

KIC 011605209

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})
011605209-01	OBS	No	1.862494	132.051040	157.4	22.350	8.4	15.3	0.39	3646	0.65	48.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011605209-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

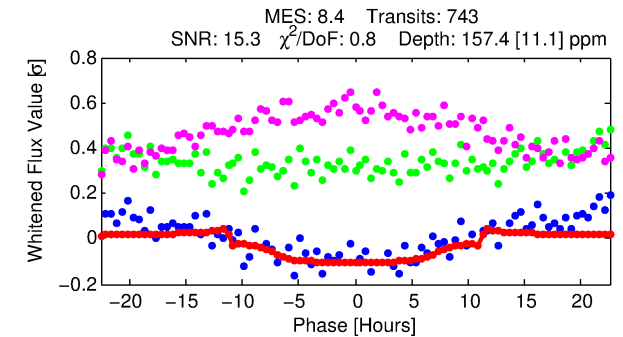
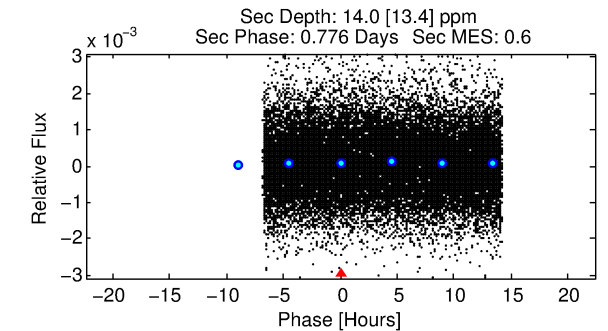
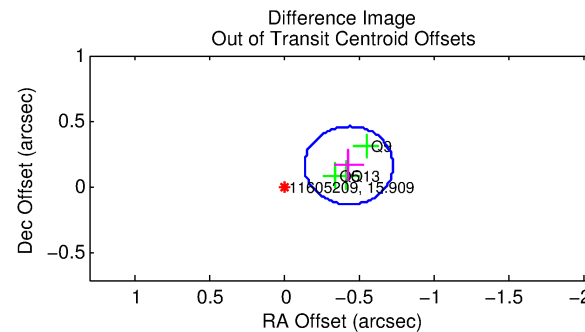
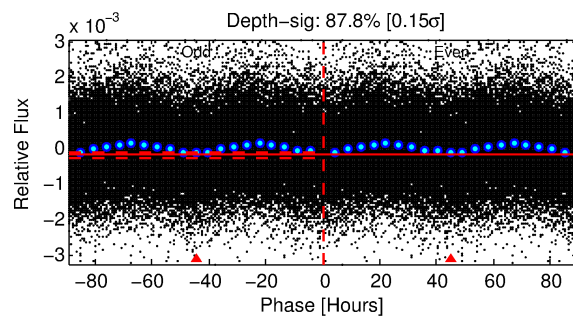
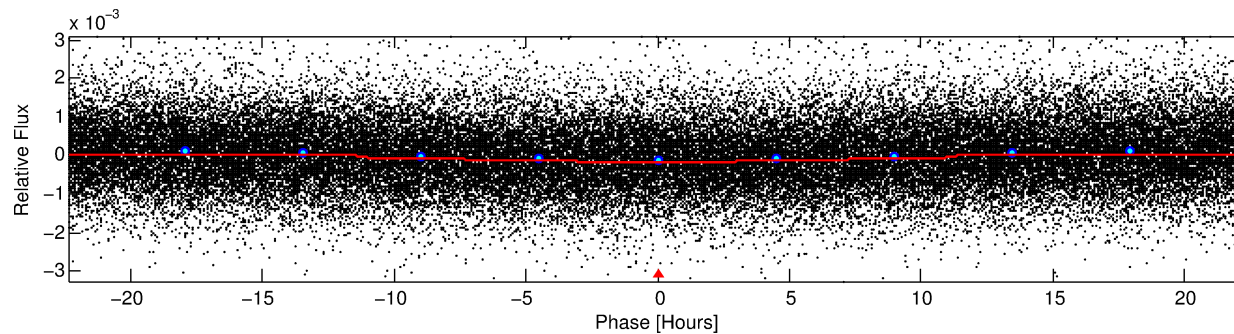
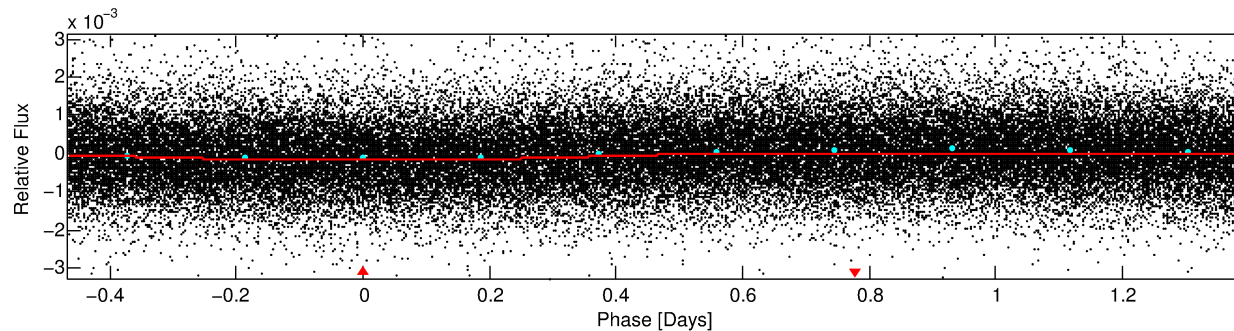
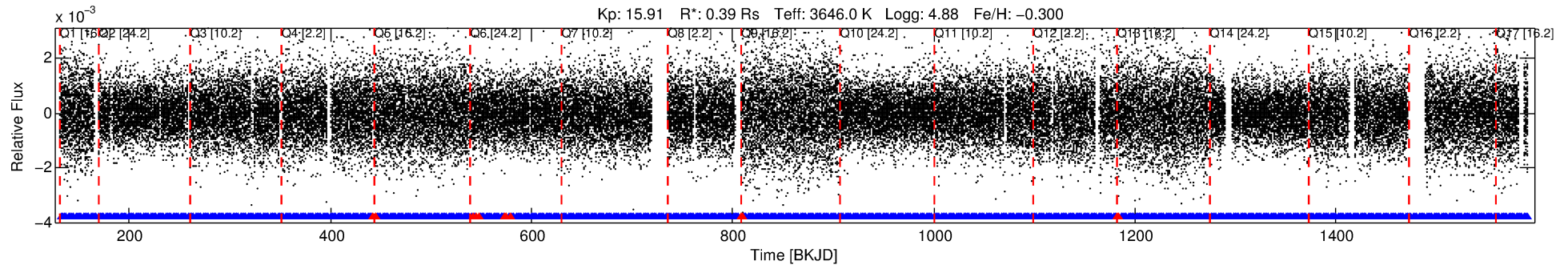
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011605209-01

No Significant Match Found

DV One-Page Summary

KIC: 11605209 Candidate: 1 of 1 Period: 1.862 d



DV Fit Results:

Period = 1.86249 [0.00003] d
Epoch = 132.0510 [0.0078] BKJD
Rp/R* = 0.0152 [0.0008]
a/R* = 1.00 [0.00]
b = 0.97 [0.01]
Seff = 48.98 [5.82]
Teq = 675 [20] K
Rp = 0.65 [0.07] Re
a = 0.0221 [0.0017] AU
Ag = 9.03 [8.74] [0.92 σ]
Teff = 1808 [437] K [2.59 σ]

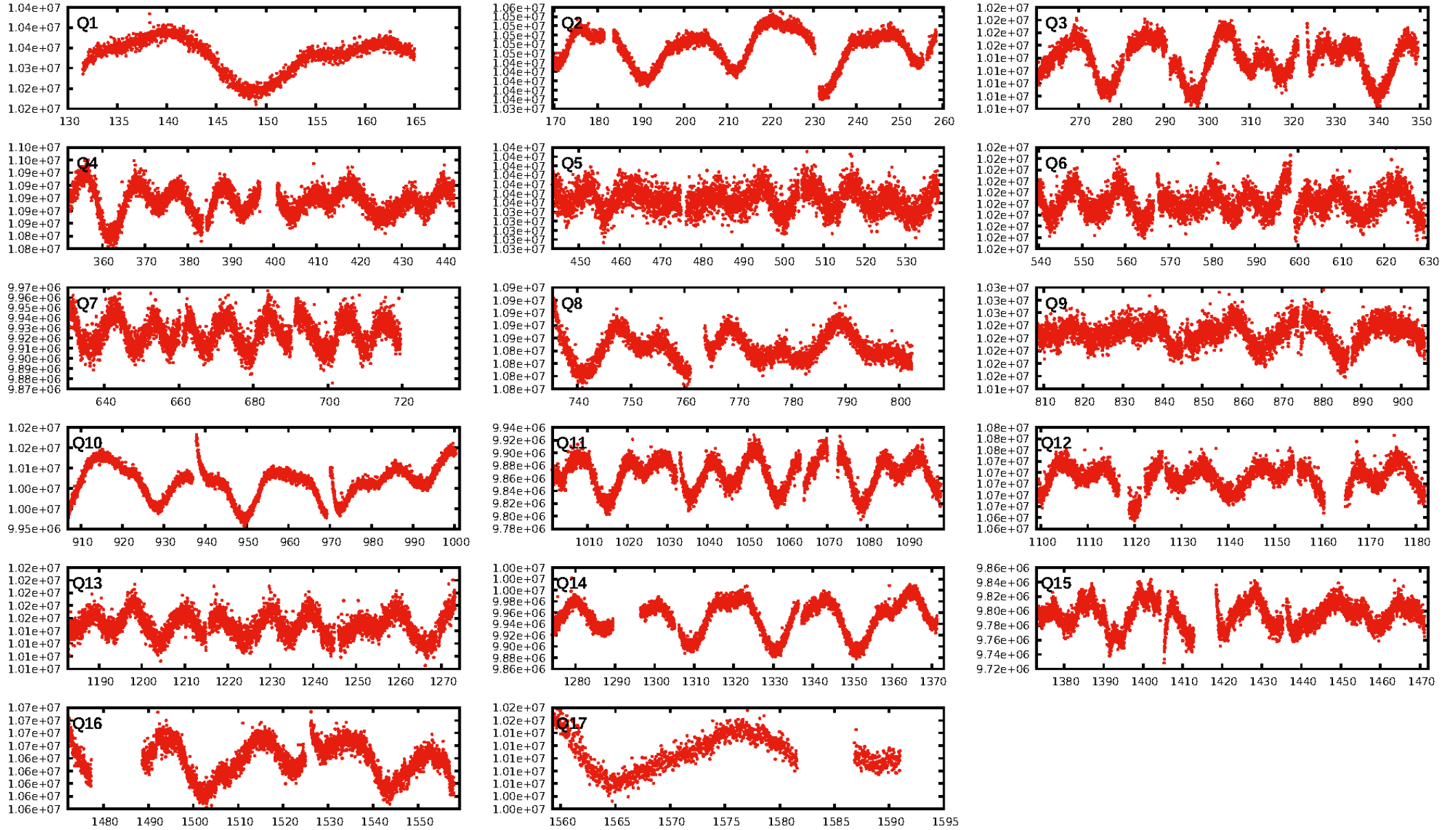
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [698/710]
GhostDiagnostic-chr: 2.795
Centroid-sig: 16.3%
Centroid-so: 0.756 arcsec [1.42 σ]
OotOffset-rm: 0.466 arcsec [4.74 σ]
KicOffset-rm: 0.640 arcsec [6.33 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [17/17]

