

KIC 006670610

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})
006670610-01	OBS	6752.01	8.942891	137.269245	285.5	1.774	7.1	8.7	0.59	4183	1.16	19.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670610-01	OBS	PC	1.00	0	0	0	0	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.

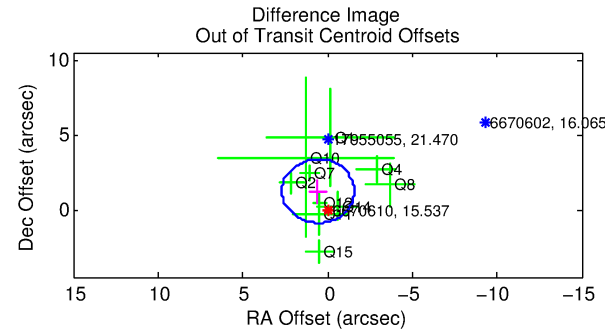
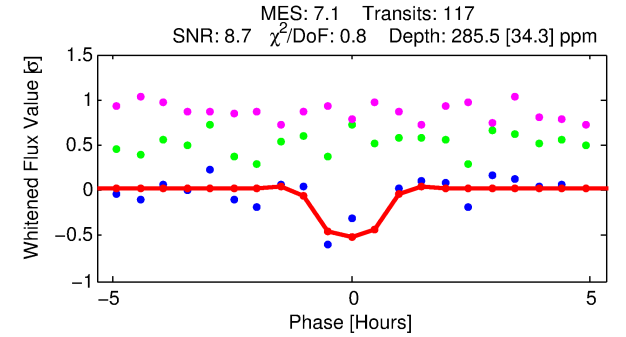
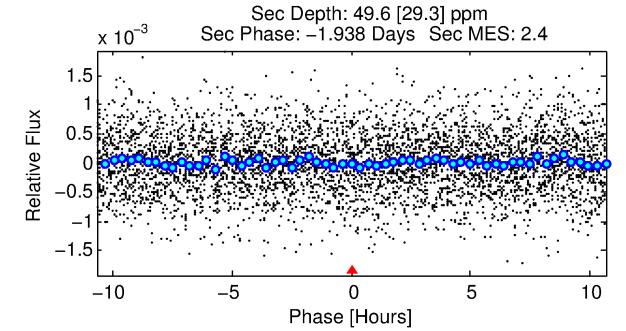
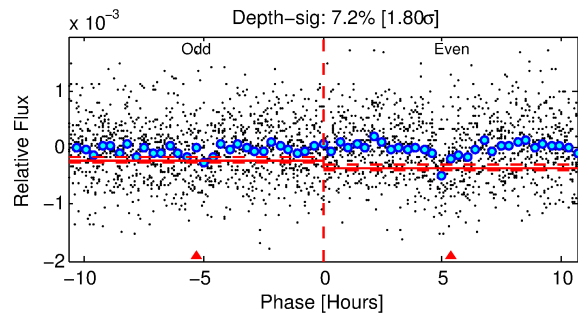
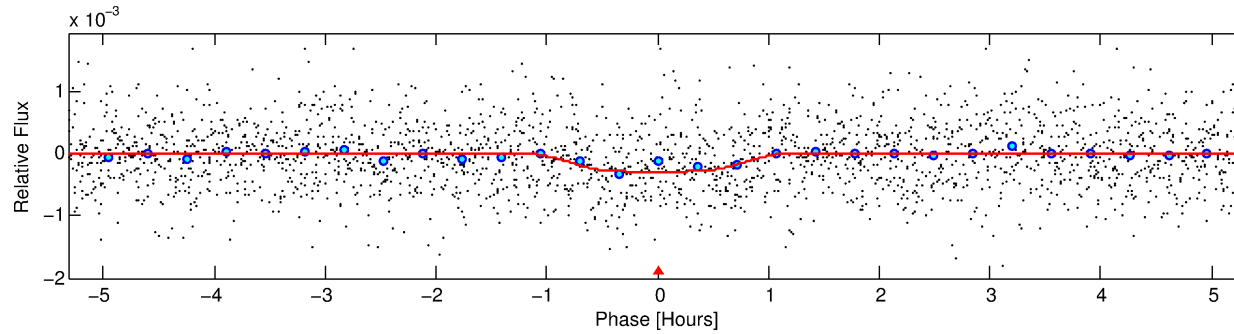
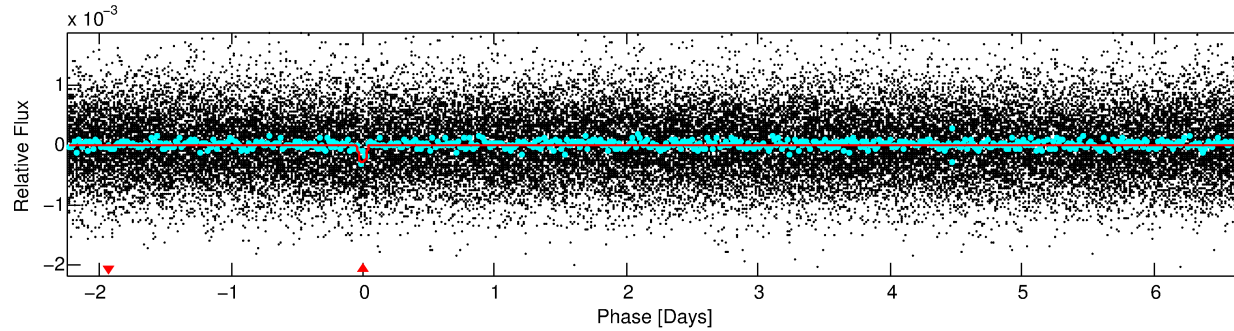
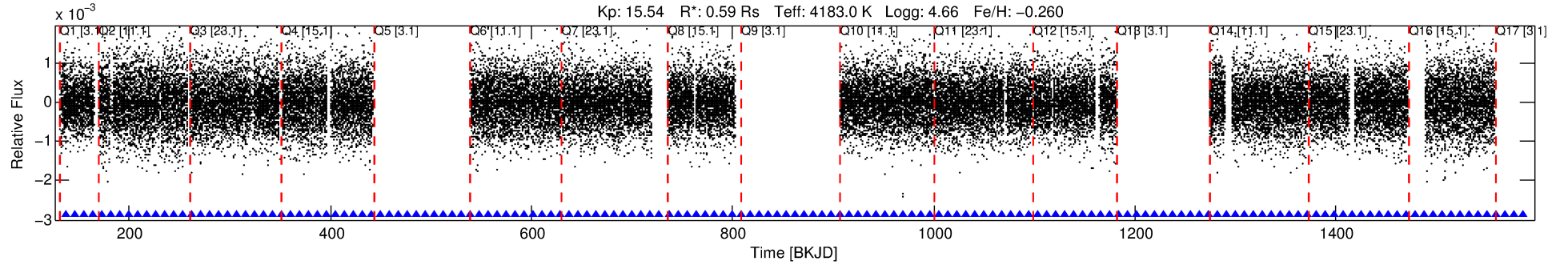
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670610-01

No Significant Match Found

DV One-Page Summary

KIC: 6670610 Candidate: 1 of 1 Period: 8.943 d
KOI: K06752.01 Corr: 0.927



DV Fit Results:

Period = 8.94289 [0.00006] d
Epoch = 137.2692 [0.0046] BKJD
Rp/R* = 0.0179 [0.0255]
a/R* = 21.76 [122.68]
b = 0.85 [1.93]
Seff = 19.53 [3.38]
Teq = 536 [23] K
Rp = 1.16 [1.66] Re
a = 0.0704 [0.0059] AU
Ag = 100.23 [291.86] [0.34 σ]
Teffp = 2622 [1910] K [1.09 σ]

