

KIC 010797920

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})
010797920-01	OBS	No	570.824476	279.996075	372.8	15.774	7.8	7.4	0.95	6045	2.19	0.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010797920-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—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.

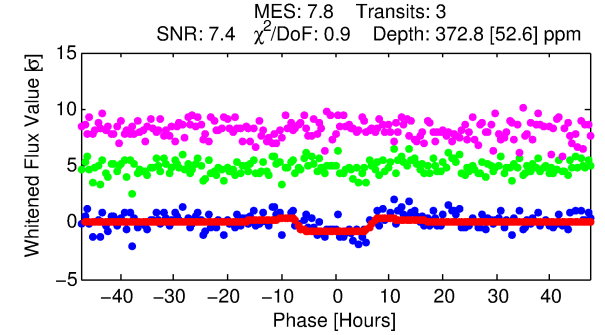
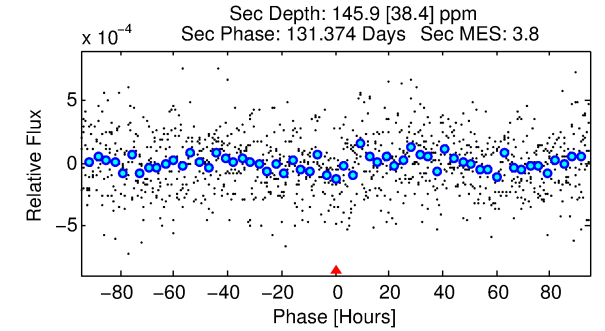
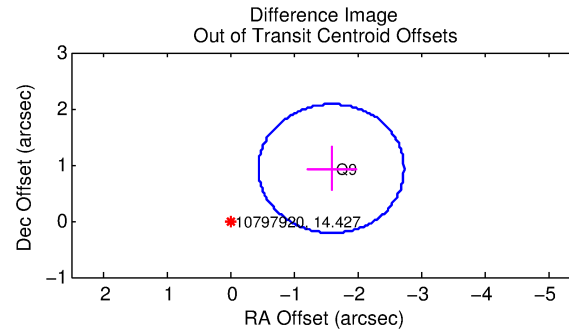
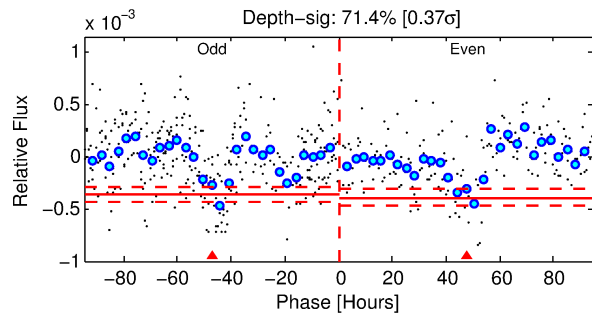
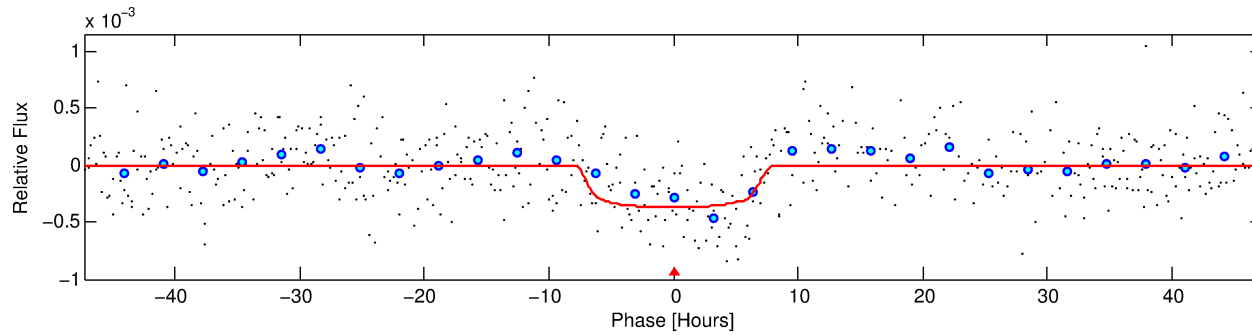
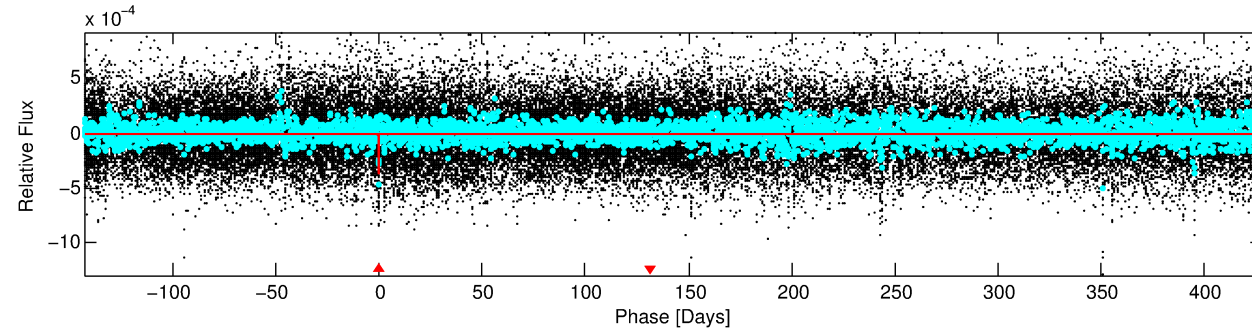
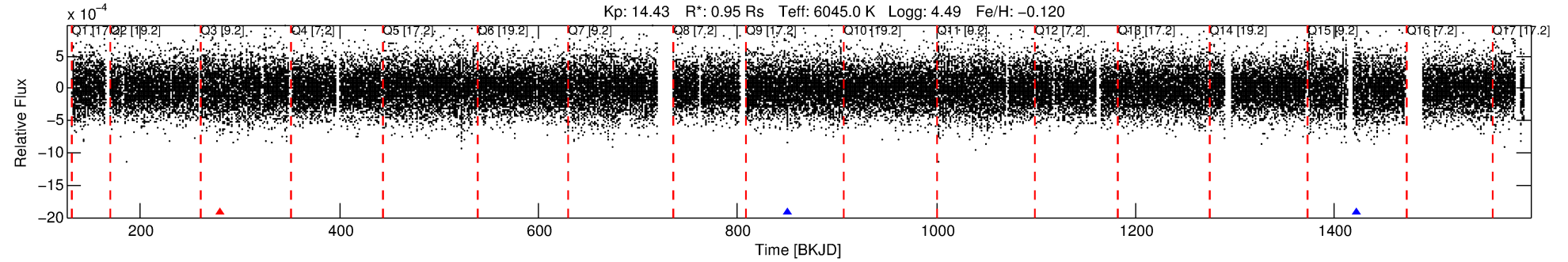
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010797920-01

