

KIC 010975146

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})
010975146-01	OBS	1300.01	0.631337	132.050811	225.4	1.075	17.1	49.8	0.53	4441	0.97	724.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010975146-01	OBS	PC	1.00	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.

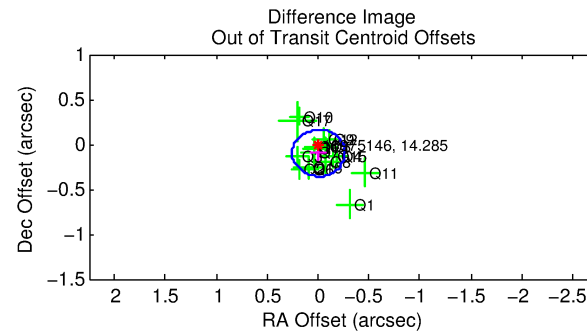
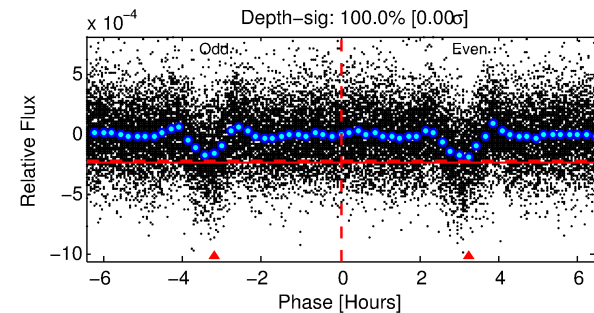
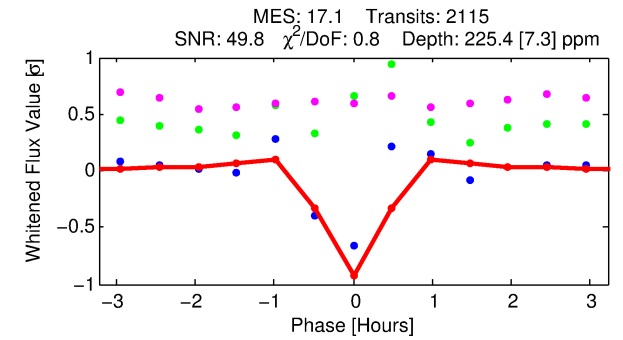
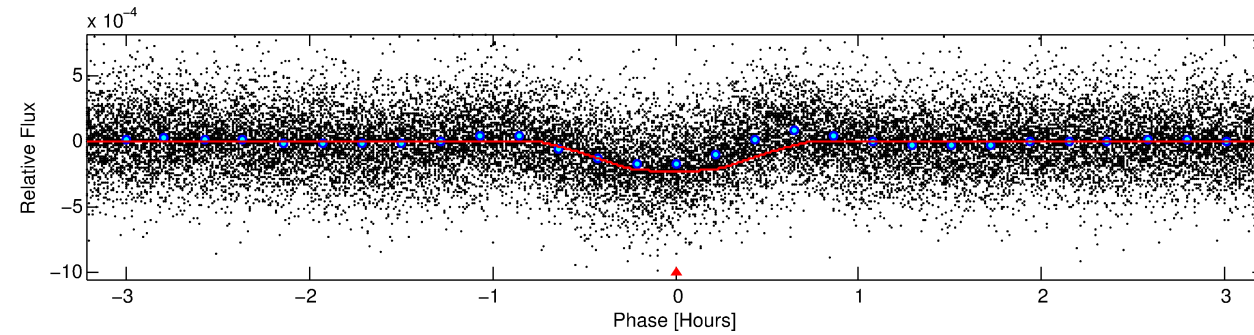
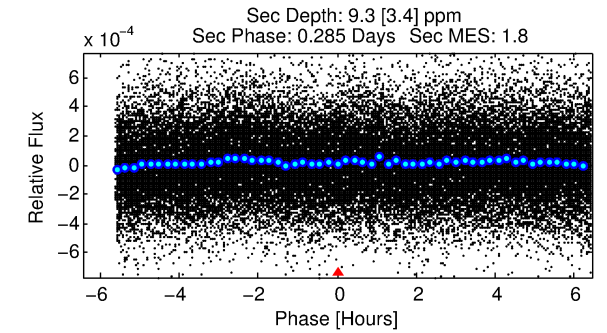
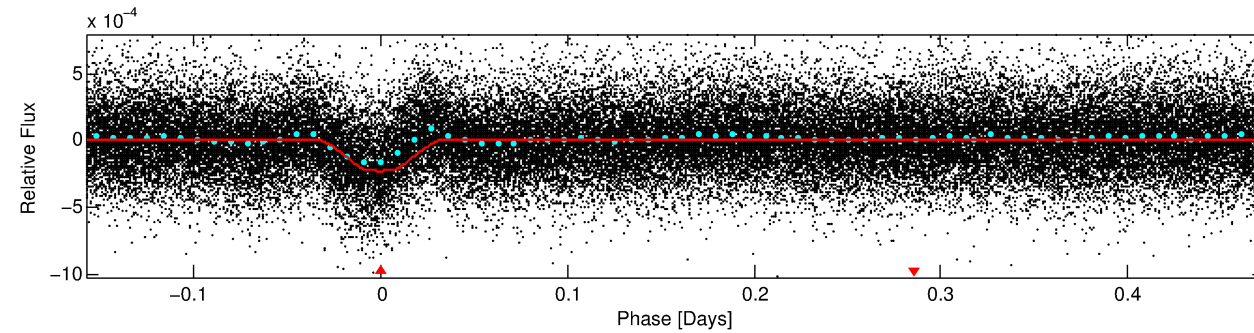
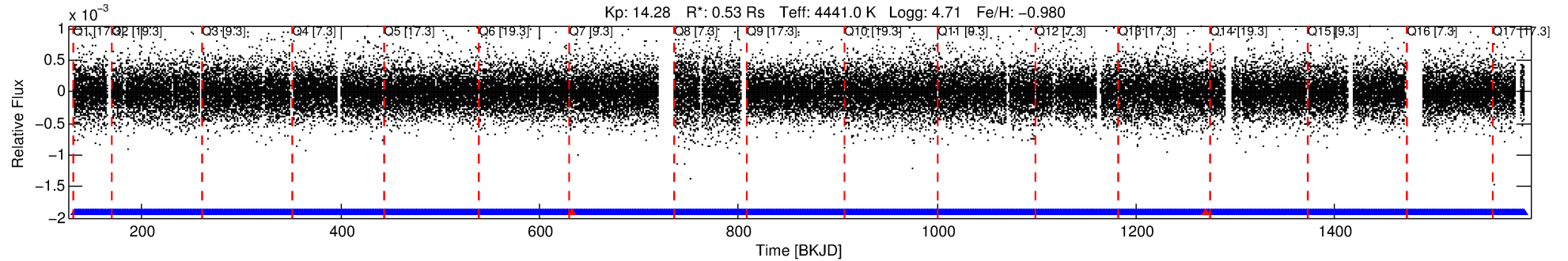
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010975146-01

No Significant Match Found

DV One-Page Summary

KIC: 10975146 Candidate: 1 of 1 Period: 0.631 d
KOI: K01300.01 Corr: 0.858



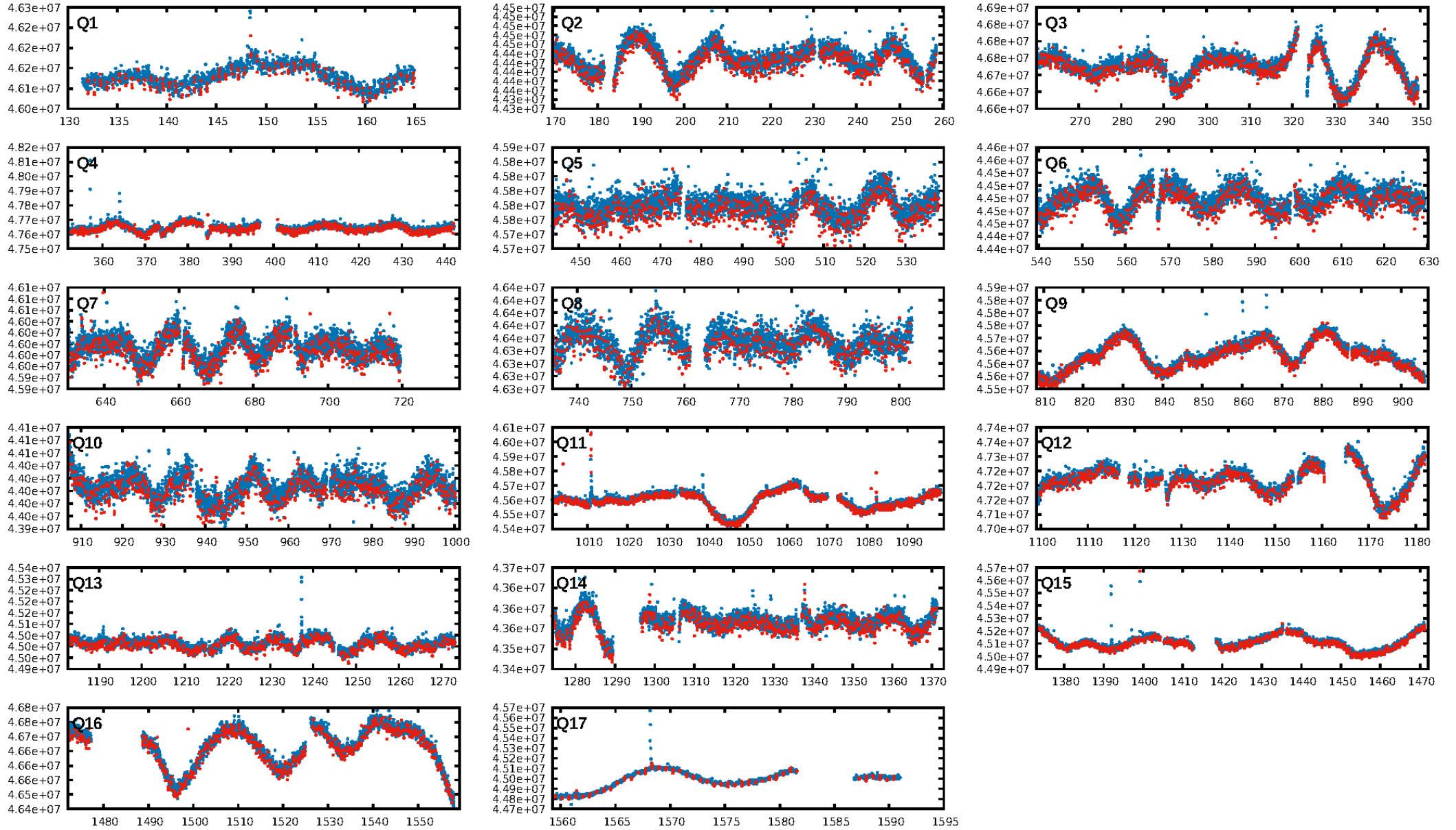
DV Fit Results:

Period = 0.63134 [0.00000] d
Epoch = 132.0508 [0.0003] BKJD
Rp/R* = 0.0167 [0.0025]
a/R* = 2.32 [1.21]
b = 0.90 [0.14]
Seff = 724.41 [121.28]
Teq = 1323 [55] K
Rp = 0.97 [0.17] Re
a = 0.0116 [0.0008] AU
Ag = 0.74 [0.36] [-0.73σ]
Teffp = 1896 [233] K [2.39σ]