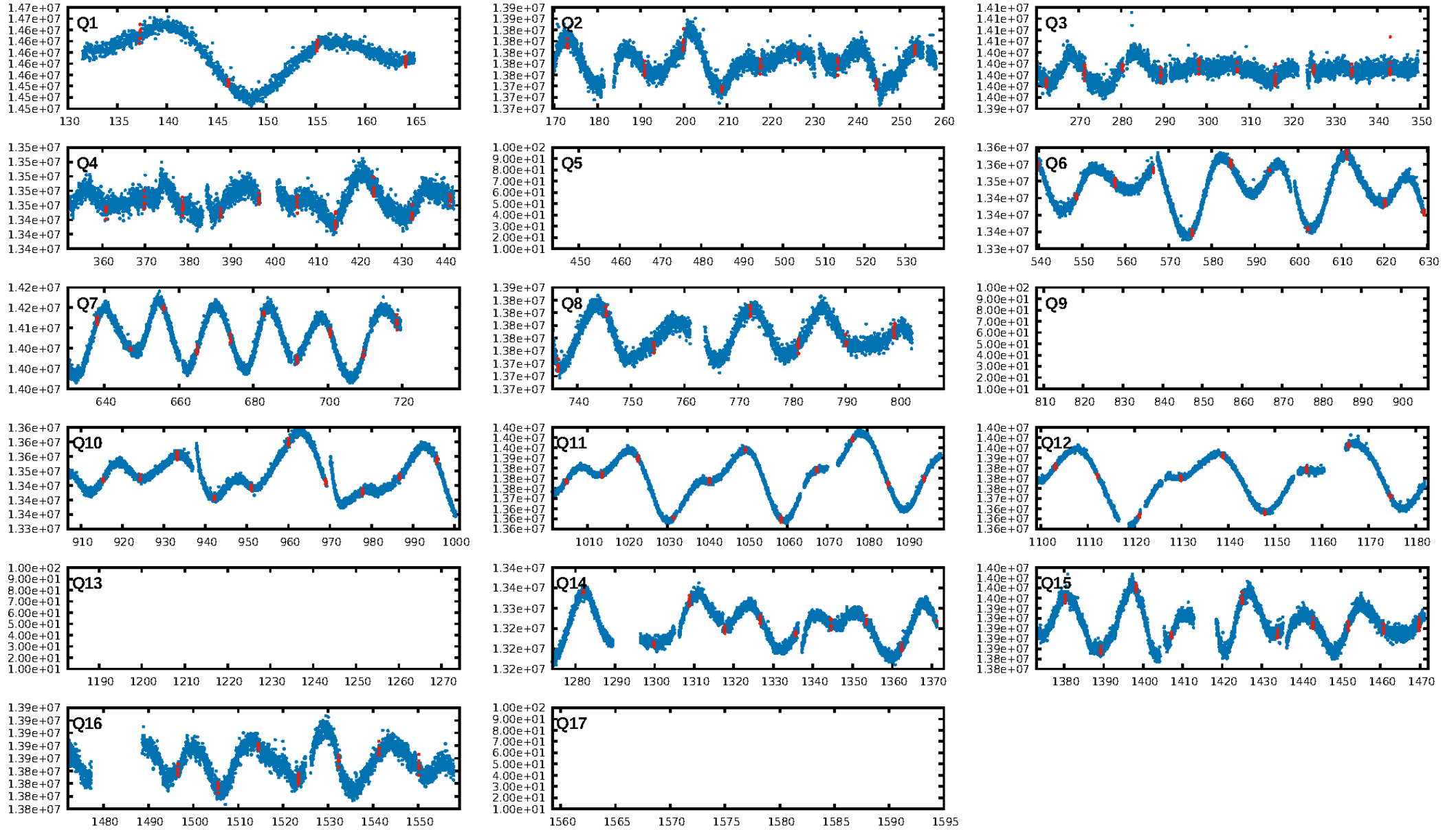
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.87e-13
RollingBand-fgt: 1.00 [113/113]
GhostDiagnostic-chr: 3.18
Centroid-sig: 6.2%
Centroid-so: 2.466 arcsec [1.80 σ]
OotOffset-rm: 1.354 arcsec [1.91 σ]
OotOffset-st: 3/3/3/1 [10]
KicOffset-rm: 1.426 arcsec [2.09 σ]
KicOffset-st: 3/3/3/1 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [13/13]

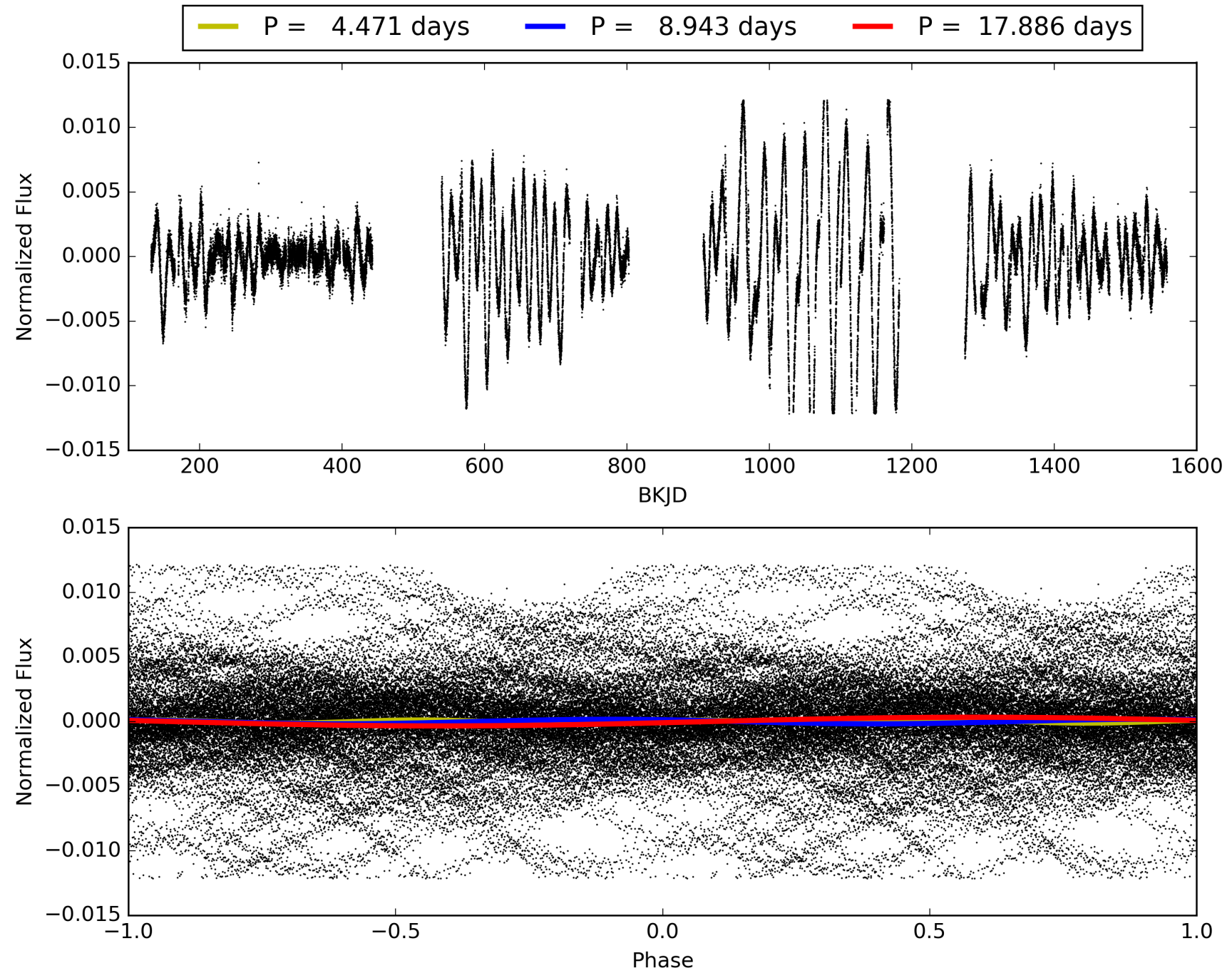
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:54:29 Z

