

KIC 007826620

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})
007826620-01	OBS	4268.01	0.849910	131.671525	121.3	1.259	11.7	14.3	0.51	4296	0.66	398.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007826620-01	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.

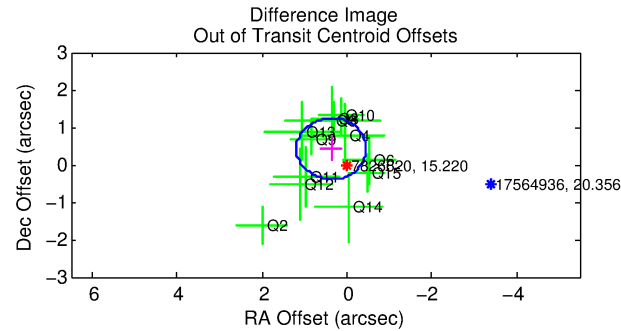
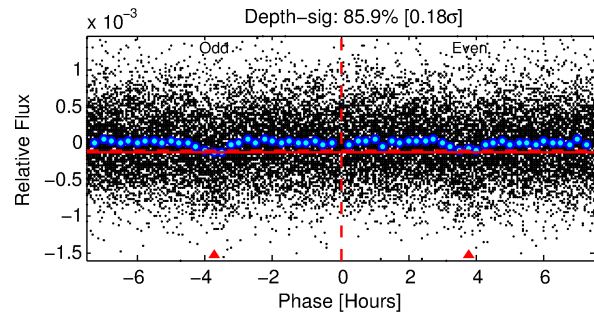
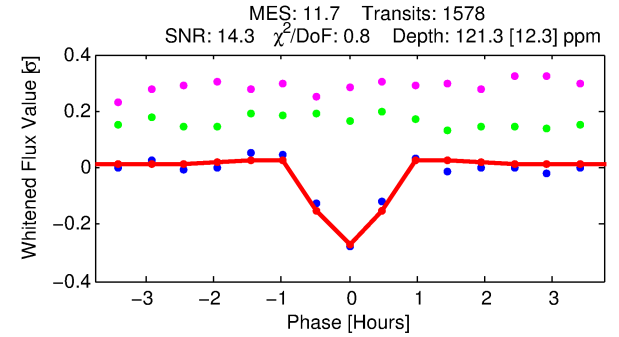
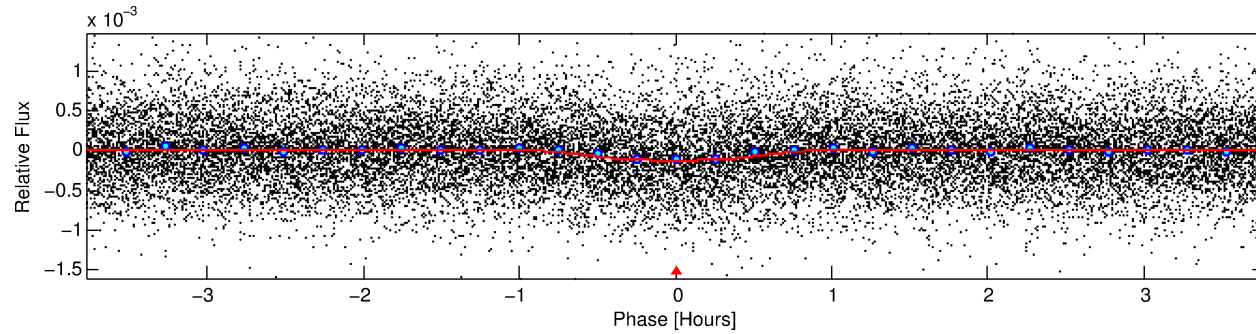
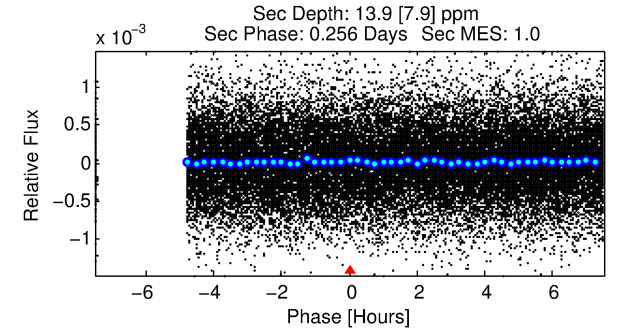
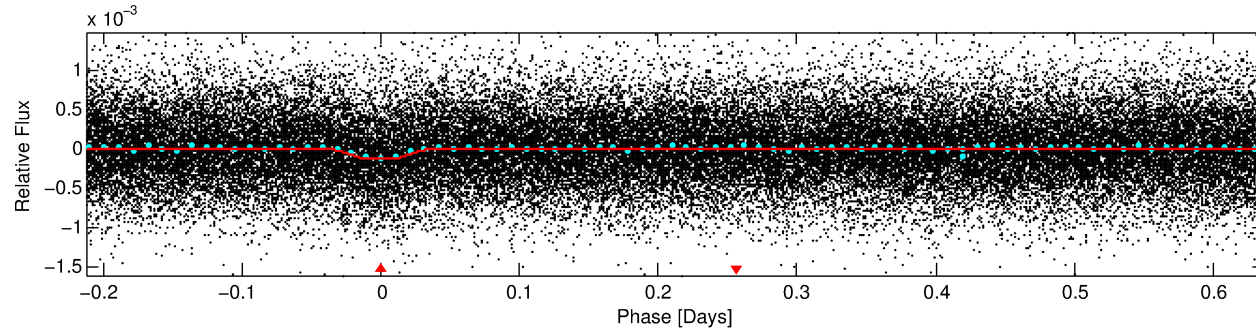
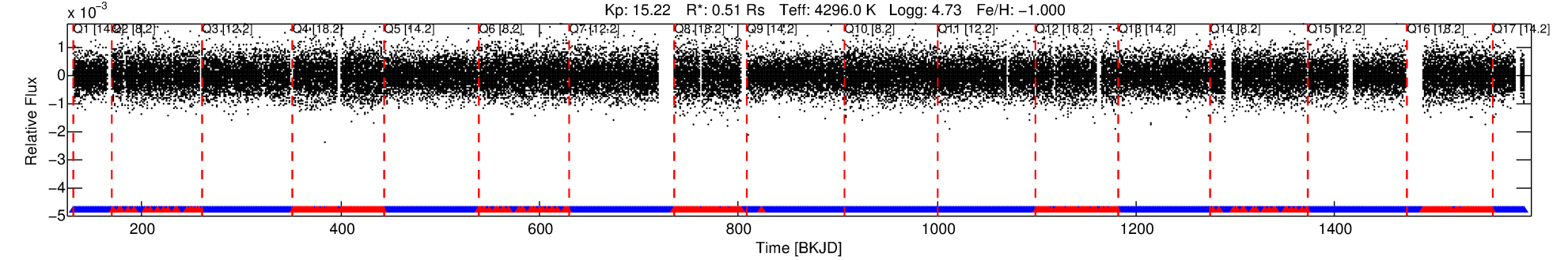
Ephemeris Match Information For 007826620-01

No Significant Match Found

DV One-Page Summary

KIC: 7826620 Candidate: 1 of 1 Period: 0.850 d

KOI: K04268.01 Corr: 0.931



DV Fit Results:

Period = 0.84991 [0.00001] d
Epoch = 131.6715 [0.0013] BKJD
Rp/R* = 0.0119 [0.0076]
a/R* = 2.72 [7.18]
b = 0.88 [0.78]
Seff = 398.89 [71.73]
Teff = 1140 [51] K
Rp = 0.65 [0.43] Re
a = 0.0140 [0.0012] AU
Ag = 3.48 [4.91] [0.51σ]
Teffp = 2406 [849] K [1.49σ]

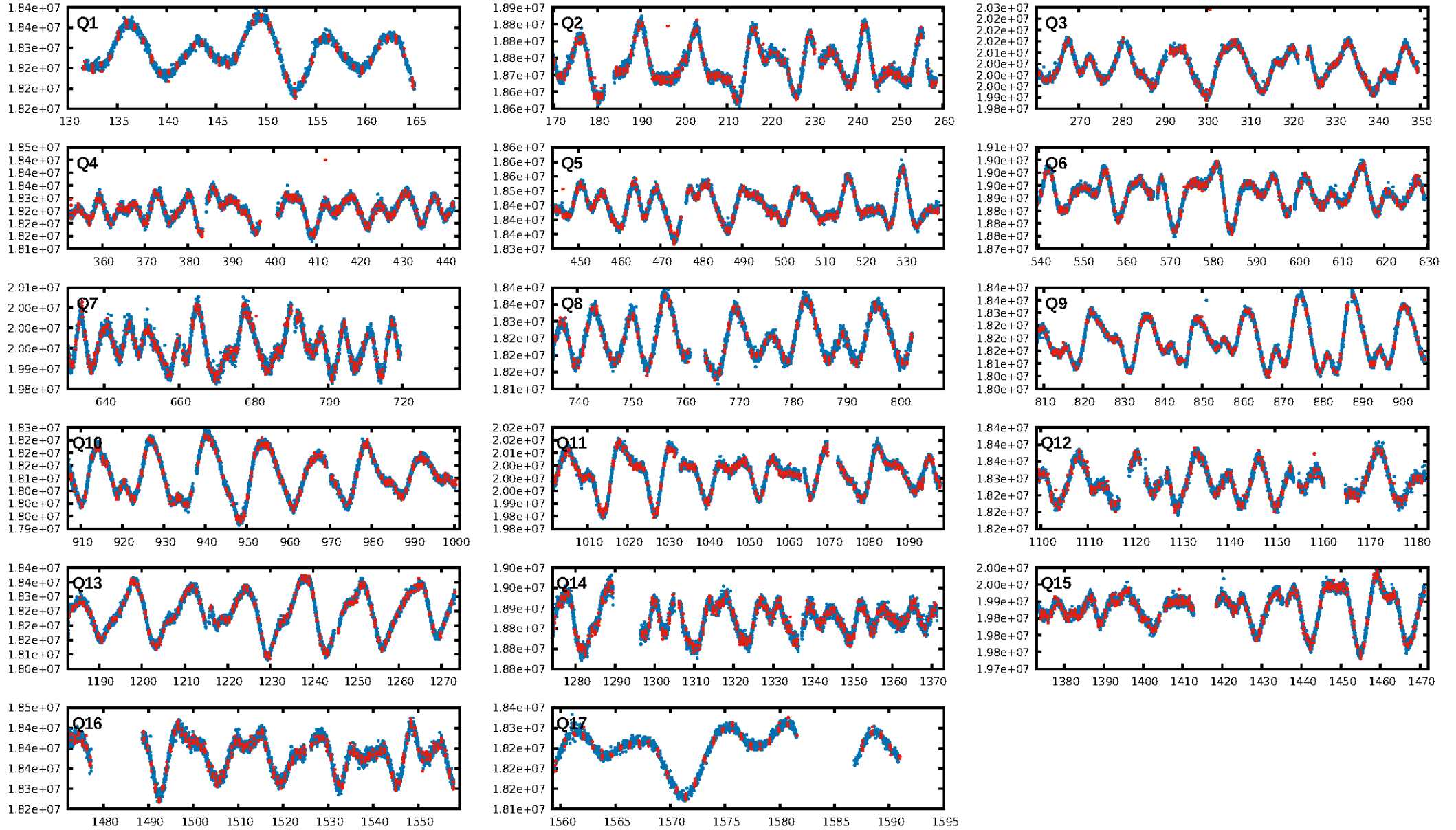
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.56e-31
RollingBand-fgt: 0.78 [1171/1506]
GhostDiagnostic-chr: 4.286
Centroid-sig: 15.7%
Centroid-so: 0.619 arcsec [0.77σ]
OotOffset-rm: 0.559 arcsec [2.05σ]
KicOffset-rm: 0.297 arcsec [1.18σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

