

KIC 005308296

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})
005308296-01	OBS	4750.01	36.721002	151.256102	513.8	7.507	8.2	8.6	0.84	5662	2.01	14.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005308296-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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 005308296-01

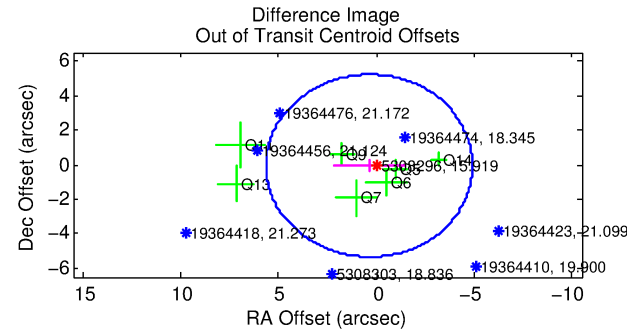
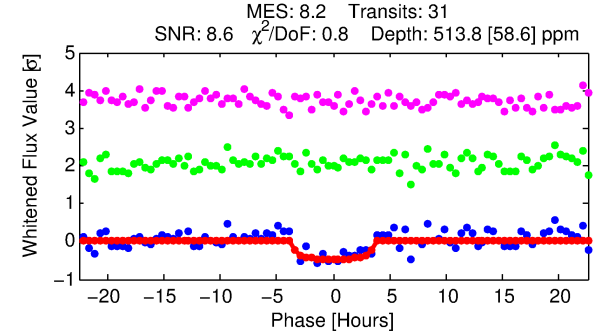
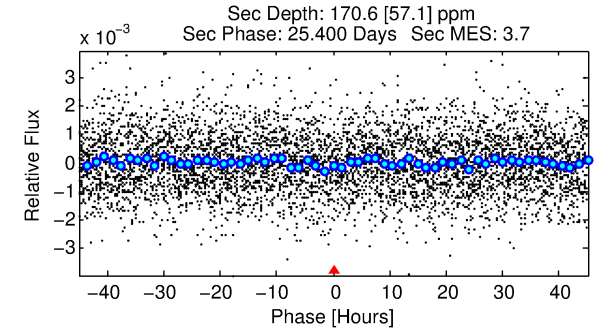
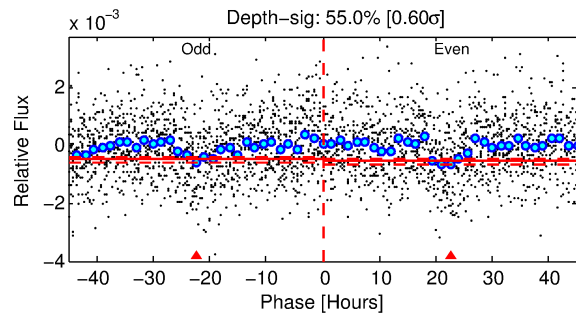
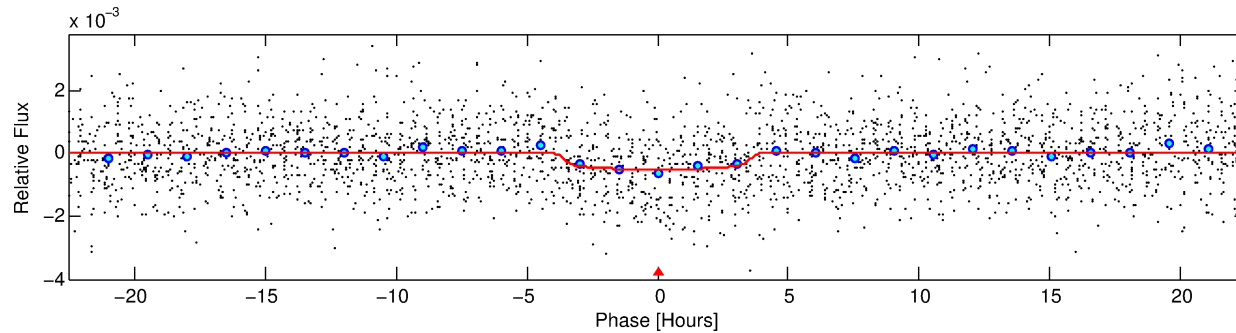
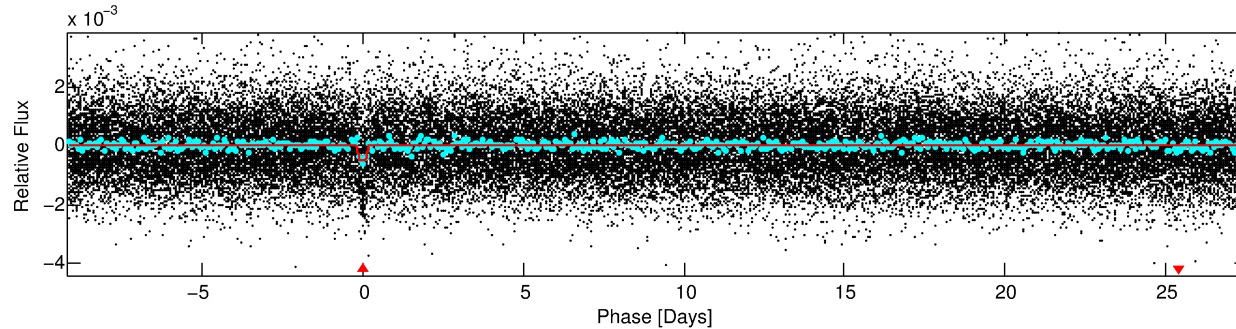
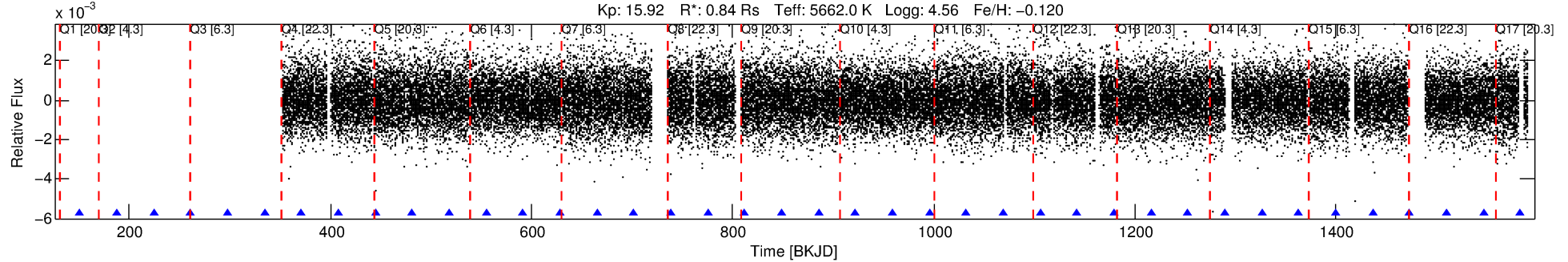
No Significant Match Found

DV One-Page Summary

KIC: 5308296 Candidate: 1 of 1 Period: 36.721 d

KOI: K04750.01 Corr: 0.948

Kp: 15.92 R*: 0.84 Rs Teff: 5662.0 K Logg: 4.56 Fe/H: -0.120



DV Fit Results:

Period = 36.72100 [0.00084] d
Epoch = 151.2561 [0.0204] BKJD
Rp/R* = 0.0219 [0.0172]
a/R* = 29.02 [97.88]
b = 0.66 [2.86]
Seff = 14.53 [5.09]
Teq = 498 [44] K
Rp = 2.01 [1.66] Re
a = 0.2114 [0.0470] AU
Ag = 1037.44 [1692.53] [0.61σ]
Teffp = 4369 [1752] K [2.21σ]

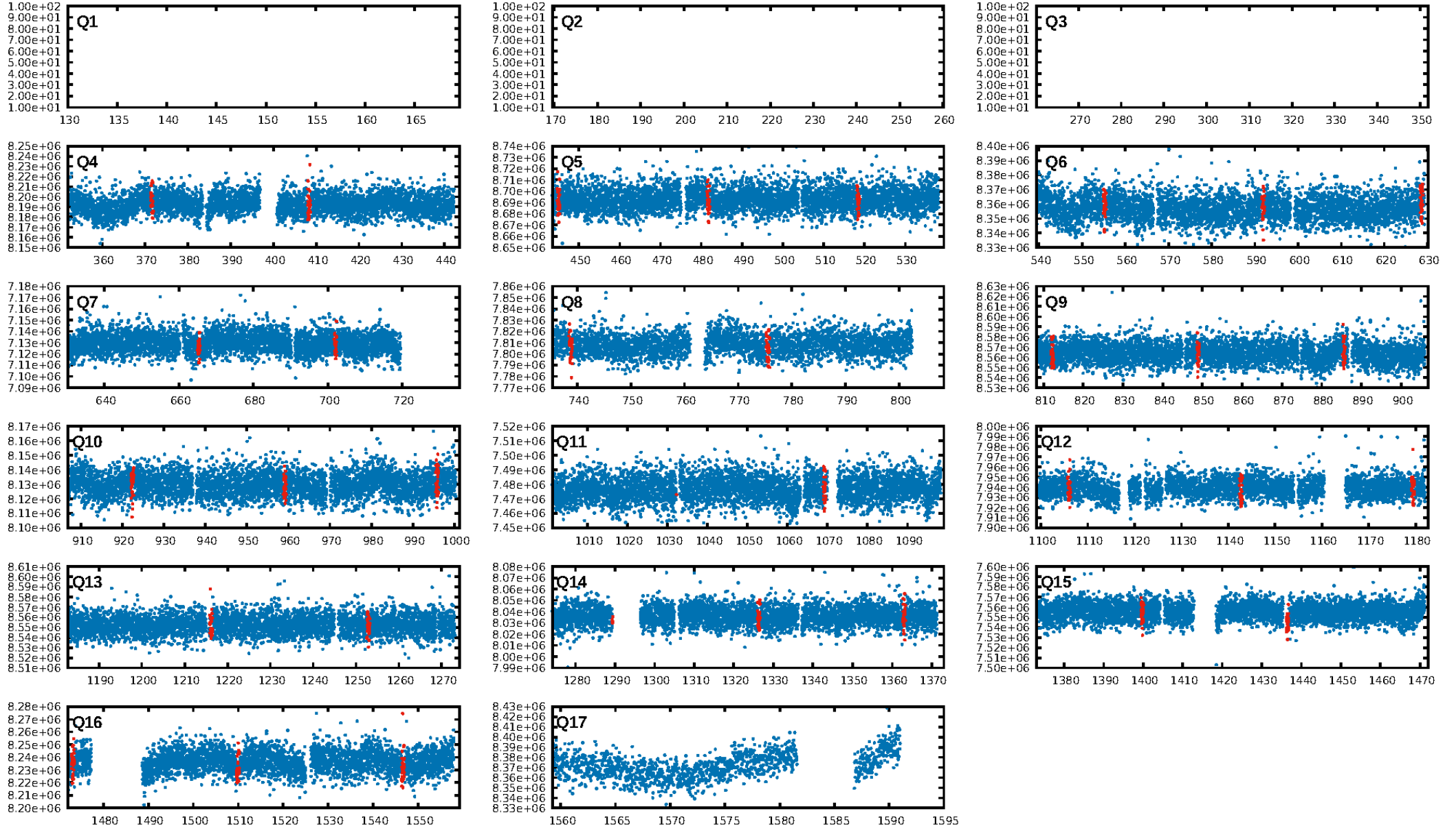
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.14e-16
RollingBand-fgt: 1.00 [31/31]
GhostDiagnostic-chr: 5.185
Centroid-sig: 3.2%
Centroid-so: 2.862 arcsec [2.41σ]
OotOffset-rm: 0.368 arcsec [0.21σ]
KicOffset-rm: 0.334 arcsec [0.47σ]
OotOffset-st: 2/2/0/3 [7]
KicOffset-st: 2/2/0/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [12/12]

