

KIC 005271270

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})
005271270-01	OBS	No	516.483137	307.082016	836.2	12.736	8.3	7.1	0.63	4342	2.28	0.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005271270-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

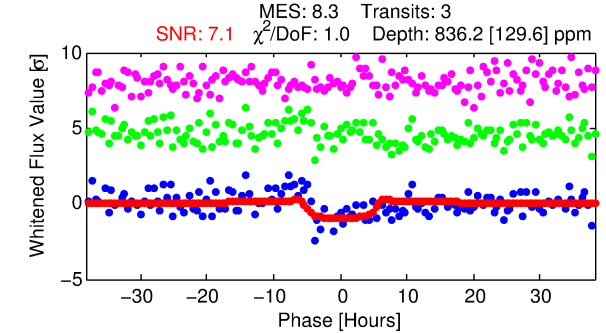
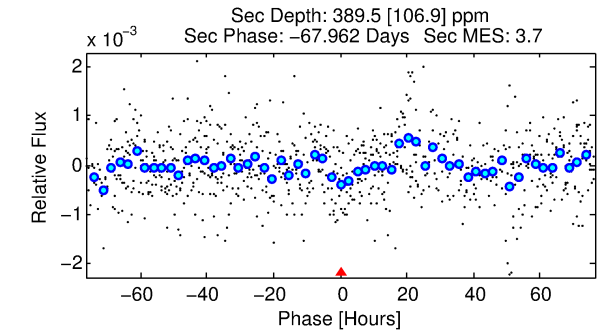
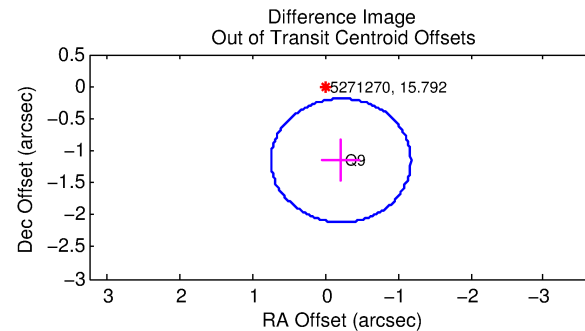
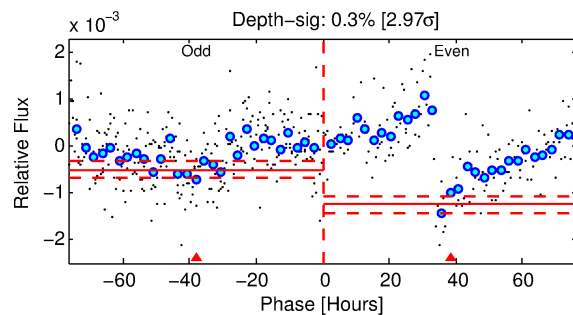
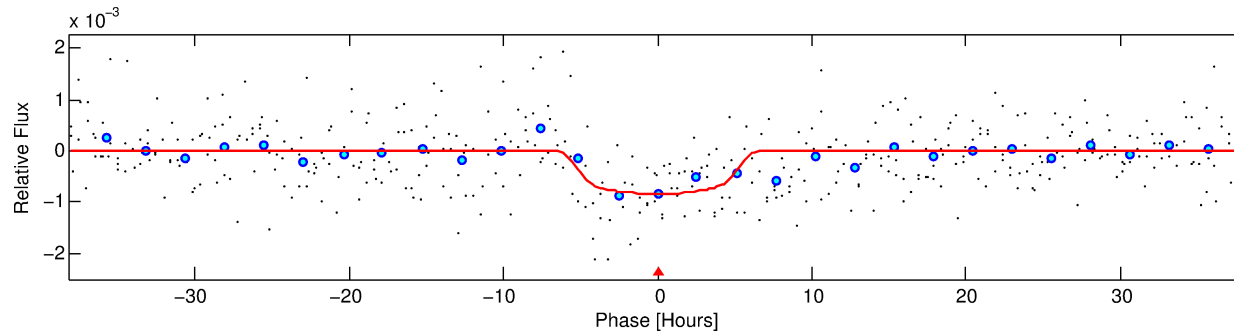
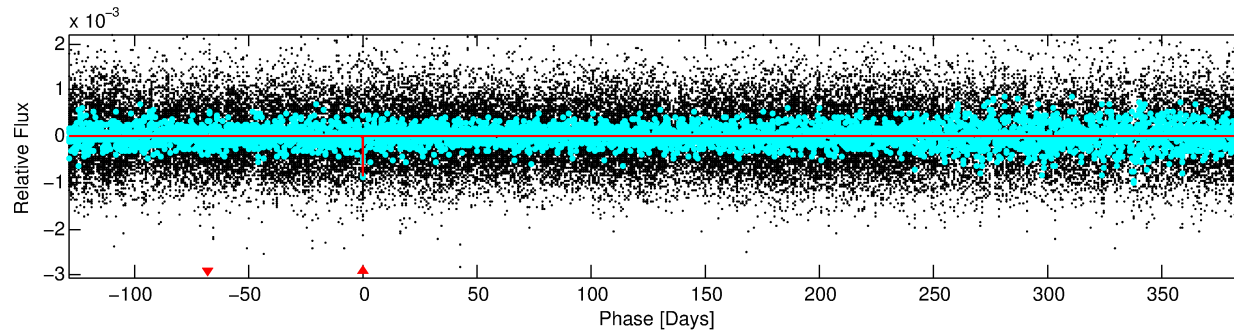
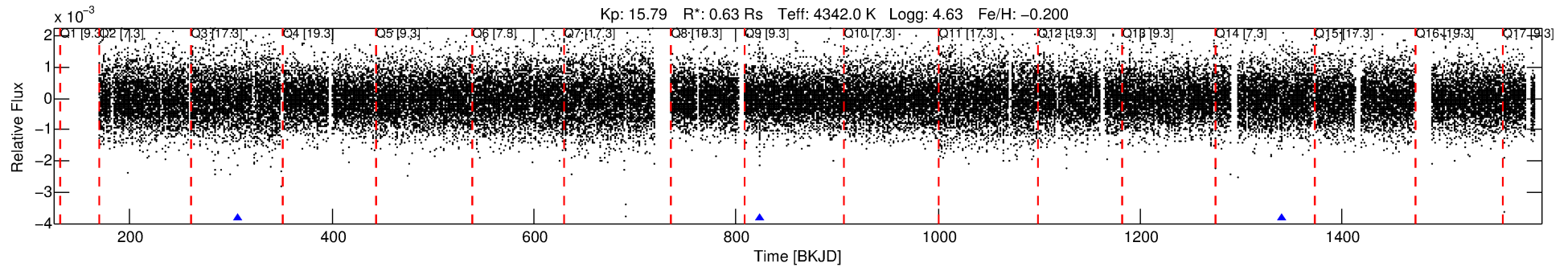
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005271270-01

No Significant Match Found

DV One-Page Summary

KIC: 5271270 Candidate: 1 of 1 Period: 516.483 d



DV Fit Results:

Period = 516.48314 [0.02334] d
Epoch = 307.0820 [0.0306] BKJD
Rp/R* = 0.0331 [0.0050]
a/R* = 149.86 [67.08]
b = 0.91 [0.09]
Seff = 0.11 [0.02]
Teq = 147 [6] K
Rp = 2.28 [0.40] Re
a = 1.0750 [0.0744] AU
Ag = 47603.26 [20009.18] [2.38 σ]
Teffp = 3352 [357] K [8.97 σ]

