

KIC 008254882

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})
008254882-01	OBS	4164.01	0.925648	132.118862	29.8	1.655	12.5	13.8	1.61	6058	1.05	7641.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008254882-01	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 008254882-01

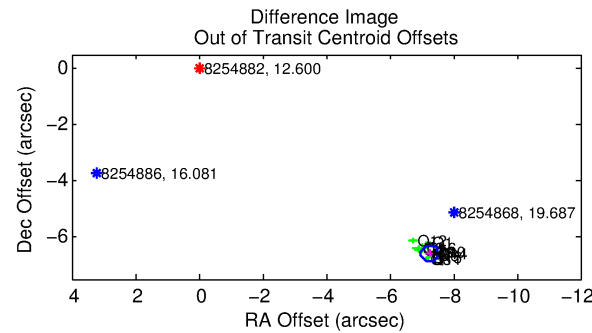
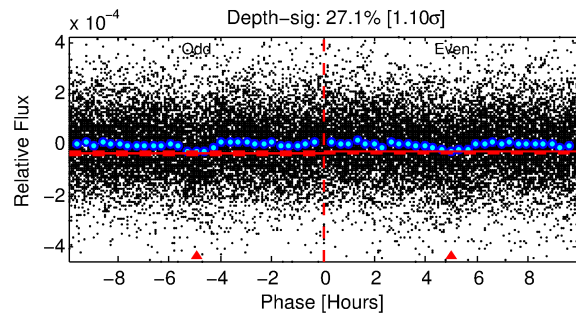
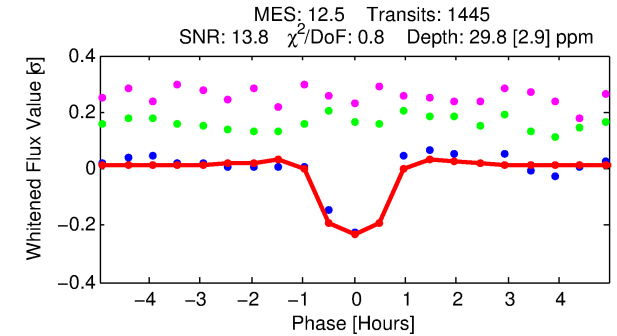
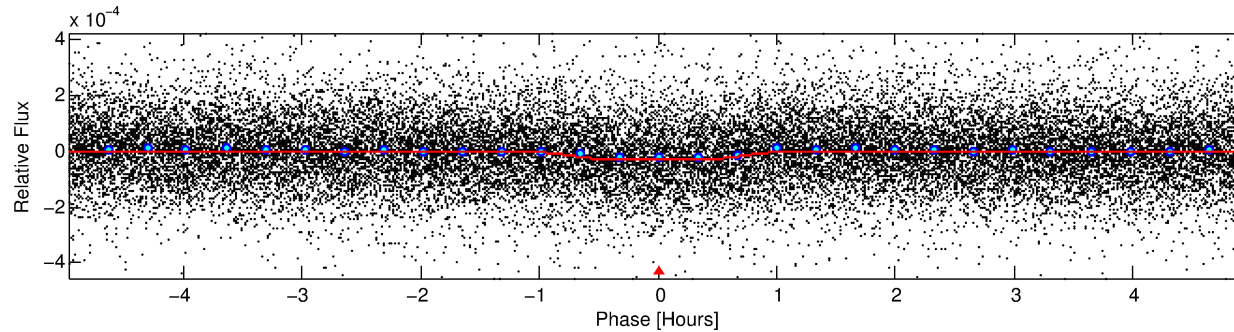
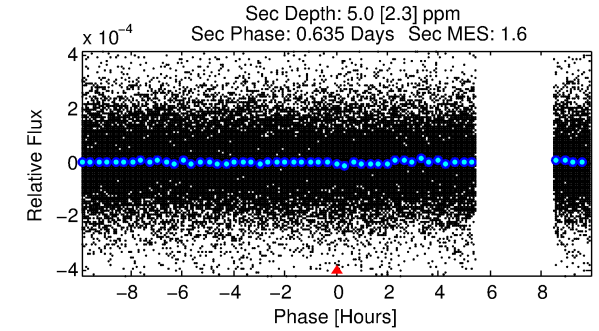
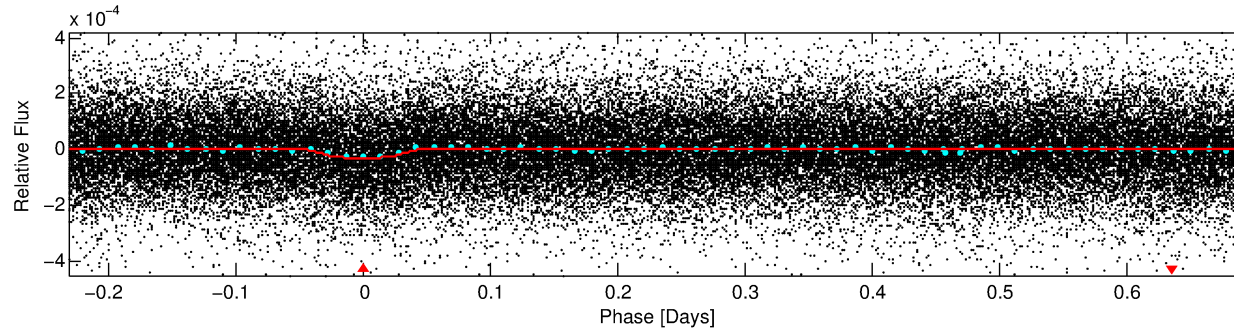
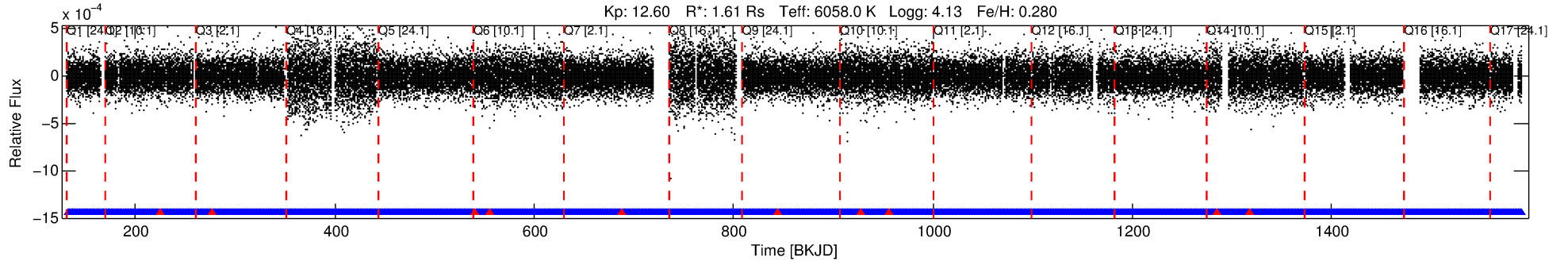
No Significant Match Found

DV One-Page Summary

KIC: 8254882 Candidate: 1 of 1 Period: 0.926 d

KOI: K04164.01 Corr: 0.942

Kp: 12.60 R*: 1.61 Rs Teff: 6058.0 K Logg: 4.13 Fe/H: 0.280



DV Fit Results:

Period = 0.92565 [0.00001] d
Epoch = 132.1189 [0.0016] BKJD
Rp/R* = 0.0060 [0.0019]
a/R* = 2.10 [2.60]
b = 0.90 [0.33]
Seff = 7641.76 [3441.45]
Teq = 2384 [268] K
Rp = 1.05 [0.47] Re
a = 0.0203 [0.0056] AU
Ag = 1.02 [0.91] [0.02σ]
Teff = 3703 [740] K [1.68σ]

