

KIC 007030676

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})
007030676-01	OBS	No	0.683558	131.622209	9.7	7.109	11.7	7.3	1.57	5978	0.52	12249.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007030676-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

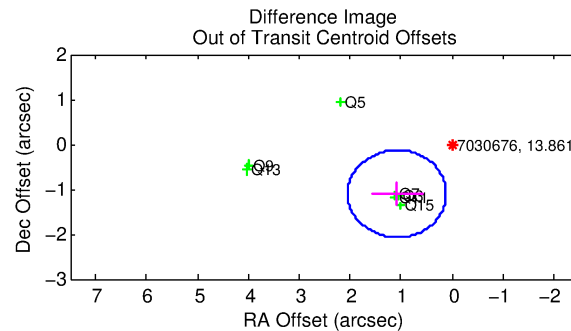
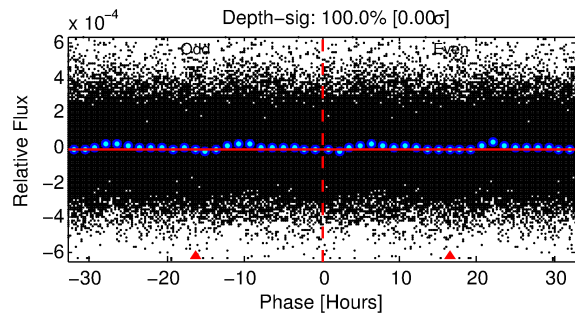
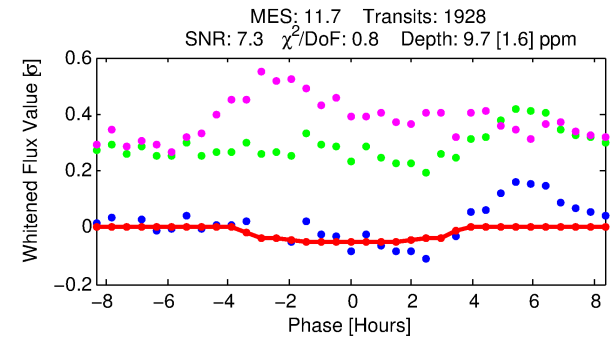
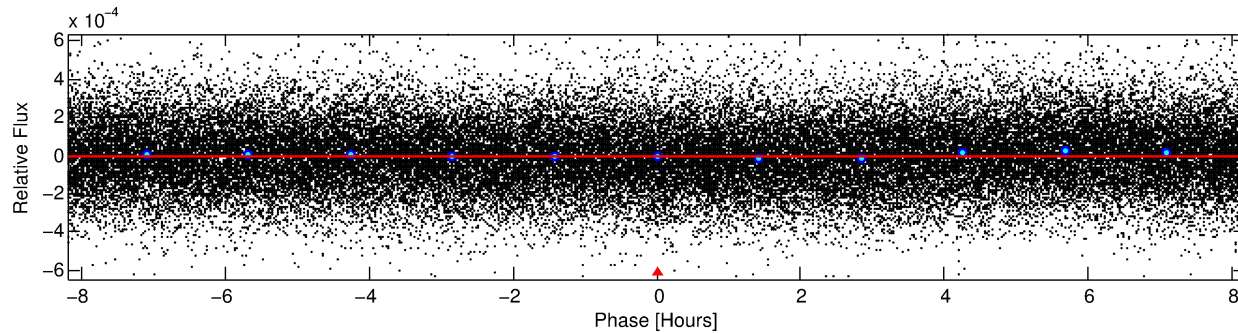
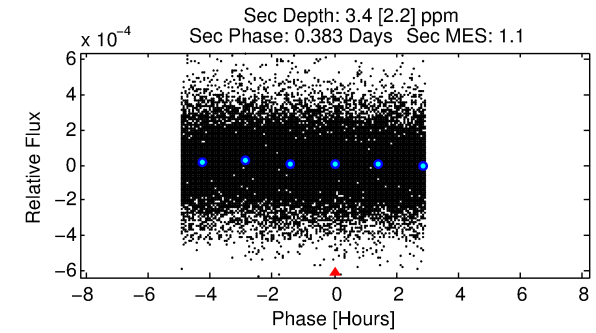
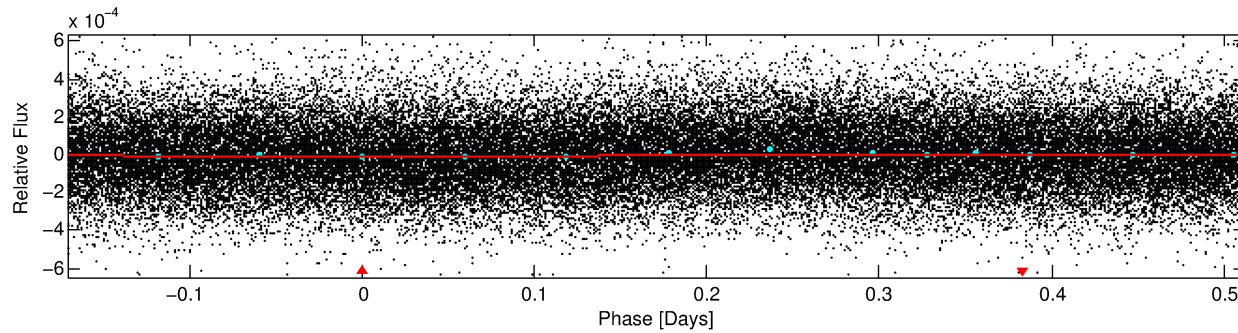
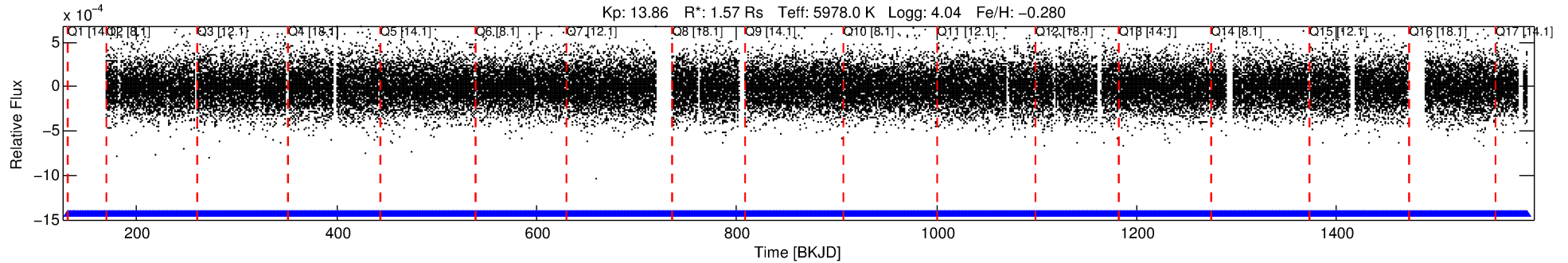
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007030676-01

No Significant Match Found

DV One-Page Summary

KIC: 7030676 Candidate: 1 of 1 Period: 0.684 d



DV Fit Results:

Period = 0.68356 [0.00002] d
Epoch = 131.6222 [0.0101] BKJD
Rp/R* = 0.0030 [0.0034]
a/R* = 1.01 [0.16]
b = 0.70 [4.20]
Seff = 12249.83 [7953.85]
Teq = 2683 [435] K
Rp = 0.52 [0.62] Re
a = 0.0151 [0.0059] AU
Ag = 1.60 [3.87] [0.15σ]
Teffp = 4663 [2731] K [0.72σ]

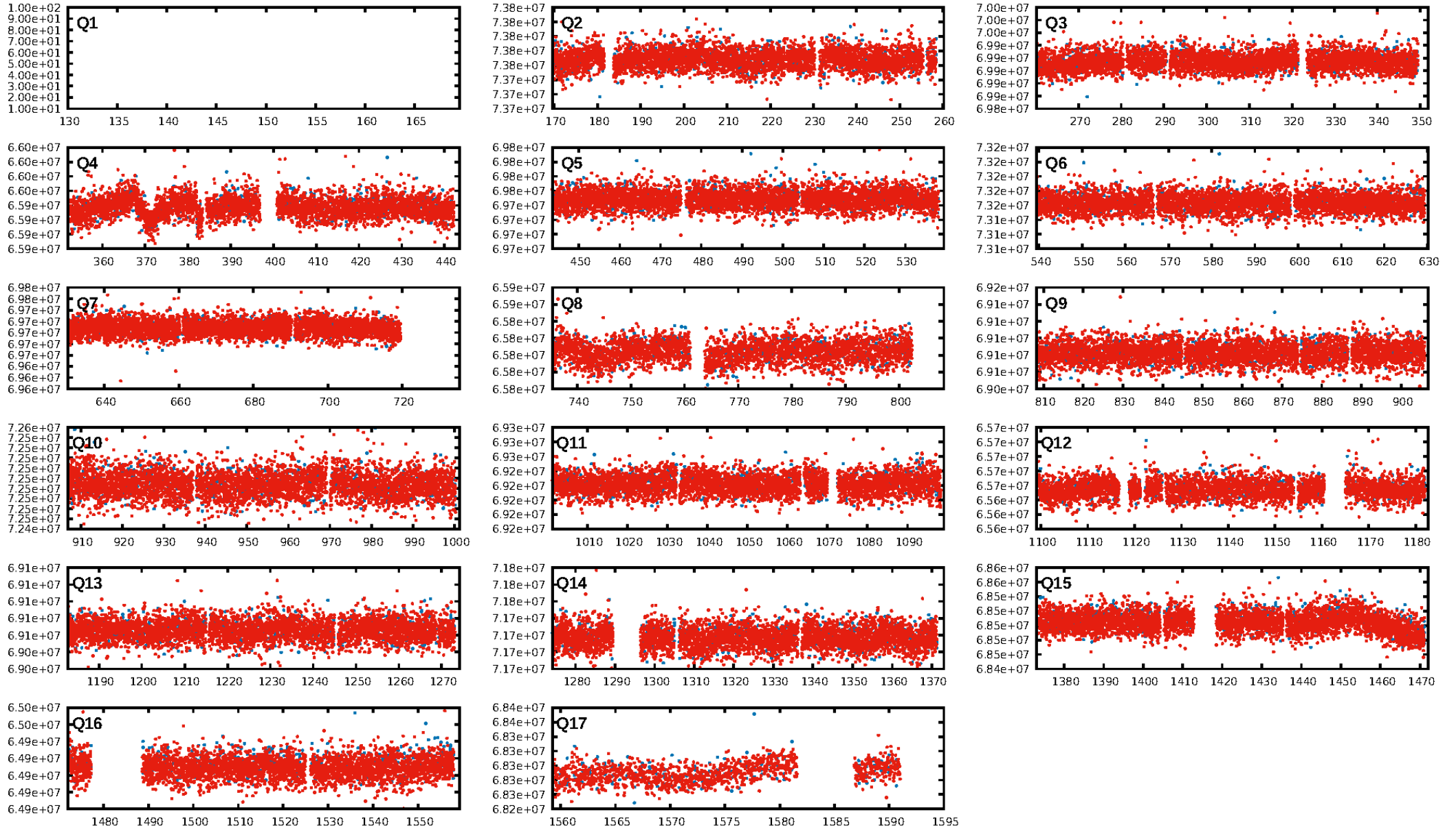
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1888/1888]
GhostDiagnostic-chr: 0.332
Centroid-sig: 0.0%
Centroid-so: 10.091 arcsec [6.26σ]
OotOffset-rm: 1.546 arcsec [4.79σ]
KicOffset-rm: 1.641 arcsec [5.45σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [16/16]

