

KIC 007905106

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})
007905106-01	OBS	4582.01	4.224247	132.358091	11.9	4.604	8.3	8.6	0.88	5735	0.35	309.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007905106-01	OBS	PC	0.83	0	0	0	0	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.

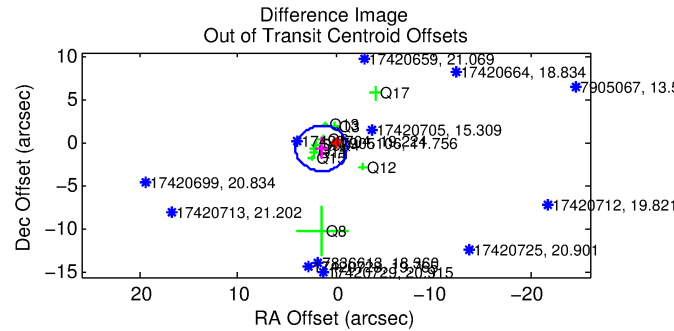
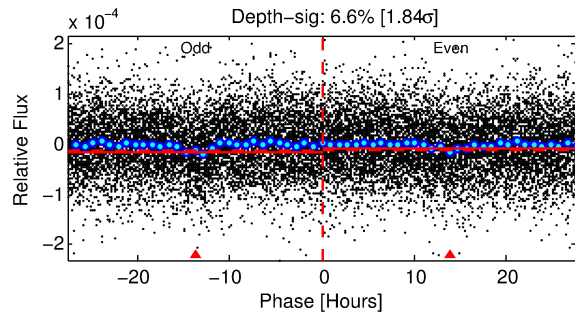
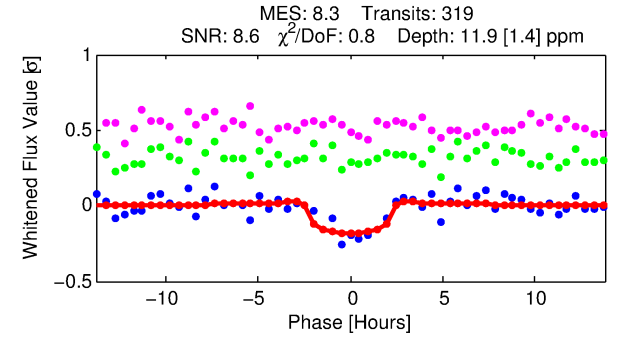
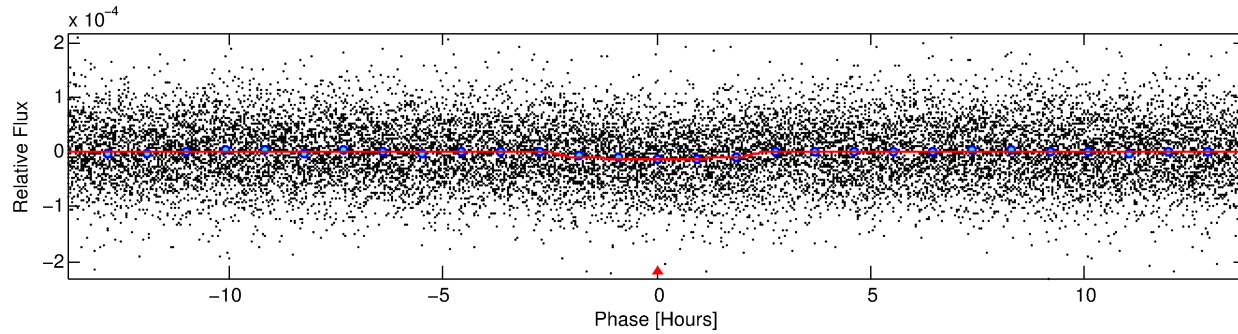
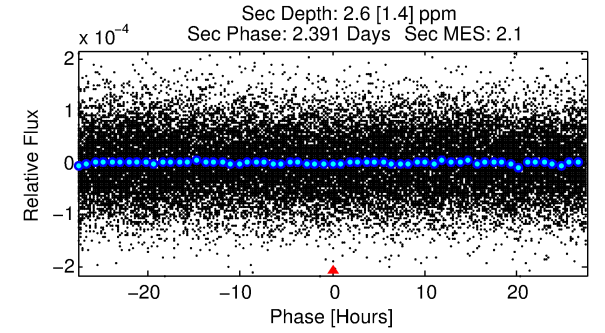
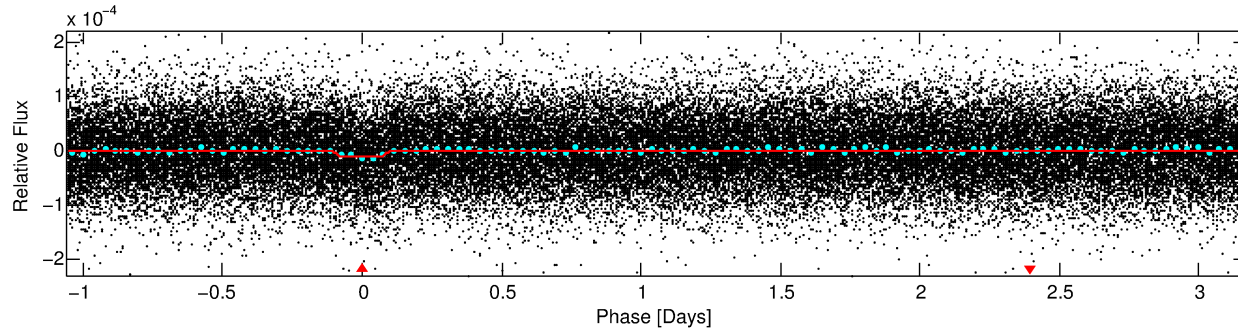
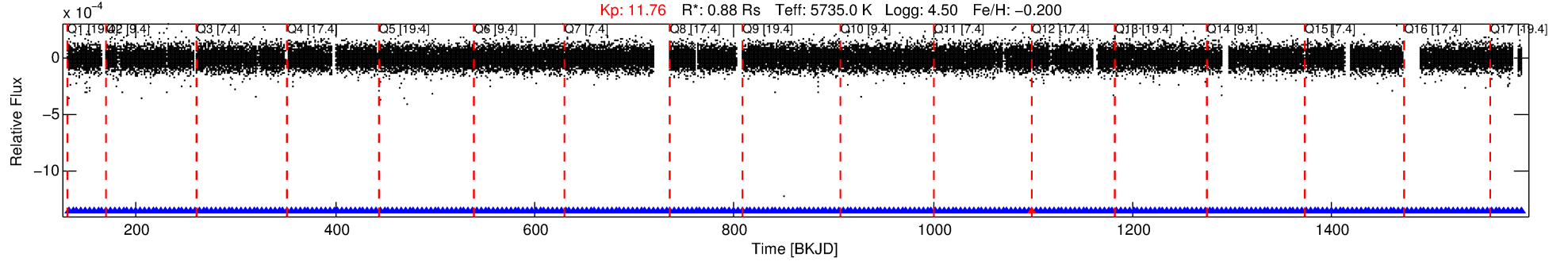
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007905106-01

No Significant Match Found

DV One-Page Summary

KIC: 7905106 Candidate: 1 of 1 Period: 4.224 d
KOI: K04582.01 Corr: 0.951



DV Fit Results:

Period = 4.22425 [0.00004] d
Epoch = 132.3581 [0.0073] BKJD
Rp/R* = 0.0036 [0.0011]
a/R* = 3.70 [4.87]
b = 0.86 [0.42]
Seff = 309.51 [62.11]
Teq = 1070 [54] K
Rp = 0.35 [0.12] Re
a = 0.0494 [0.0060] AU
Ag = 28.59 [23.46] [1.18σ]
Teffp = 3824 [768] K [3.58σ]

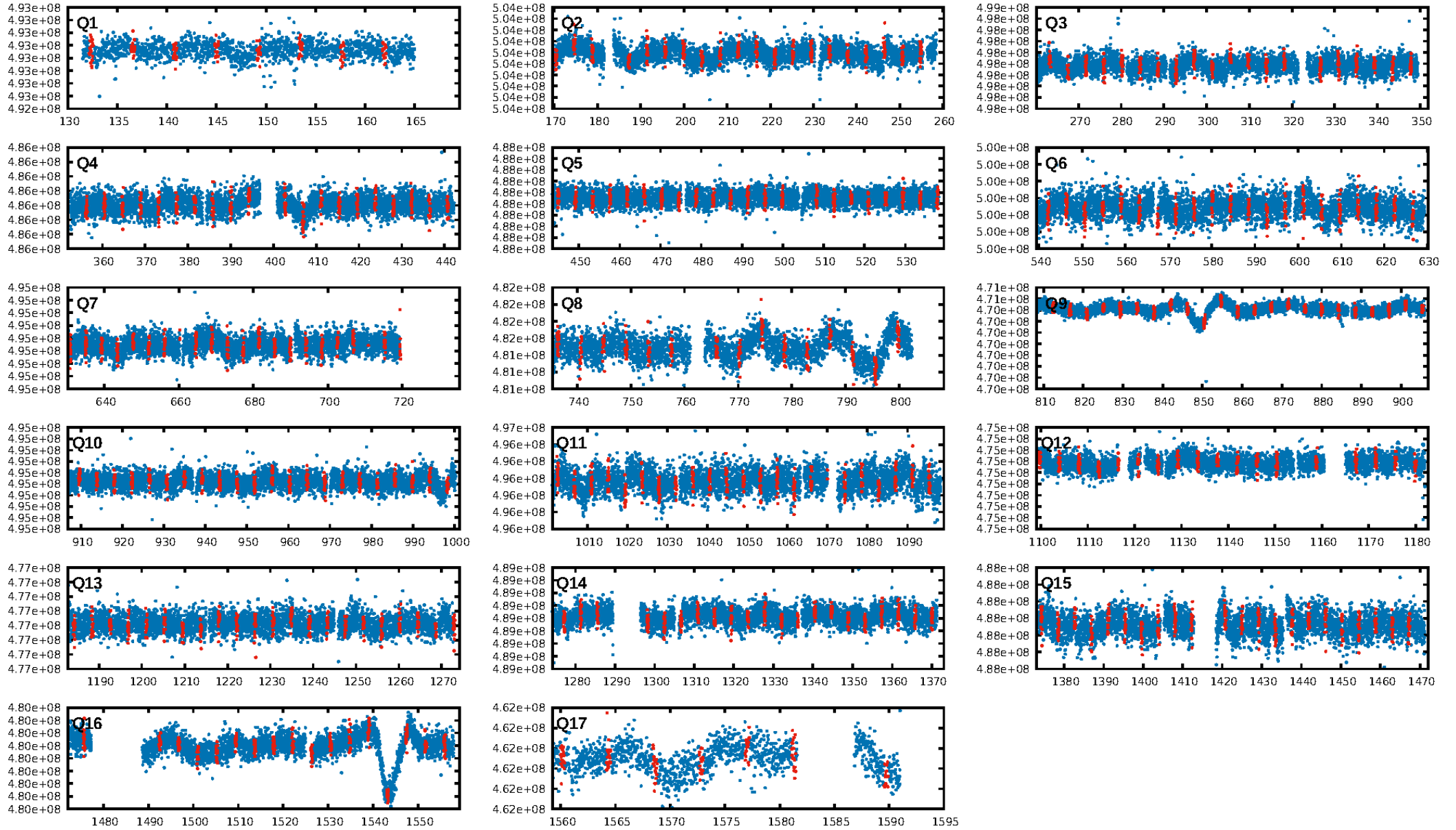
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.69e-15
RollingBand-fgt: 1.00 [303/304]
GhostDiagnostic-chr: 1.067
Centroid-sig: 0.0%
Centroid-so: 3.931 arcsec [3.45σ]
OotOffset-rm: 1.590 arcsec [1.81σ]
KicOffset-rm: 1.083 arcsec [1.16σ]
OotOffset-st: 2/3/3 [11]
KicOffset-st: 2/3/3 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

