

KIC 007703910

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})
007703910-01	OBS	4379.01	2.550978	132.457307	123.8	2.933	11.1	12.7	1.01	5921	1.76	858.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007703910-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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.

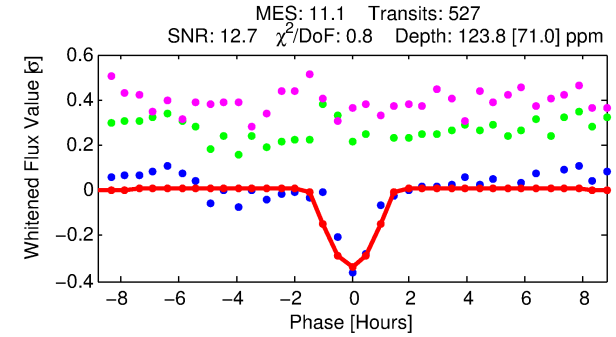
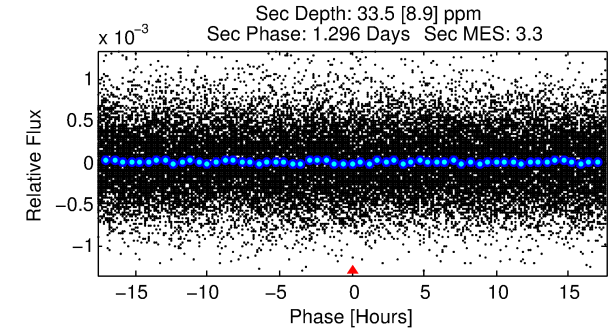
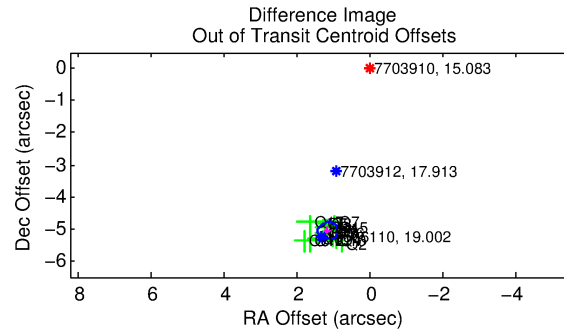
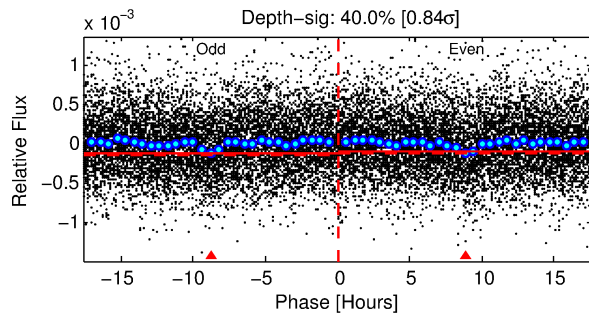
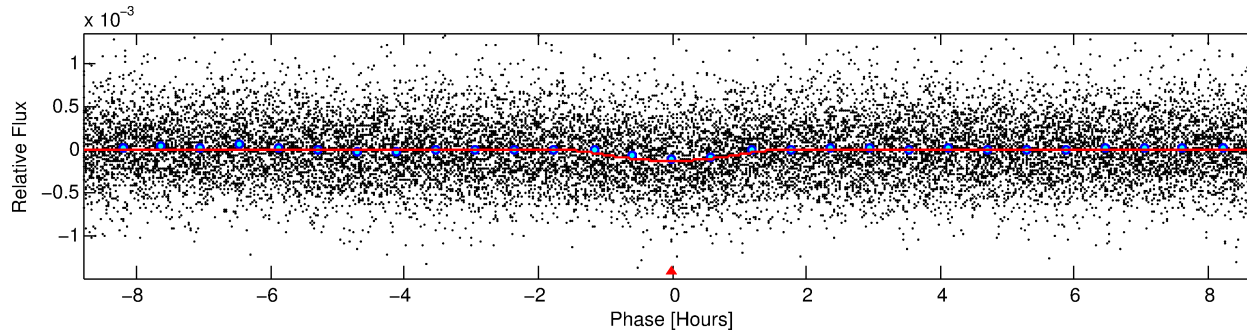
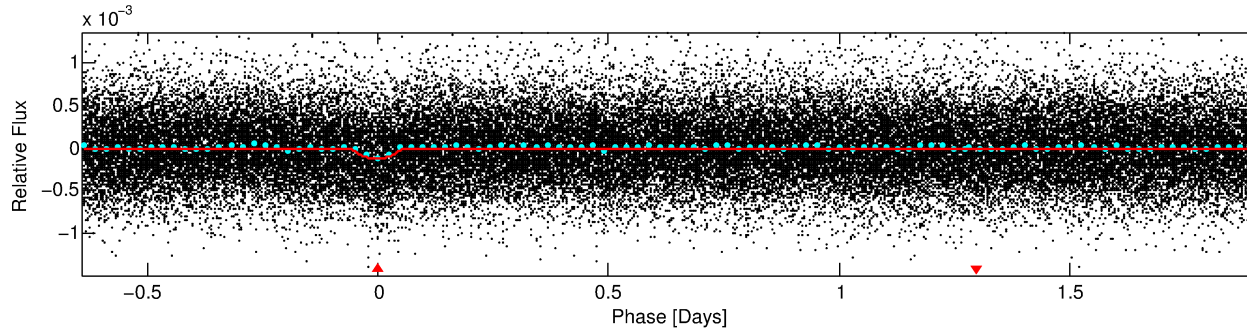
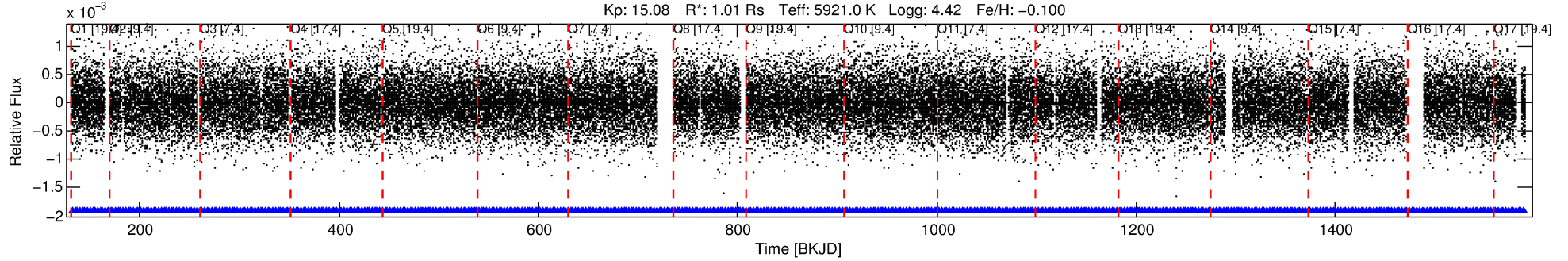
Ephemeris Match Information For 007703910-01

No Significant Match Found

DV One-Page Summary

KIC: 7703910 Candidate: 1 of 1 Period: 2.551 d
KOI: K04379 Corr: No Ephemeris Match

Kp: 15.08 R*: 1.01 Rs Teff: 5921.0 K Logg: 4.42 Fe/H: -0.100



DV Fit Results:

Period = 2.55098 [0.00002] d
Epoch = 132.4573 [0.0042] BKJD
Rp/R* = 0.0159 [0.0141]
a/R* = 1.80 [0.57]
b = 0.99 [0.03]
Seff = 858.70 [337.24]
Teq = 1380 [136] K
Rp = 1.76 [1.65] Re
a = 0.0363 [0.0092] AU
Ag = 7.83 [14.37] [0.48σ]
Teffp = 3570 [1608] K [1.36σ]

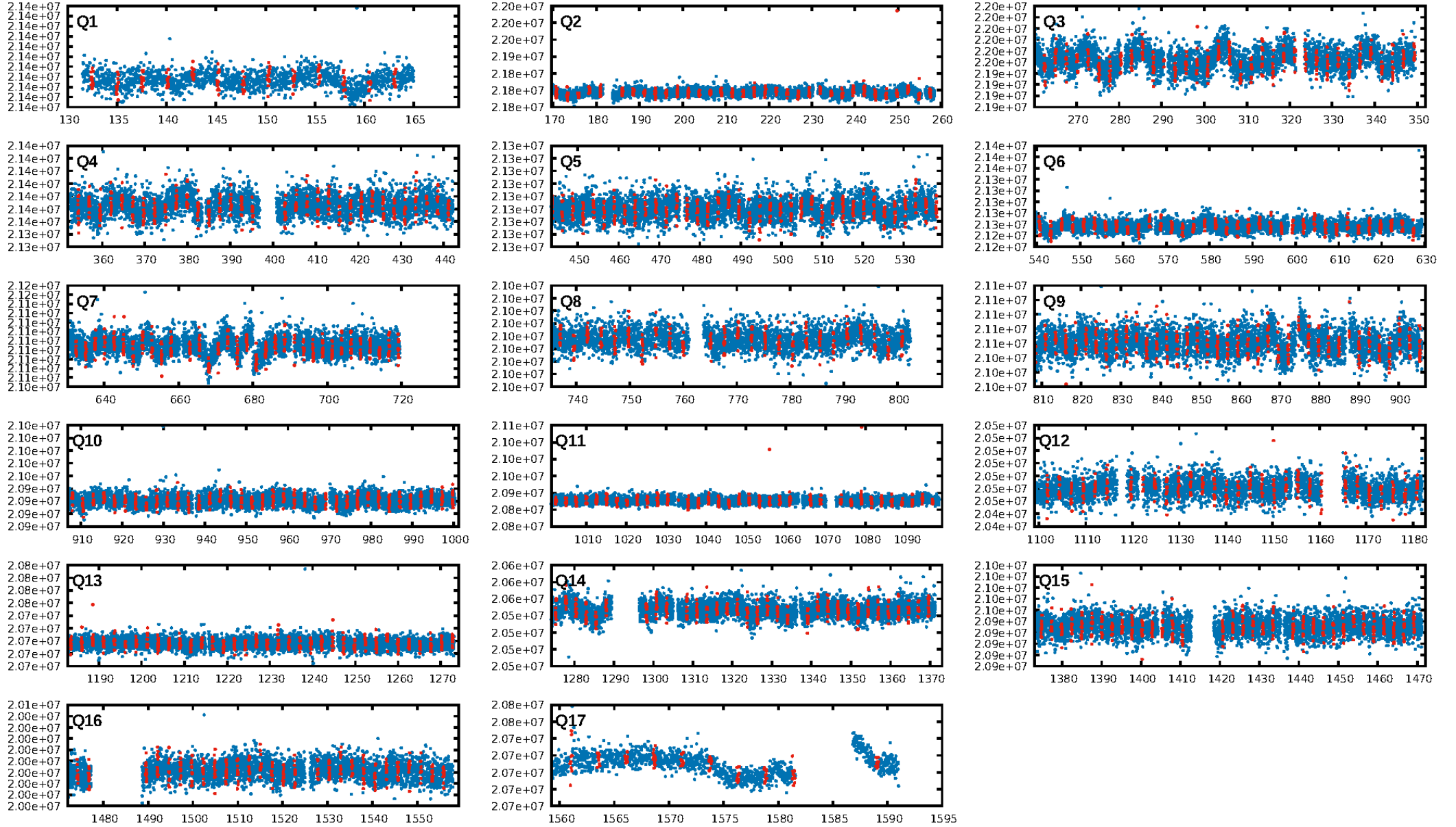
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.73e-28
RollingBand-fgt: 1.00 [504/504]
GhostDiagnostic-chr: 0.0618
Centroid-sig: 0.0%
Centroid-so: 16.310 arcsec [15.11σ]
OotOffset-rm: 5.190 arcsec [58.71σ]
KicOffset-rm: 5.388 arcsec [63.12σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

