

KIC 005725450

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})
005725450-01	OBS	No	2.588627	132.677458	22.9	8.186	8.9	8.5	1.24	6471	0.69	1582.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005725450-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

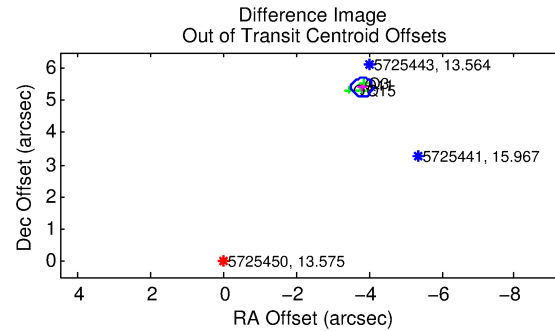
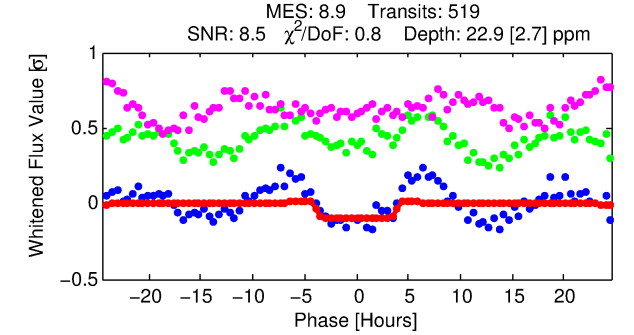
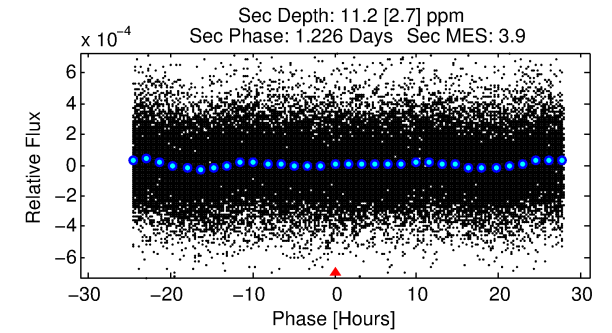
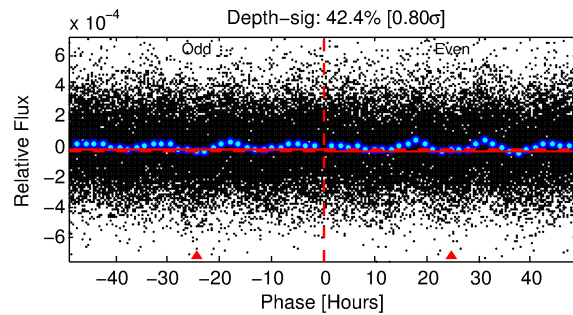
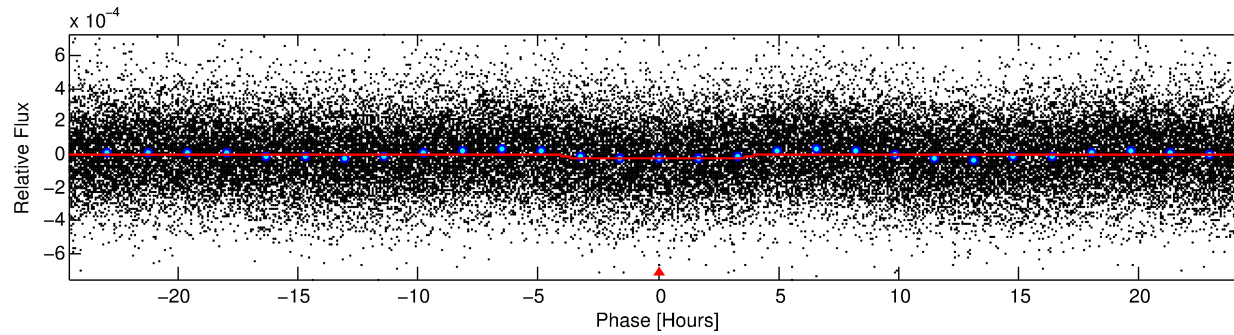
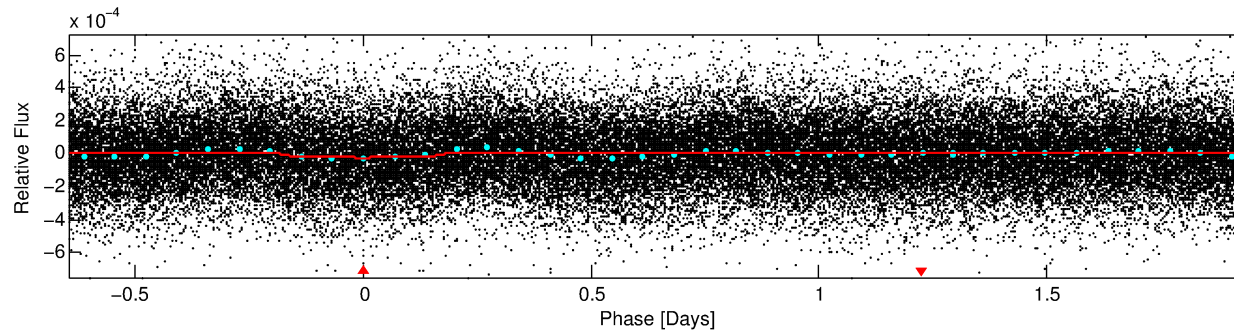
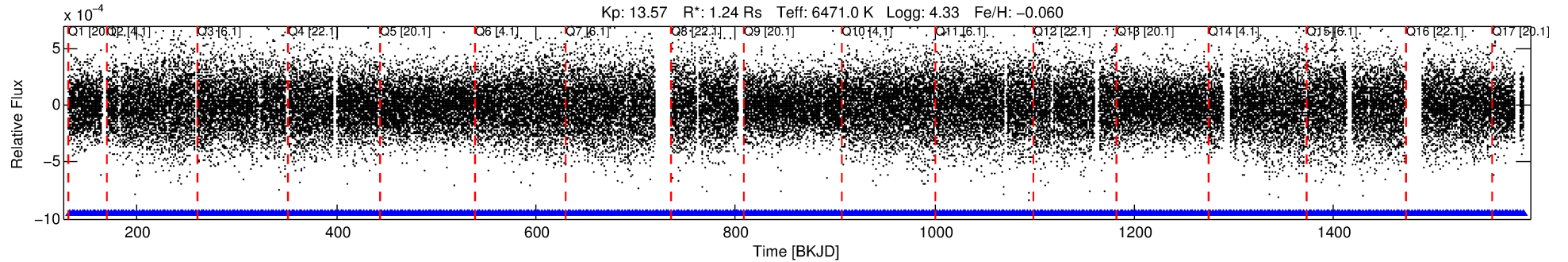
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005725450-01

No Significant Match Found

DV One-Page Summary

KIC: 5725450 Candidate: 1 of 1 Period: 2.589 d



DV Fit Results:

Period = 2.58863 [0.00004] d
Epoch = 132.6775 [0.0093] BKJD
Rp/R* = 0.0051 [0.0018]
a/R* = 1.43 [1.49]
b = 0.90 [0.44]
Seff = 1582.83 [641.89]
Teq = 1608 [163] K
Rp = 0.69 [0.34] Re
a = 0.0391 [0.0107] AU
Ag = 19.64 [16.59] [1.12 σ]
Teffp = 5235 [1000] K [3.58 σ]

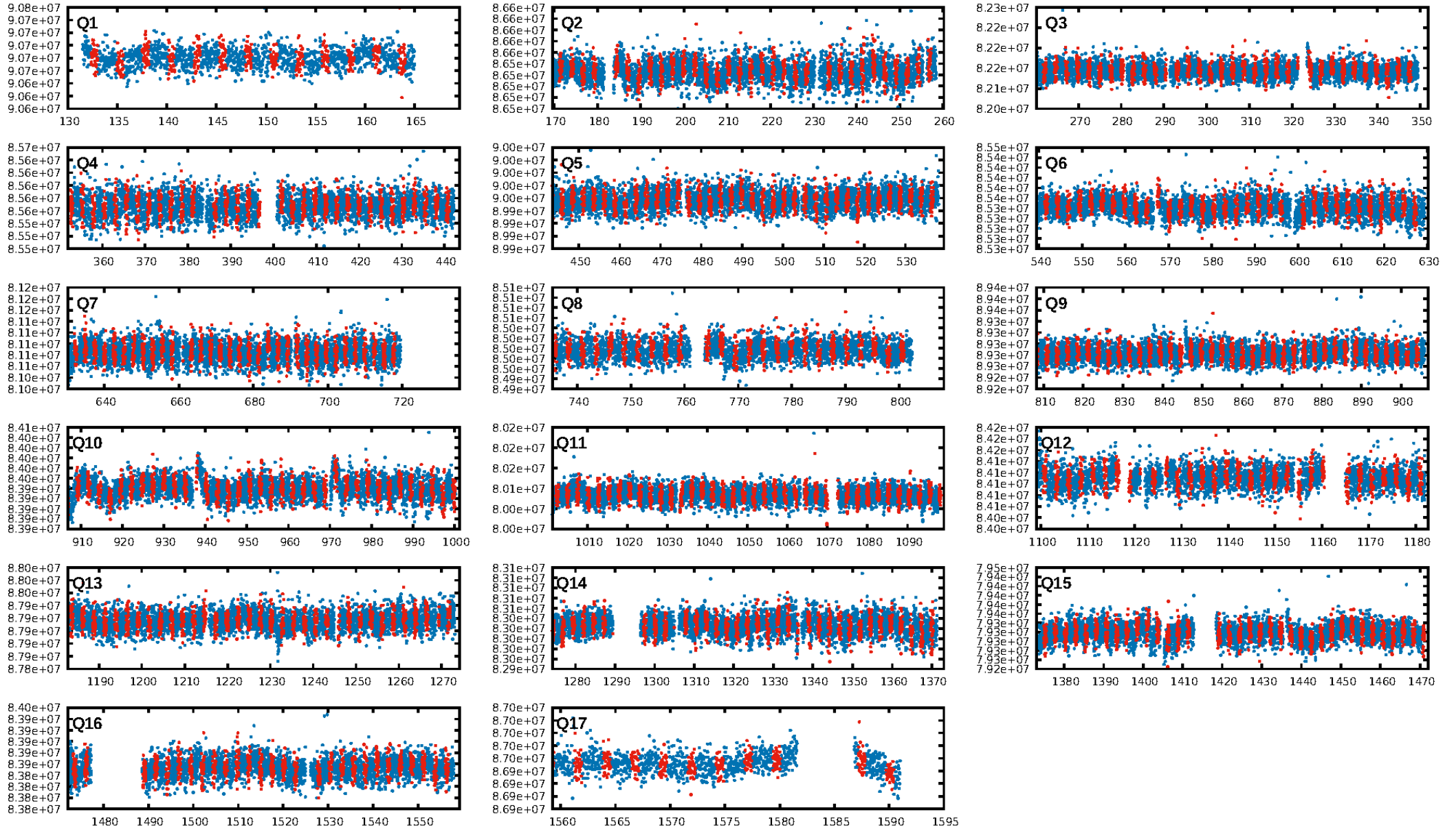
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.69e-18
RollingBand-fgt: 1.00 [496/496]
GhostDiagnostic-chr: -7.797
Centroid-sig: 0.0%
Centroid-so: 5.772 arcsec [4.36 σ]
OotOffset-rm: 6.616 arcsec [68.37 σ]
KicOffset-rm: 7.452 arcsec [73.53 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

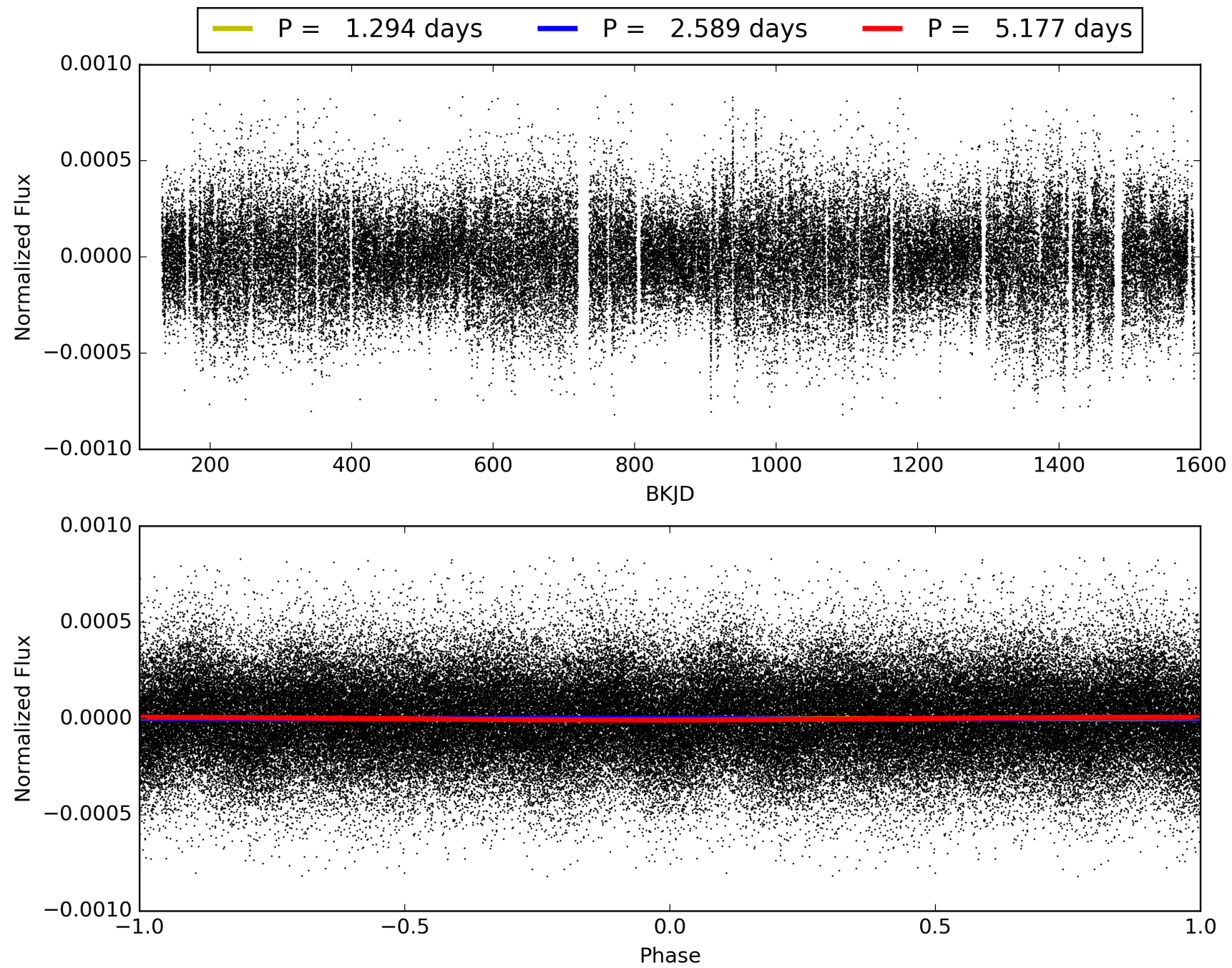
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:41:23 Z

