

KIC 005810806

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})
005810806-01	OBS	No	2.819517	132.063935	33.7	9.655	9.4	8.3	2.43	5957	1.44	3795.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005810806-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

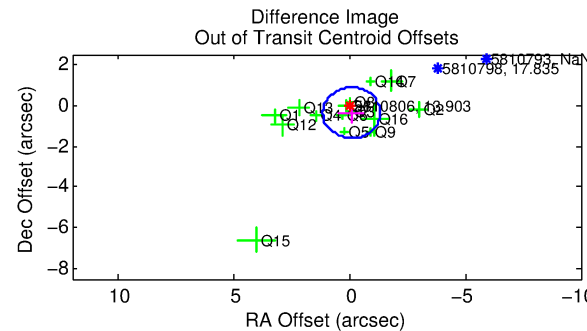
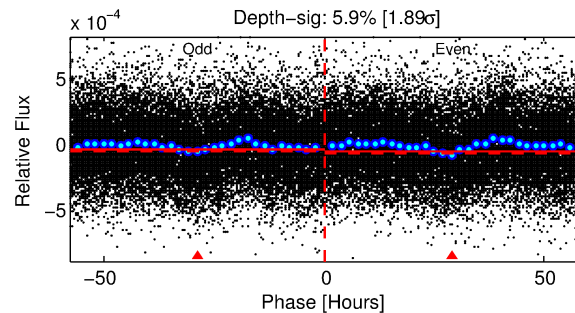
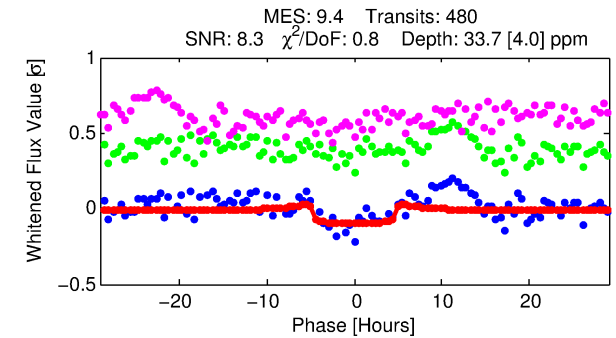
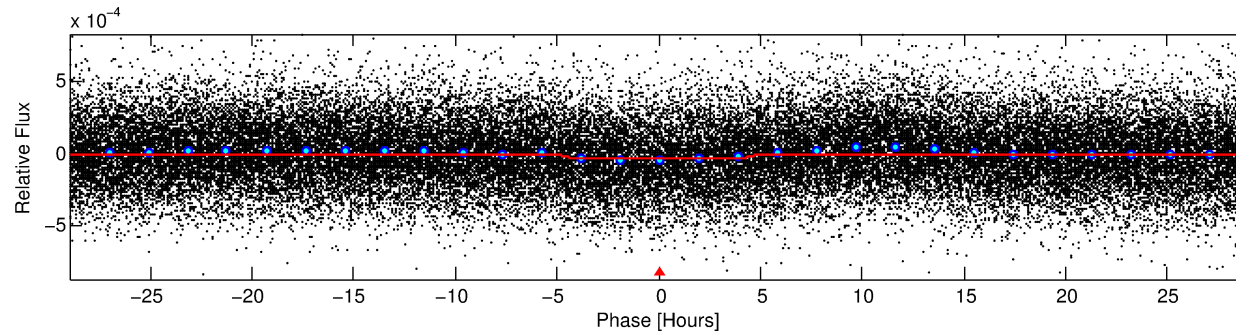
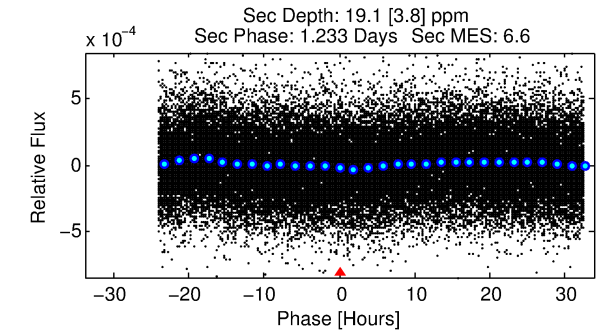
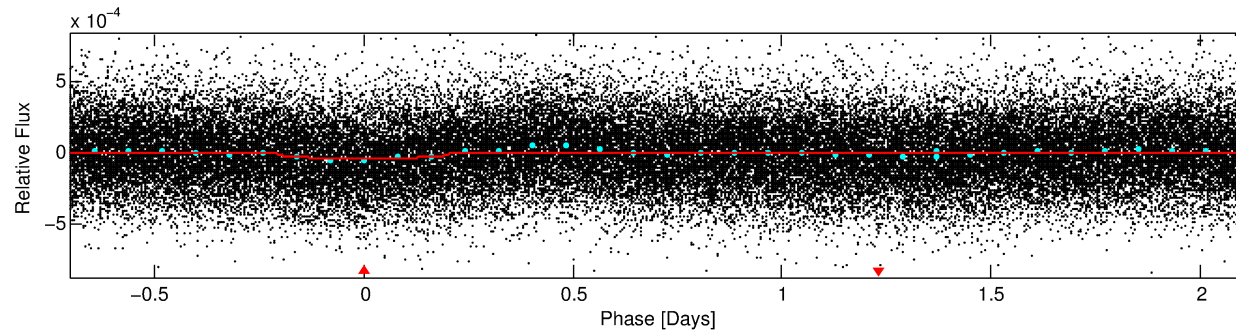
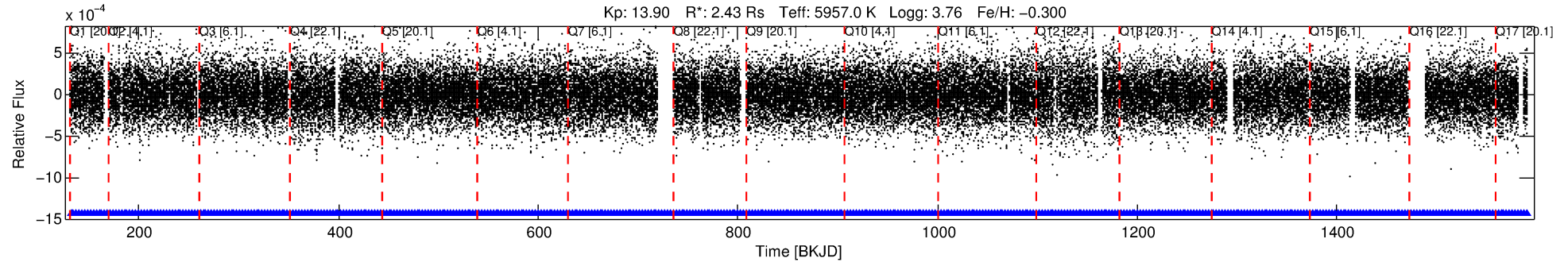
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005810806-01

No Significant Match Found

DV One-Page Summary

KIC: 5810806 Candidate: 1 of 1 Period: 2.820 d



DV Fit Results:

Period = 2.81952 [0.00004] d
Epoch = 132.0639 [0.0080] BKJD
Rp/R* = 0.0054 [0.0029]
a/R* = 2.10 [4.26]
b = 0.47 [4.36]
Seff = 3795.73 [3839.38]
Teq = 2001 [506] K
Rp = 1.44 [1.16] Re
a = 0.0419 [0.0255] AU
Ag = 8.85 [13.13] [0.60σ]
Teffp = 5337 [1470] K [2.15σ]

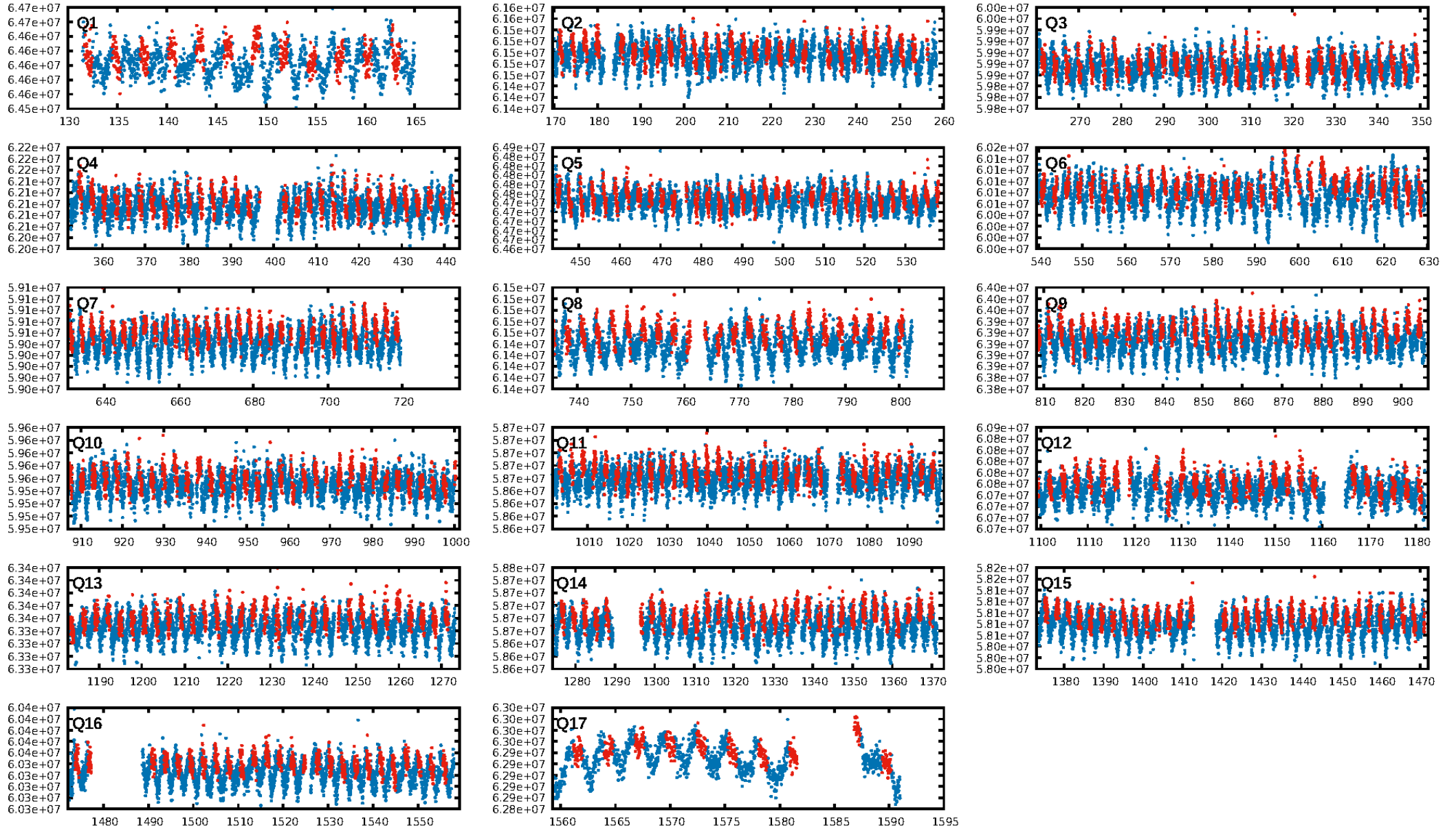
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.89e-15
RollingBand-fgt: 1.00 [458/458]
GhostDiagnostic-chr: 3.757
Centroid-sig: 33.4%
Centroid-so: 0.955 arcsec [1.02σ]
OotOffset-rm: 0.364 arcsec [0.88σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-rm: 0.400 arcsec [1.12σ]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

