

KIC 003098605

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})
003098605-01	OBS	4844.01	1.284127	132.696460	115.2	1.330	7.8	9.6	0.78	5285	1.01	906.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003098605-01	OBS	PC	0.86	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.

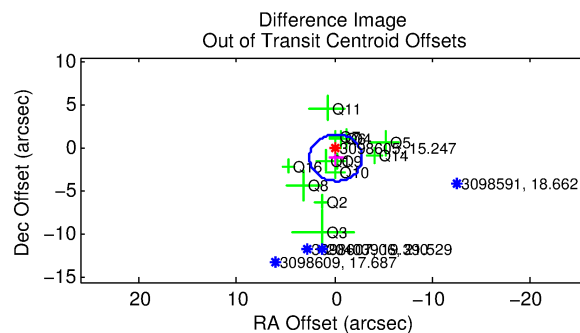
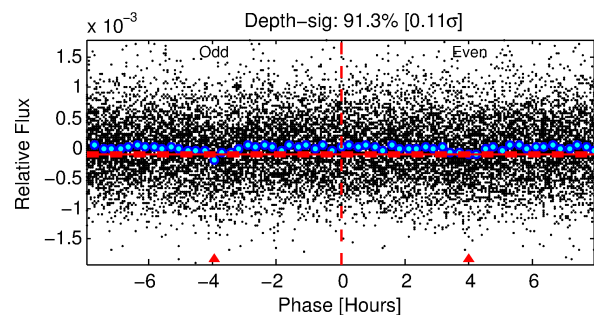
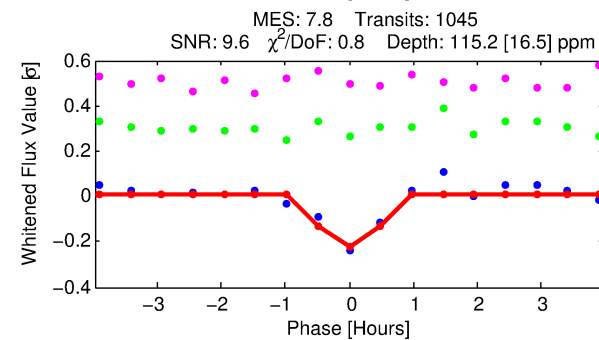
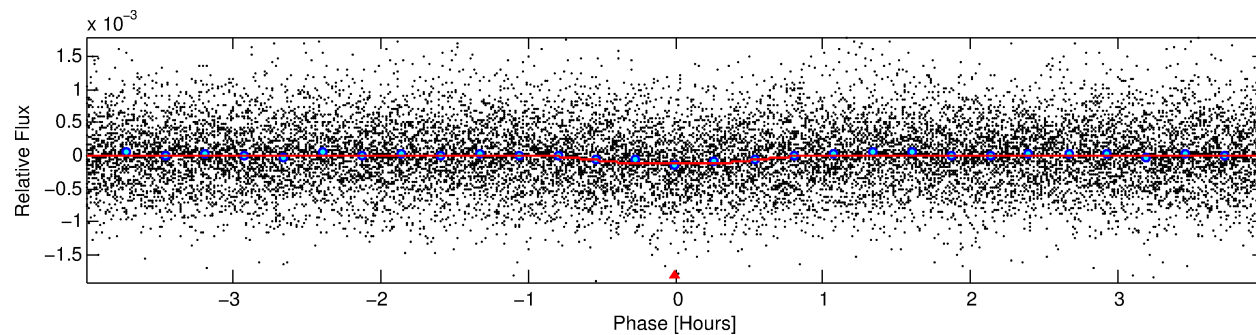
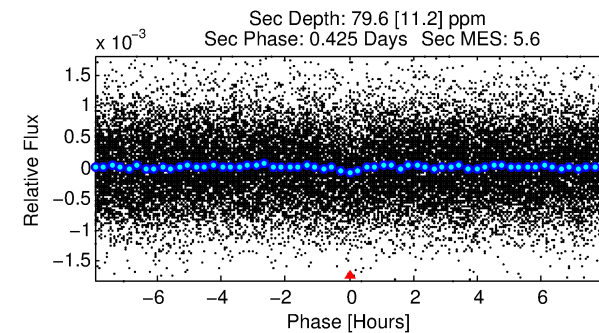
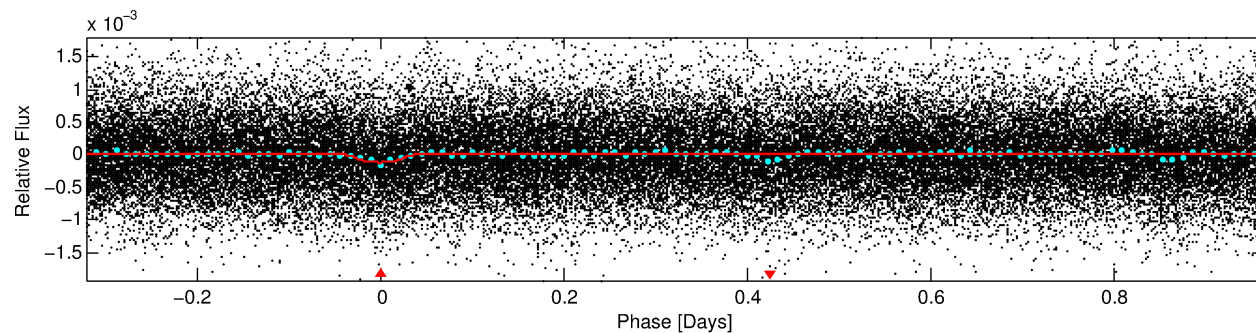
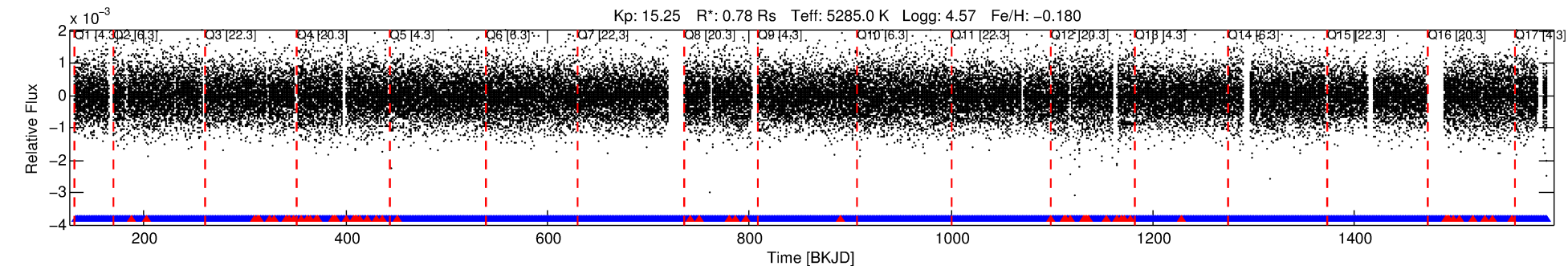
Ephemeris Match Information For 003098605-01

No Significant Match Found

DV One-Page Summary

KIC: 3098605 Candidate: 1 of 1 Period: 1.284 d
KOI: K04844 Corr: No Ephemeris Match

Kp: 15.25 R*: 0.78 Rs Teff: 5285.0 K Logg: 4.57 Fe/H: -0.180



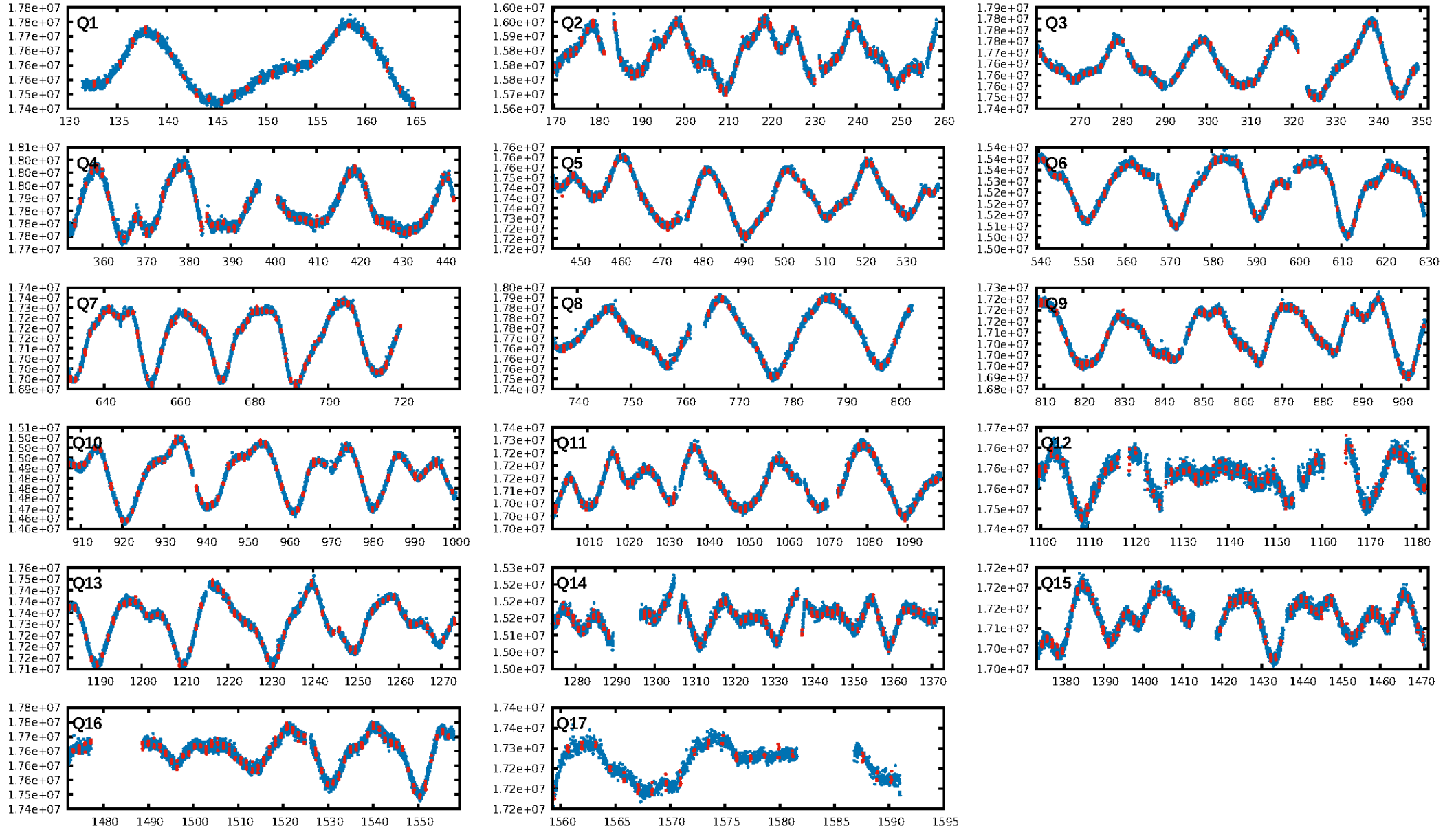
DV Fit Results:

Period = 1.28413 [0.00001] d
Epoch = 132.6965 [0.0021] BKJD
Rp/R* = 0.0119 [0.0104]
a/R* = 3.54 [12.22]
b = 0.90 [0.82]
Seff = 906.01 [191.83]
Teff = 1399 [74] K
Rp = 1.01 [0.89] Re
a = 0.0215 [0.0027] AU
Ag = 20.03 [35.25] [0.54σ]
Teffp = 4576 [2008] K [1.58σ]

