

KIC 011718144

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})
011718144-01	OBS	2310.01	16.458137	134.021569	468.7	2.241	20.3	22.2	0.88	5475	2.52	40.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011718144-01	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.

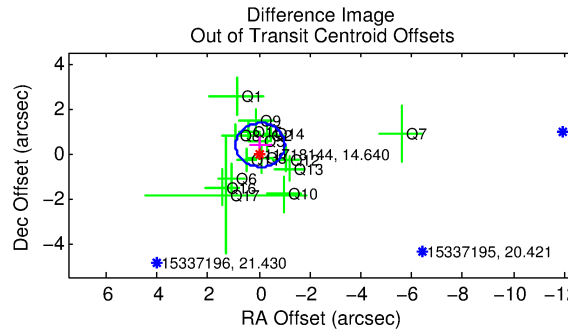
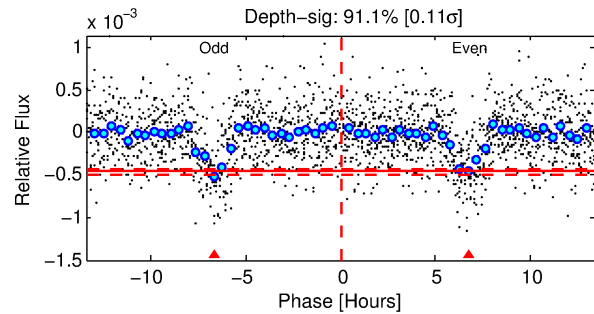
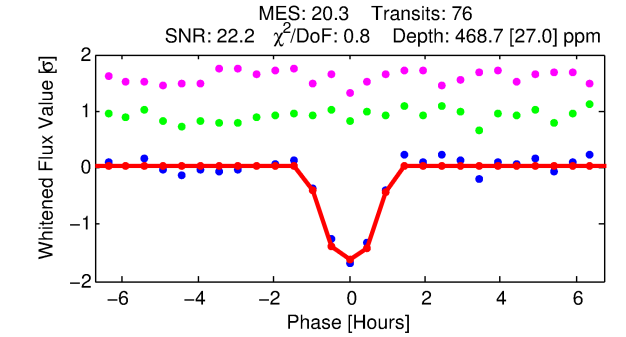
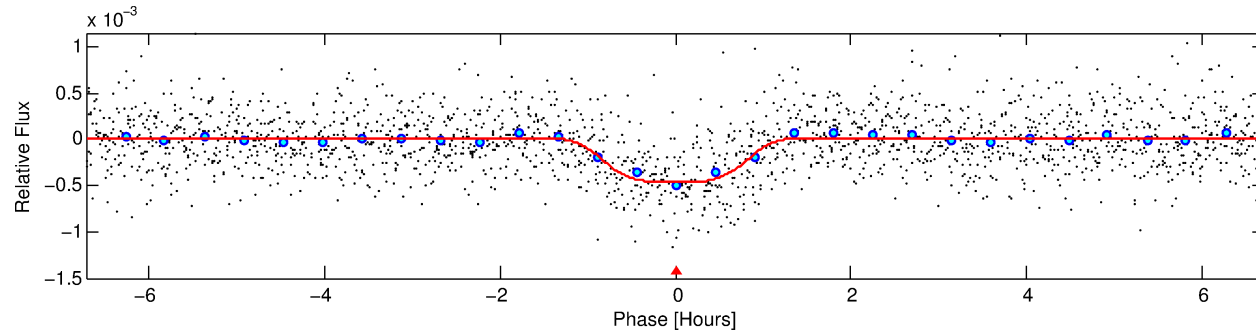
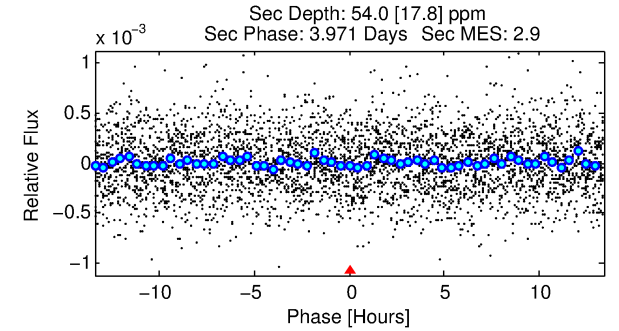
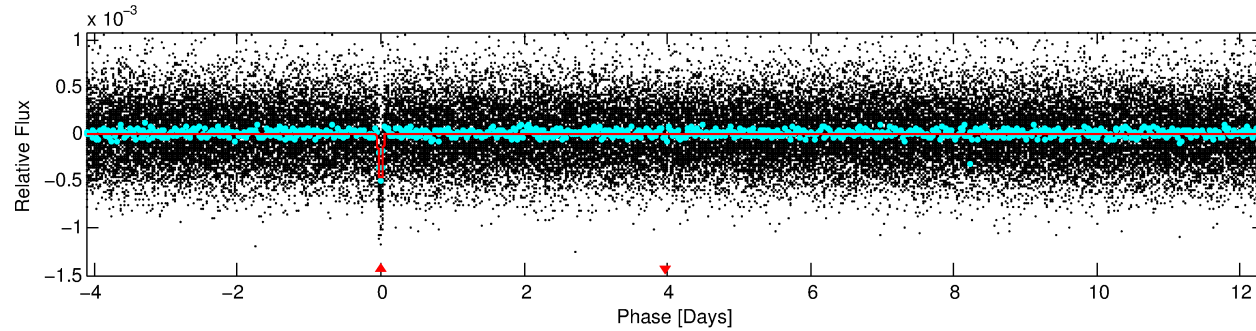
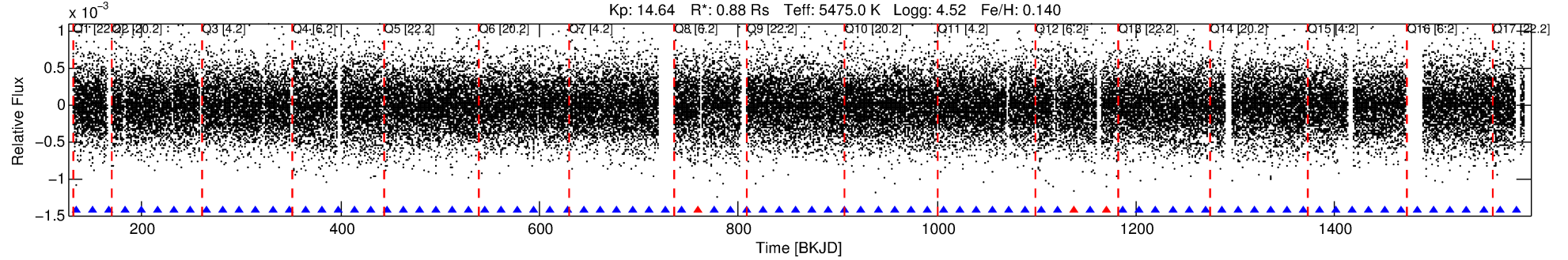
Ephemeris Match Information For 011718144-01

No Significant Match Found

DV One-Page Summary

KIC: 11718144 Candidate: 1 of 1 Period: 16.458 d

KOI: K02310.01 Corr: 0.902



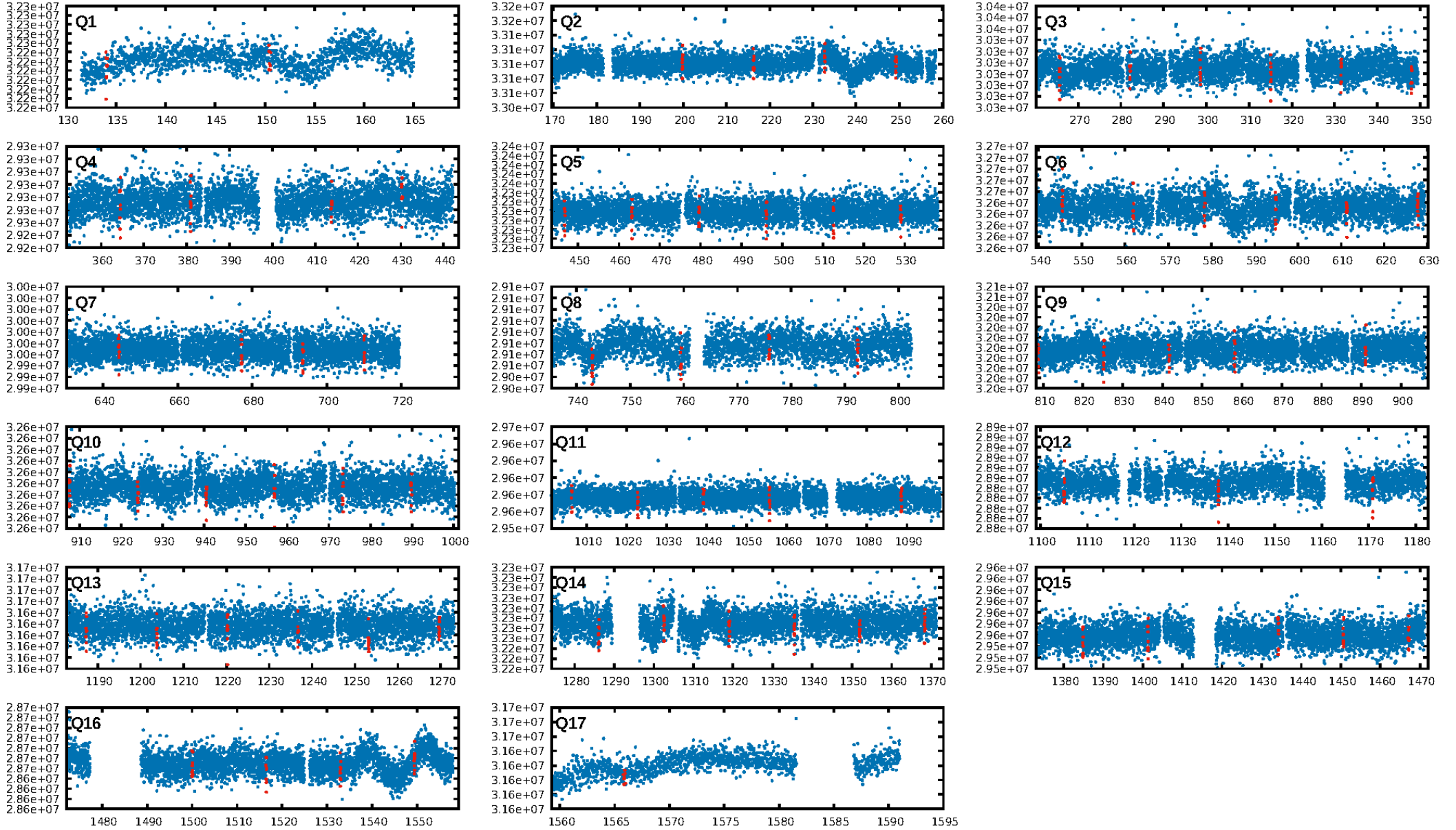
DV Fit Results:

Period = 16.45814 [0.00005] d
Epoch = 134.0216 [0.0025] BKJD
Rp/R* = 0.0261 [0.0018]
Log P/R* = 20.78 [4.97]
b = 0.96 [0.02]
Seff = 40.70 [7.80]
Teff = 644 [31] K
Rp = 2.52 [0.36] Re
a = 0.1243 [0.0145] AU
Ag = 72.47 [29.05] [2.46σ]
Teffp = 2905 [263] K [8.54σ]

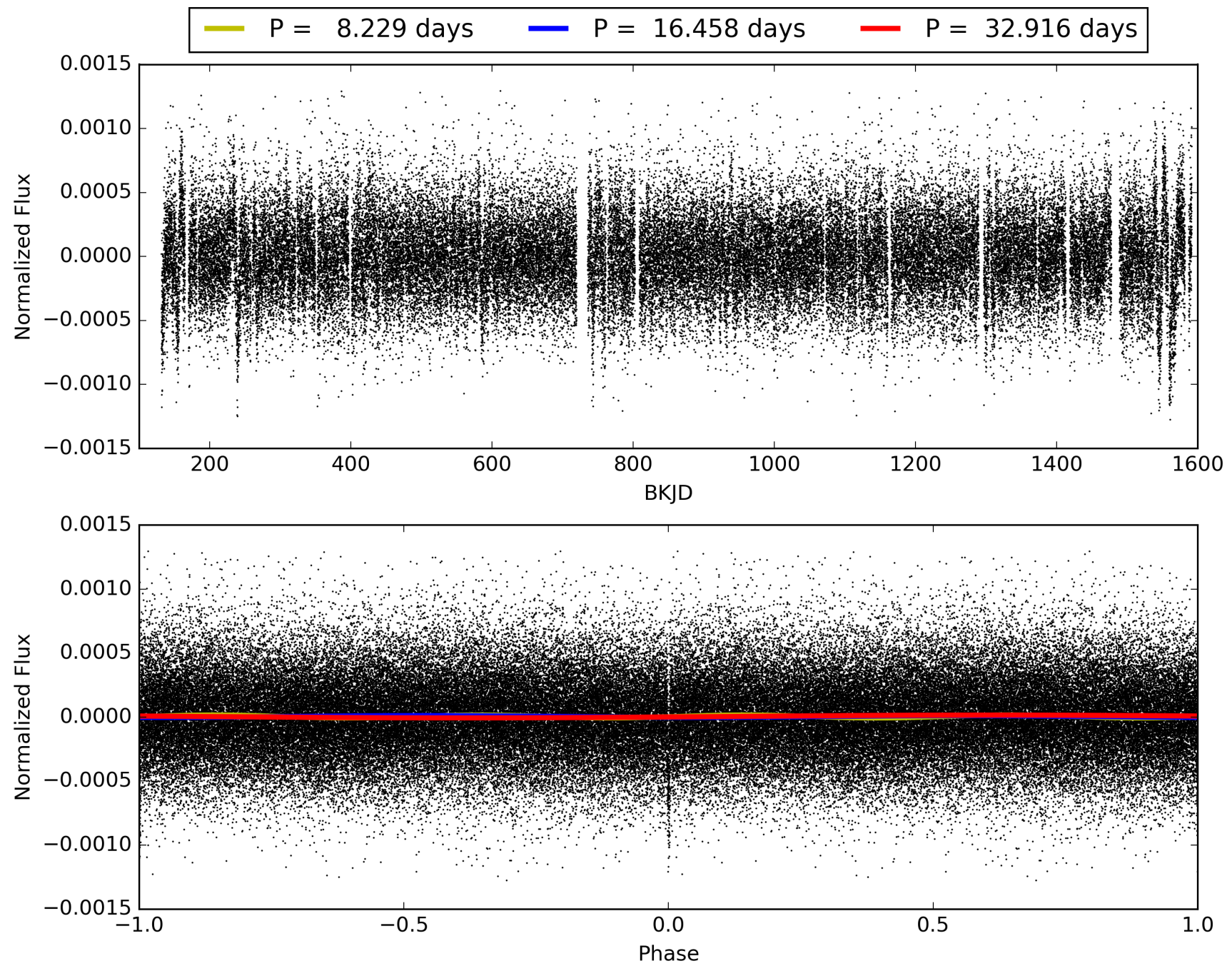
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.47e-90
RollingBand-fgt: 0.96 [70/73]
GhostDiagnostic-chr: 4.582
Centroid-sig: 10.2%
Centroid-so: 0.574 arcsec [0.85σ]
OotOffset-rm: 0.381 arcsec [1.17σ]
KicOffset-rm: 0.463 arcsec [1.62σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011718144-01, PDC Light Curves

