

KIC 005391059

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})
005391059-01	OBS	No	0.640897	131.674091	21.6	4.153	8.7	3.0	1.22	6791	0.61	11647.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005391059-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

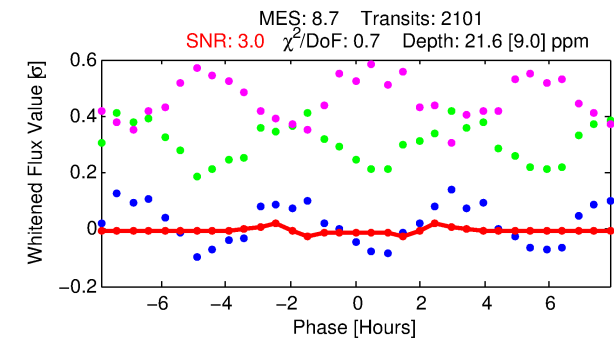
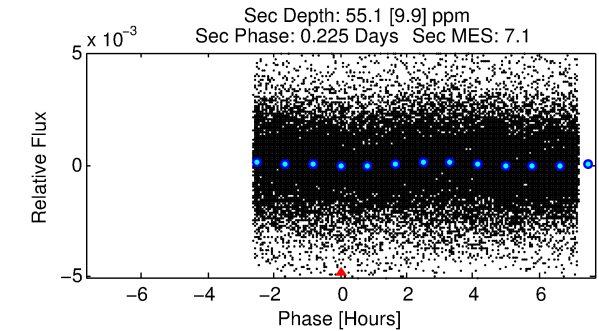
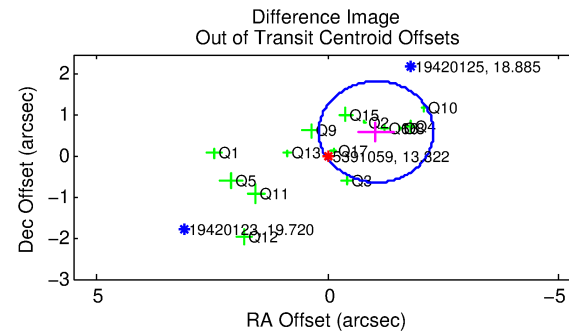
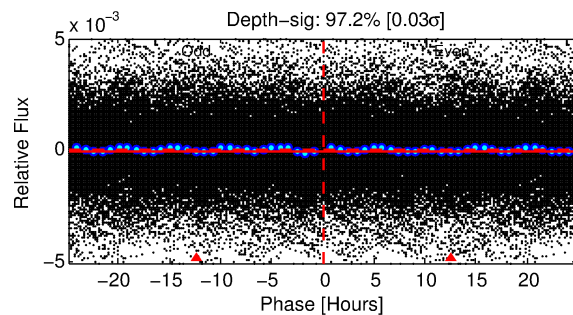
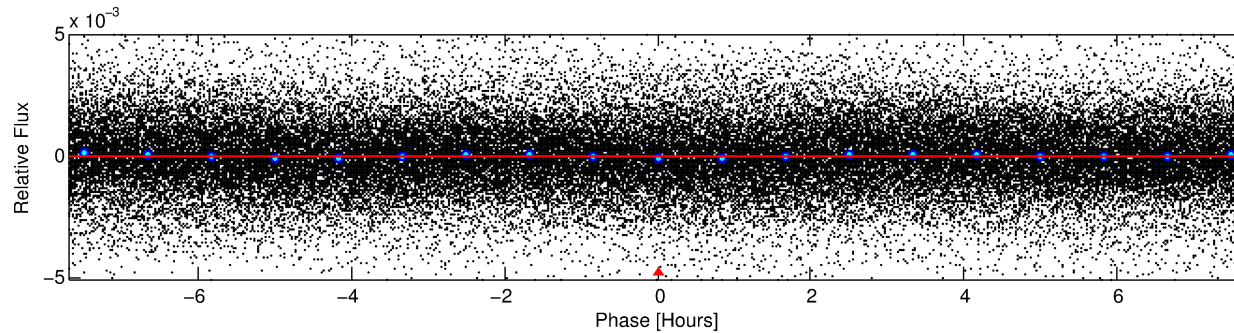
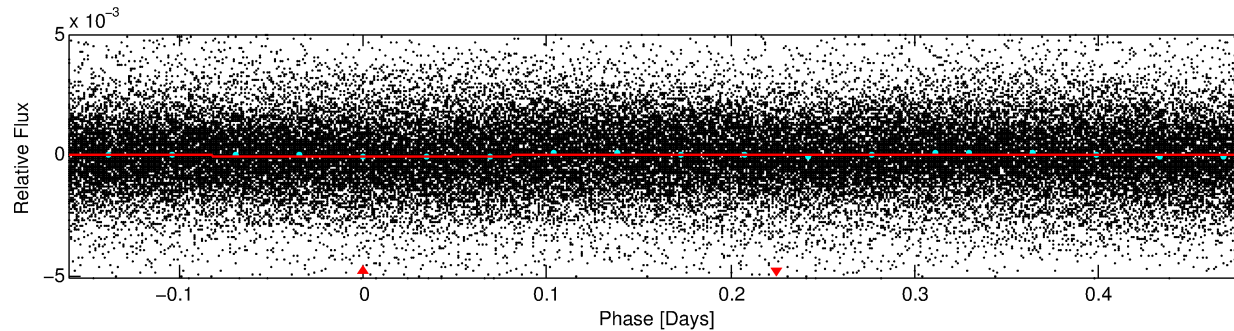
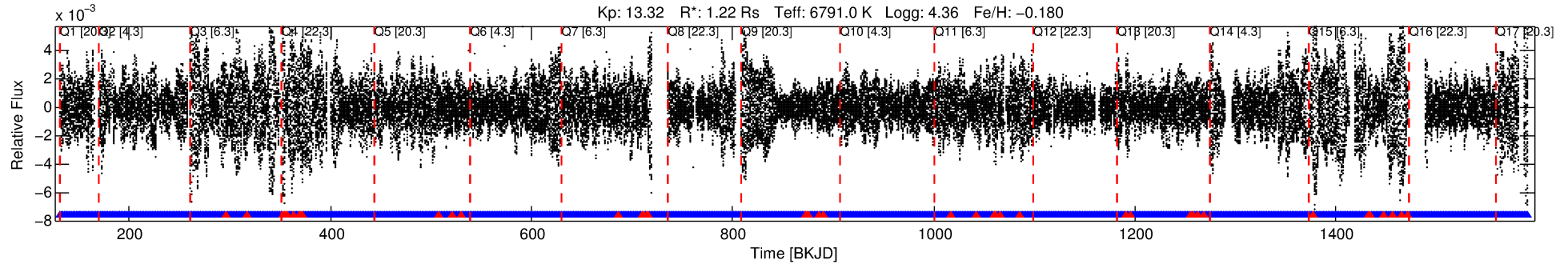
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005391059-01

No Significant Match Found

DV One-Page Summary

KIC: 5391059 Candidate: 1 of 1 Period: 0.641 d



DV Fit Results:

Period = 0.64090 [0.00003] d
Epoch = 131.6741 [0.0042] BKJD
Rp/R* = 0.0046 [0.0025]
a/R* = 1.19 [1.07]
b = 0.70 [2.26]
Seff = 11647.90 [4866.01]
Teq = 2649 [277] K
Rp = 0.61 [0.39] Re
a = 0.0156 [0.0043] AU
Ag = 20.04 [23.53] [0.81 σ]
Teffp = 8666 [2423] K [2.47 σ]

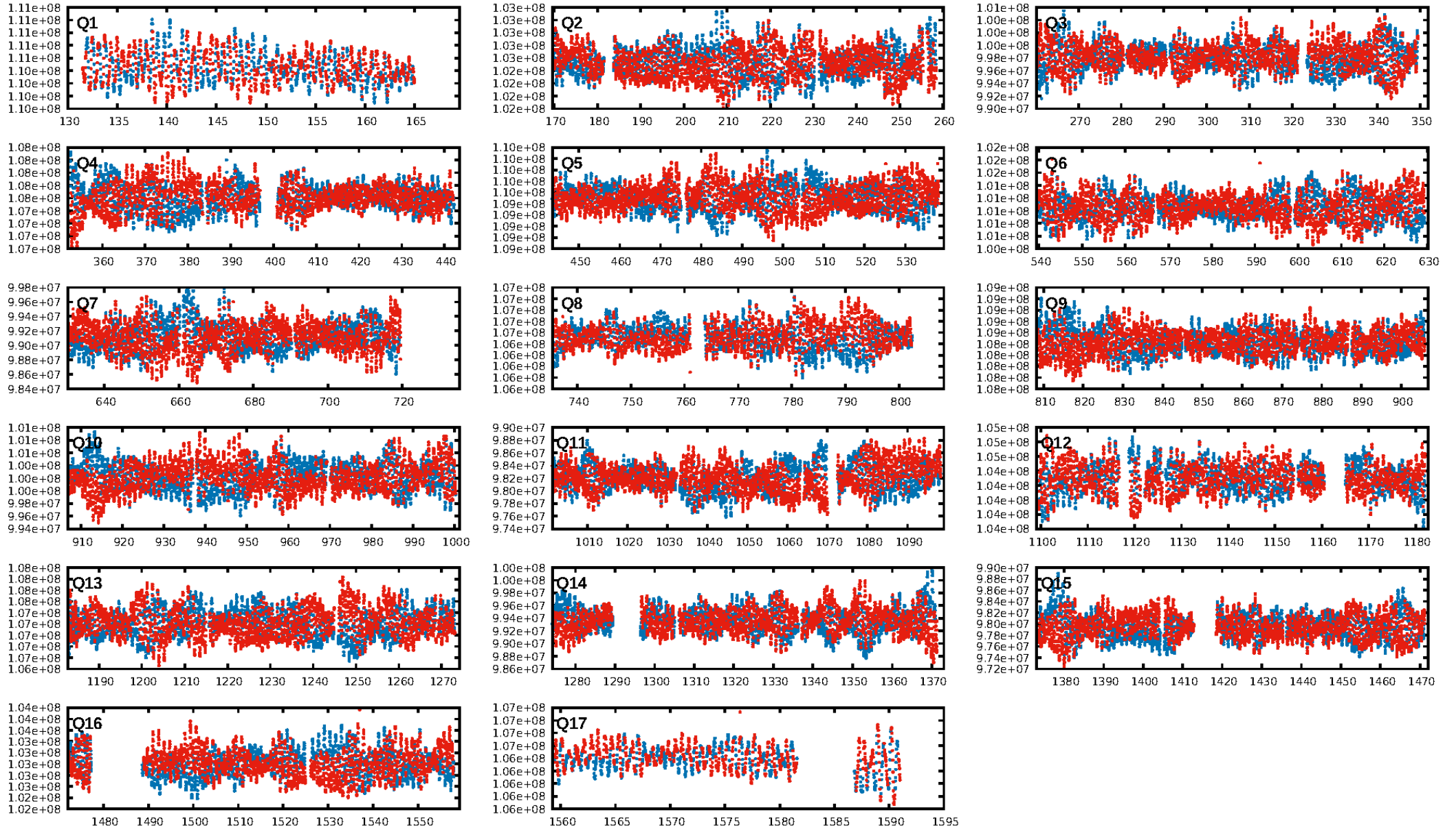
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.60e-10
RollingBand-fgt: 0.98 [1963/2006]
GhostDiagnostic-chr: 2.489
Centroid-sig: 1.1%
Centroid-so: 2.206 arcsec [1.87 σ]
OotOffset-rm: 1.210 arcsec [2.93 σ]
KicOffset-rm: 1.209 arcsec [2.87 σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.33 [5/15]
DiffImageOverlap-fno: 1.00 [17/17]

