

KIC 010621791

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})
010621791-01	OBS	No	1.348916	132.313549	22.1	6.912	9.5	8.8	1.64	7305	0.79	9411.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010621791-01	OBS	FP	0.01	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.

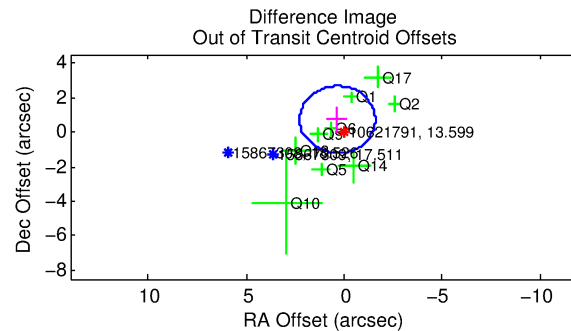
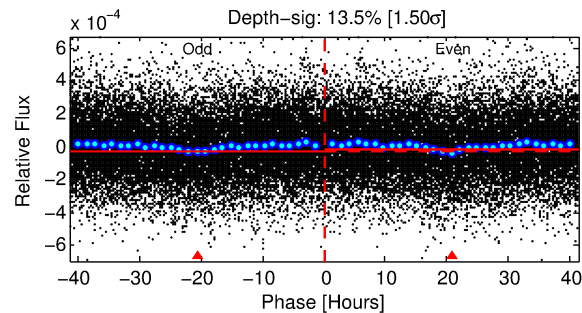
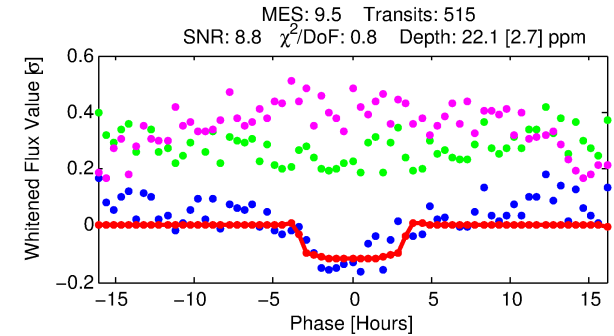
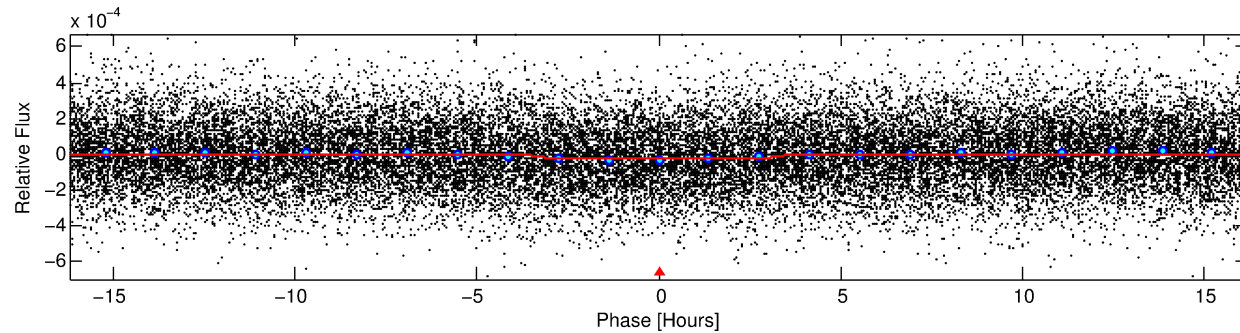
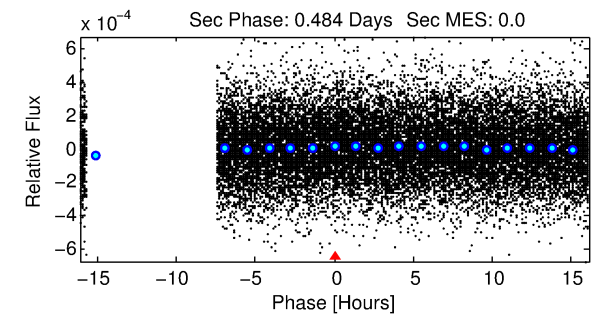
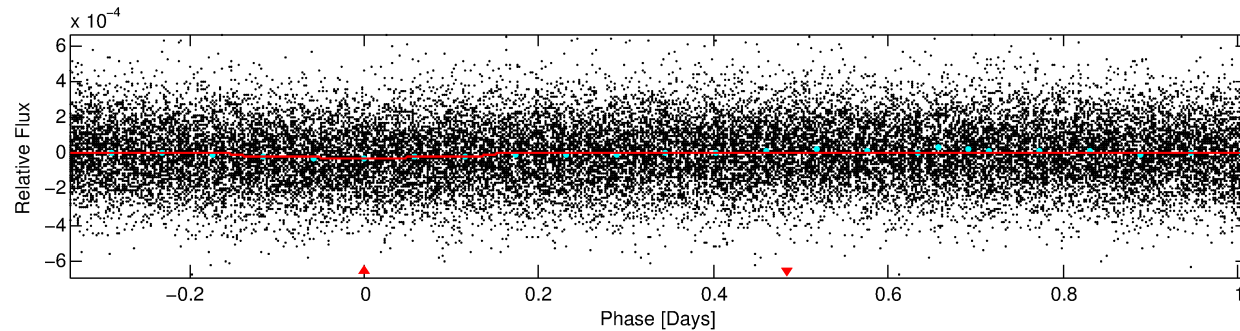
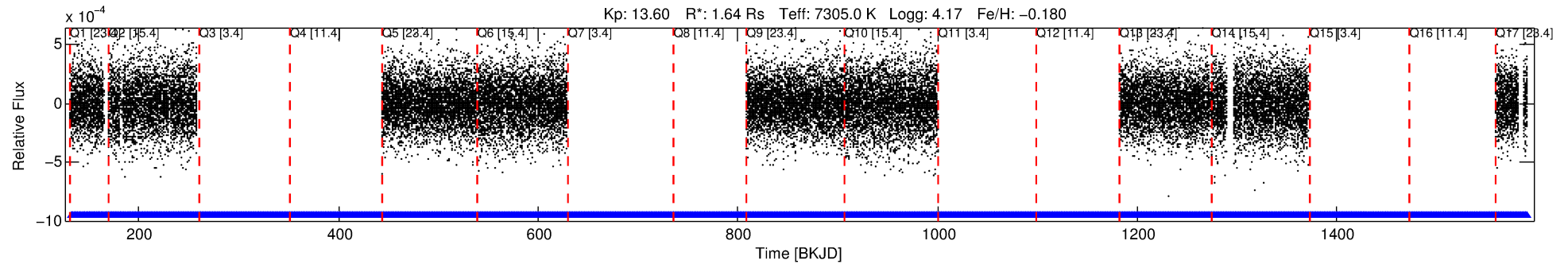
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010621791-01

No Significant Match Found

DV One-Page Summary

KIC: 10621791 Candidate: 1 of 1 Period: 1.349 d



DV Fit Results:

Period = 1.34892 [0.00002] d
Epoch = 132.3135 [0.0079] BKJD
Rp/R* = 0.0044 [0.0028]
a/R* = 1.53 [3.28]
b = 0.41 [7.66]
Seff = 9411.18 [3814.35]
Teff = 2512 [254] K
Rp = 0.79 [0.56] Re
a = 0.0270 [0.0072] AU
Ag = N/A
Teffp = N/A

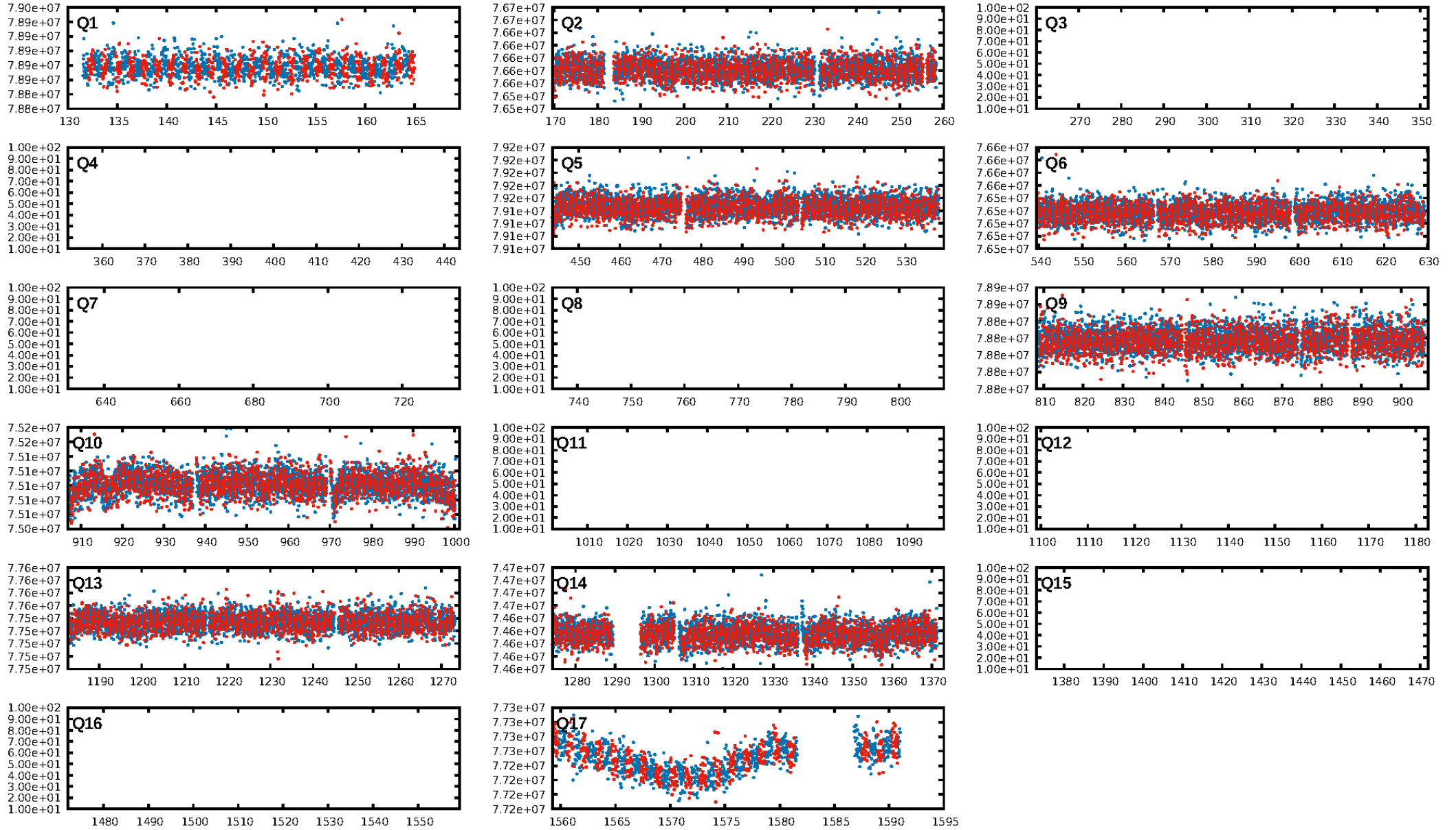
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.72e-19
RollingBand-fgt: 1.00 [470/470]
GhostDiagnostic-chr: 1.464
Centroid-sig: 33.5%
Centroid-so: 1.339 arcsec [0.87σ]
OotOffset-rm: 0.810 arcsec [1.26σ]
KicOffset-rm: 0.768 arcsec [1.28σ]
OotOffset-st: 4/0/0/5 [9]
KicOffset-st: 4/0/0/5 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [9/9]

