

KIC 008229100

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})
008229100-01	OBS	No	374.374821	261.403355	641.7	51.328	7.4	12.0	0.99	5854	2.54	0.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008229100-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

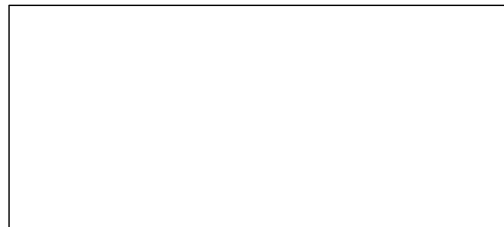
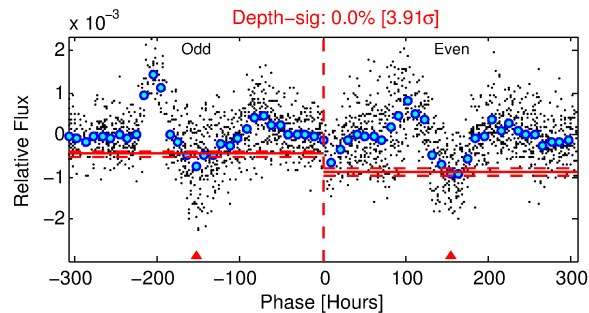
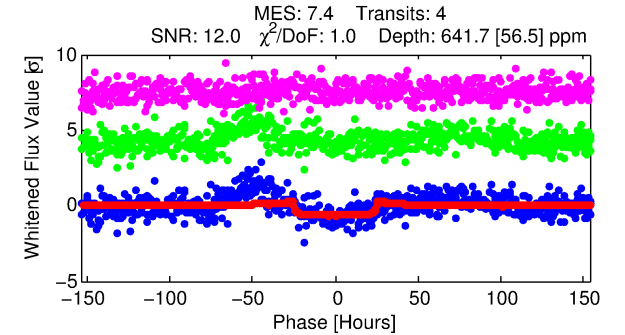
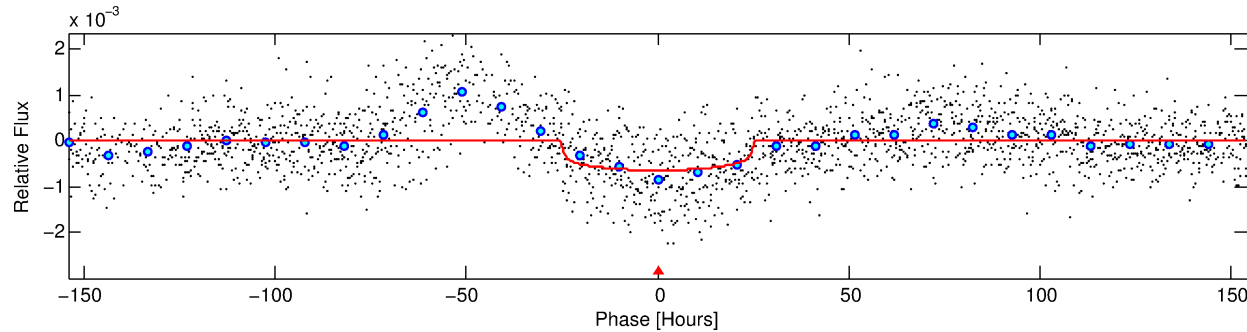
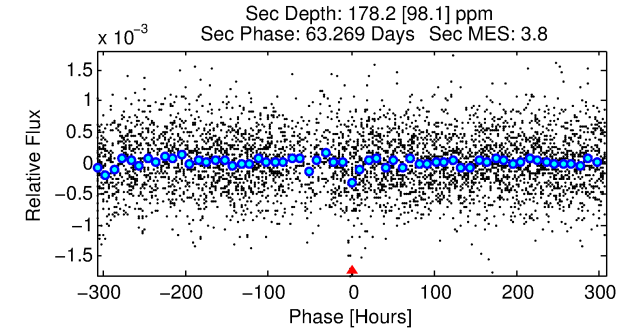
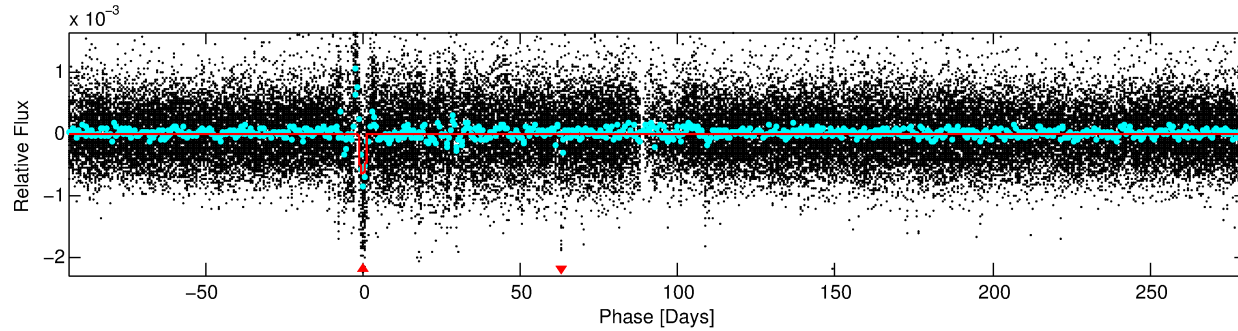
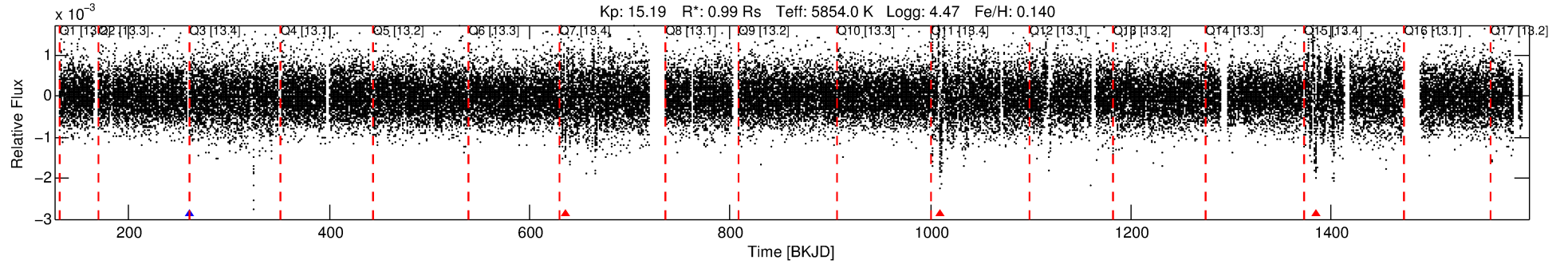
Ephemeris Match Information For 008229100-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008229100-01	8229100	008092039-01	8092039	1:1	1194.3	300	3	14.77	15.20	0.65	Col-Anomaly	1	0.21	1.99

