

KIC 004840672

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})
004840672-01	OBS	4813.01	9.229111	136.196355	177.7	3.607	7.2	7.4	0.60	4781	0.82	30.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004840672-01	OBS	PC	0.41	0	0	0	0	CENT_KIC_POS—CENT_UNCERTAIN

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.

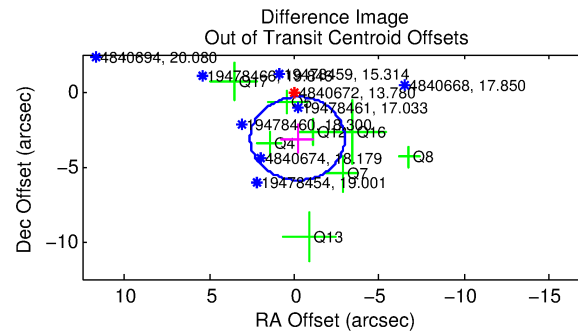
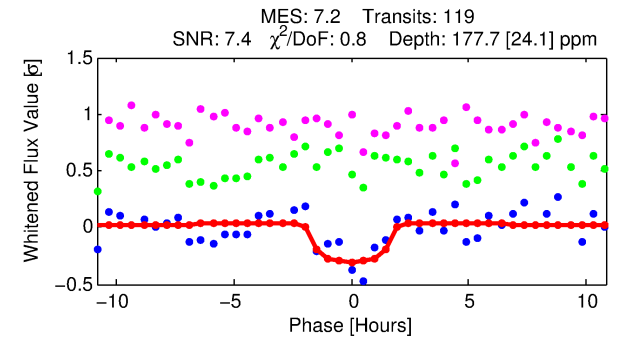
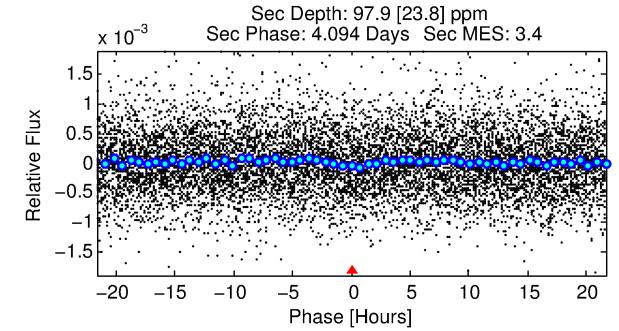
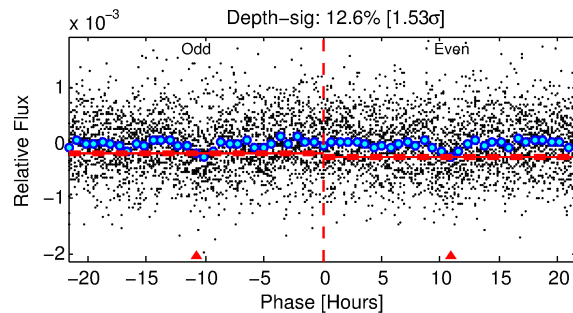
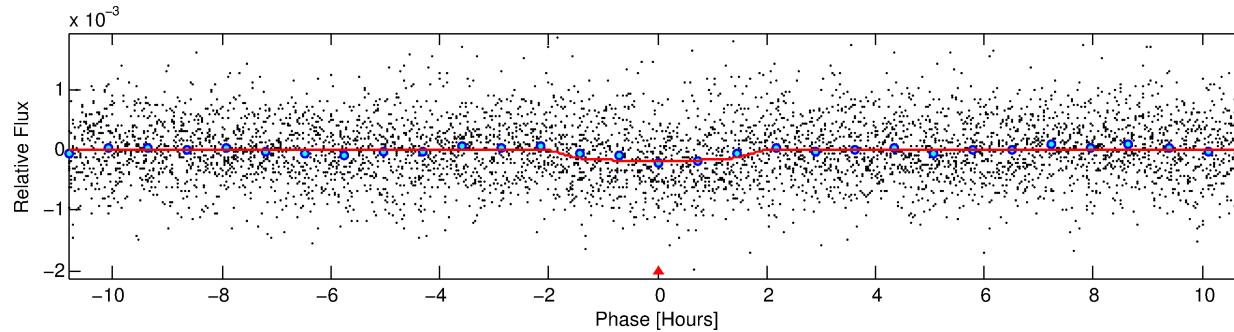
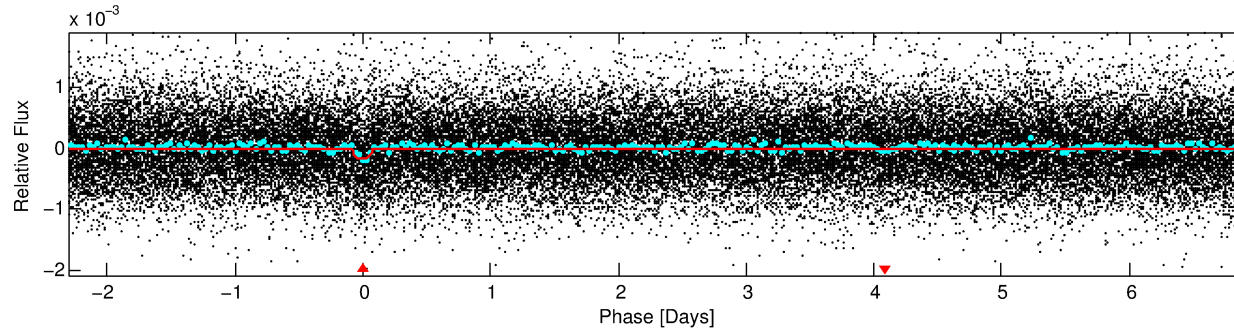
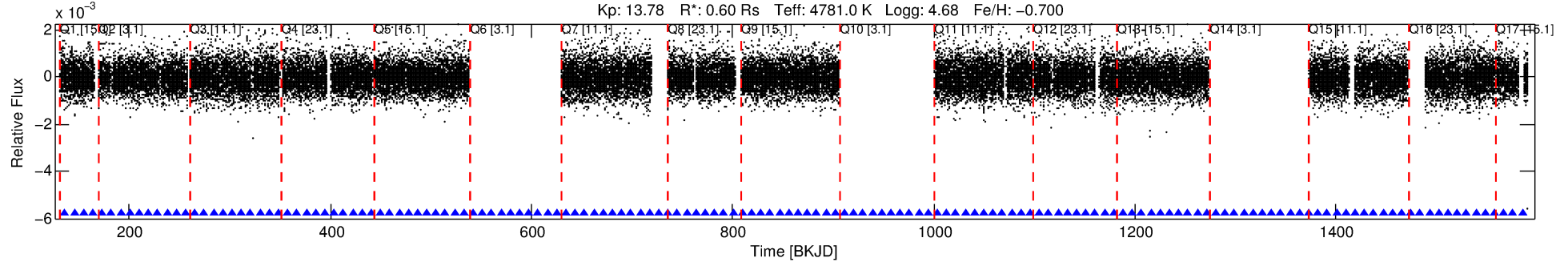
Ephemeris Match Information For 004840672-01

No Significant Match Found

DV One-Page Summary

KIC: 4840672 Candidate: 1 of 1 Period: 9.229 d
KOI: K04813.01 Corr: 0.900

Kp: 13.78 R*: 0.60 Rs Teff: 4781.0 K Logg: 4.68 Fe/H: -0.700



DV Fit Results:

Period = 9.22911 [0.00011] d
Epoch = 136.1964 [0.0089] BKJD
Rp/R* = 0.0126 [0.0230]
a/R* = 15.89 [101.34]
b = 0.60 [6.85]
Seff = 30.87 [5.23]
Teff = 601 [25] K
Rp = 0.82 [1.50] Re
a = 0.0734 [0.0054] AU
Ag = 429.62 [1566.26] [0.27σ]
Teffp = 4231 [3858] K [0.94σ]

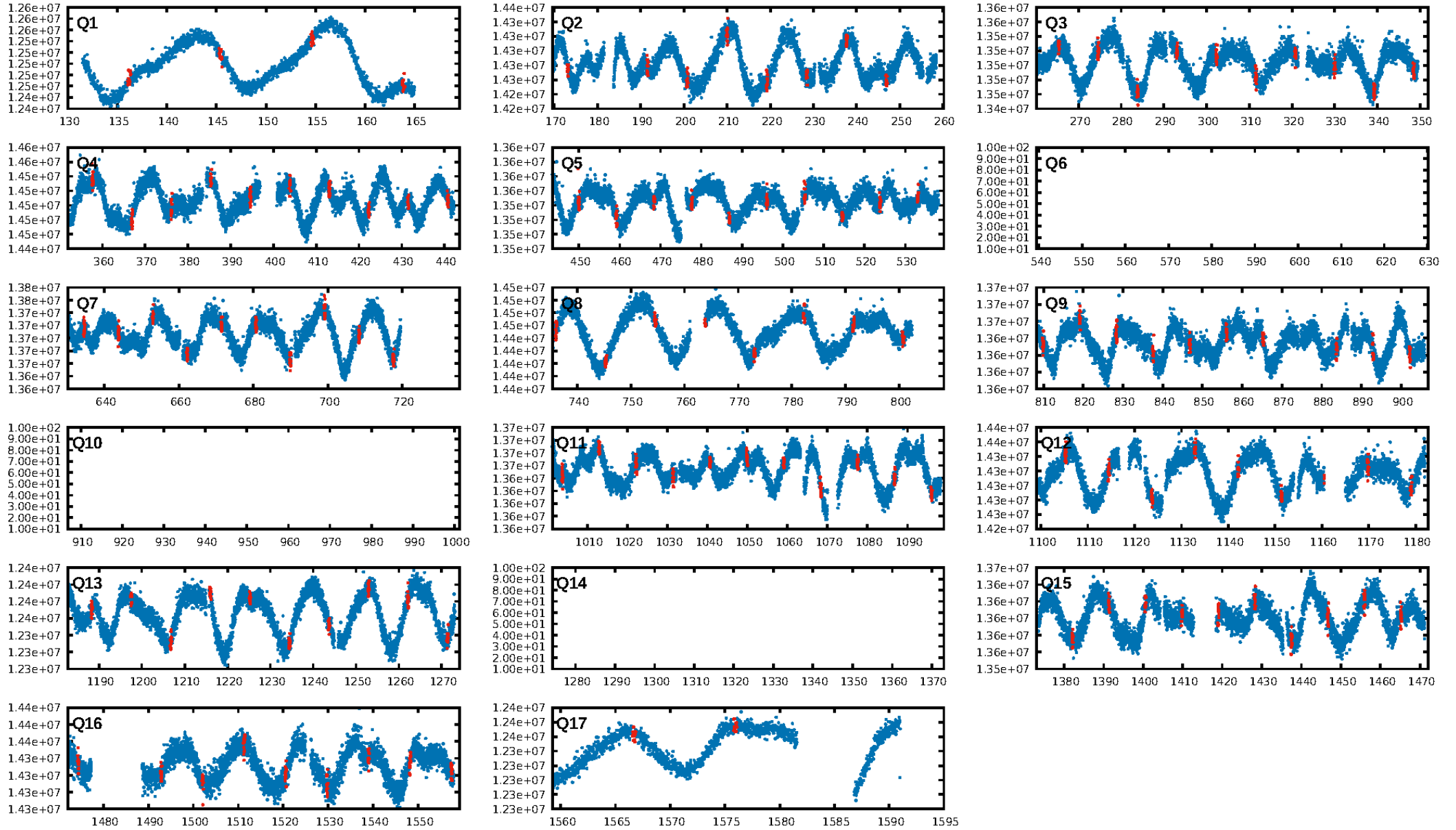
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.79e-13
RollingBand-fgt: 1.00 [113/113]
GhostDiagnostic-chr: 69.75
Centroid-sig: 1.8%
Centroid-so: 0.983 arcsec [0.78σ]
OotOffset-rm: 3.134 arcsec [3.39σ]
KicOffset-rm: 3.226 arcsec [4.45σ]
OotOffset-st: 0/1/4/3 [8]
KicOffset-st: 0/1/4/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 1.00 [14/14]

