

KIC 002856756

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})
002856756-01	OBS	No	0.641068	131.626349	13.3	2.829	15.0	12.7	5.04	10546	1.93	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002856756-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

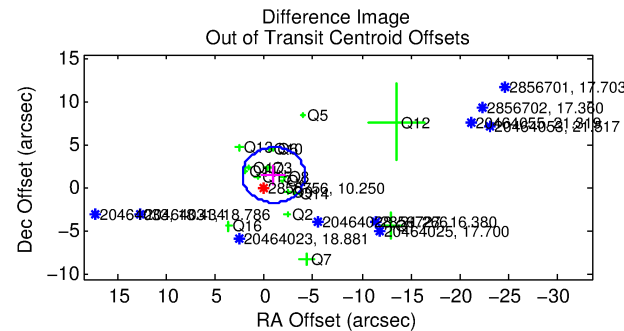
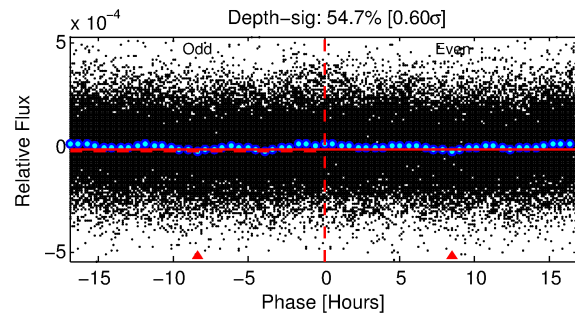
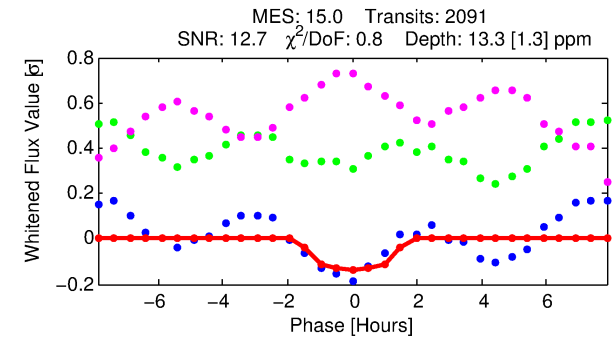
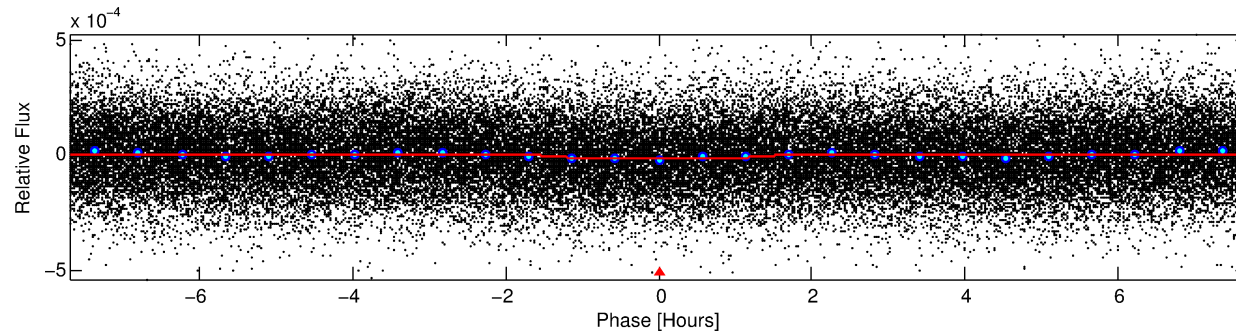
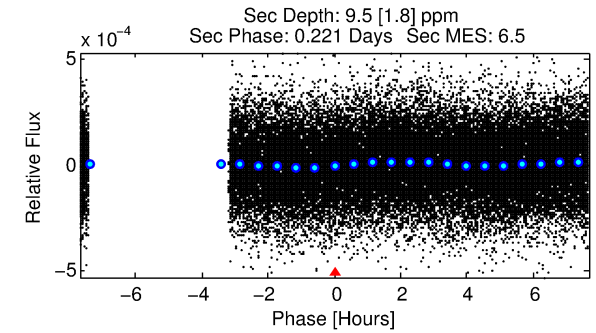
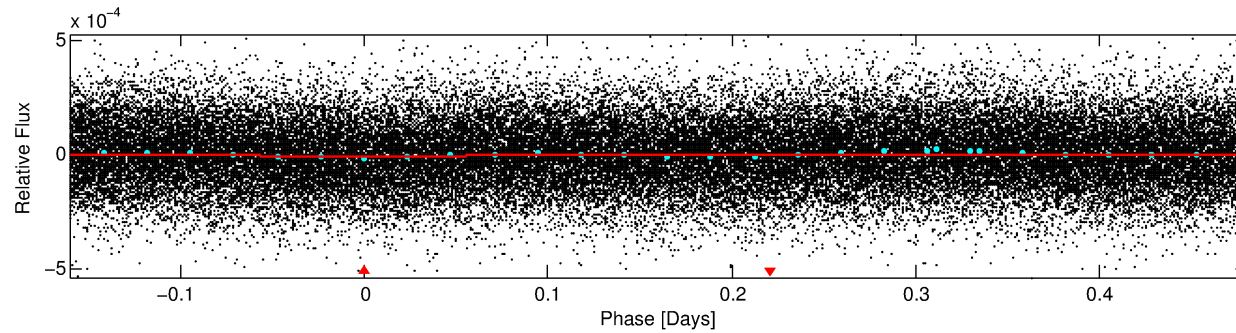
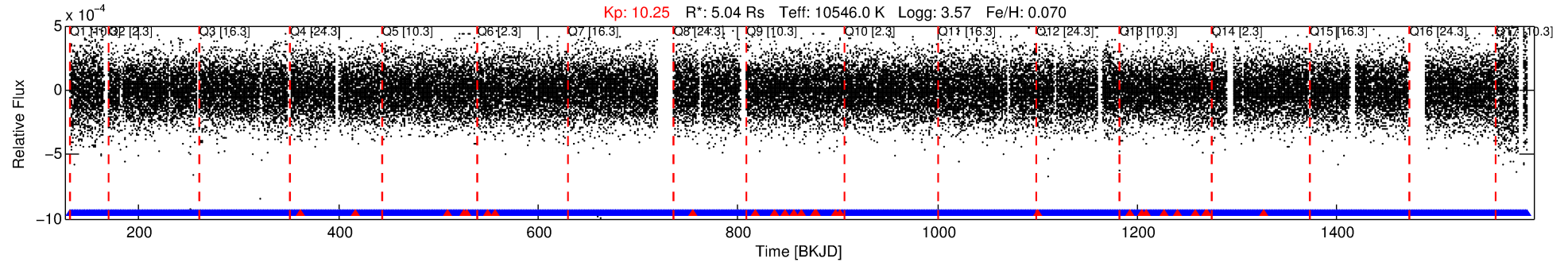
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002856756-01

No Significant Match Found

DV One-Page Summary

KIC: 2856756 Candidate: 1 of 1 Period: 0.641 d



DV Fit Results:

Period = 0.64107 [0.00001] d
Epoch = 131.6263 [0.0033] BKJD
Rp/R* = 0.0035 [0.0007]
a/R* = 1.66 [1.44]
b = 0.52 [1.93]
Seff = N/A
Teq = N/A
Rp = 1.93 [1.04] Re
a = N/A
Ag = N/A
Teffp = N/A

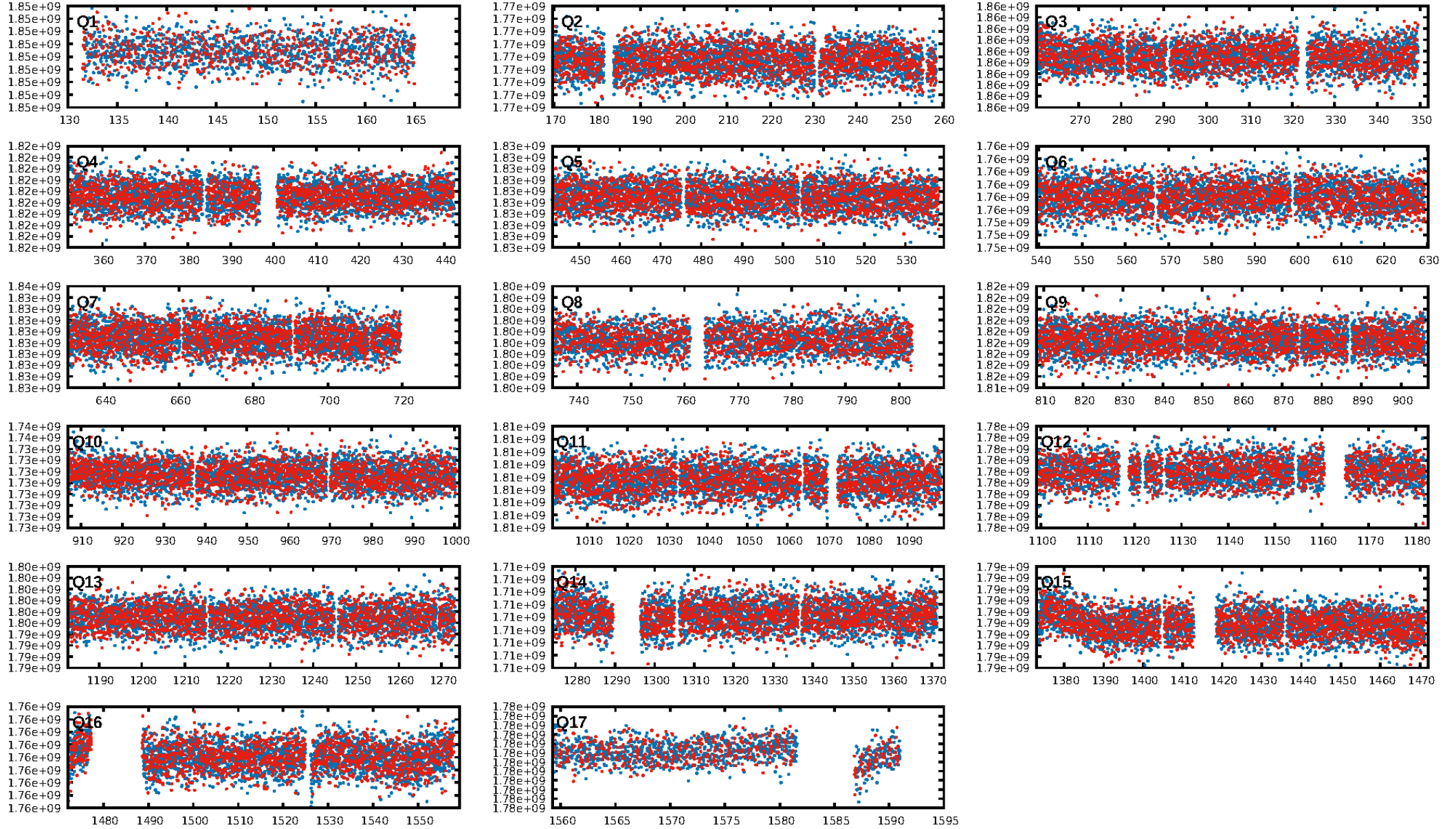
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.86e-58
RollingBand-fgt: 0.99 [1968/1996]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.705 arcsec [2.59σ]
OotOffset-rm: 1.808 arcsec [1.69σ]
KicOffset-rm: 1.265 arcsec [1.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 1.00 [17/17]

