

KIC 009527073

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})
009527073-01	OBS	No	0.738300	131.568032	52.8	1.495	7.4	5.5	0.87	5620	0.76	2668.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009527073-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

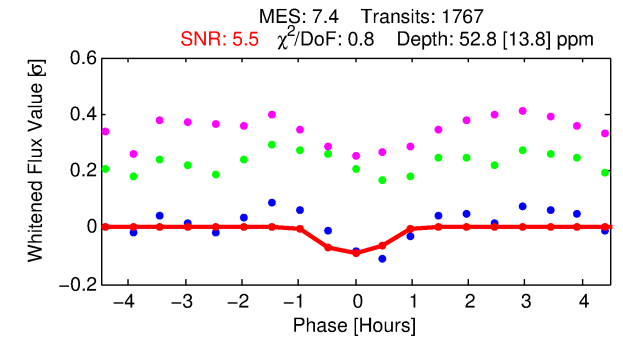
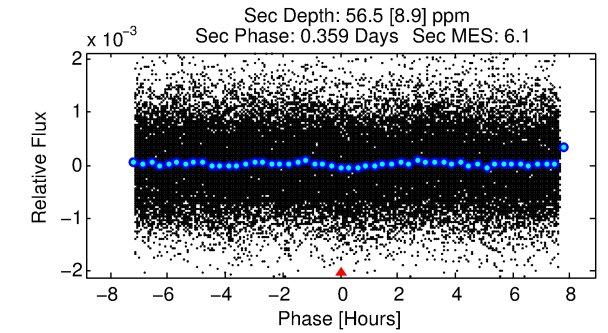
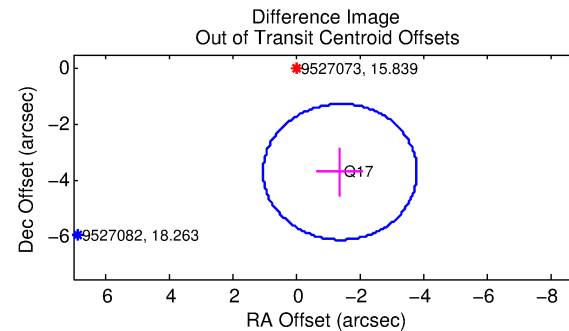
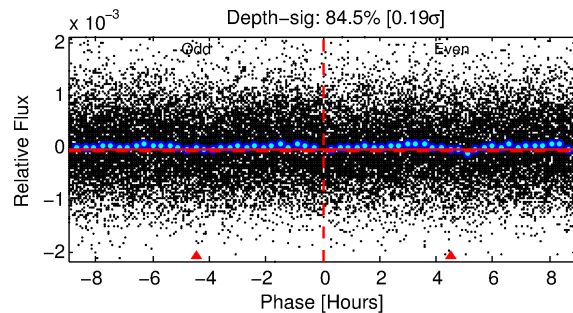
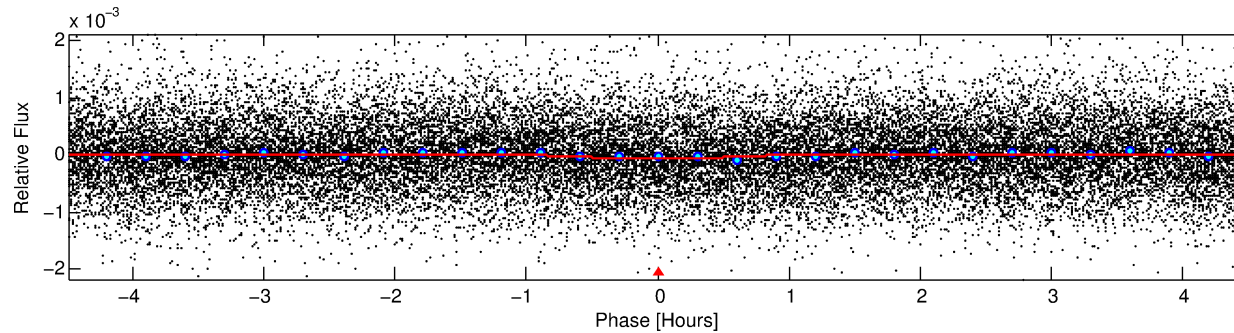
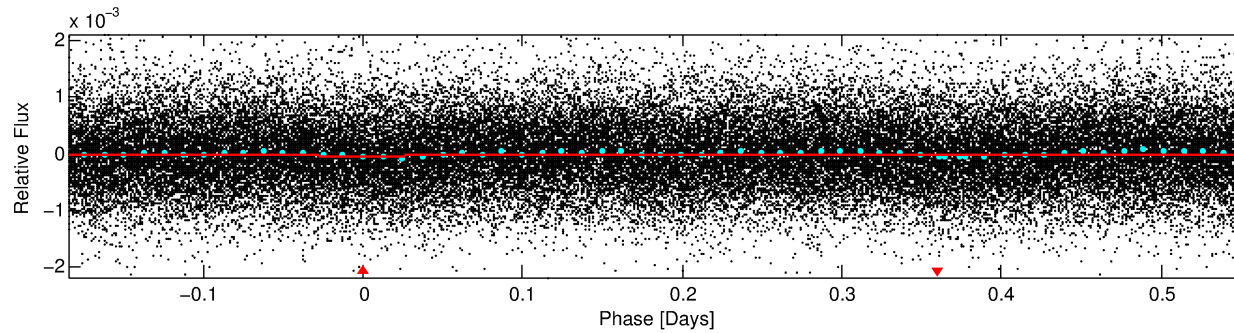
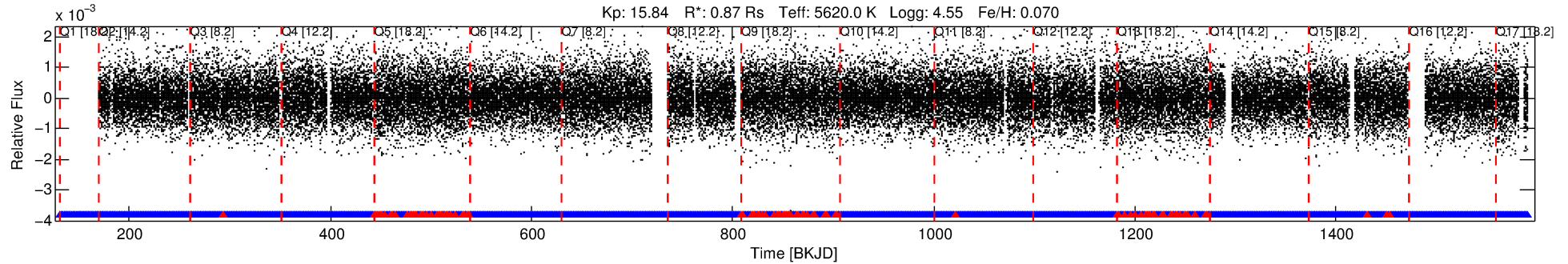
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009527073-01

No Significant Match Found

DV One-Page Summary

KIC: 9527073 Candidate: 1 of 1 Period: 0.738 d



DV Fit Results:

Period = 0.73830 [0.00002] d
Epoch = 131.5680 [0.0042] BKJD
Rp/R* = 0.0080 [0.0110]
a/R* = 1.93 [8.92]
b = 0.90 [1.32]
Seff = 2668.14 [1002.56]
Teq = 1833 [172] K
Rp = 0.76 [1.07] Re
a = 0.0159 [0.0039] AU
Ag = 13.59 [37.68] [0.33 σ]
Teffp = 5440 [3743] K [0.96 σ]

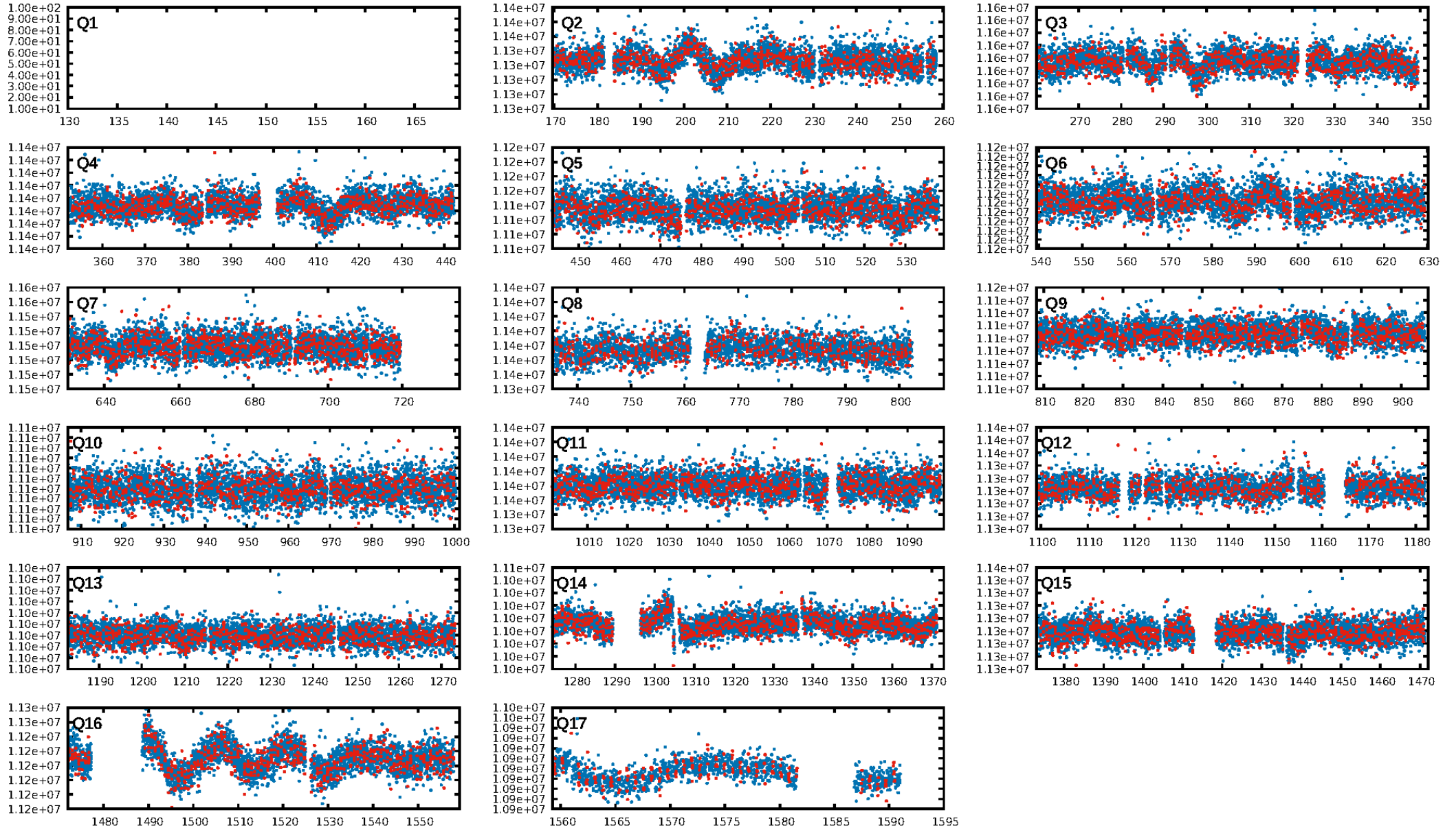
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.92e-14
RollingBand-fgt: 0.94 [1624/1732]
GhostDiagnostic-chr: -2.139
Centroid-sig: 3.3%
Centroid-so: 4.849 arcsec [1.69 σ]
OotOffset-rm: 3.943 arcsec [4.89 σ]
KicOffset-rm: 3.927 arcsec [4.89 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [16/16]