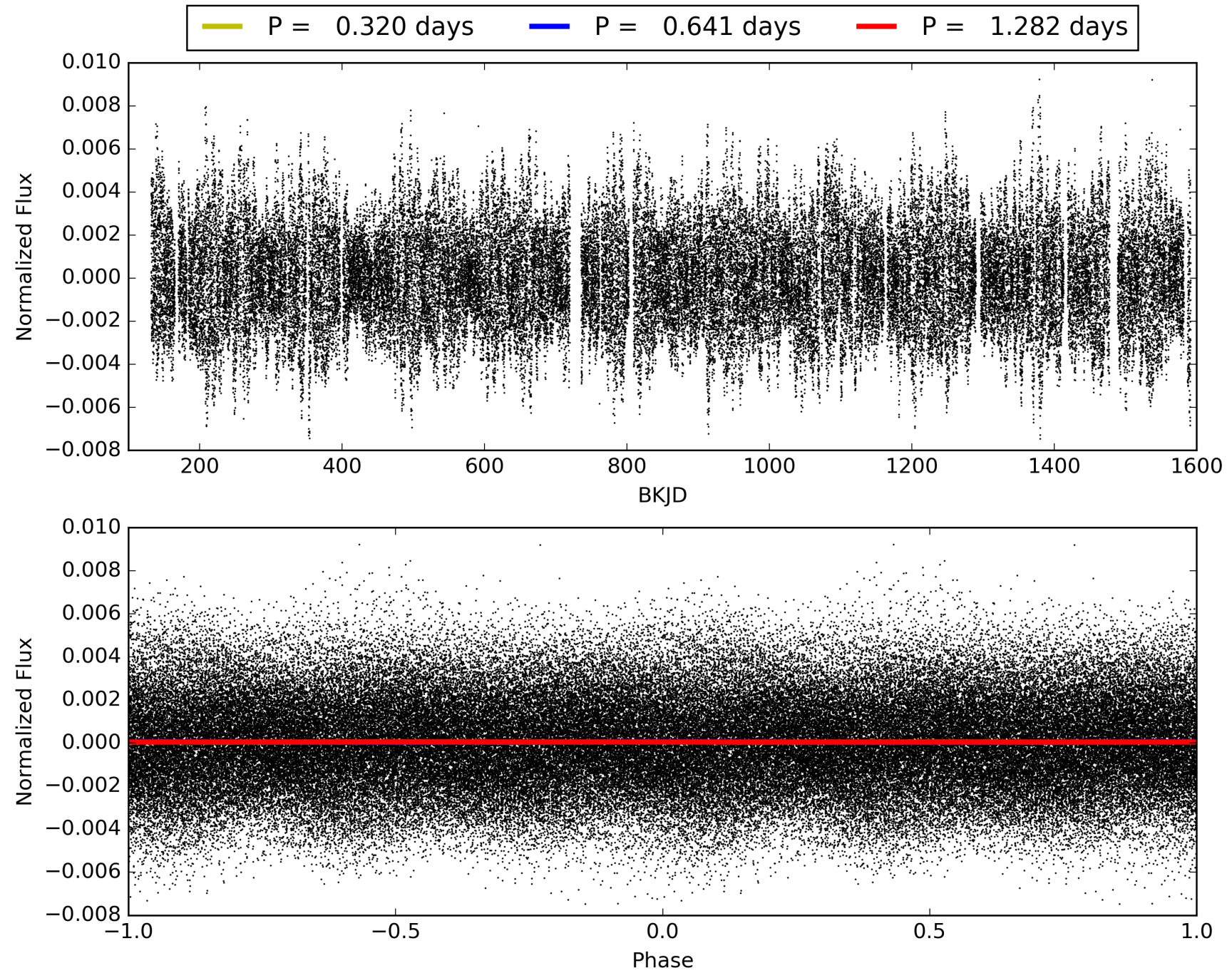
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:21:31 Z

