

KIC 007021689

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})
007021689-01	OBS	No	1.097962	131.903481	27.2	12.075	15.8	1.4	0.69	5479	0.36	1068.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007021689-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

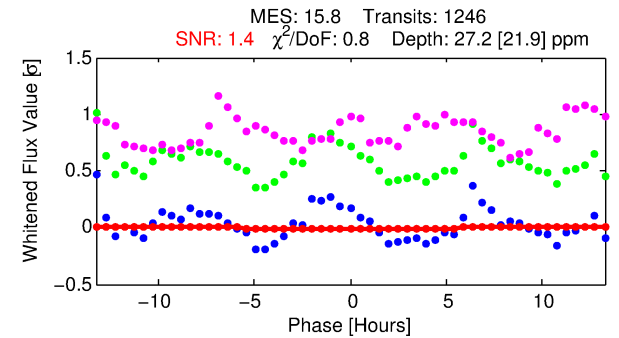
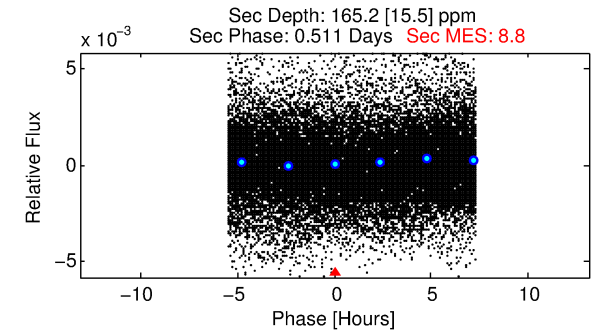
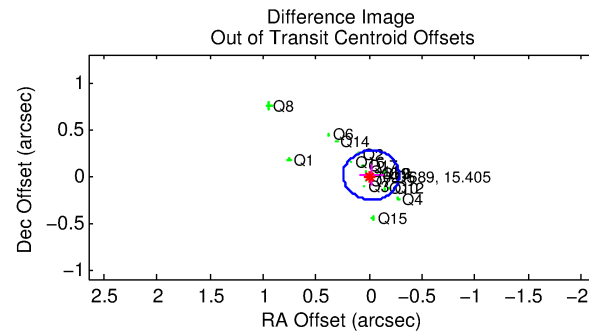
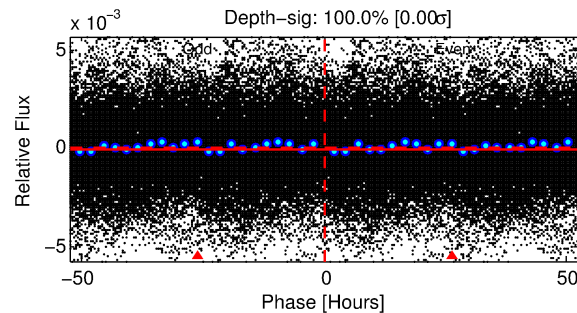
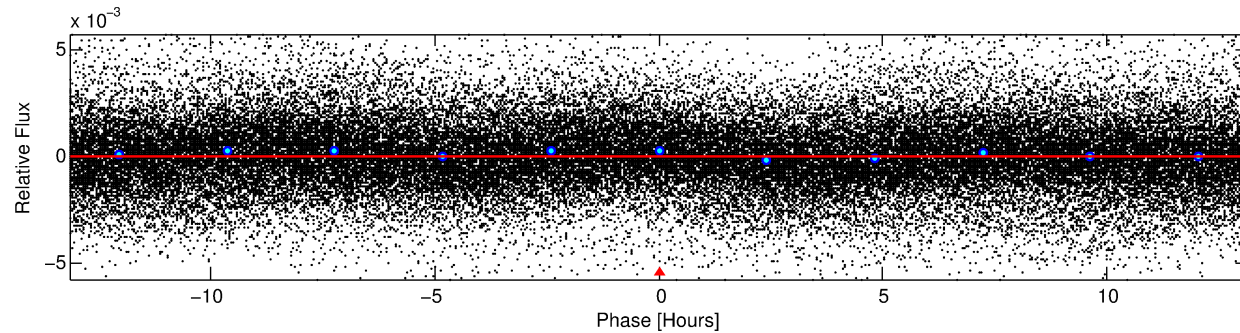
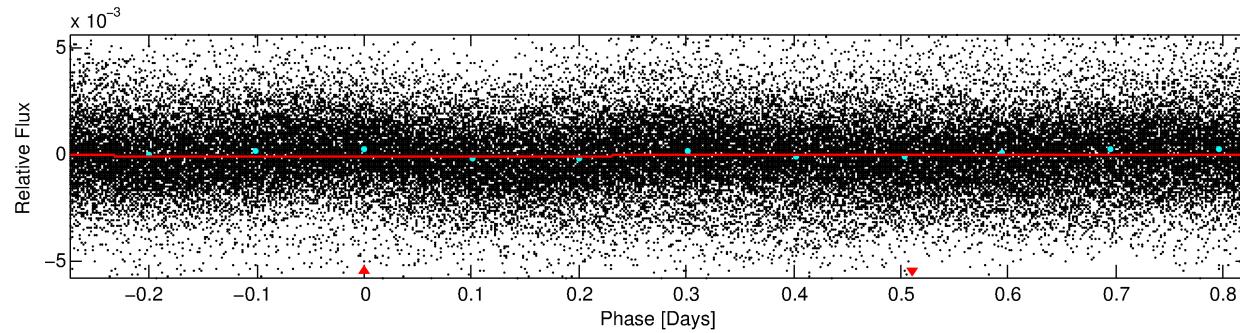
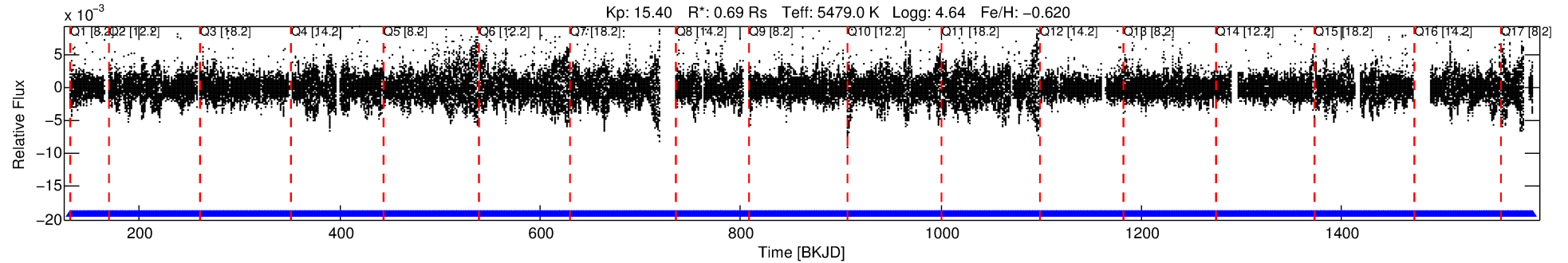
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007021689-01

No Significant Match Found

DV One-Page Summary

KIC: 7021689 Candidate: 1 of 1 Period: 1.098 d



DV Fit Results:

Period = 1.09796 [0.00009] d
Epoch = 131.9035 [0.0204] BKJD
Rp/R* = 0.0047 [0.0101]
a/R* = 1.01 [0.24]
b = 0.10 [93.21]
Seff = 1068.60 [243.66]
Teq = 1458 [83] K
Rp = 0.36 [0.76] Re
a = 0.0190 [0.0026] AU
Ag = 256.67 [1094.21] [0.23 σ]
Teffp = 9022 [9610] K [0.79 σ]