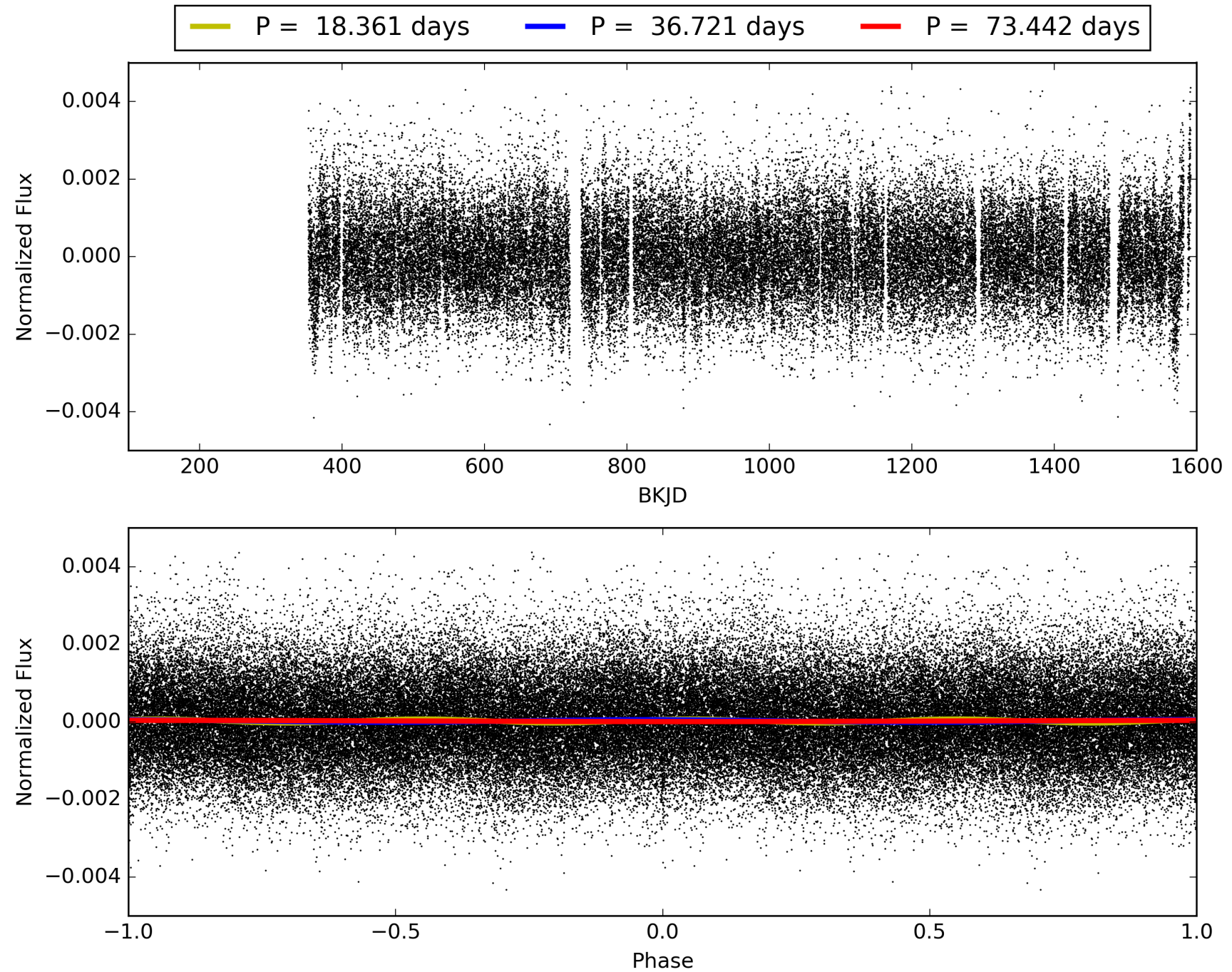
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:06:34 Z