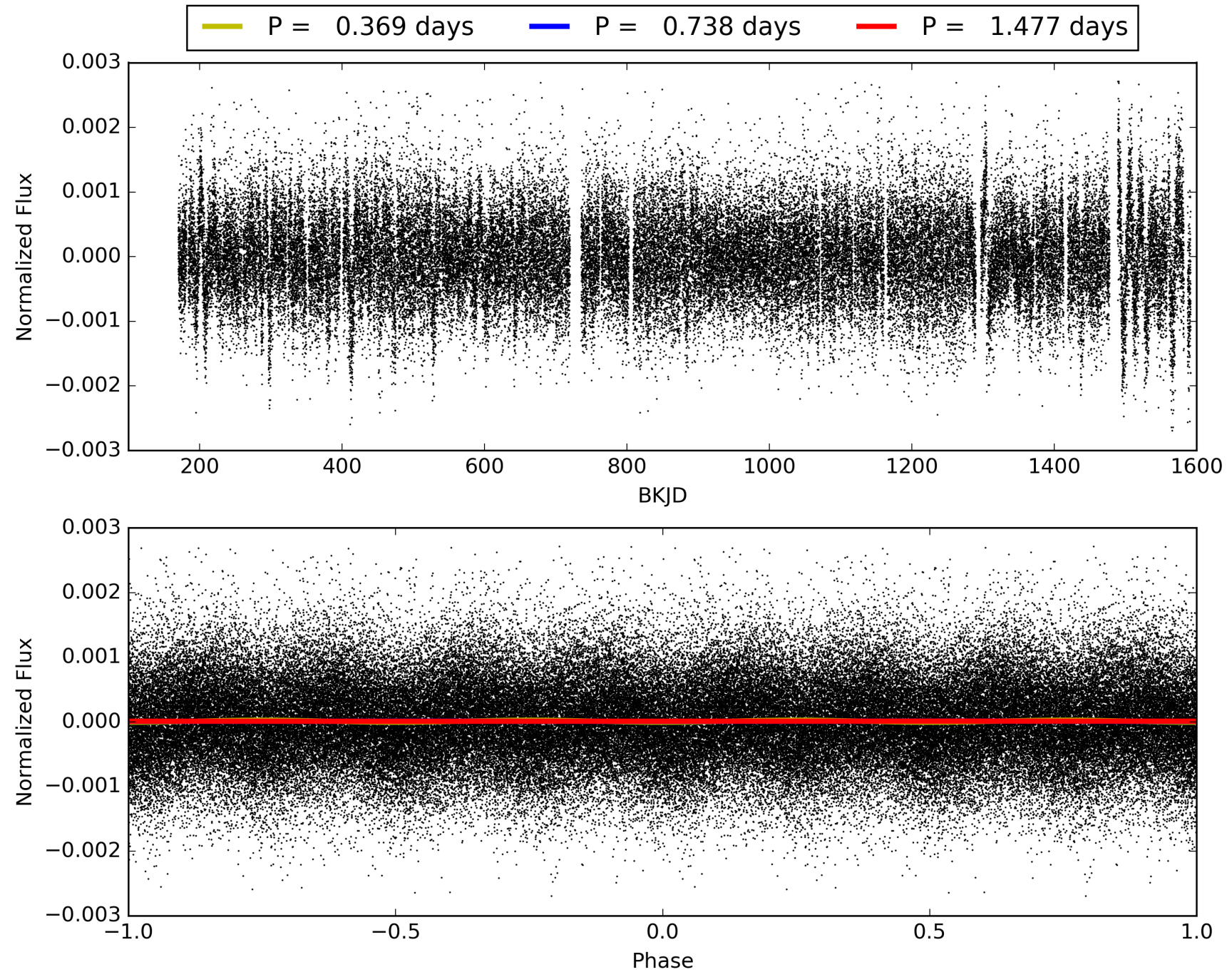
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:48:12 Z

