

KIC 010736412

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})
010736412-01	OBS	No	360.666844	371.915460	134.2	31.940	7.6	4.5	0.81	5495	1.07	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010736412-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

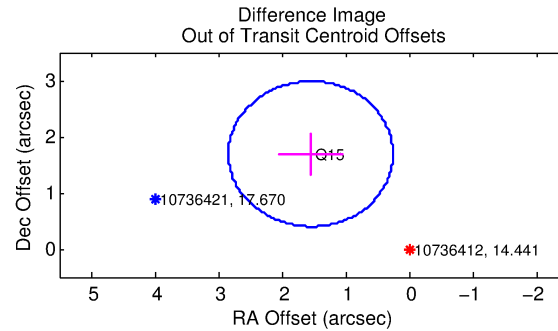
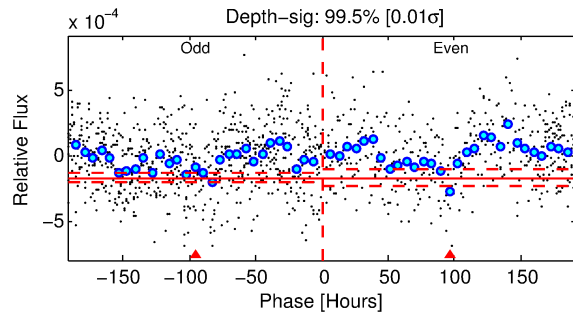
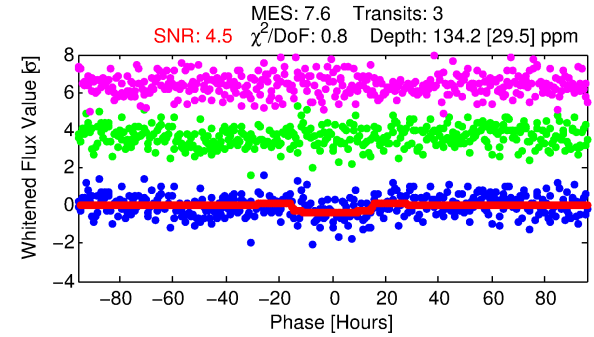
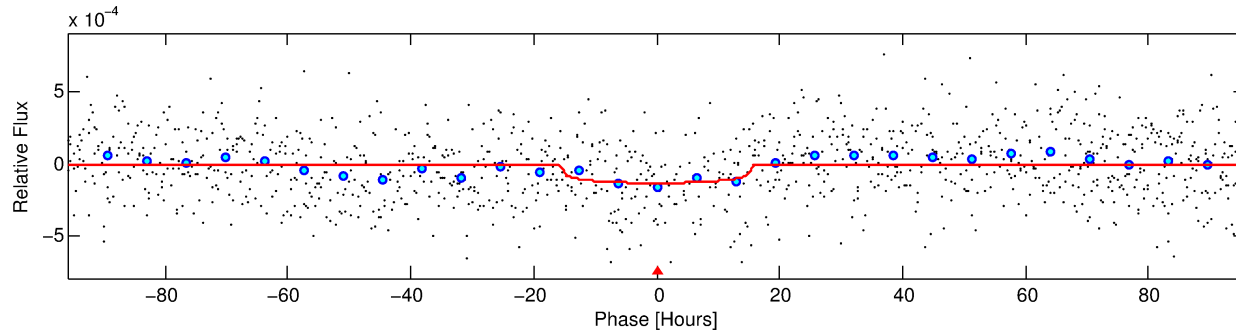
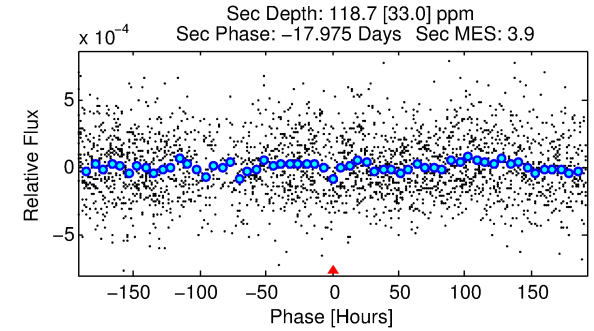
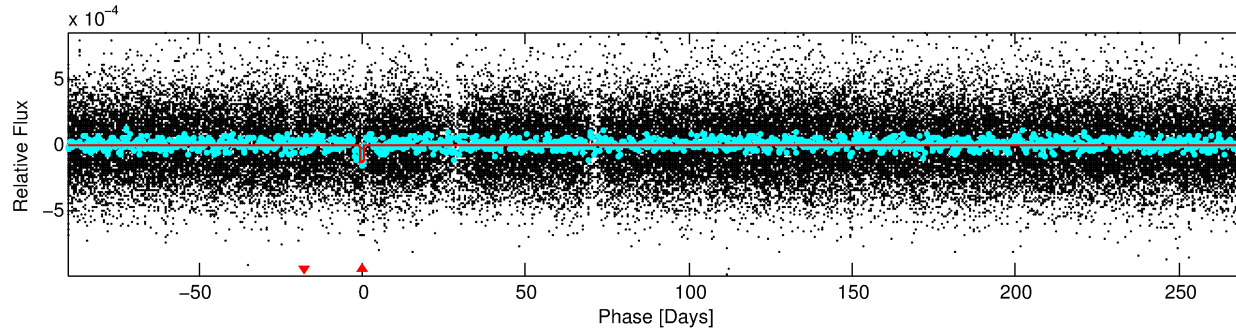
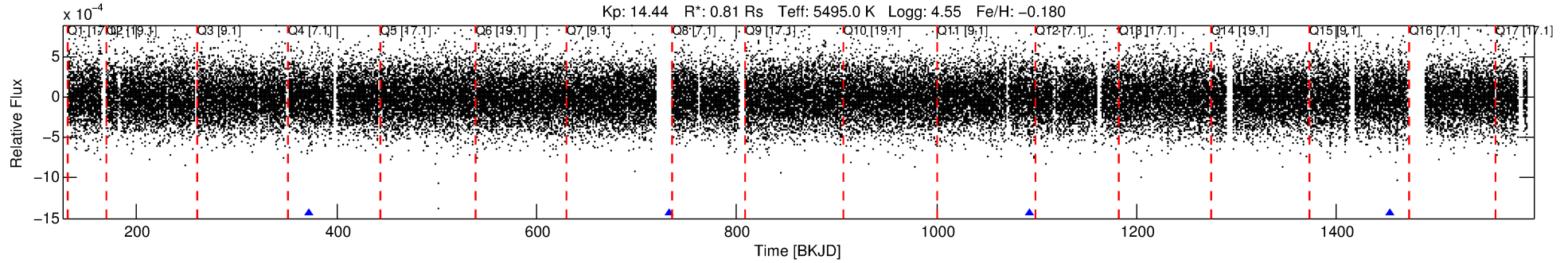
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010736412-01

No Significant Match Found

DV One-Page Summary

KIC: 10736412 Candidate: 1 of 1 Period: 360.667 d



DV Fit Results:

Period = 360.66684 [0.03220] d
Epoch = 371.9155 [0.0681] BKJD
Rp/R* = 0.0122 [0.0038]
a/R* = 47.58 [60.78]
b = 0.85 [0.43]
Seff = 0.60 [0.17]
Teq = 225 [16] K
Rp = 1.07 [0.41] Re
a = 0.9421 [0.1669] AU
Ag = 50230.06 [36612.57] [1.37σ]
Teffp = 5203 [904] K [5.50σ]

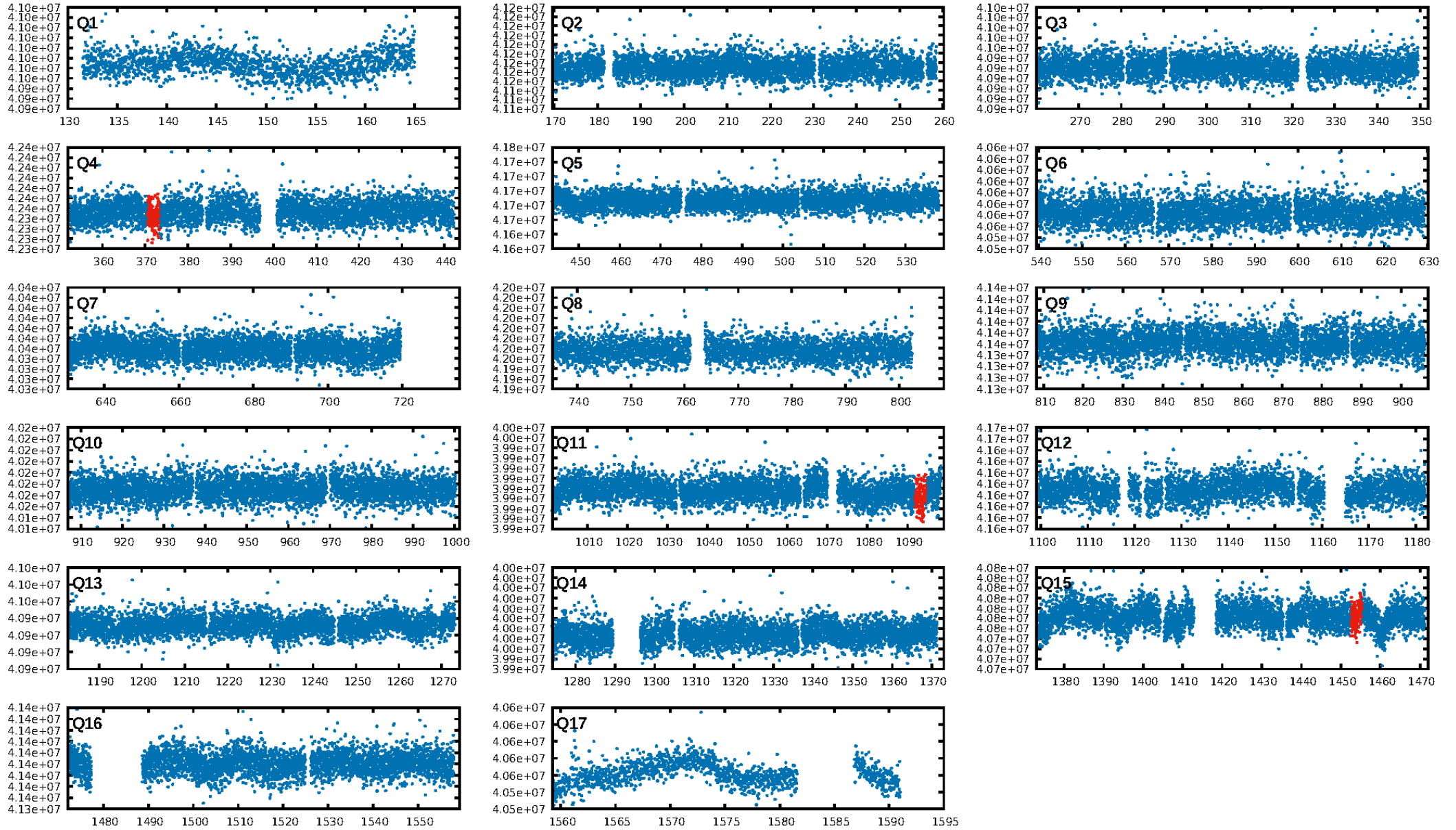
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.51e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2917
Centroid-sig: 77.6%
Centroid-so: 0.867 arcsec [0.38σ]
OotOffset-rm: 2.291 arcsec [5.31σ]
KicOffset-rm: 2.203 arcsec [5.16σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

