

KIC 008312853

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})
008312853-01	OBS	No	251.643226	242.983154	114.2	3.730	7.6	7.2	1.04	5771	1.31	1.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008312853-01	OBS	FP	0.04	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_KIC_POS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

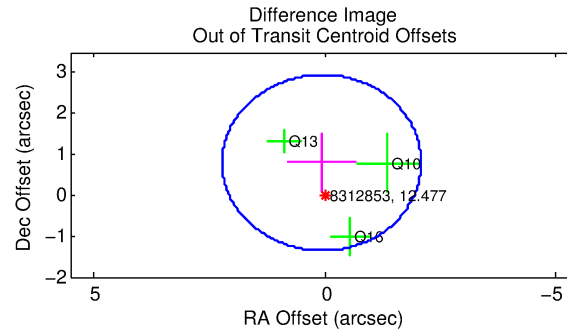
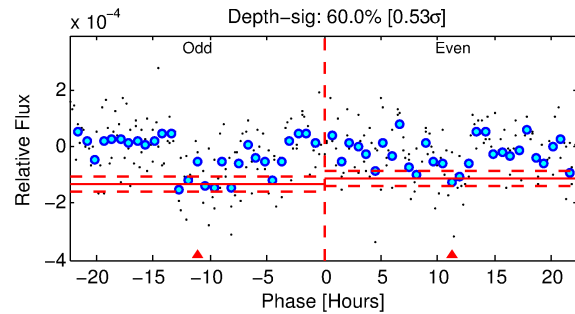
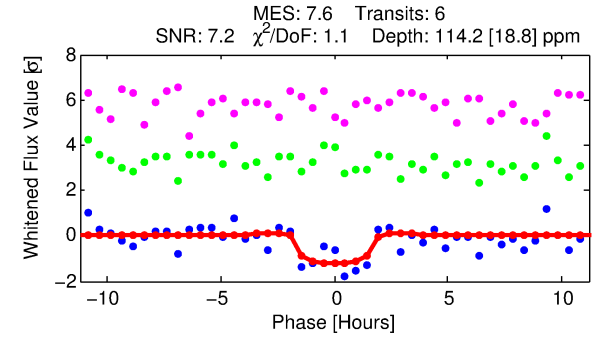
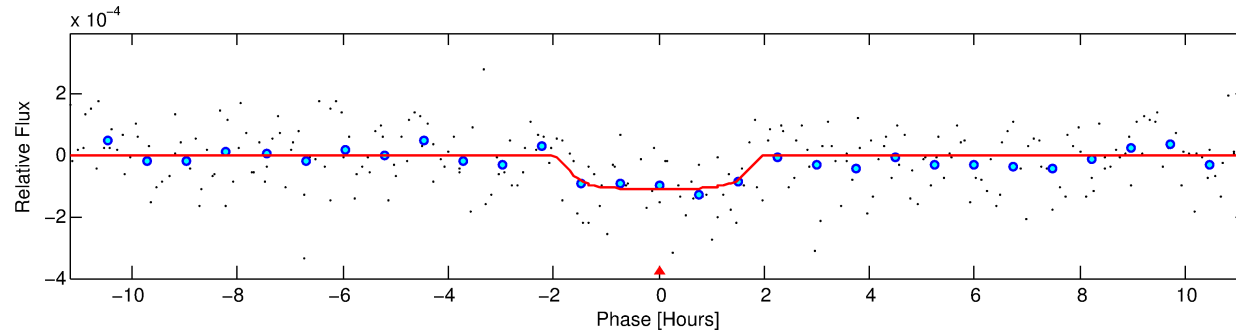
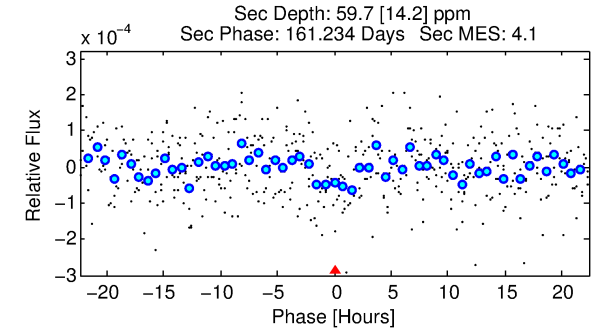
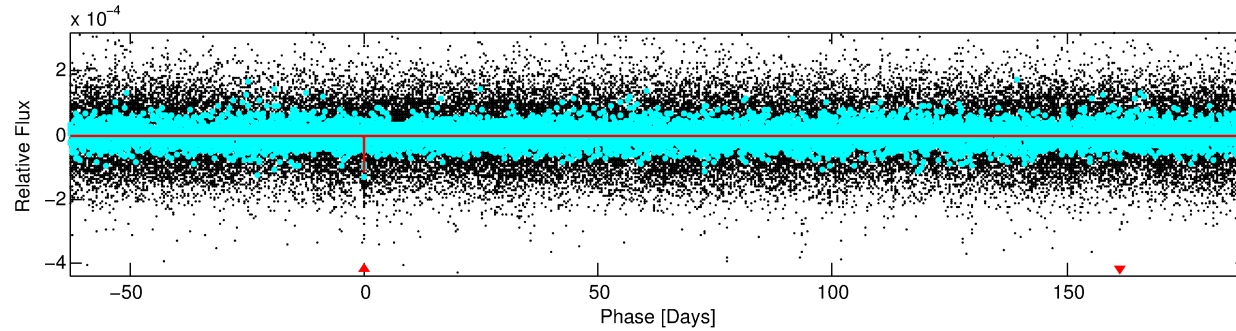
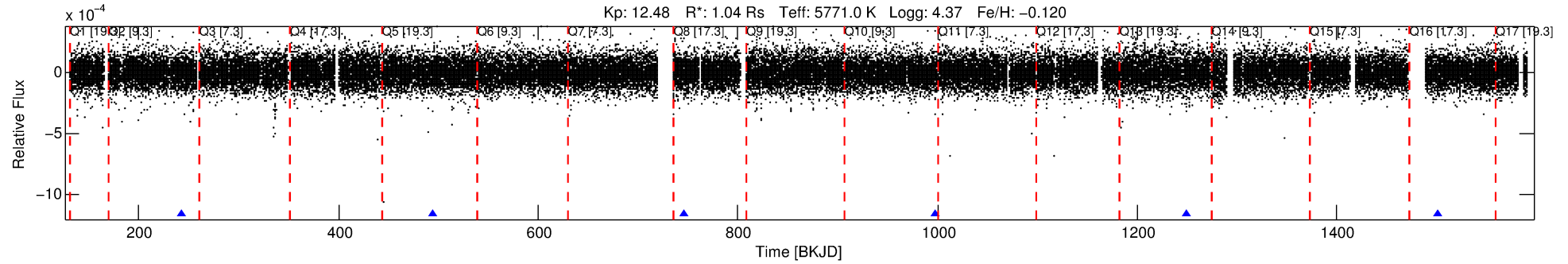
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008312853-01

No Significant Match Found

DV One-Page Summary

KIC: 8312853 Candidate: 1 of 1 Period: 251.643 d



DV Fit Results:

Period = 251.64323 [0.00374] d
Epoch = 242.9832 [0.0116] BKJD
Rp/R* = 0.0116 [0.0100]
a/R* = 237.12 [1006.29]
b = 0.90 [0.90]
Seff = 1.86 [0.48]
Teq = 298 [19] K
Rp = 1.32 [1.16] Re
a = 0.7582 [0.1235] AU
Ag = 10911.34 [19075.15] [0.57σ]
Teffp = 4703 [2040] K [2.16σ]

