

KIC 010934313

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})
010934313-01	OBS	3121.01	1.926873	131.634675	102.5	1.653	10.1	10.9	1.10	6268	1.31	1626.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934313-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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.

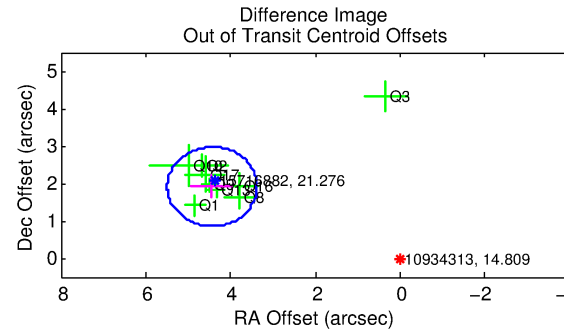
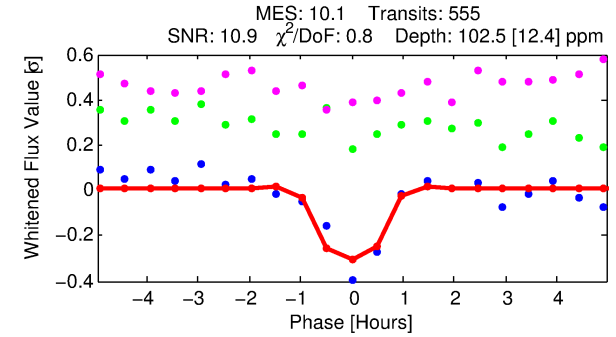
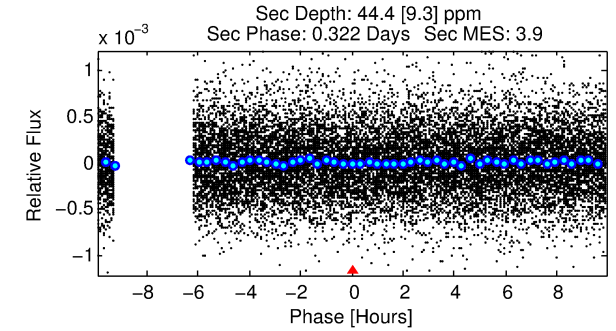
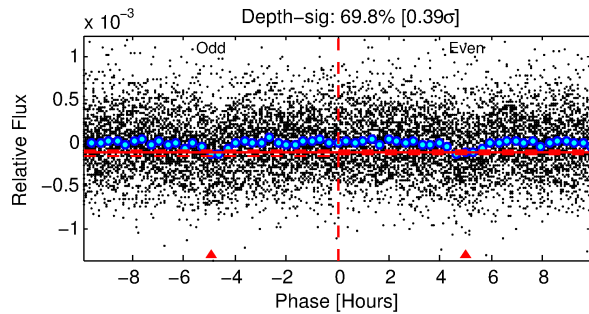
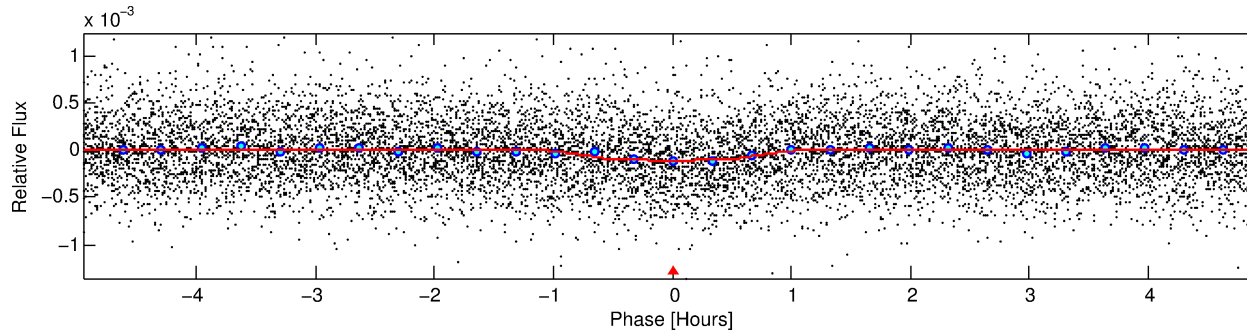
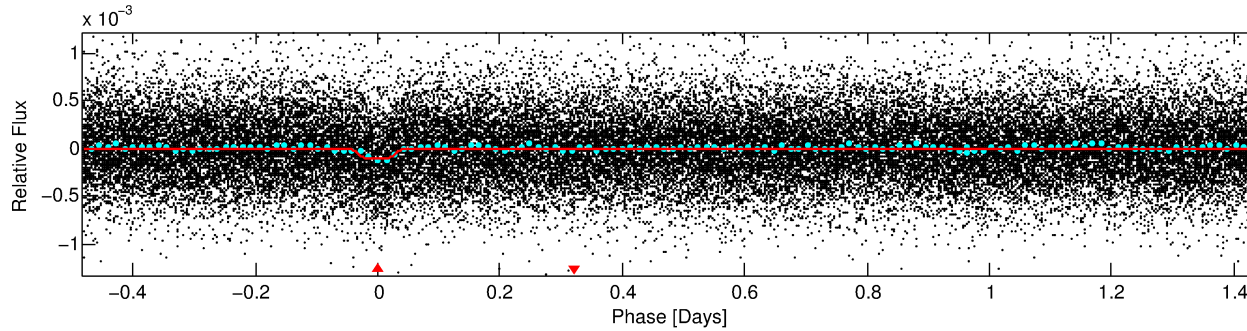
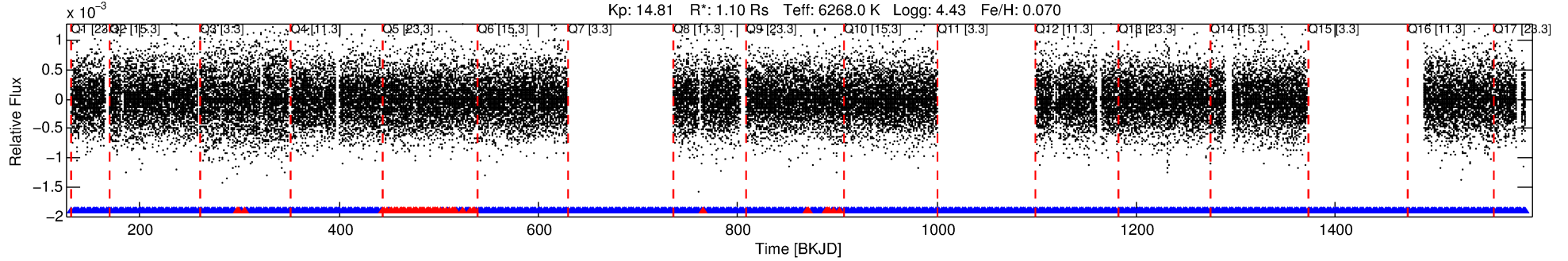
Ephemeris Match Information For 010934313-01

No Significant Match Found

DV One-Page Summary

KIC: 10934313 Candidate: 1 of 1 Period: 1.927 d
KOI: K03121.01 Corr: 0.844

Kp: 14.81 R*: 1.10 Rs Teff: 6268.0 K Logg: 4.43 Fe/H: 0.070



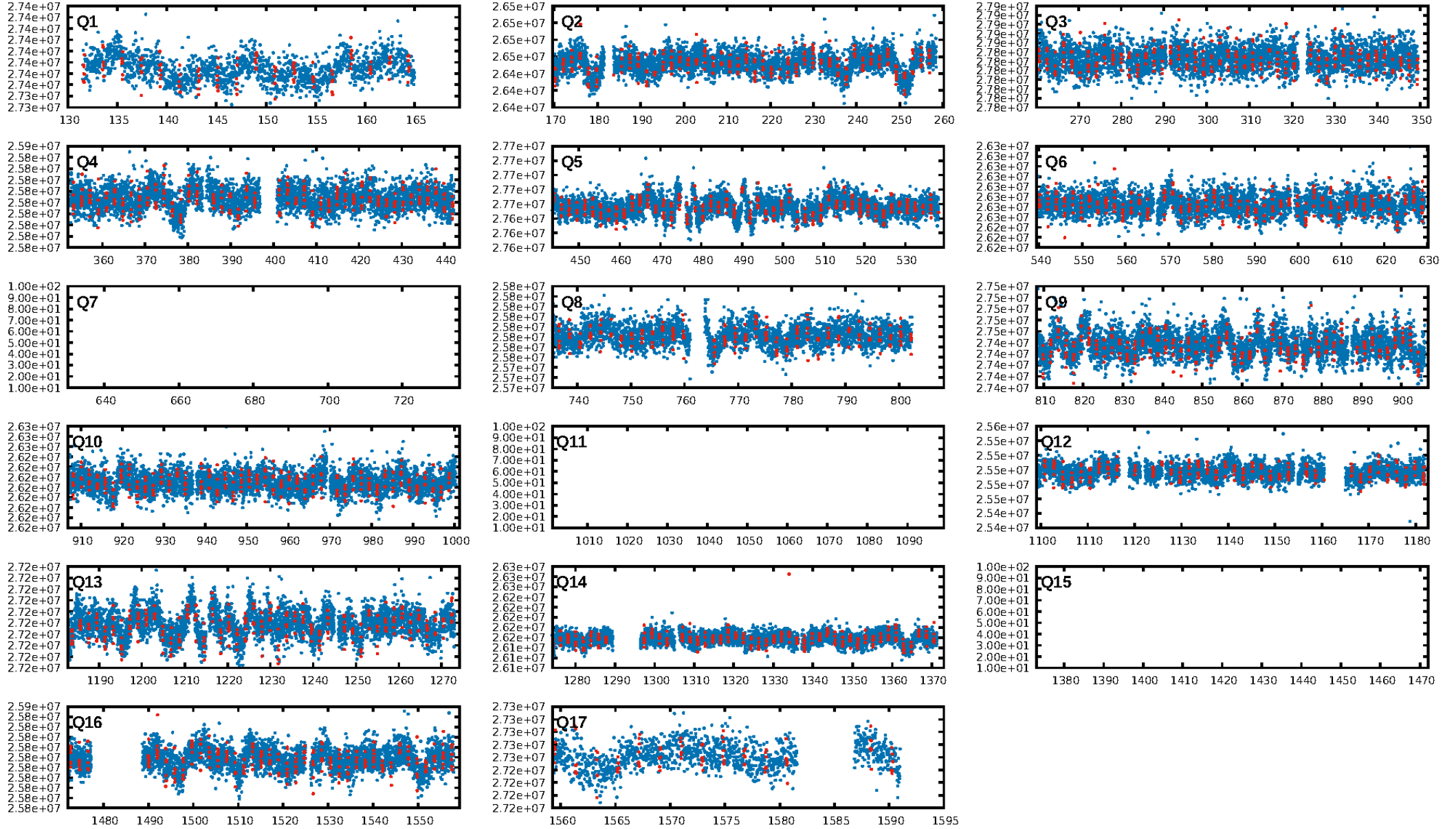
DV Fit Results:

Period = 1.92687 [0.00001] d
Epoch = 131.6347 [0.0025] BKJD
Rp/R* = 0.0109 [0.0060]
a/R* = 4.21 [11.71]
b = 0.90 [0.63]
Seff = 1626.30 [750.84]
Teff = 1619 [187] K
Rp = 1.31 [0.86] Re
a = 0.0321 [0.0095] AU
Ag = 14.58 [17.54] [0.77σ]
Teffp = 4892 [1384] K [2.34σ]