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8229100 Candidate: 1 of 1 Period: 374.375 d



DV Fit Results:

Period = 374.37482 [0.01680] d
Epoch = 261.4034 [0.0307] BKJD
Rp/R* = 0.0235 [0.0040]
a/R* = 51.67 [37.41]
b = 0.43 [1.36]
Seff = 0.96 [0.39]
Teq = 253 [26] K
Rp = 2.54 [0.90] Re
a = 1.0373 [0.2735] AU
Ag = 16296.24 [12344.58] [1.32σ]
Teffp = 4412 [729] K [5.70σ]

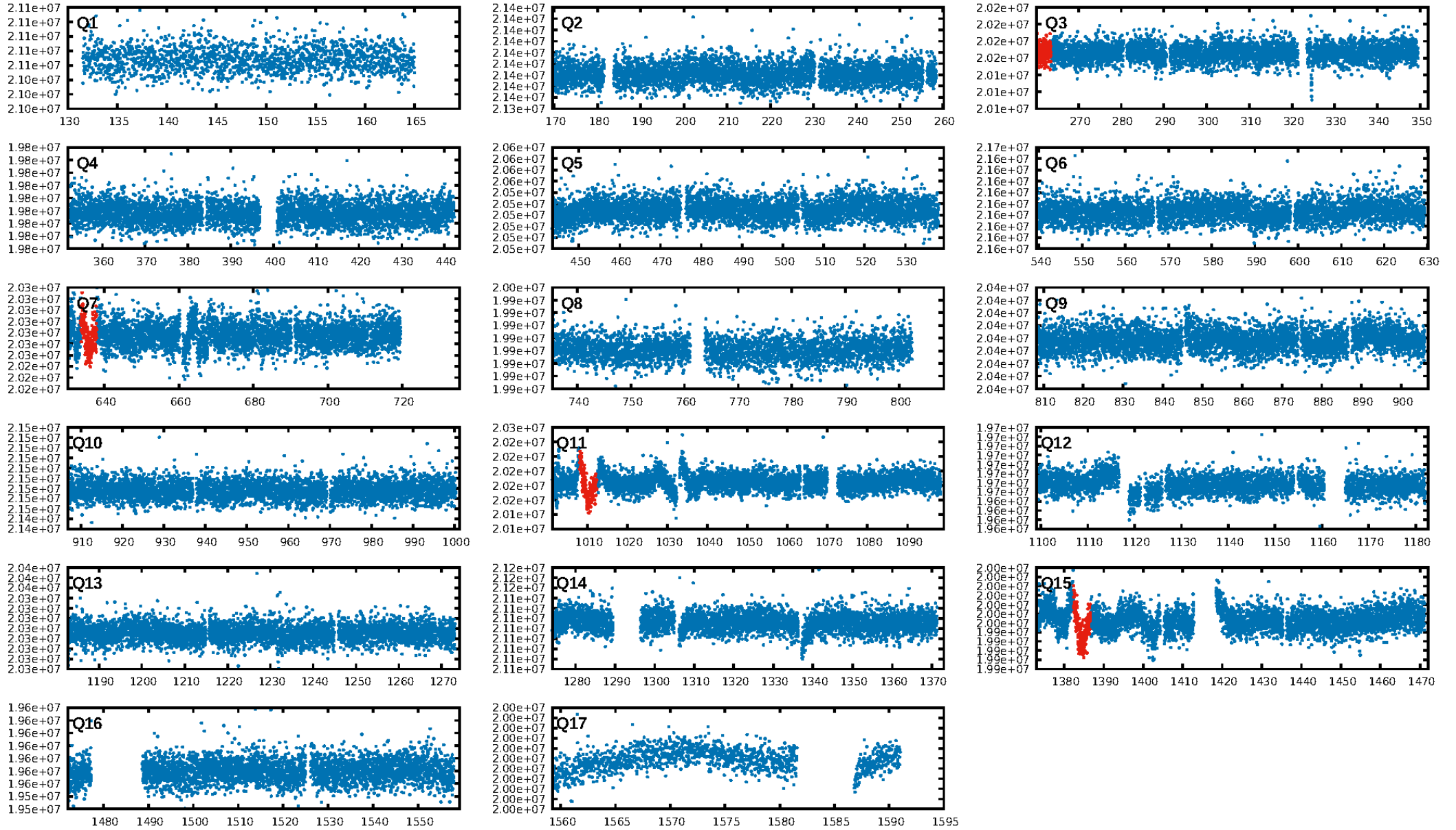
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.48e-10
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.06311
Centroid-sig: 0.0%
Centroid-so: 3.093 arcsec [2.22σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