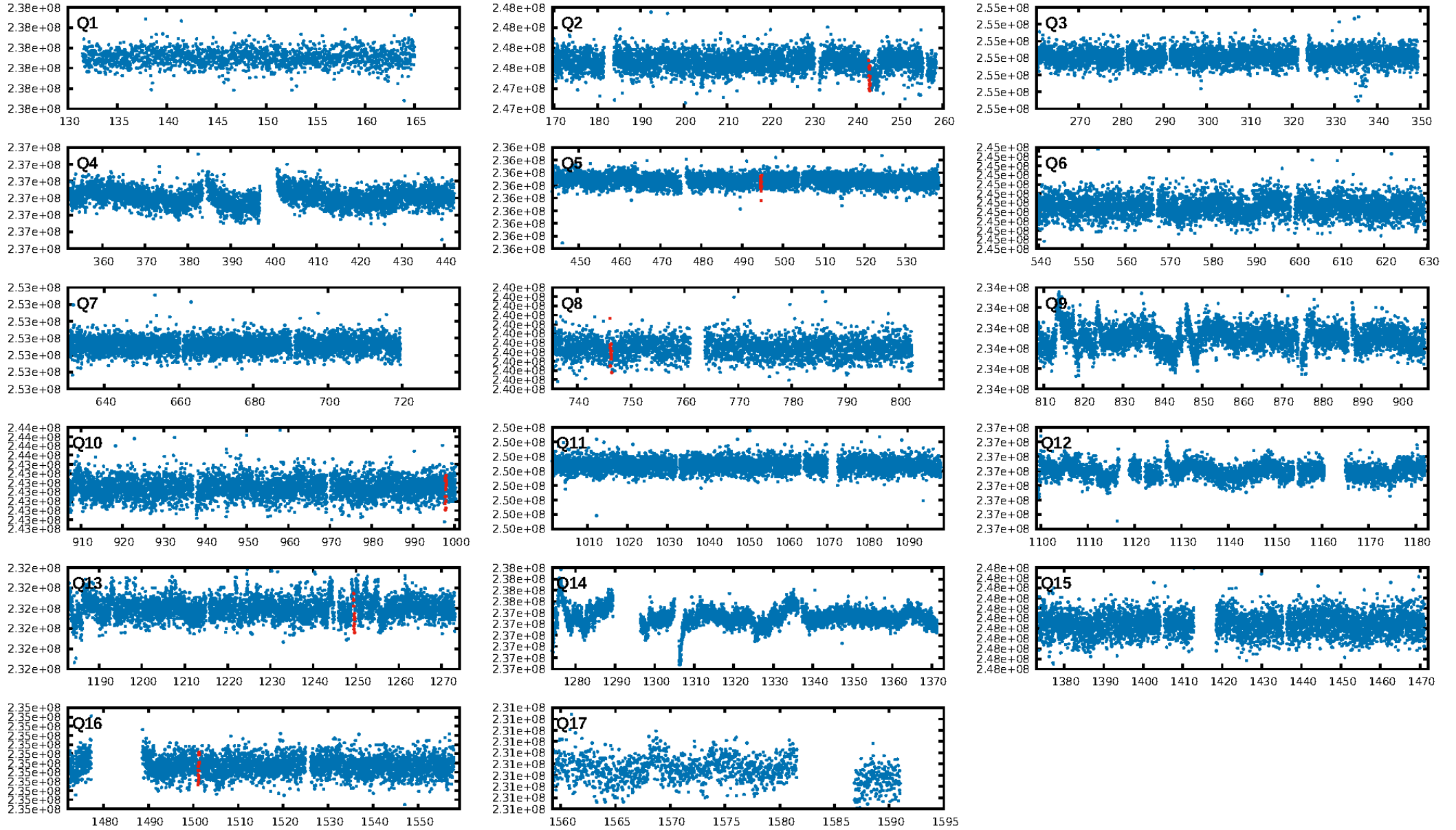
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.7%
ModelChiSquareGof-sig: 85.5%
Bootstrap-pfa: 1.05e-11
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 13.91
Centroid-sig: N/A
Centroid-so: 2.448 arcsec [1.48σ]
OotOffset-rm: 0.799 arcsec [1.11σ]
KicOffset-rm: 1.197 arcsec [1.52σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [6/6]

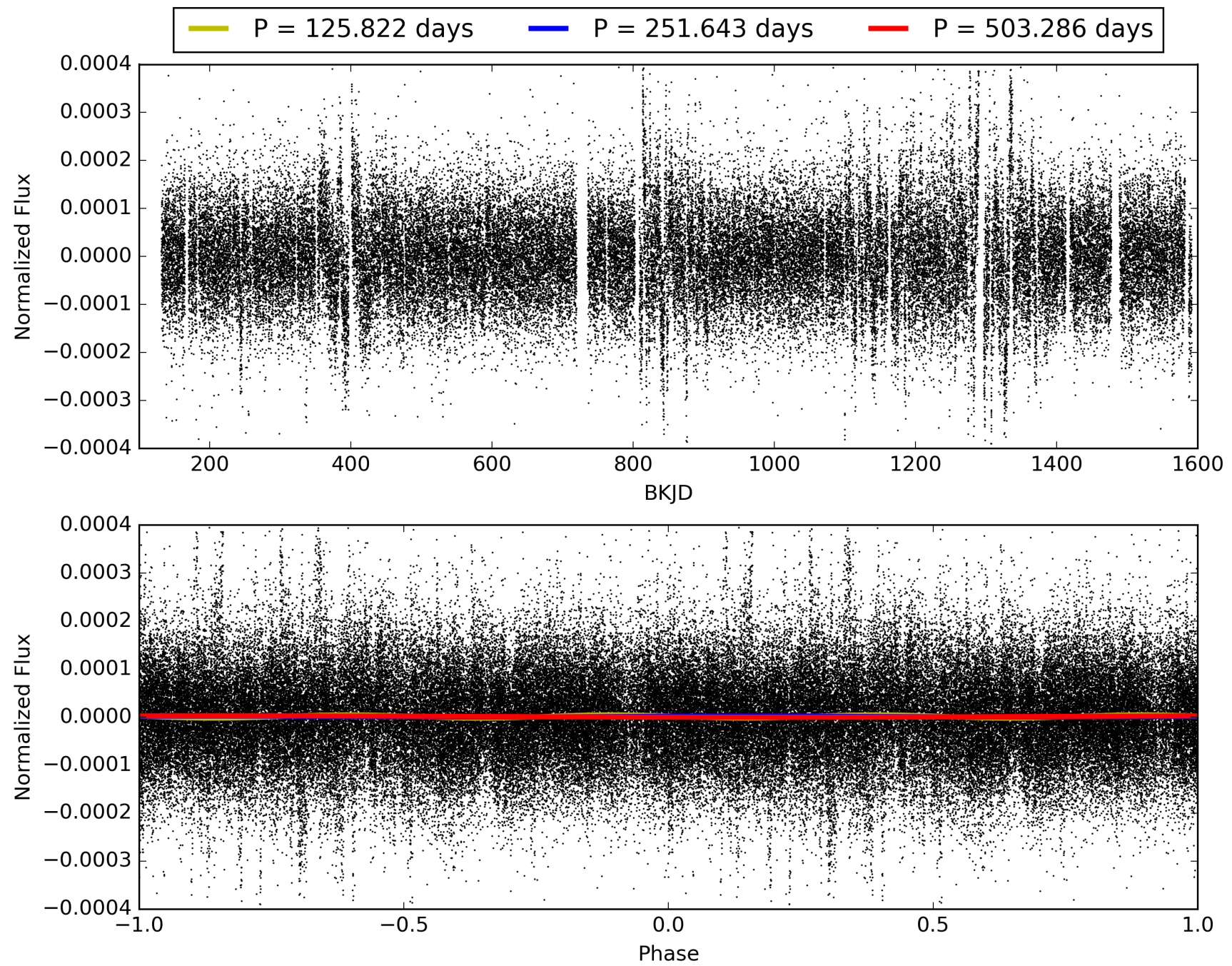
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:46:08 Z

