

KIC 008427895

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})
008427895-01	OBS	No	0.586257	131.750729	8.0	4.594	8.8	4.7	3.18	8241	0.93	137628.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008427895-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

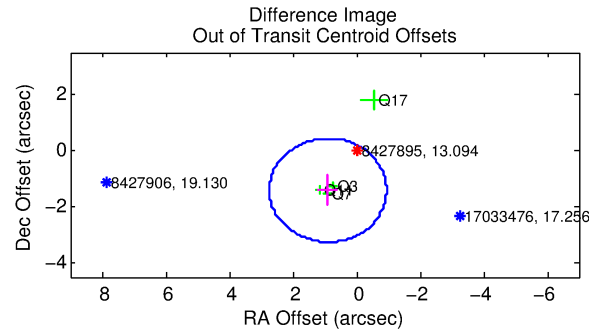
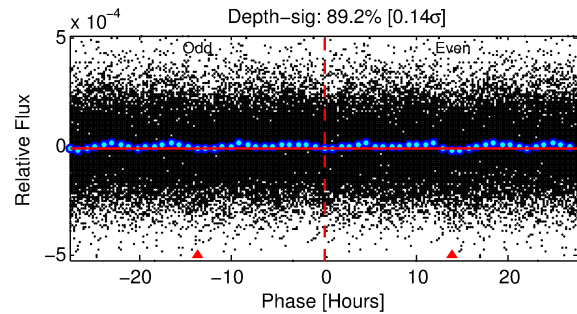
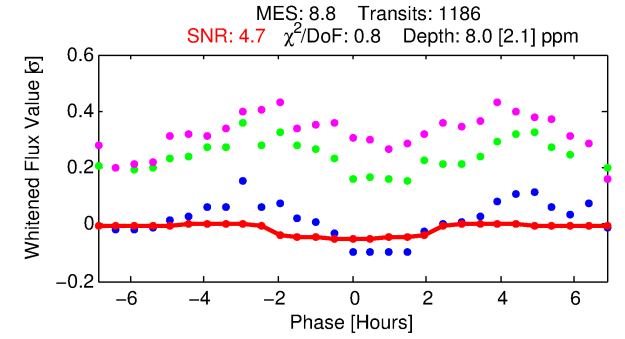
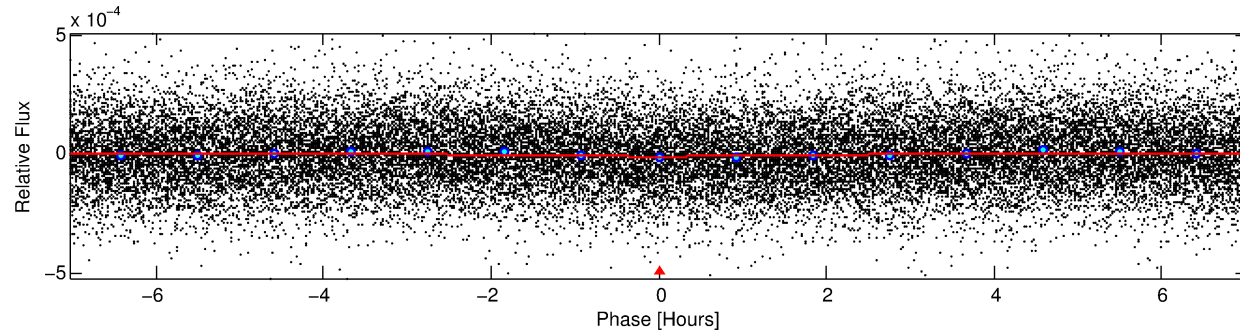
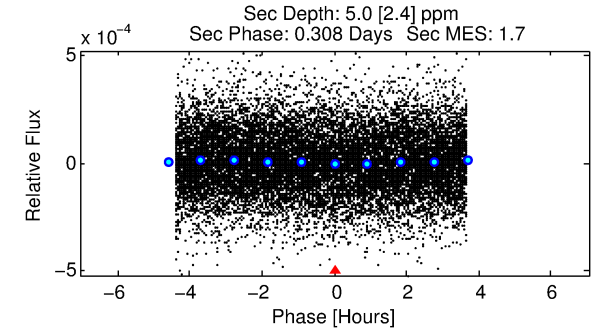
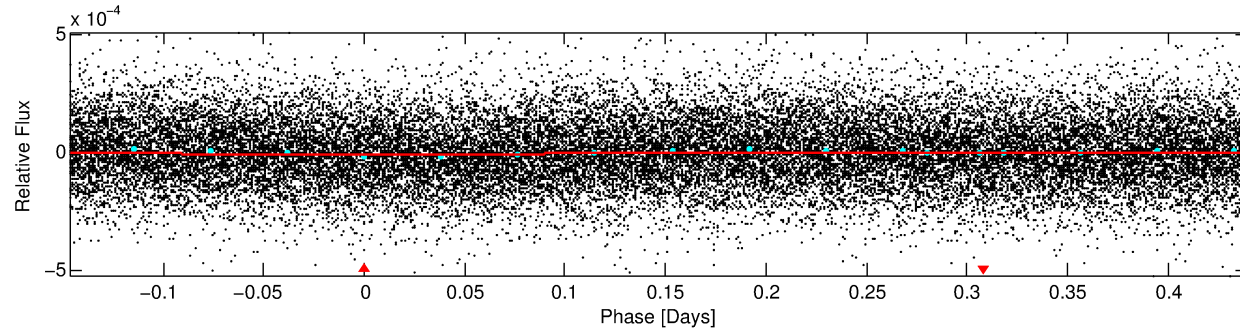
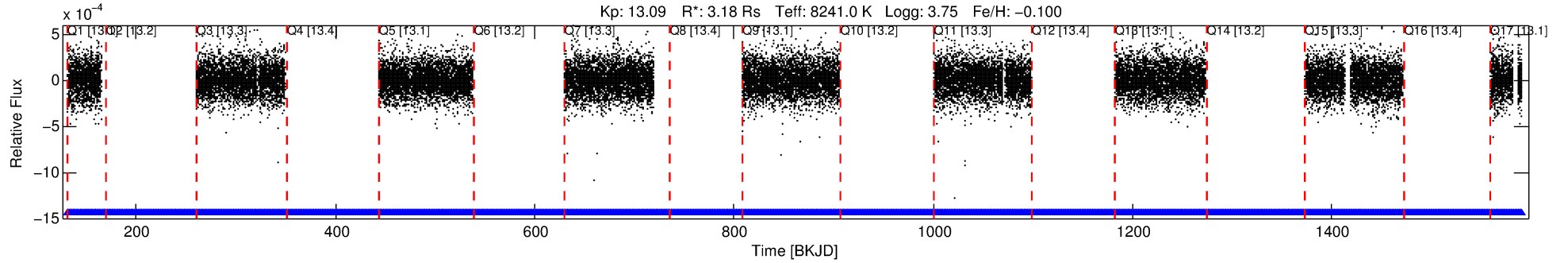
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008427895-01

No Significant Match Found

DV One-Page Summary

KIC: 8427895 Candidate: 1 of 1 Period: 0.586 d



DV Fit Results:

Period = 0.58626 [0.00002] d
Epoch = 131.7507 [0.0098] BKJD
Rp/R* = 0.0027 [0.0035]
a/R* = 1.14 [1.97]
b = 0.47 [12.81]
Seff = 137628.40 [101681.86]
Teq = 4911 [907] K
Rp = 0.93 [1.30] Re
a = 0.0174 [0.0078] AU
Ag = 0.96 [2.67] [-0.02σ]
Teffp = 7514 [5057] K [0.51σ]

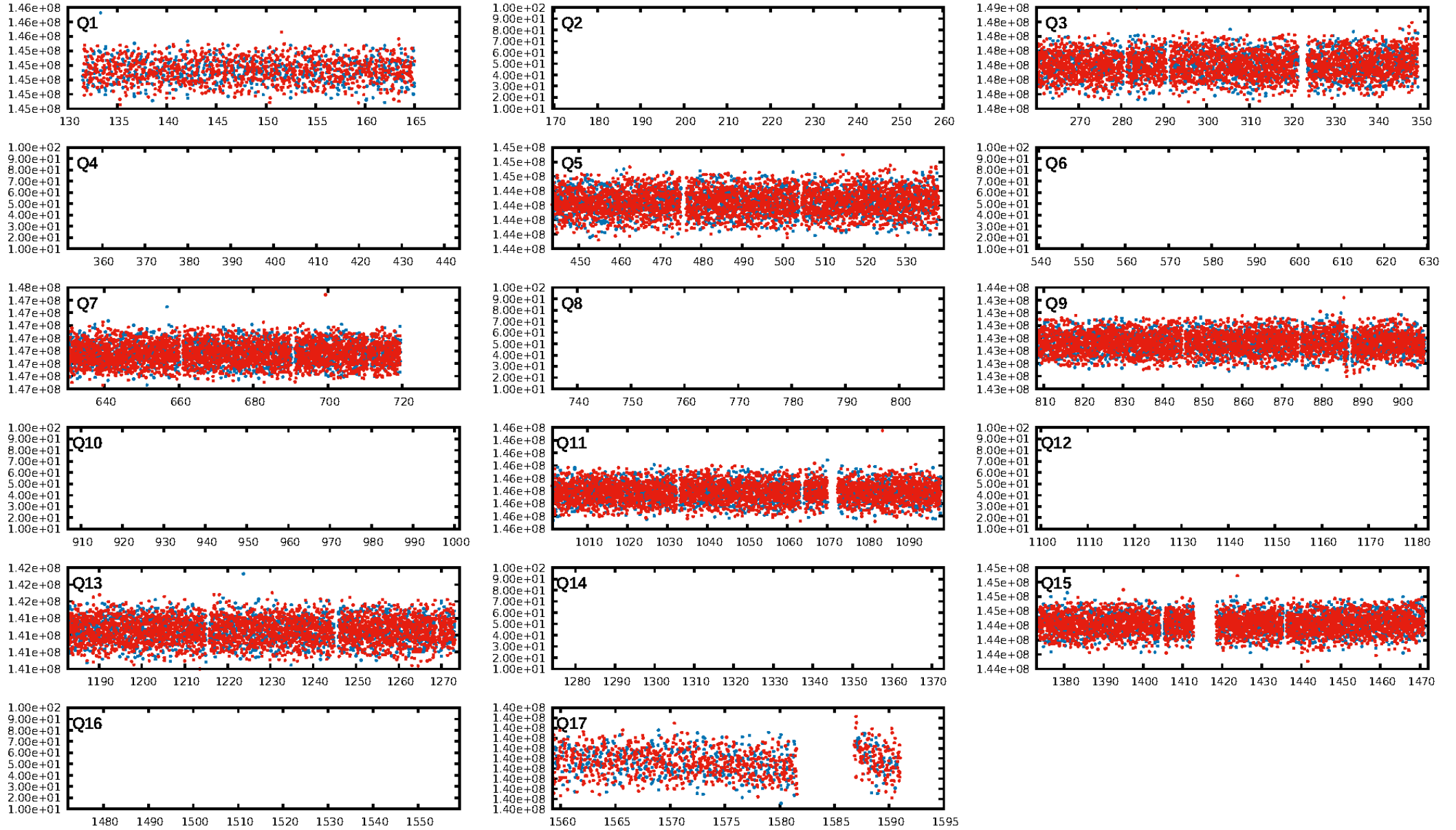
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1082/1082]
GhostDiagnostic-chr: -1.767
Centroid-sig: 6.8%
Centroid-so: 2.543 arcsec [1.10σ]
OotOffset-rm: 1.672 arcsec [2.72σ]
KicOffset-rm: 1.666 arcsec [1.95σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [9/9]