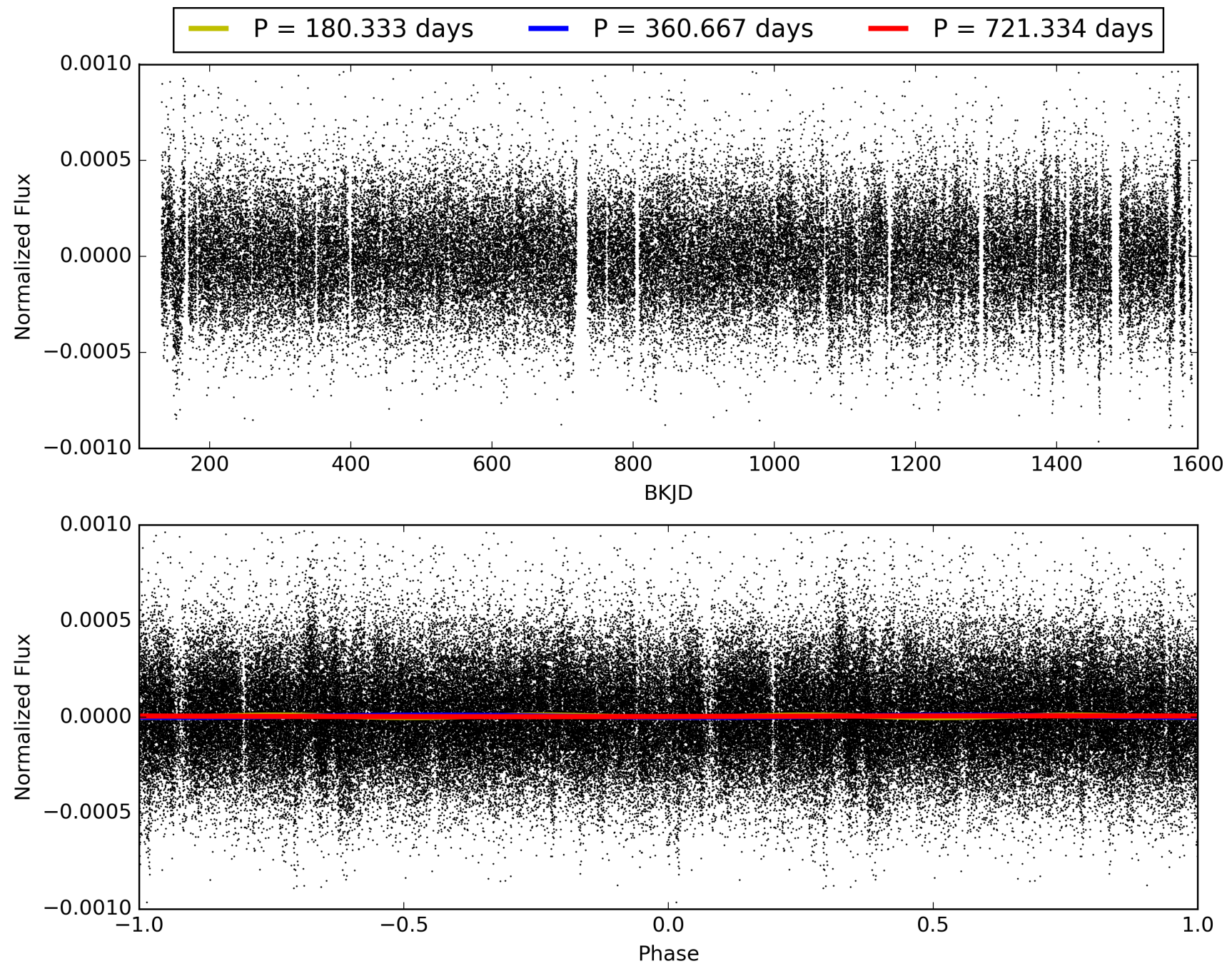
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:49:51 Z