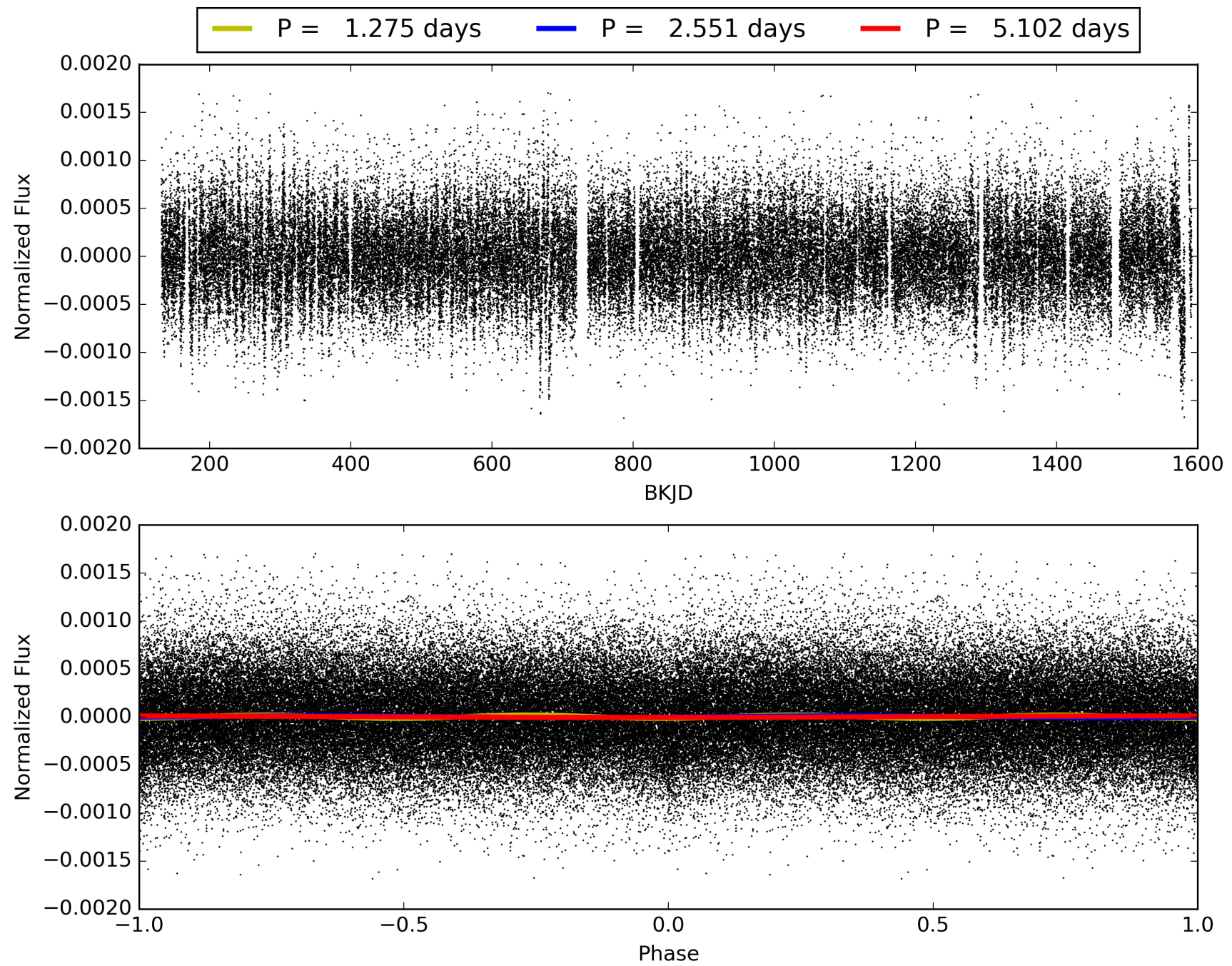
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:13:39 Z

