

KIC 007090563

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})
007090563-01	OBS	No	0.553372	131.595674	24.3	2.147	12.3	13.1	2.74	6955	1.58	59906.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007090563-01	OBS	FP	0.00	1	0	0	0	LPP_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.

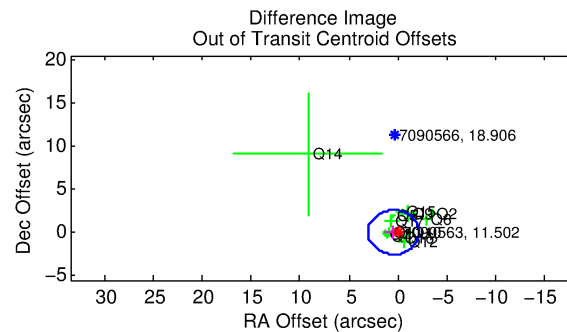
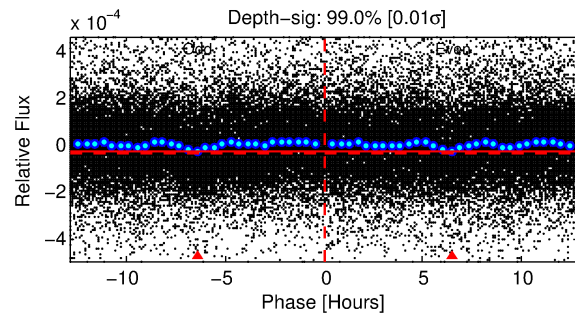
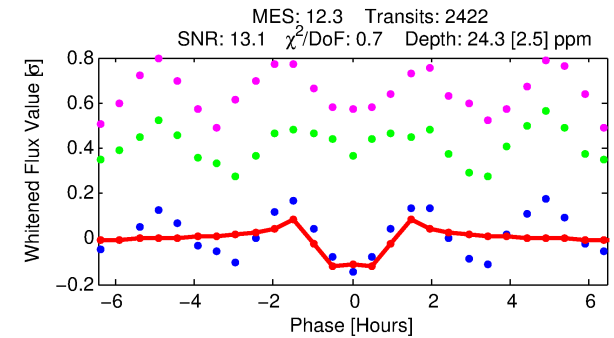
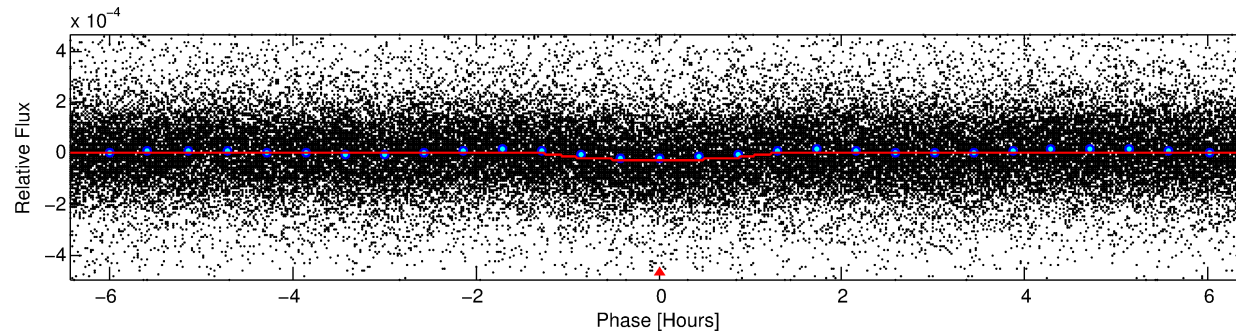
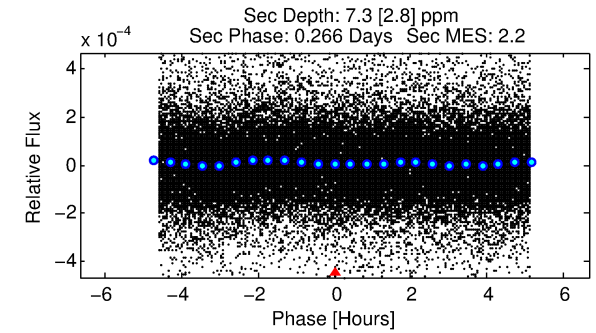
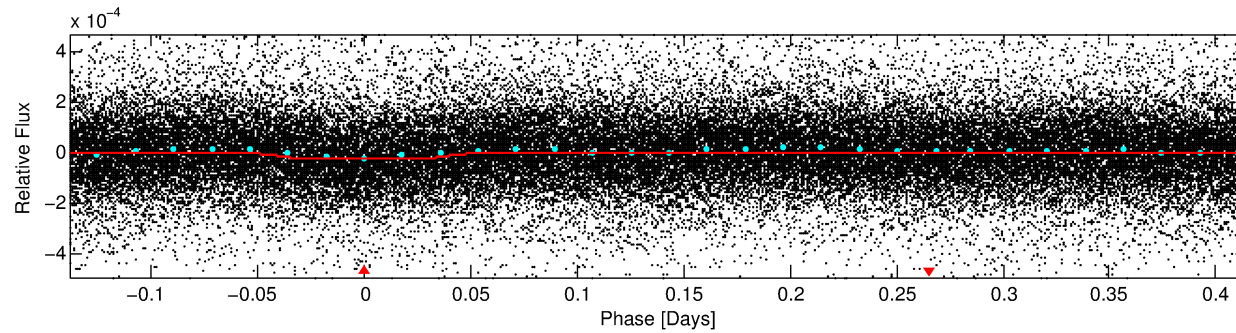
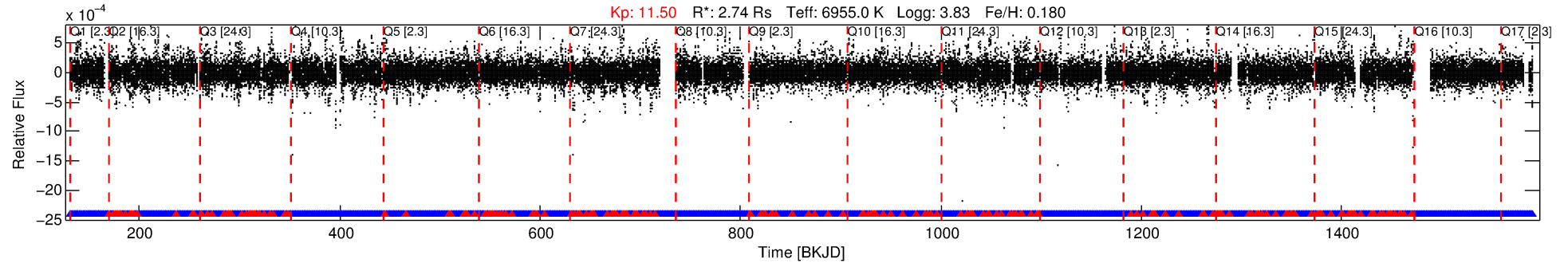
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007090563-01

No Significant Match Found

DV One-Page Summary

KIC: 7090563 Candidate: 1 of 1 Period: 0.553 d



DV Fit Results:

Period = 0.55337 [0.00001] d
Epoch = 131.5957 [0.0013] BKJD
Rp/R* = 0.0053 [0.0011]
a/R* = 1.26 [0.56]
b = 0.91 [0.23]
Seff = 59906.01 [28115.77]
Teq = 3989 [468] K
Rp = 1.59 [0.60] Re
a = 0.0162 [0.0047] AU
Ag = 0.42 [0.30] [-1.95σ]
Teffp = 4960 [706] K [1.15σ]

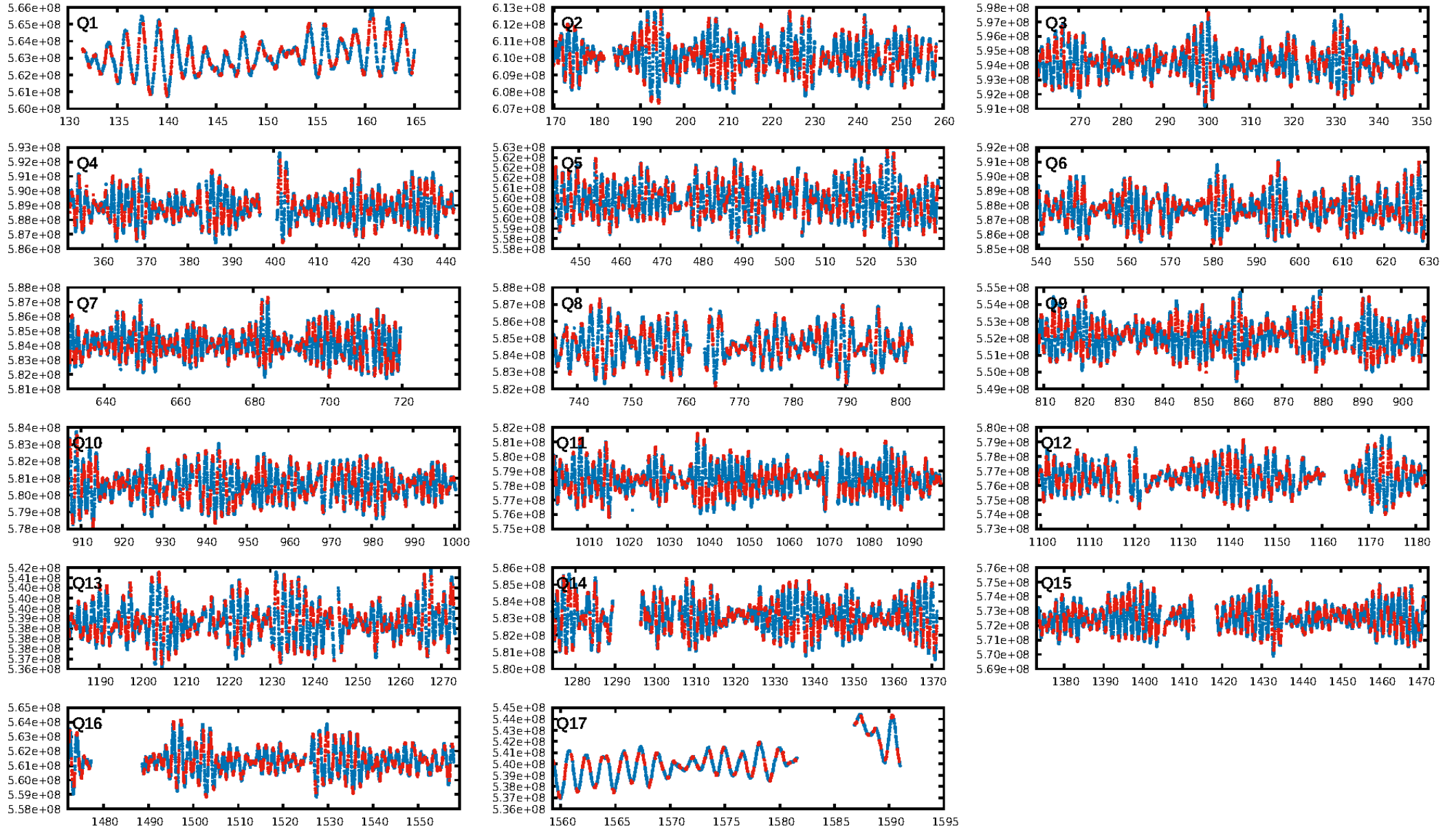
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.79e-62
RollingBand-fgt: 0.91 [2103/2312]
GhostDiagnostic-chr: -0.7346
Centroid-sig: 28.3%
Centroid-so: 0.625 arcsec [1.44σ]
OotOffset-rm: 0.479 arcsec [0.56σ]
KicOffset-rm: 0.519 arcsec [0.88σ]
OotOffset-st: 4/2/3/4 [13]
KicOffset-st: 4/2/3/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