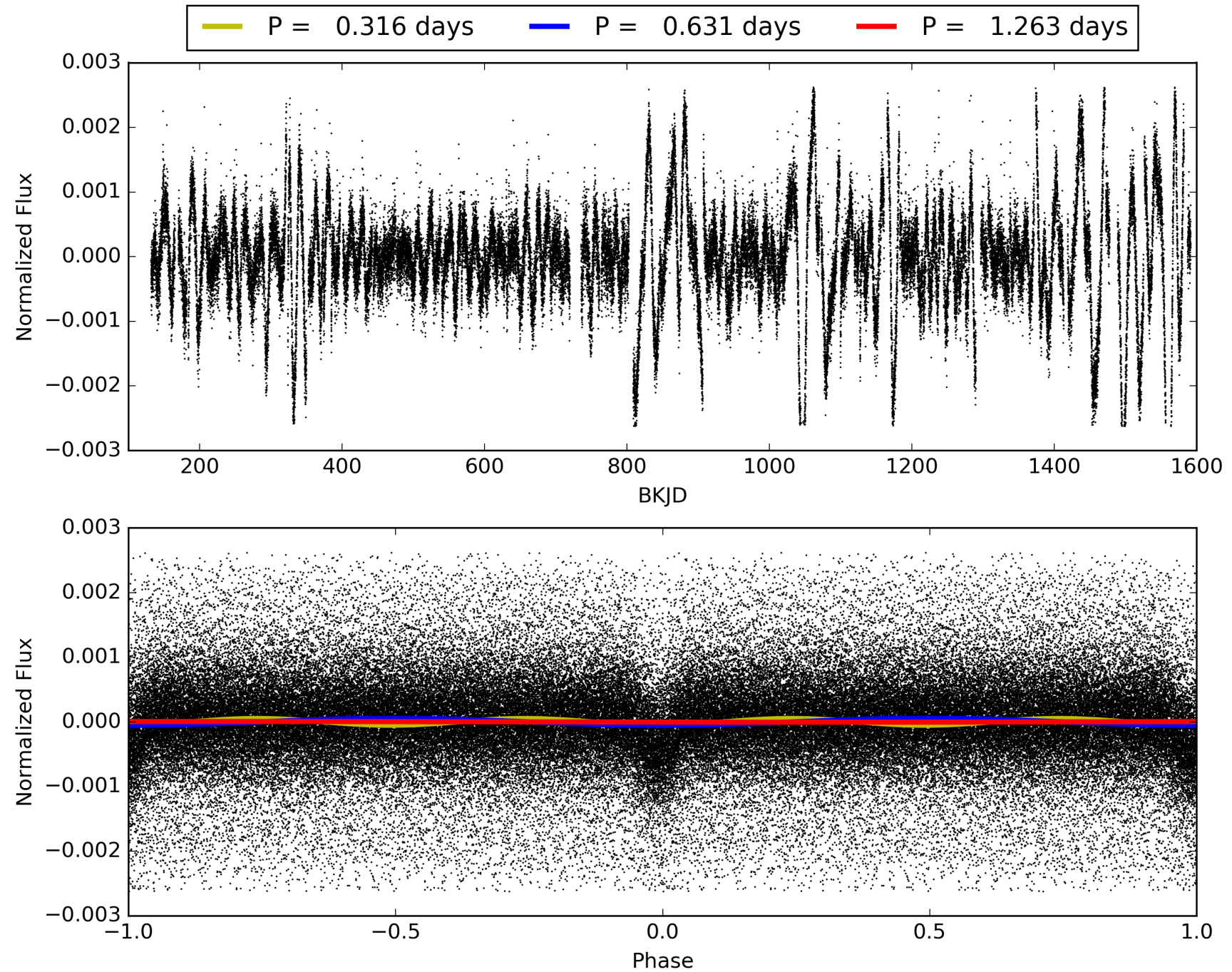
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.06e-58
RollingBand-fgt: 1.00 [2018/2020]
GhostDiagnostic-chr: 2.053
Centroid-sig: 0.0%
Centroid-so: 0.665 arcsec [3.52σ]
OotOffset-rm: 0.099 arcsec [1.15σ]
KicOffset-rm: 0.308 arcsec [3.68σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010975146-01, PDC Light Curves