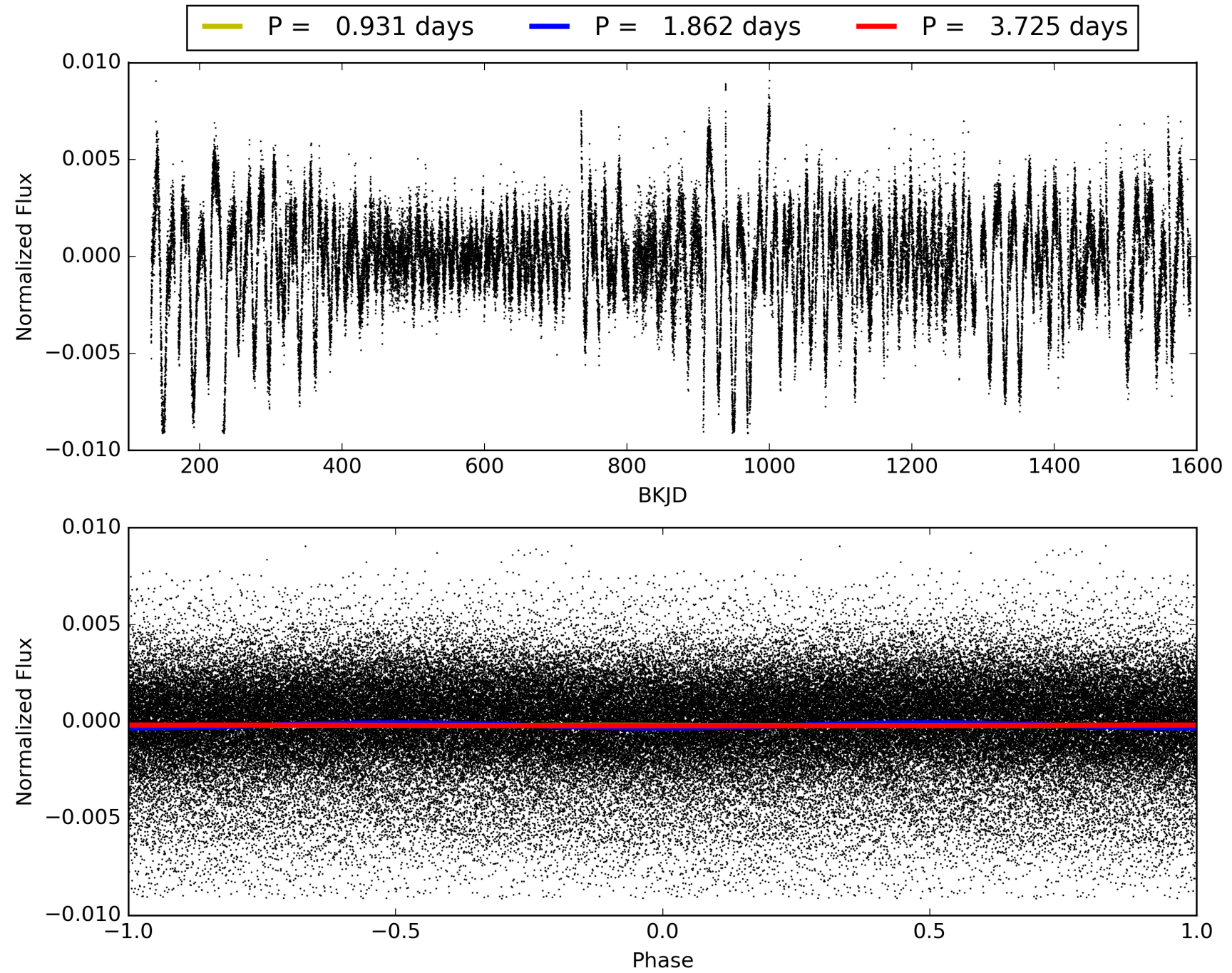
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:15:25 Z