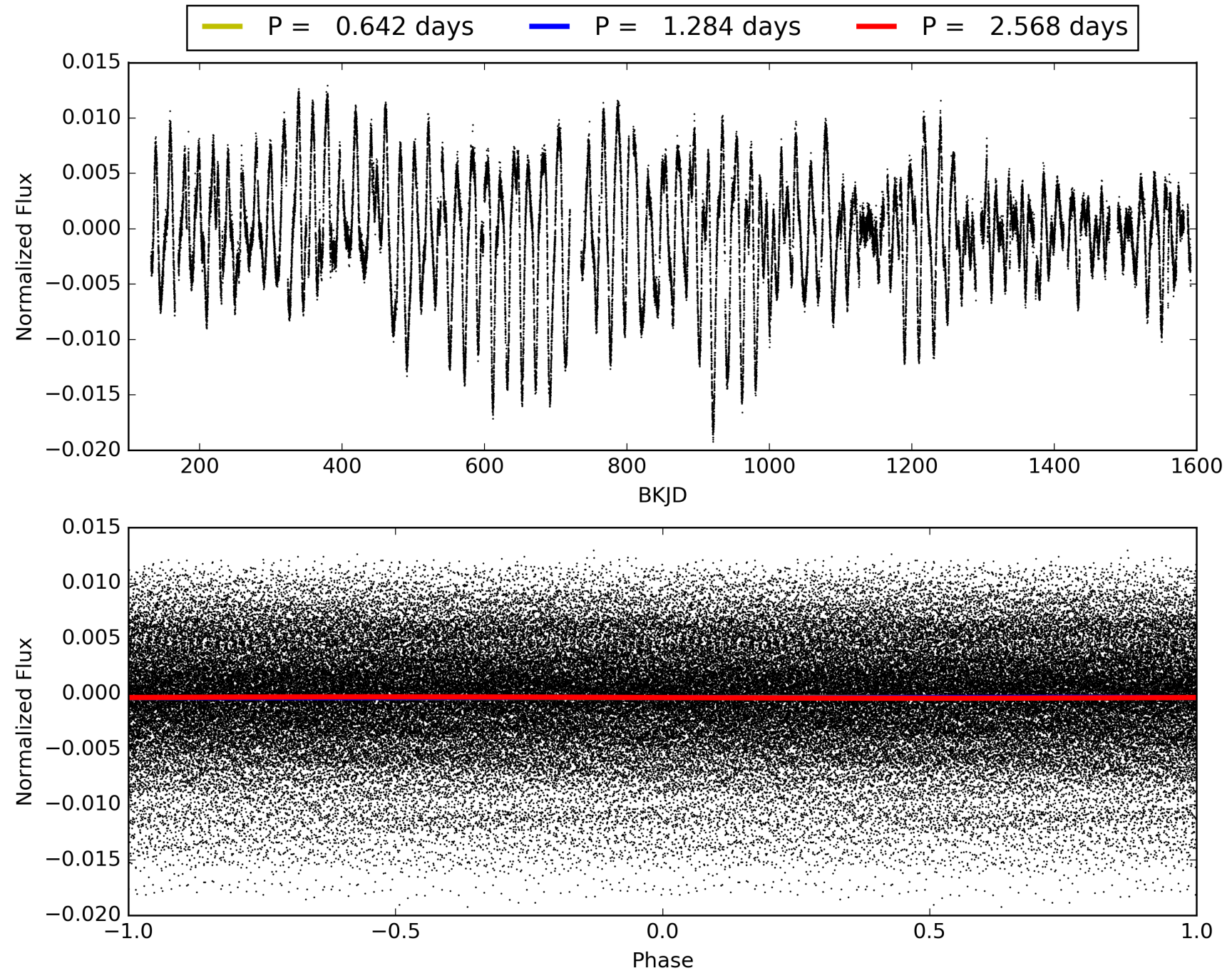
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.71e-14
RollingBand-fgt: 0.94 [942/998]
GhostDiagnostic-chr: 0.9348
Centroid-sig: 0.0%
Centroid-so: 5.177 arcsec [3.66σ]
OotOffset-rm: 1.120 arcsec [1.24σ]
KicOffset-rm: 1.269 arcsec [1.56σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.31 [4/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003098605-01, PDC Light Curves

