

KIC 002972005

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})
002972005-01	OBS	No	2.796557	131.685997	75.5	22.653	7.8	8.6	4.20	7174	3.69	16928.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002972005-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

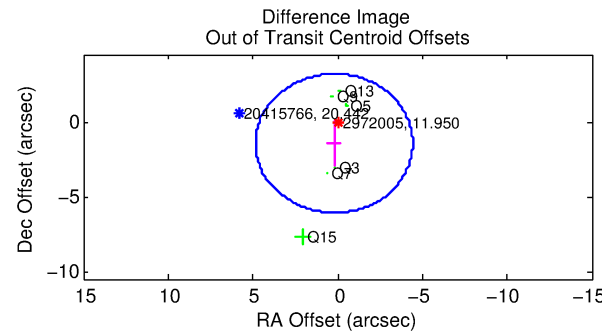
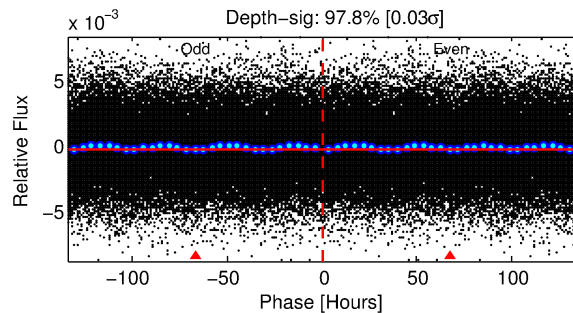
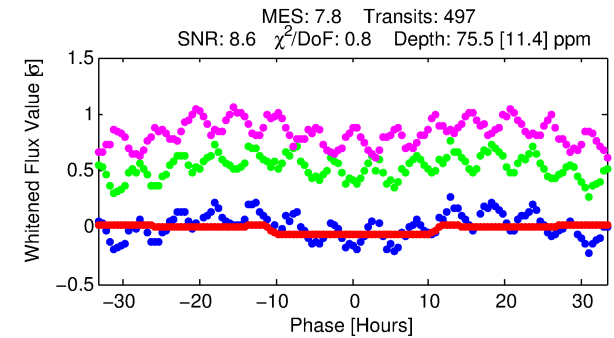
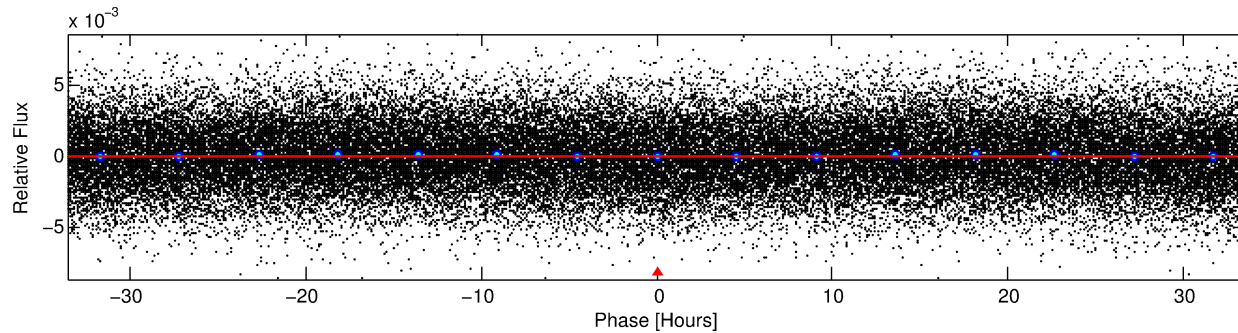
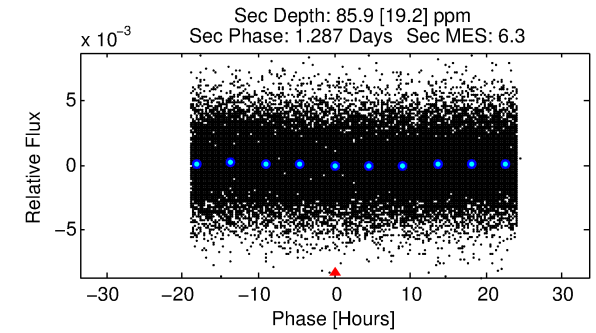
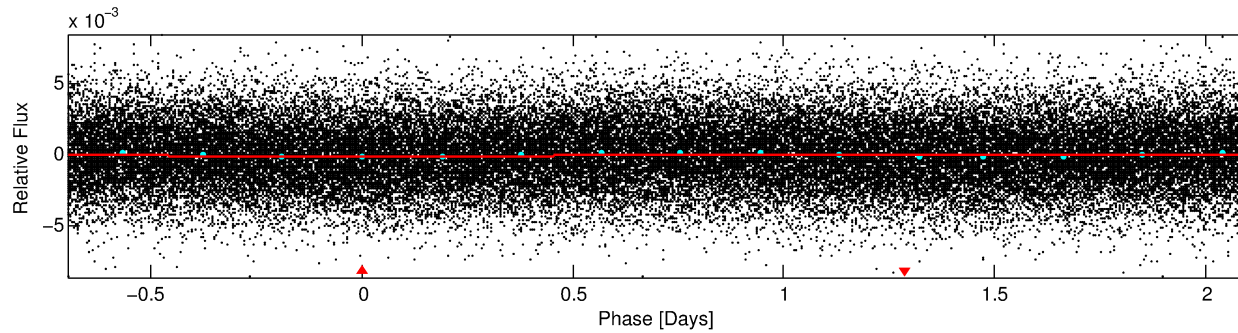
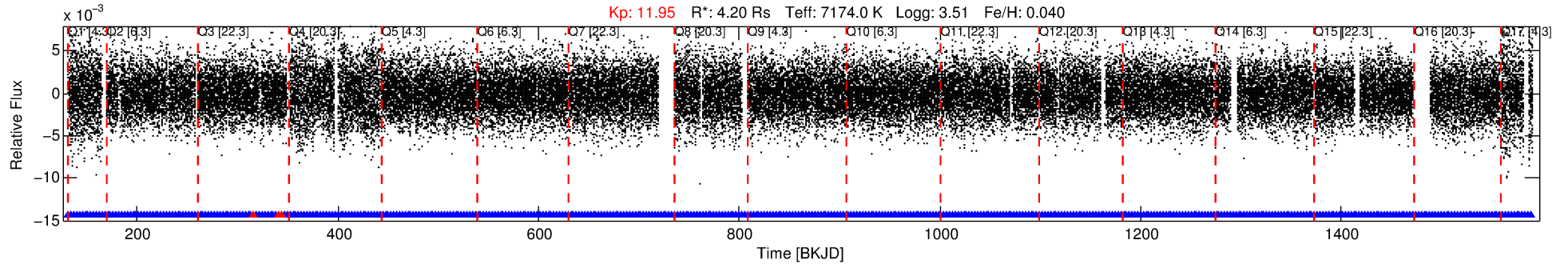
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002972005-01

No Significant Match Found

DV One-Page Summary

KIC: 2972005 Candidate: 1 of 1 Period: 2.797 d



DV Fit Results:

Period = 2.79656 [0.00009] d
Epoch = 131.6860 [0.0254] BKJD
Rp/R* = 0.0081 [0.0072]
a/R* = 1.15 [1.49]
b = 0.09 [60.58]
Seff = 16928.09 [15891.18]
Teq = 2909 [683] K
Rp = 3.69 [3.89] Re
a = 0.0497 [0.0279] AU
Ag = 8.58 [17.46] [0.43σ]
Teffp = 7697 [3503] K [1.34σ]

