

KIC 002853828

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})
002853828-01	OBS	2896.01	1.077484	131.582468	40.4	1.597	23.4	28.8	1.51	6329	1.13	7089.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002853828-01	OBS	FP	0.00	0	0	1	0	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 002853828-01

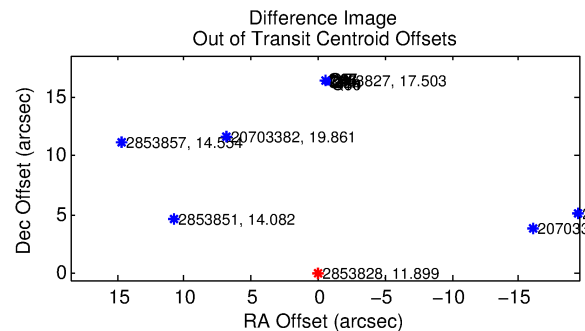
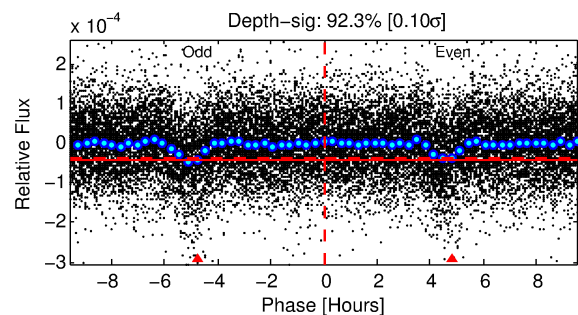
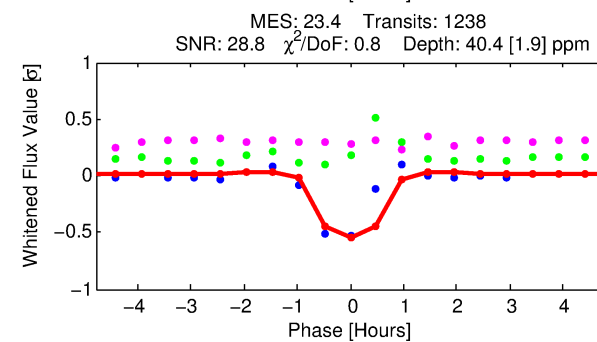
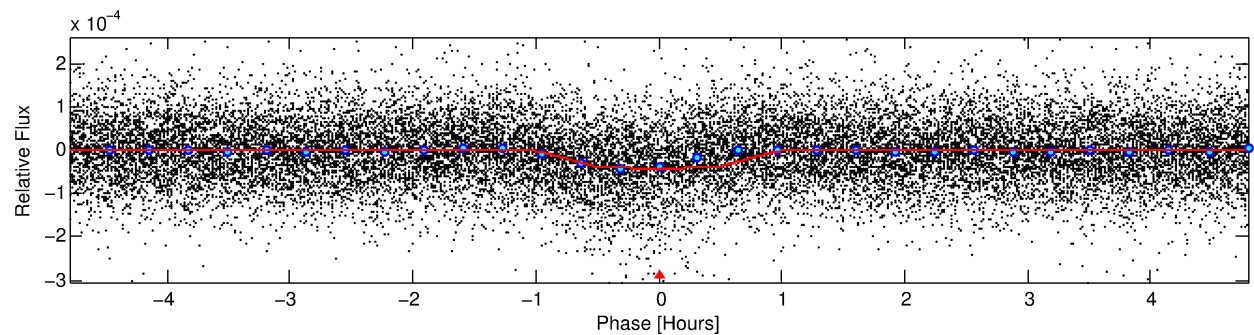
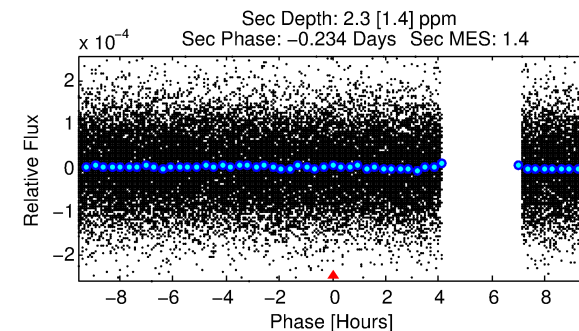
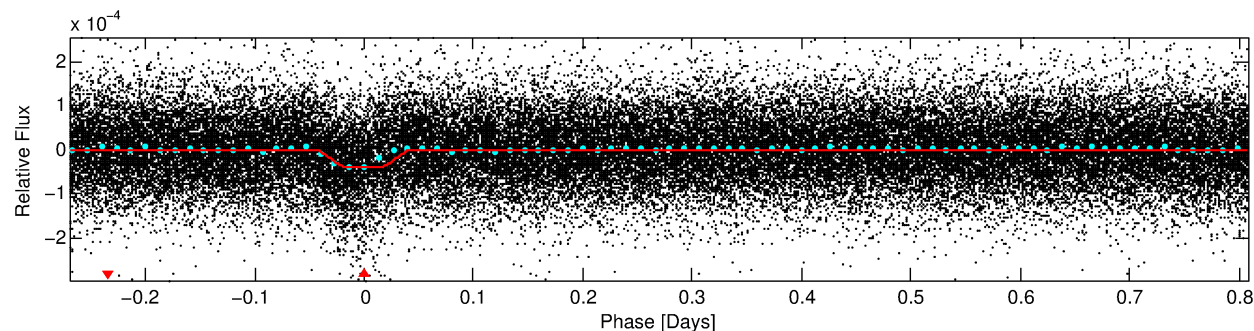
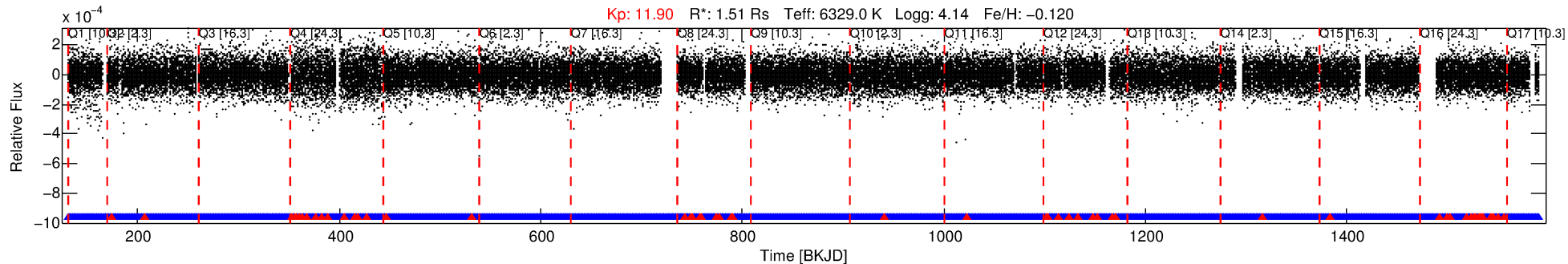
No Significant Match Found

DV One-Page Summary

KIC: 2853828 Candidate: 1 of 1 Period: 1.077 d

KOI: K02896.01 Corr: 0.824

Kp: 11.90 R*: 1.51 Rs Teff: 6329.0 K Logg: 4.14 Fe/H: -0.120



DV Fit Results:

Period = 1.07748 [0.00000] d
Epoch = 131.5825 [0.0008] BKJD
Rp/R* = 0.0069 [0.0011]
a/R* = 2.48 [1.94]
b = 0.90 [0.19]
Seff = 7089.59 [2475.33]
Teff = 2340 [204] K
Rp = 1.13 [0.31] Re
a = 0.0215 [0.0044] AU
Ag = 0.46 [0.35] [-1.54σ]
Teff = 2986 [512] K [1.17σ]

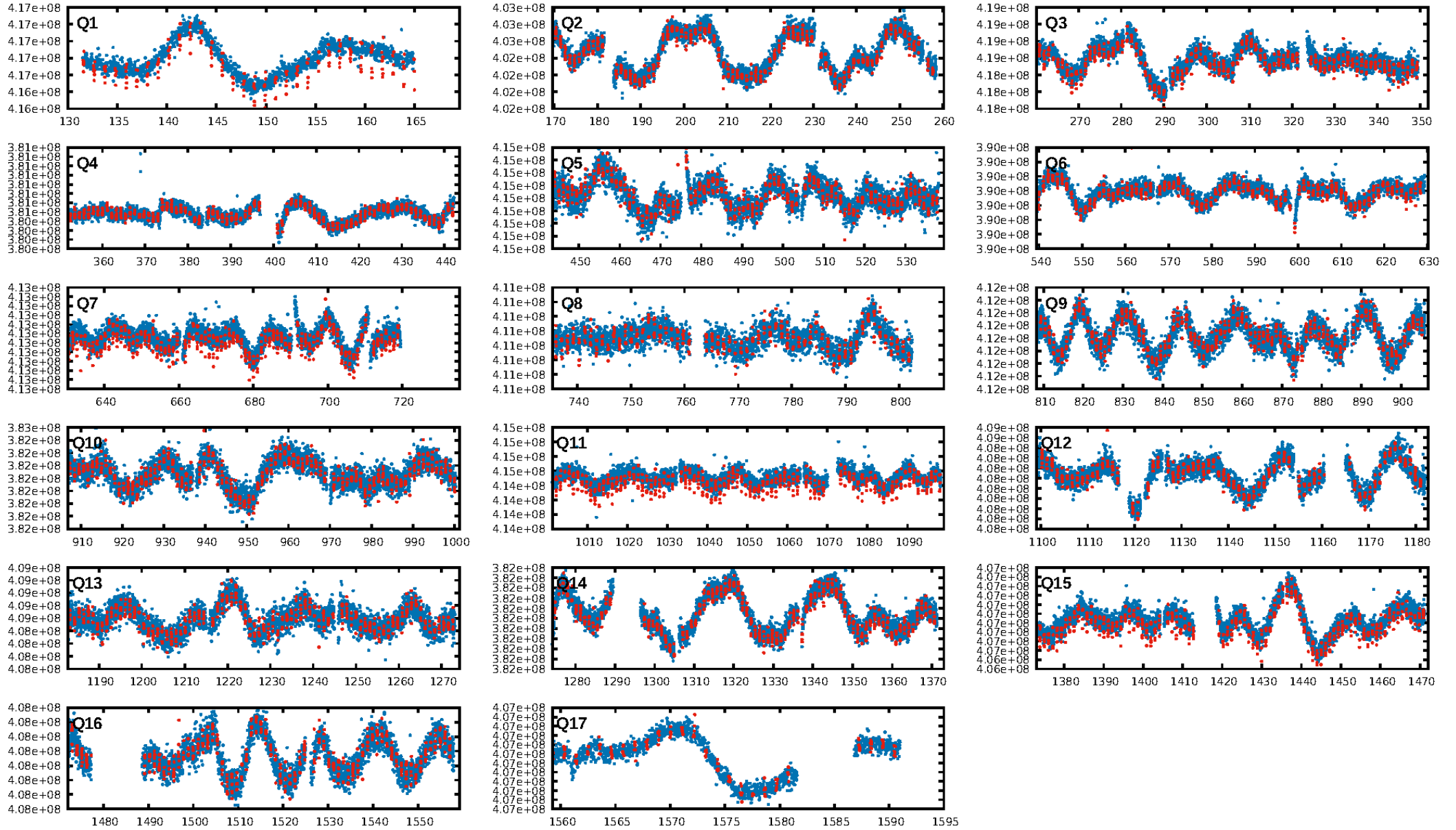
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.67e-112
RollingBand-fgt: 0.95 [1123/1181]
GhostDiagnostic-chr: -0.4236
Centroid-sig: N/A
Centroid-so: 20.704 arcsec [43.28σ]
OotOffset-rm: 16.298 arcsec [183.63σ]
KicOffset-rm: 16.301 arcsec [208.95σ]
OotOffset-st: 4/4/0/5 [13]
KicOffset-st: 4/4/0/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