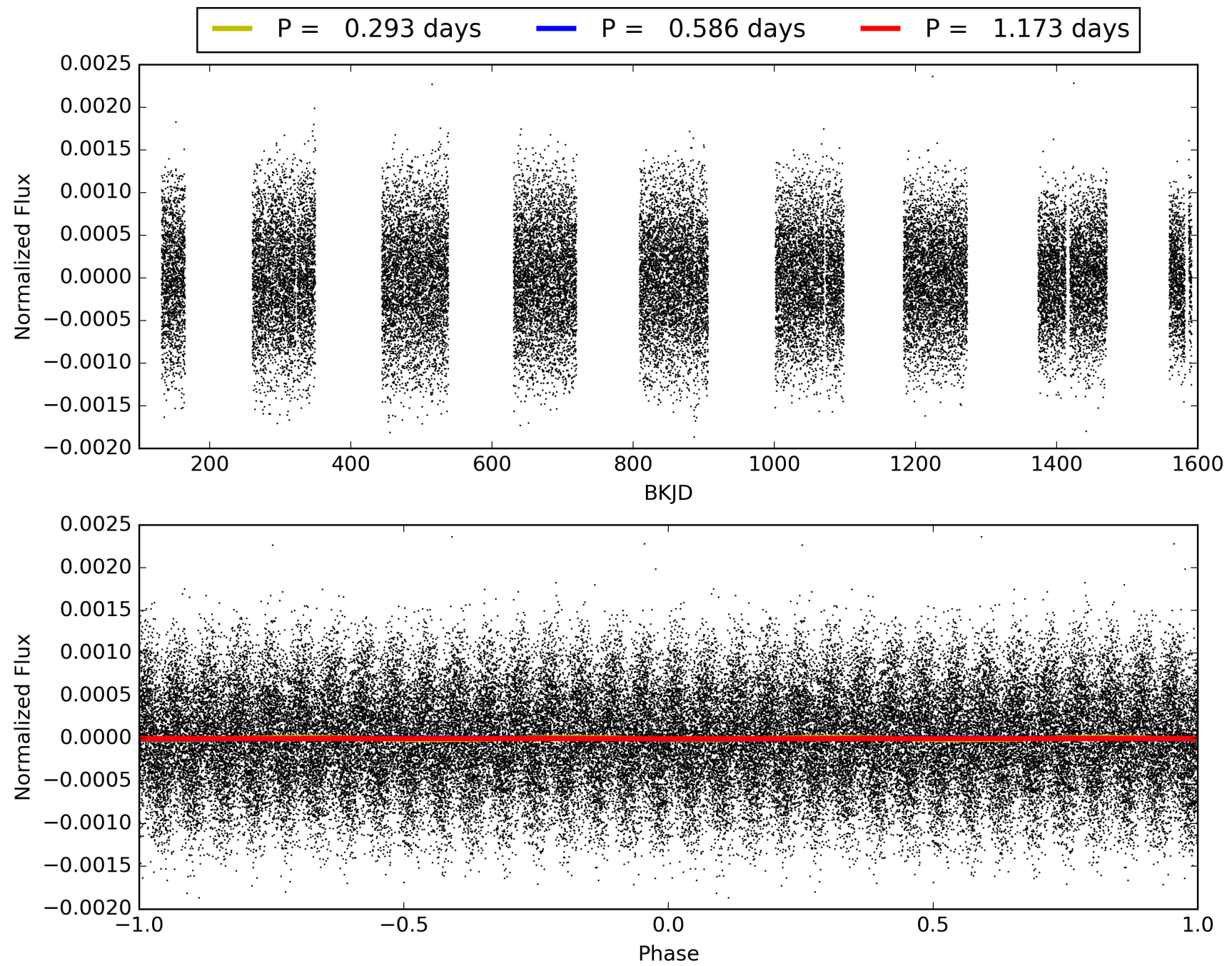
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:24:03 Z