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

TCE 009527073-01, PDC Light Curves

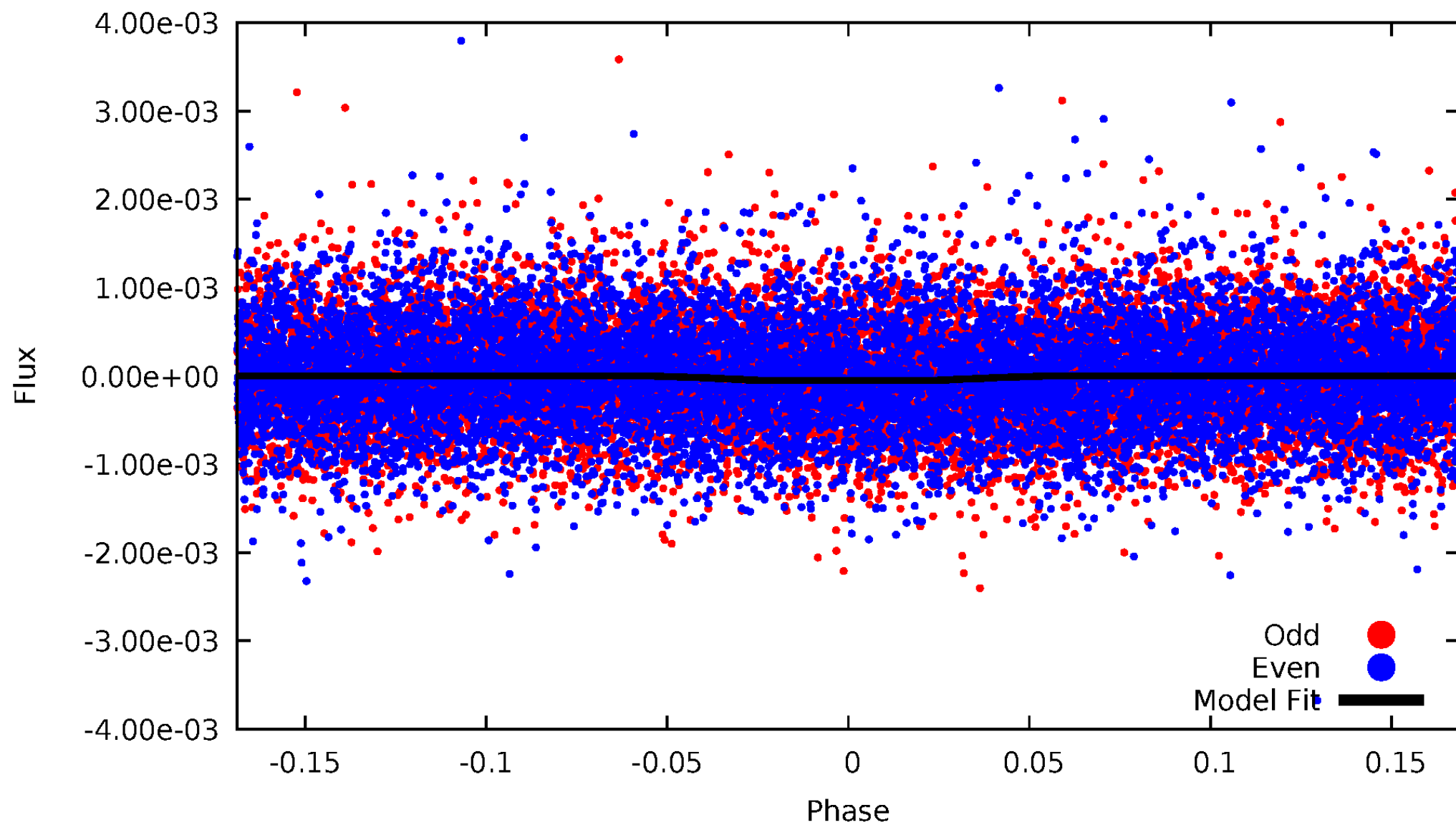


TCE 009527073-01



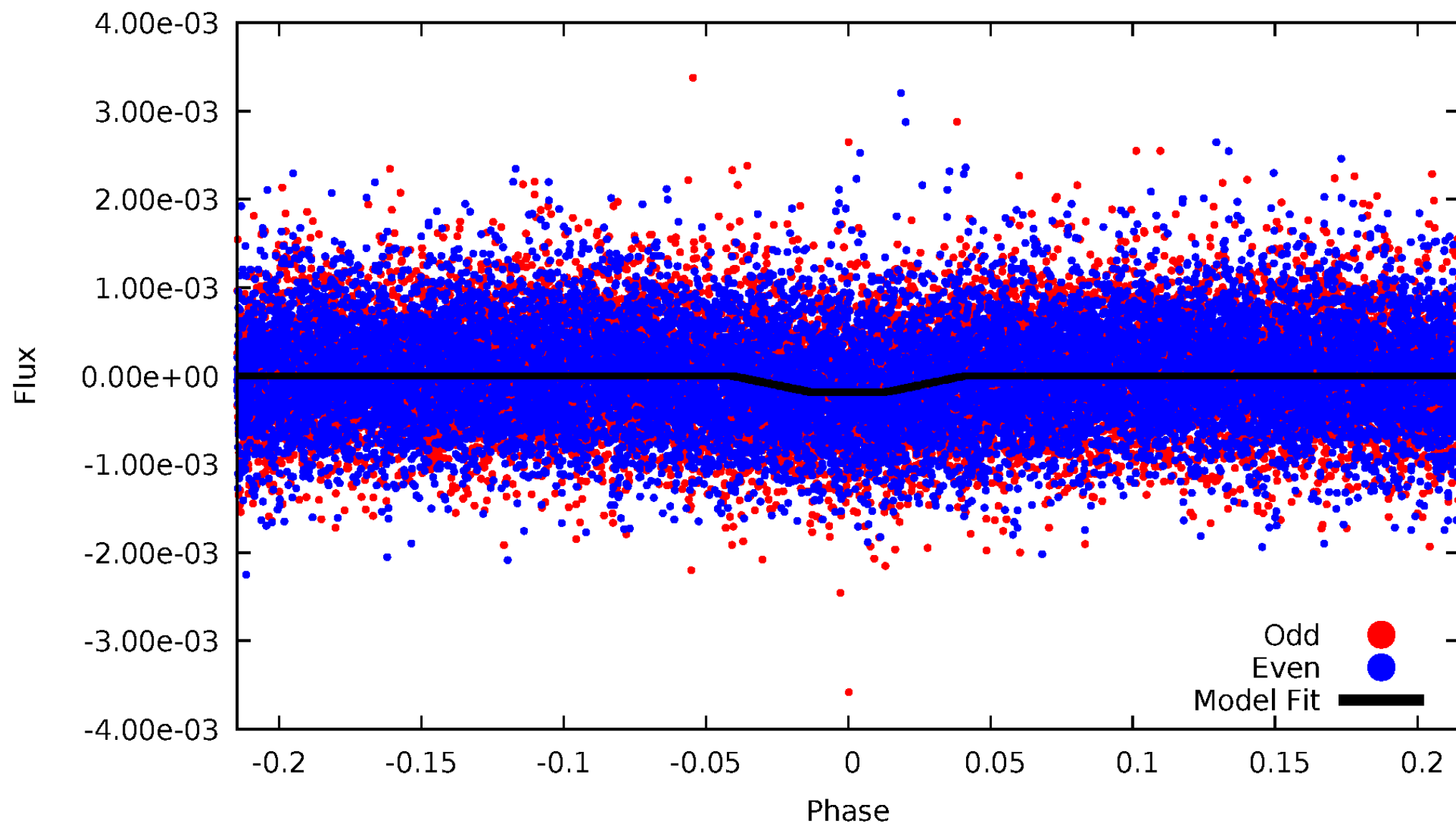
DV Odd/Even

TCE 009527073-01



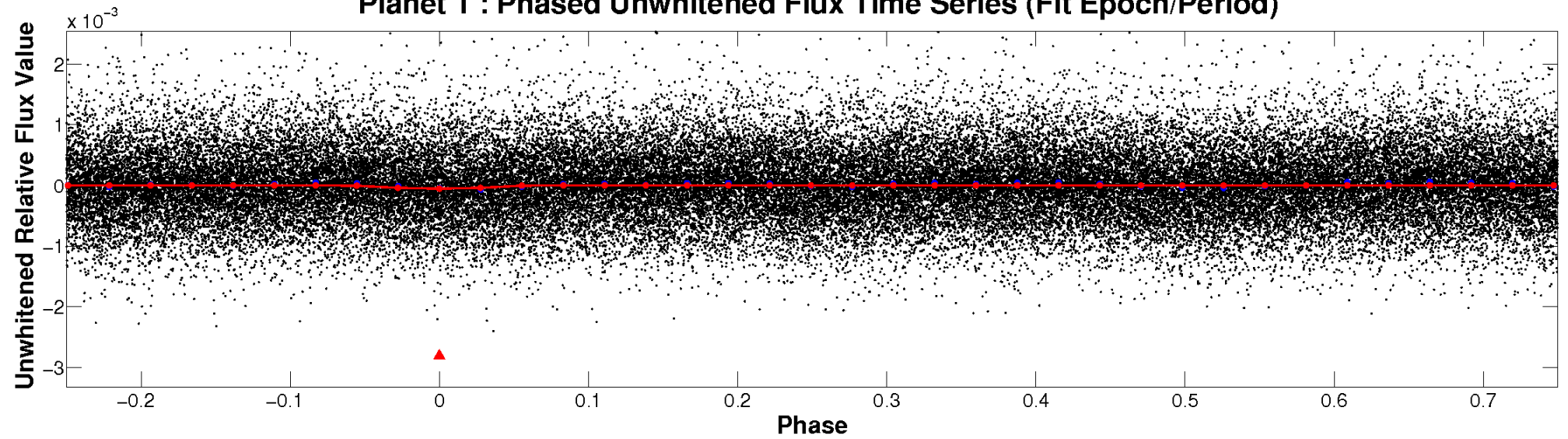
ALT Odd/Even

TCE 009527073-01

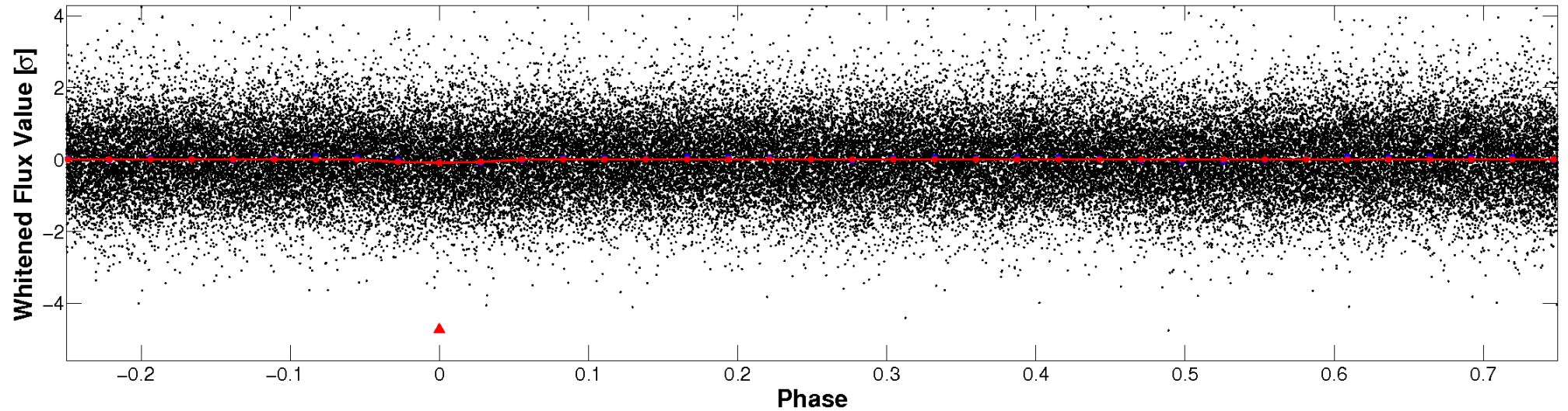


Non-Whitened Vs. Whitened Light Curve

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

