

KIC 006853172

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})
006853172-01	OBS	6776.01	28.656927	157.154376	168.0	9.767	7.7	8.3	1.10	6268	1.62	44.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006853172-01	OBS	PC	0.98	0	0	0	0	CENT_FEW_MEAS

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

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

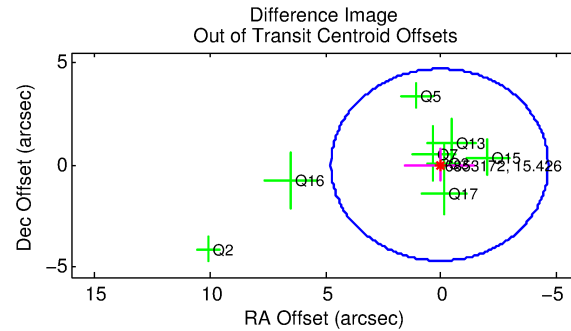
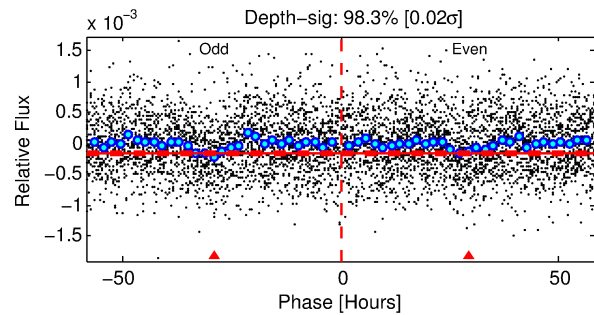
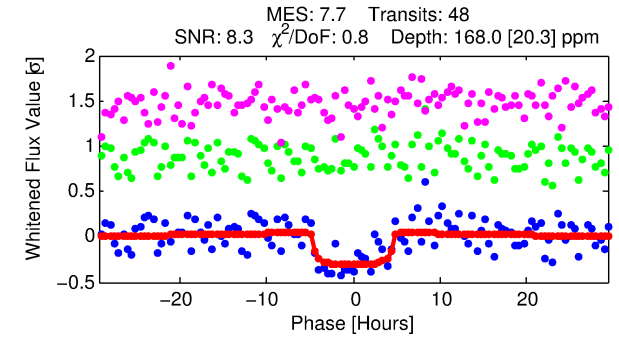
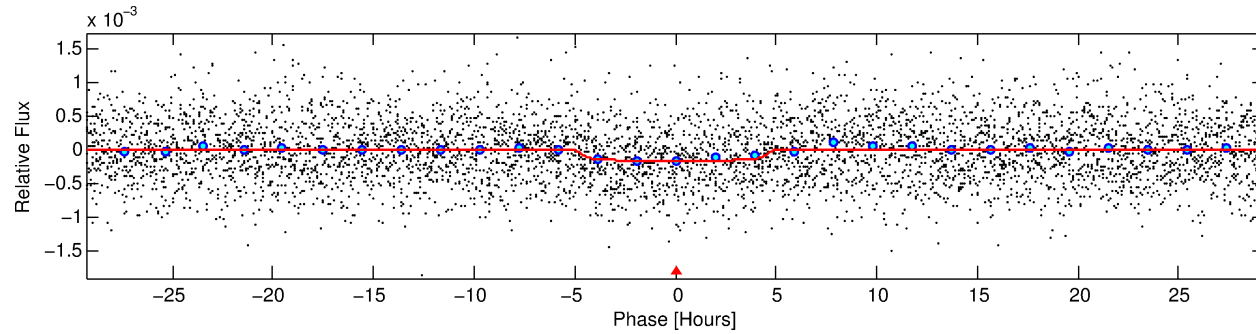
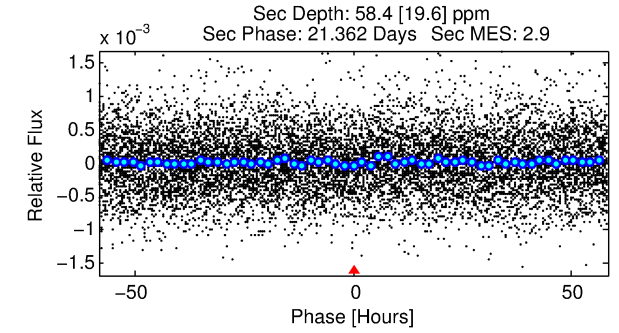
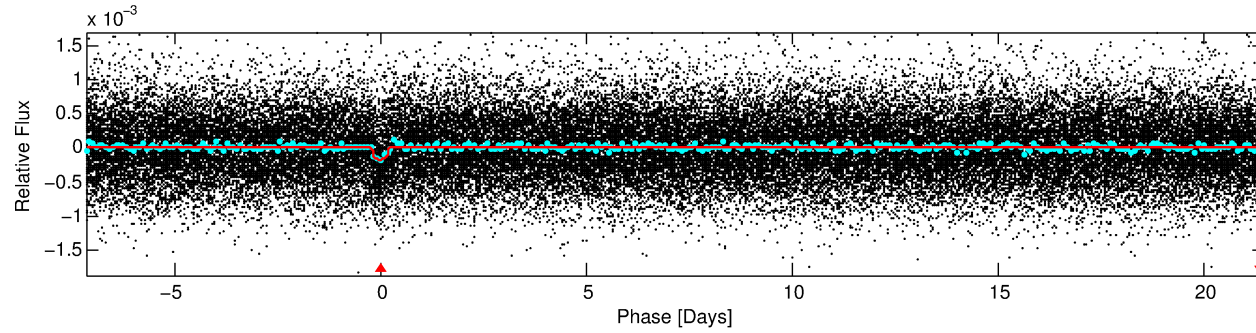
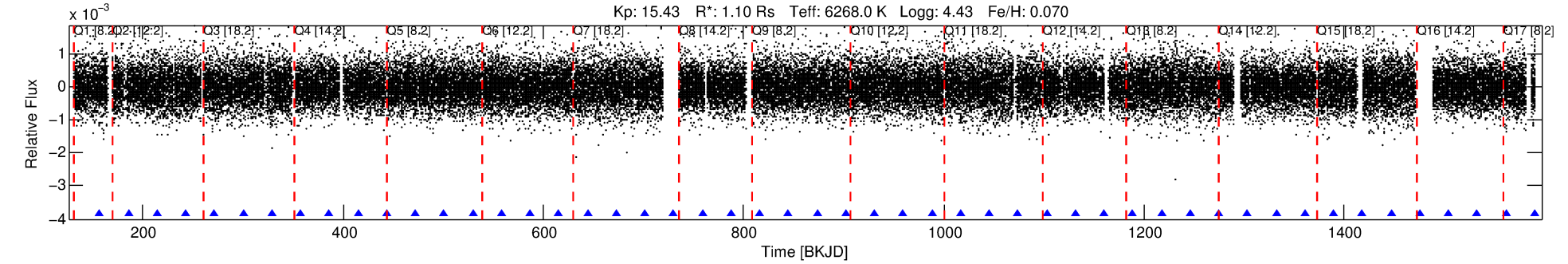
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006853172-01

No Significant Match Found

DV One-Page Summary

KIC: 6853172 Candidate: 1 of 1 Period: 28.657 d
KOI: K06776.01 Corr: 0.901



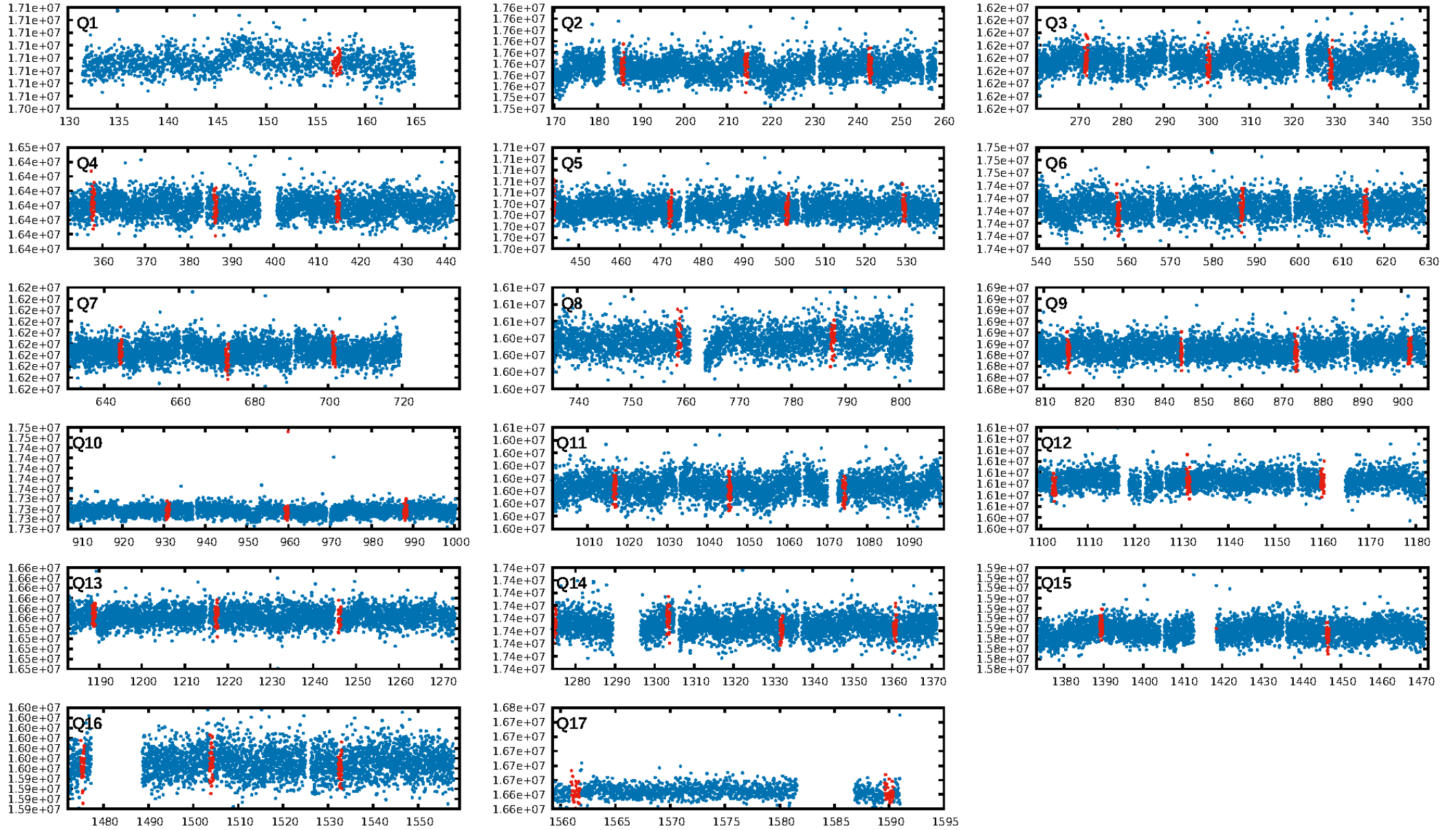
DV Fit Results:

Period = 28.65693 [0.00063] d
Epoch = 157.1544 [0.0181] BKJD
Rp/R* = 0.0135 [0.0039]
a/R* = 12.16 [17.89]
b = 0.86 [0.46]
Seff = 44.47 [18.14]
Teff = 658 [67] K
Rp = 1.62 [0.68] Re
a = 0.1940 [0.0501] AU
Ag = 458.97 [353.87] [1.29 σ]
Teffp = 4712 [812] K [4.98 σ]

