

KIC 003728947

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})
003728947-01	OBS	No	432.931371	418.063584	484.9	3.682	8.1	8.1	1.55	5952	3.87	1.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003728947-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

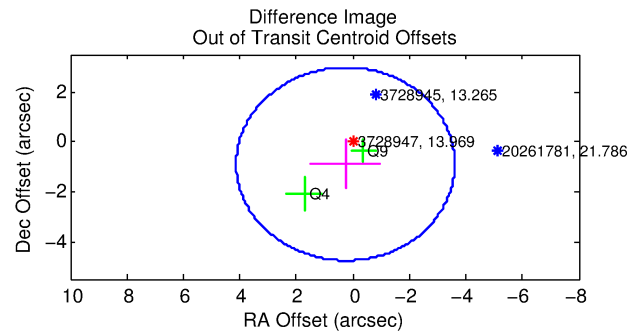
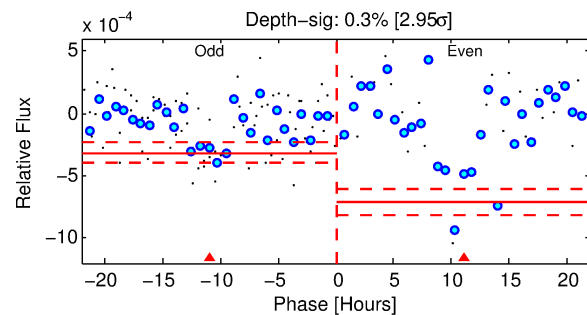
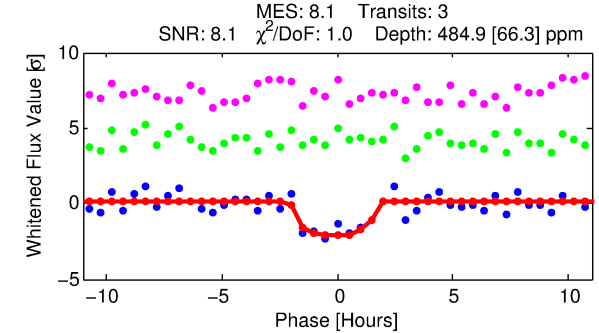
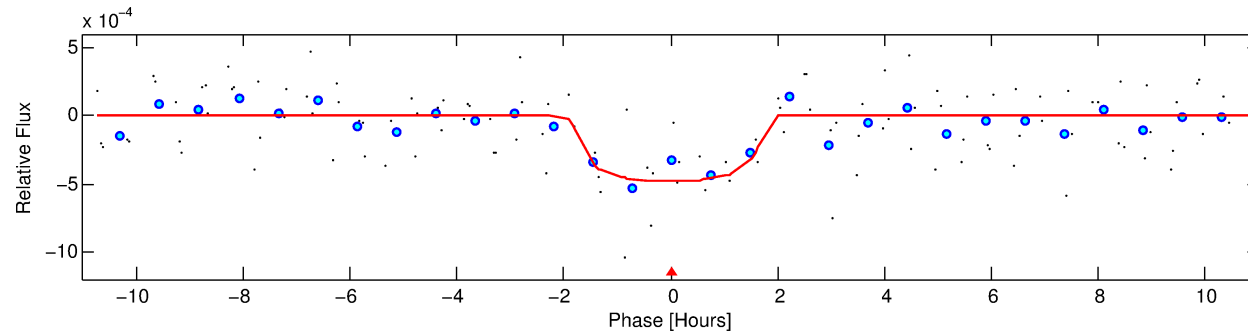
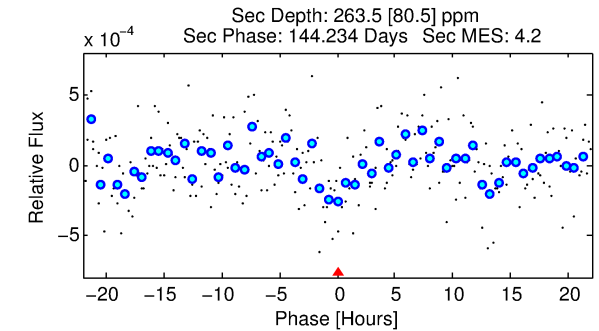
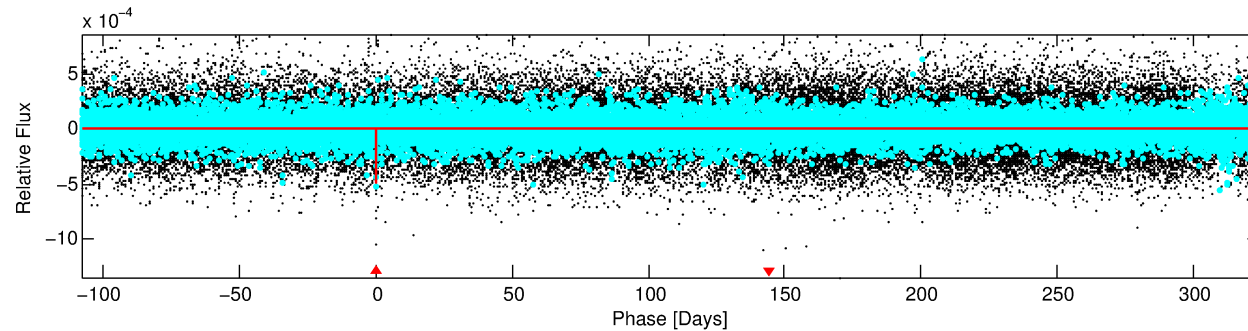
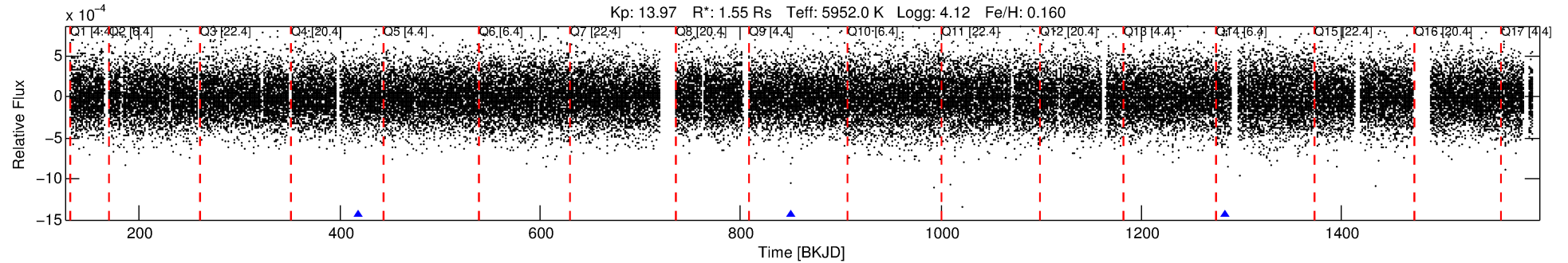
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003728947-01

No Significant Match Found

DV One-Page Summary

KIC: 3728947 Candidate: 1 of 1 Period: 432.931 d



DV Fit Results:

Period = 432.93137 [0.00747] d
Epoch = 418.0636 [0.0081] BKJD
Rp/R* = 0.0230 [0.0175]
a/R* = 516.37 [1858.98]
b = 0.85 [1.22]
Seff = 1.96 [0.94]
Teq = 302 [36] K
Rp = 3.87 [3.17] Re
a = 1.1716 [0.3370] AU
Ag = 13267.51 [21534.05] [0.62σ]
Teffp = 5005 [1953] K [2.41σ]