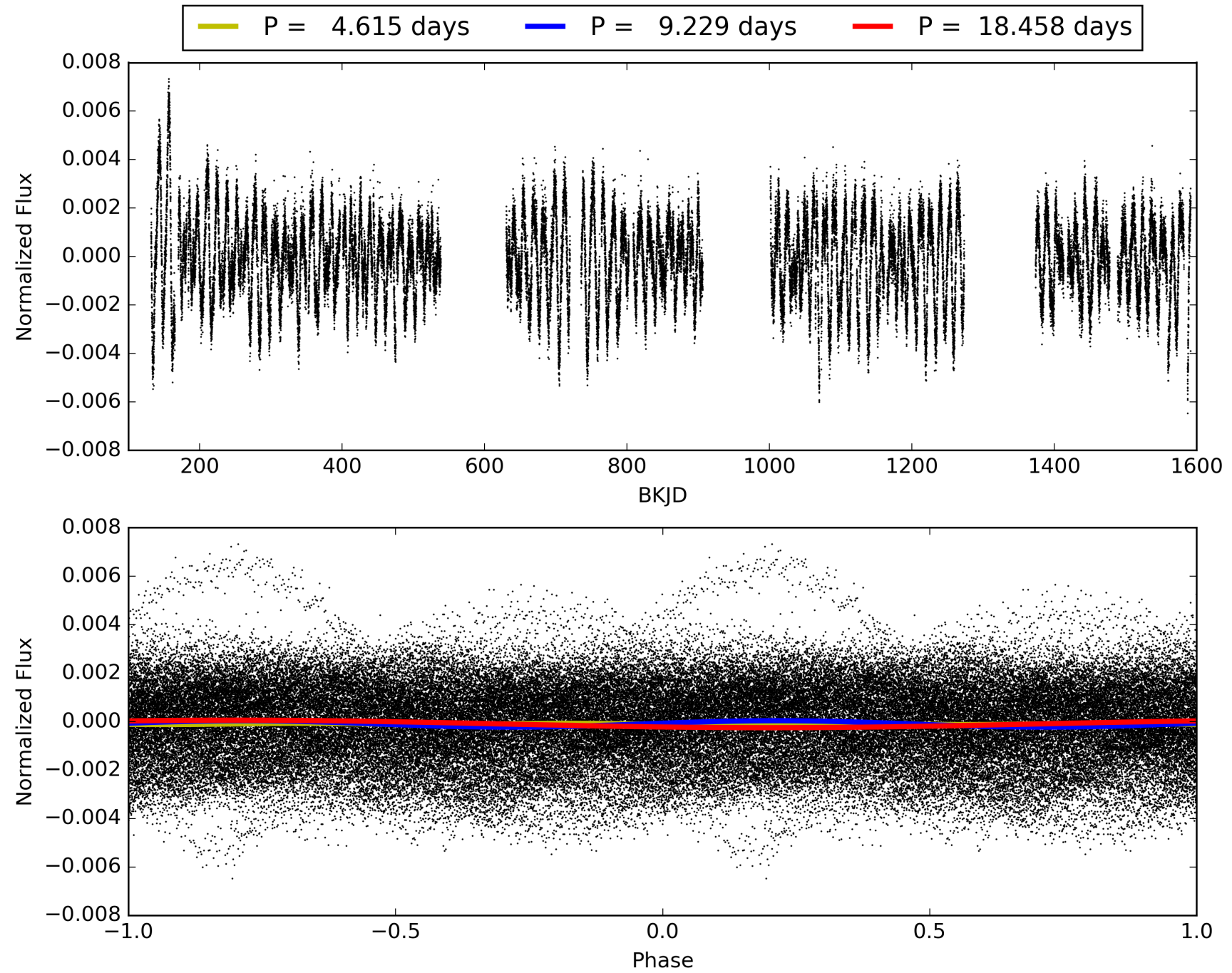
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:16:15 Z