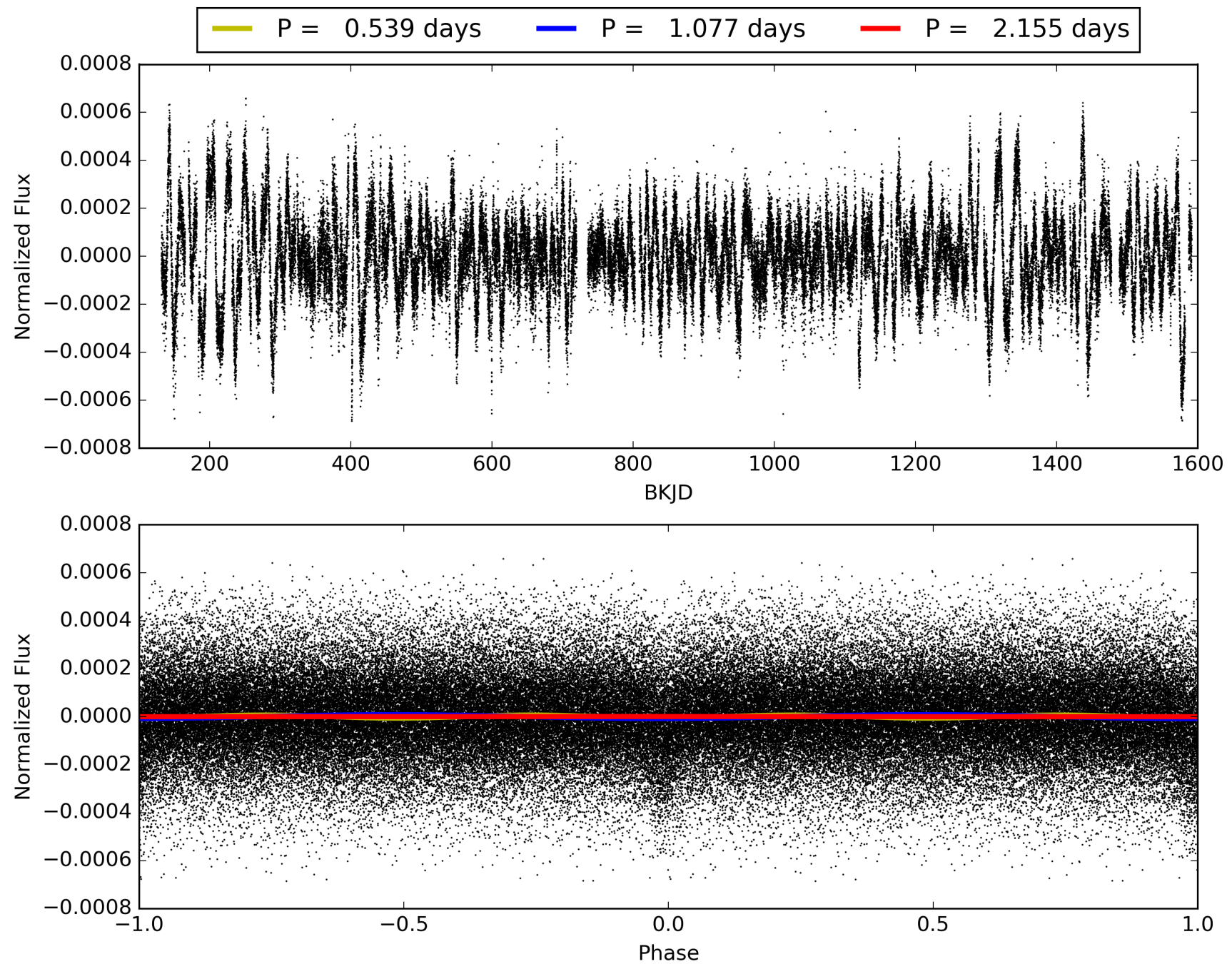
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:22:55 Z

