

KIC 005892916

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})
005892916-01	OBS	No	4.876518	136.280750	131.7	44.729	10.6	6.7	0.66	5392	0.76	141.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892916-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

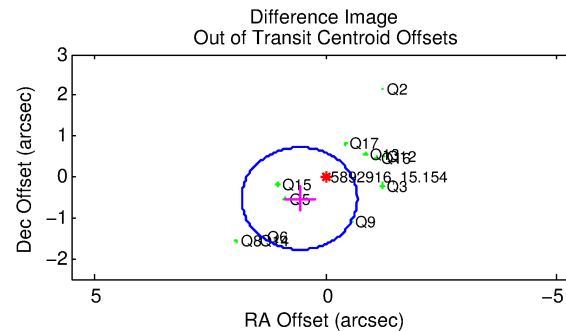
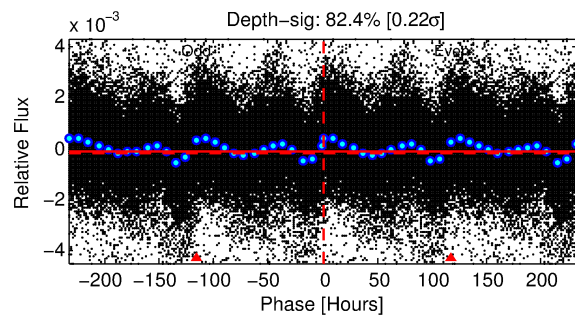
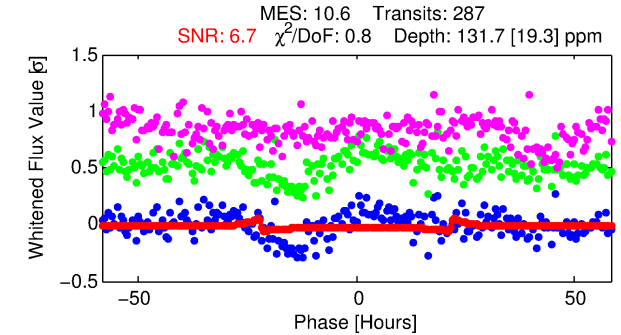
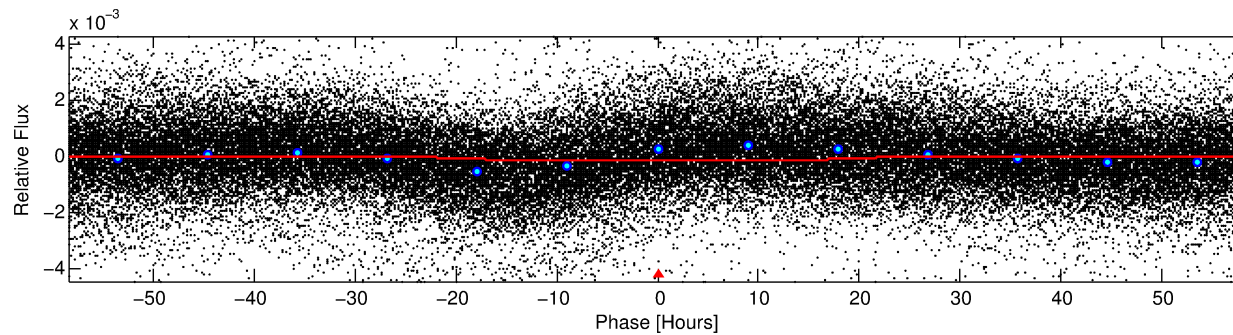
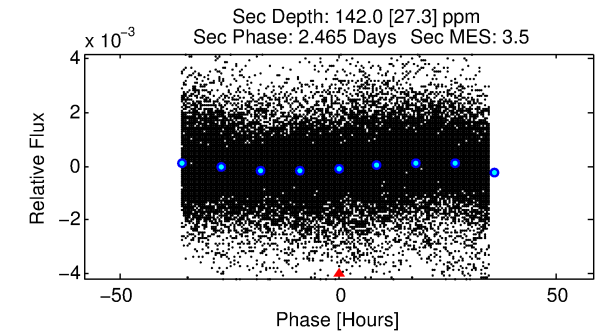
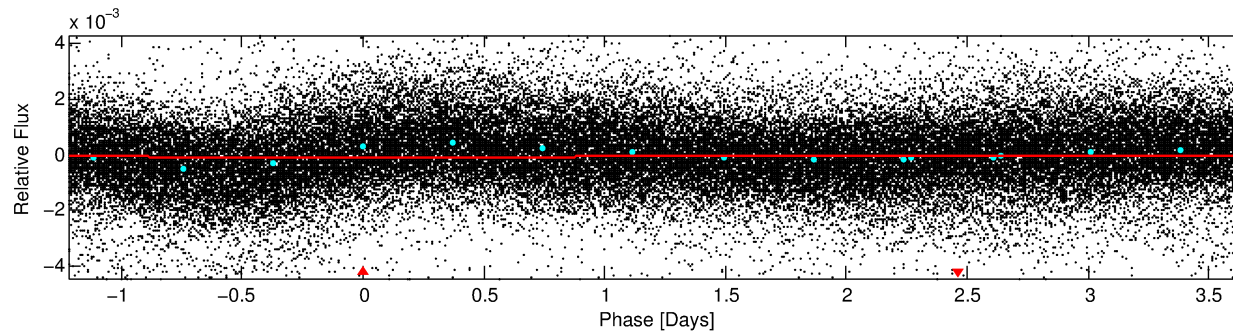
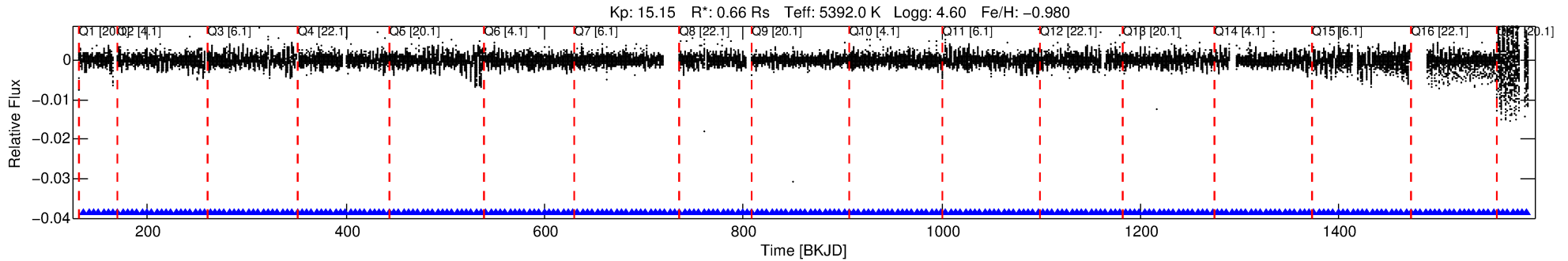
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892916-01

No Significant Match Found

DV One-Page Summary

KIC: 5892916 Candidate: 1 of 1 Period: 4.877 d



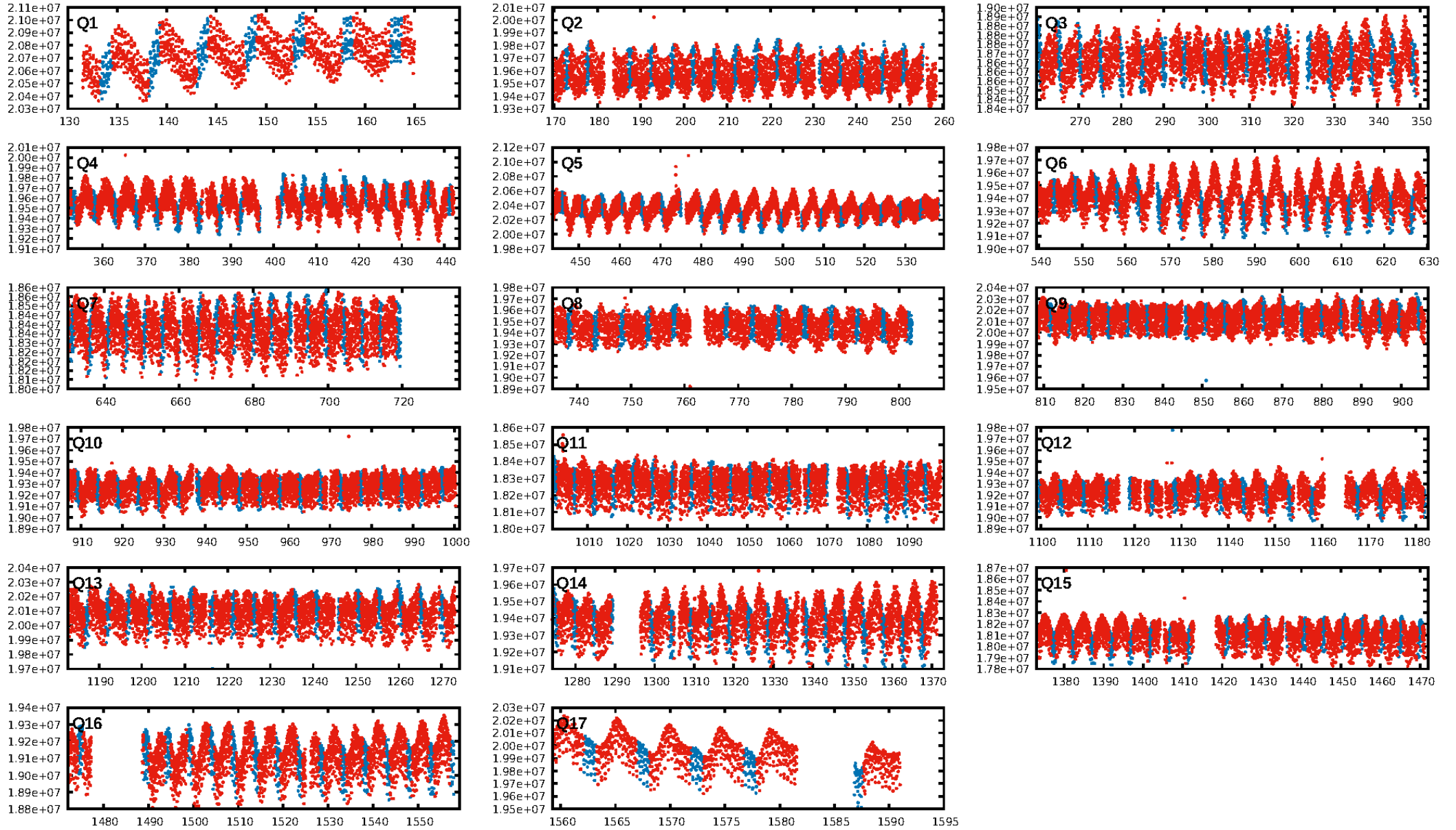
DV Fit Results:

Period = 4.87652 [0.00013] d
Epoch = 136.2807 [0.0183] BKJD
Rp/R* = 0.0104 [0.0019]
a/R* = 1.08 [0.13]
b = 0.01 [59.05]
Seff = 141.21 [26.50]
Teq = 879 [41] K
Rp = 0.76 [0.16] Re
a = 0.0486 [0.0042] AU
Ag = 322.32 [141.81] [2.27σ]
Teffp = 5758 [632] K [7.70σ]

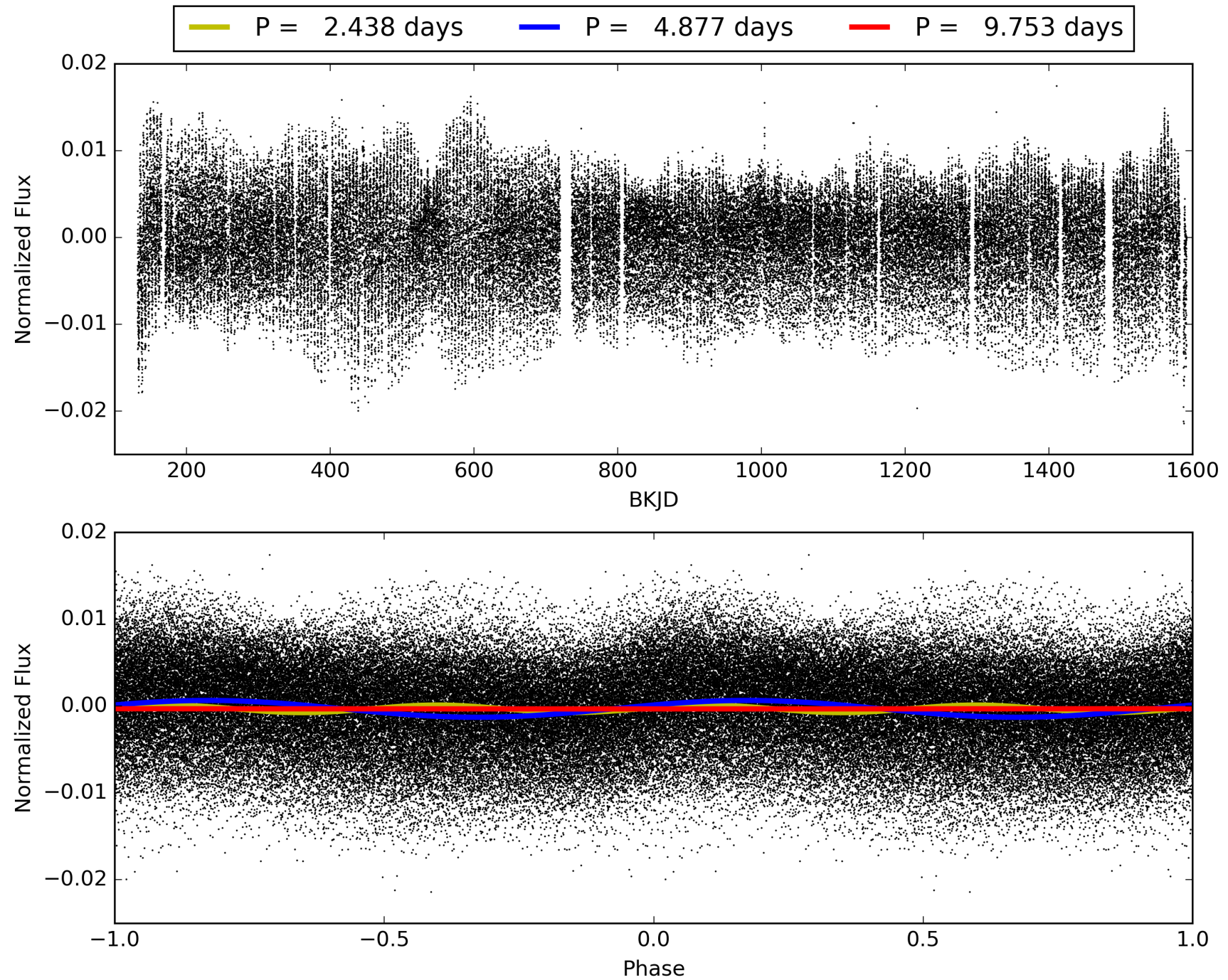
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [273/273]
GhostDiagnostic-chr: 0.7509
Centroid-sig: 8.8%
Centroid-so: 0.295 arcsec [0.68σ]
OotOffset-rm: 0.774 arcsec [1.85σ]
KicOffset-rm: 0.693 arcsec [1.59σ]
OotOffset-st: 3/2/3/4 [12]
KicOffset-st: 3/2/3/4 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005892916-01, PDC Light Curves