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

TCE 004840672-01, PDC Light Curves

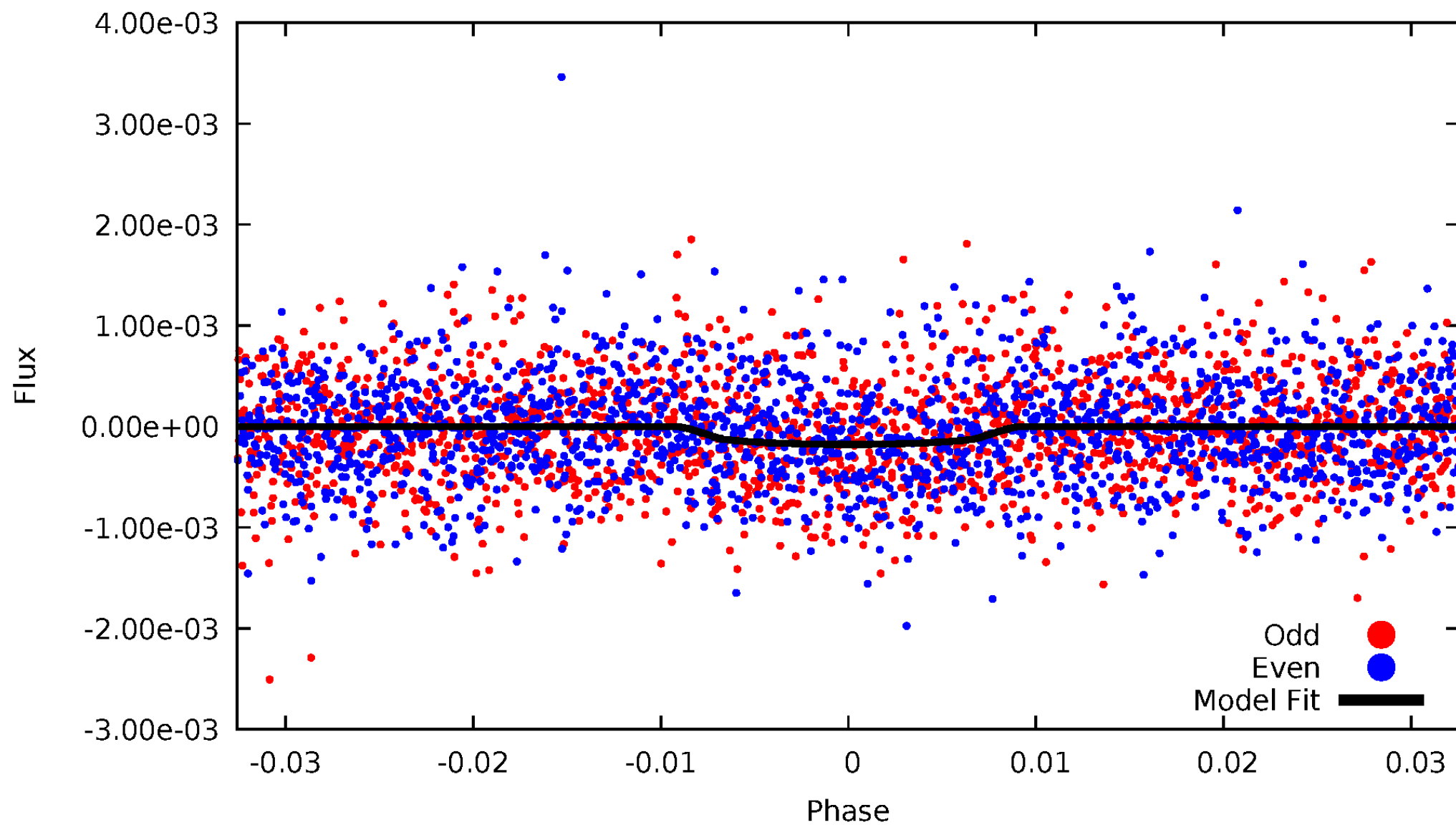


TCE 004840672-01



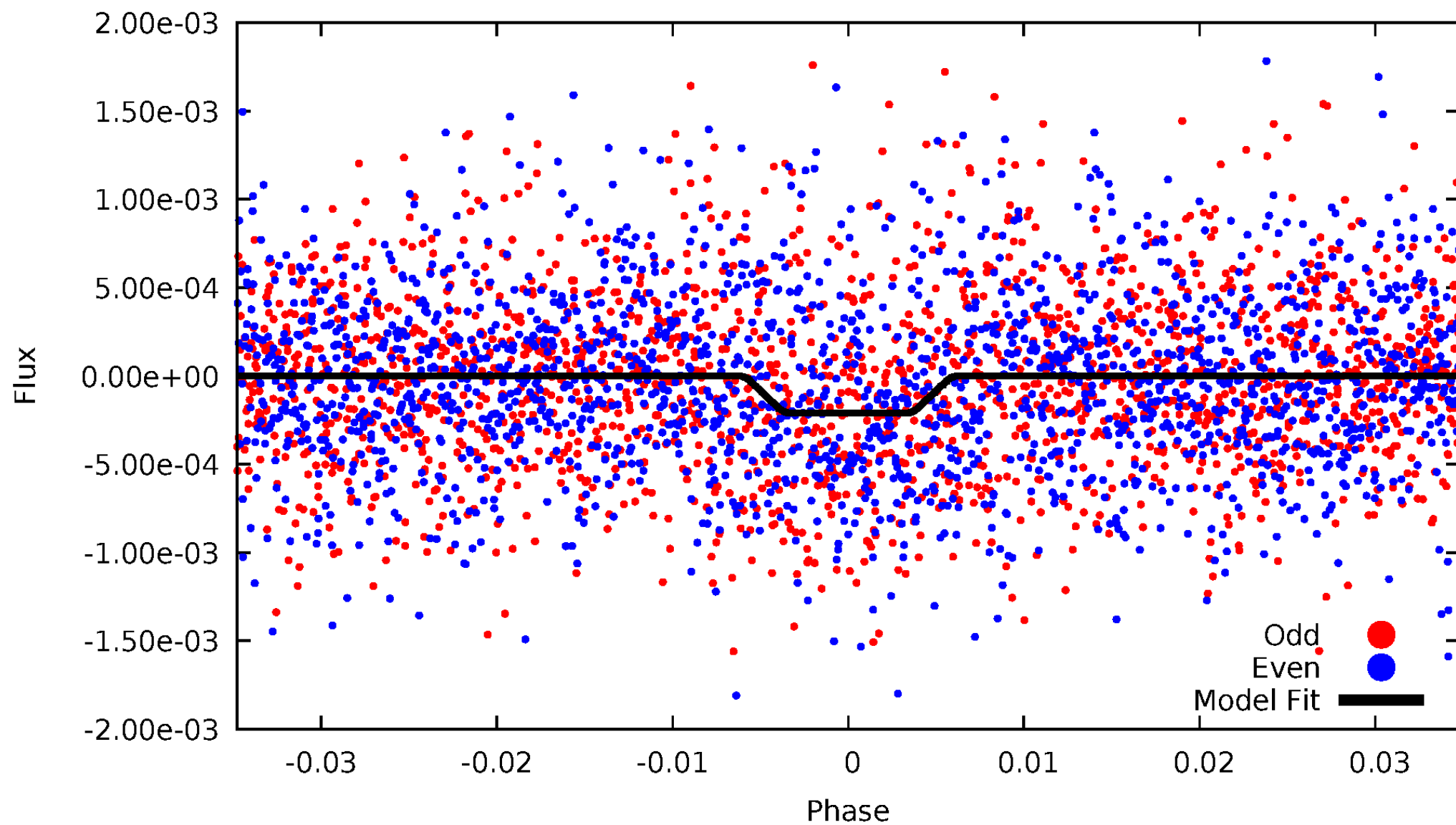
DV Odd/Even

TCE 004840672-01

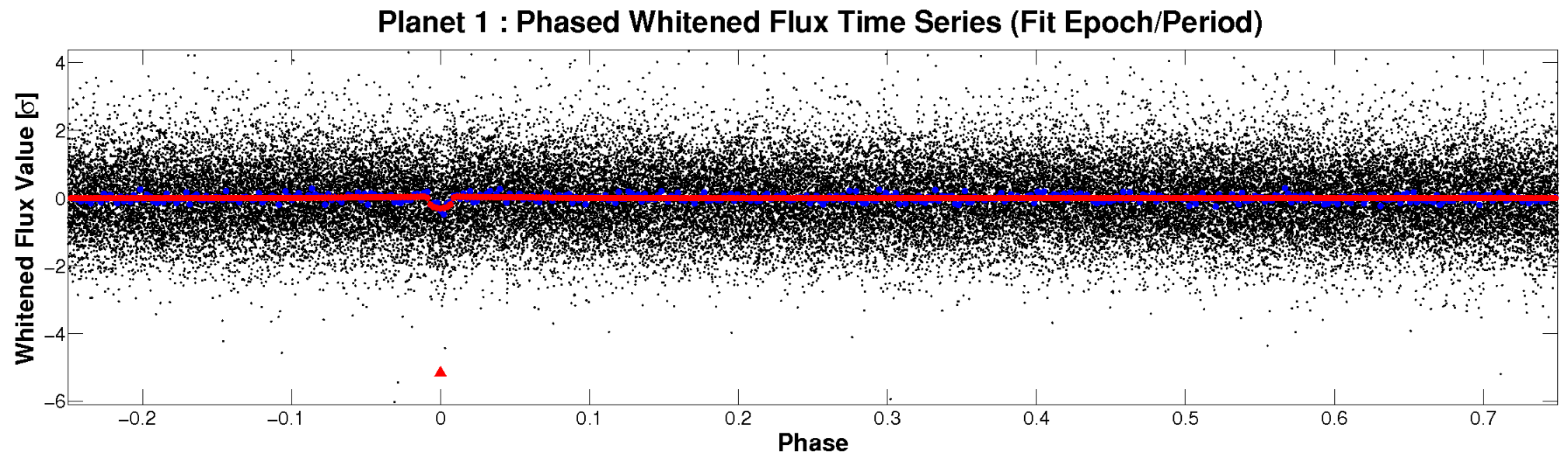
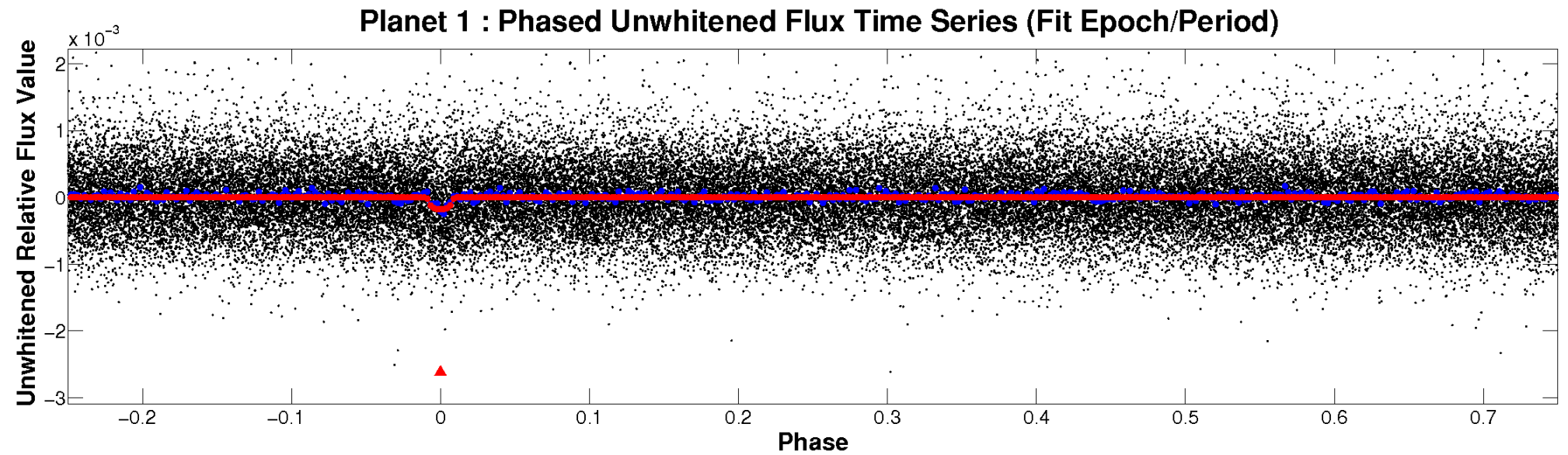


