

KIC 007903086

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})
007903086-01	OBS	2761.01	1.846844	131.907262	359.4	1.608	19.5	22.1	0.86	5591	1.97	757.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007903086-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET

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.

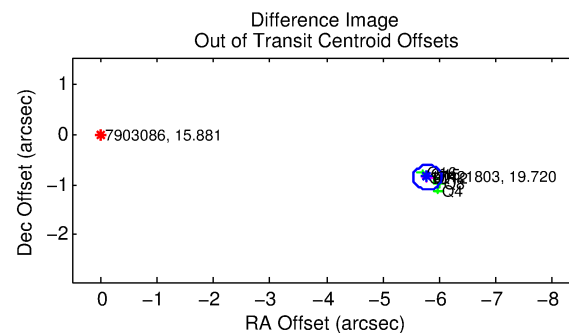
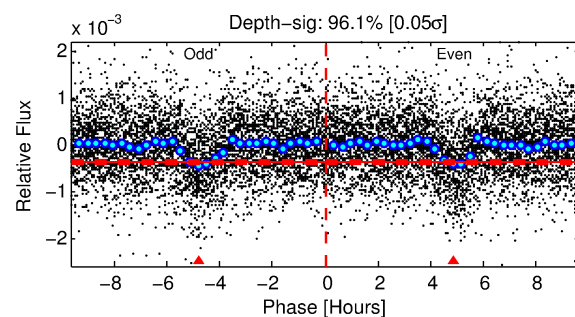
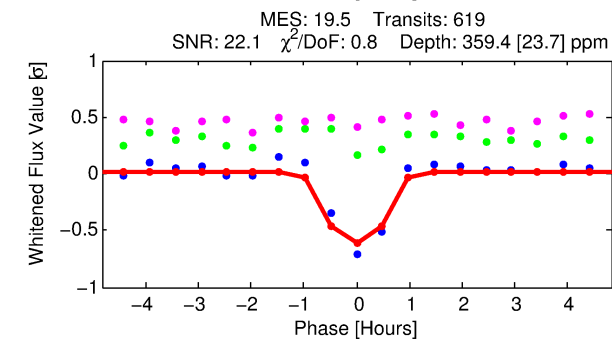
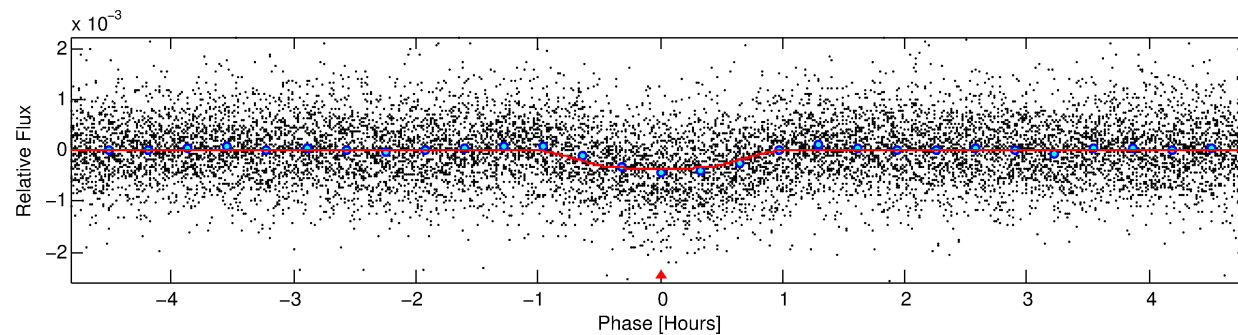
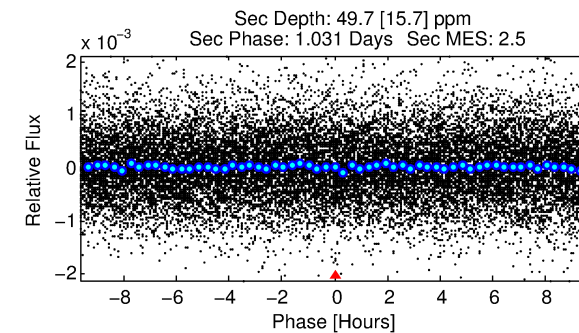
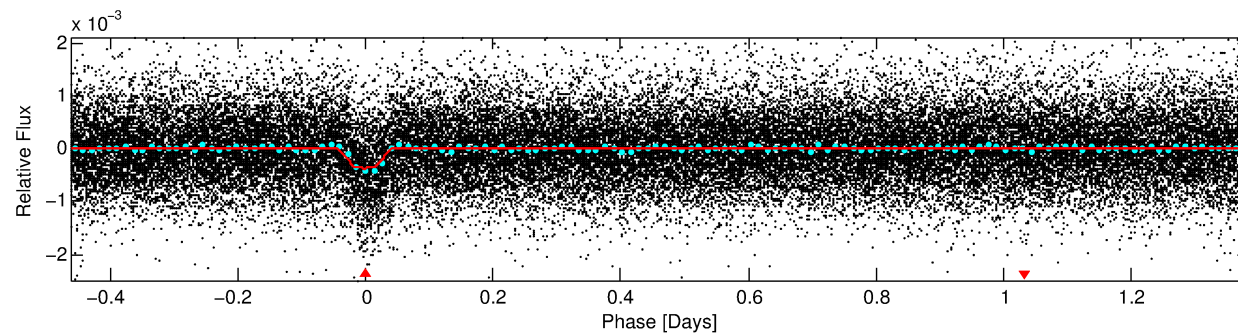
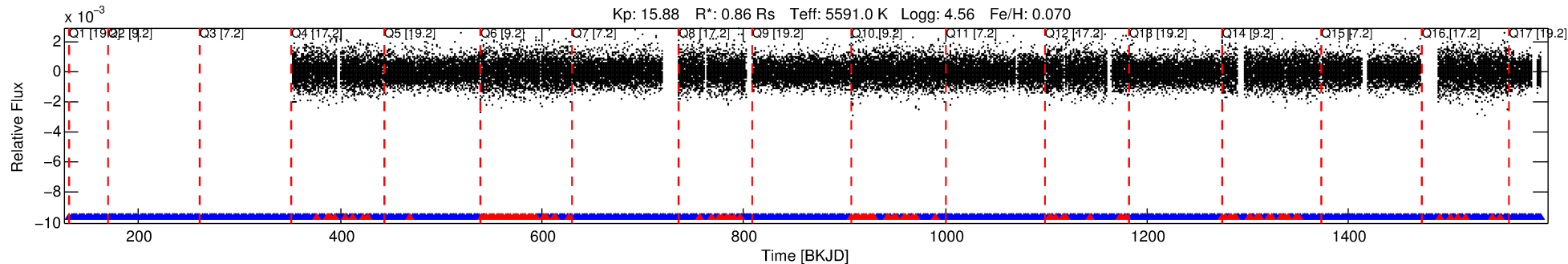
Ephemeris Match Information For 007903086-01

No Significant Match Found

DV One-Page Summary

KIC: 7903086 Candidate: 1 of 1 Period: 1.847 d
KOI: K02761.01 Corr: 0.925

Kp: 15.88 R*: 0.86 Rs Teff: 5591.0 K Logg: 4.56 Fe/H: 0.070



DV Fit Results:

Period = 1.84684 [0.00001] d
Epoch = 131.9073 [0.0011] BKJD
Rp/R* = 0.0210 [0.0064]
a/R* = 4.25 [5.48]
b = 0.90 [0.28]
Seff = 757.32 [276.49]
Teq = 1338 [122] K
Rp = 1.97 [0.81] Re
a = 0.0292 [0.0068] AU
Ag = 6.03 [4.64] [1.08σ]
Teffp = 3241 [568] K [3.27σ]

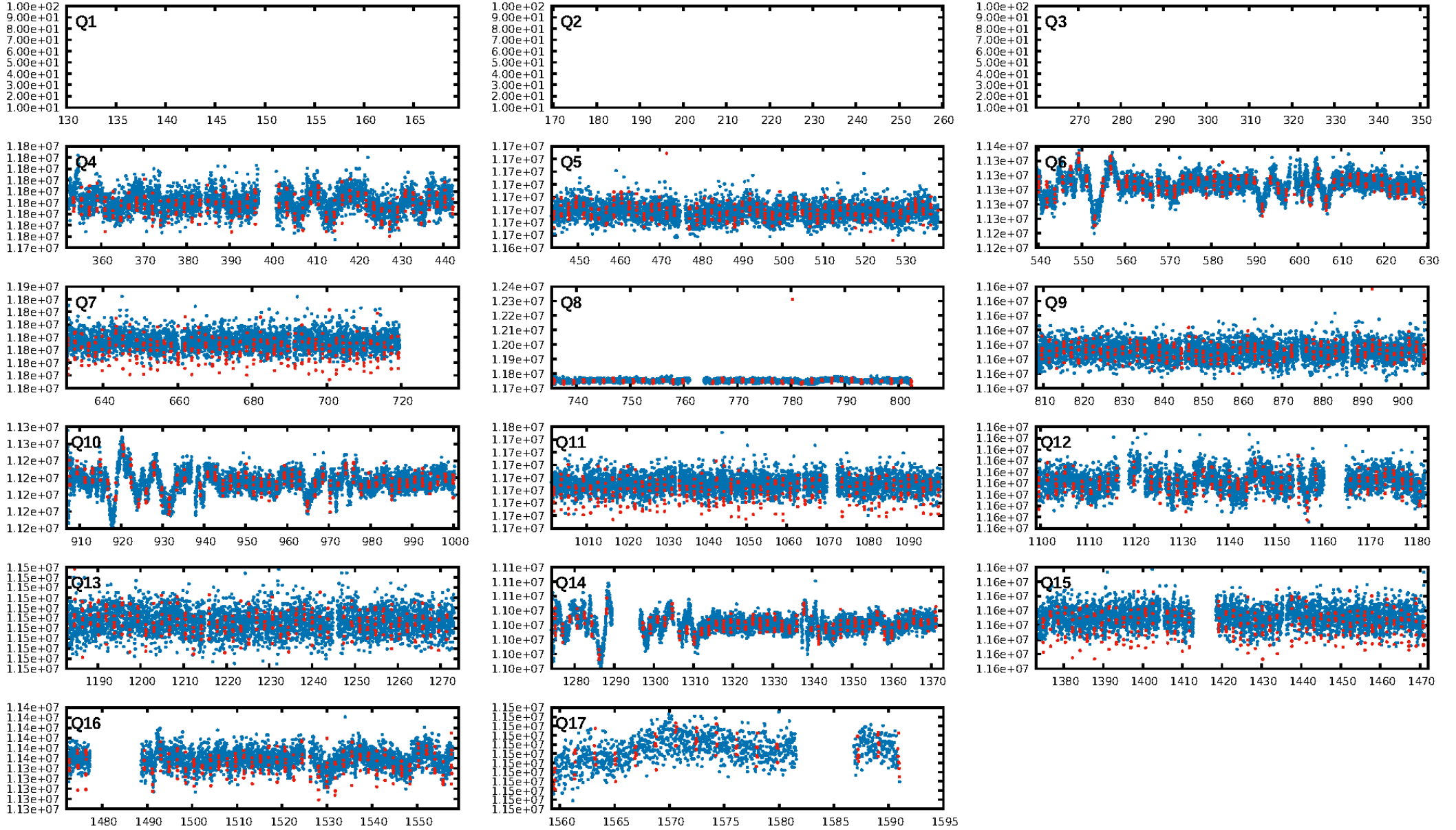
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.83e-82
RollingBand-fgt: 0.82 [495/604]
GhostDiagnostic-chr: -0.2891
Centroid-sig: 0.0%
Centroid-so: 28.745 arcsec [50.41σ]
OotOffset-rm: 5.846 arcsec [70.05σ]
KicOffset-rm: 5.775 arcsec [71.81σ]
OotOffset-st: 0/3/4/0 [7]
KicOffset-st: 0/3/4/0 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [14/14]

