

KIC 011568224

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})
011568224-01	OBS	3973.01	0.882051	132.024157	20.8	9.473	14.1	3.0	0.91	6168	0.42	3514.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011568224-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV

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.

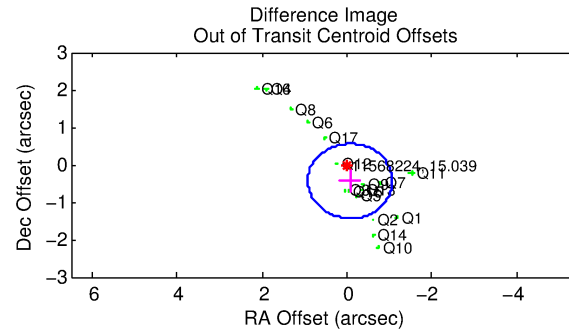
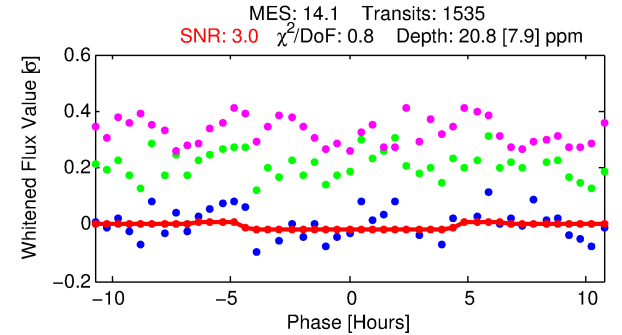
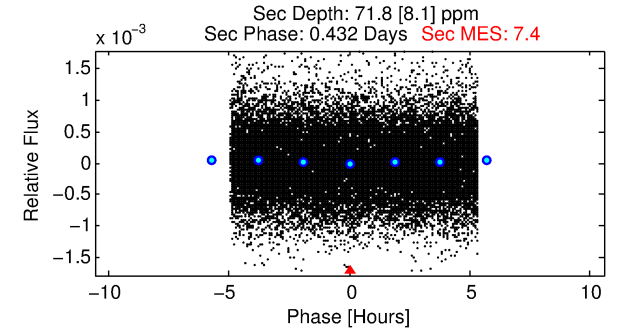
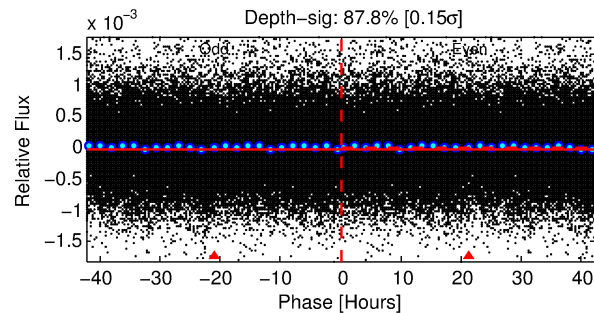
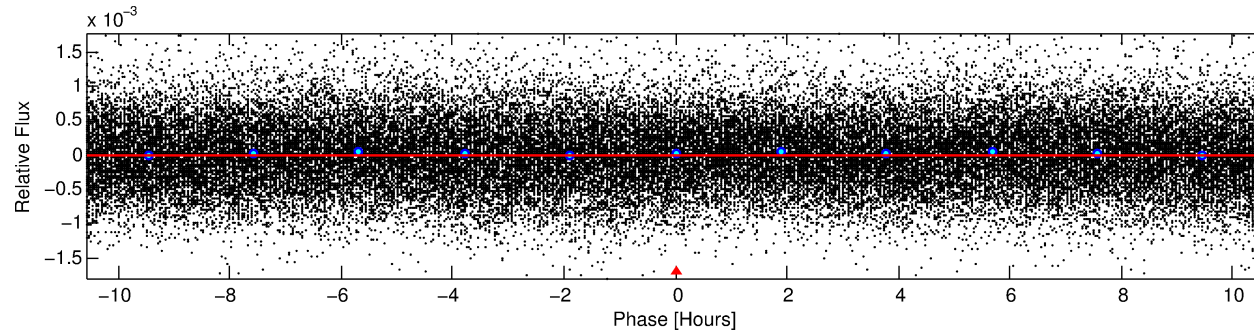
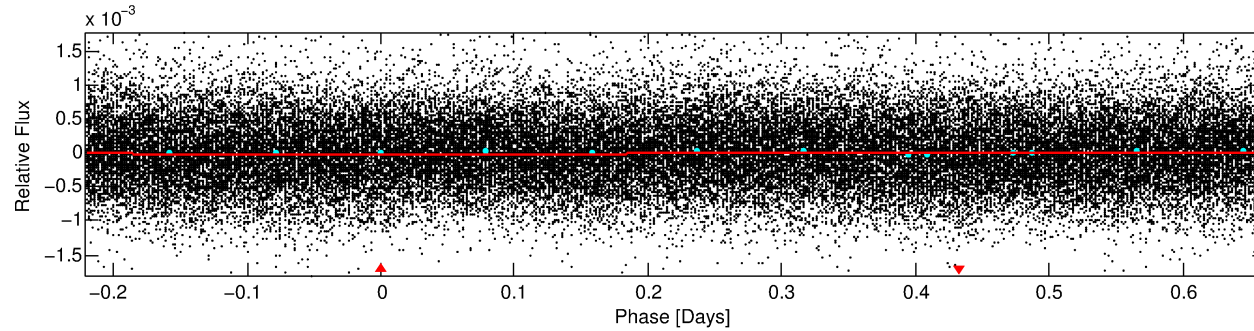
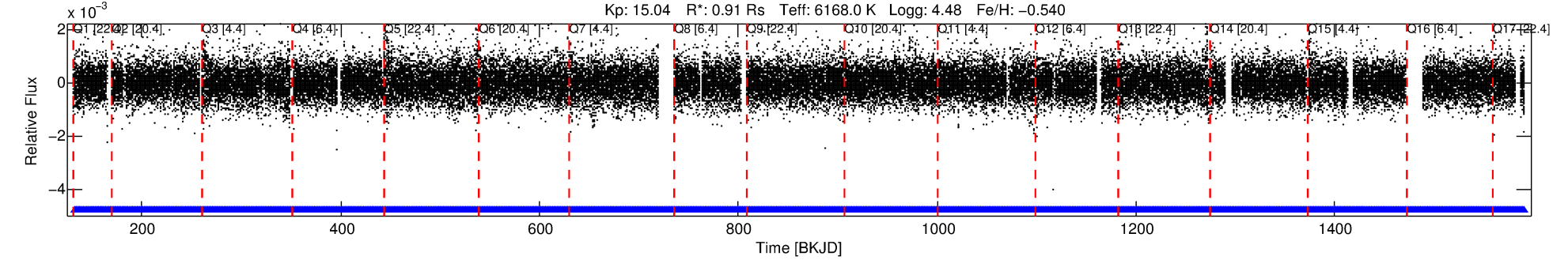
Ephemeris Match Information For 011568224-01

No Significant Match Found

DV One-Page Summary

KIC: 11568224 Candidate: 1 of 1 Period: 0.882 d
KOI: K03973 Corr: No Ephemeris Match

Kp: 15.04 R*: 0.91 Rs Teff: 6168.0 K Logg: 4.48 Fe/H: -0.540



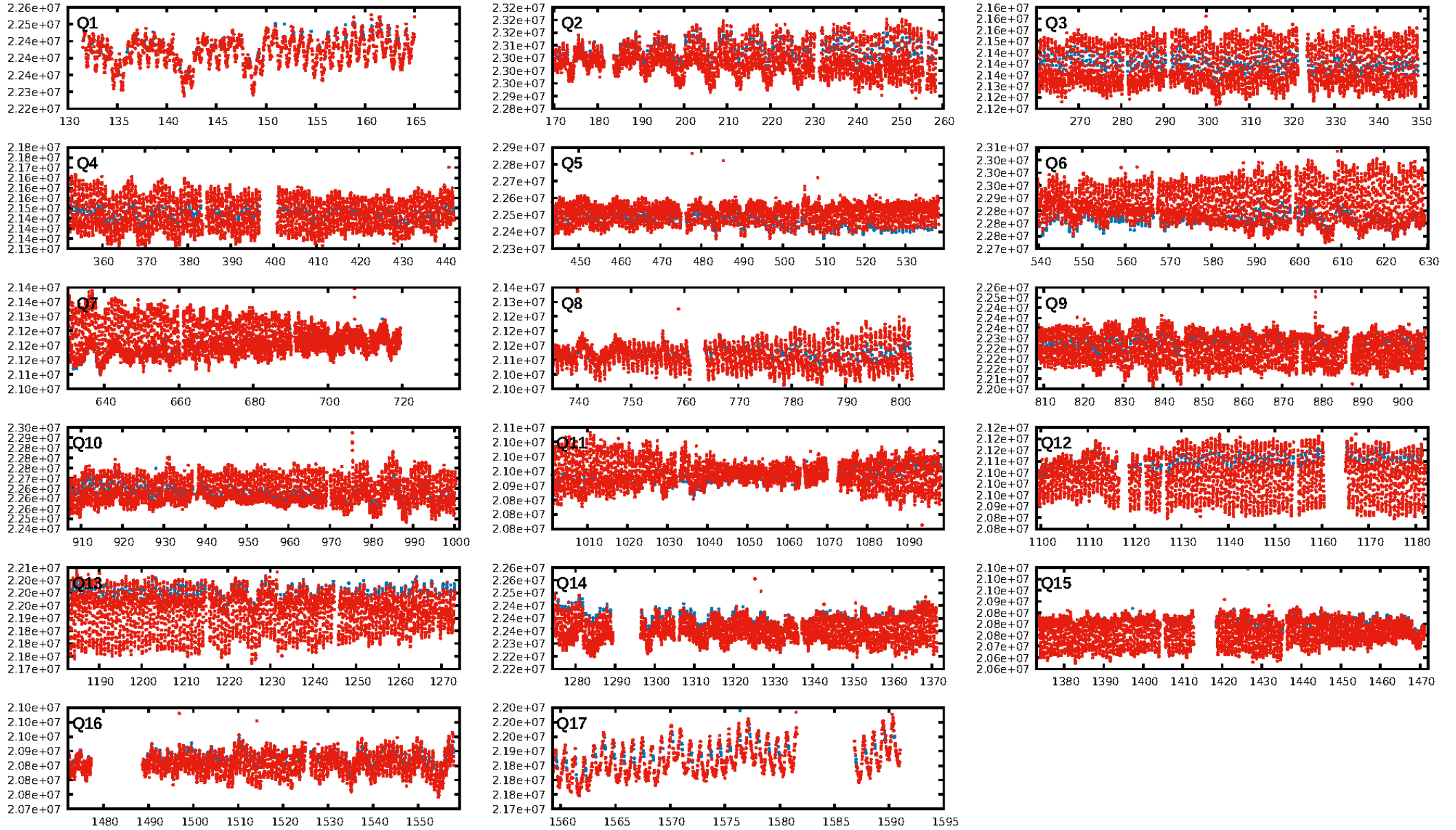
DV Fit Results:

Period = 0.88205 [0.00004] d
Epoch = 132.0242 [0.0147] BKJD
Rp/R* = 0.0042 [0.0070]
a/R* = 1.02 [0.27]
b = 0.34 [22.65]
Seff = 3514.20 [1321.37]
Teq = 1963 [185] K
Rp = 0.42 [0.70] Re
a = 0.0175 [0.0042] AU
Ag = 68.02 [224.77] [0.30σ]
Teffp = 8717 [7166] K [0.94σ]

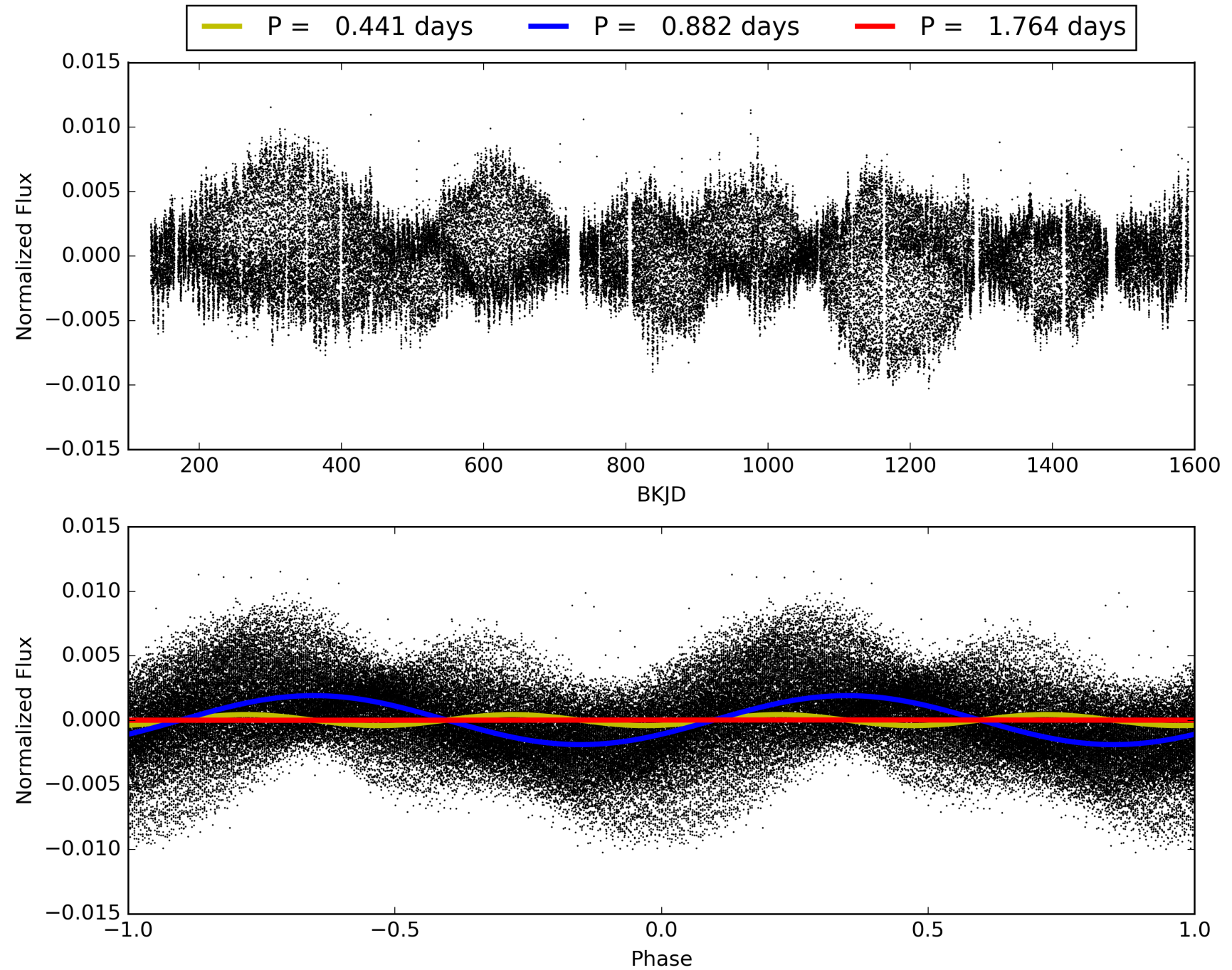
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1466/1466]
GhostDiagnostic-chr: 2.164
Centroid-sig: 69.1%
Centroid-so: 1.264 arcsec [0.61σ]
OotOffset-rm: 0.447 arcsec [1.35σ]
KicOffset-rm: 0.455 arcsec [1.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011568224-01, PDC Light Curves