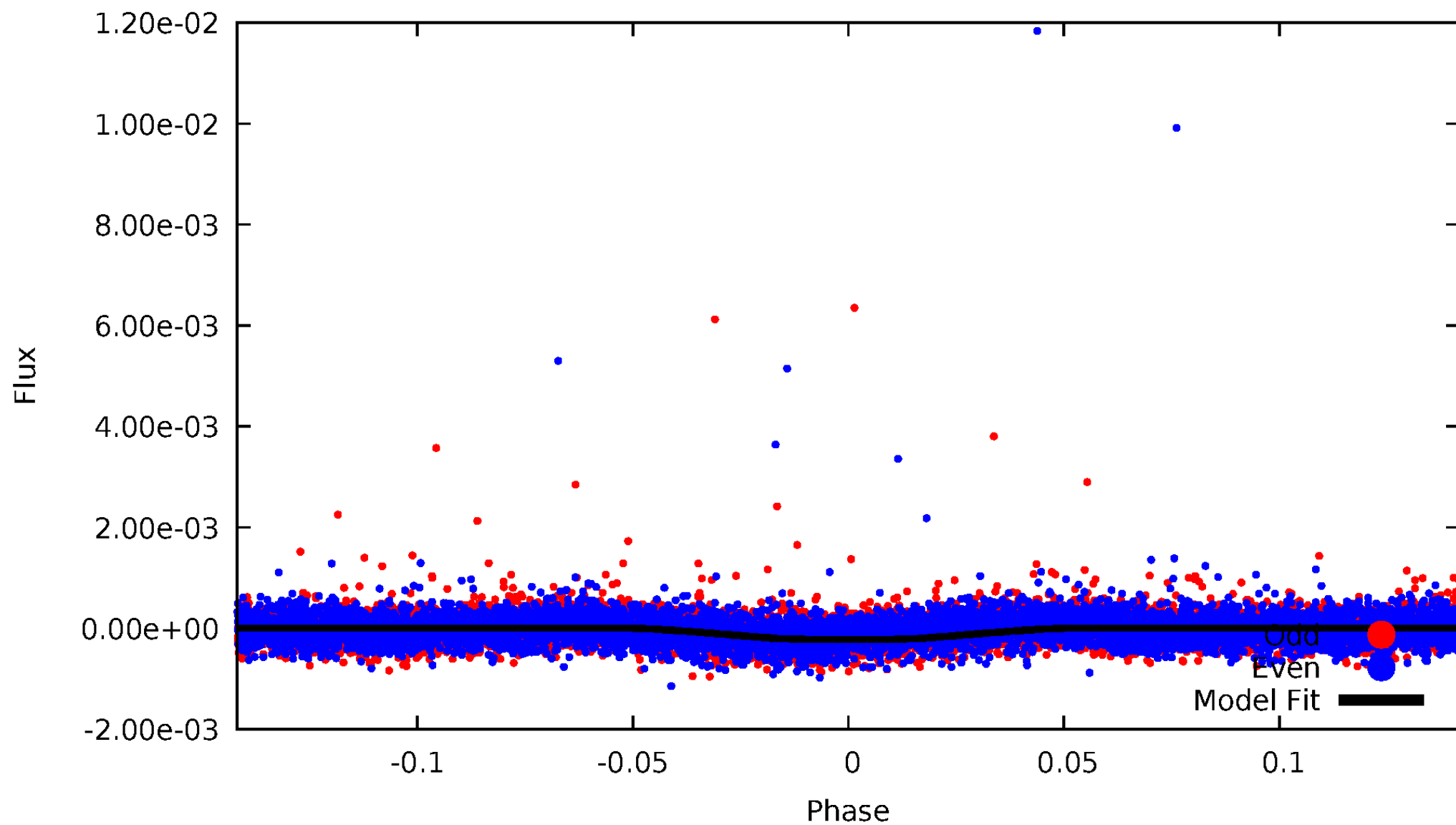


TCE 010975146-01



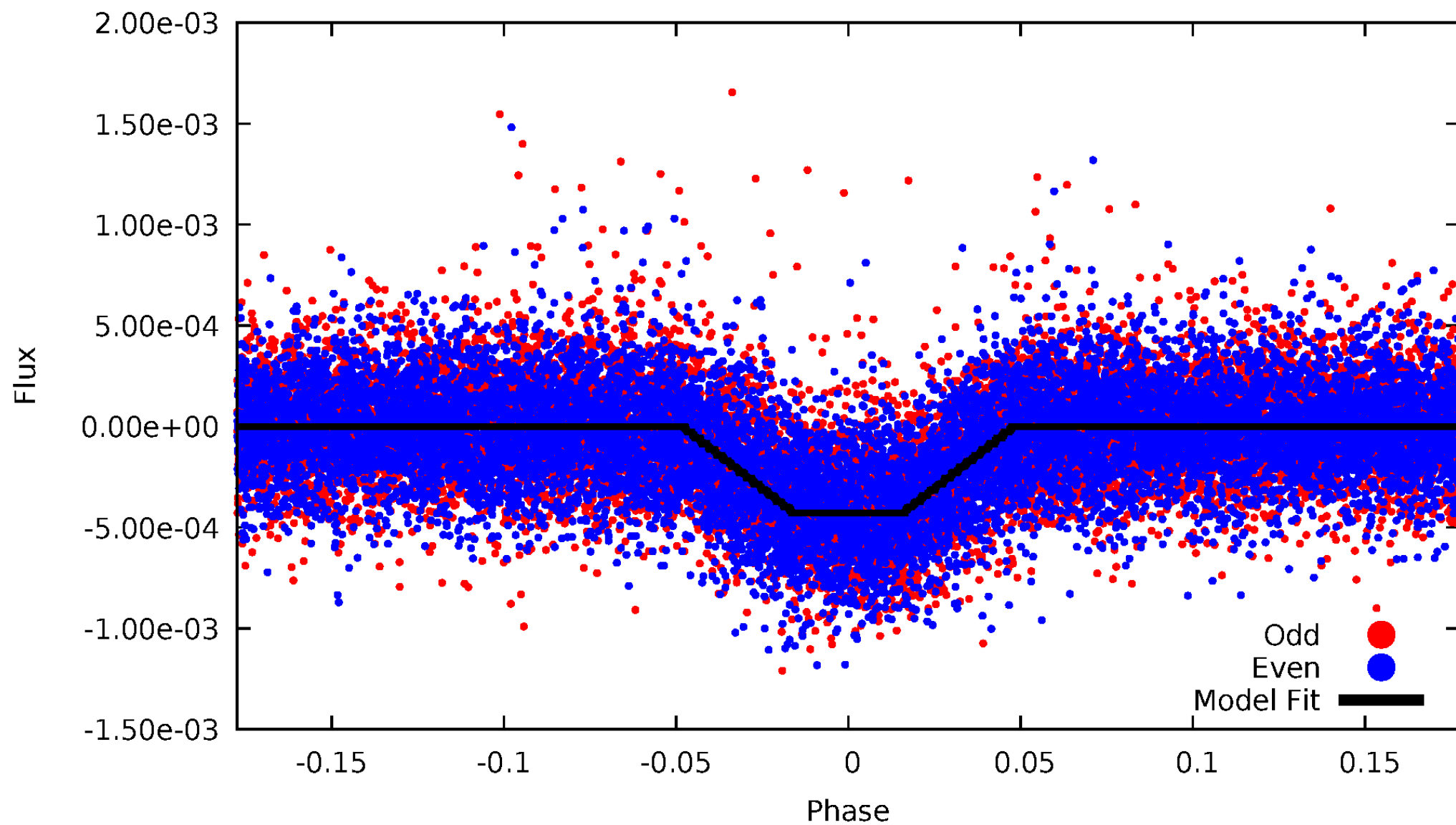
DV Odd/Even

TCE 010975146-01



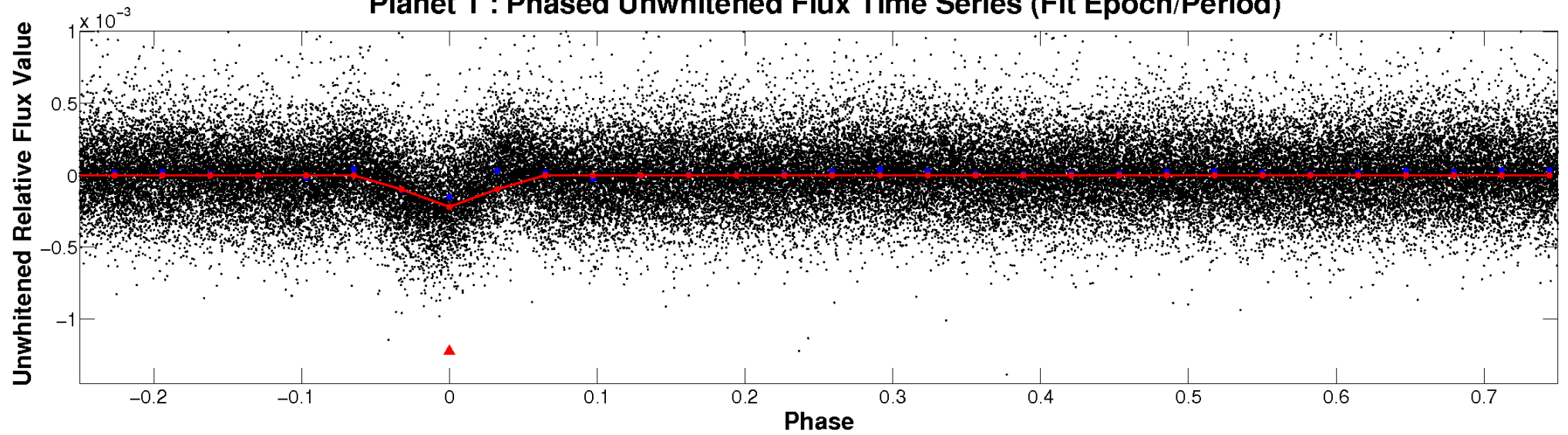
ALT Odd/Even

TCE 010975146-01

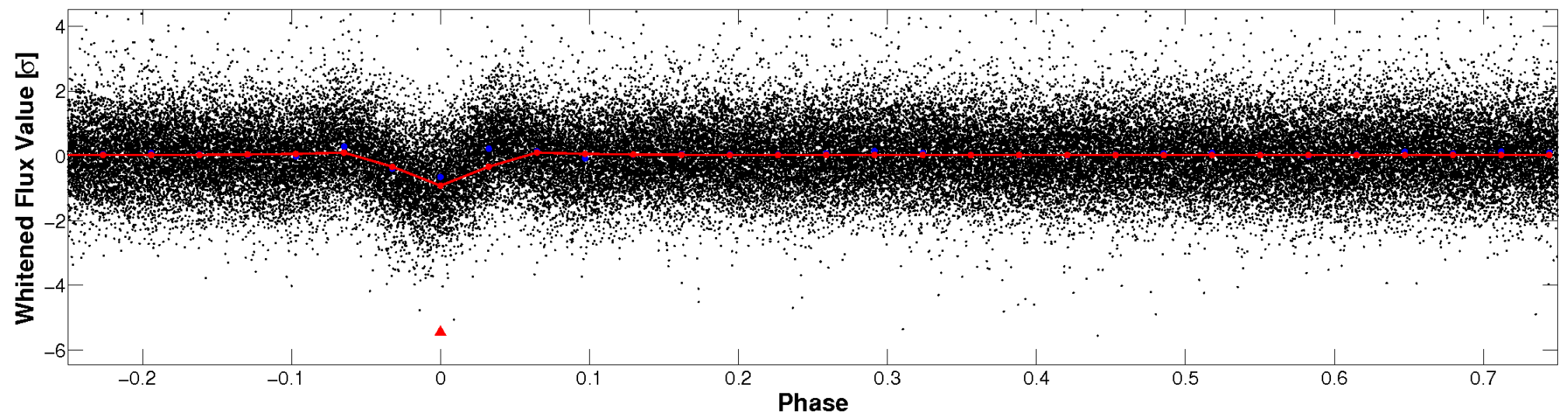


Non-Whitened Vs. Whitened Light Curve

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

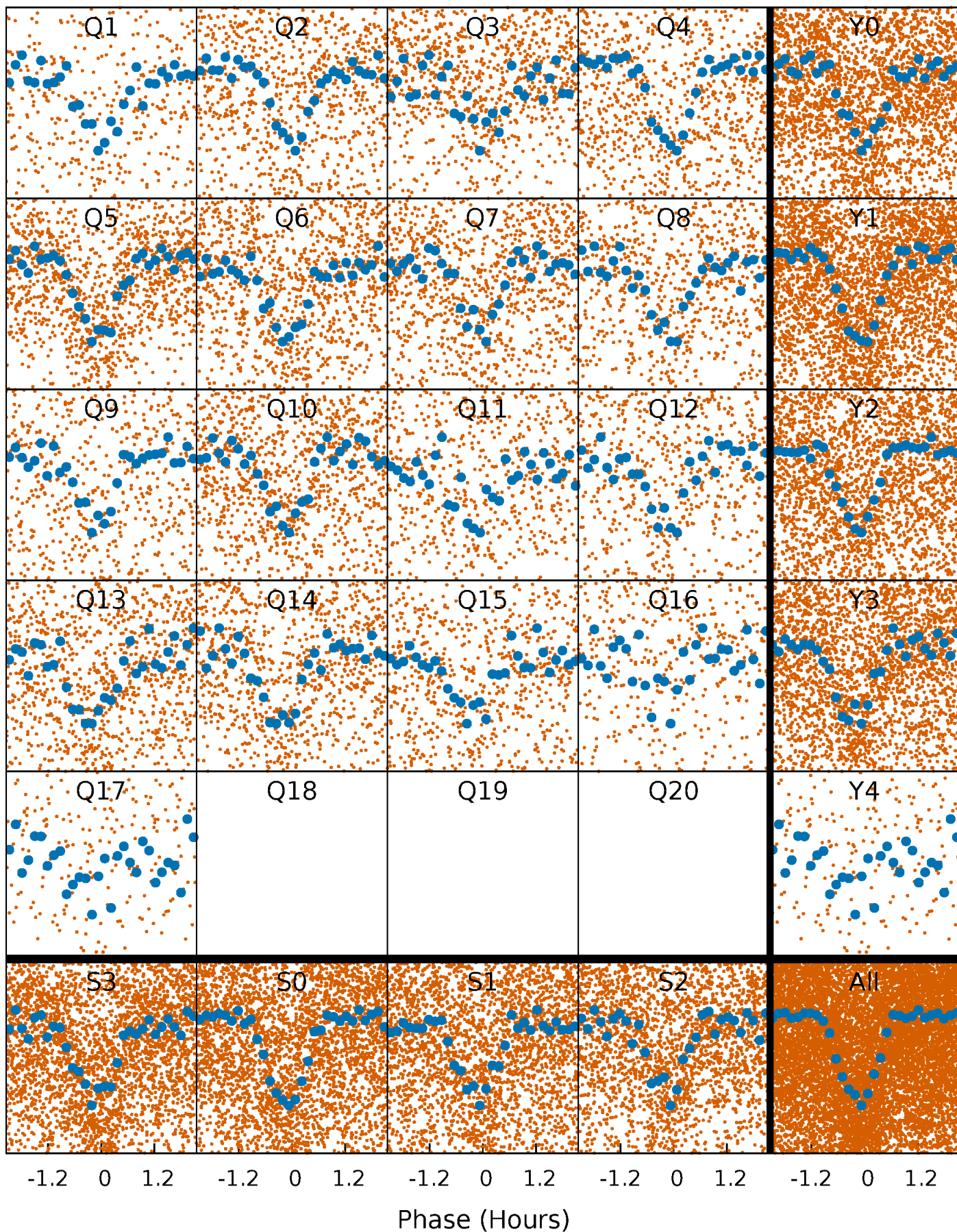


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



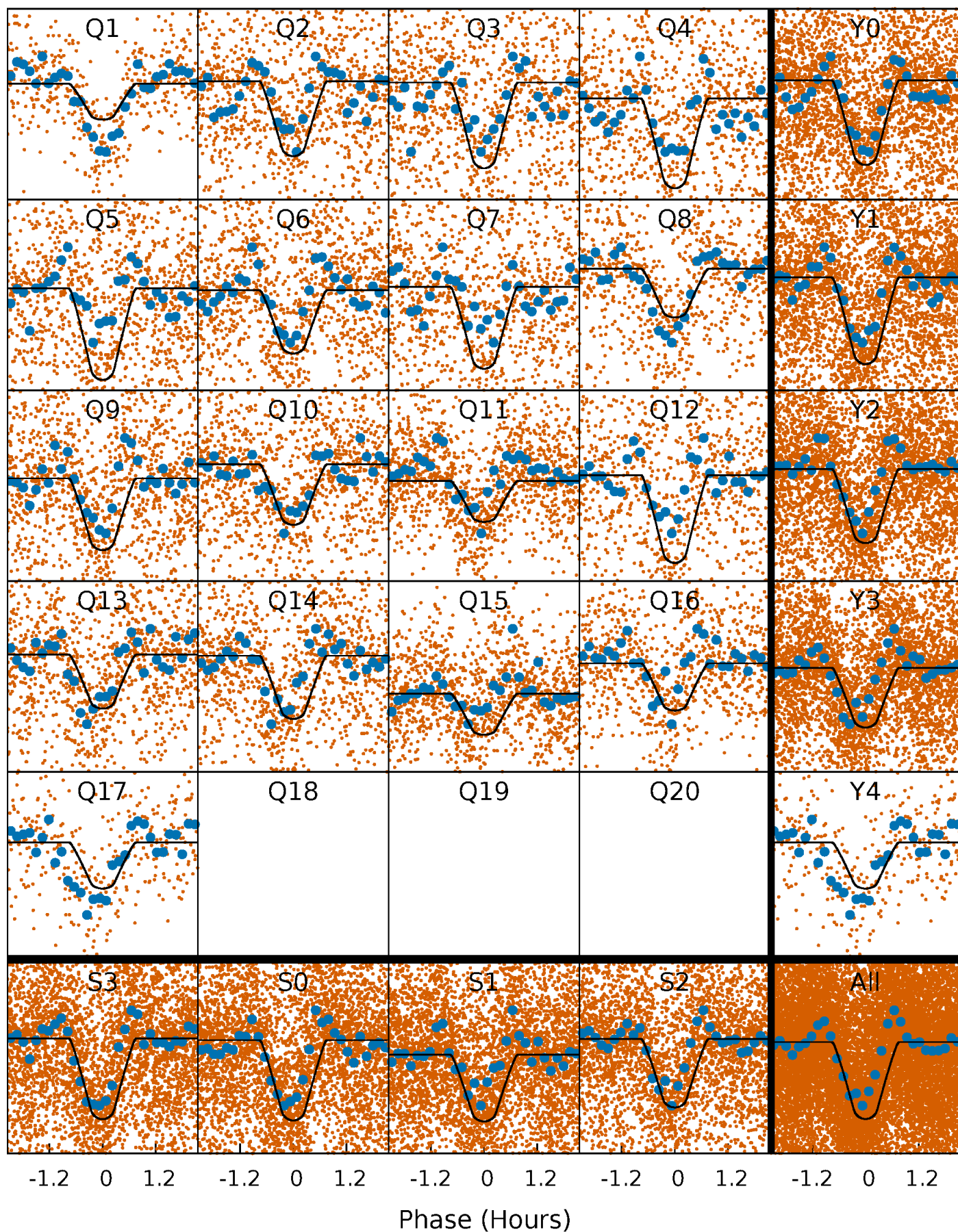
PDC Quarter-Phased Transit Curves

TCE 010975146-01 P= 0.631337 Days $T_0=132.050811$ (BKJD)