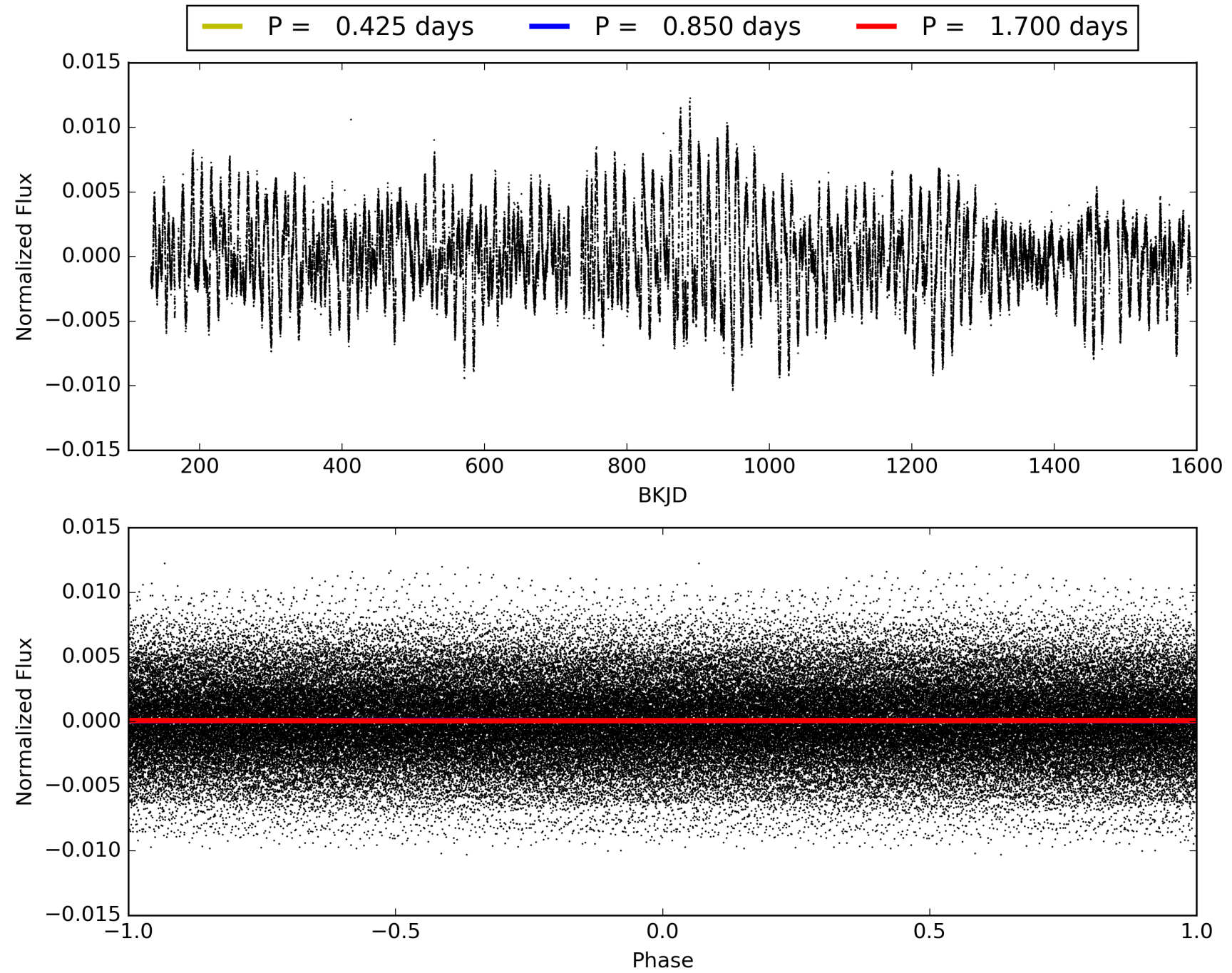
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:17:22 Z