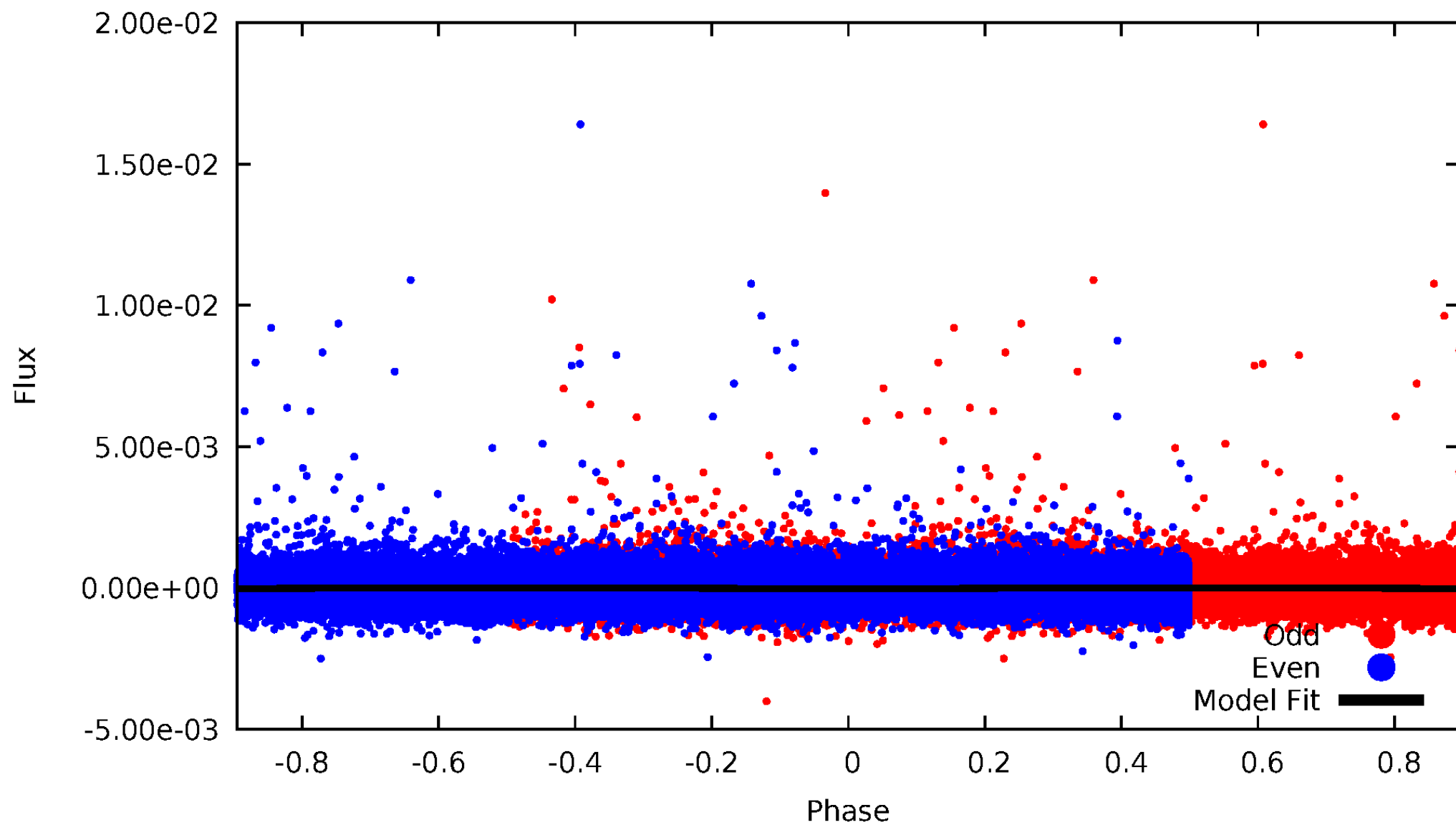


TCE 011568224-01



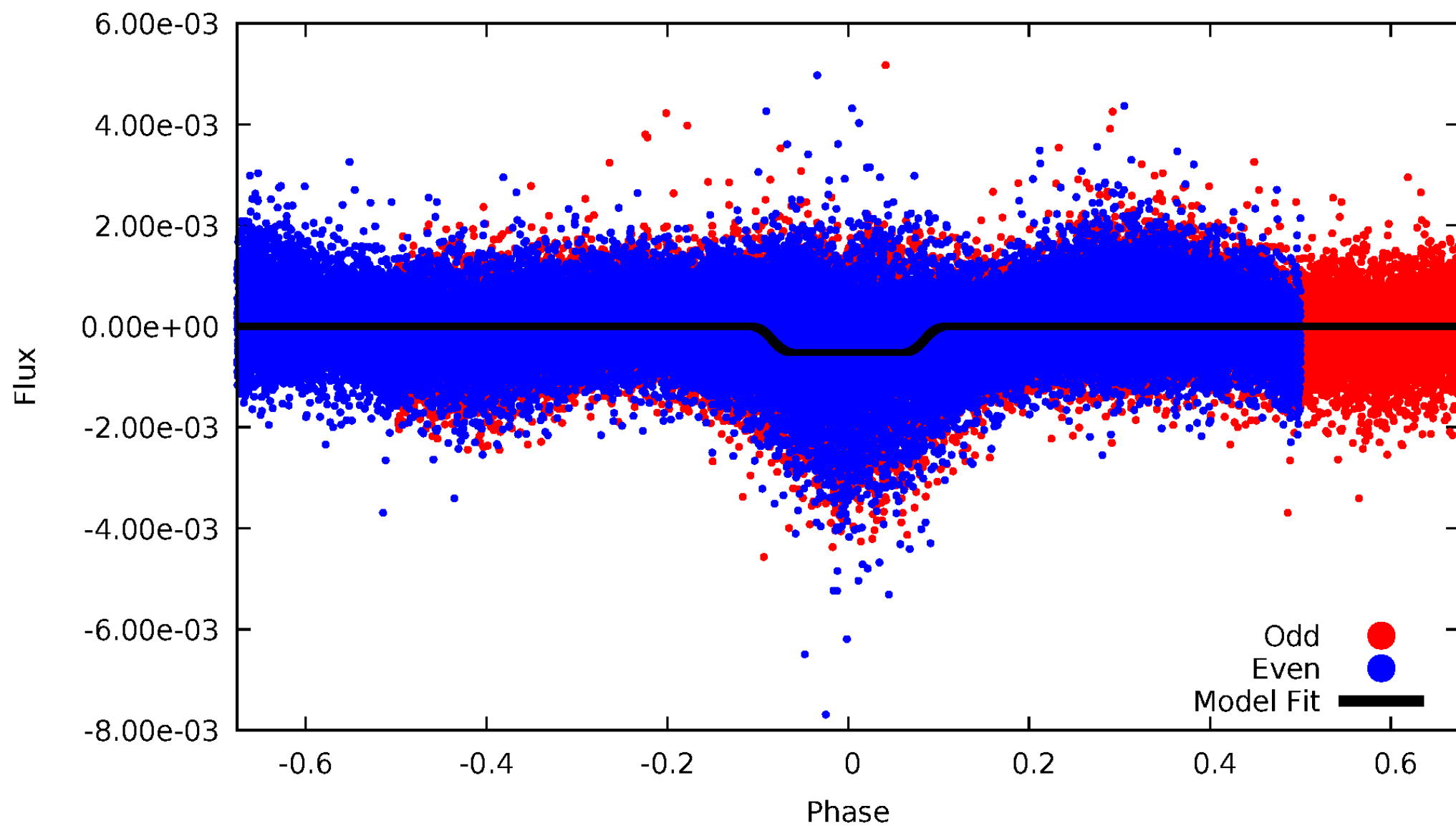
DV Odd/Even

TCE 011568224-01



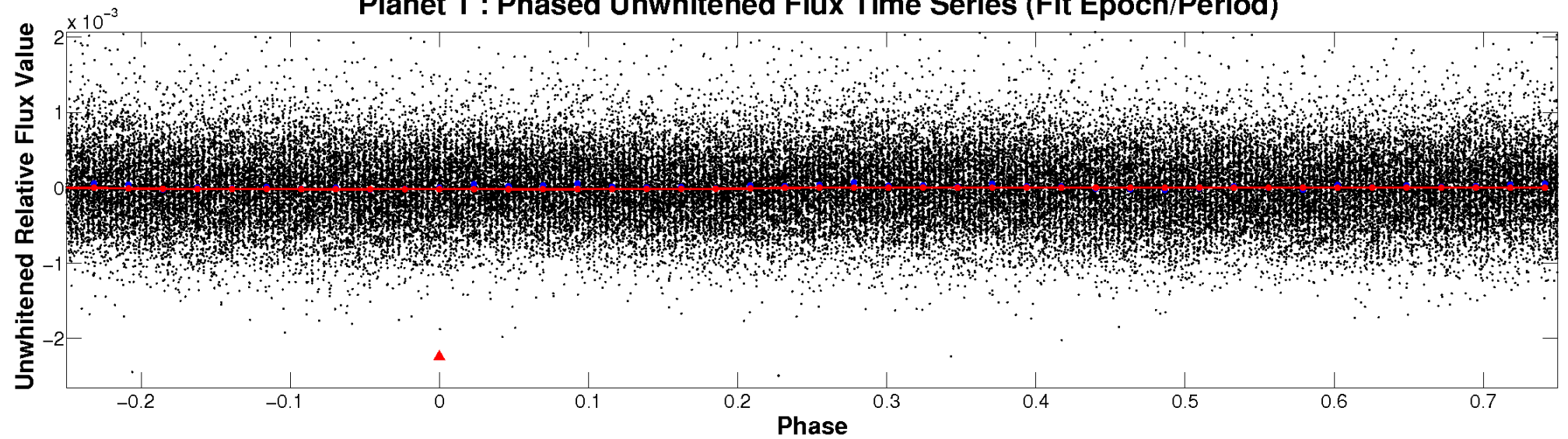
ALT Odd/Even

TCE 011568224-01

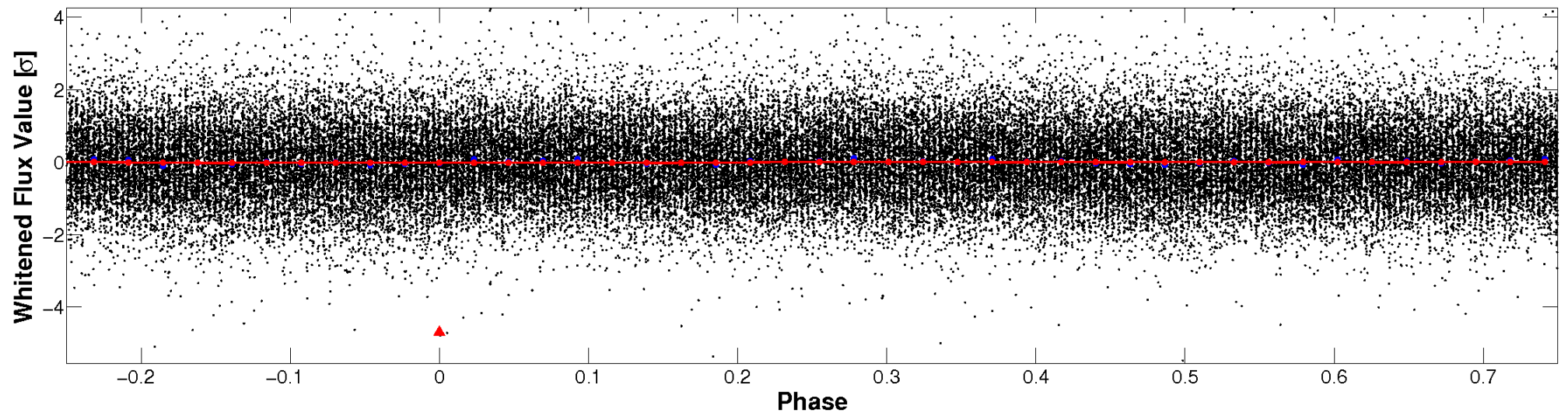


Non-Whitened Vs. Whitened Light Curve

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

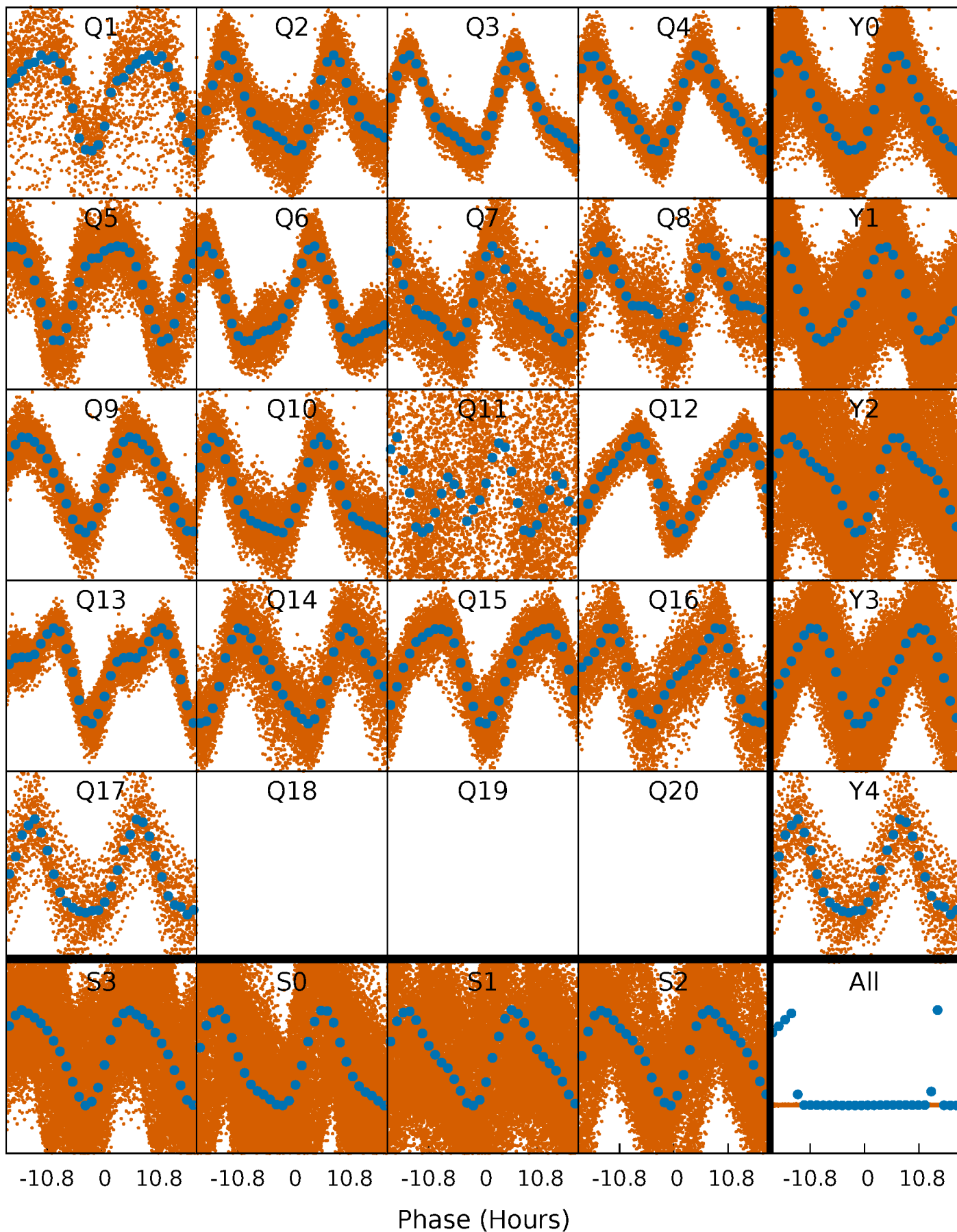


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