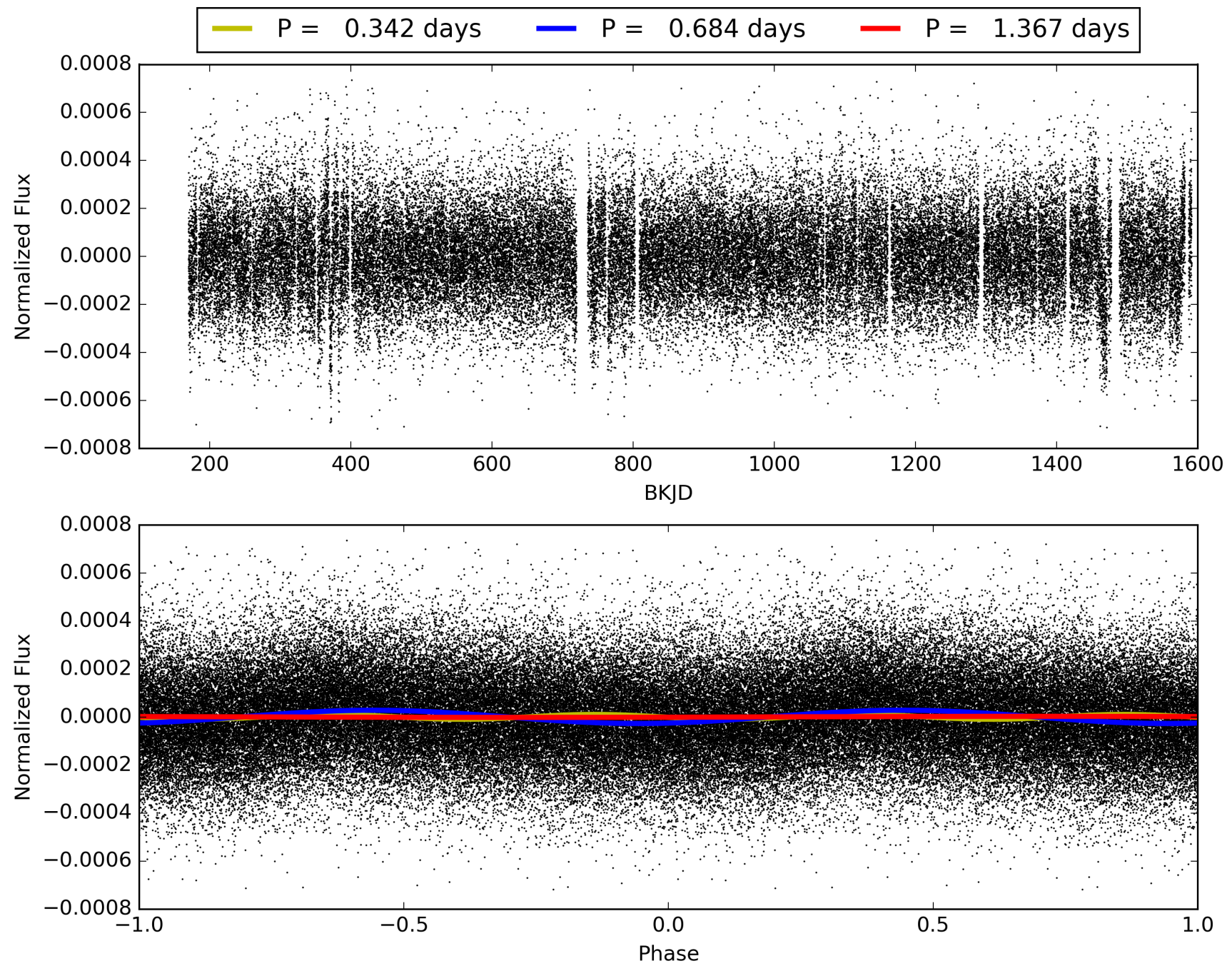
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:04:18 Z