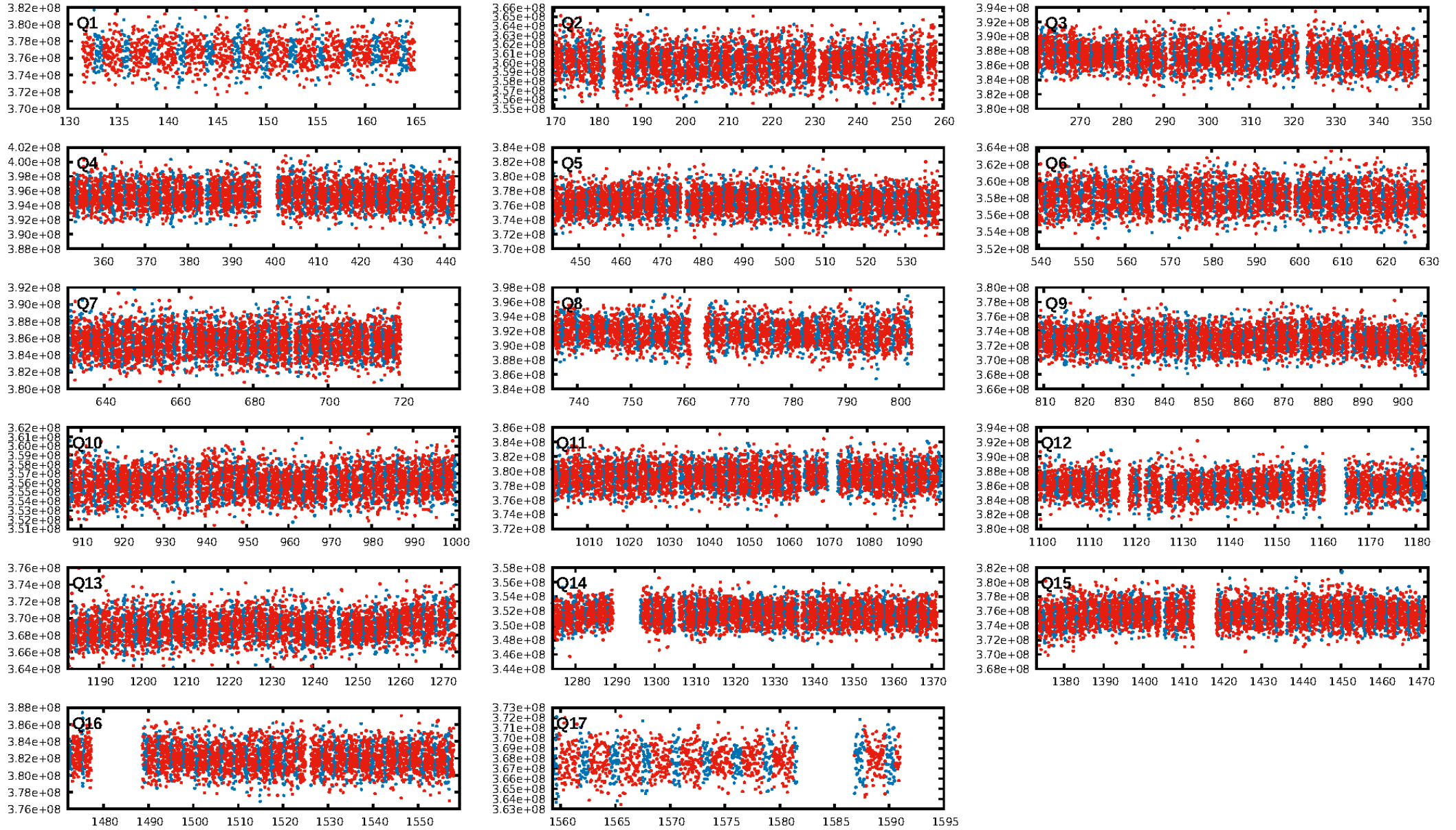
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [472/475]
GhostDiagnostic-chr: 0.7101
Centroid-sig: 0.0%
Centroid-so: 0.601 arcsec [3.63σ]
OotOffset-rm: 1.461 arcsec [0.95σ]
KicOffset-rm: 1.514 arcsec [1.05σ]
OotOffset-st: 0/3/0/3 [6]
KicOffset-st: 0/3/0/3 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [17/17]

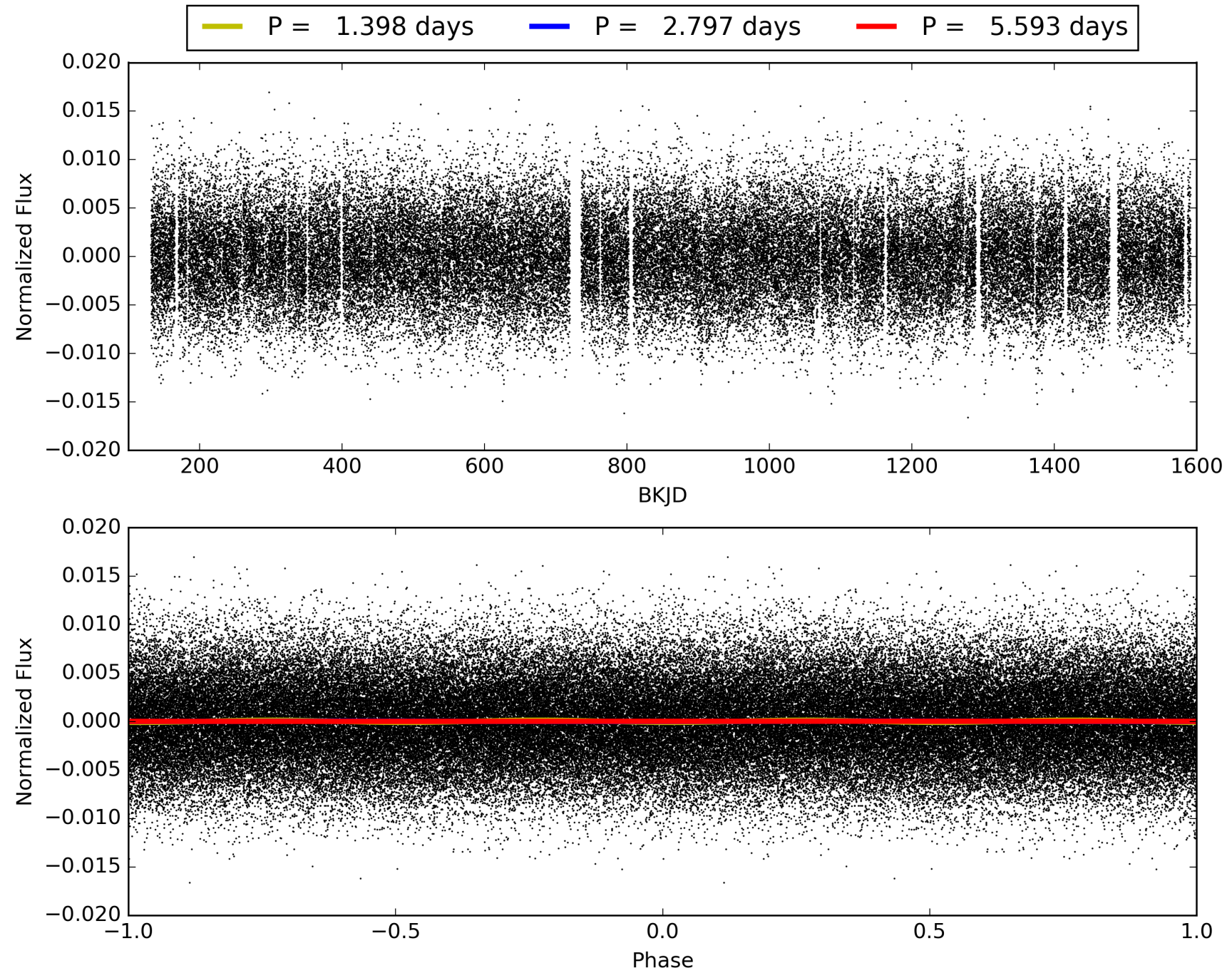
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:28:12 Z