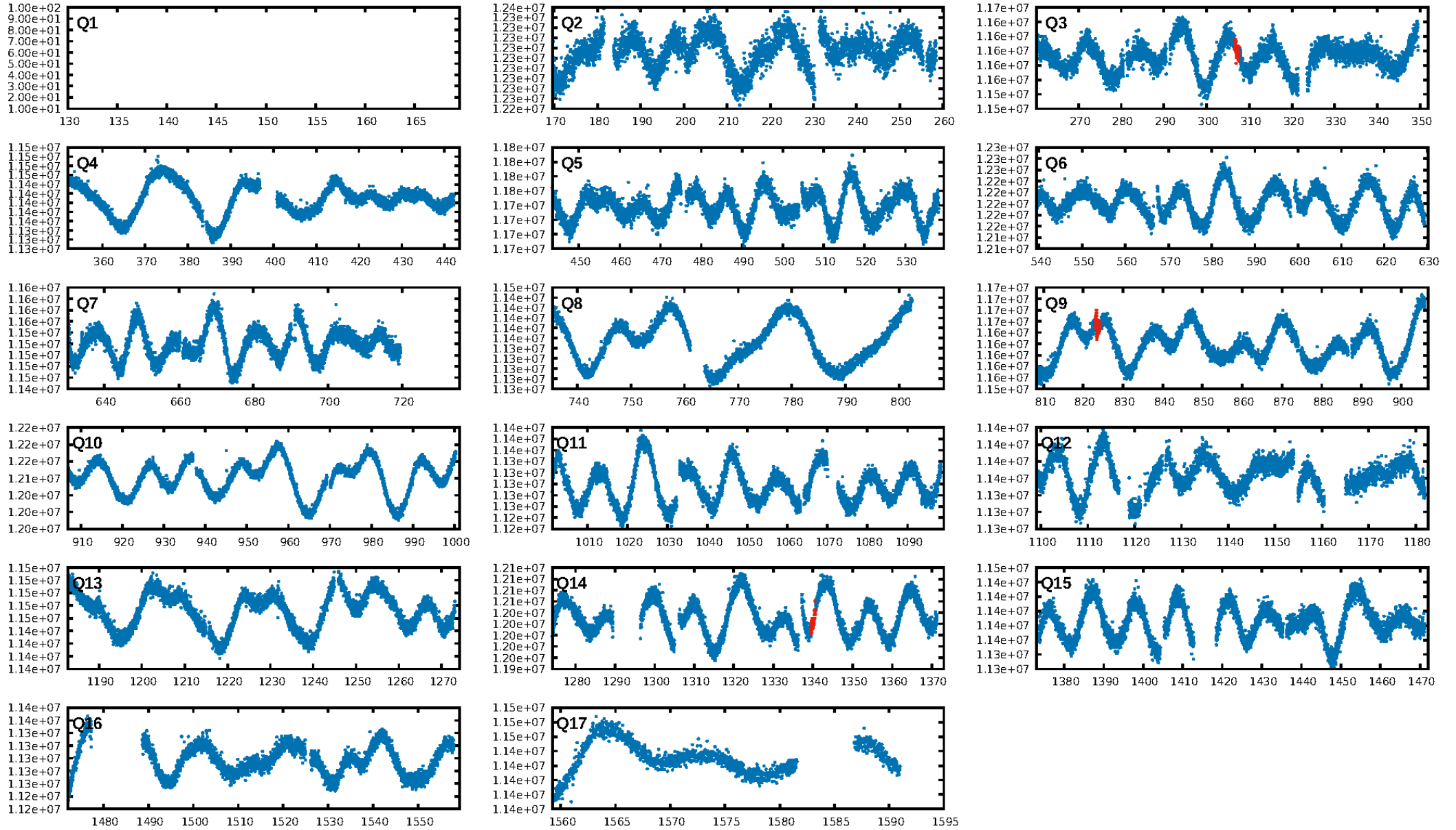
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 8.31e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.532
Centroid-sig: 17.3%
Centroid-so: 1.240 arcsec [0.83 σ]
OotOffset-rm: 1.175 arcsec [3.66 σ]
KicOffset-rm: 1.213 arcsec [3.76 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 [3/3]

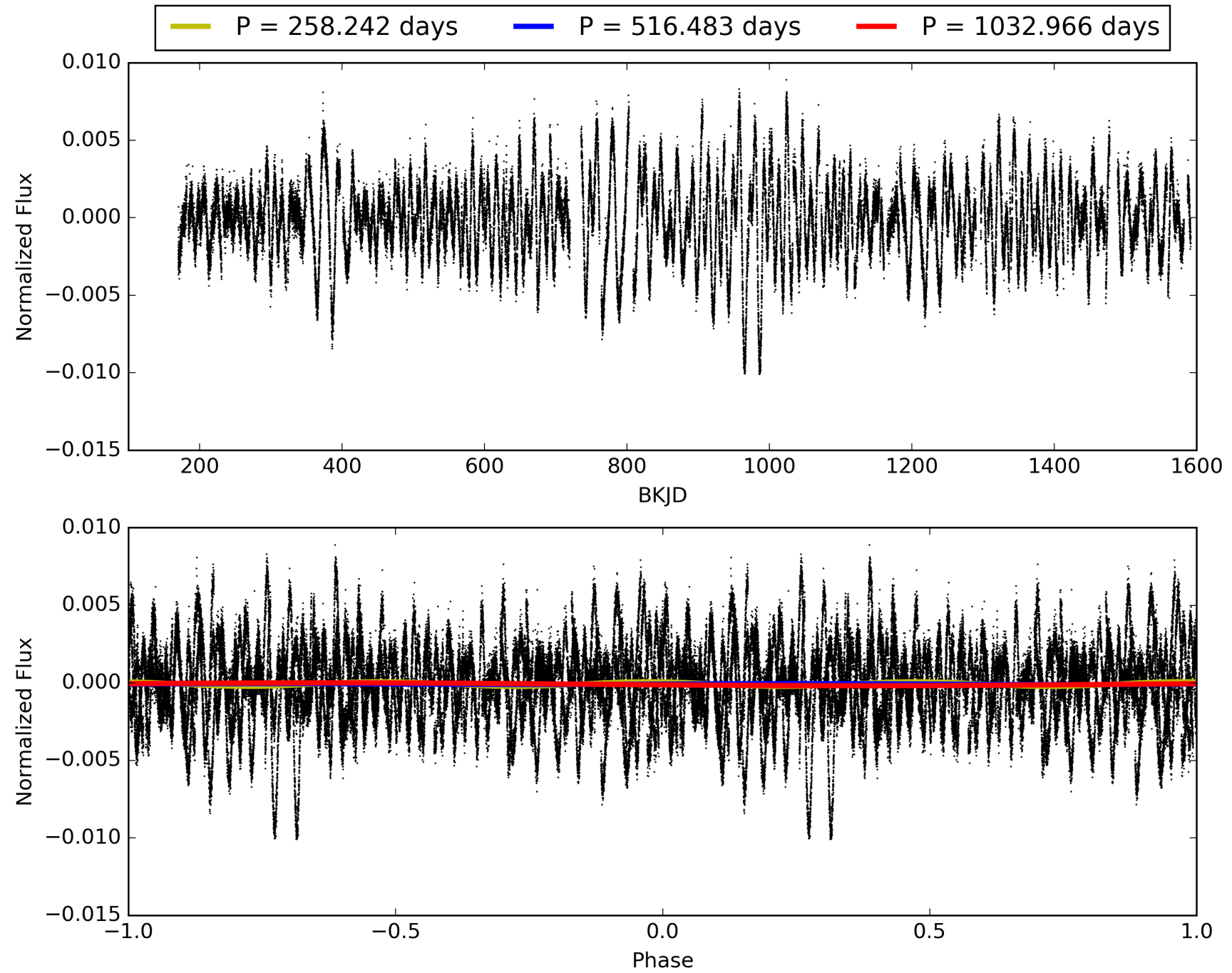
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:22:58 Z