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

TCE 006670610-01, PDC Light Curves

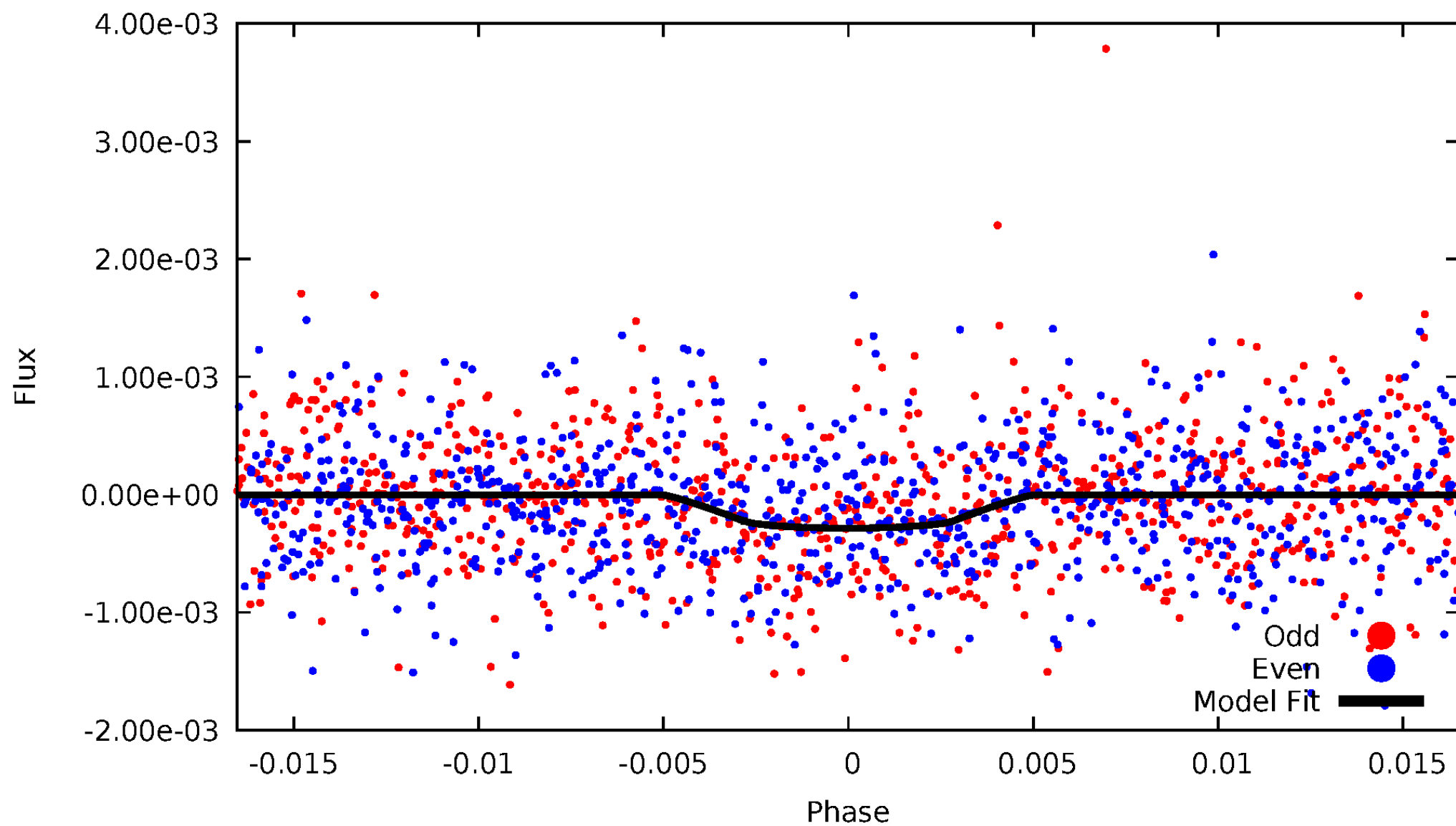


TCE 006670610-01



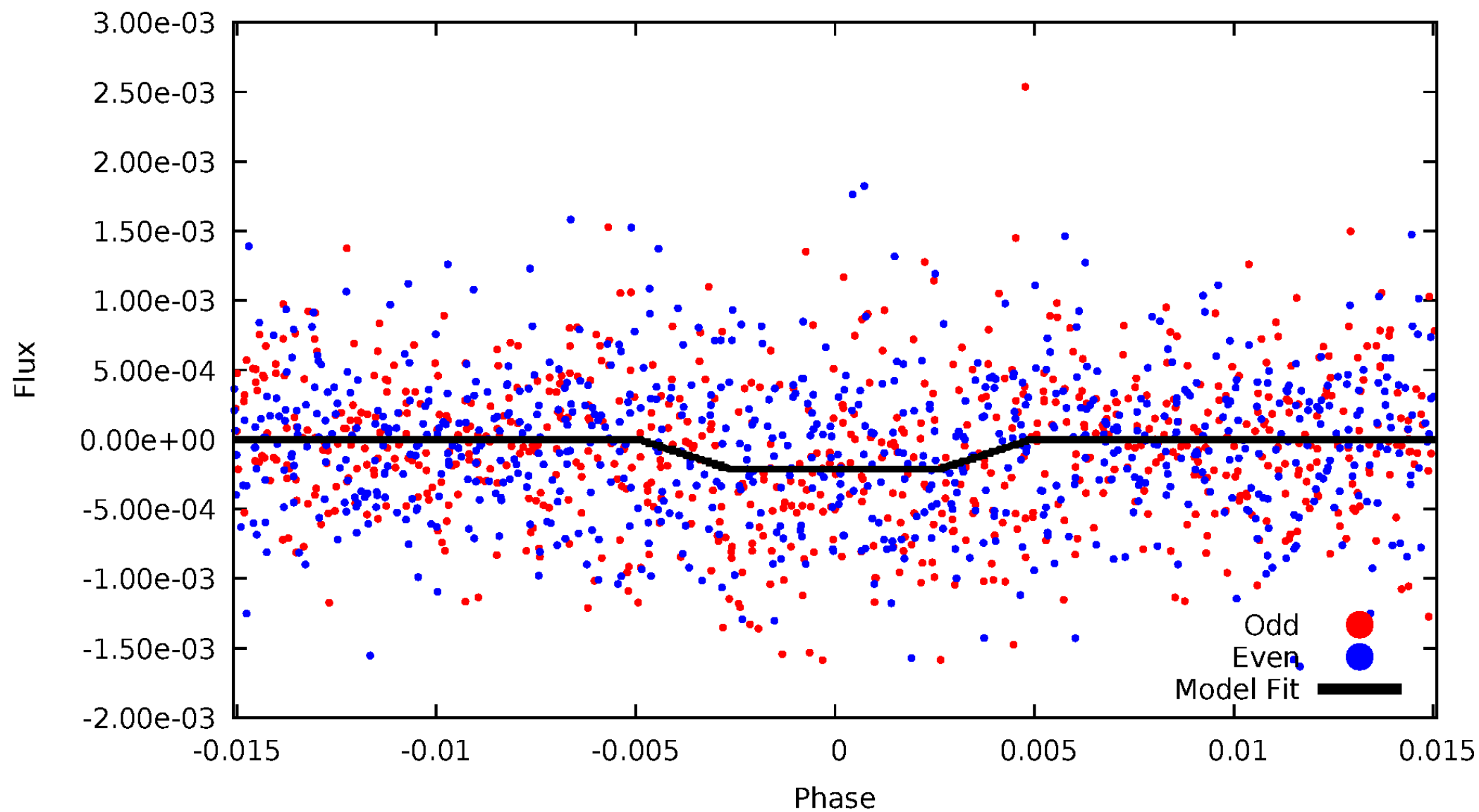
DV Odd/Even

TCE 006670610-01

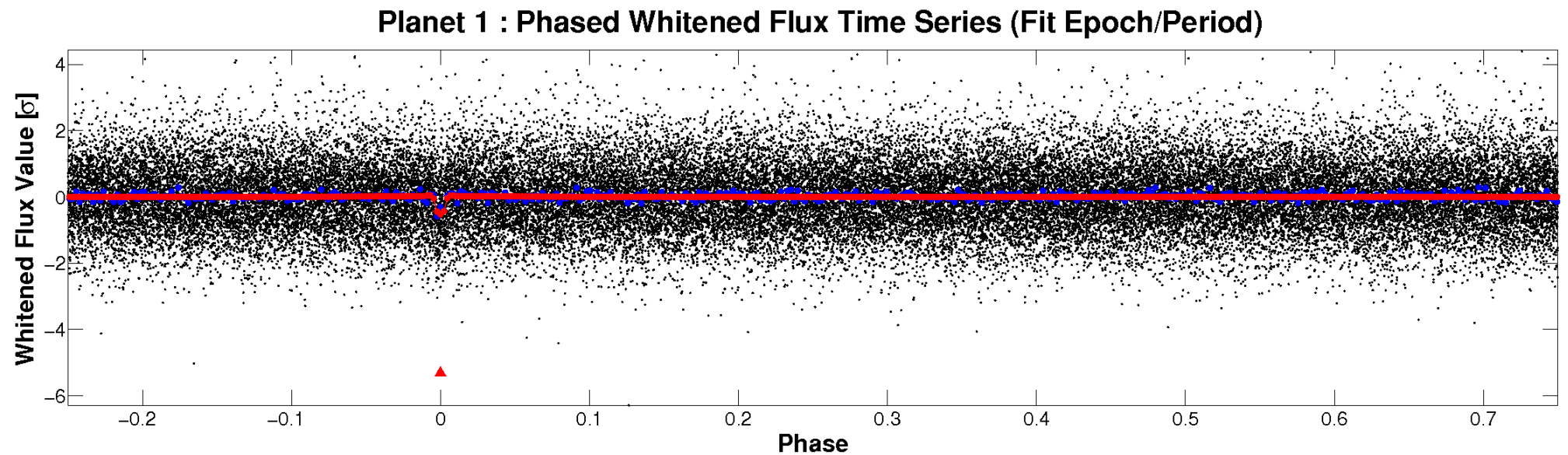
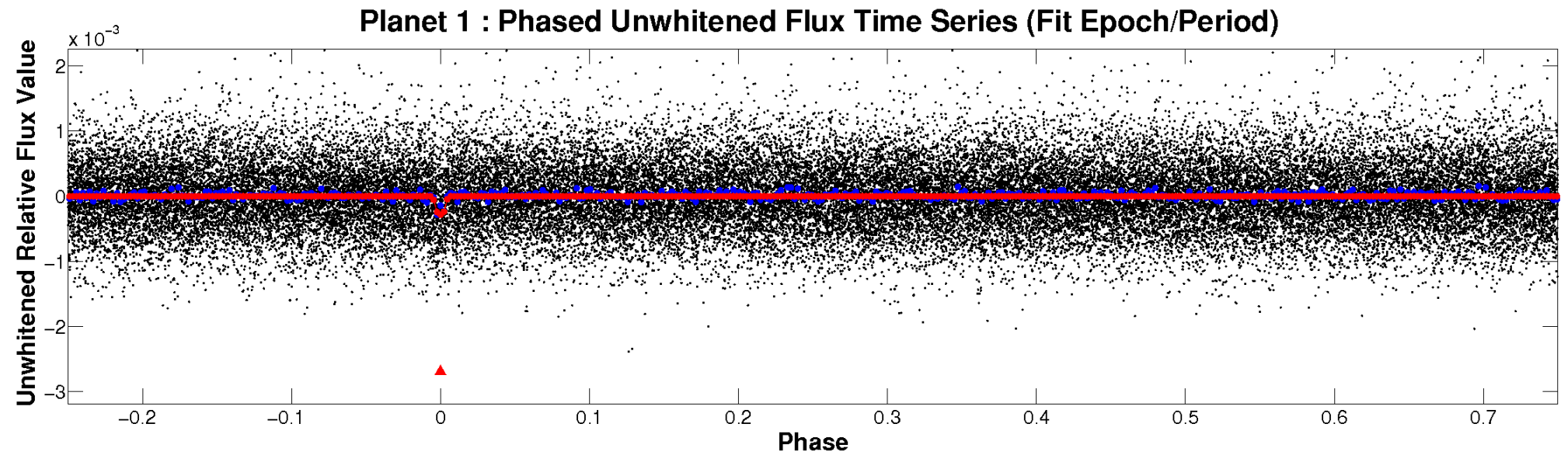


