

KIC 010164569

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})
010164569-01	OBS	No	0.671981	131.595844	25.3	6.340	10.0	10.7	10.27	7072	5.25	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010164569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

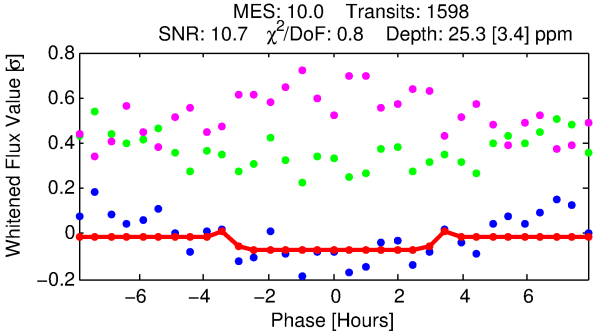
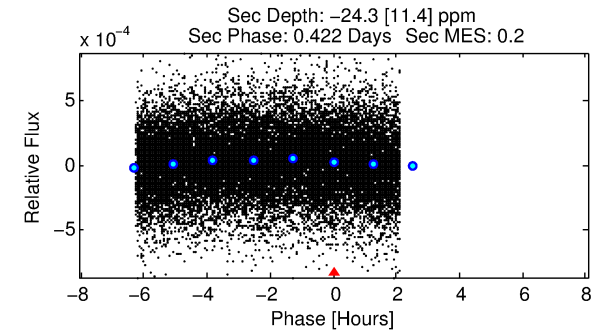
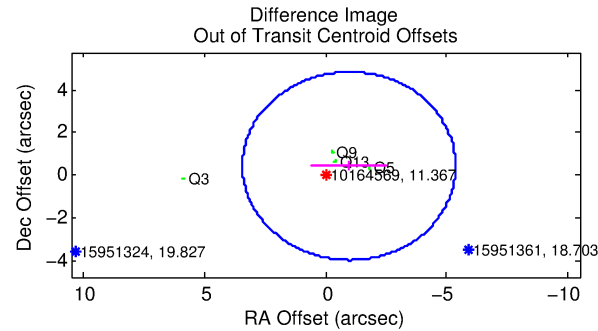
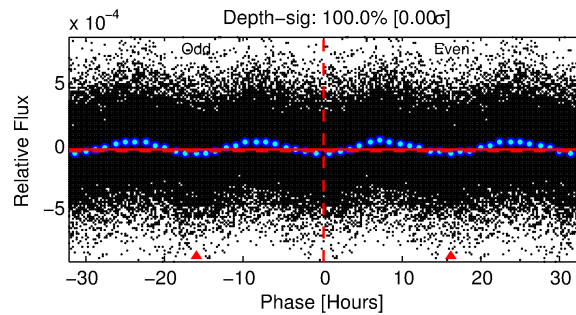
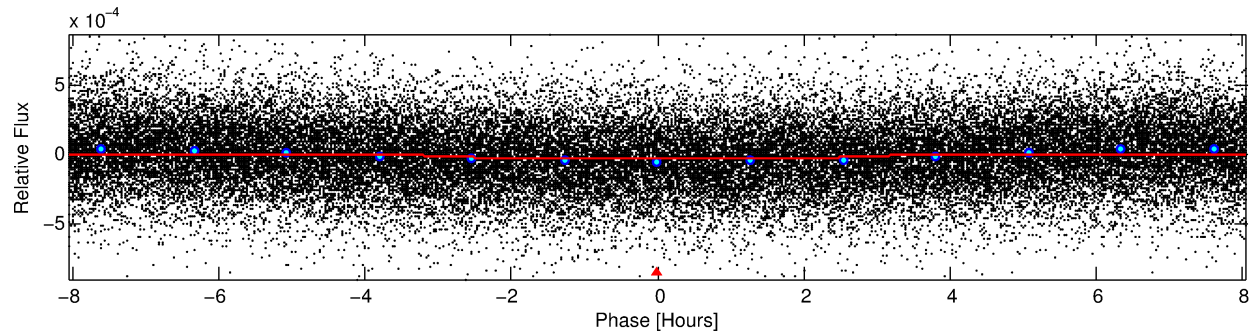
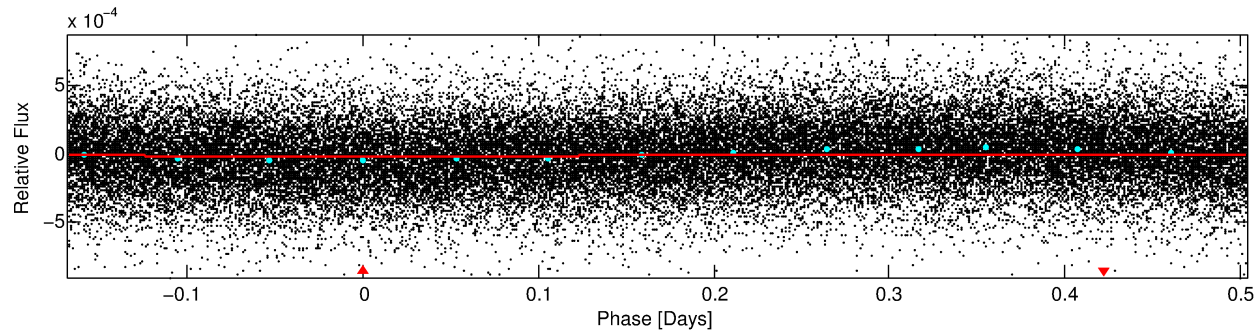
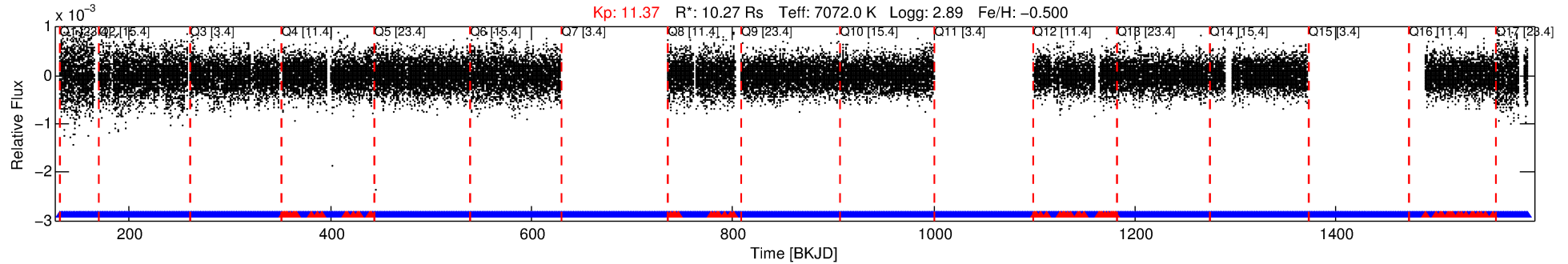
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010164569-01

No Significant Match Found

DV One-Page Summary

KIC: 10164569 Candidate: 1 of 1 Period: 0.672 d



DV Fit Results:

Period = 0.67198 [0.00001] d
Epoch = 131.5958 [0.0036] BKJD
Rp/R* = 0.0047 [0.0026]
a/R* = 1.06 [0.34]
b = 0.30 [9.19]
Seff = N/A
Teq = N/A
Rp = 5.25 [3.76] Re
a = N/A
Ag = N/A
Teffp = N/A

