

KIC 008283875

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})
008283875-01	OBS	7007.01	0.800256	132.069911	159.2	0.707	9.9	12.8	0.59	4336	0.79	559.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008283875-01	OBS	PC	0.94	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.

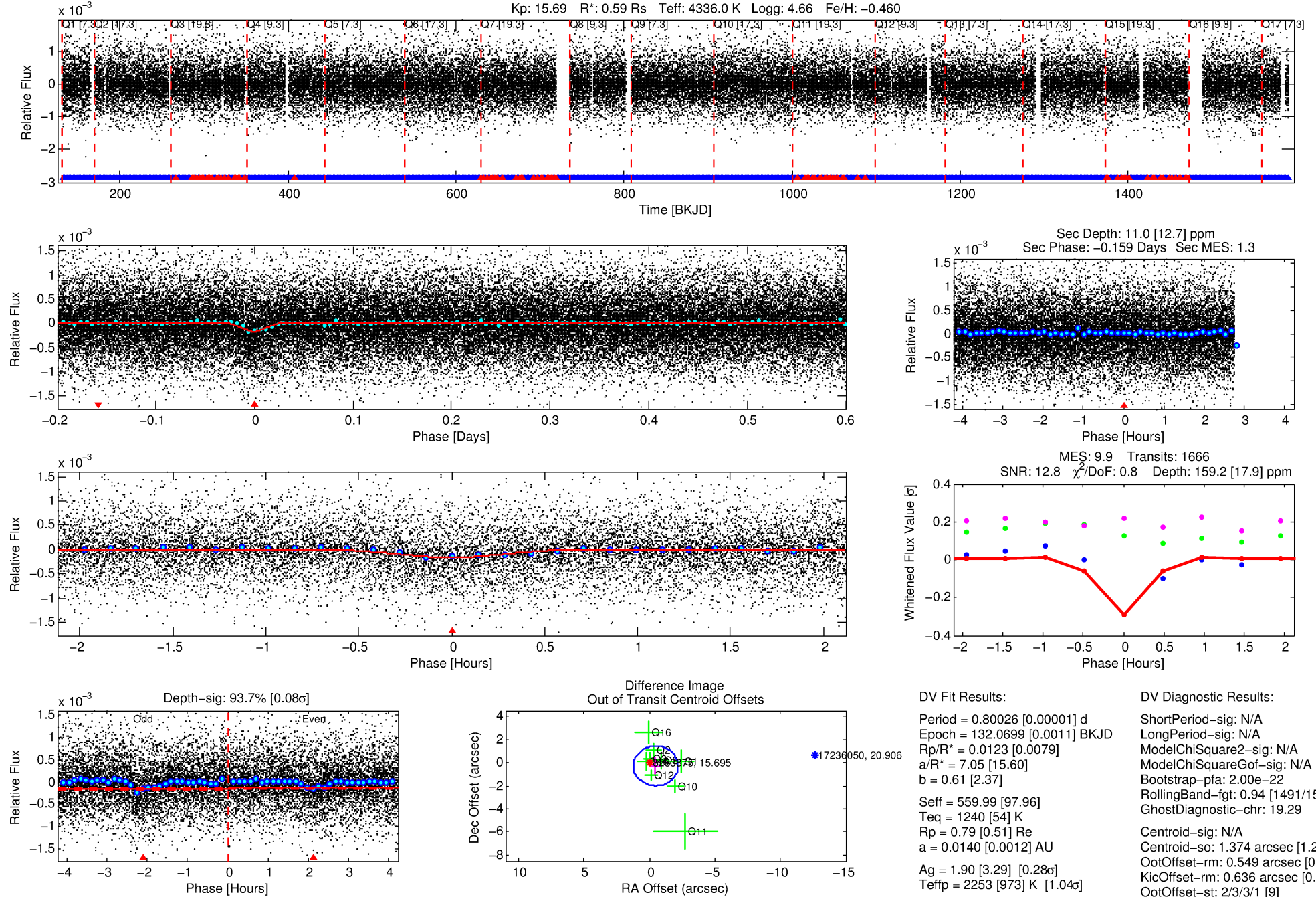
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008283875-01

No Significant Match Found

DV One-Page Summary

KIC: 8283875 Candidate: 1 of 1 Period: 0.800 d
KOI: K07007.01 Corr: 0.847



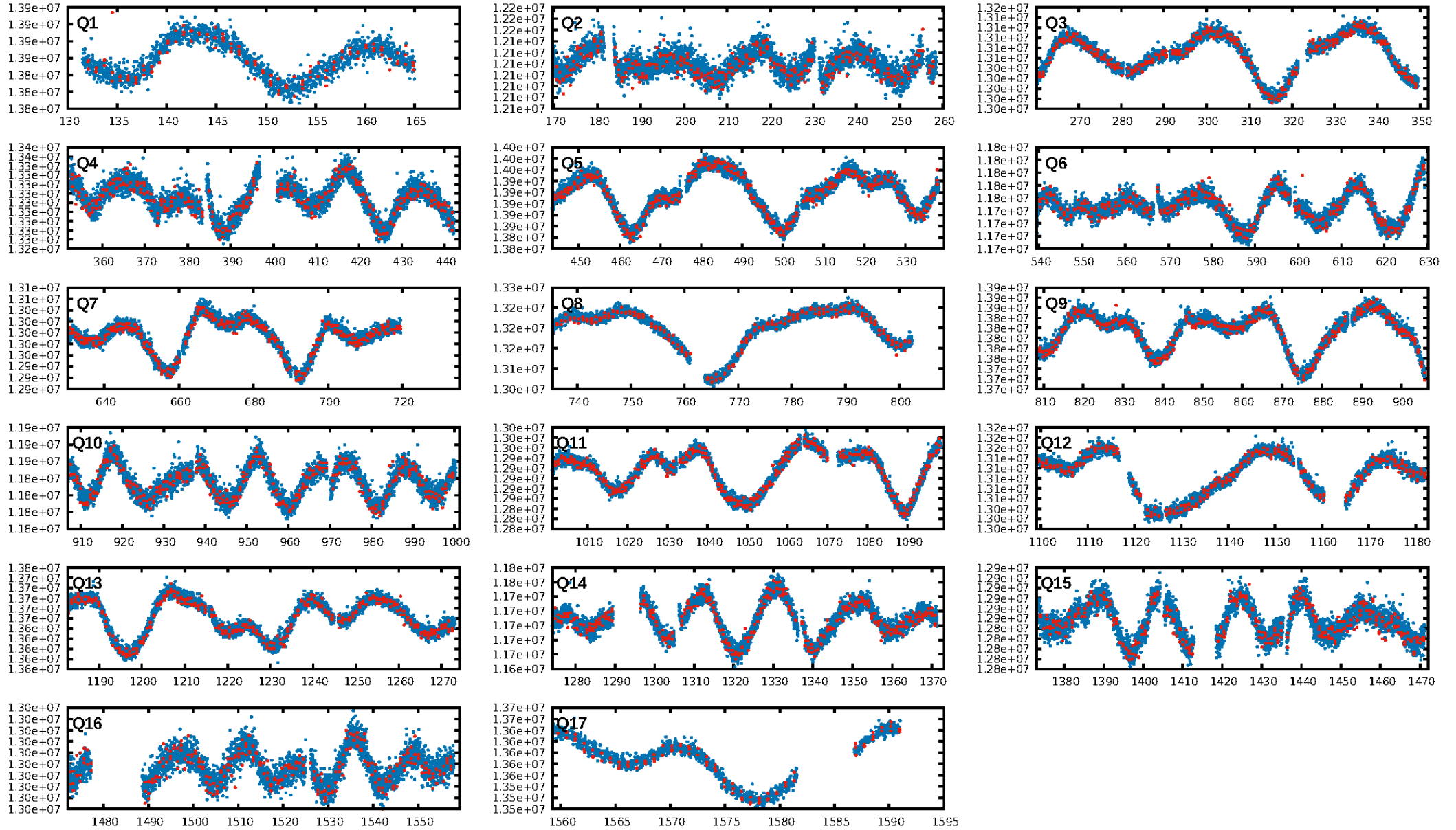
DV Fit Results:

Period = 0.80026 [0.00001] d
Epoch = 132.0699 [0.0011] BKJD
Rp/R* = 0.0123 [0.0079]
a/R* = 7.05 [15.60]
b = 0.61 [2.37]
Seff = 559.99 [97.96]
Teff = 1240 [54] K
Rp = 0.79 [0.51] Re
a = 0.0140 [0.0012] AU
Ag = 1.90 [3.29] [0.28σ]
Teffp = 2253 [973] K [1.04σ]

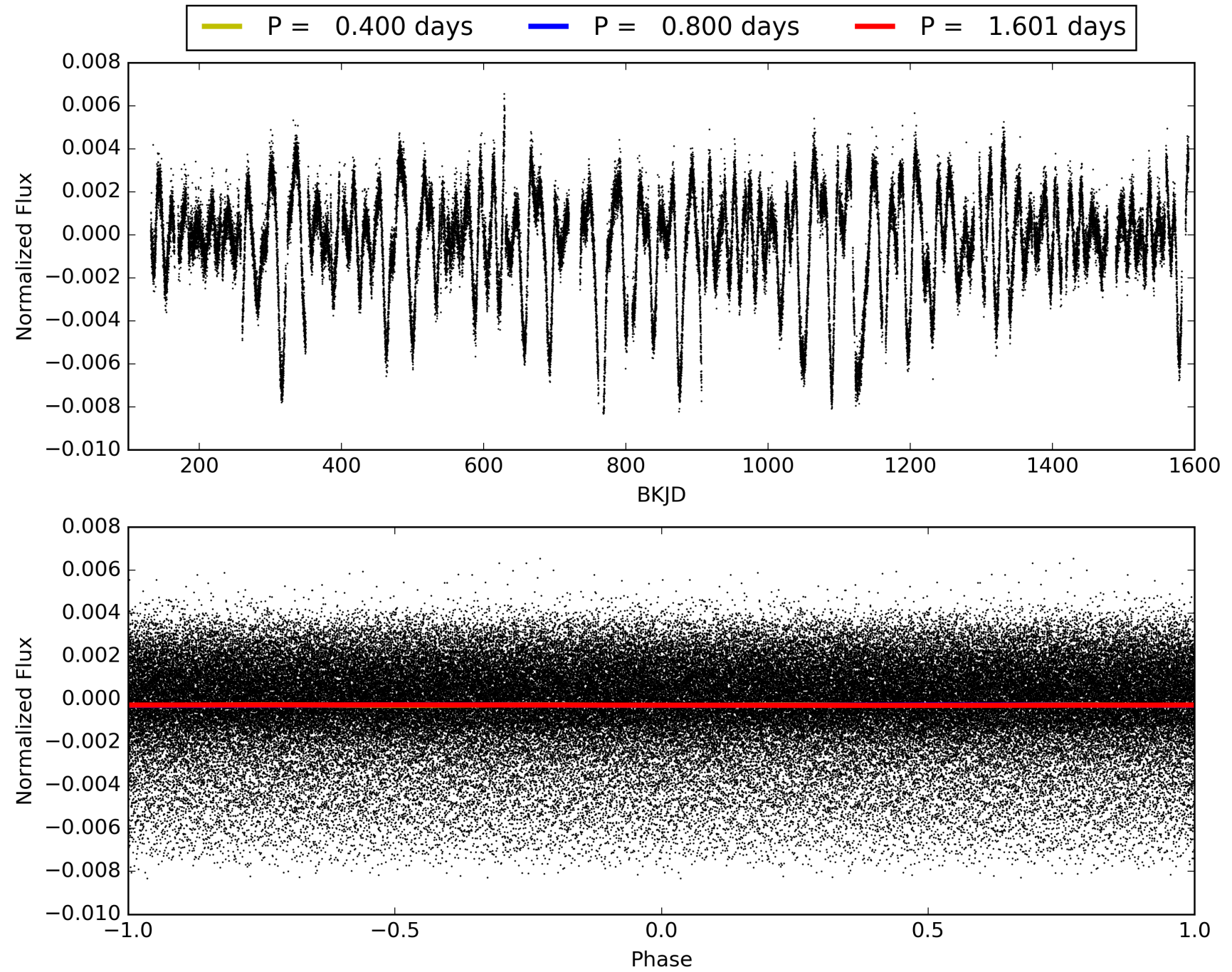
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.00e-22
RollingBand-fgt: 0.94 [1491/1590]
GhostDiagnostic-chr: 19.29
Centroid-sig: N/A
Centroid-so: 1.374 arcsec [1.26σ]
OotOffset-rm: 0.549 arcsec [0.96σ]
KicOffset-rm: 0.636 arcsec [0.97σ]
OotOffset-st: 2/3/3/1 [9]
KicOffset-st: 2/3/3/1 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008283875-01, PDC Light Curves