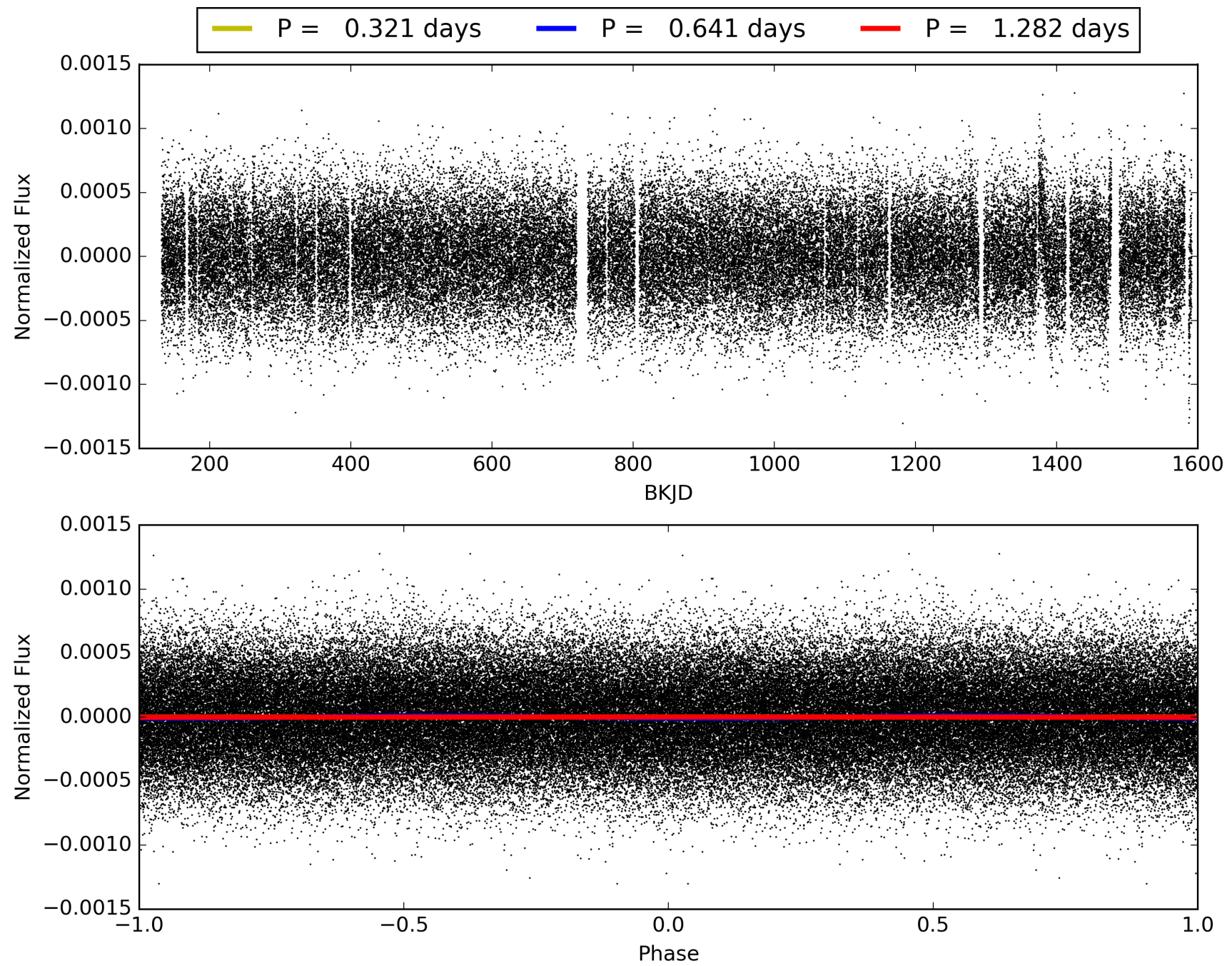
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:21:32 Z