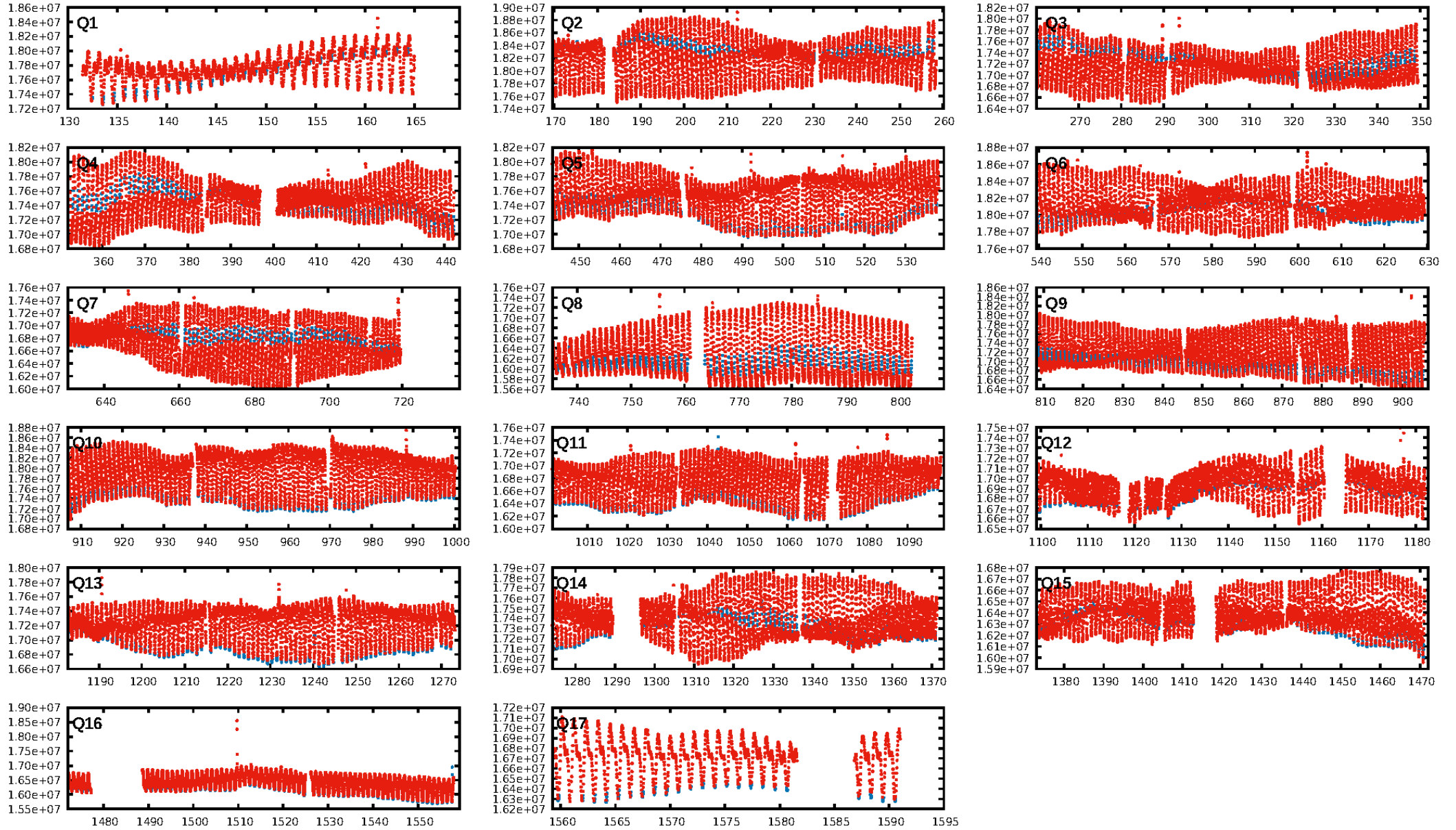
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1189/1189]
GhostDiagnostic-chr: 0.4315
Centroid-sig: 0.0%
Centroid-so: 4.413 arcsec [2.42 σ]
OotOffset-rm: 0.022 arcsec [0.25 σ]
KicOffset-rm: 0.177 arcsec [2.21 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

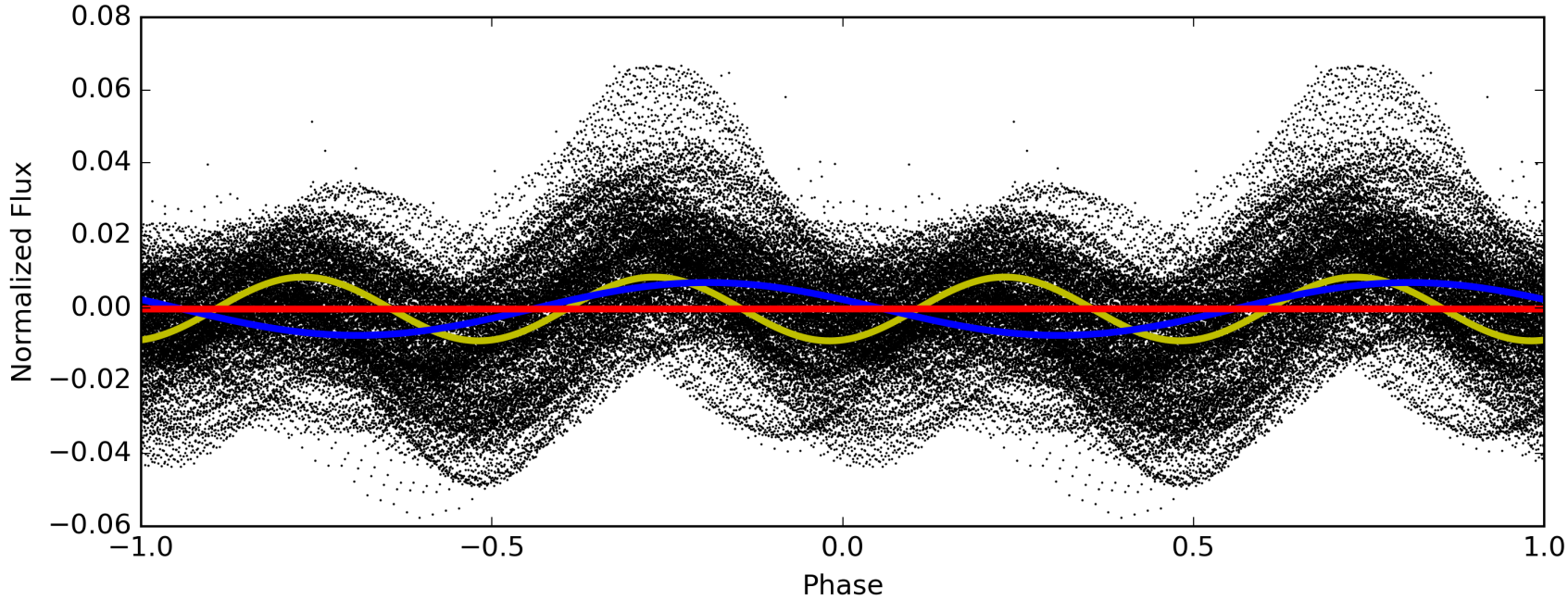
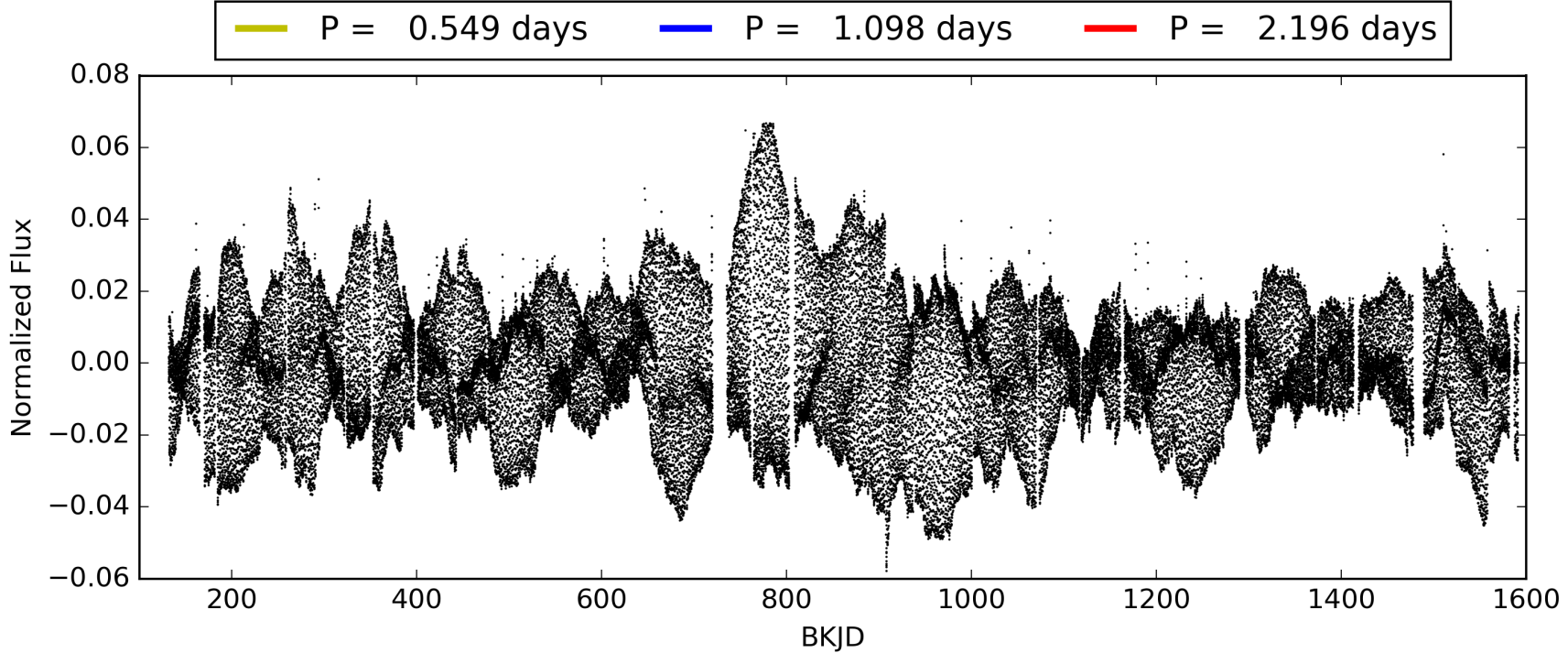
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:12:10 Z