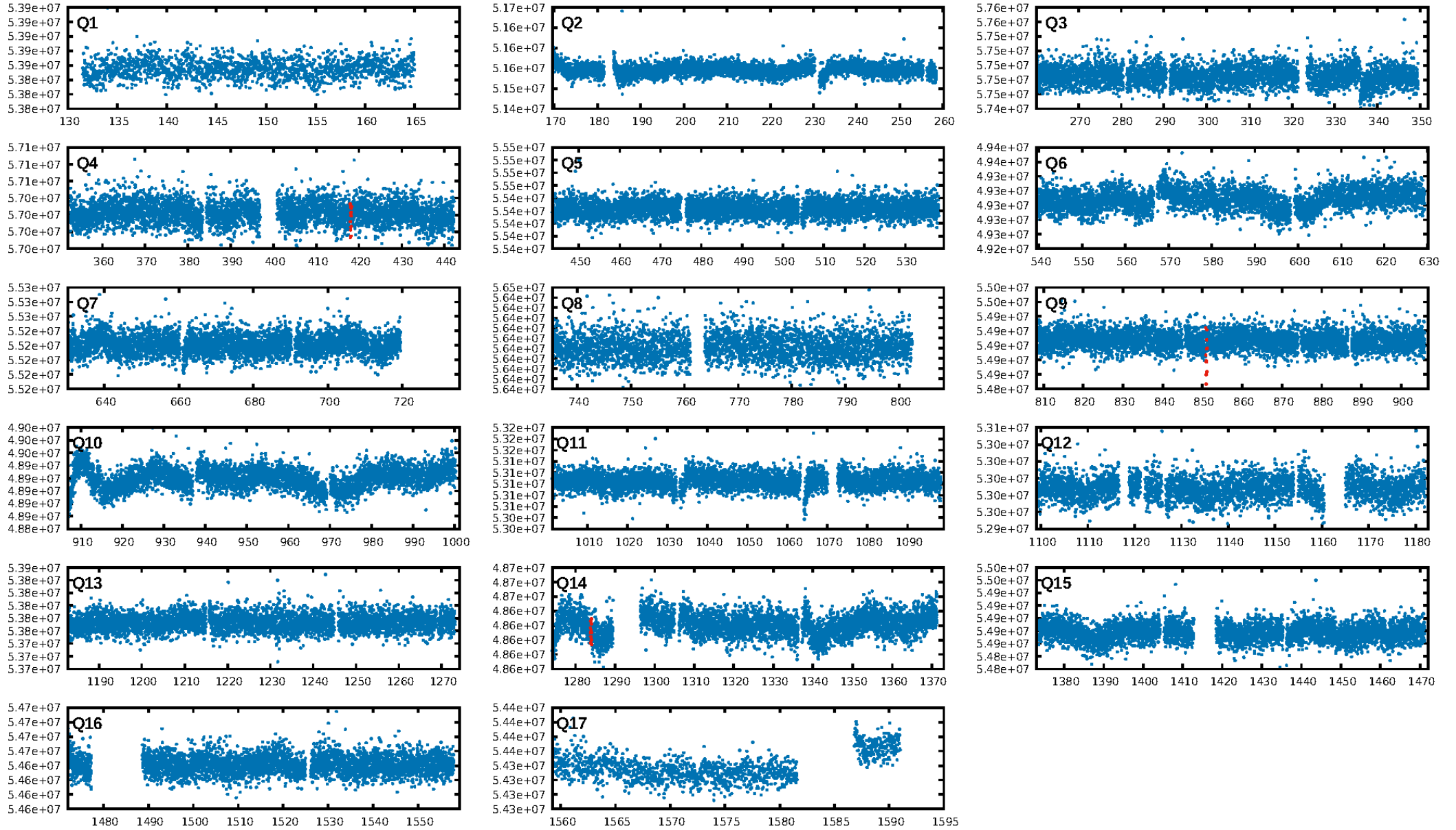
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.4%
ModelChiSquareGof-sig: 95.7%
Bootstrap-pfa: 3.90e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.676
Centroid-sig: 82.6%
Centroid-so: 1.626 arcsec [1.17σ]
OotOffset-rm: 0.932 arcsec [0.72σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 0.340 arcsec [0.42σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

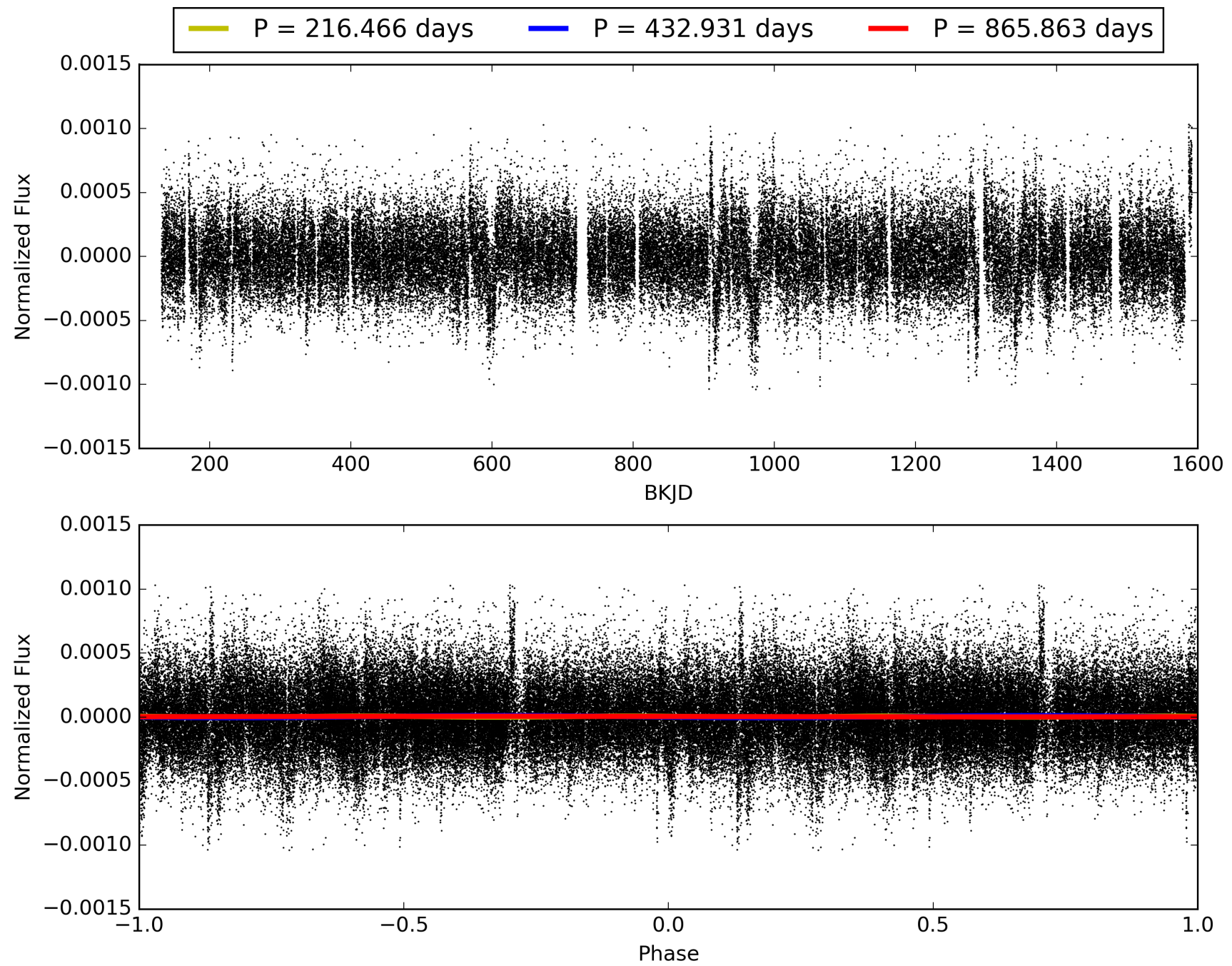
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:58:49 Z