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

TCE 002856756-01, PDC Light Curves

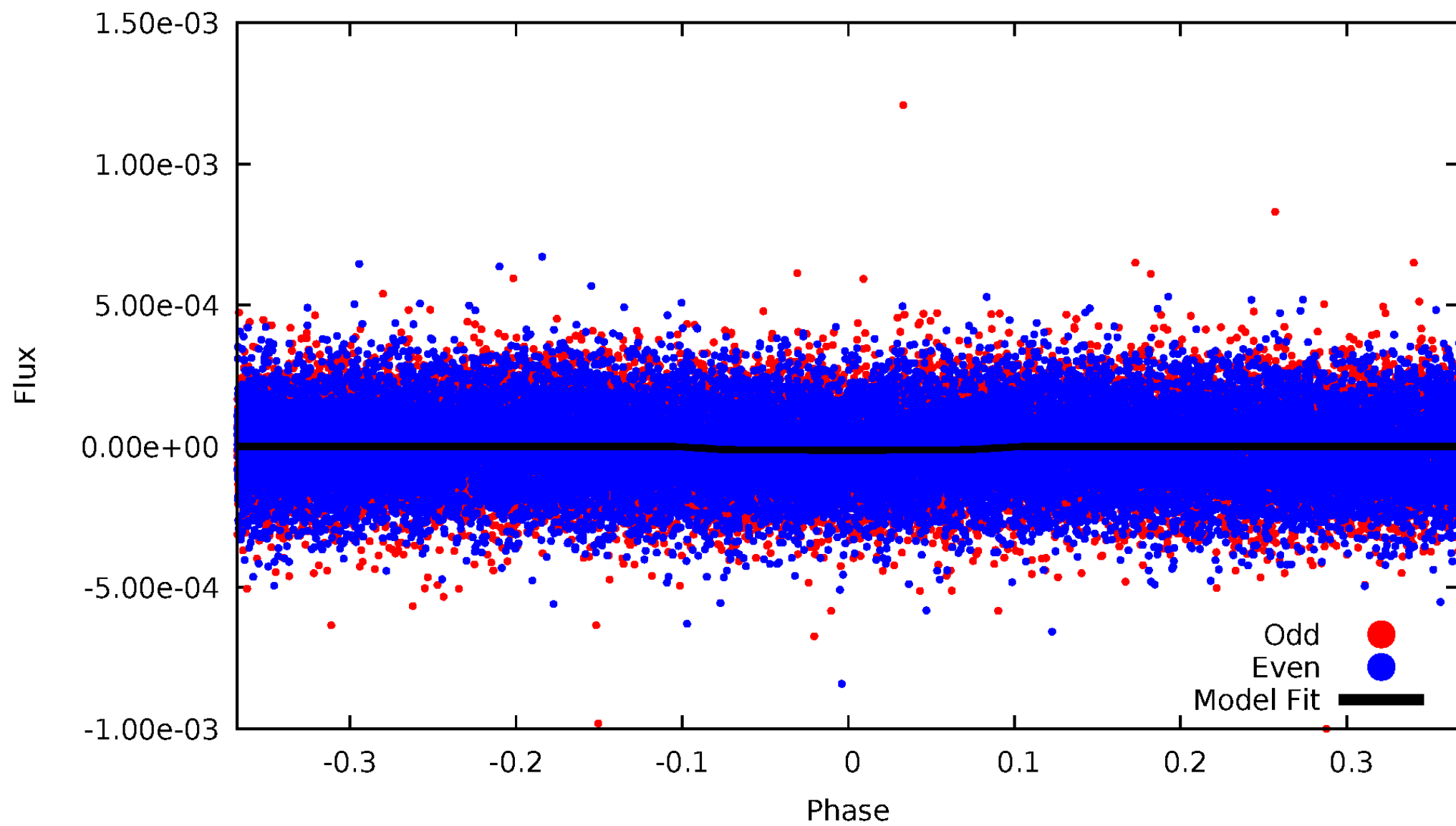


TCE 002856756-01



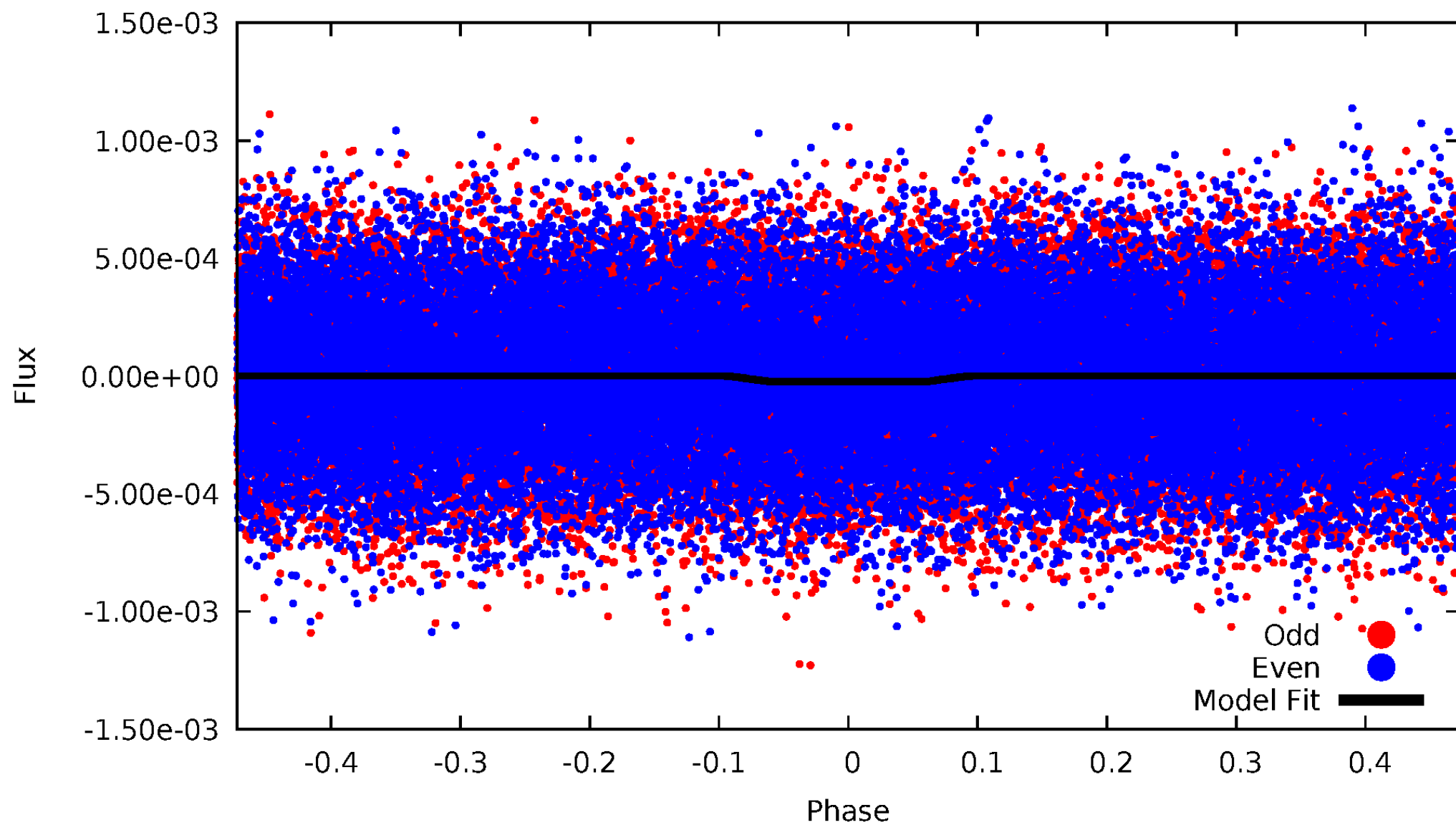
DV Odd/Even

TCE 002856756-01



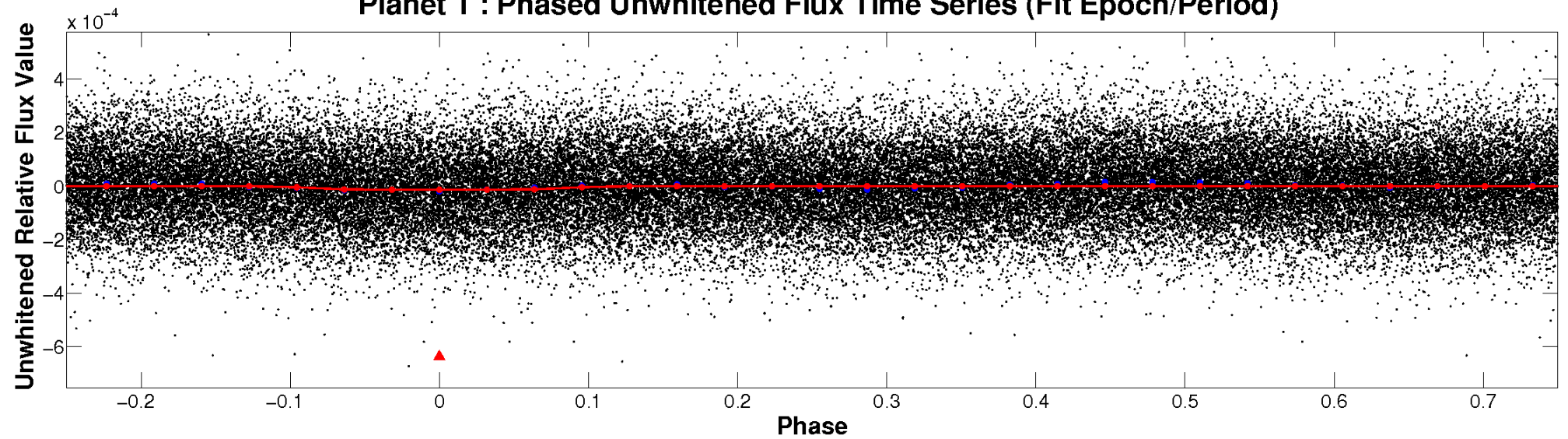
ALT Odd/Even

TCE 002856756-01

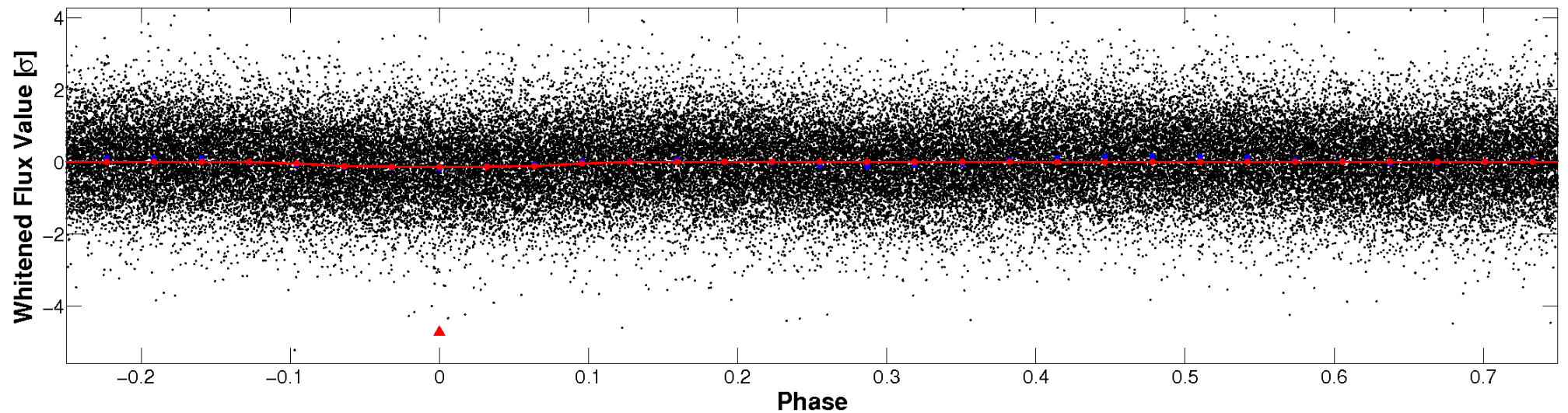


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