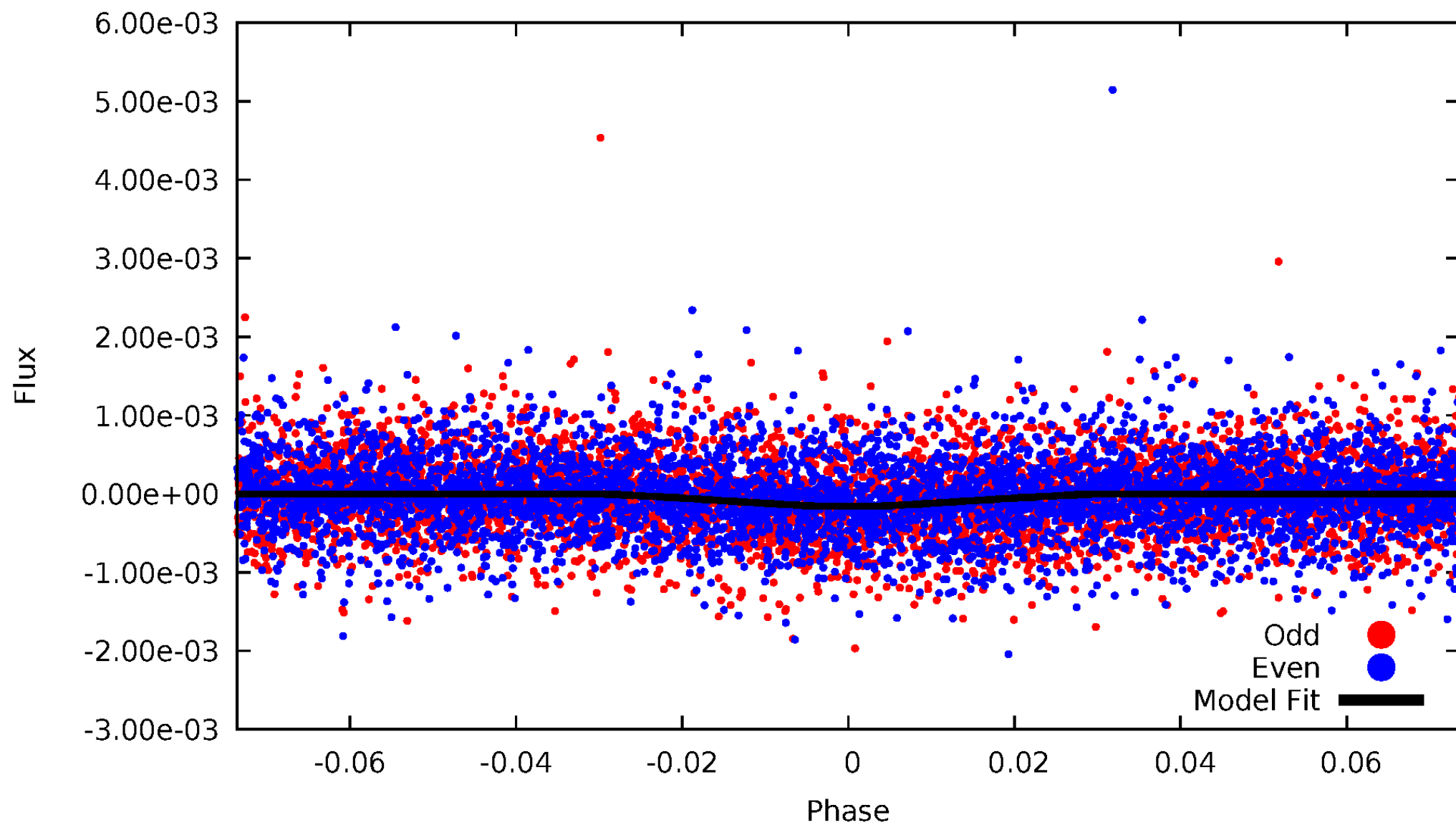


TCE 008283875-01



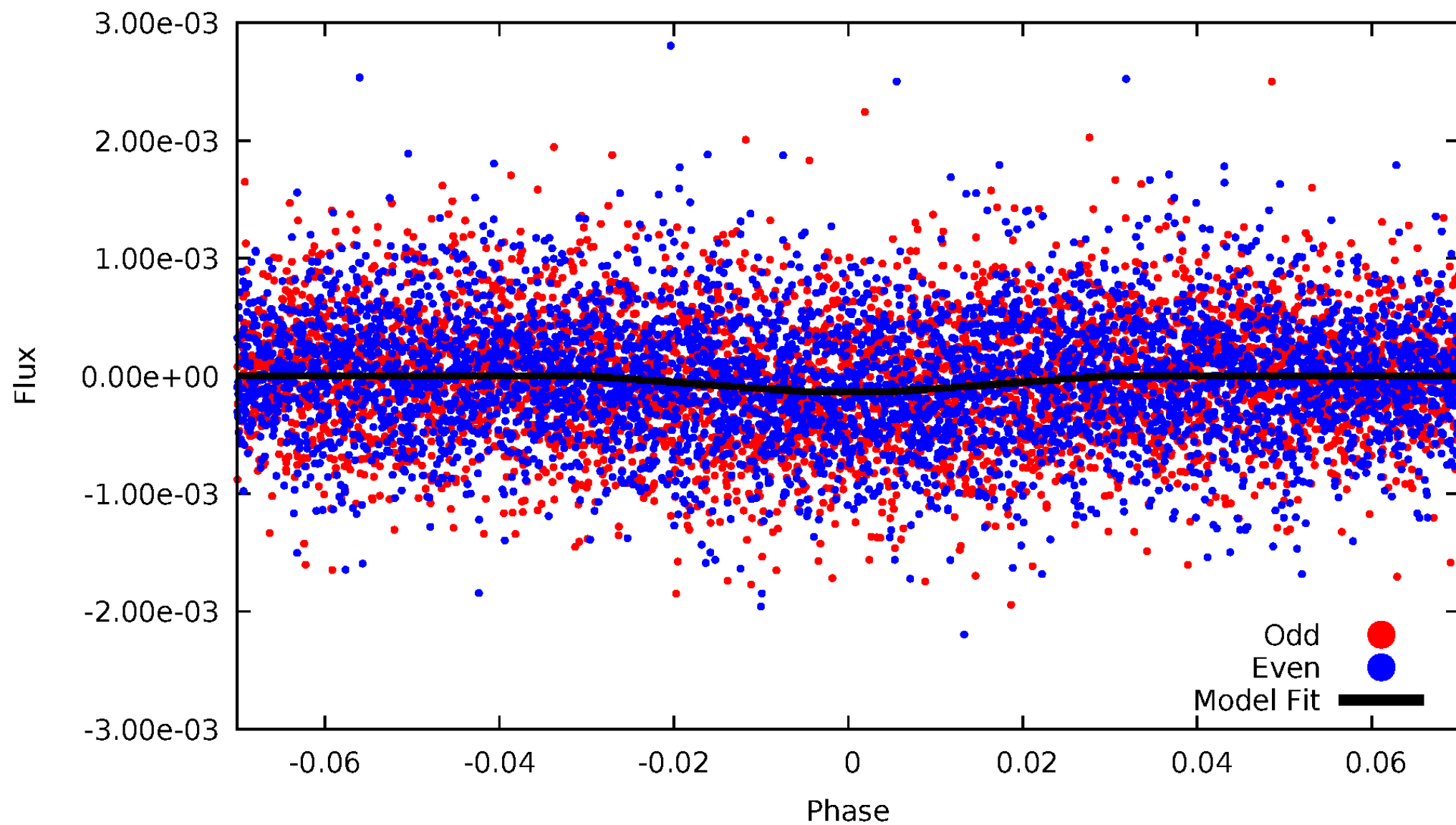
DV Odd/Even

TCE 008283875-01



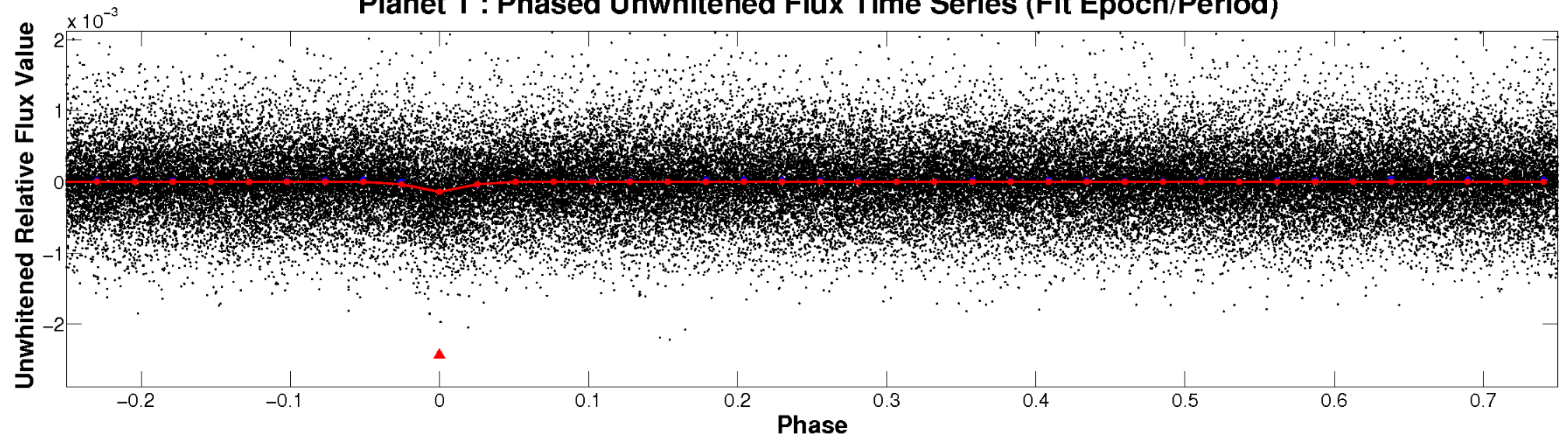
ALT Odd/Even

TCE 008283875-01

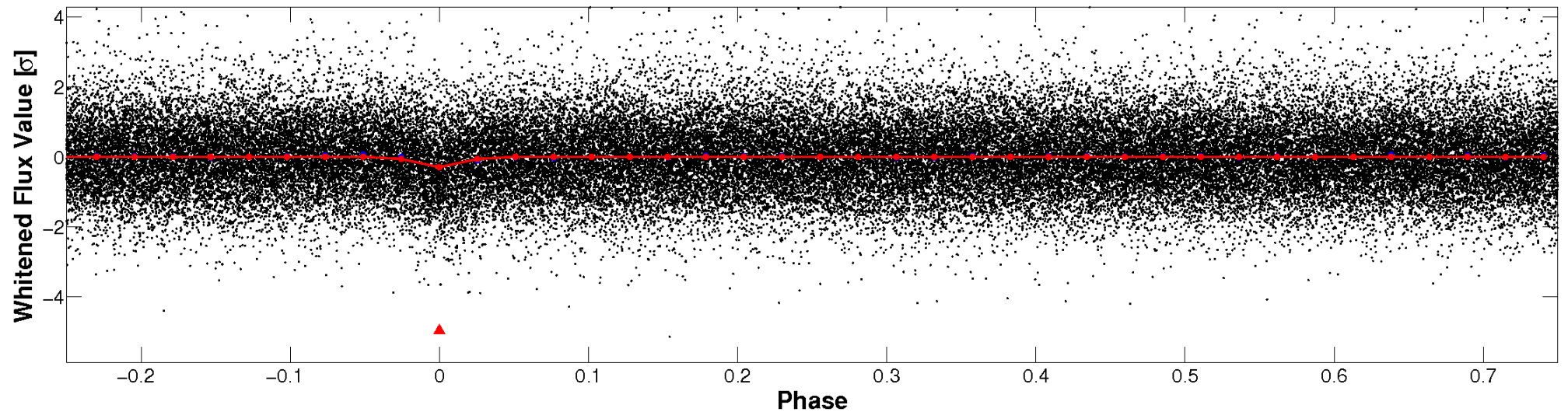


Non-Whitened Vs. Whitened Light Curve