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

TCE 005725450-01, PDC Light Curves

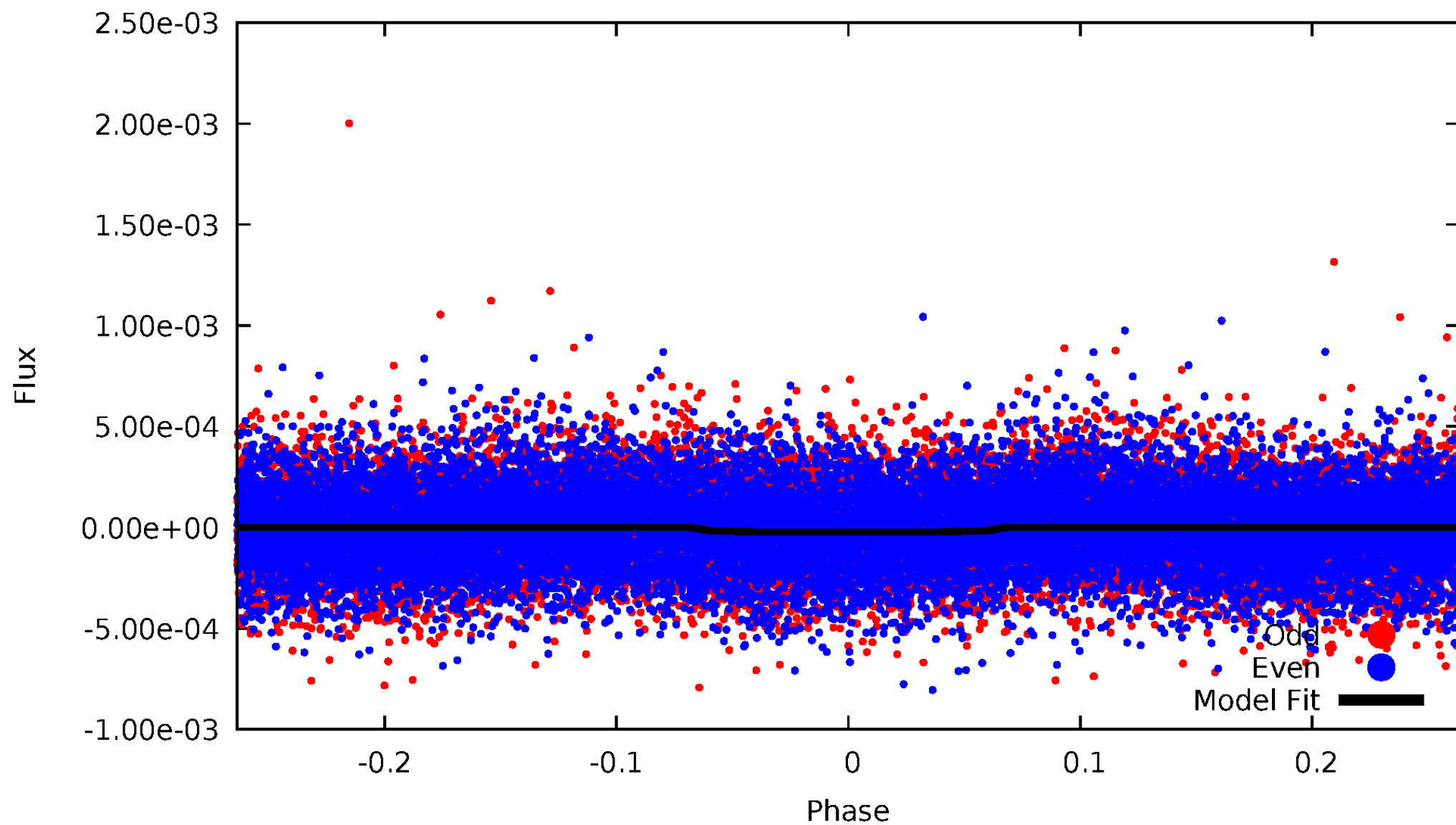


TCE 005725450-01