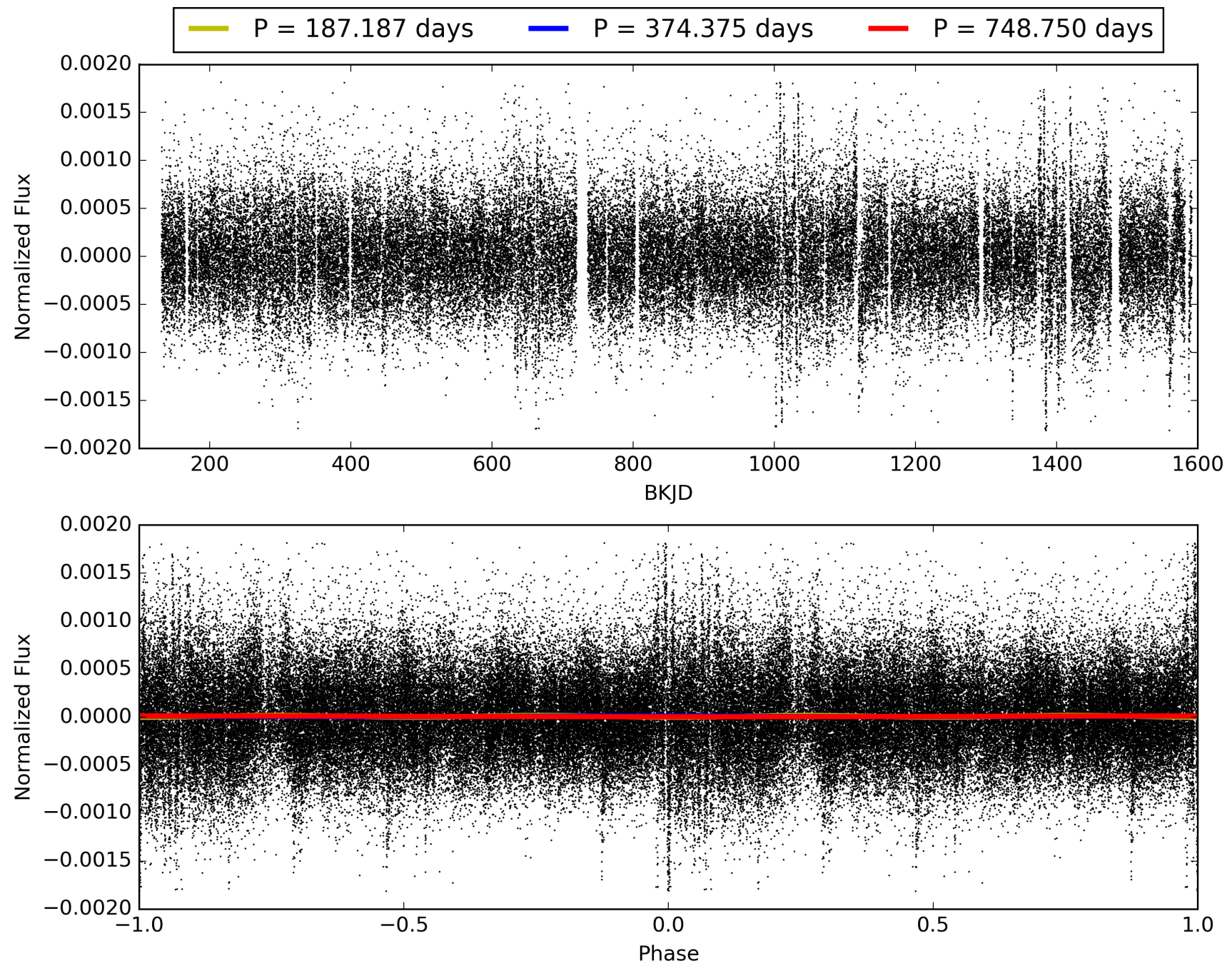
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:38:50 Z