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

TCE 007826620-01, PDC Light Curves

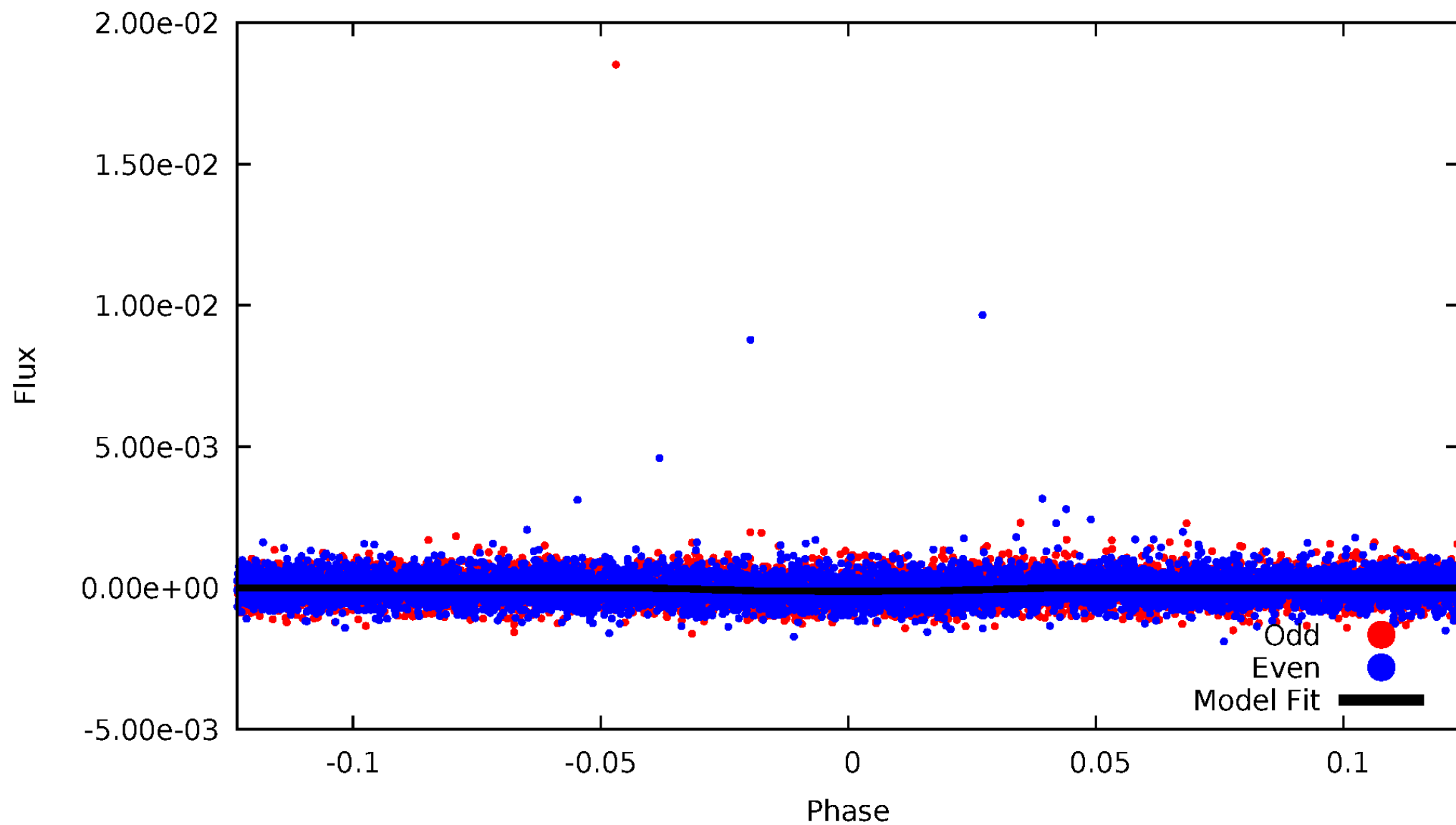


TCE 007826620-01



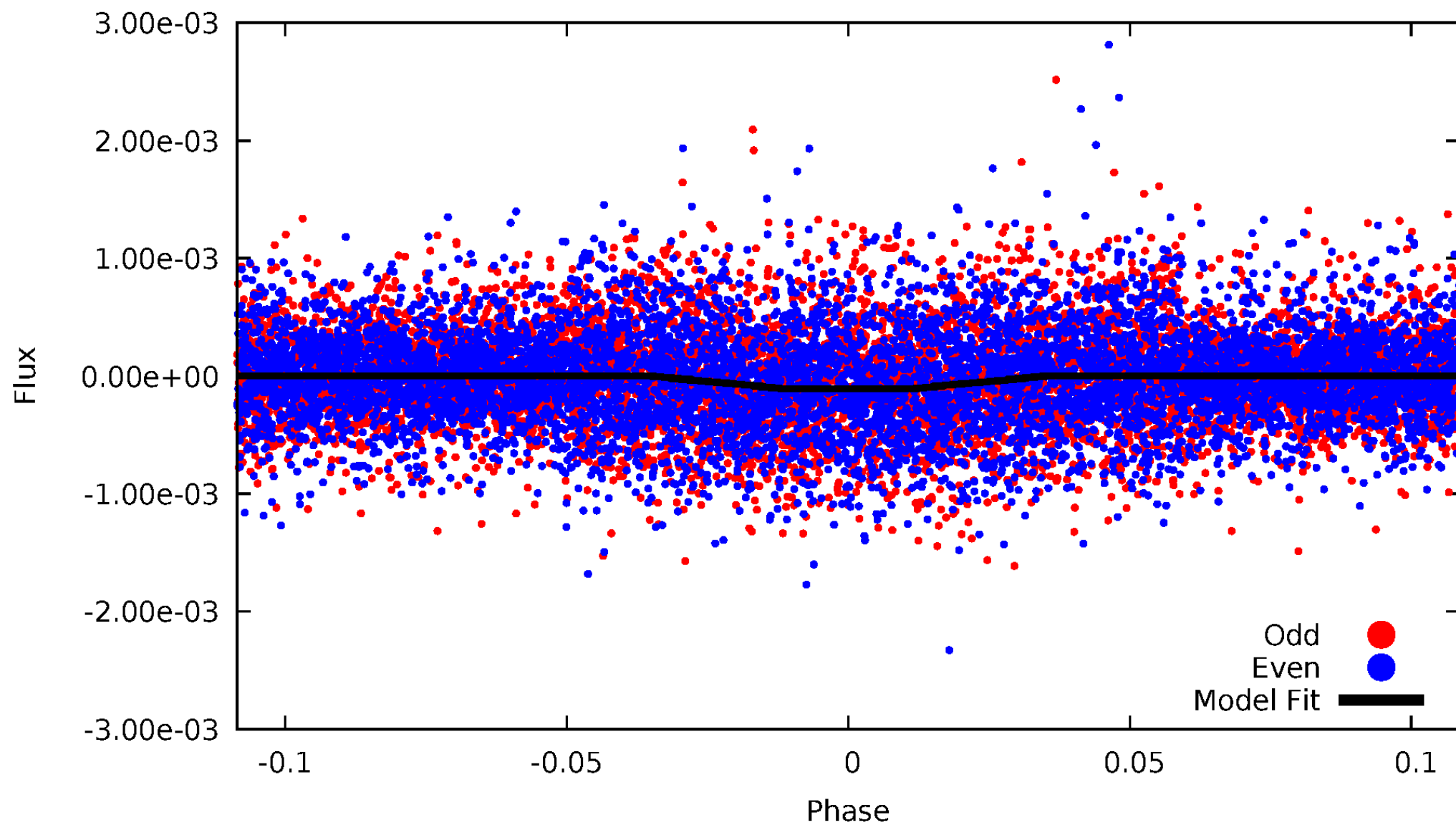
DV Odd/Even

TCE 007826620-01



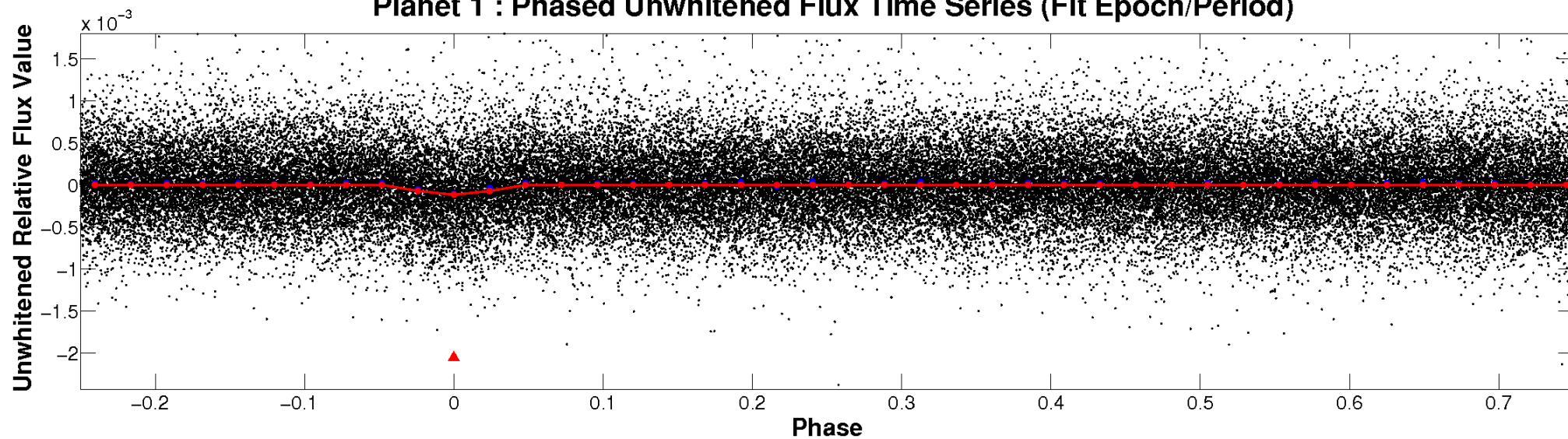
ALT Odd/Even

TCE 007826620-01

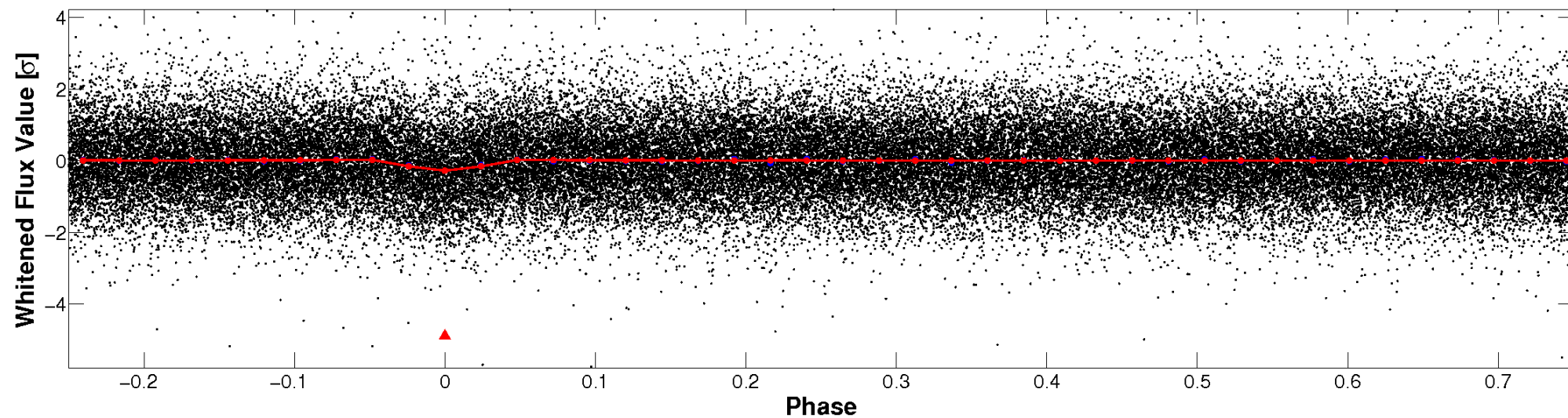


Non-Whitened Vs. Whitened Light Curve

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

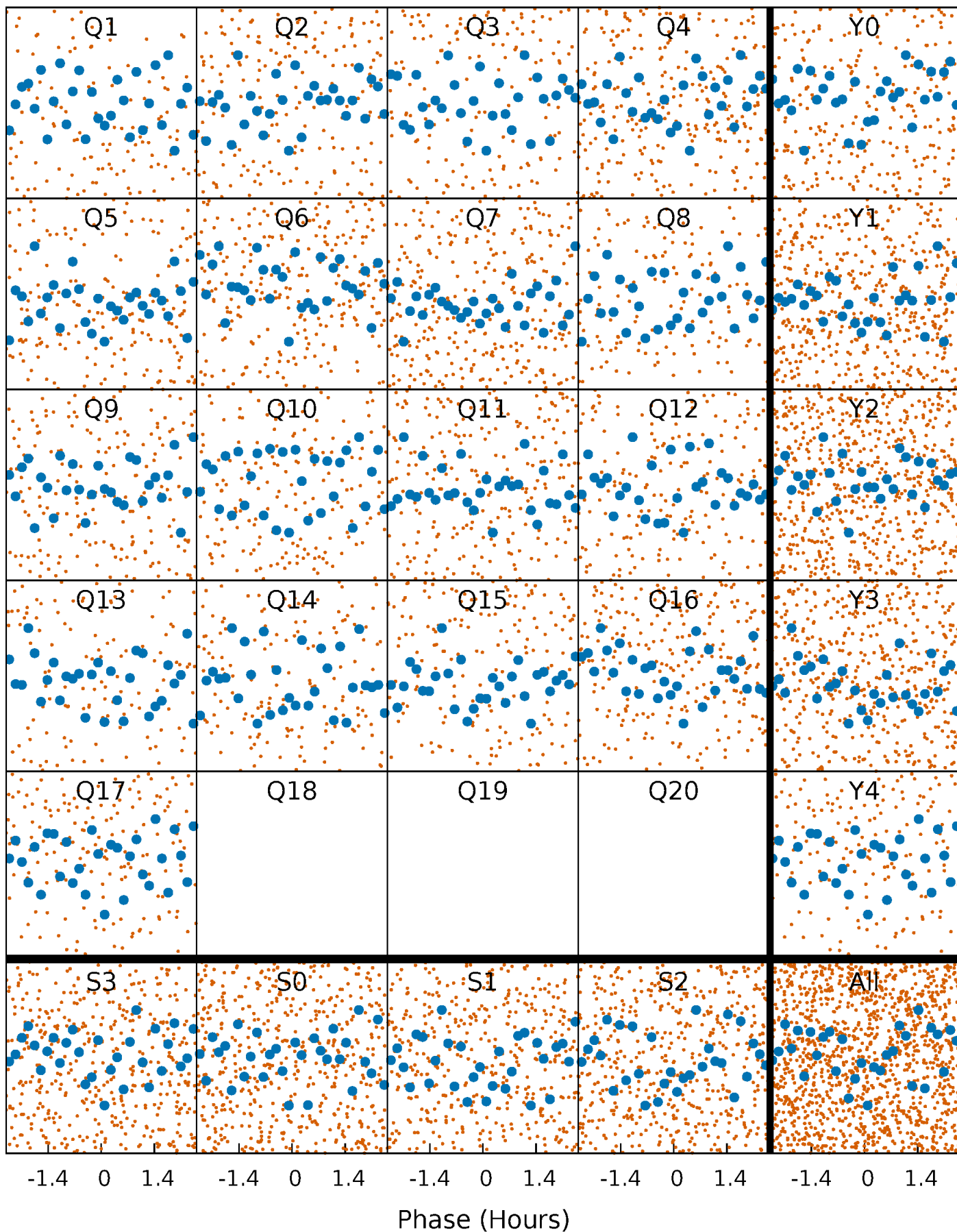


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



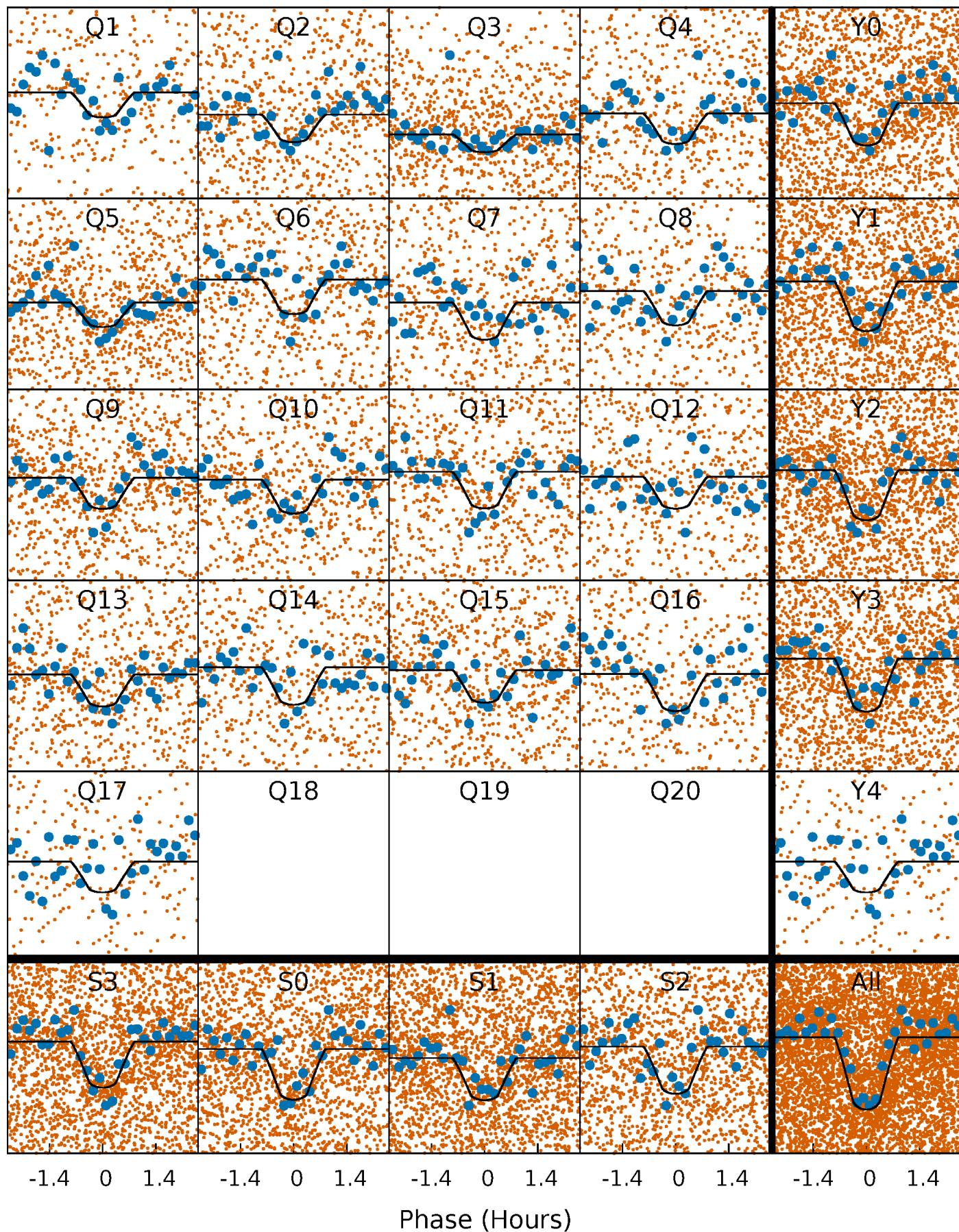
PDC Quarter-Phased Transit Curves

TCE 007826620-01 P= 0.849910 Days $T_0=131.671525$ (BKJD)