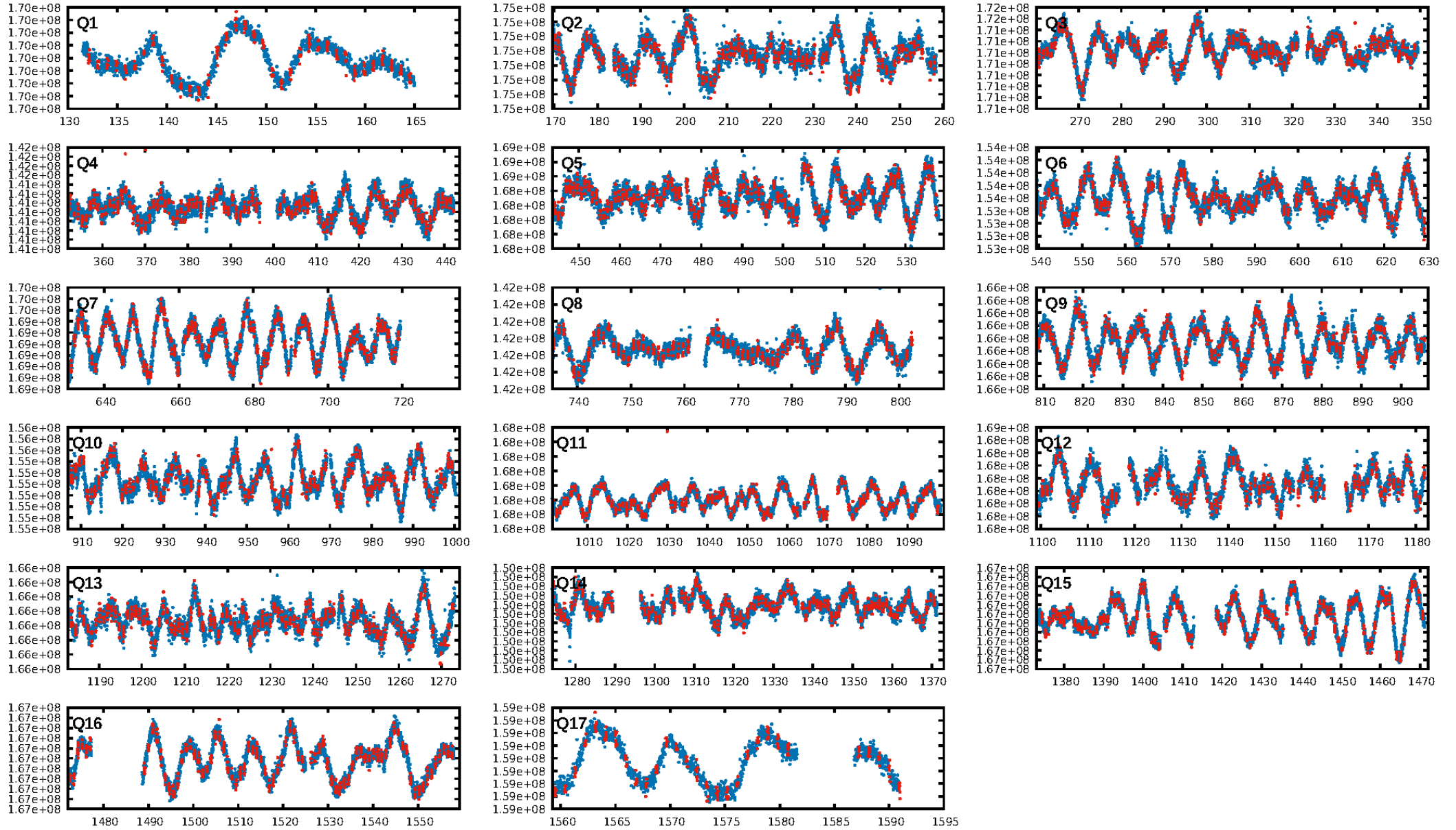
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 4.41e-34
RollingBand-fgt: 0.99 [1370/1380]
GhostDiagnostic-chr: -0.5096
Centroid-sig: 0.0%
Centroid-so: 14.054 arcsec [15.85σ]
OotOffset-rm: 9.796 arcsec [103.80σ]
KicOffset-rm: 10.042 arcsec [104.83σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

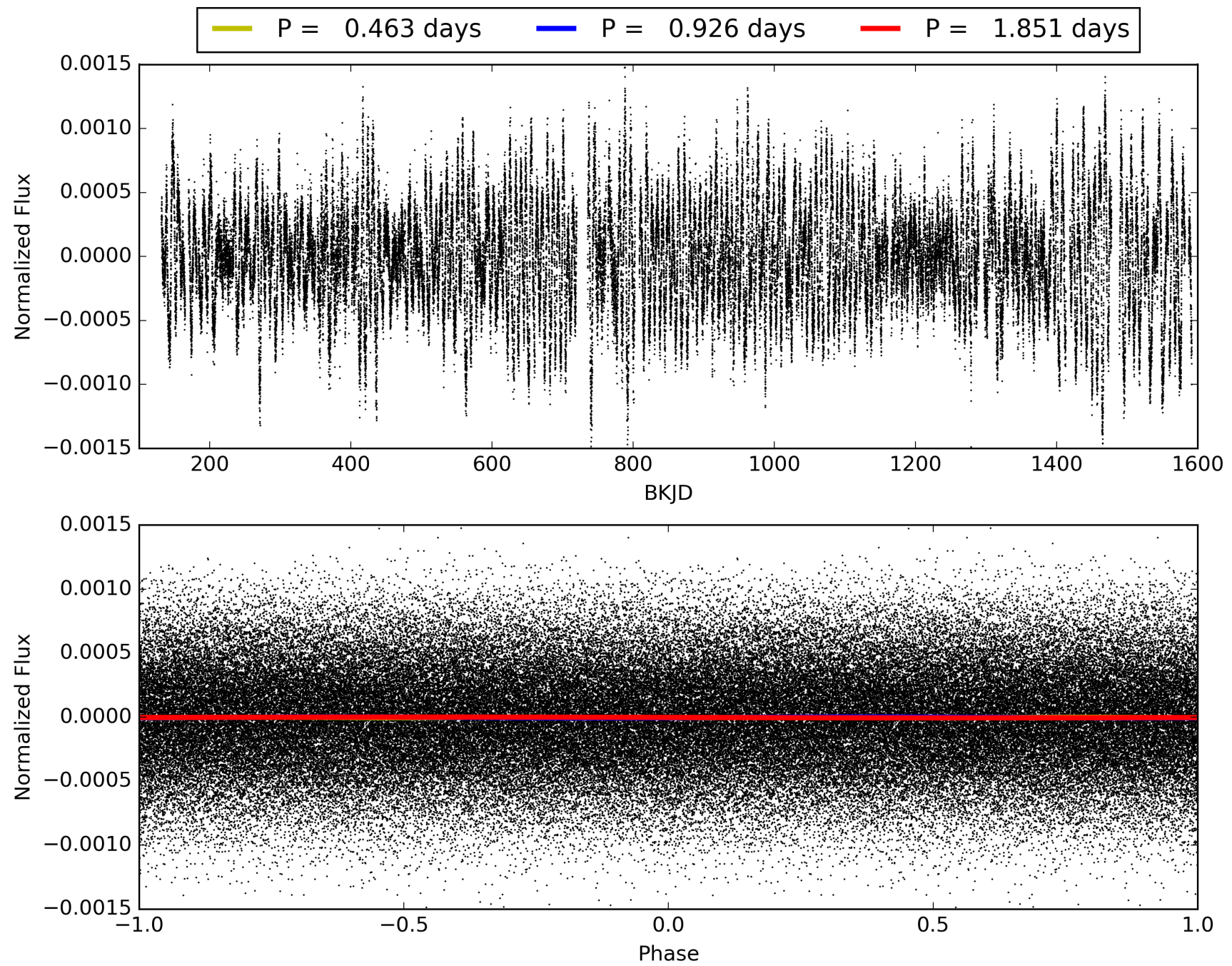
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:07:14 Z