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

TCE 008229100-01, PDC Light Curves

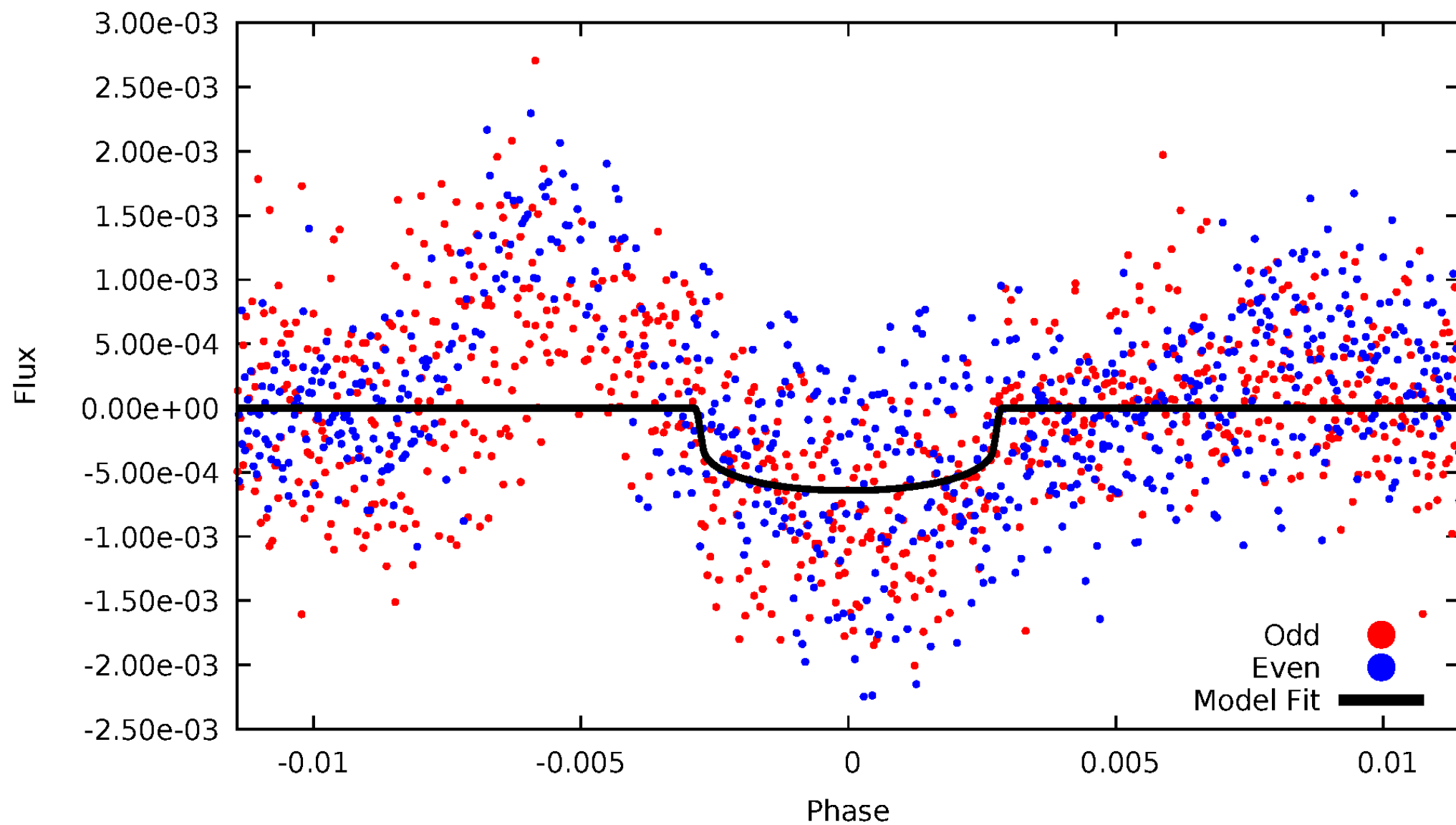


TCE 008229100-01



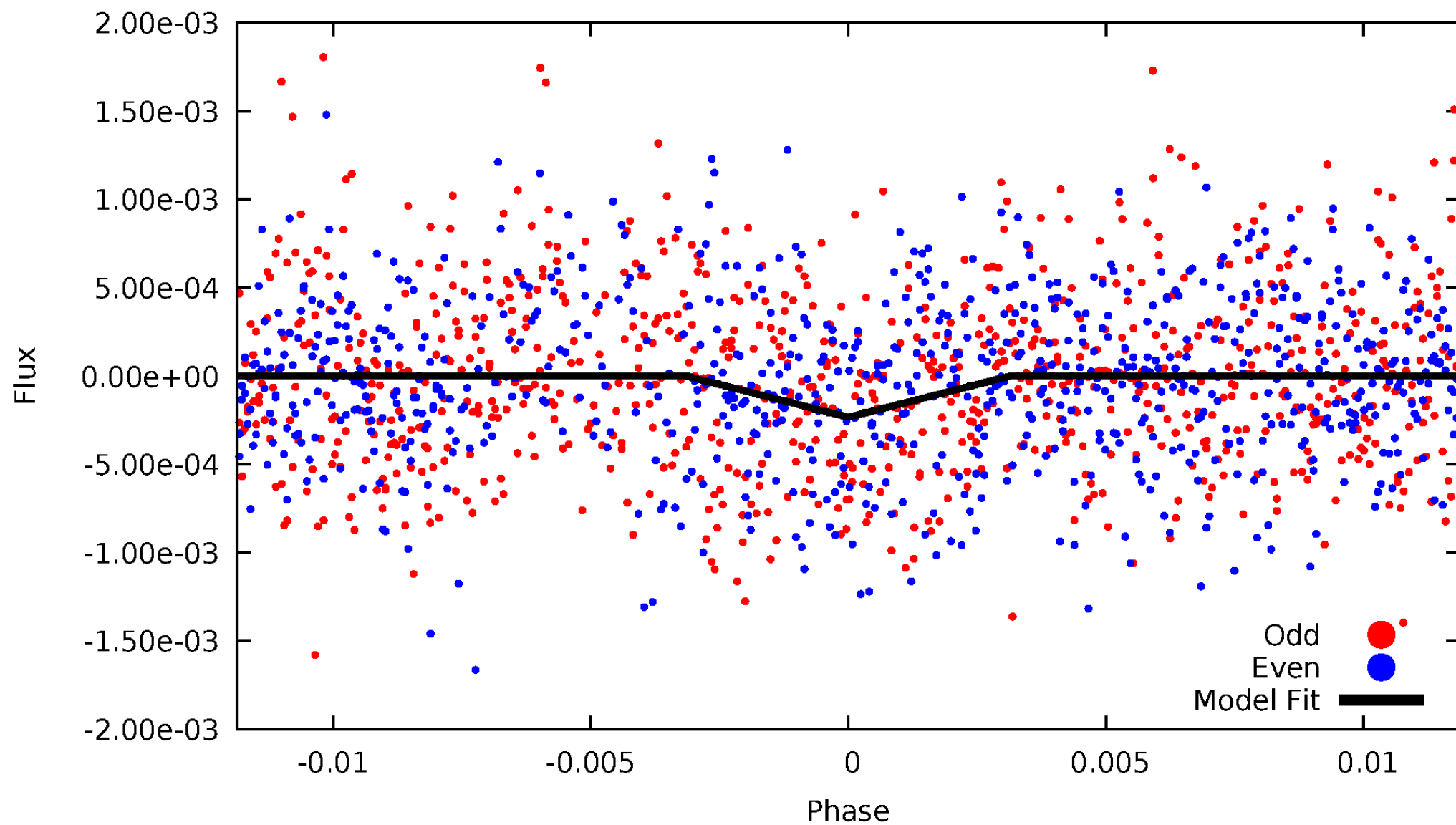
DV Odd/Even

TCE 008229100-01



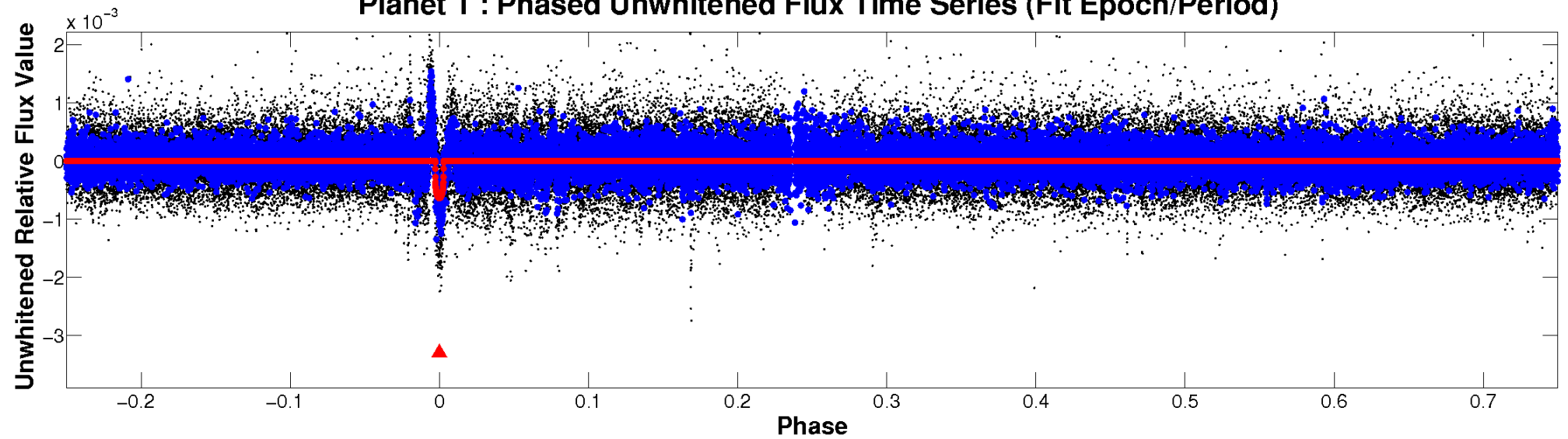
ALT Odd/Even

TCE 008229100-01