ALT Odd/Even

TCE 004840672-01

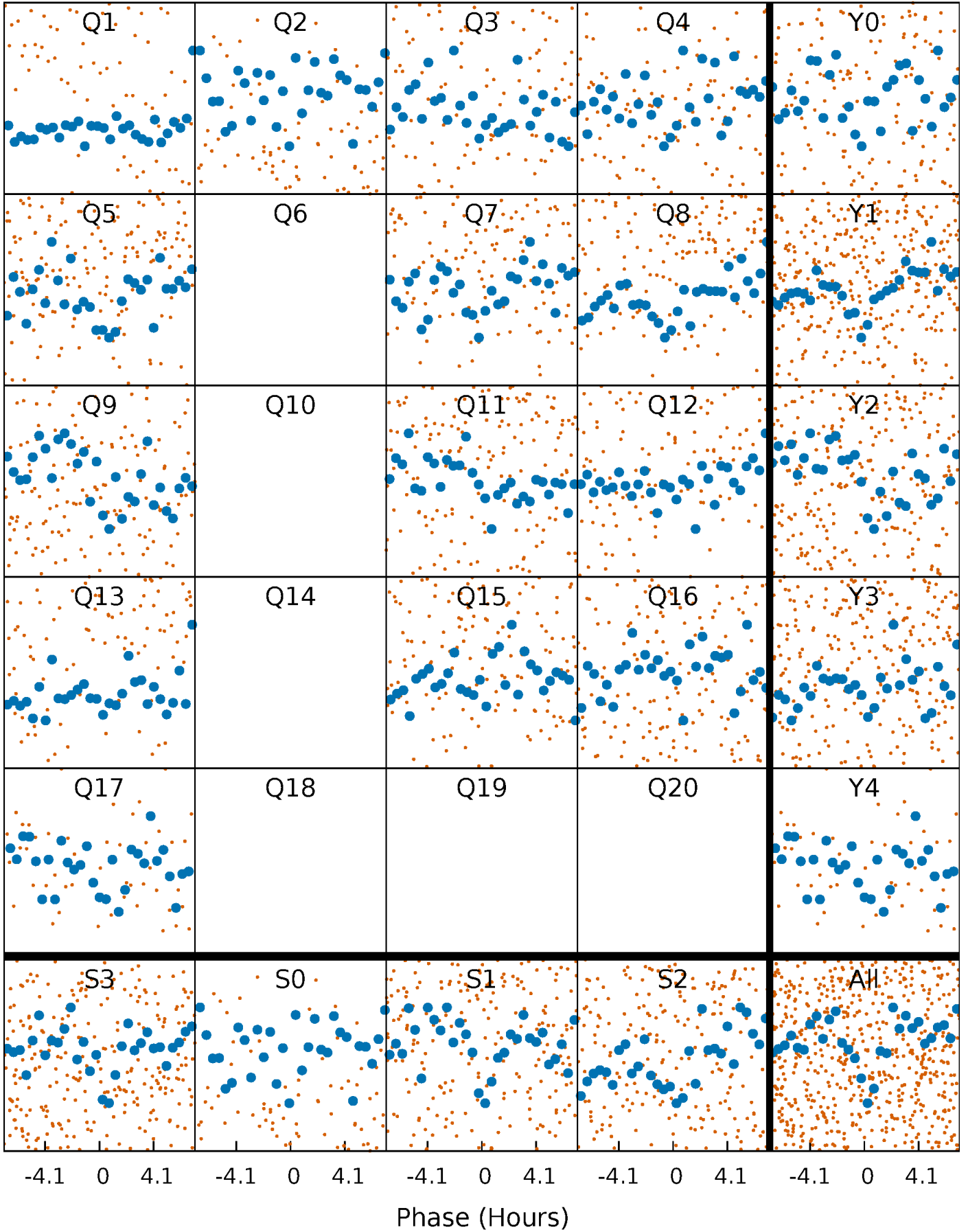


Non-Whitened Vs. Whitened Light Curve



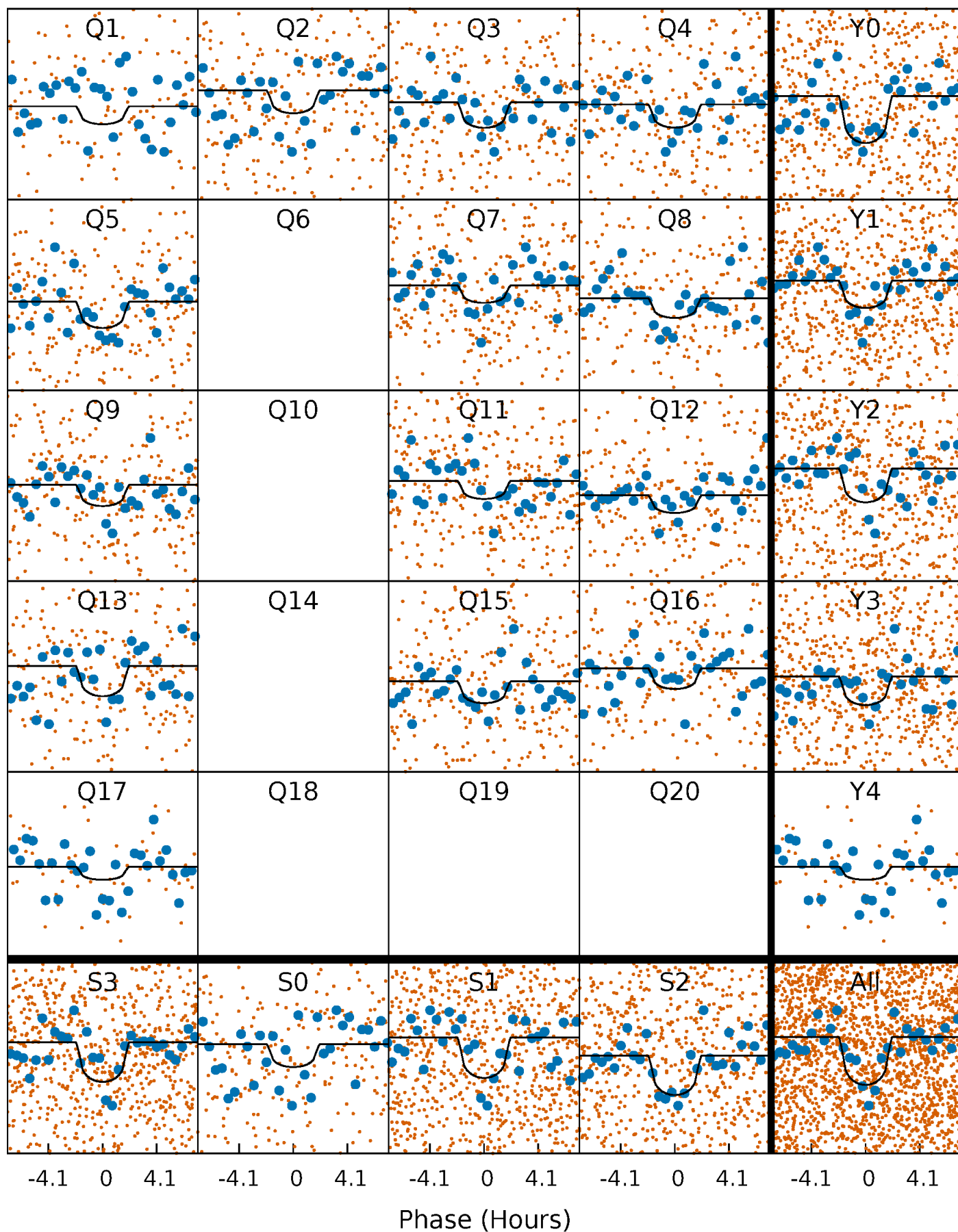
PDC Quarter-Phased Transit Curves

TCE 004840672-01 P= 9.229111 Days $T_0=136.196355$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004840672-01 P= 9.229111 Days $T_0=136.196355$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

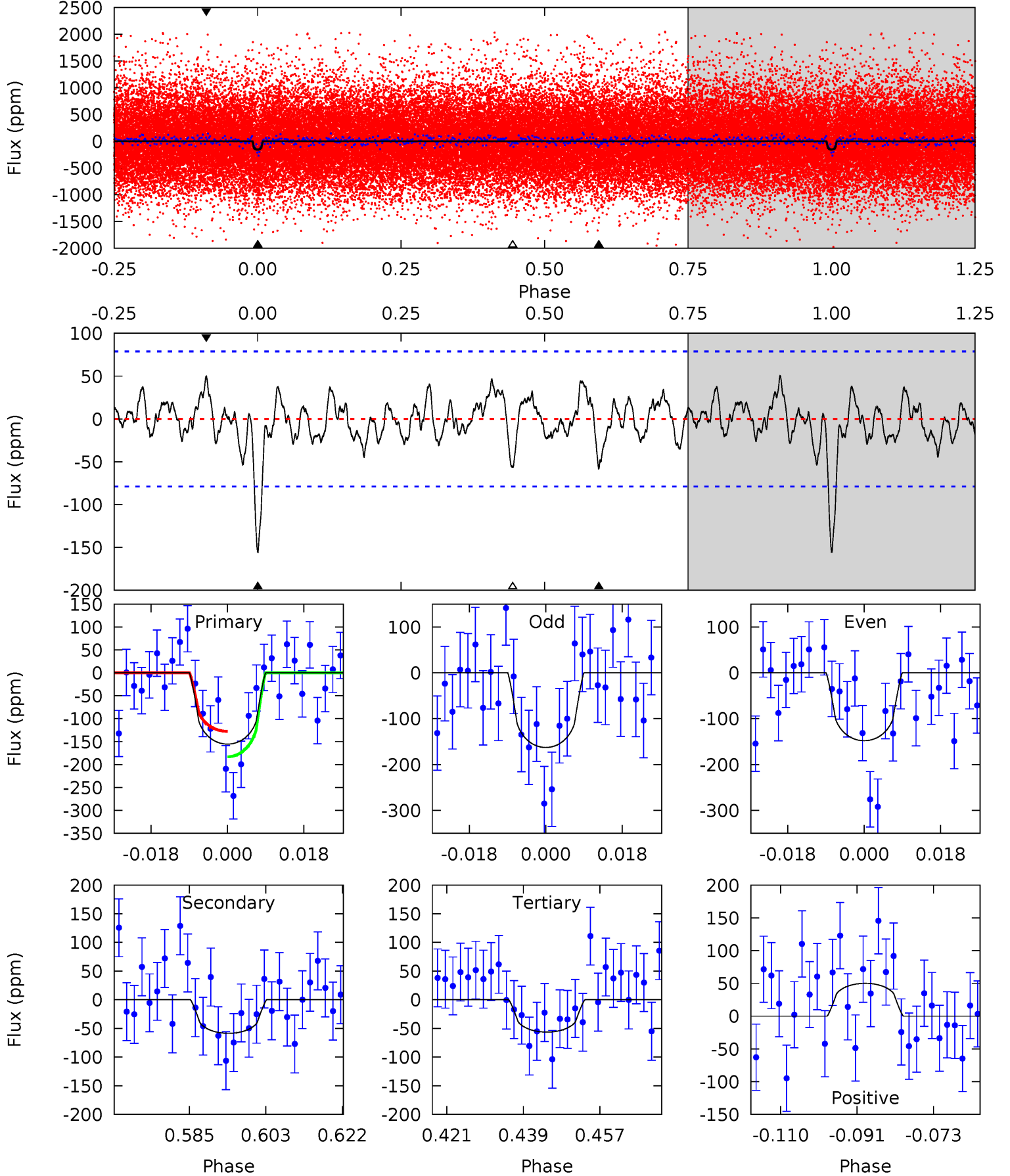
TCE 004840672-01 P= 9.229078 Days $T_0=136.203910$ (BKJD)