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

TCE 002972005-01, PDC Light Curves

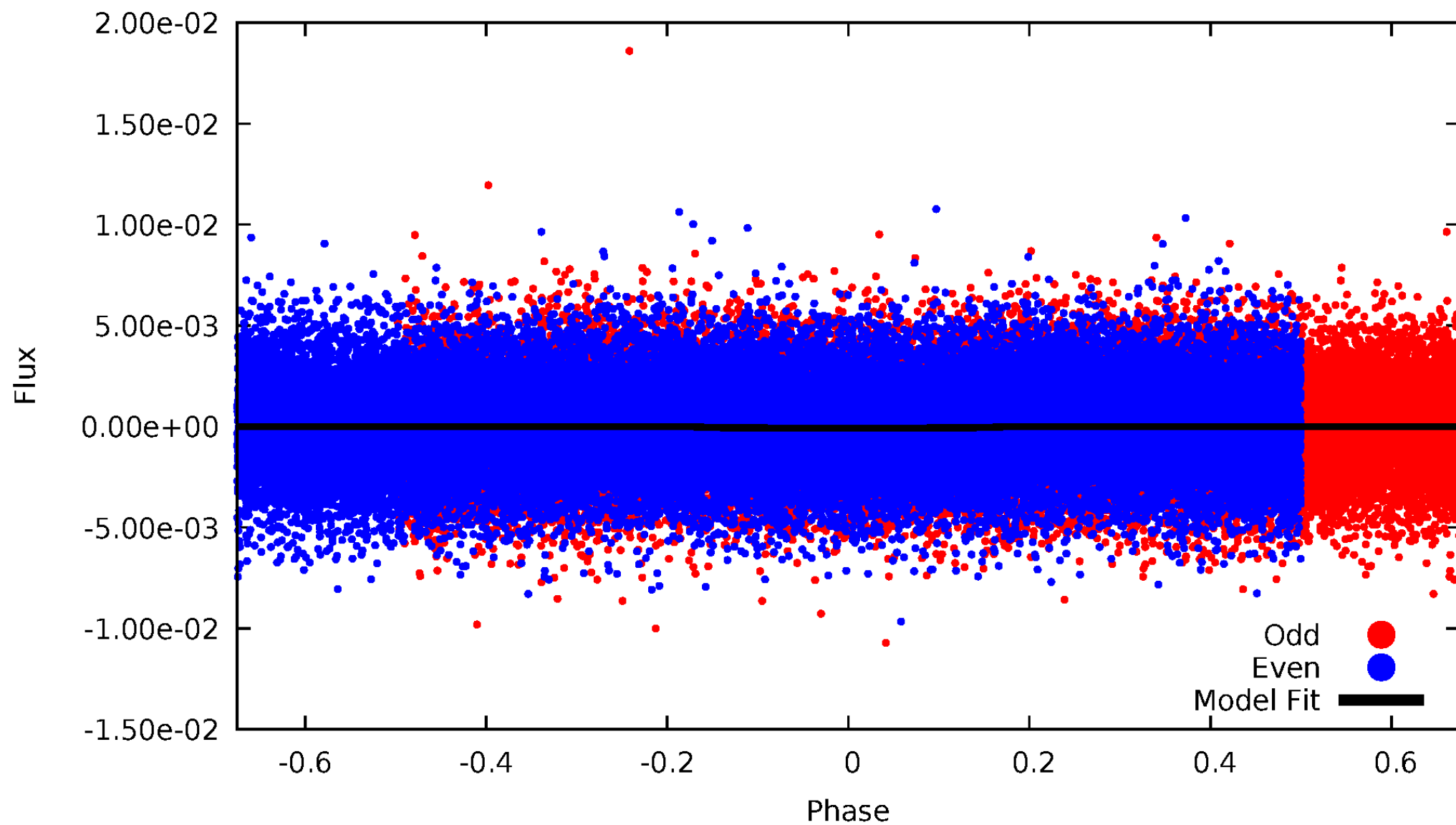


TCE 002972005-01



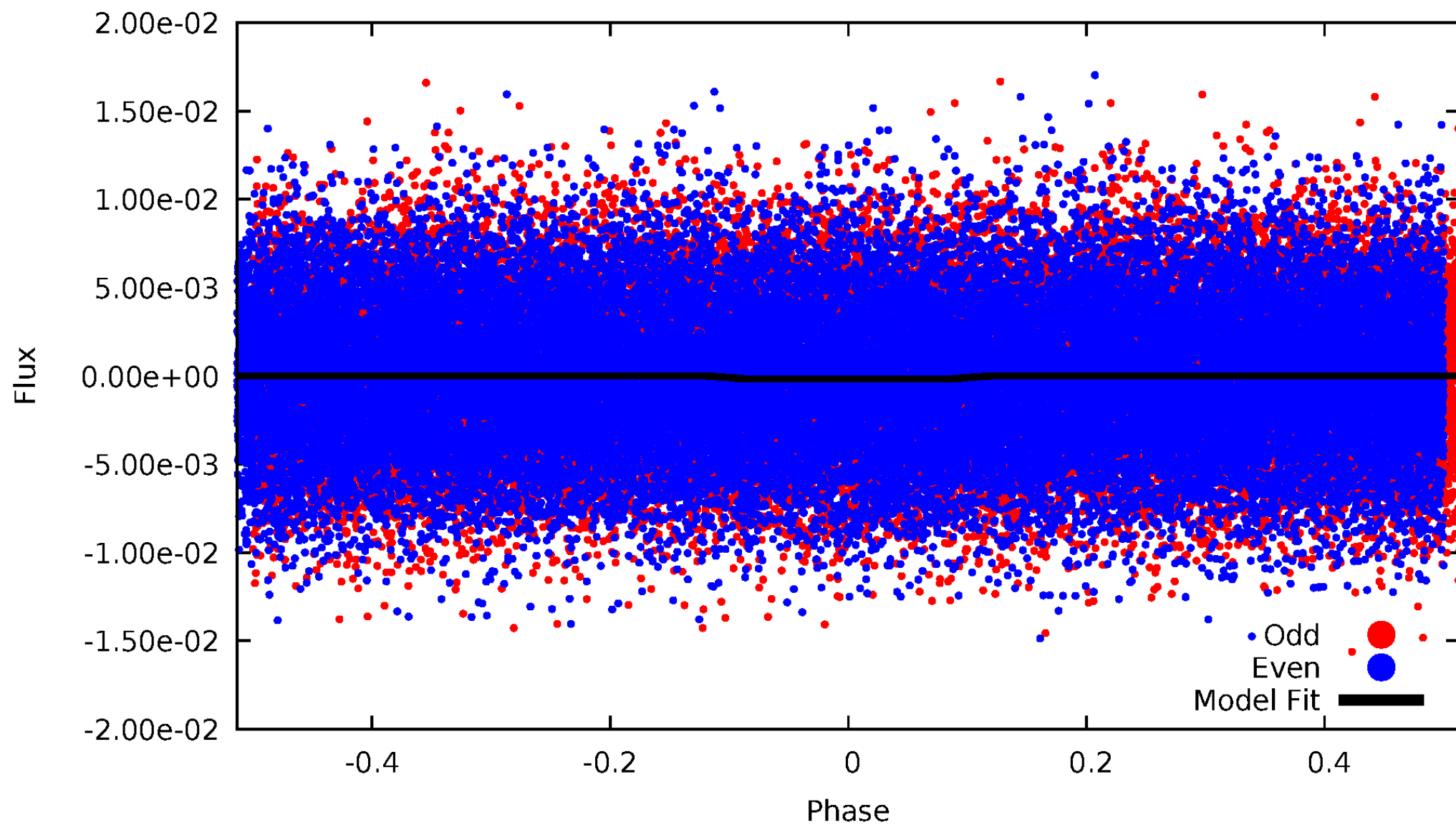
DV Odd/Even

TCE 002972005-01

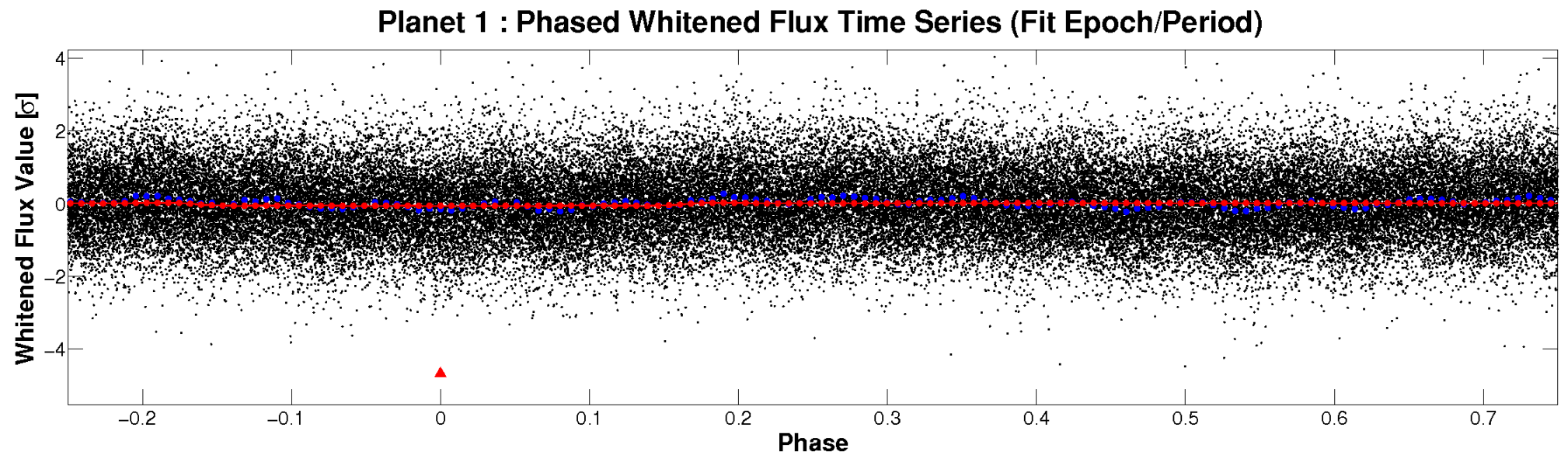
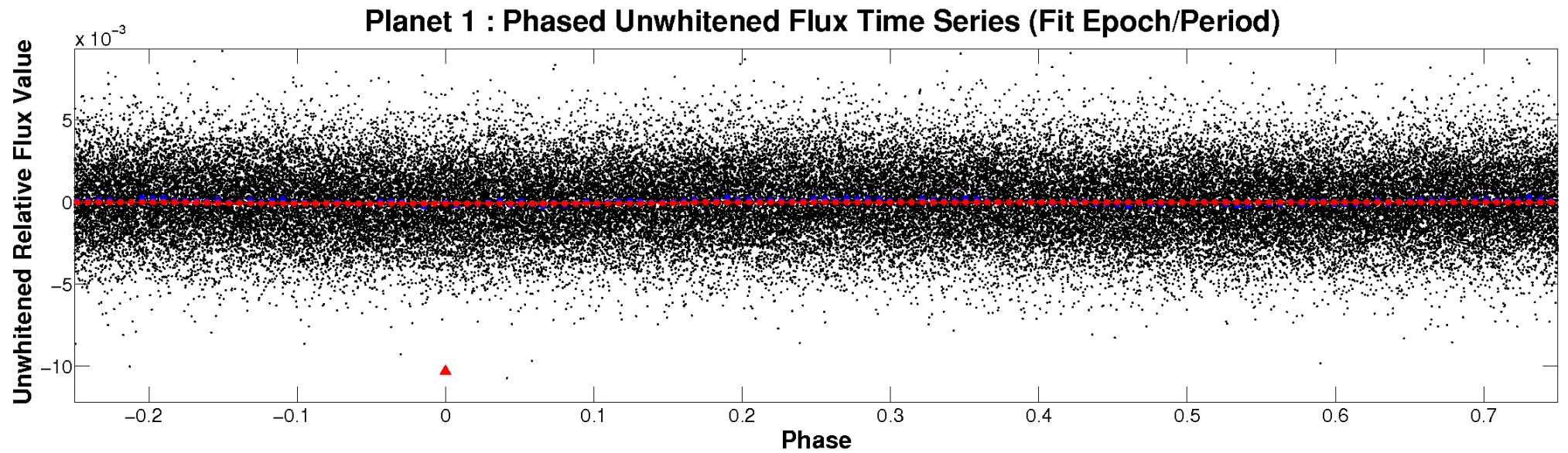