No Significant Match Found

DV One-Page Summary

KIC: 10797920 Candidate: 1 of 1 Period: 570.824 d



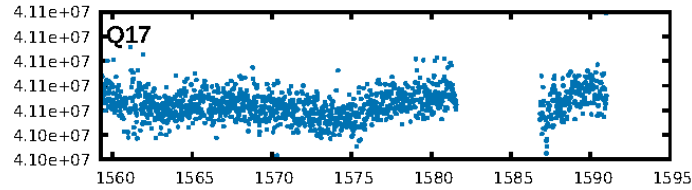
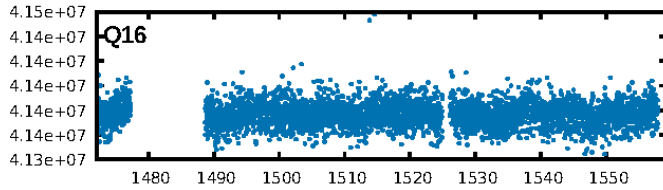
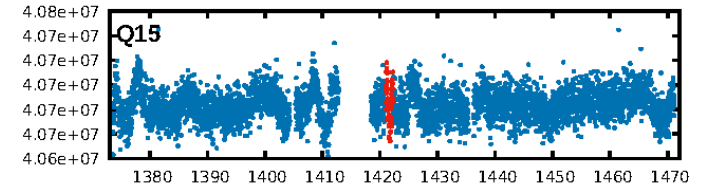
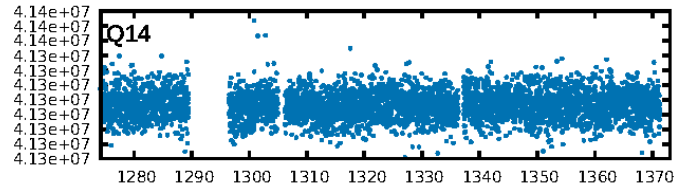
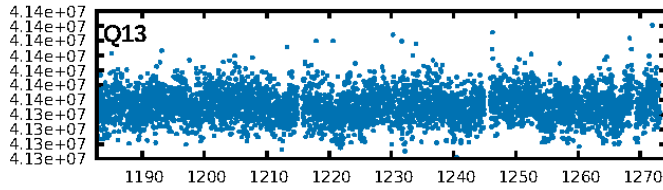
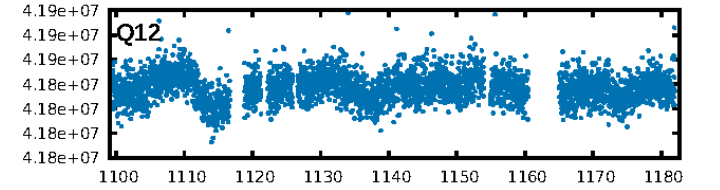
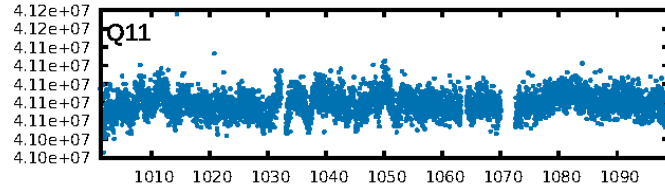
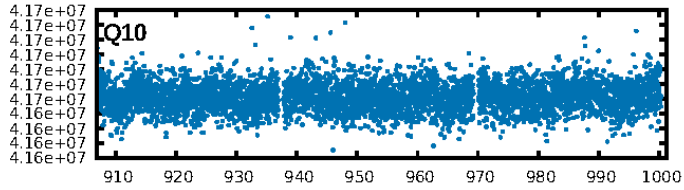
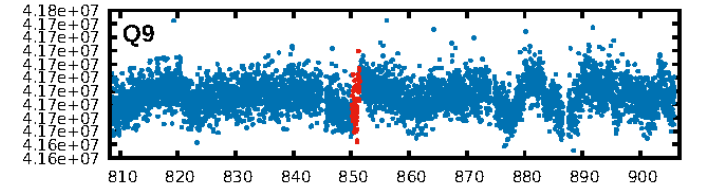
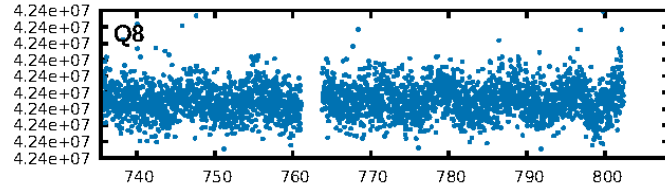
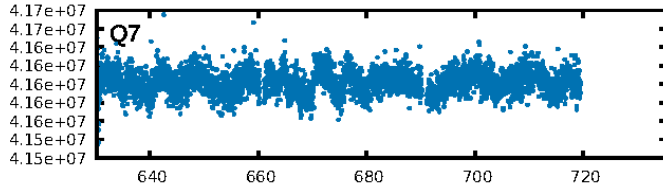
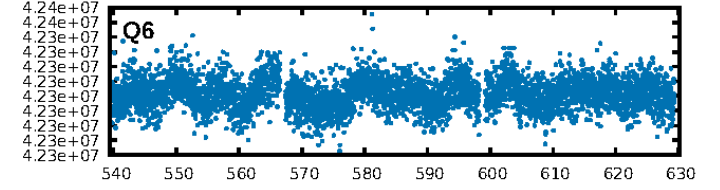
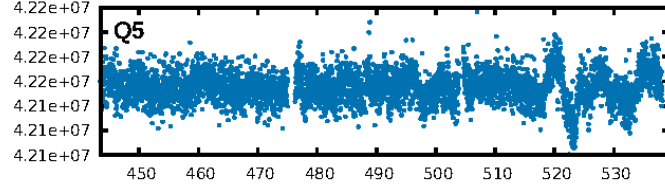
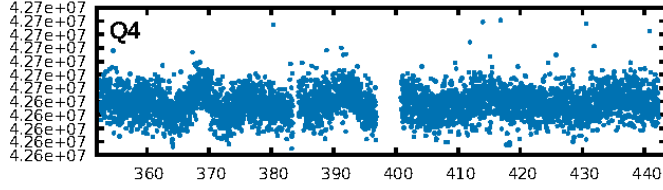
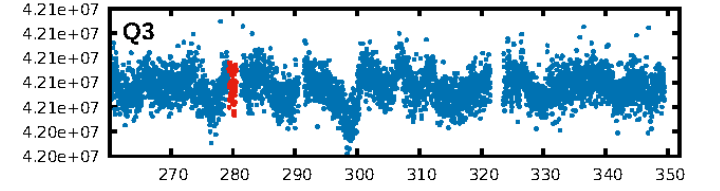
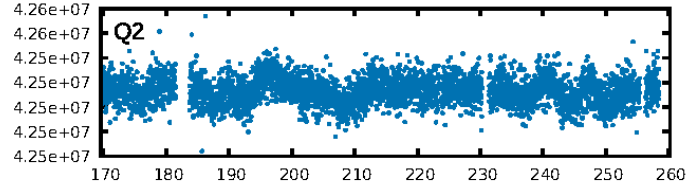
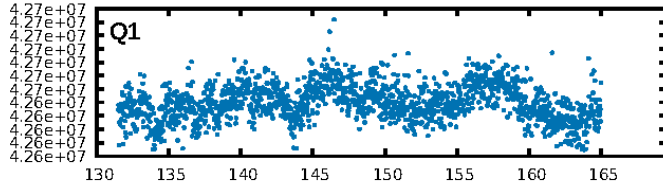
DV Fit Results:

Period = 570.82448 [0.01913] d
Epoch = 279.9961 [0.0234] BKJD
Rp/R* = 0.0211 [0.0026]
a/R* = 127.68 [62.49]
b = 0.91 [0.09]
Seff = 0.59 [0.24]
Teff = 223 [23] K
Rp = 2.20 [0.74] Re
a = 1.3636 [0.3591] AU
Ag = 30971.26 [16313.87] [1.90 σ]
Teffp = 4577 [441] K [9.85 σ]

