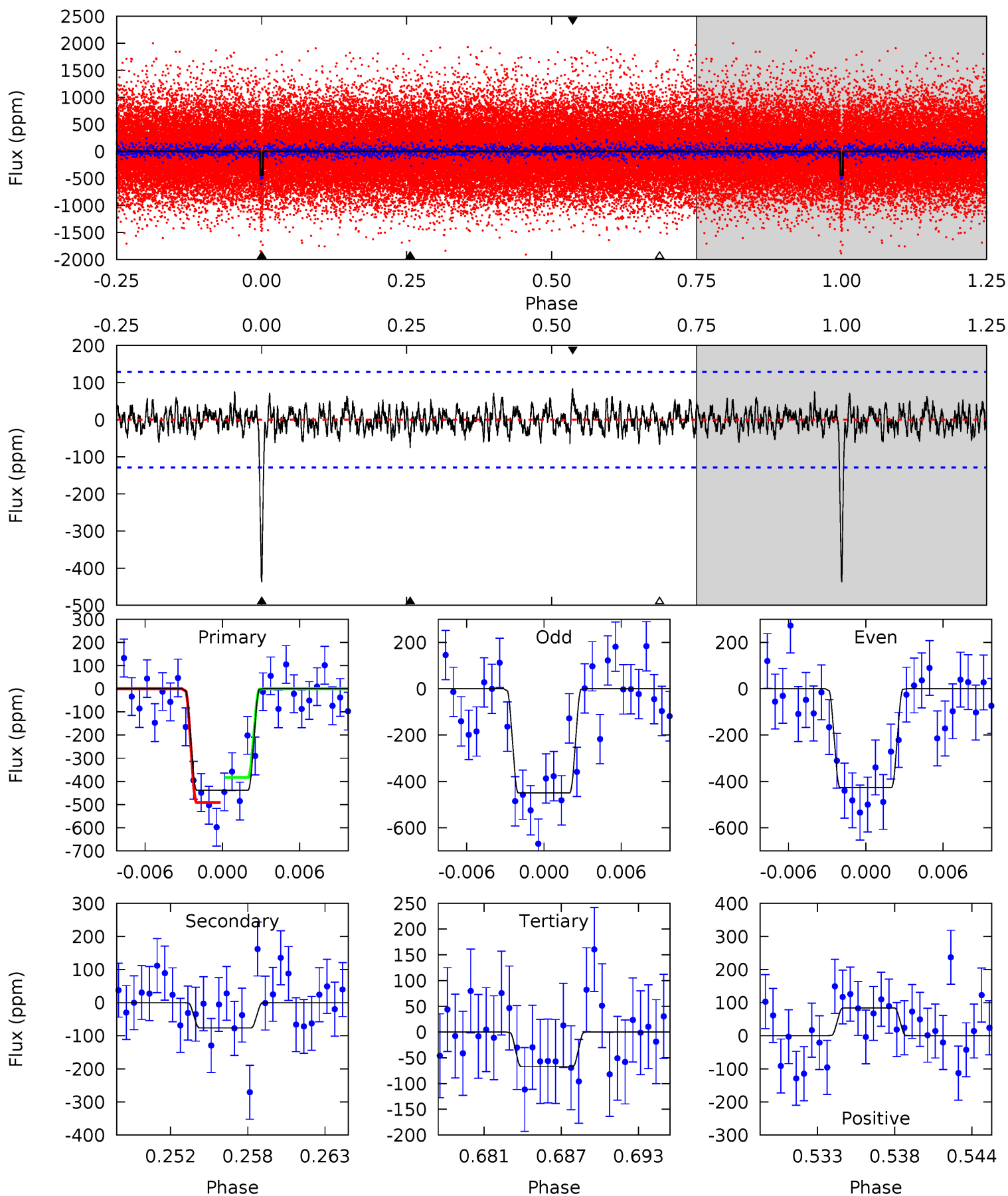
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	2.80	2.76	3.39	5.13	2.75	1.02	15.6	15.0	0.04	-0.59	0.03	0.89	0.16	2.35



Alt Model-Shift Uniqueness Test

004830605-01, $P = 35.636050$ Days, $E = 128.540932$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	3.05	2.68	