

KIC 010905911

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})
010905911-01	OBS	2754.01	1.341550	132.740558	58.0	1.499	17.7	21.0	0.97	5779	0.74	1721.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010905911-01	OBS	PC	0.84	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.

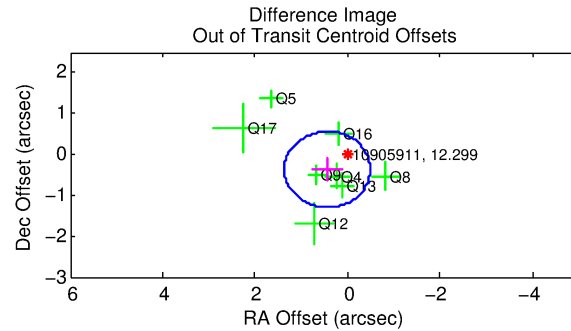
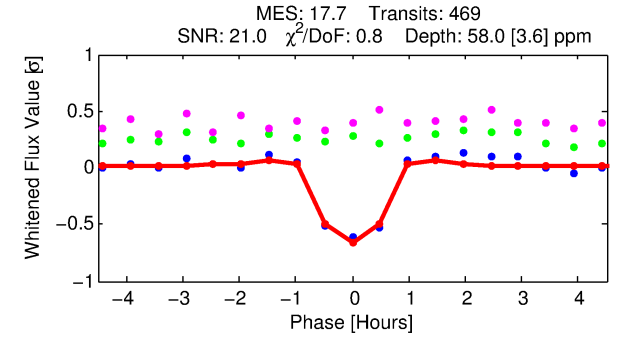
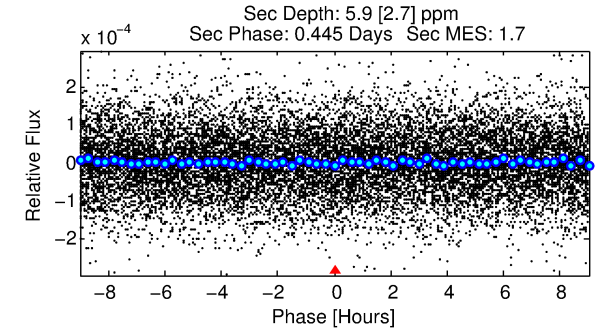
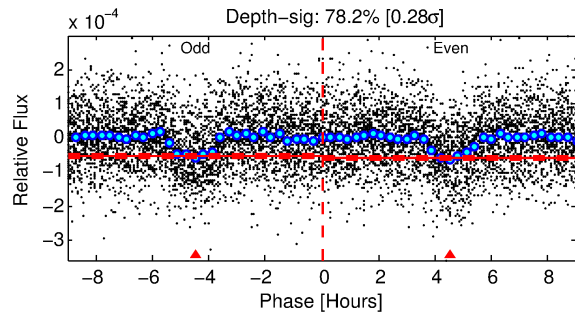
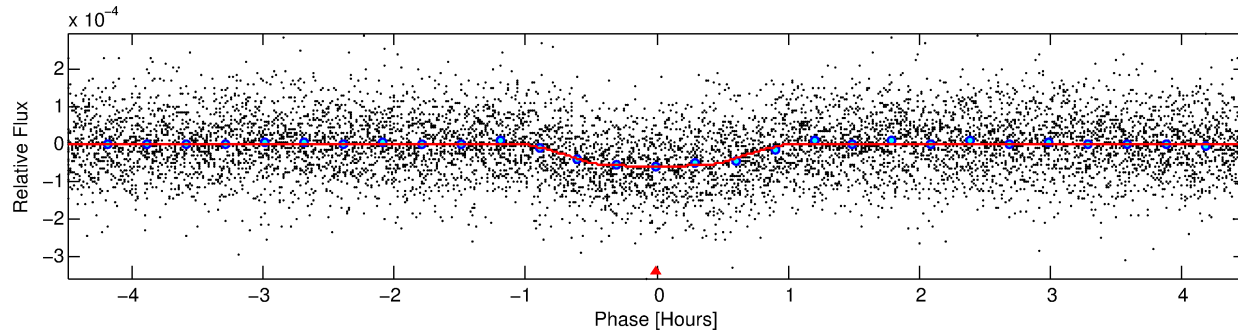
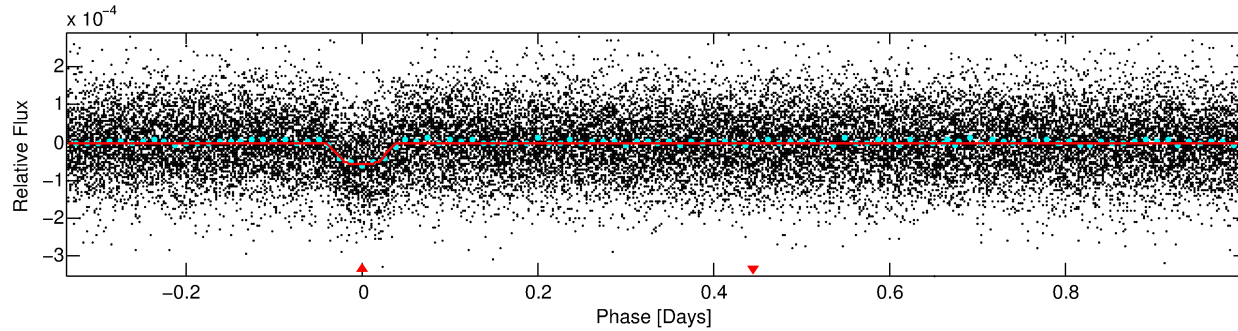
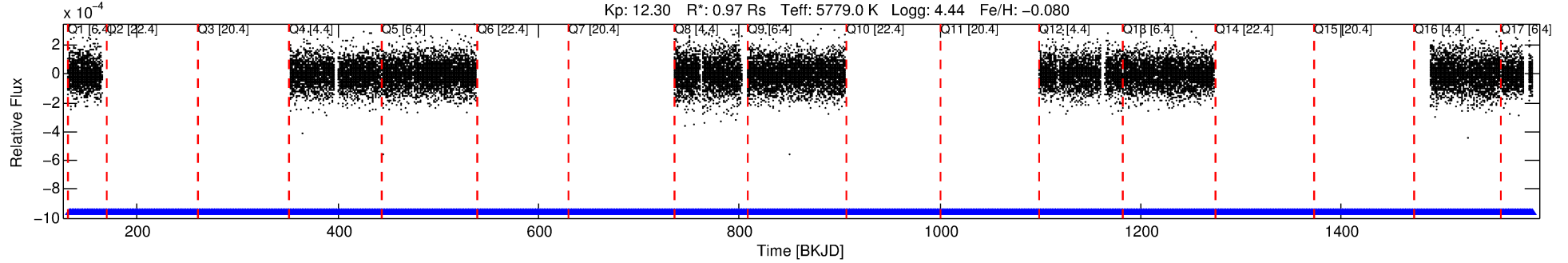
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010905911-01

No Significant Match Found

DV One-Page Summary

KIC: 10905911 Candidate: 1 of 1 Period: 1.342 d
KOI: K02754.01 Corr: 0.939



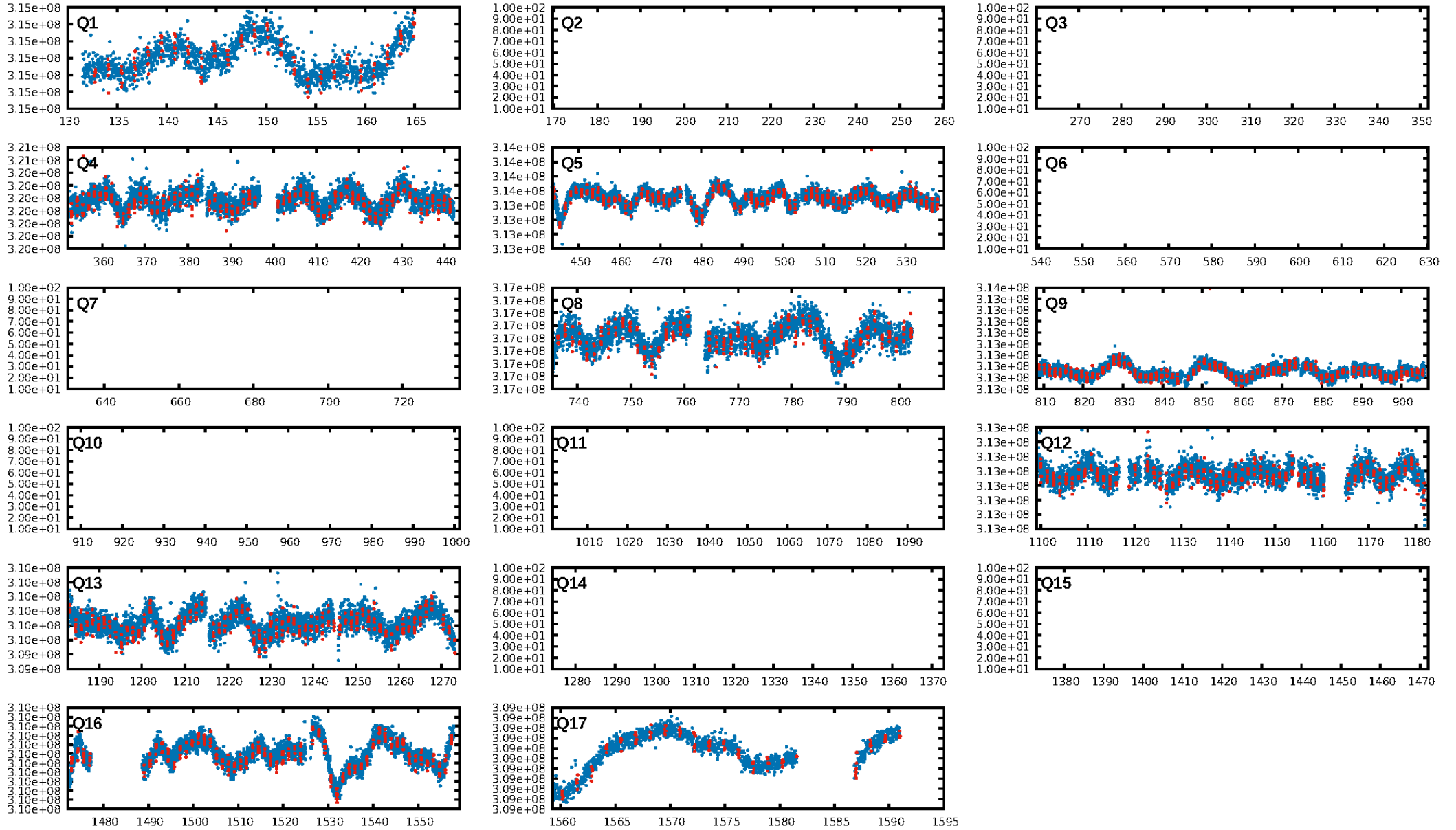
DV Fit Results:

Period = 1.34155 [0.00000] d
Epoch = 132.7406 [0.0010] BKJD
Rp/R* = 0.0070 [0.0034]
a/R* = 6.62 [13.81]
b = 0.29 [6.72]
Seff = 1721.91 [376.67]
Teq = 1643 [90] K
Rp = 0.74 [0.37] Re
a = 0.0234 [0.0031] AU
Ag = 3.23 [3.50] [0.64 σ]
Teffp = 3406 [908] K [1.93 σ]

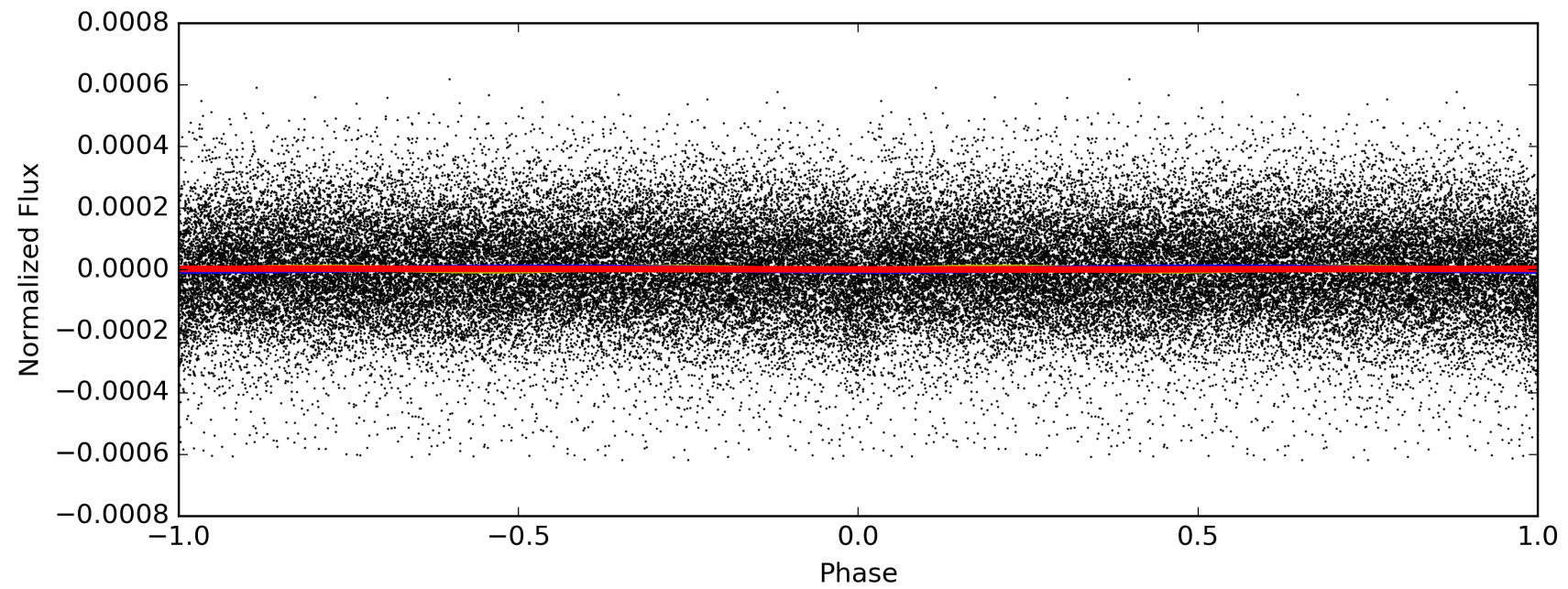
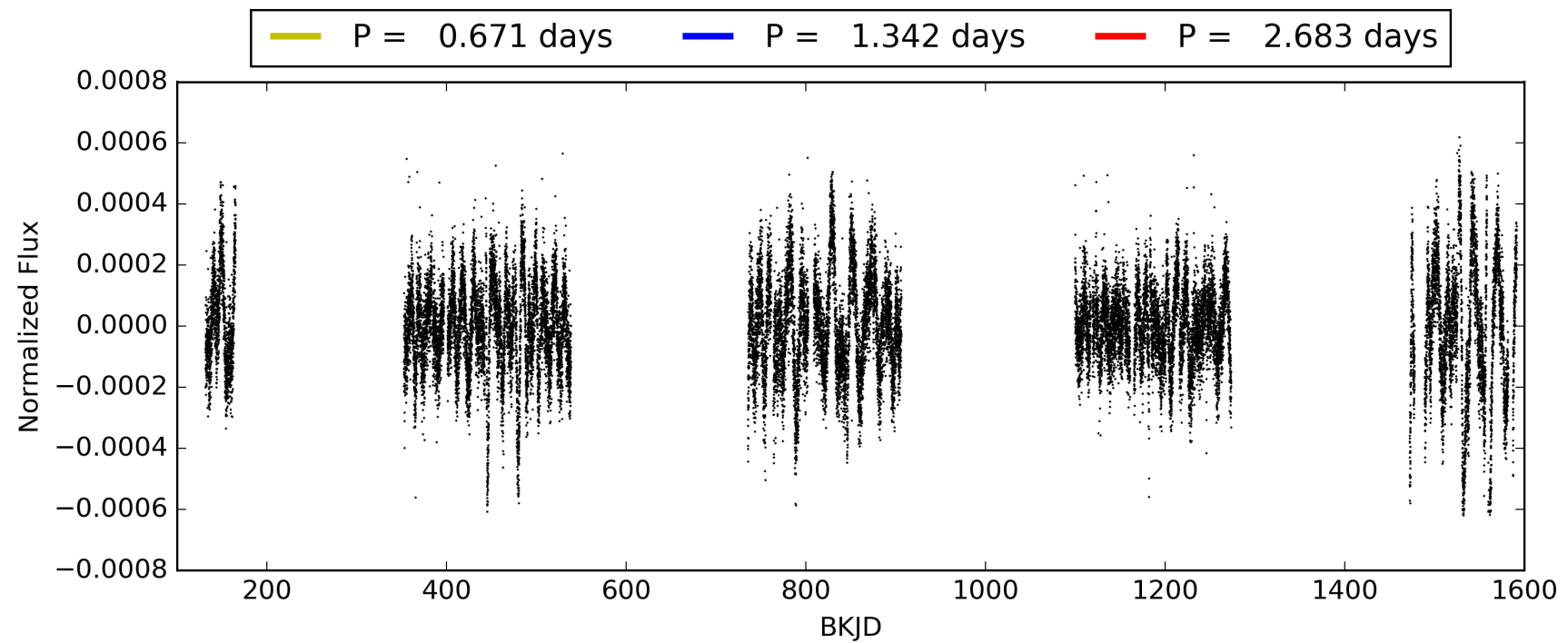
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.26e-64
RollingBand-fgt: 1.00 [423/423]
GhostDiagnostic-chr: -6.881
Centroid-sig: 0.9%
Centroid-so: 1.693 arcsec [2.82 σ]
OotOffset-rm: 0.577 arcsec [1.86 σ]
KicOffset-rm: 0.430 arcsec [1.28 σ]
OotOffset-st: 0/0/4/4 [8]
KicOffset-st: 0/0/4/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 010905911-01, PDC Light Curves