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

TCE 008254882-01, PDC Light Curves

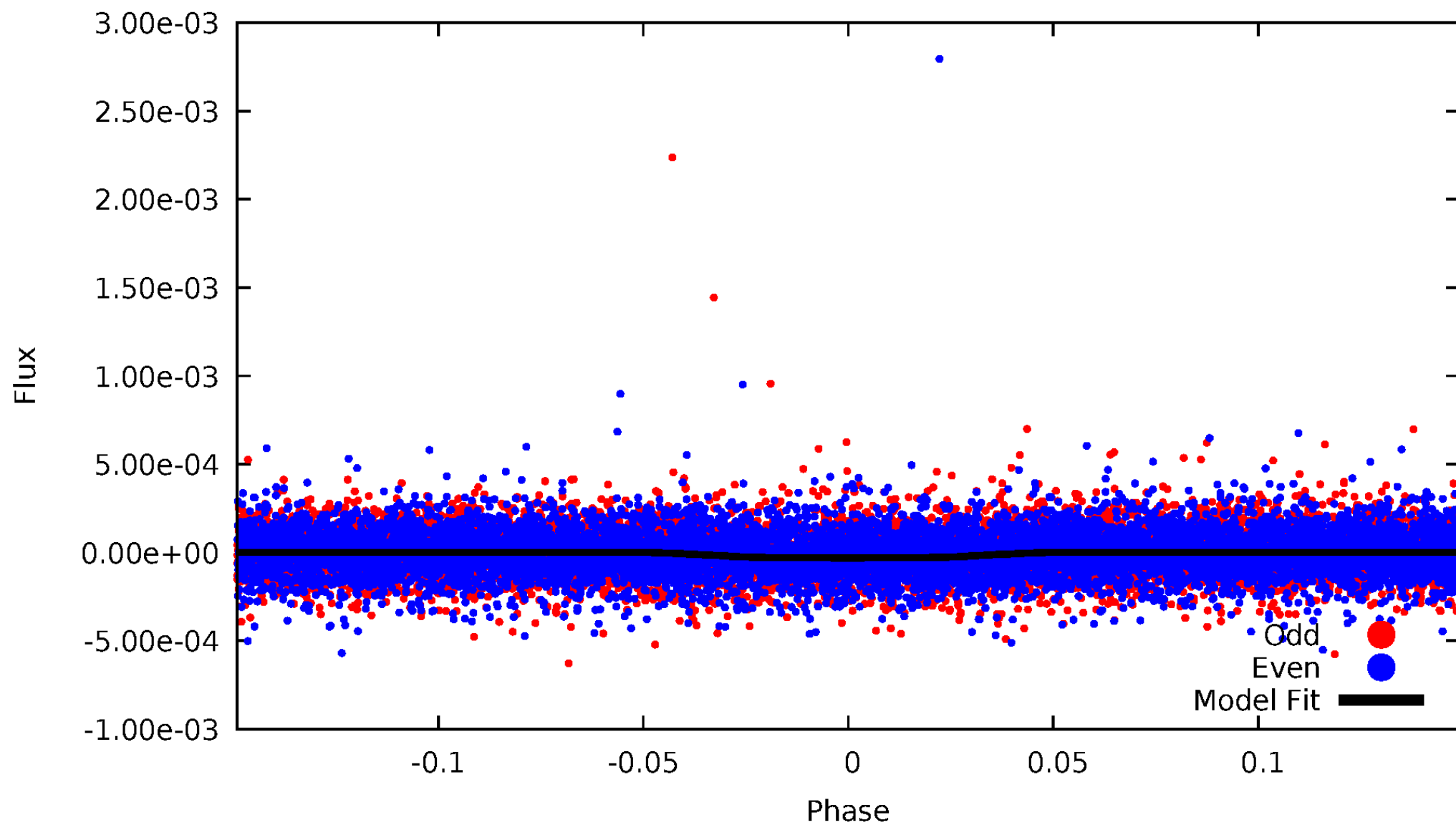


TCE 008254882-01



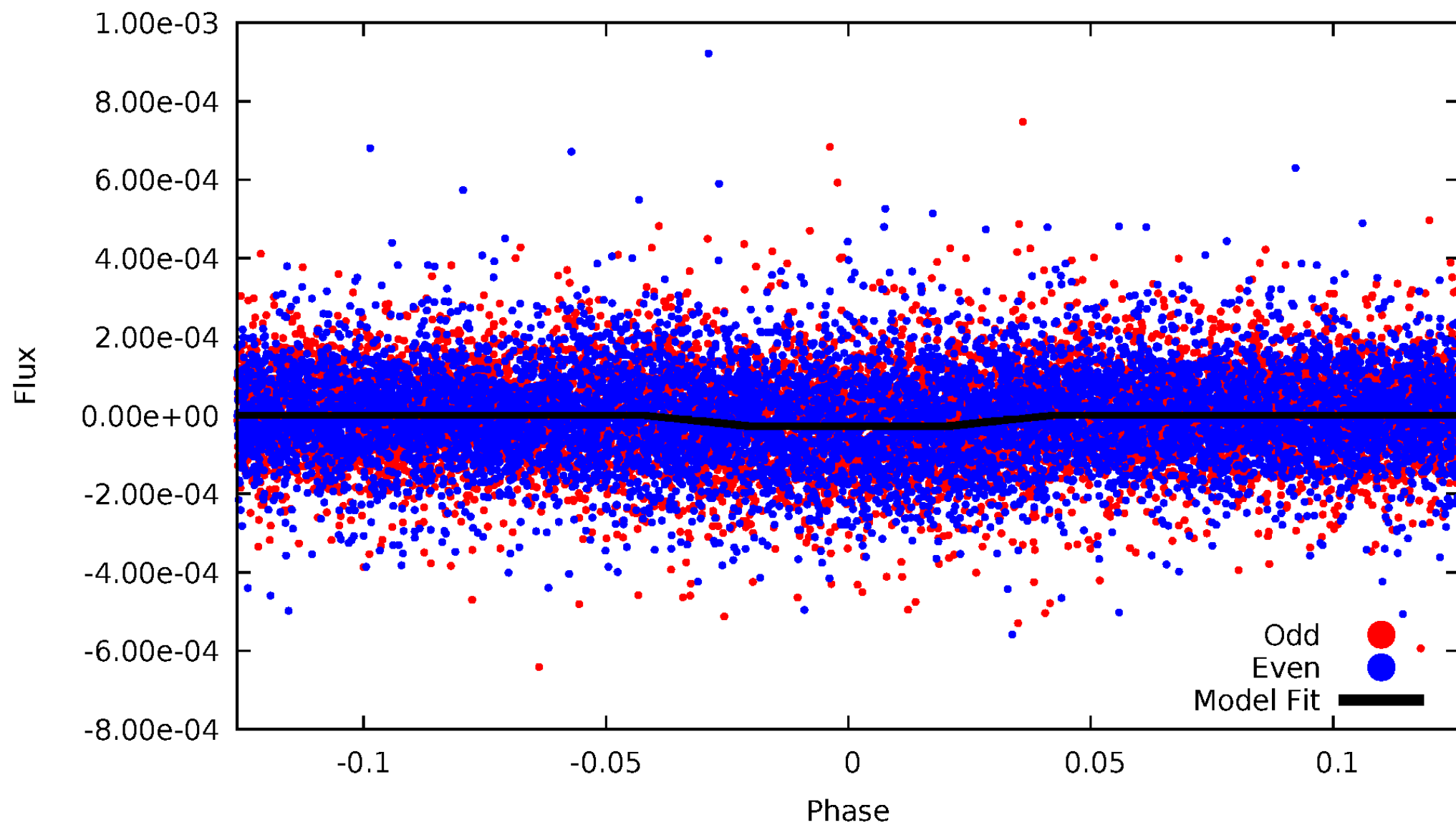
DV Odd/Even

TCE 008254882-01



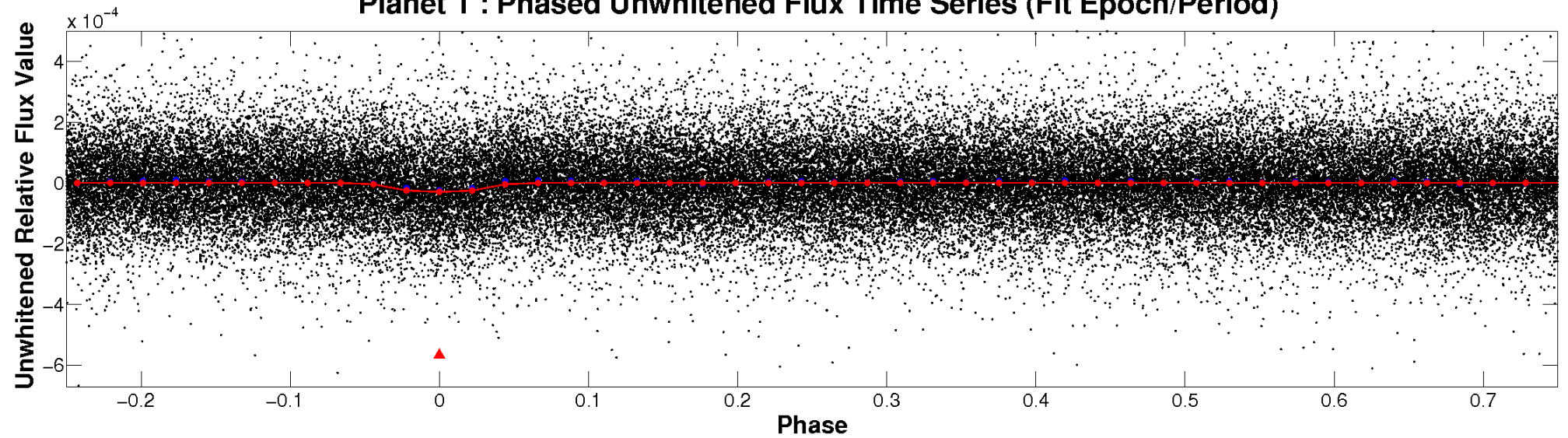
ALT Odd/Even

TCE 008254882-01

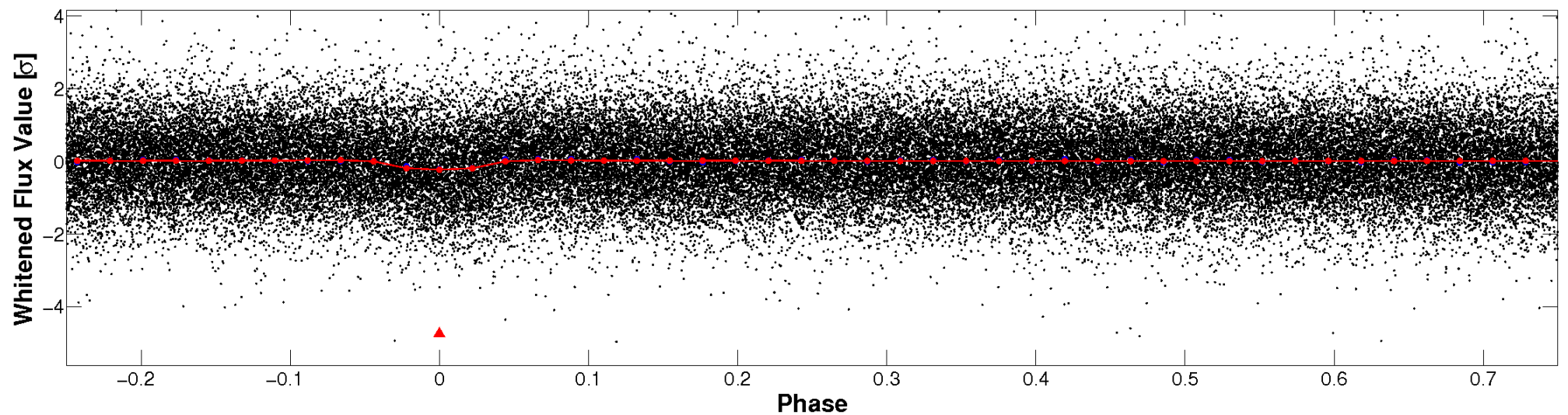