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

TCE 003728947-01, PDC Light Curves

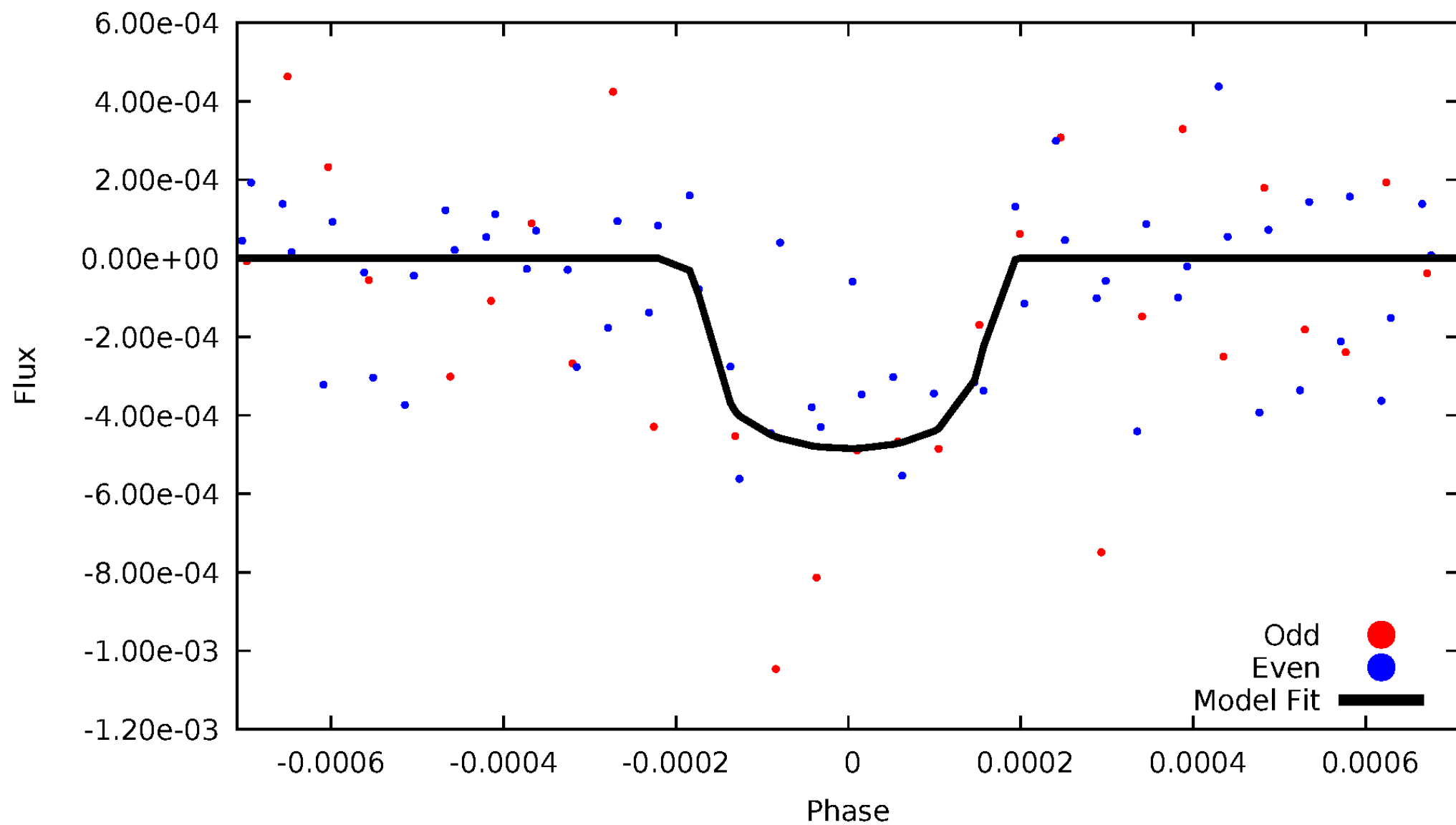


TCE 003728947-01



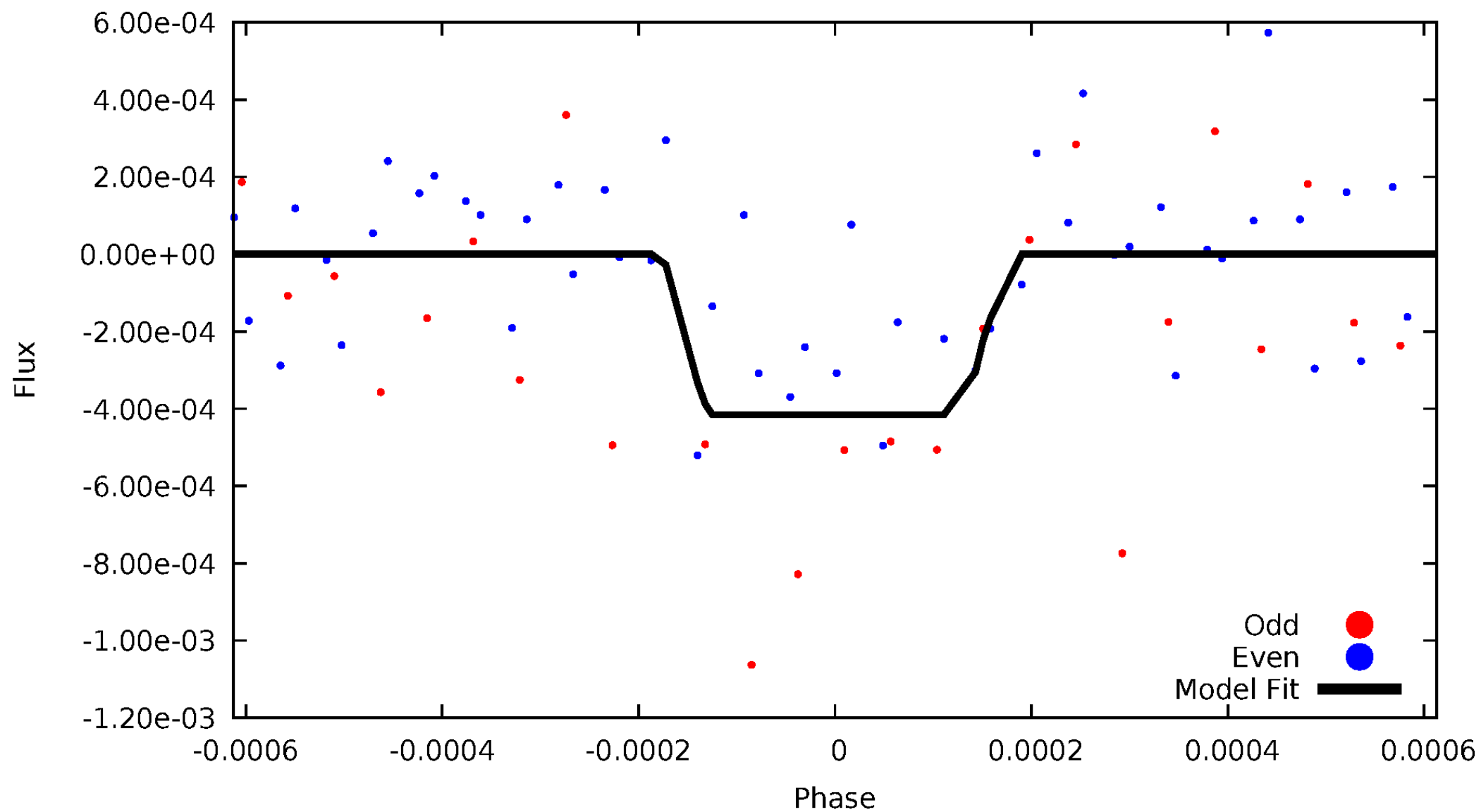
DV Odd/Even

TCE 003728947-01

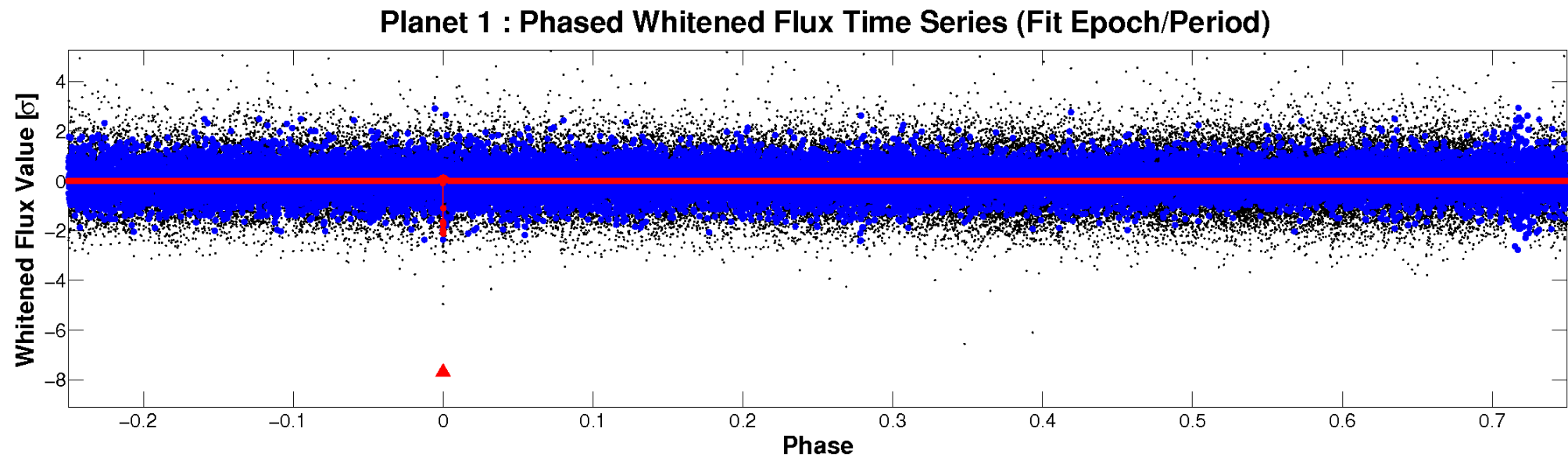
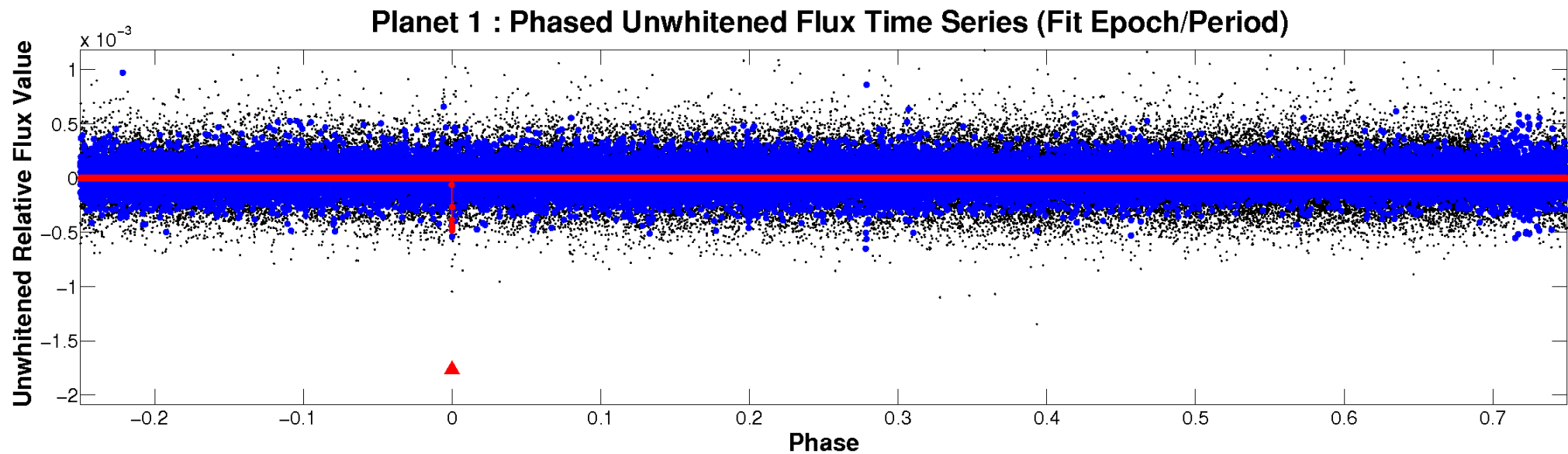


