

KIC 009307966

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})
009307966-01	OBS	4910.01	6.749588	132.514295	85.2	2.405	7.4	8.6	1.01	6181	1.08	258.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009307966-01	OBS	FP	0.07	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

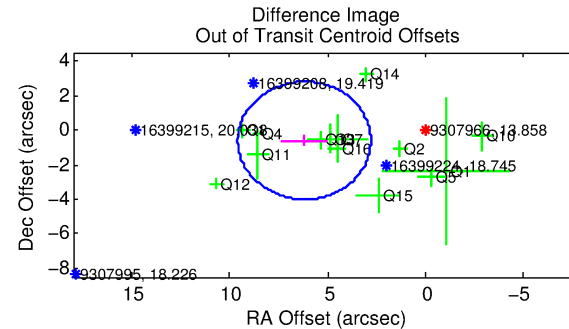
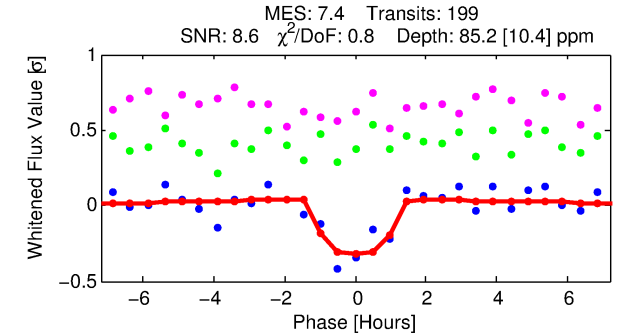
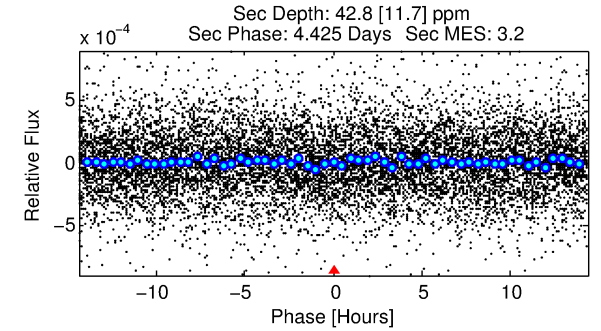
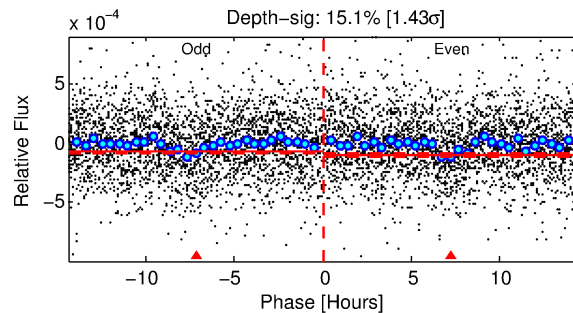
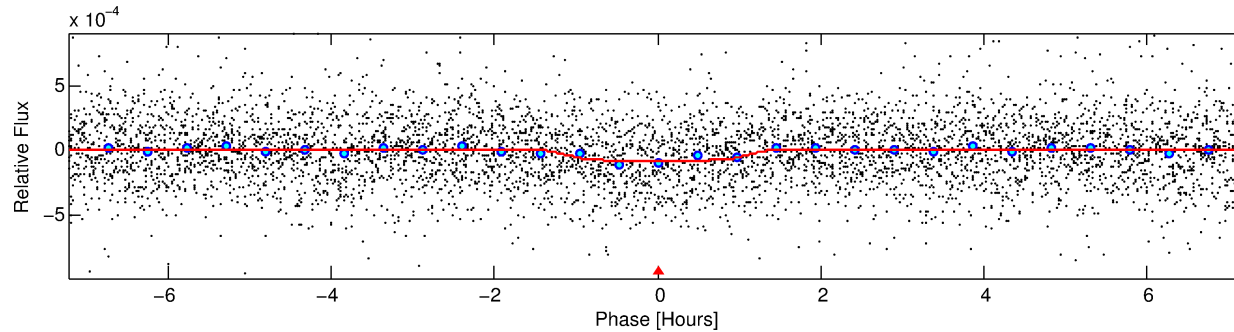
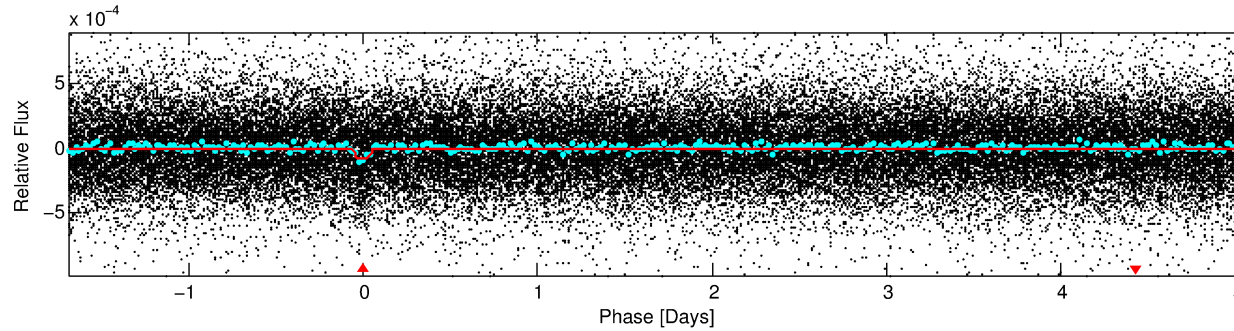
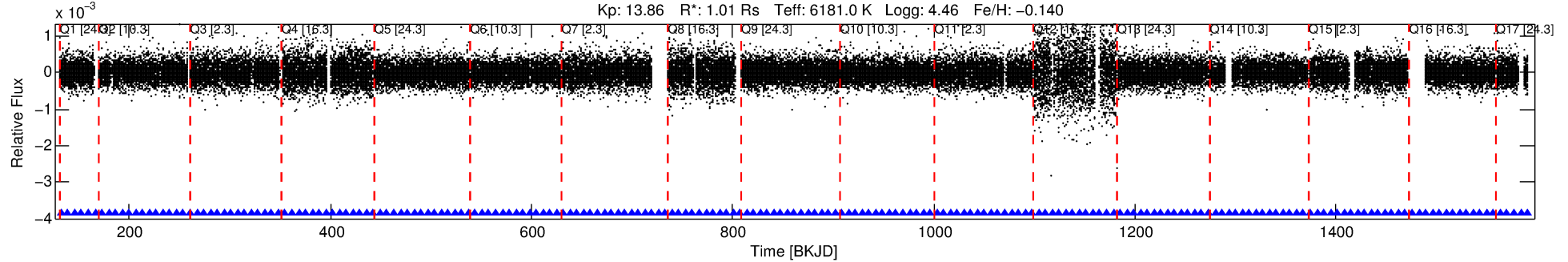
Ephemeris Match Information For 009307966-01

No Significant Match Found

DV One-Page Summary

KIC: 9307966 Candidate: 1 of 1 Period: 6.750 d
KOI: K04910 Corr: No Ephemeris Match

Kp: 13.86 R*: 1.01 Rs Teff: 6181.0 K Logg: 4.46 Fe/H: -0.140



DV Fit Results:

Period = 6.74959 [0.00005] d
Epoch = 132.5143 [0.0052] BKJD
Rp/R* = 0.0099 [0.0069]
a/R* = 10.33 [38.26]
b = 0.89 [0.90]
Seff = 258.12 [105.56]
Teq = 1022 [104] K
Rp = 1.08 [0.83] Re
a = 0.0716 [0.0192] AU
Ag = 103.22 [152.19] [0.67σ]
Teffp = 5037 [1801] K [2.23σ]

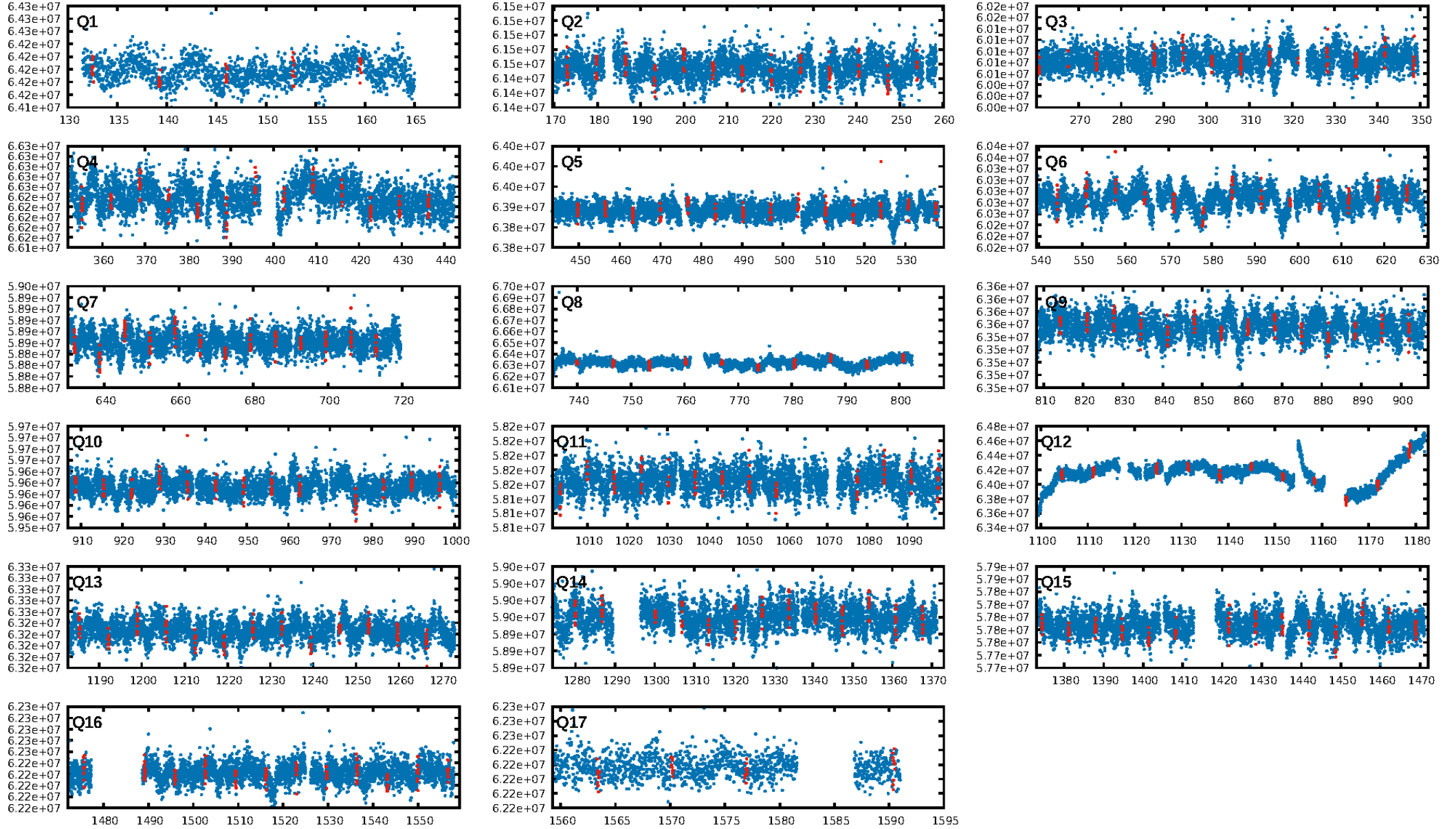
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.04e-13
RollingBand-fgt: 1.00 [190/190]
GhostDiagnostic-chr: 1.227
Centroid-sig: 0.0%
Centroid-so: 7.131 arcsec [5.23σ]
OotOffset-rm: 6.218 arcsec [5.48σ]
KicOffset-rm: 6.298 arcsec [5.61σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [17/17]