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

TCE 011605209-01, PDC Light Curves

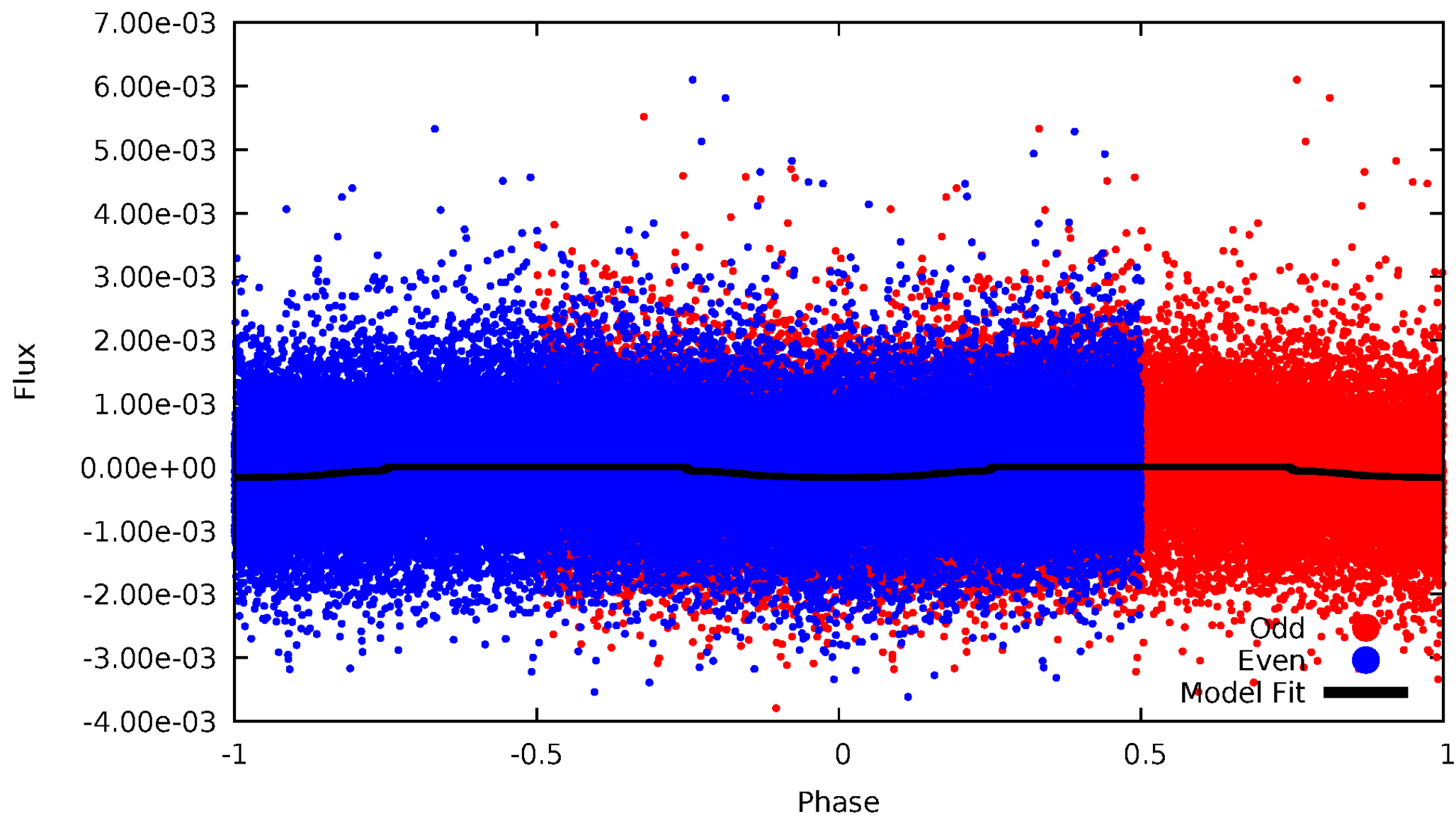


TCE 011605209-01



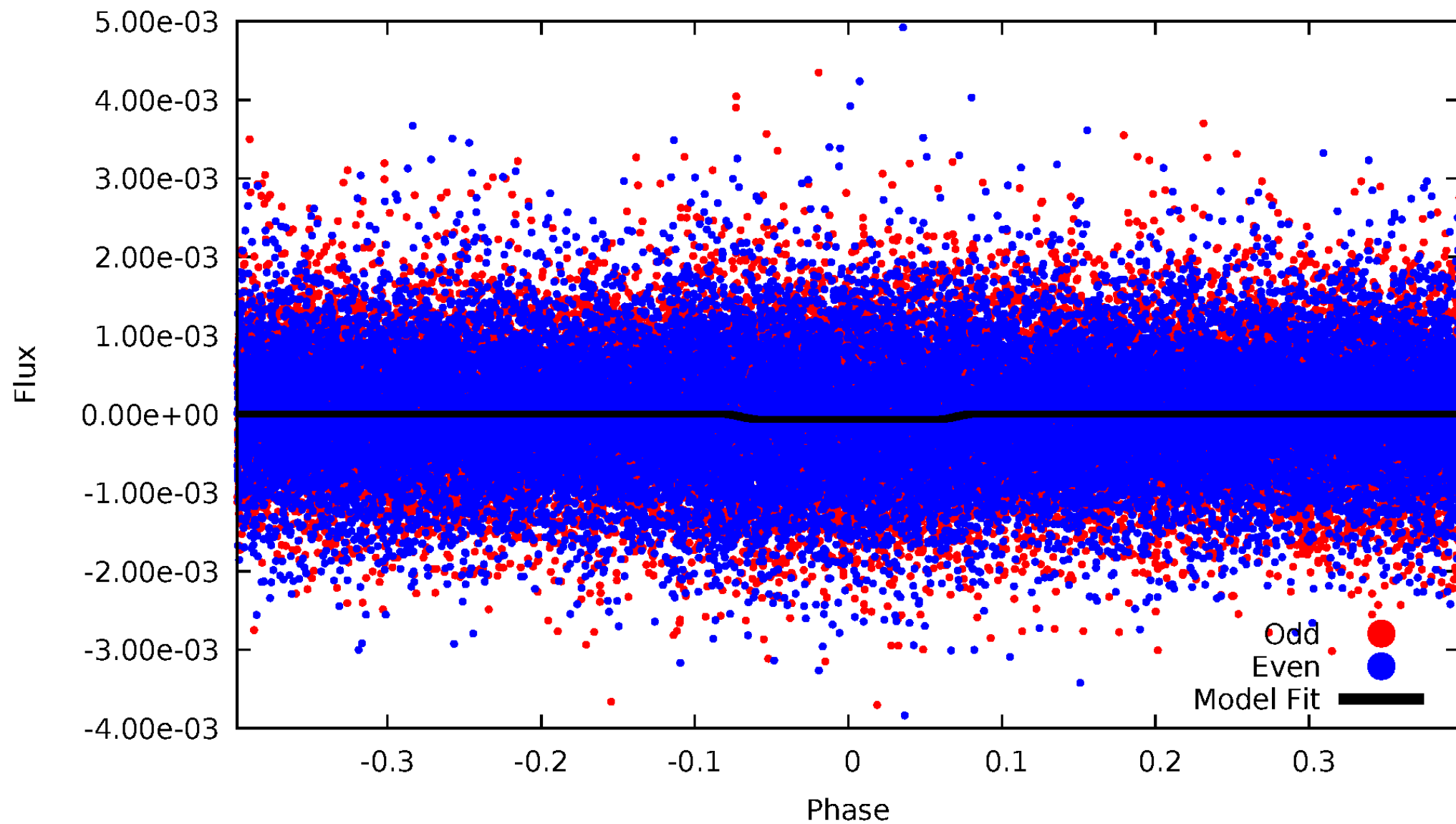
DV Odd/Even

TCE 011605209-01



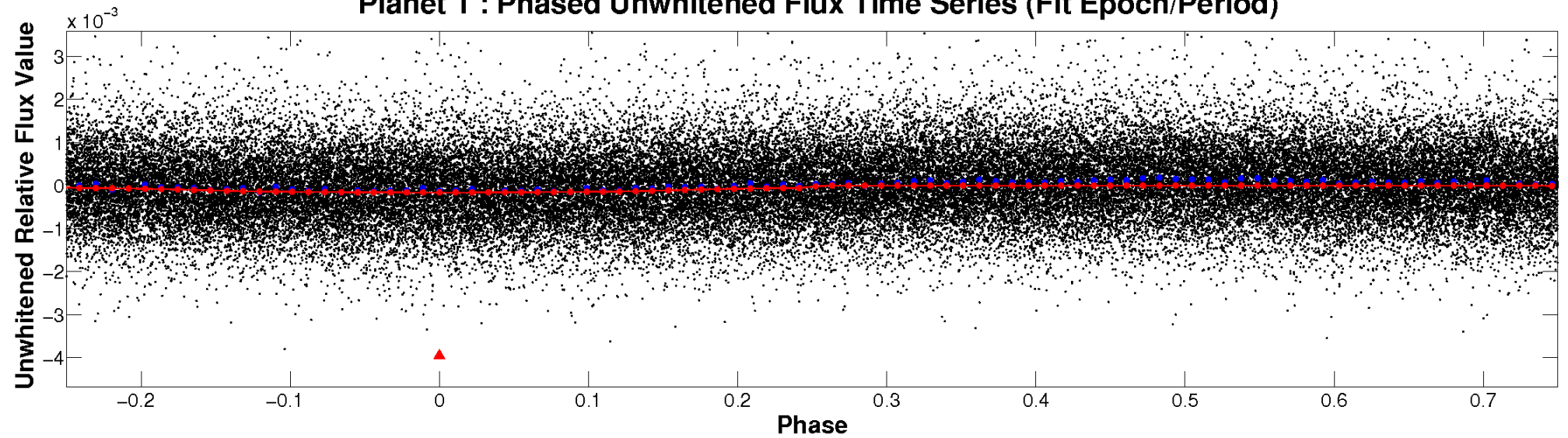
ALT Odd/Even

TCE 011605209-01

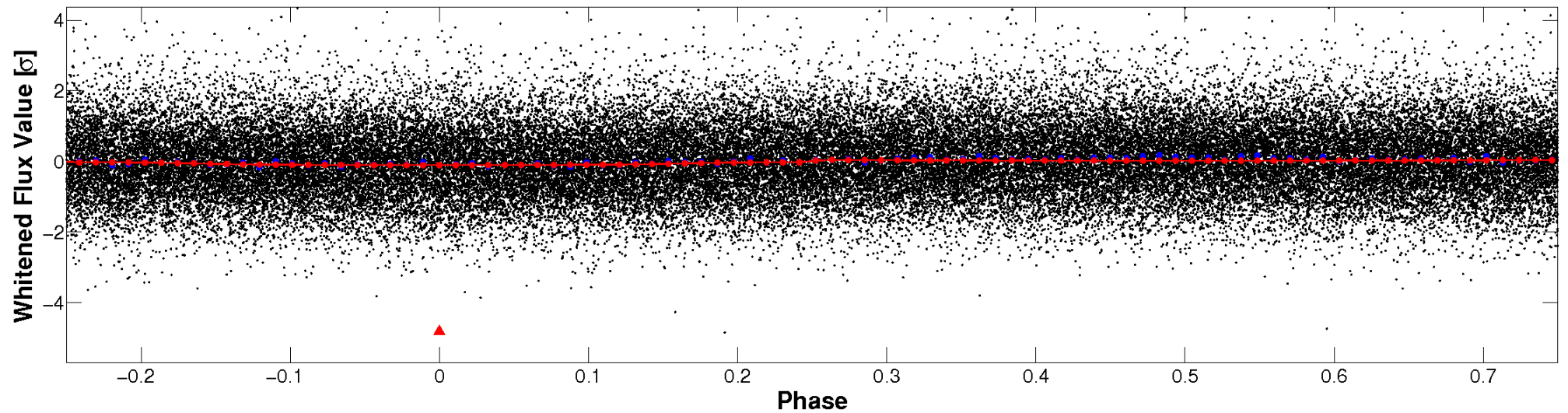


Non-Whitened Vs. Whitened Light Curve

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

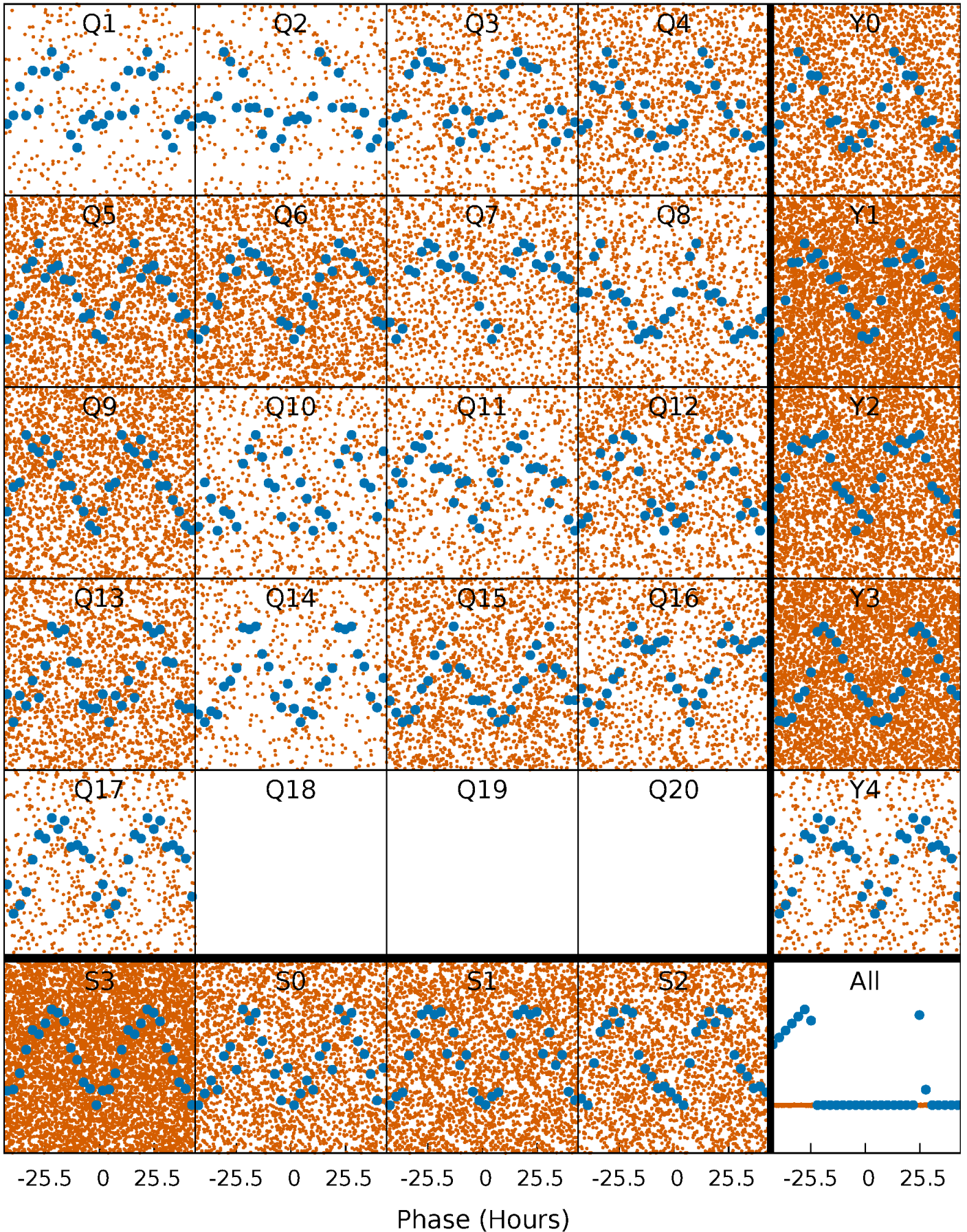


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



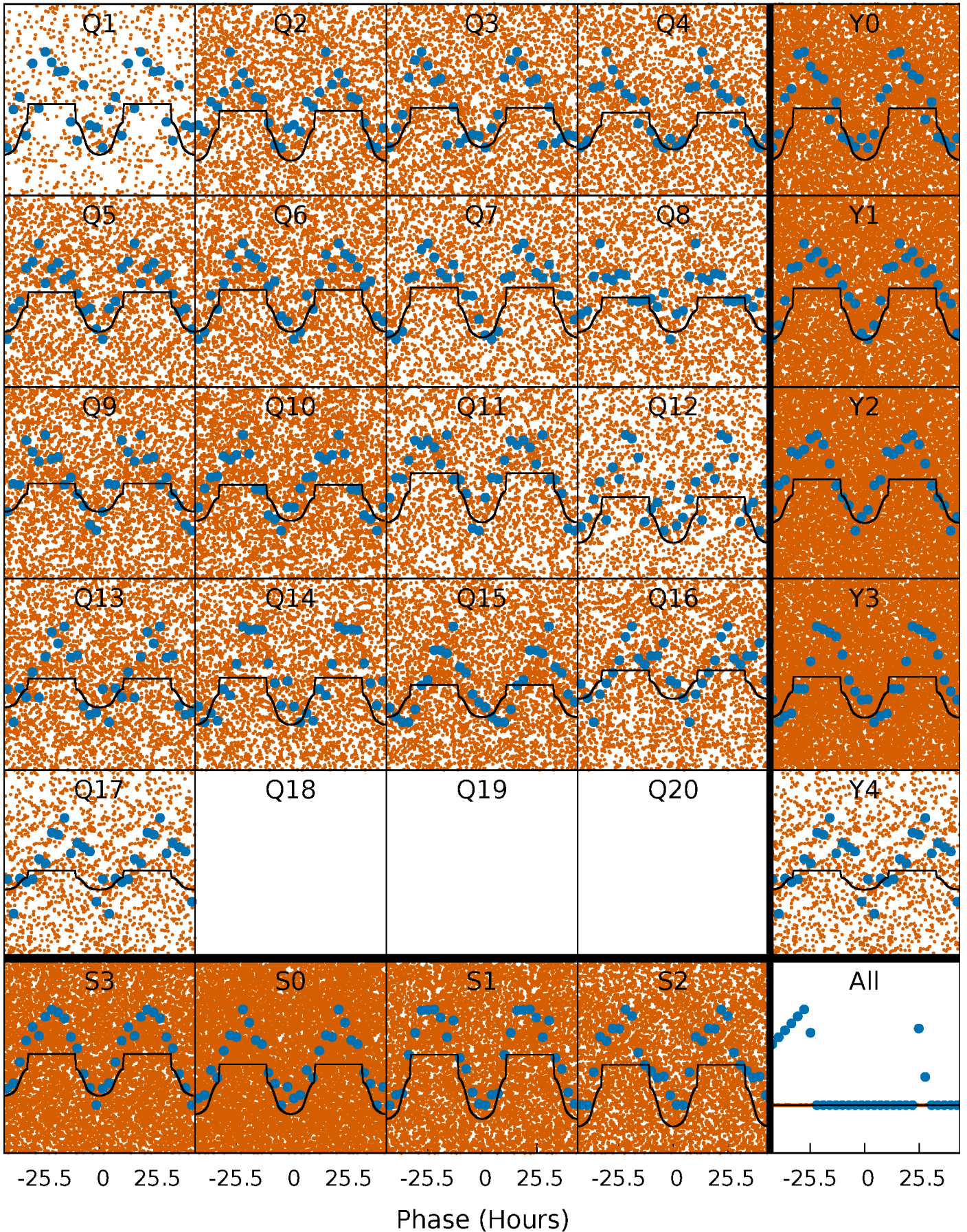
PDC Quarter-Phased Transit Curves

TCE 011605209-01 P= 1.862494 Days $T_0=132.051040$ (BKJD)