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

TCE 008312853-01, PDC Light Curves

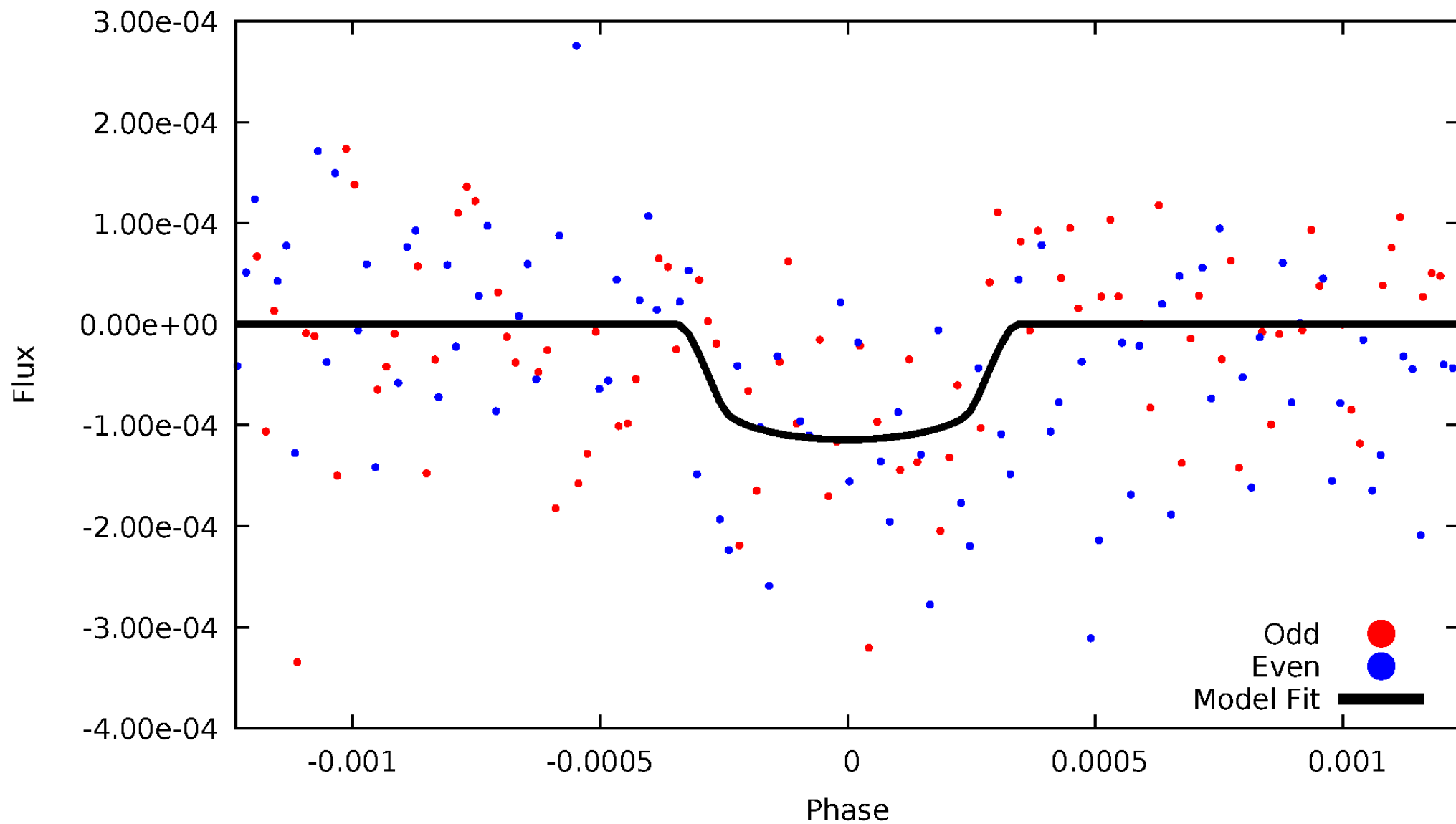


TCE 008312853-01



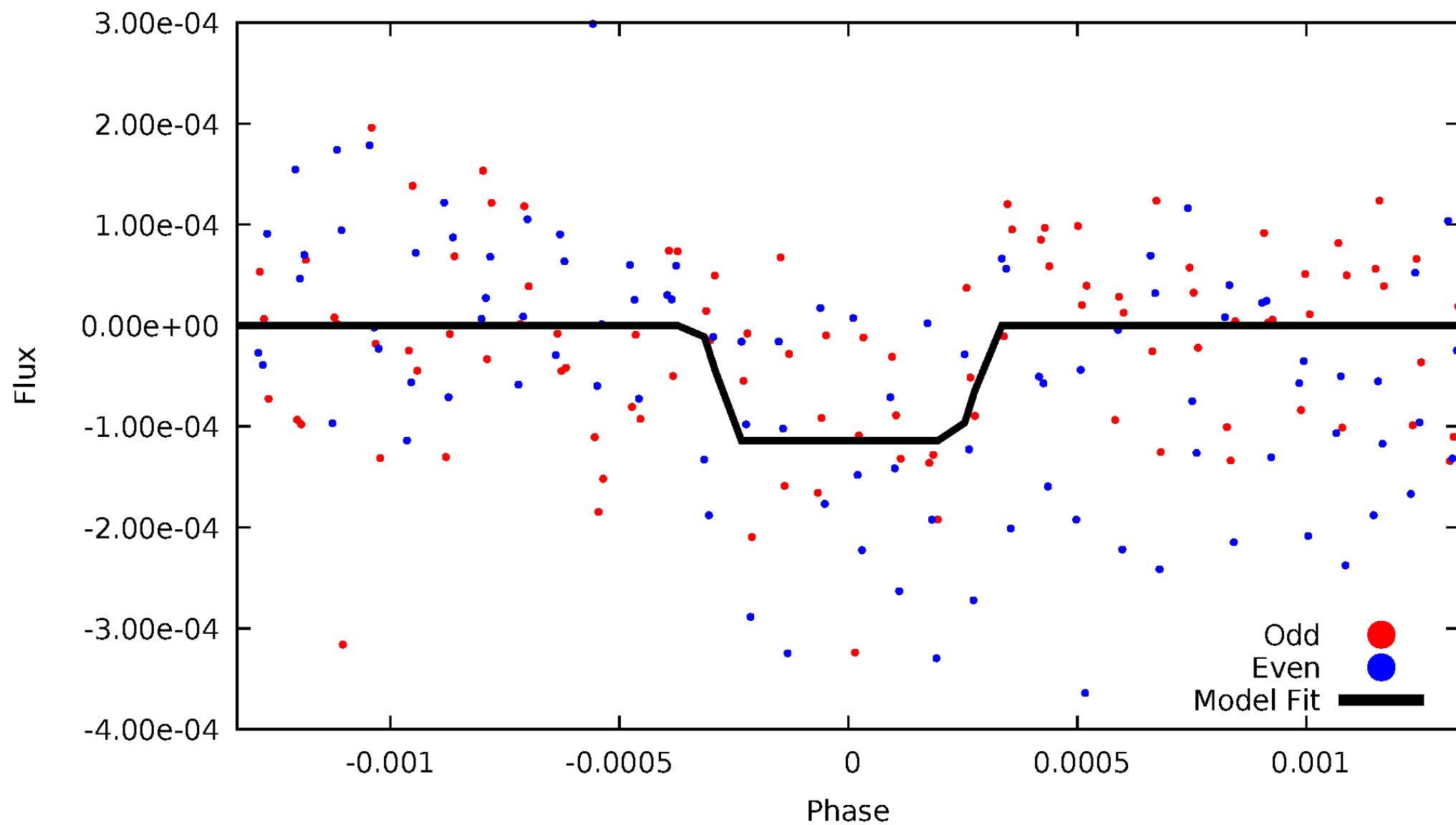
DV Odd/Even

TCE 008312853-01



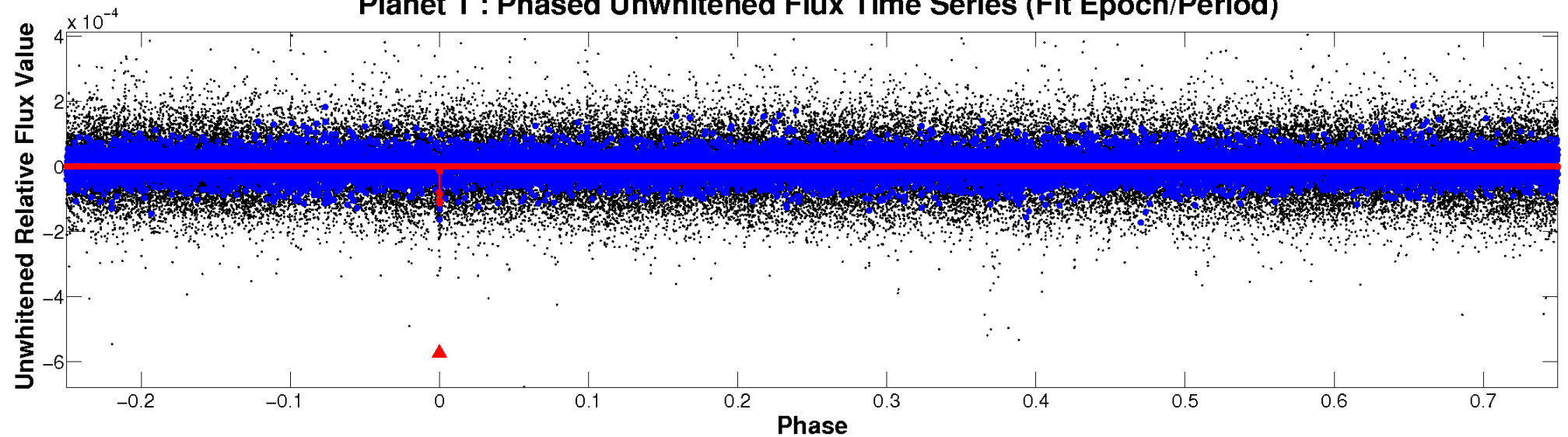
ALT Odd/Even

TCE 008312853-01

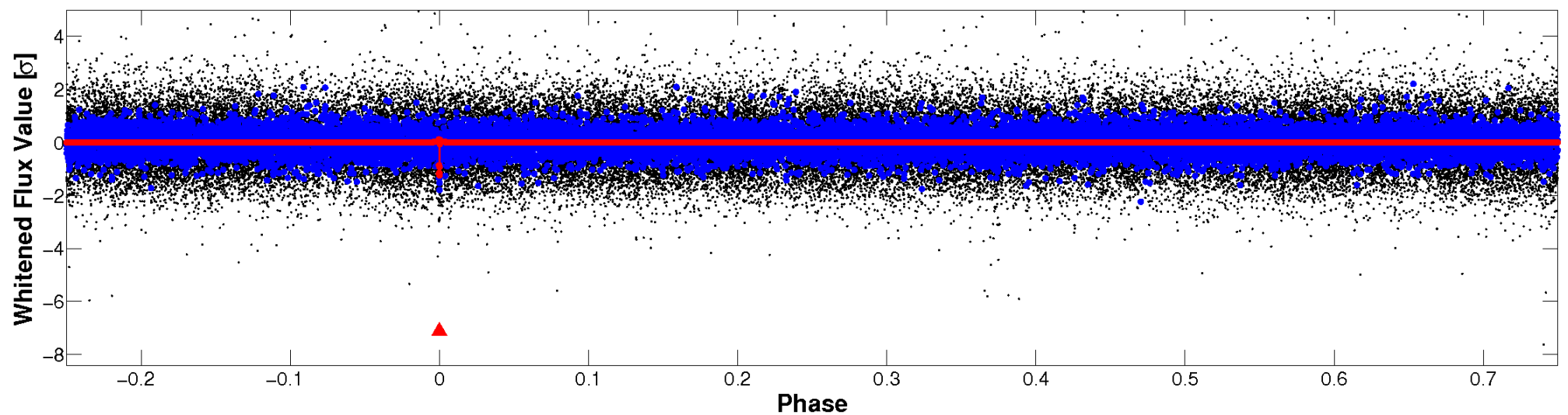


Non-Whitened Vs. Whitened Light Curve