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

TCE 007703910-01, PDC Light Curves

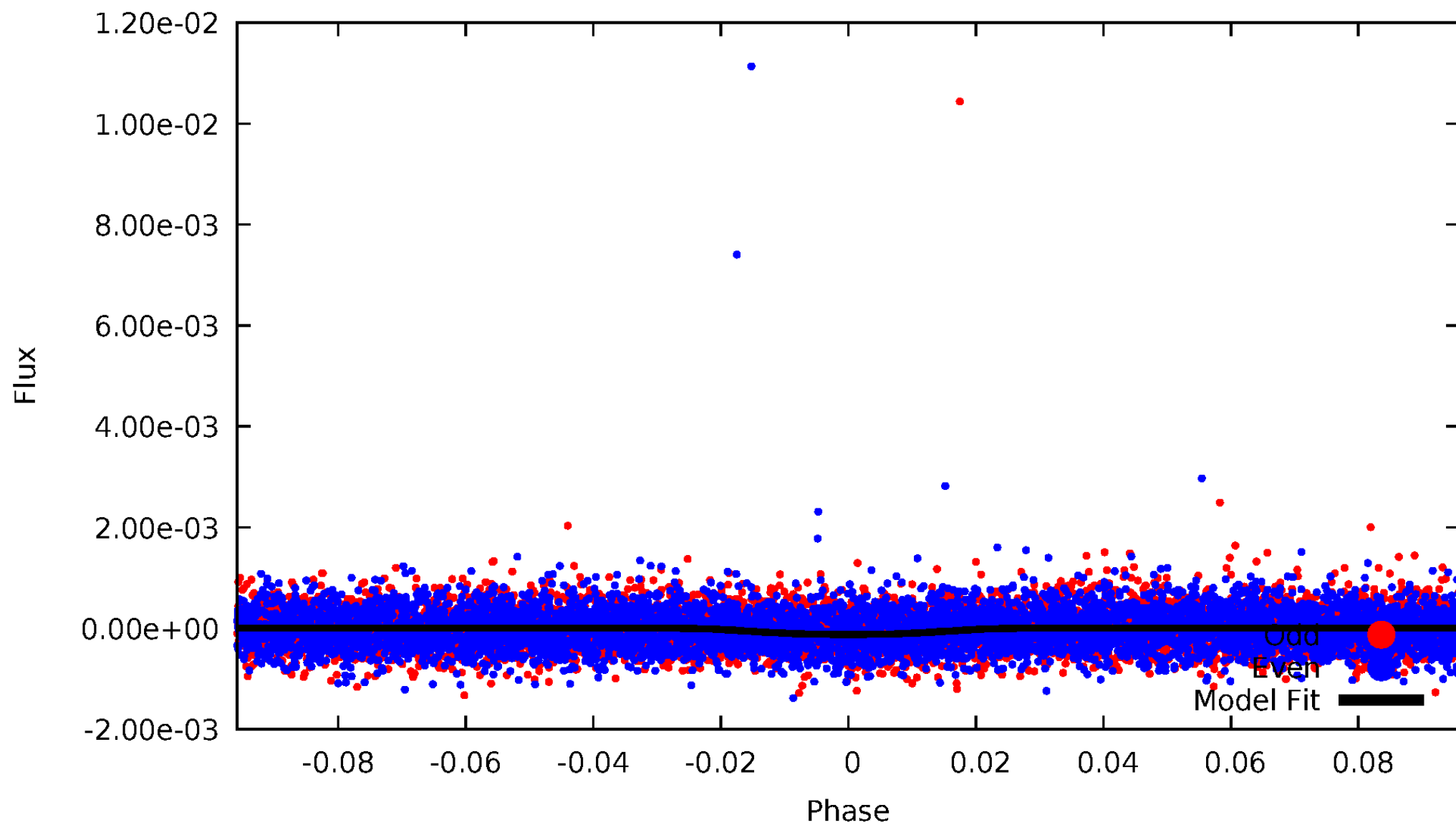


TCE 007703910-01



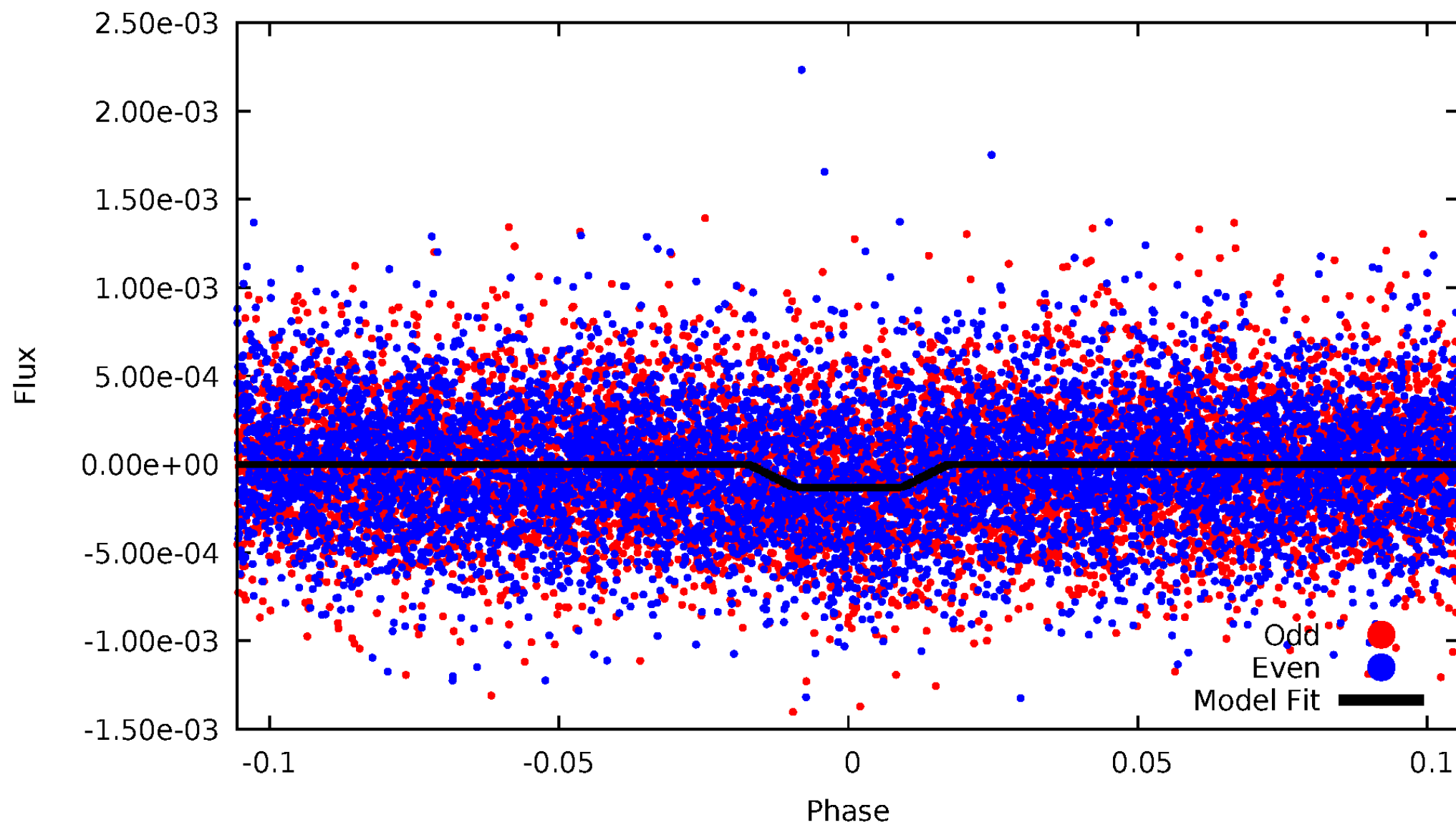
DV Odd/Even

TCE 007703910-01



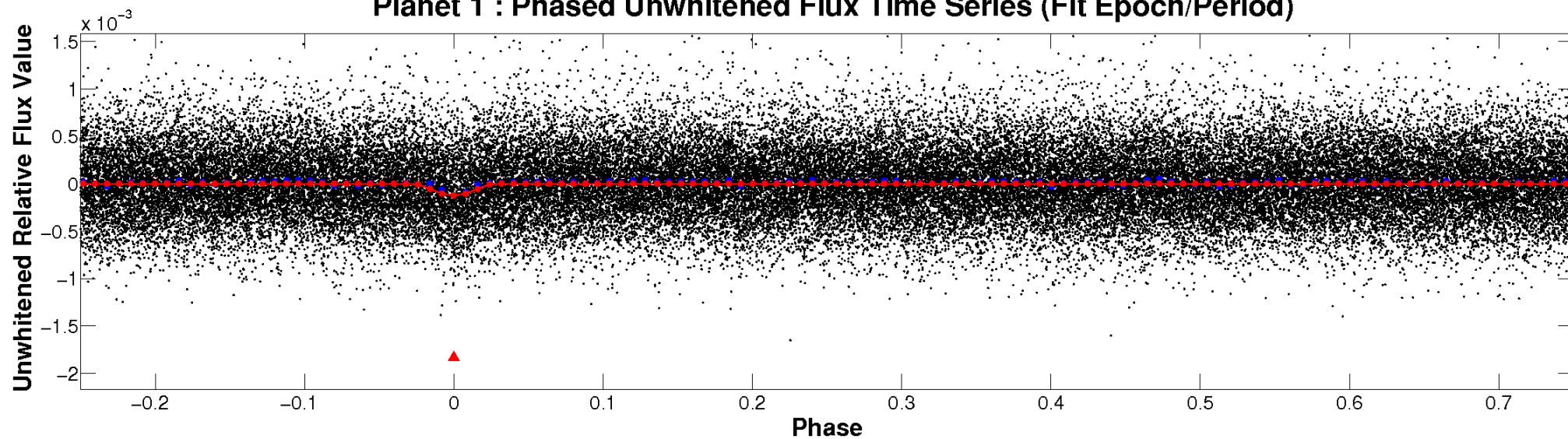
ALT Odd/Even

TCE 007703910-01

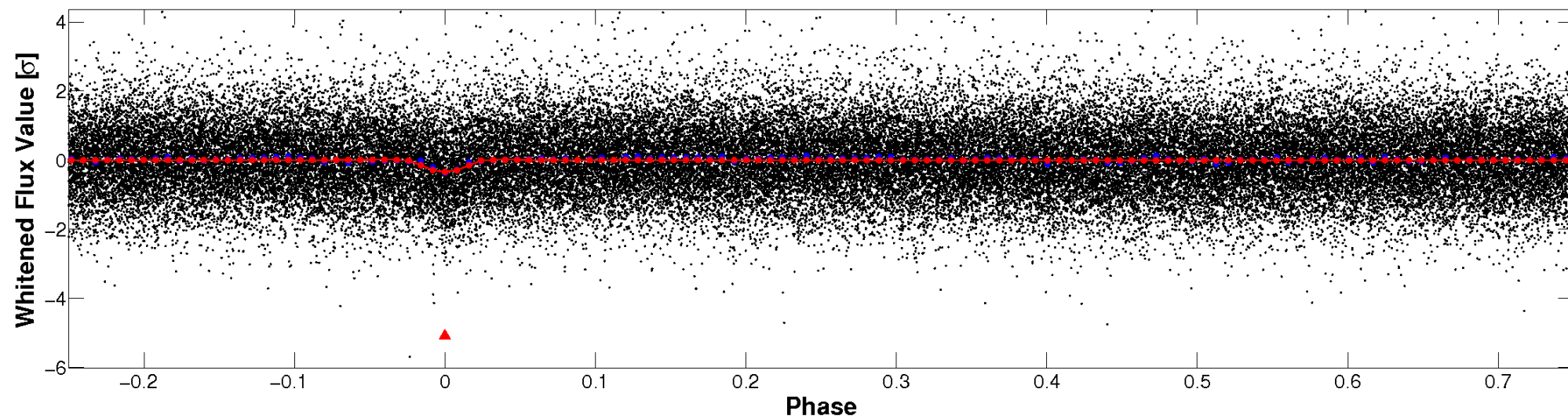


Non-Whitened Vs. Whitened Light Curve

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

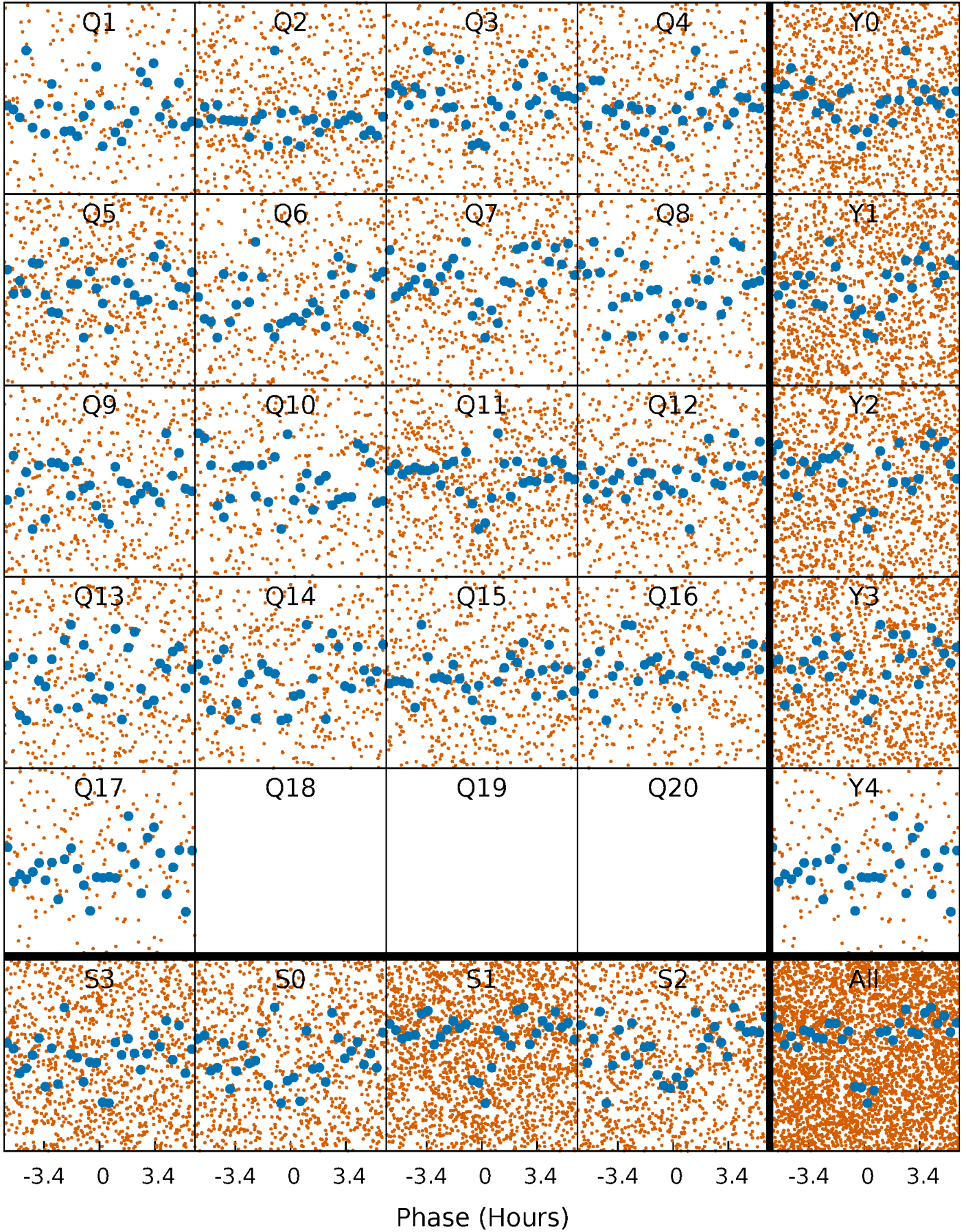


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



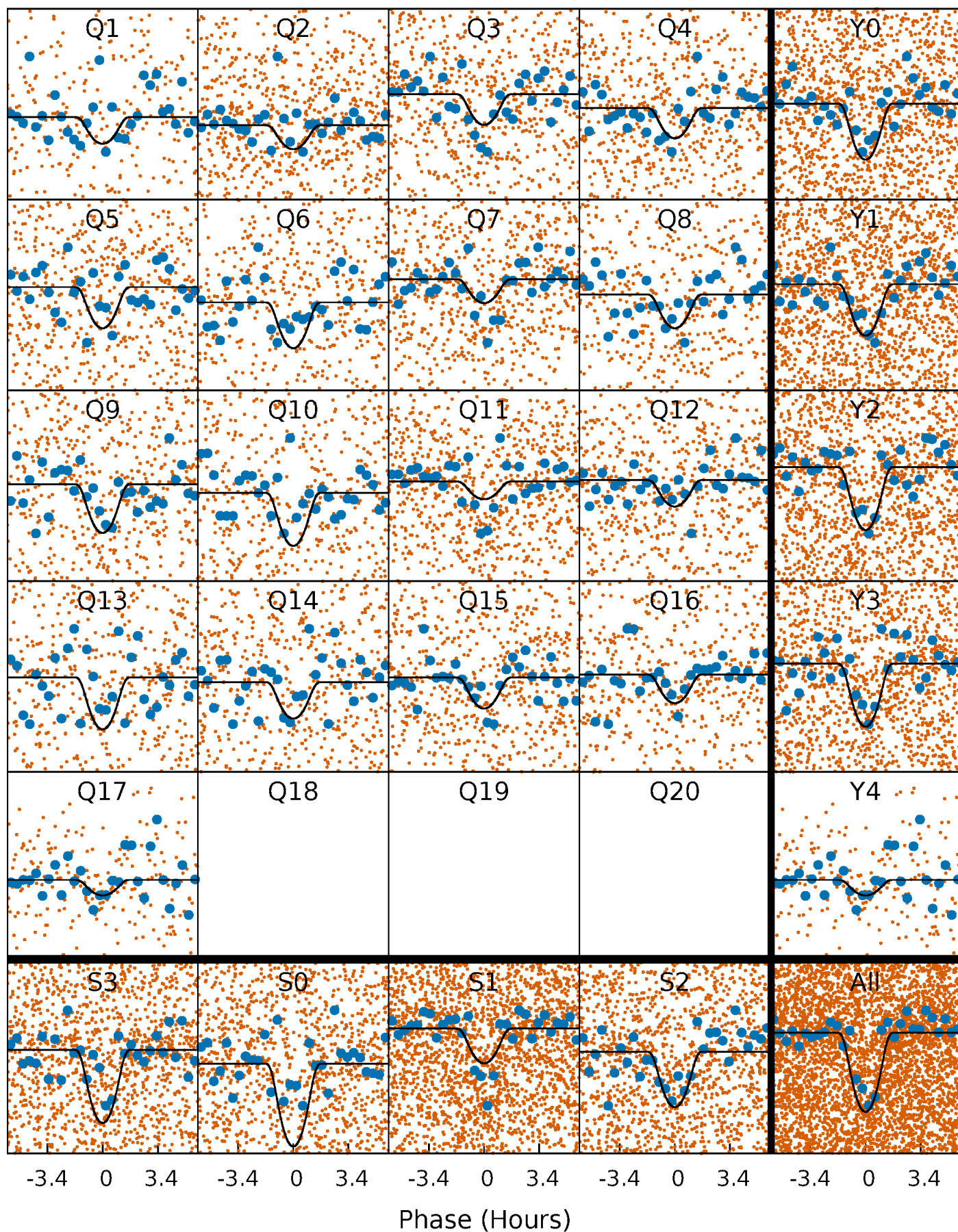
PDC Quarter-Phased Transit Curves

TCE 007703910-01 P= 2.550978 Days $T_0=132.457307$ (BKJD)