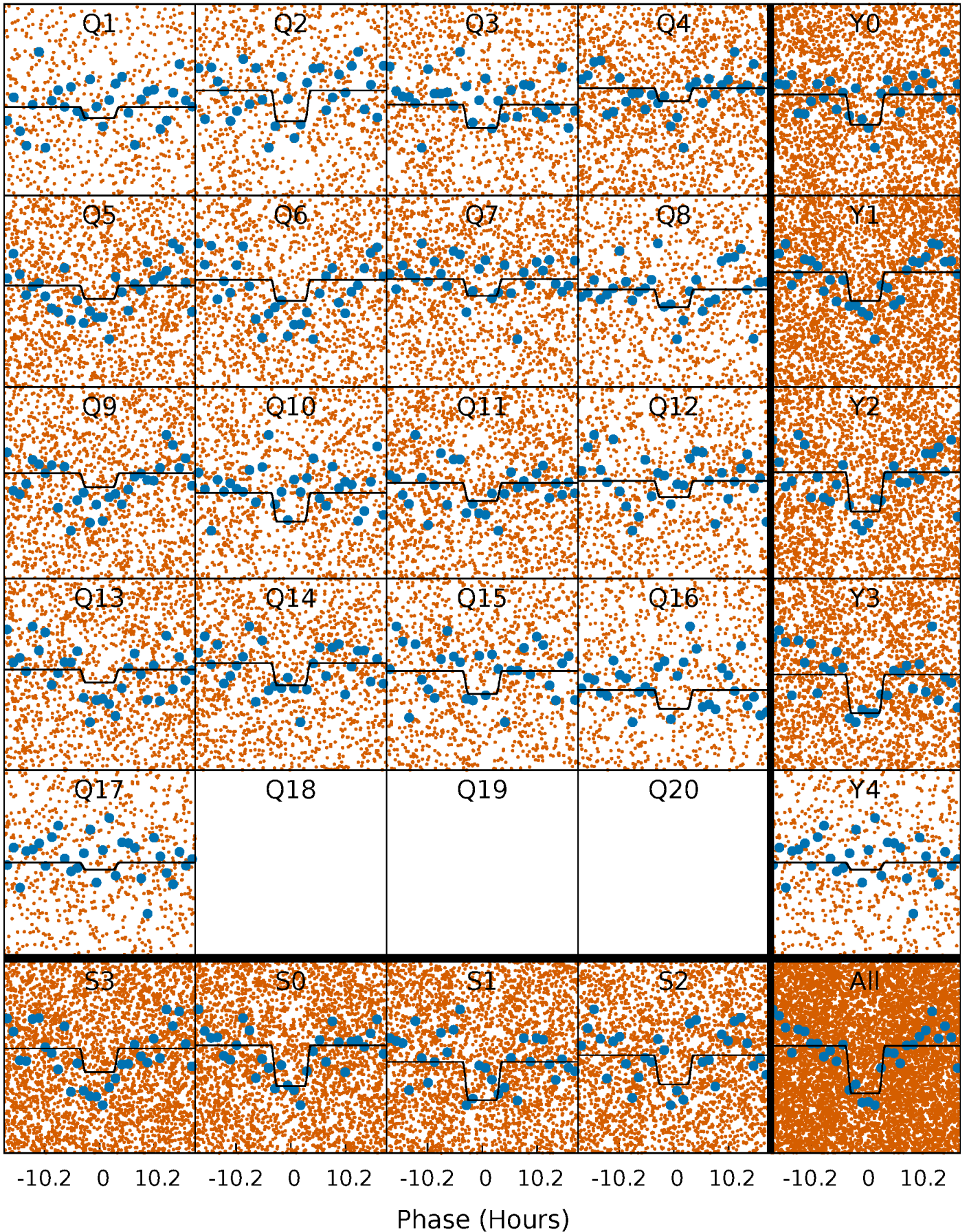
DV Quarter-Phased Transit Curves

TCE 011605209-01 P= 1.862494 Days $T_0=132.051040$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

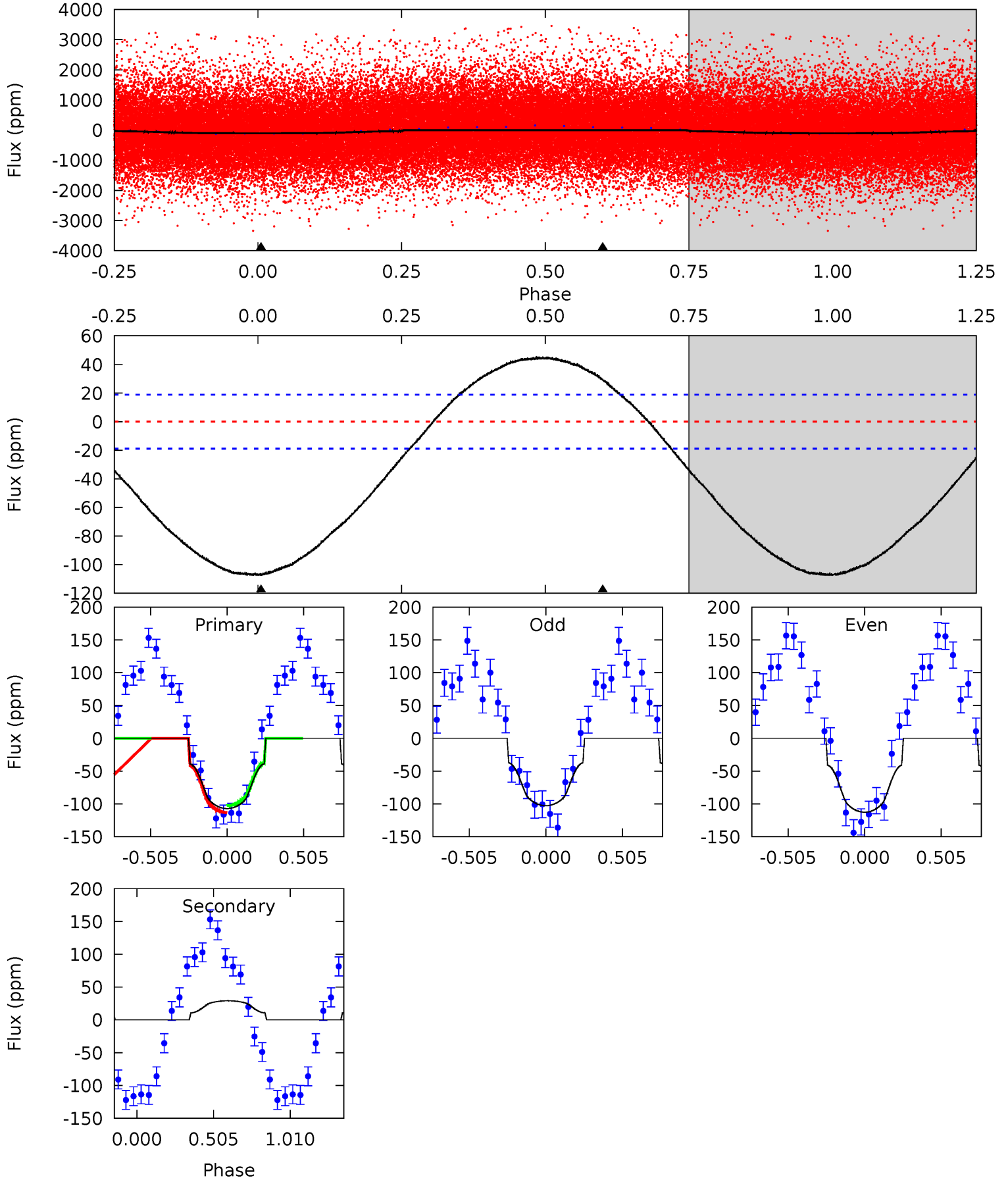
TCE 011605209-01 P= 1.861746 Days $T_0=132.255773$ (BKJD)



DV Model-Shift Uniqueness Test

011605209-01, P = 1.862494 Days, E = 130.188546 Days

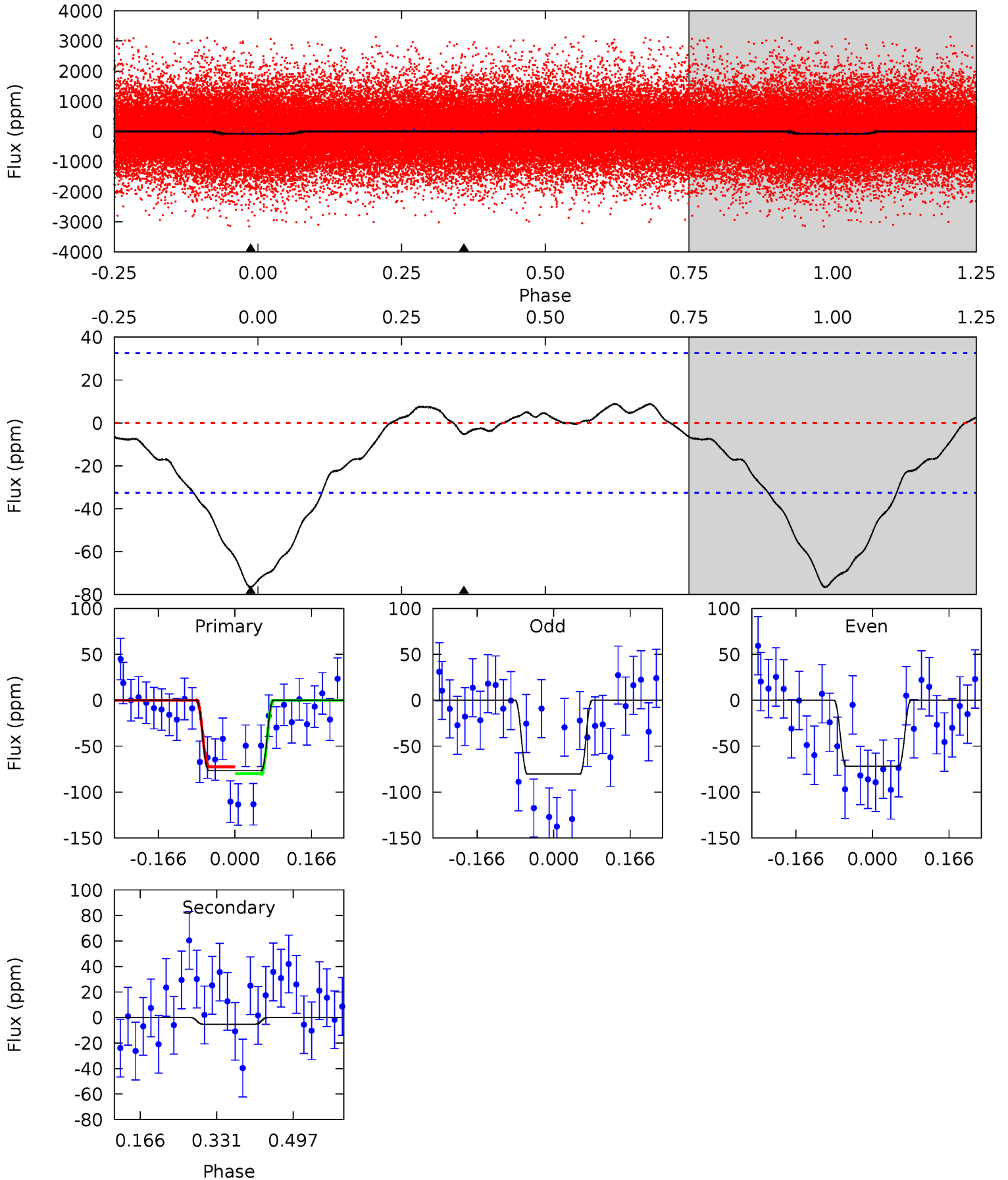
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.9	-6.49	0	0	4.21	0.67	2.86	23.9	23.9	-6.49	-6.49	1.11	1.01	0.30	1.17



