

KIC 008846809

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})
008846809-01	OBS	No	558.175204	450.792837	22.8	7.945	11.3	5.4	3.07	7846	1.69	11.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008846809-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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 008846809-01

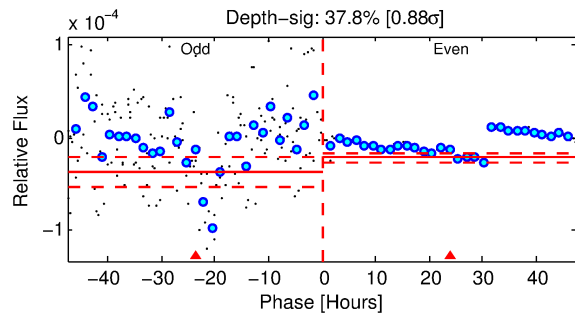
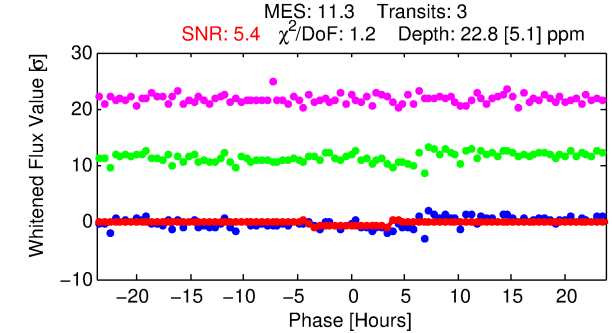
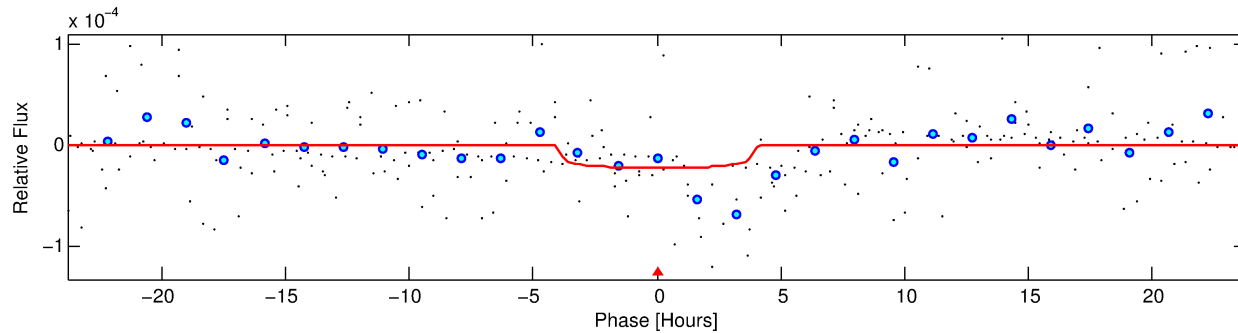
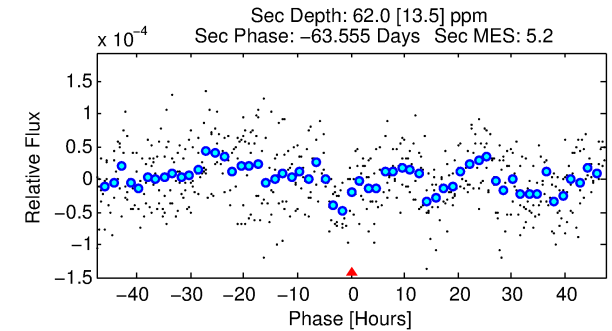
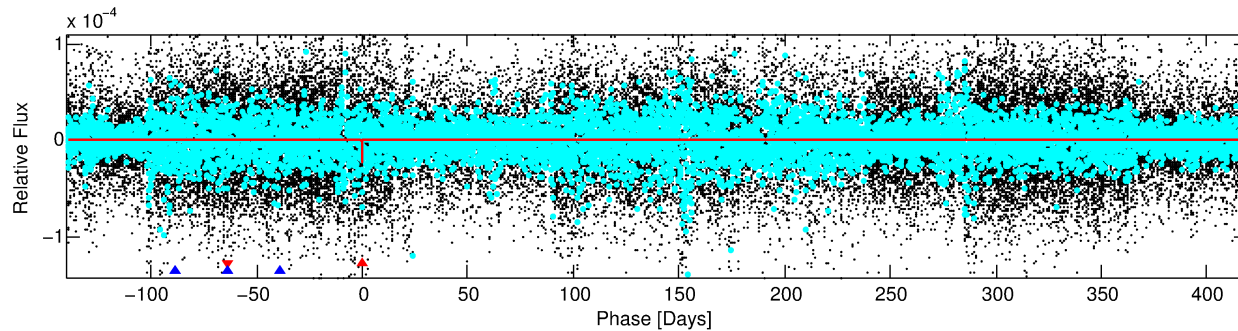
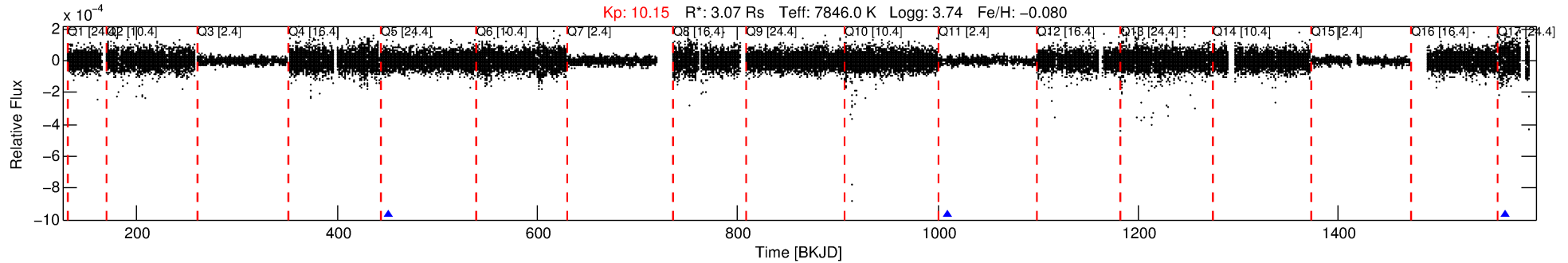
No Significant Match Found

DV One-Page Summary

KIC: 8846809 Candidate: 1 of 2 Period: 558.175 d

KOI: K07597 Corr: No Ephemeris Match

Kp: 10.15 R*: 3.07 Rs Teff: 7846.0 K Logg: 3.74 Fe/H: -0.080



DV Fit Results:

Period = 558.17520 [0.03115] d
Epoch = 450.7928 [0.0315] BKJD
Rp/R* = 0.0051 [0.0011]
a/R* = 247.75 [258.43]
b = 0.89 [0.25]
Seff = 11.83 [8.54]
Teq = 473 [85] K
Rp = 1.69 [0.83] Re
a = 1.6428 [0.7096] AU
Ag = 32146.54 [27680.02] [1.16σ]
Teffp = 9790 [1284] K [7.24σ]