ALT Odd/Even

TCE 003728947-01

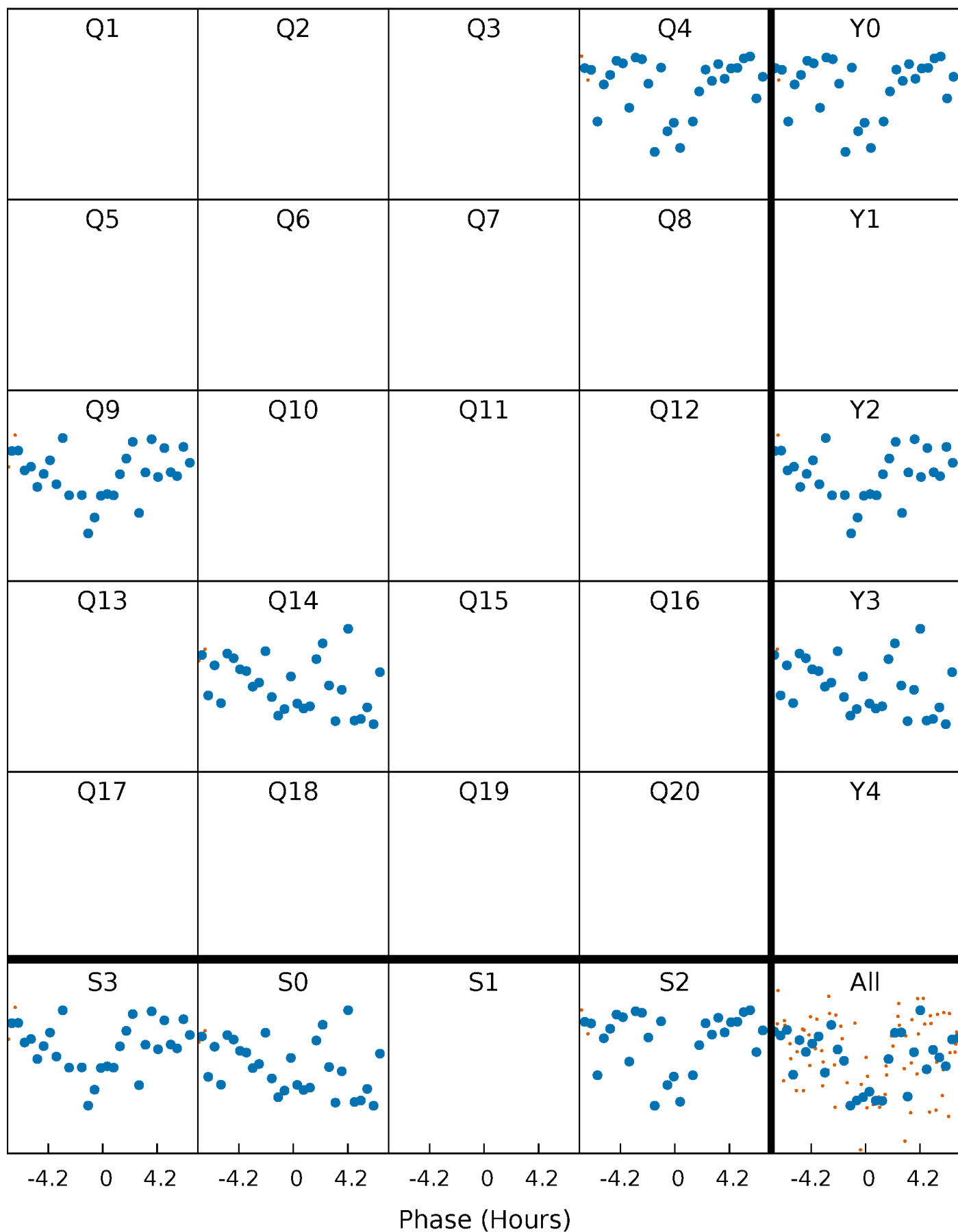


Non-Whitened Vs. Whitened Light Curve



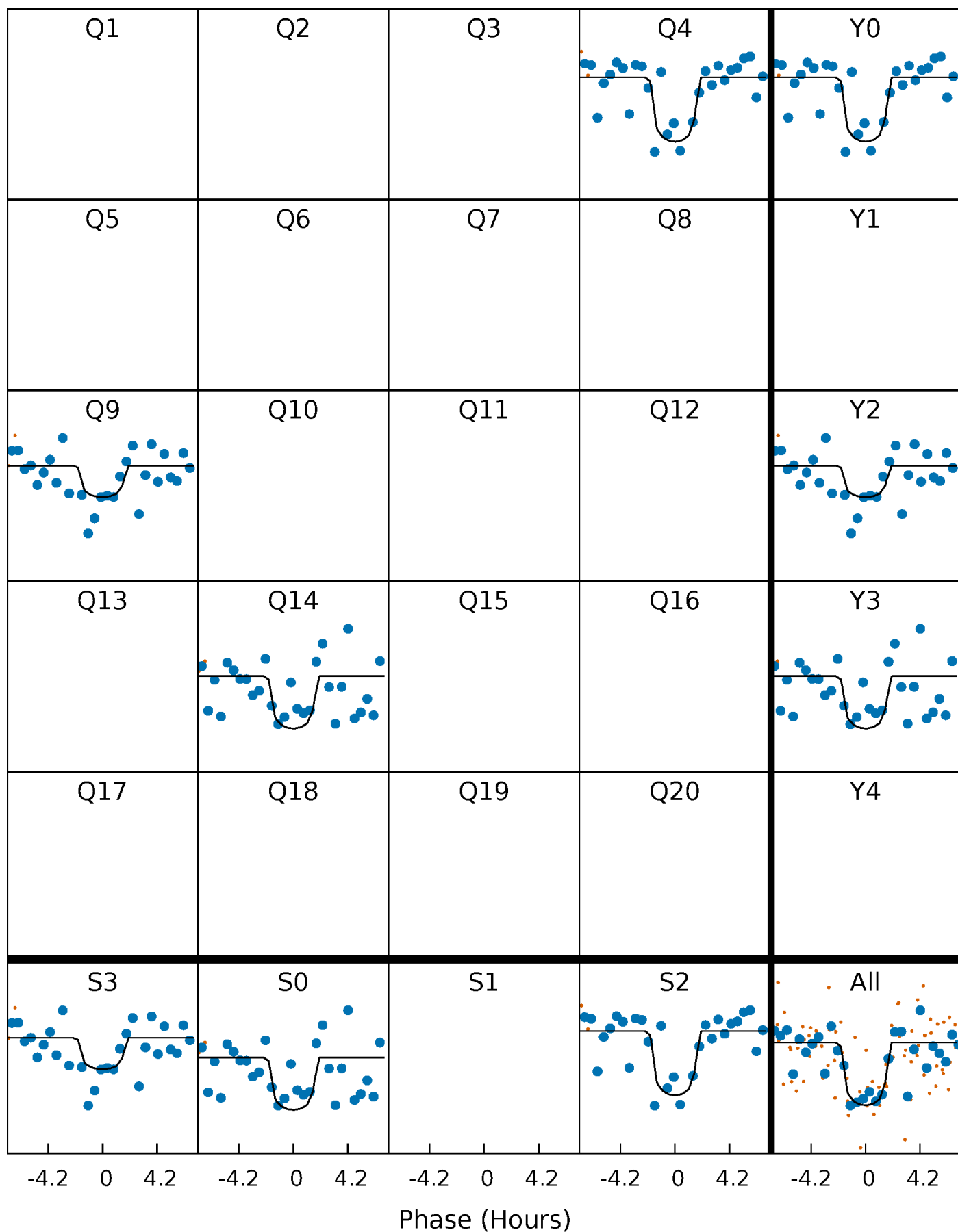
PDC Quarter-Phased Transit Curves

TCE 003728947-01 P=432.931372 Days $T_0=418.063584$ (BKJD)