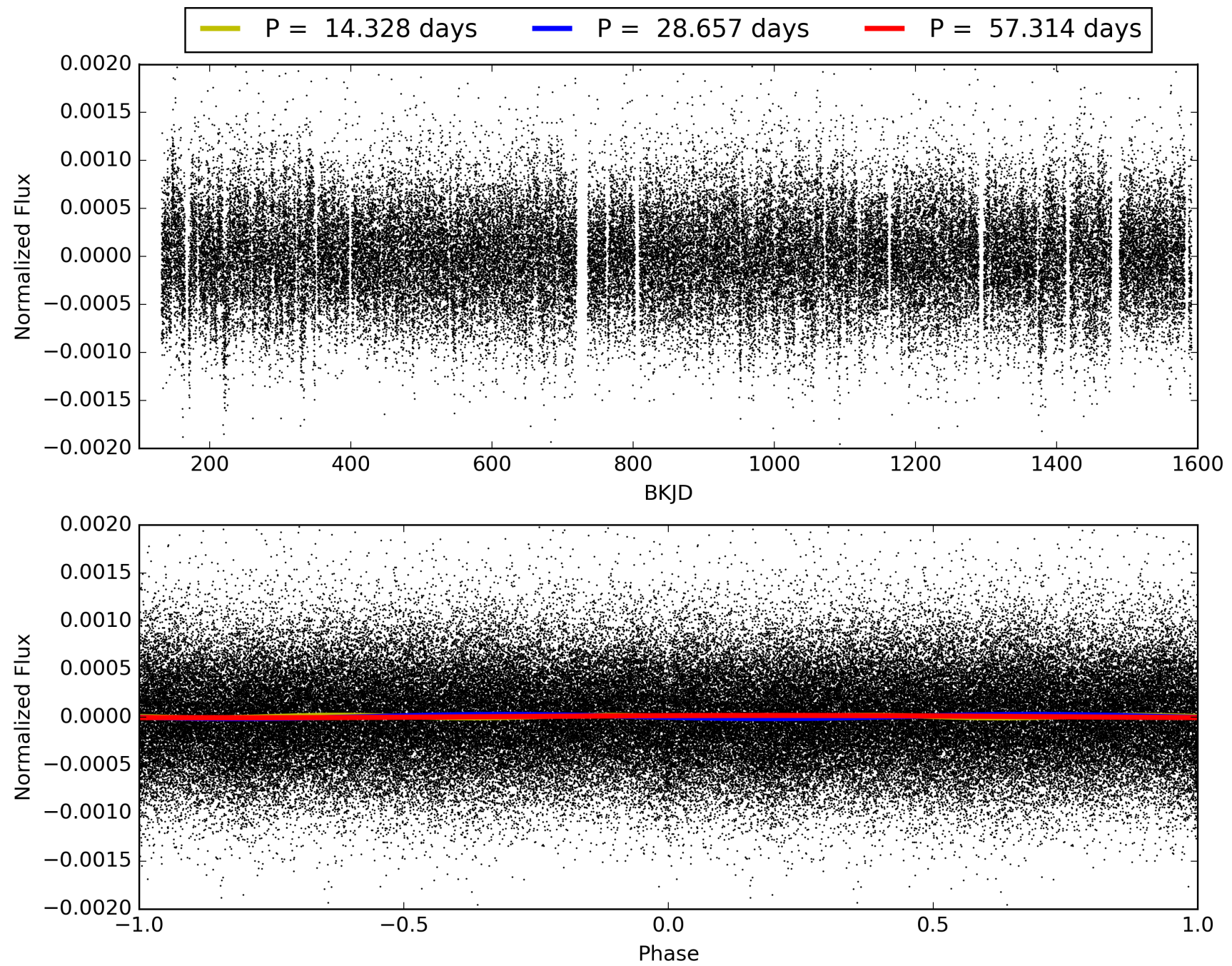
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.50e-14
RollingBand-fgt: 1.00 [45/45]
GhostDiagnostic-chr: -0.8138
Centroid-sig: 30.0%
Centroid-so: 1.774 arcsec [0.85 σ]
OotOffset-rm: 0.062 arcsec [0.04 σ]
KicOffset-rm: 0.065 arcsec [0.12 σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006853172-01, PDC Light Curves