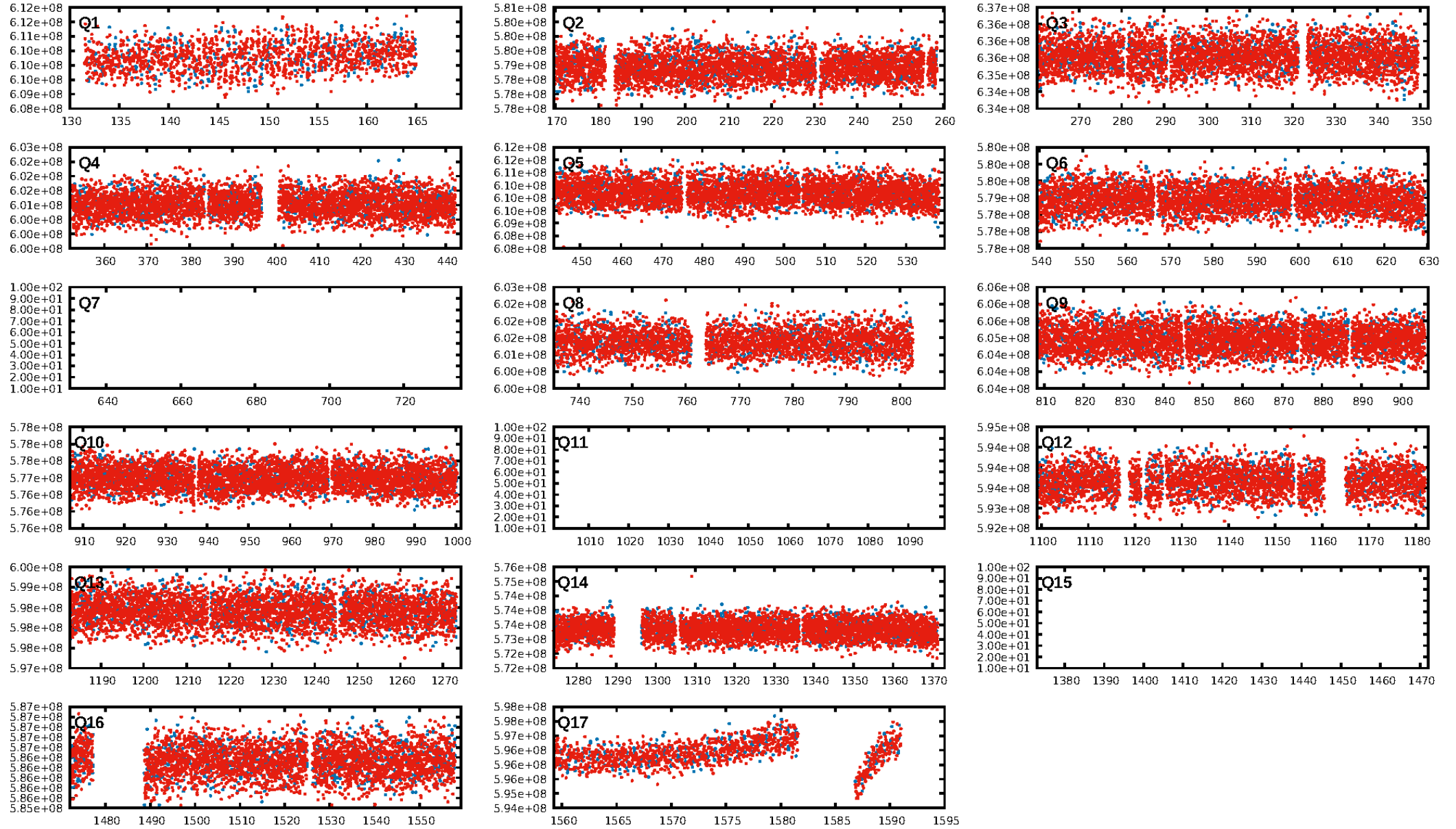
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1432/1508]
GhostDiagnostic-chr: 2.322
Centroid-sig: 6.1%
Centroid-so: 0.787 arcsec [2.19σ]
OotOffset-rm: 1.066 arcsec [0.73σ]
KicOffset-rm: 1.011 arcsec [0.64σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [14/14]

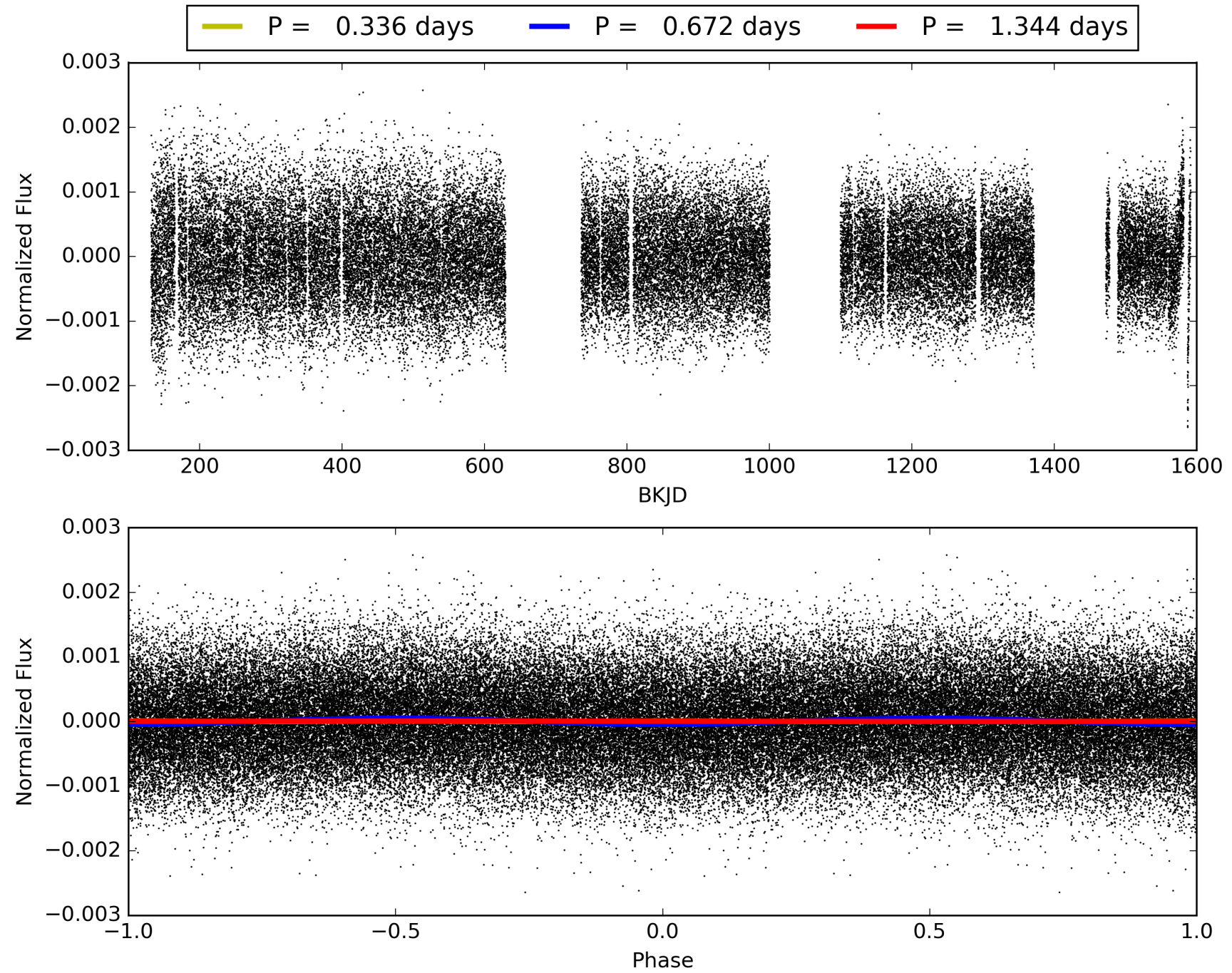
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:44:55 Z