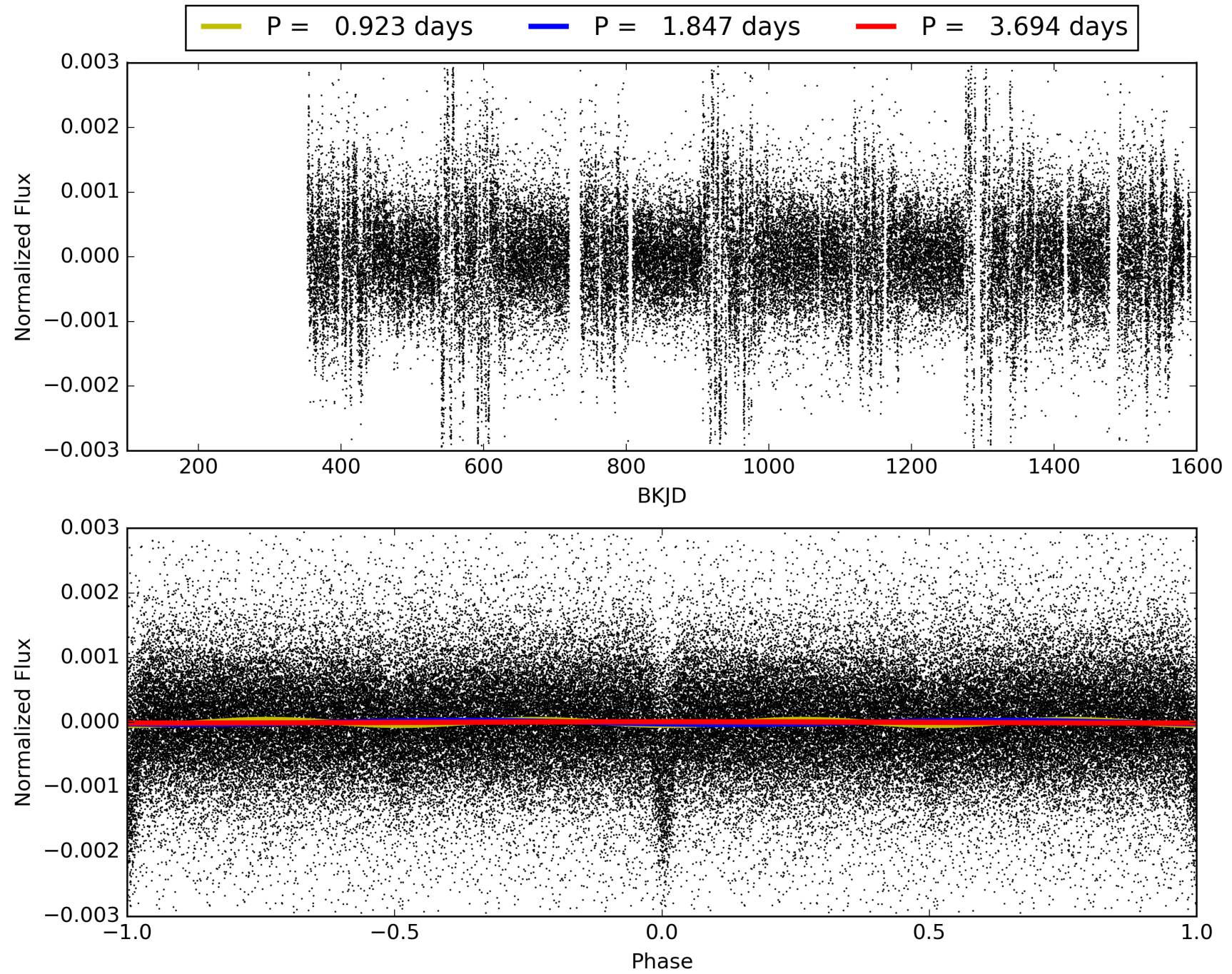
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:07:16 Z