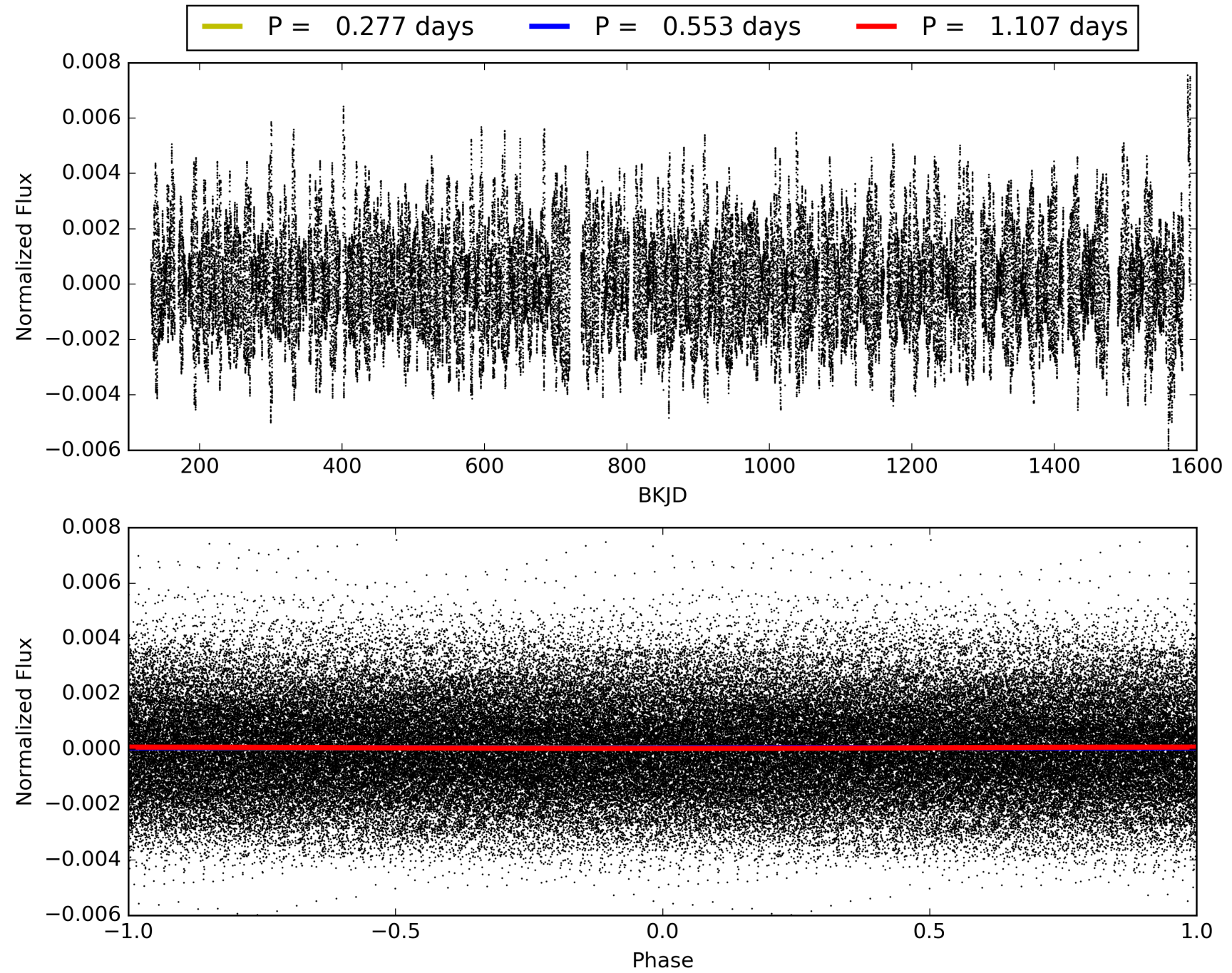
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:17:12 Z