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

TCE 008427895-01, PDC Light Curves

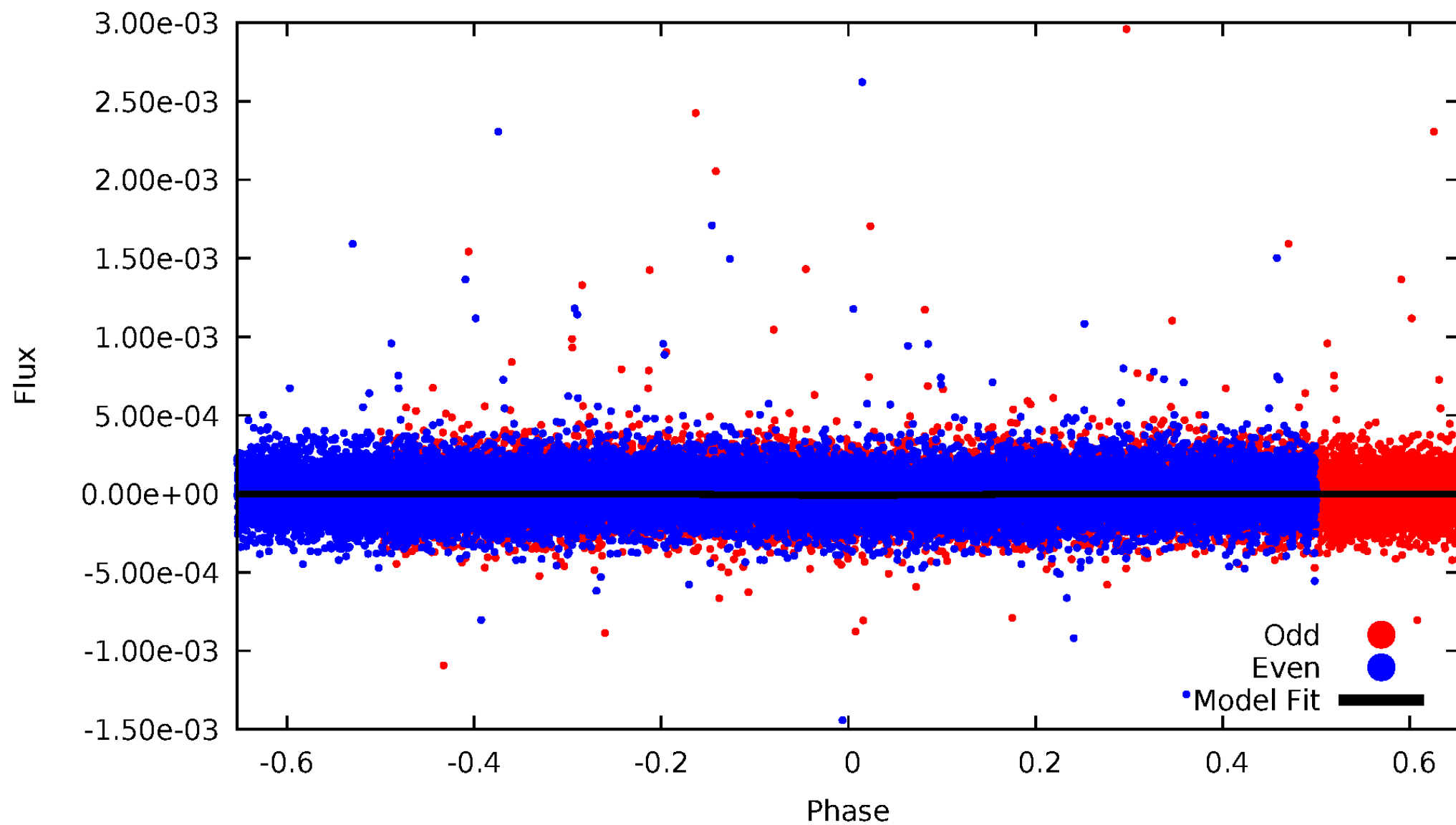


TCE 008427895-01



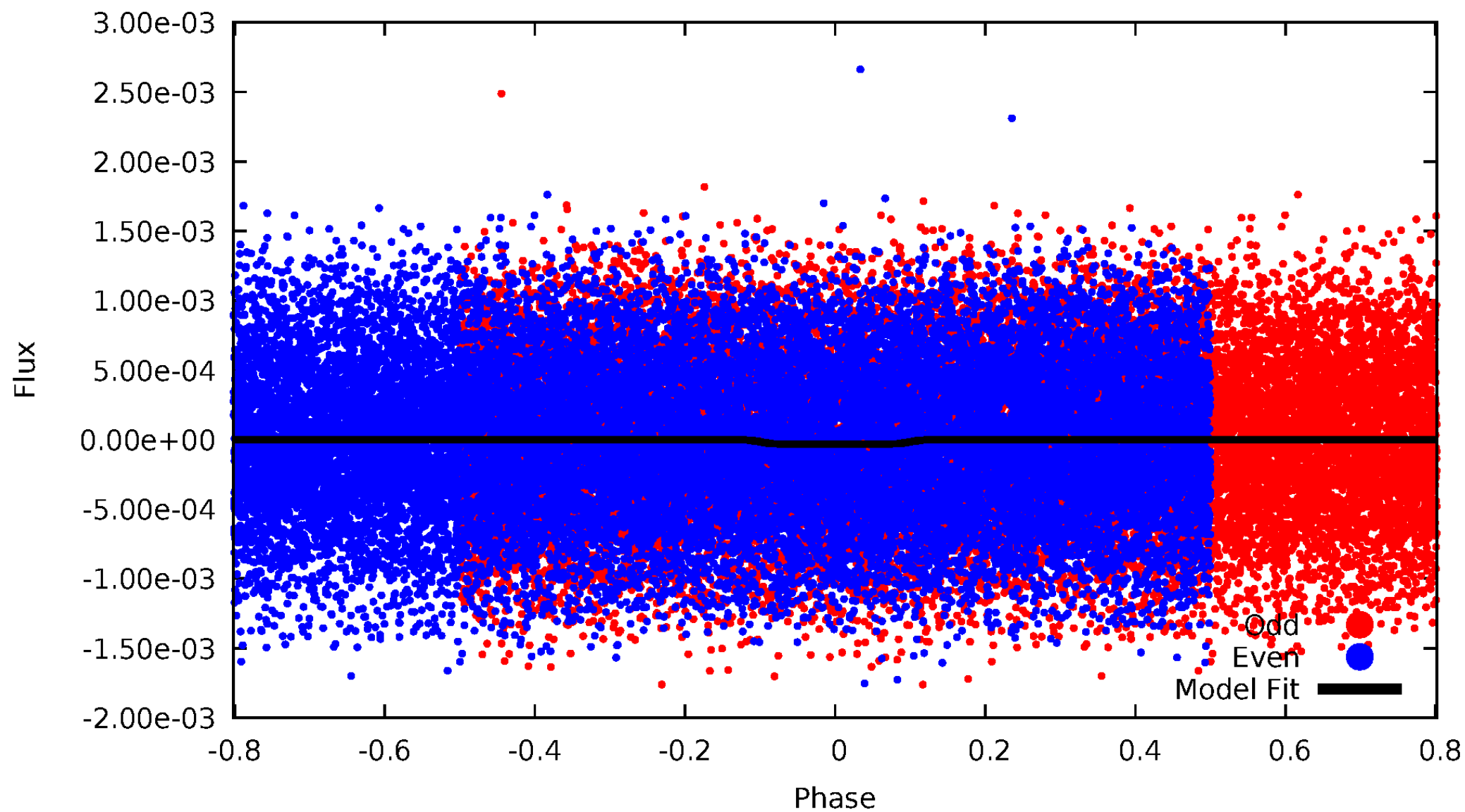
DV Odd/Even

TCE 008427895-01

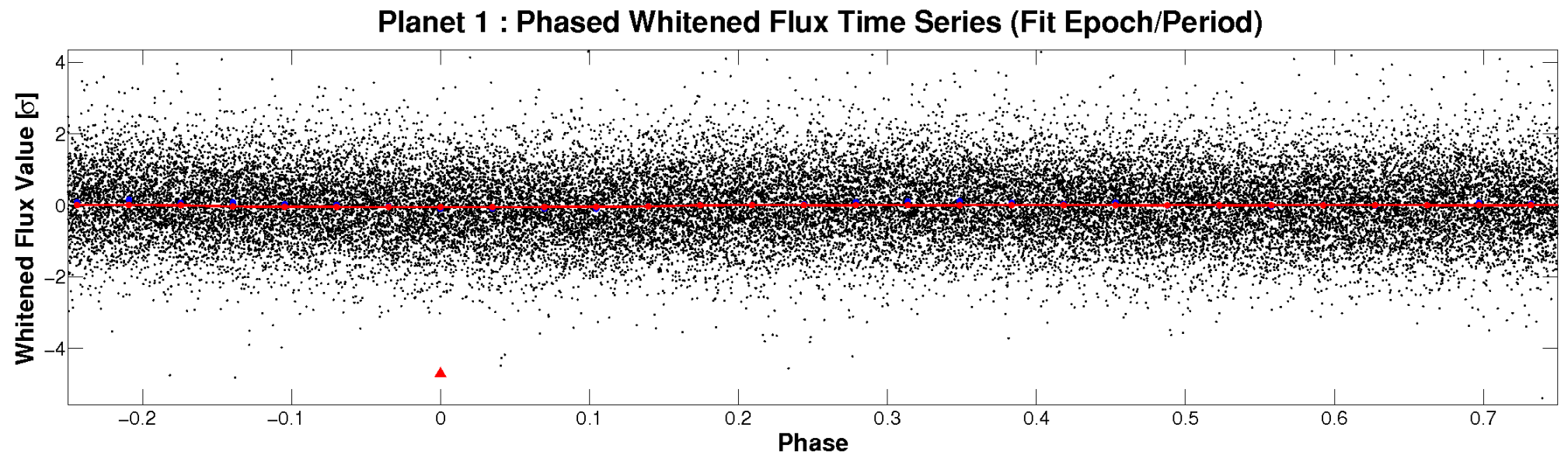
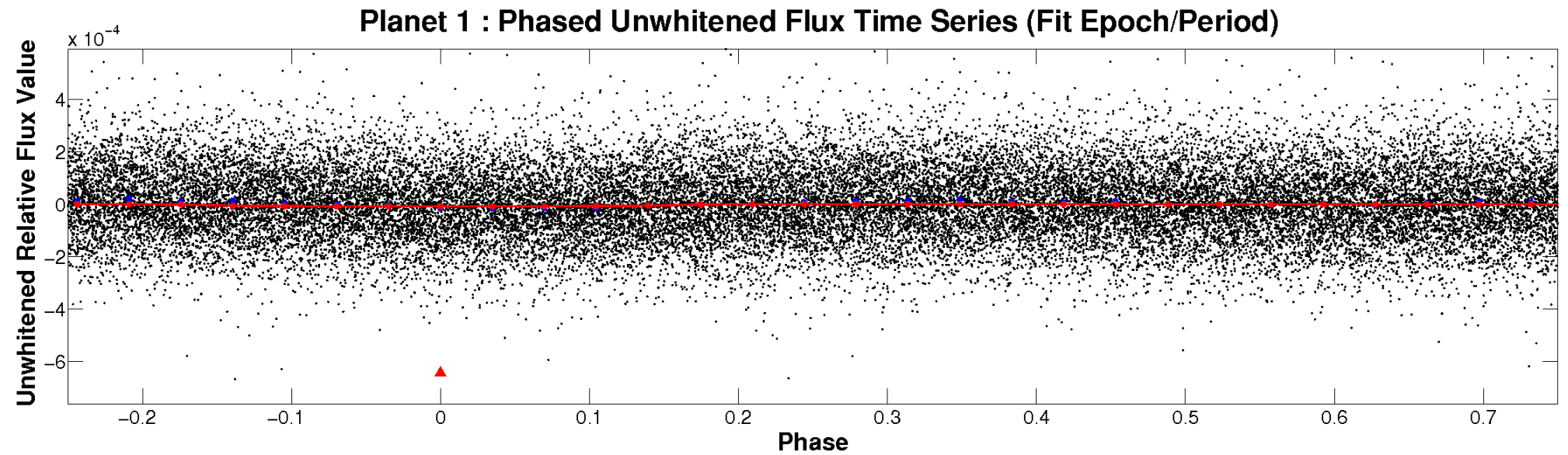