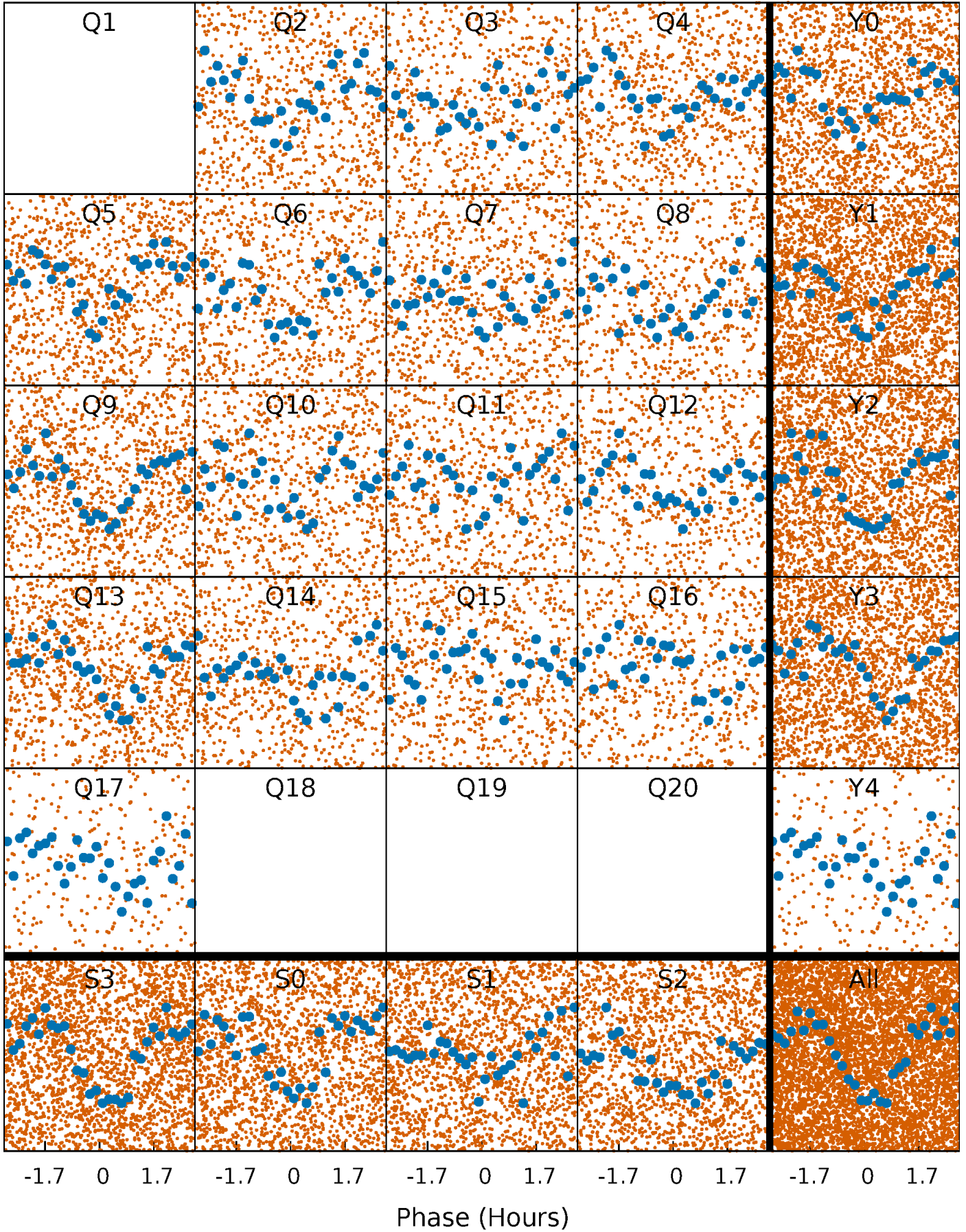


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



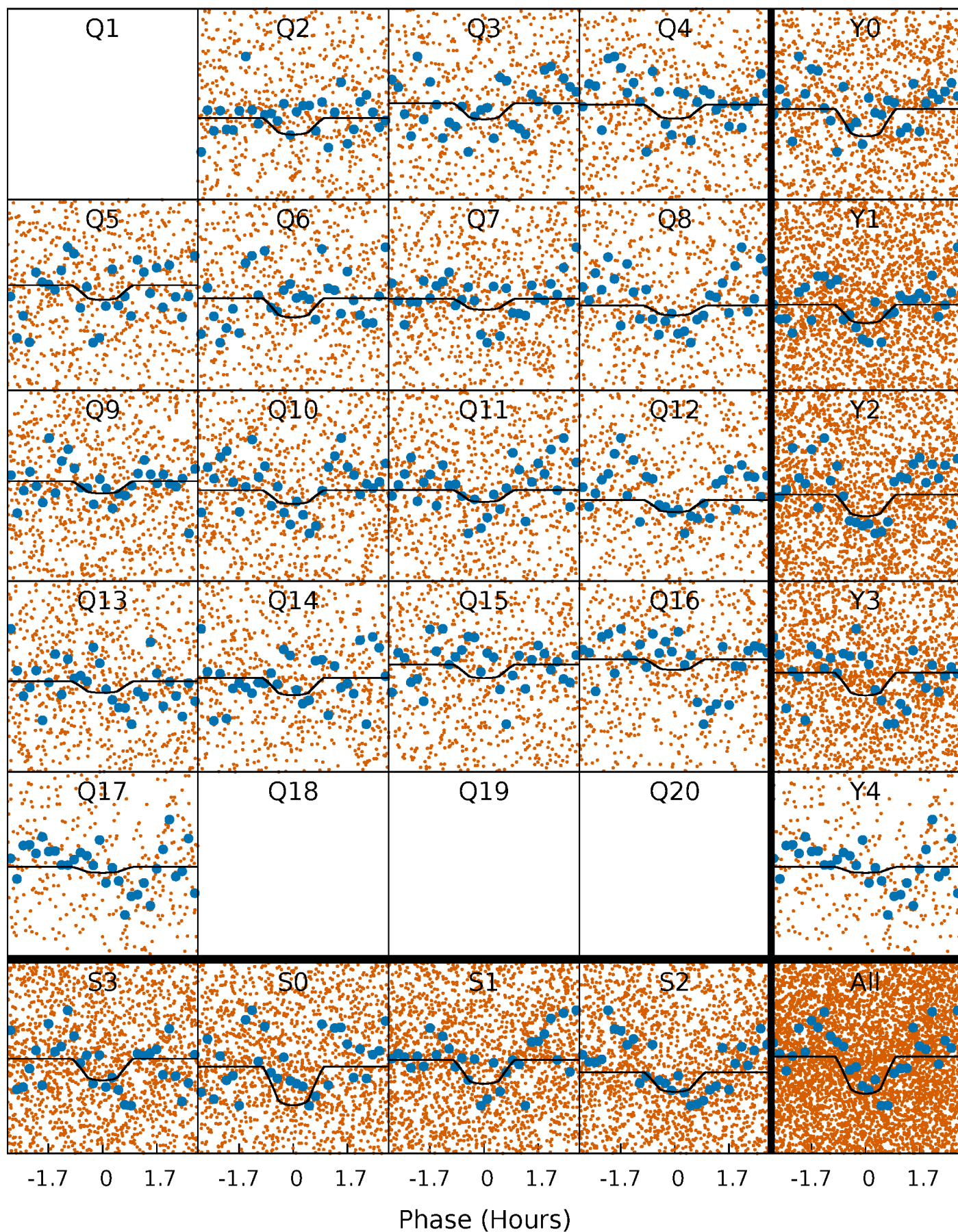
PDC Quarter-Phased Transit Curves

TCE 009527073-01 P= 0.738300 Days $T_0=131.568032$ (BKJD)



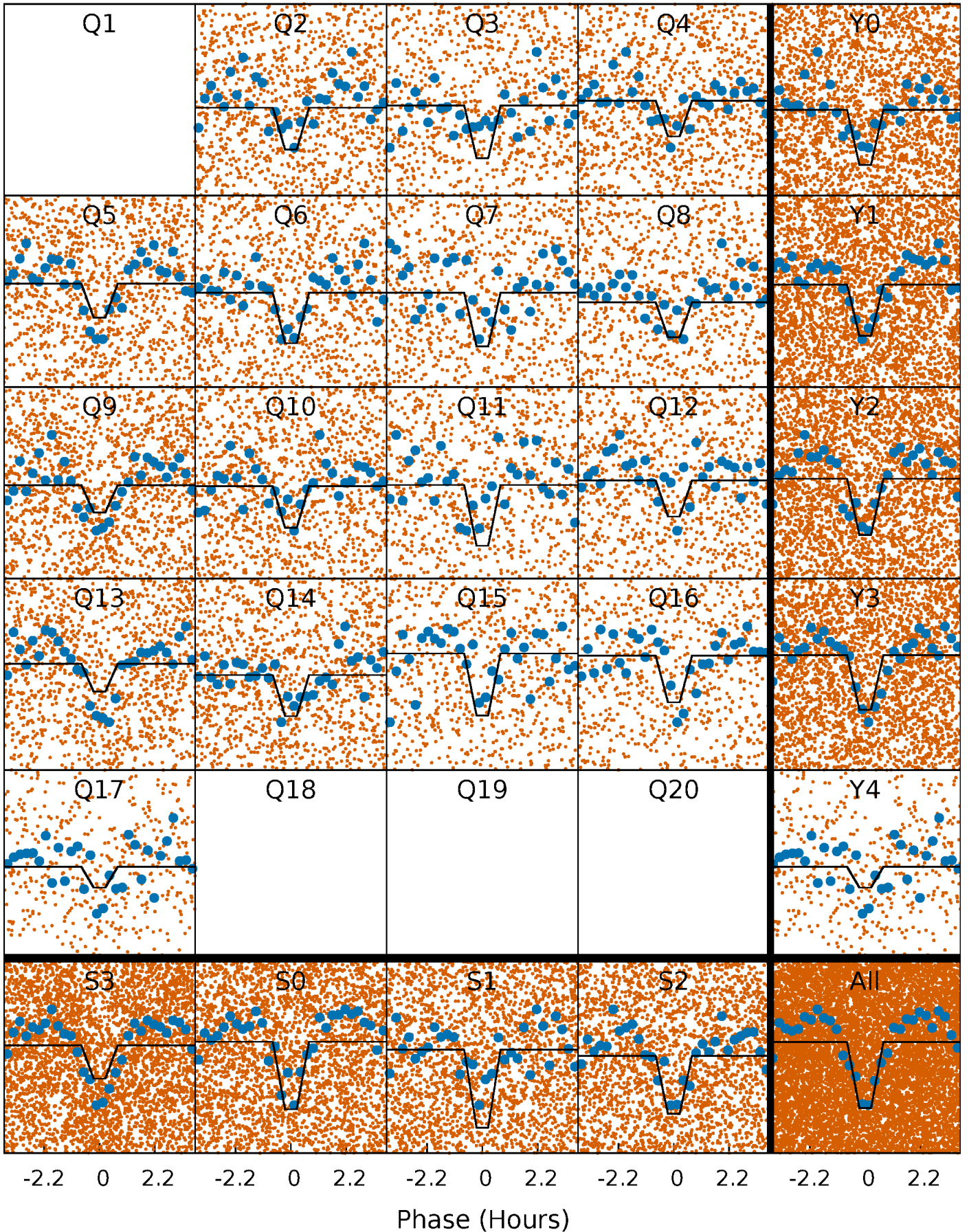
DV Quarter-Phased Transit Curves

TCE 009527073-01 P= 0.738300 Days $T_0=131.568032$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