3.35	5.13	2.76	0.96	14.8	14.1	0.36	-0.31	0.46	1.00	0.16	2.15



Stellar Parameters For KIC 004830605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5926^{+160}_{-178}	$4.532^{+0.042}_{-0.168}$	$-0.200^{+0.300}_{-0.300}$	$0.887^{+0.216}_{-0.077}$	$0.978^{+0.109}_{-0.120}$	$1.971^{+0.433}_{-0.931}$
	+3%/-3%	+1%/-4%	+150%/-150%	+24%/-9%	+11%/-12%	+22%/-47%
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 004830605-01 / KOI 1660.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-68 ± 24	$2.21^{+0.95}_{-1.03}$	764^{+46}_{-31}	3922^{+1152}_{-517}	310^{+873}_{-179}
Alt.	-76 ± 25	$2.14^{+1.08}_{-0.96}$	763^{+44}_{-31}	4079^{+982}_{-577}	395^{+843}_{-241}

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 $A_{obs} \gg 1.0$

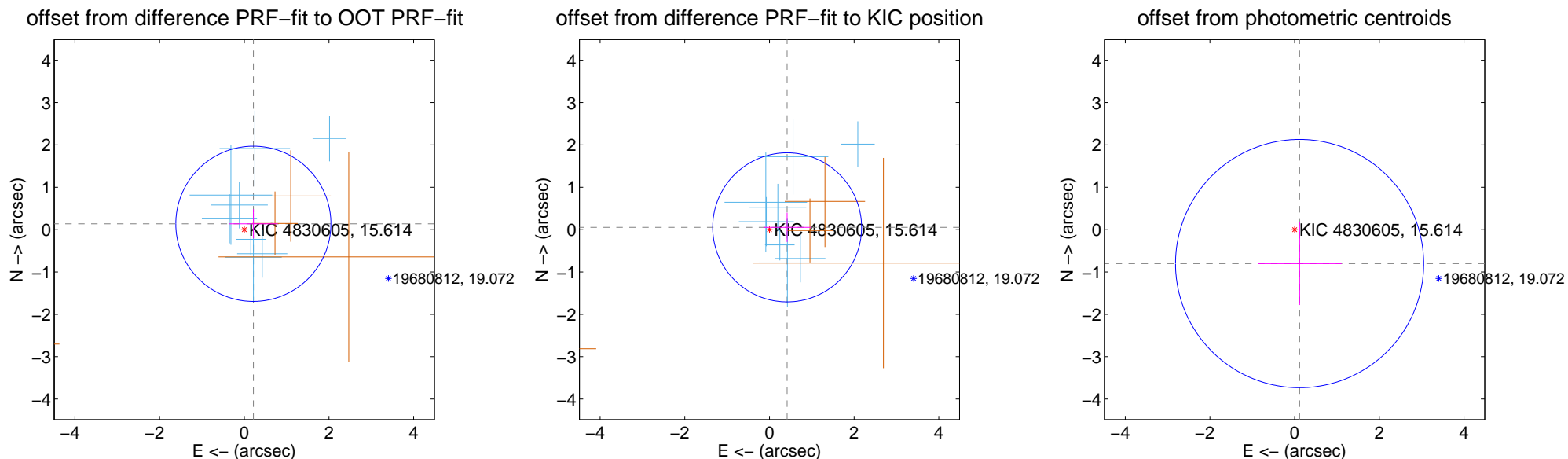
DV Centroid Data

Supplemental centroid analysis for 004830605-01. Kepler magnitude: 15.61. Transit SNR 14.93

There are 8 quarters with good PRF difference image offsets