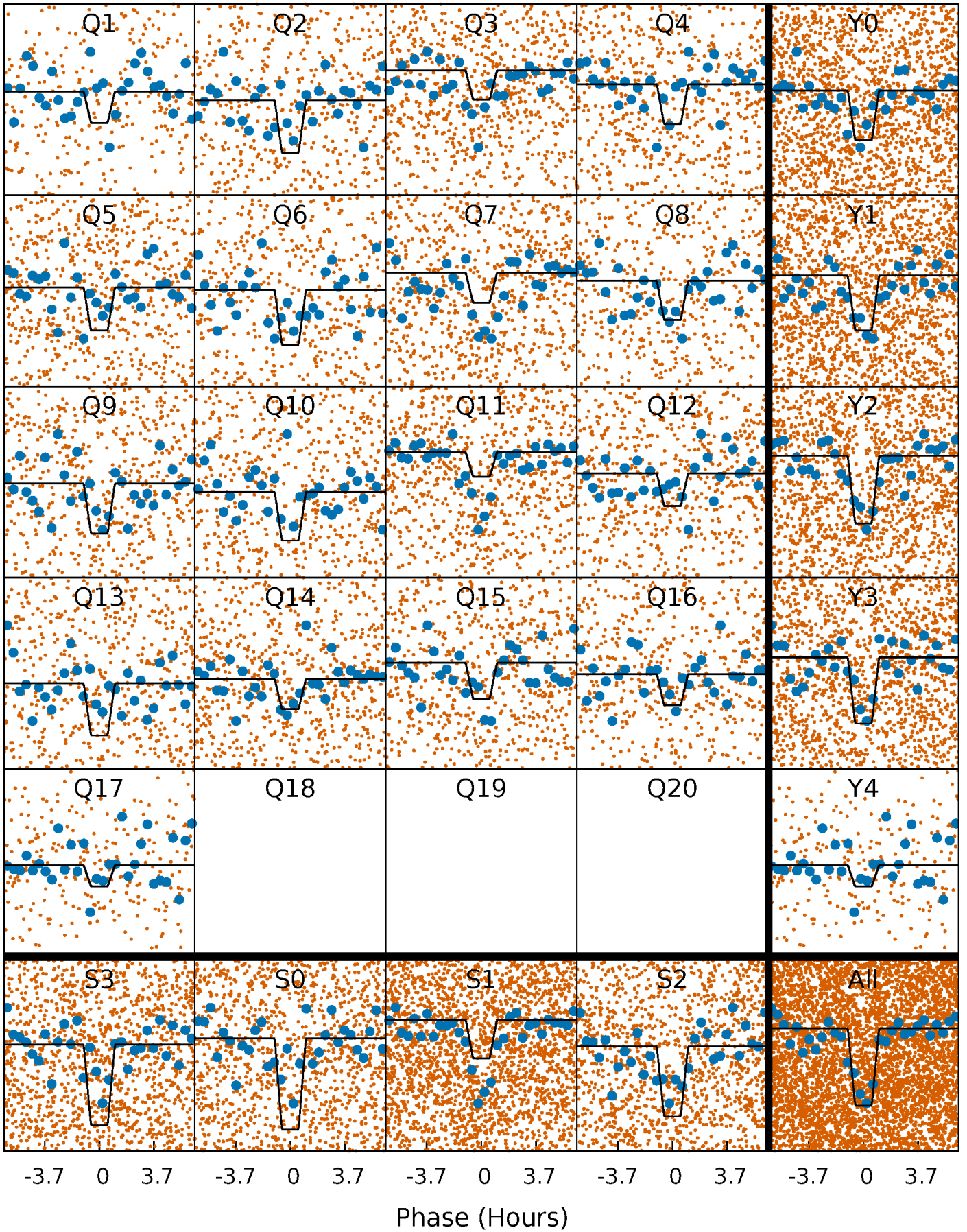
DV Quarter-Phased Transit Curves

TCE 007703910-01 P= 2.550978 Days $T_0=132.457307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

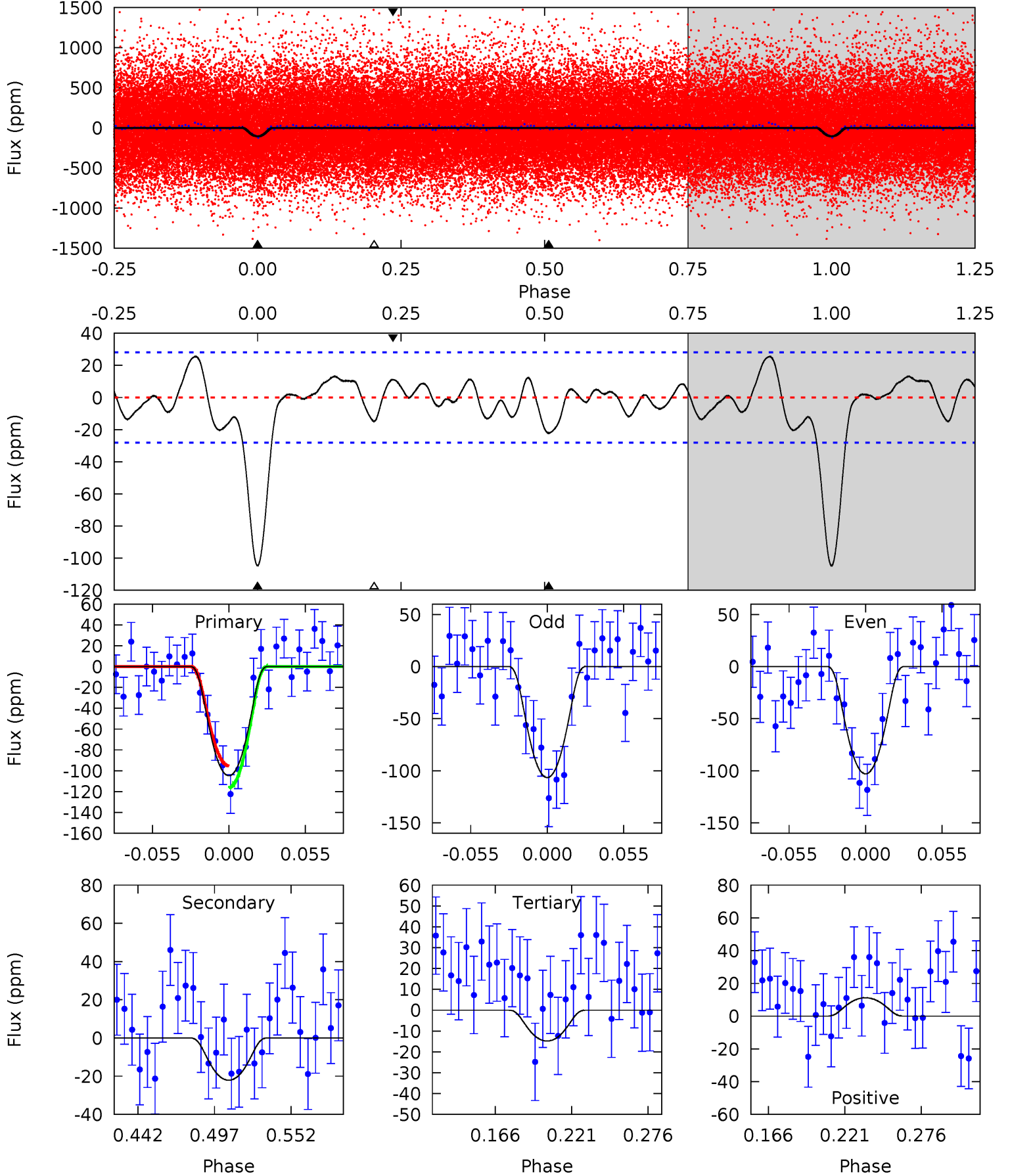
TCE 007703910-01 P= 2.550955 Days $T_0=132.466931$ (BKJD)