ALT Odd/Even

TCE 006670610-01

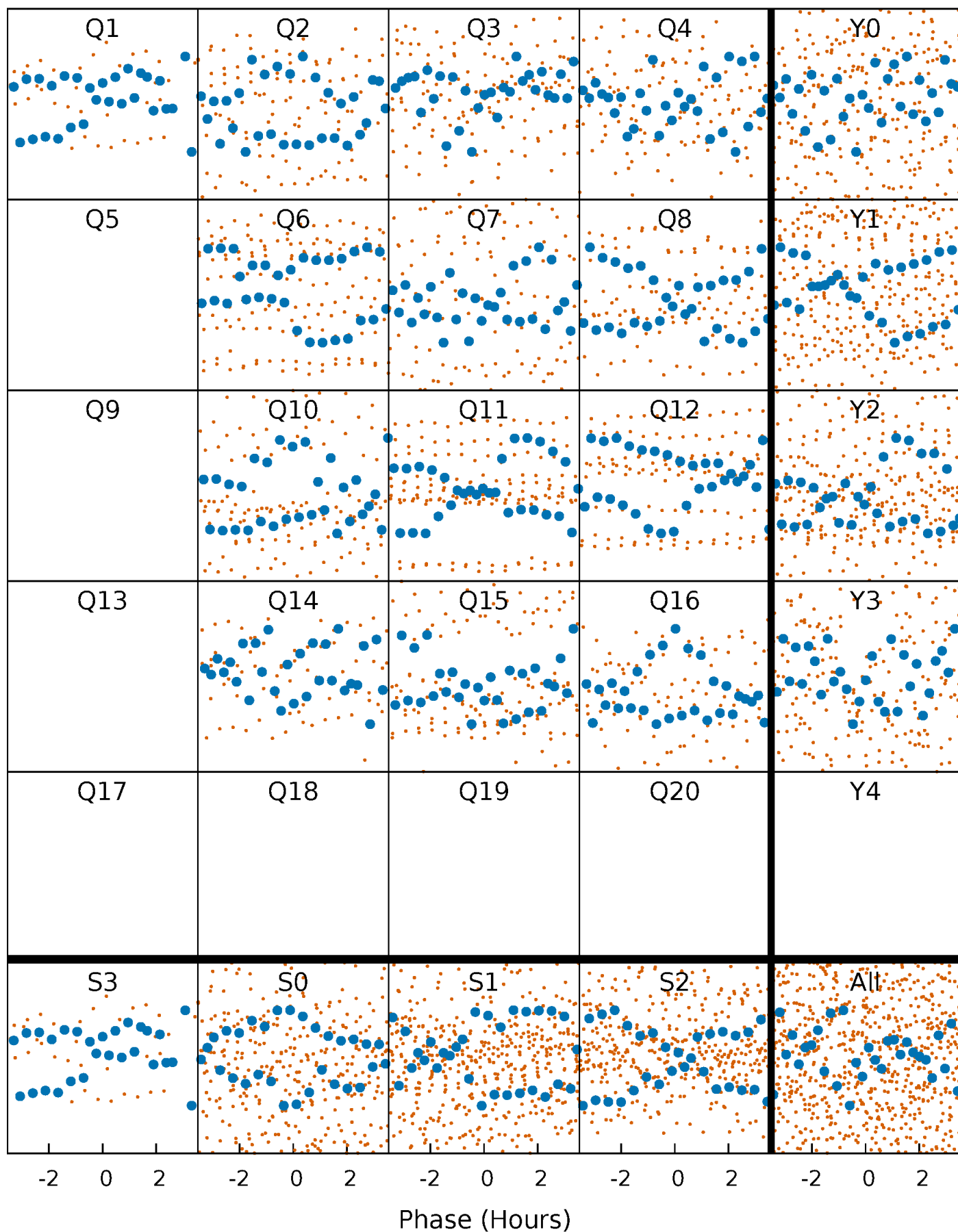


Non-Whitened Vs. Whitened Light Curve



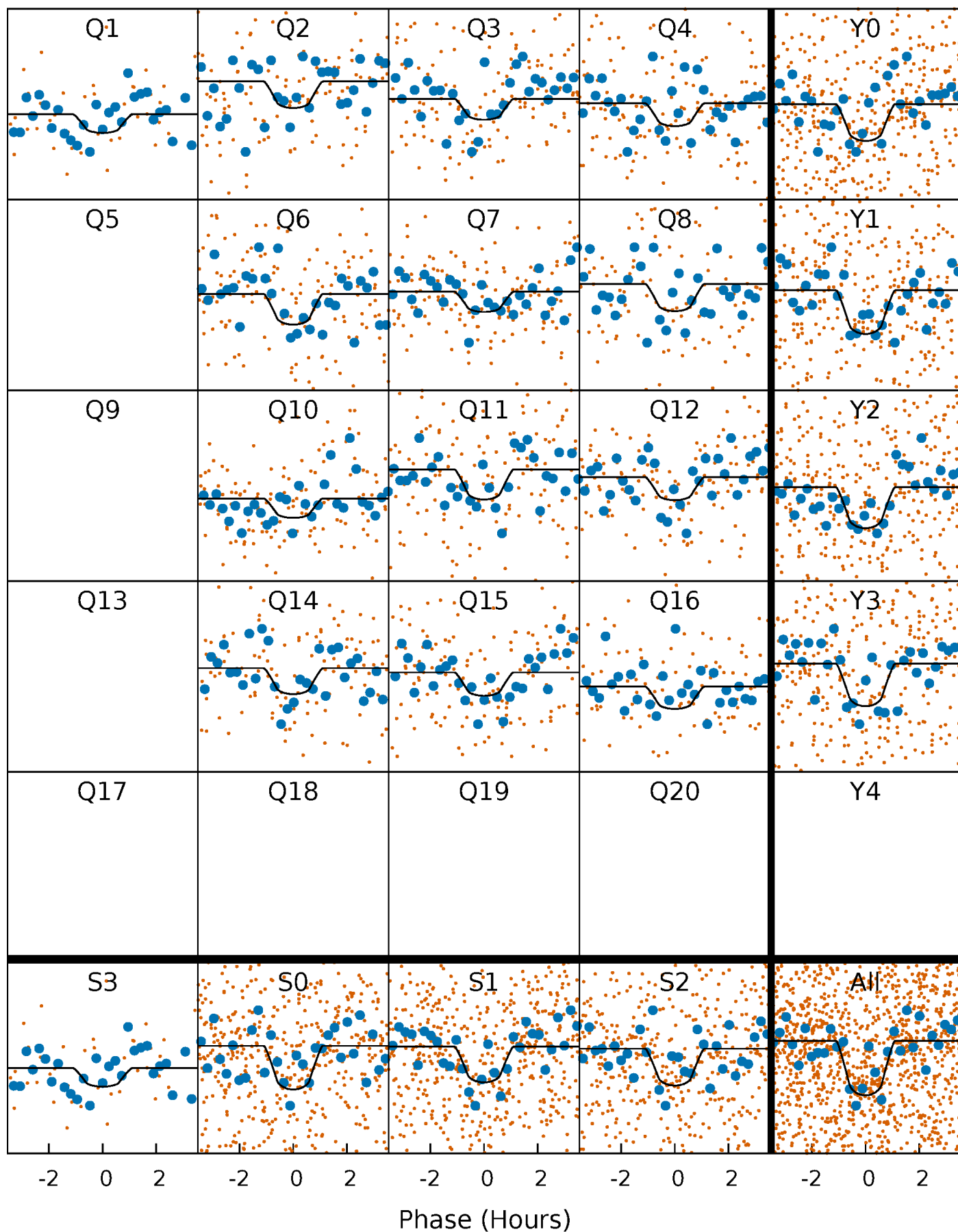
PDC Quarter-Phased Transit Curves

TCE 006670610-01 P= 8.942891 Days $T_0=137.269245$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006670610-01 P= 8.942891 Days $T_0=137.269245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