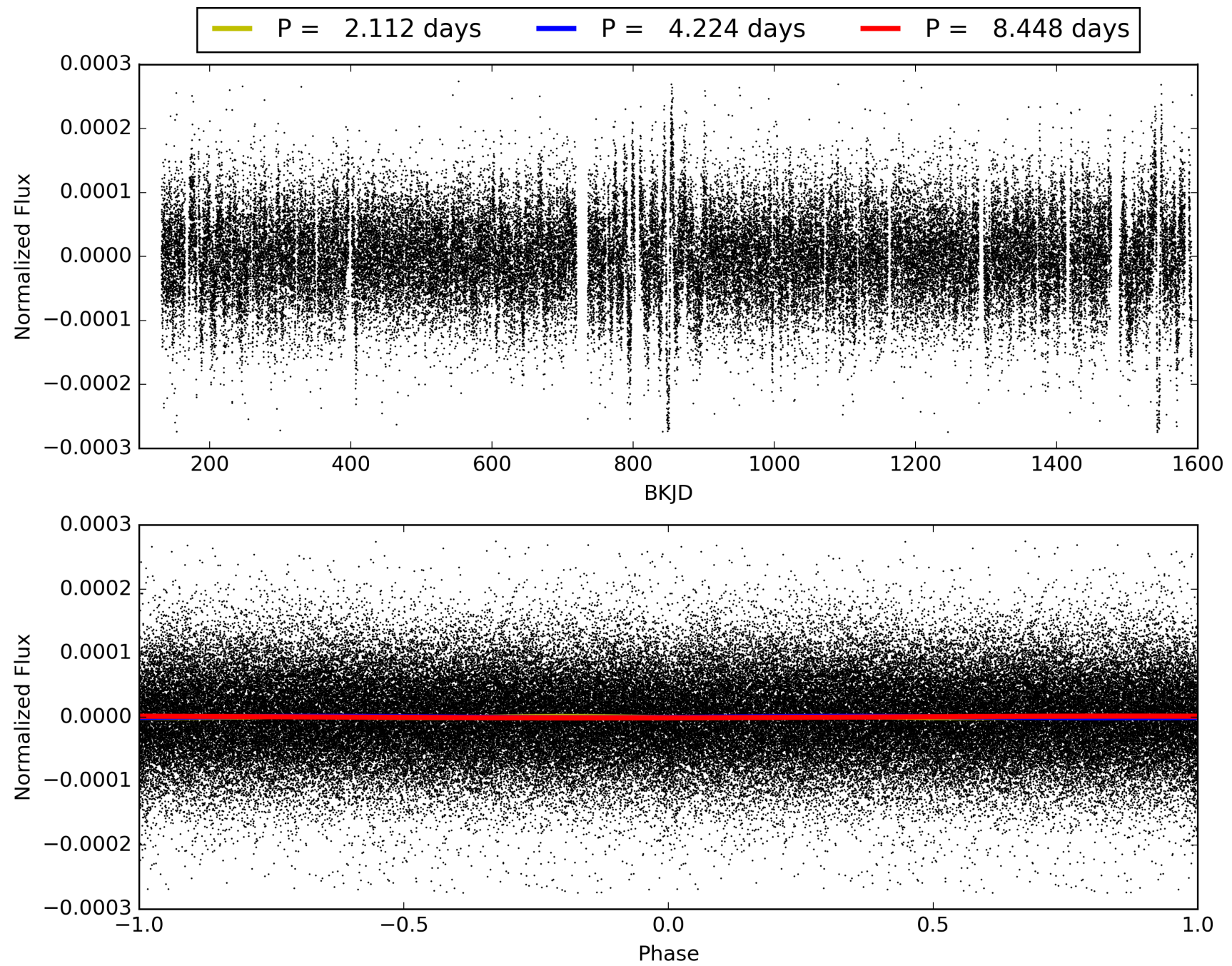
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:08:56 Z