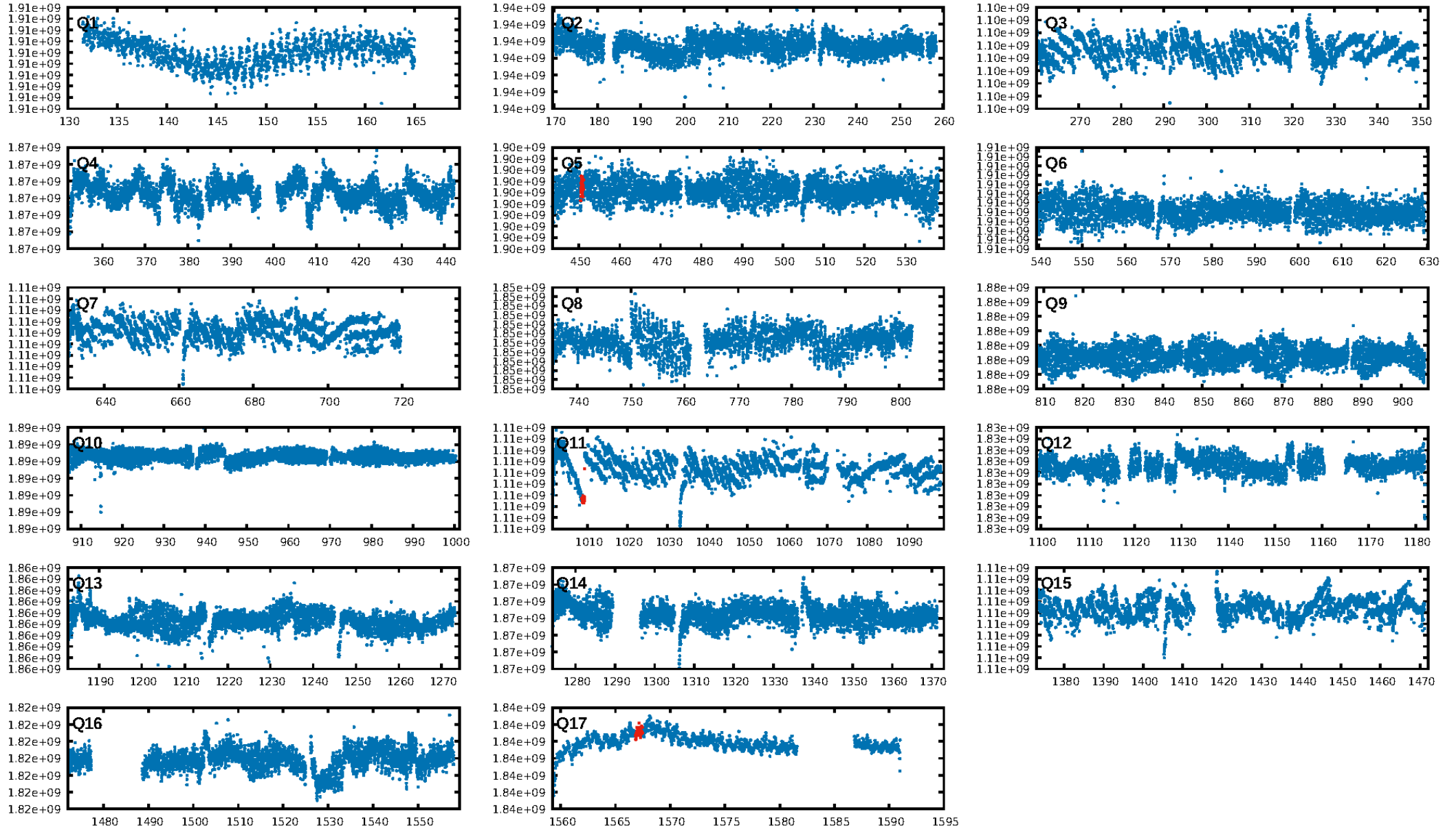
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [19.61σ]
ModelChiSquare2-sig: 87.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 8.64e-19
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.5%
Centroid-so: 12.346 arcsec [1.84σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

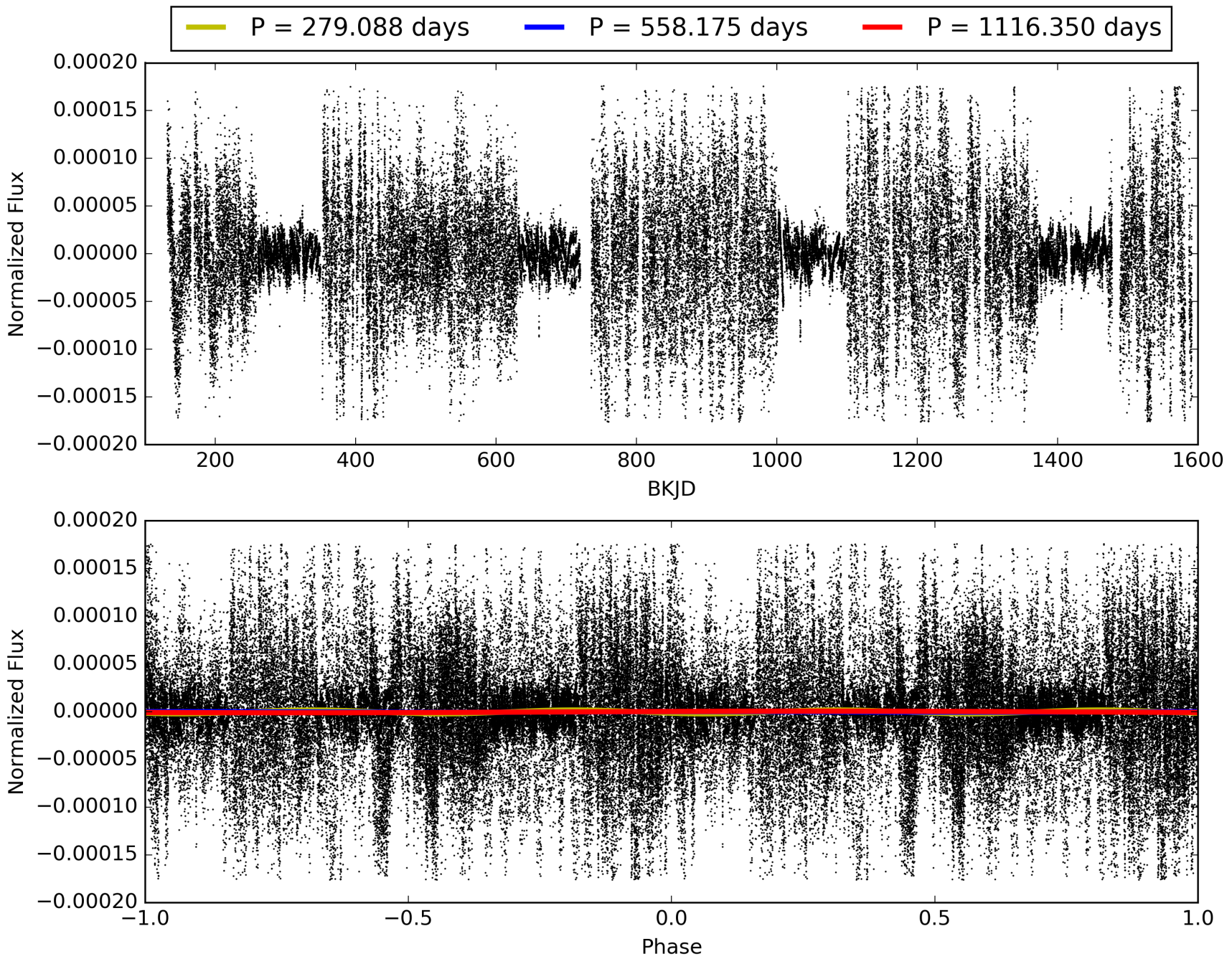
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:53:15 Z