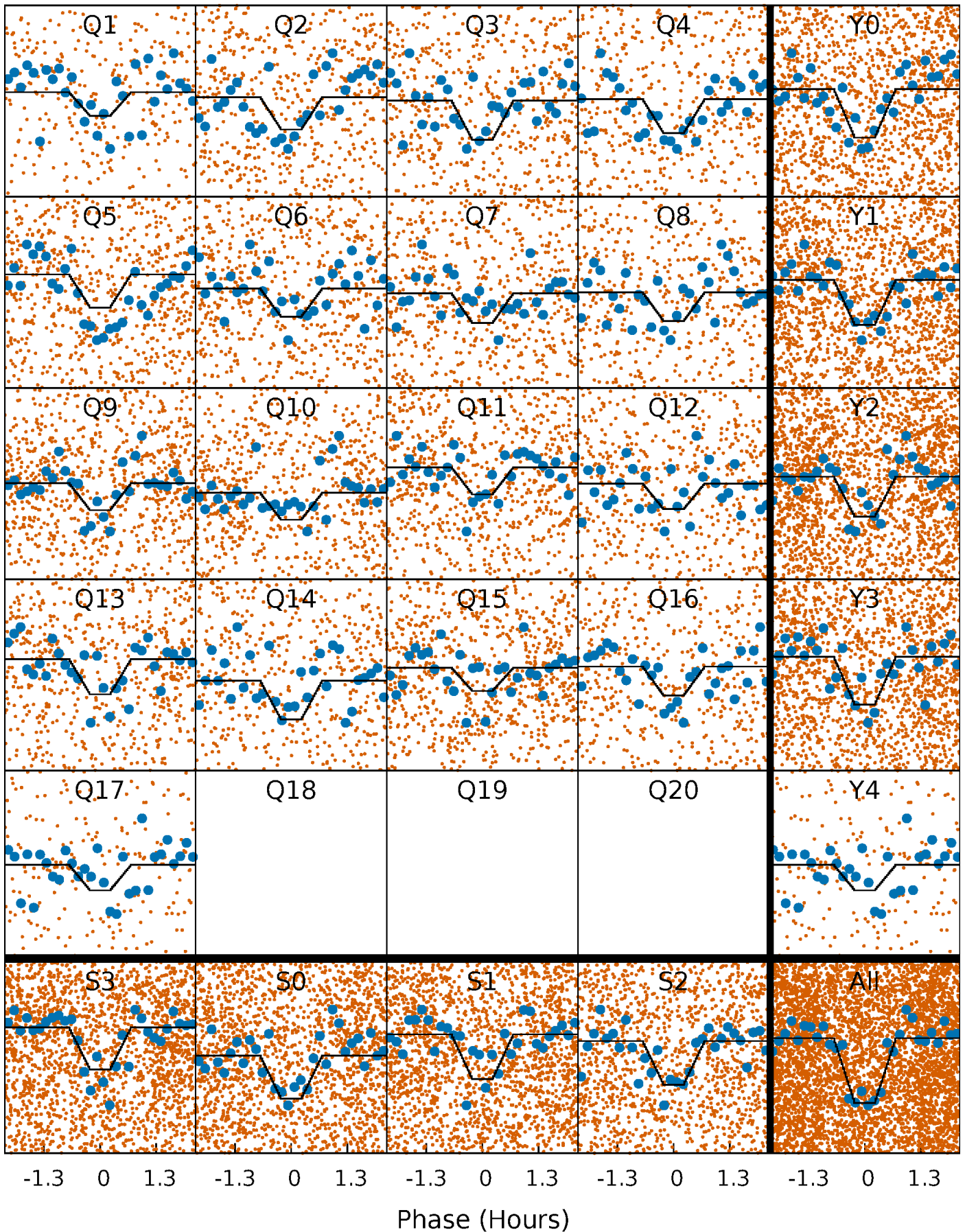
DV Quarter-Phased Transit Curves

TCE 007826620-01 P= 0.849910 Days $T_0=131.671525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

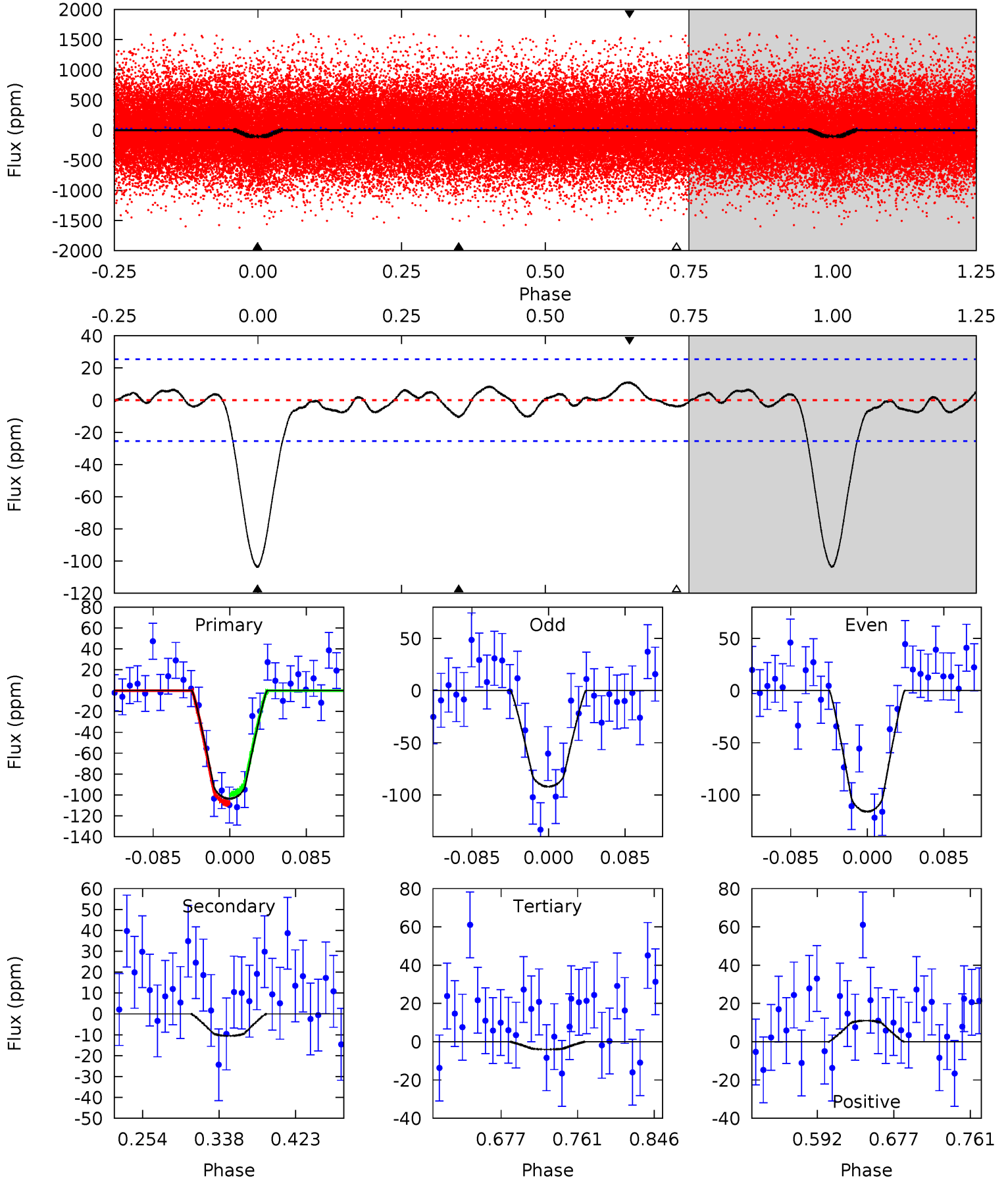
TCE 007826620-01 P= 0.849907 Days $T_0=131.672395$ (BKJD)



DV Model-Shift Uniqueness Test

007826620-01, P = 0.849910 Days, E = 130.821615 Days

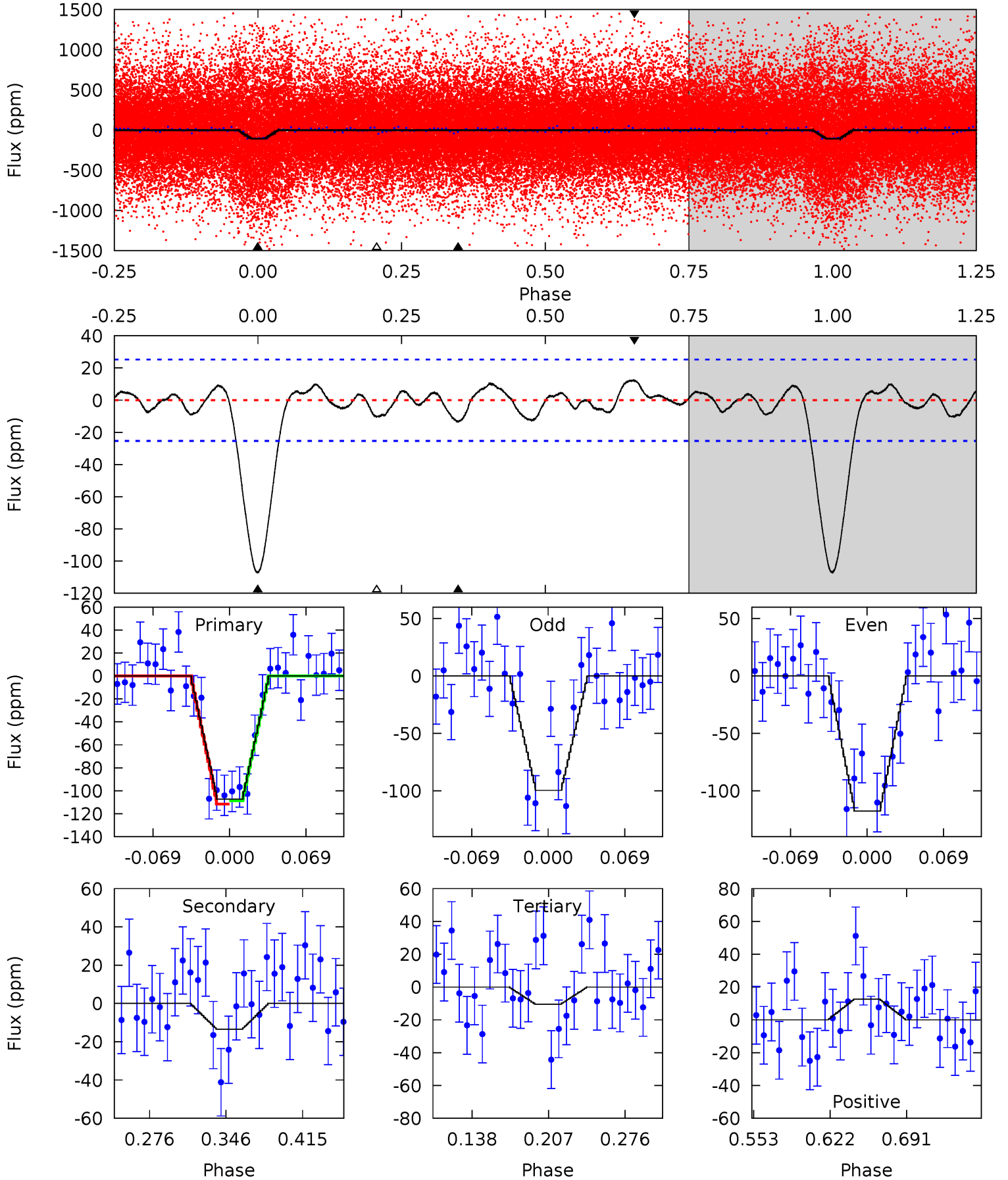
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	1.91	0.73	1.99	4.60	1.72	0.83	18.0	16.7	1.18	-0.09	2.18	0.88	0.10	0.81