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

TCE 005271270-01, PDC Light Curves

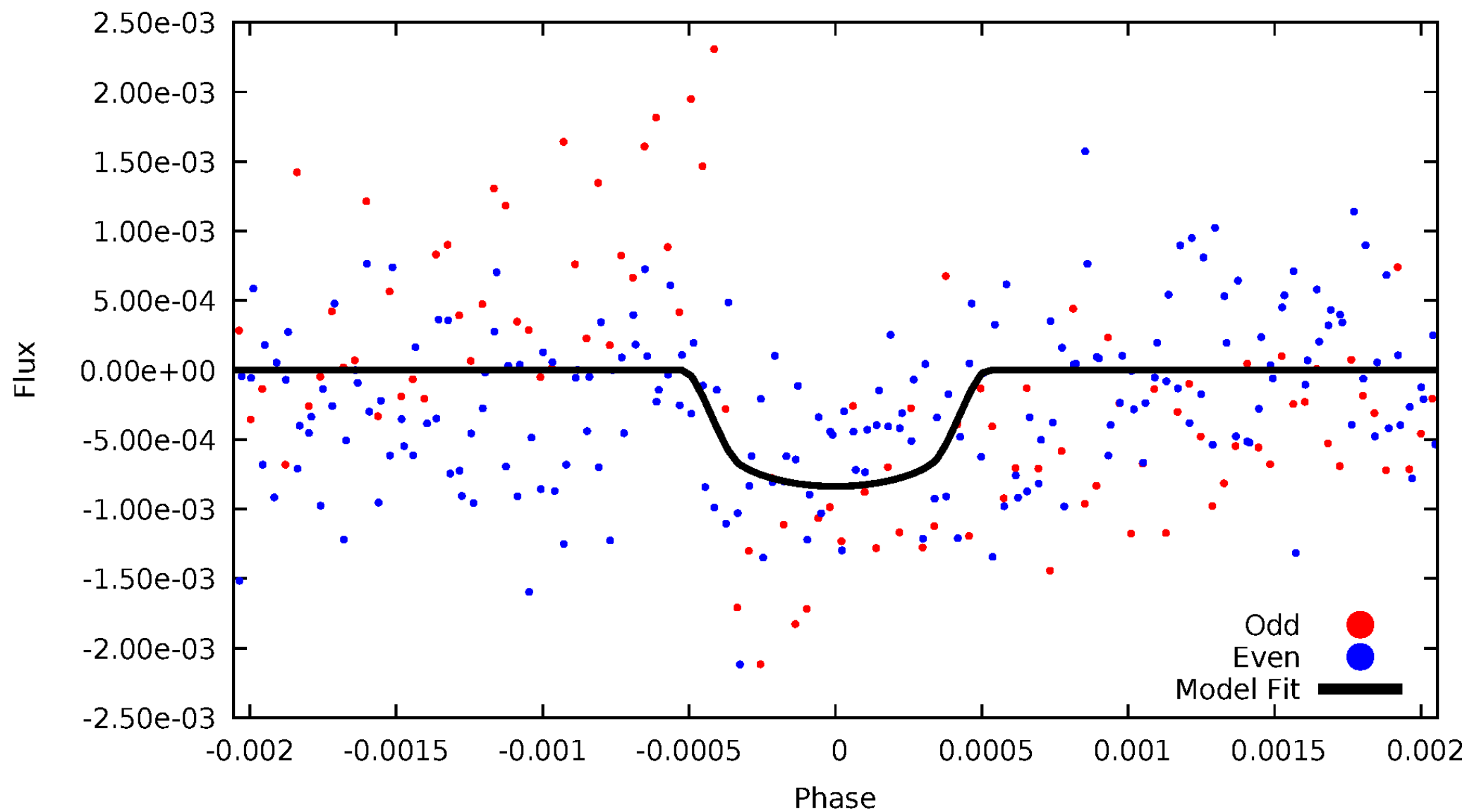


TCE 005271270-01



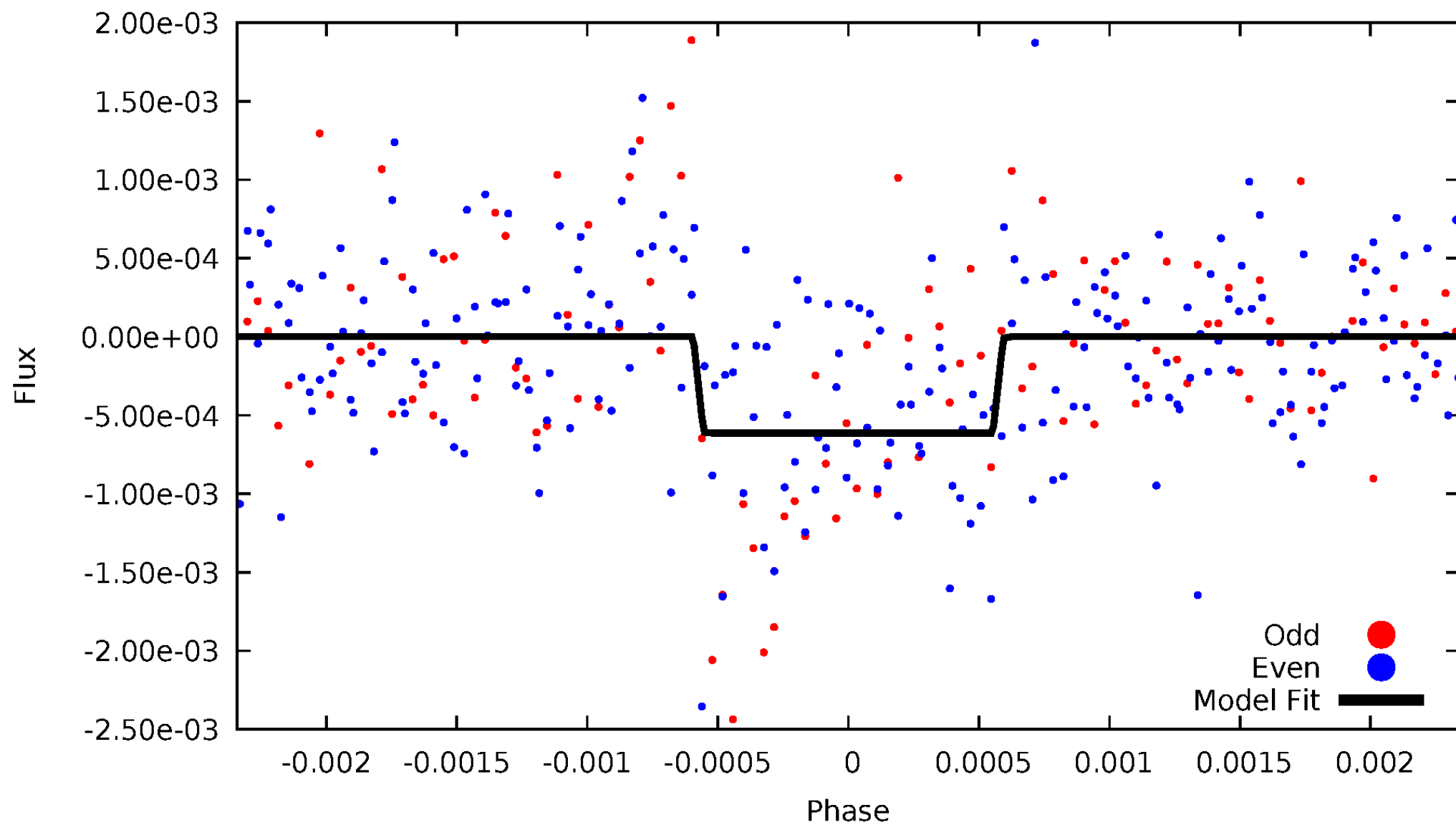
DV Odd/Even

TCE 005271270-01



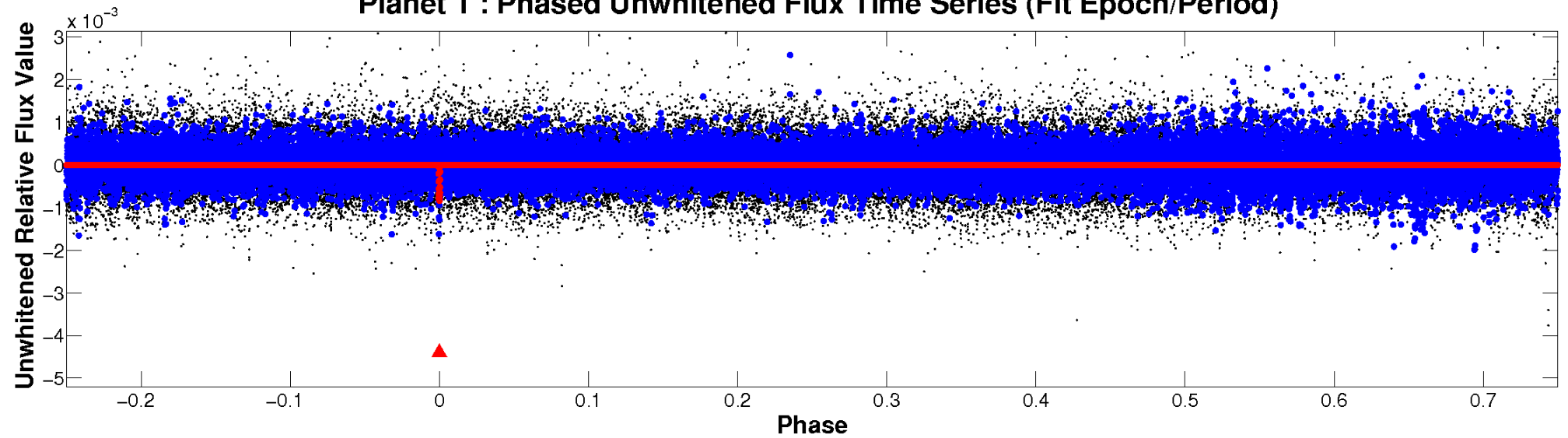
ALT Odd/Even

TCE 005271270-01

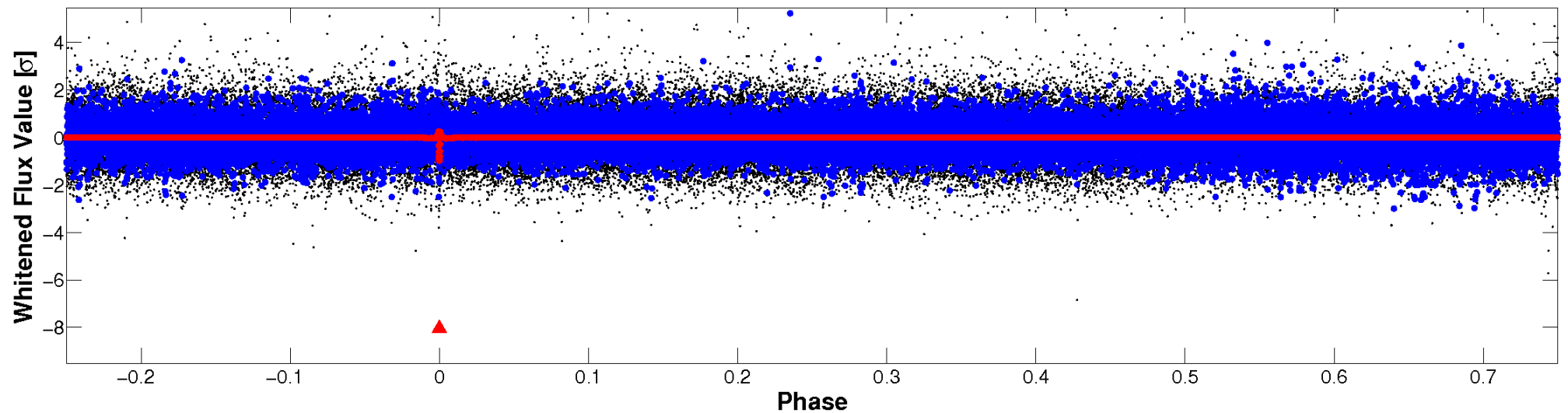


Non-Whitened Vs. Whitened Light Curve