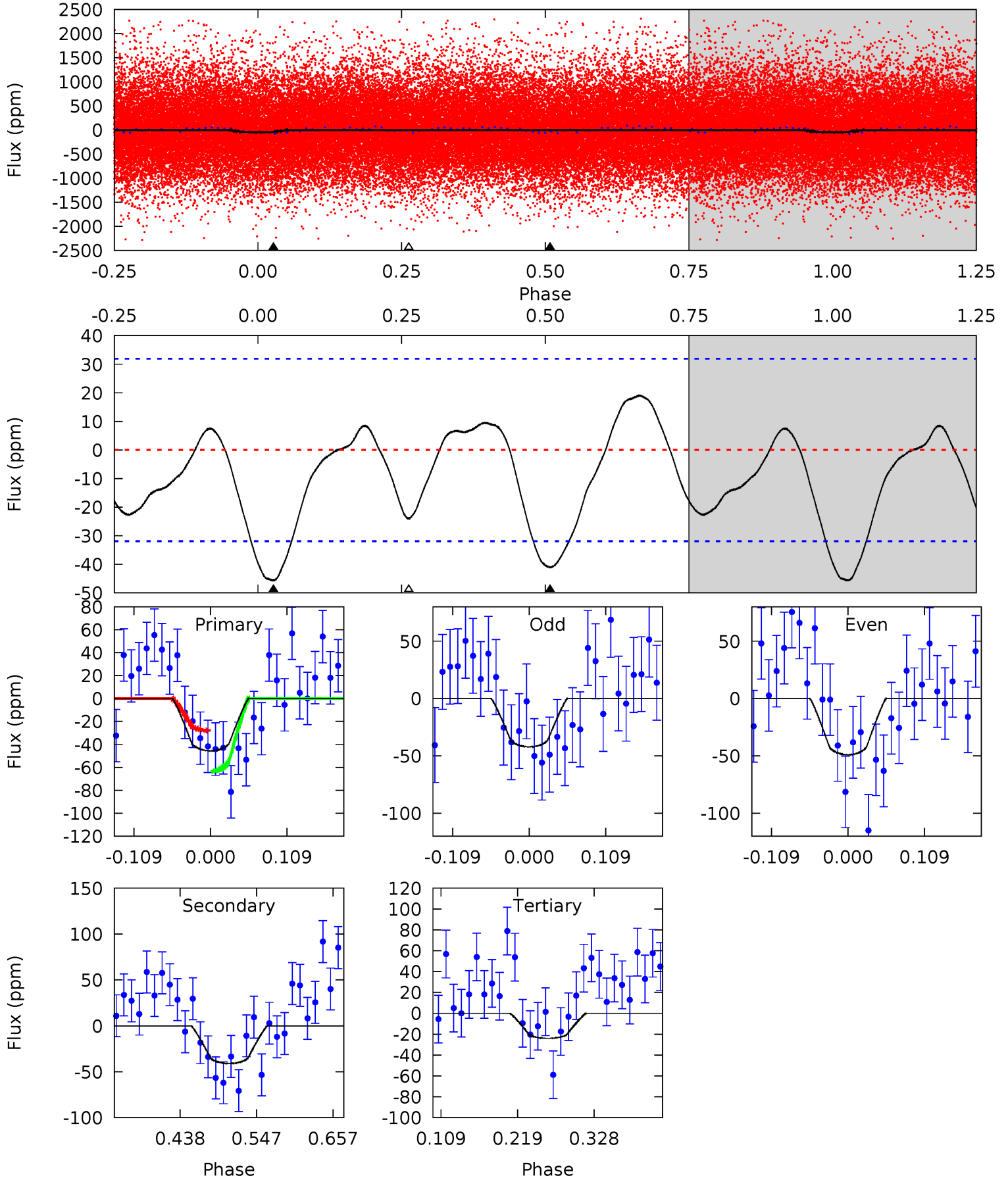
TCE 009527073-01 P= 0.738324 Days $T_0=131.553334$ (BKJD)



DV Model-Shift Uniqueness Test

009527073-01, P = 0.738300 Days, E = 131.568032 Days

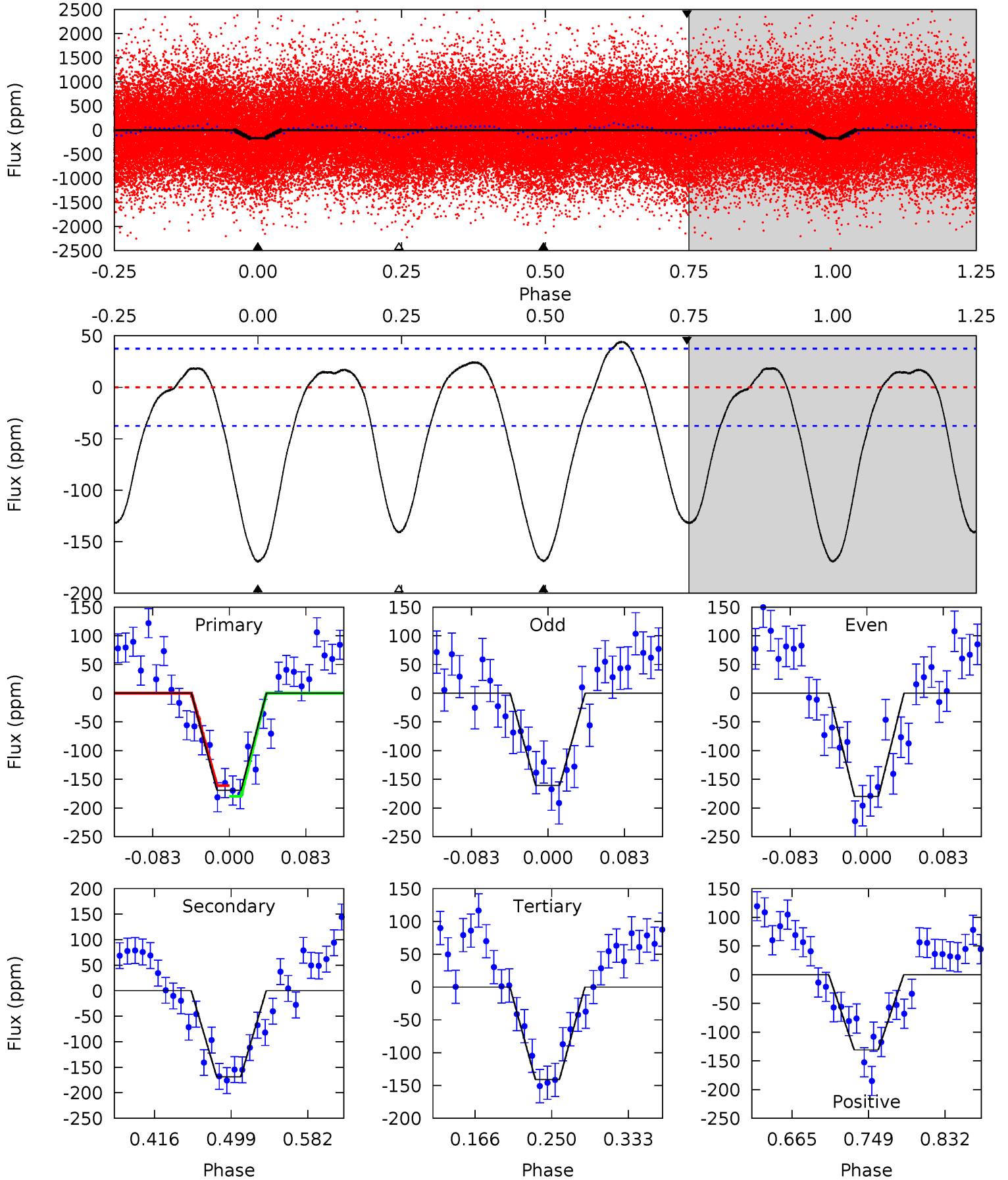
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.49	5.85	3.42	0	4.55	1.60	1.77	3.07	6.49	2.43	5.85	0.49	0.82	0.29	2.55



Alt Model-Shift Uniqueness Test

009527073-01, P = 0.738324 Days, E = 131.553334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.8	20.7	17.3	-16.1	4.60	1.73	6.75	3.48	36.8	3.43	36.8	1.18	0.99	0.21	1.14



Stellar Parameters For KIC 009527073

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+169}_{-169}	$4.553^{+0.035}_{-0.196}$	$0.070^{+0.250}_{-0.300}$	$0.869^{+0.248}_{-0.078}$	$0.984^{+0.083}_{-0.125}$	$2.113^{+0.393}_{-1.046}$
	+3%/-3%	+1%/-4%	+357%/-429%	+29%/-9%	+8%/-13%	+19%/-50%
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 009527073-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-41 ± 7	$1.15^{+0.99}_{-0.78}$	2621^{+171}_{-121}	4310^{+3043}_{-950}	$4.008^{+34.909}_{-2.801}$
Alt.	-169 ± 8	$1.53^{+1.03}_{-0.89}$	2619^{+170}_{-109}	5201^{+2910}_{-1009}	$9.918^{+45.990}_{-6.372}$

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

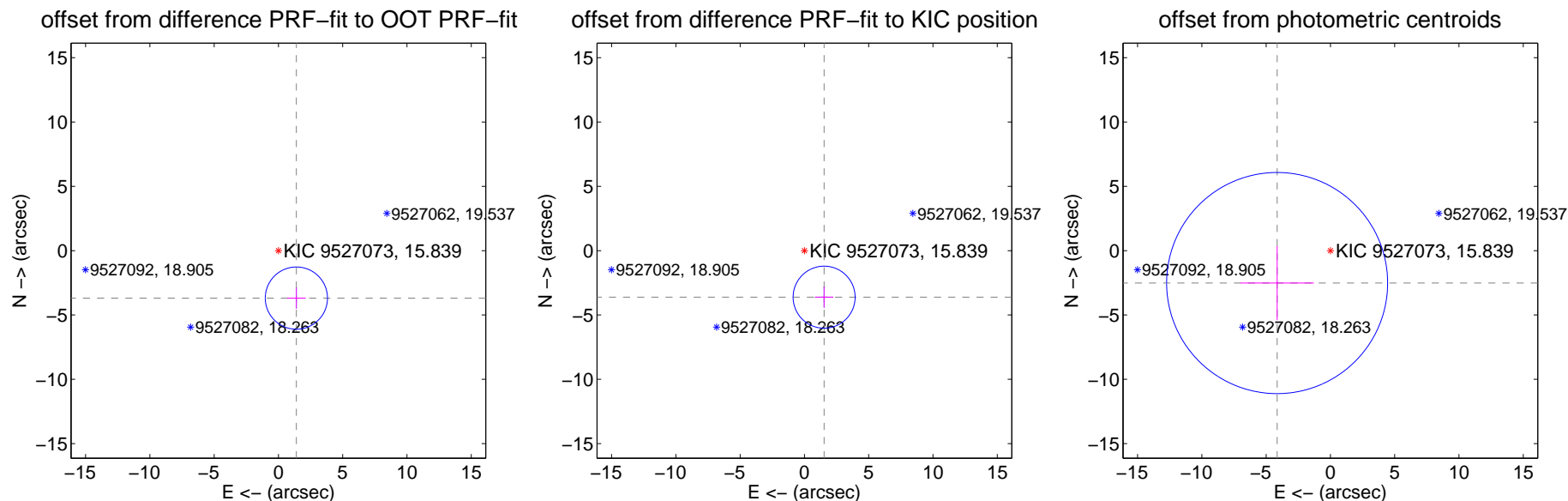
DV Centroid Data

Supplemental centroid analysis for 009527073-01. Kepler magnitude: 15.84. Transit SNR 5.47