Alt Model-Shift Uniqueness Test

011605209-01, P = 1.861746 Days, E = 130.394027 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	0.71	0	0	4.46	1.39	1.12	10.5	10.5	0.71	0.71	0.58	1.07	0.10	0.51



Stellar Parameters For KIC 011605209

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3646^{+58}_{-65}	$4.877^{+0.036}_{-0.044}$	$-0.300^{+0.100}_{-0.100}$	$0.389^{+0.035}_{-0.039}$	$0.416^{+0.033}_{-0.050}$	$9.974^{+2.226}_{-1.668}$
	+2%/-2%	+1%/-1%	+33%/-33%	+9%/-10%	+8%/-12%	+22%/-17%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 011605209-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	29 ± 4	$0.65^{+0.05}_{-0.05}$	943^{+22}_{-22}	-2699^{+78}_{-73}	$-18.527^{+3.673}_{-3.922}$
Alt.	-5 ± 7	$0.35^{+0.05}_{-0.04}$	945^{+24}_{-23}	2519^{+344}_{-4865}	11^{+18}_{-16}

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 $A_{obs} \gg 1.0$

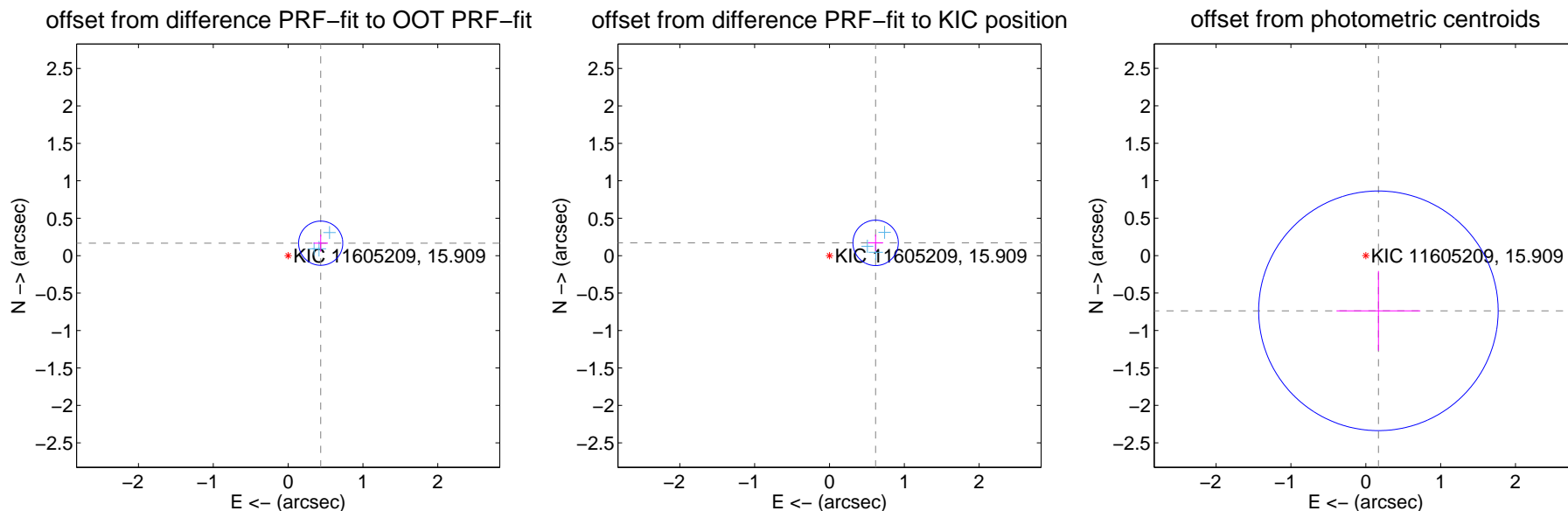
DV Centroid Data

Supplemental centroid analysis for 011605209-01. Kepler magnitude: 15.91. Transit SNR 15.32

There are 3 quarters with good PRF difference image offsets

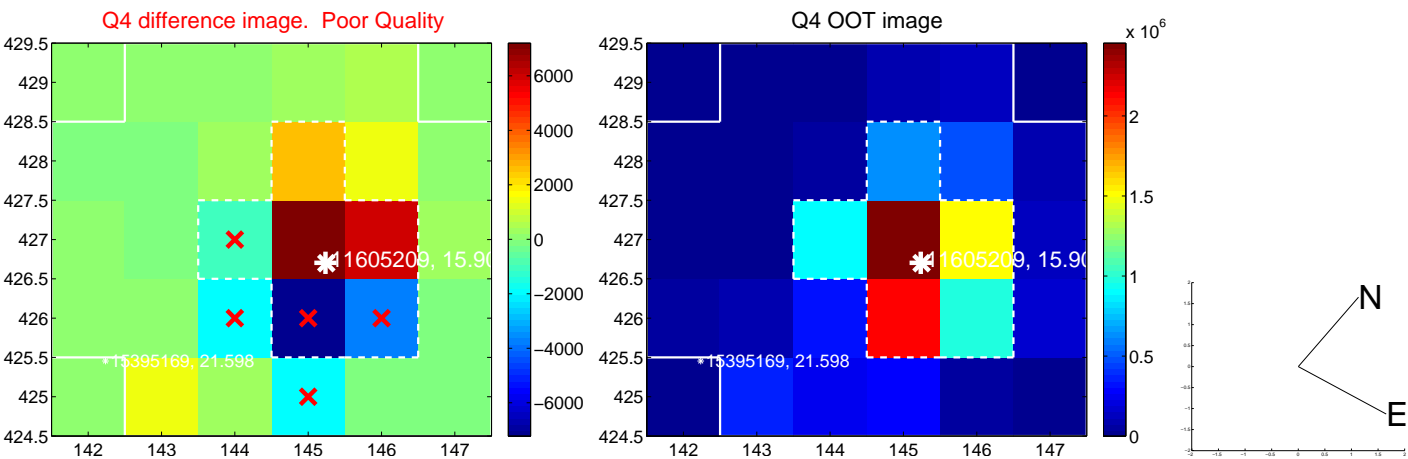
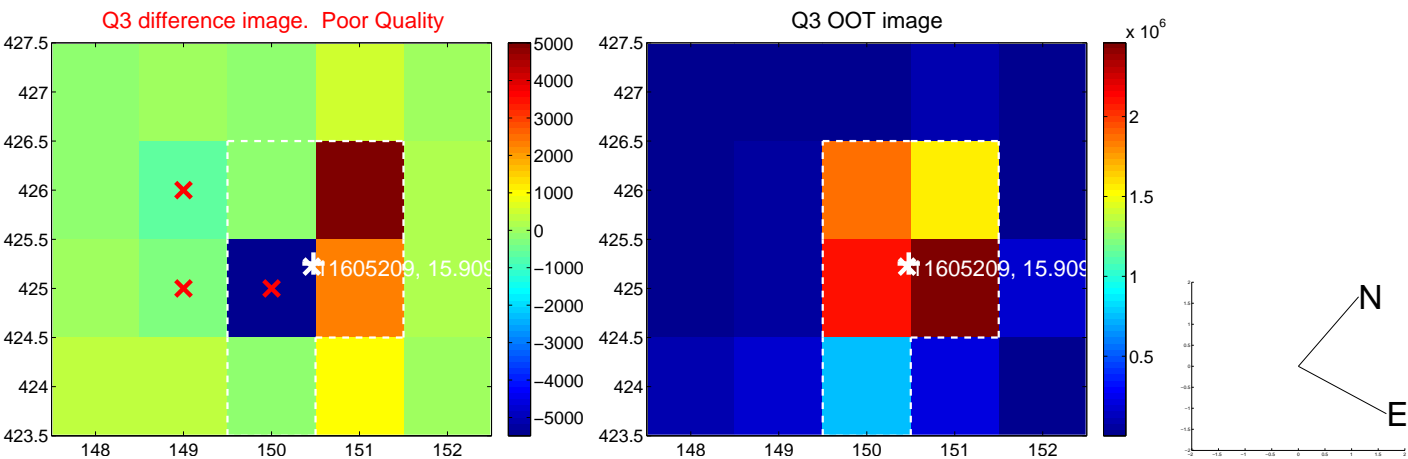
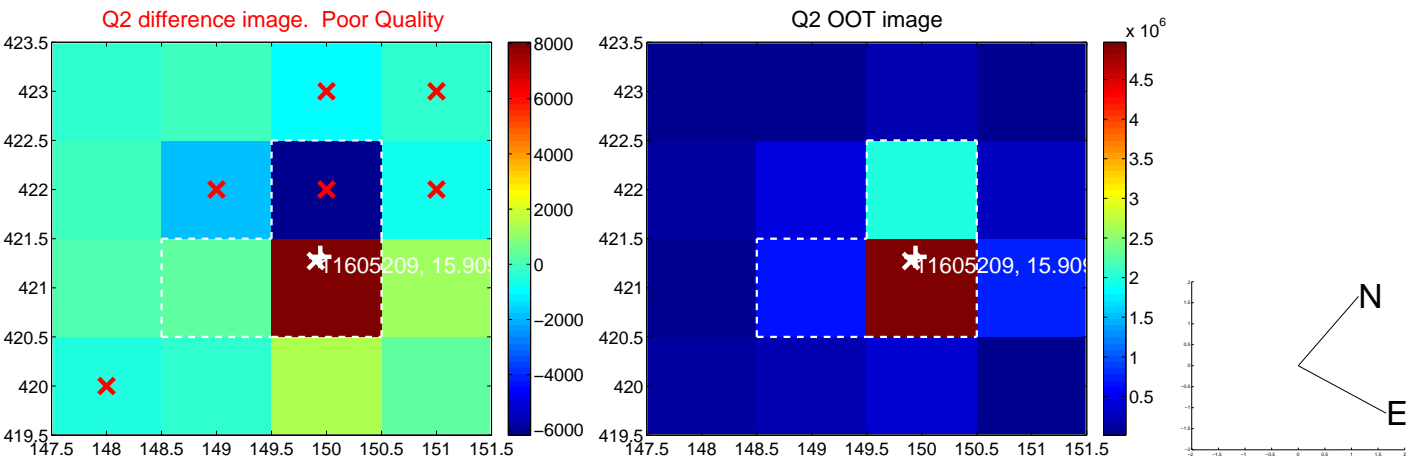
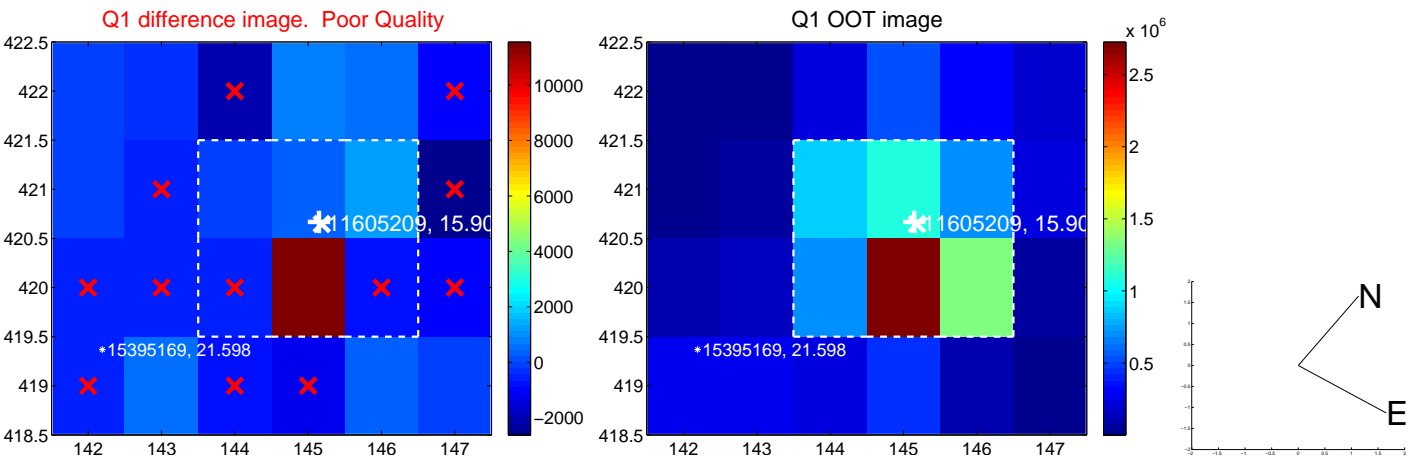
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.466 ± 0.098	4.74	-0.435 ± 0.096	0.166 ± 0.113
PRF-fit source offset from KIC position	0.640 ± 0.101	6.33	-0.617 ± 0.100	0.171 ± 0.111
photometric centroid source offset	0.76 ± 0.53	1.42	-0.17 ± 0.56	-0.74 ± 0.53