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

TCE 007903086-01, PDC Light Curves

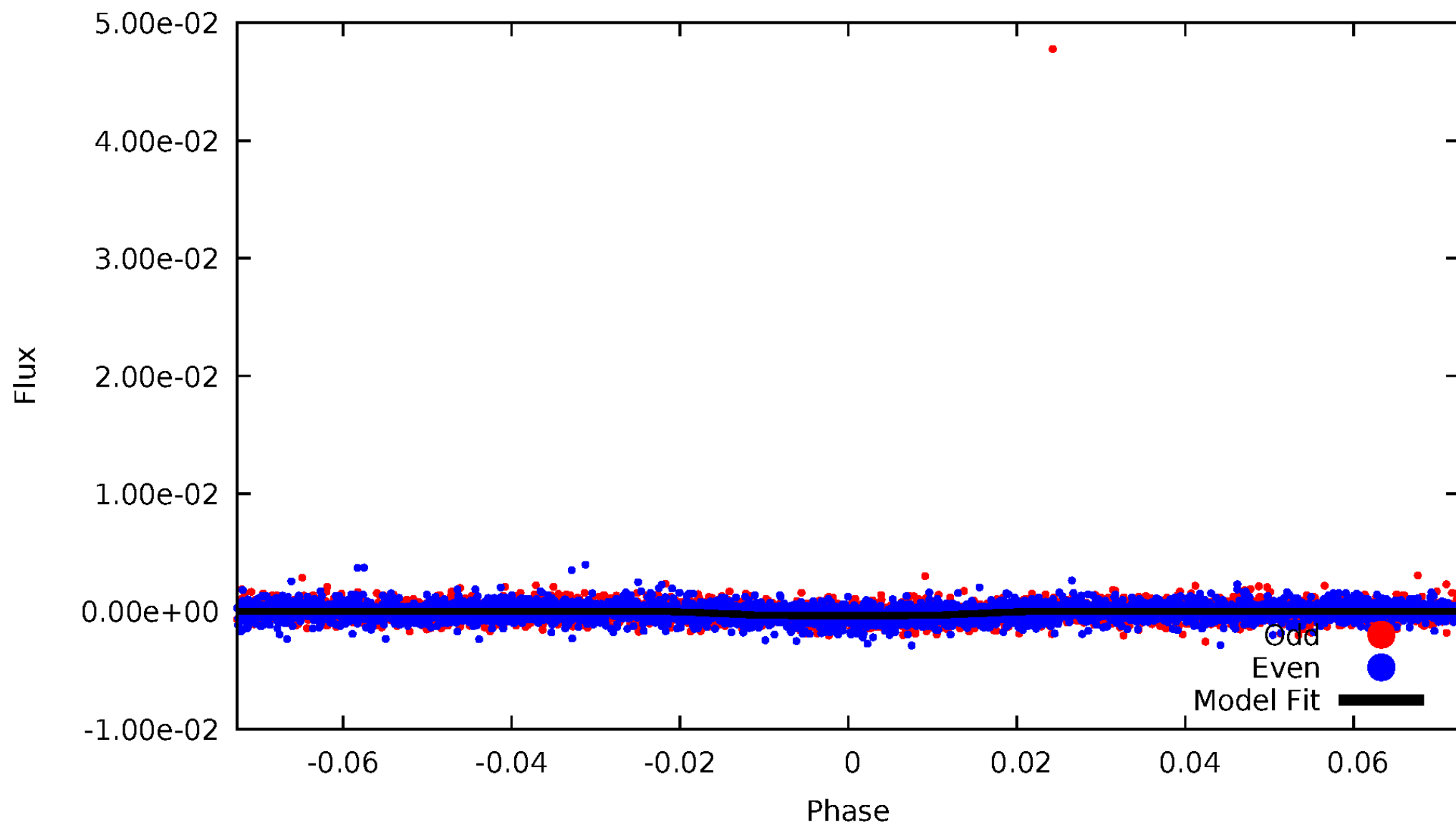


TCE 007903086-01



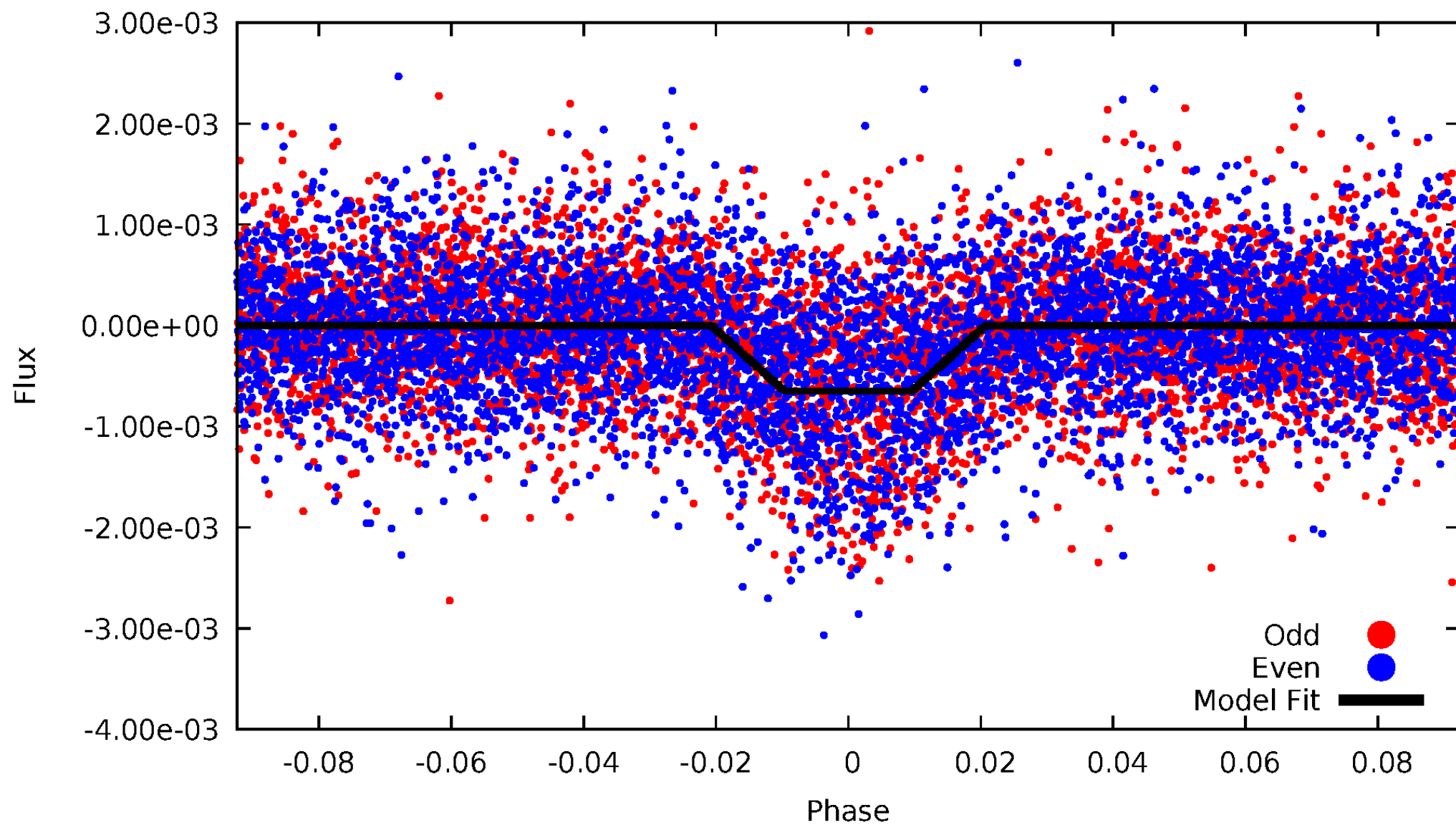
DV Odd/Even

TCE 007903086-01

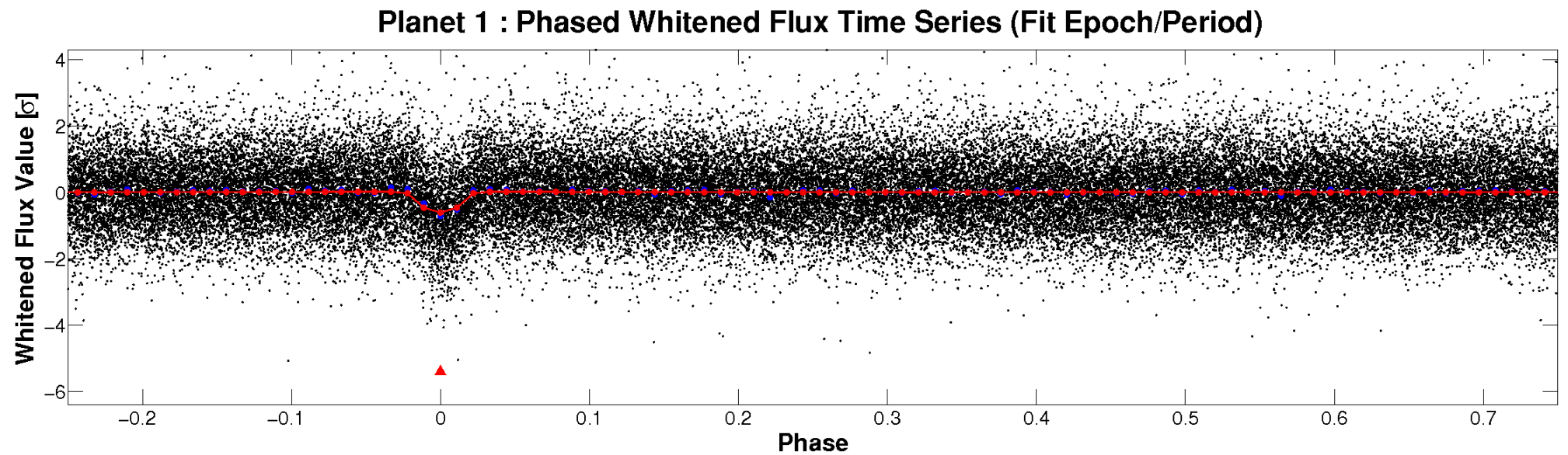
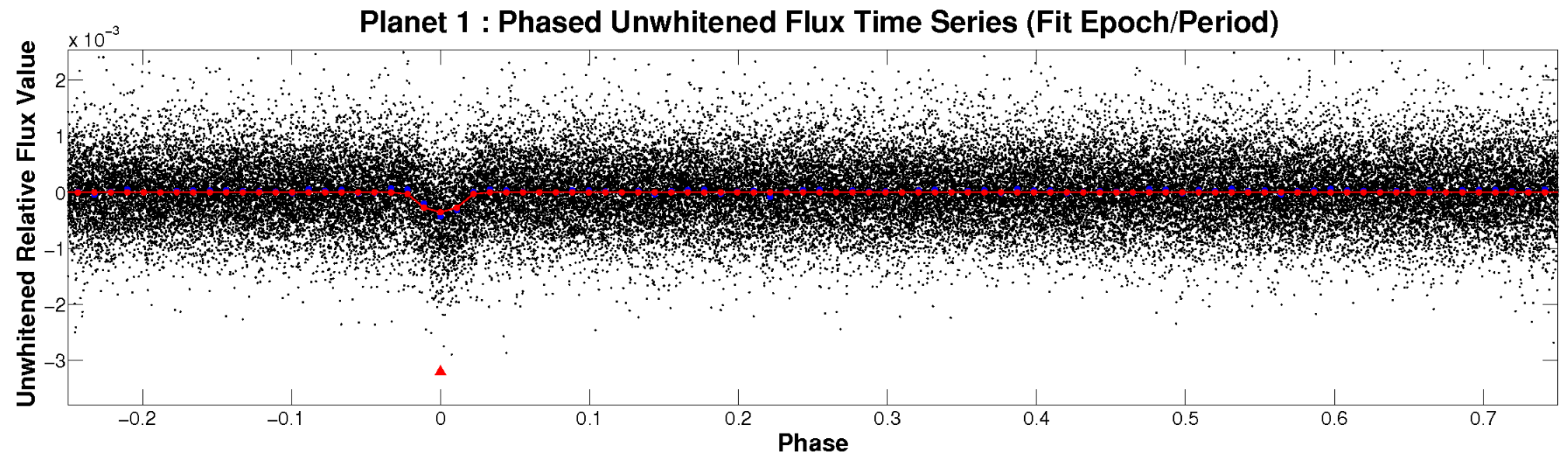