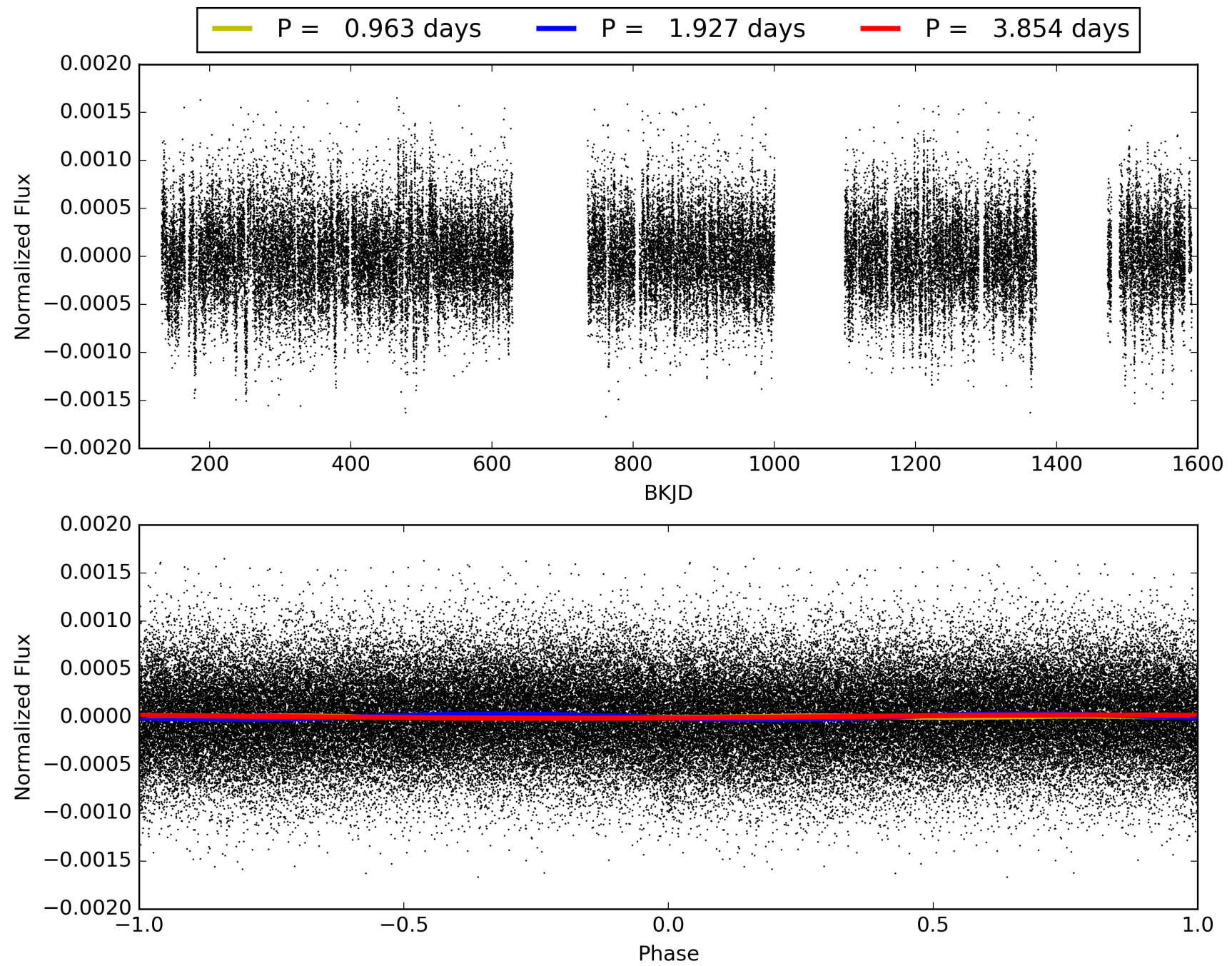
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.94e-23
RollingBand-fgt: 0.90 [472/523]
GhostDiagnostic-chr: 0.2549
Centroid-sig: 0.0%
Centroid-so: 10.929 arcsec [8.79σ]
OotOffset-rm: 4.826 arcsec [13.67σ]
KicOffset-rm: 4.837 arcsec [14.36σ]
OotOffset-st: 2/1/2/4 [9]
KicOffset-st: 2/1/2/4 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010934313-01, PDC Light Curves