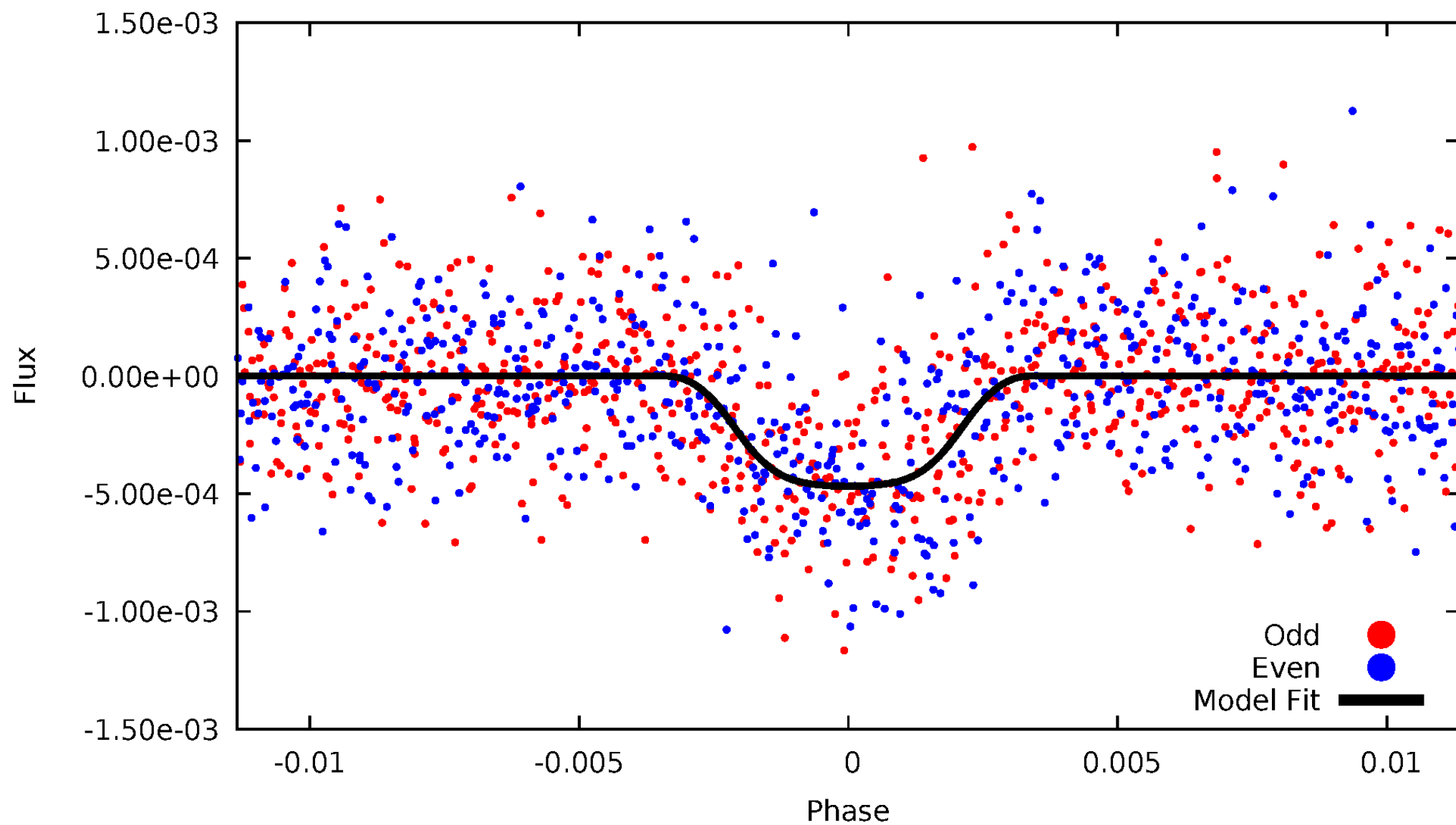


TCE 011718144-01



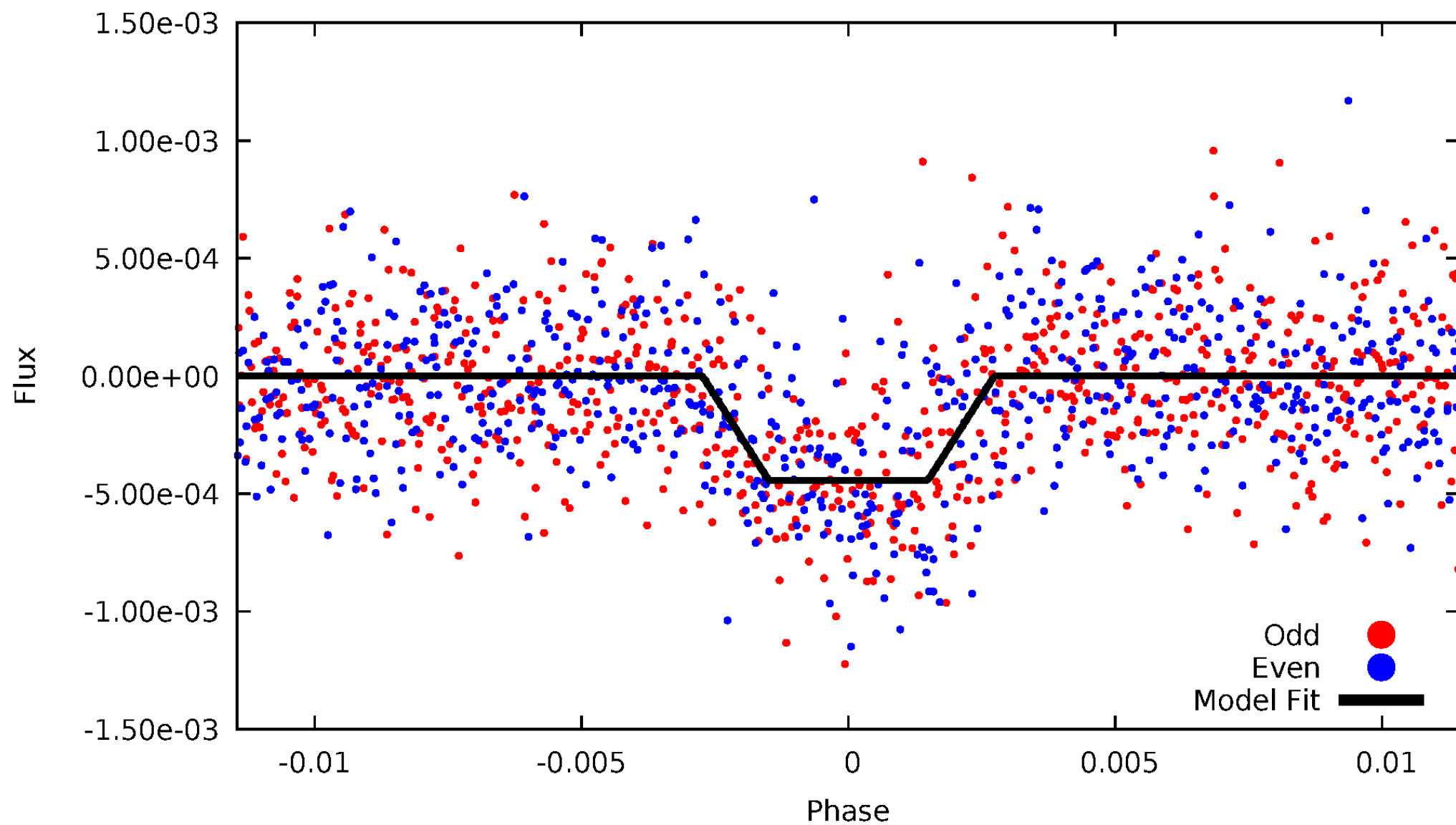
DV Odd/Even

TCE 011718144-01



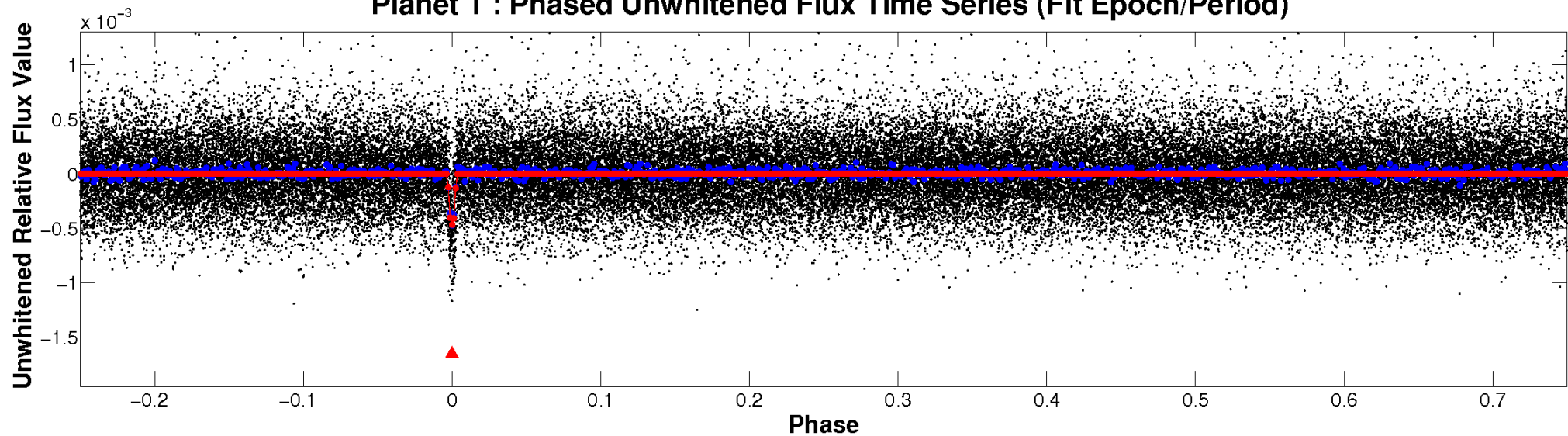
ALT Odd/Even

TCE 011718144-01

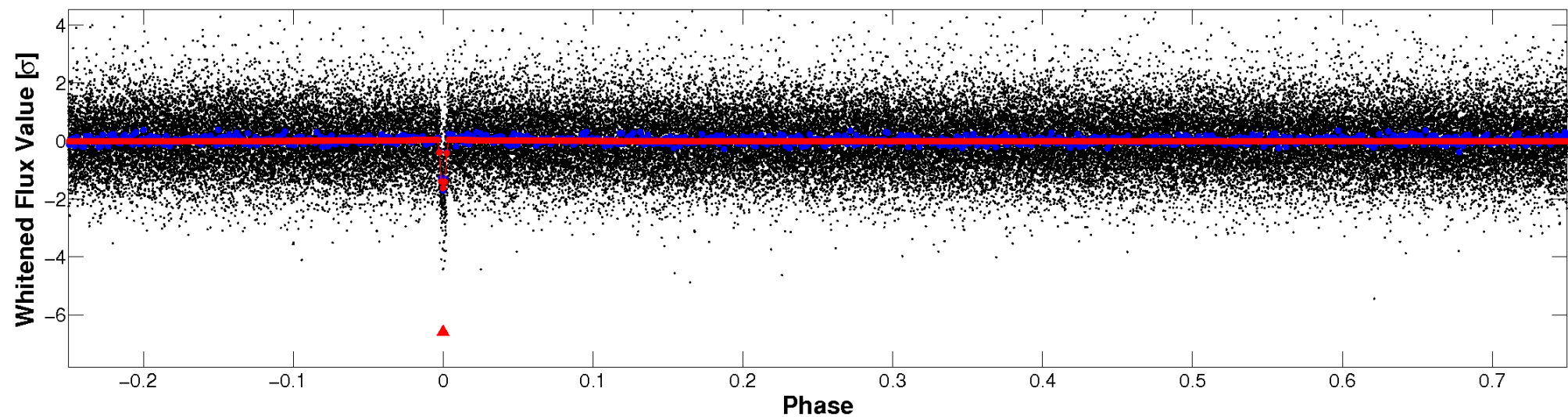


Non-Whitened Vs. Whitened Light Curve

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

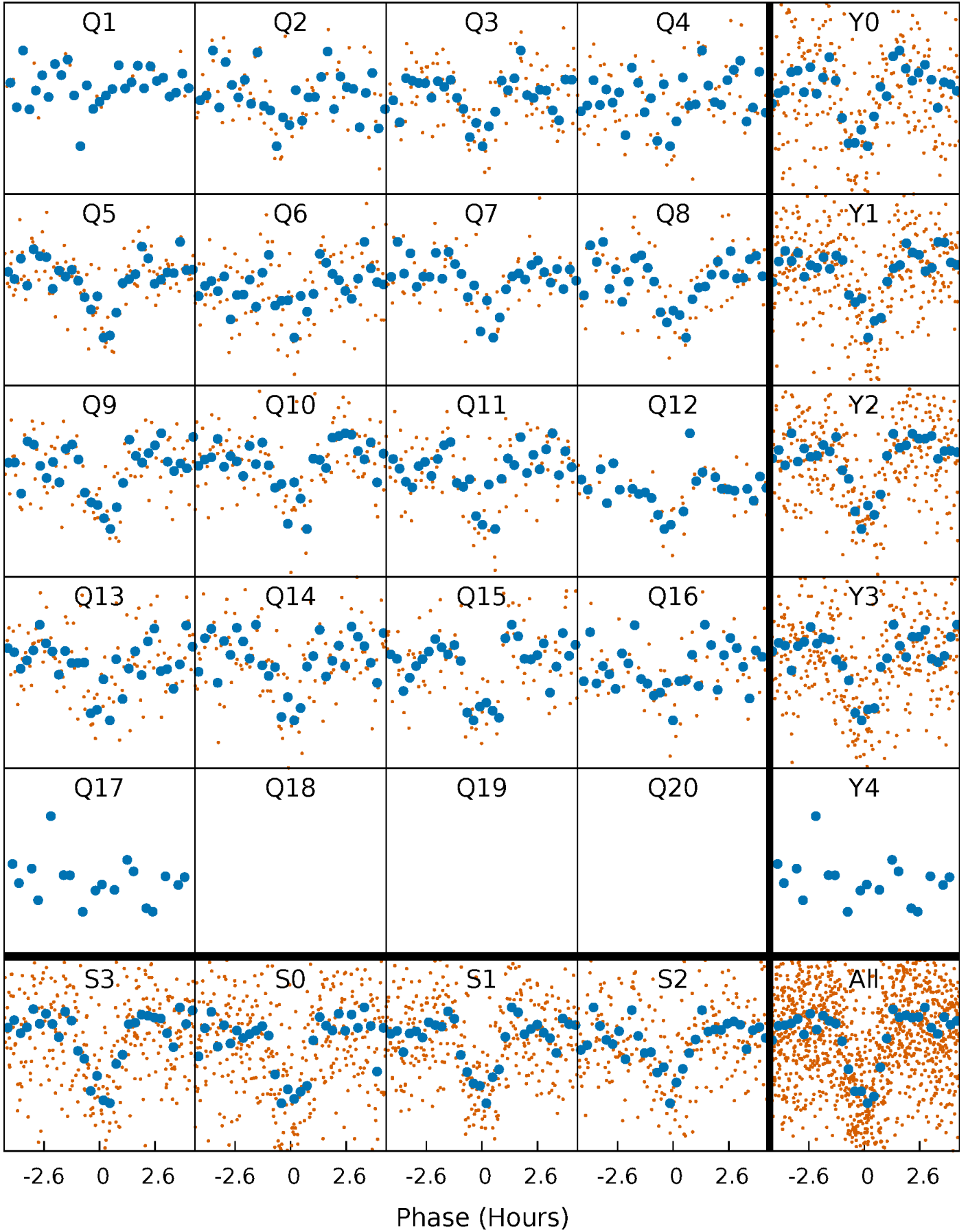