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

TCE 007090563-01, PDC Light Curves

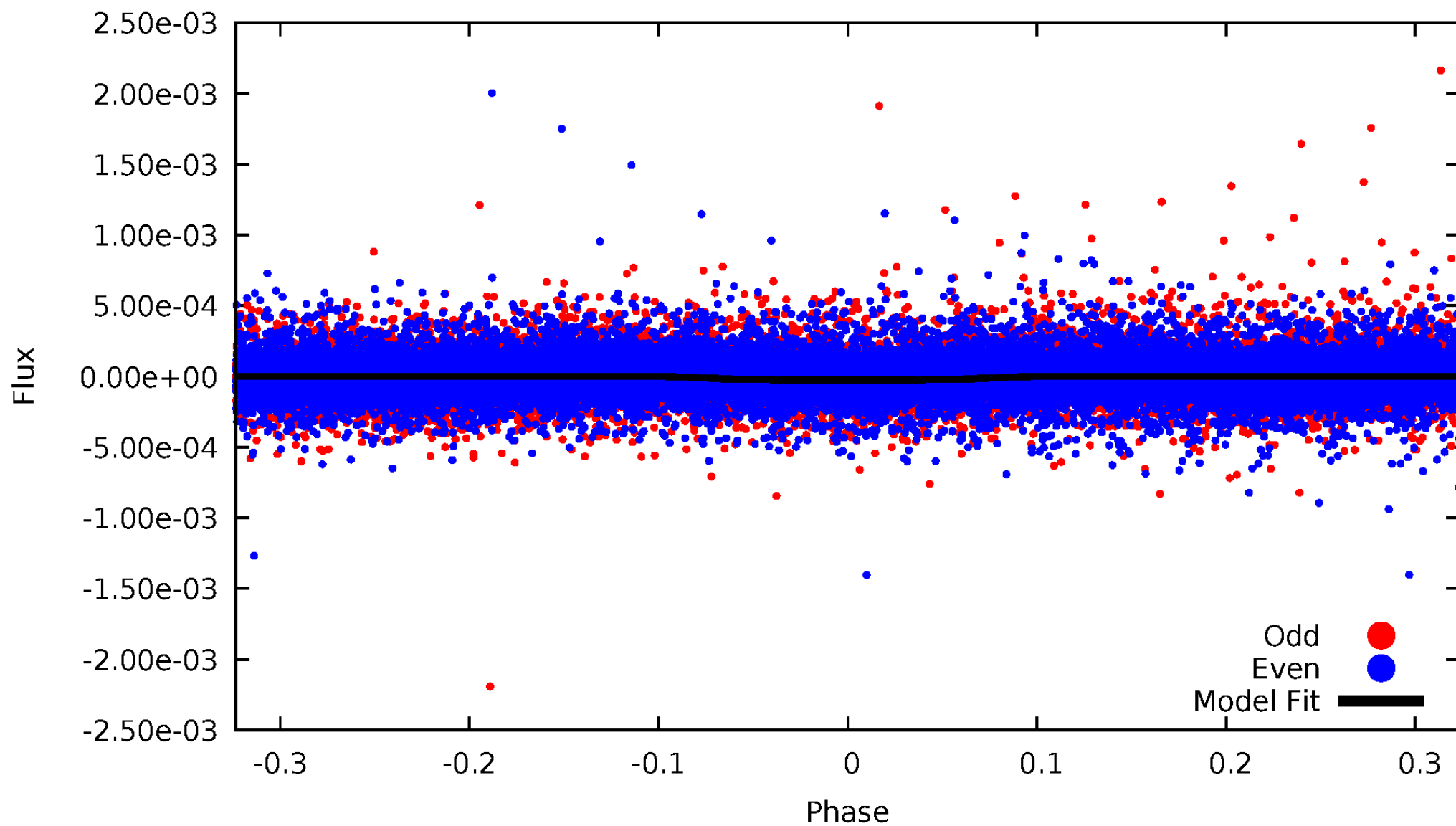


TCE 007090563-01



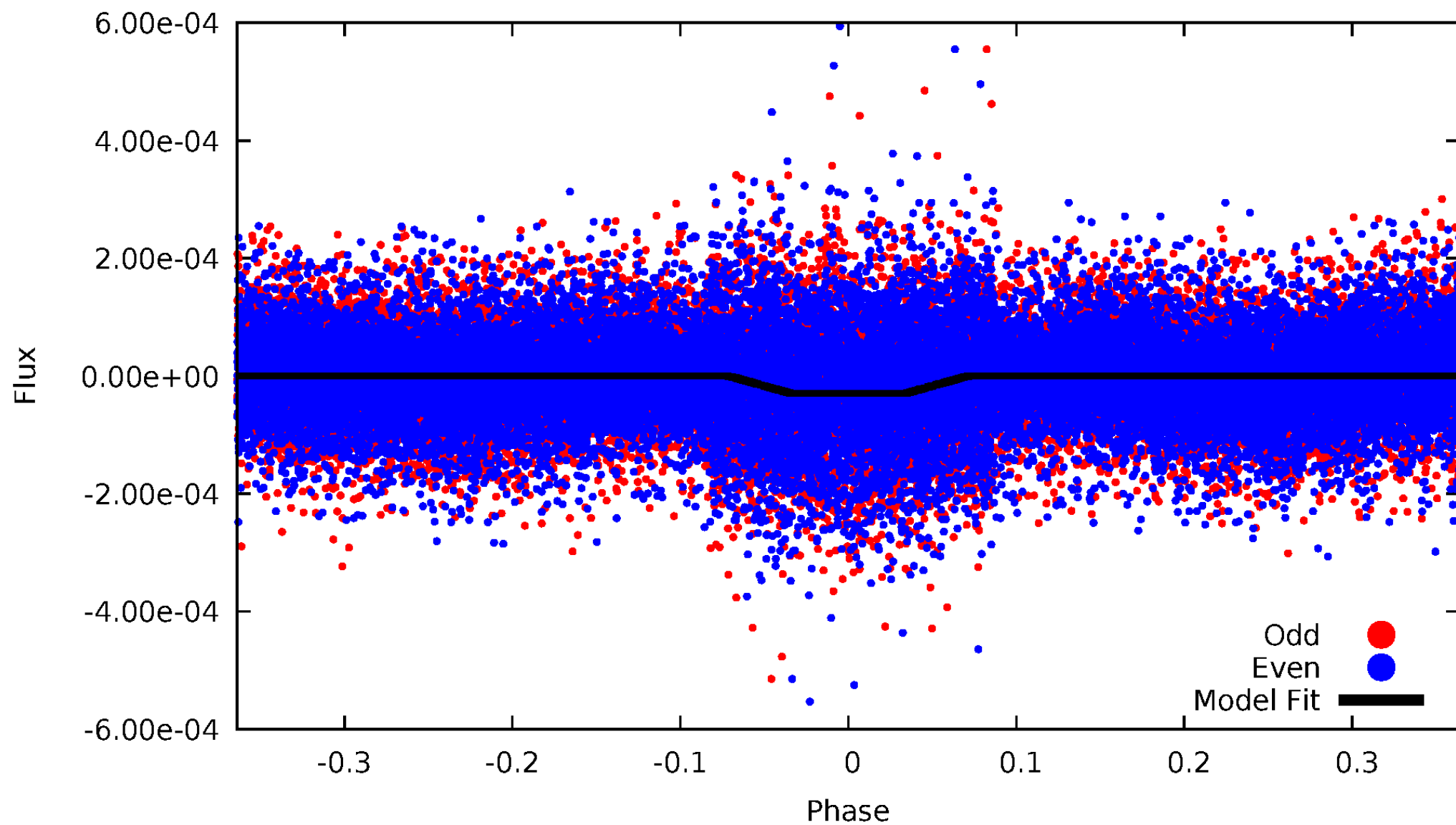
DV Odd/Even

TCE 007090563-01



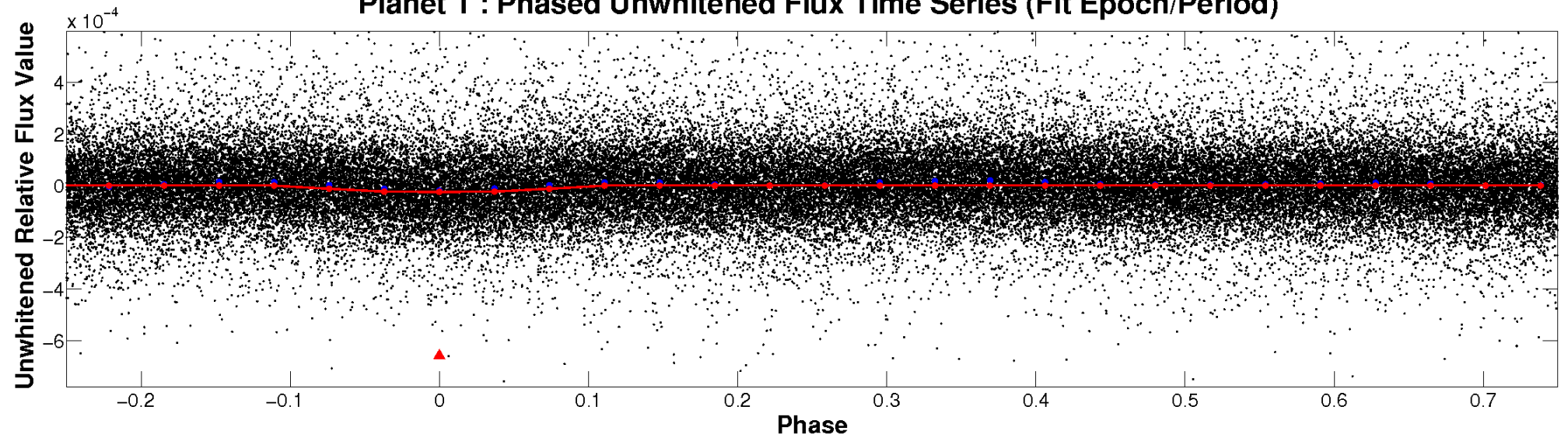
ALT Odd/Even

TCE 007090563-01

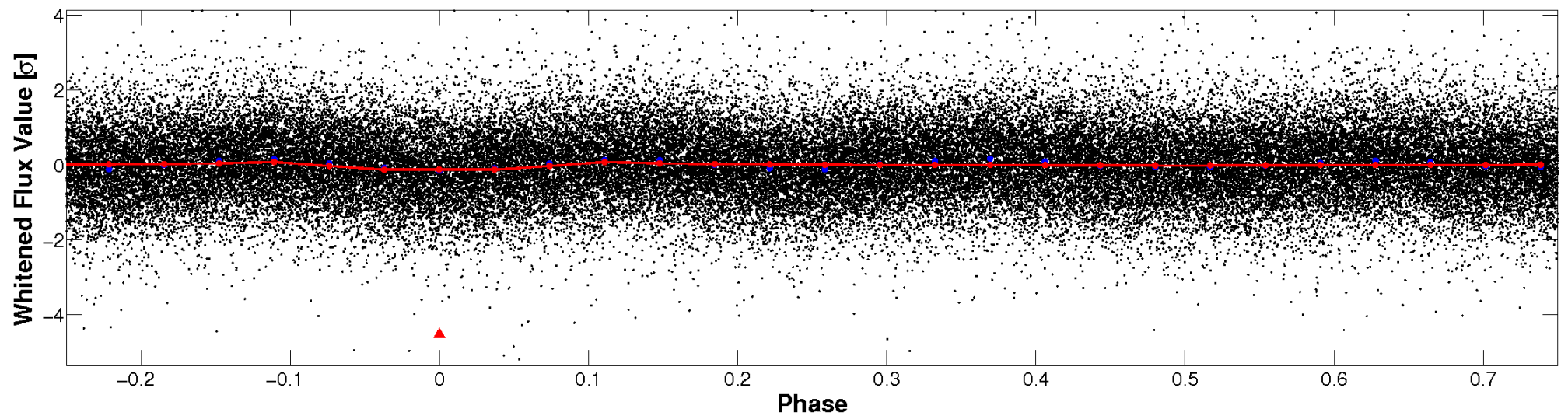


Non-Whitened Vs. Whitened Light Curve

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

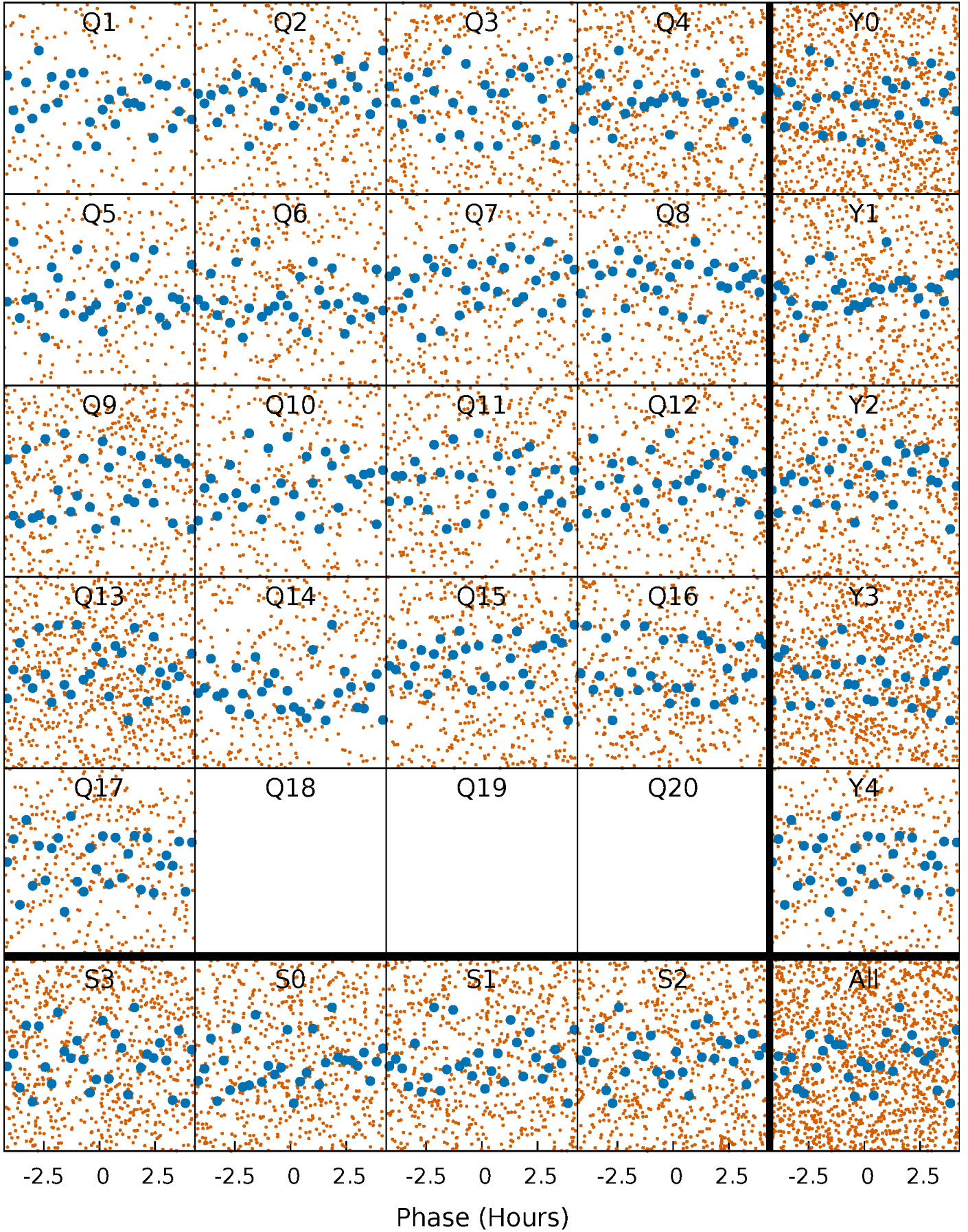


