

KIC 005728139

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})
005728139-01	OBS	0206.01	5.334079	131.982019	4707.4	6.266	569.9	564.2	1.91	6332	13.23	1184.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005728139-01	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.

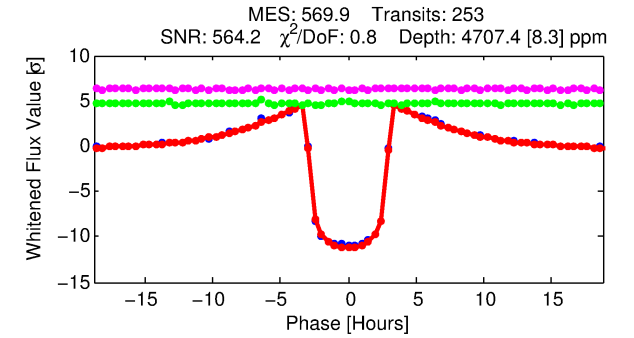
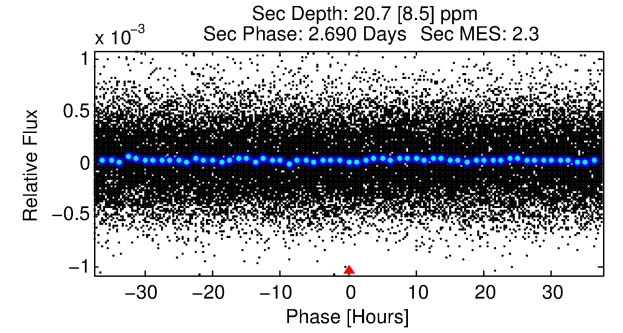
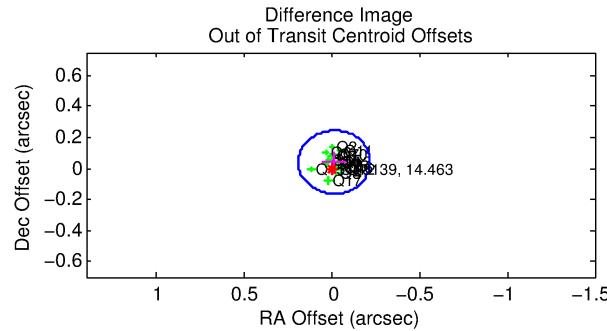
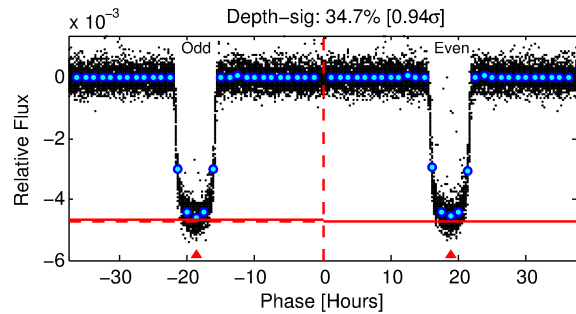
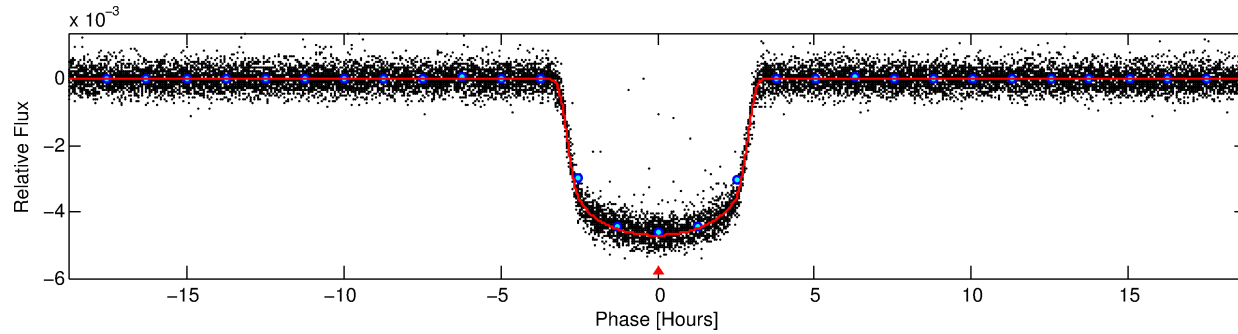
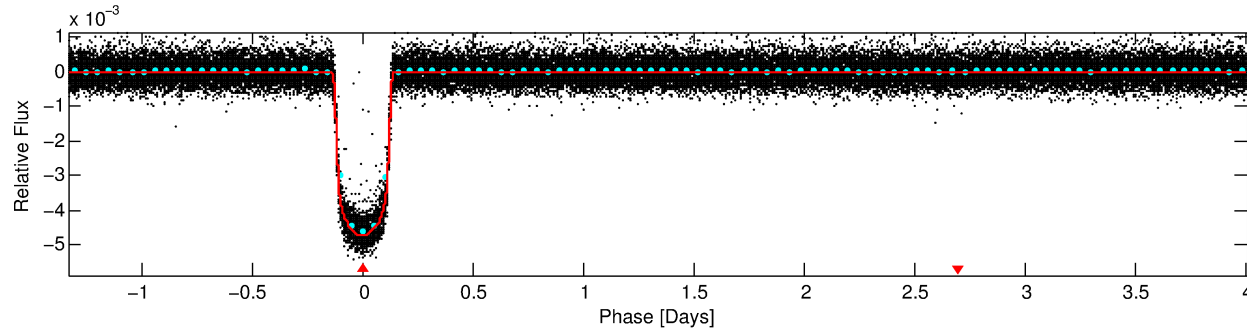
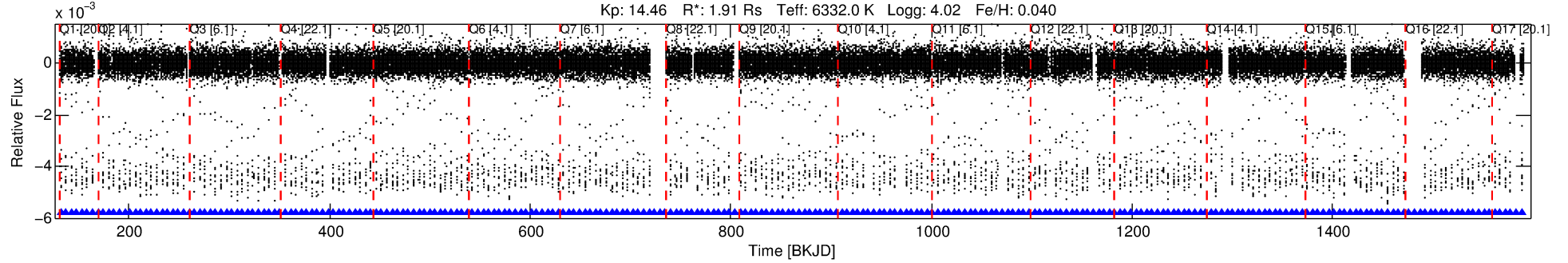
Ephemeris Match Information For 005728139-01

No Significant Match Found

DV One-Page Summary

KIC: 5728139 Candidate: 1 of 1 Period: 5.334 d
KOI: K00206.01 Name: Kepler-433b Corr: 0.998

Kp: 14.46 R*: 1.91 Rs Teff: 6332.0 K Logg: 4.02 Fe/H: 0.040



DV Fit Results:

Period = 5.33408 [0.00000] d
Epoch = 131.9820 [0.0001] BKJD
Rp/R* = 0.0636 [0.0004]
a/R* = 6.63 [0.18]
b = 0.32 [0.08]
Seff = 1184.61 [379.11]
Teq = 1496 [120] K
Rp = 13.23 [3.04] Re
a = 0.0664 [0.0137] AU
Ag = 0.29 [0.15] [-4.78σ]
Teffp = 1693 [176] K [0.93σ]

