

KIC 006974658

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})
006974658-01	OBS	2925.01	0.716533	131.721348	70.2	0.815	14.5	19.3	1.03	5552	1.05	4051.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006974658-01	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.

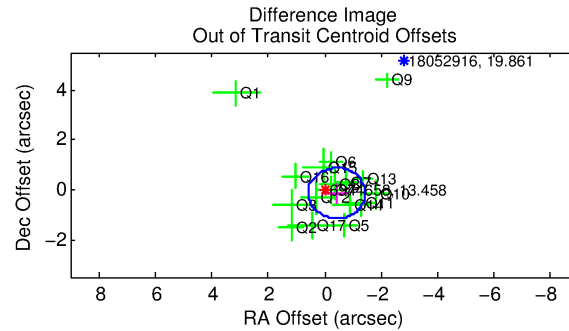
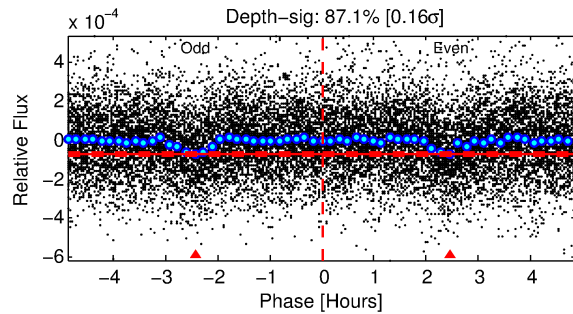
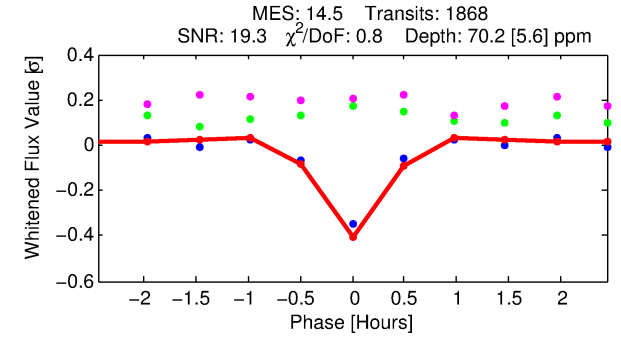
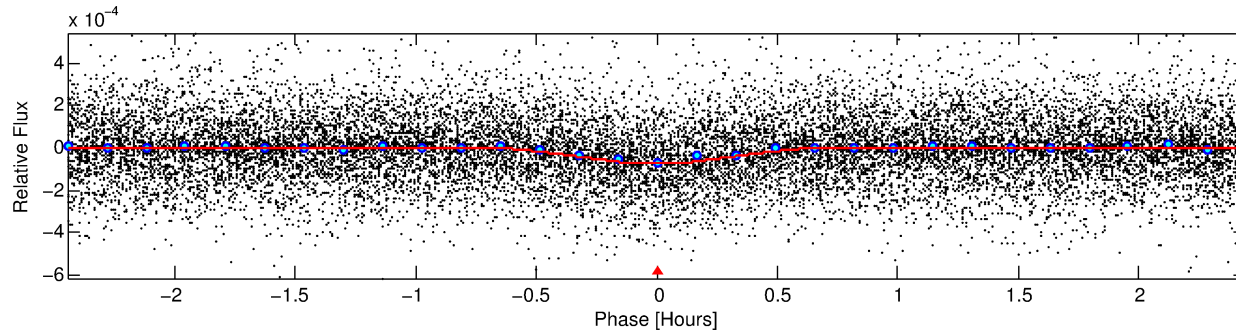
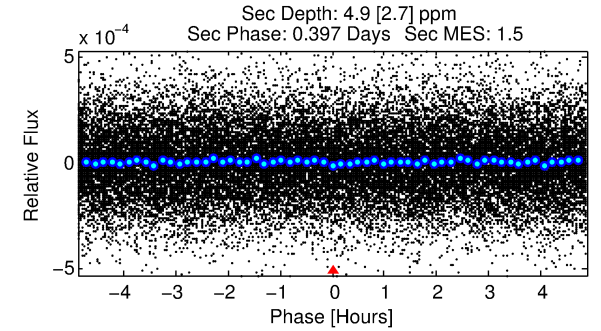
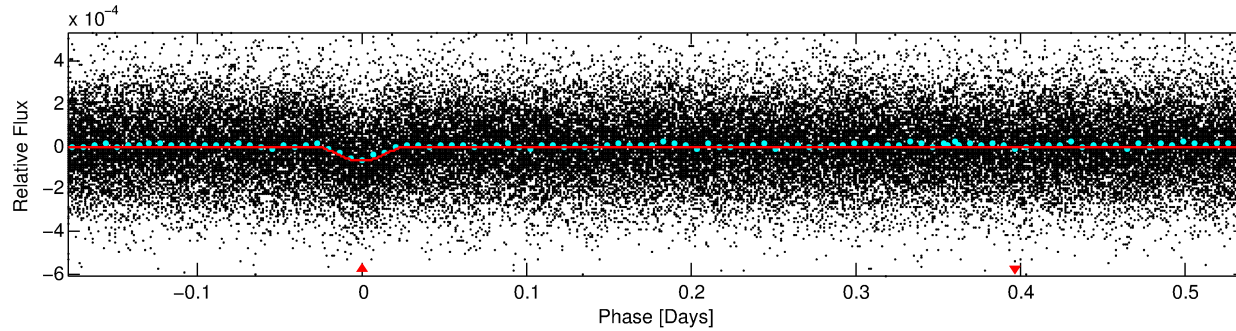
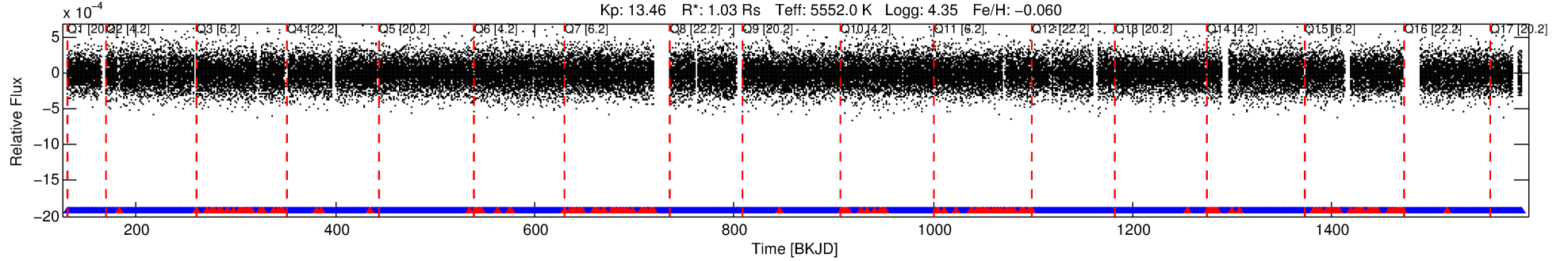
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006974658-01

No Significant Match Found

DV One-Page Summary

KIC: 6974658 Candidate: 1 of 1 Period: 0.717 d
KOI: K02925.01 Corr: 0.973



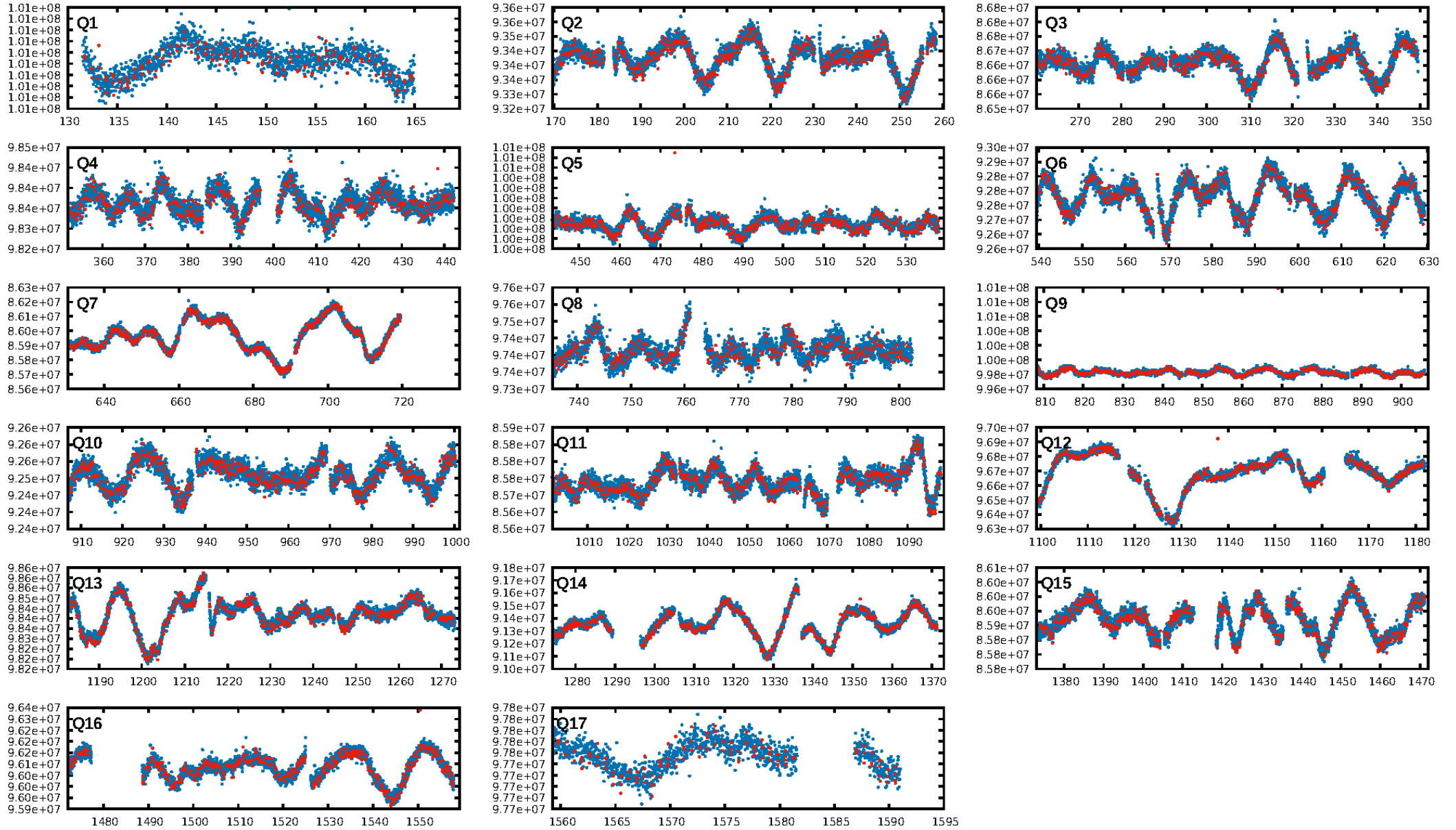
DV Fit Results:

Period = 0.71653 [0.00001] d
Epoch = 131.7213 [0.0007] BKJD
Rp/R* = 0.0094 [0.0019]
a/R* = 3.17 [2.59]
b = 0.90 [0.19]
Seff = 4051.37 [1530.00]
Teq = 2034 [192] K
Rp = 1.05 [0.38] Re
a = 0.0149 [0.0037] AU
Ag = 0.54 [0.42] [-1.08σ]
Teffp = 2701 [471] K [1.31σ]

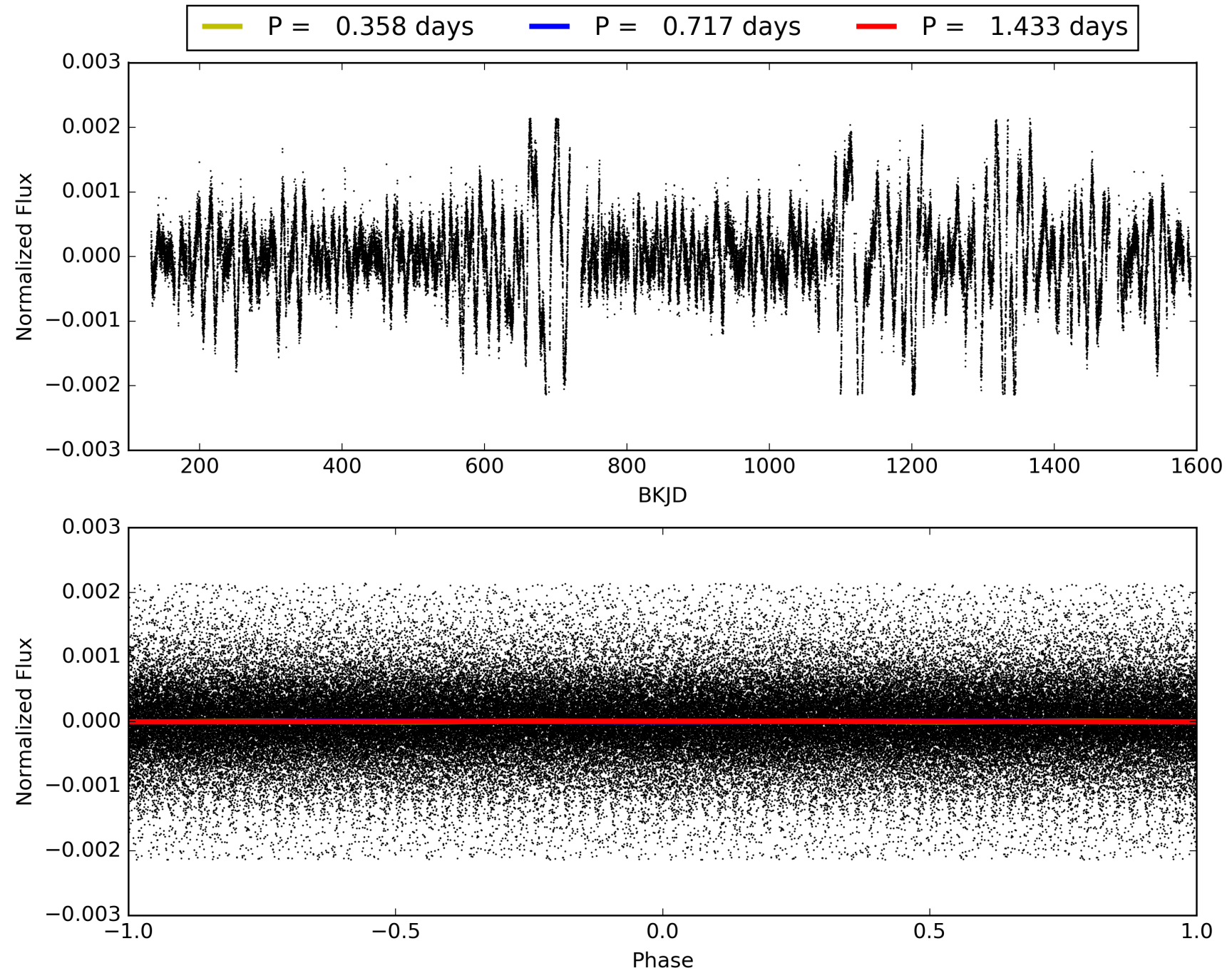
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.58e-44
RollingBand-fgt: 0.91 [1616/1784]
GhostDiagnostic-chr: 3.704
Centroid-sig: 16.5%
Centroid-so: 0.713 arcsec [1.12σ]
OotOffset-rm: 0.450 arcsec [1.33σ]
KicOffset-rm: 0.640 arcsec [1.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006974658-01, PDC Light Curves