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

TCE 007021689-01, PDC Light Curves

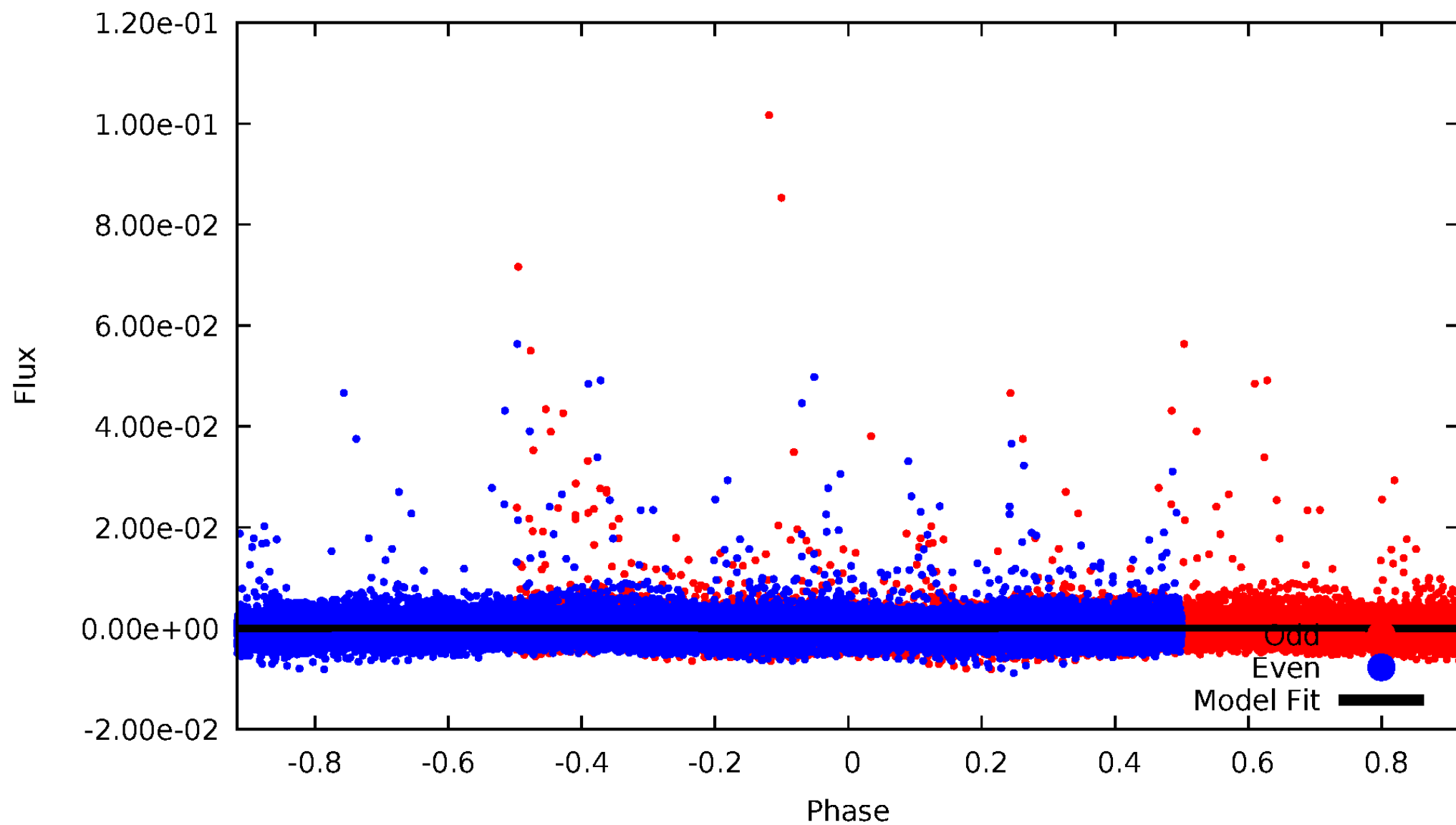


TCE 007021689-01



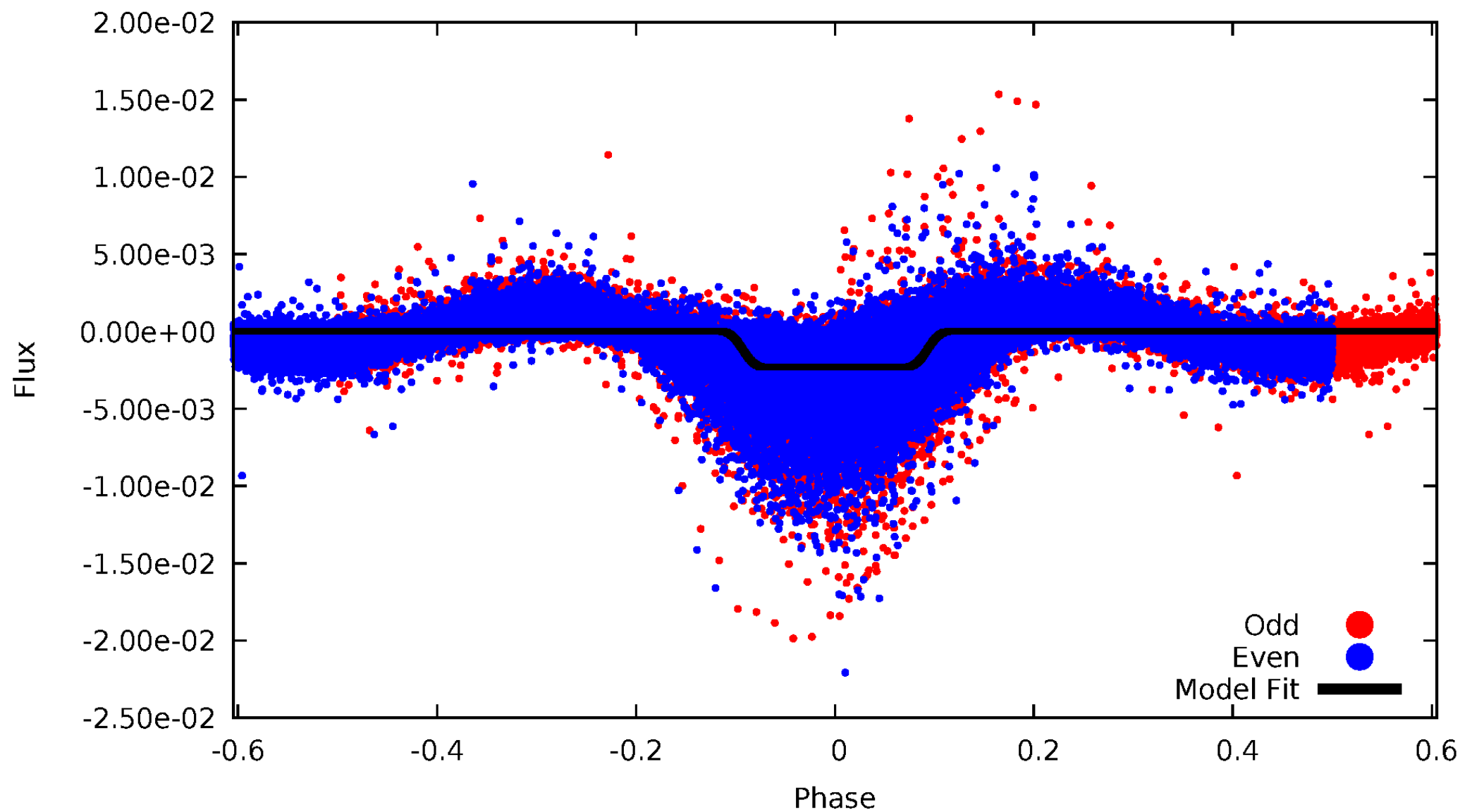
DV Odd/Even

TCE 007021689-01



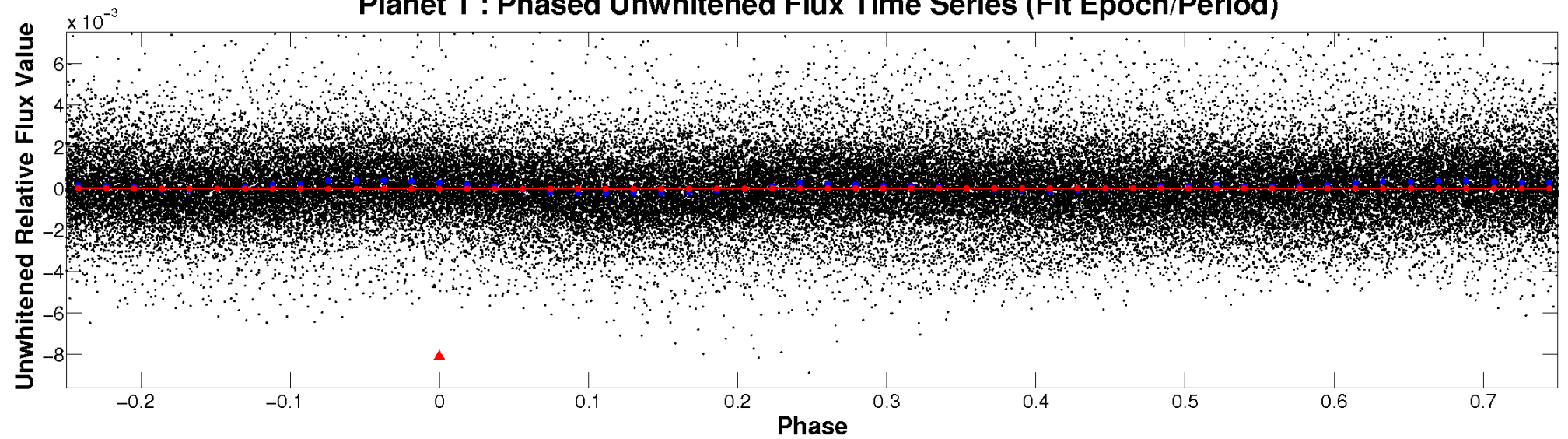
ALT Odd/Even

TCE 007021689-01

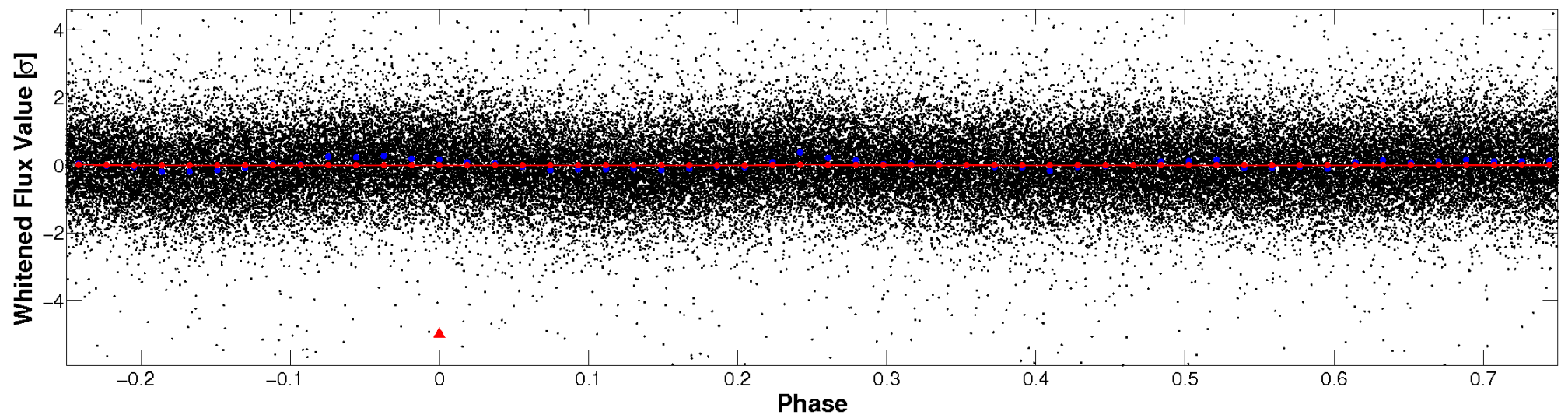