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

TCE 010164569-01, PDC Light Curves

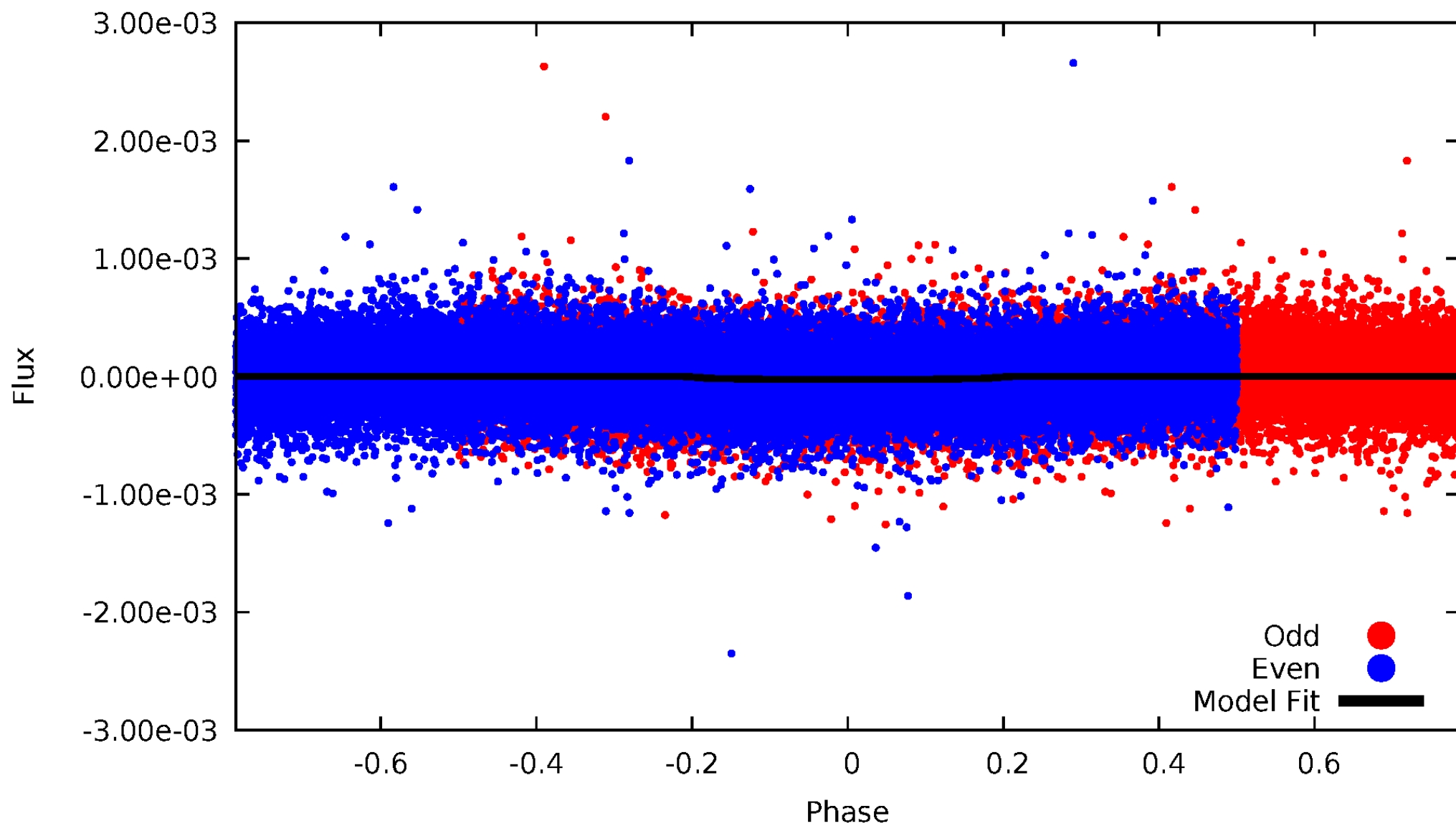


TCE 010164569-01



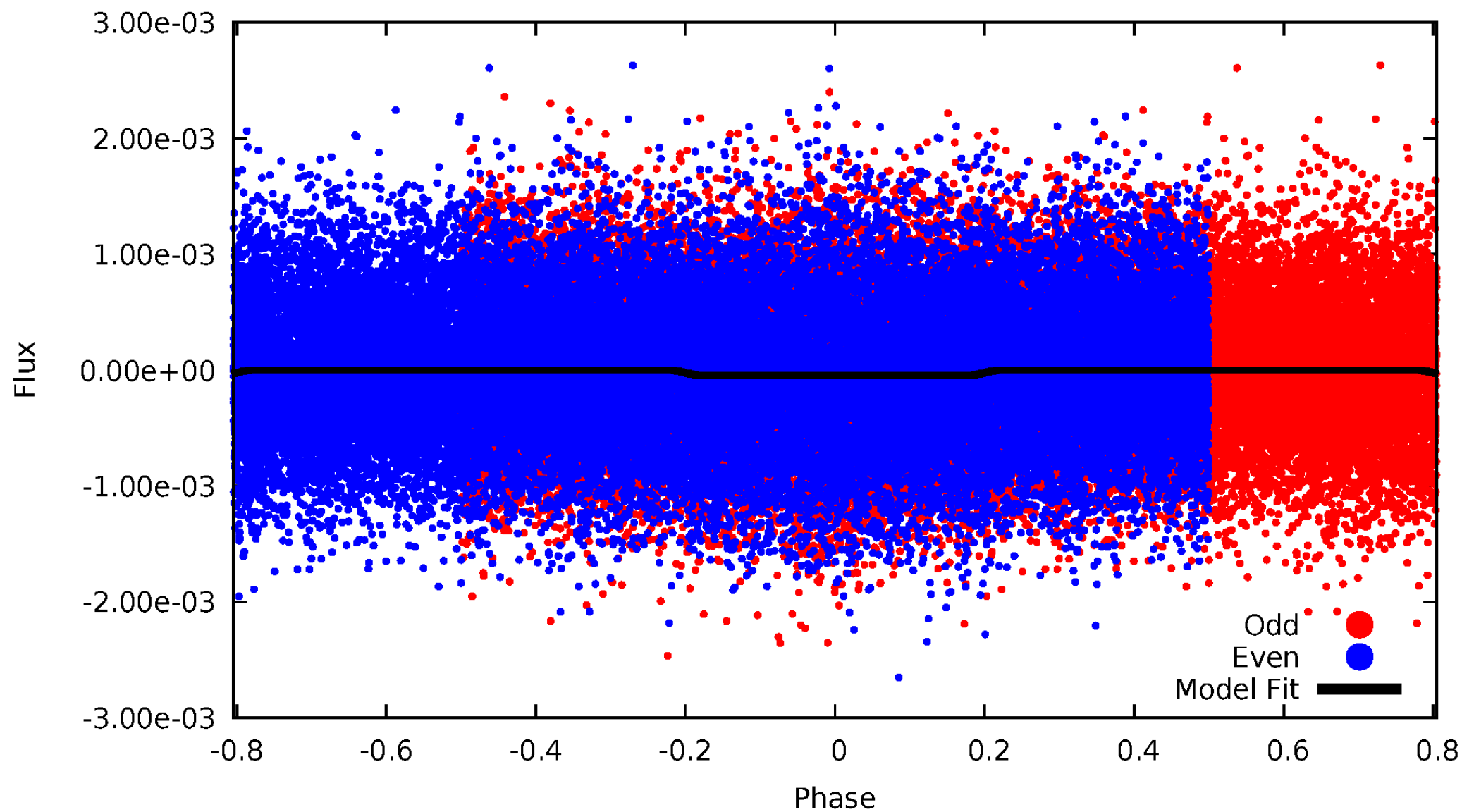
DV Odd/Even

TCE 010164569-01



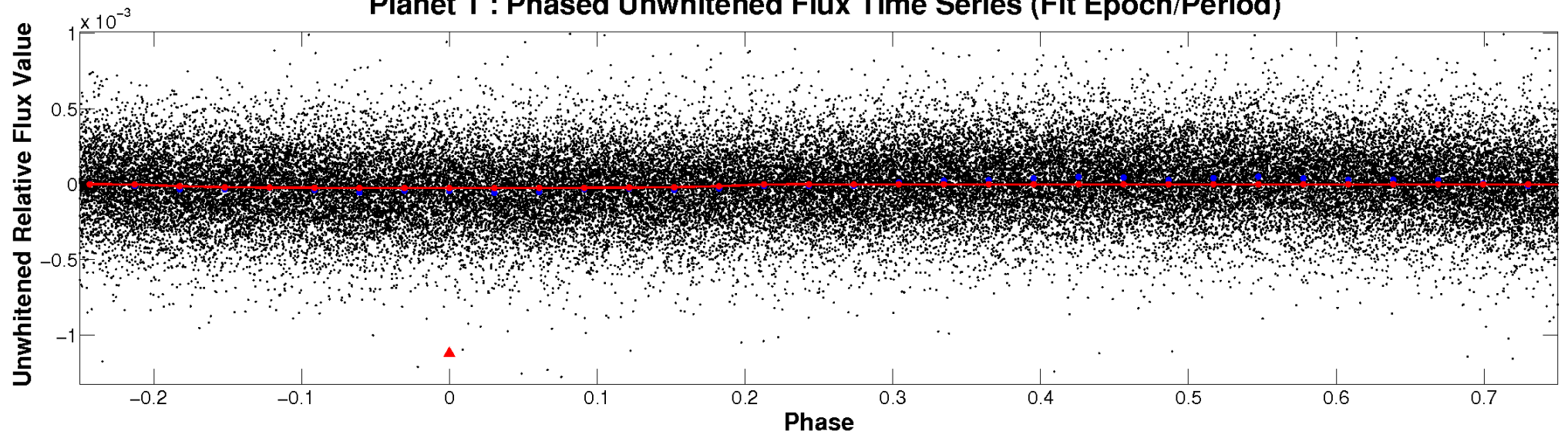
ALT Odd/Even

TCE 010164569-01

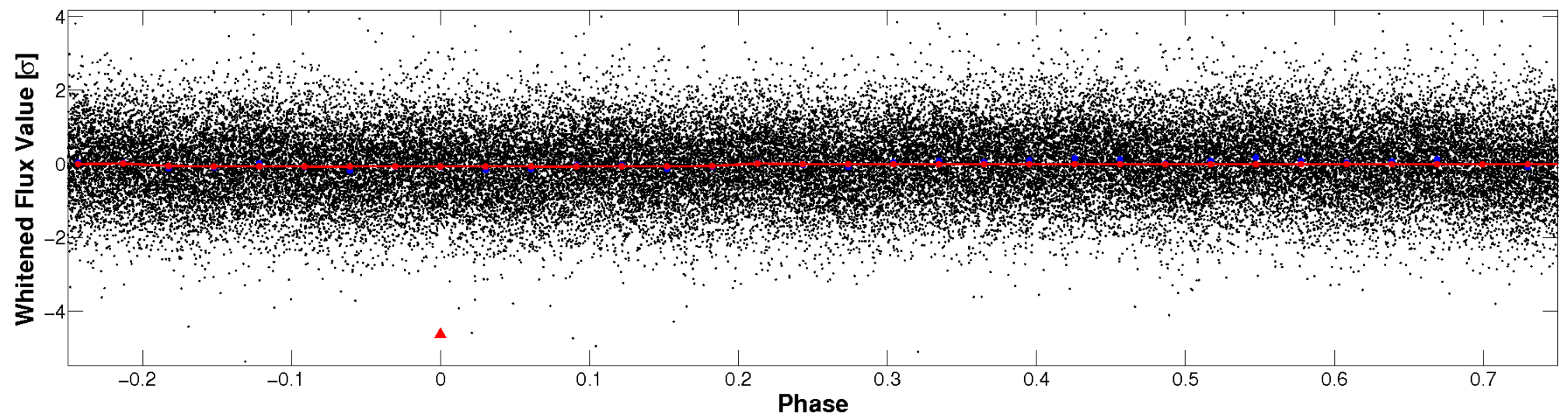