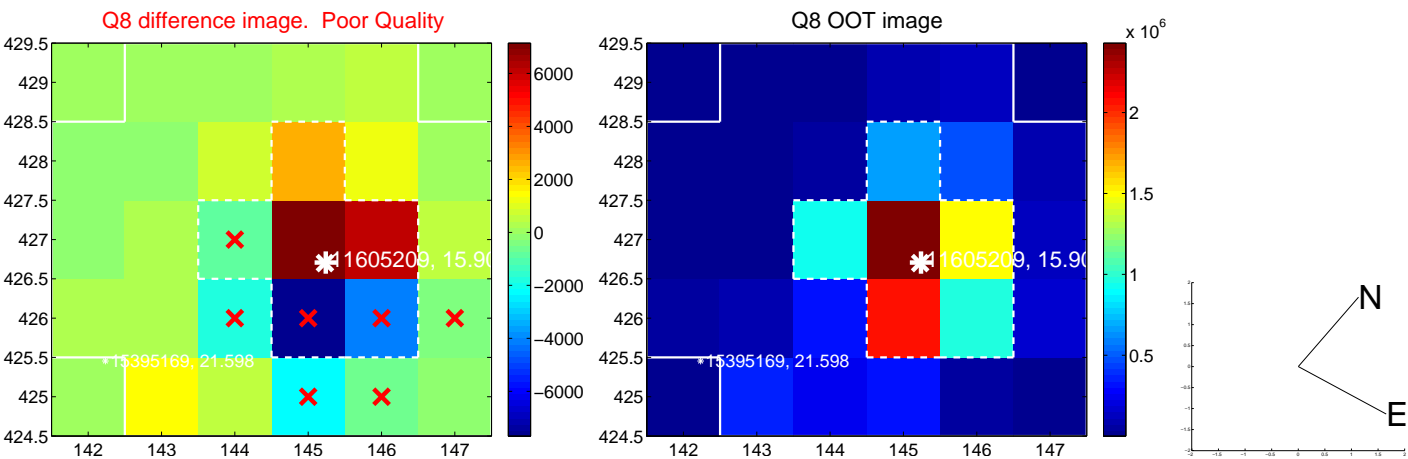
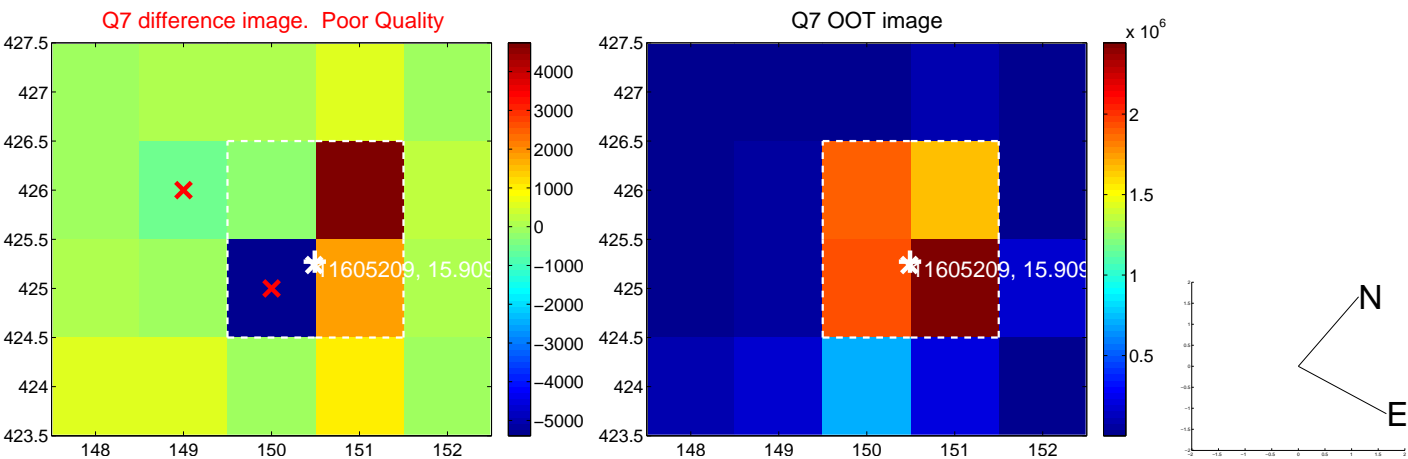
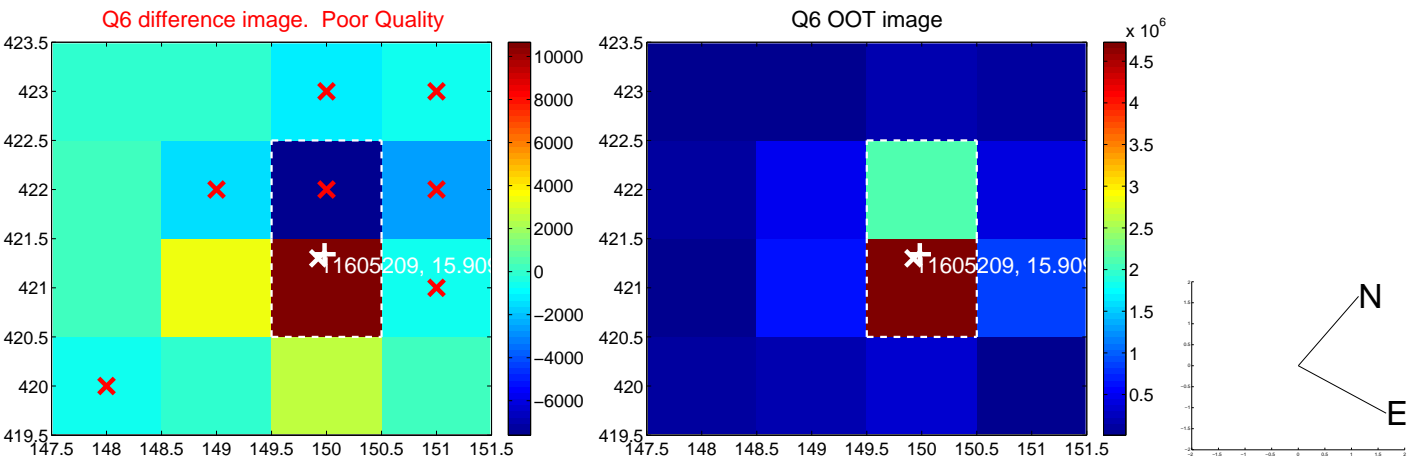
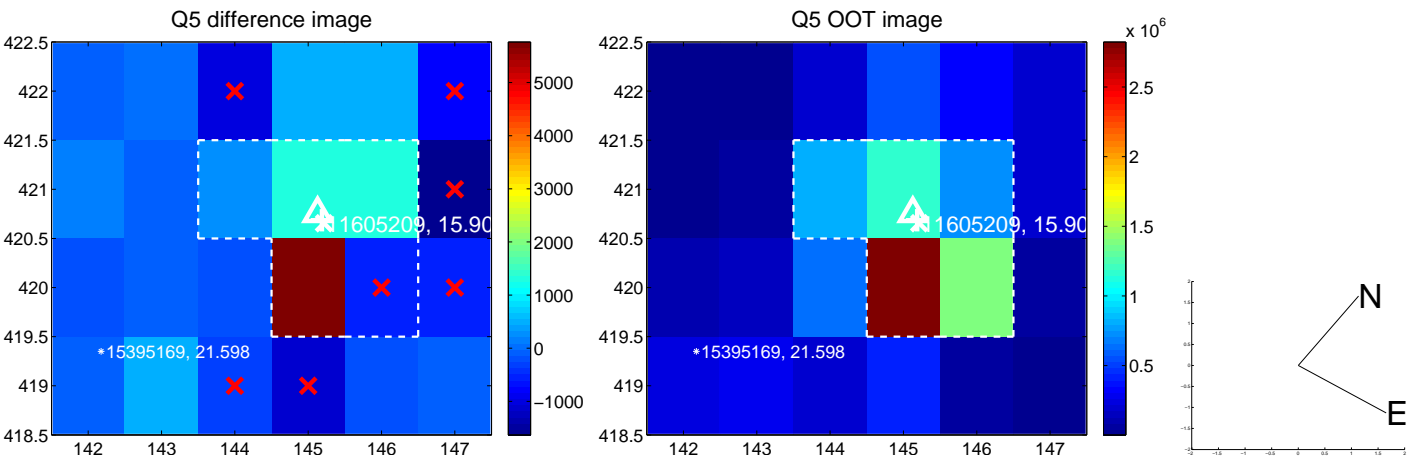