Alt Model-Shift Uniqueness Test

007826620-01, P = 0.849907 Days, E = 130.822488 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	2.48	1.93	2.32	4.64	1.82	1.01	17.8	17.4	0.55	0.16	1.66	0.89	0.11	0.25



Stellar Parameters For KIC 007826620

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4296^{+115}_{-140}	$4.733^{+0.066}_{-0.033}$	$-1.000^{+0.300}_{-0.350}$	$0.505^{+0.039}_{-0.054}$	$0.503^{+0.042}_{-0.042}$	$5.499^{+1.803}_{-0.778}$
	+3%/-3%	+1%/-1%	+30%/-35%	+8%/-11%	+8%/-8%	+33%/-14%
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 007826620-01 / KOI 4268.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 6	$0.69^{+0.42}_{-0.37}$	1579^{+56}_{-61}	2717^{+737}_{-499}	$2.243^{+8.737}_{-1.573}$
Alt.	-14 ± 5	$0.61^{+0.37}_{-0.32}$	1579^{+58}_{-60}	2937^{+765}_{-456}	$3.555^{+13.048}_{-2.346}$

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

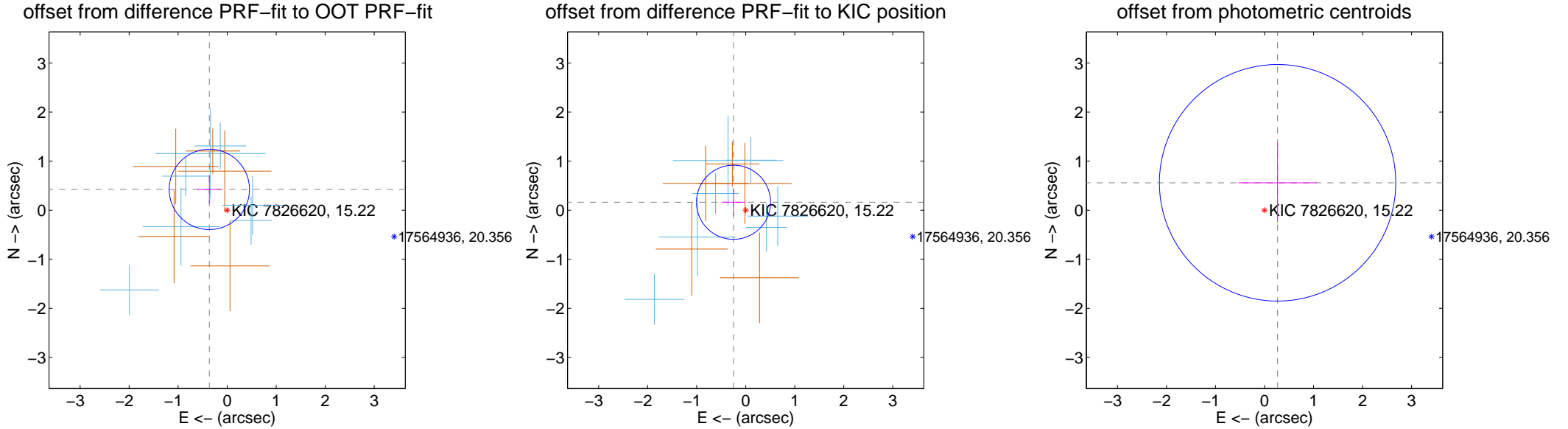
DV Centroid Data

Supplemental centroid analysis for 007826620-01. Kepler magnitude: 15.22. Transit SNR 14.31

There are 7 quarters with good PRF difference image offsets

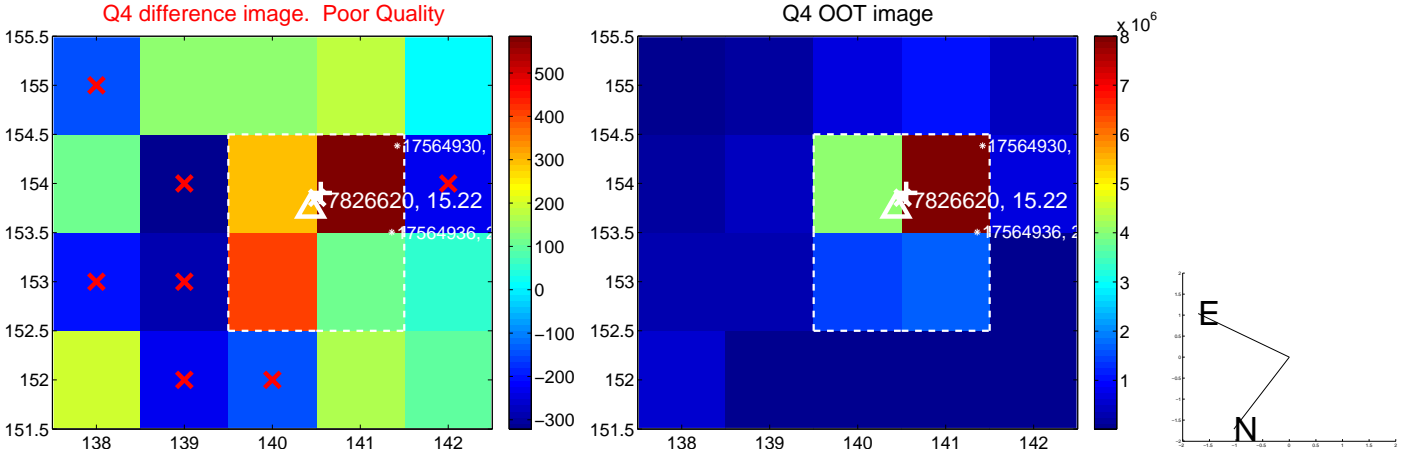
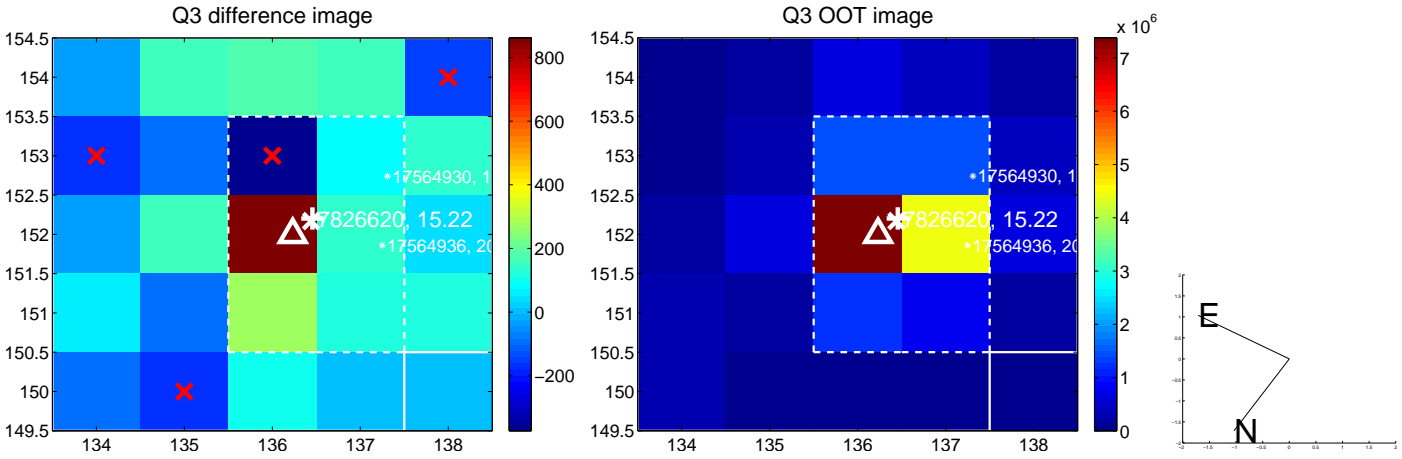
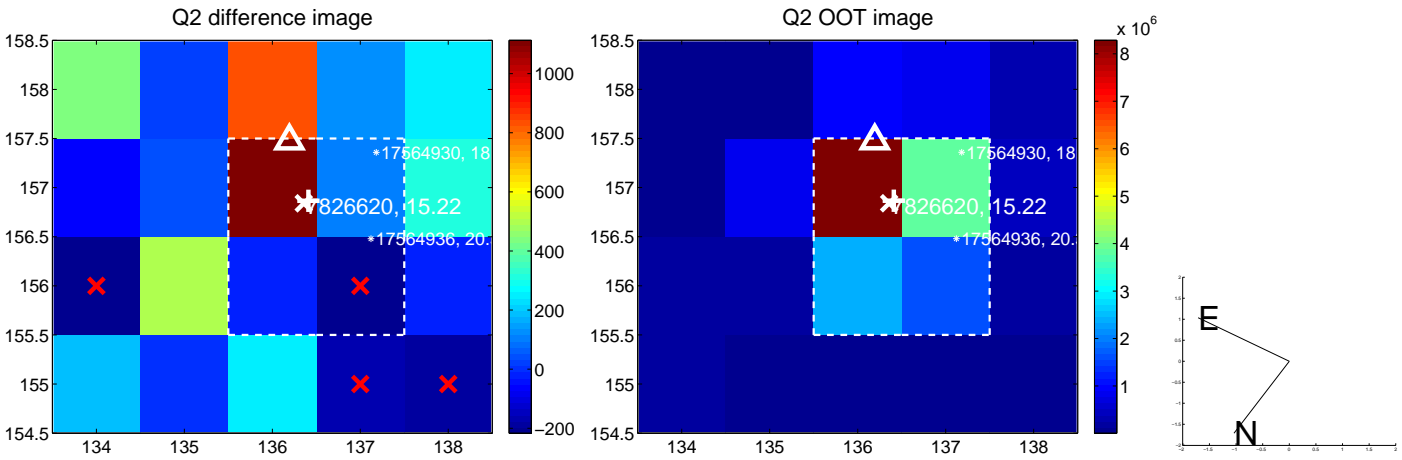
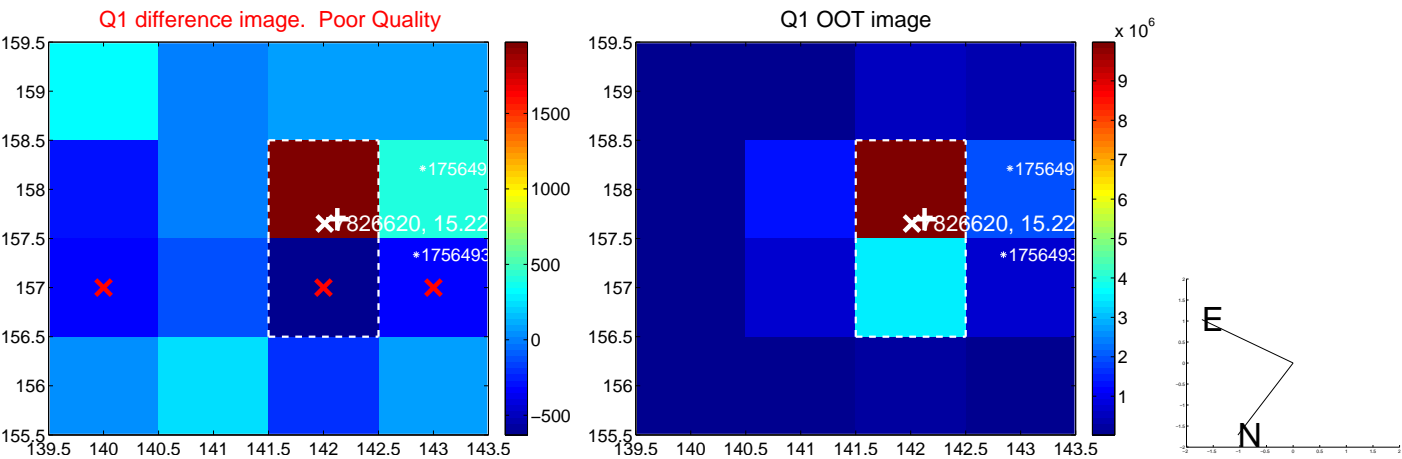
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.559 ± 0.273	2.05	0.364 ± 0.242	0.425 ± 0.294
PRF-fit source offset from KIC position	0.297 ± 0.252	1.18	0.249 ± 0.239	0.162 ± 0.280
photometric centroid source offset	0.62 ± 0.80	0.77	-0.27 ± 0.80	0.56 ± 0.80