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

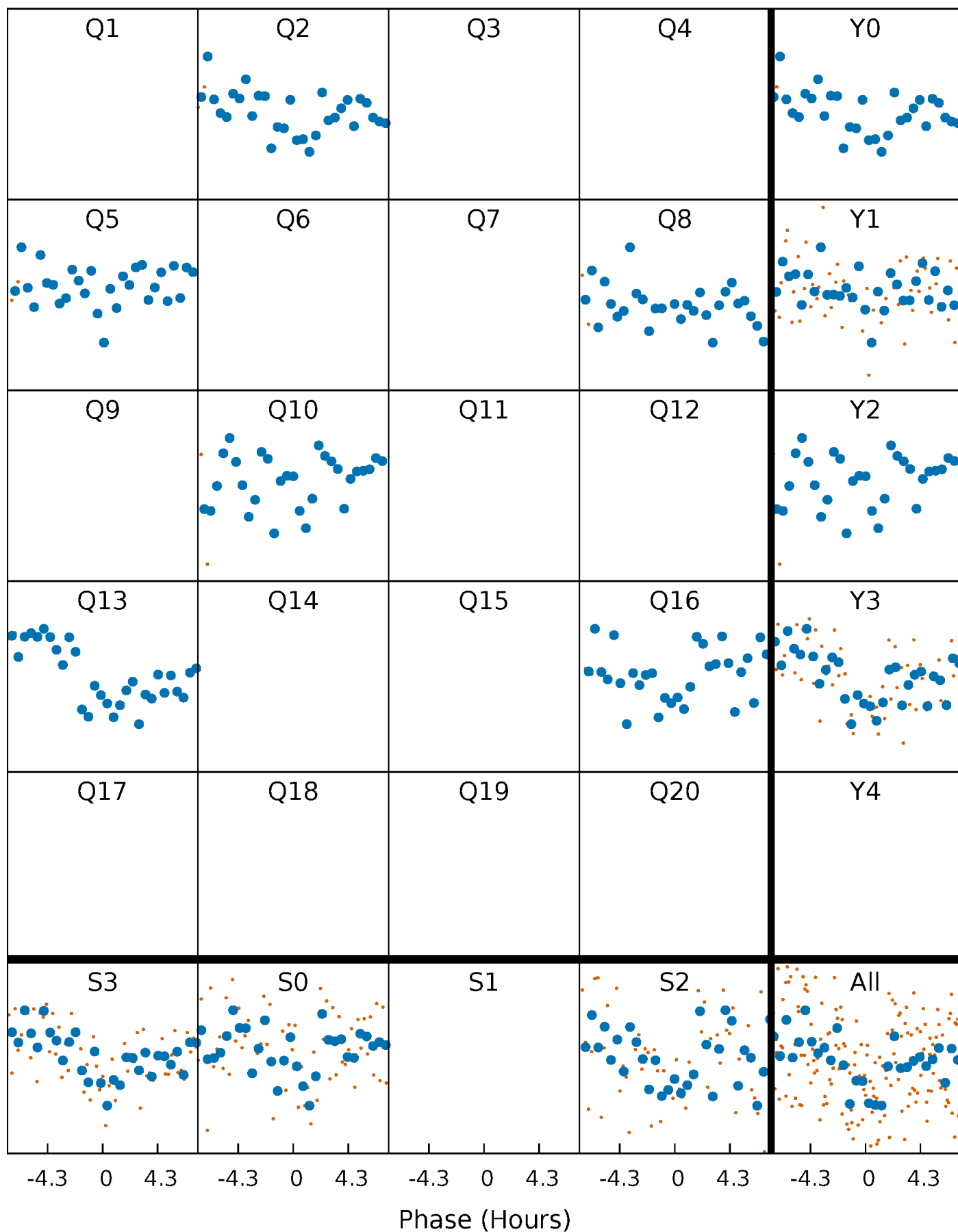


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



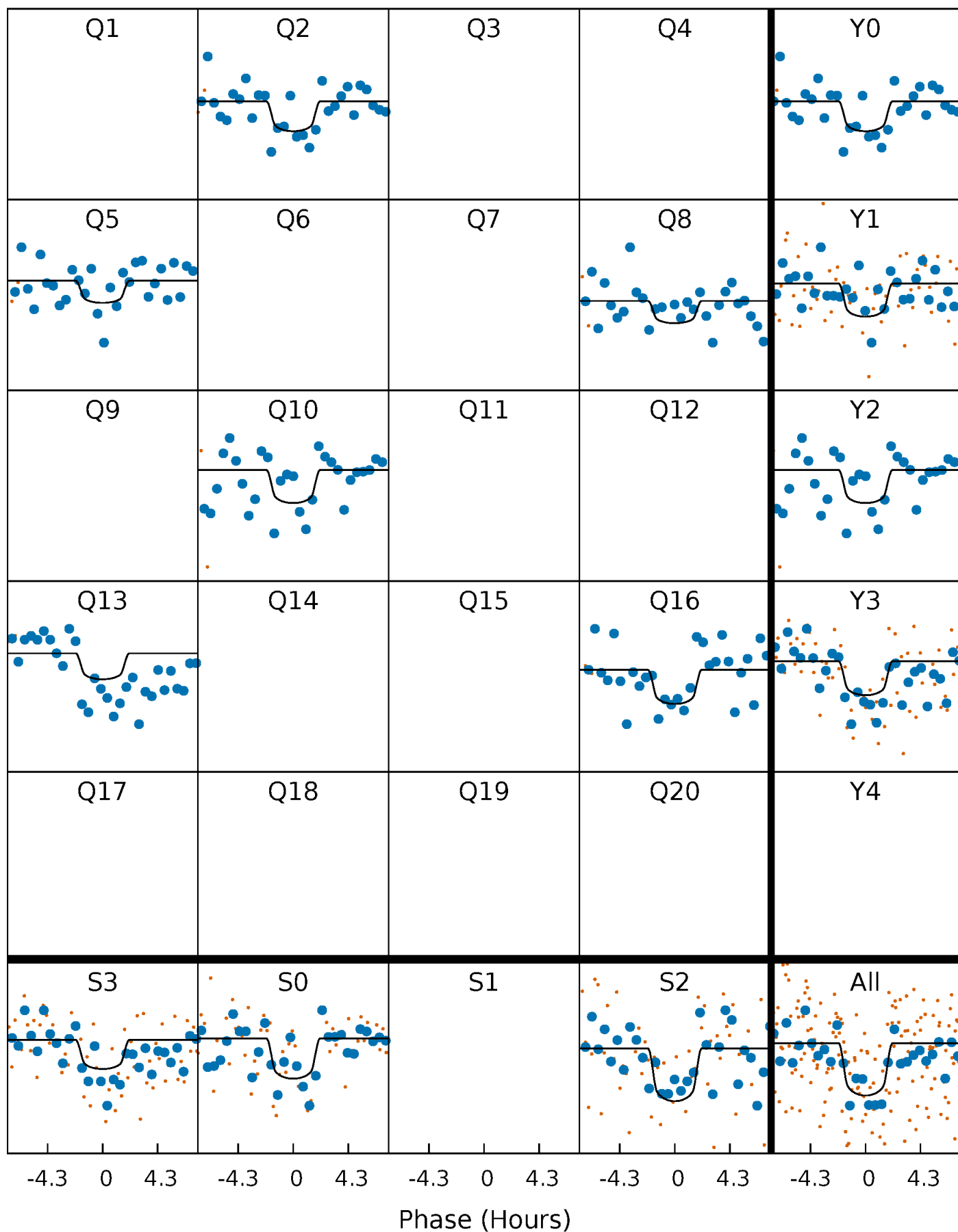
PDC Quarter-Phased Transit Curves

TCE 008312853-01 P=251.643226 Days $T_0=242.983154$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008312853-01 P=251.643226 Days $T_0=242.983154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