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

TCE 007905106-01, PDC Light Curves

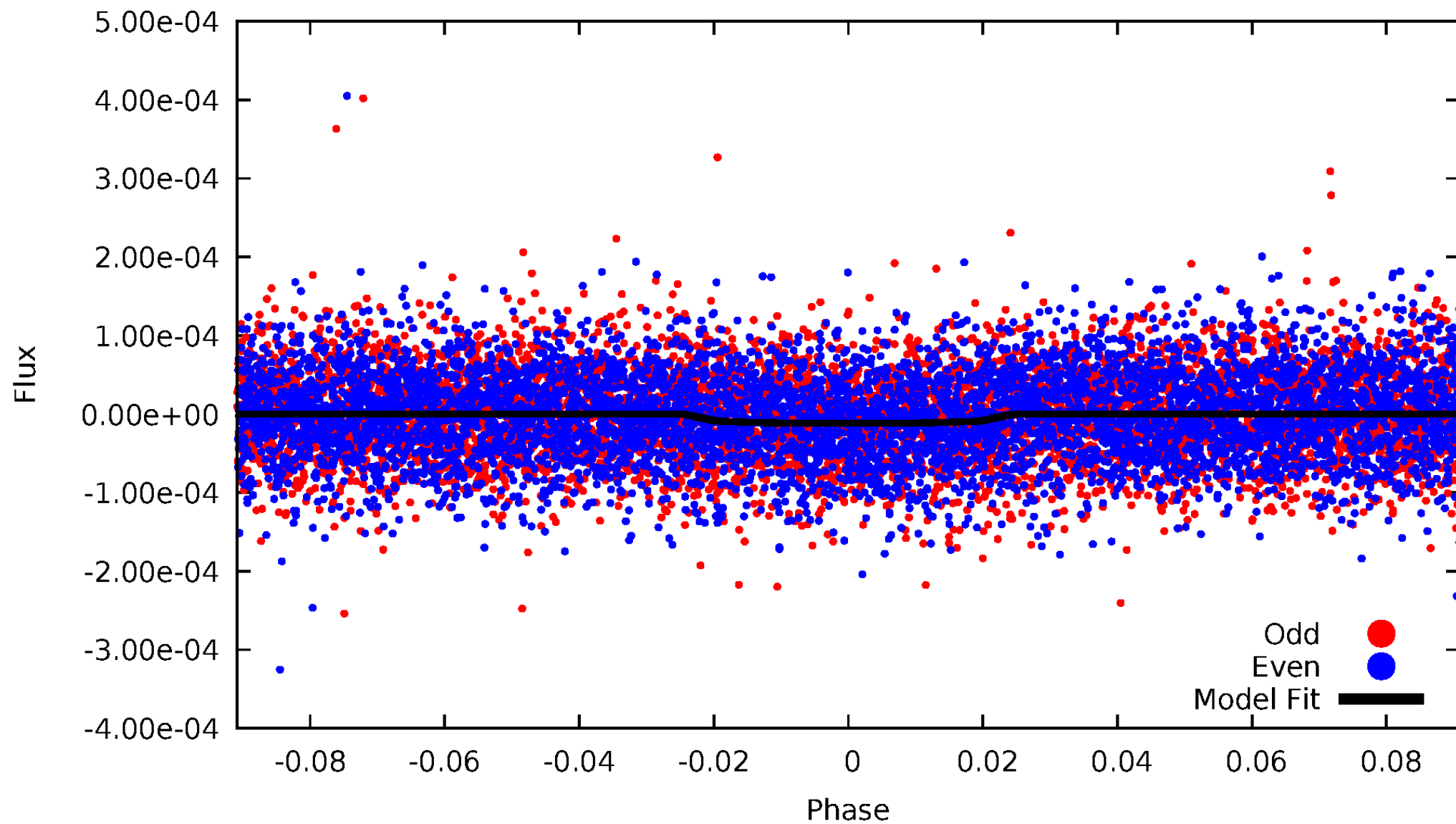


TCE 007905106-01



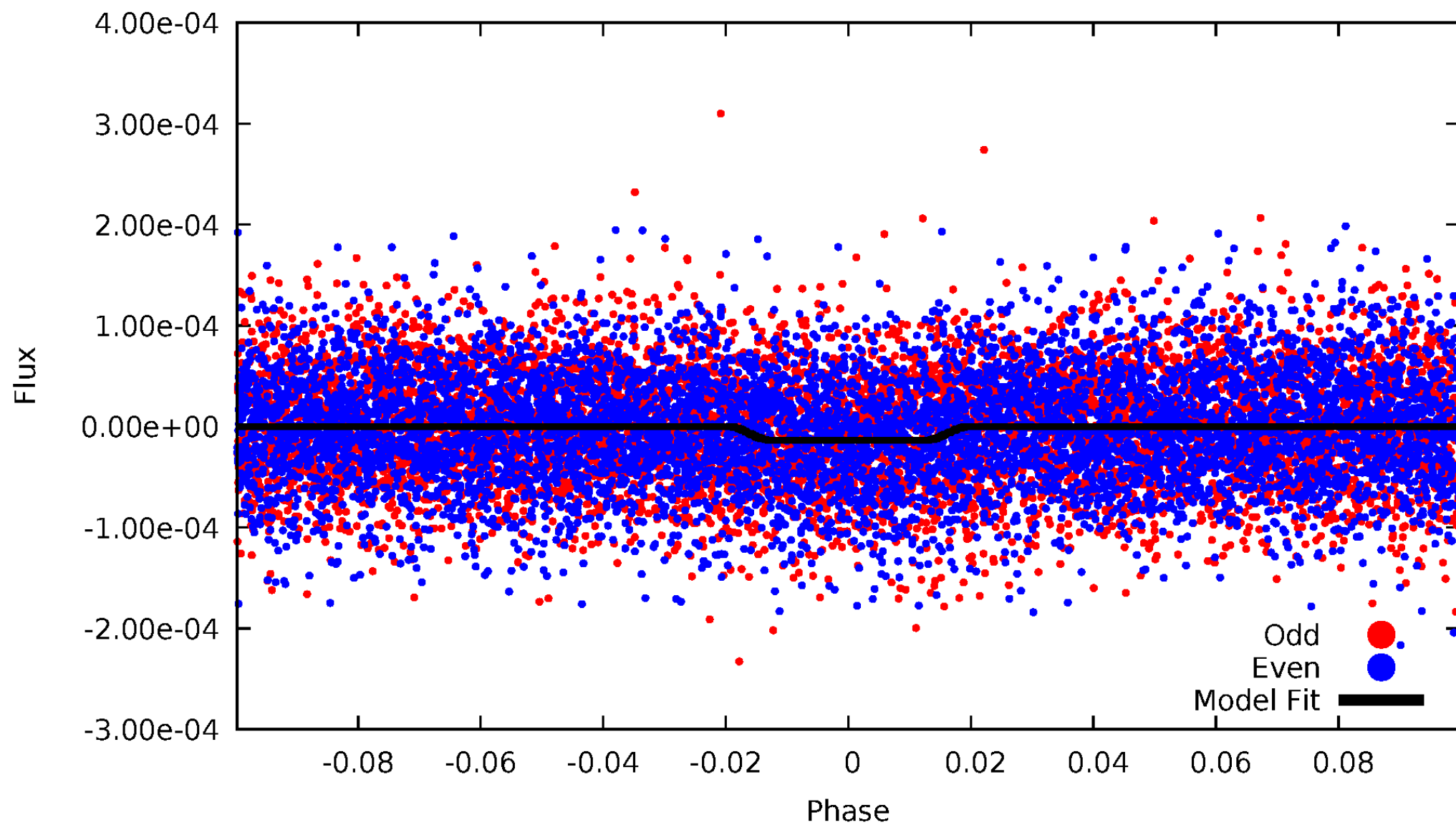
DV Odd/Even

TCE 007905106-01

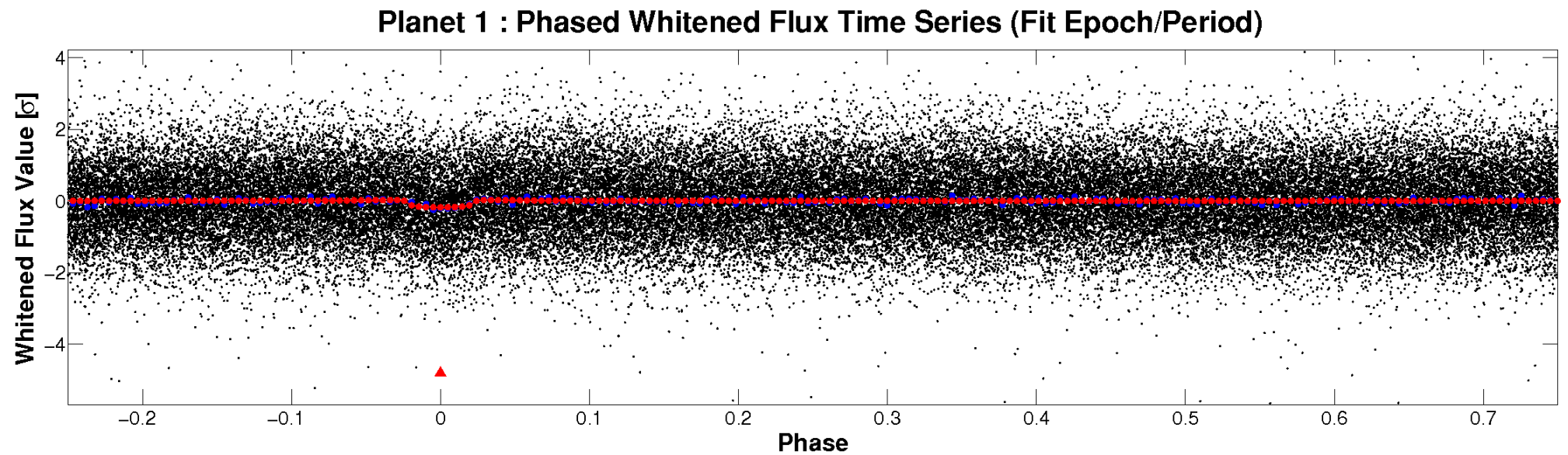
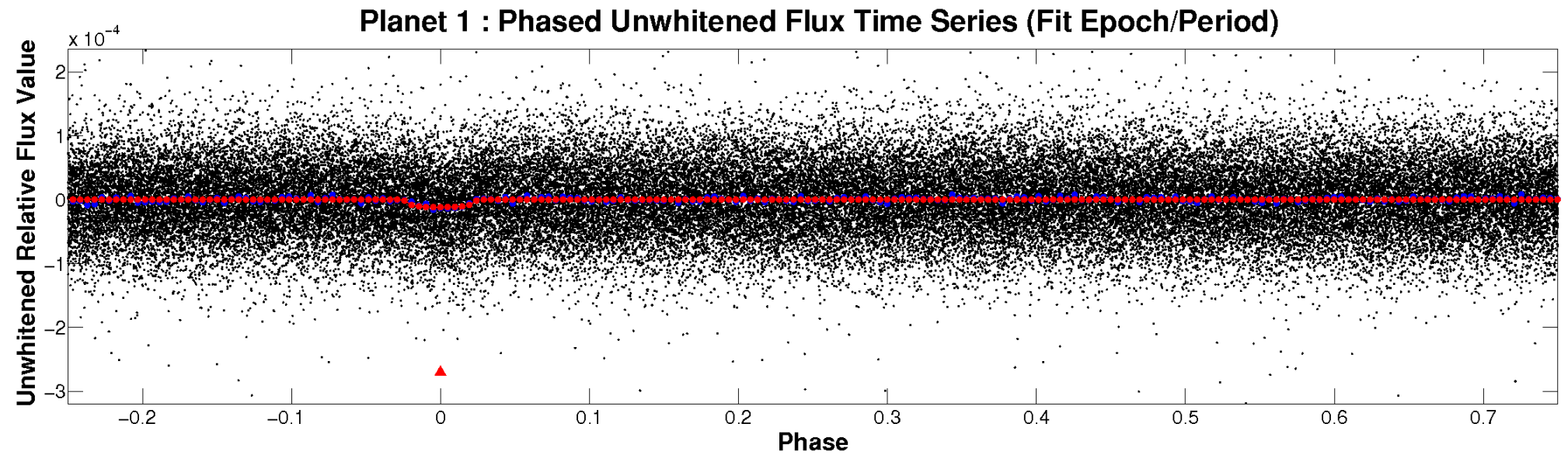