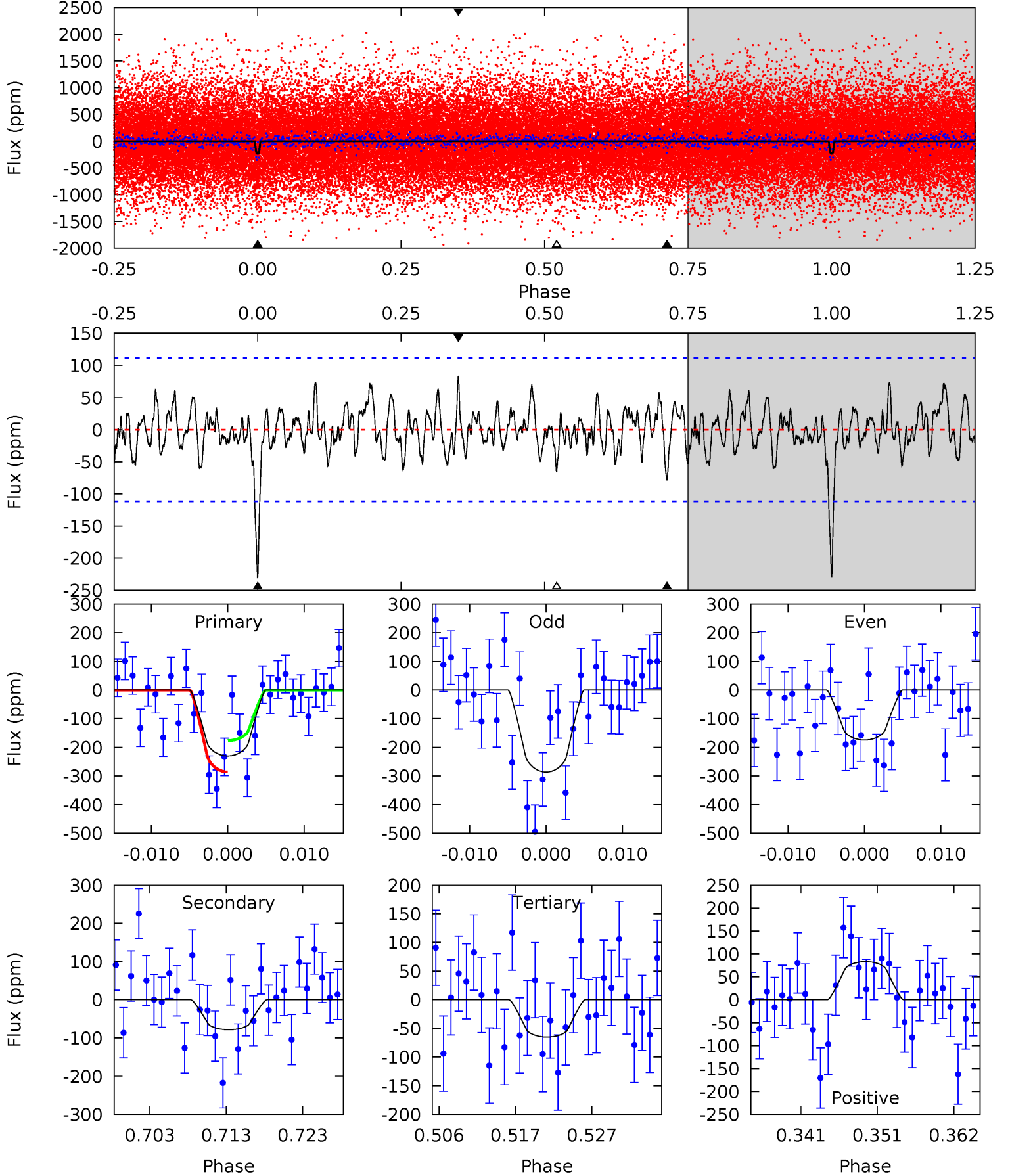
TCE 006670610-01 P= 8.942994 Days $T_0=137.262003$ (BKJD)



DV Model-Shift Uniqueness Test

006670610-01, P = 8.942891 Days, E = 128.326354 Days

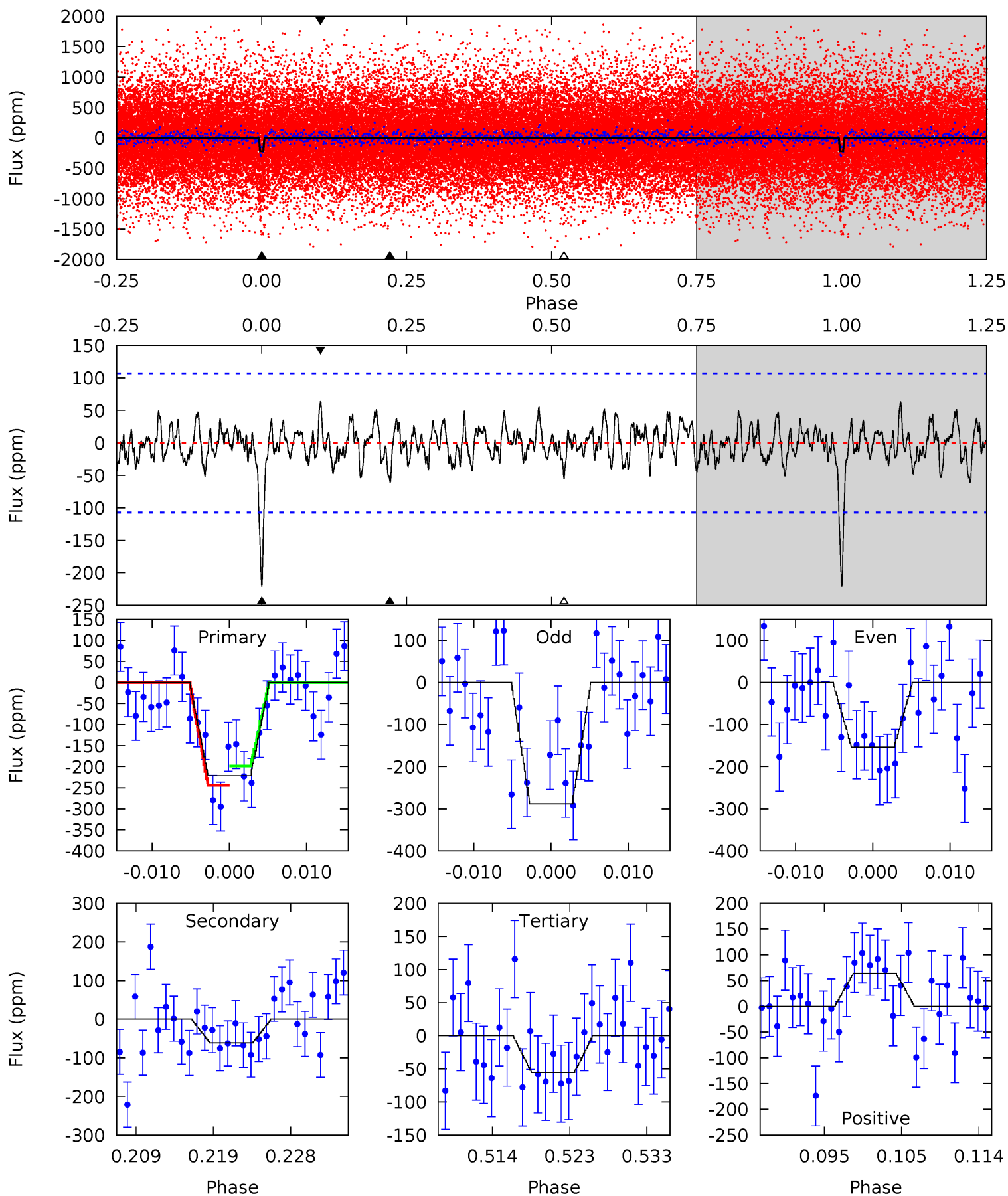
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.52	2.93	3.74	5.02	2.56	1.21	7.41	6.60	0.60	-0.22	2.52	1.00	0.27	2.46



Alt Model-Shift Uniqueness Test

006670610-01, P = 8.942994 Days, E = 128.319009 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	2.87	2.61	3.00	5.04	2.59	1.01	7.78	7.39	0.26	-0.13	3.16	0.95	0.22	1.07



Stellar Parameters For KIC 006670610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4183^{+125}_{-138}	$4.655^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.594^{+0.043}_{-0.064}$	$0.582^{+0.064}_{-0.058}$	$3.909^{+1.057}_{-0.409}$
	+3%/-3%	+1%/-1%	+115%/-115%	+7%/-11%	+11%/-10%	+27%/-10%
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 006670610-01 / KOI 6752.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-78 ± 22	$1.59^{+1.45}_{-1.04}$	745^{+25}_{-29}	3000^{+1304}_{-499}	82^{+659}_{-61}
Alt.	-61 ± 21	$1.51^{+1.40}_{-1.00}$	744^{+24}_{-29}	2939^{+1201}_{-491}	71^{+579}_{-53}