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

TCE 005308296-01, PDC Light Curves

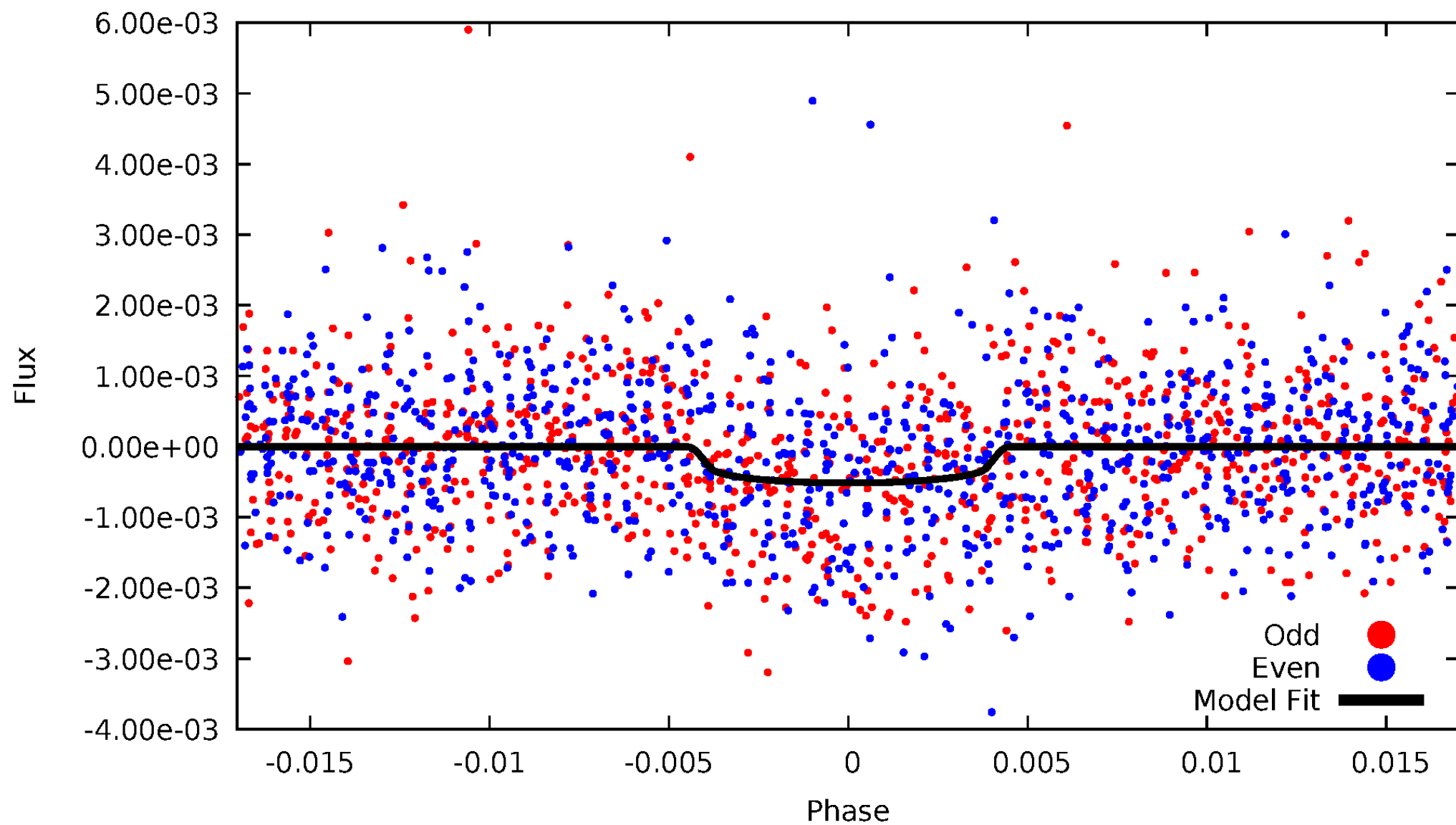


TCE 005308296-01



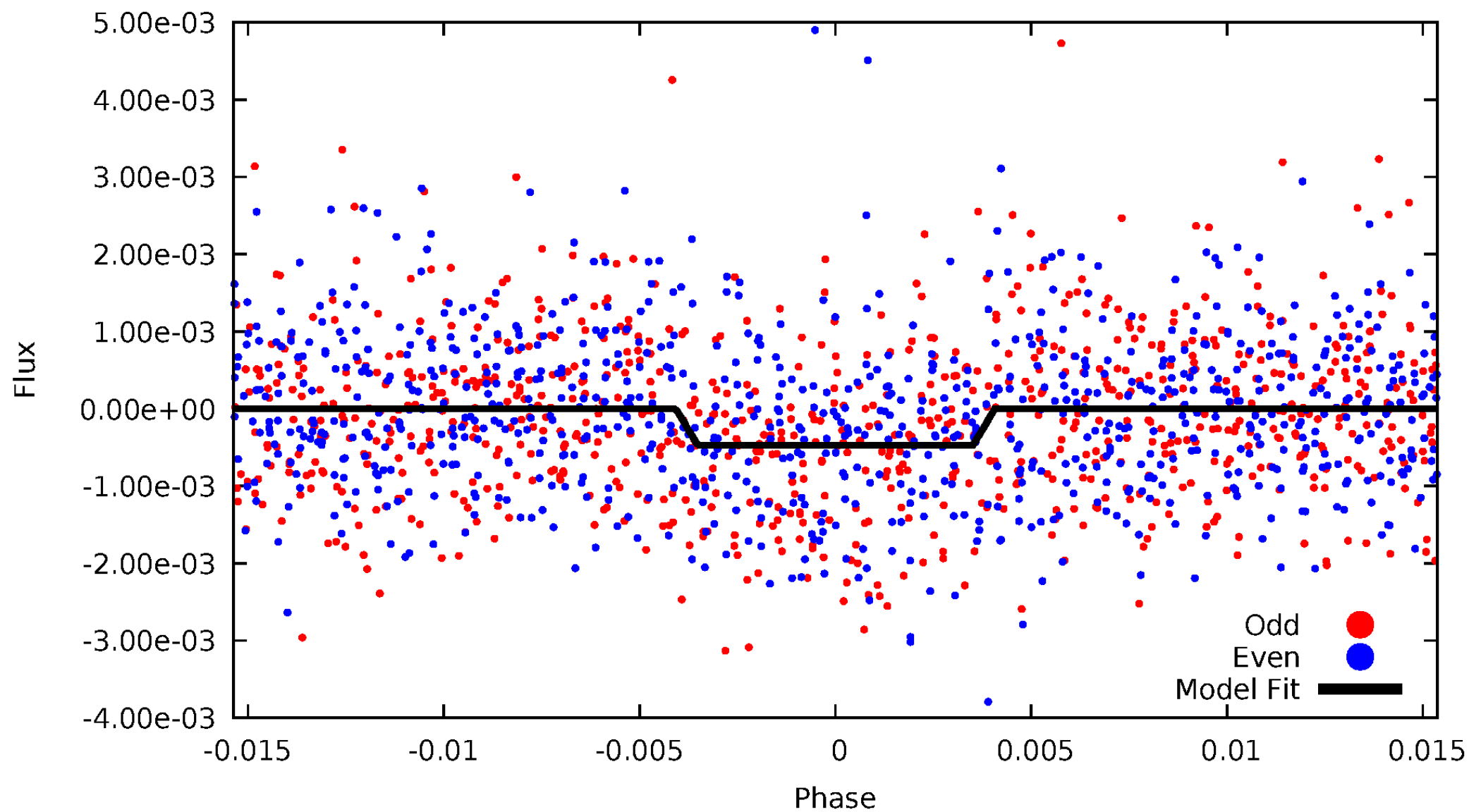
DV Odd/Even

TCE 005308296-01



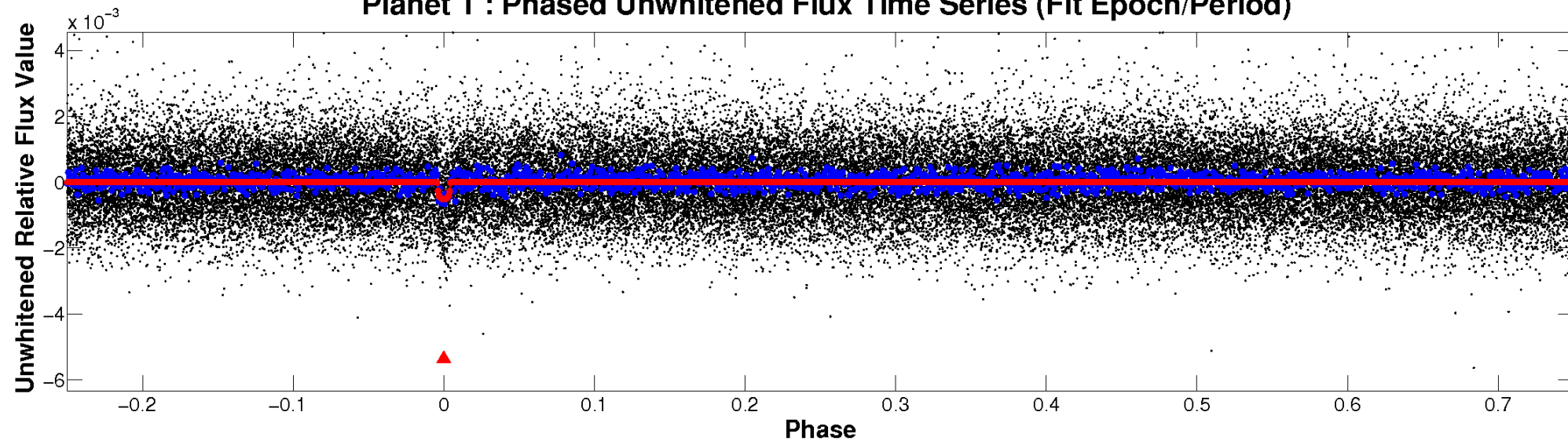
ALT Odd/Even

TCE 005308296-01

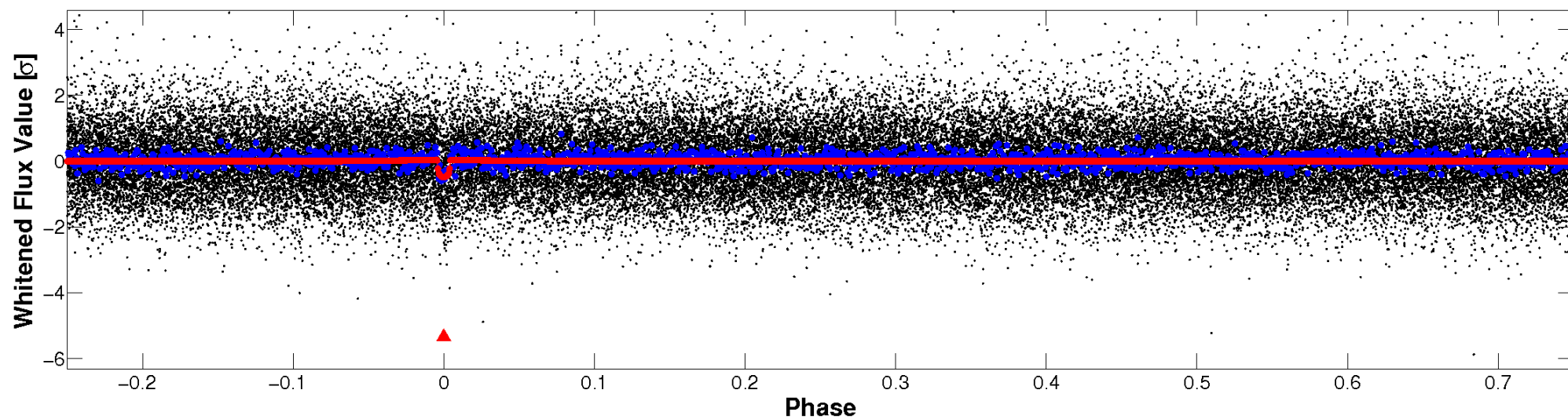


Non-Whitened Vs. Whitened Light Curve

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

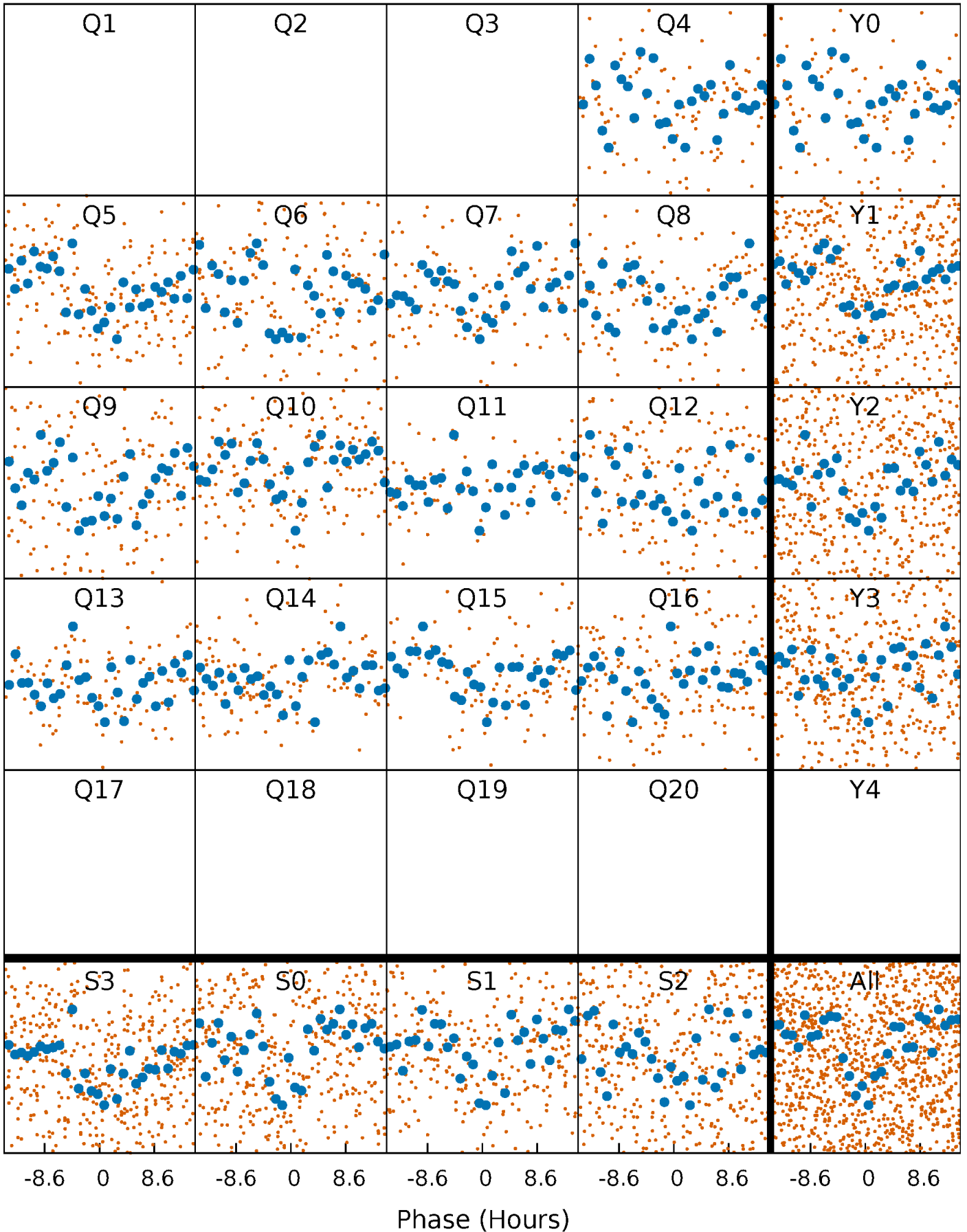