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

TCE 010736412-01, PDC Light Curves

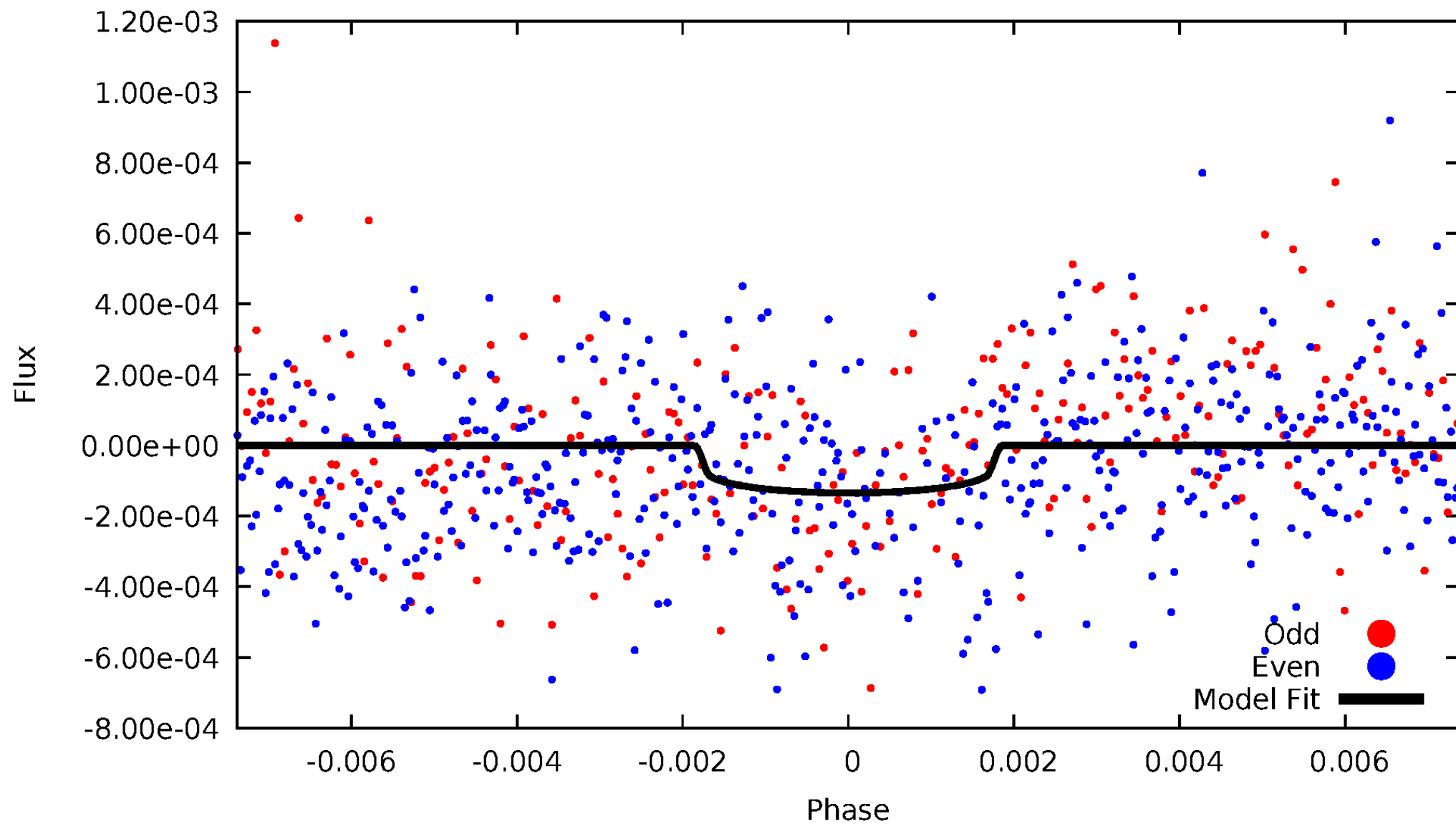


TCE 010736412-01



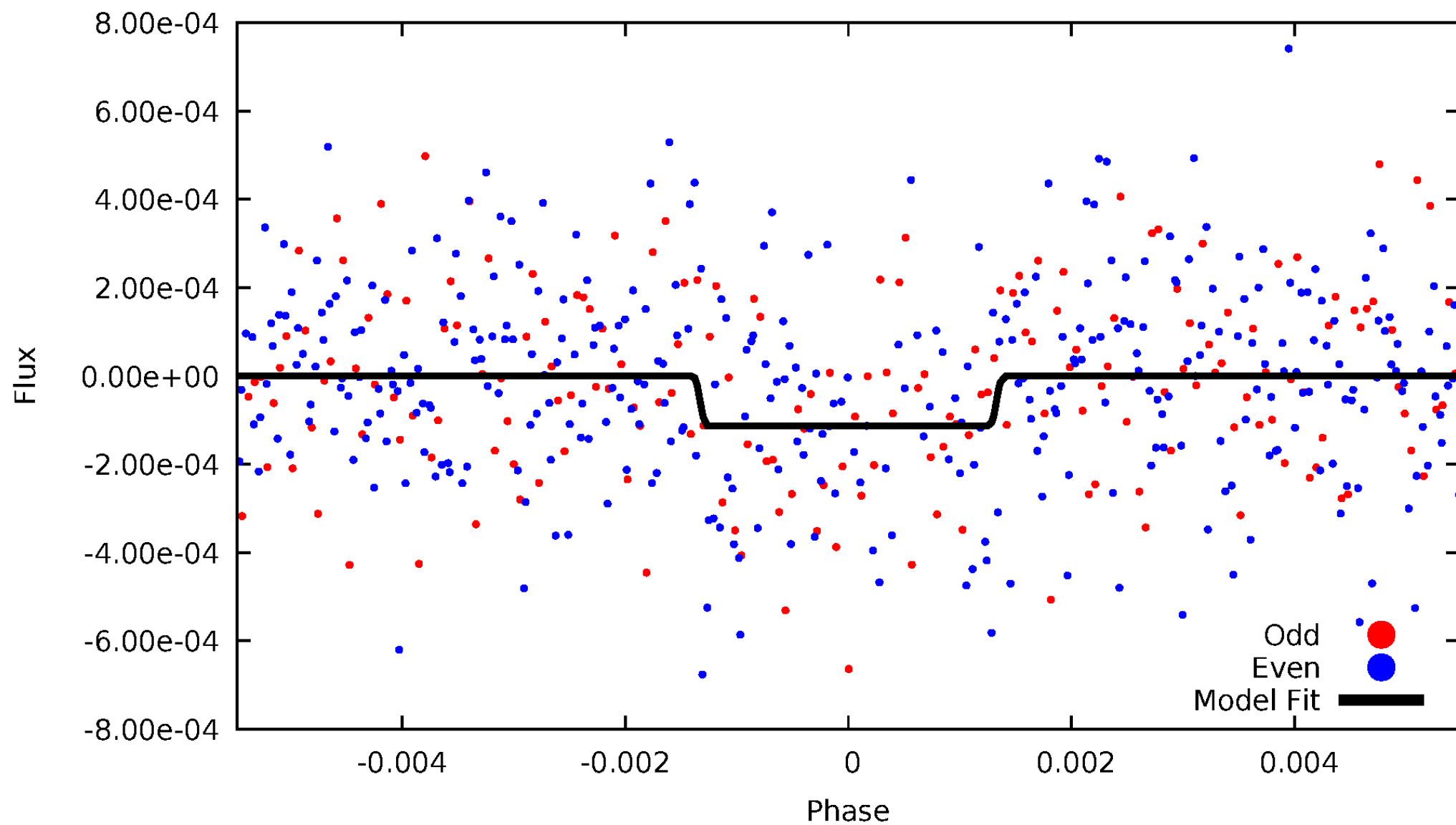
DV Odd/Even

TCE 010736412-01

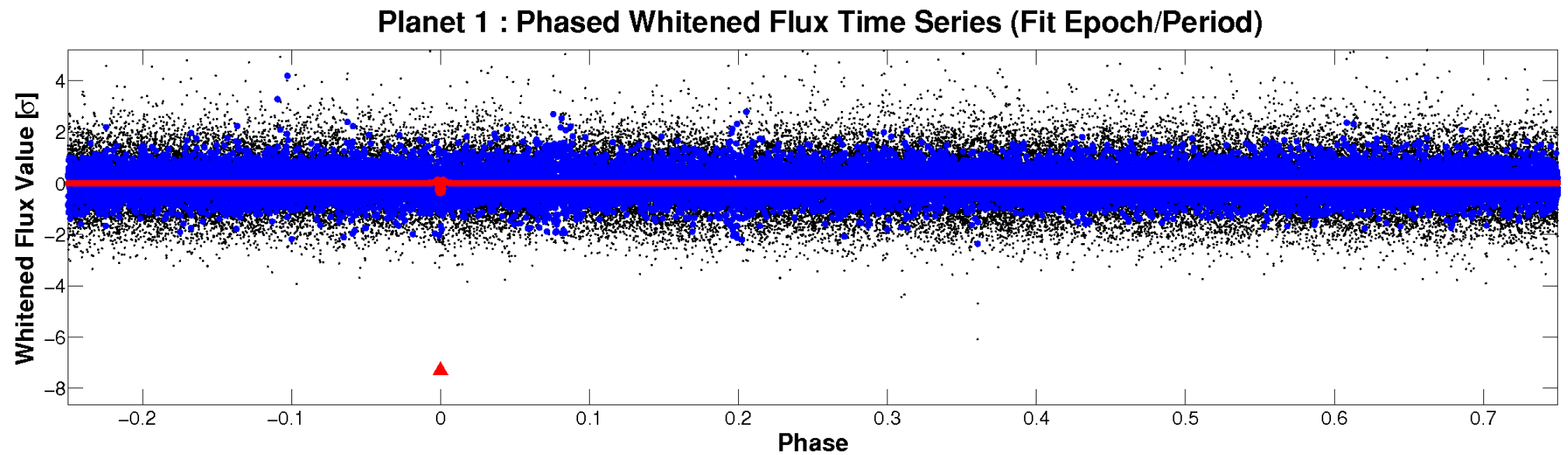
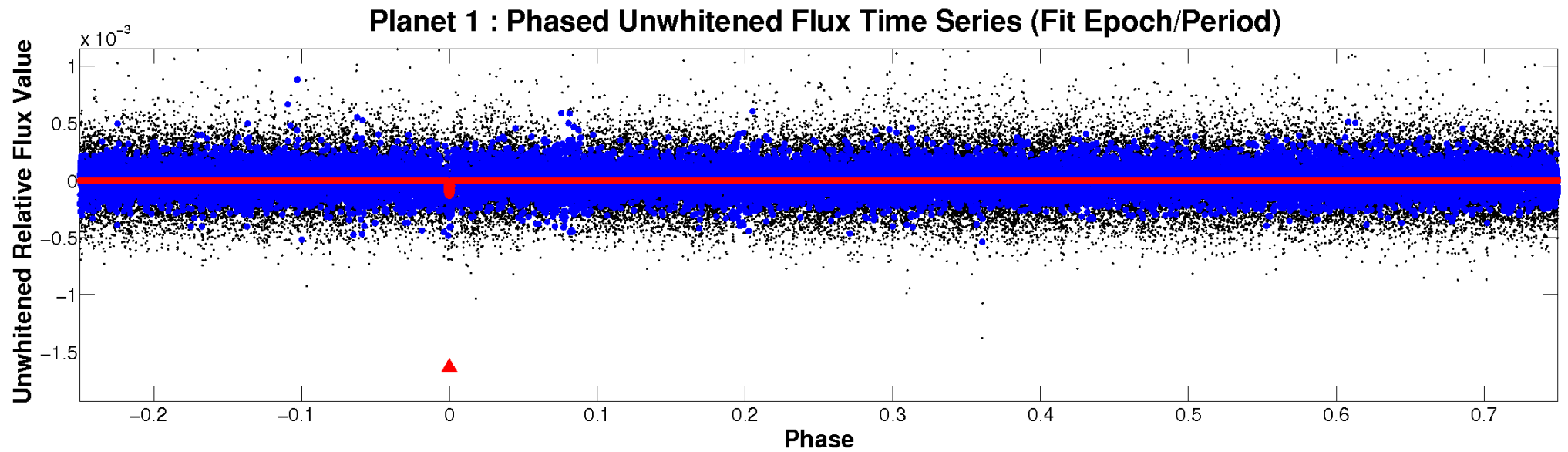


