

KIC 005900390

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})
005900390-01	OBS	4063.01	0.624652	131.882500	11.9	2.219	12.3	9.2	2.00	9653	0.79	88064.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005900390-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—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 005900390-01

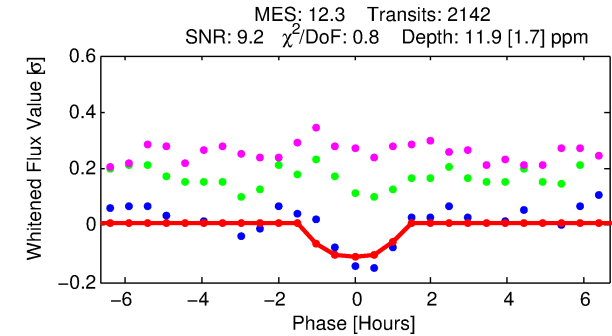
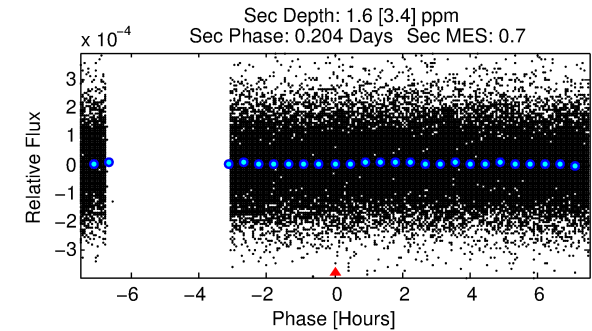
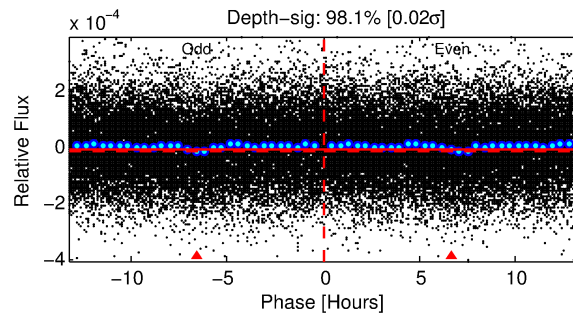
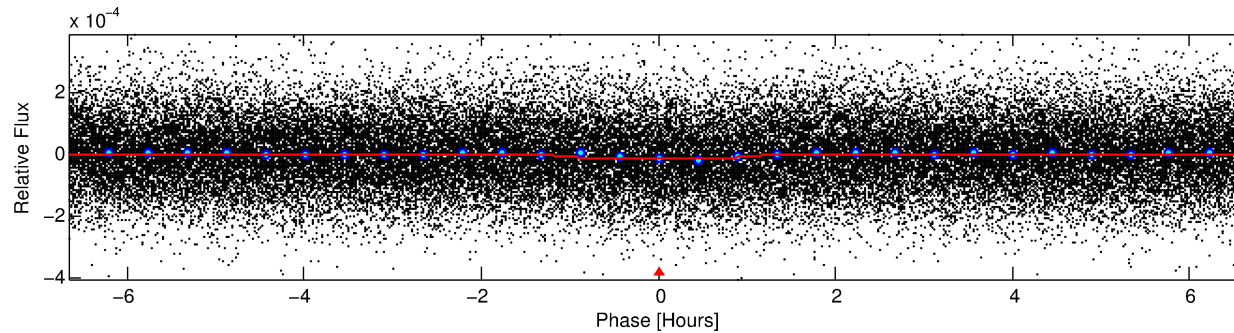
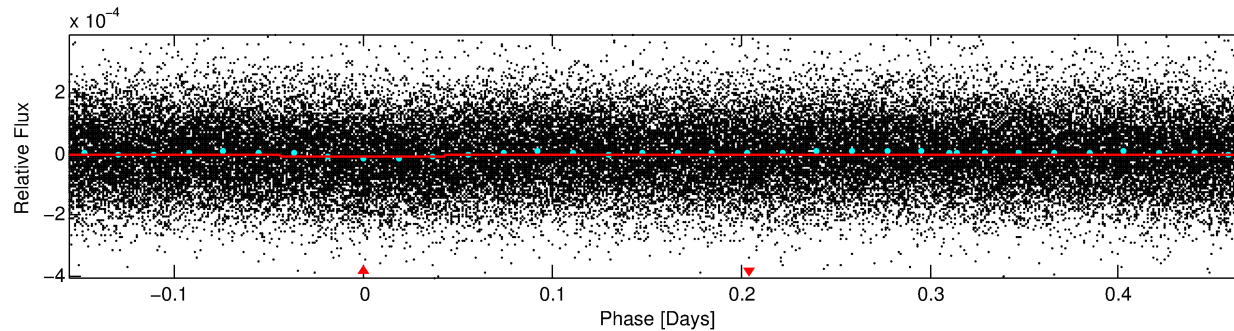
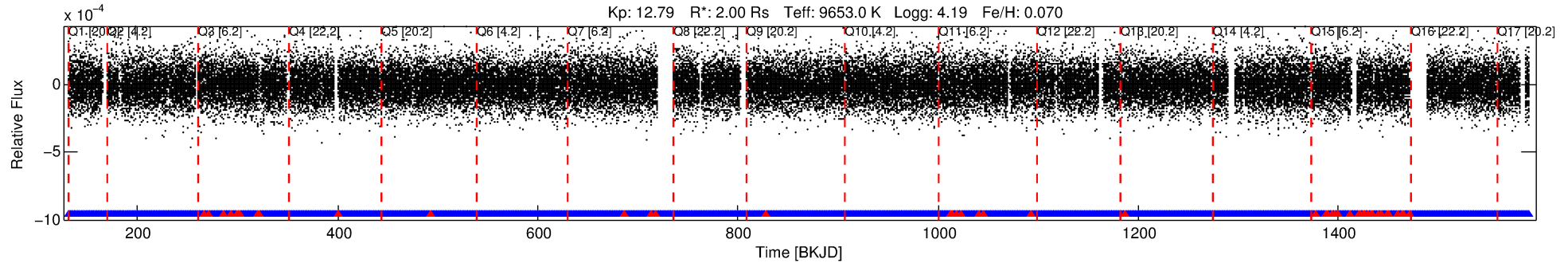
No Significant Match Found

DV One-Page Summary

KIC: 5900390 Candidate: 1 of 1 Period: 0.625 d

KOI: K04063.01 Corr: 0.822

Kp: 12.79 R*: 2.00 Rs Teff: 9653.0 K Logg: 4.19 Fe/H: 0.070



DV Fit Results:

Period = 0.62465 [0.00001] d
Epoch = 131.8825 [0.0031] BKJD
Rp/R* = 0.0036 [0.0008]
a/R* = 1.32 [0.95]
b = 0.91 [0.33]
Seff = 88064.26 [41719.14]
Teq = 4393 [520] K
Rp = 0.79 [0.38] Re
a = 0.0188 [0.0061] AU
Ag = 0.49 [1.08] [-0.47σ]
Teffp = 5686 [3071] K [0.42σ]

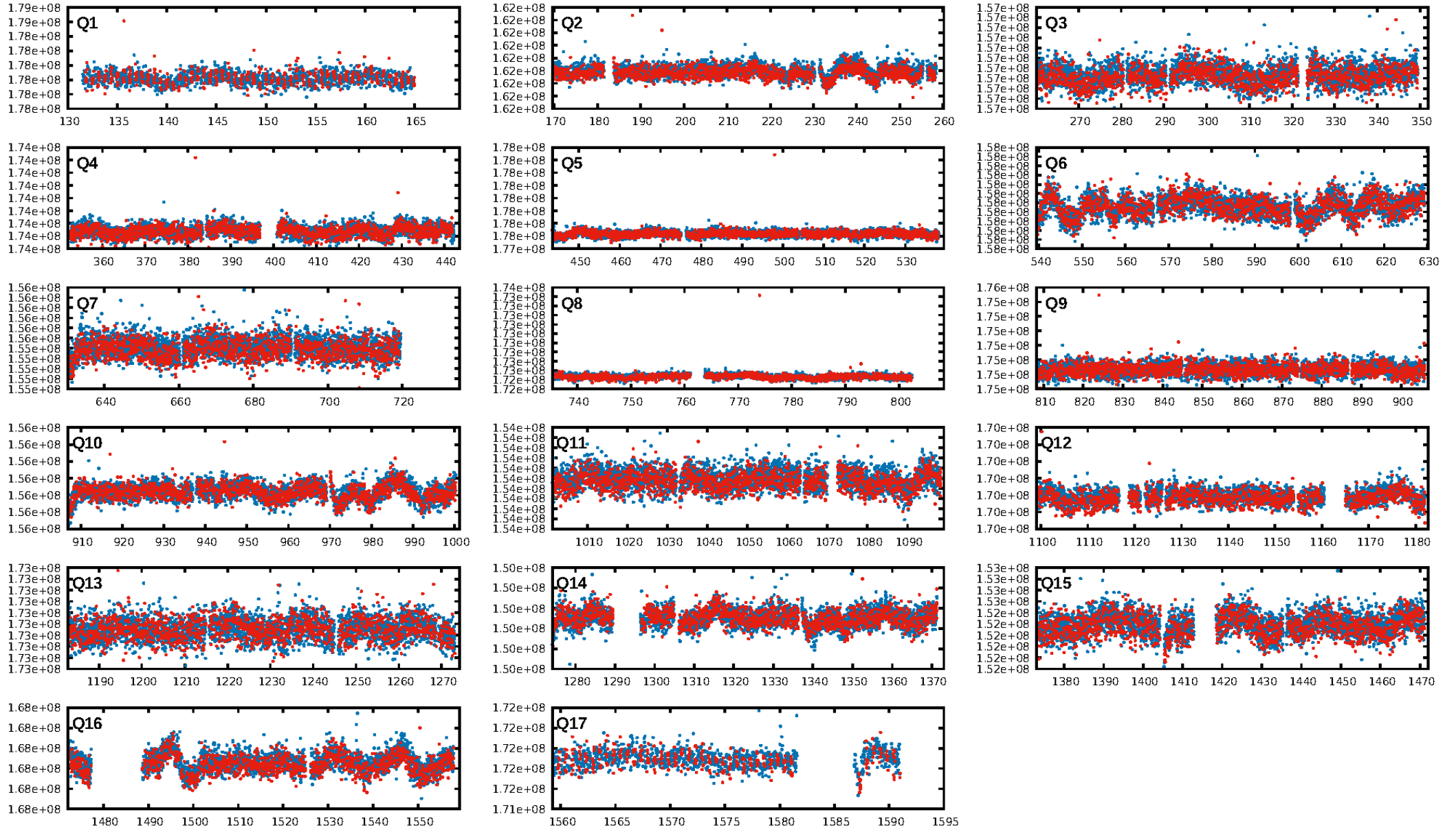
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.95e-35
RollingBand-fgt: 0.97 [1993/2046]
GhostDiagnostic-chr: -0.3289
Centroid-sig: 0.0%
Centroid-so: 36.266 arcsec [19.16σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