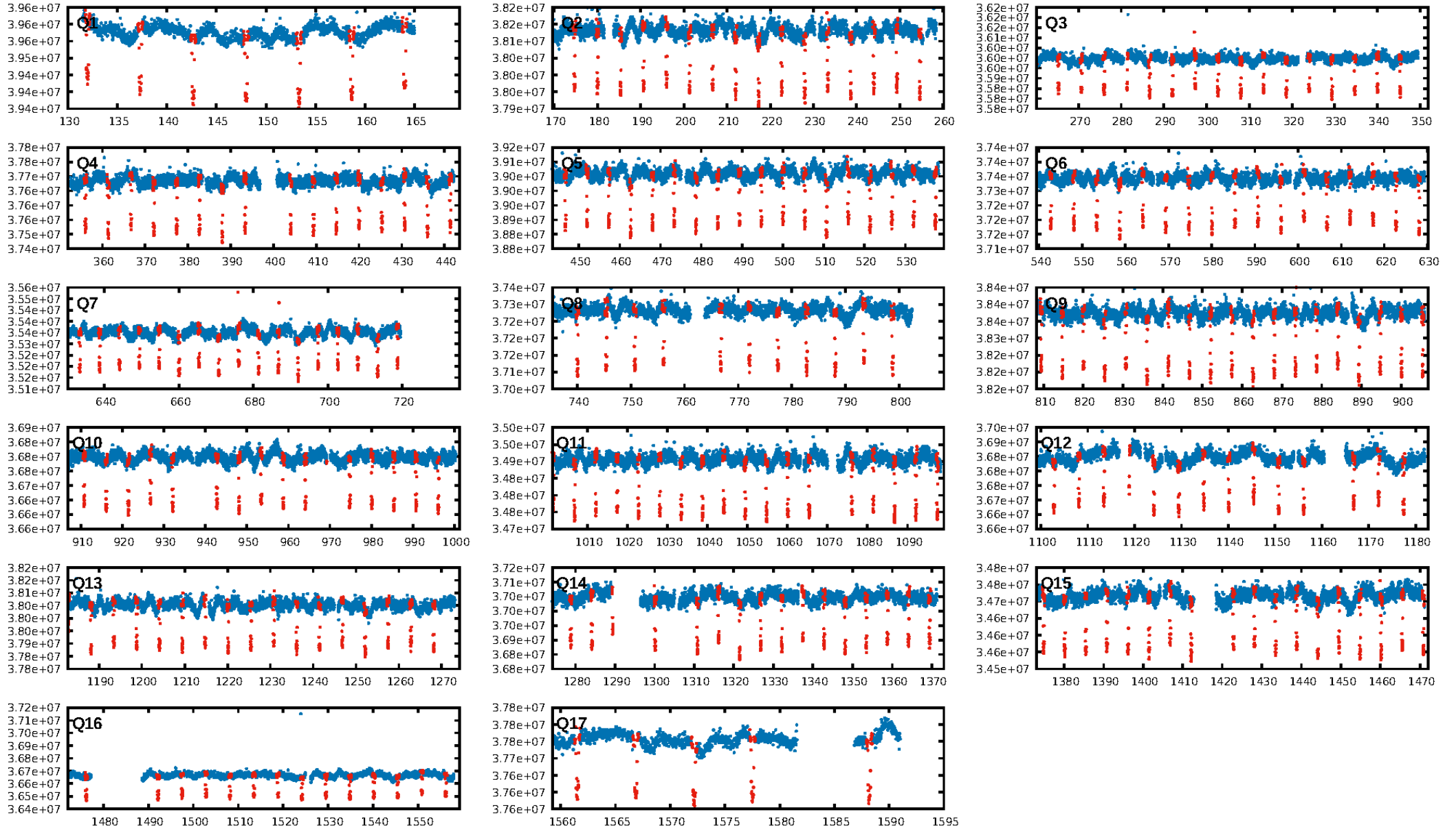
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [241/241]
GhostDiagnostic-chr: 5.816
Centroid-sig: 0.0%
Centroid-so: 0.073 arcsec [4.28σ]
OotOffset-rm: 0.043 arcsec [0.63σ]
KicOffset-rm: 0.080 arcsec [1.16σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

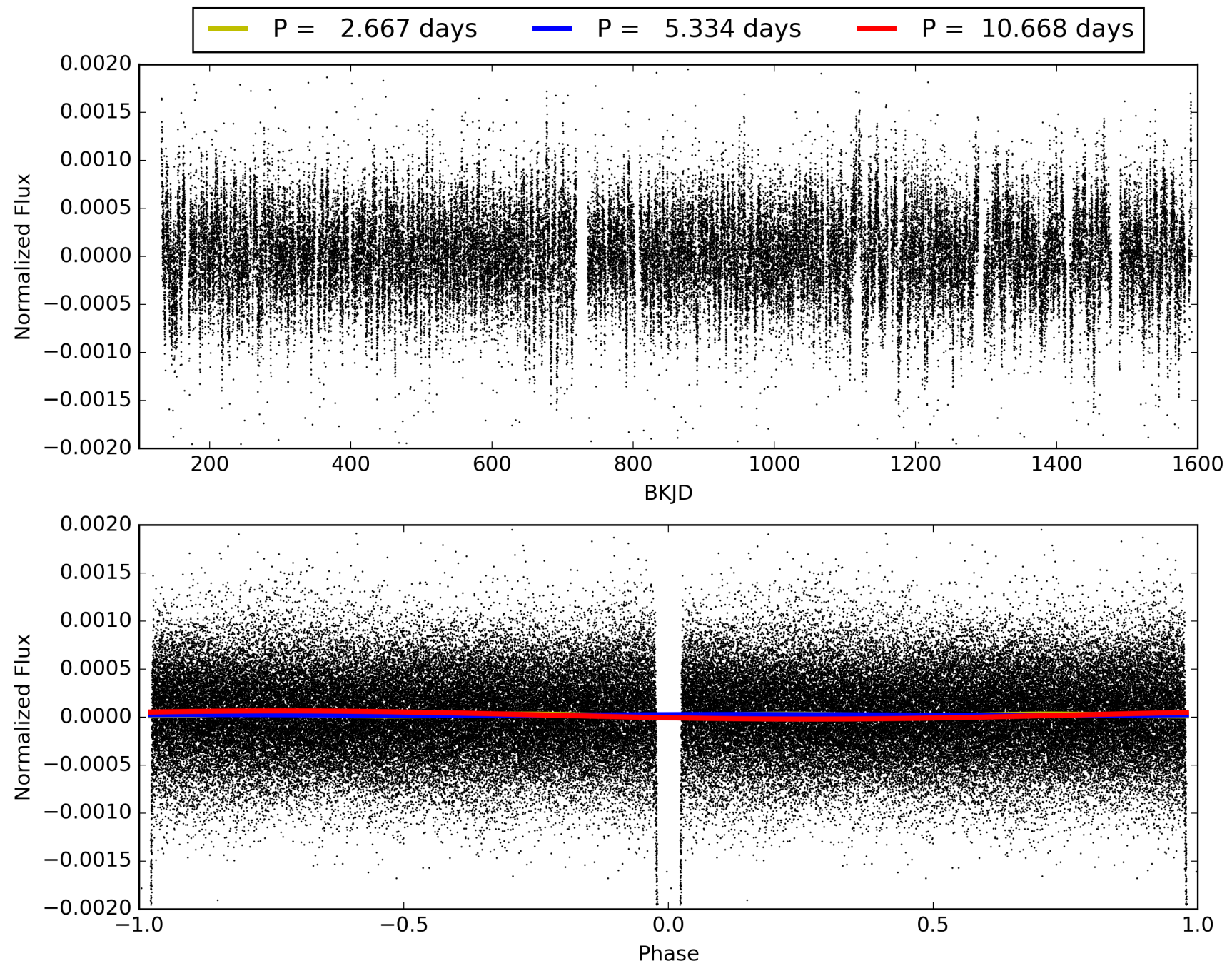
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:49:52 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005728139-01, PDC Light Curves