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

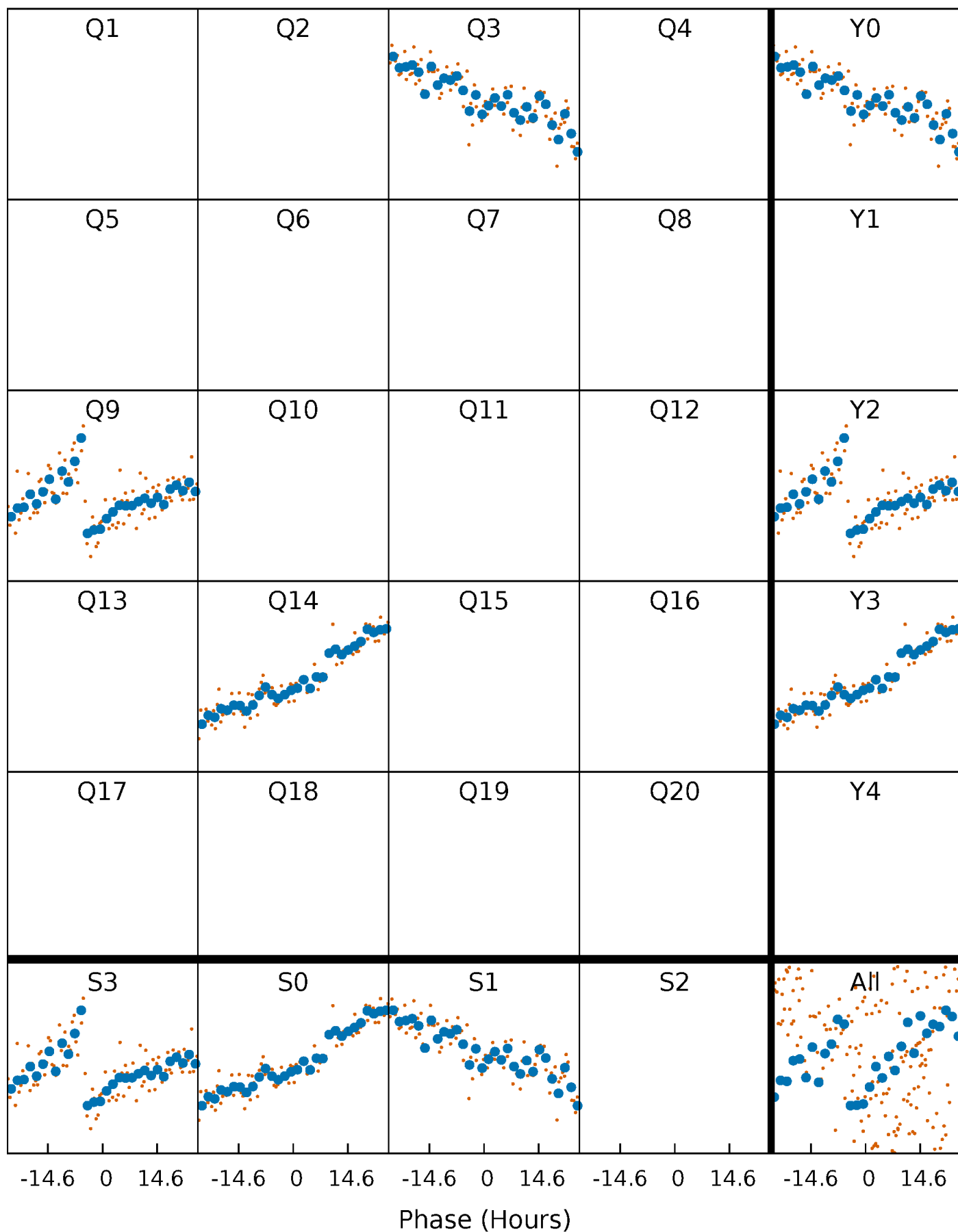


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005271270-01 P=516.483137 Days $T_0=307.082016$ (BKJD)



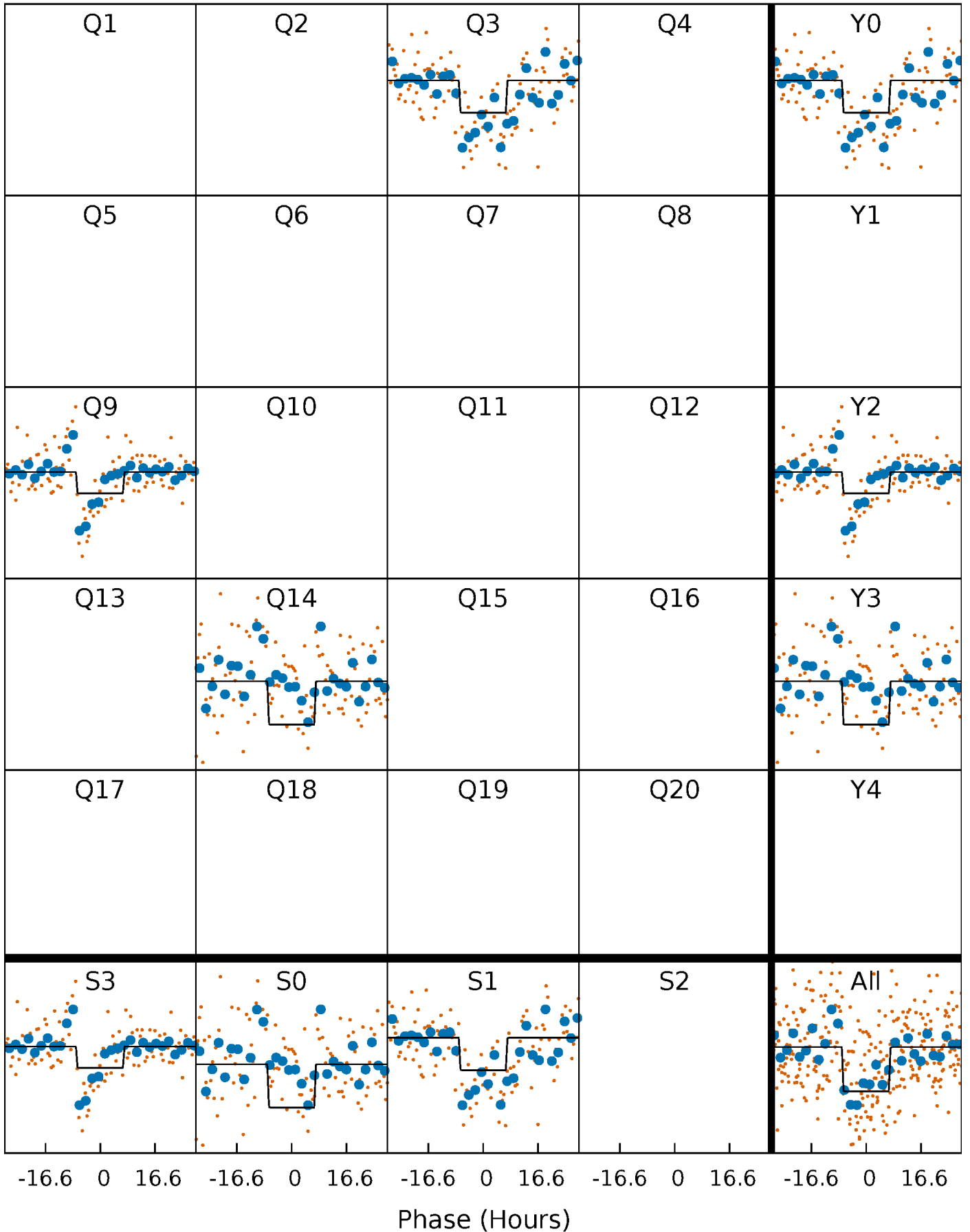
DV Quarter-Phased Transit Curves

TCE 005271270-01 P=516.483137 Days $T_0=307.082016$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