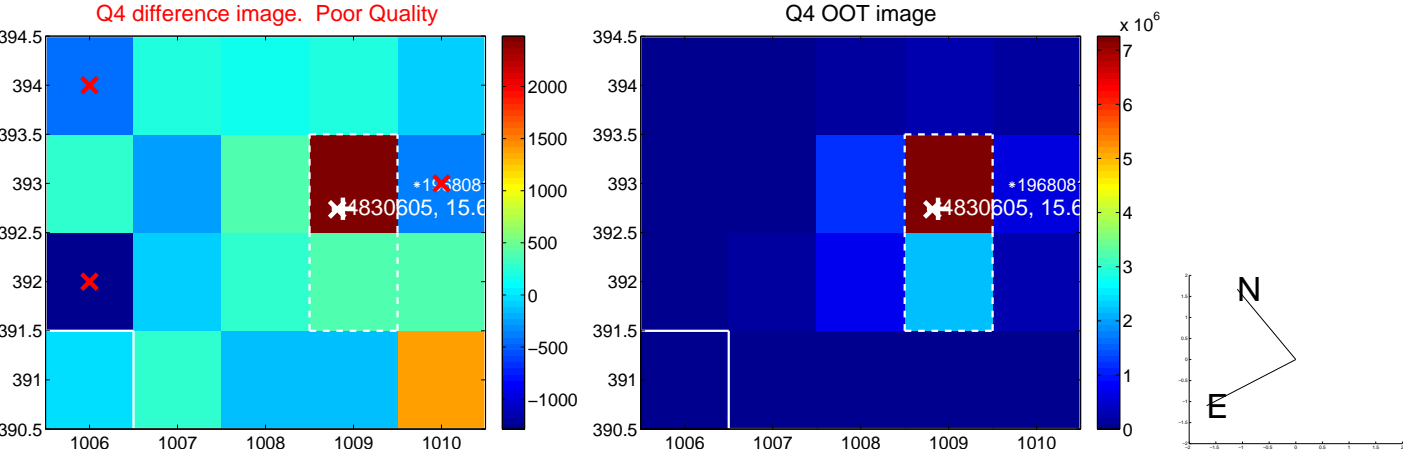
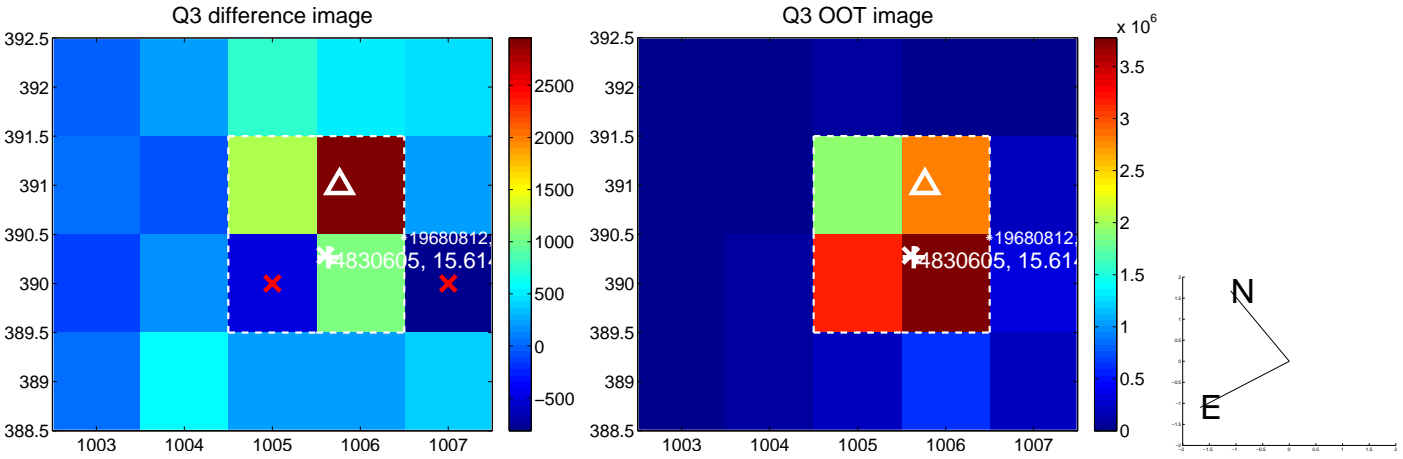
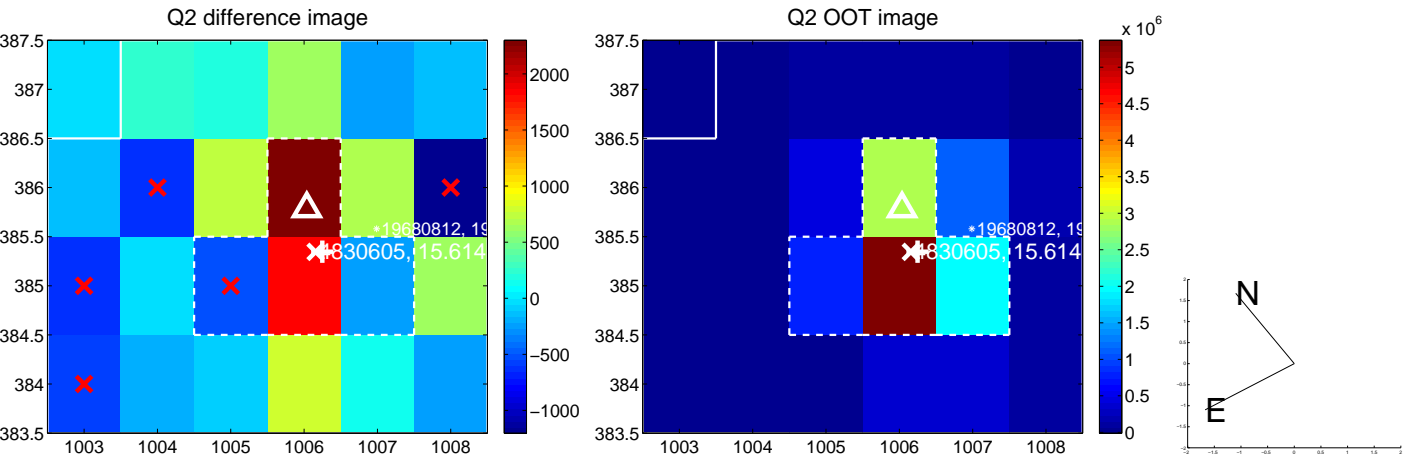
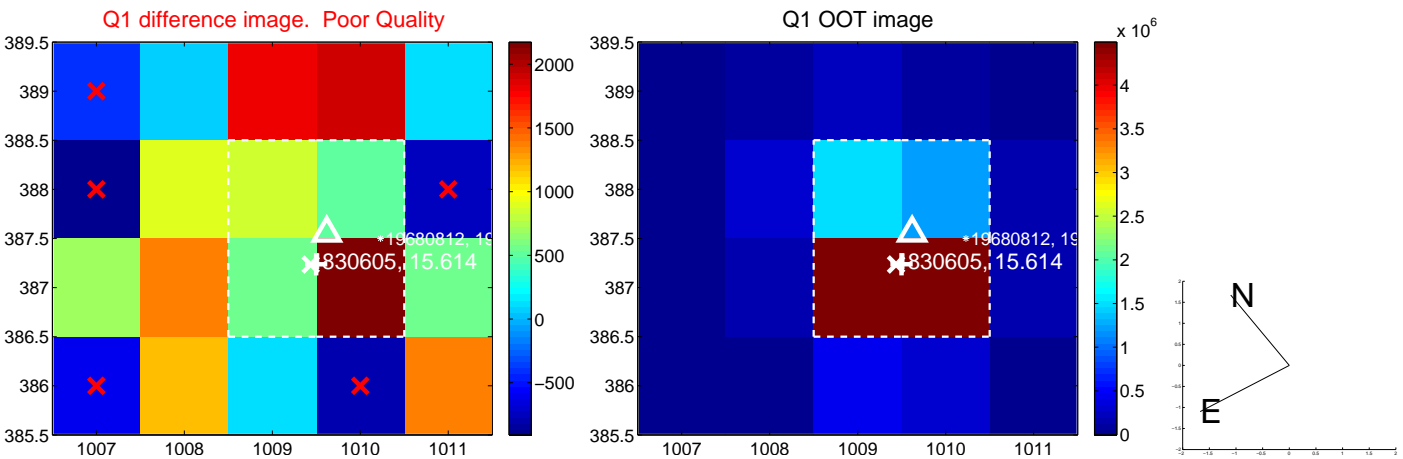
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.255 ± 0.611	0.42	-0.215 ± 0.578	0.138 ± 0.344
PRF-fit source offset from KIC position	0.421 ± 0.586	0.72	-0.418 ± 0.562	0.054 ± 0.345