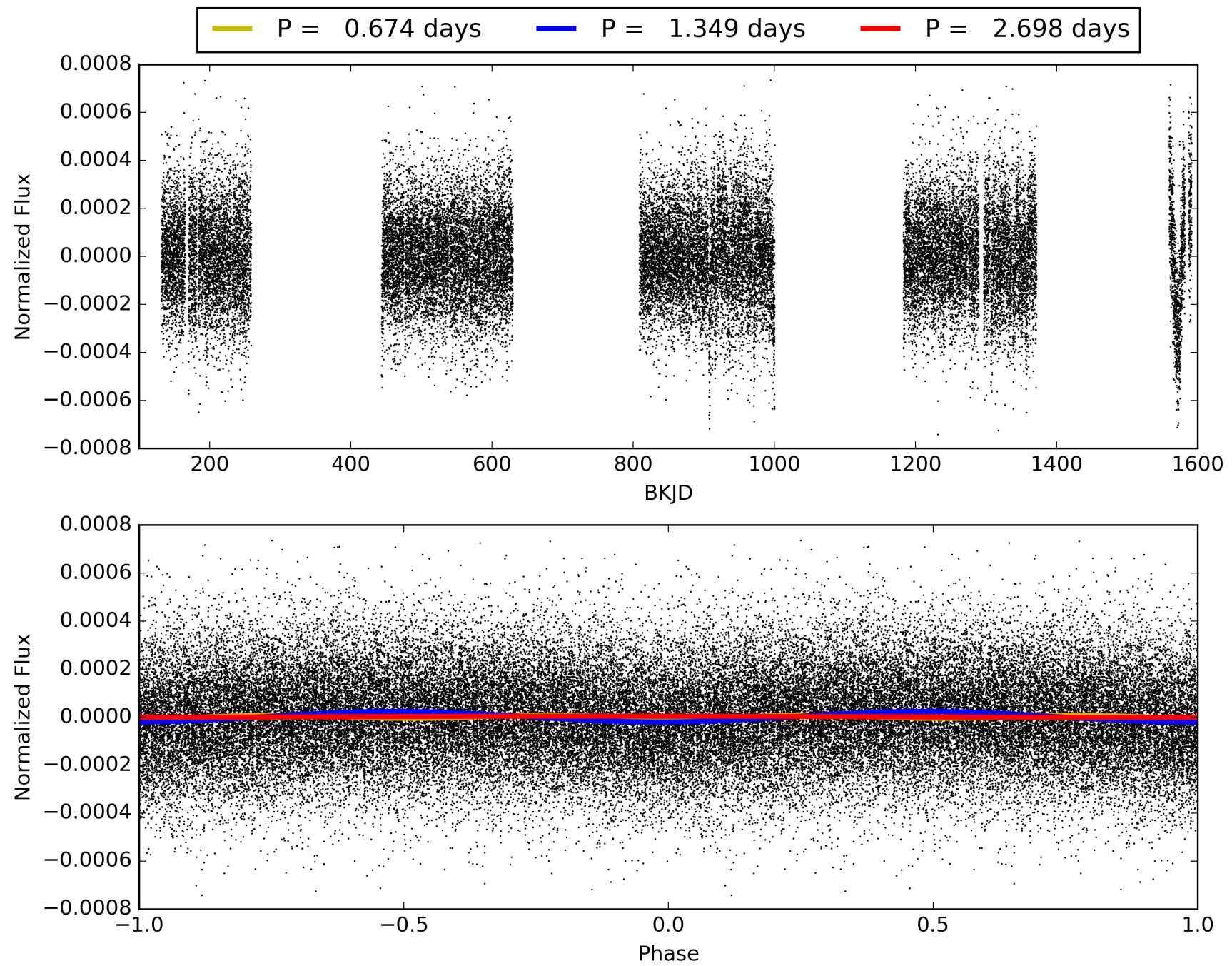
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:02:50 Z