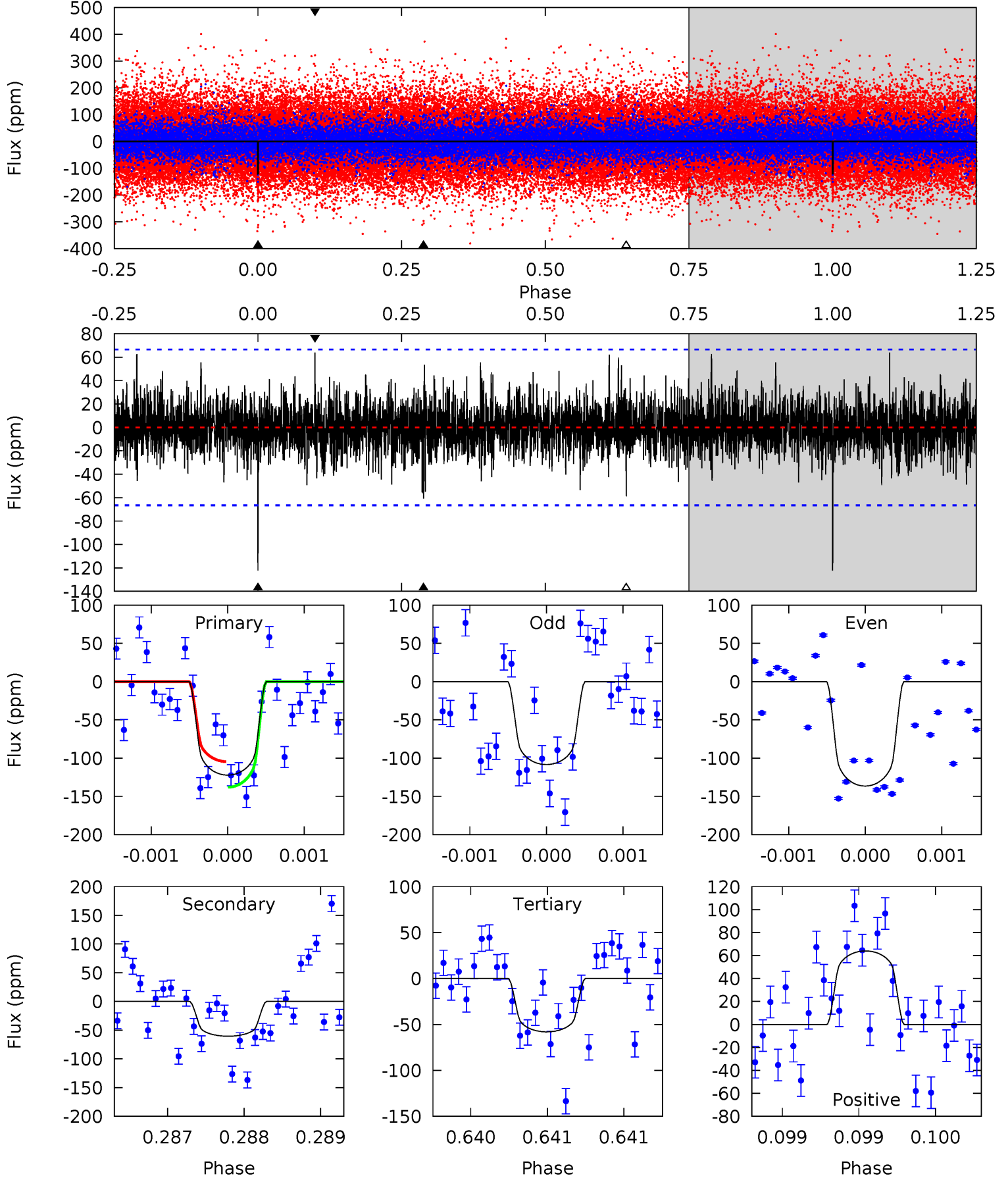
TCE 008312853-01 P=251.638636 Days $T_0=242.994855$ (BKJD)



DV Model-Shift Uniqueness Test

008312853-01, P = 251.643226 Days, E = 242.983154 Days

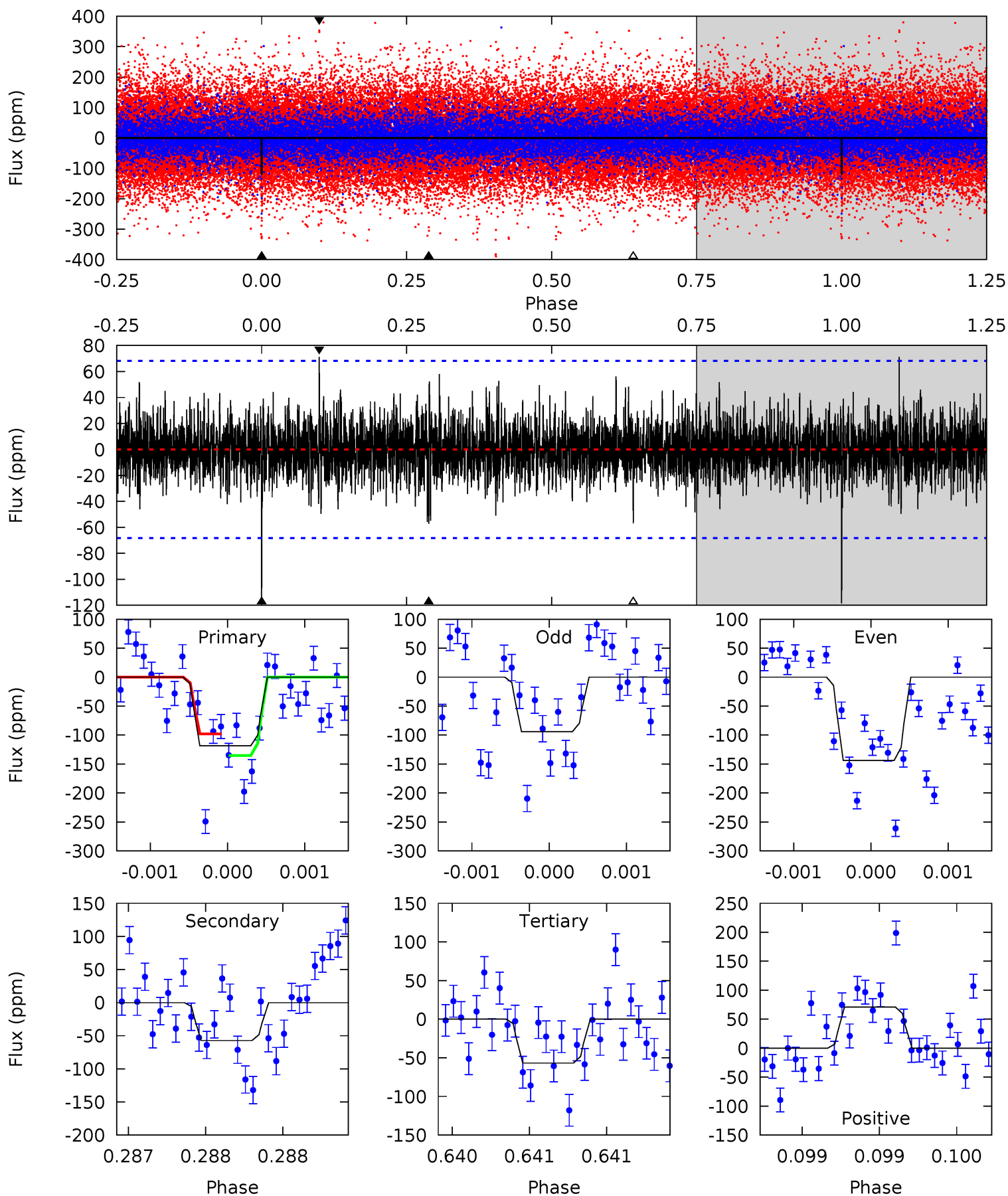
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.02	4.82	5.31	5.52	3.40	1.26	5.31	4.82	0.20	-0.28	1.17	1.10	0.34	1.38