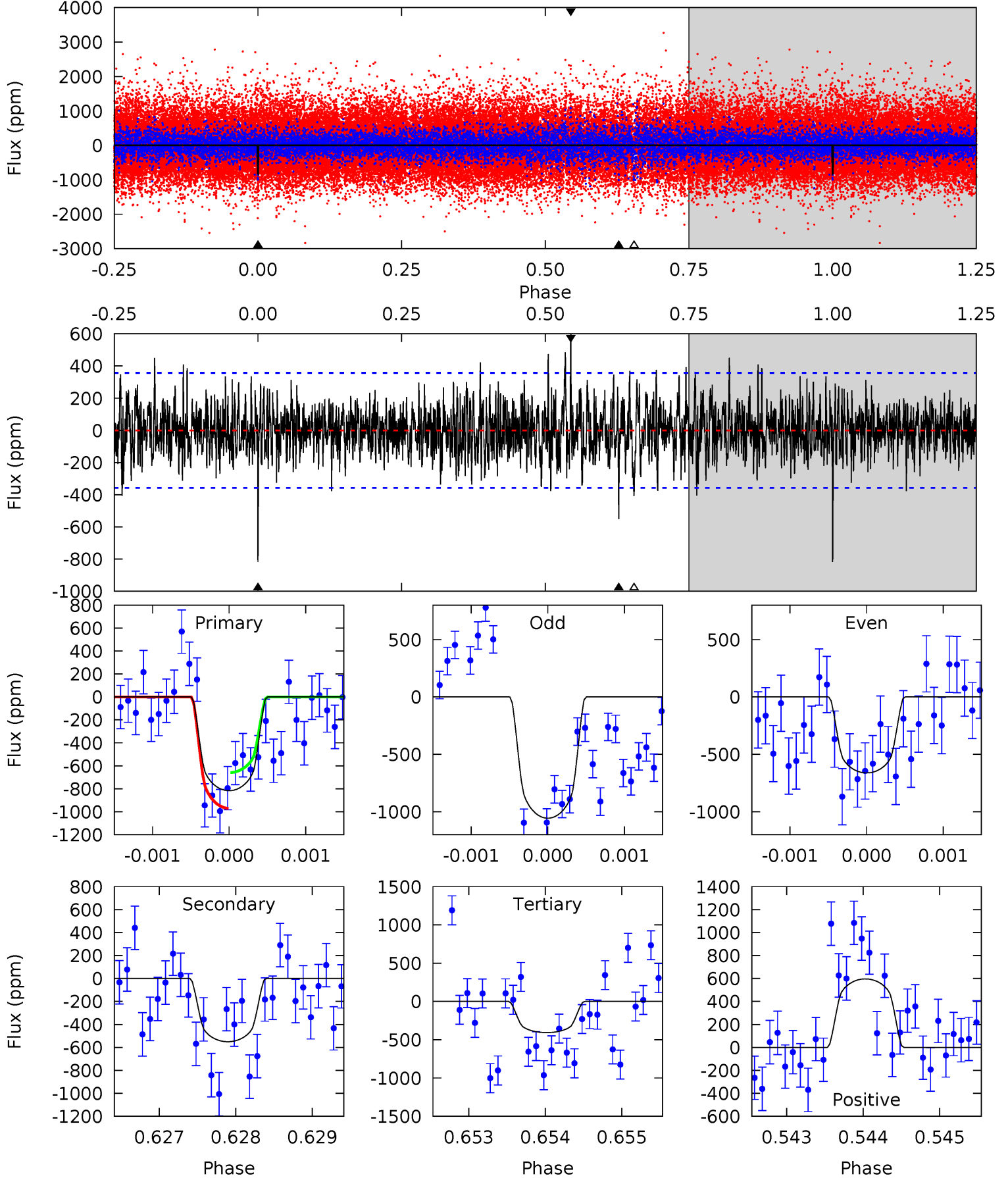
TCE 005271270-01 P=516.458229 Days $T_0=307.203074$ (BKJD)



DV Model-Shift Uniqueness Test

005271270-01, P = 516.483137 Days, E = 307.082016 Days

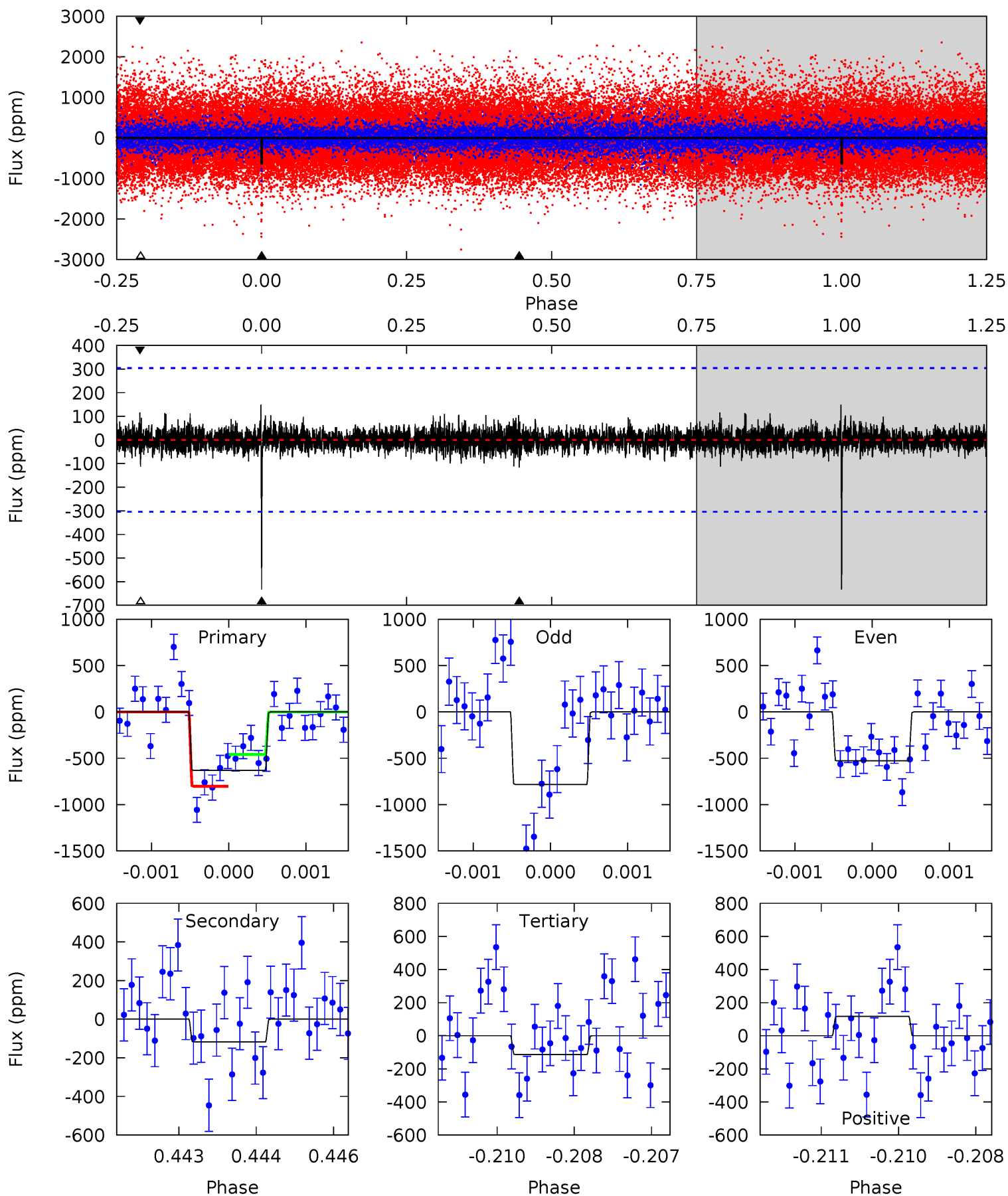
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	8.38	6.19	9.07	5.44	3.27	1.88	6.23	3.35	2.18	-0.70	2.82	0.96	0.42	2.36



Alt Model-Shift Uniqueness Test

005271270-01, P = 516.458229 Days, E = 307.203074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	2.09	2.02	2.08	5.43	3.25	0.48	9.25	9.20	0.07	0.01	2.13	0.81	0.19	3.06



Stellar Parameters For KIC 005271270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4342^{+129}_{-129}	$4.631^{+0.049}_{-0.021}$	$-0.200^{+0.300}_{-0.300}$	$0.631^{+0.045}_{-0.055}$	$0.622^{+0.067}_{-0.050}$	$3.481^{+0.746}_{-0.373}$
	+3%/-3%	+1%/-0%	+150%/-150%	+7%/-9%	+11%/-8%	+21%/-11%
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 005271270-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-551 ± 66	$2.29^{+0.37}_{-0.39}$	204^{+7}_{-8}	3816^{+319}_{-225}	66871^{+33629}_{-18120}
Alt.	-117 ± 56	$1.70^{+0.35}_{-0.36}$	204^{+7}_{-7}	3271^{+342}_{-322}	26209^{+22429}_{-13370}