ALT Odd/Even

TCE 007903086-01

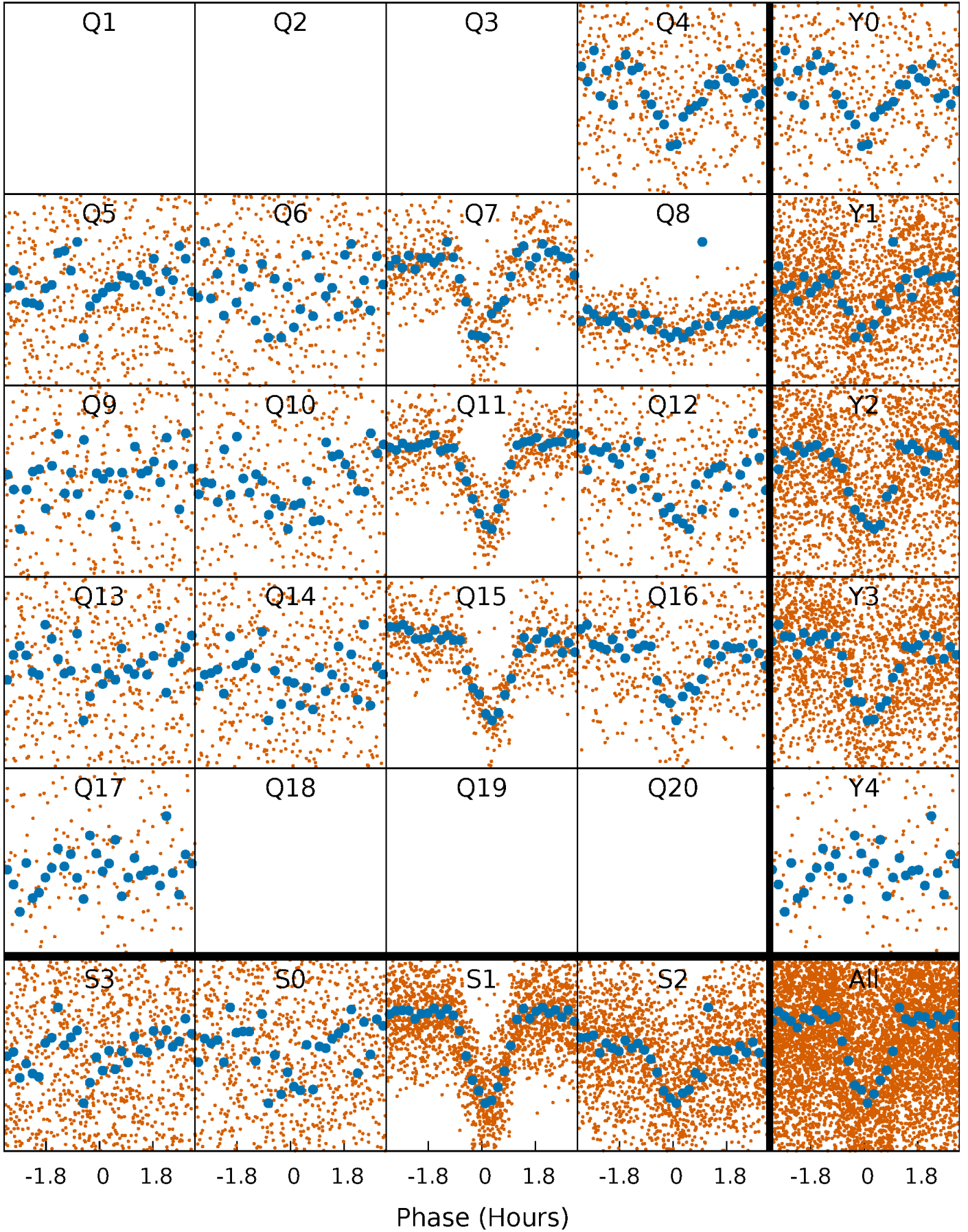


Non-Whitened Vs. Whitened Light Curve



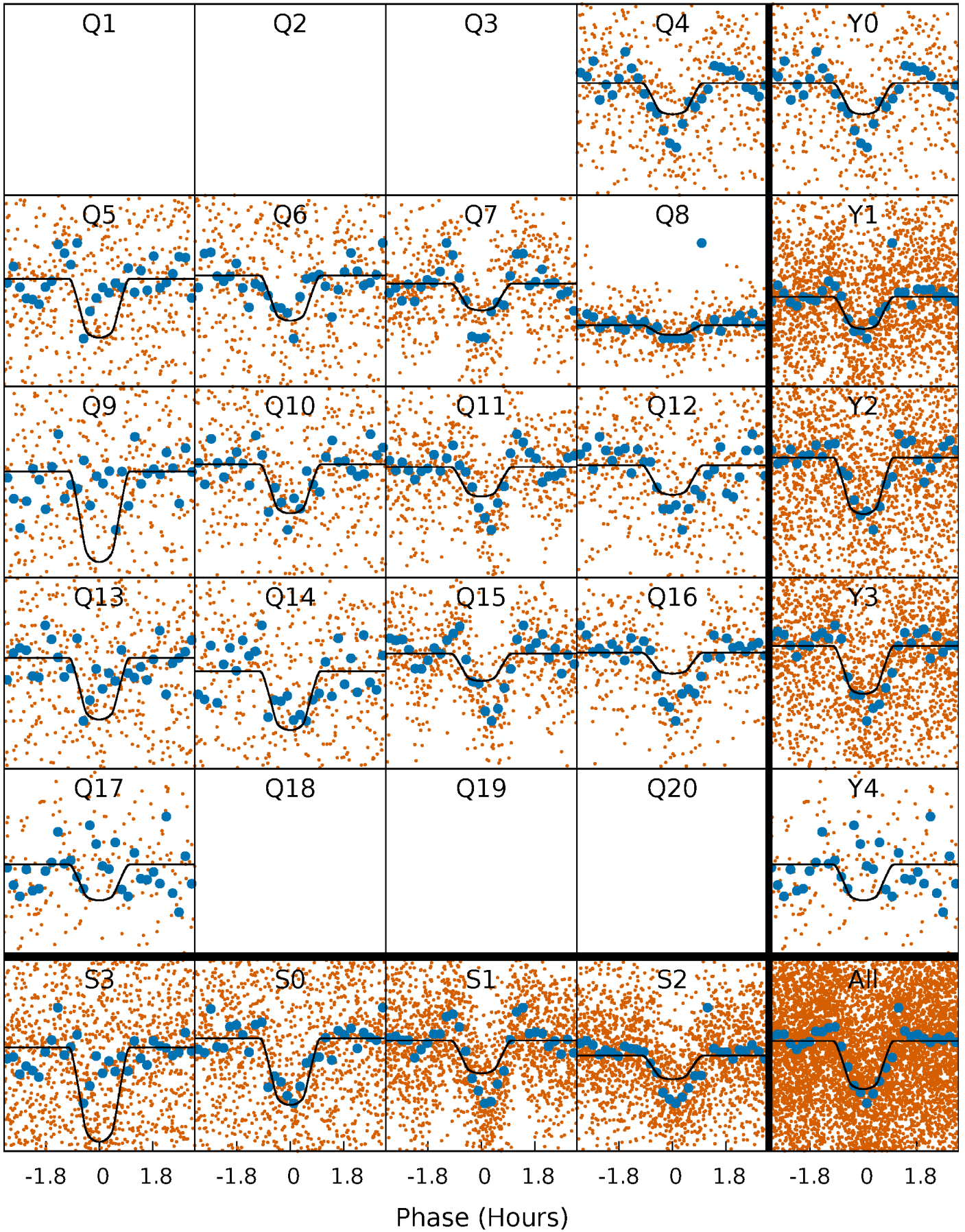
PDC Quarter-Phased Transit Curves

TCE 007903086-01 P= 1.846844 Days $T_0=131.907262$ (BKJD)



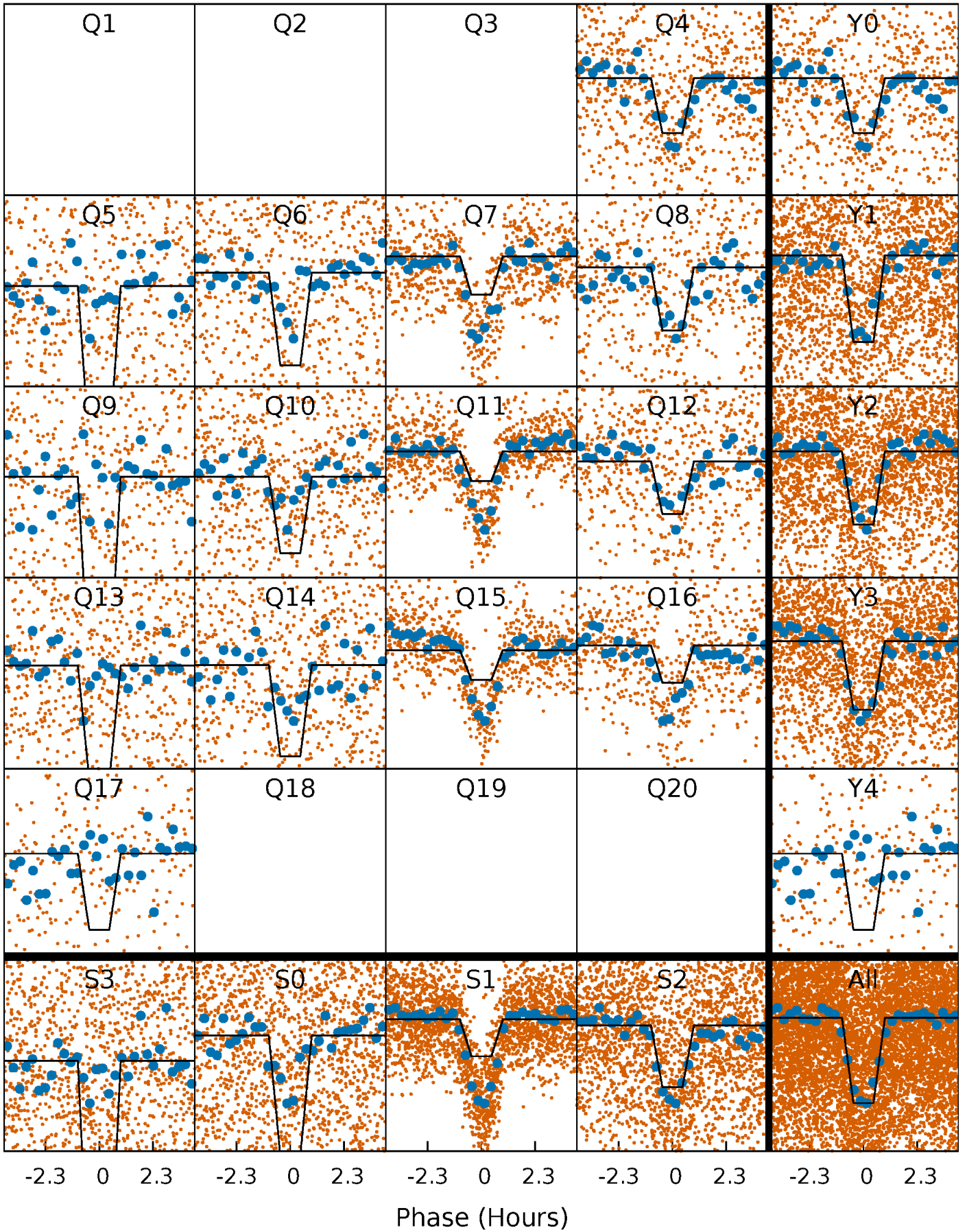
DV Quarter-Phased Transit Curves

TCE 007903086-01 P= 1.846844 Days $T_0=131.907262$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

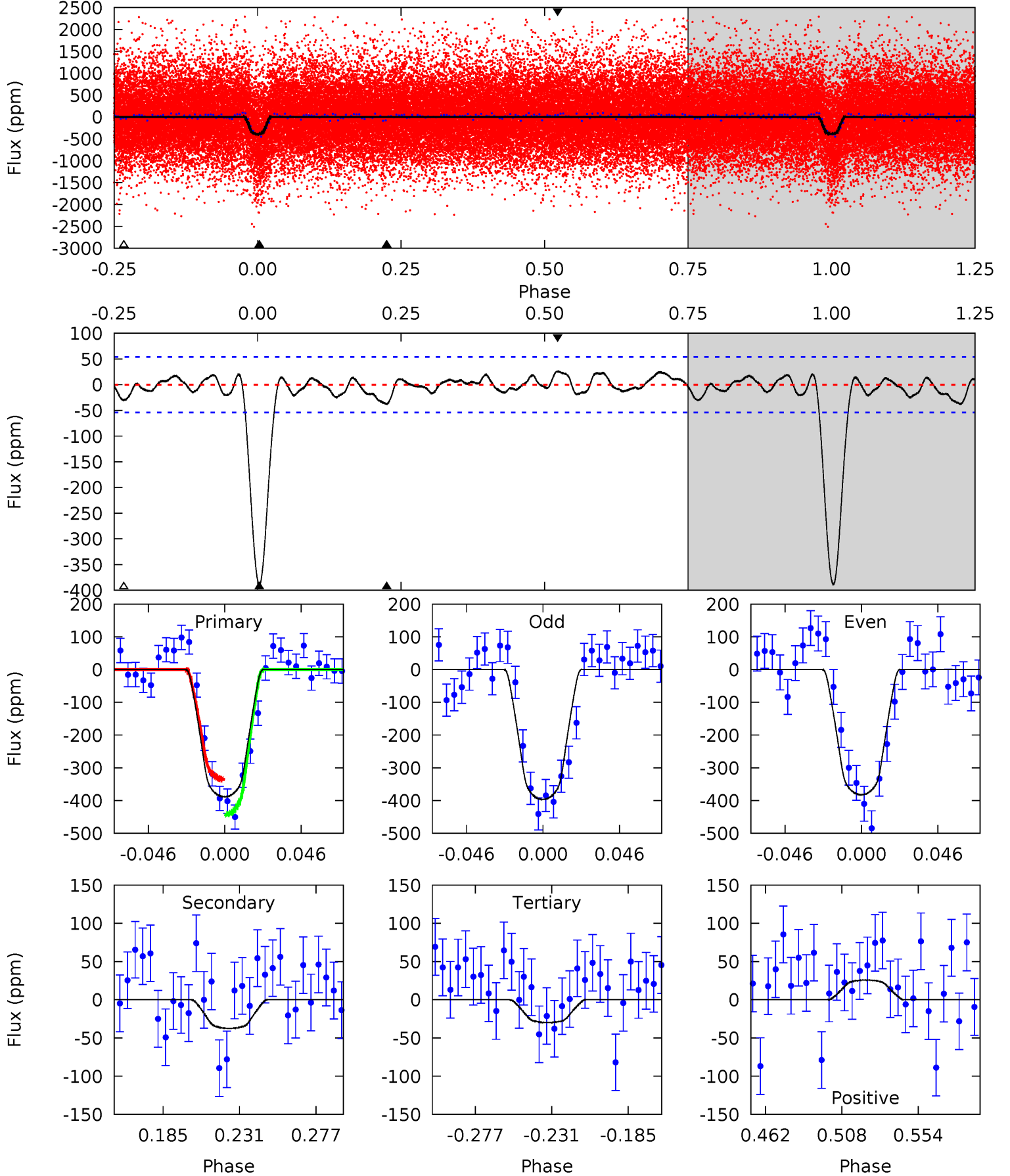
TCE 007903086-01 P= 1.846861 Days $T_0=131.904744$ (BKJD)