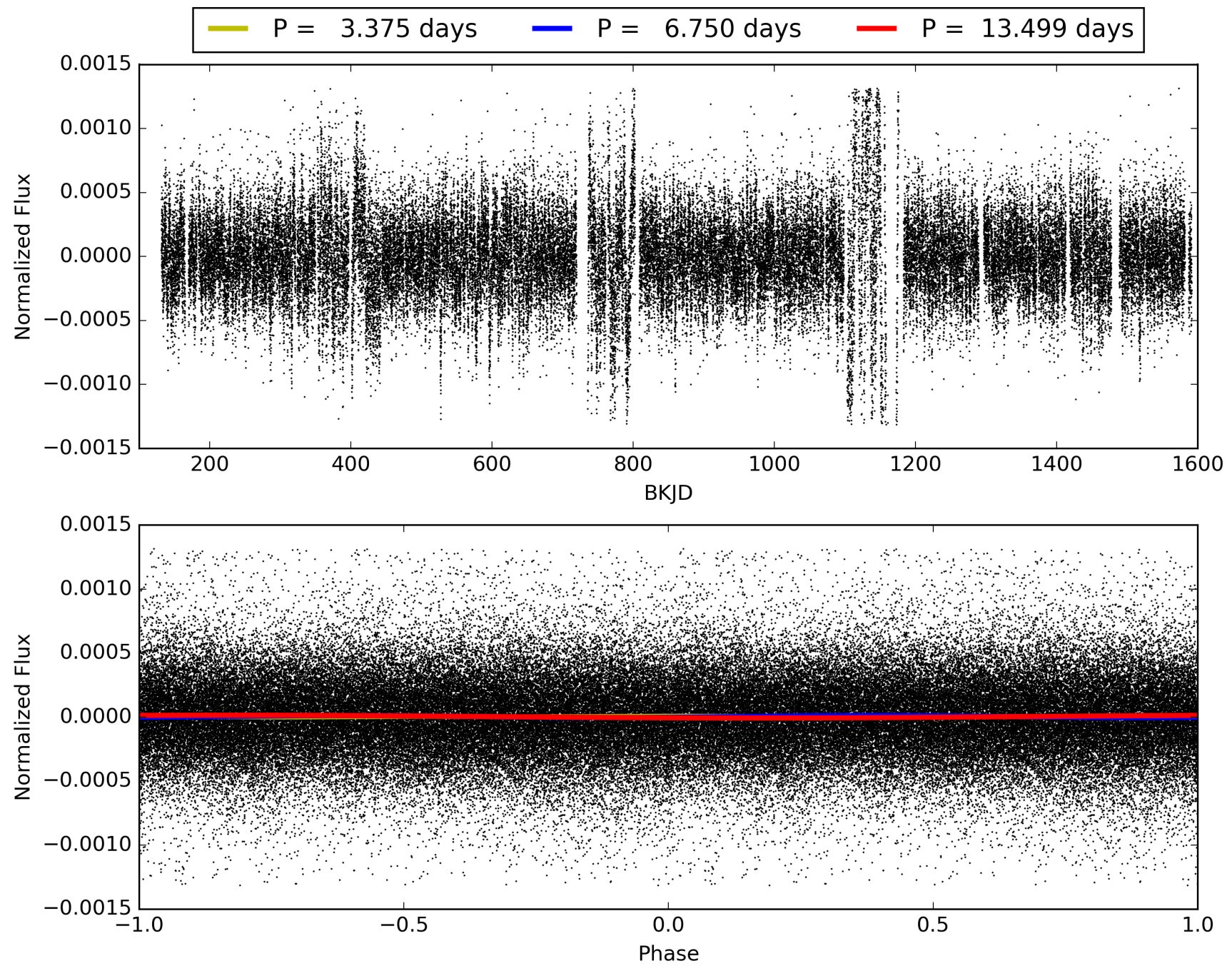
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:40:28 Z