ALT Odd/Even

TCE 002972005-01

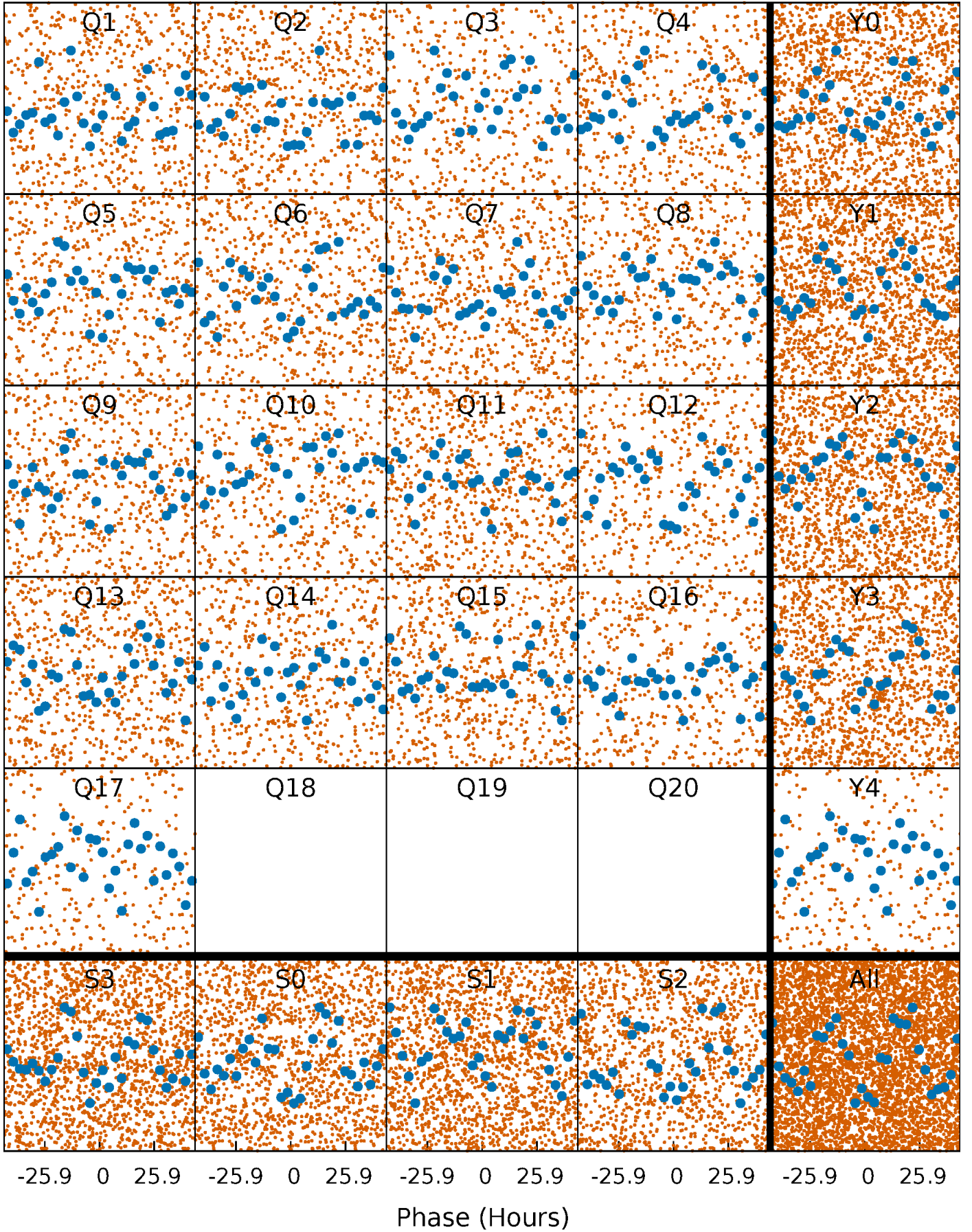


Non-Whitened Vs. Whitened Light Curve



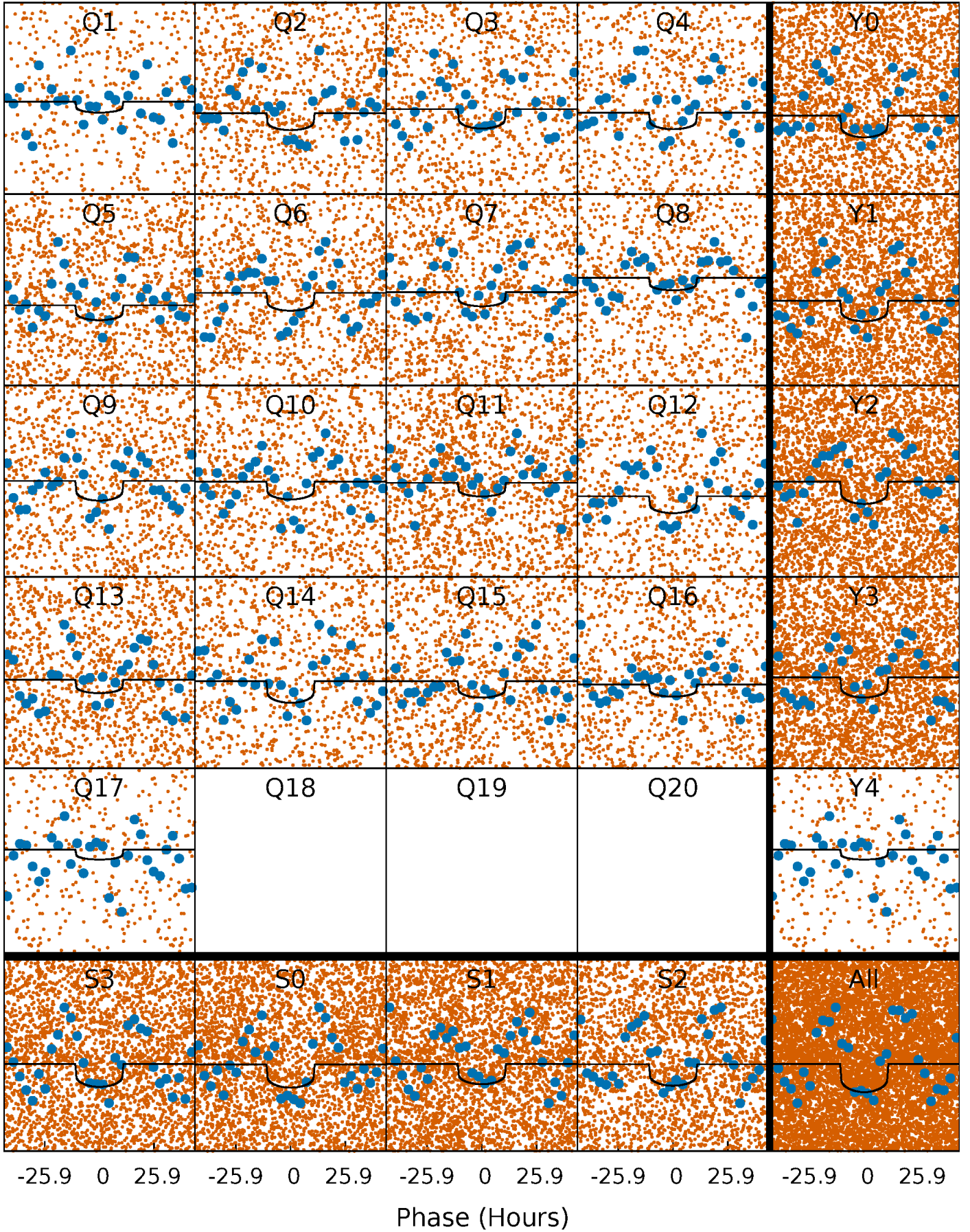
PDC Quarter-Phased Transit Curves

TCE 002972005-01 P= 2.796557 Days $T_0=131.685997$ (BKJD)