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

TCE 005391059-01, PDC Light Curves

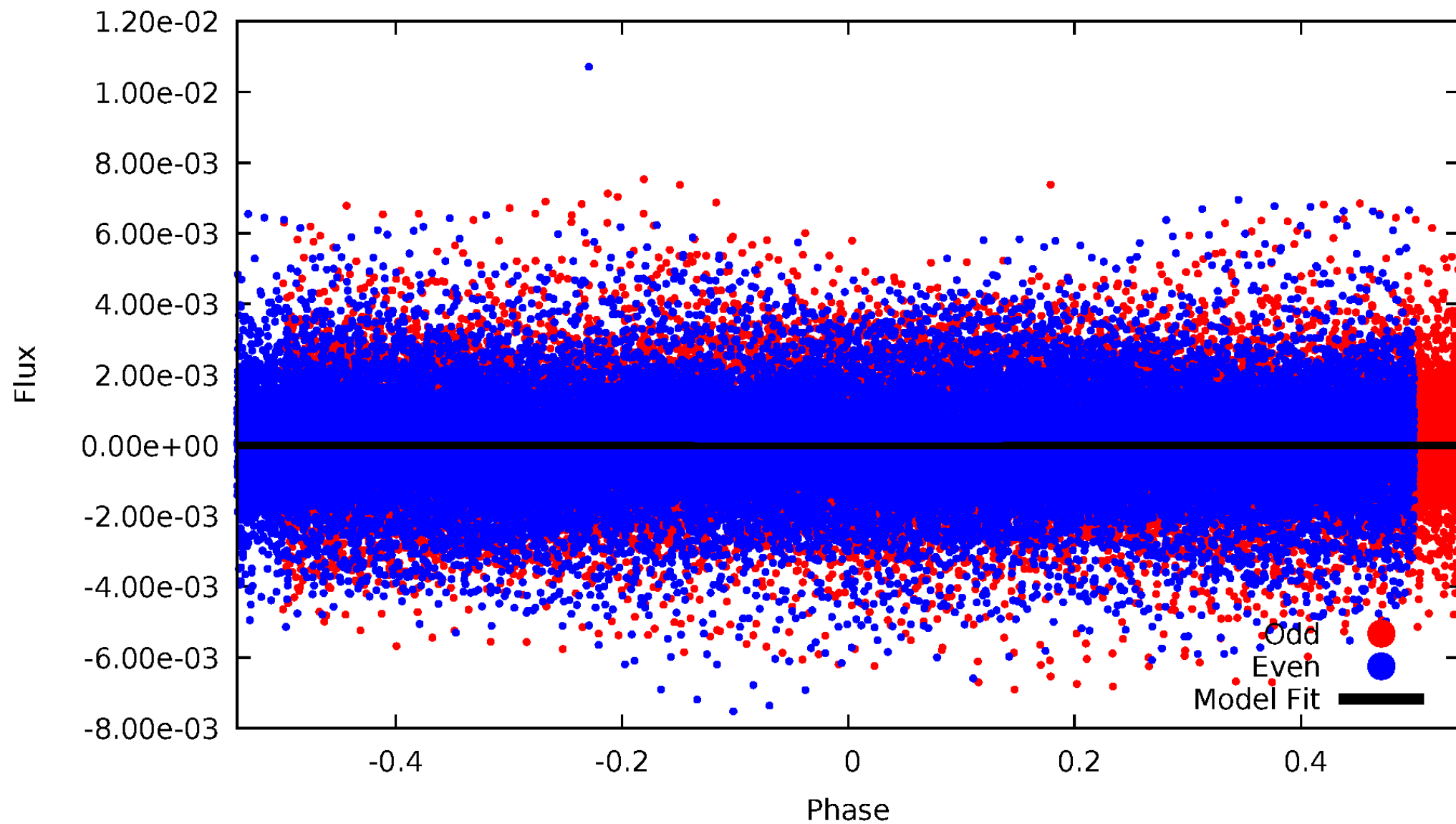


TCE 005391059-01



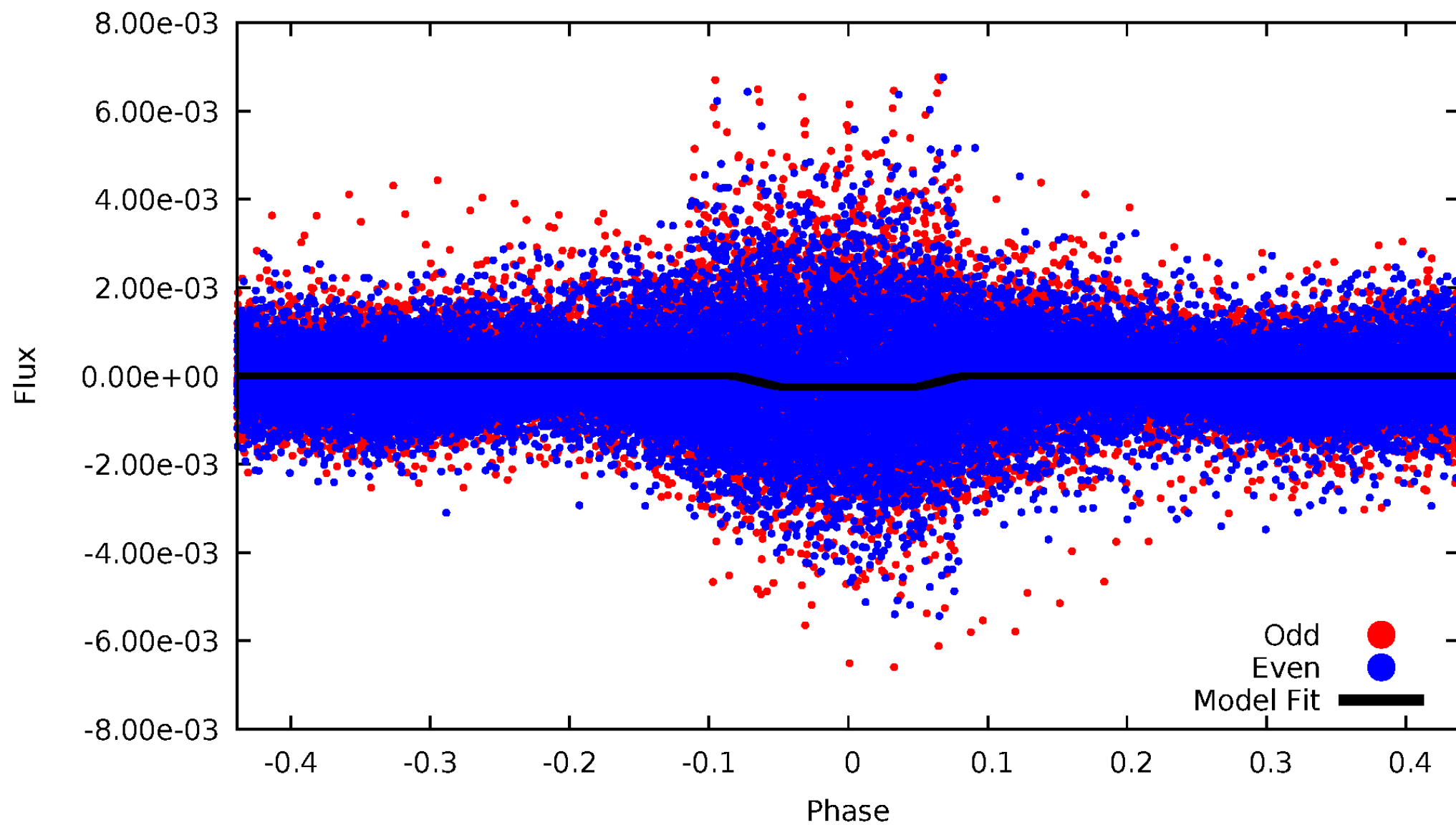
DV Odd/Even

TCE 005391059-01



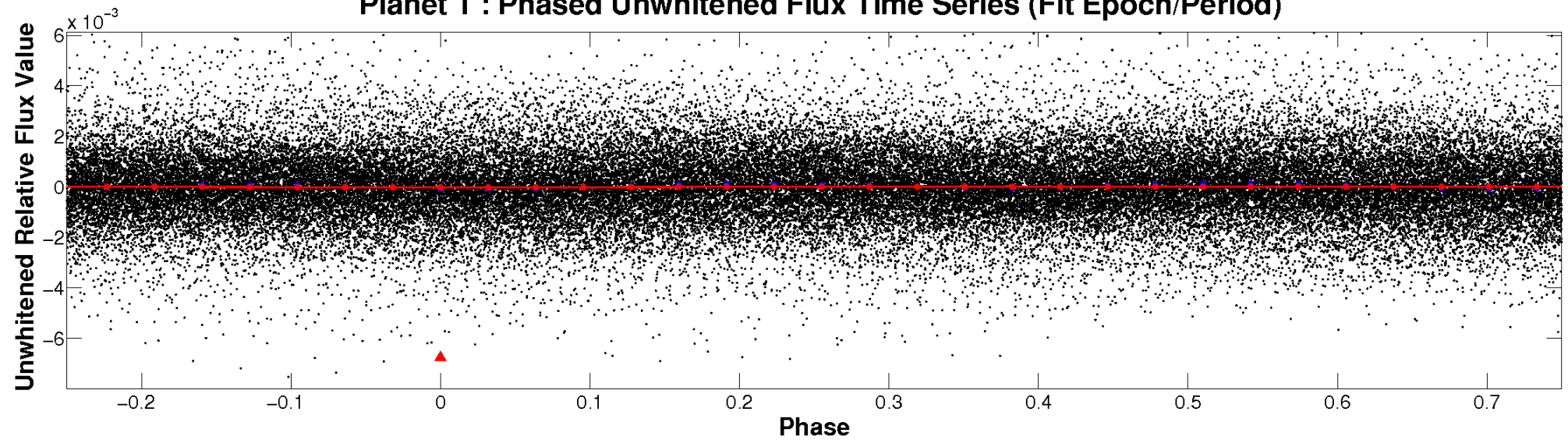
ALT Odd/Even

TCE 005391059-01

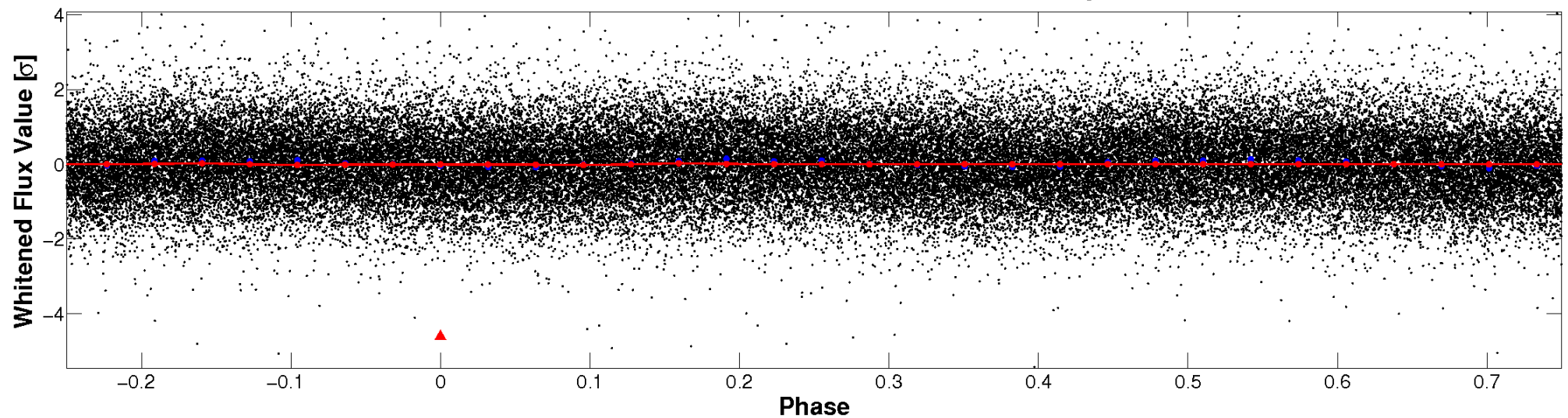


Non-Whitened Vs. Whitened Light Curve

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