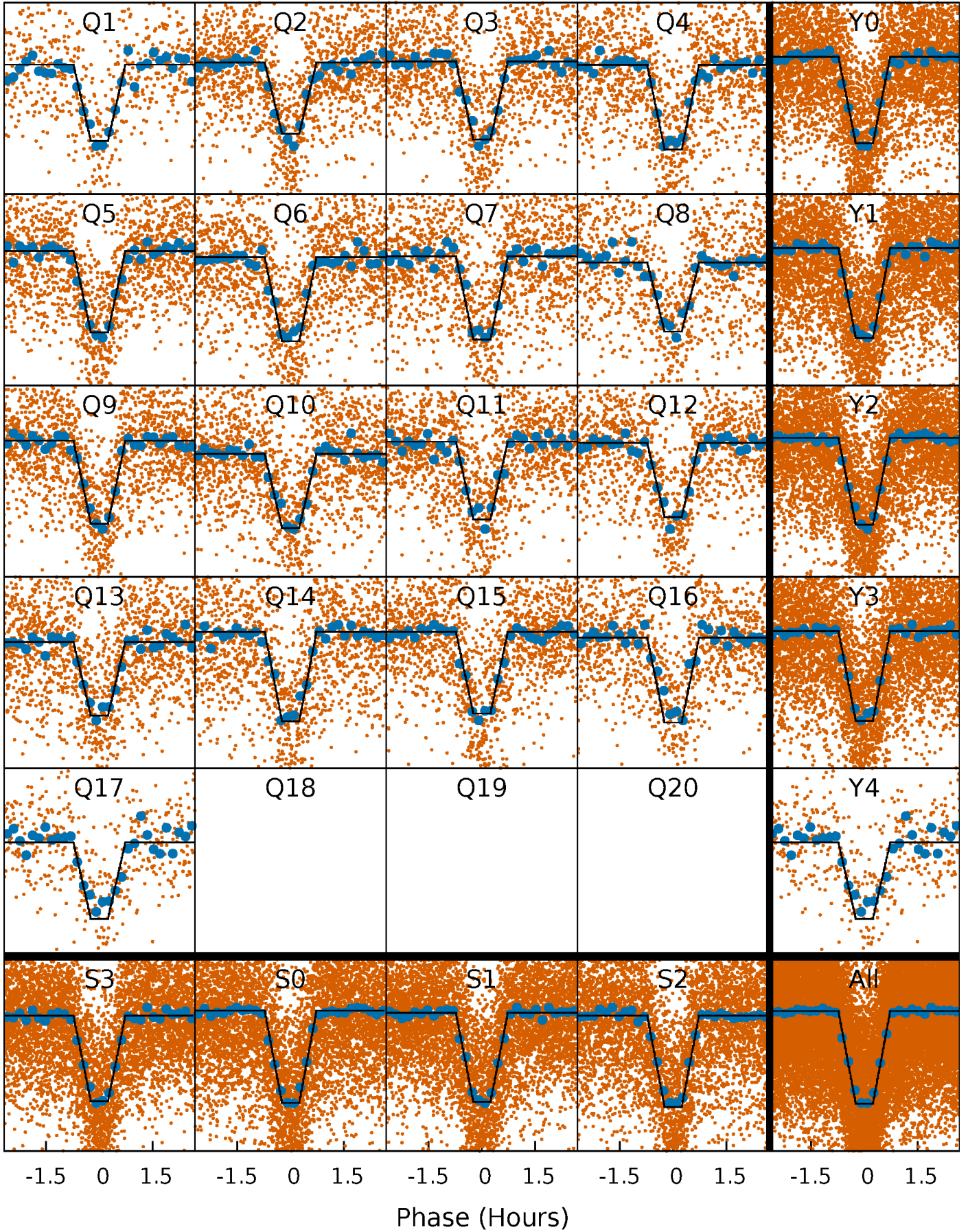
DV Quarter-Phased Transit Curves

TCE 010975146-01 P= 0.631337 Days $T_0=132.050811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

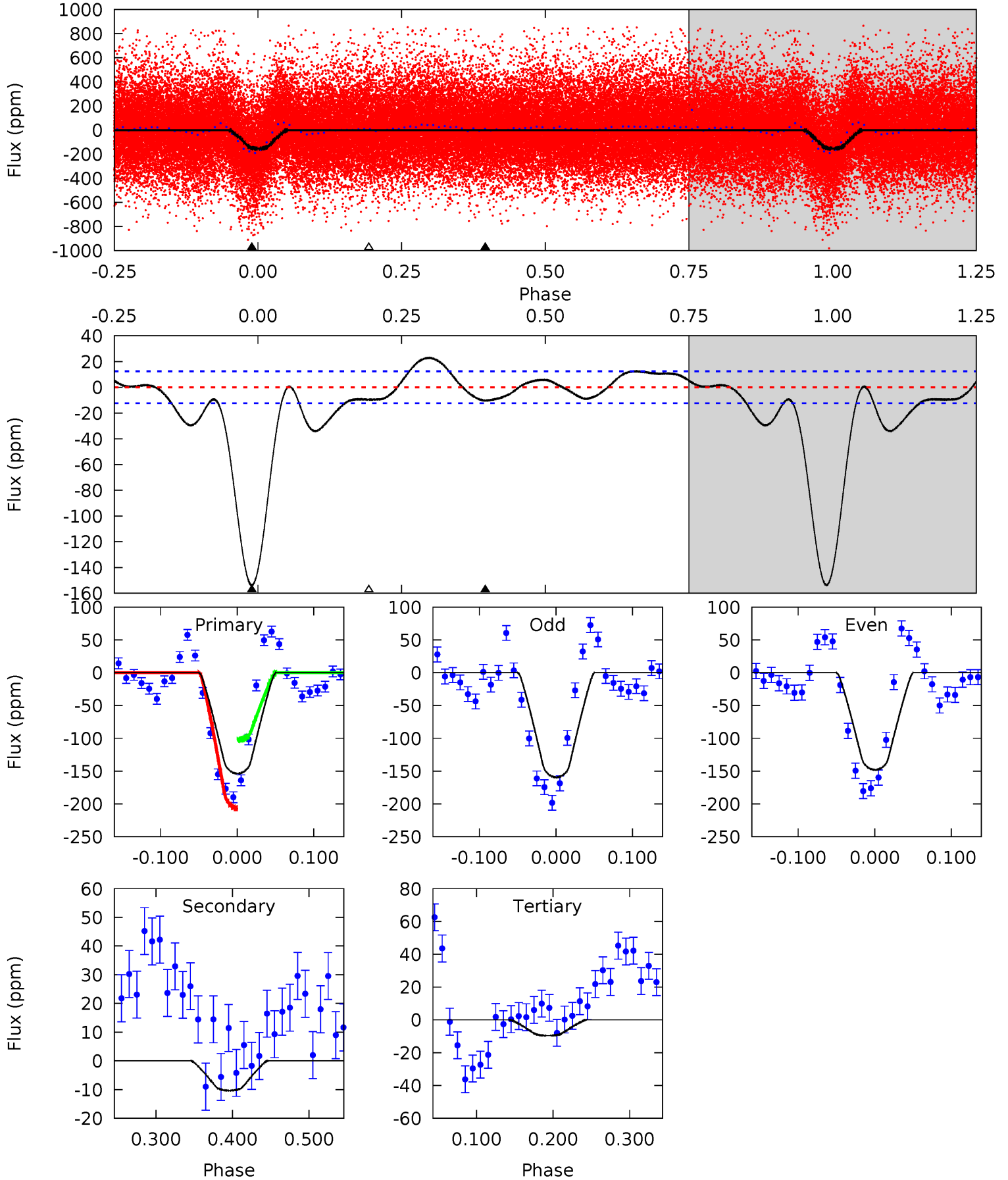
TCE 010975146-01 P= 0.631331 Days $T_0=132.051472$ (BKJD)



DV Model-Shift Uniqueness Test

010975146-01, P = 0.631337 Days, E = 131.419474 Days

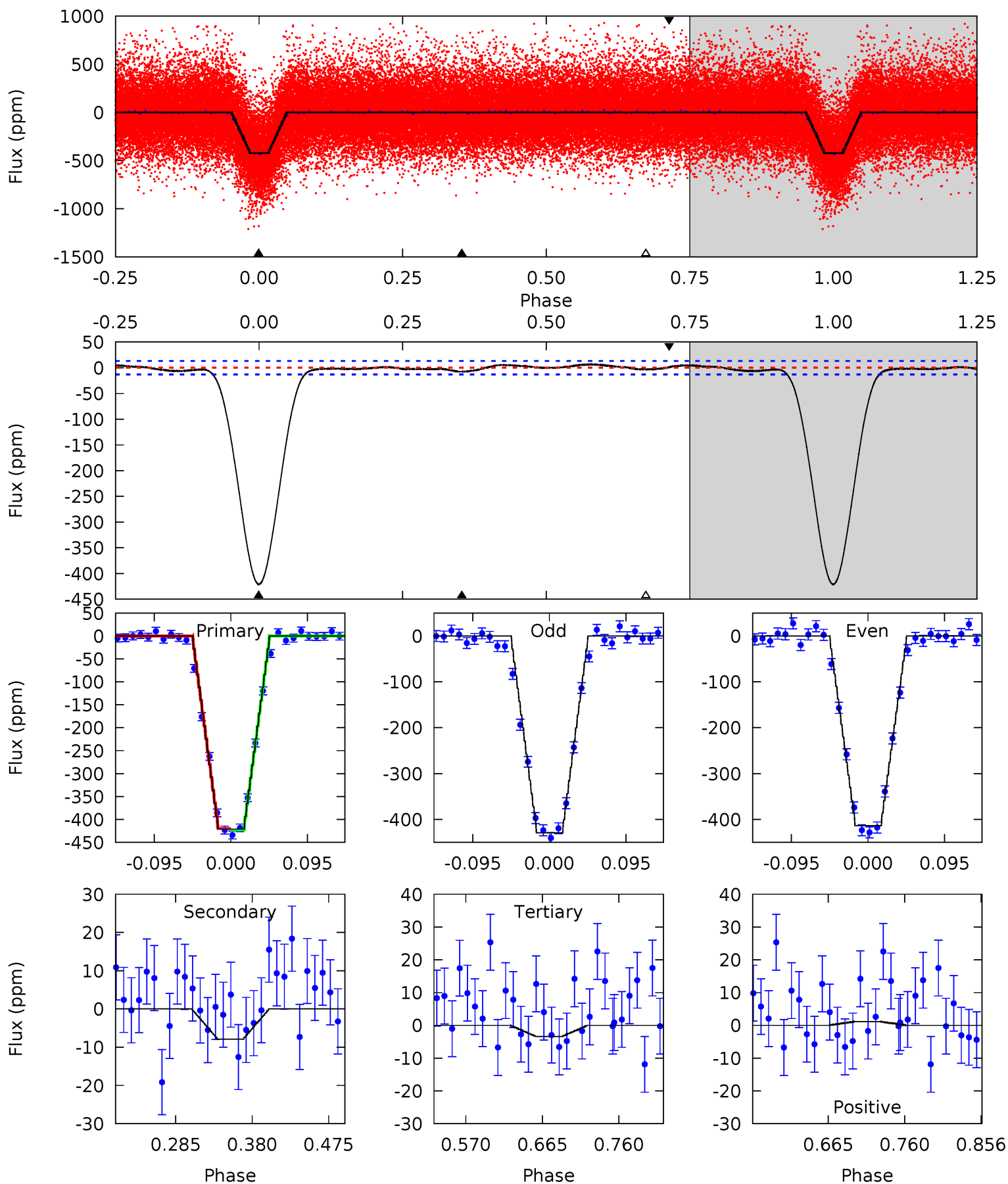
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.7	3.81	3.54	0	4.56	1.64	4.81	53.1	56.7	0.27	3.81	2.13	0.90	0.13	19.3