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

TCE 007030676-01, PDC Light Curves

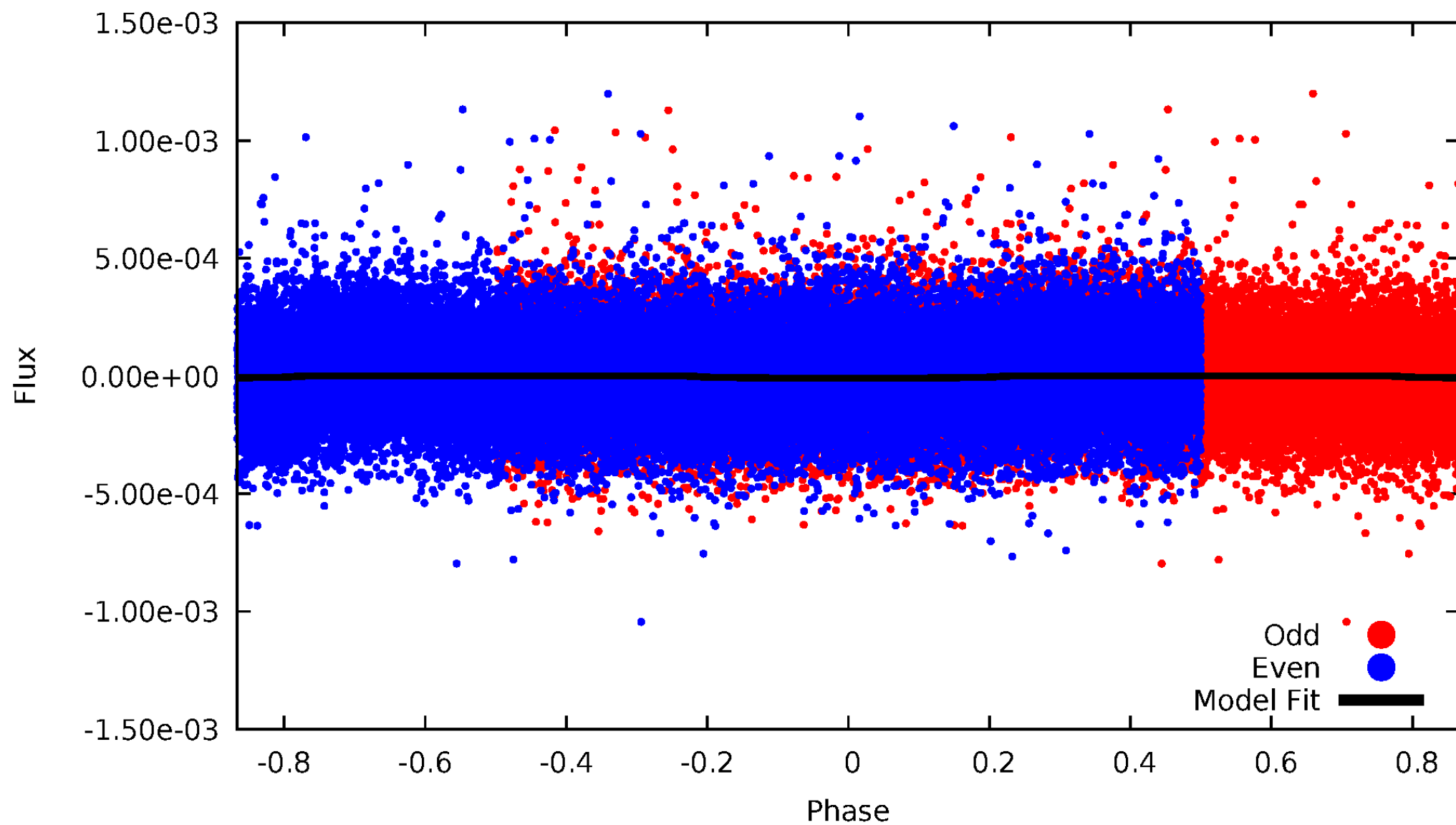


TCE 007030676-01



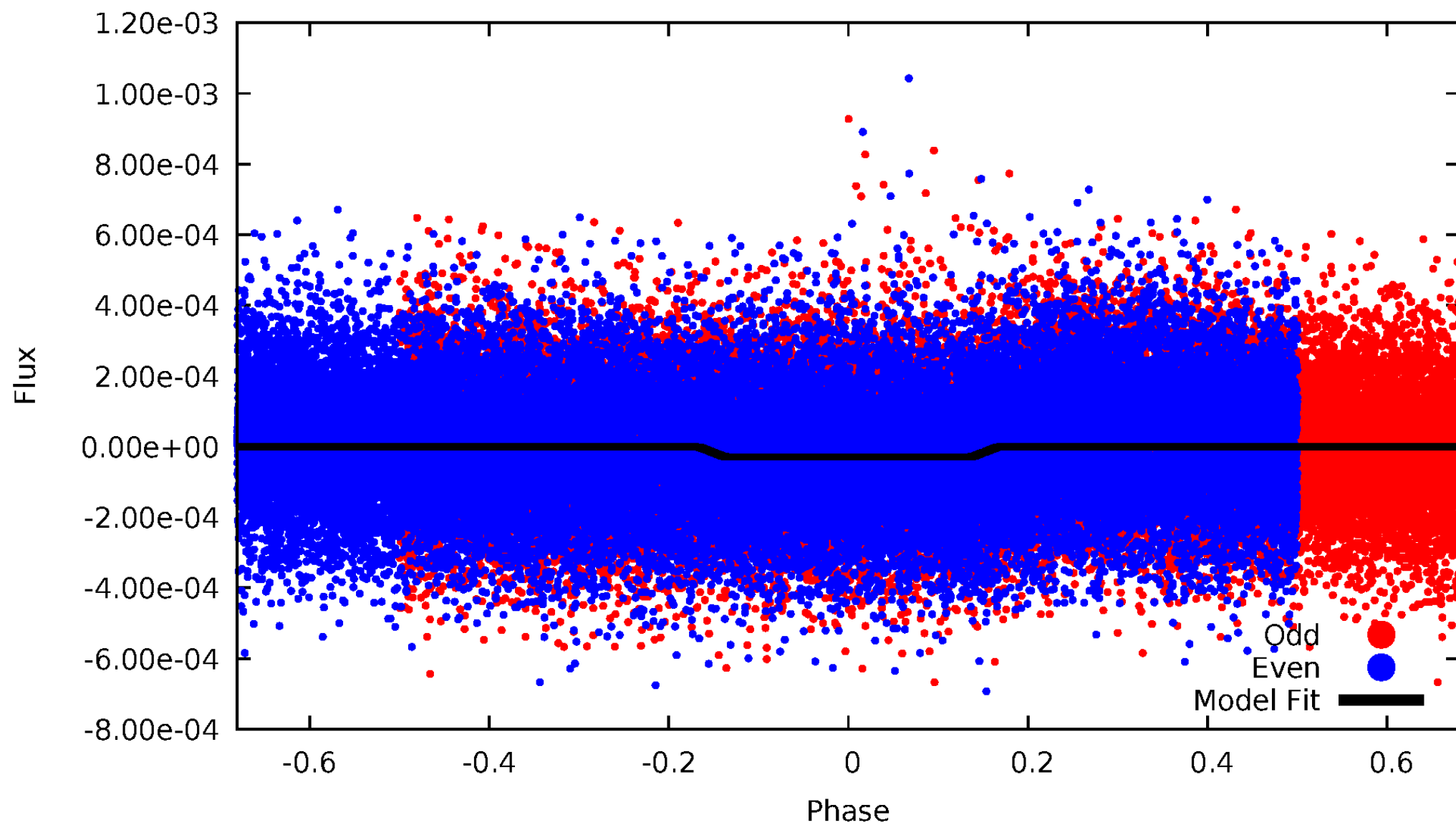
DV Odd/Even

TCE 007030676-01



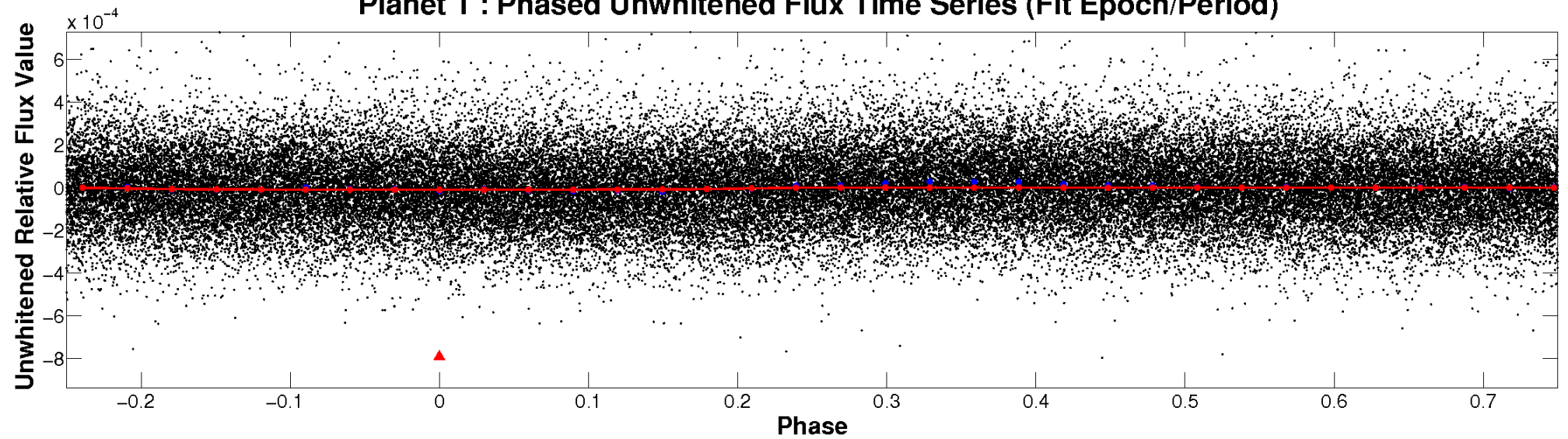
ALT Odd/Even

TCE 007030676-01

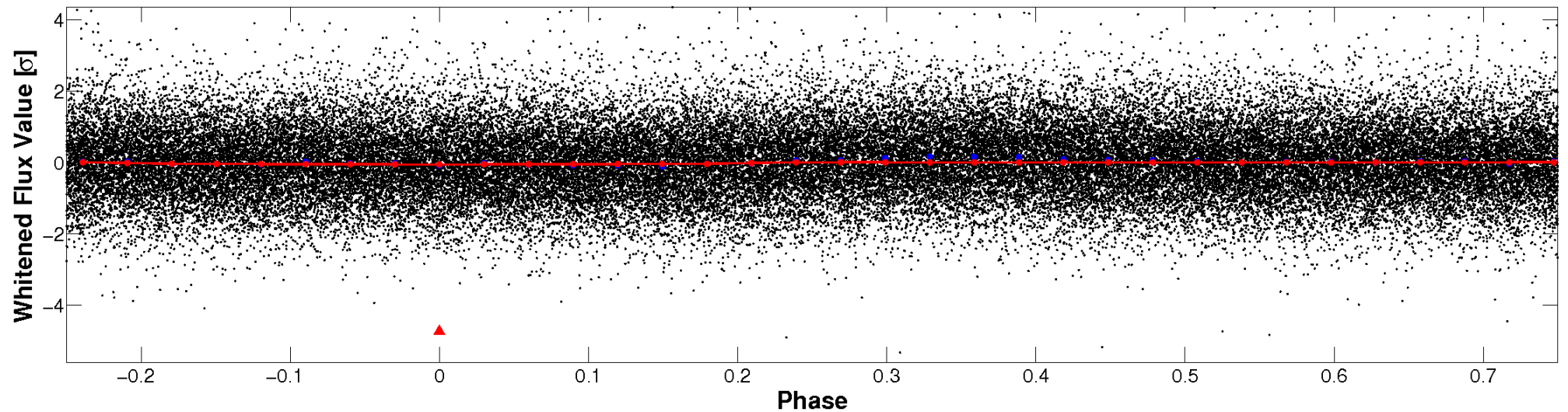


Non-Whitened Vs. Whitened Light Curve

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

