

KIC 008545603

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})
008545603-01	OBS	7893.01	55.884951	140.645099	482.1	2.318	7.4	7.5	0.87	5668	2.16	8.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008545603-01	OBS	FP	0.03	1	0	0	0	INDIV_TRANS_SKYE—MOD_NONUNIQ_ALT

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

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

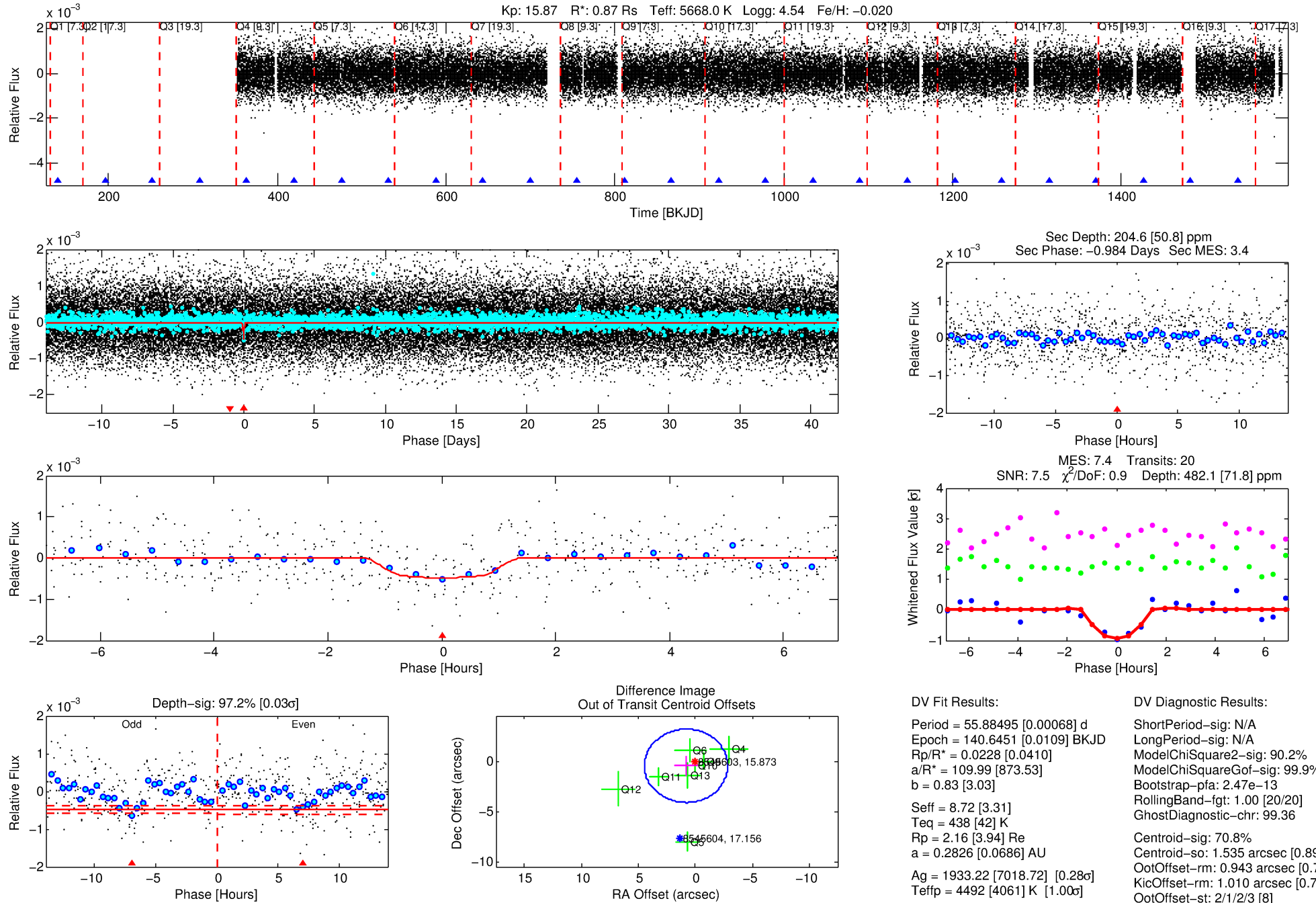
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008545603-01

No Significant Match Found

DV One-Page Summary

KIC: 8545603 Candidate: 1 of 1 Period: 55.885 d



DV Fit Results:

Period = 55.88495 [0.00068] d
Epoch = 140.6451 [0.0109] BKJD
Rp/R* = 0.0228 [0.0410]
a/R* = 109.99 [873.53]
b = 0.83 [3.03]
Seff = 8.72 [3.31]
Teq = 438 [42] K
Rp = 2.16 [3.94] Re
a = 0.2826 [0.0686] AU
Ag = 1933.22 [7018.72] [0.28 σ]
Teffp = 4492 [4061] K [1.00 σ]

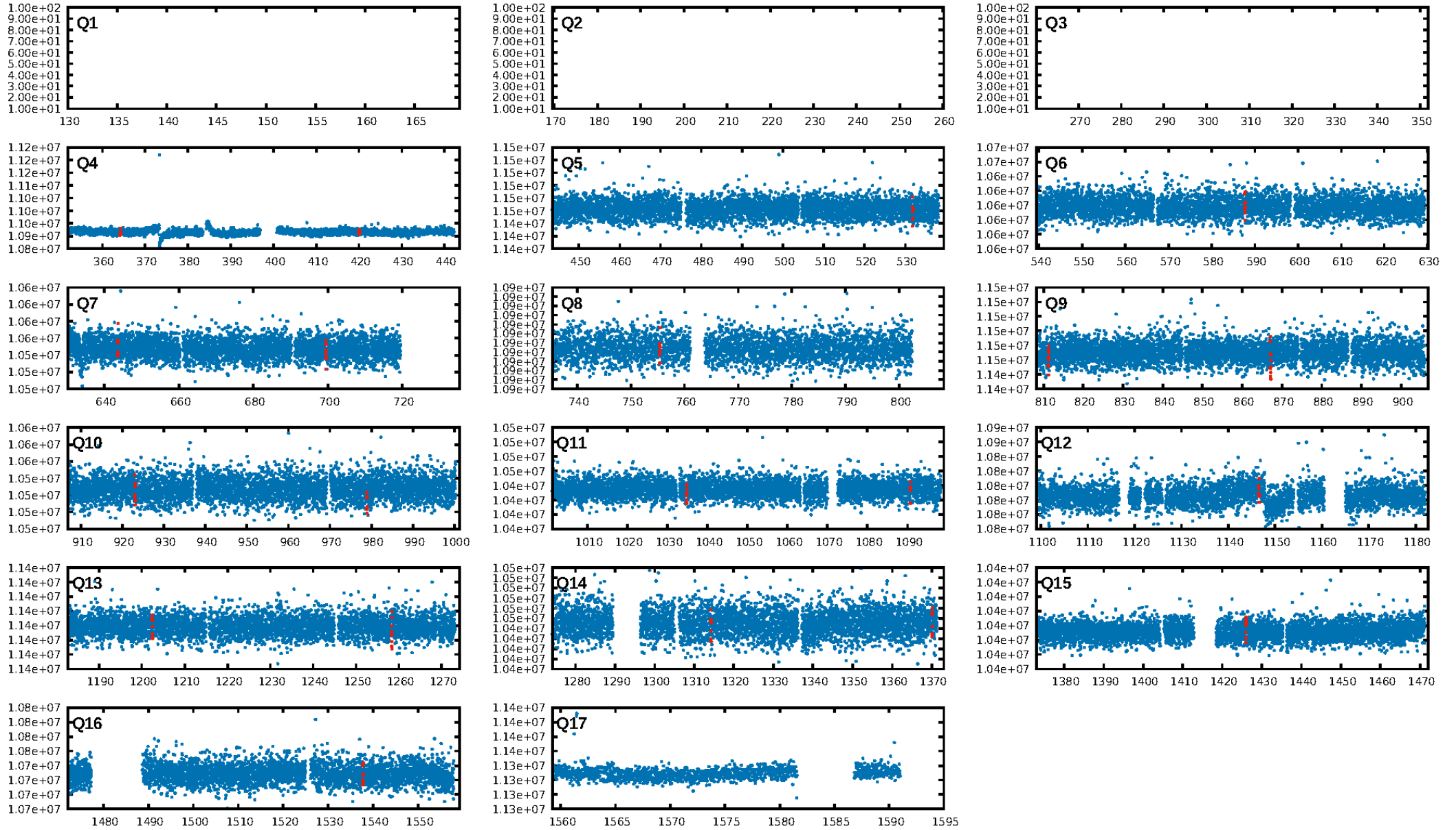
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.47e-13
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 99.36
Centroid-sig: 70.8%
Centroid-so: 1.535 arcsec [0.89 σ]
OotOffset-rm: 0.943 arcsec [0.77 σ]
KicOffset-rm: 1.010 arcsec [0.79 σ]
OotOffset-st: 2/1/2/3 [8]
KicOffset-st: 2/1/2/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 1.00 [13/13]