Non-Whitened Vs. Whitened Light Curve

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

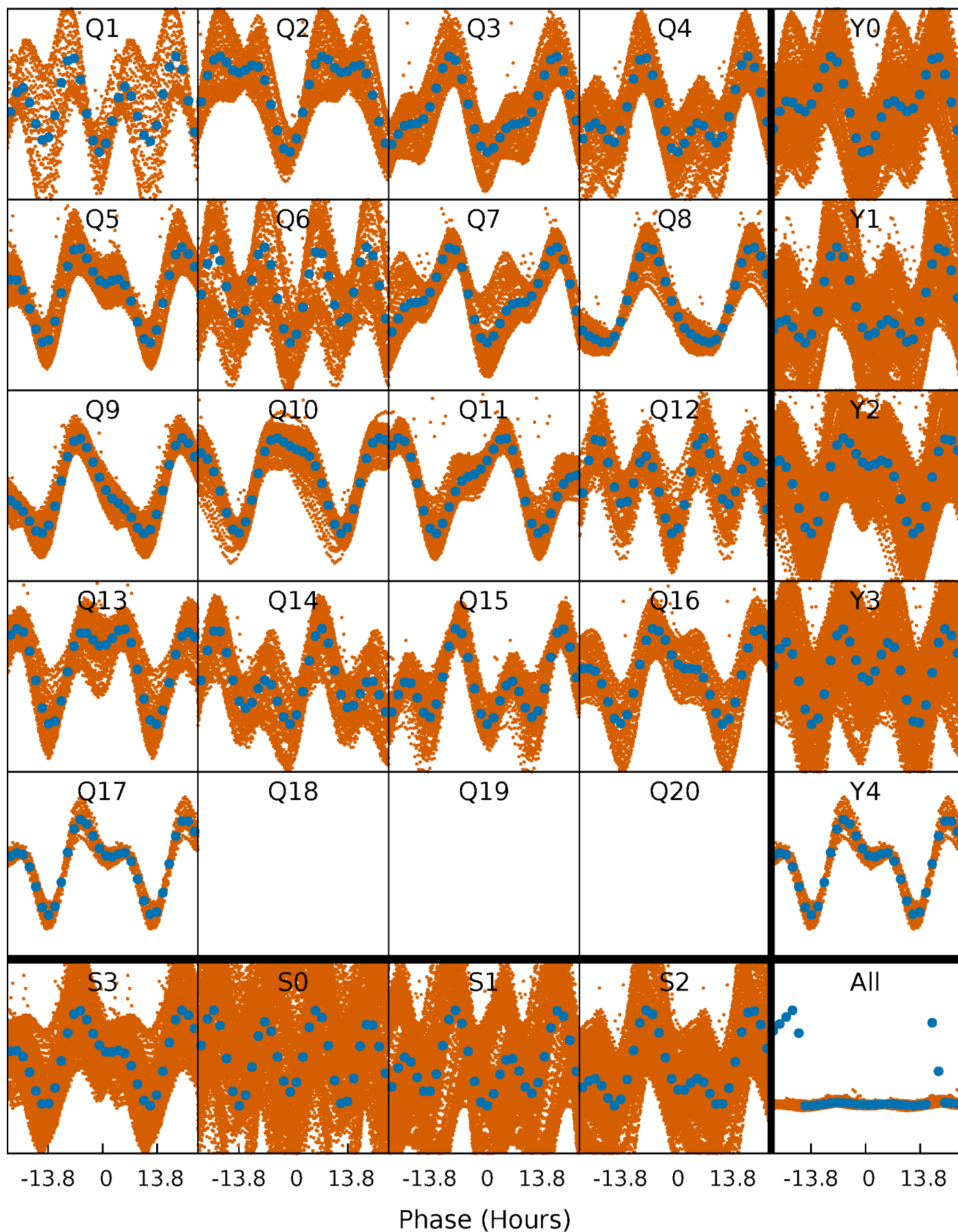


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



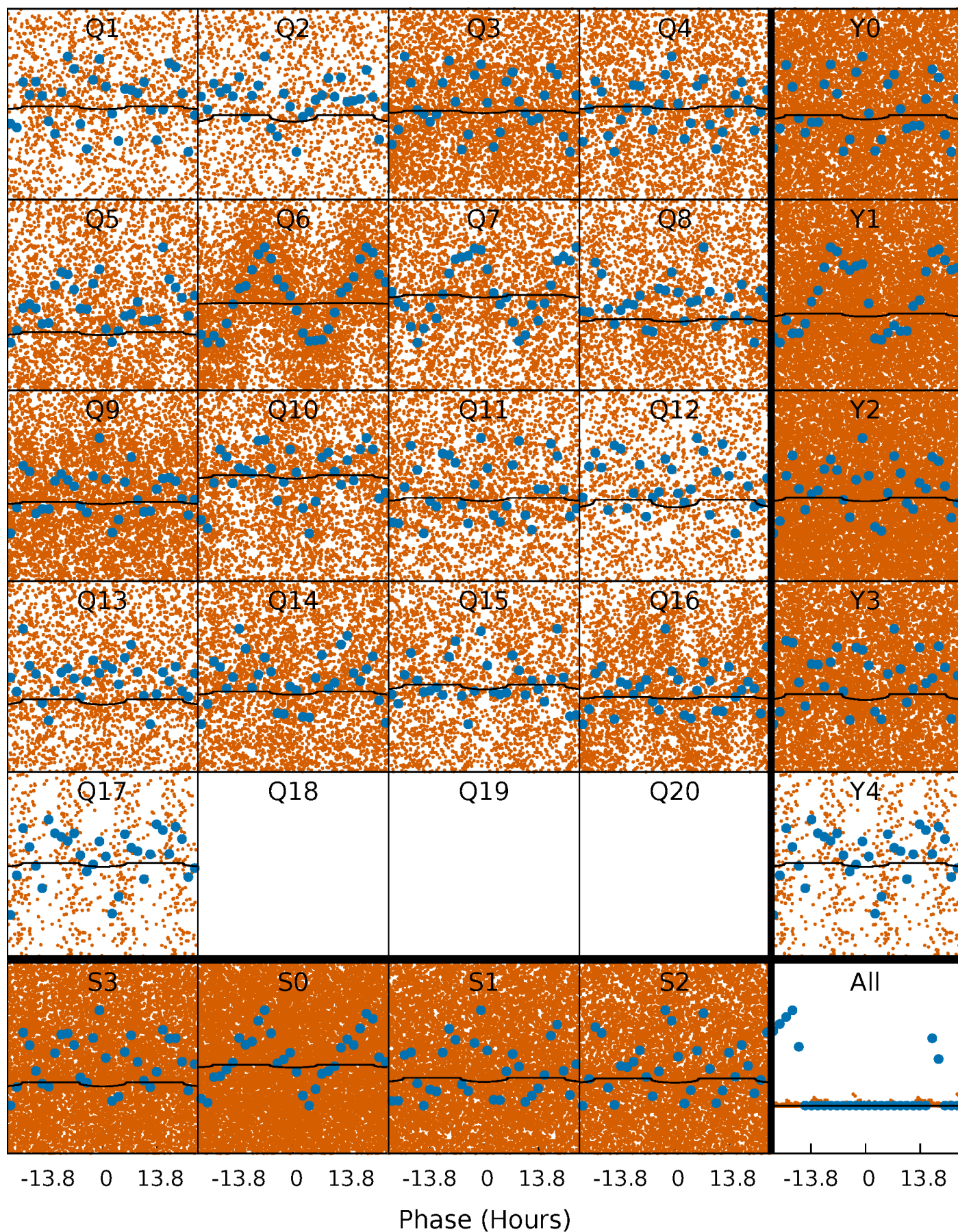
PDC Quarter-Phased Transit Curves

TCE 007021689-01 P= 1.097962 Days $T_0=131.903481$ (BKJD)