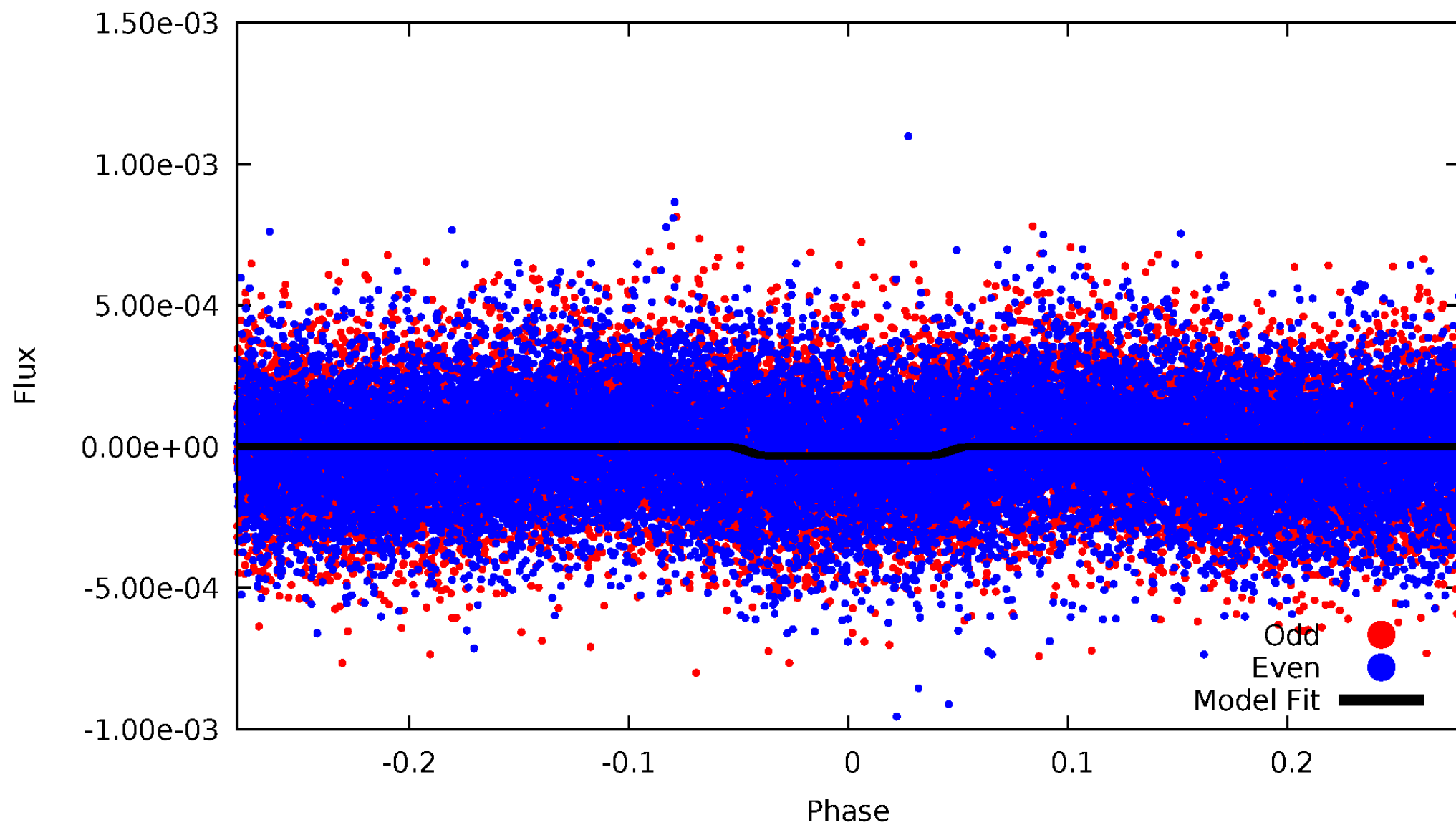
DV Odd/Even

TCE 005725450-01

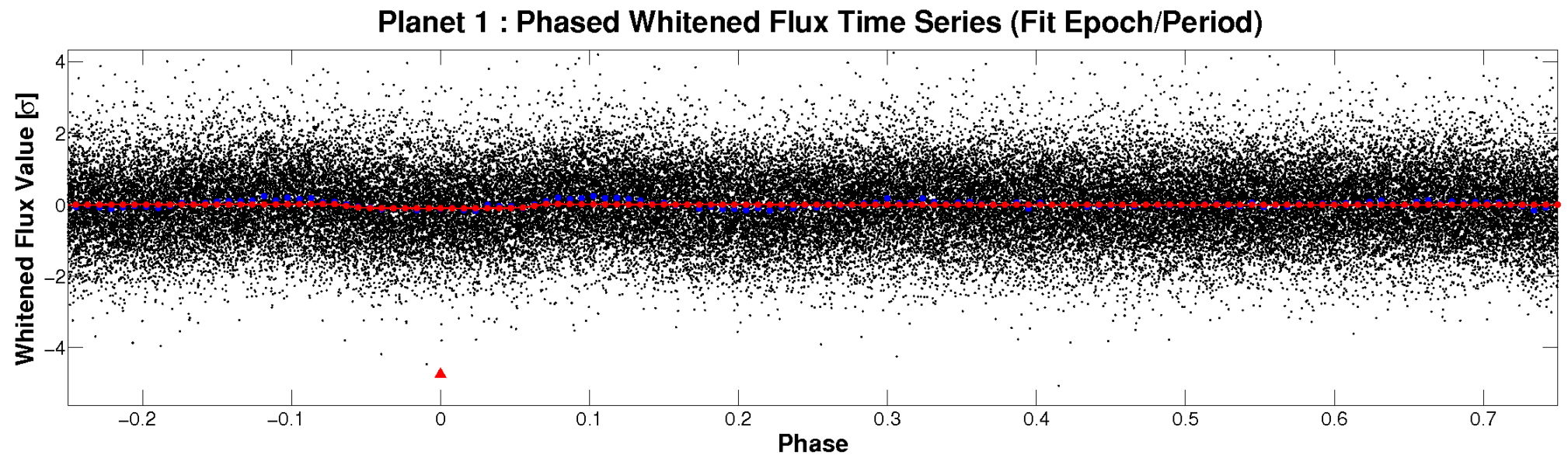
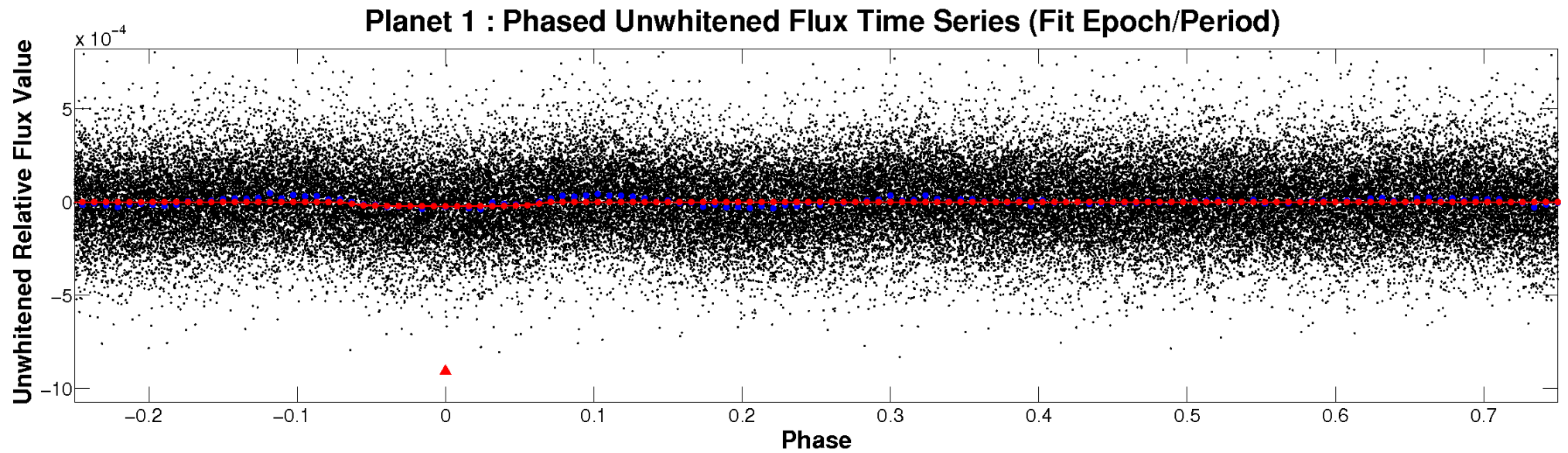