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

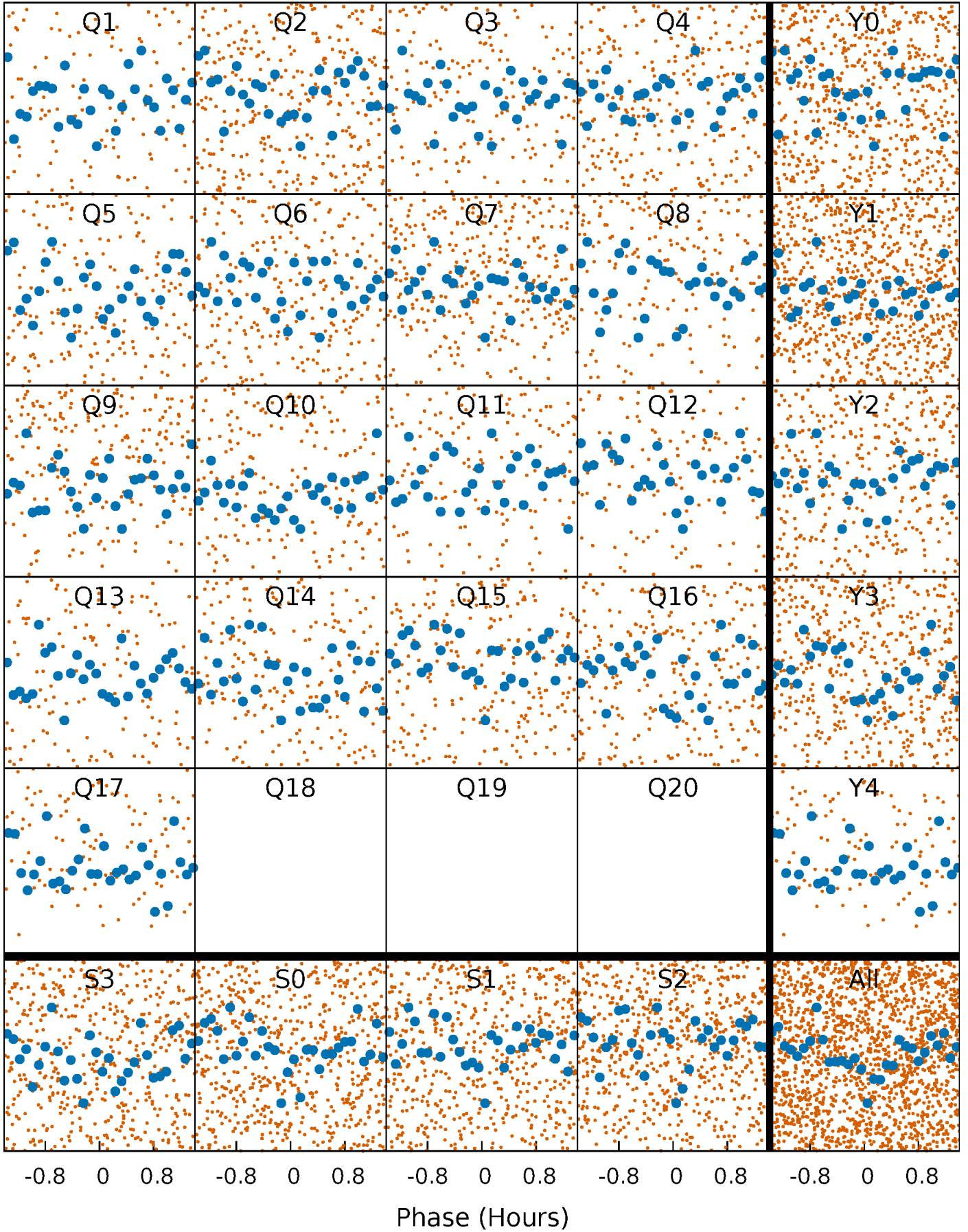


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



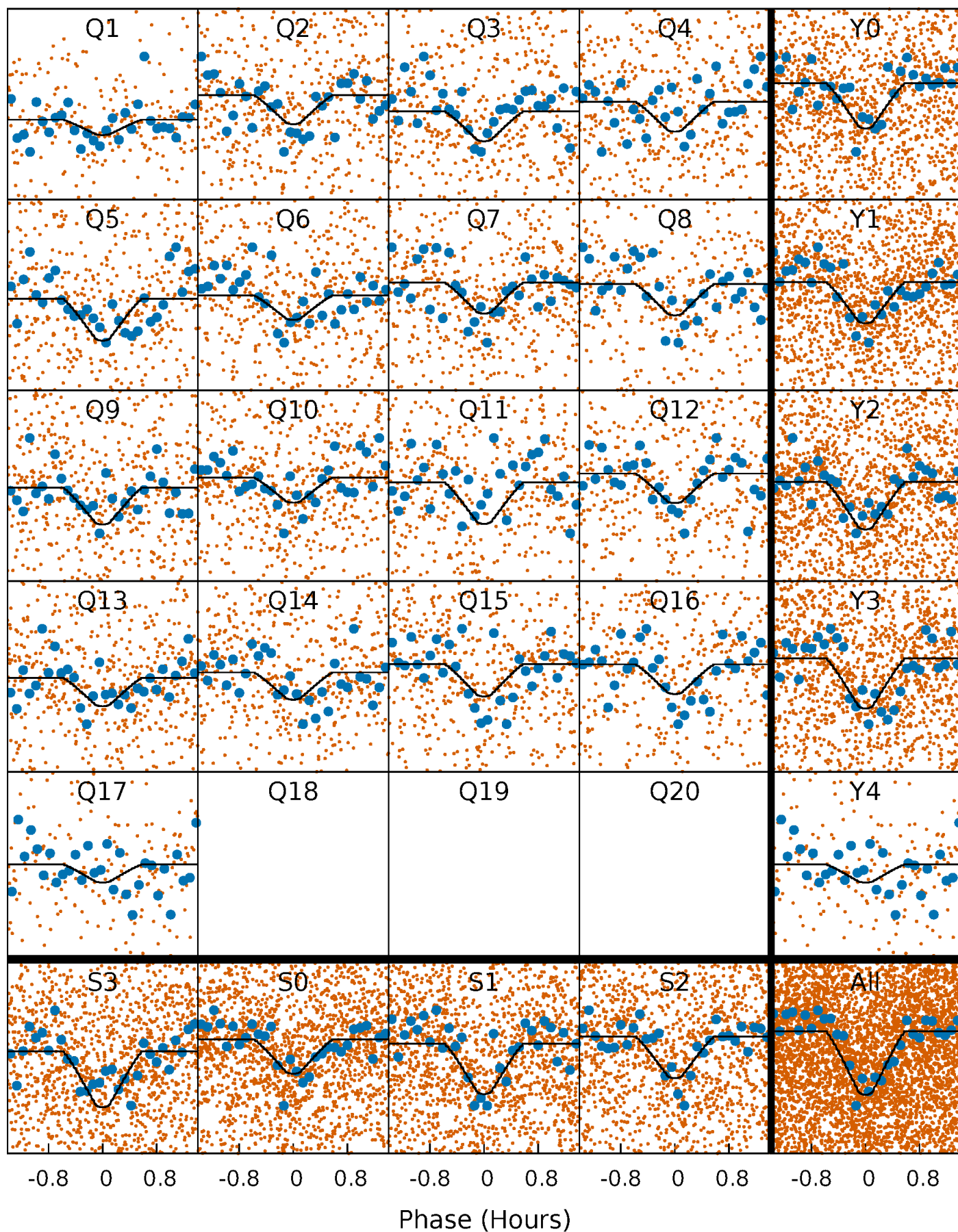
PDC Quarter-Phased Transit Curves

TCE 008283875-01 P= 0.800256 Days $T_0=132.069911$ (BKJD)