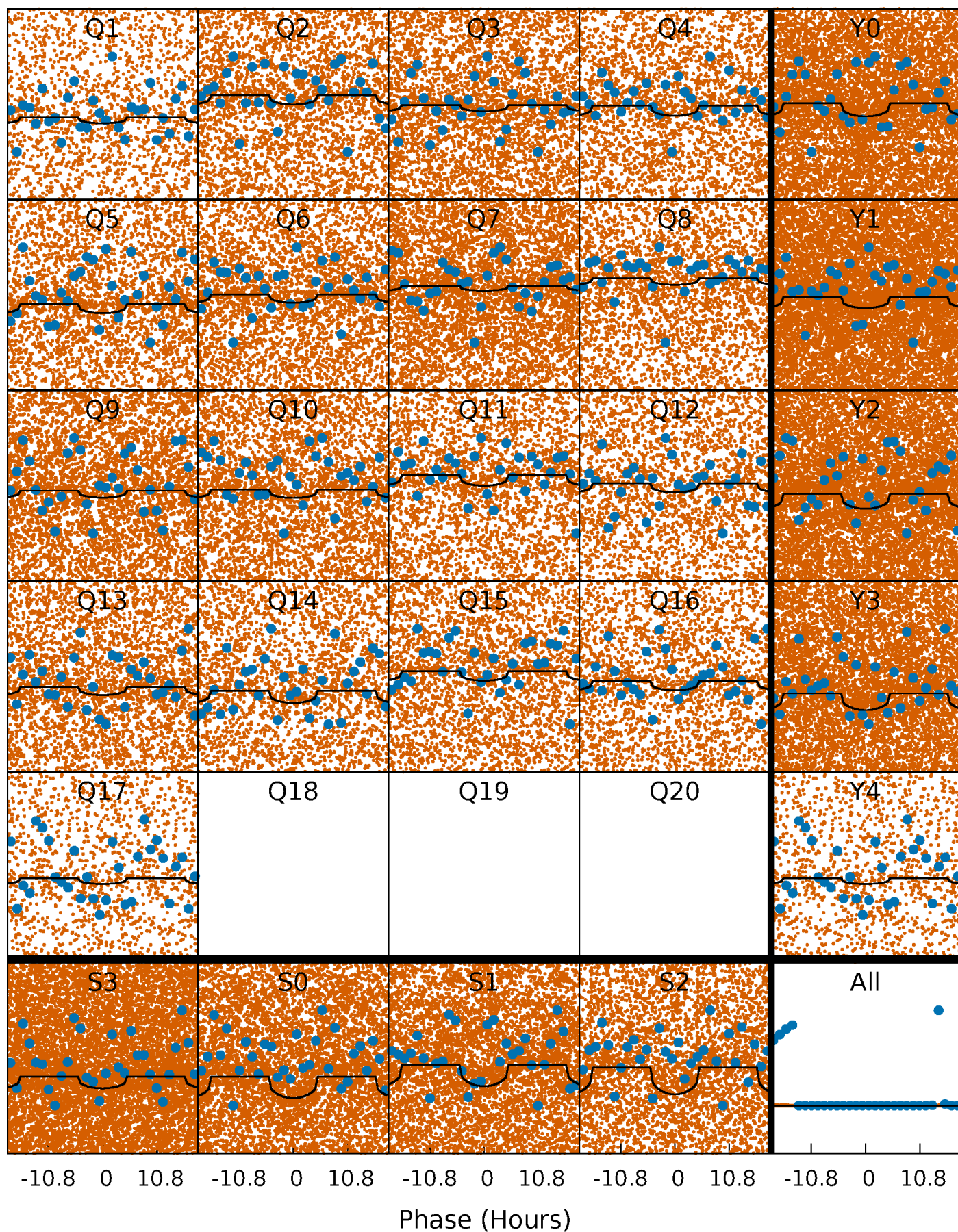
PDC Quarter-Phased Transit Curves

TCE 011568224-01 P= 0.882051 Days $T_0=132.024157$ (BKJD)



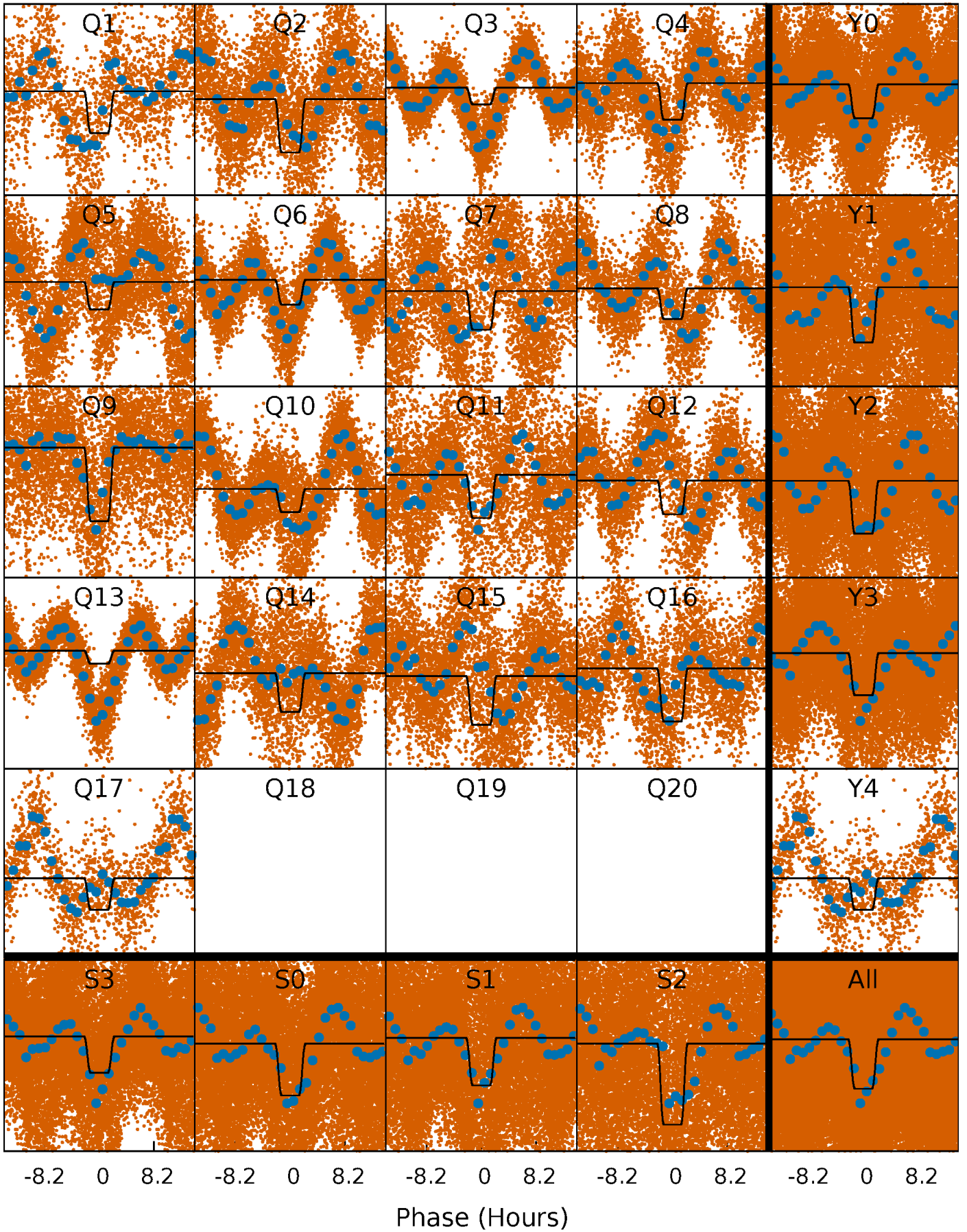
DV Quarter-Phased Transit Curves

TCE 011568224-01 P= 0.882051 Days $T_0=132.024157$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

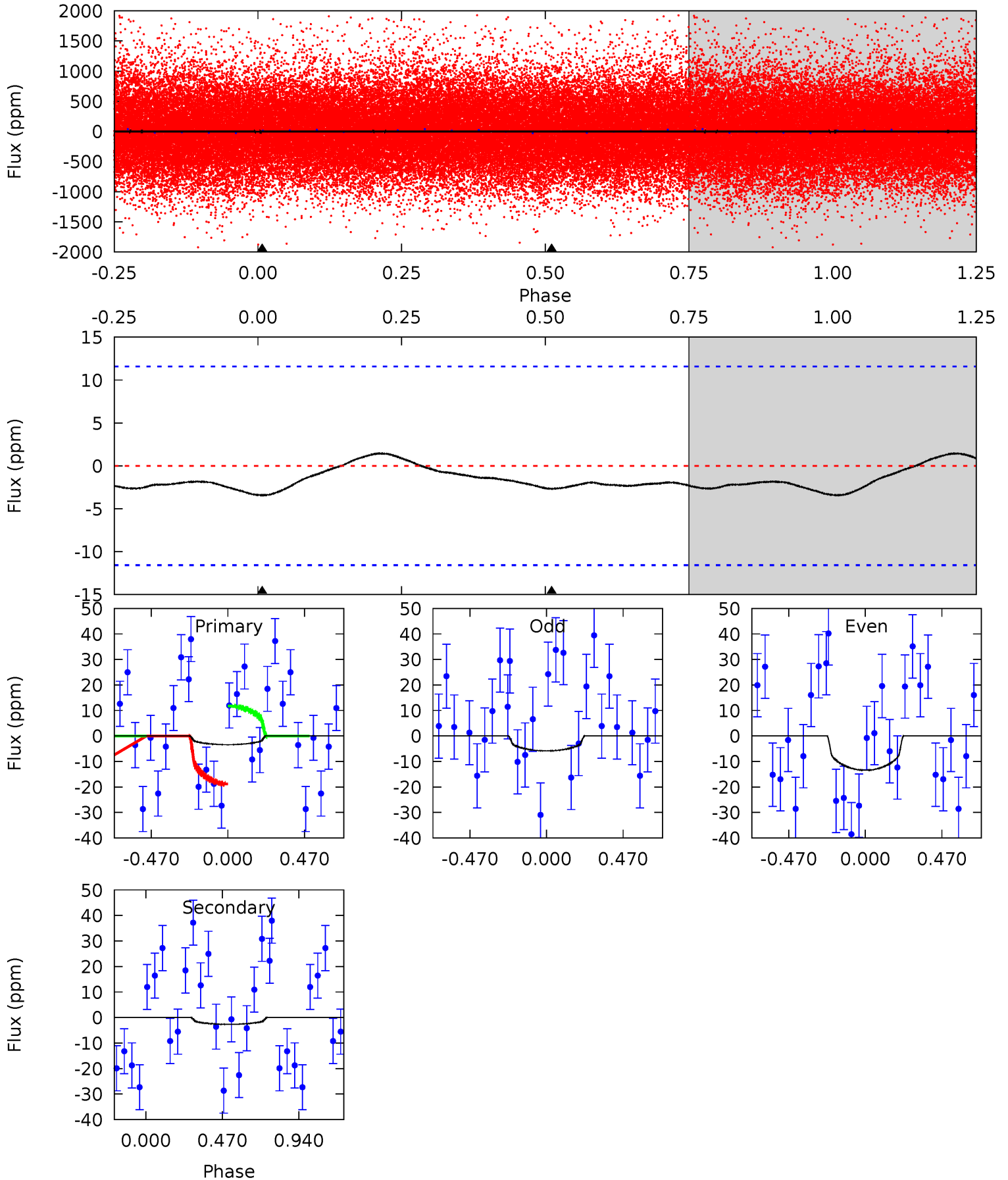
TCE 011568224-01 P= 0.881941 Days $T_0=132.040976$ (BKJD)