Alt Model-Shift Uniqueness Test

010975146-01, P = 0.631331 Days, E = 131.420141 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
147.0	2.75	1.19	0.40	4.58	1.67	1.13	145.8	146.6	1.56	2.35	2.77	0.99	0.02	0.58



Stellar Parameters For KIC 010975146

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4441^{+133}_{-146}	$4.710^{+0.056}_{-0.032}$	$-0.980^{+0.300}_{-0.300}$	$0.530^{+0.038}_{-0.046}$	$0.526^{+0.044}_{-0.029}$	$4.975^{+1.147}_{-0.643}$
	+3%/-3%	+1%/-1%	+31%/-31%	+7%/-9%	+8%/-6%	+23%/-13%
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 010975146-01 / KOI 1300.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 3	$0.96^{+0.16}_{-0.16}$	1842^{+61}_{-74}	2504^{+198}_{-223}	$0.825^{+0.424}_{-0.296}$
Alt.	-8 ± 3	$1.19^{+0.15}_{-0.15}$	1841^{+67}_{-66}	2090^{+283}_{-4038}	$0.409^{+0.224}_{-0.161}$

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 $A_{obs} \gg 1.0$

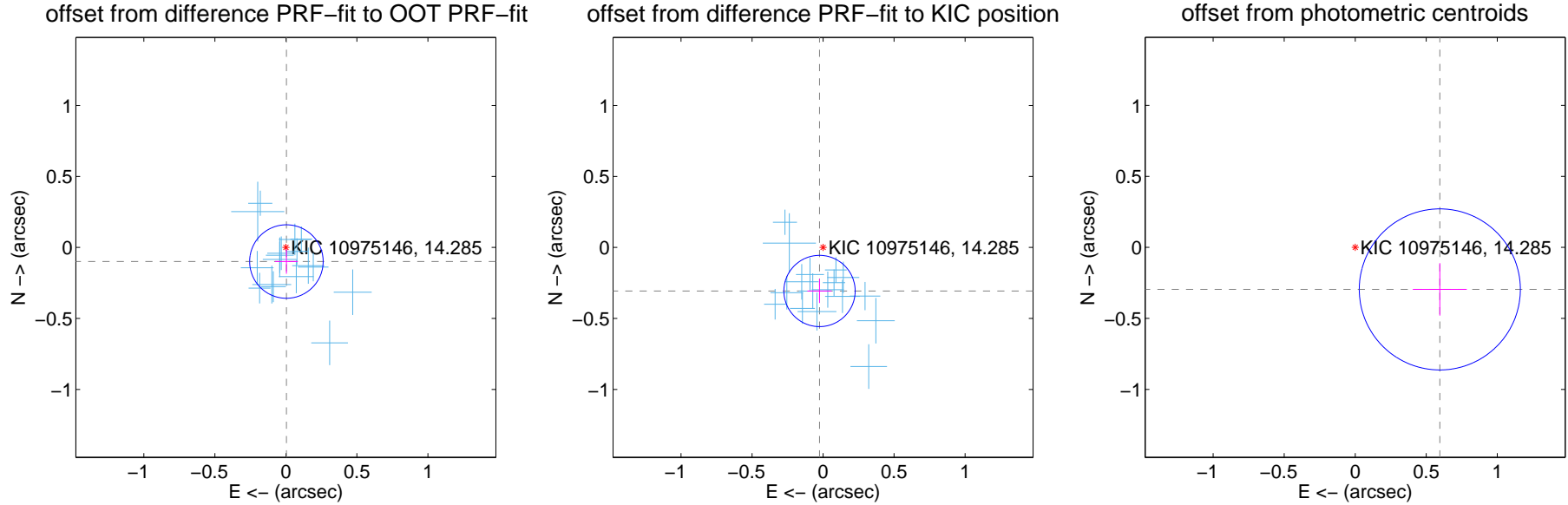
DV Centroid Data

Supplemental centroid analysis for 010975146-01. Kepler magnitude: 14.29. Transit SNR 49.84

There are 17 quarters with good PRF difference image offsets

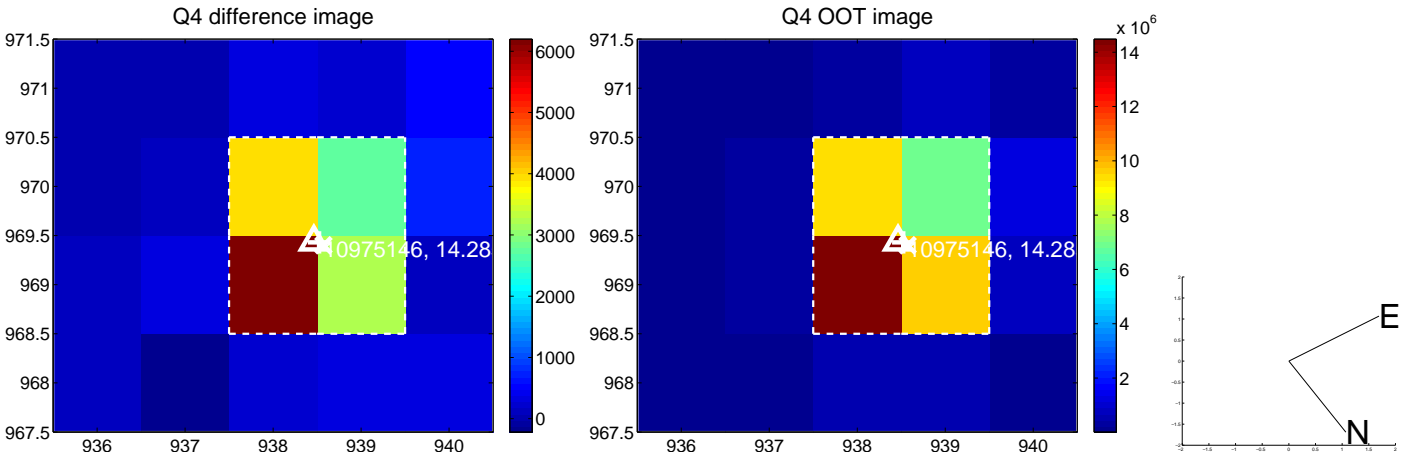
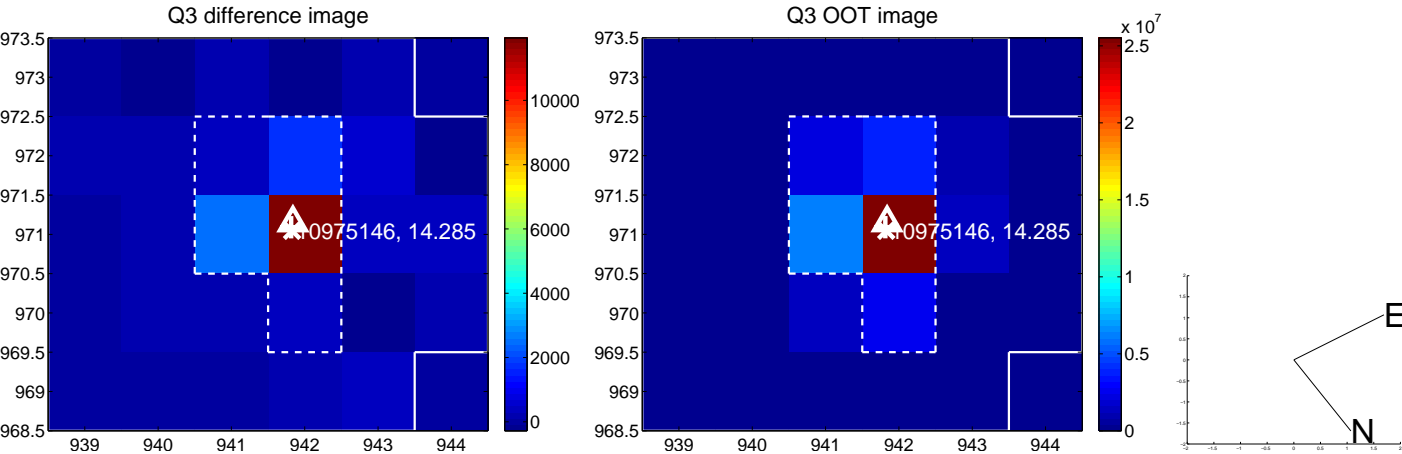
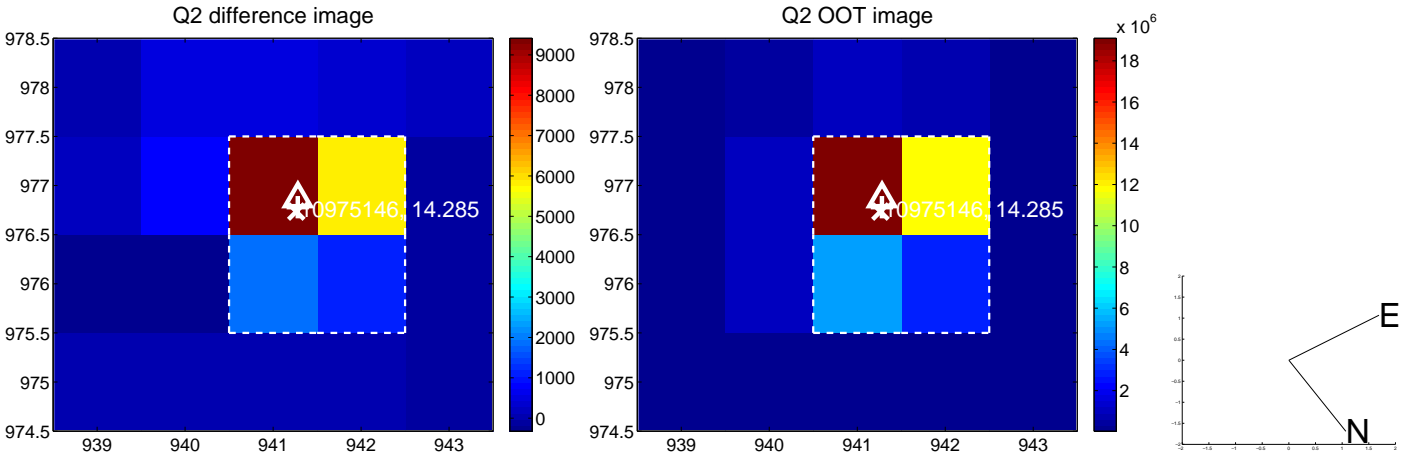
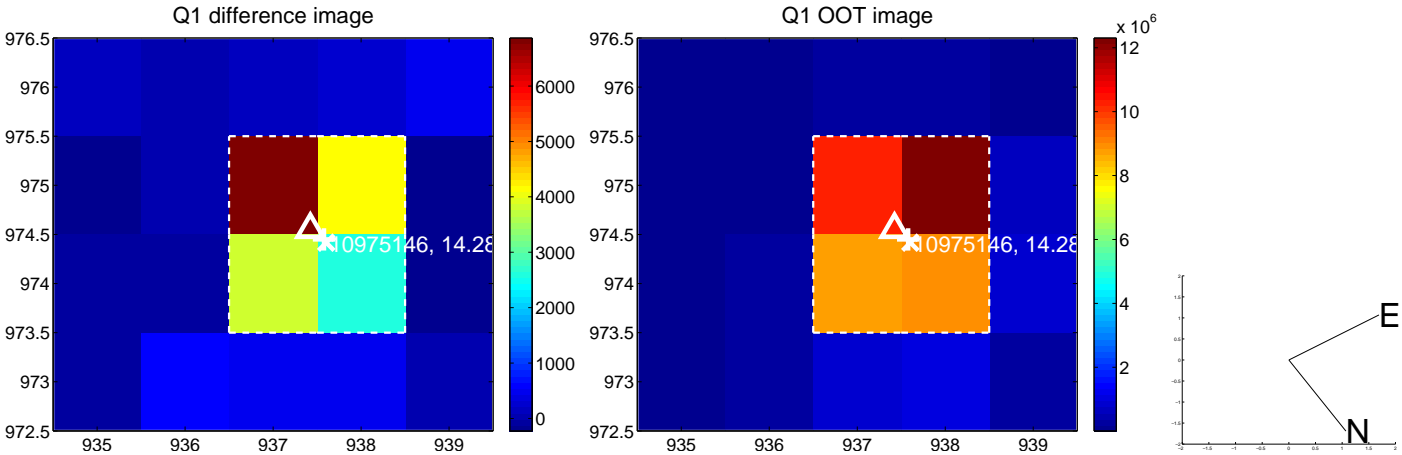
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.086	1.15	-0.004 ± 0.080	-0.099 ± 0.086
PRF-fit source offset from KIC position	0.308 ± 0.084	3.68	0.025 ± 0.085	-0.307 ± 0.085
photometric centroid source offset	0.67 ± 0.19	3.52	-0.60 ± 0.19	-0.30 ± 0.18