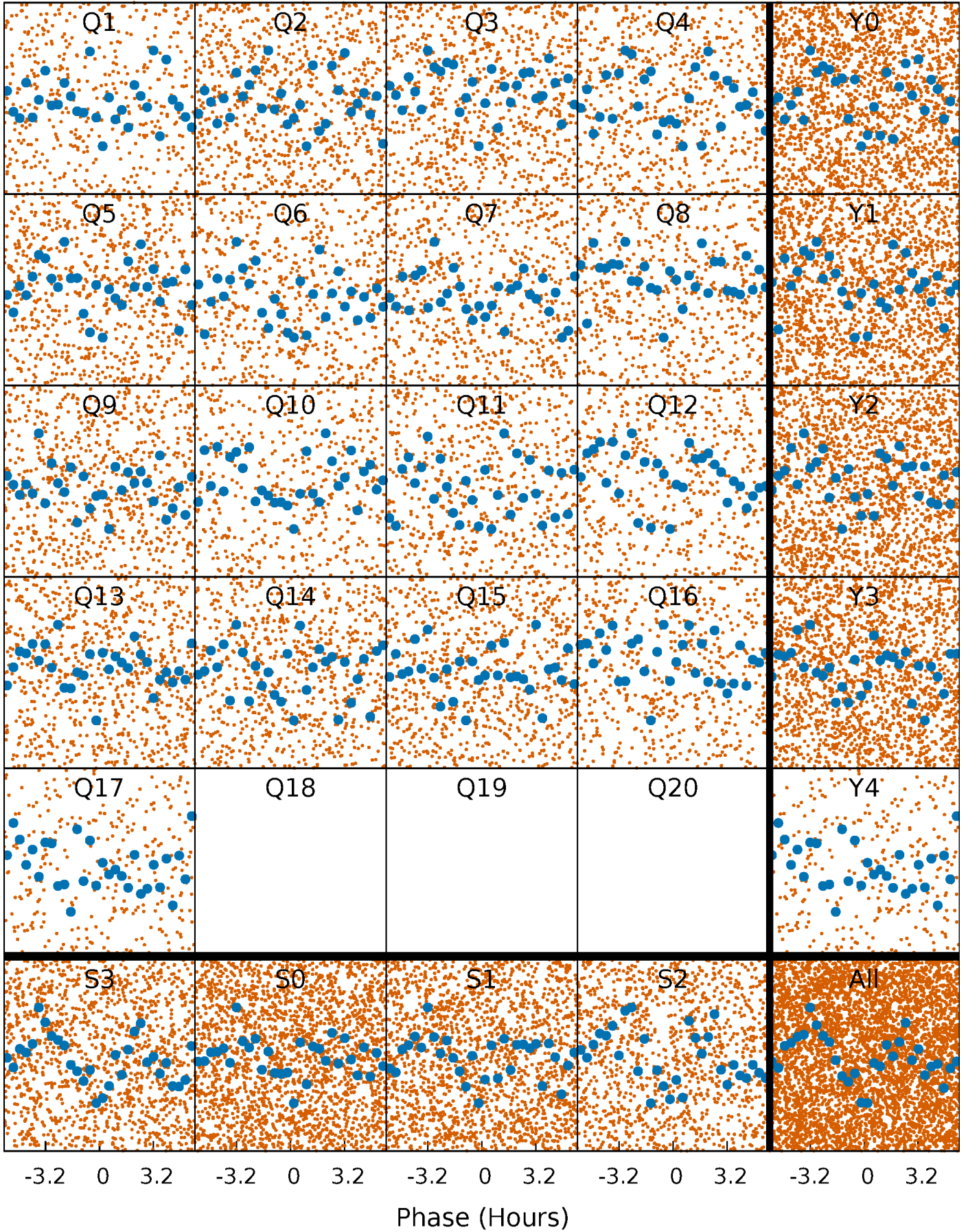


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



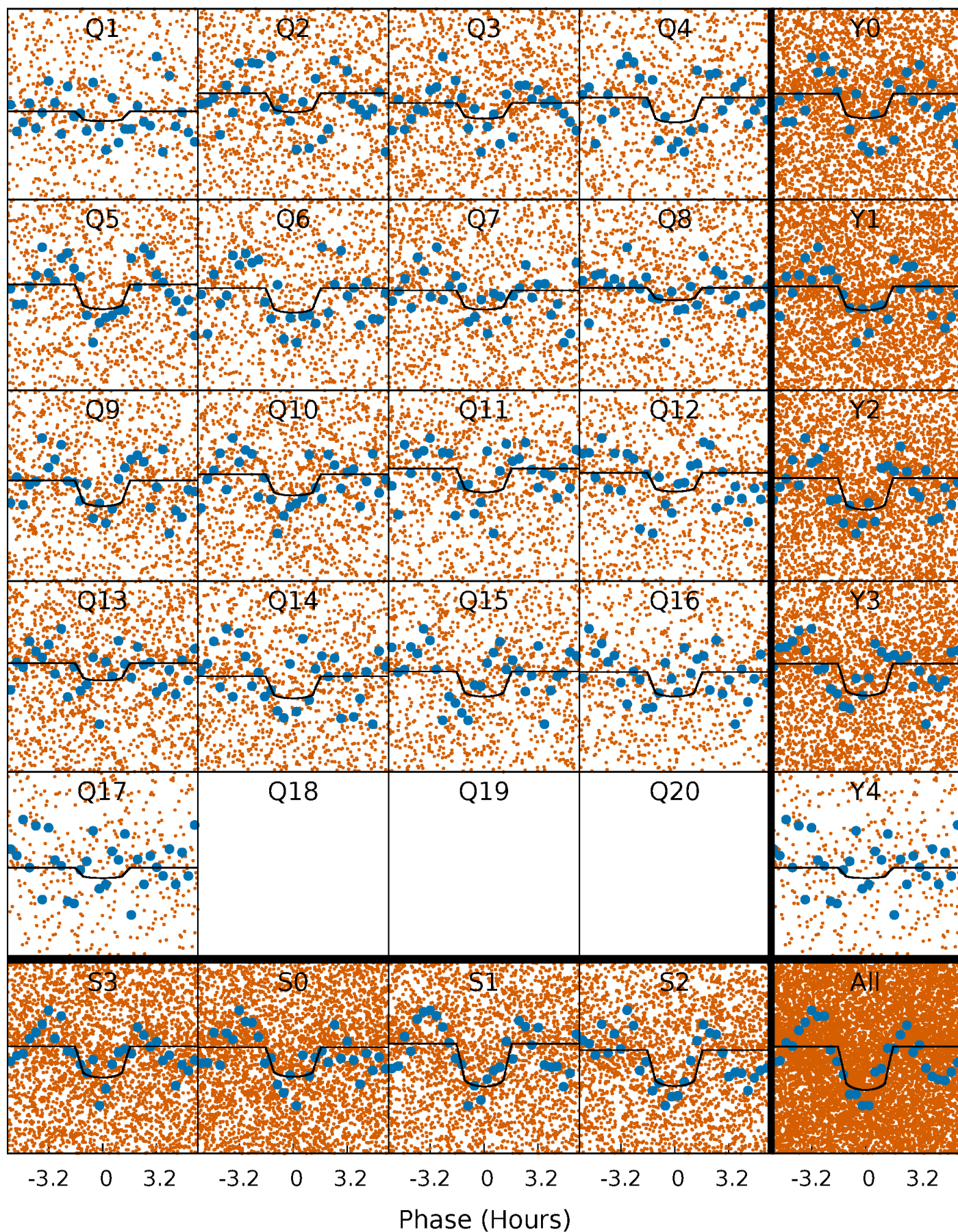
PDC Quarter-Phased Transit Curves

TCE 002856756-01 P= 0.641068 Days $T_0=131.626349$ (BKJD)



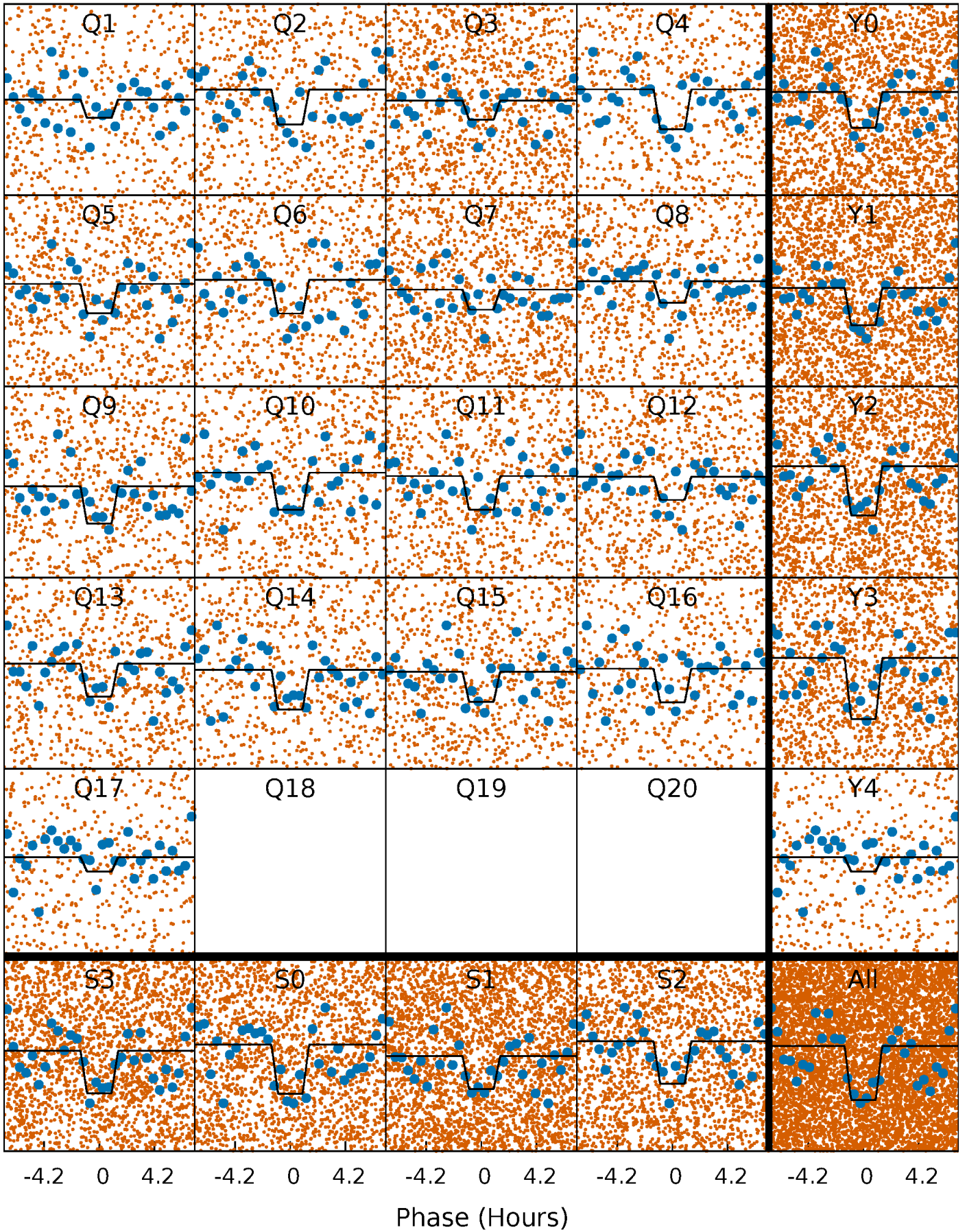
DV Quarter-Phased Transit Curves

TCE 002856756-01 P= 0.641068 Days $T_0=131.626349$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