DV Model-Shift Uniqueness Test

011568224-01, P = 0.882051 Days, E = 131.142106 Days

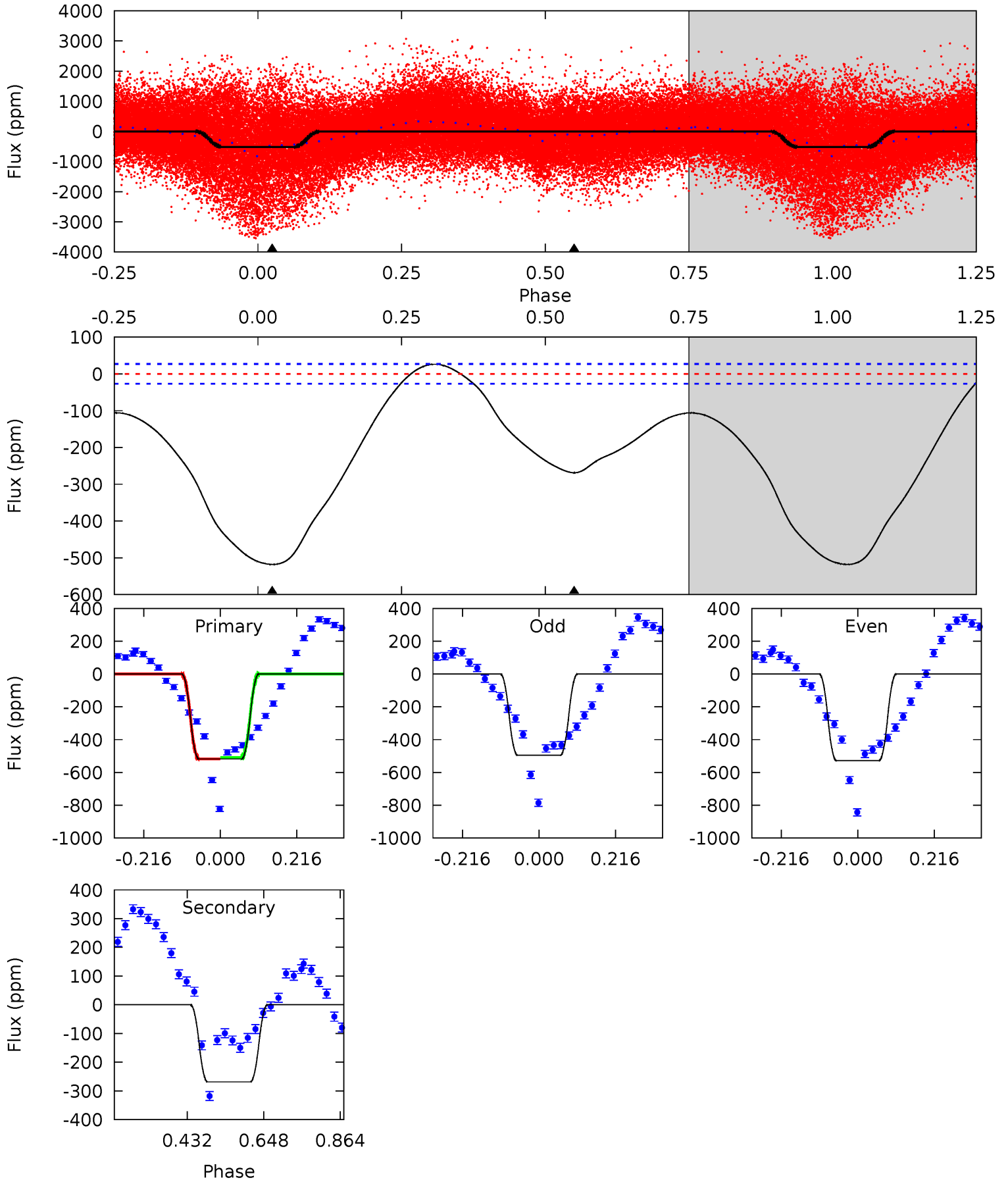
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.25	0.98	0	0	4.23	0.72	0.57	1.25	1.25	0.98	0.98	1.37	-3.93	0.30	1.35



Alt Model-Shift Uniqueness Test

011568224-01, P = 0.881941 Days, E = 131.159035 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
84.9	44.0	0	0	4.40	1.24	10.2	84.9	84.9	44.0	44.0	2.63	1.24	0.05	0.85



Stellar Parameters For KIC 011568224

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6168^{+186}_{-204}	$4.482^{+0.078}_{-0.195}$	$-0.540^{+0.300}_{-0.300}$	$0.911^{+0.253}_{-0.101}$	$0.919^{+0.105}_{-0.105}$	$1.713^{+0.574}_{-0.839}$
	+3%/-3%	+2%/-4%	+56%/-56%	+28%/-11%	+11%/-11%	+34%/-49%
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 011568224-01 / KOI 3973.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 3	$0.68^{+0.66}_{-0.43}$	2790^{+179}_{-154}	3061^{+1894}_{-6099}	$0.661^{+6.072}_{-0.687}$
Alt.	-269 ± 6	$2.36^{+0.83}_{-0.71}$	2770^{+200}_{-139}	5201^{+917}_{-601}	$8.048^{+8.187}_{-3.507}$

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 $A_{obs} \gg 1.0$

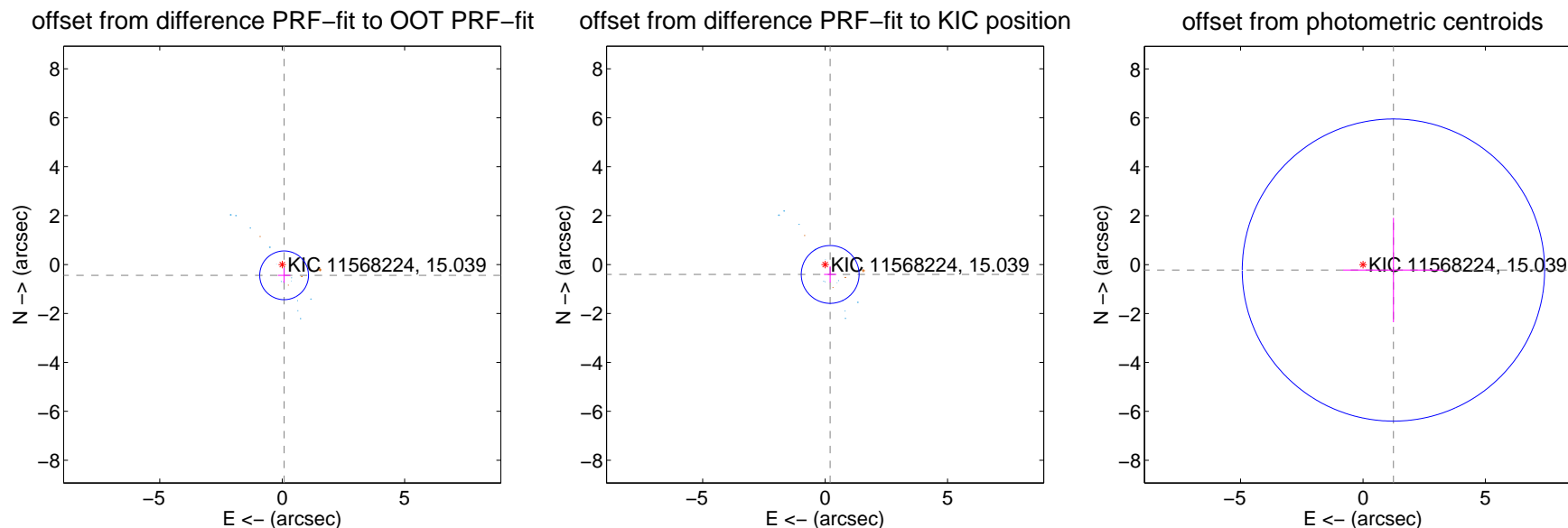
DV Centroid Data

Supplemental centroid analysis for 011568224-01. Kepler magnitude: 15.04. Transit SNR 3.01