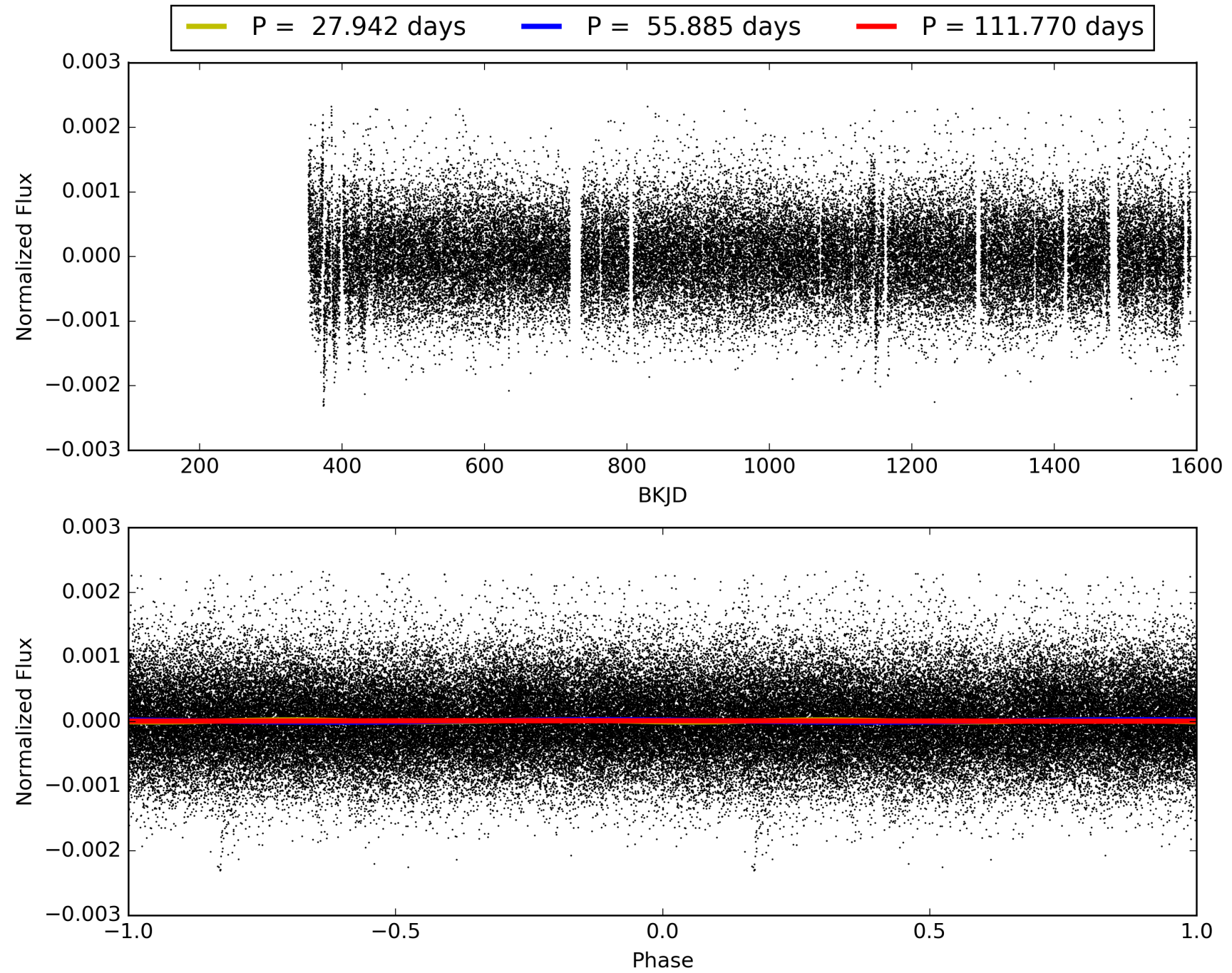
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:43:06 Z