ALT Odd/Even

TCE 008427895-01

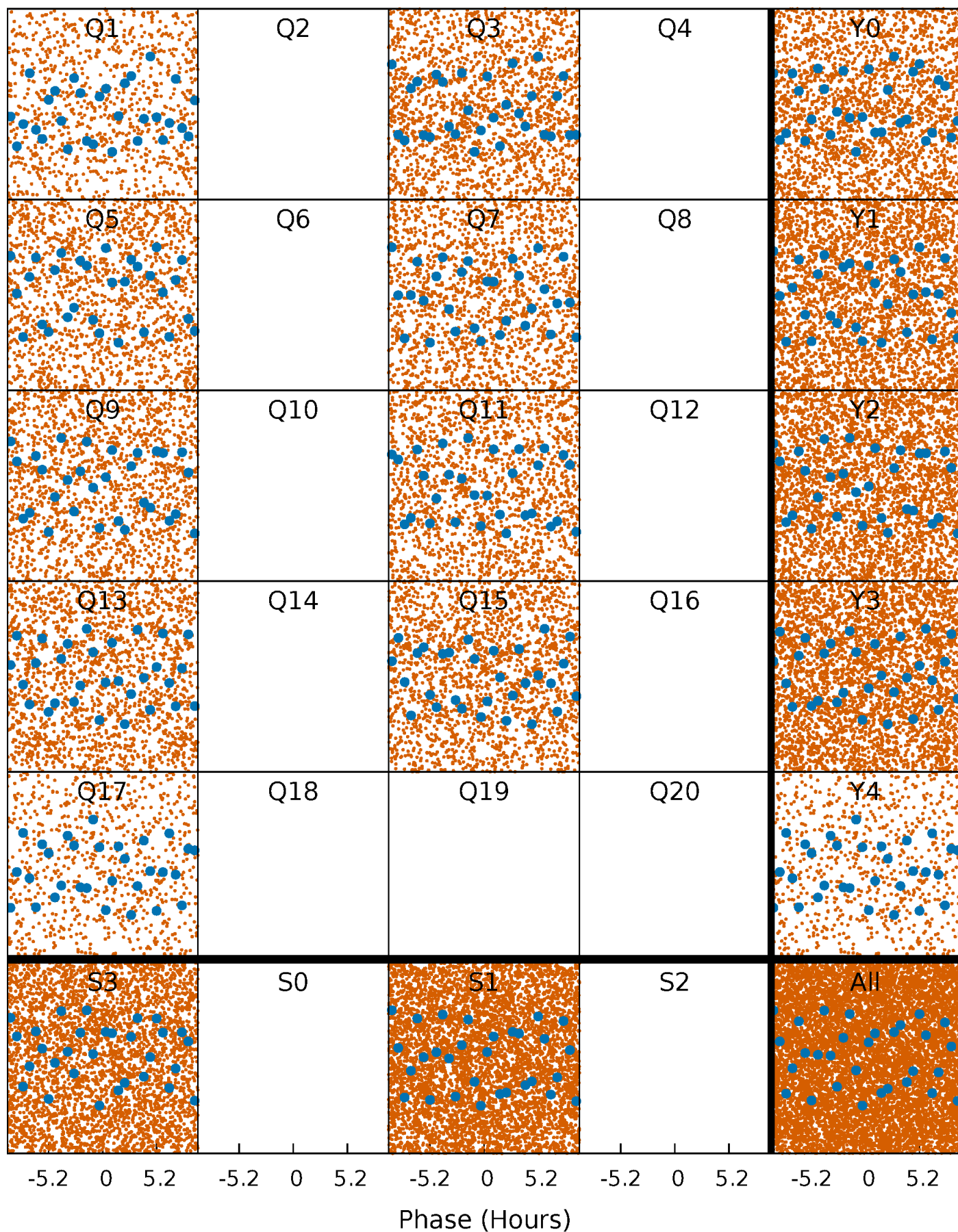


Non-Whitened Vs. Whitened Light Curve



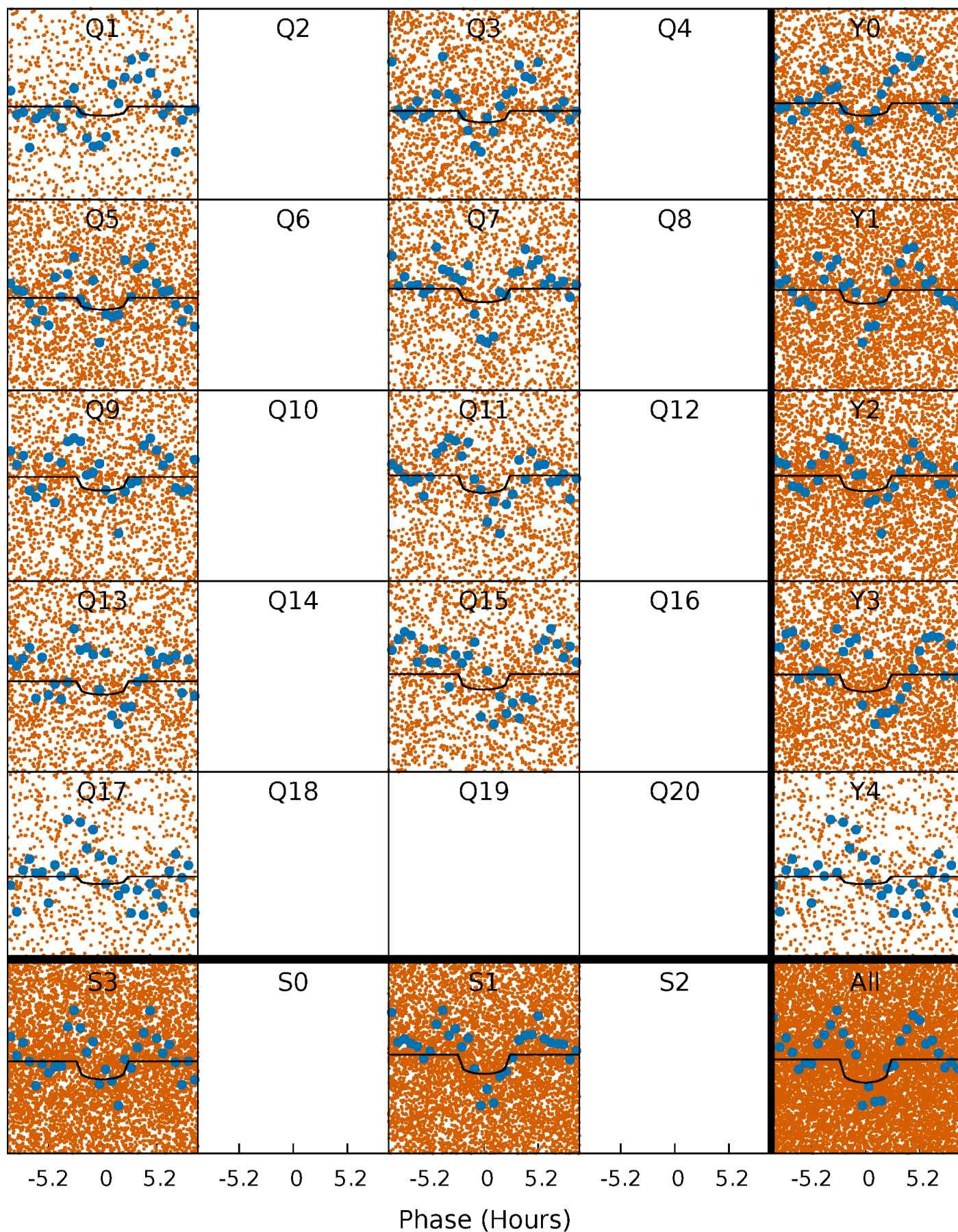
PDC Quarter-Phased Transit Curves

TCE 008427895-01 P= 0.586257 Days $T_0=131.750729$ (BKJD)



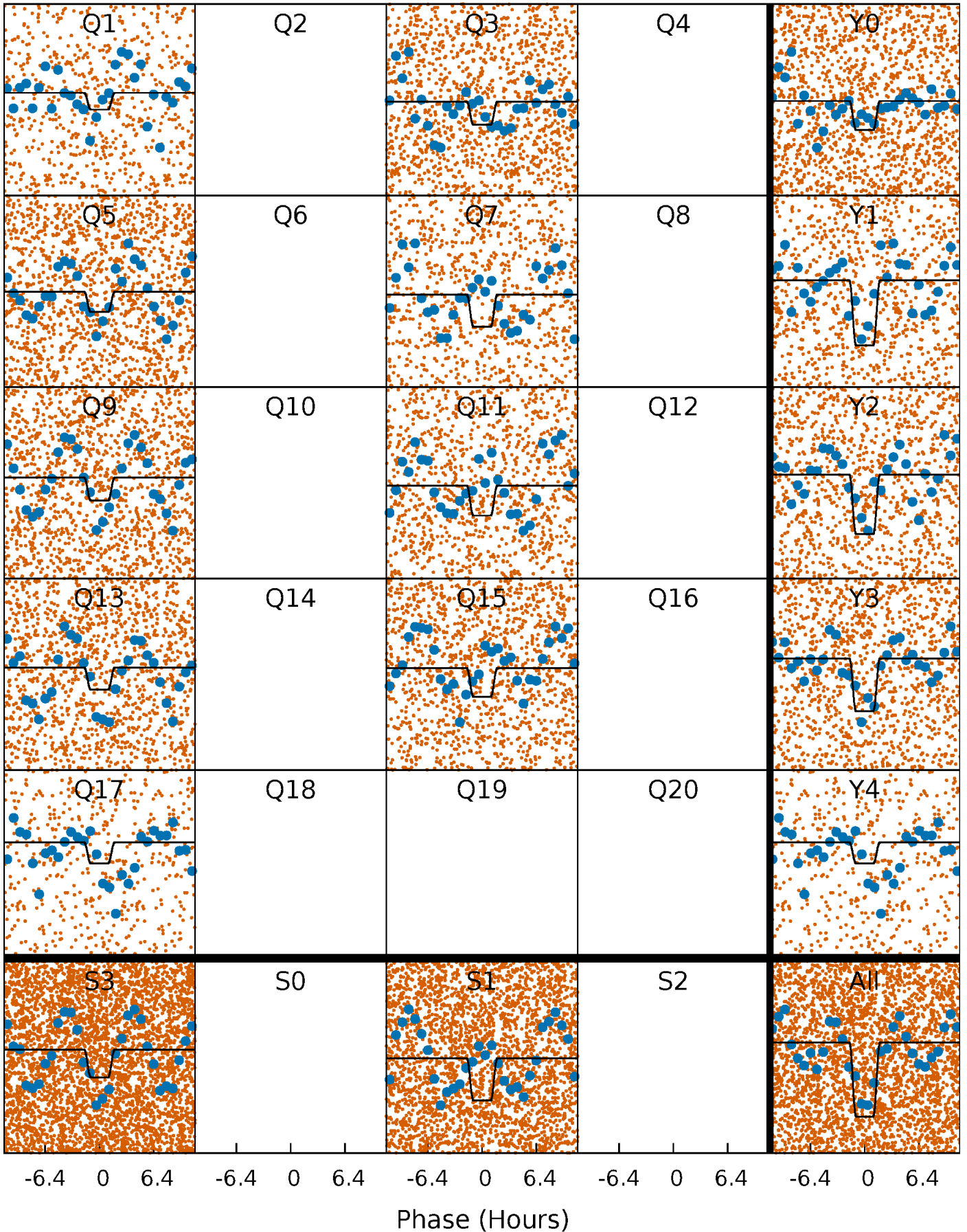
DV Quarter-Phased Transit Curves

TCE 008427895-01 P= 0.586257 Days $T_0=131.750729$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