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

TCE 009307966-01, PDC Light Curves

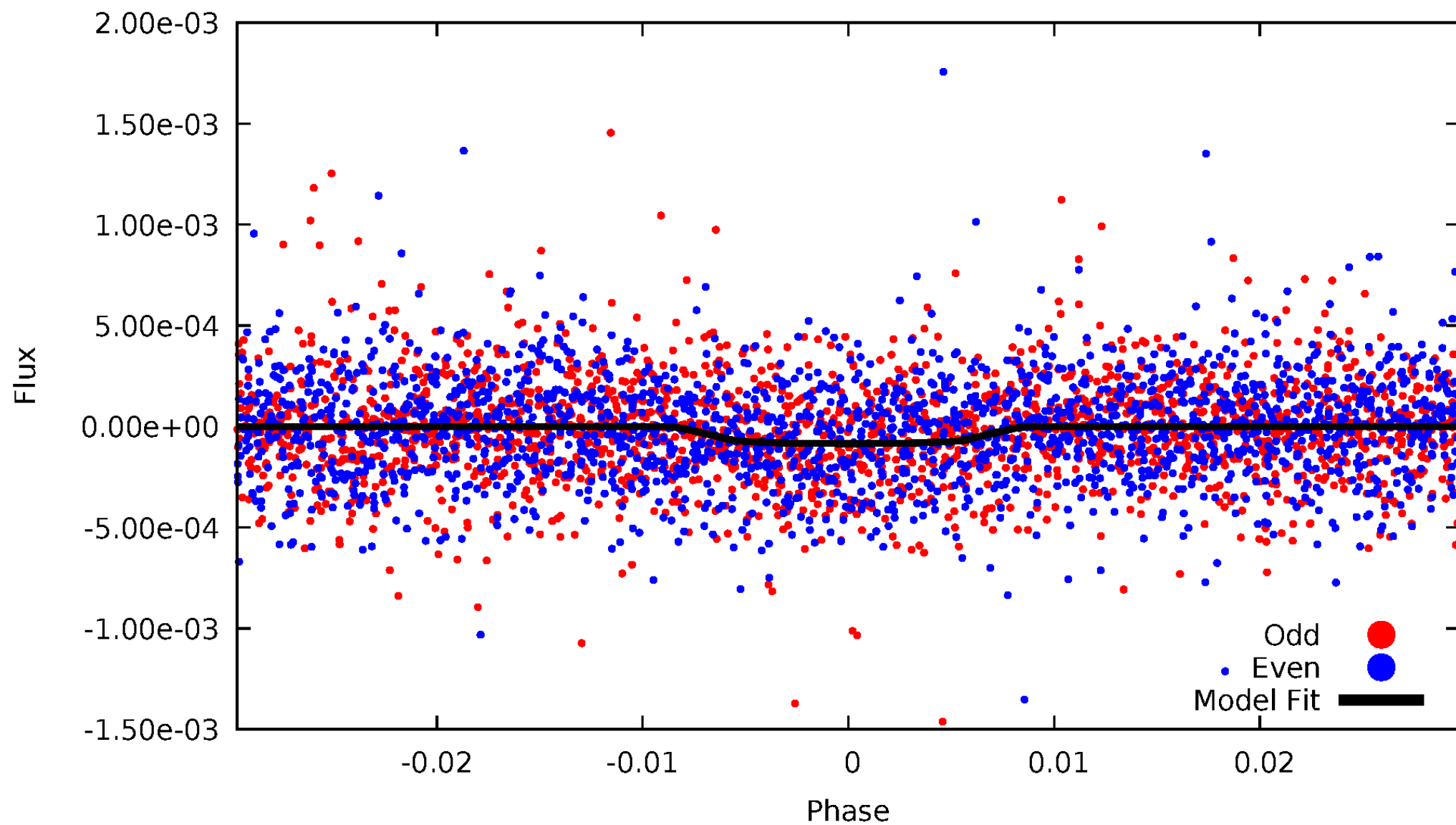


TCE 009307966-01



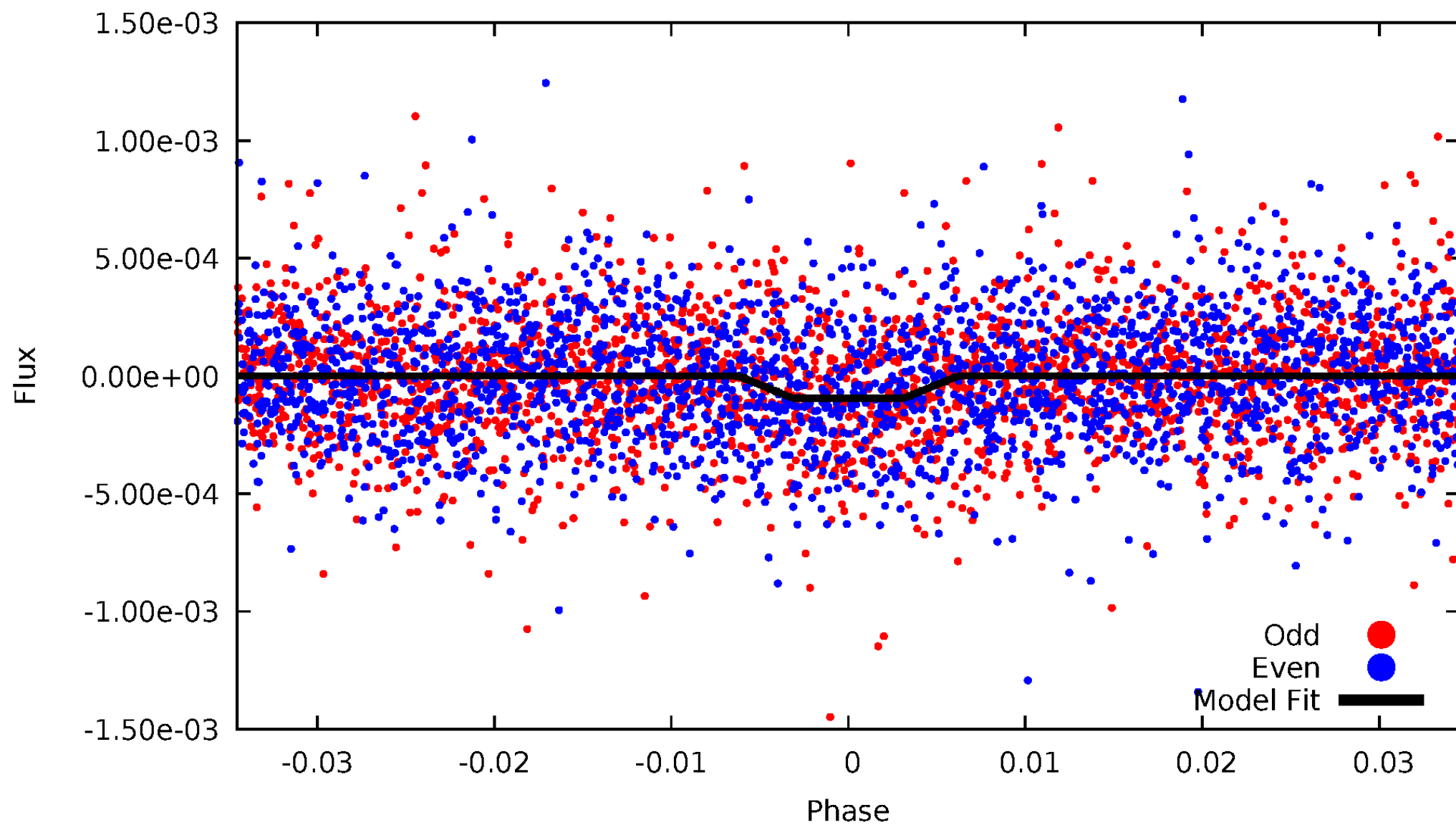
DV Odd/Even

TCE 009307966-01



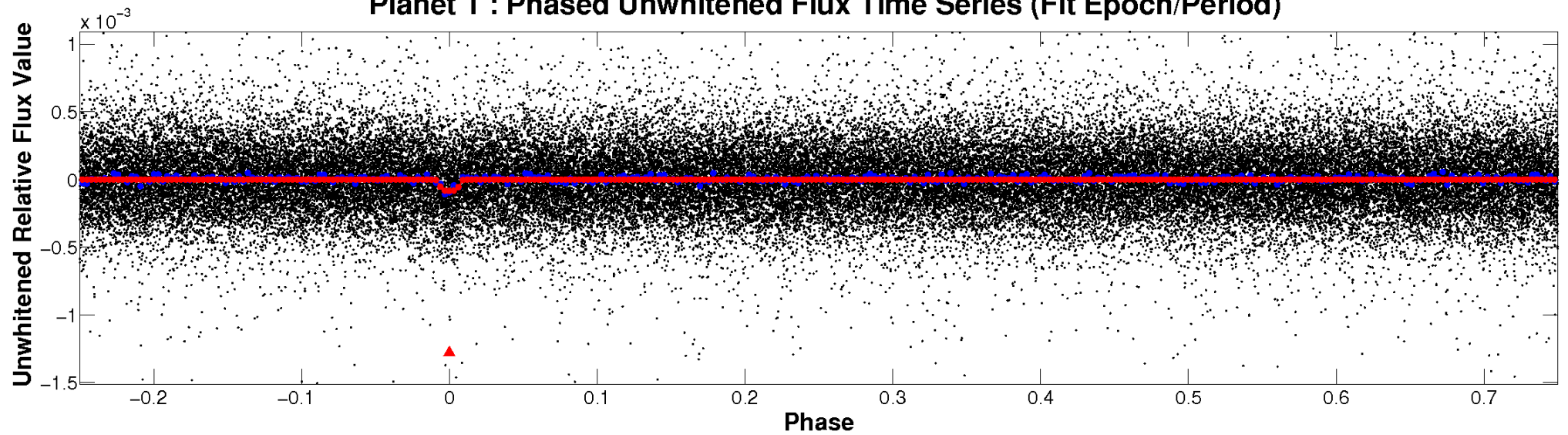
ALT Odd/Even

TCE 009307966-01

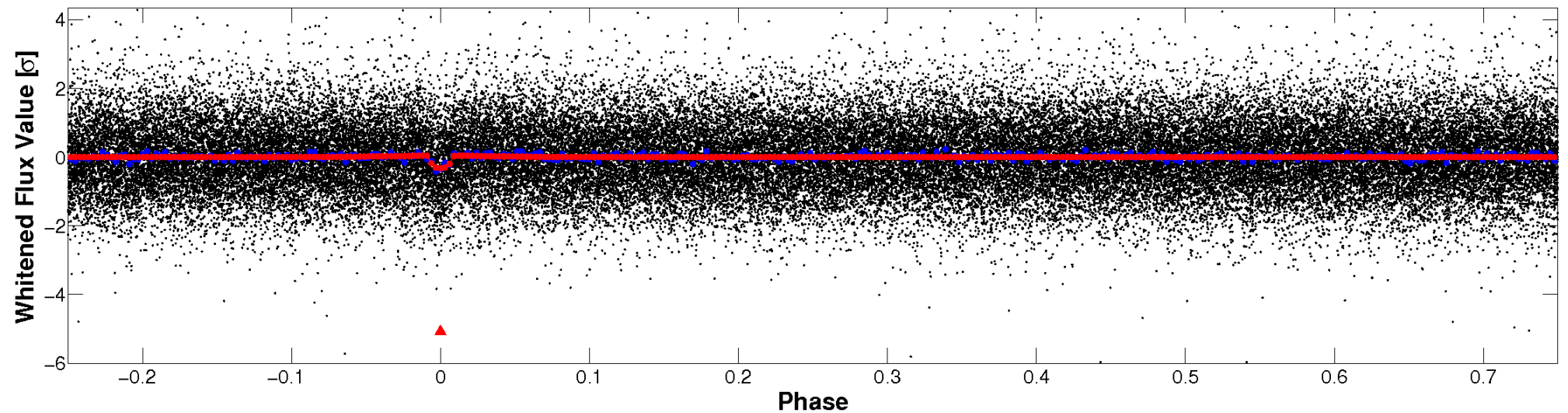


Non-Whitened Vs. Whitened Light Curve

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

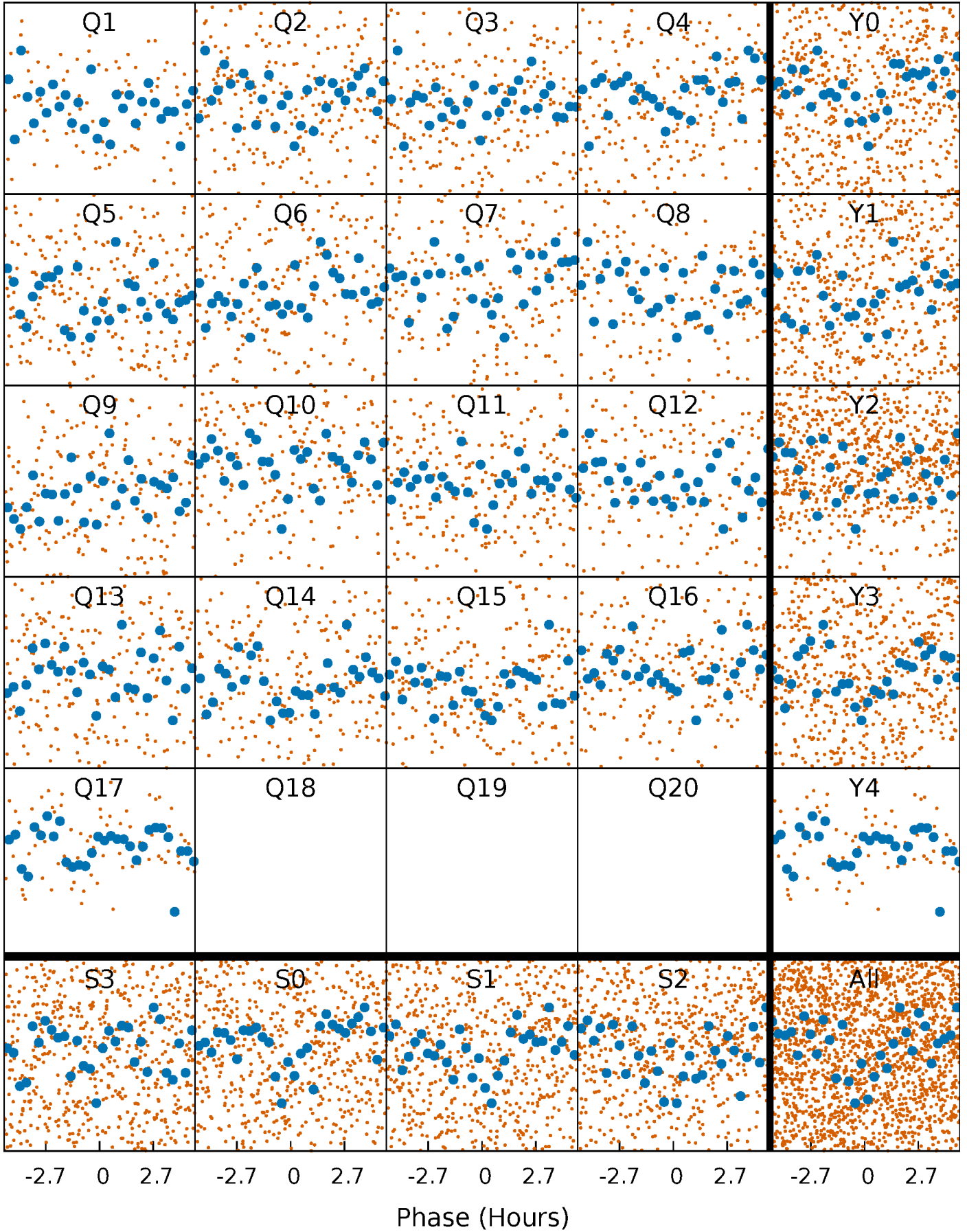


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



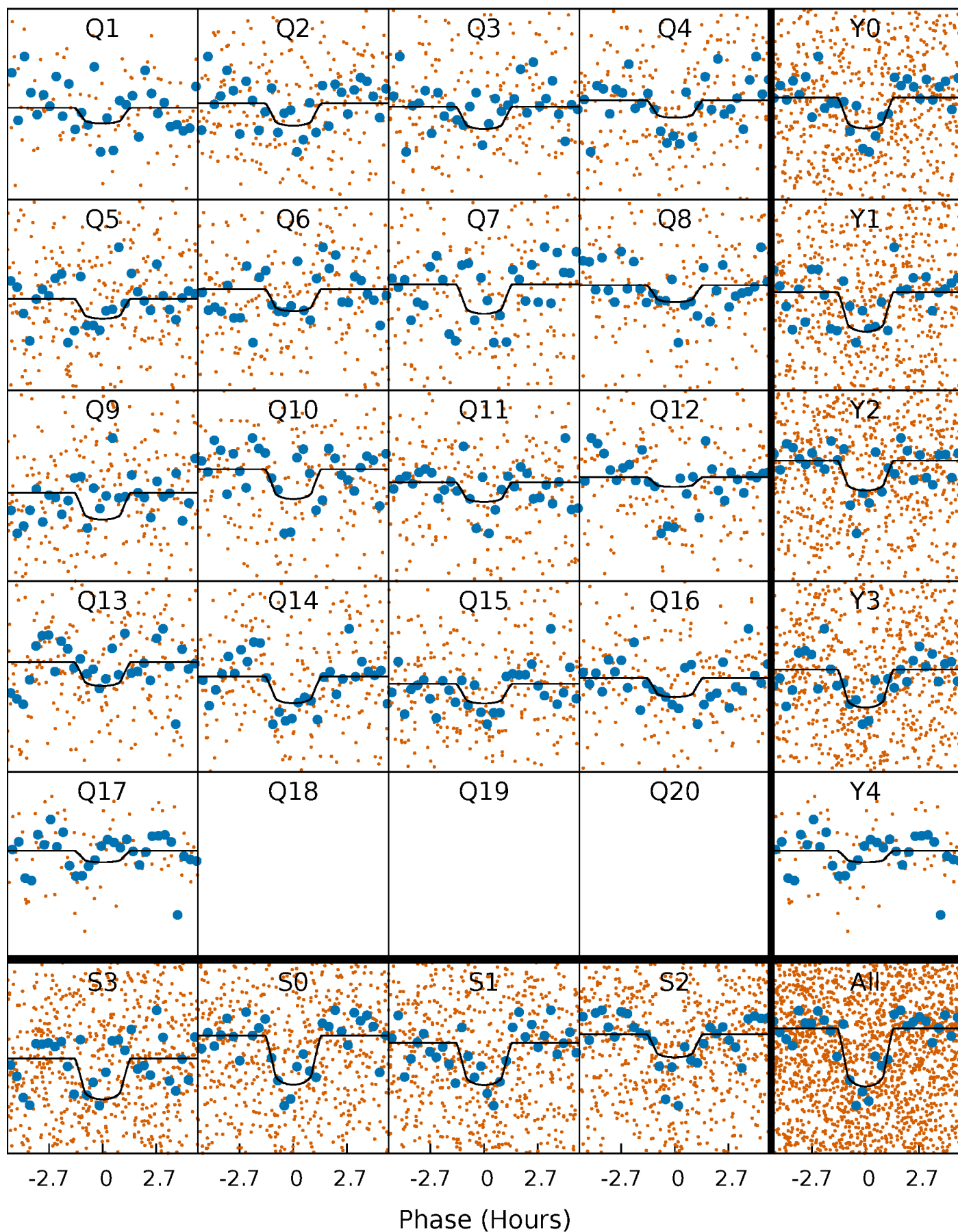
PDC Quarter-Phased Transit Curves

TCE 009307966-01 P= 6.749588 Days $T_0=132.514295$ (BKJD)