ALT Odd/Even

TCE 010736412-01

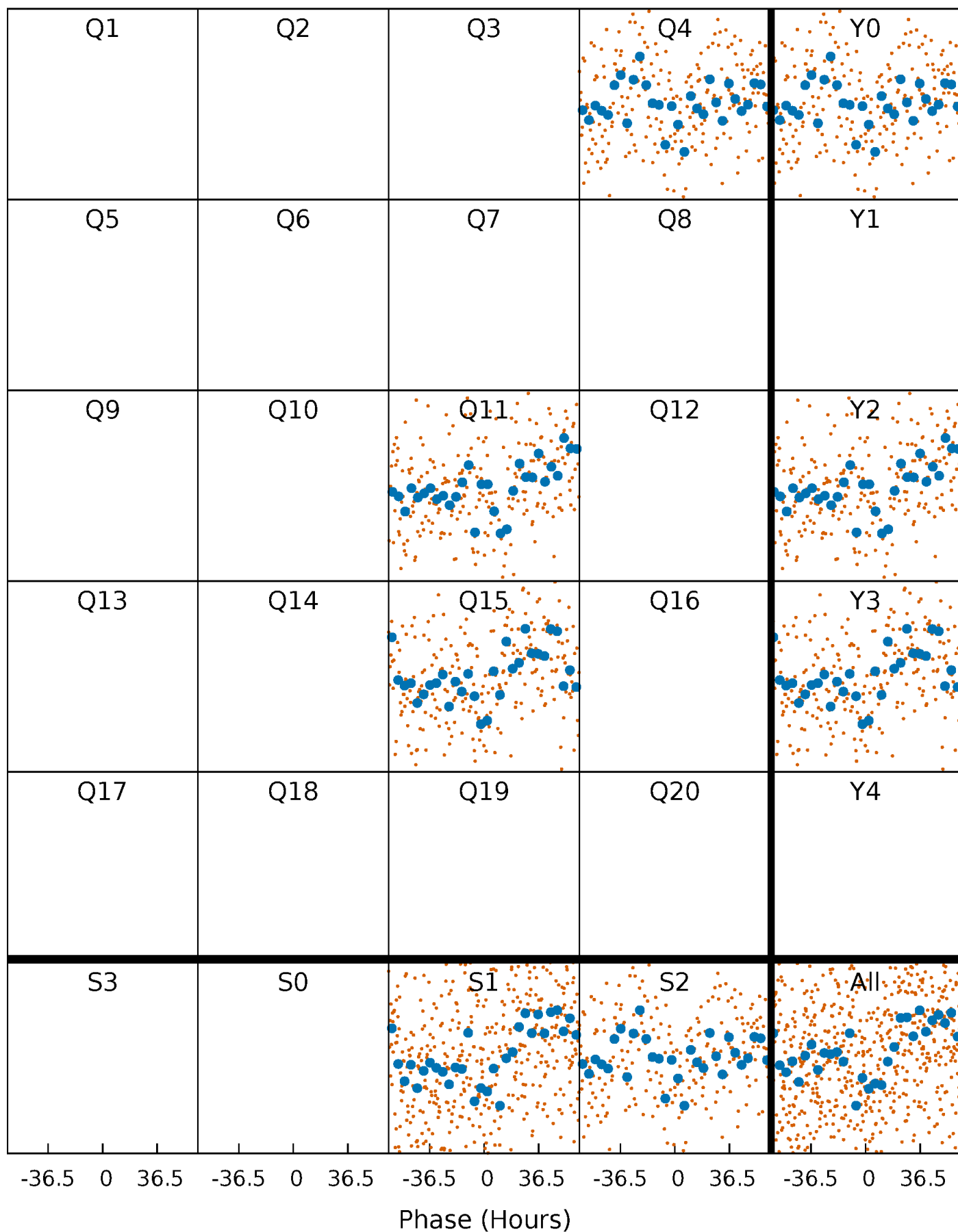


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010736412-01 P=360.666844 Days $T_0=371.915460$ (BKJD)



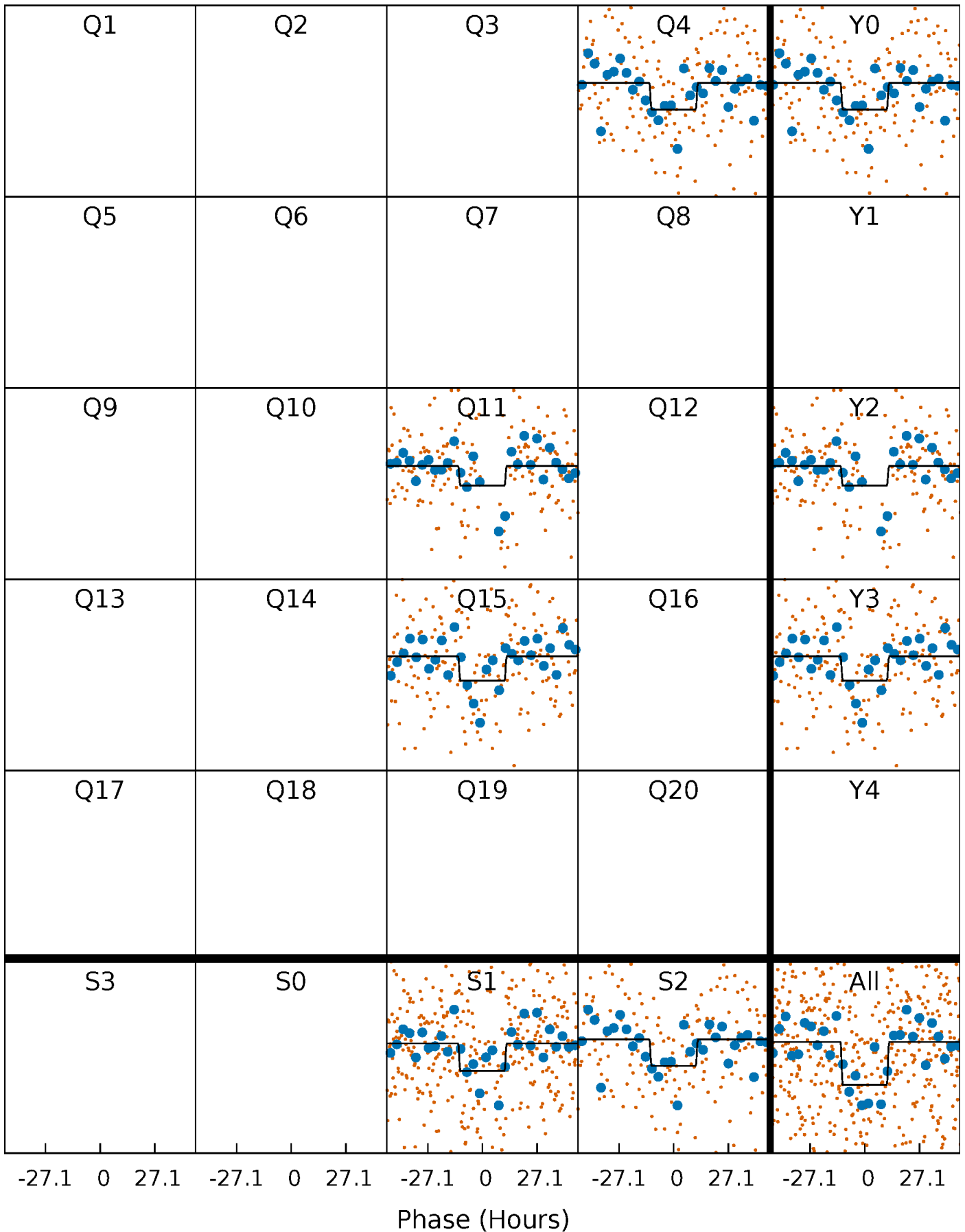
DV Quarter-Phased Transit Curves

TCE 010736412-01 P=360.666844 Days $T_0=371.915460$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

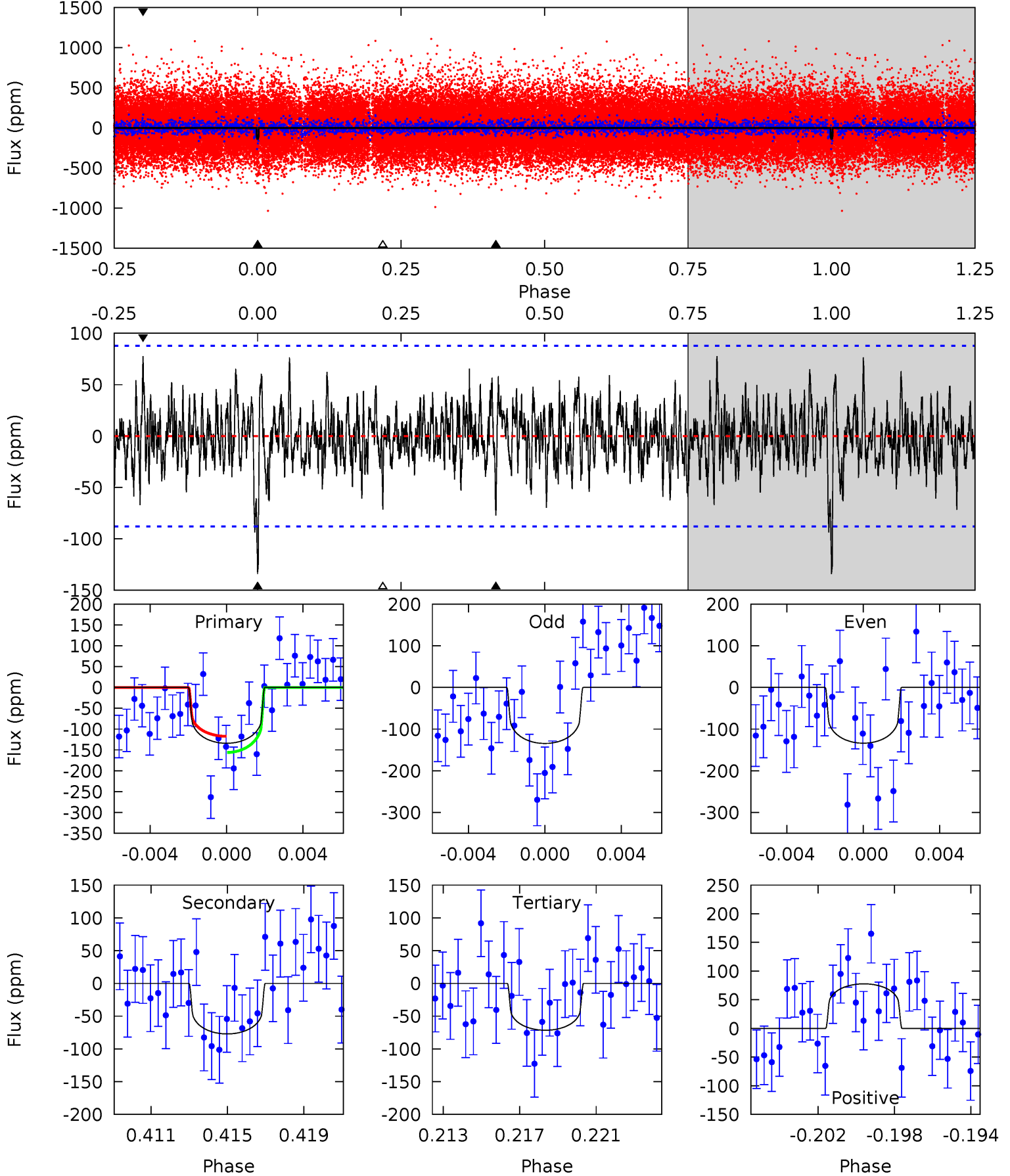
TCE 010736412-01 P=360.645523 Days $T_0=372.076500$ (BKJD)