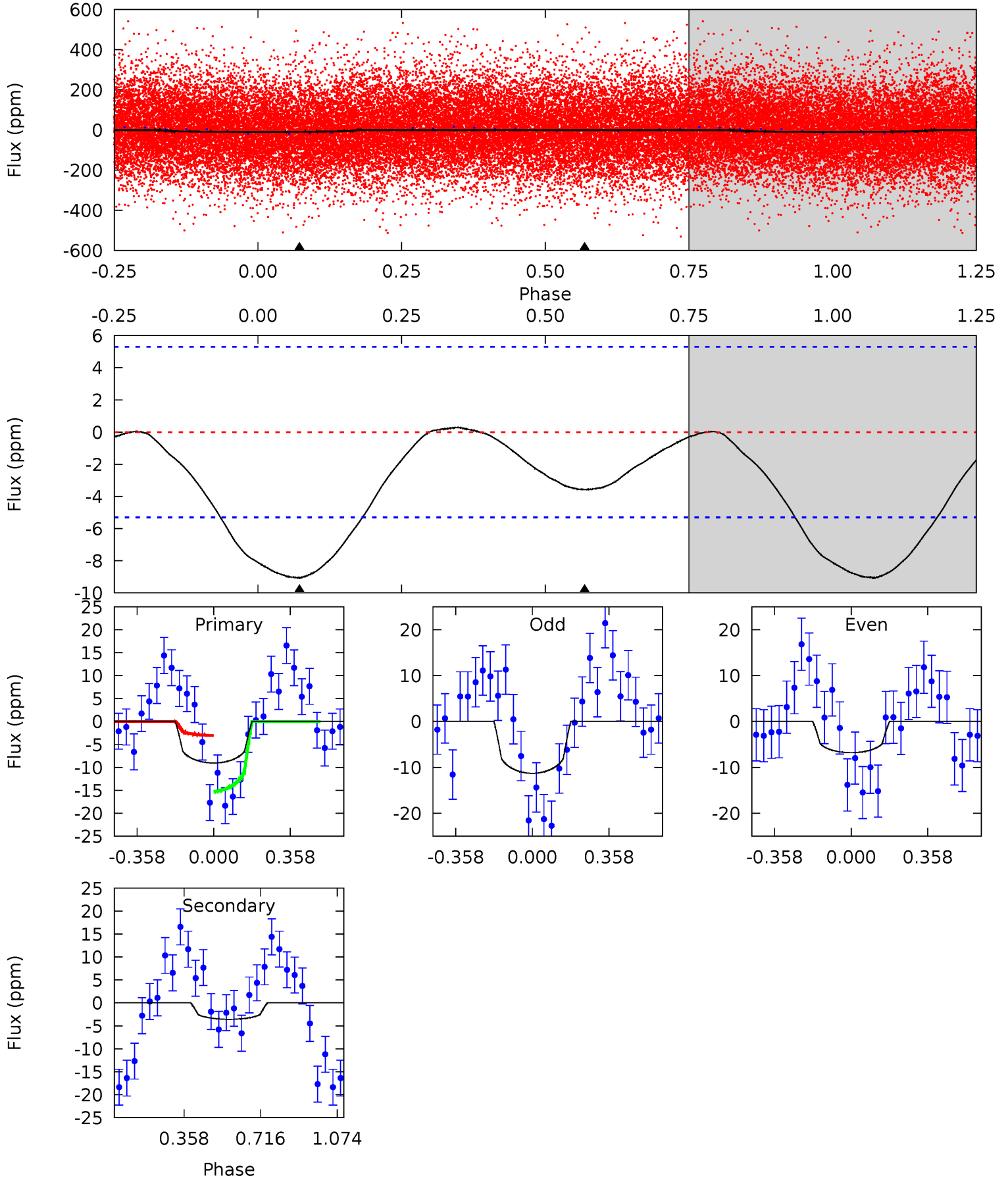
TCE 008427895-01 P= 0.586310 Days $T_0=131.725901$ (BKJD)



DV Model-Shift Uniqueness Test

008427895-01, P = 0.586257 Days, E = 131.164472 Days

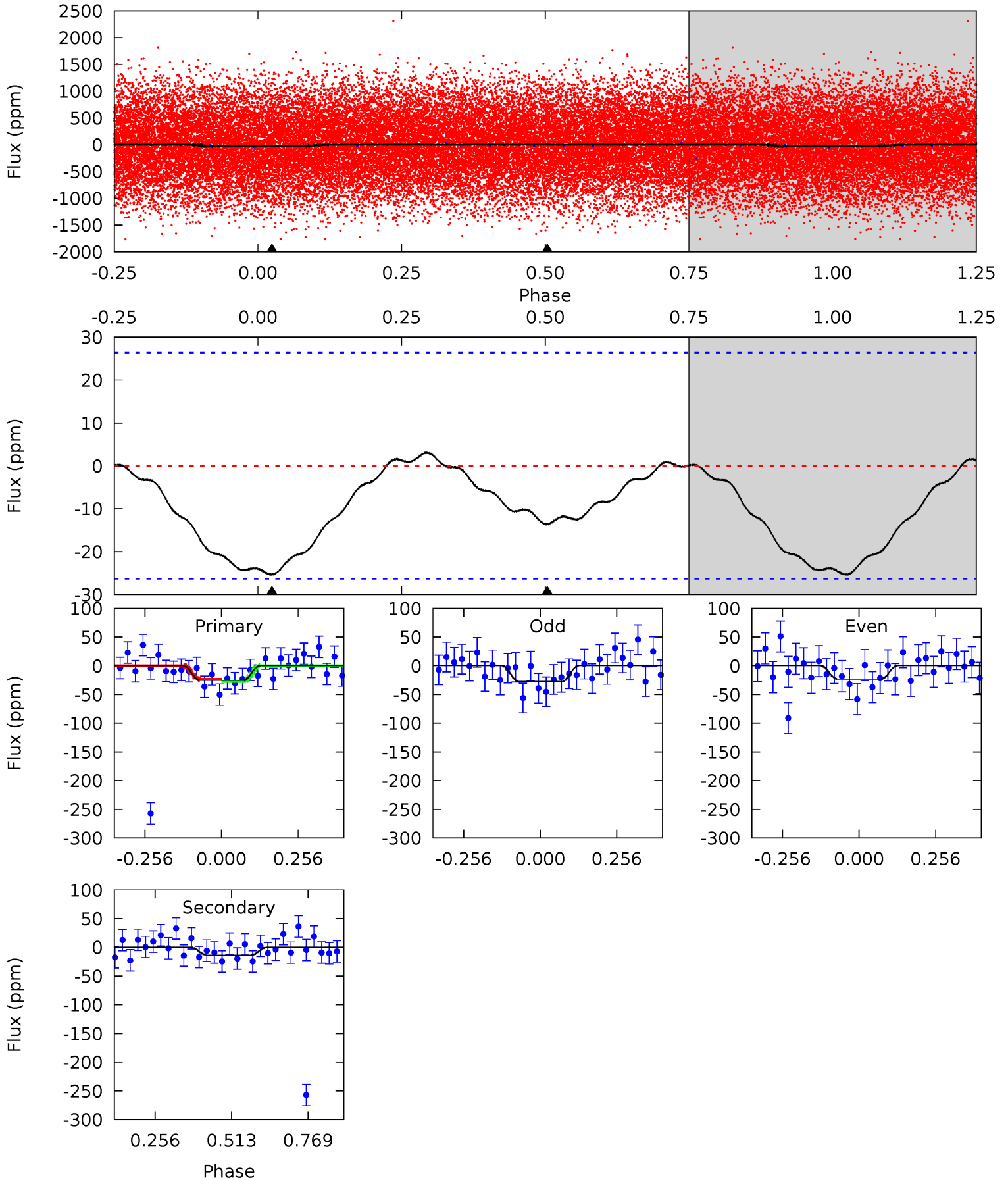
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.32	2.89	0	0	4.29	0.92	0.40	7.32	7.32	2.89	2.89	1.79	0.99	0.03	4.98



Alt Model-Shift Uniqueness Test

008427895-01, P = 0.586310 Days, E = 131.139591 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.20	2.26	0	0	4.36	1.14	0.23	4.20	4.20	2.26	2.26	0.33	0.99	0.11	0.30



Stellar Parameters For KIC 008427895

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8241^{+229}_{-343}	$3.745^{+0.424}_{-0.133}$	$-0.100^{+0.300}_{-0.400}$	$3.177^{+0.789}_{-1.465}$	$2.046^{+0.345}_{-0.517}$	$0.090^{+0.340}_{-0.037}$
	+3%/-4%	+11%/-4%	+300%/-400%	+25%/-46%	+17%/-25%	+378%/-41%
Source	KIC0	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 008427895-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.15^{+1.12}_{-0.76}$	6733^{+523}_{-842}	4310^{+5548}_{-9267}	$0.417^{+3.186}_{-0.308}$
Alt.	-14 ± 6	$1.95^{+1.17}_{-1.13}$	6696^{+540}_{-774}	5105^{+4428}_{-9564}	$0.580^{+2.391}_{-0.402}$

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 $A_{obs} \gg 1.0$

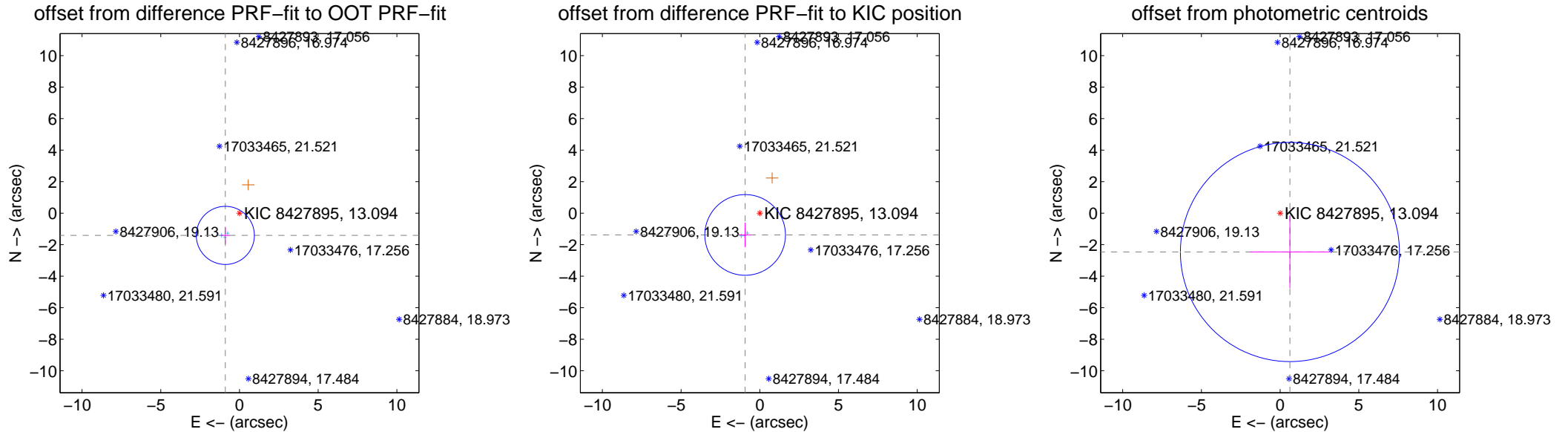
DV Centroid Data

Supplemental centroid analysis for 008427895-01. Kepler magnitude: 13.09. Transit SNR 4.66

