

KIC 010002792

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})
010002792-01	OBS	No	0.579776	132.058943	22.1	1.193	8.8	2.6	0.65	4524	0.38	1159.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010002792-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS

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

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

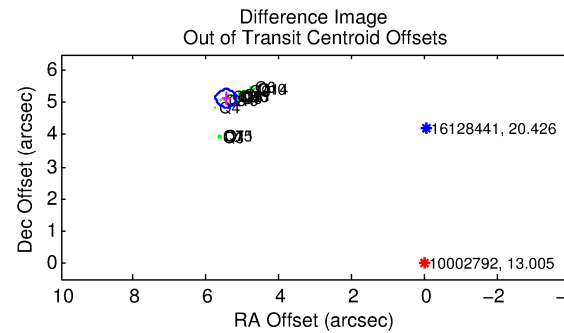
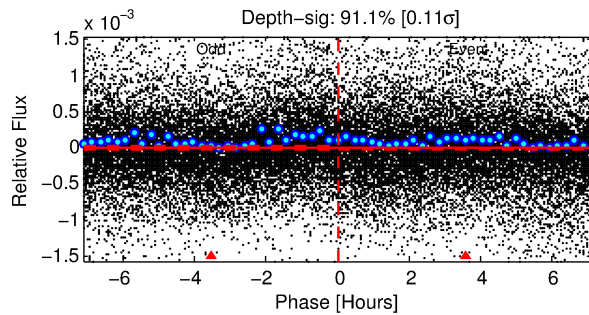
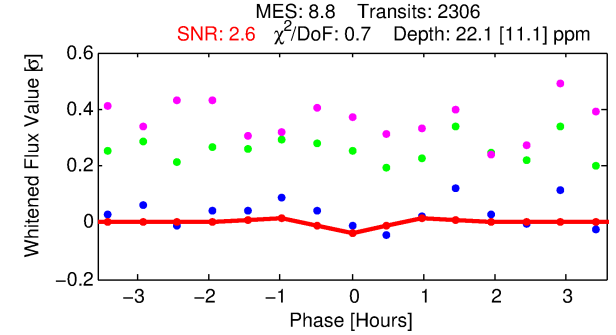
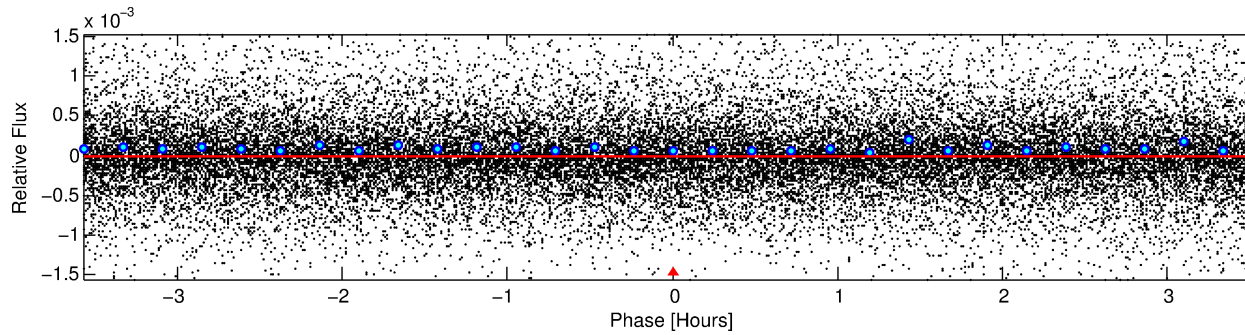
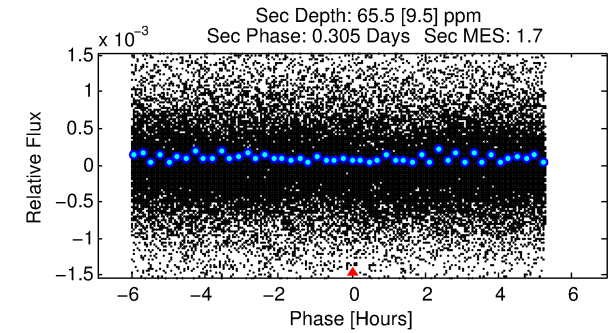
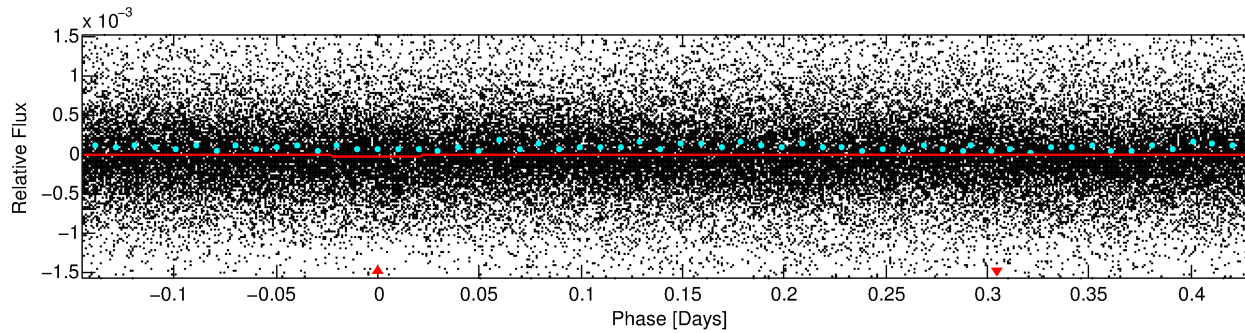
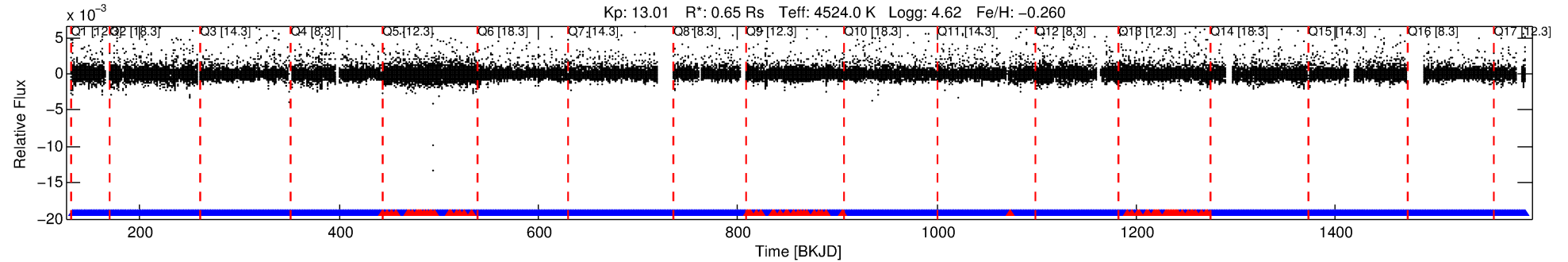
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010002792-01

No Significant Match Found

DV One-Page Summary

KIC: 10002792 Candidate: 1 of 1 Period: 0.580 d



DV Fit Results:

Period = 0.57978 [0.00004] d
Epoch = 132.0589 [0.0048] BKJD
Rp/R* = 0.0053 [0.0048]
a/R* = 1.98 [4.80]
b = 0.89 [0.80]
Seff = 1159.73 [196.39]
Teq = 1488 [63] K
Rp = 0.37 [0.34] Re
a = 0.0117 [0.0009] AU
Ag = 35.18 [64.21] [0.53σ]
Teffp = 5603 [2559] K [1.61σ]

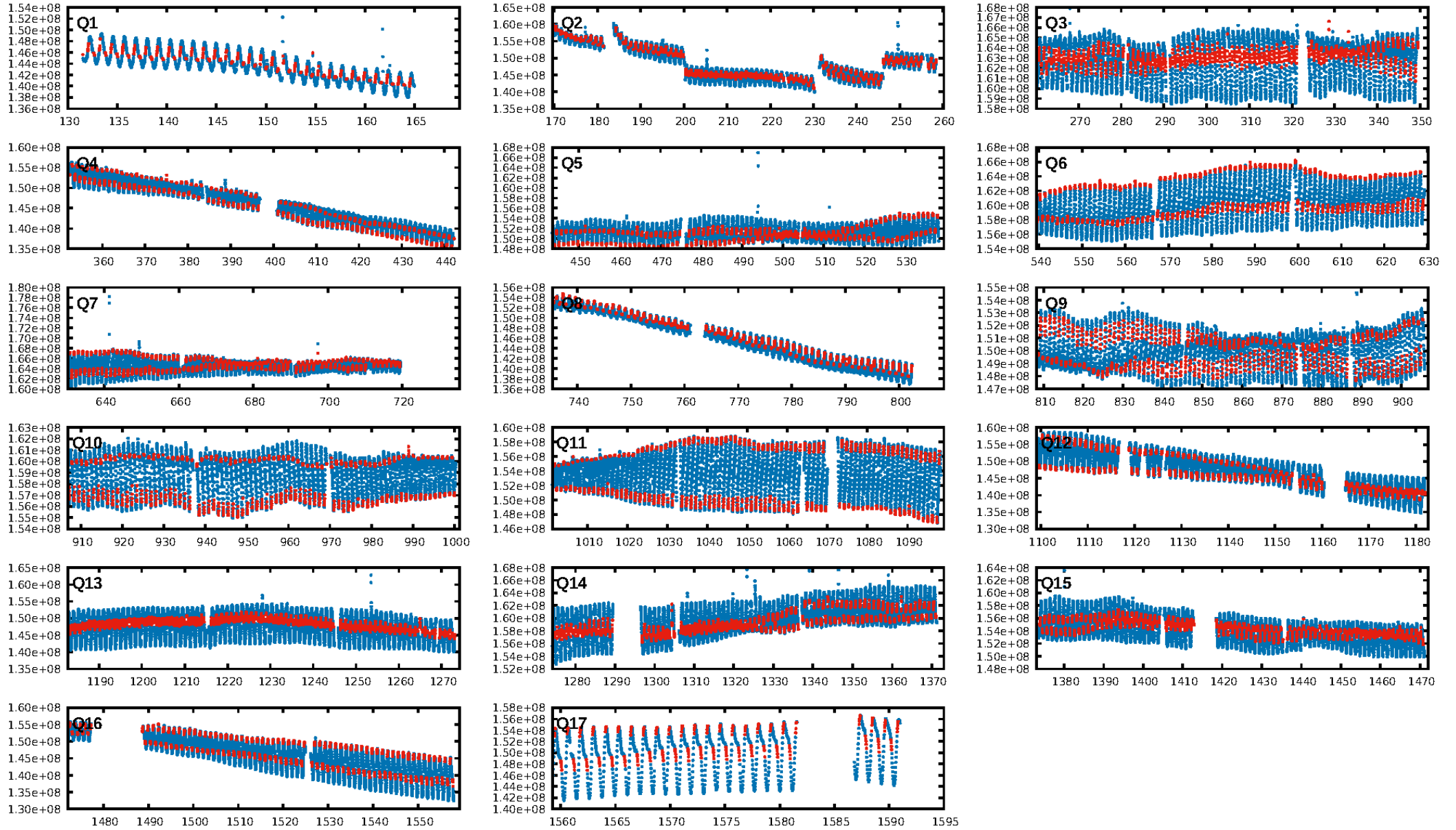
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.85e-27
RollingBand-fgt: 0.96 [2123/2202]
GhostDiagnostic-chr: 1.134
Centroid-sig: N/A
Centroid-so: 4.460 arcsec [2.07σ]
OotOffset-rm: 7.490 arcsec [81.90σ]
KicOffset-rm: 0.134 arcsec [1.93σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