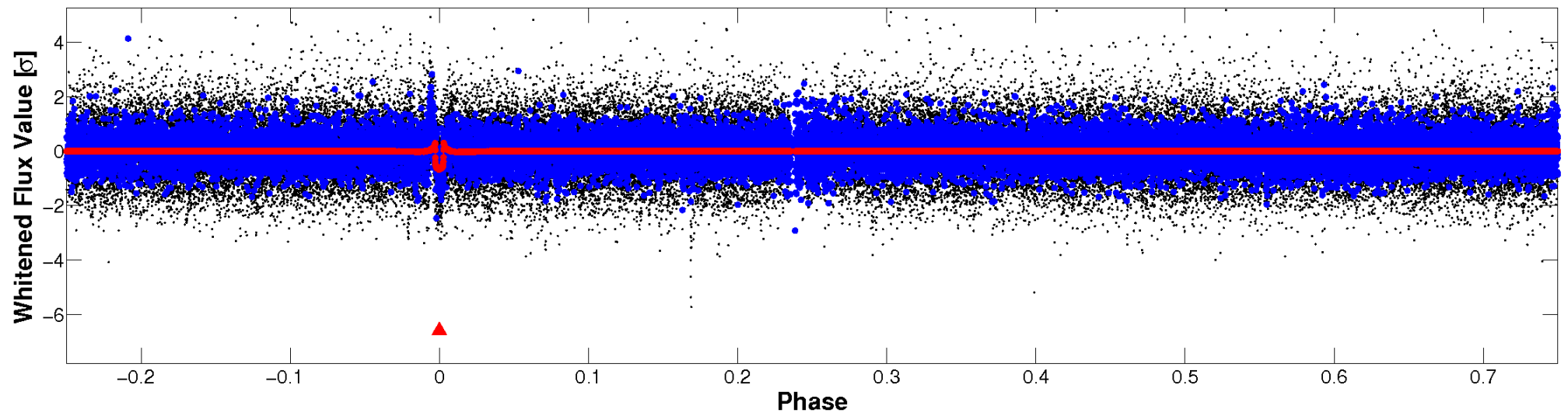


Non-Whitened Vs. Whitened Light Curve

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



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



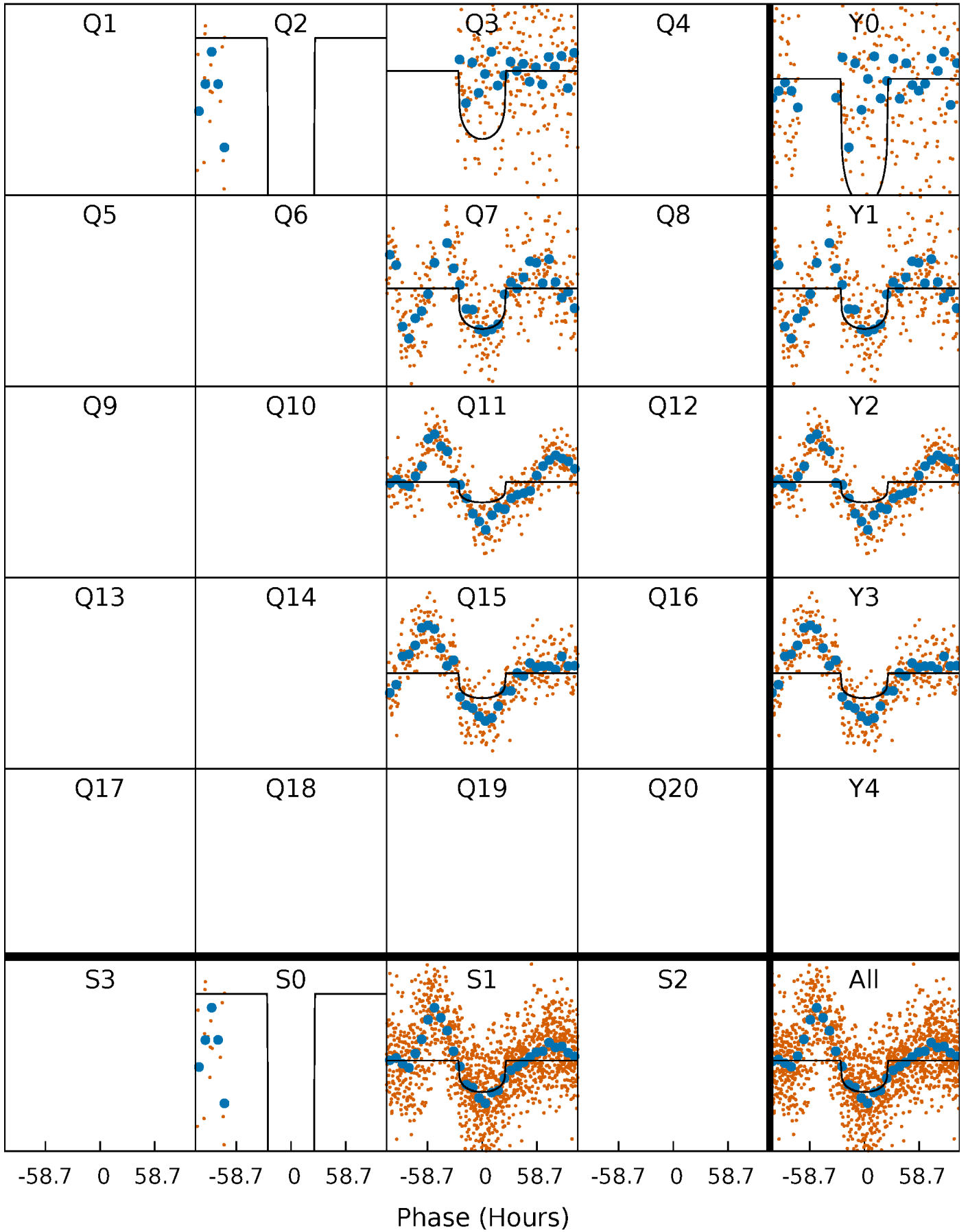
PDC Quarter-Phased Transit Curves

TCE 008229100-01 P=374.374821 Days $T_0=261.403355$ (BKJD)