DV Model-Shift Uniqueness Test

010736412-01, P = 360.666844 Days, E = 11.248616 Days

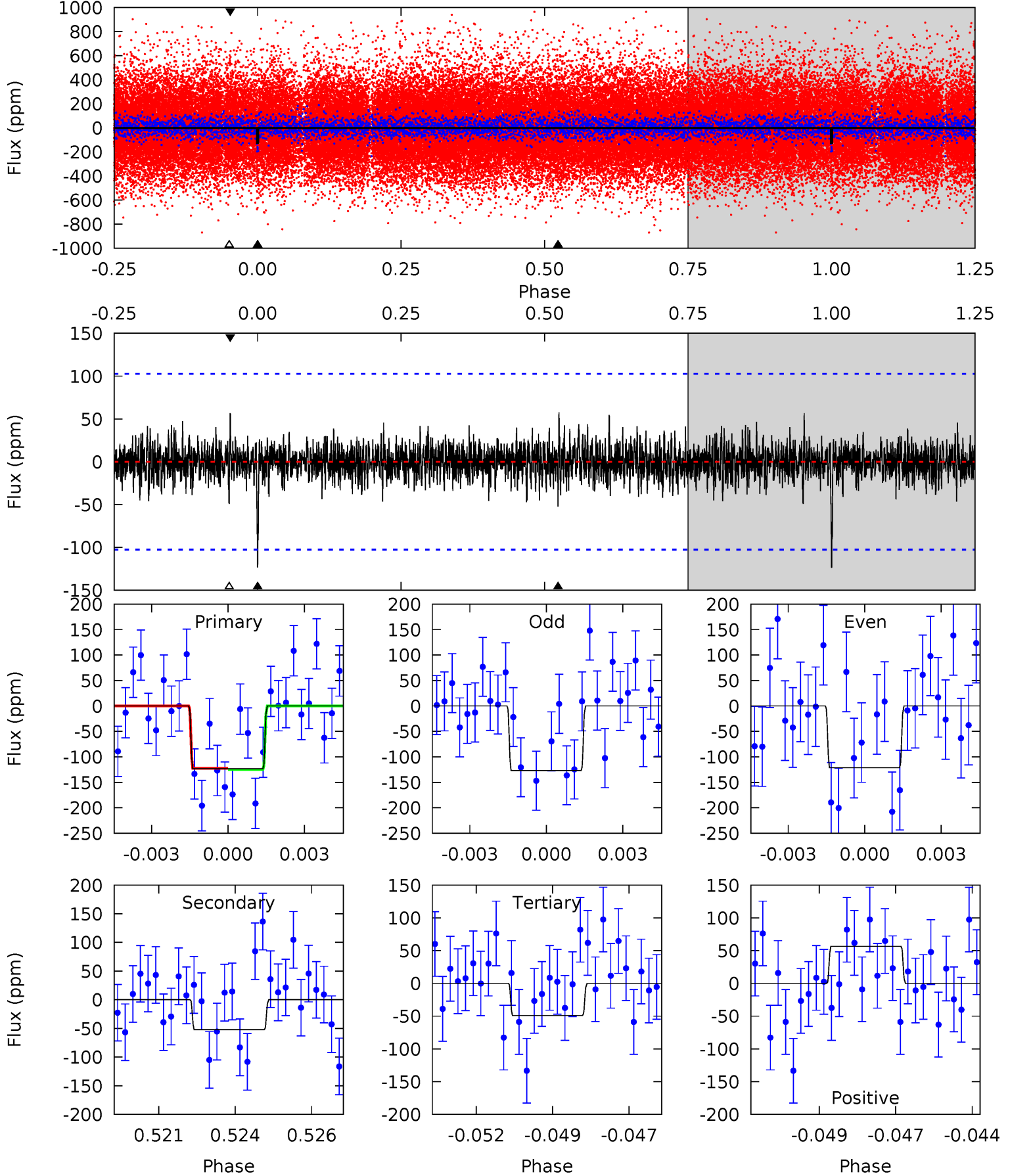
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	4.58	4.24	4.61	5.21	2.90	1.37	3.71	3.34	0.34	-0.03	0.02	1.00	0.37	1.15



Alt Model-Shift Uniqueness Test

010736412-01, P = 360.645523 Days, E = 11.430977 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.34	2.68	2.52	2.91	5.27	3.00	0.73	3.83	3.43	0.17	-0.23	0.14	0.98	0.32	0.06



Stellar Parameters For KIC 010736412

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5495^{+166}_{-149}	$4.554^{+0.048}_{-0.133}$	$-0.180^{+0.300}_{-0.300}$	$0.810^{+0.176}_{-0.070}$	$0.857^{+0.092}_{-0.083}$	$2.273^{+0.540}_{-0.890}$
	+3%/-3%	+1%/-3%	+167%/-167%	+22%/-9%	+11%/-10%	+24%/-39%
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 010736412-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-77 ± 17	$1.09^{+0.35}_{-0.35}$	318^{+17}_{-14}	4783^{+892}_{-533}	30971^{+36446}_{-14039}
Alt.	-52 ± 19	$0.95^{+0.35}_{-0.35}$	319^{+16}_{-13}	4673^{+1170}_{-660}	27045^{+48297}_{-14857}

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 $A_{obs} \gg 1.0$

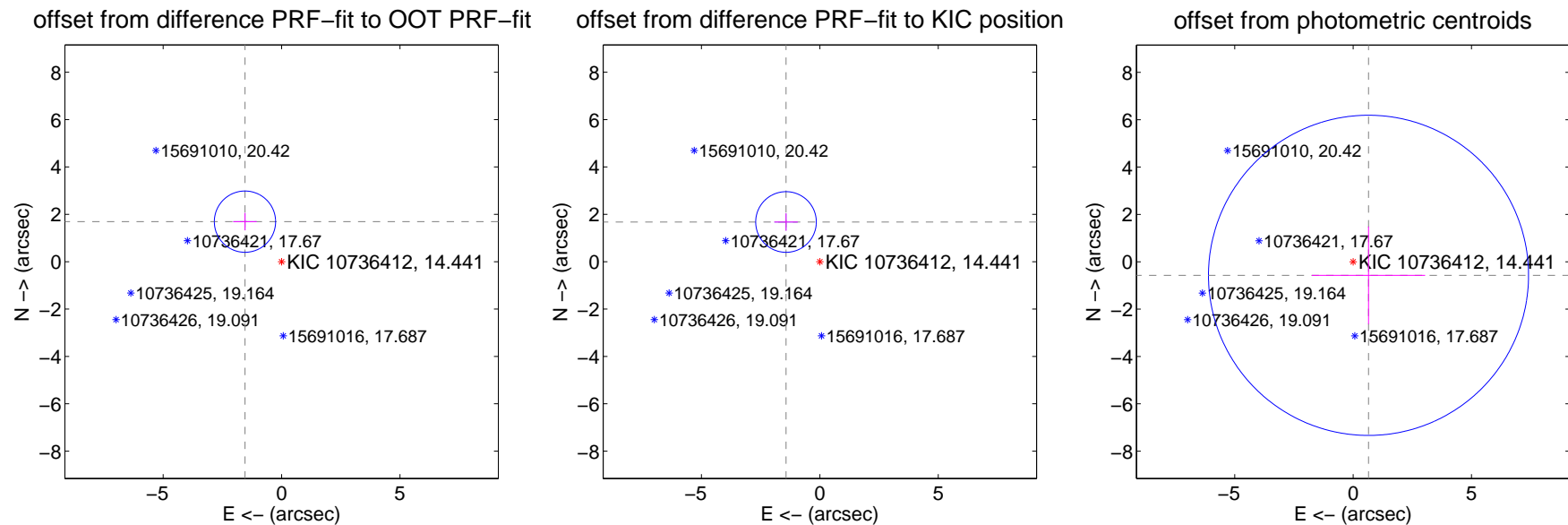
DV Centroid Data

Supplemental centroid analysis for 010736412-01. Kepler magnitude: 14.44. Transit SNR 4.46