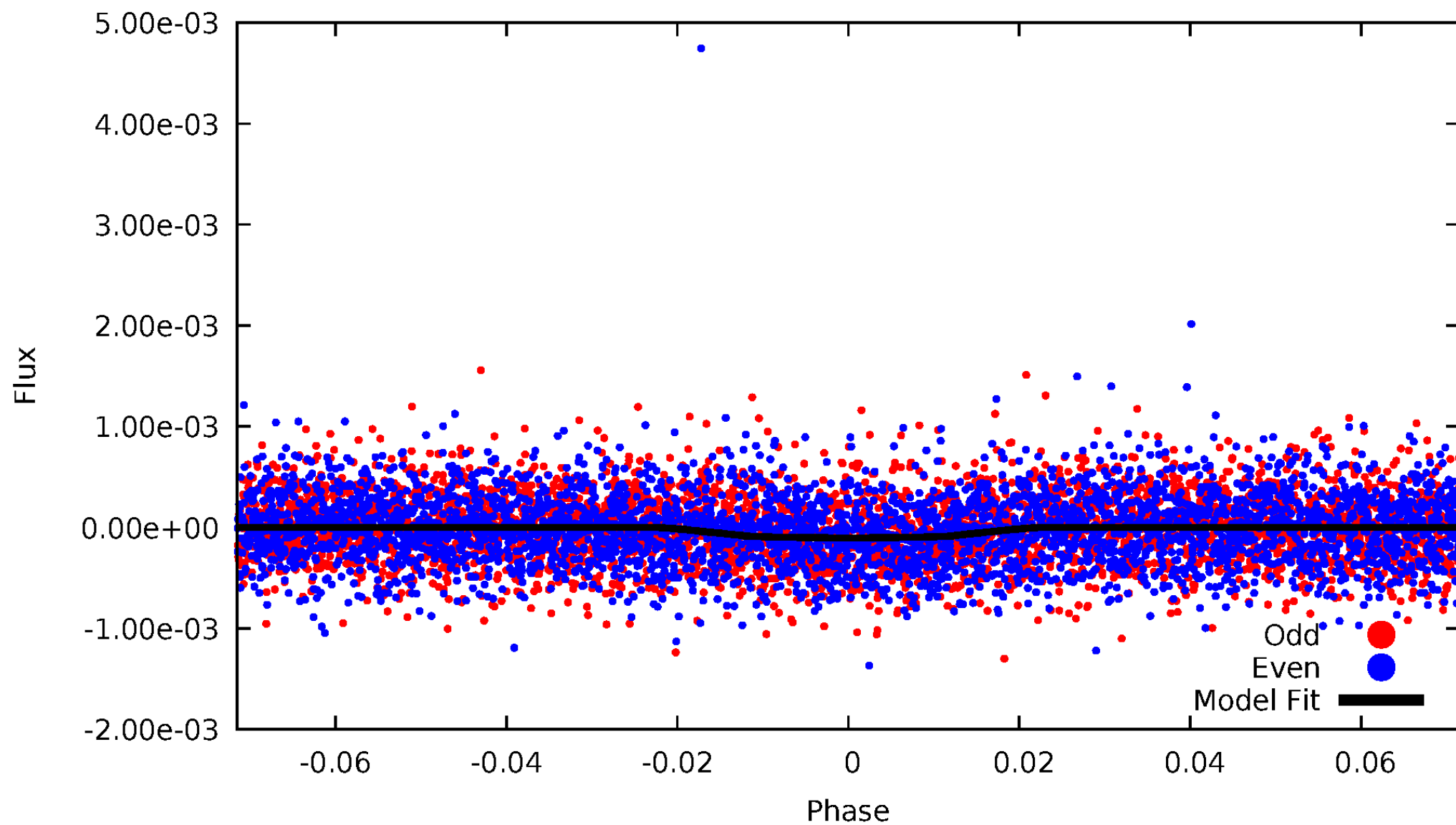


TCE 010934313-01



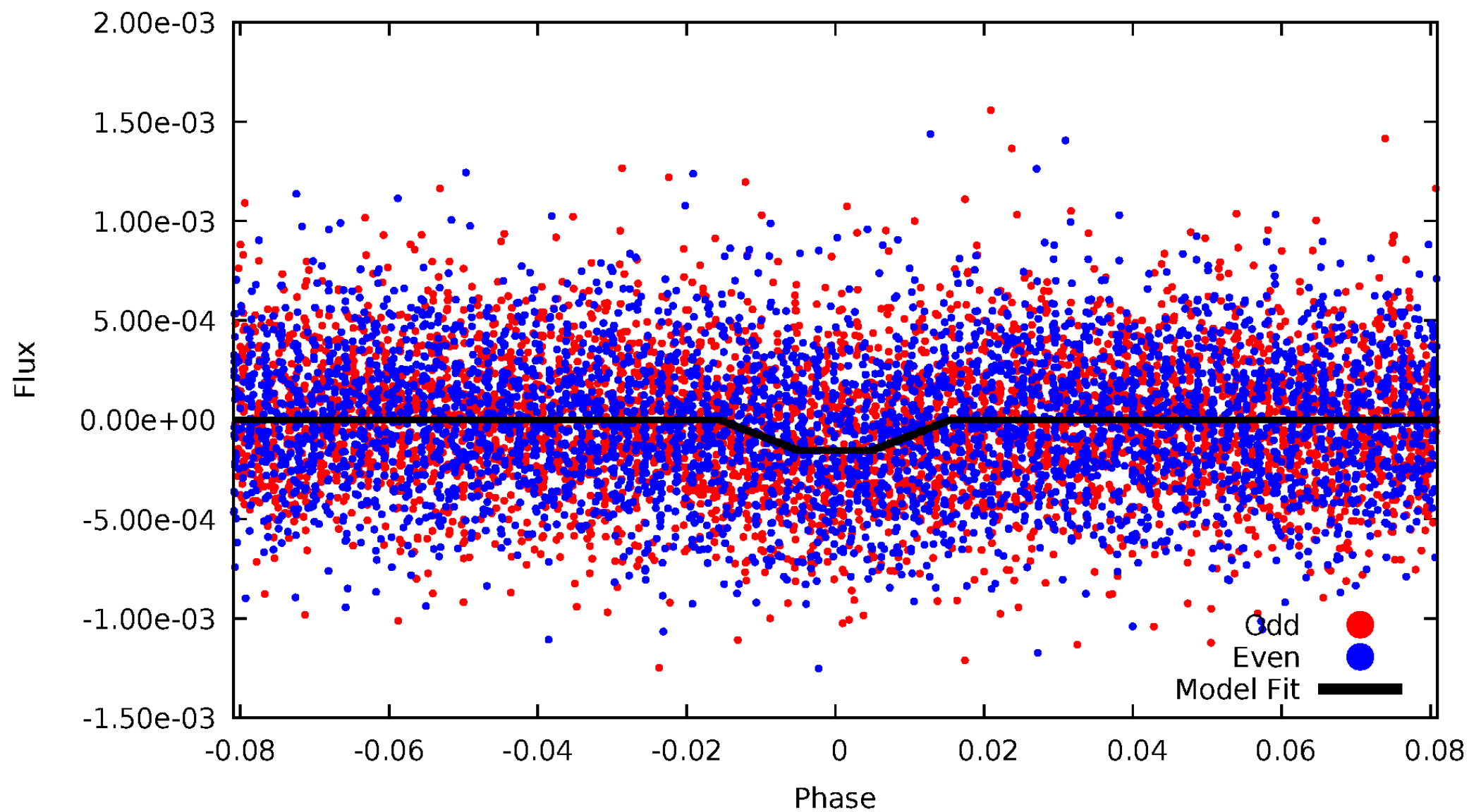
DV Odd/Even

TCE 010934313-01



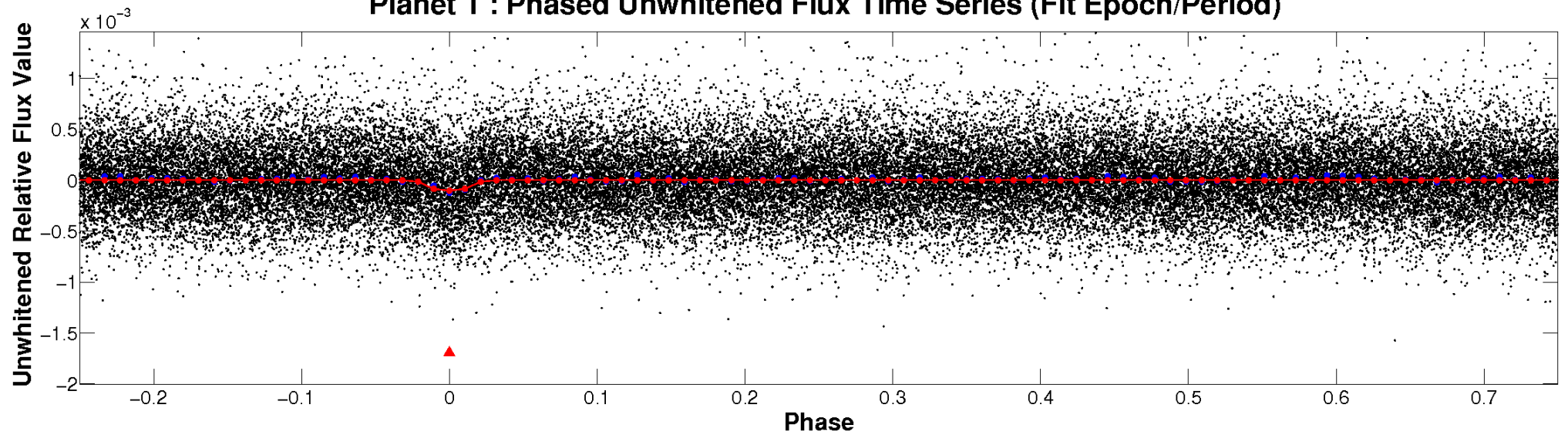
ALT Odd/Even

TCE 010934313-01

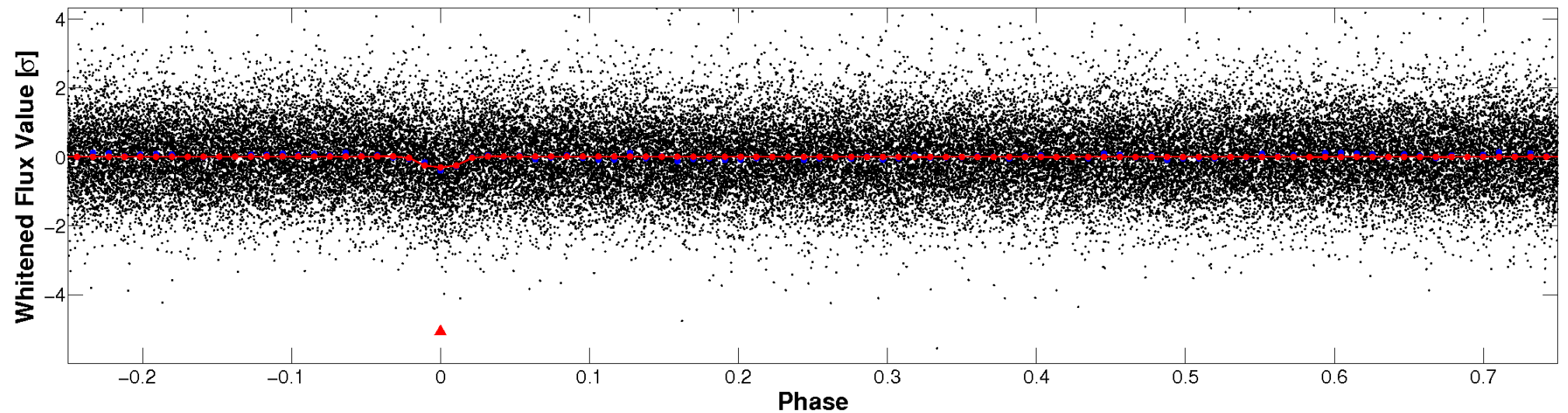


Non-Whitened Vs. Whitened Light Curve

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

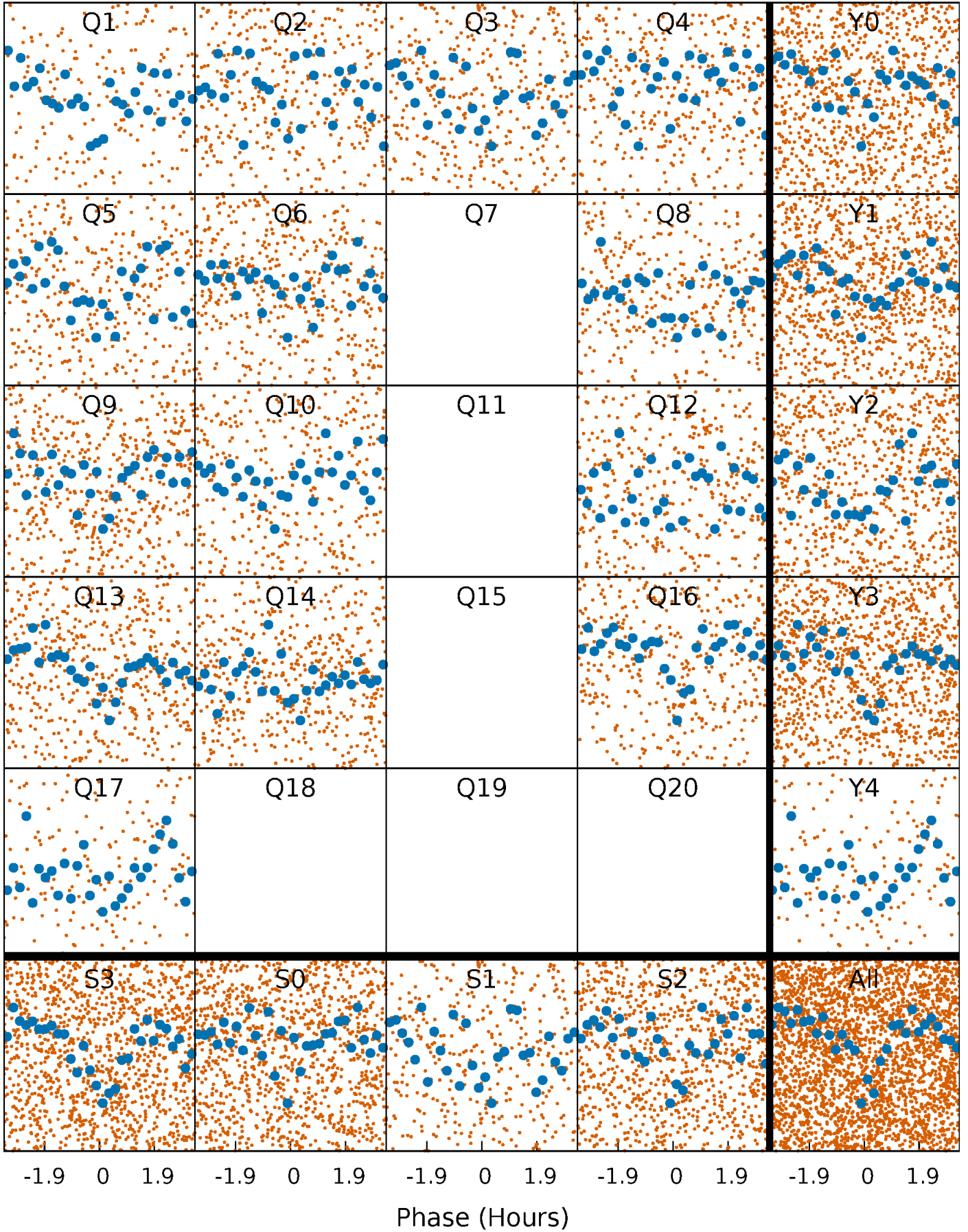


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



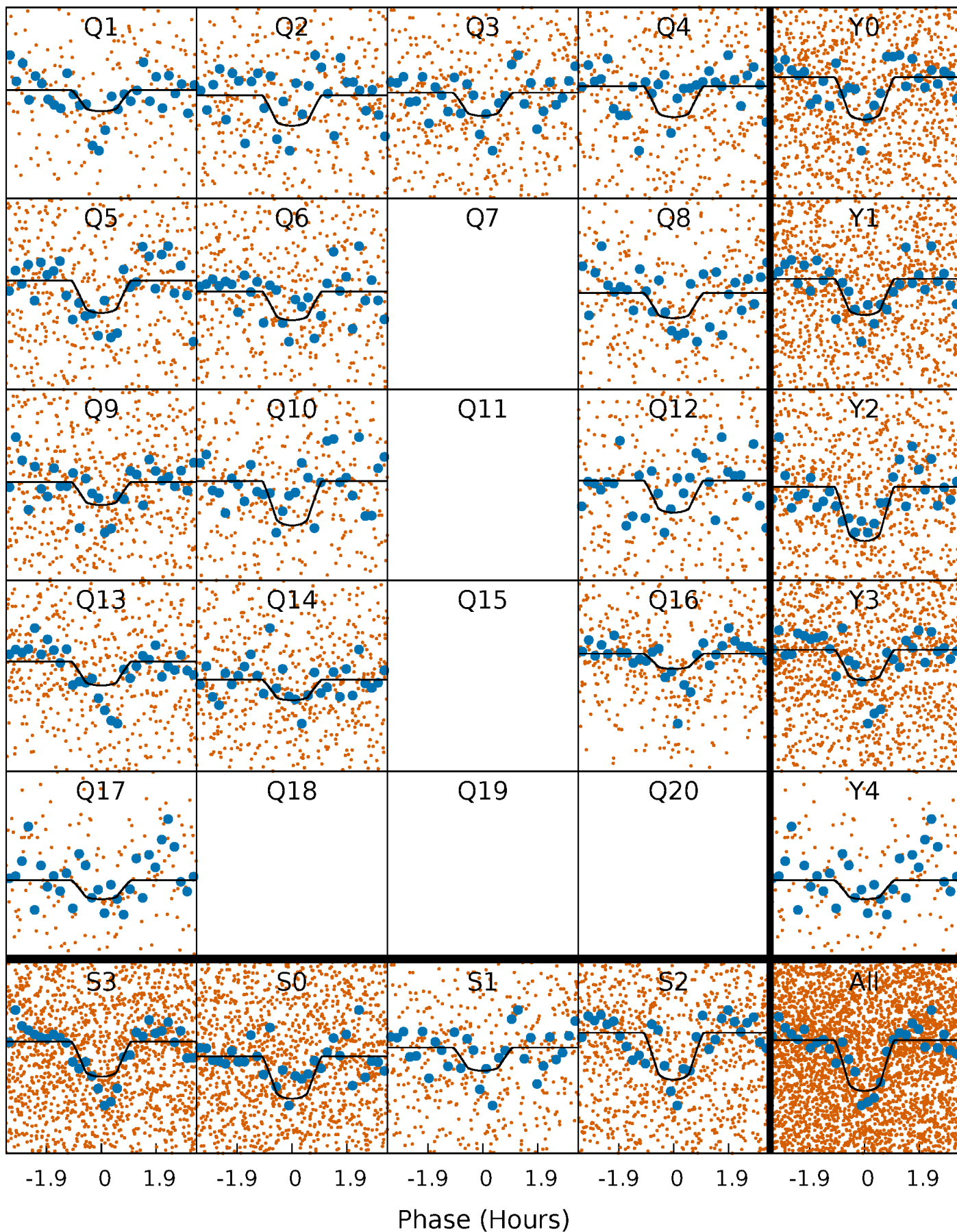
PDC Quarter-Phased Transit Curves

TCE 010934313-01 P= 1.926873 Days $T_0=131.634675$ (BKJD)