There are 1 quarters with good PRF difference image offsets

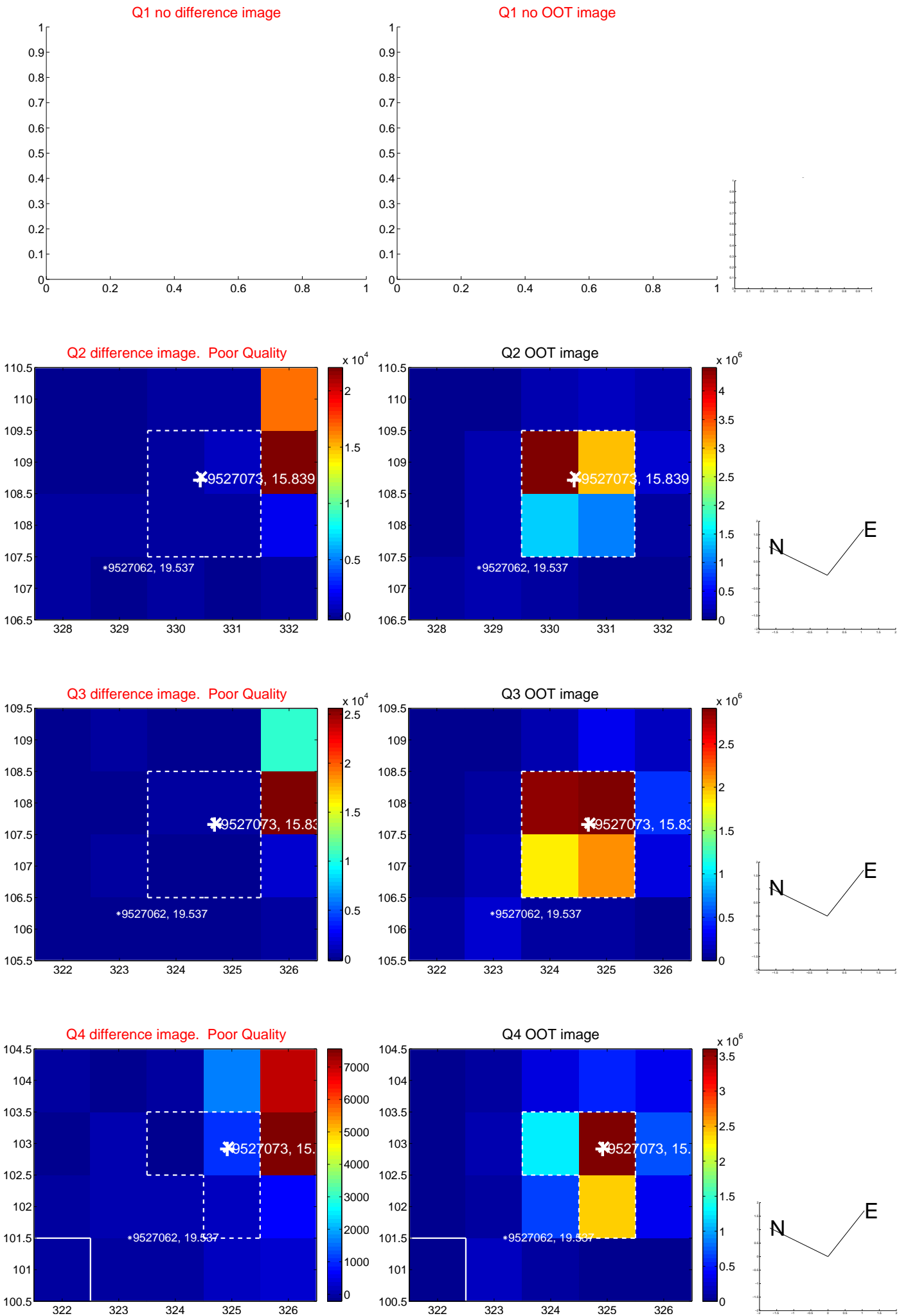
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.943 ± 0.806	4.89	-1.395 ± 0.714	-3.687 ± 0.819
PRF-fit source offset from KIC position	3.927 ± 0.804	4.89	-1.532 ± 0.714	-3.616 ± 0.819
photometric centroid source offset	4.85 ± 2.86	1.69	4.14 ± 2.85	-2.52 ± 2.89

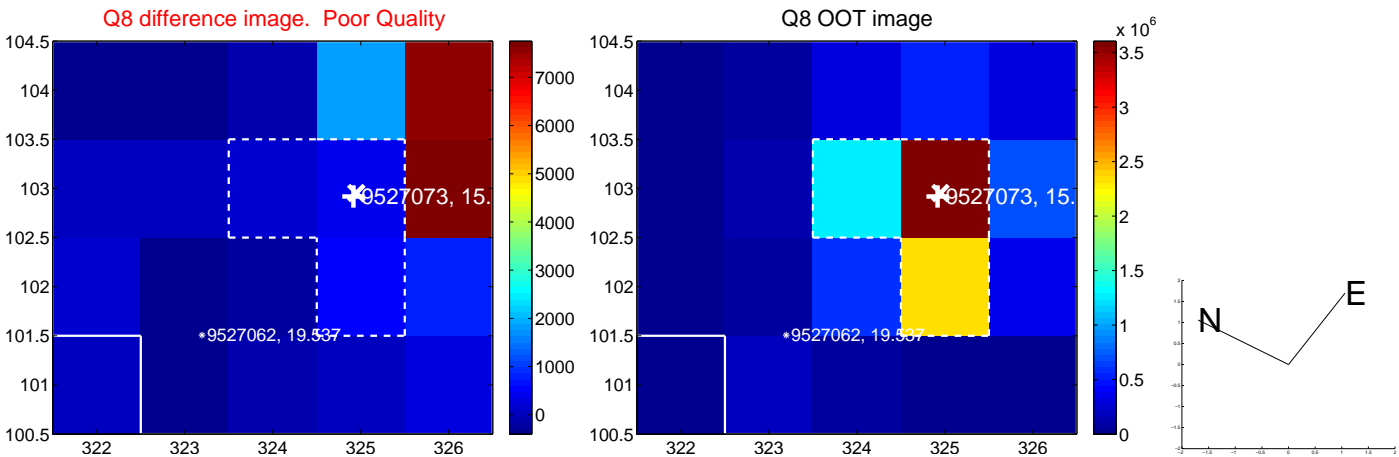
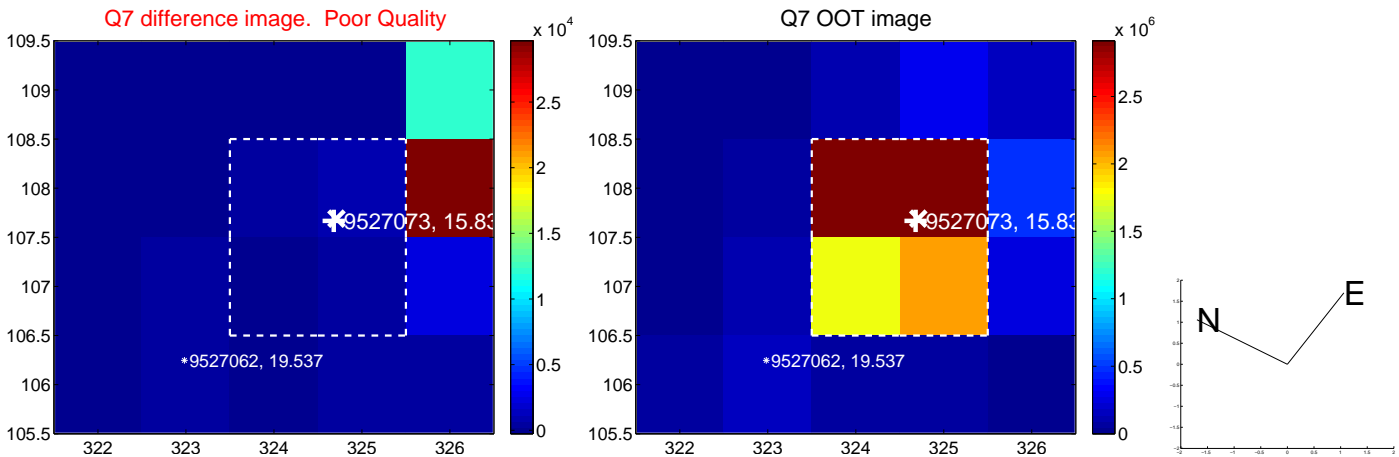
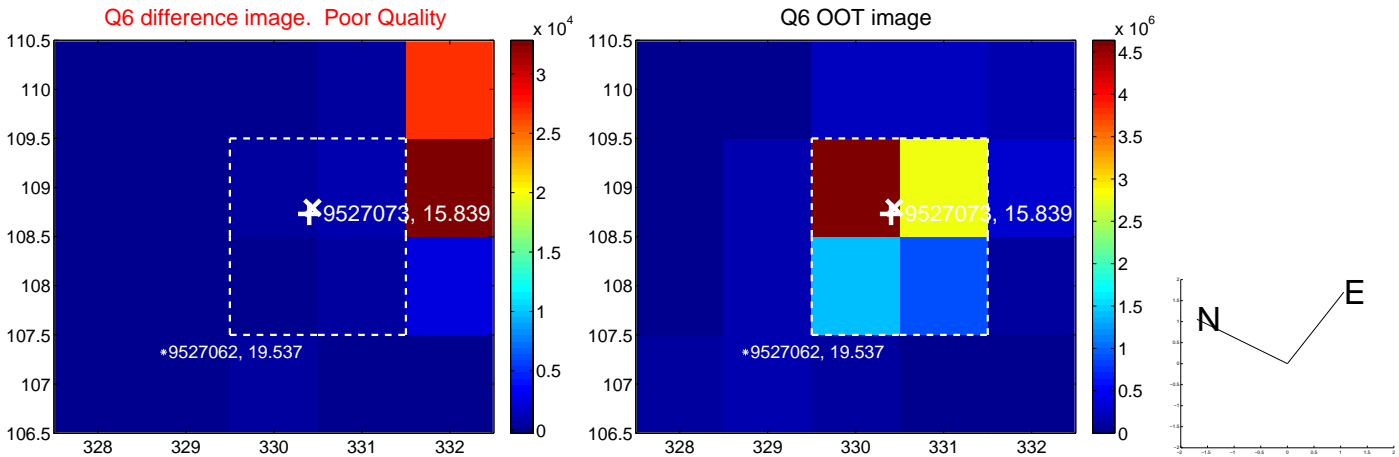
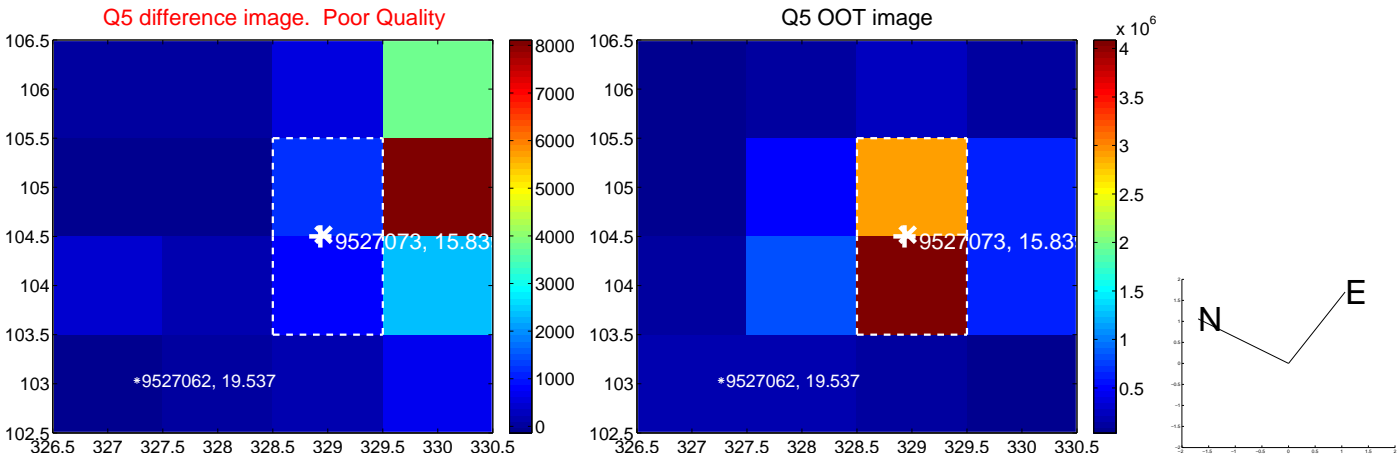