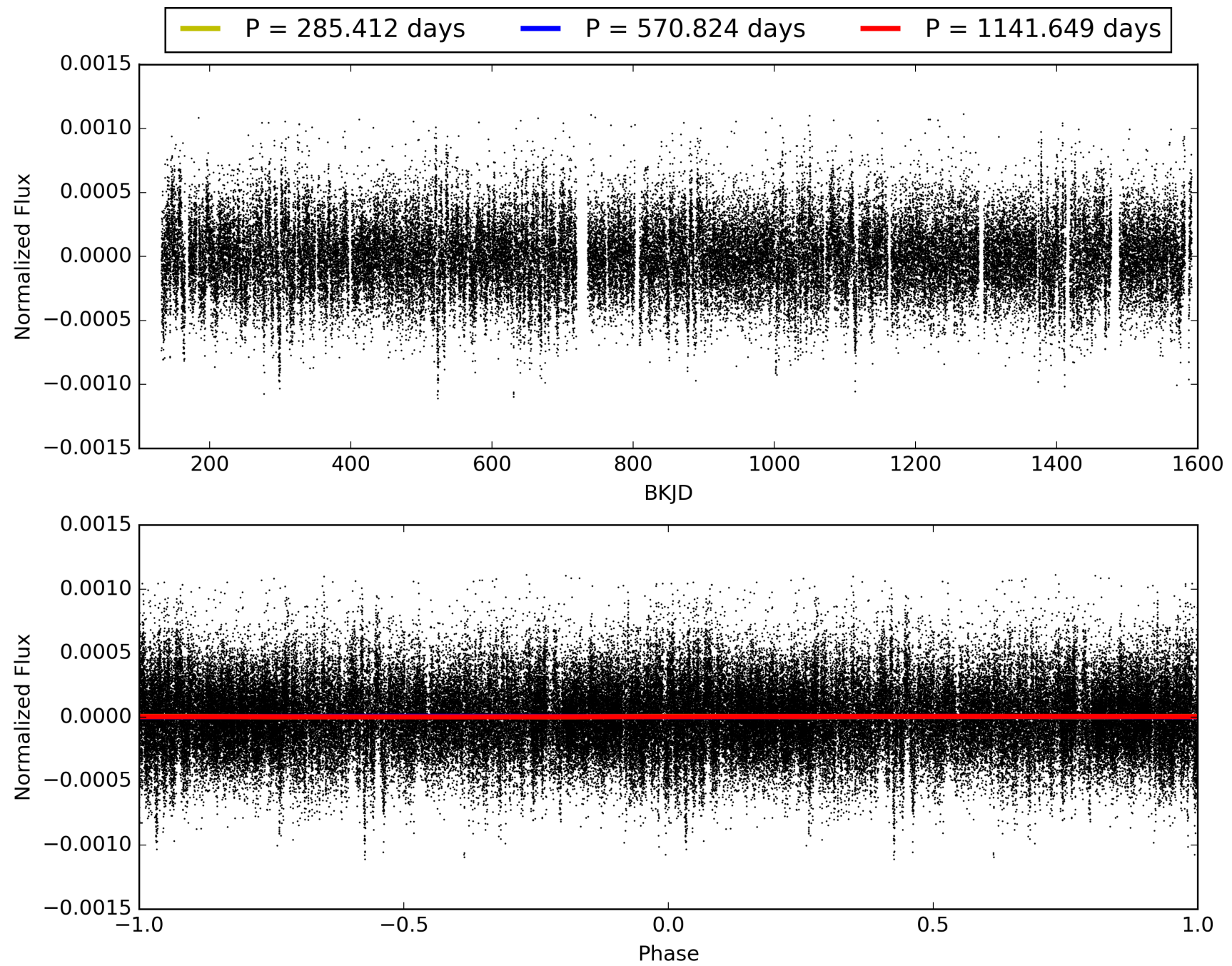
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.35e-11
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 3.962
Centroid-sig: 48.7%
Centroid-so: 1.854 arcsec [0.79 σ]
OotOffset-rm: 1.843 arcsec [4.82 σ]
KicOffset-rm: 1.747 arcsec [4.59 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 010797920-01, PDC Light Curves