There are 3 quarters with good PRF difference image offsets

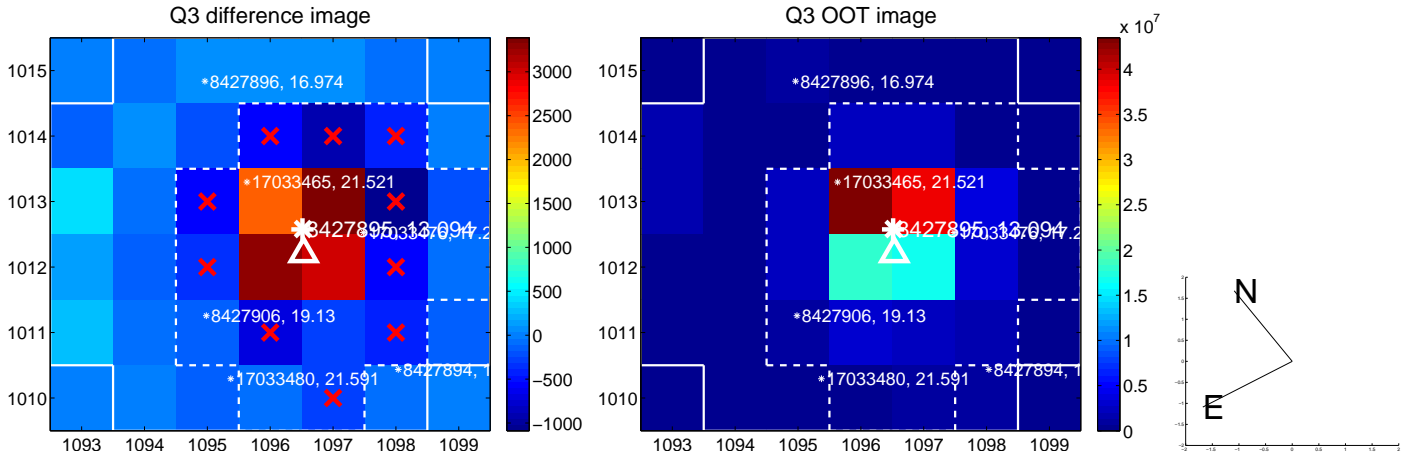
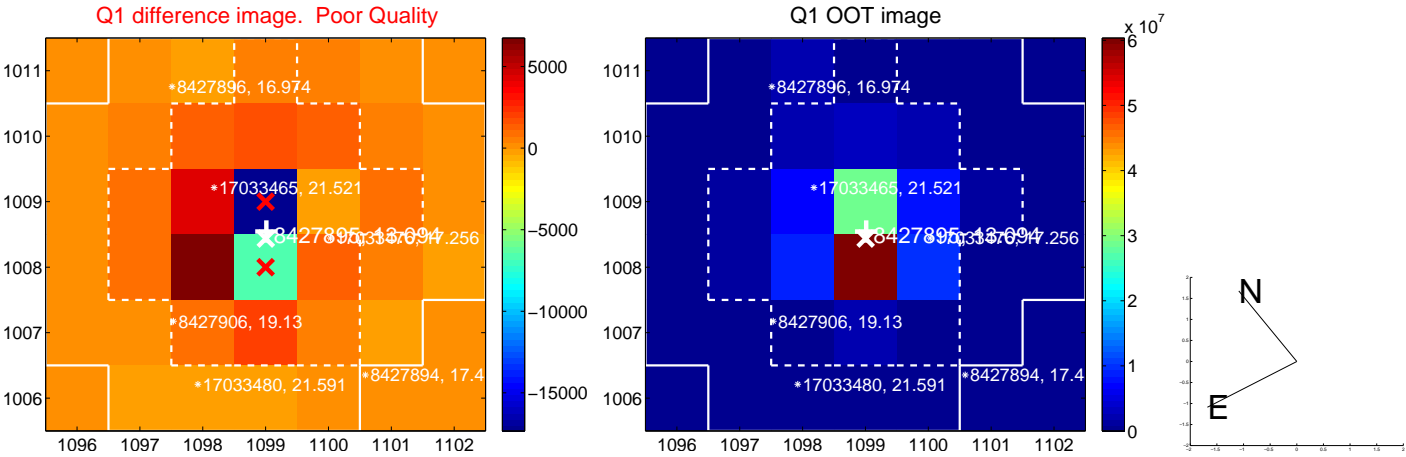
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.672 ± 0.615	2.72	0.897 ± 0.287	-1.411 ± 0.552
PRF-fit source offset from KIC position	1.666 ± 0.854	1.95	0.930 ± 0.379	-1.382 ± 0.779
photometric centroid source offset	2.54 ± 2.32	1.10	-0.62 ± 2.53	-2.47 ± 2.30

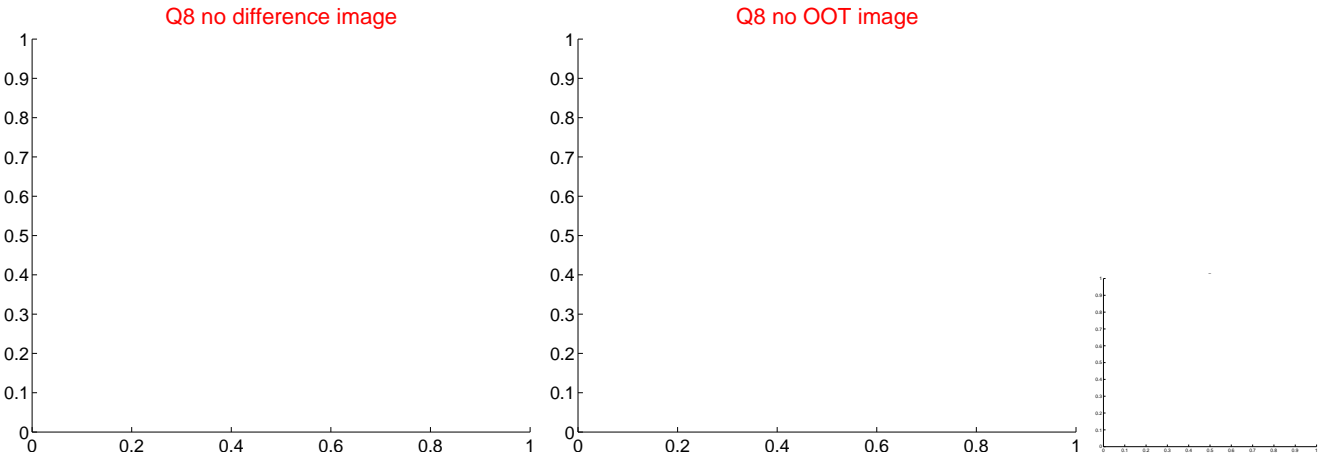
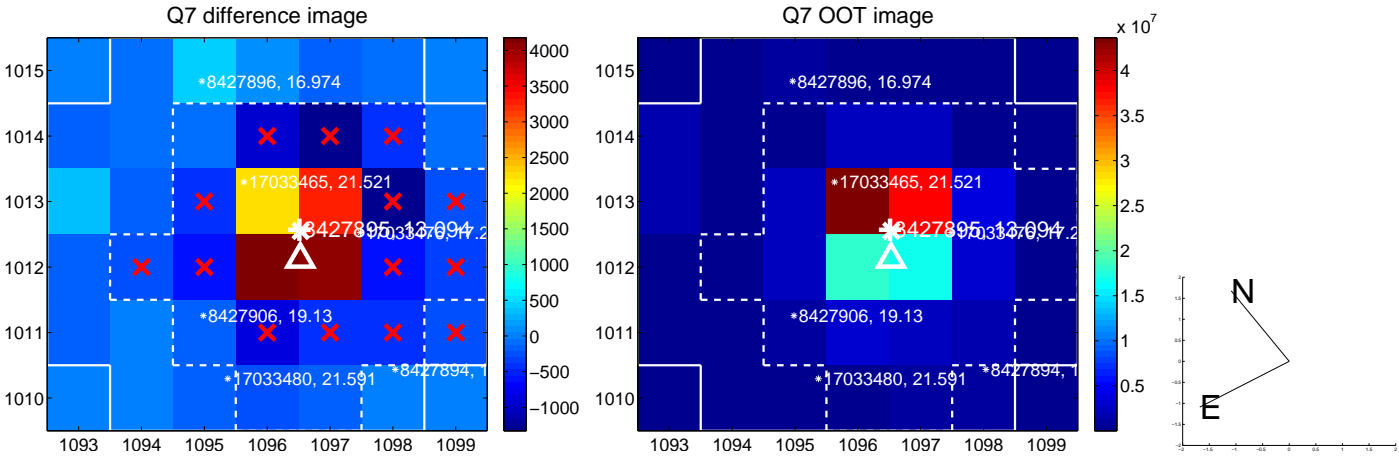
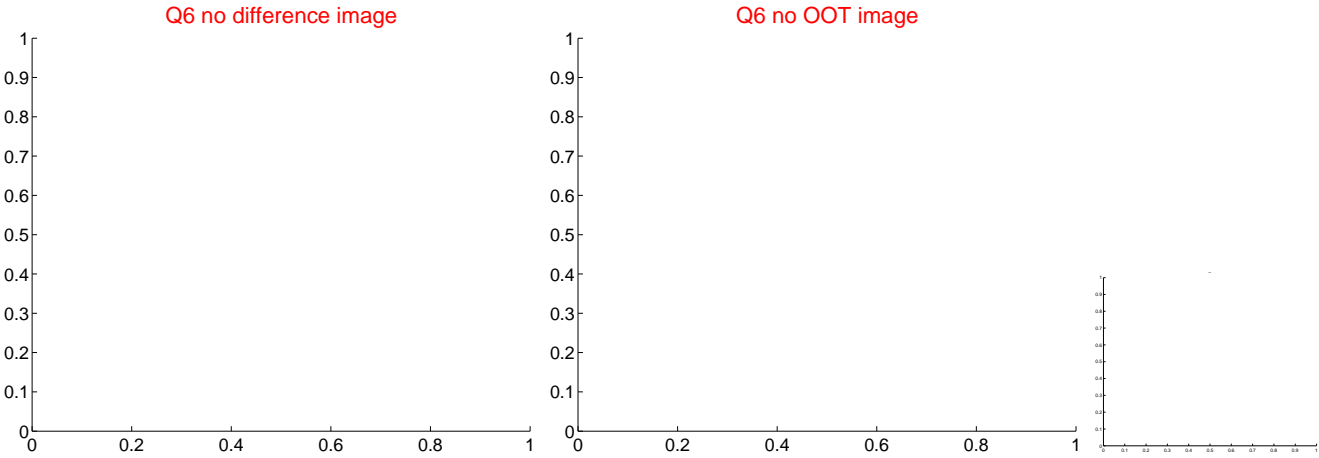
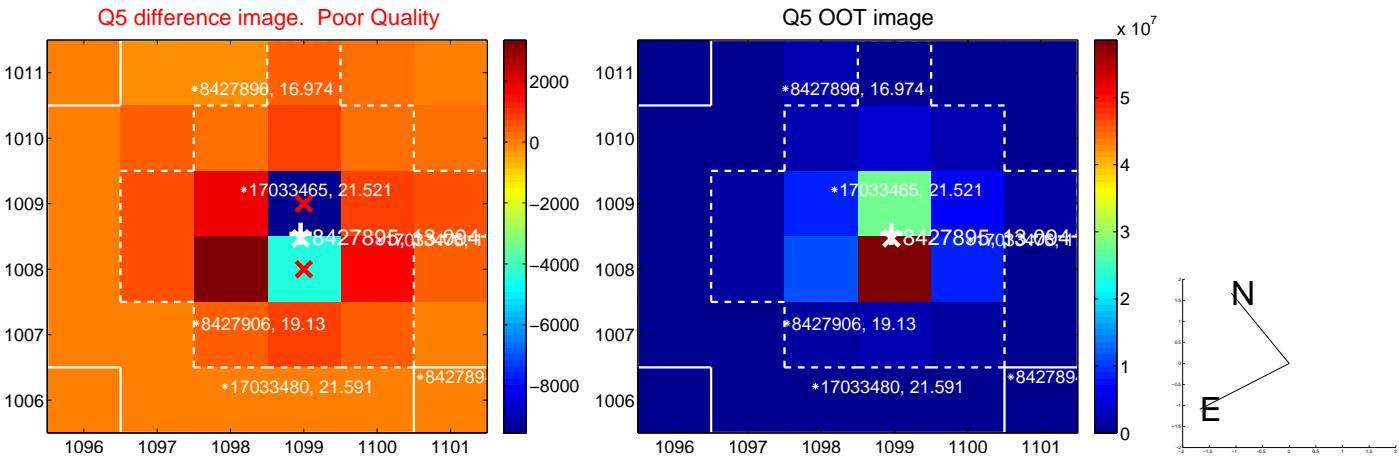