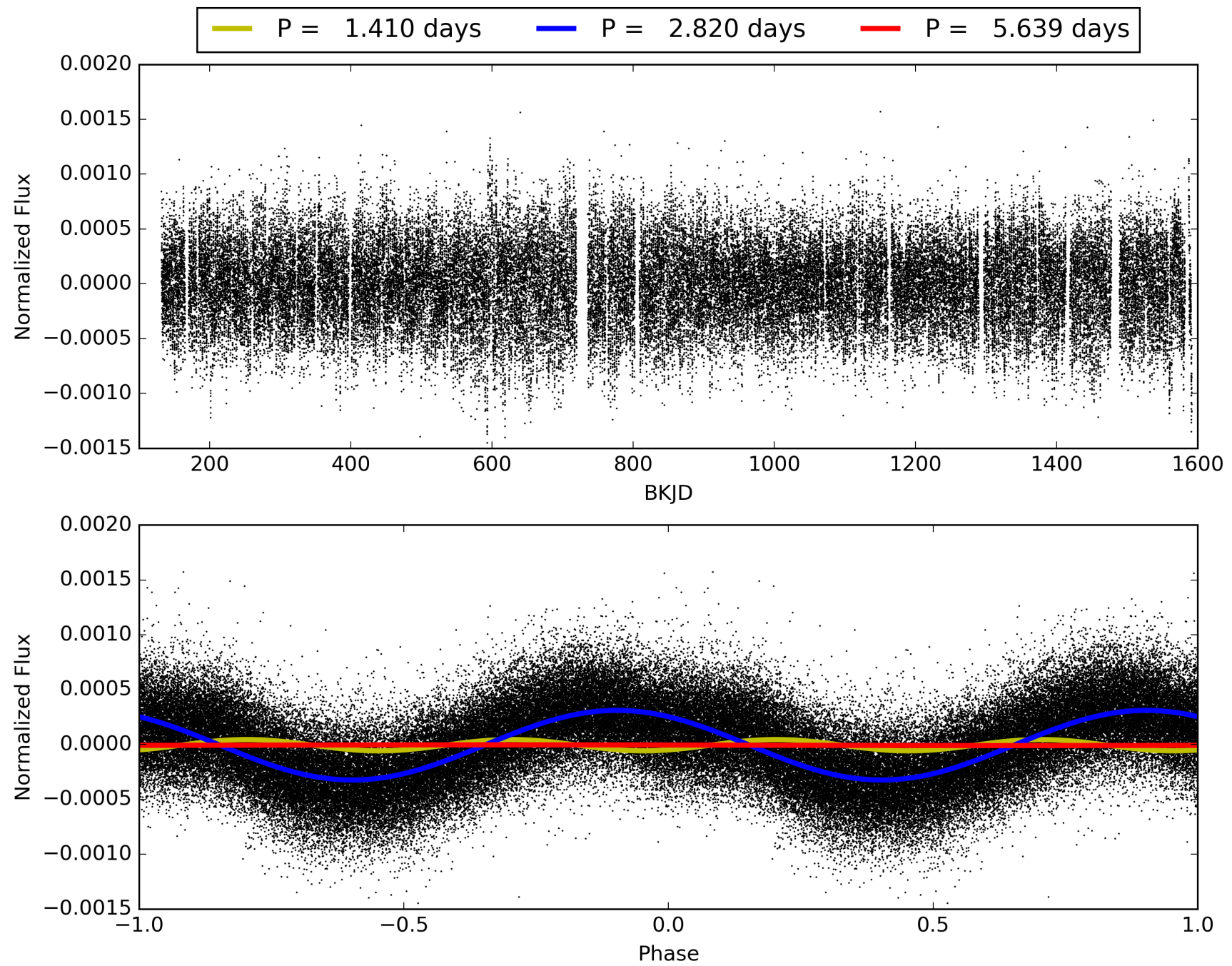
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:07:10 Z