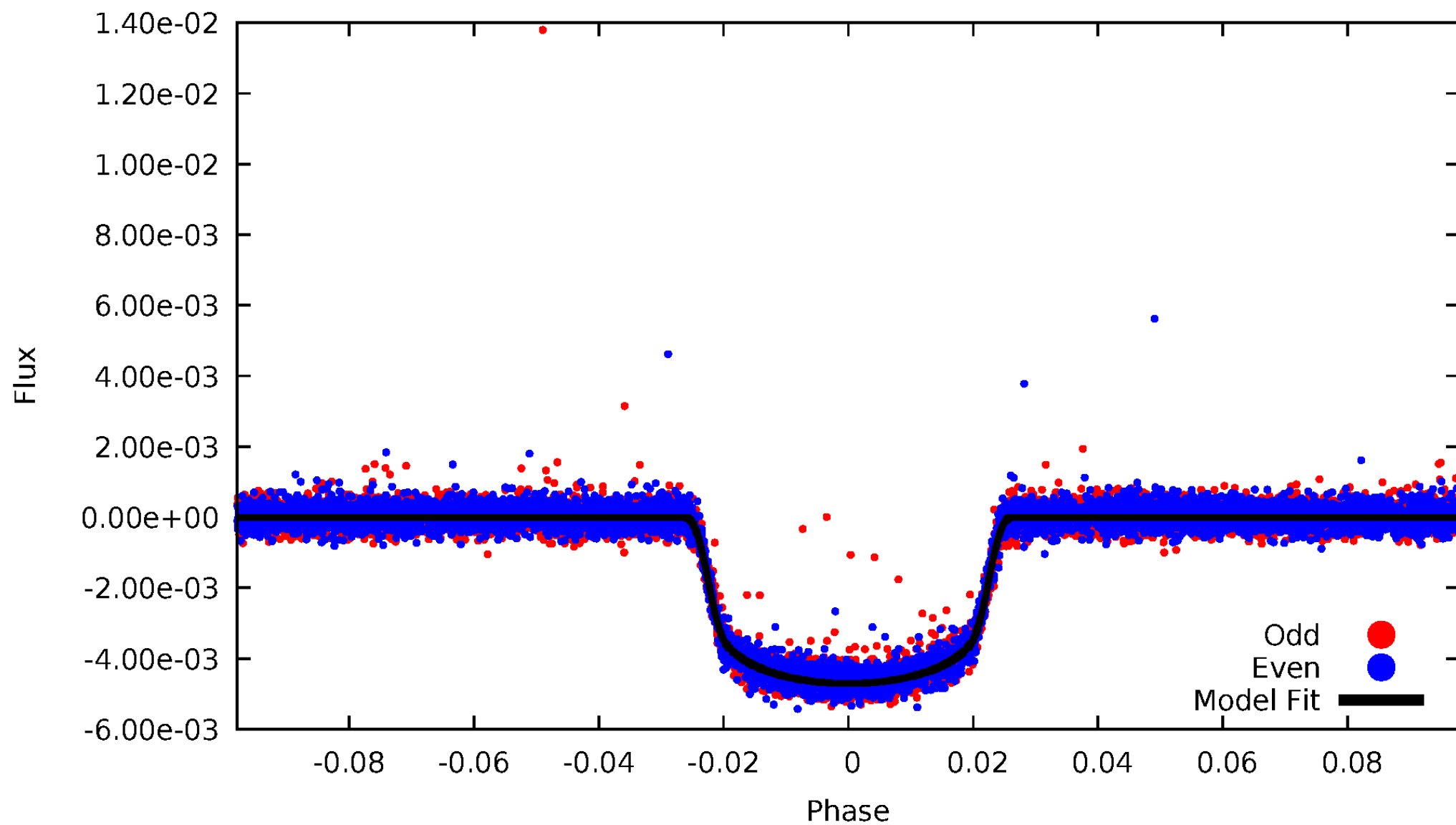


TCE 005728139-01



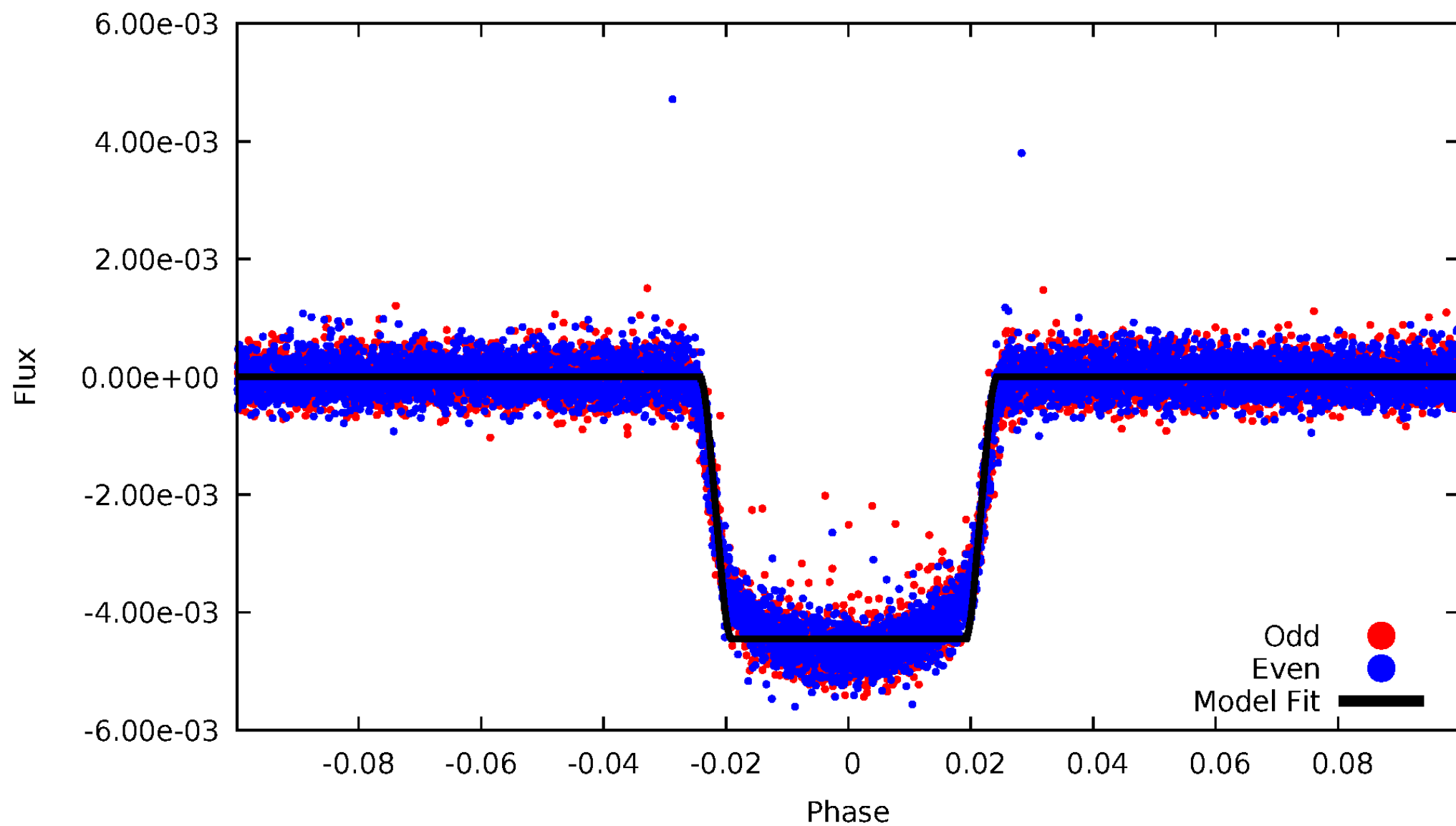
DV Odd/Even

TCE 005728139-01



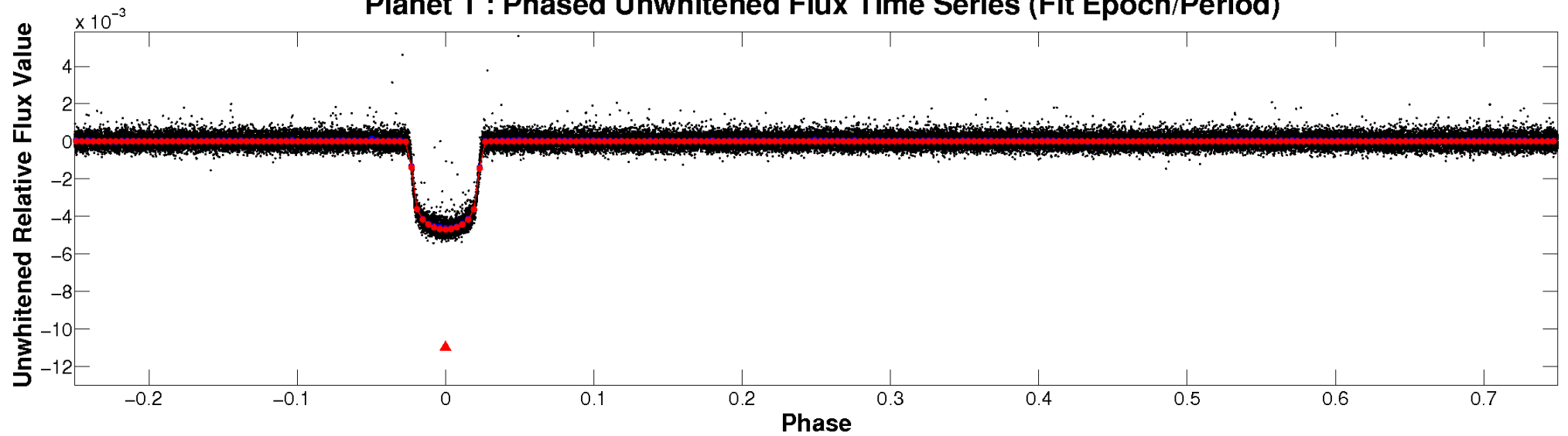
ALT Odd/Even

TCE 005728139-01

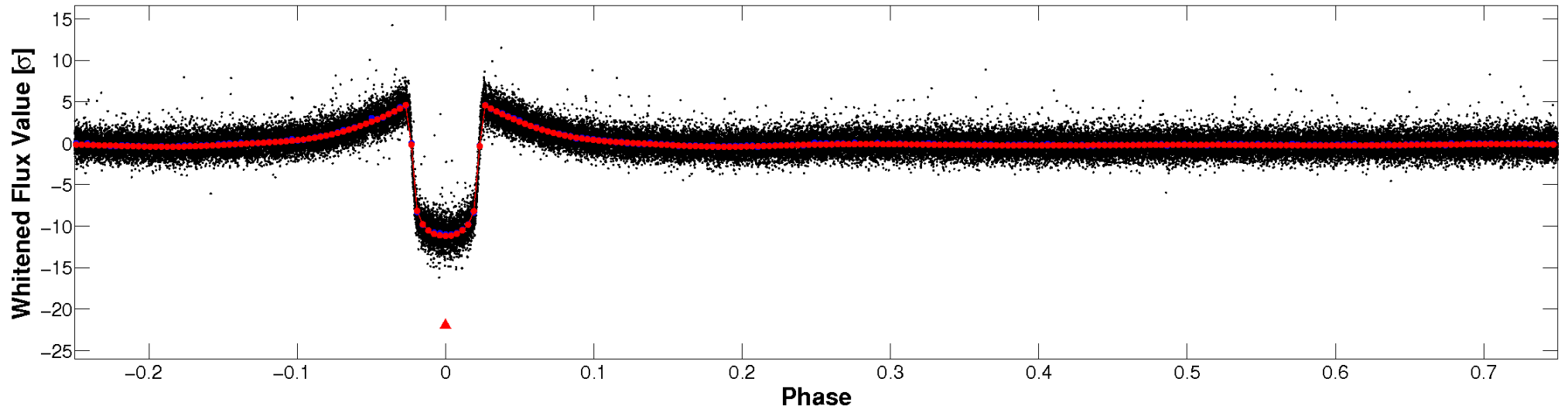


Non-Whitened Vs. Whitened Light Curve

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

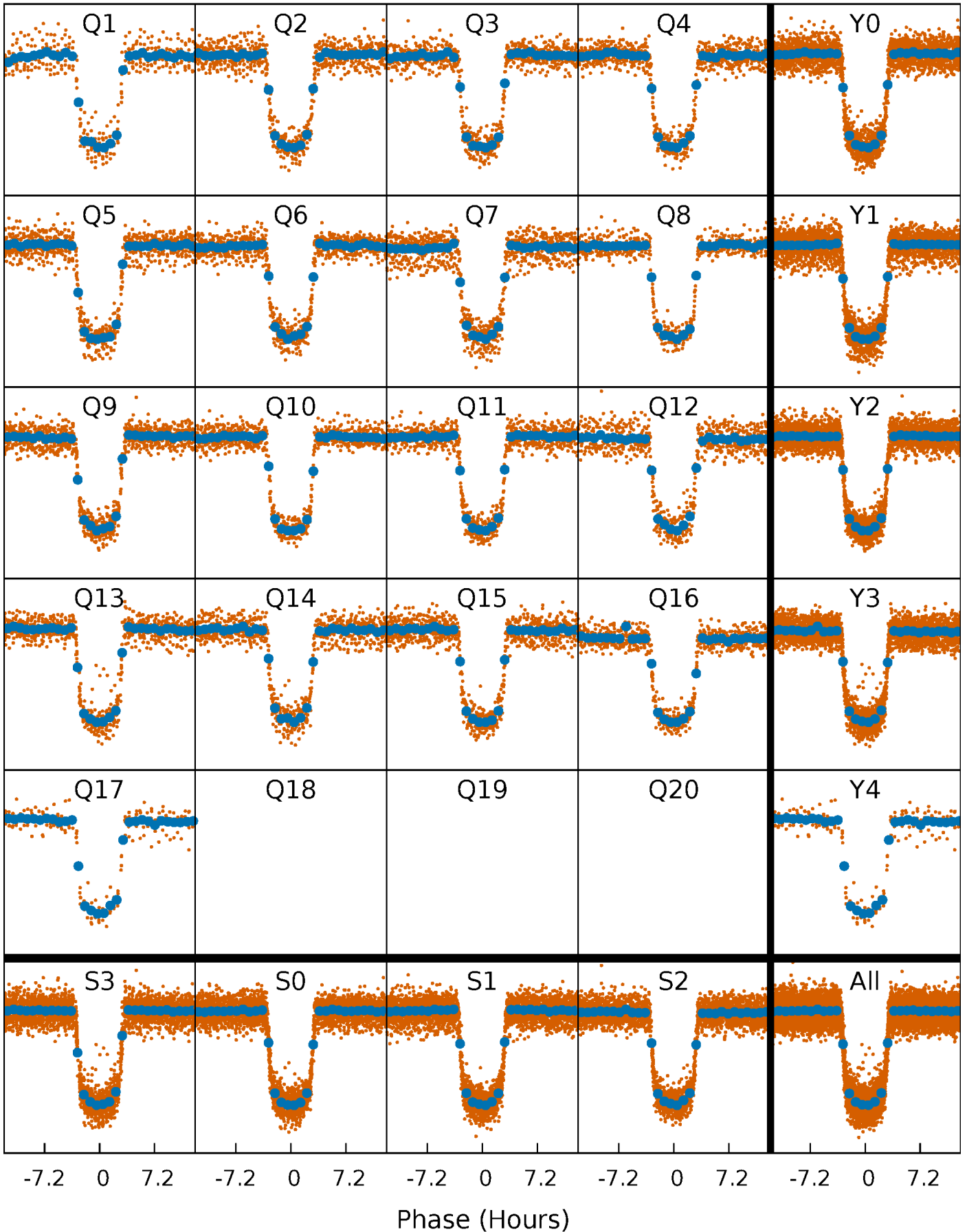