Non-Whitened Vs. Whitened Light Curve

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

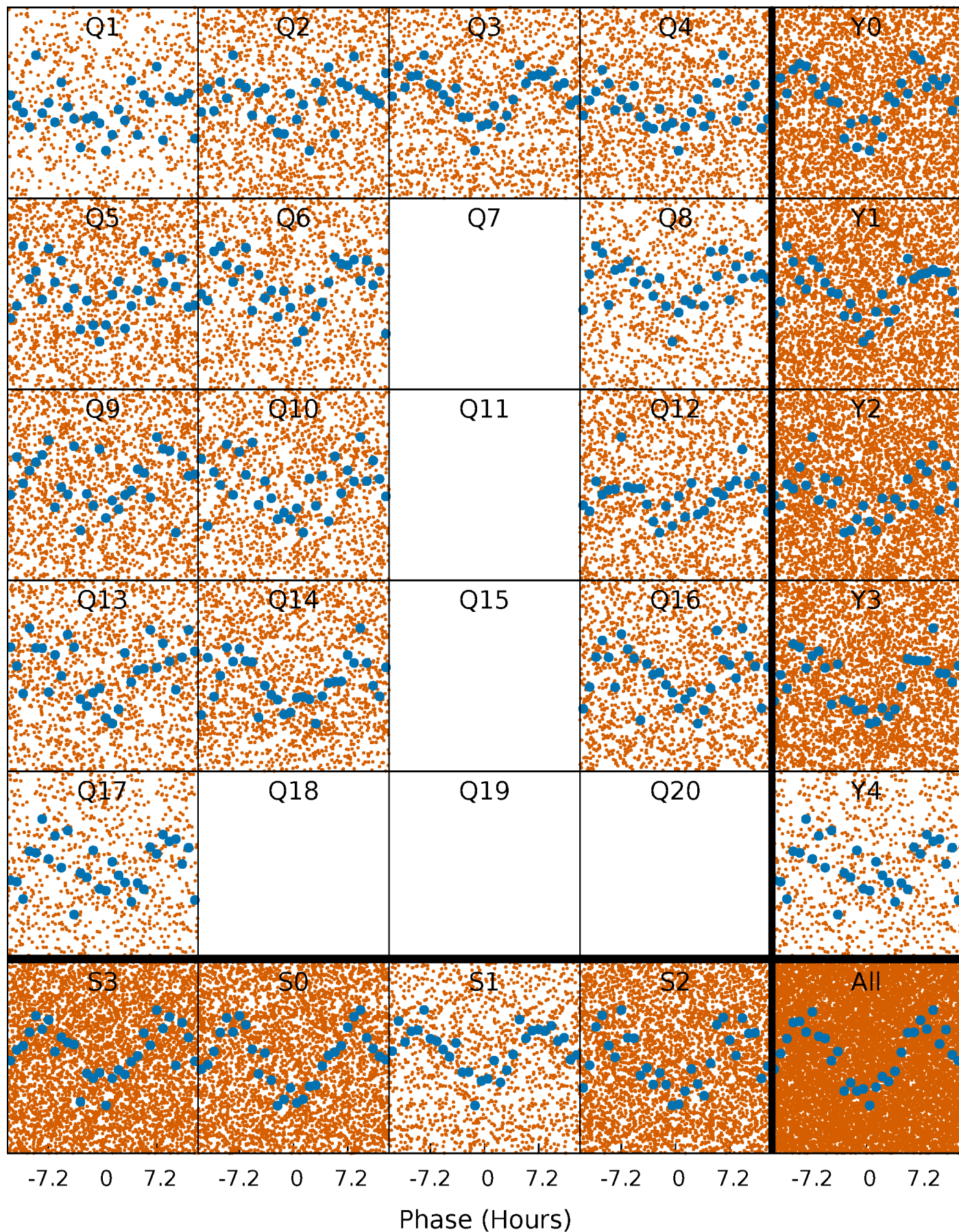


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



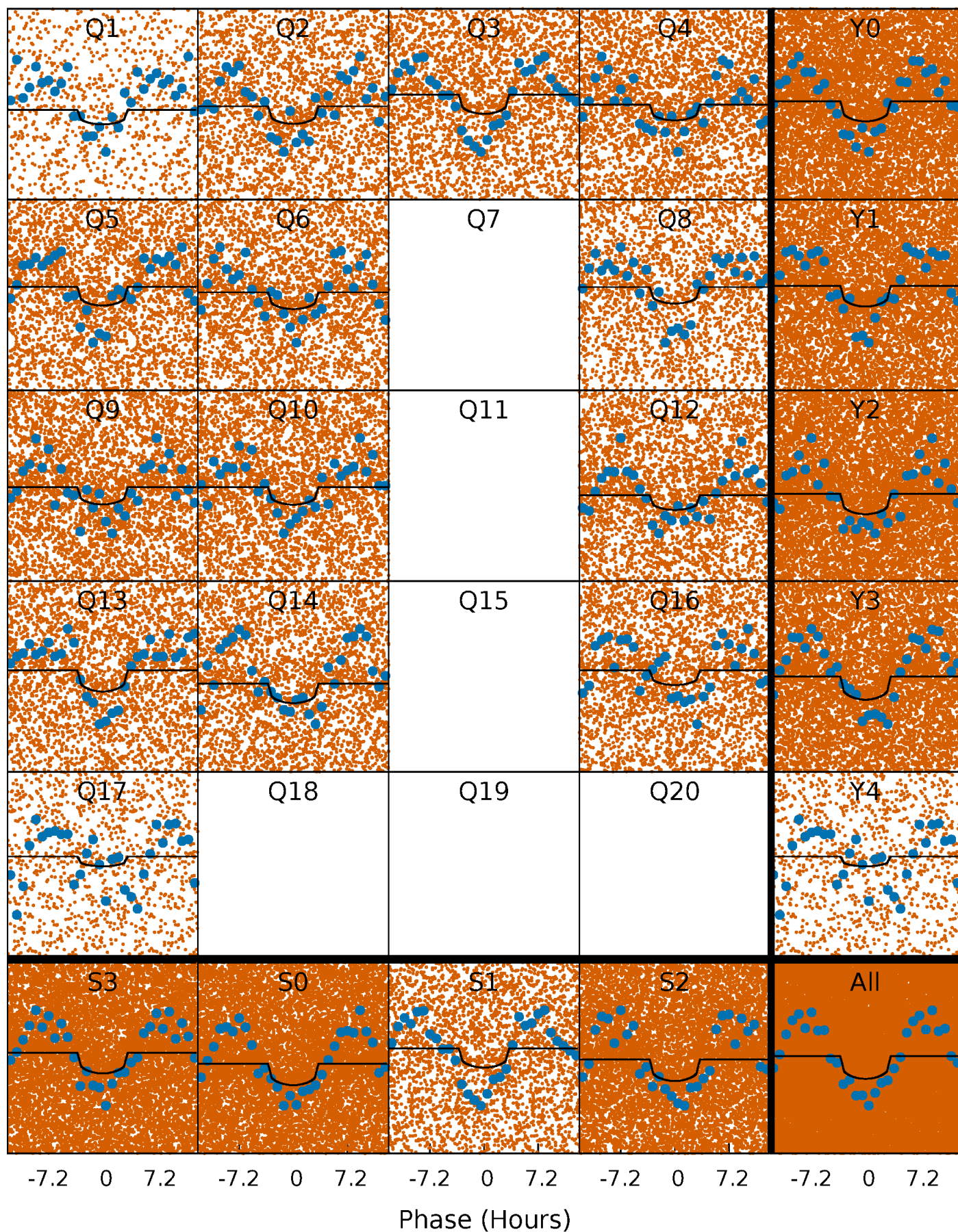
PDC Quarter-Phased Transit Curves

TCE 010164569-01 P= 0.671981 Days $T_0=131.595844$ (BKJD)