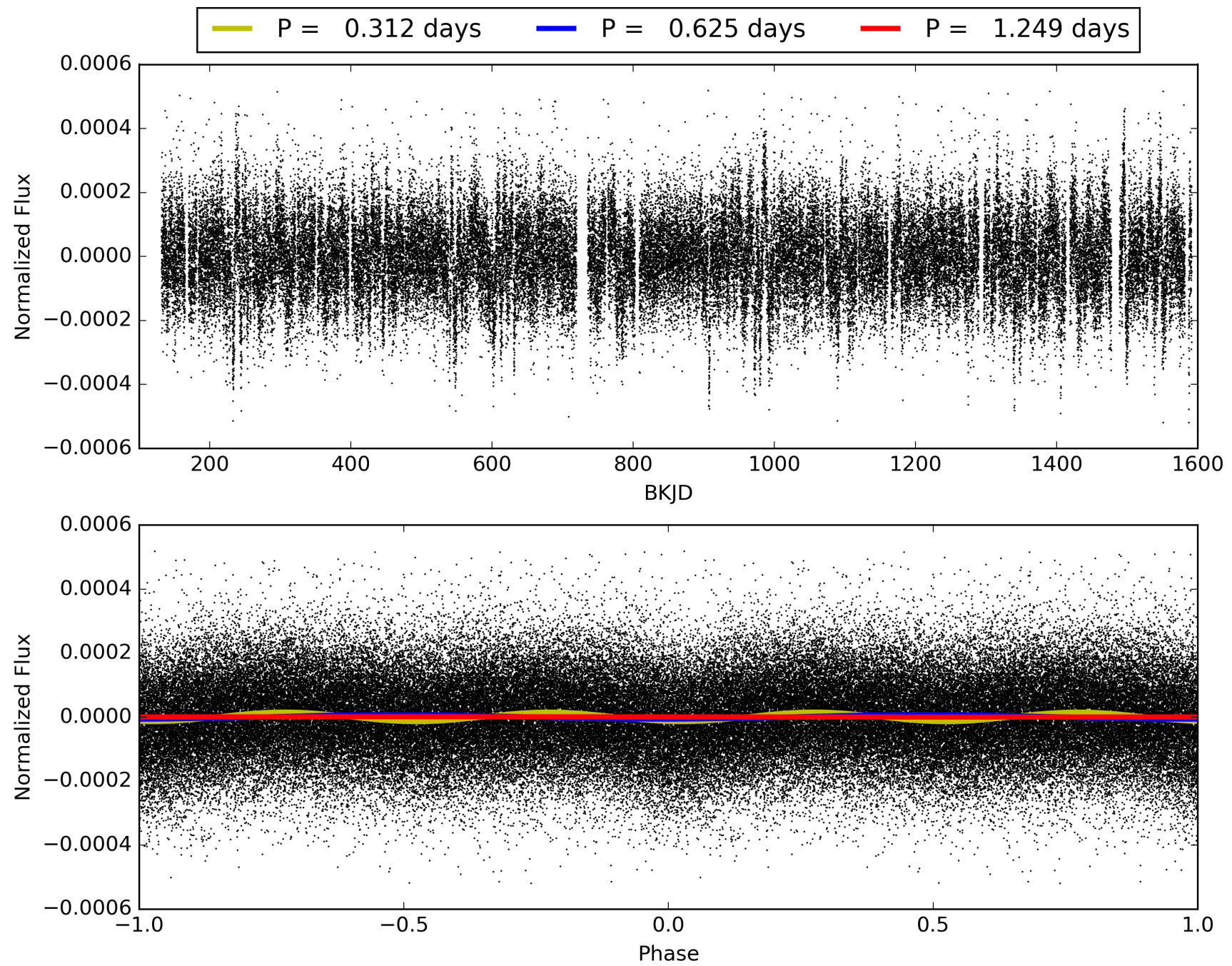
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:02:10 Z