ALT Odd/Even

TCE 007905106-01

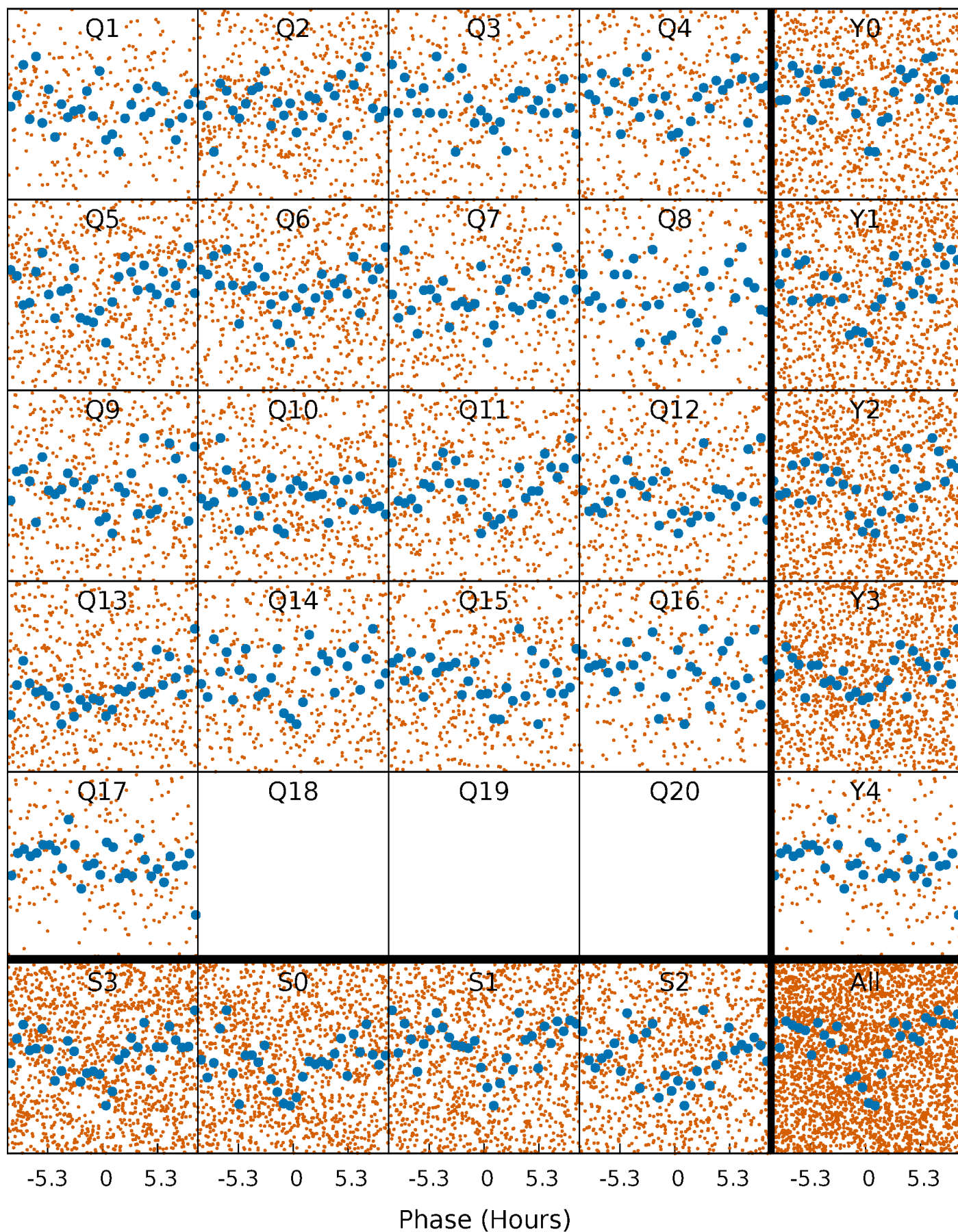


Non-Whitened Vs. Whitened Light Curve



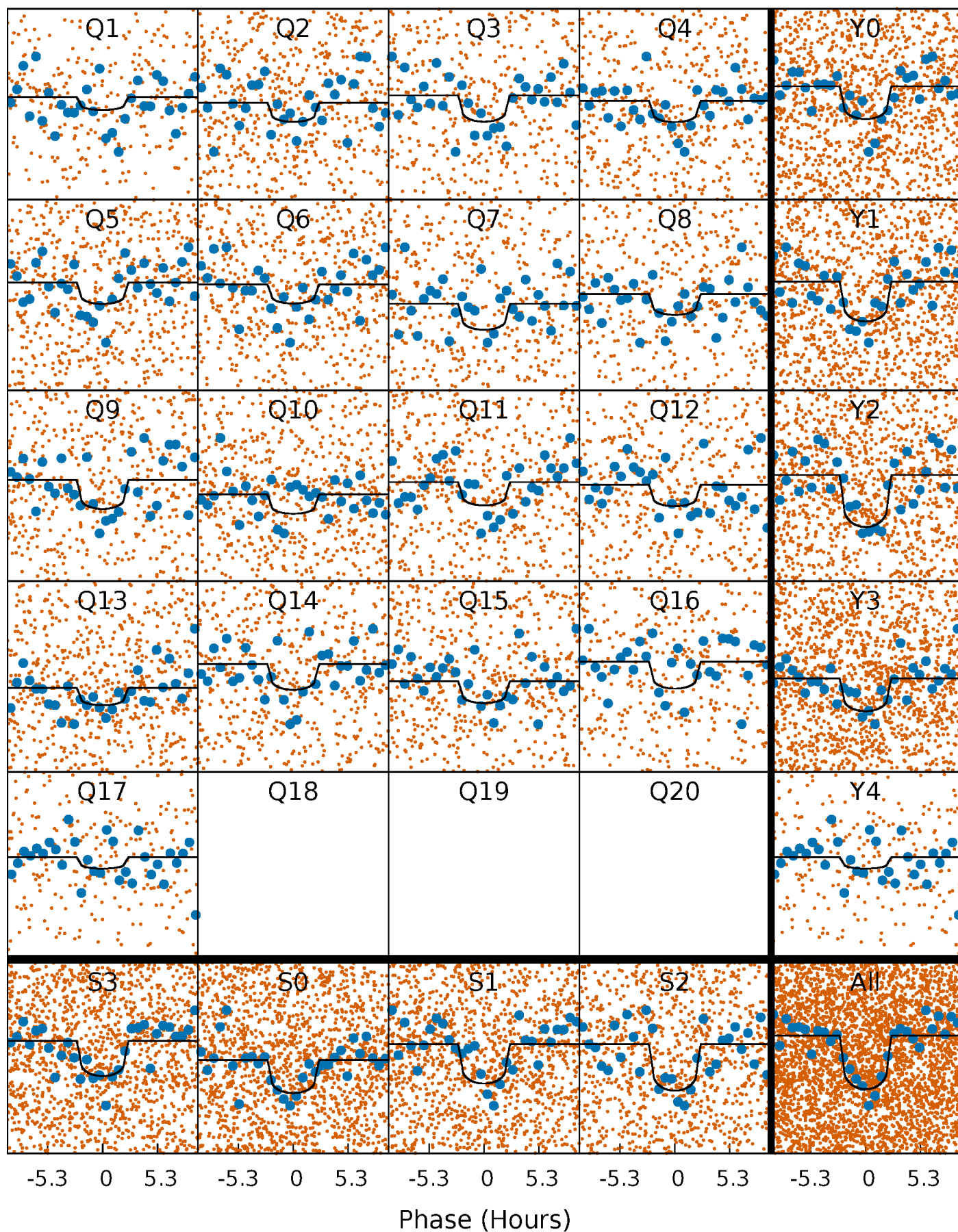
PDC Quarter-Phased Transit Curves

TCE 007905106-01 P= 4.224247 Days $T_0=132.358091$ (BKJD)



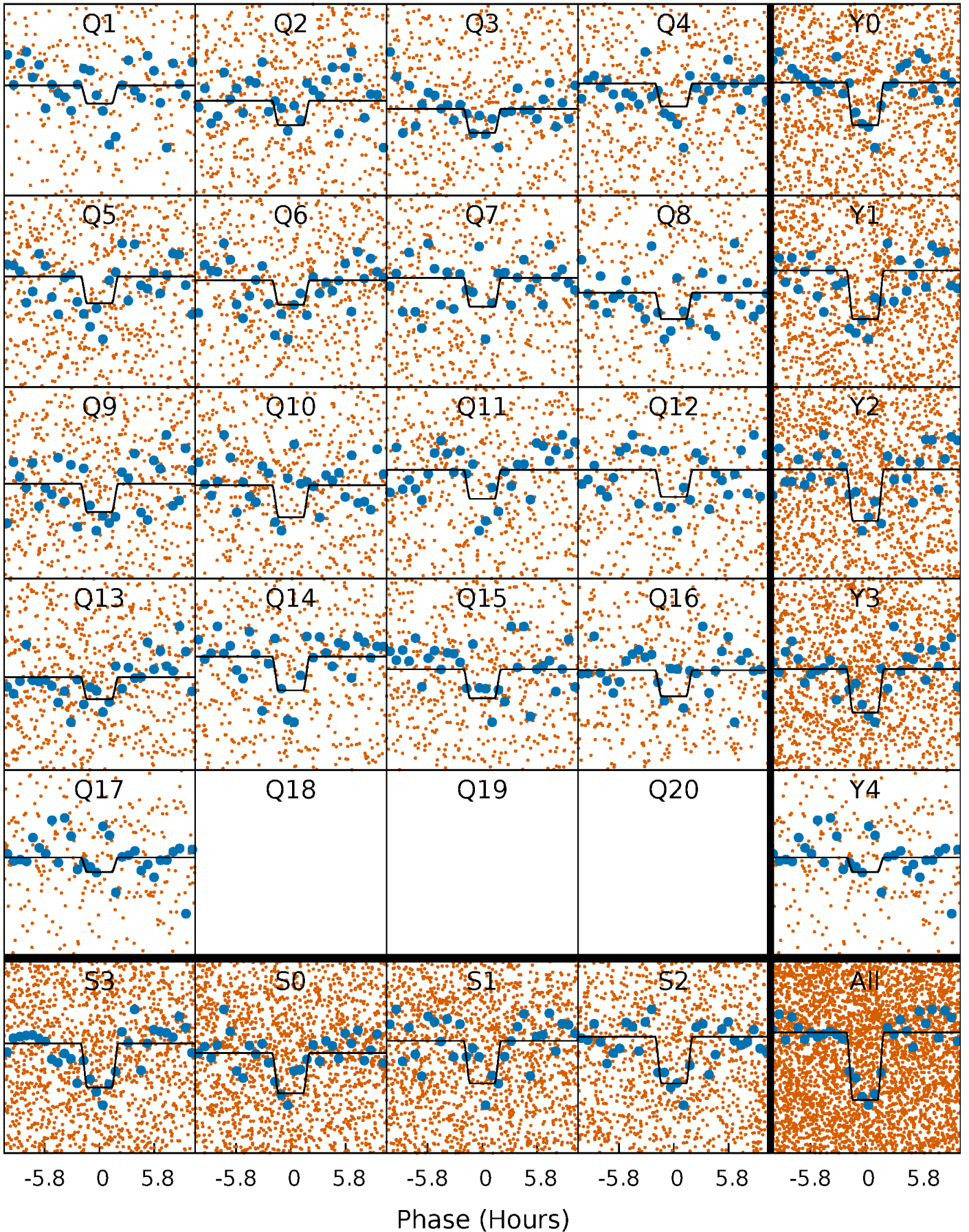
DV Quarter-Phased Transit Curves

TCE 007905106-01 P= 4.224247 Days $T_0=132.358091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