Non-Whitened Vs. Whitened Light Curve

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

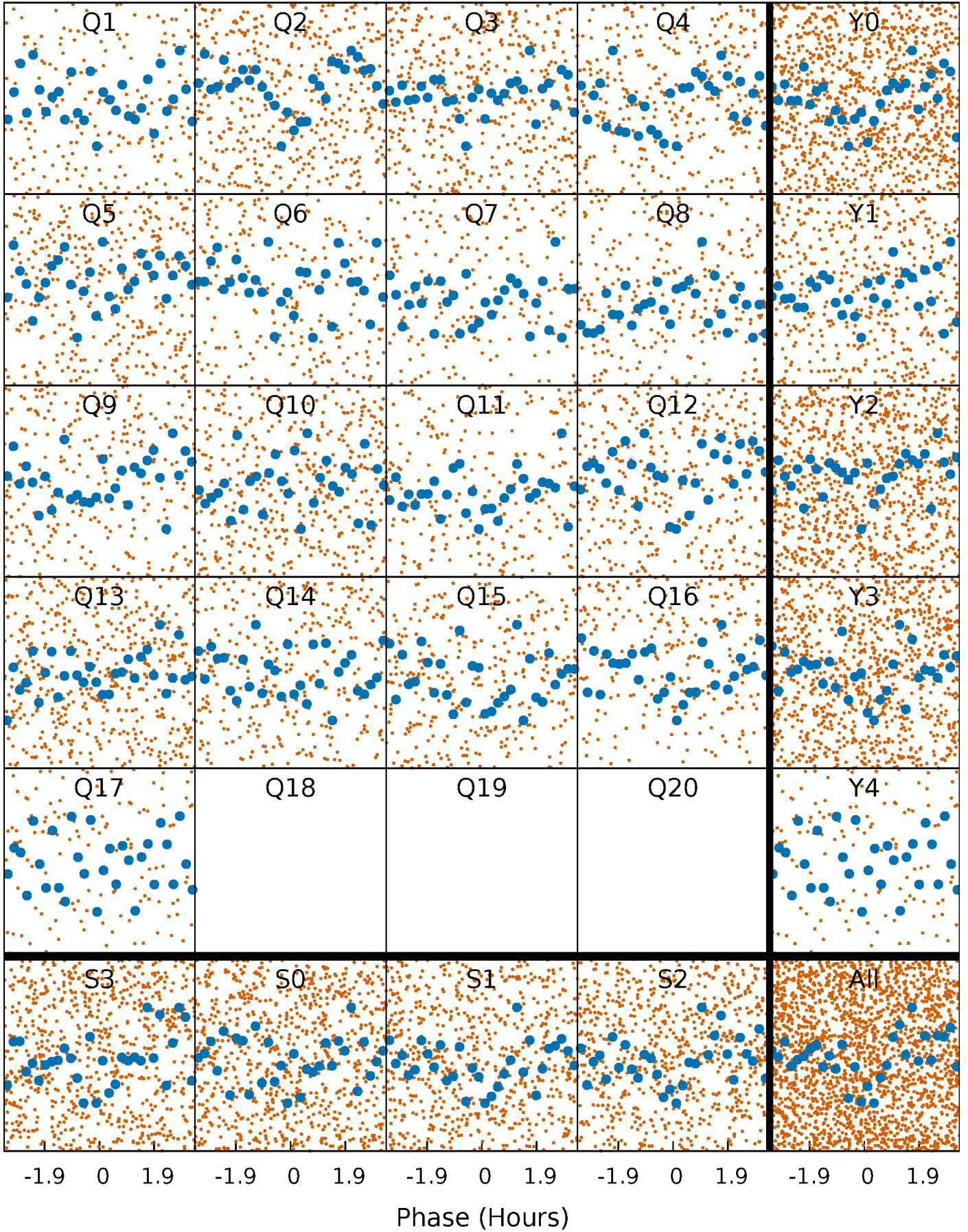


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



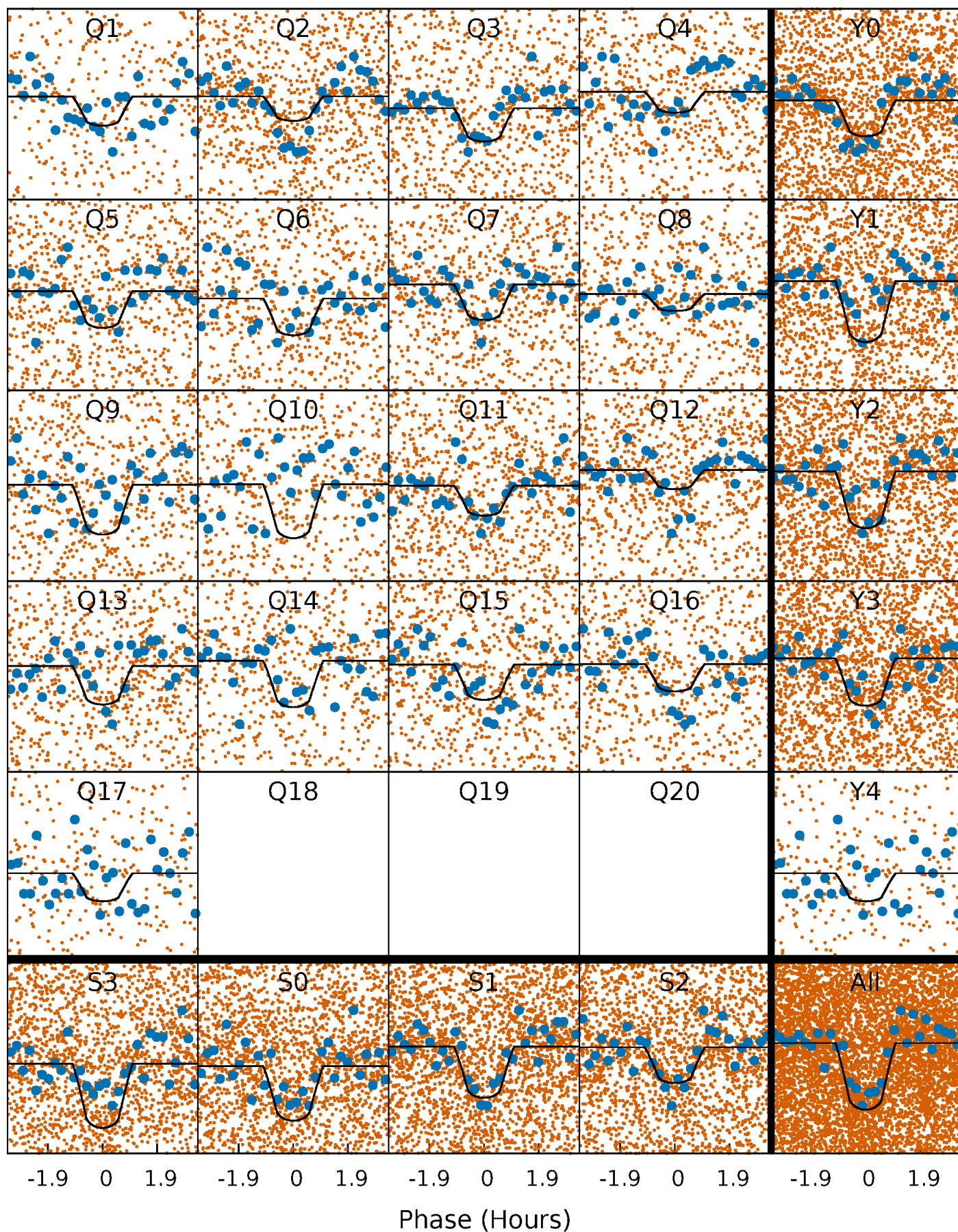
PDC Quarter-Phased Transit Curves

TCE 008254882-01 P= 0.925648 Days $T_0=132.118862$ (BKJD)