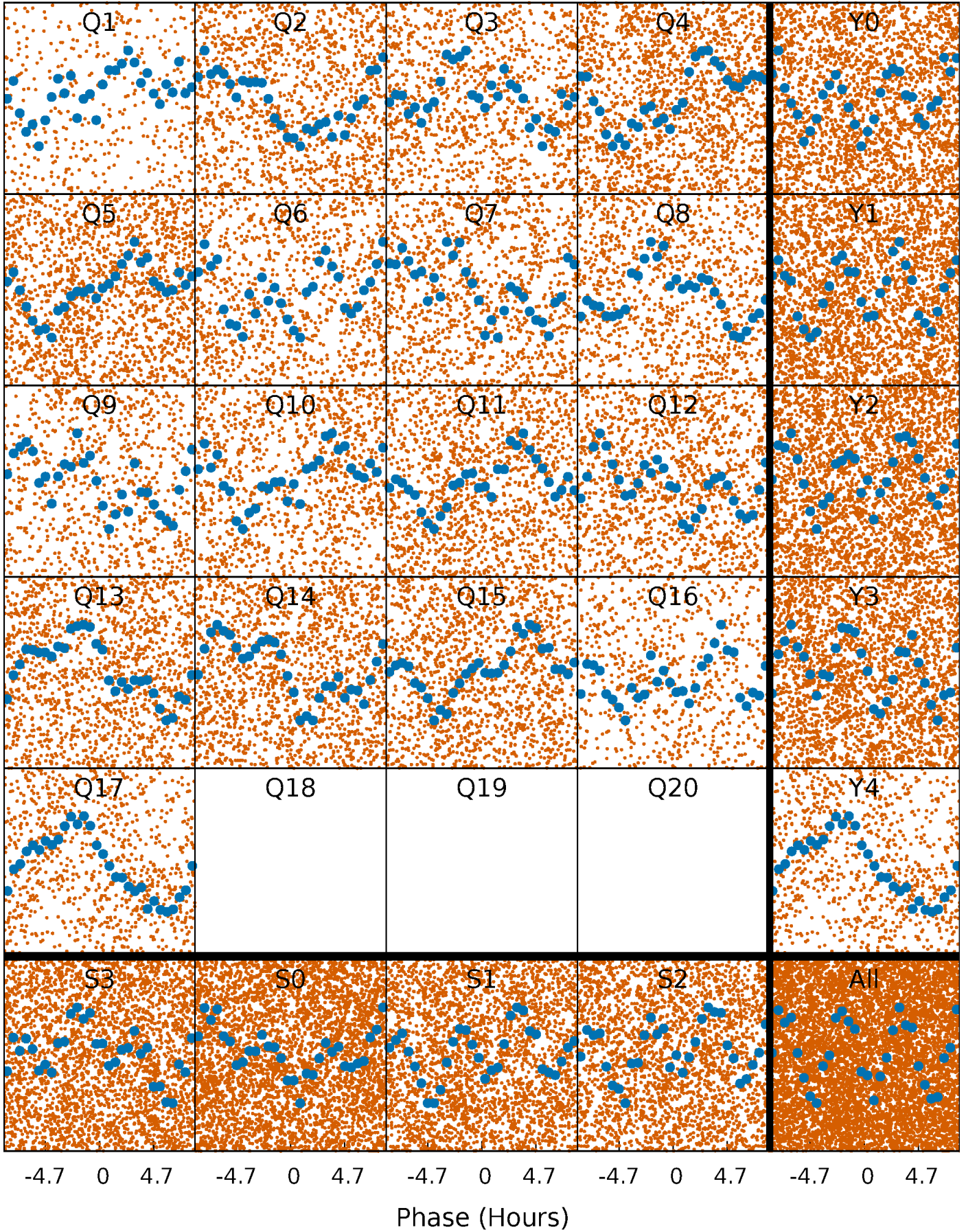


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



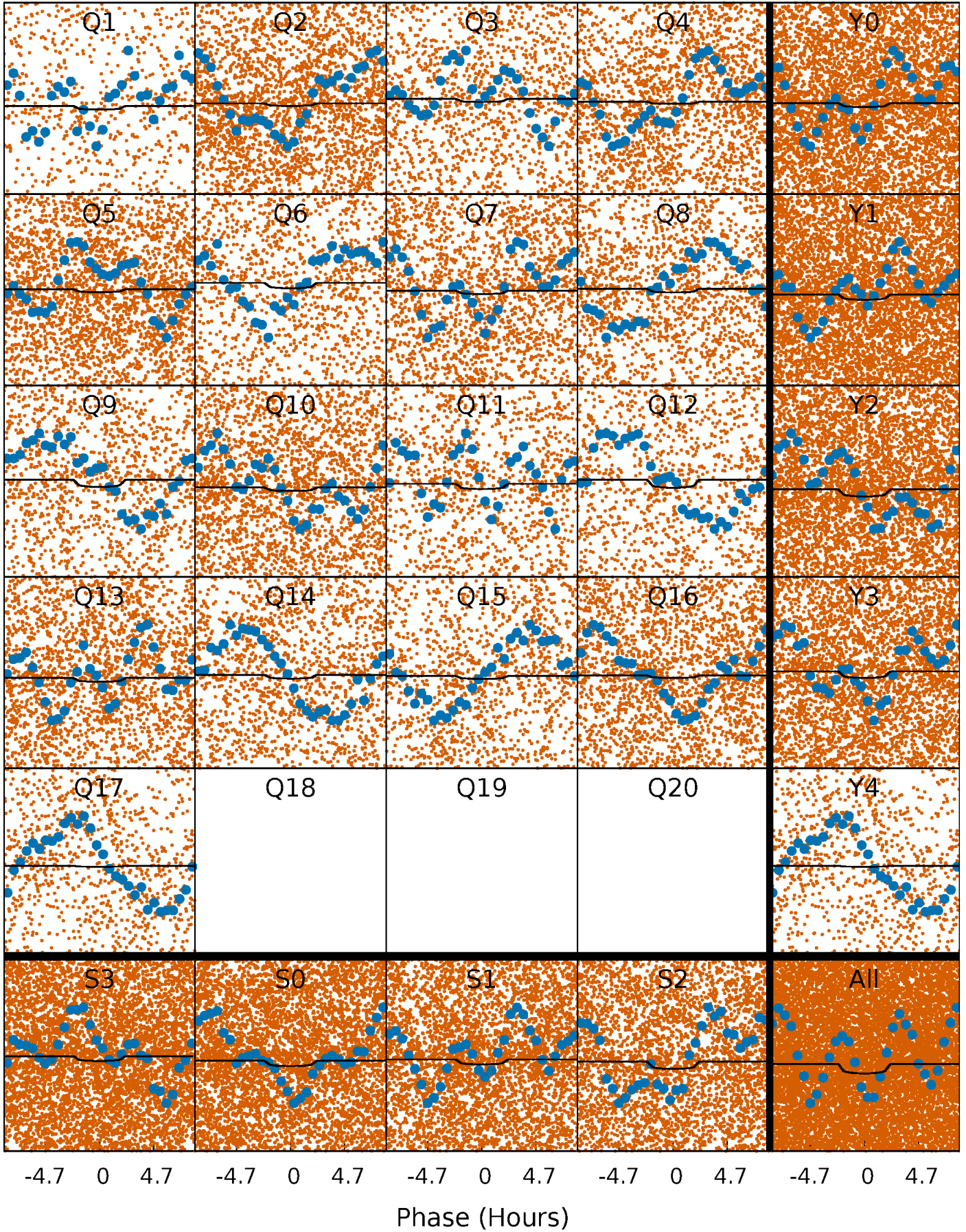
PDC Quarter-Phased Transit Curves

TCE 005391059-01 P= 0.640897 Days $T_0=131.674091$ (BKJD)



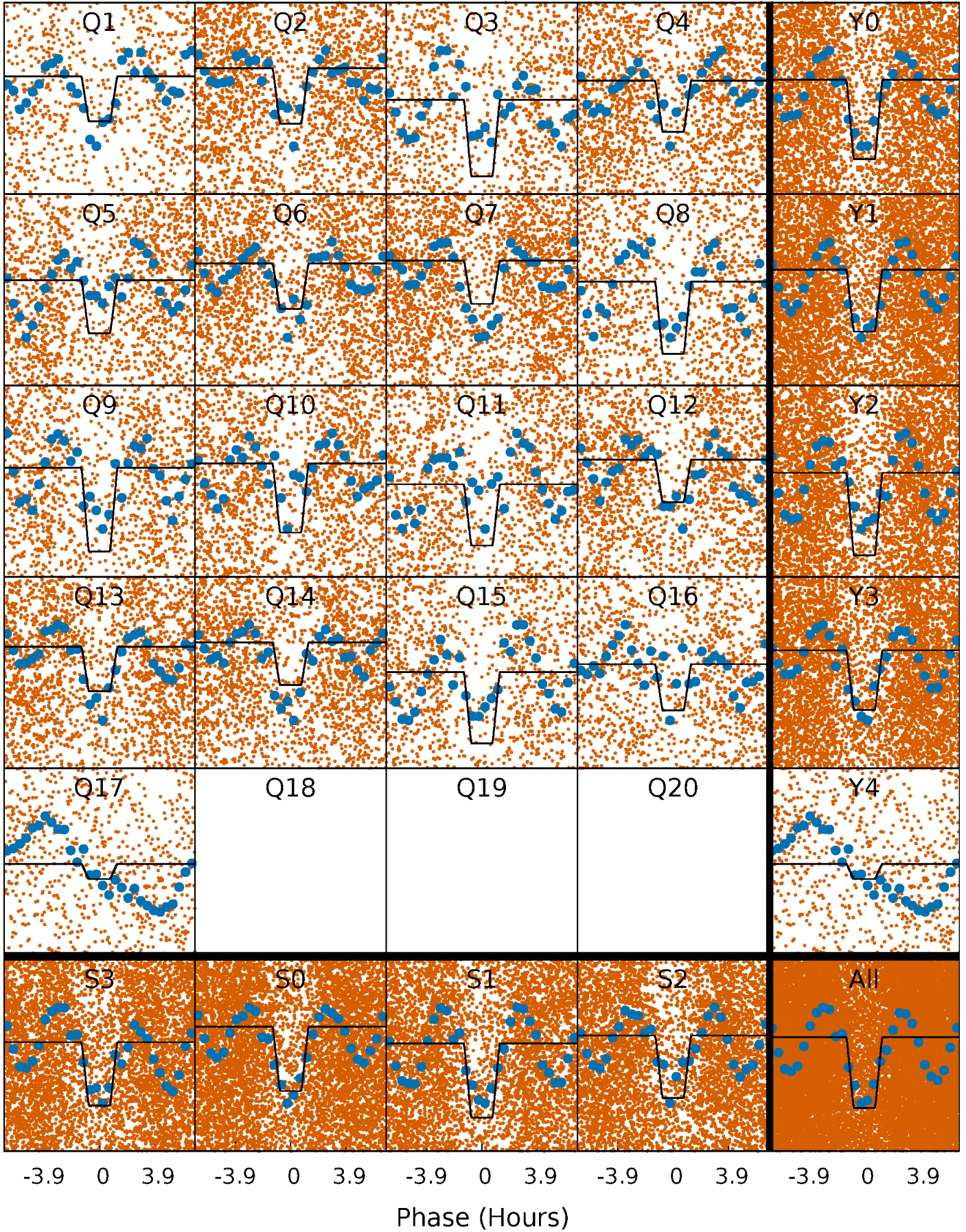
DV Quarter-Phased Transit Curves

TCE 005391059-01 P= 0.640897 Days $T_0=131.674091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