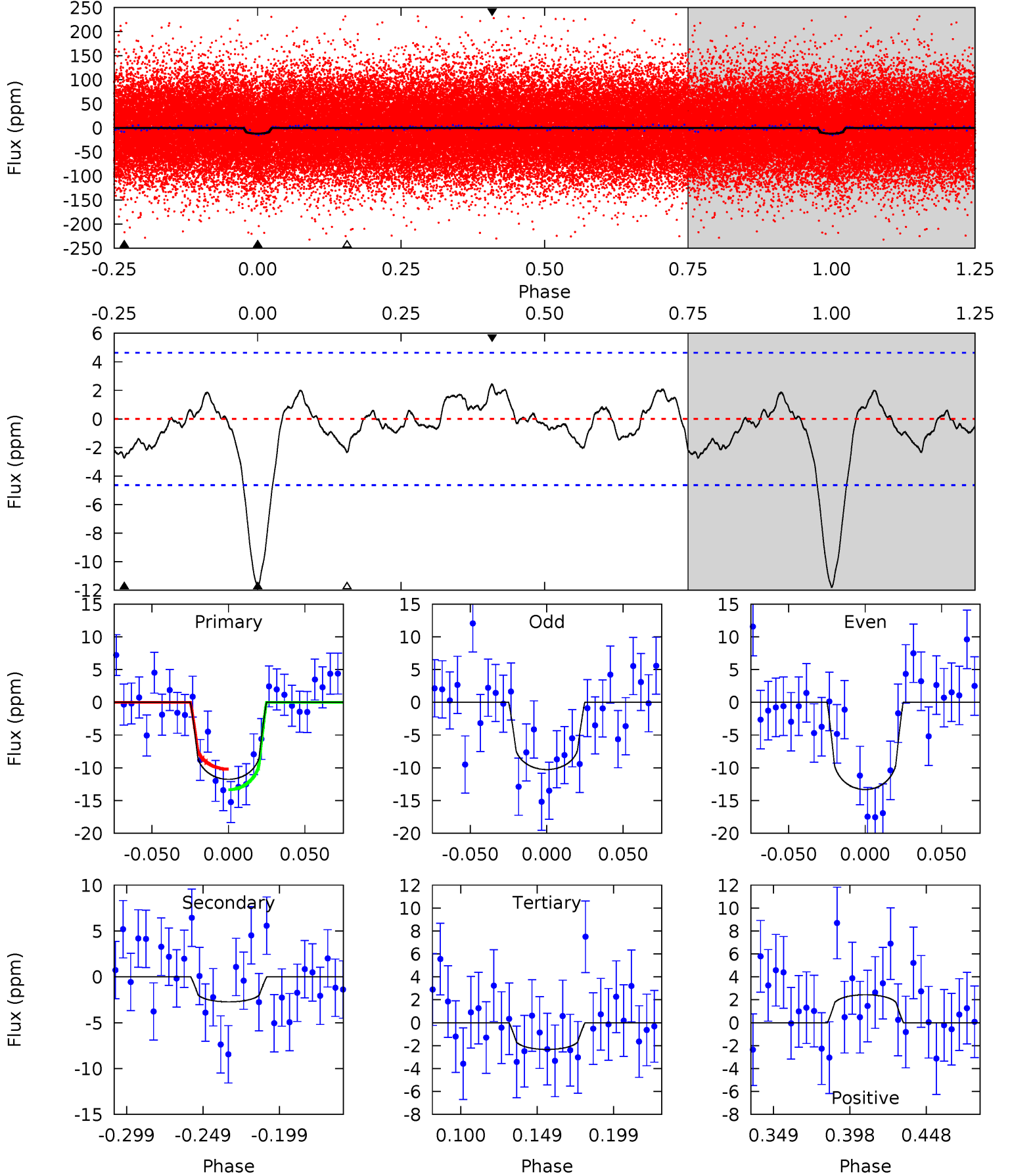
TCE 007905106-01 P= 4.224225 Days $T_0=132.366889$ (BKJD)



DV Model-Shift Uniqueness Test

007905106-01, P = 4.224247 Days, E = 128.133844 Days

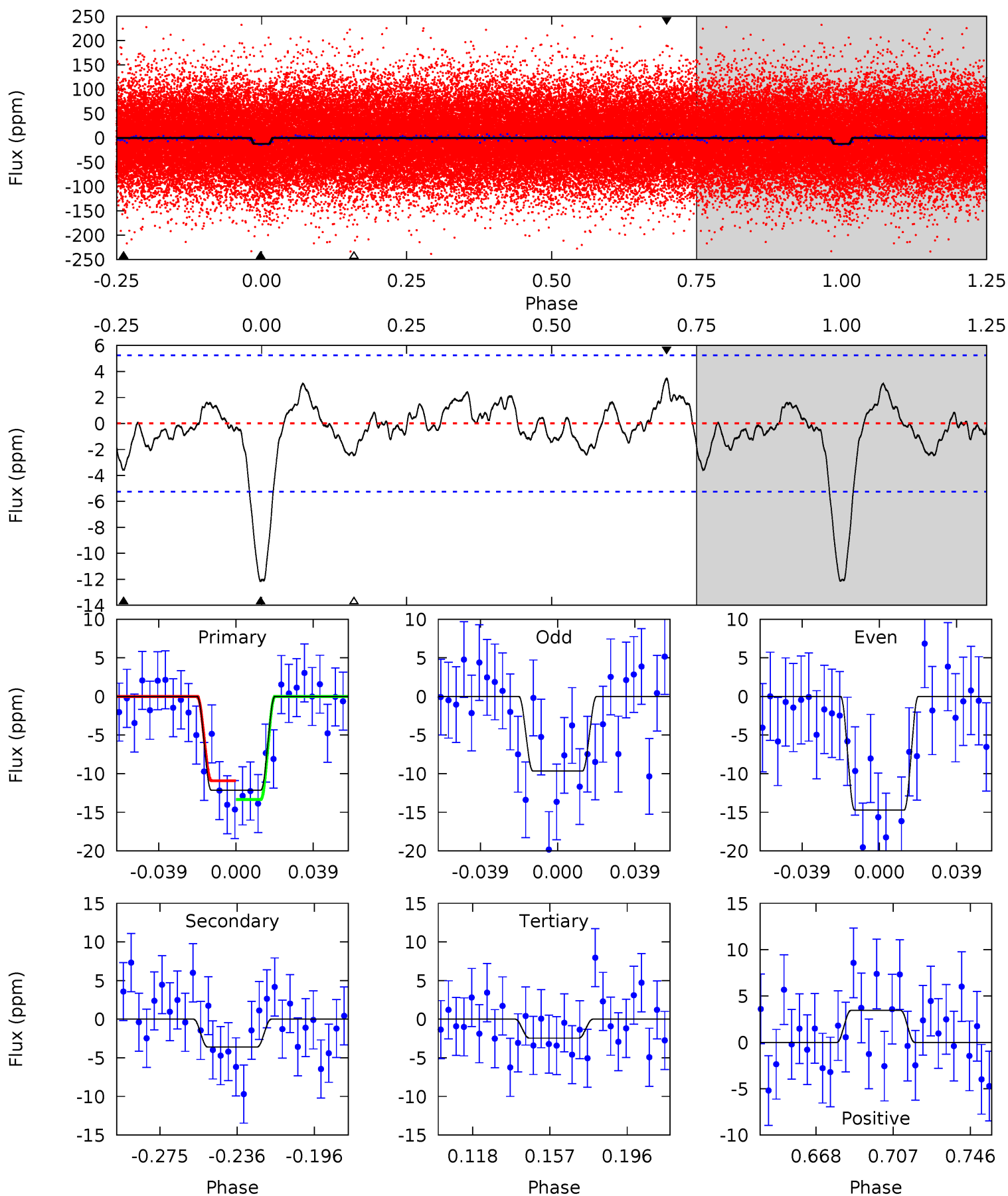
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	2.77	2.37	2.48	4.71	1.96	1.07	9.58	9.48	0.40	0.30	1.55	0.89	0.17	1.60



Alt Model-Shift Uniqueness Test

007905106-01, P = 4.224225 Days, E = 128.142664 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.26	2.22	3.13	4.76	2.06	1.13	8.77	7.87	1.04	0.13	2.29	0.92	0.22	1.11



Stellar Parameters For KIC 007905106

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5735^{+103}_{-115}	$4.501^{+0.048}_{-0.104}$	$-0.200^{+0.150}_{-0.150}$	$0.883^{+0.121}_{-0.056}$	$0.903^{+0.056}_{-0.061}$	$1.845^{+0.388}_{-0.549}$
	+2%/-2%	+1%/-2%	+75%/-75%	+14%/-6%	+6%/-7%	+21%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007905106-01 / KOI 4582.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 1	$0.36^{+0.11}_{-0.10}$	1503^{+55}_{-46}	4104^{+585}_{-439}	28^{+28}_{-14}
Alt.	-4 ± 1	$0.37^{+0.11}_{-0.11}$	1504^{+56}_{-48}	4297^{+697}_{-461}	36^{+36}_{-17}

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

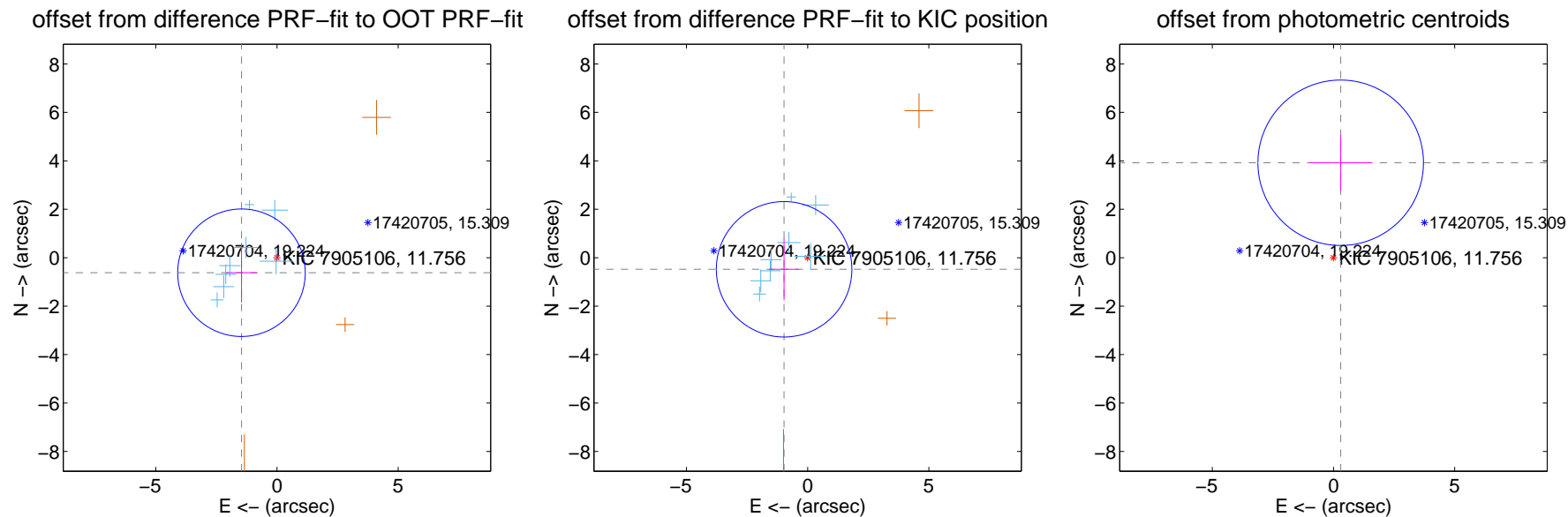
DV Centroid Data

Supplemental centroid analysis for 007905106-01. **Kepler magnitude: 11.76.** Transit SNR 8.58