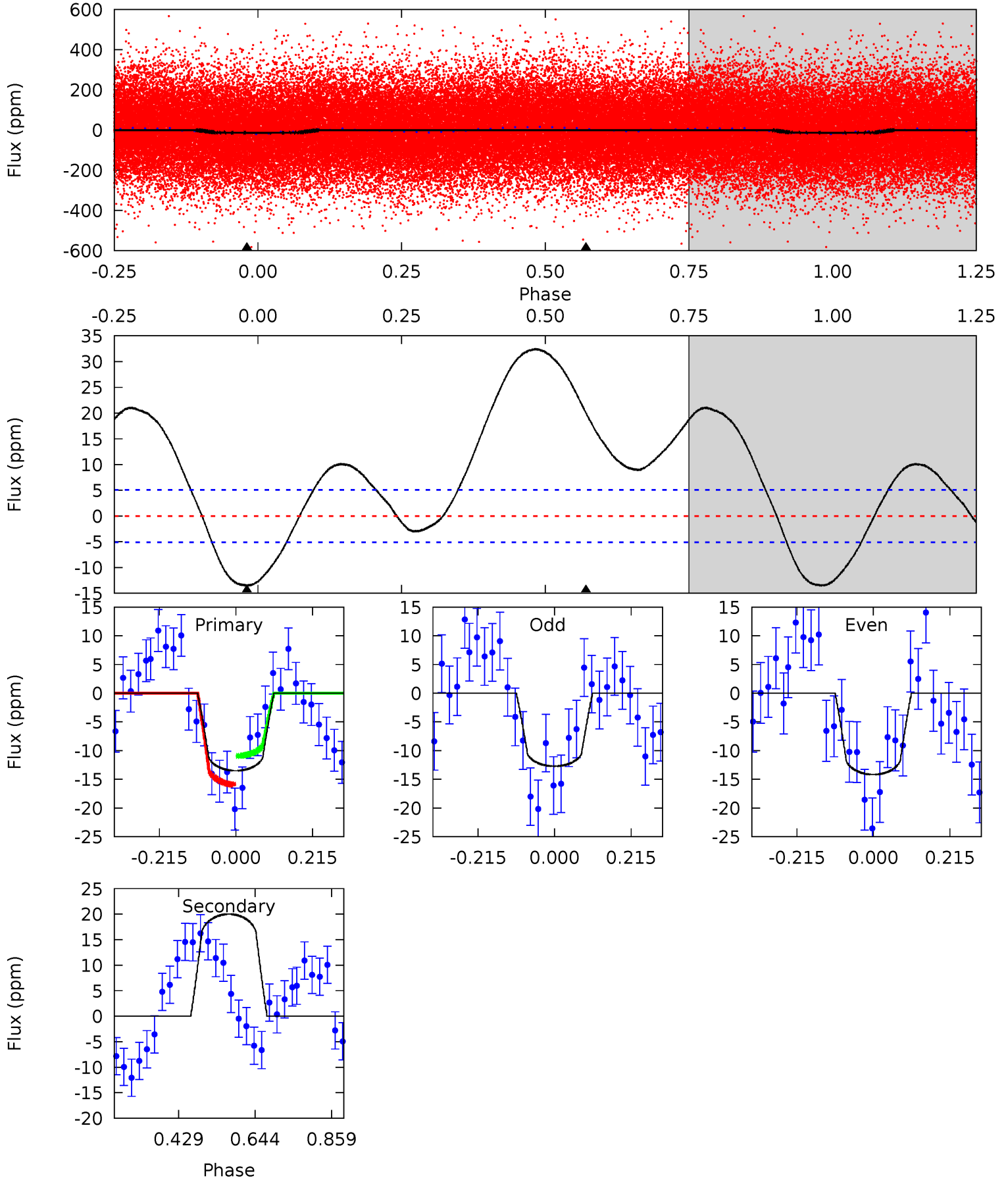
TCE 002856756-01 P= 0.641027 Days $T_0=131.654651$ (BKJD)



DV Model-Shift Uniqueness Test

002856756-01, P = 0.641068 Days, E = 130.985281 Days

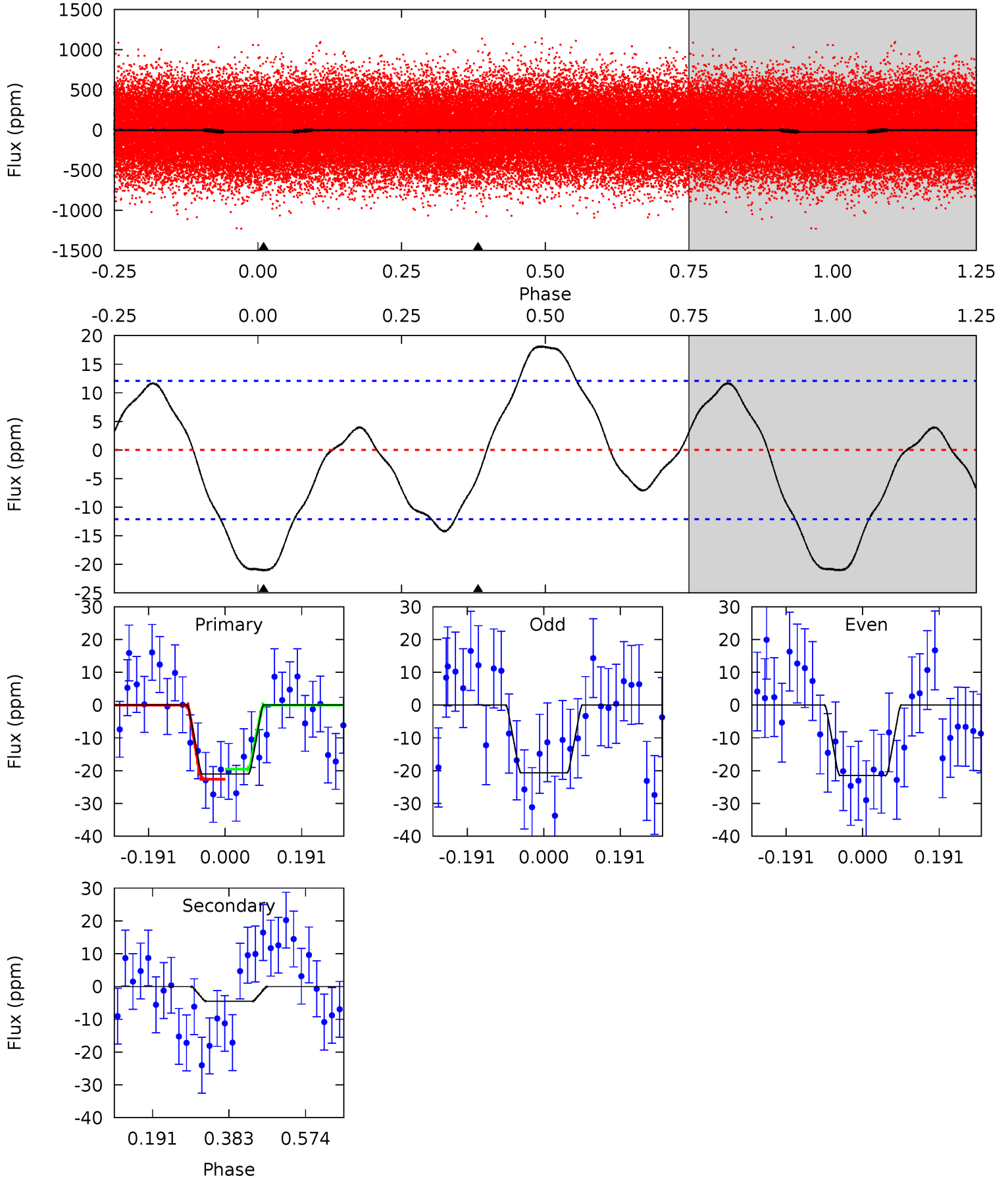
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	-17.3	0	0	4.40	1.24	2.60	11.7	11.7	-17.3	-17.3	0.63	1.02	0.71	2.16



Alt Model-Shift Uniqueness Test

002856756-01, P = 0.641027 Days, E = 131.013624 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.71	1.66	0	0	4.43	1.31	2.18	7.71	7.71	1.66	1.66	0.15	1.15	0.46	0.58



Stellar Parameters For KIC 002856756

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	10546^{+294}_{-441}	$3.573^{+0.466}_{-0.049}$	$0.070^{+0.150}_{-0.550}$	$5.040^{+0.134}_{-2.547}$	$3.467^{+0.069}_{-0.952}$	$0.038^{+0.175}_{-0.007}$
	+3%/-4%	+13%/-1%	+214%/-786%	+3%/-51%	+2%/-27%	+460%/-18%
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 002856756-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	20 ± 1	$1.78^{+0.41}_{-0.44}$	9584^{+482}_{-1008}	-13749^{+1749}_{-2632}	$-1.647^{+0.564}_{-1.173}$
Alt.	-5 ± 3	$2.46^{+0.47}_{-0.63}$	9526^{+525}_{-985}	-5518^{+10574}_{-1190}	$0.191^{+0.202}_{-0.123}$

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

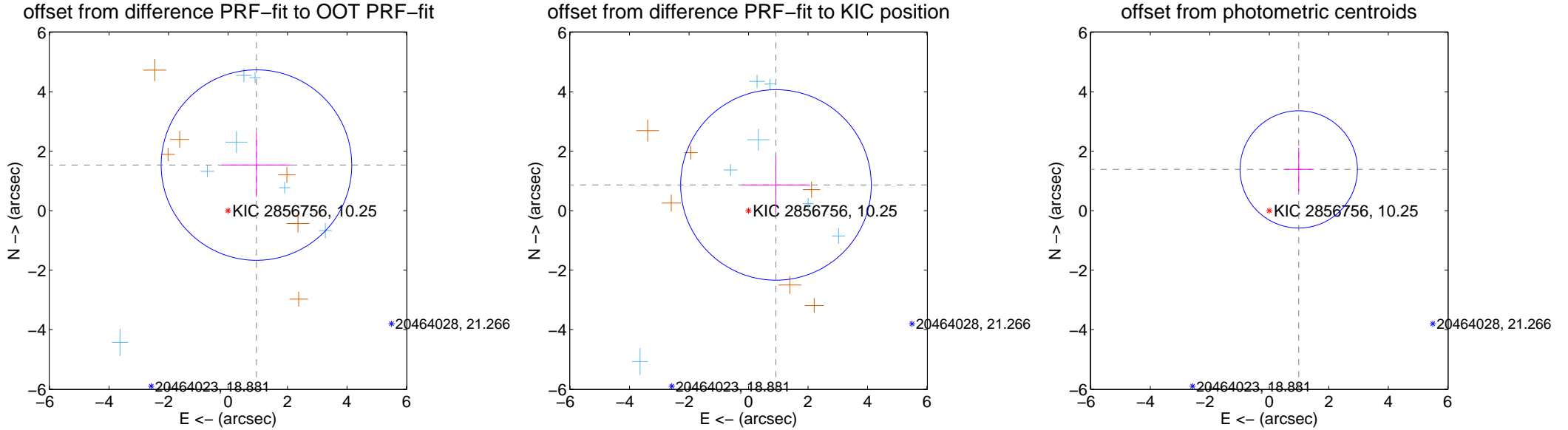
DV Centroid Data

Supplemental centroid analysis for 002856756-01. **Kepler magnitude: 10.25.** Transit SNR 12.71