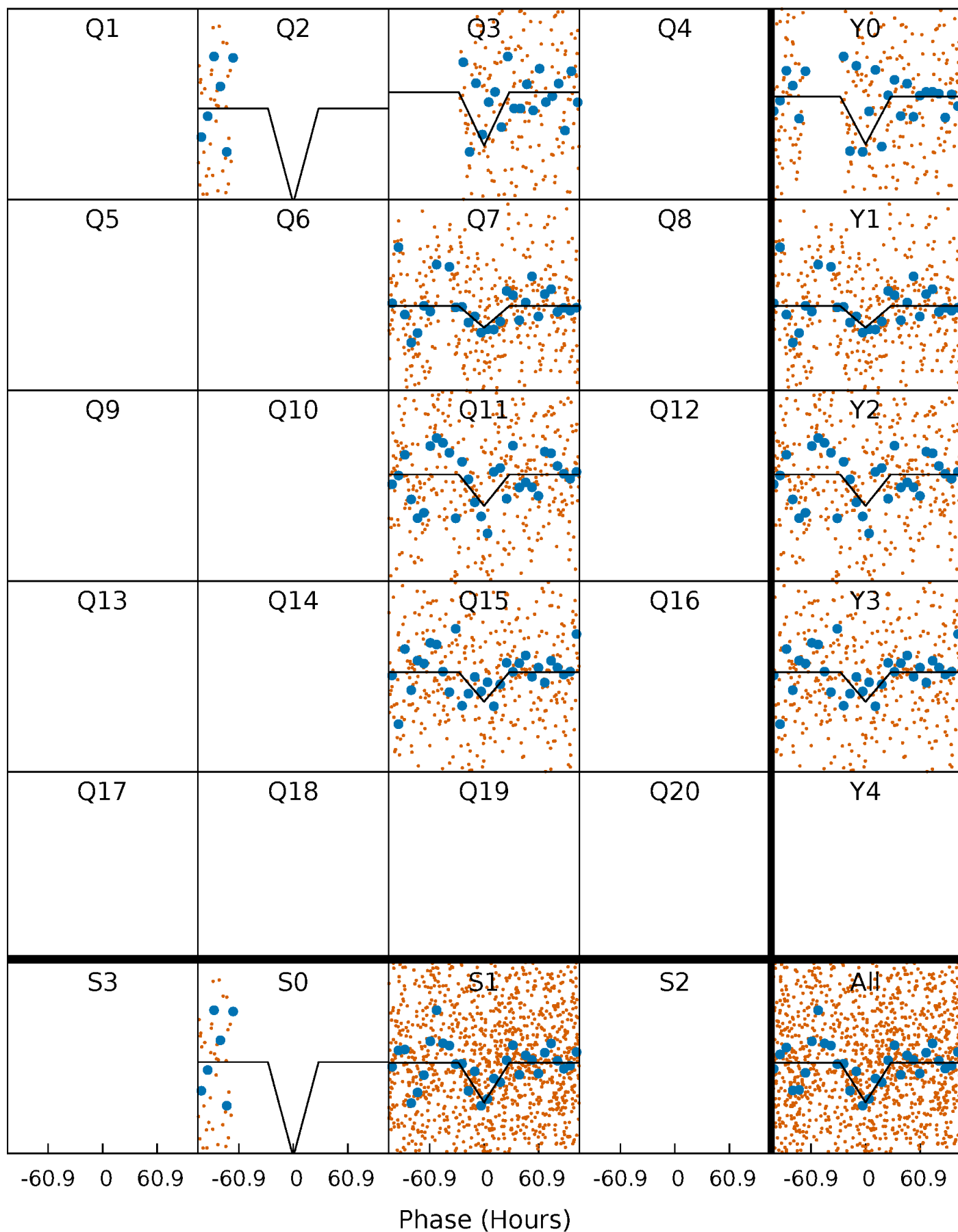
DV Quarter-Phased Transit Curves

TCE 008229100-01 P=374.374821 Days $T_0=261.403355$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

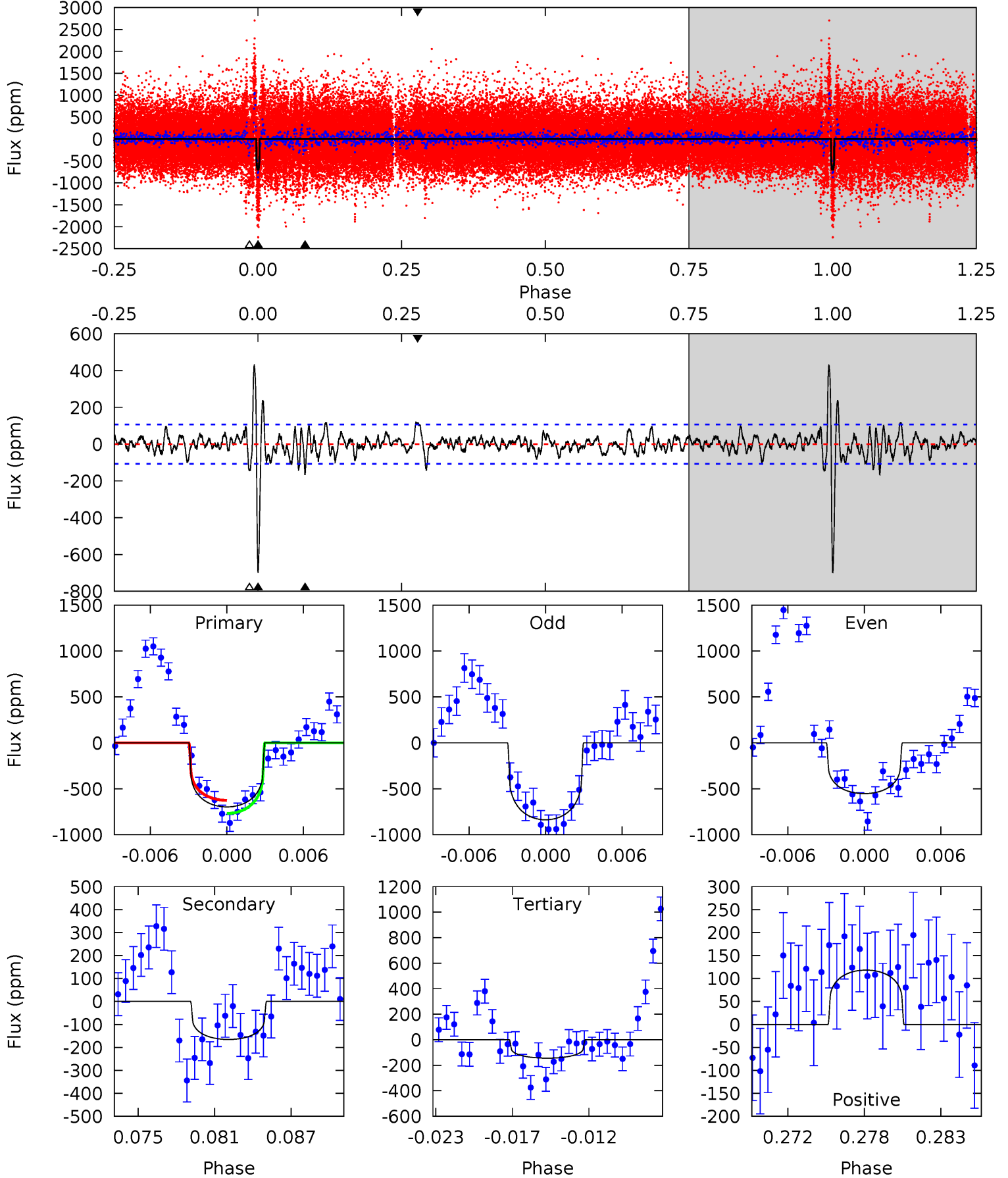
TCE 008229100-01 P=374.404120 Days $T_0=261.362211$ (BKJD)