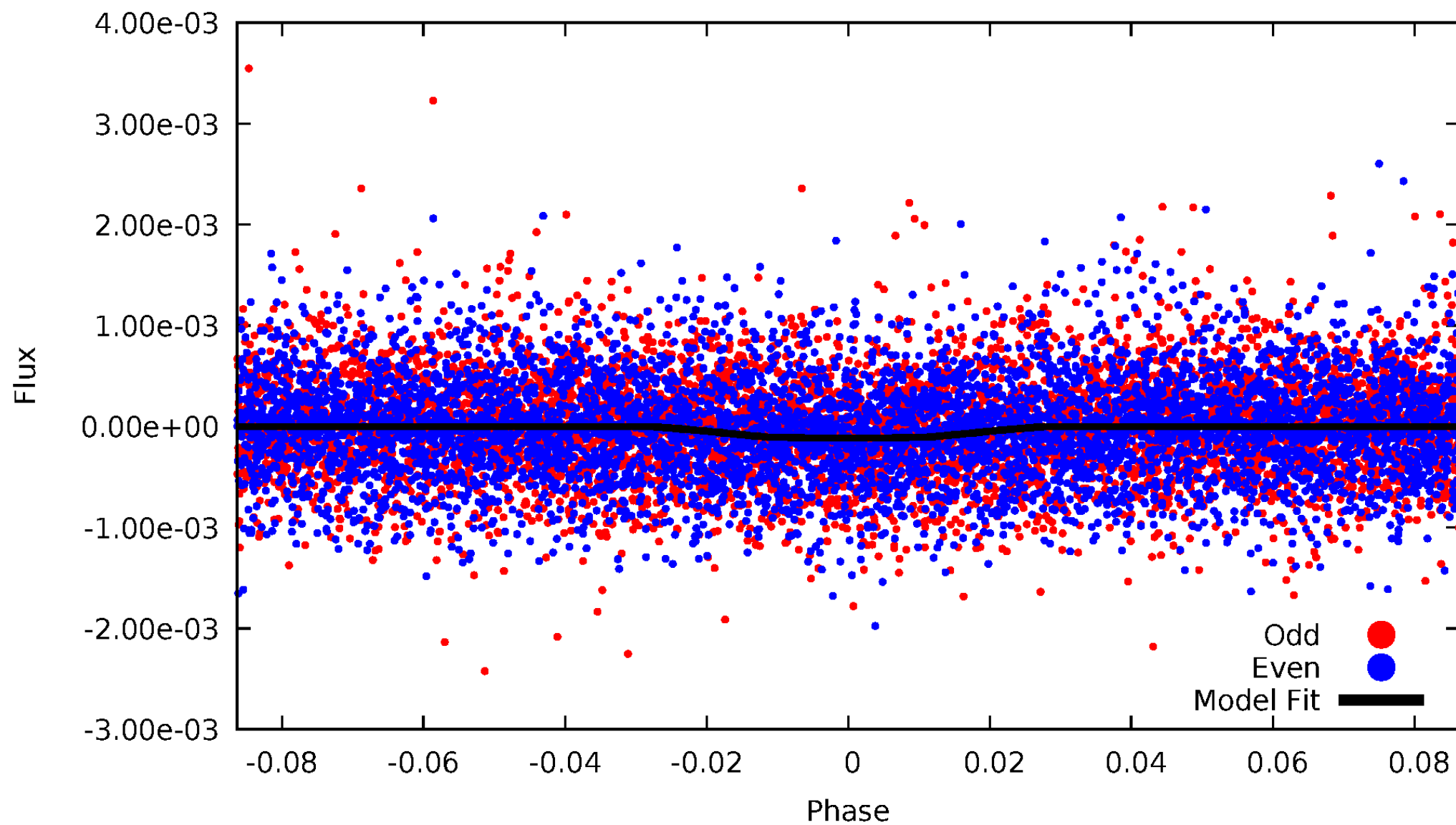


TCE 003098605-01



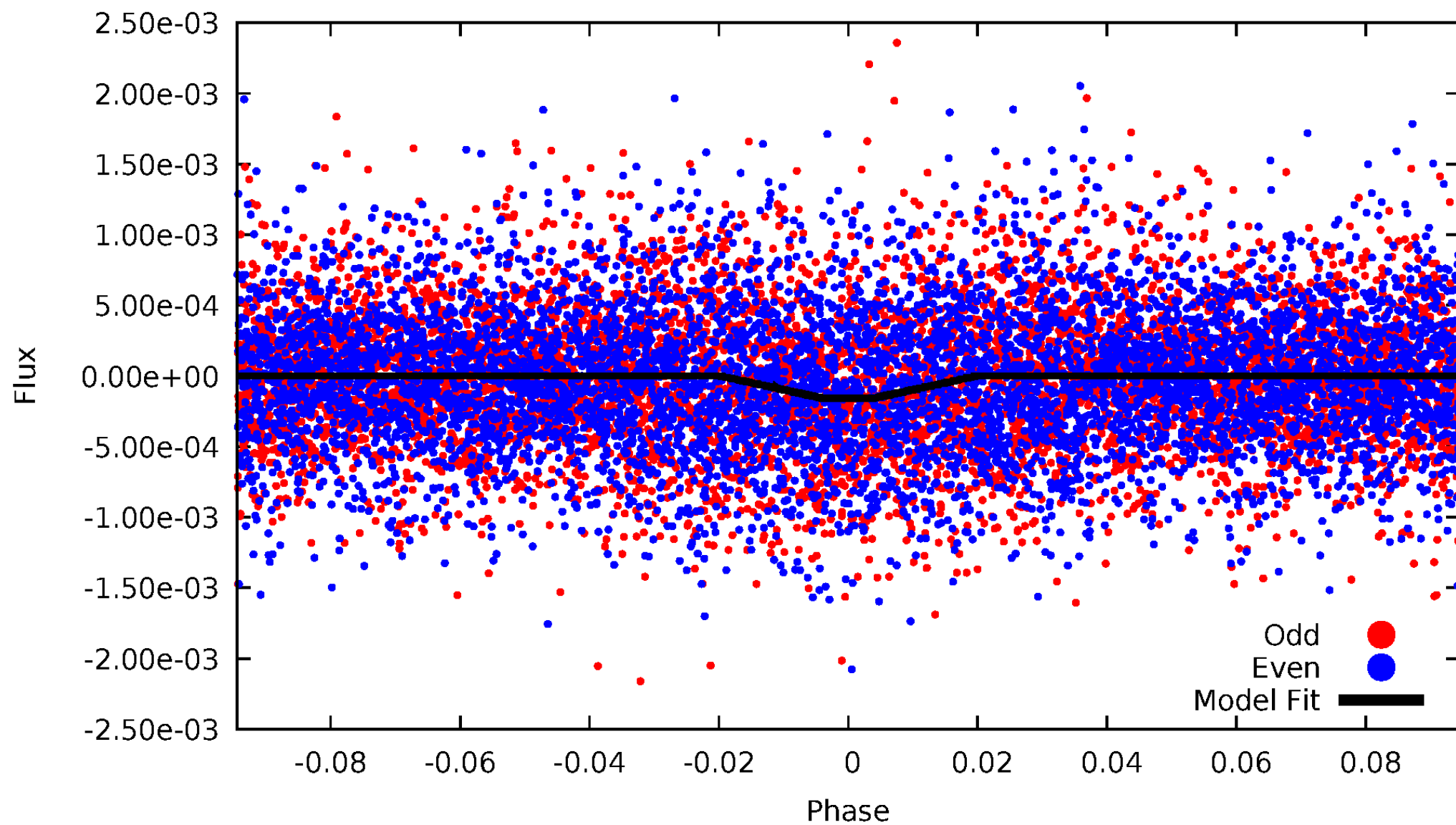
DV Odd/Even

TCE 003098605-01



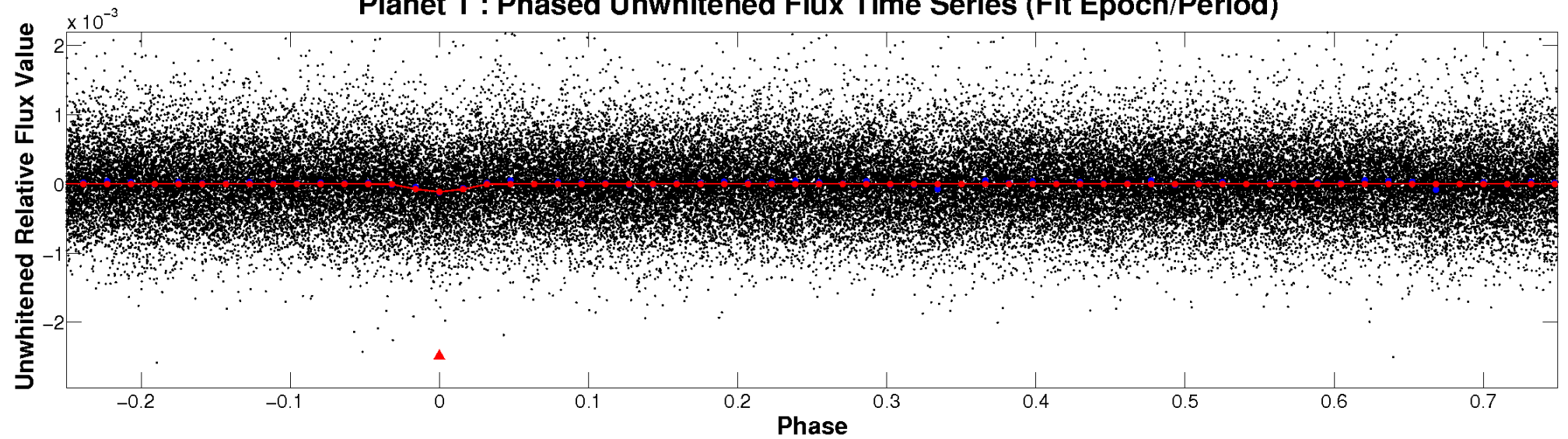
ALT Odd/Even

TCE 003098605-01

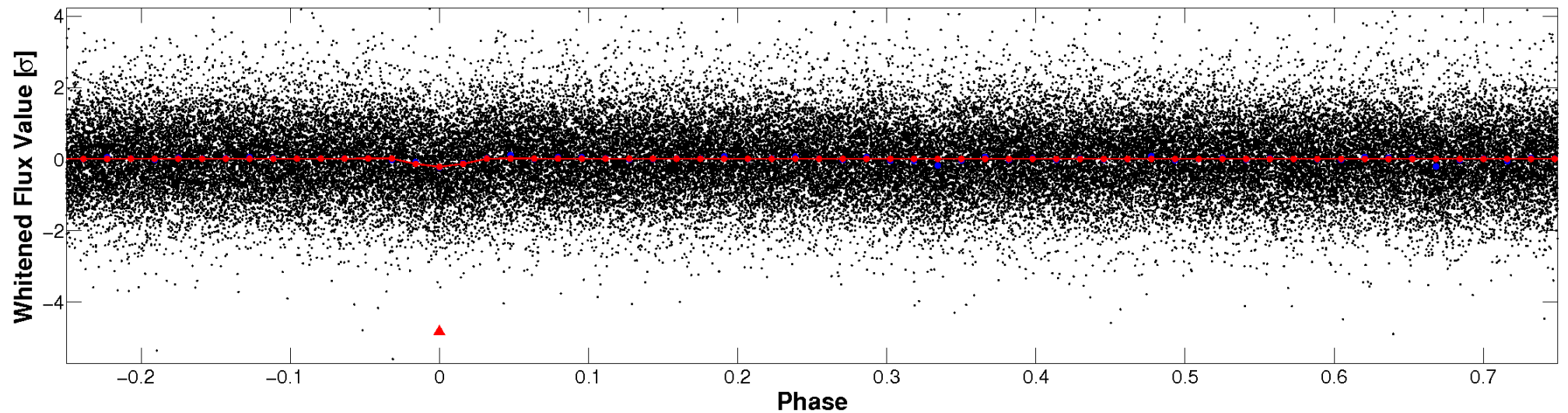


Non-Whitened Vs. Whitened Light Curve

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

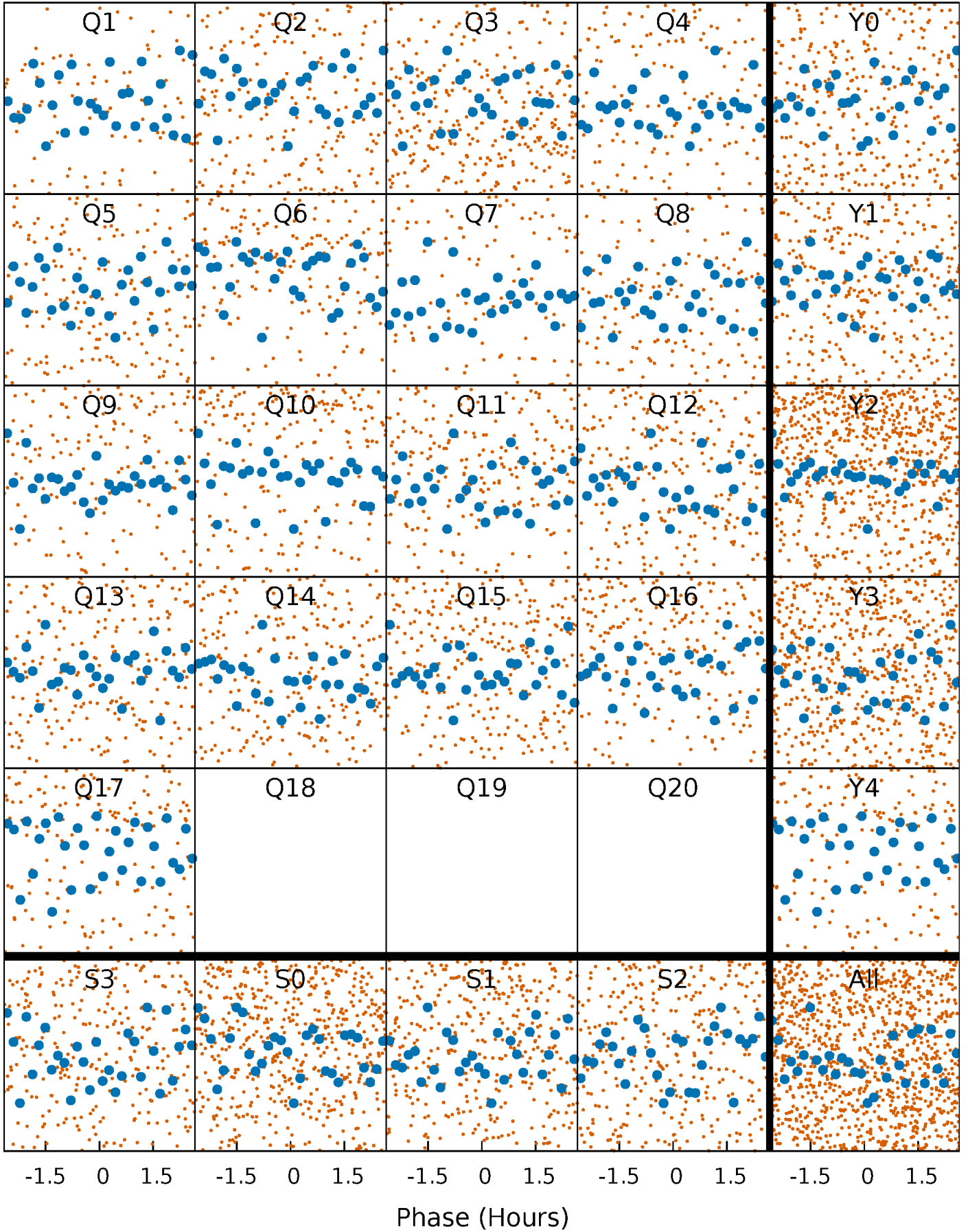


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



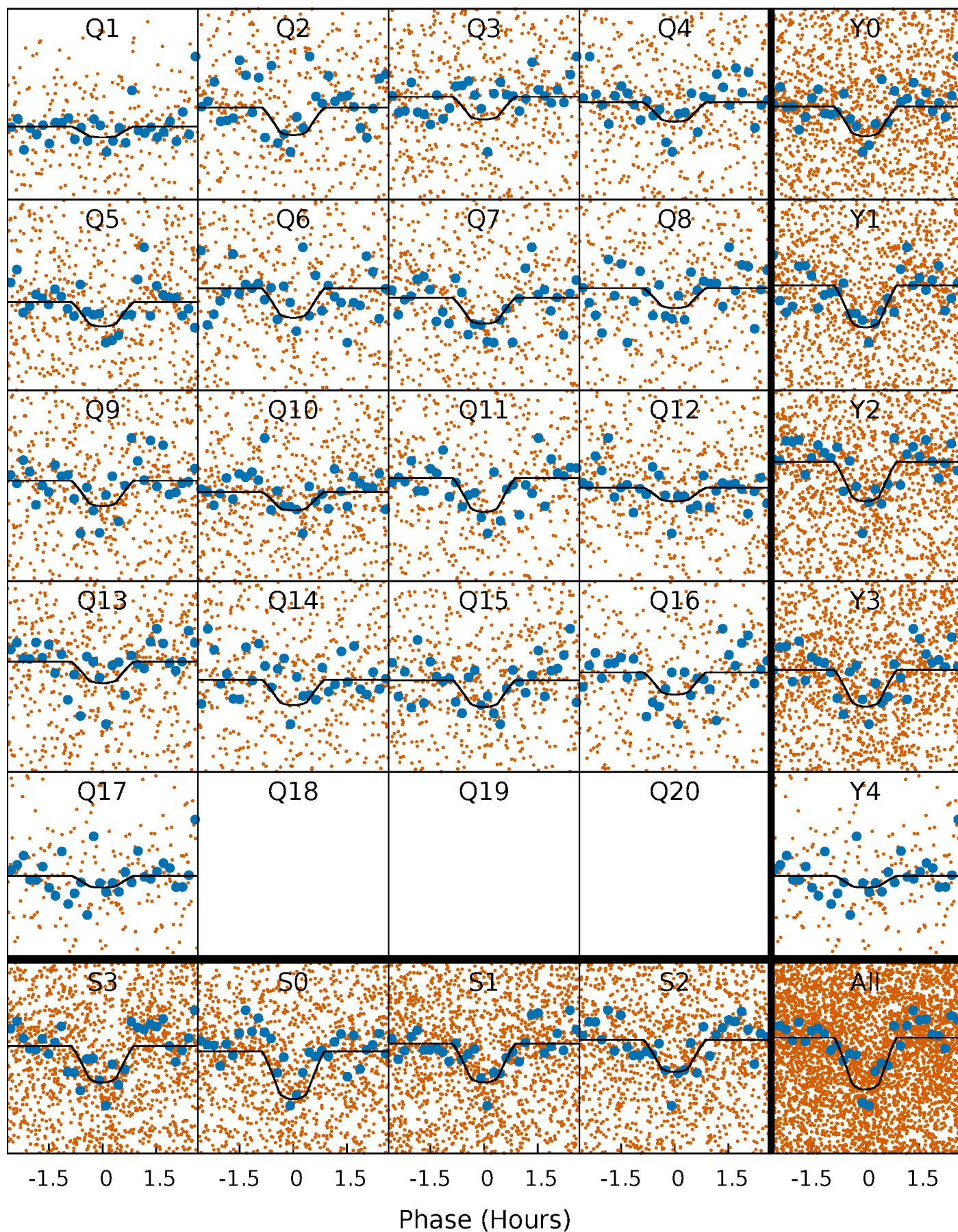
PDC Quarter-Phased Transit Curves

TCE 003098605-01 P= 1.284127 Days $T_0=132.696460$ (BKJD)