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



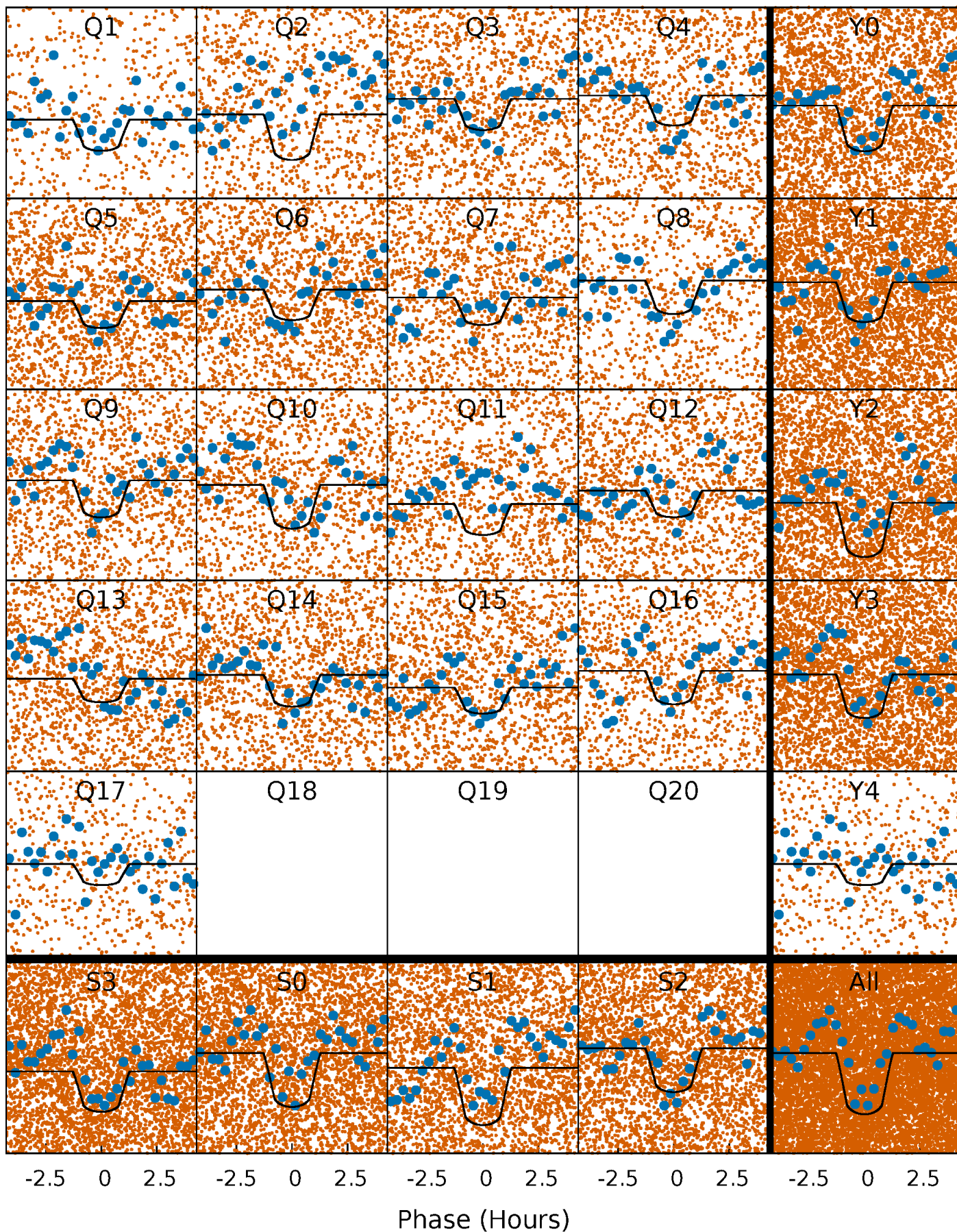
PDC Quarter-Phased Transit Curves

TCE 007090563-01 P= 0.553372 Days $T_0=131.595674$ (BKJD)



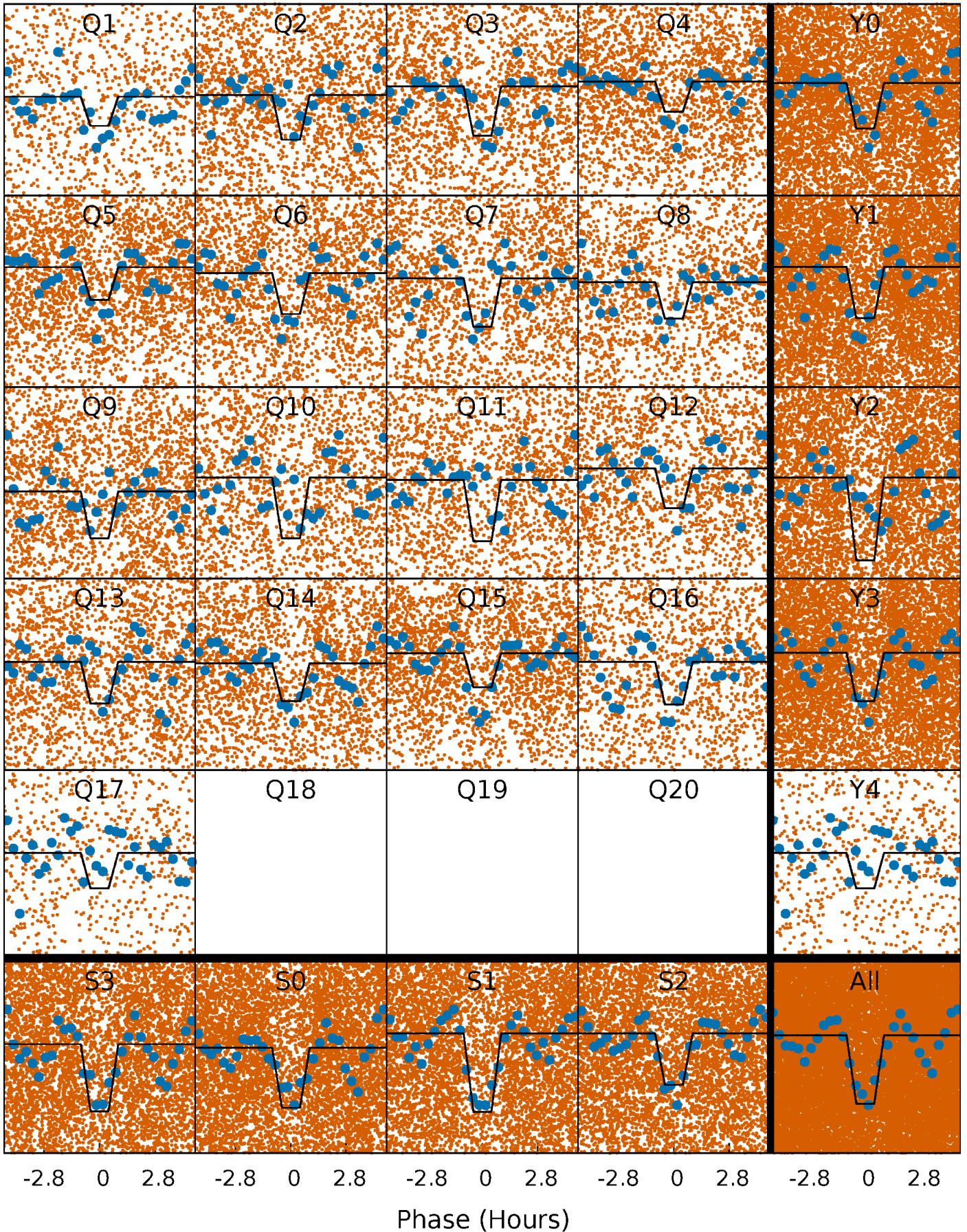
DV Quarter-Phased Transit Curves

TCE 007090563-01 P= 0.553372 Days $T_0=131.595674$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

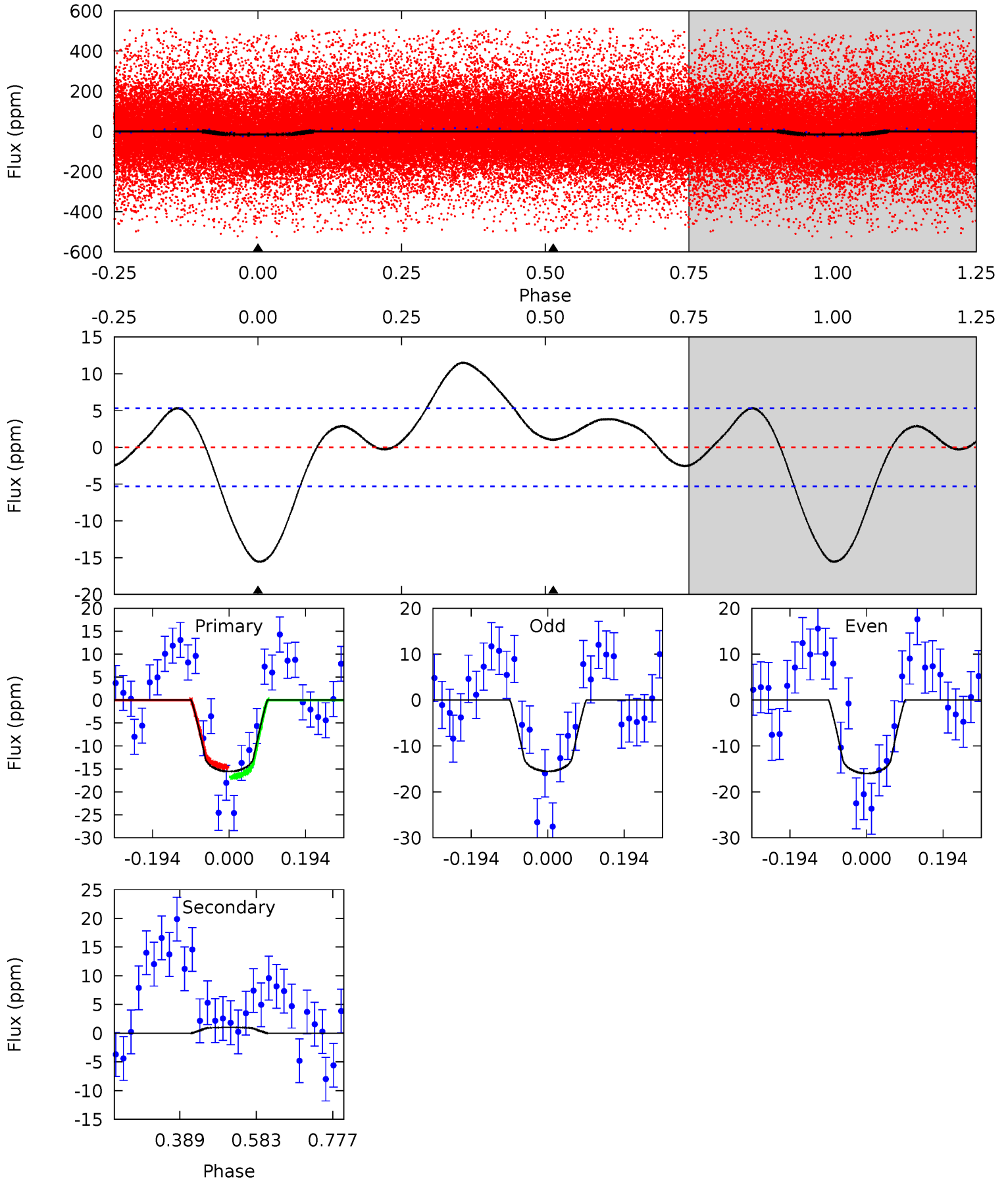
TCE 007090563-01 P= 0.553375 Days $T_0=131.593853$ (BKJD)