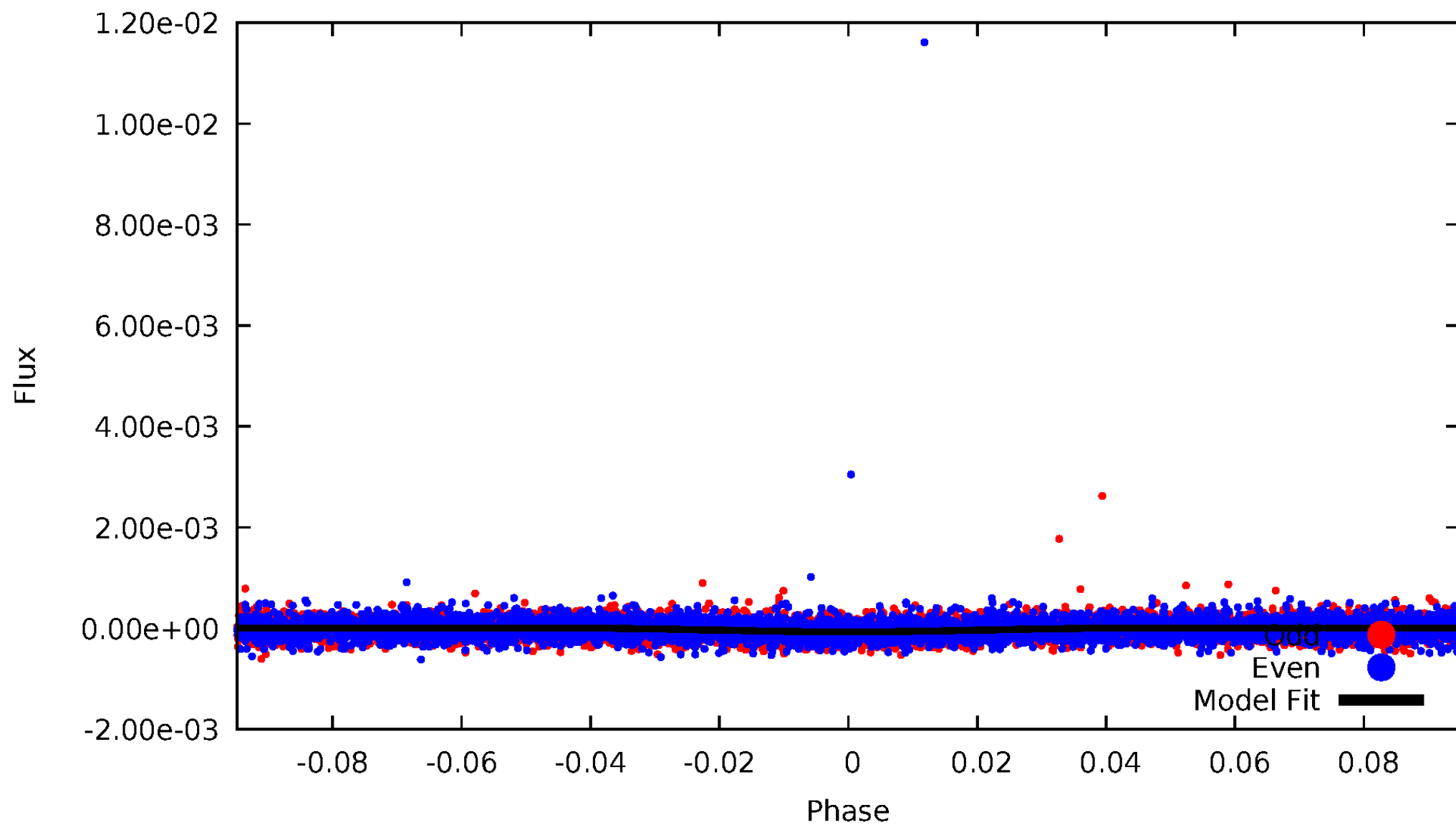


TCE 006974658-01



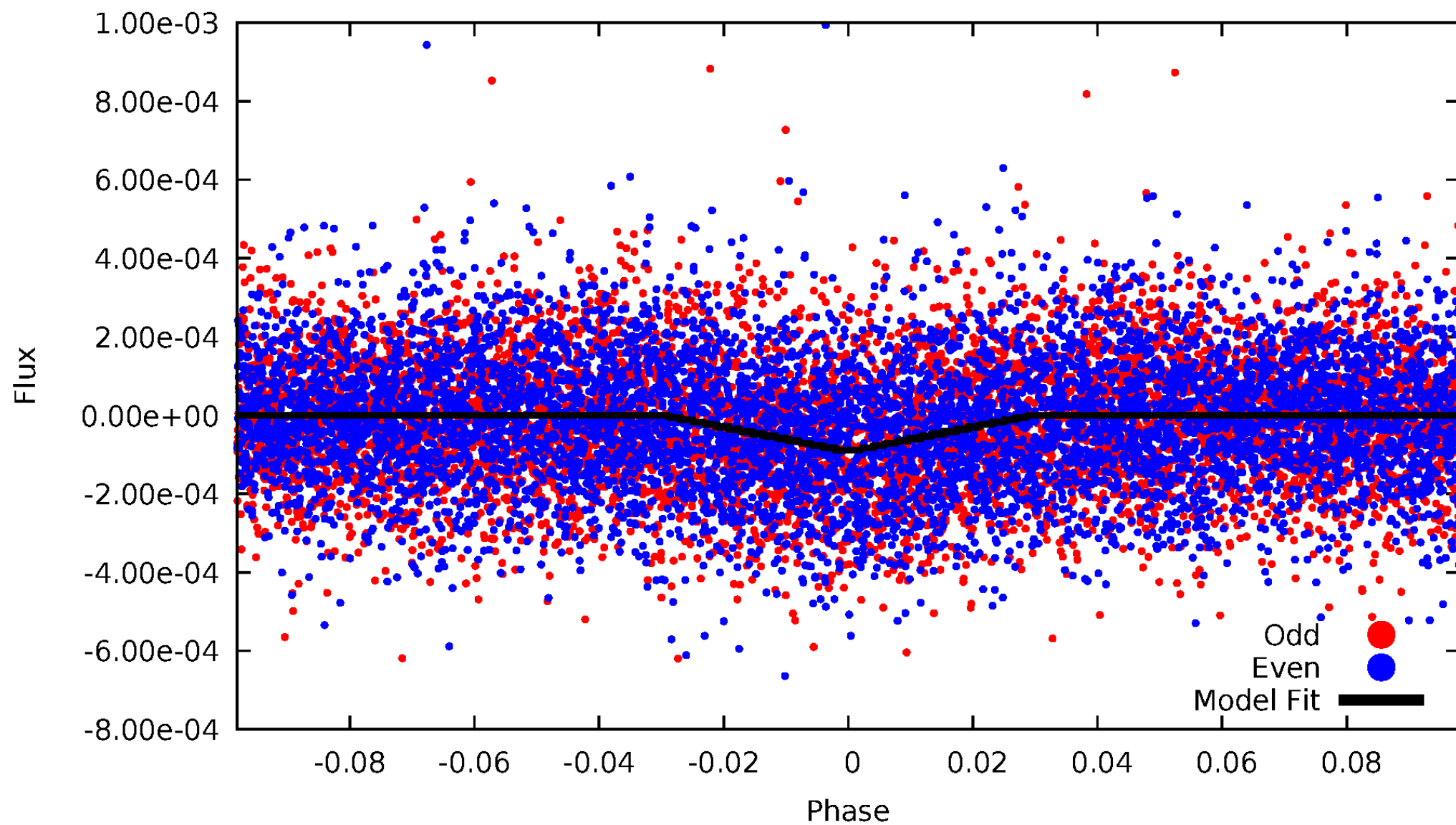
DV Odd/Even

TCE 006974658-01



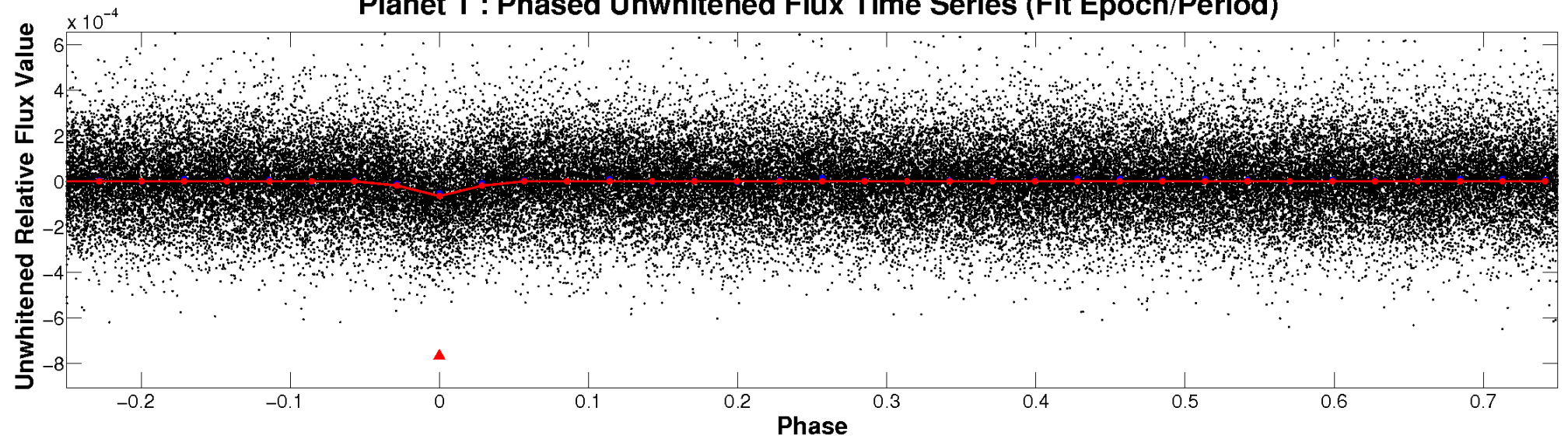
ALT Odd/Even

TCE 006974658-01

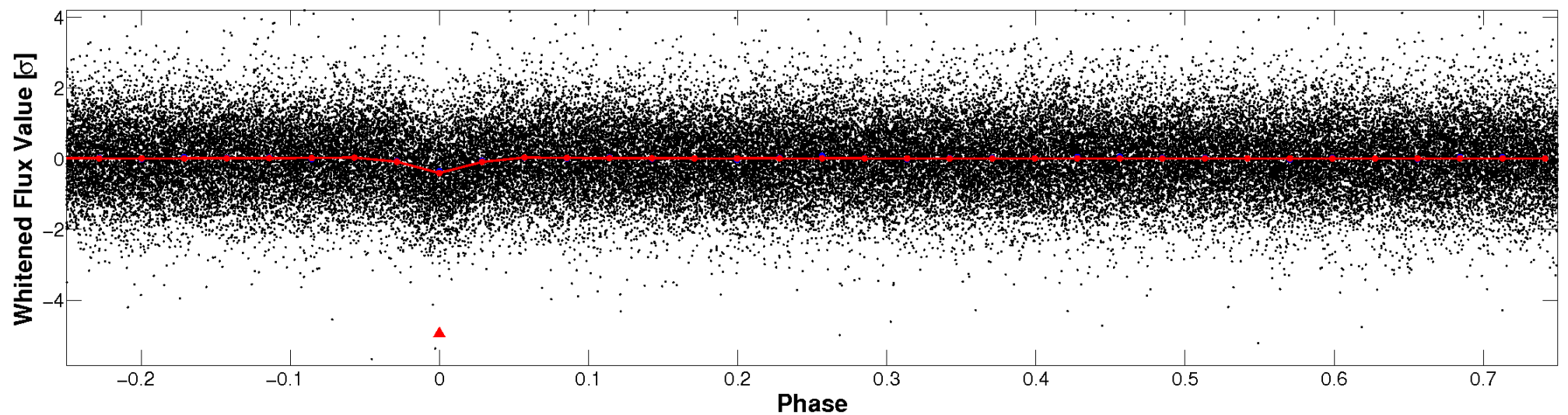


Non-Whitened Vs. Whitened Light Curve

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

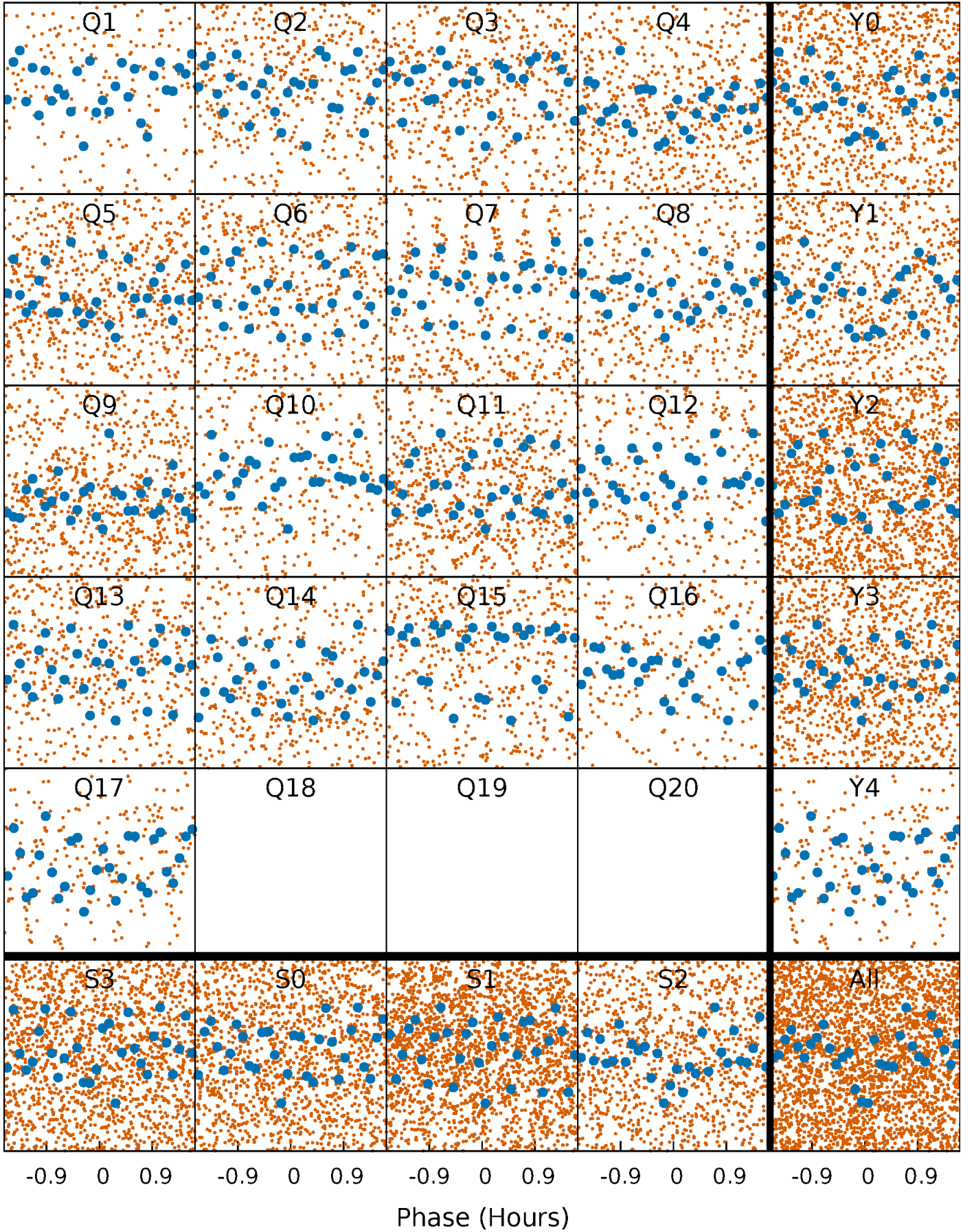


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