DV Model-Shift Uniqueness Test

004840672-01, P = 9.229111 Days, E = 126.967244 Days

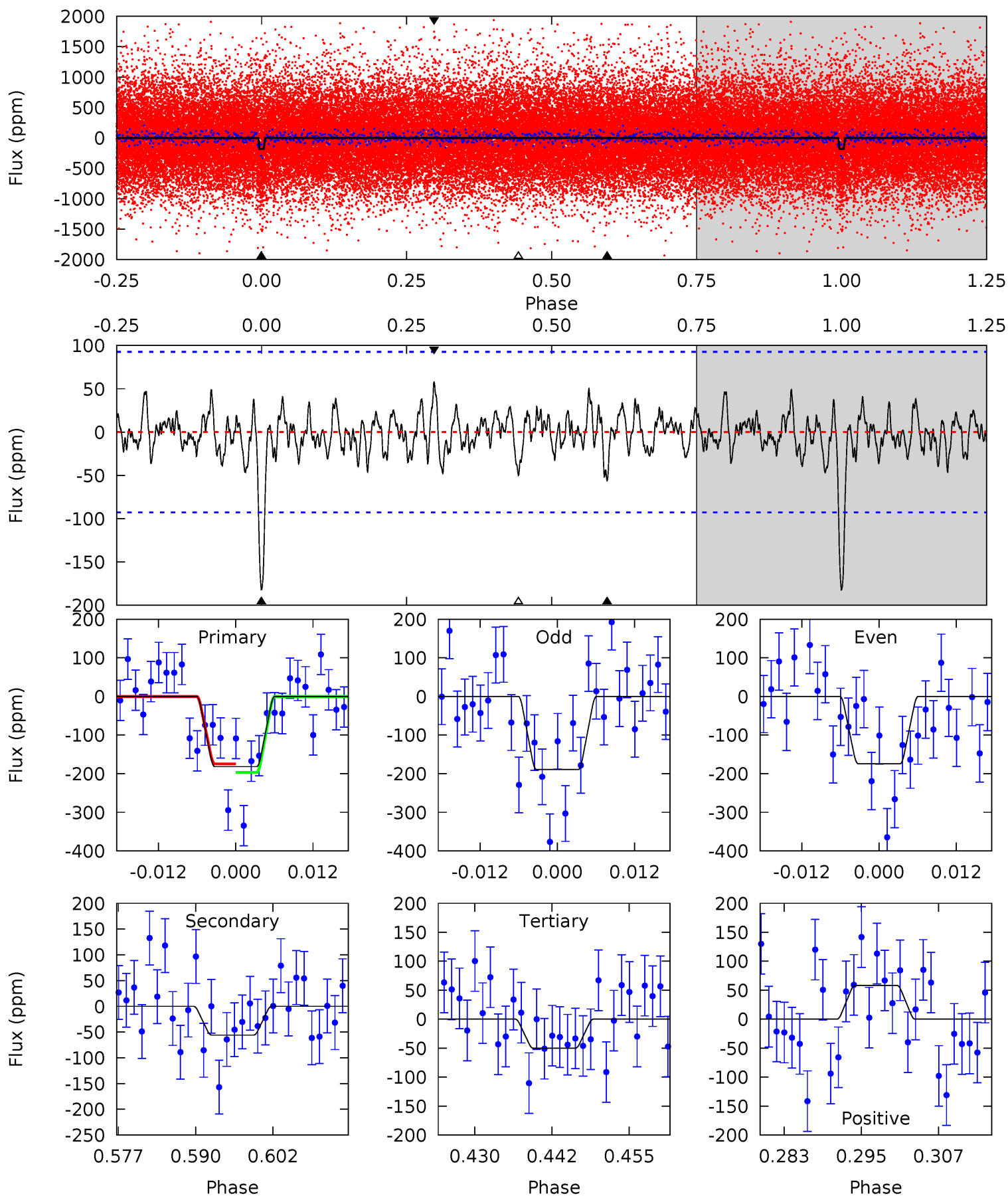
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.68	3.65	3.51	3.12	4.91	2.36	1.23	6.17	6.57	0.14	0.53	0.46	0.96	0.24	1.73



Alt Model-Shift Uniqueness Test

004840672-01, P = 9.229078 Days, E = 126.974832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.79	3.01	2.70	3.13	4.99	2.50	1.01	7.09	6.66	0.31	-0.12	0.40	0.75	0.24	0.58



Stellar Parameters For KIC 004840672

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4781^{+168}_{-168}	$4.679^{+0.036}_{-0.045}$	$-0.700^{+0.300}_{-0.300}$	$0.596^{+0.058}_{-0.044}$	$0.618^{+0.061}_{-0.044}$	$4.116^{+0.696}_{-0.716}$
	+4%/-4%	+1%/-1%	+43%/-43%	+10%/-7%	+10%/-7%	+17%/-17%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004840672-01 / KOI 4813.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-59 ± 16	$1.35^{+1.24}_{-0.95}$	839^{+34}_{-32}	3334^{+1811}_{-580}	90^{+884}_{-66}
Alt.	-56 ± 19	$1.45^{+1.31}_{-0.98}$	843^{+32}_{-34}	3259^{+1455}_{-601}	78^{+598}_{-60}

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

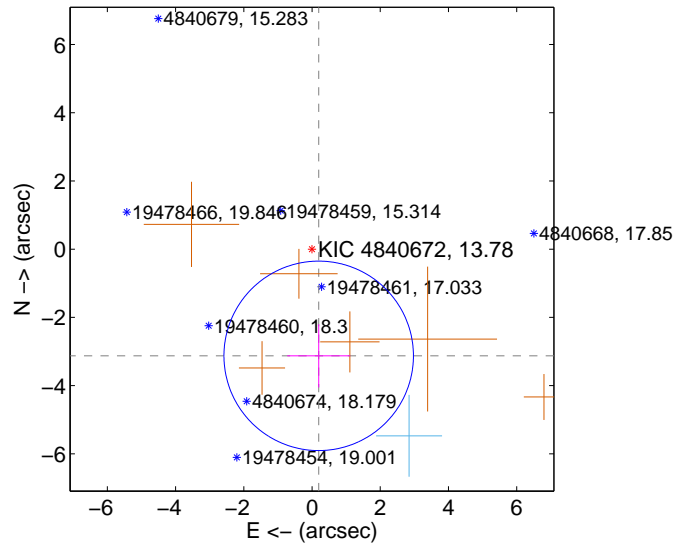
Supplemental centroid analysis for 004840672-01. Kepler magnitude: 13.78. Transit SNR 7.45

There are 1 quarters with good PRF difference image offsets

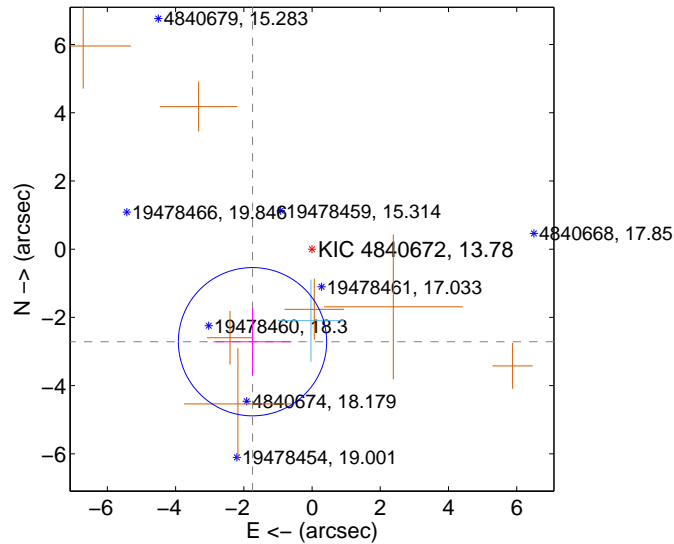
The OOT PRF centroid is offset from the target star catalog position by about 6.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.134 ± 0.926	3.39	-0.195 ± 0.924	-3.128 ± 0.926
PRF-fit source offset from KIC position	3.226 ± 0.724	4.45	1.746 ± 1.144	-2.713 ± 0.986
photometric centroid source offset	0.98 ± 1.27	0.78	0.71 ± 1.13	0.68 ± 1.40

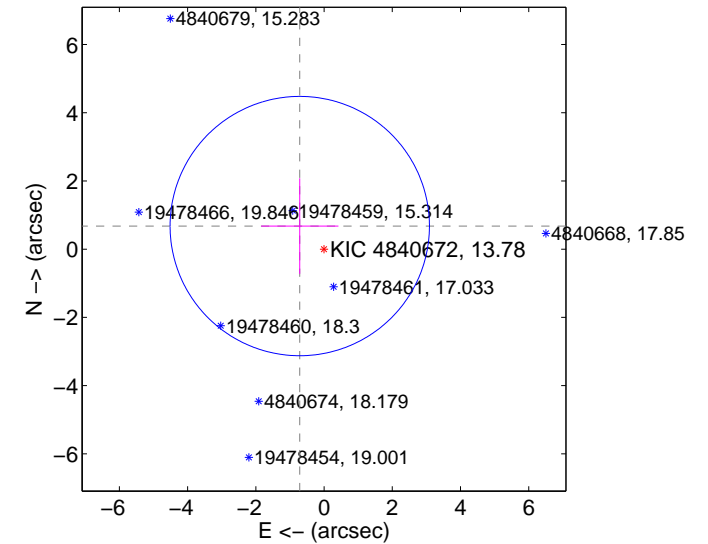
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