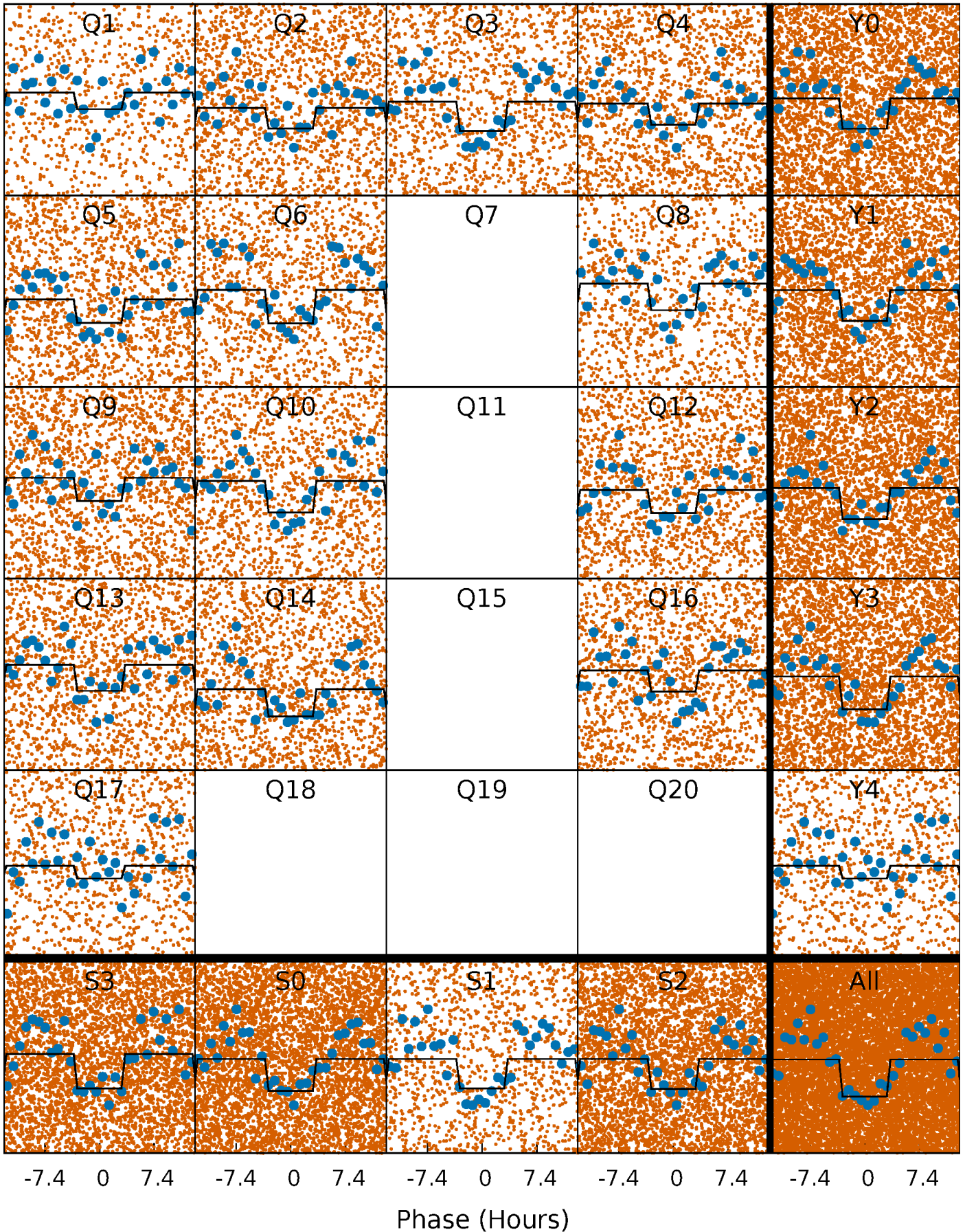
DV Quarter-Phased Transit Curves

TCE 010164569-01 P= 0.671981 Days $T_0=131.595844$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

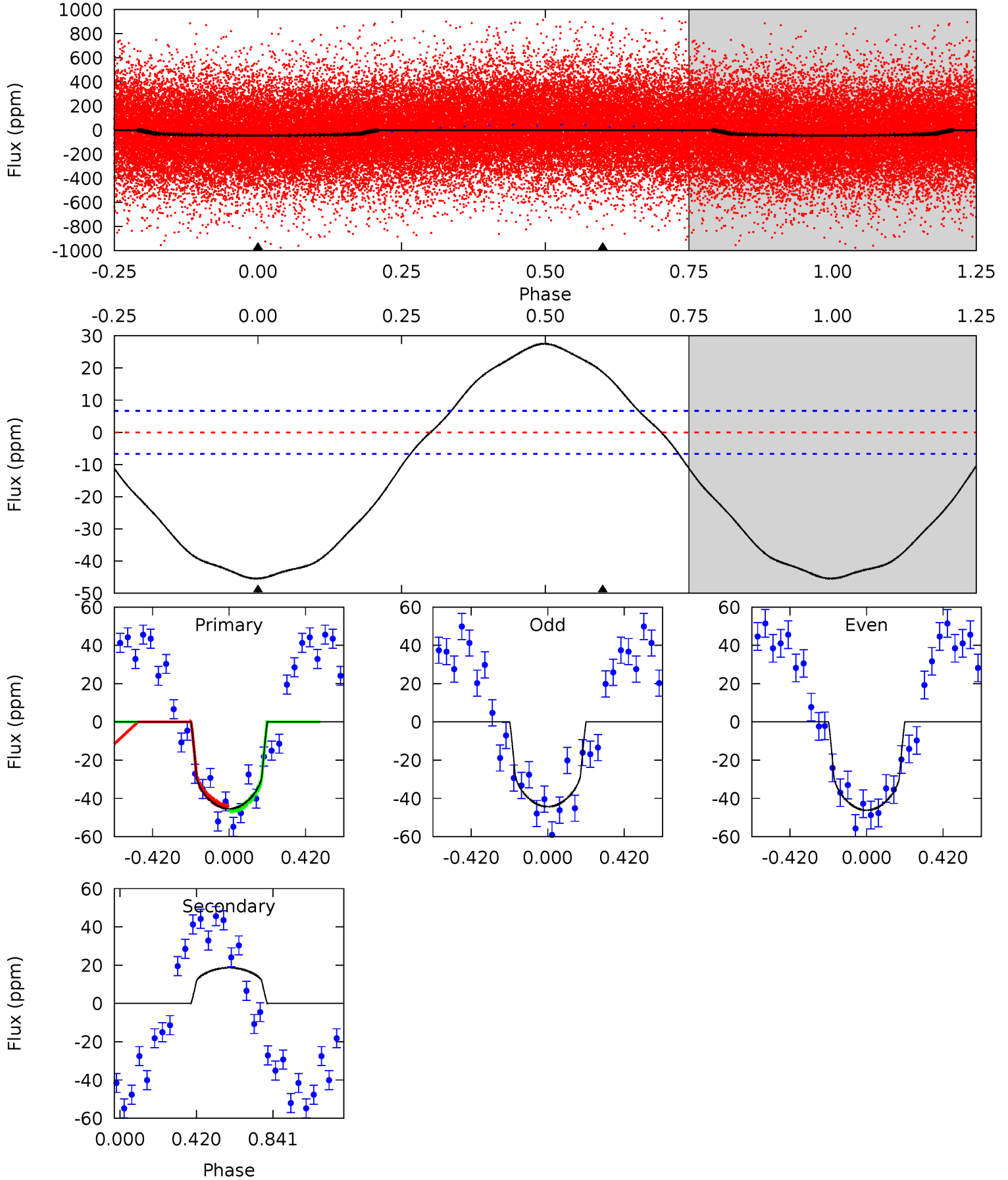
TCE 010164569-01 P= 0.671988 Days $T_0=131.587936$ (BKJD)