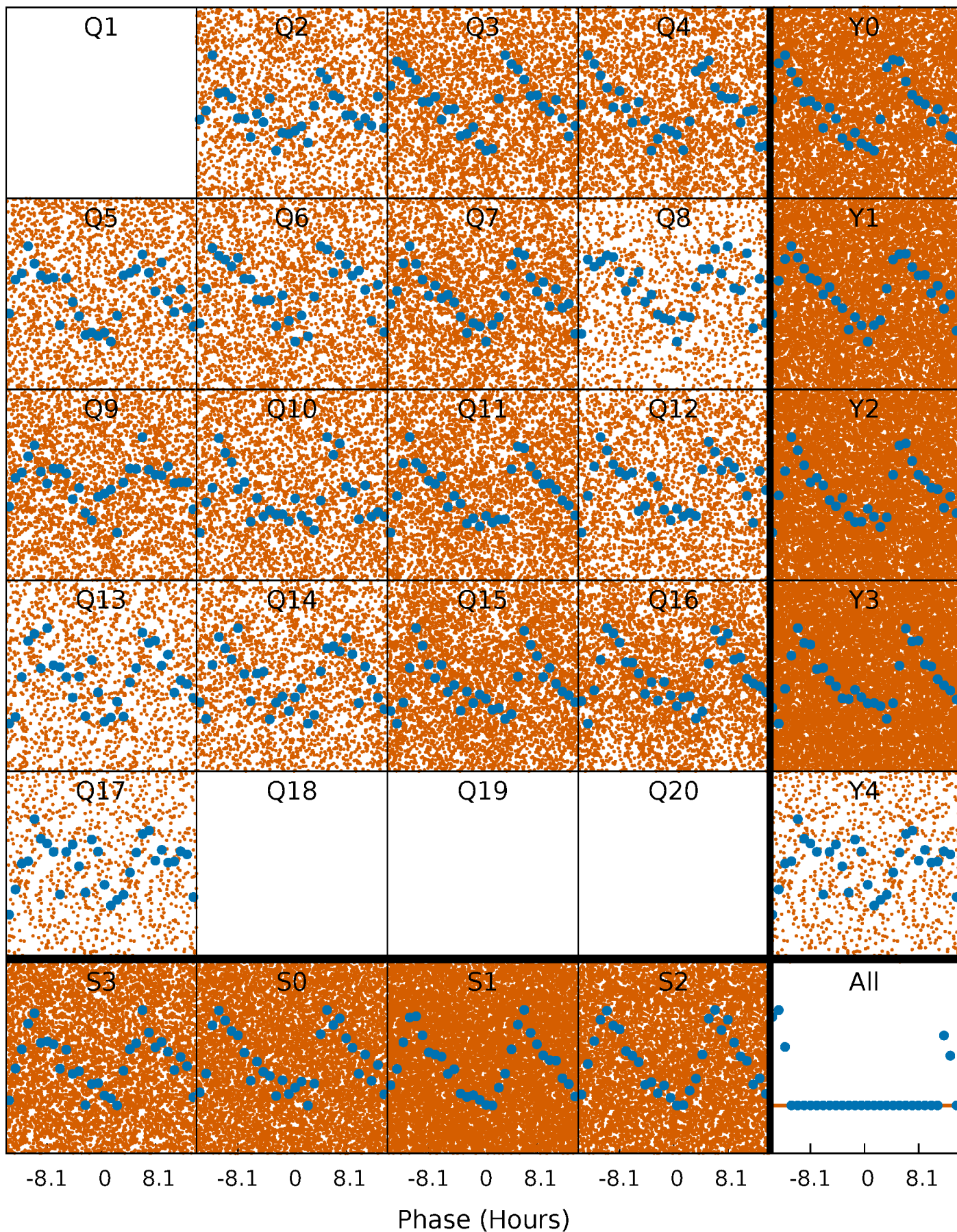


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



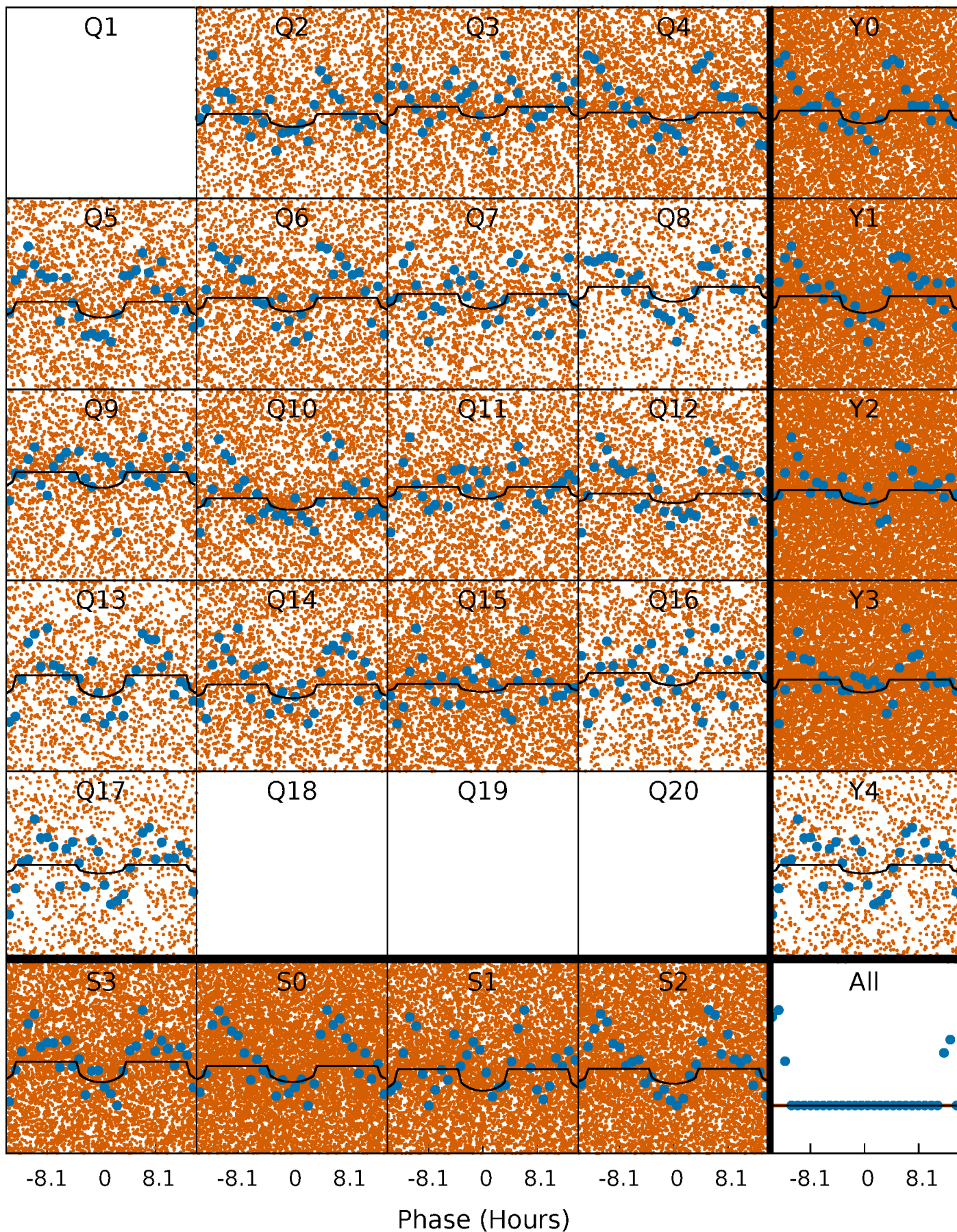
PDC Quarter-Phased Transit Curves

TCE 007030676-01 P= 0.683558 Days $T_0=131.622209$ (BKJD)



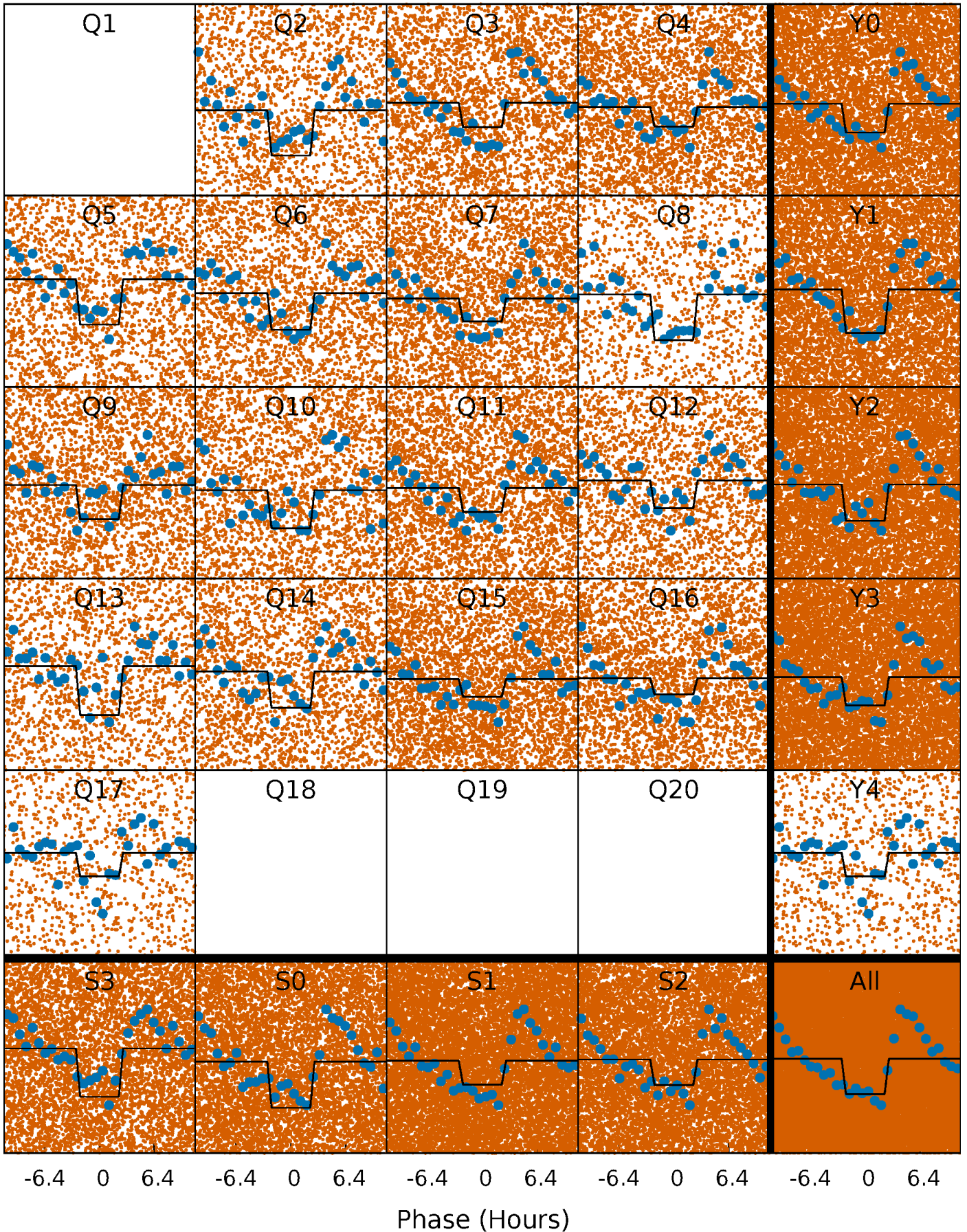
DV Quarter-Phased Transit Curves

TCE 007030676-01 P= 0.683558 Days $T_0=131.622209$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