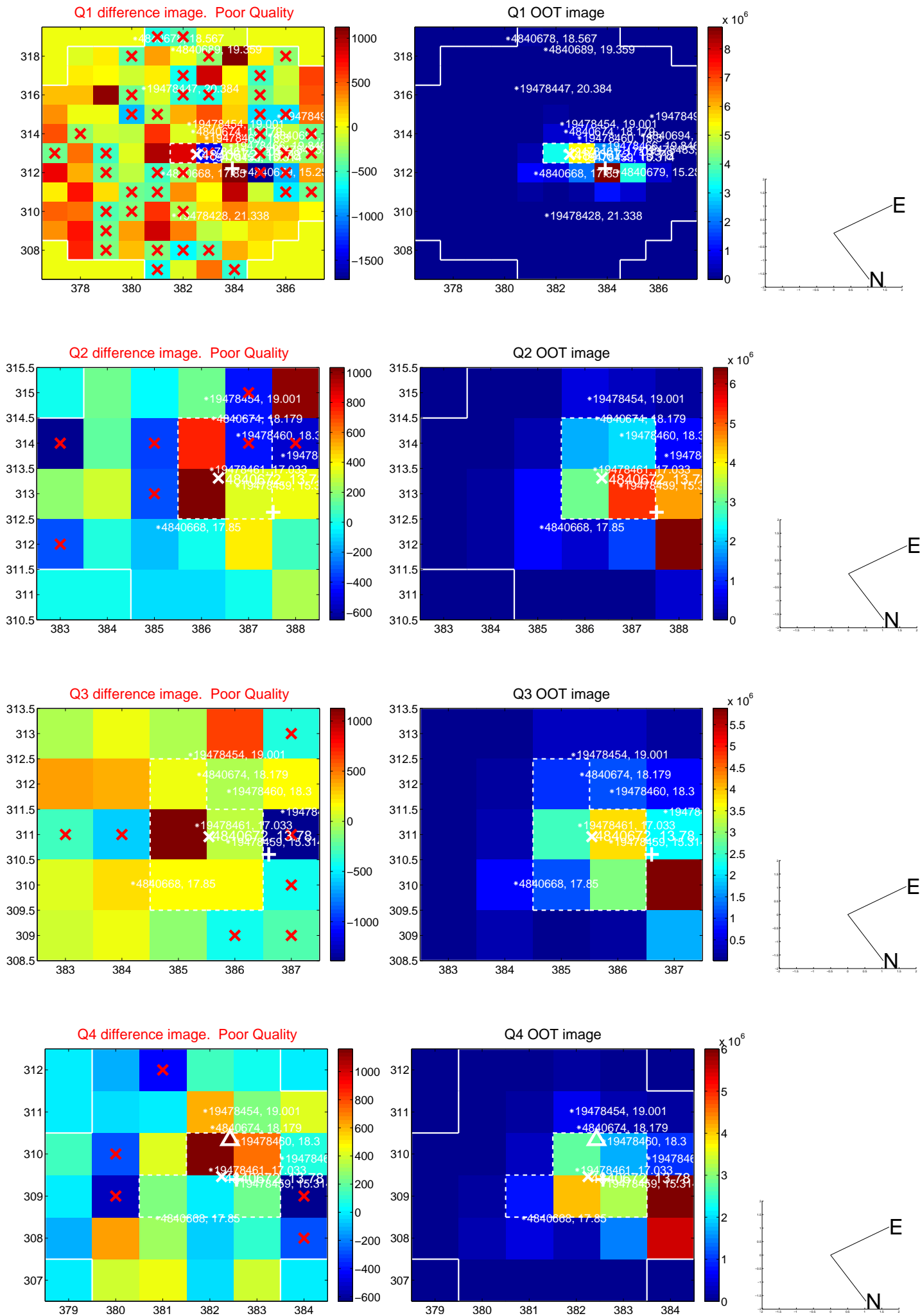


offset from photometric centroids

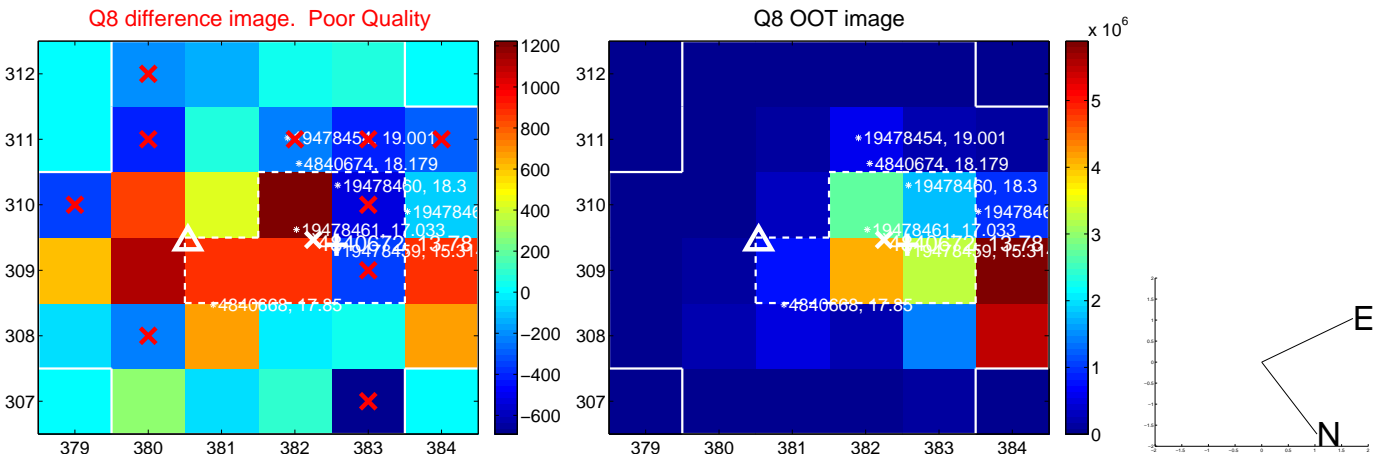
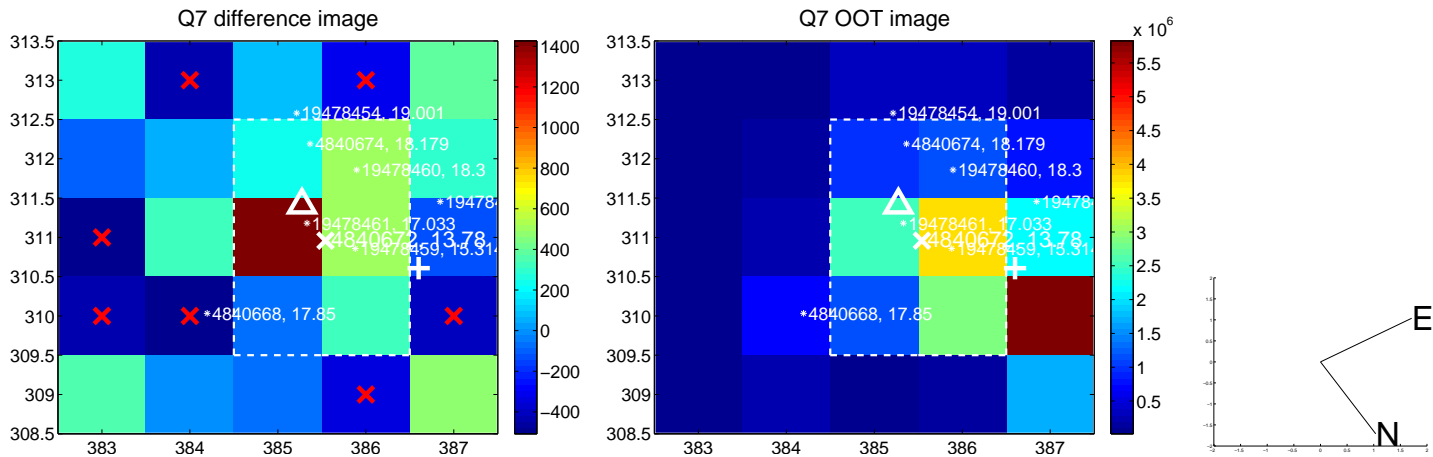
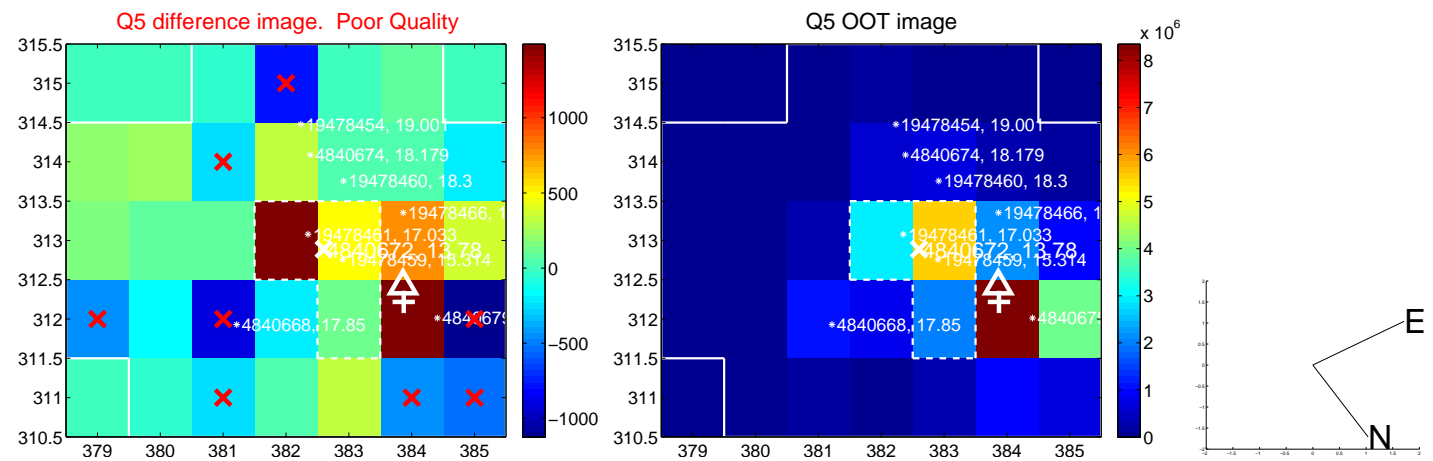