DV Model-Shift Uniqueness Test

010164569-01, P = 0.671981 Days, E = 130.923863 Days

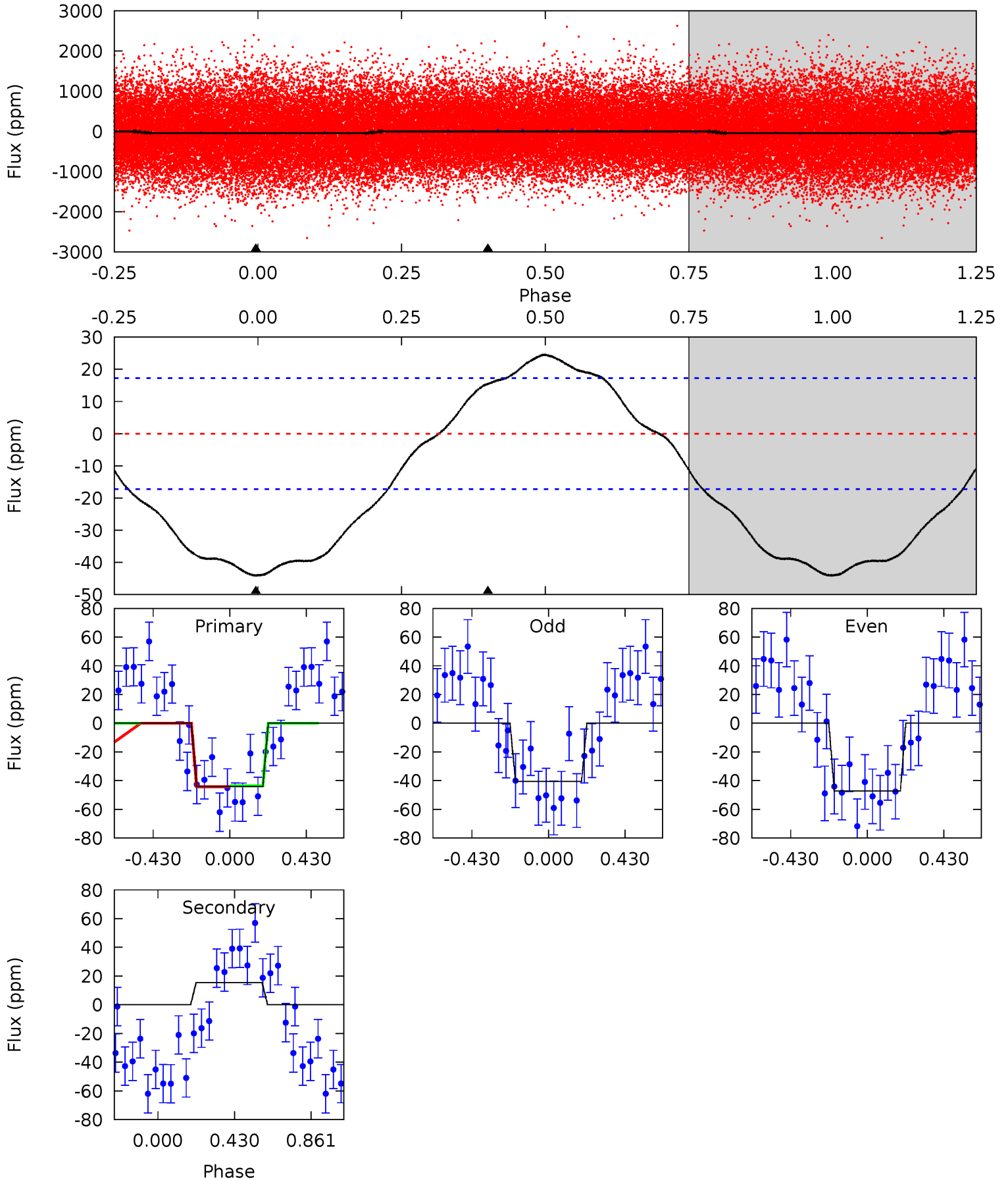
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	-11.9	0	0	4.25	0.81	3.65	28.9	28.9	-11.9	-11.9	0.58	0.99	0.38	0.68



Alt Model-Shift Uniqueness Test

010164569-01, P = 0.671988 Days, E = 130.915948 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	-3.80	0	0	4.25	0.79	1.10	10.9	10.9	-3.80	-3.80	0.82	0.80	0.36	0.06



Stellar Parameters For KIC 010164569

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7072^{+381}_{-954}	$2.894^{+0.345}_{-0.092}$	$-0.500^{+0.050}_{-0.150}$	$10.271^{+1.191}_{-4.766}$	$3.011^{+0.199}_{-1.126}$	$0.004^{+0.013}_{-0.001}$
	+5%/-13%	+12%/-3%	+10%/-30%	+12%/-46%	+7%/-37%	+324%/-30%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 010164569-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	19 ± 2	$4.87^{+2.83}_{-2.49}$	8911^{+1087}_{-1263}	-8817^{+1557}_{-2546}	$-0.192^{+0.111}_{-0.588}$
Alt.	15 ± 4	$6.54^{+3.00}_{-2.81}$	8973^{+1035}_{-1328}	-8227^{+1341}_{-1245}	$-0.091^{+0.052}_{-0.183}$

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

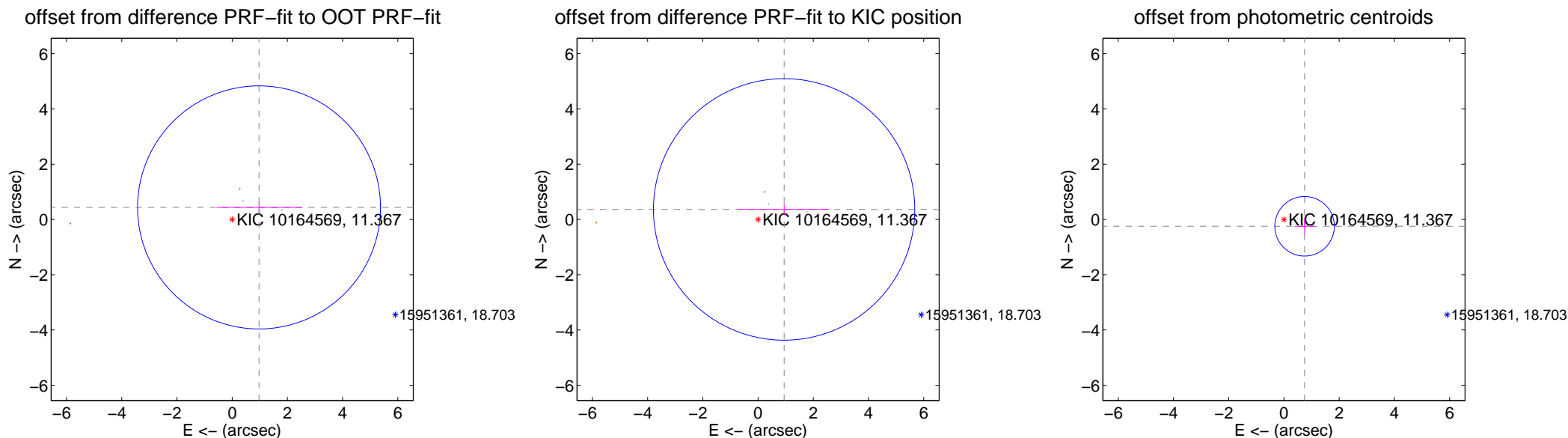
DV Centroid Data

Supplemental centroid analysis for 010164569-01. **Kepler magnitude: 11.37.** Transit SNR 10.67

There are 3 quarters with good PRF difference image offsets

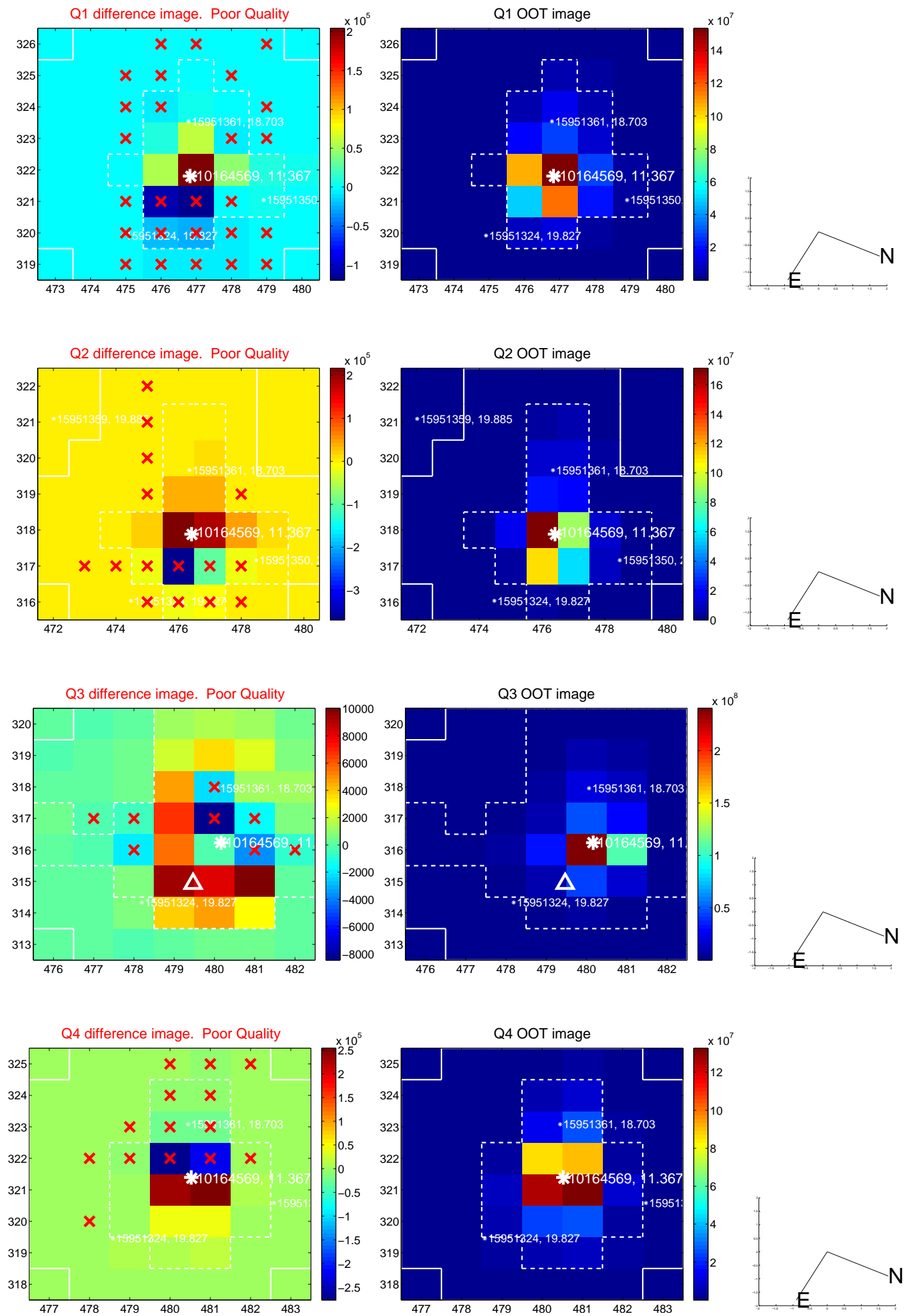
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.066 ± 1.466	0.73	-0.973 ± 1.543	0.436 ± 0.192
PRF-fit source offset from KIC position	1.011 ± 1.578	0.64	-0.944 ± 1.632	0.363 ± 0.211
photometric centroid source offset	0.79 ± 0.36	2.19	-0.75 ± 0.36	-0.25 ± 0.31