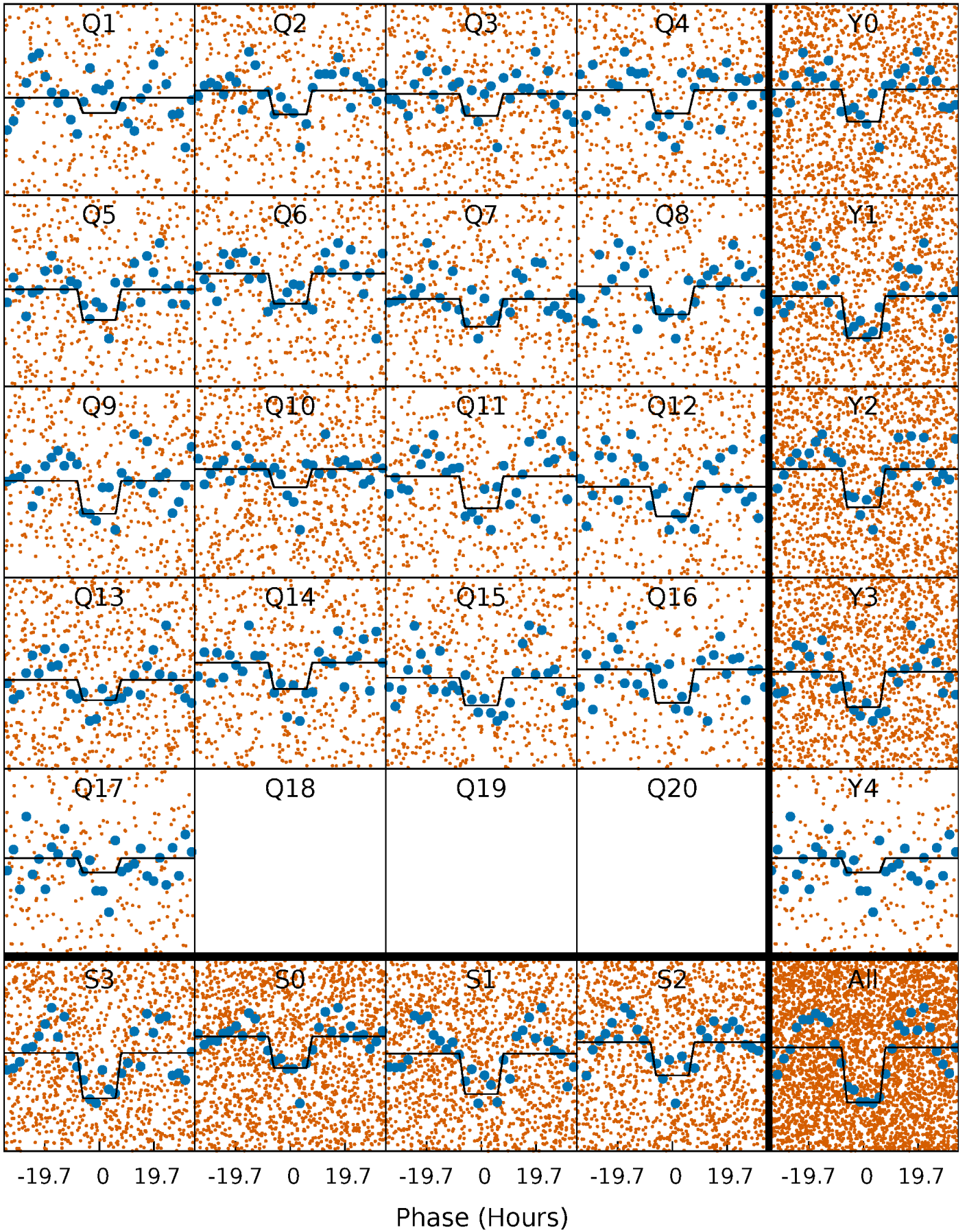
DV Quarter-Phased Transit Curves

TCE 002972005-01 P= 2.796557 Days $T_0=131.685997$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

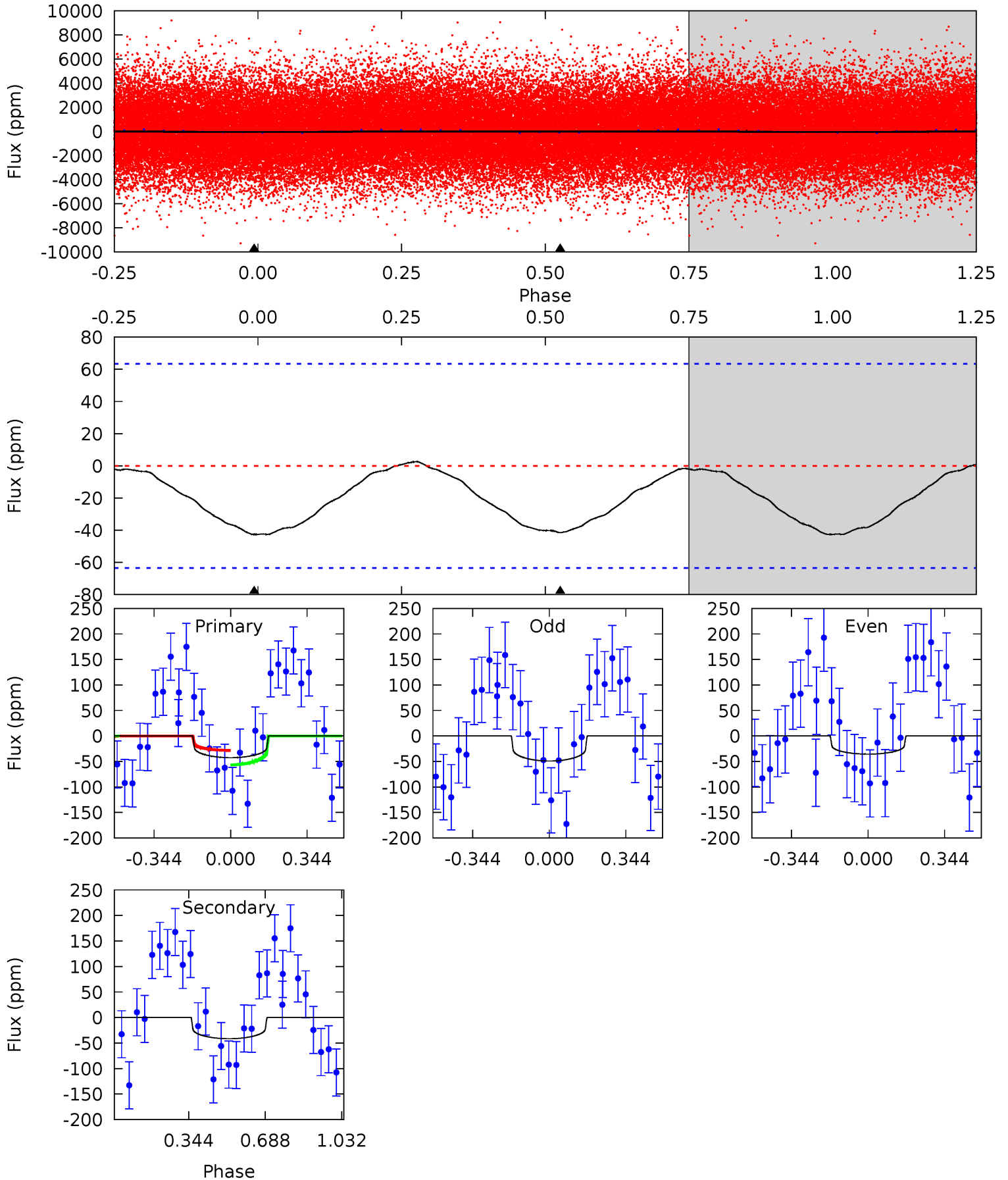
TCE 002972005-01 P= 2.796818 Days $T_0=131.654320$ (BKJD)