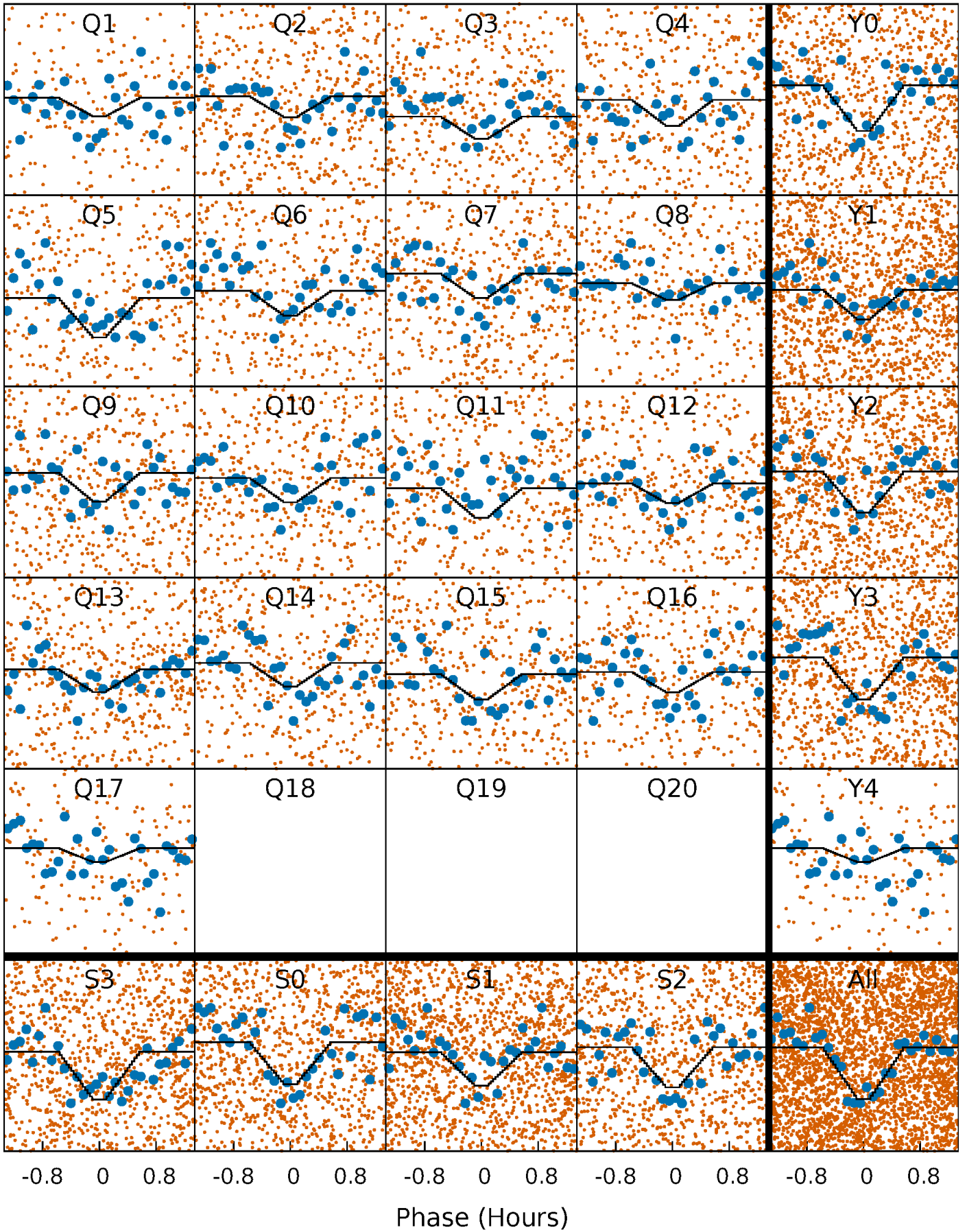
DV Quarter-Phased Transit Curves

TCE 008283875-01 P= 0.800256 Days $T_0=132.069911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

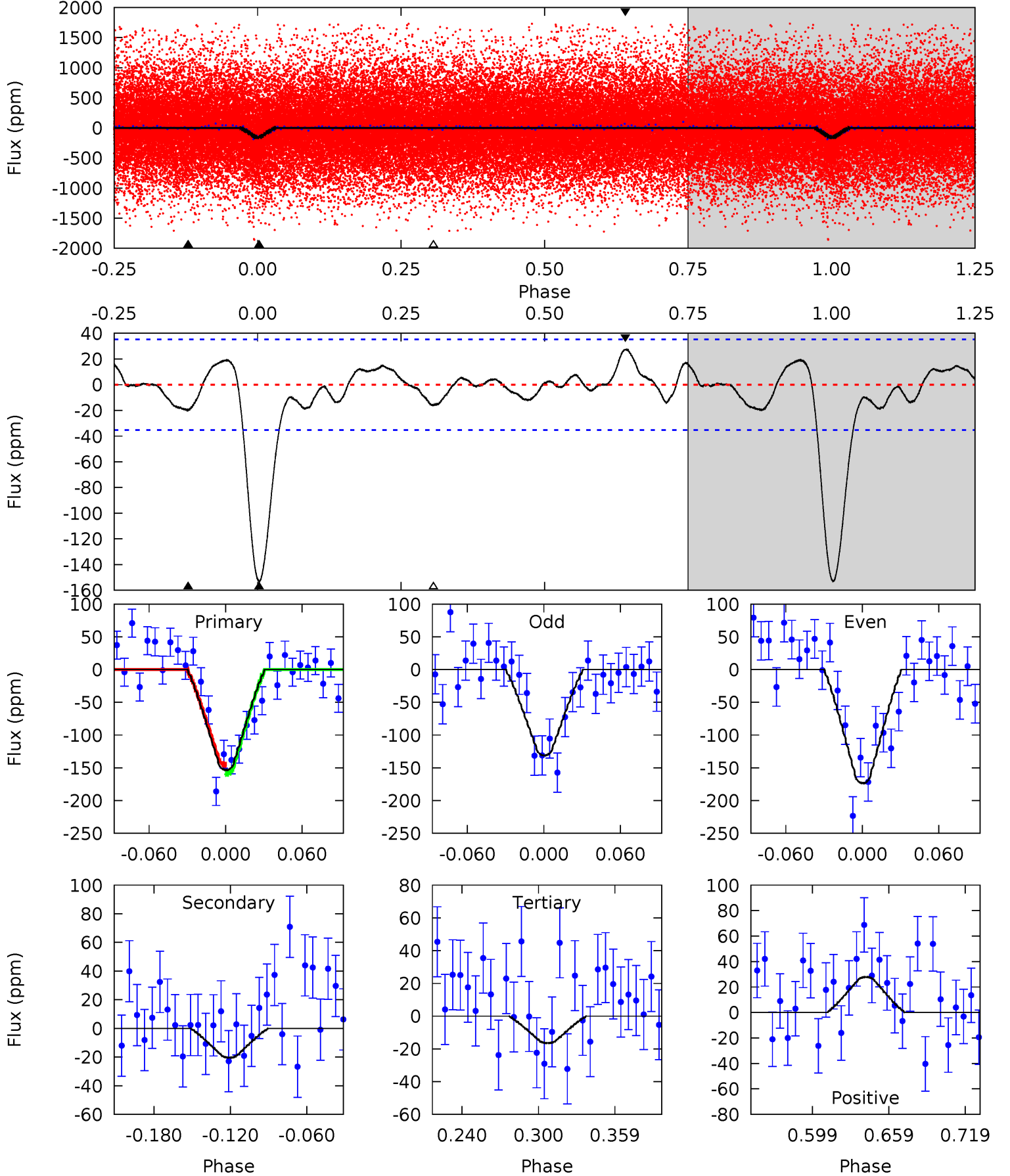
TCE 008283875-01 P= 0.800259 Days $T_0=132.069494$ (BKJD)



DV Model-Shift Uniqueness Test

008283875-01, P = 0.800256 Days, E = 131.269655 Days

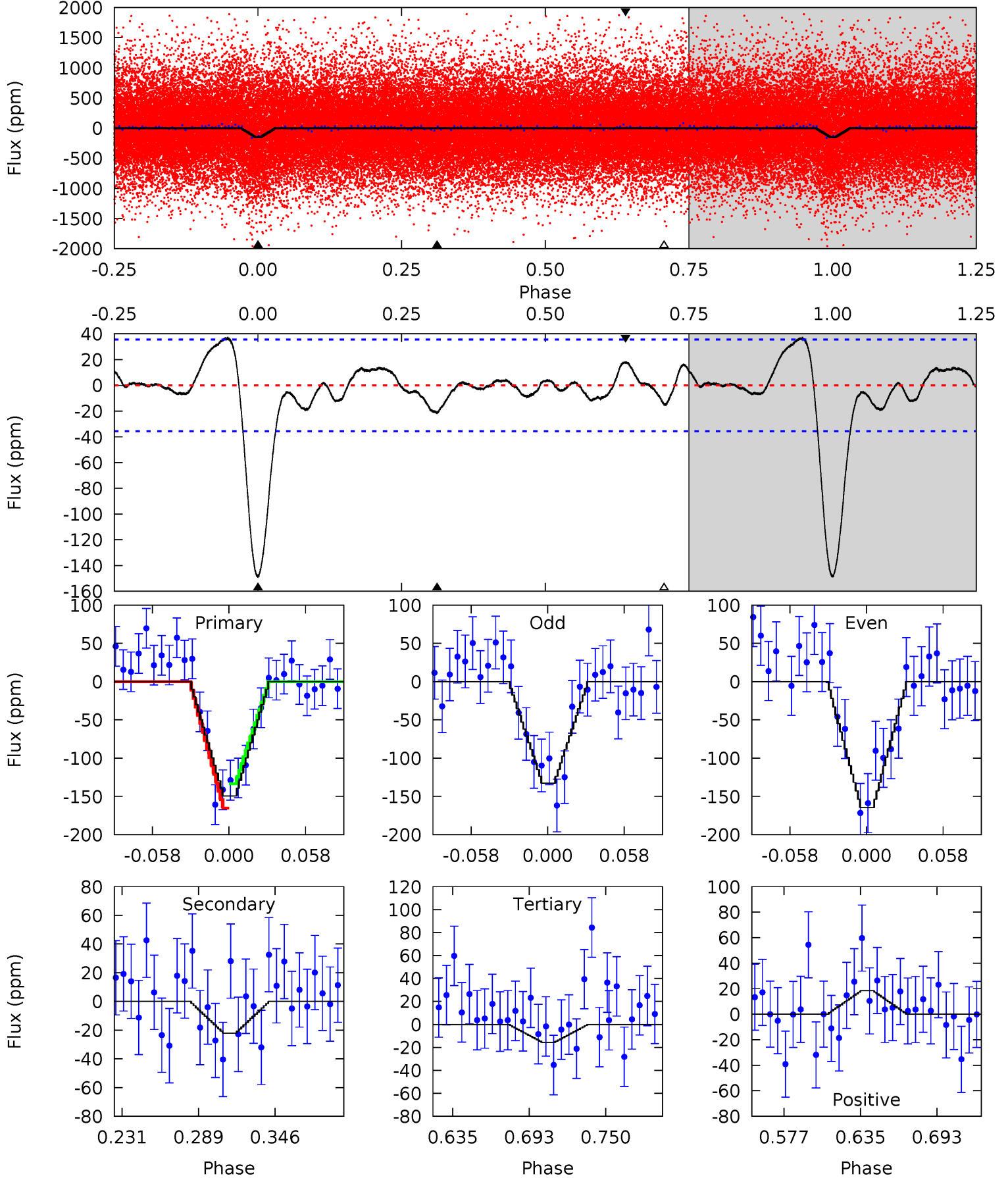
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	2.70	2.18	3.68	4.67	1.88	1.25	18.1	16.6	0.52	-0.99	2.81	0.94	0.15	0.89