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



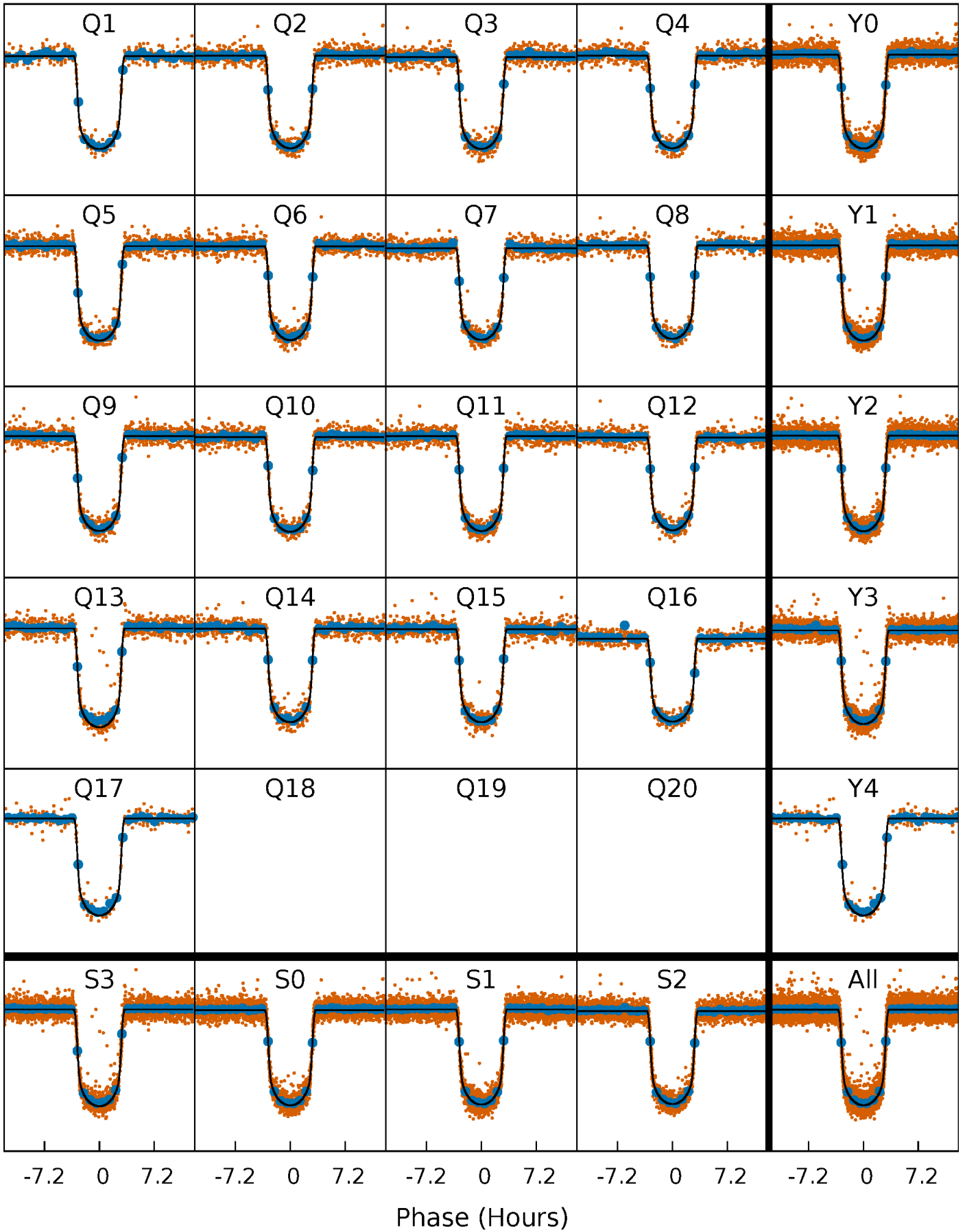
PDC Quarter-Phased Transit Curves

TCE 005728139-01 P= 5.334079 Days $T_0=131.982019$ (BKJD)



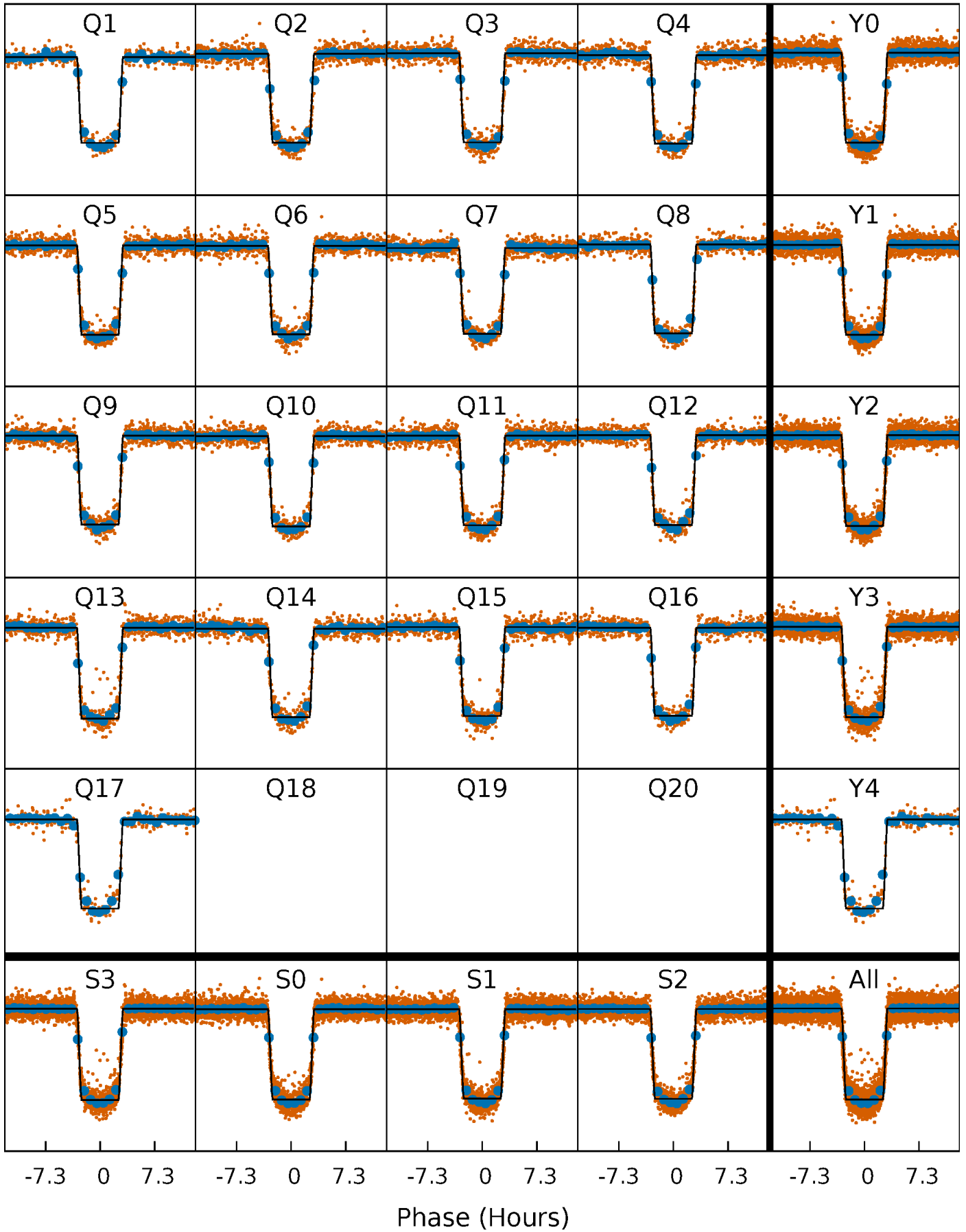
DV Quarter-Phased Transit Curves

TCE 005728139-01 P= 5.334079 Days $T_0=131.982019$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