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

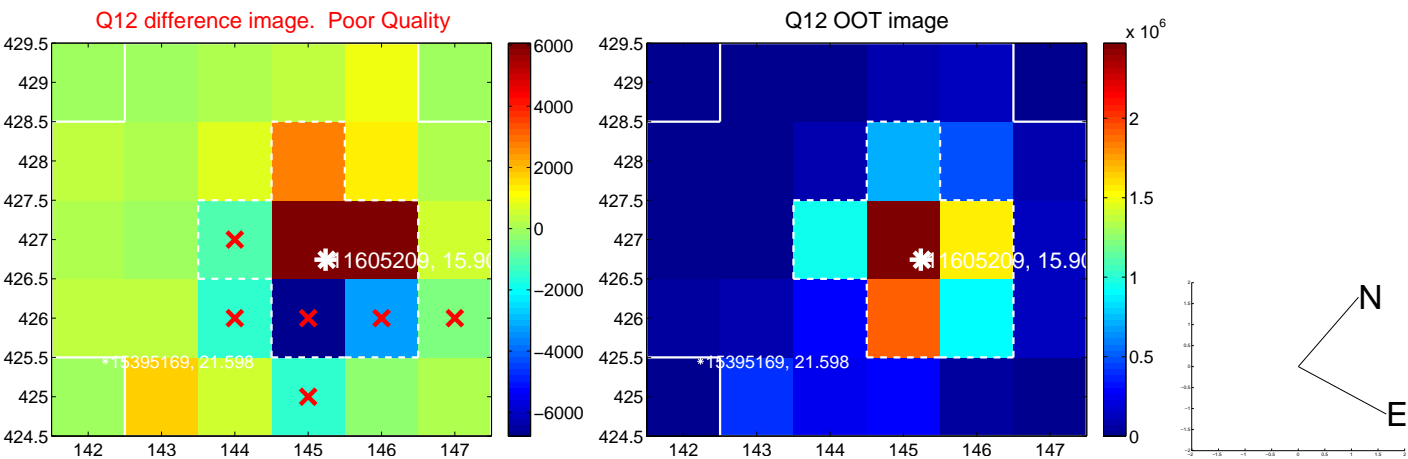
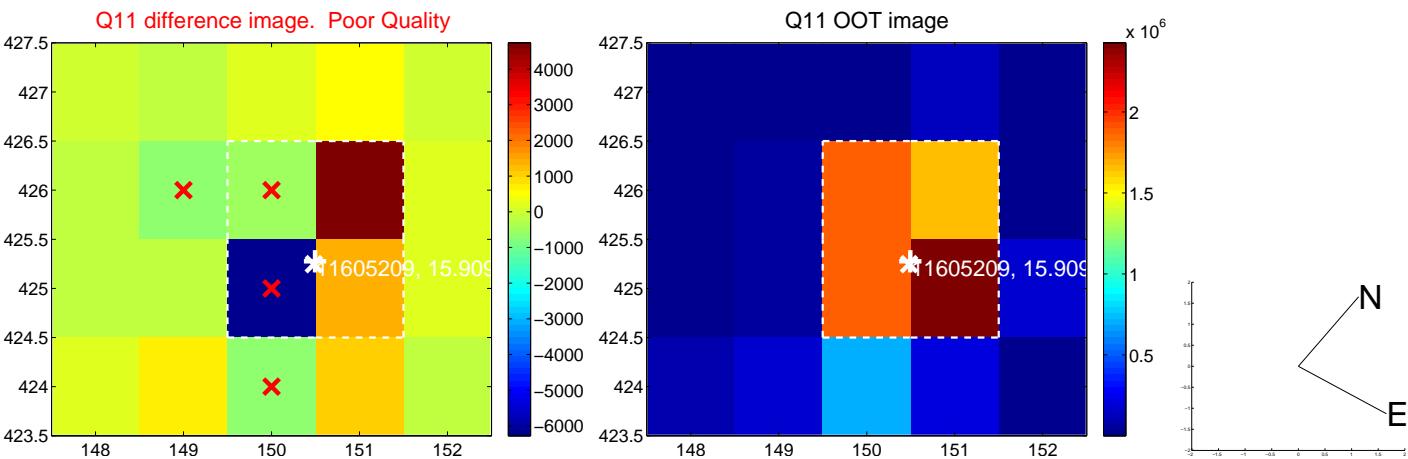
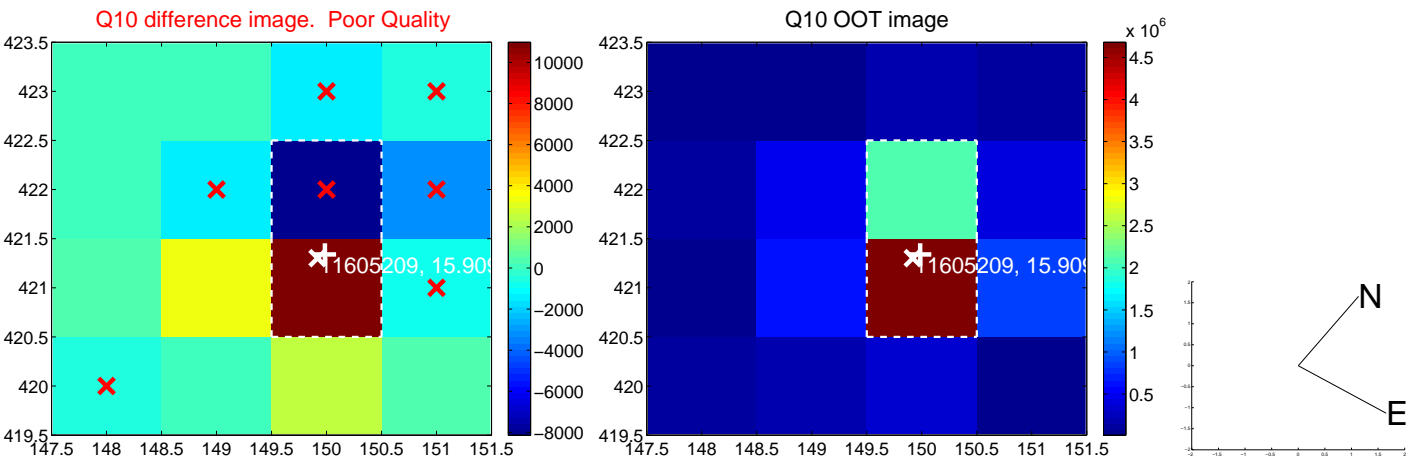
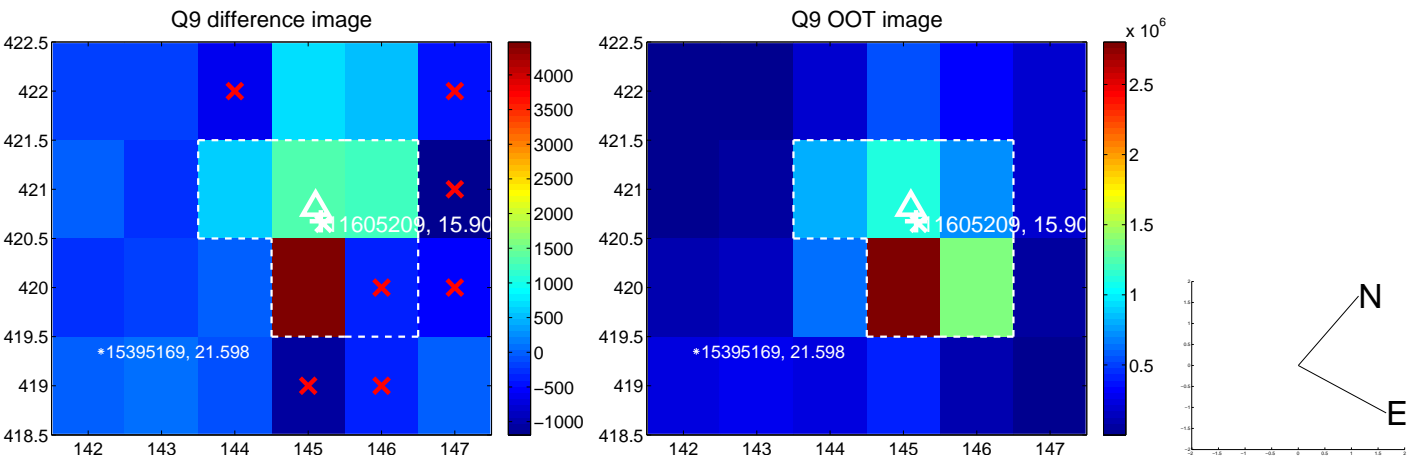
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