ALT Odd/Even

TCE 005725450-01

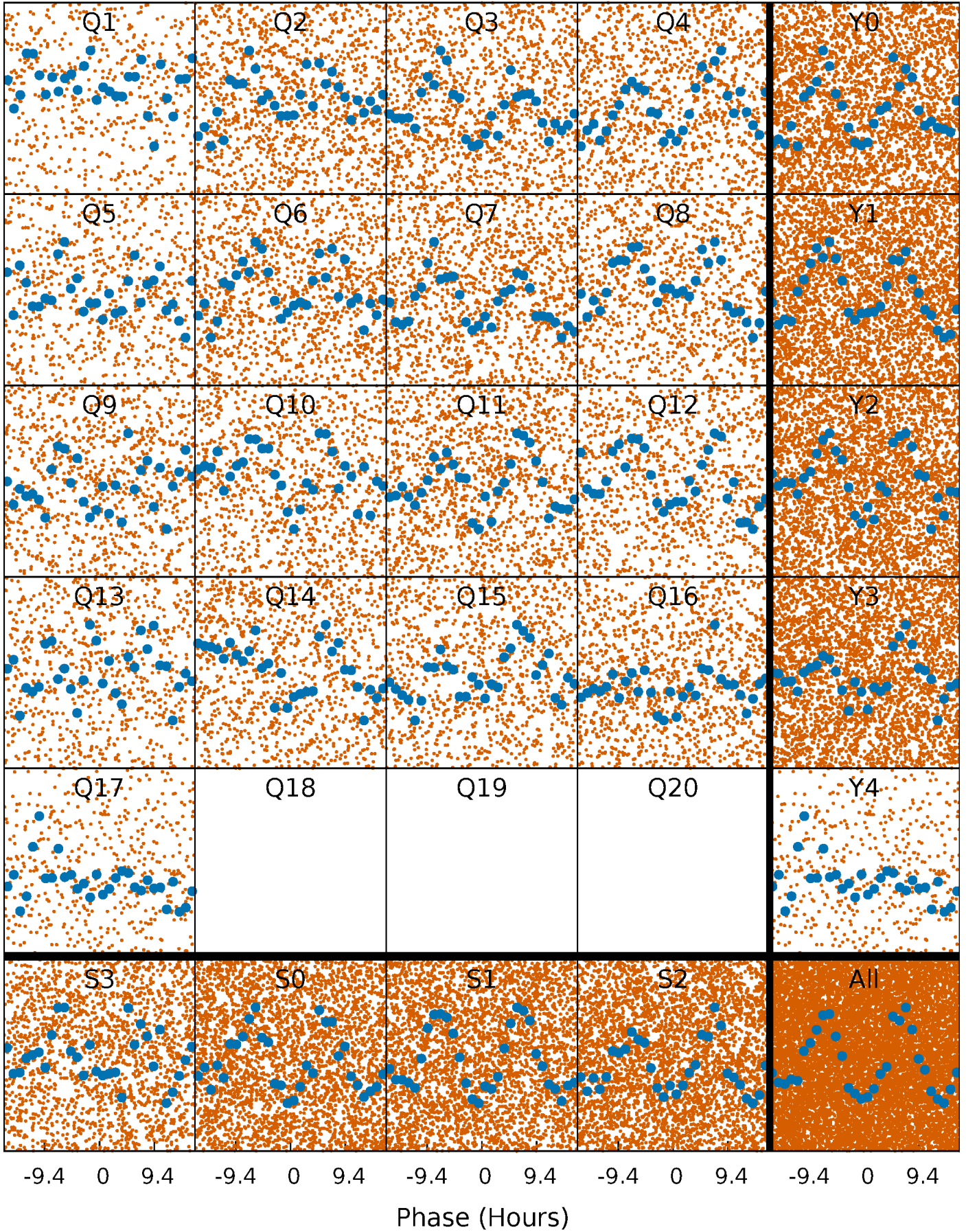


Non-Whitened Vs. Whitened Light Curve



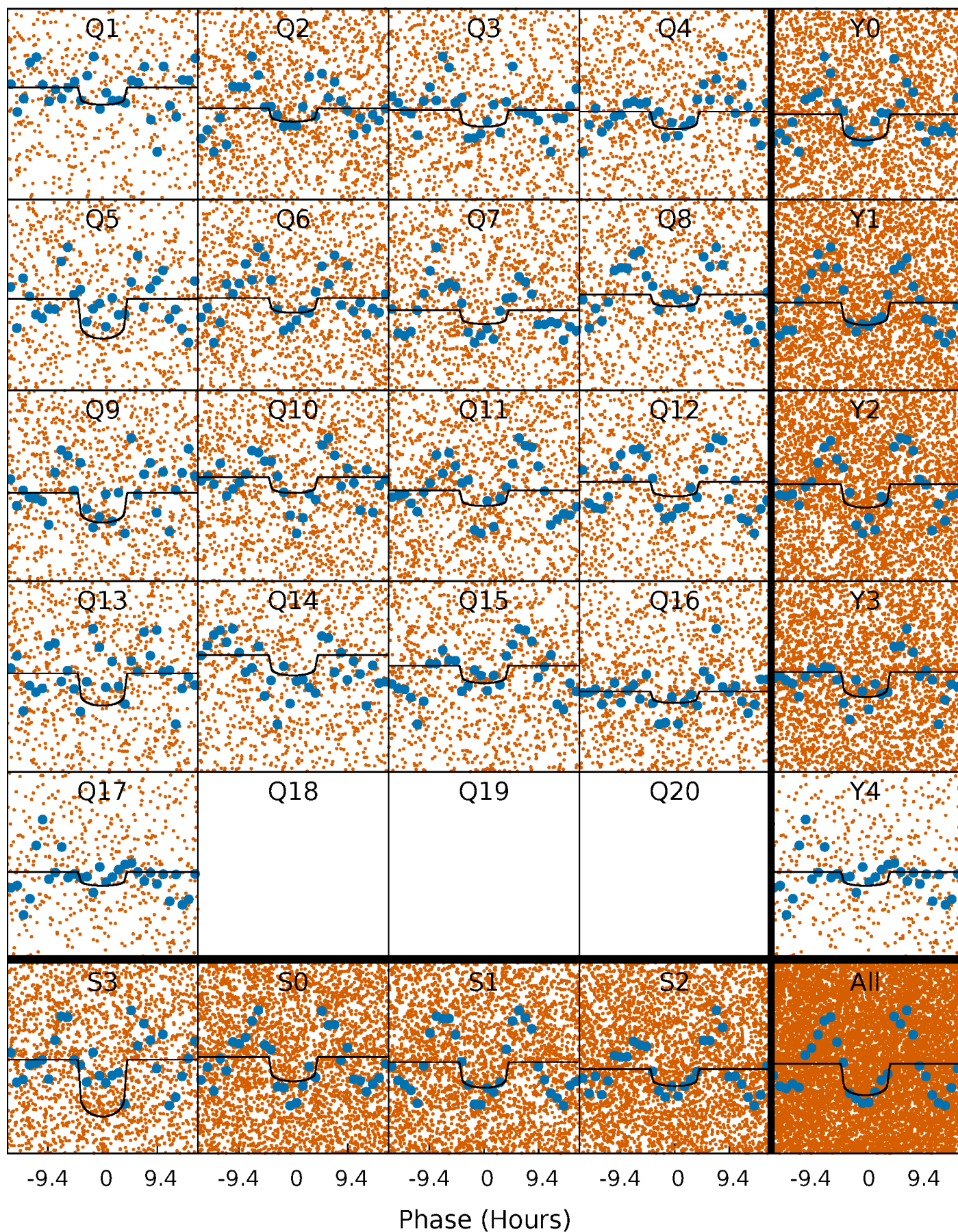
PDC Quarter-Phased Transit Curves

TCE 005725450-01 P= 2.588627 Days $T_0=132.677458$ (BKJD)