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

TCE 010621791-01, PDC Light Curves

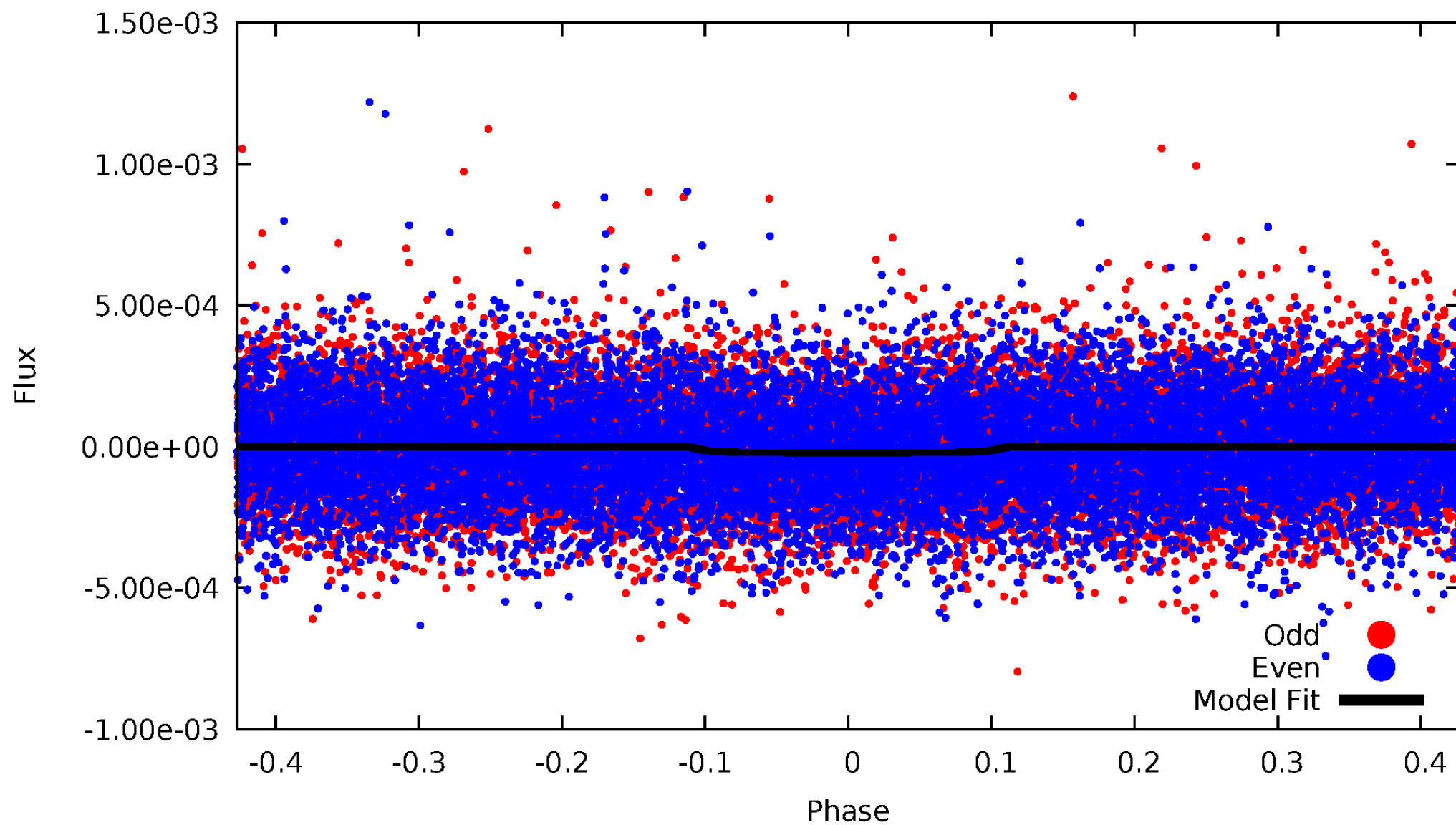


TCE 010621791-01



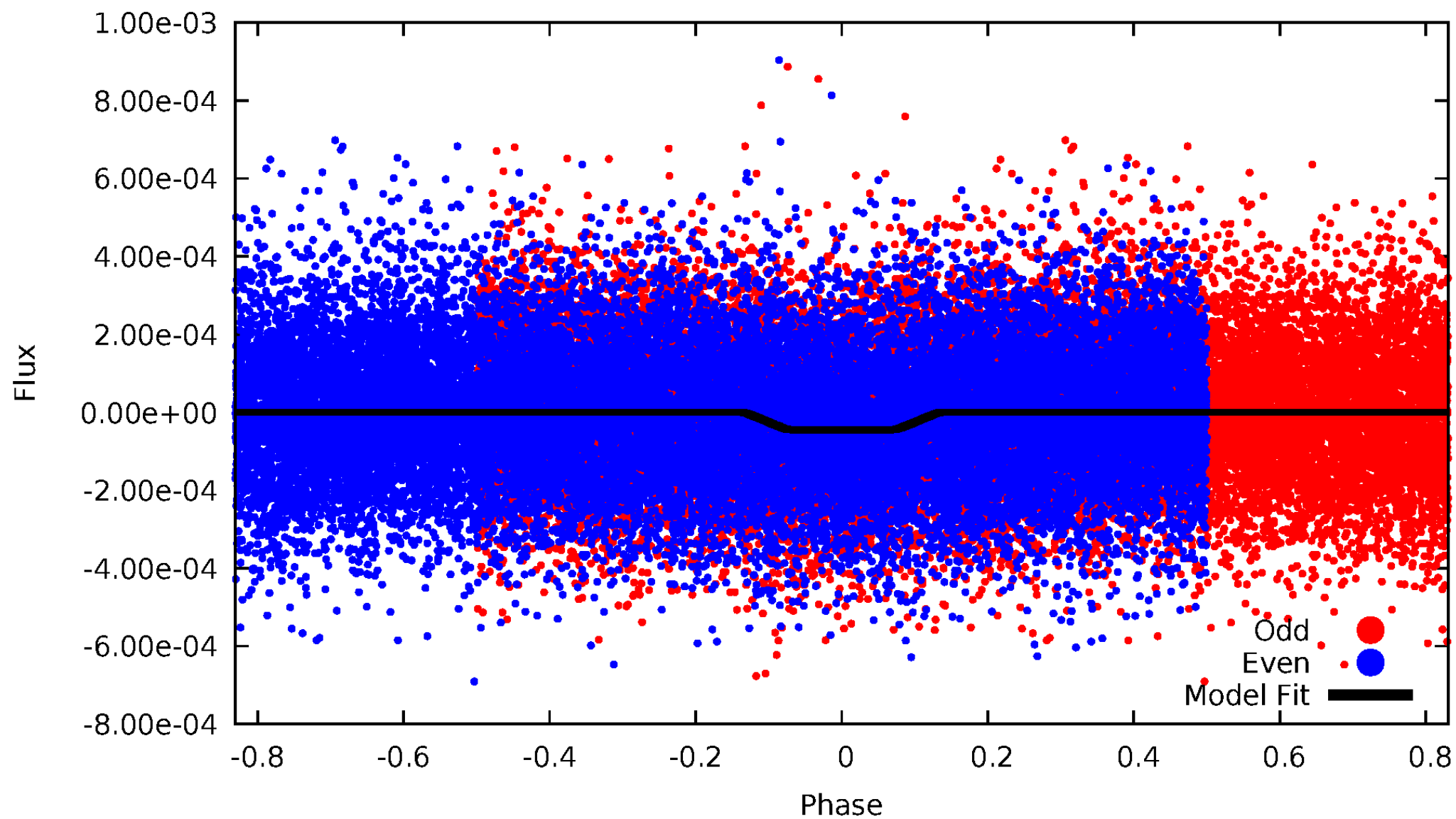
DV Odd/Even

TCE 010621791-01



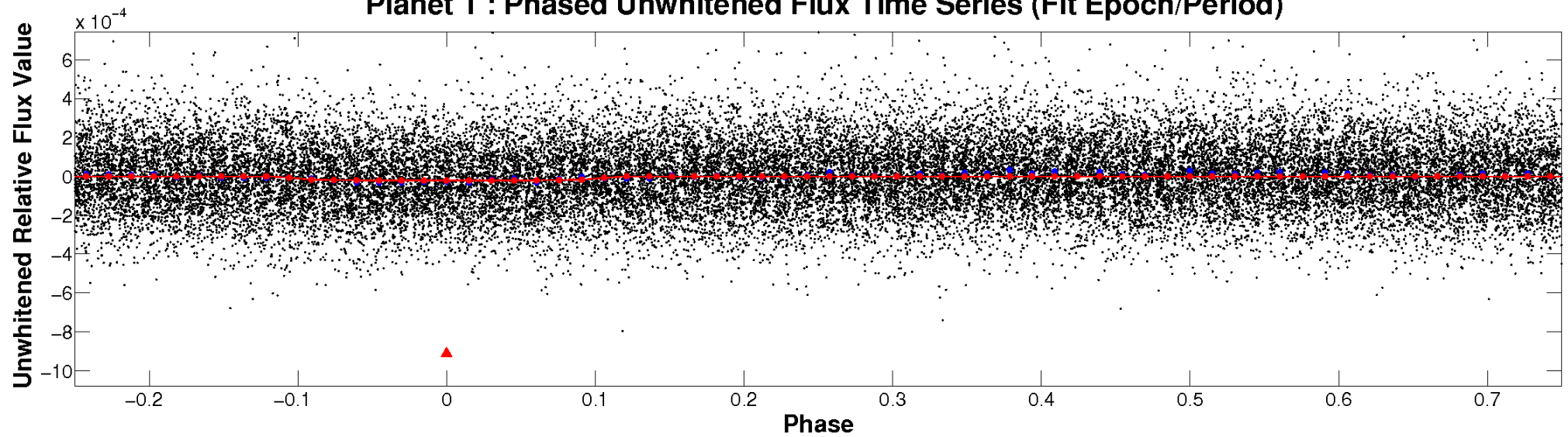
ALT Odd/Even

TCE 010621791-01

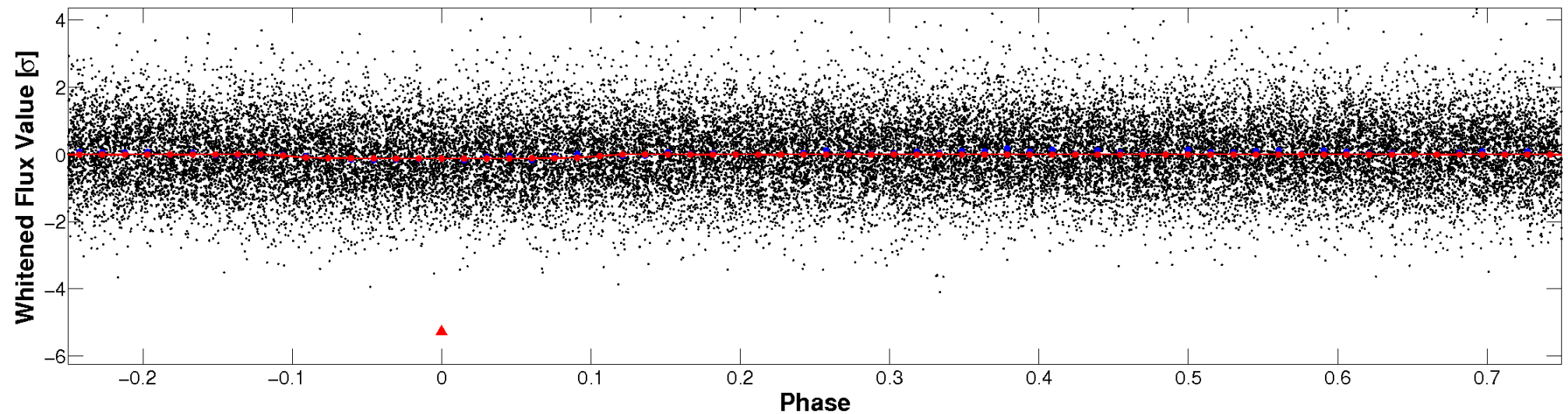


Non-Whitened Vs. Whitened Light Curve

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