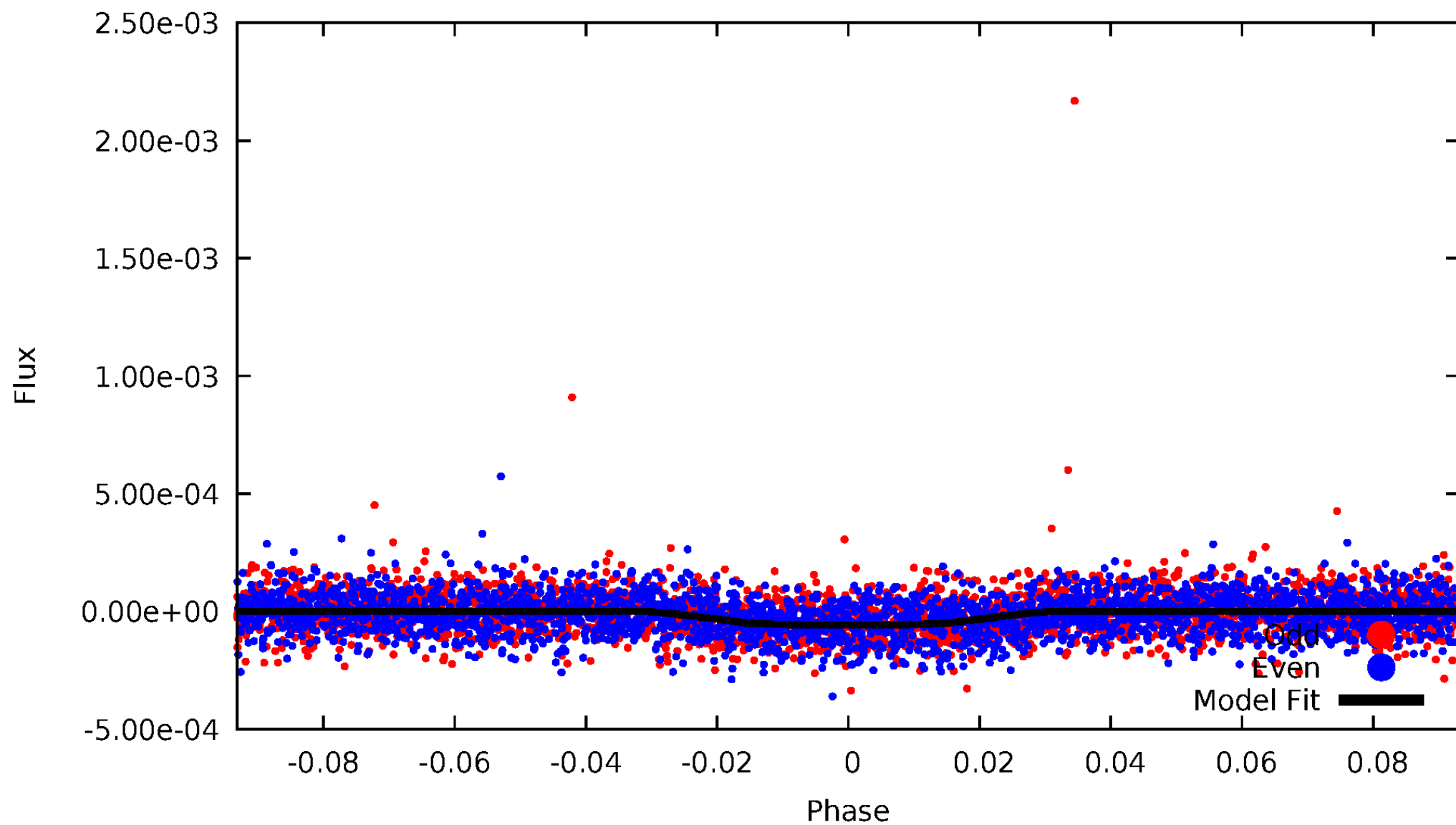


TCE 010905911-01



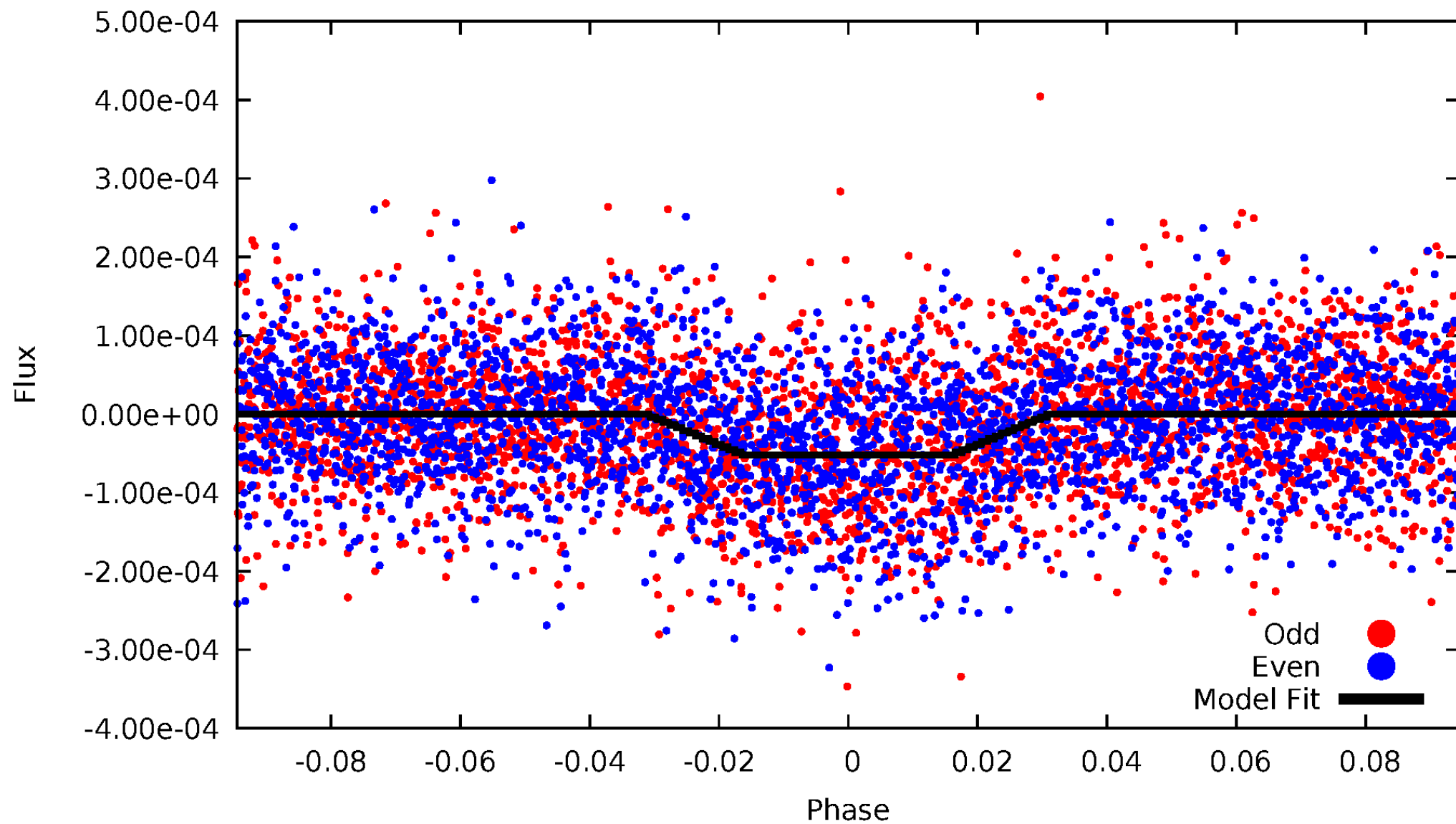
DV Odd/Even

TCE 010905911-01



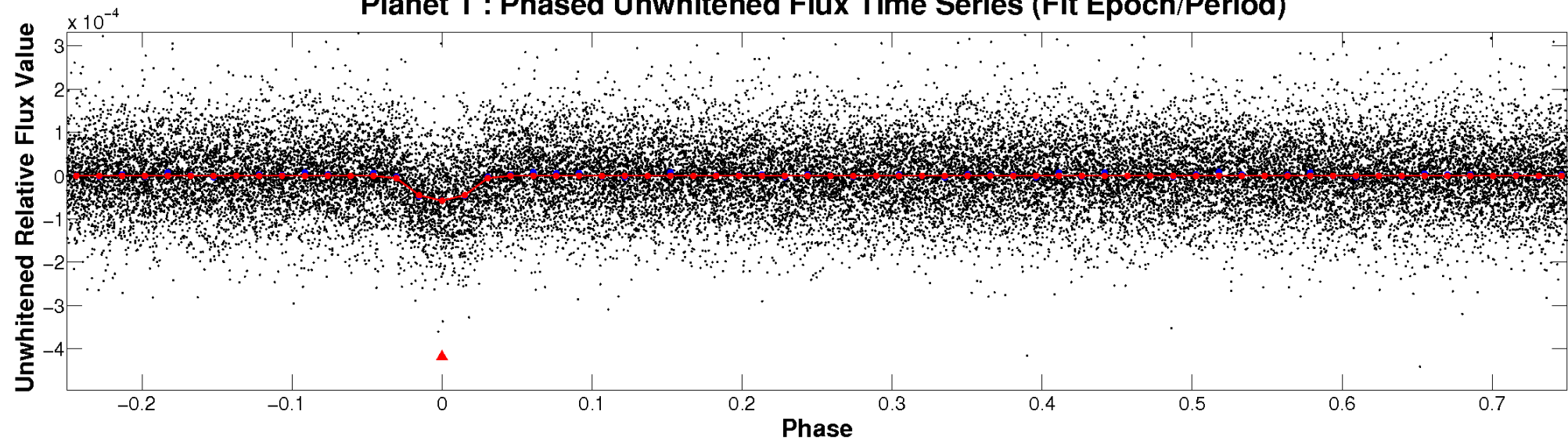
ALT Odd/Even

TCE 010905911-01

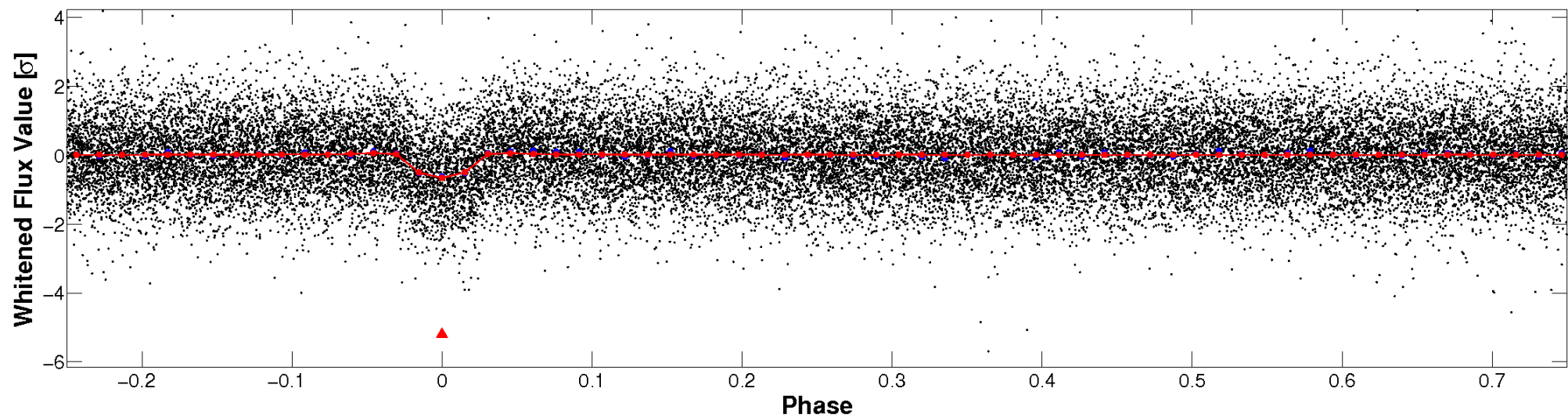


Non-Whitened Vs. Whitened Light Curve

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

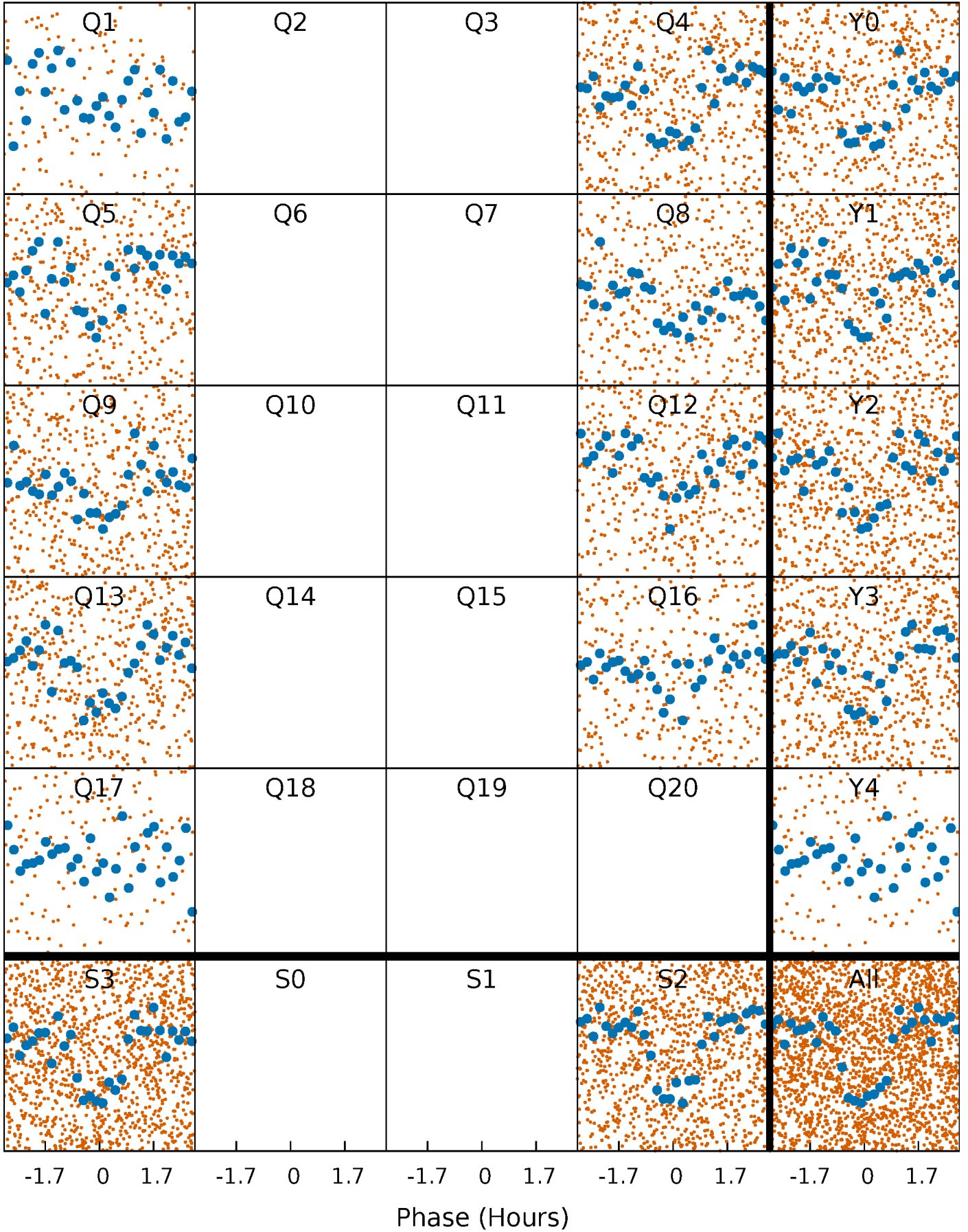