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

TCE 008846809-01, PDC Light Curves

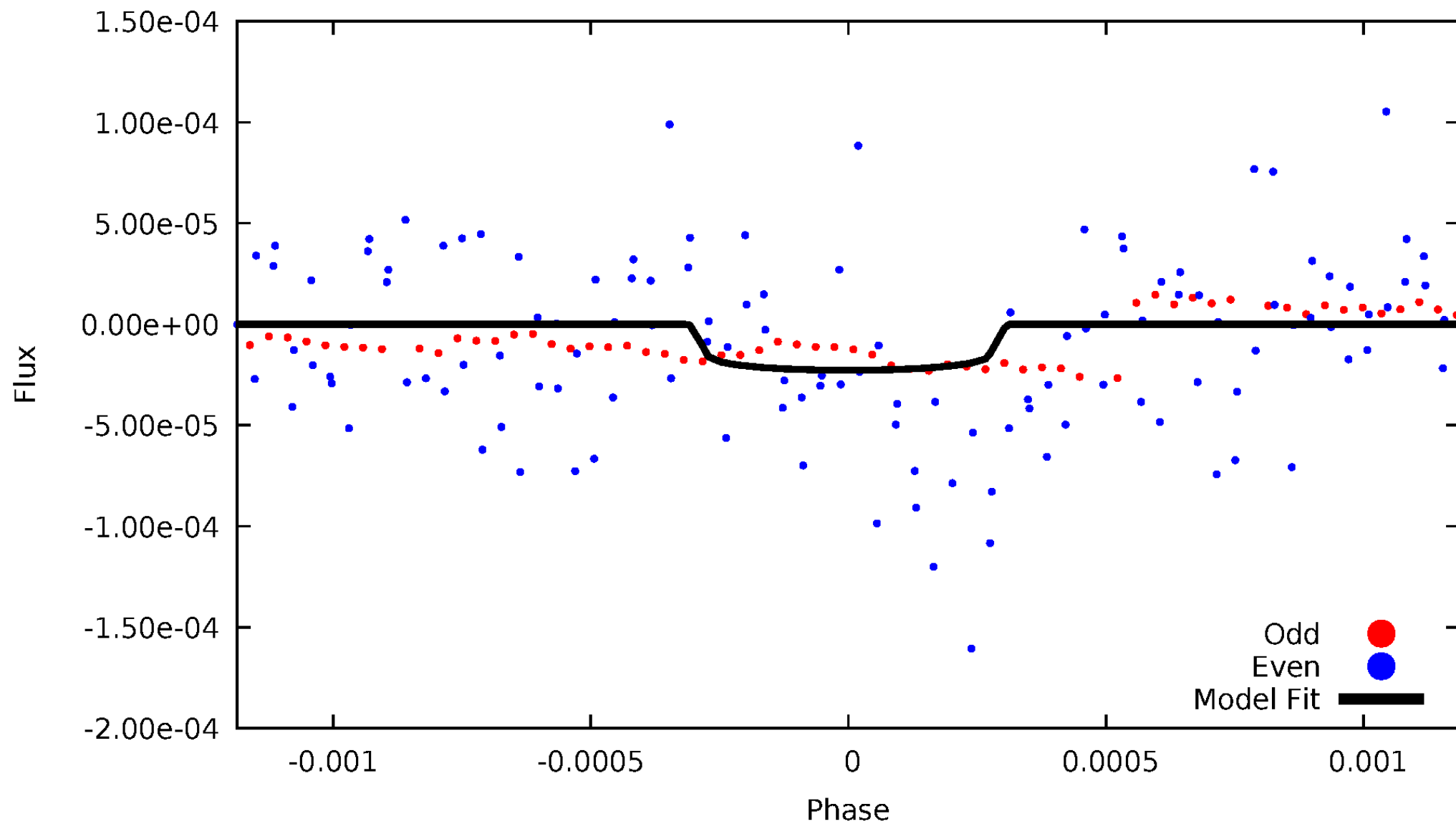


TCE 008846809-01