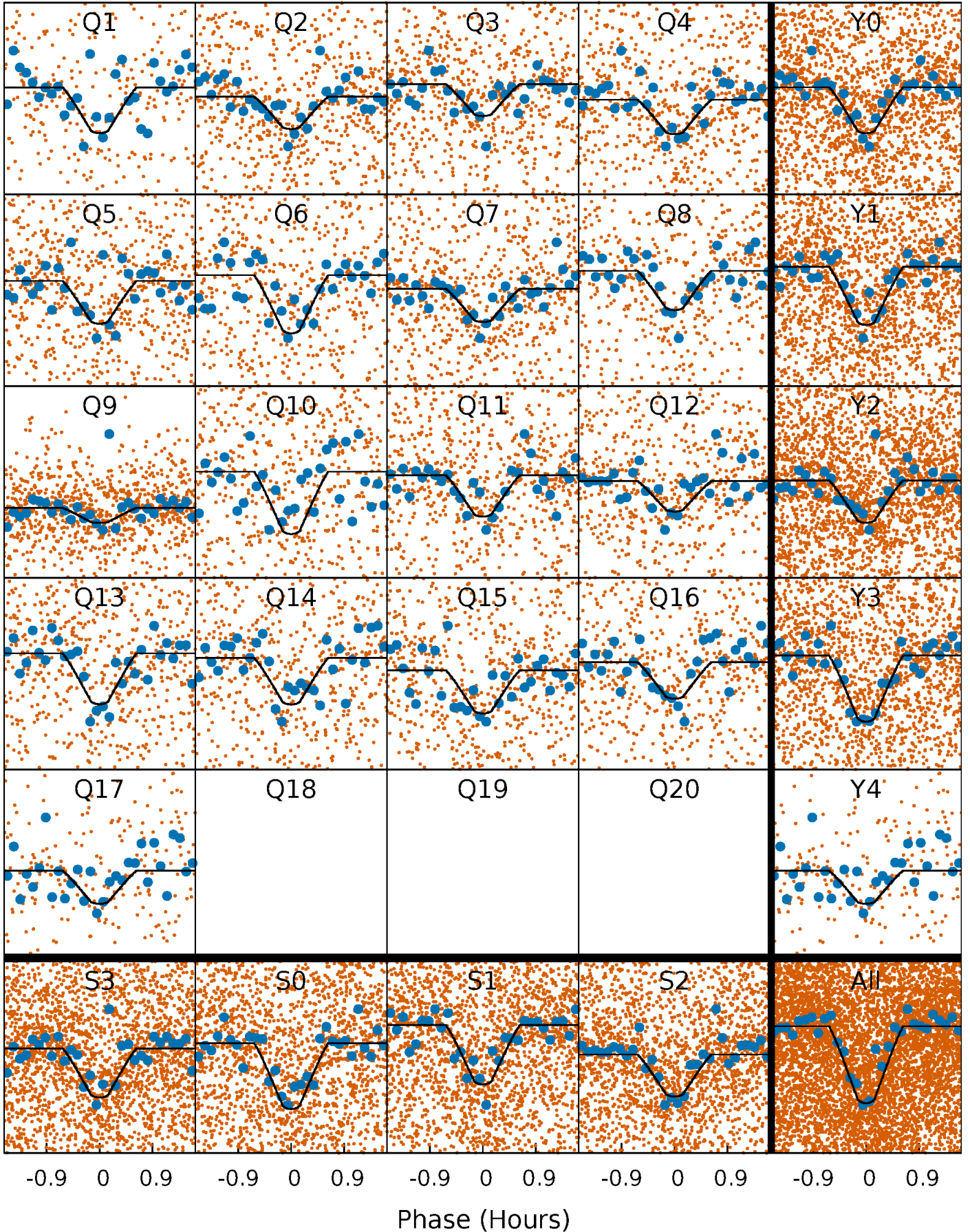
PDC Quarter-Phased Transit Curves

TCE 006974658-01 P= 0.716533 Days $T_0=131.721348$ (BKJD)



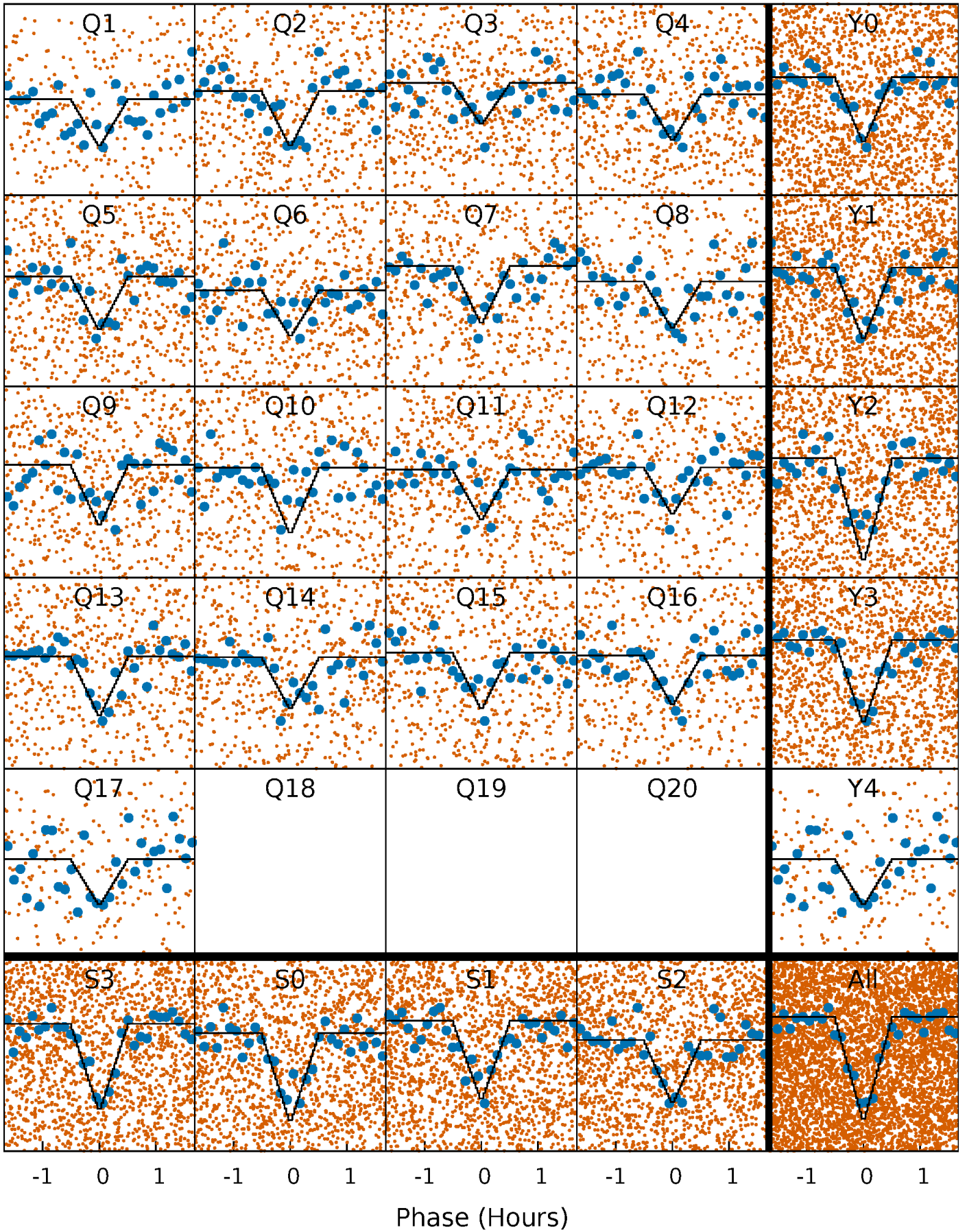
DV Quarter-Phased Transit Curves

TCE 006974658-01 P= 0.716533 Days $T_0=131.721348$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

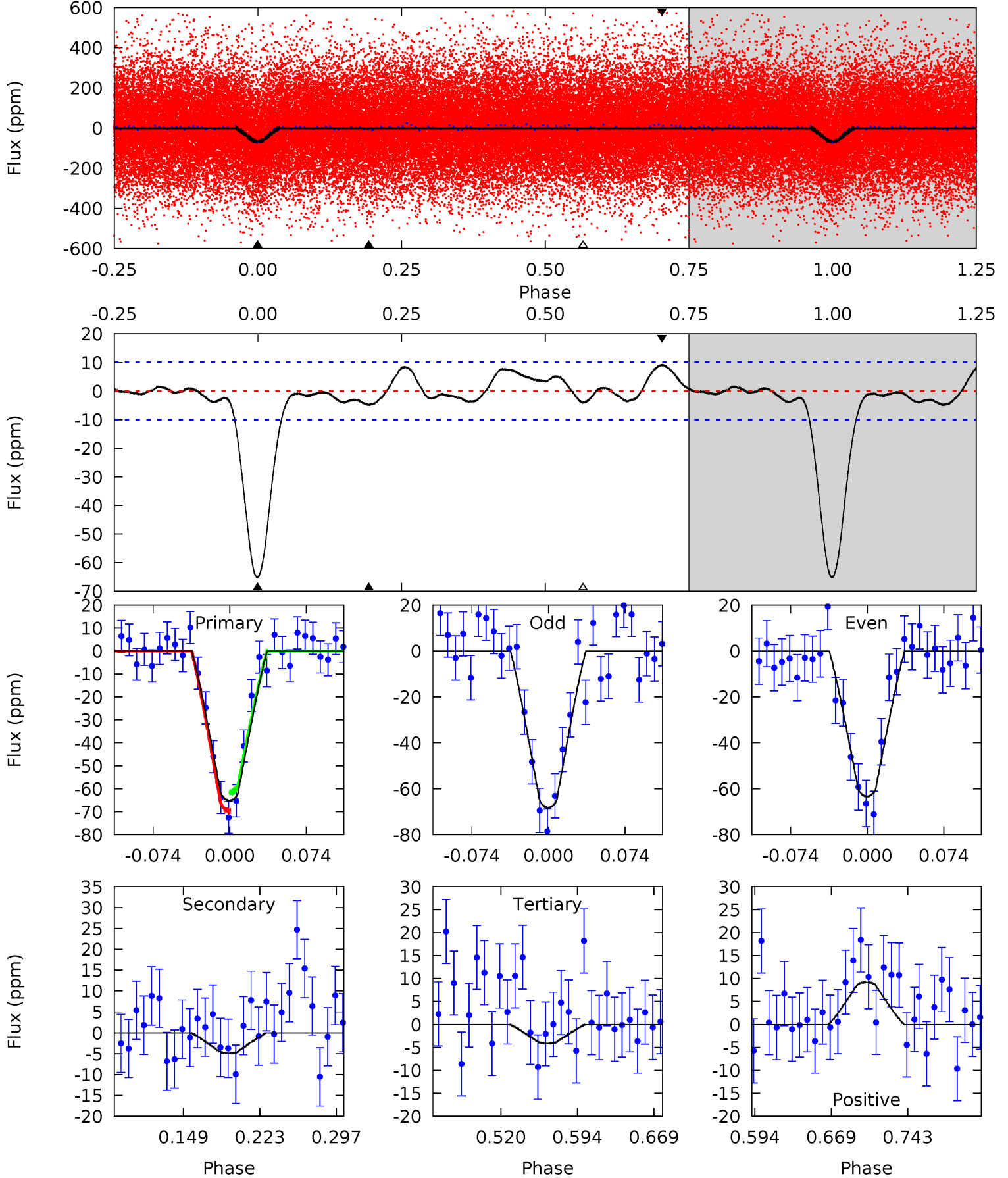
TCE 006974658-01 P= 0.716532 Days $T_0=131.721450$ (BKJD)