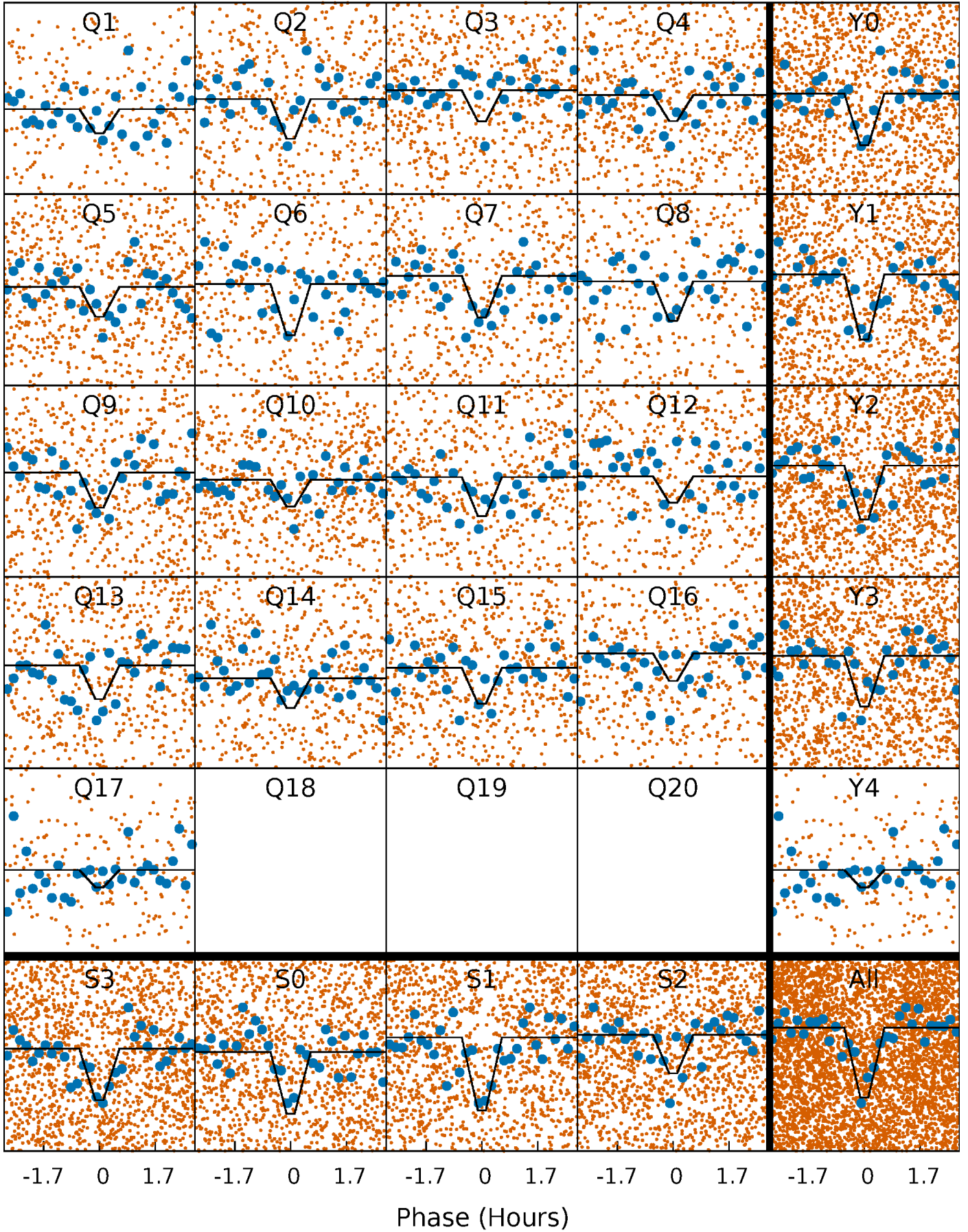
DV Quarter-Phased Transit Curves

TCE 003098605-01 P= 1.284127 Days $T_0=132.696460$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

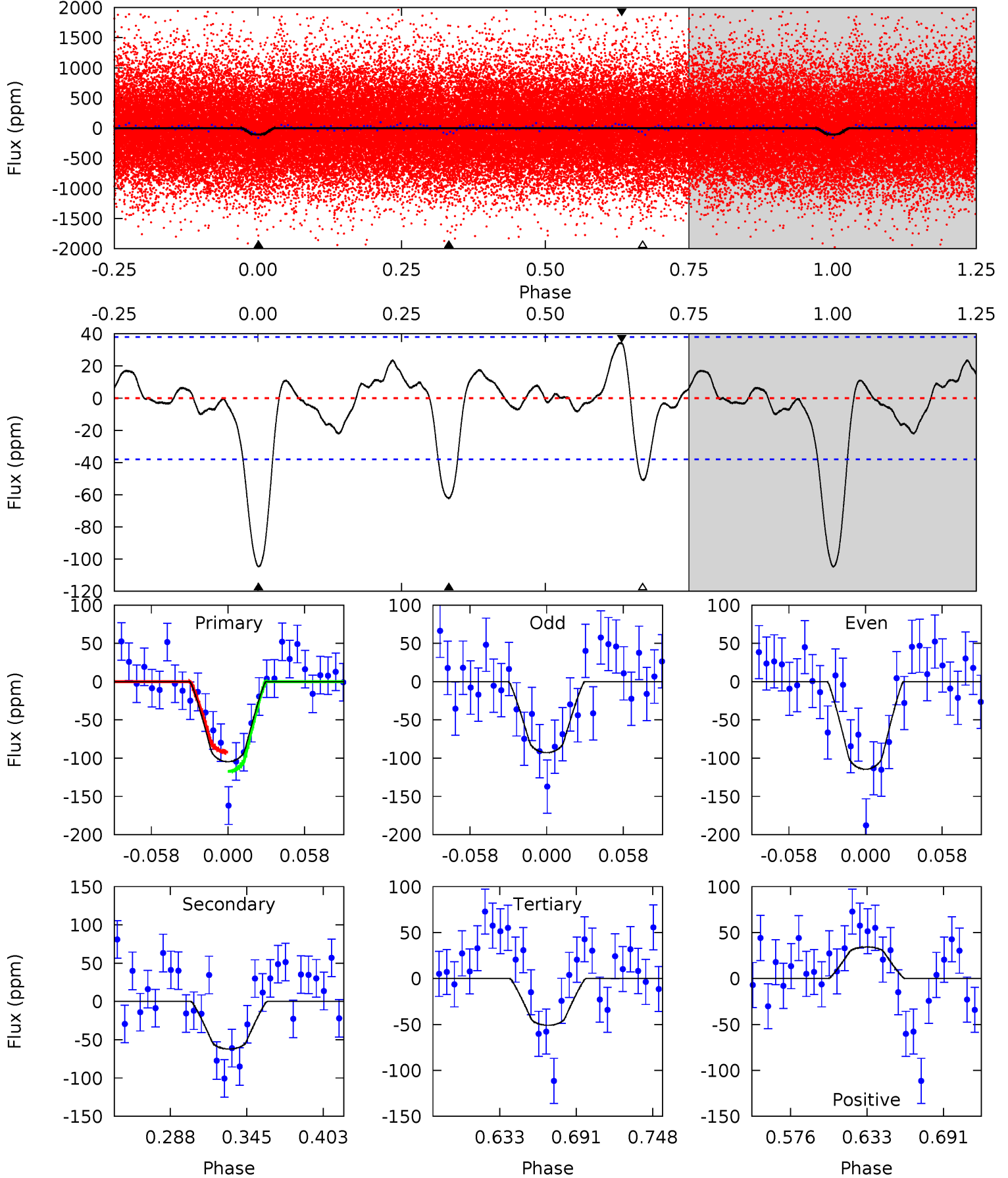
TCE 003098605-01 P= 1.284132 Days $T_0=132.696403$ (BKJD)



DV Model-Shift Uniqueness Test

003098605-01, P = 1.284127 Days, E = 131.412333 Days

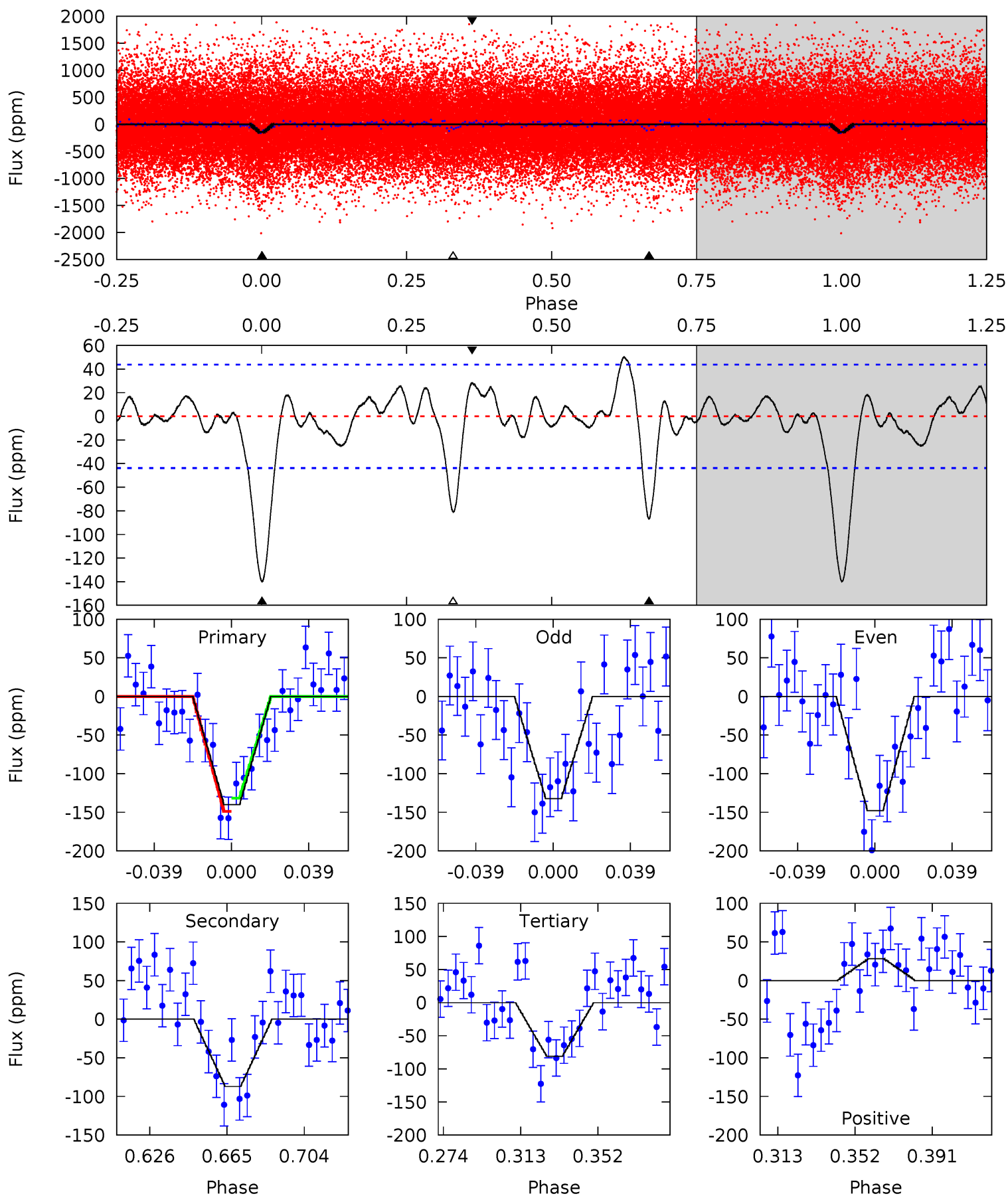
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.66	6.28	4.22	4.68	1.90	1.69	6.62	8.67	1.38	3.44	1.34	0.95	0.25	1.56