Alt Model-Shift Uniqueness Test

008312853-01, P = 251.638636 Days, E = 242.994855 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.60	4.64	4.60	5.76	5.53	3.41	1.19	4.99	3.84	0.04	-1.12	2.06	1.22	0.37	1.52



Stellar Parameters For KIC 008312853

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5771^{+138}_{-156}	$4.370^{+0.130}_{-0.130}$	$-0.120^{+0.300}_{-0.300}$	$1.036^{+0.200}_{-0.145}$	$0.918^{+0.124}_{-0.083}$	$1.163^{+0.700}_{-0.436}$
	+2%/-3%	+3%/-3%	+250%/-250%	+19%/-14%	+14%/-9%	+60%/-38%
Source	PHO1	FLK73	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 008312853-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-61 ± 12	$1.54^{+1.10}_{-0.89}$	415^{+23}_{-21}	4501^{+2180}_{-781}	8113^{+37662}_{-5418}
Alt.	-57 ± 12	$1.43^{+1.08}_{-0.87}$	415^{+22}_{-19}	4622^{+2617}_{-858}	9132^{+52395}_{-6305}

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 $A_{obs} \gg 1.0$

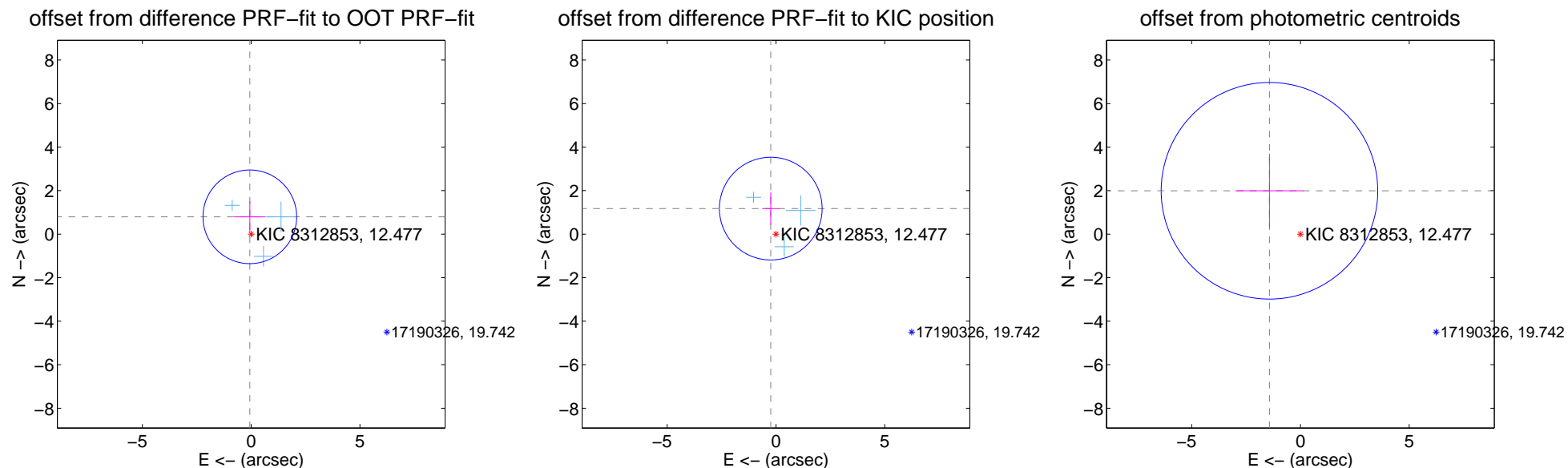
DV Centroid Data

Supplemental centroid analysis for 008312853-01. Kepler magnitude: 12.48. Transit SNR 7.18

There are 3 quarters with good PRF difference image offsets

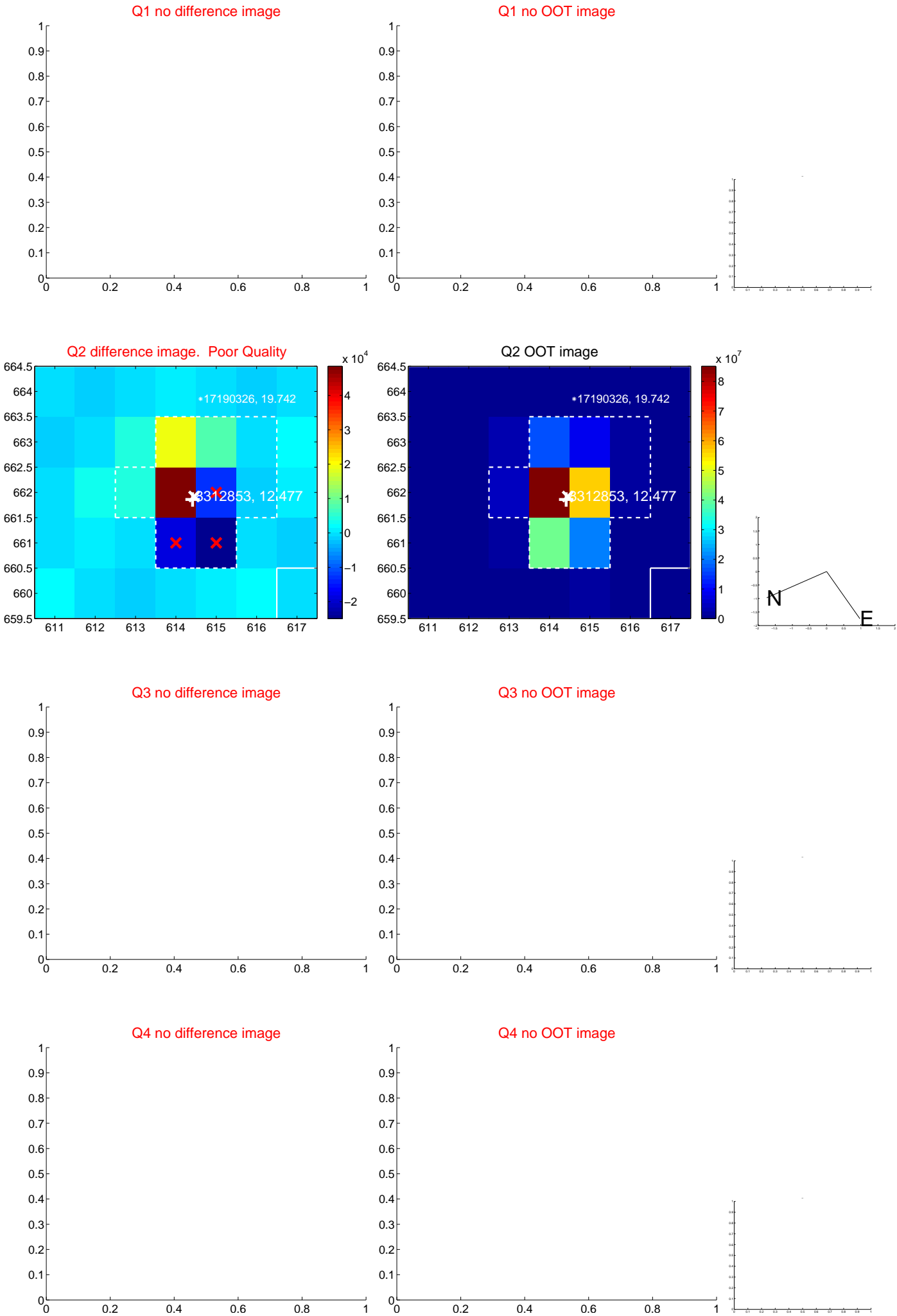
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.799 ± 0.717	1.11	0.062 ± 0.731	0.796 ± 0.717
PRF-fit source offset from KIC position	1.197 ± 0.787	1.52	0.238 ± 0.391	1.173 ± 0.742
photometric centroid source offset	2.45 ± 1.66	1.48	1.42 ± 1.57	1.99 ± 1.70