DV Model-Shift Uniqueness Test

007703910-01, P = 2.550978 Days, E = 129.906329 Days

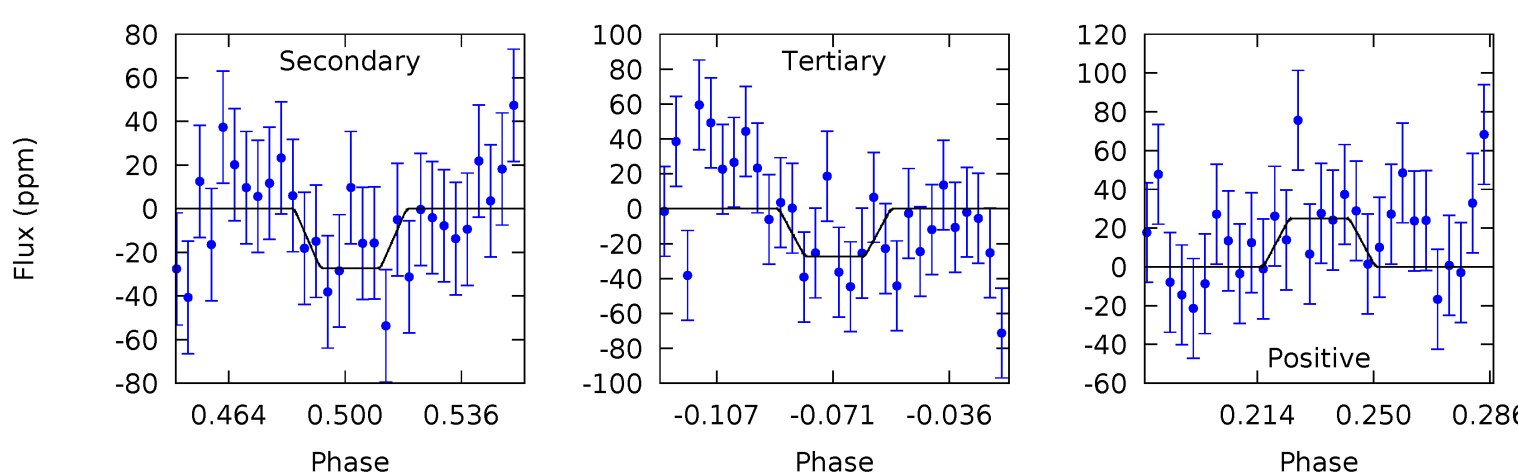
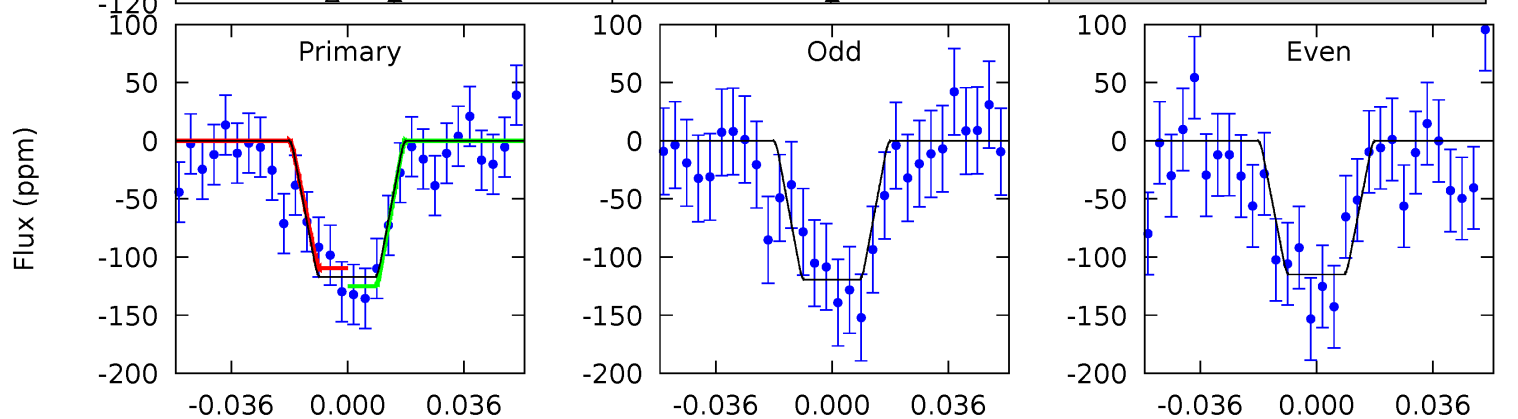
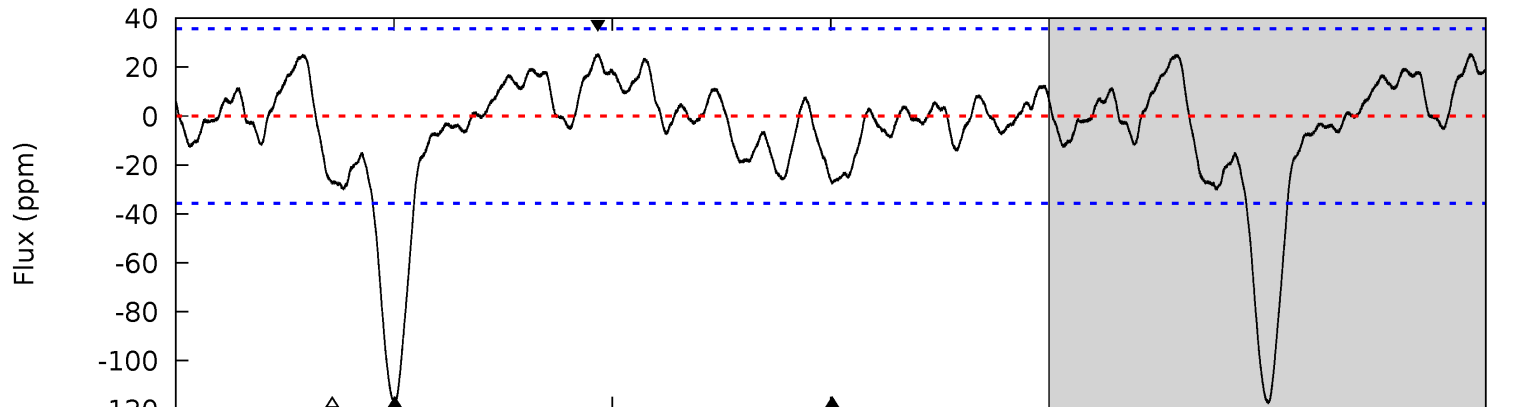
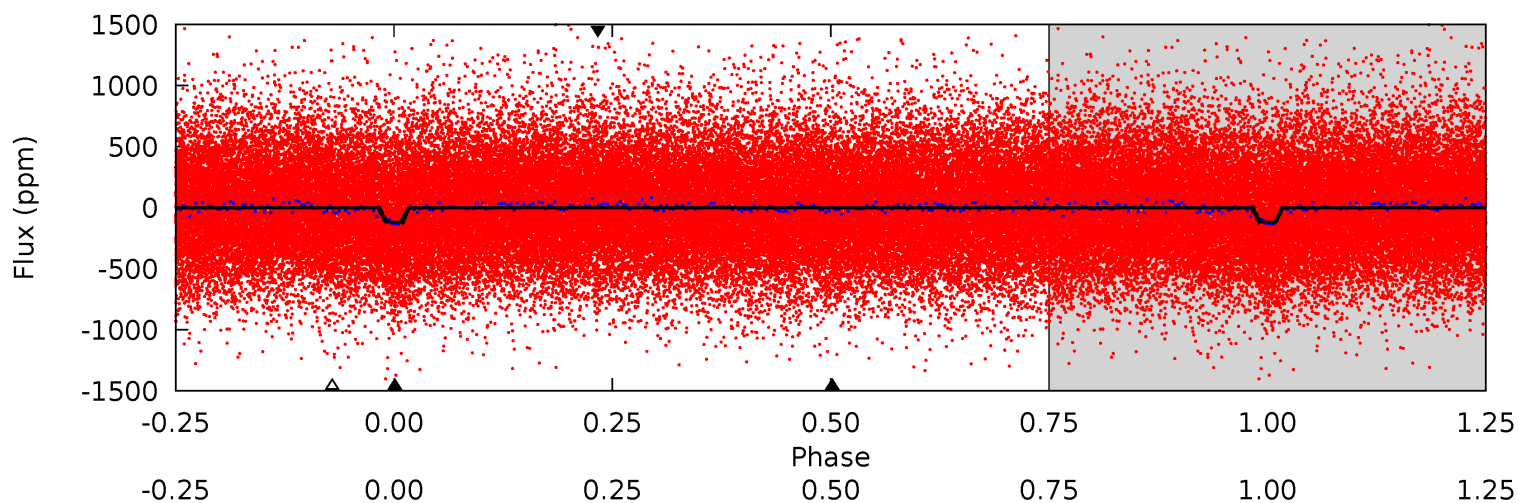
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	3.69	2.47	1.87	4.69	1.92	1.46	15.0	15.6	1.22	1.82	0.29	0.95	0.20	1.74



Alt Model-Shift Uniqueness Test

007703910-01, P = 2.550955 Days, E = 129.915976 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.65	3.66	3.35	4.78	2.10	1.58	12.0	12.4	-0.00	0.31	0.30	1.00	0.18	1.06



Stellar Parameters For KIC 007703910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5921^{+158}_{-193}	$4.418^{+0.101}_{-0.203}$	$-0.100^{+0.250}_{-0.300}$	$1.015^{+0.305}_{-0.153}$	$0.984^{+0.140}_{-0.117}$	$1.324^{+0.519}_{-0.683}$
	+3%/-3%	+2%/-5%	+250%/-300%	+30%/-15%	+14%/-12%	+39%/-52%
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 007703910-01 / KOI 4379.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 6	$2.02^{+1.60}_{-1.21}$	1954^{+145}_{-105}	3455^{+1402}_{-648}	$3.833^{+20.936}_{-2.730}$
Alt.	-27 ± 7	$1.84^{+1.49}_{-1.14}$	1947^{+148}_{-103}	3697^{+1830}_{-679}	$5.418^{+35.799}_{-3.793}$

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 $A_{obs} \gg 1.0$

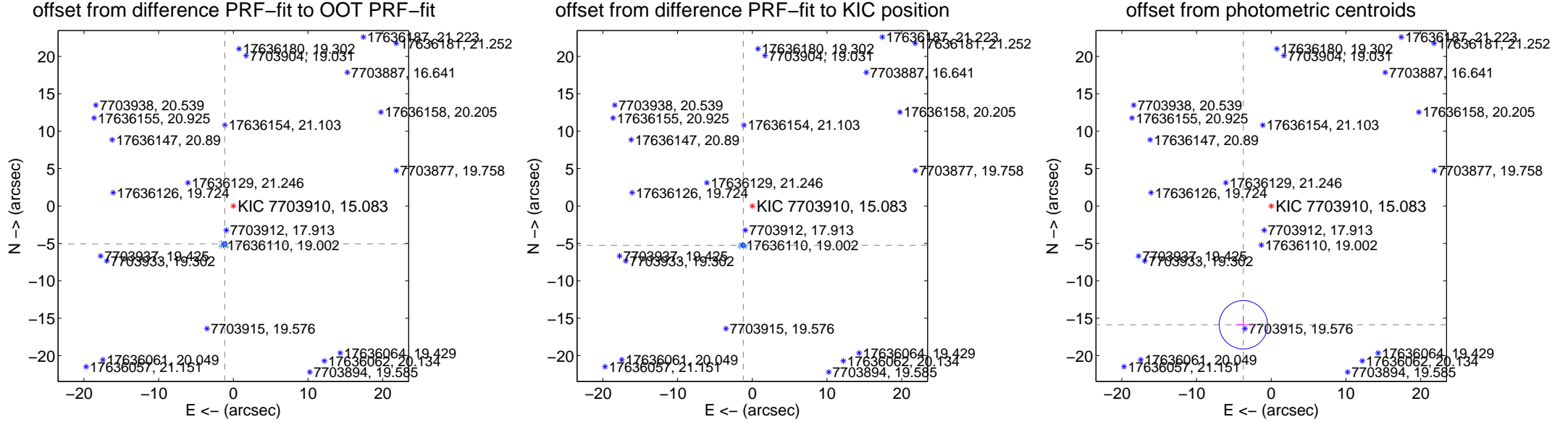
DV Centroid Data

Supplemental centroid analysis for 007703910-01. Kepler magnitude: 15.08. Transit SNR 12.66