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

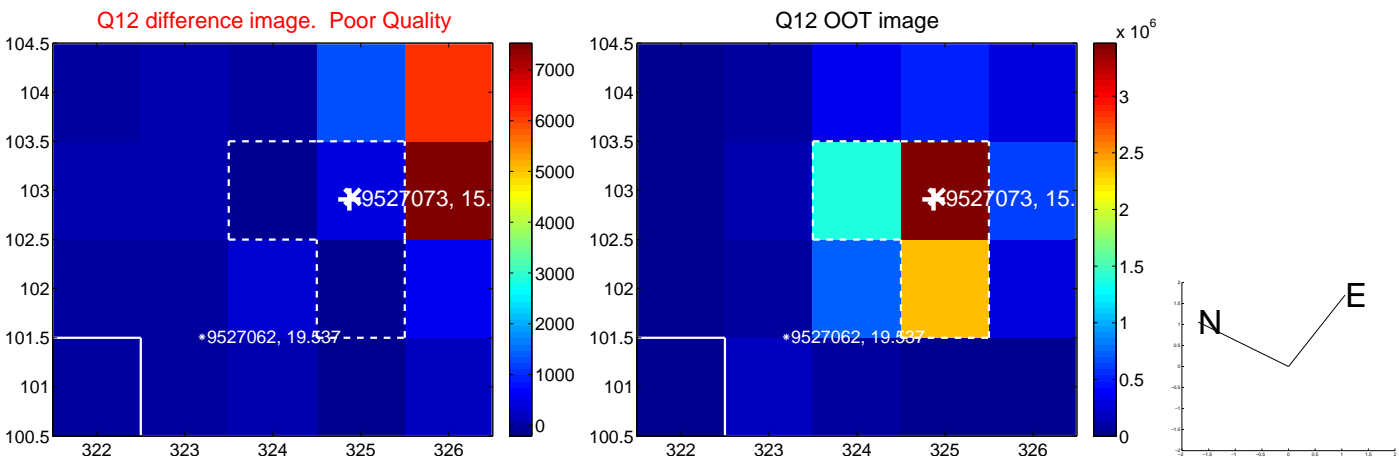
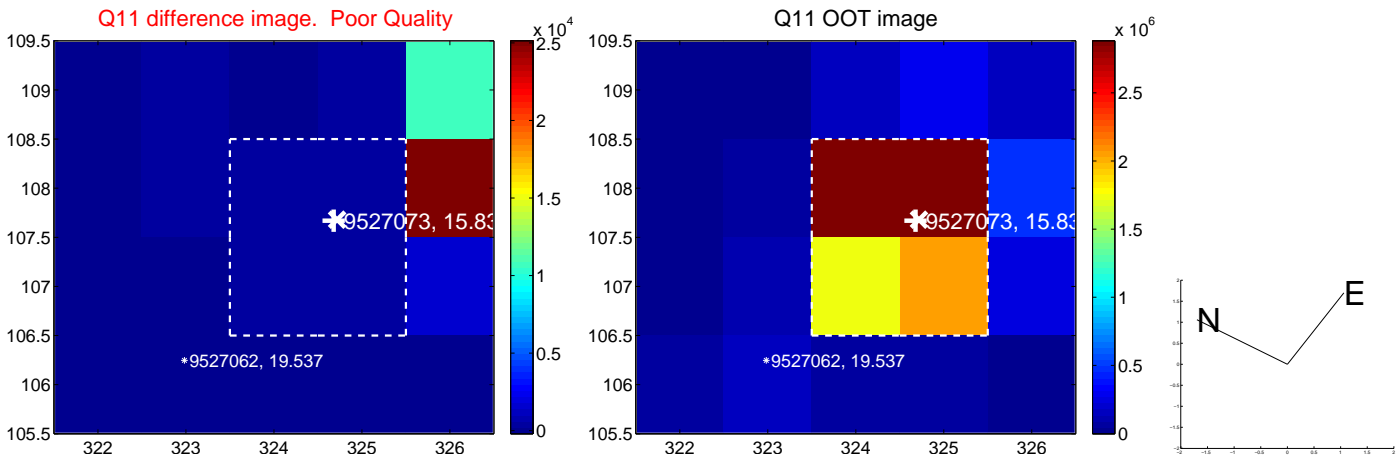
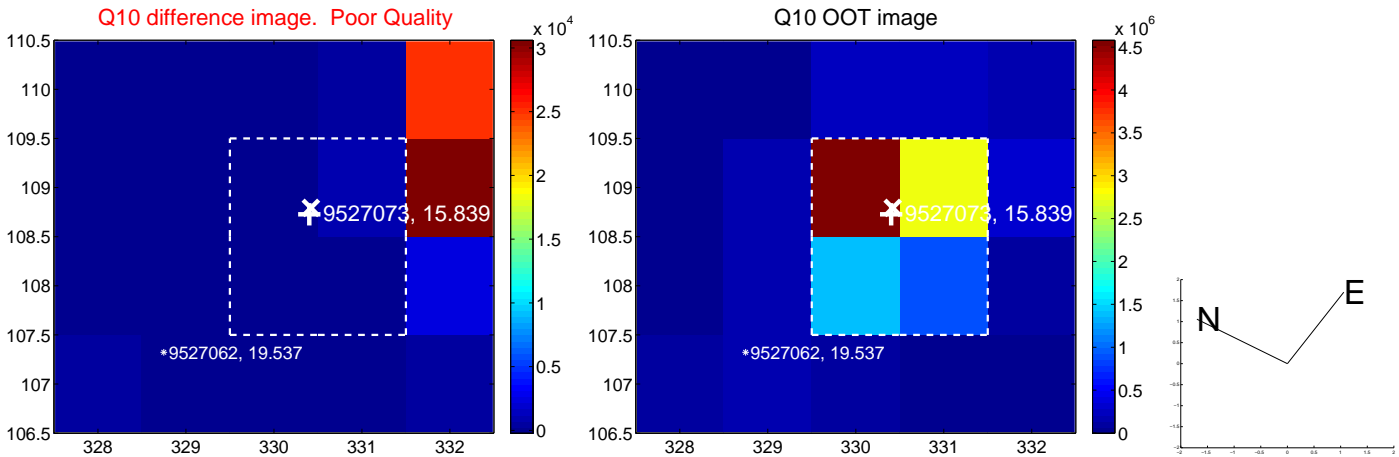
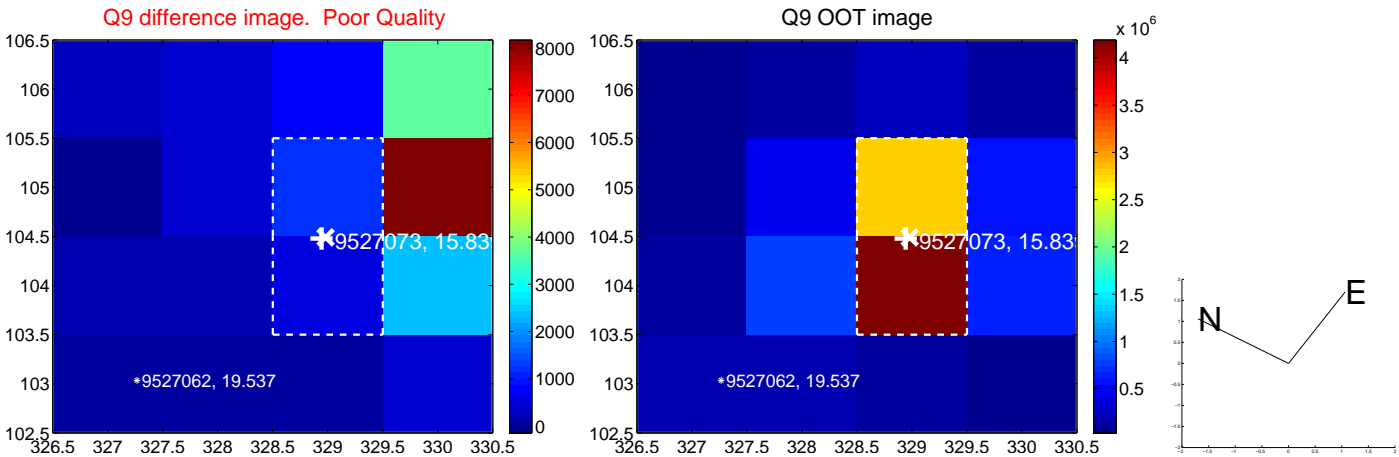
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