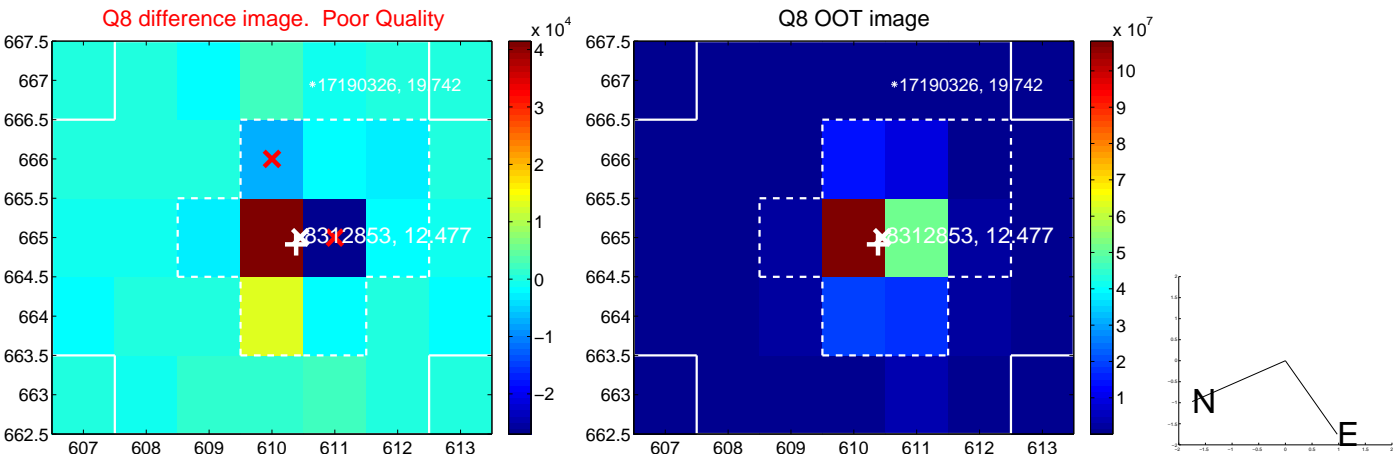
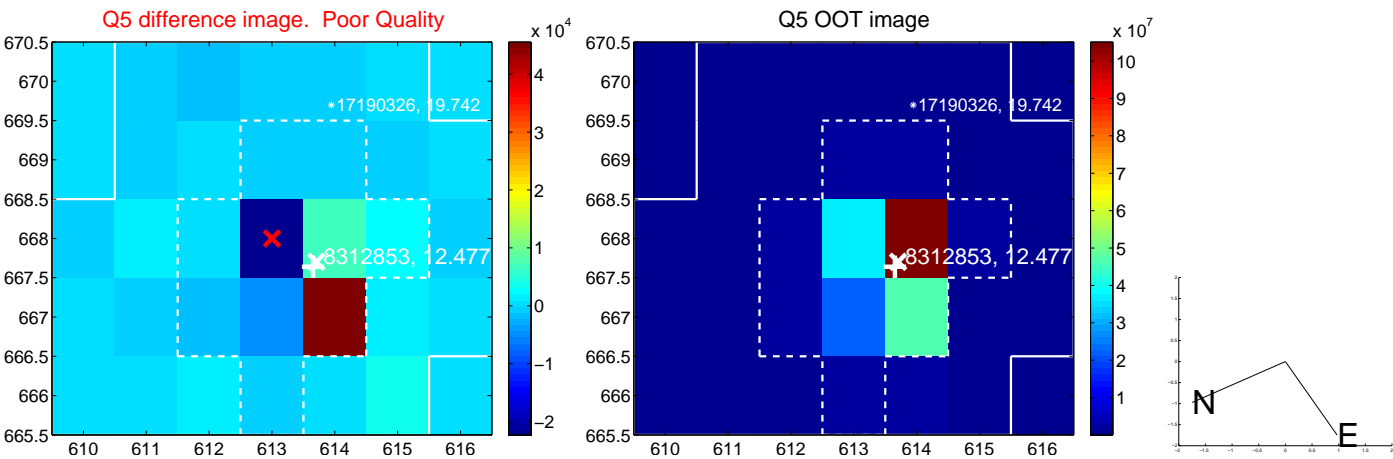


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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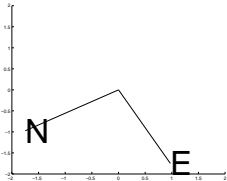
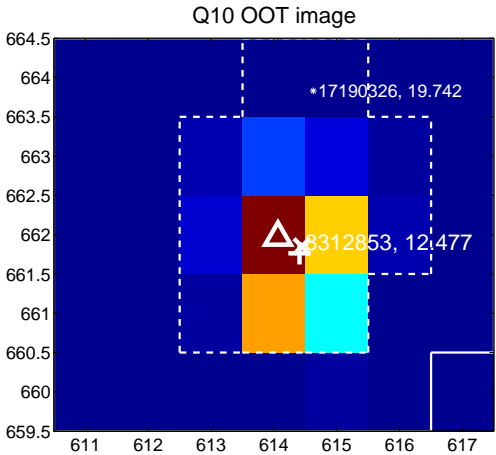
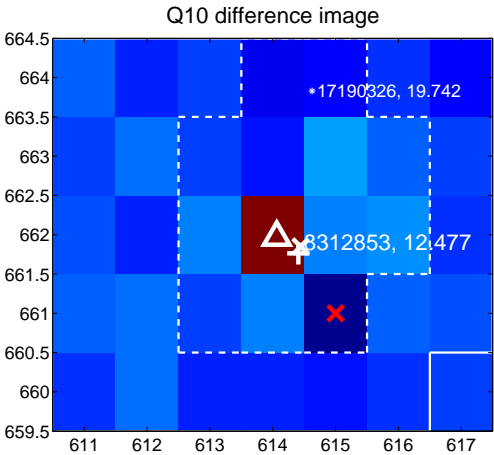