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

TCE 002853828-01, PDC Light Curves

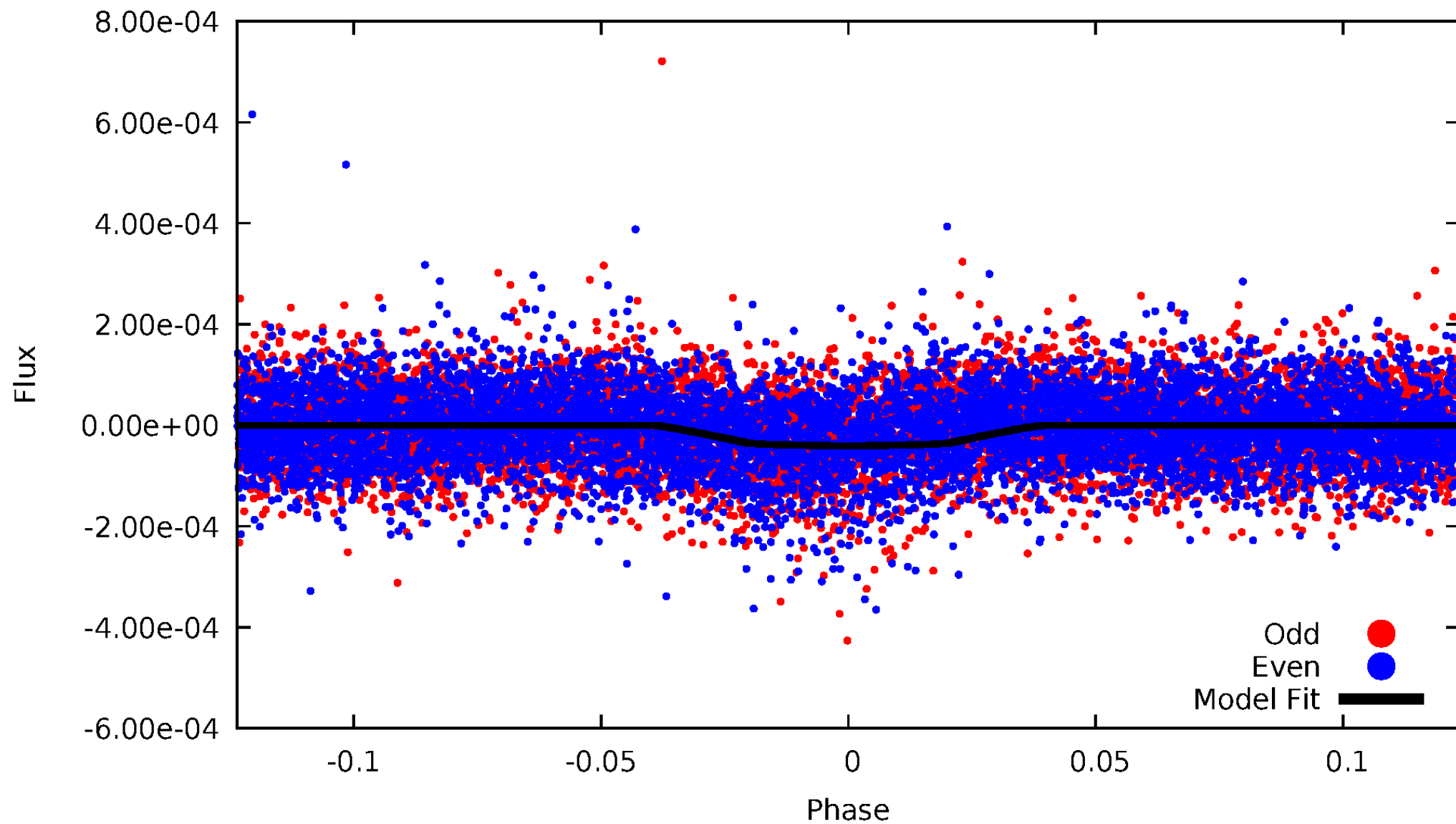


TCE 002853828-01



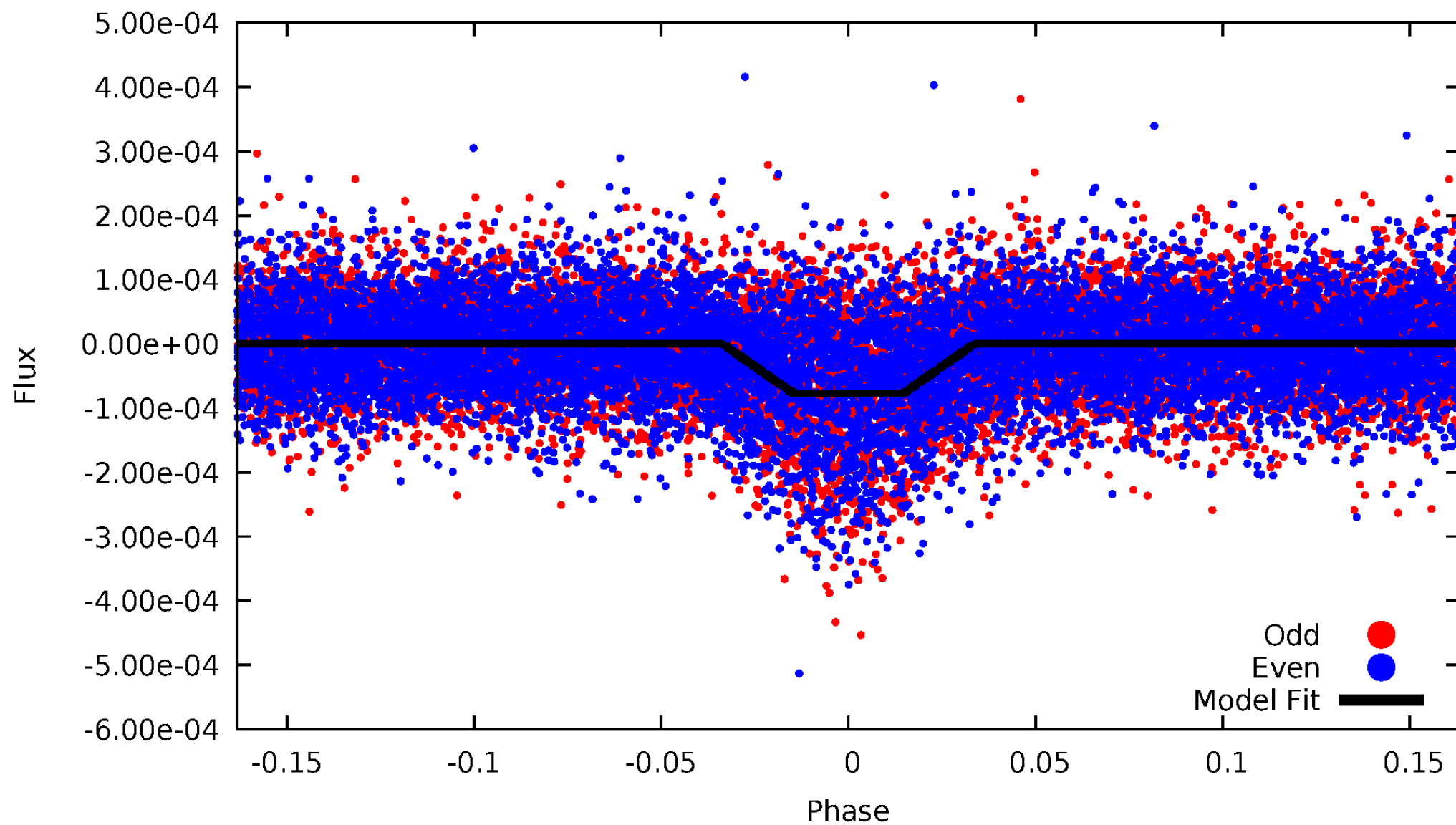
DV Odd/Even

TCE 002853828-01

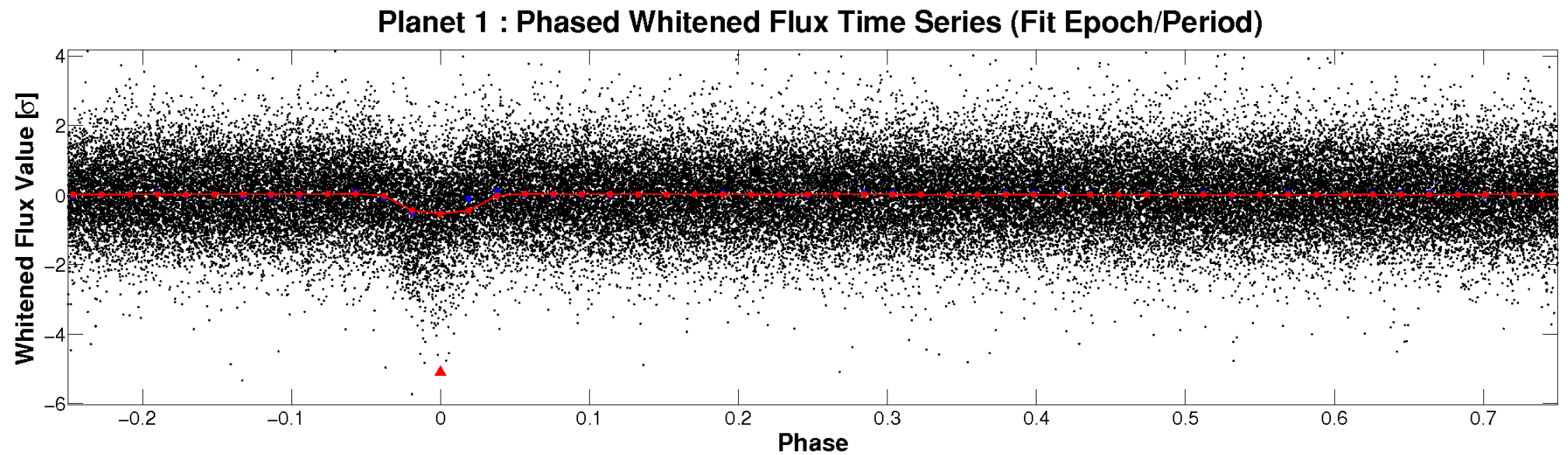
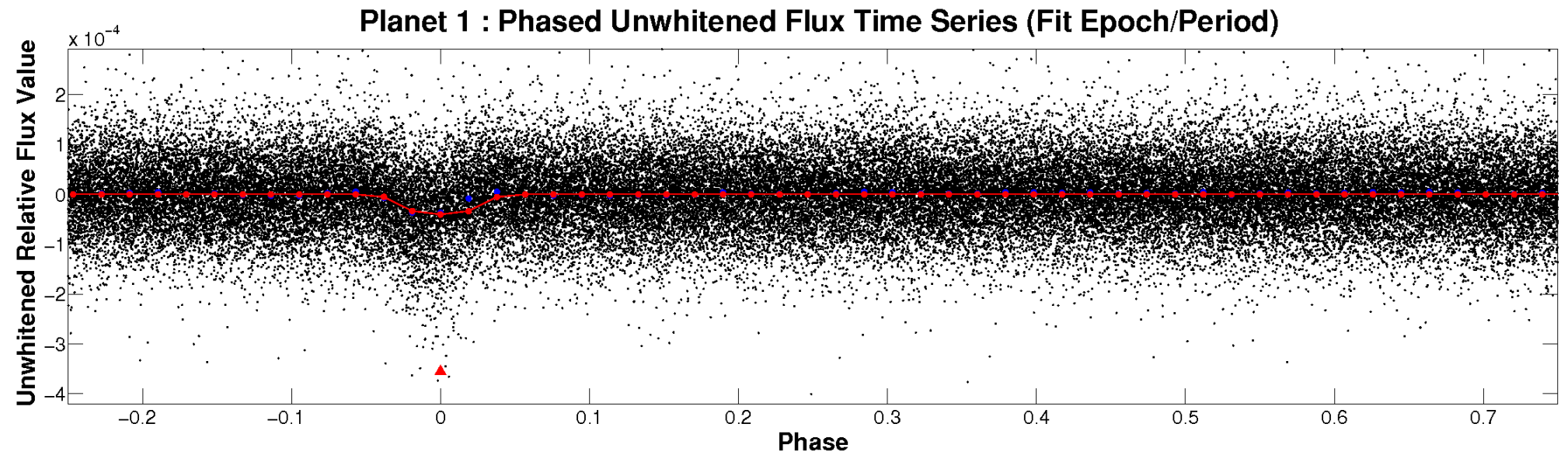