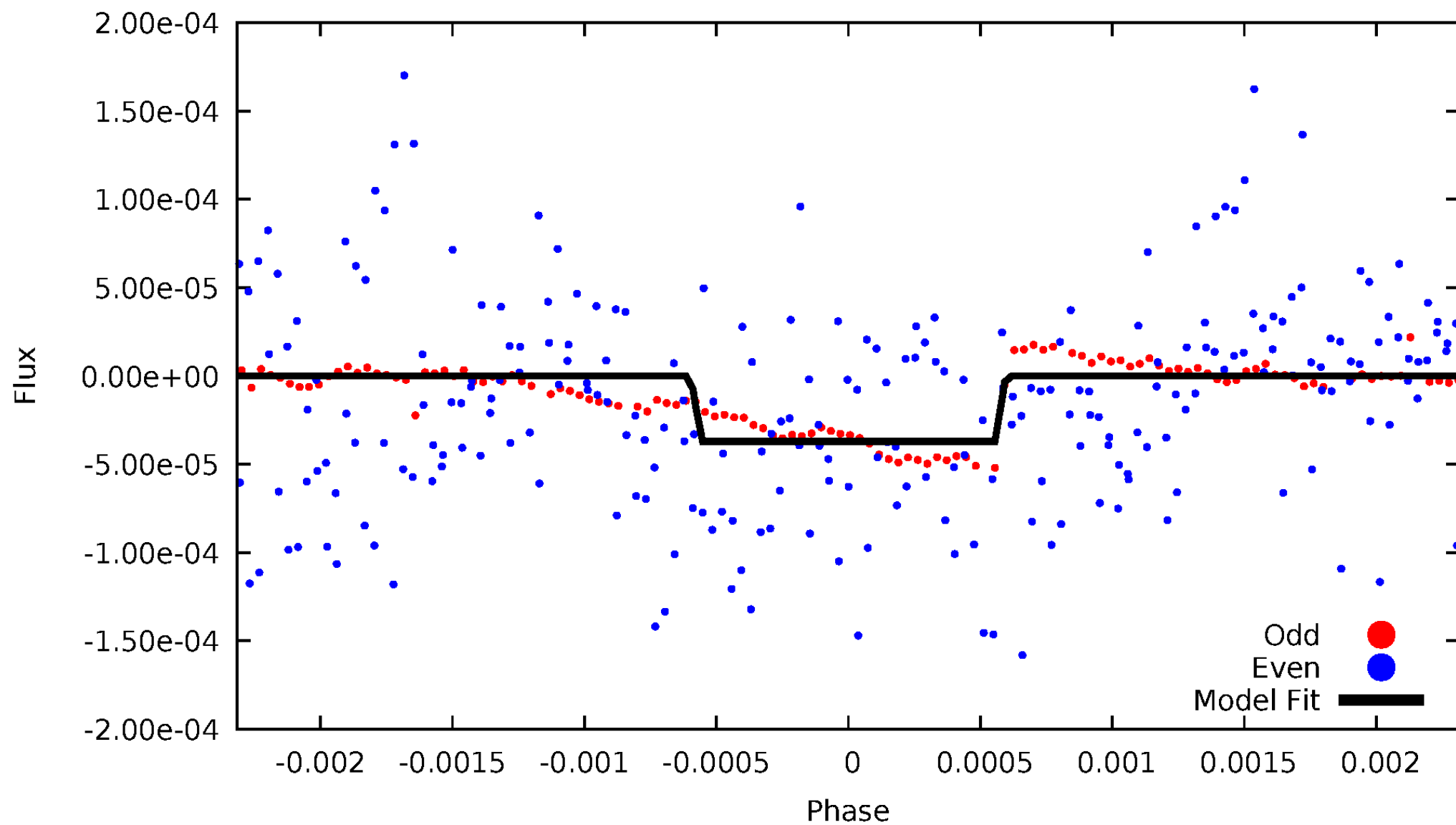
DV Odd/Even

TCE 008846809-01

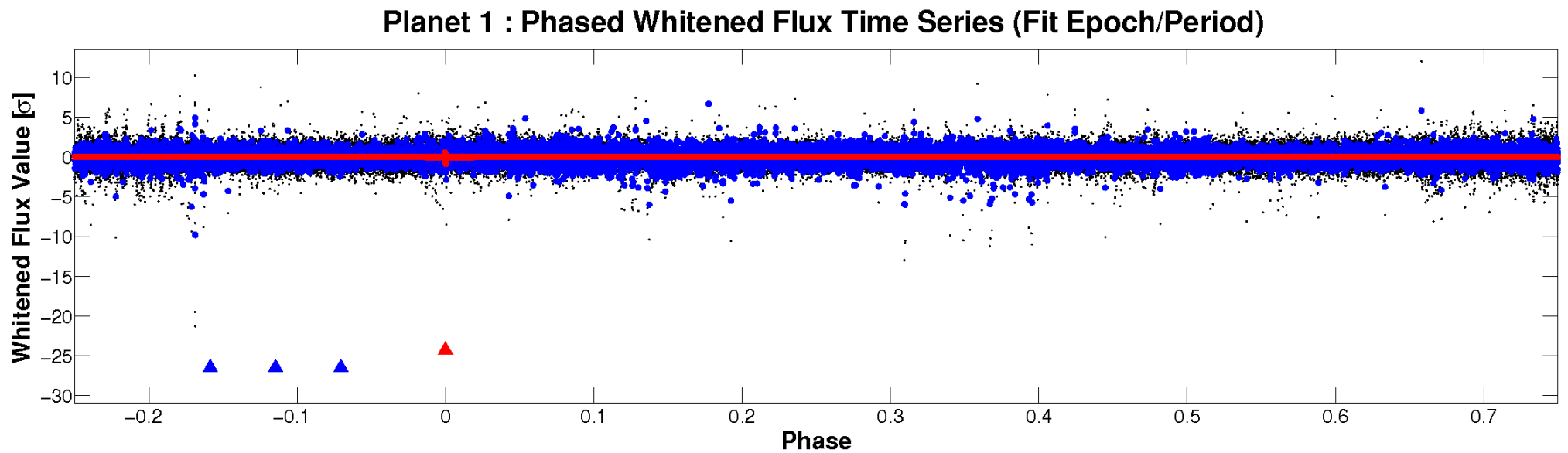
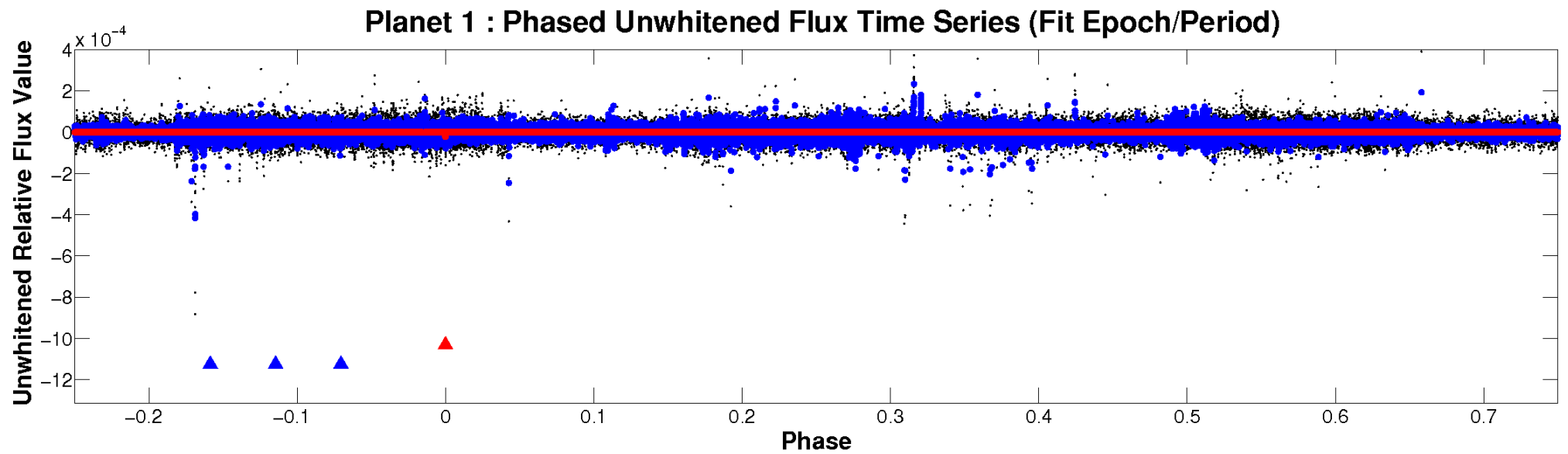