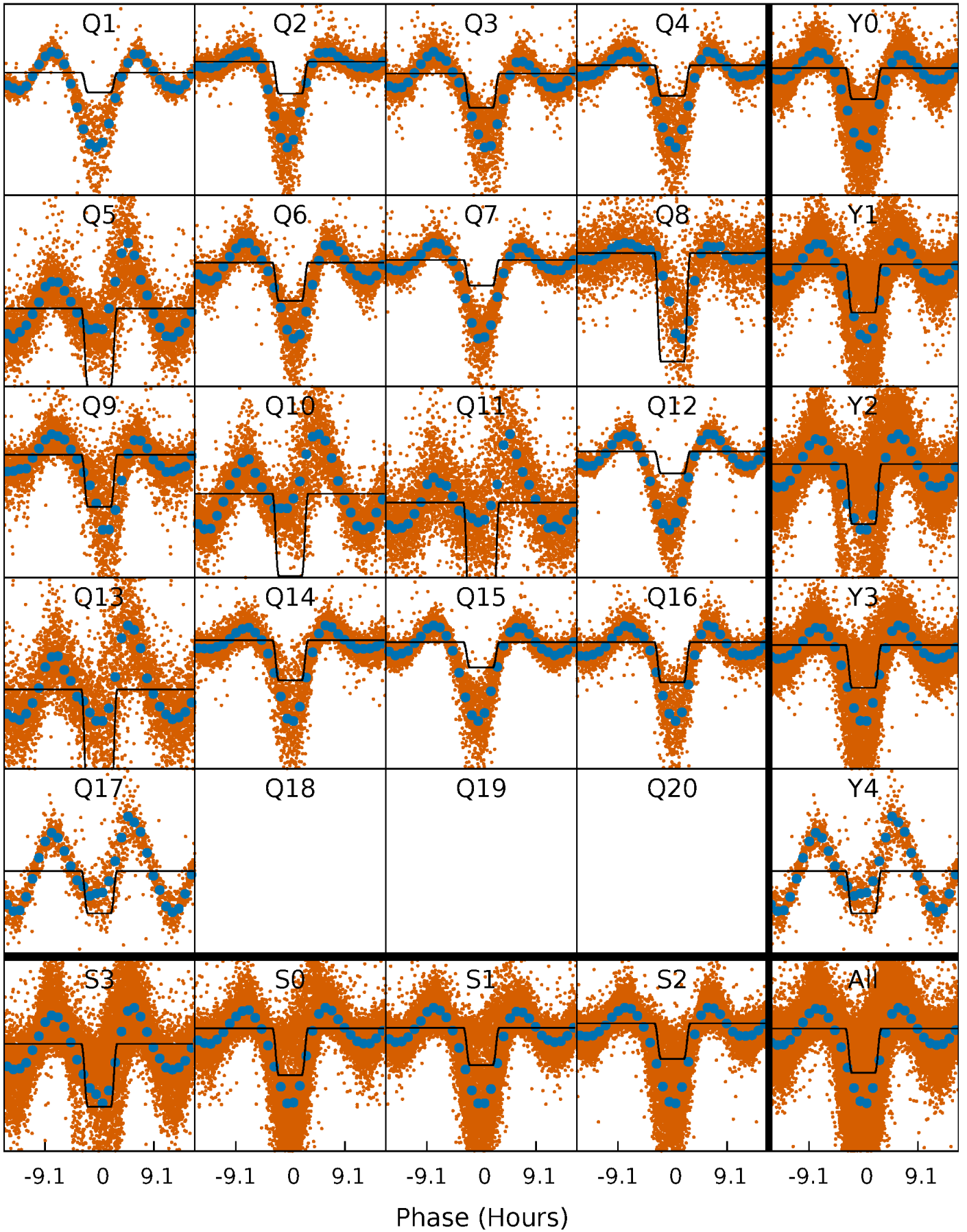
DV Quarter-Phased Transit Curves

TCE 007021689-01 P= 1.097962 Days $T_0=131.903481$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

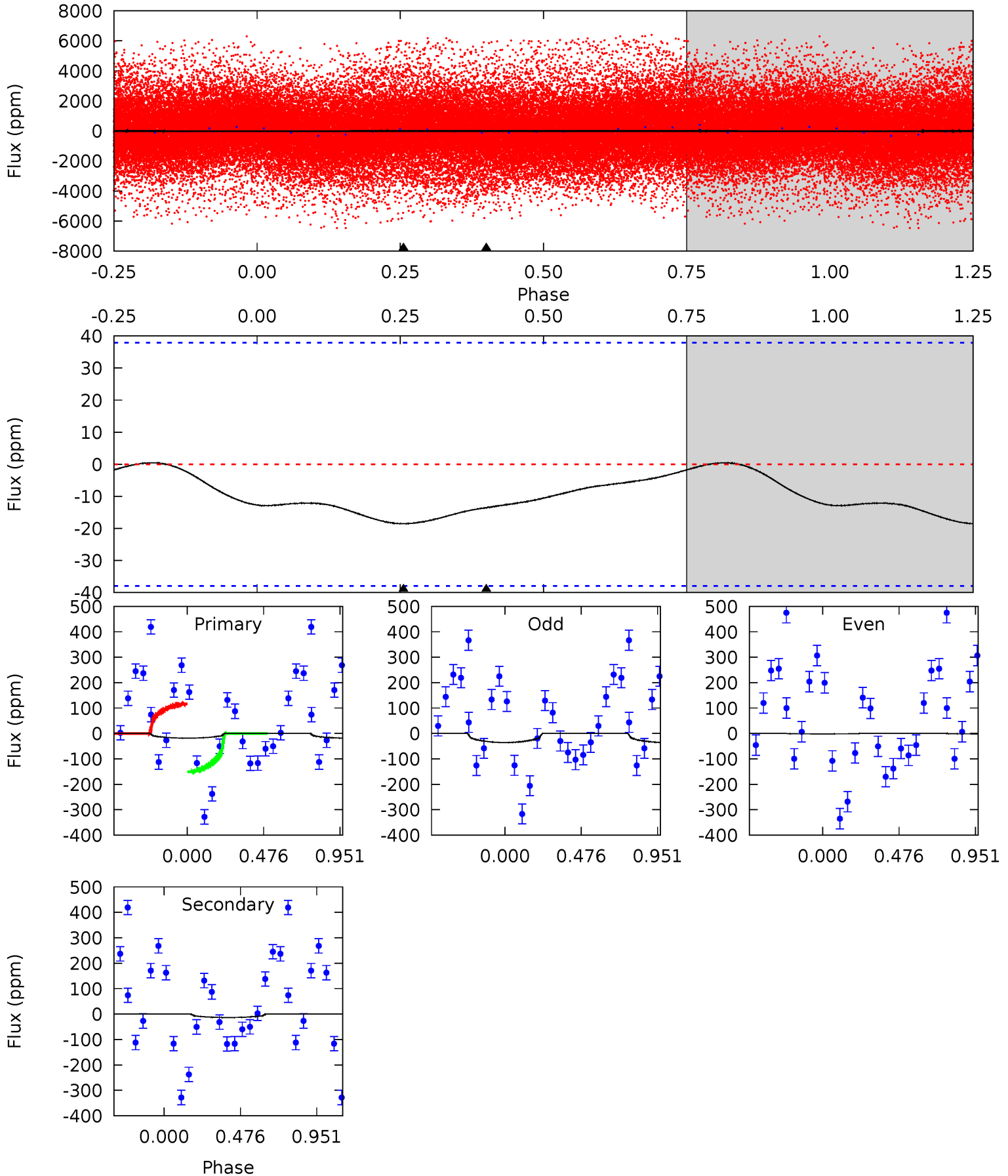
TCE 007021689-01 P= 1.098005 Days $T_0=131.889688$ (BKJD)