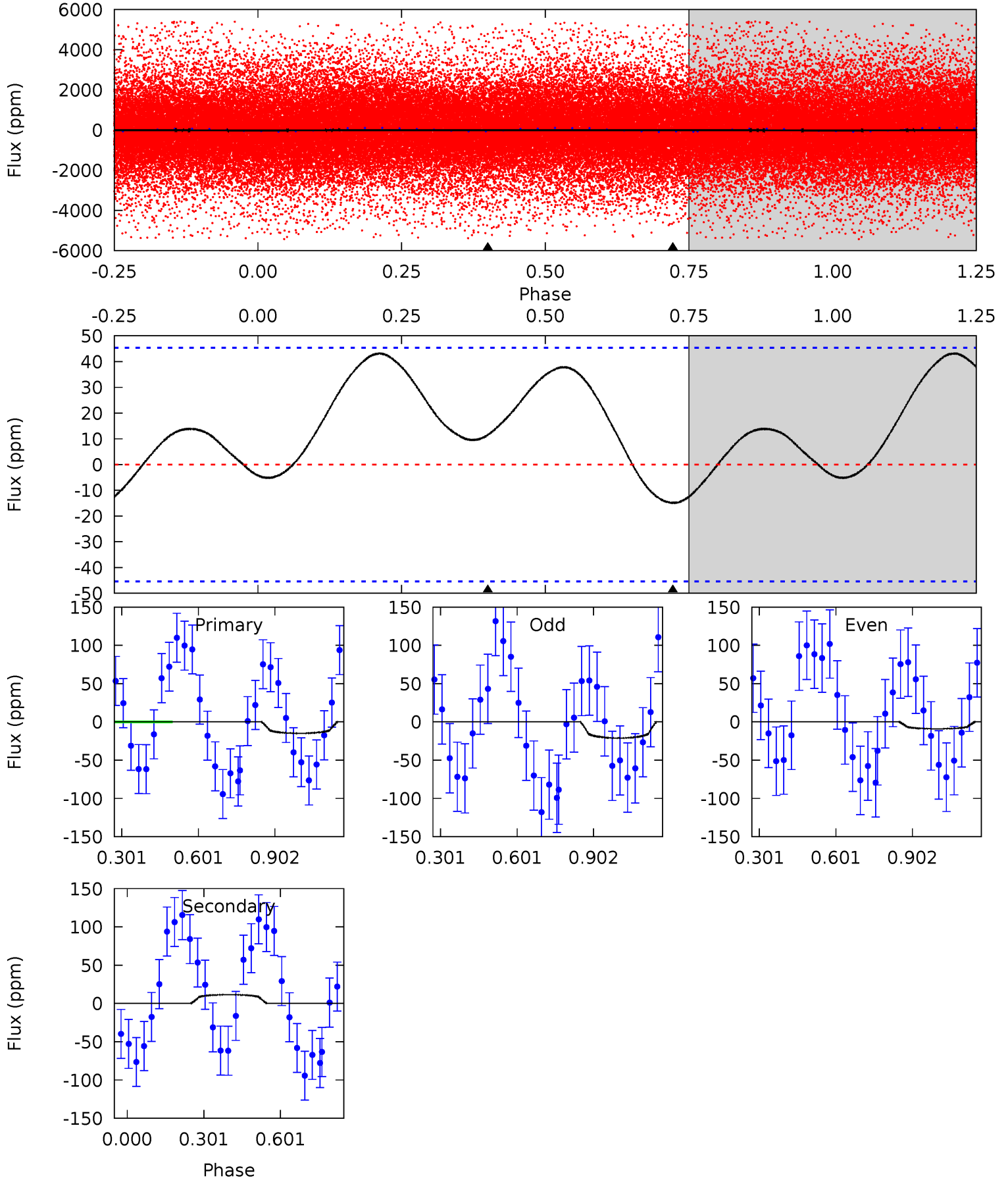
TCE 005391059-01 P= 0.640932 Days $T_0=131.666596$ (BKJD)



DV Model-Shift Uniqueness Test

005391059-01, P = 0.640897 Days, E = 131.033194 Days

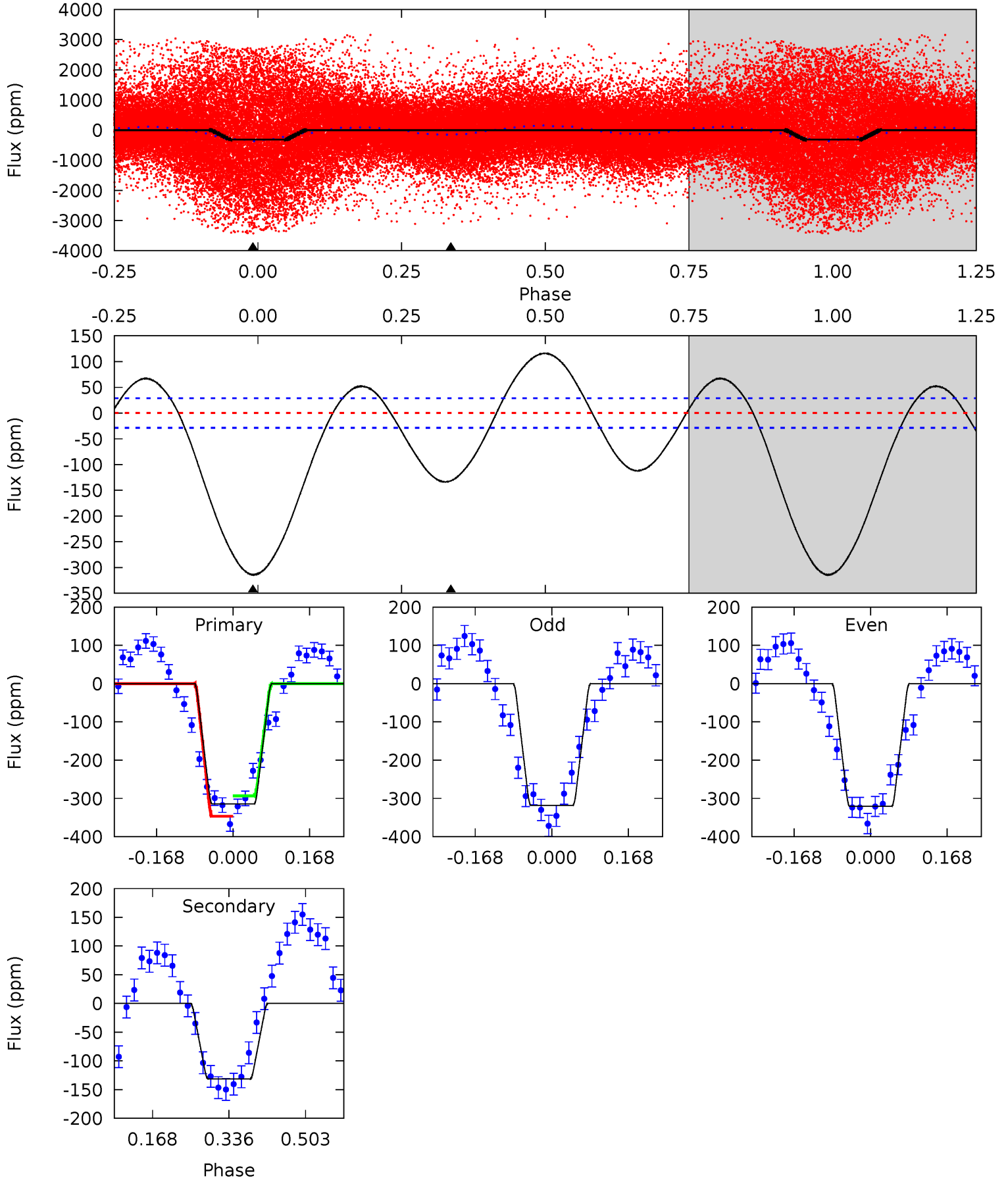
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.42	-1.10	0	0	4.33	1.03	0.64	1.42	1.42	-1.10	-1.10	0.58	1.35	0.74	1.51



Alt Model-Shift Uniqueness Test

005391059-01, P = 0.640932 Days, E = 131.025664 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.7	20.4	0	0	4.45	1.38	11.2	48.7	48.7	20.4	20.4	0.19	0.59	0.27	4.15



Stellar Parameters For KIC 005391059

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6791^{+165}_{-259}	$4.356^{+0.065}_{-0.208}$	$-0.180^{+0.250}_{-0.300}$	$1.219^{+0.406}_{-0.135}$	$1.242^{+0.182}_{-0.164}$	$0.965^{+0.275}_{-0.508}$
	+2%/-4%	+1%/-5%	+139%/-167%	+33%/-11%	+15%/-13%	+28%/-53%
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 005391059-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	11 ± 10	$0.65^{+0.35}_{-0.34}$	3751^{+266}_{-183}	-5677^{+1681}_{-3050}	$-3.027^{+2.748}_{-12.621}$
Alt.	-132 ± 6	$2.18^{+0.53}_{-0.39}$	3757^{+275}_{-194}	5618^{+507}_{-412}	$3.634^{+1.599}_{-1.195}$

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

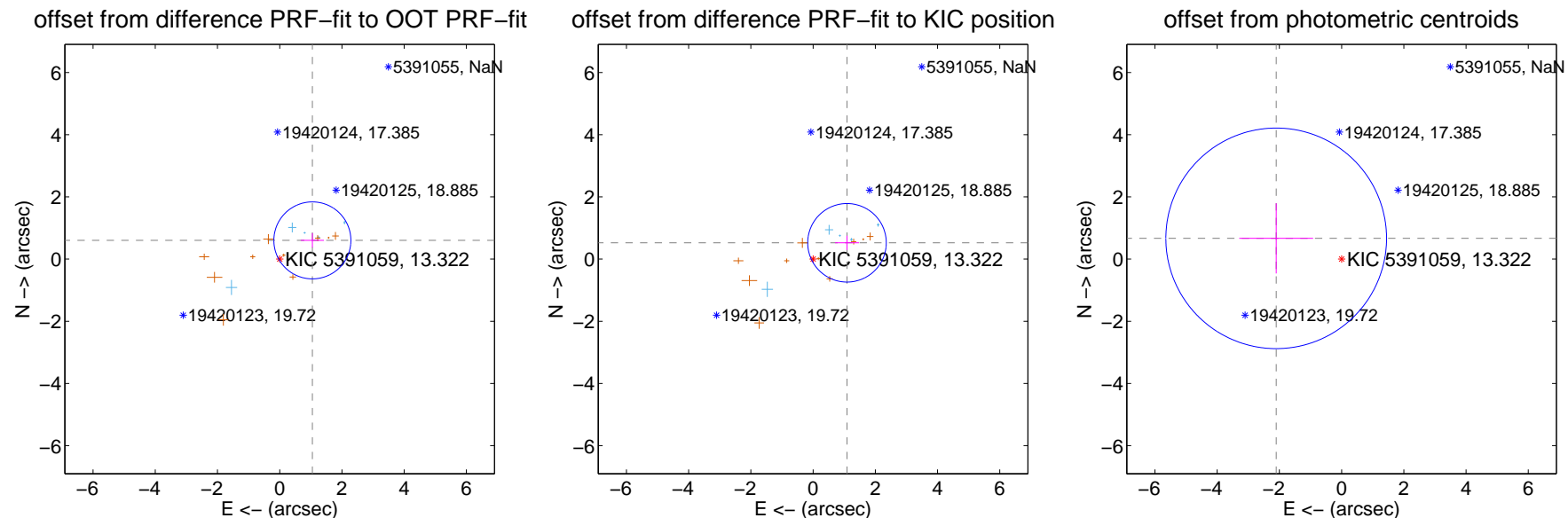
DV Centroid Data

Supplemental centroid analysis for 005391059-01. Kepler magnitude: 13.32. Transit SNR 2.99