ALT Odd/Even

TCE 008846809-01

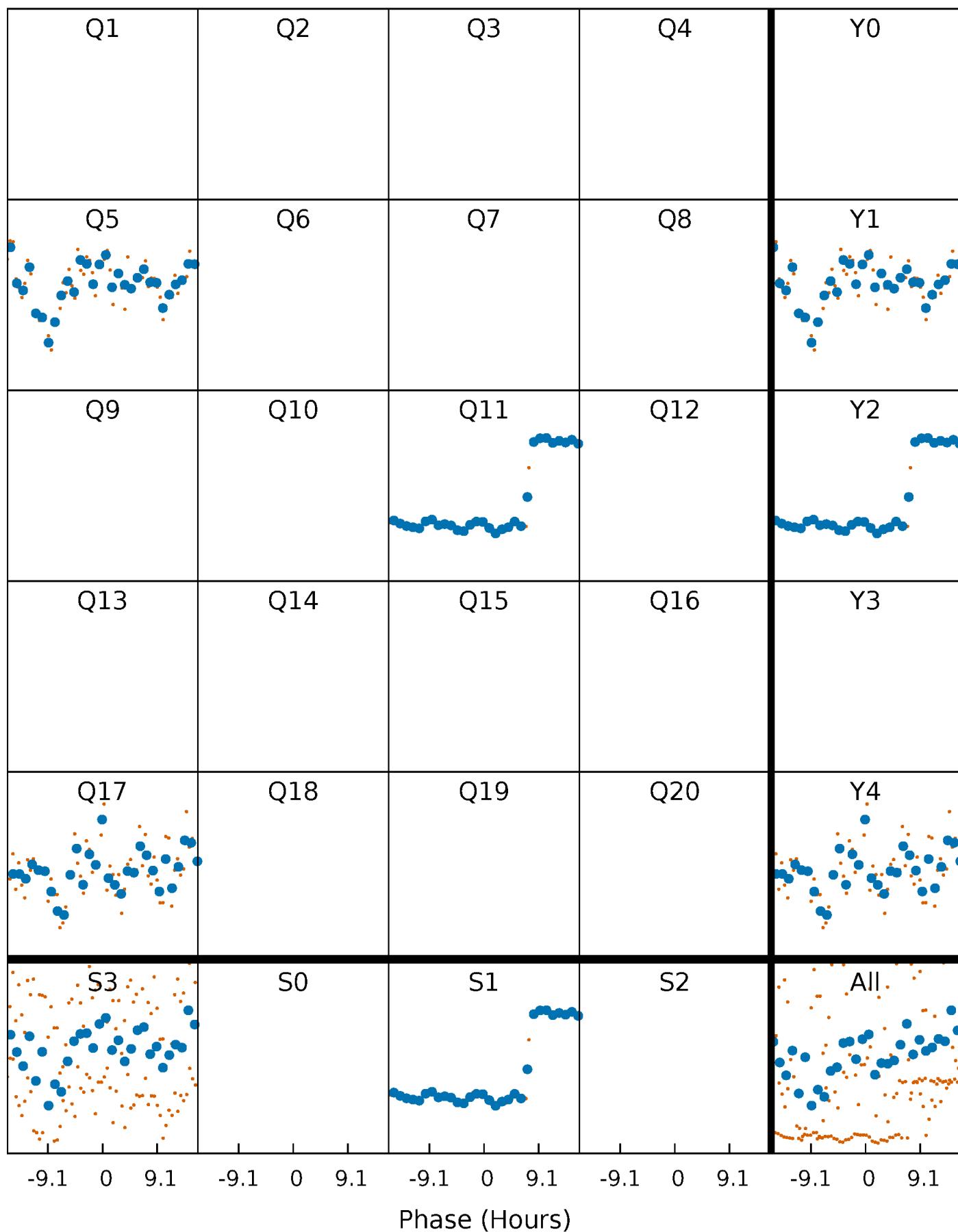


Non-Whitened Vs. Whitened Light Curve



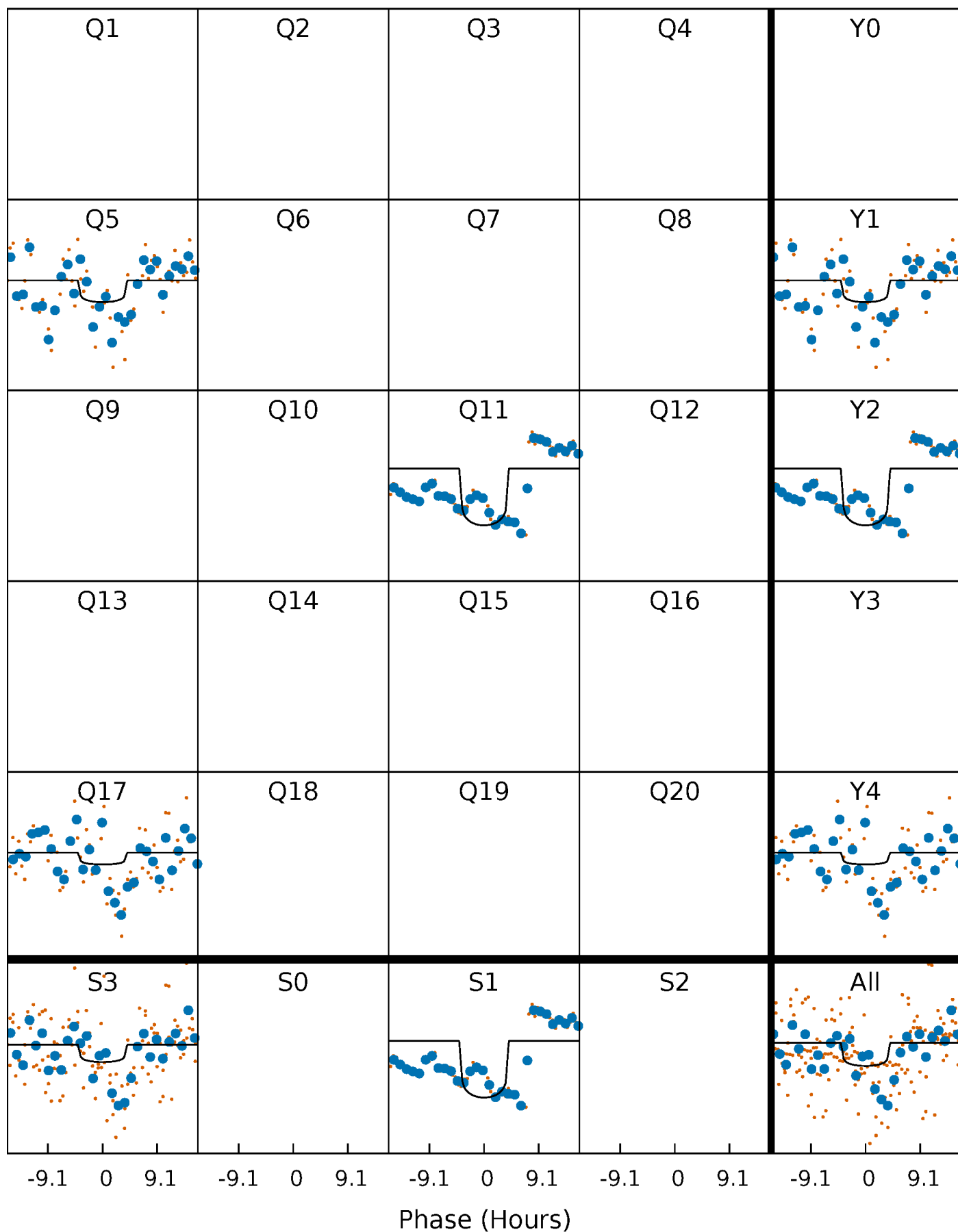
PDC Quarter-Phased Transit Curves

TCE 008846809-01 P=558.175204 Days $T_0=450.792837$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008846809-01 P=558.175204 Days $T_0=450.792837$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