DV Model-Shift Uniqueness Test

007903086-01, P = 1.846844 Days, E = 131.907262 Days

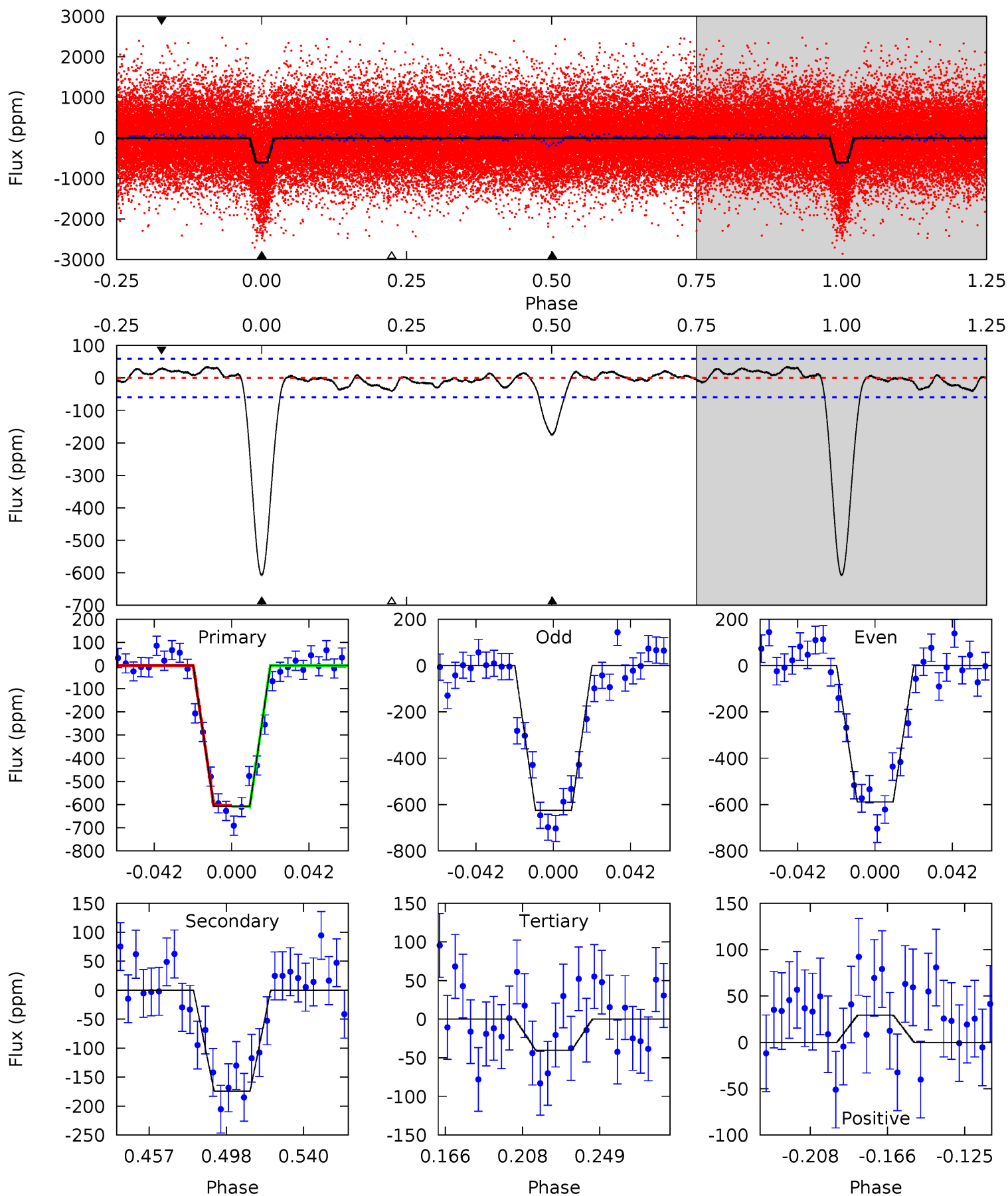
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.9	3.27	2.61	2.25	4.72	1.99	1.10	31.3	31.7	0.67	1.02	0.62	1.02	0.06	4.71



Alt Model-Shift Uniqueness Test

007903086-01, P = 1.846861 Days, E = 131.904744 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.6	14.0	3.22	2.34	4.75	2.04	1.29	45.4	46.3	10.7	11.6	1.45	1.19	0.05	0.22



Stellar Parameters For KIC 007903086

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5591^{+166}_{-183}	$4.559^{+0.033}_{-0.187}$	$0.070^{+0.250}_{-0.300}$	$0.860^{+0.237}_{-0.063}$	$0.977^{+0.084}_{-0.115}$	$2.163^{+0.391}_{-1.051}$
	+3%/-3%	+1%/-4%	+357%/-429%	+28%/-7%	+9%/-12%	+18%/-49%
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 007903086-01 / KOI 2761.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 11	$2.03^{+0.77}_{-0.62}$	1908^{+137}_{-84}	3444^{+530}_{-371}	$3.914^{+5.345}_{-1.909}$
Alt.	-174 ± 12	$2.50^{+0.67}_{-0.64}$	1905^{+124}_{-86}	4220^{+492}_{-324}	13^{+10}_{-5}

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

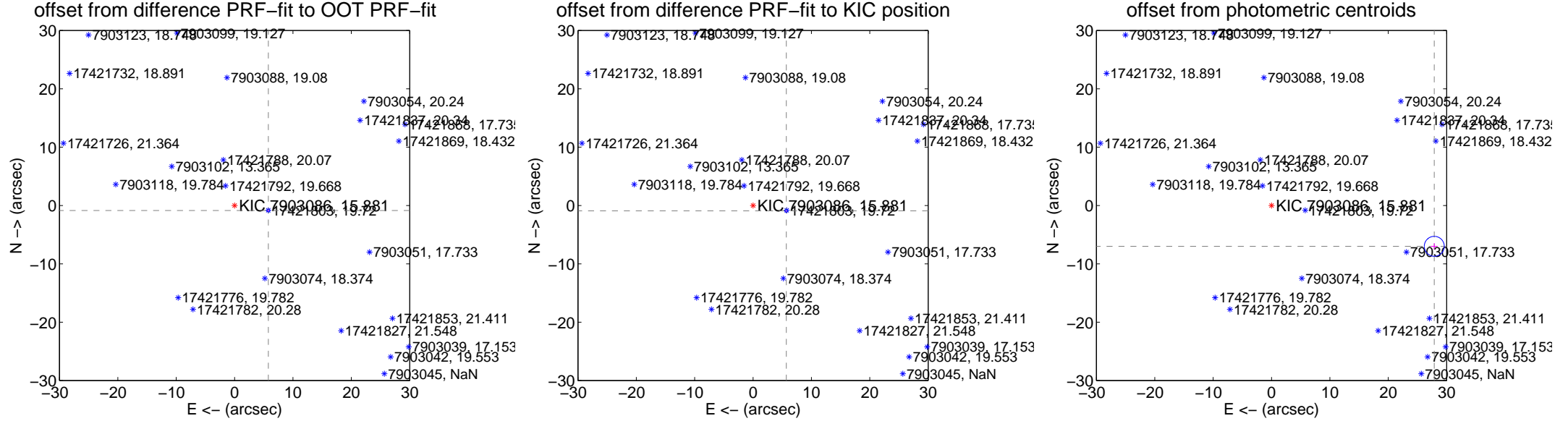
DV Centroid Data

Supplemental centroid analysis for 007903086-01. Kepler magnitude: 15.88. Transit SNR 22.14

There are 7 quarters with good PRF difference image offsets

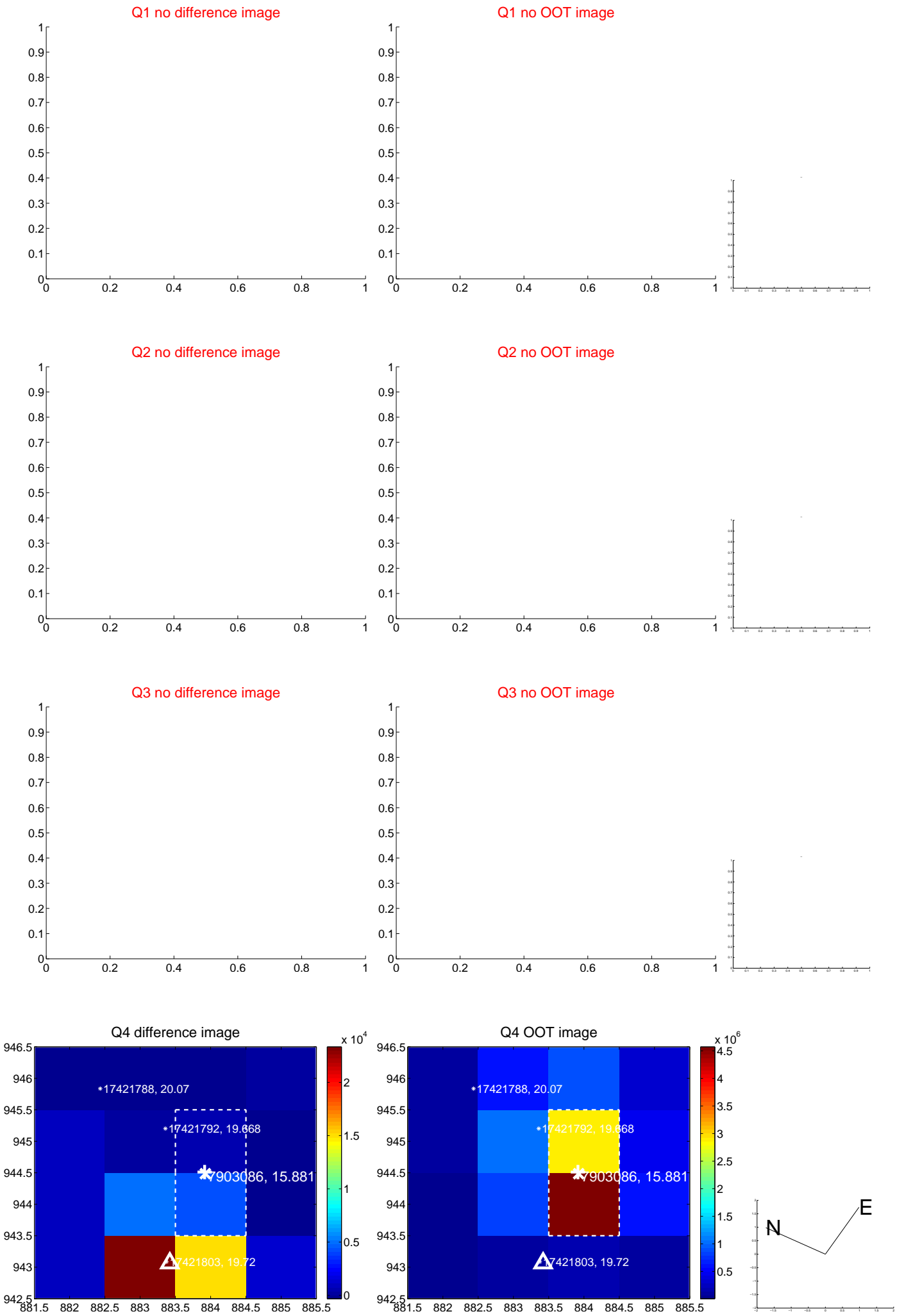
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.846 \pm 0.083	70.05	-5.783 \pm 0.081	-0.855 \pm 0.080
PRF-fit source offset from KIC position	5.775 \pm 0.080	71.81	-5.702 \pm 0.079	-0.920 \pm 0.077
photometric centroid source offset	28.75 \pm 0.57	50.41	-27.88 \pm 0.57	-6.99 \pm 0.52