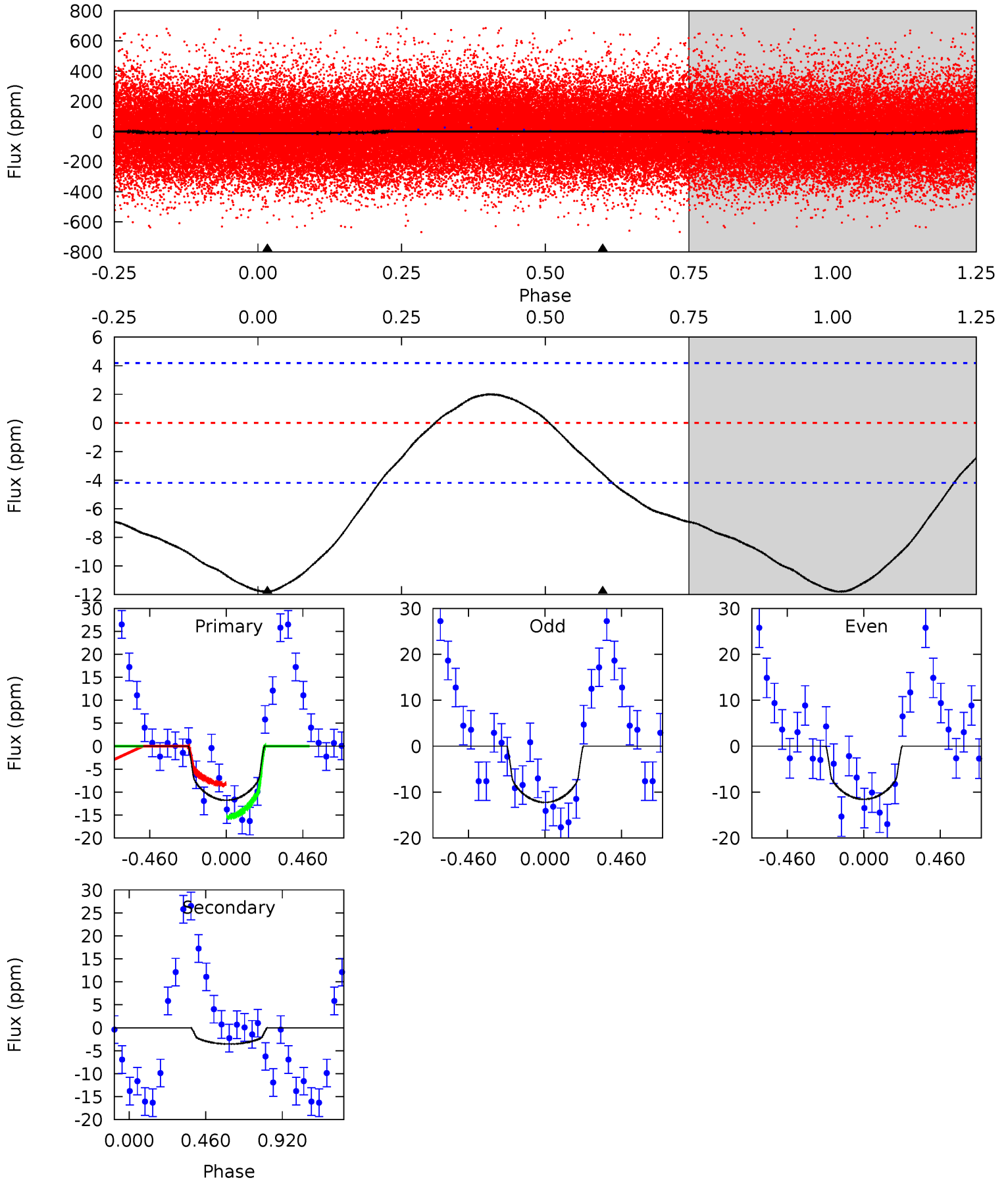
TCE 007030676-01 P= 0.683614 Days $T_0=131.595003$ (BKJD)



DV Model-Shift Uniqueness Test

007030676-01, P = 0.683558 Days, E = 131.622209 Days

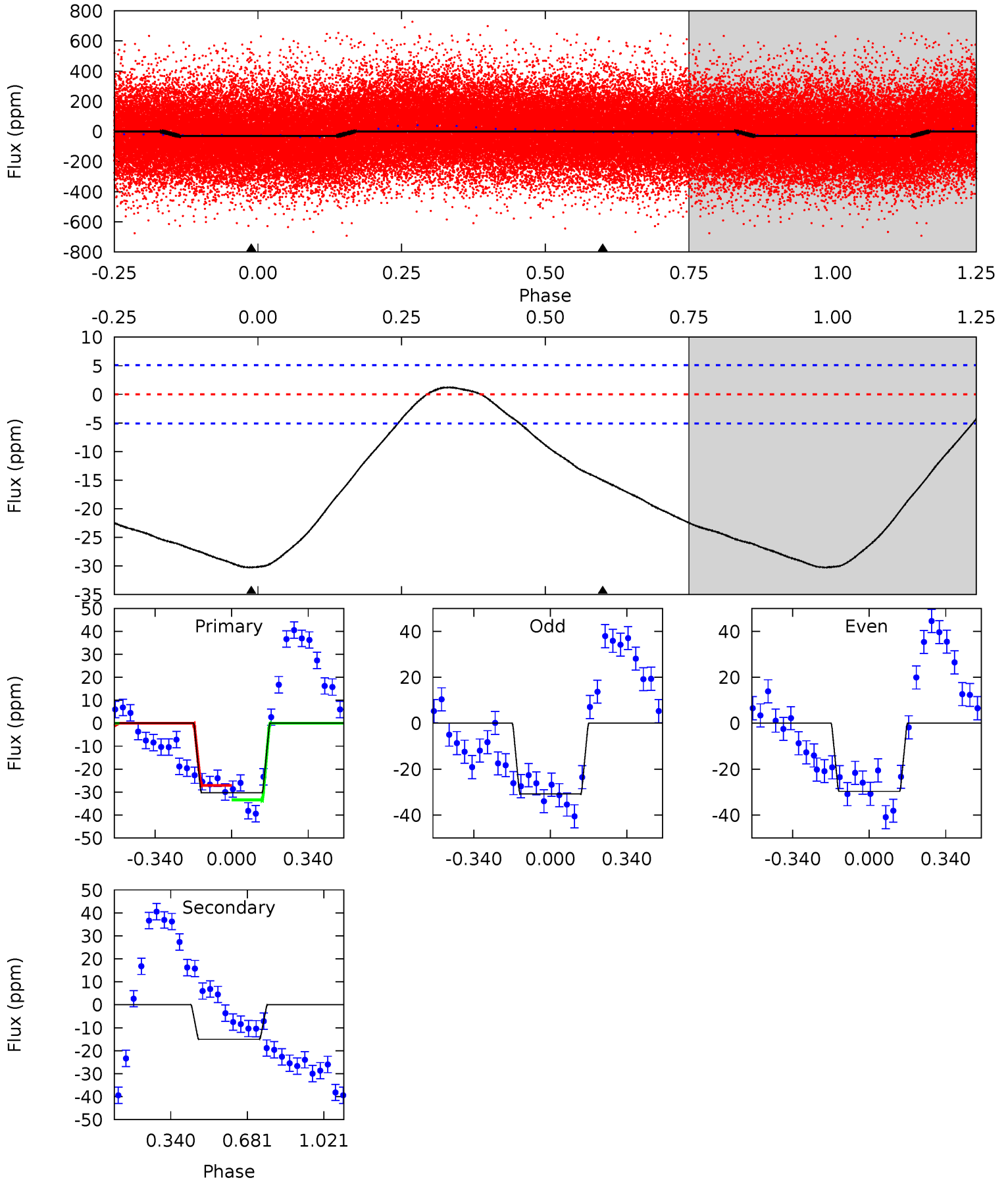
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	3.58	0	0	4.23	0.74	0.99	11.9	11.9	3.58	3.58	0.34	1.14	0.15	3.60



Alt Model-Shift Uniqueness Test

007030676-01, P = 0.683614 Days, E = 131.595003 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	12.7	0	0	4.30	0.95	1.63	25.5	25.5	12.7	12.7	0.49	1.00	0.04	2.74



Stellar Parameters For KIC 007030676

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5978^{+198}_{-198}	$4.044^{+0.378}_{-0.135}$	$-0.280^{+0.300}_{-0.300}$	$1.567^{+0.407}_{-0.610}$	$0.992^{+0.150}_{-0.135}$	$0.363^{+1.086}_{-0.166}$
	+3%/-3%	+9%/-3%	+107%/-107%	+26%/-39%	+15%/-14%	+299%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007030676-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$0.60^{+0.55}_{-0.36}$	3664^{+298}_{-382}	4132^{+2657}_{-1549}	$1.234^{+7.789}_{-0.901}$
Alt.	-15 ± 1	$0.90^{+0.60}_{-0.49}$	3662^{+278}_{-403}	4835^{+2496}_{-1003}	$2.337^{+9.039}_{-1.484}$

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 $A_{obs} \gg 1.0$

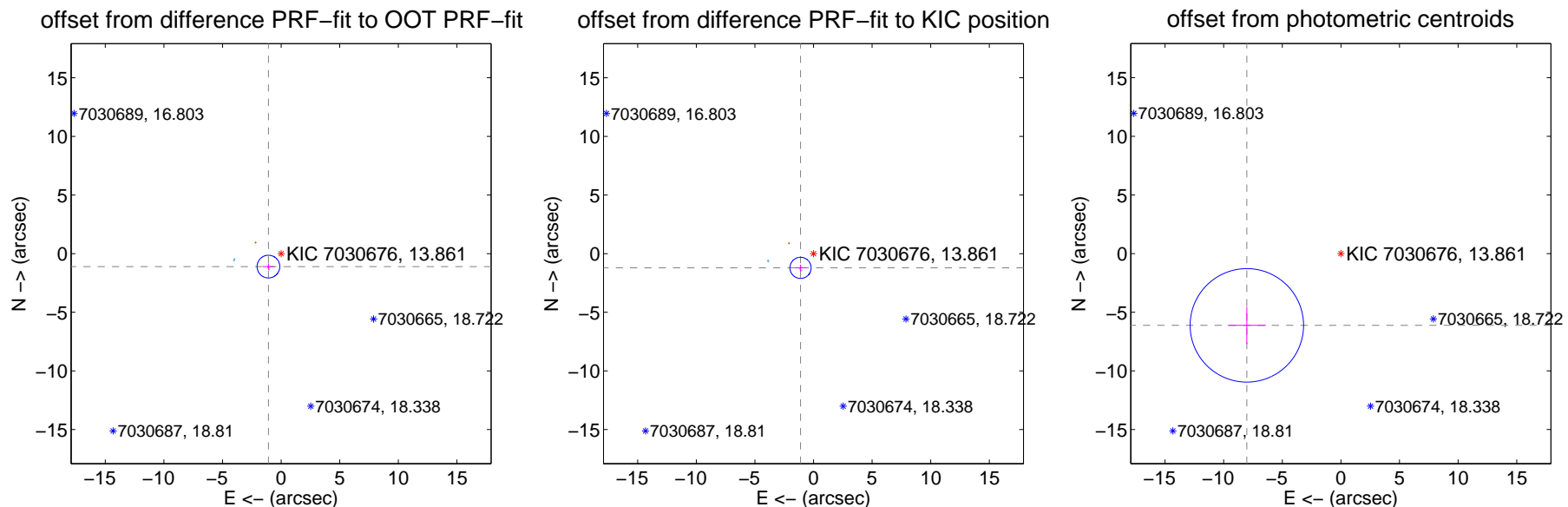
DV Centroid Data

Supplemental centroid analysis for 007030676-01. Kepler magnitude: 13.86. Transit SNR 7.29