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



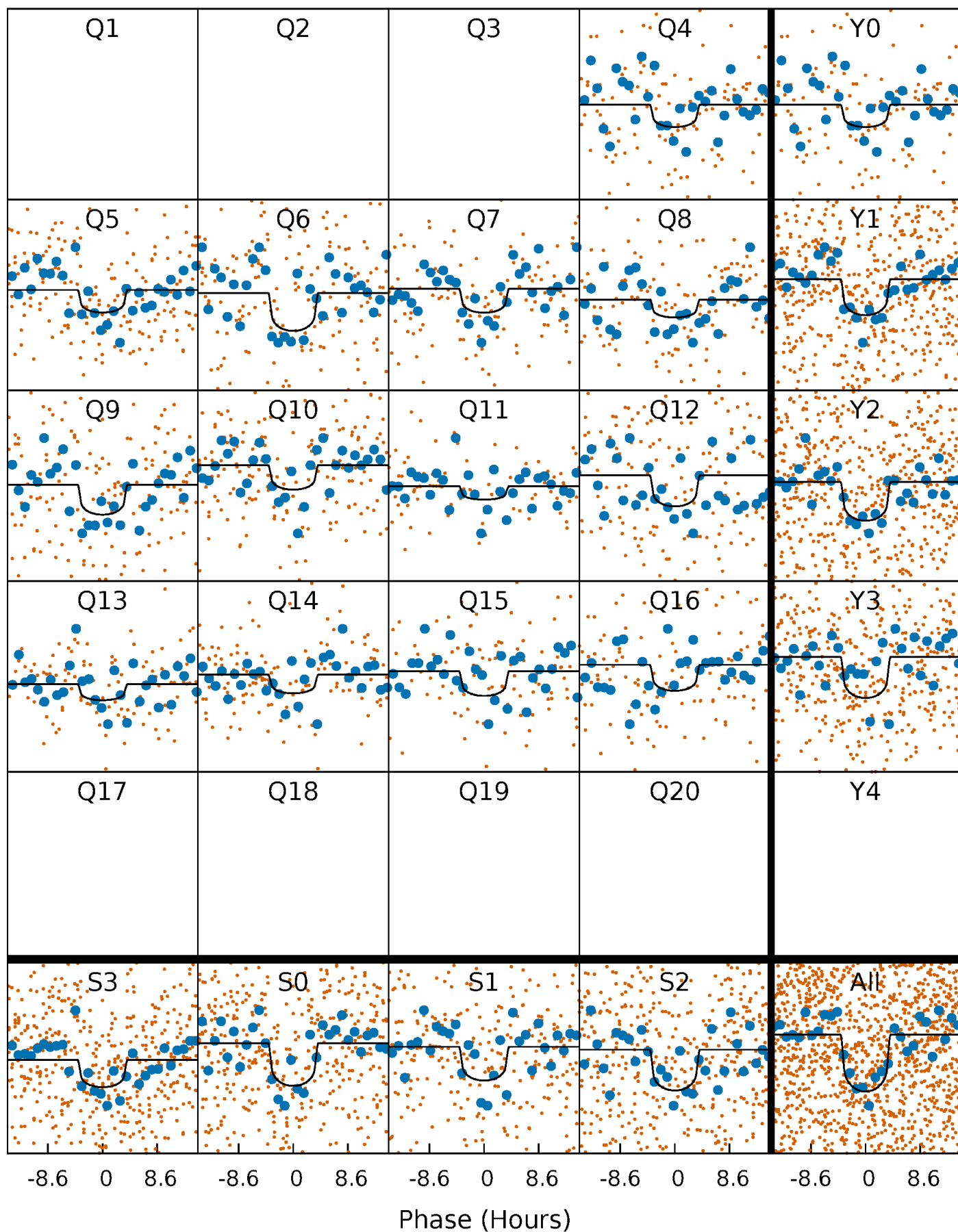
PDC Quarter-Phased Transit Curves

TCE 005308296-01 P= 36.721002 Days $T_0=151.256102$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005308296-01 P= 36.721002 Days $T_0=151.256102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

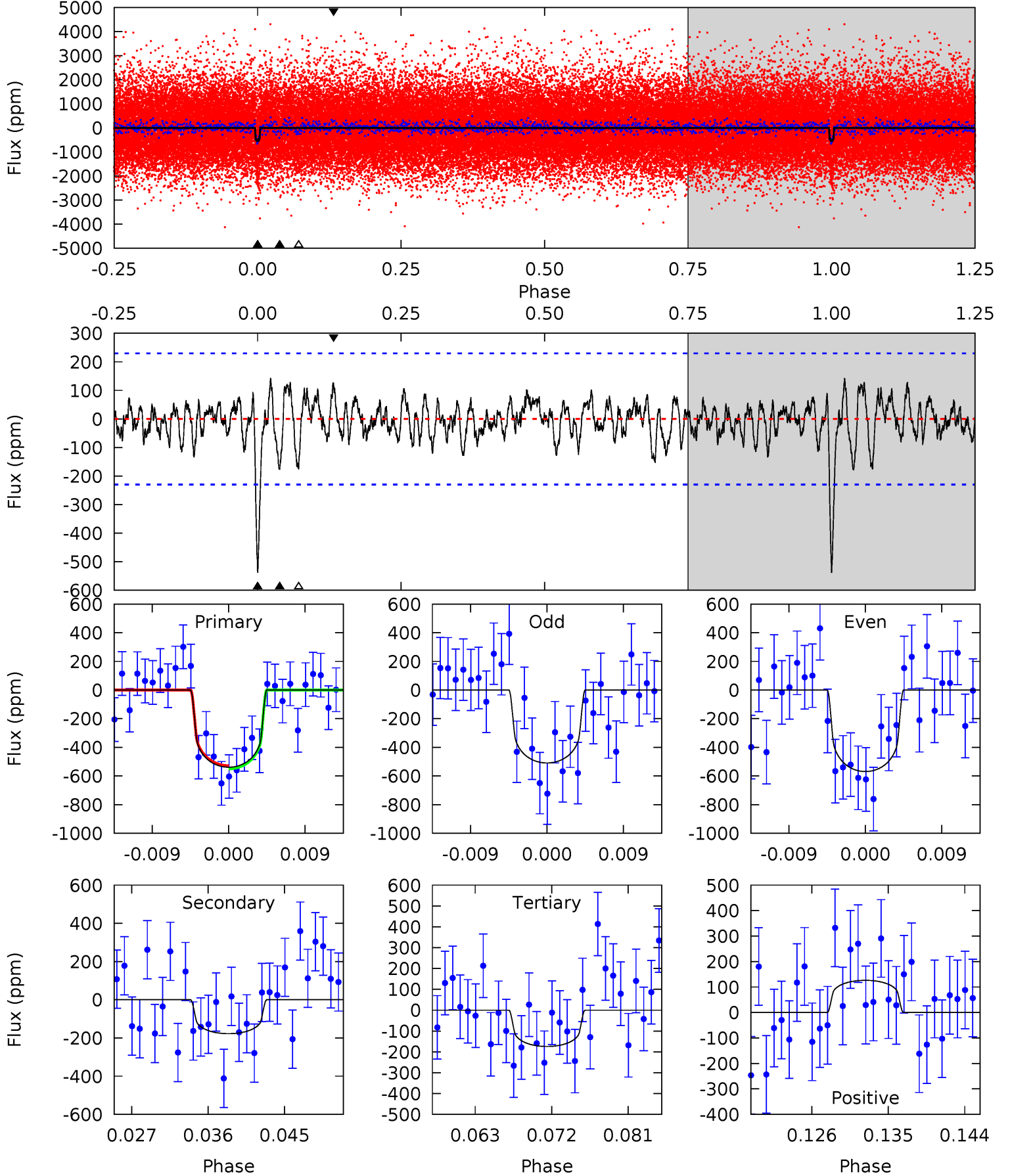
TCE 005308296-01 P= 36.720039 Days $T_0=151.275071$ (BKJD)