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

TCE 008545603-01, PDC Light Curves

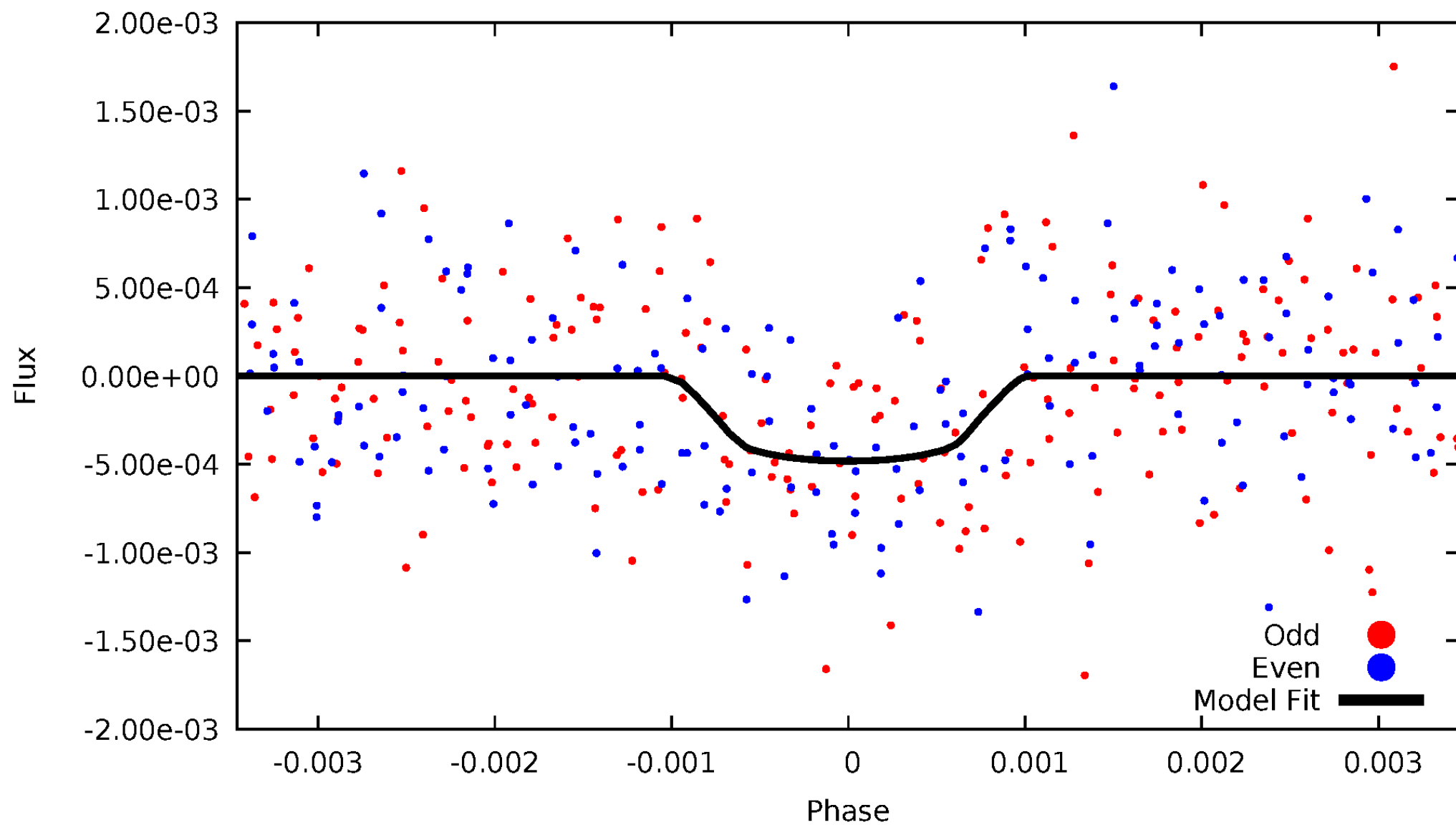


TCE 008545603-01



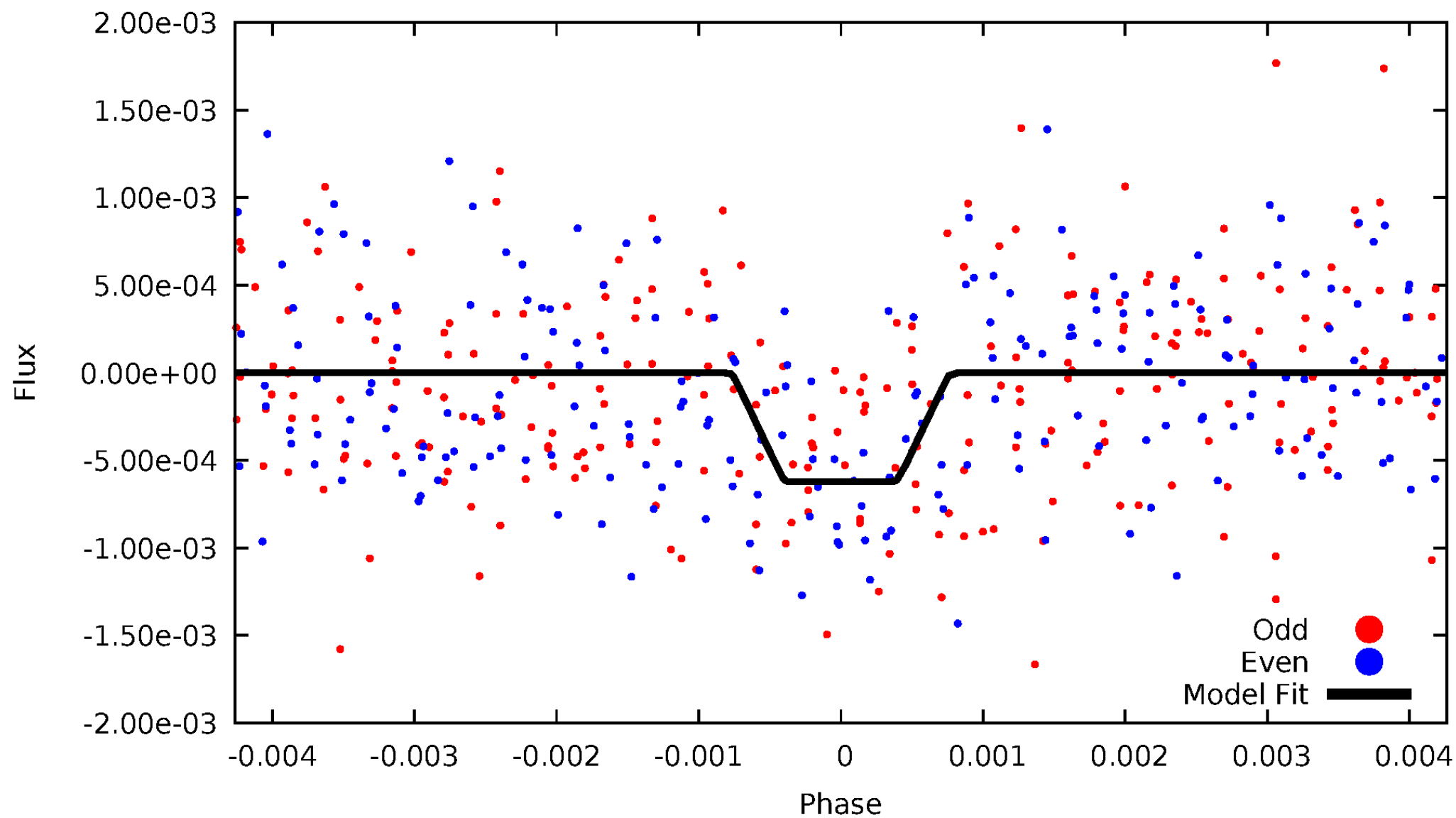
DV Odd/Even

TCE 008545603-01

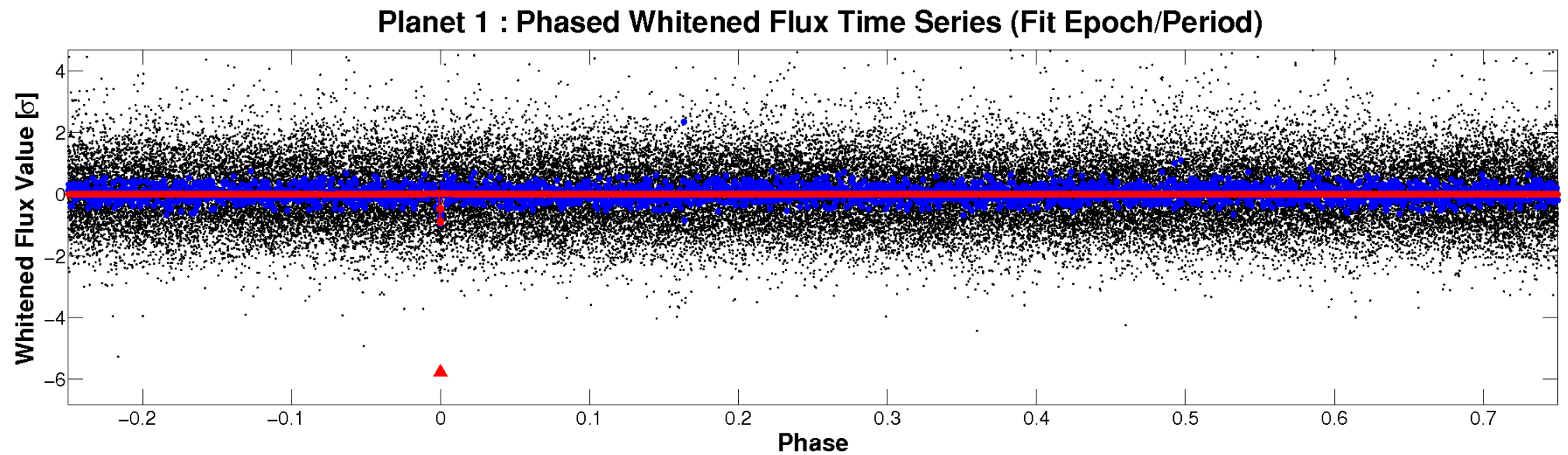
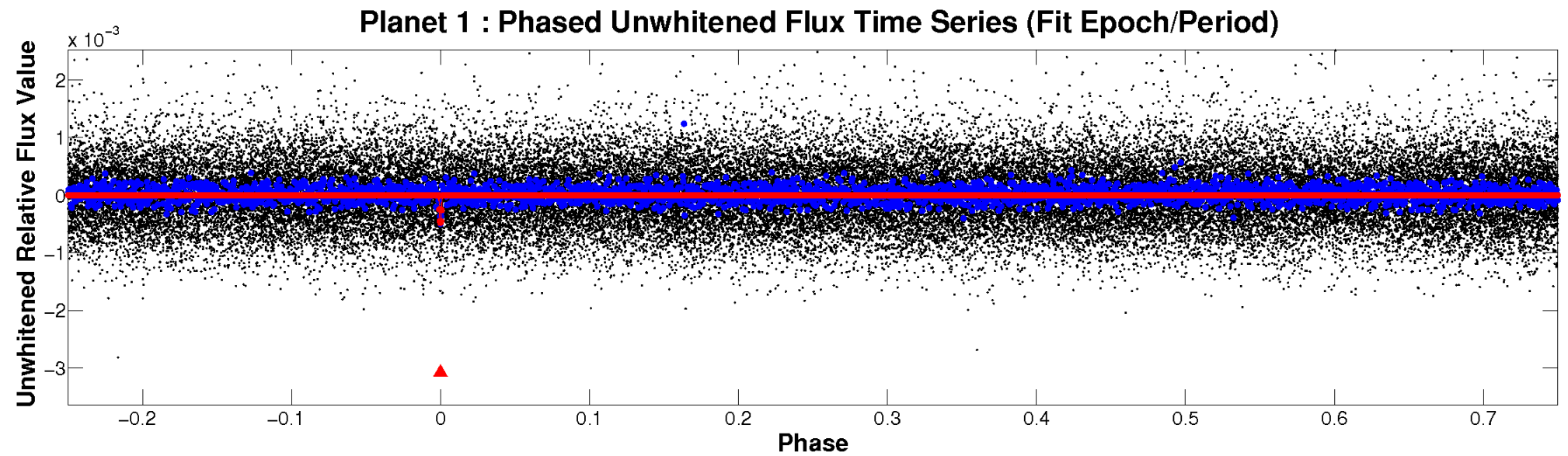