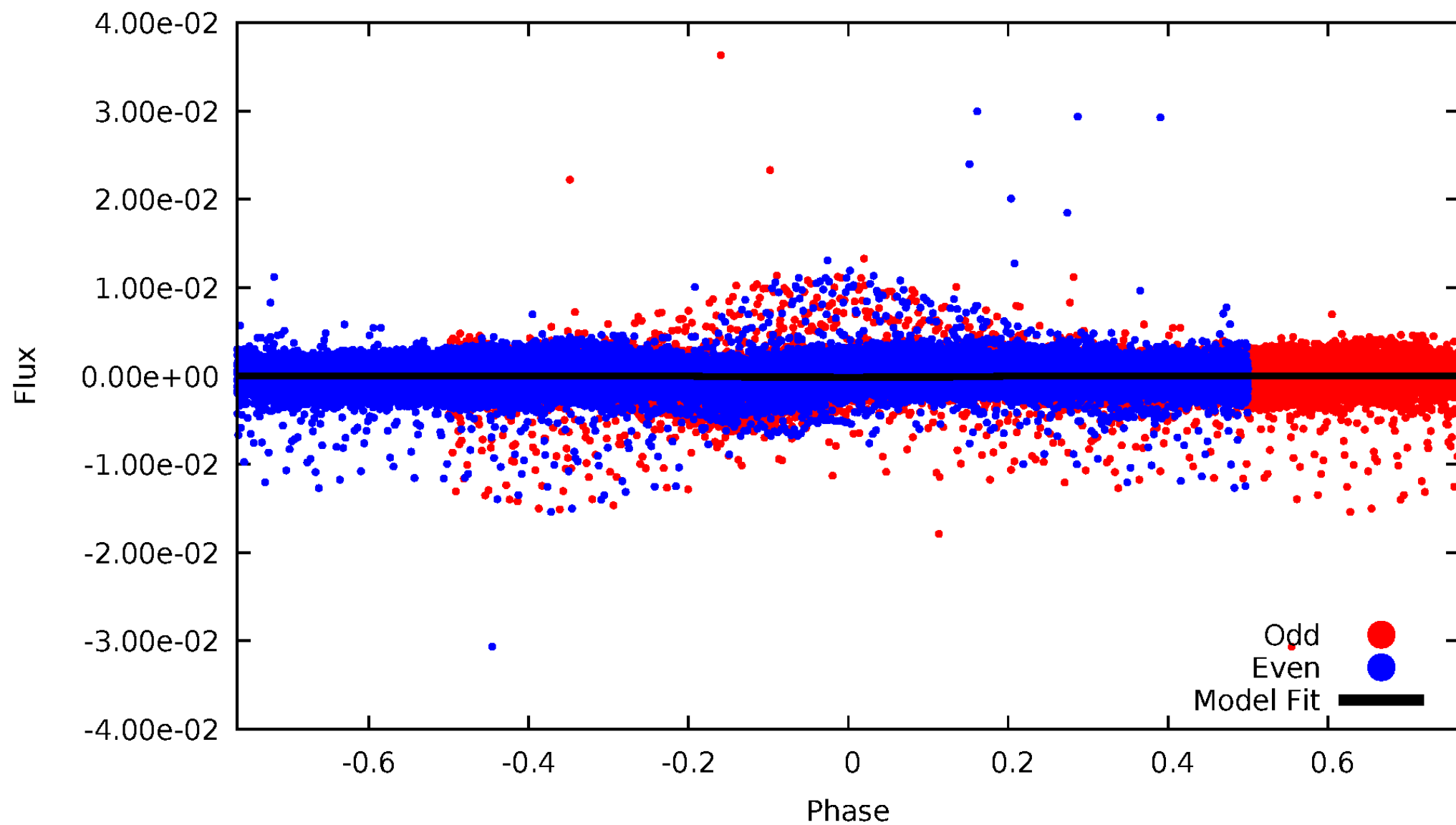


TCE 005892916-01



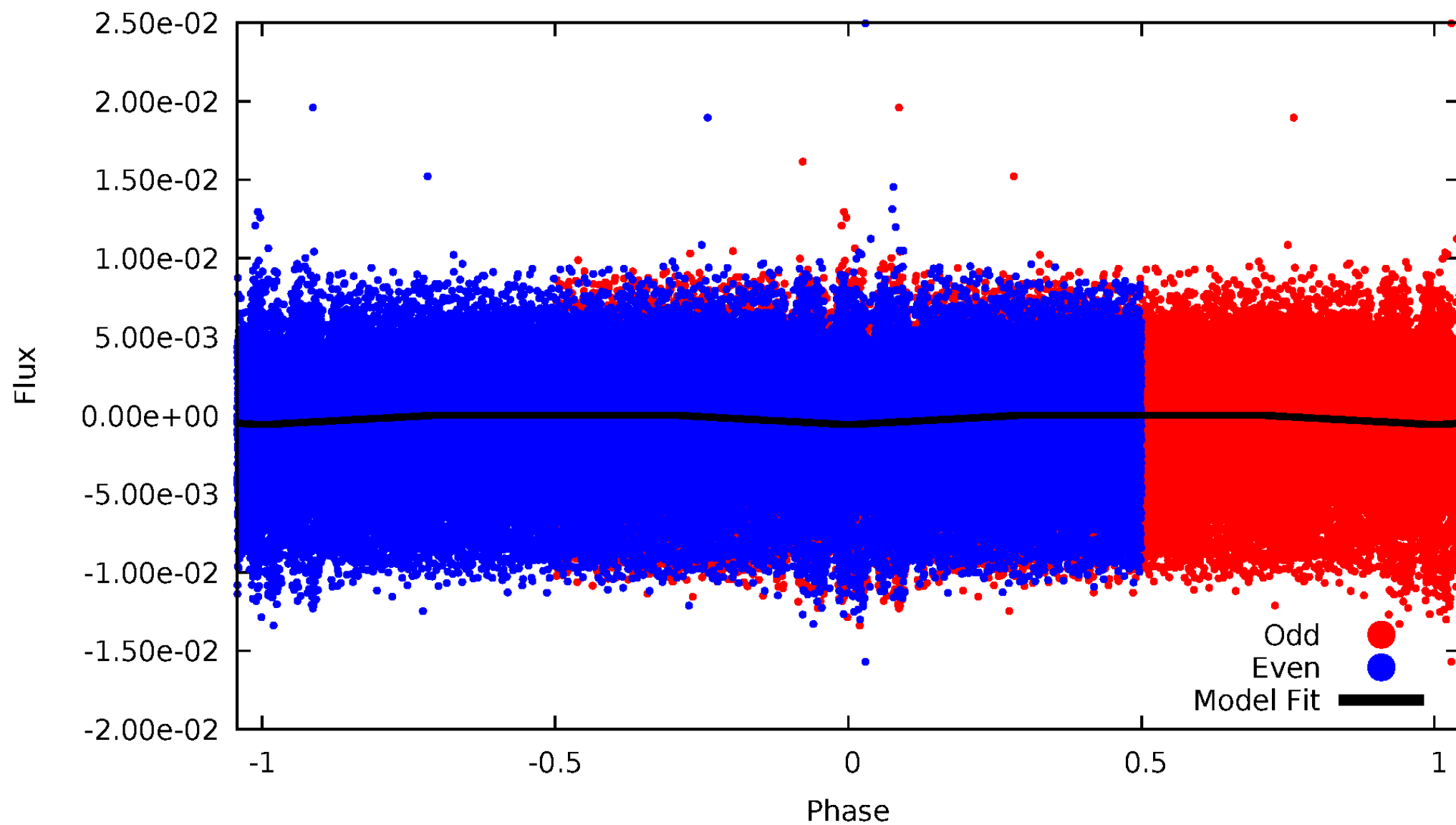
DV Odd/Even

TCE 005892916-01



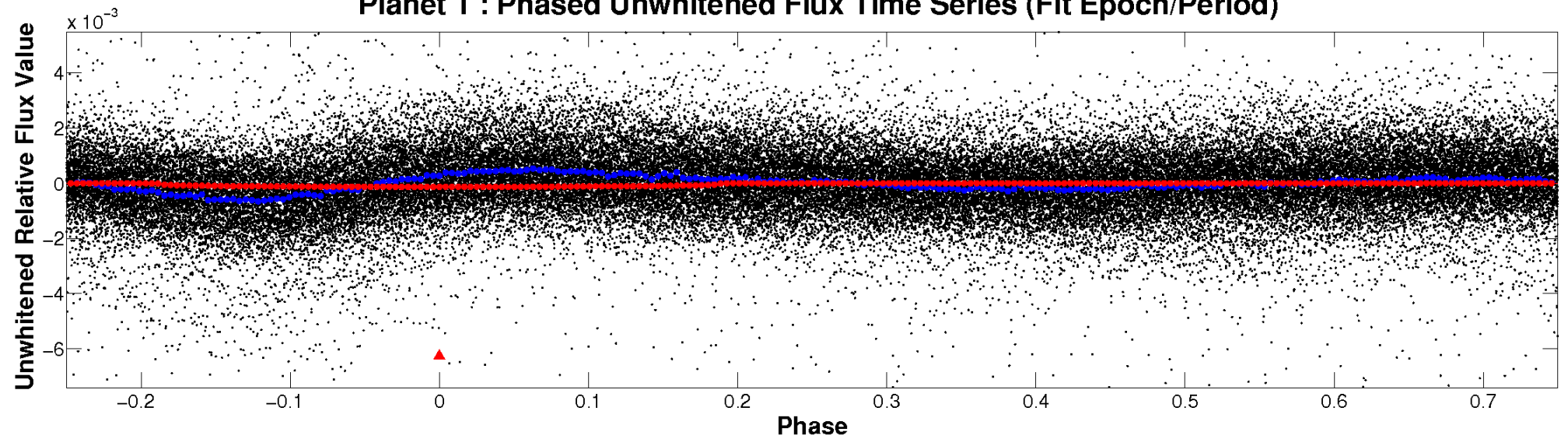
ALT Odd/Even

TCE 005892916-01

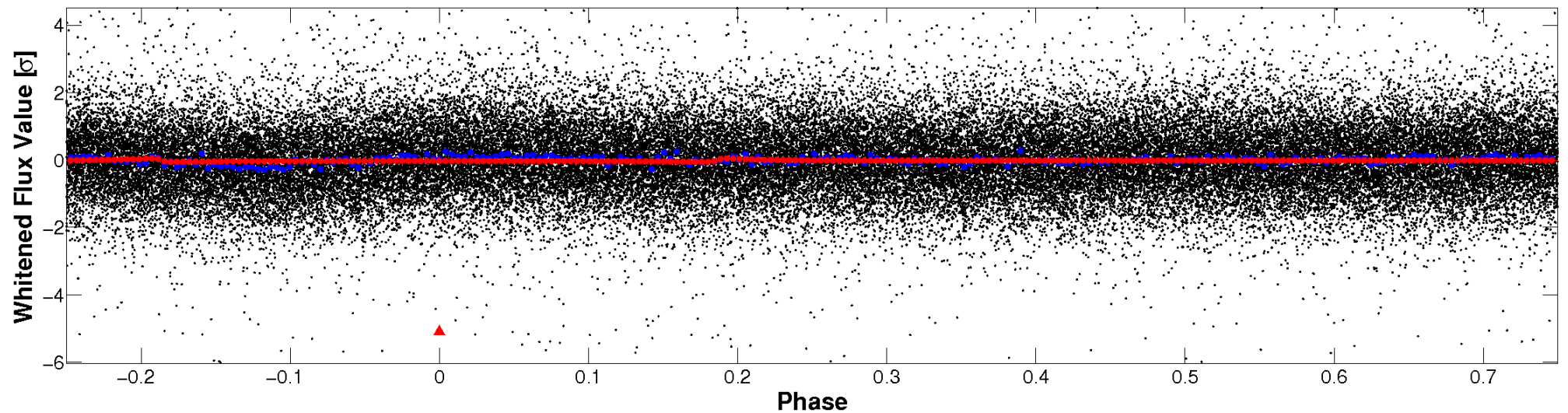


Non-Whitened Vs. Whitened Light Curve

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

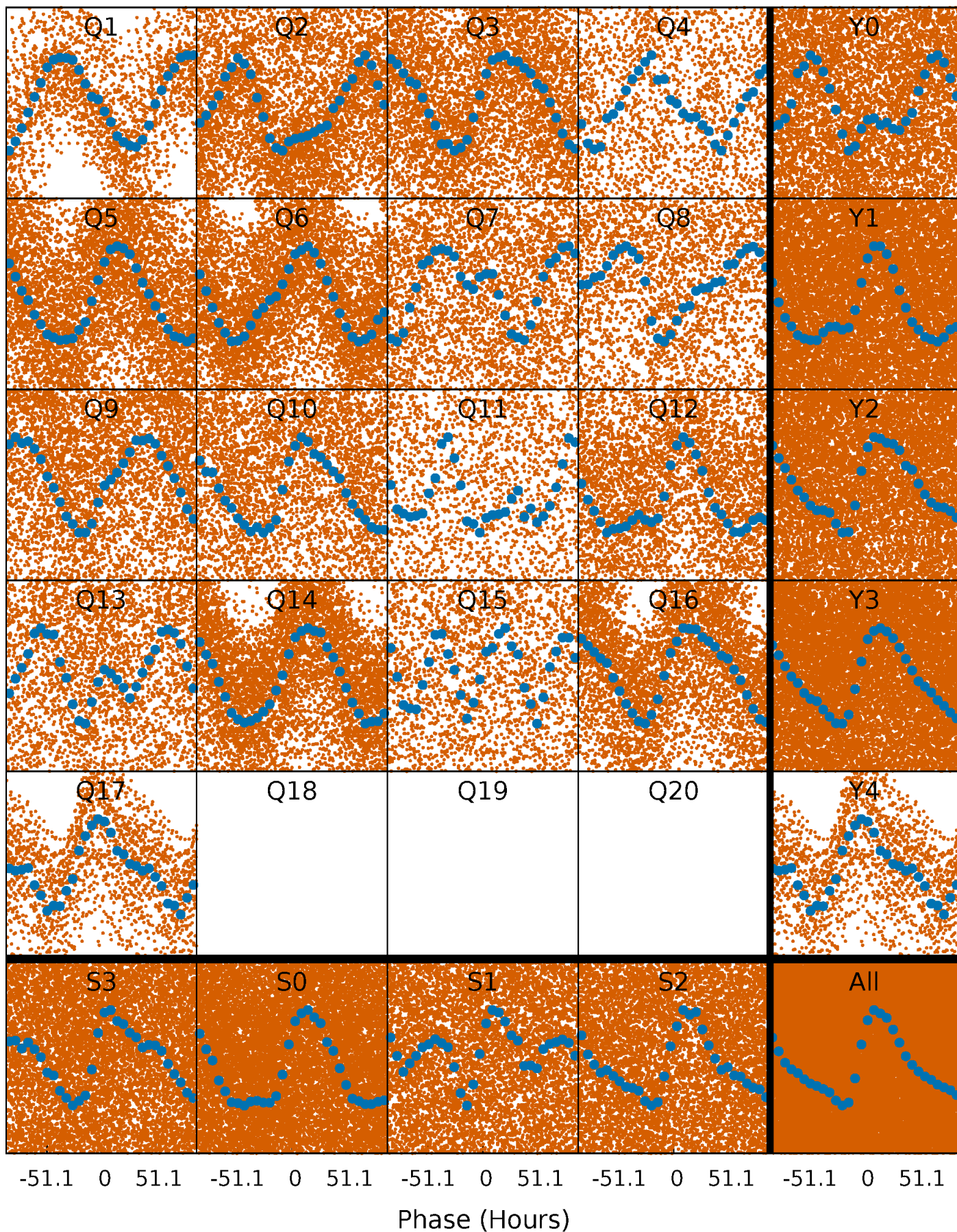


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