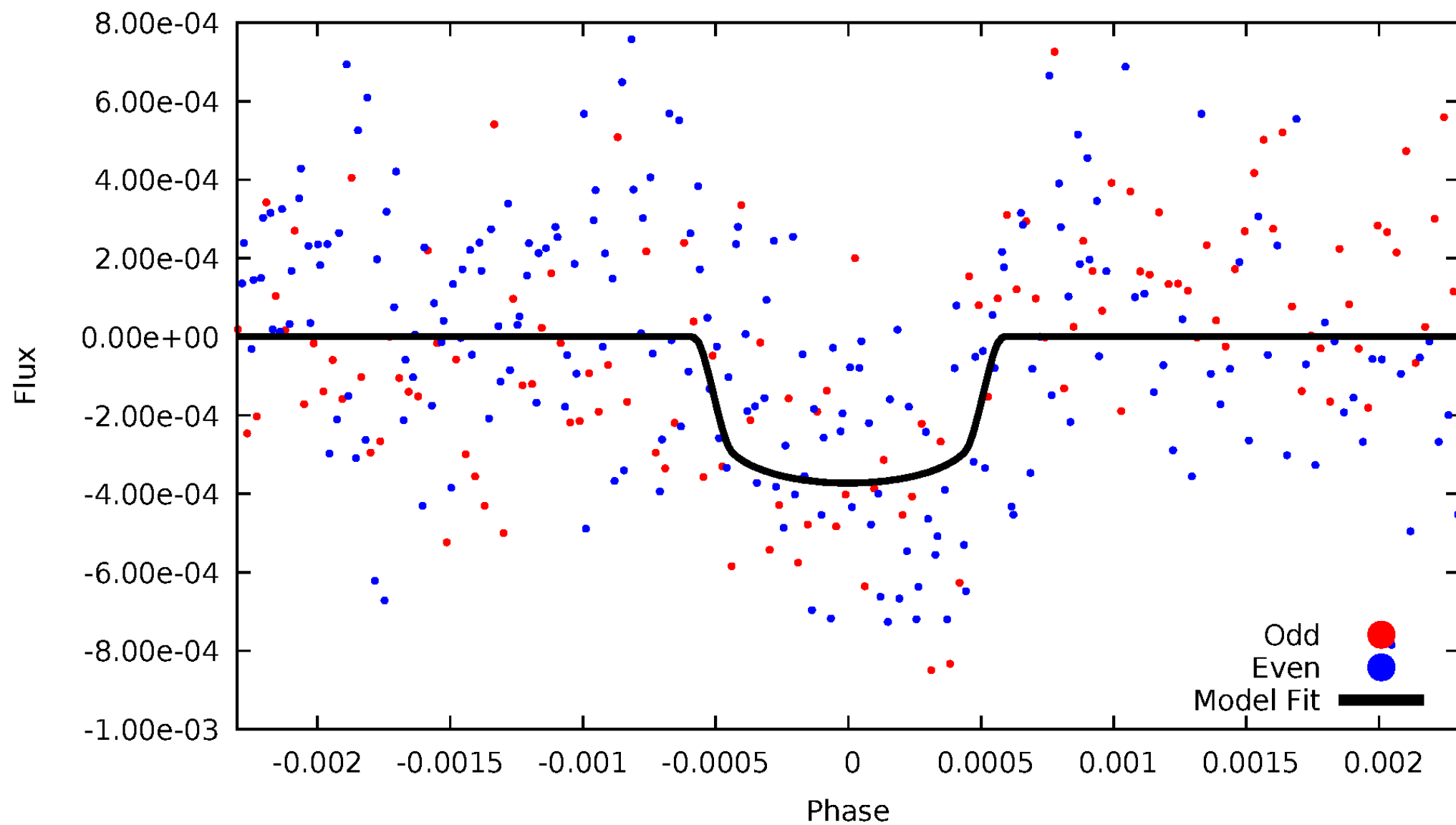


TCE 010797920-01



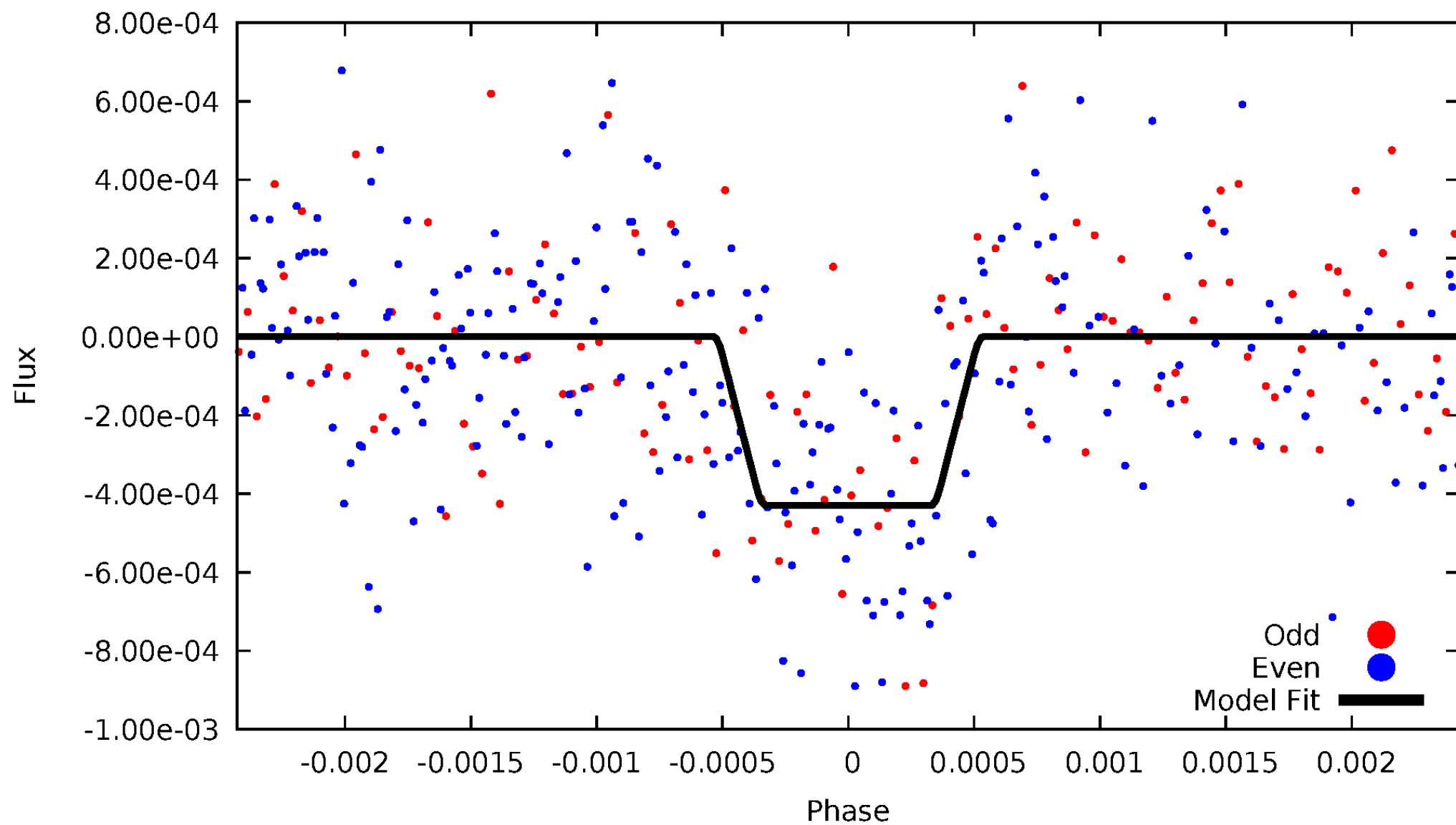
DV Odd/Even

TCE 010797920-01

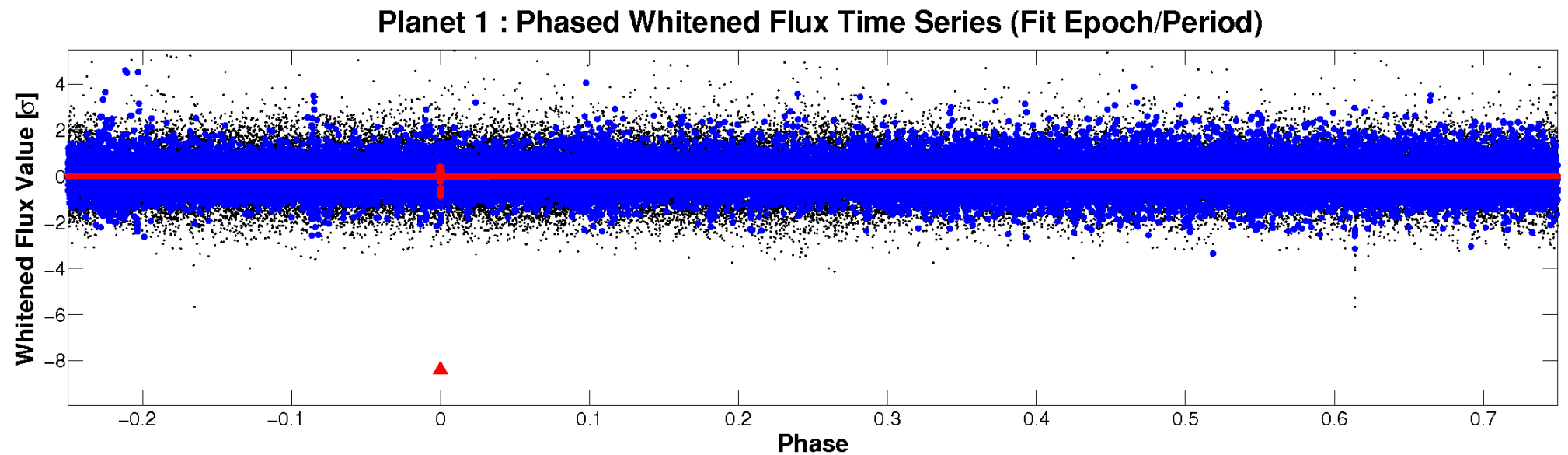
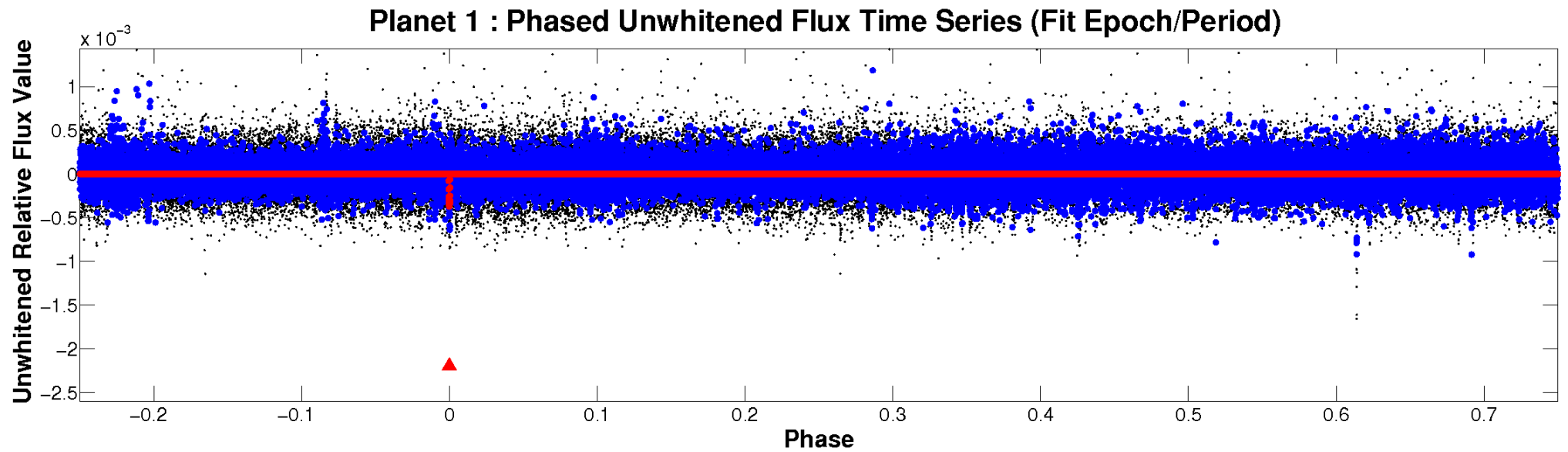