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

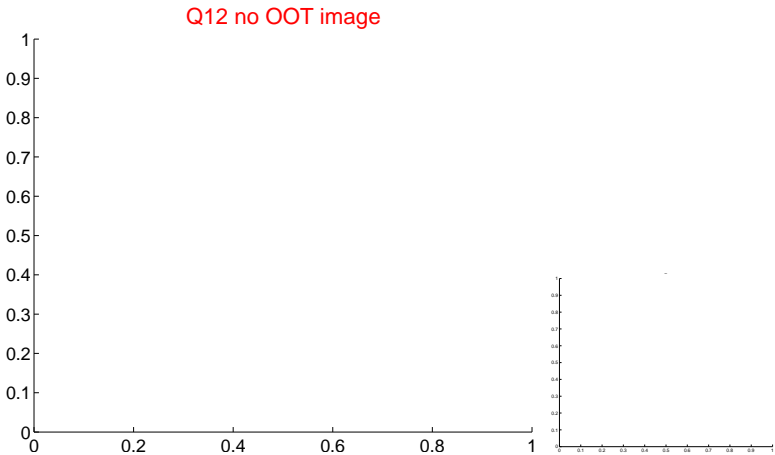
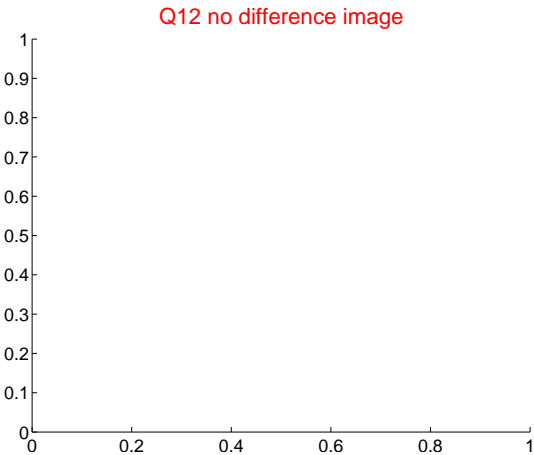
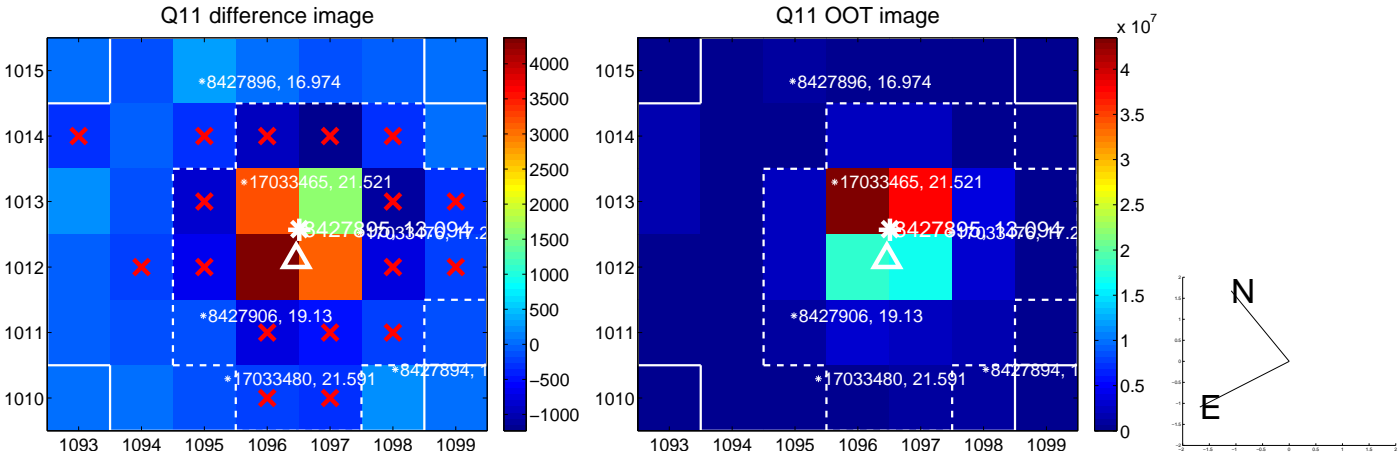
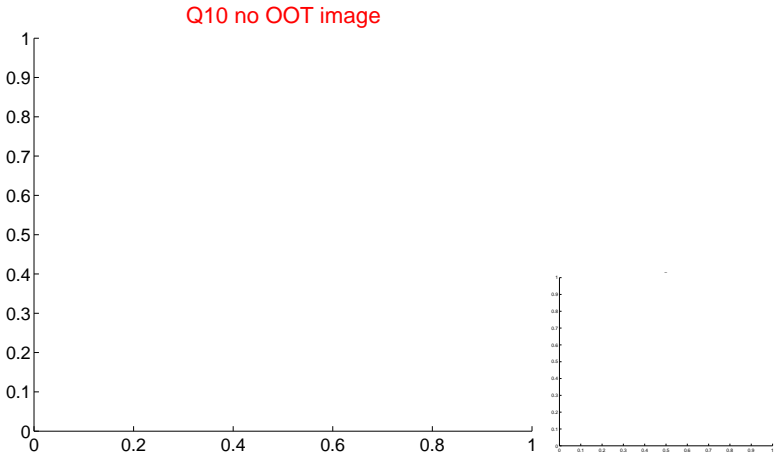
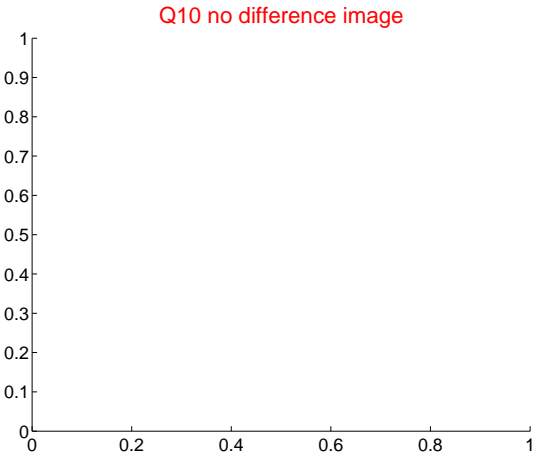
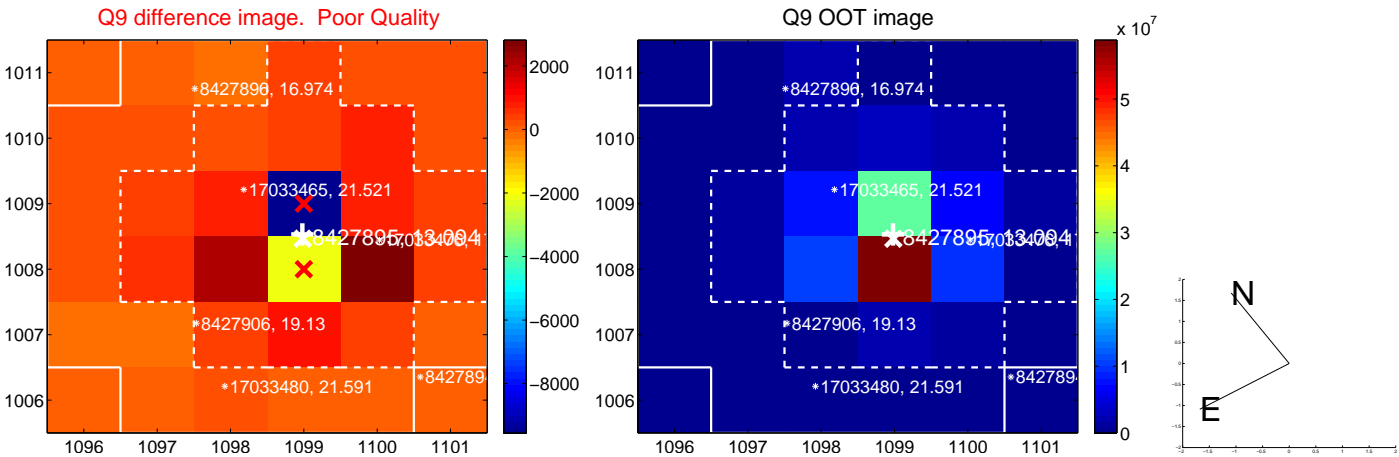
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