There are 16 quarters with good PRF difference image offsets

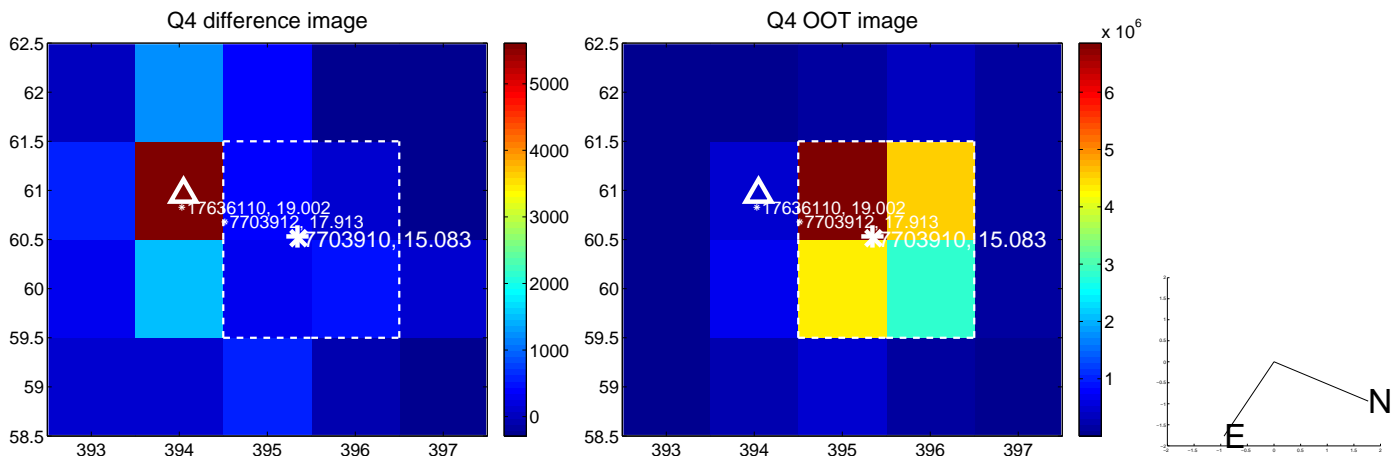
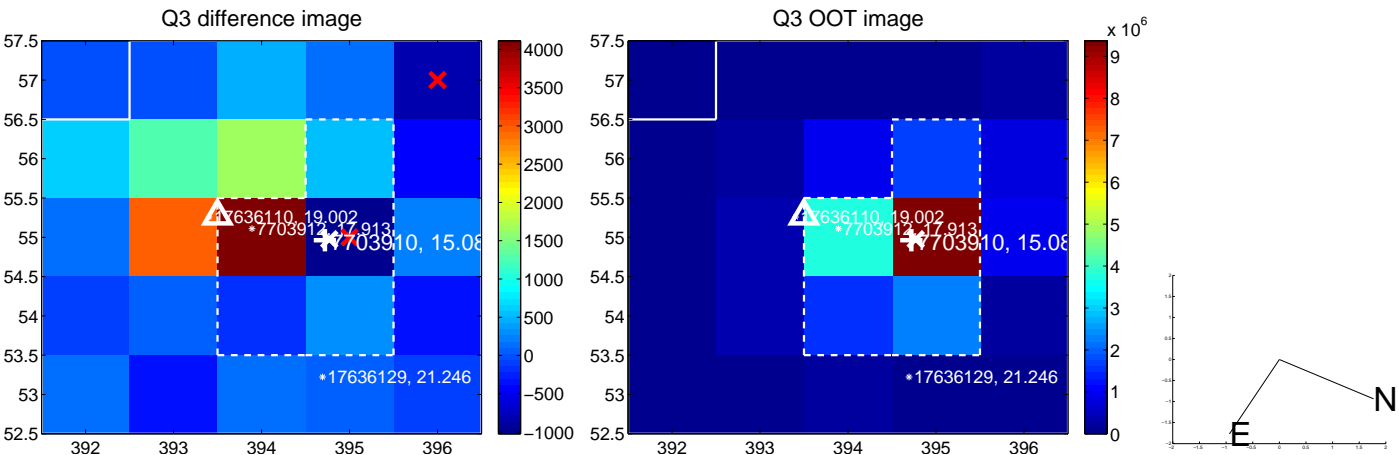
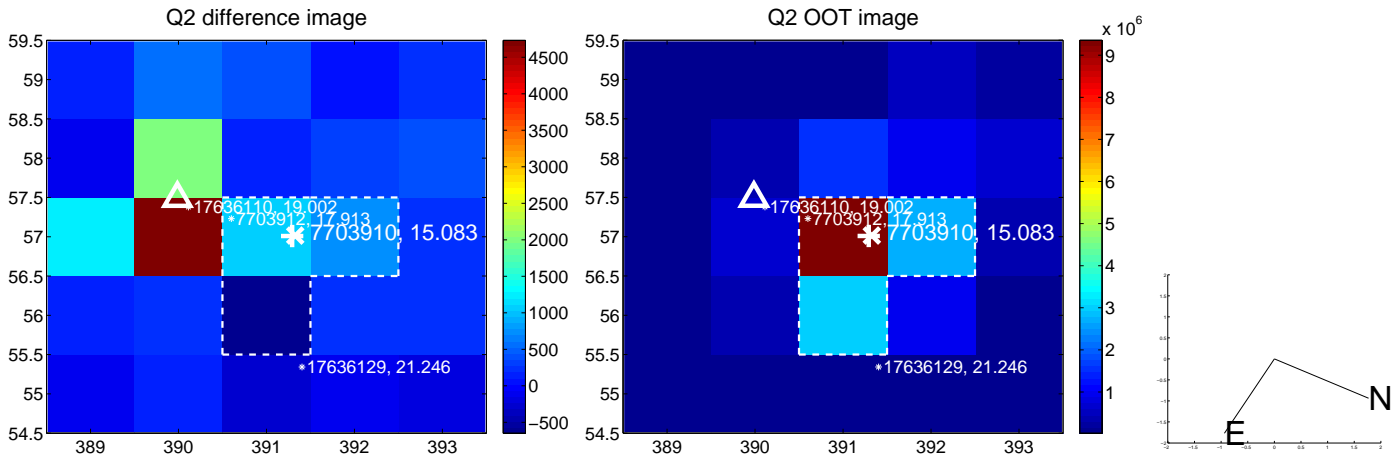
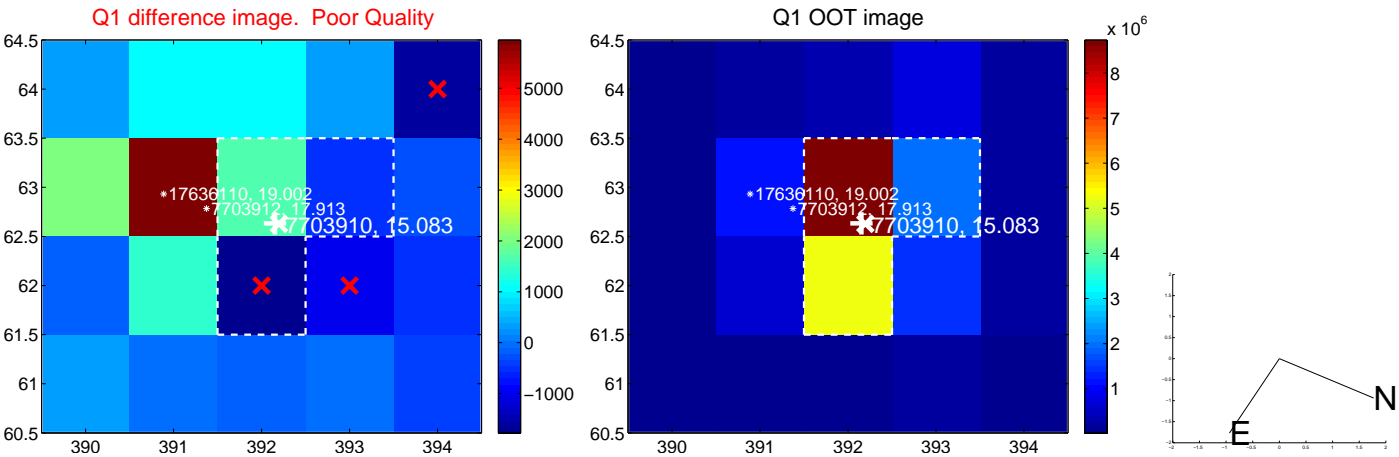
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.190 \pm 0.088	58.71	1.148 \pm 0.094	-5.061 \pm 0.088
PRF-fit source offset from KIC position	5.388 \pm 0.085	63.12	1.207 \pm 0.086	-5.251 \pm 0.085
photometric centroid source offset	16.31 \pm 1.08	15.11	3.73 \pm 1.06	-15.88 \pm 1.08

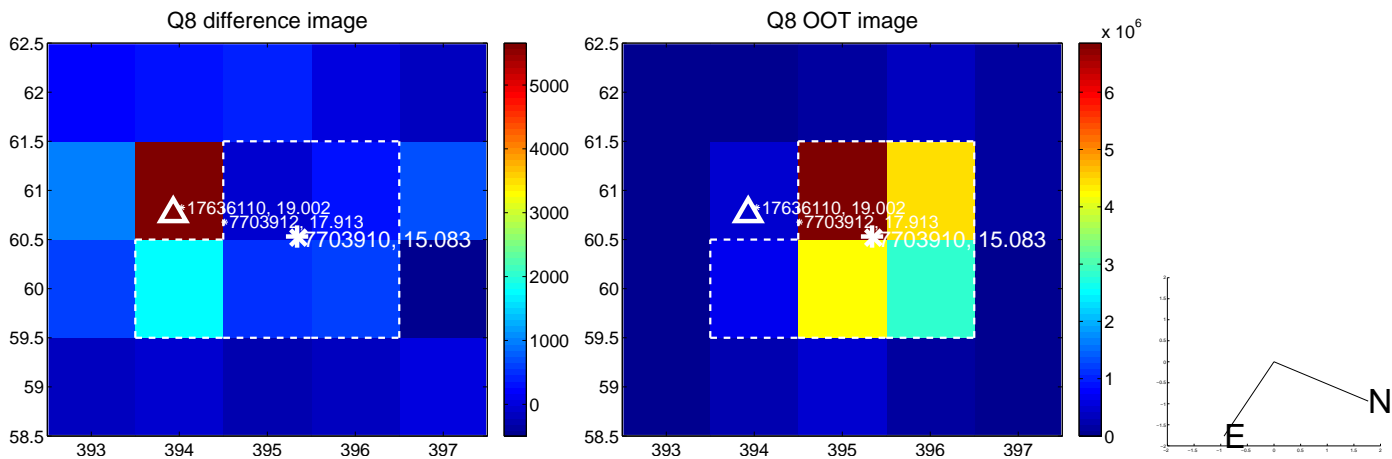
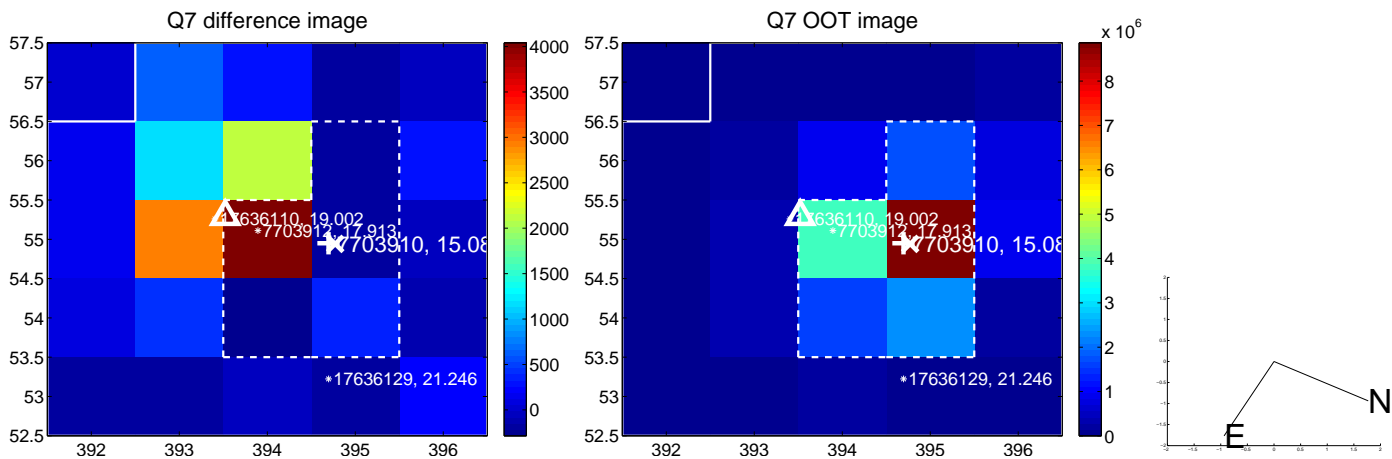
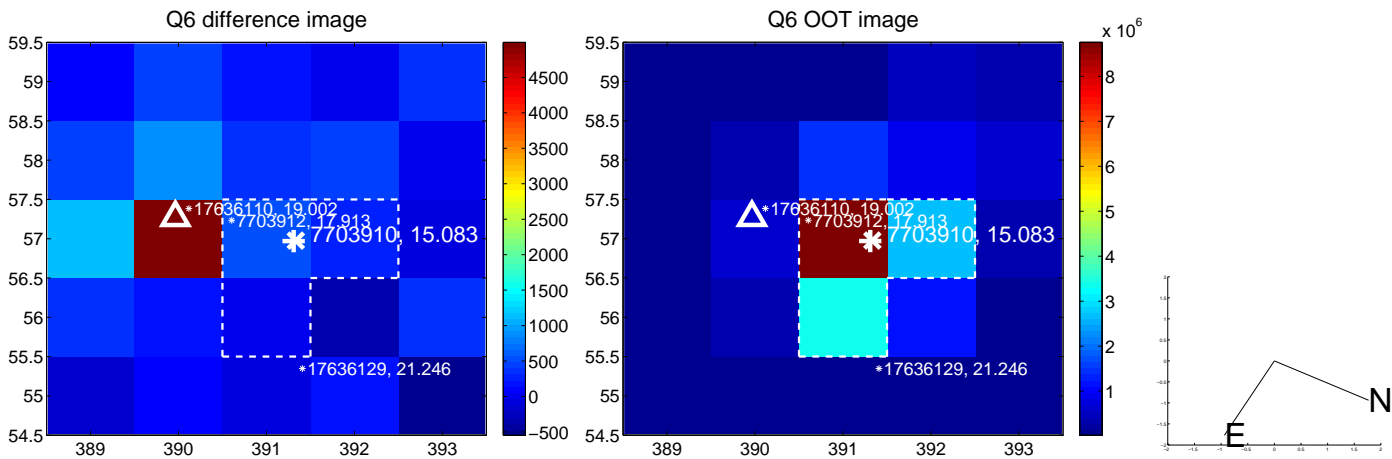
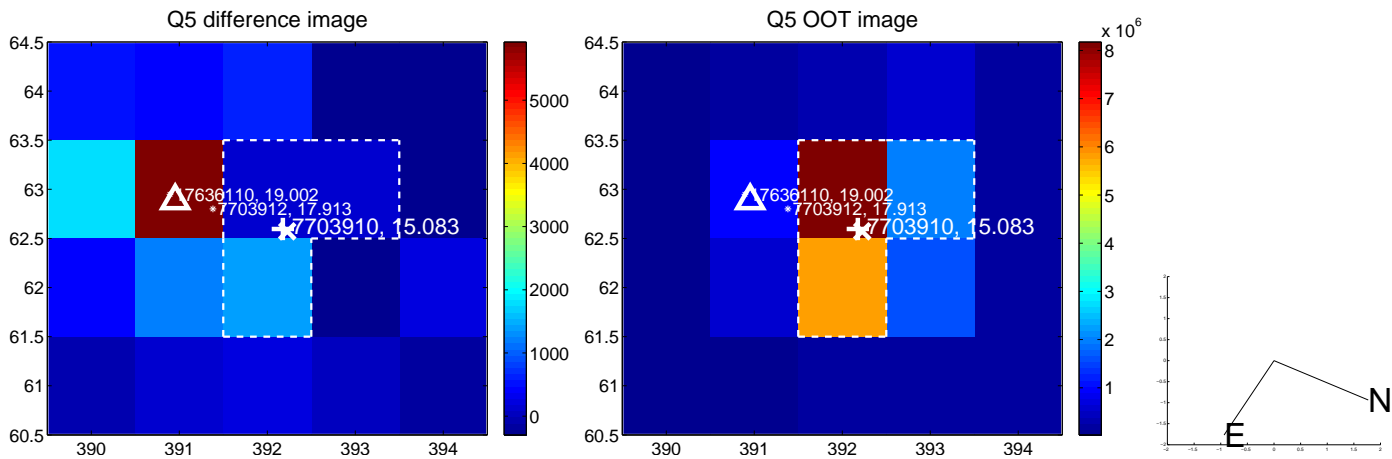