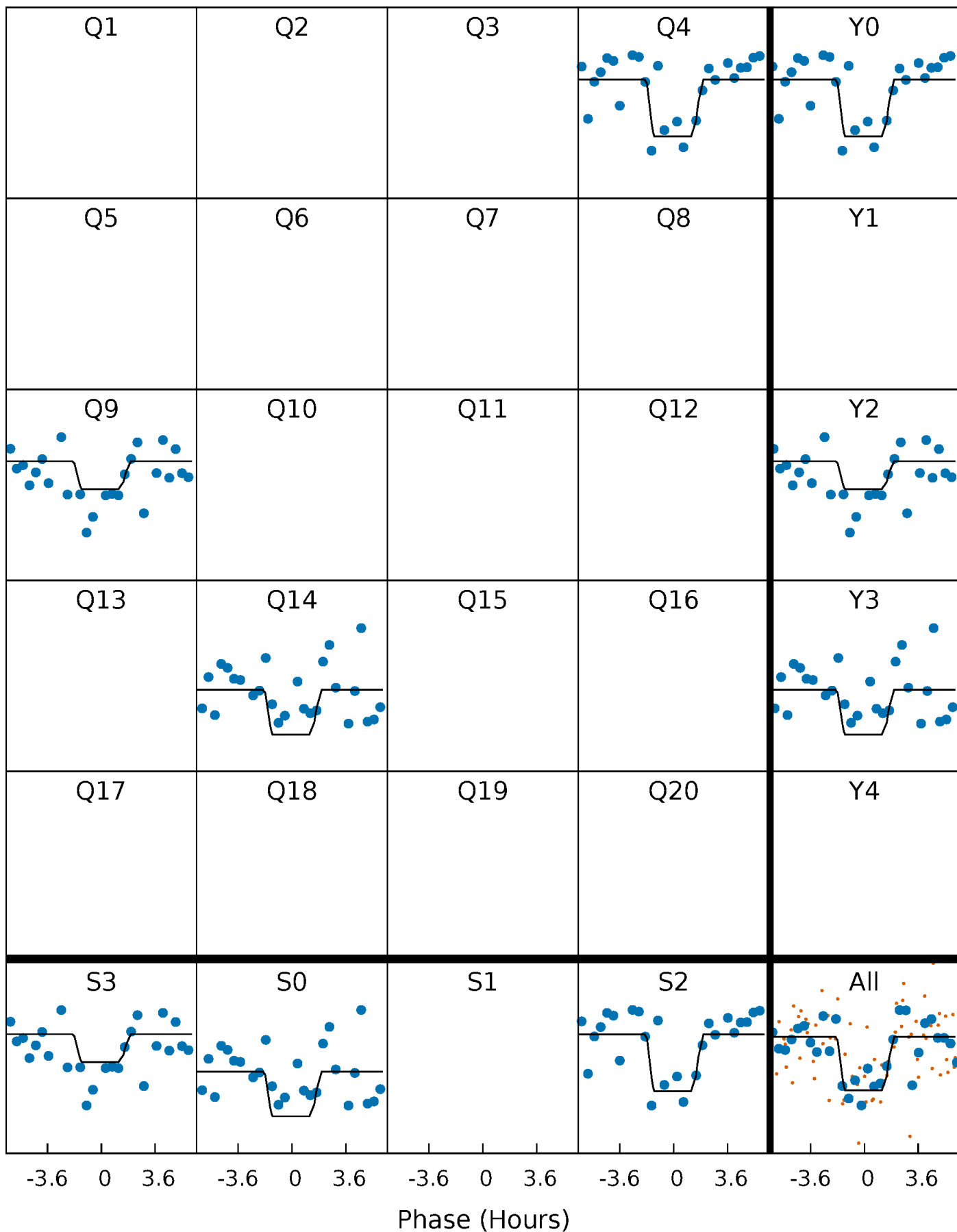
DV Quarter-Phased Transit Curves

TCE 003728947-01 P=432.931372 Days $T_0=418.063584$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

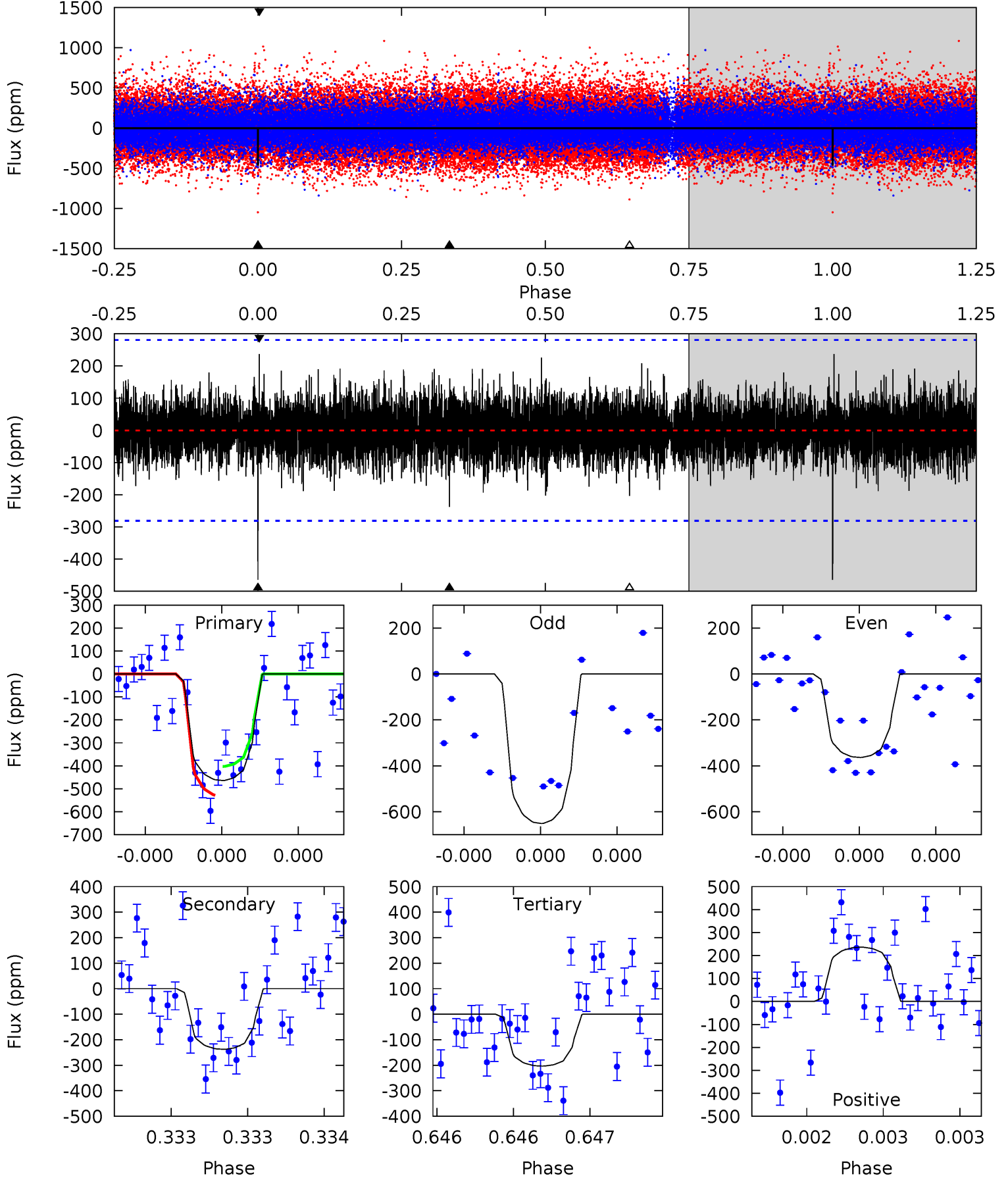
TCE 003728947-01 P=432.925836 Days $T_0=418.069509$ (BKJD)



DV Model-Shift Uniqueness Test

003728947-01, P = 432.931372 Days, E = 418.063584 Days

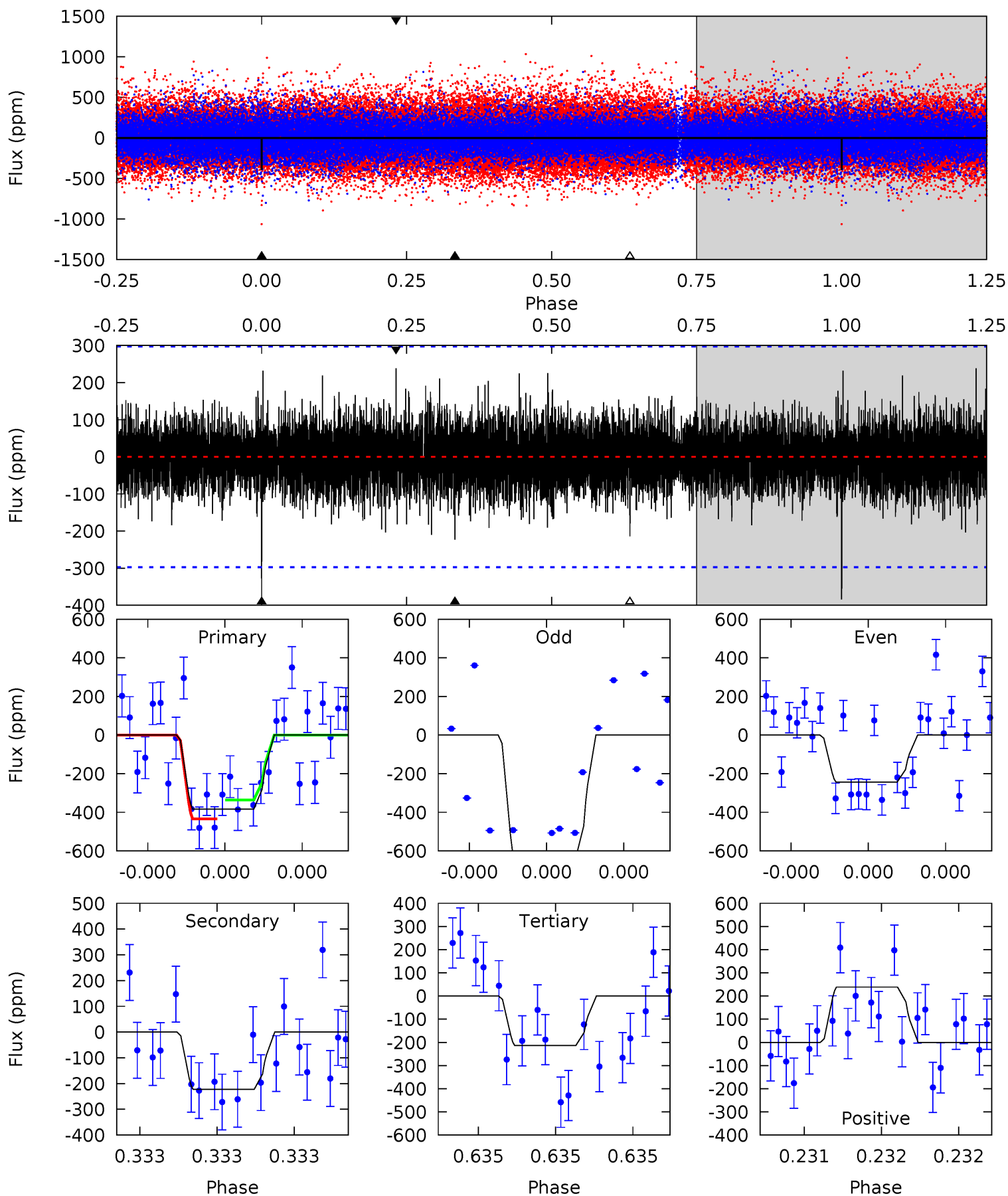
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.30	4.76	4.07	4.74	5.63	3.56	1.10	5.23	4.57	0.69	0.02	2.76	1.15	0.34	1.26