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



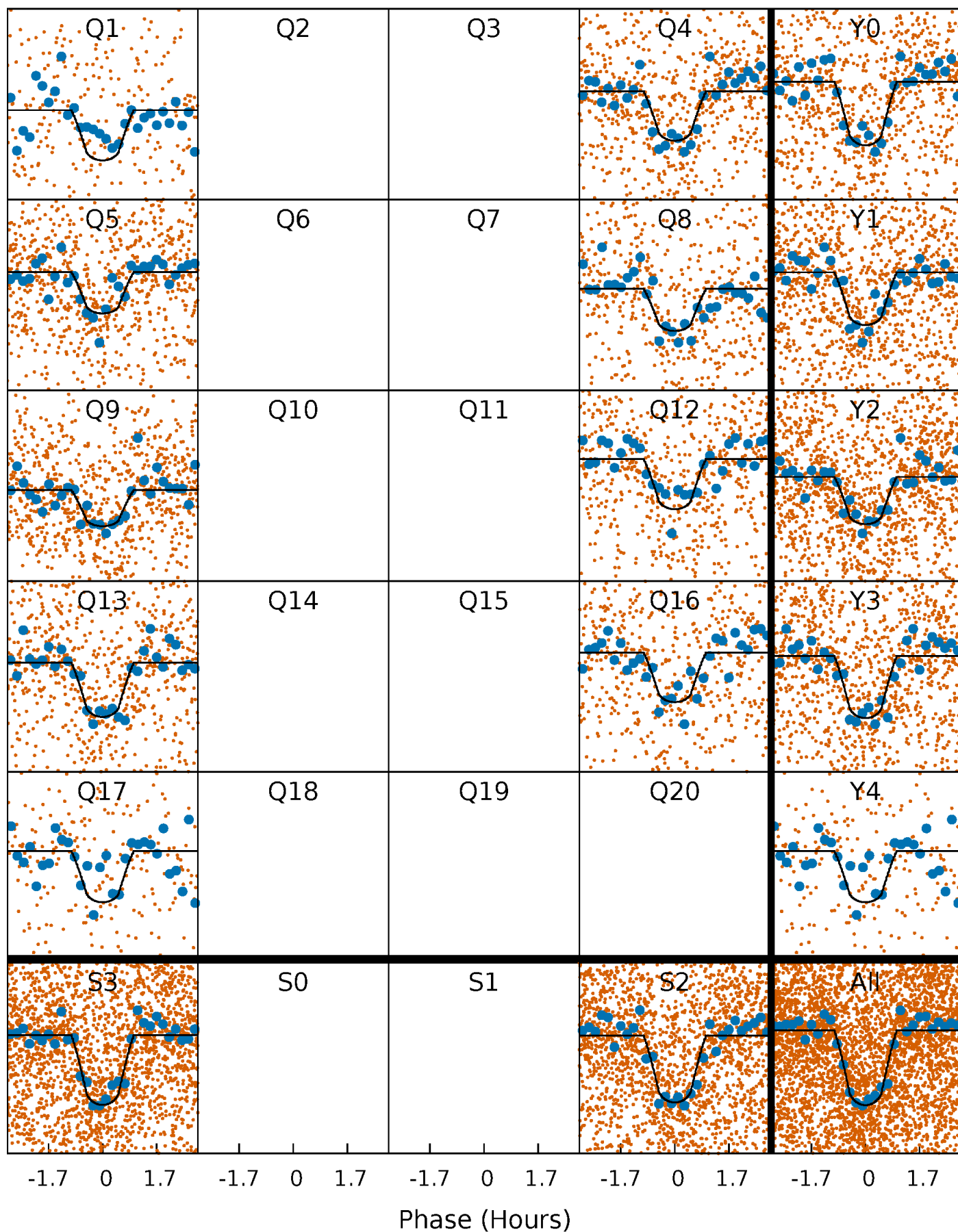
PDC Quarter-Phased Transit Curves

TCE 010905911-01 P= 1.341550 Days $T_0=132.740558$ (BKJD)



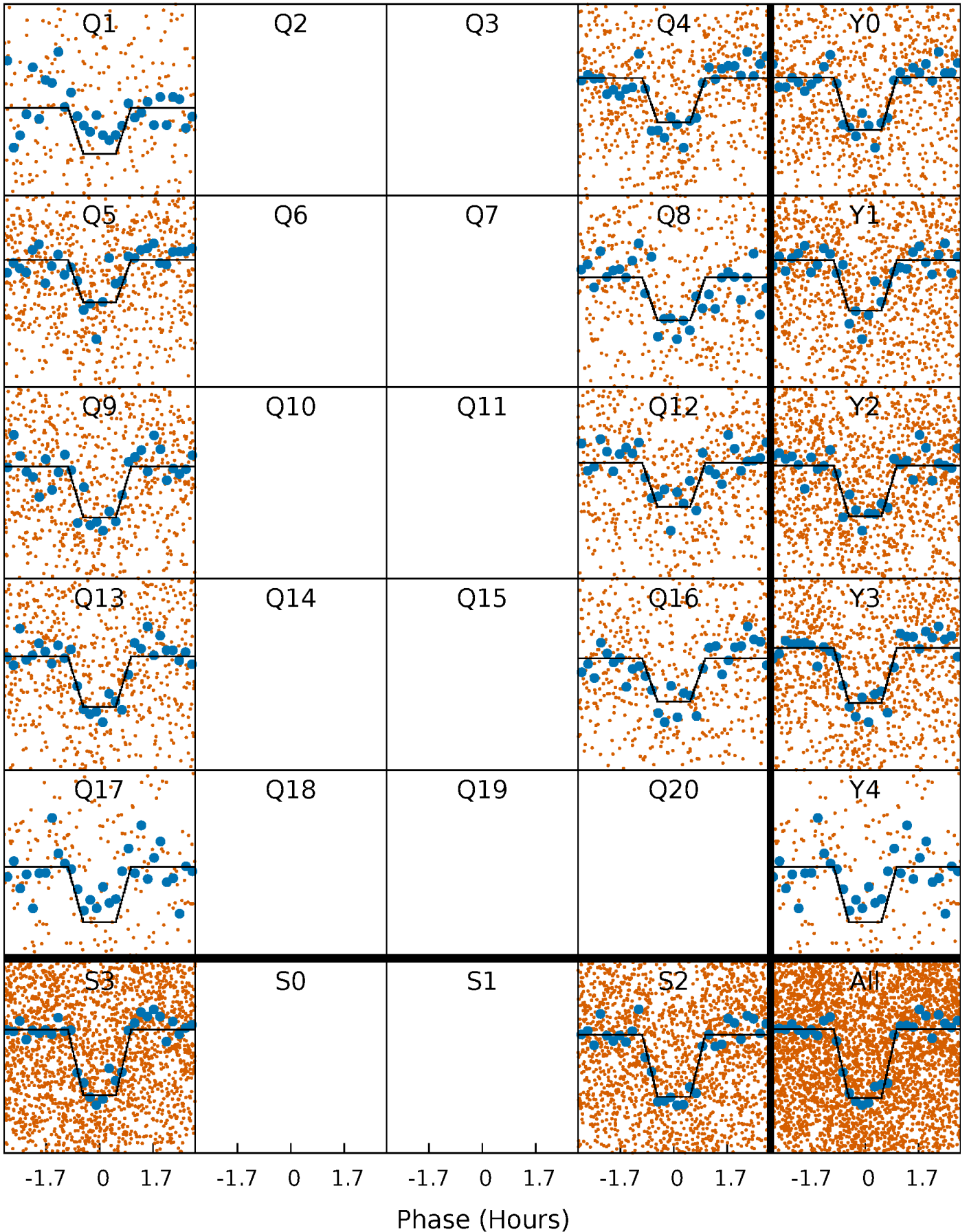
DV Quarter-Phased Transit Curves

TCE 010905911-01 P= 1.341550 Days $T_0=132.740558$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