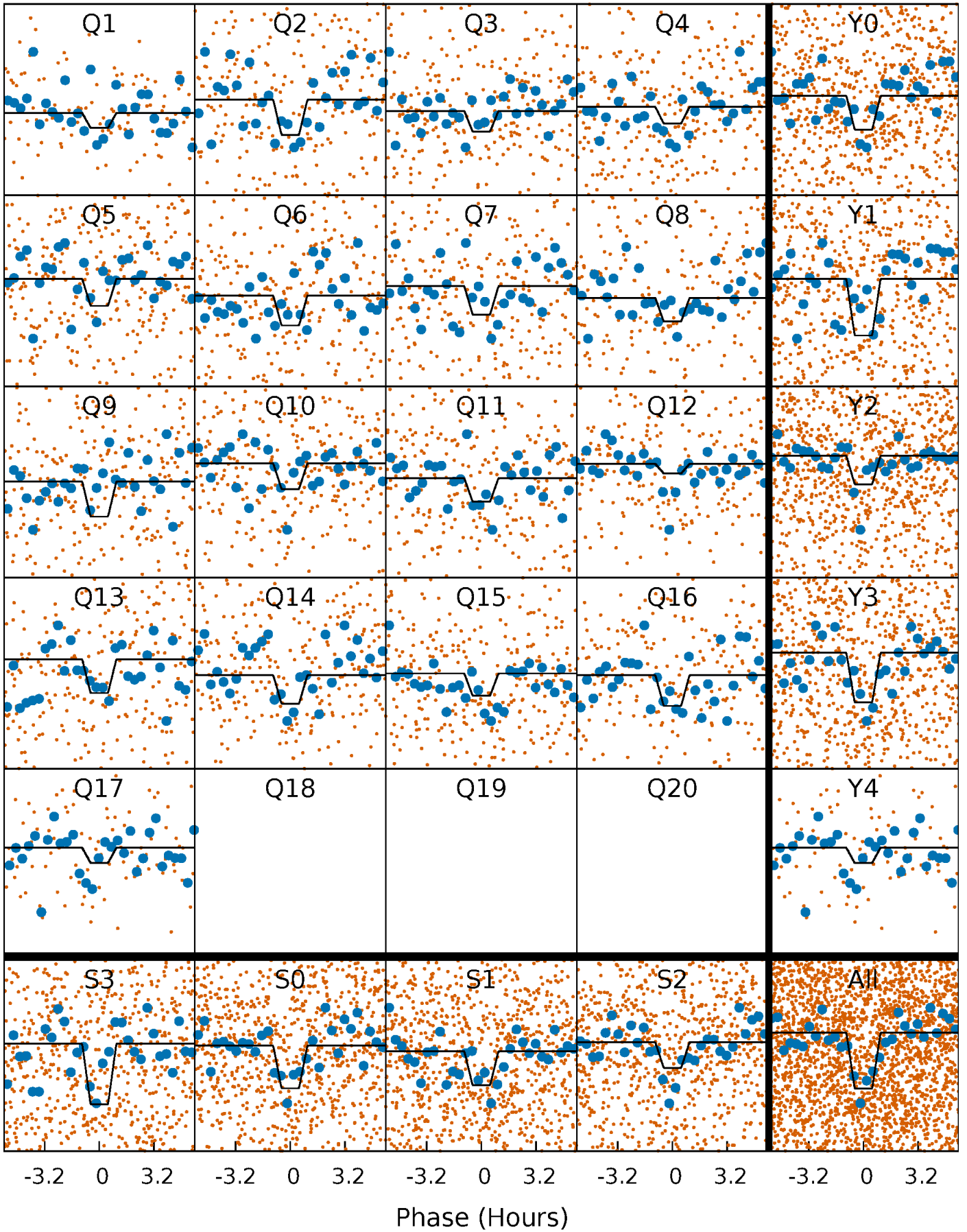
DV Quarter-Phased Transit Curves

TCE 009307966-01 P= 6.749588 Days $T_0=132.514295$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

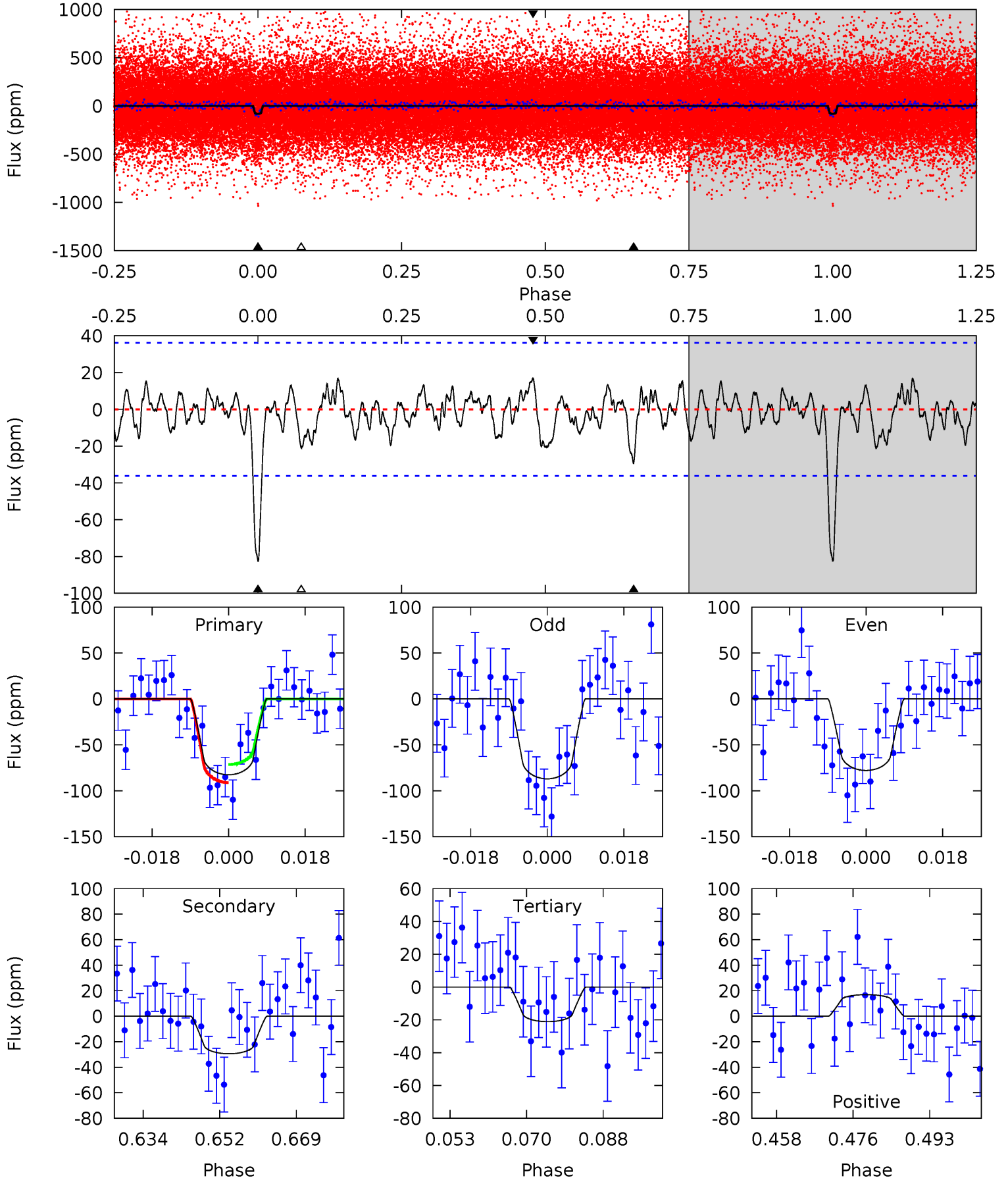
TCE 009307966-01 P= 6.749487 Days $T_0=132.519069$ (BKJD)



DV Model-Shift Uniqueness Test

009307966-01, P = 6.749588 Days, E = 125.764707 Days

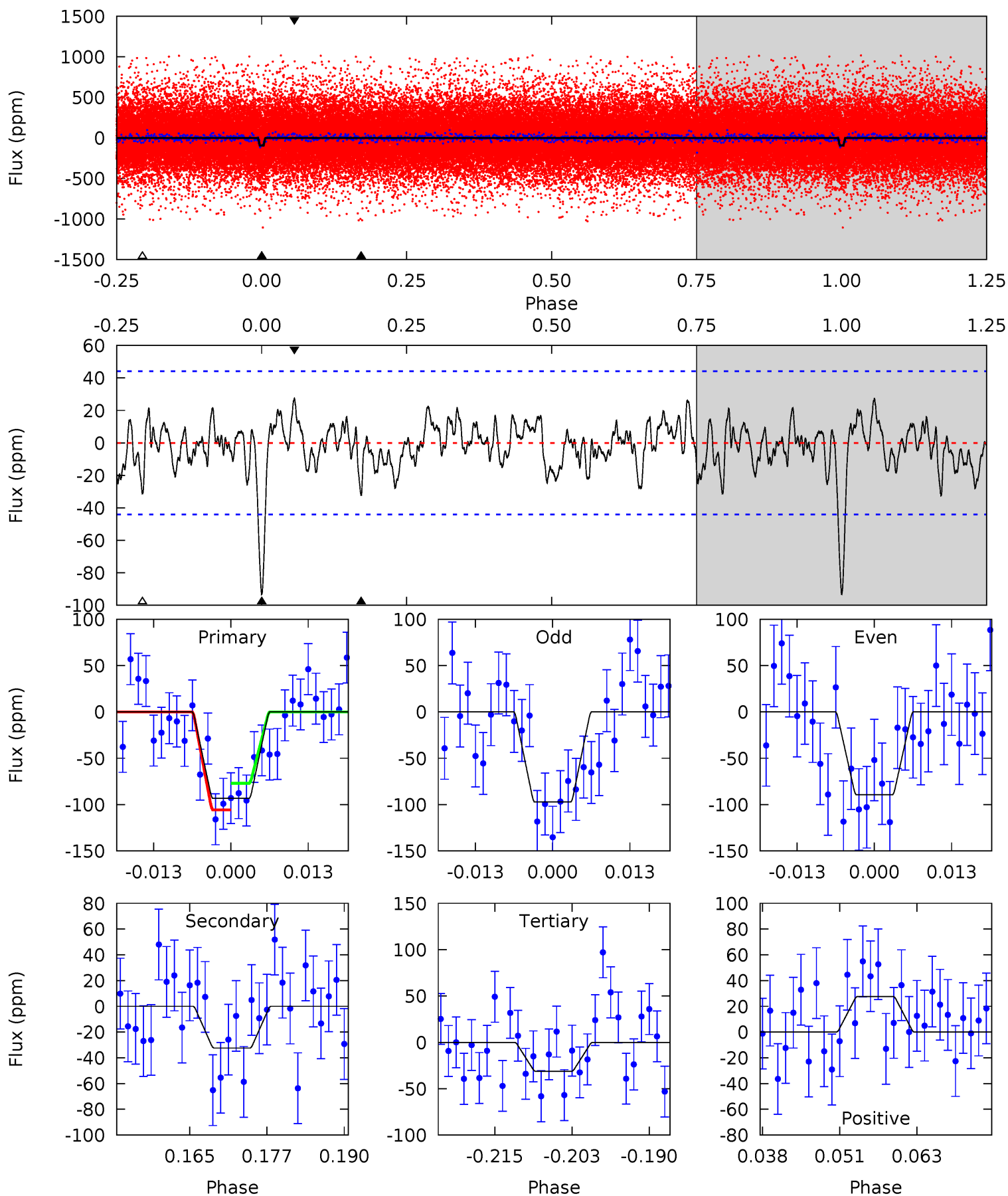
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.00	2.87	2.30	4.92	2.37	1.10	8.36	8.93	1.13	1.70	0.62	1.09	0.17	1.34