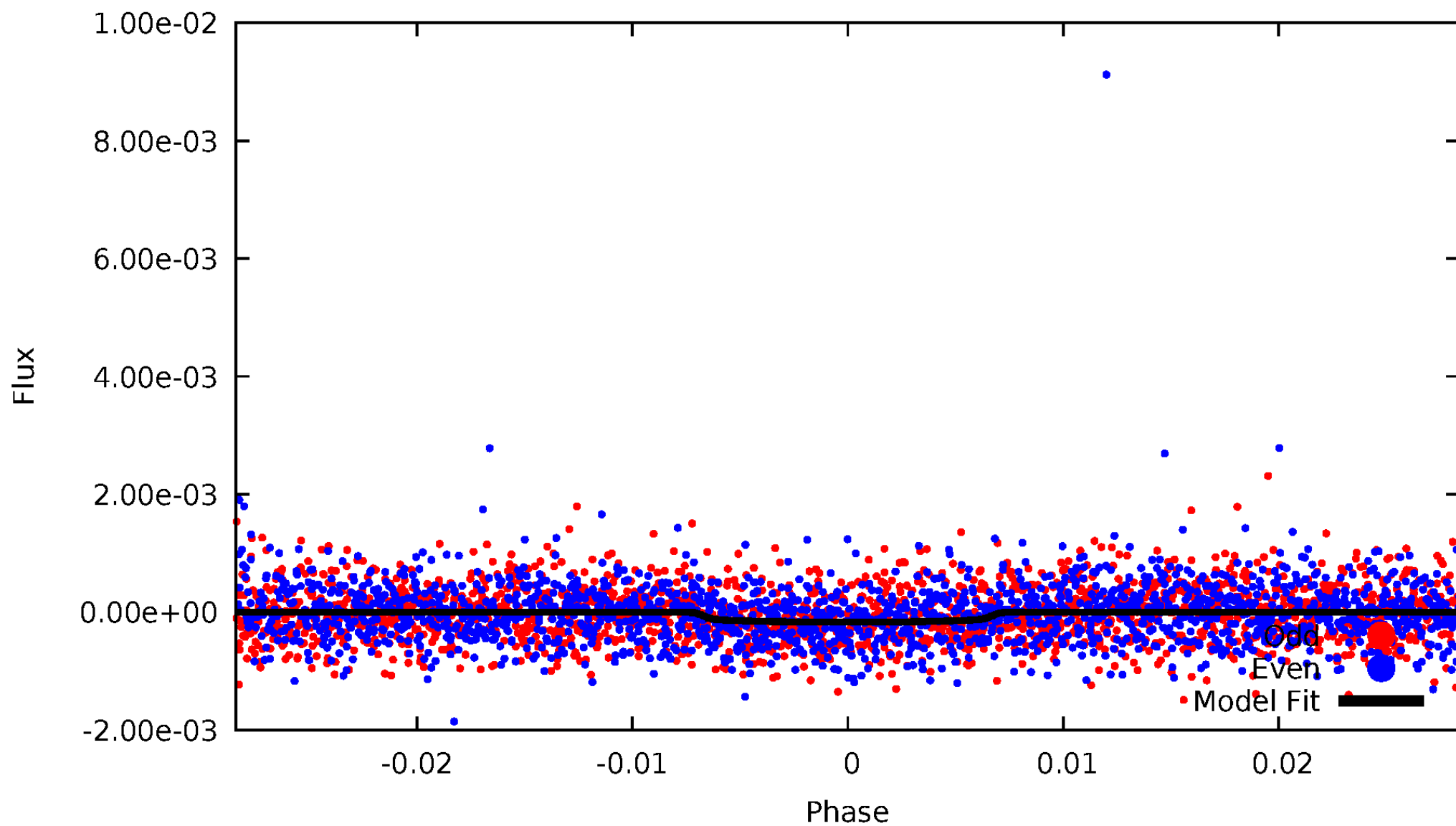


TCE 006853172-01



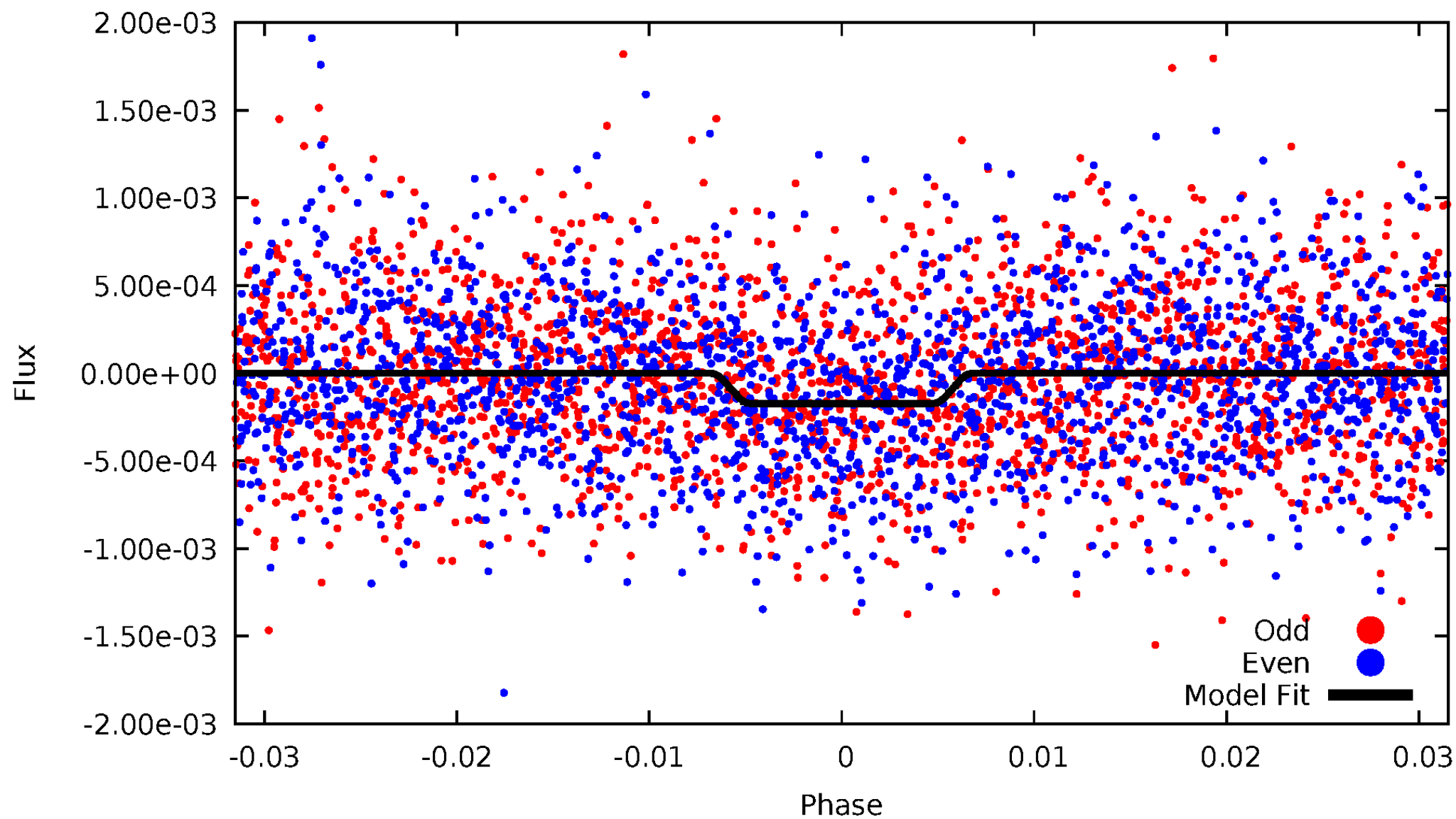
DV Odd/Even

TCE 006853172-01

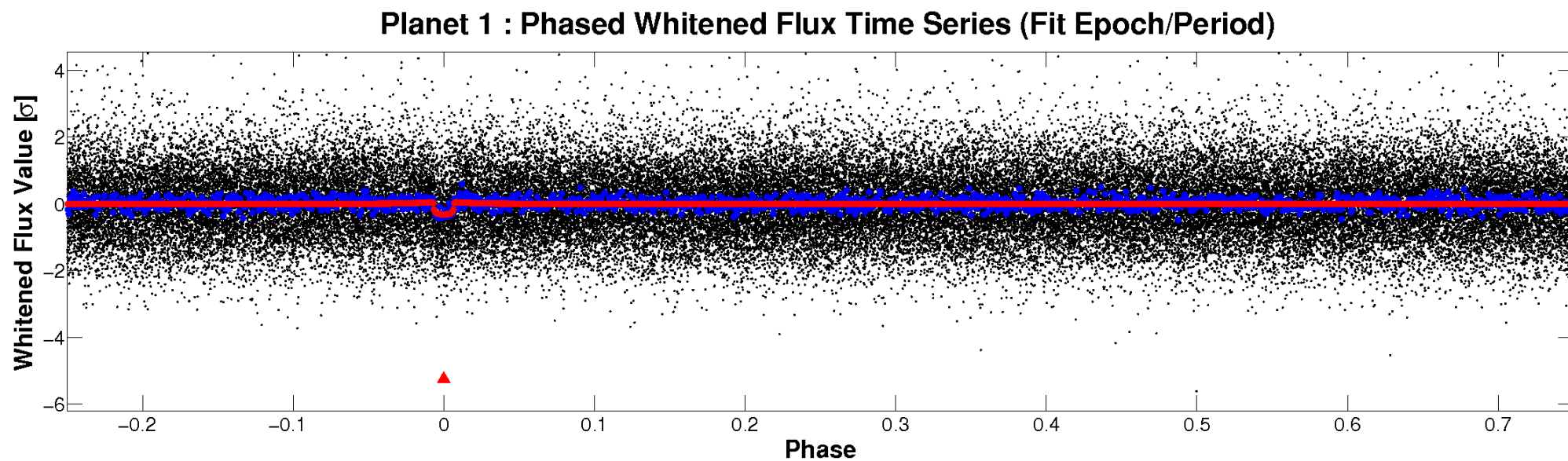
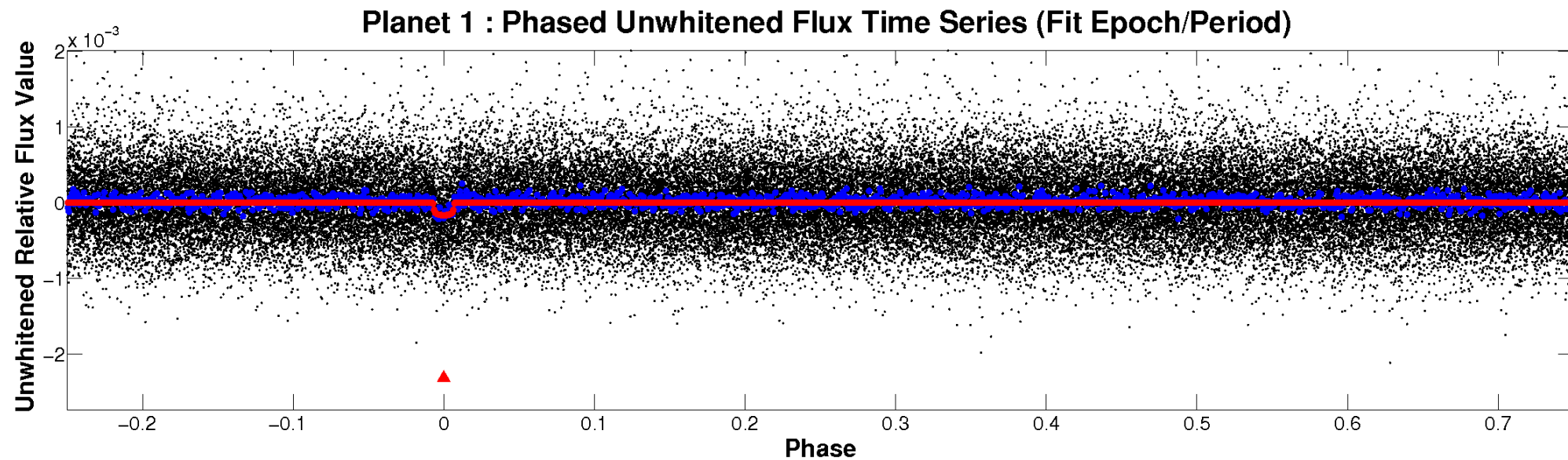


ALT Odd/Even

TCE 006853172-01

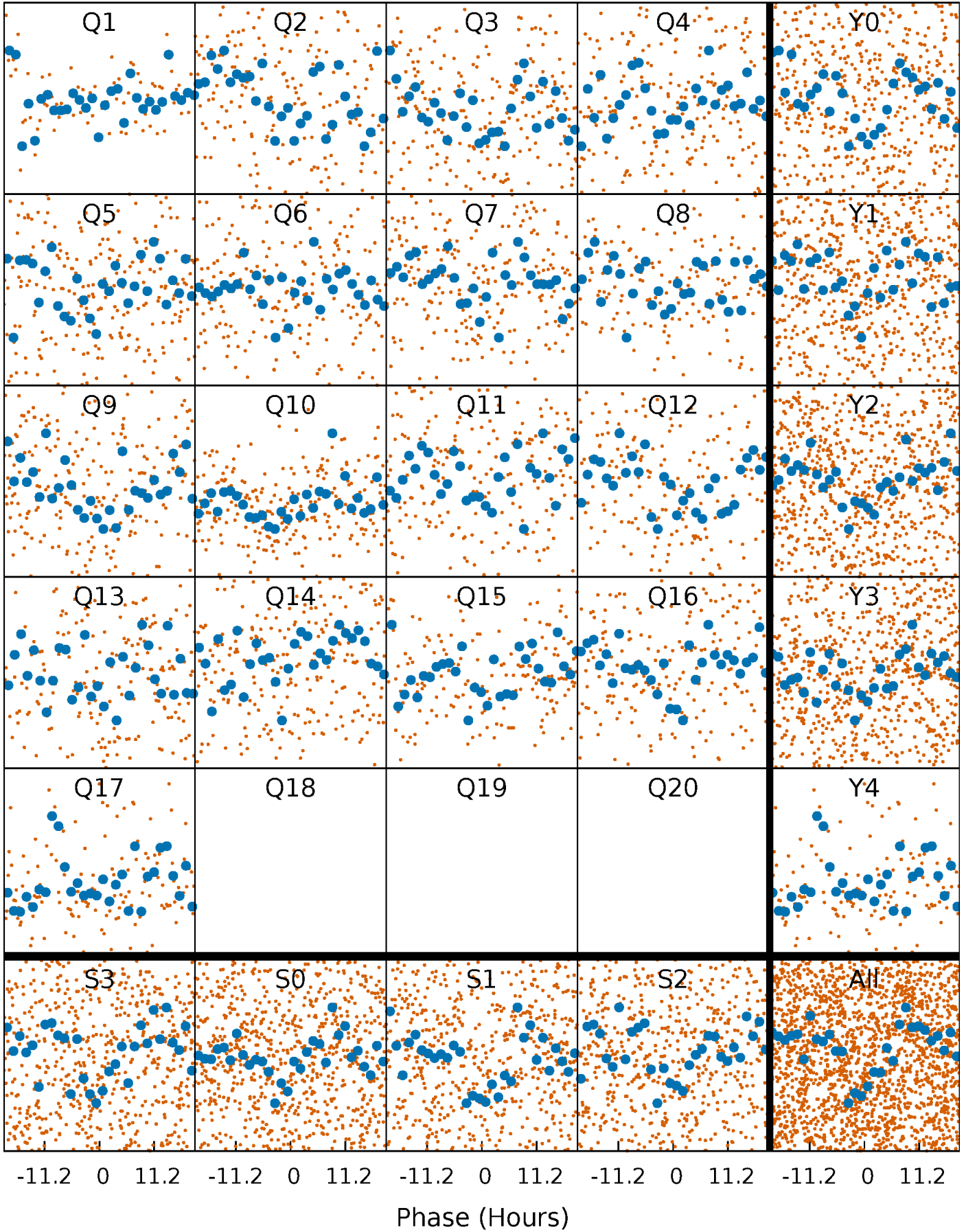


Non-Whitened Vs. Whitened Light Curve



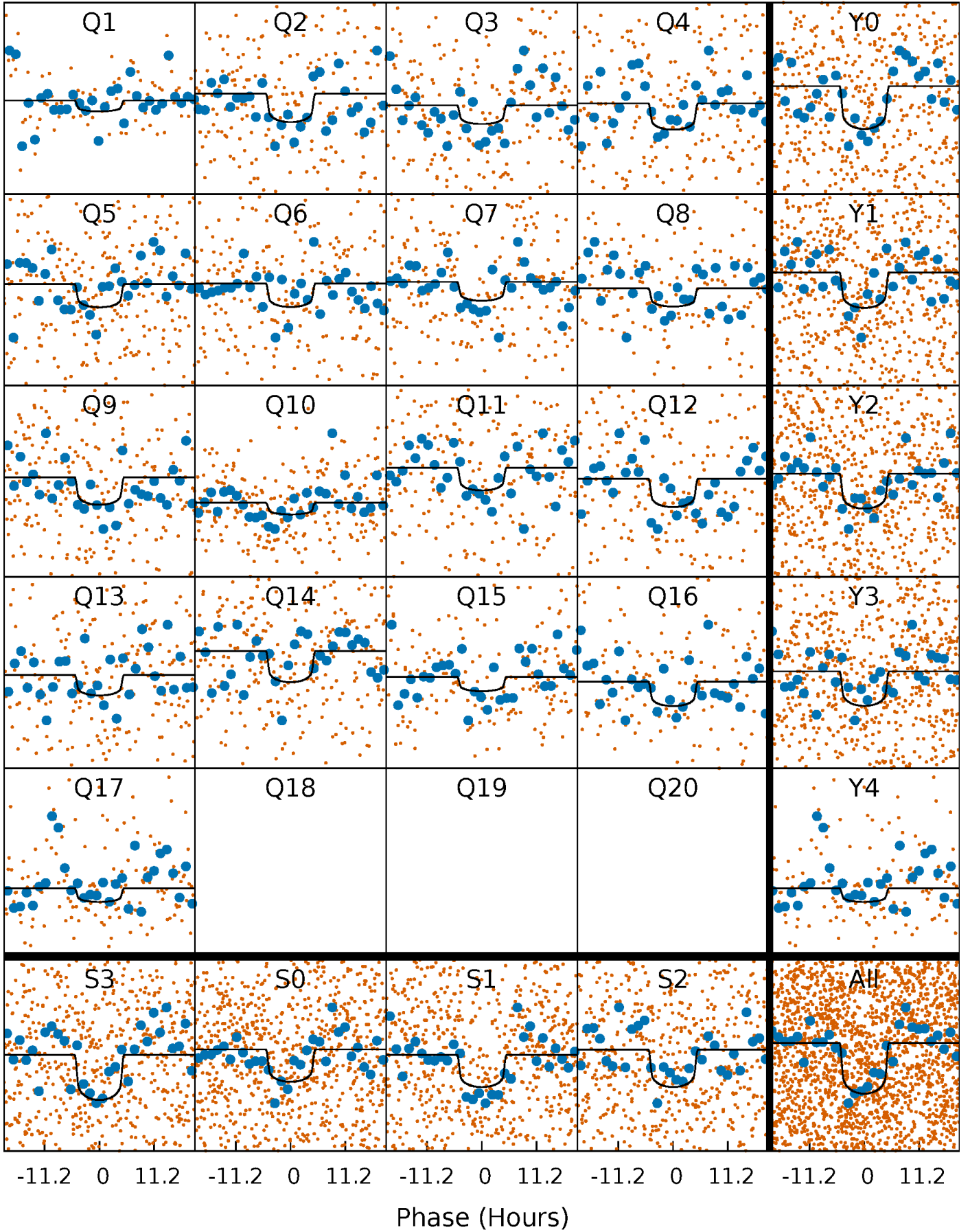
PDC Quarter-Phased Transit Curves

TCE 006853172-01 P= 28.656927 Days $T_0=157.154376$ (BKJD)