ALT Odd/Even

TCE 008545603-01

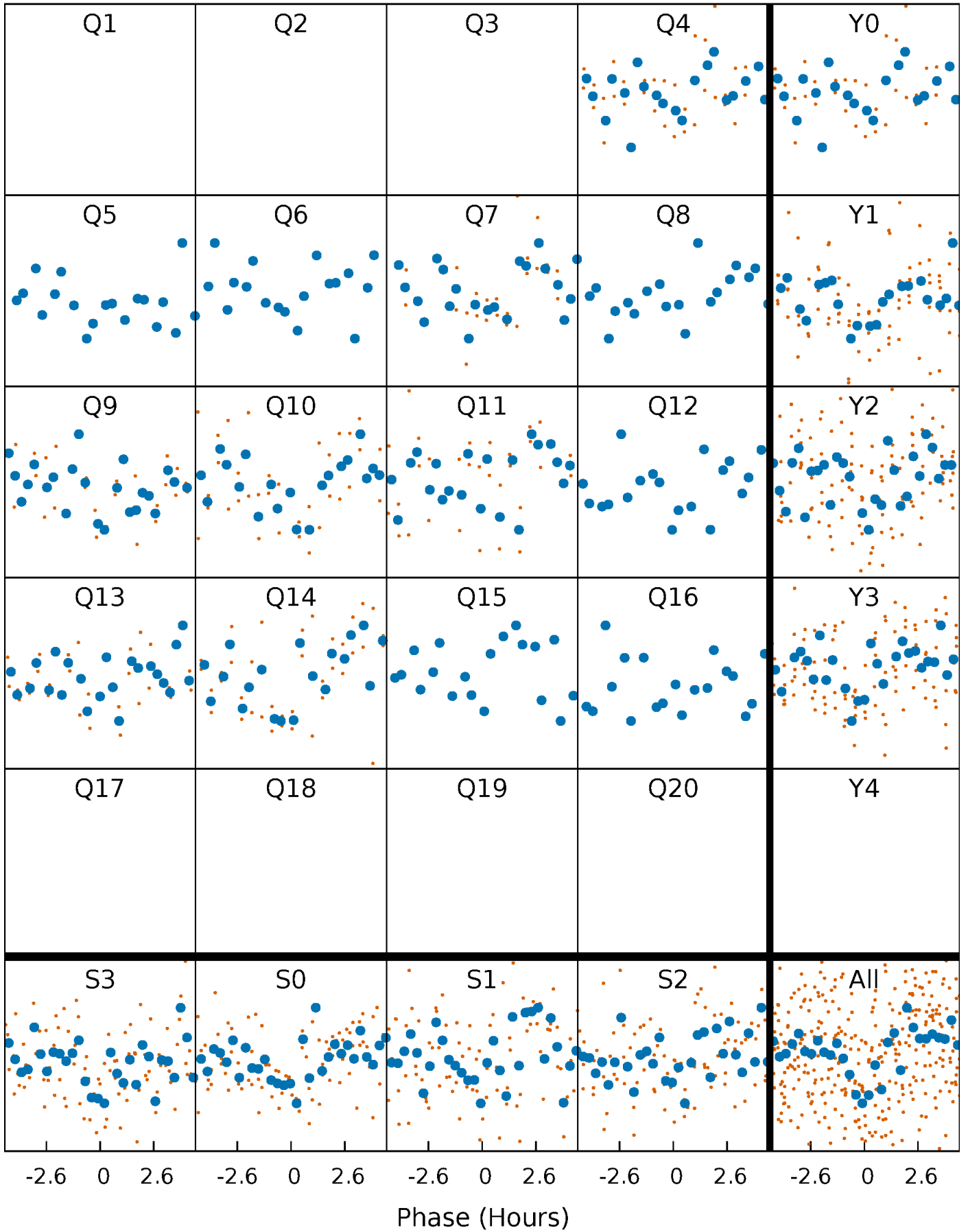


Non-Whitened Vs. Whitened Light Curve



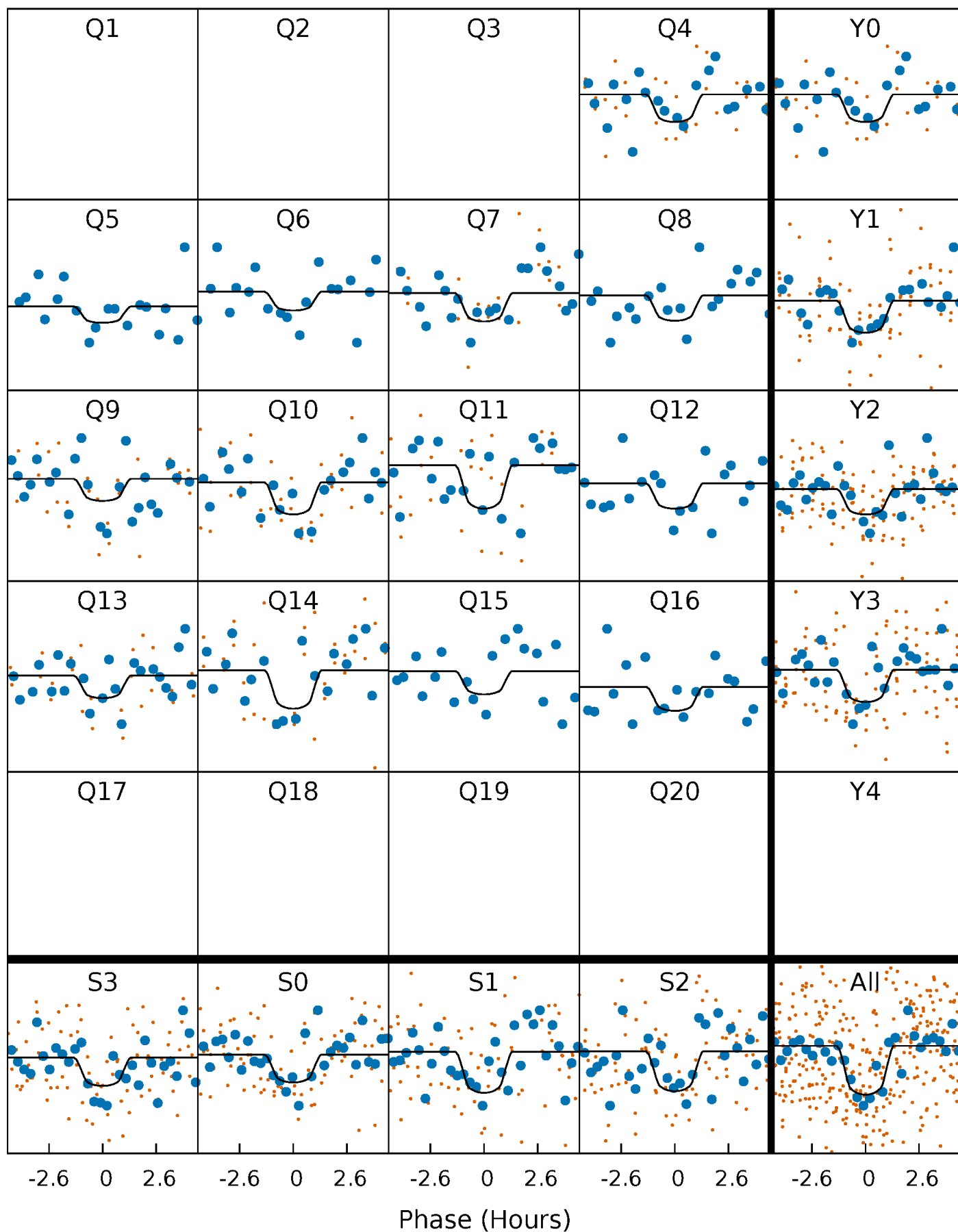
PDC Quarter-Phased Transit Curves

TCE 008545603-01 P= 55.884951 Days $T_0=140.645099$ (BKJD)



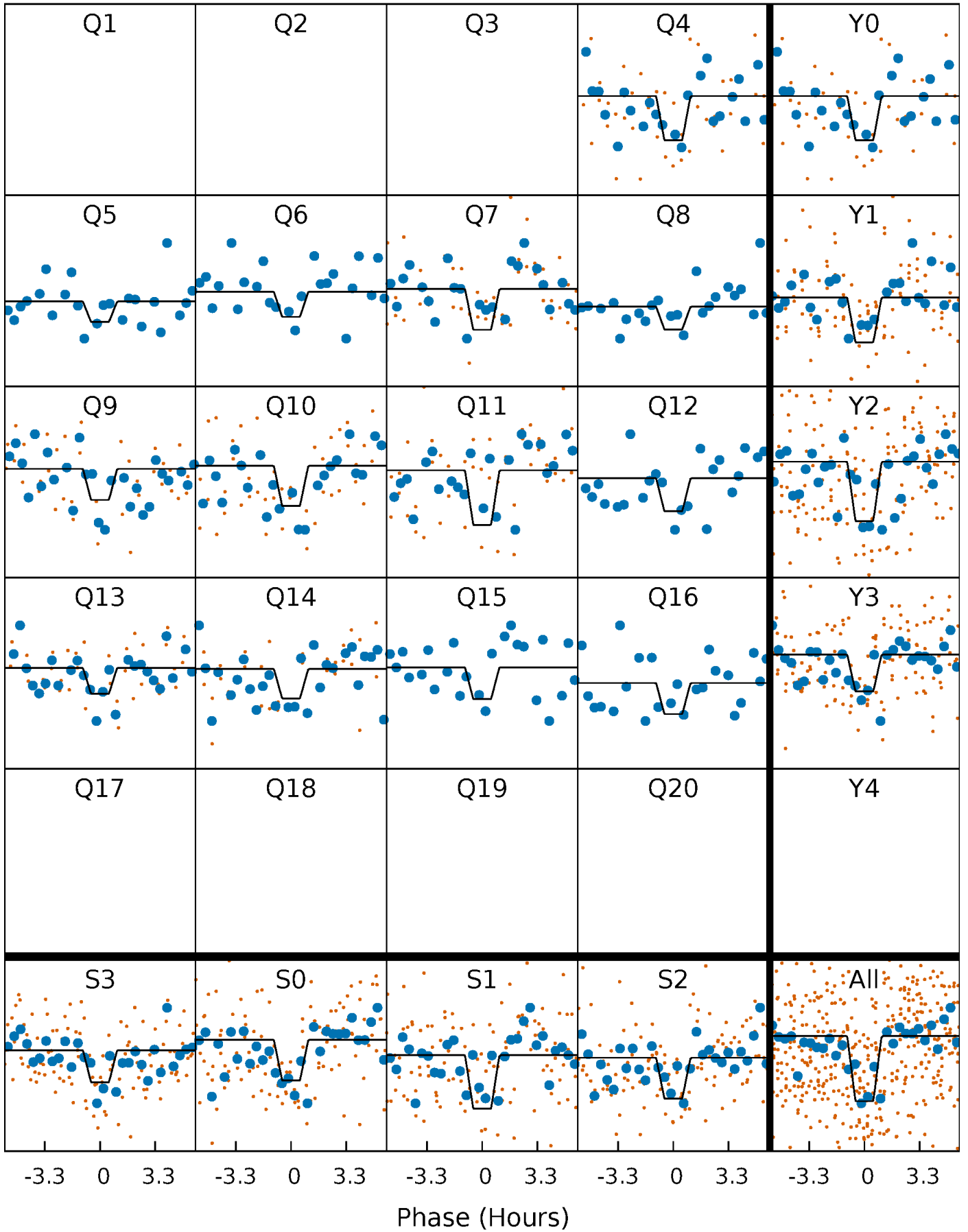
DV Quarter-Phased Transit Curves

TCE 008545603-01 P= 55.884951 Days $T_0=140.645099$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

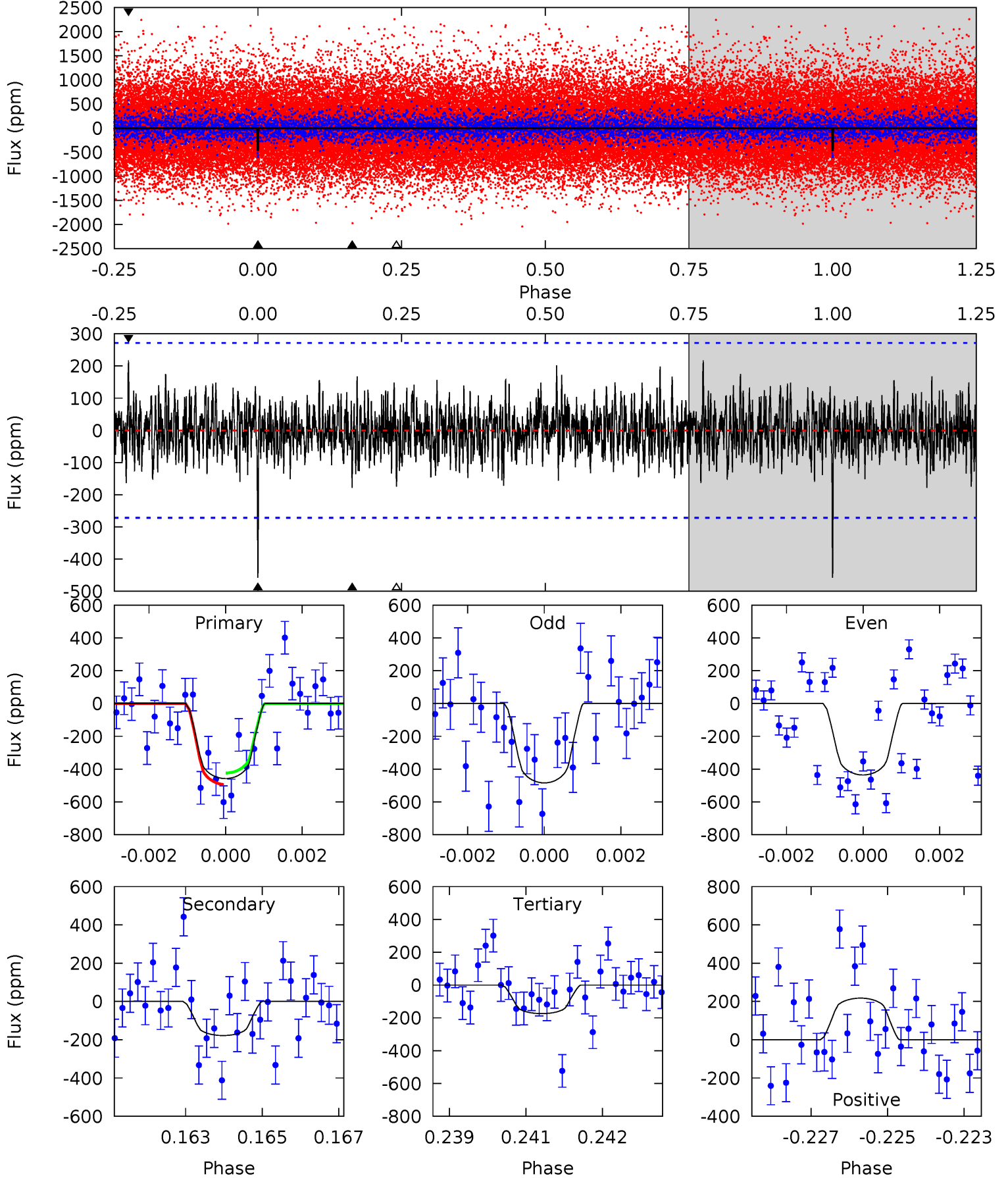
TCE 008545603-01 P= 55.884473 Days $T_0=140.649768$ (BKJD)