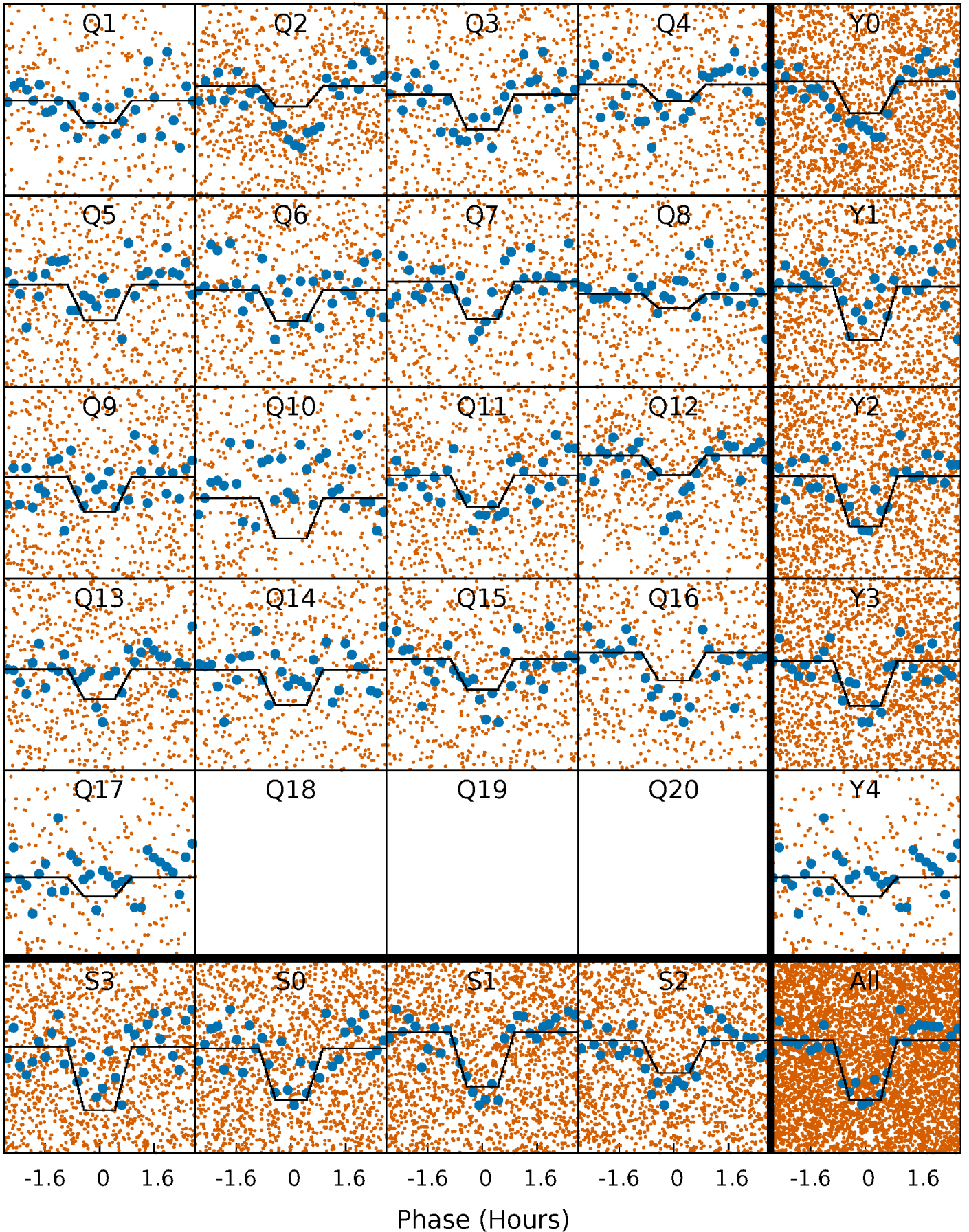
DV Quarter-Phased Transit Curves

TCE 008254882-01 P= 0.925648 Days $T_0=132.118862$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

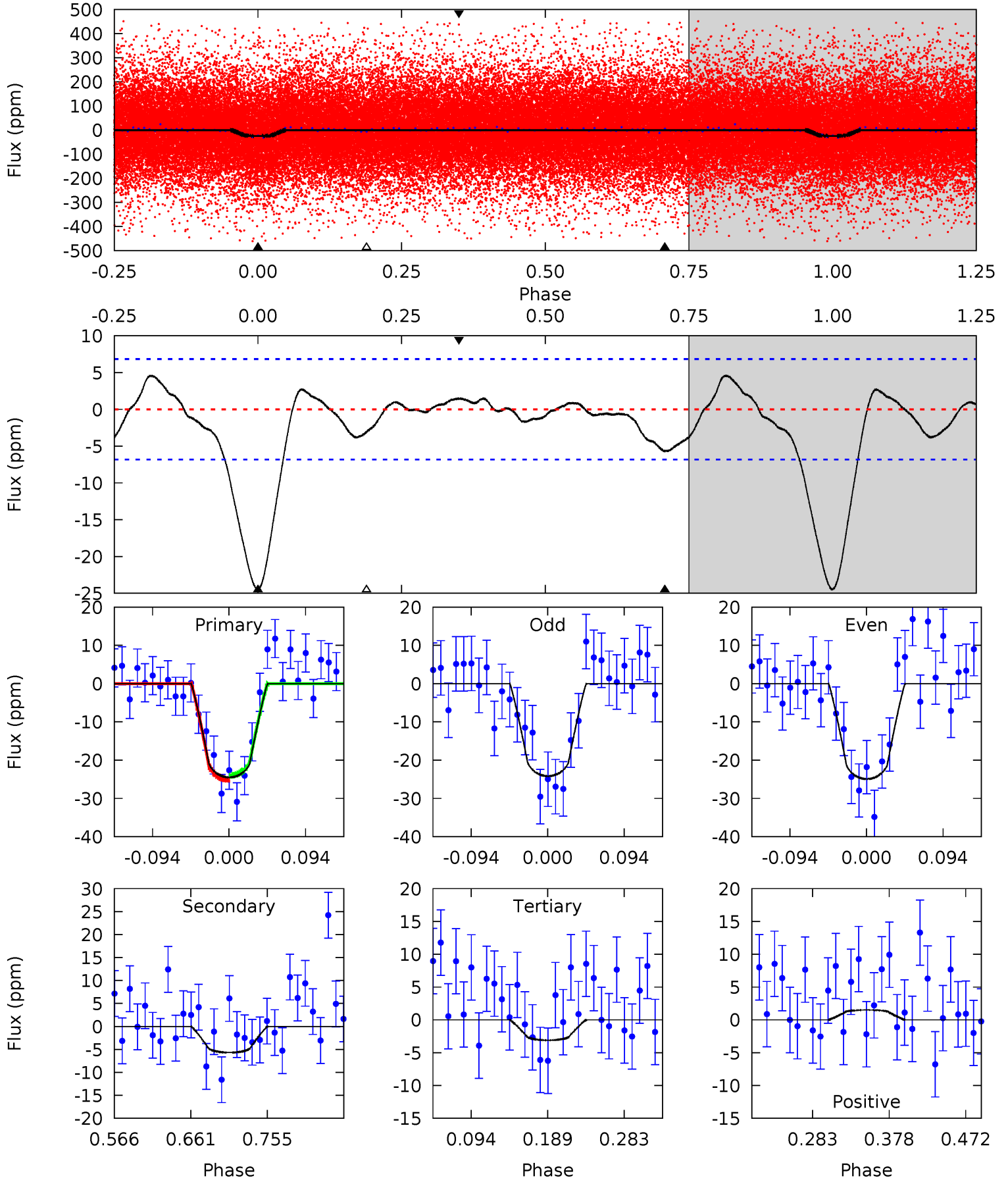
TCE 008254882-01 P= 0.925660 Days $T_0=132.111991$ (BKJD)



DV Model-Shift Uniqueness Test

008254882-01, P = 0.925648 Days, E = 131.193214 Days

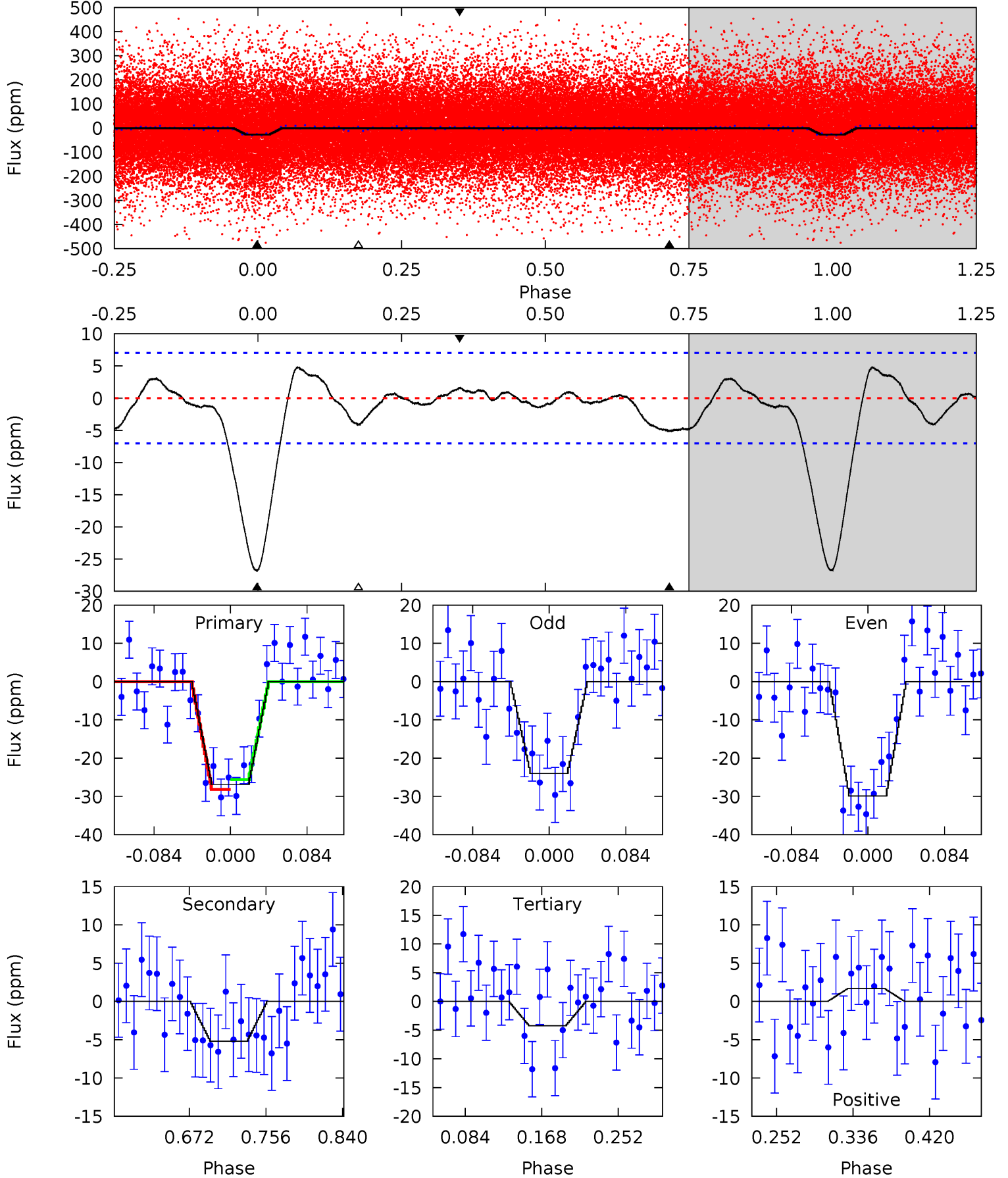
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	3.82	2.08	1.01	4.58	1.67	1.10	14.3	15.4	1.74	2.81	0.26	0.93	0.16	0.35