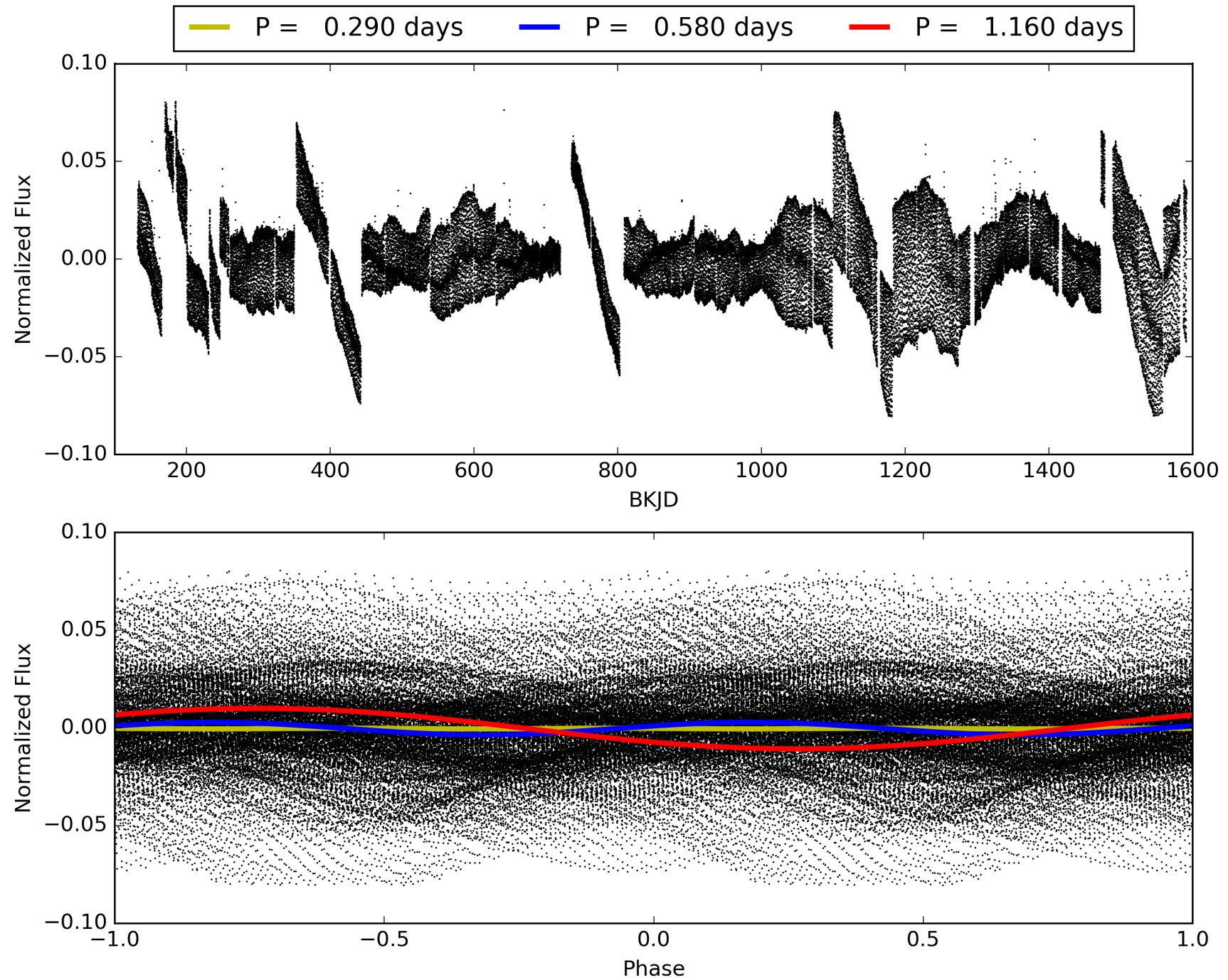
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:06:45 Z