Alt Model-Shift Uniqueness Test

008283875-01, P = 0.800259 Days, E = 131.269235 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	2.91	2.07	2.43	4.68	1.90	1.33	17.6	17.2	0.85	0.49	2.11	0.99	0.20	2.09



Stellar Parameters For KIC 008283875

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4336^{+118}_{-144}	$4.656^{+0.059}_{-0.027}$	$-0.460^{+0.300}_{-0.300}$	$0.590^{+0.045}_{-0.061}$	$0.574^{+0.063}_{-0.048}$	$3.945^{+1.058}_{-0.473}$
	+3%/-3%	+1%/-1%	+65%/-65%	+8%/-10%	+11%/-8%	+27%/-12%
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 008283875-01 / KOI 7007.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 8	$0.80^{+0.53}_{-0.45}$	1718^{+60}_{-66}	3001^{+1080}_{-443}	$3.255^{+16.376}_{-2.132}$
Alt.	-22 ± 8	$0.77^{+0.50}_{-0.41}$	1718^{+56}_{-63}	3086^{+939}_{-467}	$3.859^{+14.841}_{-2.515}$

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 $A_{obs} \gg 1.0$

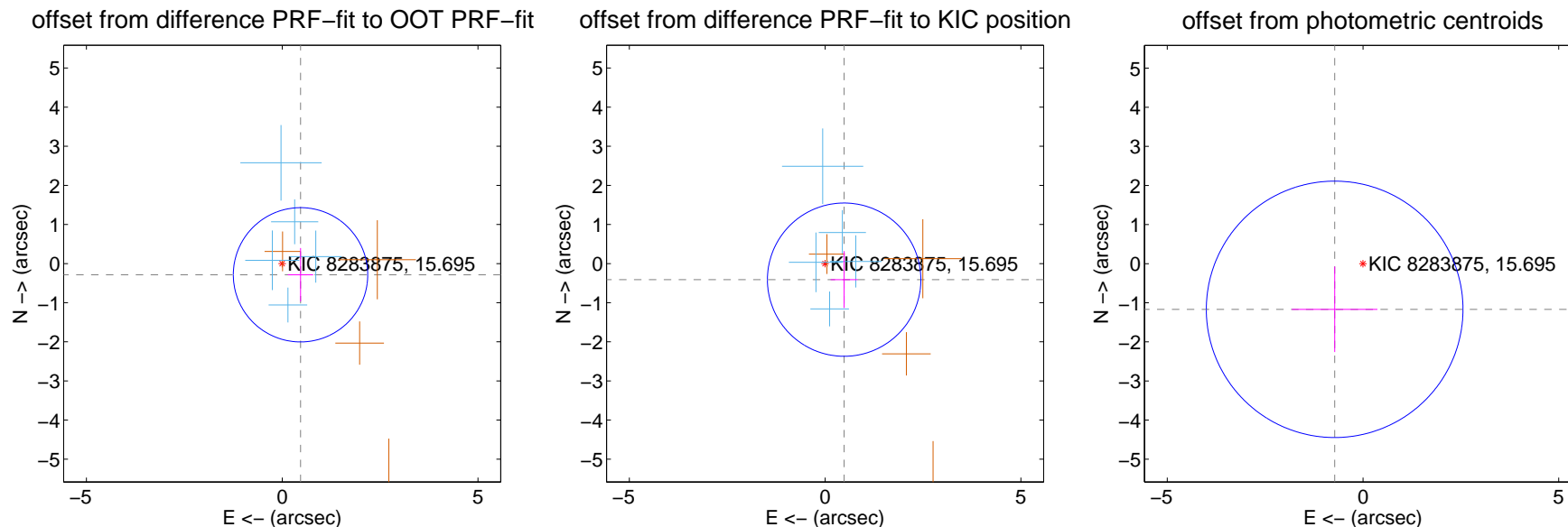
DV Centroid Data

Supplemental centroid analysis for 008283875-01. Kepler magnitude: 15.70. Transit SNR 12.79

There are 5 quarters with good PRF difference image offsets

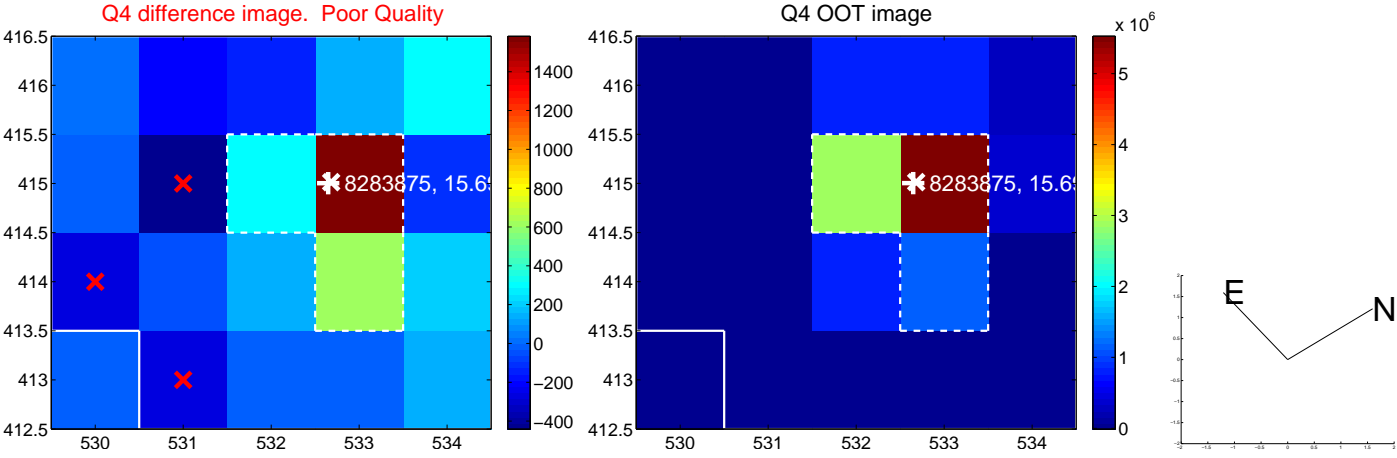
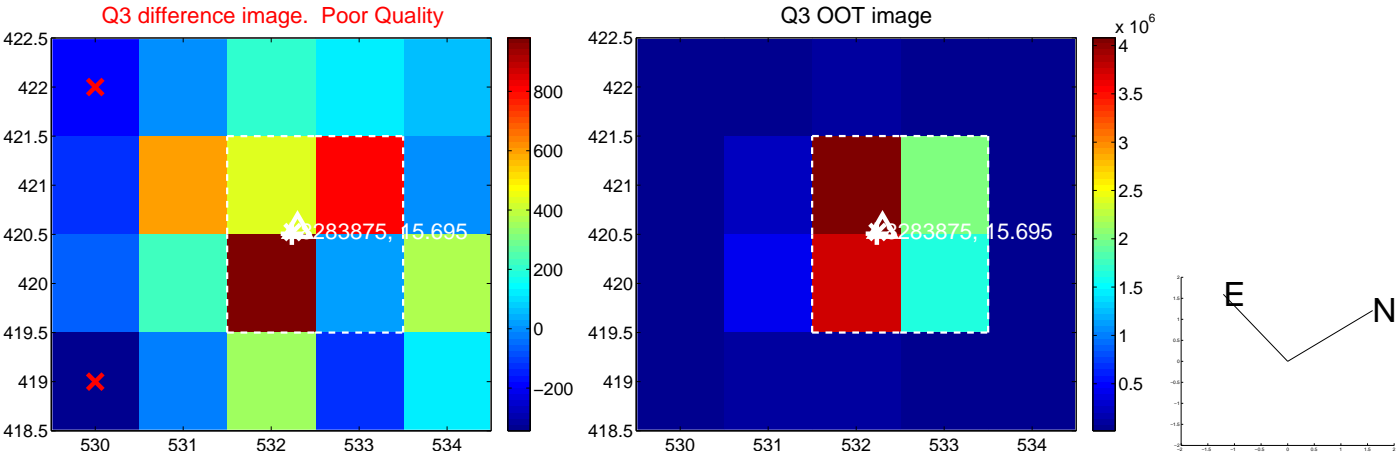
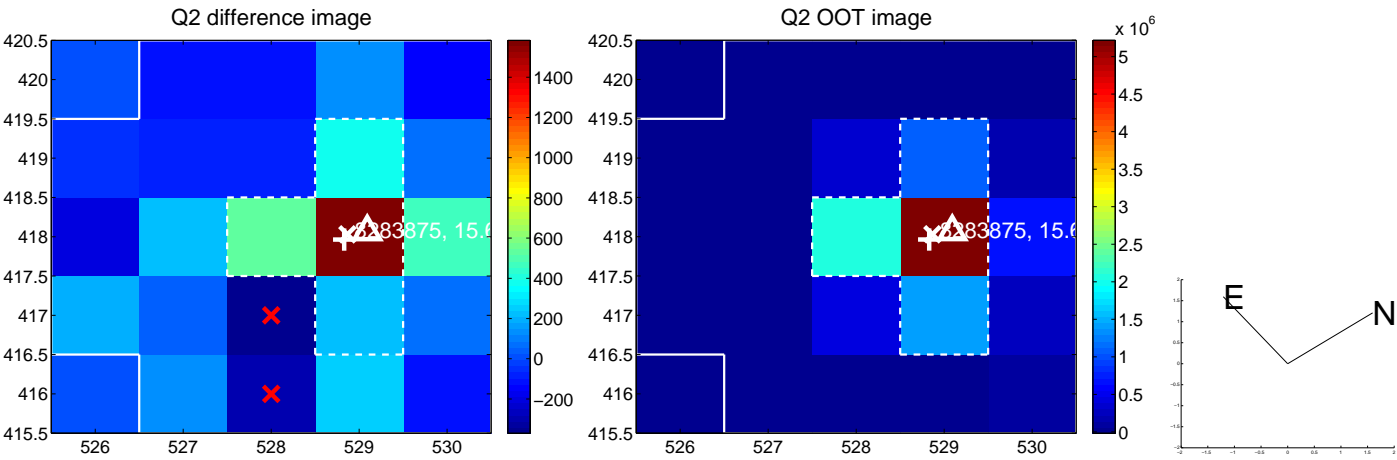
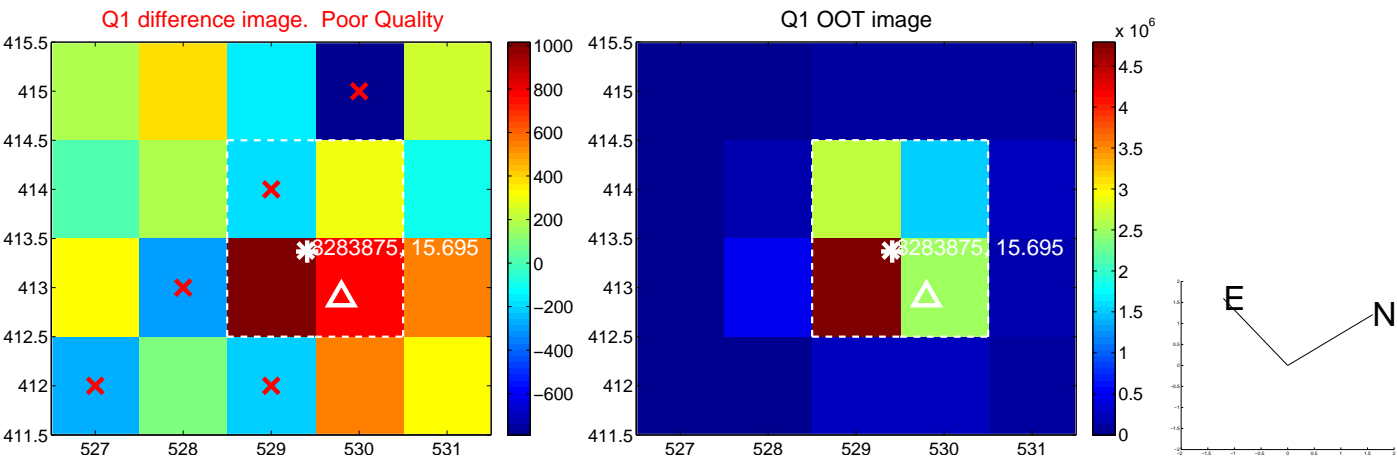
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.549 ± 0.572	0.96	-0.468 ± 0.323	-0.286 ± 0.683
PRF-fit source offset from KIC position	0.636 ± 0.653	0.97	-0.486 ± 0.345	-0.411 ± 0.724
photometric centroid source offset	1.37 ± 1.09	1.26	0.72 ± 1.09	-1.17 ± 1.09