Alt Model-Shift Uniqueness Test

003098605-01, P = 1.284132 Days, E = 131.412271 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	9.46	8.81	3.07	4.76	2.06	1.90	6.40	12.1	0.64	6.39	0.84	0.86	0.26	0.94



Stellar Parameters For KIC 003098605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5285^{+159}_{-143}	$4.566^{+0.049}_{-0.091}$	$-0.180^{+0.300}_{-0.300}$	$0.775^{+0.121}_{-0.069}$	$0.805^{+0.086}_{-0.078}$	$2.441^{+0.528}_{-0.698}$
	+3%/-3%	+1%/-2%	+167%/-167%	+16%/-9%	+11%/-10%	+22%/-29%
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 003098605-01 / KOI 4844.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 8	$1.17^{+0.81}_{-0.71}$	1973^{+84}_{-82}	4212^{+2114}_{-755}	12^{+60}_{-8}
Alt.	-87 ± 9	$1.27^{+0.84}_{-0.72}$	1967^{+85}_{-71}	4376^{+1891}_{-750}	14^{+61}_{-9}

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

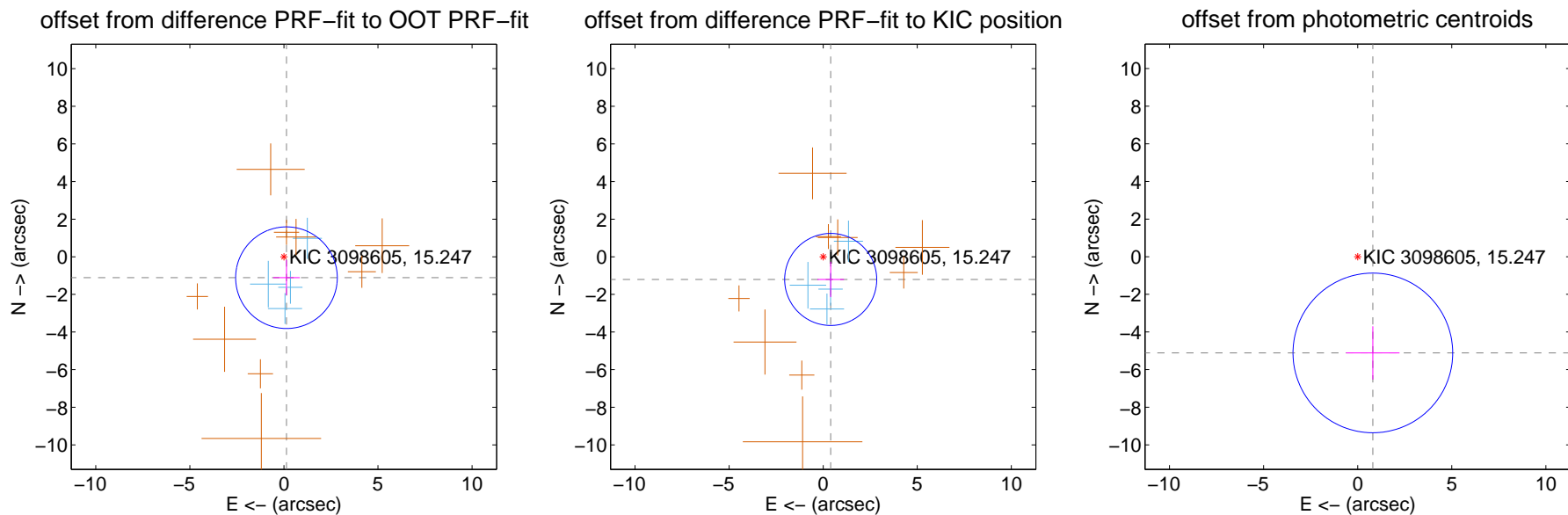
DV Centroid Data

Supplemental centroid analysis for 003098605-01. Kepler magnitude: 15.25. Transit SNR 9.56

There are 4 quarters with good PRF difference image offsets

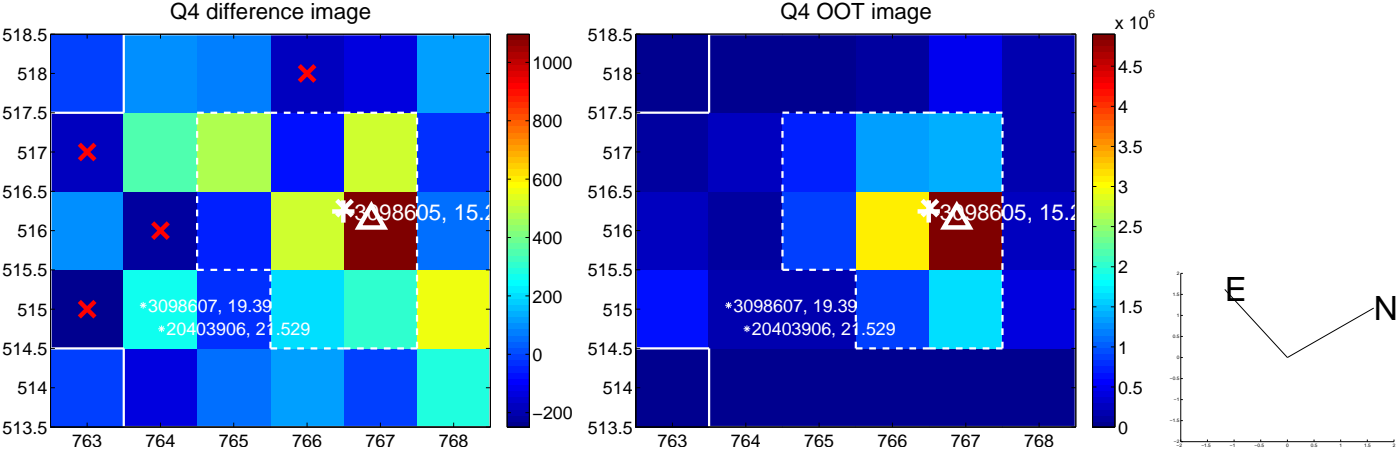
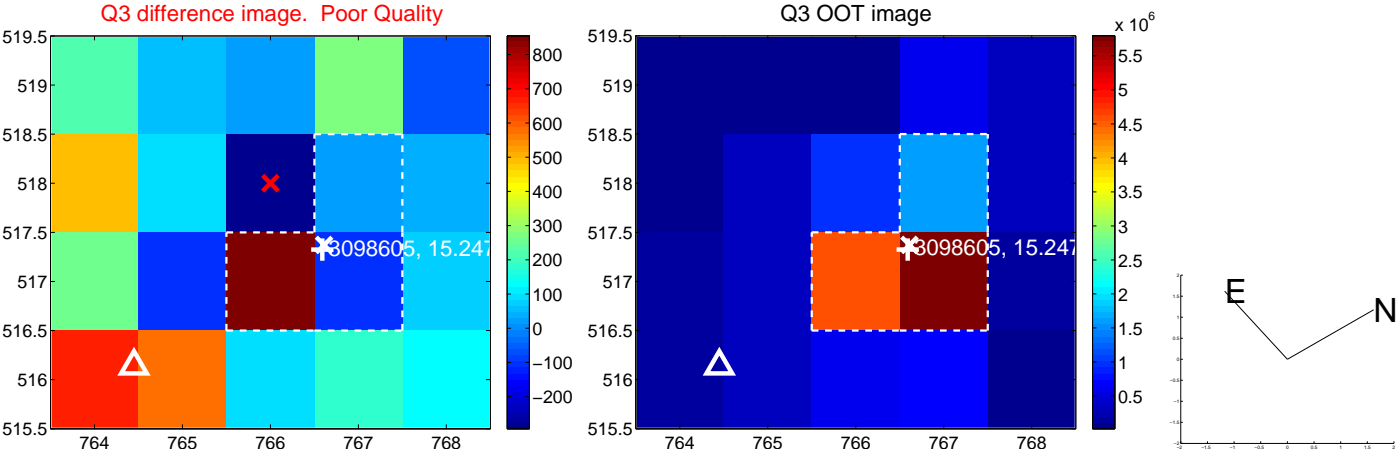
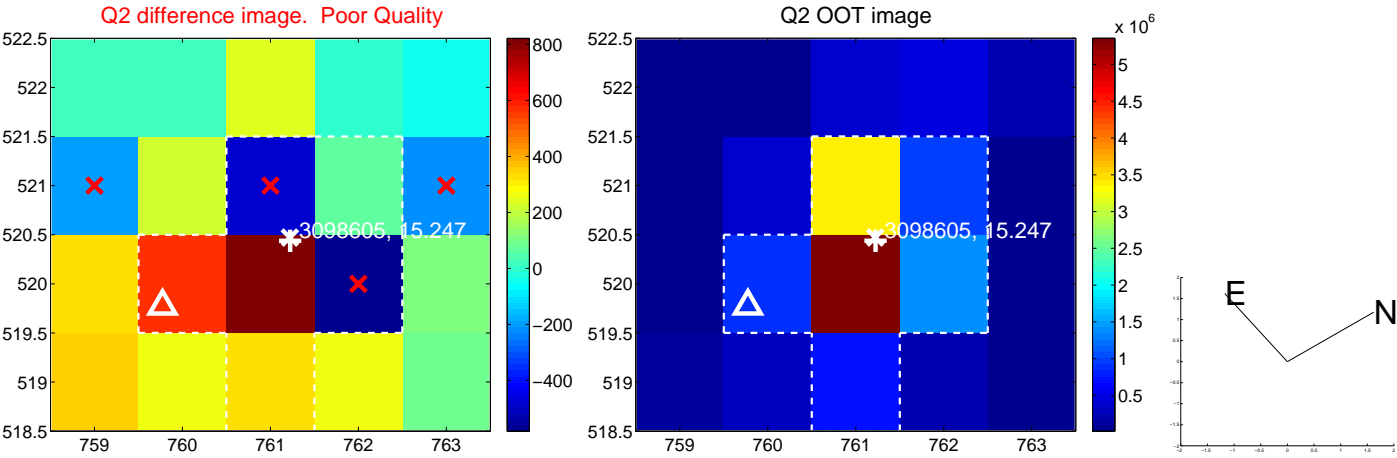
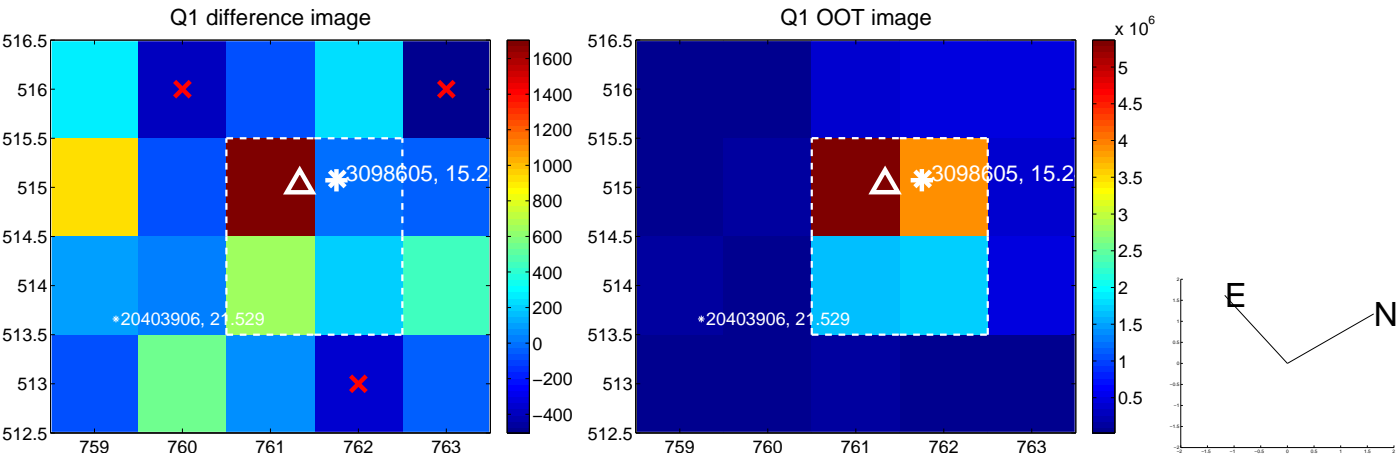
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.120 ± 0.900	1.24	-0.135 ± 0.707	-1.112 ± 0.933
PRF-fit source offset from KIC position	1.269 ± 0.815	1.56	-0.399 ± 0.705	-1.205 ± 0.939
photometric centroid source offset	5.18 ± 1.41	3.66	-0.81 ± 1.42	-5.11 ± 1.41