DV Model-Shift Uniqueness Test

007090563-01, P = 0.553372 Days, E = 131.042302 Days

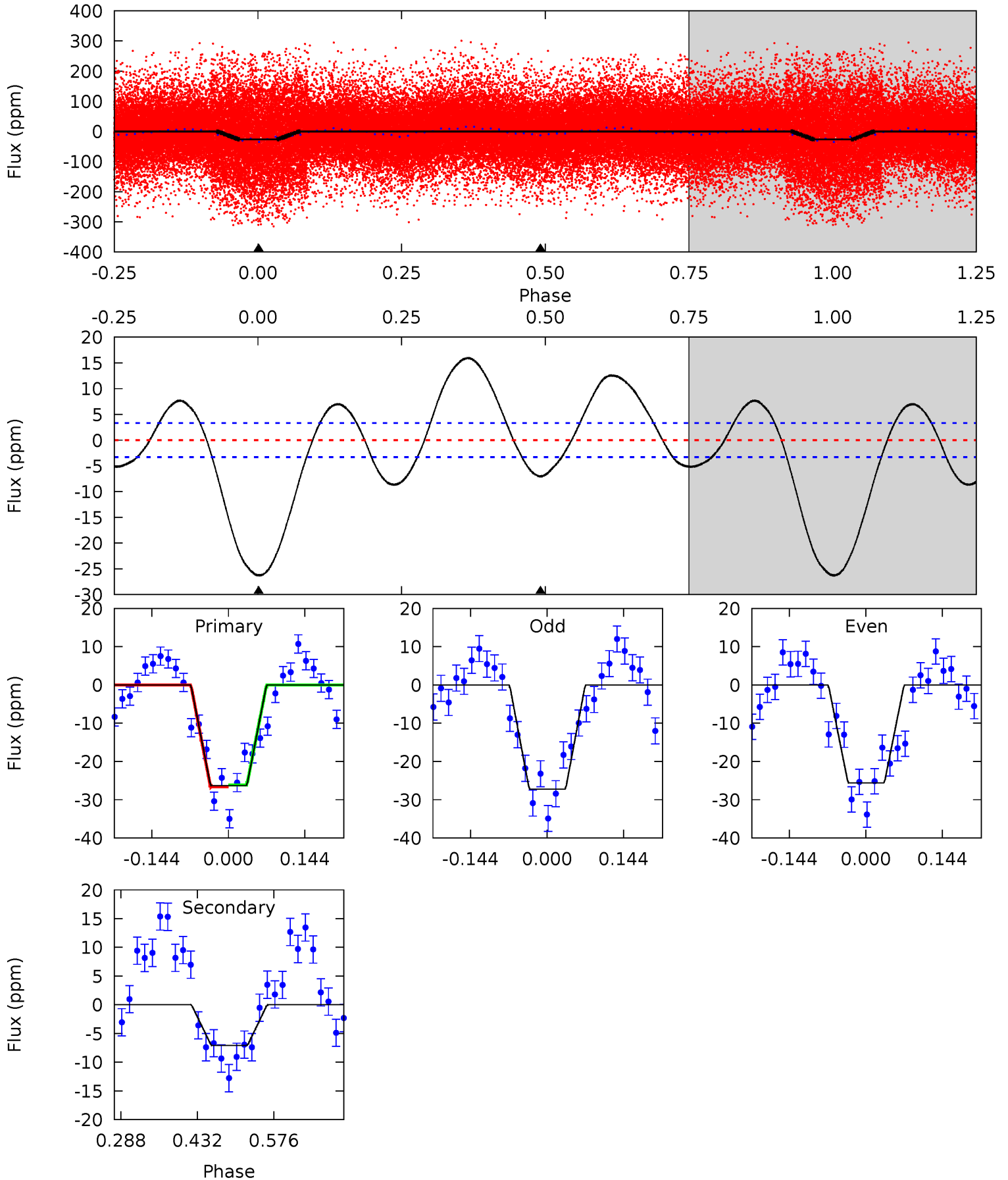
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	-0.85	0	0	4.42	1.30	2.46	13.0	13.0	-0.85	-0.85	0.19	0.59	0.43	0.90



Alt Model-Shift Uniqueness Test

007090563-01, P = 0.553375 Days, E = 131.040478 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	9.62	0	0	4.49	1.46	8.49	35.8	35.8	9.62	9.62	1.12	1.00	0.38	0.34



Stellar Parameters For KIC 007090563

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6955^{+156}_{-225}	$3.830^{+0.259}_{-0.111}$	$0.180^{+0.200}_{-0.300}$	$2.736^{+0.471}_{-0.875}$	$1.846^{+0.164}_{-0.383}$	$0.127^{+0.209}_{-0.043}$
	+2%/-3%	+7%/-3%	+111%/-167%	+17%/-32%	+9%/-21%	+164%/-34%
Source	PHO1	FLK73	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 007090563-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 1	$1.52^{+0.39}_{-0.35}$	5518^{+309}_{-436}	-4819^{+335}_{-304}	$-0.057^{+0.068}_{-0.099}$
Alt.	-7 ± 1	$1.53^{+0.38}_{-0.38}$	5486^{+334}_{-474}	3917^{+876}_{-6995}	$0.430^{+0.321}_{-0.153}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

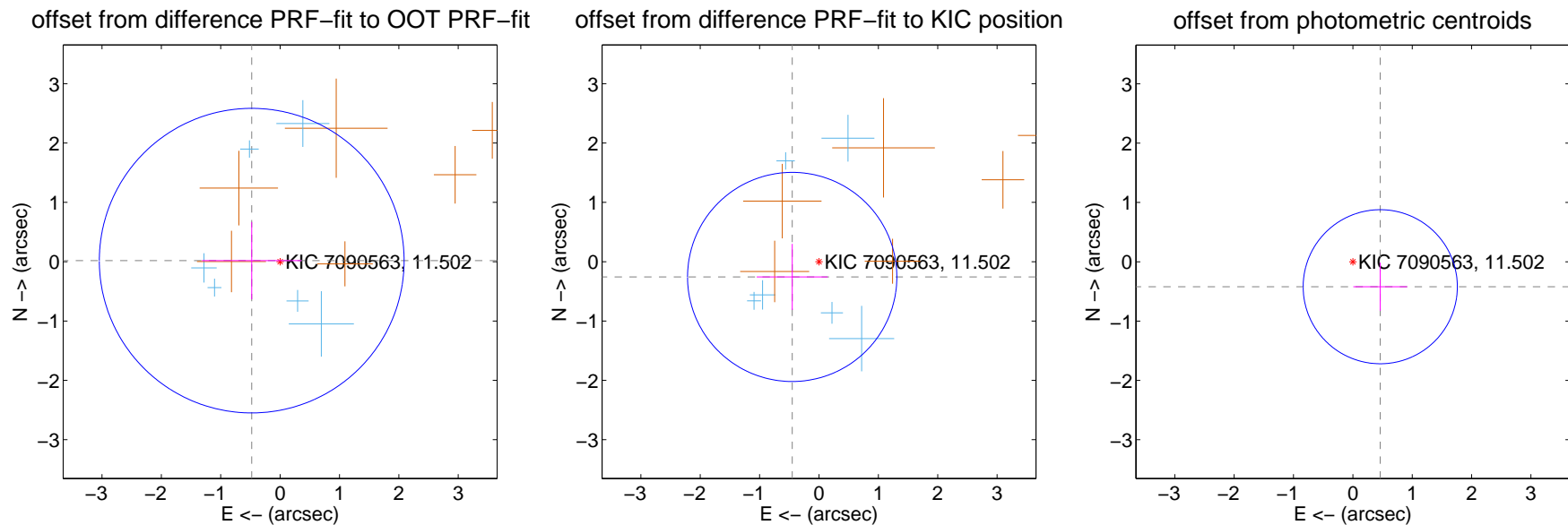
DV Centroid Data

Supplemental centroid analysis for 007090563-01. **Kepler magnitude: 11.50.** Transit SNR 13.09