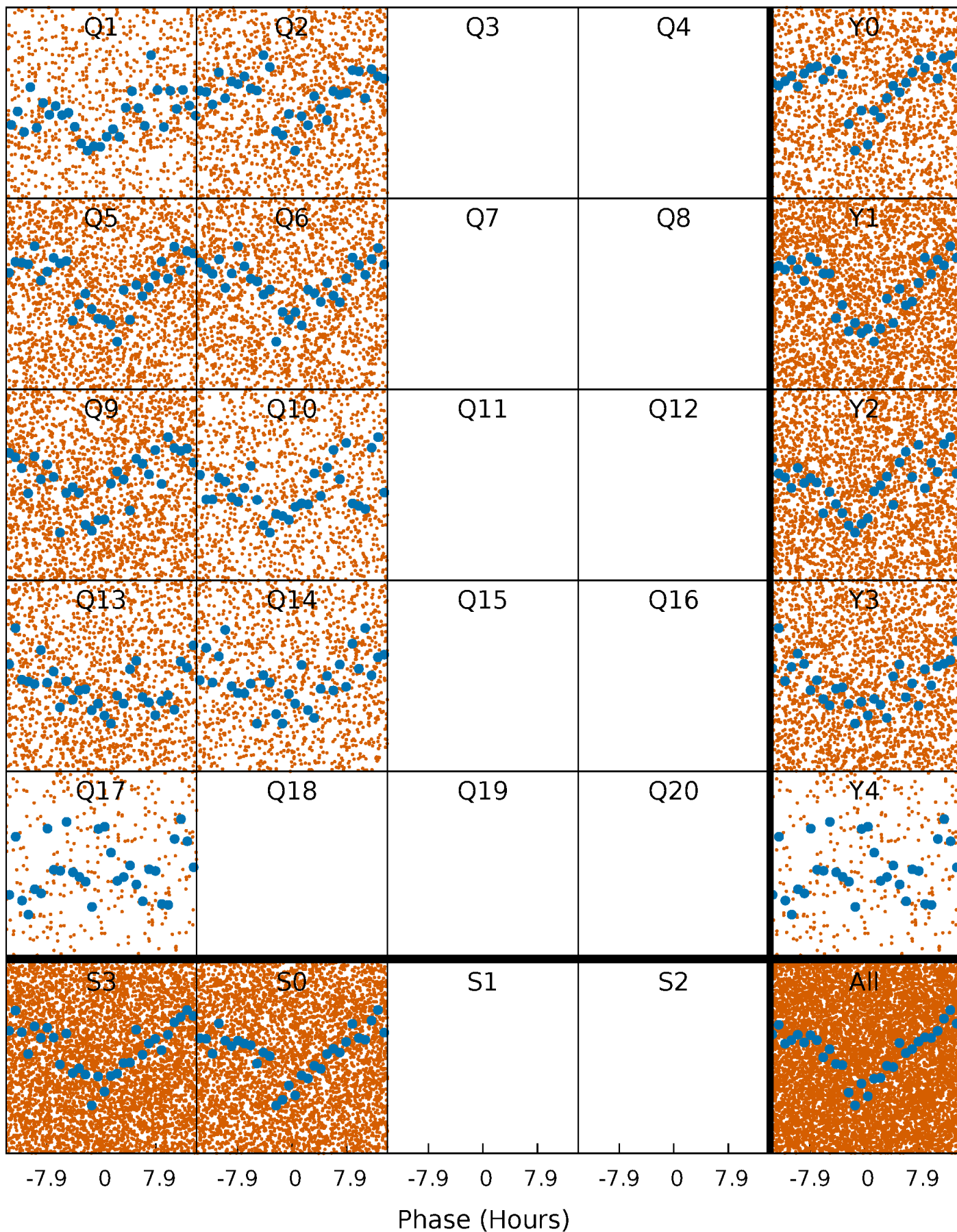


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



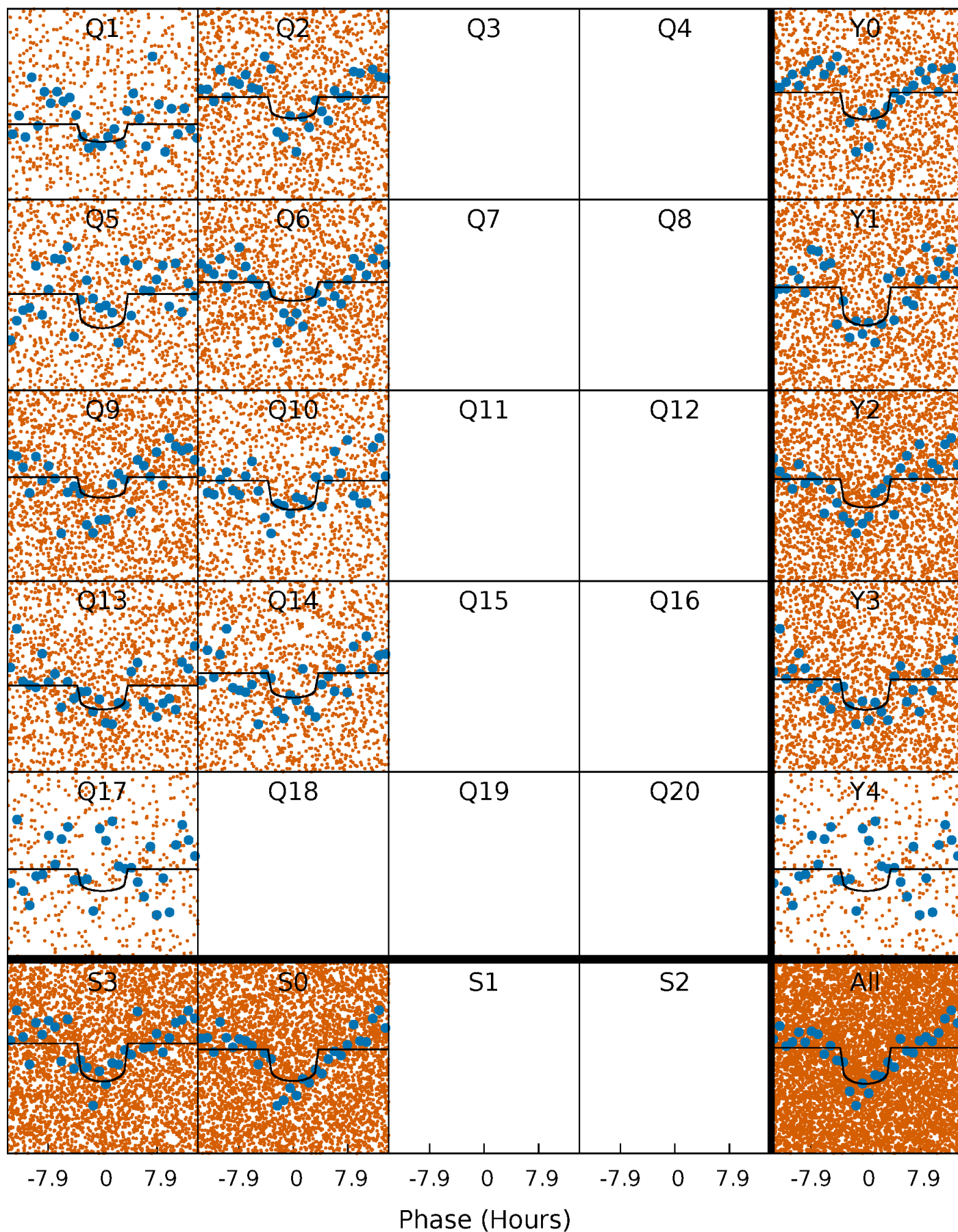
PDC Quarter-Phased Transit Curves

TCE 010621791-01 P= 1.348916 Days $T_0=132.313549$ (BKJD)



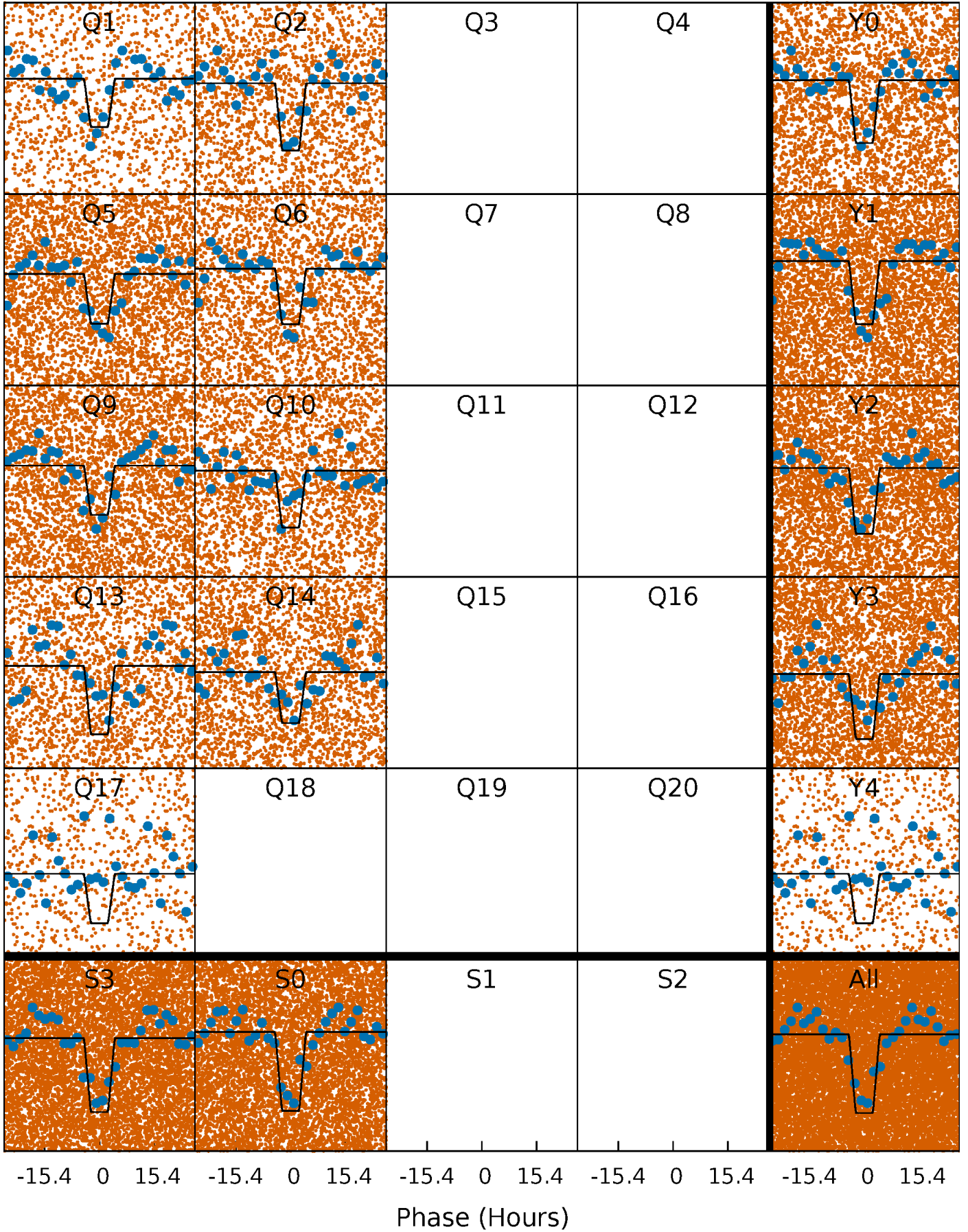
DV Quarter-Phased Transit Curves

TCE 010621791-01 P= 1.348916 Days $T_0=132.313549$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