ALT Odd/Even

TCE 010797920-01

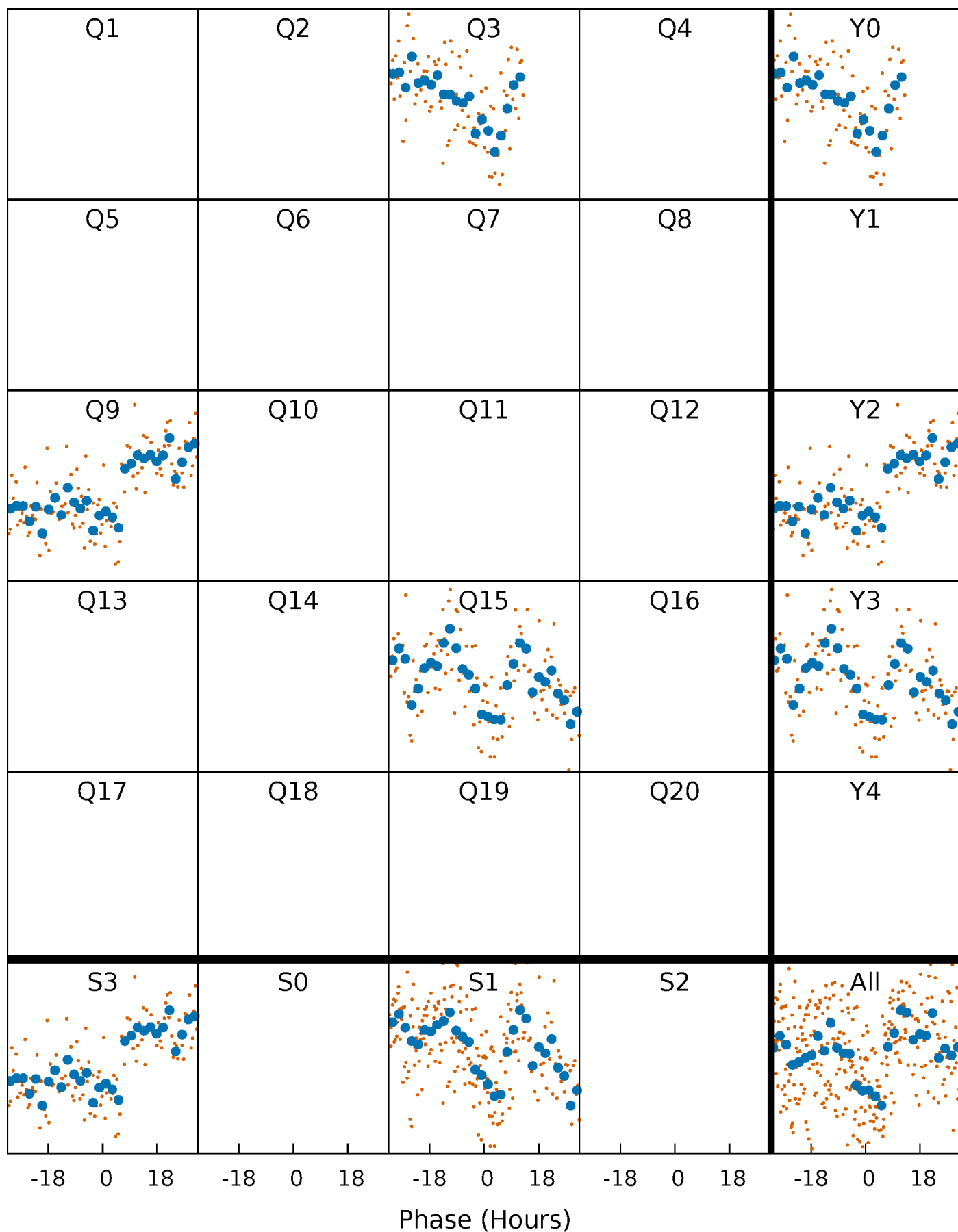


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010797920-01 P=570.824476 Days $T_0=279.996075$ (BKJD)