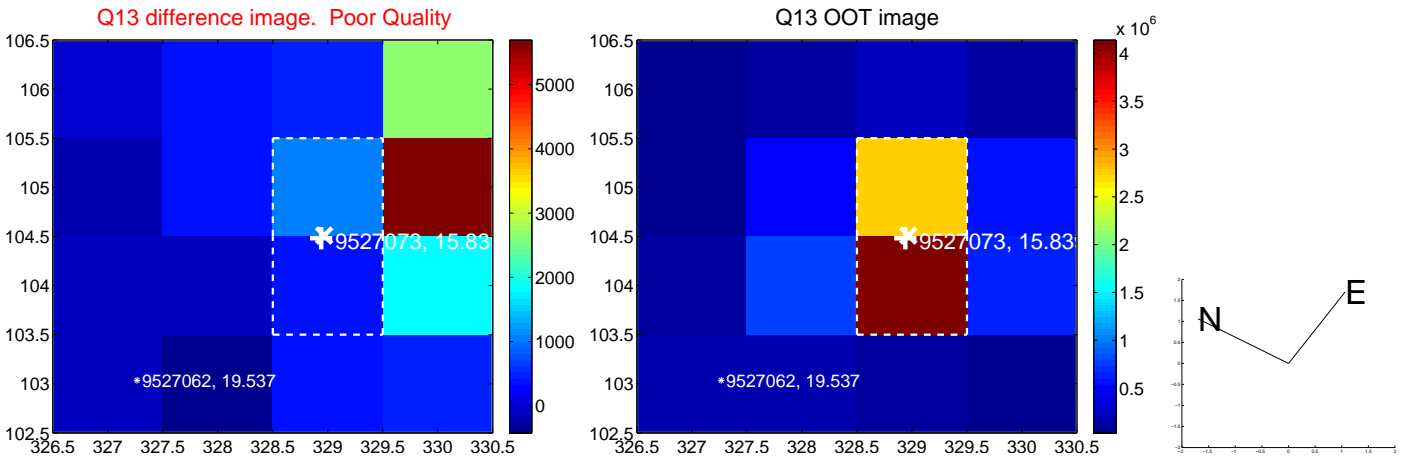
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



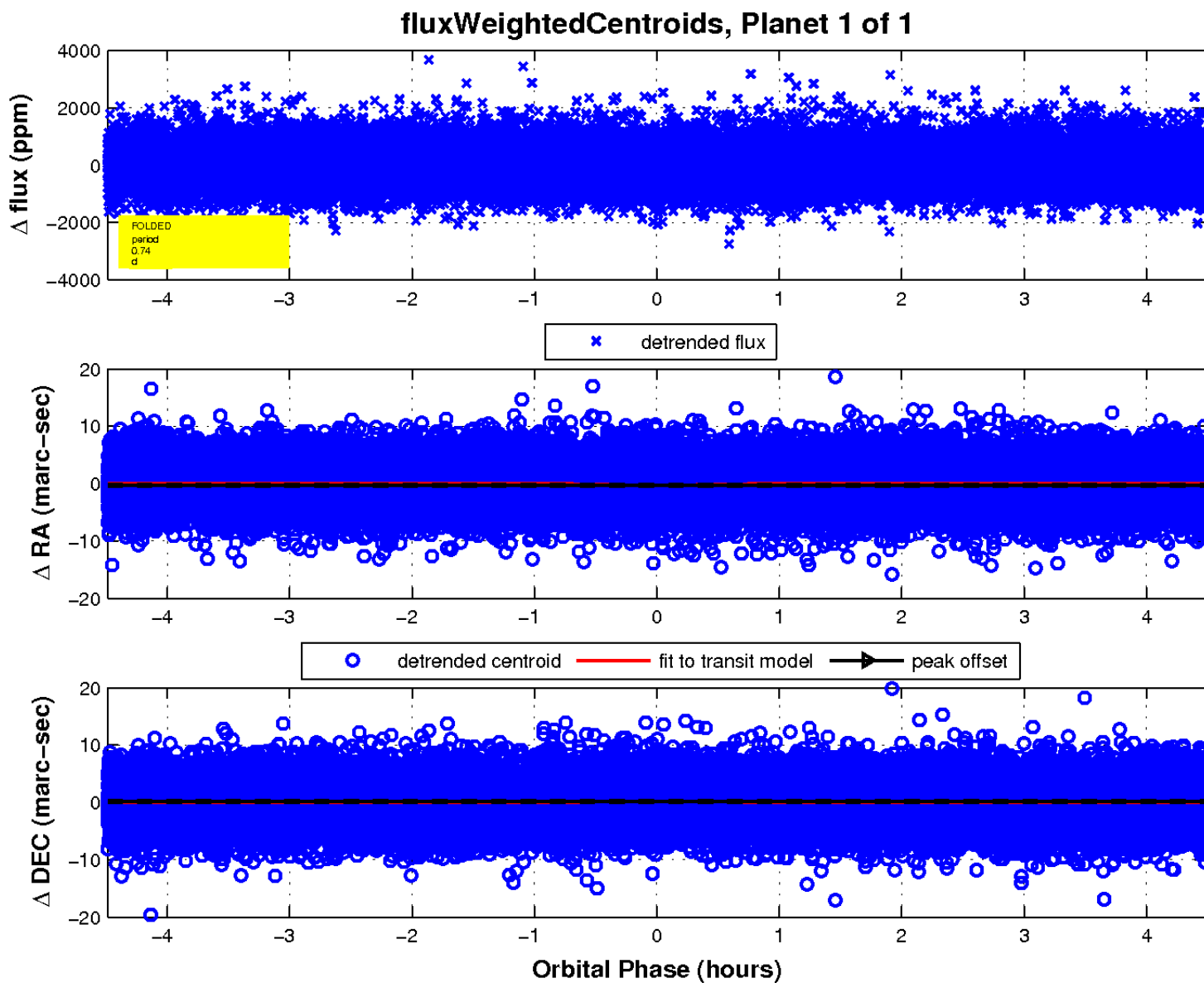
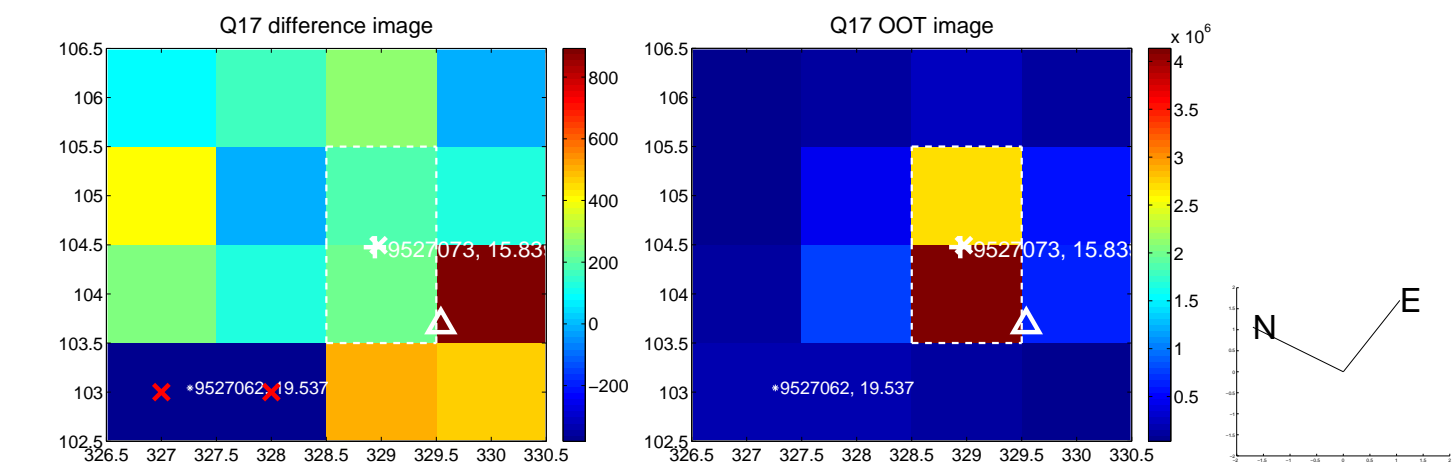
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