Alt Model-Shift Uniqueness Test

008254882-01, P = 0.925660 Days, E = 131.186331 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	3.39	2.76	1.11	4.60	1.73	0.99	14.8	16.5	0.63	2.28	1.92	0.95	0.15	0.84



Stellar Parameters For KIC 008254882

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6058^{+190}_{-232}	$4.135^{+0.240}_{-0.180}$	$0.280^{+0.150}_{-0.300}$	$1.612^{+0.459}_{-0.505}$	$1.296^{+0.161}_{-0.242}$	$0.435^{+0.644}_{-0.195}$
	+3%/-4%	+6%/-4%	+54%/-107%	+28%/-31%	+12%/-19%	+148%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008254882-01 / KOI 4164.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$1.03^{+0.38}_{-0.34}$	3329^{+289}_{-289}	3885^{+778}_{-612}	$1.156^{+1.680}_{-0.573}$
Alt.	-5 ± 2	$0.93^{+0.37}_{-0.37}$	3323^{+245}_{-295}	4022^{+839}_{-689}	$1.393^{+2.183}_{-0.783}$

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

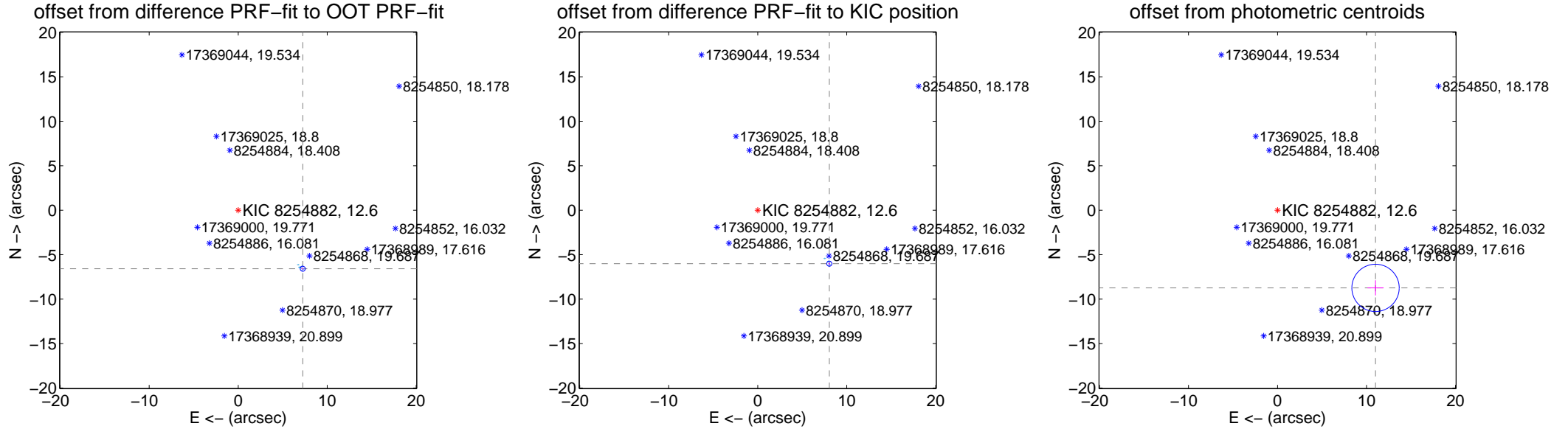
DV Centroid Data

Supplemental centroid analysis for 008254882-01. Kepler magnitude: 12.60. Transit SNR 13.83

There are 13 quarters with good PRF difference image offsets

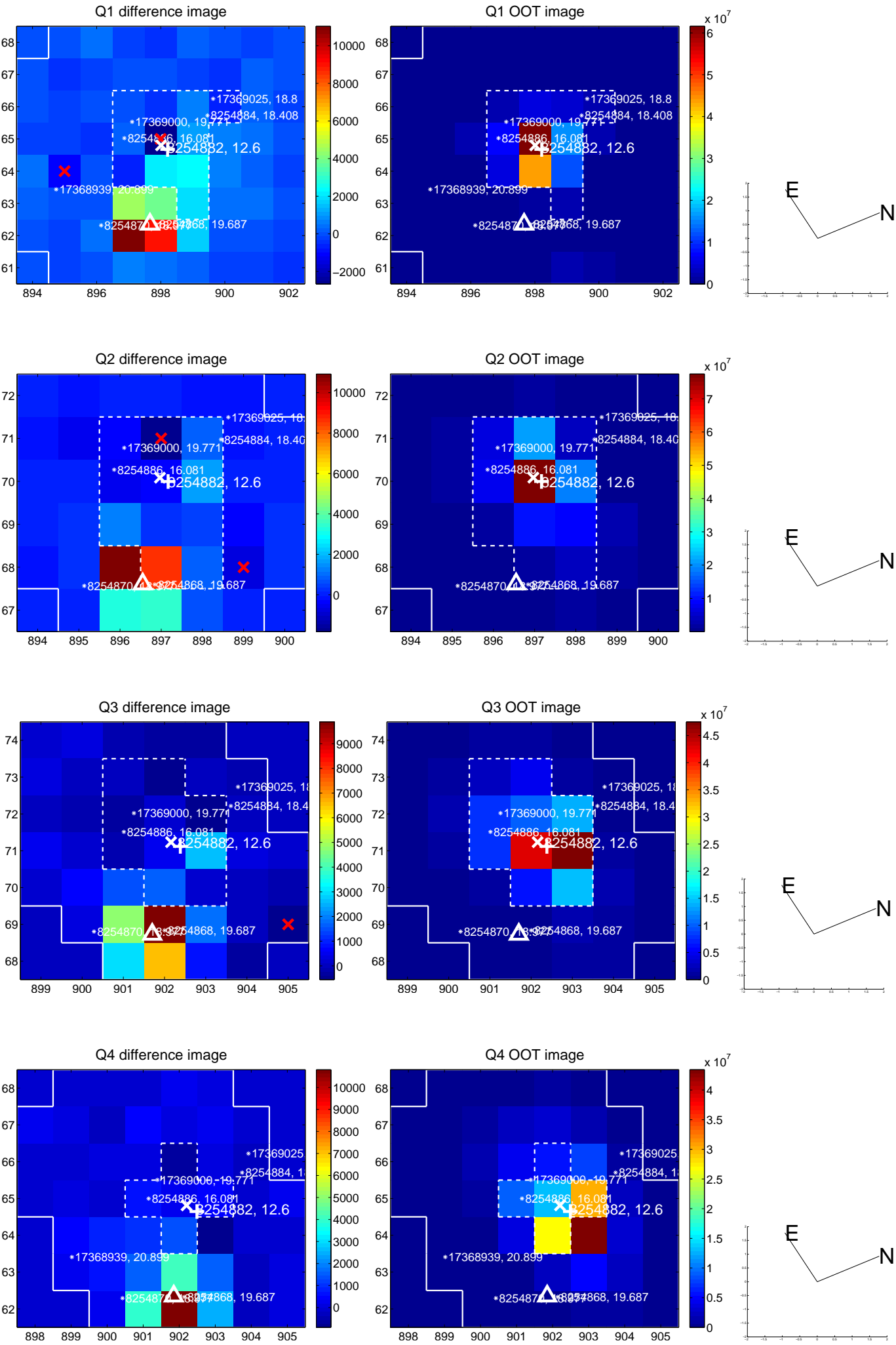
The direct PRF centroid is offset from the target star catalog position by about 1.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.796 \pm 0.094	103.80	-7.252 \pm 0.083	-6.586 \pm 0.088
PRF-fit source offset from KIC position	10.042 \pm 0.096	104.83	-8.041 \pm 0.078	-6.016 \pm 0.094
photometric centroid source offset	14.05 \pm 0.89	15.85	-11.01 \pm 0.91	-8.73 \pm 0.85