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

TCE 010002792-01, PDC Light Curves

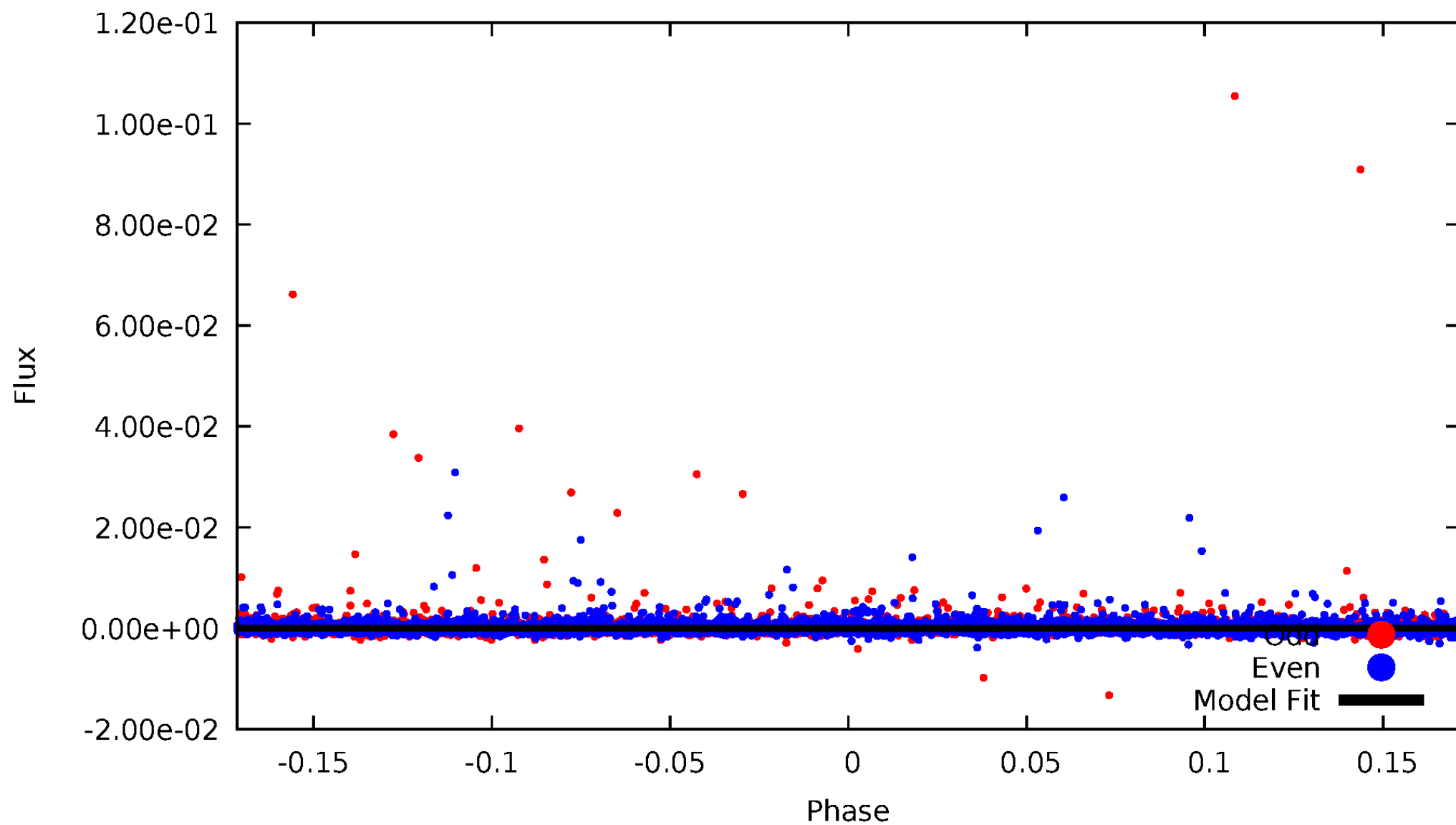


TCE 010002792-01



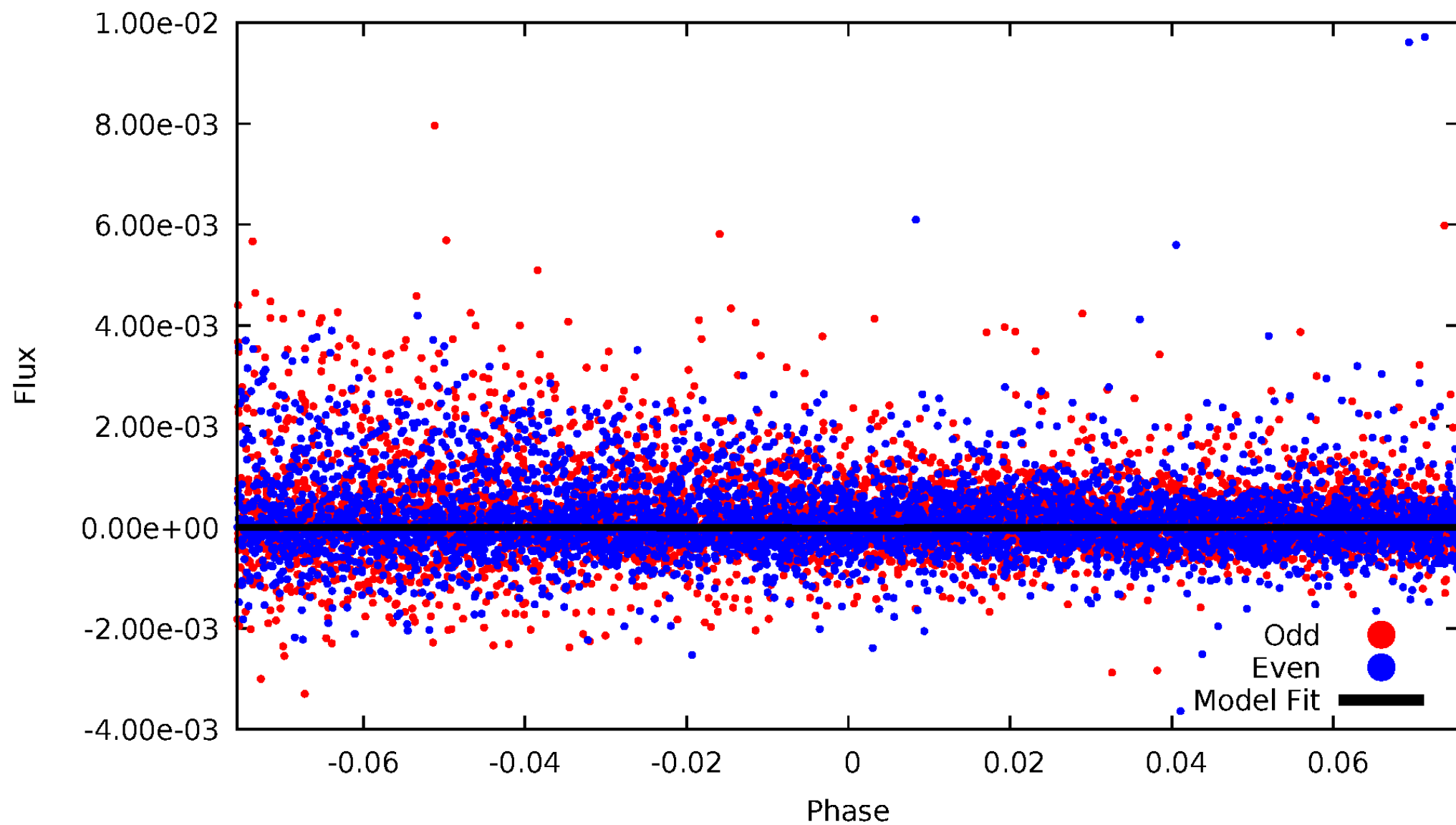
DV Odd/Even

TCE 010002792-01



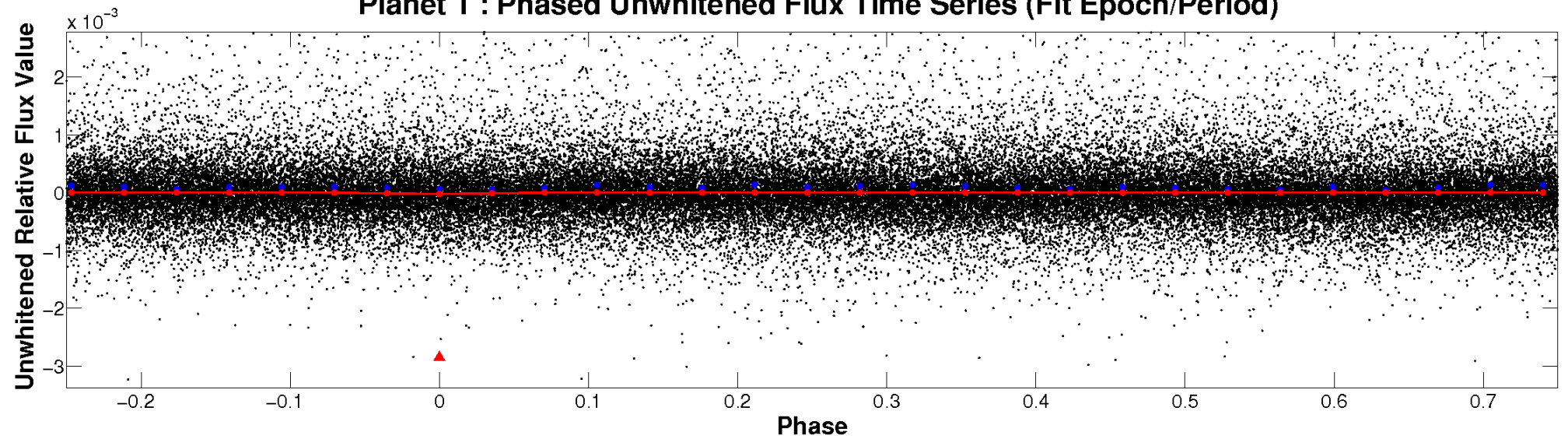
ALT Odd/Even

TCE 010002792-01

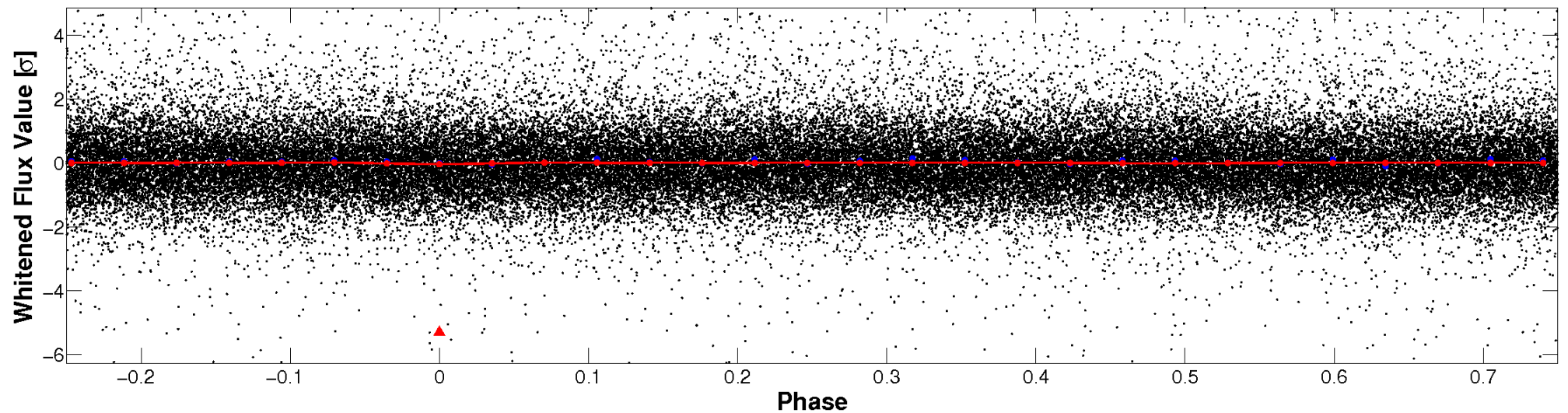


Non-Whitened Vs. Whitened Light Curve

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

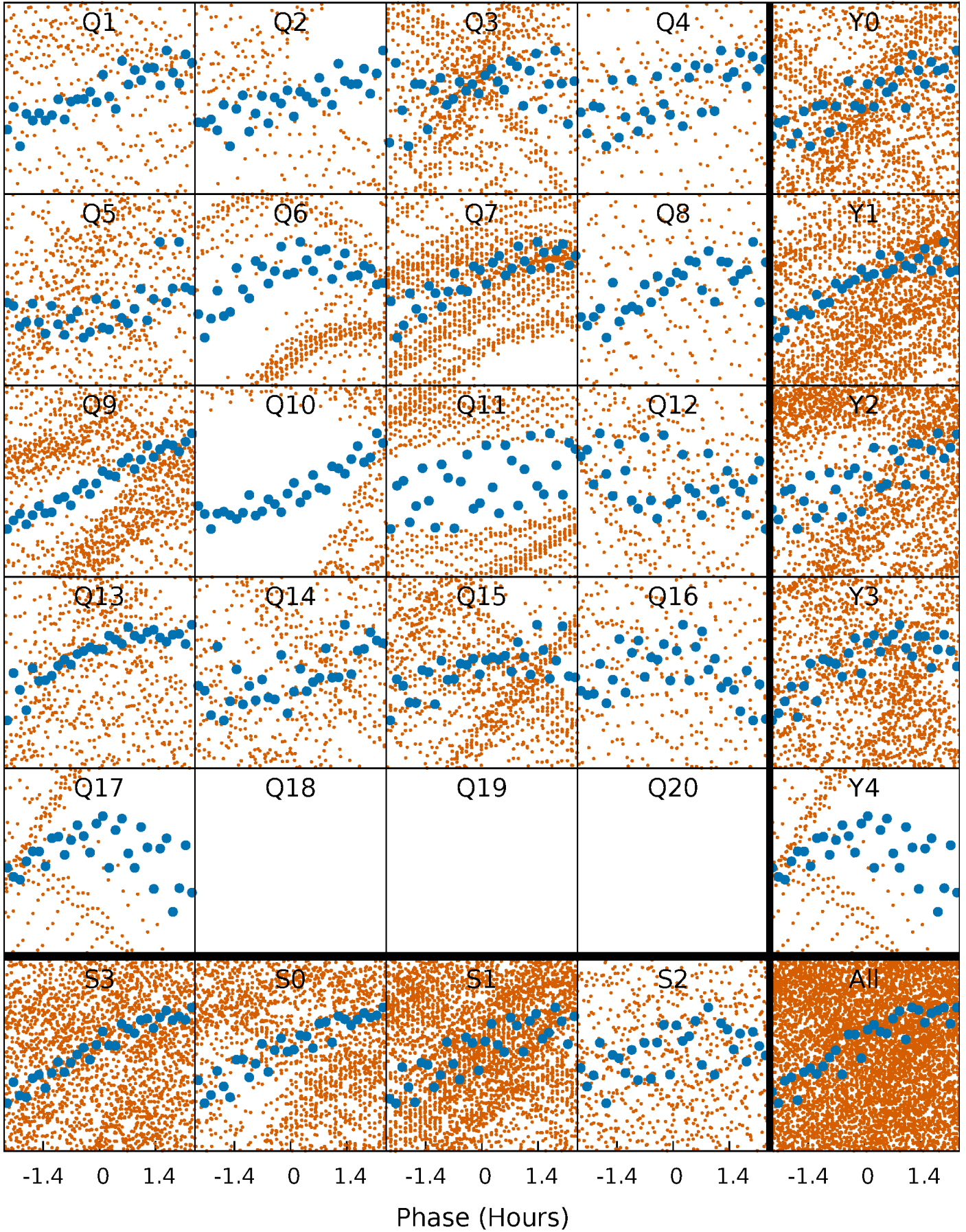


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



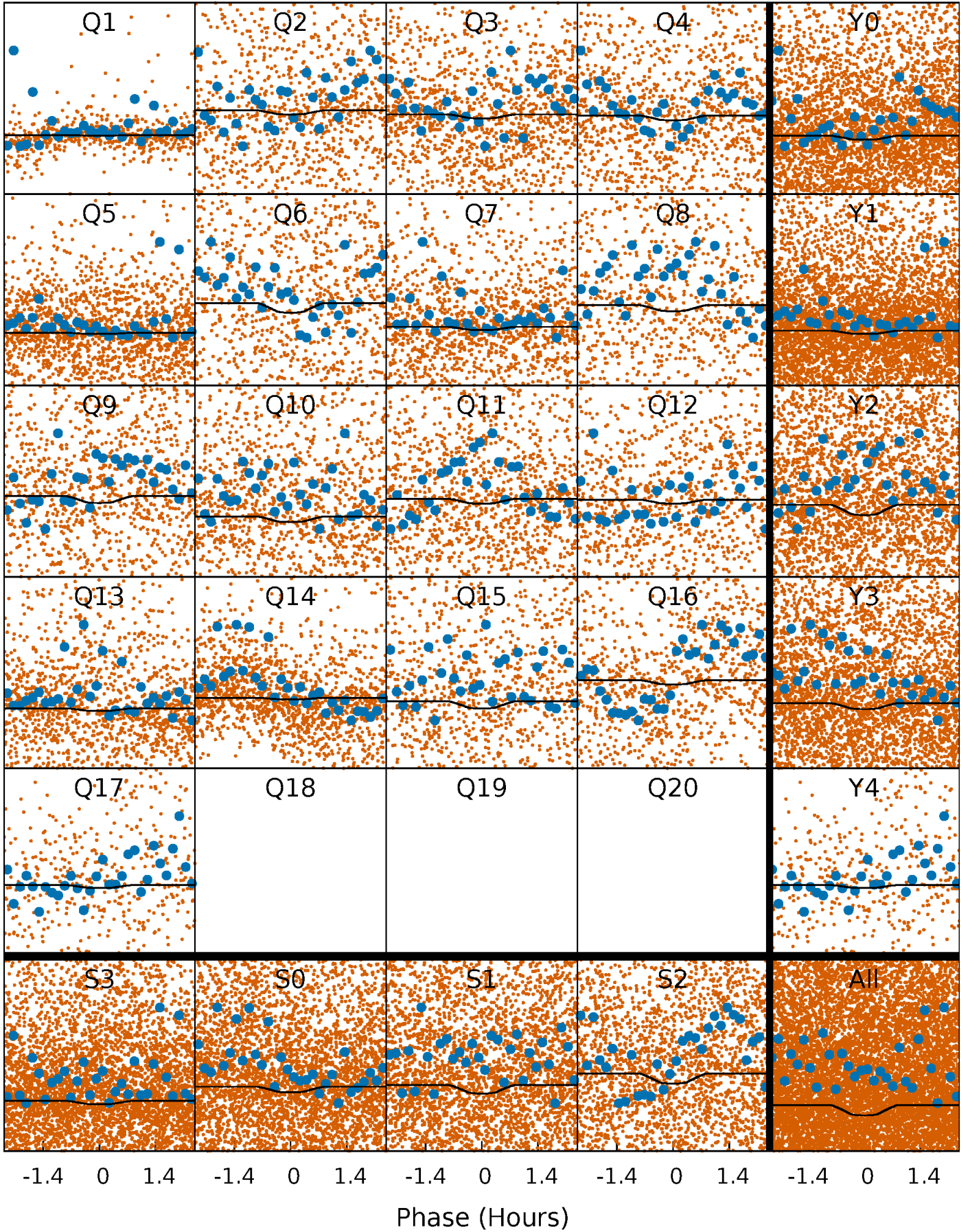
PDC Quarter-Phased Transit Curves

TCE 010002792-01 P= 0.579776 Days $T_0=132.058943$ (BKJD)