There are 13 quarters with good PRF difference image offsets

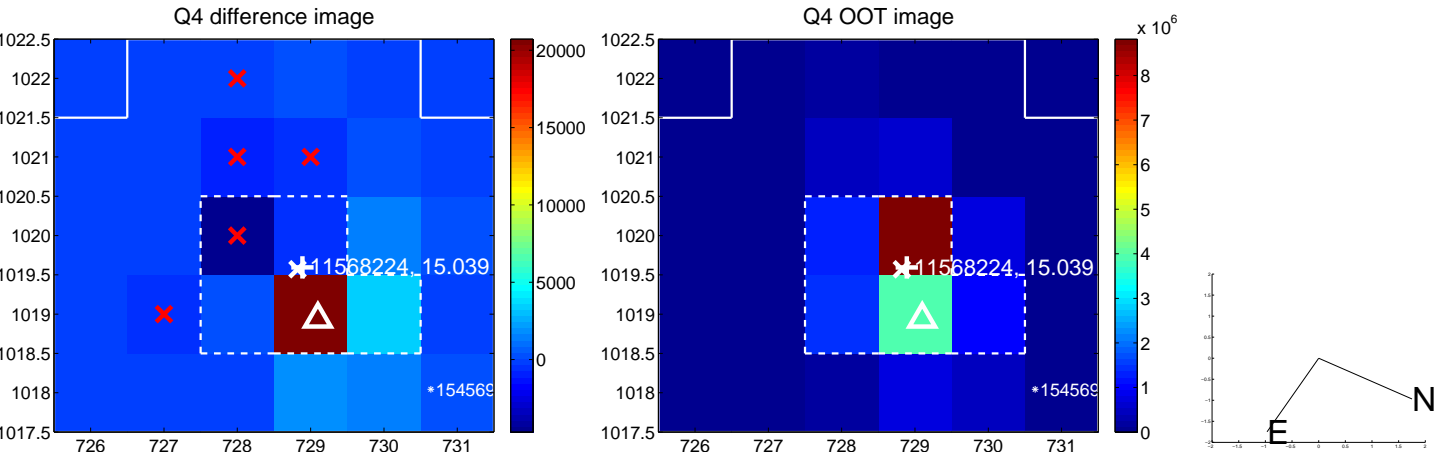
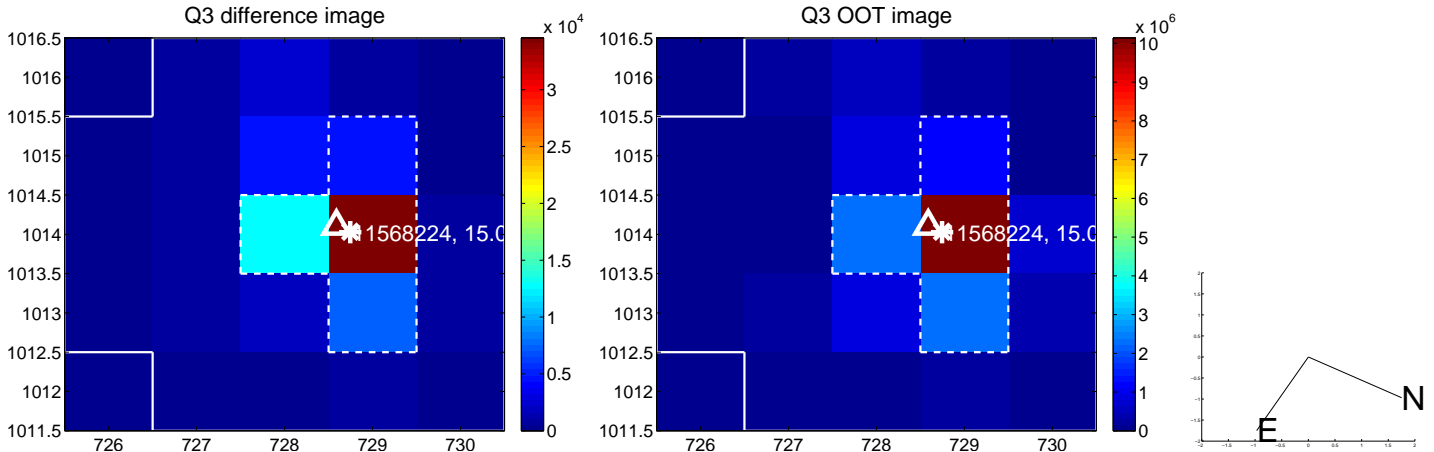
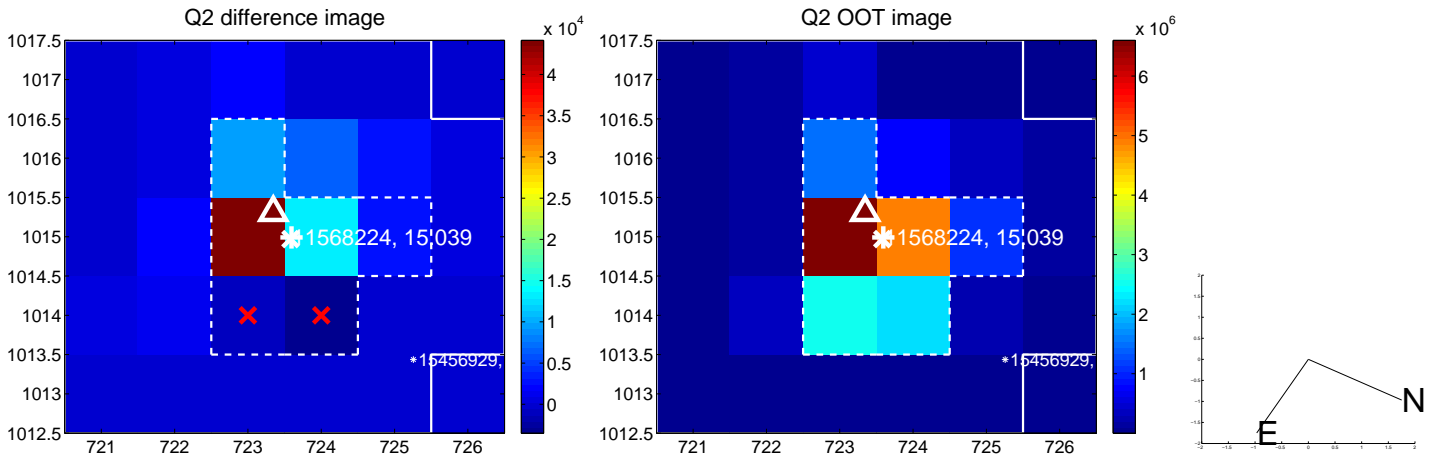
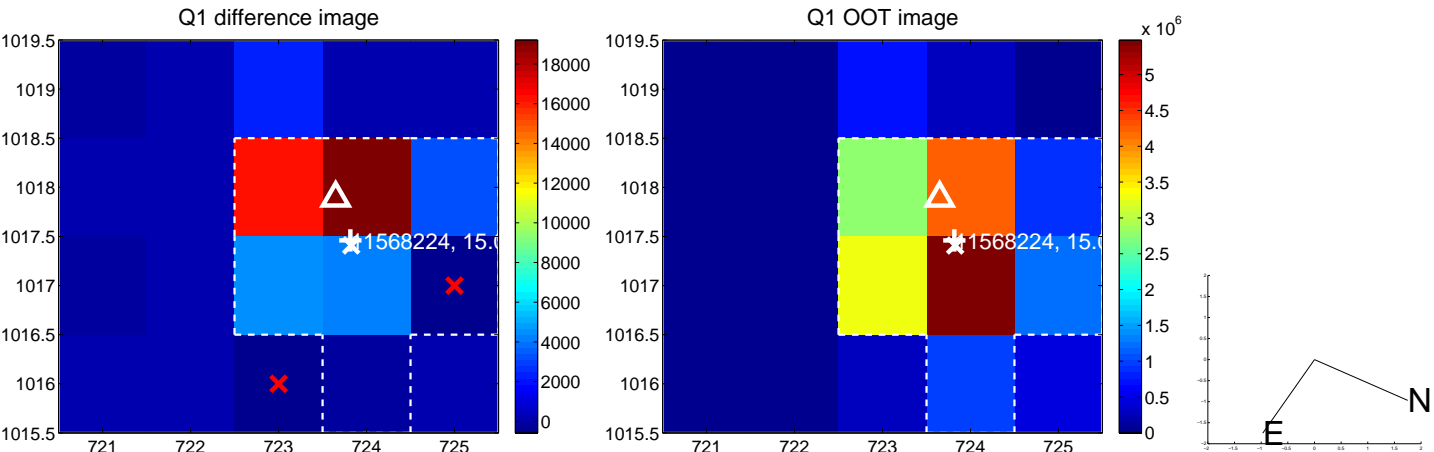
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.447 ± 0.332	1.35	-0.078 ± 0.254	-0.441 ± 0.301
PRF-fit source offset from KIC position	0.455 ± 0.394	1.15	-0.207 ± 0.251	-0.405 ± 0.330
photometric centroid source offset	1.26 ± 2.06	0.61	-1.24 ± 2.06	-0.22 ± 2.13

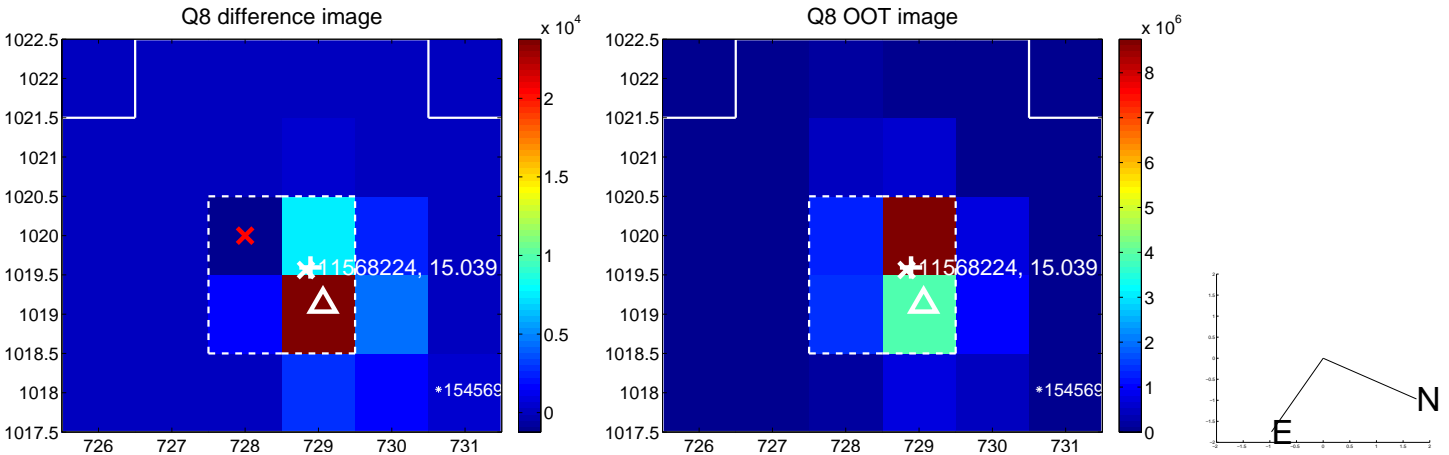
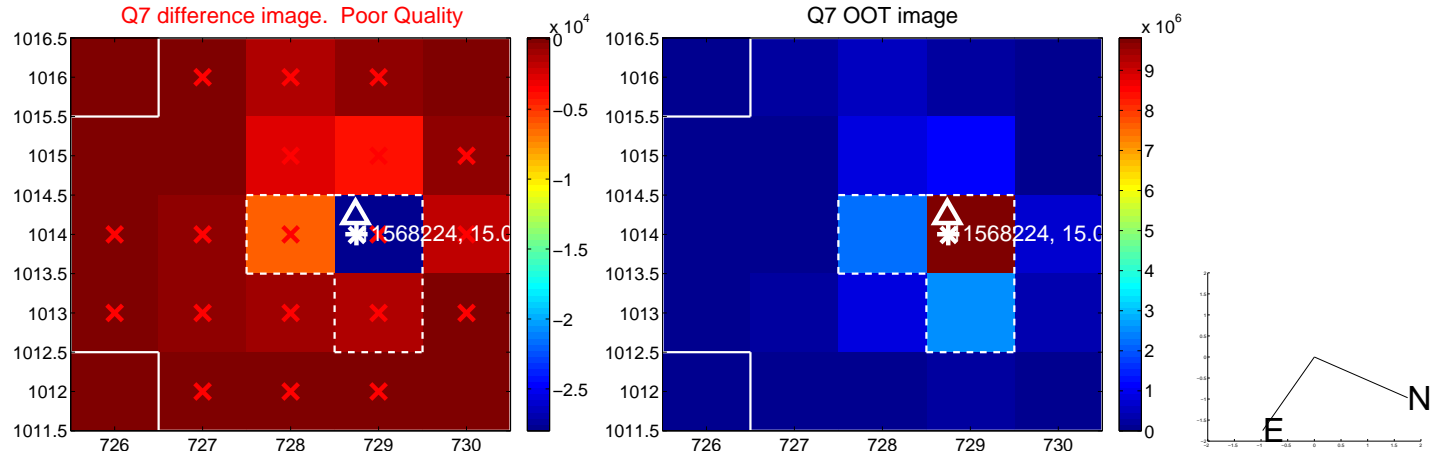
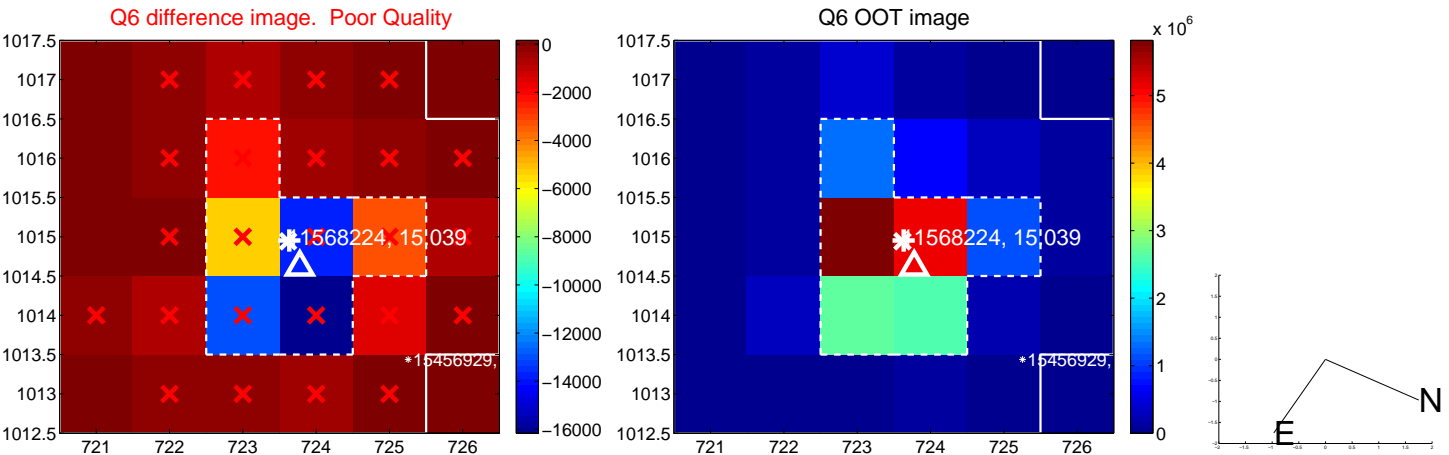
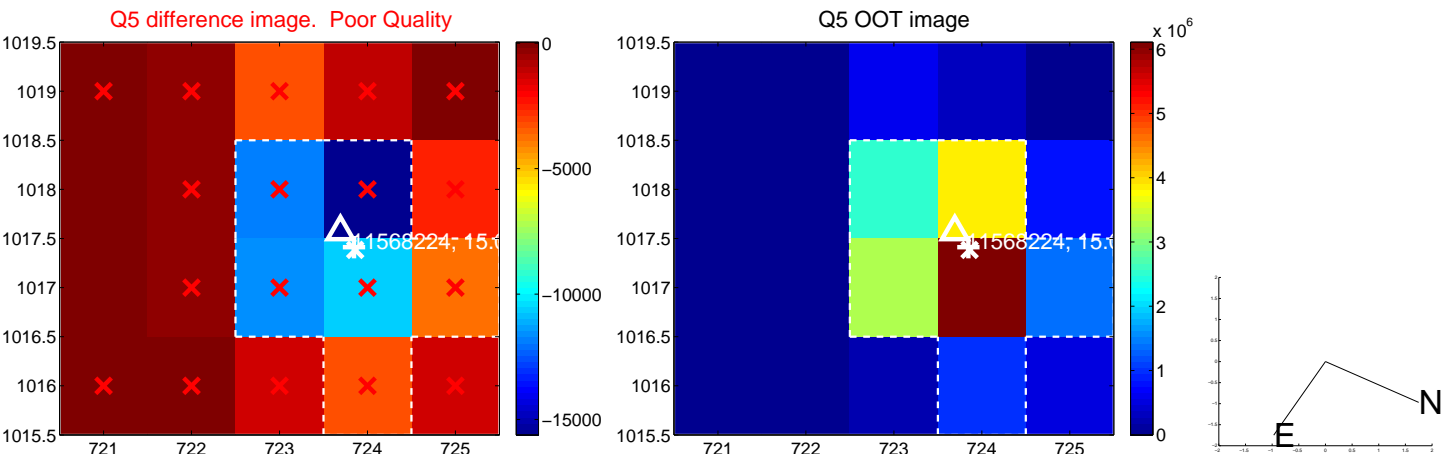