There are 6 quarters with good PRF difference image offsets

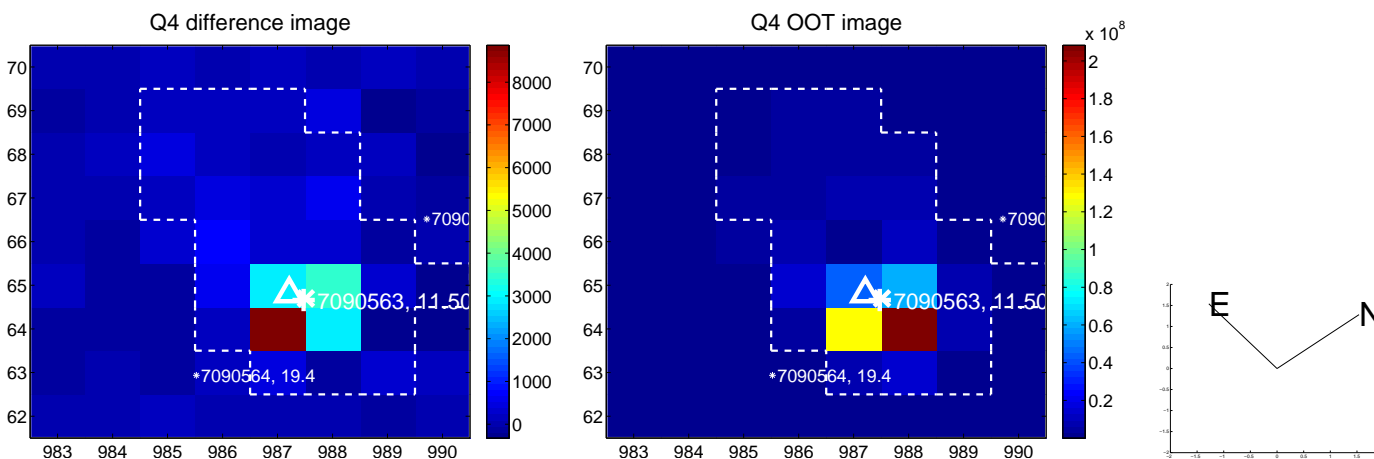
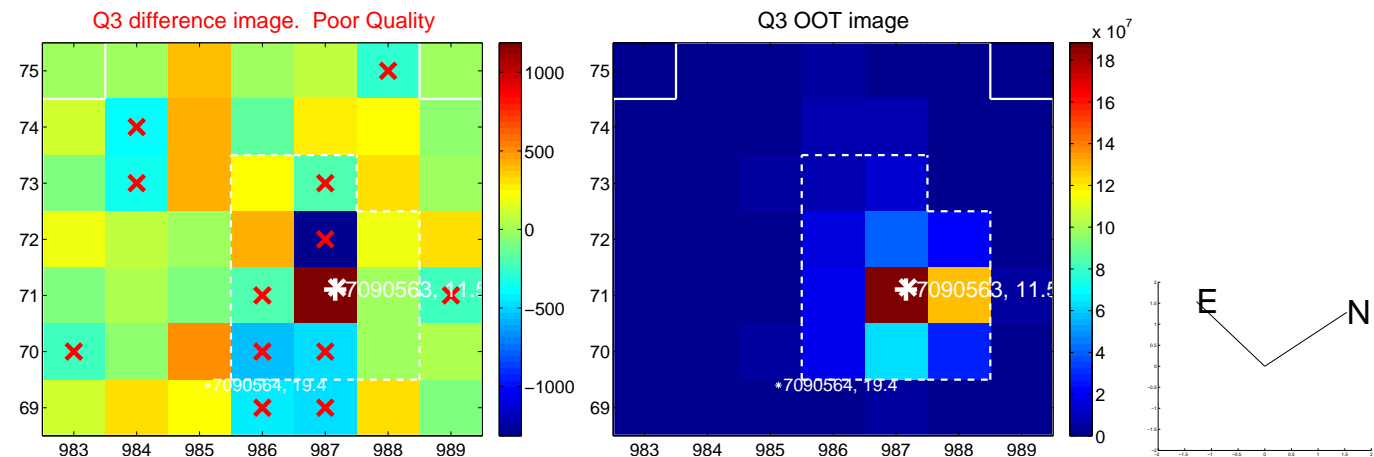
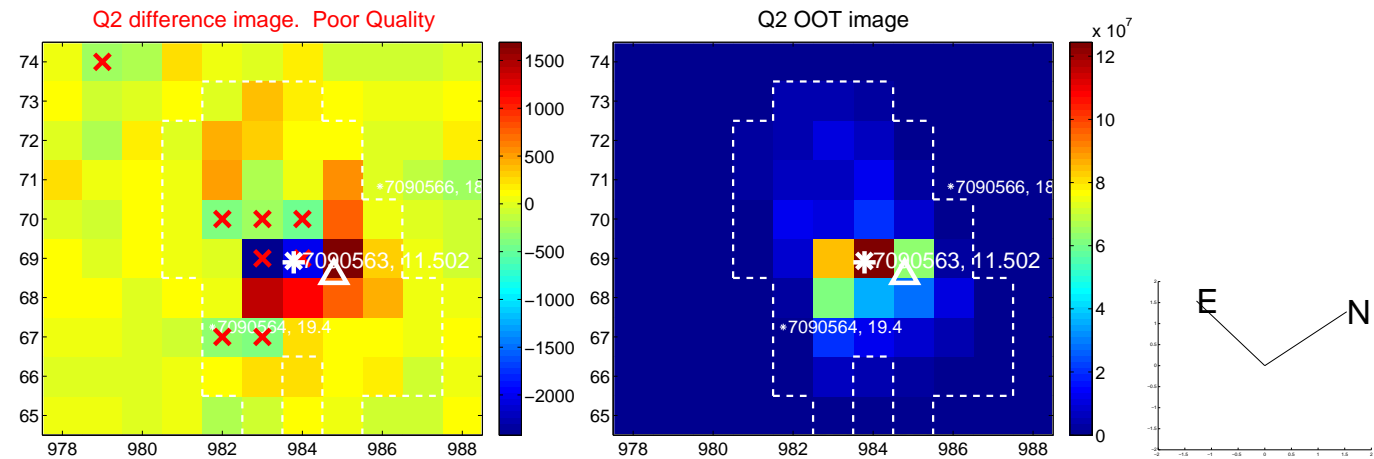
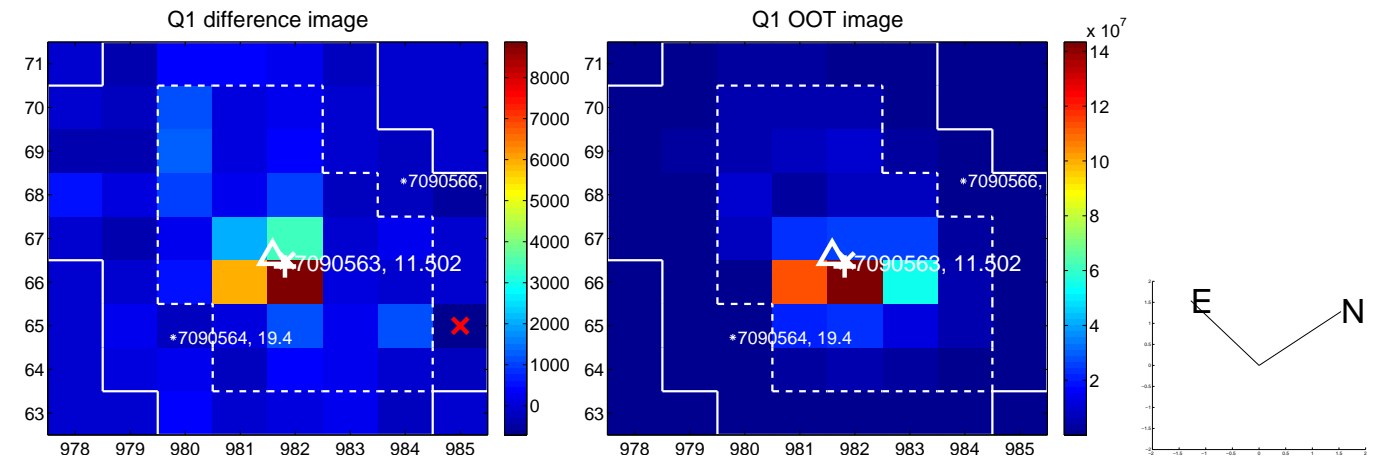
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.479 ± 0.856	0.56	0.478 ± 0.839	0.018 ± 0.651
PRF-fit source offset from KIC position	0.519 ± 0.588	0.88	0.451 ± 0.597	-0.257 ± 0.557
photometric centroid source offset	0.62 ± 0.43	1.44	-0.46 ± 0.45	-0.42 ± 0.41

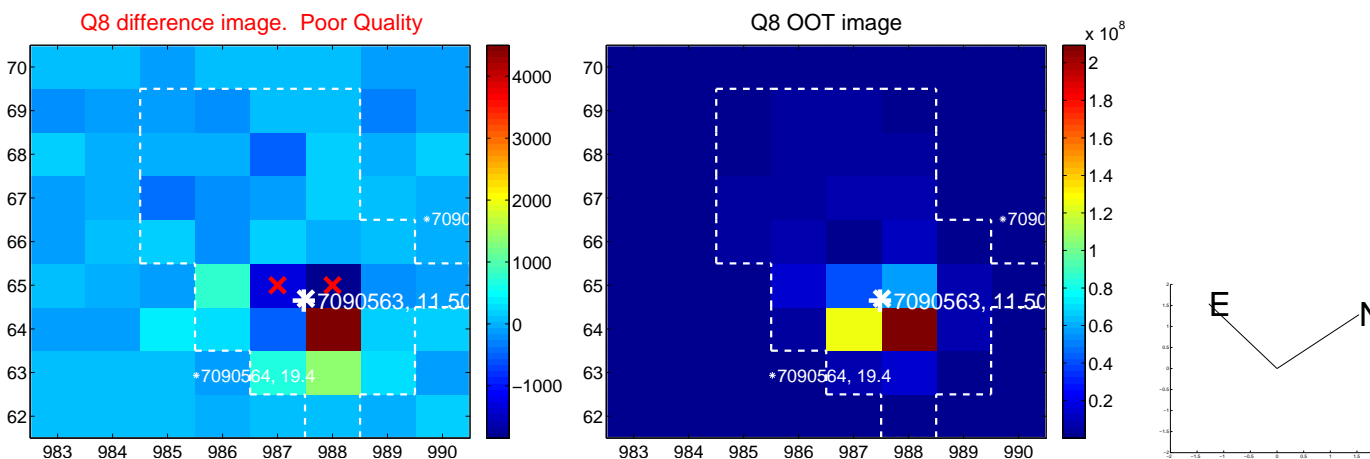
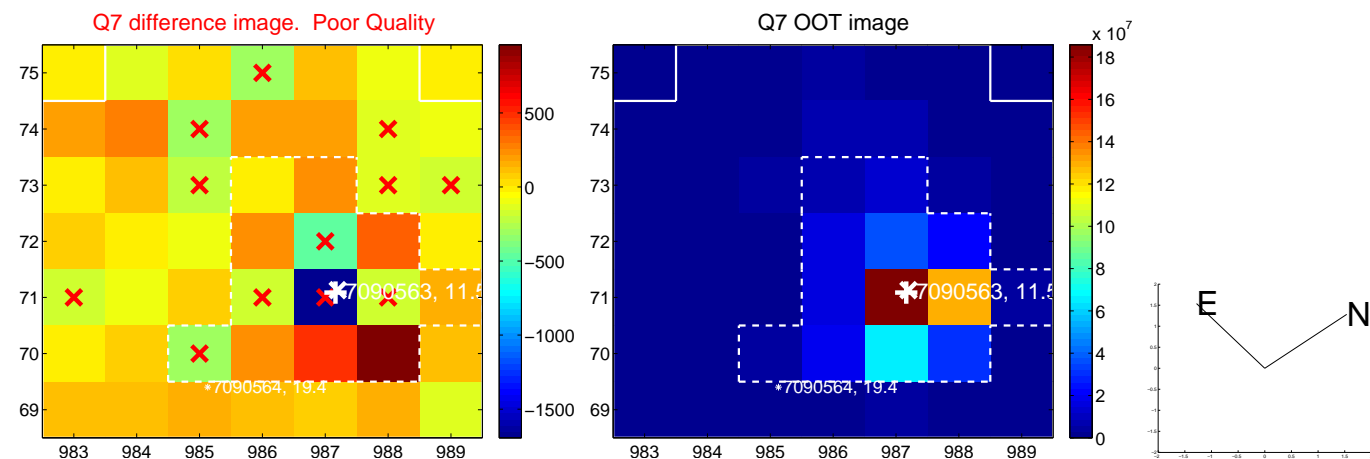
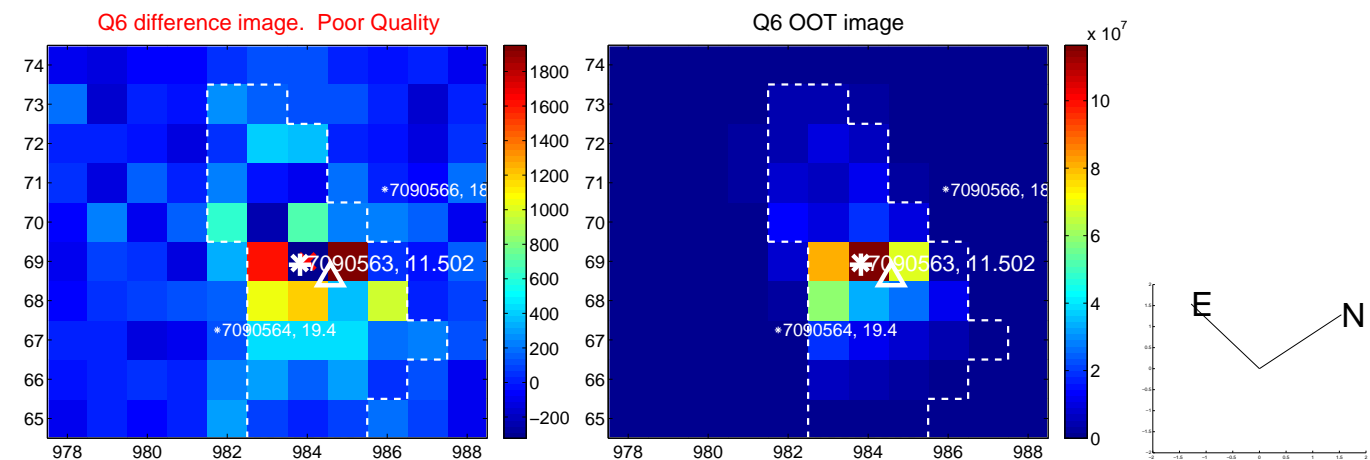
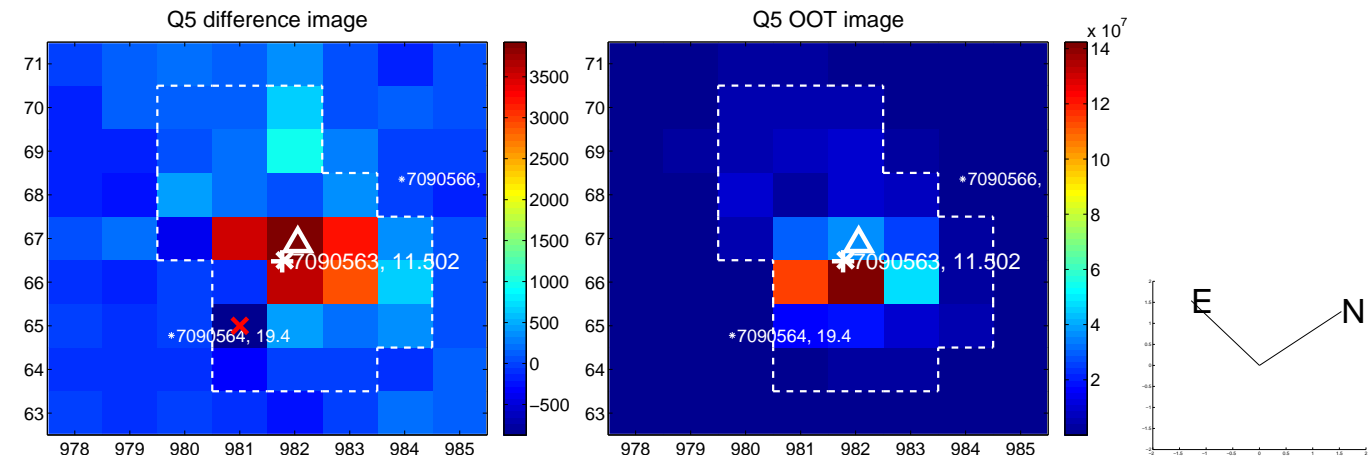


