

KIC 002853446

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})
002853446-01	OBS	1118.01	7.372905	137.612454	198.4	1.877	16.0	18.5	1.07	5973	2.04	240.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002853446-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

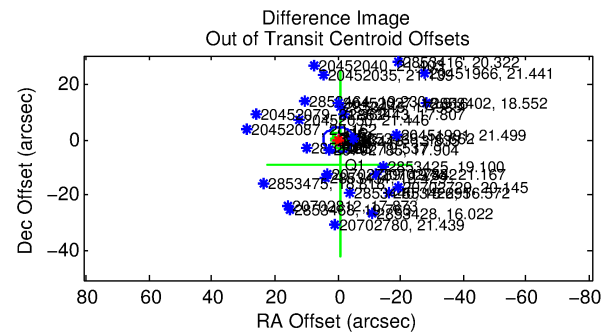
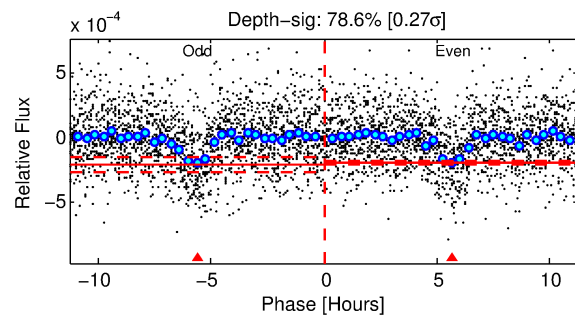
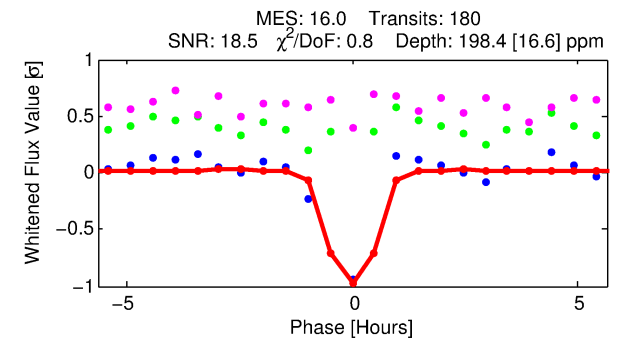
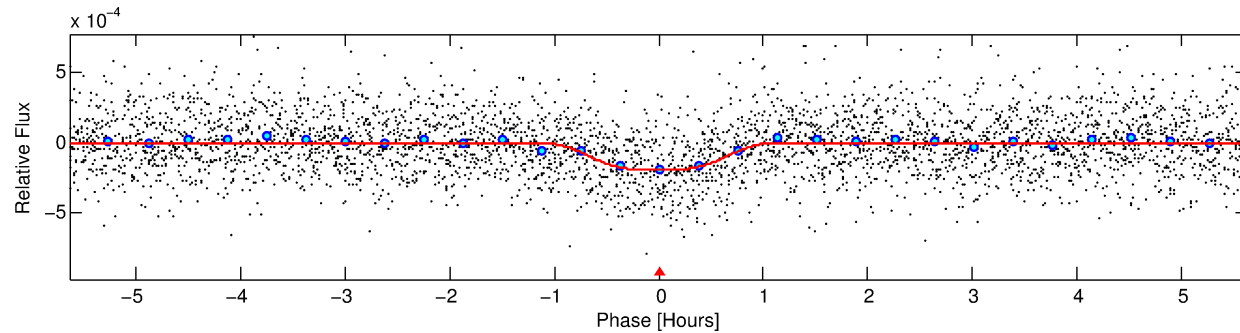
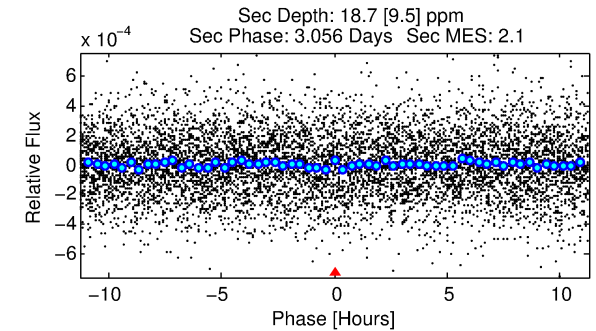
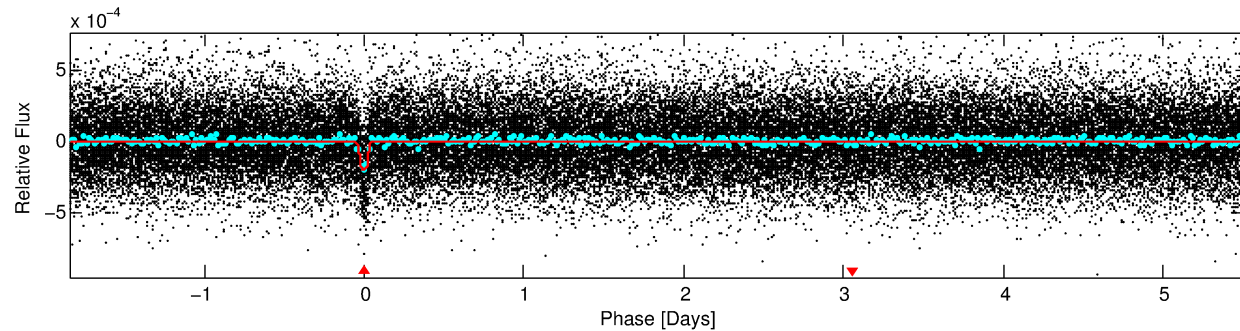
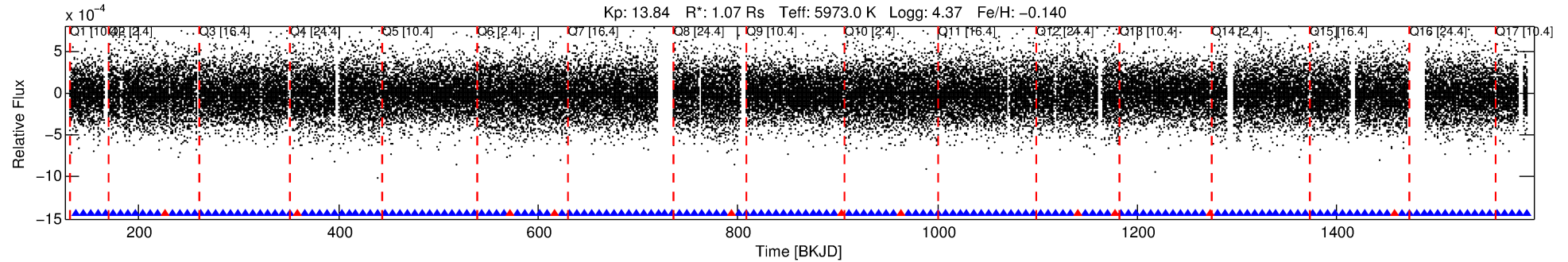
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002853446-01

No Significant Match Found

DV One-Page Summary

KIC: 2853446 Candidate: 1 of 1 Period: 7.373 d
KOI: K01118.01 Corr: 0.894



DV Fit Results:

Period = 7.37291 [0.00002] d
Epoch = 137.6125 [0.0024] BKJD
Rp/R* = 0.0174 [0.0012]
a/R* = 8.49 [1.88]
b = 0.98 [0.01]
Seff = 240.47 [55.44]
Teff = 1004 [58] K
Rp = 2.04 [0.35] Re
a = 0.0737 [0.0103] AU
Ag = 13.43 [7.65] [1.63σ]
Teffp = 2972 [398] K [4.90σ]

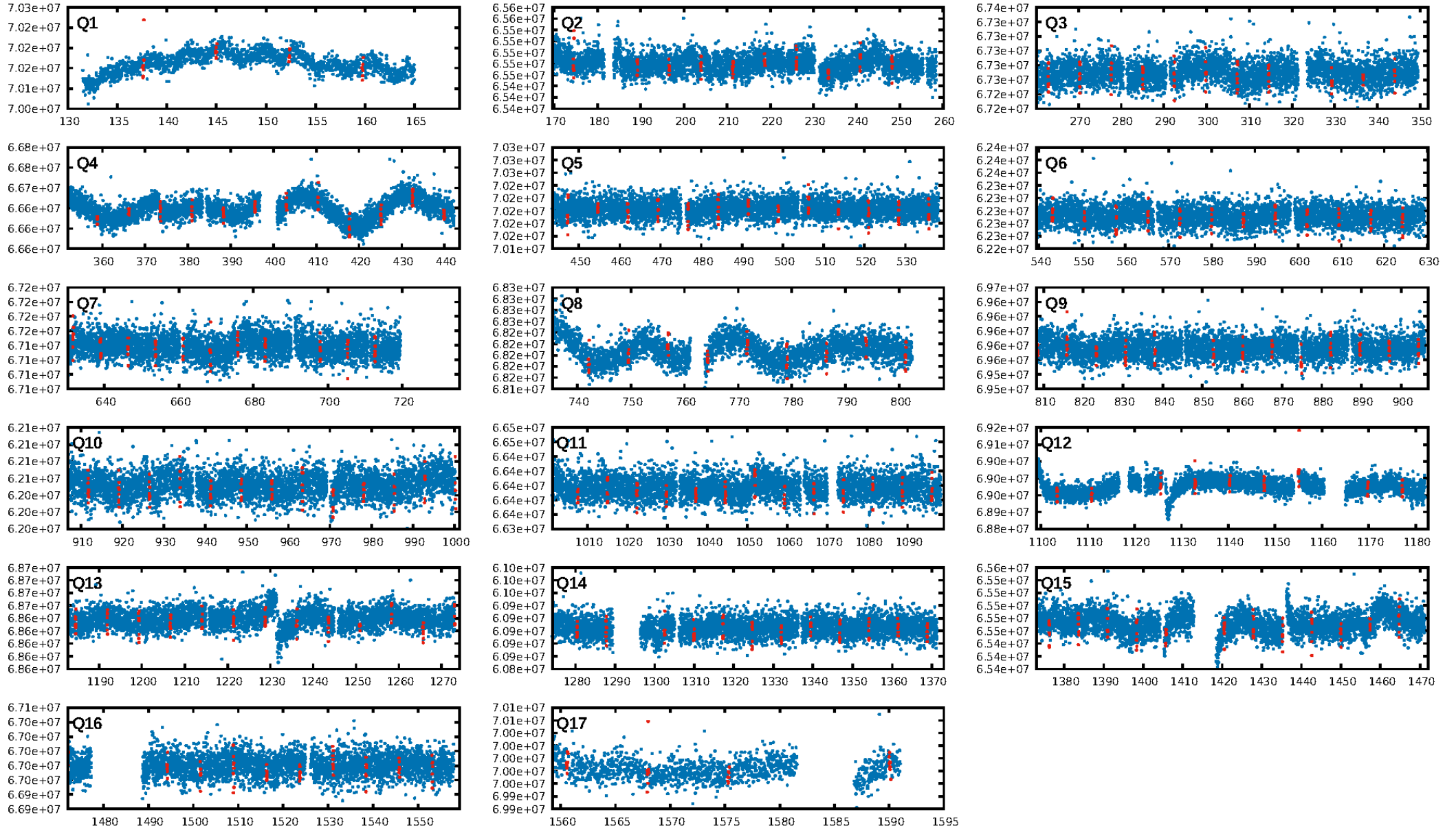
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.58e-57
RollingBand-fgt: 0.94 [161/172]
GhostDiagnostic-chr: 2.968
Centroid-sig: 0.0%
Centroid-so: 1.138 arcsec [1.72σ]
OotOffset-rm: 0.130 arcsec [0.08σ]
KicOffset-rm: 0.356 arcsec [0.19σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