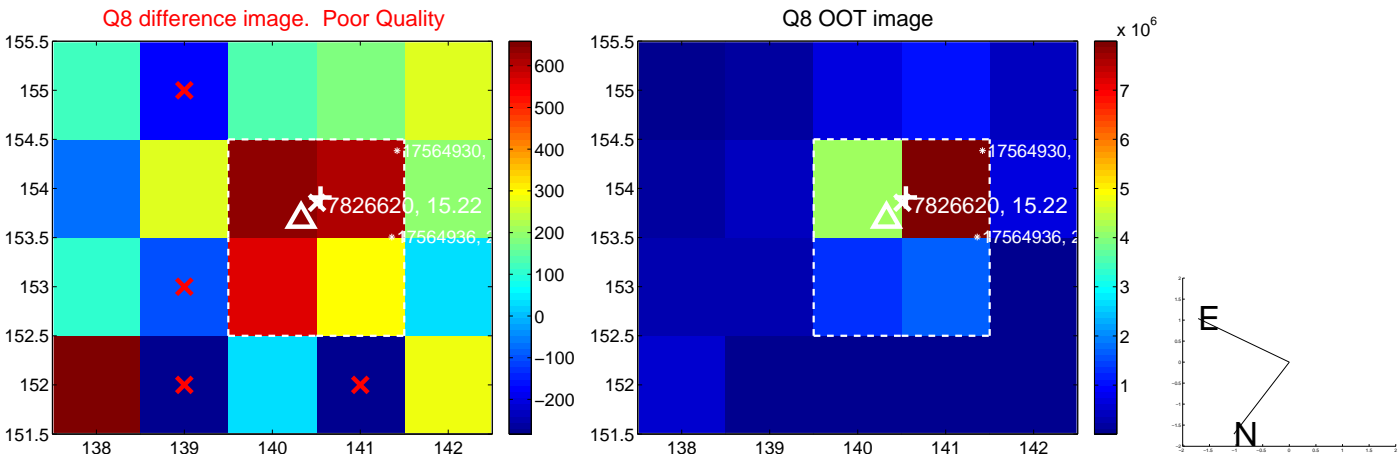
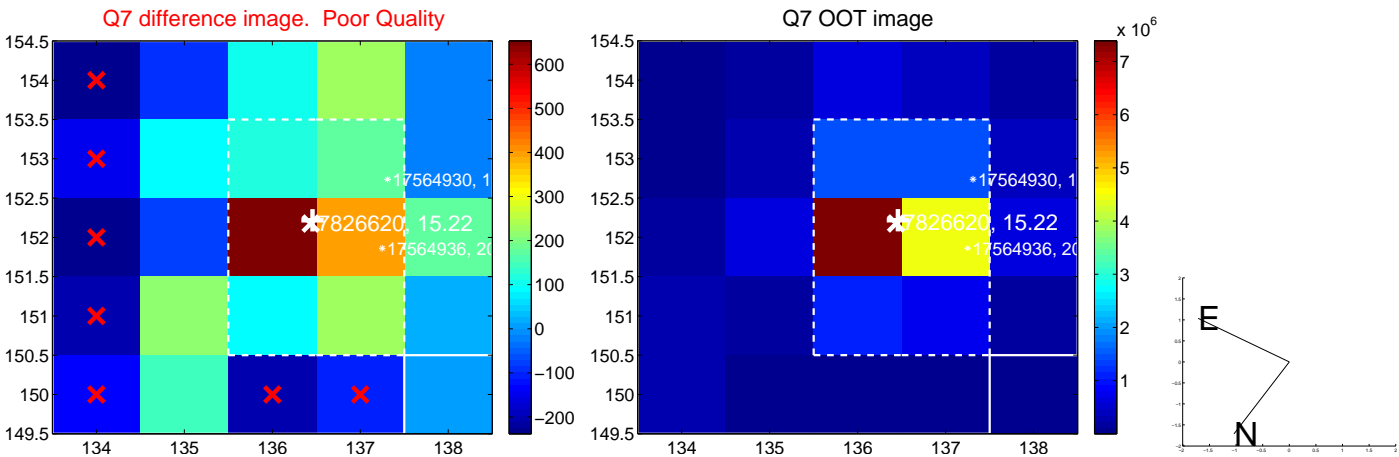
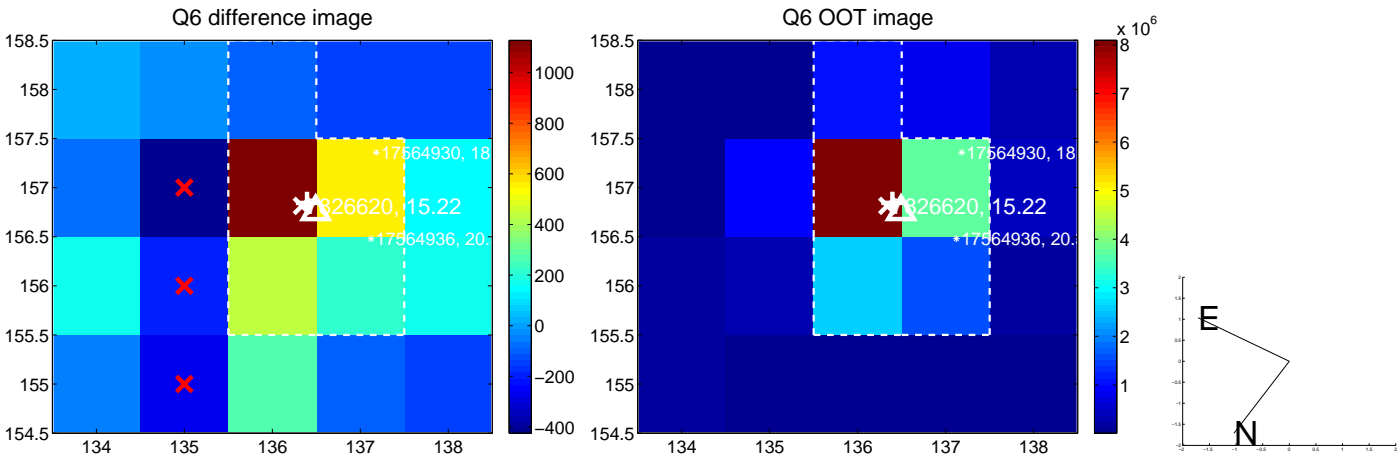
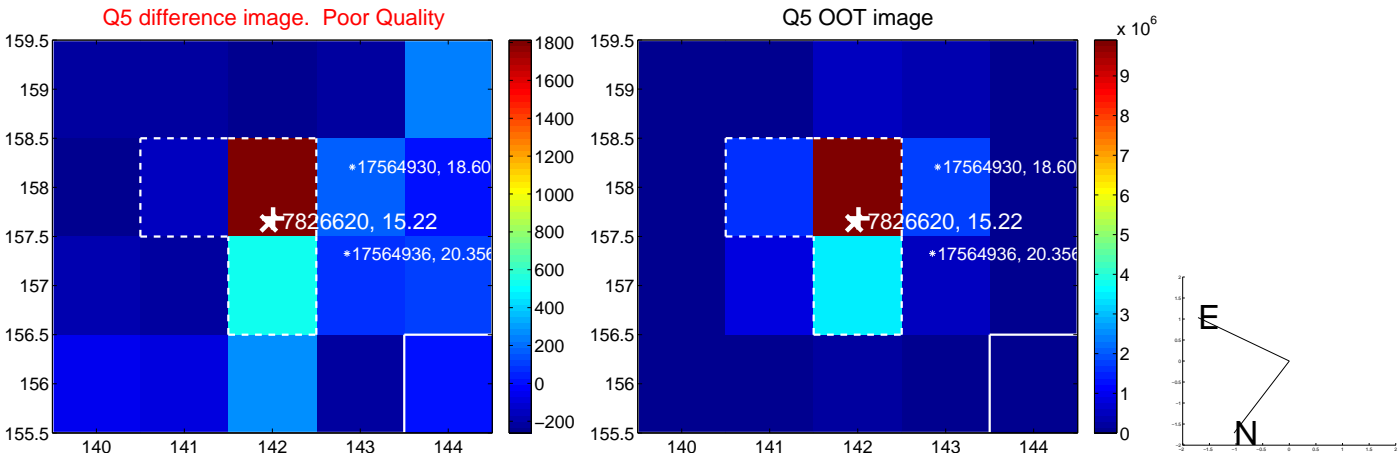