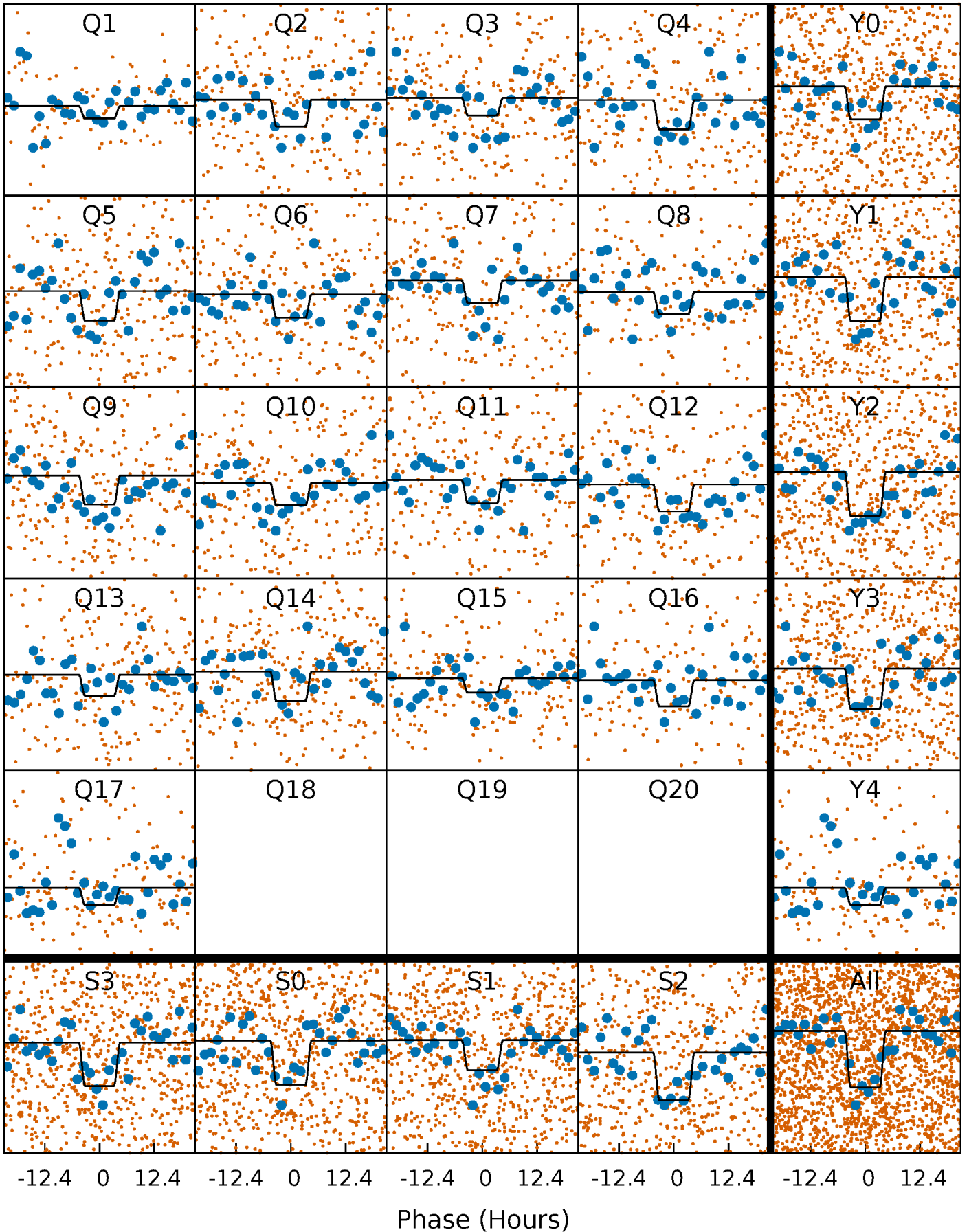
DV Quarter-Phased Transit Curves

TCE 006853172-01 P= 28.656927 Days $T_0=157.154376$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

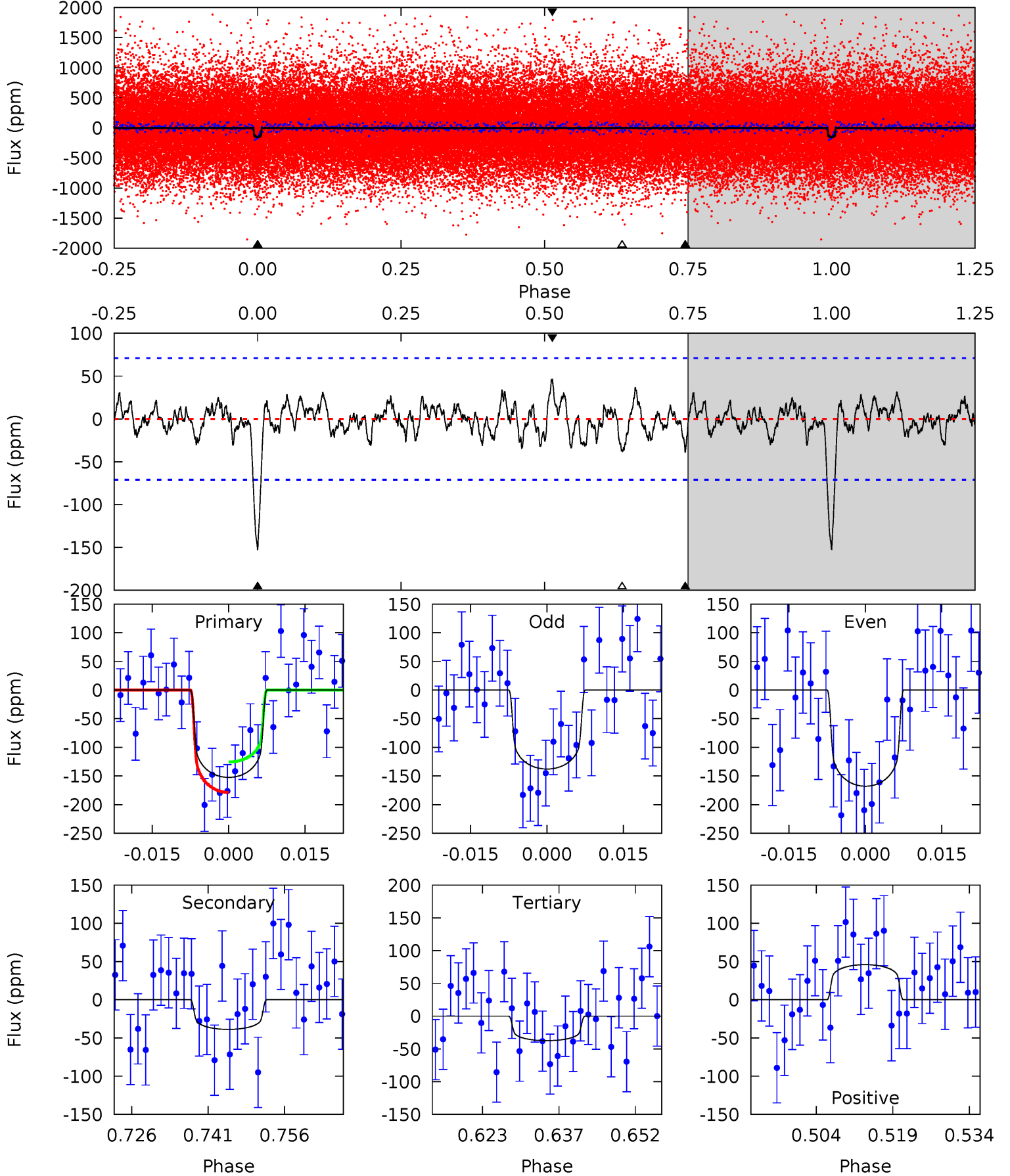
TCE 006853172-01 P= 28.656585 Days $T_0=157.136014$ (BKJD)



DV Model-Shift Uniqueness Test

006853172-01, P = 28.656927 Days, E = 128.497449 Days

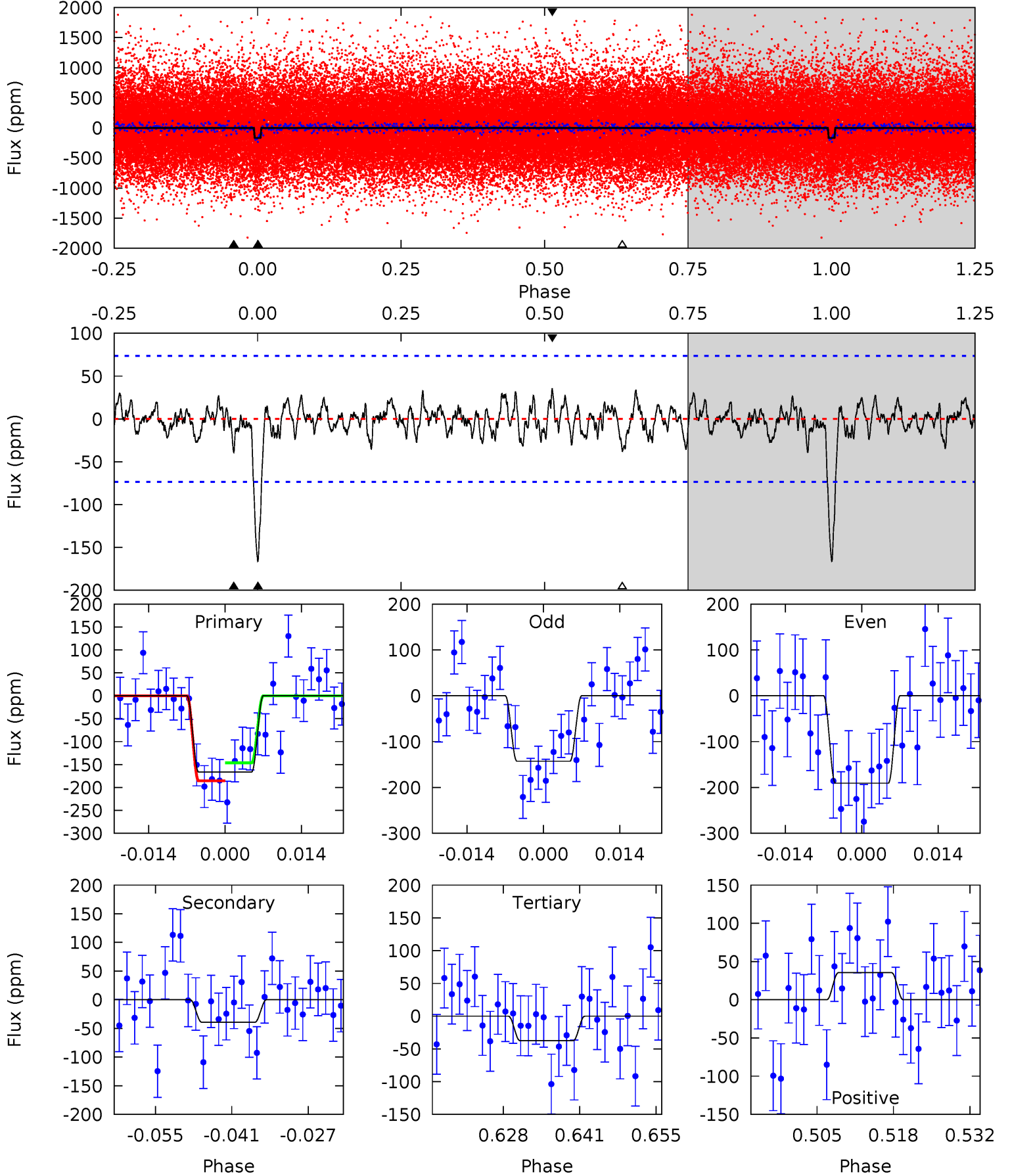
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	2.71	2.61	3.20	4.95	2.44	1.01	8.02	7.42	0.09	-0.50	1.05	1.11	0.23	1.86