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

TCE 005900390-01, PDC Light Curves

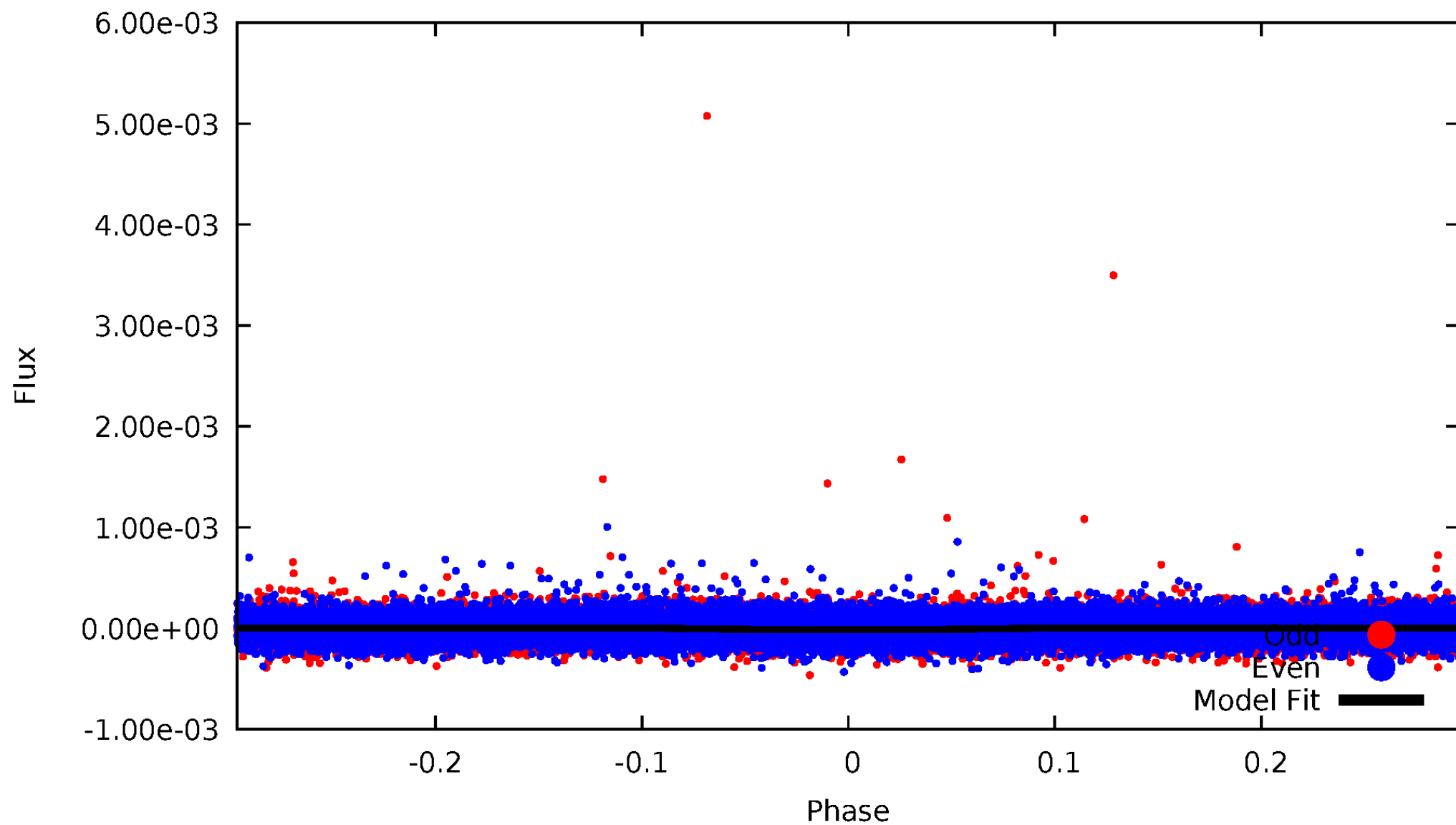


TCE 005900390-01



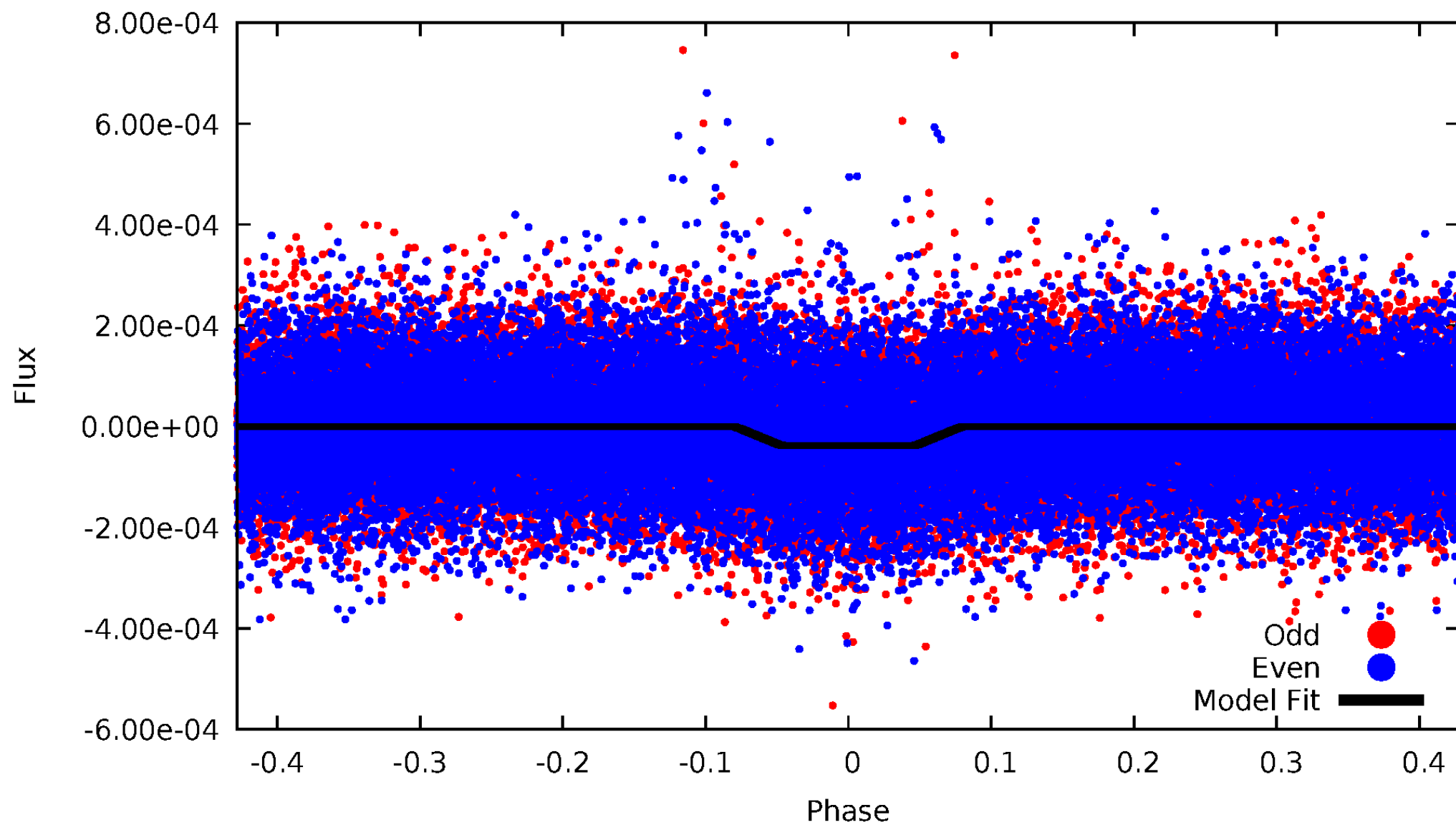
DV Odd/Even

TCE 005900390-01



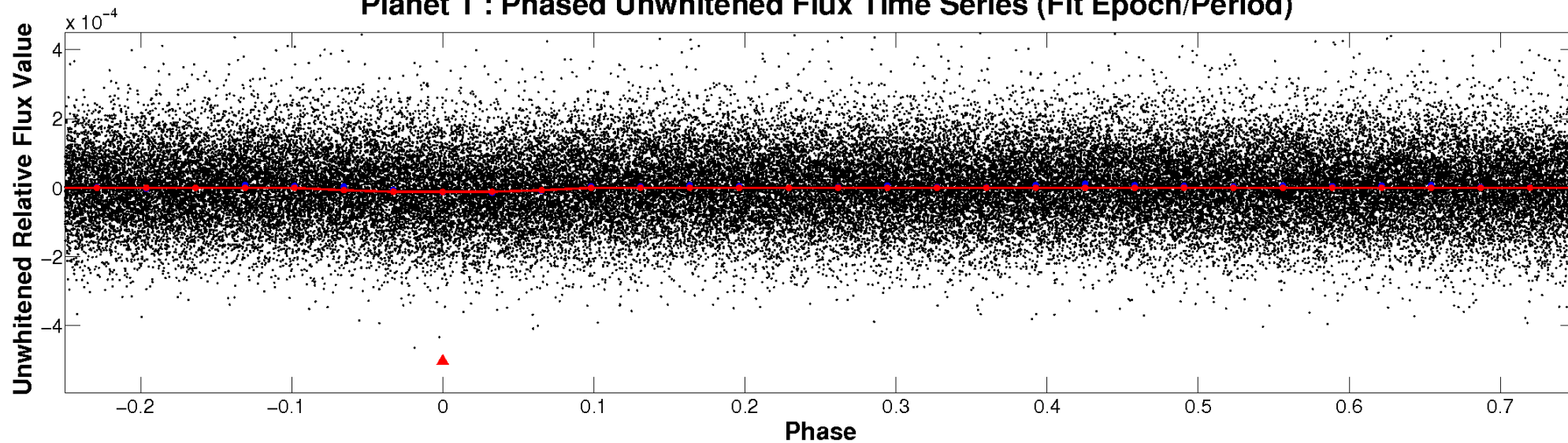
ALT Odd/Even

TCE 005900390-01

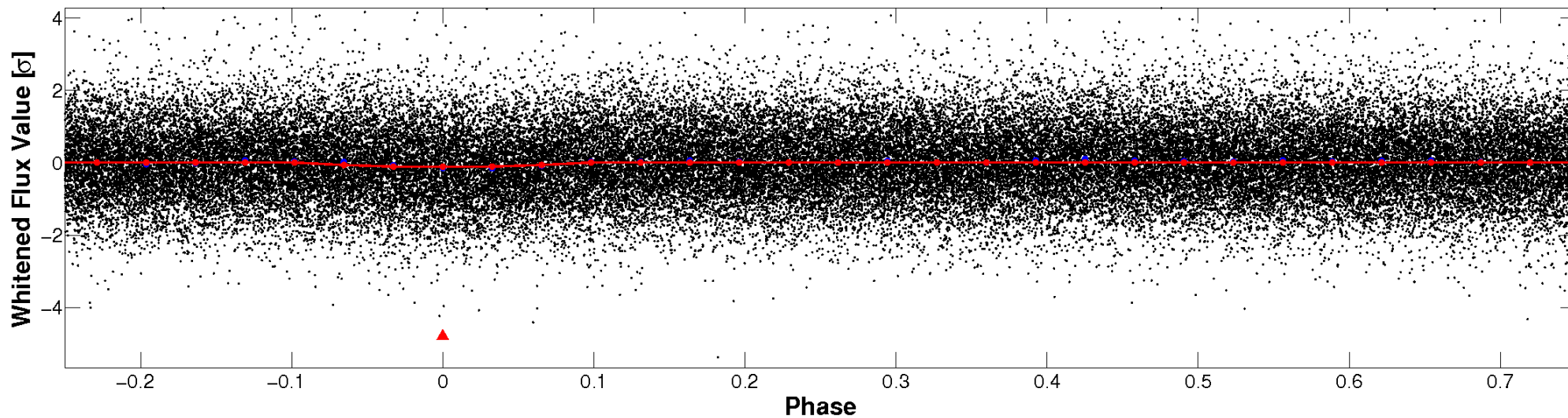


Non-Whitened Vs. Whitened Light Curve

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

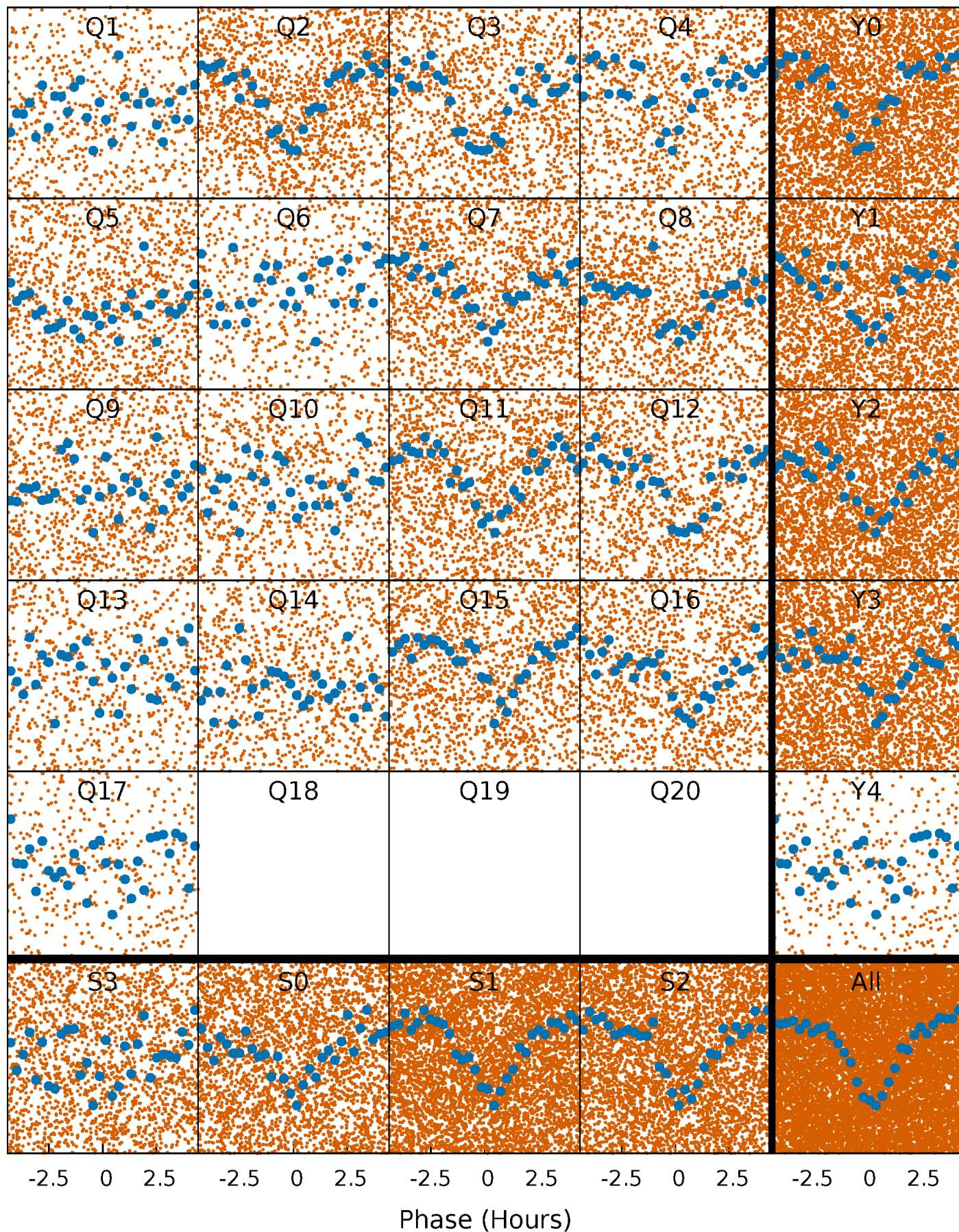


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



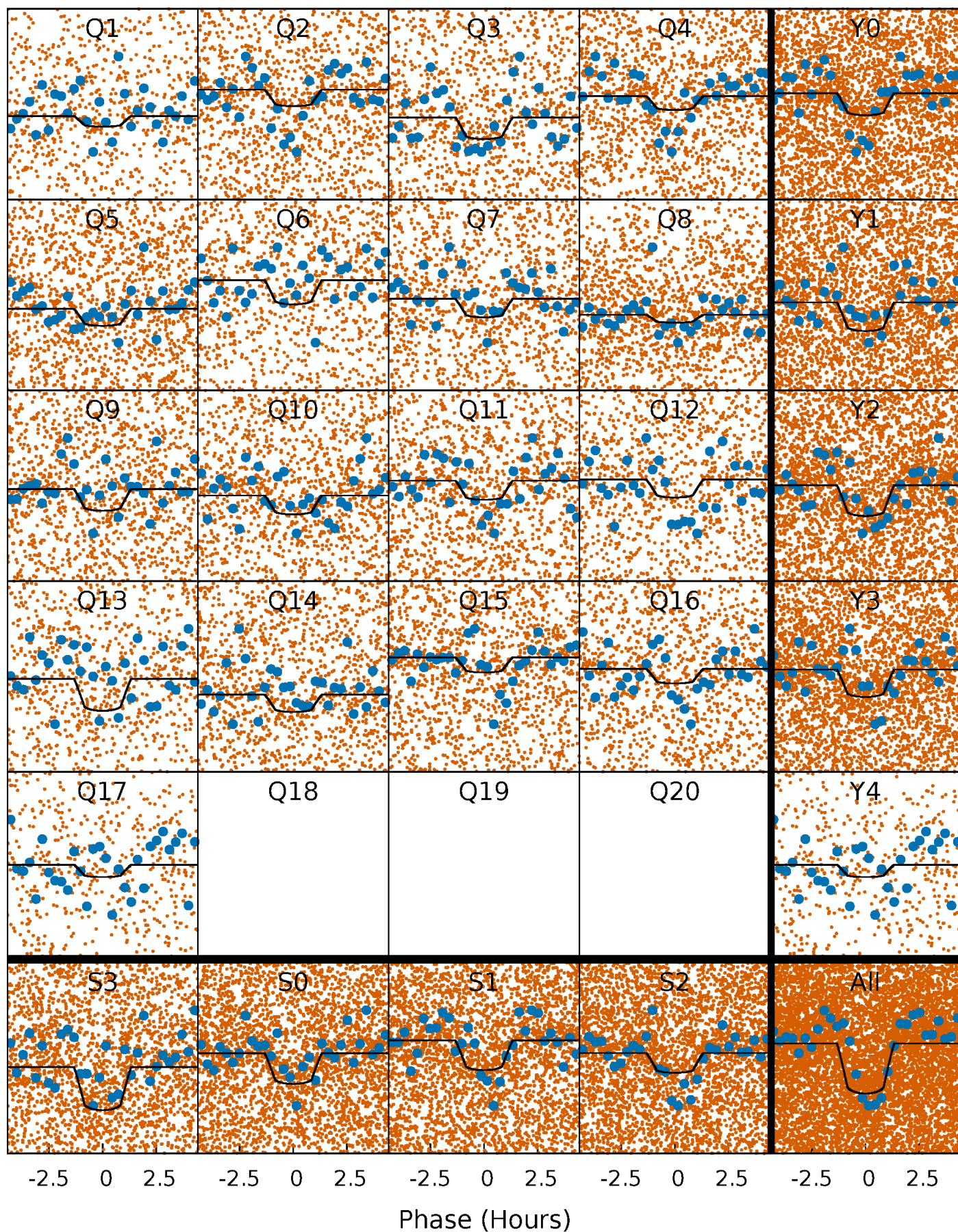
PDC Quarter-Phased Transit Curves

TCE 005900390-01 P= 0.624652 Days $T_0=131.882500$ (BKJD)