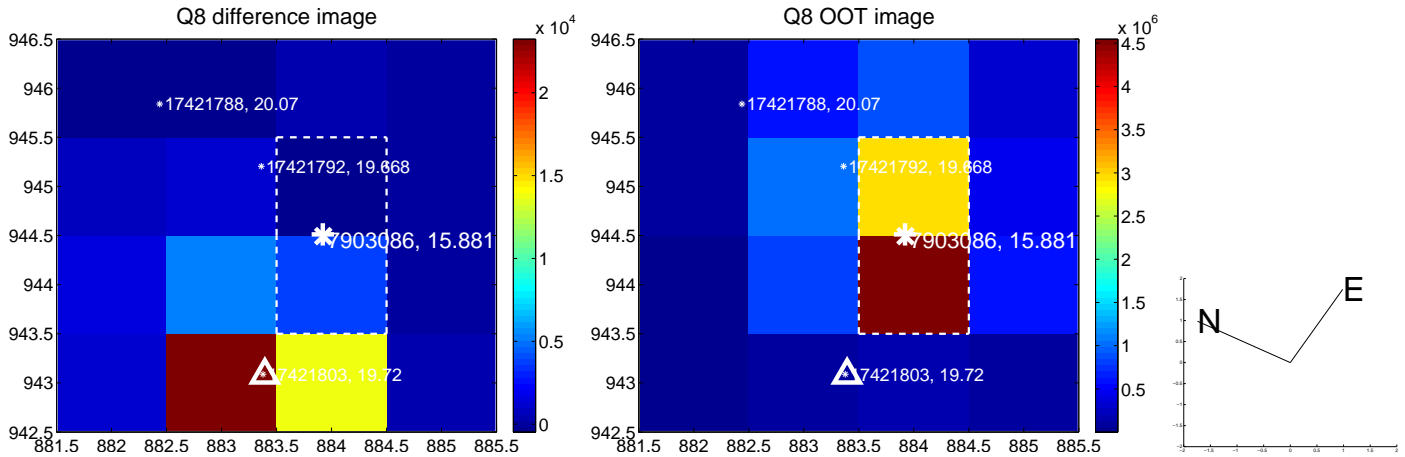
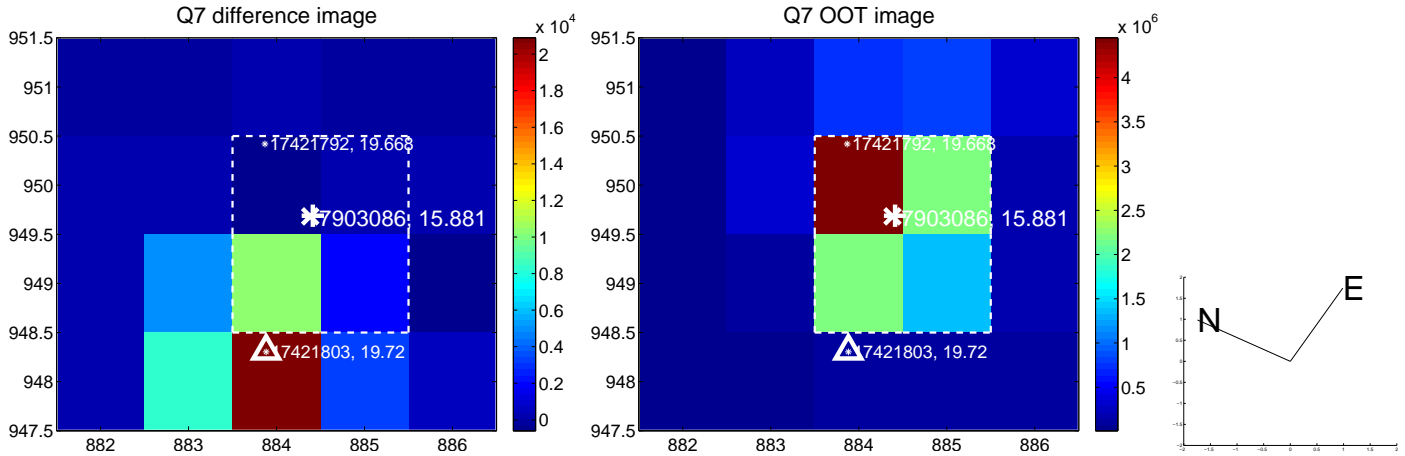
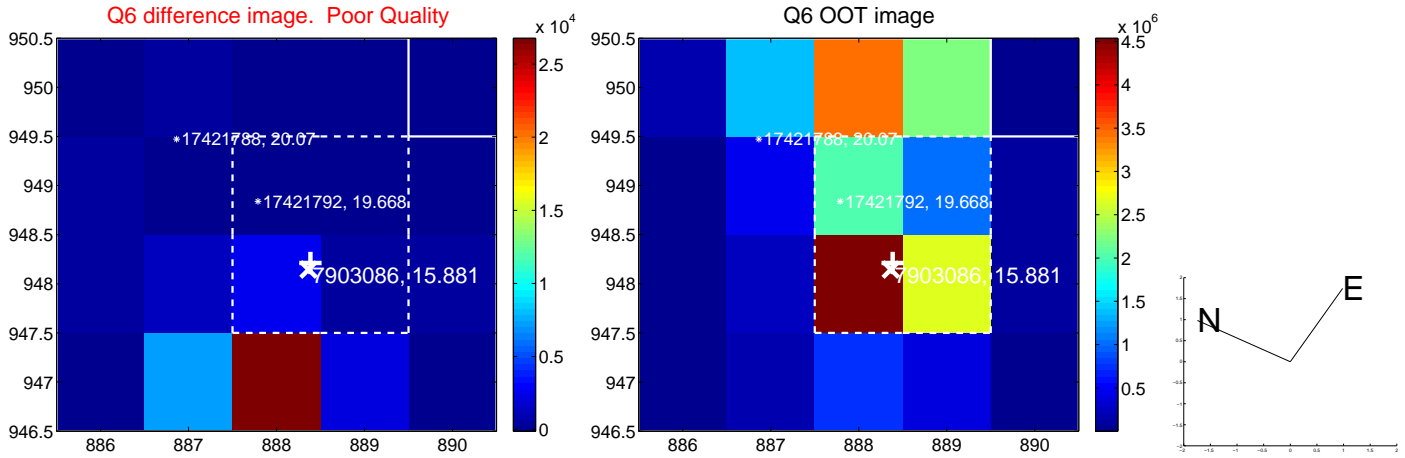
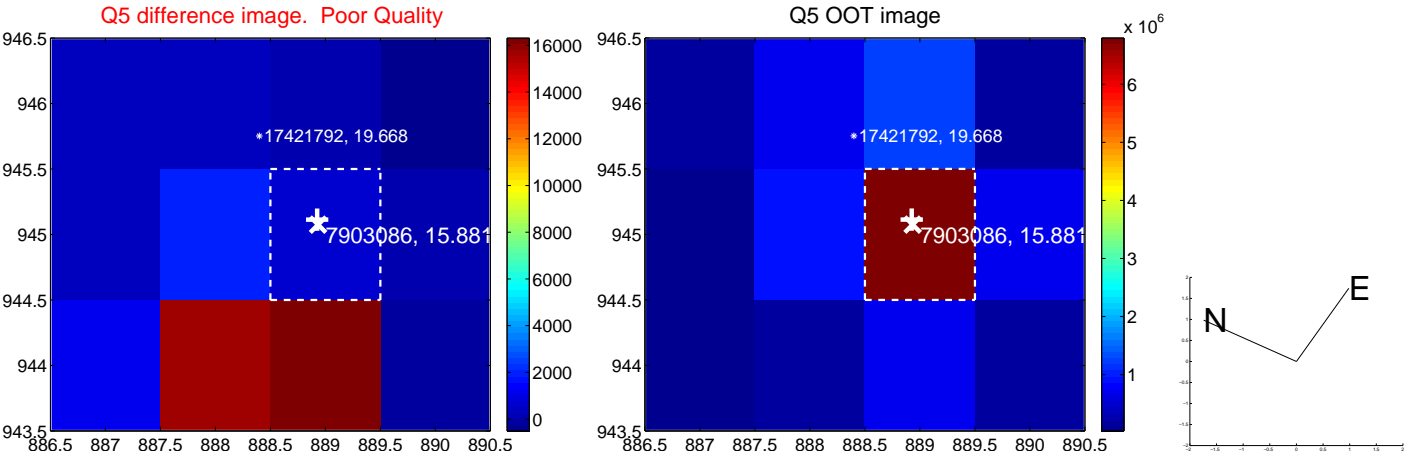