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

TCE 005810806-01, PDC Light Curves

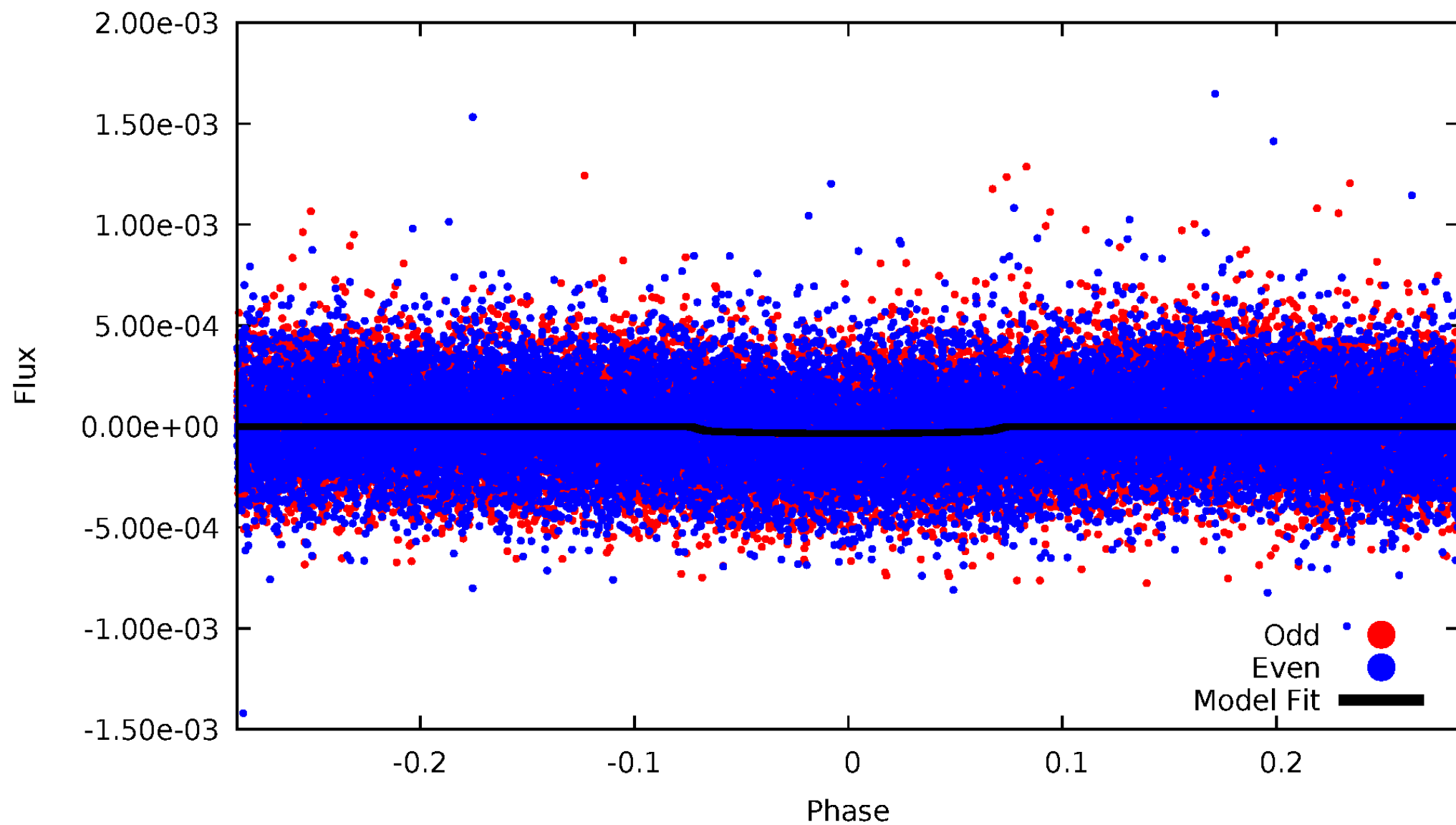


TCE 005810806-01



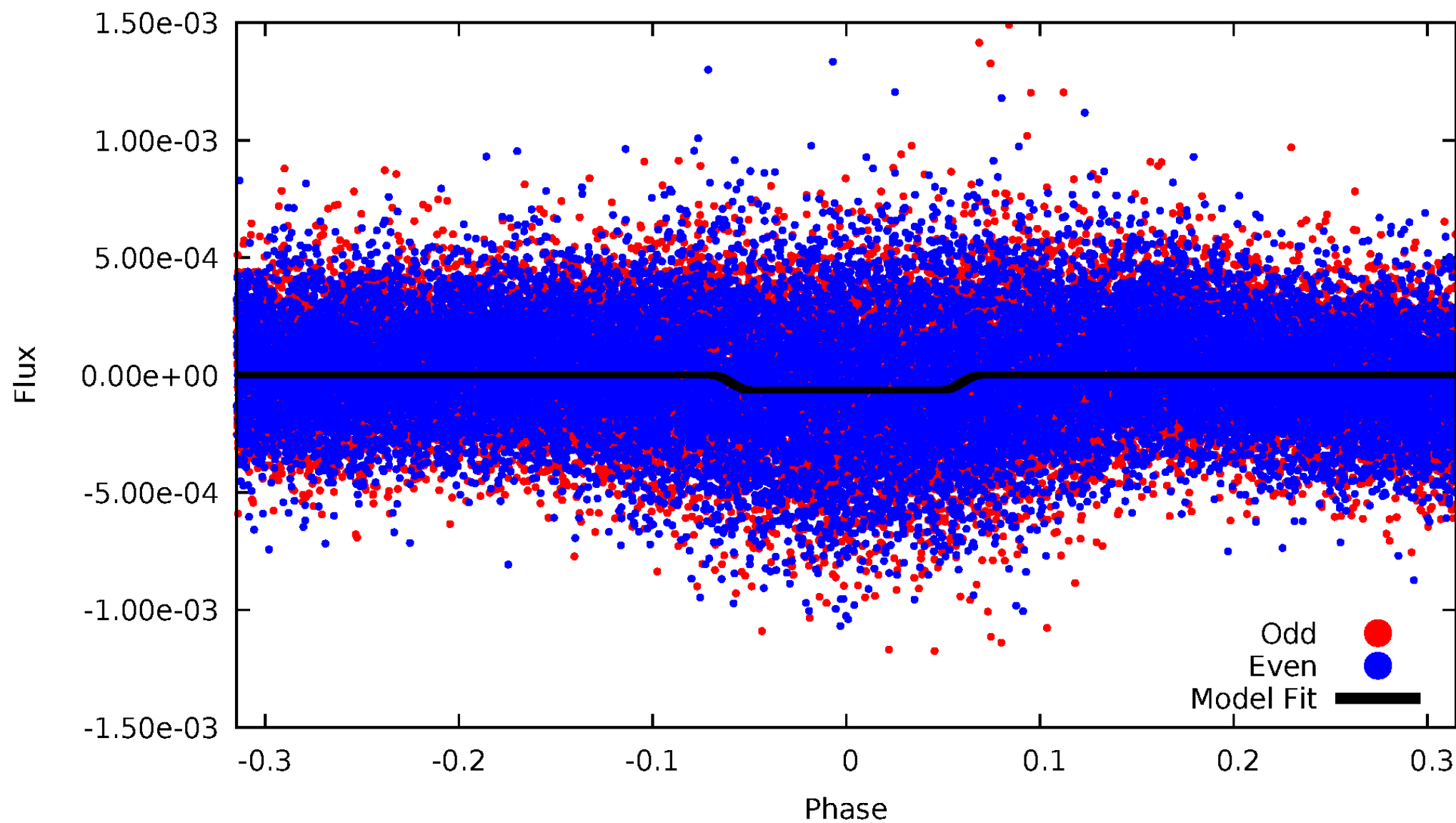
DV Odd/Even

TCE 005810806-01

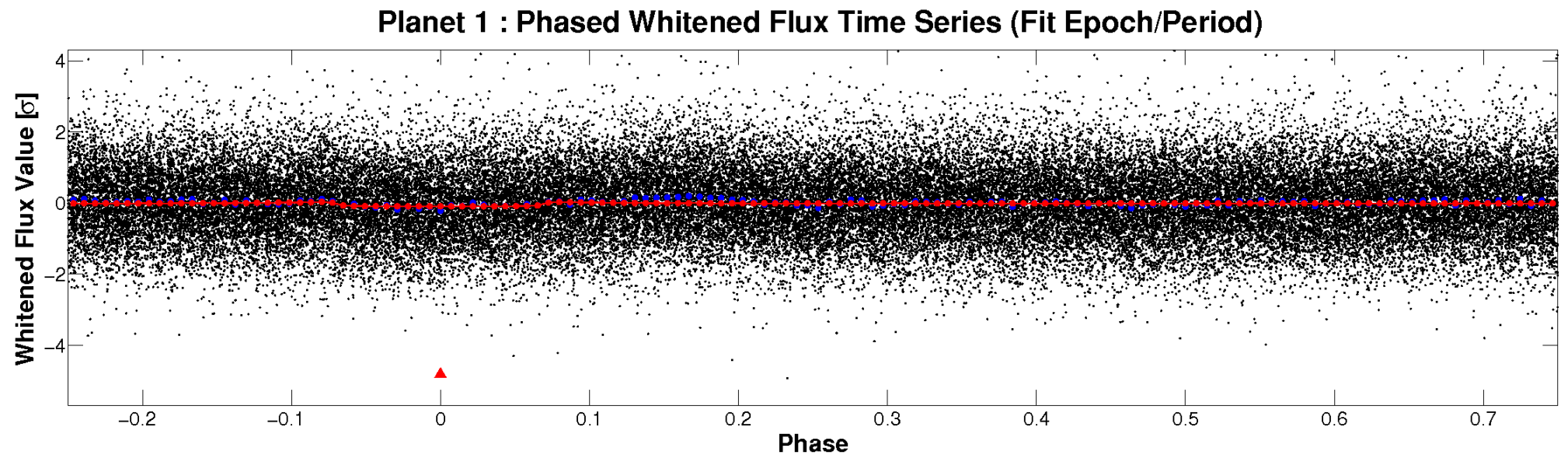
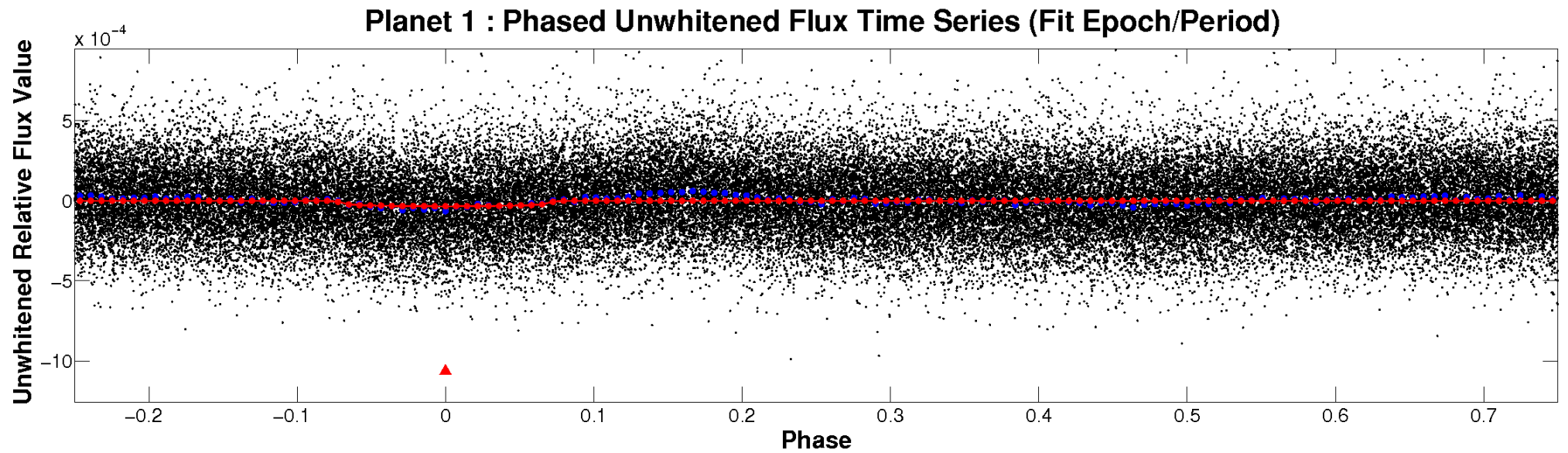


ALT Odd/Even

TCE 005810806-01

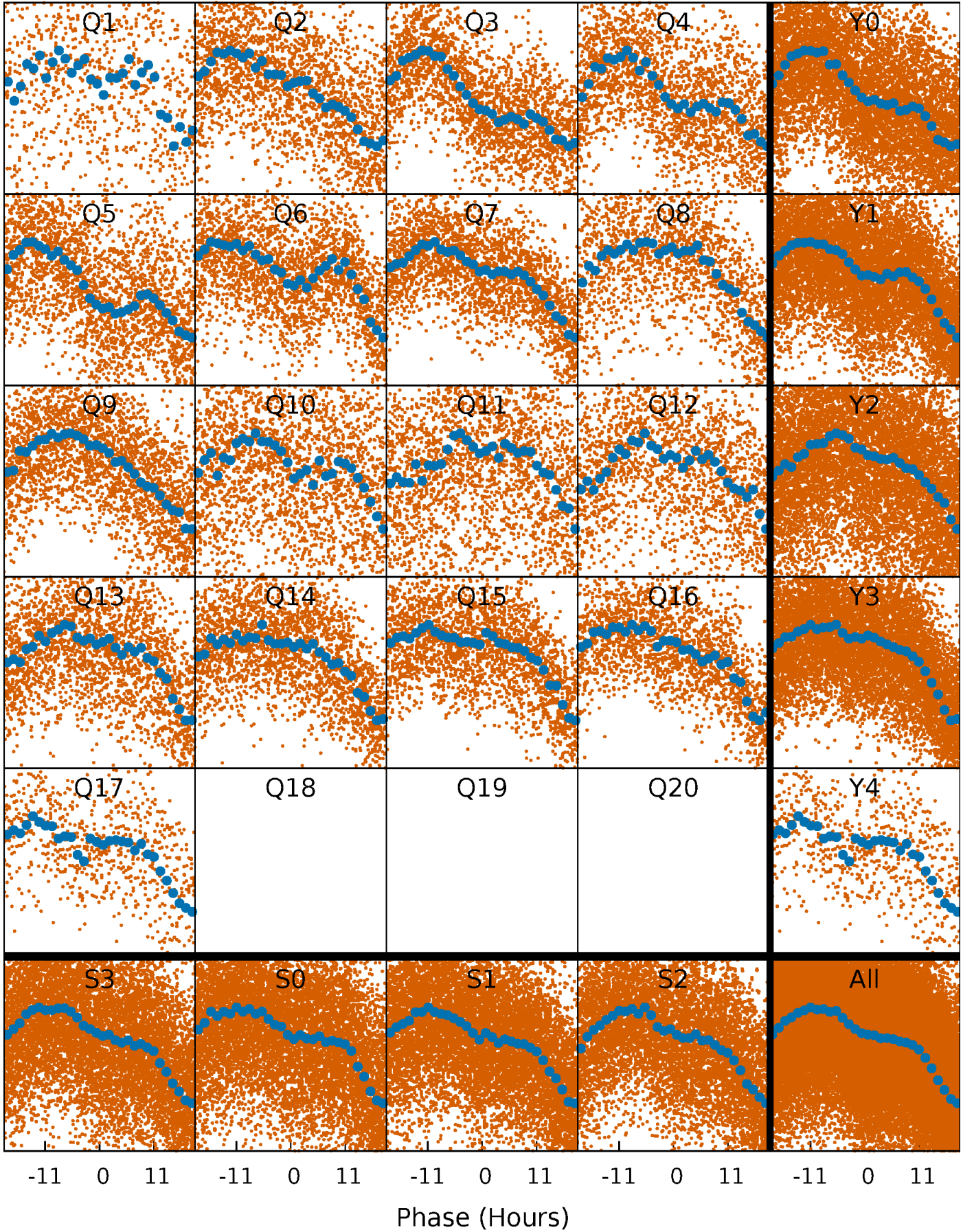


Non-Whitened Vs. Whitened Light Curve



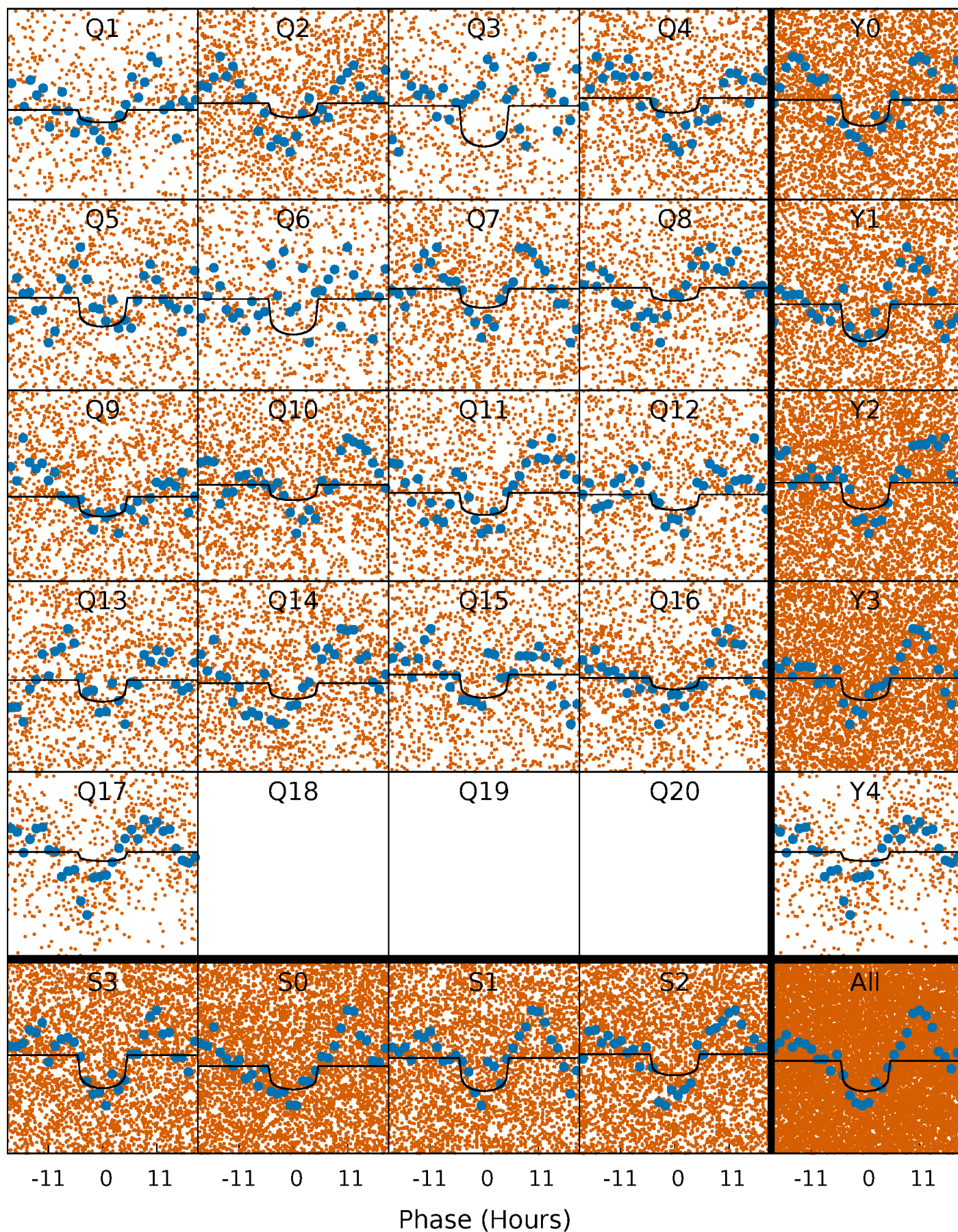
PDC Quarter-Phased Transit Curves

TCE 005810806-01 P= 2.819517 Days $T_0=132.063936$ (BKJD)