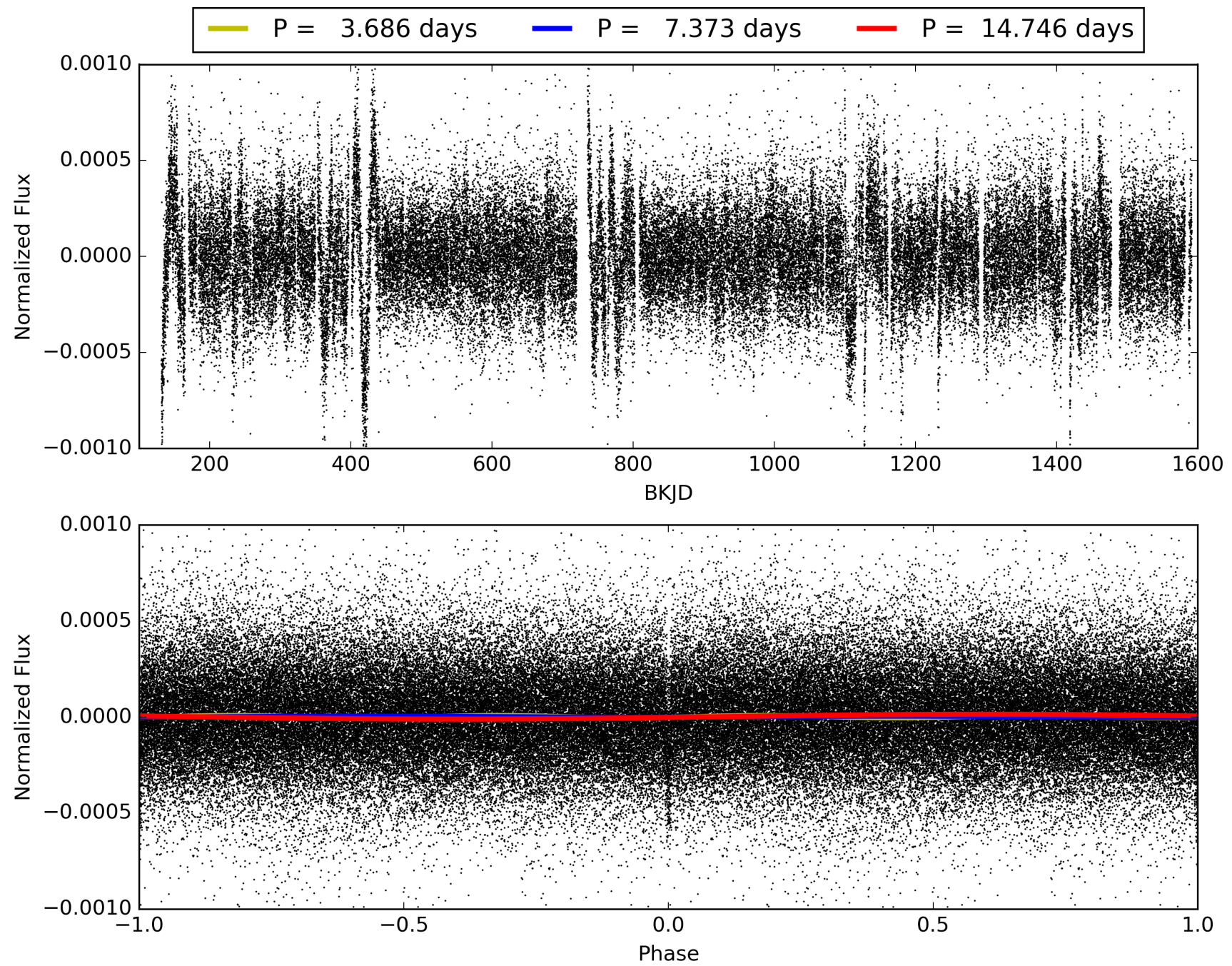
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:46:20 Z