Alt Model-Shift Uniqueness Test

006853172-01, P = 28.656585 Days, E = 128.479429 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.65	2.53	2.40	4.97	2.47	0.91	8.70	8.83	0.12	0.25	1.62	0.91	0.18	1.33



Stellar Parameters For KIC 006853172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6268^{+174}_{-239}	$4.429^{+0.052}_{-0.208}$	$0.070^{+0.250}_{-0.300}$	$1.100^{+0.335}_{-0.134}$	$1.188^{+0.141}_{-0.157}$	$1.257^{+0.337}_{-0.636}$
	+3%/-4%	+1%/-5%	+357%/-429%	+30%/-12%	+12%/-13%	+27%/-51%
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 006853172-01 / KOI 6776.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 14	$1.71^{+0.58}_{-0.50}$	942^{+68}_{-54}	4397^{+722}_{-514}	257^{+308}_{-128}
Alt.	-39 ± 15	$1.67^{+0.53}_{-0.50}$	937^{+64}_{-46}	4417^{+820}_{-499}	276^{+331}_{-142}

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 $A_{obs} \gg 1.0$

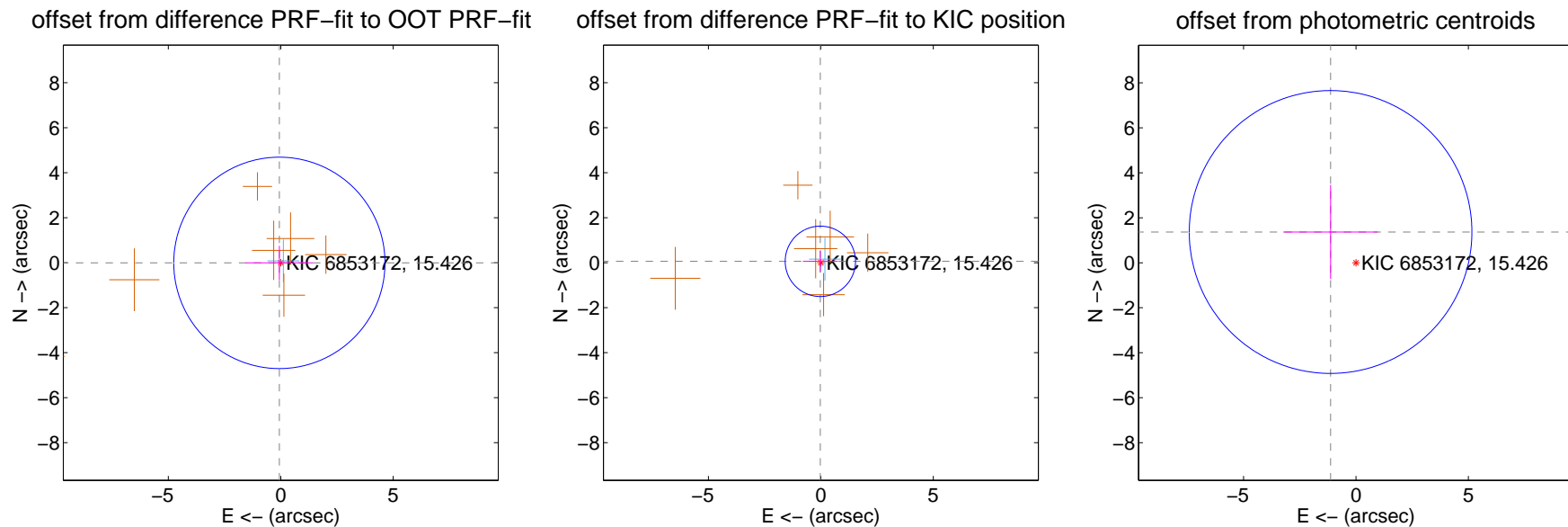
DV Centroid Data

Supplemental centroid analysis for 006853172-01. Kepler magnitude: 15.43. Transit SNR 8.25

There are 1 quarters with good PRF difference image offsets

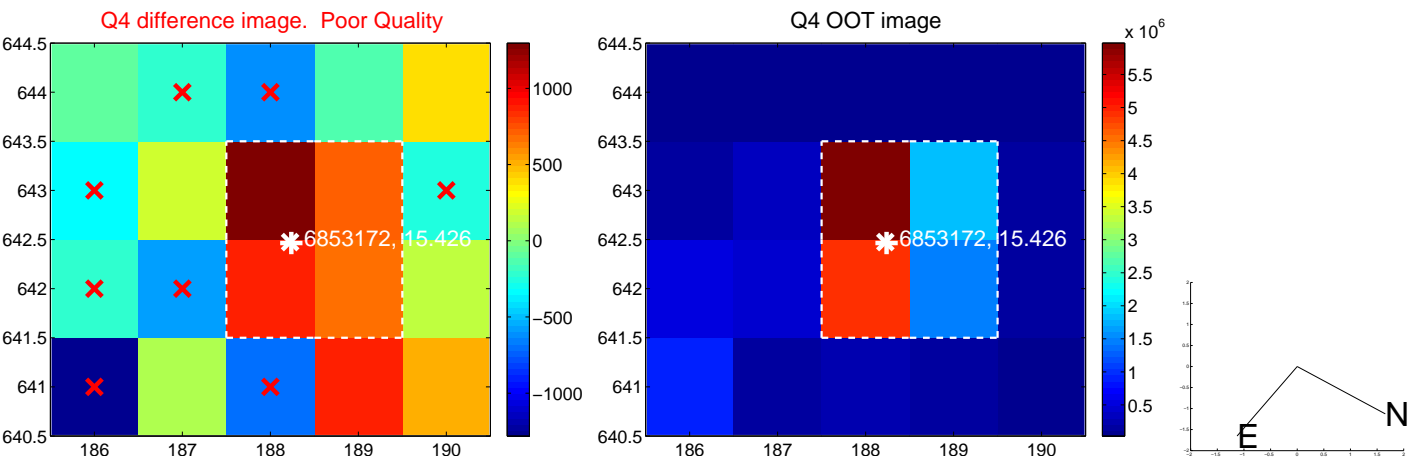
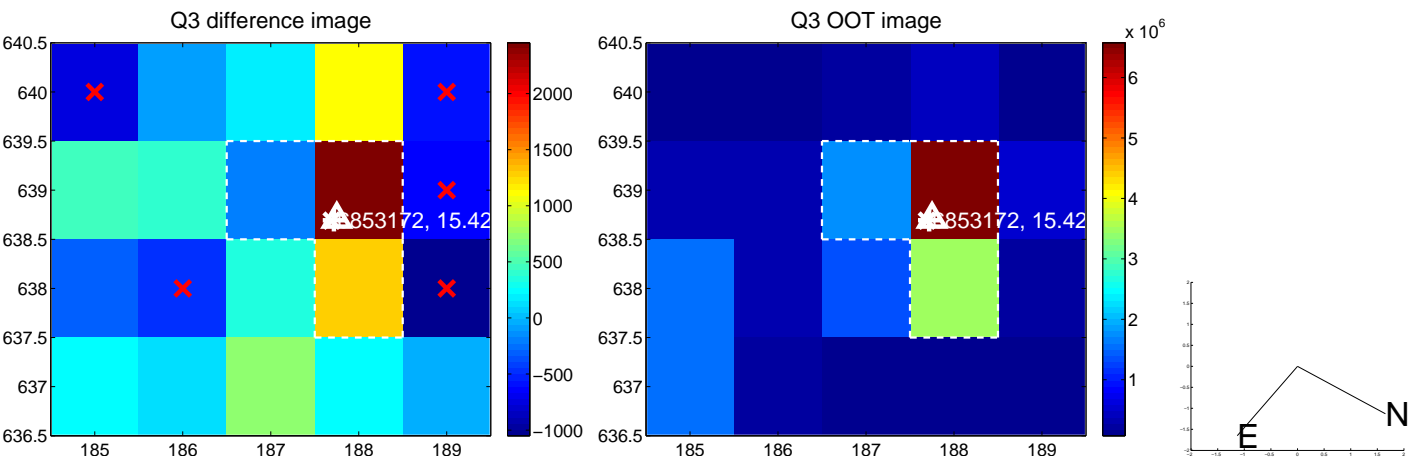
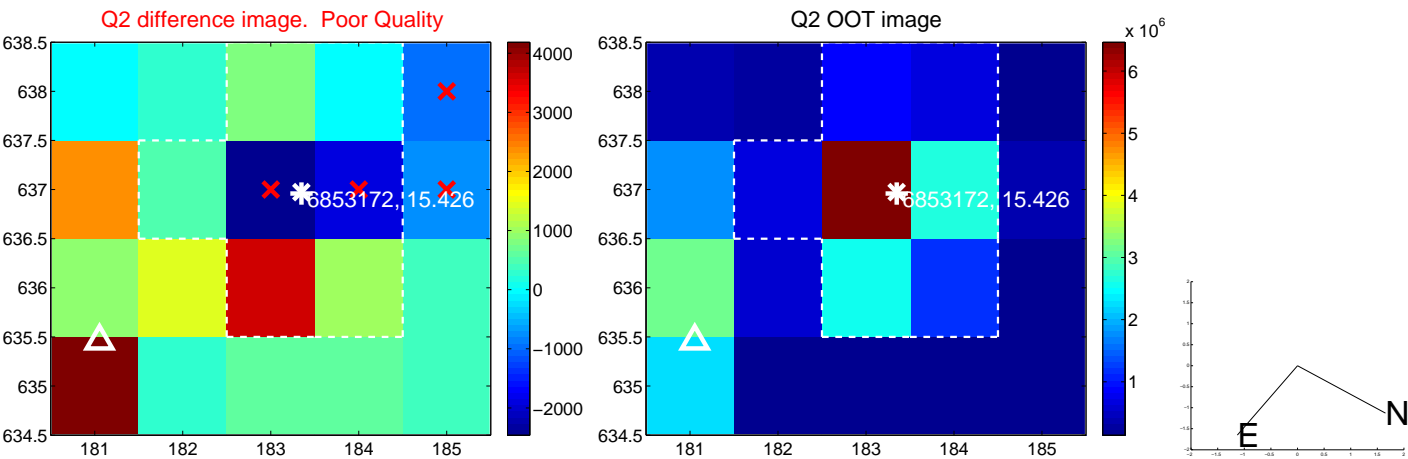
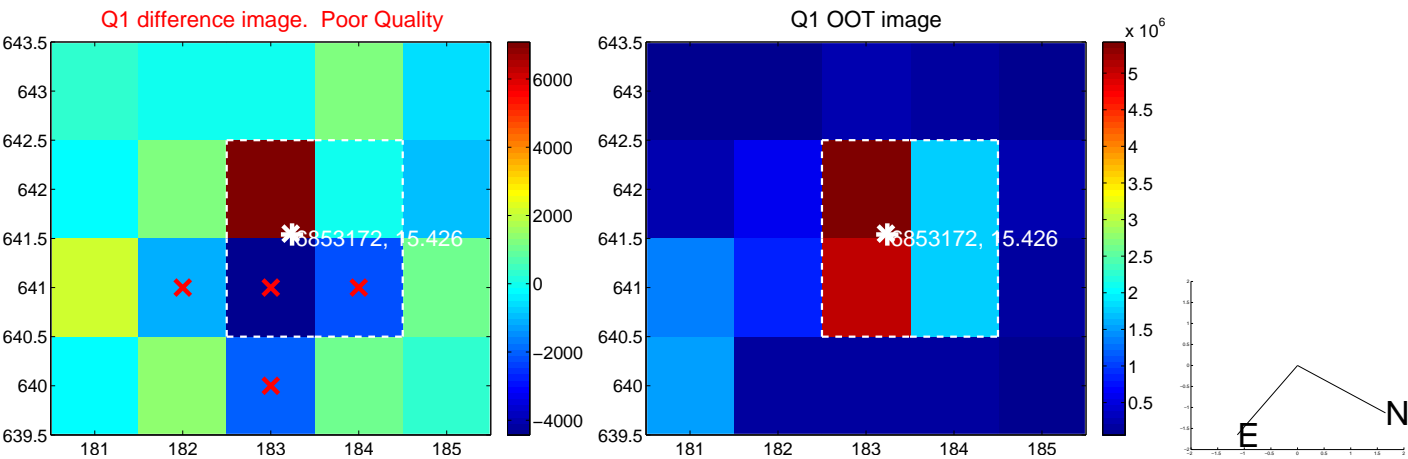
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.062 ± 1.566	0.04	0.061 ± 1.503	-0.008 ± 0.758
PRF-fit source offset from KIC position	0.065 ± 0.521	0.12	0.023 ± 0.777	0.061 ± 0.473
photometric centroid source offset	1.77 ± 2.10	0.85	1.13 ± 2.10	1.37 ± 2.09