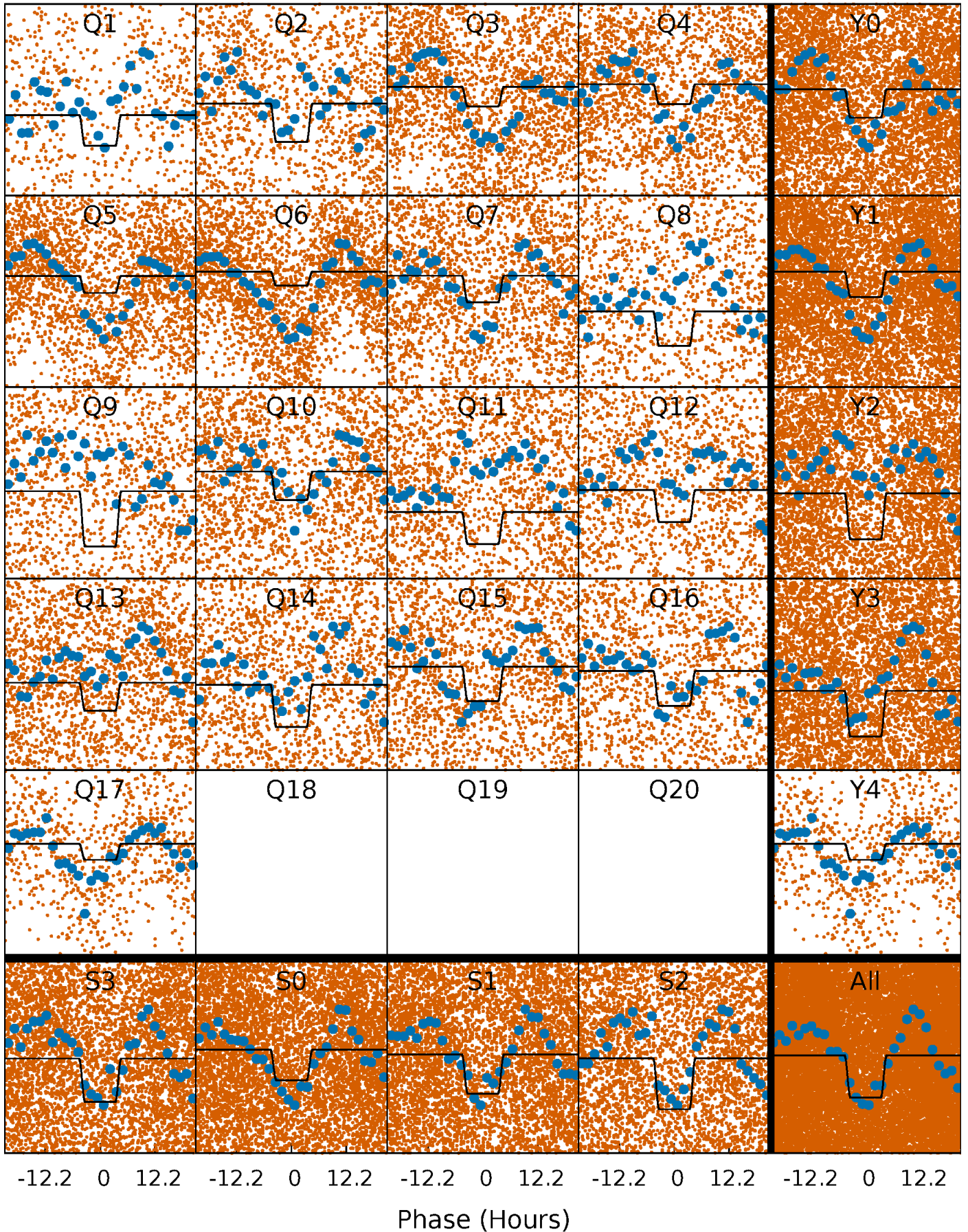
DV Quarter-Phased Transit Curves

TCE 005810806-01 P= 2.819517 Days $T_0=132.063936$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

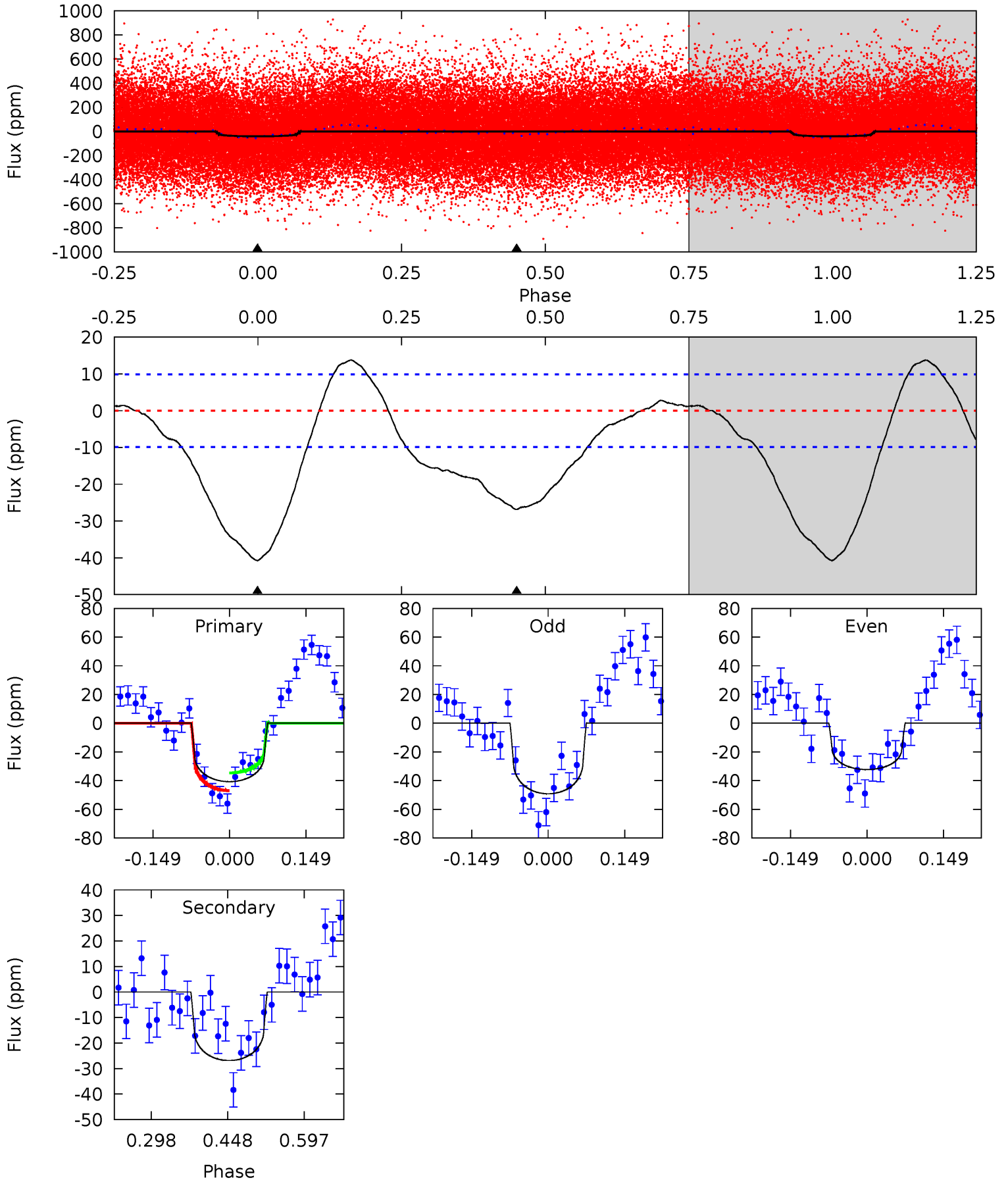
TCE 005810806-01 P= 2.819524 Days $T_0=132.059486$ (BKJD)