Alt Model-Shift Uniqueness Test

003728947-01, P = 432.925836 Days, E = 418.069509 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.31	4.24	4.07	4.54	5.66	3.62	1.02	3.24	2.77	0.17	-0.30	3.70	1.16	0.38	0.93



Stellar Parameters For KIC 003728947

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5952^{+166}_{-187}	$4.118^{+0.273}_{-0.147}$	$0.160^{+0.200}_{-0.300}$	$1.546^{+0.412}_{-0.457}$	$1.143^{+0.144}_{-0.176}$	$0.436^{+0.785}_{-0.185}$
	+3%/-3%	+7%/-4%	+125%/-188%	+27%/-30%	+13%/-15%	+180%/-42%
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 003728947-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-238 ± 50	$4.16^{+2.92}_{-2.42}$	415^{+33}_{-35}	4727^{+2364}_{-856}	10093^{+44383}_{-6587}
Alt.	-223 ± 53	$3.56^{+3.13}_{-2.30}$	415^{+32}_{-35}	4946^{+3537}_{-996}	13042^{+93527}_{-9327}

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

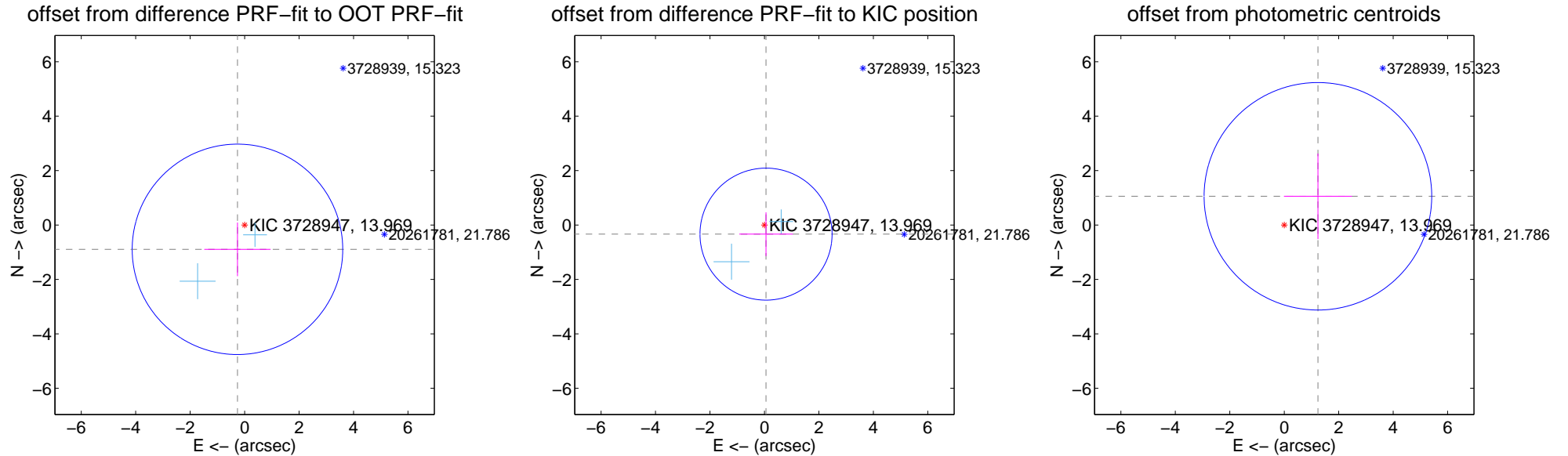
DV Centroid Data

Supplemental centroid analysis for 003728947-01. Kepler magnitude: 13.97. Transit SNR 8.06

There are 2 quarters with good PRF difference image offsets

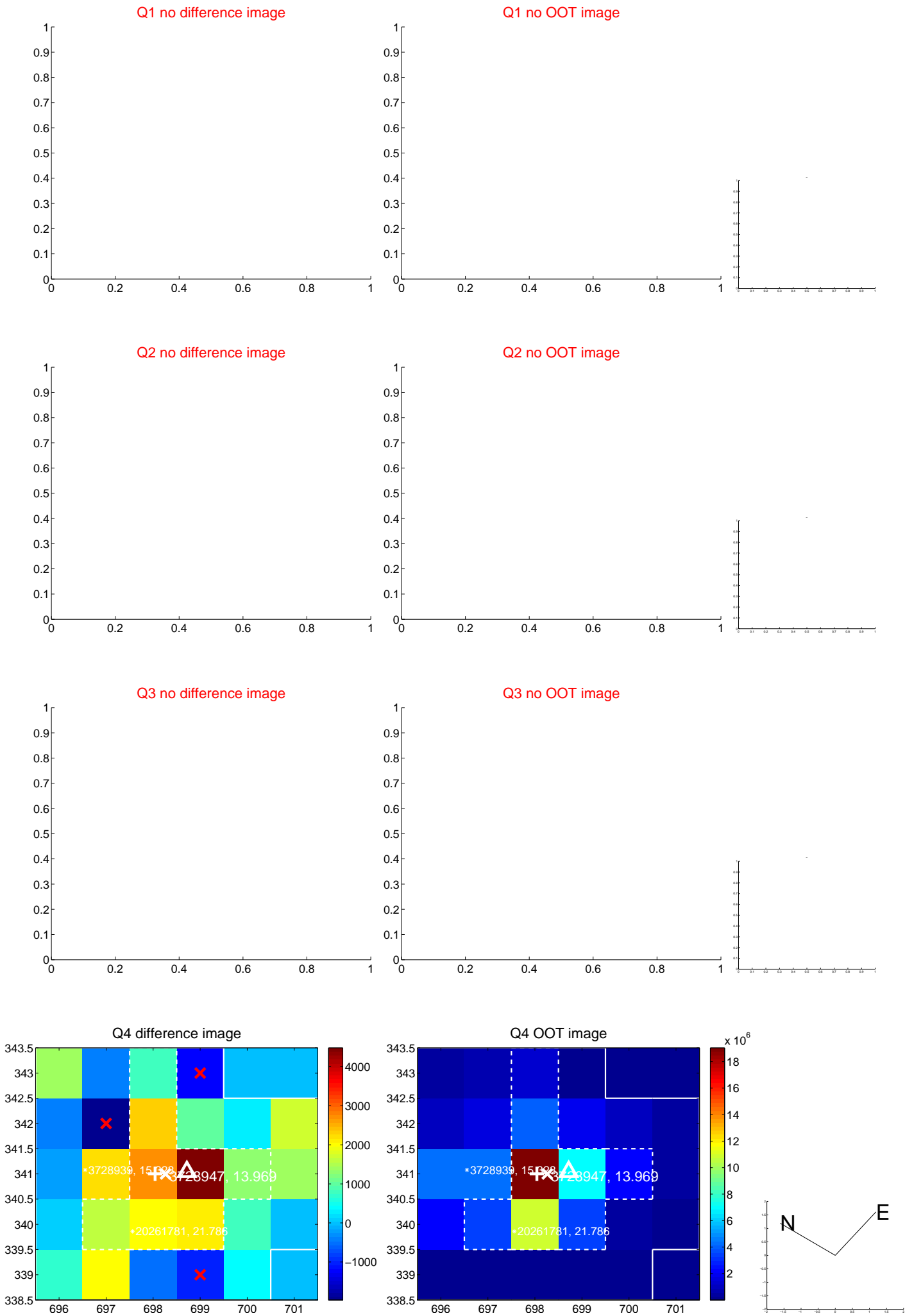
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.932 ± 1.289	0.72	0.263 ± 1.218	-0.894 ± 0.986
PRF-fit source offset from KIC position	0.340 ± 0.808	0.42	-0.059 ± 0.984	-0.335 ± 0.802
photometric centroid source offset	1.63 ± 1.39	1.17	-1.24 ± 1.25	1.06 ± 1.57



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.