DV Model-Shift Uniqueness Test

007021689-01, P = 1.097962 Days, E = 130.805519 Days

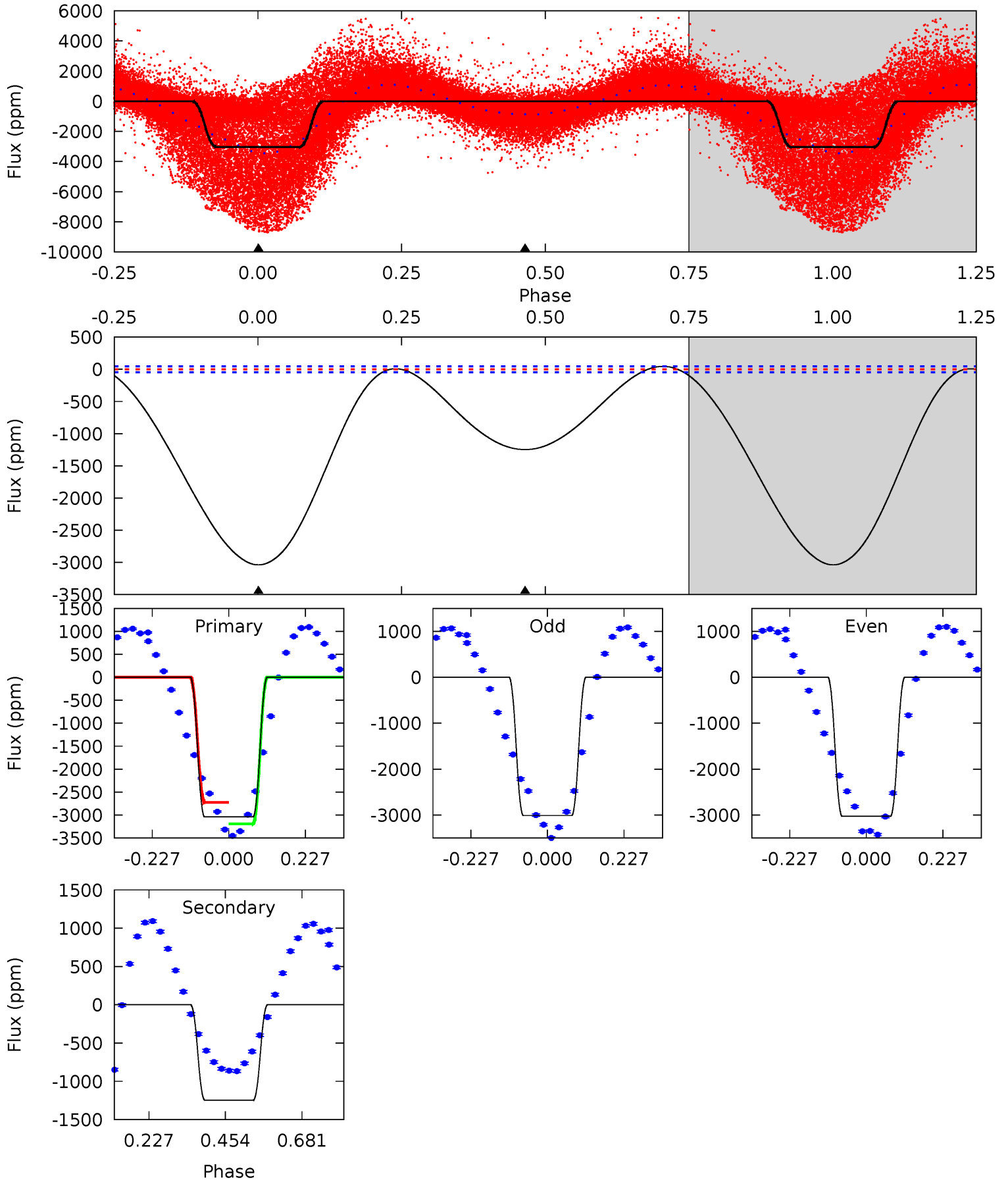
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.07	1.51	0	0	4.23	0.71	0.09	2.07	2.07	1.51	1.51	1.92	6.99	0.02	1.90



Alt Model-Shift Uniqueness Test

007021689-01, P = 1.098005 Days, E = 130.791683 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
286.8	117.7	0	0	4.39	1.21	9.49	286.8	286.8	117.7	117.7	0.76	1.06	0.01	22.3



Stellar Parameters For KIC 007021689

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5479^{+163}_{-163}	$4.638^{+0.032}_{-0.104}$	$-0.620^{+0.300}_{-0.300}$	$0.690^{+0.115}_{-0.046}$	$0.757^{+0.073}_{-0.066}$	$3.238^{+0.553}_{-0.995}$
	+3%/-3%	+1%/-2%	+48%/-48%	+17%/-7%	+10%/-9%	+17%/-31%
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 007021689-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 9	$0.69^{+0.67}_{-0.46}$	2067^{+95}_{-80}	3744^{+1949}_{-977}	$4.853^{+32.051}_{-3.930}$
Alt.	-1247 ± 11	$3.74^{+0.80}_{-0.78}$	2067^{+92}_{-73}	4782^{+512}_{-354}	18^{+10}_{-6}

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 $A_{obs} \gg 1.0$

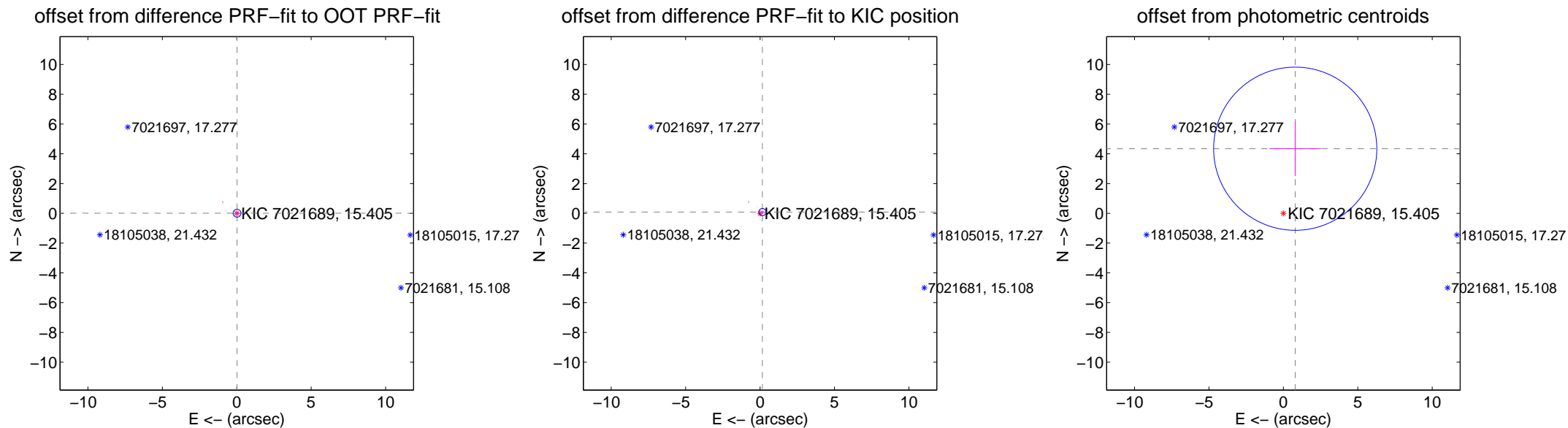
DV Centroid Data

Supplemental centroid analysis for 007021689-01. Kepler magnitude: 15.40. Transit SNR 1.37

There are 9 quarters with good PRF difference image offsets

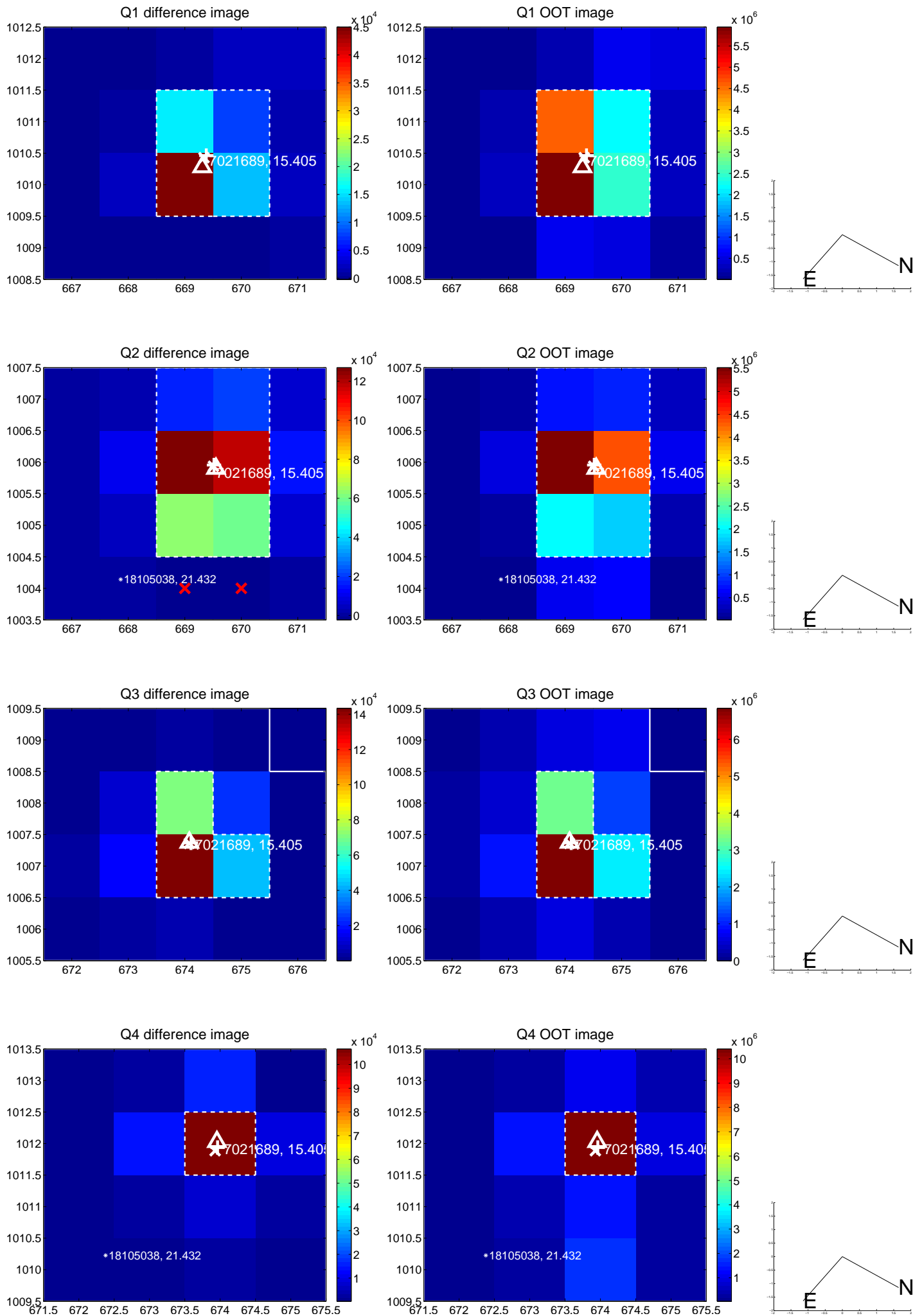
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.088	0.25	-0.020 ± 0.105	0.008 ± 0.095
PRF-fit source offset from KIC position	0.177 ± 0.080	2.21	-0.156 ± 0.100	0.085 ± 0.091
photometric centroid source offset	4.41 ± 1.83	2.42	-0.80 ± 1.73	4.34 ± 1.83