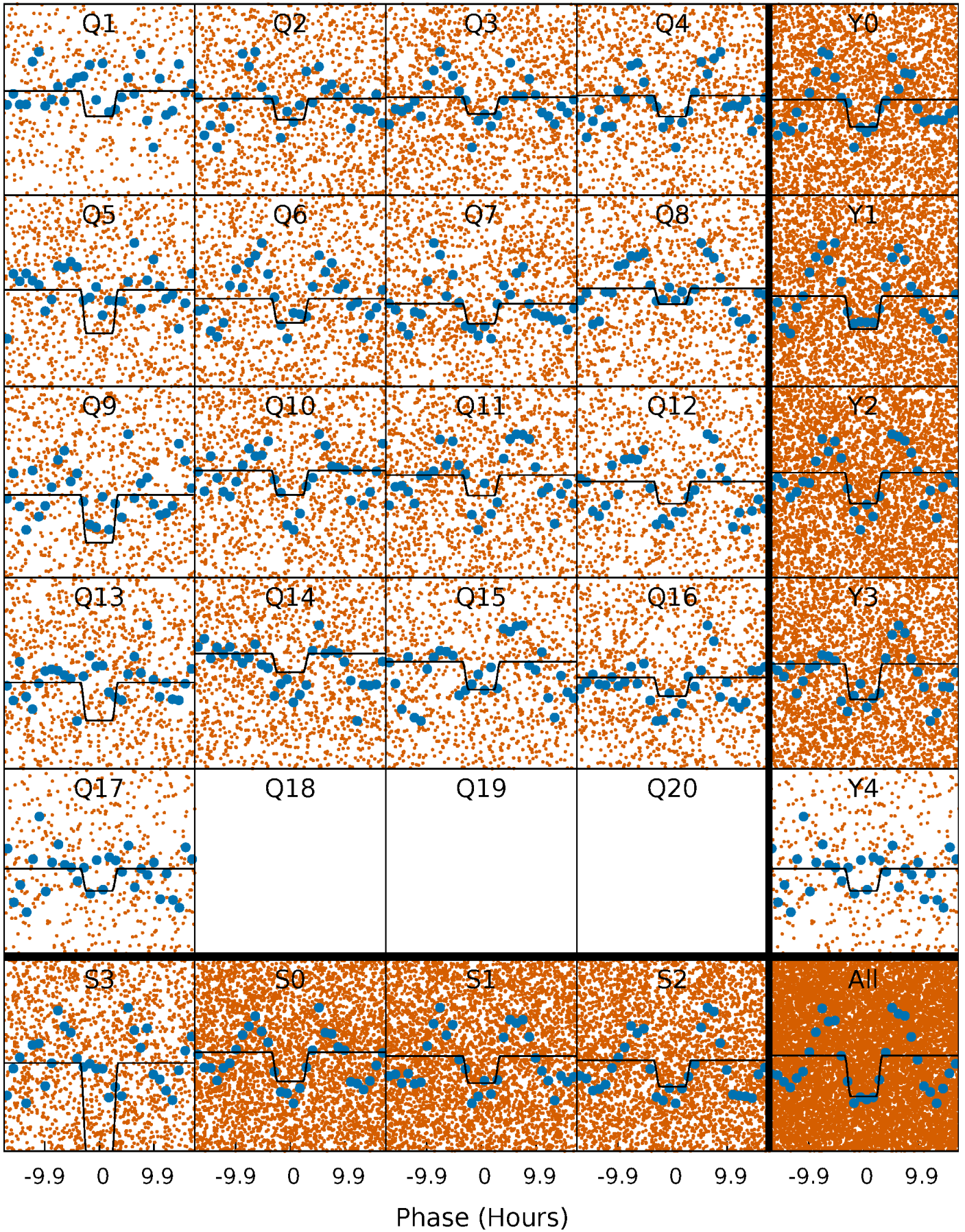
DV Quarter-Phased Transit Curves

TCE 005725450-01 P= 2.588627 Days $T_0=132.677458$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

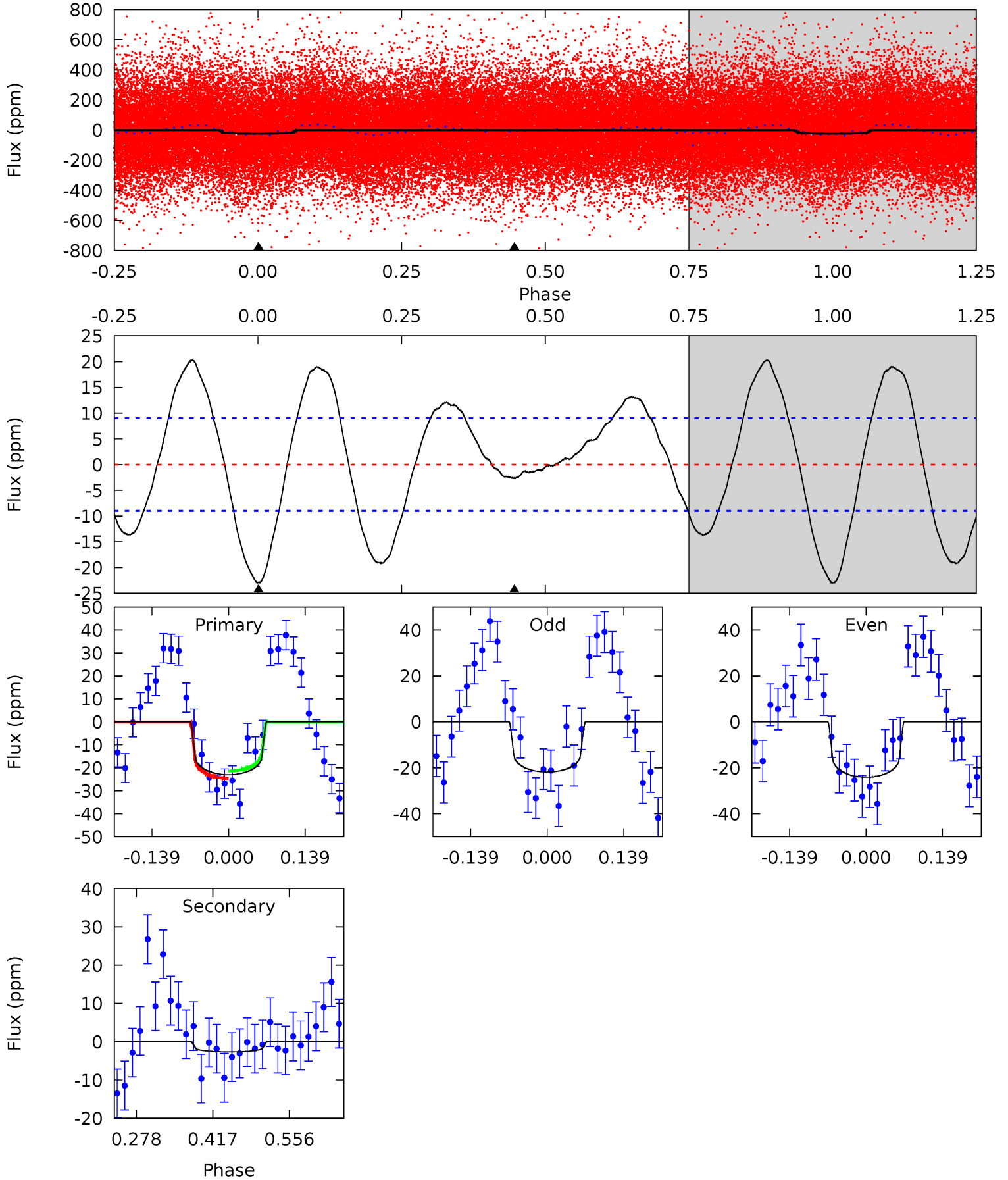
TCE 005725450-01 P= 2.588688 Days $T_0=132.659733$ (BKJD)