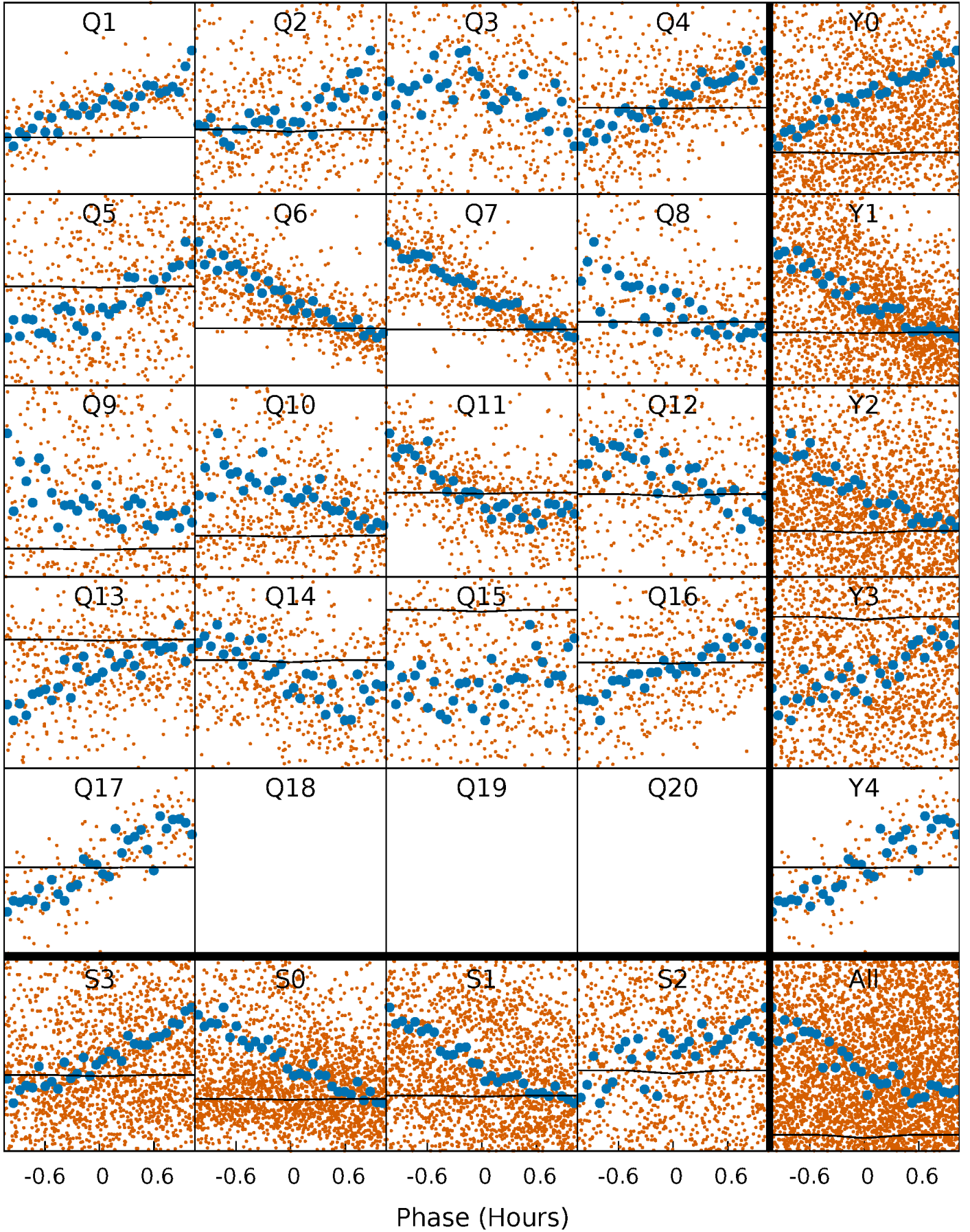
DV Quarter-Phased Transit Curves

TCE 010002792-01 $P = 0.579776$ Days $T_0 = 132.058943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

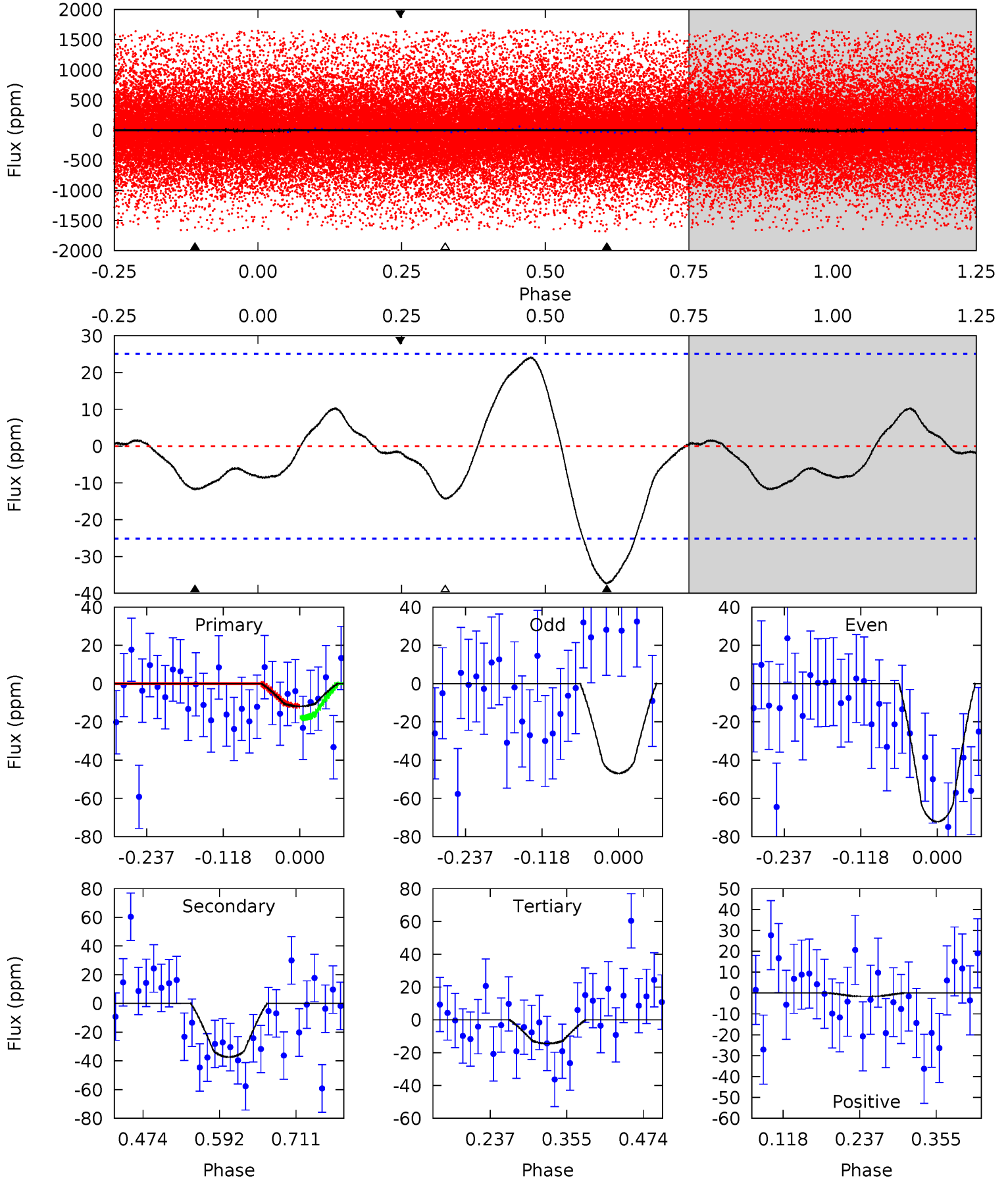
TCE 010002792-01 $P = 0.579959$ Days $T_0 = 132.087480$ (BKJD)



DV Model-Shift Uniqueness Test

010002792-01, P = 0.579776 Days, E = 131.479167 Days

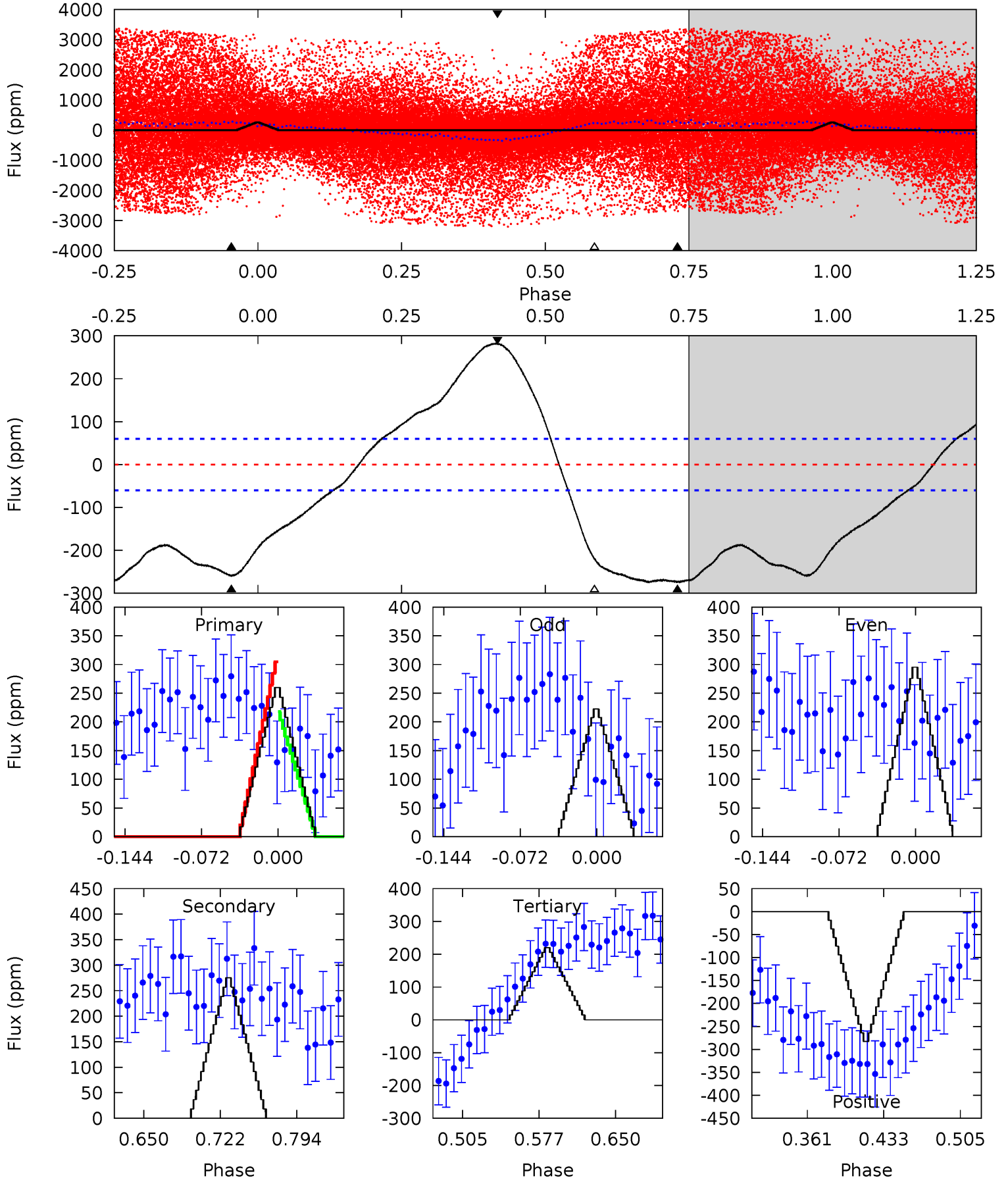
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.13	6.73	2.59	-0.29	4.53	1.56	1.78	-0.46	2.42	4.14	7.02	2.33	18.5	0.39	0.60