DV Model-Shift Uniqueness Test

002972005-01, P = 2.796557 Days, E = 128.889440 Days

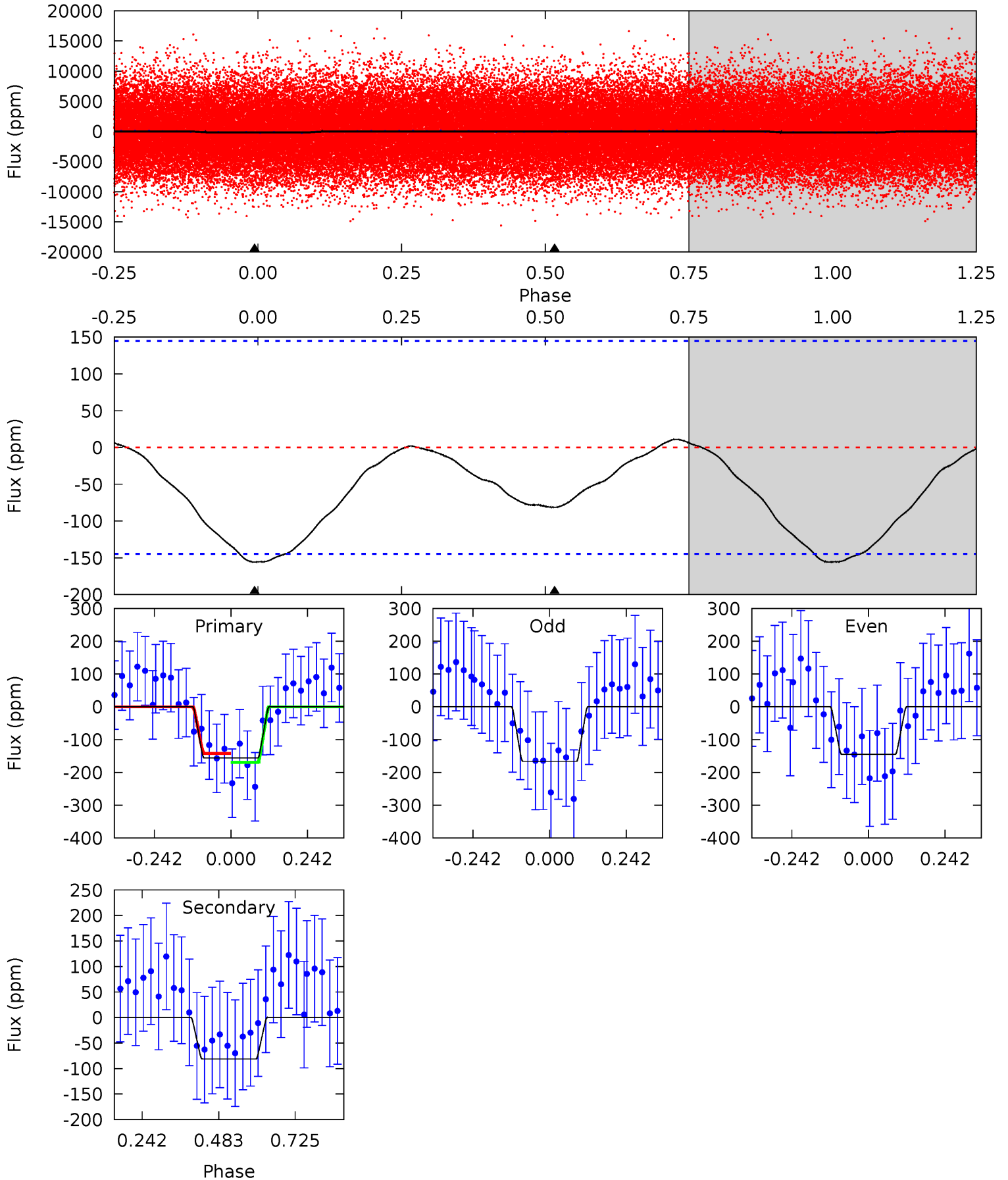
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.89	2.82	0	0	4.30	0.95	0.13	2.89	2.89	2.82	2.82	0.46	1.38	0.06	0.97



Alt Model-Shift Uniqueness Test

002972005-01, P = 2.796818 Days, E = 128.857502 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.71	2.46	0	0	4.38	1.17	0.18	4.71	4.71	2.46	2.46	0.33	0.68	0.07	0.42



Stellar Parameters For KIC 002972005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7174^{+200}_{-300}	$3.513^{+0.552}_{-0.065}$	$0.040^{+0.200}_{-0.300}$	$4.200^{+0.409}_{-2.317}$	$2.094^{+0.108}_{-0.611}$	$0.040^{+0.309}_{-0.008}$
	+3%/-4%	+16%/-2%	+500%/-750%	+10%/-55%	+5%/-29%	+776%/-20%
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 002972005-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-42 ± 15	$3.59^{+2.79}_{-2.42}$	3906^{+272}_{-564}	5875^{+5695}_{-1571}	$4.448^{+33.432}_{-3.280}$
Alt.	-81 ± 33	$4.98^{+2.96}_{-2.53}$	3889^{+294}_{-548}	5705^{+3071}_{-1221}	$3.848^{+14.479}_{-2.401}$

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 $A_{obs} \gg 1.0$

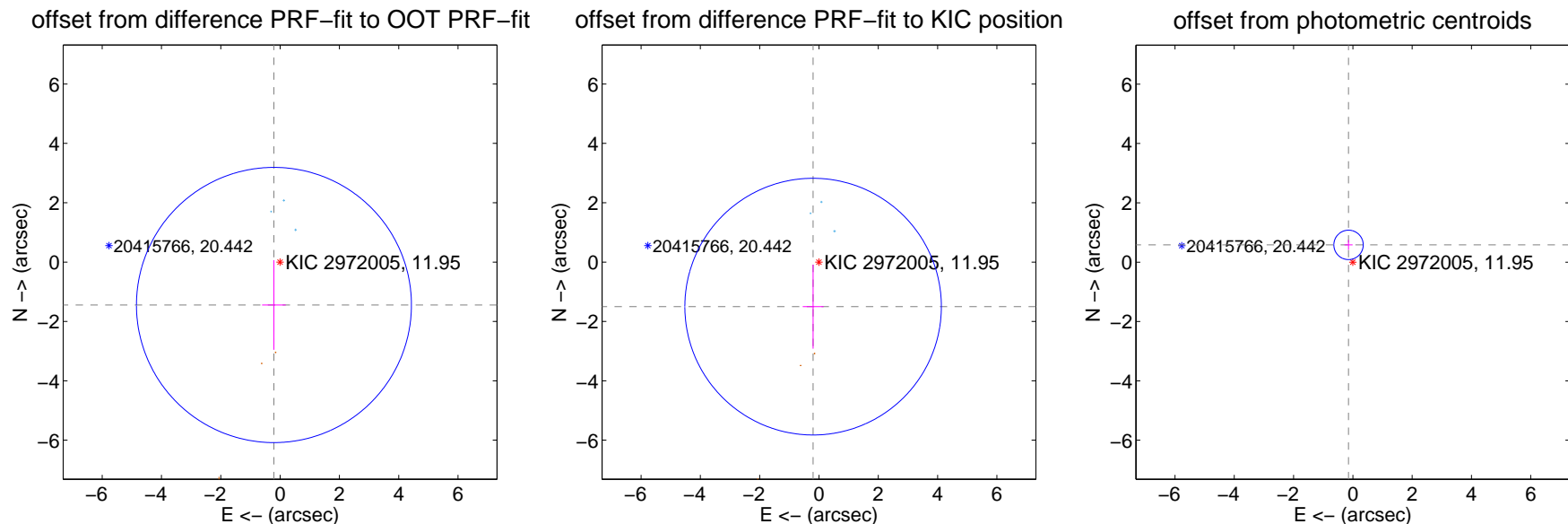
DV Centroid Data

Supplemental centroid analysis for 002972005-01. **Kepler magnitude: 11.95.** Transit SNR 8.58

There are 3 quarters with good PRF difference image offsets

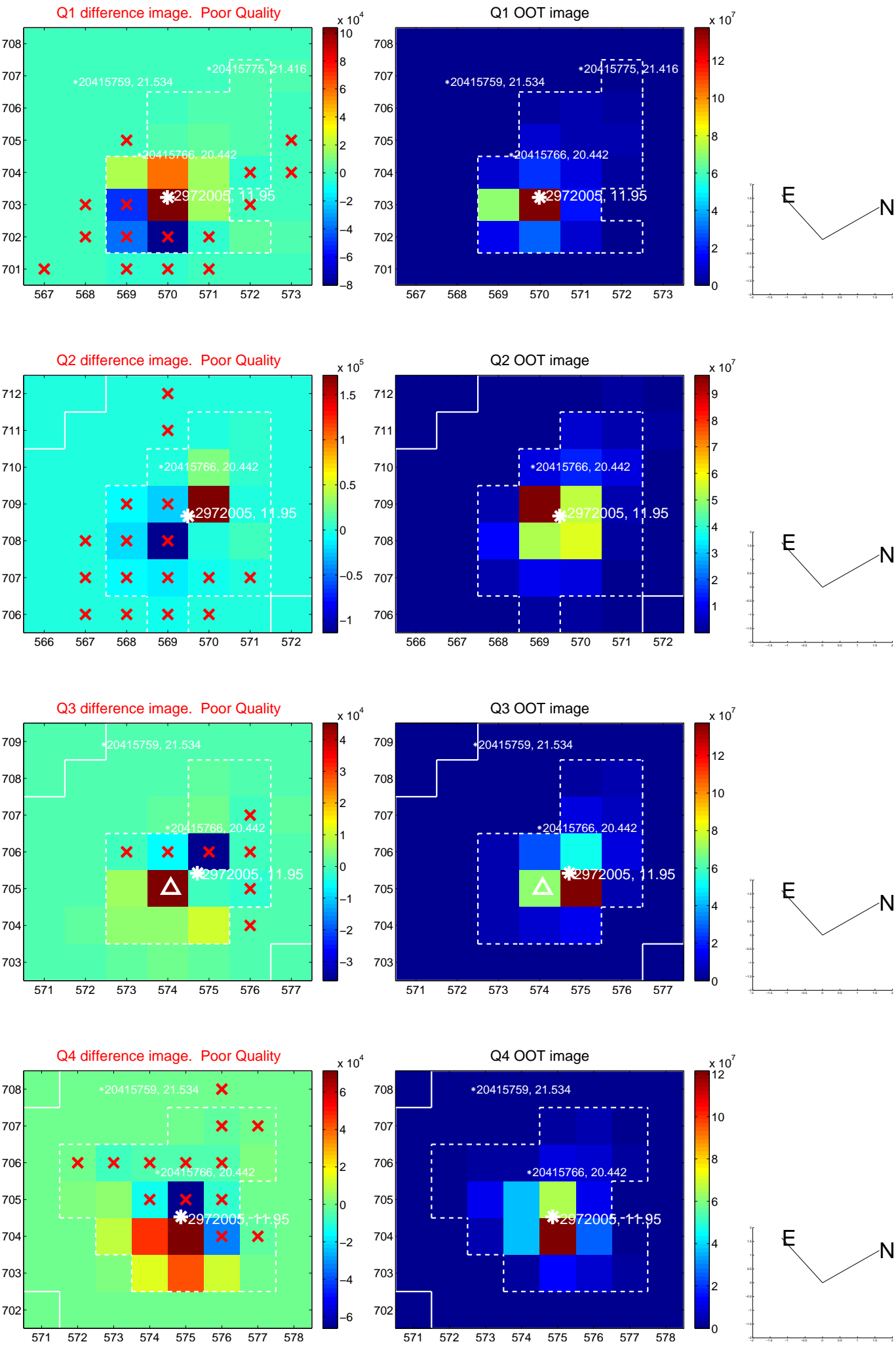
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.461 ± 1.546	0.95	0.208 ± 0.399	-1.446 ± 1.511
PRF-fit source offset from KIC position	1.514 ± 1.442	1.05	0.198 ± 0.350	-1.501 ± 1.415
photometric centroid source offset	0.60 ± 0.17	3.63	0.15 ± 0.14	0.58 ± 0.17