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

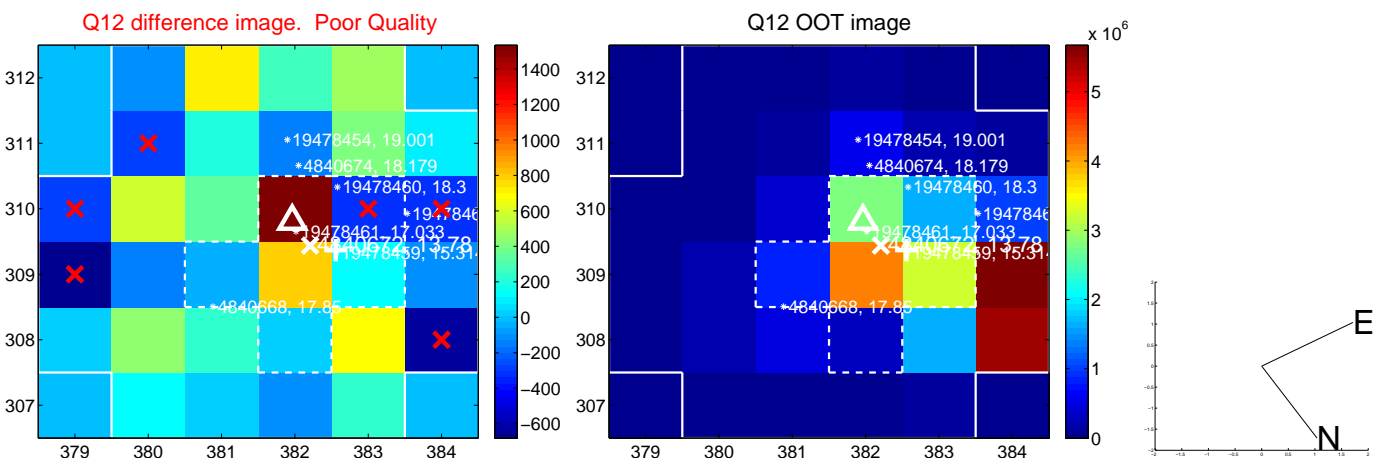
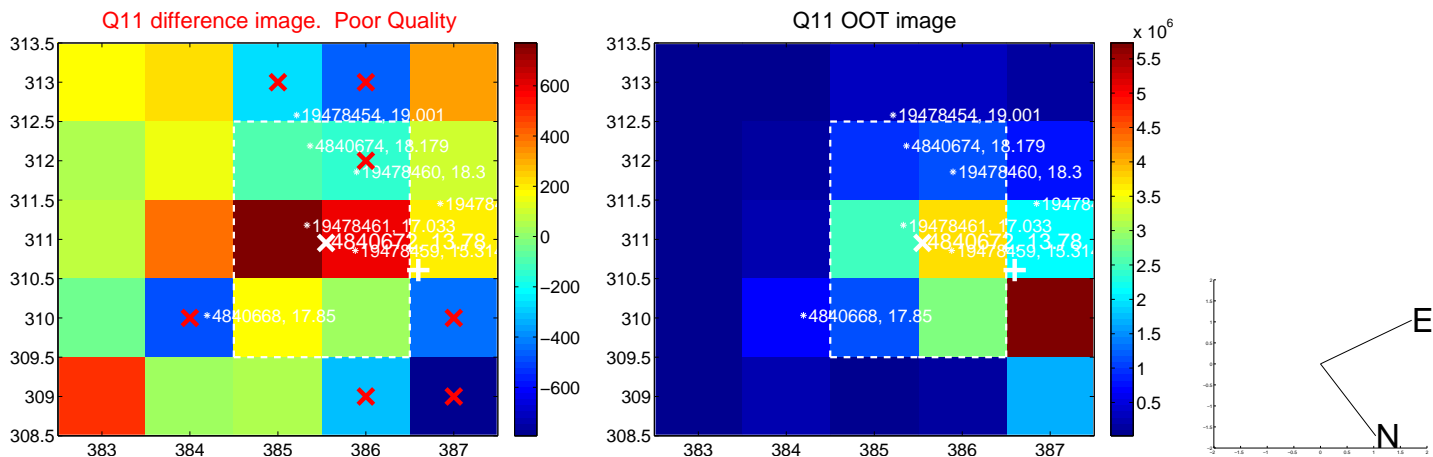
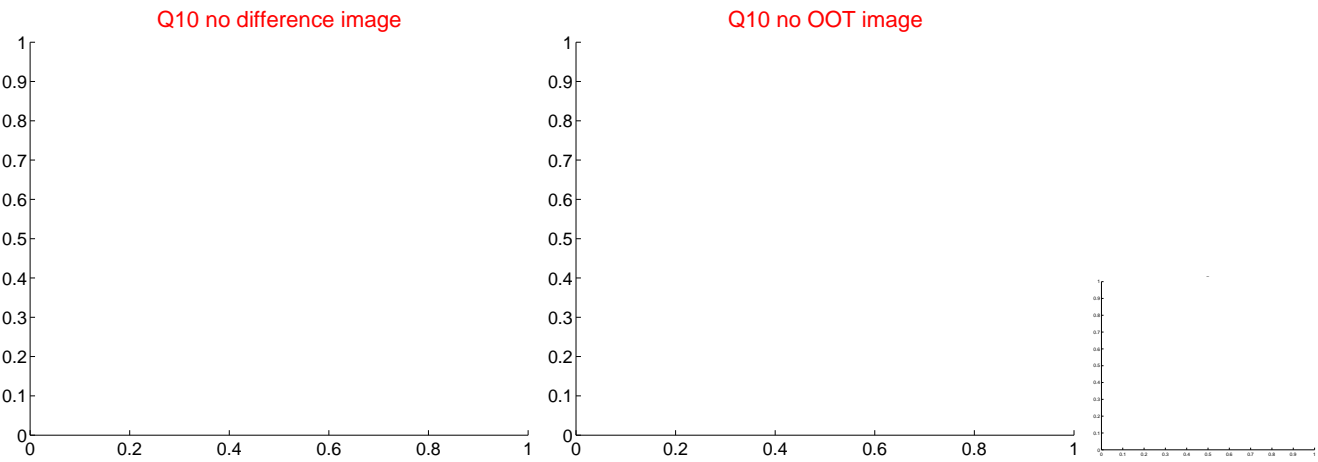
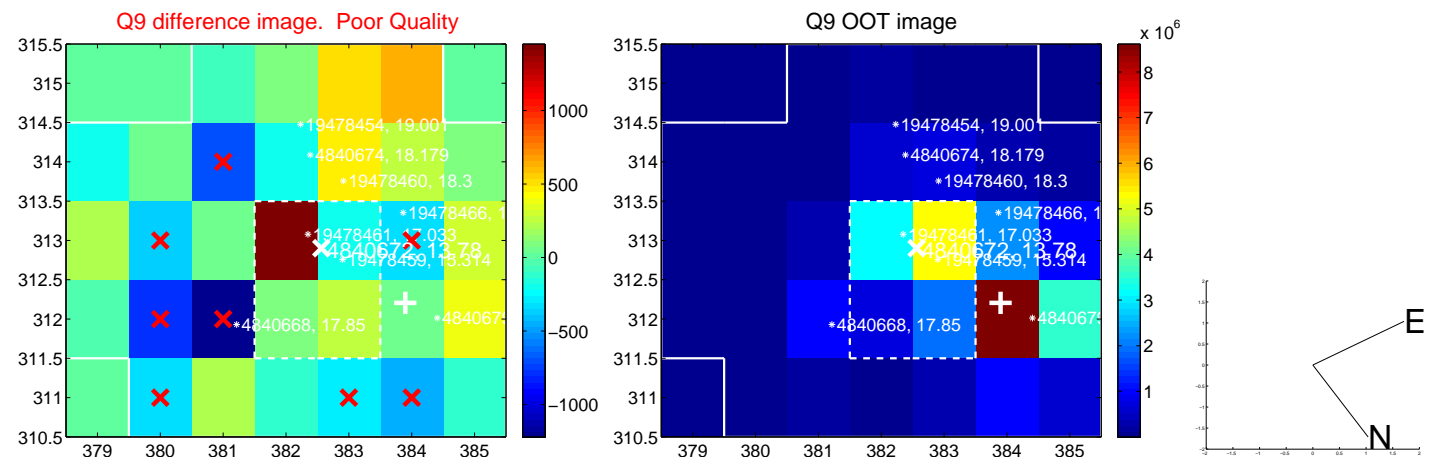
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