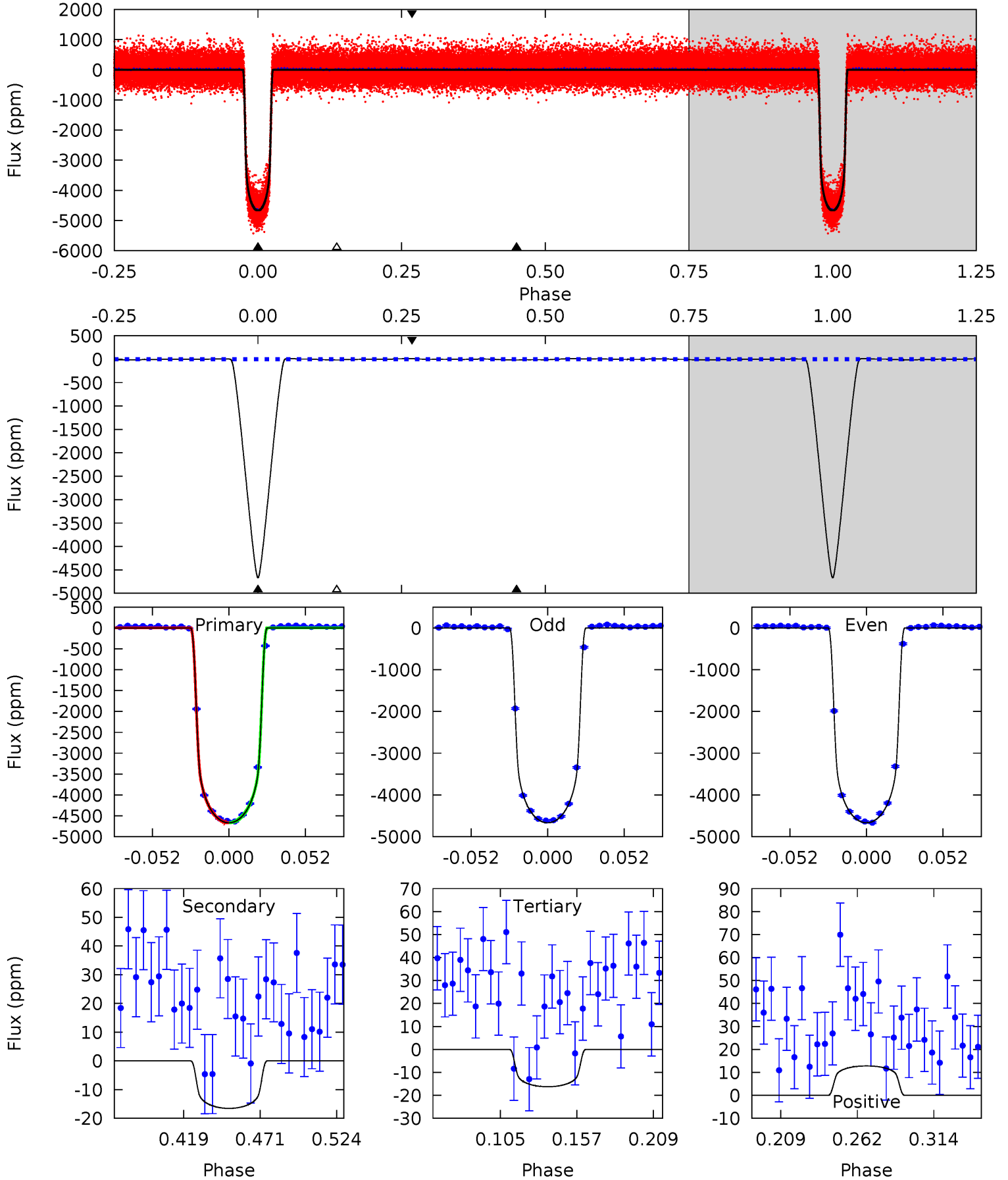
TCE 005728139-01 P= 5.334106 Days $T_0=131.978529$ (BKJD)



DV Model-Shift Uniqueness Test

005728139-01, P = 5.334079 Days, E = 126.647940 Days

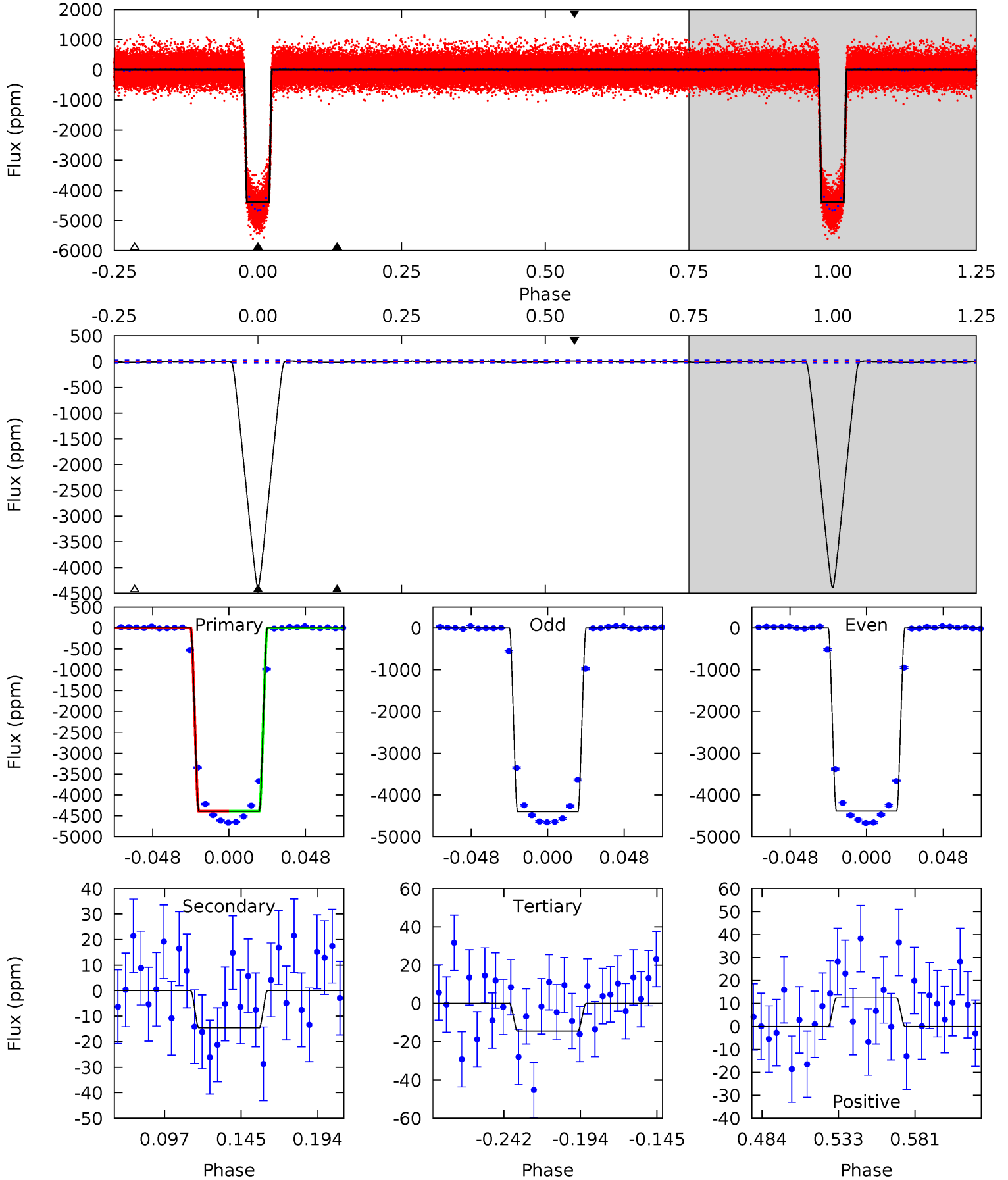
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
959.2	3.40	3.34	2.63	4.70	1.94	1.37	955.8	956.5	0.06	0.77	0.08	1.00	0.00	0.32



Alt Model-Shift Uniqueness Test

005728139-01, P = 5.334106 Days, E = 126.644423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
892.3	2.96	2.93	2.53	4.71	1.97	1.07	889.3	889.7	0.02	0.43	1.90	1.00	0.00	0.15



Stellar Parameters For KIC 005728139

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6332^{+82}_{-75}	$4.016^{+0.180}_{-0.120}$	$0.040^{+0.150}_{-0.150}$	$1.905^{+0.357}_{-0.437}$	$1.373^{+0.148}_{-0.162}$	$0.280^{+0.269}_{-0.102}$
	+1%/-1%	+4%/-3%	+375%/-375%	+19%/-23%	+11%/-12%	+96%/-36%
Source	SPE76	SPE76	SPE76	DSEP		

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

Secondary Eclipse Parameters for KIC 005728139-01 / KOI 0206.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 5	$13.21^{+1.31}_{-1.53}$	2084^{+104}_{-110}	-2160^{+4055}_{-205}	$0.229^{+0.094}_{-0.072}$
Alt.	-15 ± 5	$13.74^{+1.42}_{-1.65}$	2080^{+106}_{-123}	-2264^{+347}_{-178}	$0.183^{+0.091}_{-0.069}$