DV Model-Shift Uniqueness Test

005810806-01, P = 2.819517 Days, E = 129.244419 Days

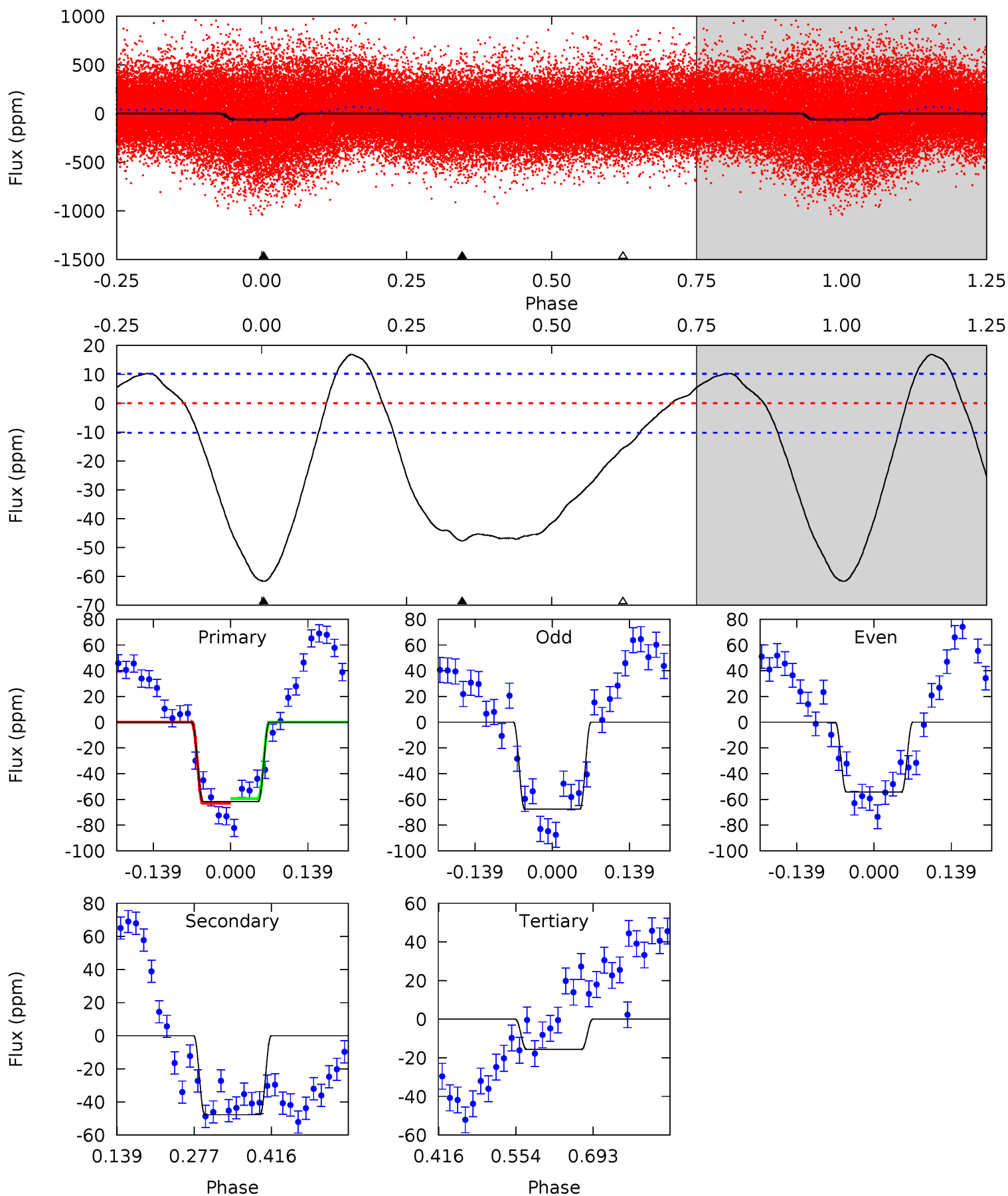
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	12.2	0	0	4.48	1.44	3.11	18.5	18.5	12.2	12.2	3.84	0.86	0.25	2.81



Alt Model-Shift Uniqueness Test

005810806-01, P = 2.819524 Days, E = 129.239962 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	21.0	6.87	0	4.50	1.48	7.81	20.2	27.1	14.1	21.0	2.93	1.26	0.22	0.79



Stellar Parameters For KIC 005810806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5957^{+195}_{-195}	$3.758^{+0.600}_{-0.150}$	$-0.300^{+0.300}_{-0.250}$	$2.431^{+0.579}_{-1.448}$	$1.232^{+0.175}_{-0.325}$	$0.121^{+1.068}_{-0.049}$
	+3%/-3%	+16%/-4%	+100%/-83%	+24%/-60%	+14%/-26%	+884%/-40%
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 005810806-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-27 ± 2	$1.26^{+0.89}_{-0.68}$	2736^{+233}_{-395}	5809^{+2906}_{-1083}	16^{+62}_{-10}
Alt.	-48 ± 2	$1.89^{+0.93}_{-0.78}$	2723^{+245}_{-406}	5474^{+1419}_{-715}	13^{+24}_{-7}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

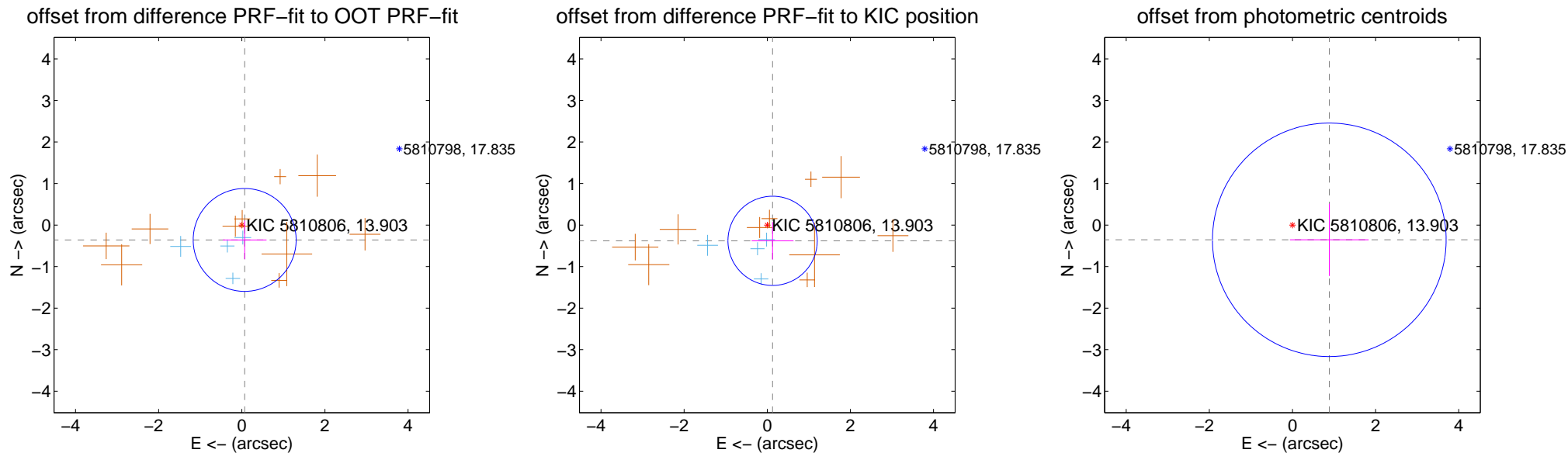
DV Centroid Data

Supplemental centroid analysis for 005810806-01. Kepler magnitude: 13.90. Transit SNR 8.33

There are 4 quarters with good PRF difference image offsets

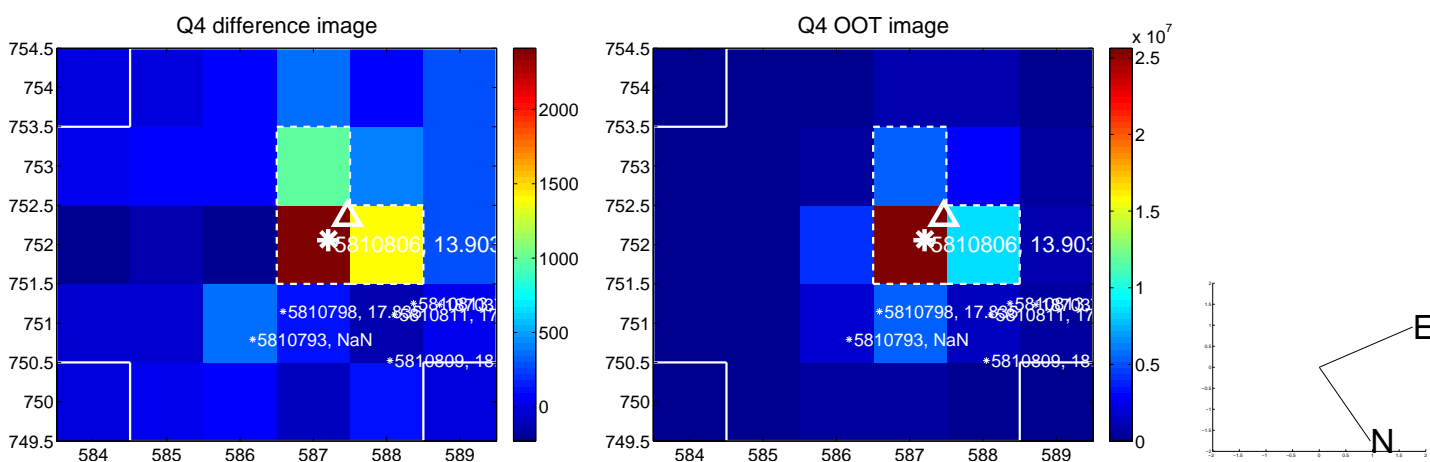
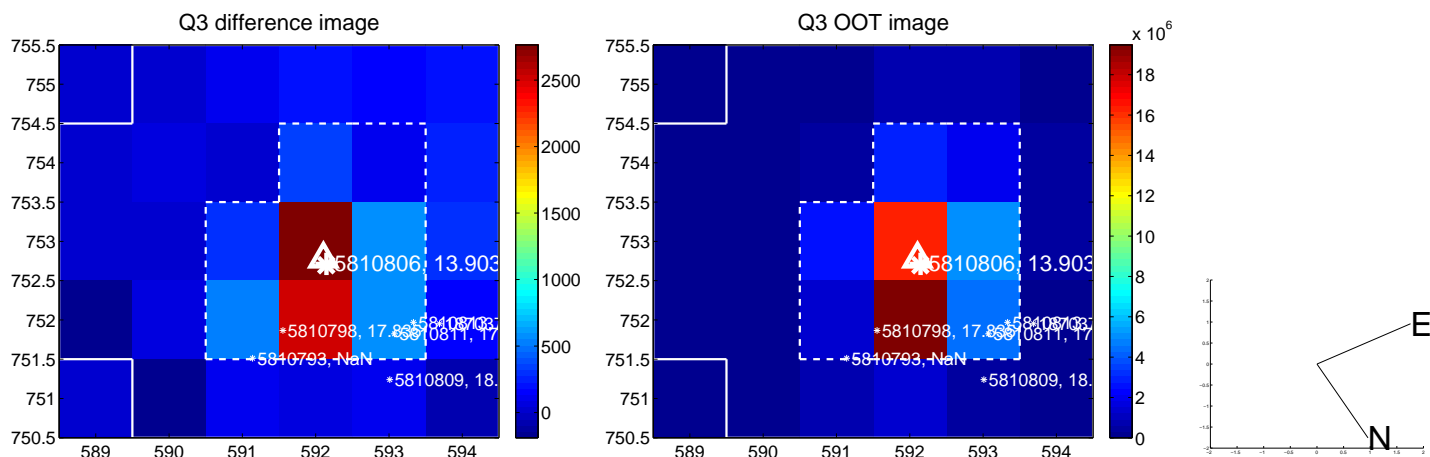
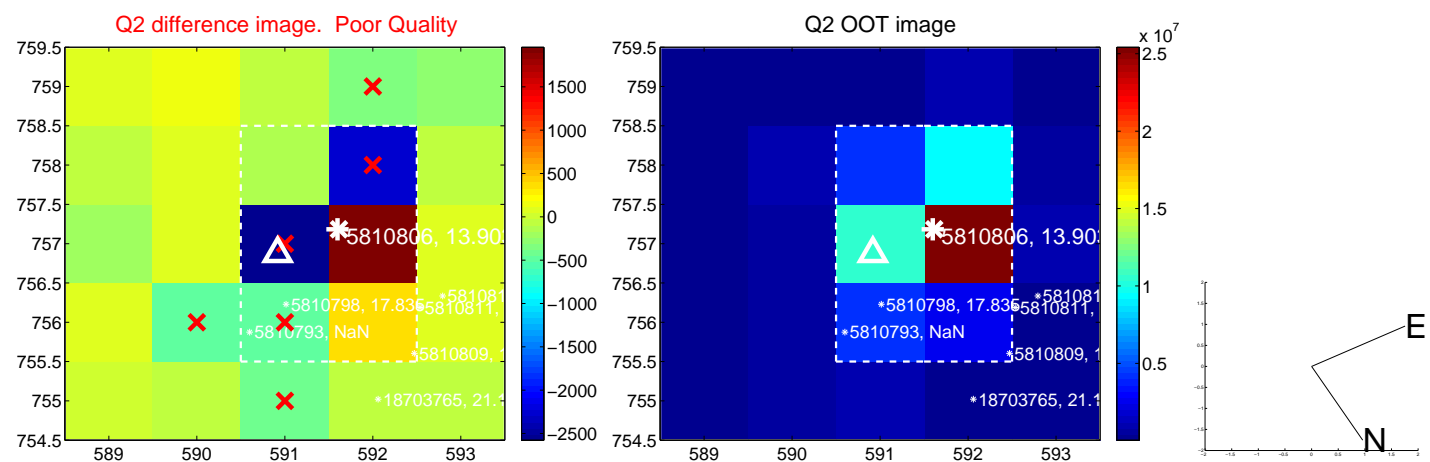
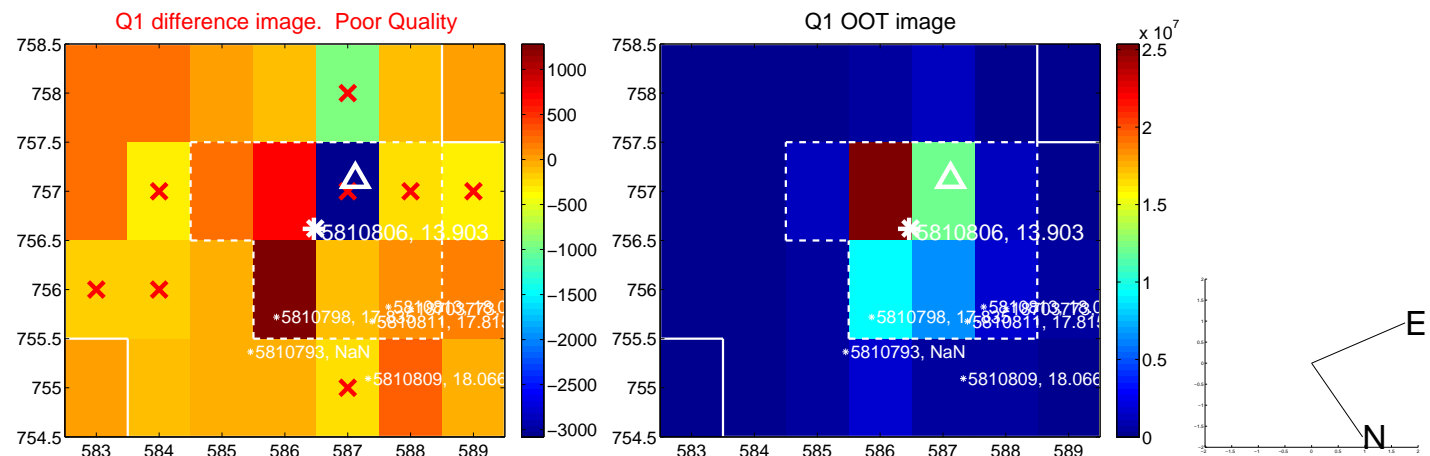
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.364 ± 0.413	0.88	-0.069 ± 0.526	-0.358 ± 0.465
PRF-fit source offset from KIC position	0.400 ± 0.358	1.12	-0.128 ± 0.504	-0.379 ± 0.450
photometric centroid source offset	0.95 ± 0.94	1.02	-0.89 ± 0.95	-0.35 ± 0.87