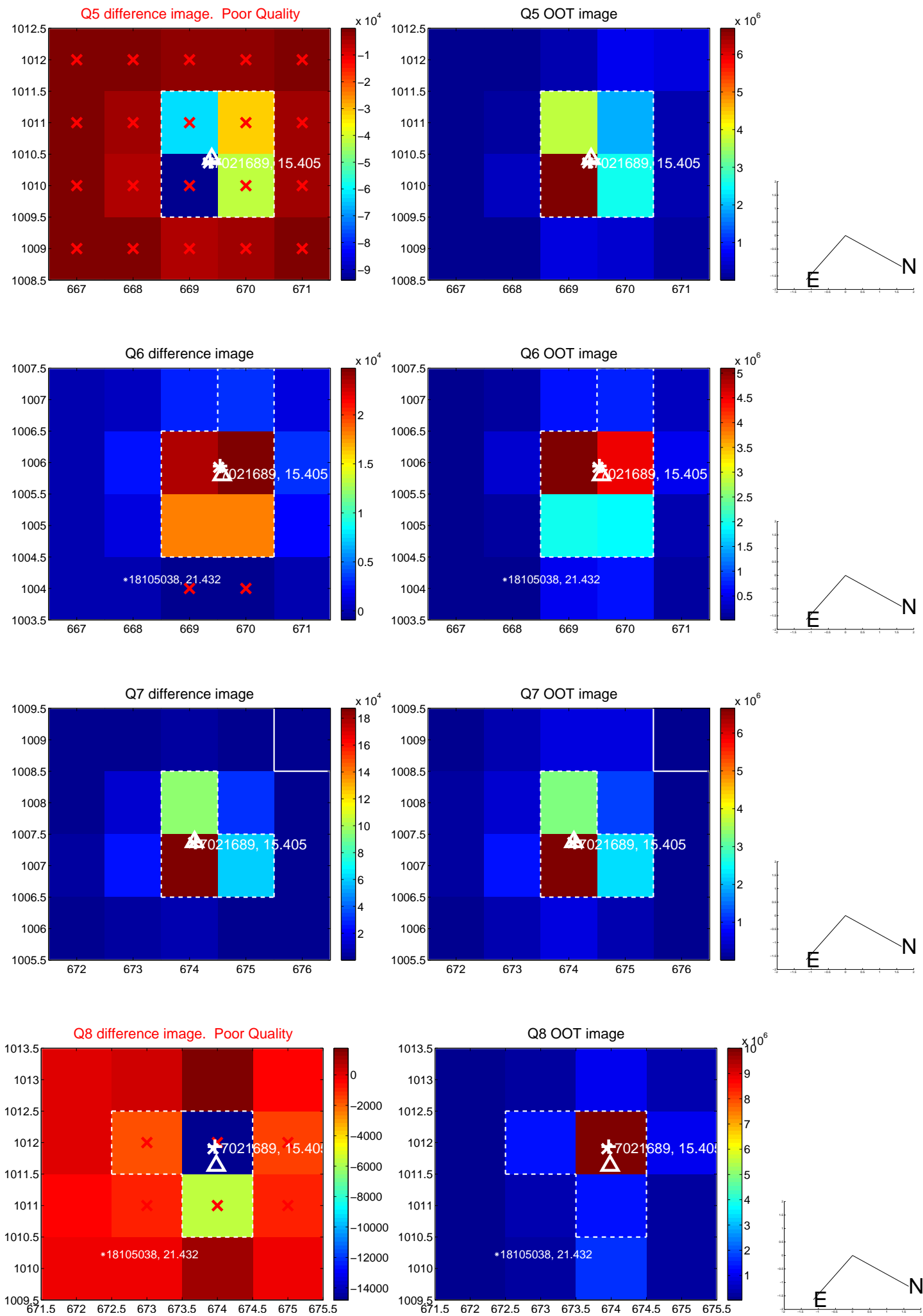


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

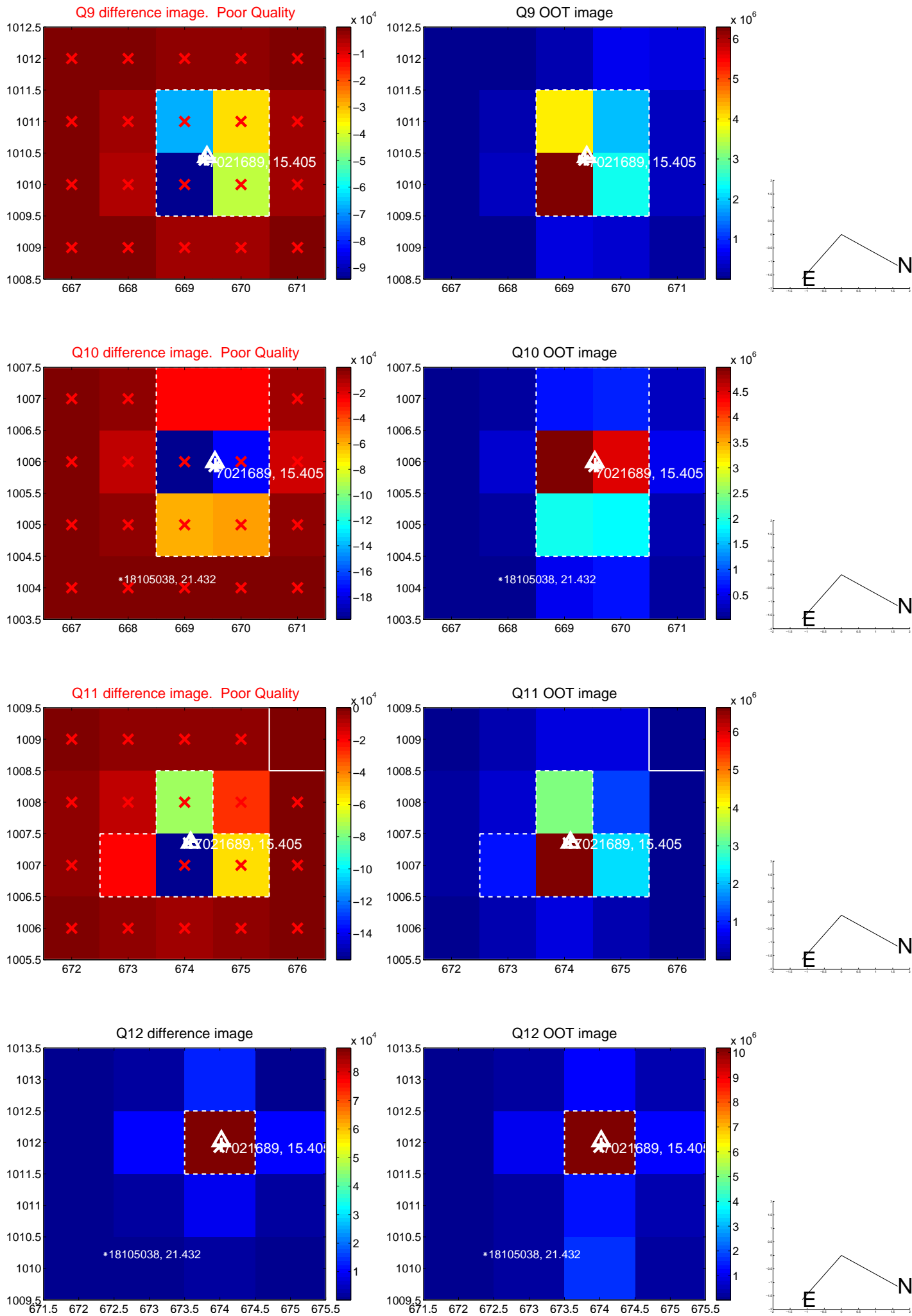
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