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 $A_{obs} \gg 1.0$

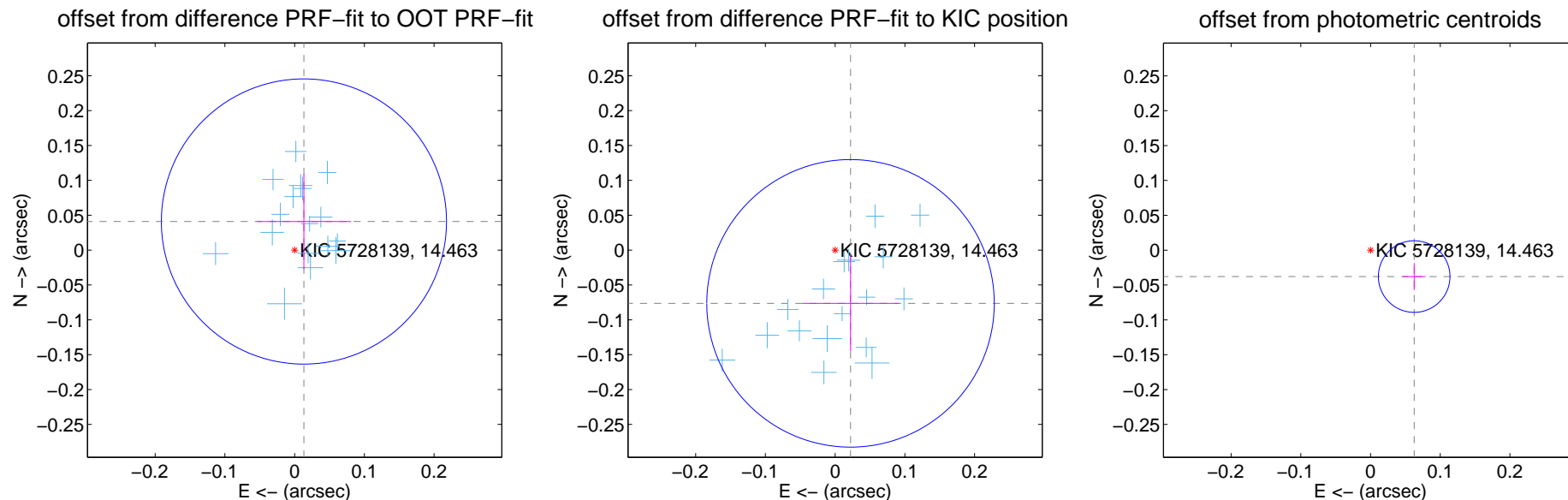
DV Centroid Data

Supplemental centroid analysis for 005728139-01. Kepler magnitude: 14.46. Transit SNR 564.16

There are 17 quarters with good PRF difference image offsets

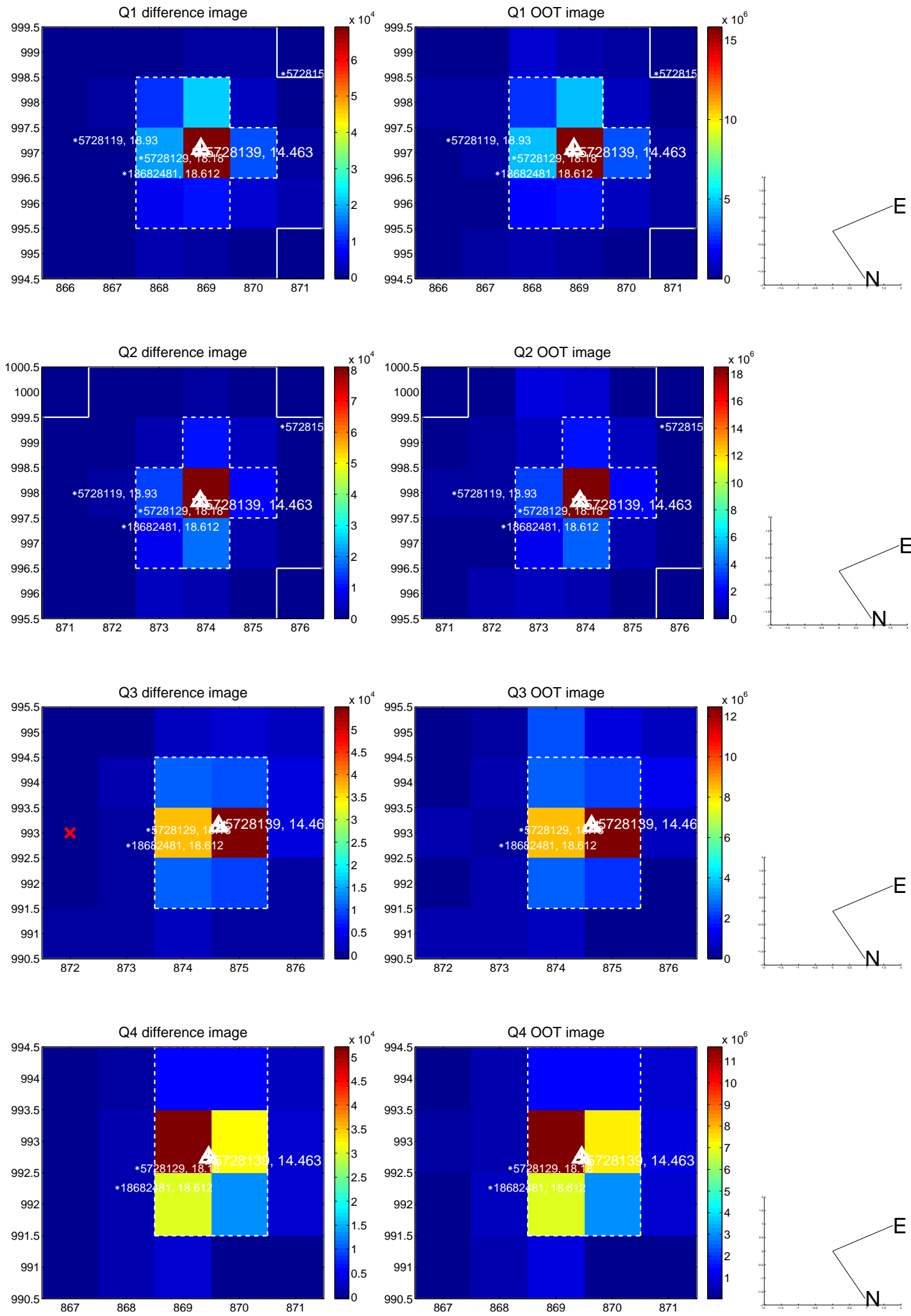
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.068	0.63	-0.013 ± 0.067	0.041 ± 0.068
PRF-fit source offset from KIC position	0.080 ± 0.069	1.16	-0.022 ± 0.069	-0.076 ± 0.069
photometric centroid source offset	0.07 ± 0.02	4.28	-0.06 ± 0.02	-0.04 ± 0.02