DV Model-Shift Uniqueness Test

008545603-01, P = 55.884951 Days, E = 140.645099 Days

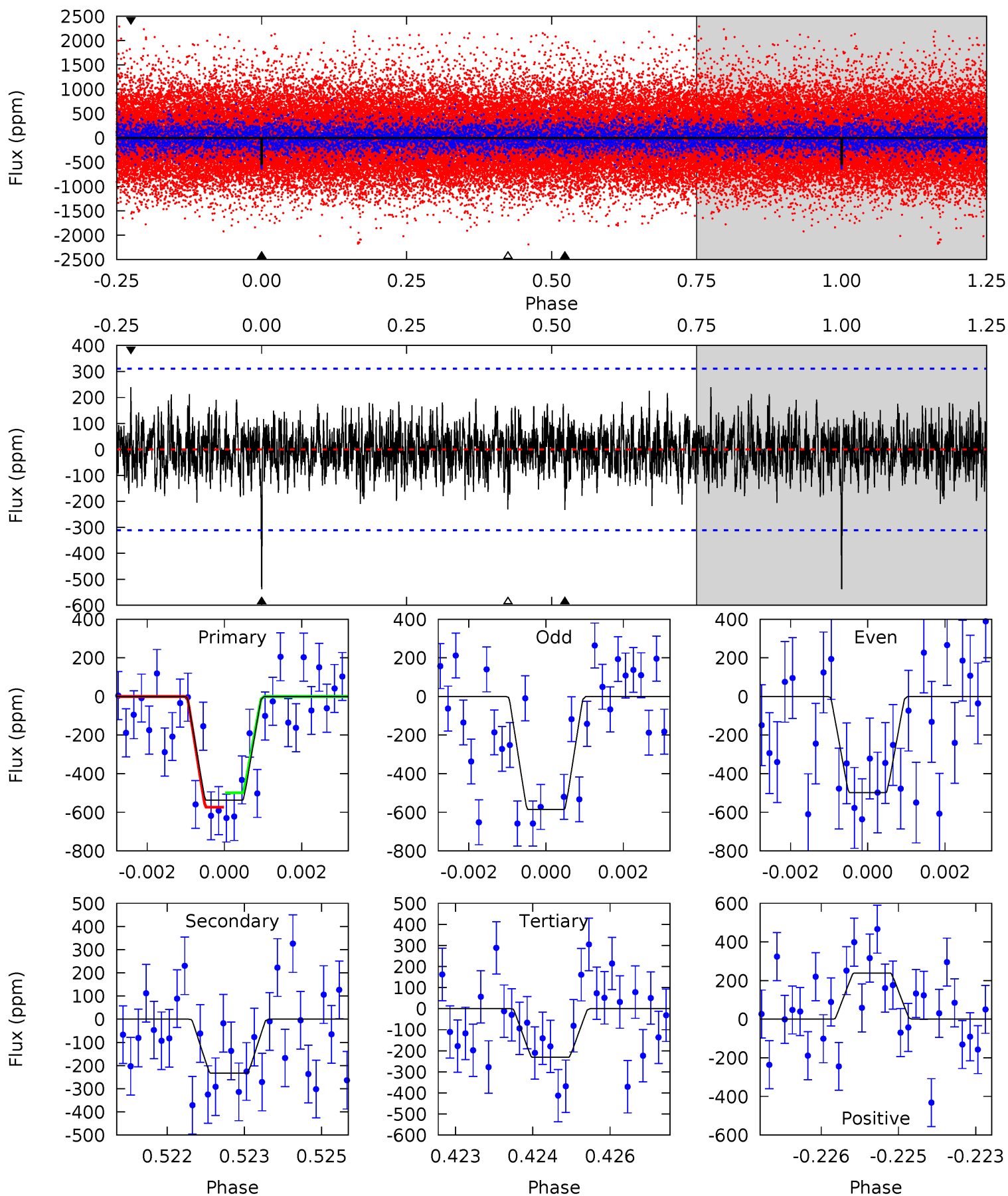
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.98	3.49	3.42	4.26	5.33	3.09	1.14	5.56	4.72	0.08	-0.77	0.47	1.10	0.32	0.68



Alt Model-Shift Uniqueness Test

008545603-01, $P = 55.884473$ Days, $E = 140.649768$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.28	4.02	3.98	4.12	5.37	3.16	1.18	5.29	5.15	0.04	-0.10	0.74	1.00	0.31	0.64



Stellar Parameters For KIC 008545603

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5668^{+169}_{-186}	$4.545^{+0.035}_{-0.196}$	$-0.020^{+0.300}_{-0.300}$	$0.868^{+0.248}_{-0.078}$	$0.963^{+0.104}_{-0.115}$	$2.073^{+0.396}_{-1.043}$
	+3%/-3%	+1%/-4%	+1500%/-1500%	+29%/-9%	+11%/-12%	+19%/-50%
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 008545603-01 / KOI 7893.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-178 ± 51	$3.90^{+3.49}_{-2.71}$	629^{+47}_{-31}	3700^{+2188}_{-648}	493^{+4959}_{-360}
Alt.	-233 ± 58	$3.98^{+3.93}_{-2.83}$	627^{+44}_{-28}	3837^{+2682}_{-728}	607^{+7246}_{-456}

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

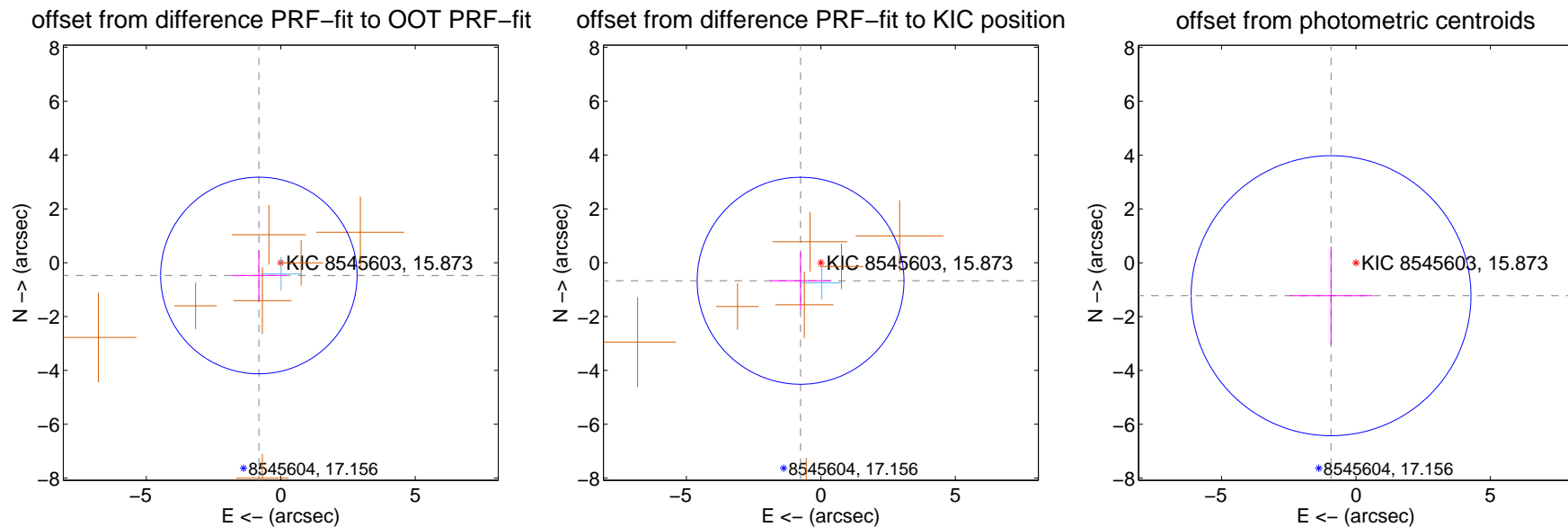
DV Centroid Data

Supplemental centroid analysis for 008545603-01. Kepler magnitude: 15.87. Transit SNR 7.46

There are 1 quarters with good PRF difference image offsets

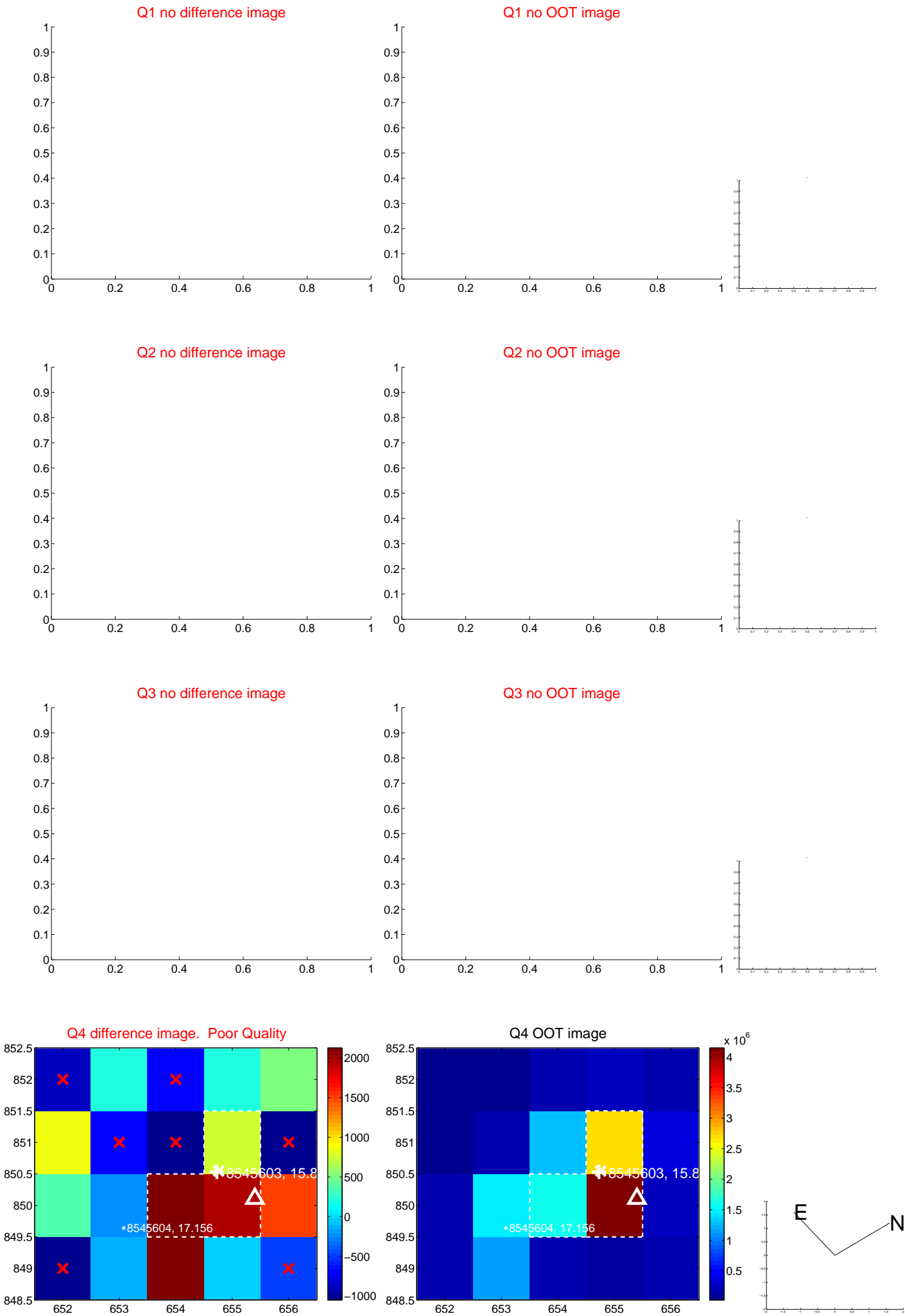
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.943 ± 1.217	0.77	0.814 ± 1.018	-0.476 ± 0.947
PRF-fit source offset from KIC position	1.010 ± 1.281	0.79	0.754 ± 1.146	-0.672 ± 1.084
photometric centroid source offset	1.53 ± 1.73	0.89	0.93 ± 1.55	-1.22 ± 1.83