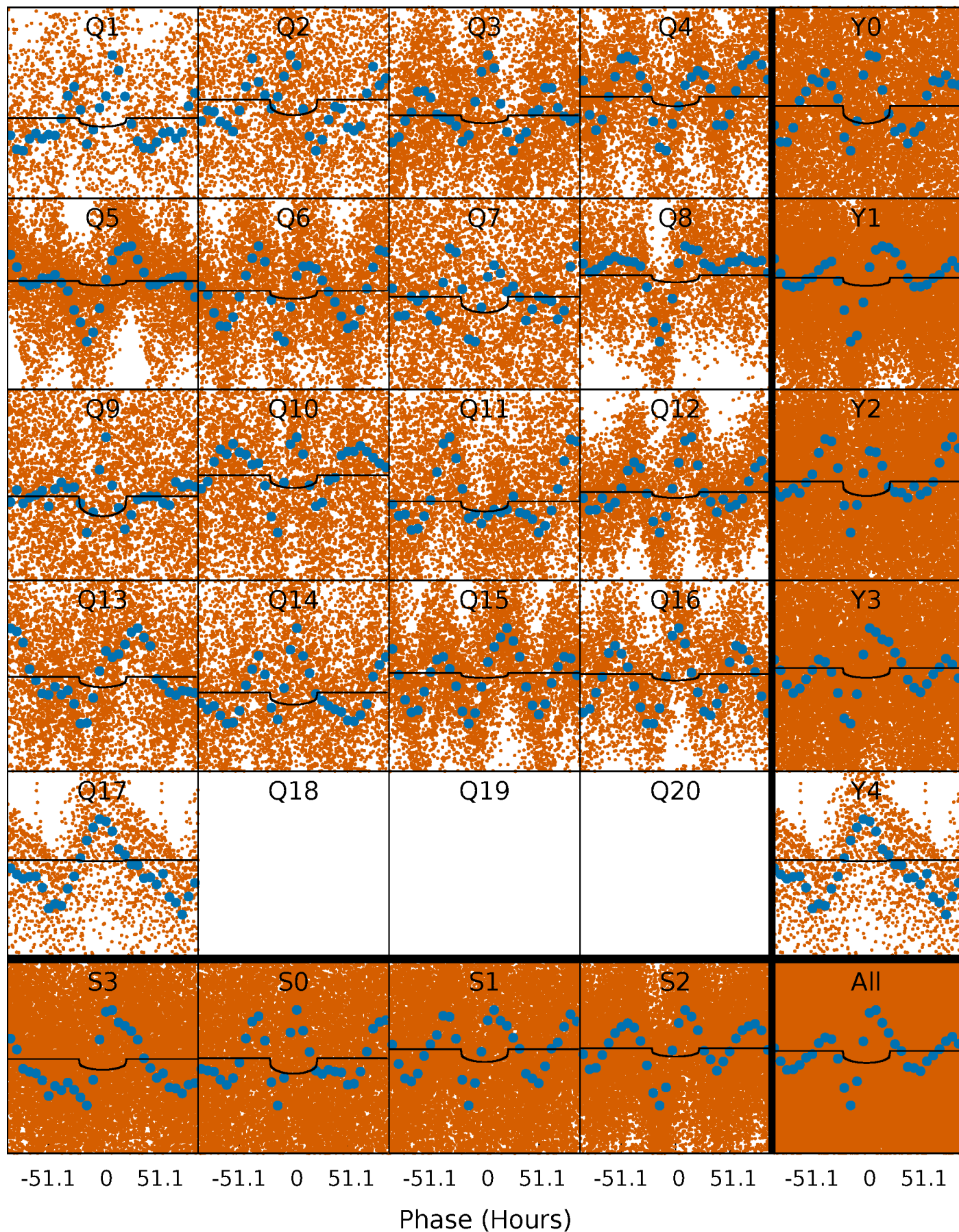
PDC Quarter-Phased Transit Curves

TCE 005892916-01 P= 4.876518 Days $T_0=136.280750$ (BKJD)



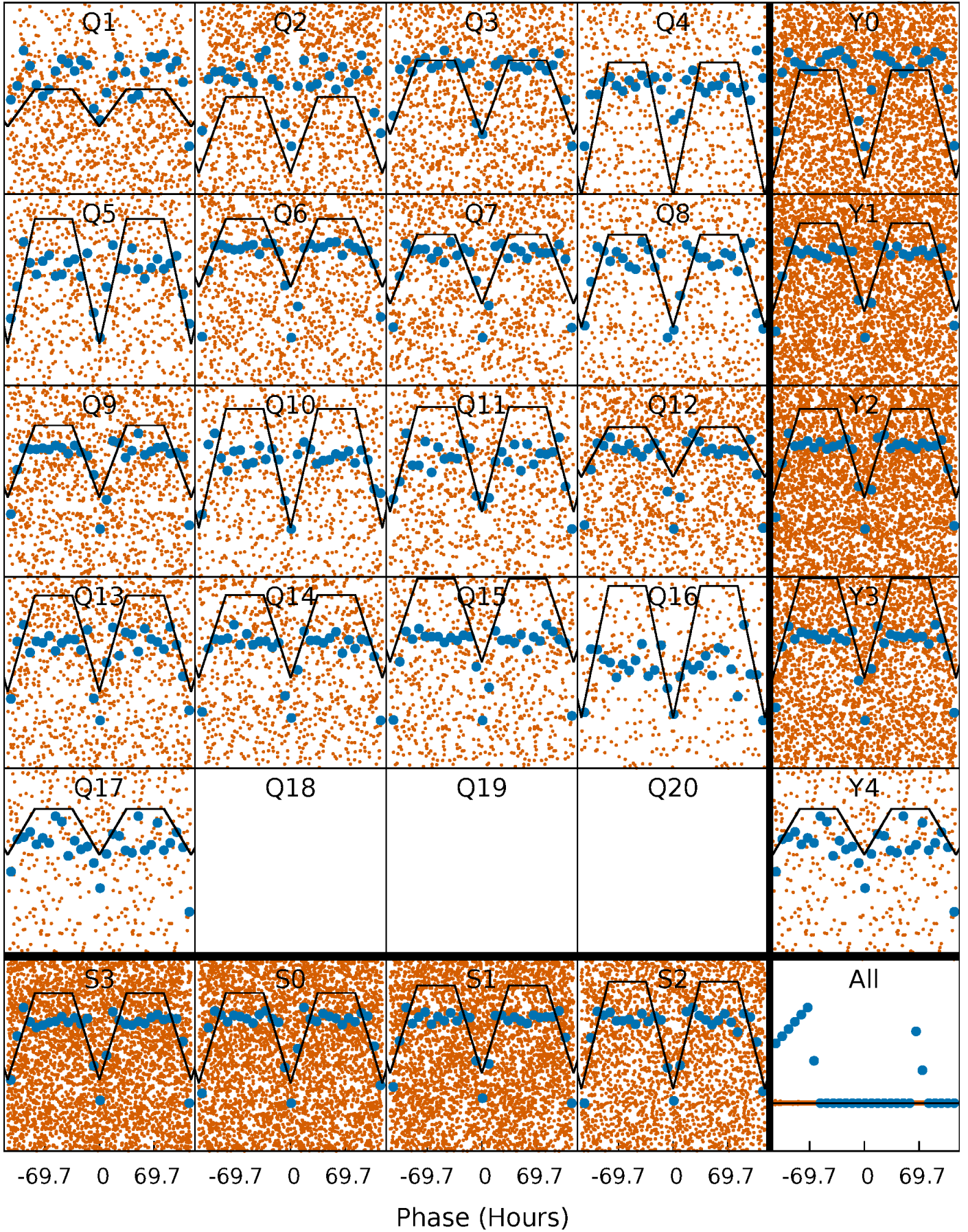
DV Quarter-Phased Transit Curves

TCE 005892916-01 P= 4.876518 Days $T_0=136.280750$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

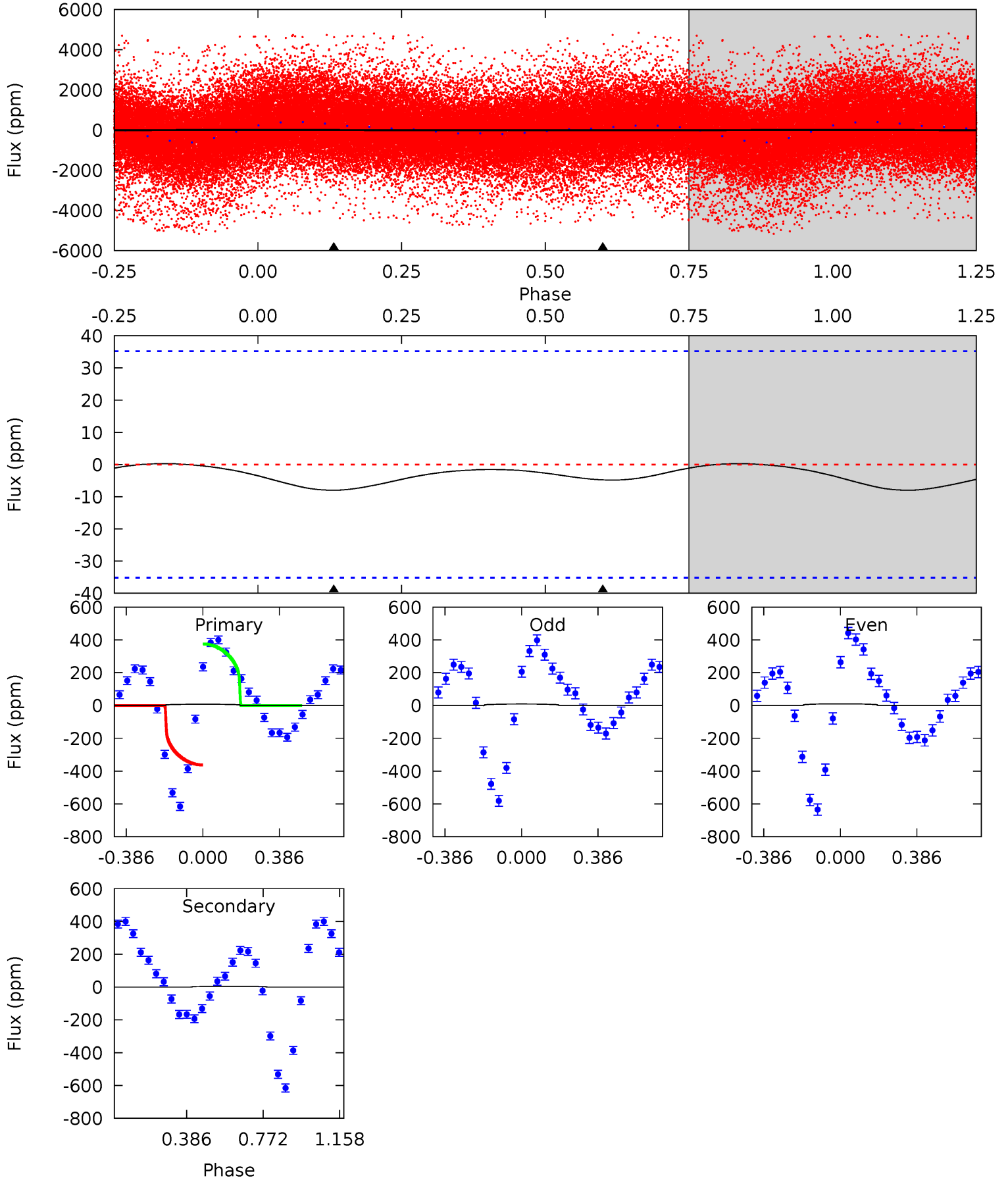
TCE 005892916-01 P= 4.875944 Days $T_0=135.760671$ (BKJD)