DV Model-Shift Uniqueness Test

005308296-01, P = 36.721002 Days, E = 151.256102 Days

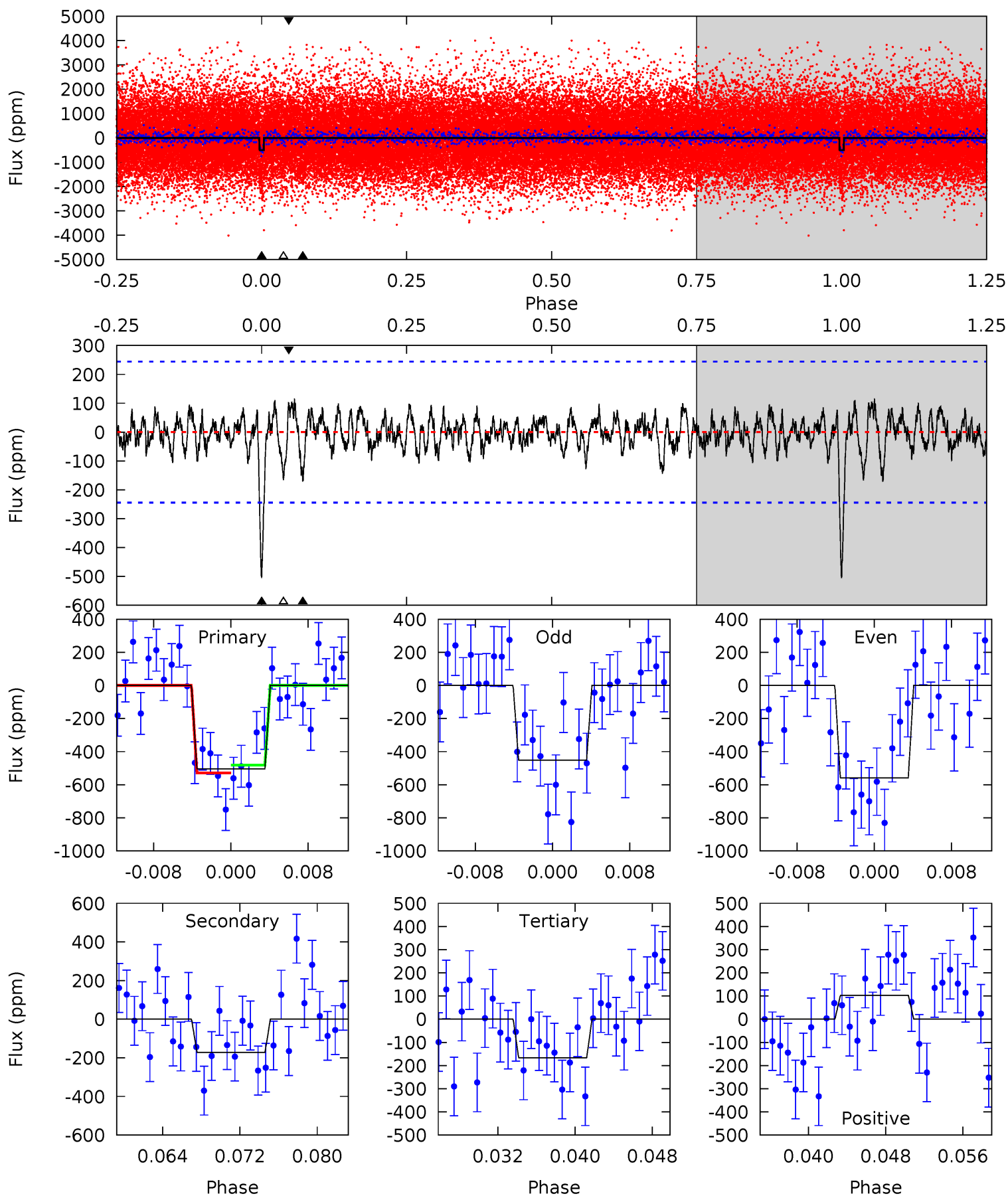
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	3.91	3.83	2.78	5.05	2.61	1.16	8.02	9.07	0.07	1.13	0.66	0.99	0.21	0.24



Alt Model-Shift Uniqueness Test

005308296-01, P = 36.720039 Days, E = 151.275071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.56	3.46	2.13	5.07	2.65	0.94	7.03	8.36	0.10	1.44	1.10	0.94	0.18	0.48



Stellar Parameters For KIC 005308296

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5662^{+186}_{-186}	$4.560^{+0.031}_{-0.178}$	$-0.120^{+0.300}_{-0.300}$	$0.840^{+0.221}_{-0.069}$	$0.937^{+0.094}_{-0.115}$	$2.228^{+0.391}_{-1.063}$
	+3%/-3%	+1%/-4%	+250%/-250%	+26%/-8%	+10%/-12%	+18%/-48%
Source	KIC0	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 005308296-01 / KOI 4750.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-178 ± 45	$2.32^{+1.55}_{-1.32}$	713^{+46}_{-33}	4409^{+1960}_{-776}	790^{+3298}_{-533}
Alt.	-172 ± 48	$2.41^{+1.37}_{-1.39}$	716^{+44}_{-35}	4341^{+1896}_{-700}	722^{+3340}_{-459}

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

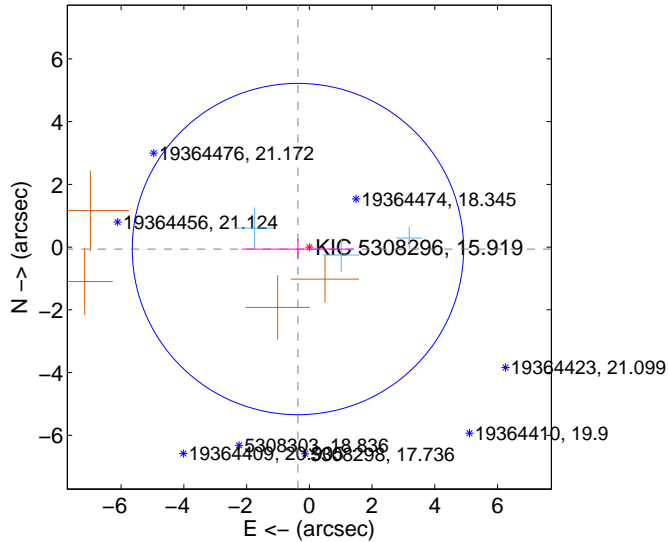
Supplemental centroid analysis for 005308296-01. Kepler magnitude: 15.92. Transit SNR 8.58

There are 3 quarters with good PRF difference image offsets

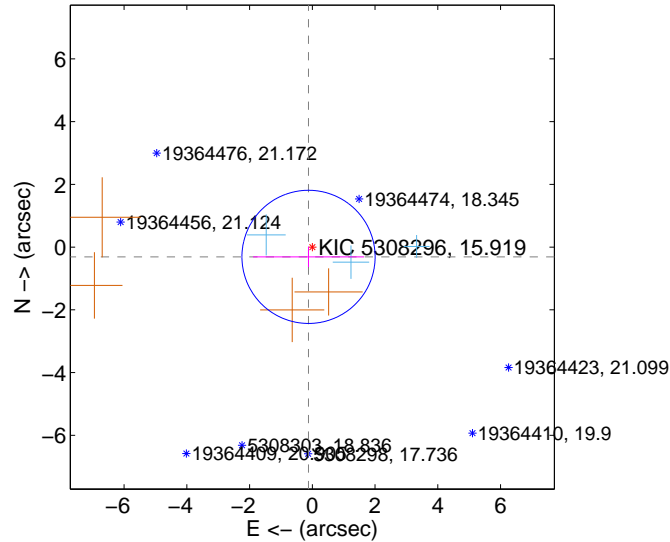
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.368 ± 1.760	0.21	0.363 ± 1.785	-0.062 ± 0.331
PRF-fit source offset from KIC position	0.334 ± 0.707	0.47	0.121 ± 1.767	-0.311 ± 0.324
photometric centroid source offset	2.86 ± 1.19	2.41	0.90 ± 1.35	-2.72 ± 1.17

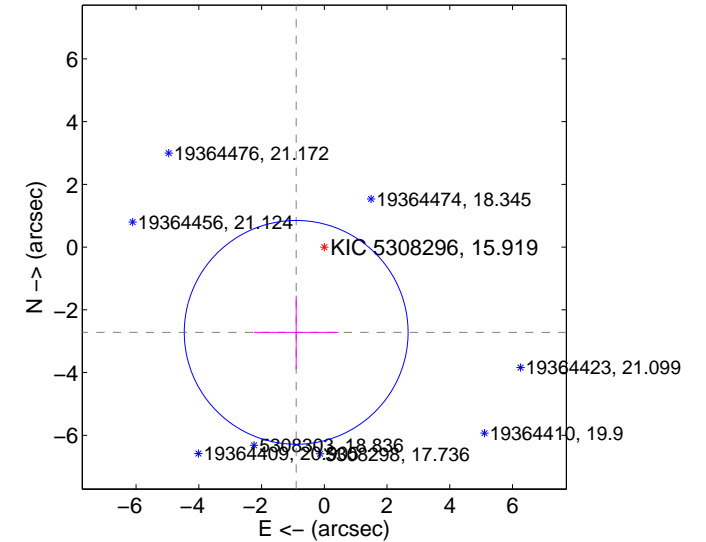
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