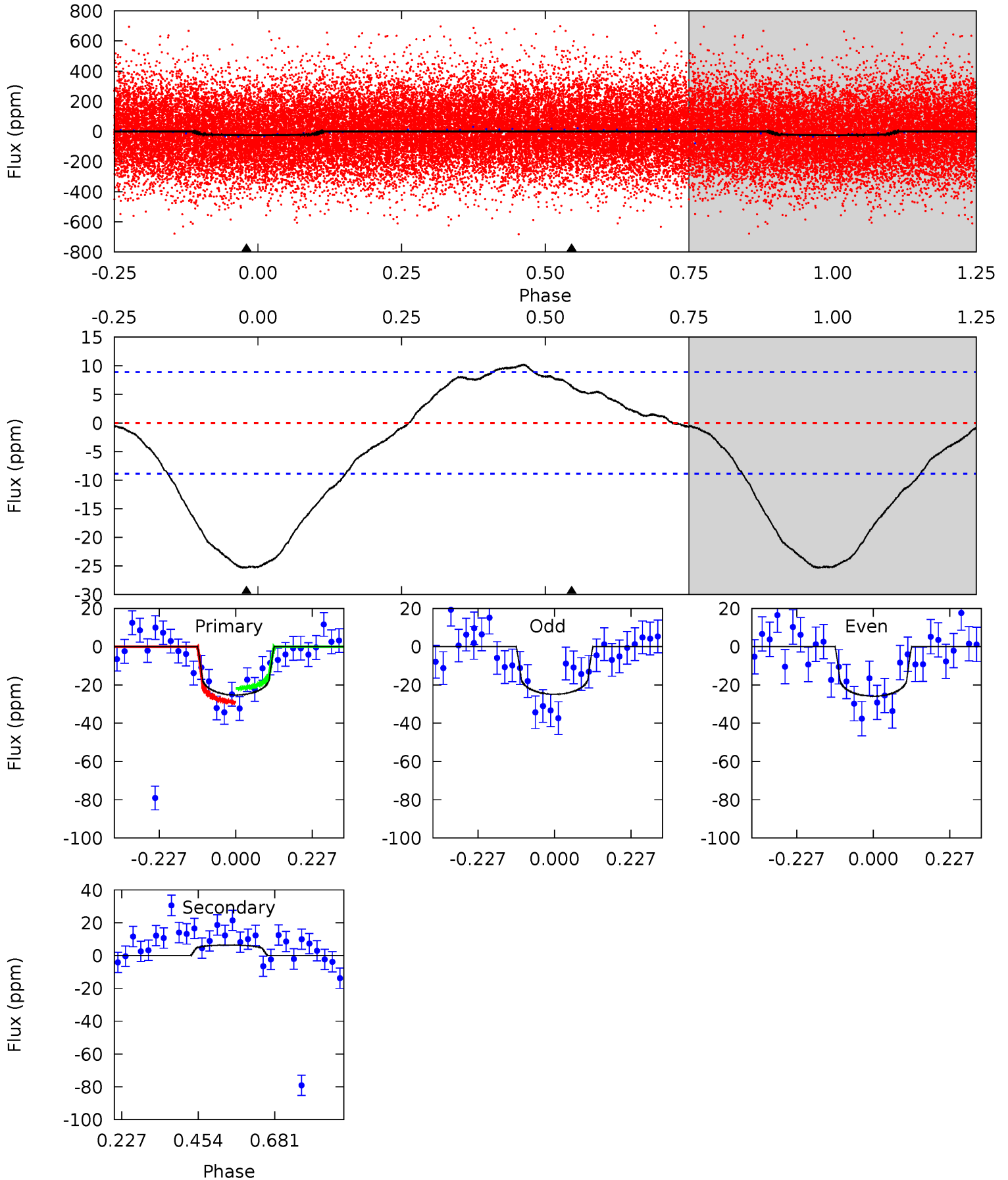
TCE 010621791-01 P= 1.348826 Days $T_0=132.334486$ (BKJD)



DV Model-Shift Uniqueness Test

010621791-01, P = 1.348916 Days, E = 130.964633 Days

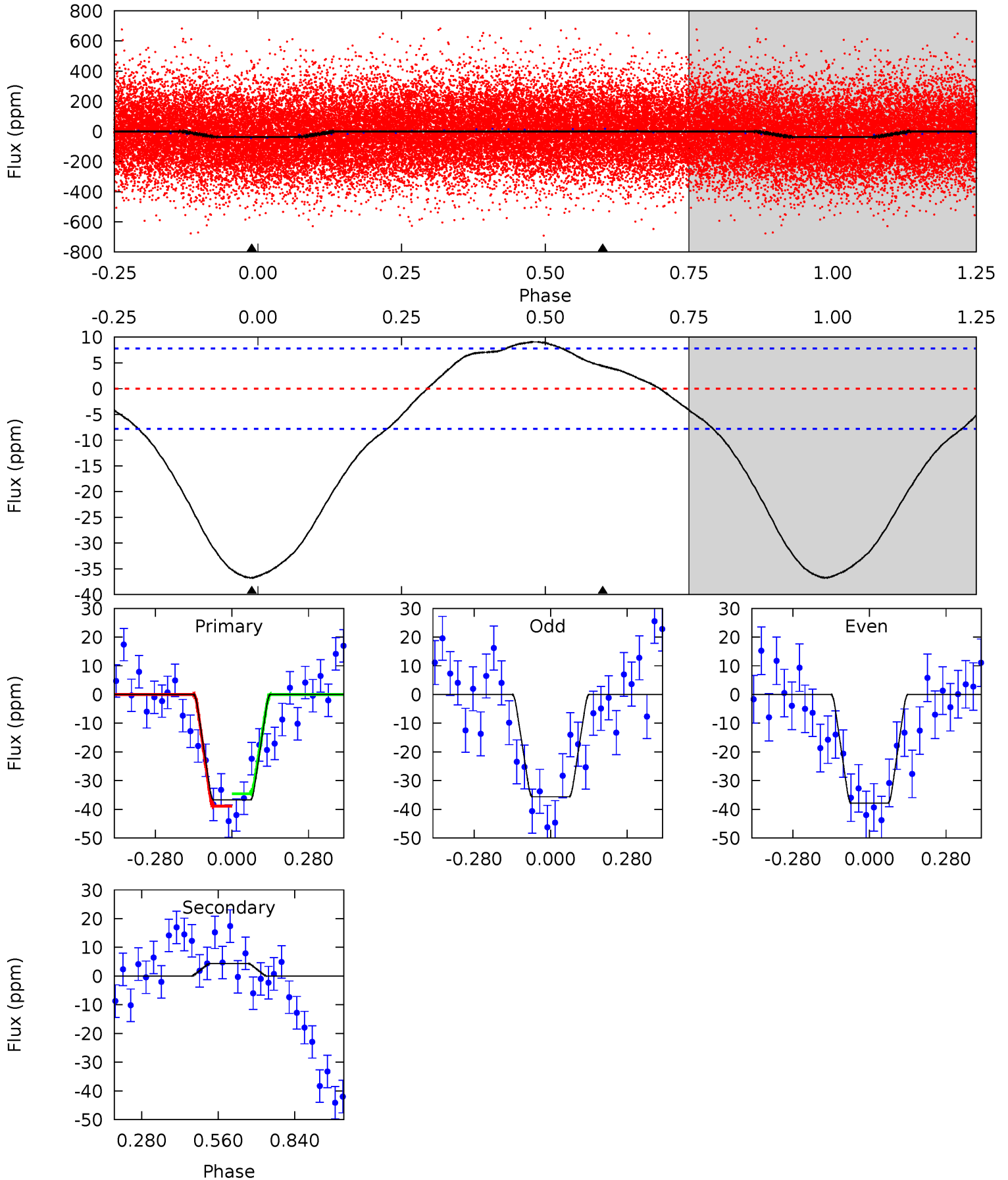
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	-3.16	0	0	4.39	1.21	1.45	12.5	12.5	-3.16	-3.16	0.26	1.14	0.29	1.78



Alt Model-Shift Uniqueness Test

010621791-01, P = 1.348826 Days, E = 130.985660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	-2.44	0	0	4.34	1.08	1.76	20.5	20.5	-2.44	-2.44	0.63	0.81	0.20	1.19



Stellar Parameters For KIC 010621791

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7305^{+230}_{-307}	$4.168^{+0.128}_{-0.192}$	$-0.180^{+0.250}_{-0.350}$	$1.642^{+0.546}_{-0.336}$	$1.449^{+0.232}_{-0.209}$	$0.461^{+0.288}_{-0.235}$
	+3%/-4%	+3%/-5%	+139%/-194%	+33%/-20%	+16%/-14%	+63%/-51%
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 010621791-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	6 ± 2	$0.84^{+0.53}_{-0.45}$	3548^{+261}_{-230}	-5419^{+927}_{-2387}	$-3.293^{+2.114}_{-12.217}$
Alt.	4 ± 2	$1.21^{+0.56}_{-0.51}$	3535^{+296}_{-239}	-4462^{+473}_{-1022}	$-1.152^{+0.705}_{-2.612}$

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

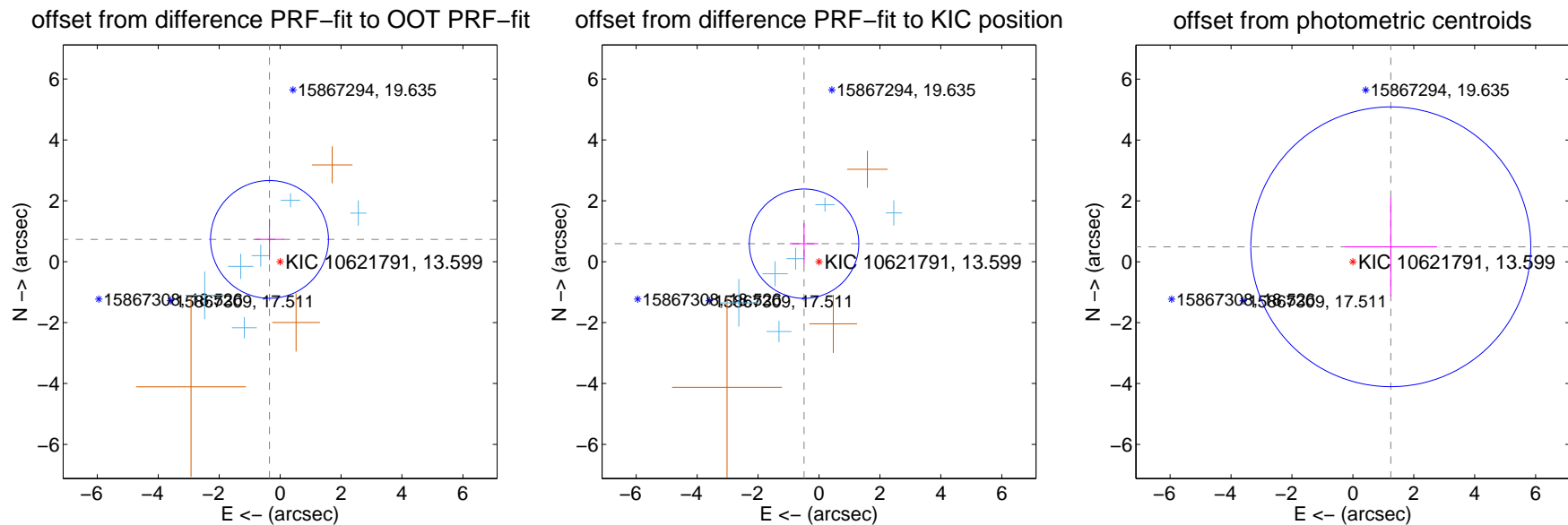
DV Centroid Data

Supplemental centroid analysis for 010621791-01. Kepler magnitude: 13.60. Transit SNR 8.82