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

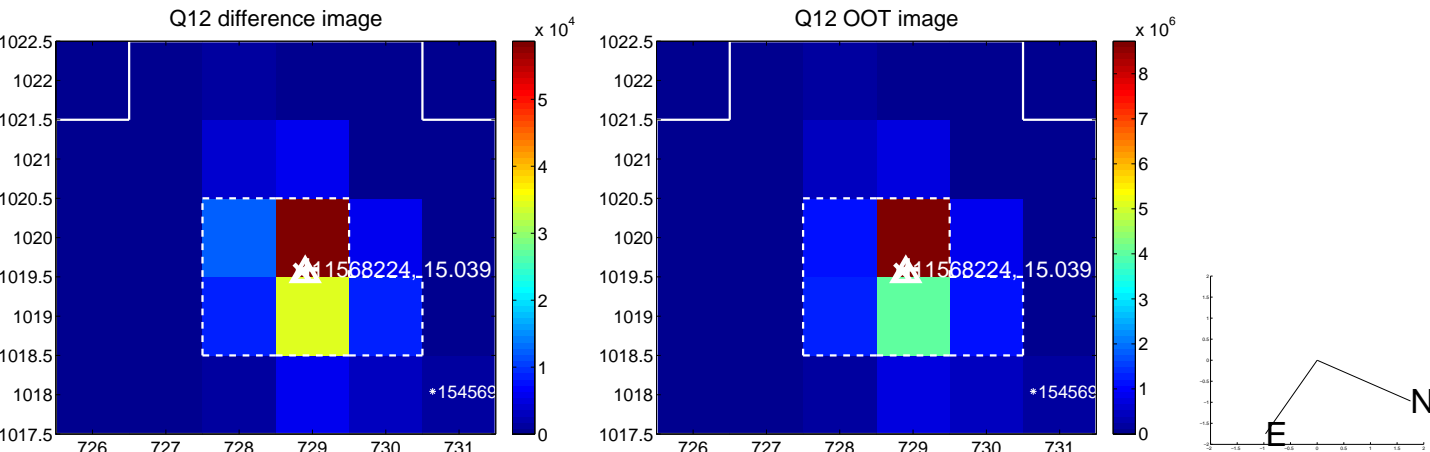
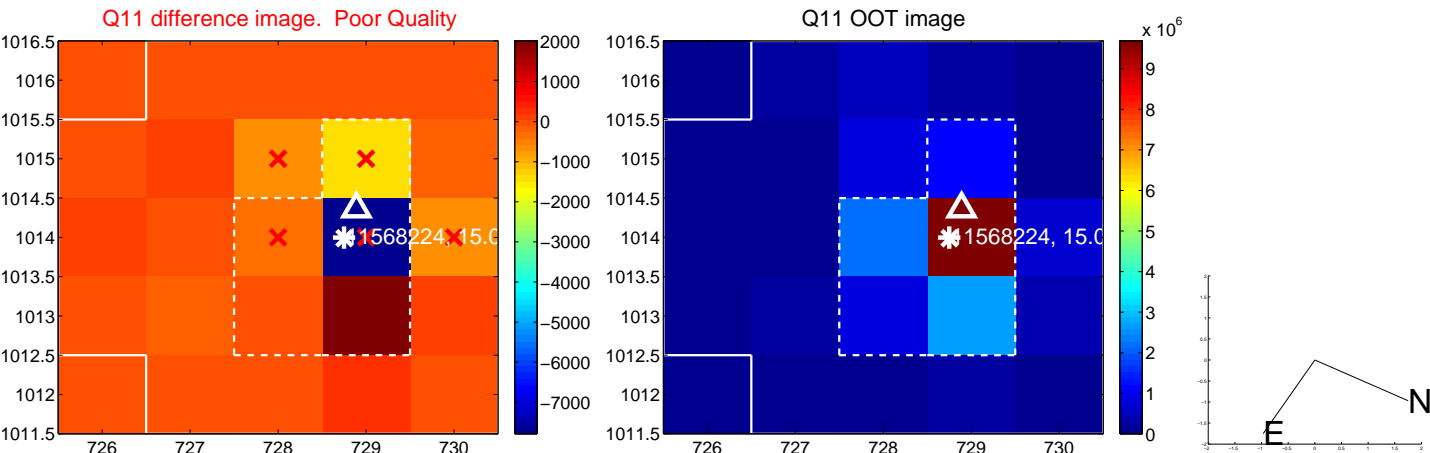
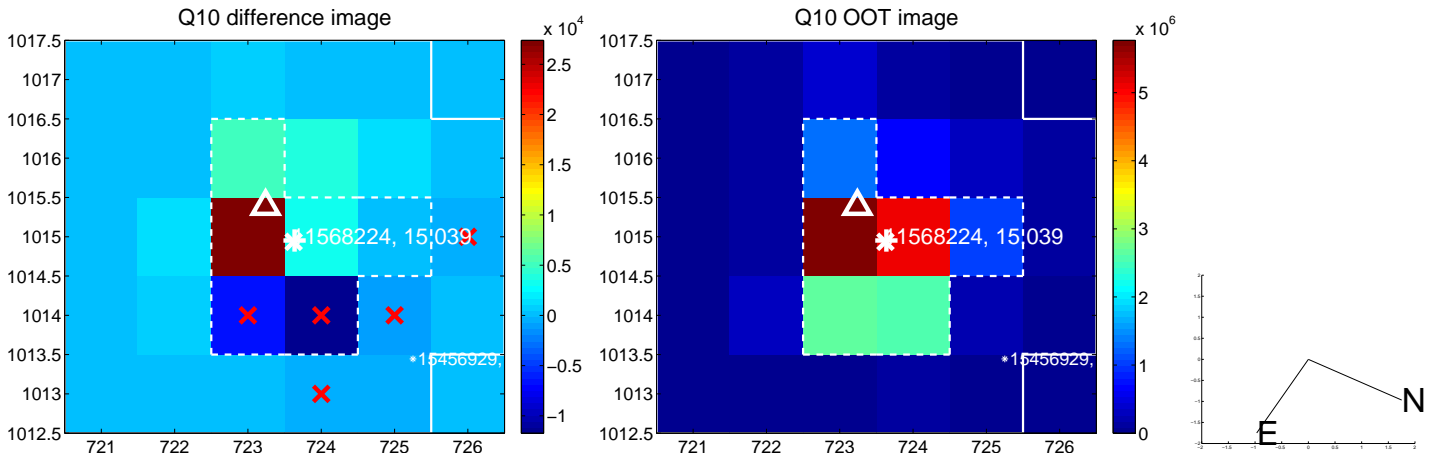
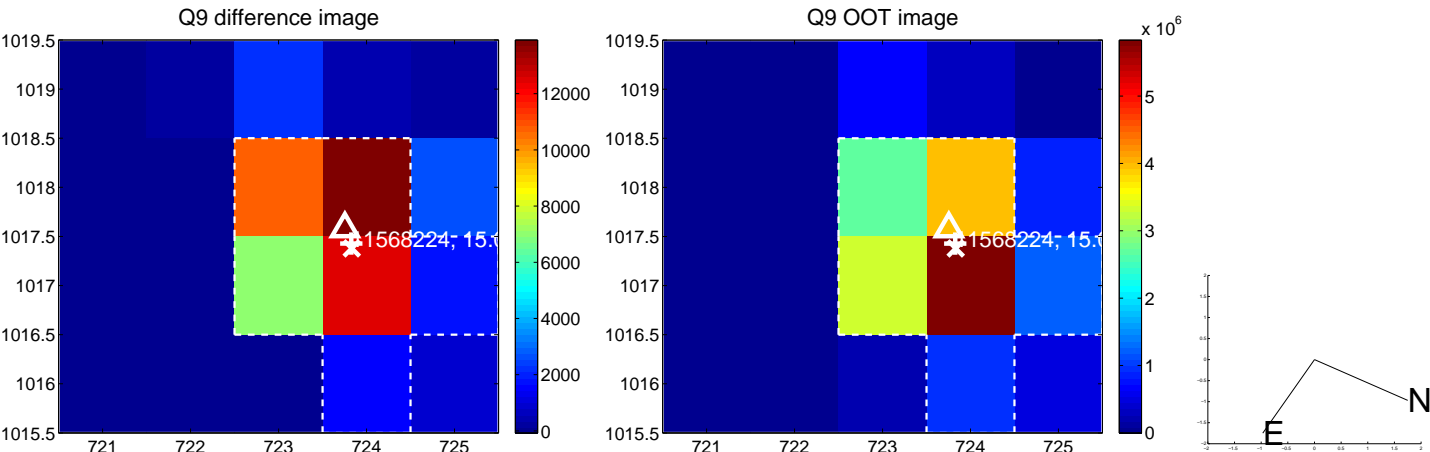
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