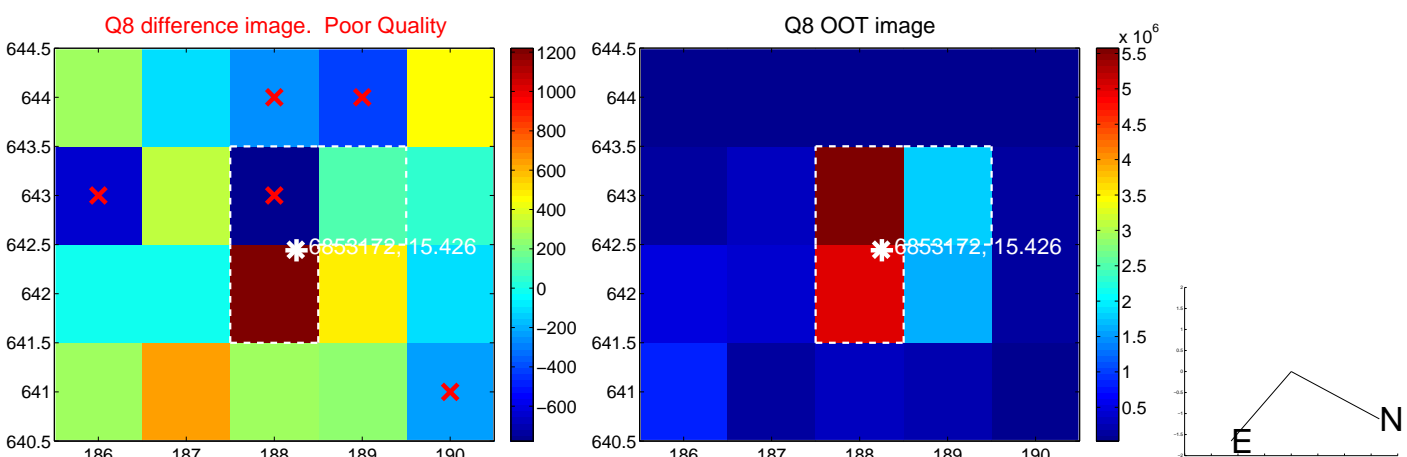
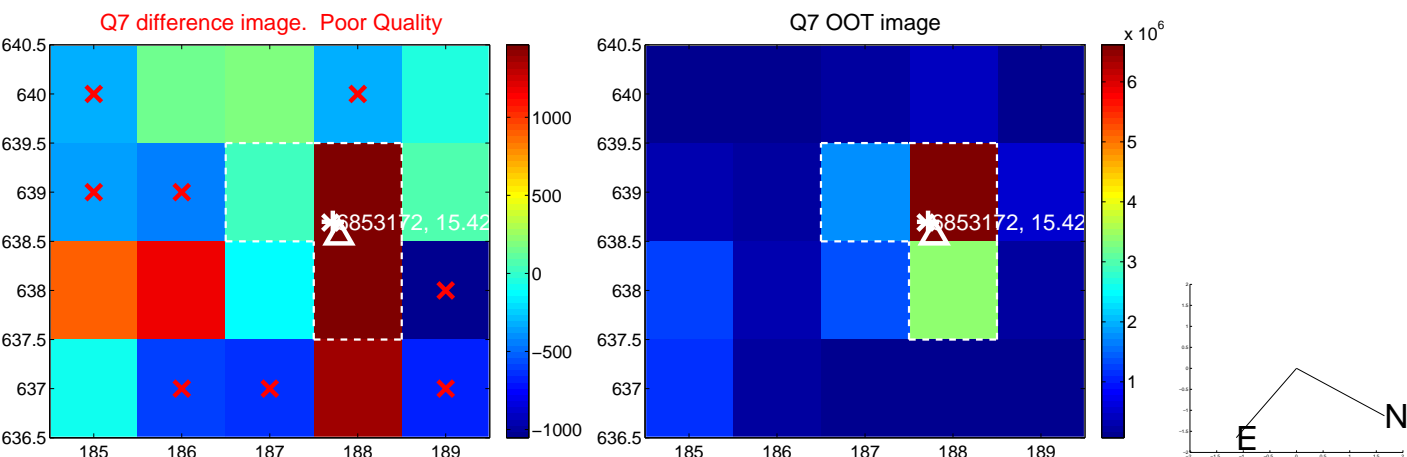
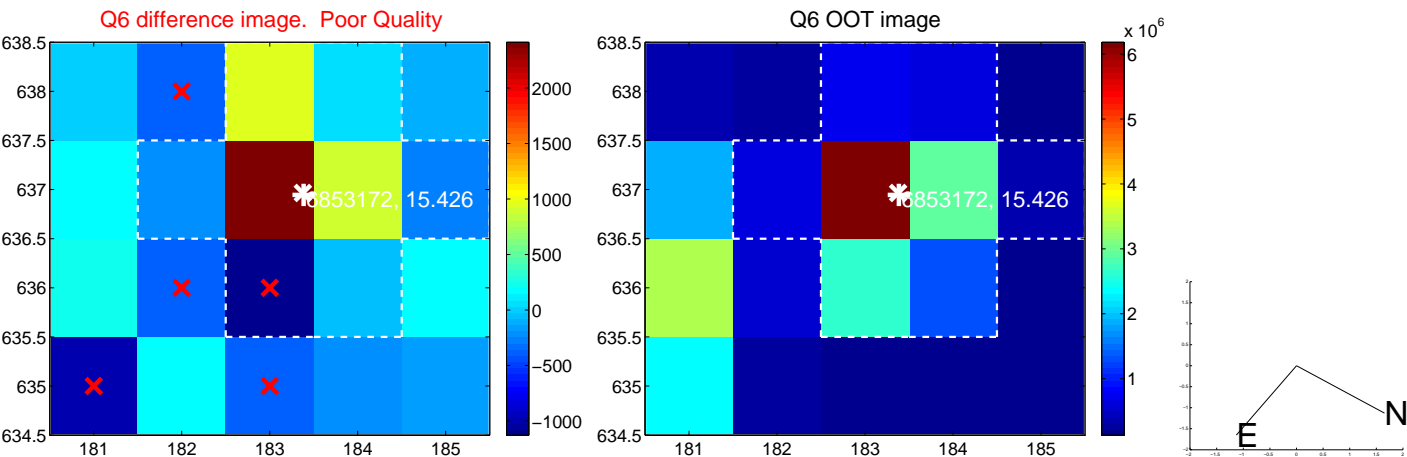
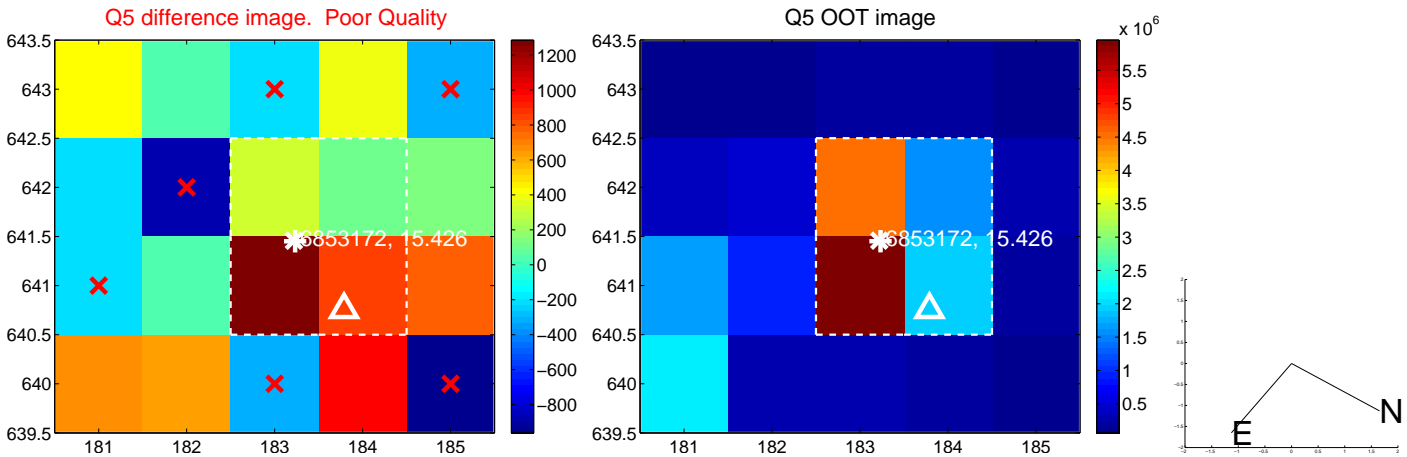