Alt Model-Shift Uniqueness Test

010002792-01, P = 0.579959 Days, E = 131.507521 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	21.3	17.0	21.8	4.63	1.80	13.2	3.09	-1.75	4.26	-0.57	2.90	2.34	0.51	3.03



Stellar Parameters For KIC 010002792

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4524^{+121}_{-148}	$4.615^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.651^{+0.046}_{-0.063}$	$0.637^{+0.070}_{-0.051}$	$3.253^{+0.815}_{-0.369}$
	+3%/-3%	+1%/-1%	+115%/-115%	+7%/-10%	+11%/-8%	+25%/-11%
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 010002792-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 6	$0.44^{+0.32}_{-0.27}$	2063^{+70}_{-75}	4462^{+2445}_{-823}	15^{+83}_{-10}
Alt.	-275 ± 13	$0.32^{+0.30}_{-0.22}$	2062^{+71}_{-79}	8512^{+14712}_{-2575}	197^{+1701}_{-142}

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

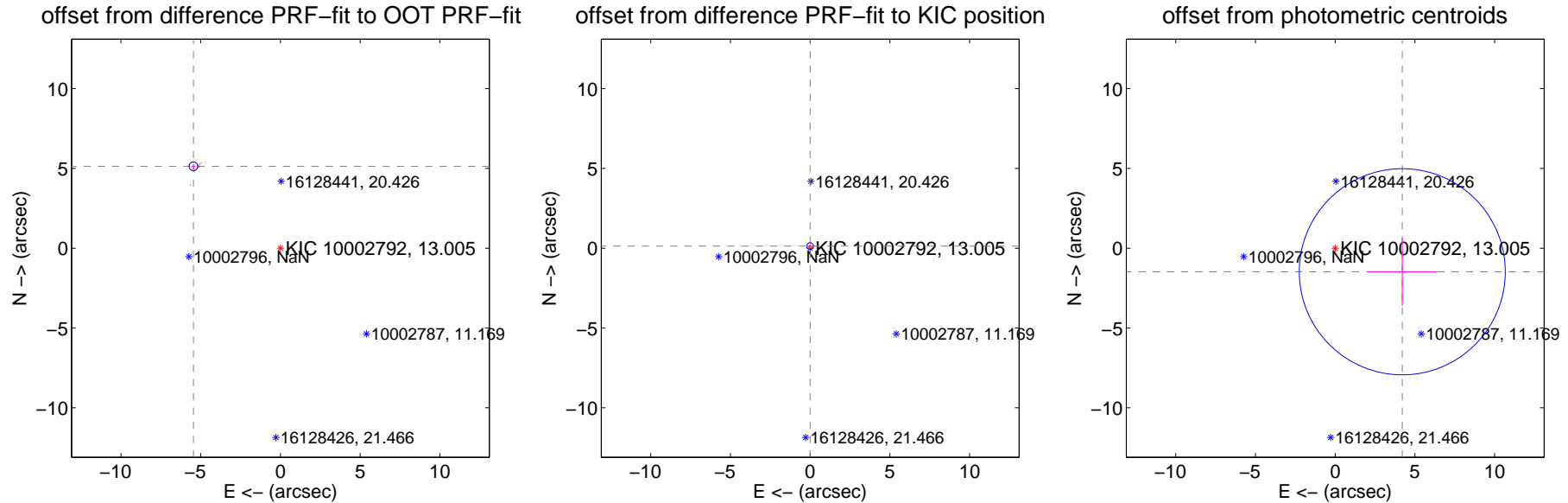
DV Centroid Data

Supplemental centroid analysis for 010002792-01. Kepler magnitude: 13.01. Transit SNR 2.64

There are 6 quarters with good PRF difference image offsets

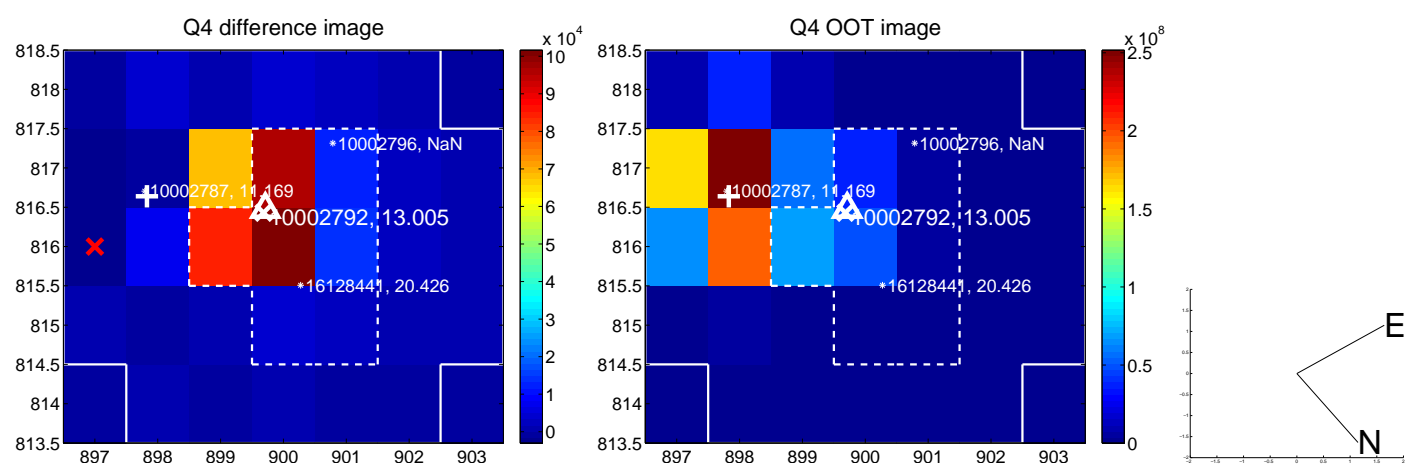
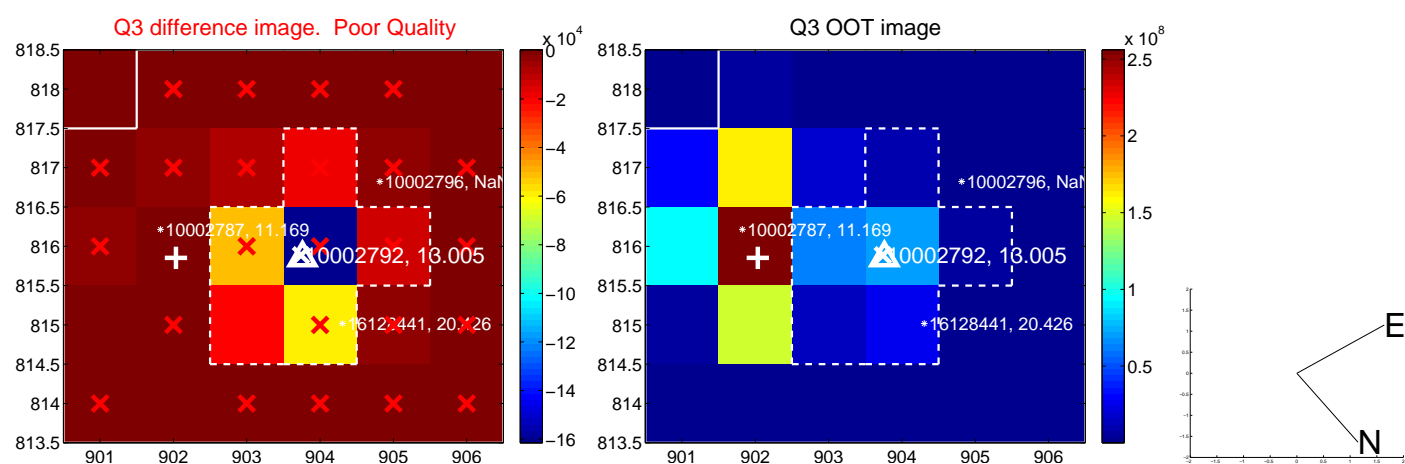
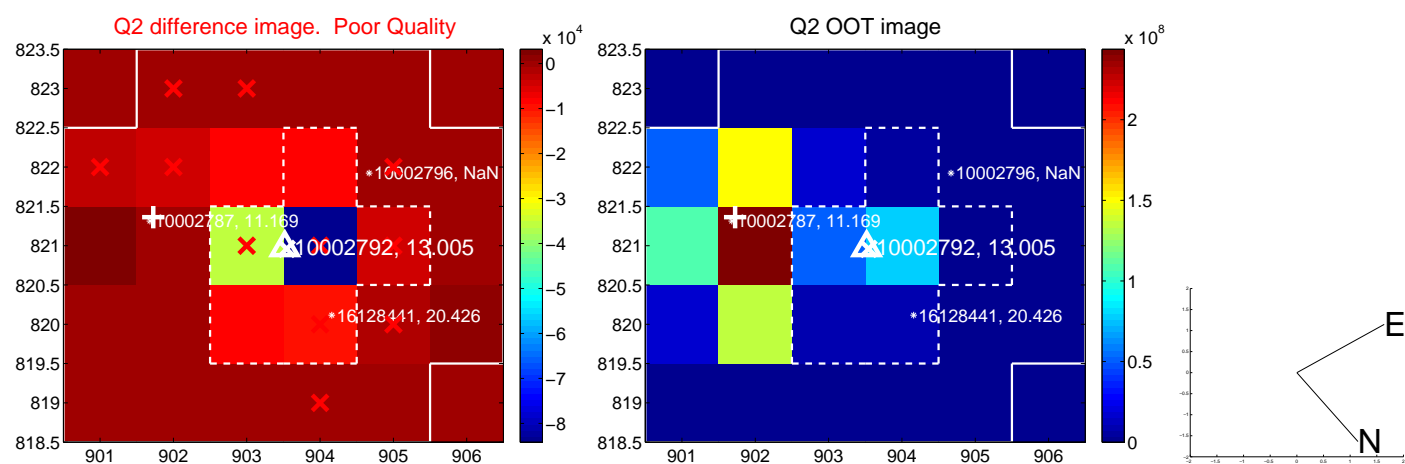
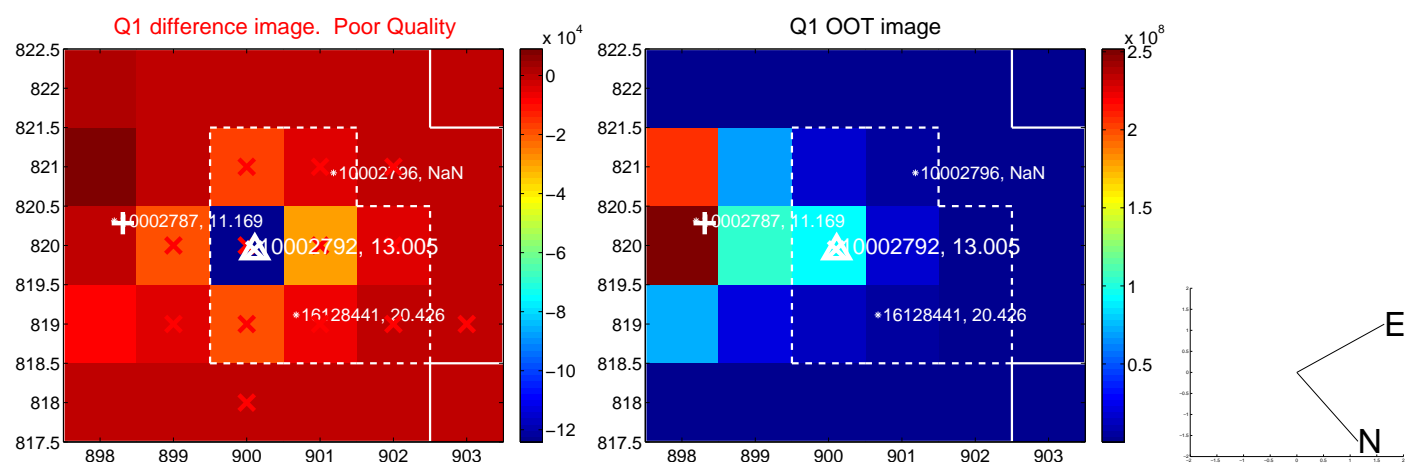
The OOT PRF centroid is offset from the target star catalog position by about 7.20 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.490 \pm 0.091	81.90	5.456 \pm 0.110	5.132 \pm 0.152
PRF-fit source offset from KIC position	0.134 \pm 0.070	1.93	0.003 \pm 0.069	0.134 \pm 0.070
photometric centroid source offset	4.46 \pm 2.15	2.07	-4.21 \pm 2.16	-1.48 \pm 2.13