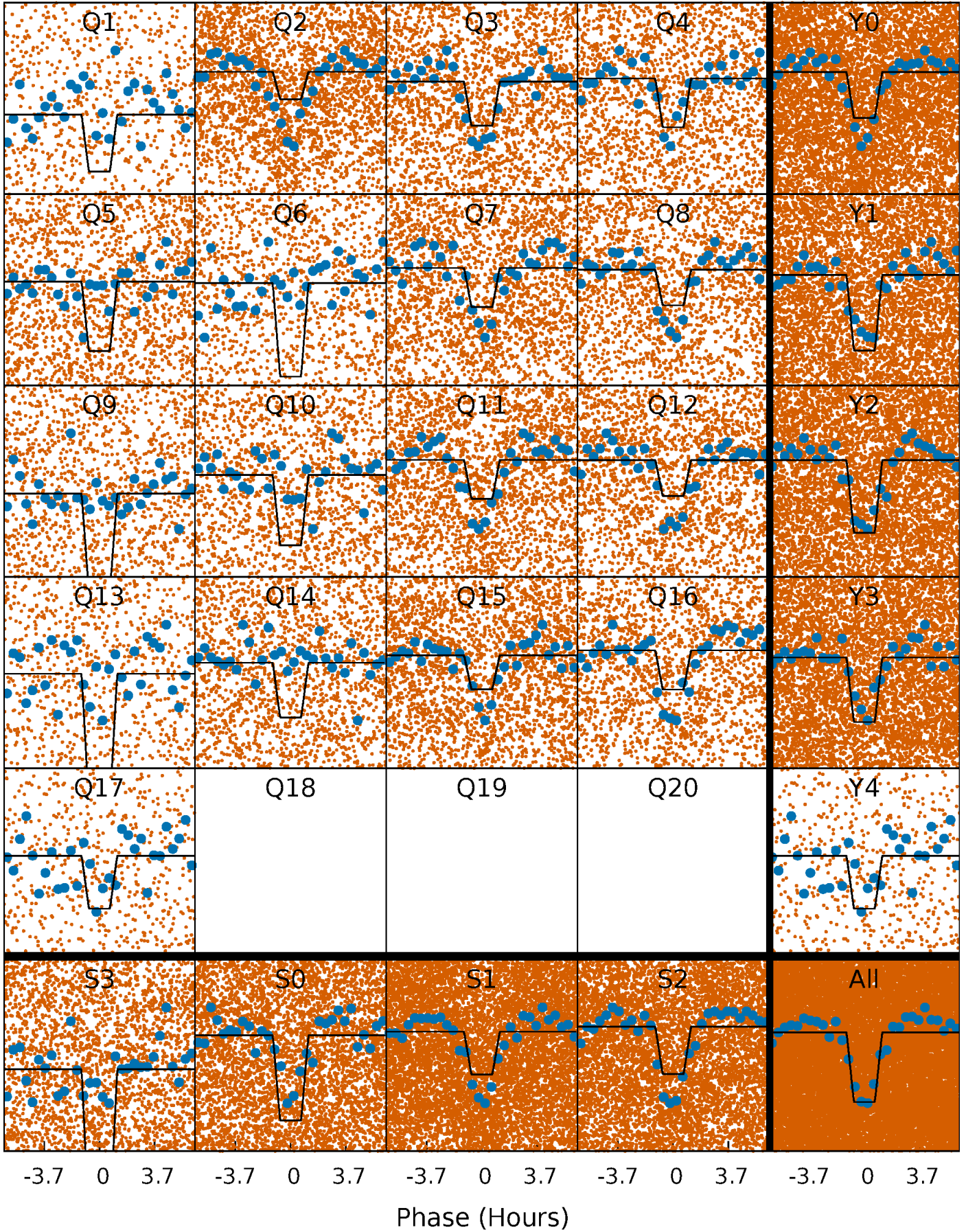
DV Quarter-Phased Transit Curves

TCE 005900390-01 P= 0.624652 Days $T_0=131.882500$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

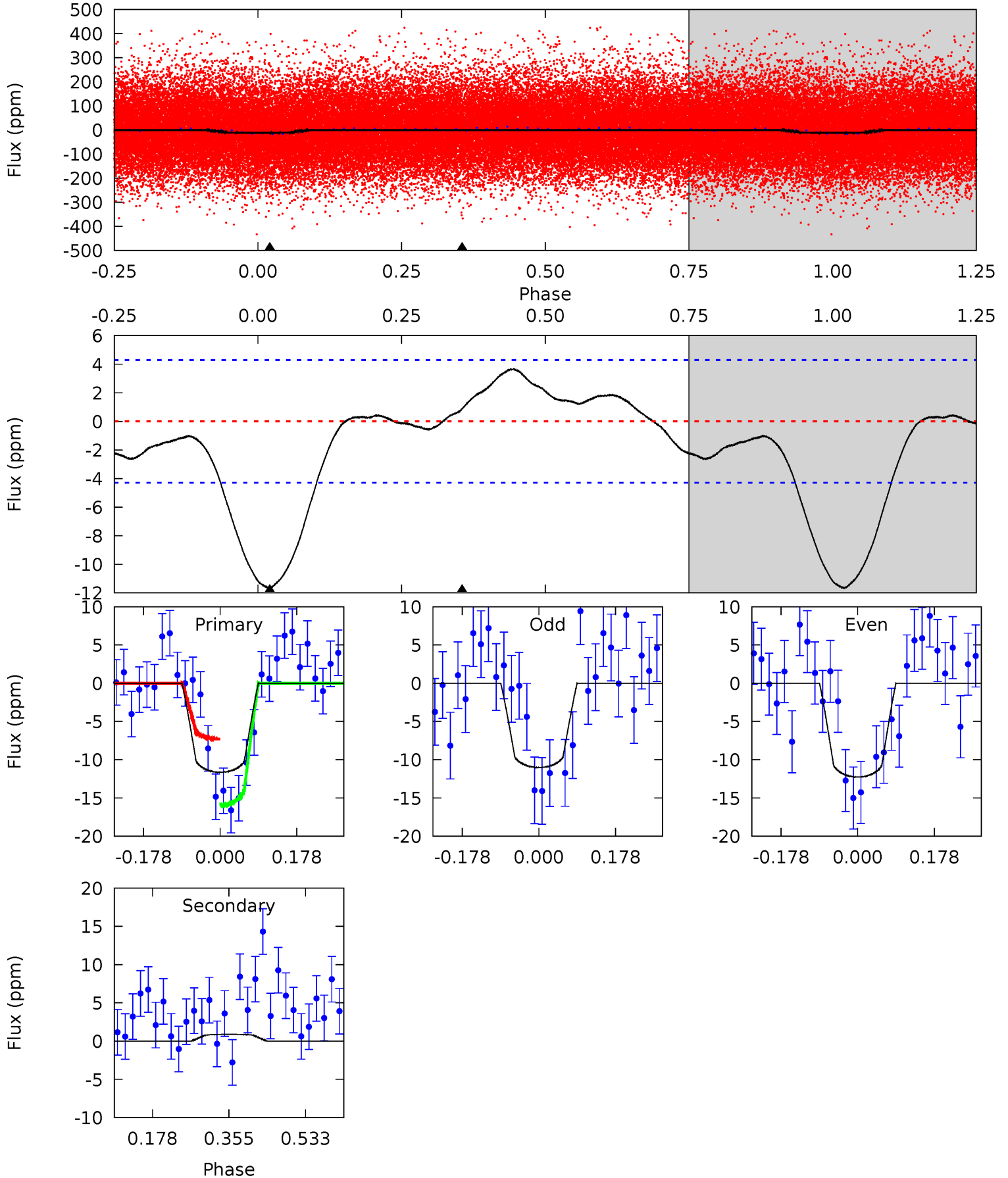
TCE 005900390-01 P= 0.624670 Days $T_0=131.874105$ (BKJD)



DV Model-Shift Uniqueness Test

005900390-01, P = 0.624652 Days, E = 131.257848 Days

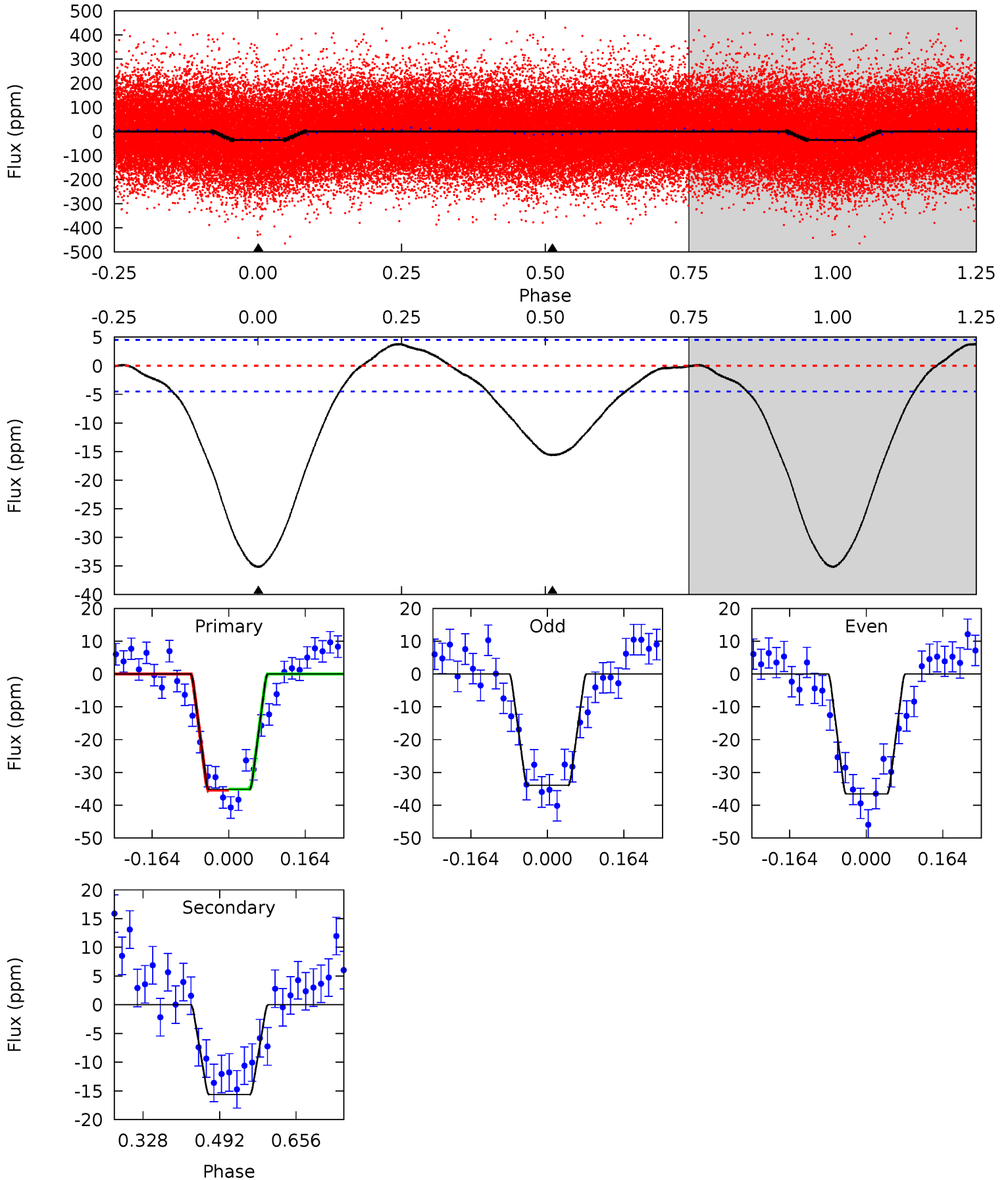
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	-0.92	0	0	4.44	1.35	1.70	12.1	12.1	-0.92	-0.92	0.65	0.86	0.24	4.51