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

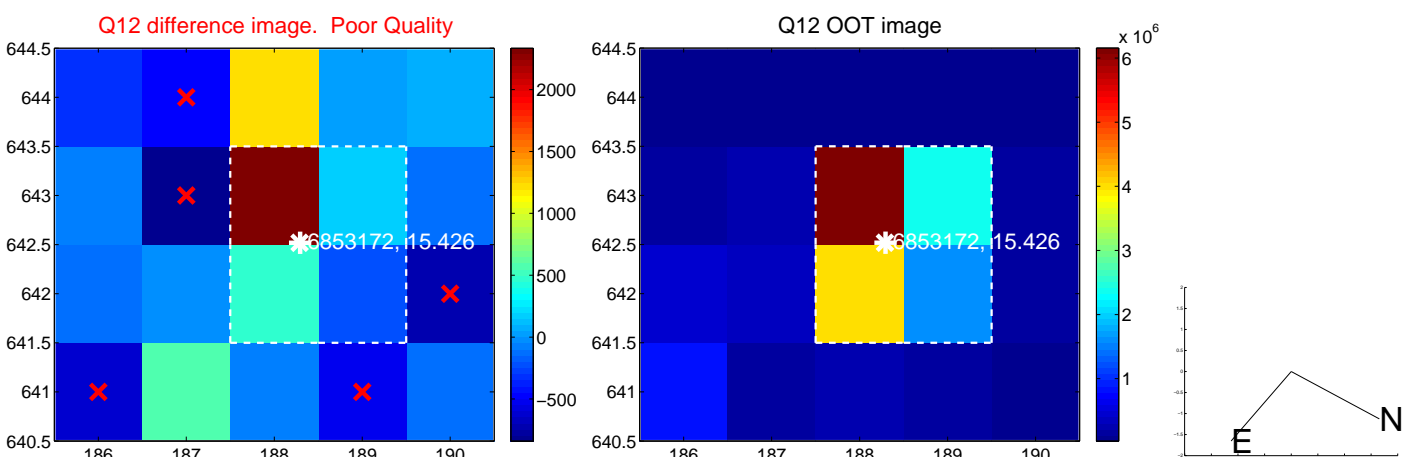
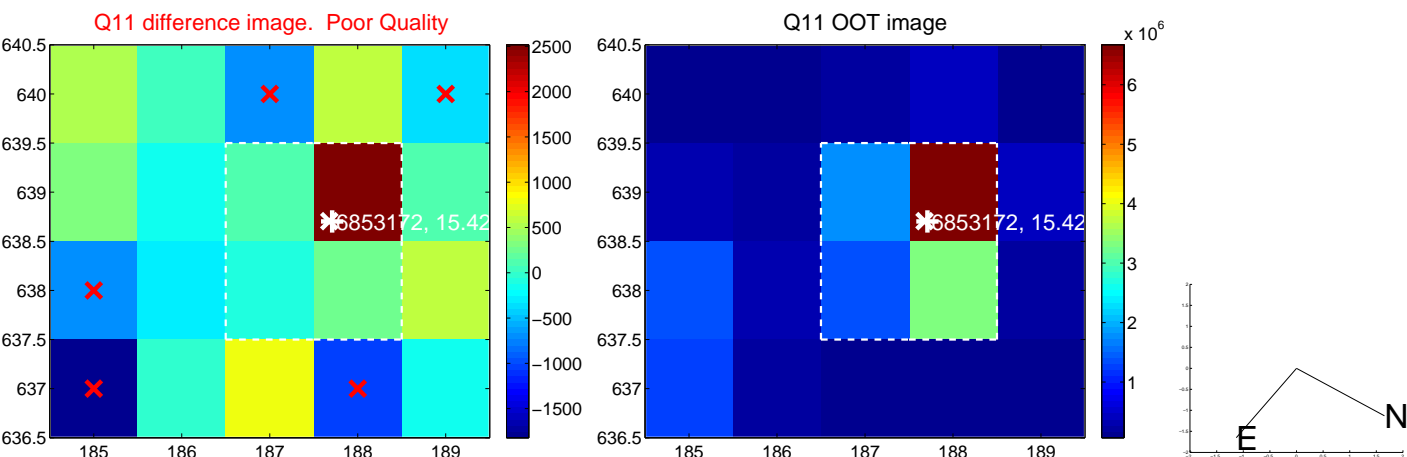
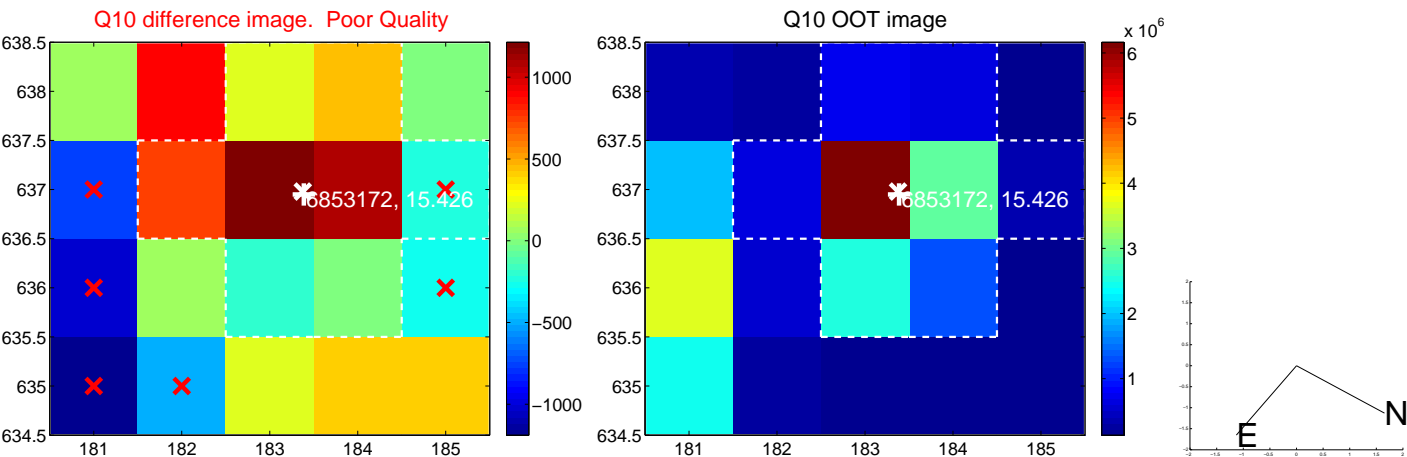
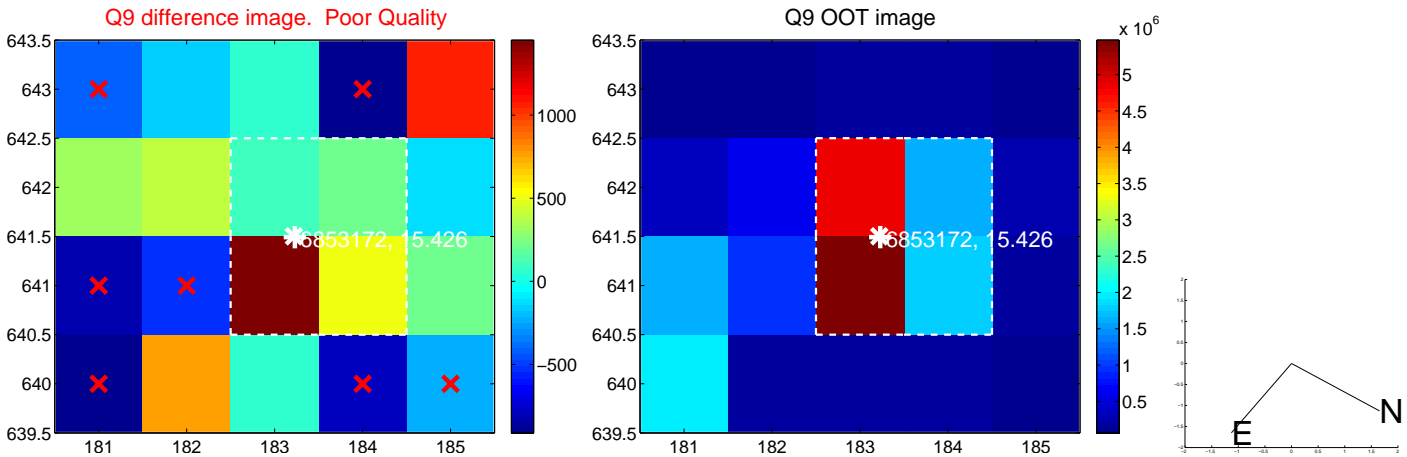
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