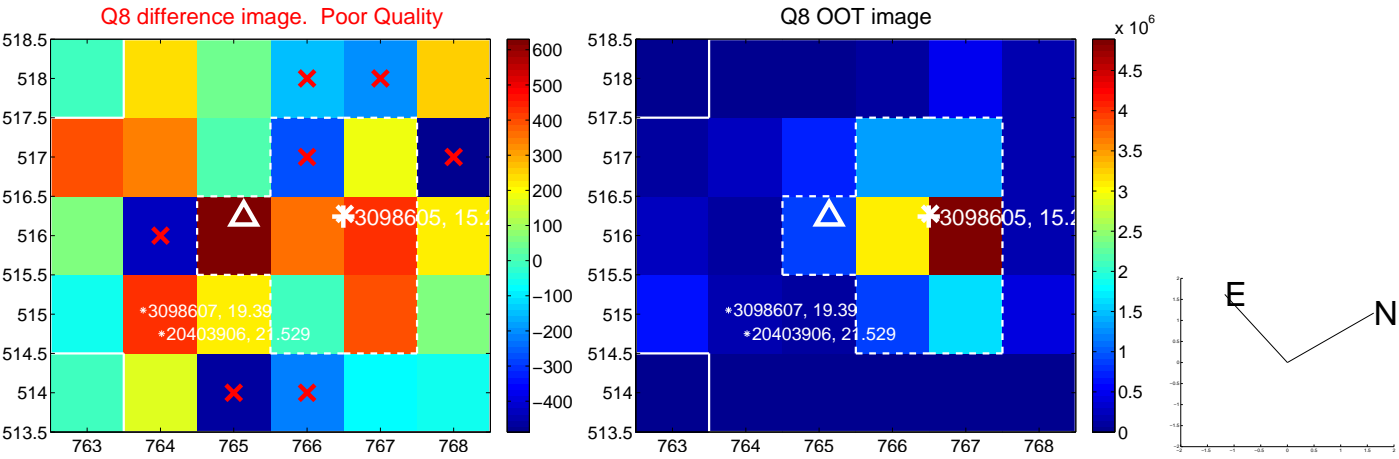
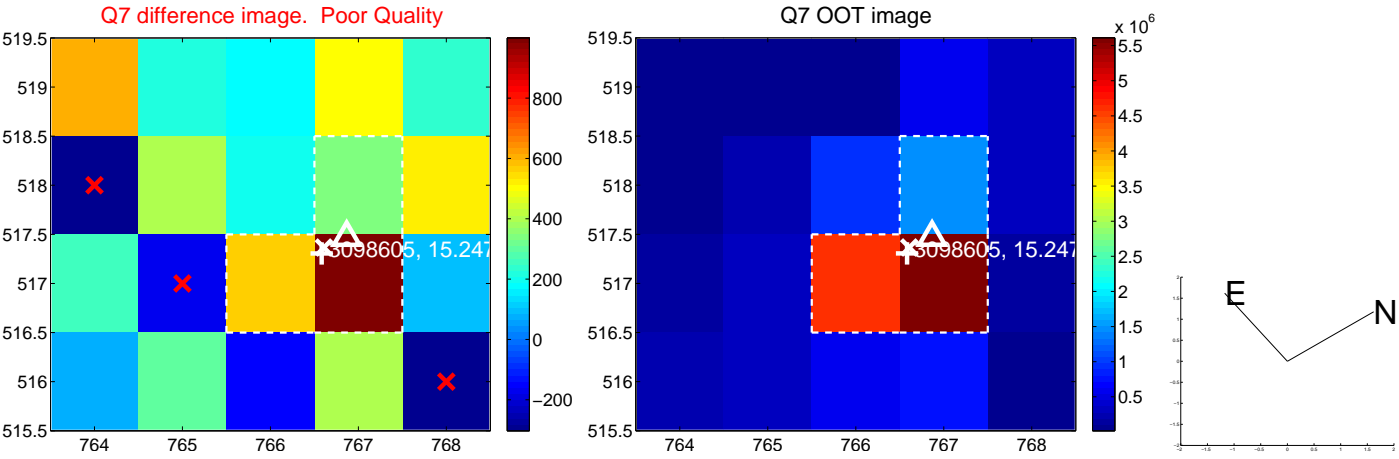
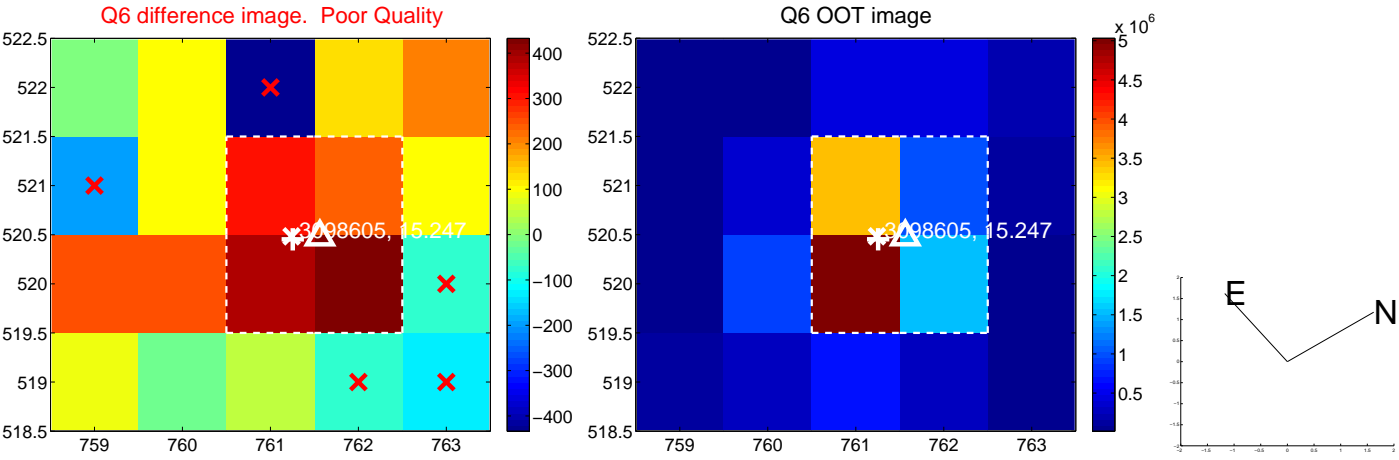
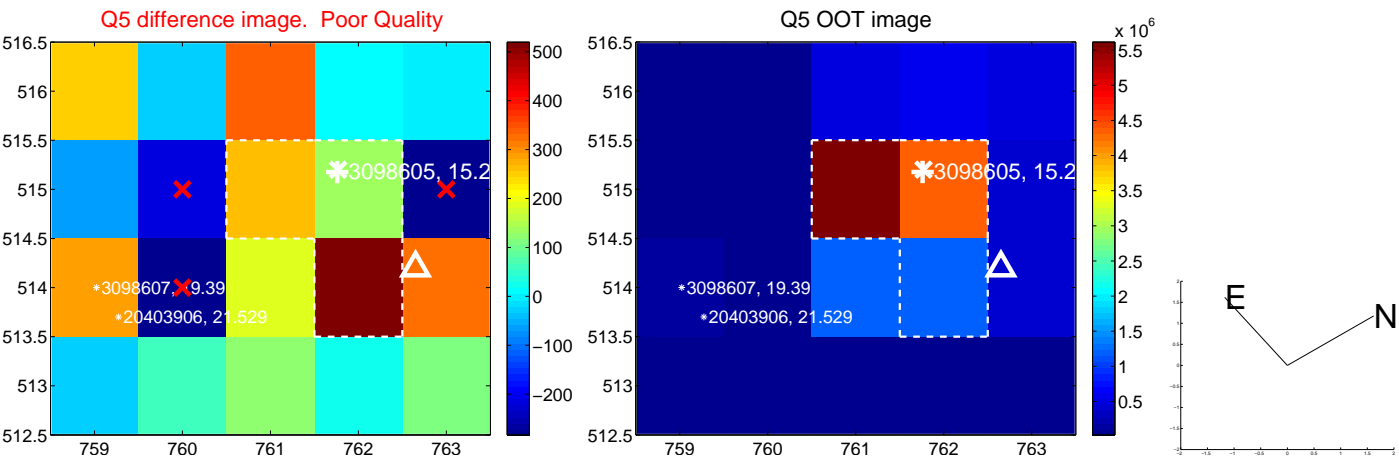