There are 8 quarters with good PRF difference image offsets

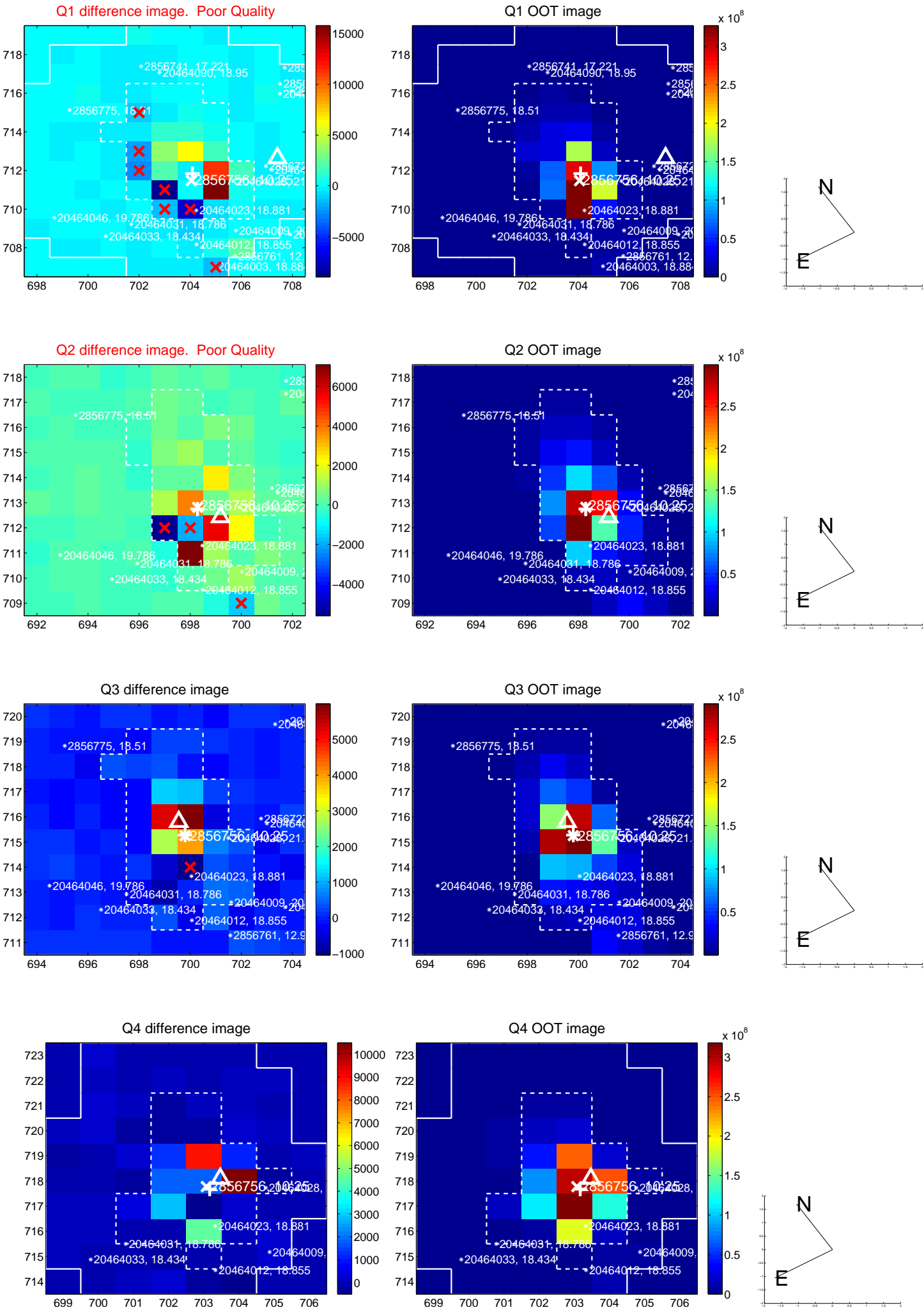
The OOT PRF centroid is offset from the target star catalog position by about 2.35 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.808 ± 1.068	1.69	-0.956 ± 1.167	1.535 ± 1.070
PRF-fit source offset from KIC position	1.265 ± 1.068	1.18	-0.922 ± 1.145	0.867 ± 0.964
photometric centroid source offset	1.71 ± 0.66	2.59	-0.99 ± 0.46	1.39 ± 0.74

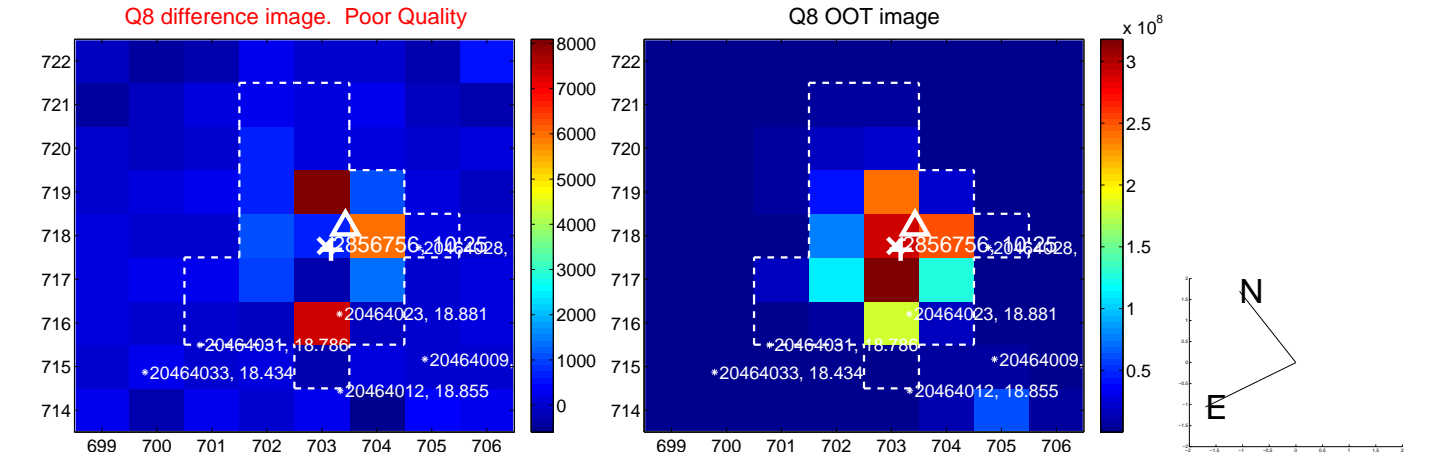
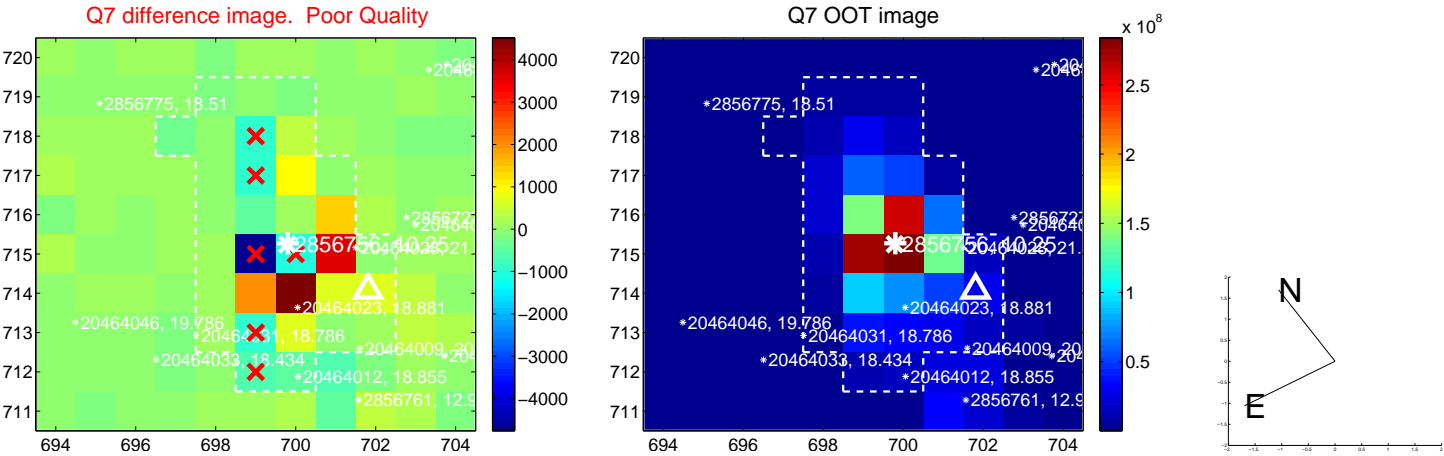
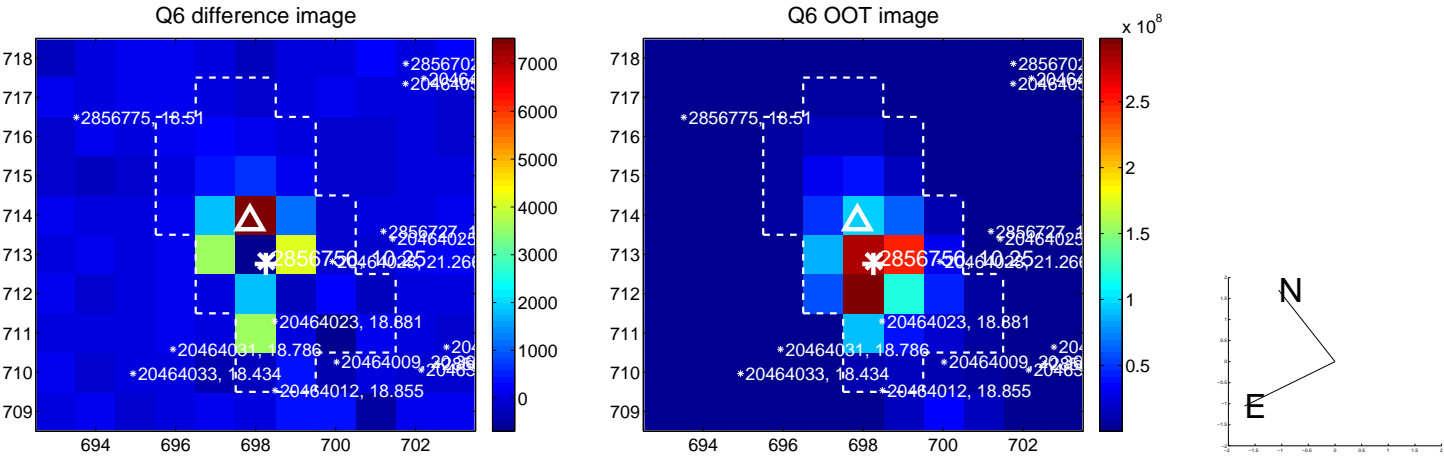
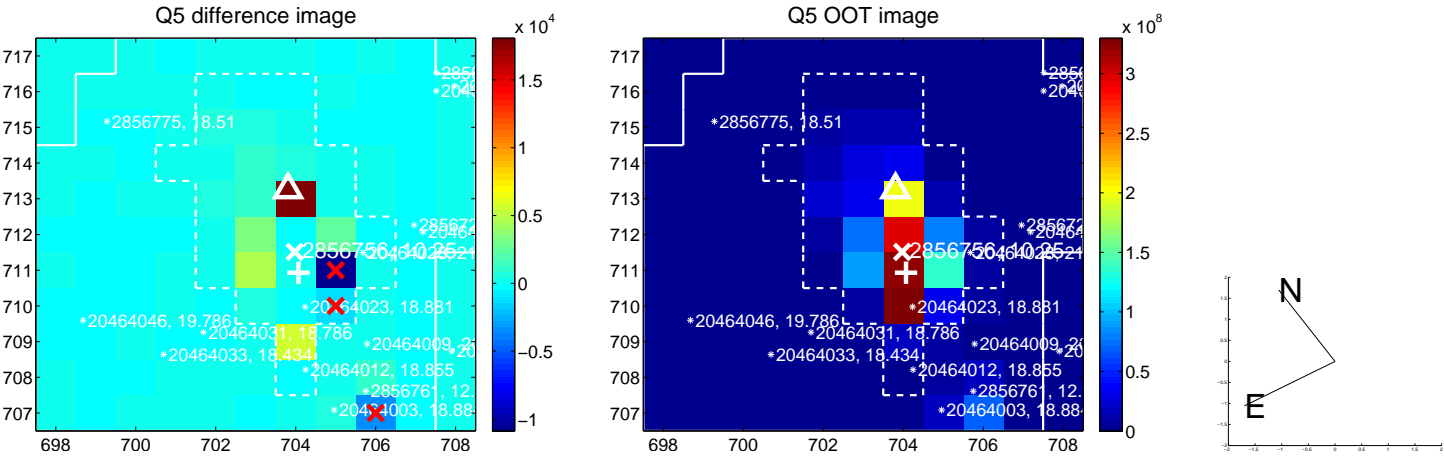