Alt Model-Shift Uniqueness Test

005900390-01, P = 0.624670 Days, E = 131.249435 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	15.4	0	0	4.46	1.39	1.80	34.7	34.7	15.4	15.4	1.30	0.98	0.10	0.16



Stellar Parameters For KIC 005900390

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9653^{+272}_{-467}	$4.191^{+0.144}_{-0.216}$	$0.070^{+0.200}_{-0.750}$	$1.996^{+0.831}_{-0.512}$	$2.256^{+0.396}_{-0.544}$	$0.400^{+0.352}_{-0.212}$
	+3%/-5%	+3%/-5%	+286%/-1071%	+42%/-26%	+18%/-24%	+88%/-53%
Source	KIC0	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 005900390-01 / KOI 4063.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	1 ± 1	$0.80^{+0.25}_{-0.20}$	6159^{+540}_{-482}	-5631^{+839}_{-792}	$-0.264^{+0.269}_{-0.444}$
Alt.	-16 ± 1	$1.33^{+0.35}_{-0.25}$	6140^{+522}_{-447}	6796^{+732}_{-648}	$1.617^{+0.780}_{-0.539}$

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

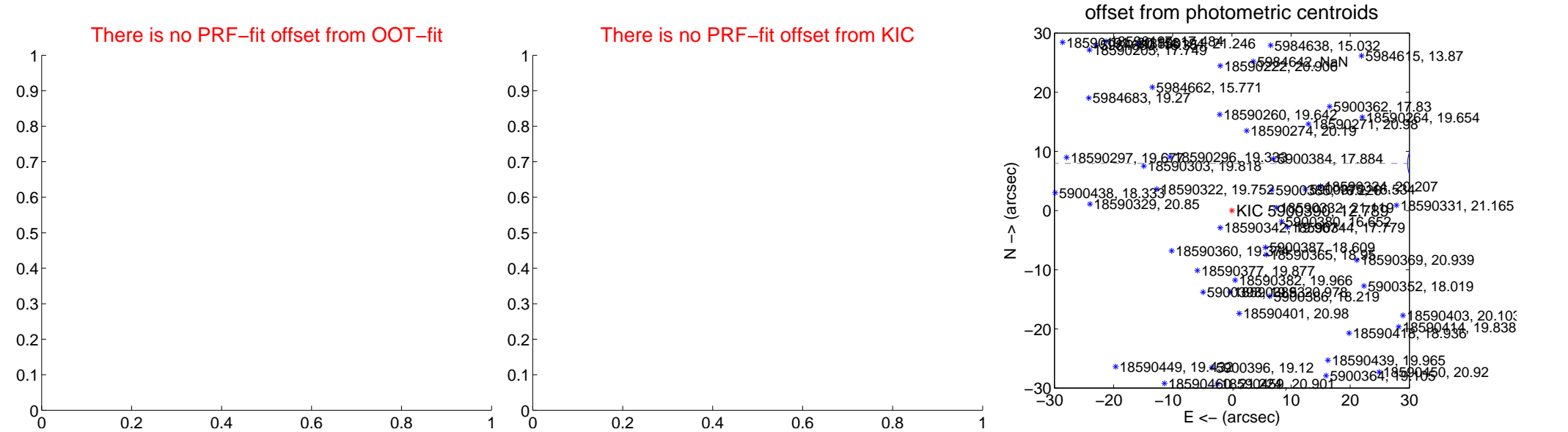
DV Centroid Data

Supplemental centroid analysis for 005900390-01. Kepler magnitude: 12.79. Transit SNR 9.18

There are 0 quarters with good PRF difference image offsets

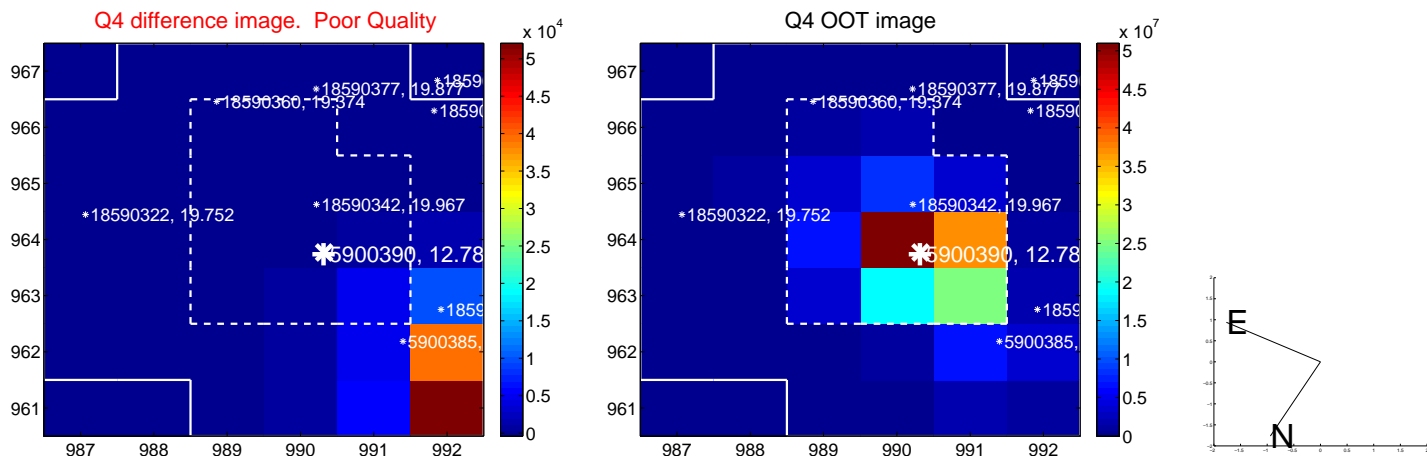
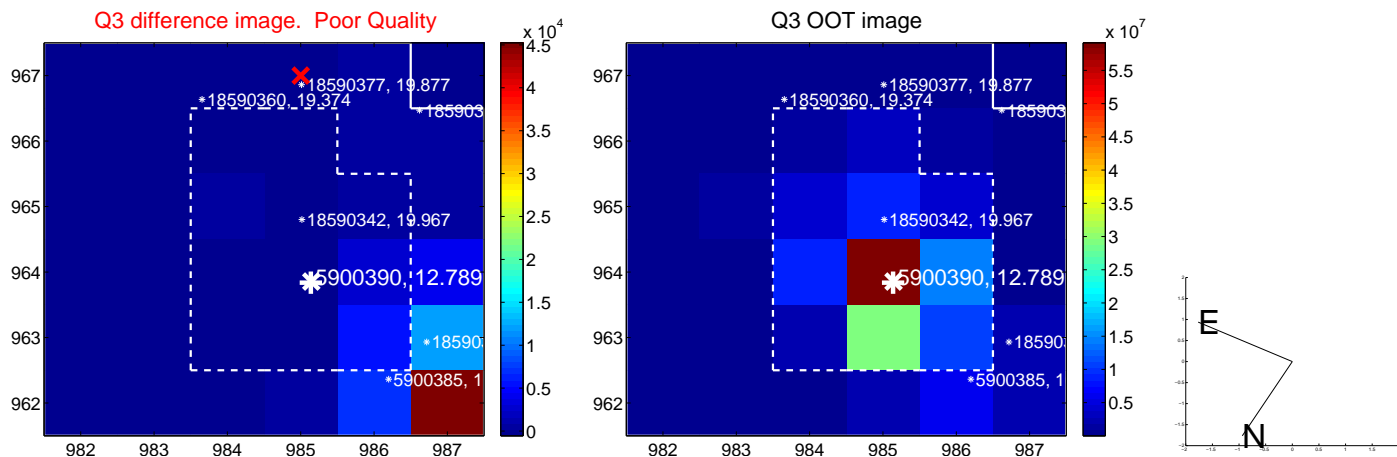
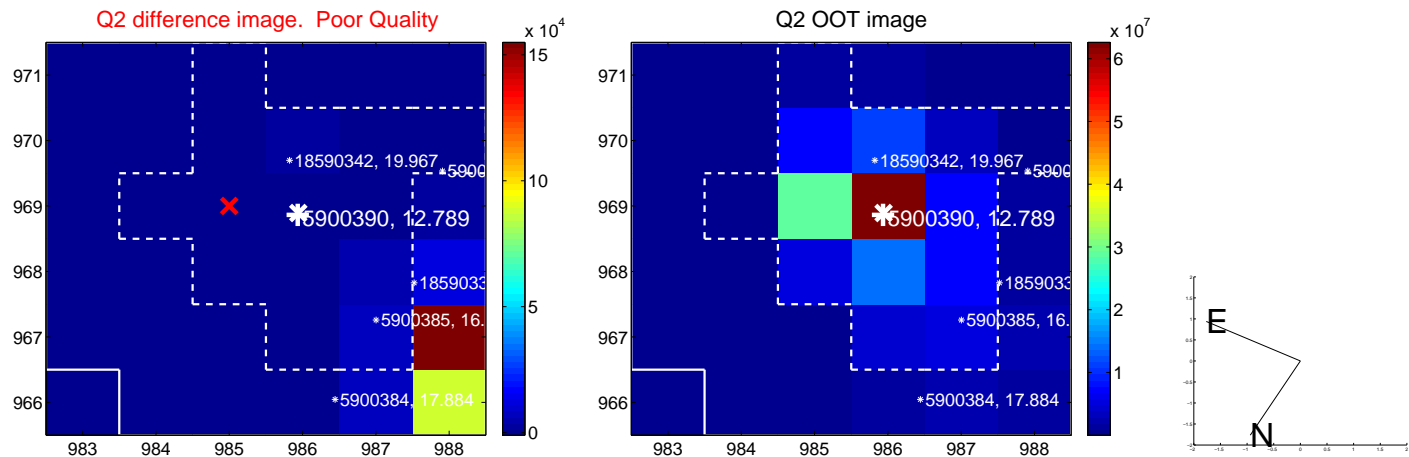
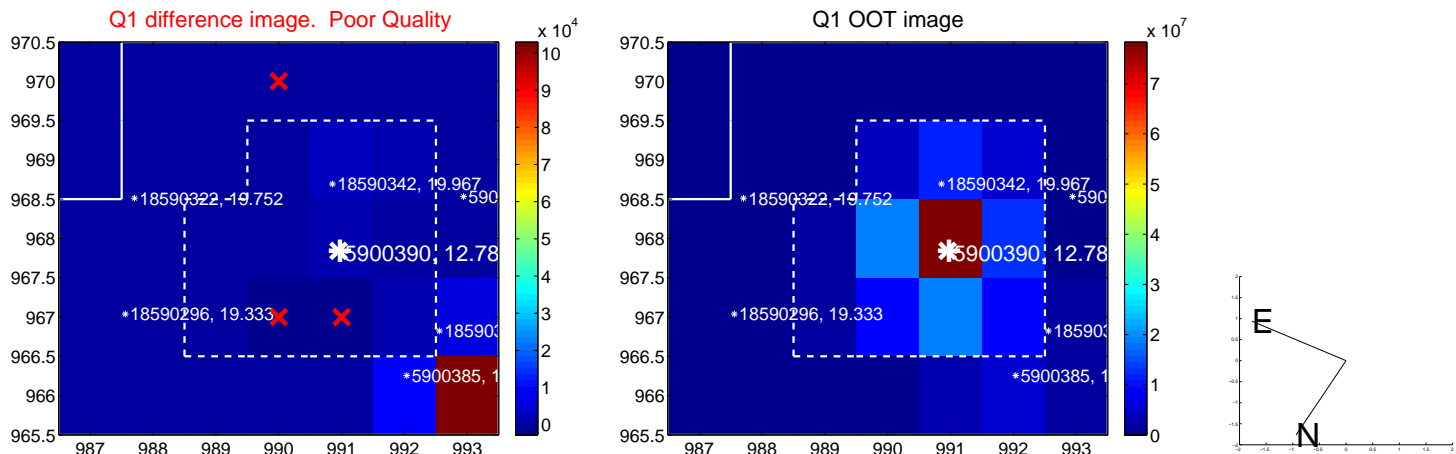
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	36.27 ± 1.89	19.16	-35.38 ± 1.92	7.98 ± 1.30