There are 6 quarters with good PRF difference image offsets

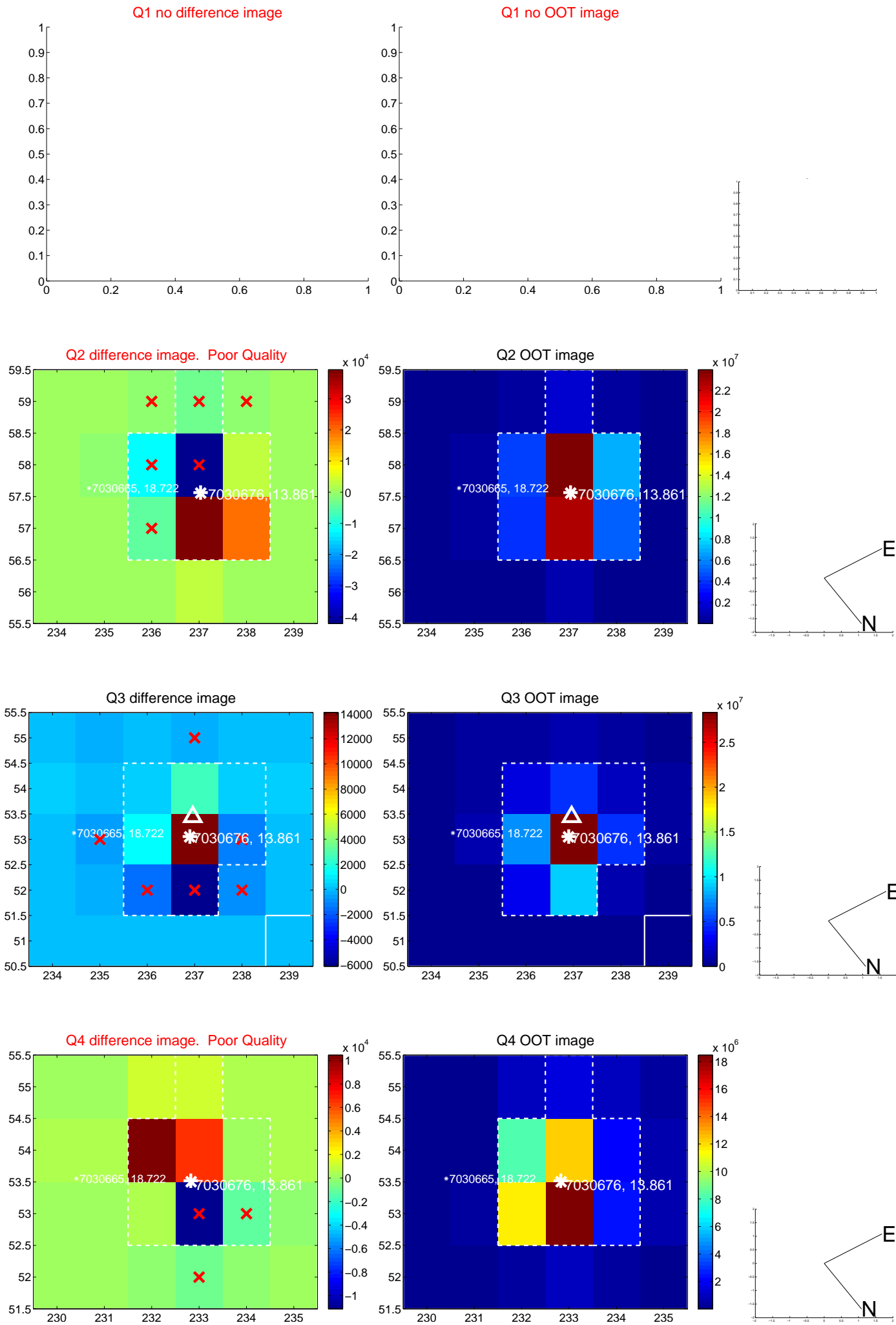
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.546 ± 0.323	4.79	1.082 ± 0.498	-1.105 ± 0.262
PRF-fit source offset from KIC position	1.641 ± 0.301	5.45	1.108 ± 0.514	-1.210 ± 0.276
photometric centroid source offset	10.09 ± 1.61	6.26	8.02 ± 1.63	-6.12 ± 1.59

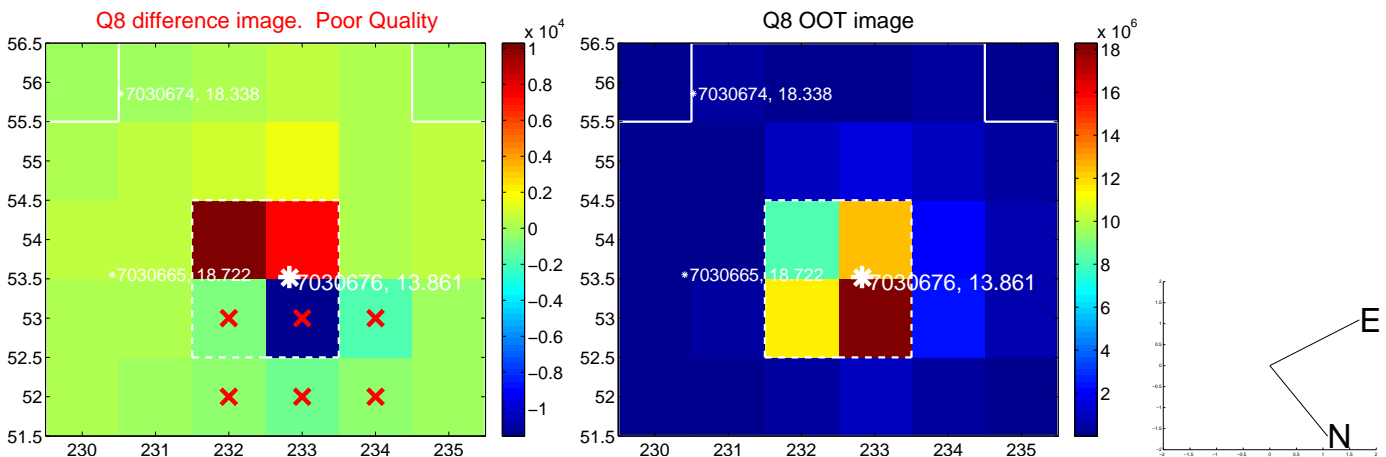
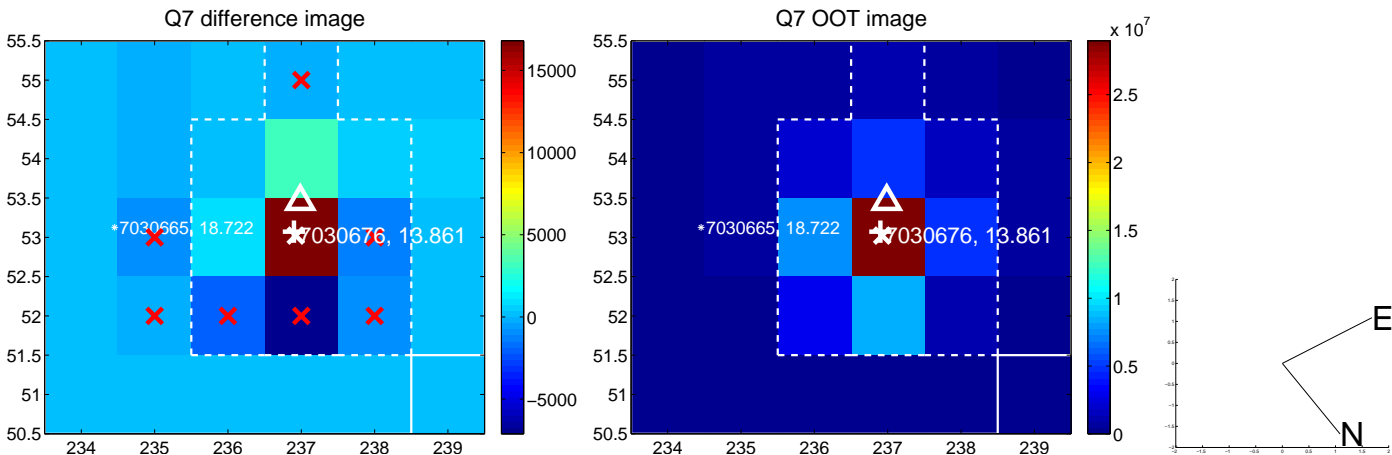
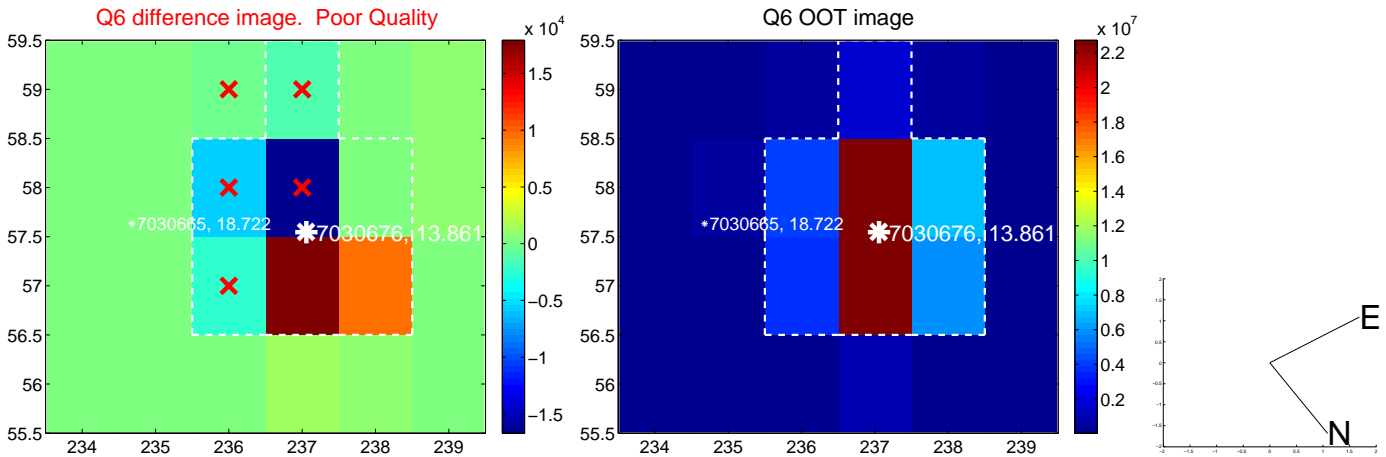
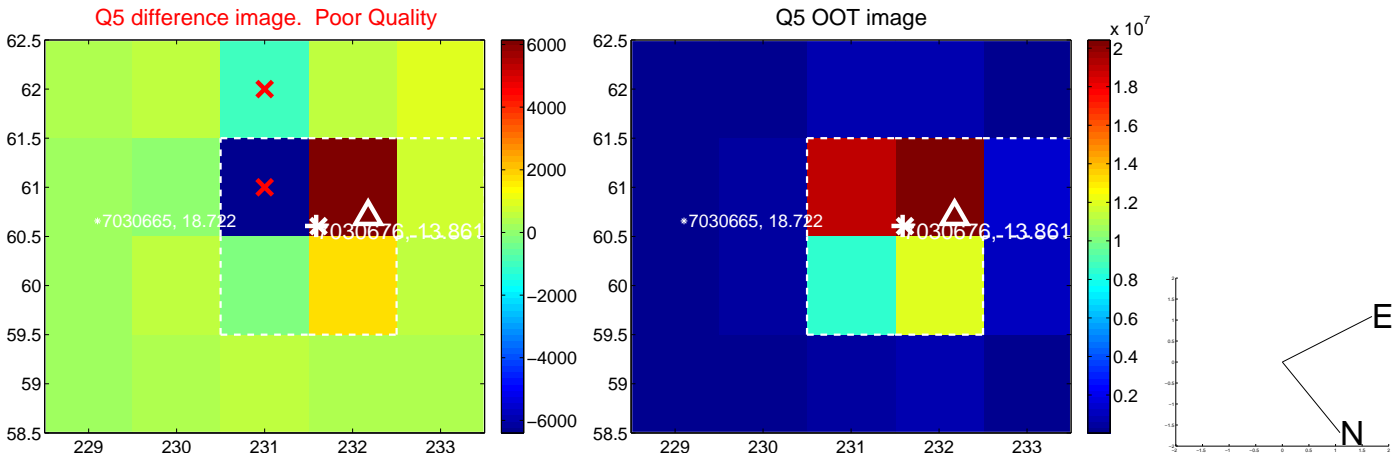