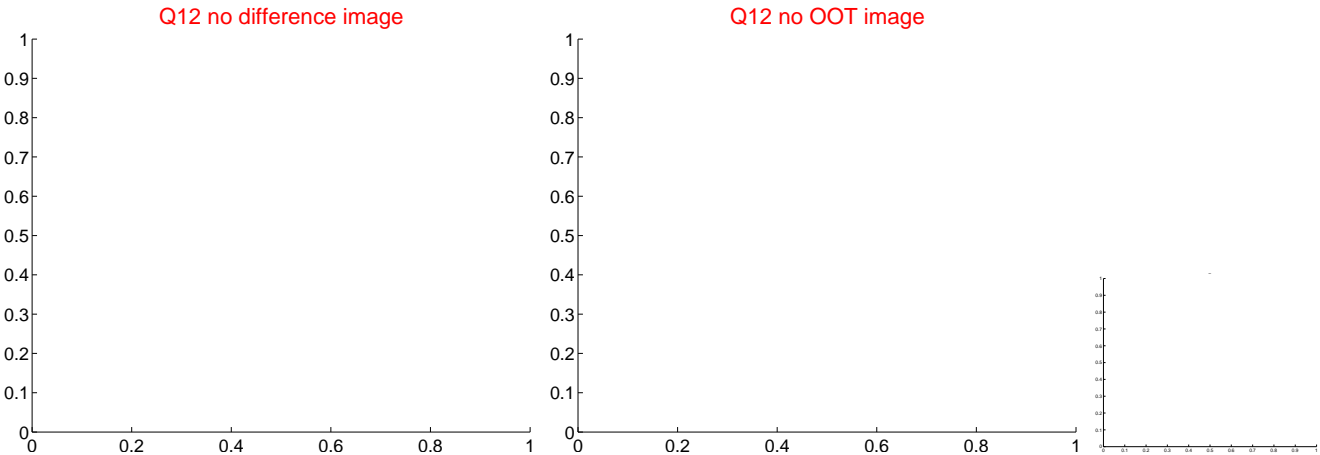
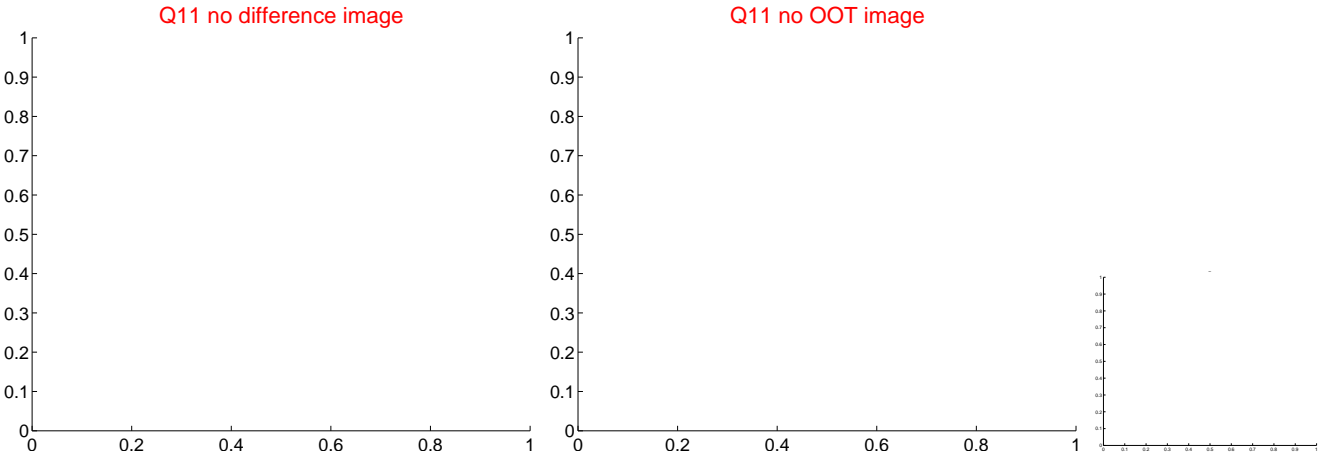
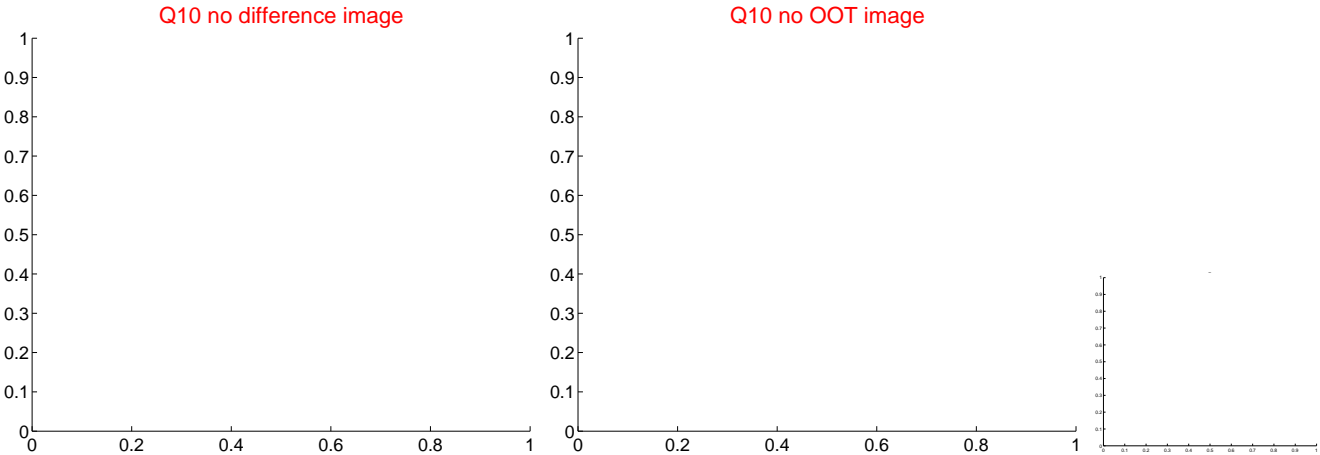
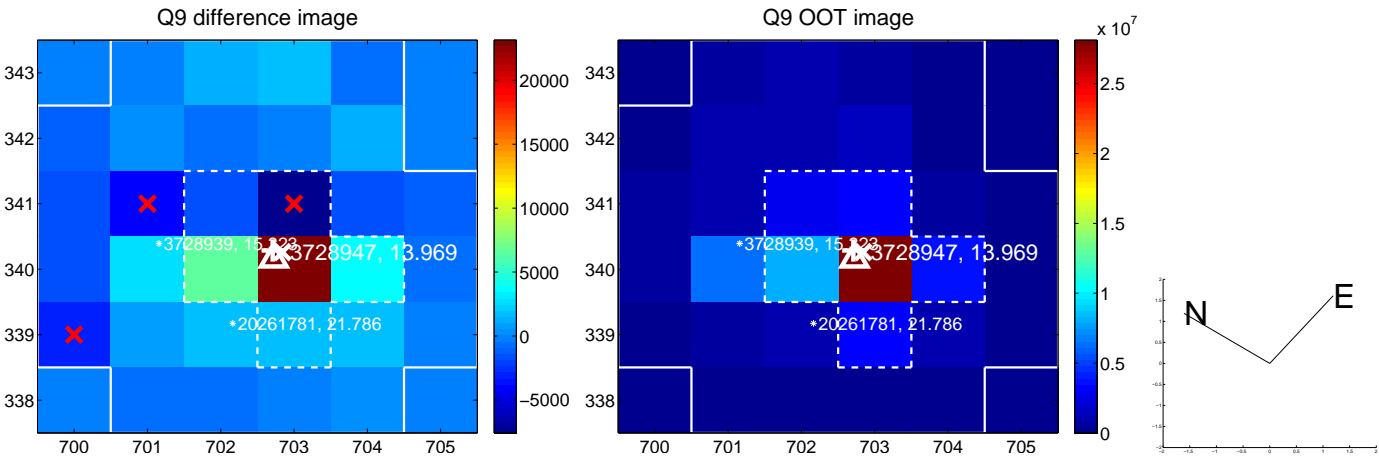
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