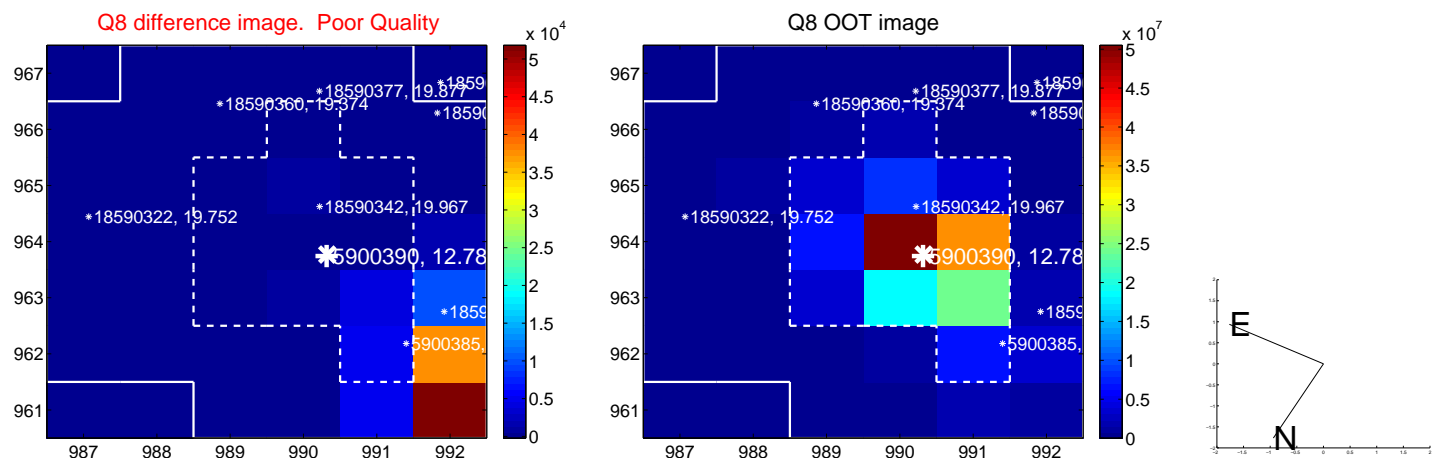
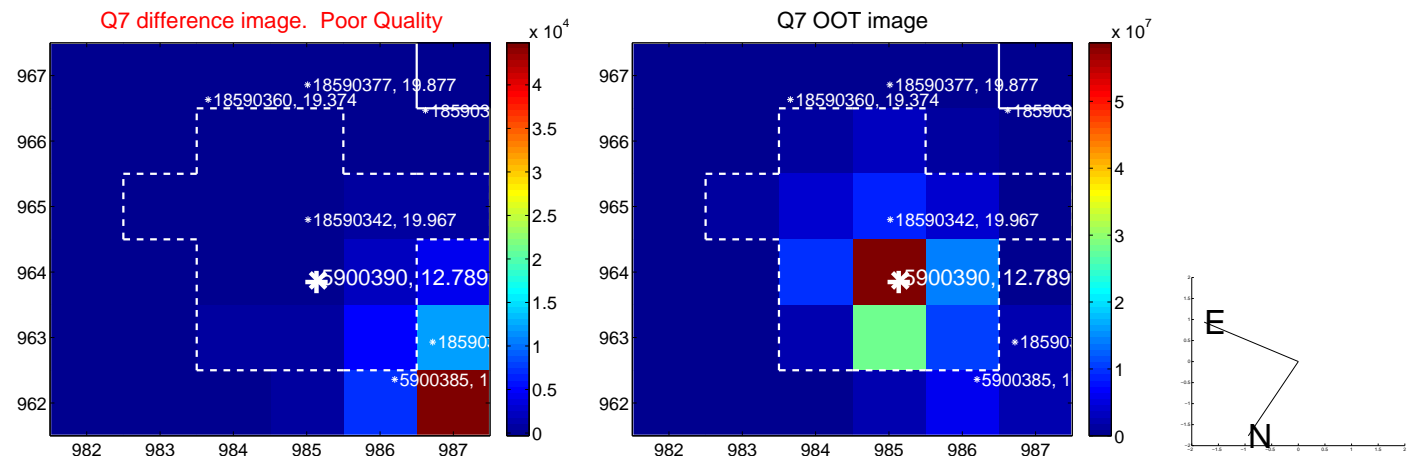
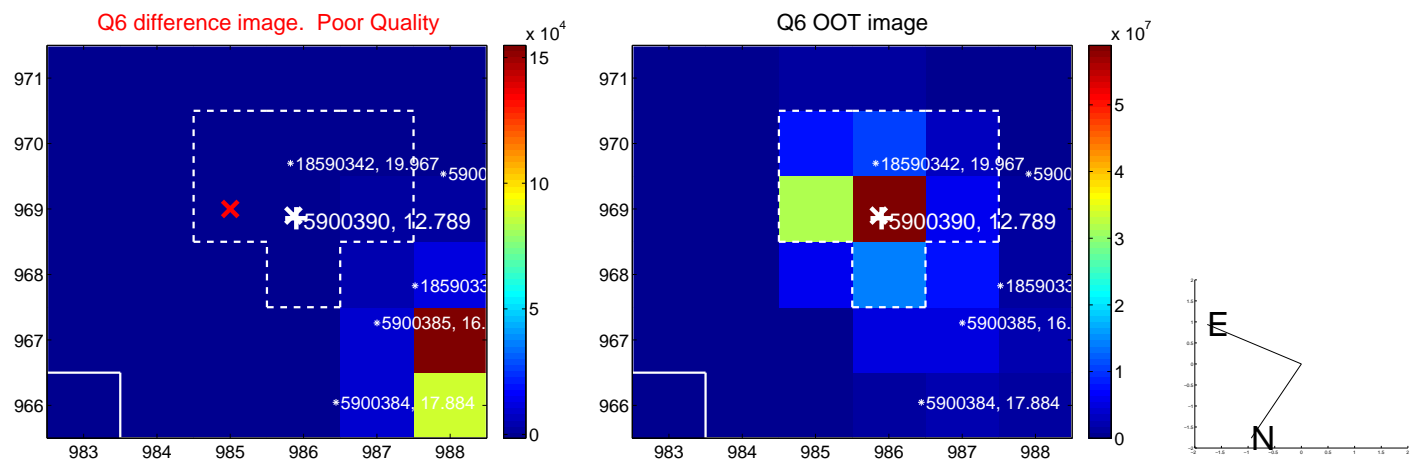
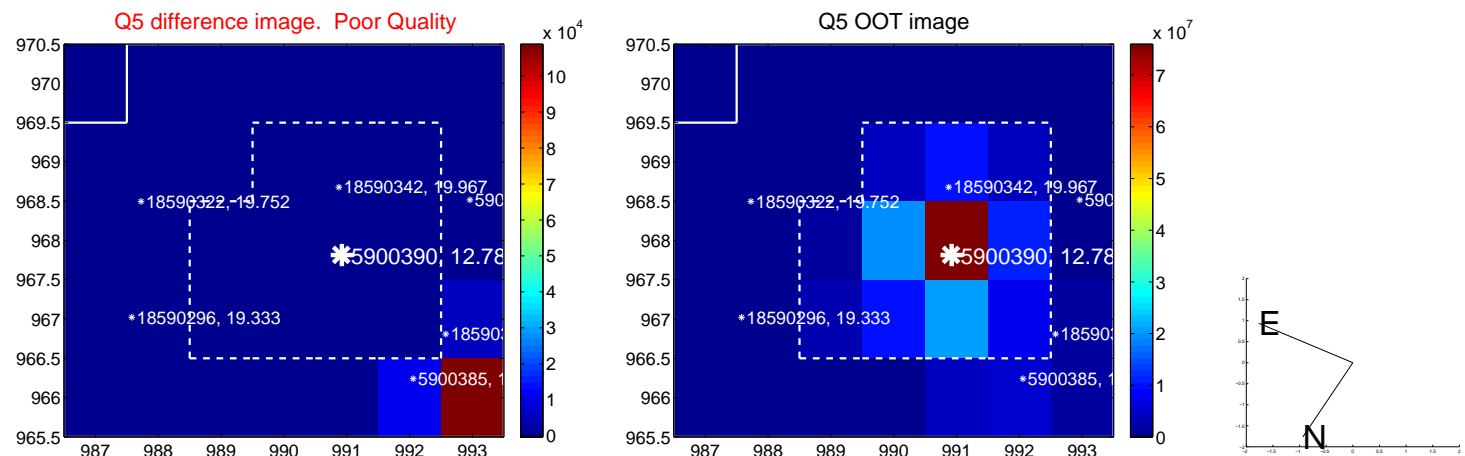