DV Model-Shift Uniqueness Test

008229100-01, P = 374.374821 Days, E = 261.403355 Days

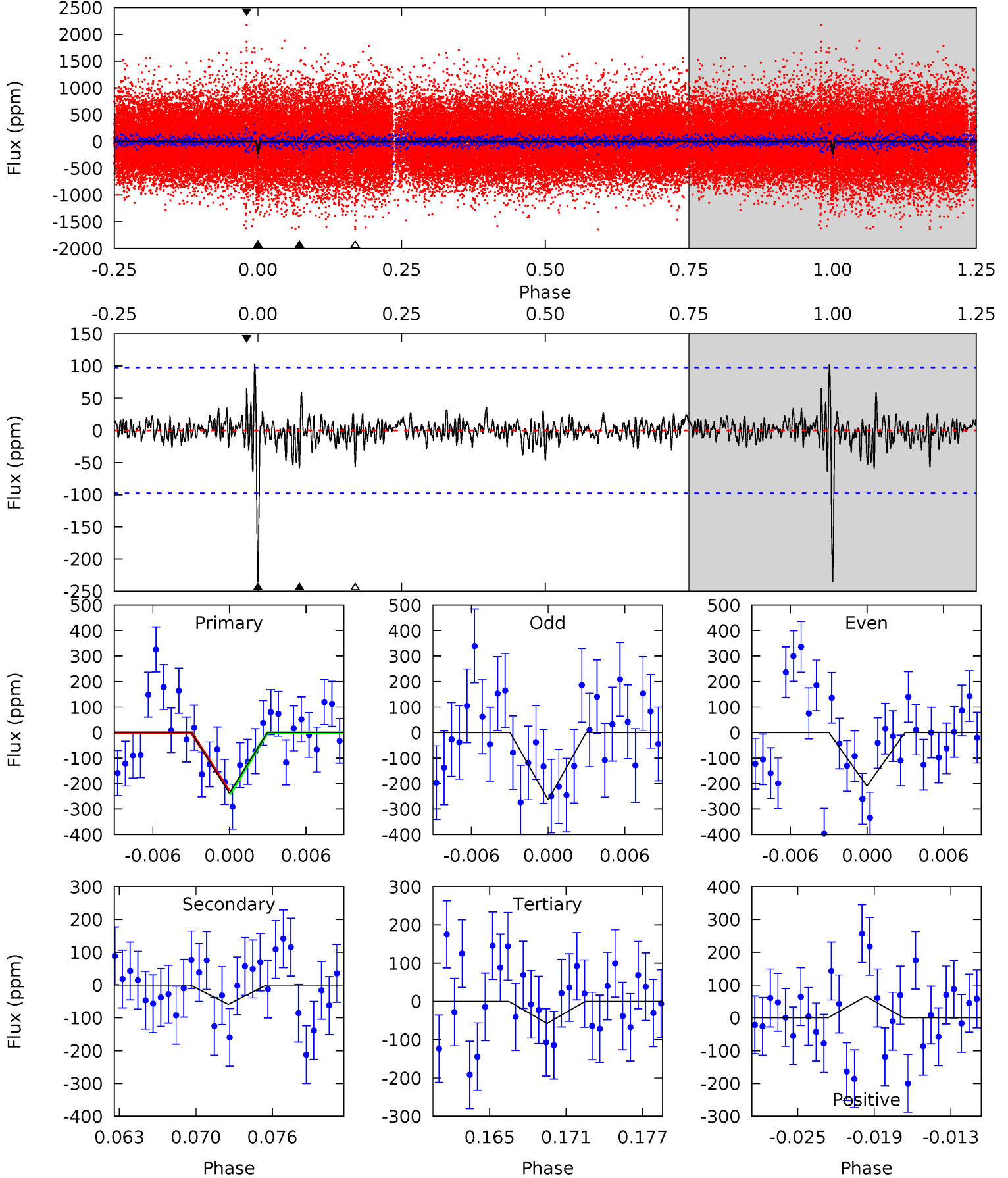
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.5	7.95	6.93	5.68	5.13	2.76	2.25	26.6	27.8	1.02	2.27	6.85	0.86	0.38	3.43



Alt Model-Shift Uniqueness Test

008229100-01, P = 374.404120 Days, E = 261.362211 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	3.06	2.98	3.40	5.11	2.73	0.69	9.33	8.91	0.08	-0.34	1.41	0.94	0.30	0.37



Stellar Parameters For KIC 008229100

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5854^{+162}_{-182}	$4.471^{+0.054}_{-0.216}$	$0.140^{+0.200}_{-0.300}$	$0.992^{+0.305}_{-0.102}$	$1.062^{+0.125}_{-0.125}$	$1.531^{+0.421}_{-0.785}$
	+3%/-3%	+1%/-5%	+143%/-214%	+31%/-10%	+12%/-12%	+27%/-51%
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 008229100-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-166 ± 21	$2.62^{+0.55}_{-0.47}$	360^{+24}_{-17}	4523^{+383}_{-311}	13831^{+7089}_{-4428}
Alt.	-59 ± 19	$1.77^{+0.54}_{-0.49}$	361^{+27}_{-18}	4305^{+663}_{-467}	10570^{+11644}_{-5117}