ALT Odd/Even

TCE 002853828-01

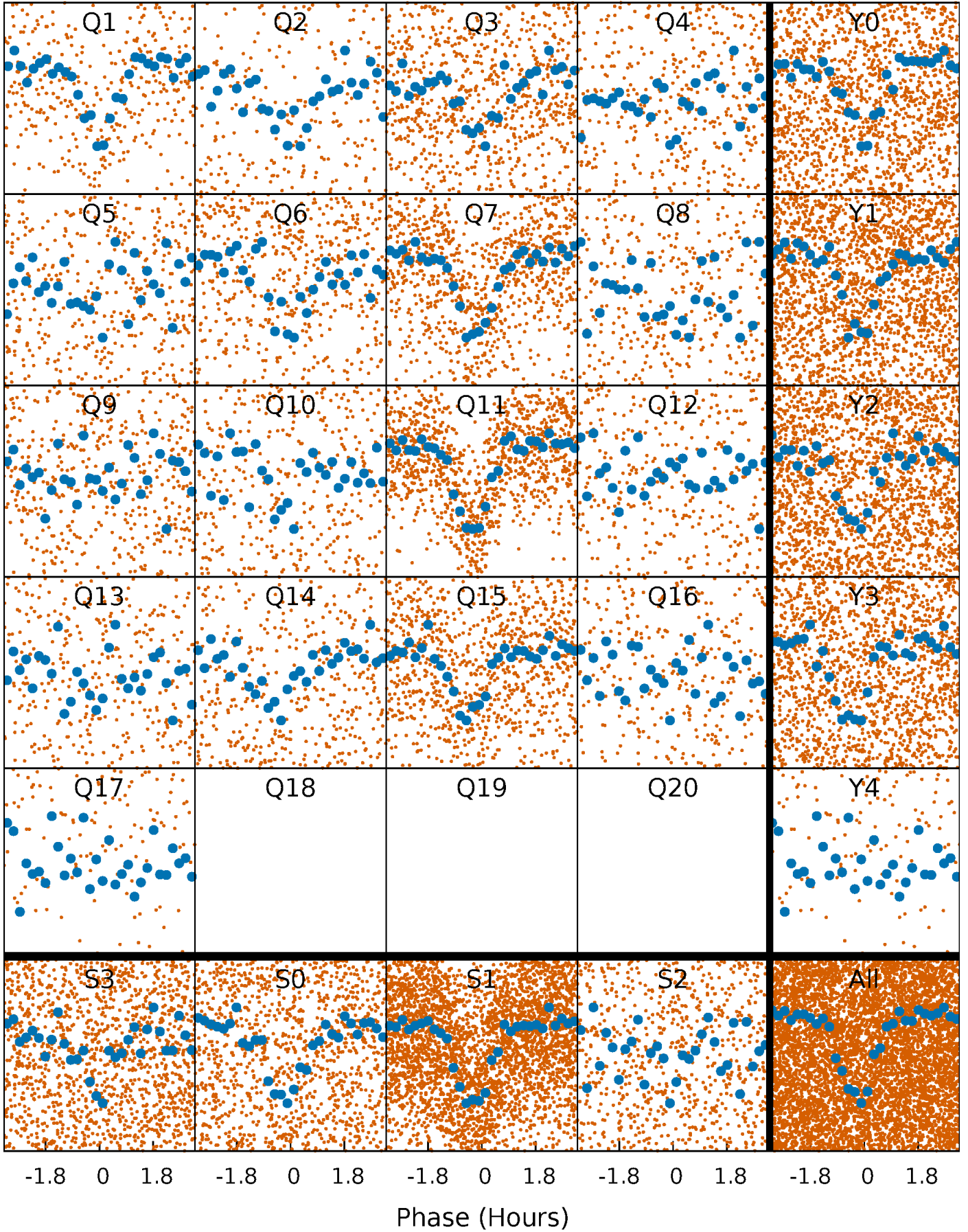


Non-Whitened Vs. Whitened Light Curve



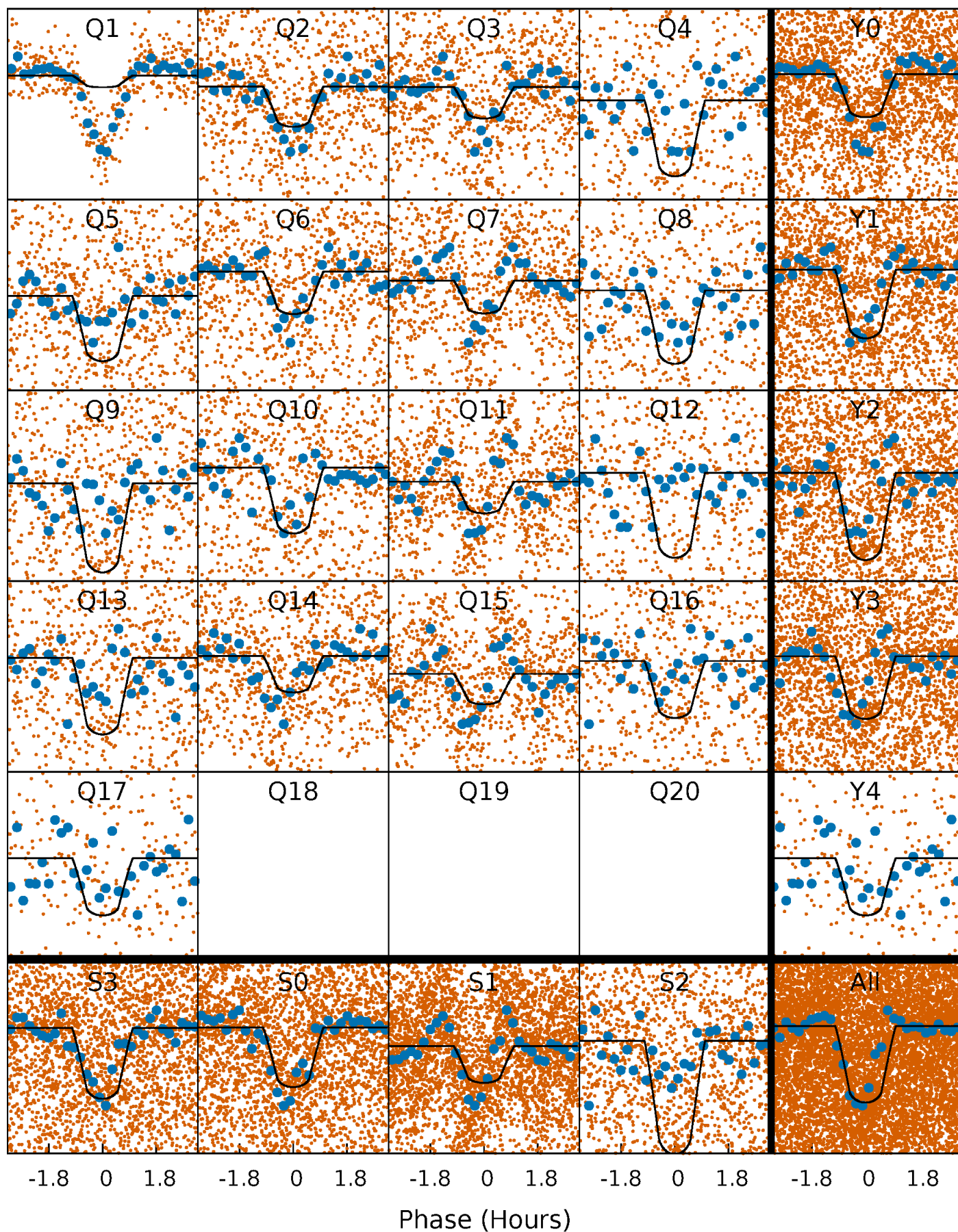
PDC Quarter-Phased Transit Curves

TCE 002853828-01 P= 1.077484 Days $T_0=131.582468$ (BKJD)



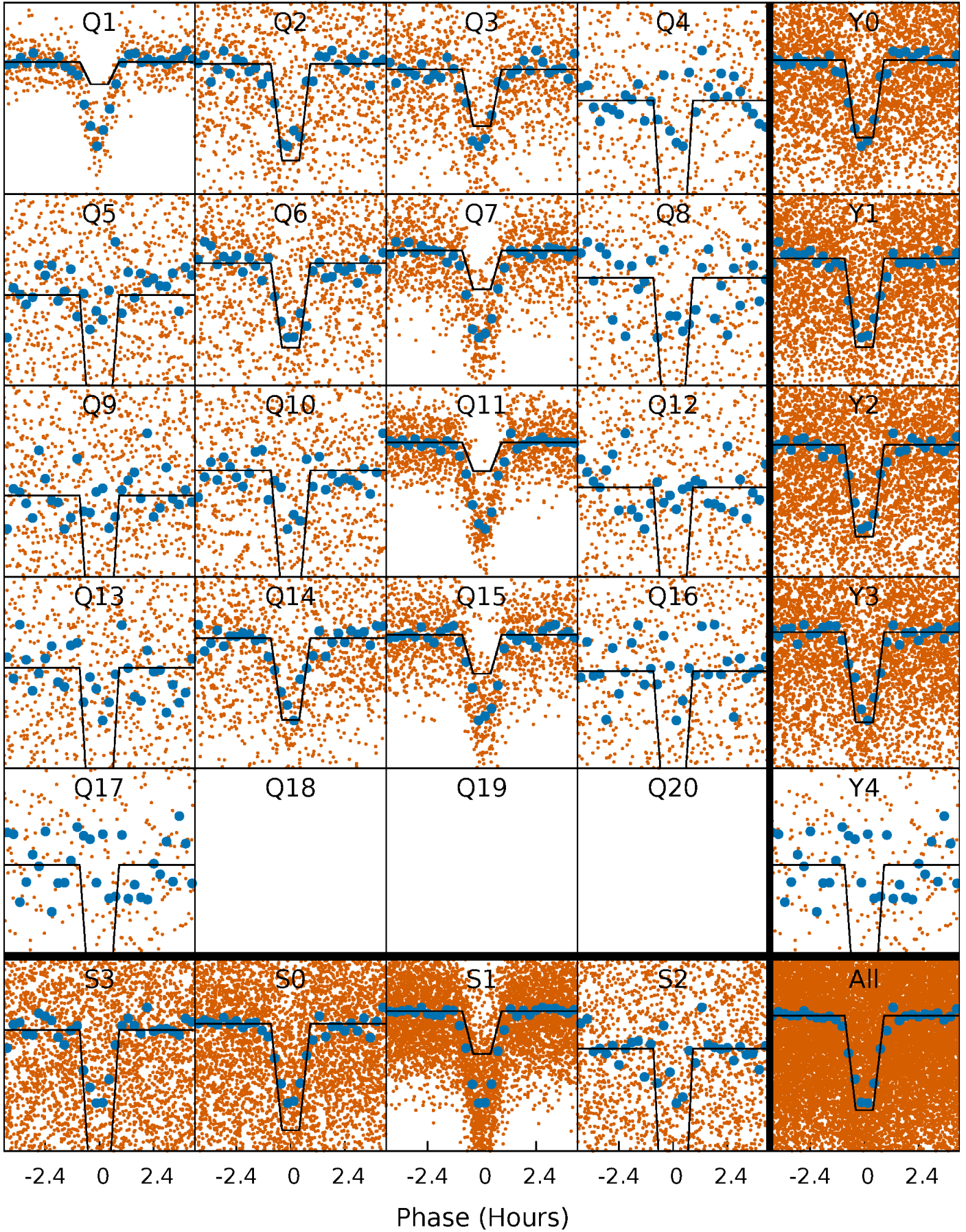
DV Quarter-Phased Transit Curves

TCE 002853828-01 P= 1.077484 Days $T_0=131.582468$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

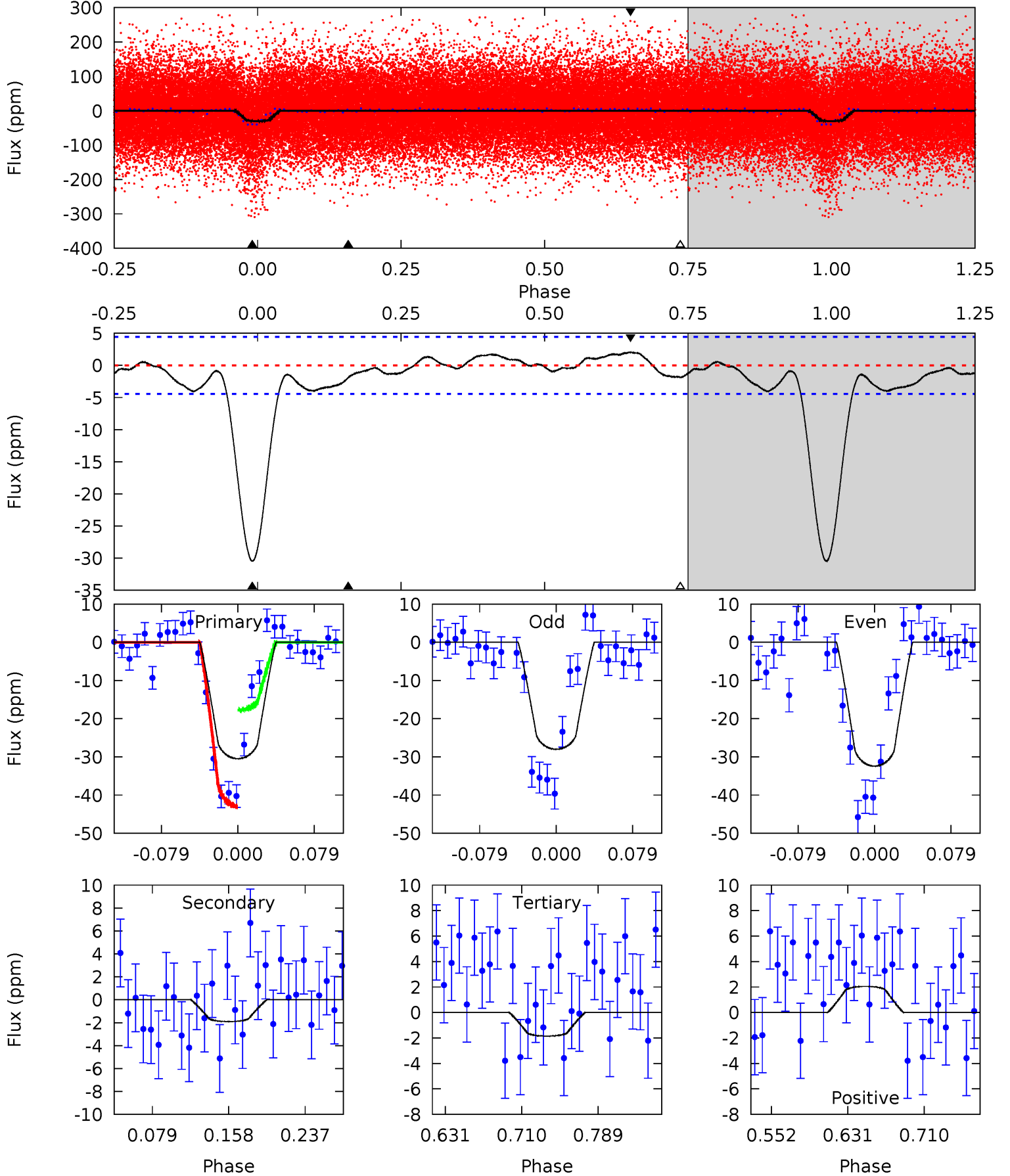
TCE 002853828-01 P= 1.077461 Days $T_0=131.586619$ (BKJD)