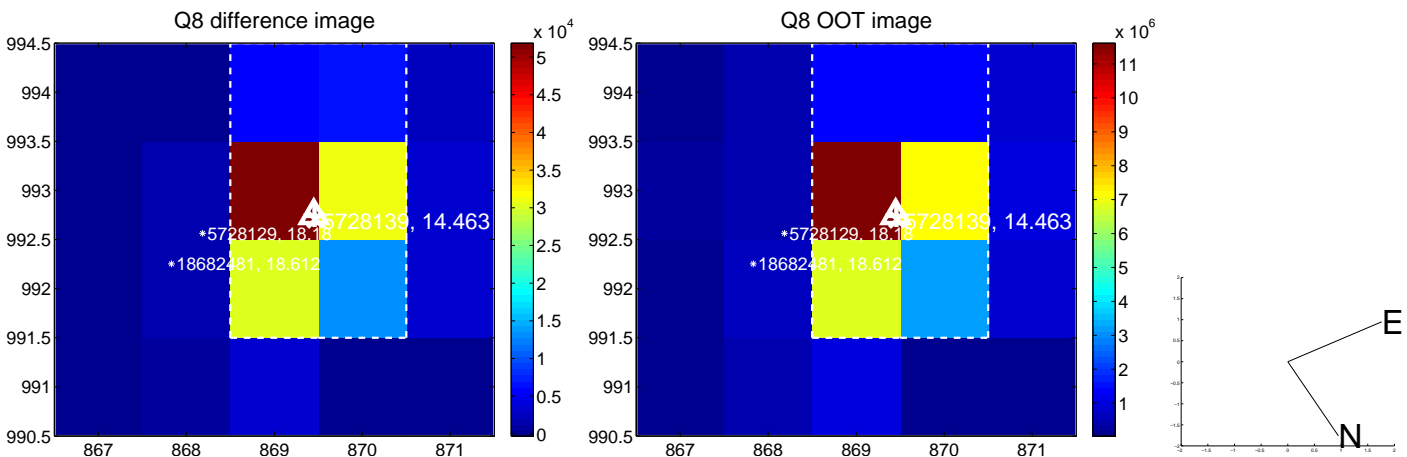
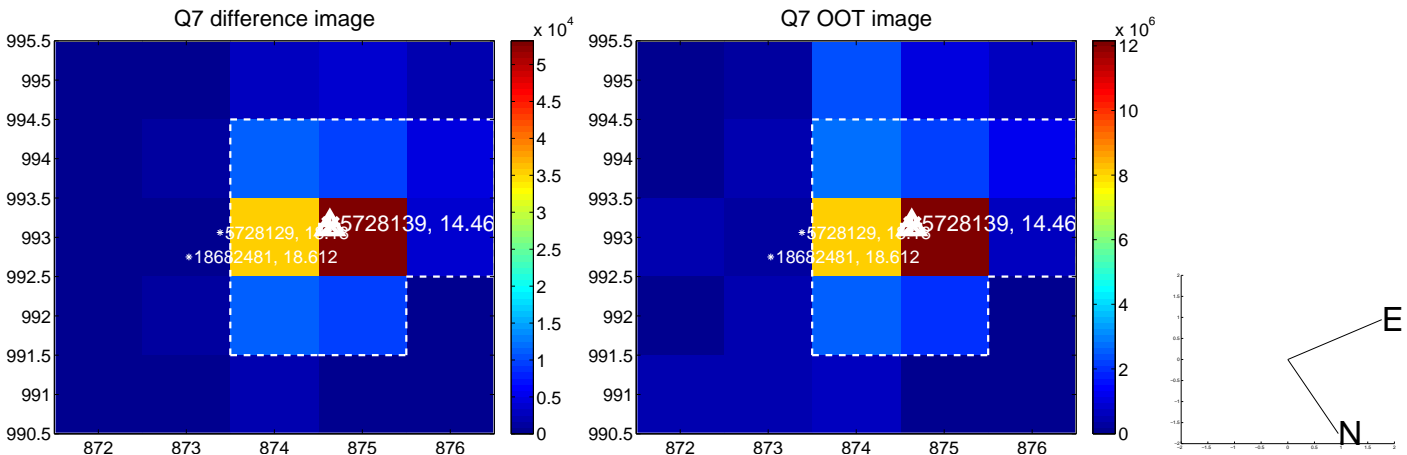
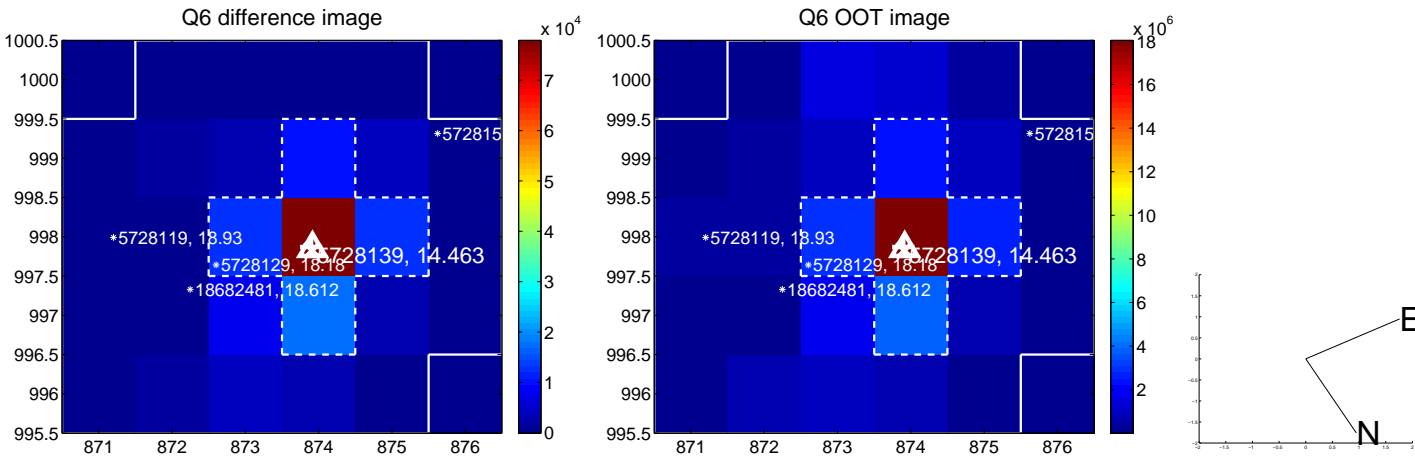
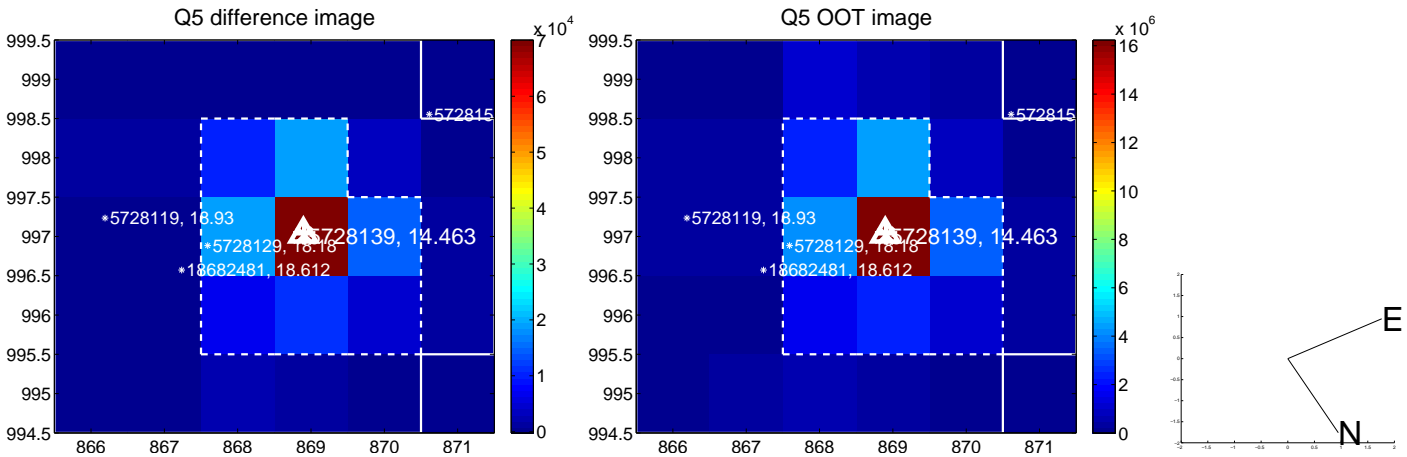


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

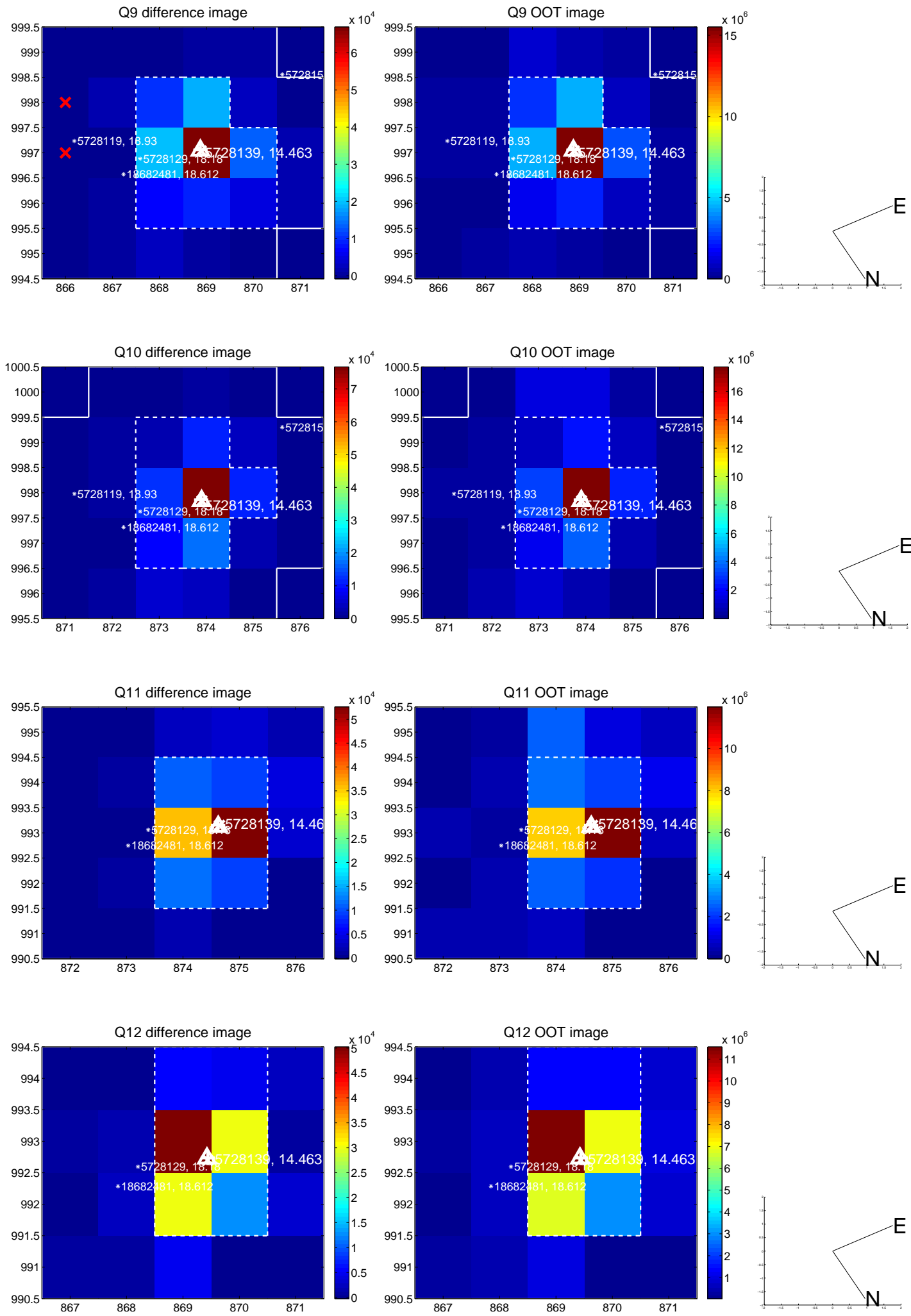
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