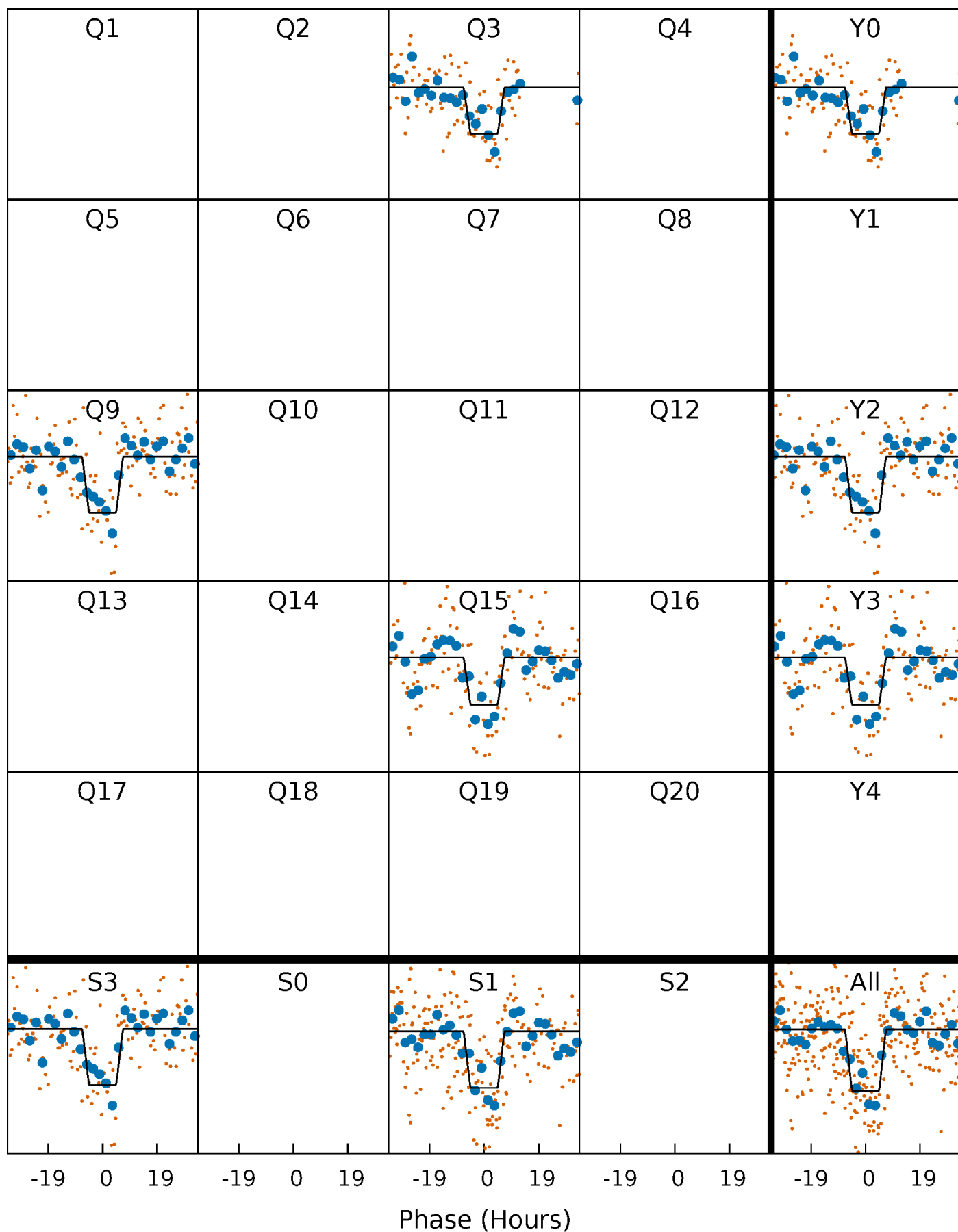
DV Quarter-Phased Transit Curves

TCE 010797920-01 P=570.824476 Days $T_0=279.996075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

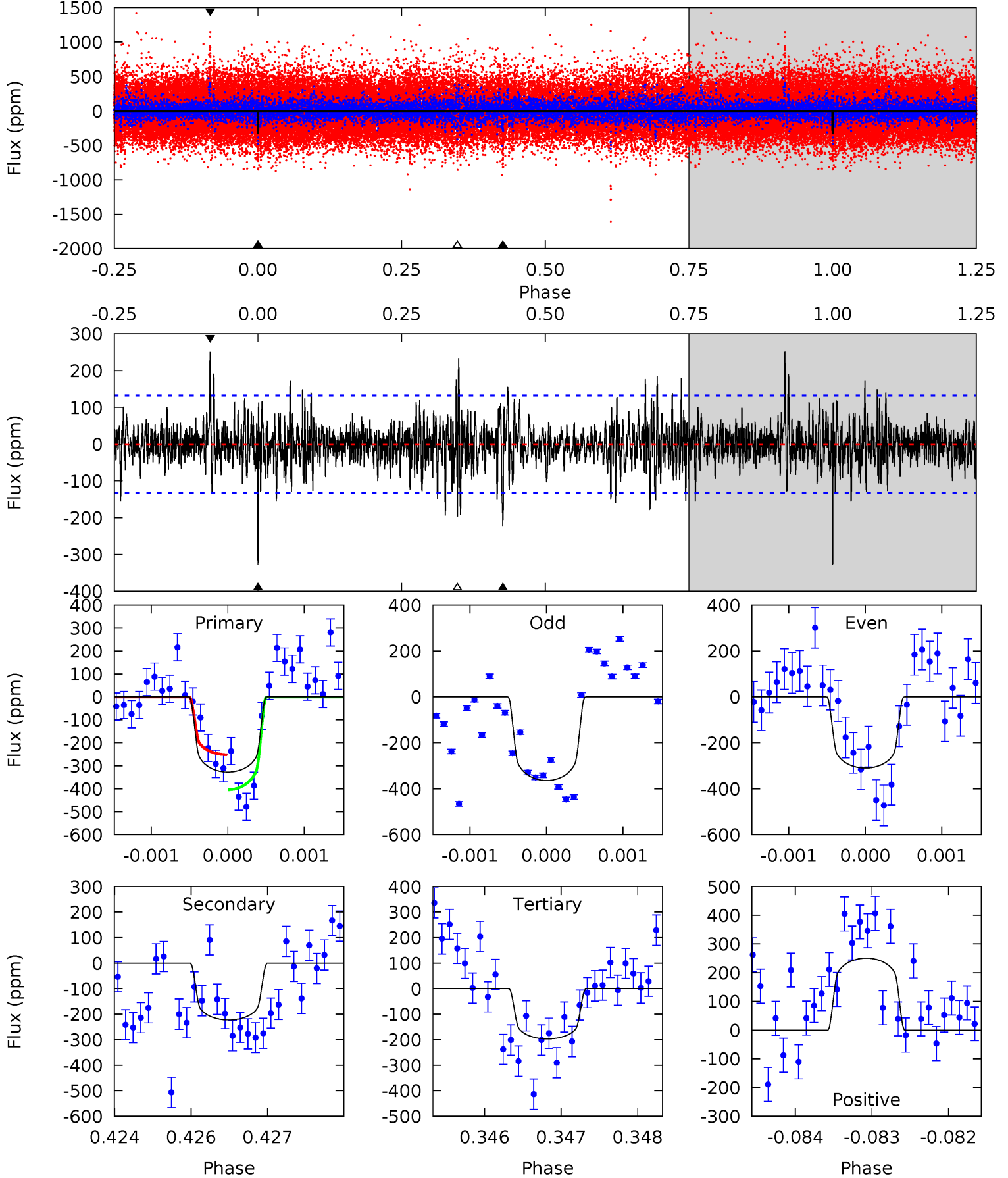
TCE 010797920-01 P=570.845555 Days $T_0=280.023762$ (BKJD)



DV Model-Shift Uniqueness Test

010797920-01, P = 570.824476 Days, E = 279.996075 Days

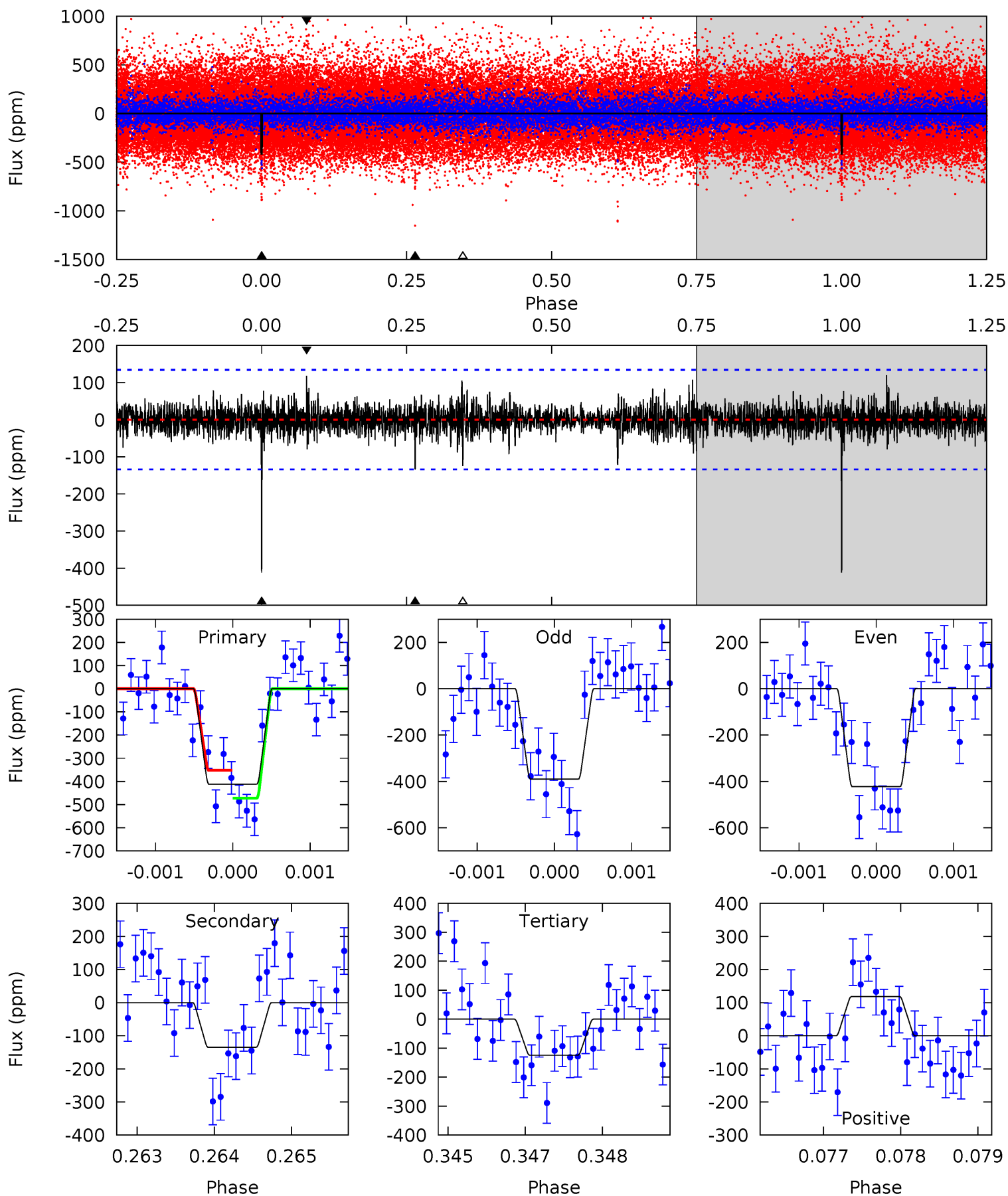
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	9.12	8.06	10.3	5.42	3.25	1.96	5.36	3.14	1.07	-1.16	1.05	1.00	0.43	3.14