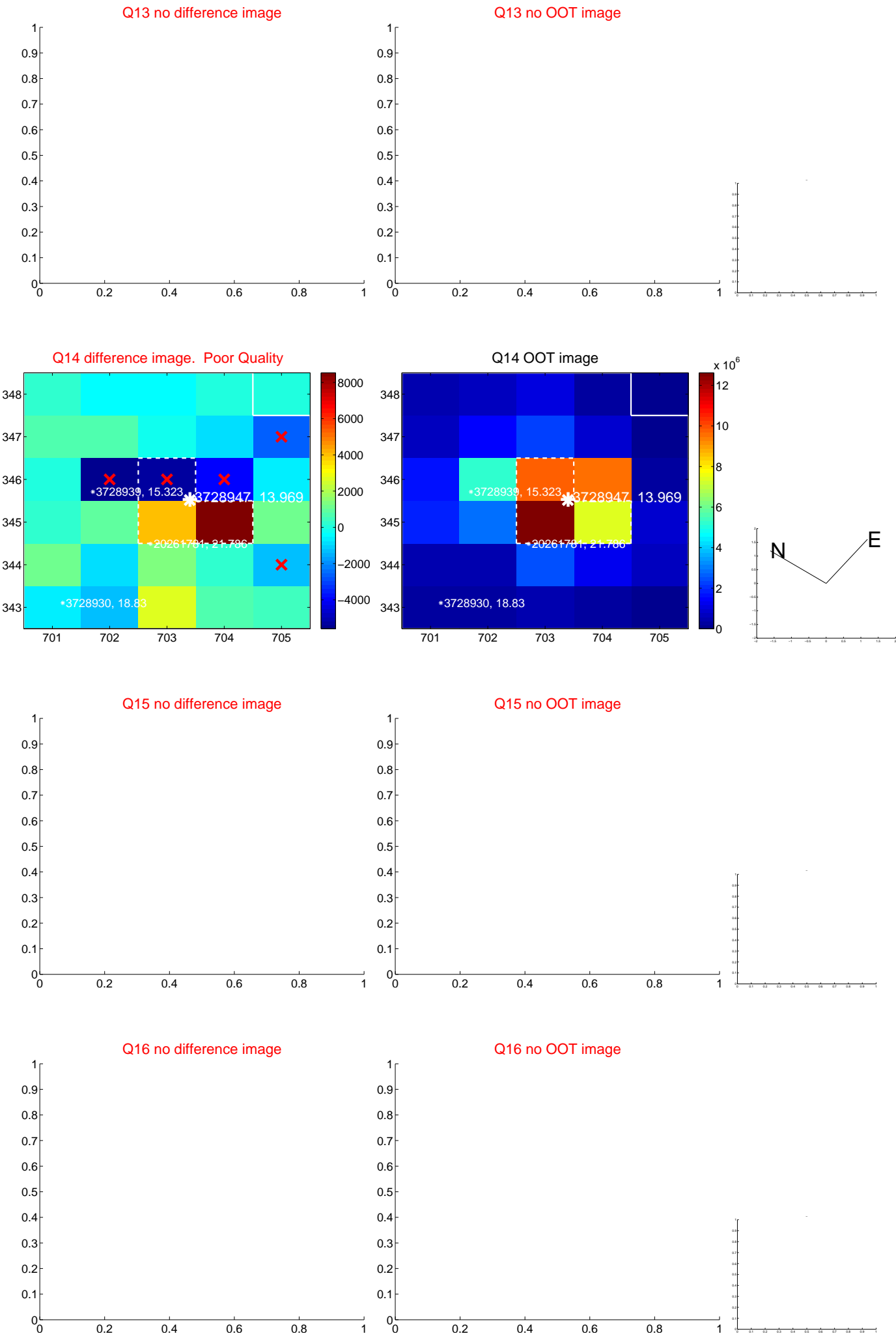
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



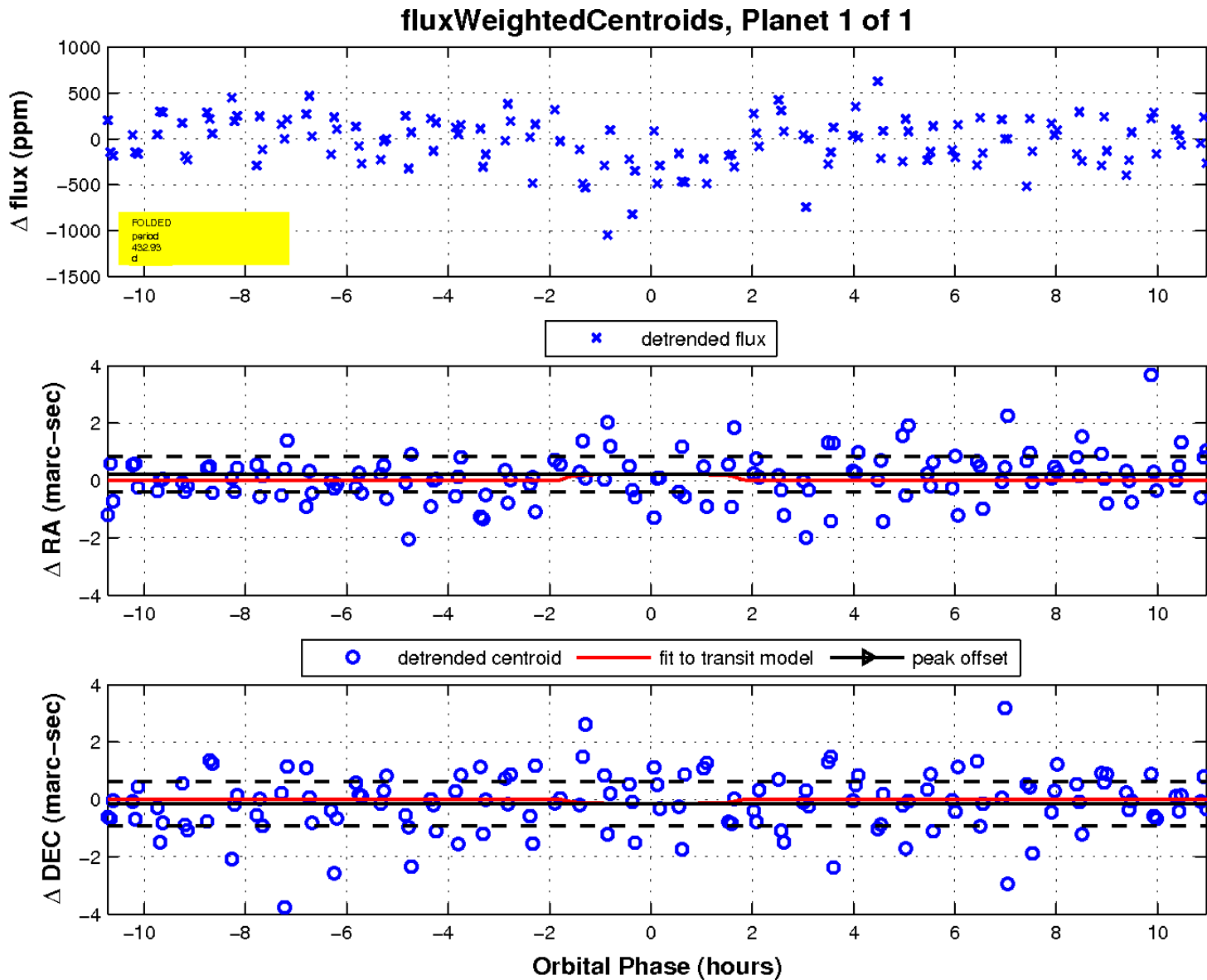
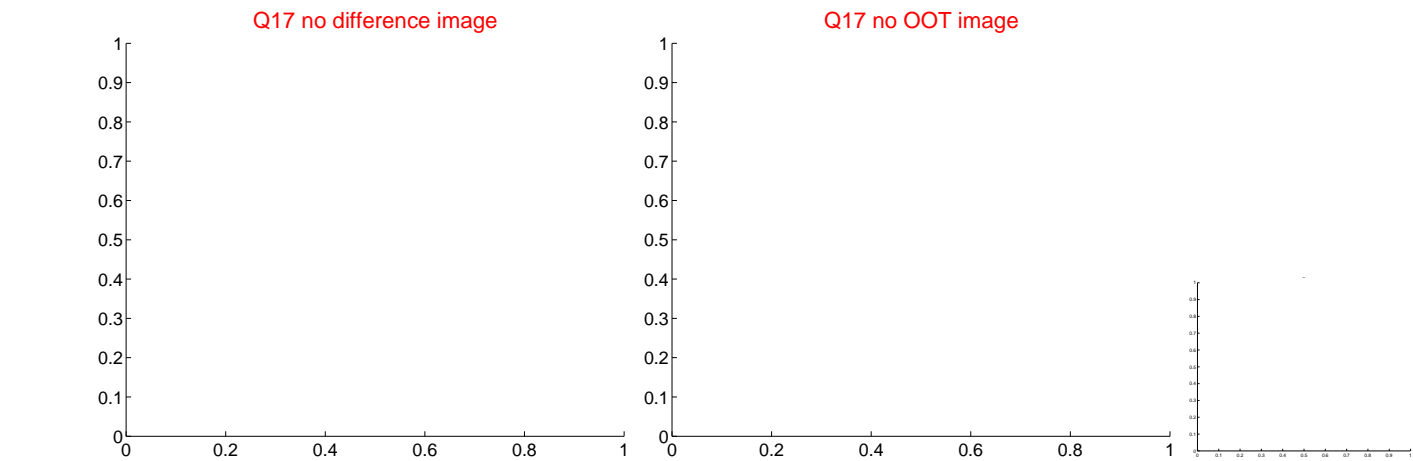
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UKIRT Image

Declination