DV Model-Shift Uniqueness Test

005892916-01, P = 4.876518 Days, E = 131.404232 Days

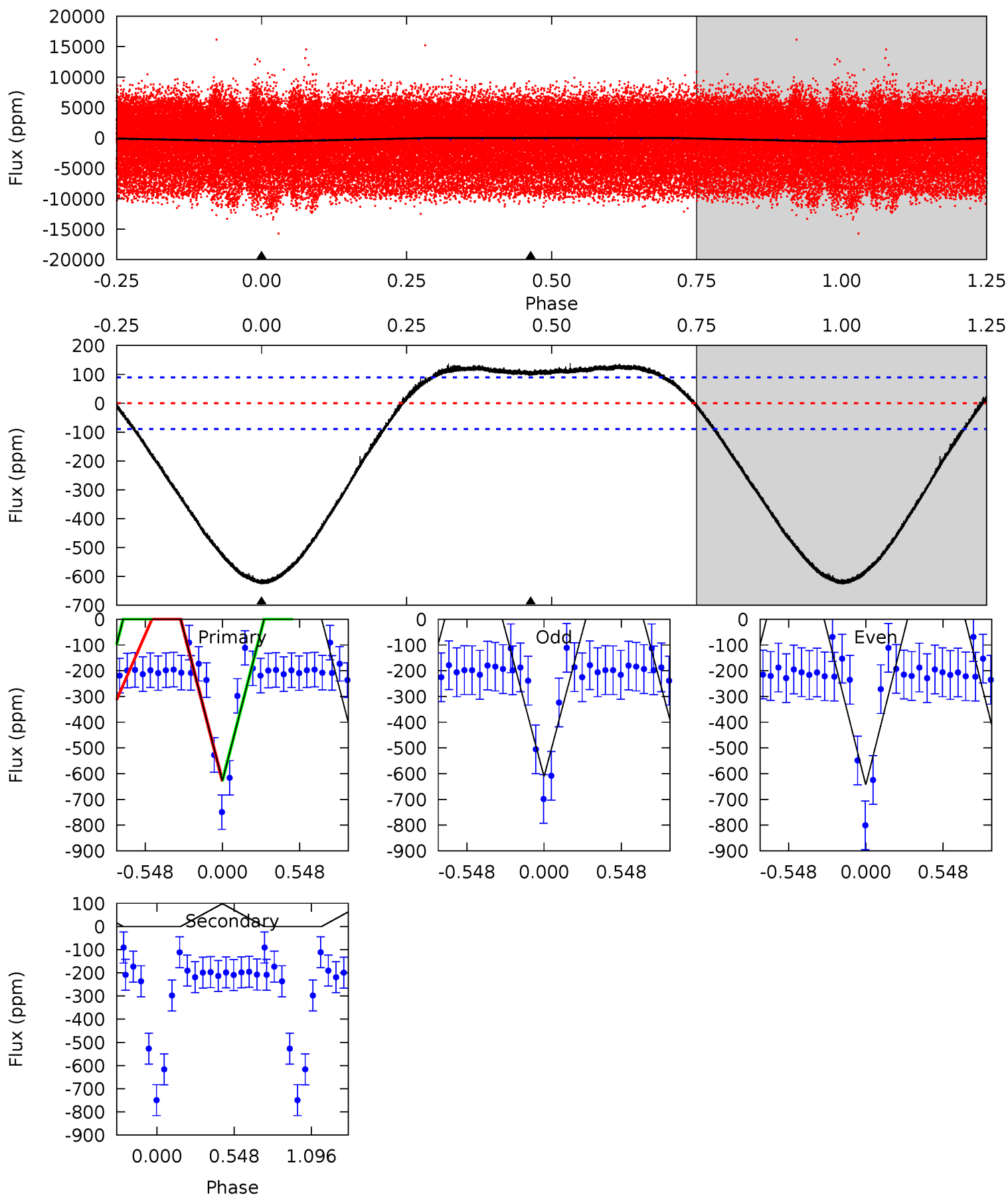
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.97	0.58	0	0	4.27	0.87	0.09	0.97	0.97	0.58	0.58	0.07	-1.69	0.03	0.86



Alt Model-Shift Uniqueness Test

005892916-01, P = 4.875944 Days, E = 130.884727 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.4	-4.61	0	0	4.19	0.60	2.68	29.4	29.4	-4.61	-4.61	0.76	1.00	0.18	0.02



Stellar Parameters For KIC 005892916

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5392^{+177}_{-177}	$4.603^{+0.077}_{-0.056}$	$-0.980^{+0.300}_{-0.300}$	$0.664^{+0.063}_{-0.063}$	$0.645^{+0.061}_{-0.028}$	$3.097^{+0.952}_{-0.611}$
	+3%/-3%	+2%/-1%	+31%/-31%	+9%/-9%	+9%/-4%	+31%/-20%
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 005892916-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 8	$0.75^{+0.15}_{-0.15}$	1223^{+52}_{-51}	3060^{+587}_{-5981}	11^{+21}_{-18}
Alt.	98 ± 21	$1.88^{+0.17}_{-0.16}$	1220^{+50}_{-48}	-3721^{+188}_{-173}	$-36.419^{+8.795}_{-11.832}$

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

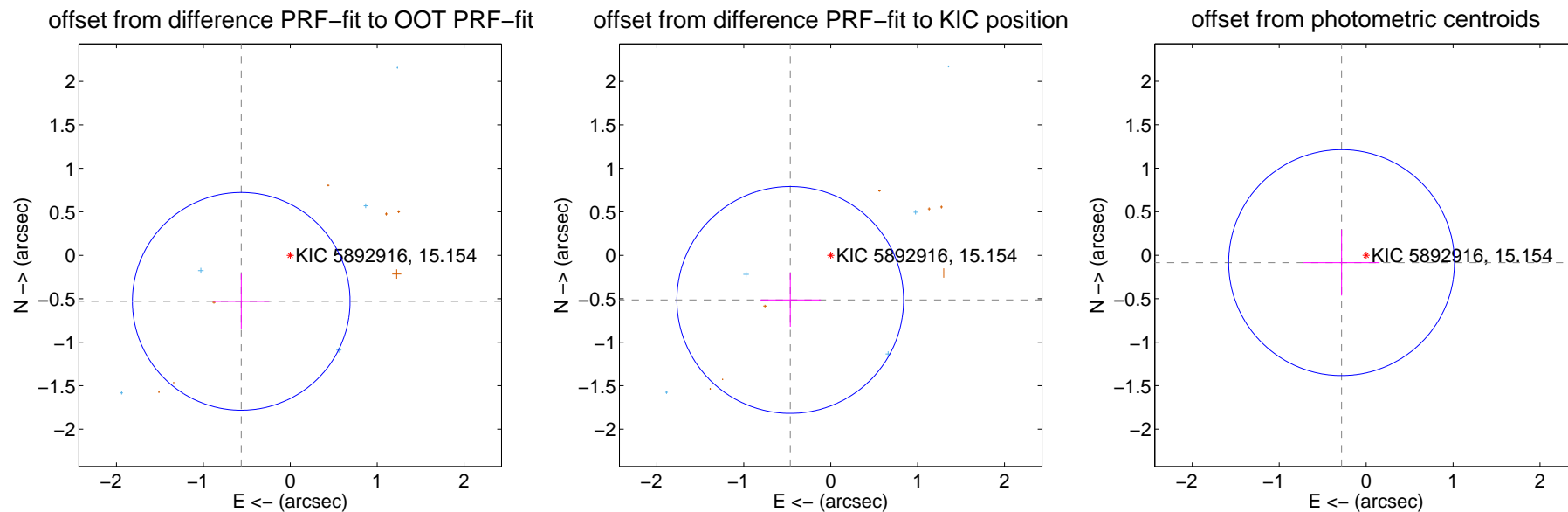
DV Centroid Data

Supplemental centroid analysis for 005892916-01. Kepler magnitude: 15.15. Transit SNR 6.74