There are 1 quarters with good PRF difference image offsets

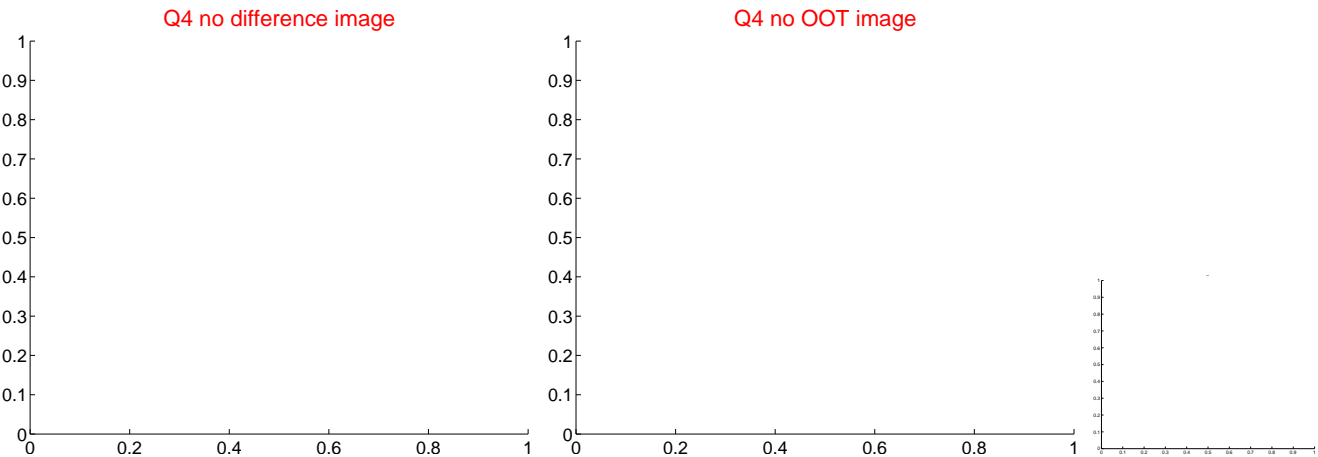
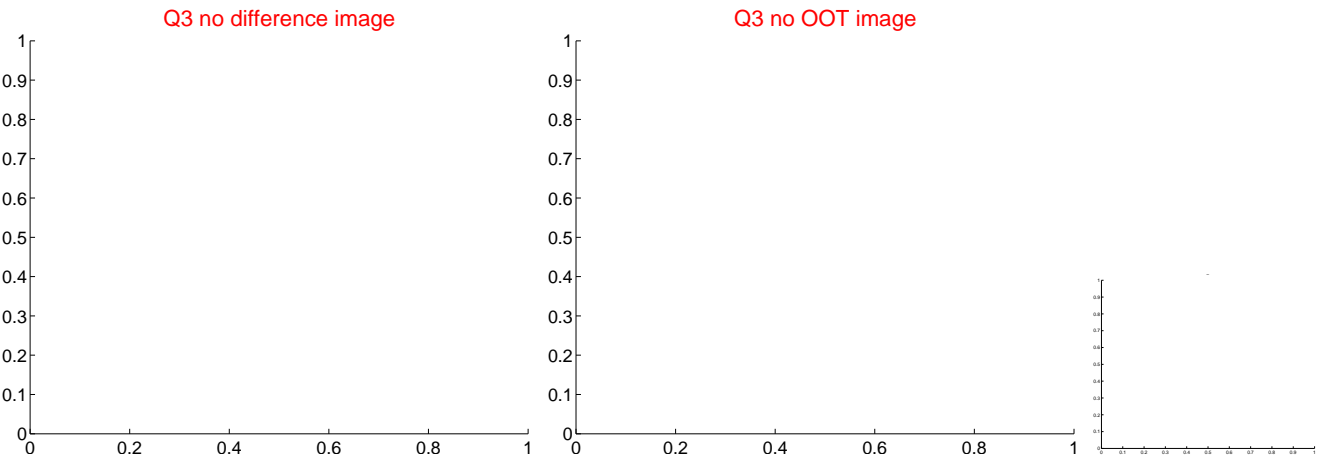
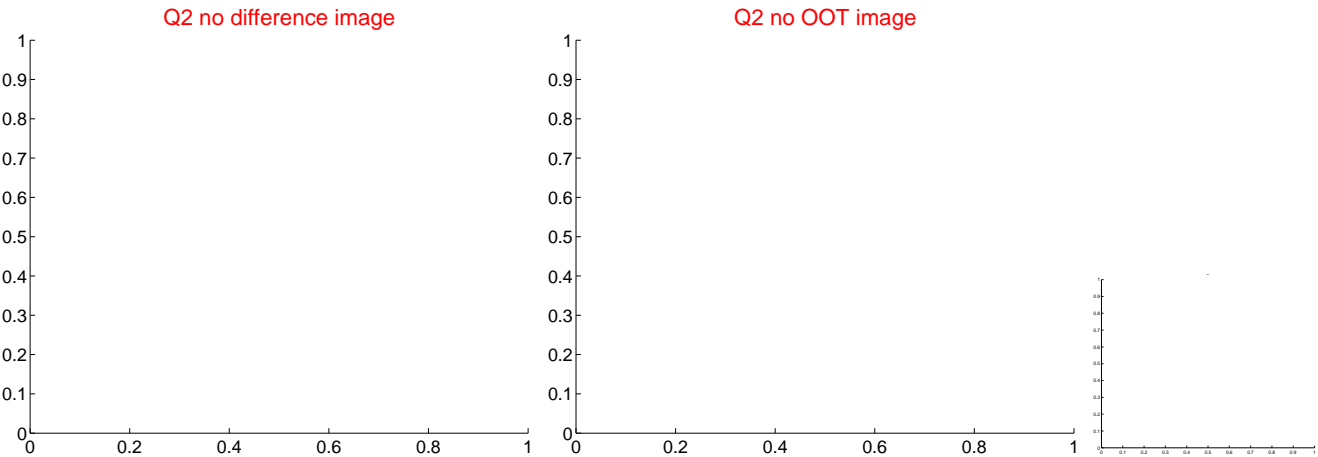
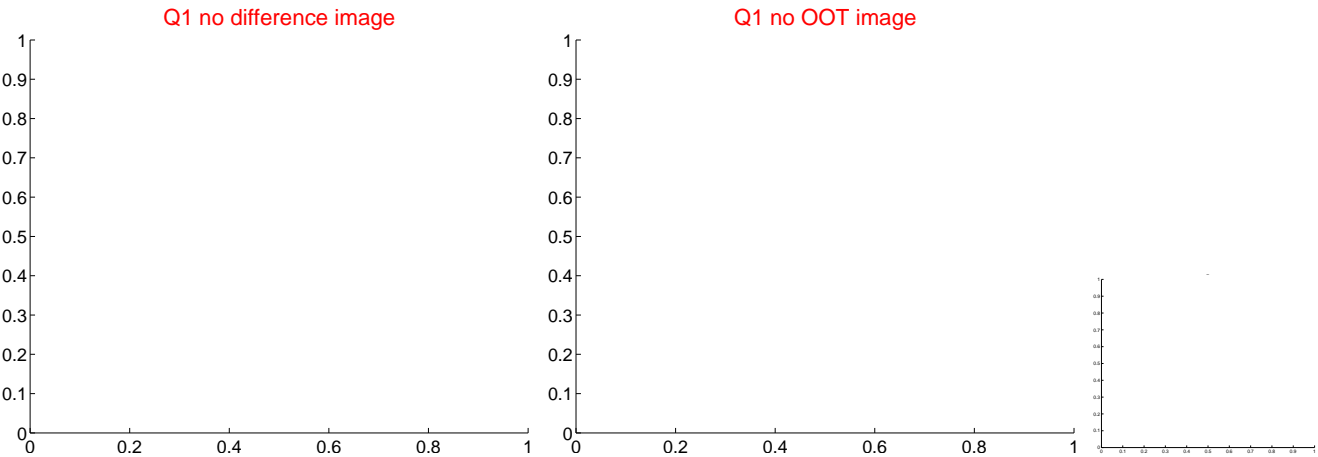
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.291 \pm 0.431	5.31	1.546 \pm 0.496	1.691 \pm 0.368
PRF-fit source offset from KIC position	2.203 \pm 0.427	5.16	1.429 \pm 0.496	1.676 \pm 0.368
photometric centroid source offset	0.87 \pm 2.25	0.38	-0.65 \pm 2.39	-0.57 \pm 2.06