There are 8 quarters with good PRF difference image offsets

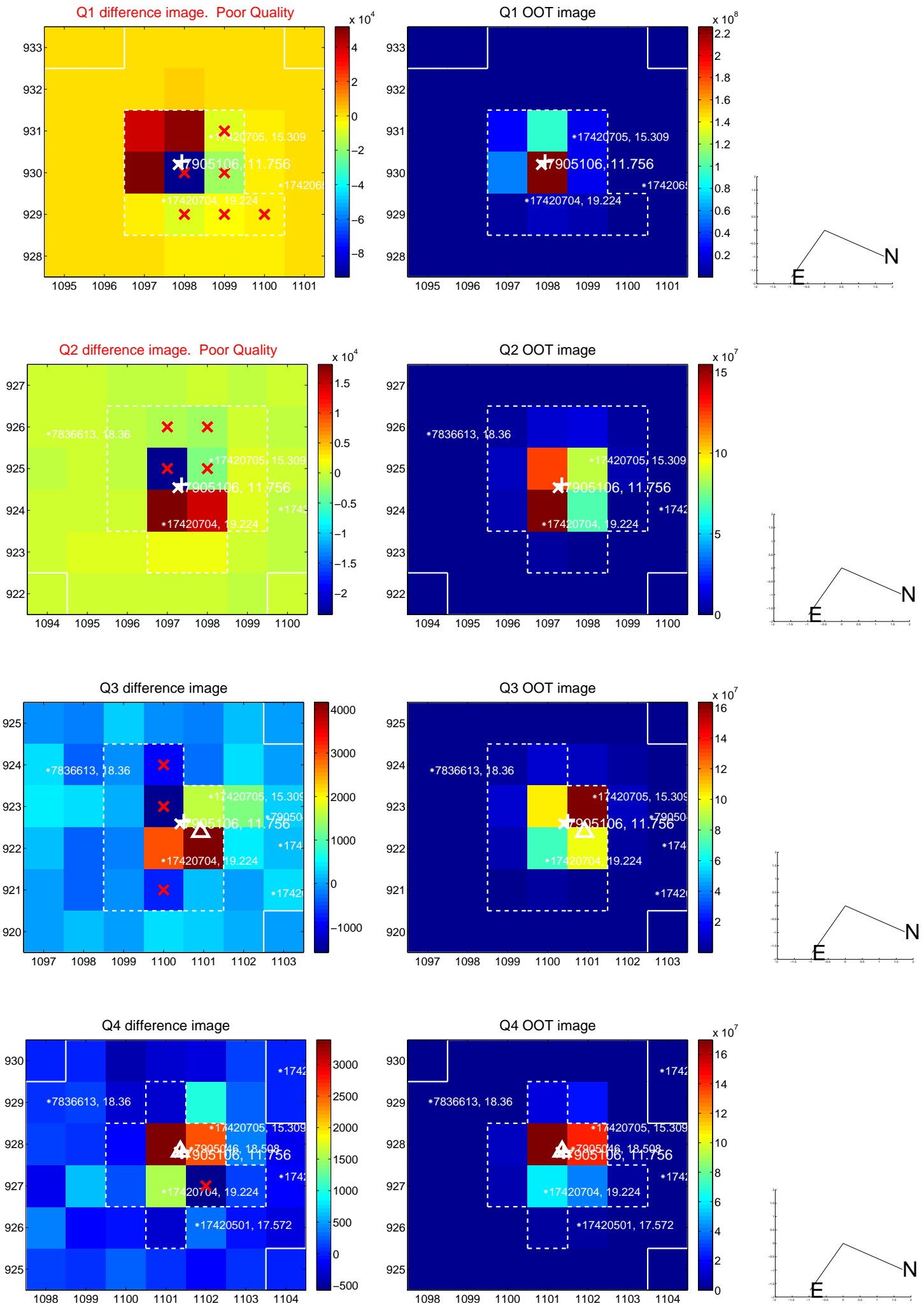
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.590 ± 0.877	1.81	1.464 ± 0.631	-0.620 ± 1.229
PRF-fit source offset from KIC position	1.083 ± 0.932	1.16	0.972 ± 0.611	-0.478 ± 1.280
photometric centroid source offset	3.93 ± 1.14	3.45	-0.30 ± 1.30	3.92 ± 1.14

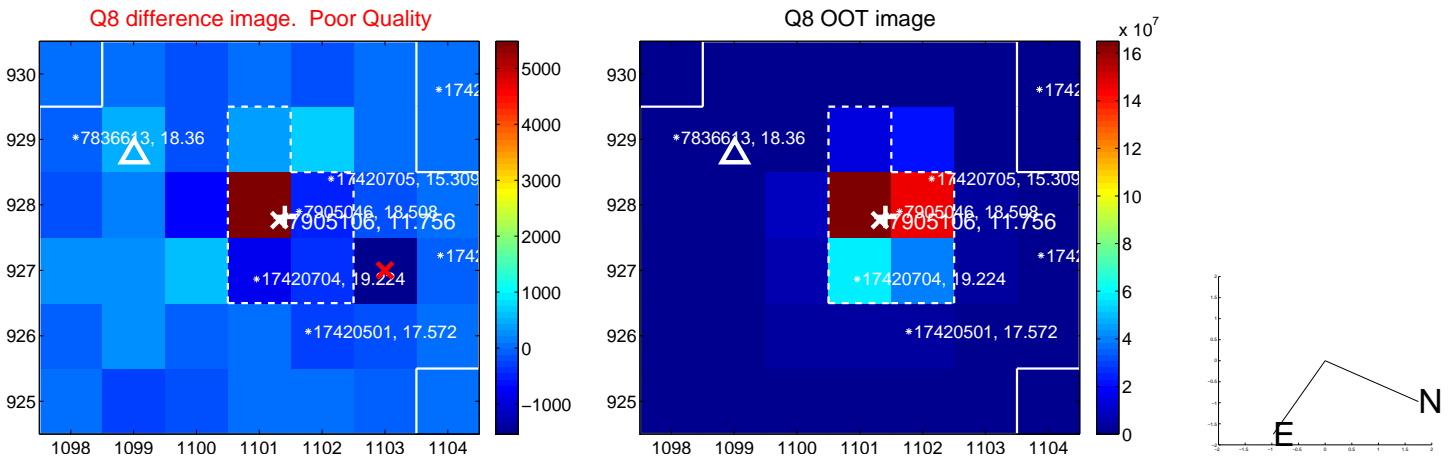
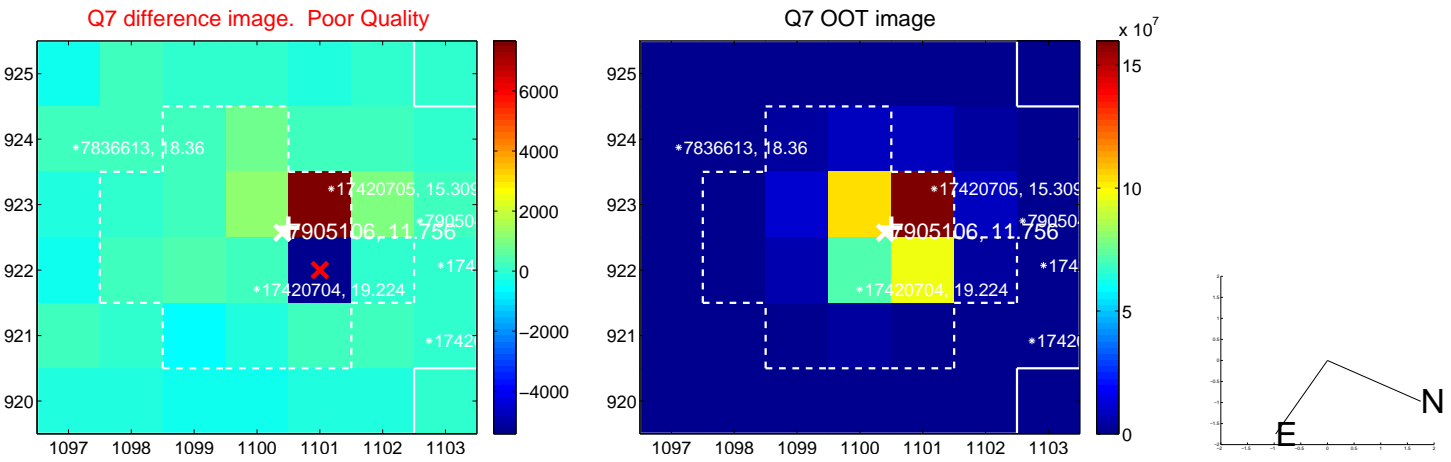
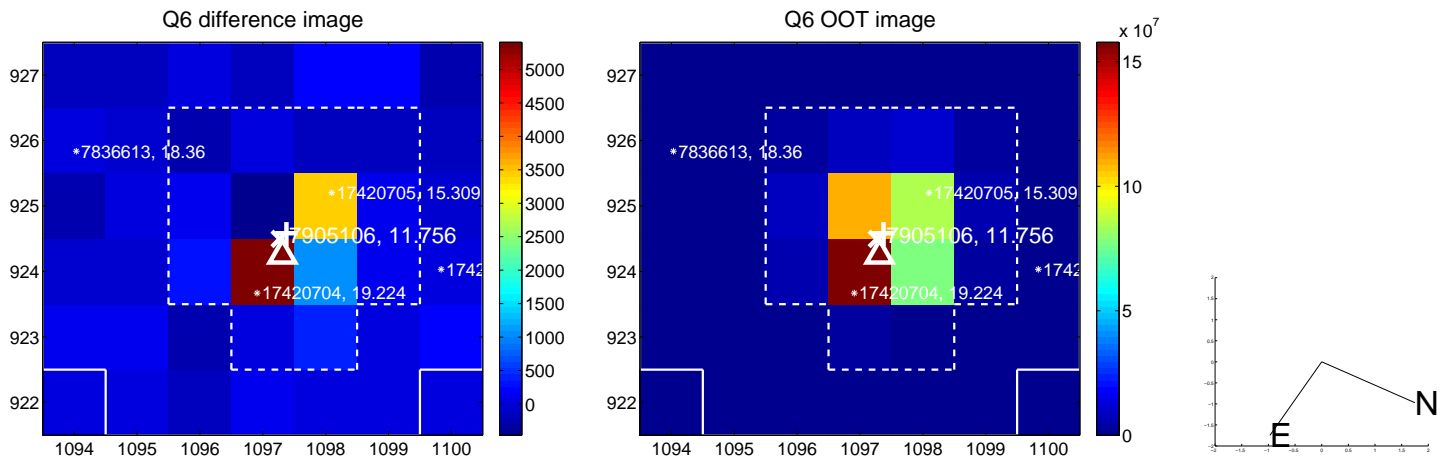
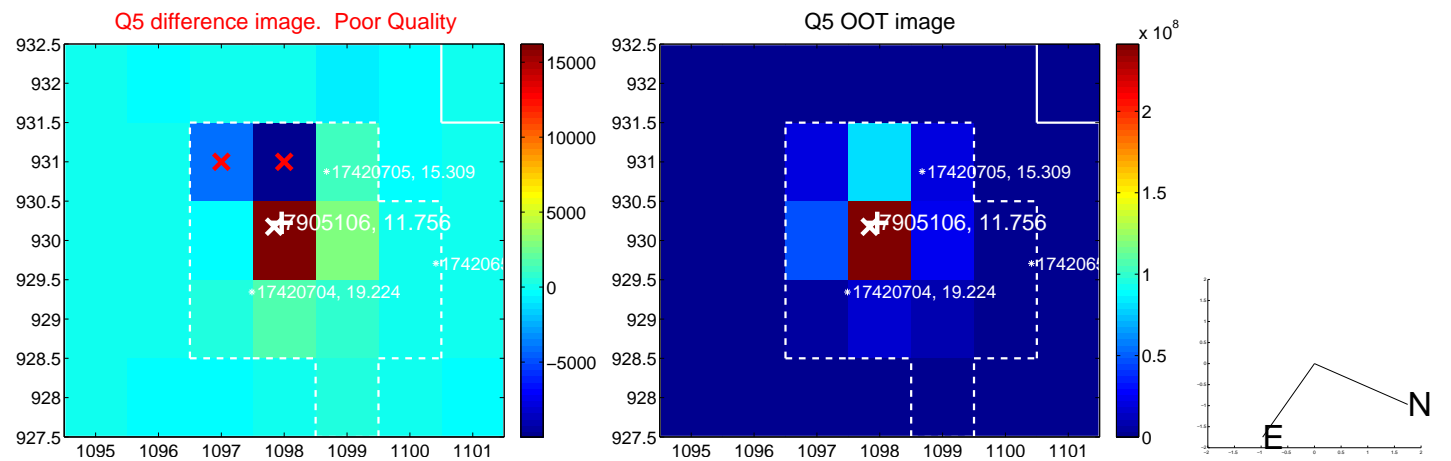