DV Model-Shift Uniqueness Test

006974658-01, P = 0.716533 Days, E = 131.004815 Days

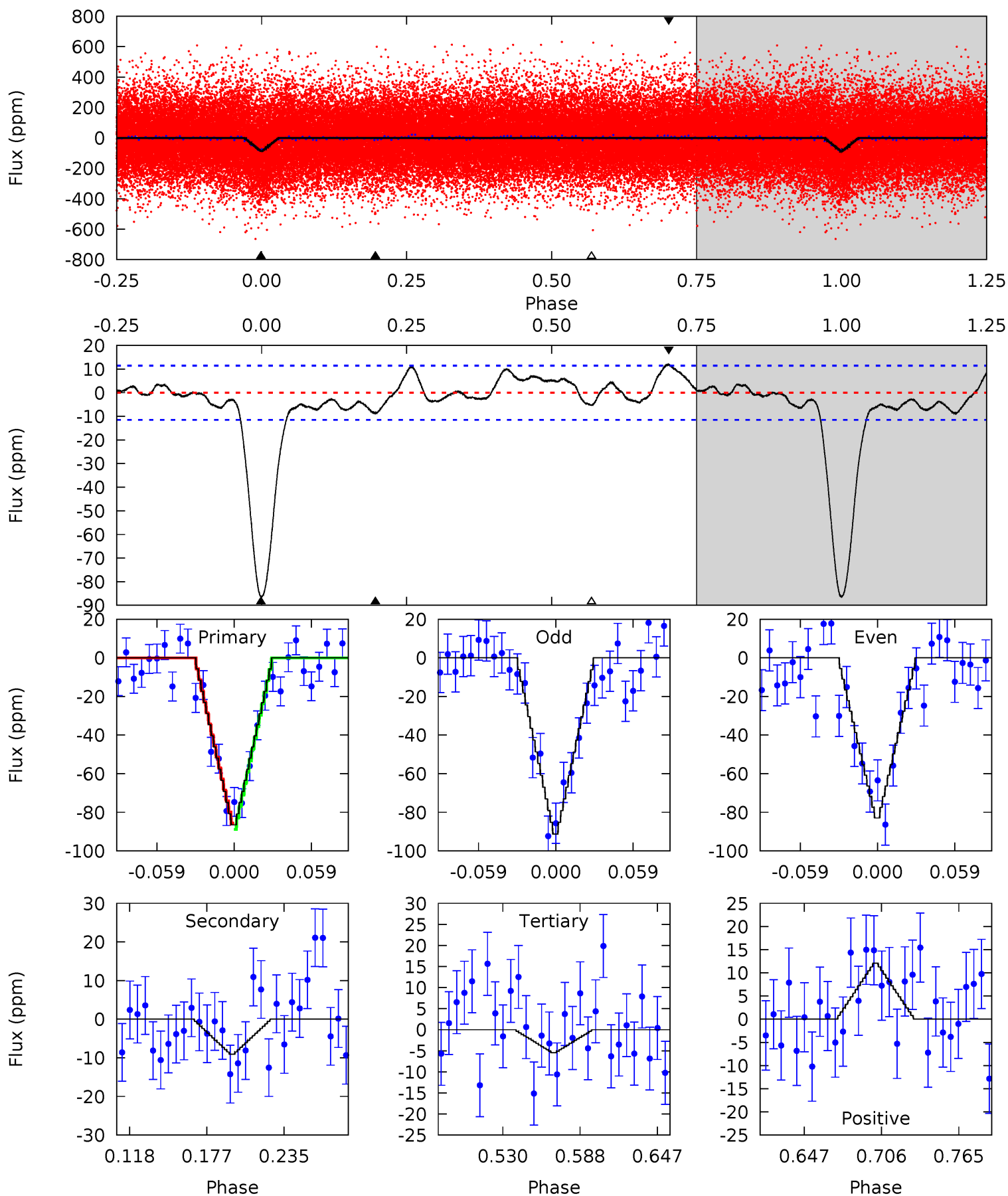
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	2.23	1.89	4.22	4.63	1.78	1.57	28.0	25.7	0.35	-1.98	1.13	0.91	0.12	1.84



Alt Model-Shift Uniqueness Test

006974658-01, P = 0.716532 Days, E = 131.004918 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.3	3.71	2.23	4.92	4.67	1.89	1.90	33.1	30.4	1.48	-1.21	1.71	1.00	0.12	0.68



Stellar Parameters For KIC 006974658

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5552^{+149}_{-149}	$4.349^{+0.180}_{-0.198}$	$-0.060^{+0.300}_{-0.250}$	$1.030^{+0.304}_{-0.187}$	$0.863^{+0.122}_{-0.071}$	$1.114^{+0.899}_{-0.581}$
	+3%/-3%	+4%/-5%	+500%/-417%	+30%/-18%	+14%/-8%	+81%/-52%
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 006974658-01 / KOI 2925.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$1.06^{+0.27}_{-0.25}$	2843^{+246}_{-179}	2894^{+481}_{-5383}	$0.539^{+0.506}_{-0.307}$
Alt.	-9 ± 2	$1.08^{+0.28}_{-0.24}$	2856^{+226}_{-183}	3357^{+411}_{-414}	$0.950^{+0.705}_{-0.423}$

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

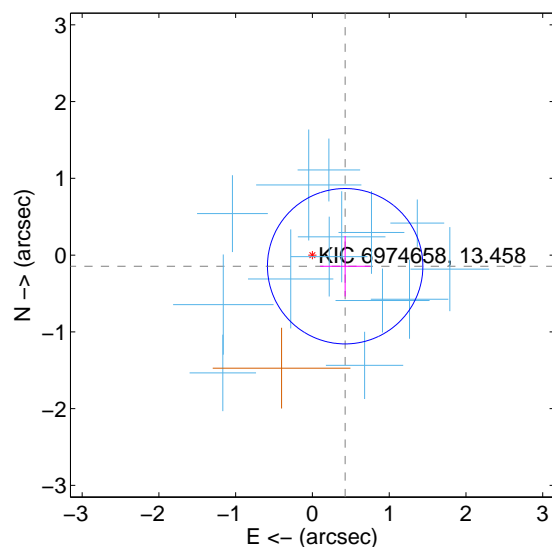
Supplemental centroid analysis for 006974658-01. Kepler magnitude: 13.46. Transit SNR 19.34

There are 14 quarters with good PRF difference image offsets

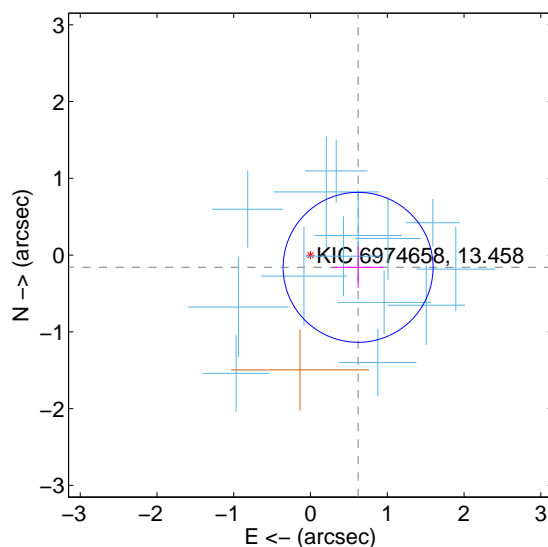
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.450 ± 0.337	1.33	-0.426 ± 0.326	-0.145 ± 0.395
PRF-fit source offset from KIC position	0.640 ± 0.326	1.97	-0.620 ± 0.329	-0.159 ± 0.268
photometric centroid source offset	0.71 ± 0.64	1.12	-0.13 ± 0.72	-0.70 ± 0.64

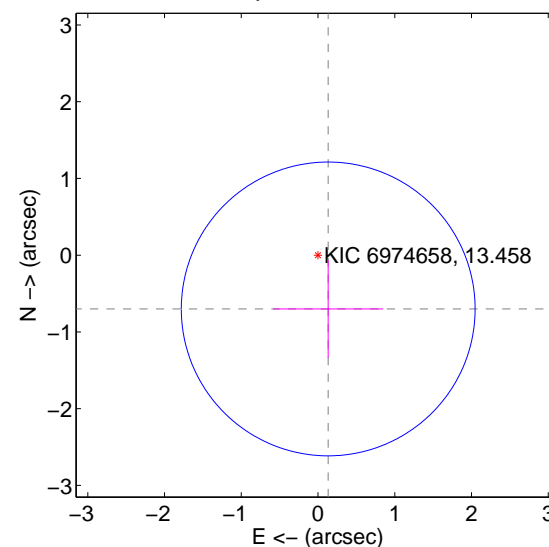
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