There are 5 quarters with good PRF difference image offsets

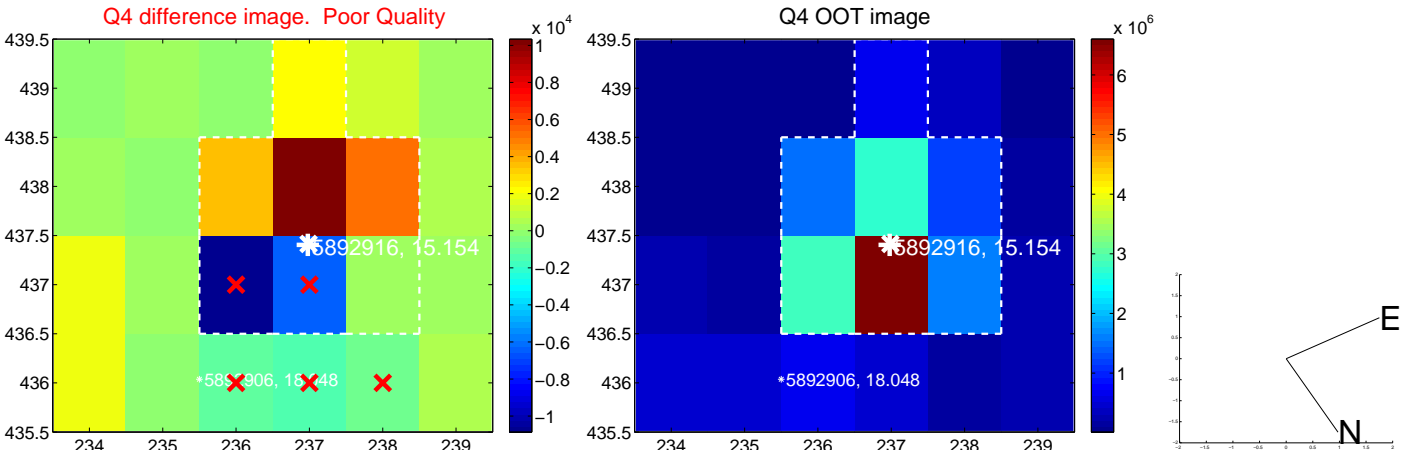
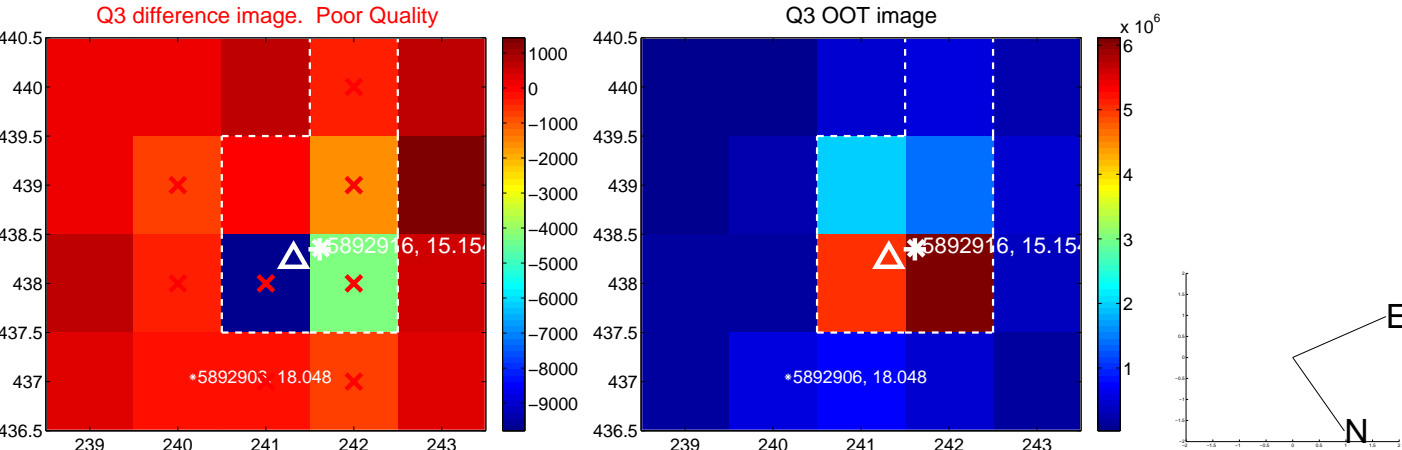
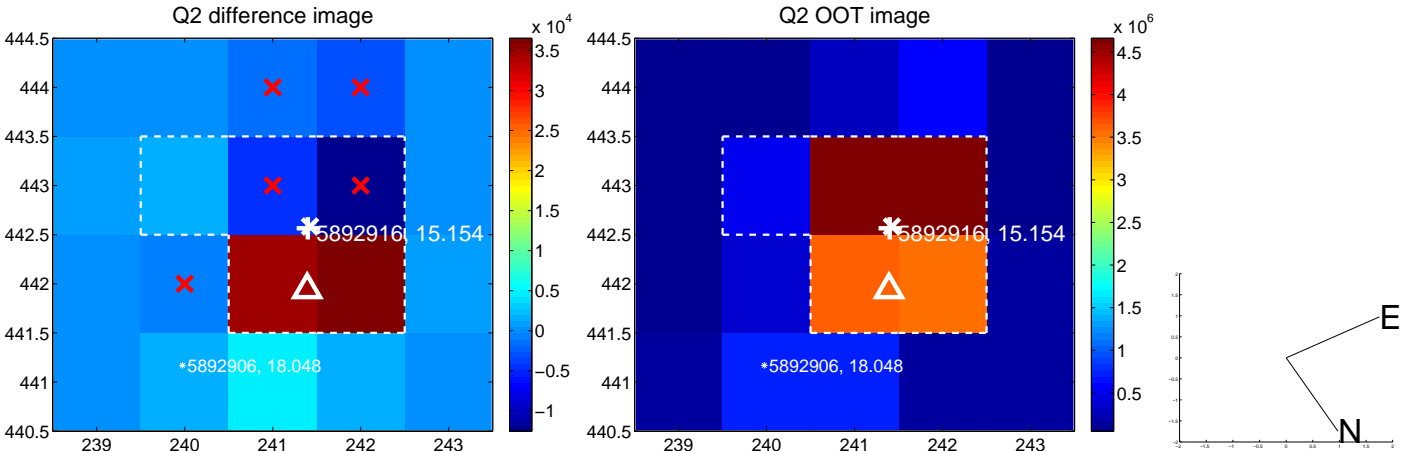
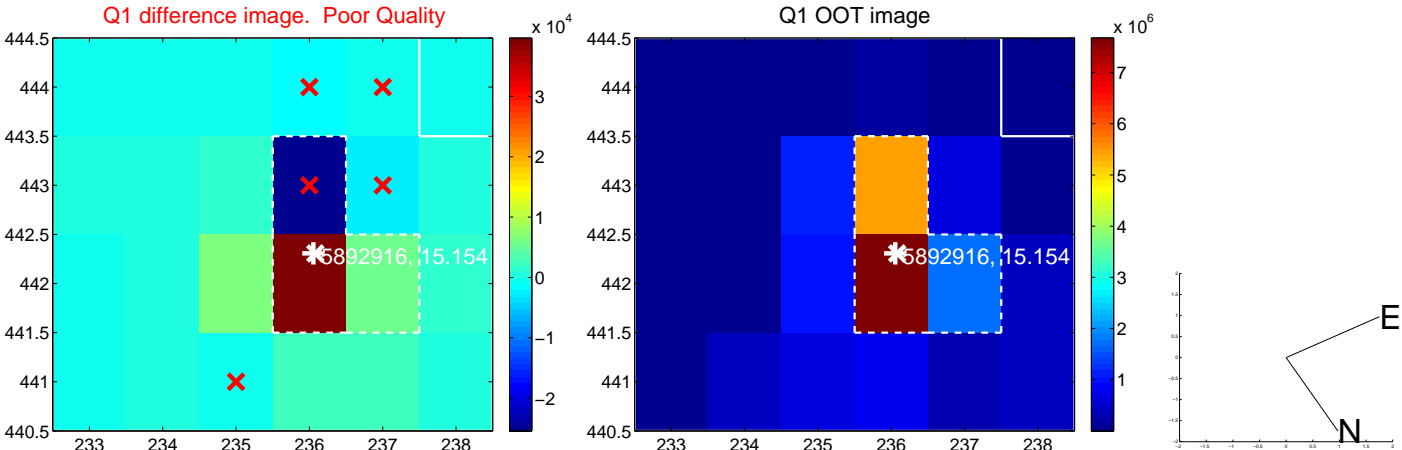
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.774 ± 0.417	1.85	0.564 ± 0.322	-0.530 ± 0.316
PRF-fit source offset from KIC position	0.693 ± 0.435	1.59	0.466 ± 0.352	-0.514 ± 0.309
photometric centroid source offset	0.30 ± 0.43	0.68	0.28 ± 0.44	-0.09 ± 0.38