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

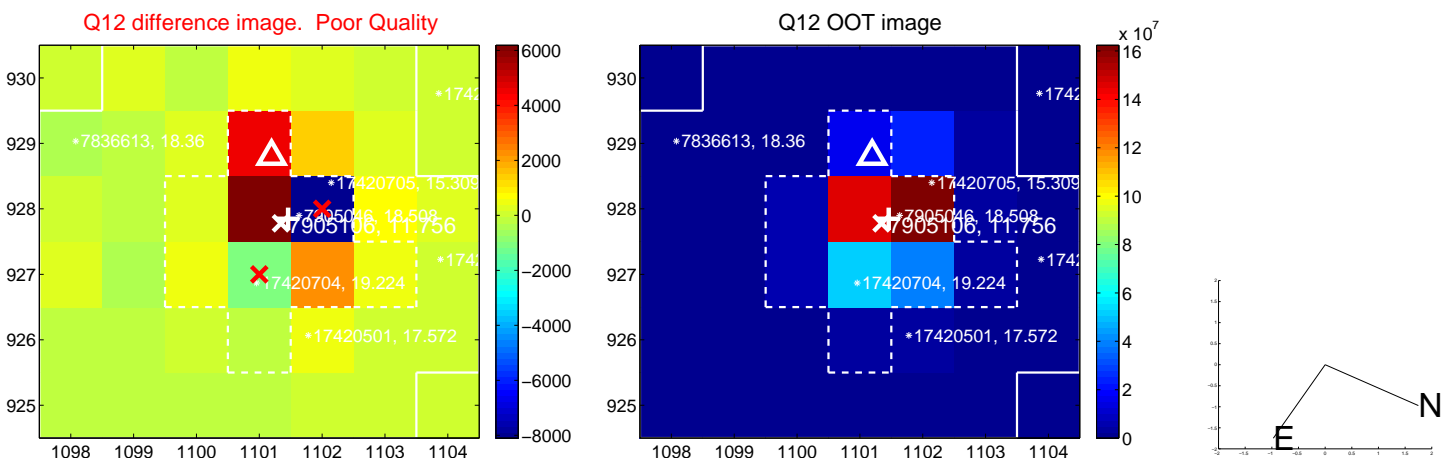
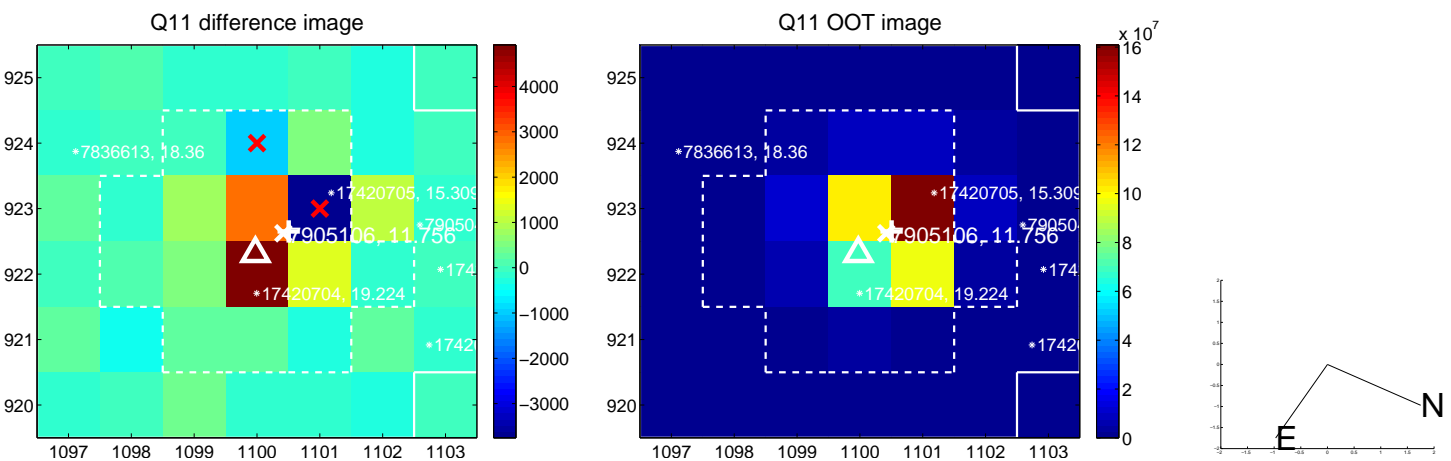
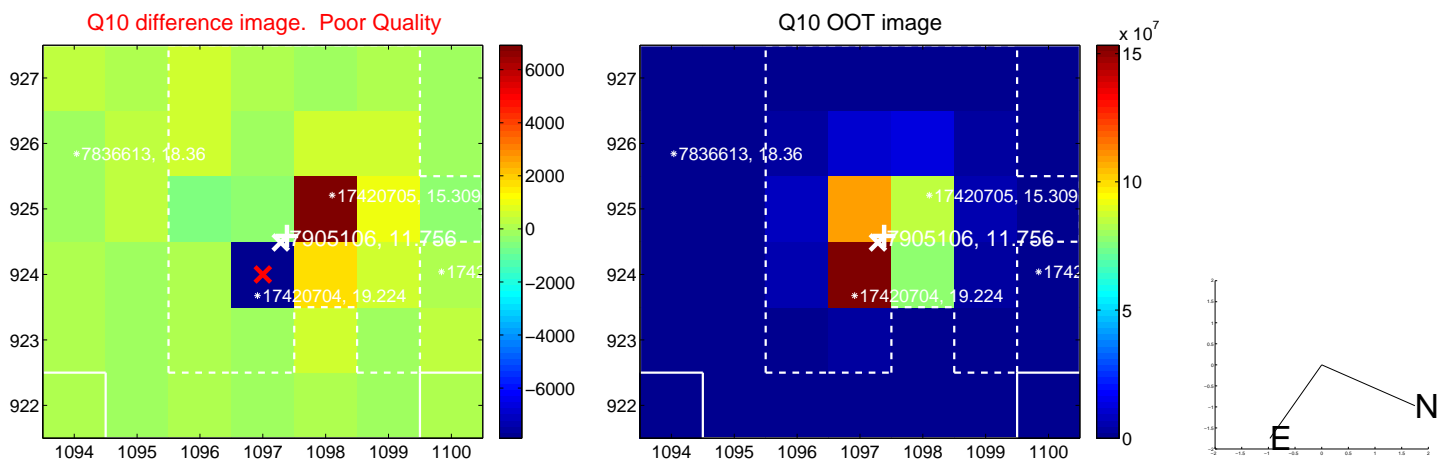
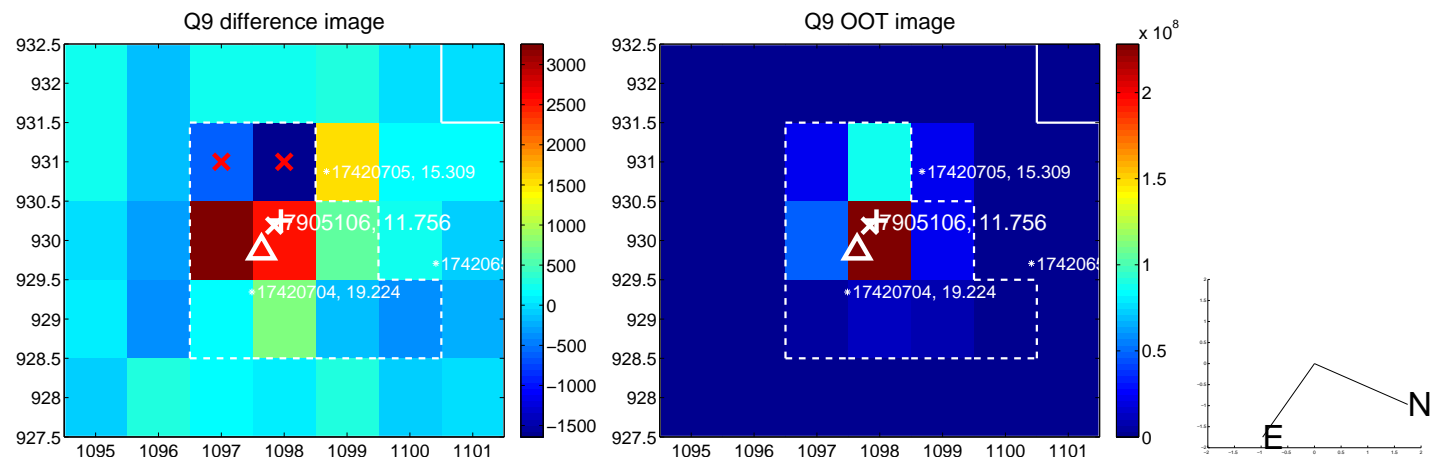
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