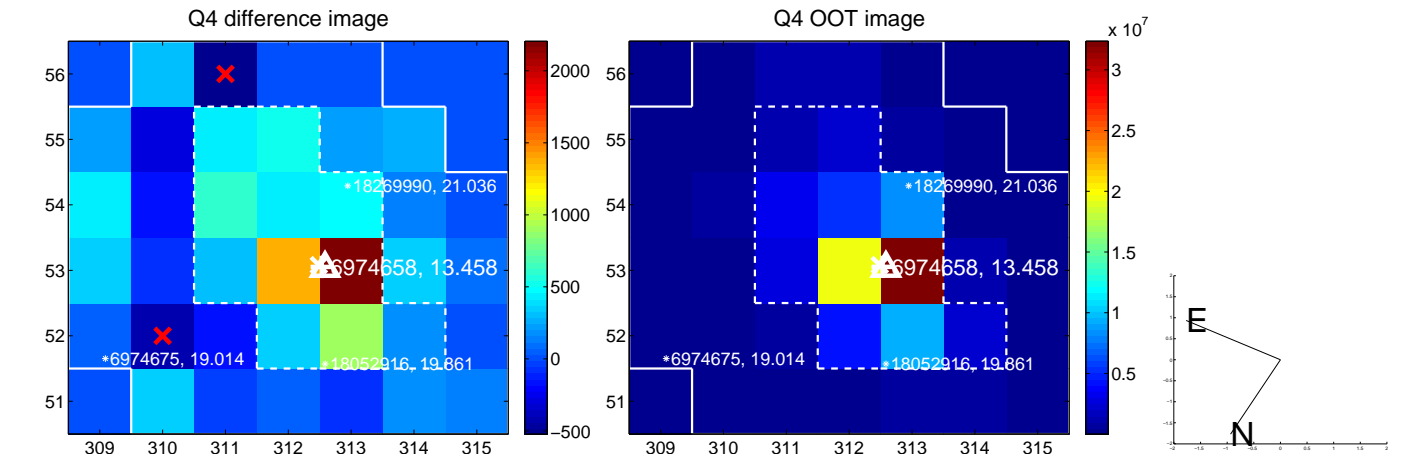
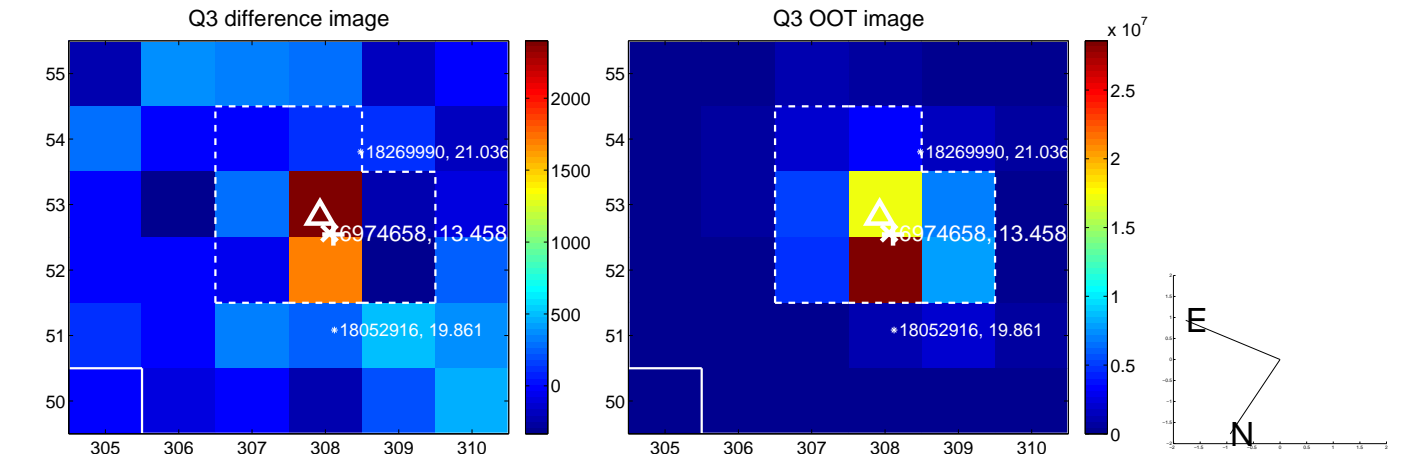
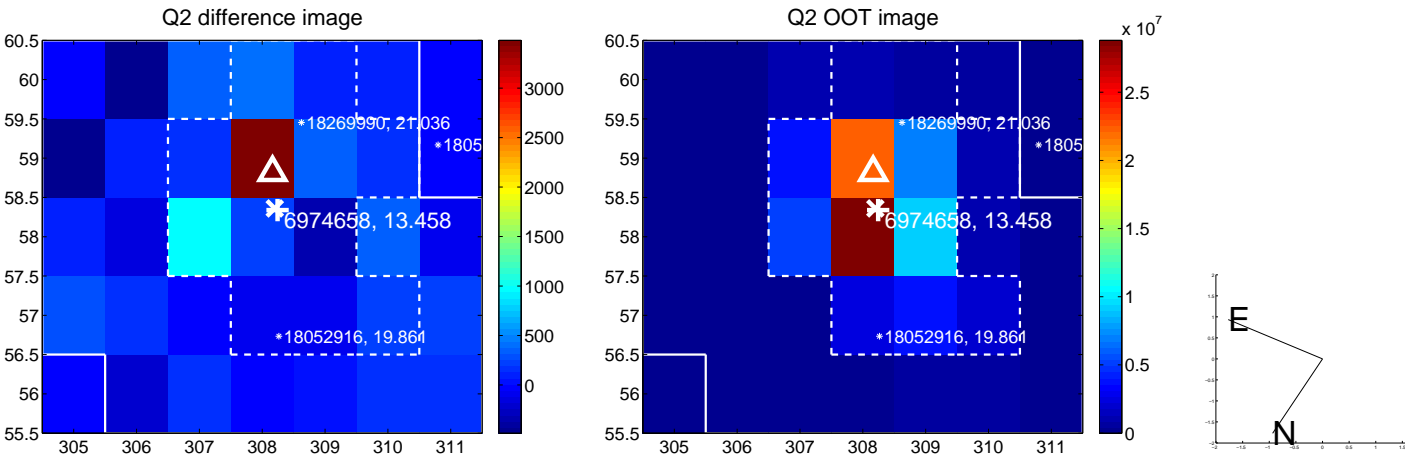
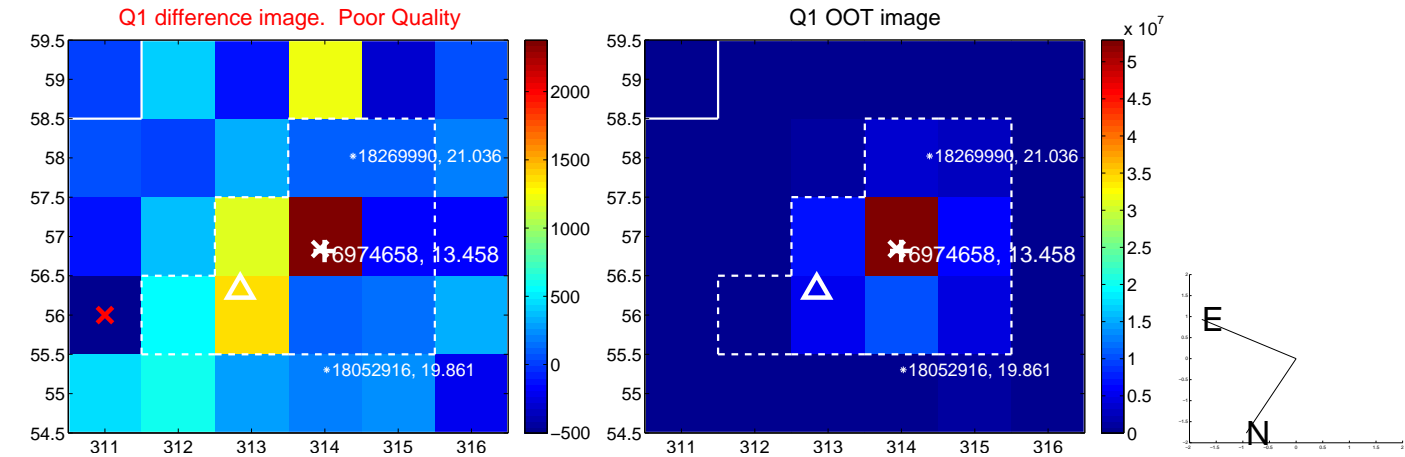