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

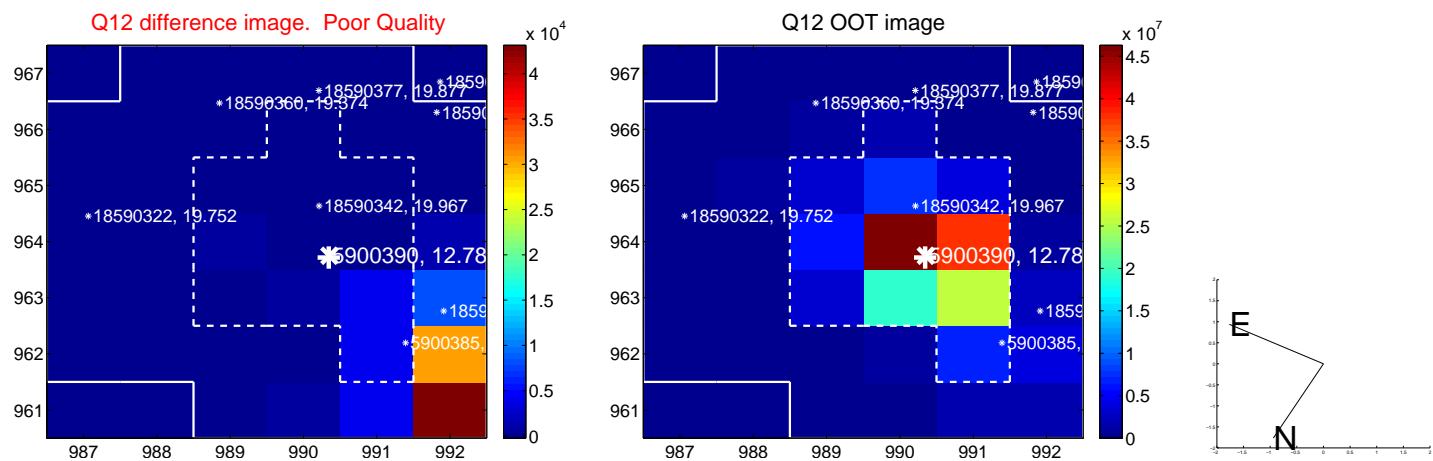
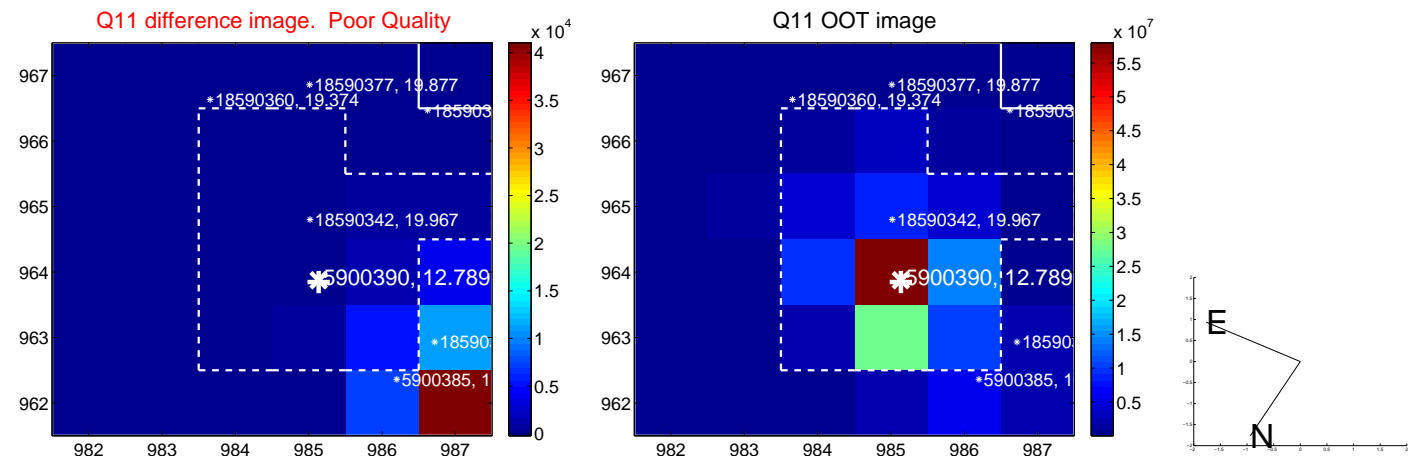
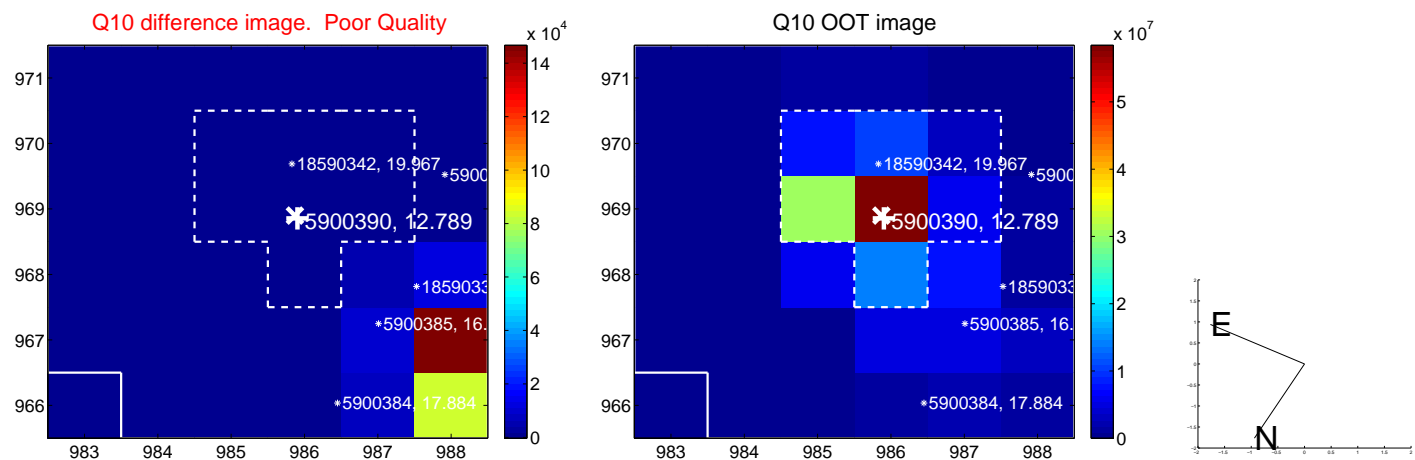
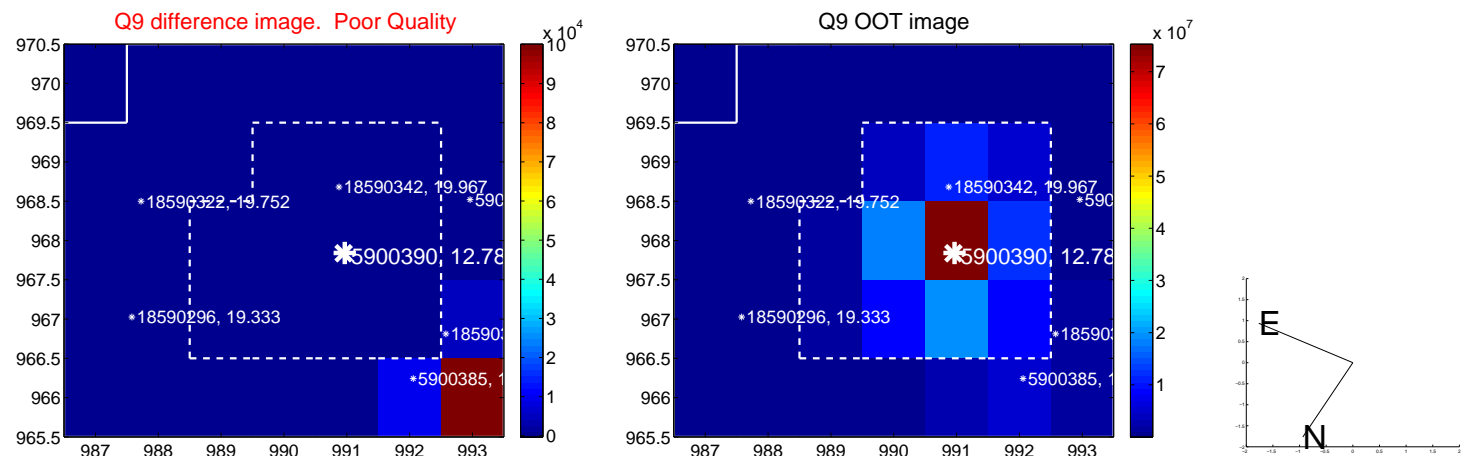
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