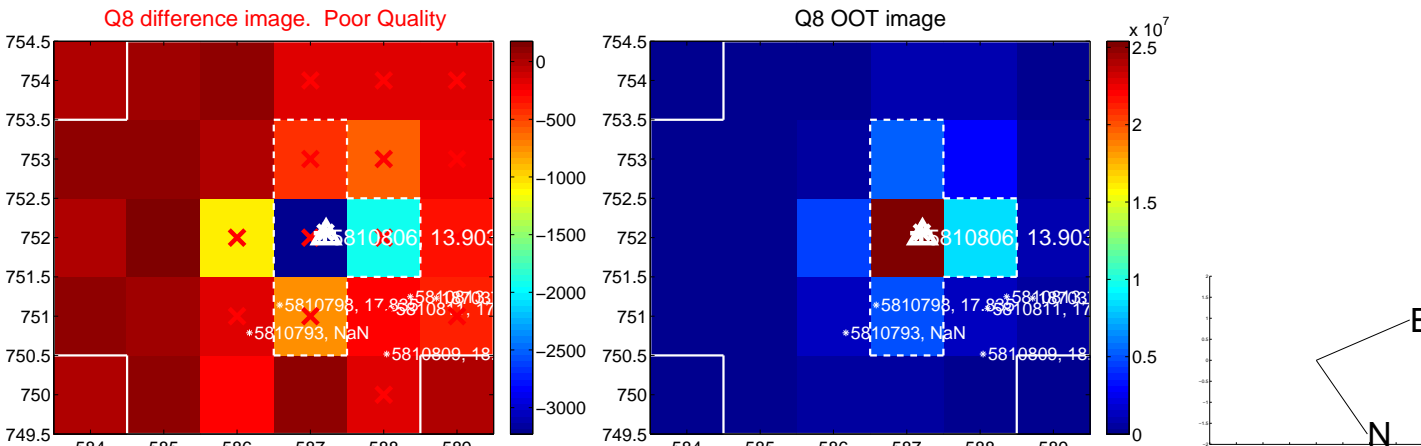
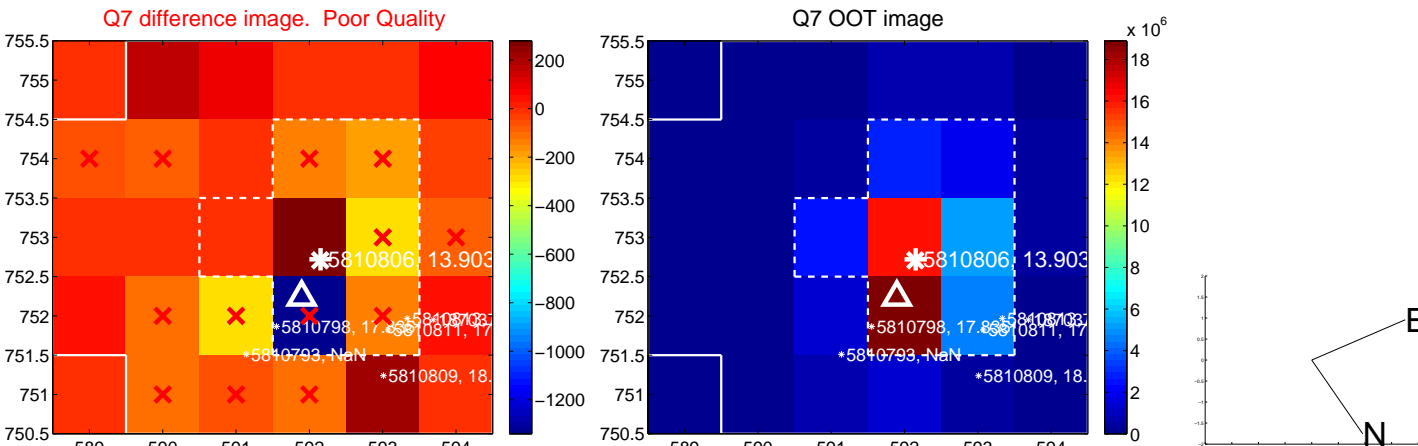
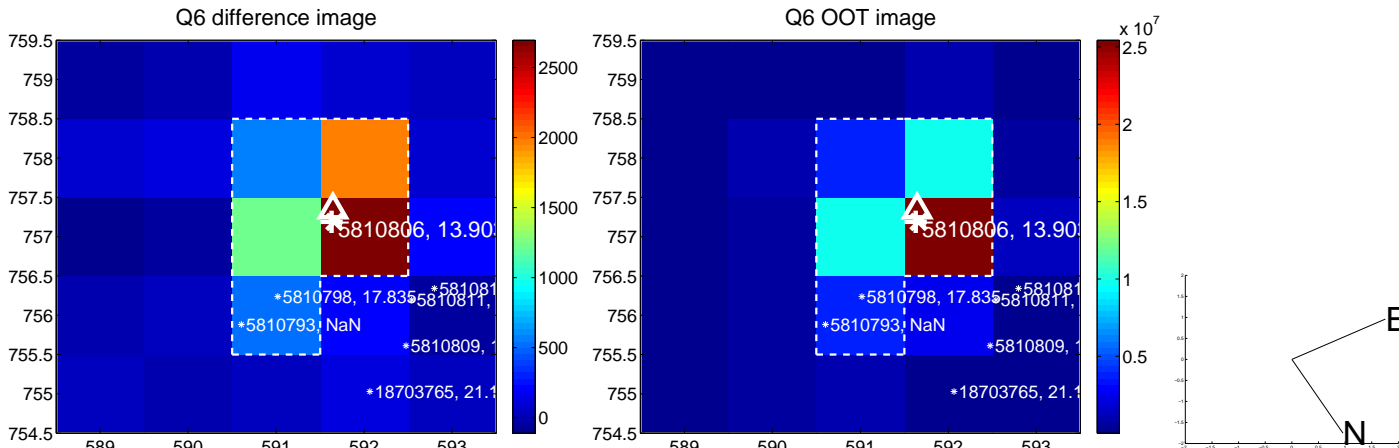
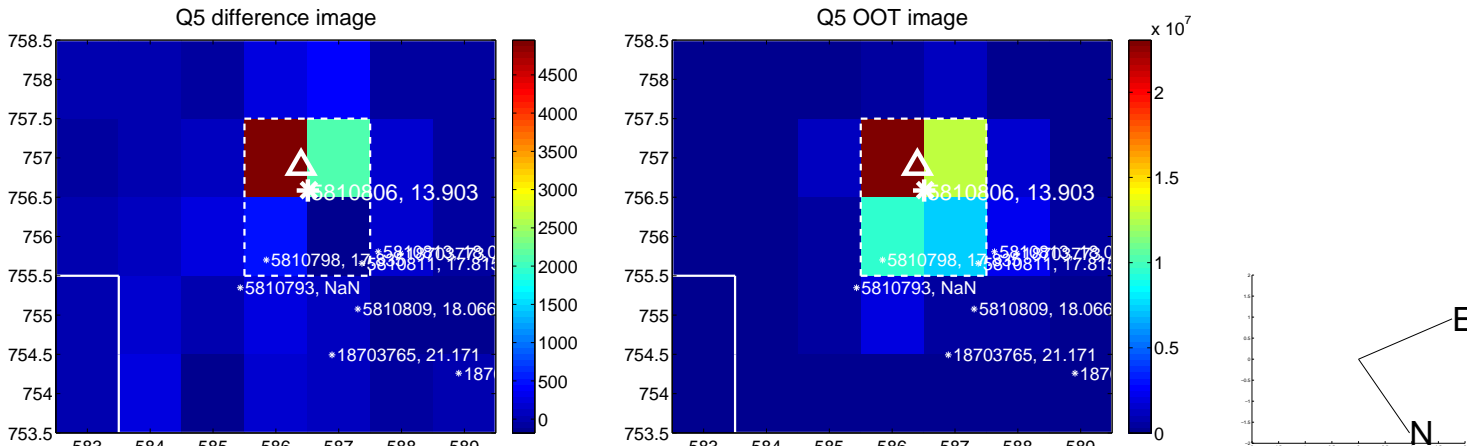