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 $A_{obs} \gg 1.0$

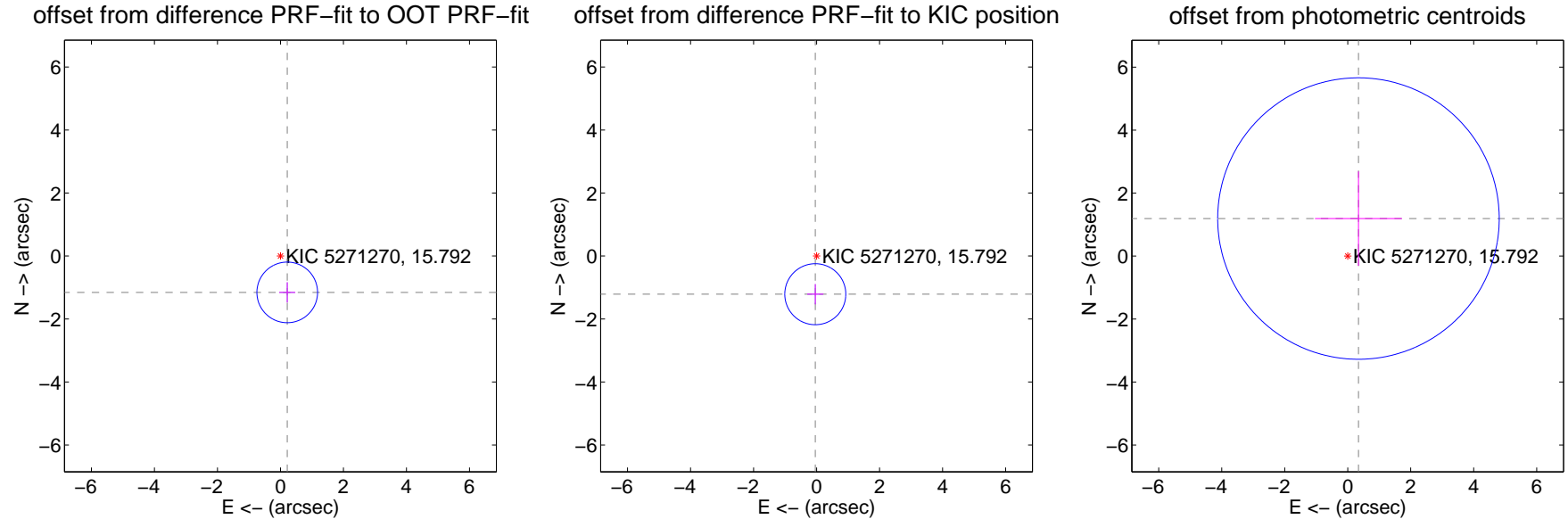
DV Centroid Data

Supplemental centroid analysis for 005271270-01. Kepler magnitude: 15.79. Transit SNR 7.09

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

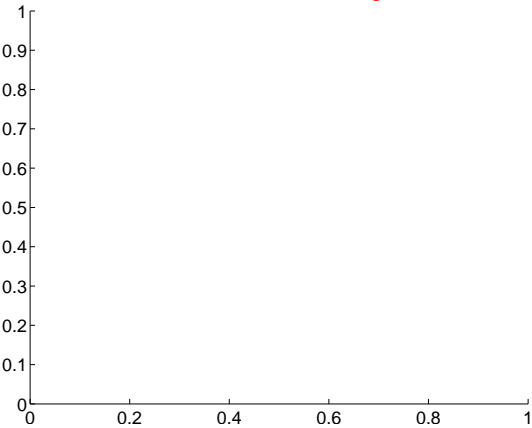
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.175 ± 0.321	3.66	-0.215 ± 0.257	-1.155 ± 0.323
PRF-fit source offset from KIC position	1.213 ± 0.323	3.76	0.041 ± 0.257	-1.212 ± 0.323
photometric centroid source offset	1.24 ± 1.49	0.83	-0.34 ± 1.38	1.19 ± 1.50



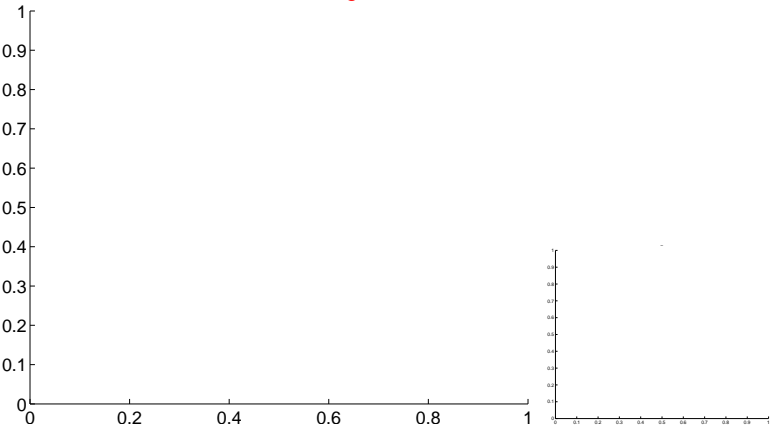
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