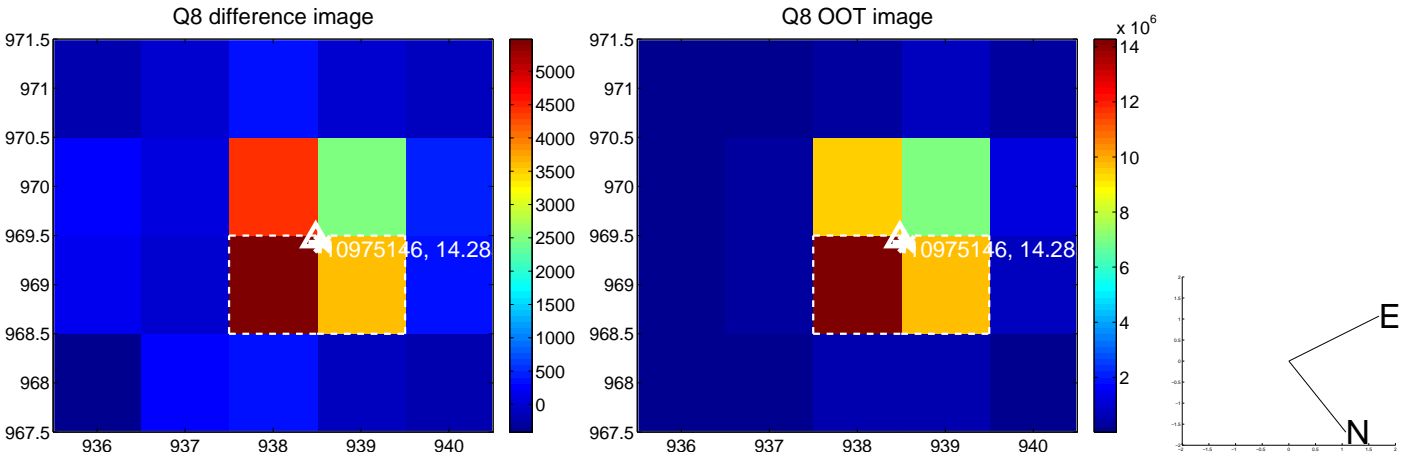
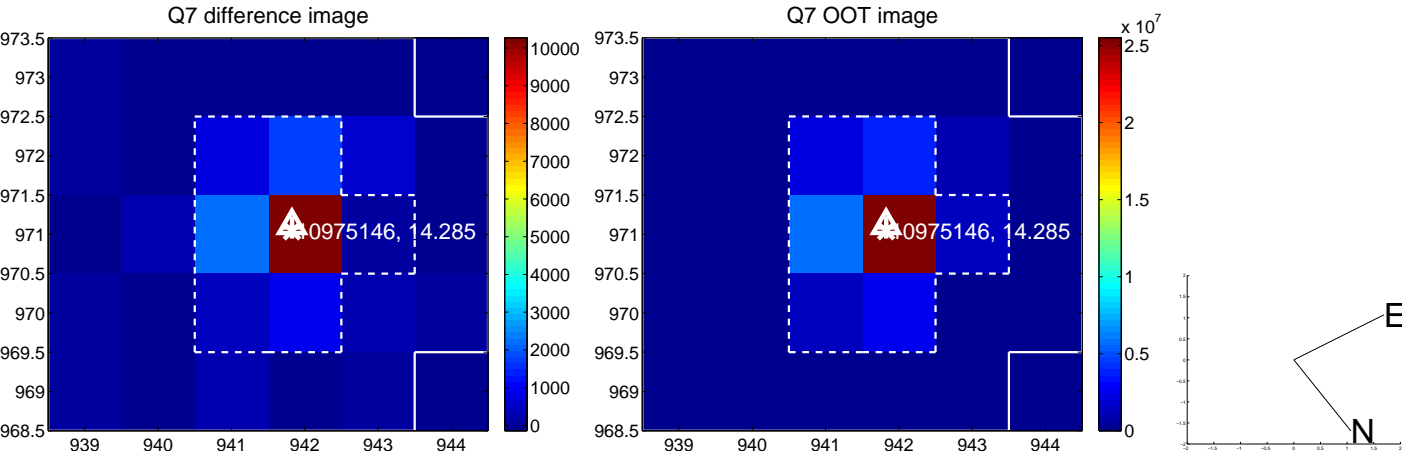
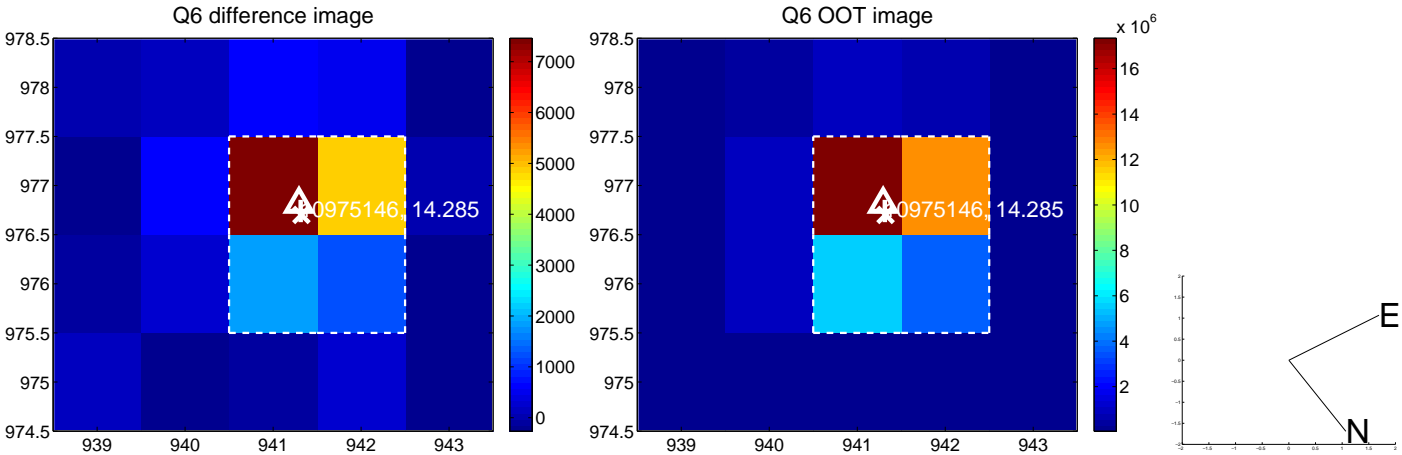
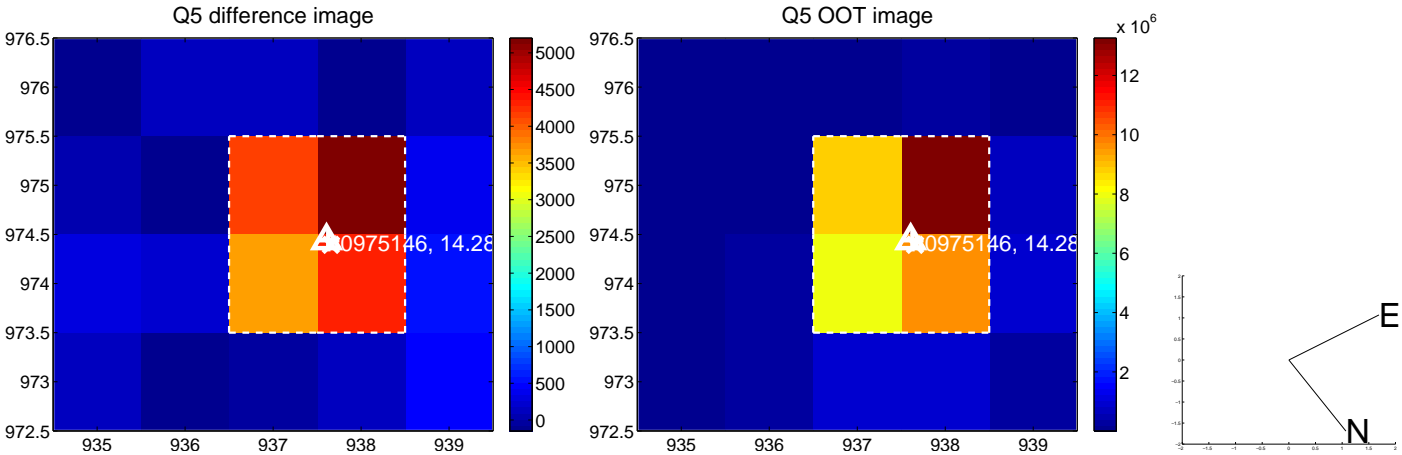