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

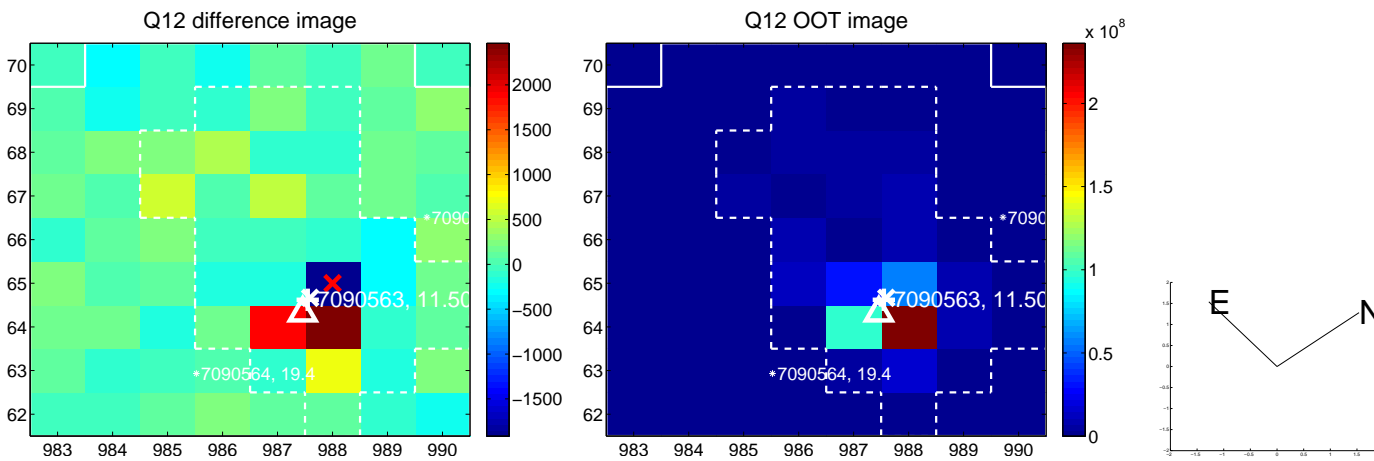
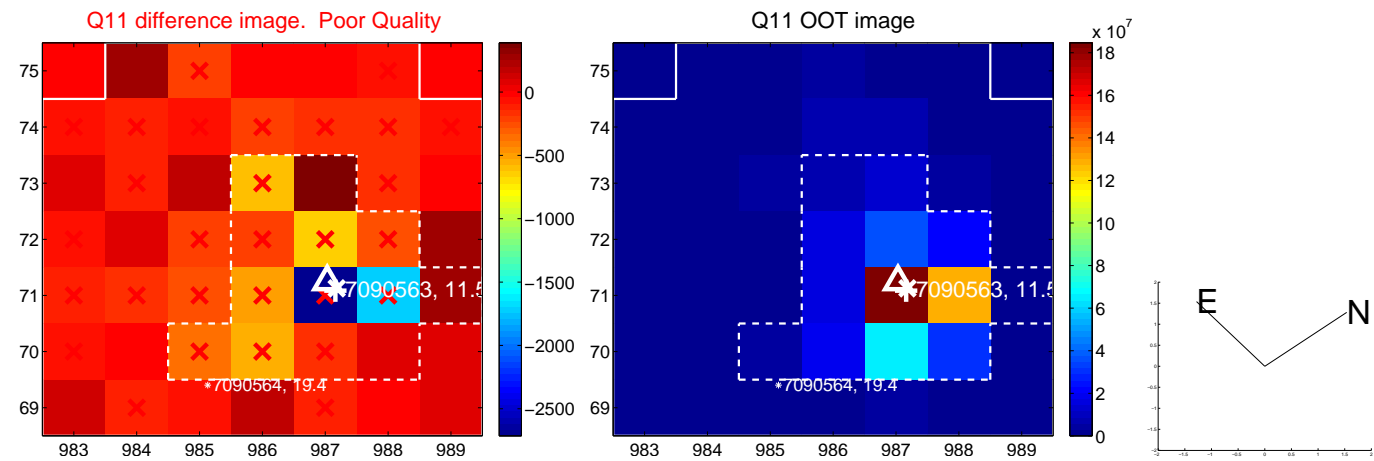
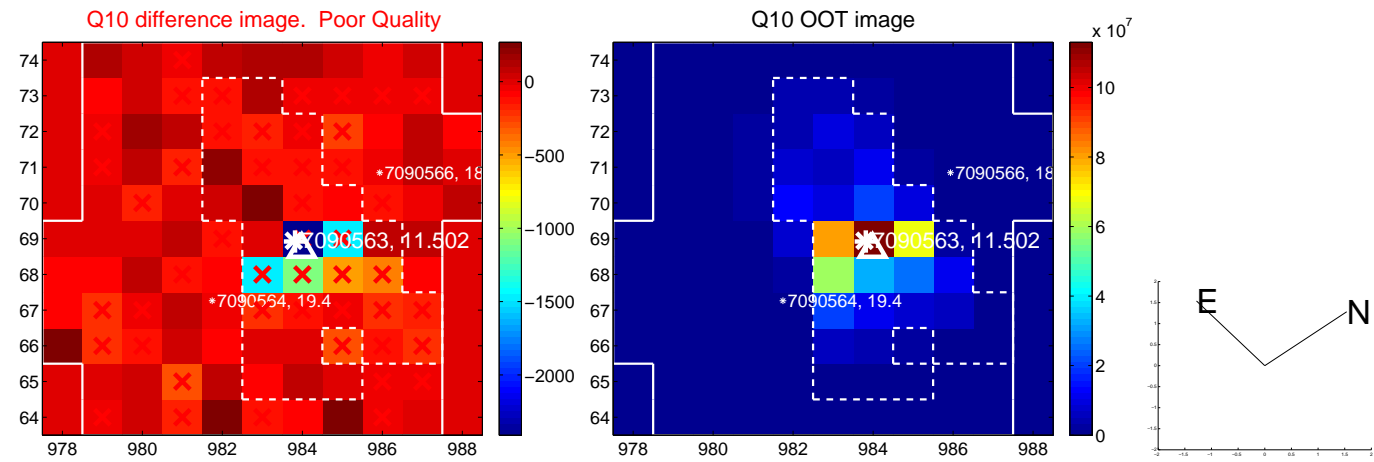
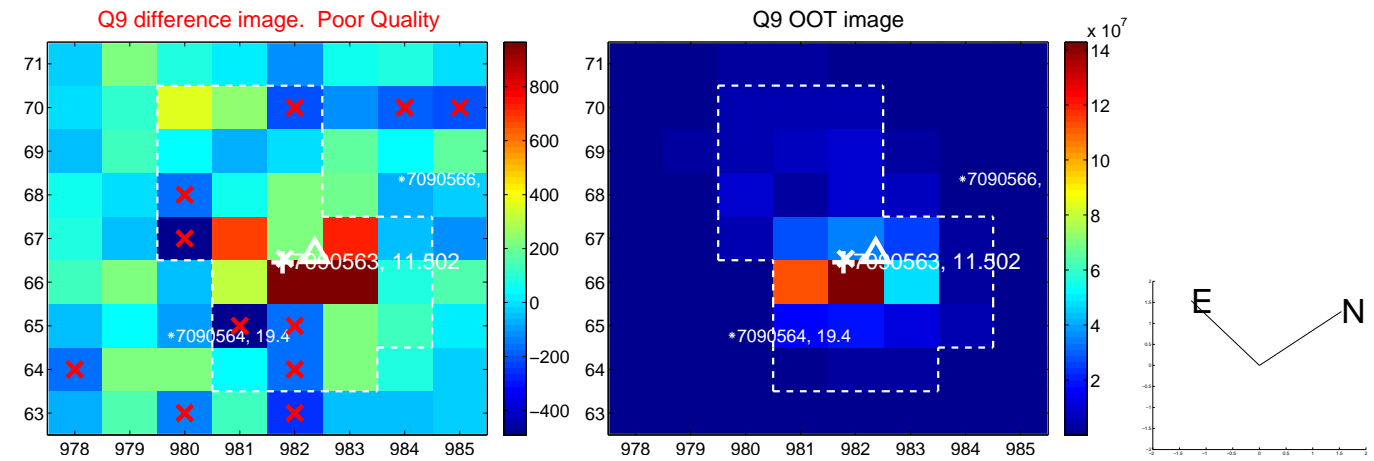
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