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

TCE 002853446-01, PDC Light Curves

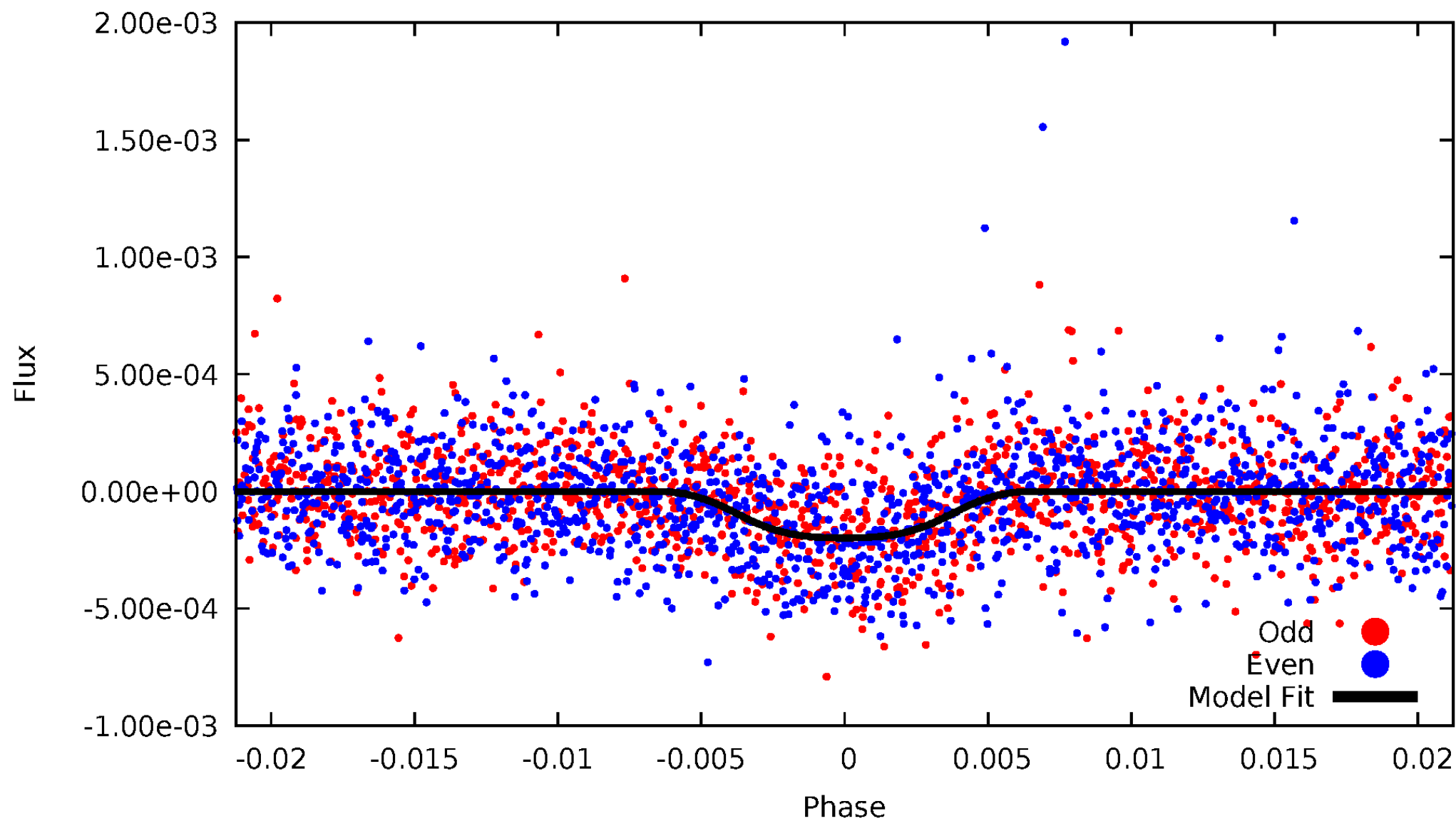


TCE 002853446-01



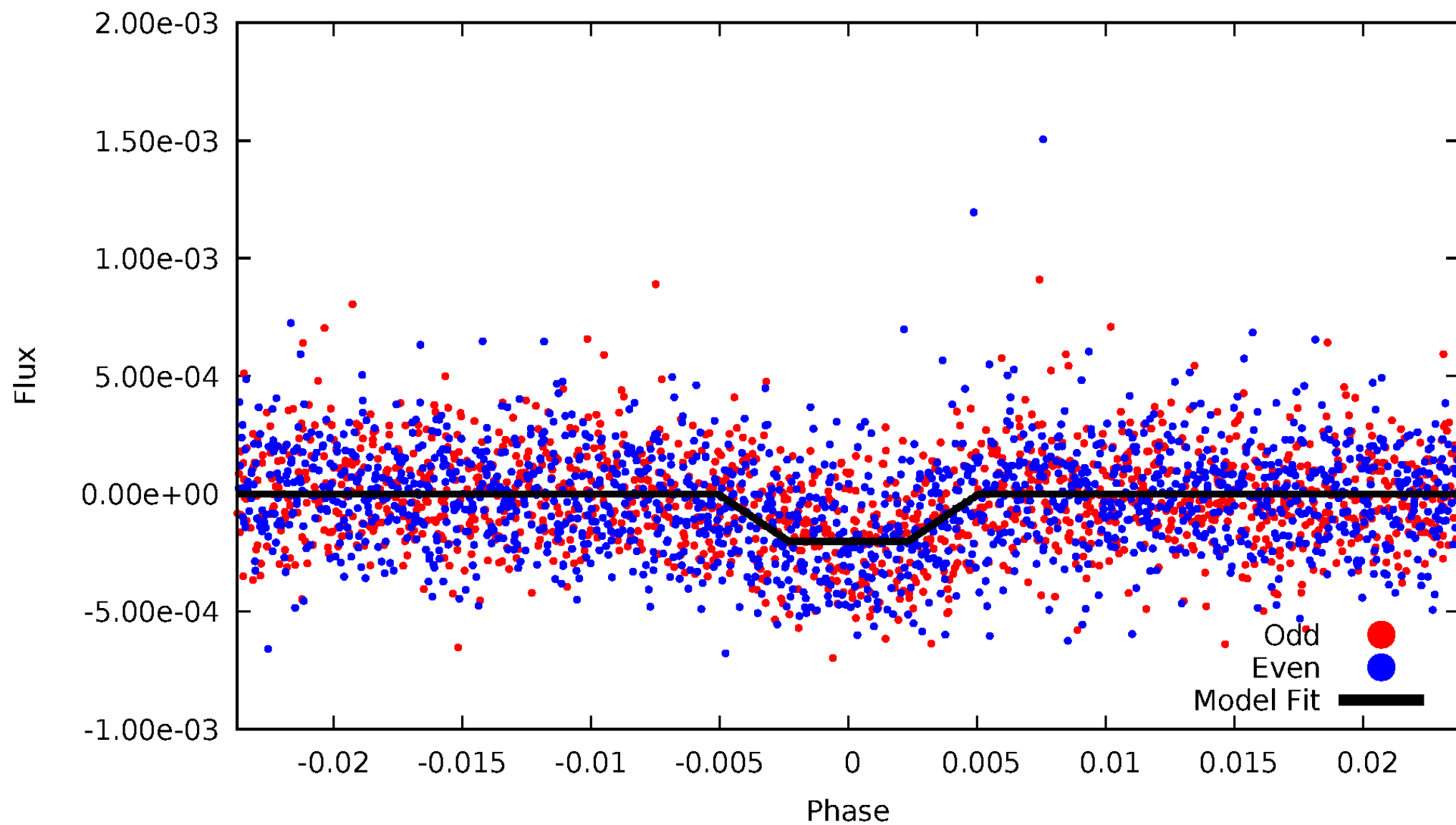
DV Odd/Even

TCE 002853446-01

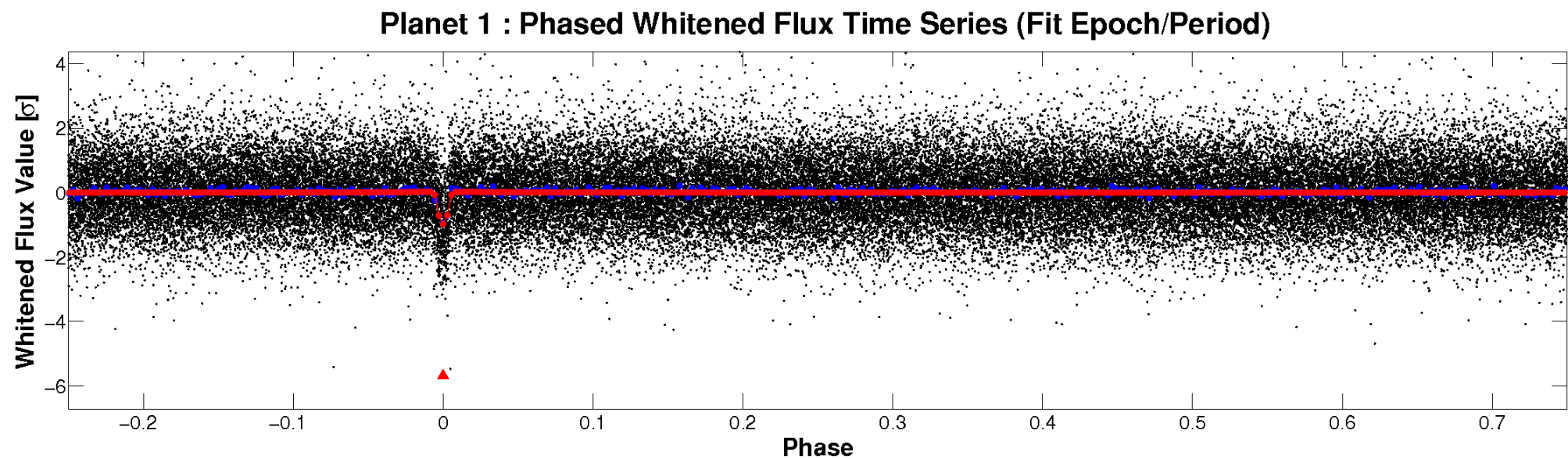
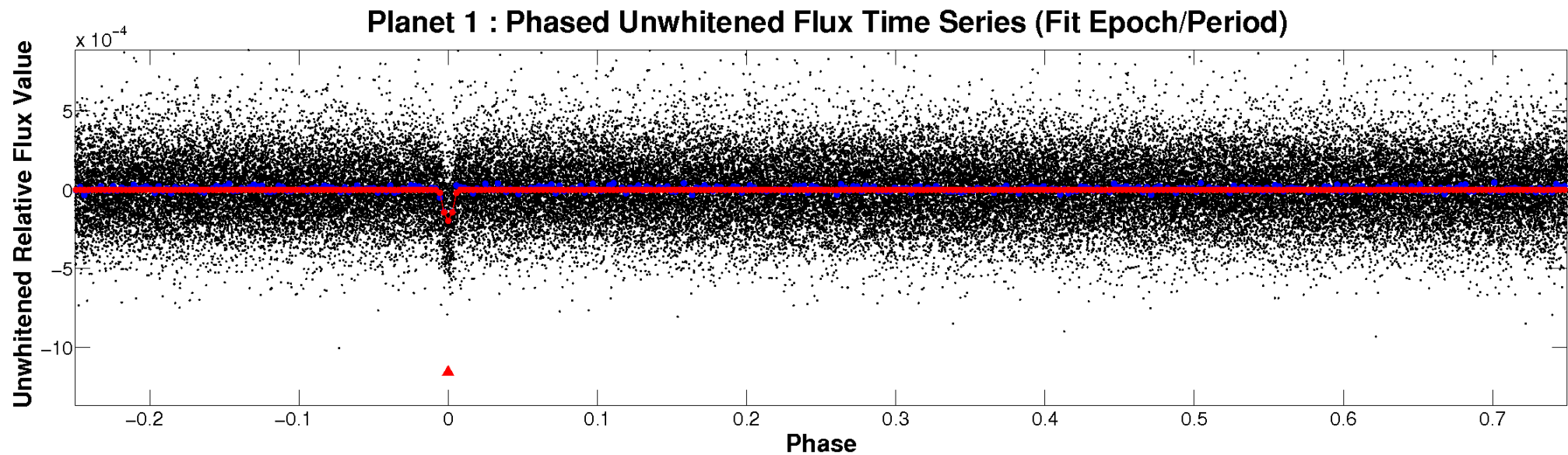


ALT Odd/Even

TCE 002853446-01

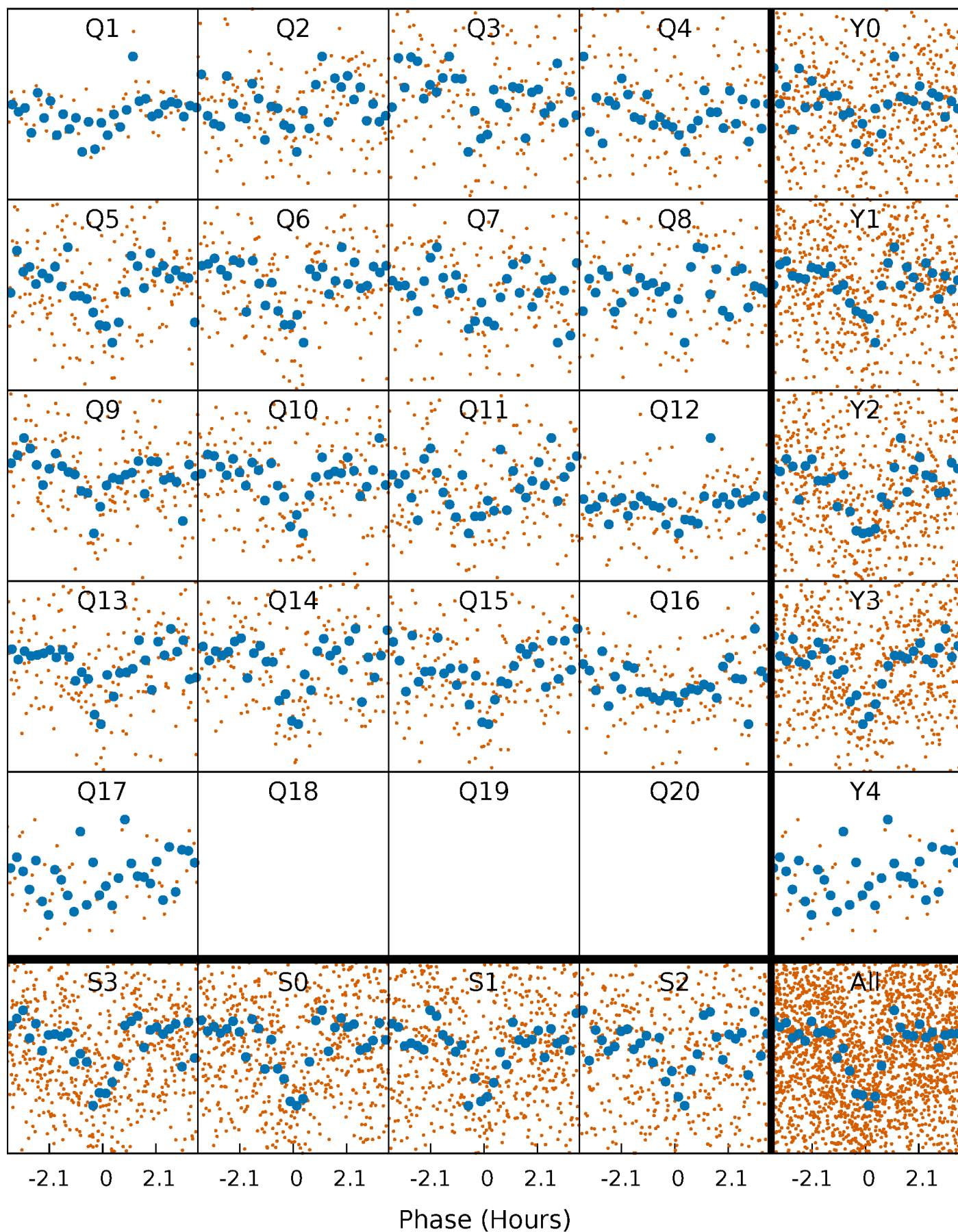


Non-Whitened Vs. Whitened Light Curve



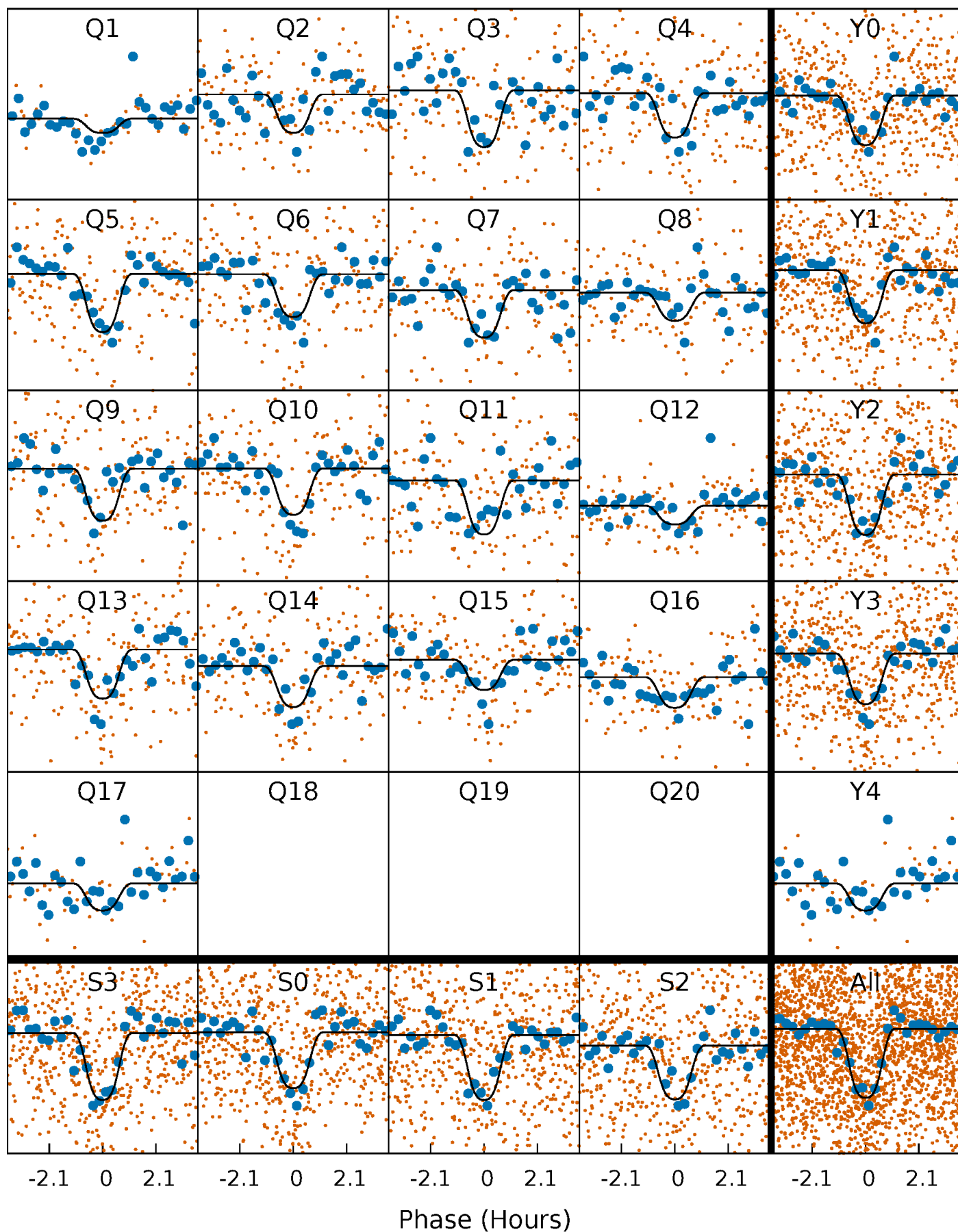
PDC Quarter-Phased Transit Curves

TCE 002853446-01 P= 7.372905 Days $T_0=137.612454$ (BKJD)