There are 5 quarters with good PRF difference image offsets

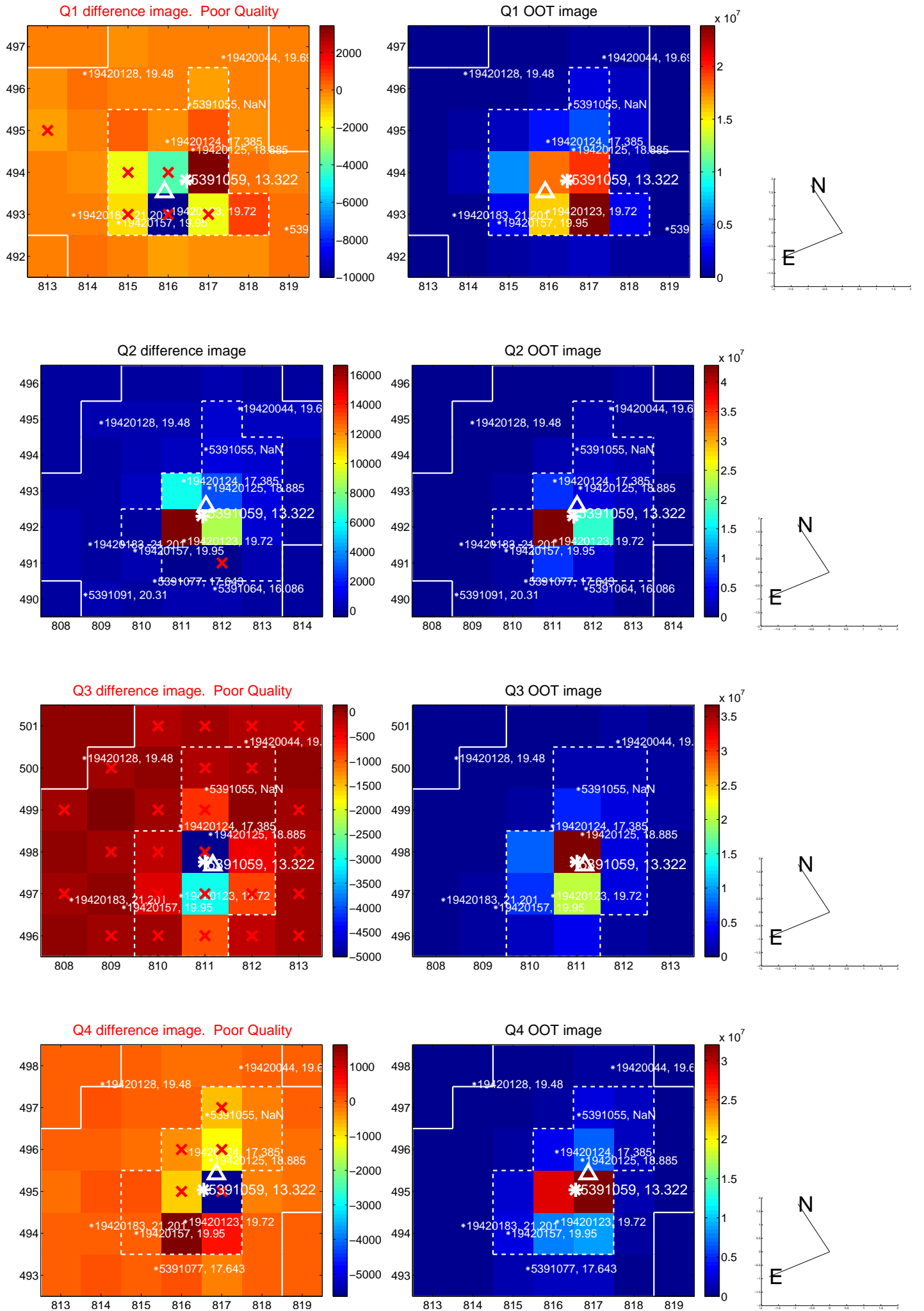
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.210 ± 0.413	2.93	-1.050 ± 0.371	0.602 ± 0.232
PRF-fit source offset from KIC position	1.209 ± 0.421	2.87	-1.090 ± 0.385	0.524 ± 0.229
photometric centroid source offset	2.21 ± 1.18	1.87	2.10 ± 1.19	0.67 ± 1.13