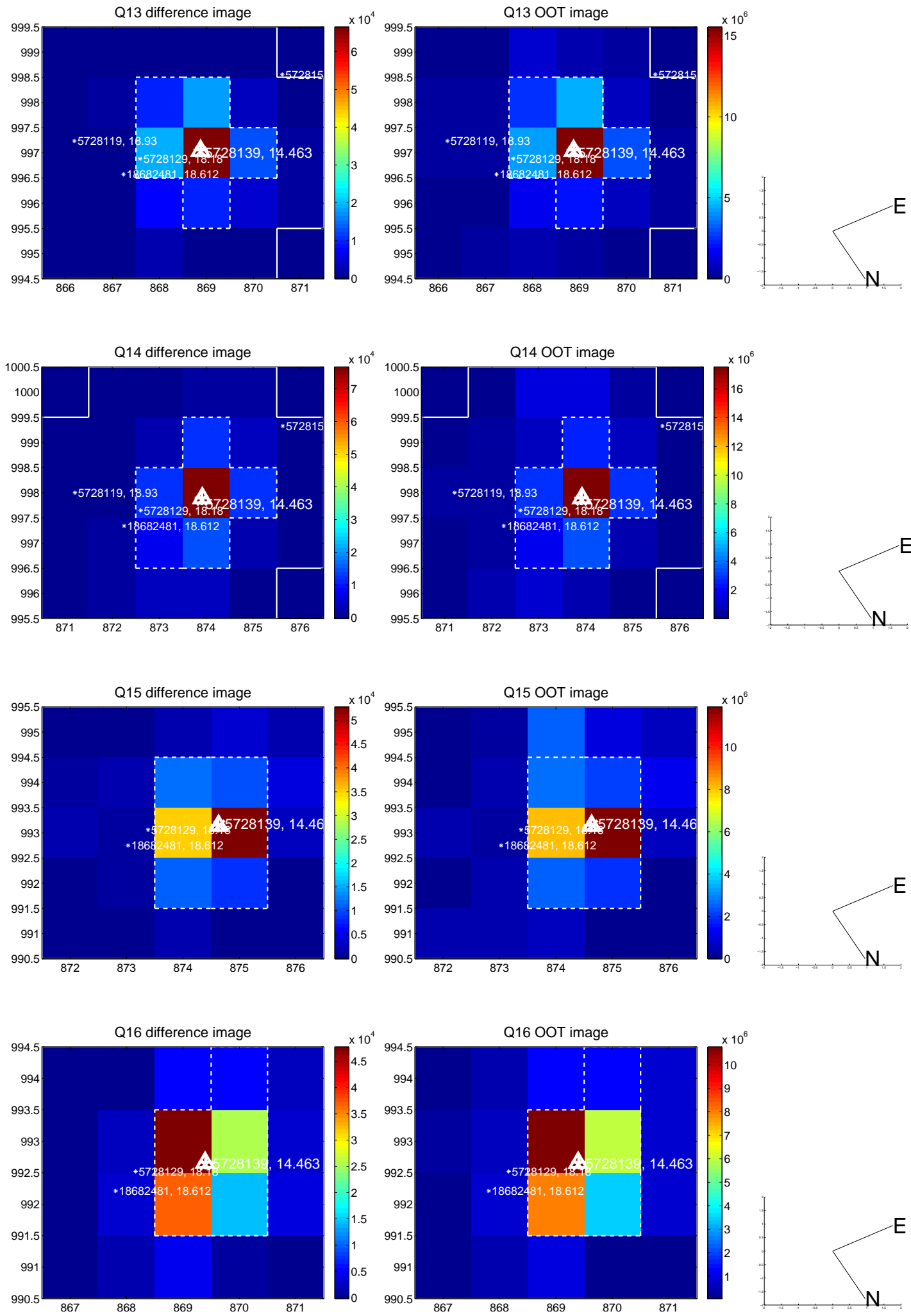
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



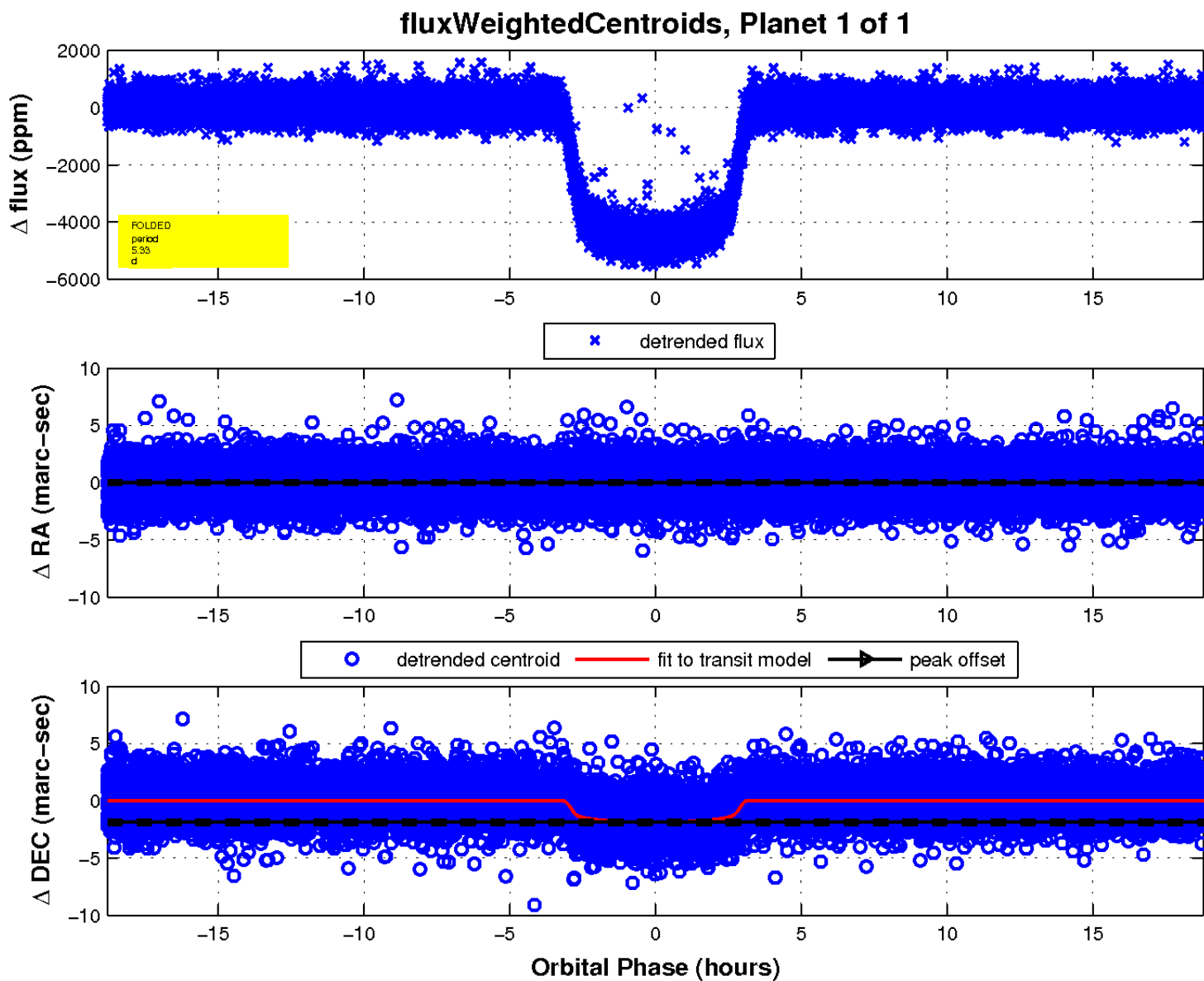
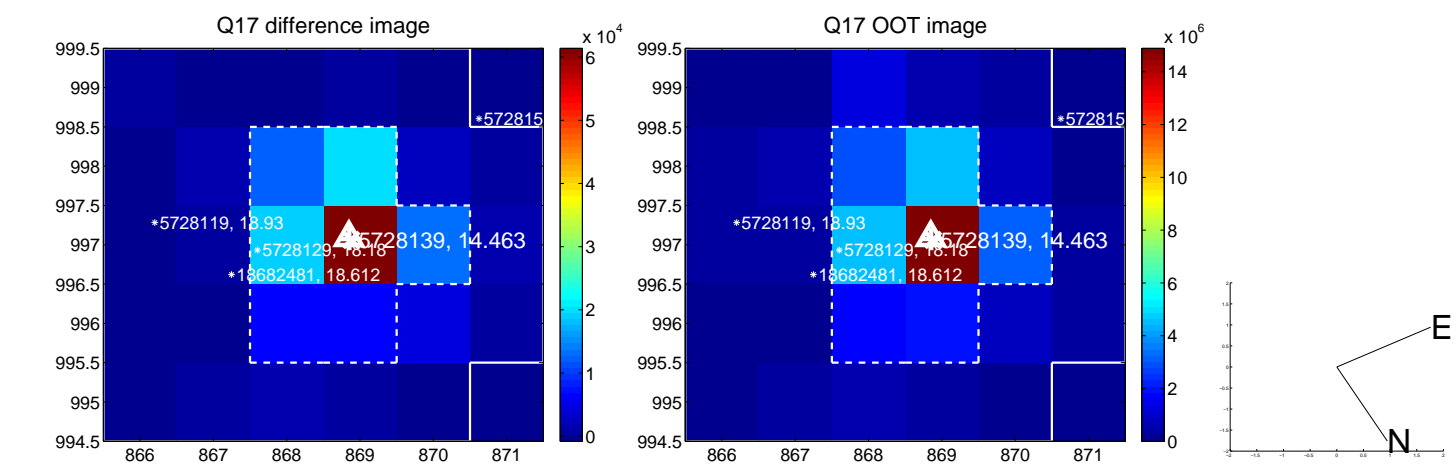
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