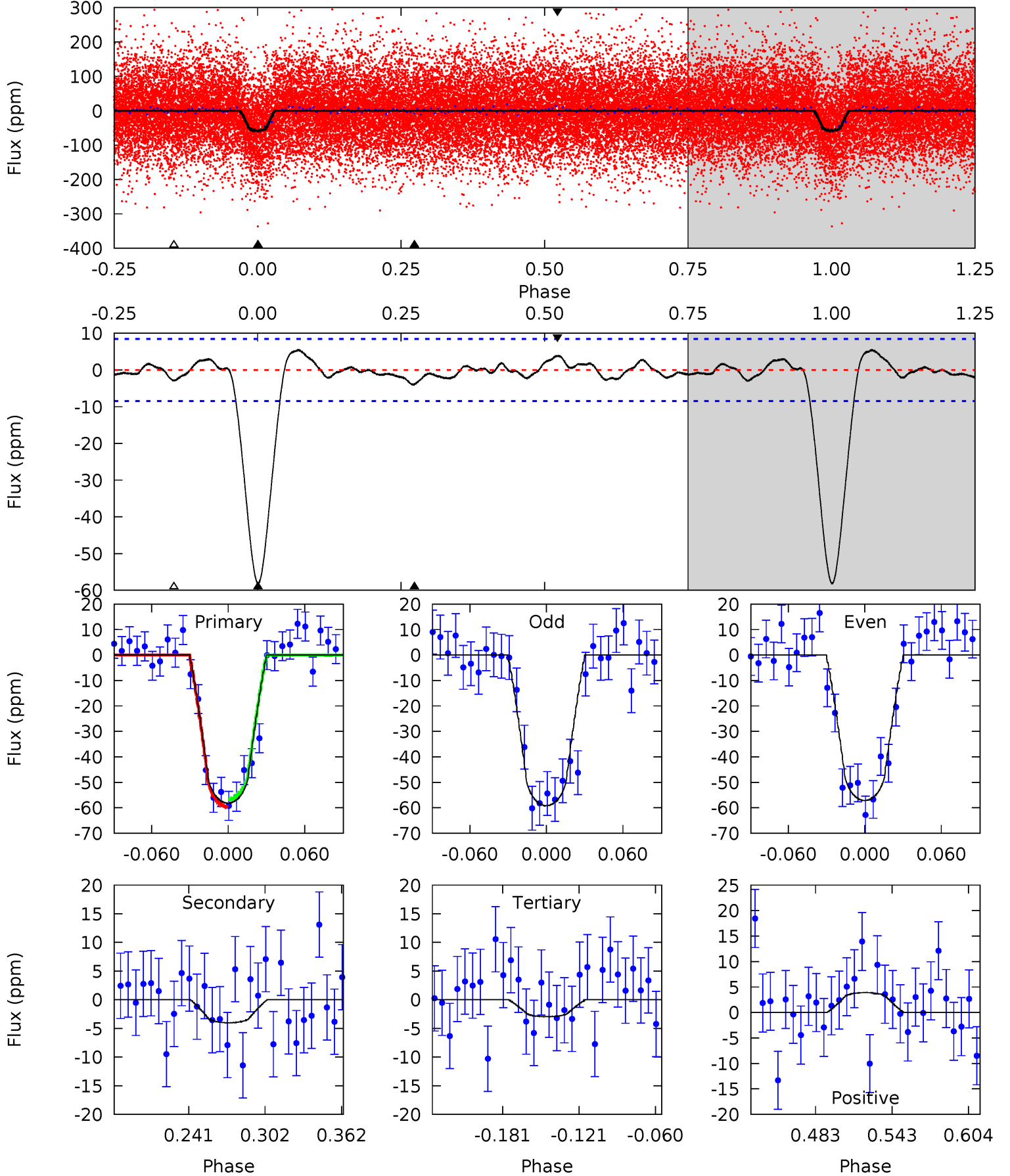
TCE 010905911-01 P= 1.341553 Days $T_0=132.739668$ (BKJD)



DV Model-Shift Uniqueness Test

010905911-01, P = 1.341550 Days, E = 131.399008 Days

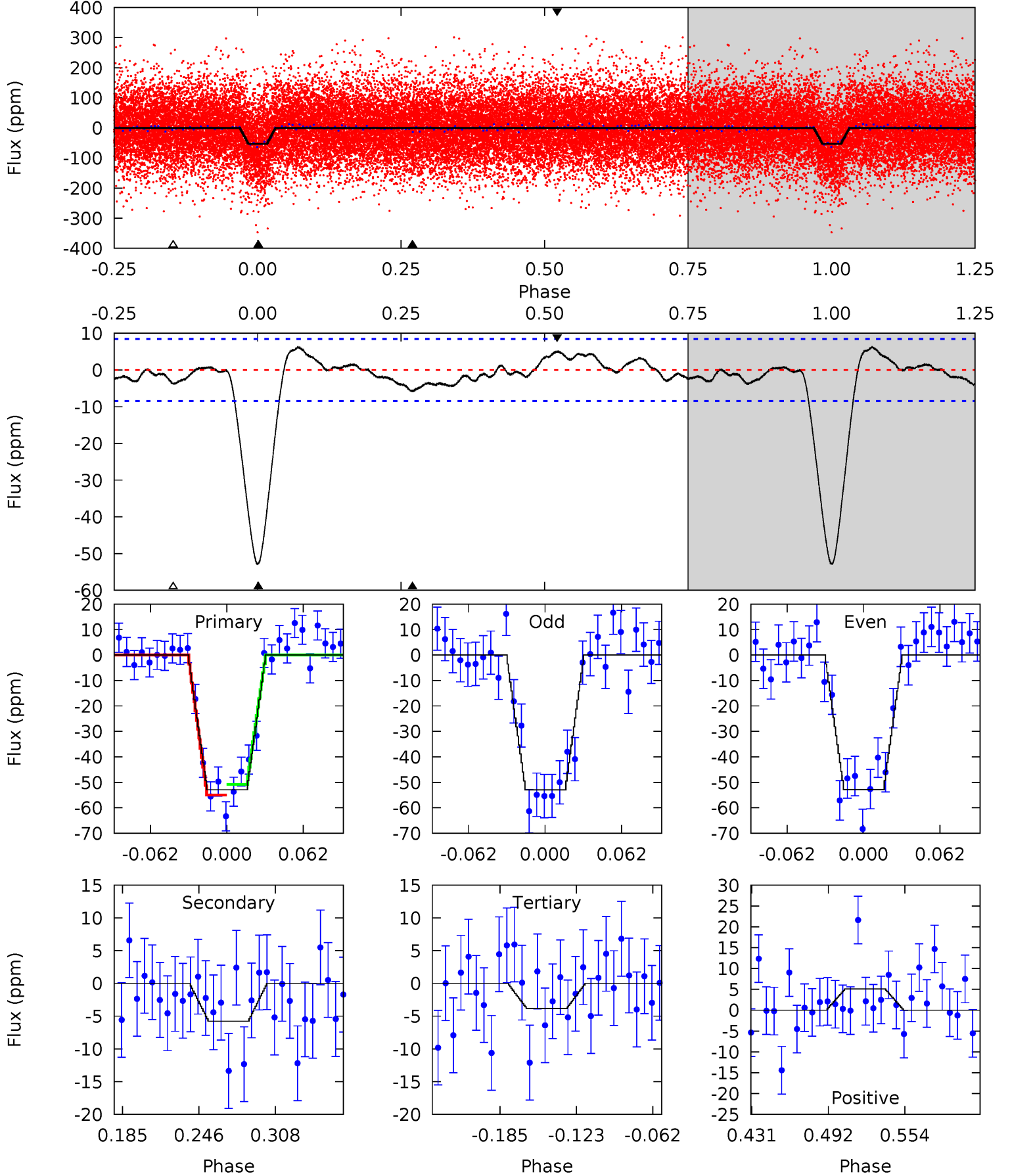
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	2.21	1.63	2.15	4.67	1.88	0.97	30.4	29.9	0.59	0.06	0.56	0.97	0.09	0.75



Alt Model-Shift Uniqueness Test

010905911-01, P = 1.341553 Days, E = 131.398115 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.2	3.18	2.12	2.82	4.67	1.87	1.32	27.0	26.3	1.06	0.36	0.05	1.01	0.11	1.15



Stellar Parameters For KIC 010905911

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5779^{+104}_{-115}	$4.440^{+0.072}_{-0.117}$	$-0.080^{+0.150}_{-0.150}$	$0.970^{+0.140}_{-0.086}$	$0.945^{+0.062}_{-0.062}$	$1.458^{+0.429}_{-0.468}$
	+2%/-2%	+2%/-3%	+188%/-188%	+14%/-9%	+7%/-7%	+29%/-32%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010905911-01 / KOI 2754.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 2	$0.74^{+0.33}_{-0.34}$	2305^{+88}_{-80}	3452^{+977}_{-612}	$2.065^{+5.526}_{-1.295}$
Alt.	-6 ± 2	$0.78^{+0.37}_{-0.37}$	2302^{+108}_{-76}	3629^{+942}_{-505}	$2.785^{+6.986}_{-1.554}$

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

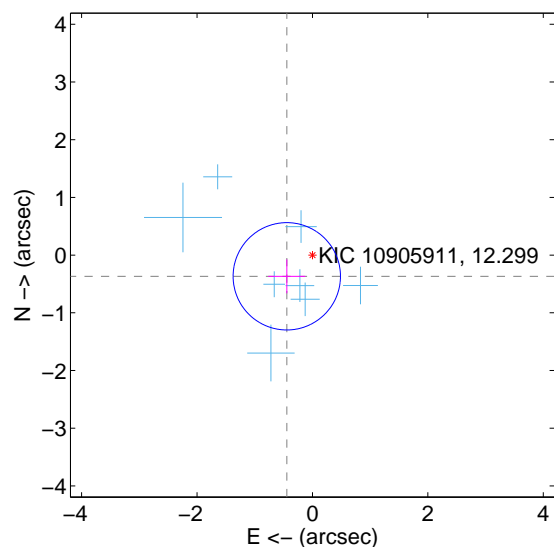
Supplemental centroid analysis for 010905911-01. Kepler magnitude: 12.30. Transit SNR 21.00