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

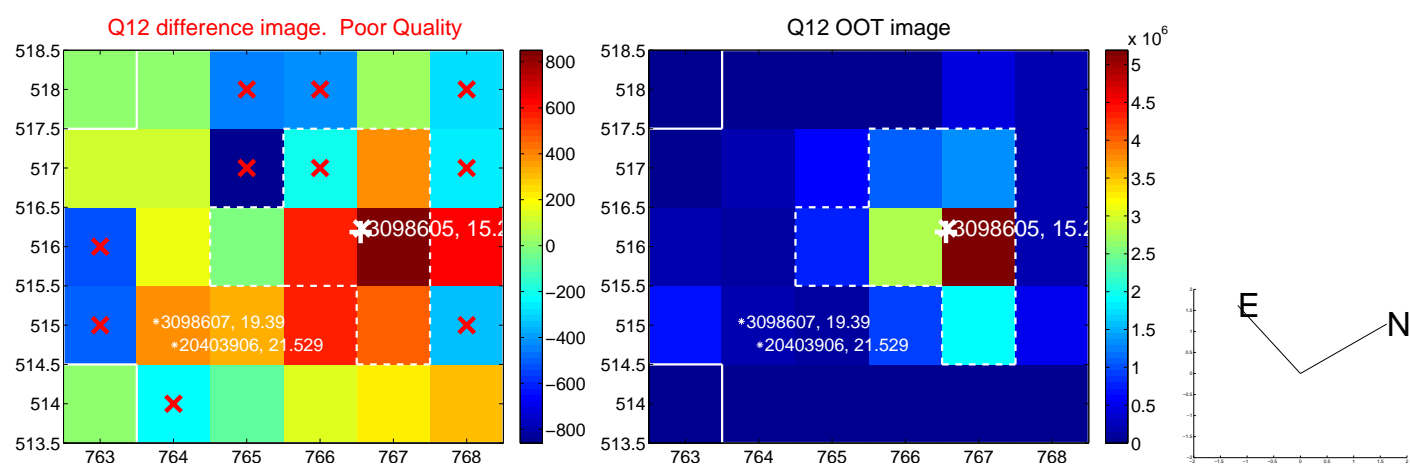
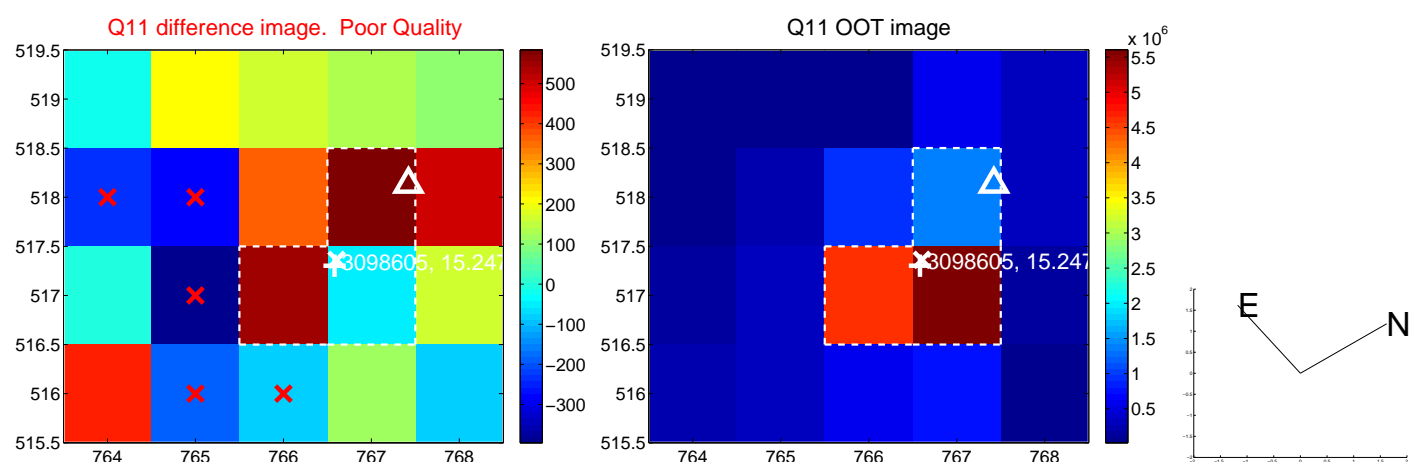
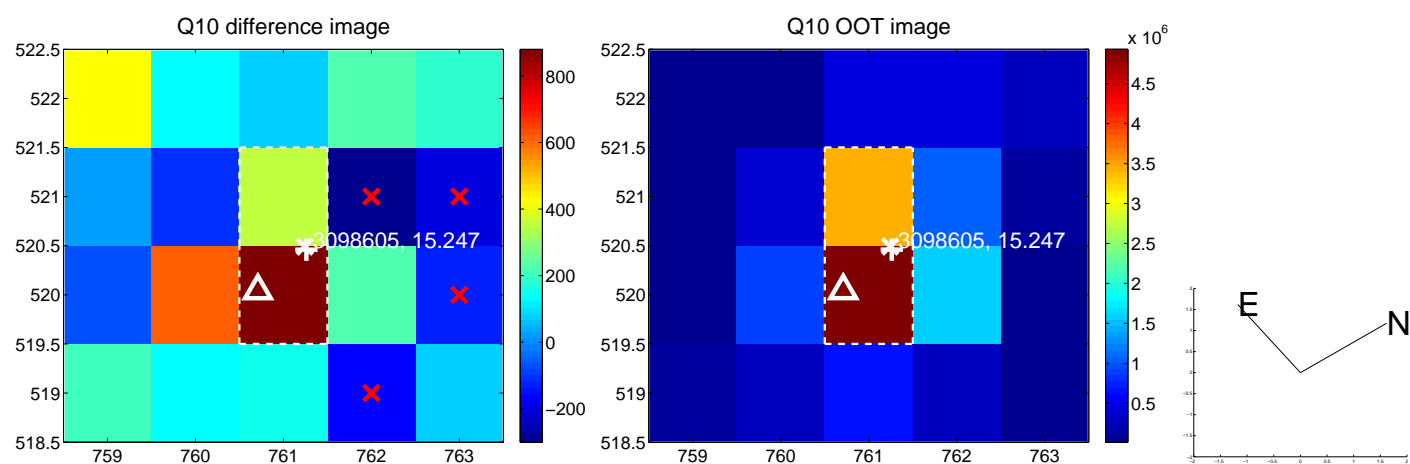
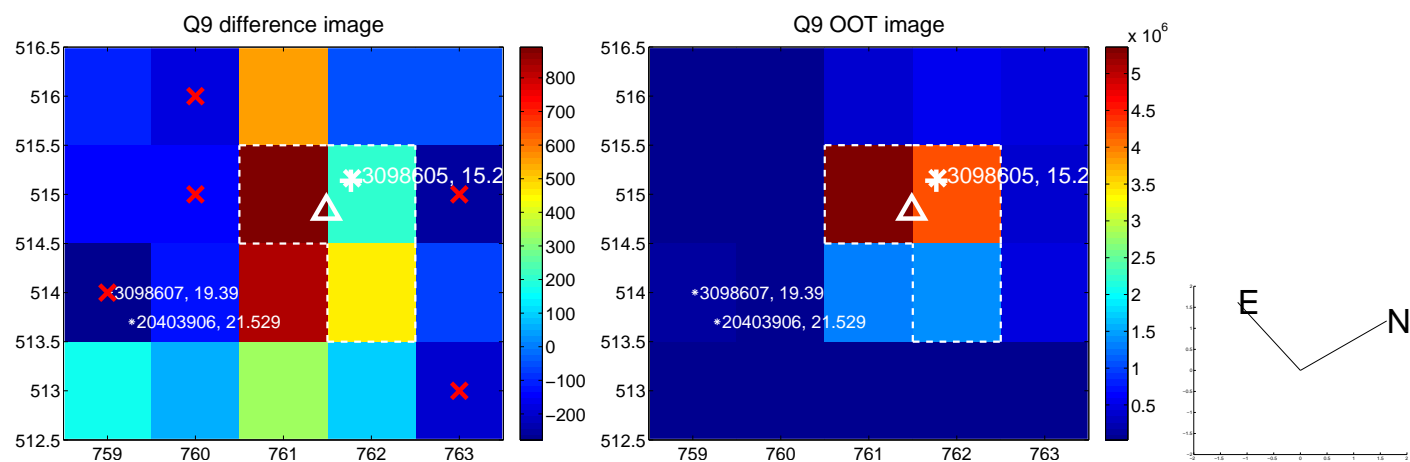
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