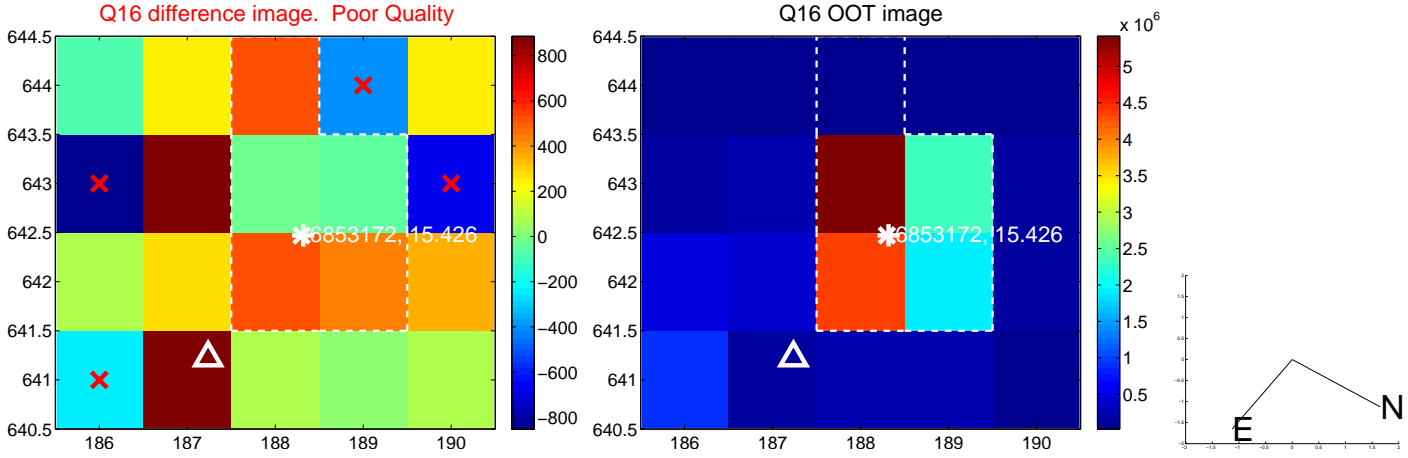
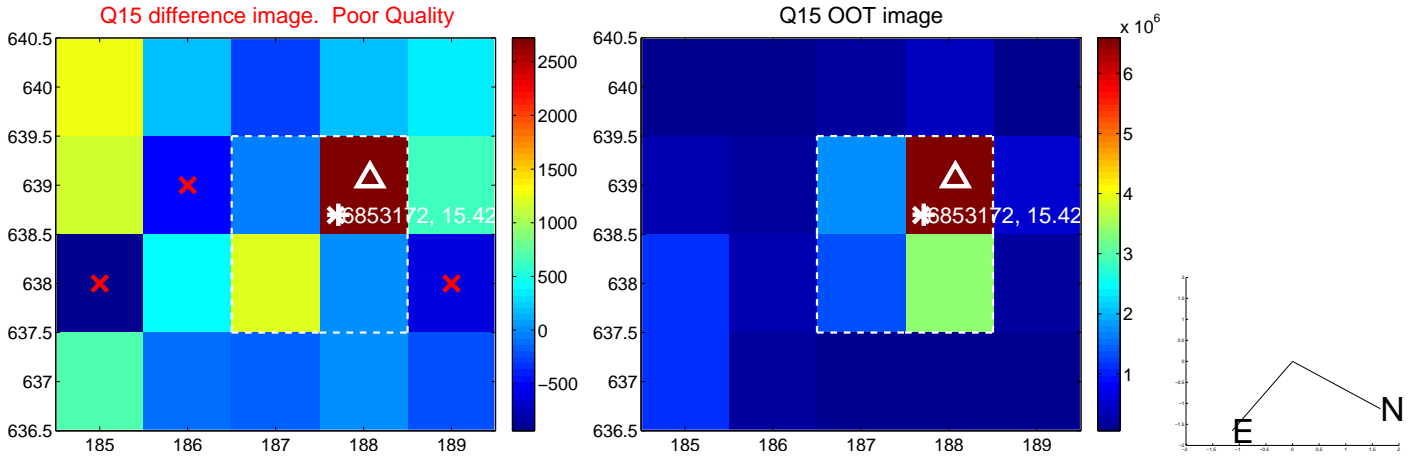
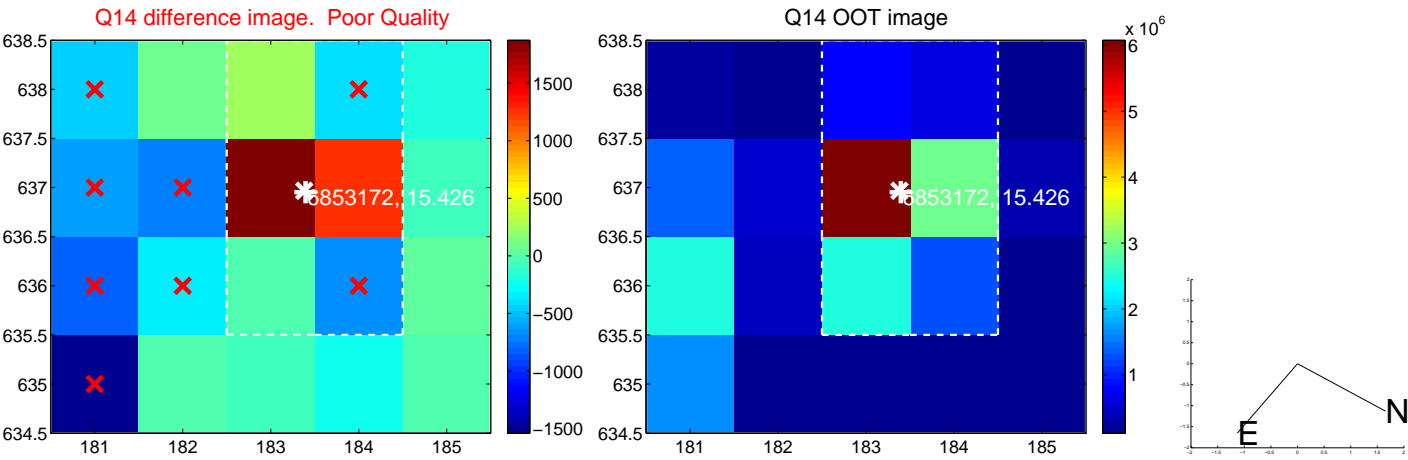
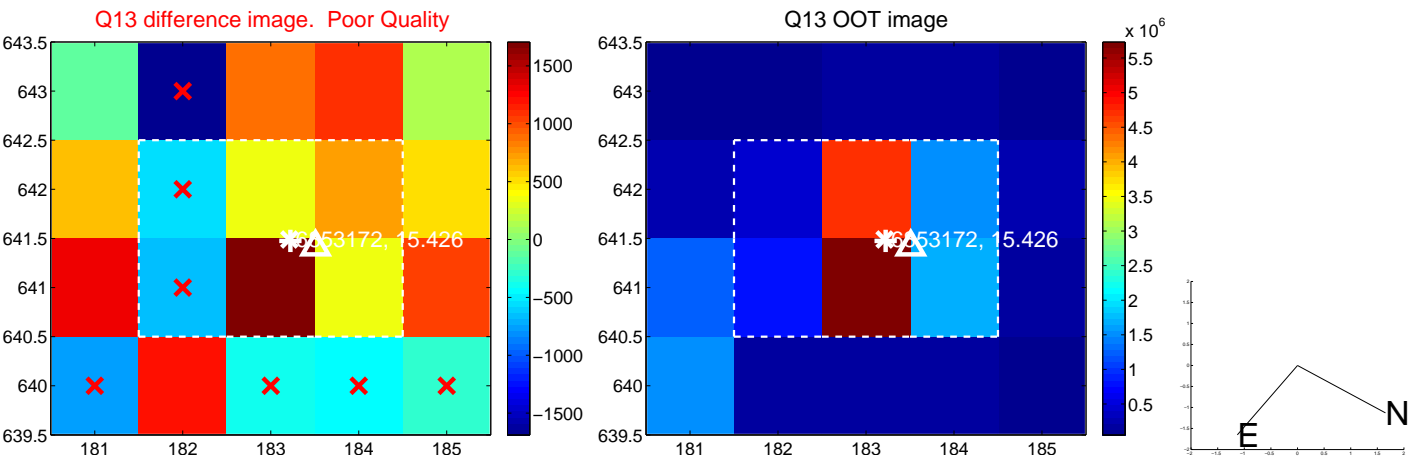
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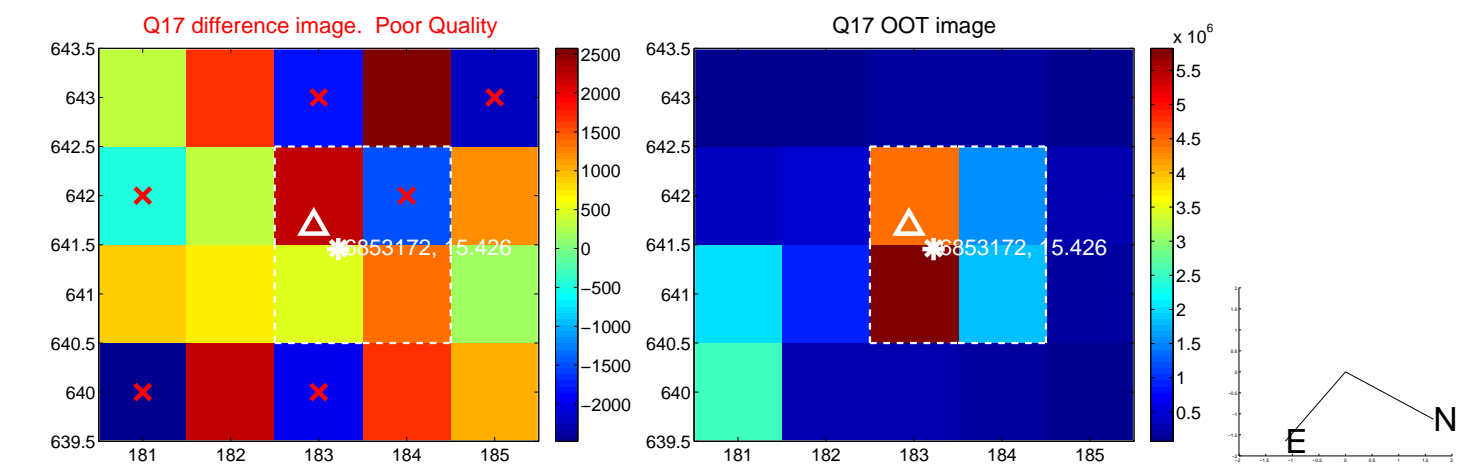
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



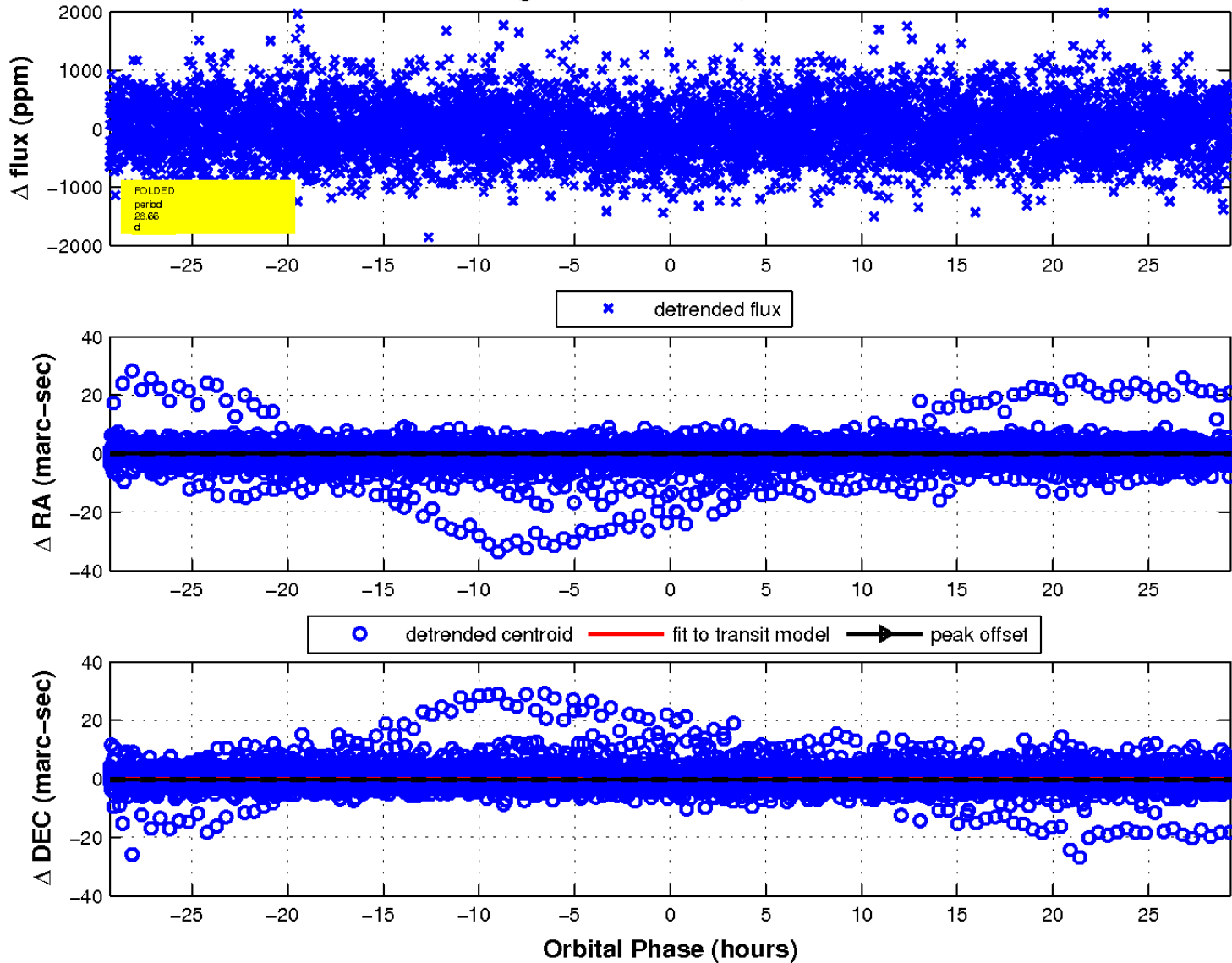
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fluxWeightedCentroids, Planet 1 of 1



Declination