DV Model-Shift Uniqueness Test

005725450-01, P = 2.588627 Days, E = 130.088831 Days

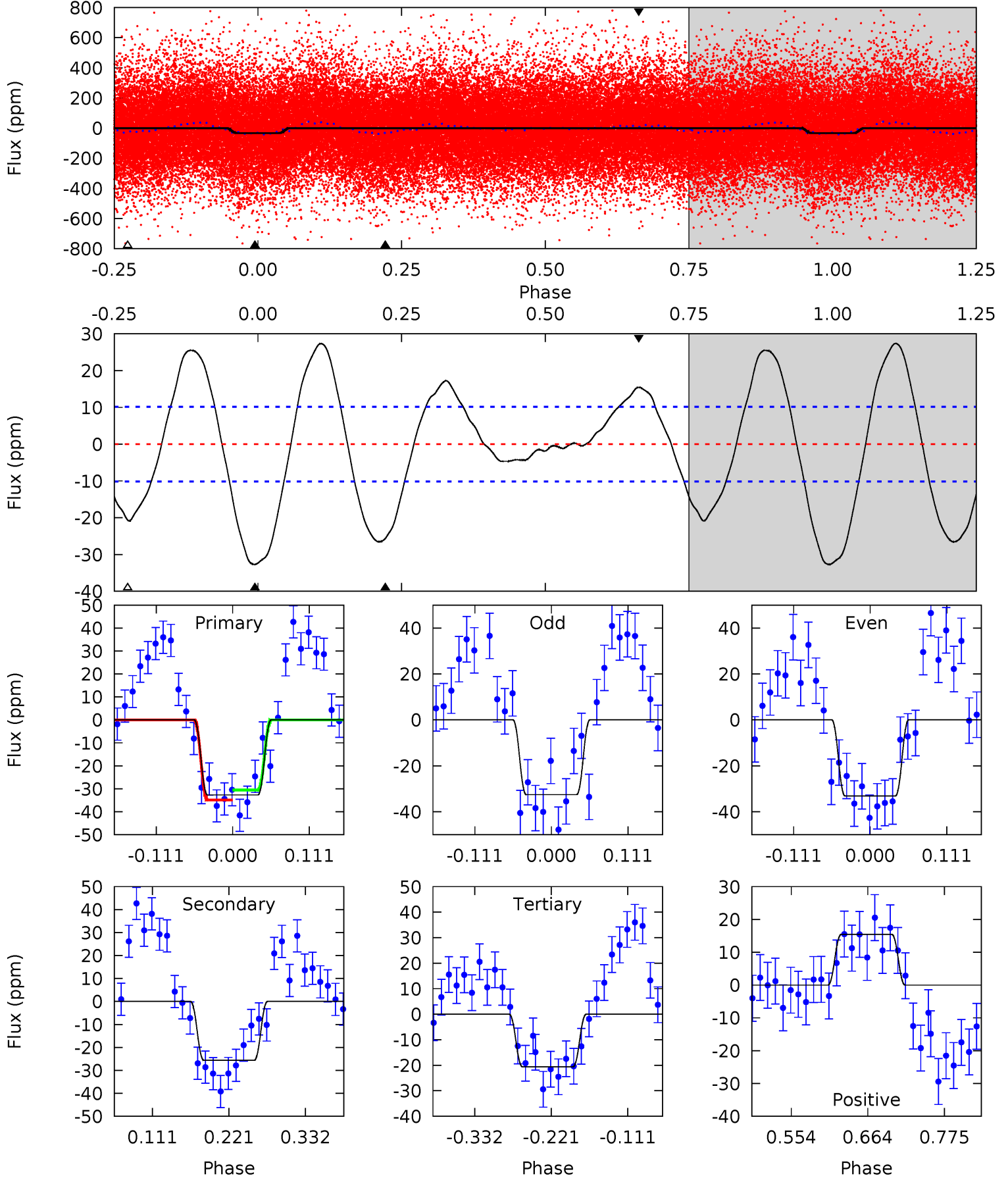
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	1.31	0	0	4.50	1.48	5.15	11.5	11.5	1.31	1.31	0.57	0.99	0.47	0.80



Alt Model-Shift Uniqueness Test

005725450-01, P = 2.588688 Days, E = 130.071045 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	11.5	9.24	6.92	4.54	1.59	4.70	5.40	7.71	2.24	4.55	0.13	0.95	0.46	0.97



Stellar Parameters For KIC 005725450

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6471^{+153}_{-211}	$4.326^{+0.087}_{-0.203}$	$-0.060^{+0.250}_{-0.300}$	$1.242^{+0.418}_{-0.179}$	$1.192^{+0.181}_{-0.163}$	$0.877^{+0.352}_{-0.483}$
	+2%/-3%	+2%/-5%	+417%/-500%	+34%/-14%	+15%/-14%	+40%/-55%
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 005725450-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$0.72^{+0.30}_{-0.25}$	2274^{+177}_{-120}	3810^{+847}_{-912}	$3.635^{+6.926}_{-2.827}$
Alt.	-26 ± 2	$0.80^{+0.27}_{-0.26}$	2279^{+165}_{-129}	6060^{+1496}_{-772}	33^{+41}_{-15}

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

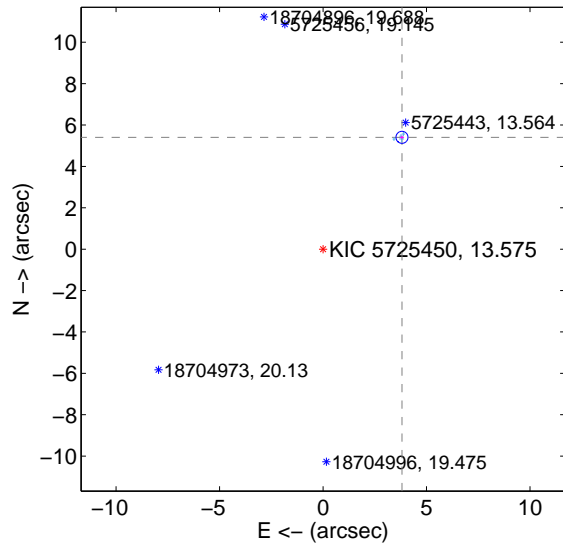
Supplemental centroid analysis for 005725450-01. Kepler magnitude: 13.57. Transit SNR 8.46