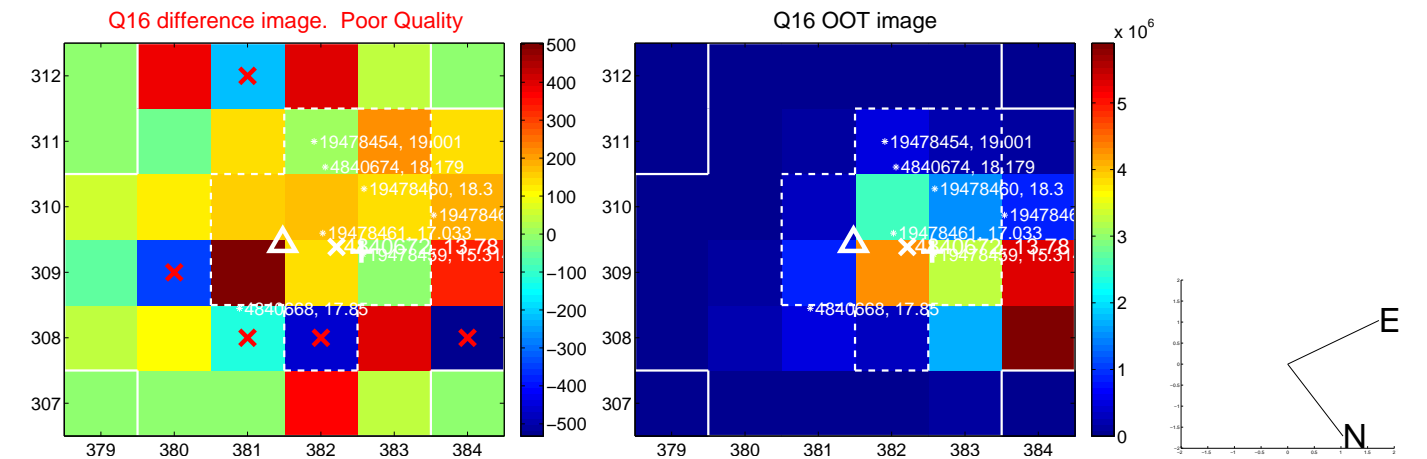
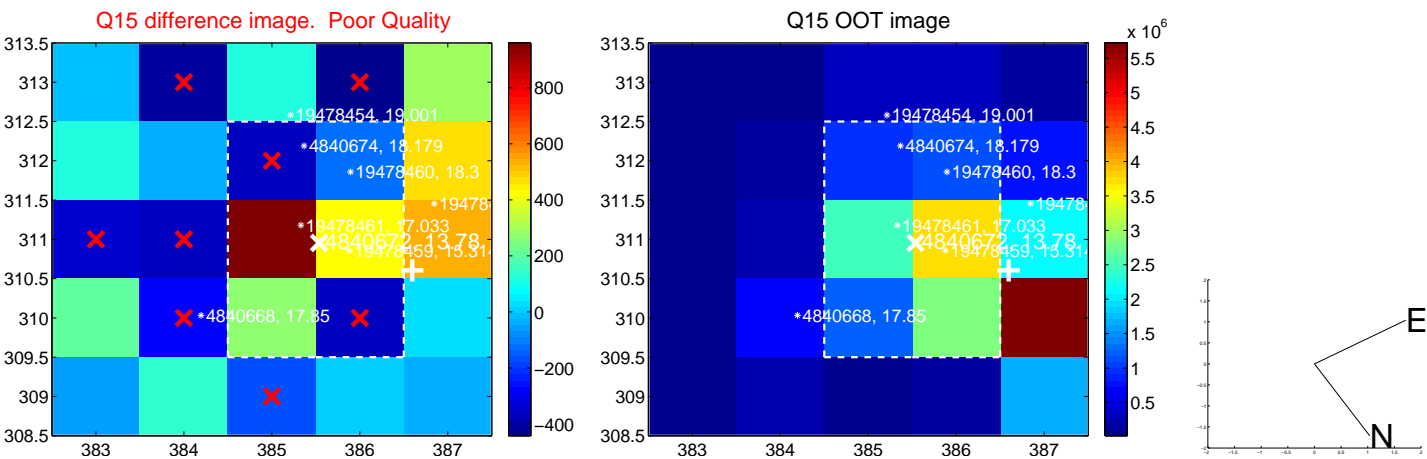
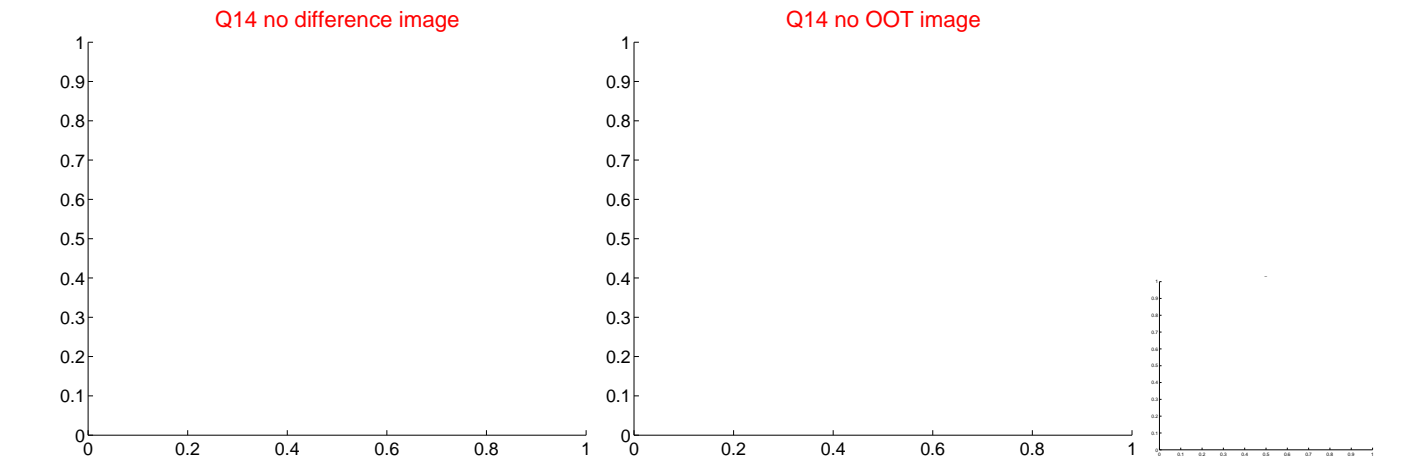
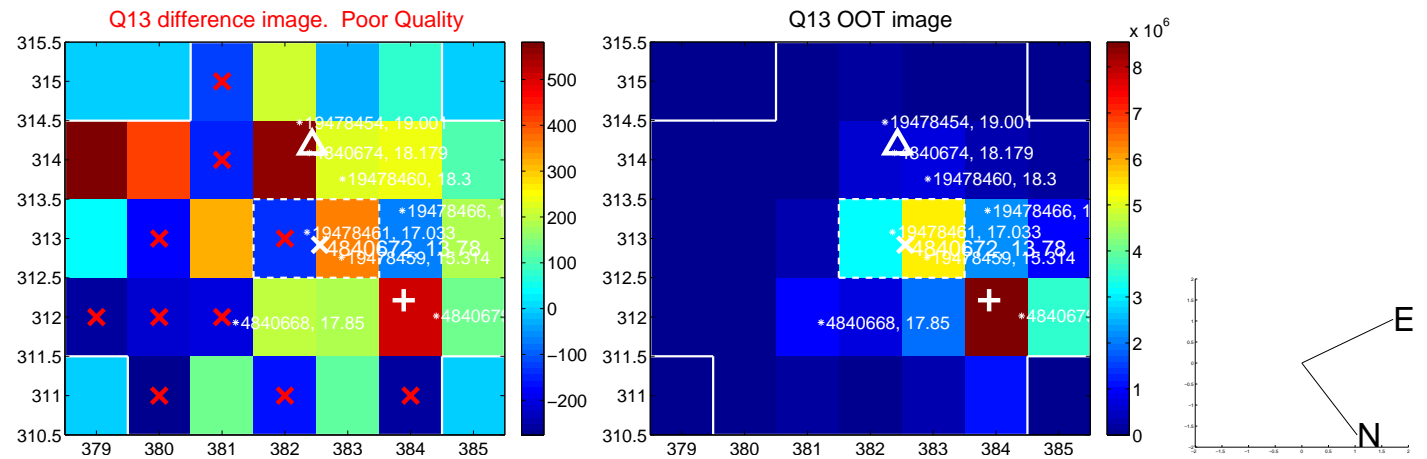
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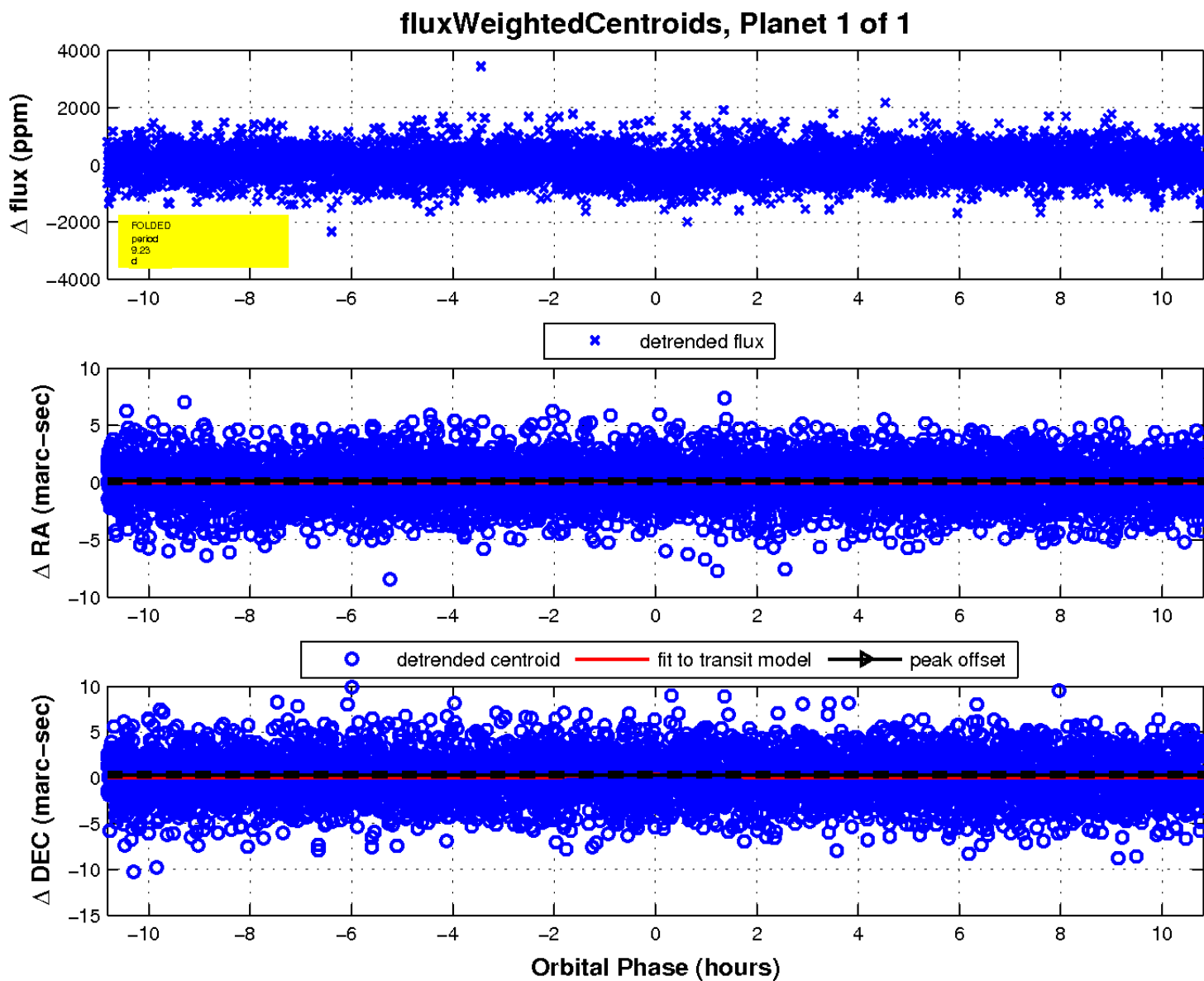
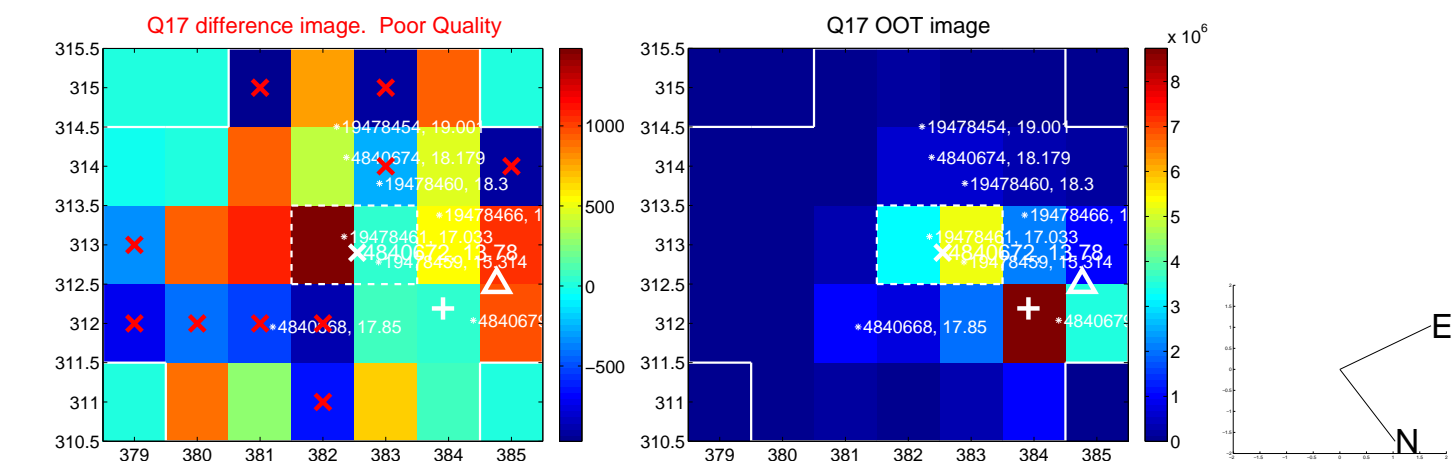
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UKIRT Image

Declination