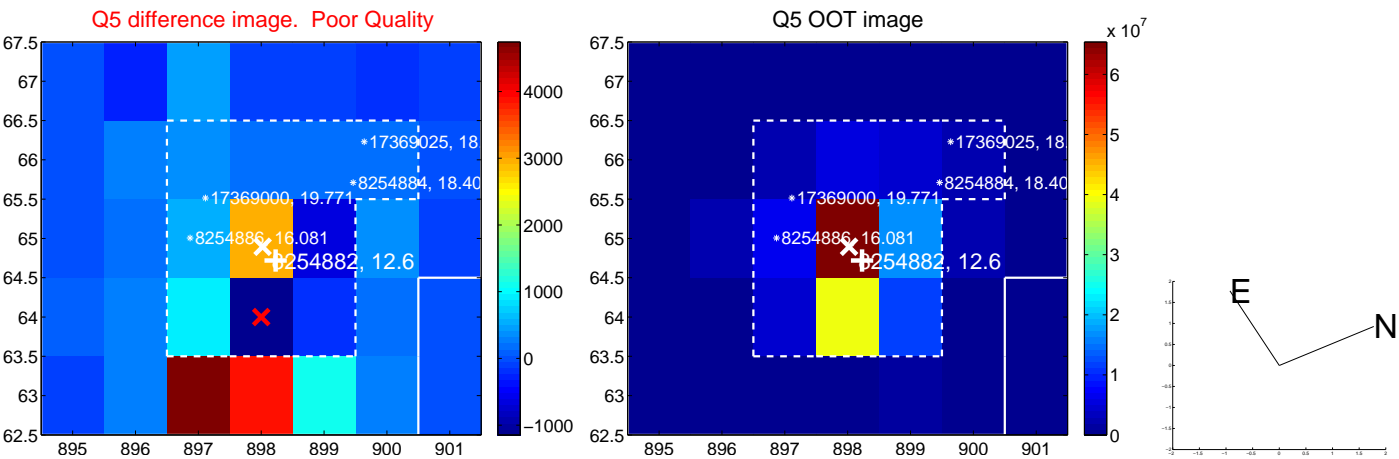


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

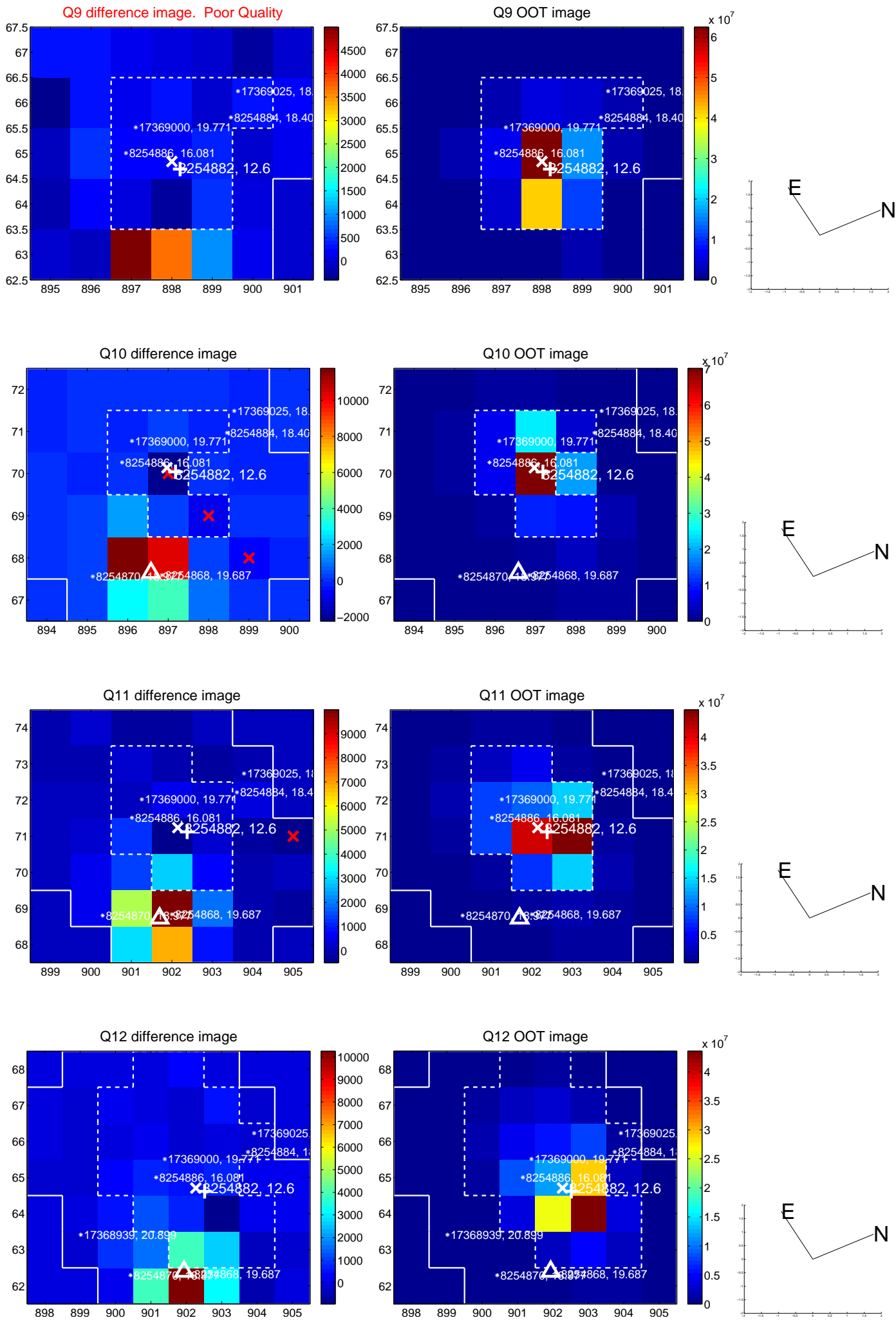
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