DV Model-Shift Uniqueness Test

002853828-01, P = 1.077484 Days, E = 130.504984 Days

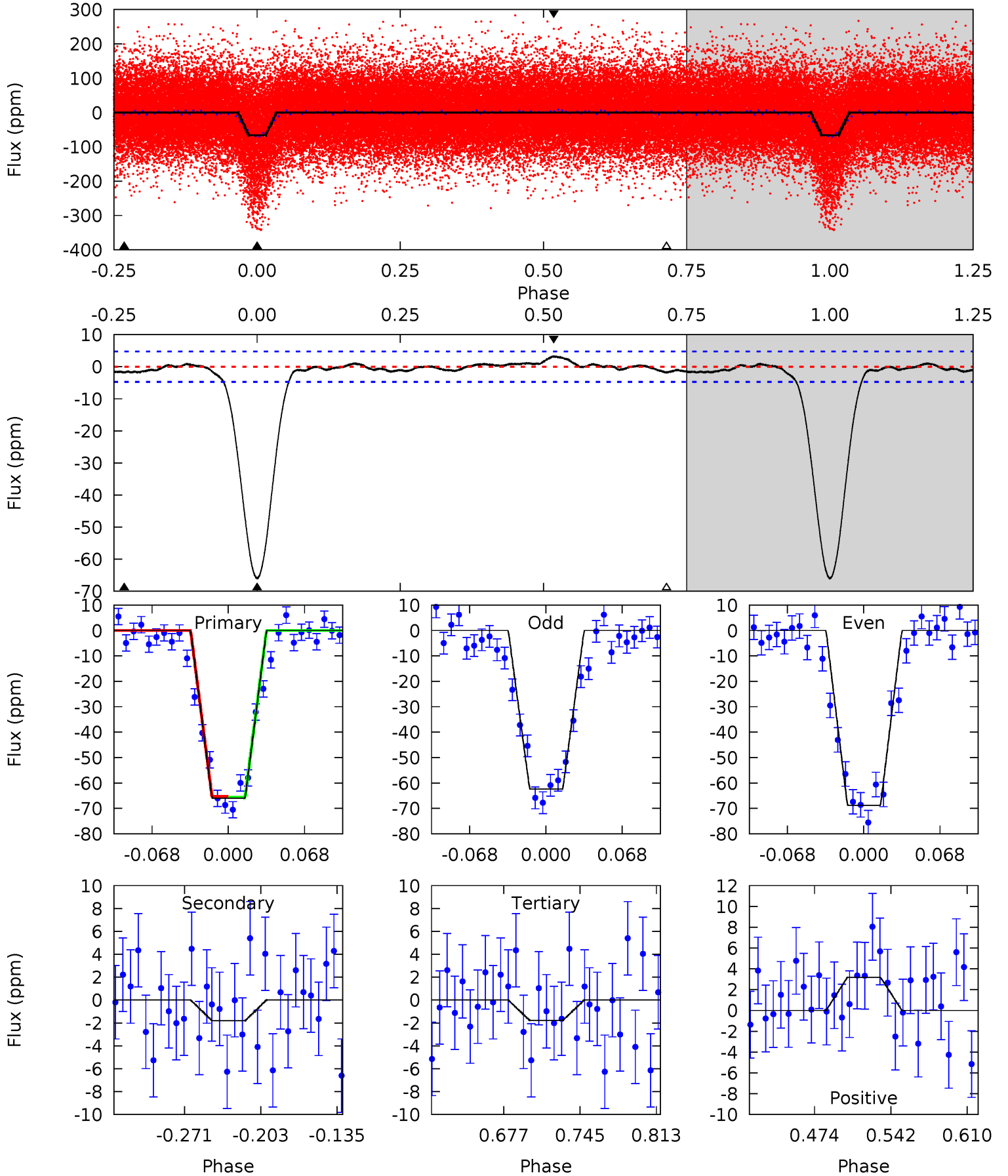
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.6	1.98	1.93	2.13	4.61	1.76	1.50	29.7	29.5	0.05	-0.15	2.29	1.20	0.06	13.1



Alt Model-Shift Uniqueness Test

002853828-01, P = 1.077461 Days, E = 130.509158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.5	1.76	1.74	3.11	4.65	1.83	1.00	62.8	61.4	0.02	-1.35	3.12	1.35	0.05	0.16



Stellar Parameters For KIC 002853828

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6329^{+170}_{-189}	$4.137^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.300}$	$1.508^{+0.326}_{-0.326}$	$1.135^{+0.182}_{-0.136}$	$0.466^{+0.501}_{-0.179}$
	+3%/-3%	+5%/-3%	+208%/-250%	+22%/-22%	+16%/-12%	+107%/-38%
Source	PHO1	FLK73	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 002853828-01 / KOI 2896.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2±1	$1.10^{+0.25}_{-0.21}$	3248^{+200}_{-207}	2705^{+656}_{-5575}	$0.388^{+0.314}_{-0.219}$
Alt.	-2±1	$1.42^{+0.28}_{-0.26}$	3240^{+205}_{-213}	-2664^{+5485}_{-446}	$0.224^{+0.198}_{-0.137}$

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

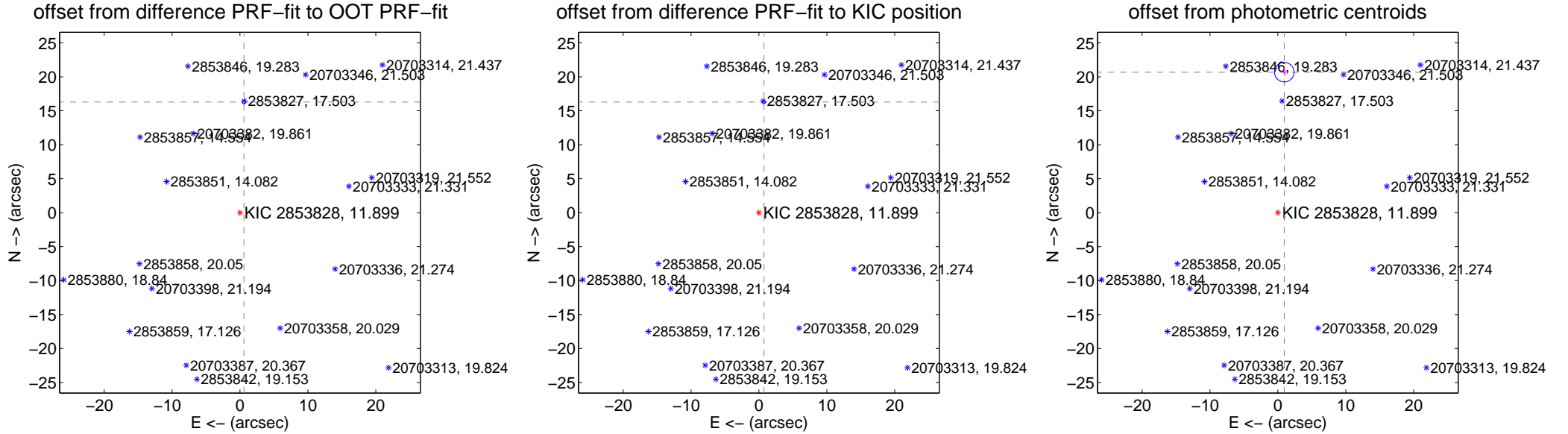
DV Centroid Data

Supplemental centroid analysis for 002853828-01. **Kepler magnitude: 11.90.** Transit SNR 28.80

There are 13 quarters with good PRF difference image offsets

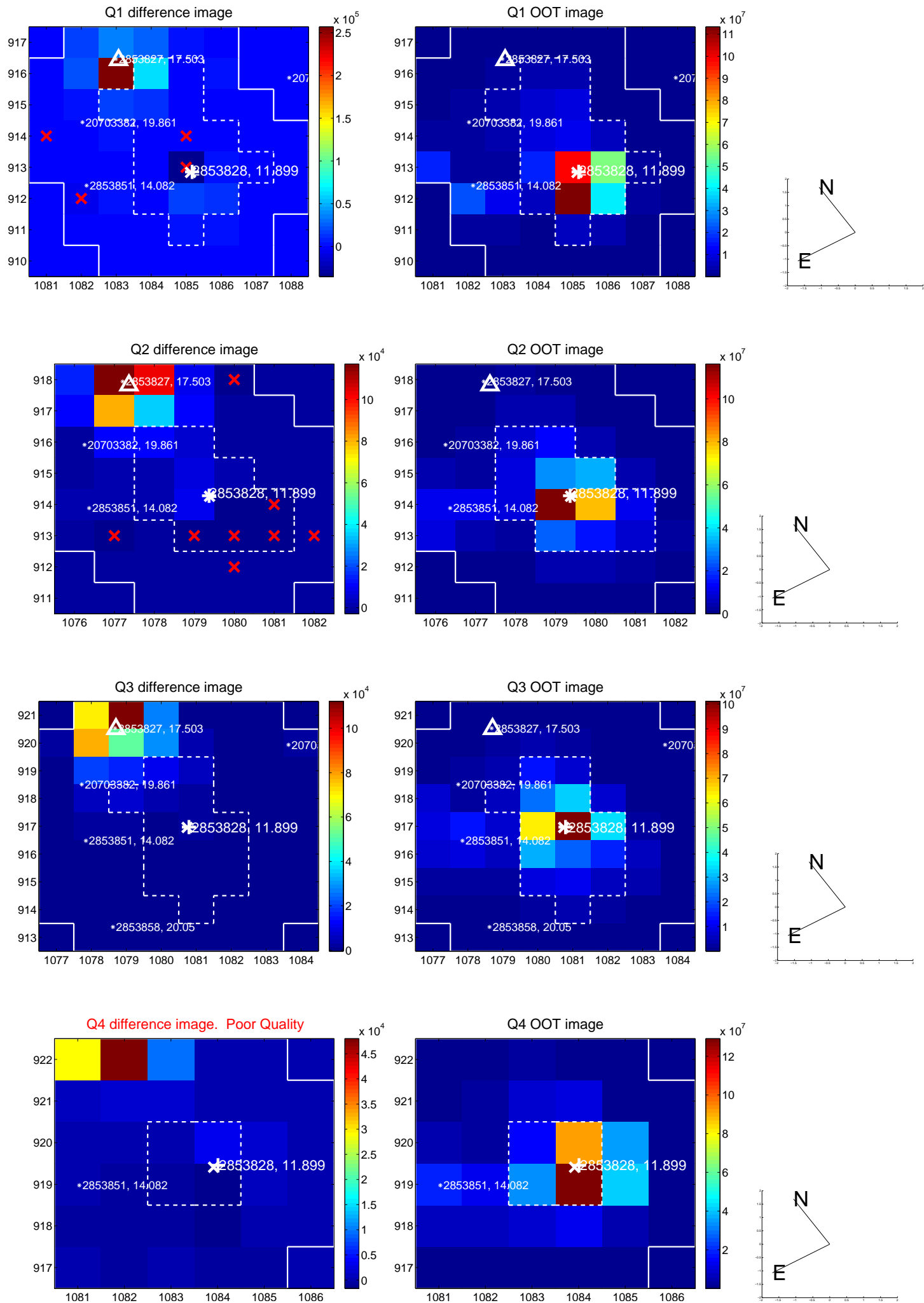
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	16.298 ± 0.089	183.63	-0.585 ± 0.075	16.288 ± 0.089
PRF-fit source offset from KIC position	16.301 ± 0.078	208.95	-0.731 ± 0.075	16.284 ± 0.078
photometric centroid source offset	20.70 ± 0.48	43.28	-0.94 ± 0.35	20.68 ± 0.48