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



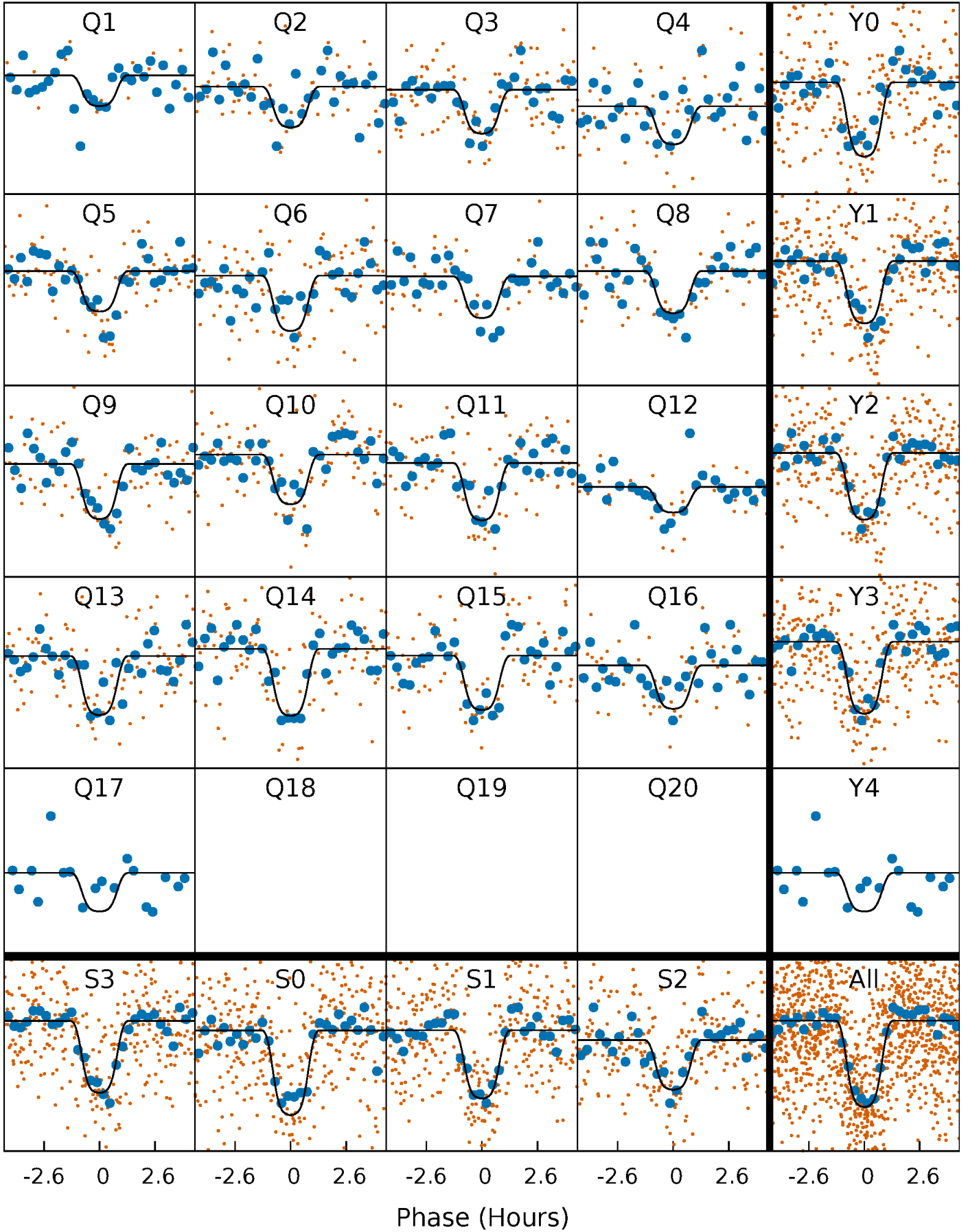
PDC Quarter-Phased Transit Curves

TCE 011718144-01 P= 16.458137 Days $T_0=134.021569$ (BKJD)



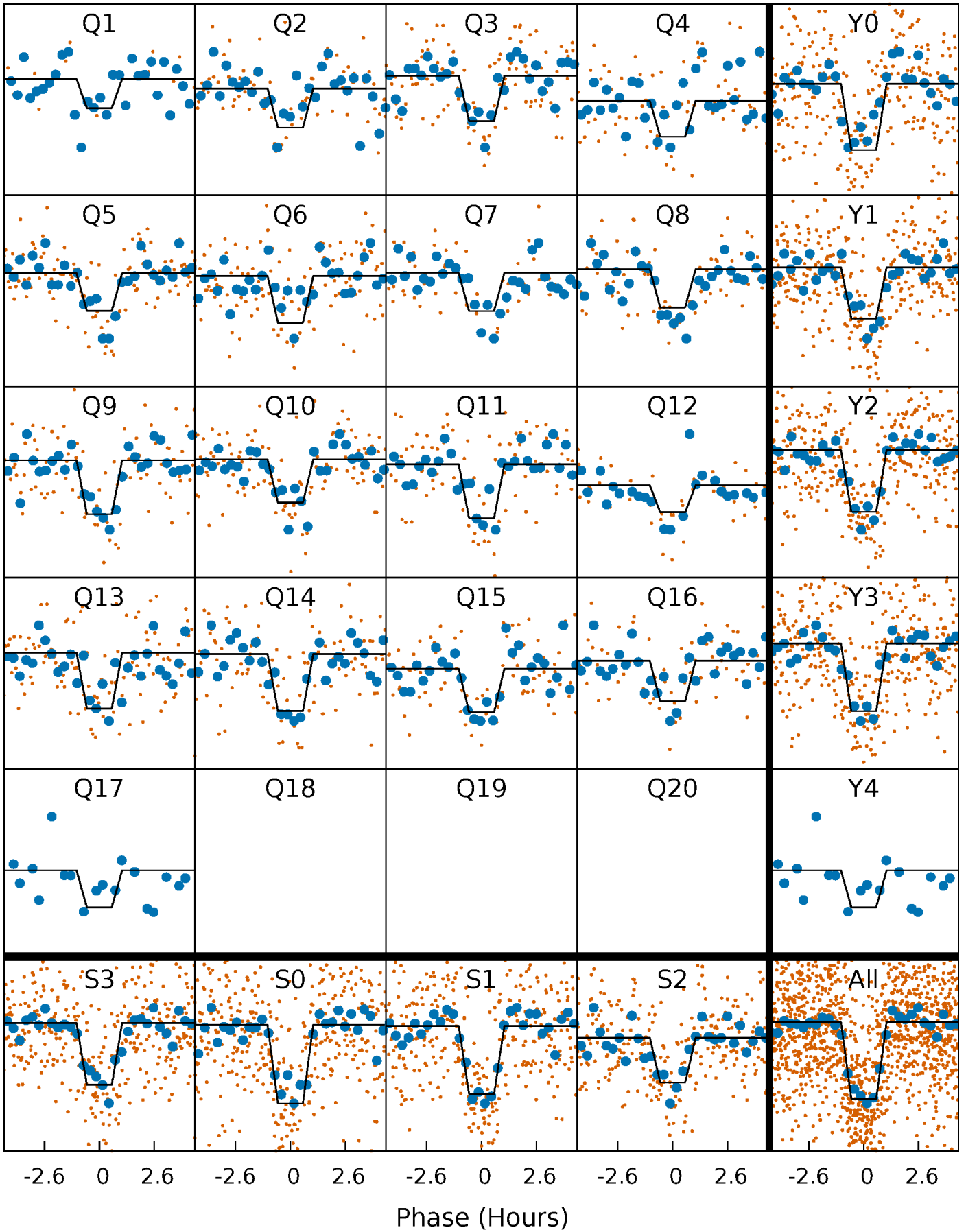
DV Quarter-Phased Transit Curves

TCE 011718144-01 P= 16.458137 Days $T_0=134.021569$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