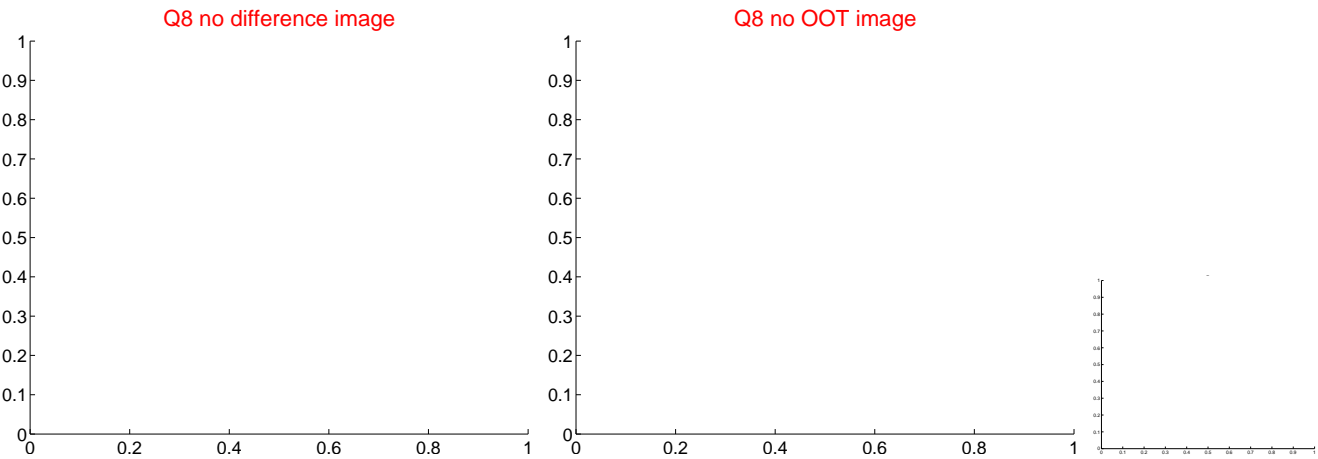
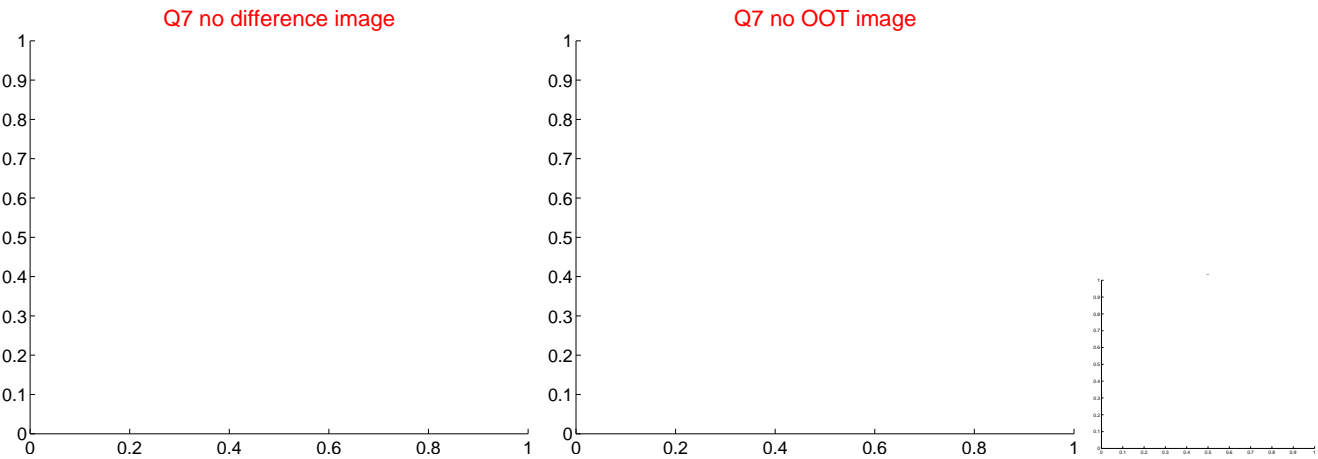
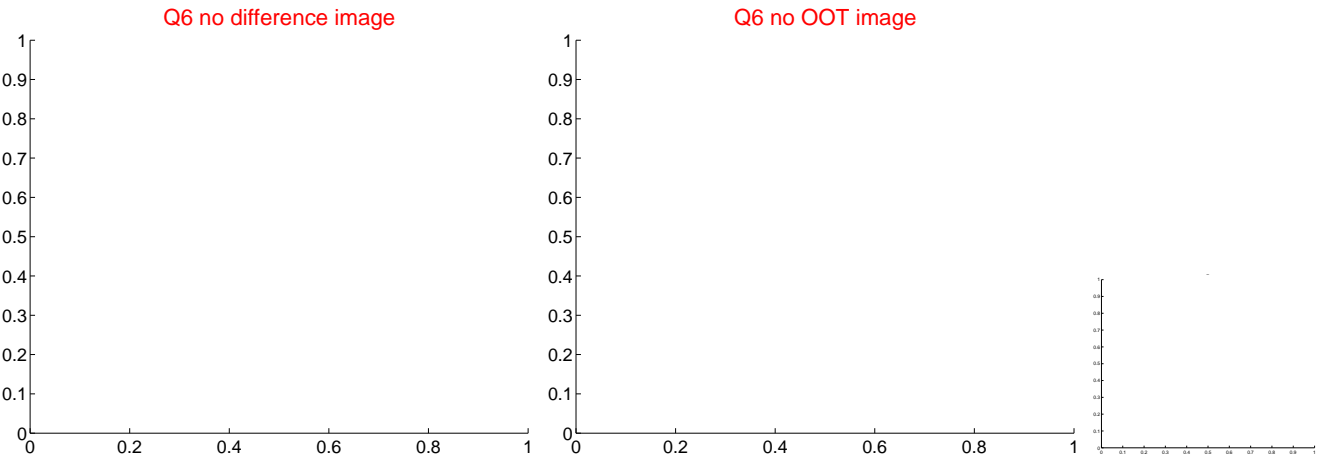
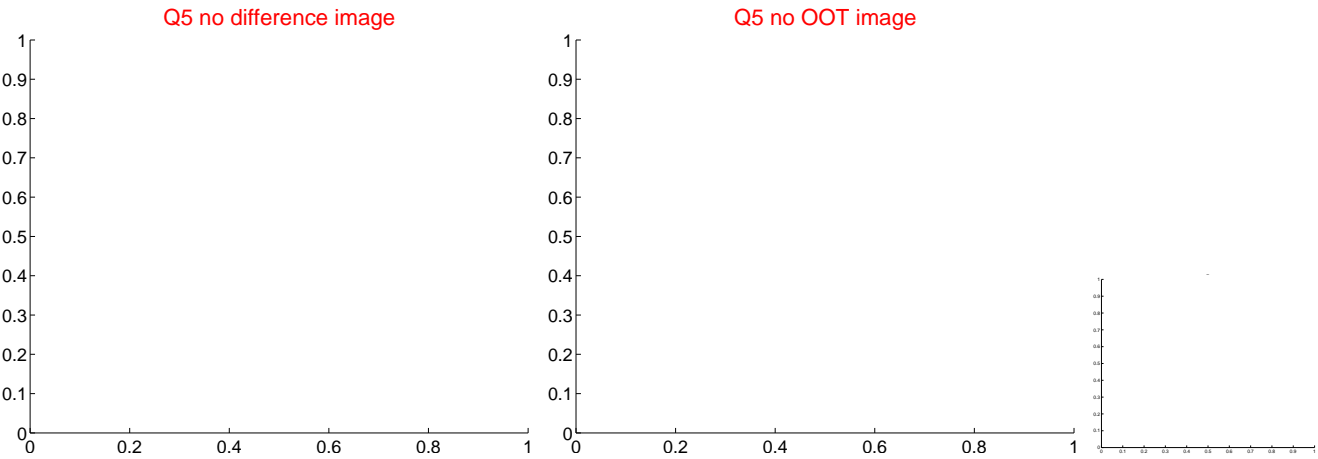


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

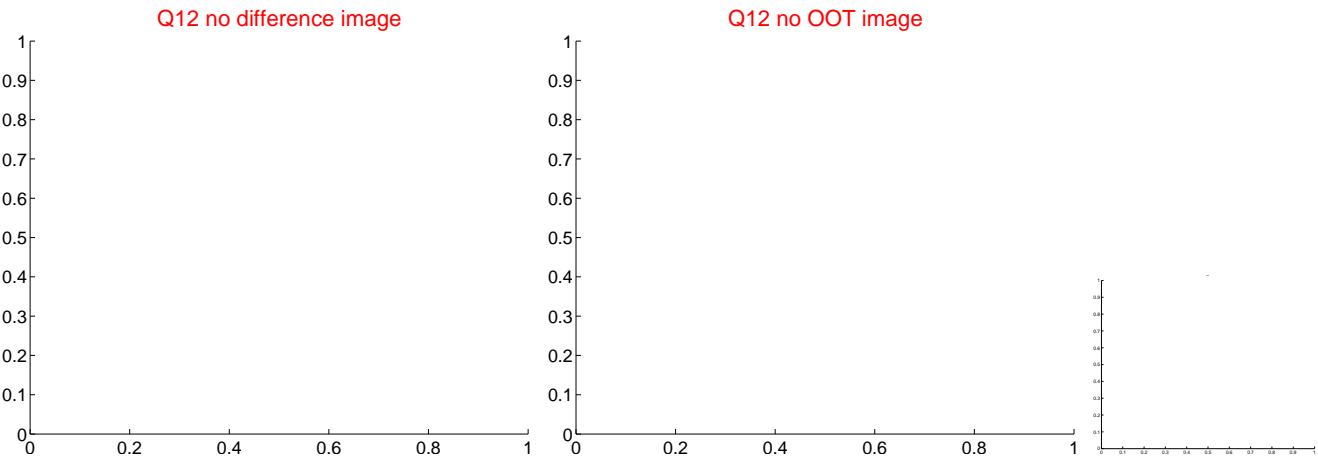
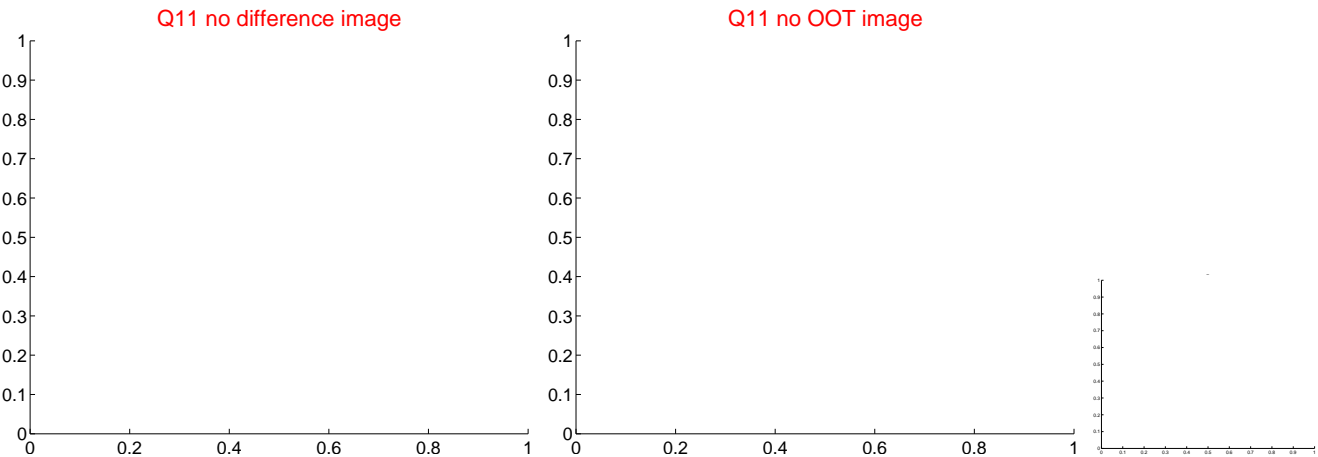
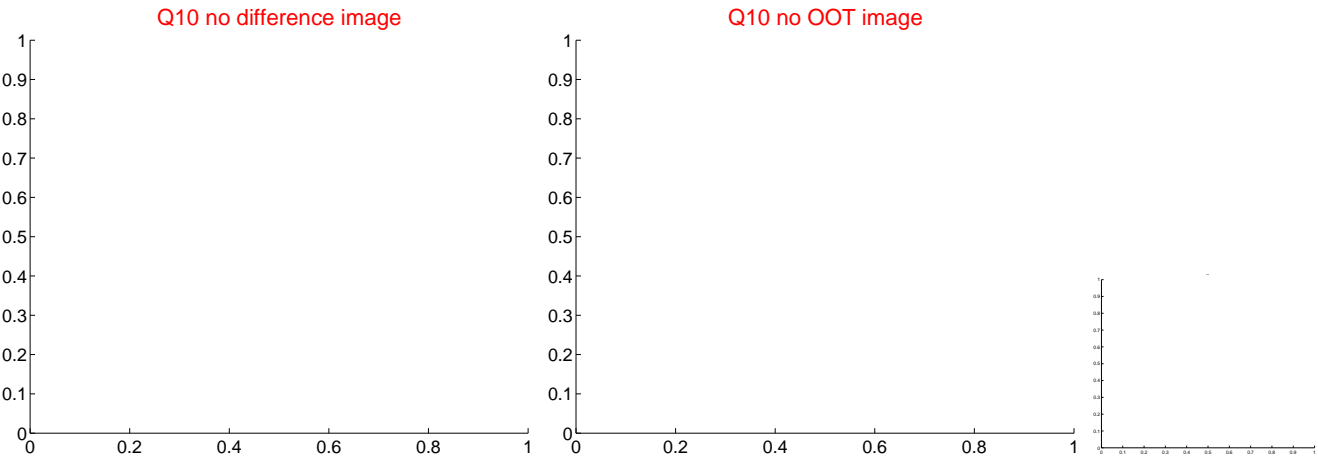
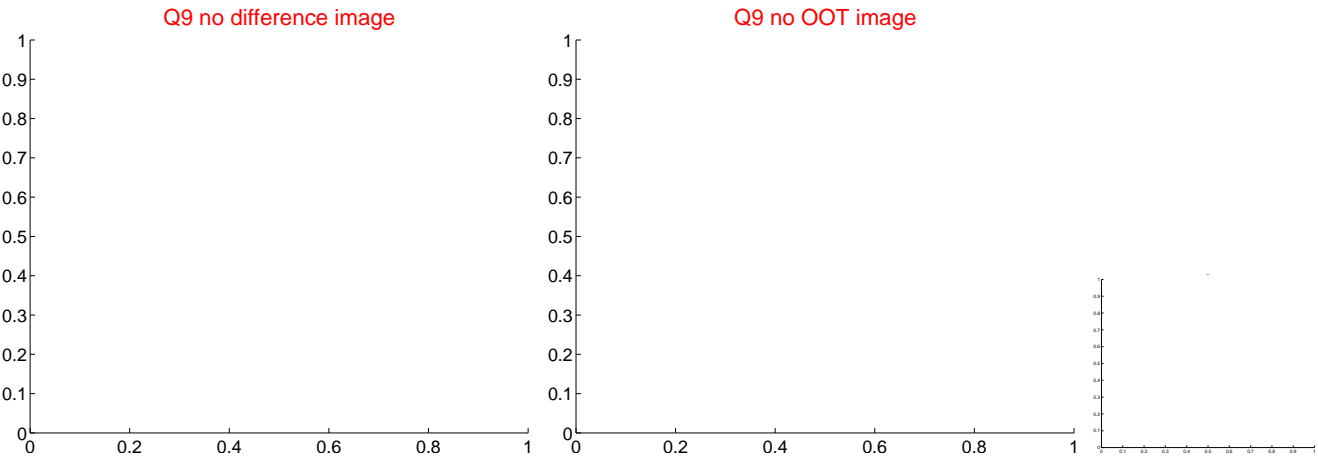
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