There are 8 quarters with good PRF difference image offsets

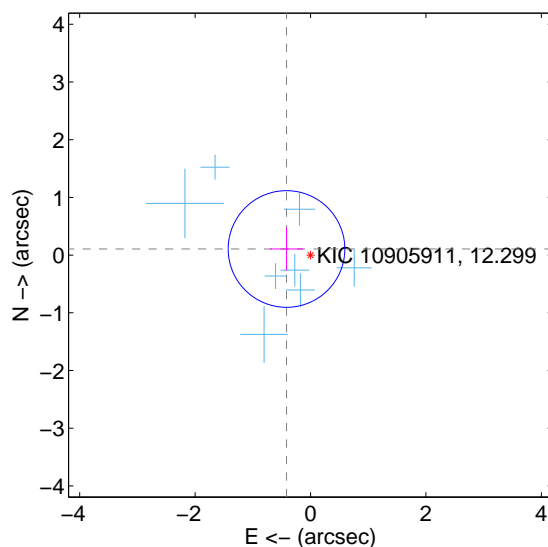
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.577 ± 0.310	1.86	0.444 ± 0.321	-0.368 ± 0.294
PRF-fit source offset from KIC position	0.430 ± 0.337	1.28	0.416 ± 0.287	0.106 ± 0.371
photometric centroid source offset	1.69 ± 0.60	2.82	-1.57 ± 0.62	0.63 ± 0.50

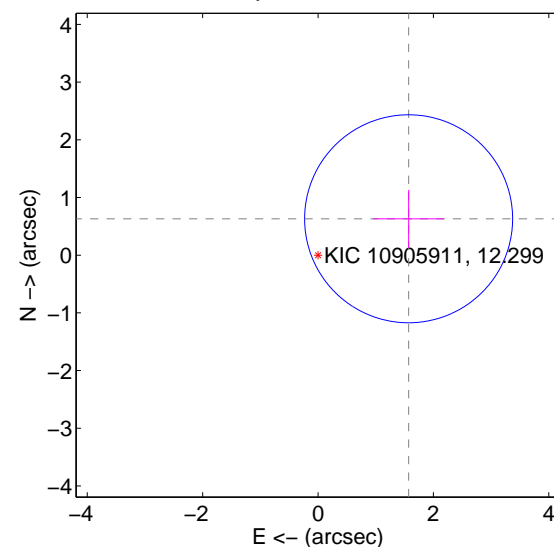
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

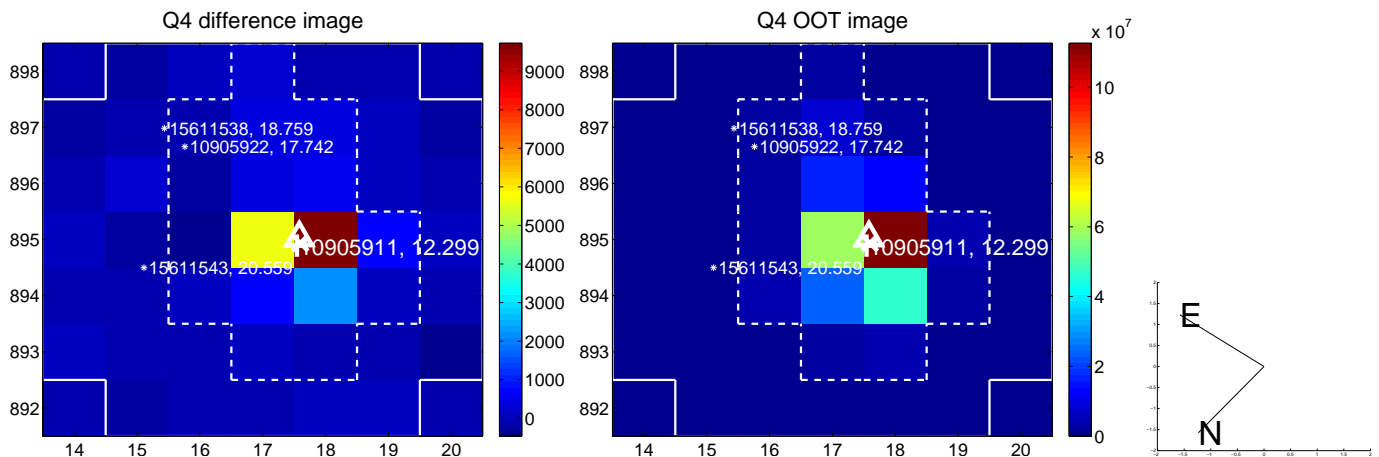
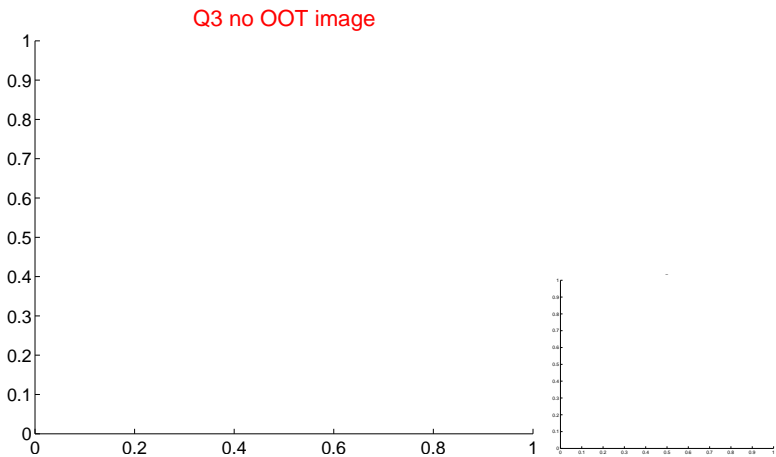
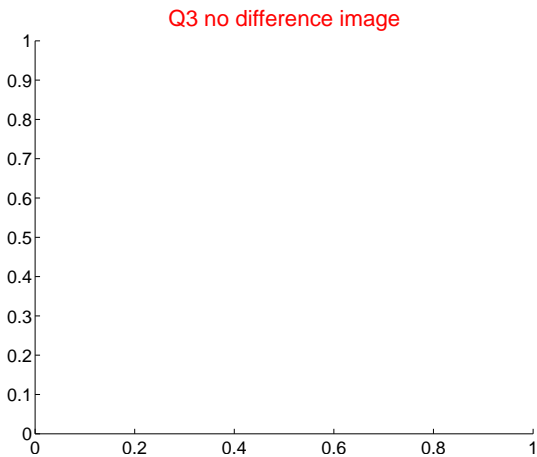
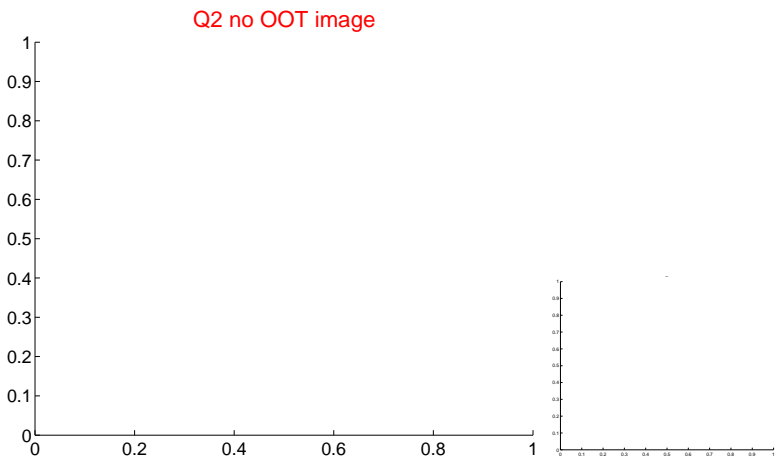
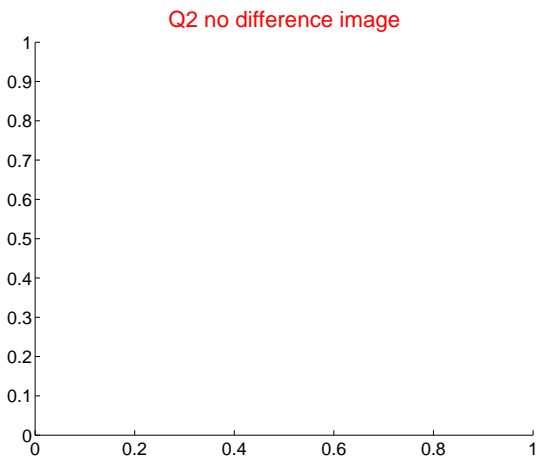
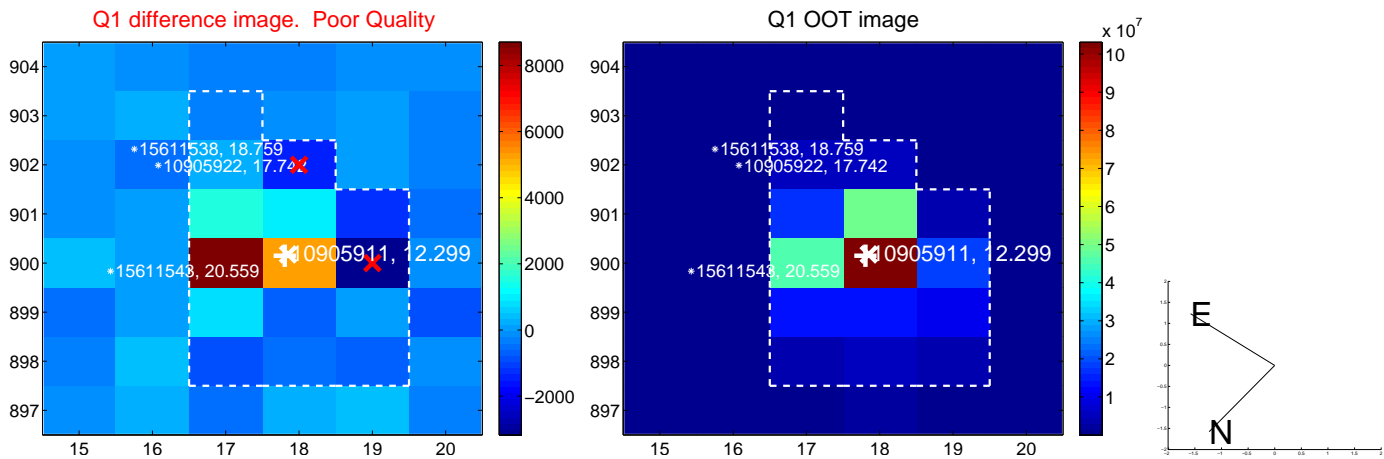