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

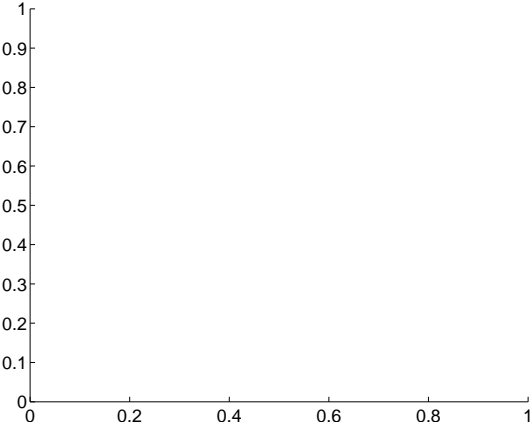
Q9 no difference image



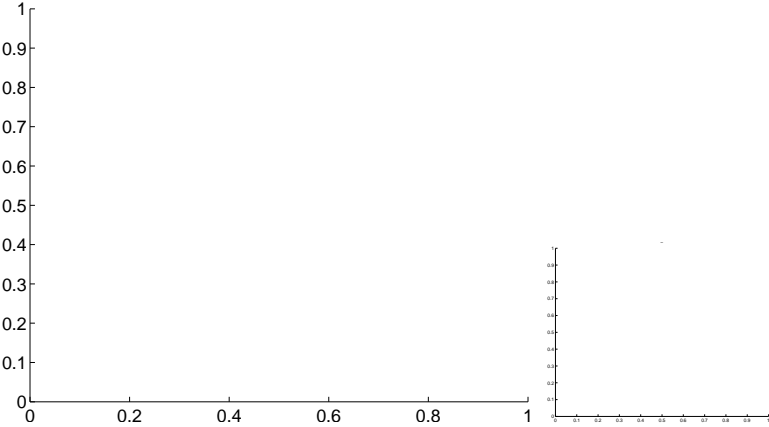
Q9 no OOT image



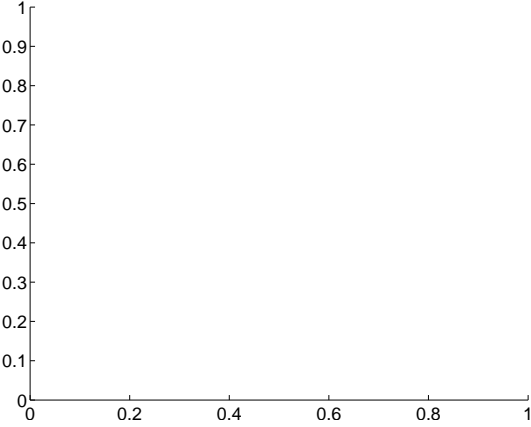
Q11 no difference image



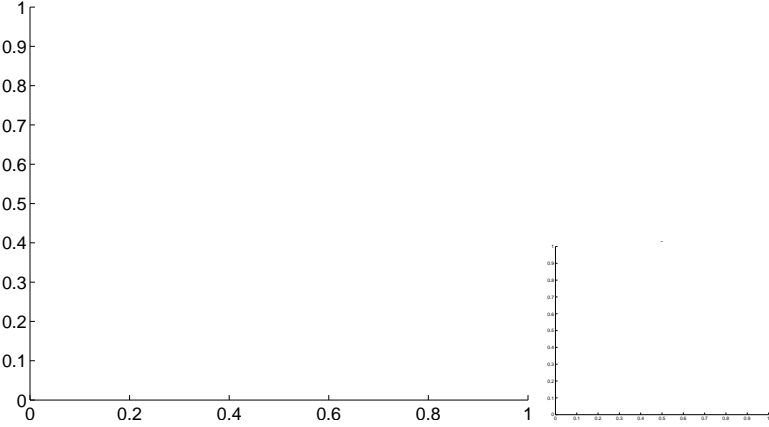
Q11 no OOT image



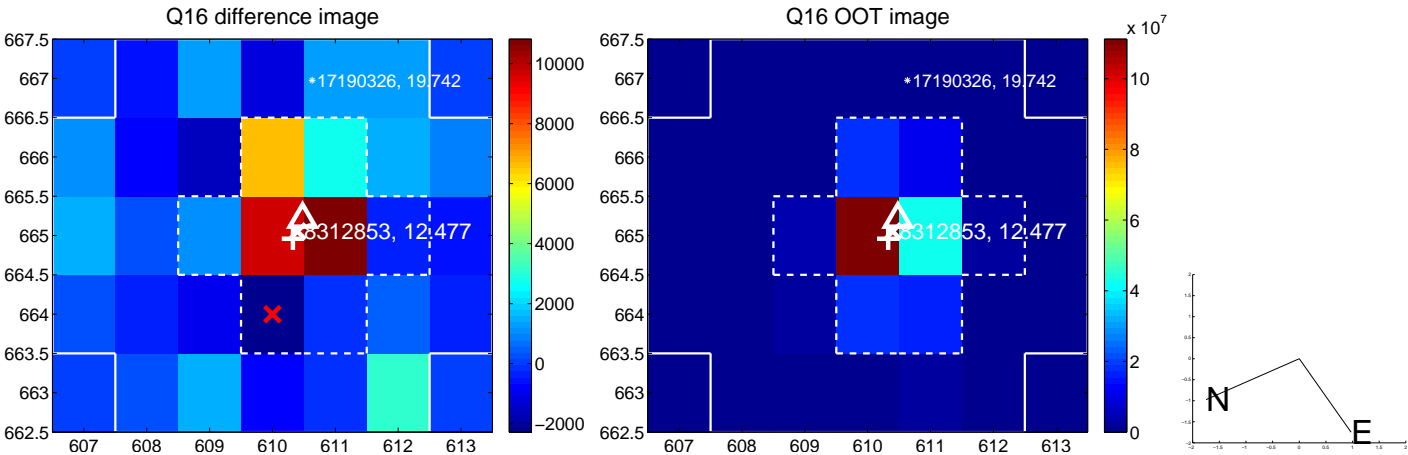
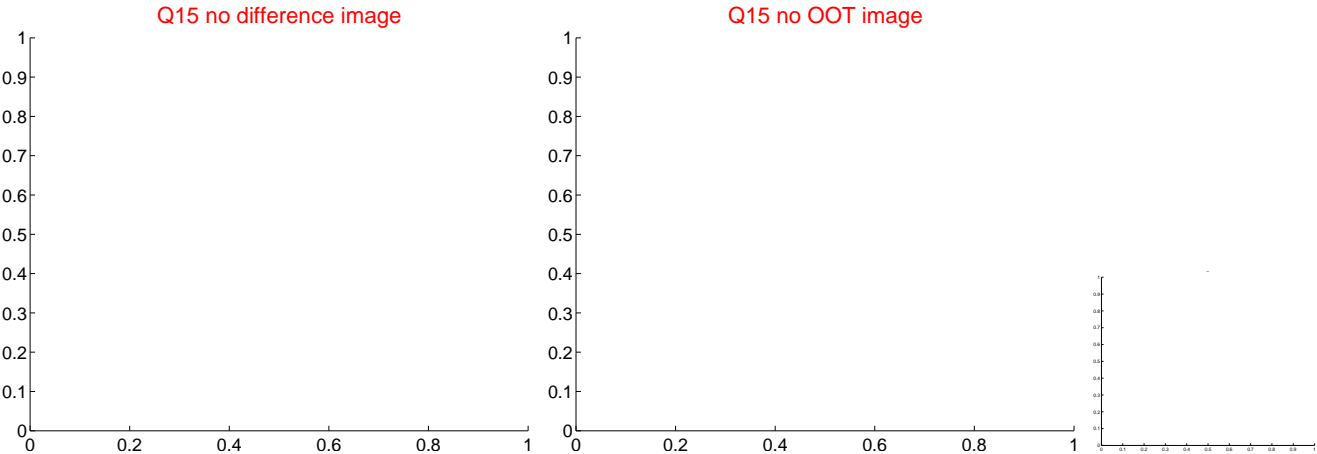
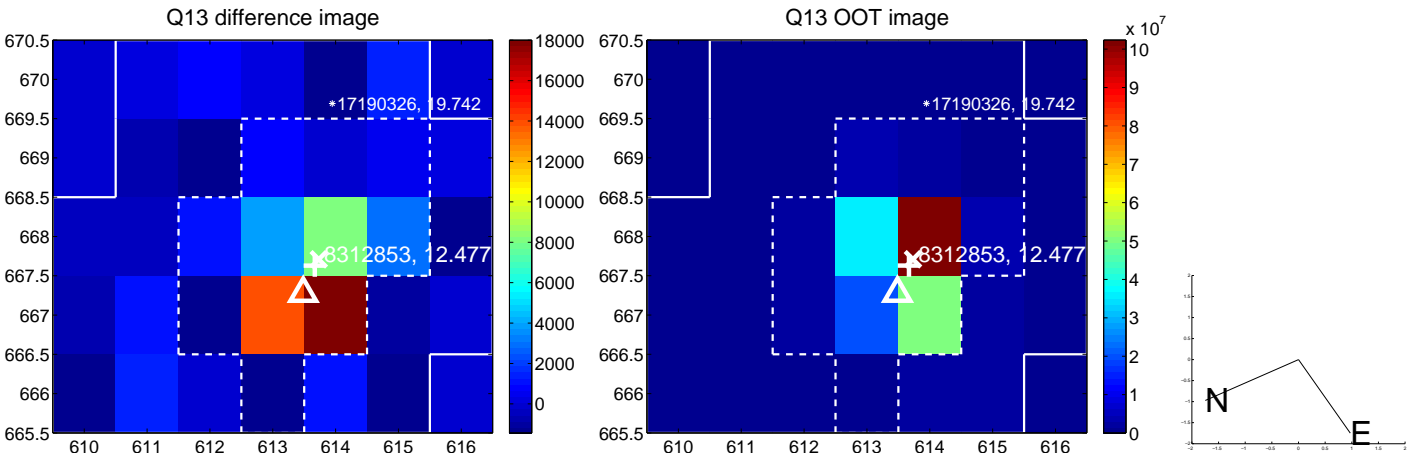
Q12 no difference image



Q12 no OOT image



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



UKIRT Image

Declination