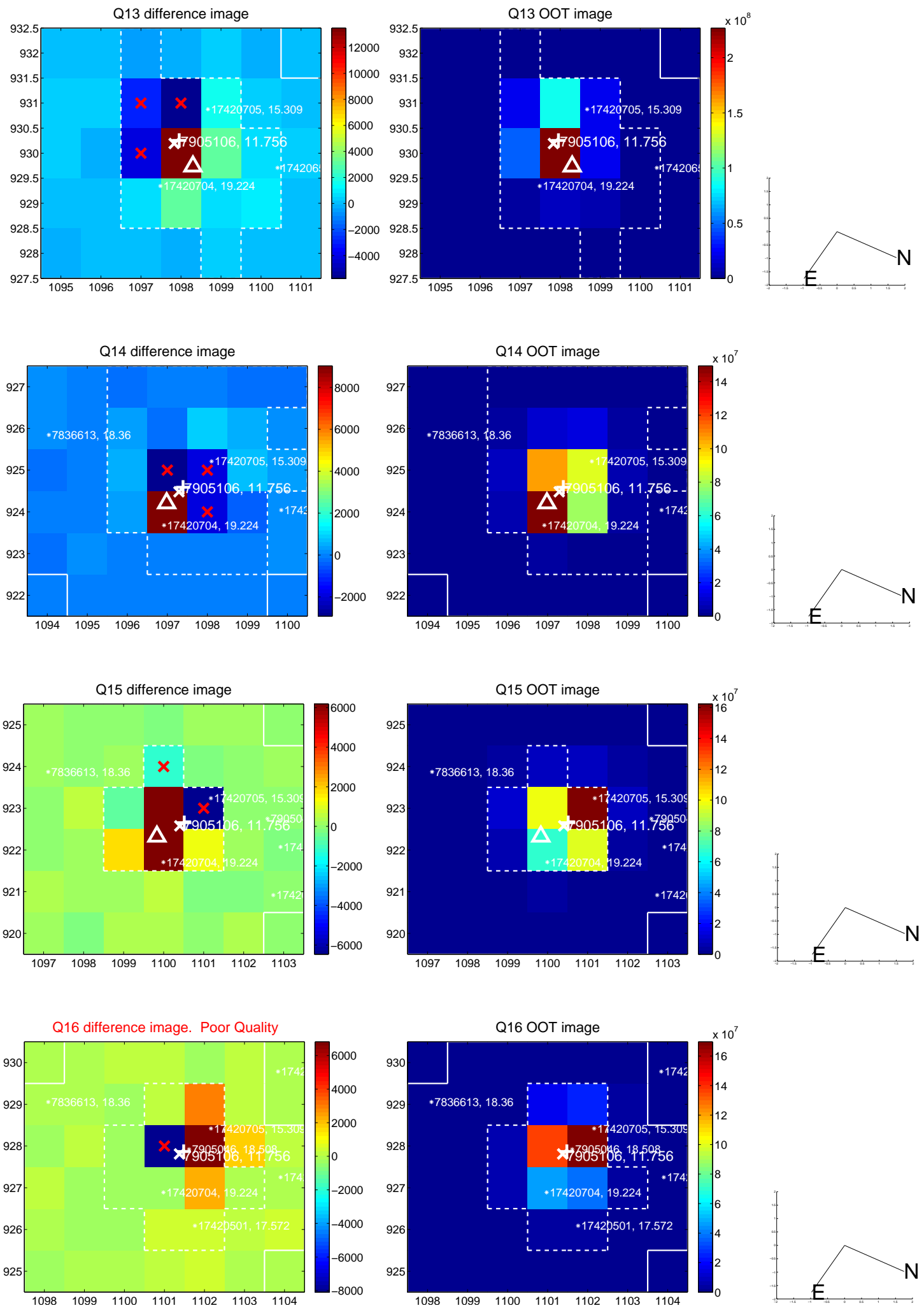
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



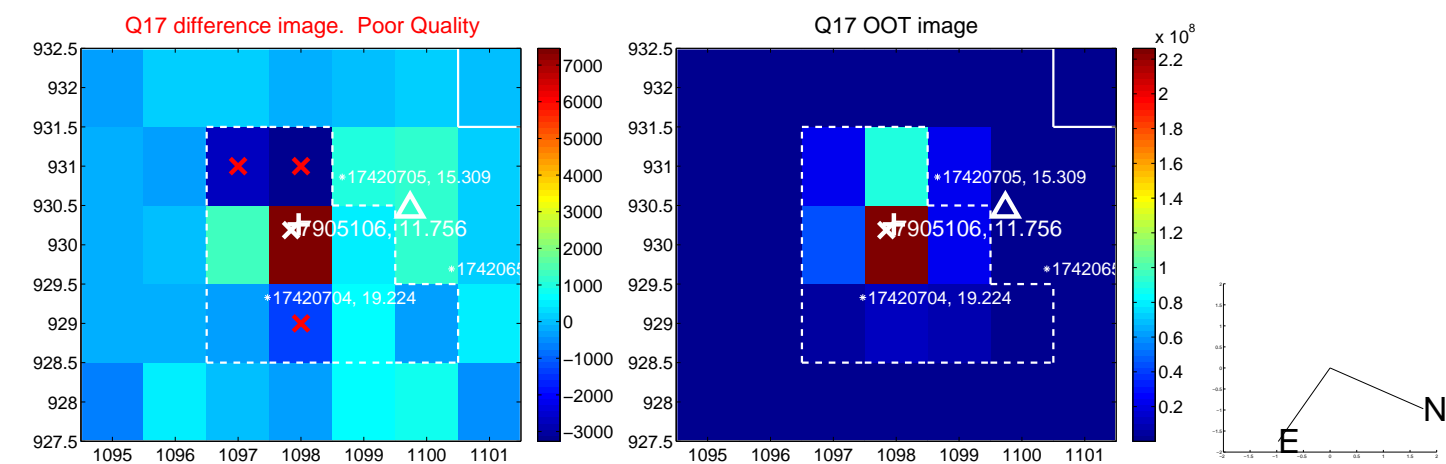
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



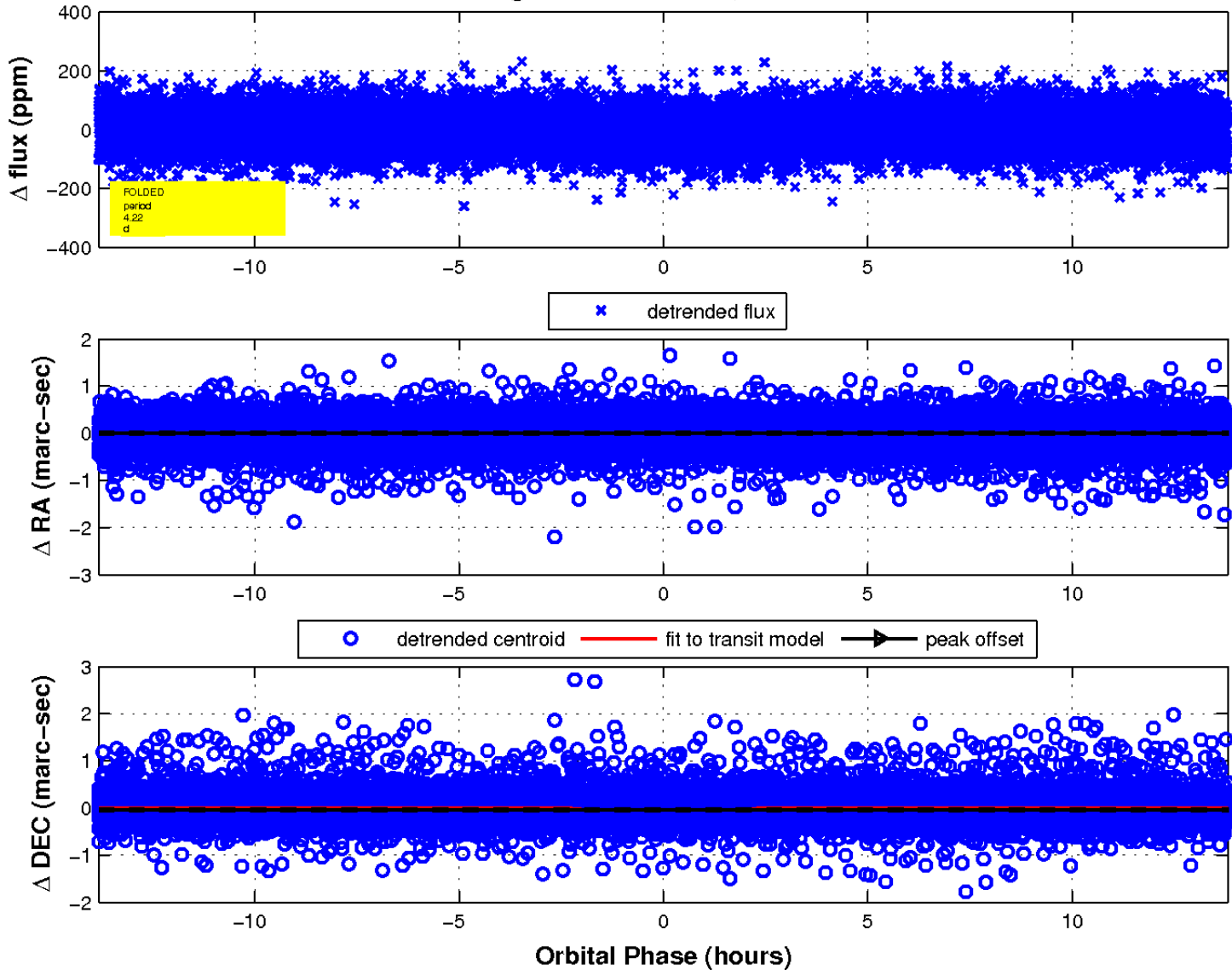
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