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

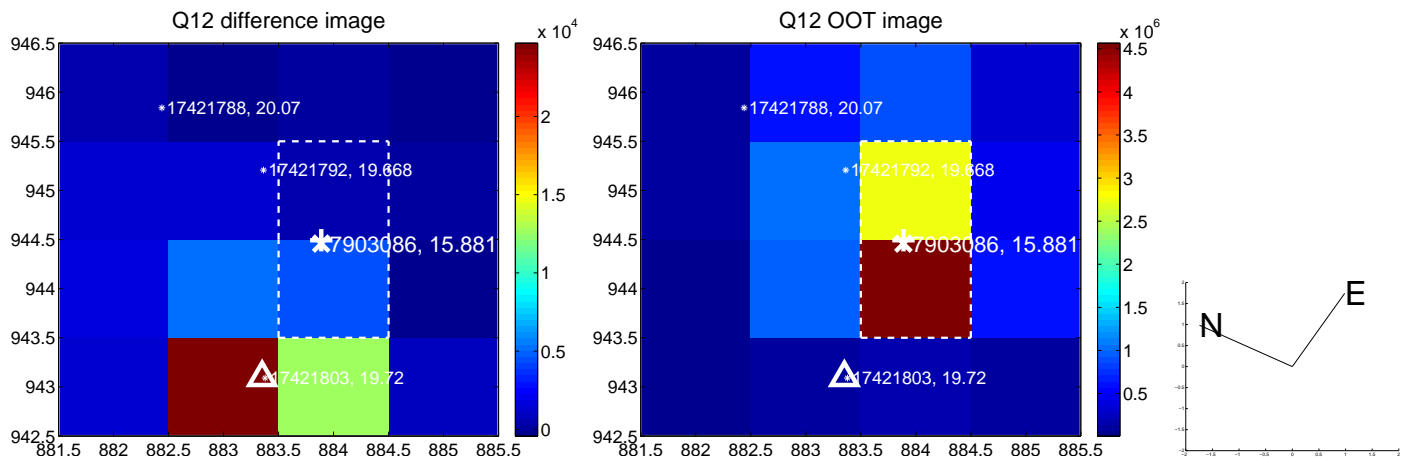
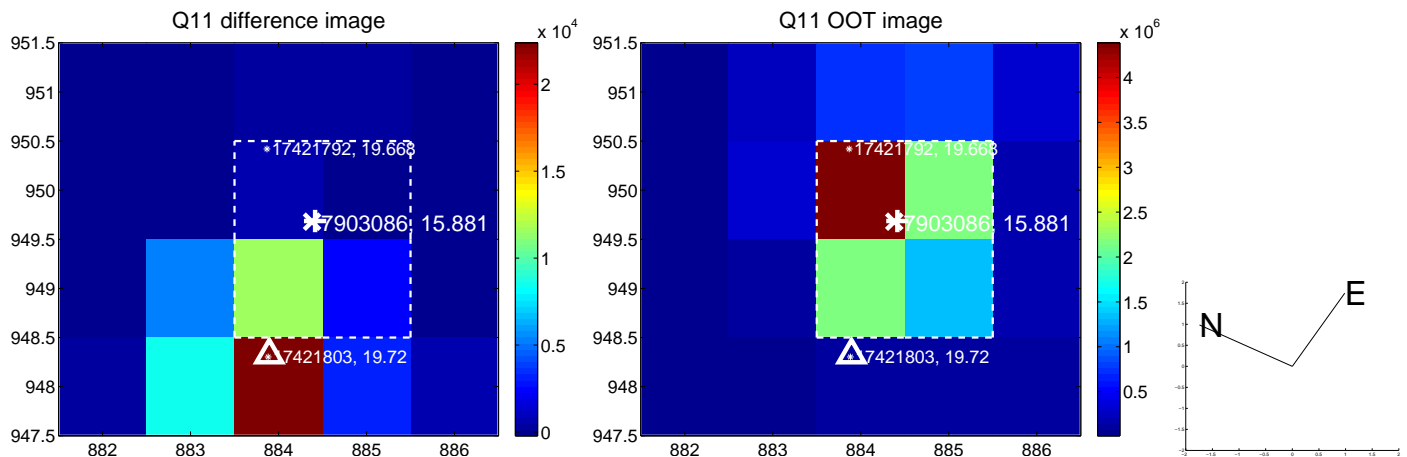
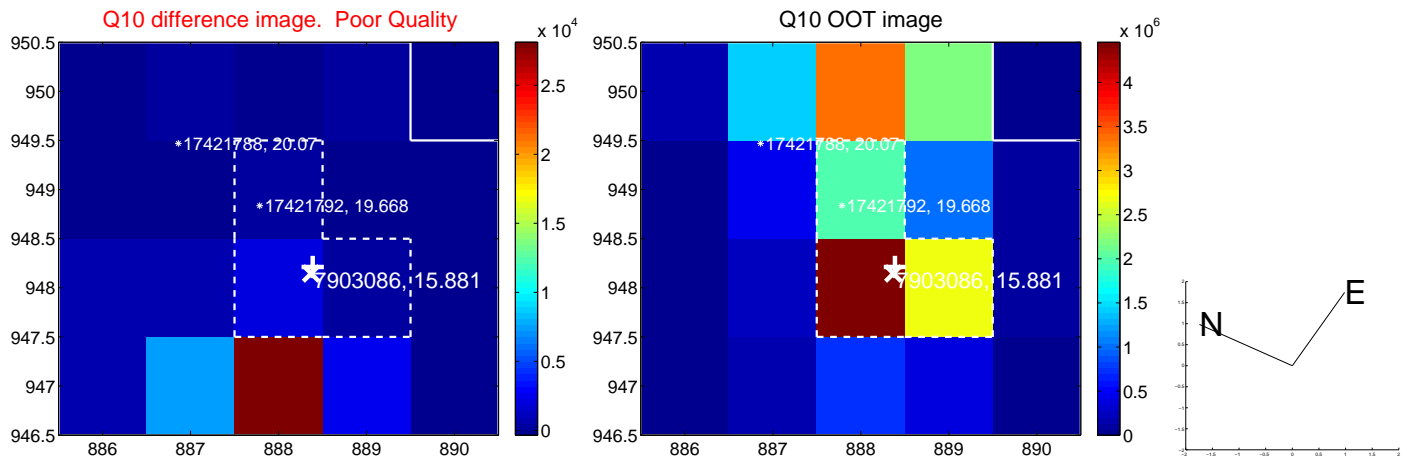
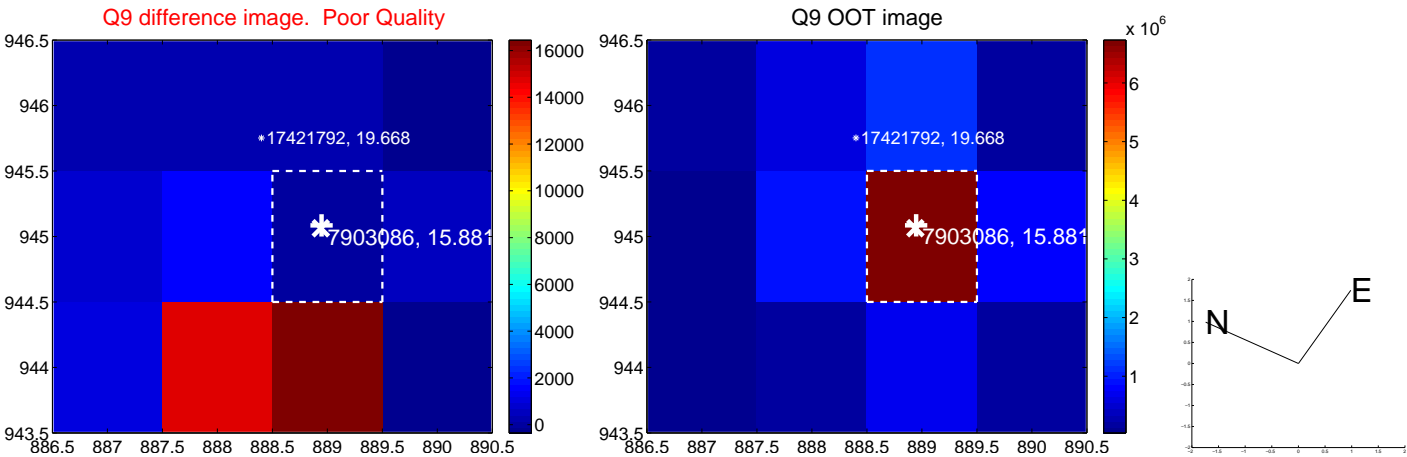
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