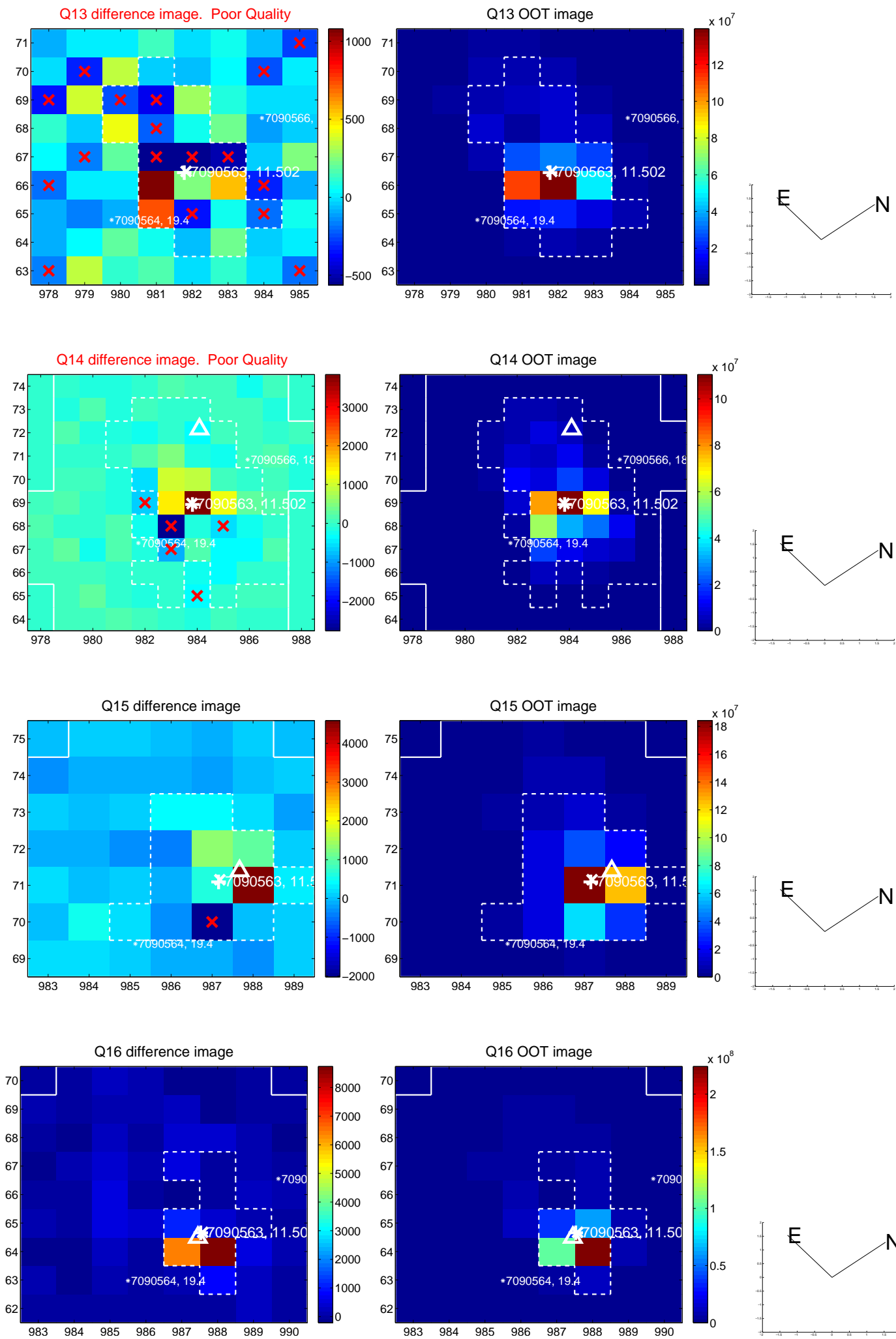
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



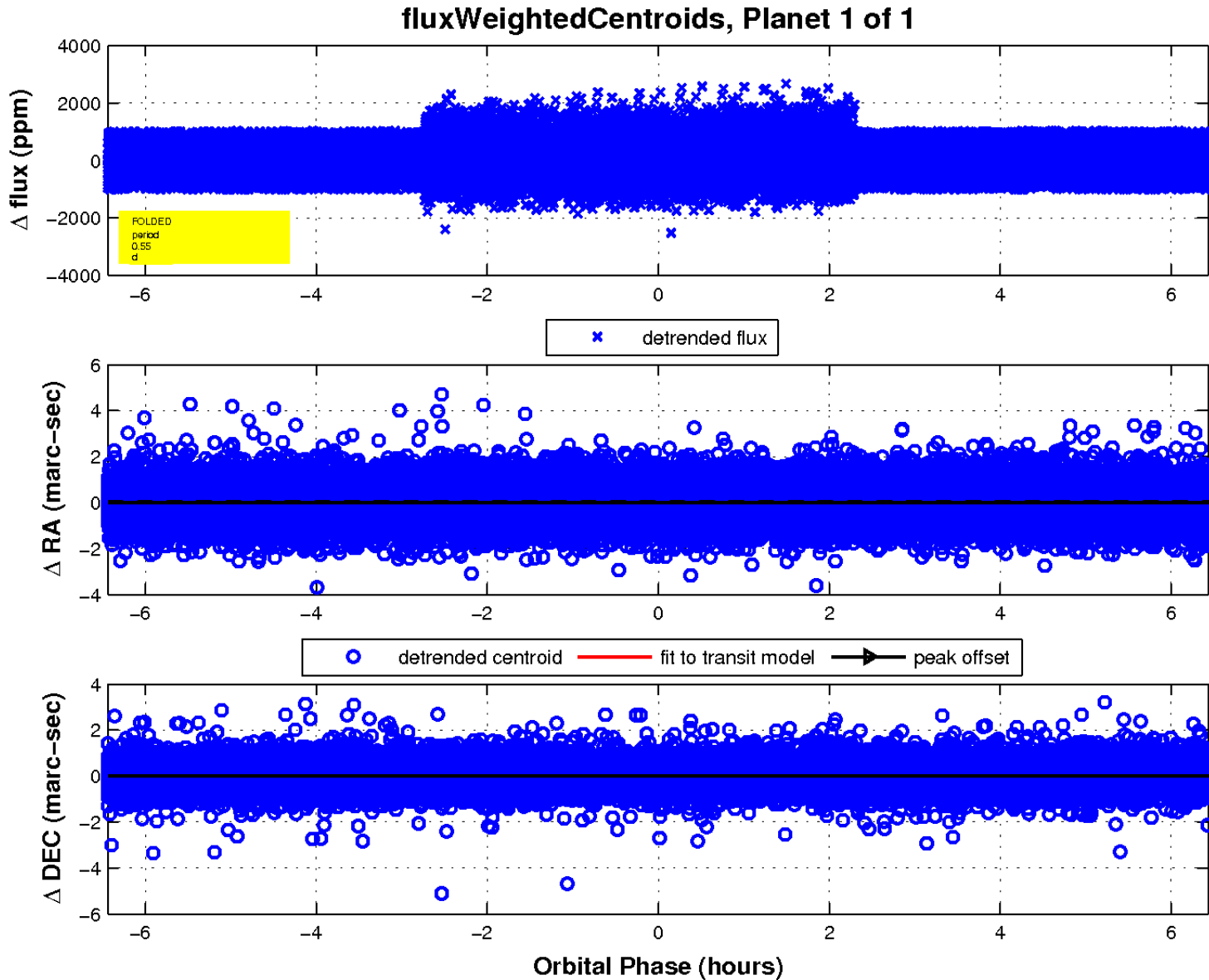
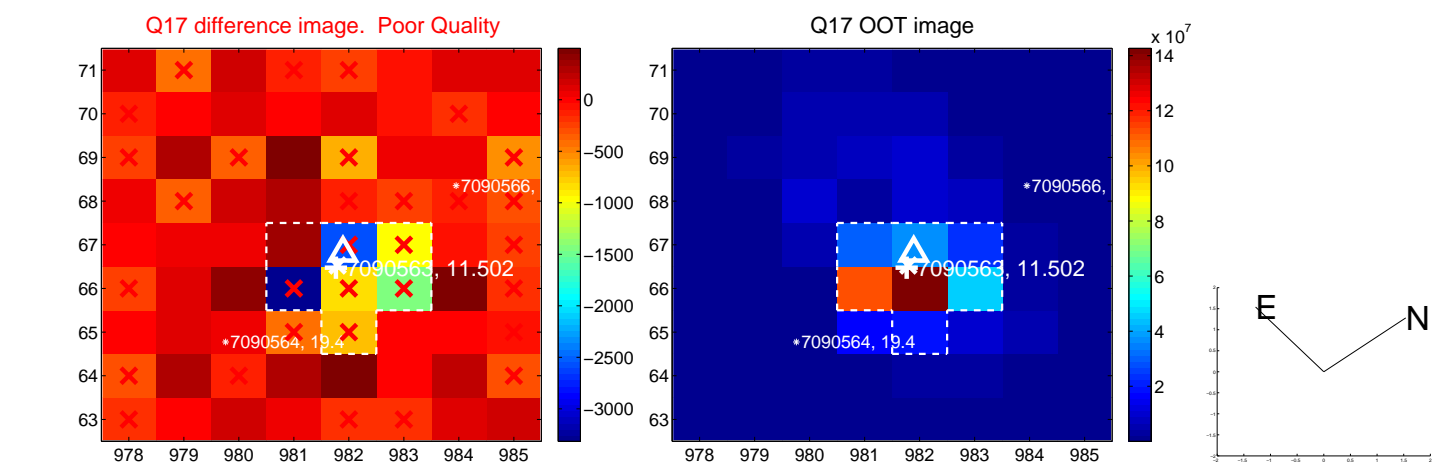
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