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

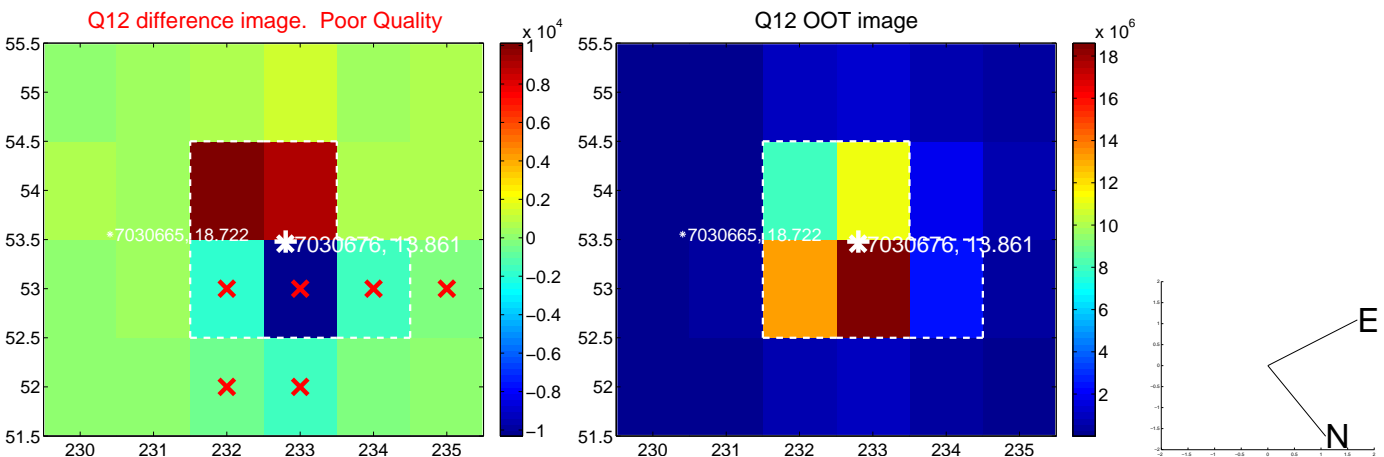
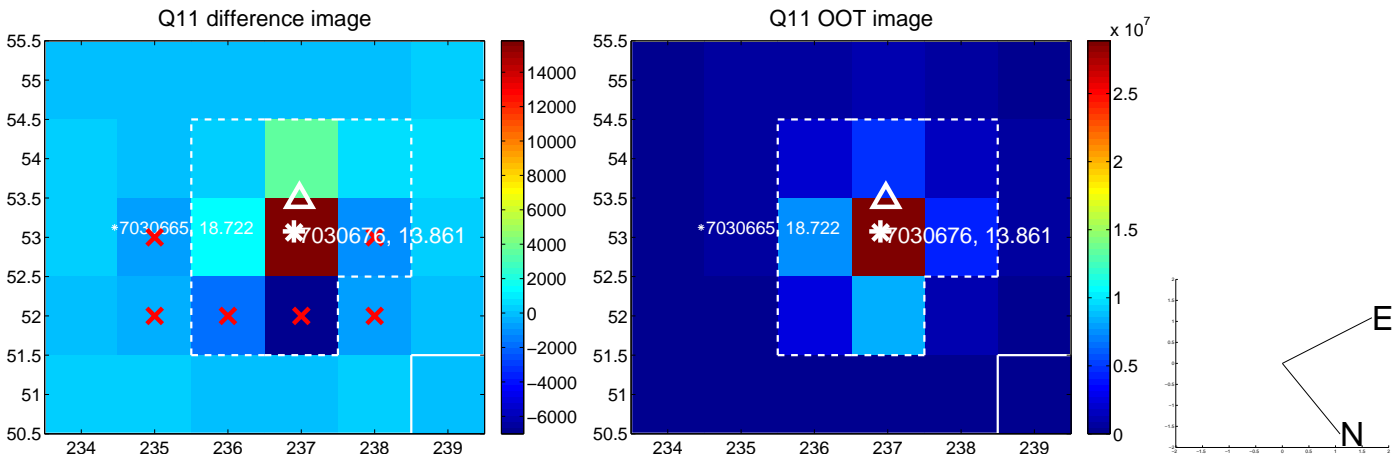
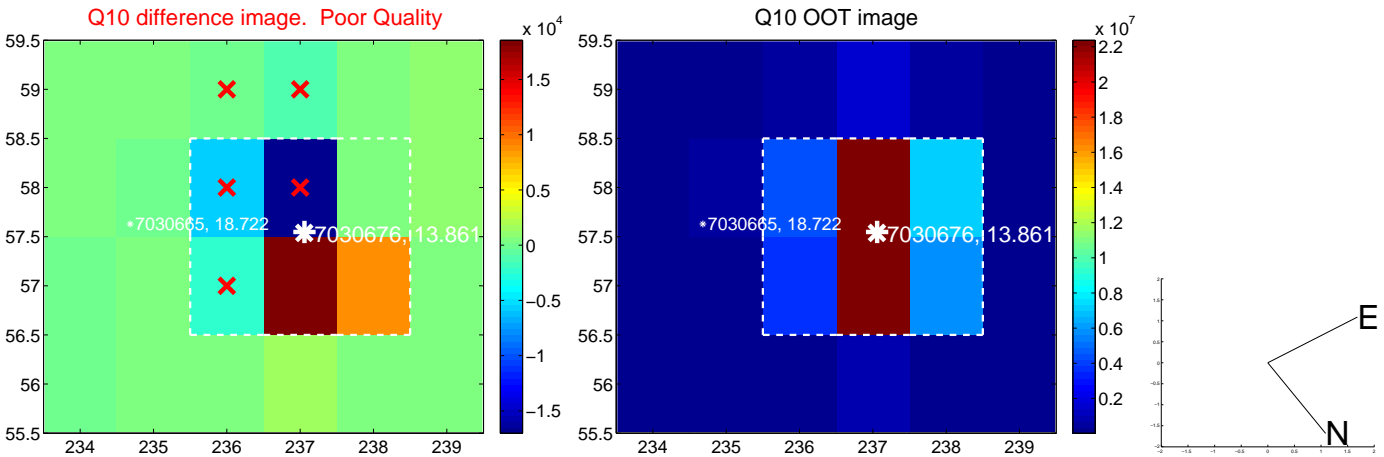
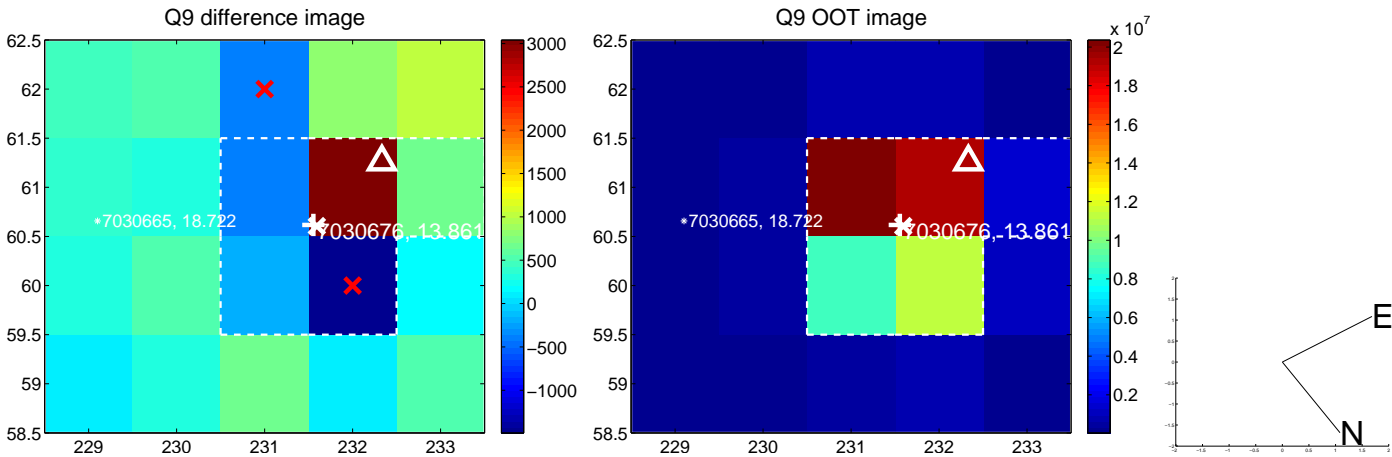
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