Alt Model-Shift Uniqueness Test

009307966-01, P = 6.749487 Days, E = 125.769582 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	3.66	3.53	3.11	4.98	2.49	1.26	7.02	7.44	0.13	0.55	0.44	0.98	0.23	1.62



Stellar Parameters For KIC 009307966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6181^{+171}_{-214}	$4.464^{+0.052}_{-0.208}$	$-0.140^{+0.250}_{-0.350}$	$1.006^{+0.324}_{-0.108}$	$1.074^{+0.139}_{-0.153}$	$1.488^{+0.401}_{-0.755}$
	+3%/-3%	+1%/-5%	+179%/-250%	+32%/-11%	+13%/-14%	+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 009307966-01 / KOI 4910.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29 ± 7	$1.26^{+0.81}_{-0.70}$	1458^{+117}_{-74}	4524^{+2009}_{-780}	51^{+221}_{-33}
Alt.	-32 ± 9	$1.18^{+0.80}_{-0.70}$	1456^{+109}_{-74}	4713^{+2539}_{-823}	64^{+322}_{-42}

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

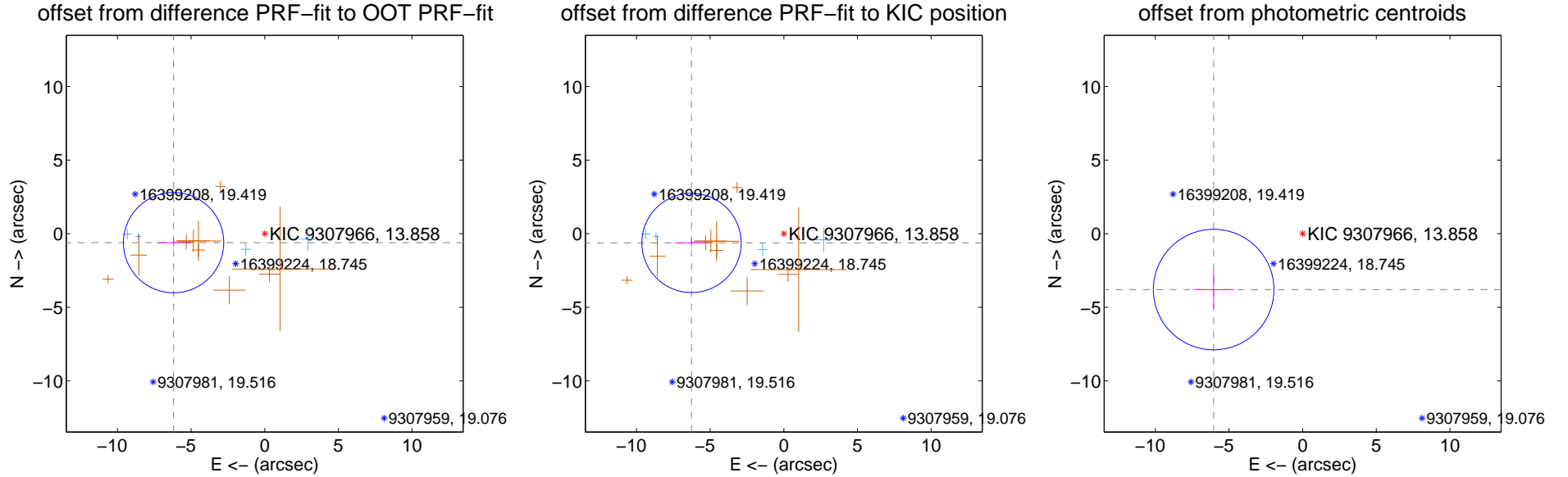
DV Centroid Data

Supplemental centroid analysis for 009307966-01. Kepler magnitude: 13.86. Transit SNR 8.64

There are 4 quarters with good PRF difference image offsets

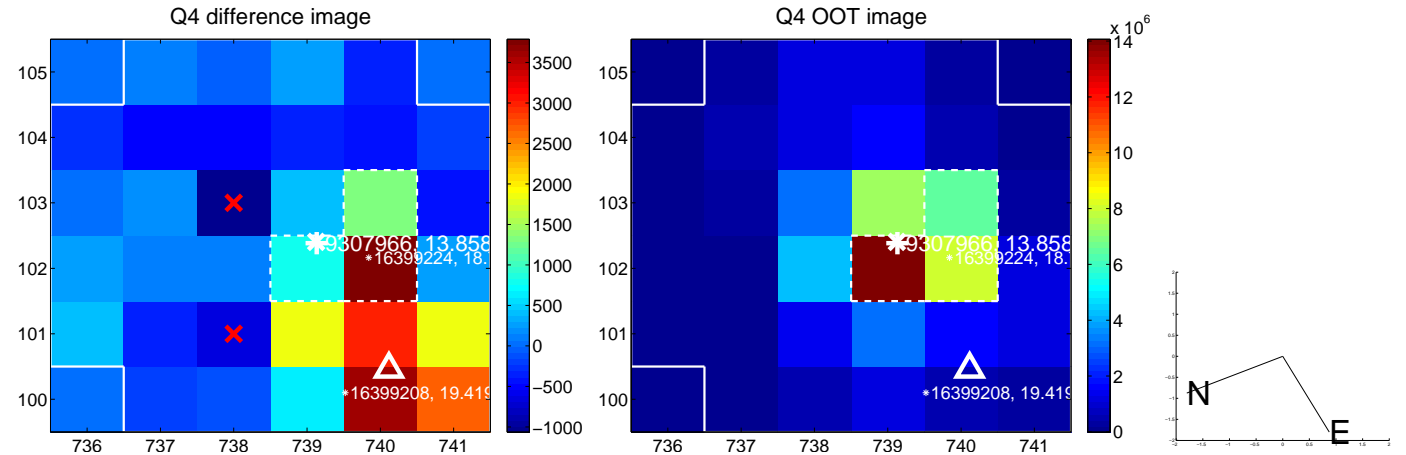
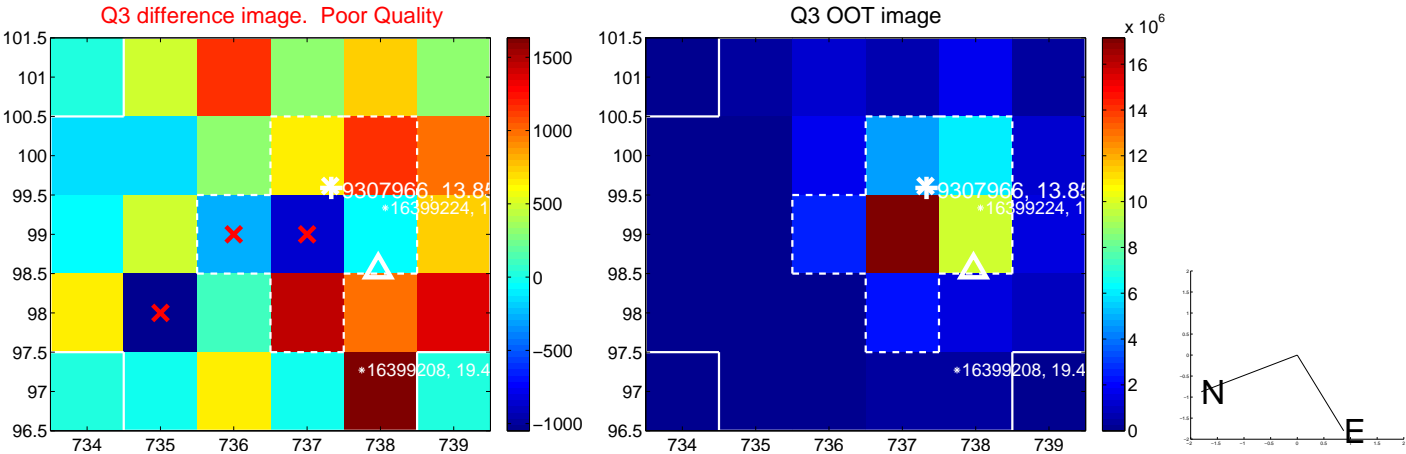
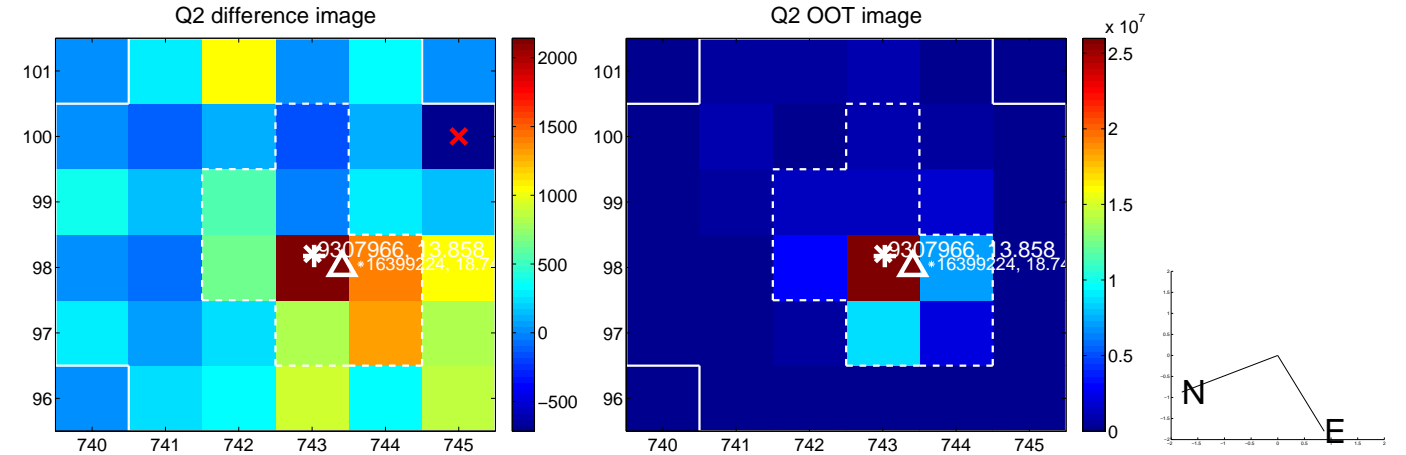
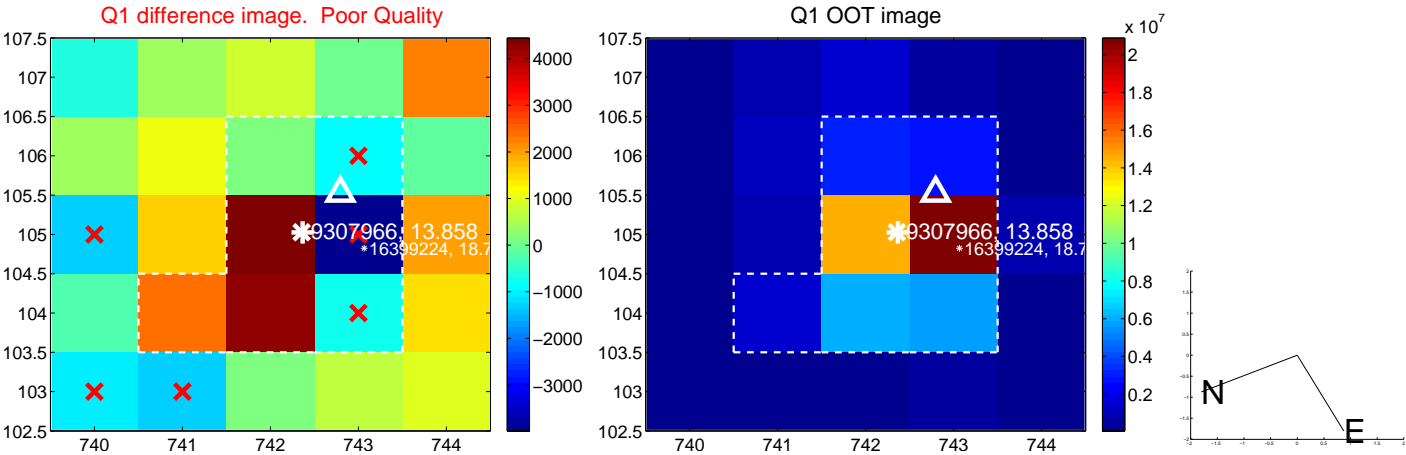
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.218 ± 1.135	5.48	6.188 ± 1.140	-0.607 ± 0.262
PRF-fit source offset from KIC position	6.298 ± 1.123	5.61	6.267 ± 1.129	-0.625 ± 0.267
photometric centroid source offset	7.13 ± 1.36	5.23	6.04 ± 1.37	-3.79 ± 1.35