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

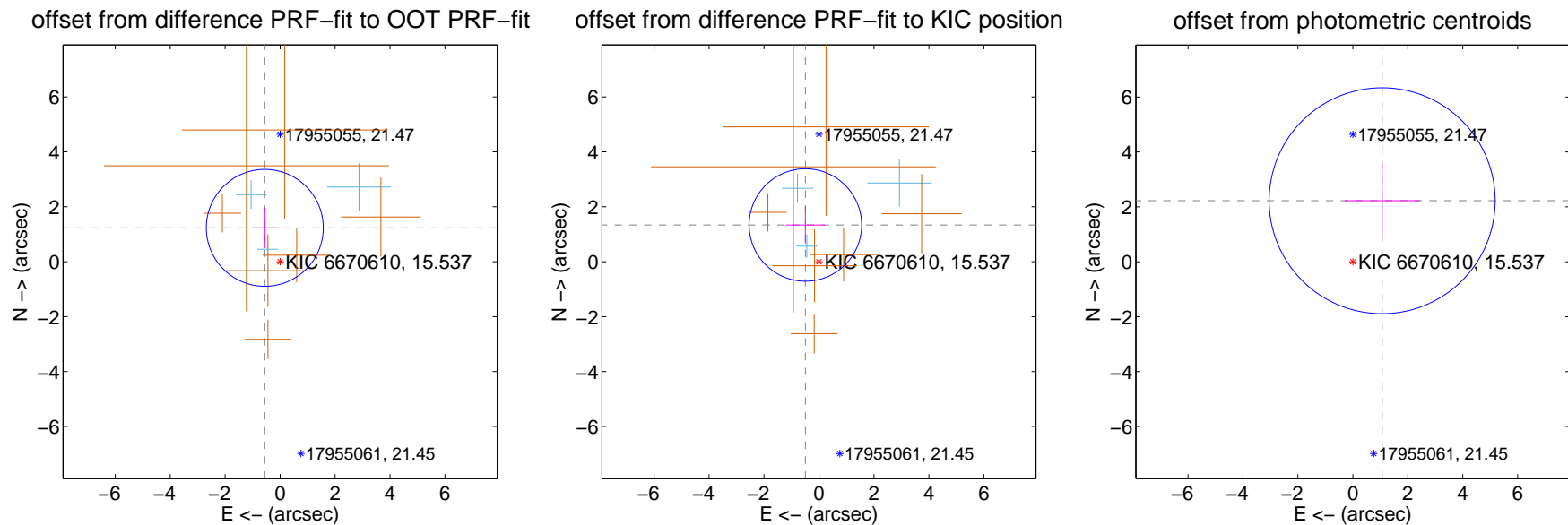
DV Centroid Data

Supplemental centroid analysis for 006670610-01. Kepler magnitude: 15.54. Transit SNR 8.73

There are 3 quarters with good PRF difference image offsets

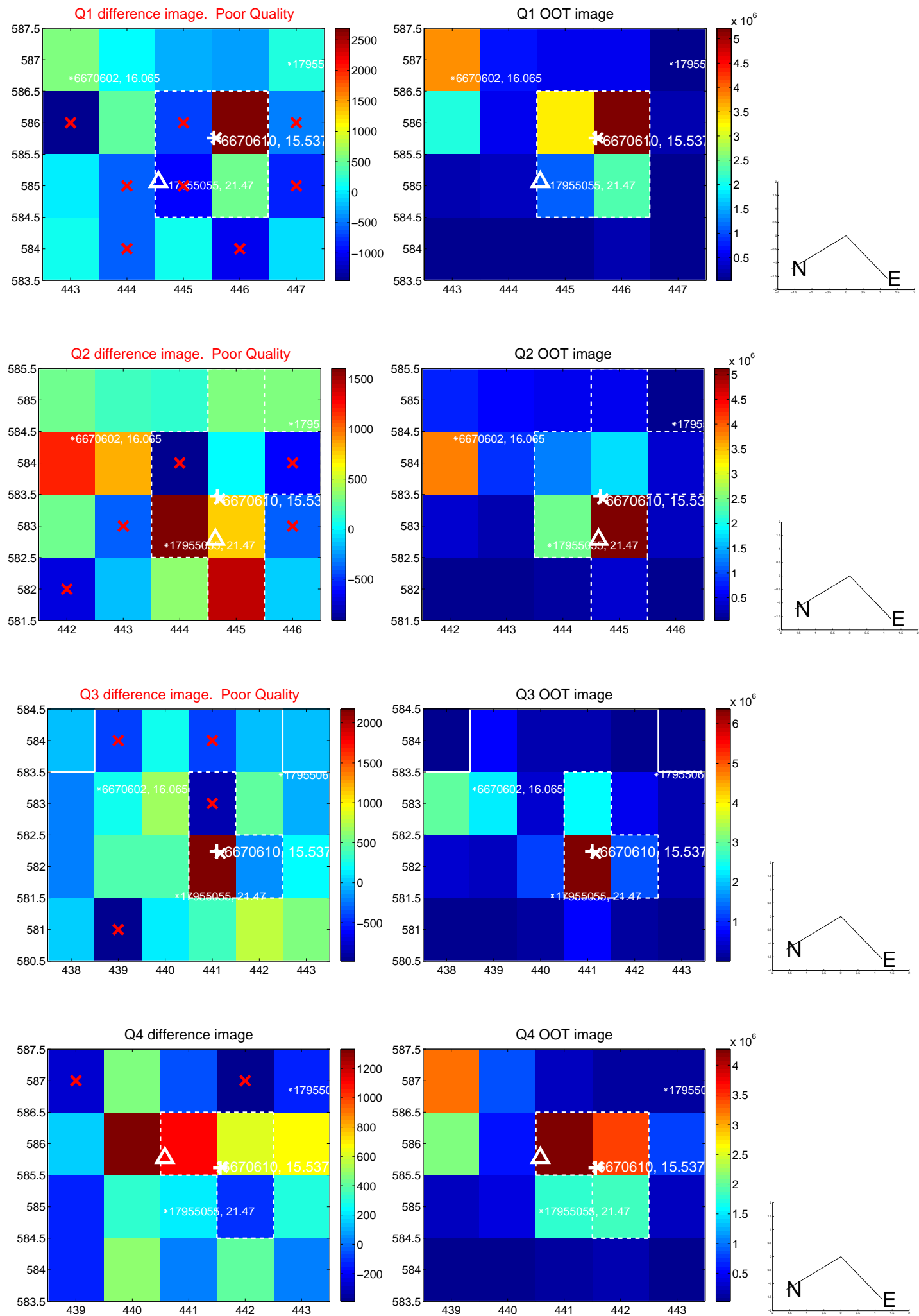
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.354 ± 0.710	1.91	0.558 ± 0.515	1.233 ± 0.741
PRF-fit source offset from KIC position	1.426 ± 0.682	2.09	0.495 ± 0.710	1.337 ± 0.679
photometric centroid source offset	2.47 ± 1.37	1.80	-1.07 ± 1.37	2.22 ± 1.37



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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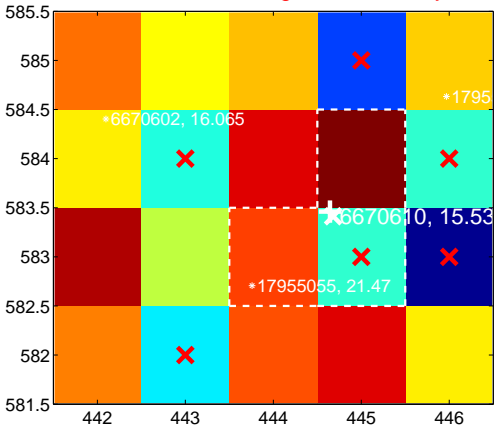
Q5 no difference image



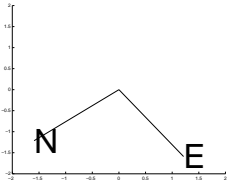
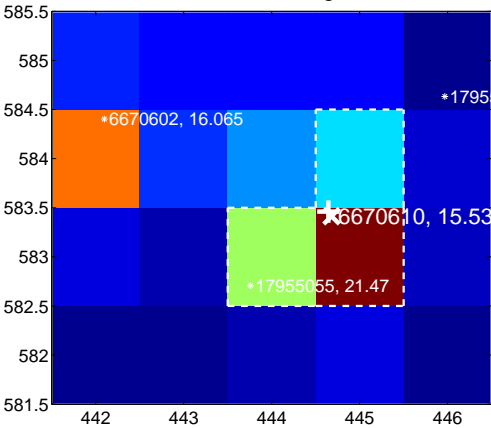
Q5 no OOT image



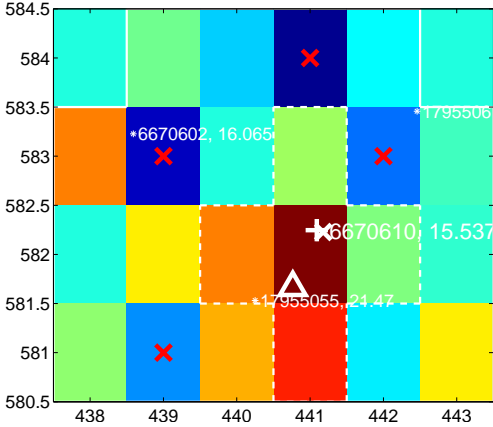
Q6 difference image. Poor Quality



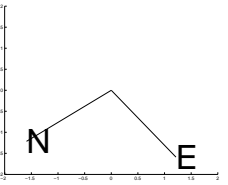
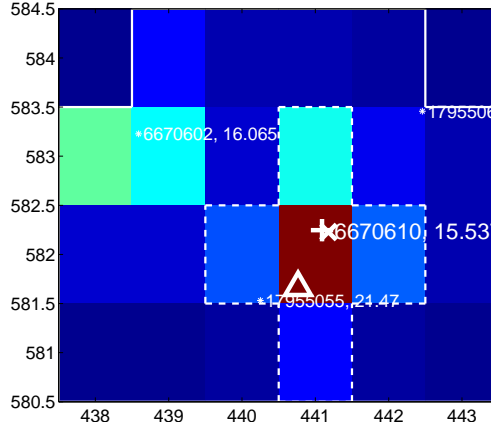
Q6 OOT image