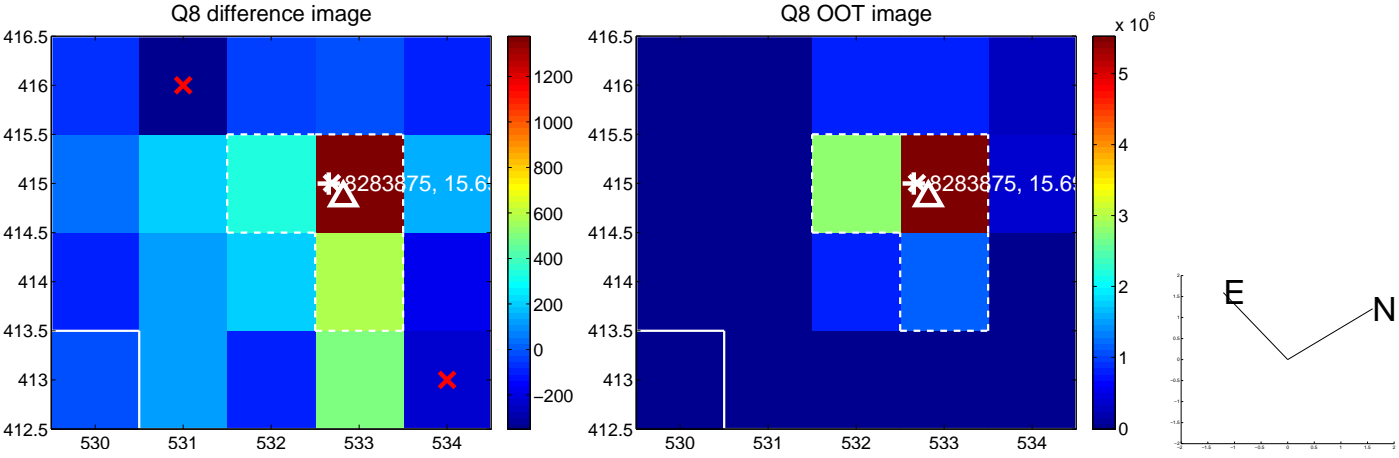
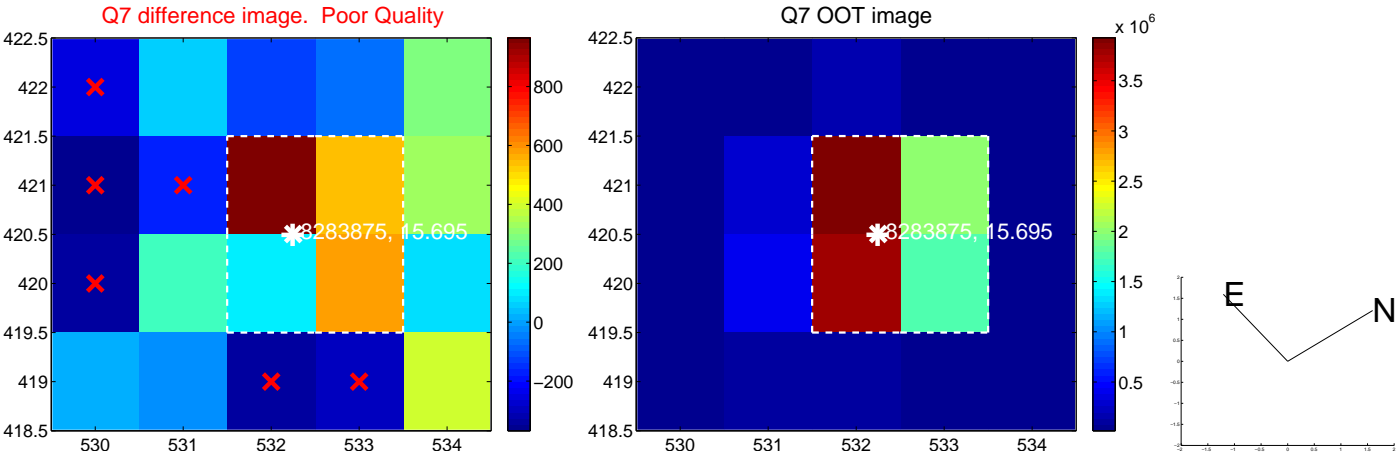
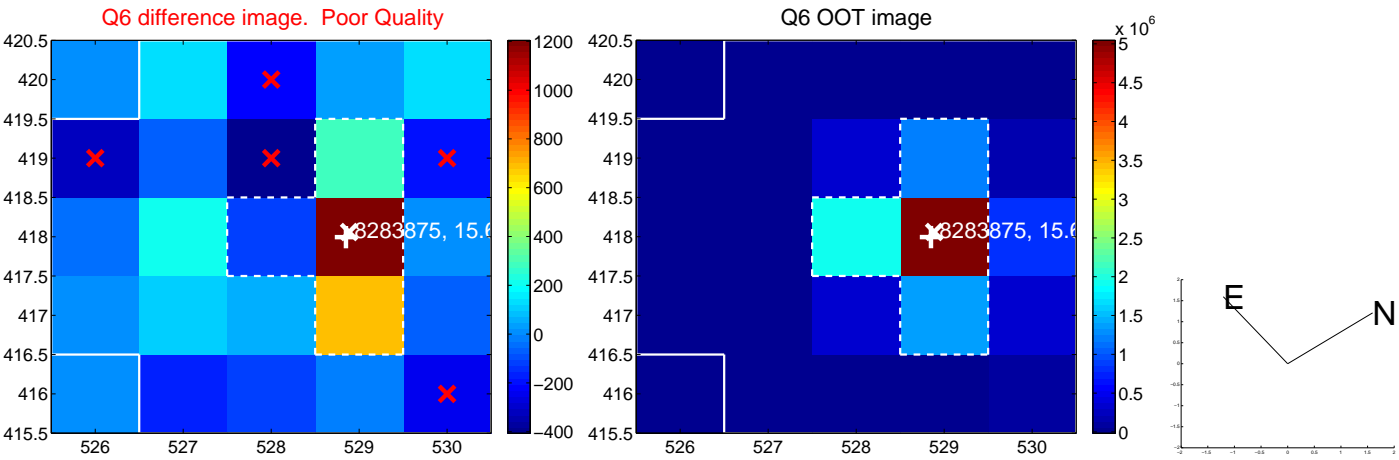
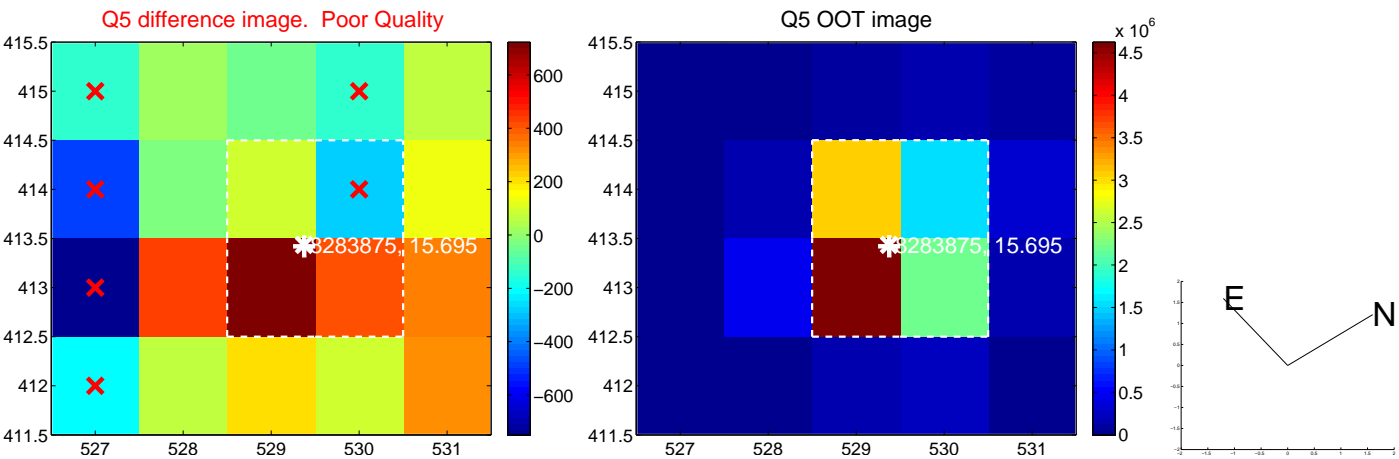