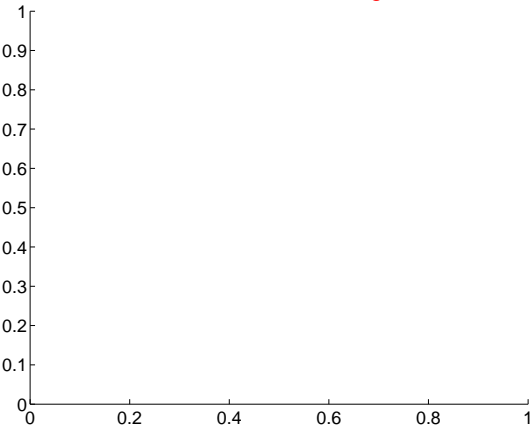
Q1 no difference image



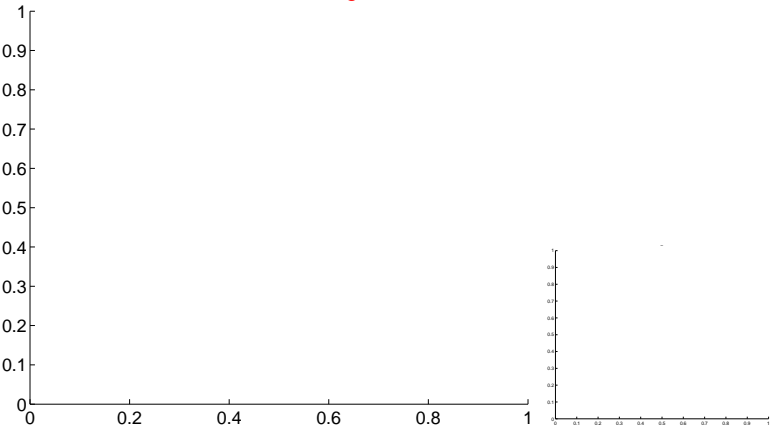
Q1 no OOT image



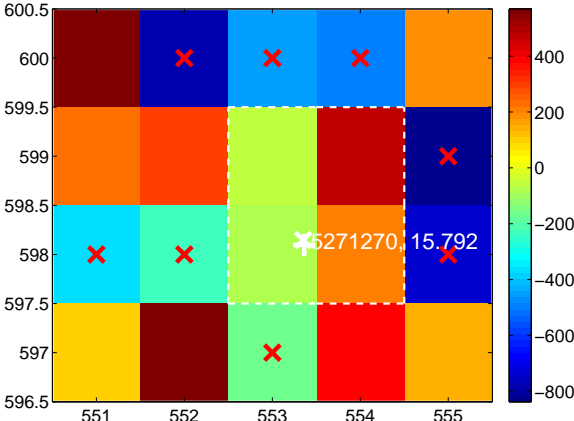
Q2 no difference image



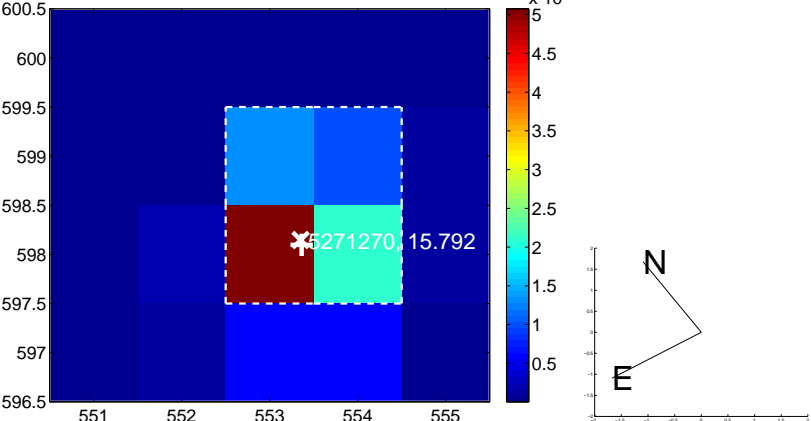
Q2 no OOT image



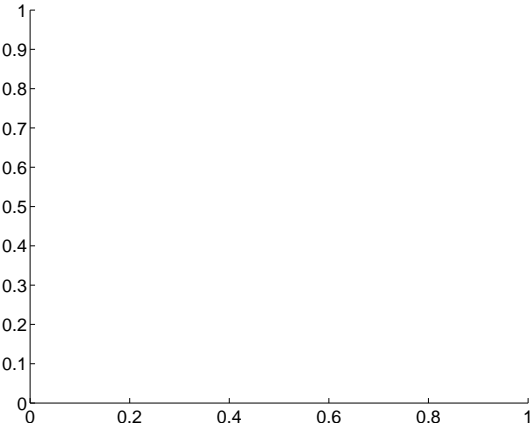
Q3 difference image. Poor Quality



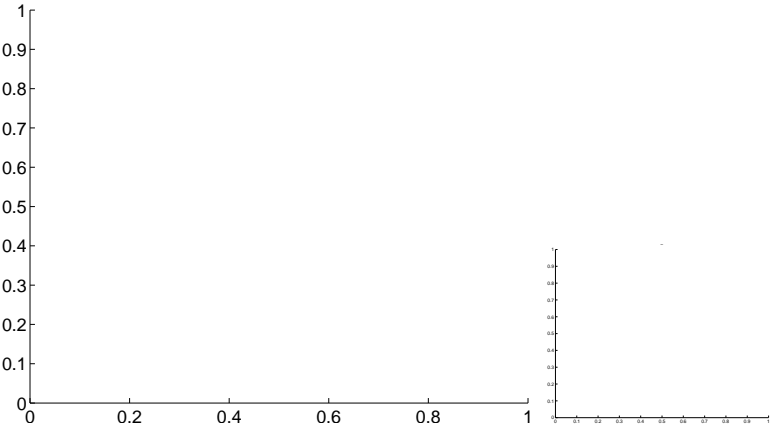
Q3 OOT image



Q4 no difference image



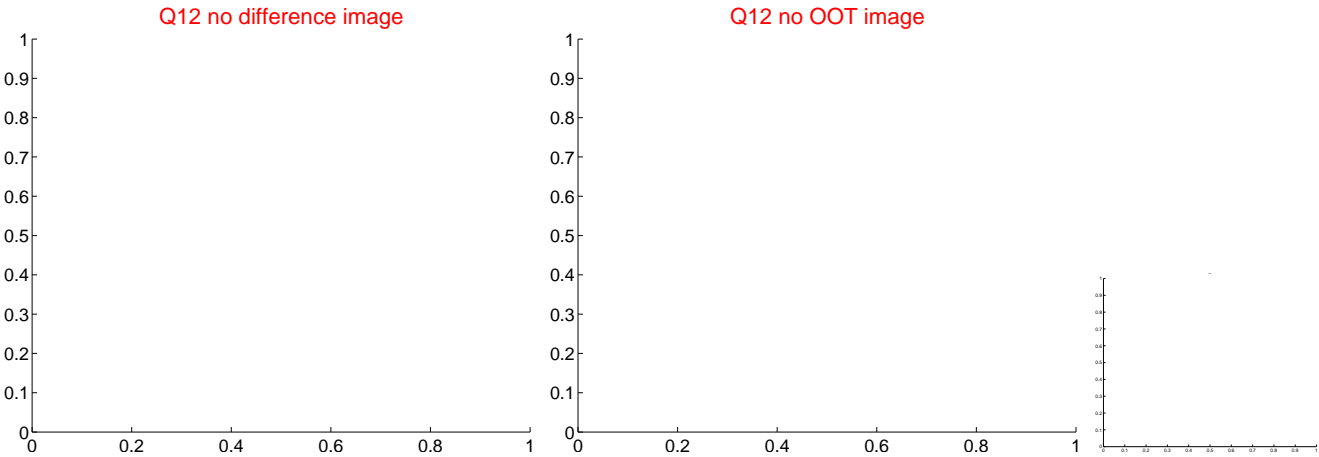
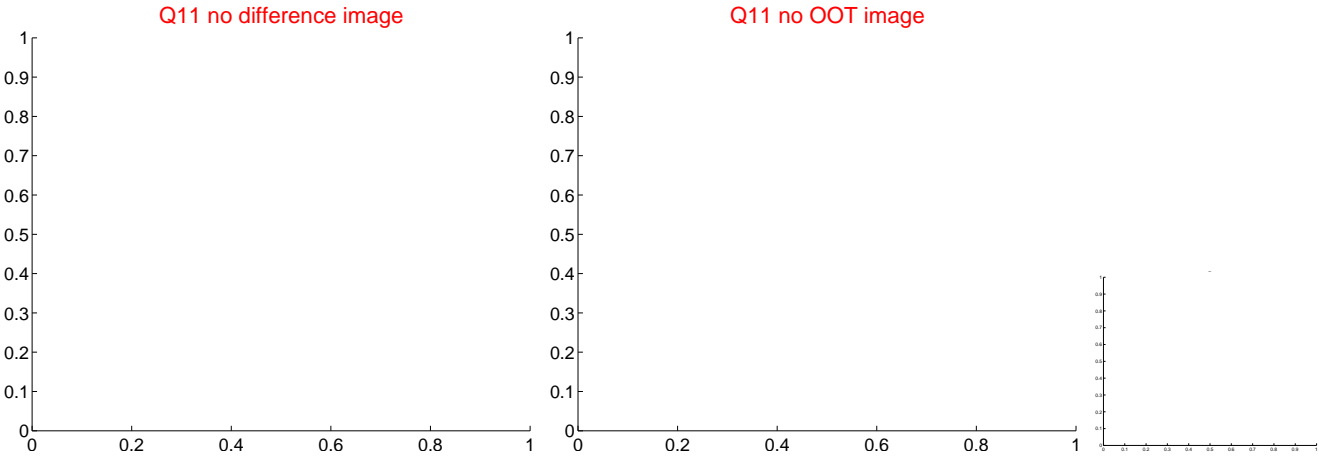
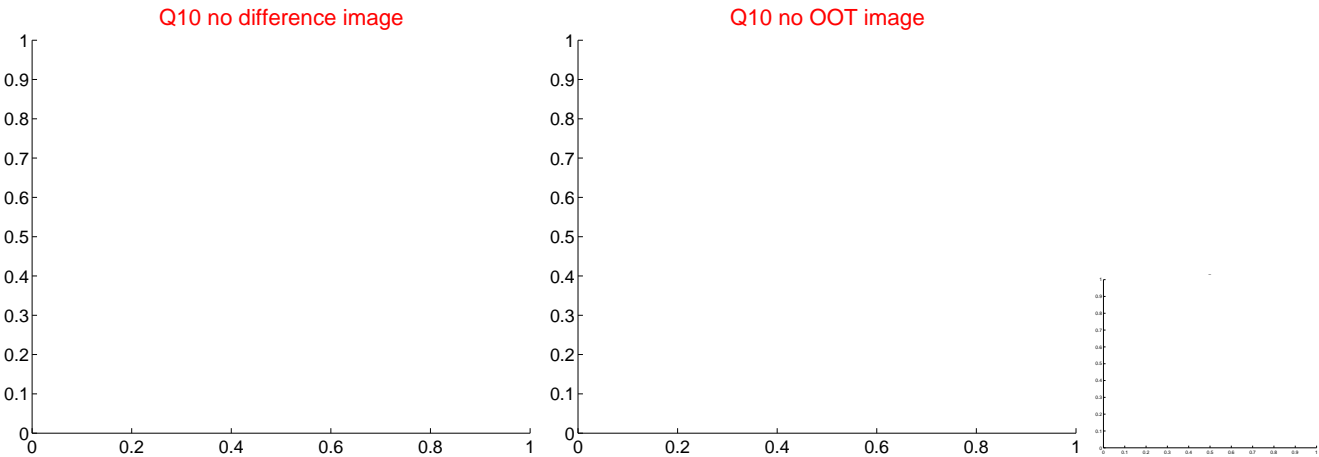
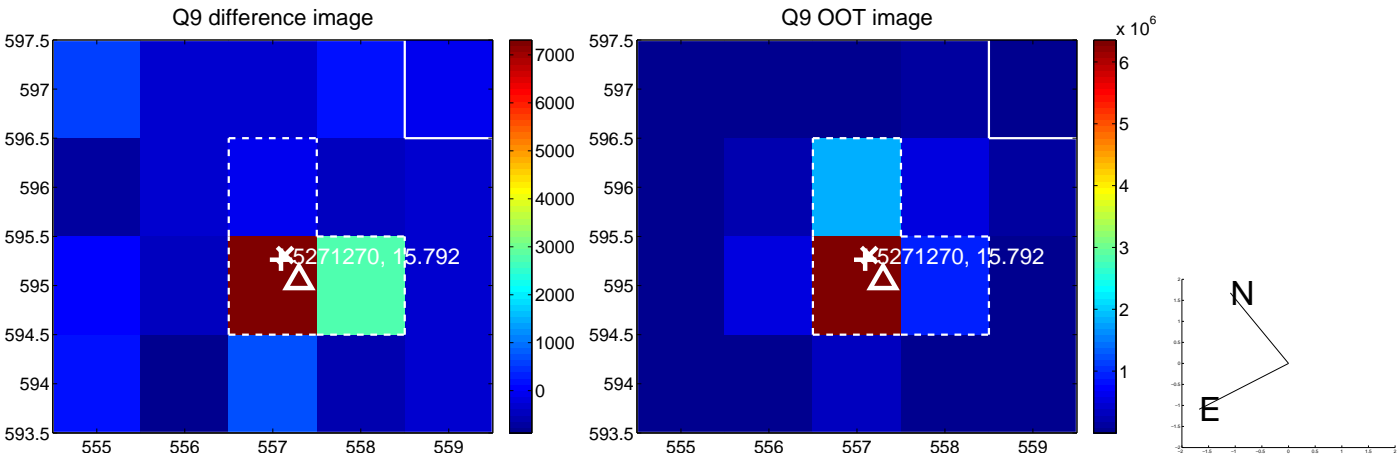
Q4 no OOT image