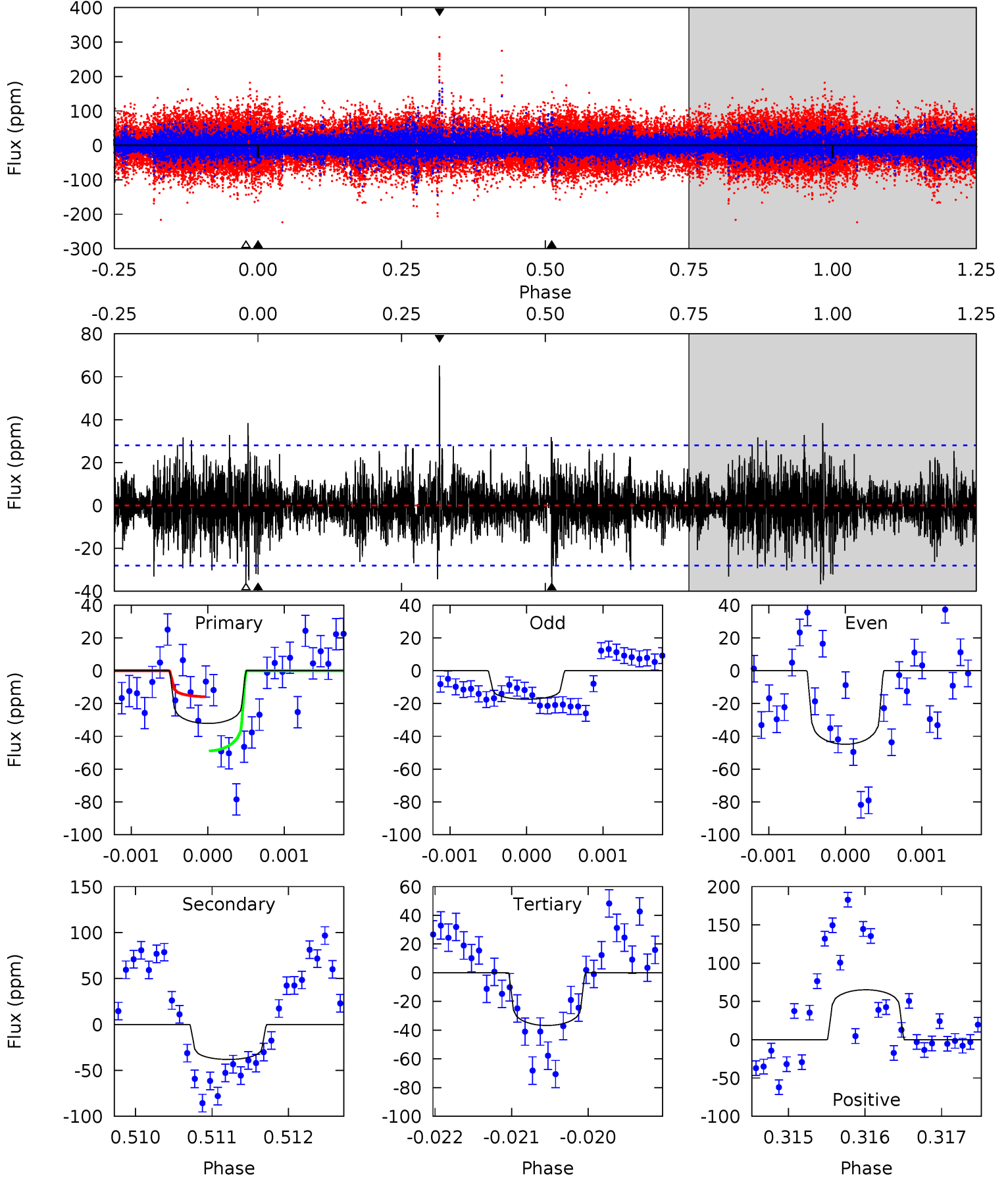
TCE 008846809-01 P=558.306160 Days $T_0=450.643202$ (BKJD)



DV Model-Shift Uniqueness Test

008846809-01, P = 558.175204 Days, E = 450.792837 Days

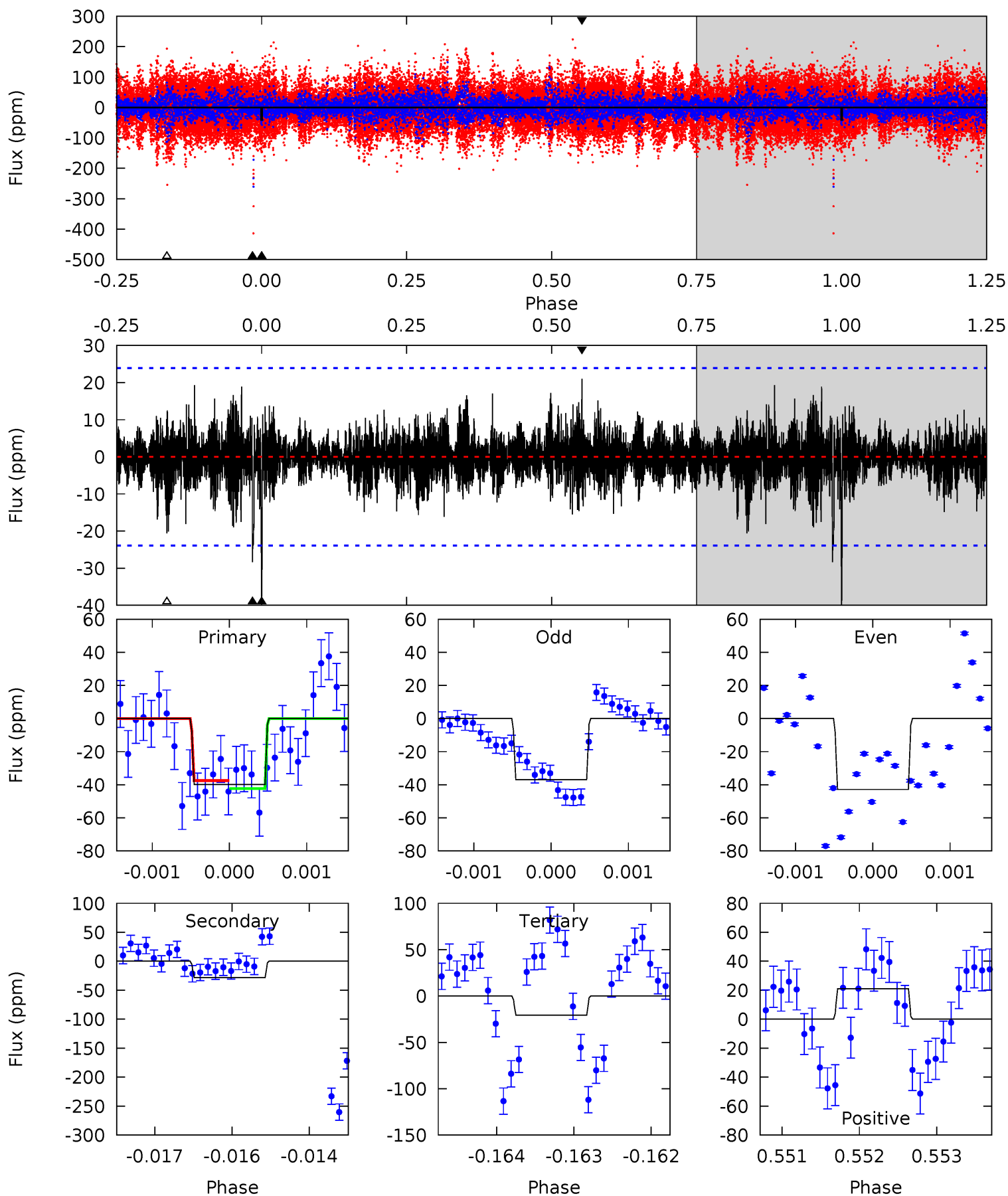
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.35	7.53	7.25	12.9	5.54	3.42	1.67	-0.90	-6.53	0.27	-5.36	2.51	0.92	0.63	3.28