There are 6 quarters with good PRF difference image offsets

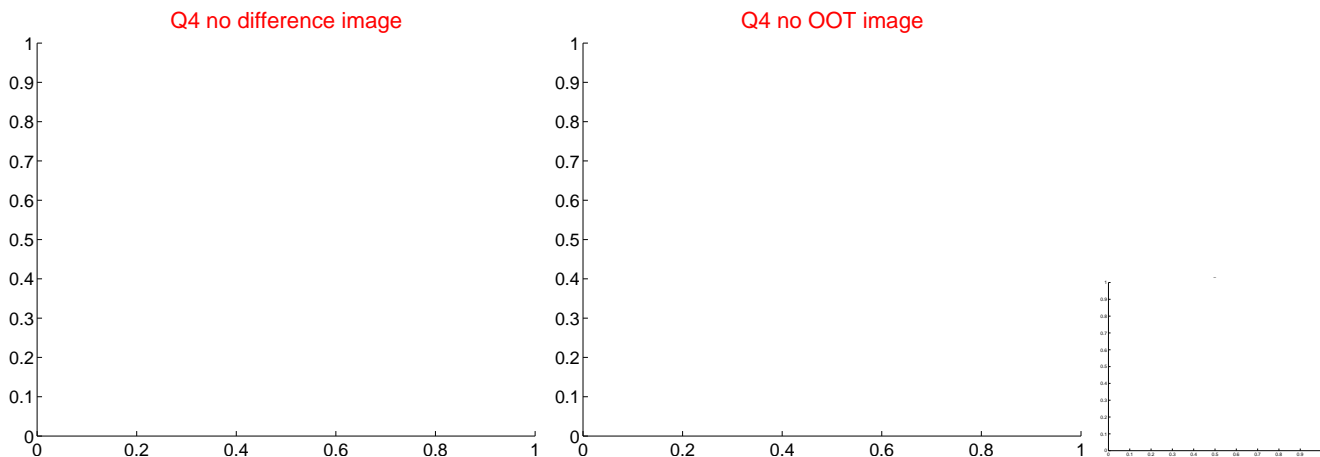
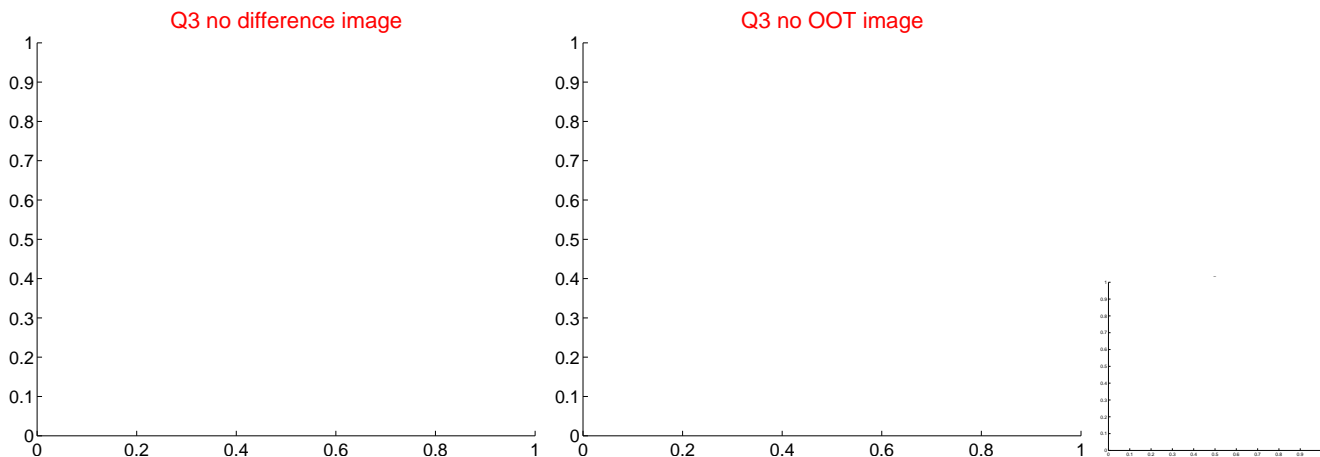
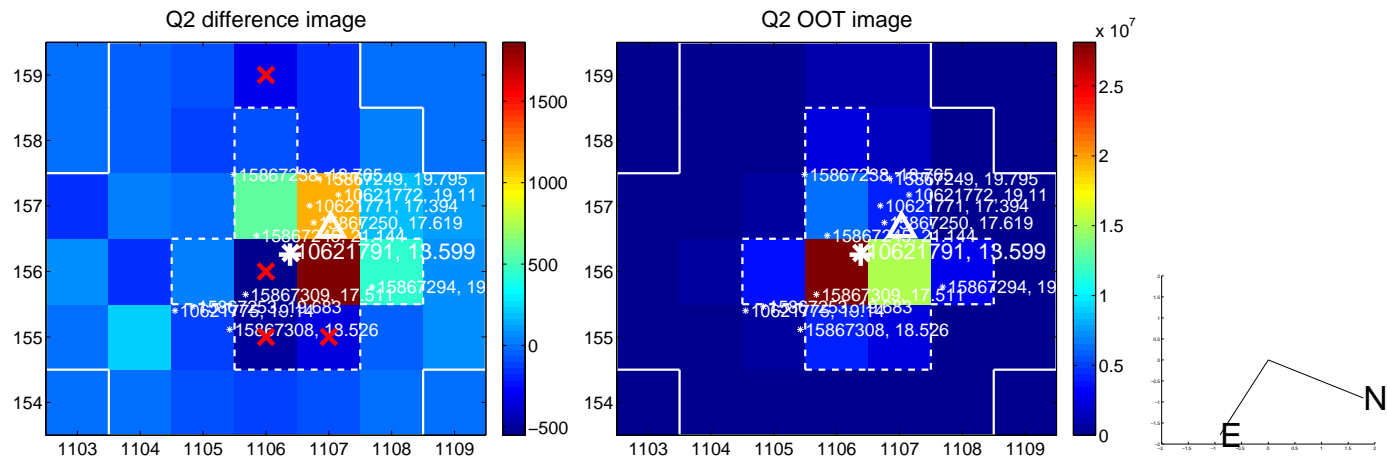
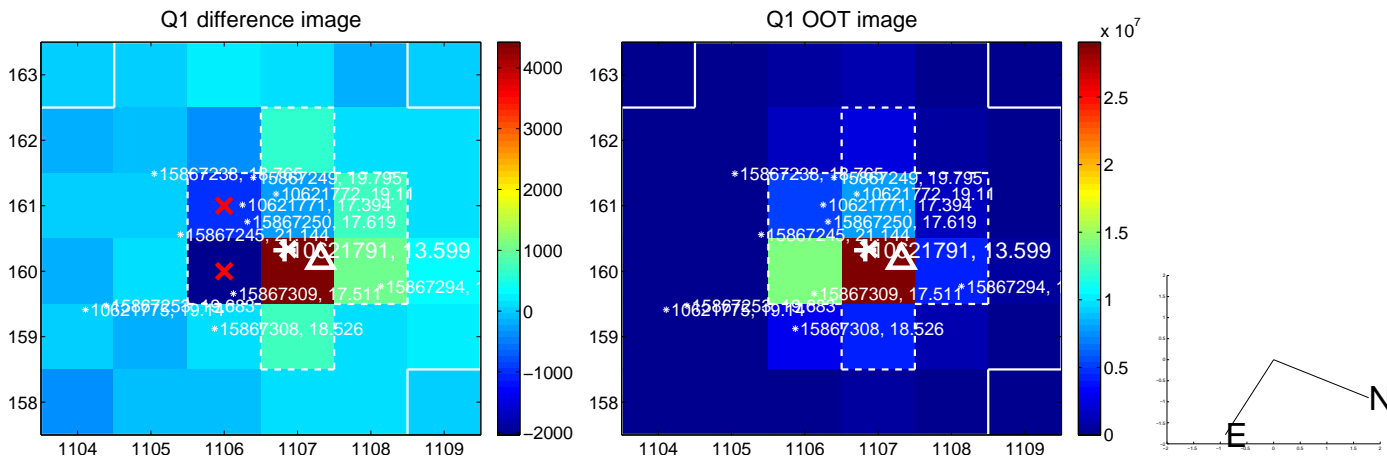
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.810 ± 0.645	1.26	0.348 ± 0.468	0.731 ± 0.679
PRF-fit source offset from KIC position	0.768 ± 0.599	1.28	0.490 ± 0.469	0.592 ± 0.673
photometric centroid source offset	1.34 ± 1.53	0.87	-1.25 ± 1.52	0.49 ± 1.62