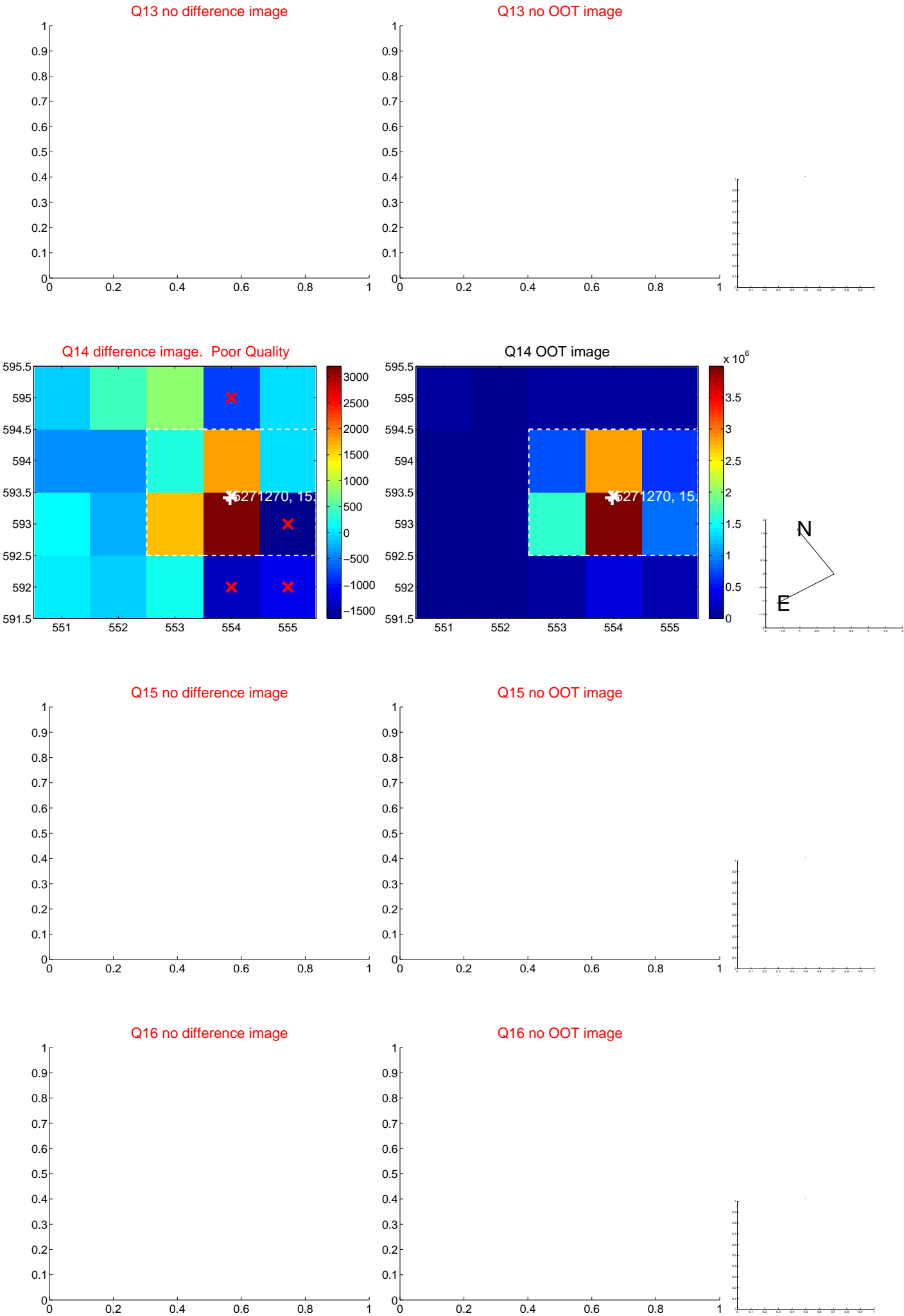
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



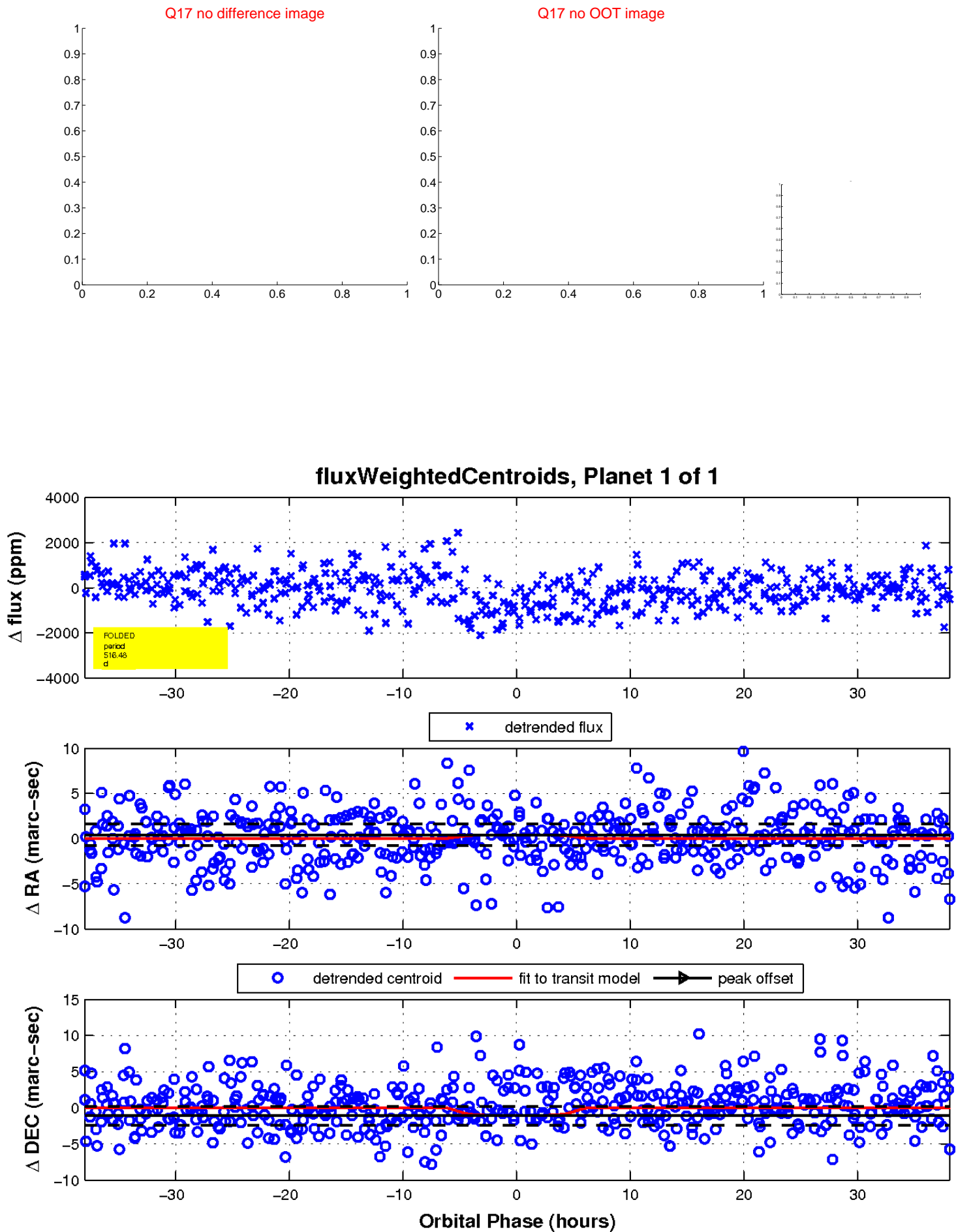
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