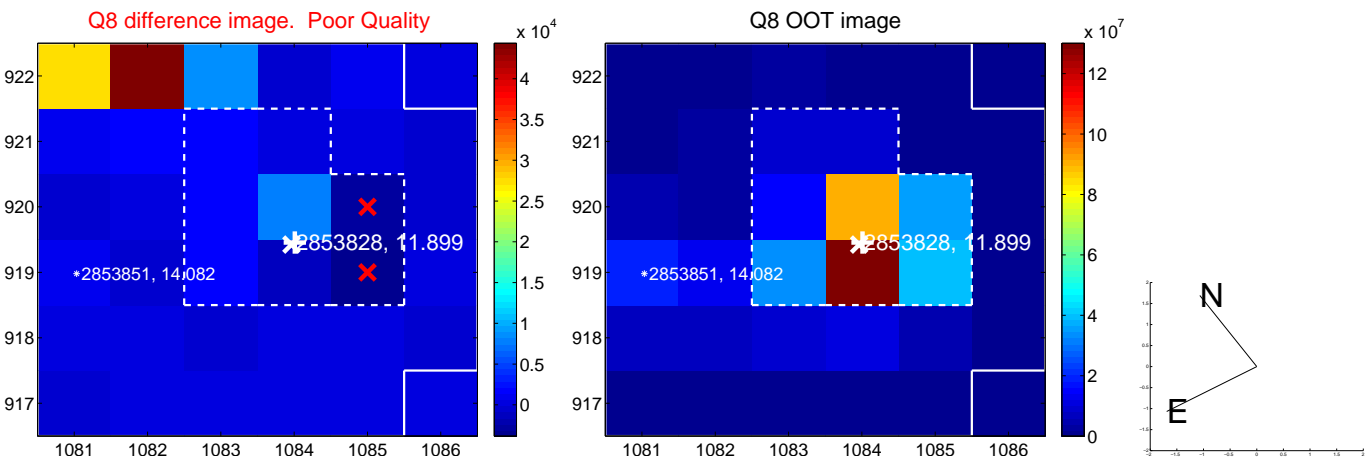
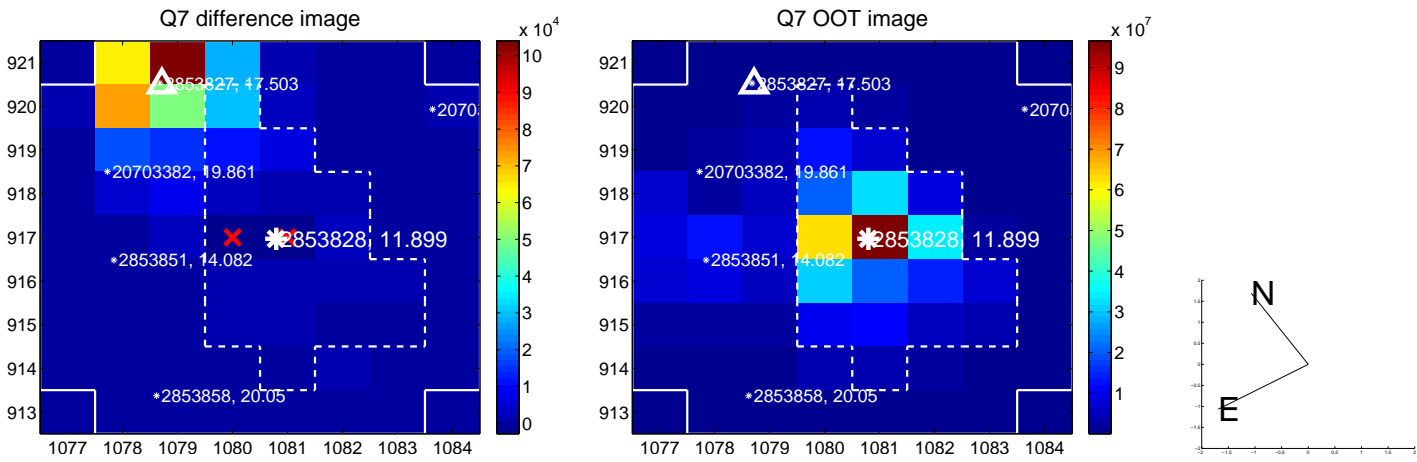
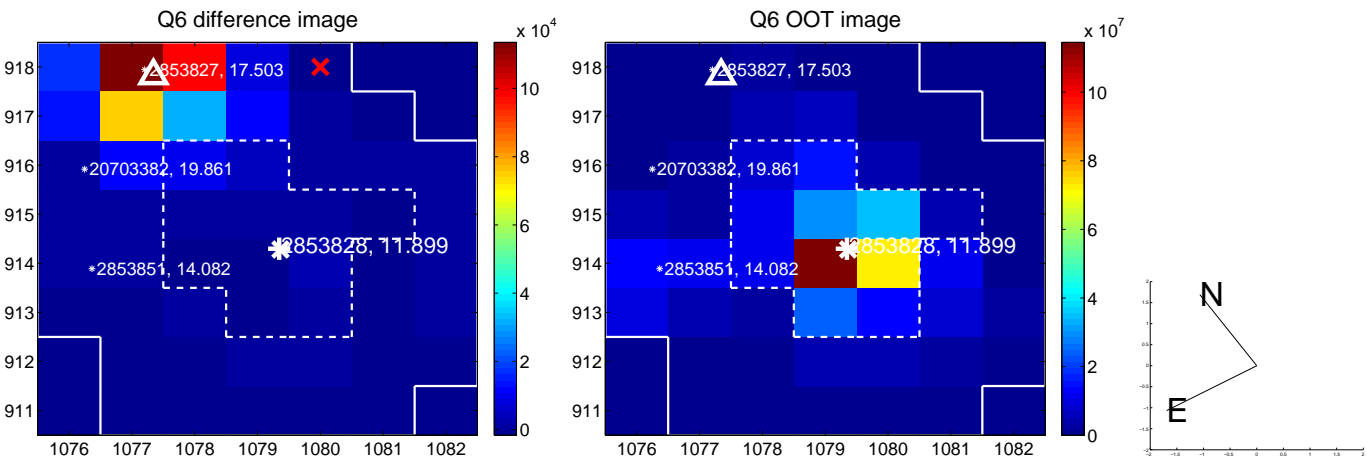
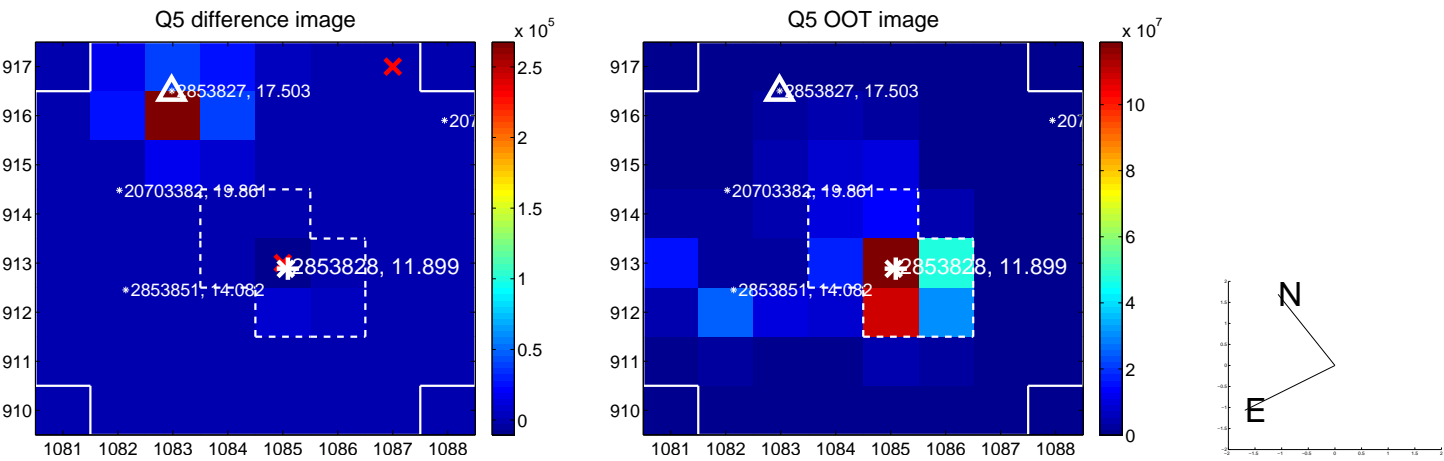