photometric centroid source offset	0.81 ± 0.98	0.83	-0.12 ± 0.99	-0.80 ± 0.98

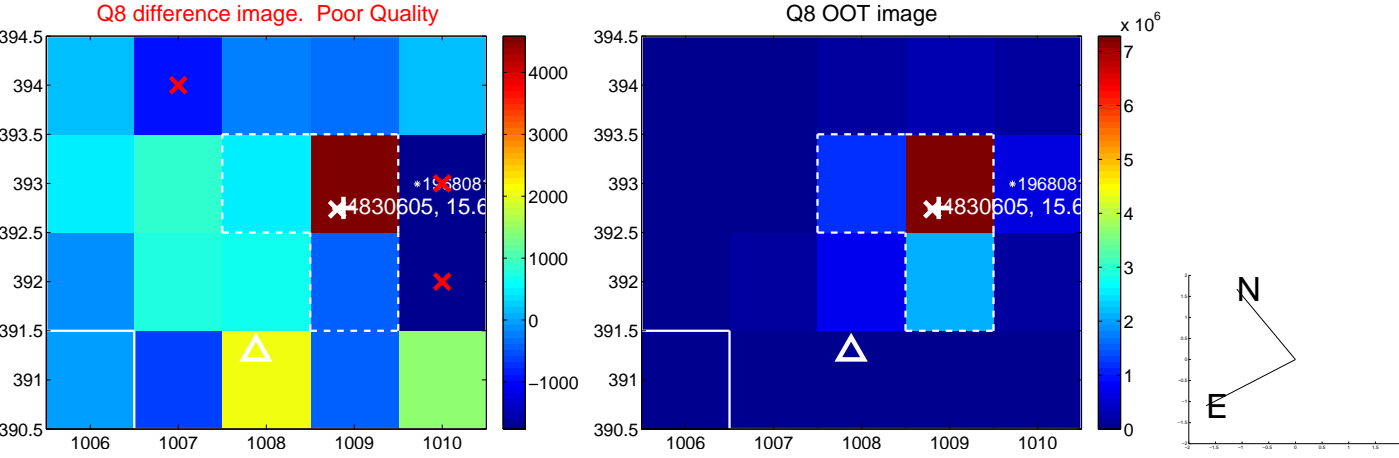
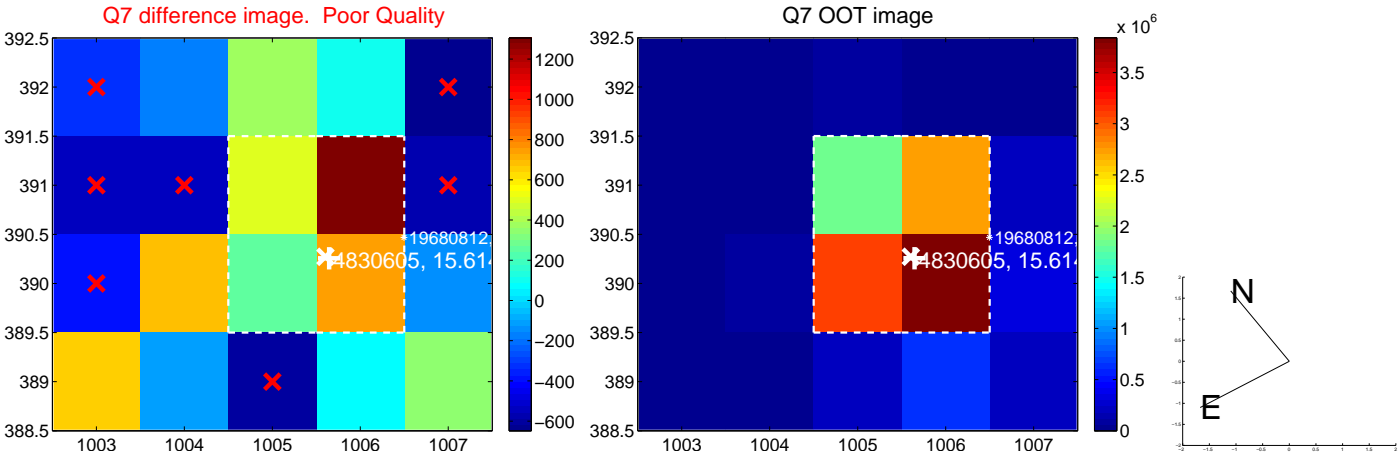
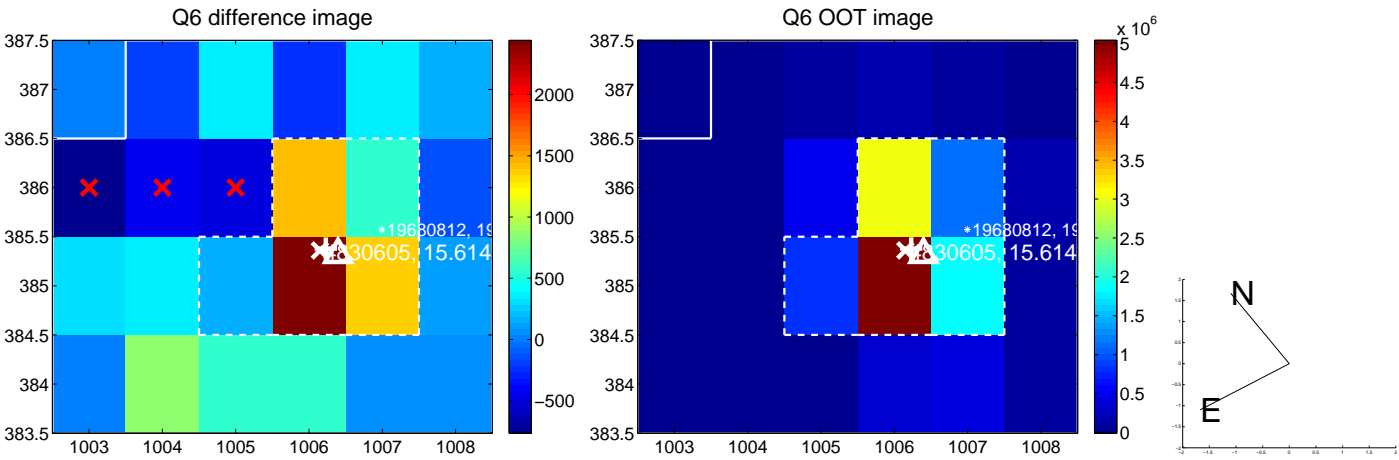
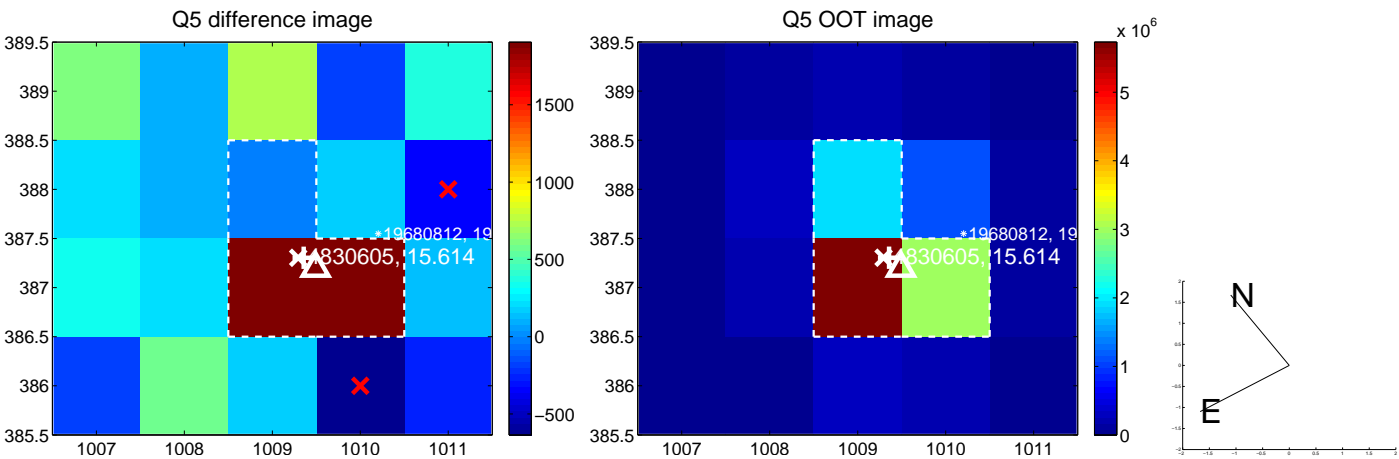


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