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

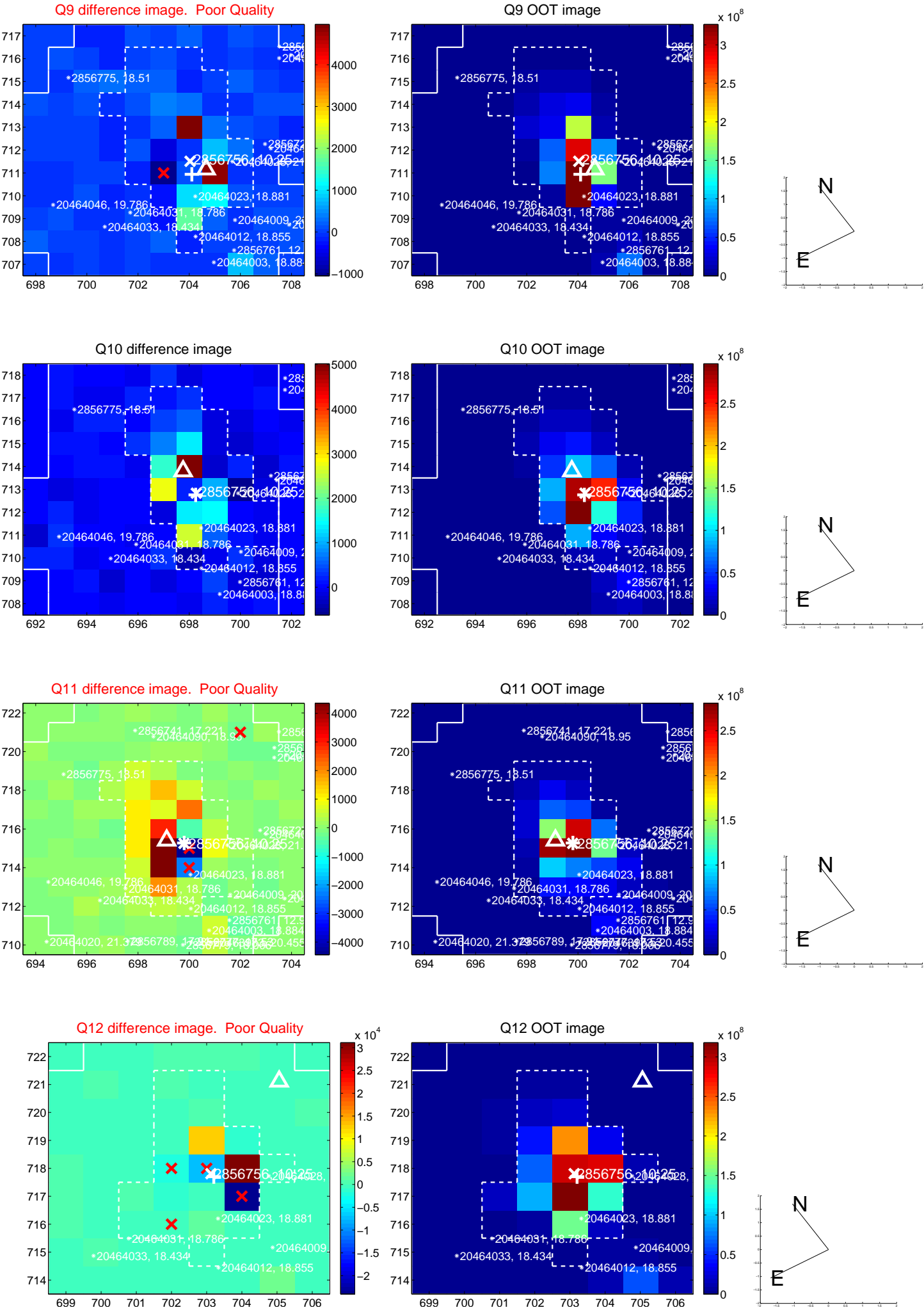
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



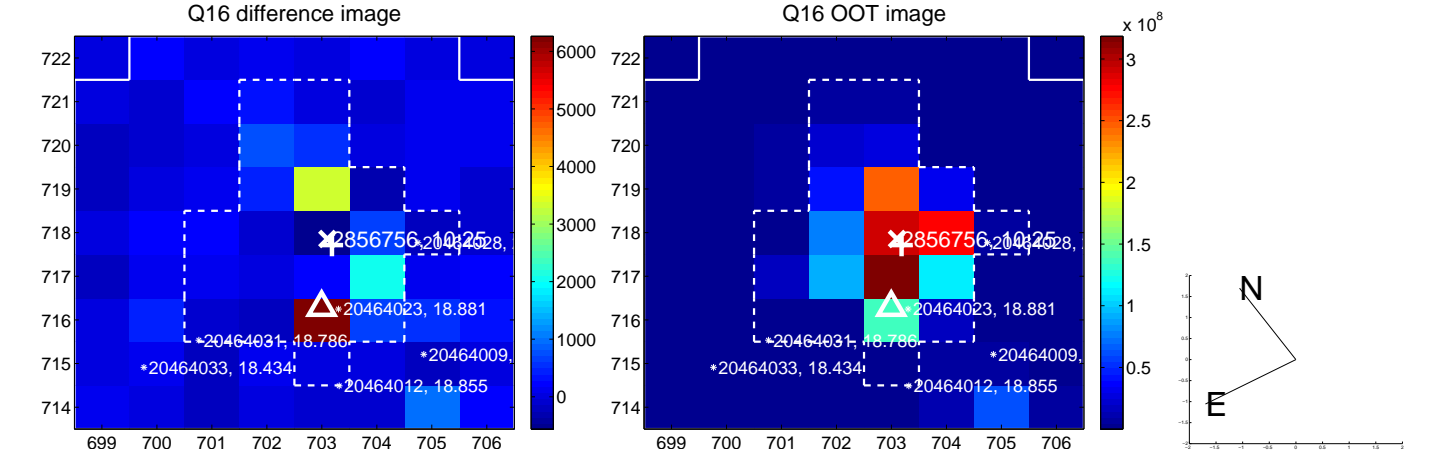
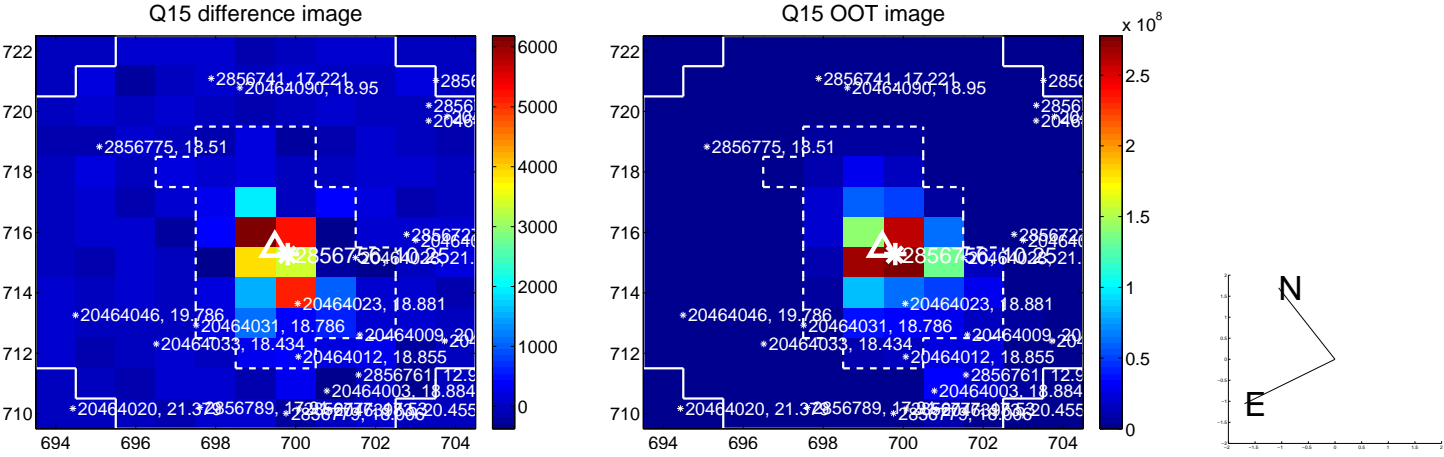
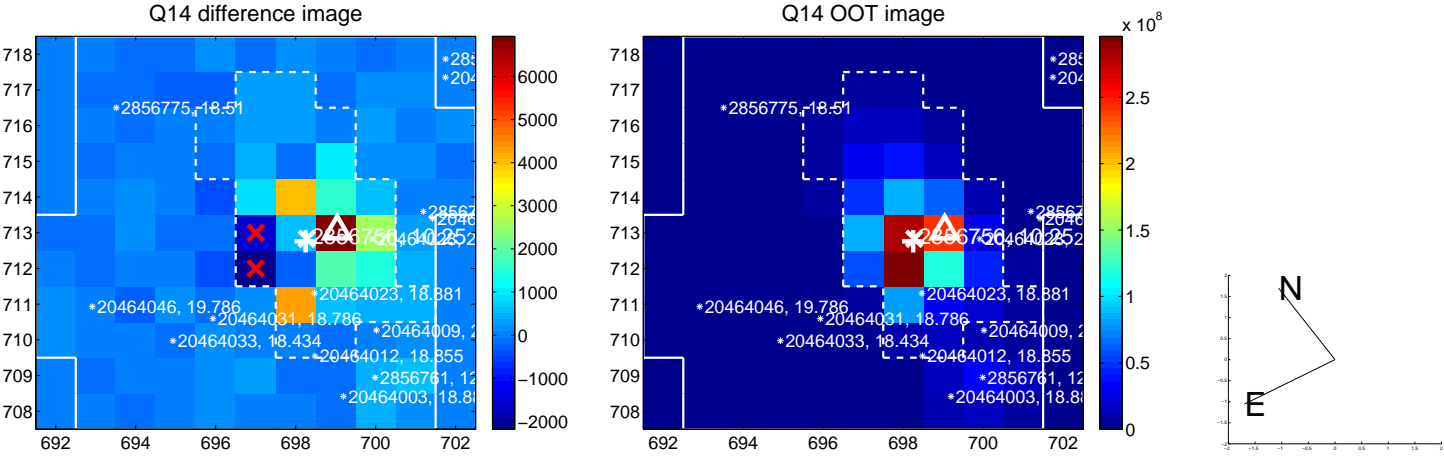
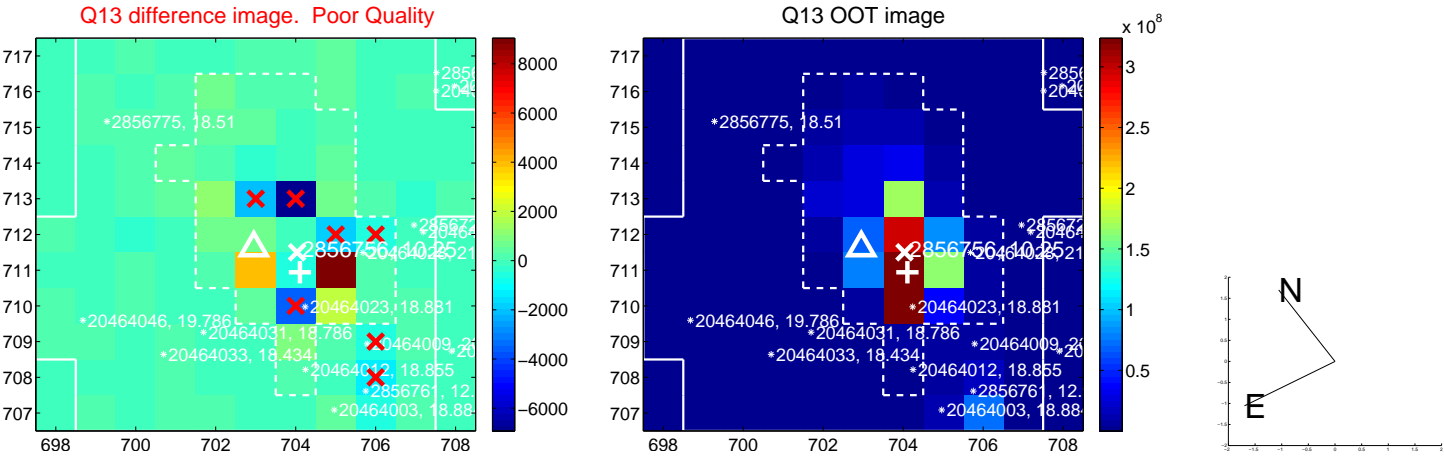
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