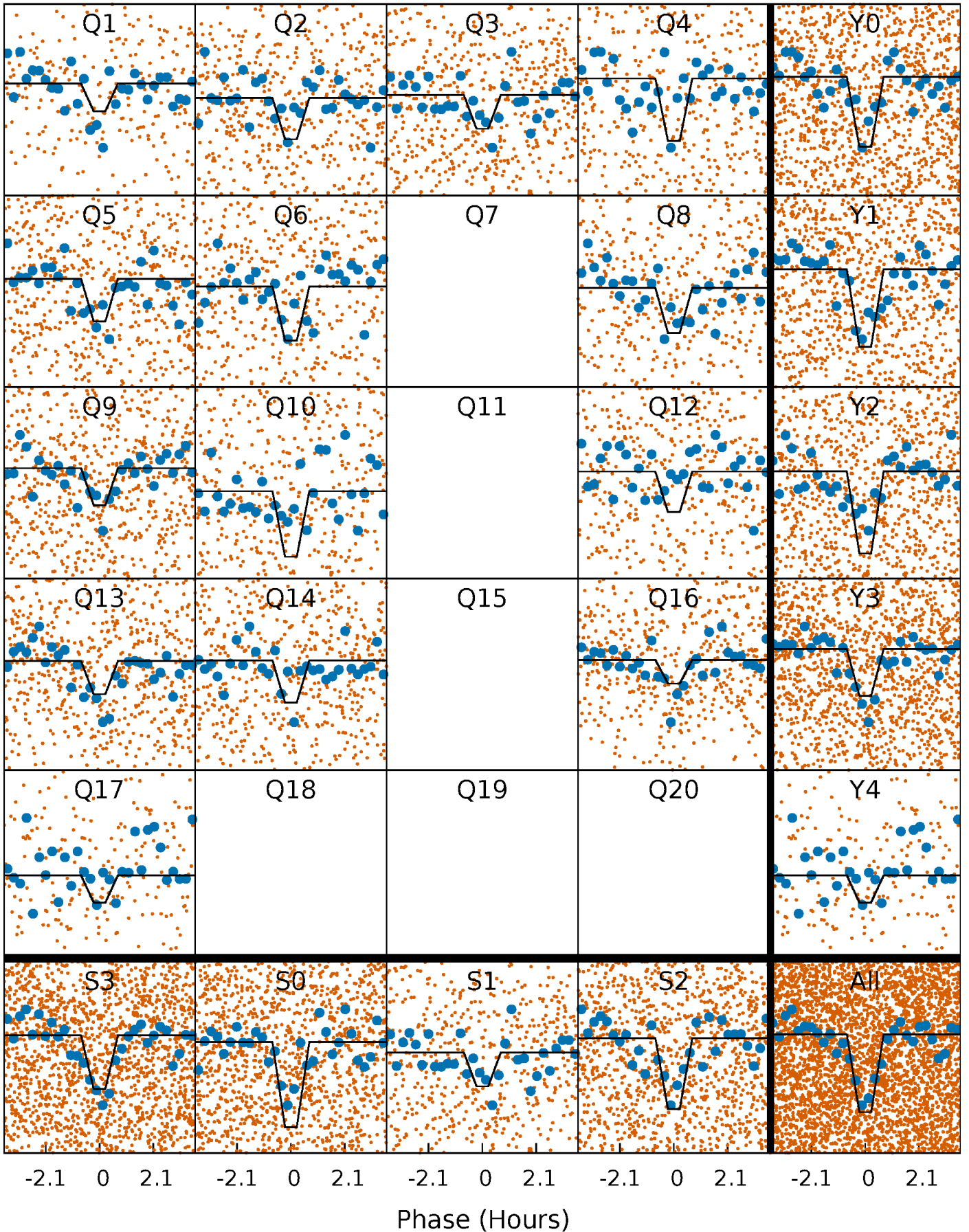
DV Quarter-Phased Transit Curves

TCE 010934313-01 P= 1.926873 Days $T_0=131.634675$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

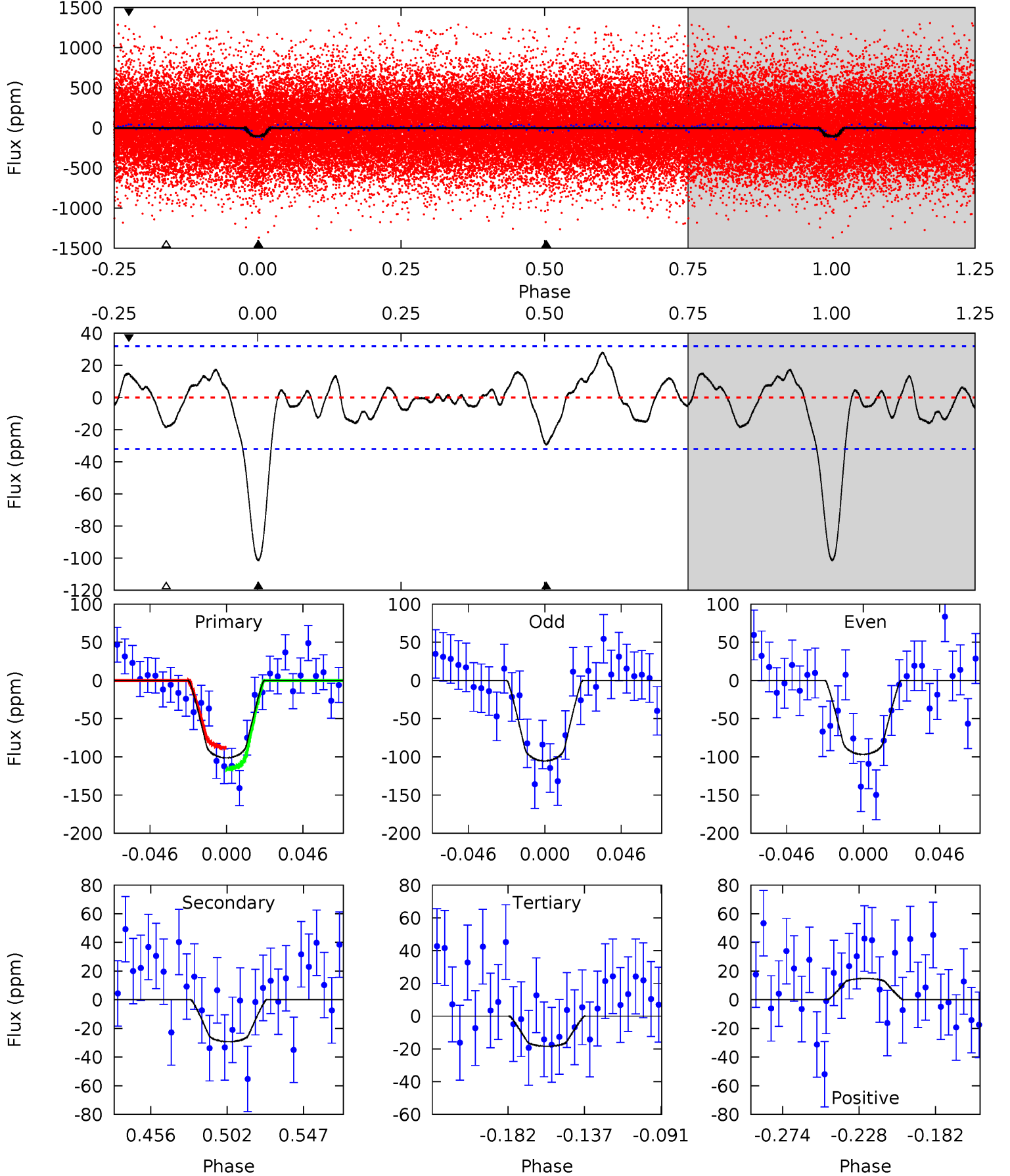
TCE 010934313-01 P= 1.926887 Days $T_0=131.633079$ (BKJD)