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

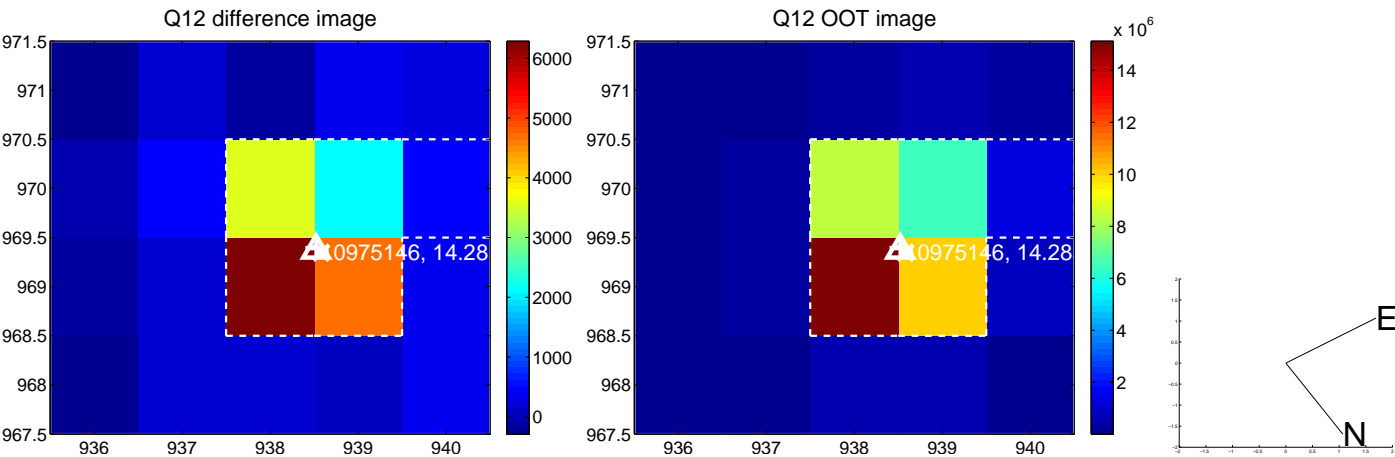
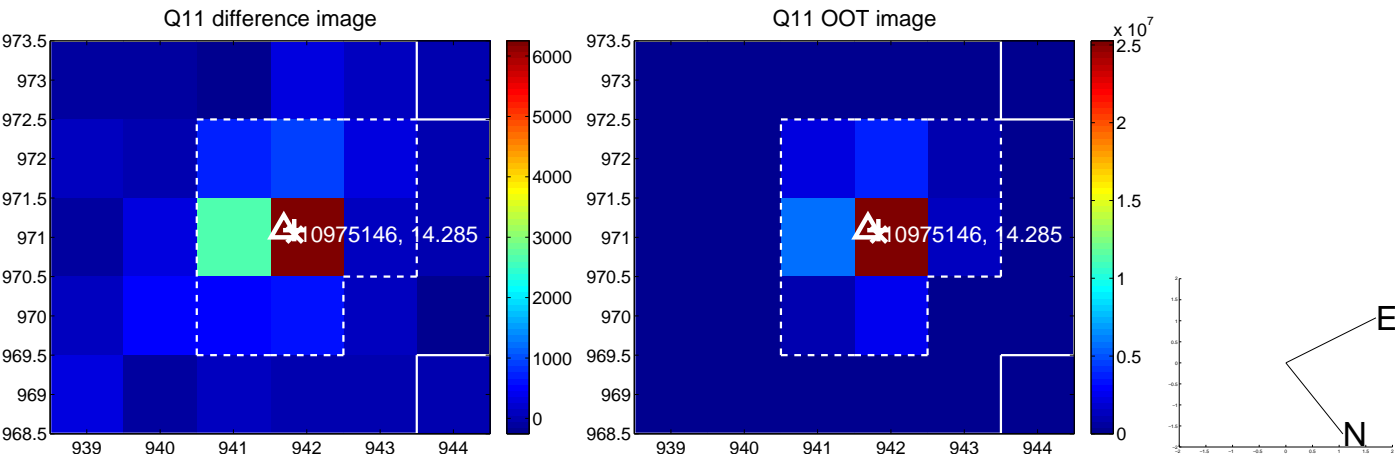
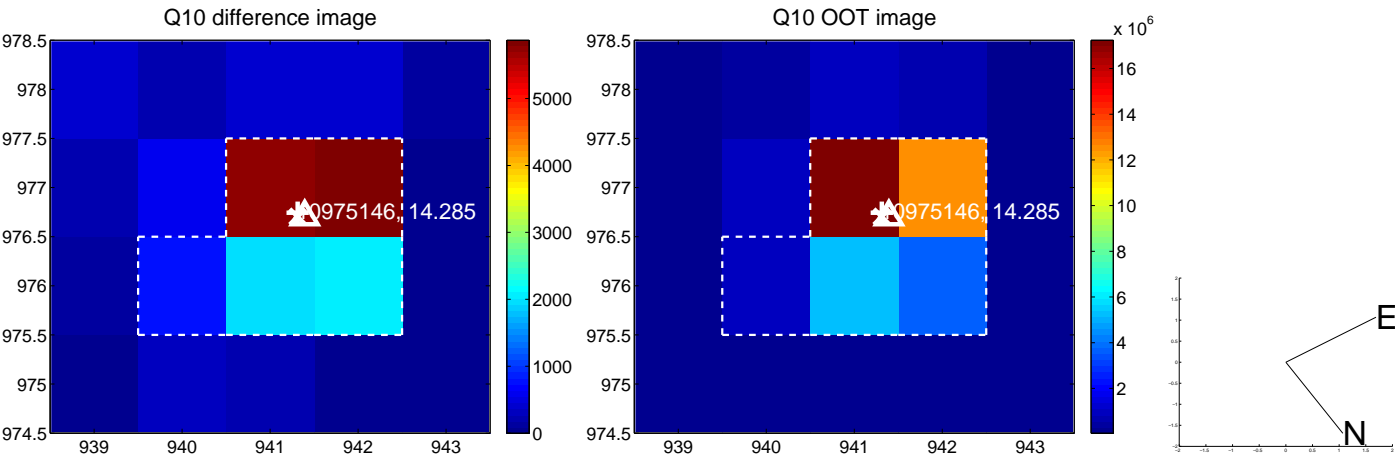
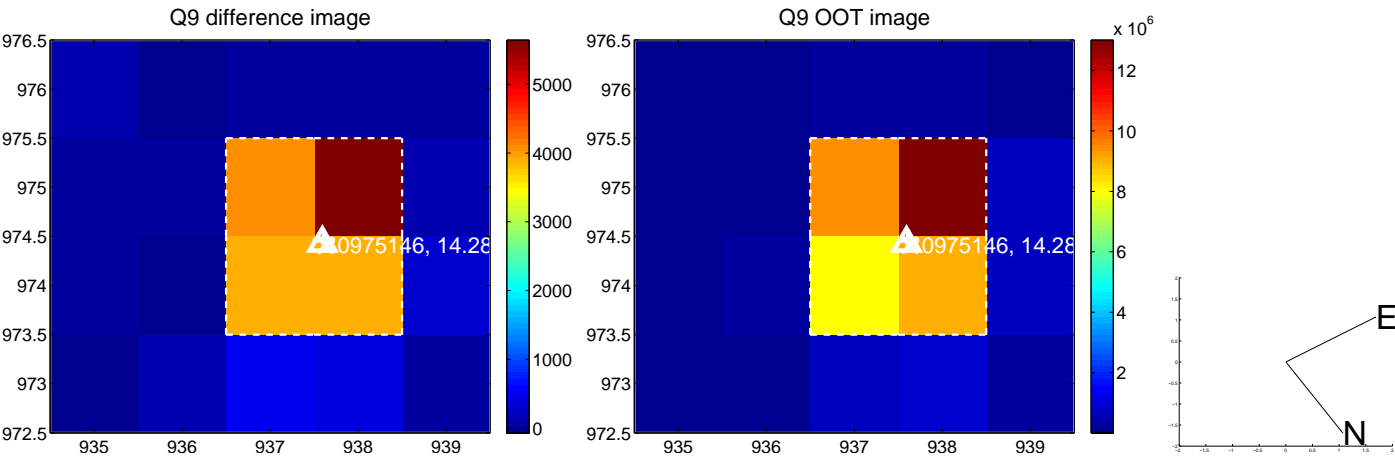
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