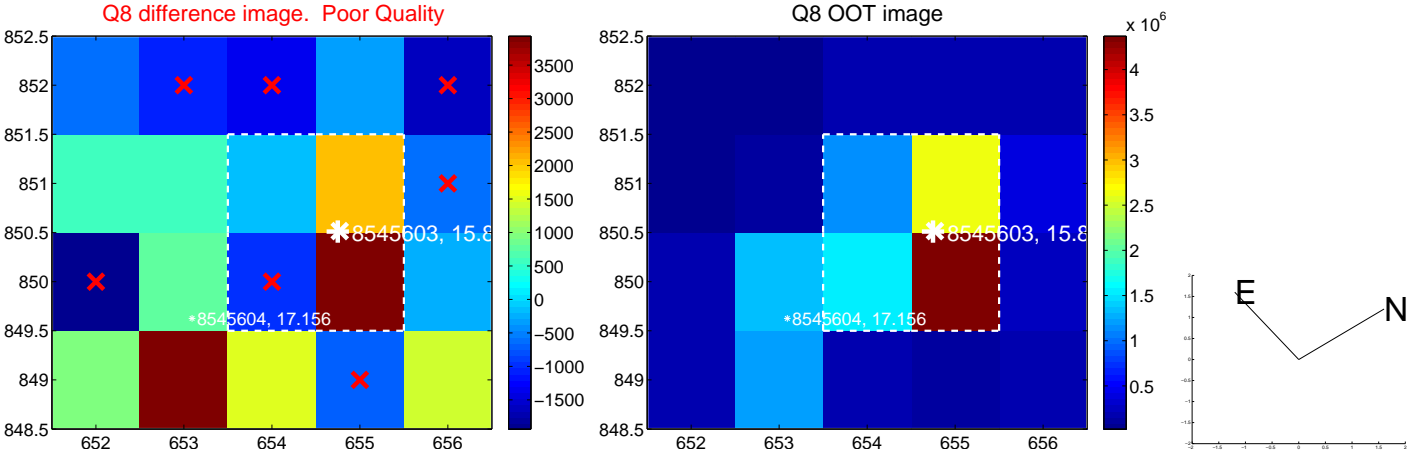
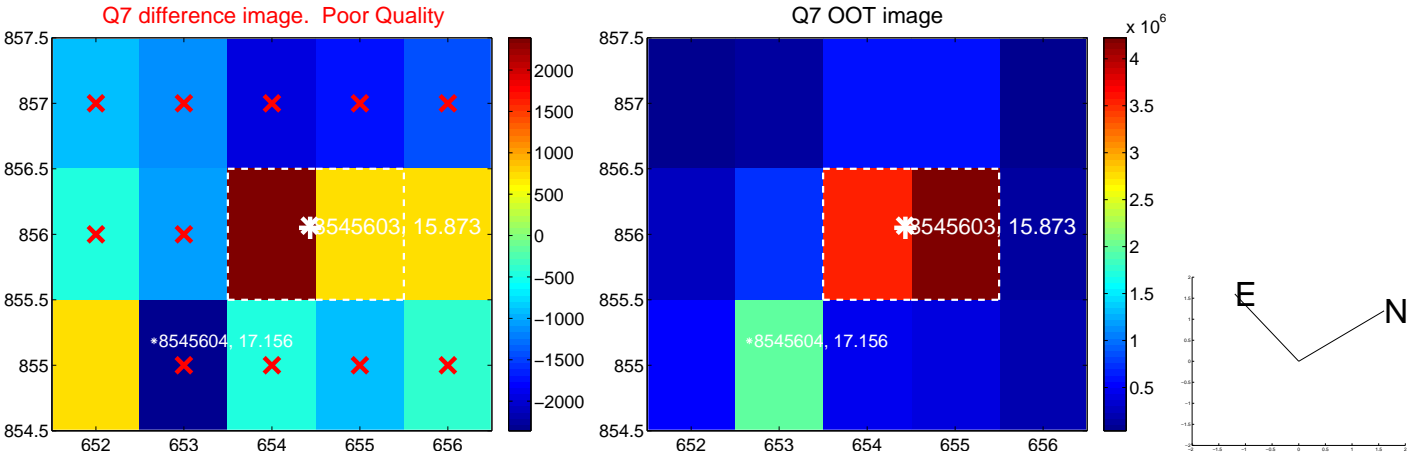
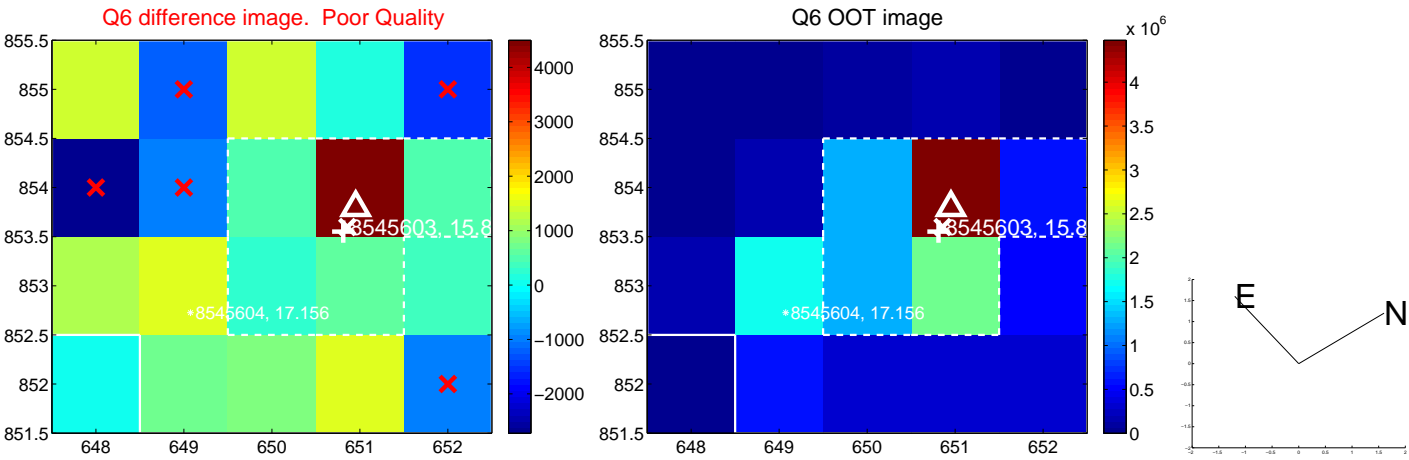
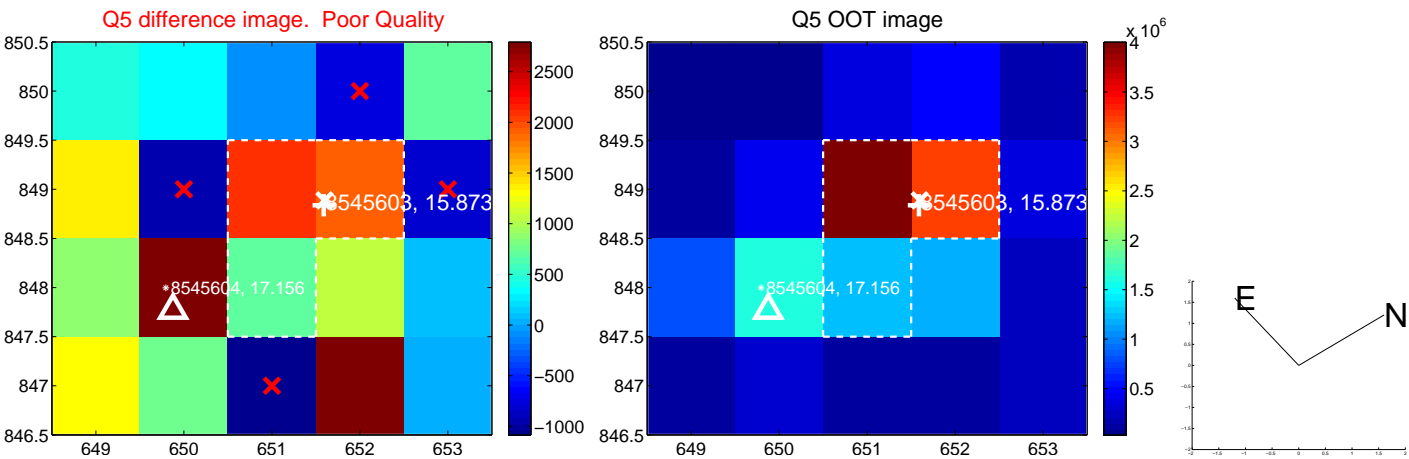