offset from photometric centroids

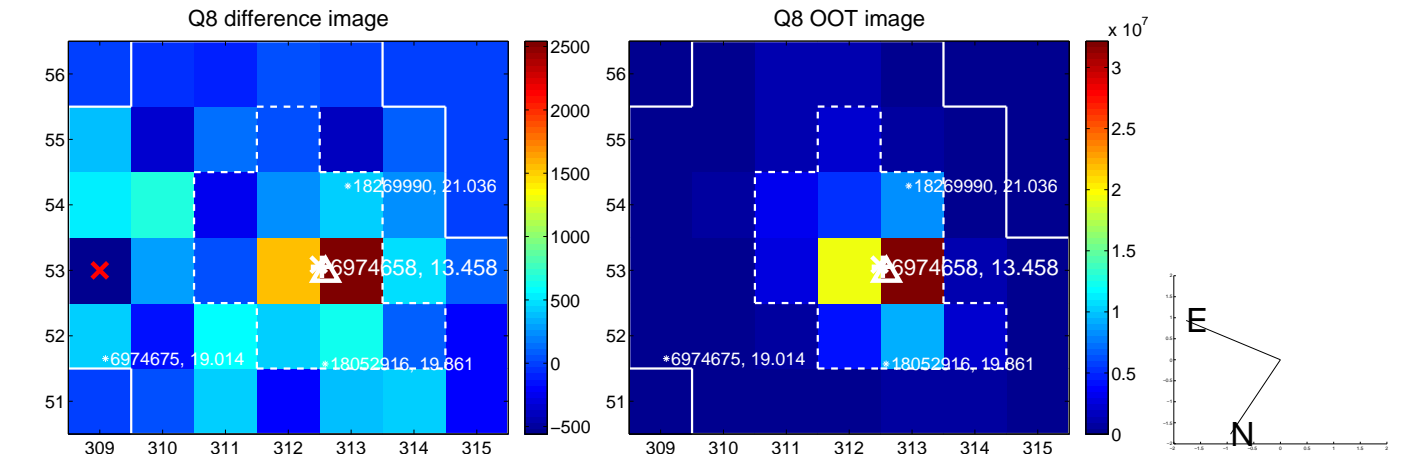
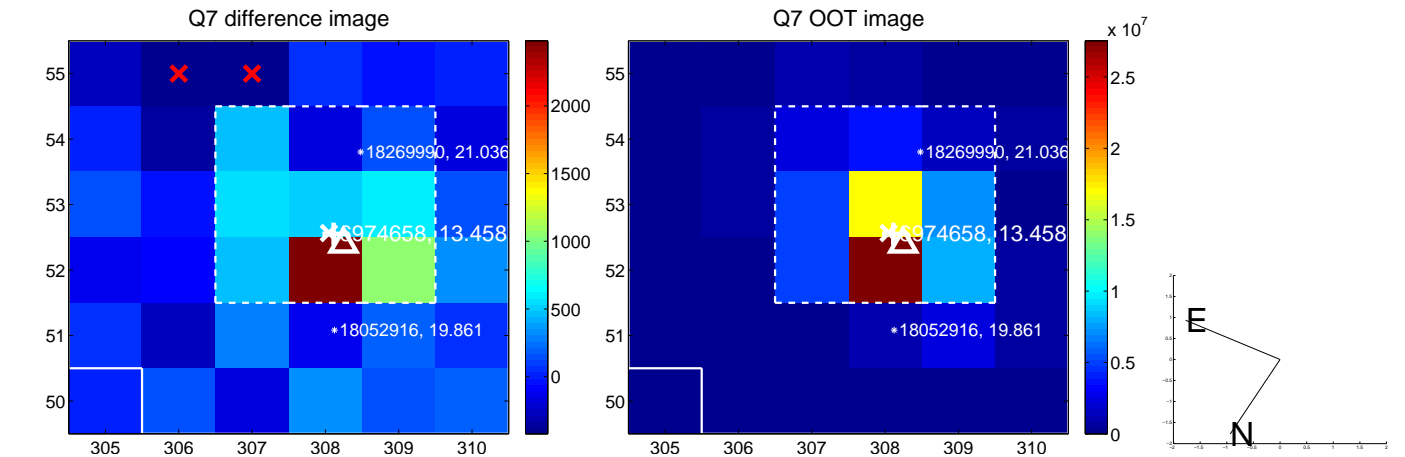
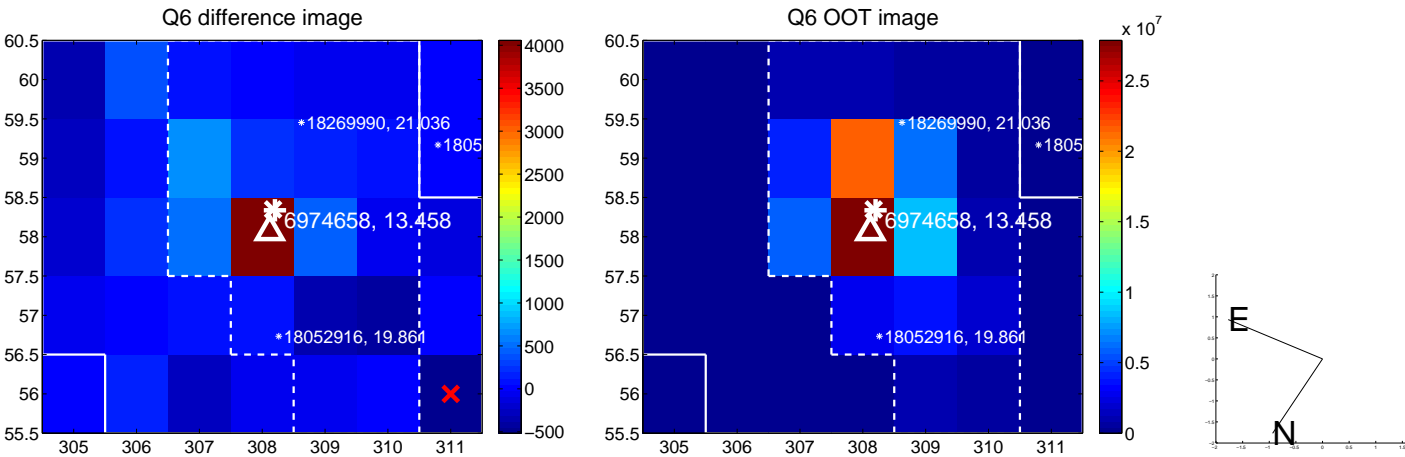
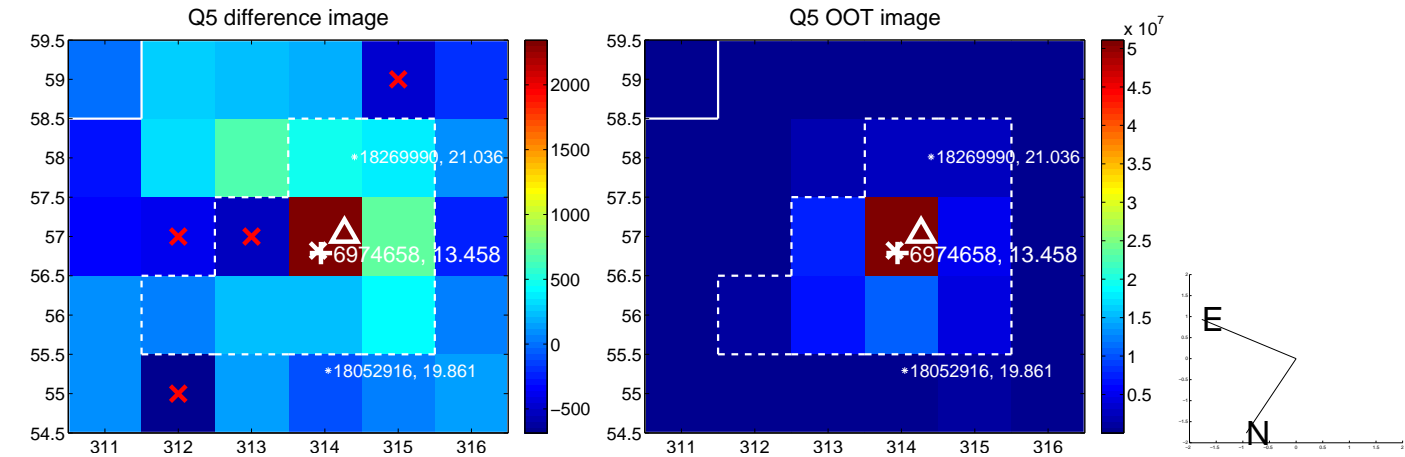