DV Model-Shift Uniqueness Test

010934313-01, P = 1.926873 Days, E = 129.707802 Days

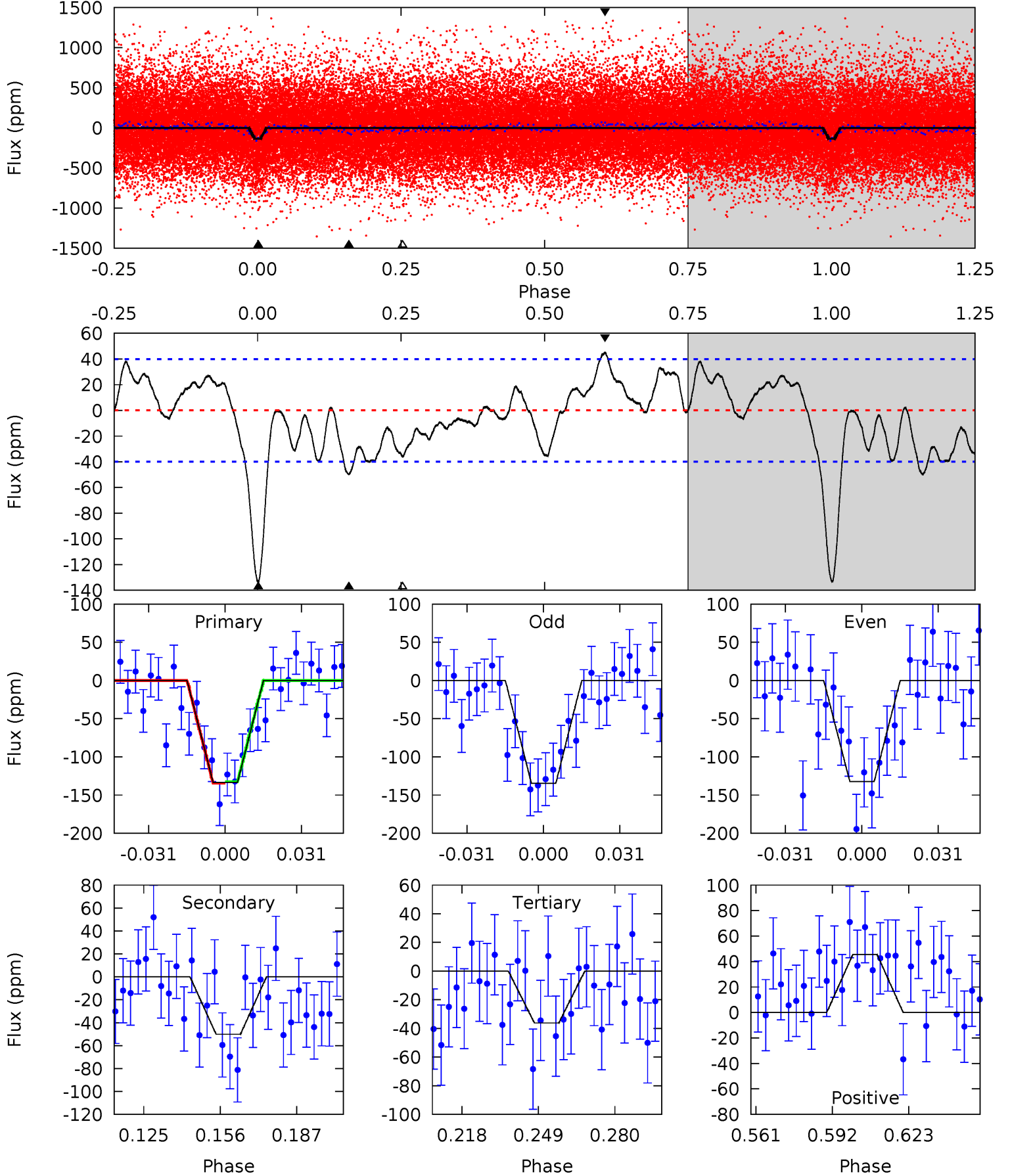
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	4.32	2.72	2.19	4.73	2.00	1.42	12.2	12.8	1.60	2.14	0.64	0.97	0.22	2.09



Alt Model-Shift Uniqueness Test

010934313-01, P = 1.926887 Days, E = 129.706192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	6.04	4.36	5.49	4.80	2.16	2.43	11.7	10.6	1.68	0.56	0.15	0.97	0.25	0.12



Stellar Parameters For KIC 010934313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6268^{+173}_{-239}	$4.429^{+0.060}_{-0.240}$	$0.070^{+0.250}_{-0.300}$	$1.100^{+0.384}_{-0.128}$	$1.188^{+0.153}_{-0.187}$	$1.257^{+0.311}_{-0.745}$
	+3%/-4%	+1%/-5%	+357%/-429%	+35%/-12%	+13%/-16%	+25%/-59%
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 010934313-01 / KOI 3121.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29 ± 7	$1.40^{+0.81}_{-0.71}$	2311^{+187}_{-130}	4504^{+1661}_{-740}	$7.977^{+25.918}_{-4.783}$
Alt.	-50 ± 8	$1.51^{+0.82}_{-0.67}$	2305^{+173}_{-121}	4854^{+1679}_{-772}	12^{+27}_{-7}

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

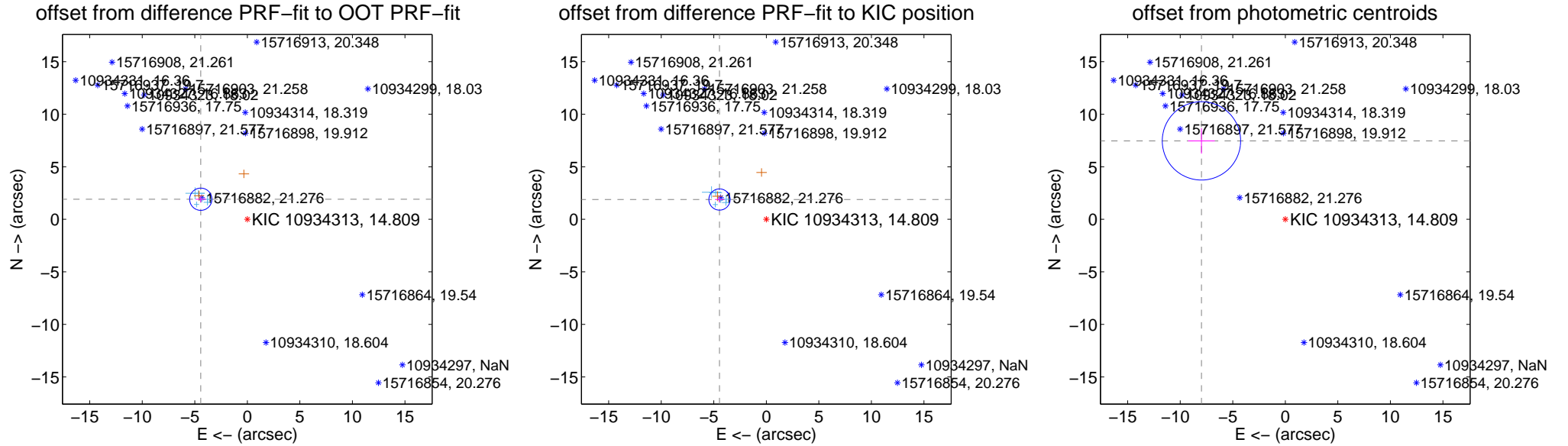
DV Centroid Data

Supplemental centroid analysis for 010934313-01. Kepler magnitude: 14.81. Transit SNR 10.91

There are 7 quarters with good PRF difference image offsets

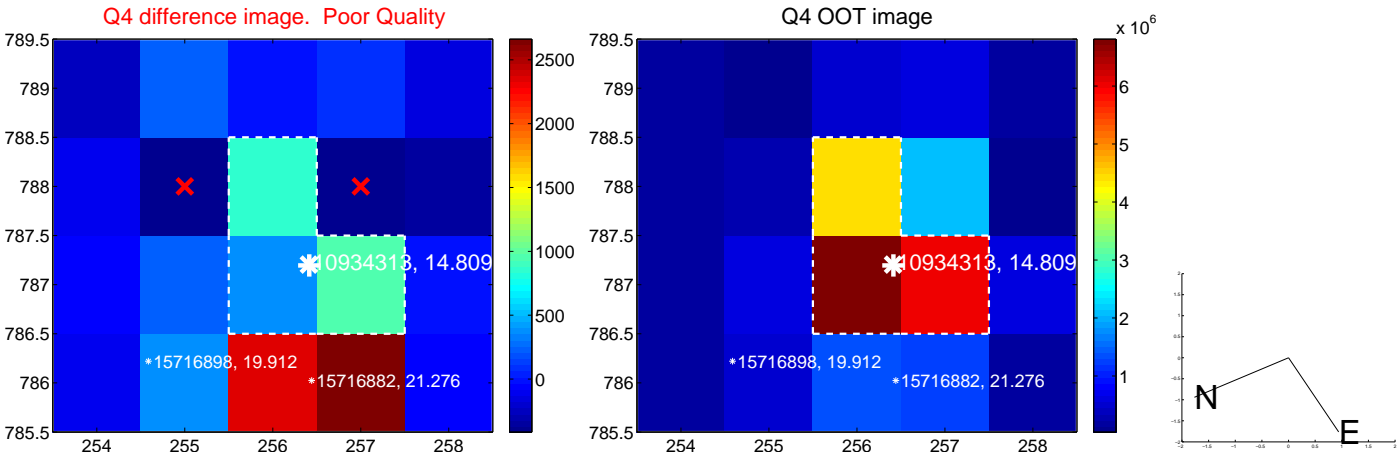
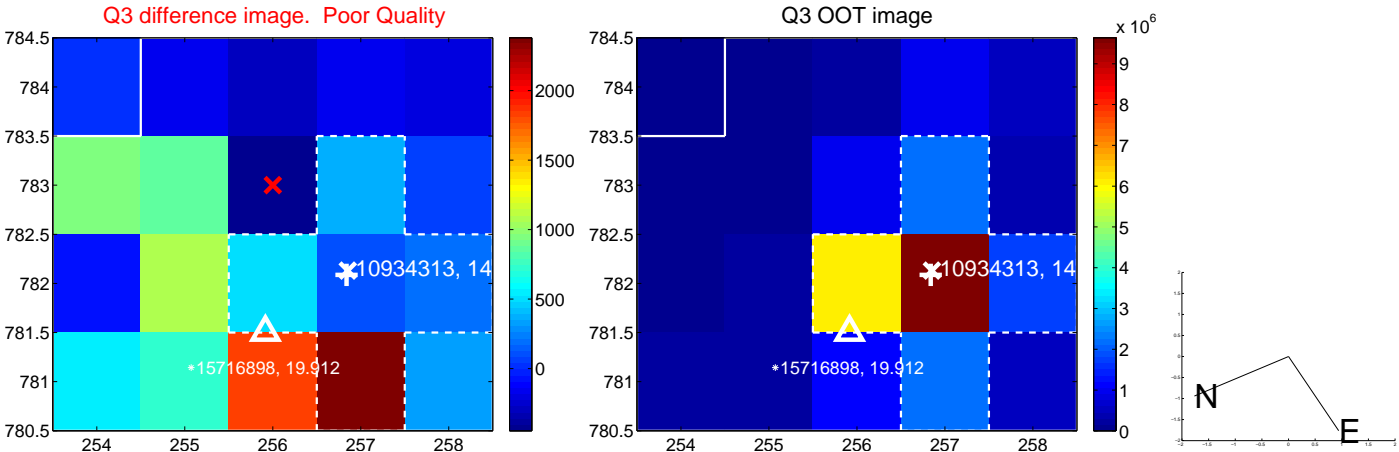
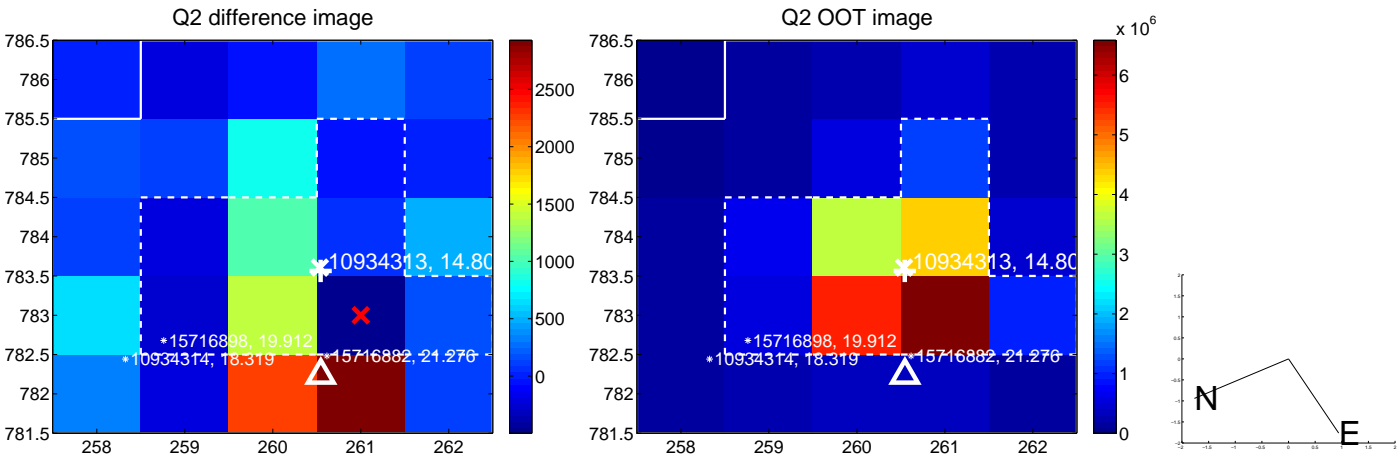
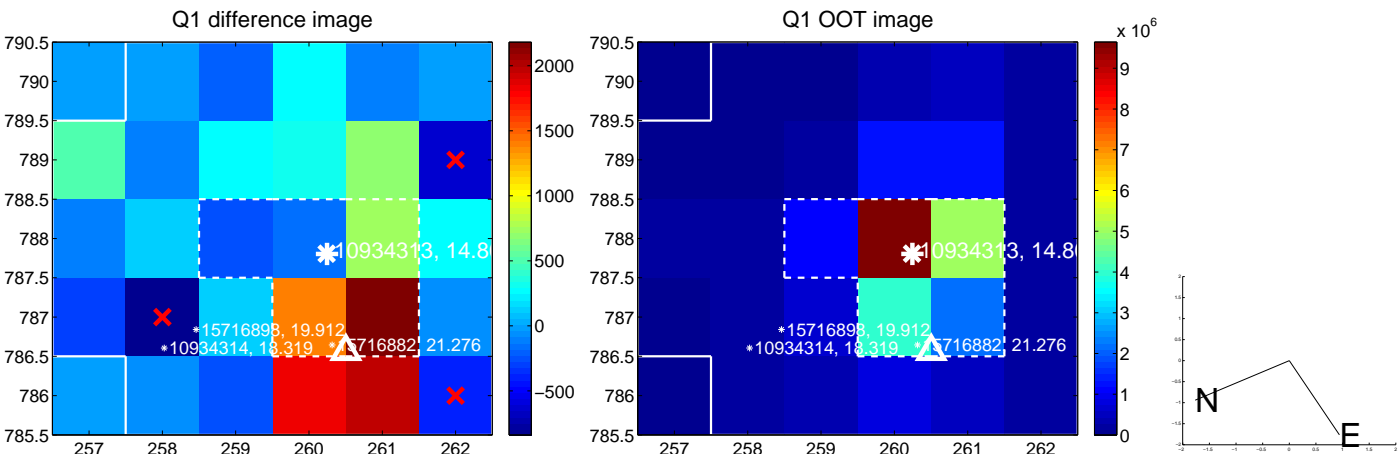
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.826 ± 0.353	13.67	4.431 ± 0.487	1.912 ± 0.300
PRF-fit source offset from KIC position	4.837 ± 0.337	14.36	4.455 ± 0.437	1.885 ± 0.269
photometric centroid source offset	10.93 ± 1.24	8.79	7.98 ± 1.27	7.47 ± 1.21