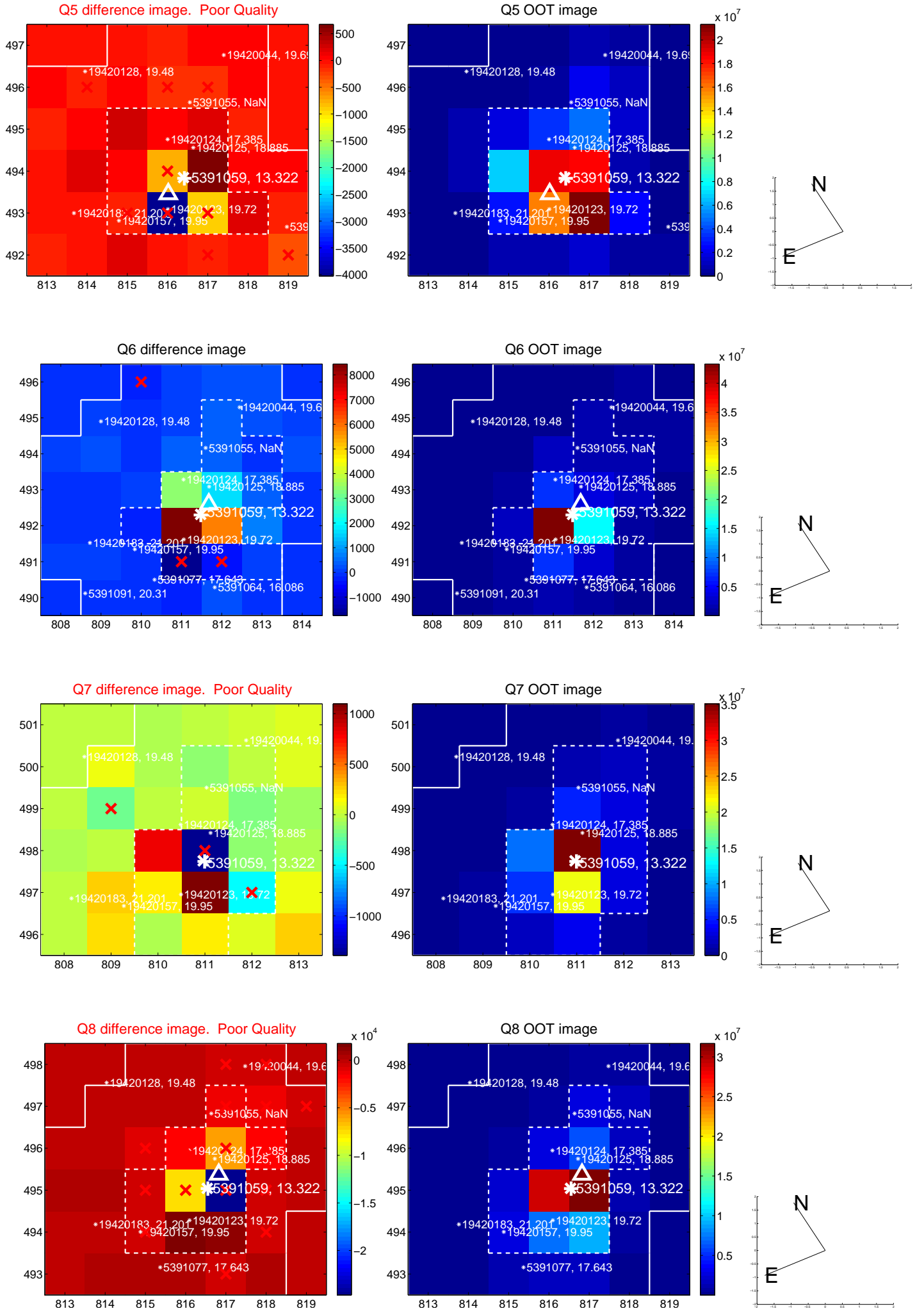


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

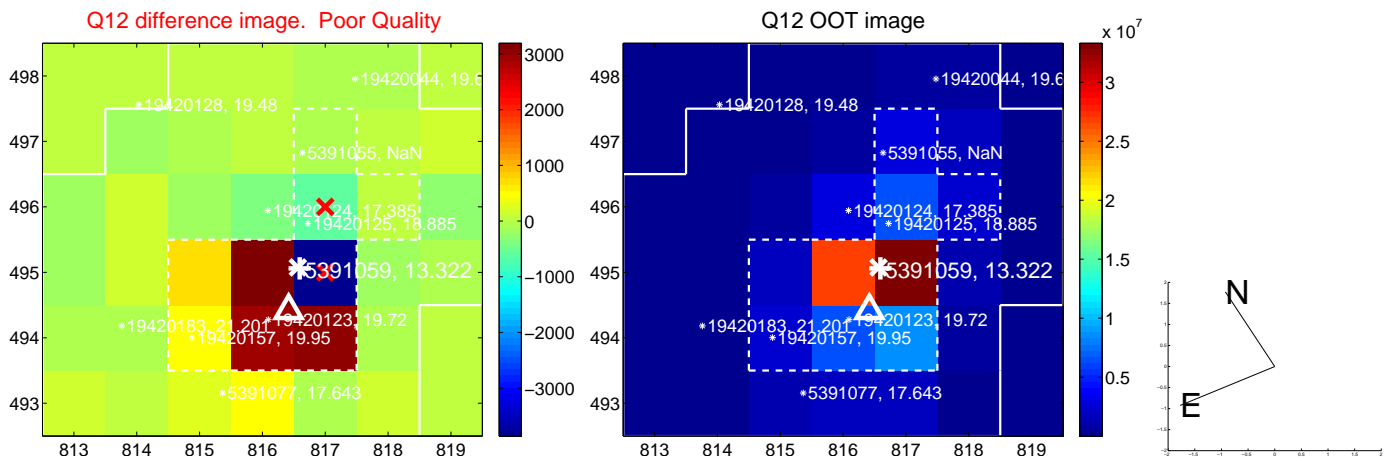
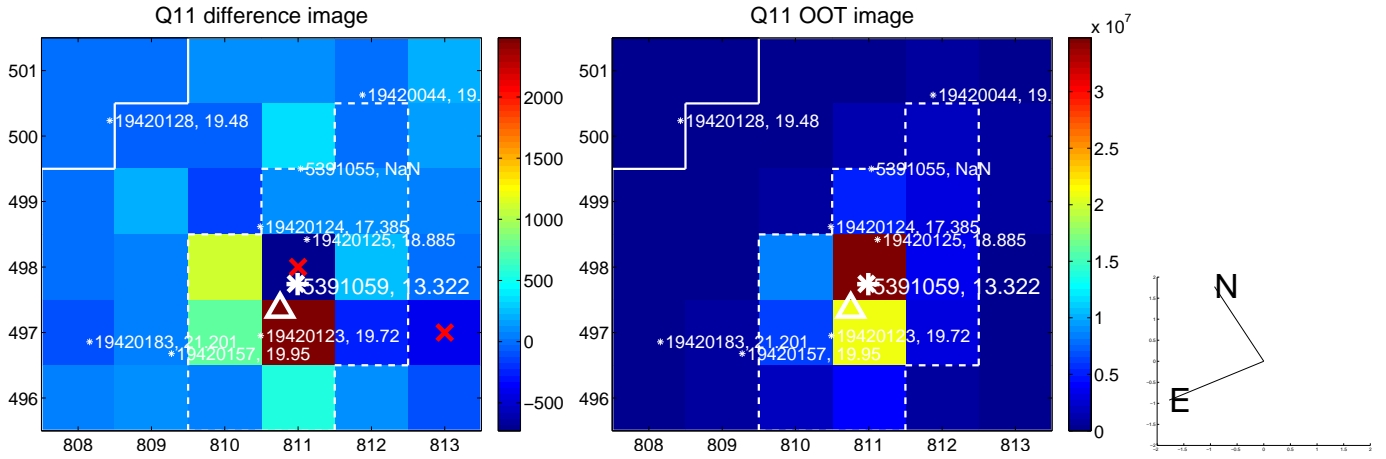
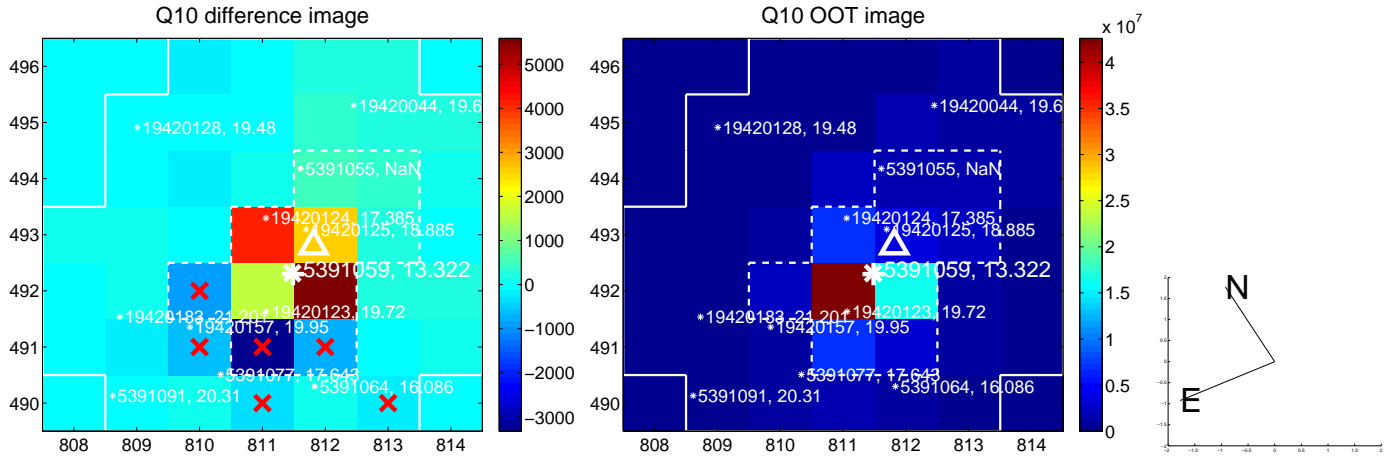
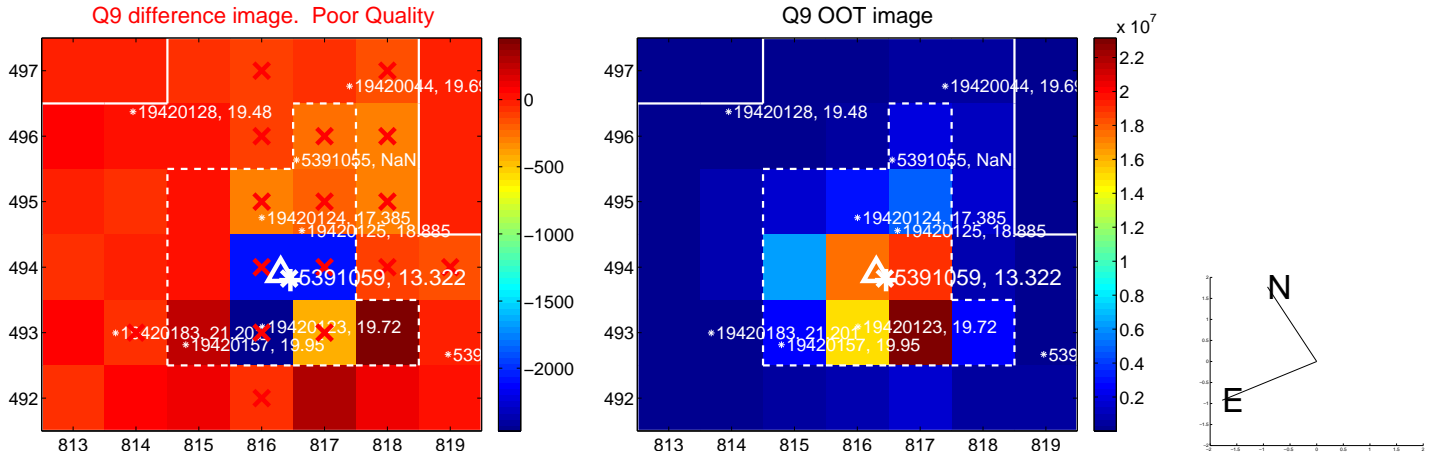
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