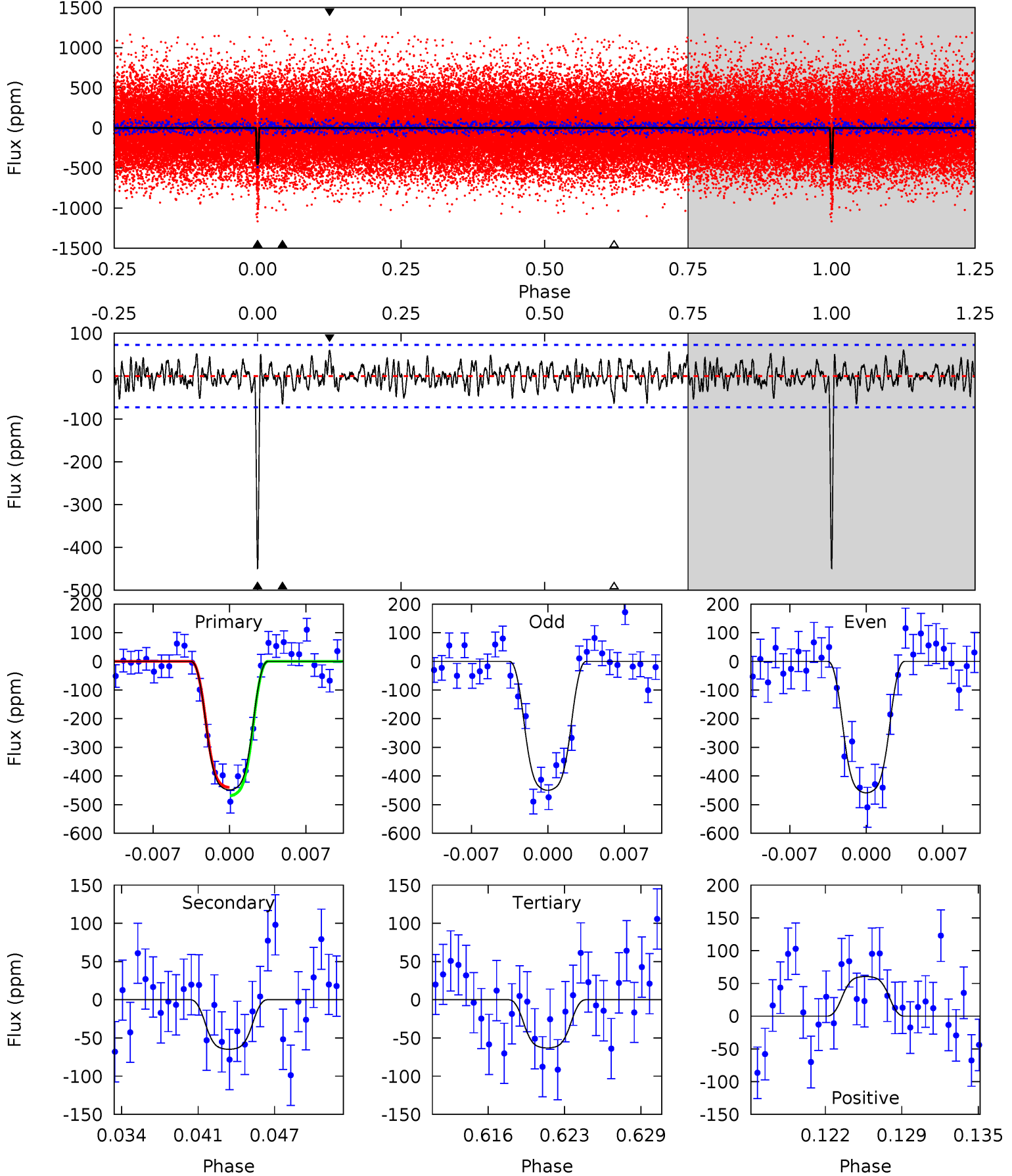
TCE 011718144-01 P= 16.458132 Days $T_0=134.021649$ (BKJD)



DV Model-Shift Uniqueness Test

011718144-01, P = 16.458137 Days, E = 117.563432 Days

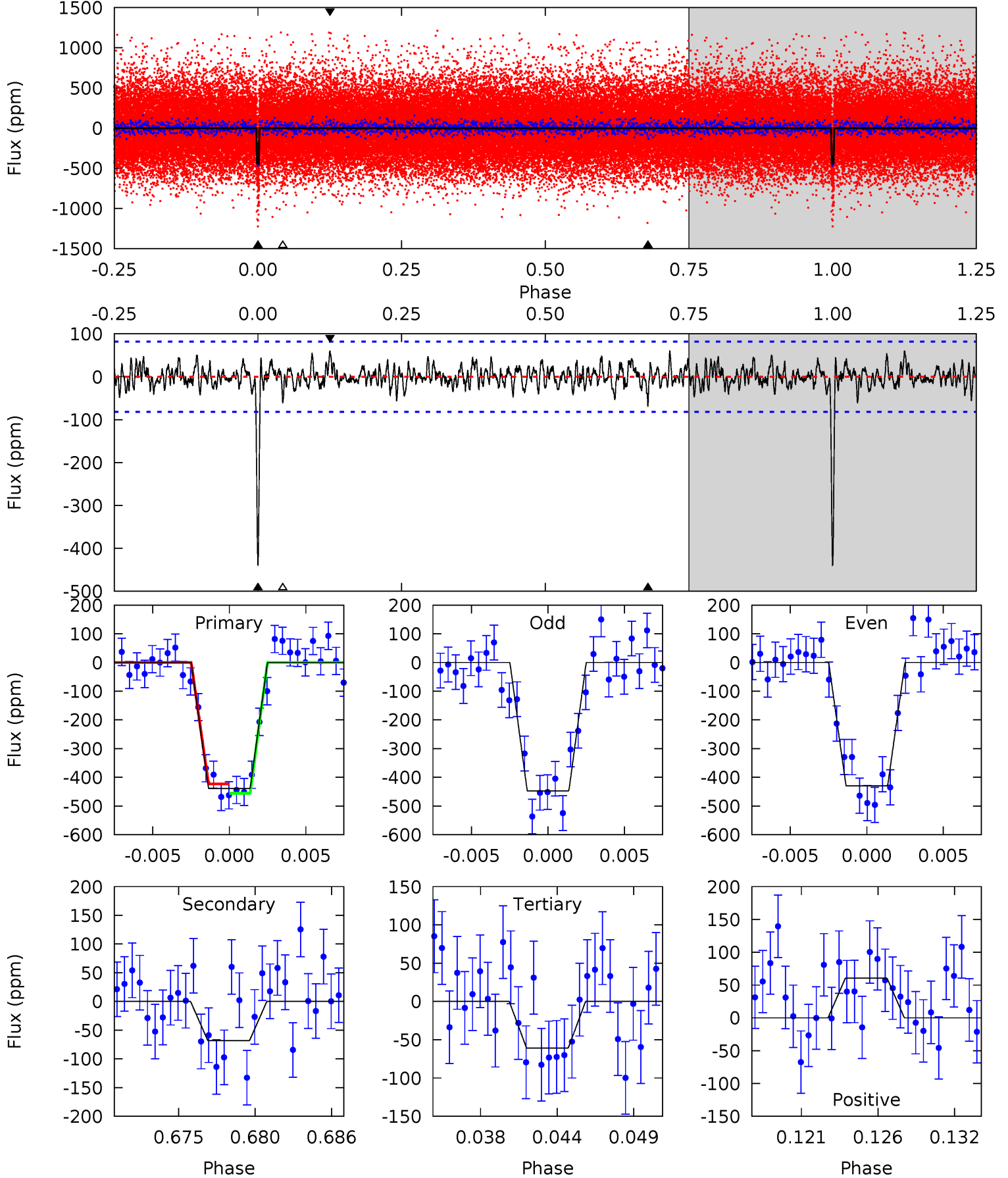
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.5	4.54	4.42	4.24	5.10	2.71	1.39	27.0	27.2	0.12	0.30	0.31	0.98	0.12	1.01



Alt Model-Shift Uniqueness Test

011718144-01, P = 16.458132 Days, E = 117.563517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	4.29	3.83	3.81	5.14	2.78	1.19	23.8	23.8	0.46	0.49	0.56	0.96	0.12	1.04



Stellar Parameters For KIC 011718144

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5475^{+73}_{-82}	$4.521^{+0.028}_{-0.105}$	$0.140^{+0.150}_{-0.150}$	$0.884^{+0.112}_{-0.042}$	$0.946^{+0.044}_{-0.058}$	$1.926^{+0.234}_{-0.559}$
	+1%/-1%	+1%/-2%	+107%/-107%	+13%/-5%	+5%/-6%	+12%/-29%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011718144-01 / KOI 2310.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 14	$2.57^{+0.23}_{-0.20}$	907^{+30}_{-21}	3500^{+156}_{-154}	82^{+26}_{-21}
Alt.	-68 ± 16	$2.05^{+0.23}_{-0.20}$	907^{+32}_{-20}	3794^{+194}_{-195}	134^{+46}_{-36}