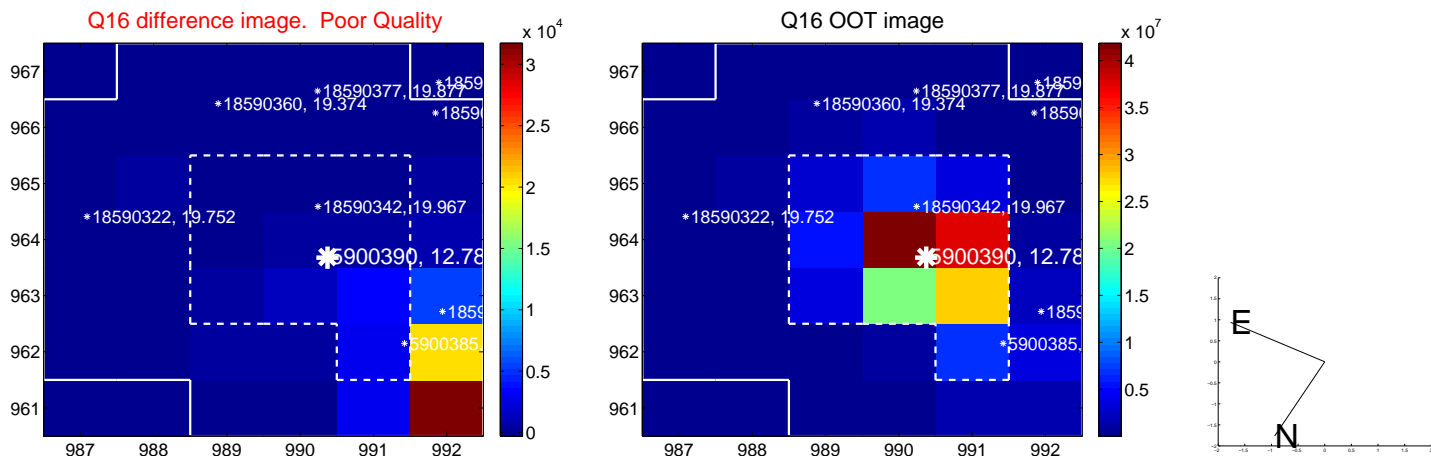
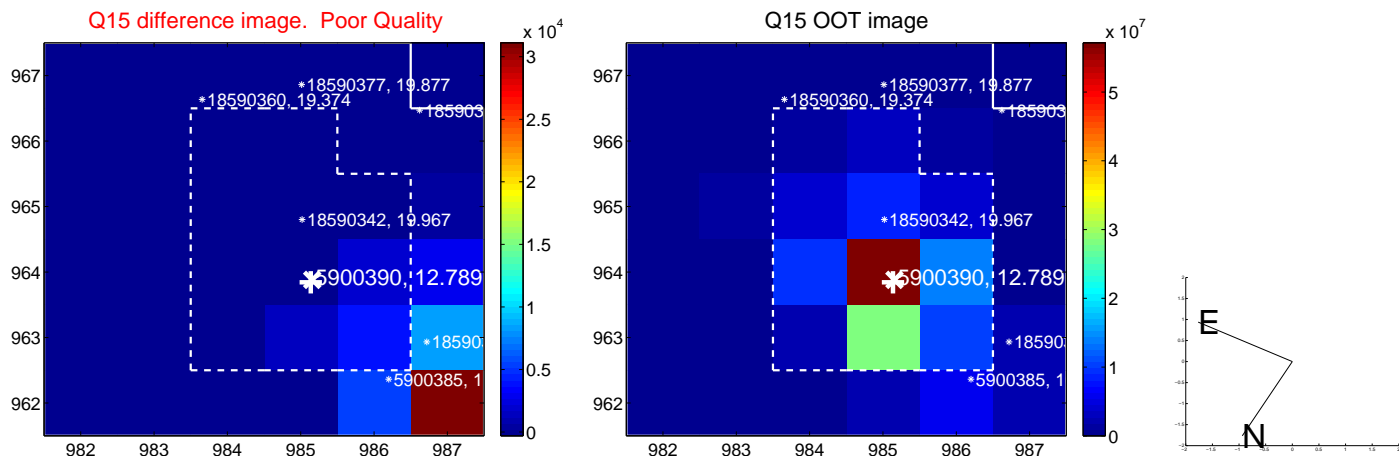
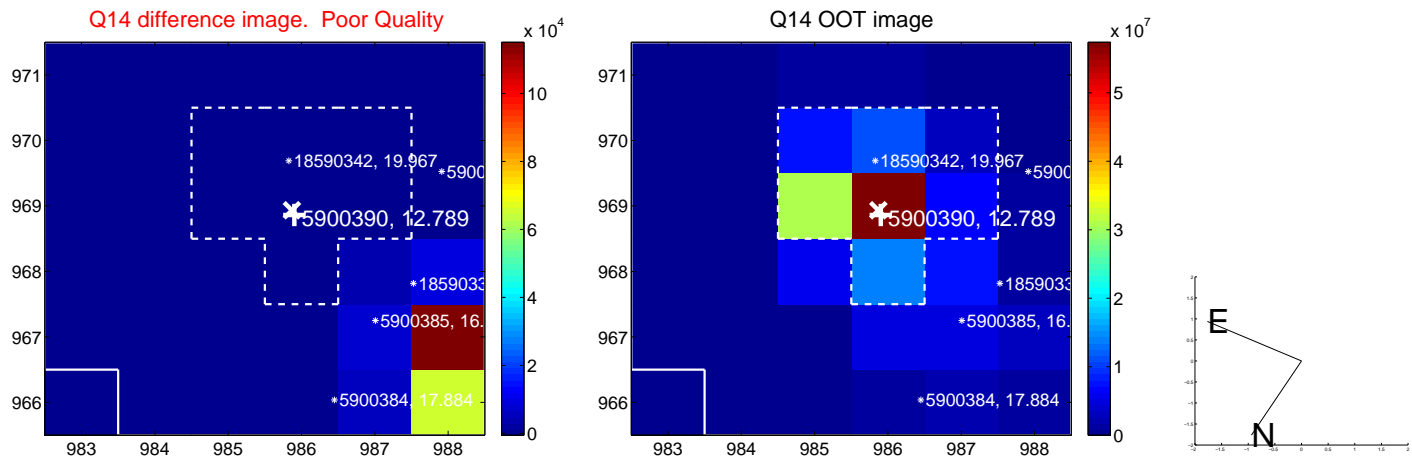
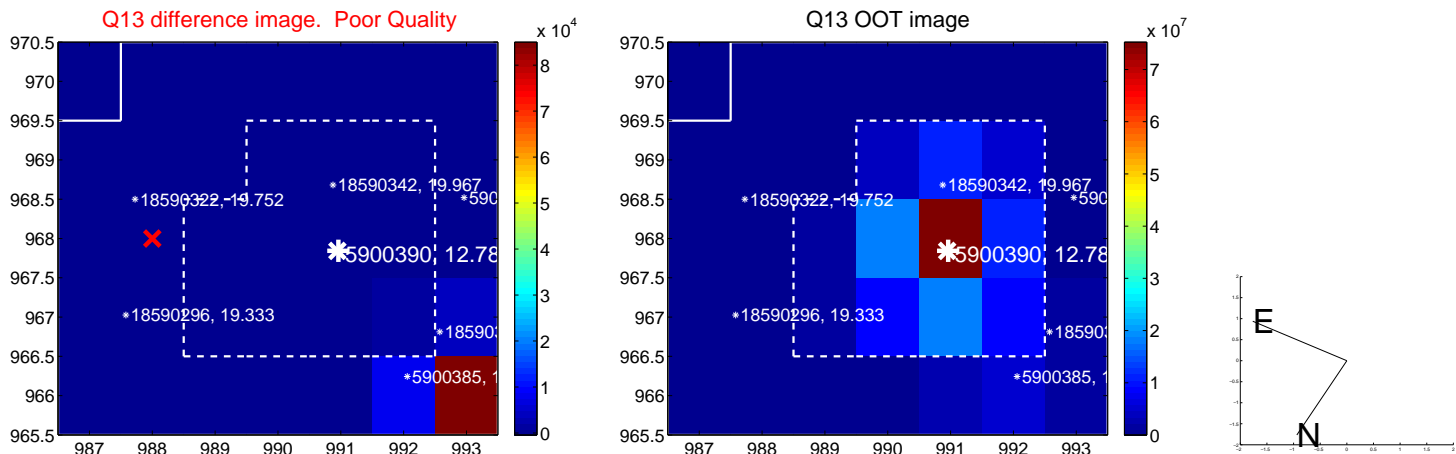
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



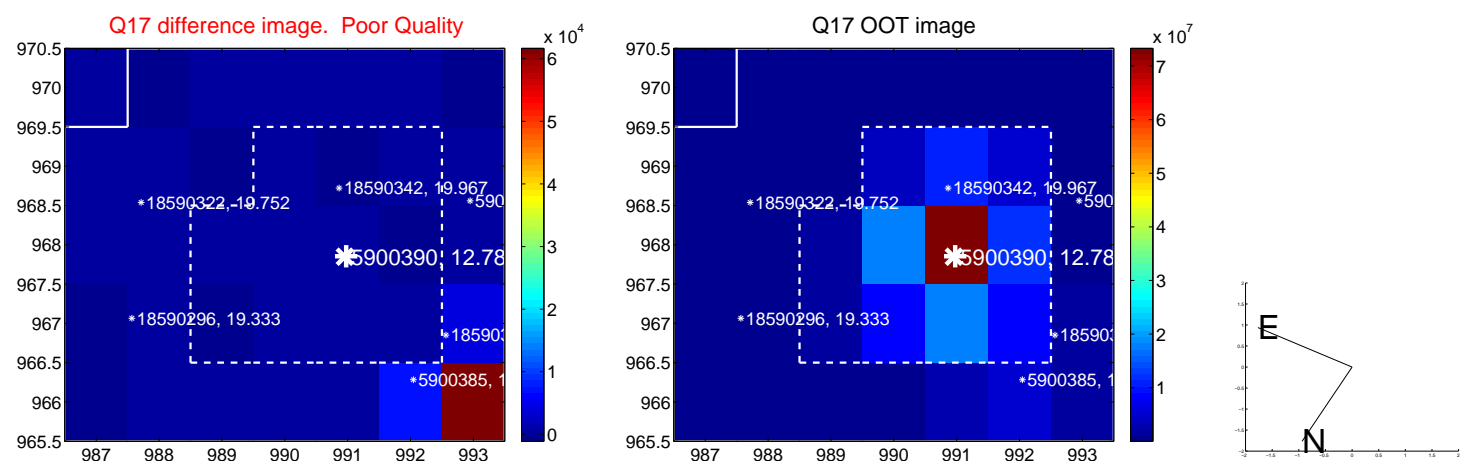
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



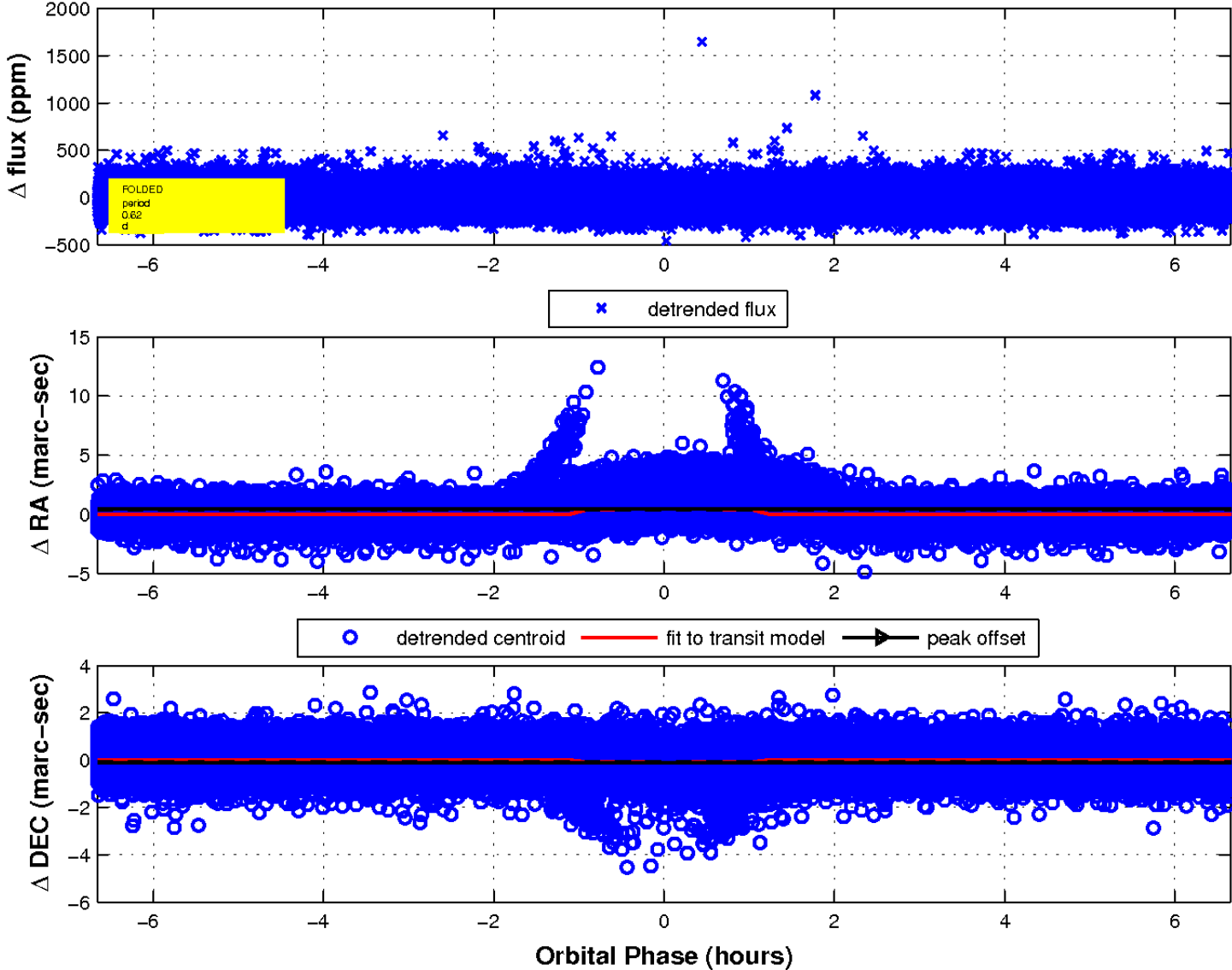
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