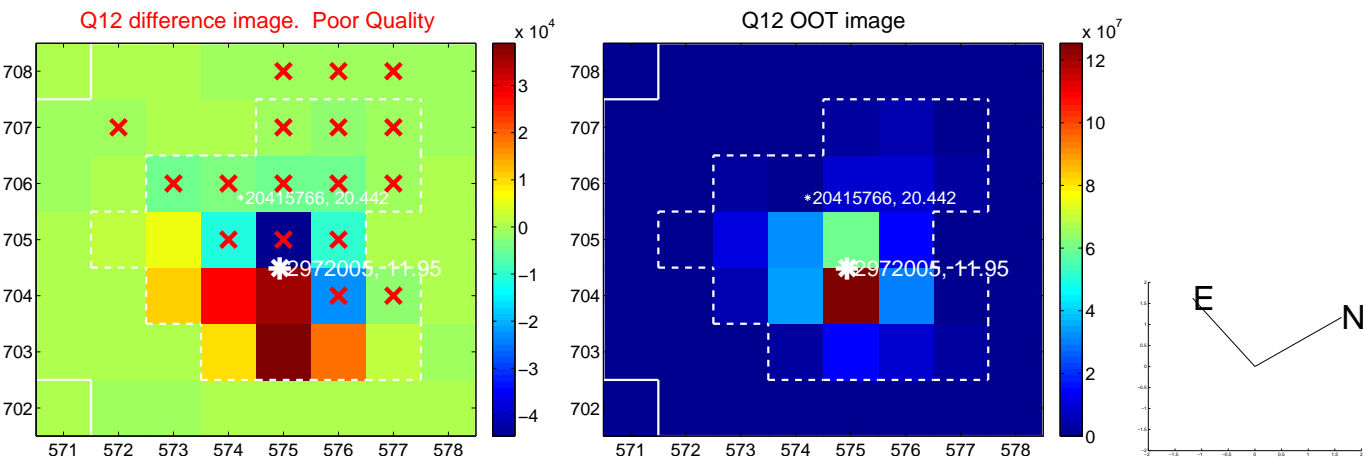
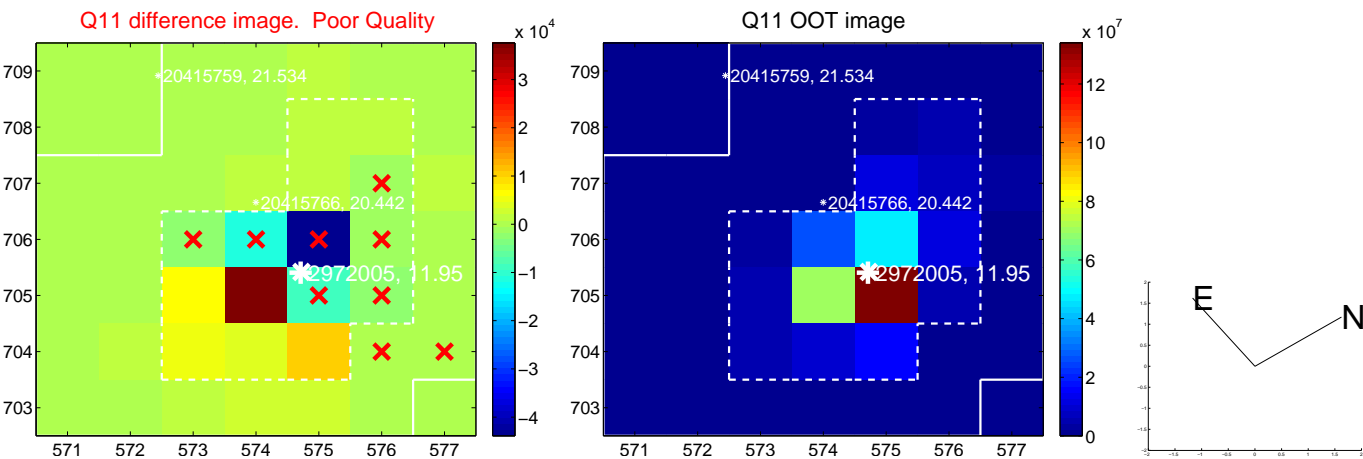
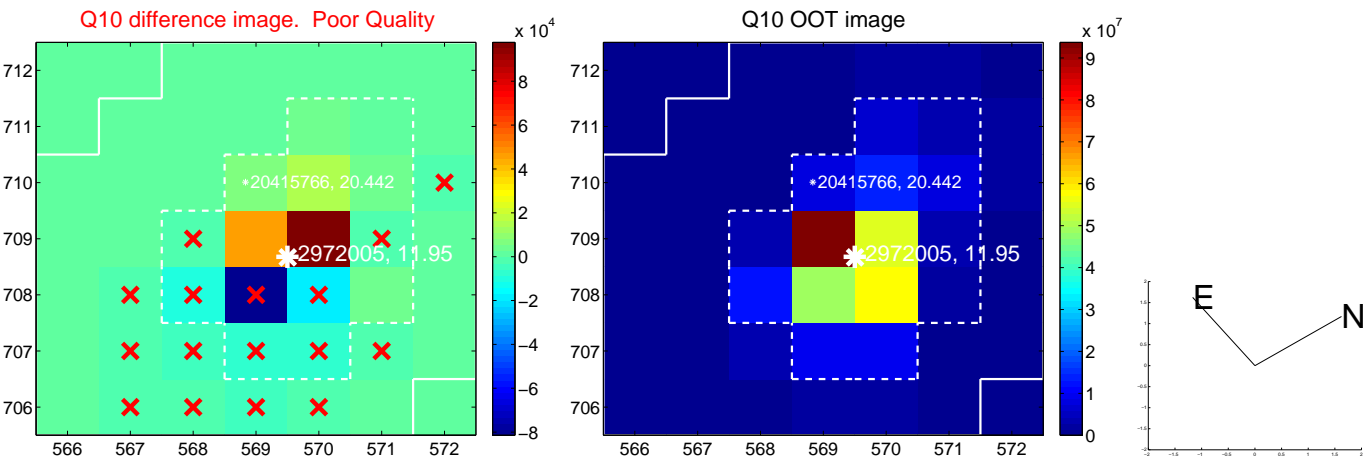
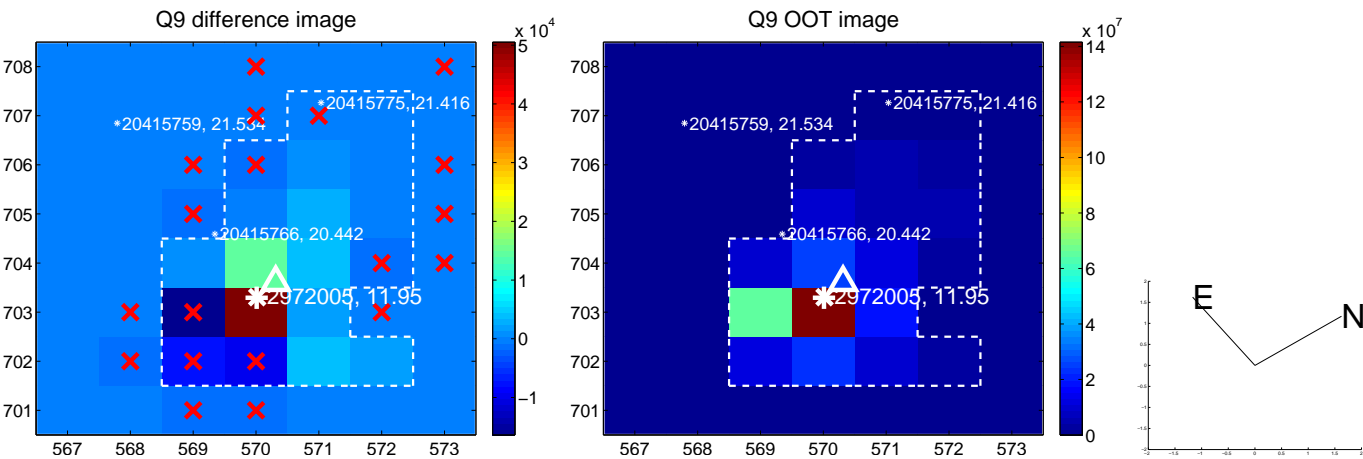