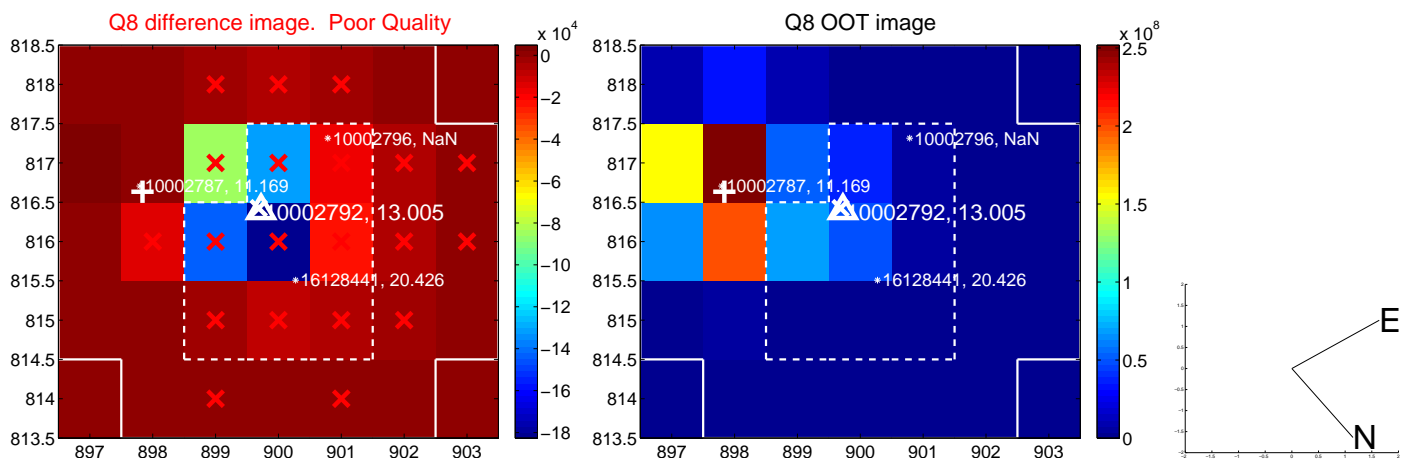
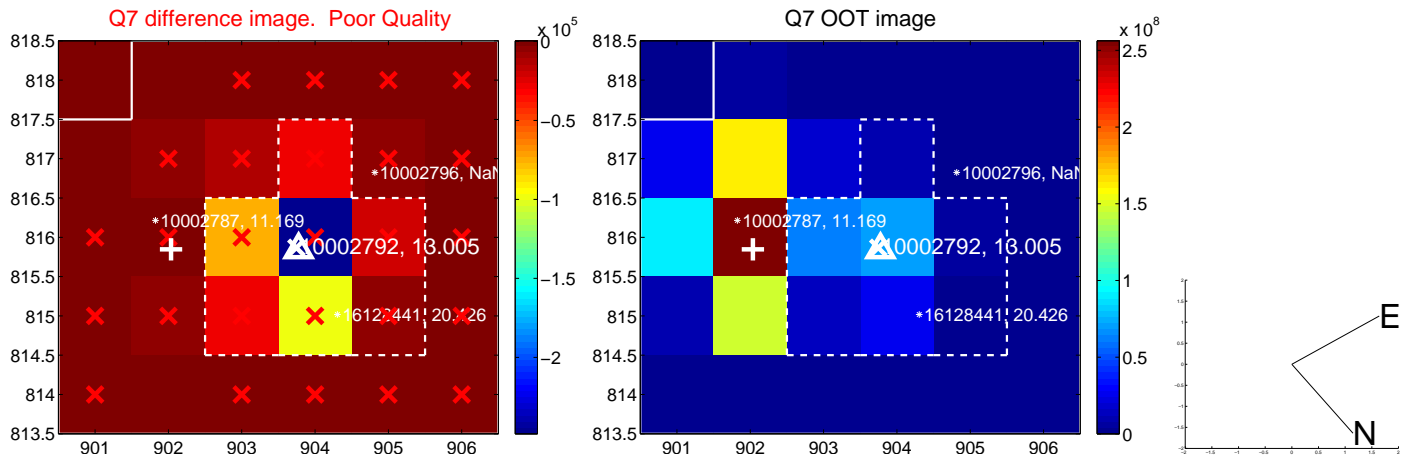
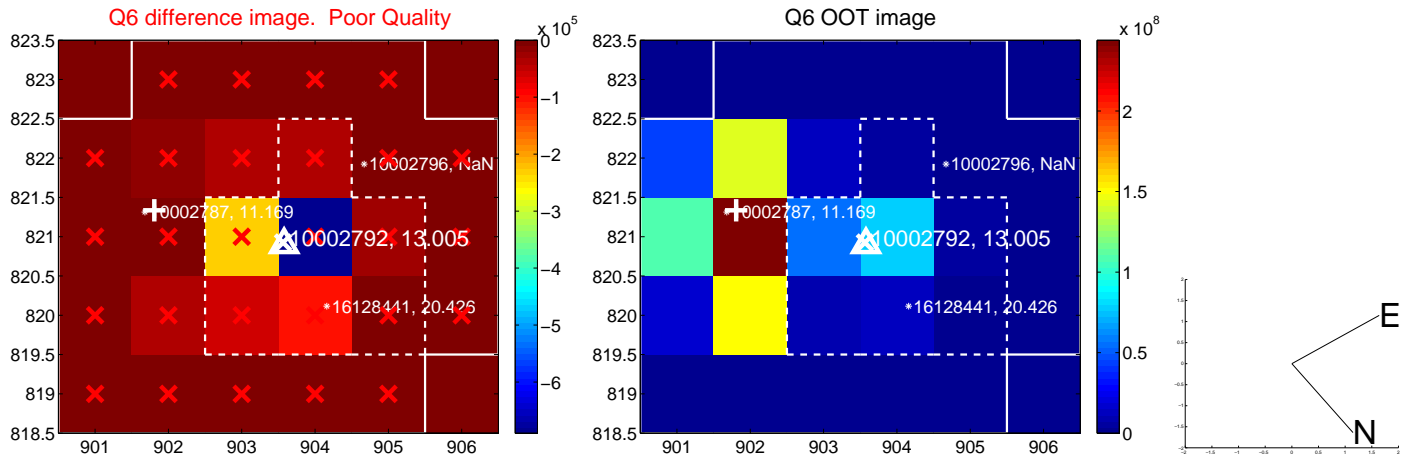
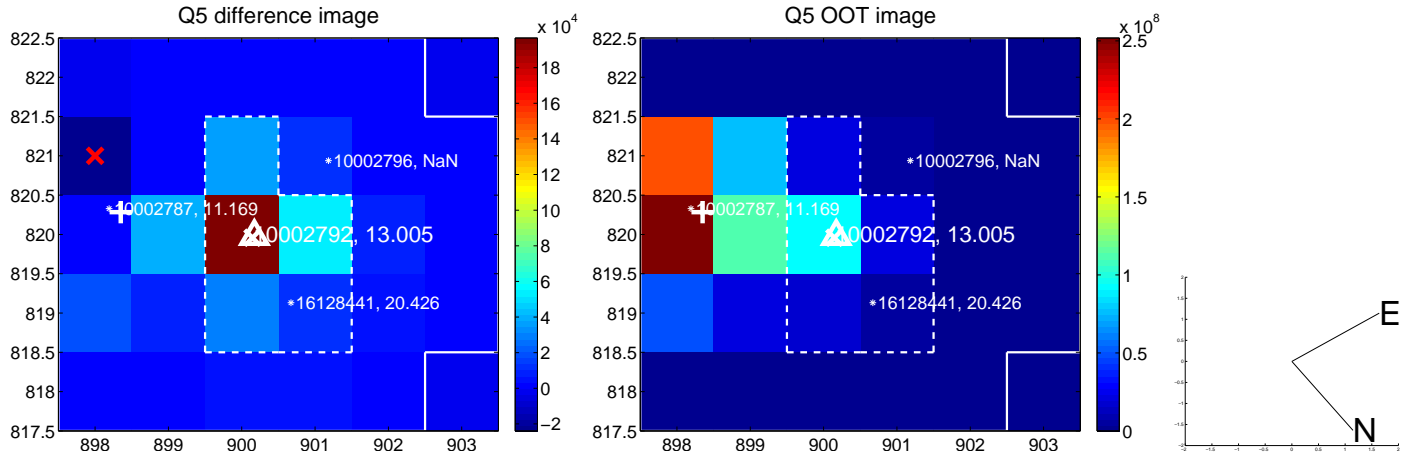