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

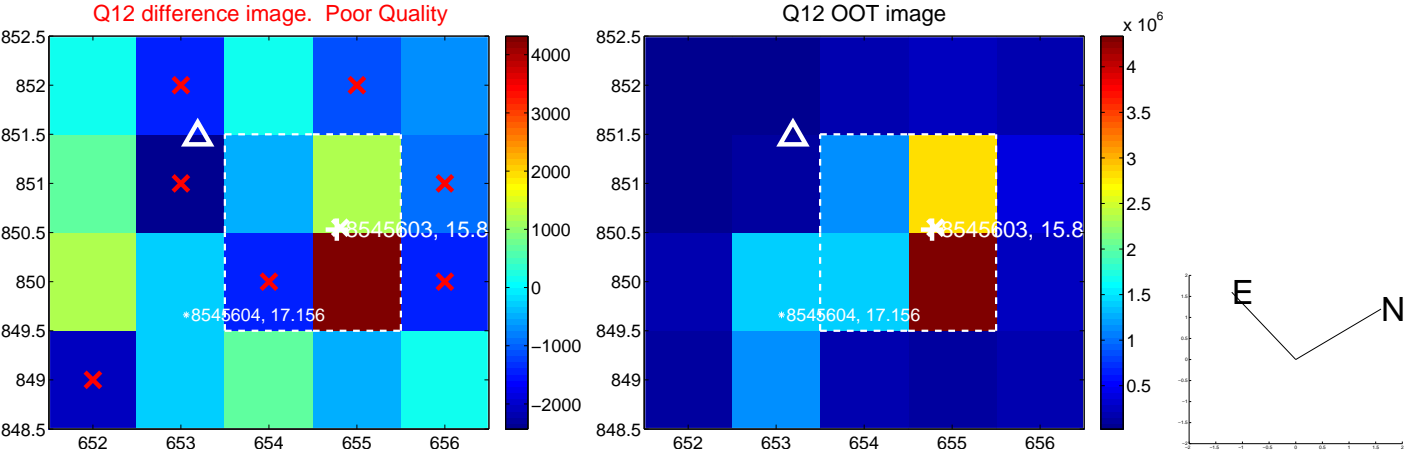
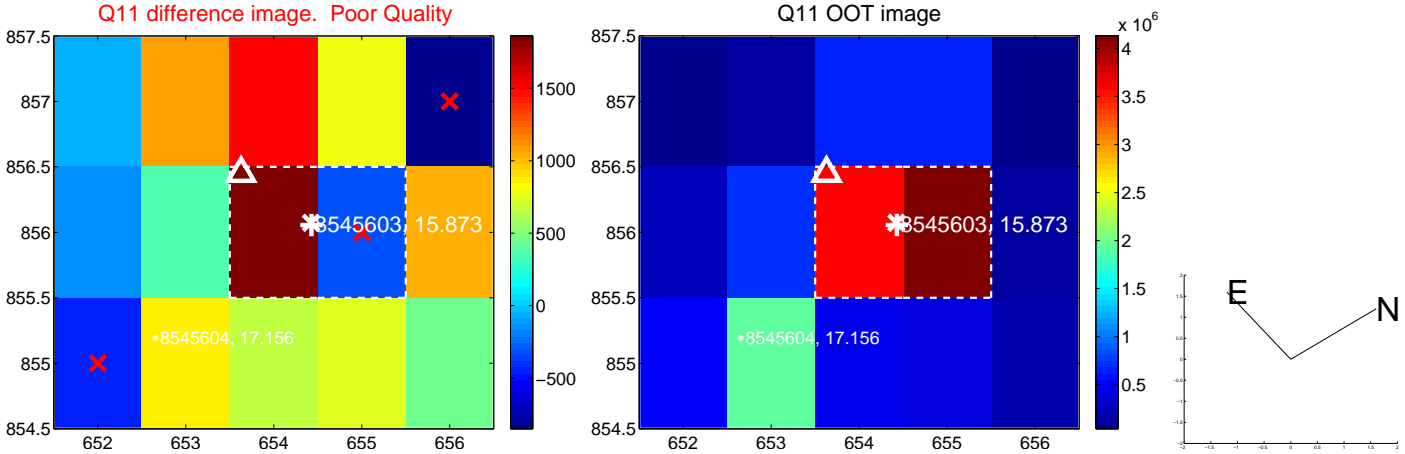
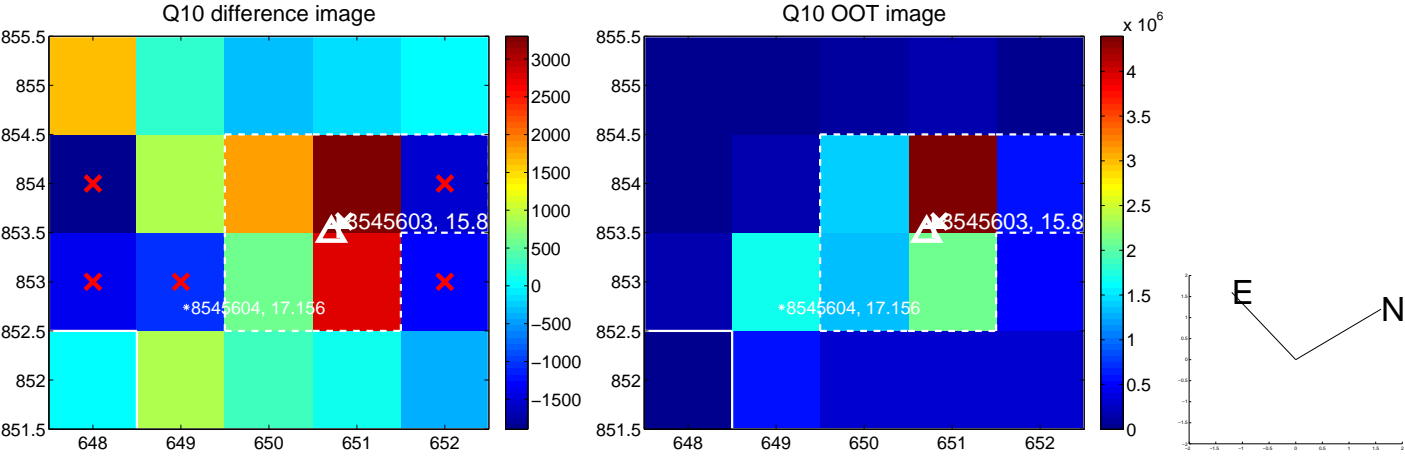
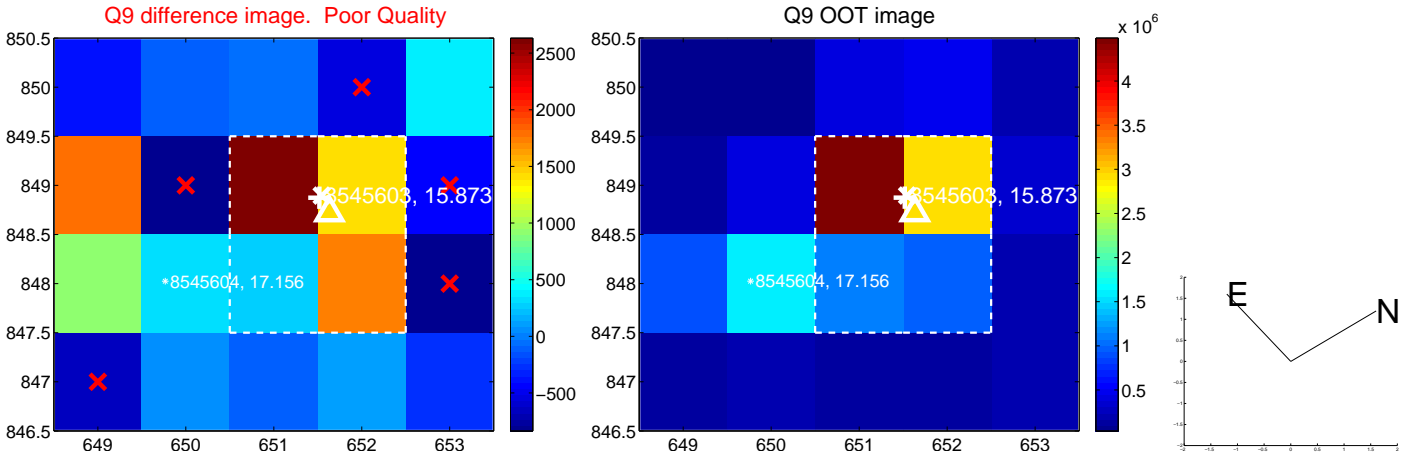
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