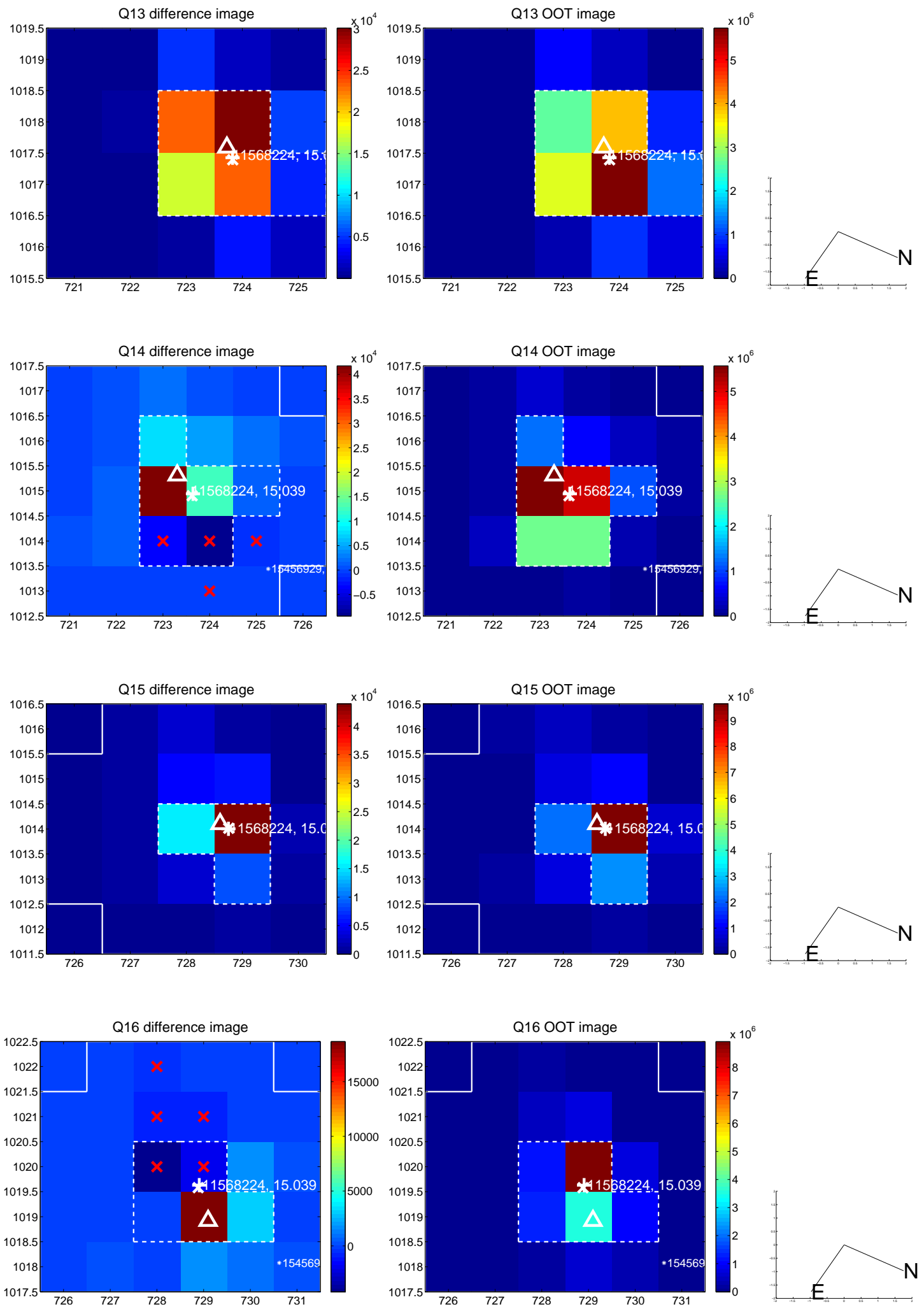
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



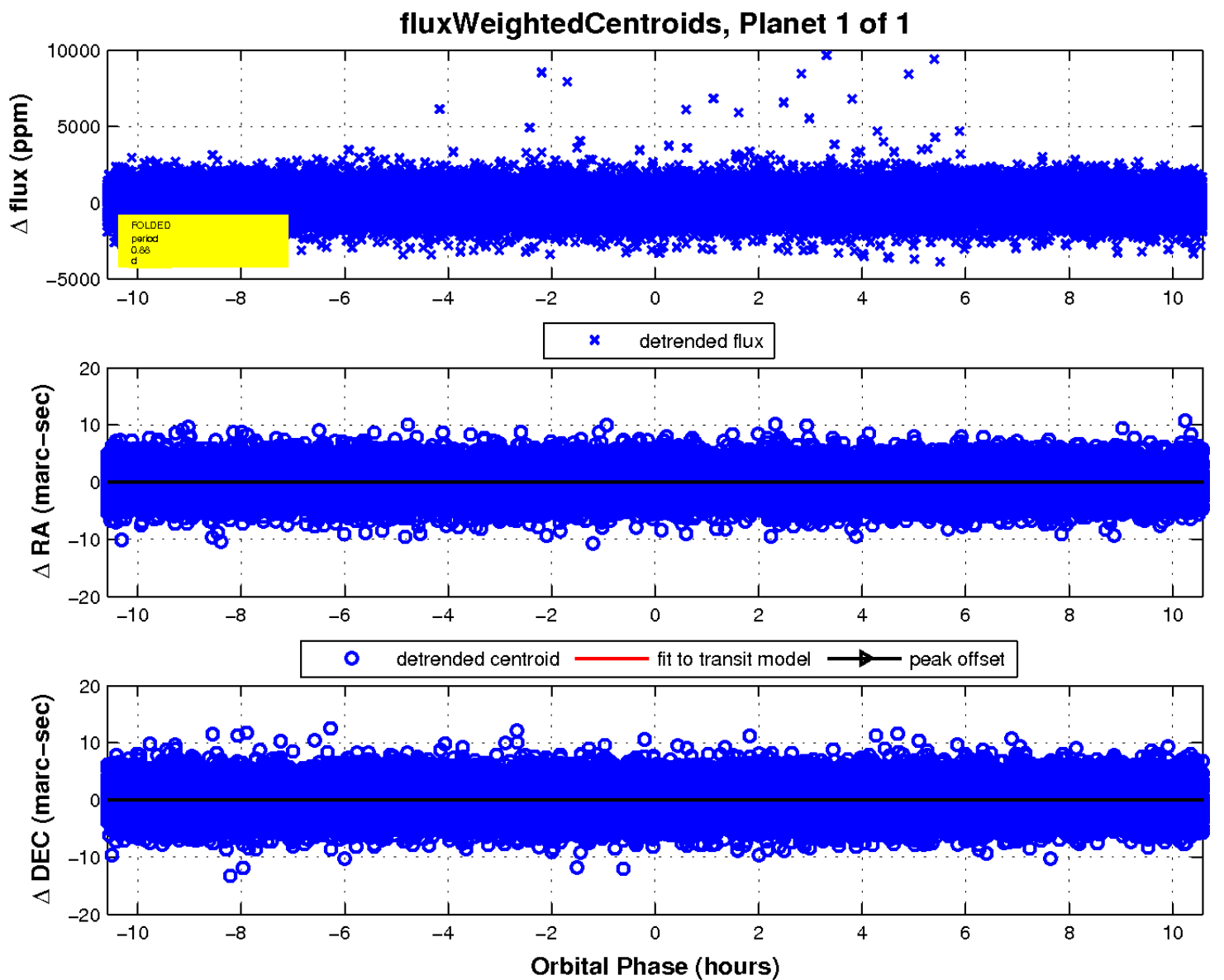
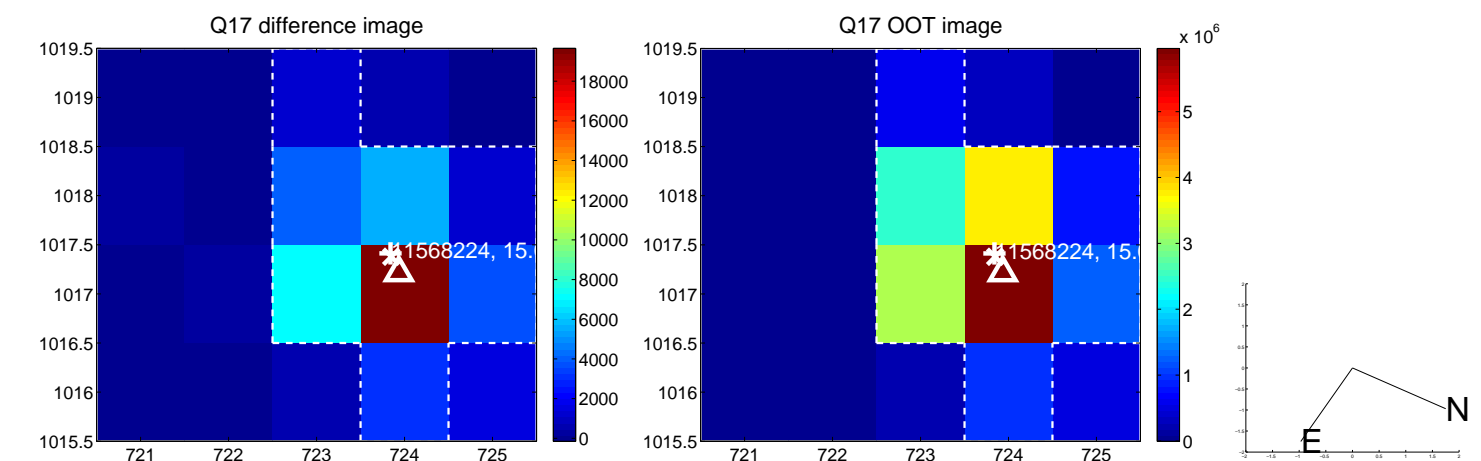
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UKIRT Image

Declination