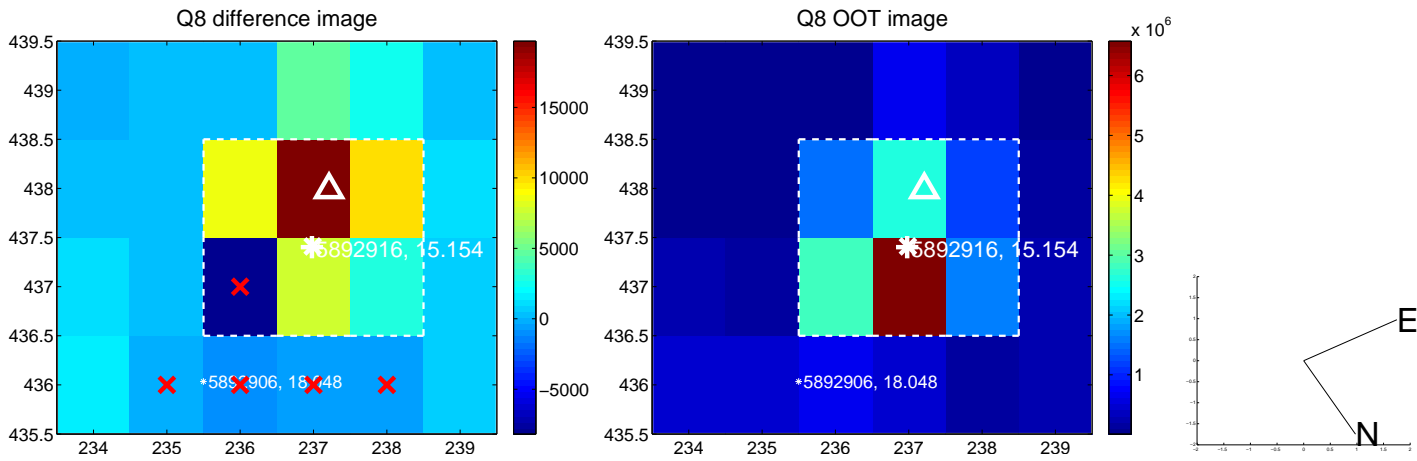
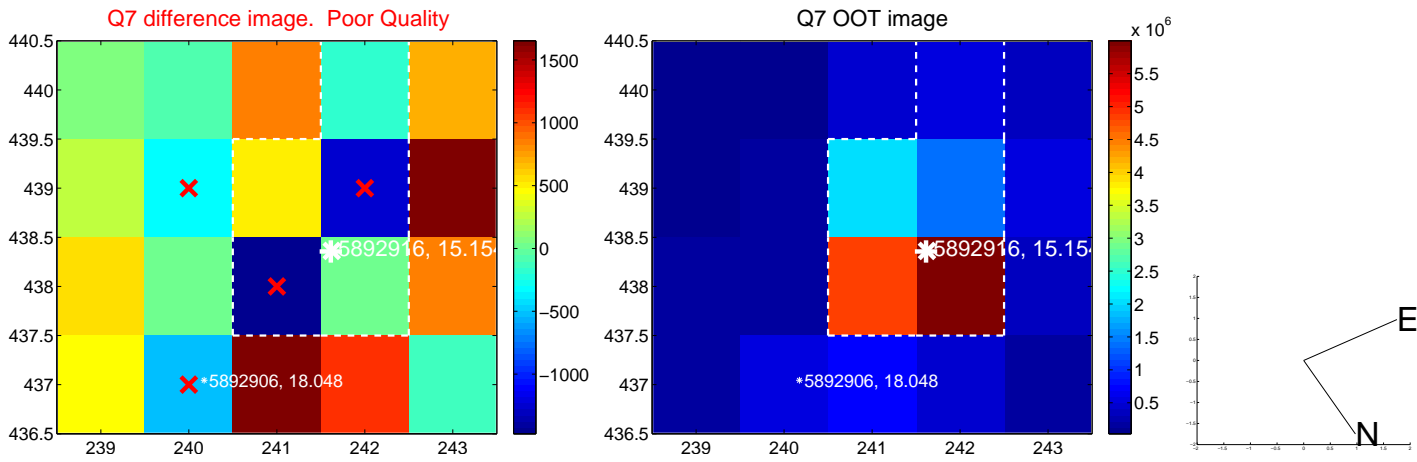
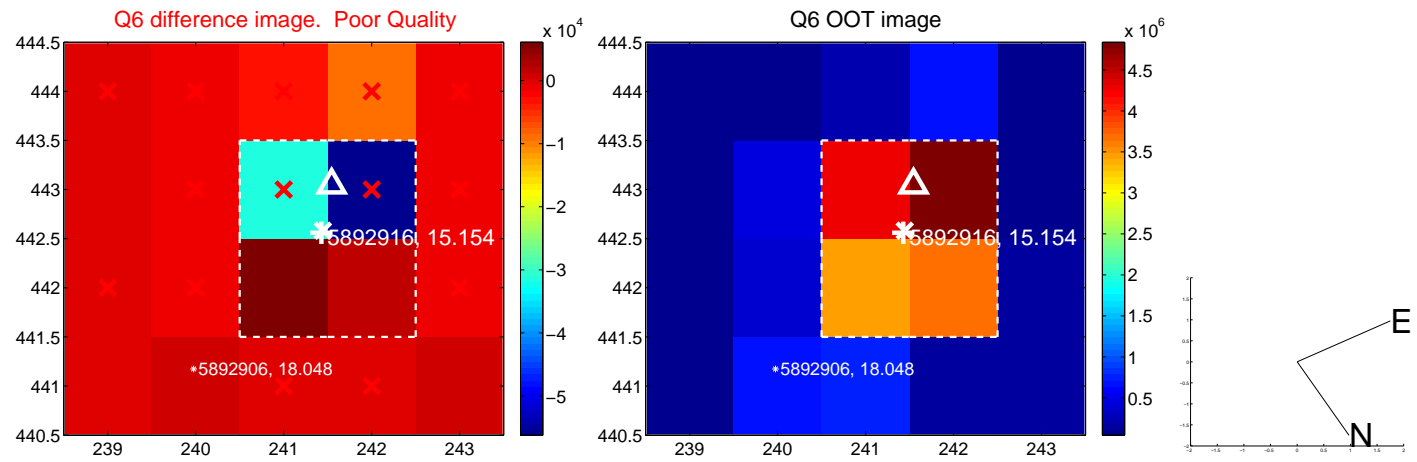
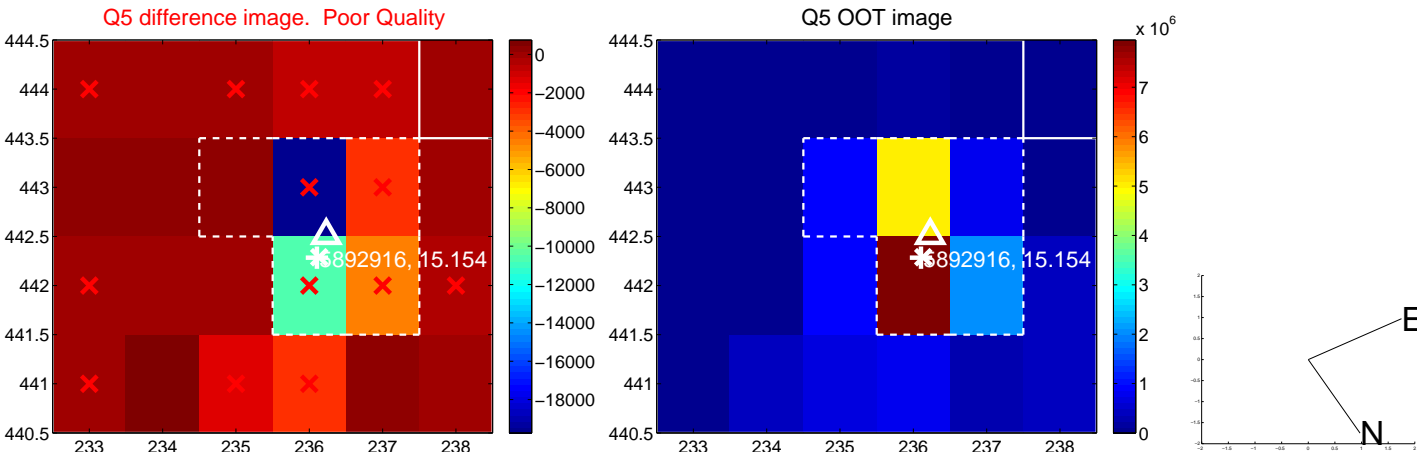


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

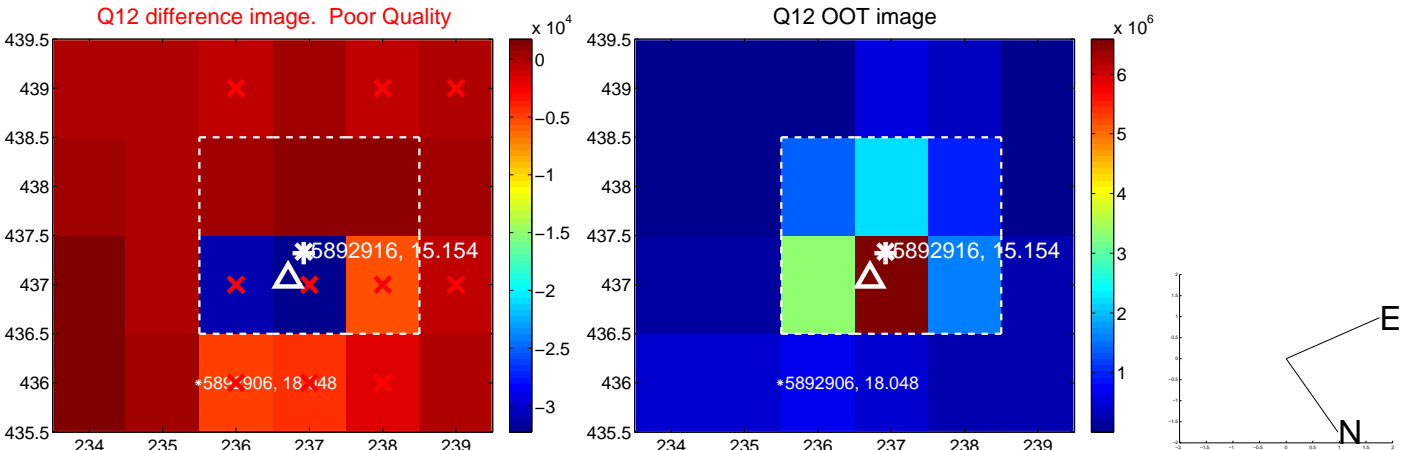
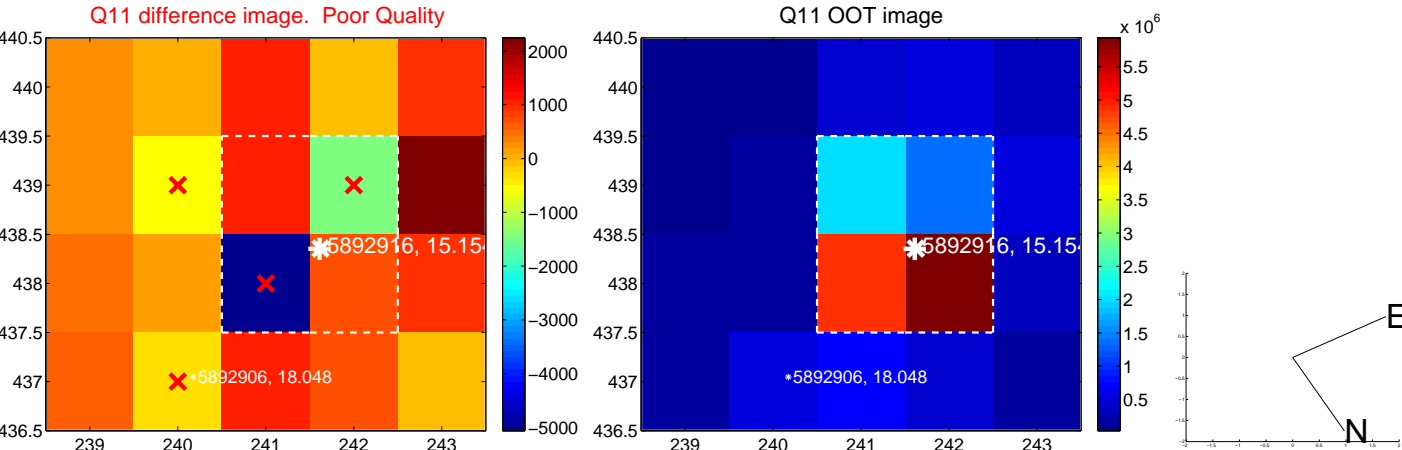
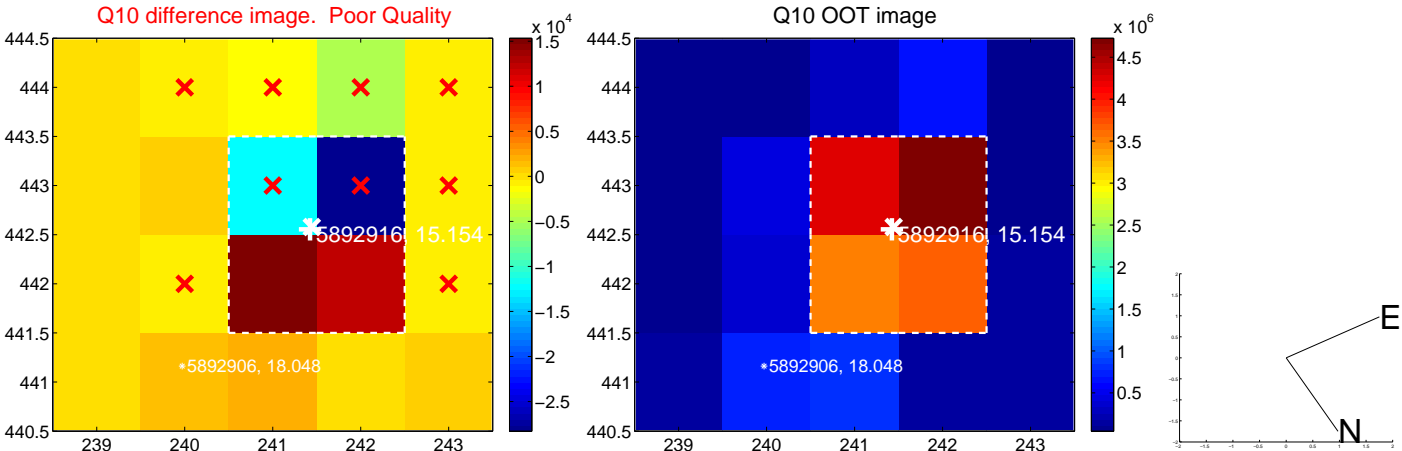
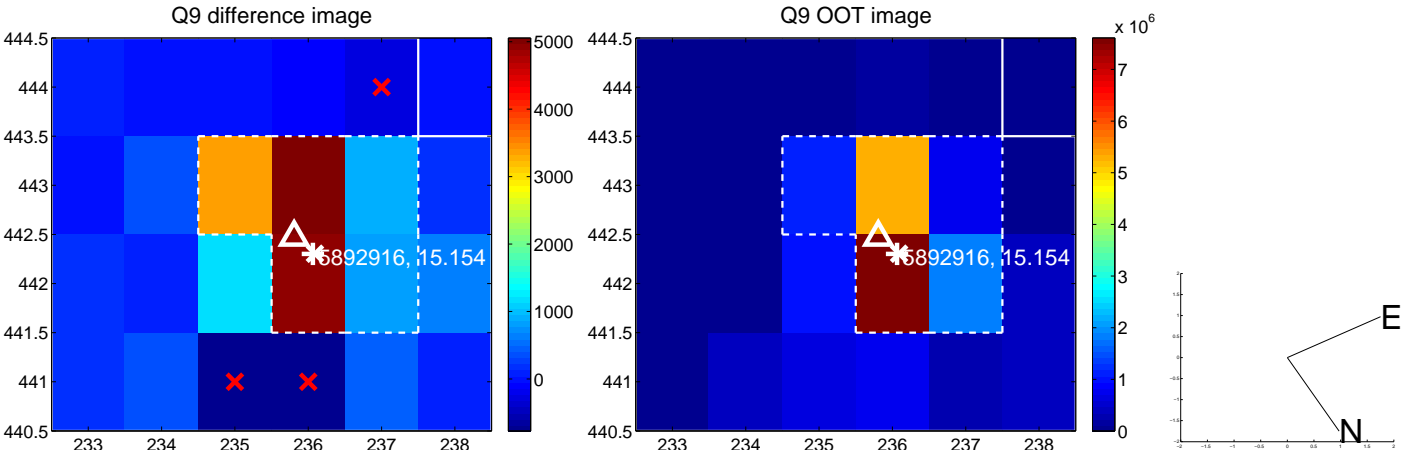
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