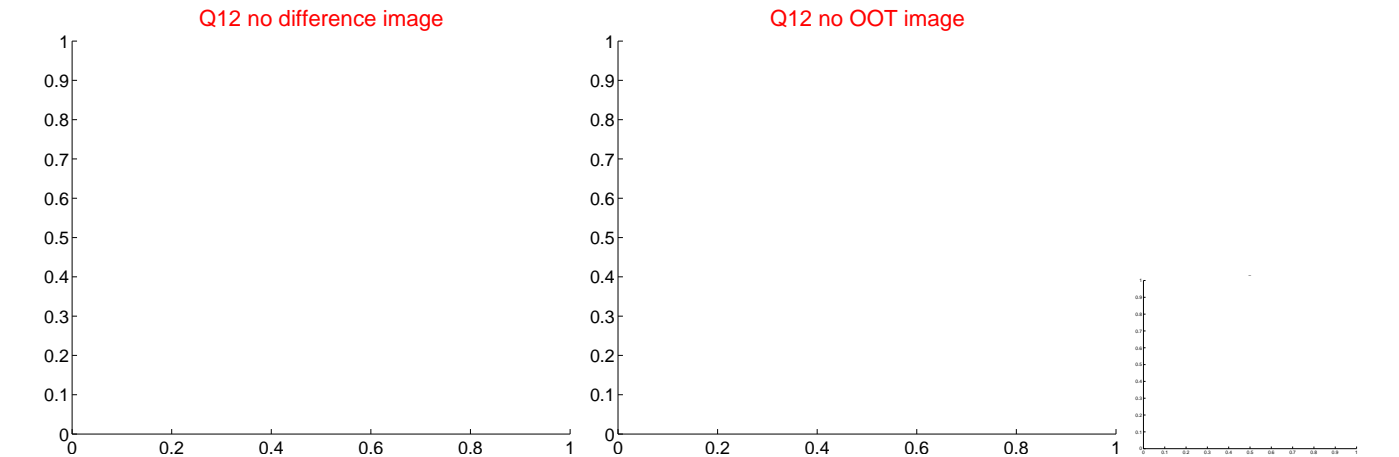
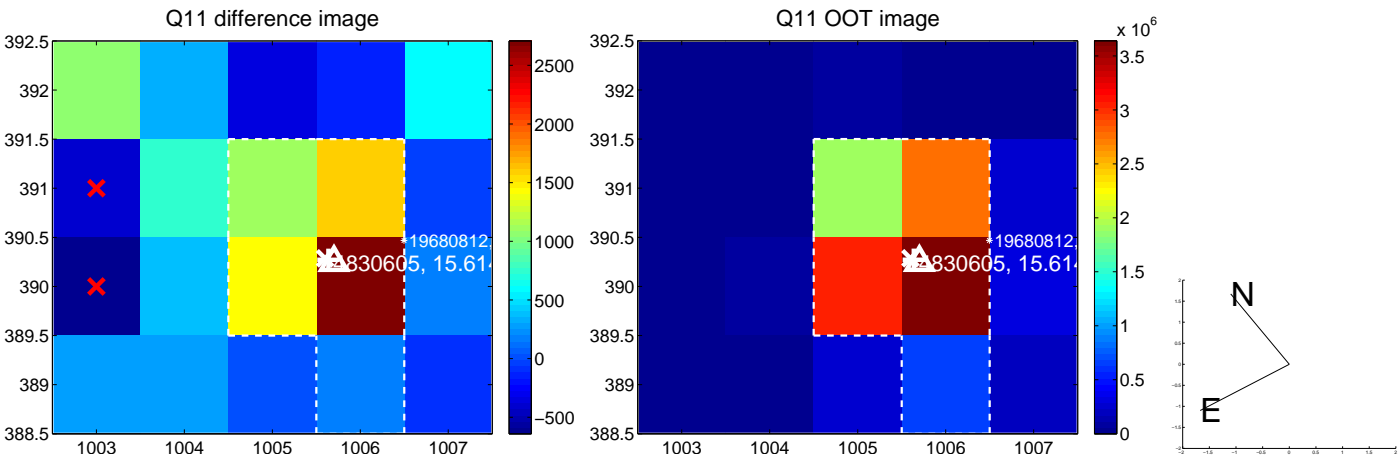
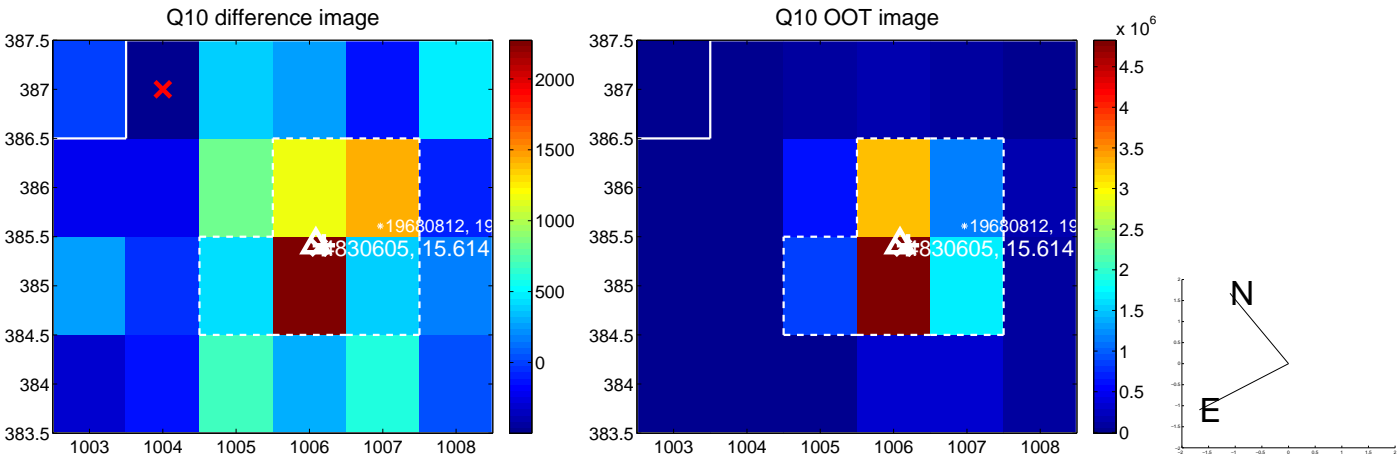
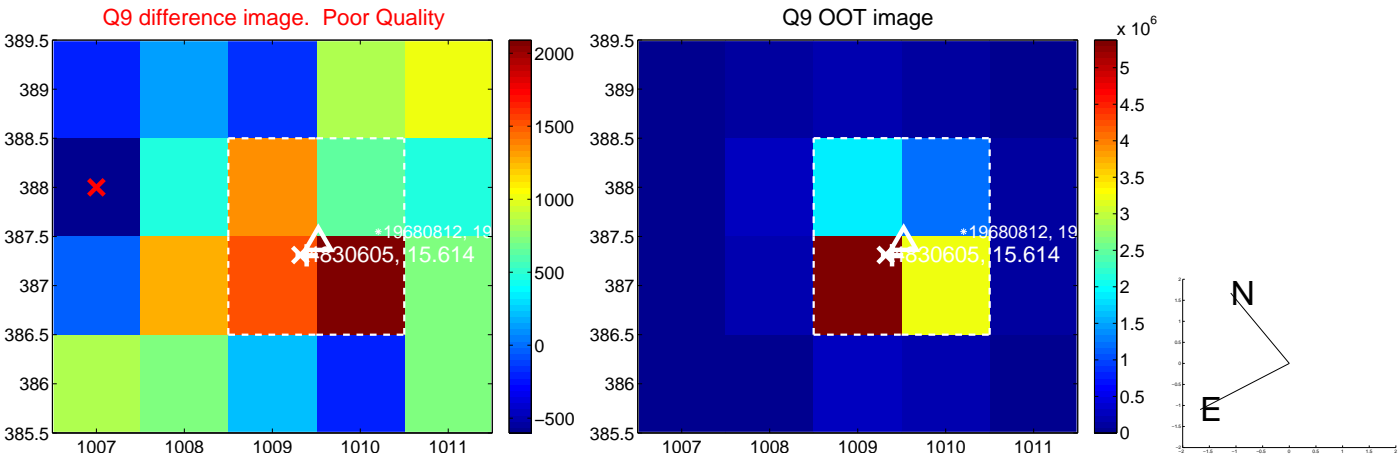
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



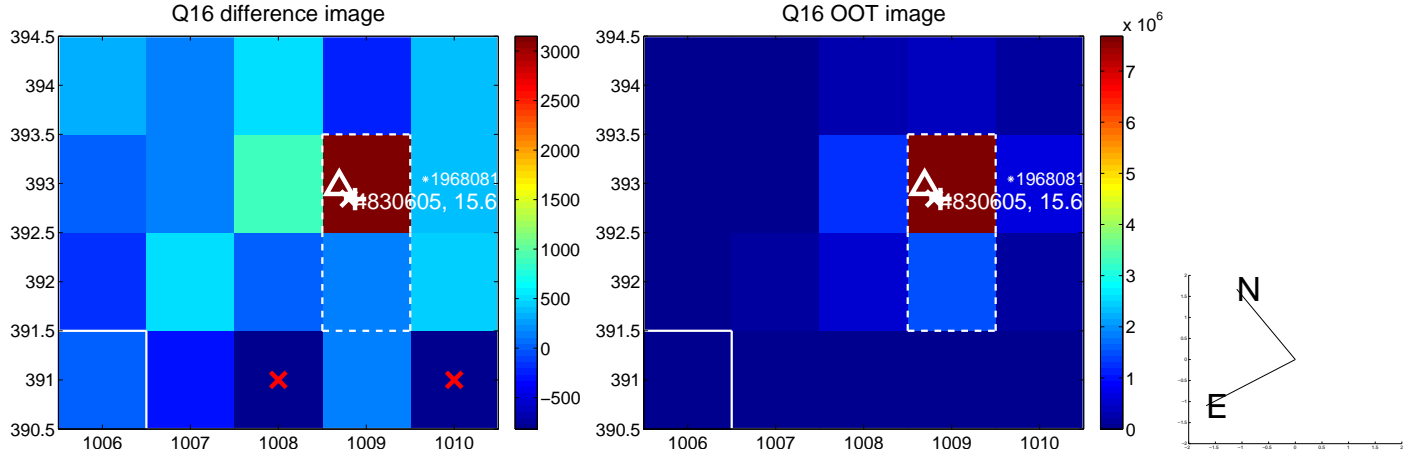
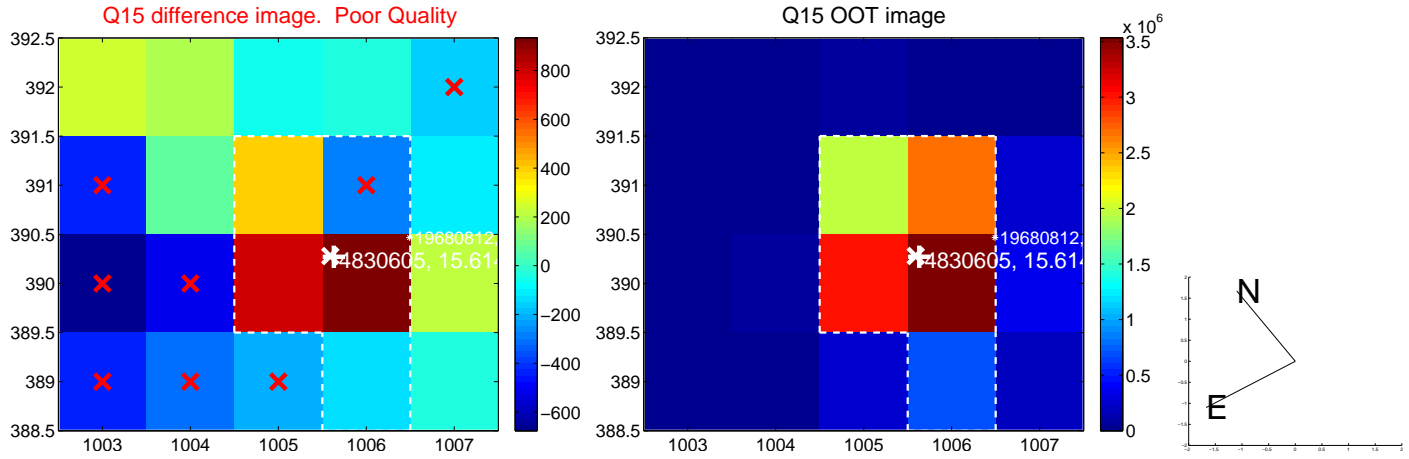