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 $A_{obs} \gg 1.0$

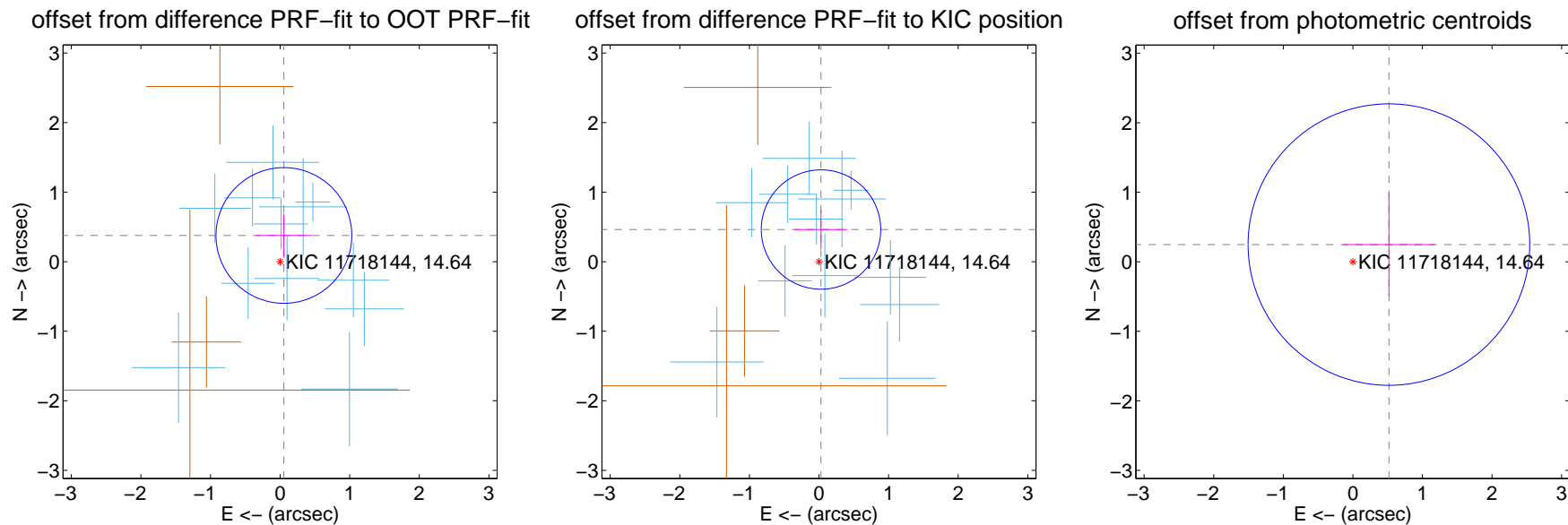
DV Centroid Data

Supplemental centroid analysis for 011718144-01. Kepler magnitude: 14.64. Transit SNR 22.23

There are 12 quarters with good PRF difference image offsets

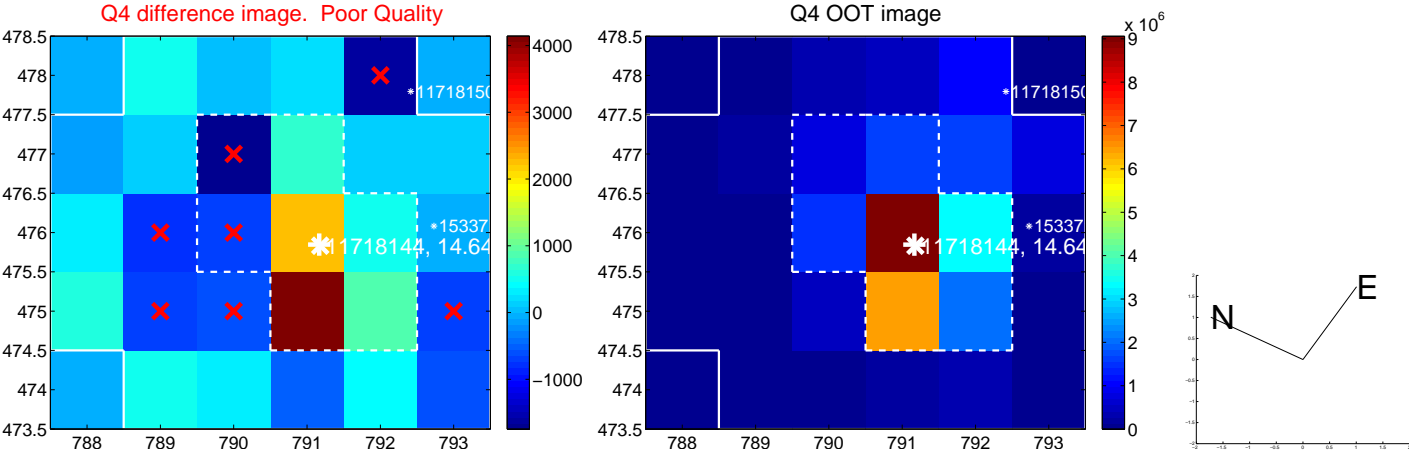
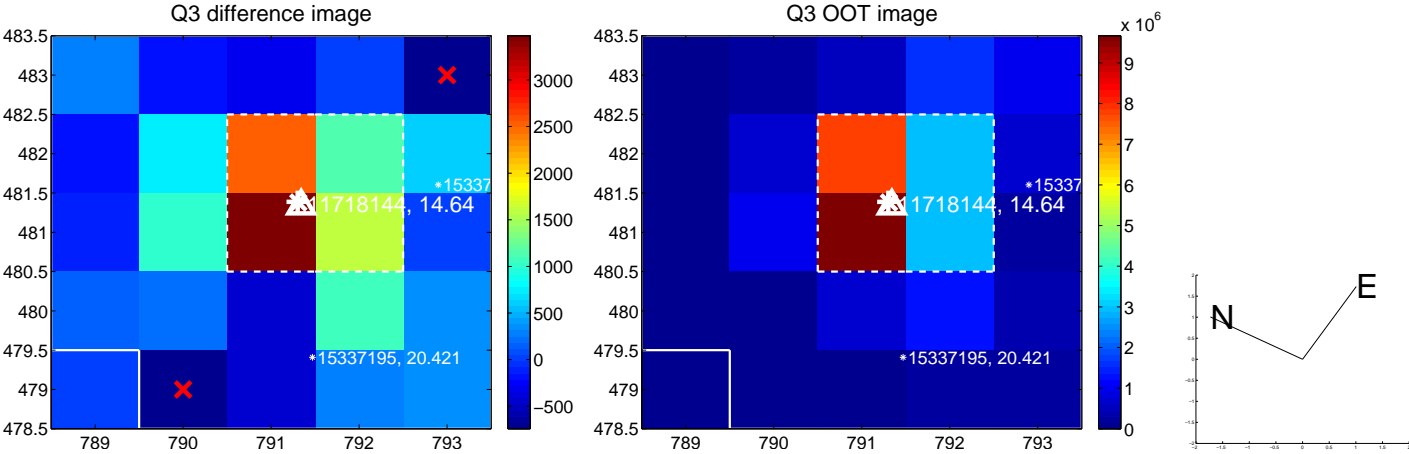
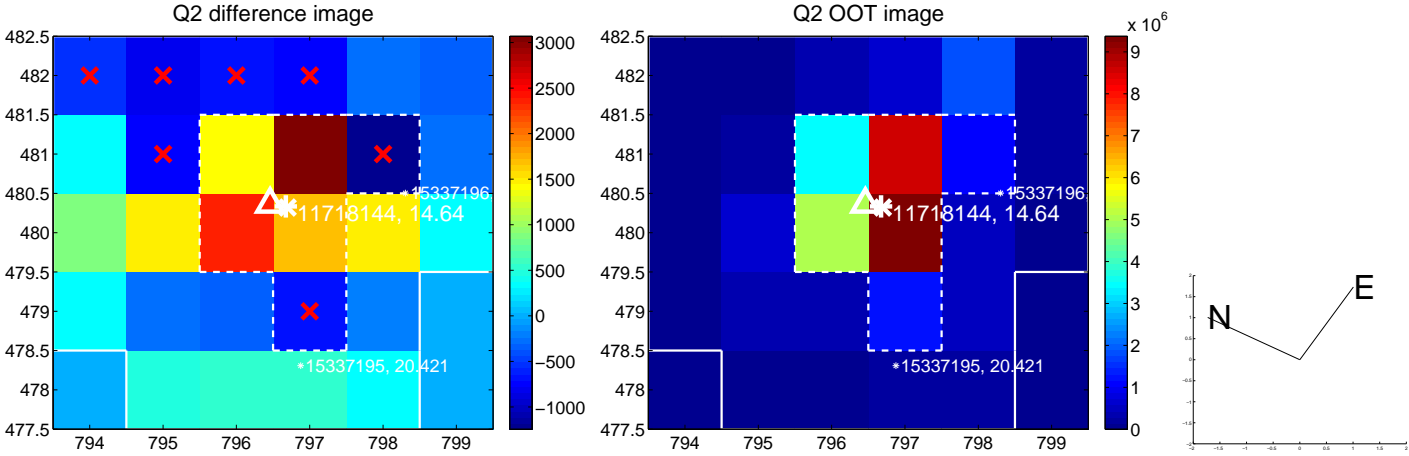
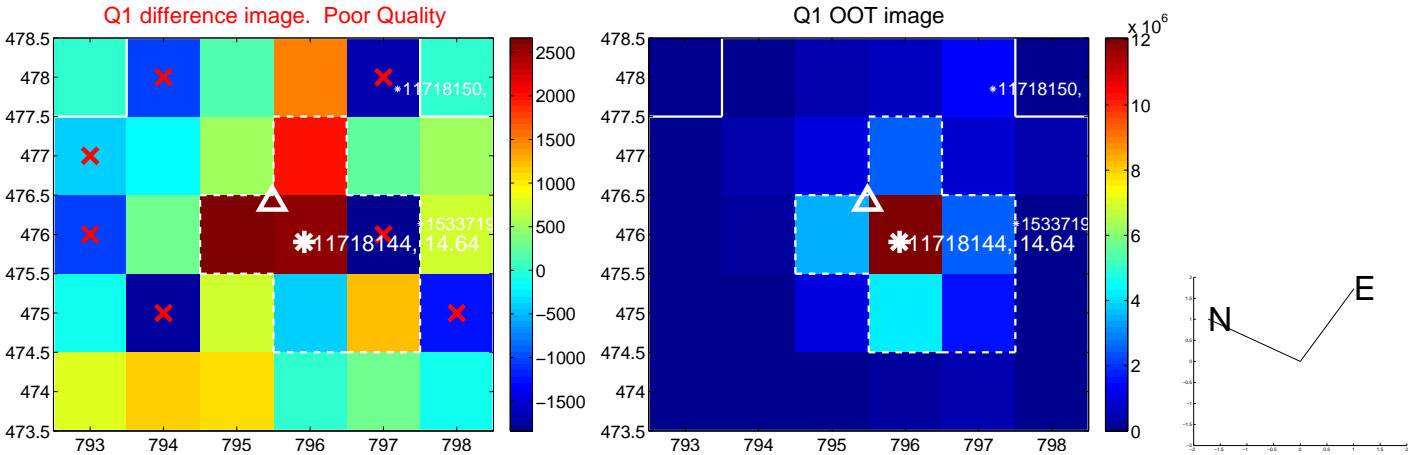
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.381 ± 0.325	1.17	-0.054 ± 0.402	0.377 ± 0.313
PRF-fit source offset from KIC position	0.463 ± 0.286	1.62	-0.029 ± 0.379	0.463 ± 0.281
photometric centroid source offset	0.57 ± 0.67	0.85	-0.52 ± 0.66	0.25 ± 0.74