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

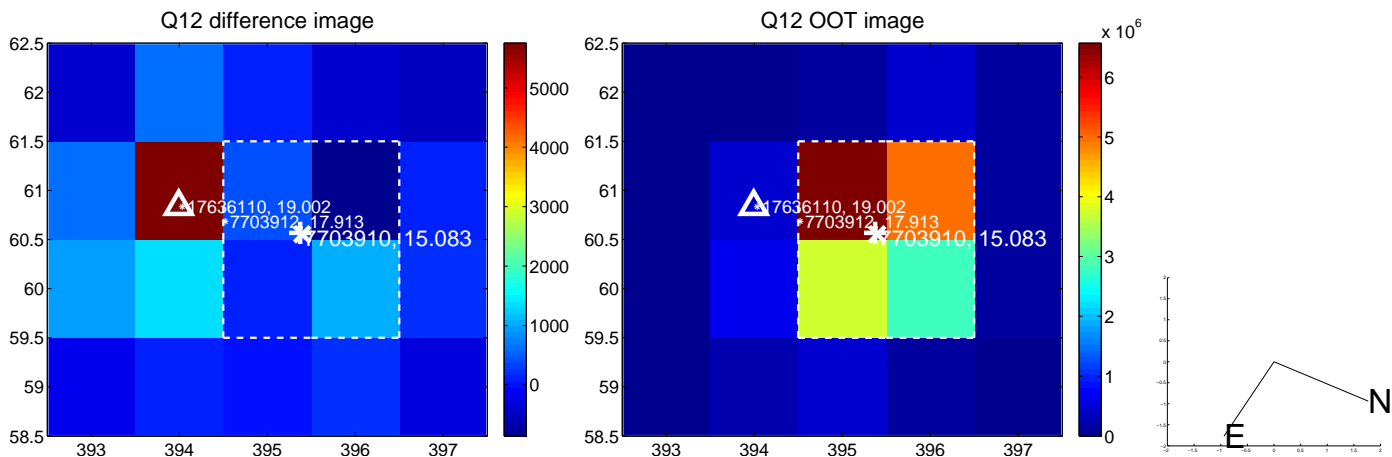
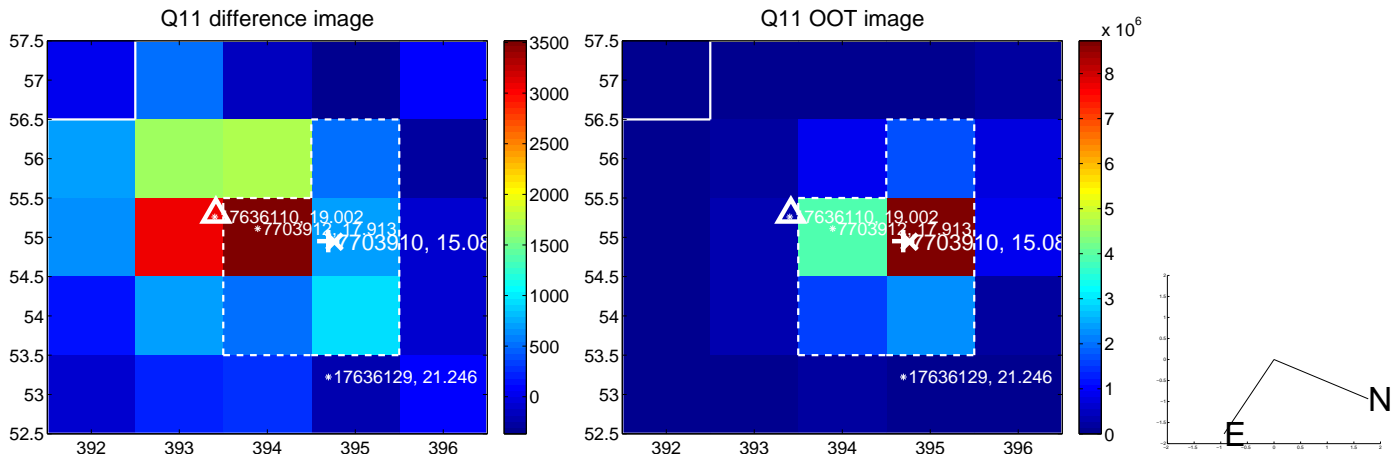
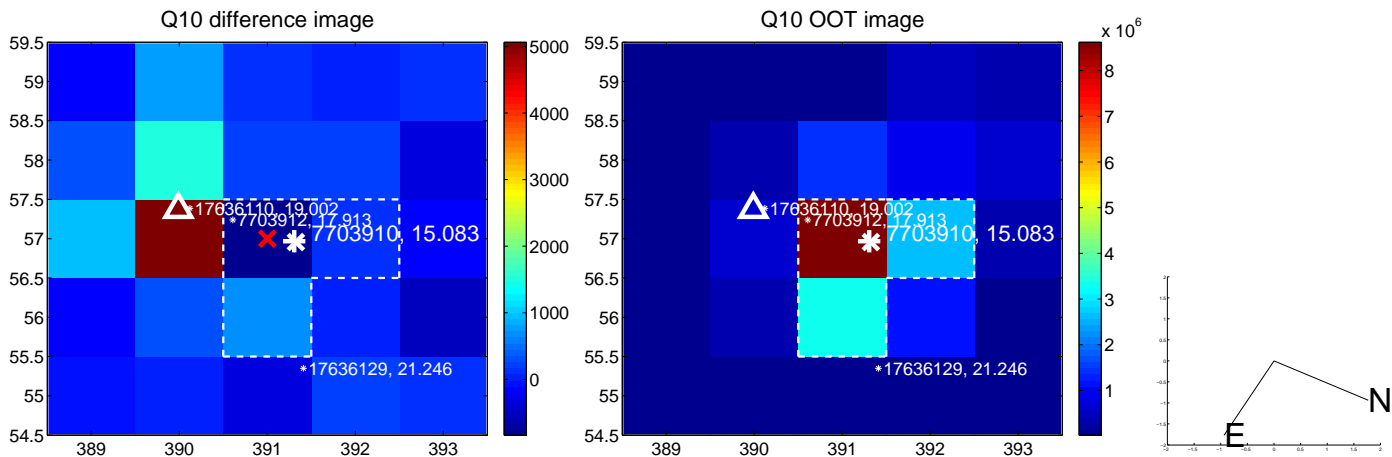
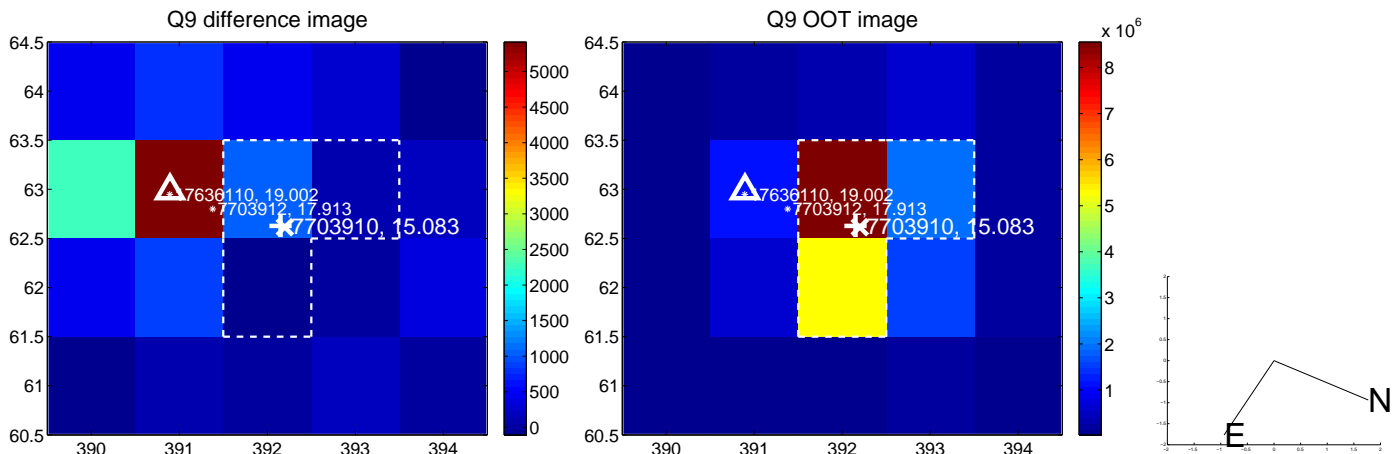
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