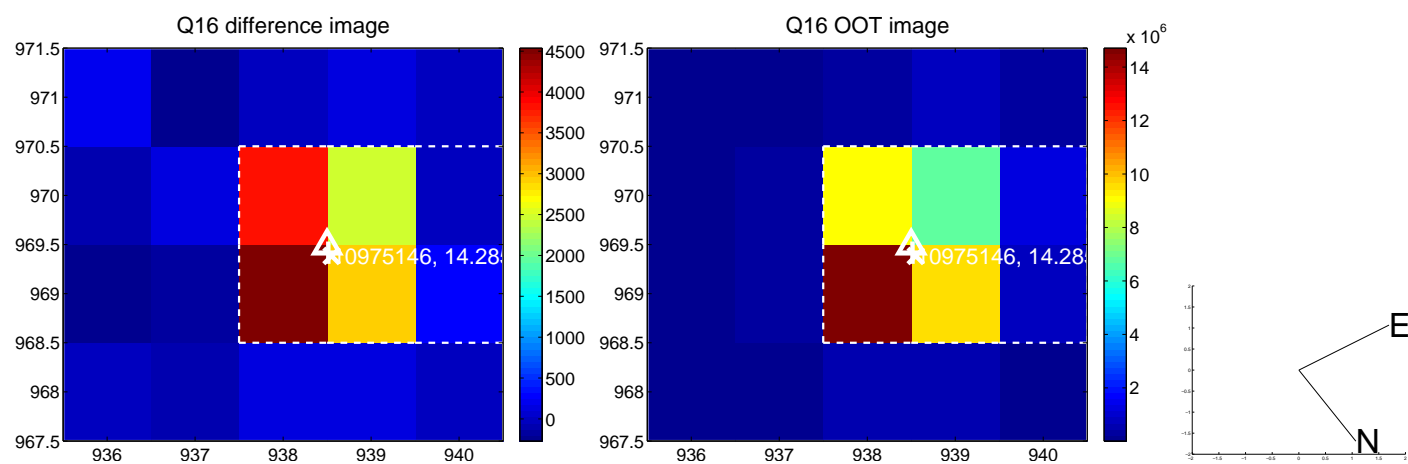
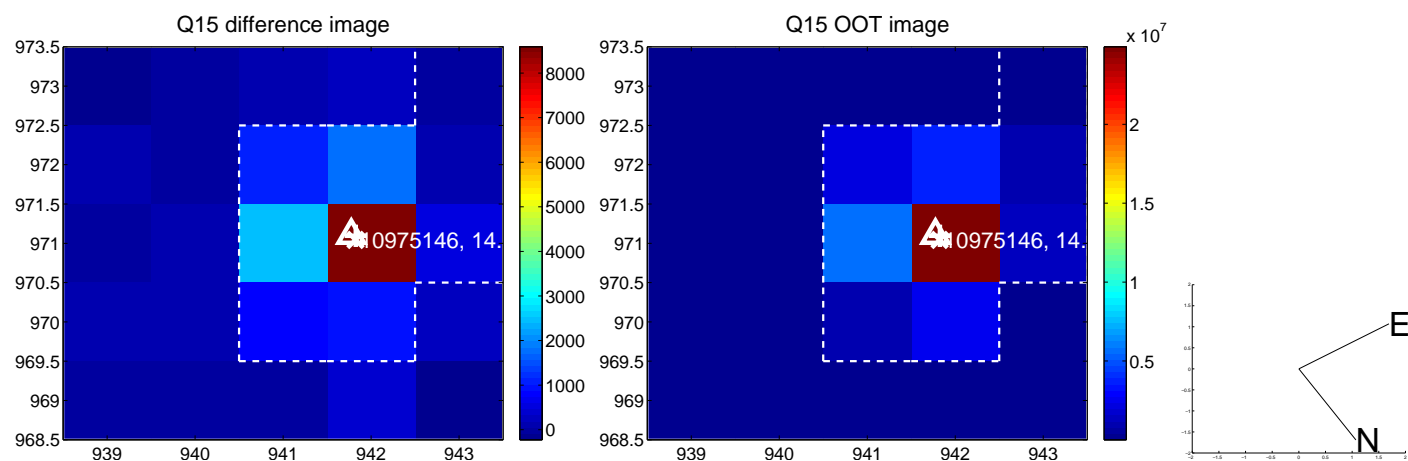
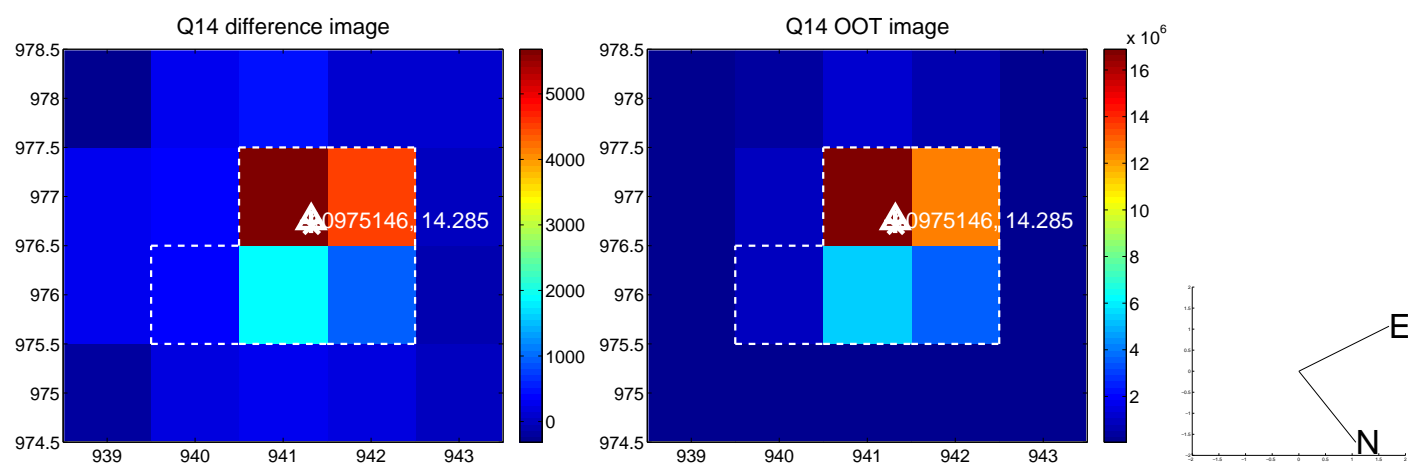
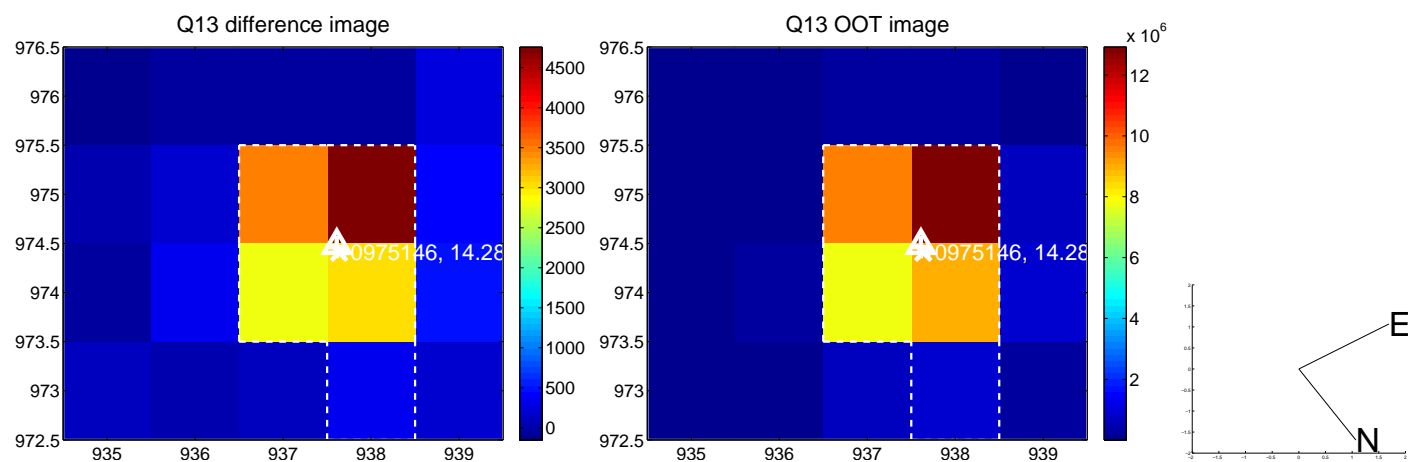
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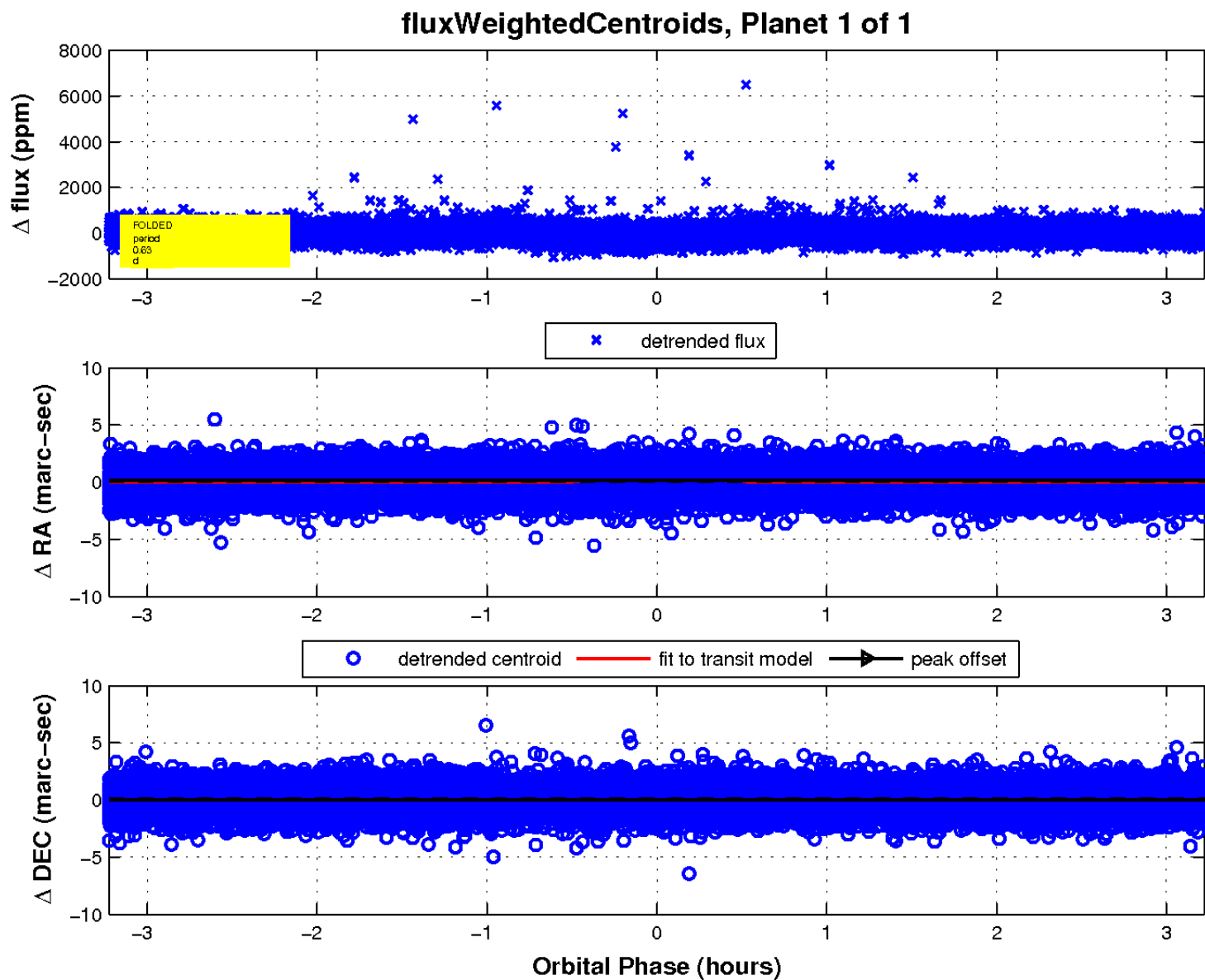
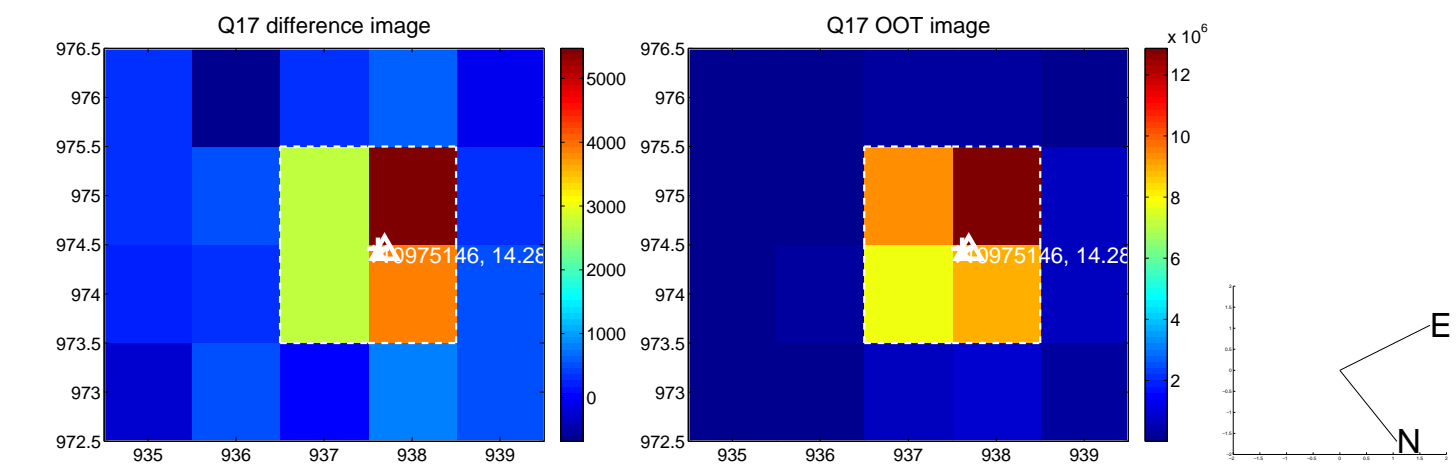
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UKIRT Image

Declination