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

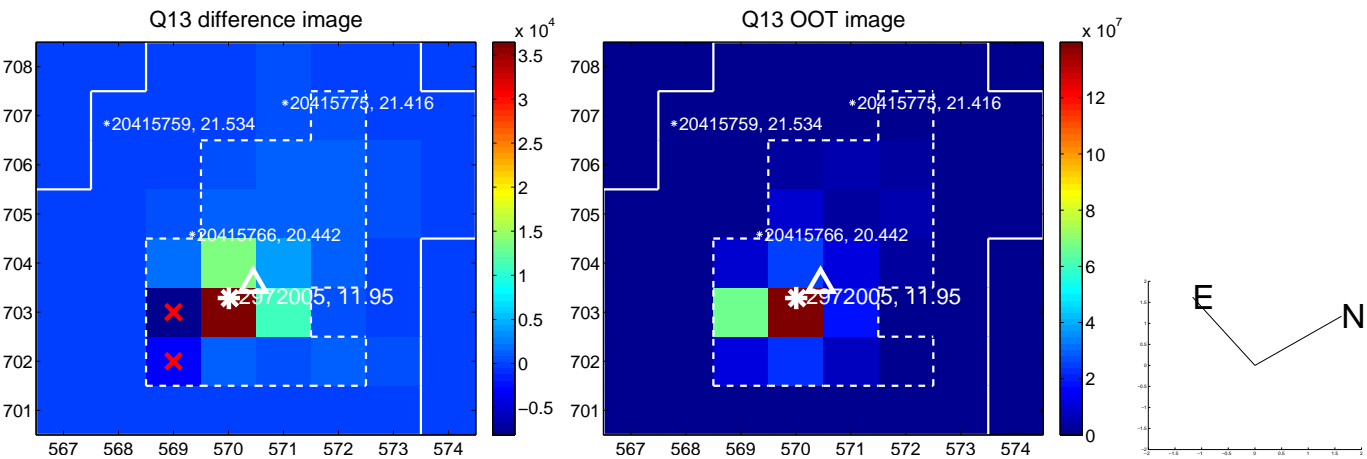
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



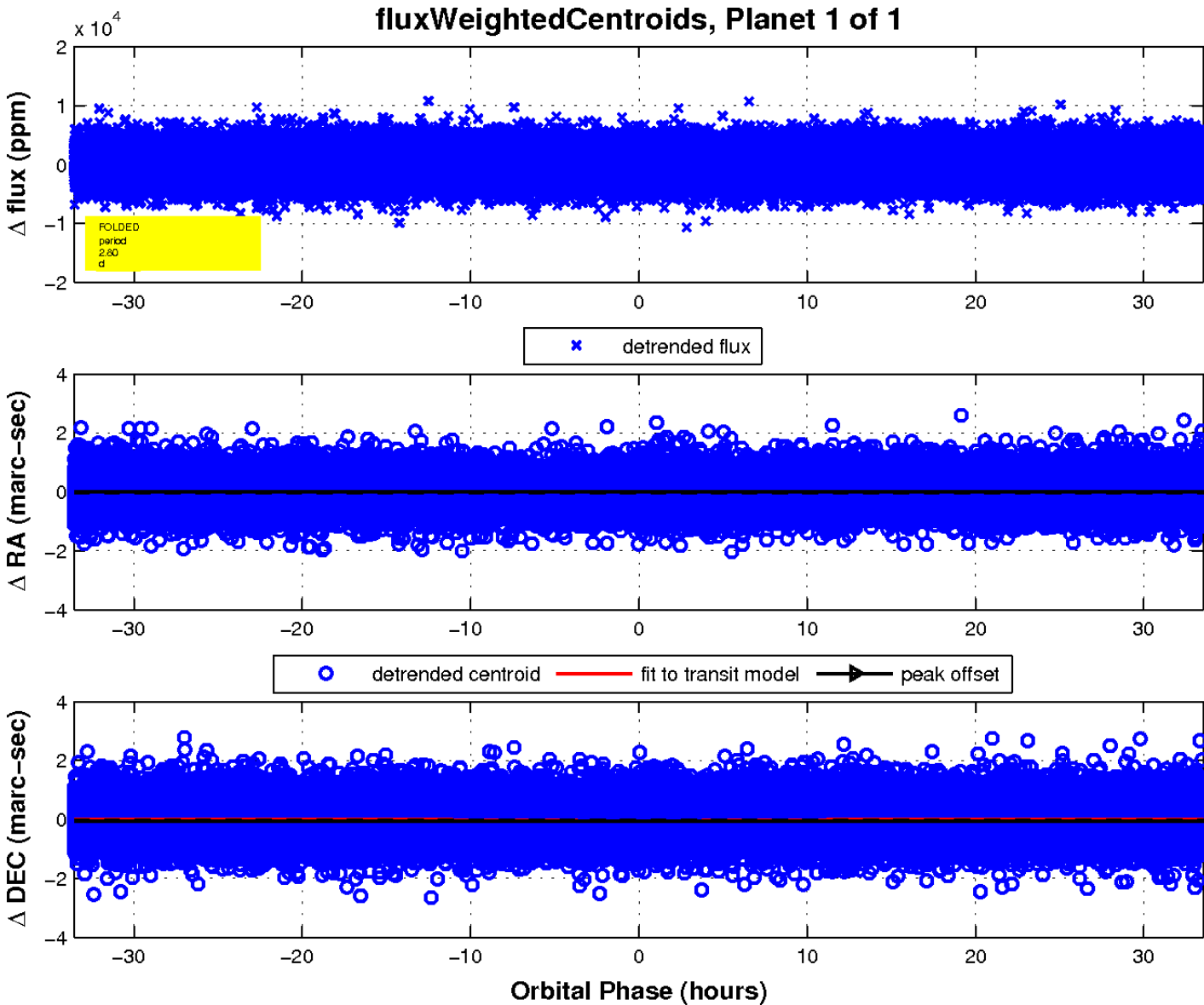
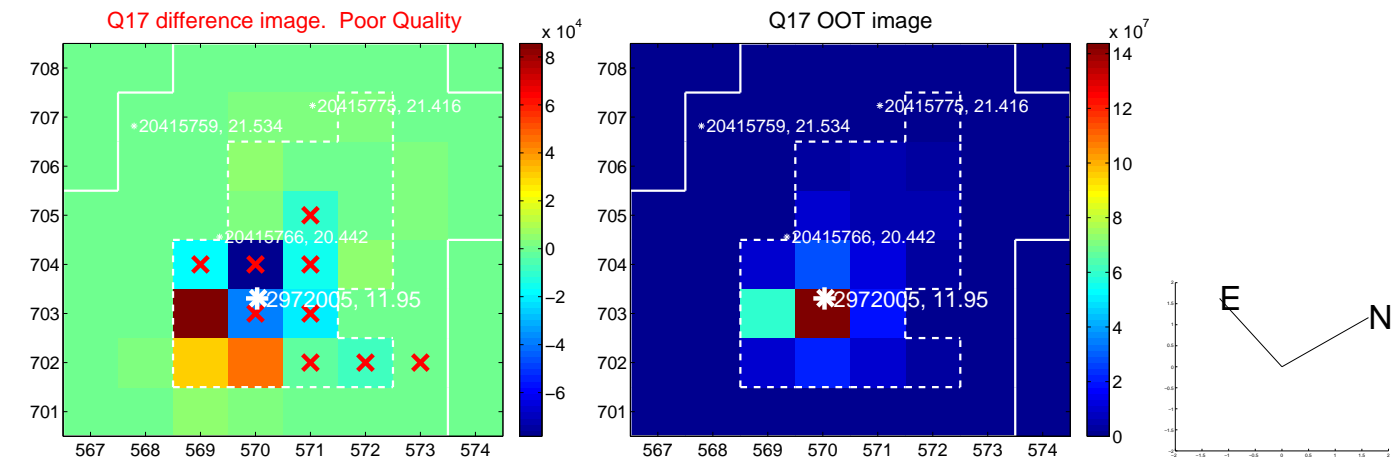
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



Declination