Alt Model-Shift Uniqueness Test

008846809-01, P = 558.306160 Days, E = 450.643202 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.04	6.43	4.67	4.76	5.42	3.24	1.10	4.37	4.28	1.76	1.68	0.58	1.08	0.34	0.54



Stellar Parameters For KIC 008846809

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7846^{+217}_{-326}	$3.743^{+0.417}_{-0.098}$	$-0.080^{+0.200}_{-0.300}$	$3.066^{+0.445}_{-1.334}$	$1.898^{+0.120}_{-0.384}$	$0.093^{+0.300}_{-0.028}$
	+3%/-4%	+11%/-3%	+250%/-375%	+15%/-44%	+6%/-20%	+323%/-30%
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 008846809-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 5	$1.56^{+0.45}_{-0.45}$	643^{+44}_{-76}	8876^{+1707}_{-1160}	22597^{+23802}_{-8723}
Alt.	-28 ± 4	$1.85^{+0.50}_{-0.49}$	636^{+51}_{-72}	7222^{+1129}_{-734}	12091^{+10535}_{-4672}

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

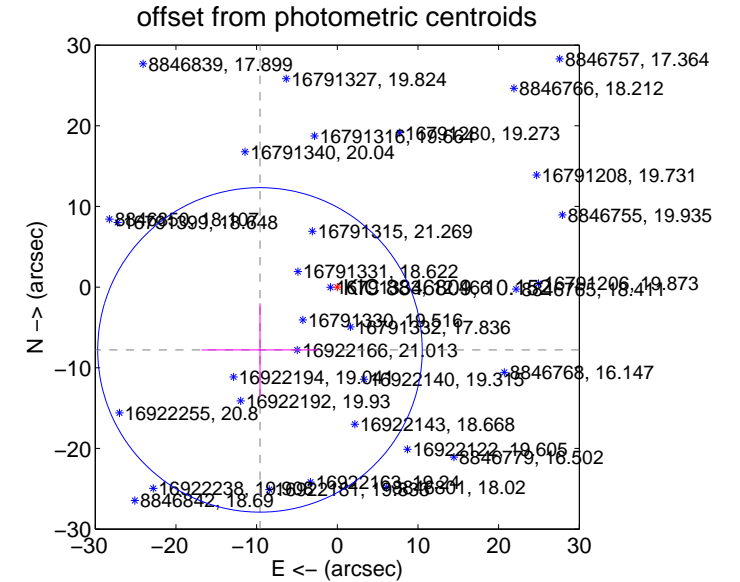
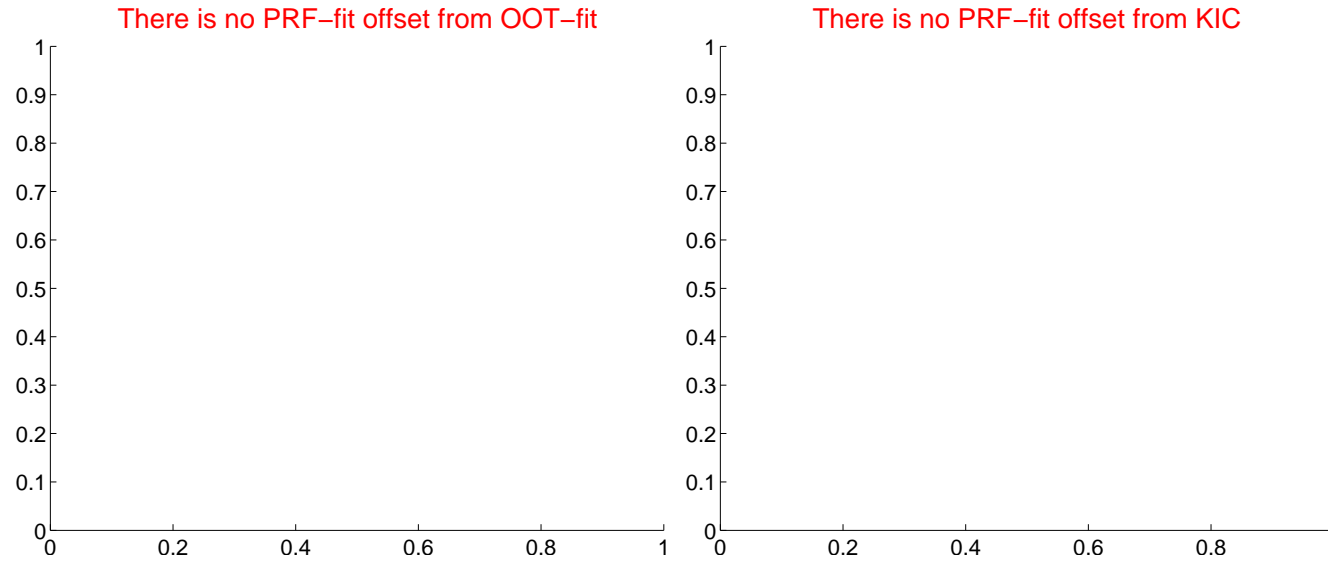
DV Centroid Data

Supplemental centroid analysis for 008846809-01. **Kepler magnitude: 10.15.** Transit SNR 5.36

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	12.35 ± 6.70	1.84	9.58 ± 7.25	-7.79 ± 5.78