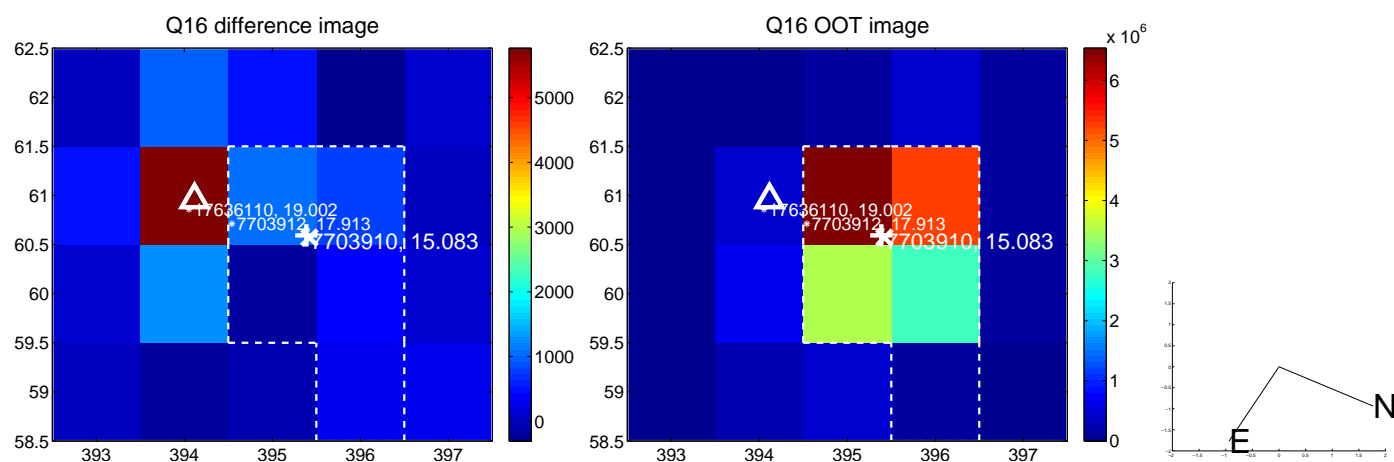
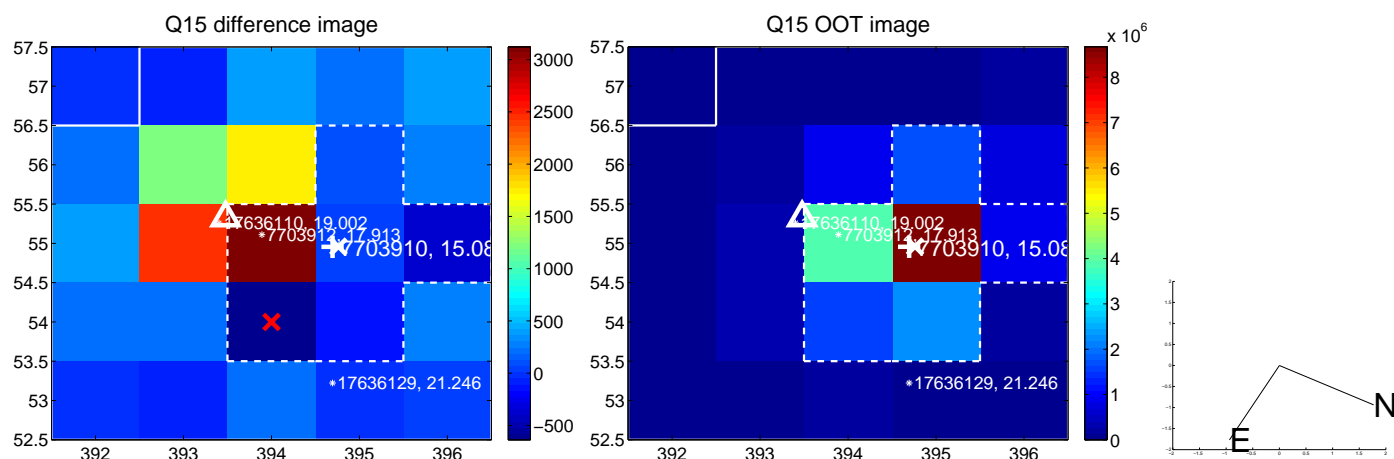
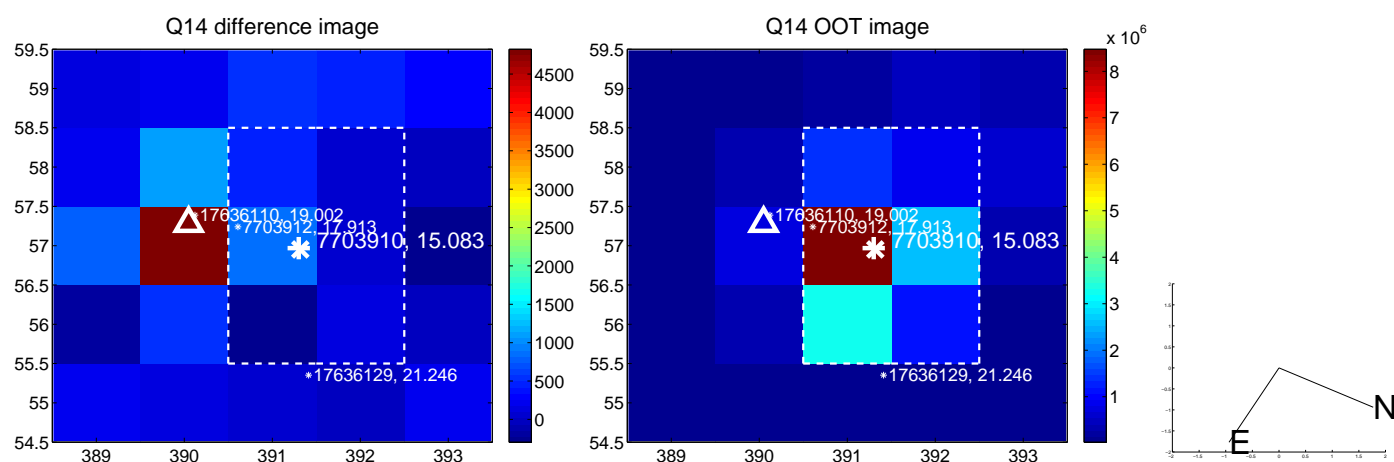
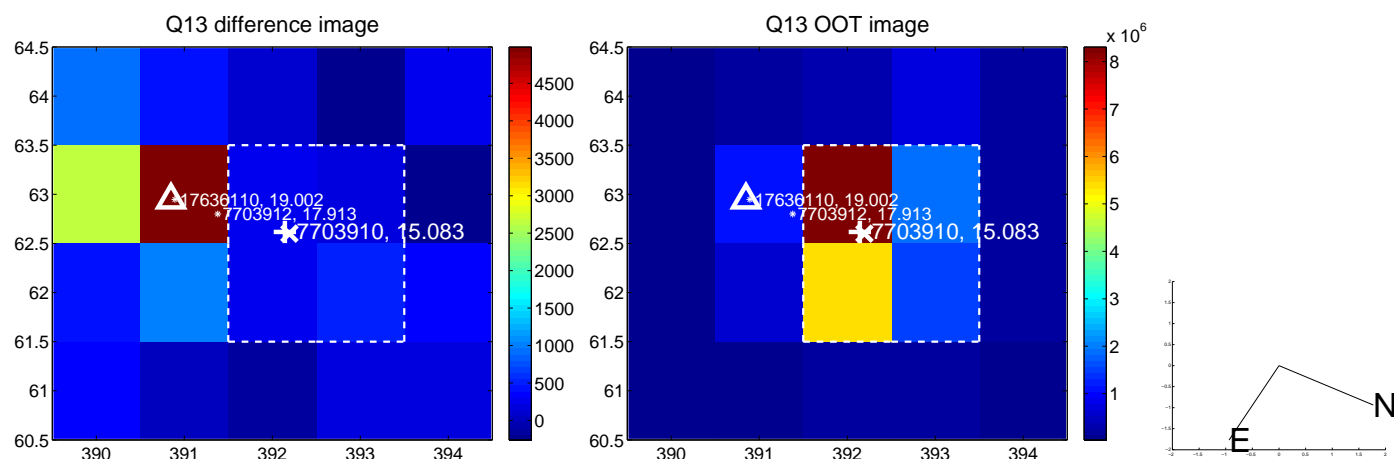
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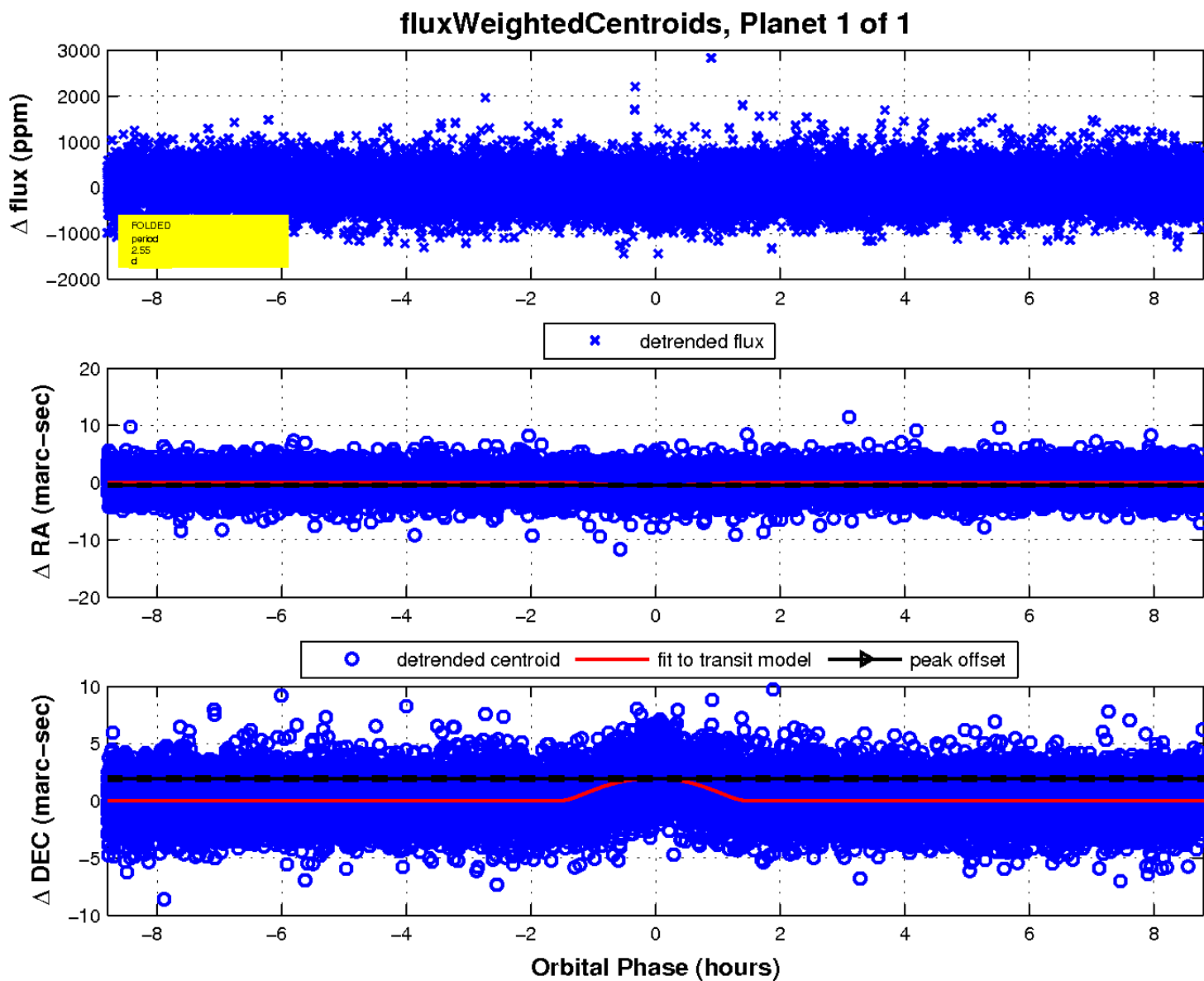
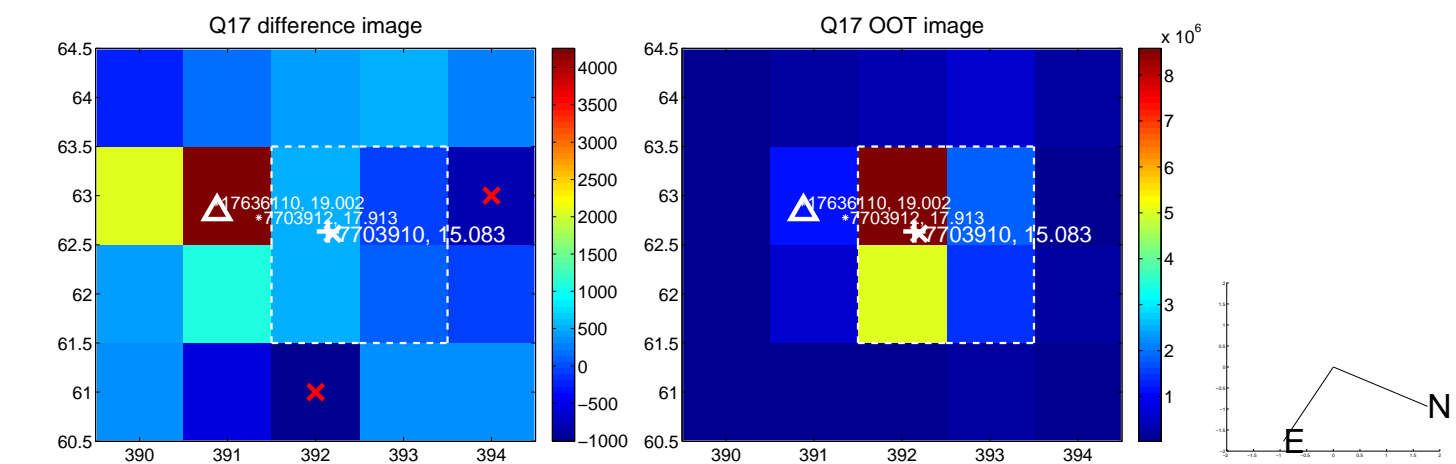
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UKIRT Image

Declination