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

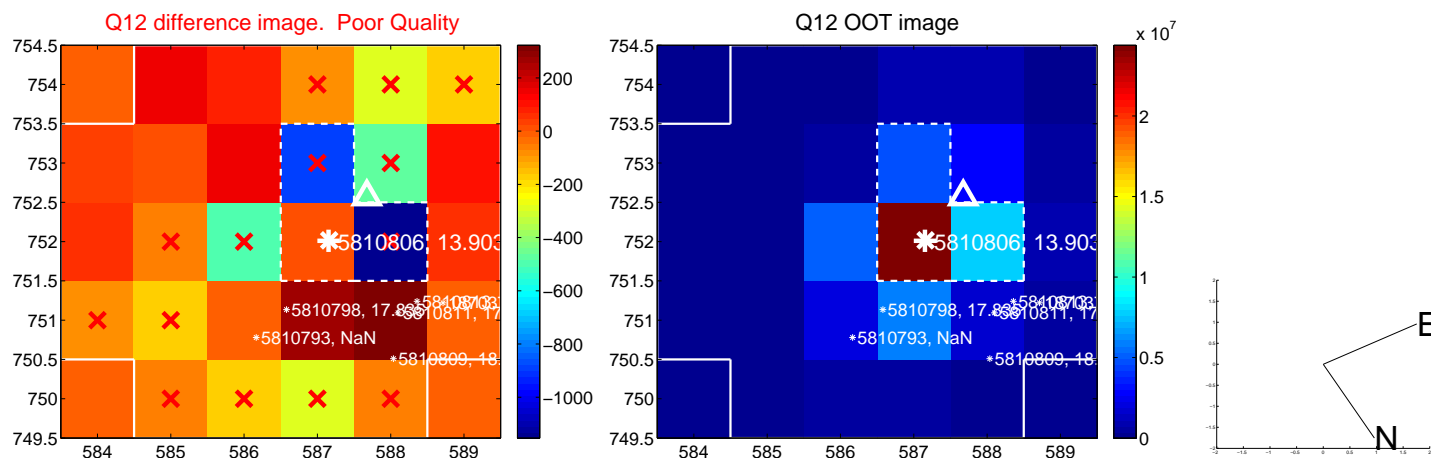
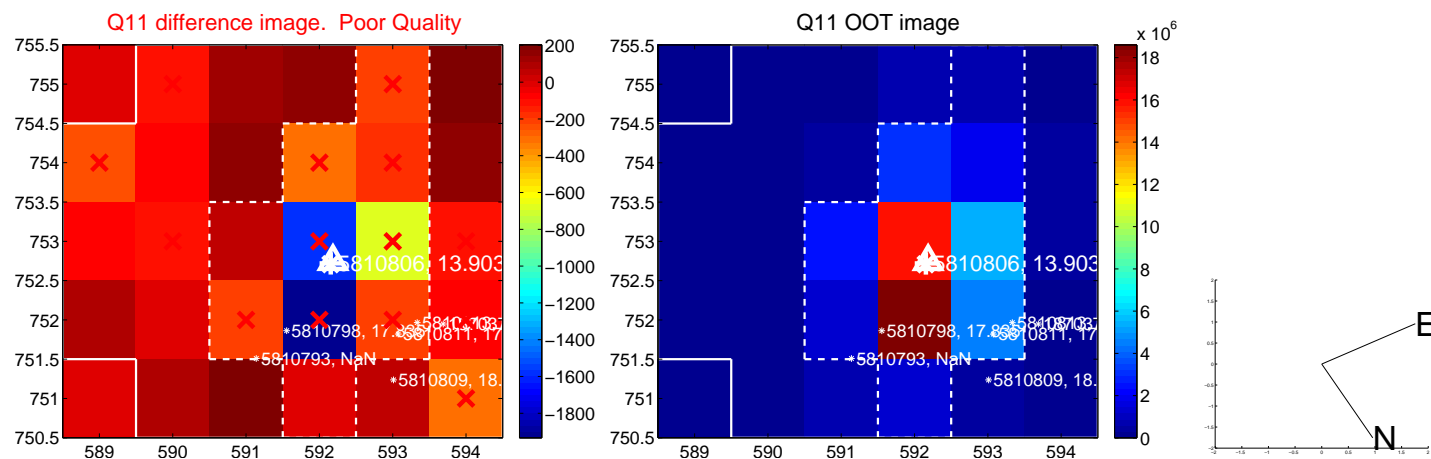
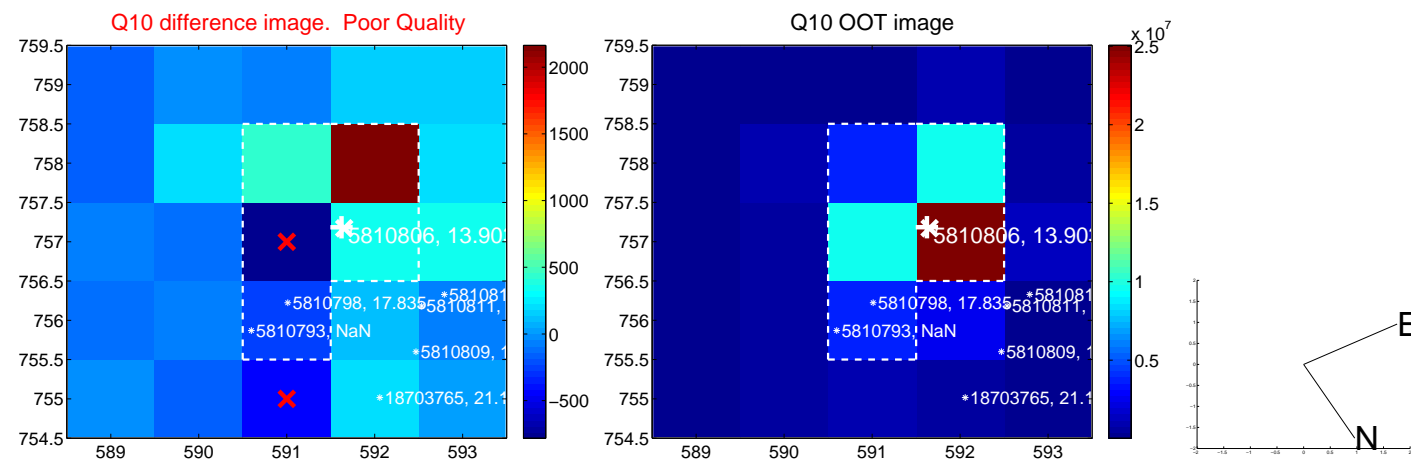
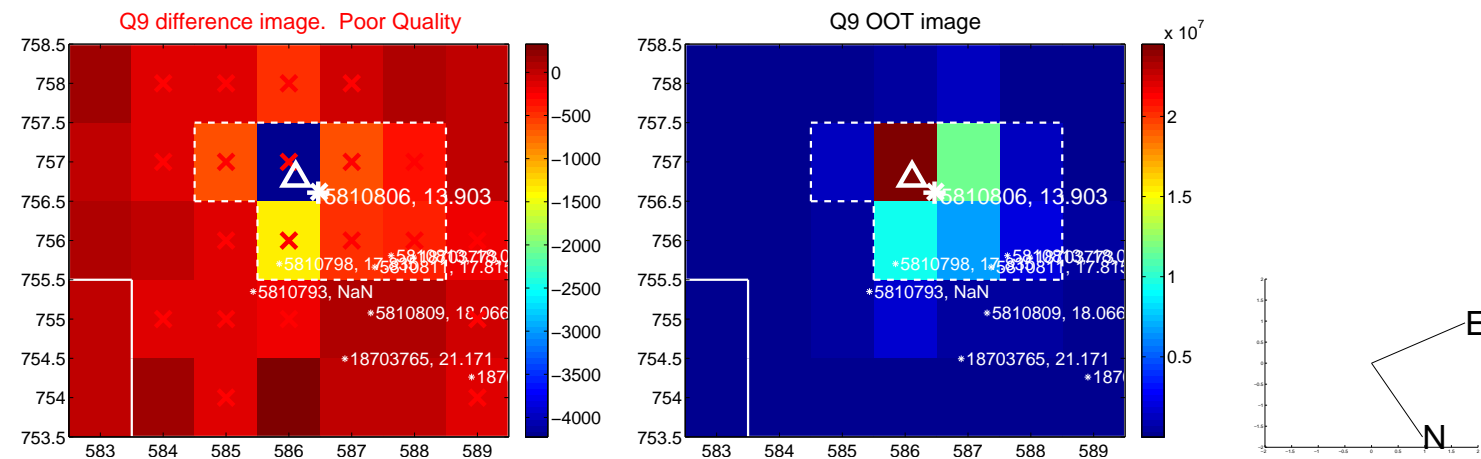
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