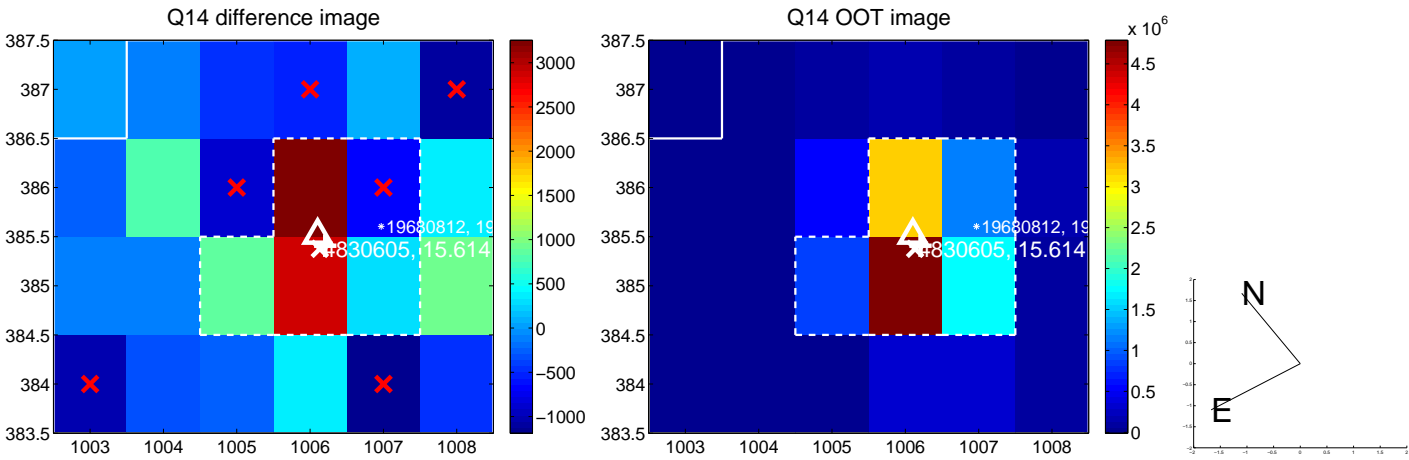
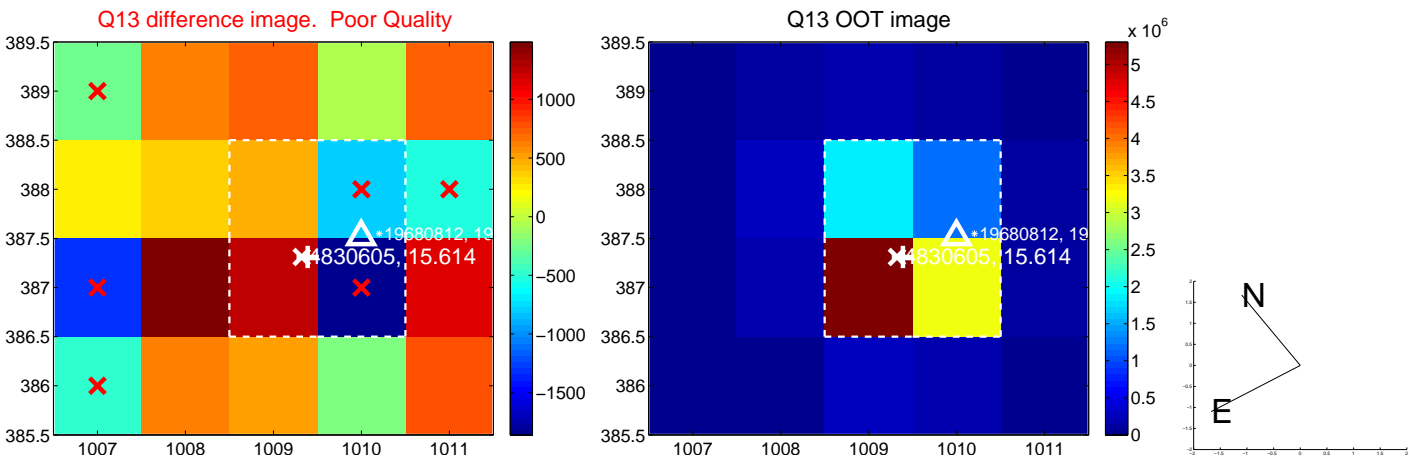
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



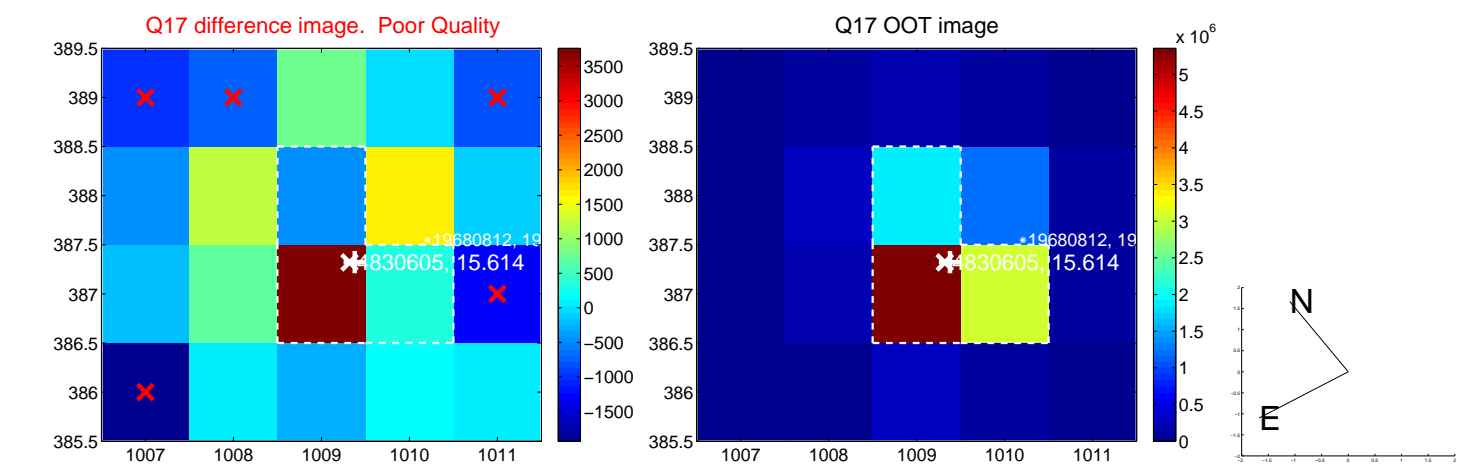
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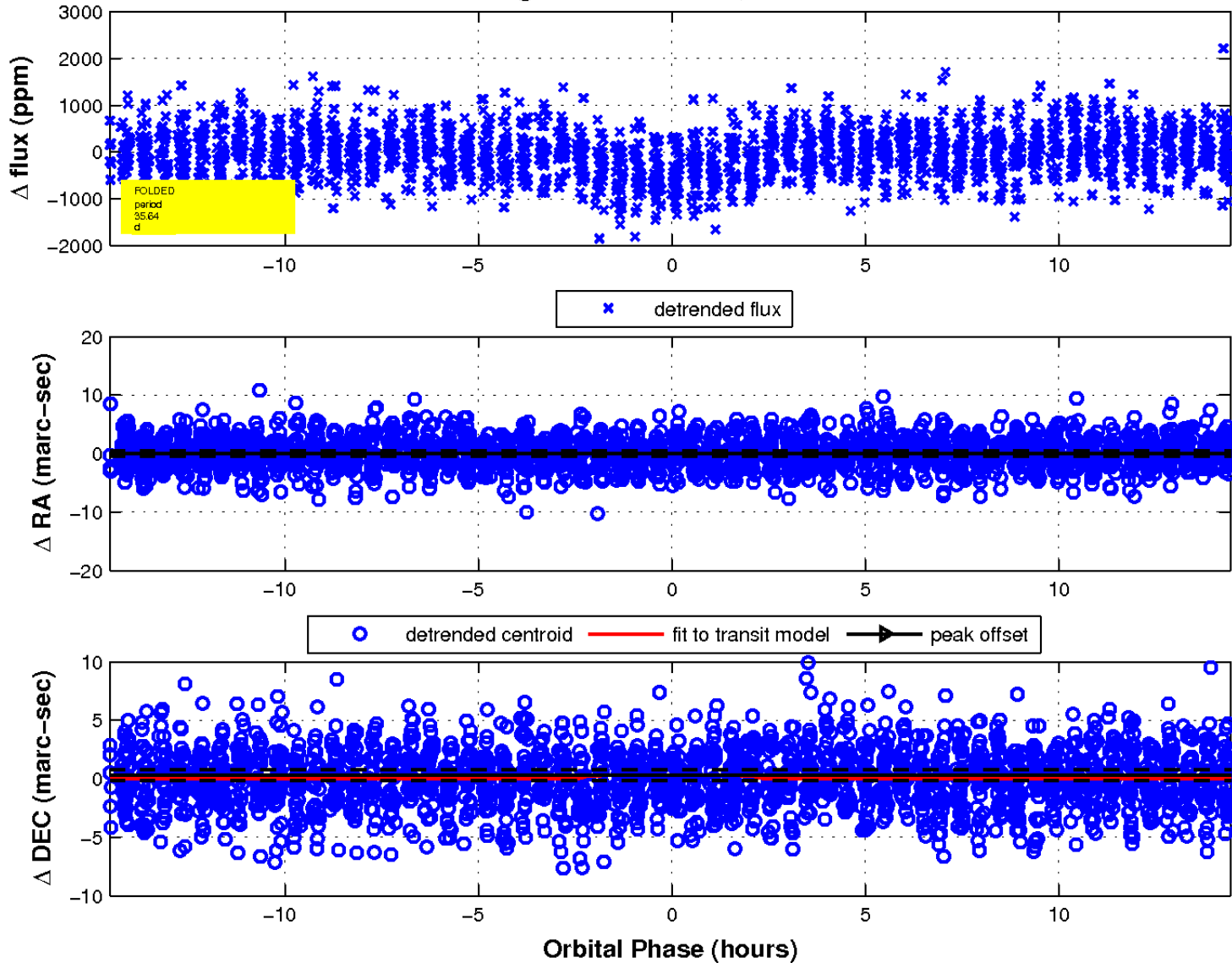
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