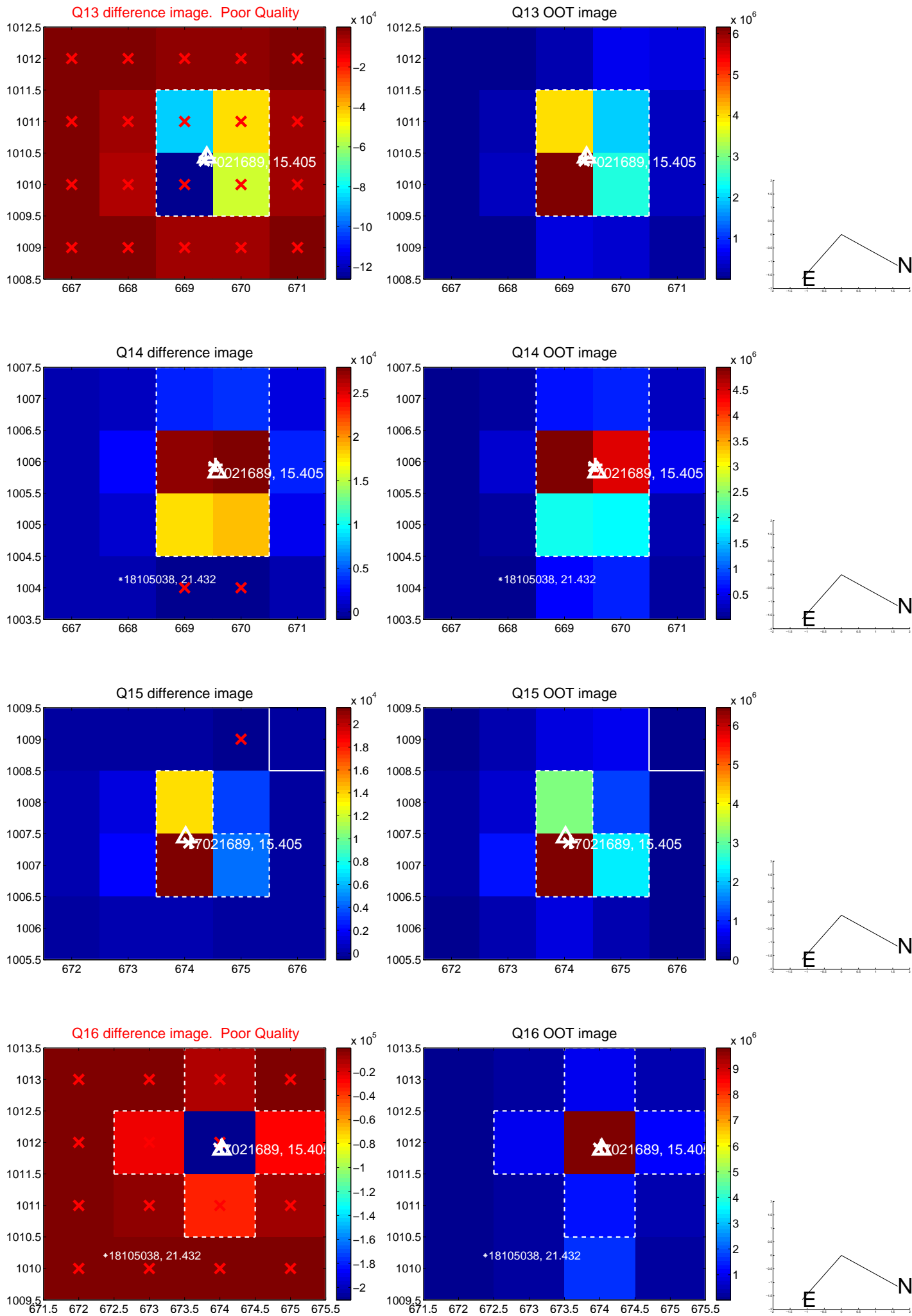
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



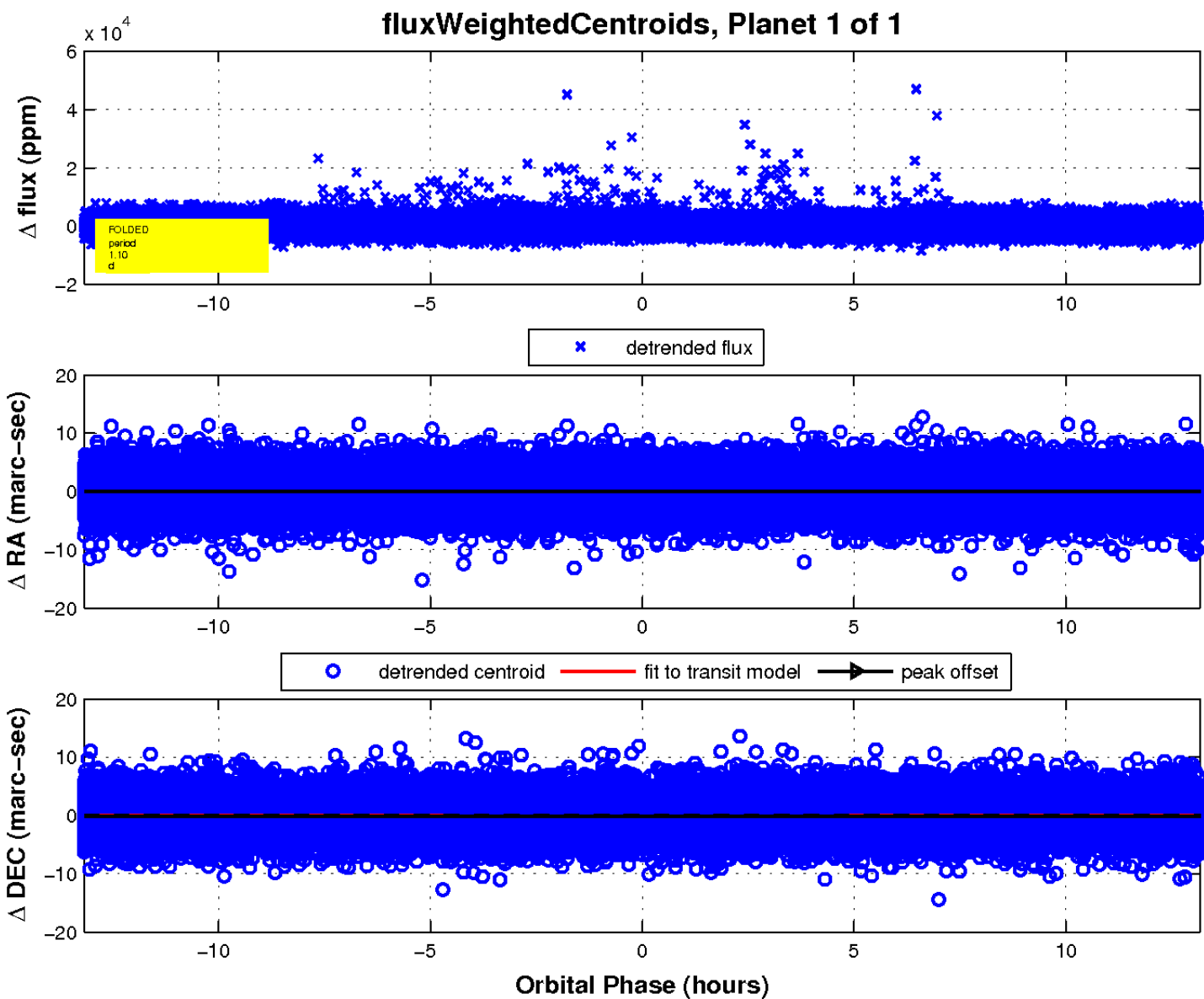
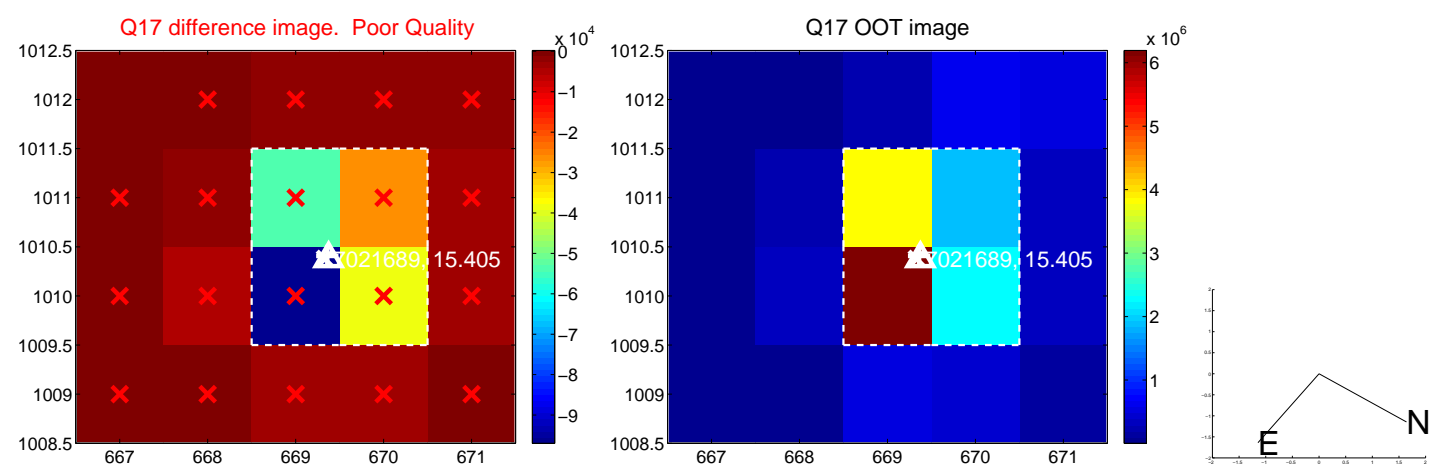
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