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

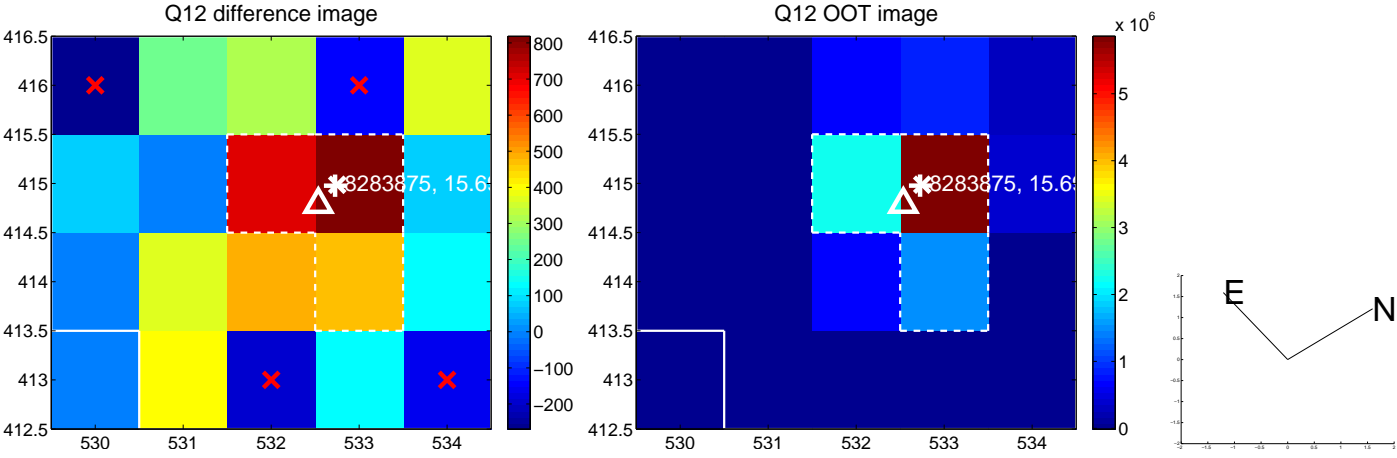
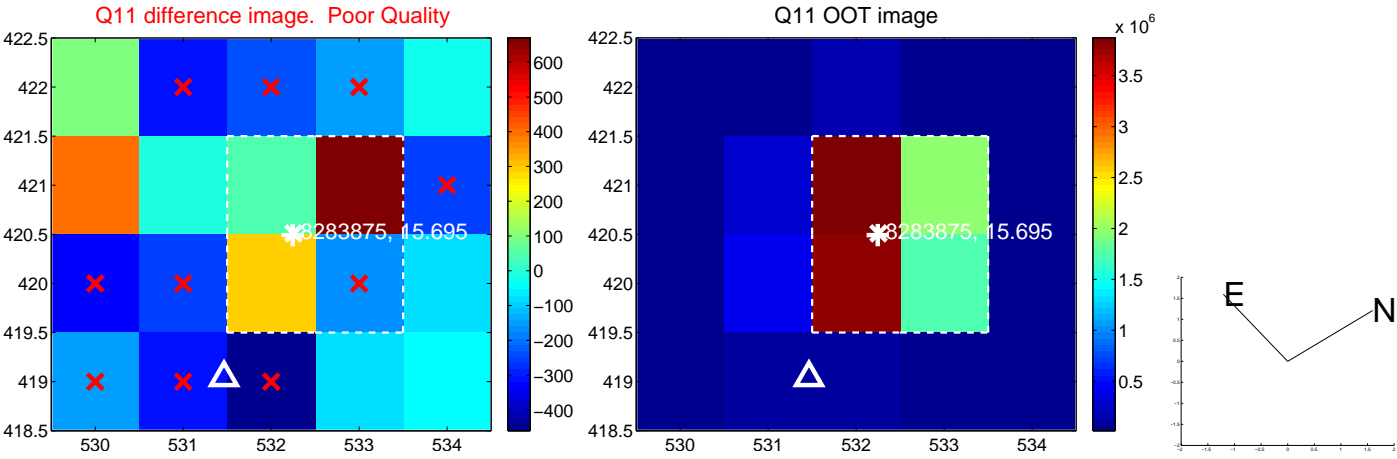
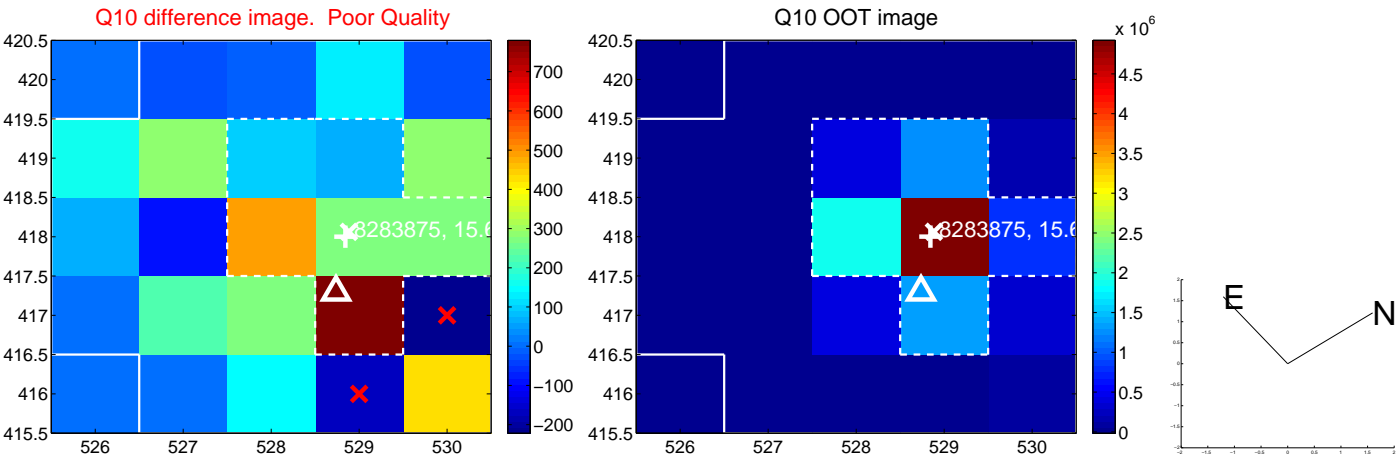
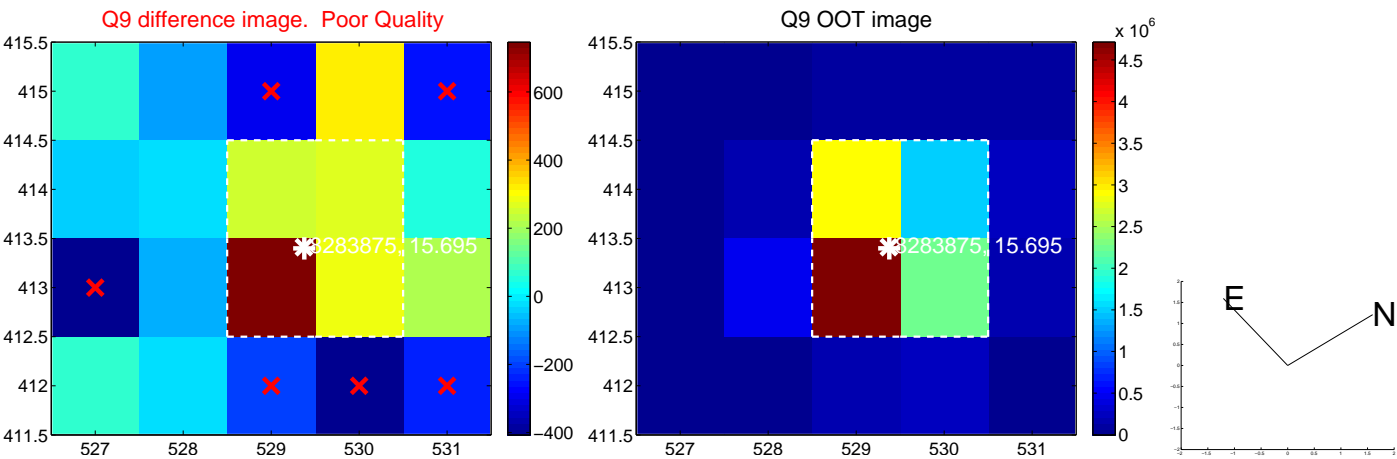
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