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

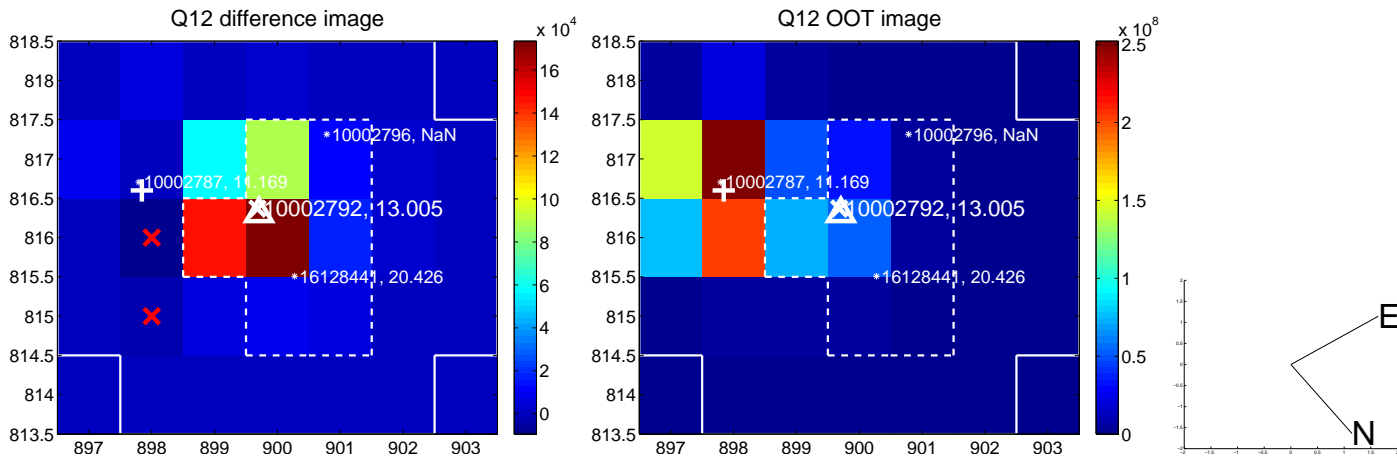
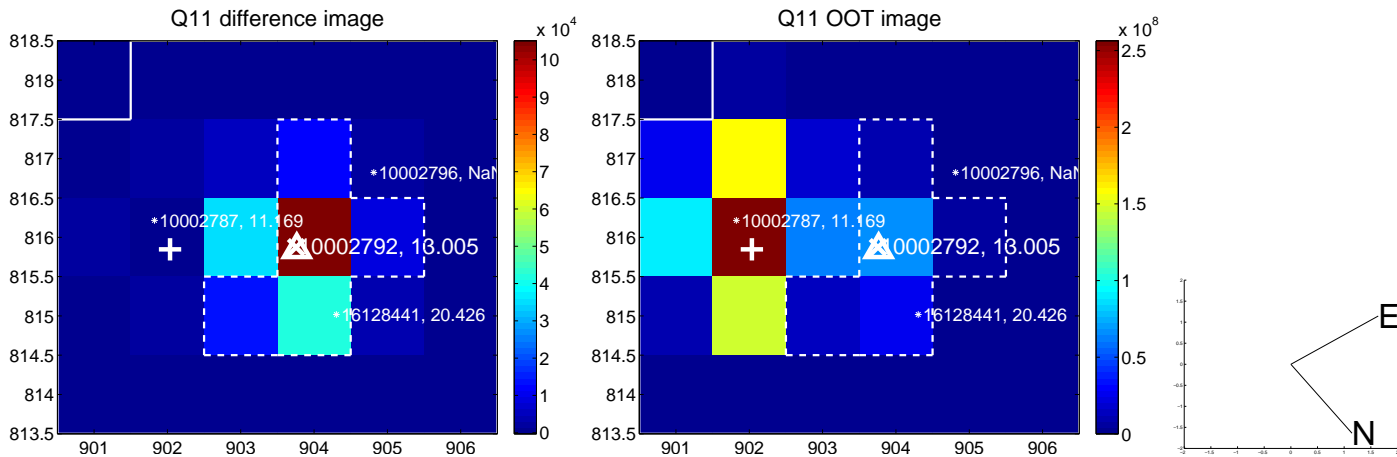
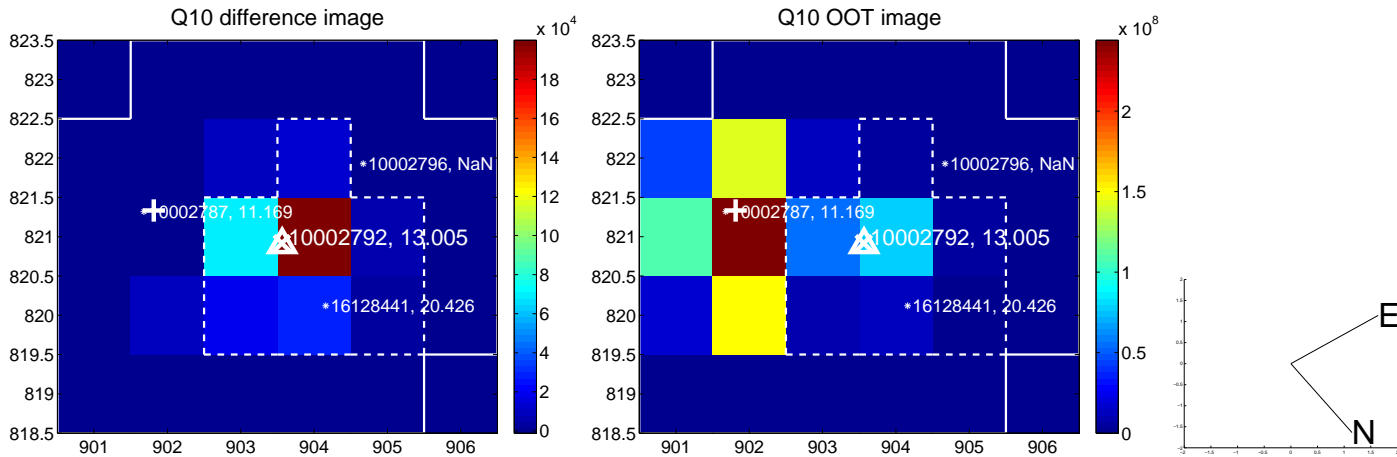
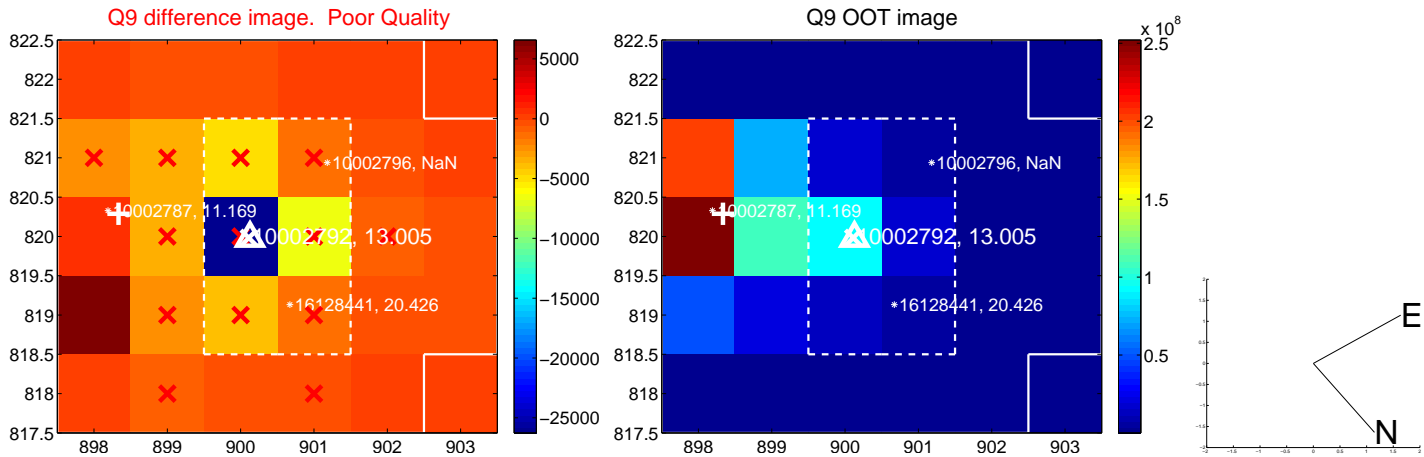
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