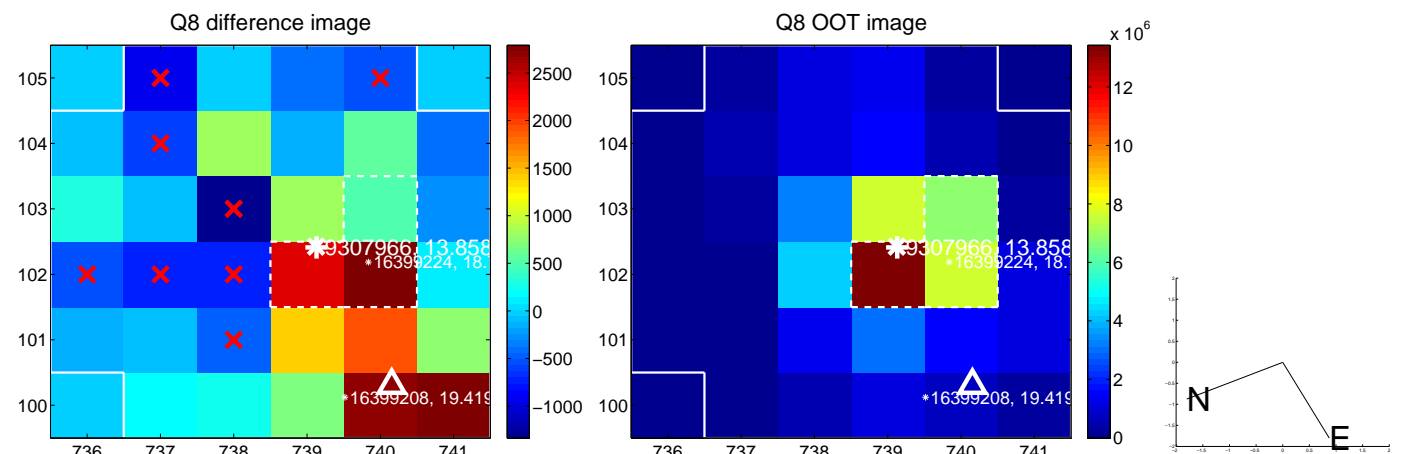
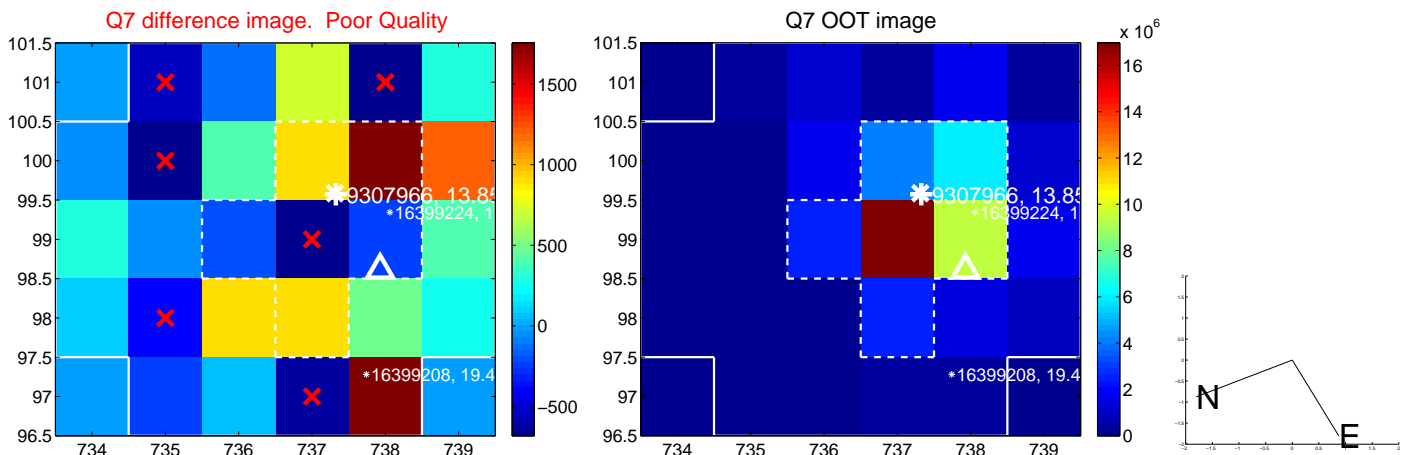
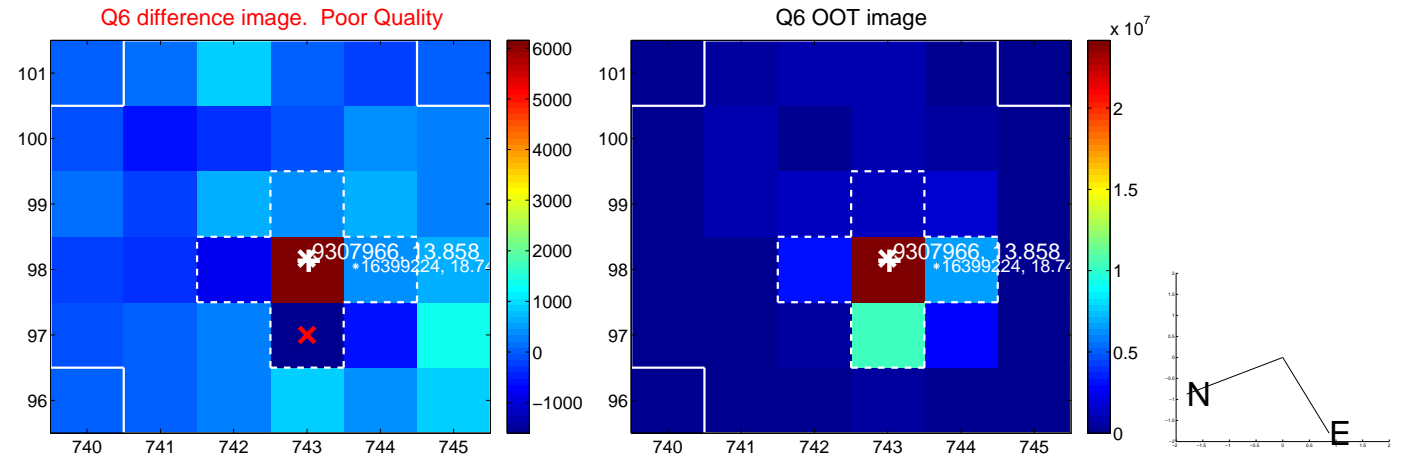
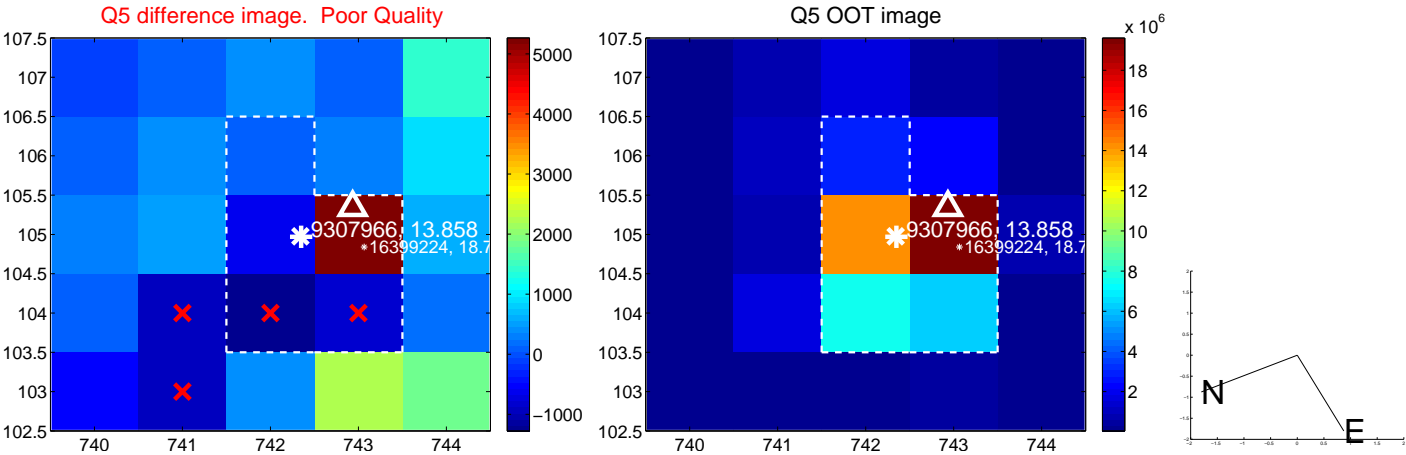