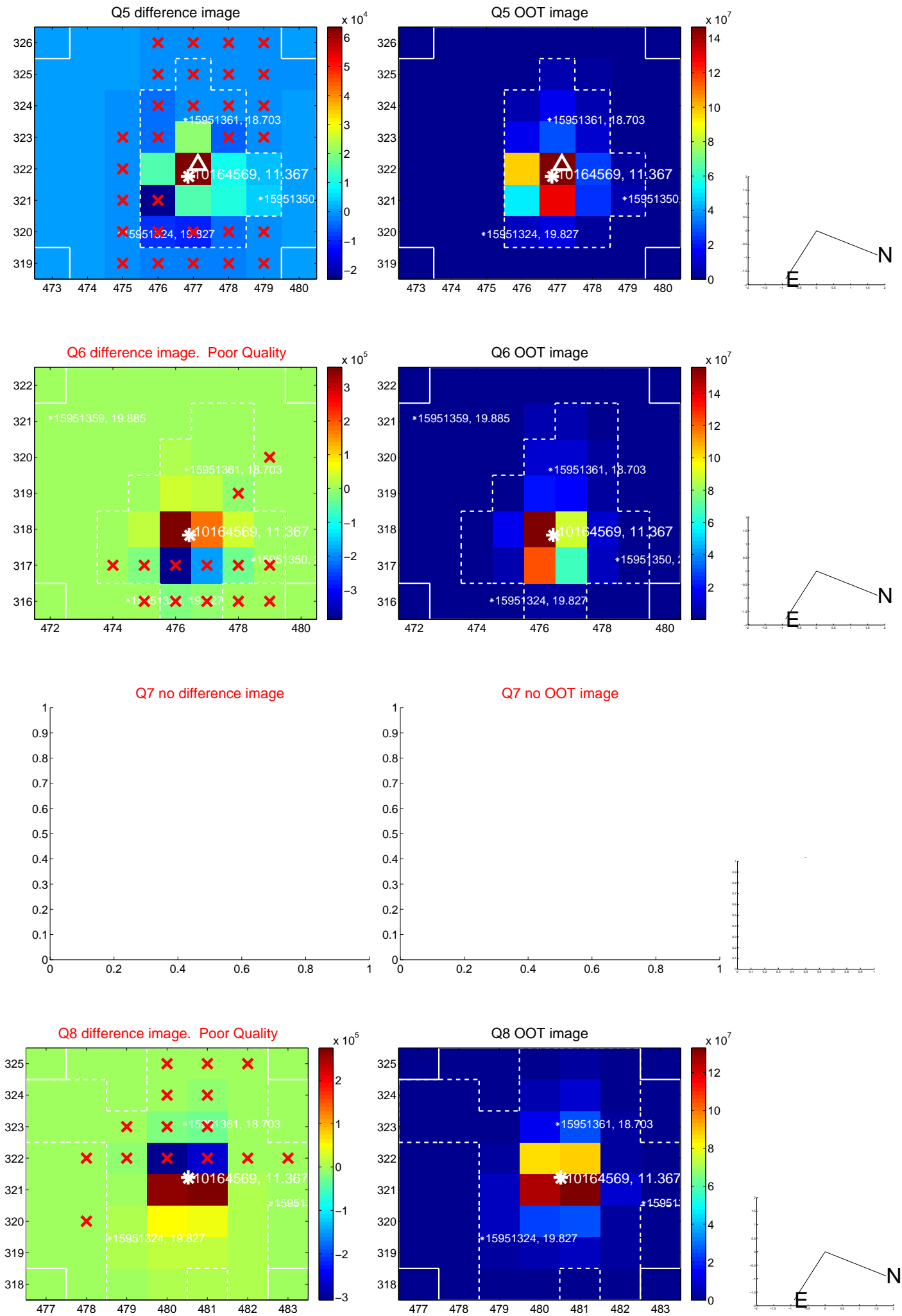


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

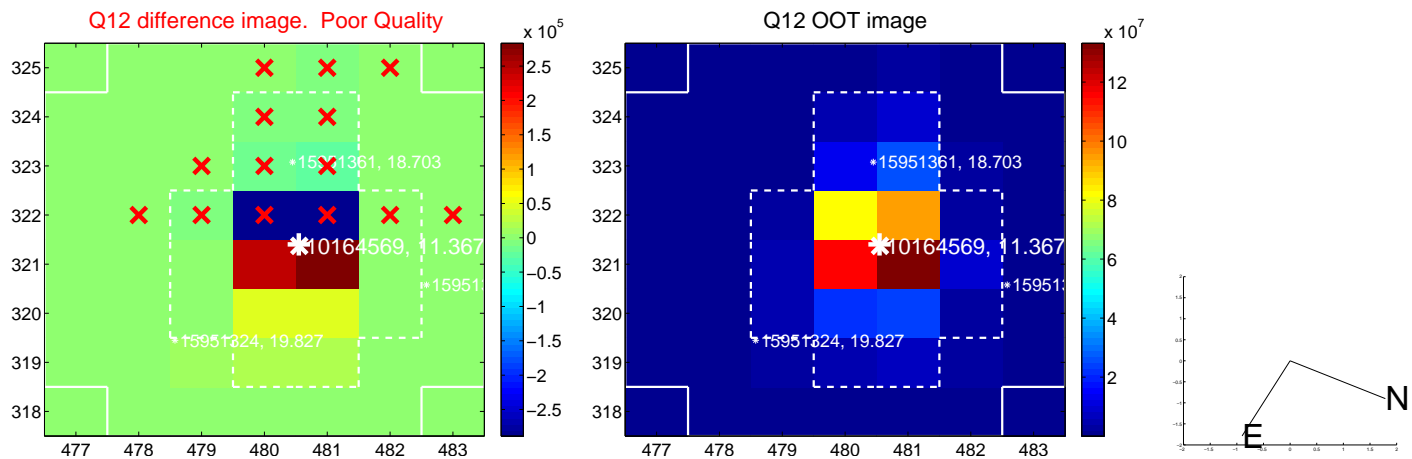
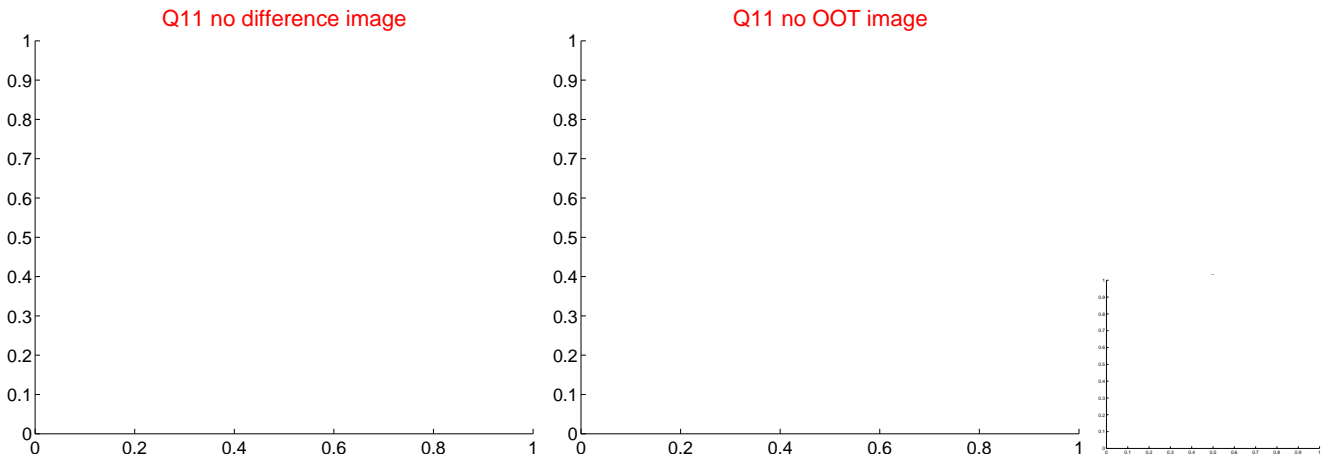
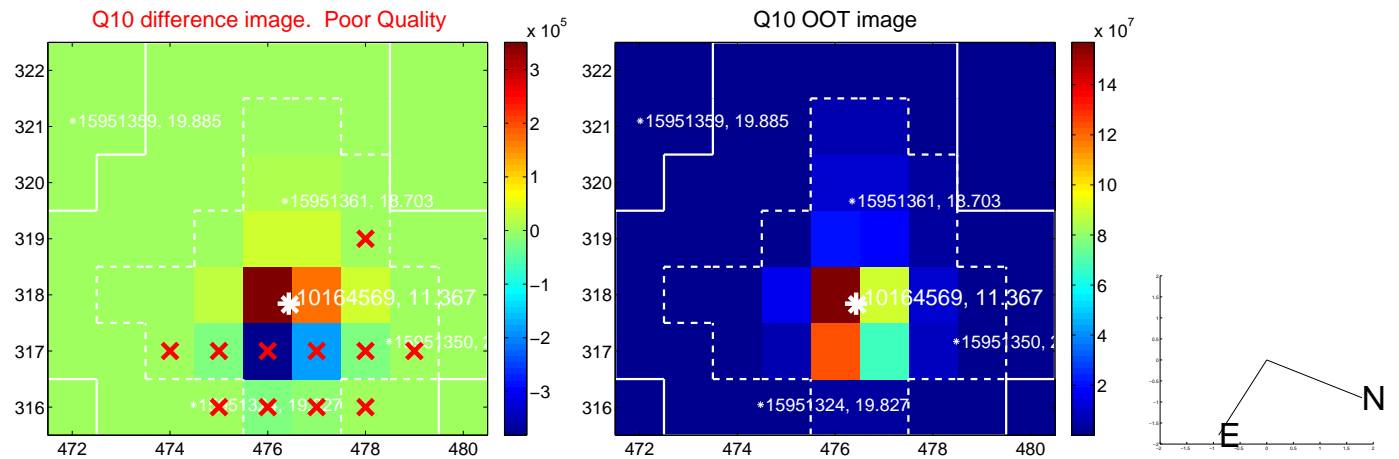