offset from photometric centroids

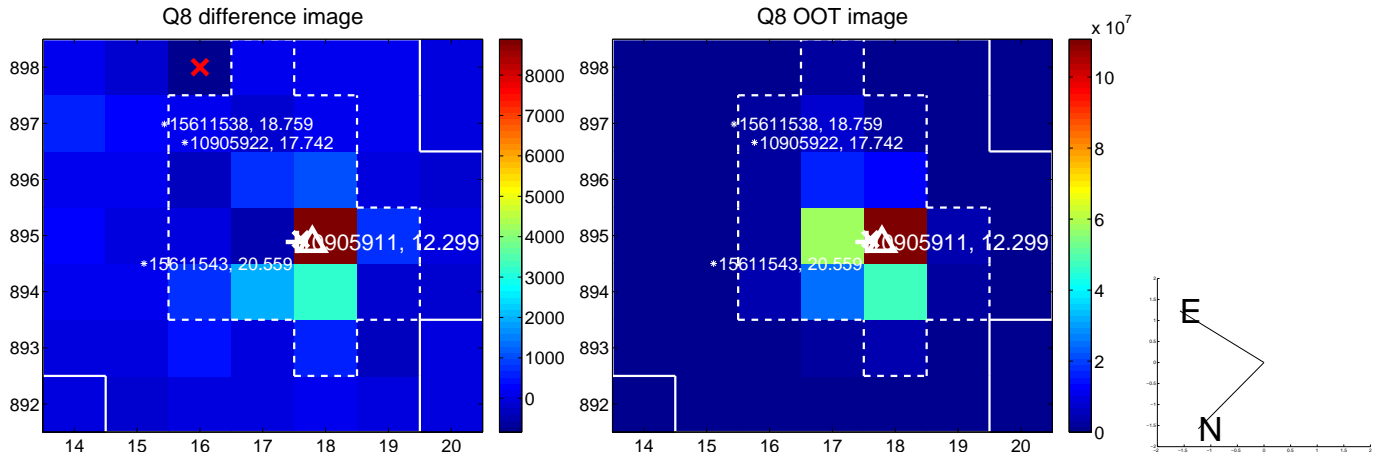
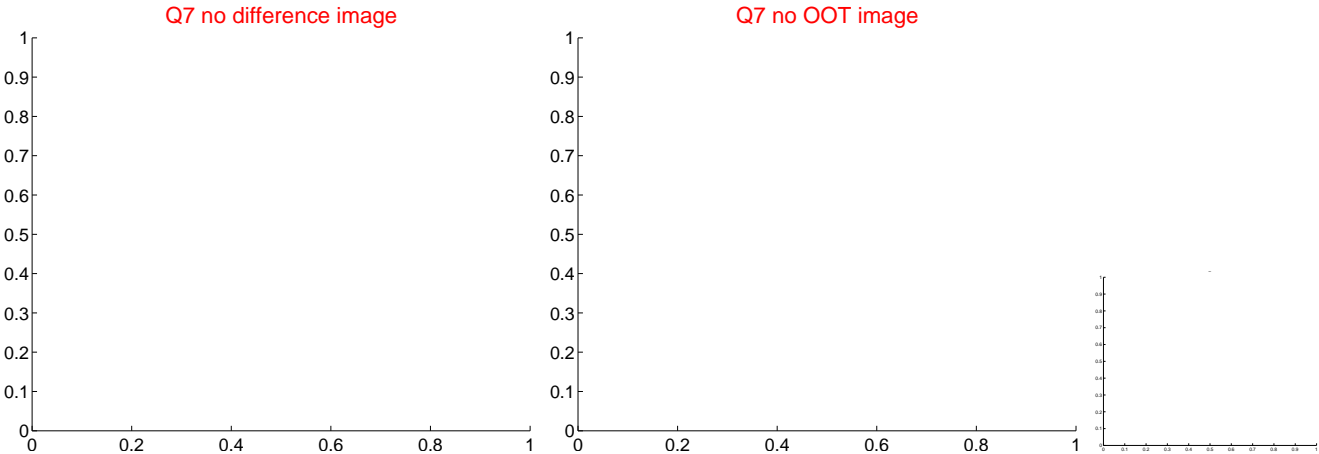
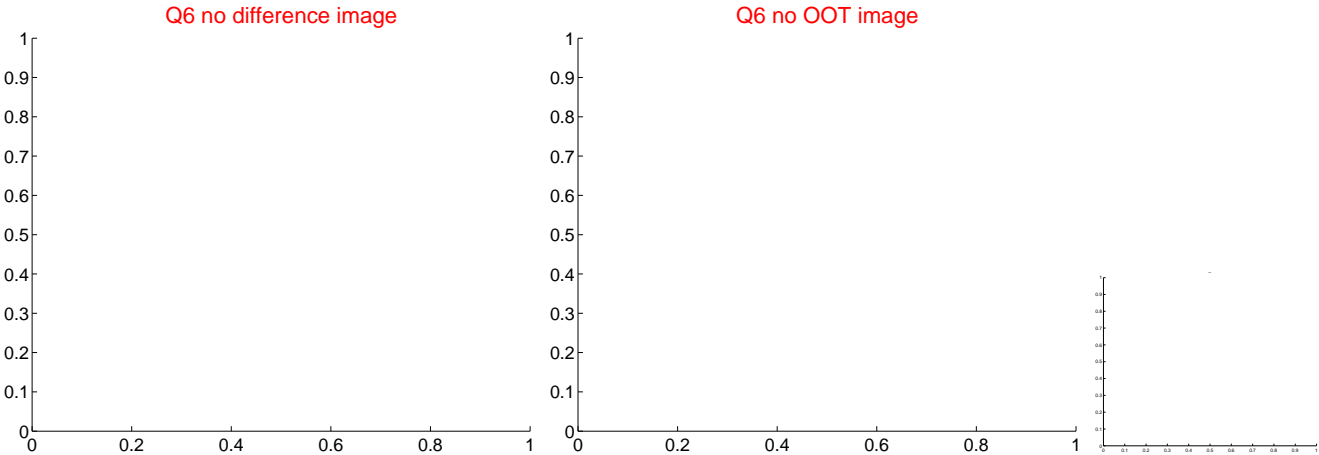
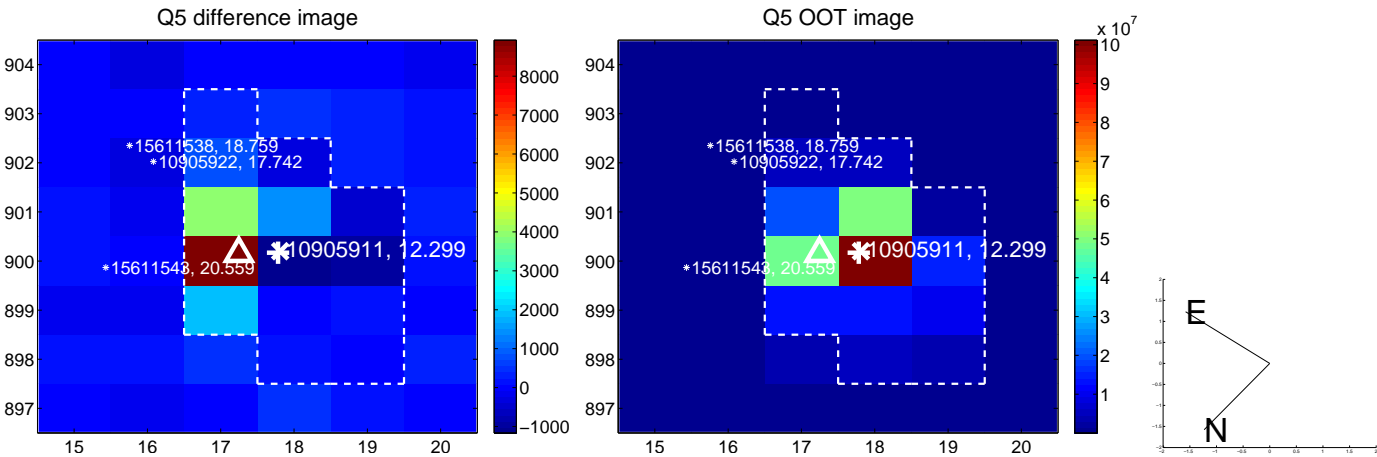