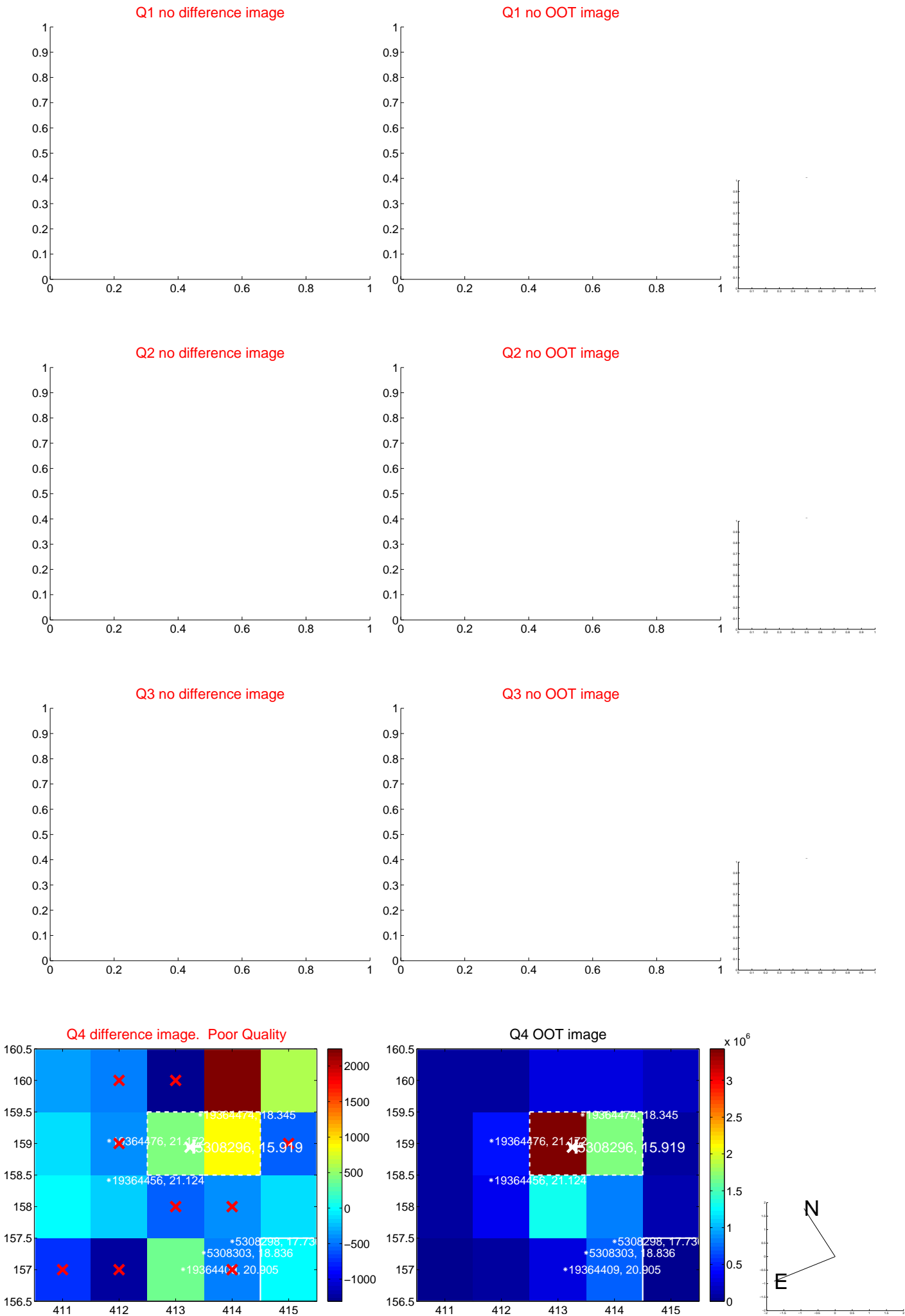


offset from photometric centroids

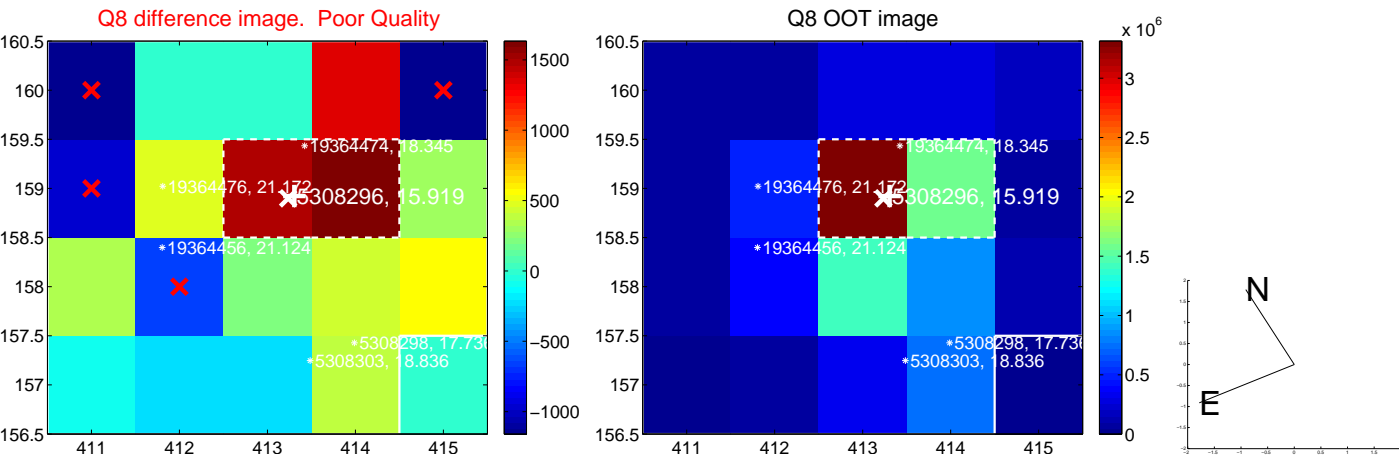
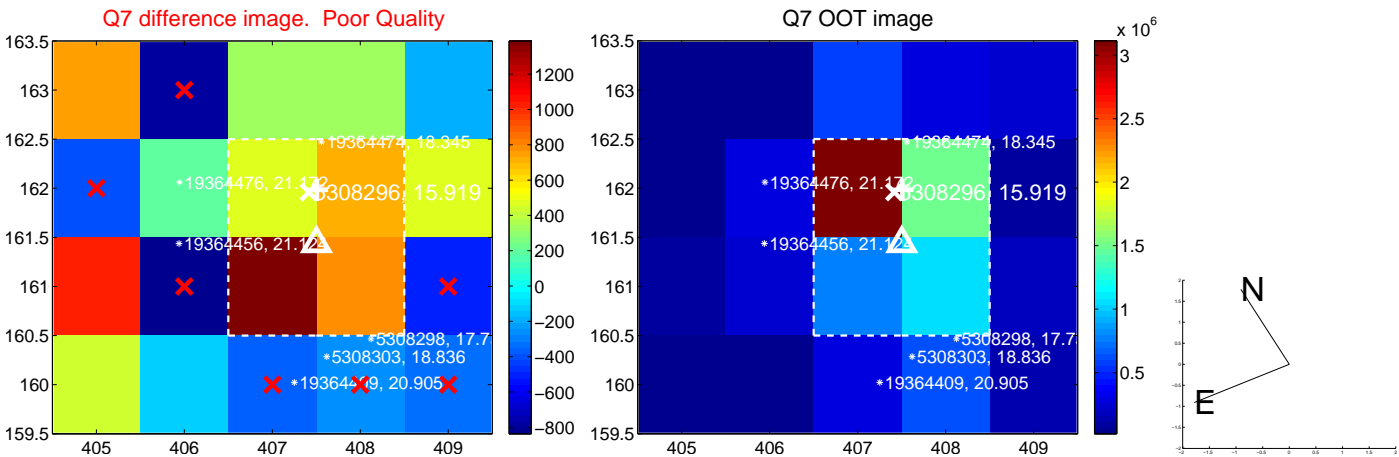
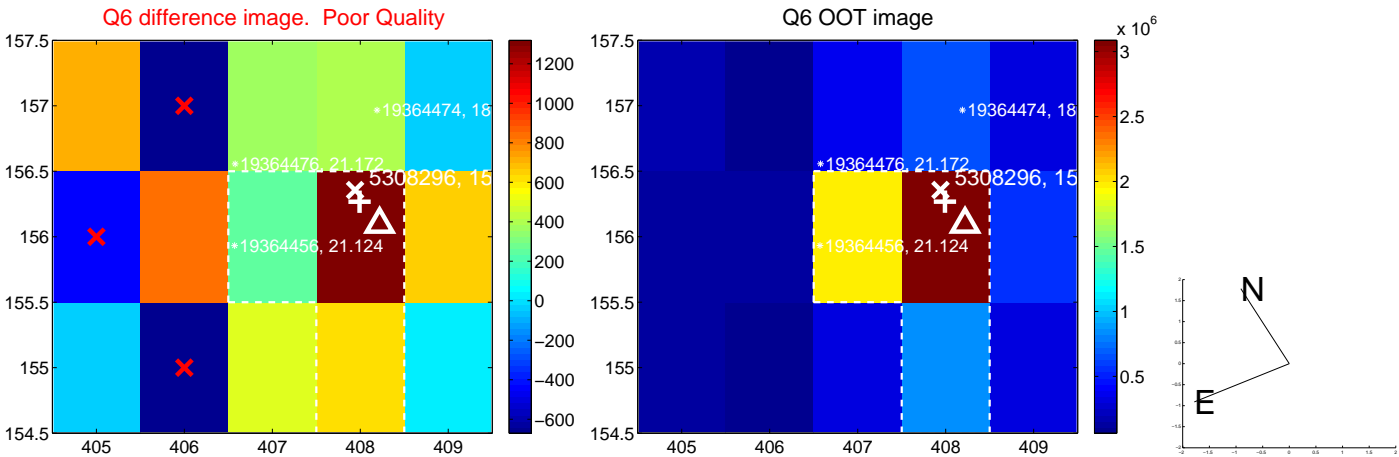
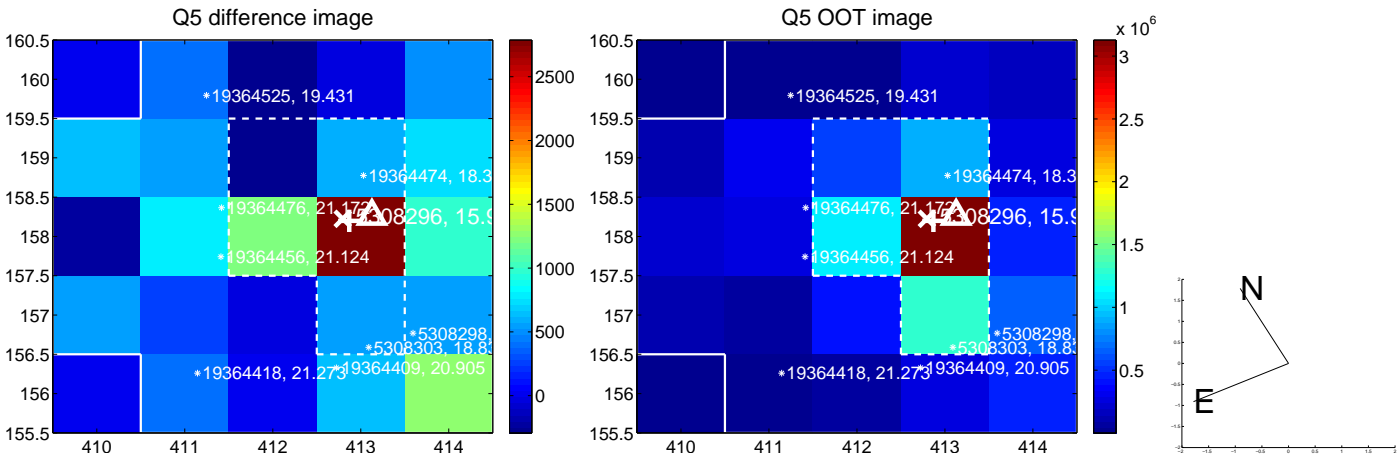