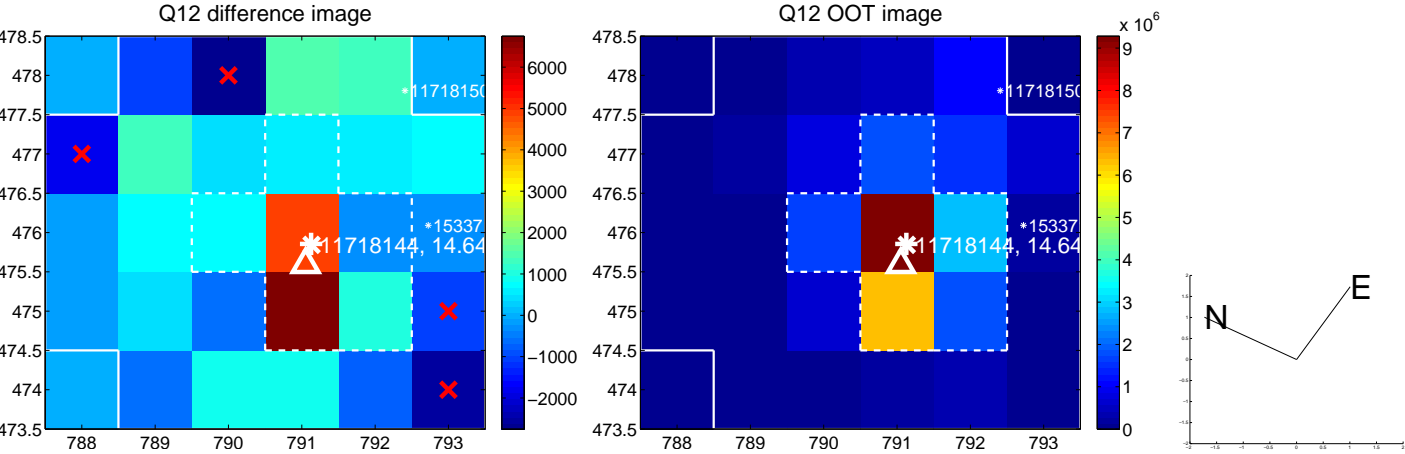
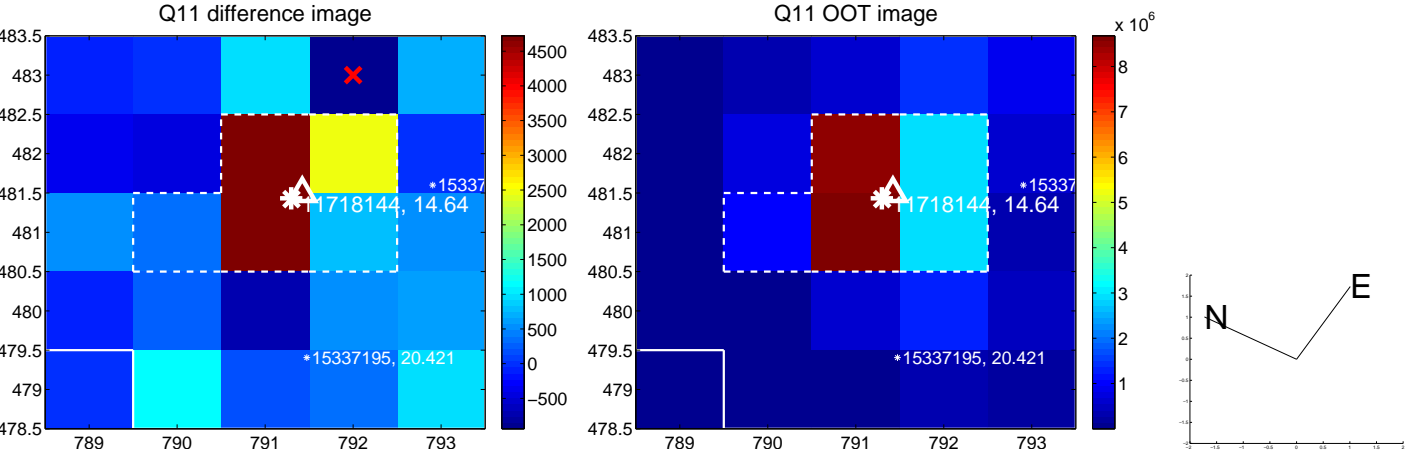
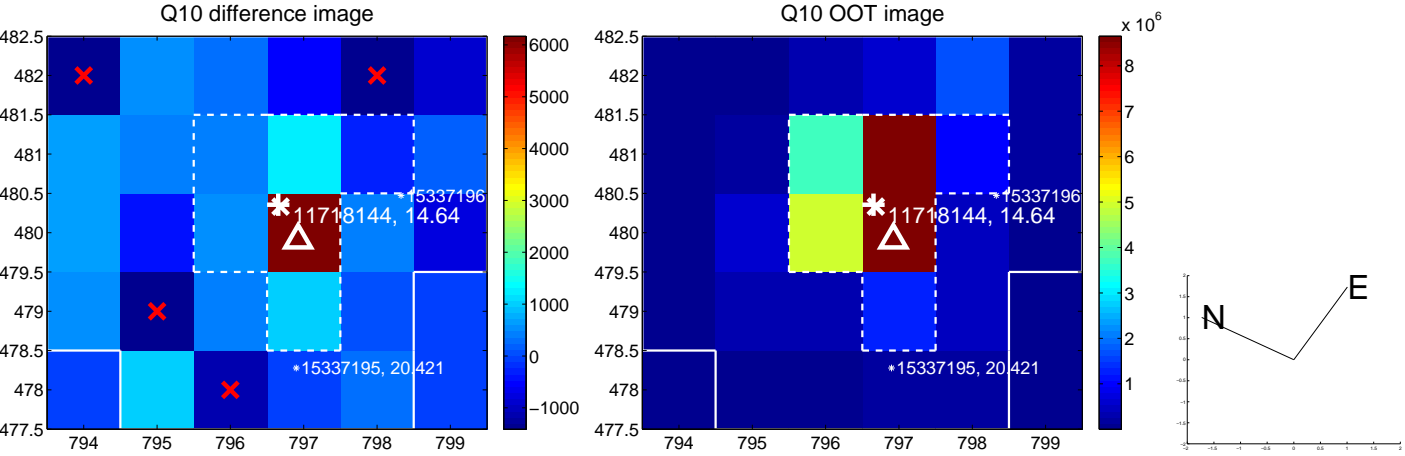
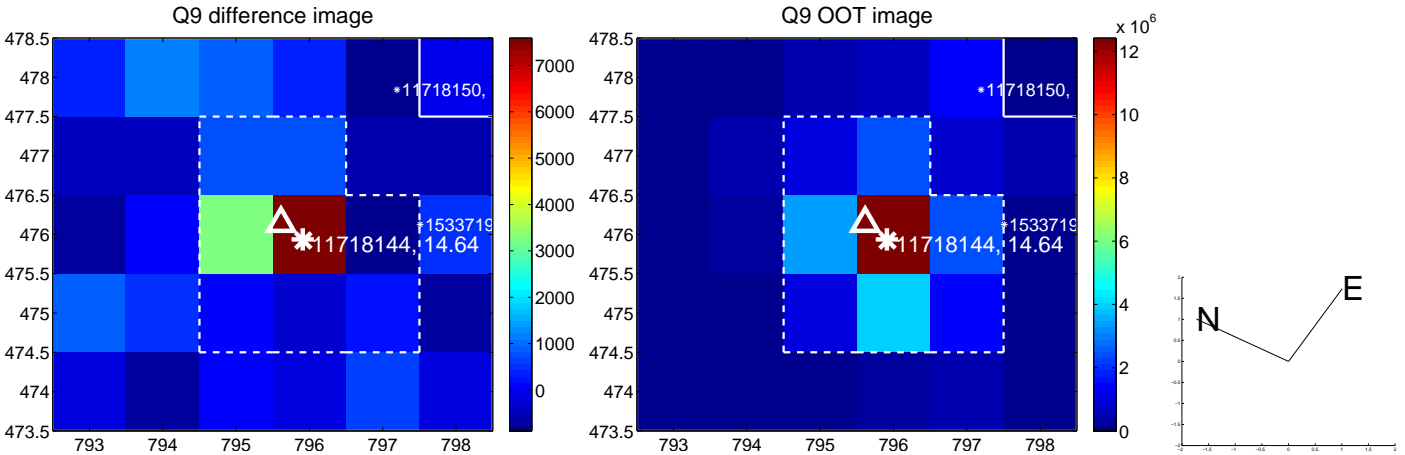