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

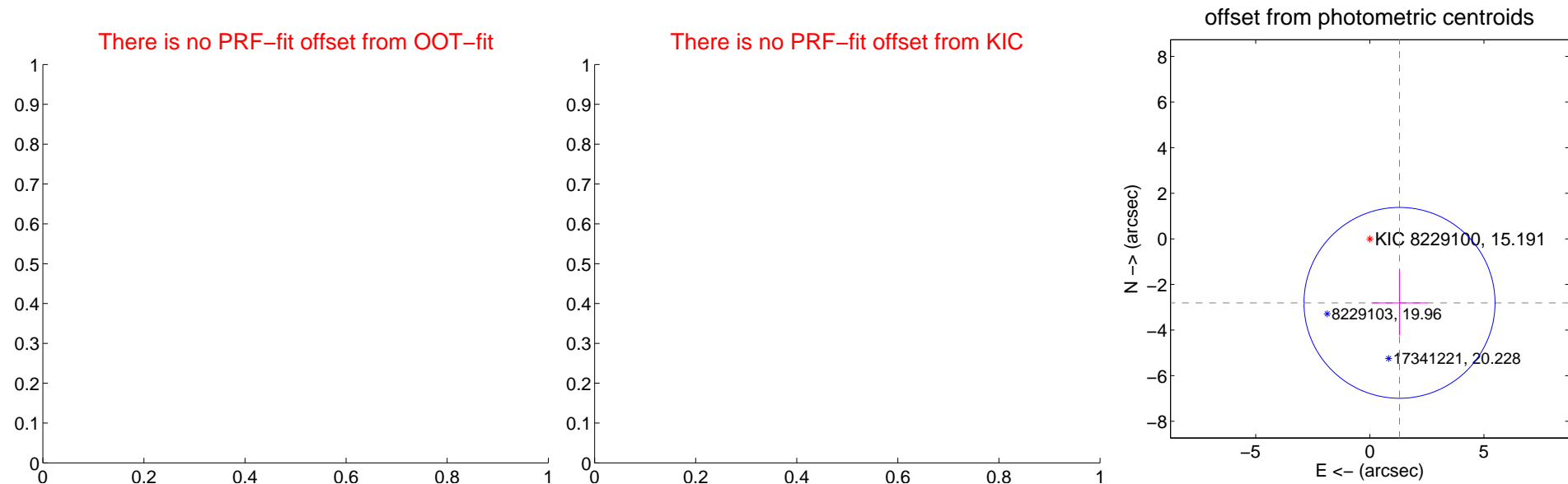
DV Centroid Data

Supplemental centroid analysis for 008229100-01. Kepler magnitude: 15.19. Transit SNR 12.00

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.09 ± 1.39	2.22	-1.30 ± 1.22	-2.81 ± 1.43



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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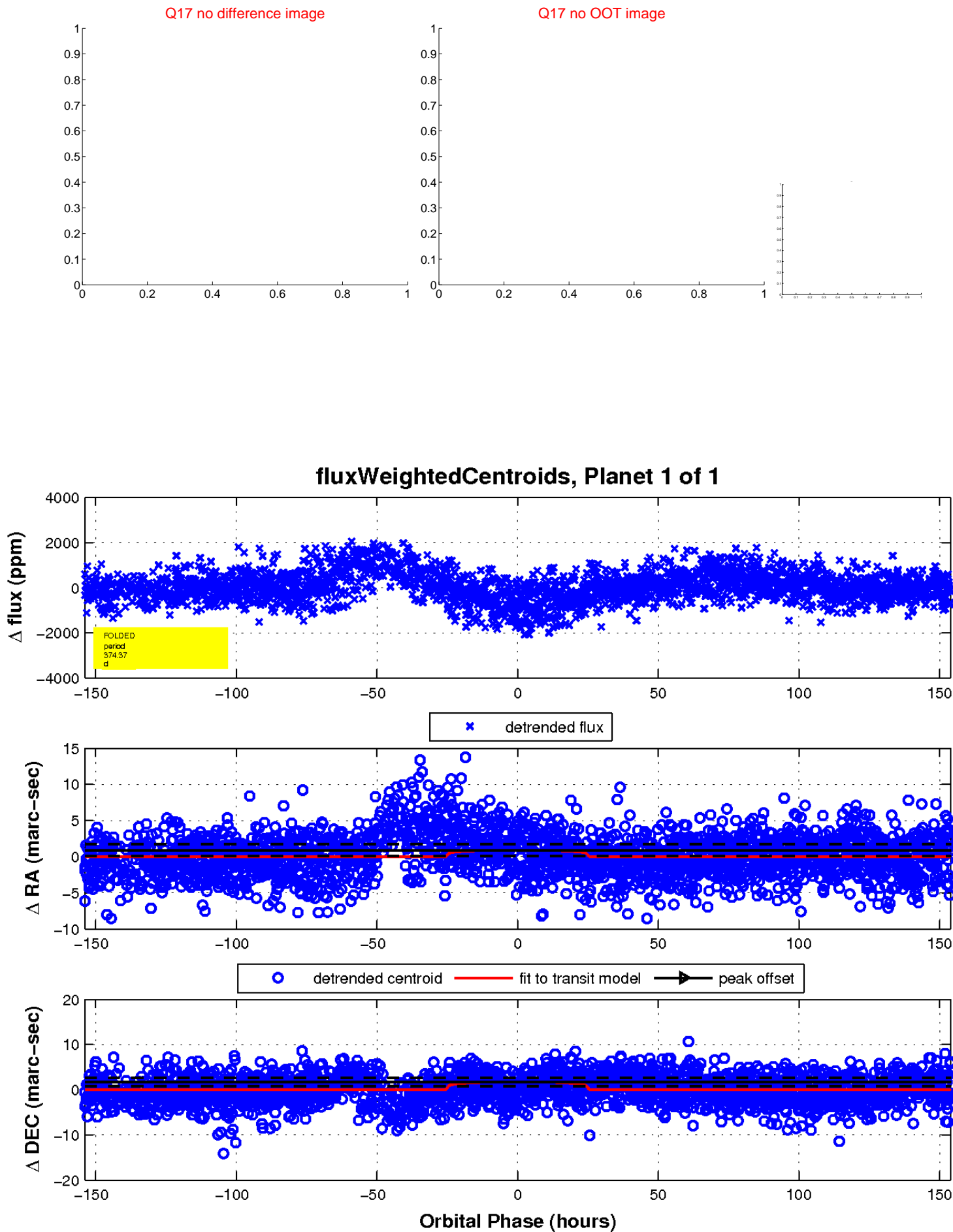
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UKIRT Image

Declination