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

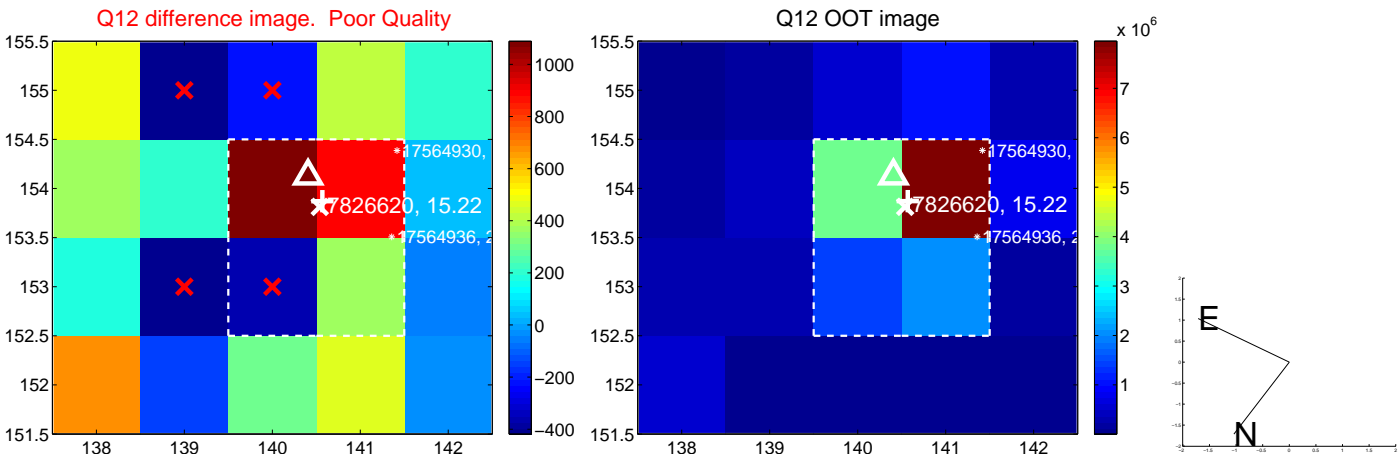
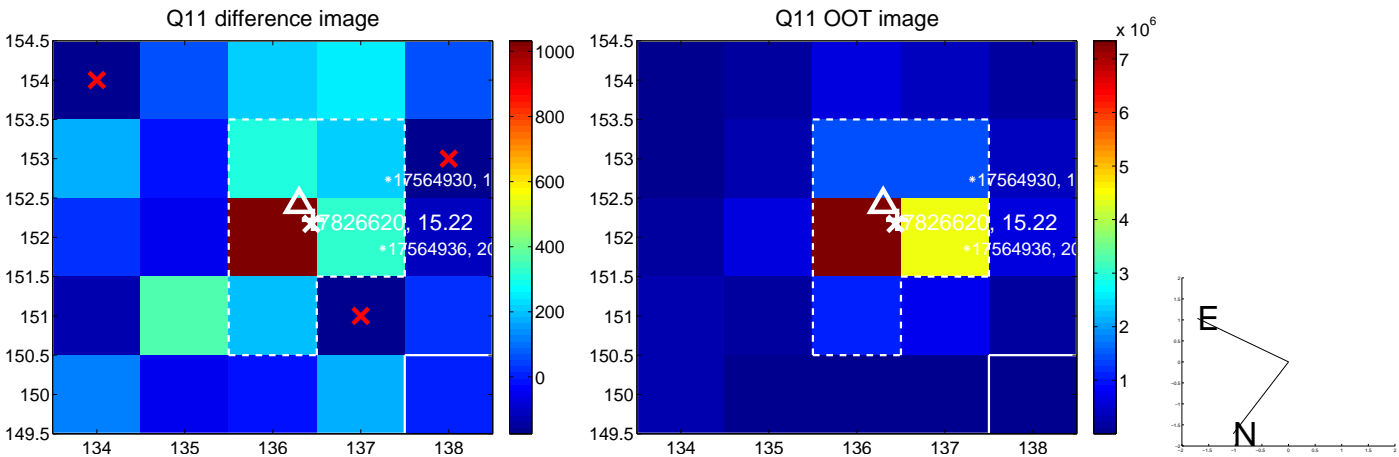
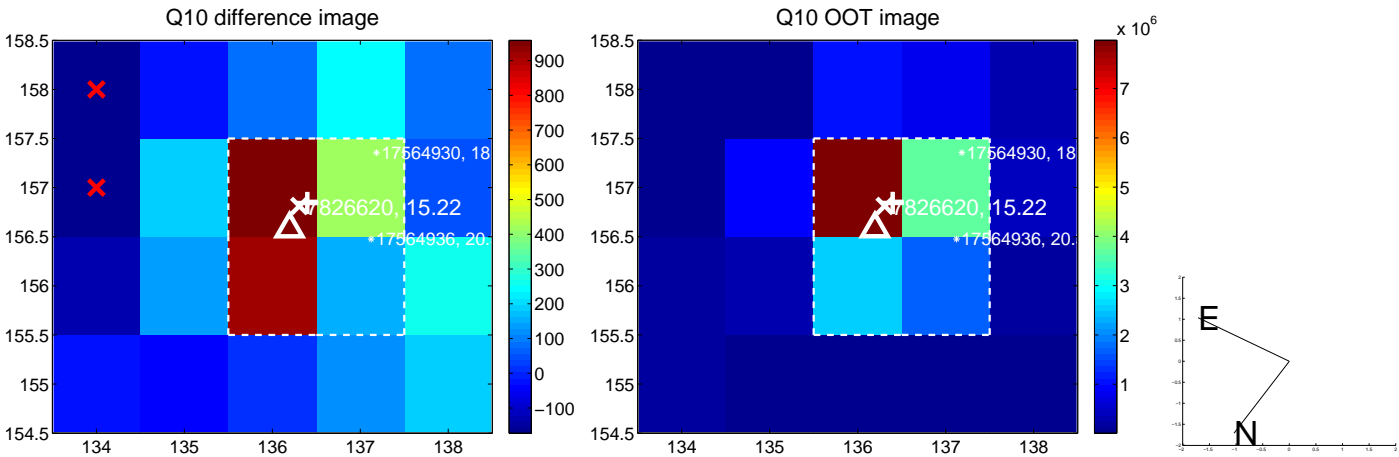
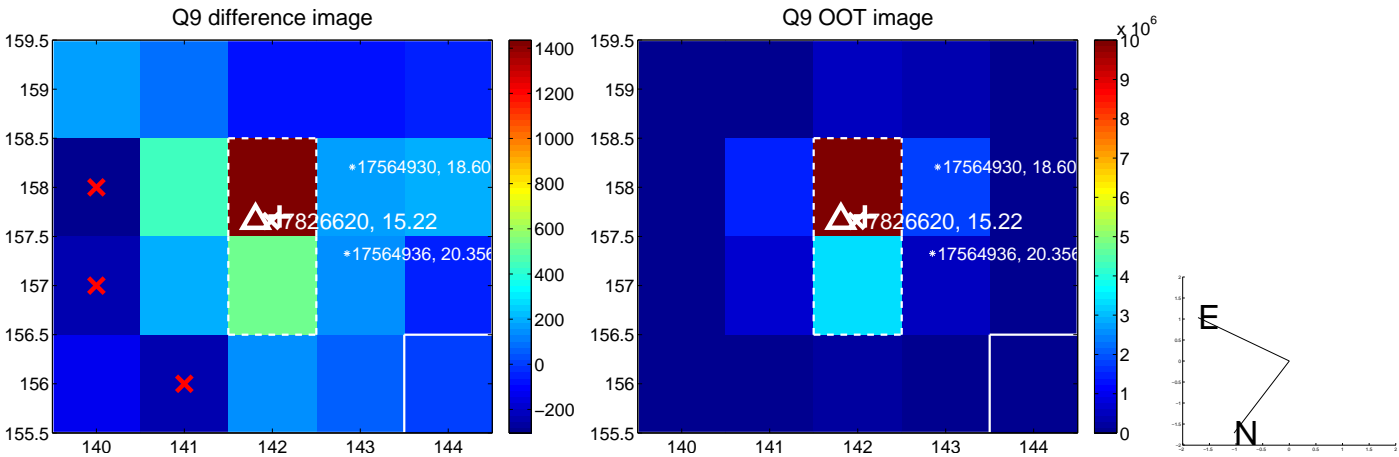
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