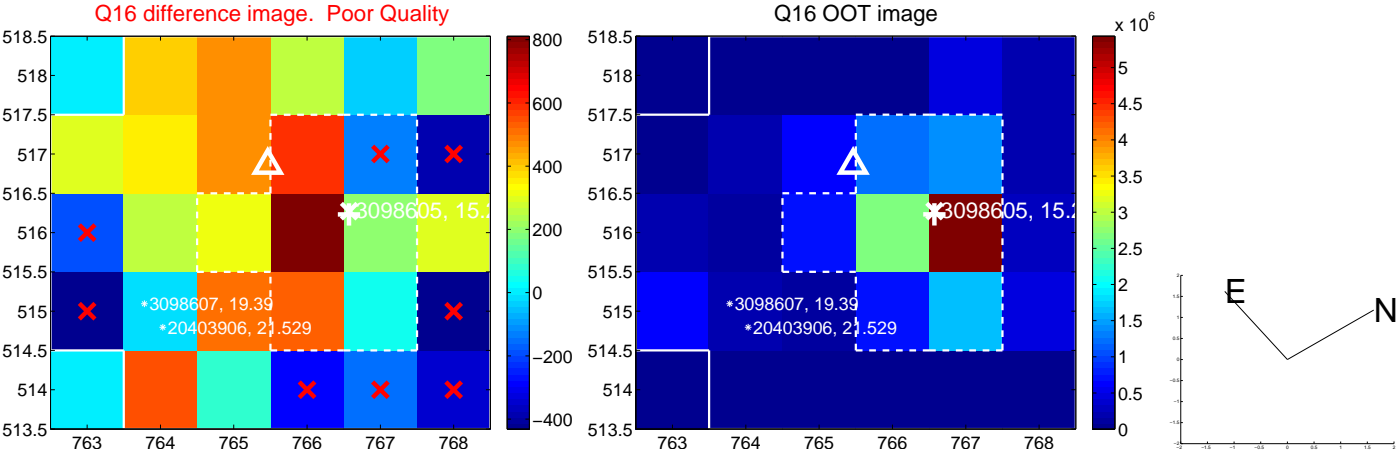
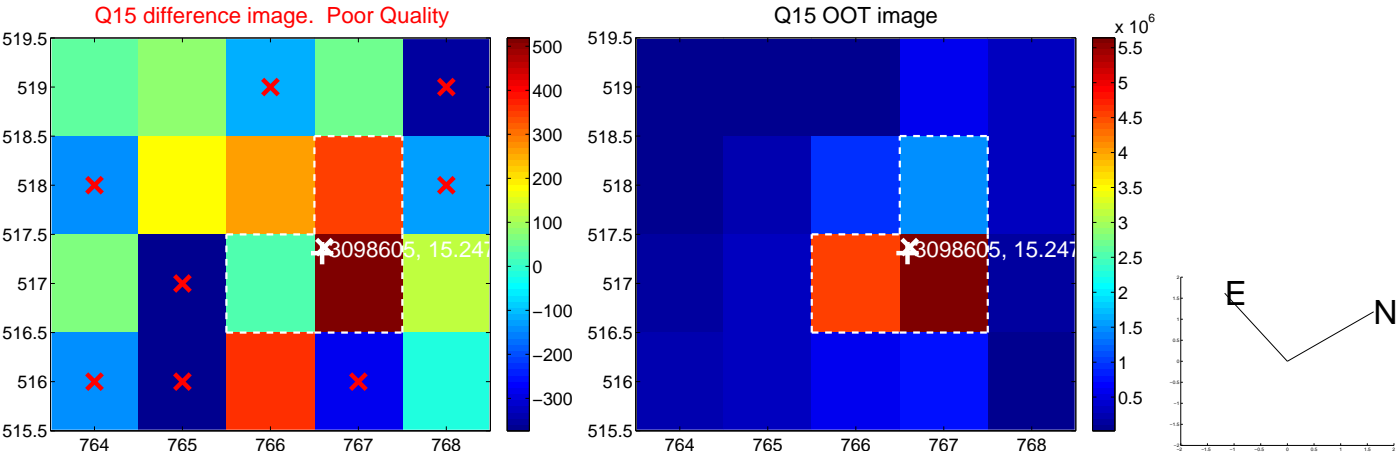
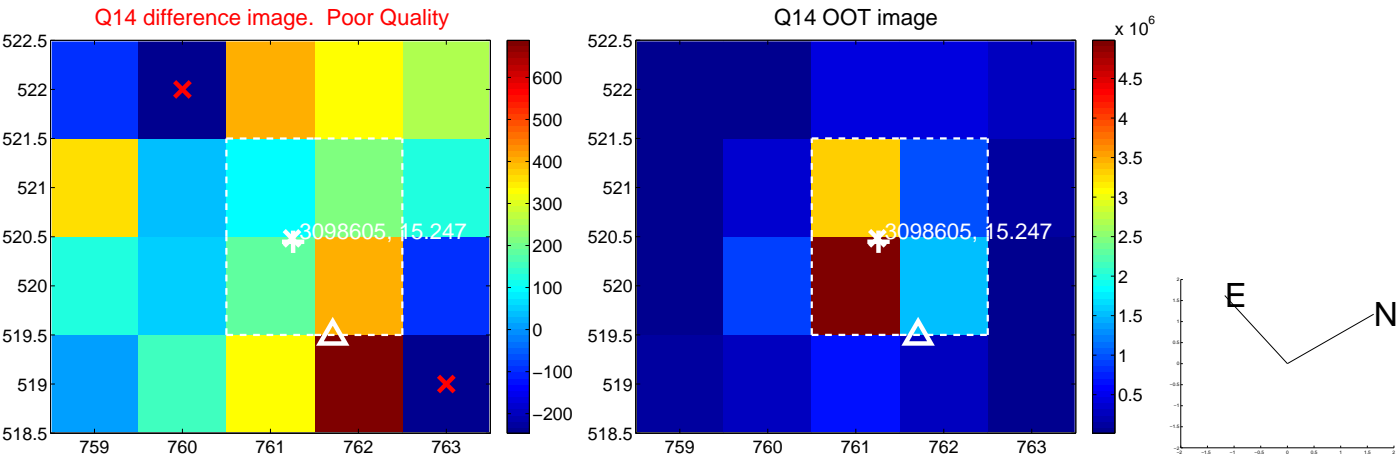
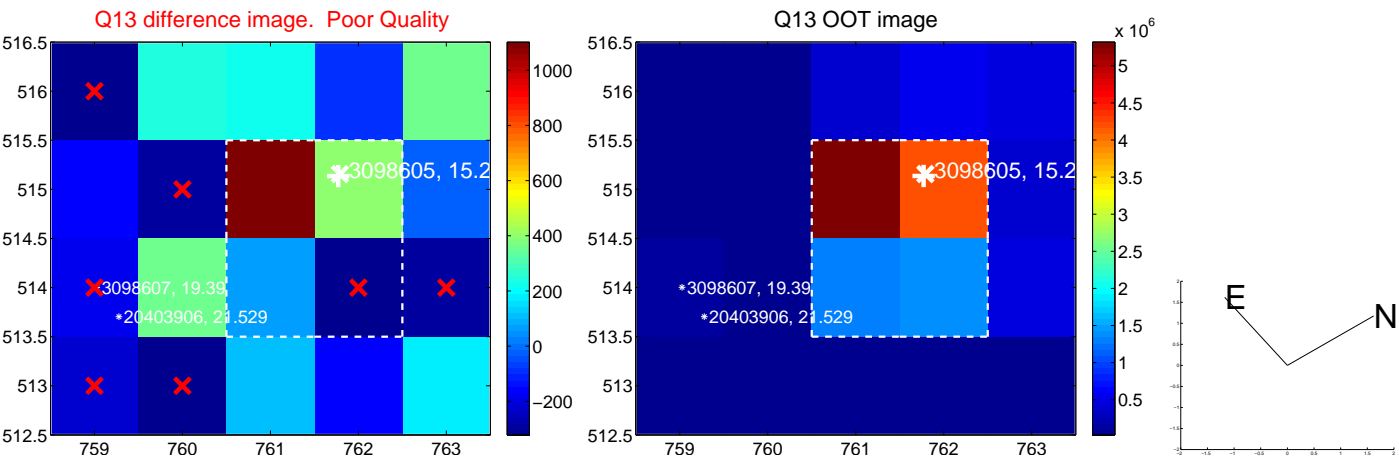
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



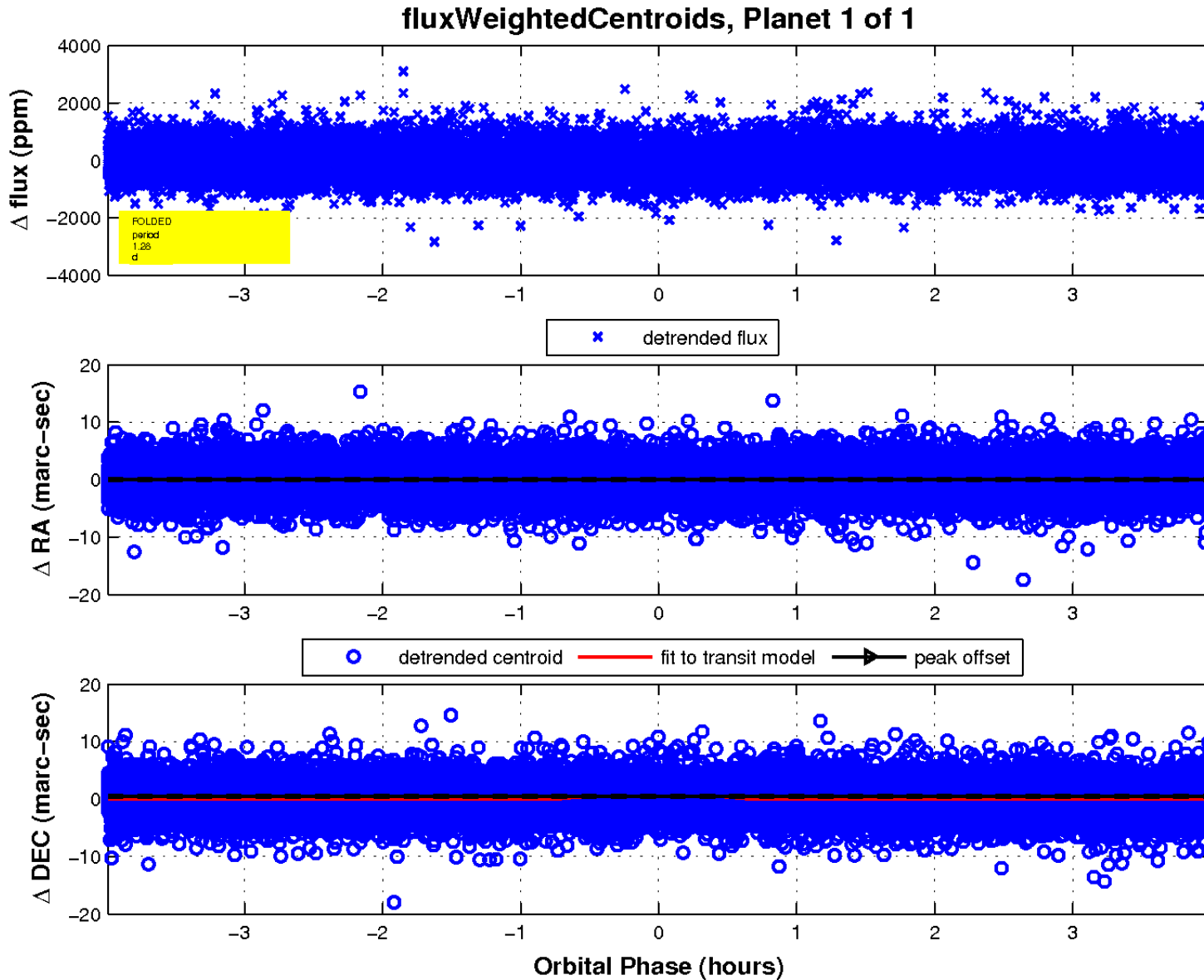
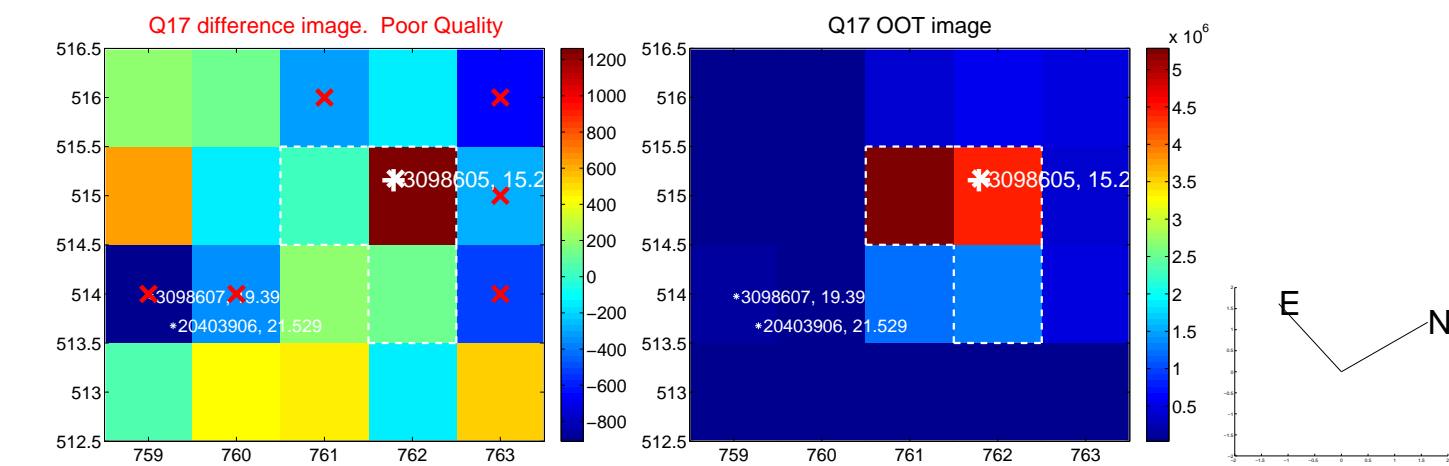
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