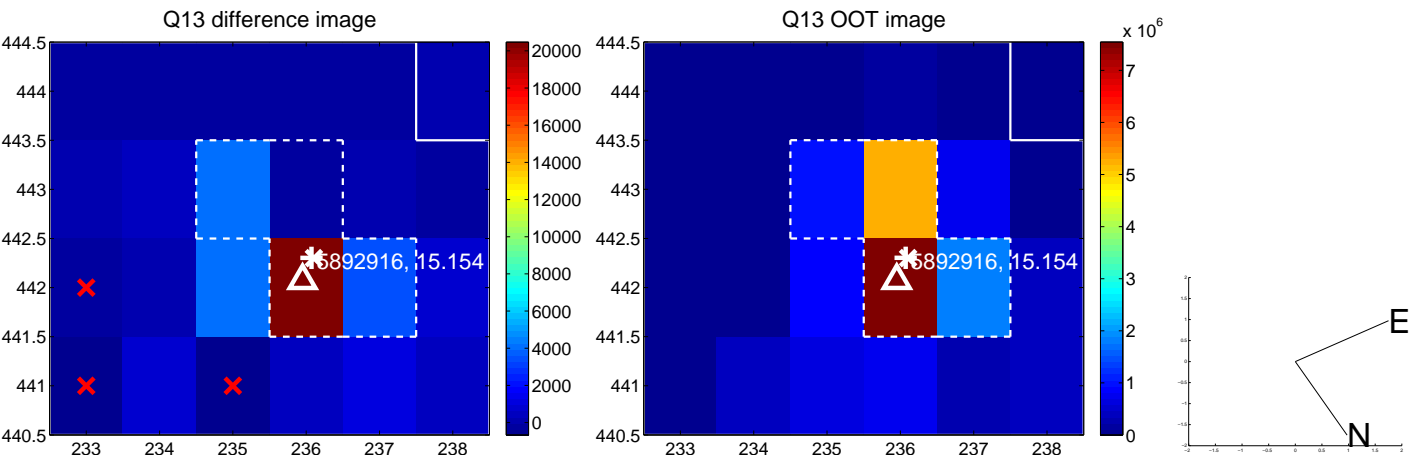
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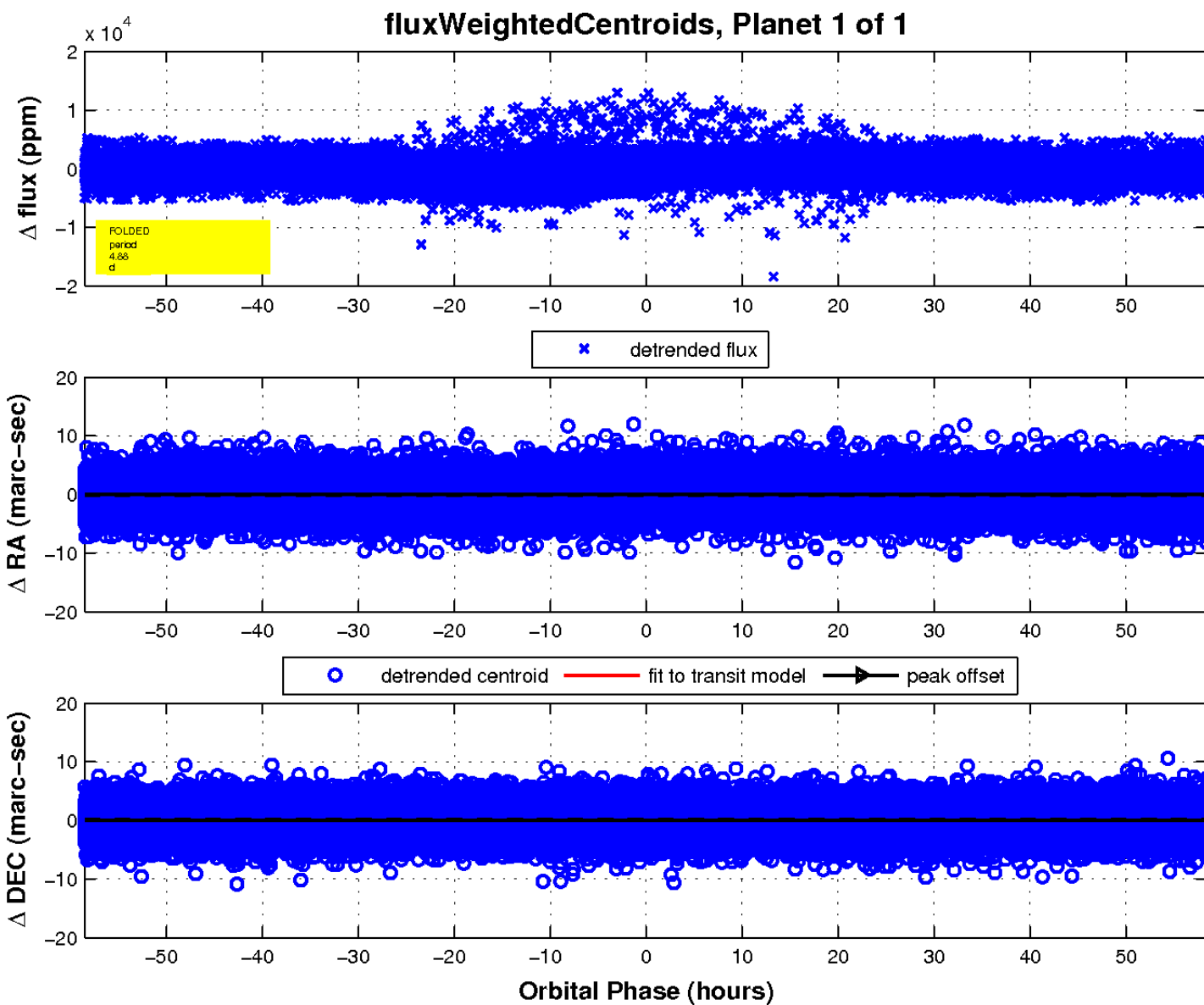
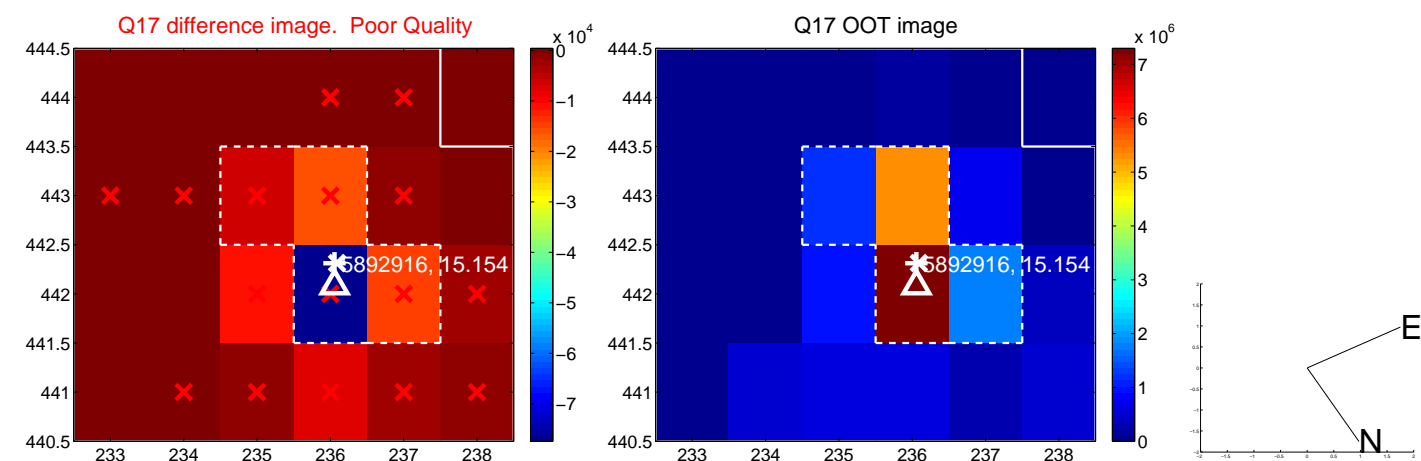
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UKIRT Image