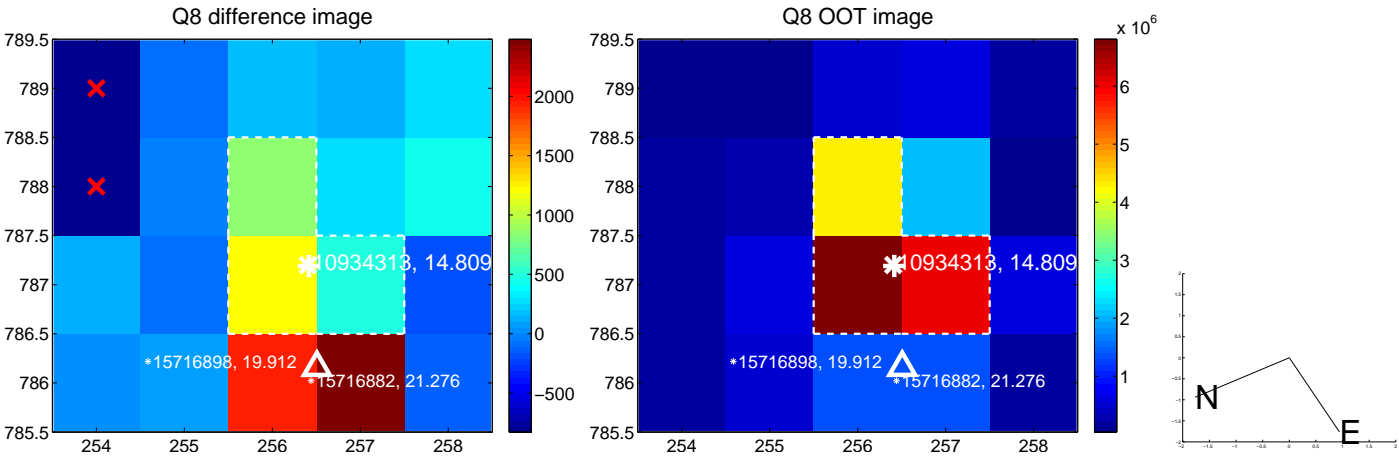
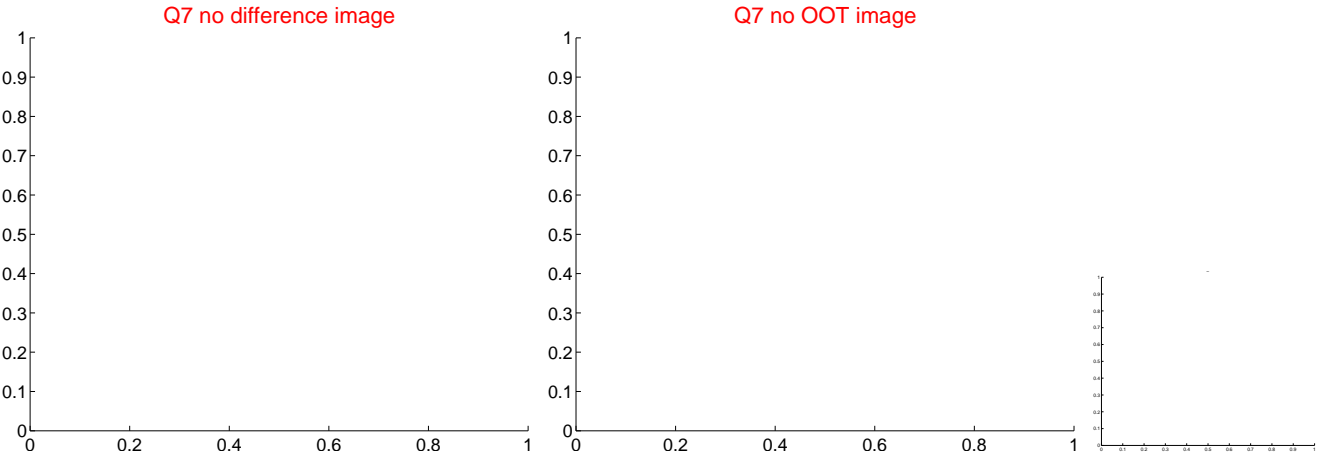
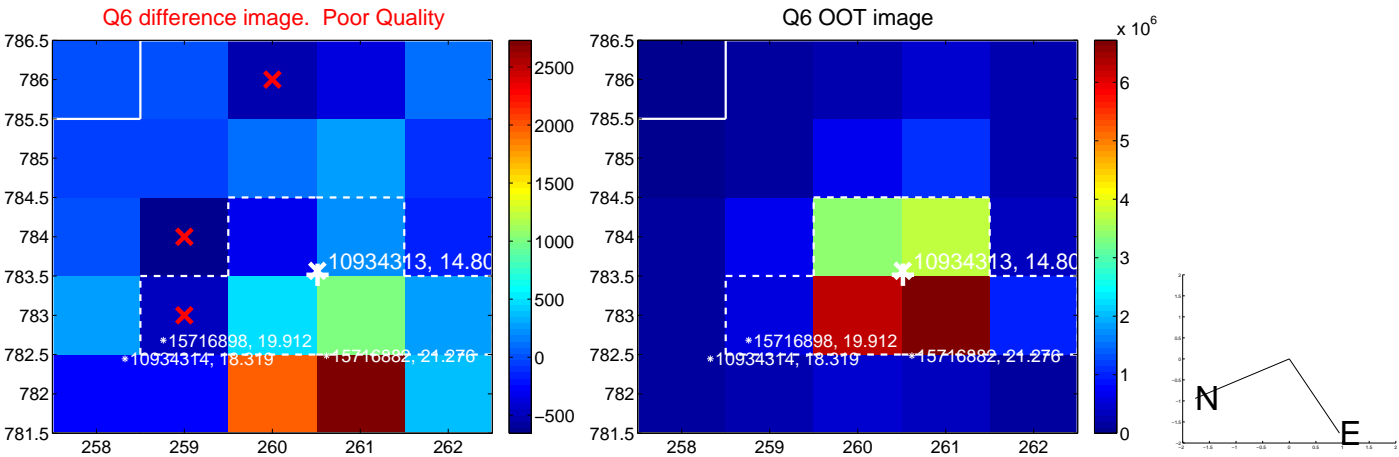
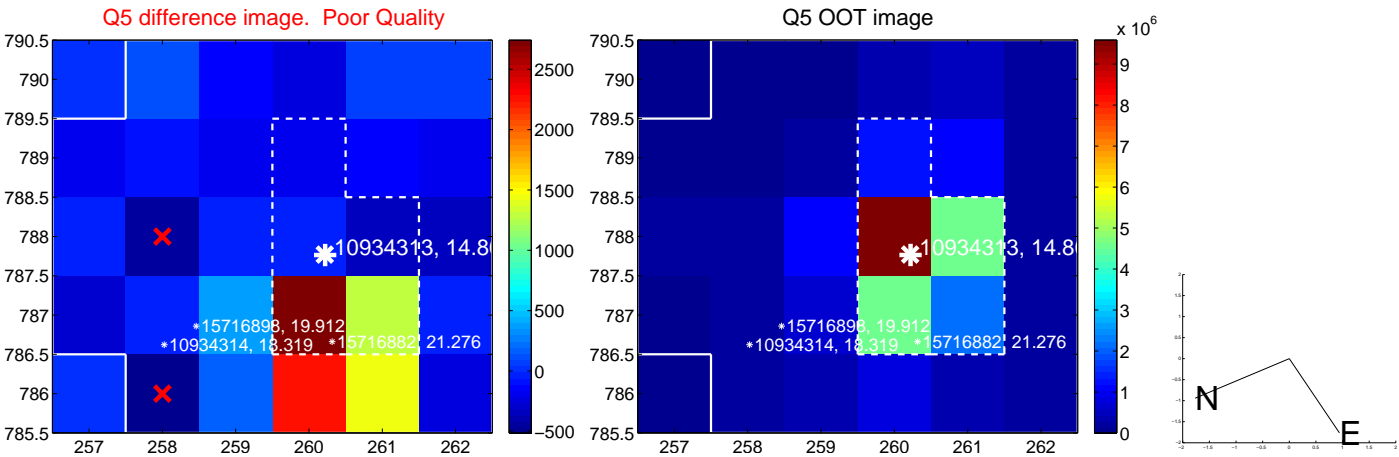