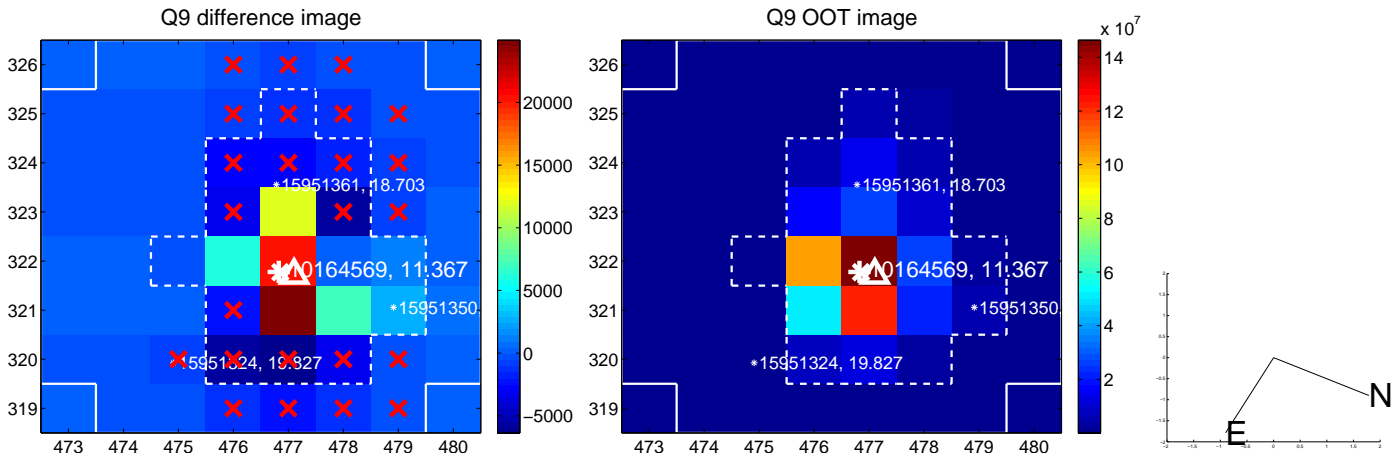
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



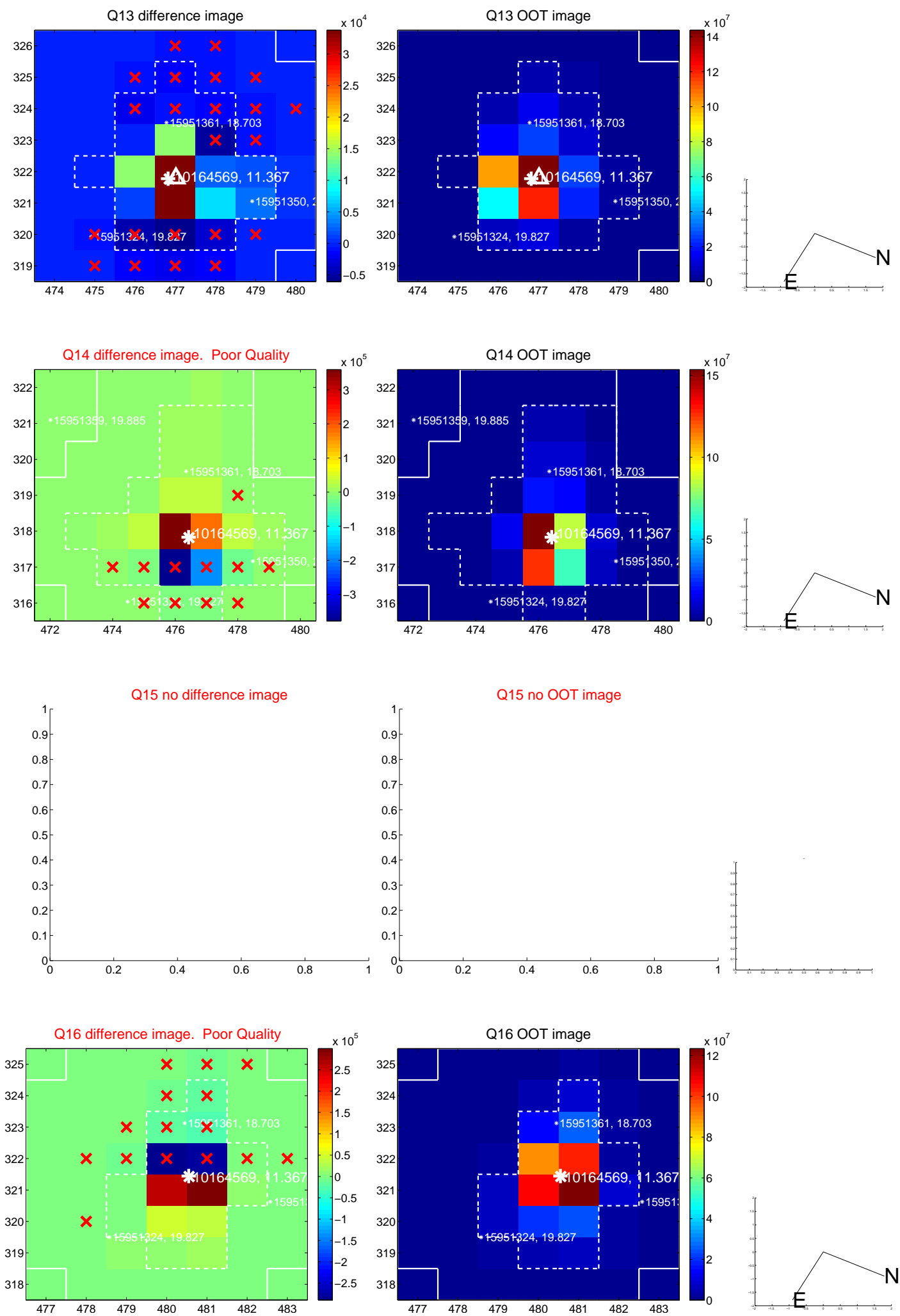
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