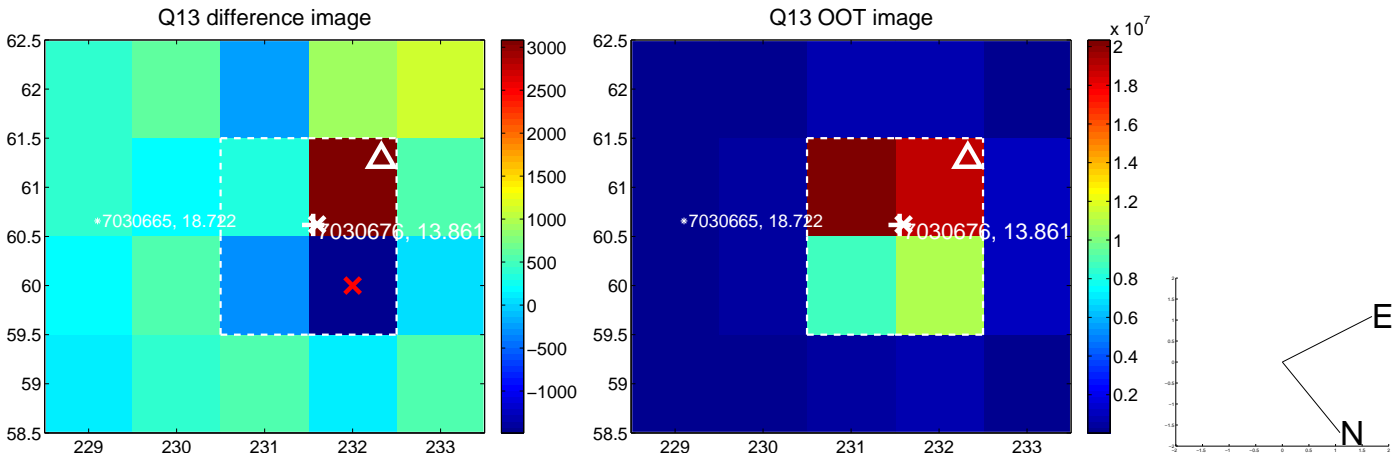
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



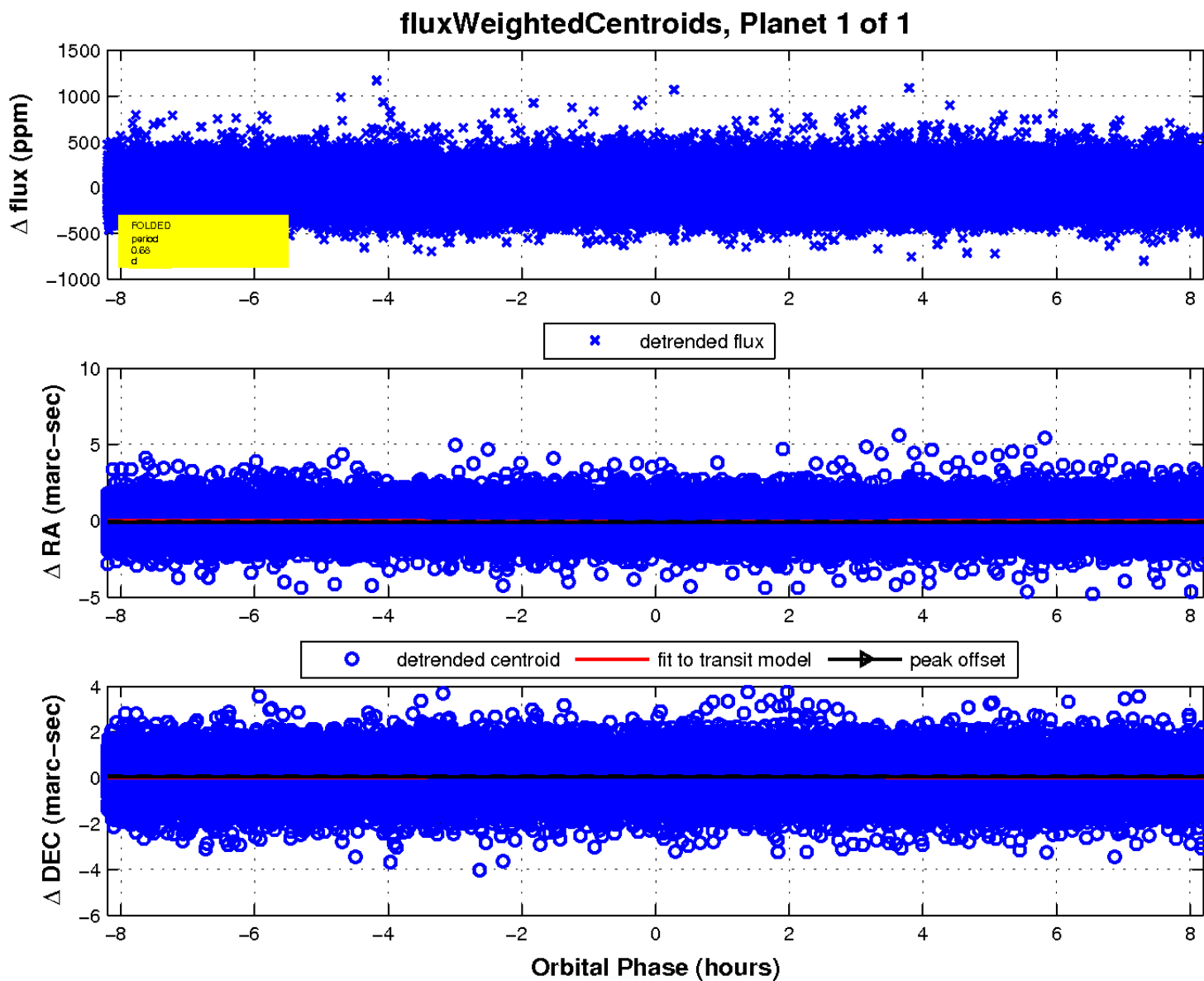
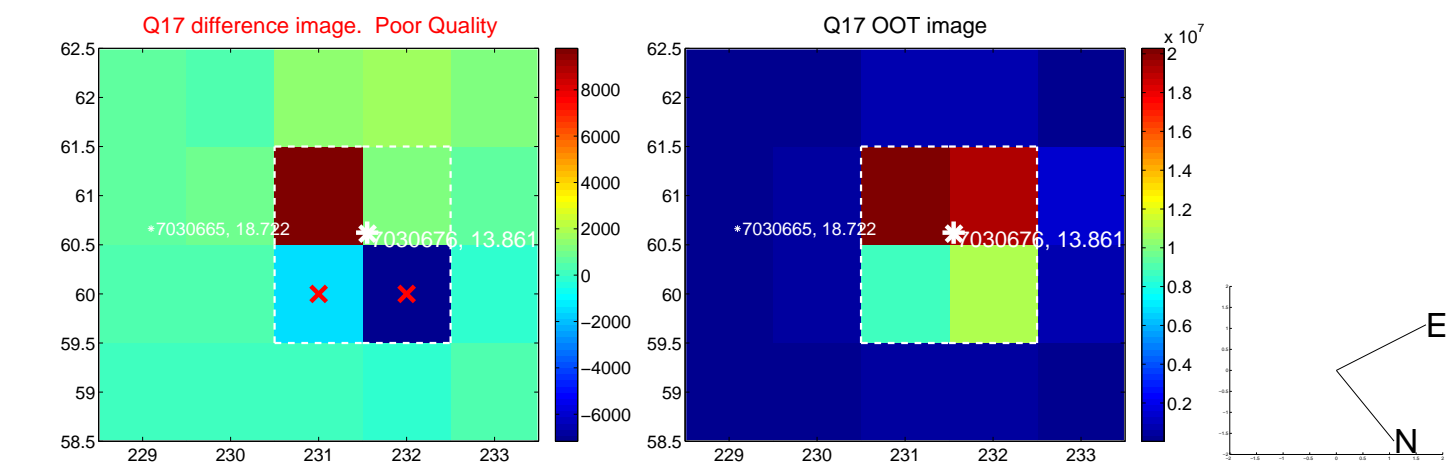
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