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

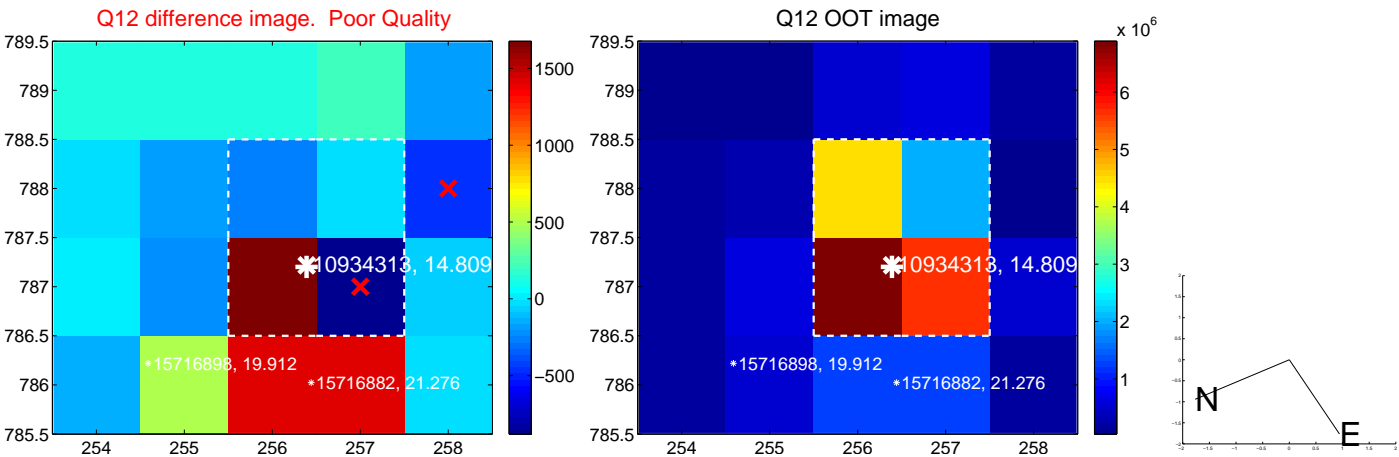
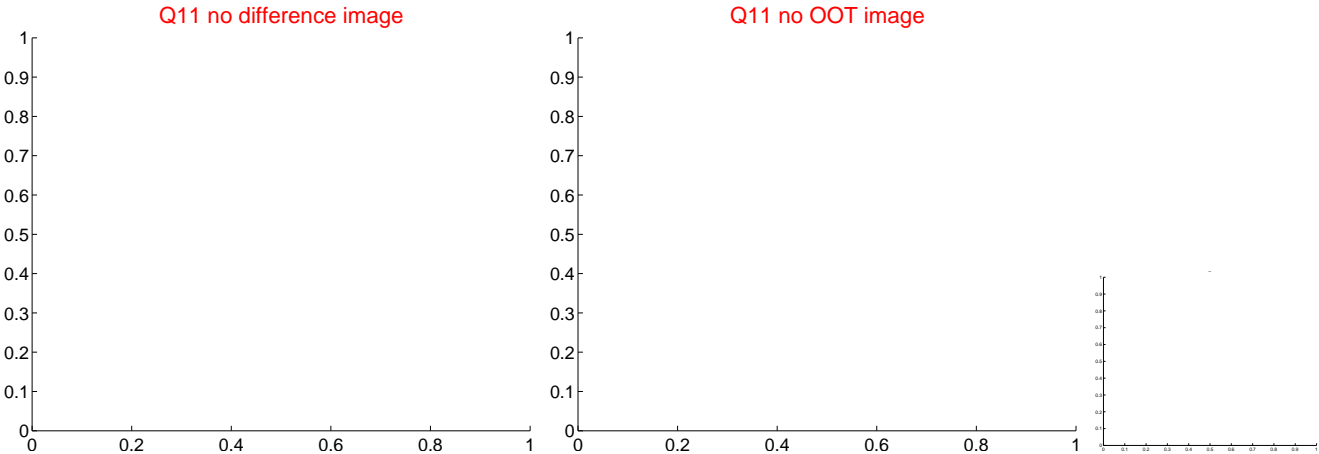
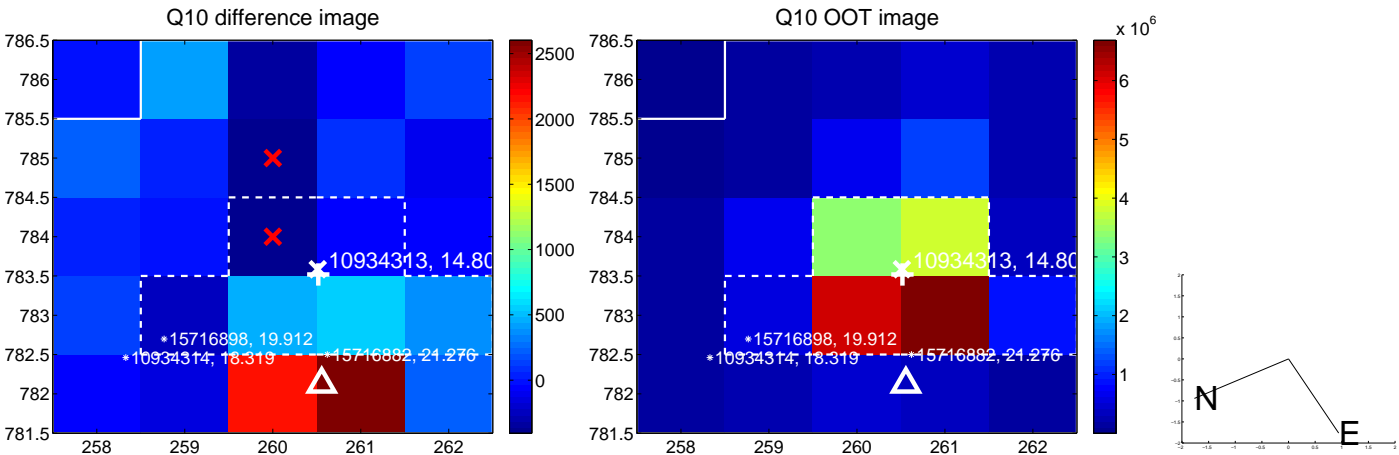
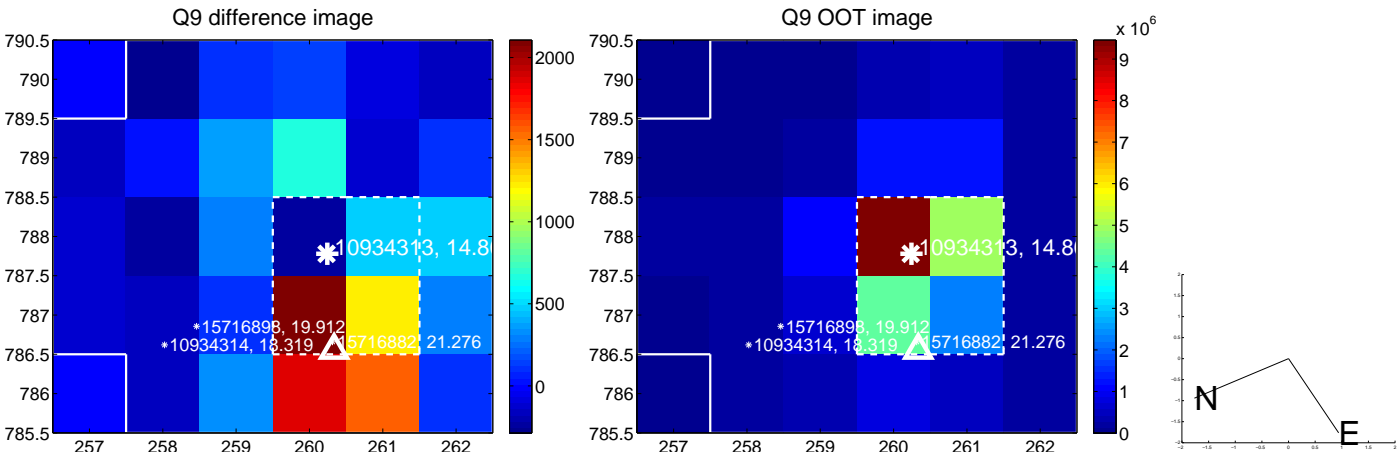
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