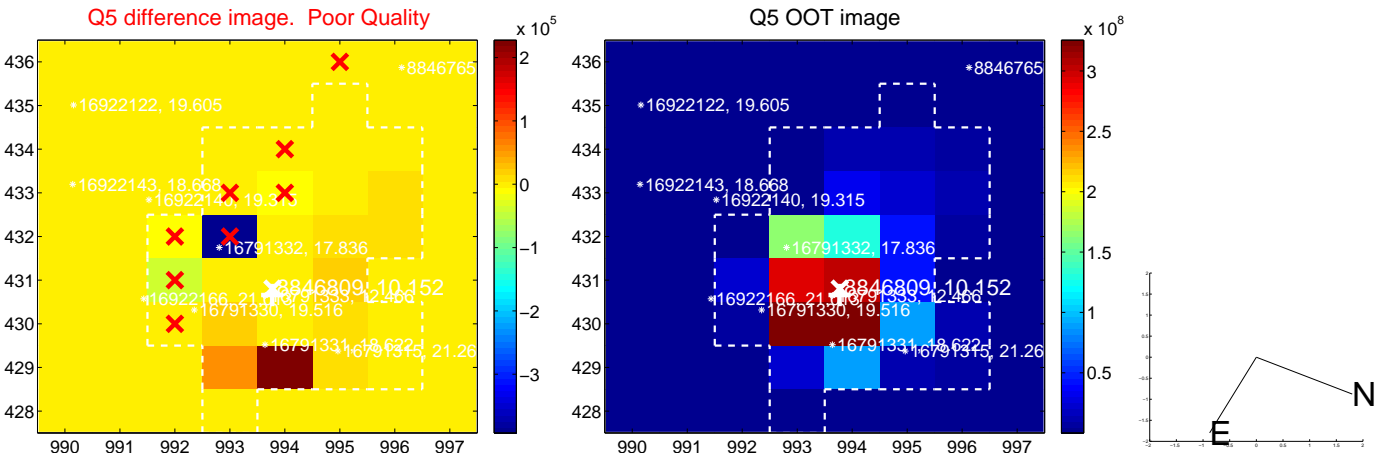


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



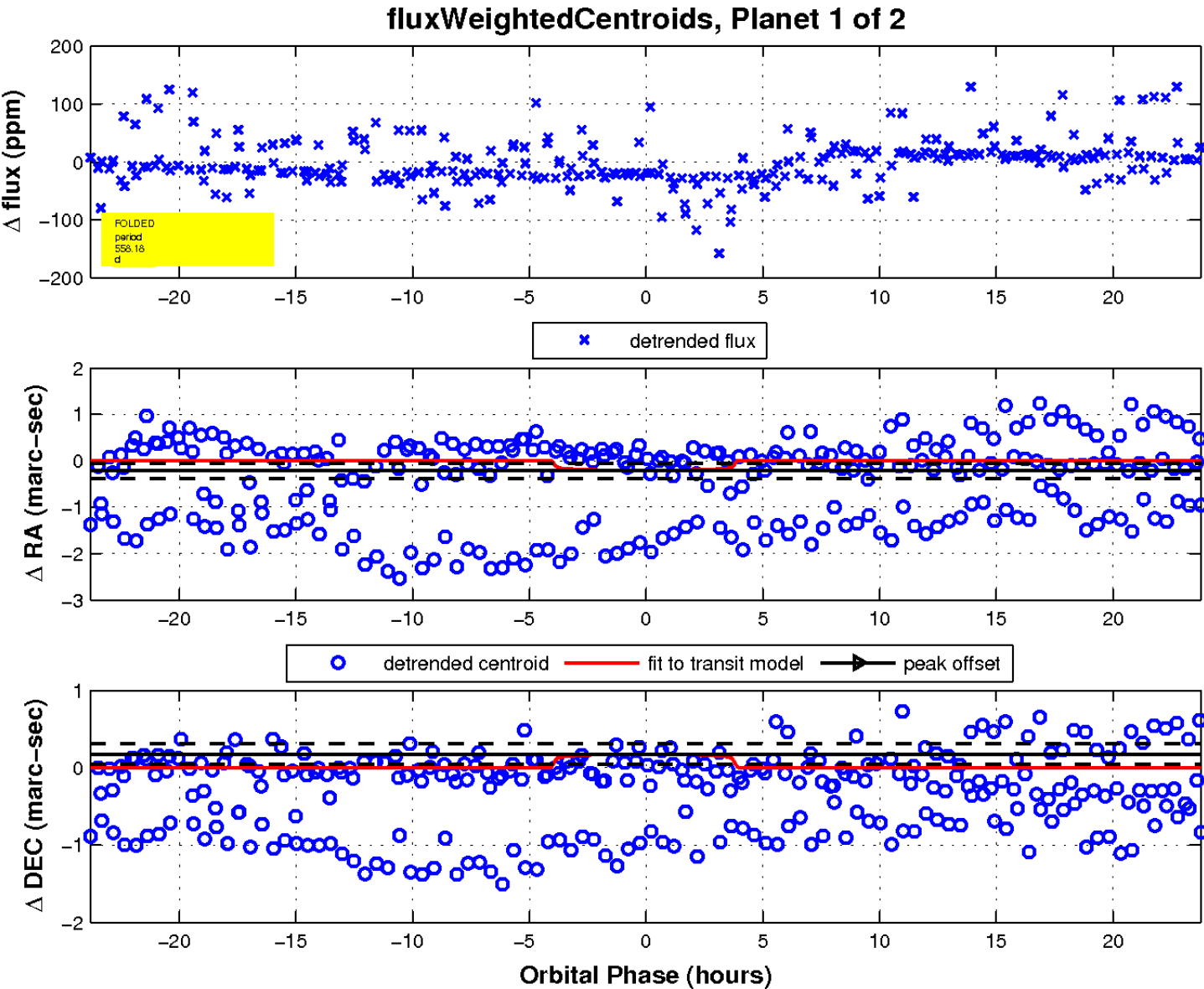
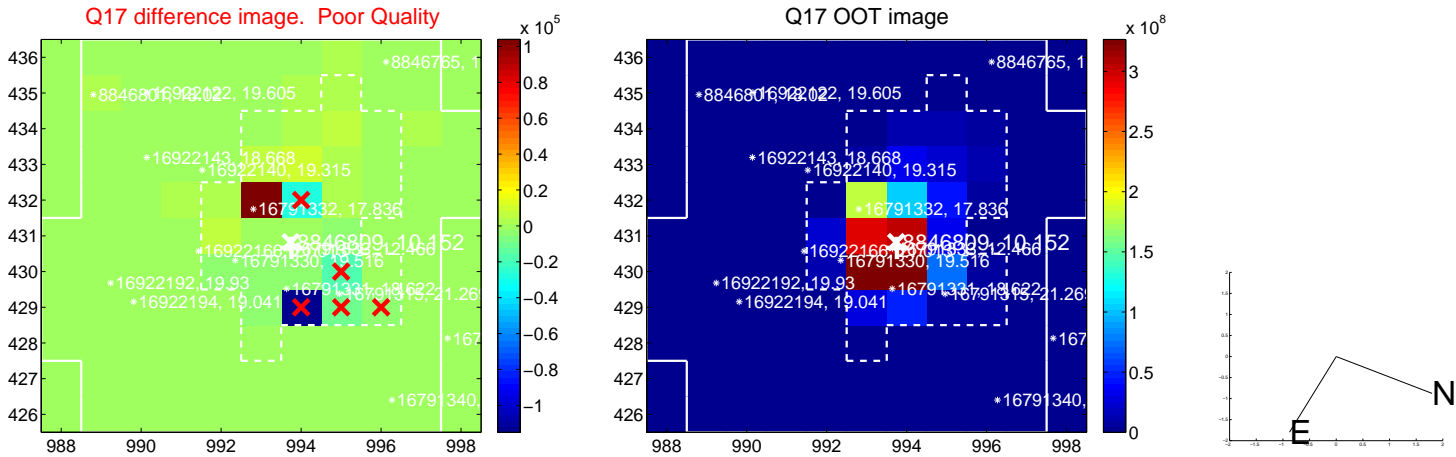
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