Alt Model-Shift Uniqueness Test

010797920-01, $P = 570.845555$ Days, $E = 280.023762$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	5.46	5.05	4.81	5.44	3.28	1.05	11.7	11.9	0.41	0.65	0.62	1.06	0.22	2.44



Stellar Parameters For KIC 010797920

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6045^{+162}_{-198}	$4.494^{+0.052}_{-0.208}$	$-0.120^{+0.250}_{-0.300}$	$0.955^{+0.300}_{-0.100}$	$1.038^{+0.139}_{-0.139}$	$1.679^{+0.442}_{-0.879}$
	+3%/-3%	+1%/-5%	+208%/-250%	+31%/-10%	+13%/-13%	+26%/-52%
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 010797920-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-223 ± 24	$2.29^{+0.46}_{-0.38}$	318^{+24}_{-15}	5142^{+383}_{-309}	41916^{+20621}_{-12017}
Alt.	-135 ± 25	$2.27^{+0.40}_{-0.34}$	319^{+25}_{-16}	4656^{+354}_{-288}	26023^{+11054}_{-8303}

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 $A_{obs} \gg 1.0$

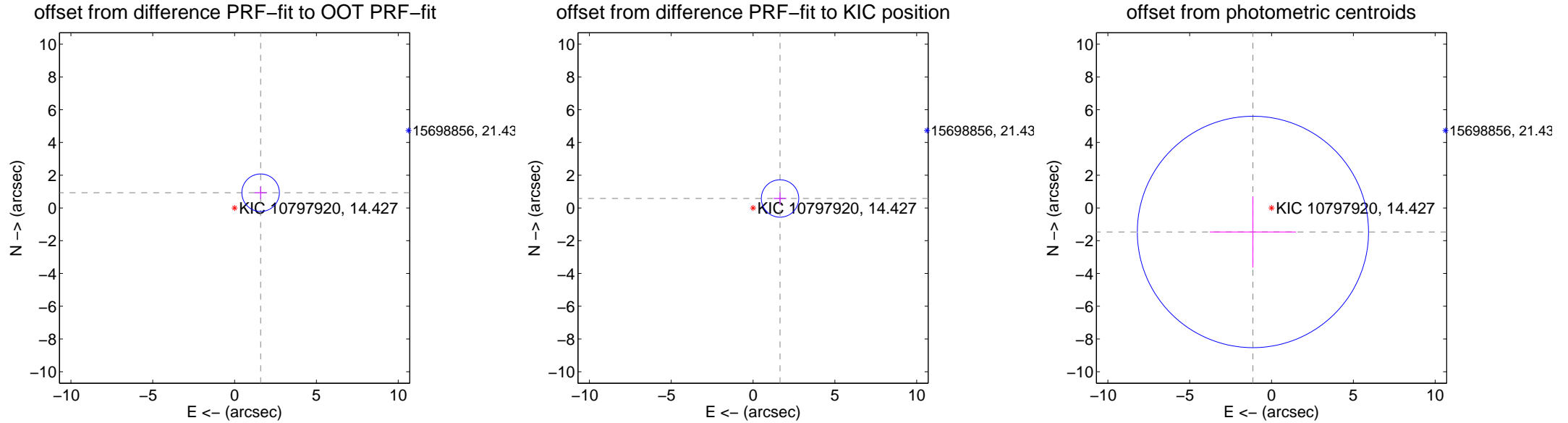
DV Centroid Data

Supplemental centroid analysis for 010797920-01. Kepler magnitude: 14.43. Transit SNR 7.38

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.843 ± 0.382	4.82	-1.591 ± 0.380	0.929 ± 0.387
PRF-fit source offset from KIC position	1.747 ± 0.381	4.59	-1.649 ± 0.380	0.578 ± 0.387
photometric centroid source offset	1.85 ± 2.35	0.79	1.14 ± 2.63	-1.47 ± 2.17



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.

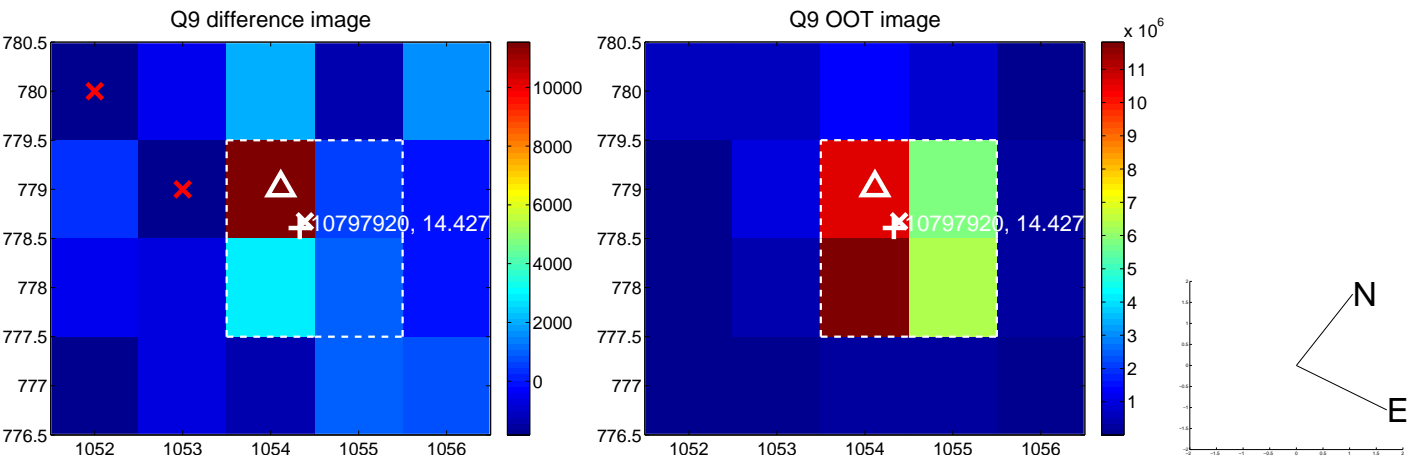
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