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

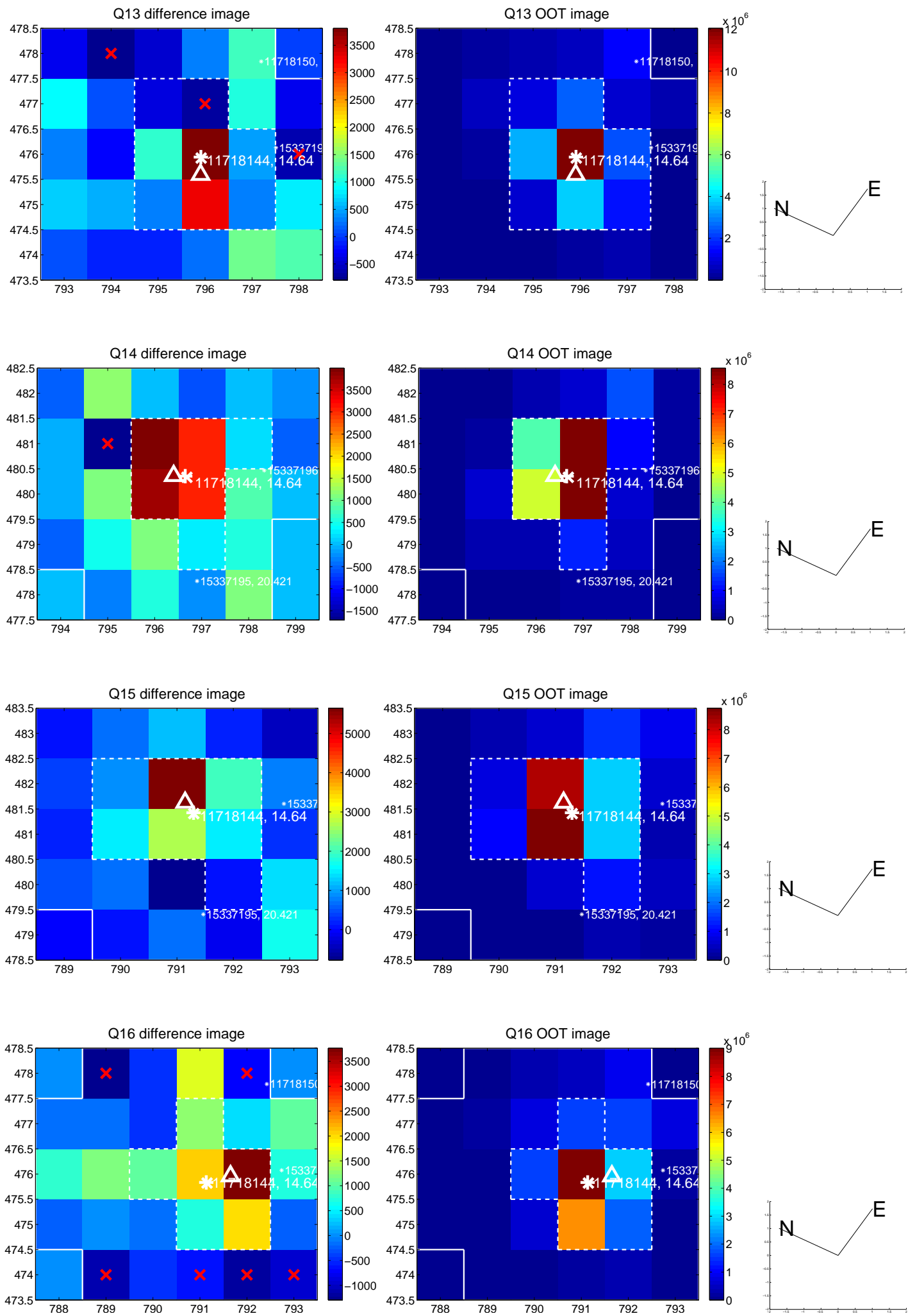
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



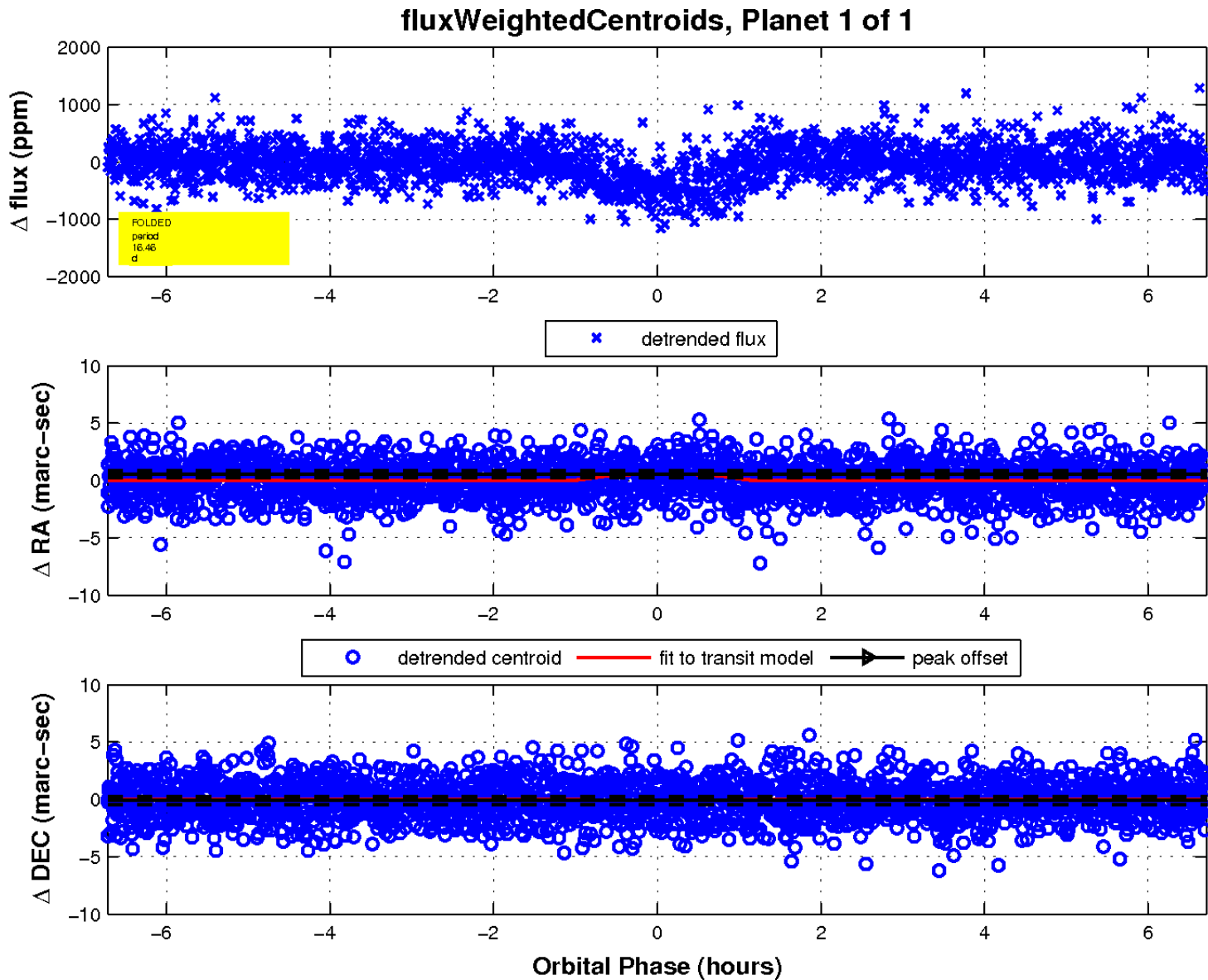
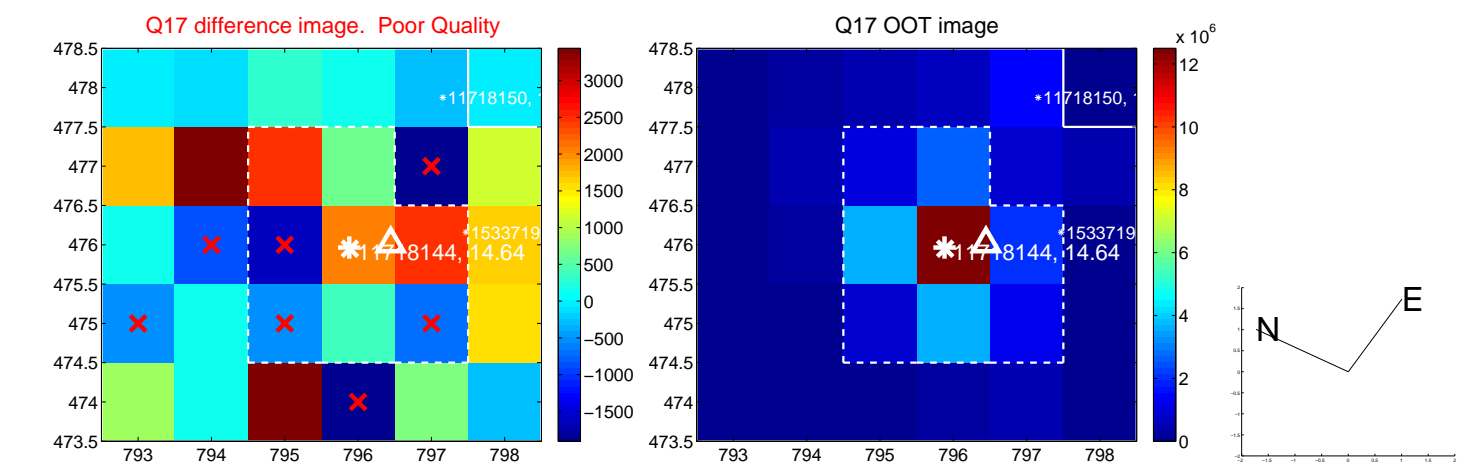
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