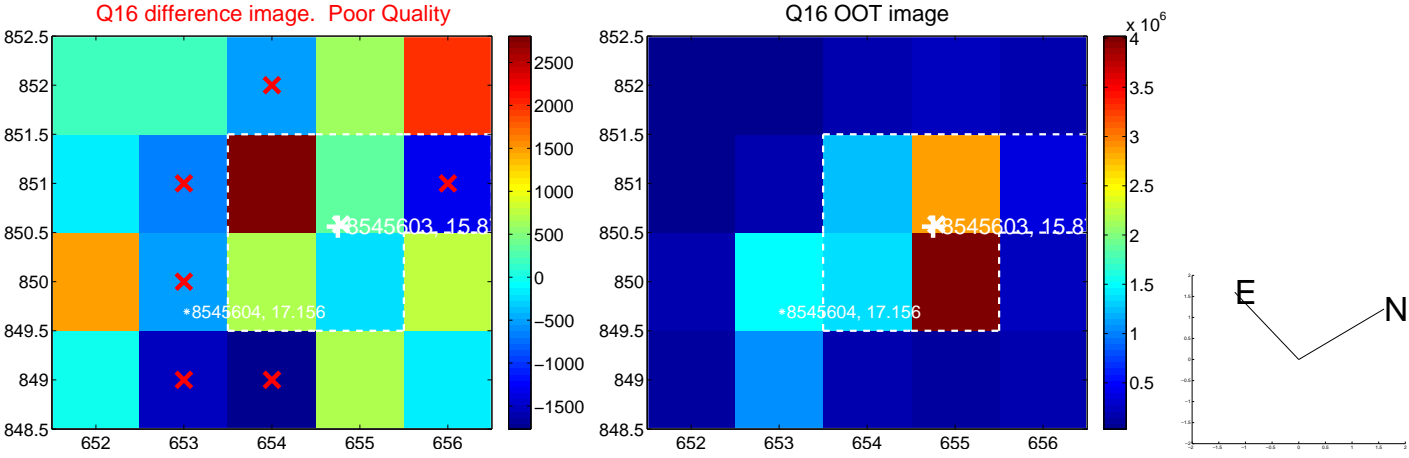
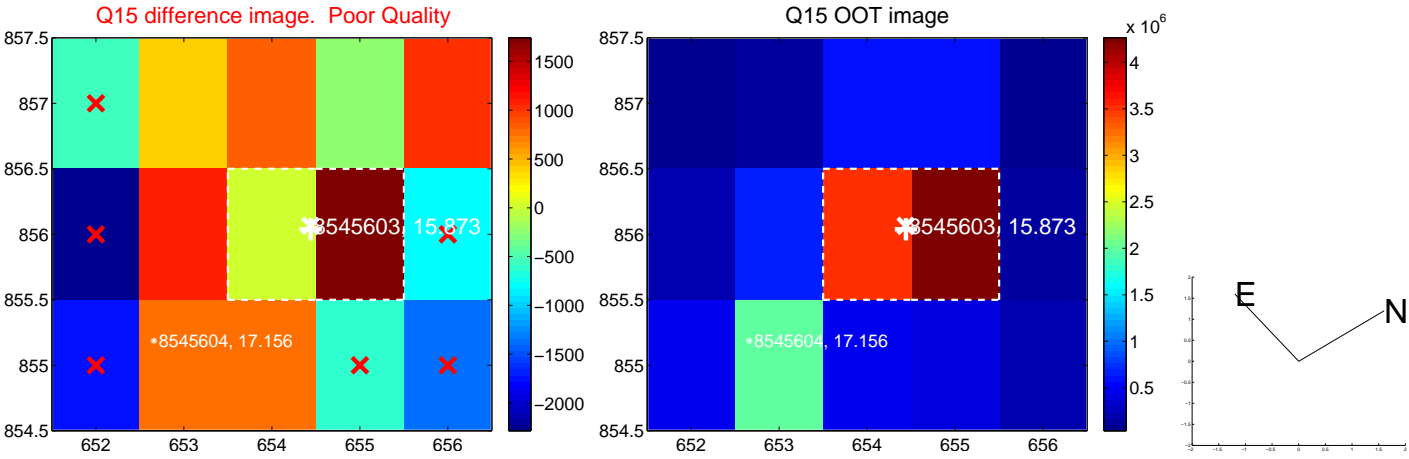
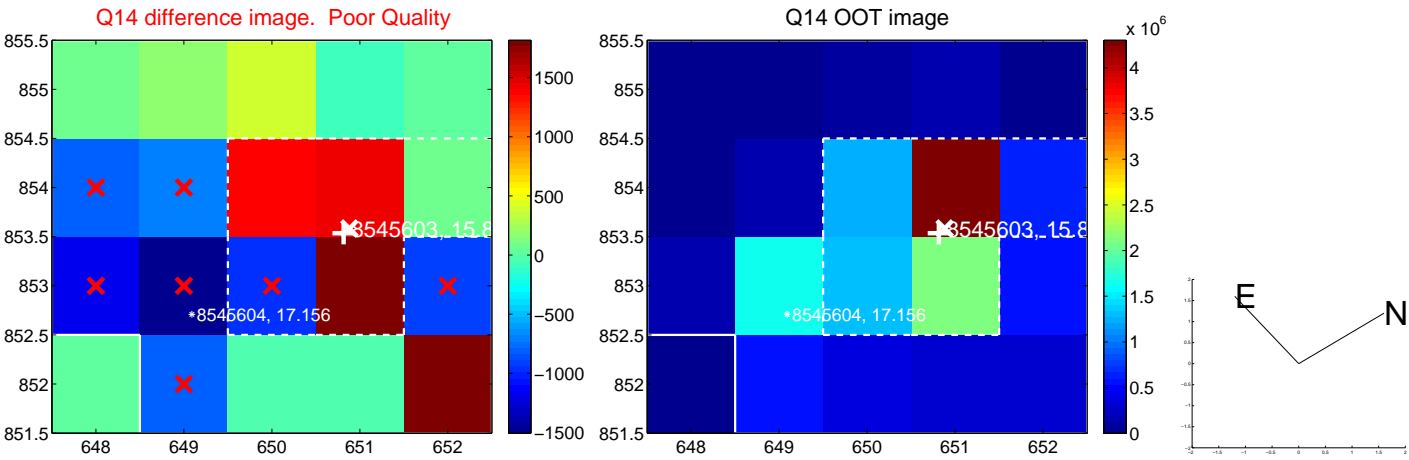
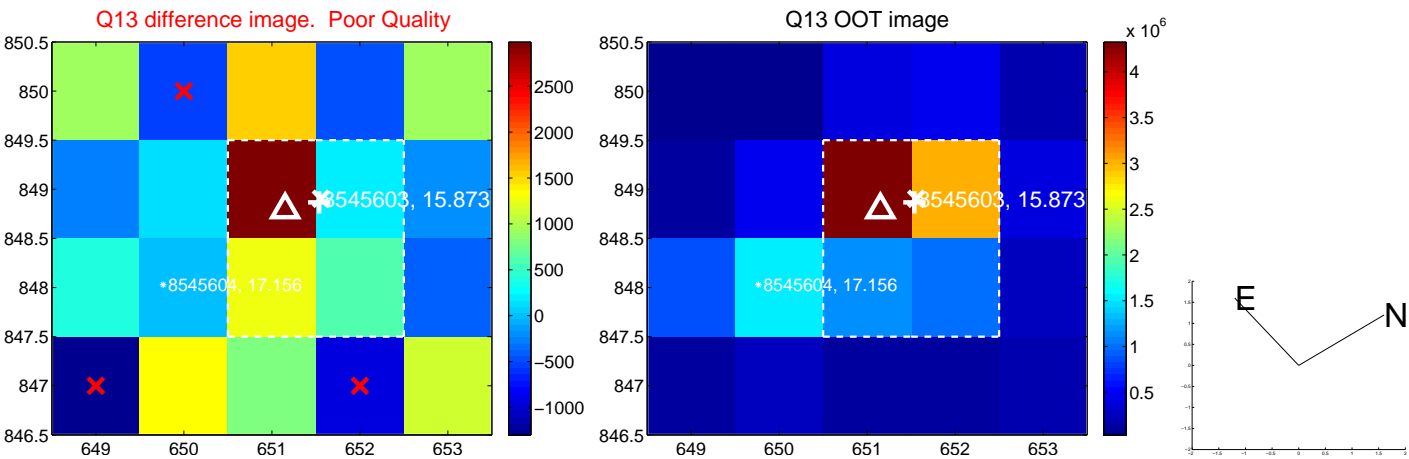
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



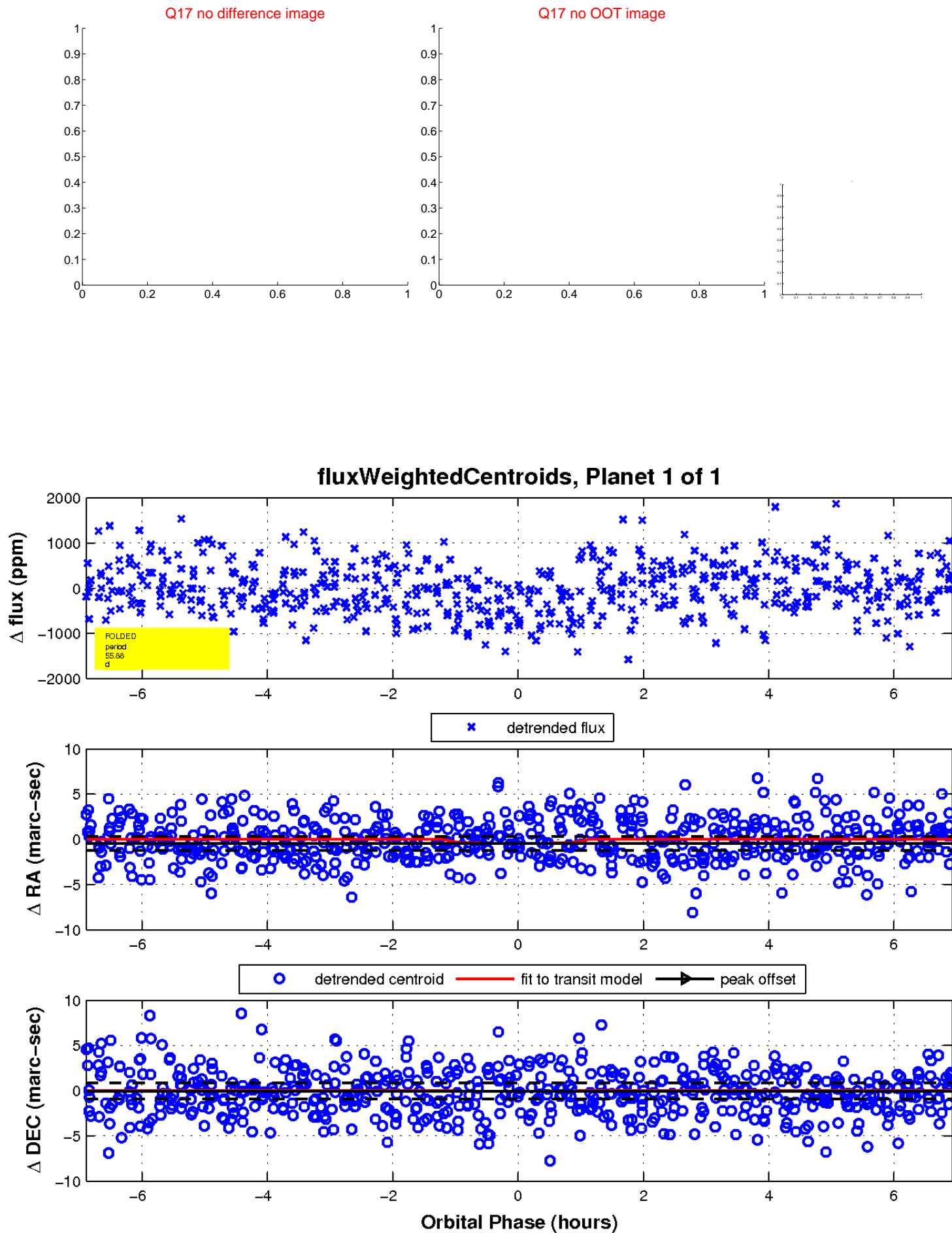
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UKIRT Image

Declination