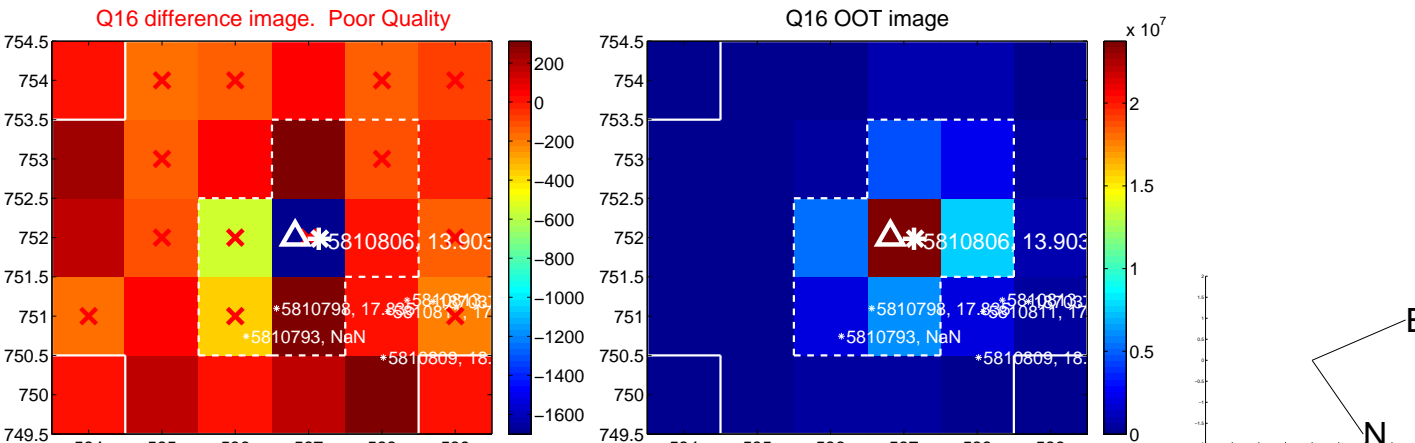
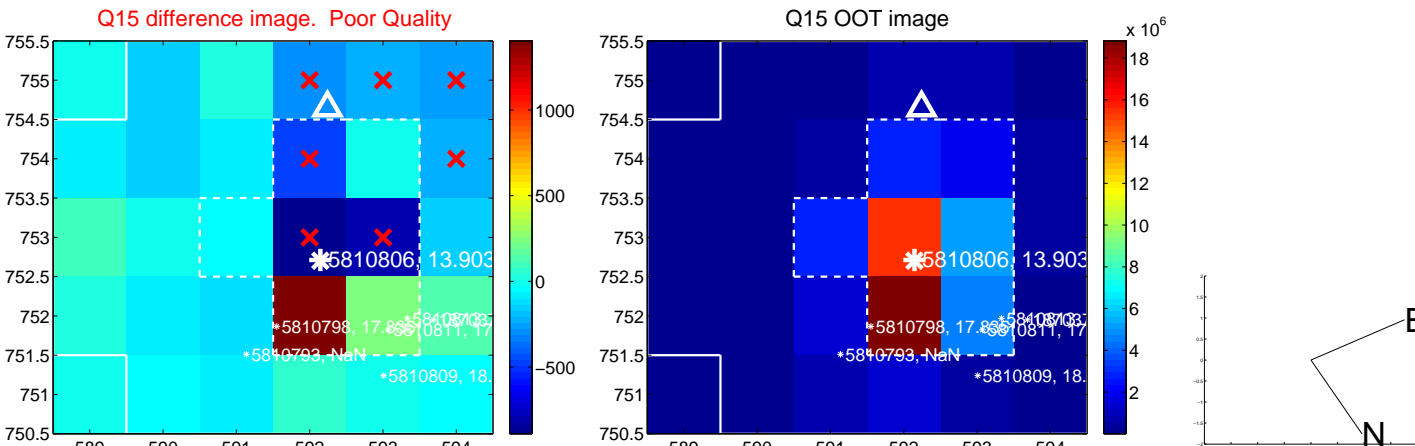
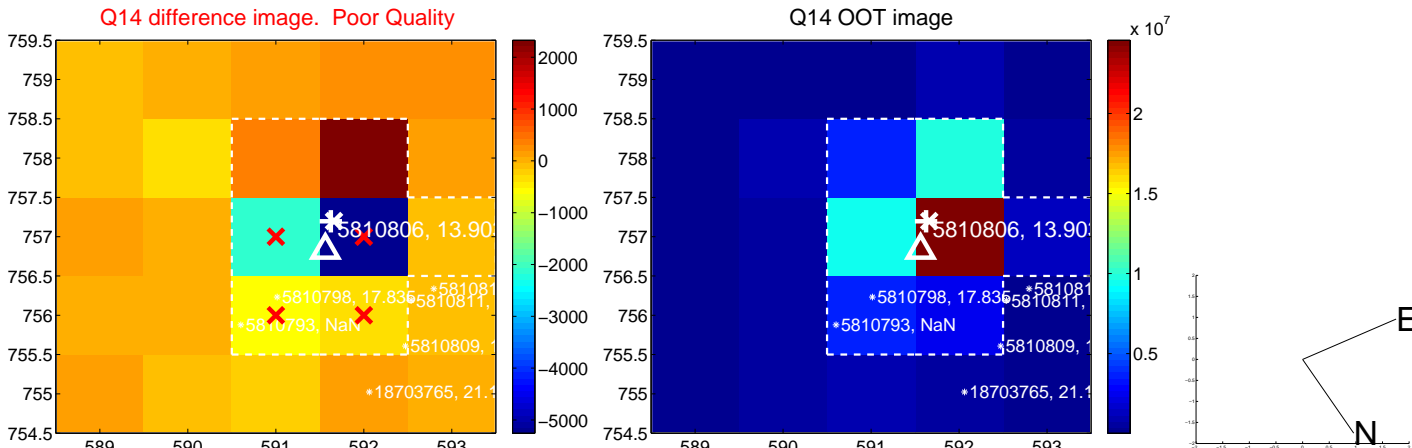
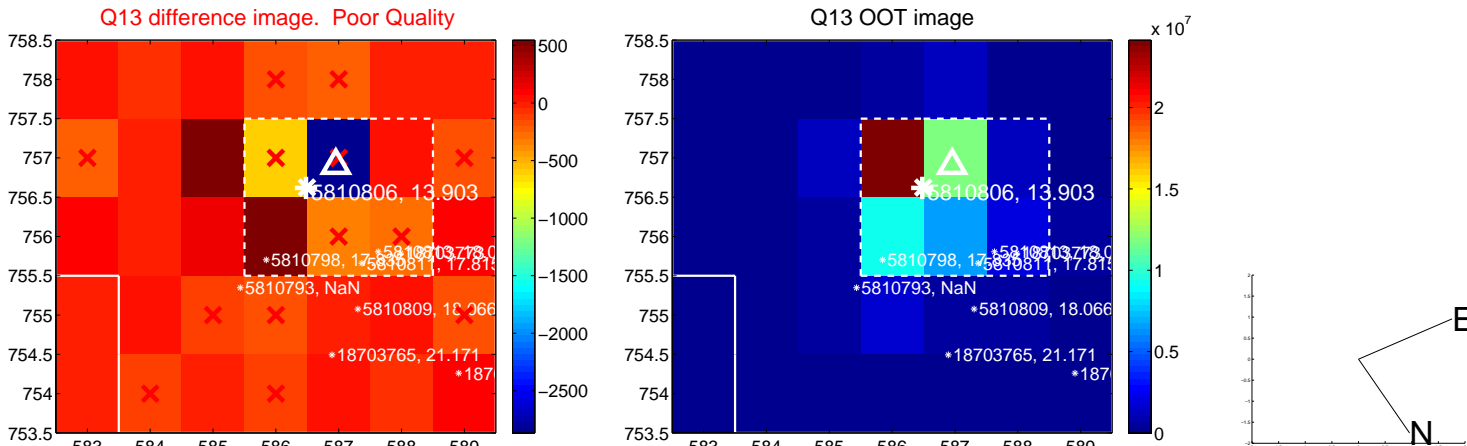
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



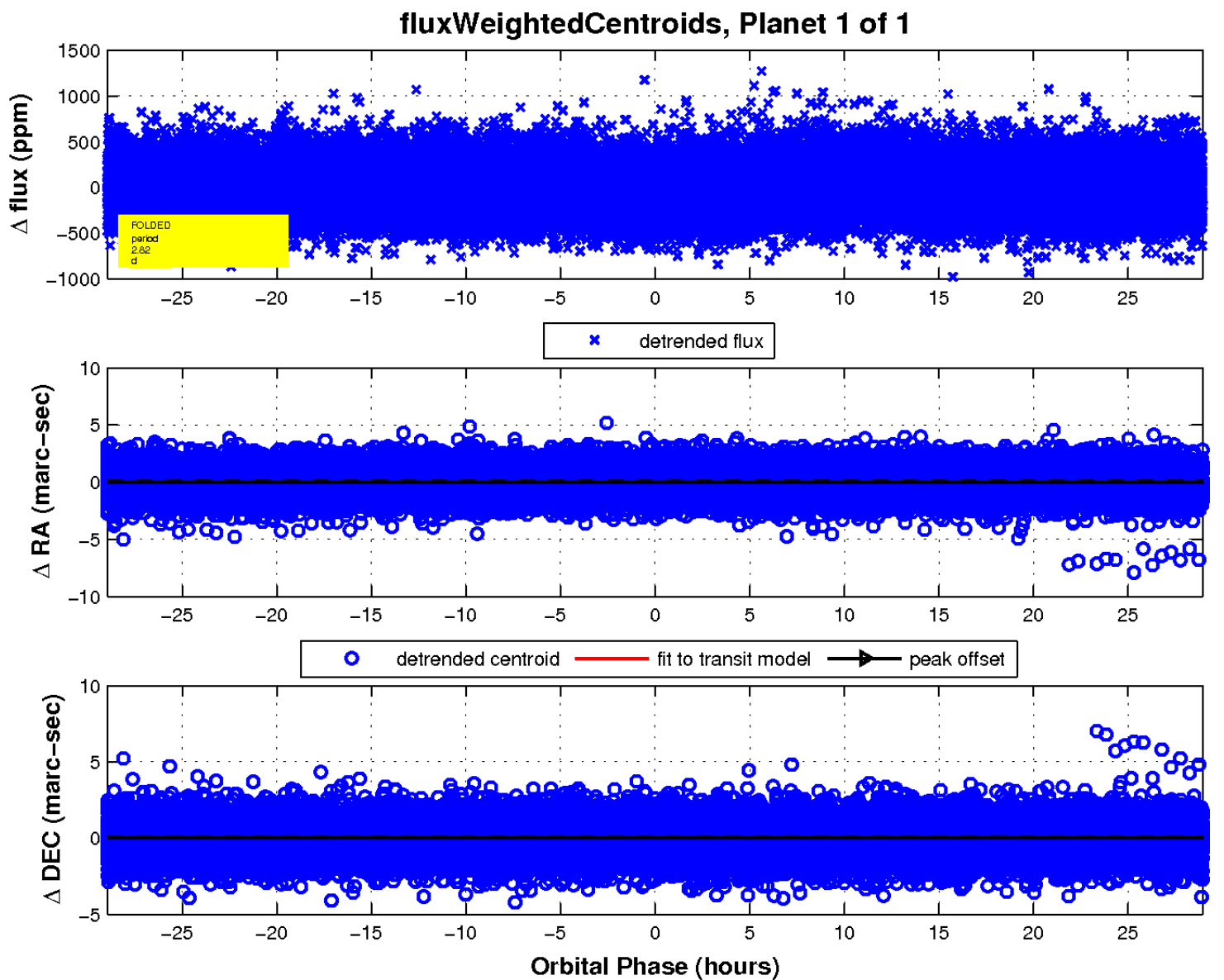
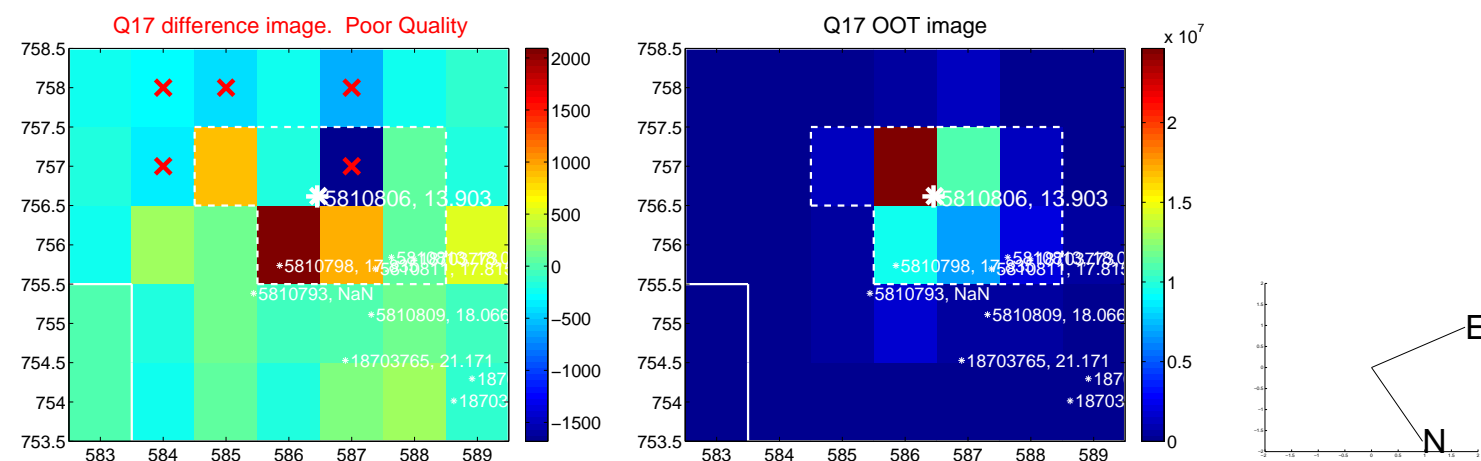
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