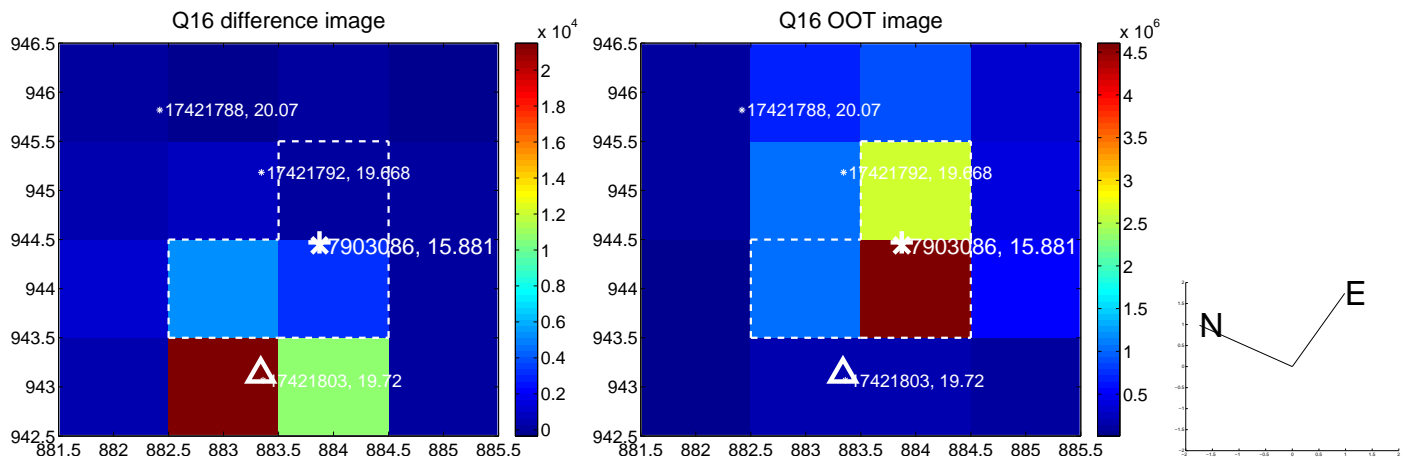
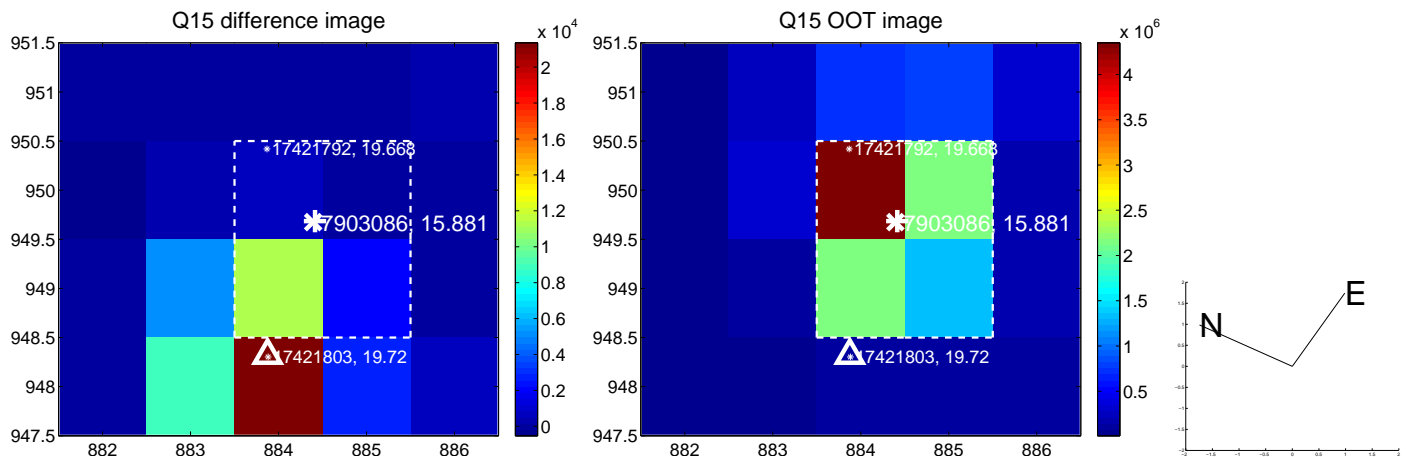
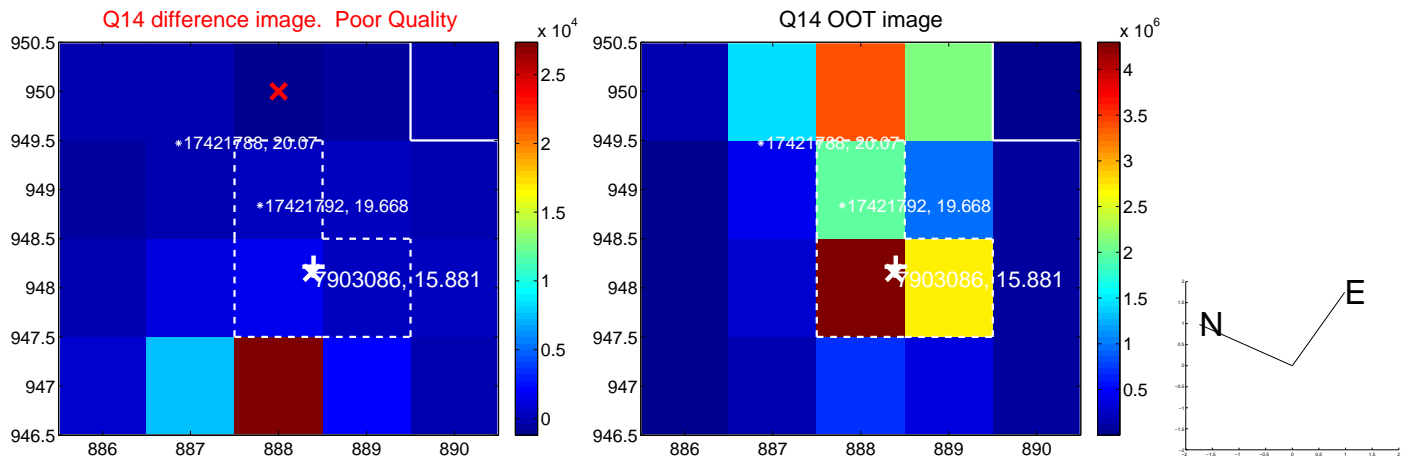
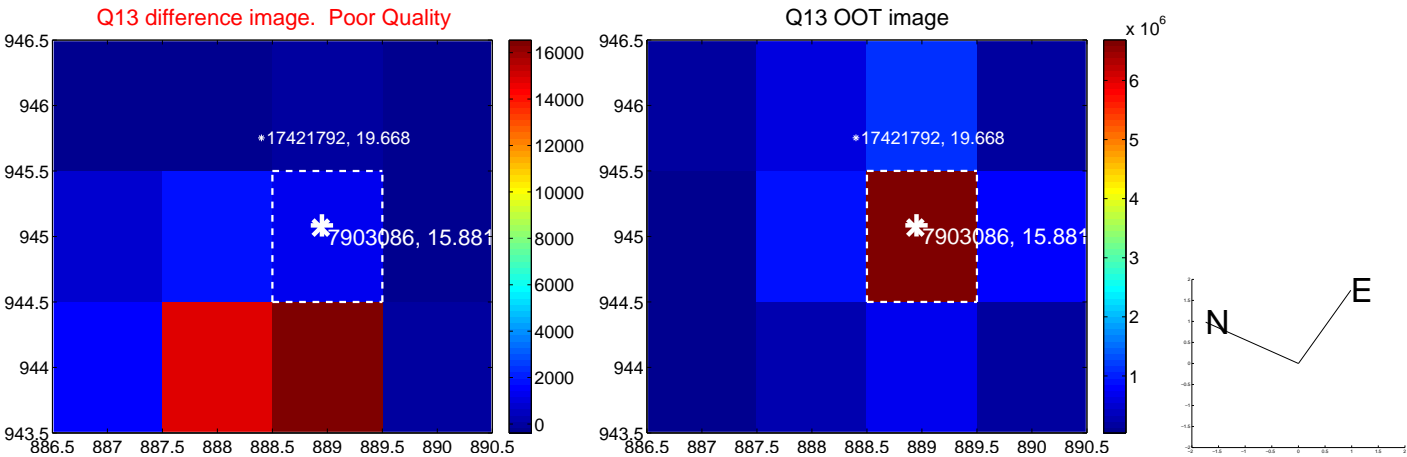
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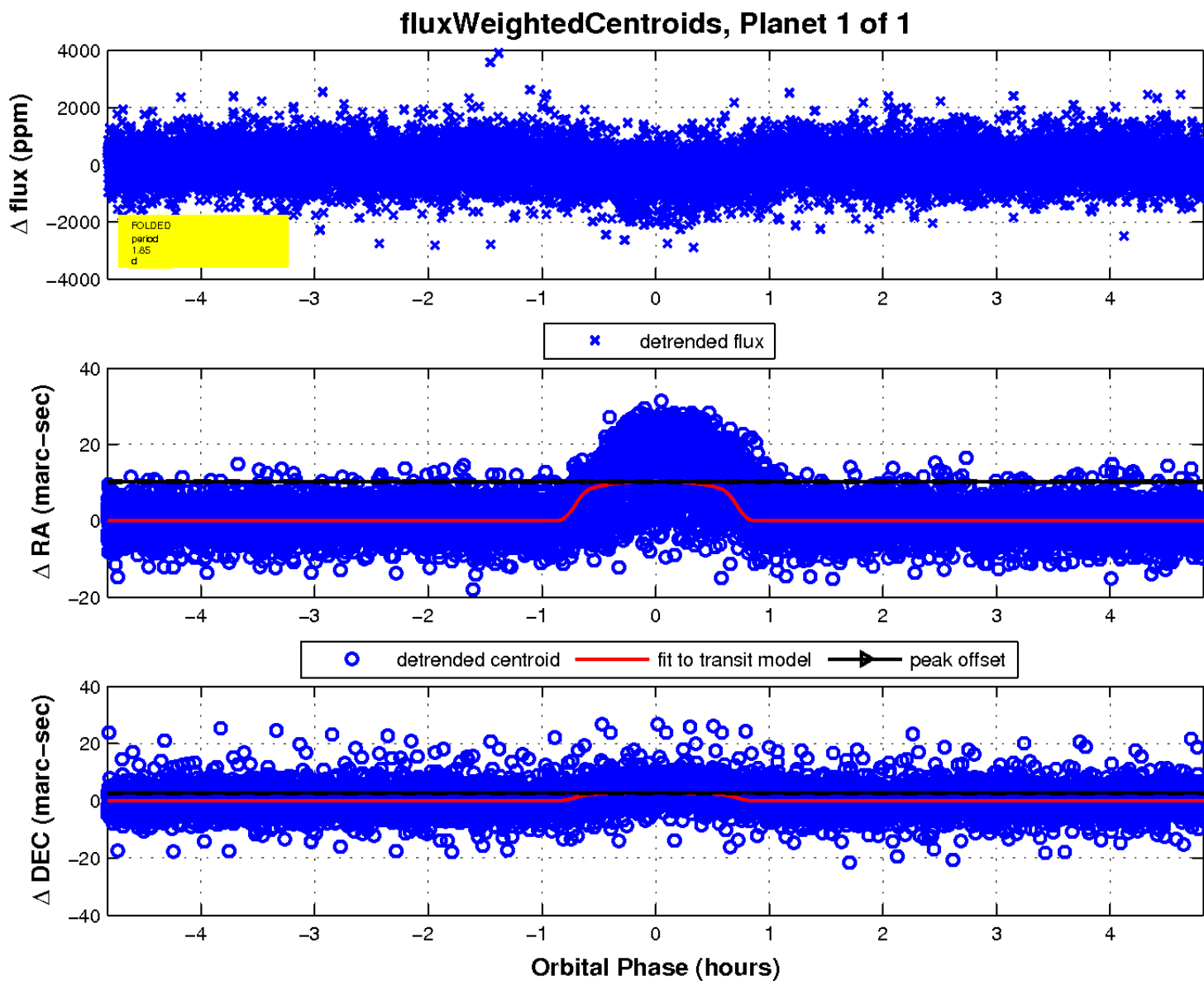
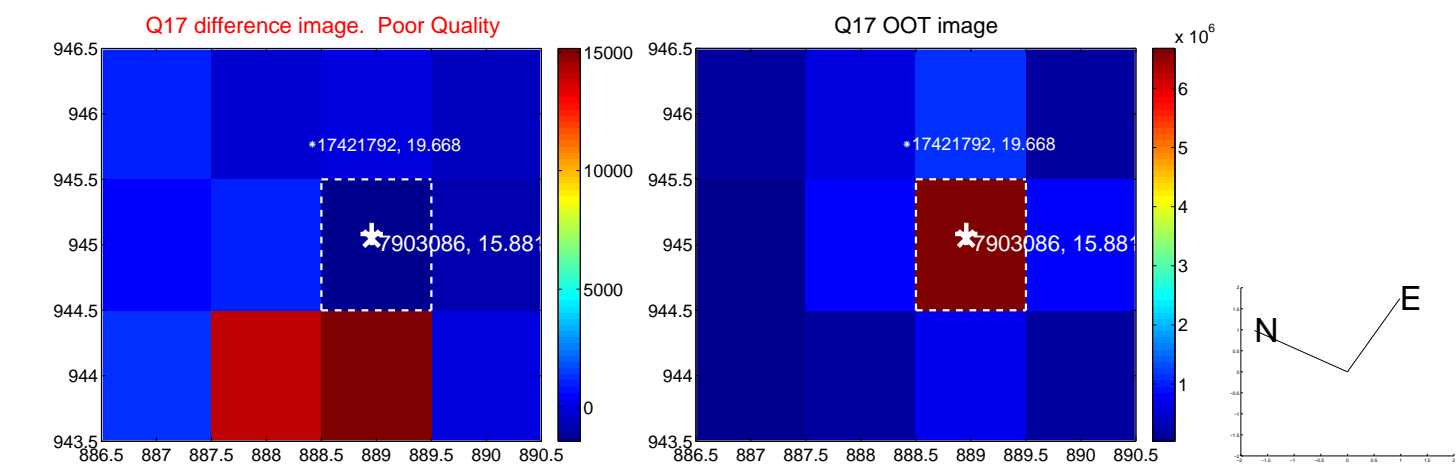
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UKIRT Image

Declination