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

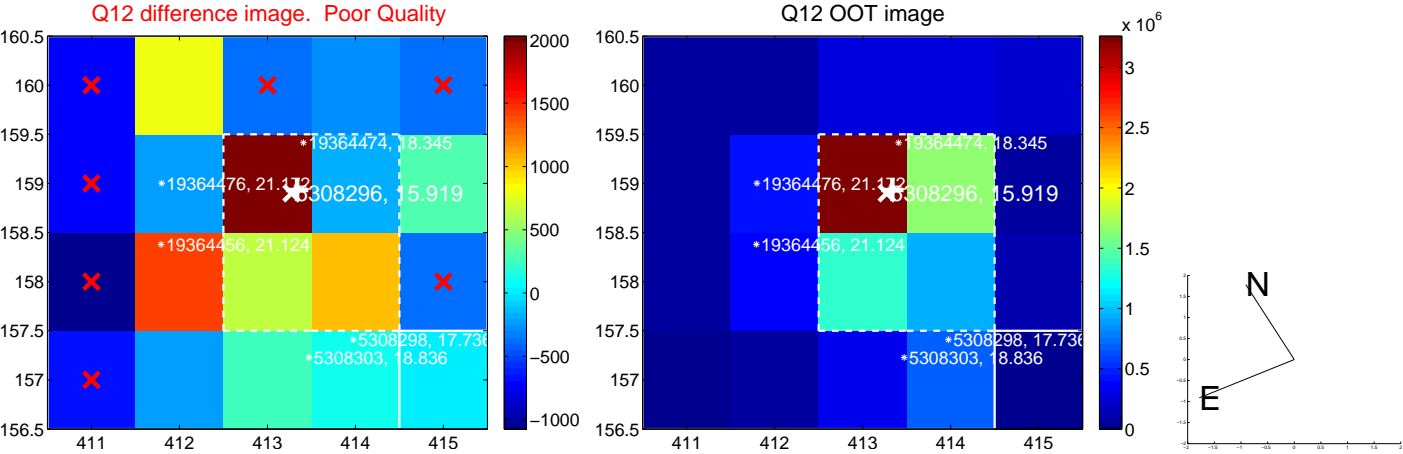
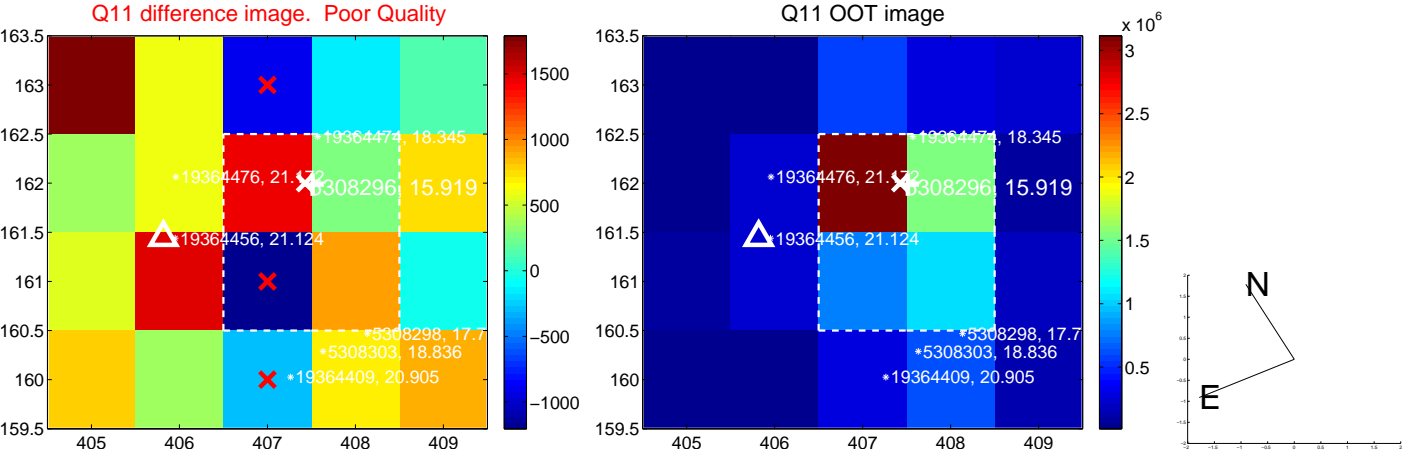
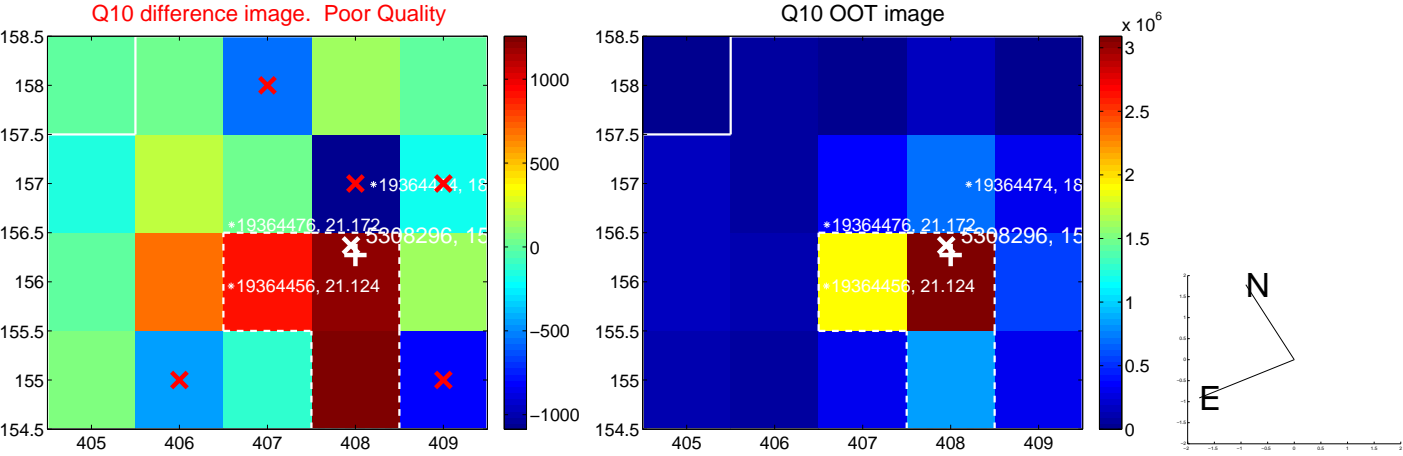
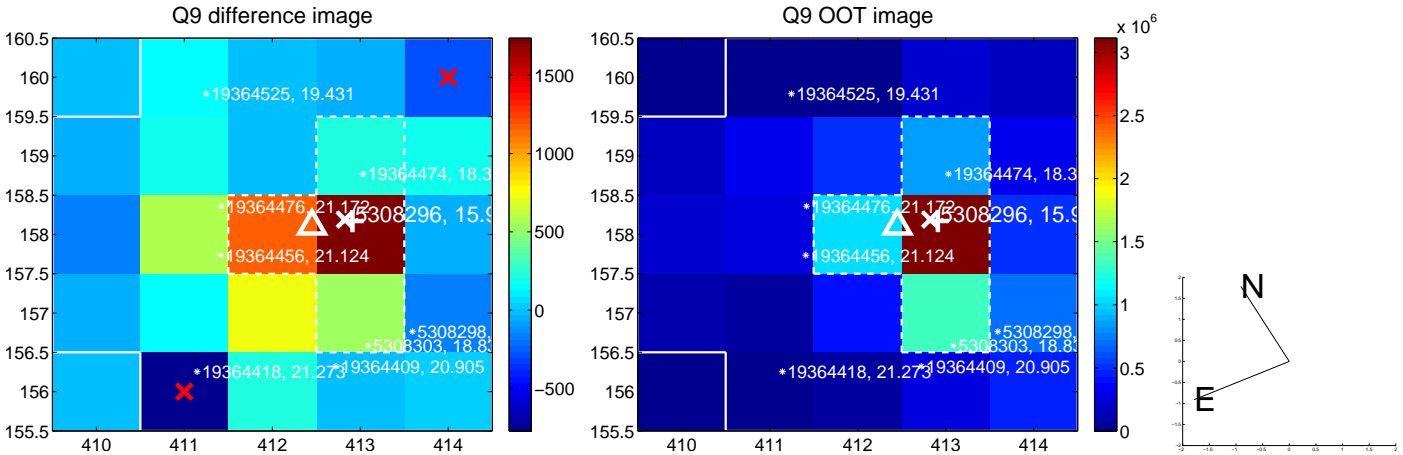
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