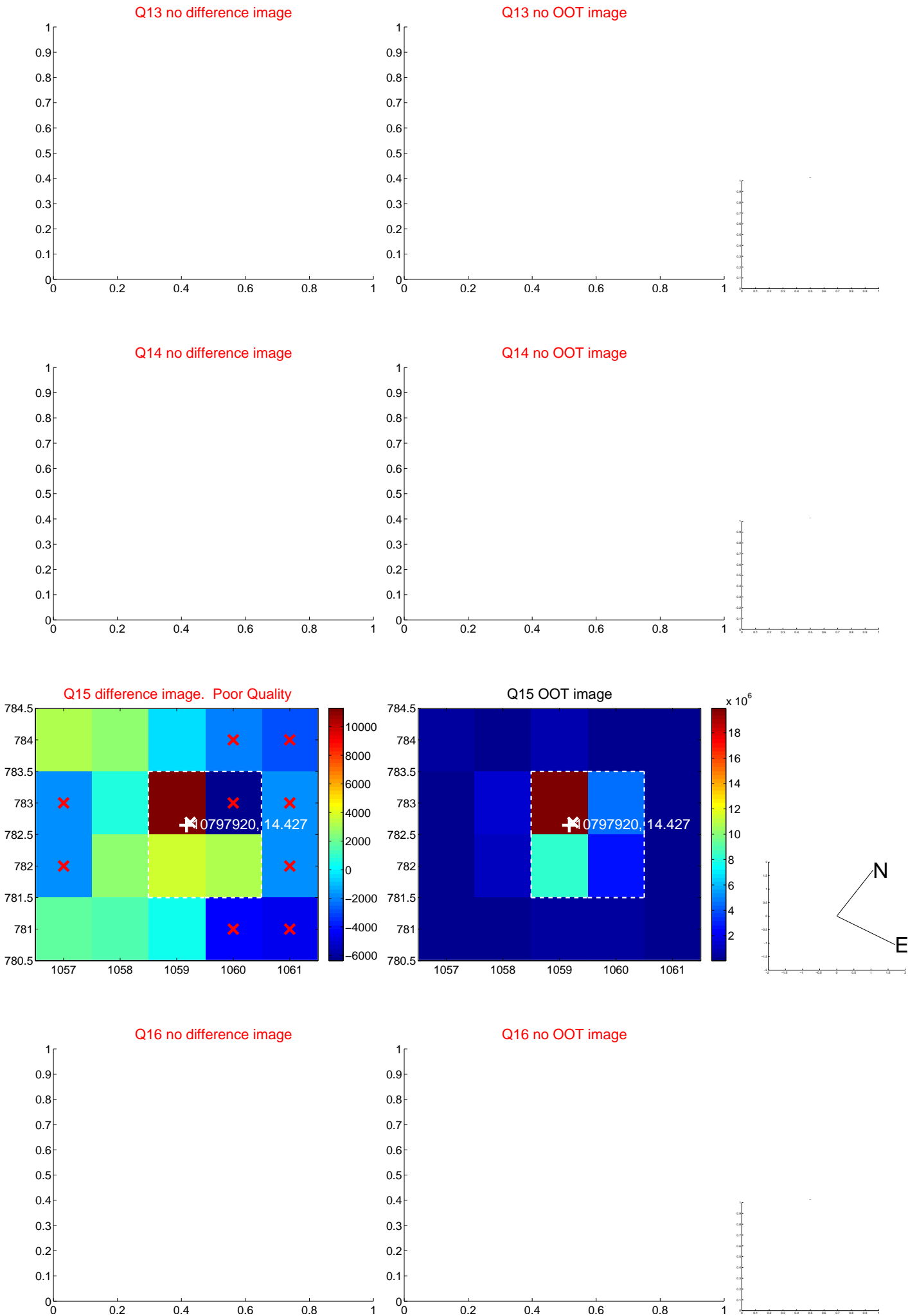
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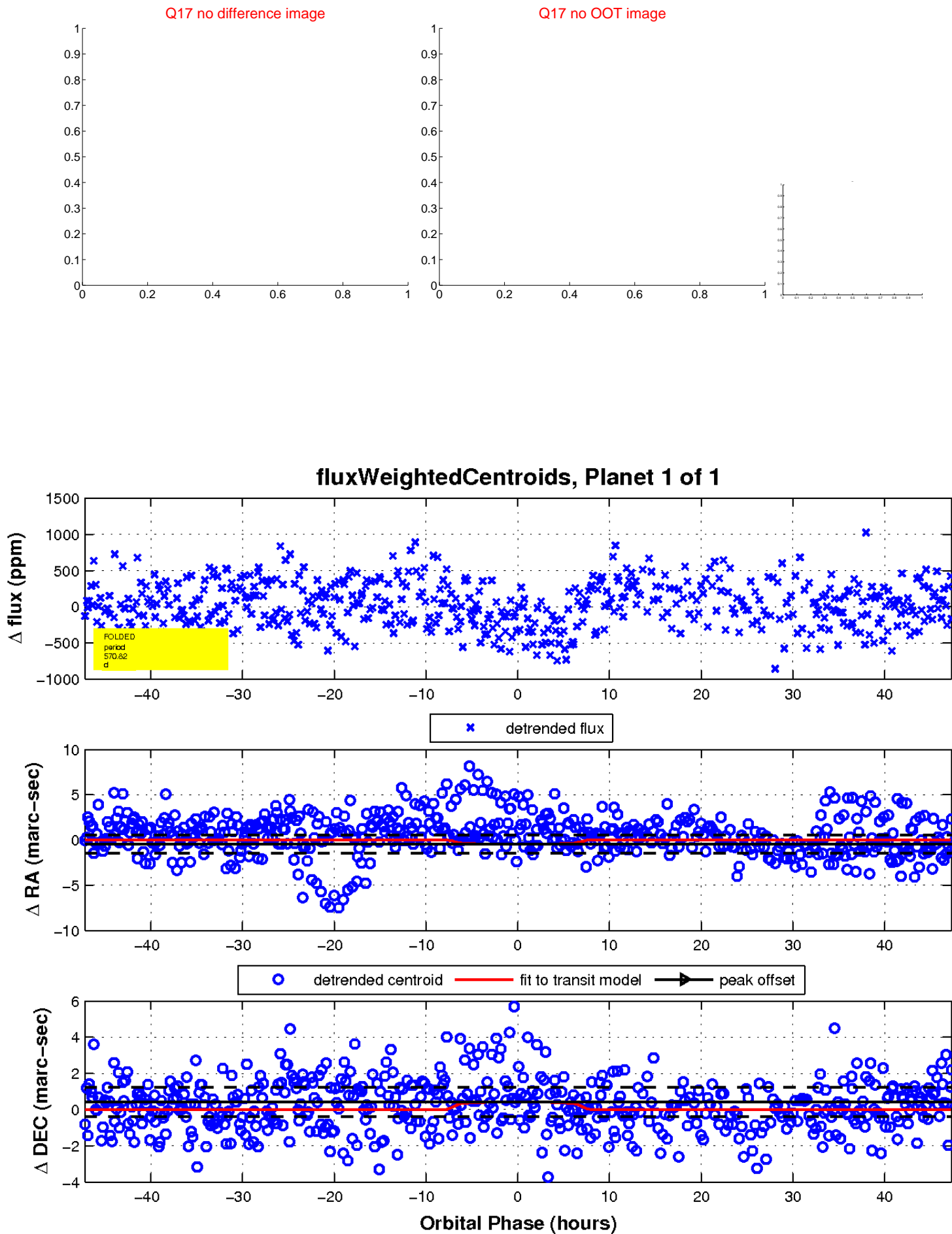
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UKIRT Image