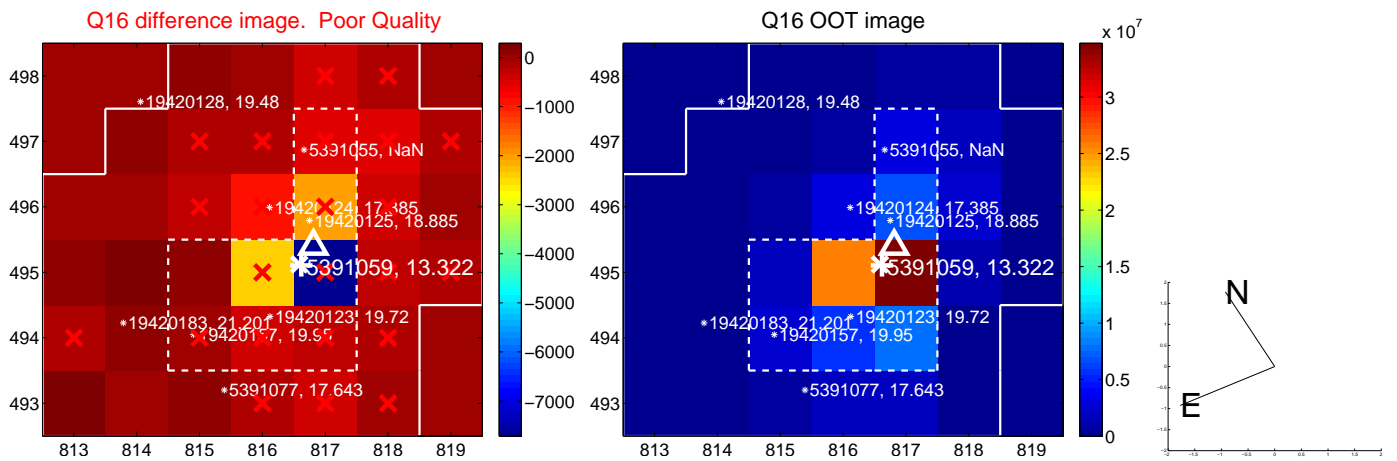
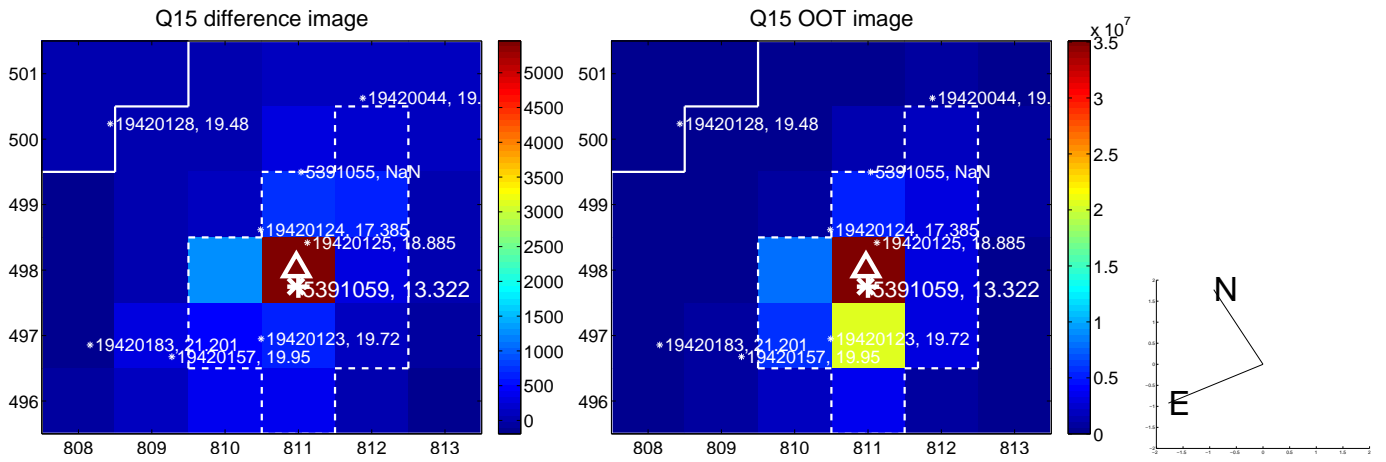
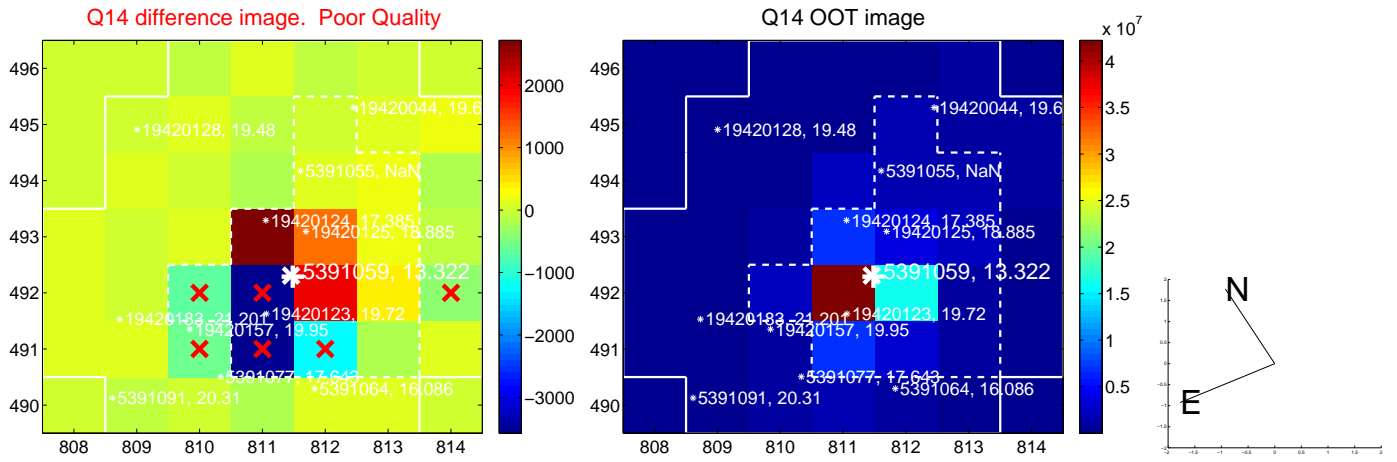
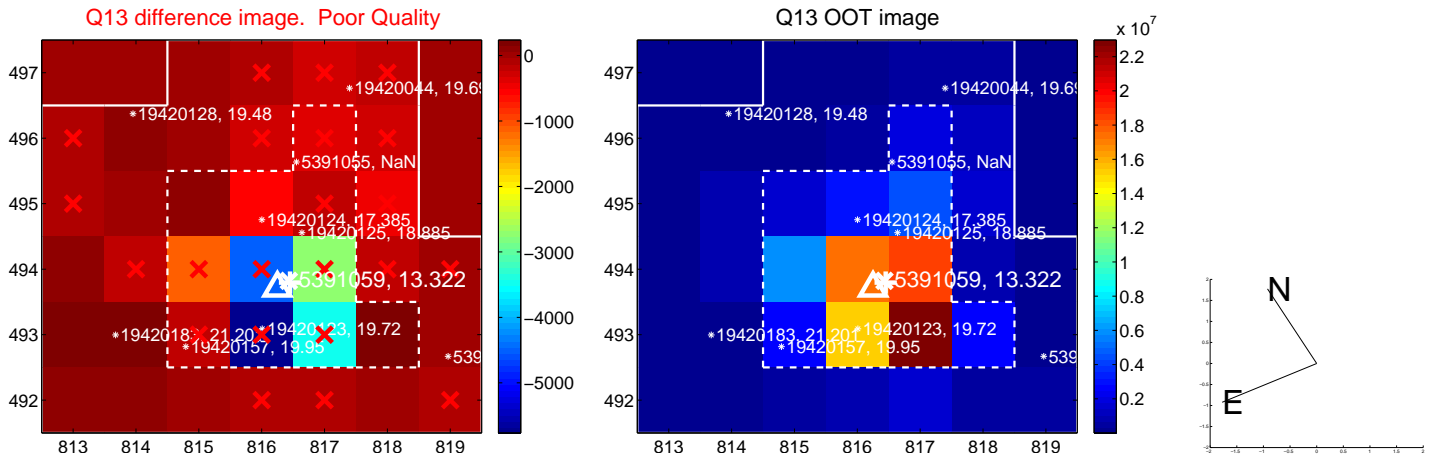
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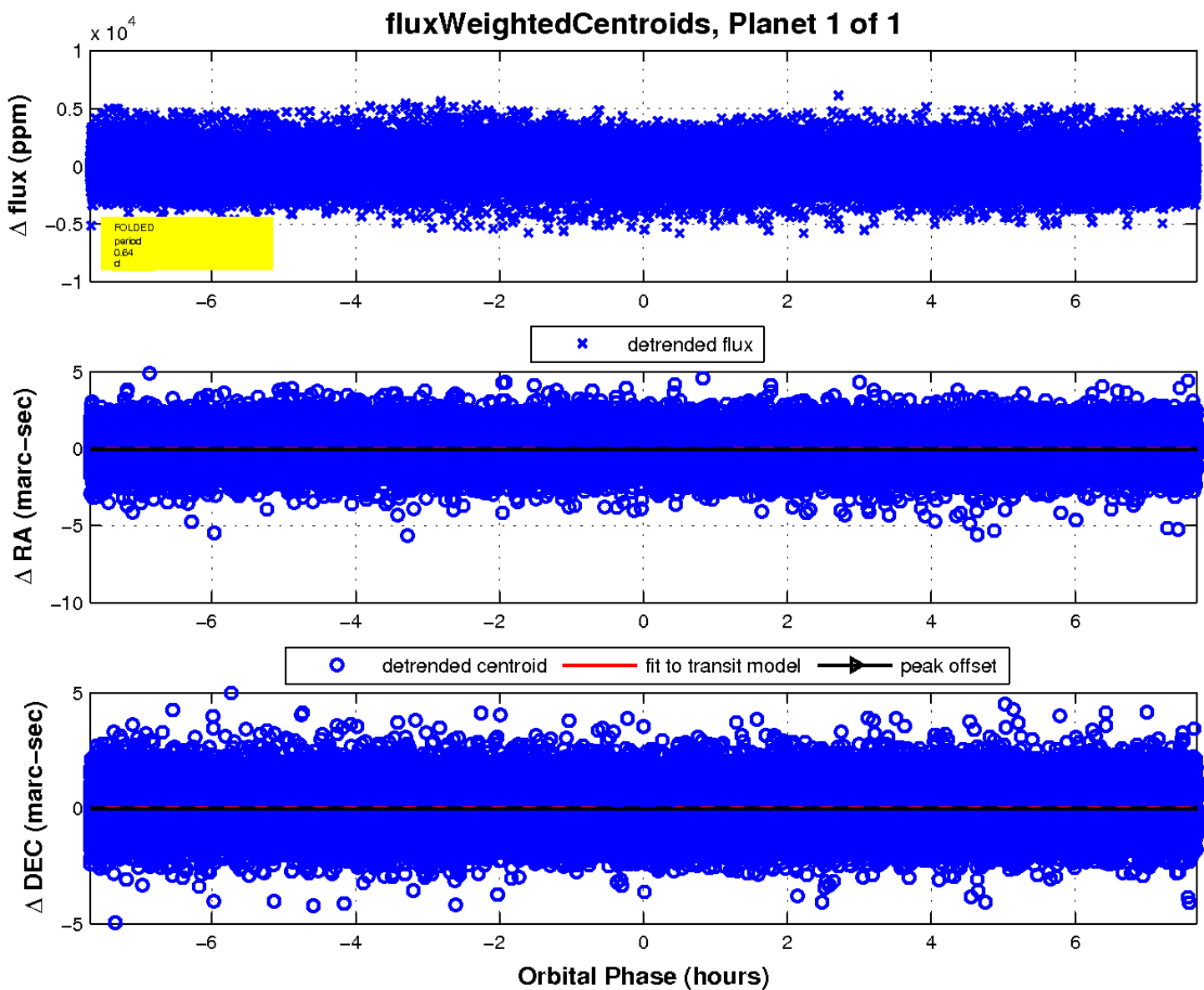
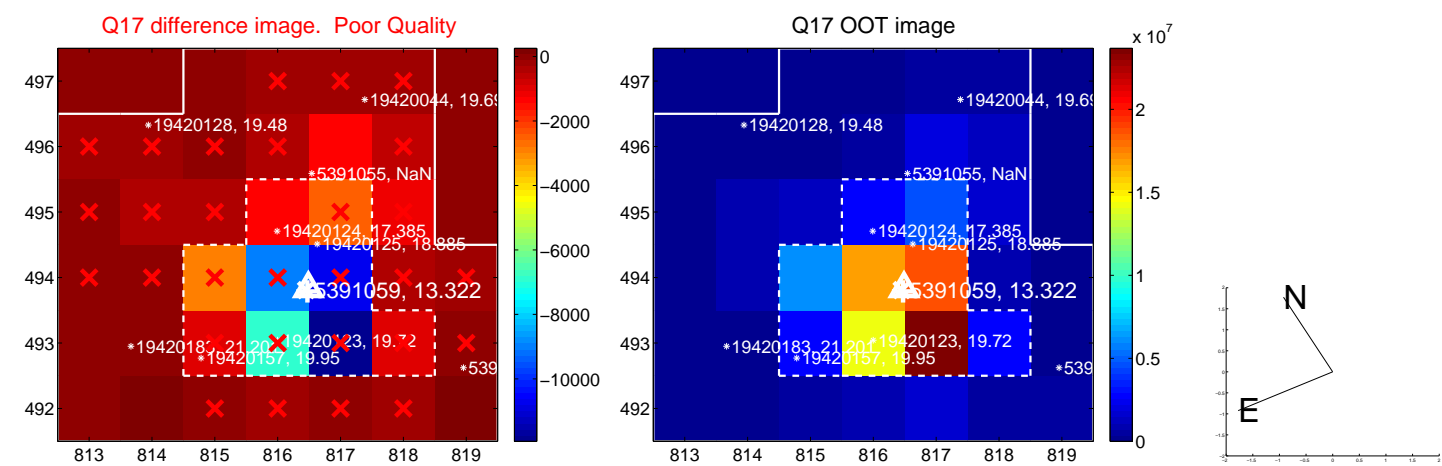
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UKIRT Image

Declination