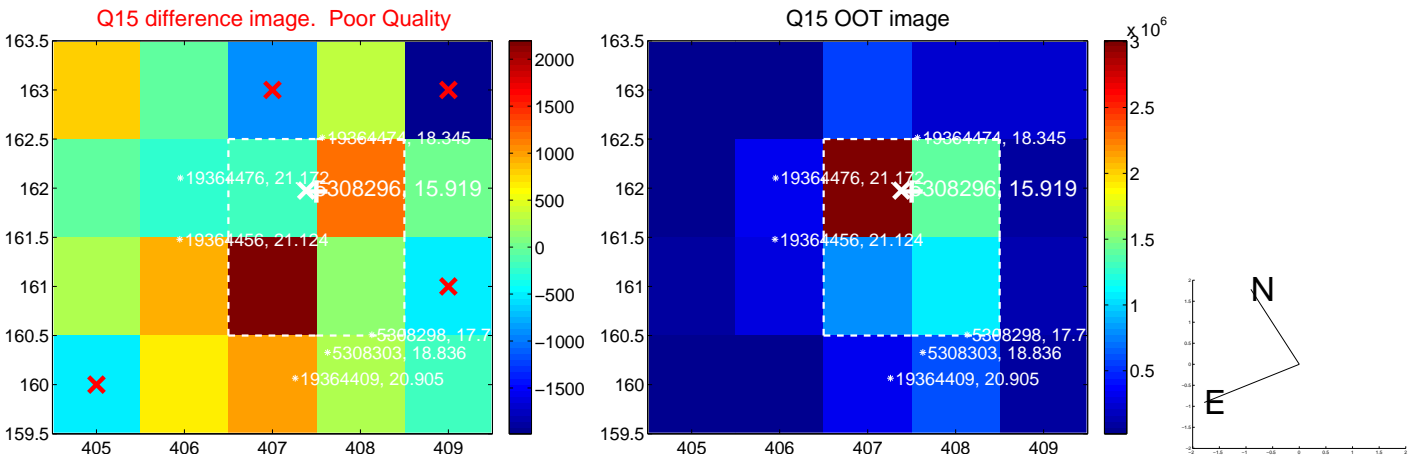
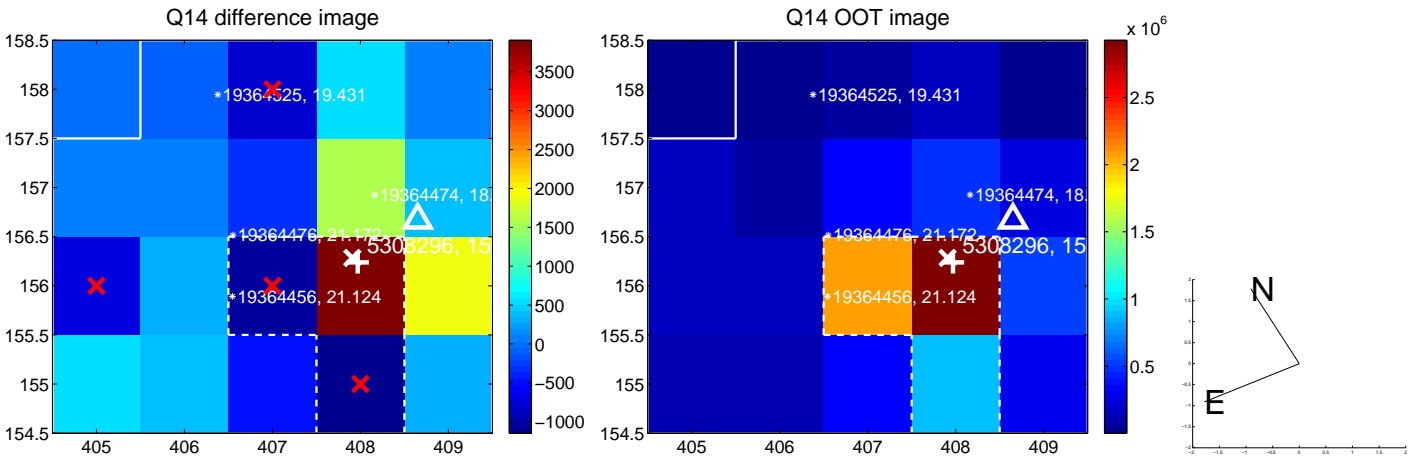
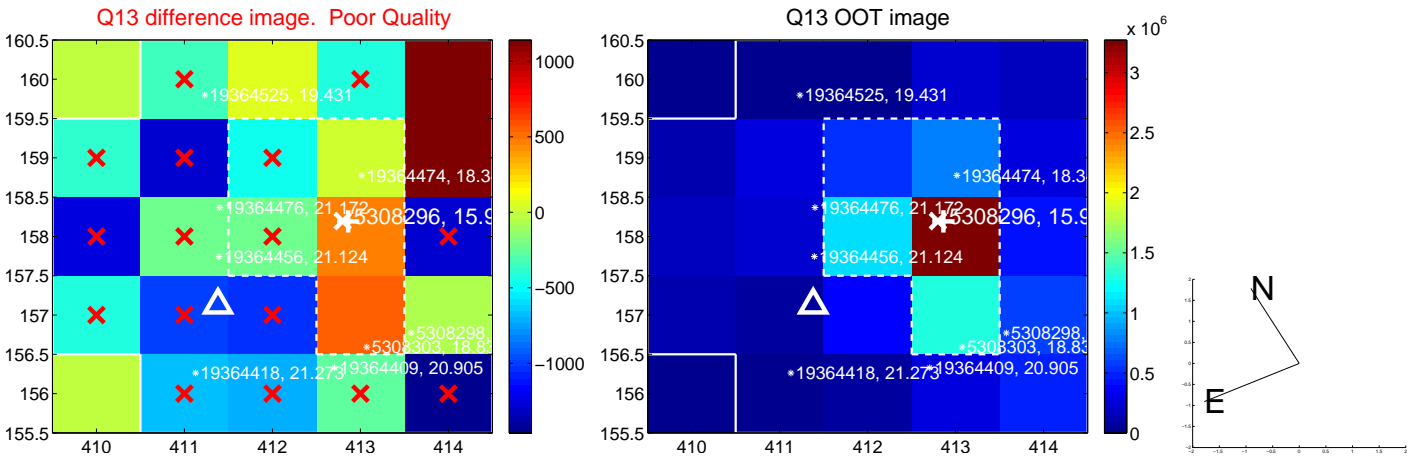
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



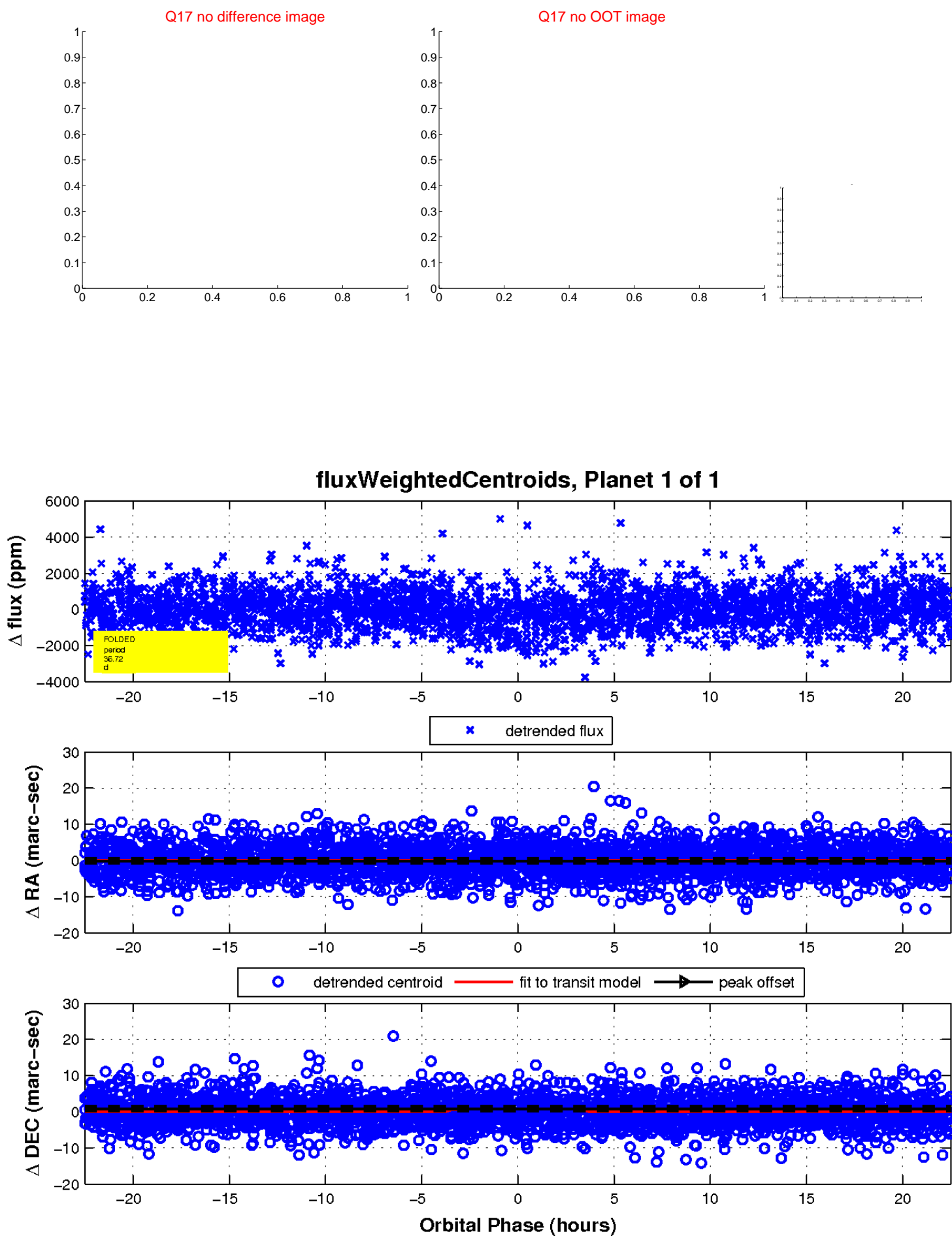
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