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

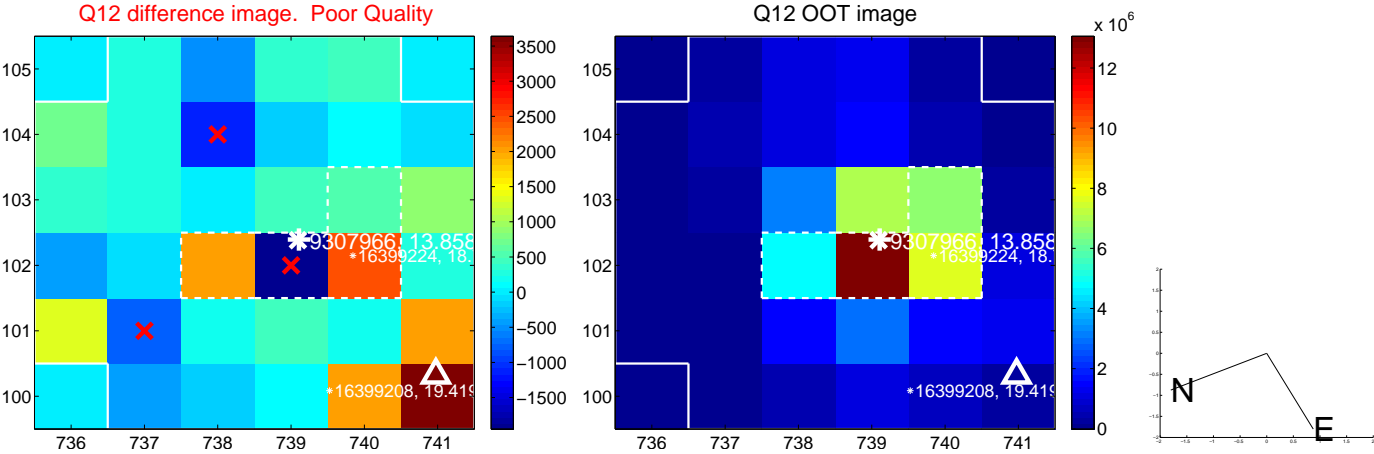
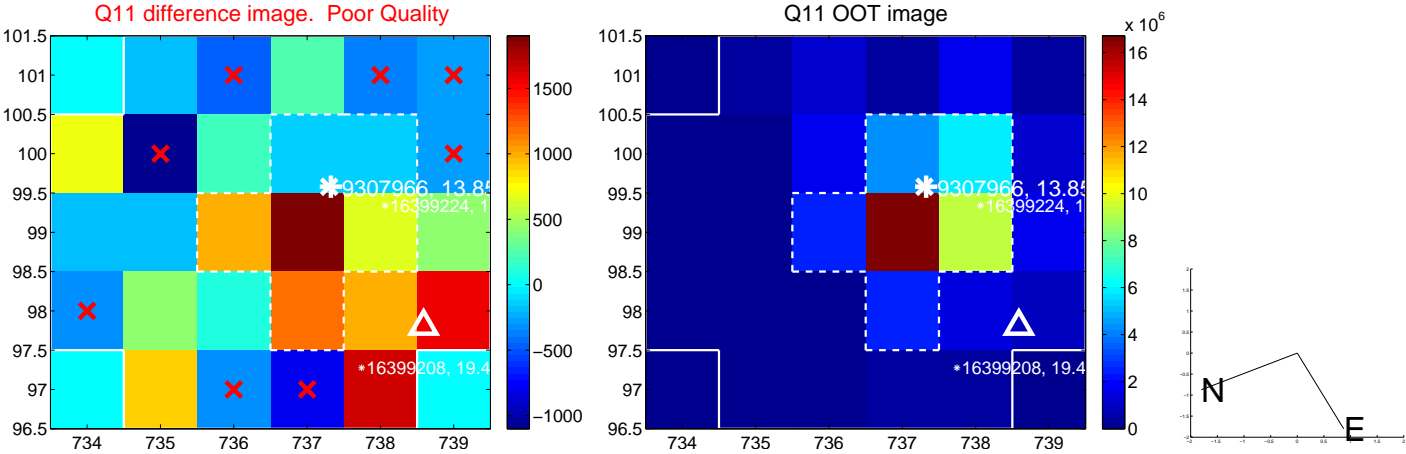
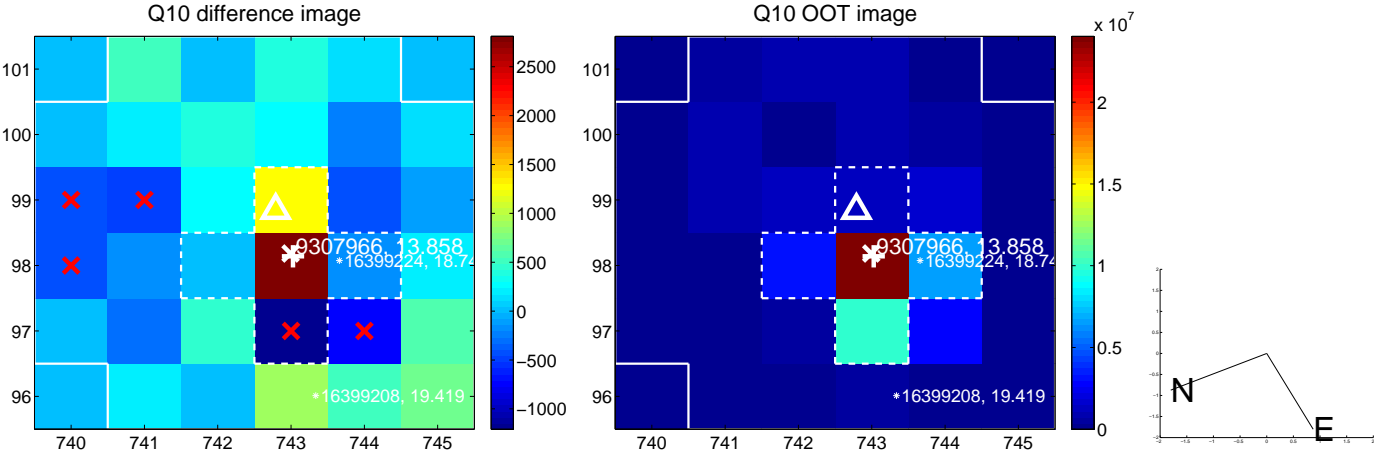
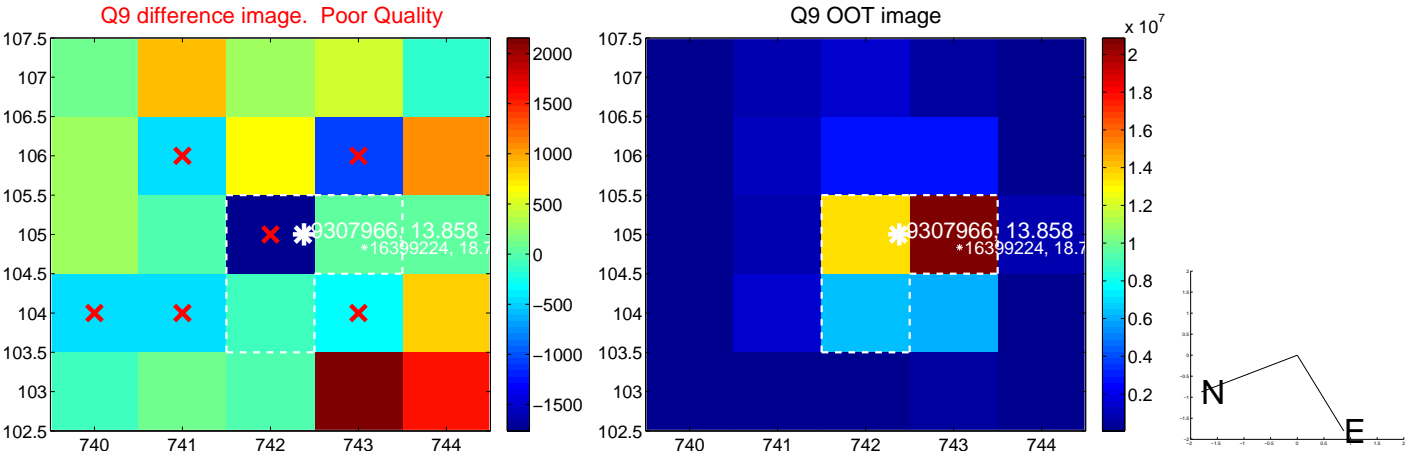
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