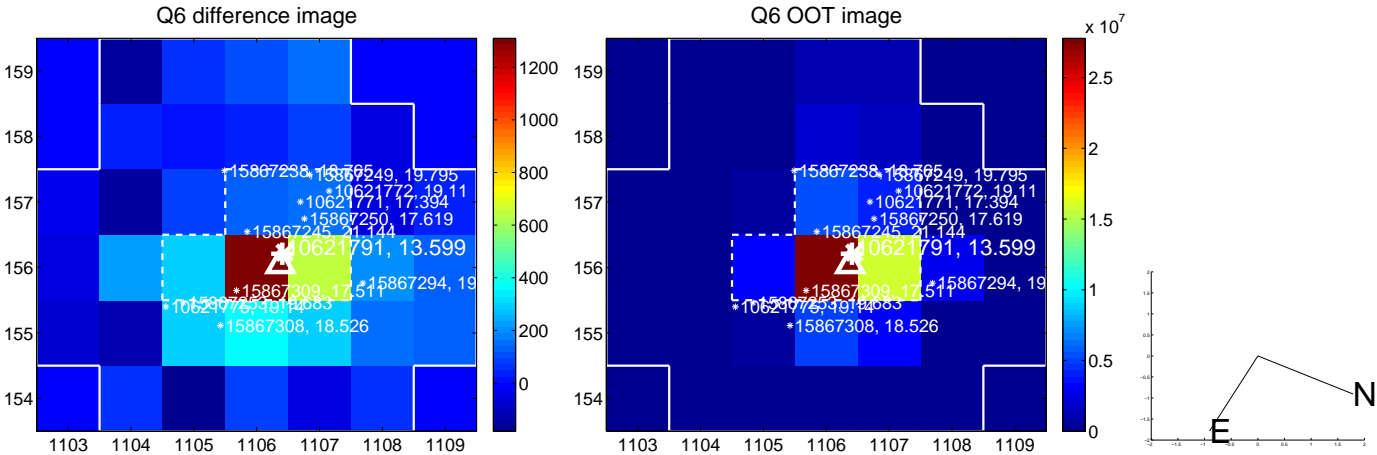
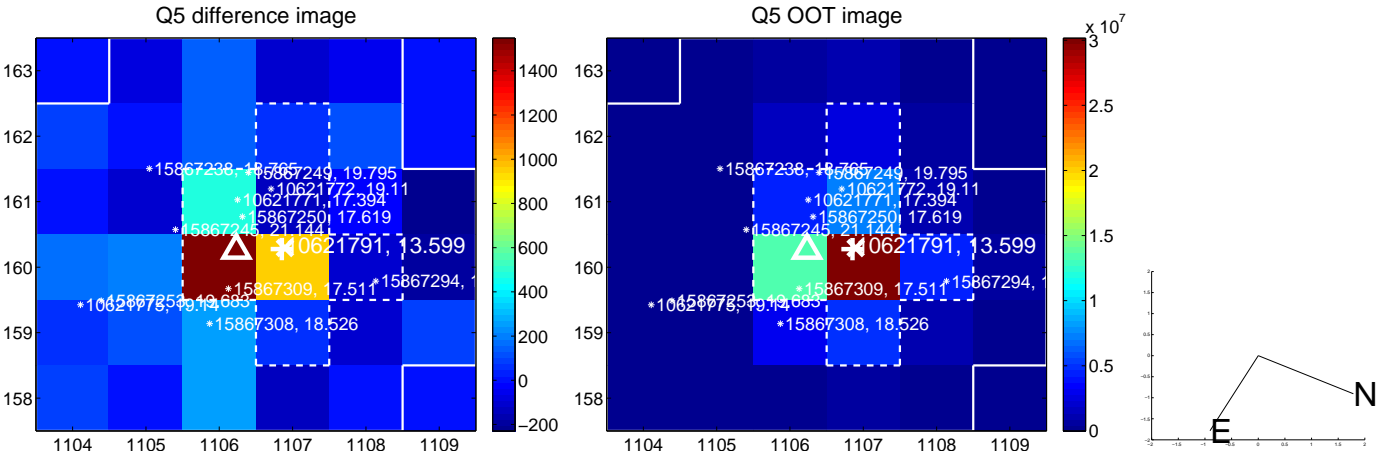


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

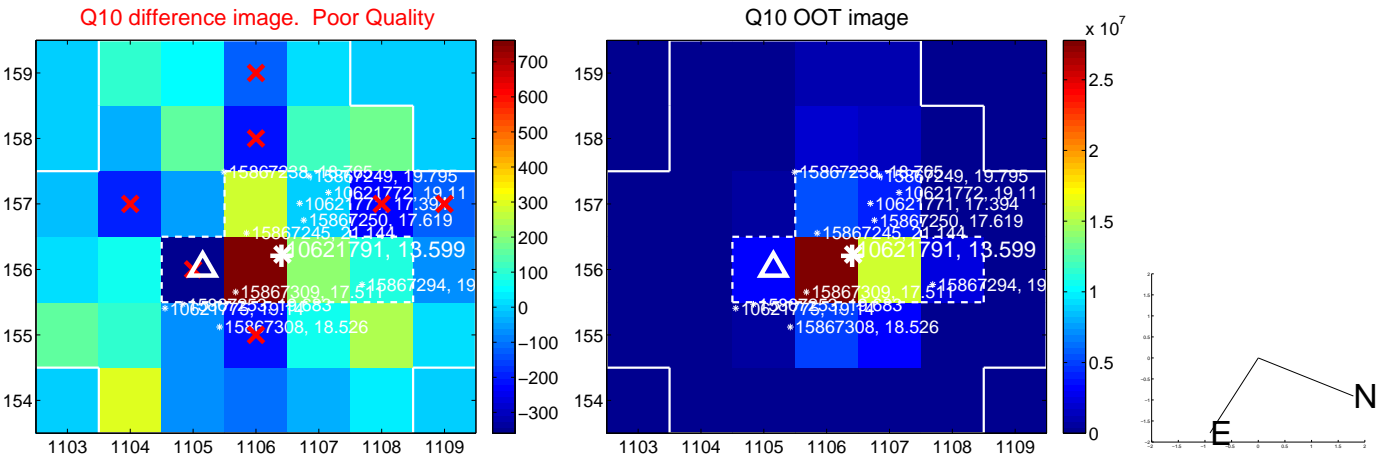
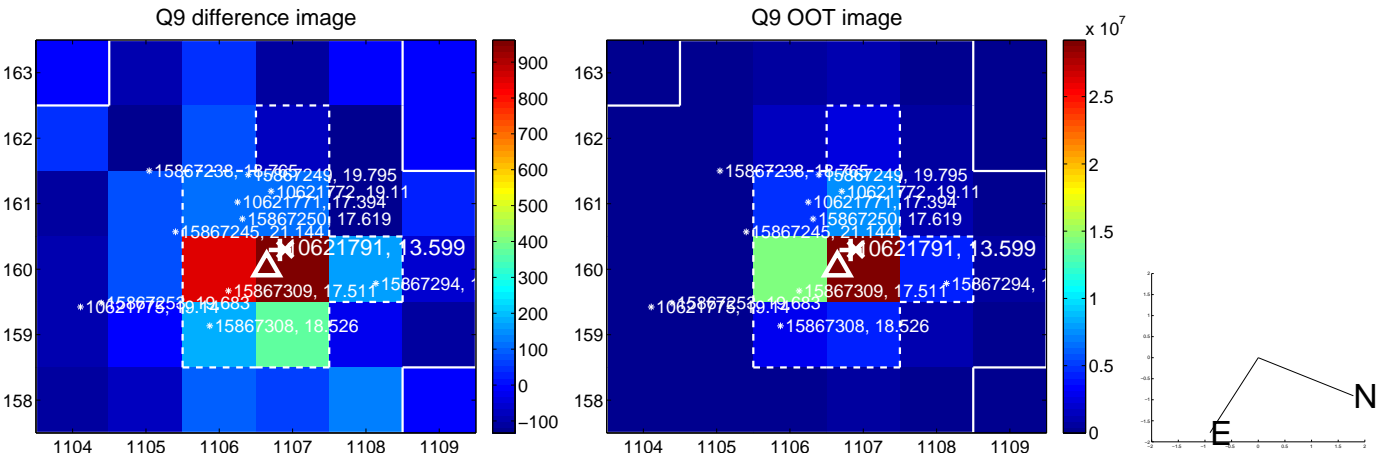
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