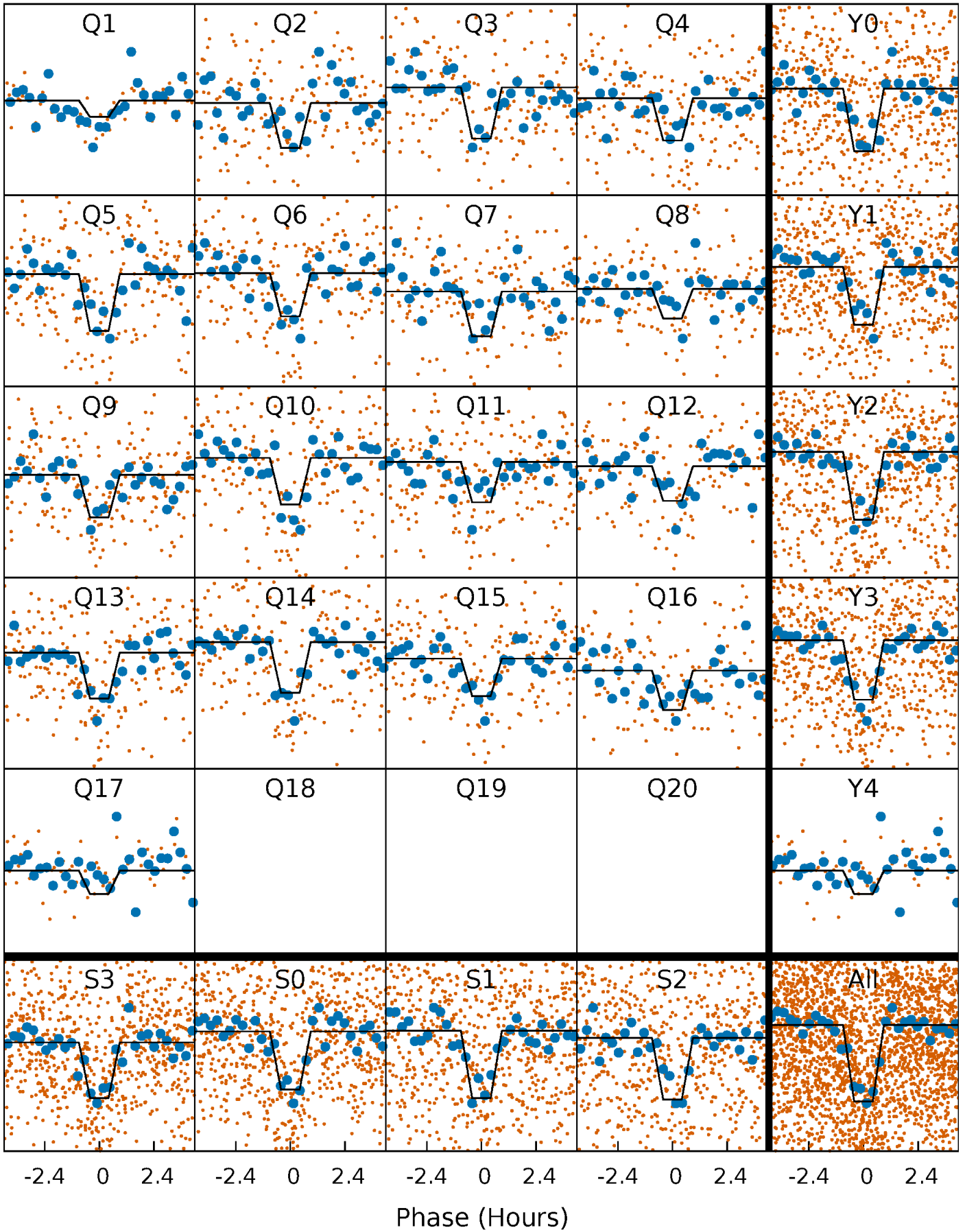
DV Quarter-Phased Transit Curves

TCE 002853446-01 P= 7.372905 Days $T_0=137.612454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

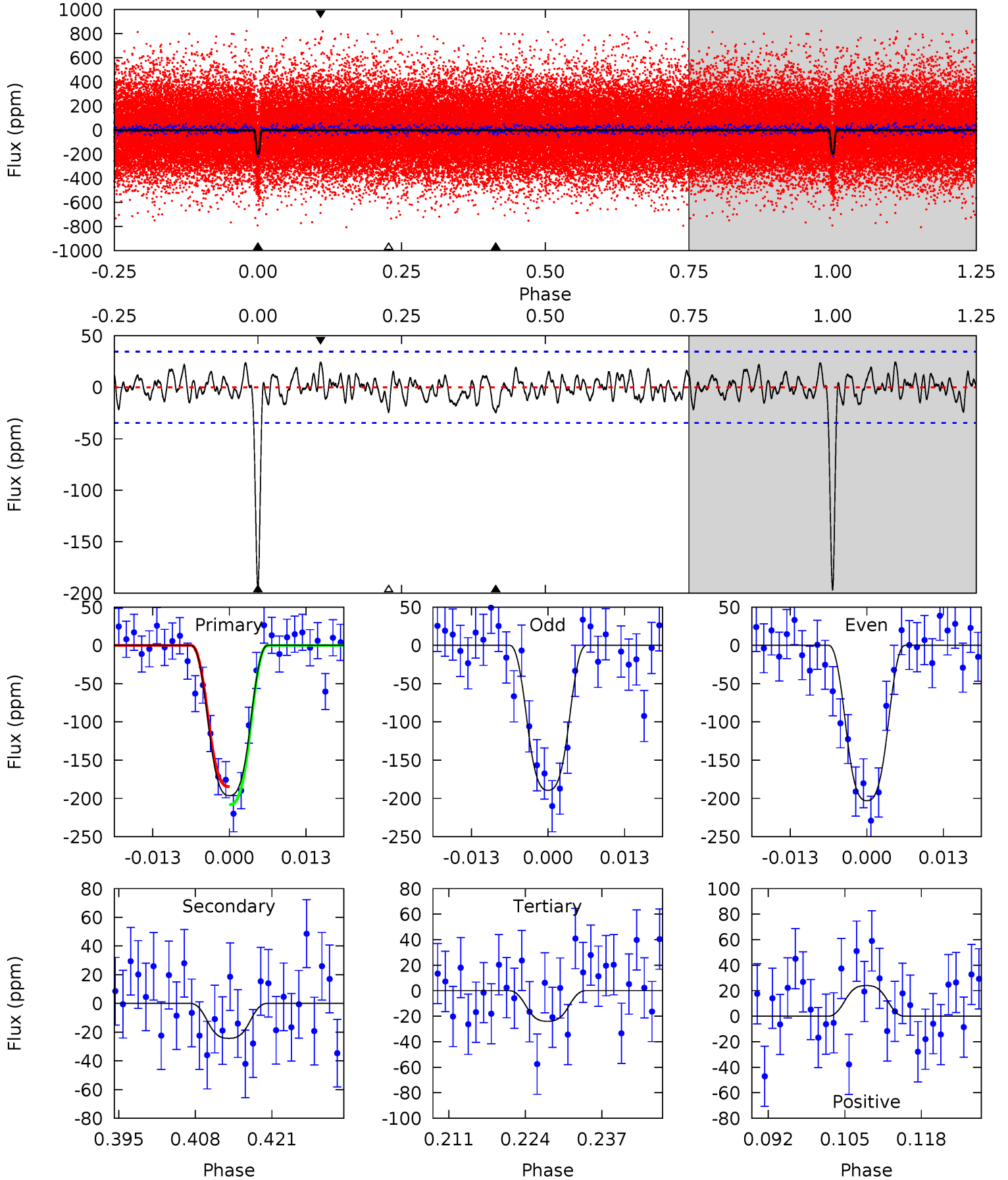
TCE 002853446-01 P= 7.372931 Days $T_0=137.607632$ (BKJD)



DV Model-Shift Uniqueness Test

002853446-01, P = 7.372905 Days, E = 130.239549 Days

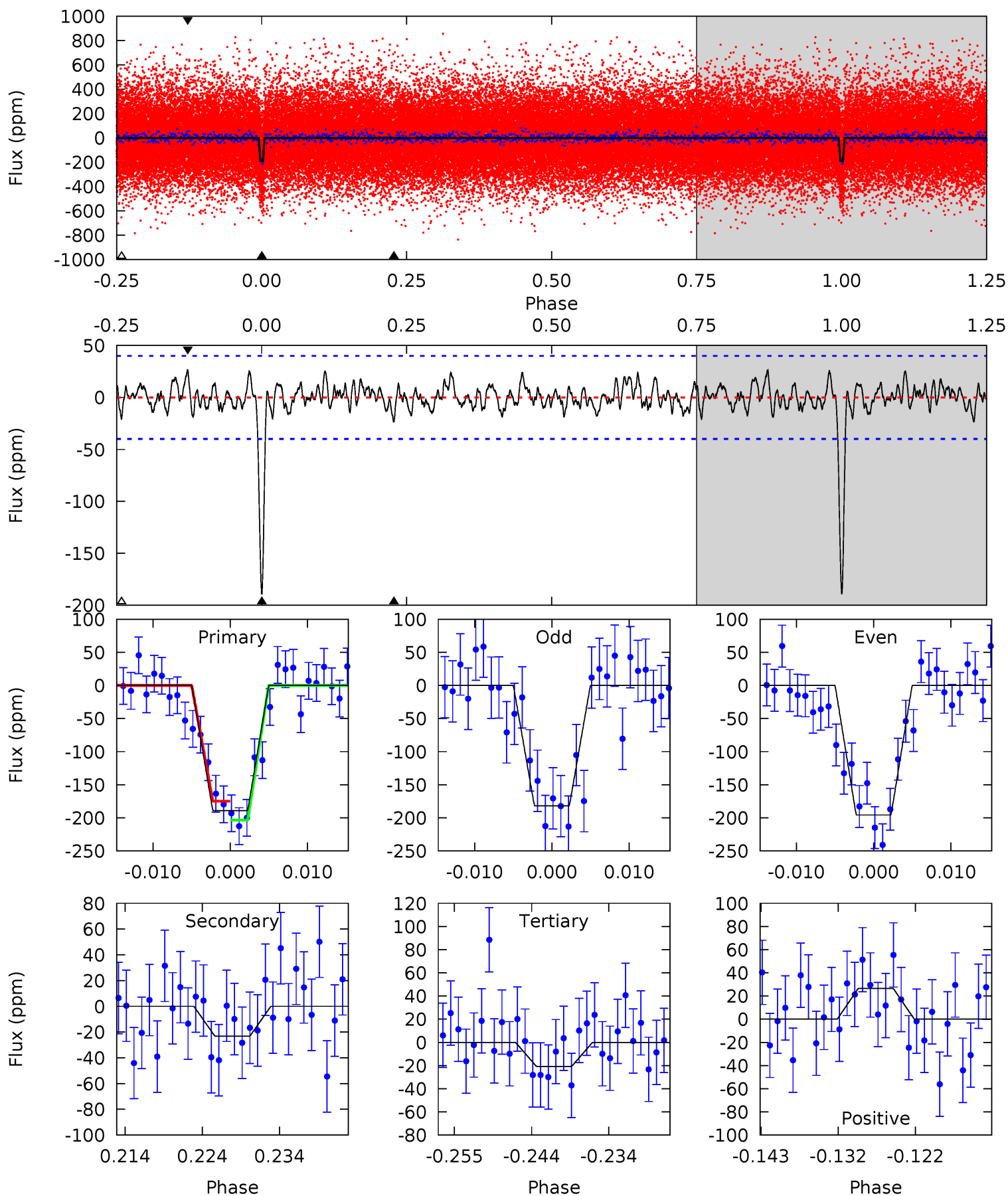
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	3.49	3.45	3.46	4.97	2.48	1.25	24.8	24.8	0.05	0.04	0.98	0.97	0.11	1.69