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

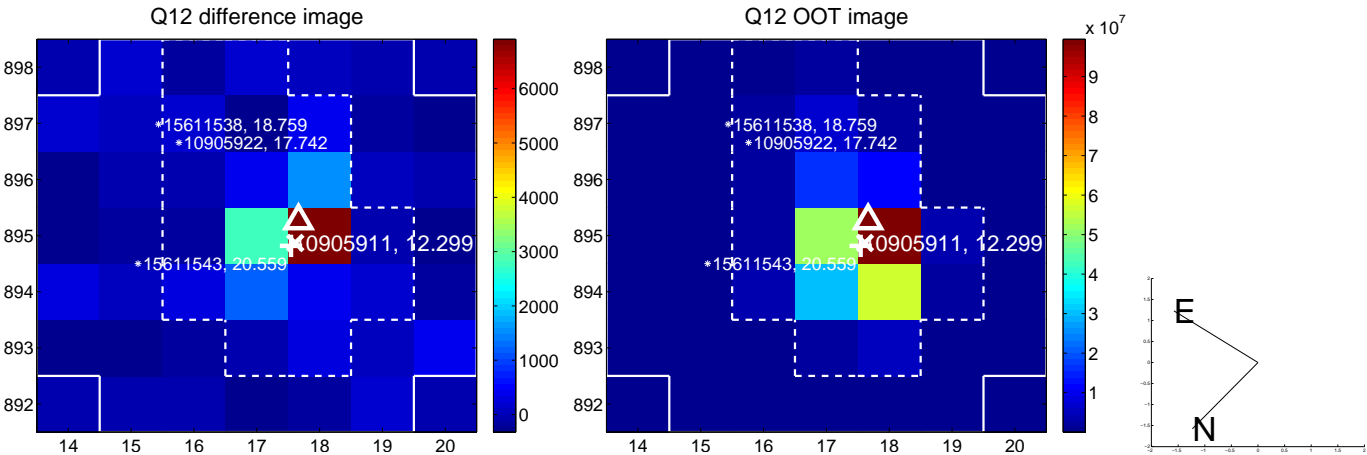
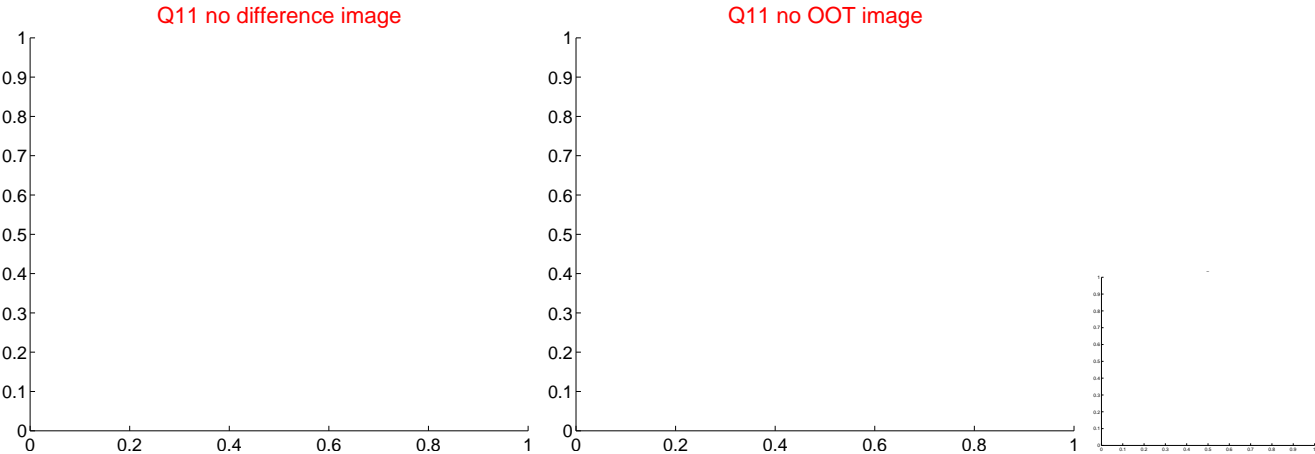
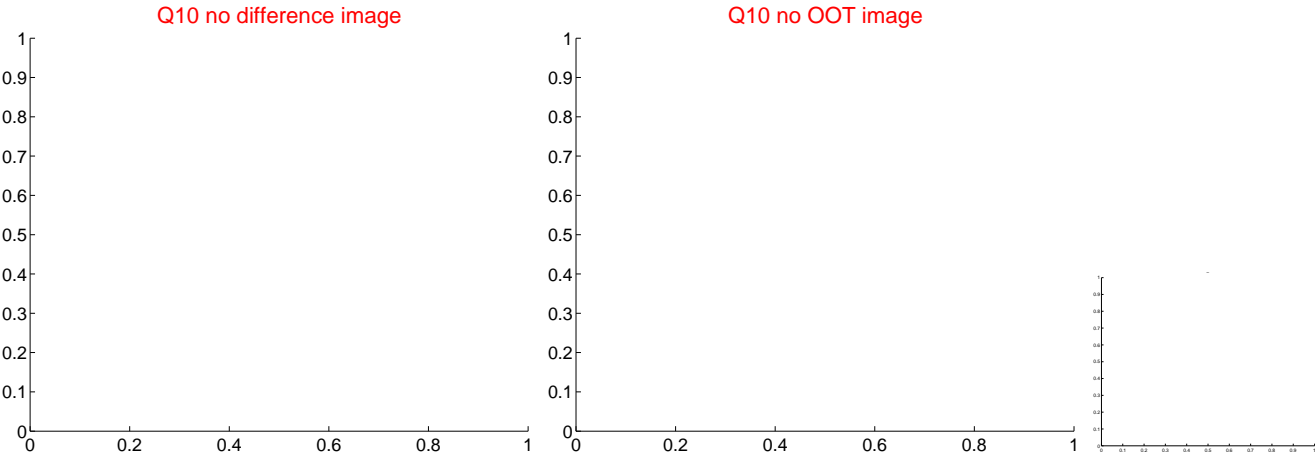
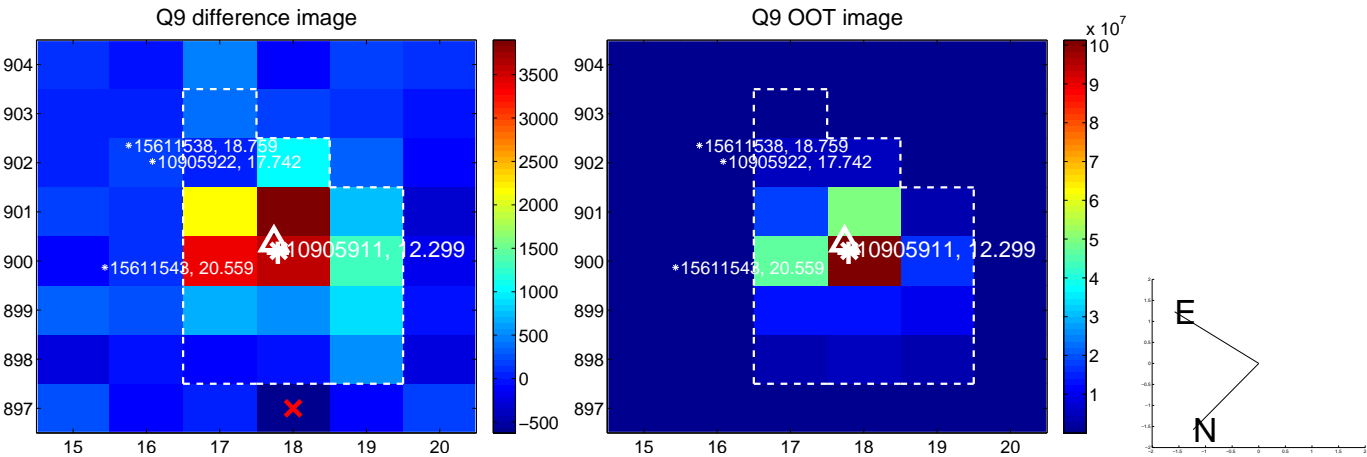
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



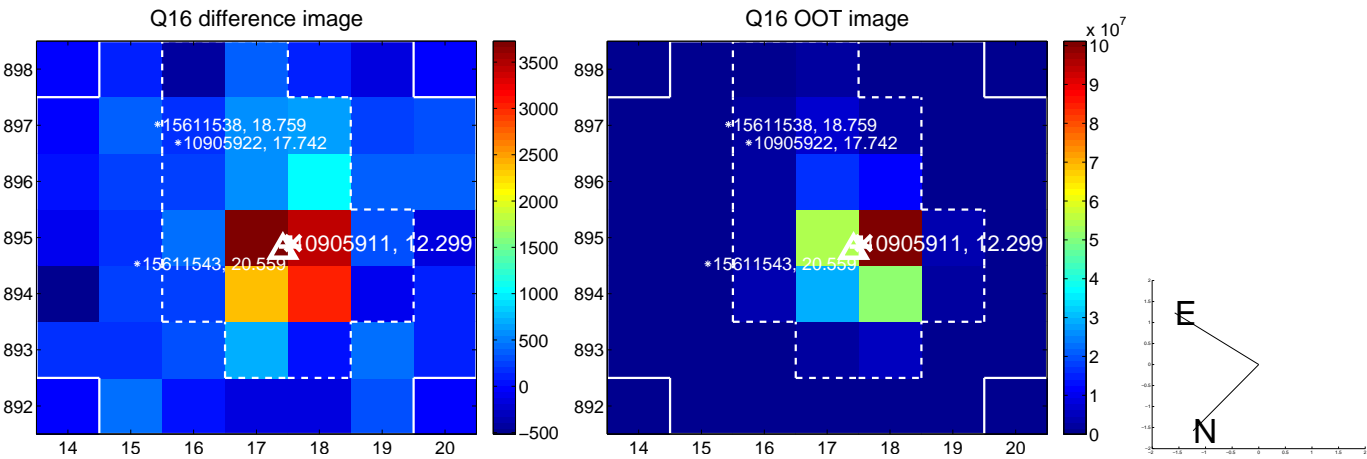
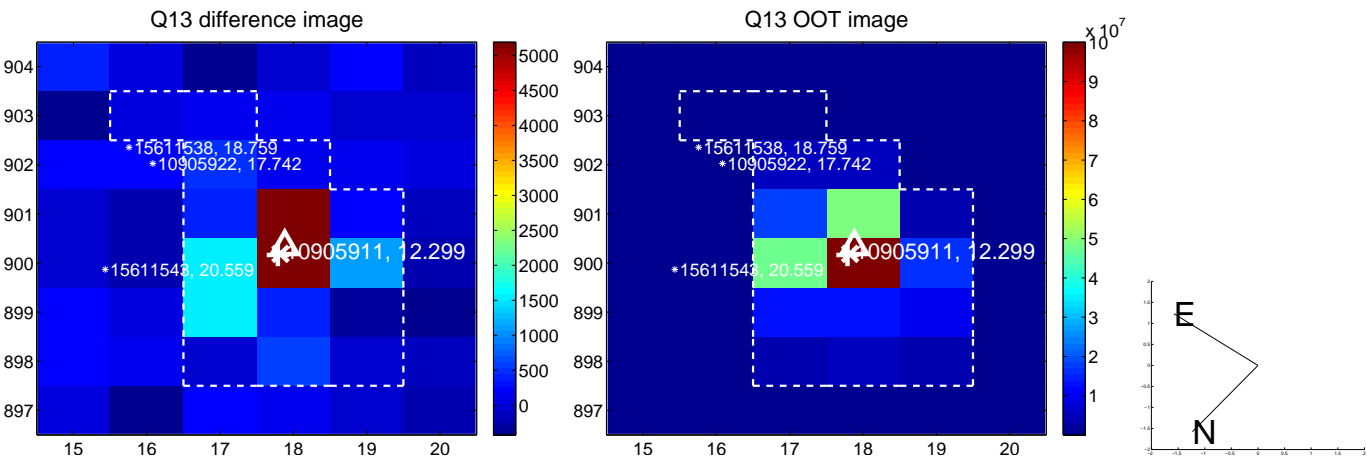
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