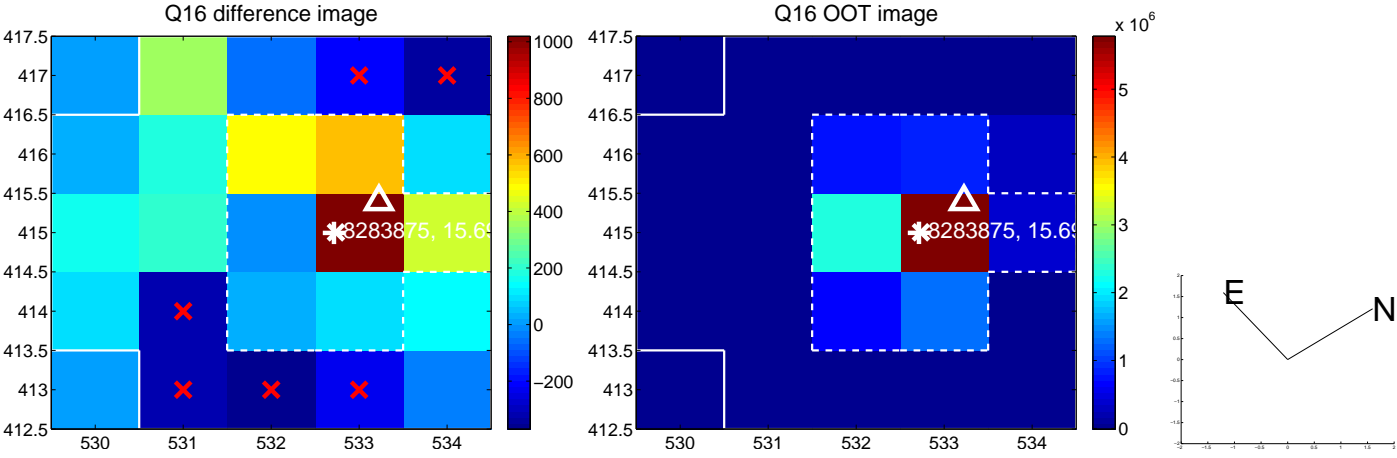
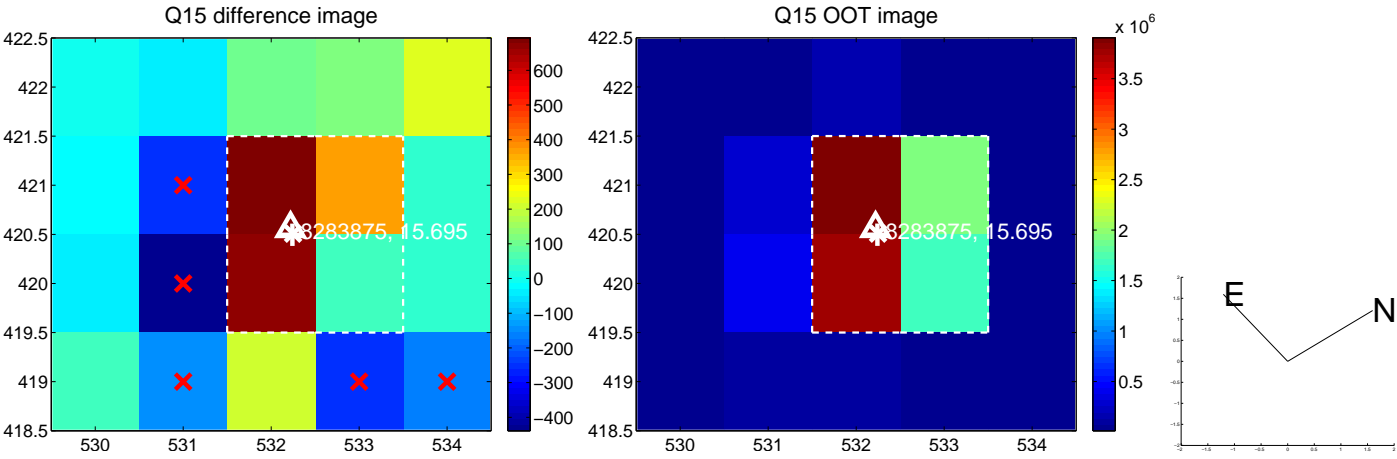
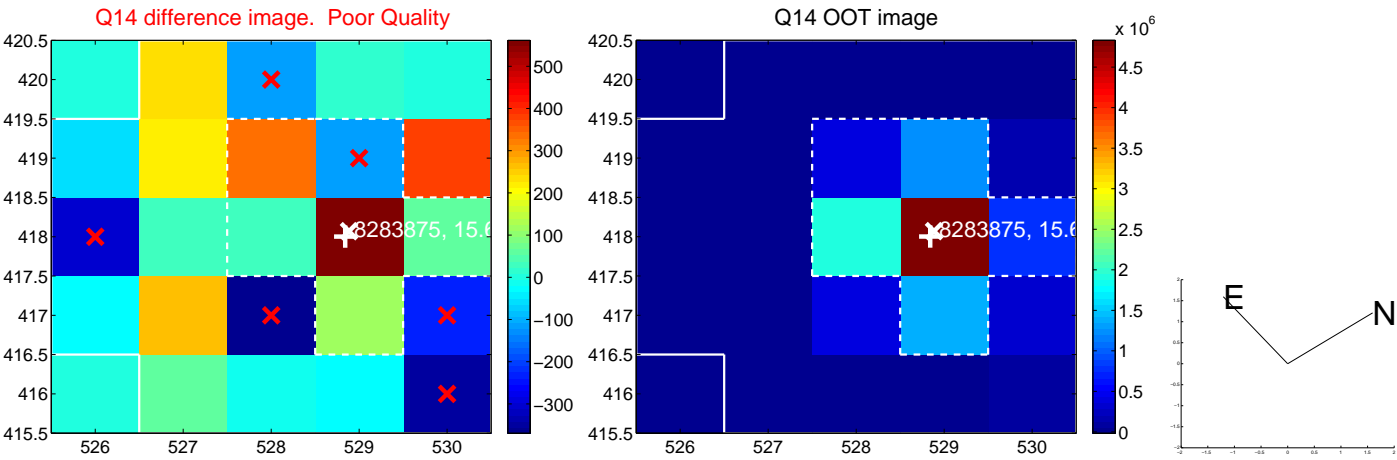
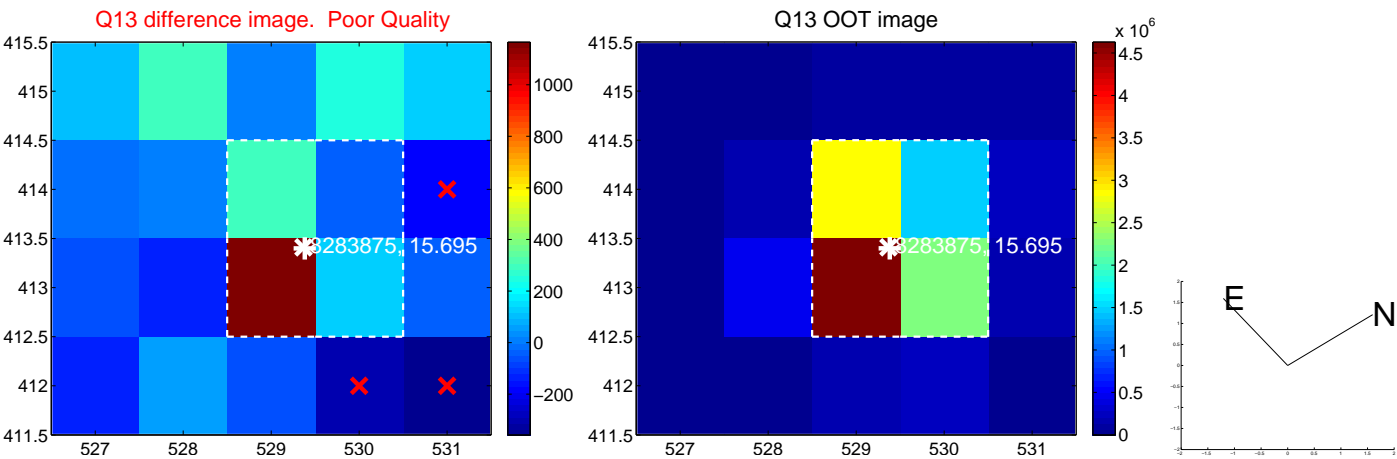
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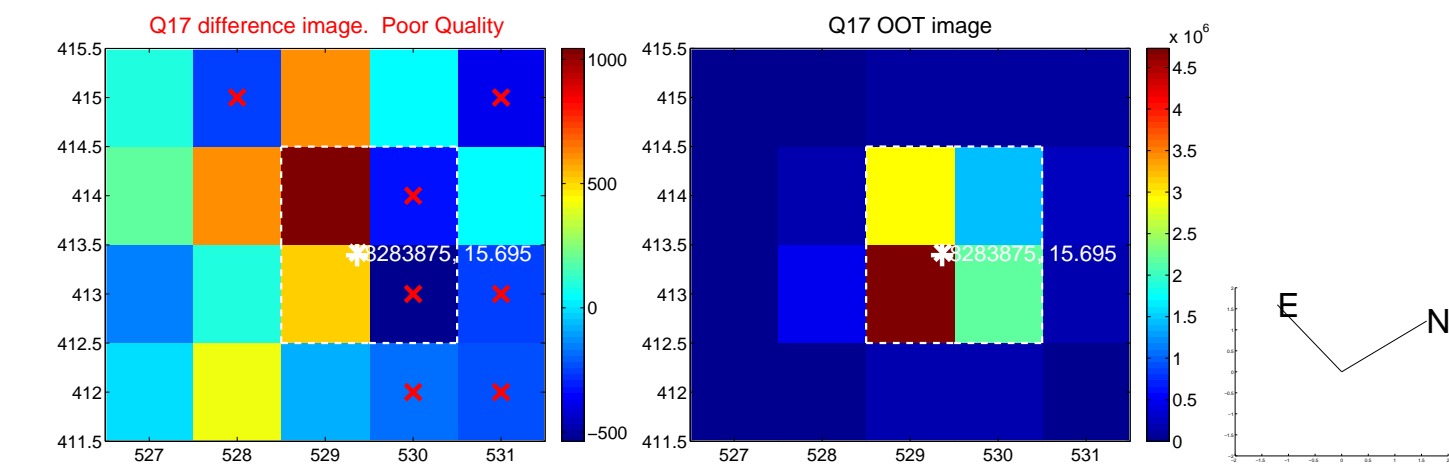
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



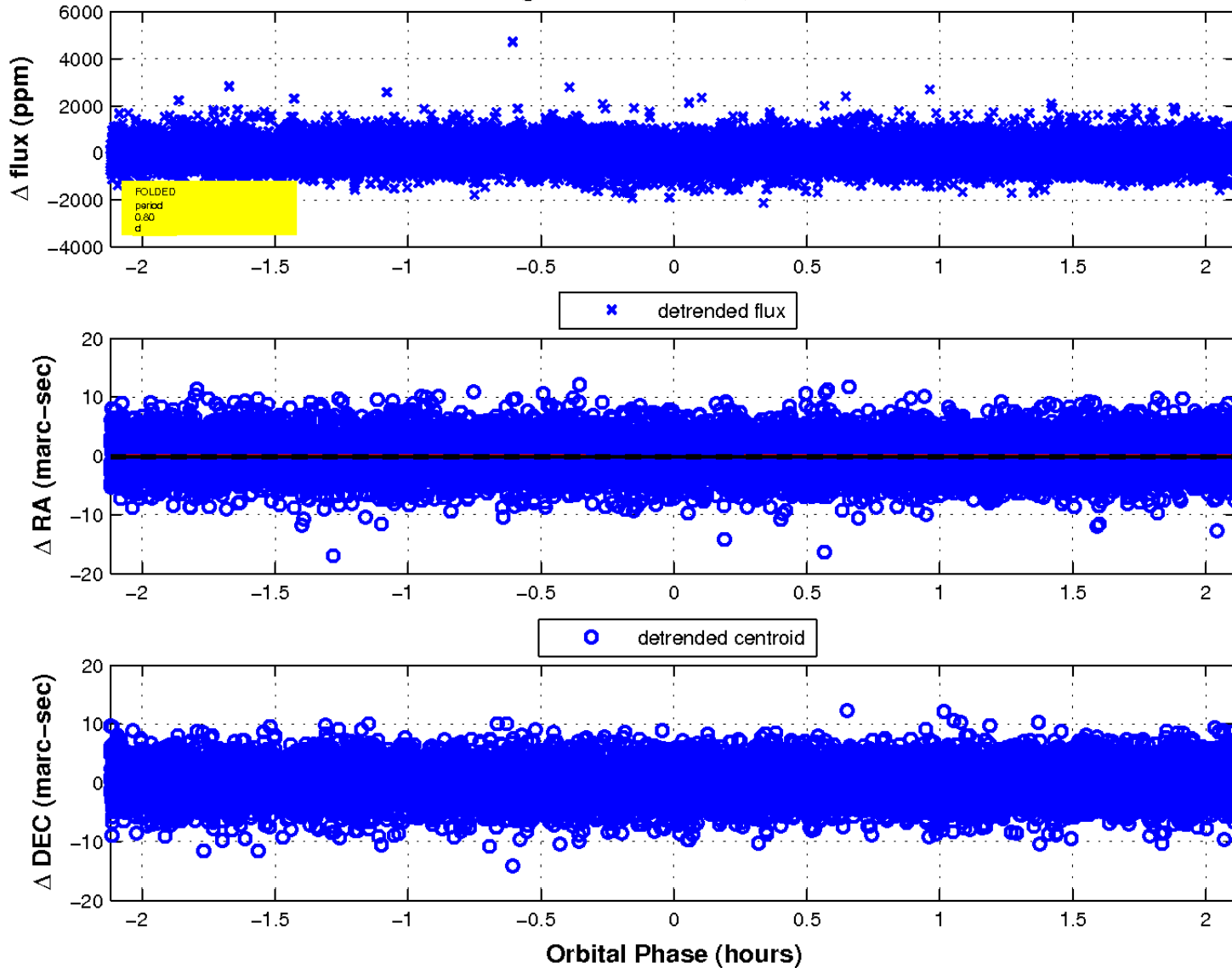
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