Alt Model-Shift Uniqueness Test

002853446-01, P = 7.372931 Days, E = 130.234701 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	2.92	2.63	3.34	5.02	2.57	1.15	21.1	20.4	0.29	-0.43	0.87	0.95	0.12	1.80



Stellar Parameters For KIC 002853446

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5973^{+107}_{-131}	$4.371^{+0.099}_{-0.121}$	$-0.140^{+0.150}_{-0.150}$	$1.070^{+0.168}_{-0.126}$	$0.982^{+0.071}_{-0.071}$	$1.129^{+0.467}_{-0.391}$
	+2%/-2%	+2%/-3%	+107%/-107%	+16%/-12%	+7%/-7%	+41%/-35%
Source	SPE12	SPE12	SPE12	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 002853446-01 / KOI 1118.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 7	$2.06^{+0.22}_{-0.22}$	1406^{+59}_{-63}	3598^{+181}_{-212}	17^{+7}_{-6}
Alt.	-23 ± 8	$1.66^{+0.20}_{-0.21}$	1403^{+60}_{-59}	3830^{+253}_{-291}	25^{+12}_{-10}

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

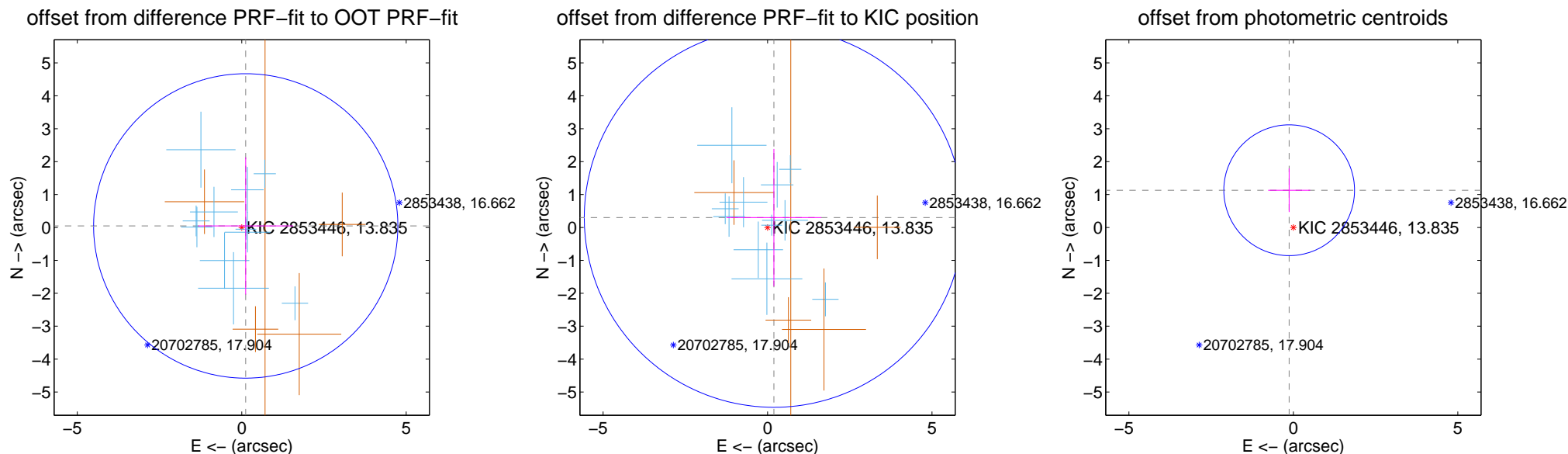
DV Centroid Data

Supplemental centroid analysis for 002853446-01. Kepler magnitude: 13.84. Transit SNR 18.53

There are 11 quarters with good PRF difference image offsets

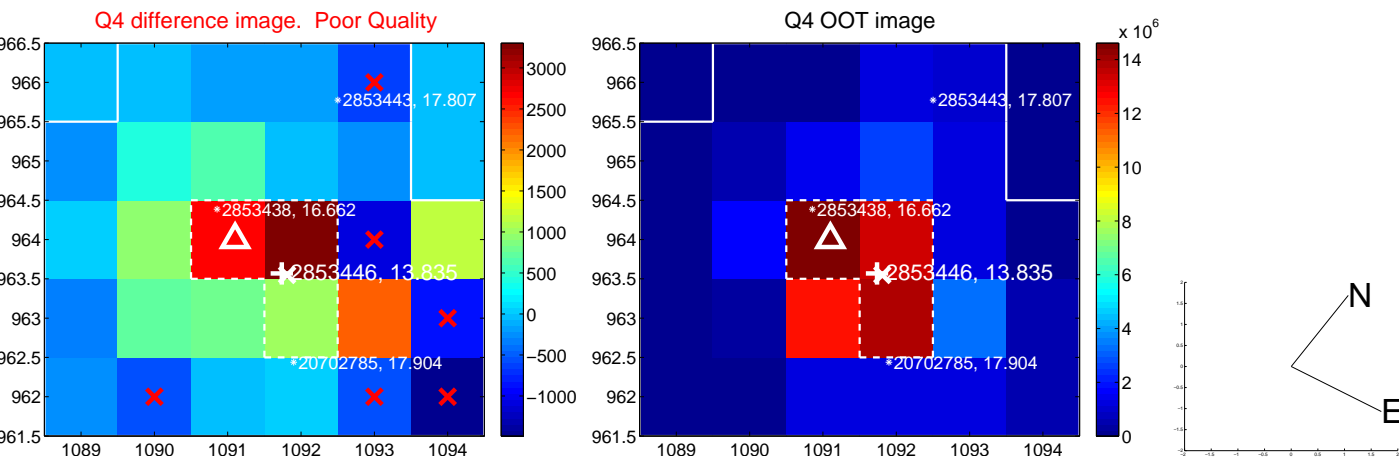
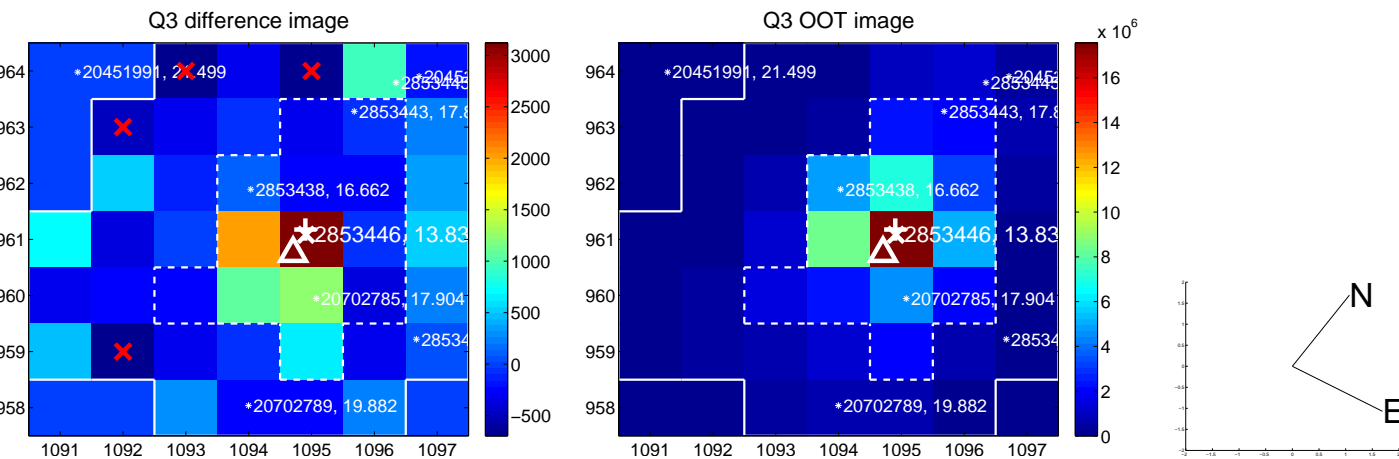
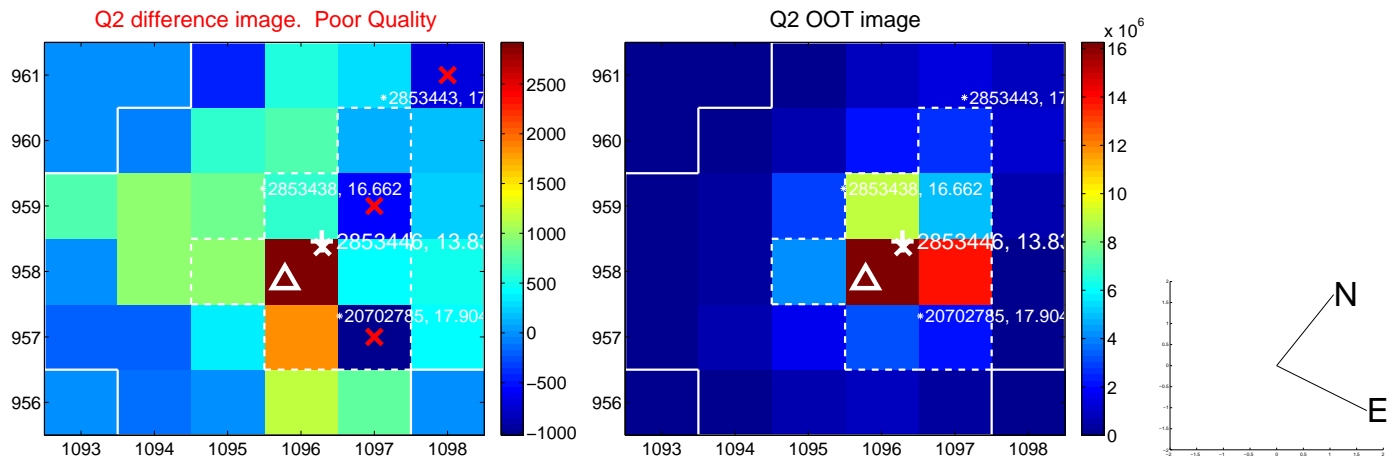
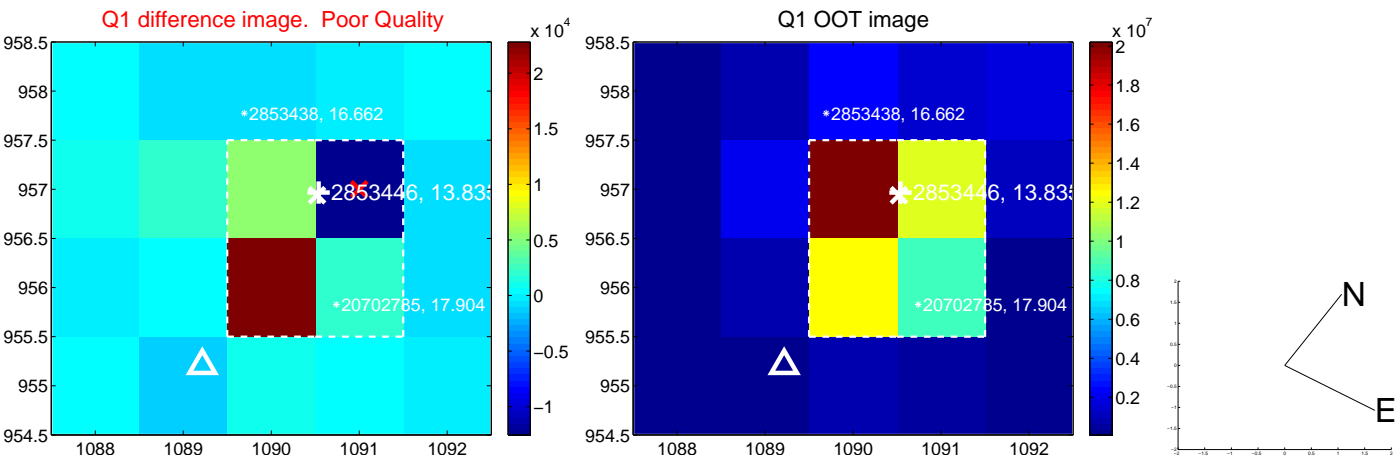
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 1.542	0.08	-0.121 ± 1.443	0.047 ± 2.085
PRF-fit source offset from KIC position	0.356 ± 1.921	0.19	-0.192 ± 1.443	0.300 ± 2.085
photometric centroid source offset	1.14 ± 0.66	1.72	0.13 ± 0.64	1.13 ± 0.66