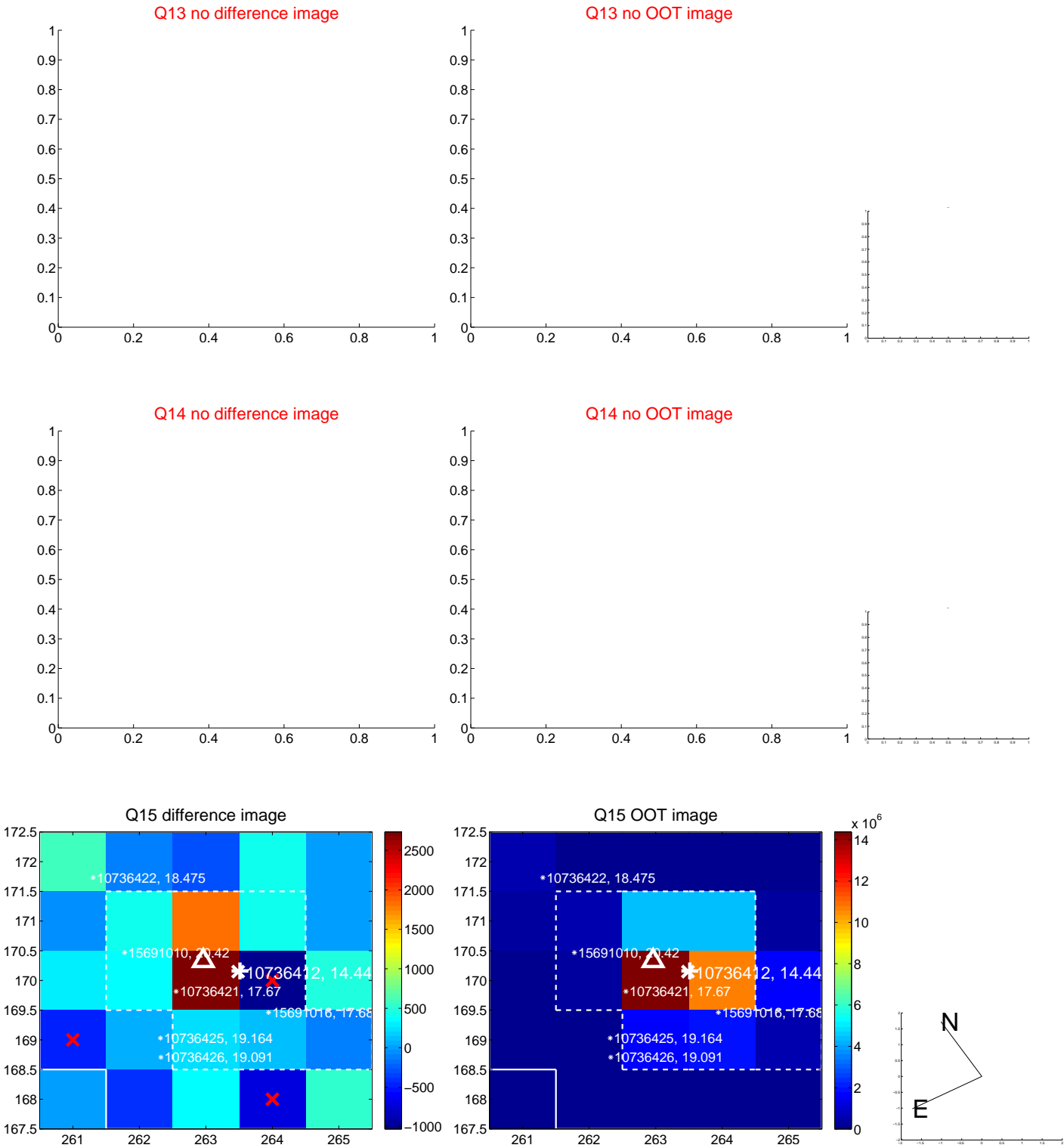
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



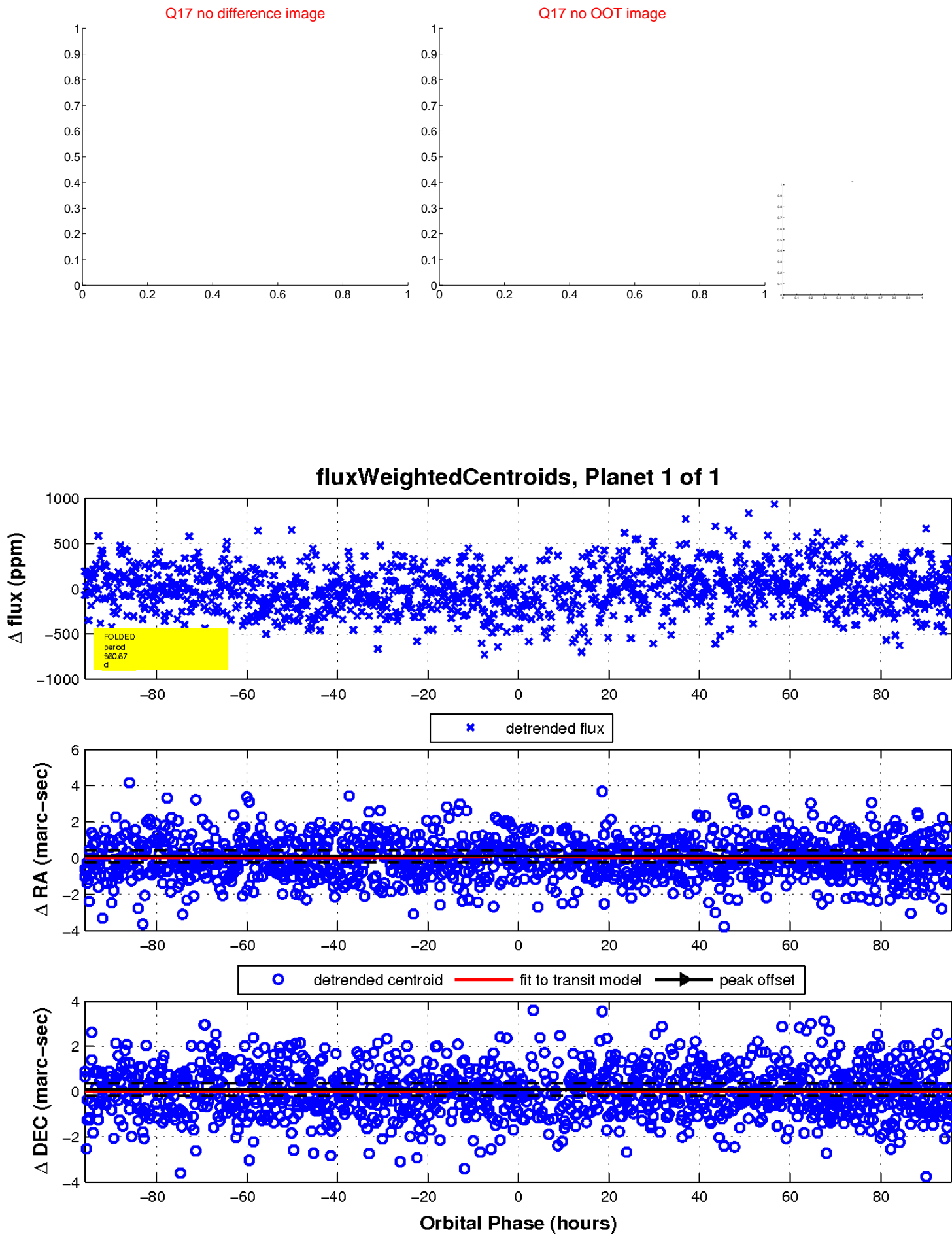
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UKIRT Image

Declination