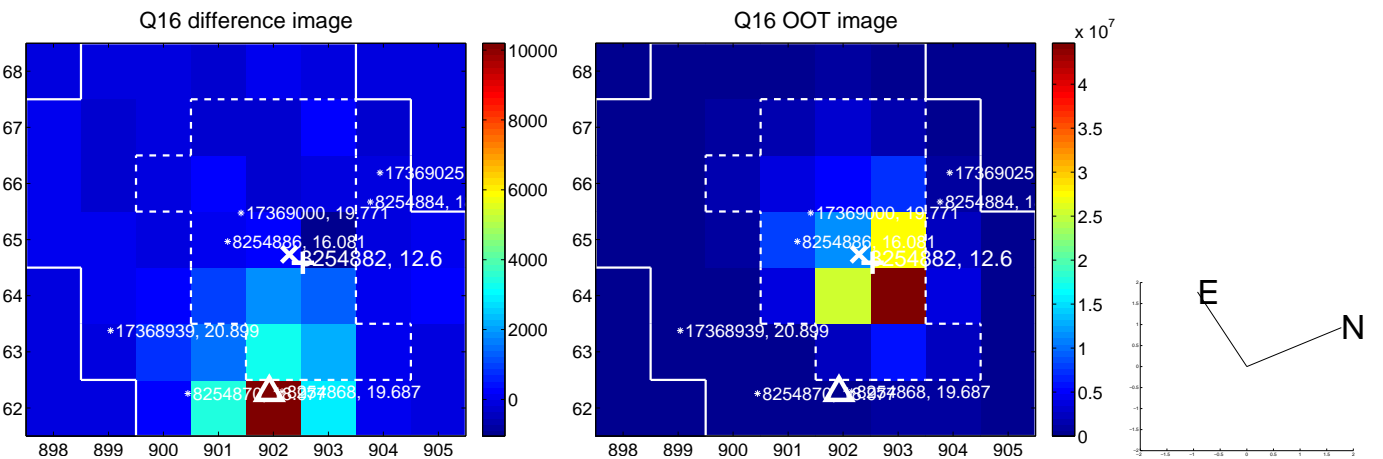
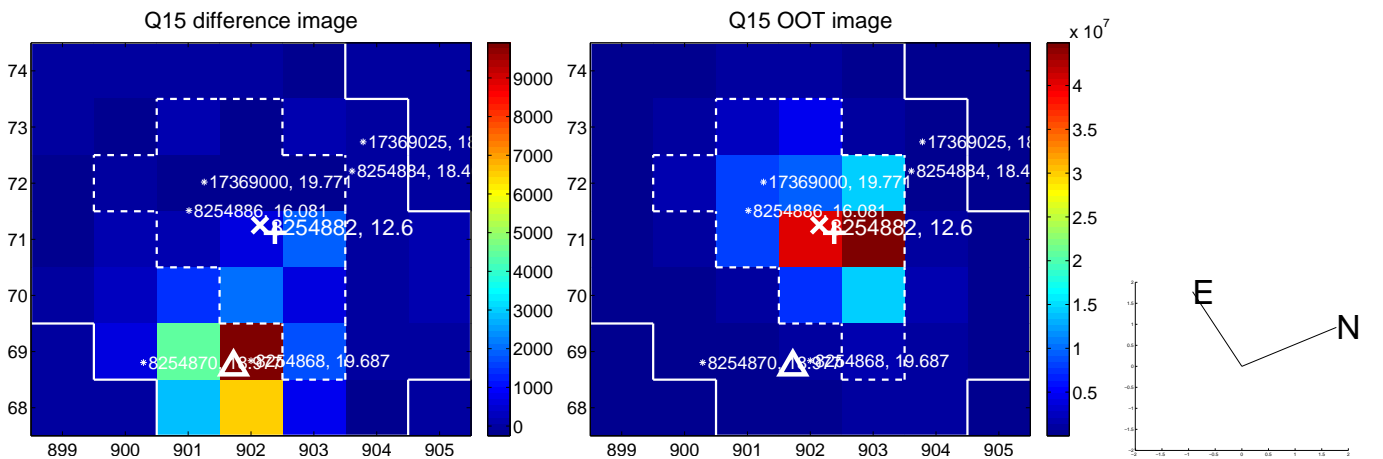
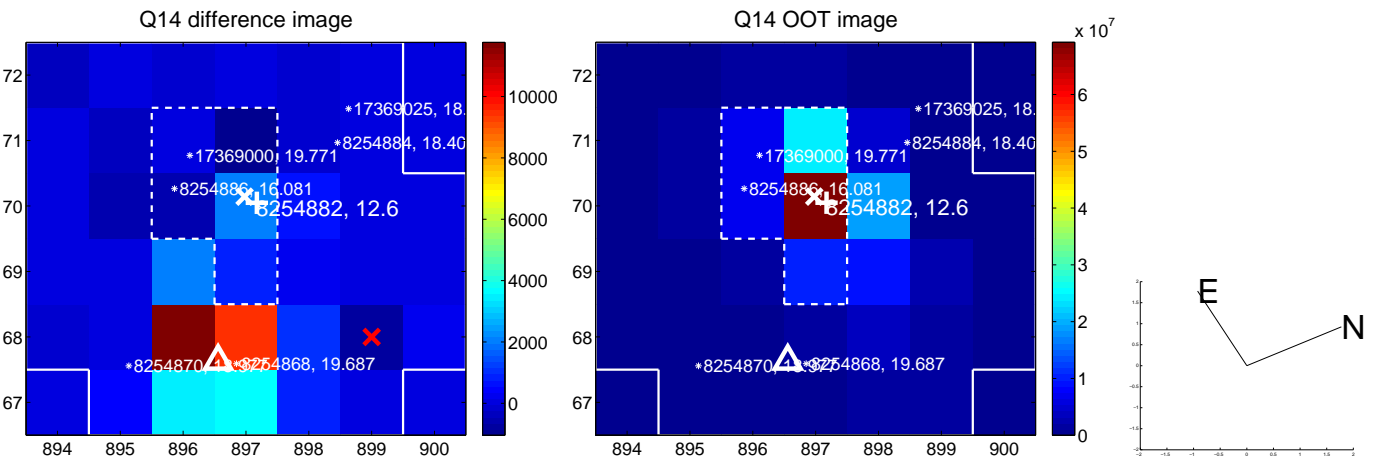
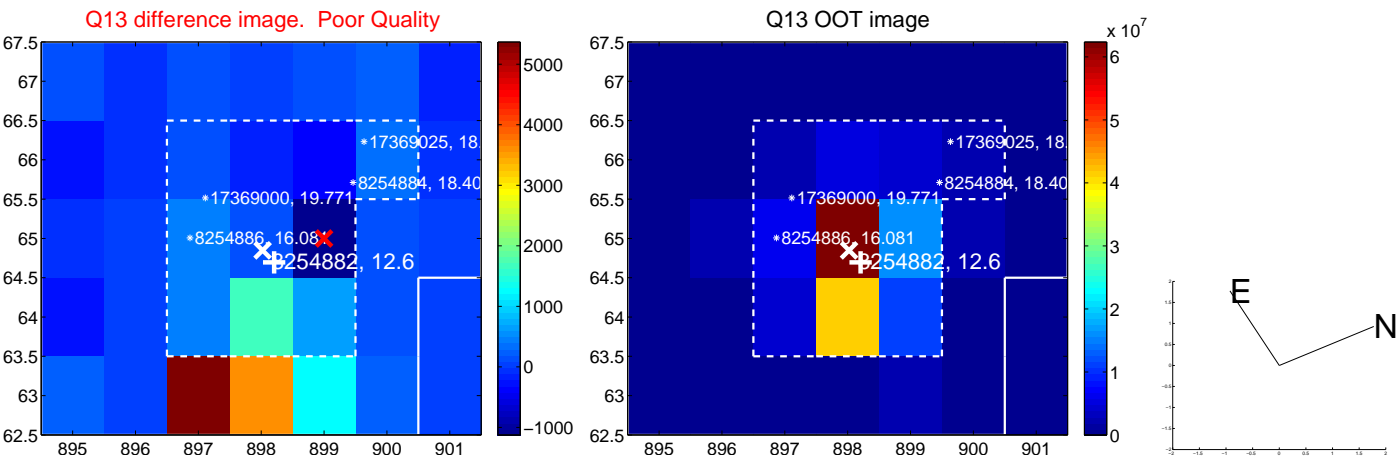
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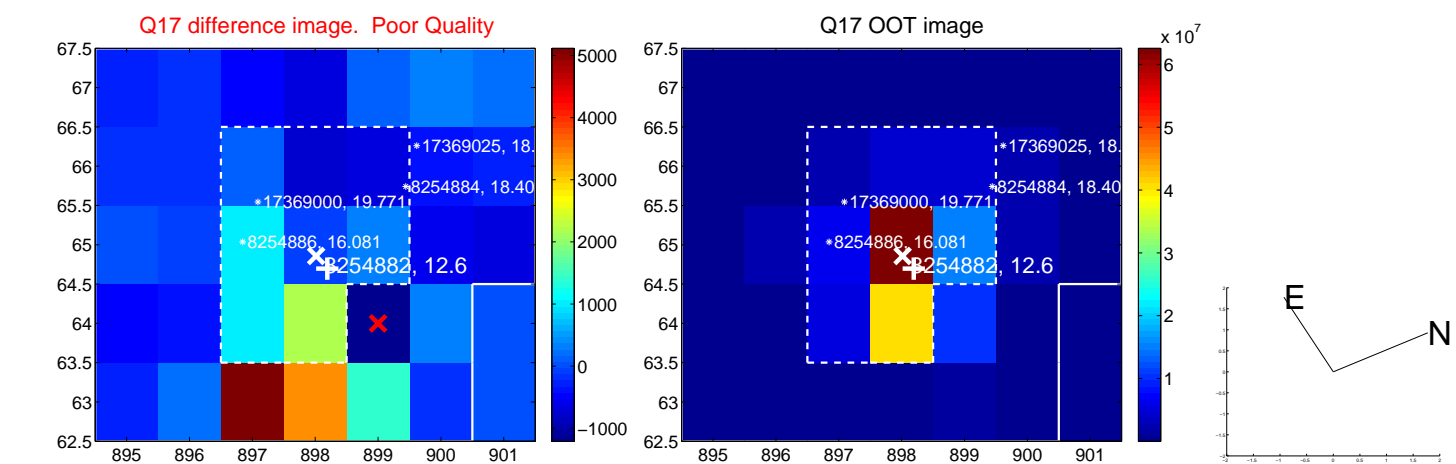
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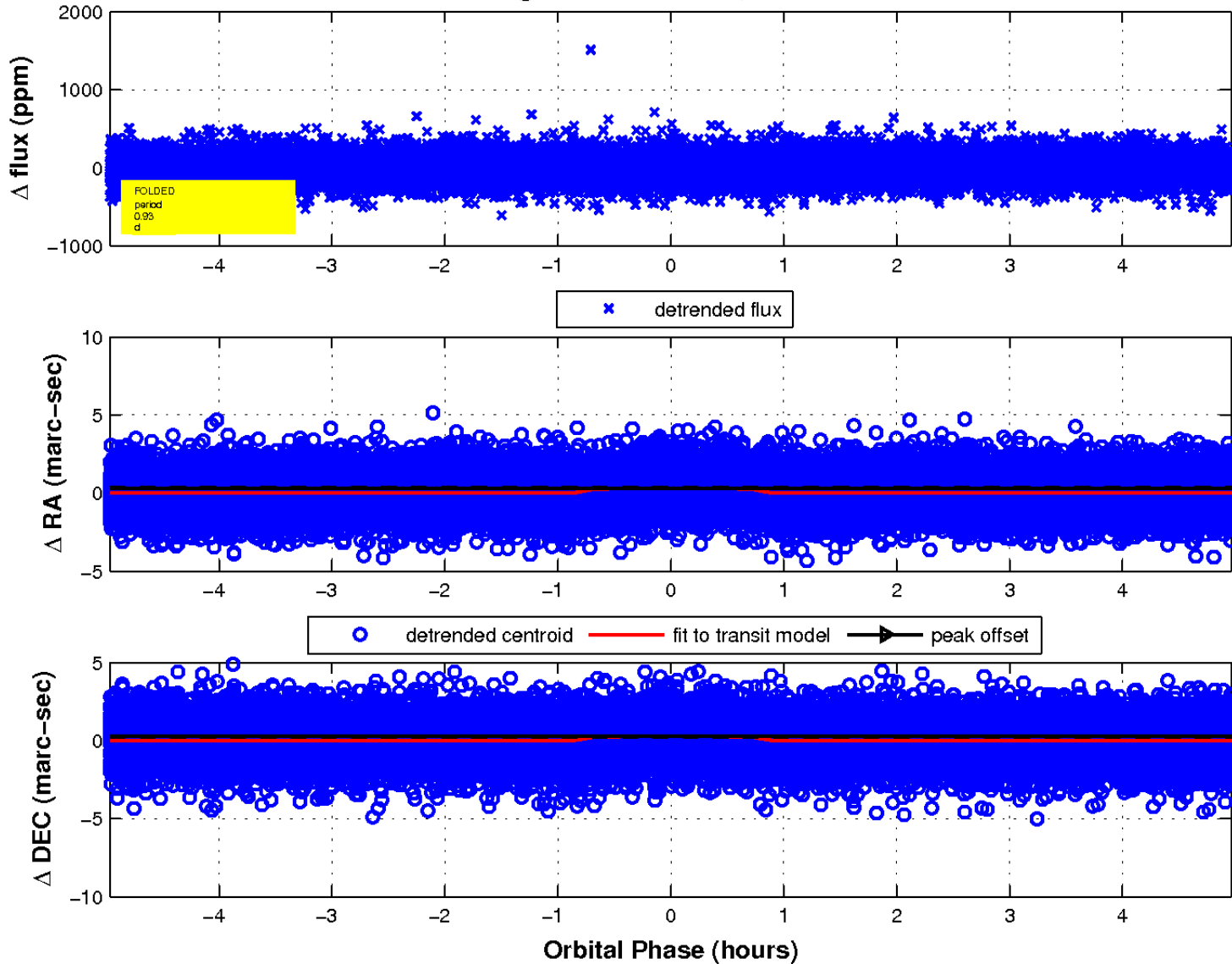
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