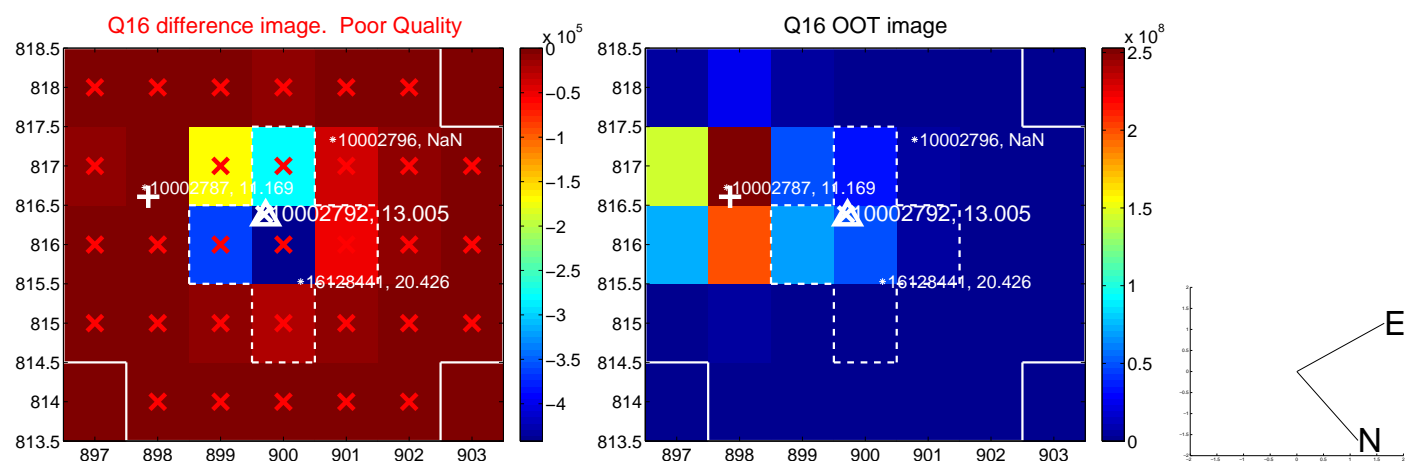
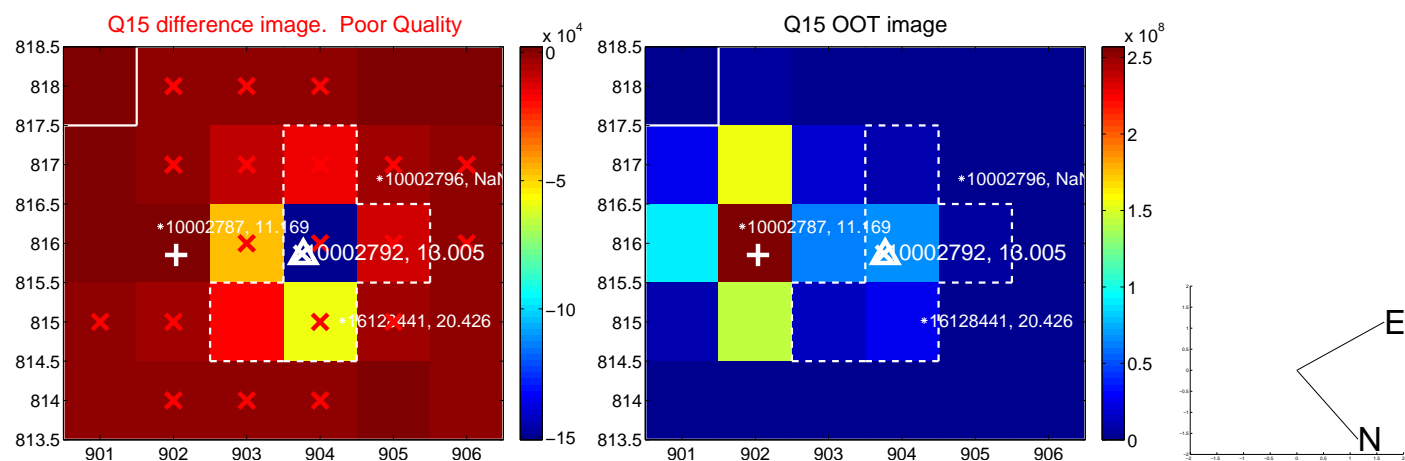
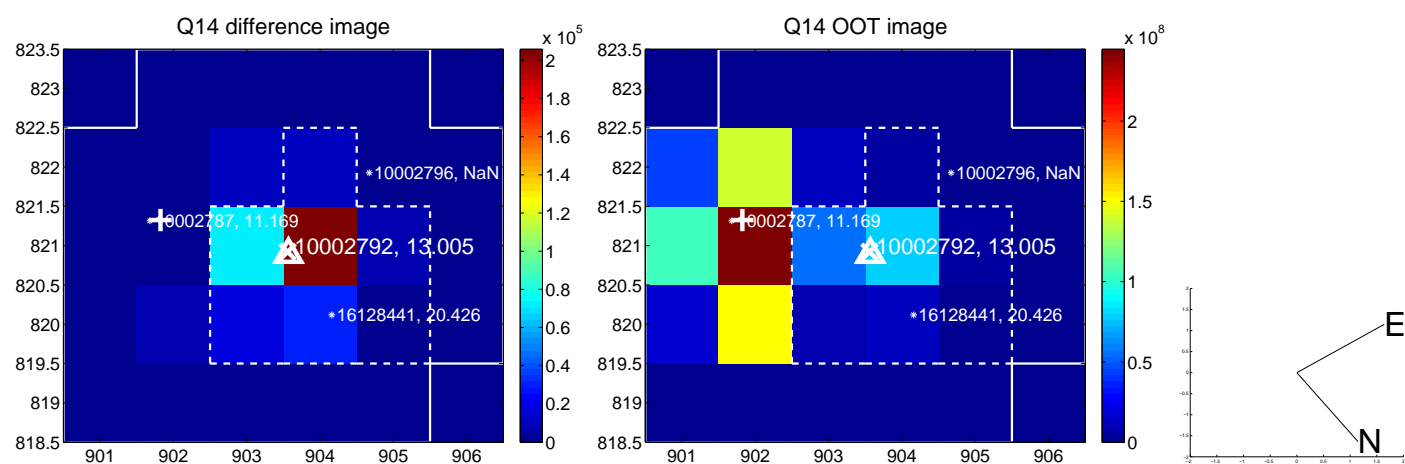
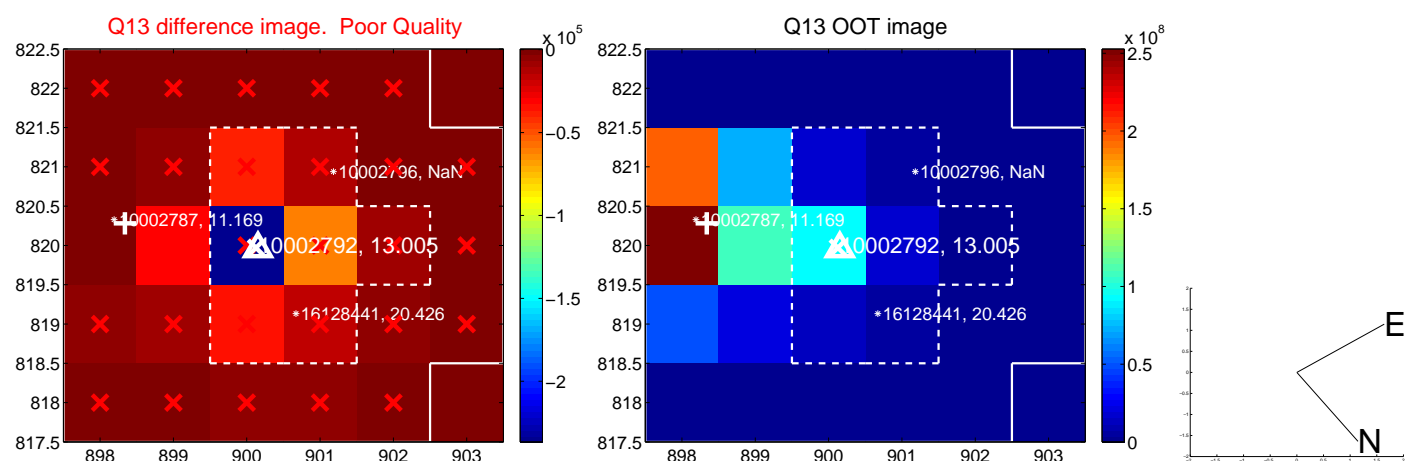
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



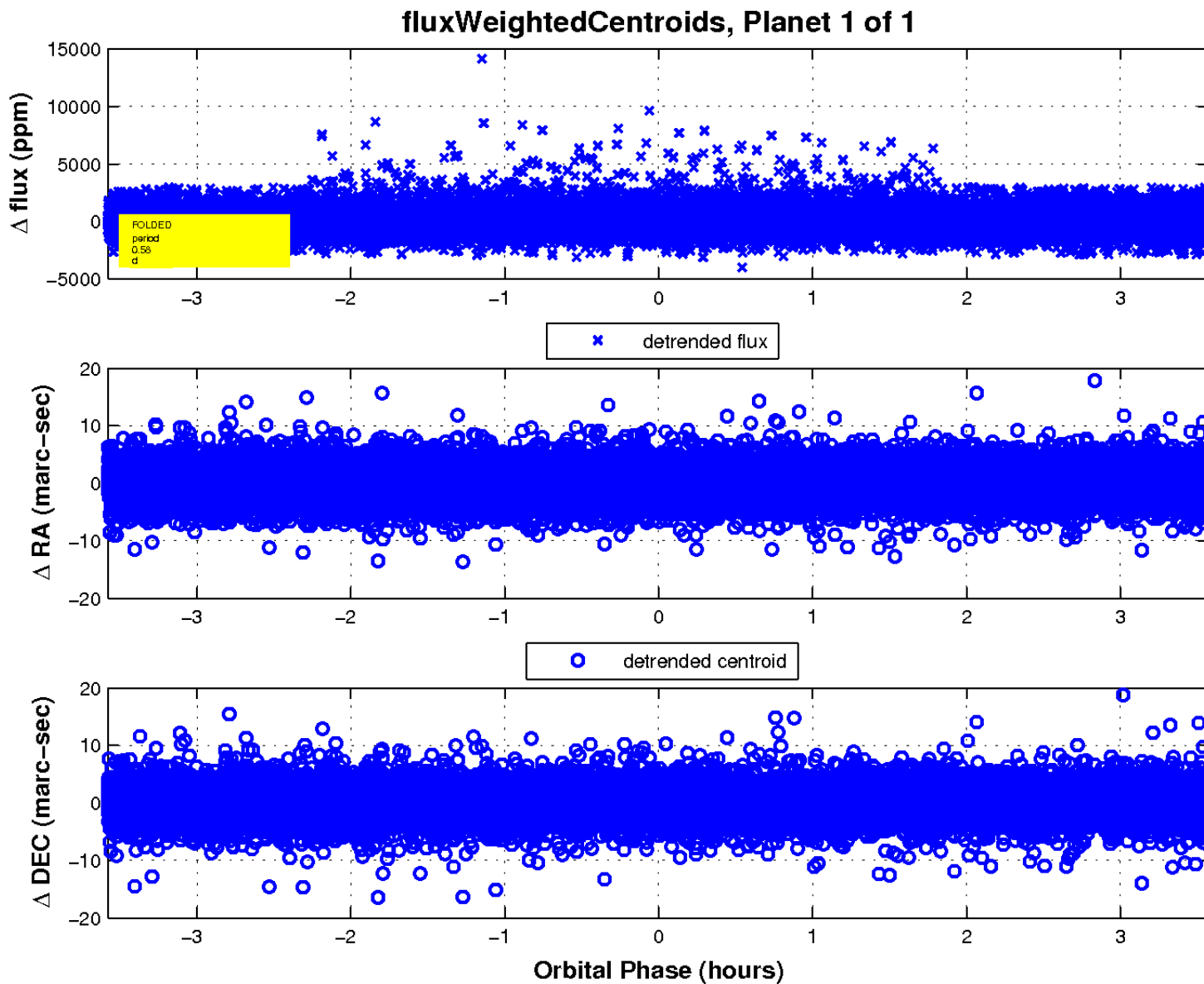
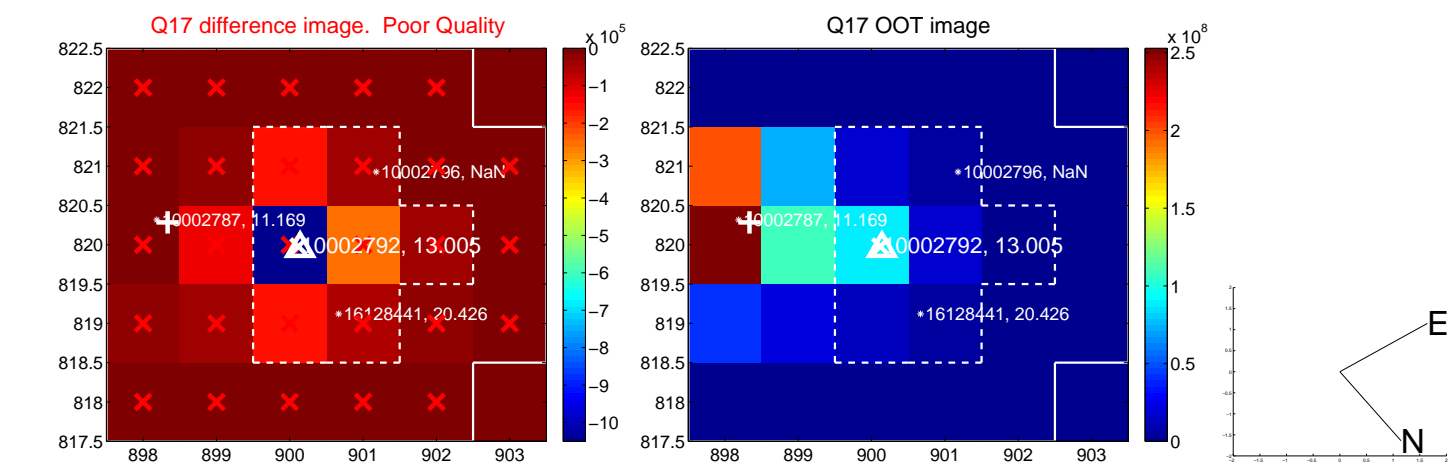
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UKIRT Image

Declination