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

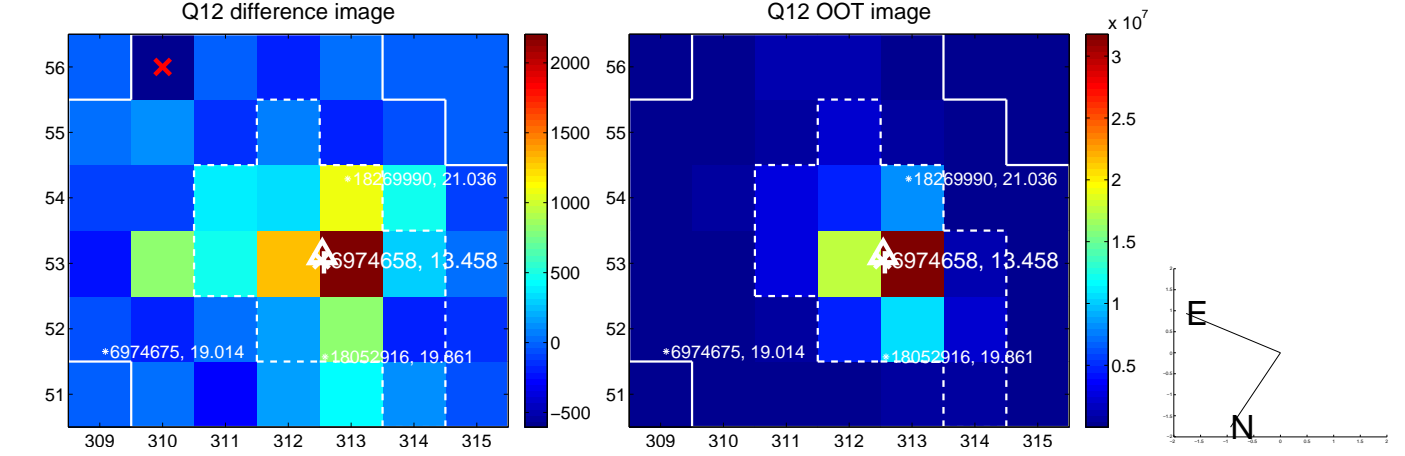
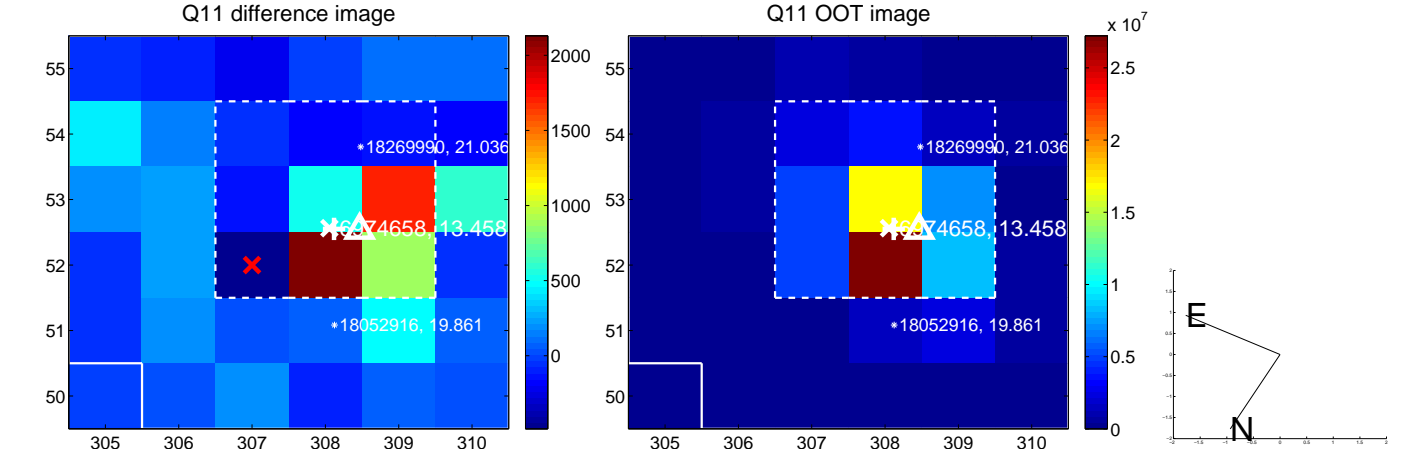
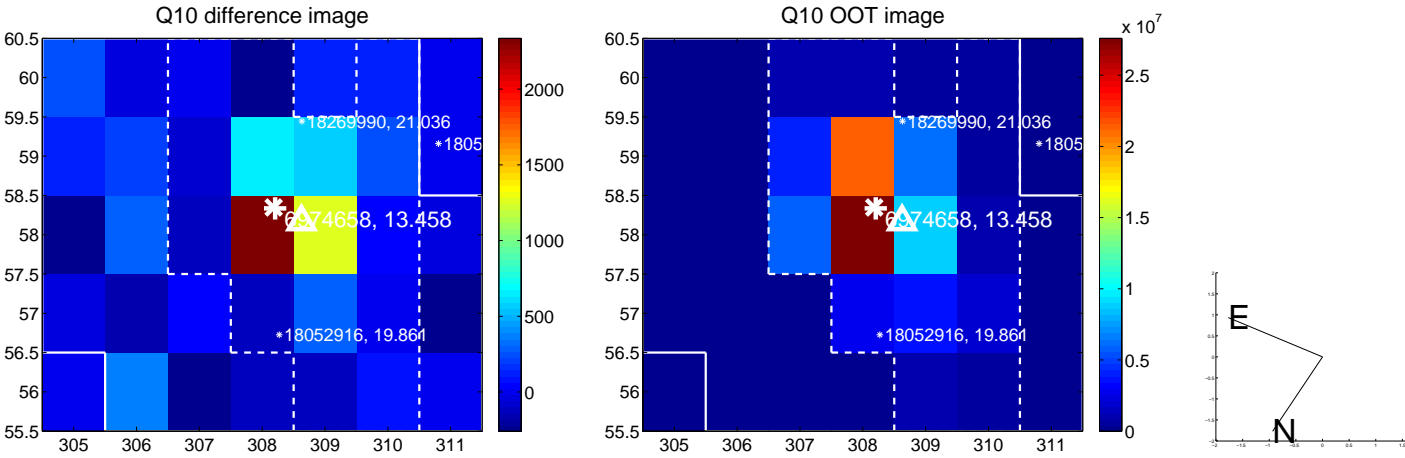
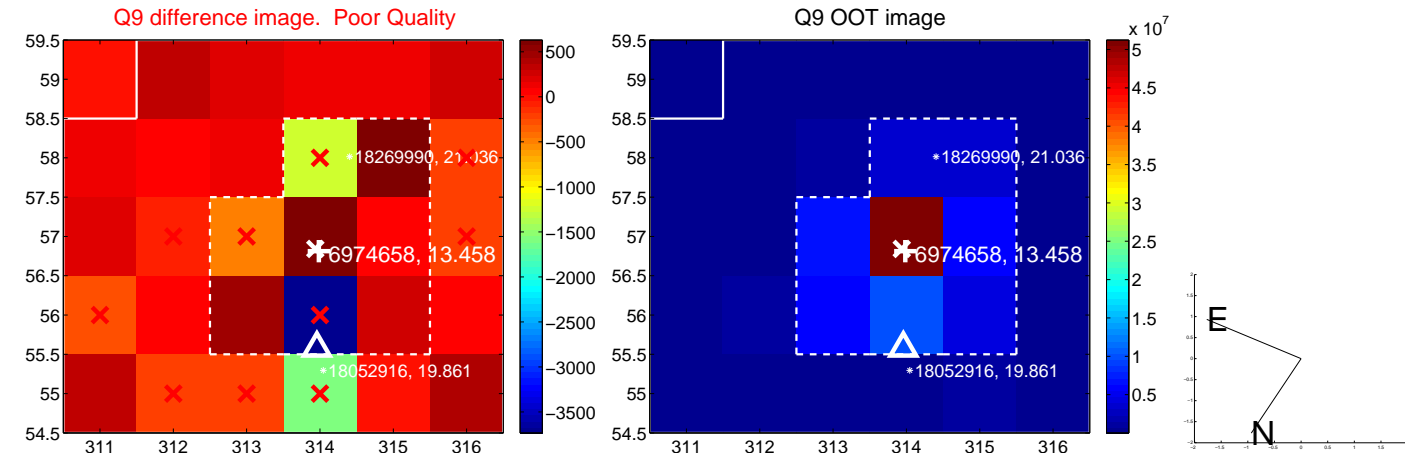
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



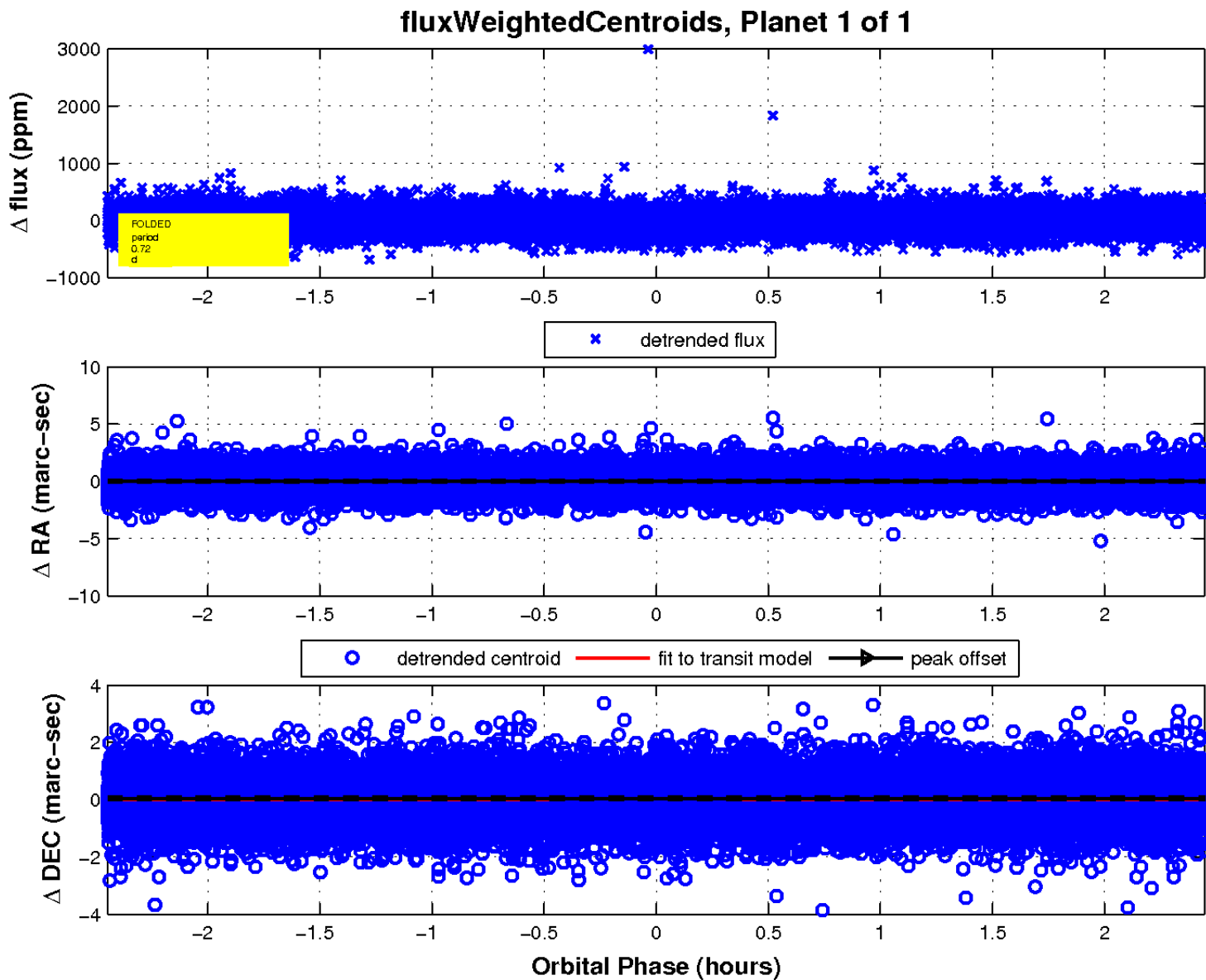
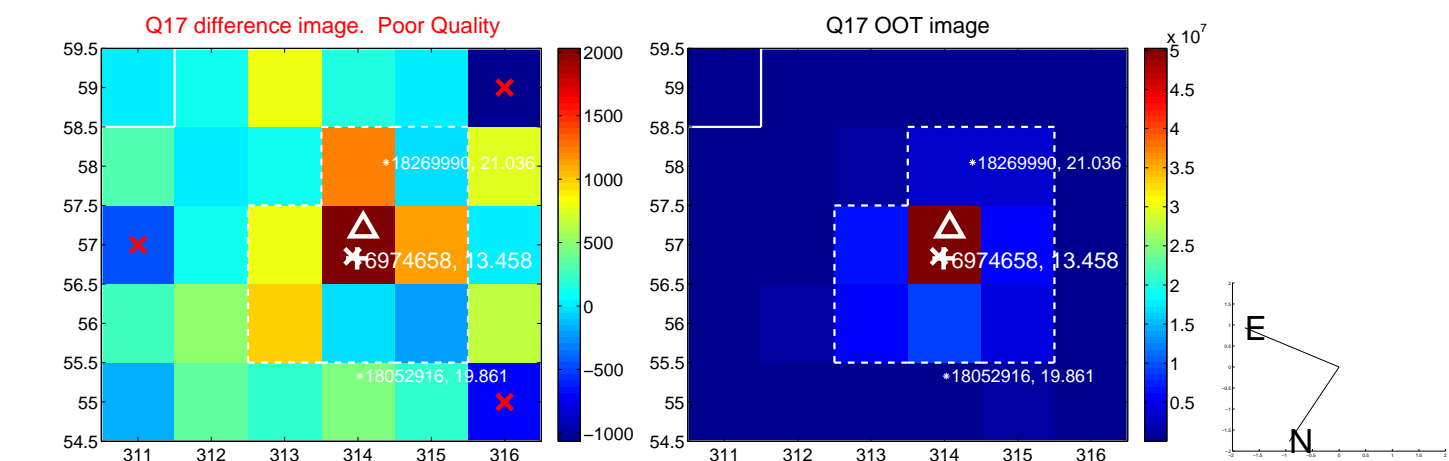
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