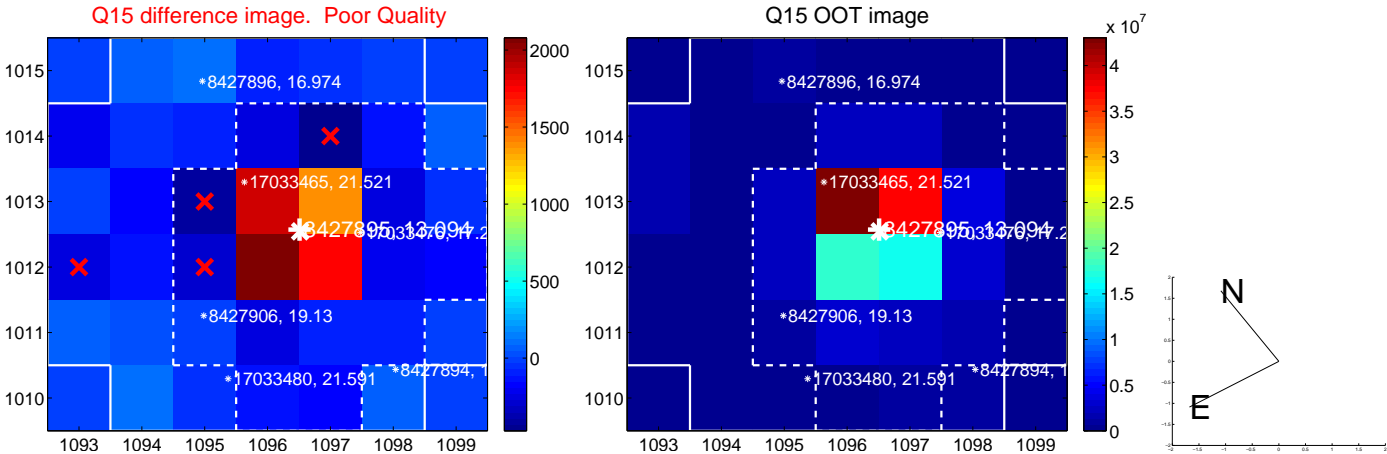
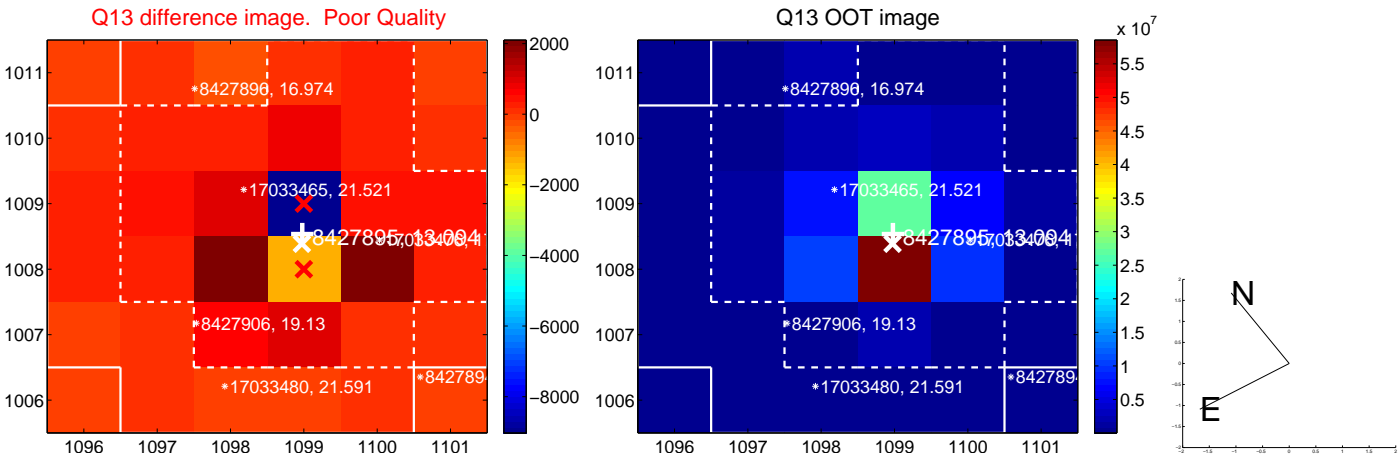
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



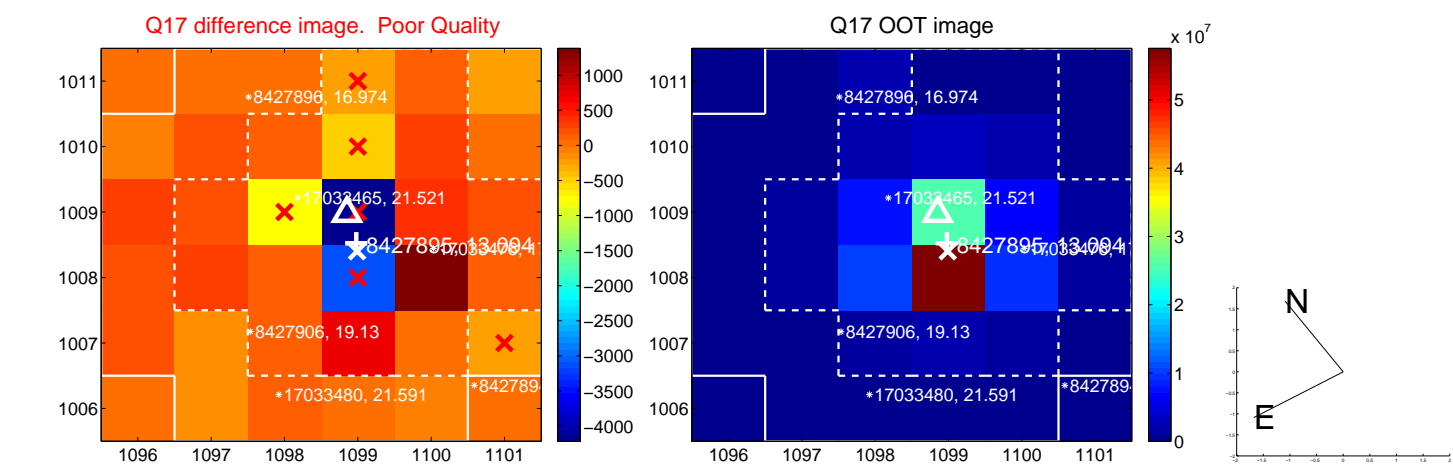
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



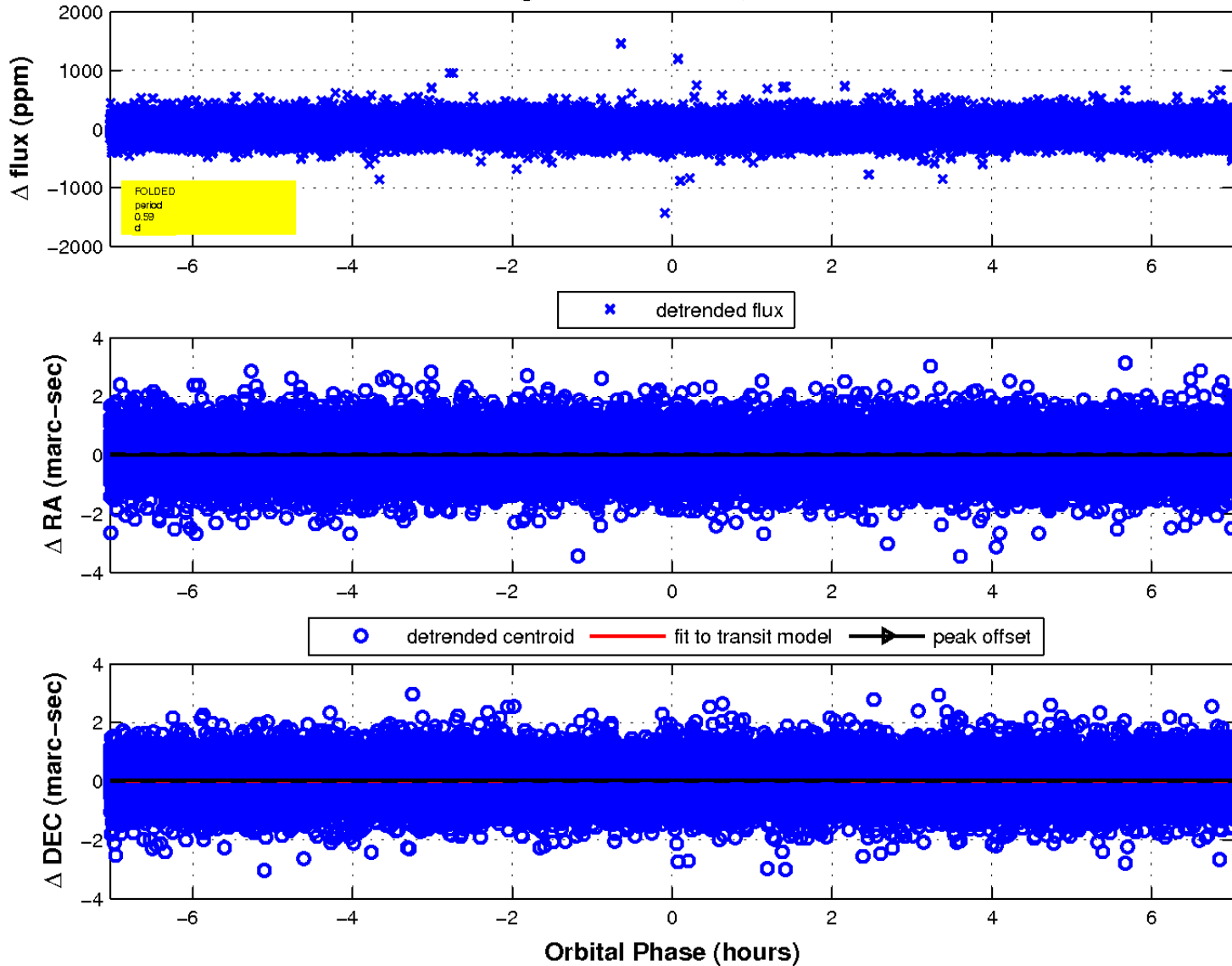
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