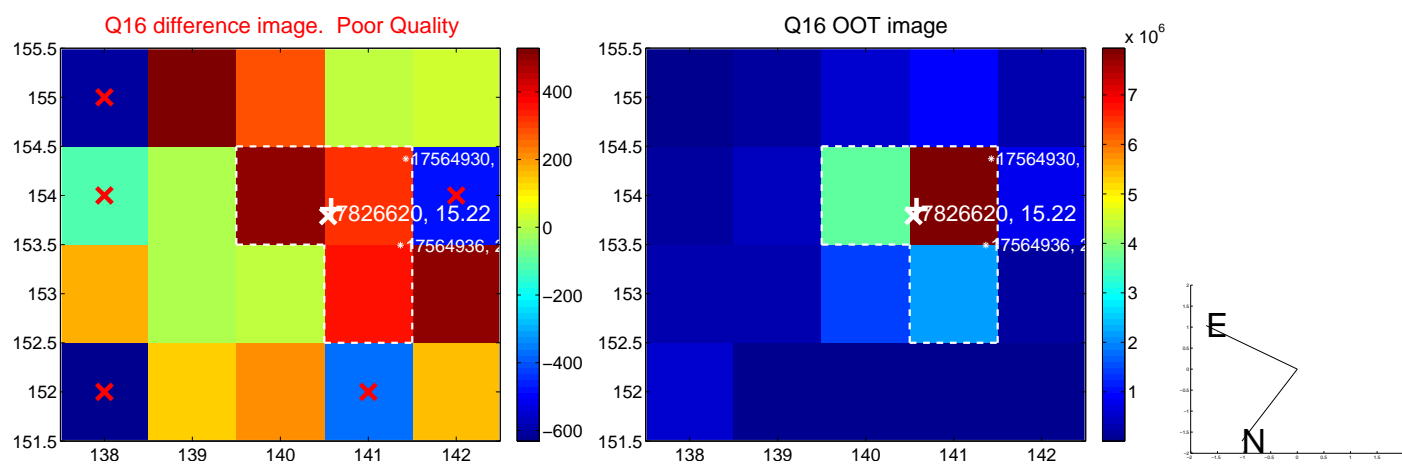
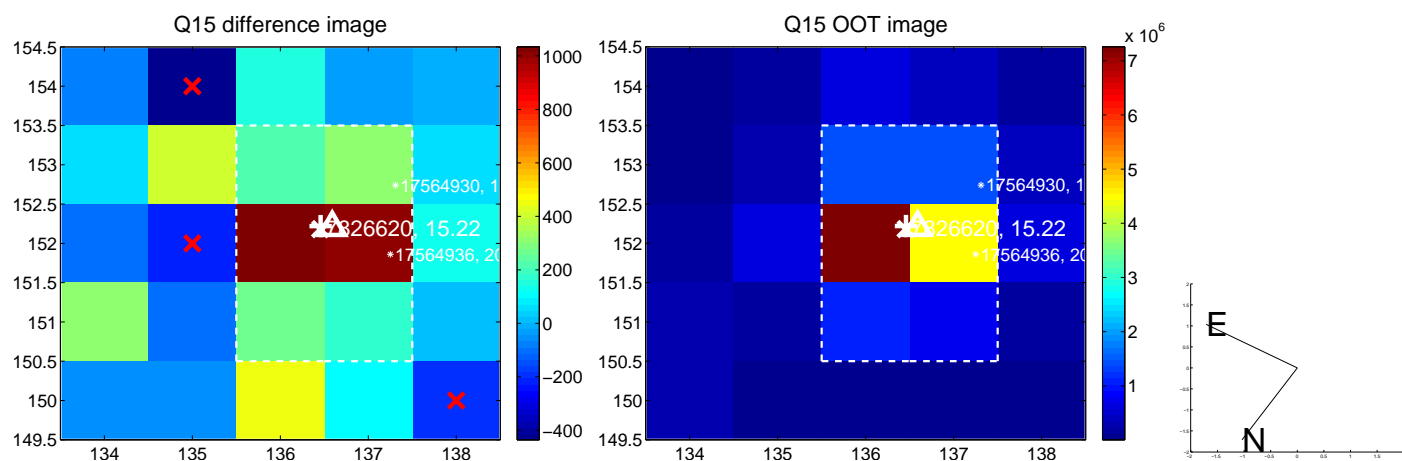
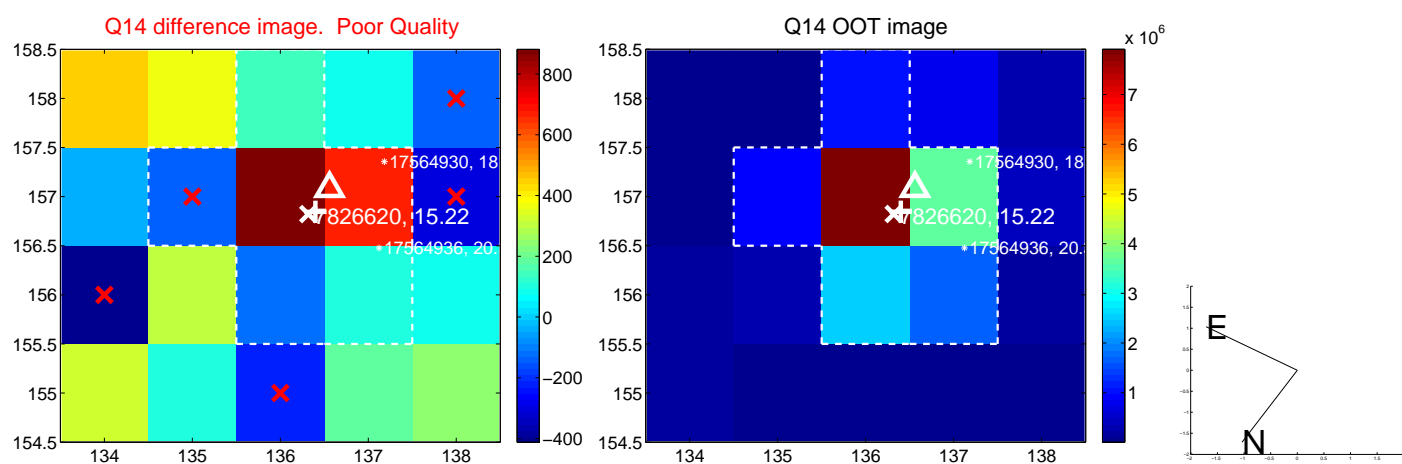
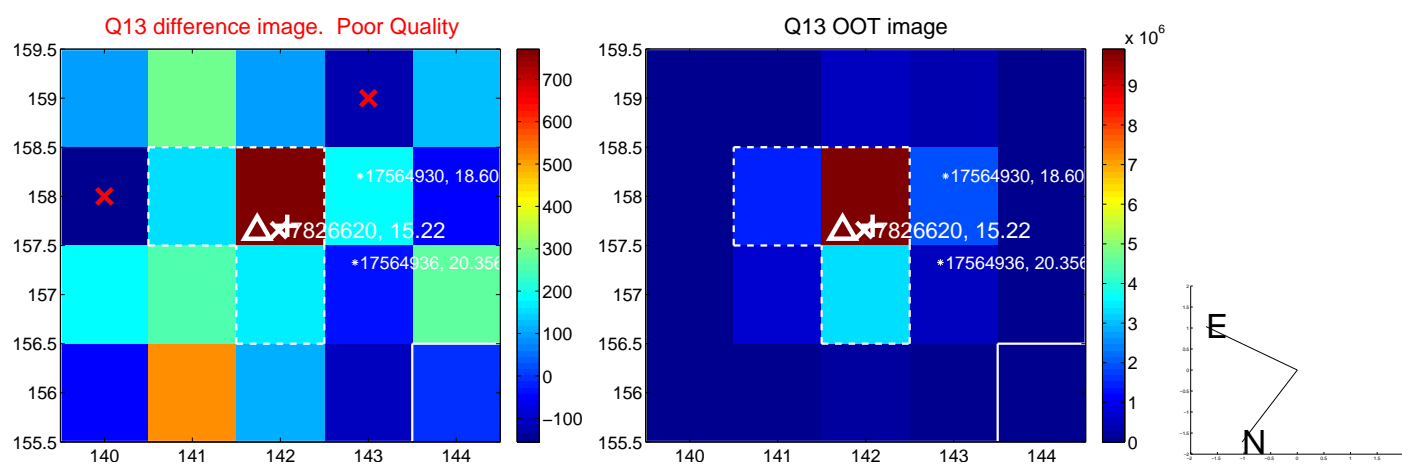
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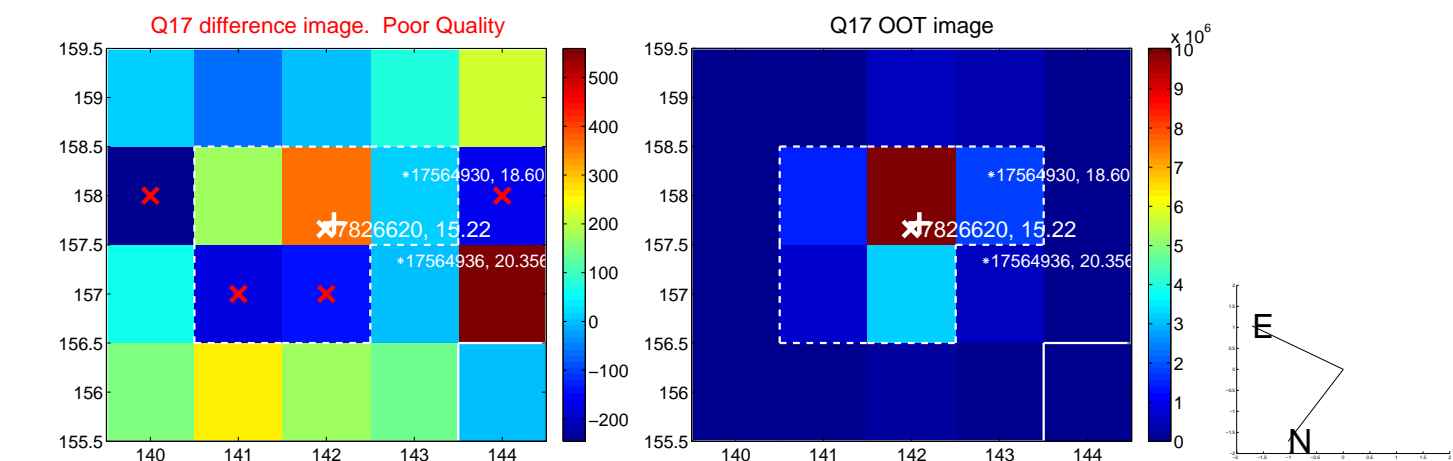
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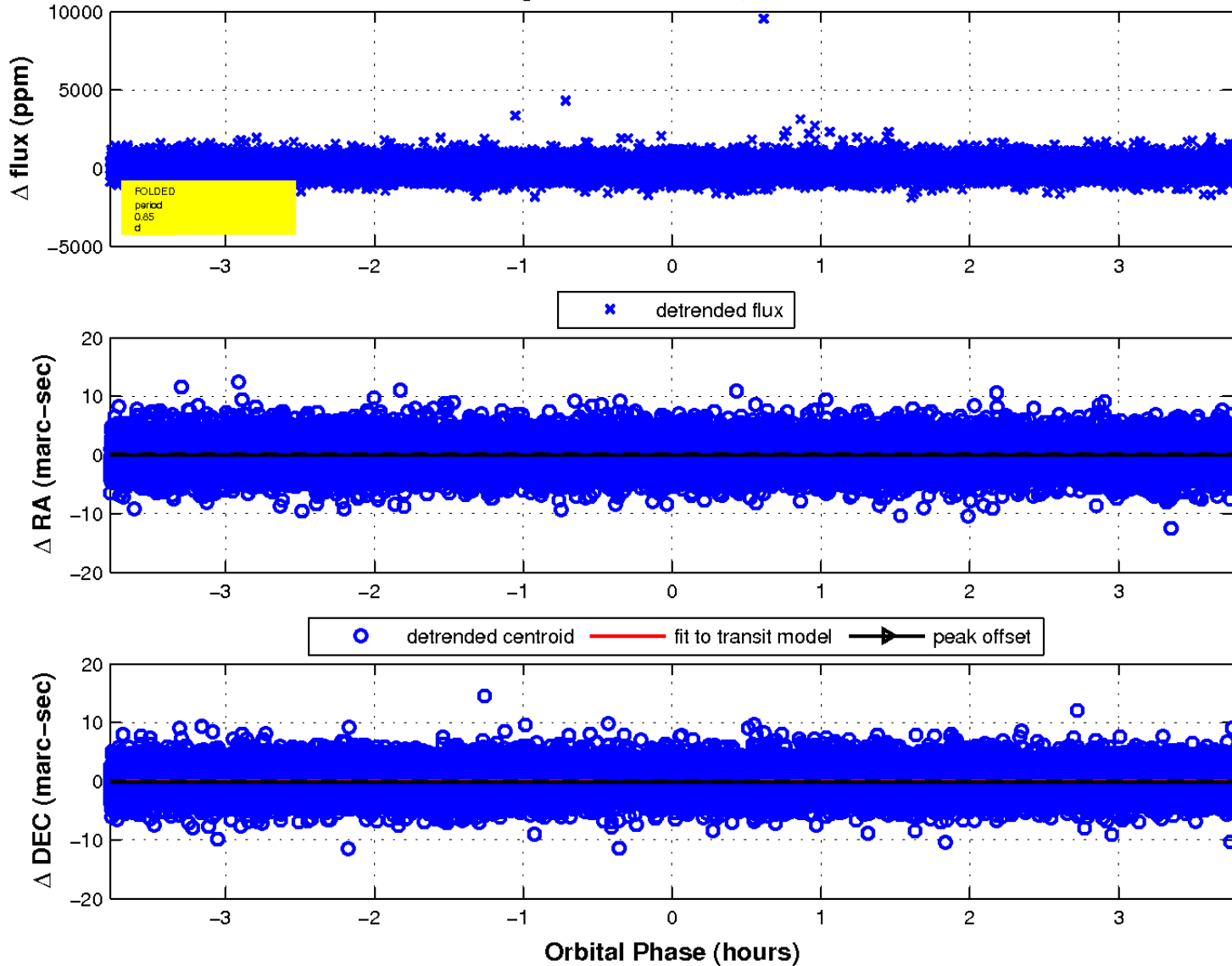
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