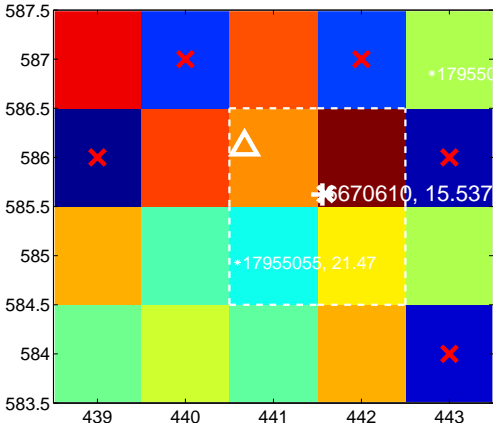
Q7 difference image



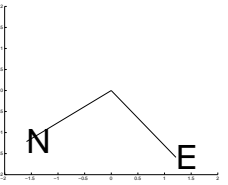
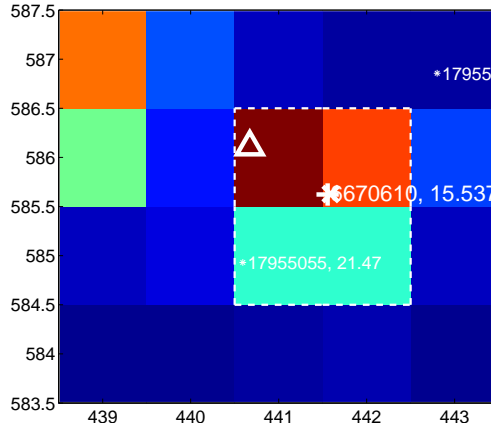
Q7 OOT image