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

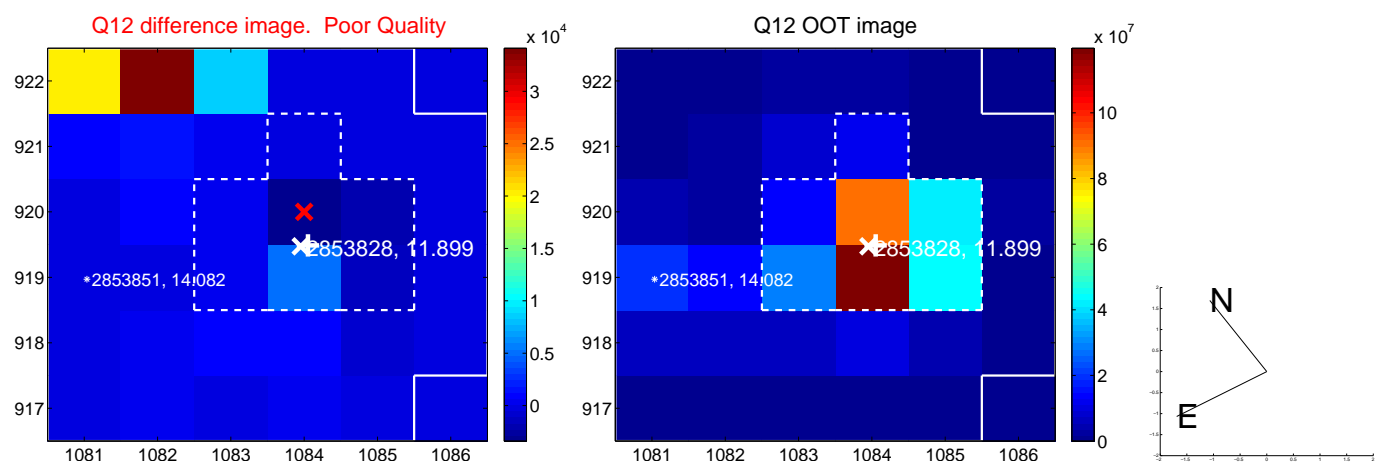
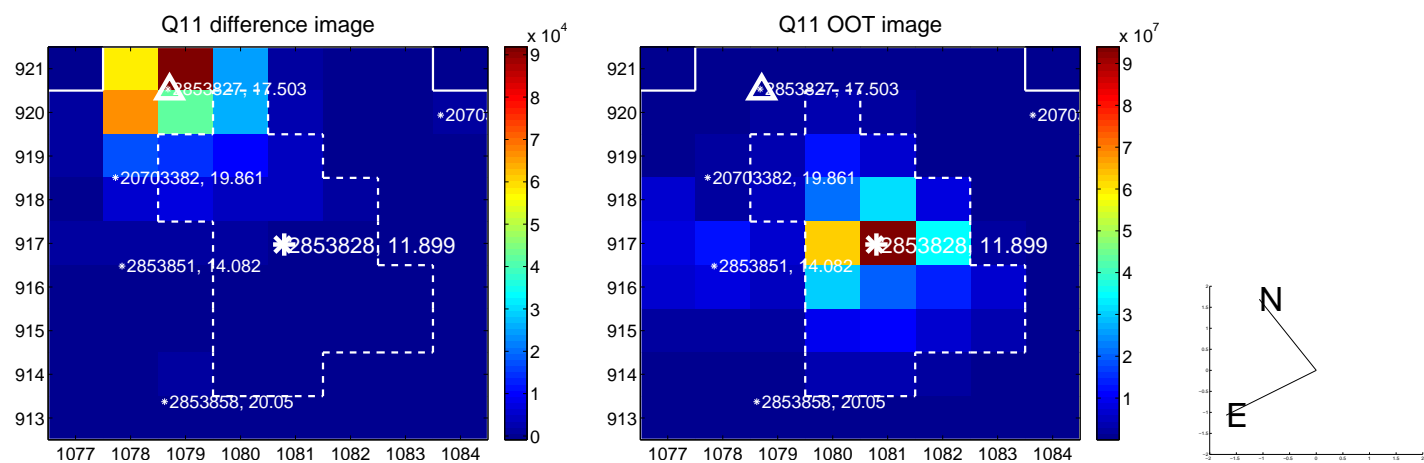
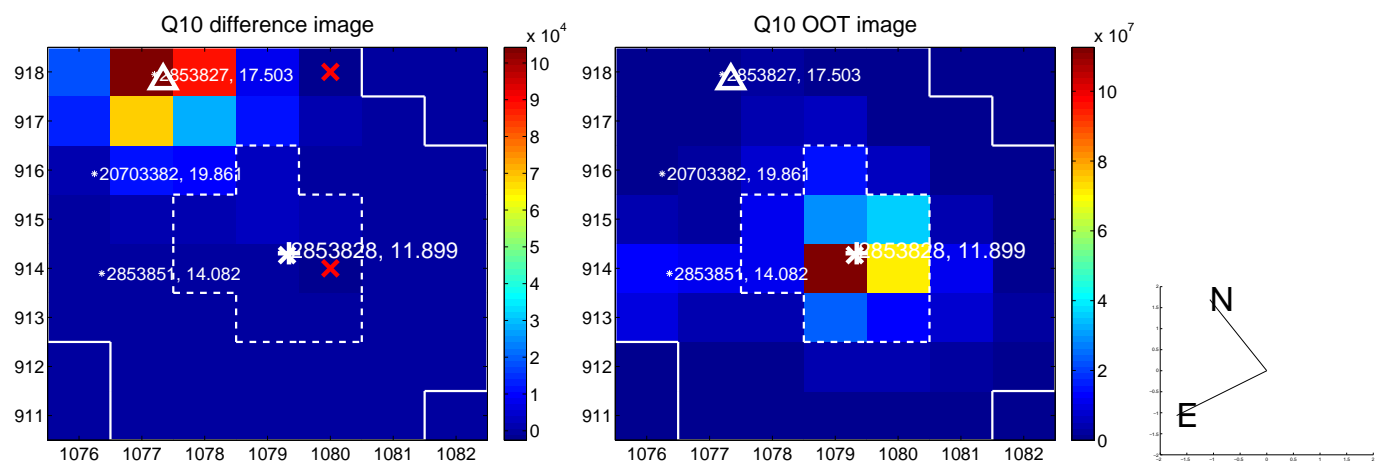
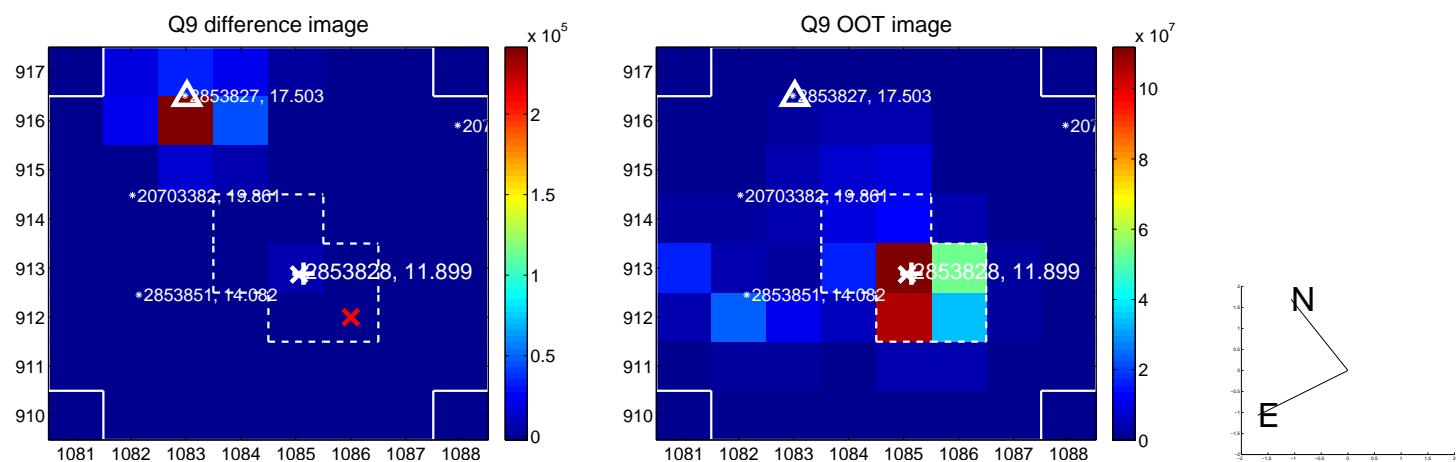
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