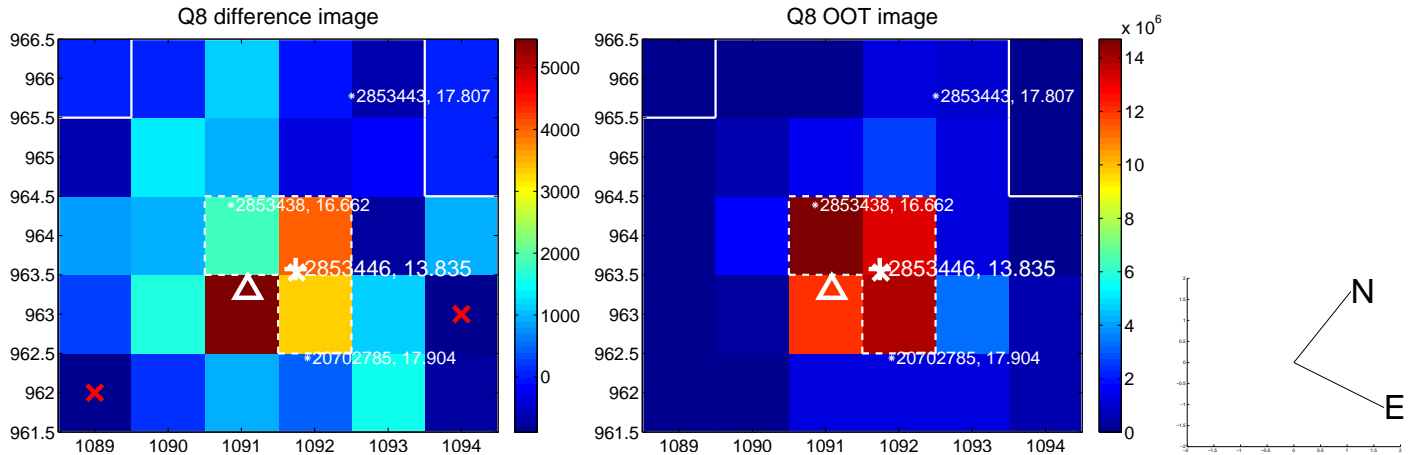
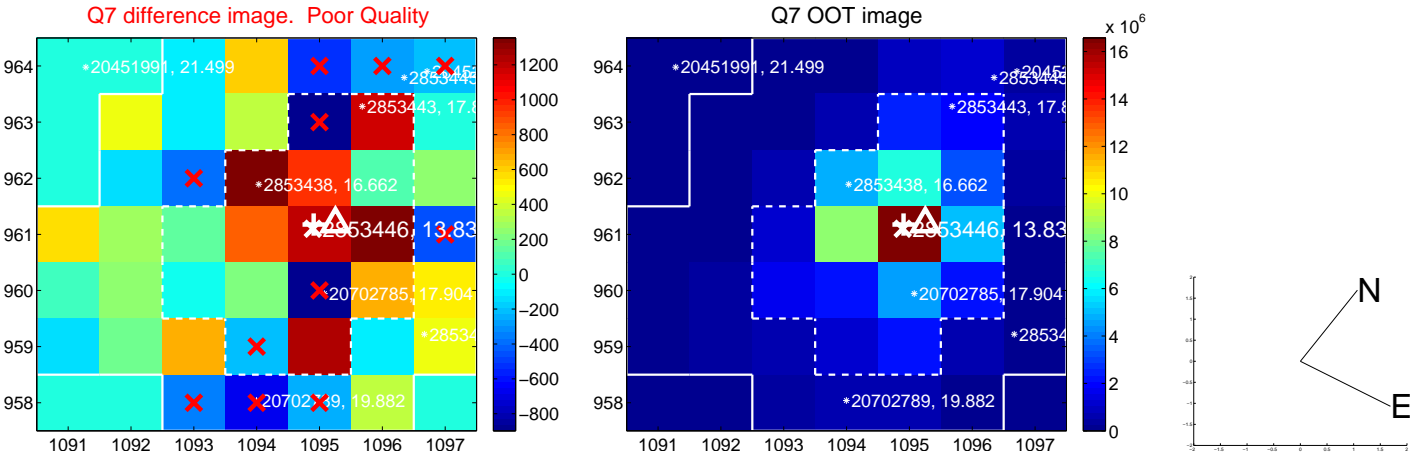
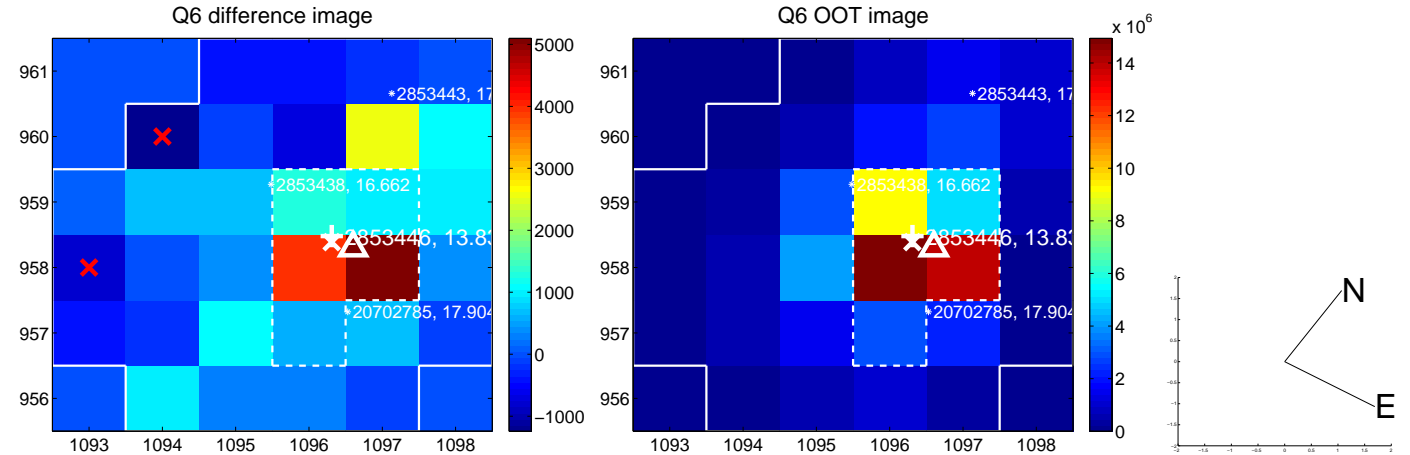
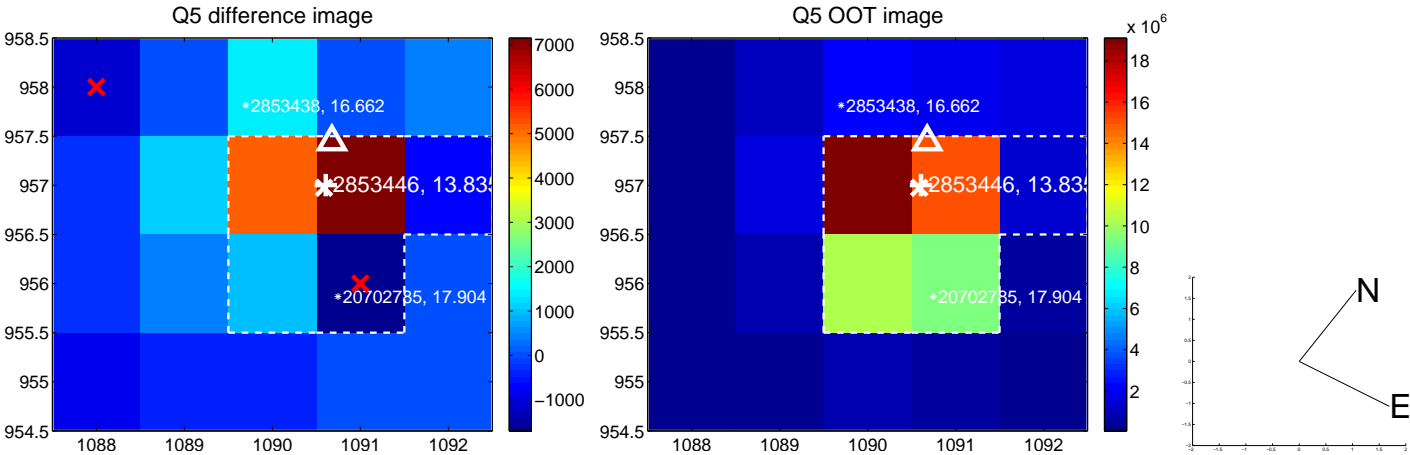