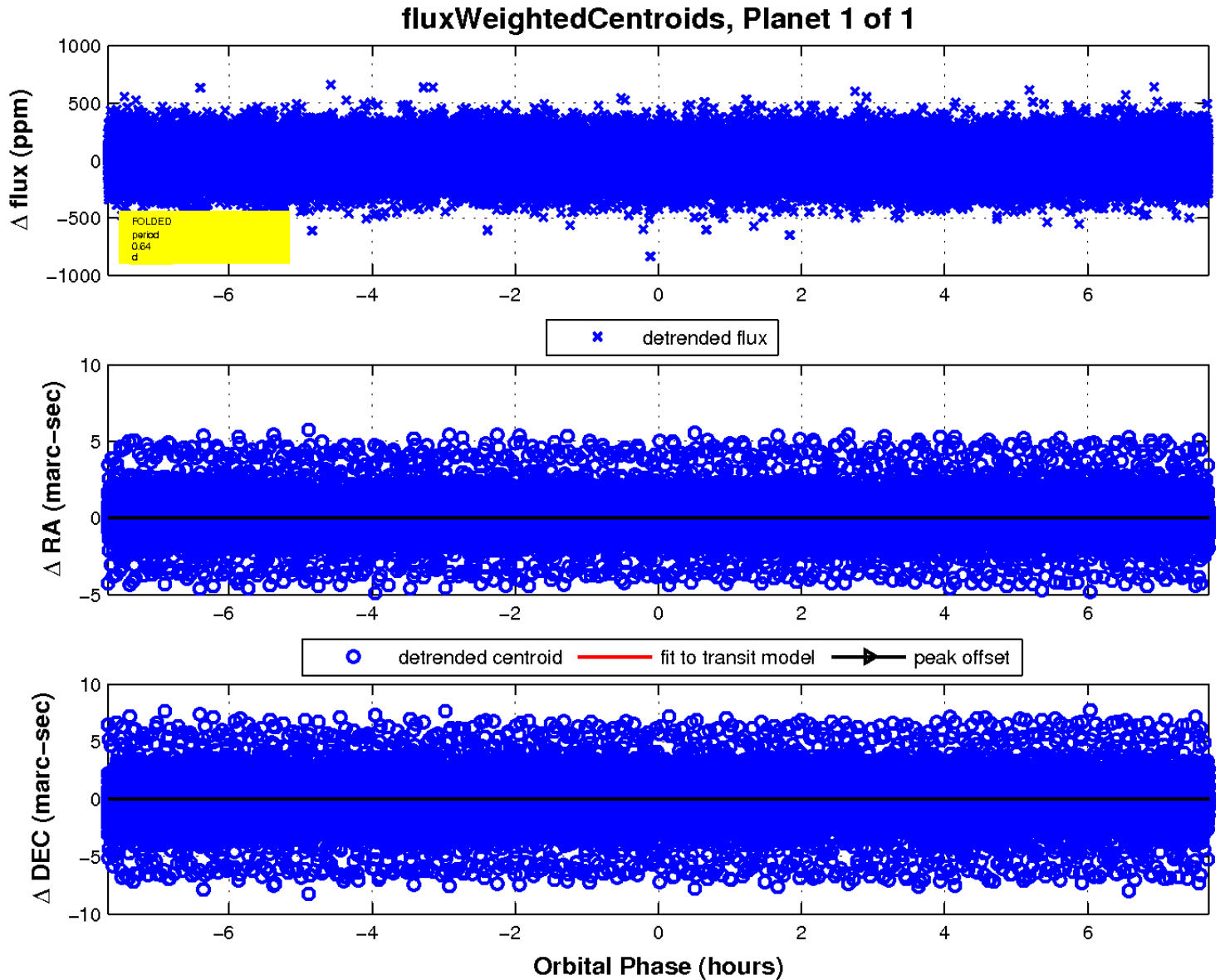
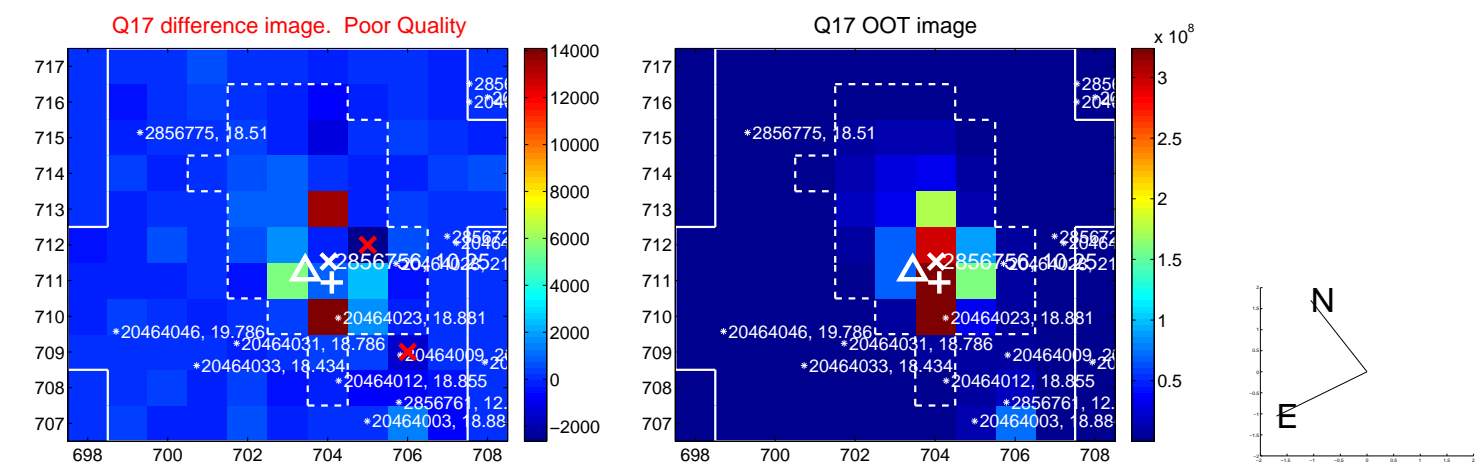
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