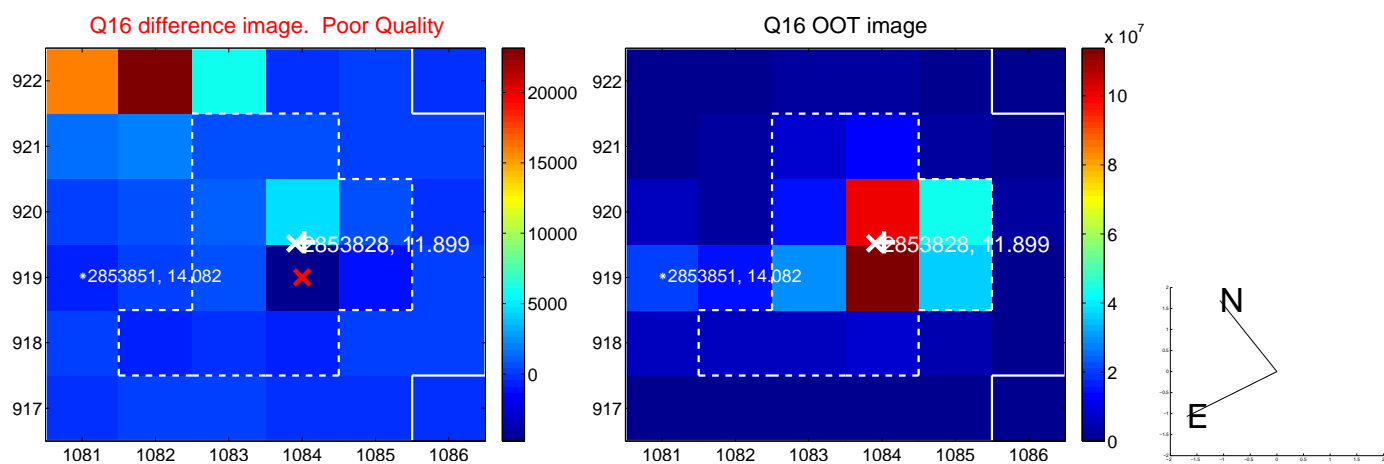
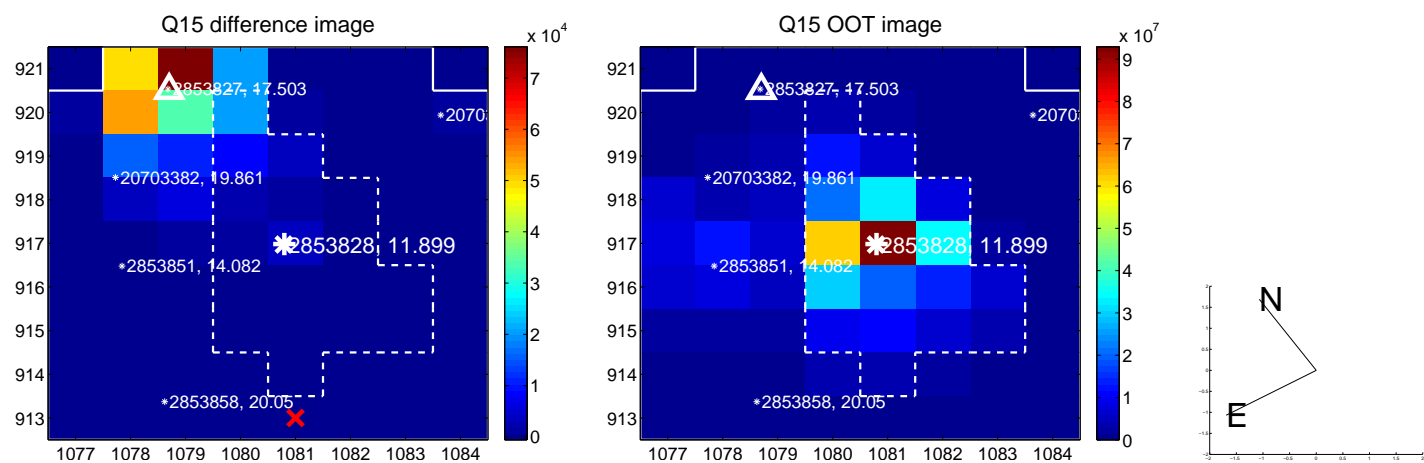
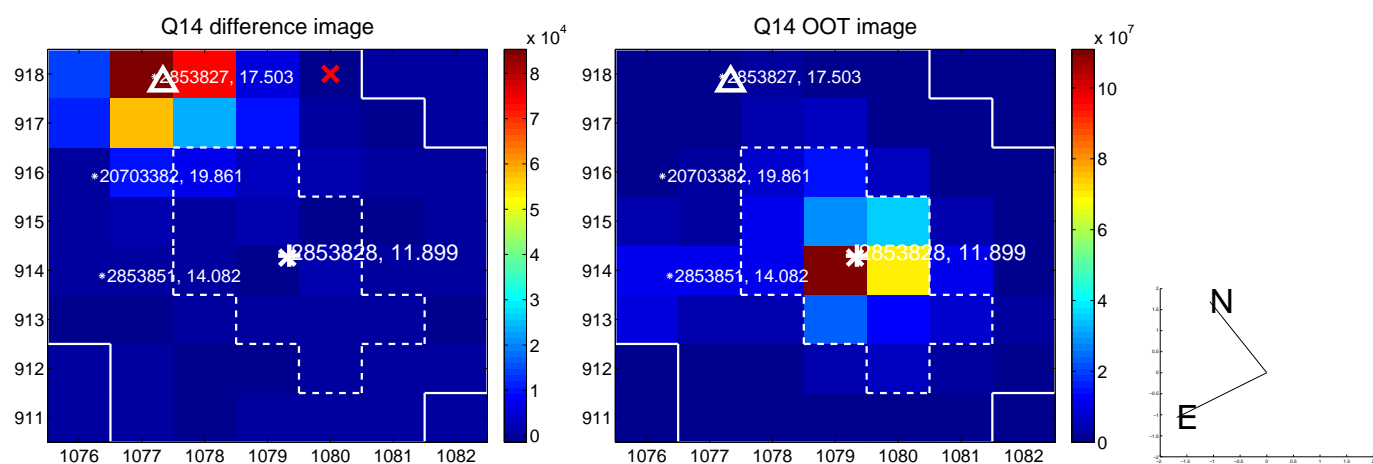
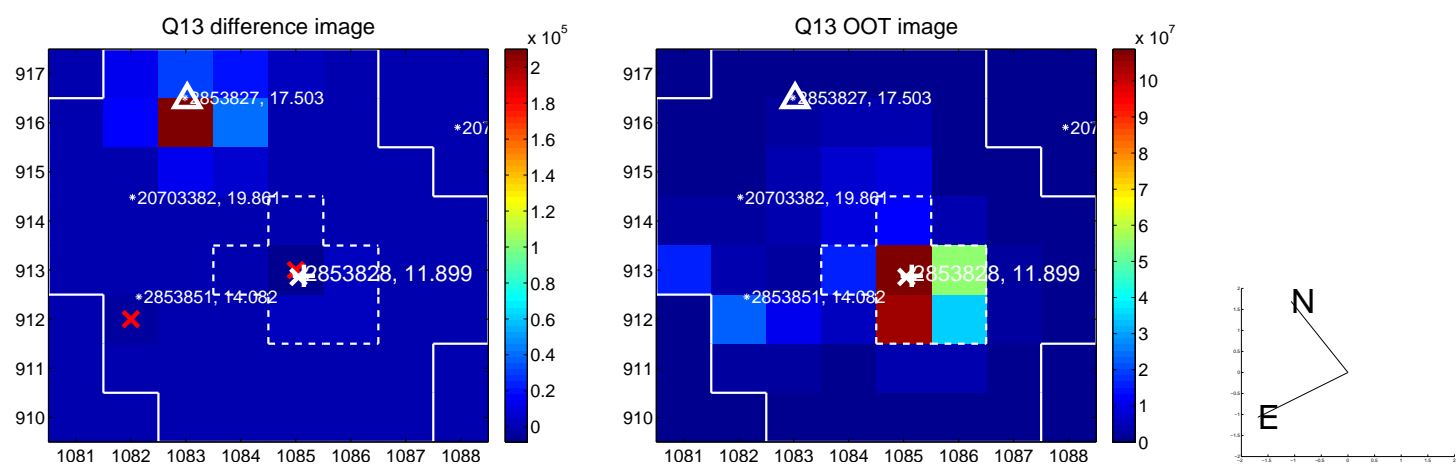
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



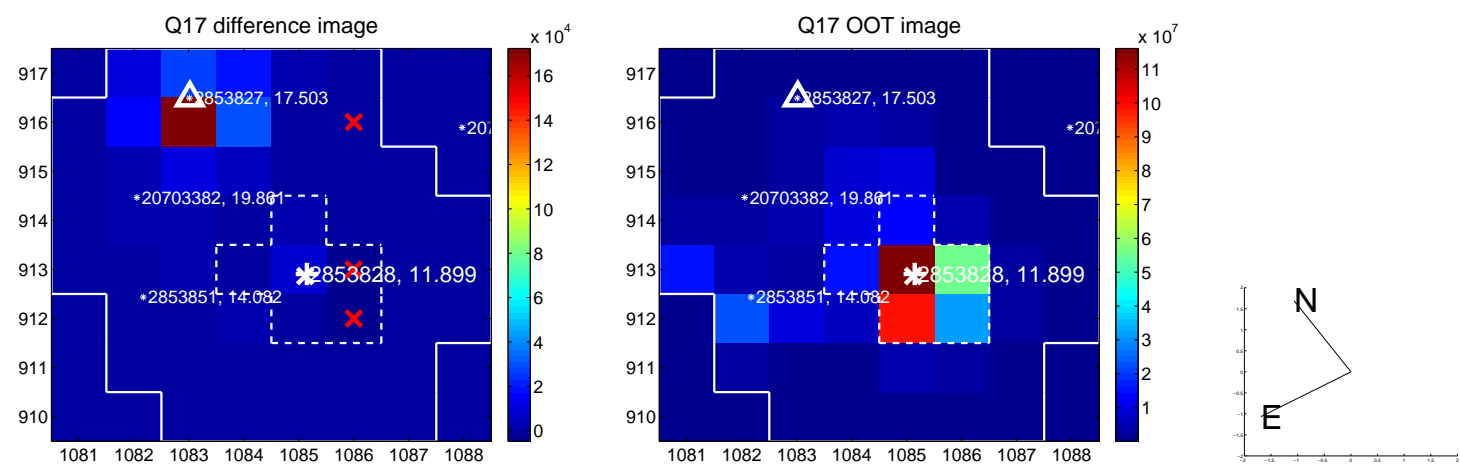
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



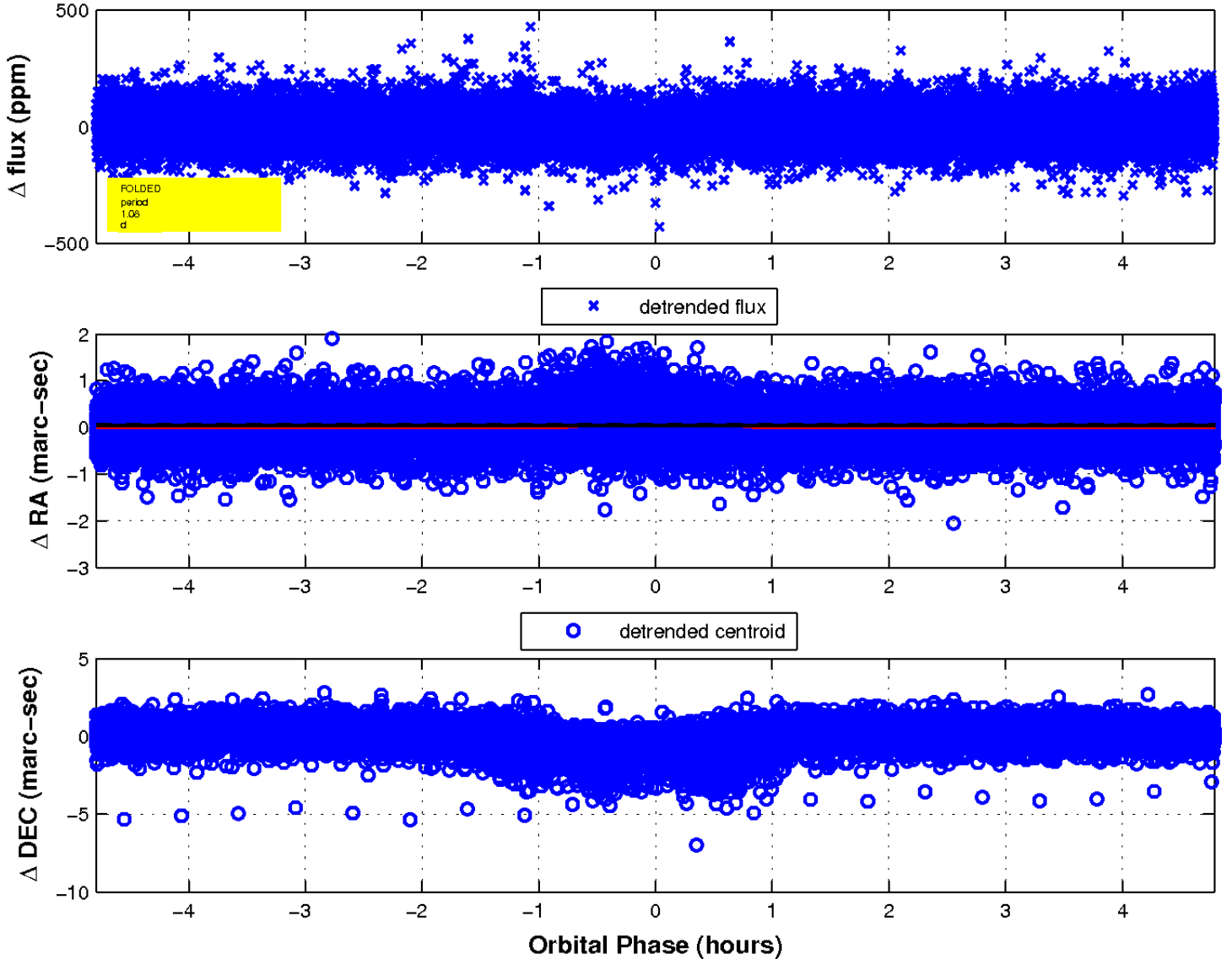
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