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

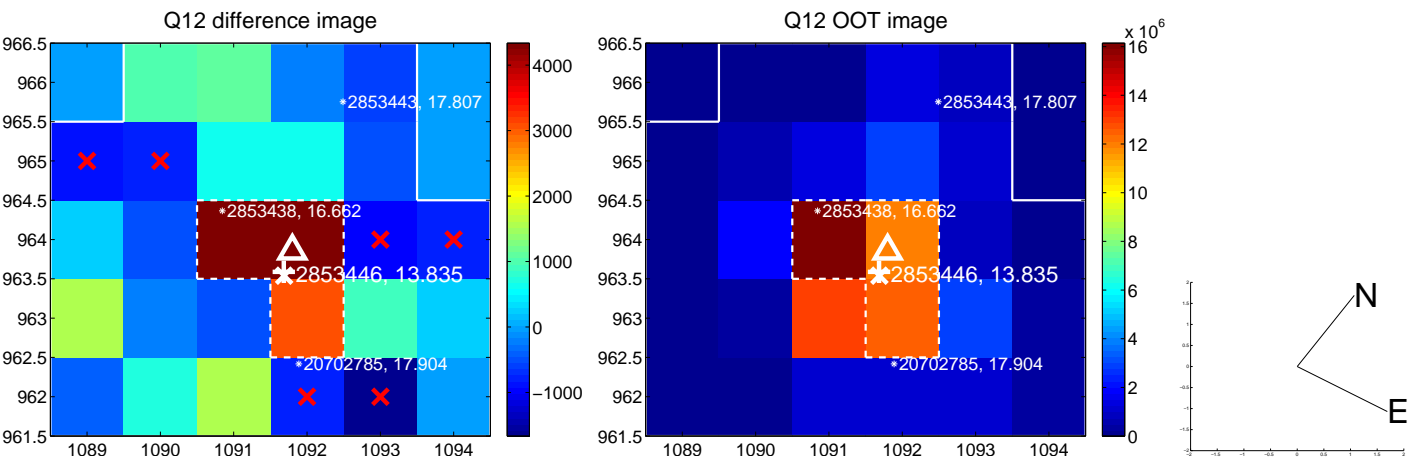
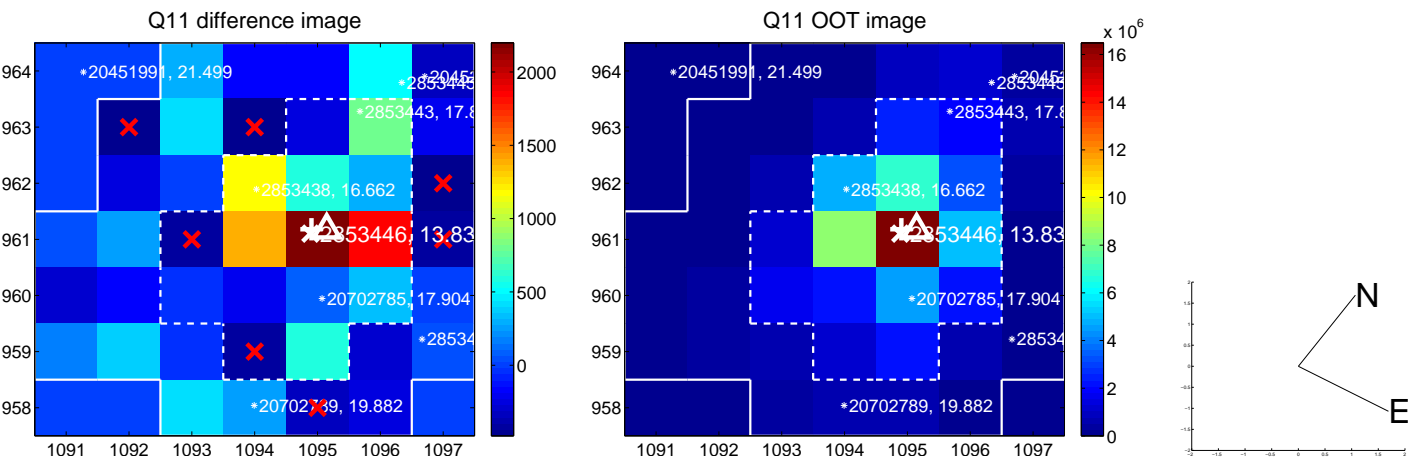
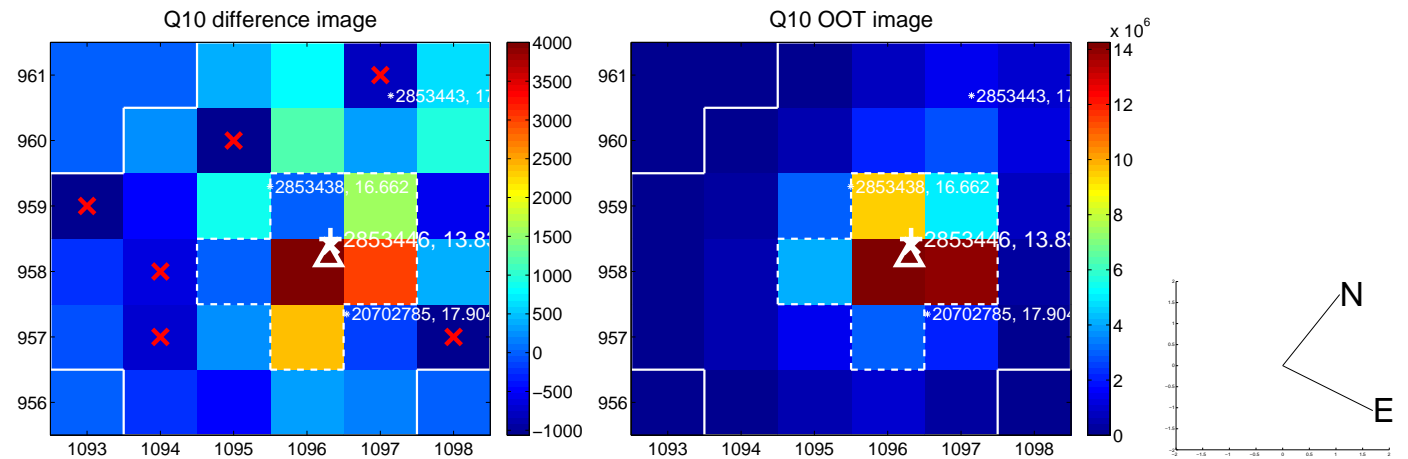
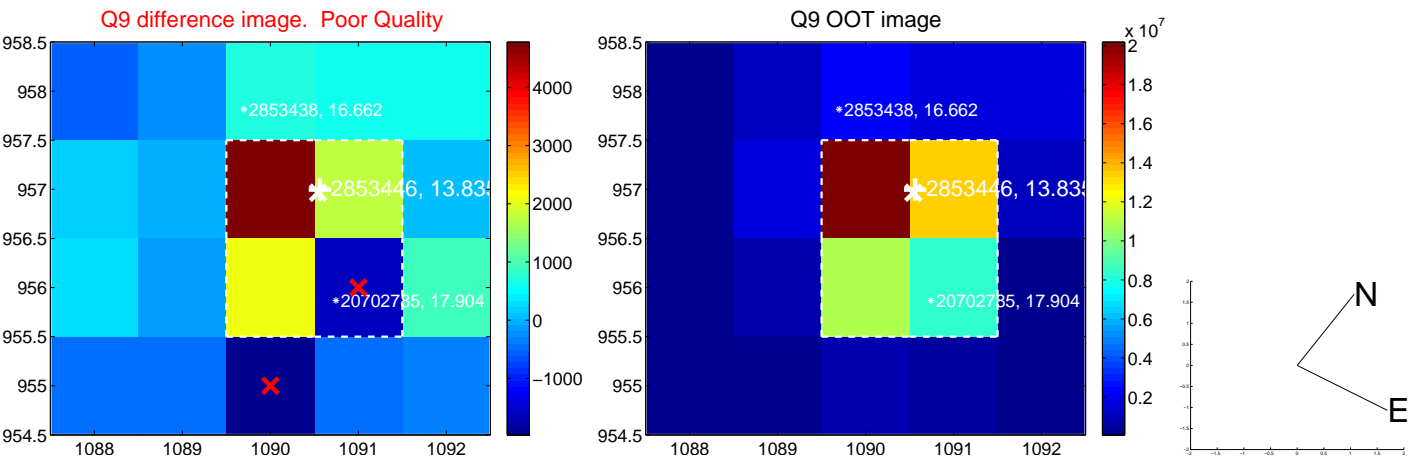
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