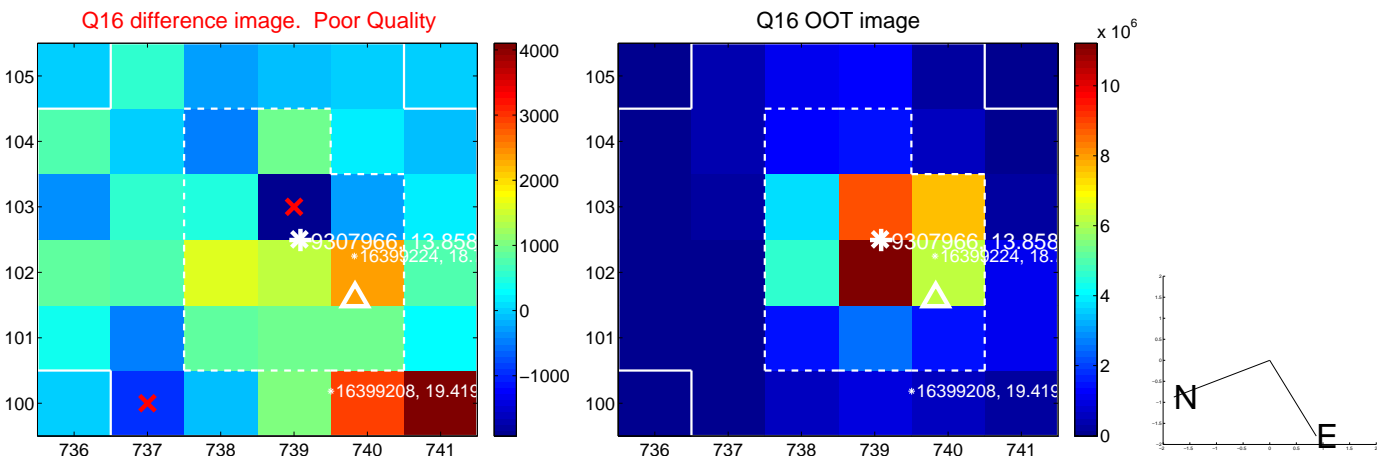
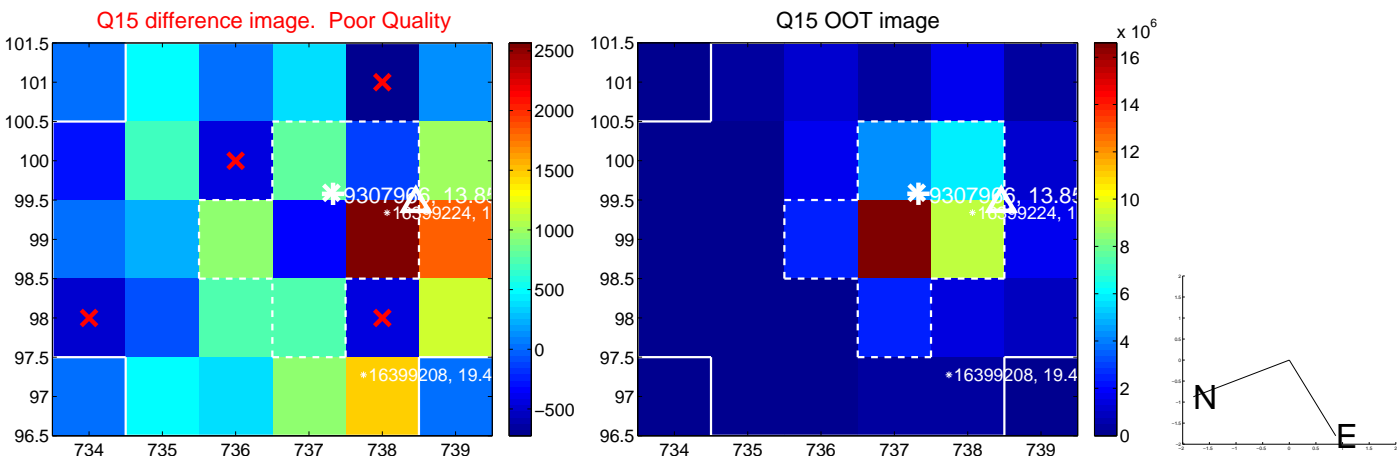
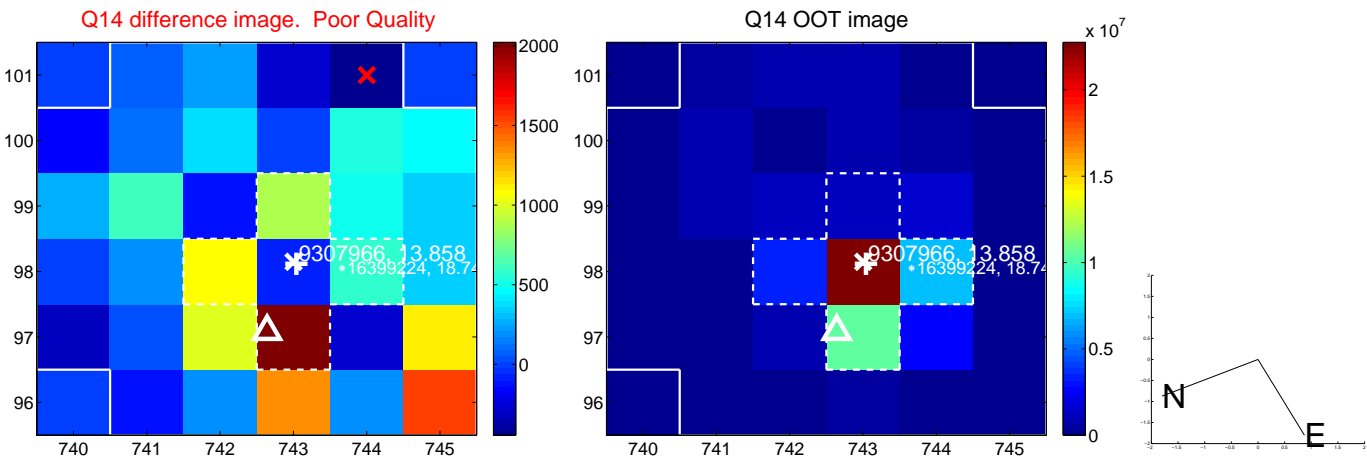
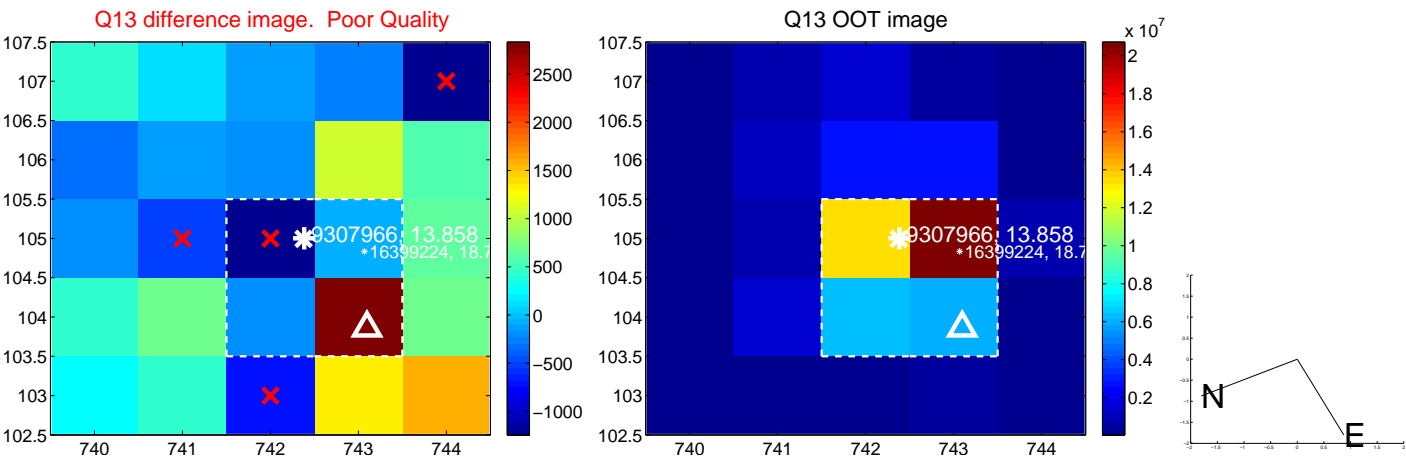
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



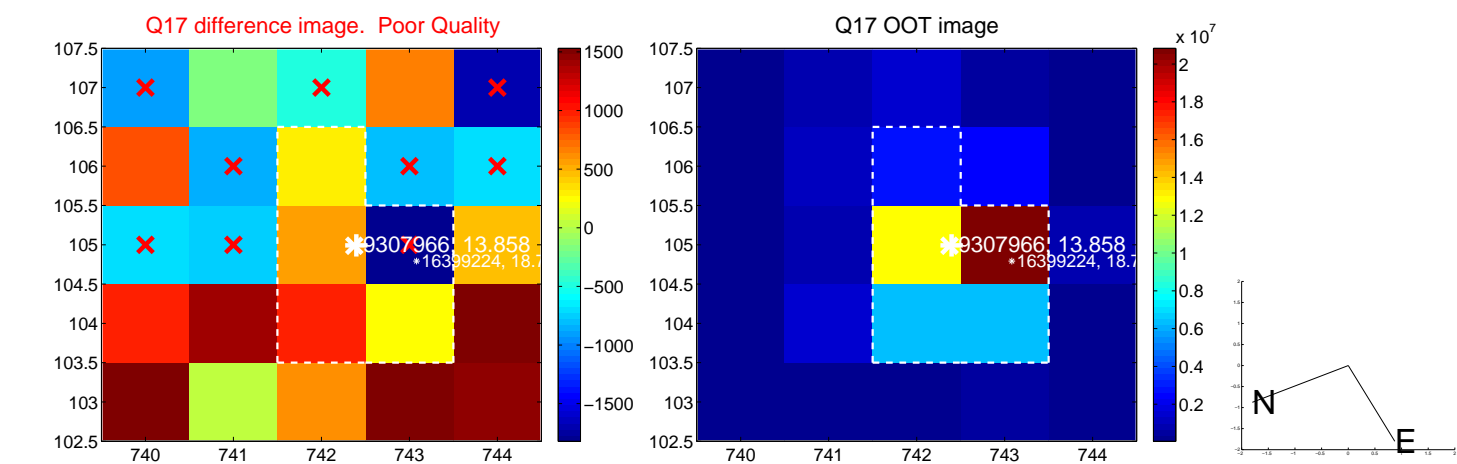
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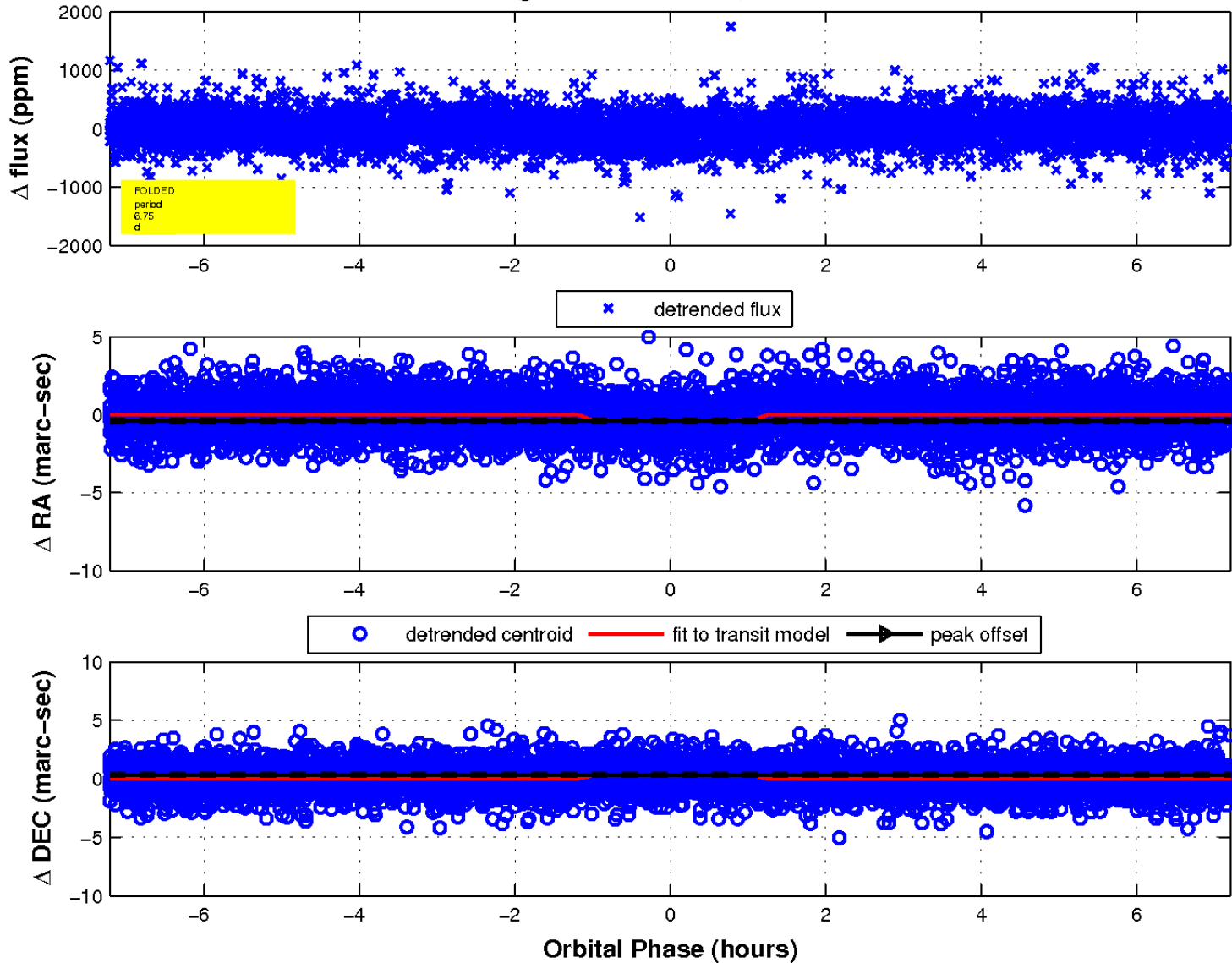
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