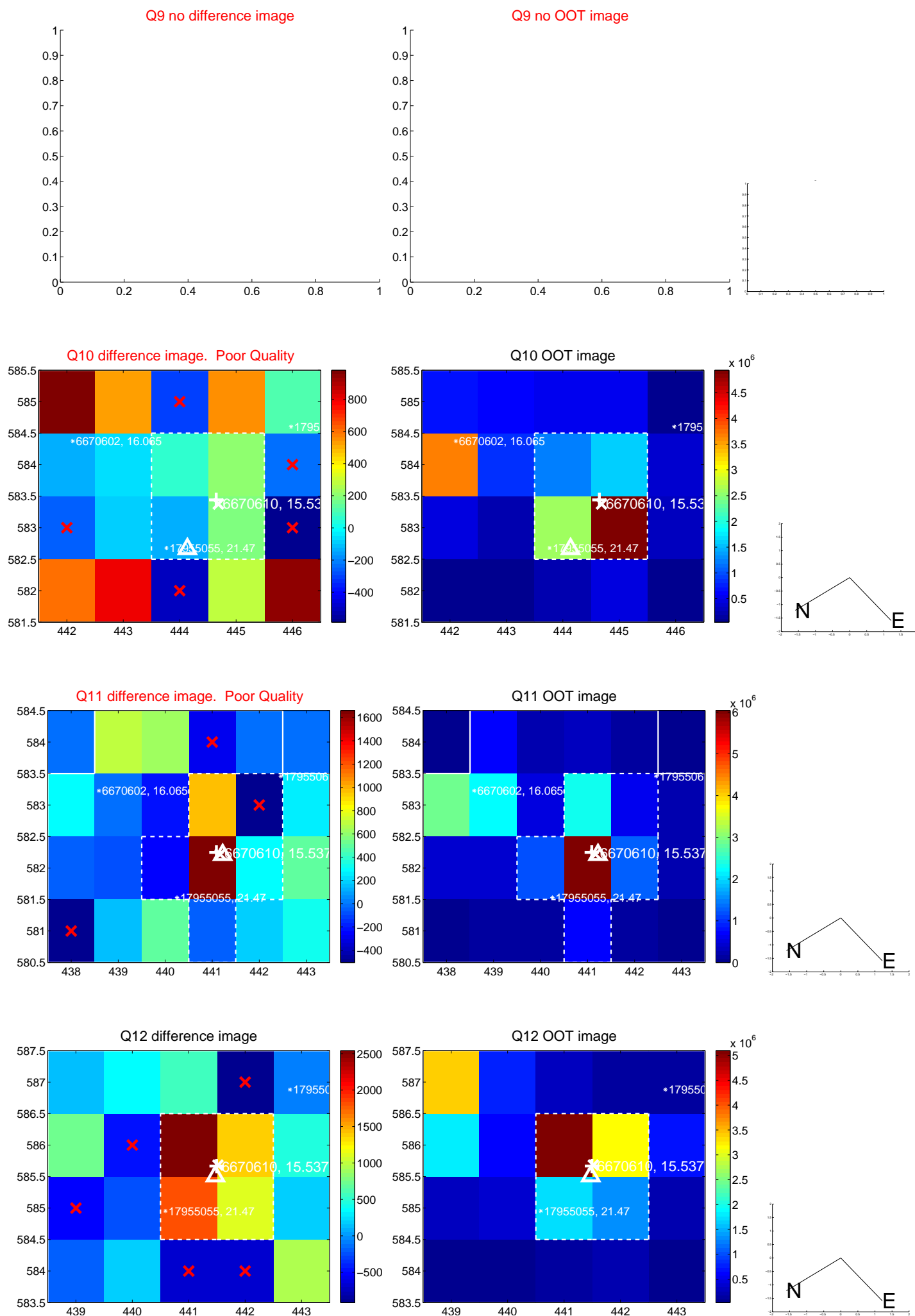
Q8 difference image. Poor Quality



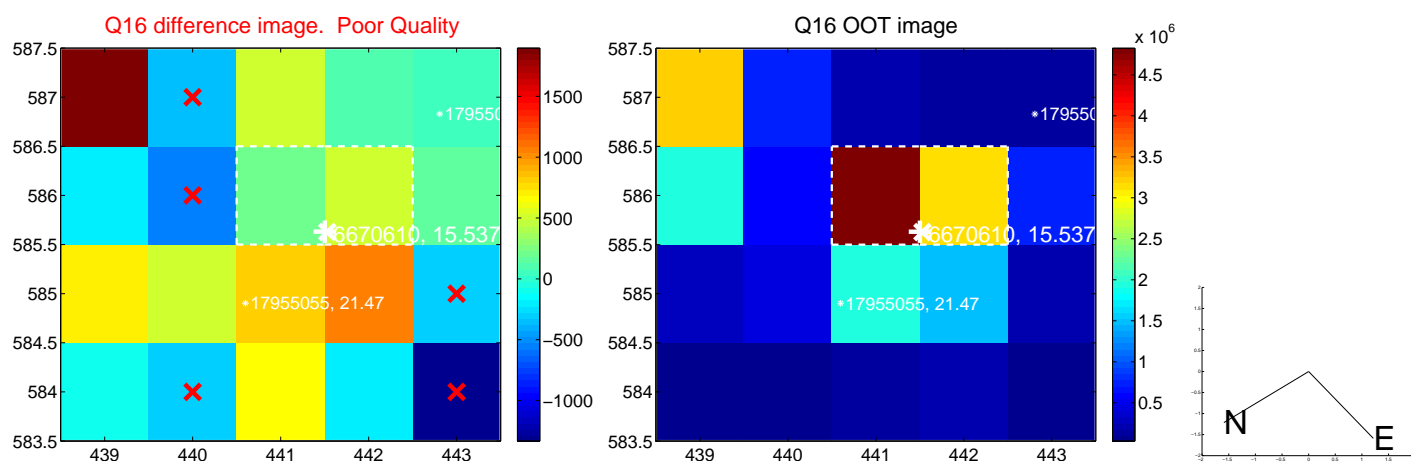
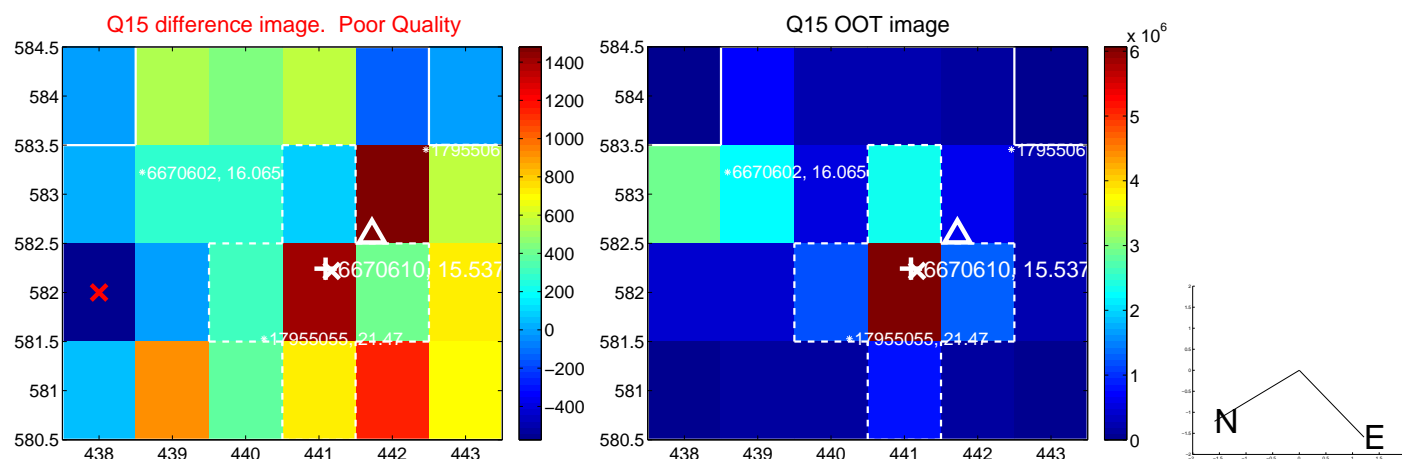
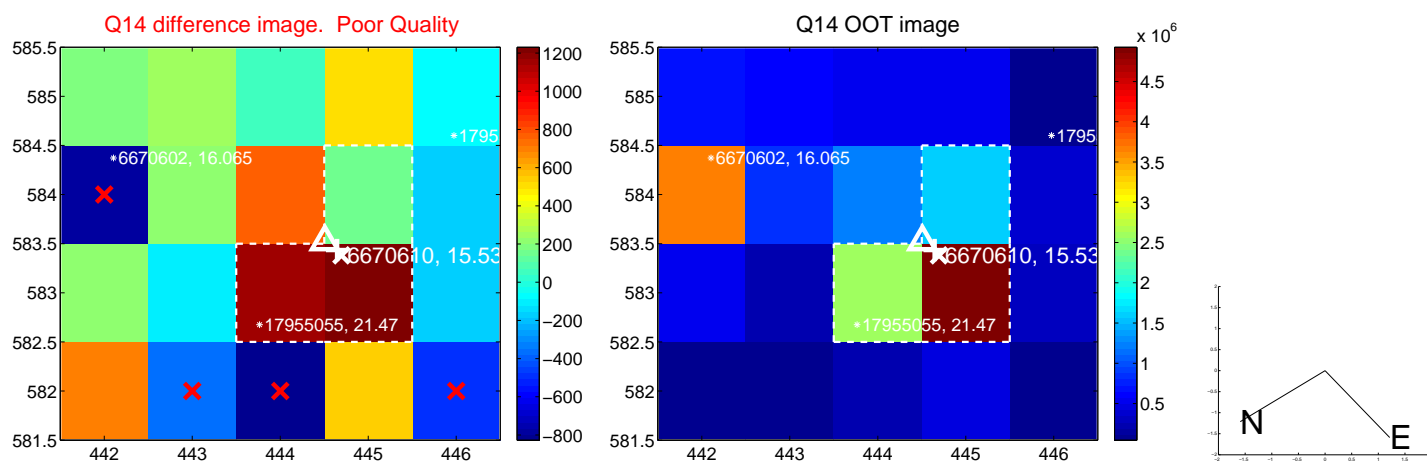
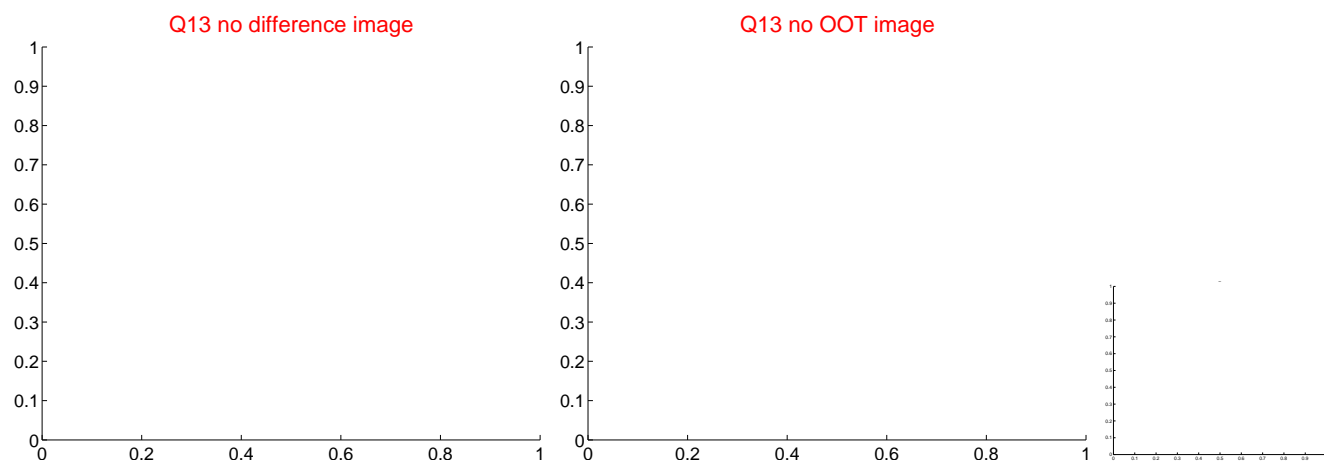
Q8 OOT image



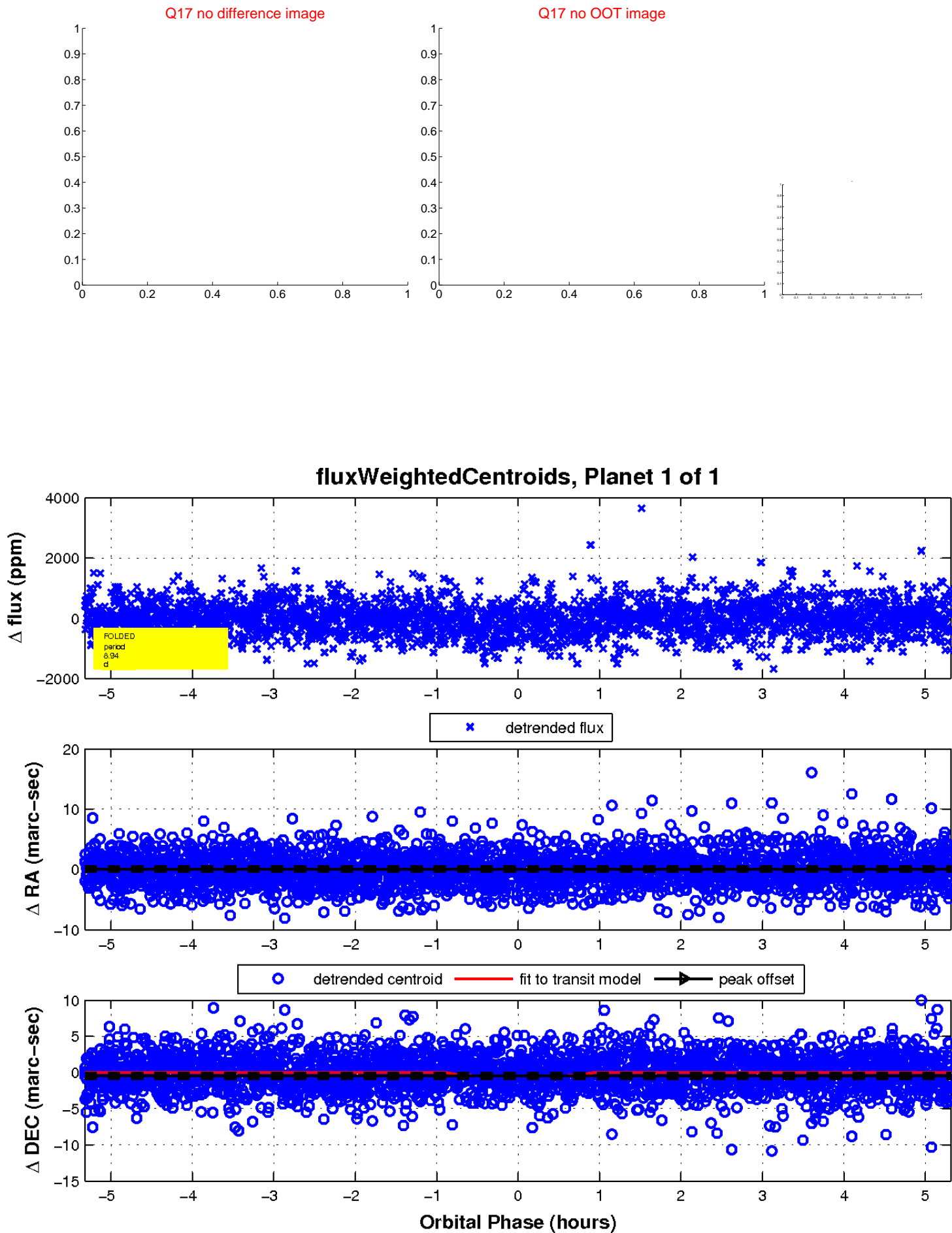
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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UKIRT Image

Declination