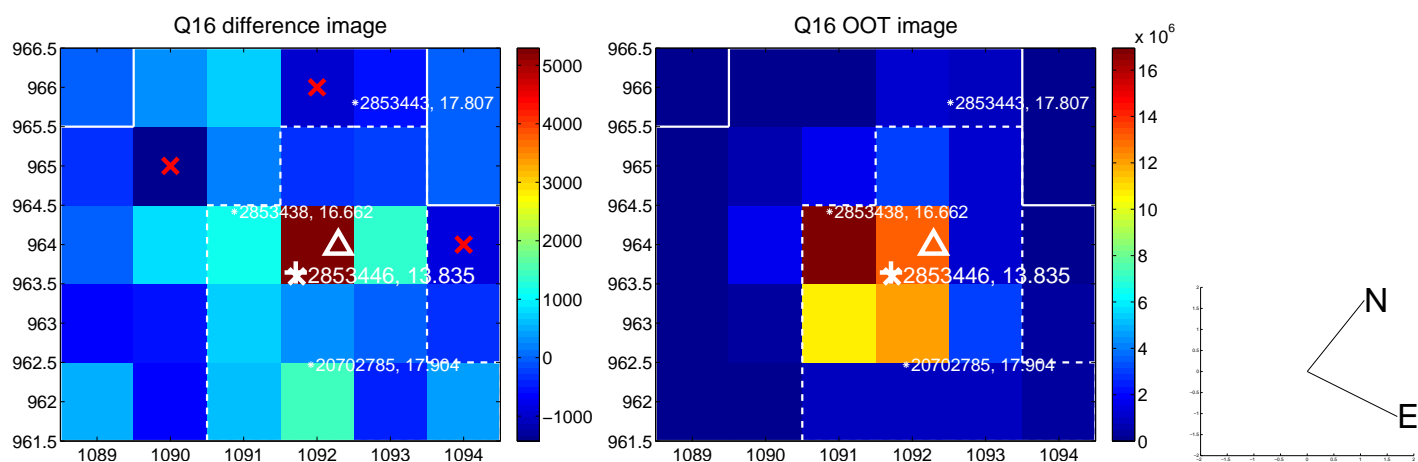
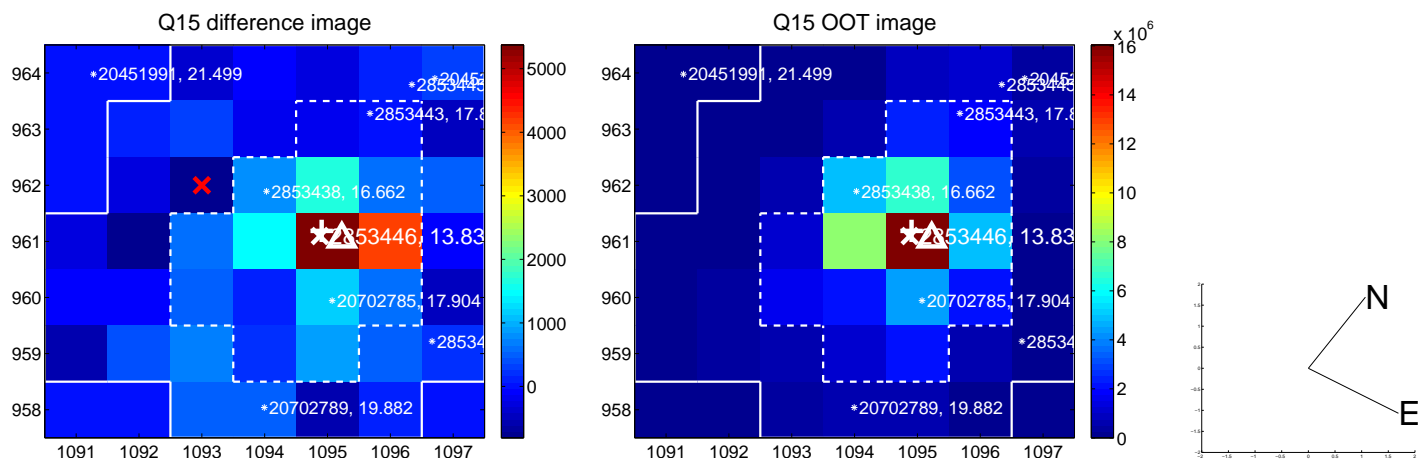
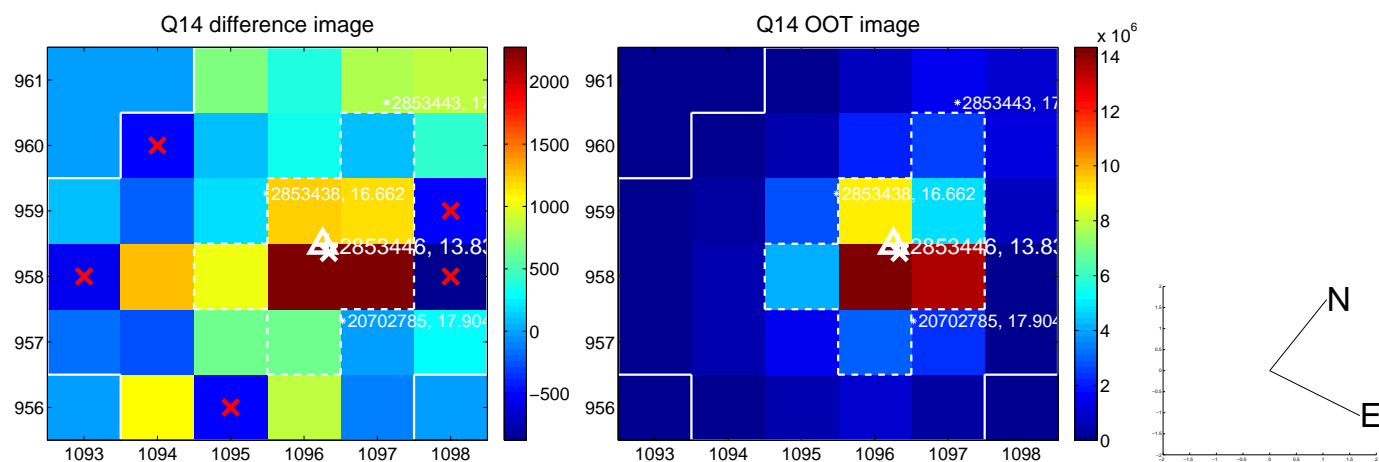
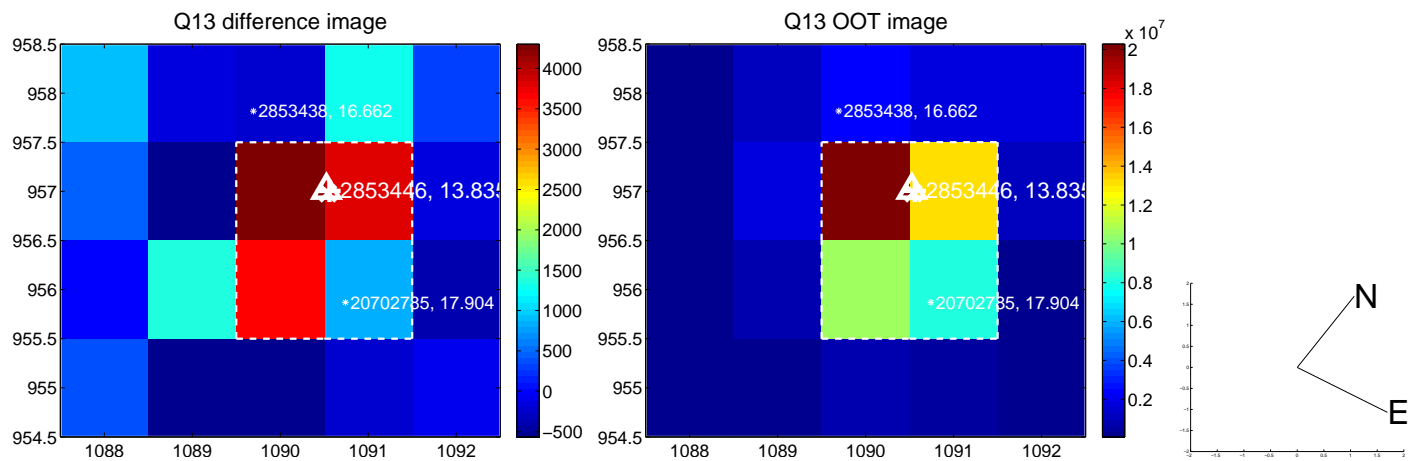
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



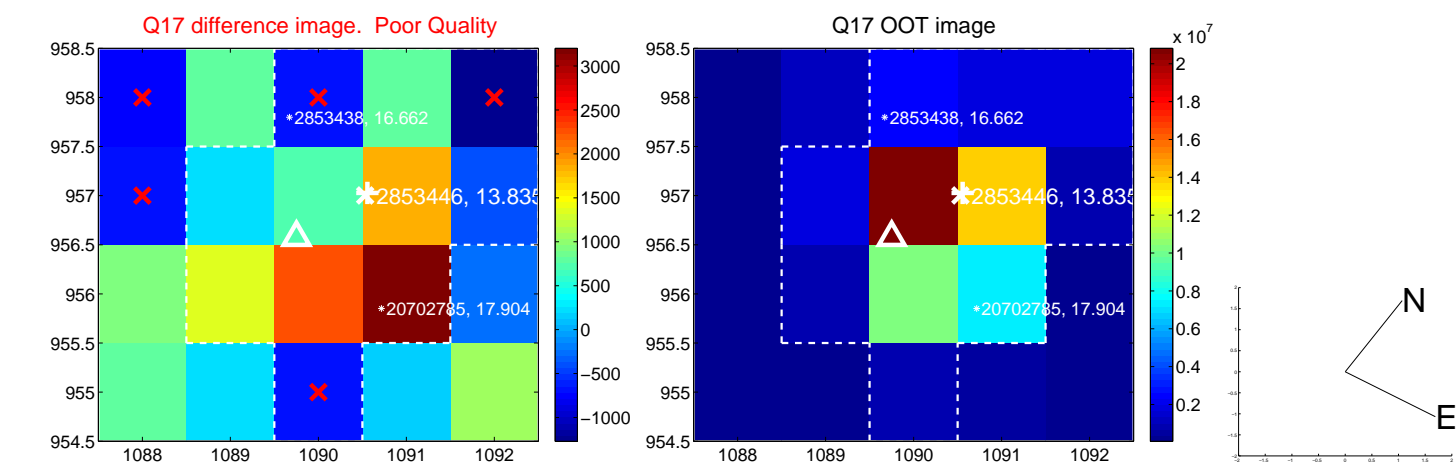
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



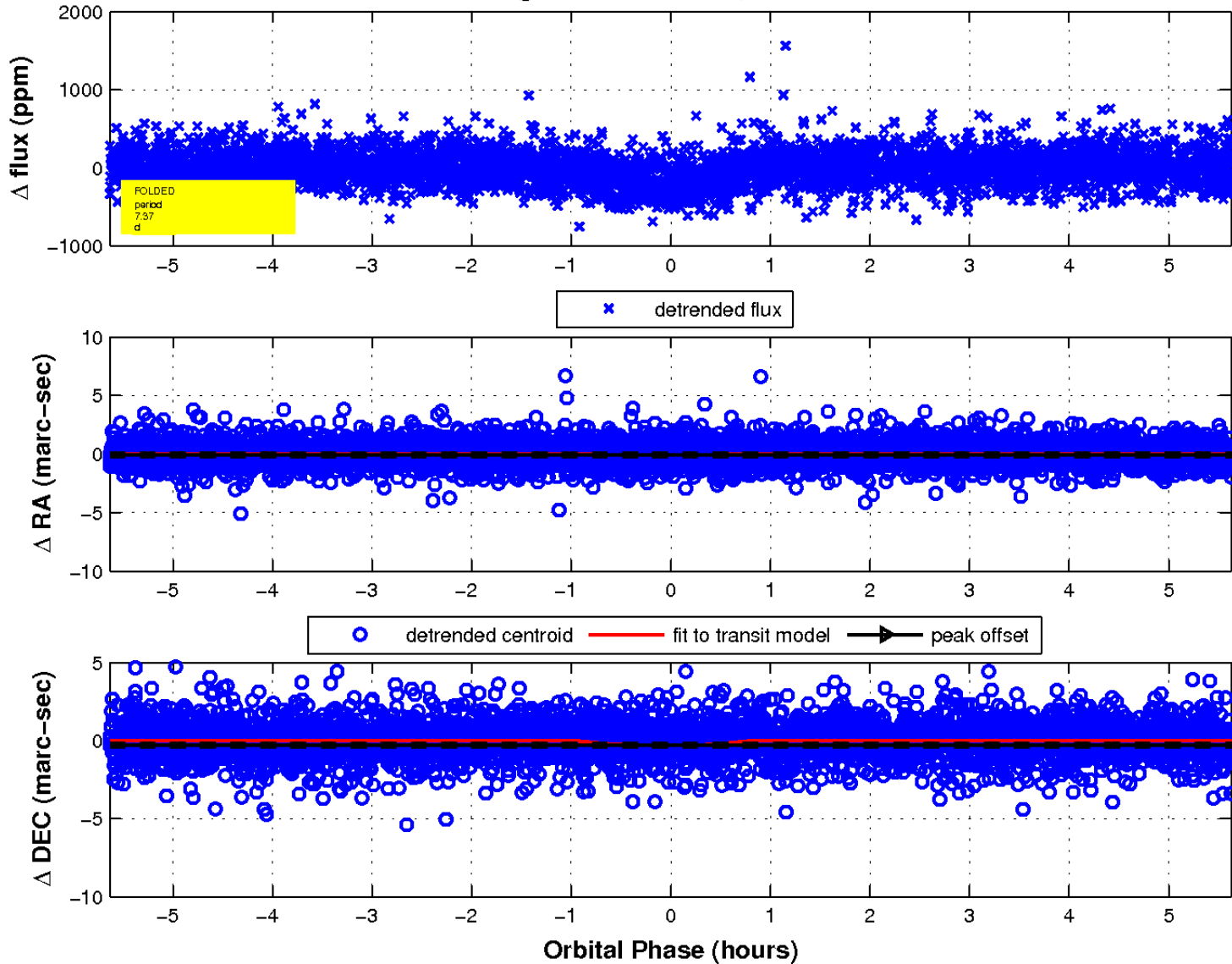
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