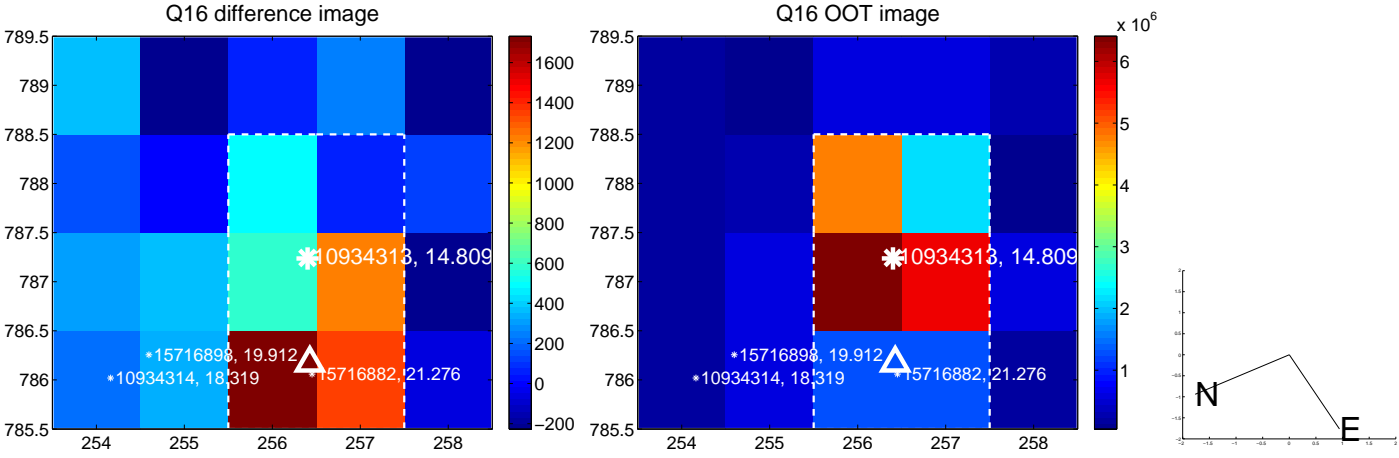
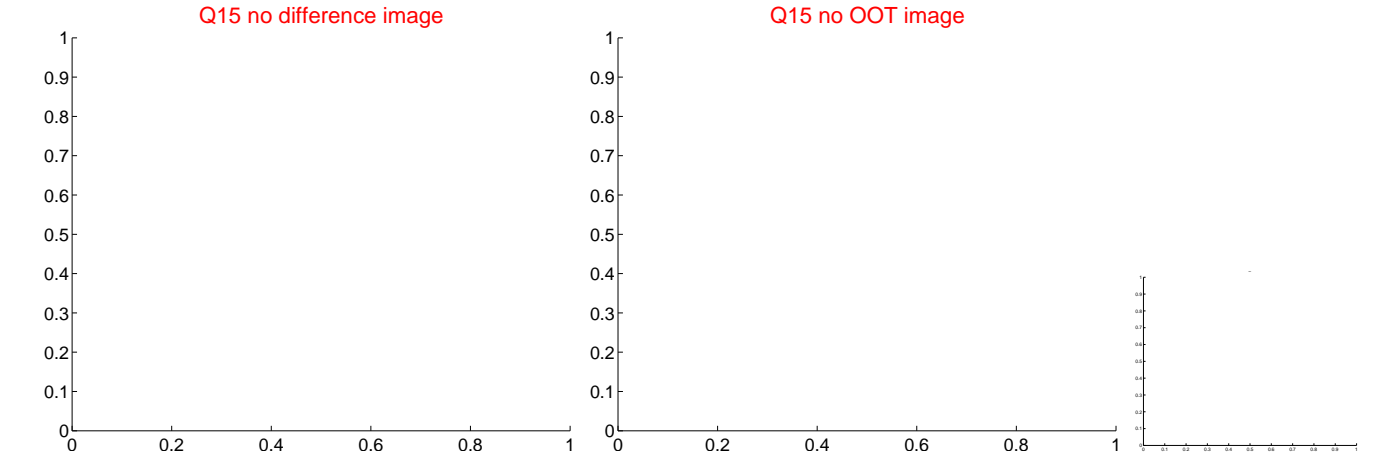
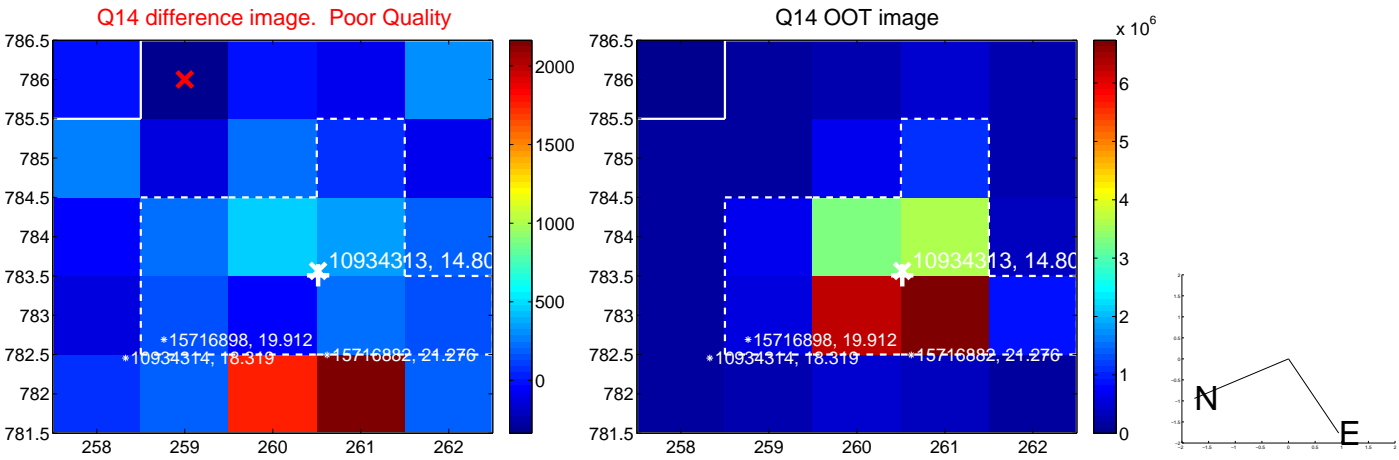
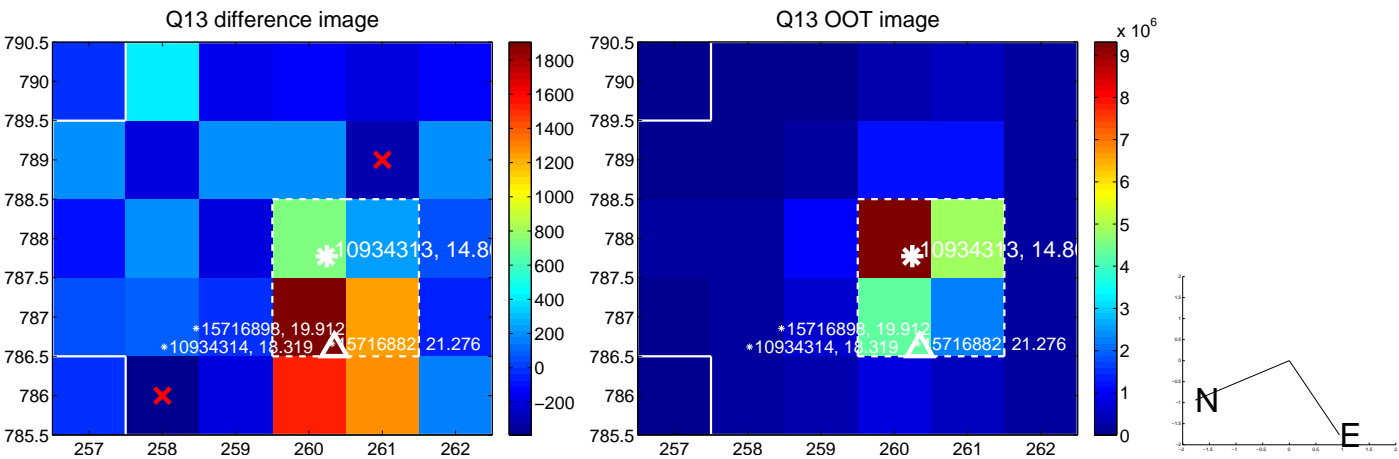
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



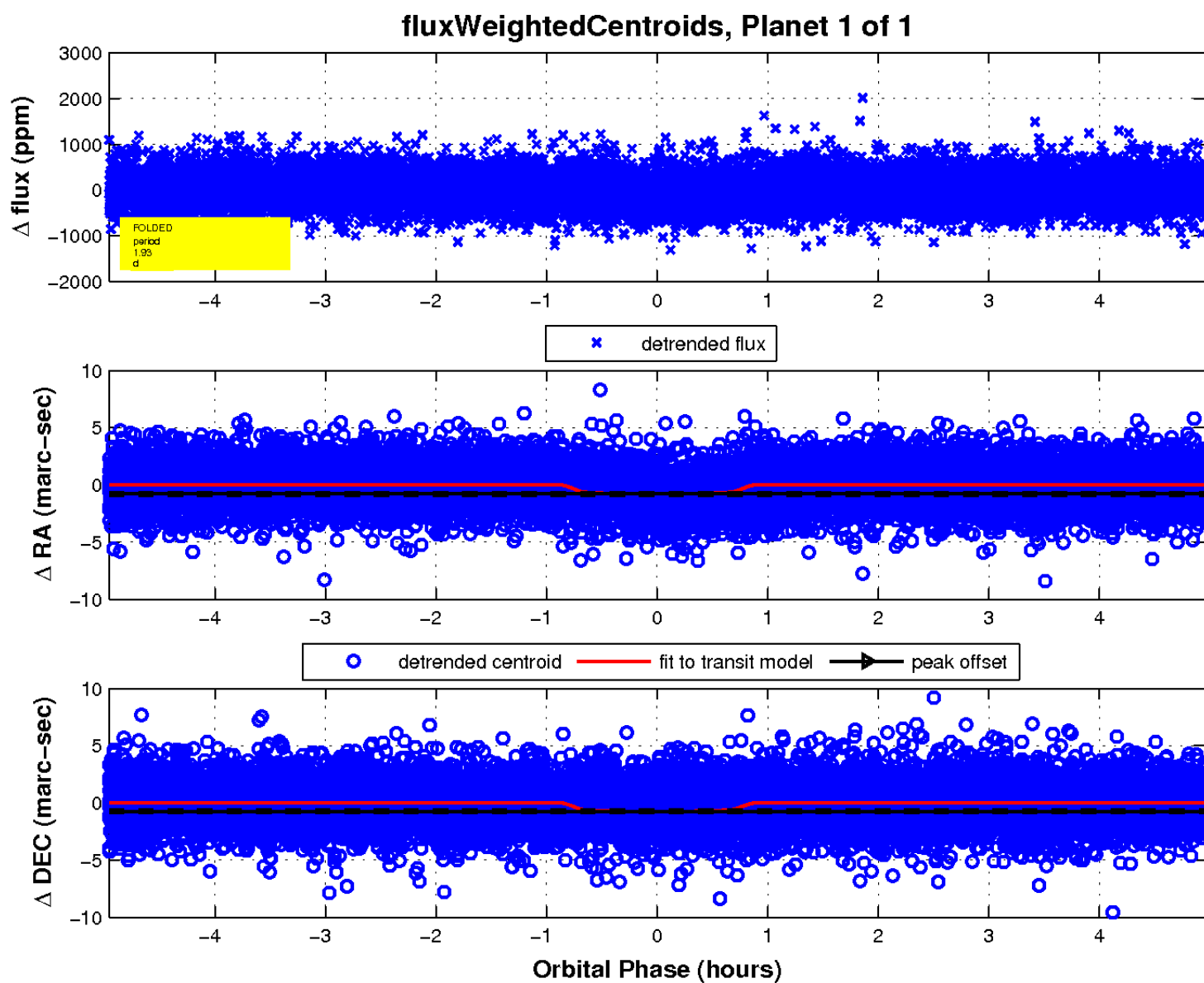
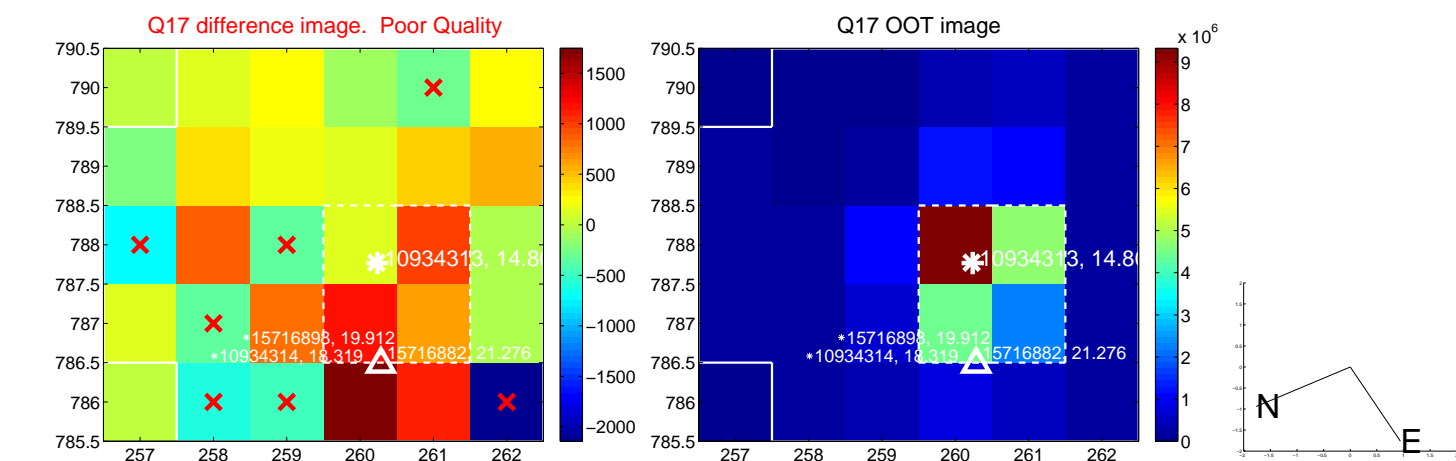
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white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