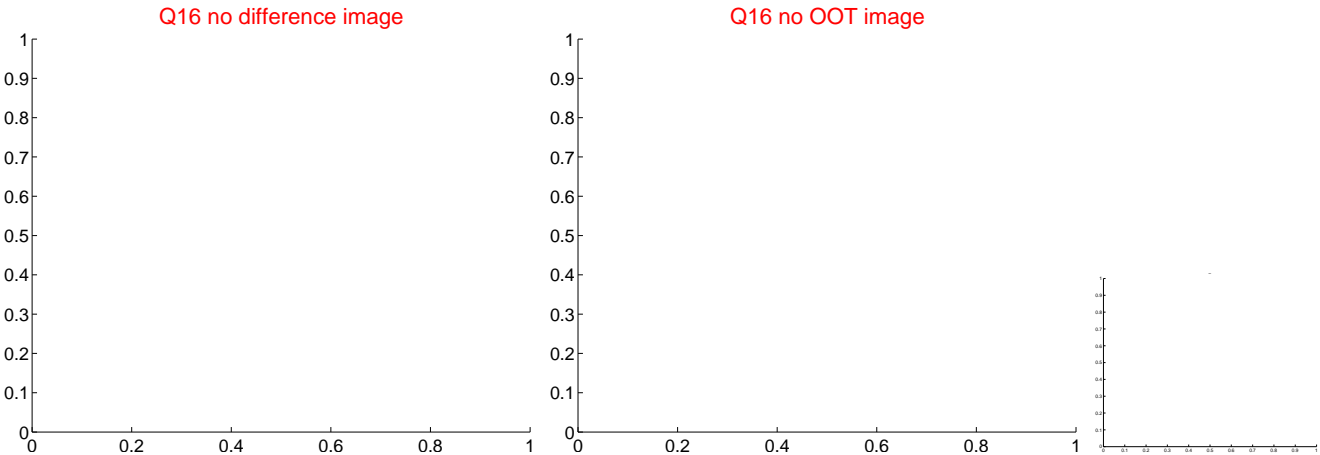
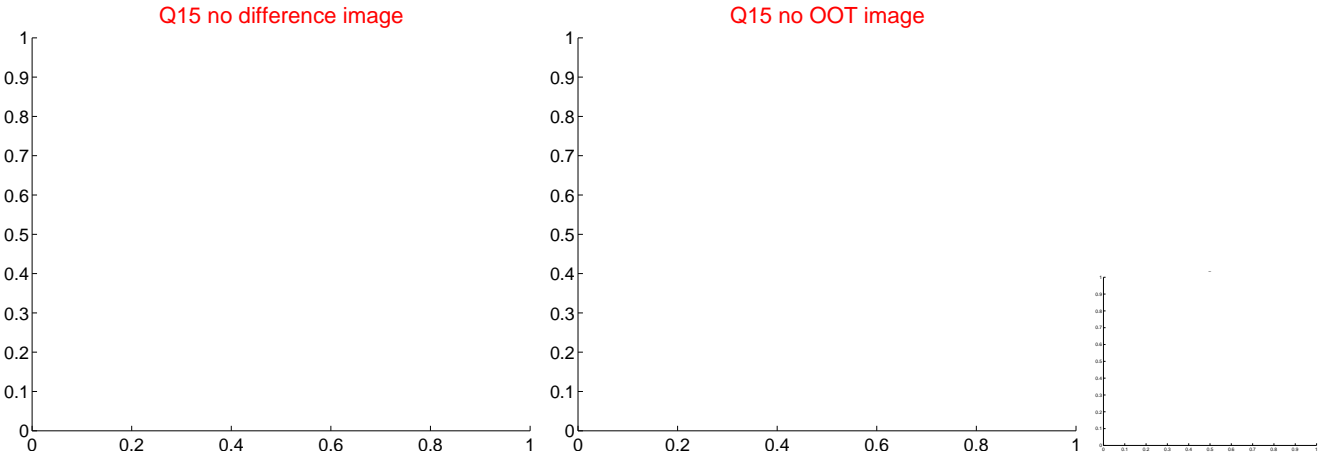
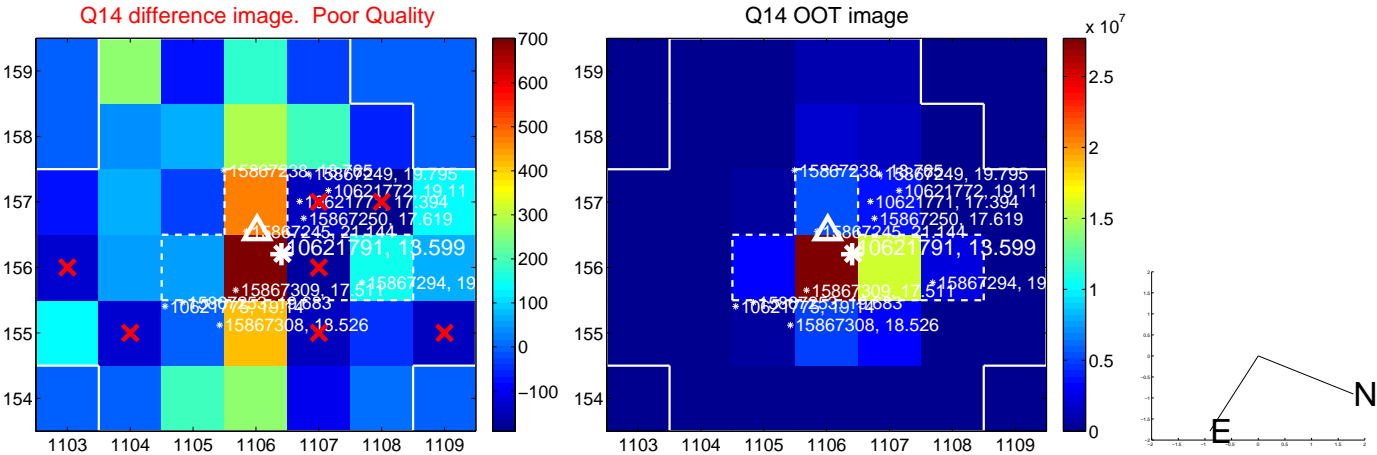
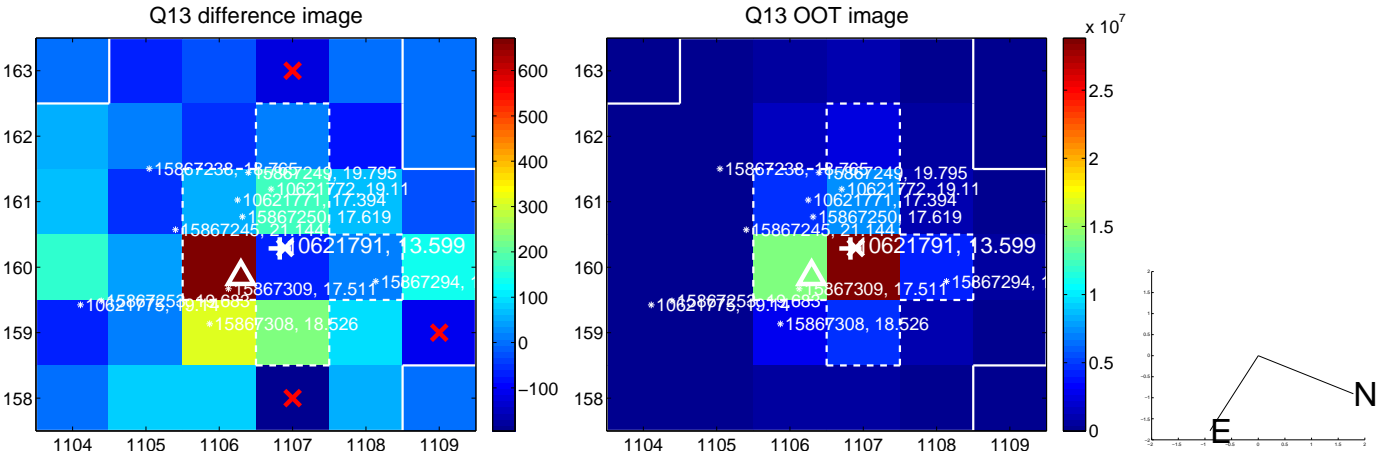
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



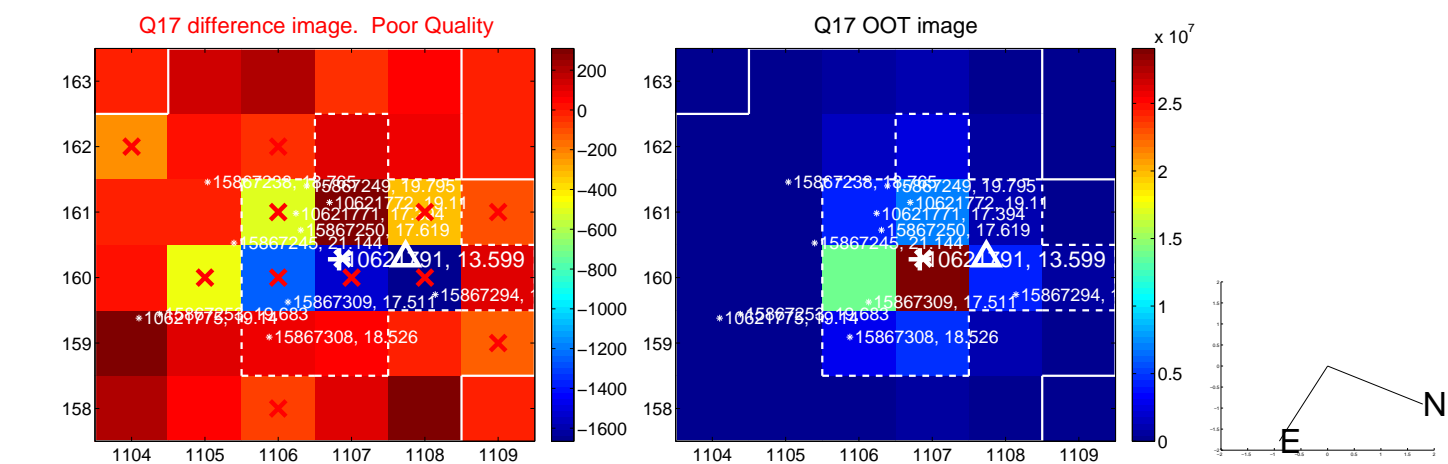
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



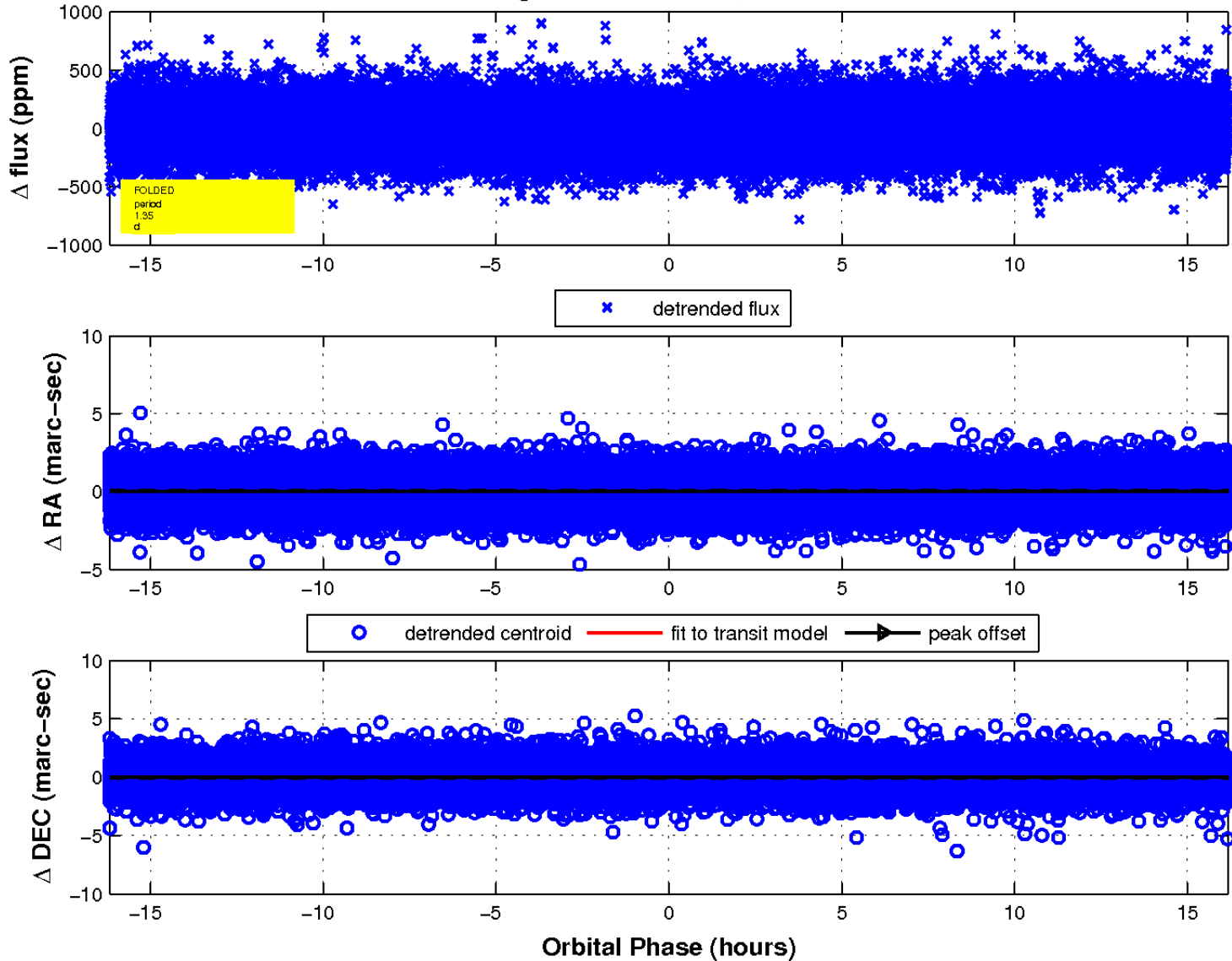
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