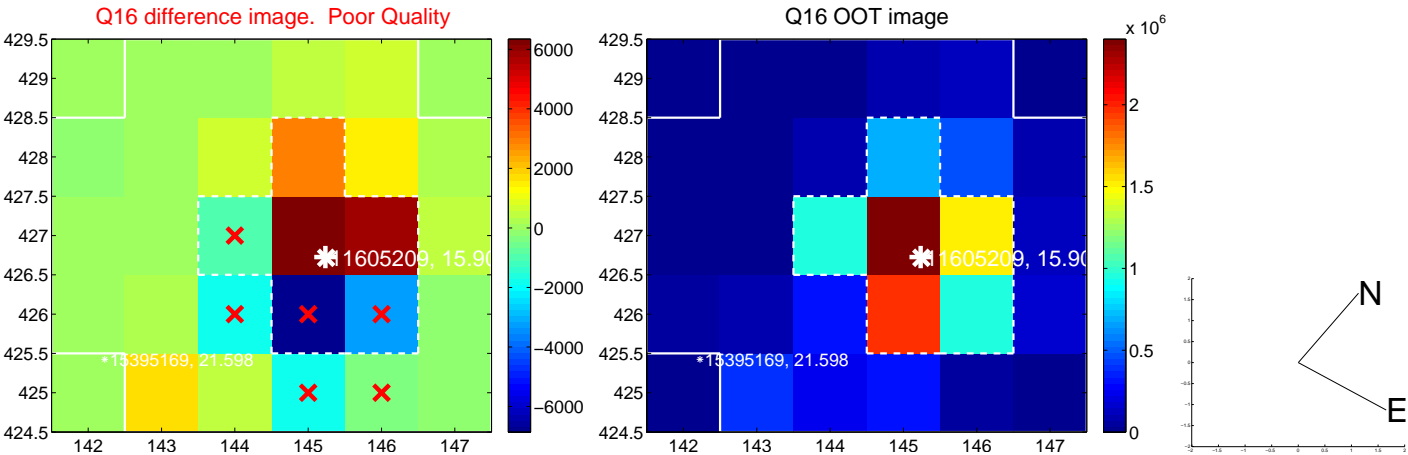
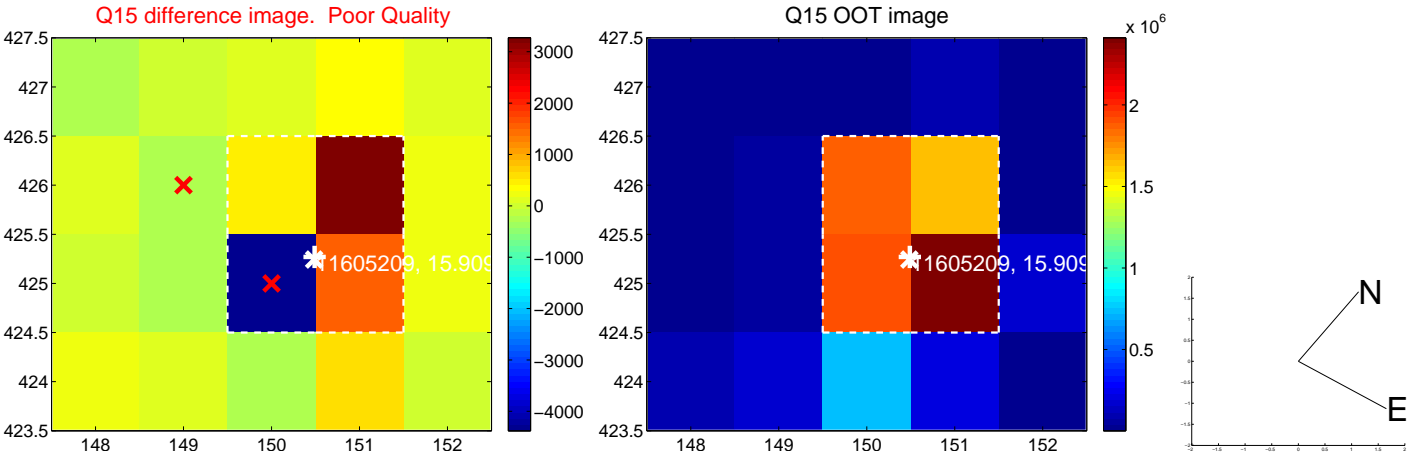
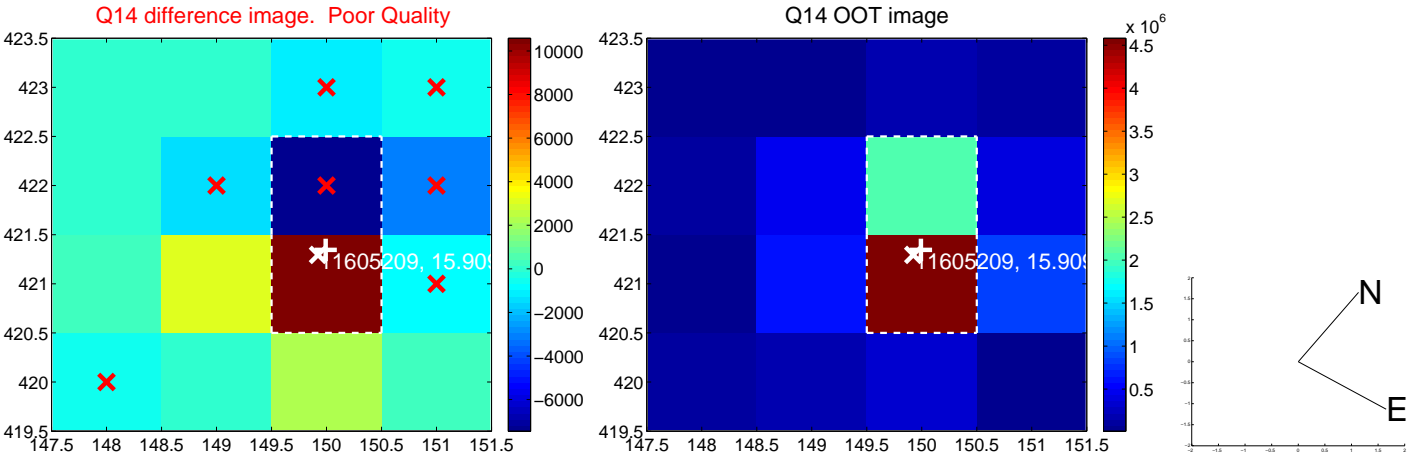
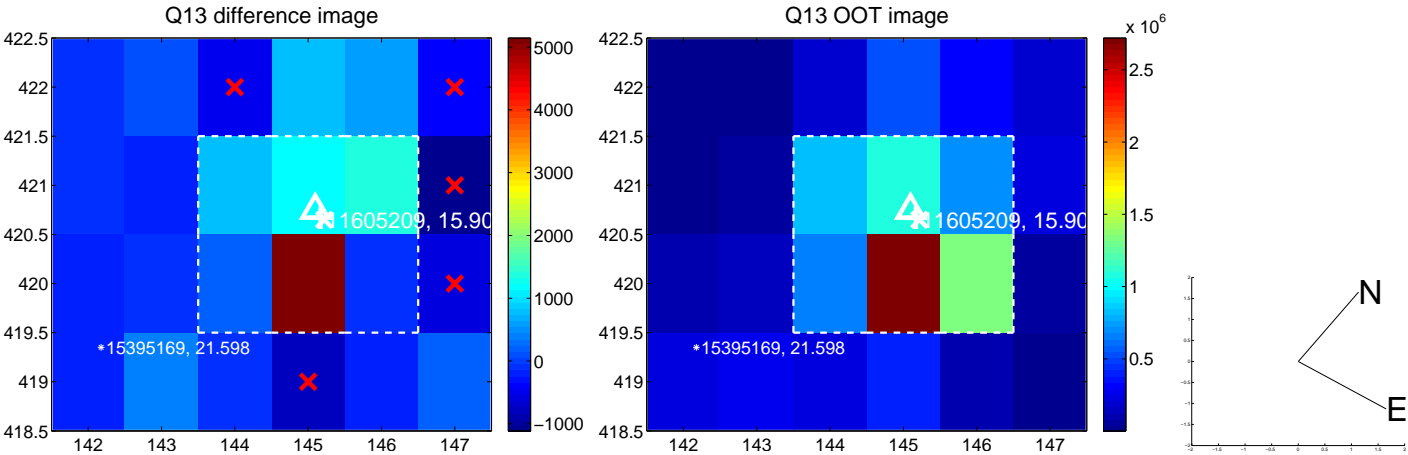
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



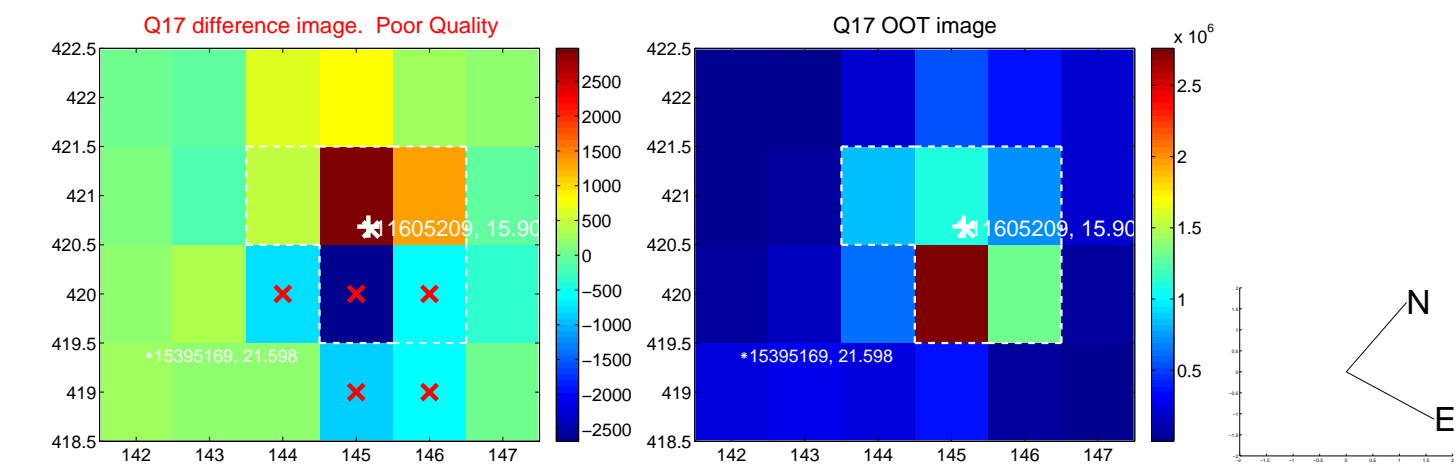
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



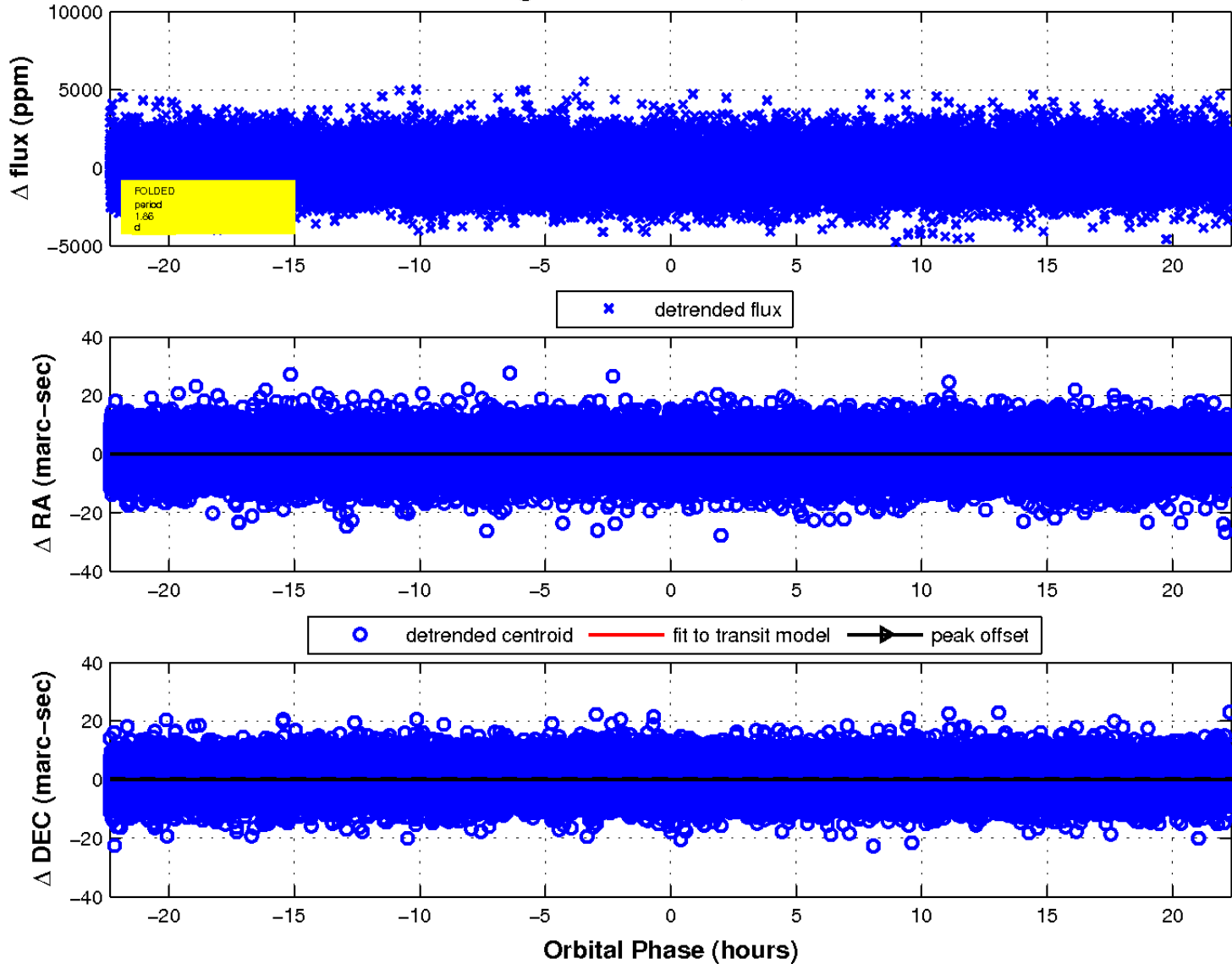
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