There are 4 quarters with good PRF difference image offsets

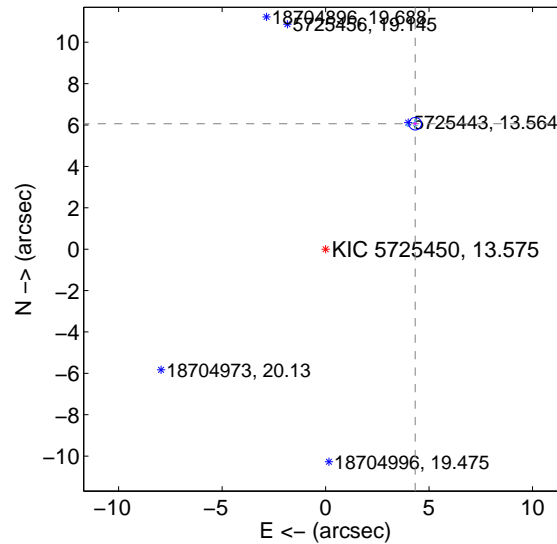
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.616 ± 0.097	68.37	-3.815 ± 0.103	5.406 ± 0.079
PRF-fit source offset from KIC position	7.452 ± 0.101	73.53	-4.330 ± 0.102	6.064 ± 0.084
photometric centroid source offset	5.77 ± 1.32	4.36	-5.23 ± 1.31	2.44 ± 1.38

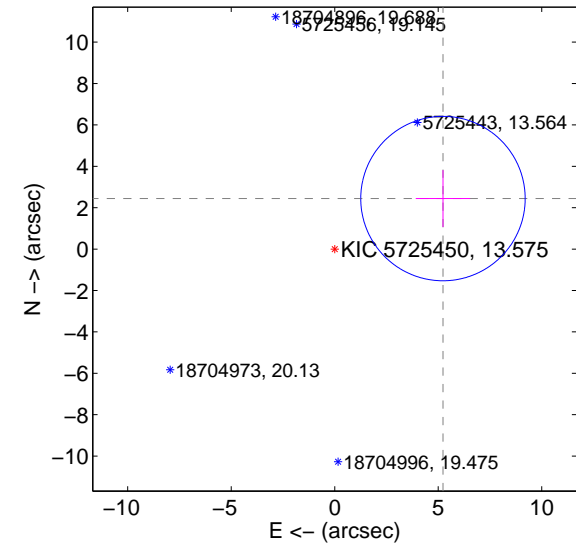
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

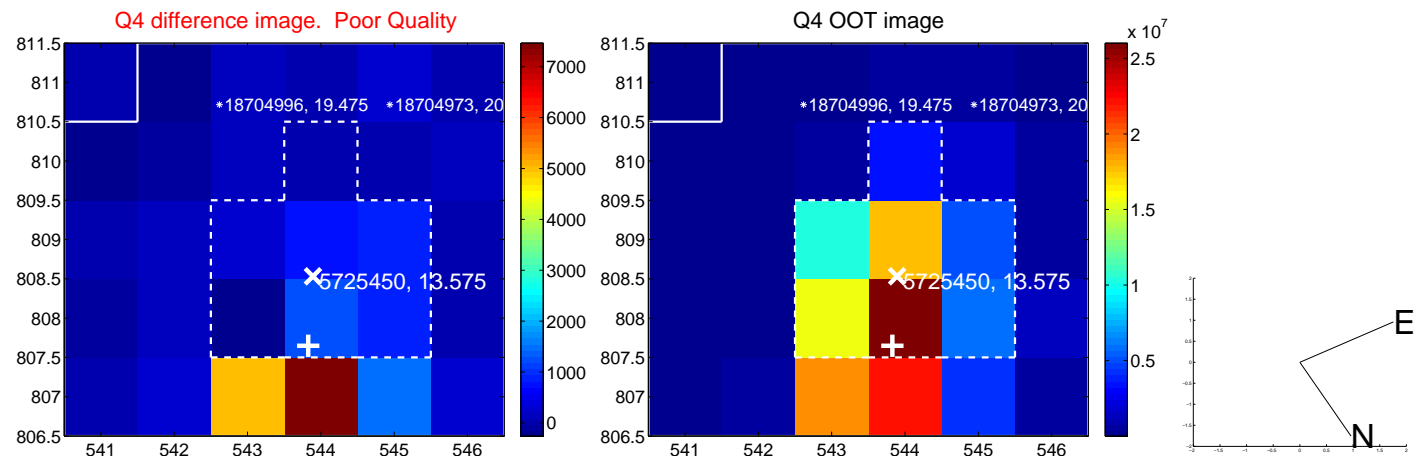
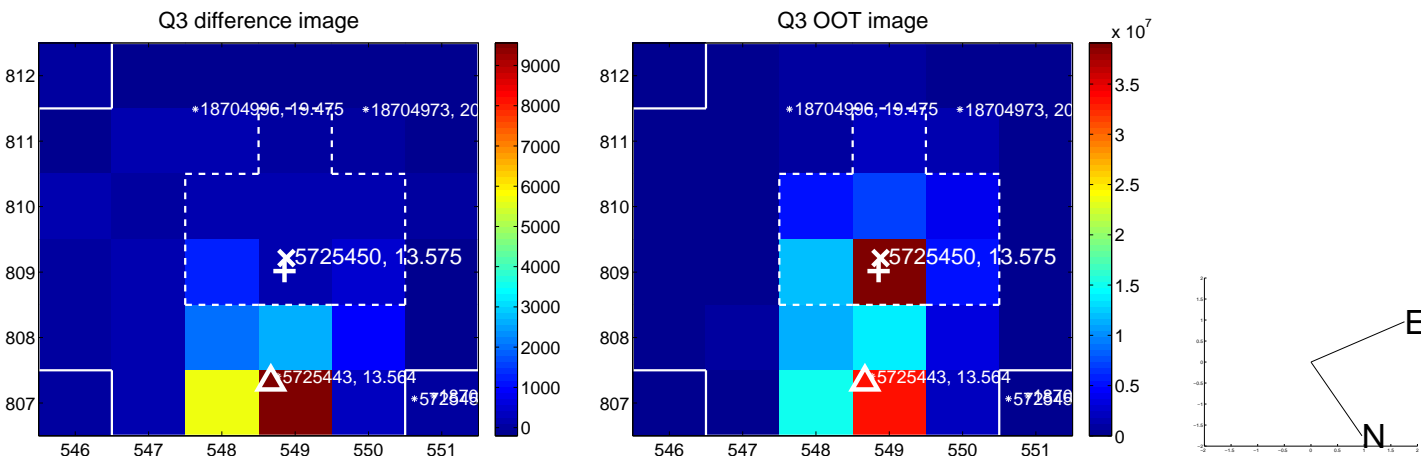
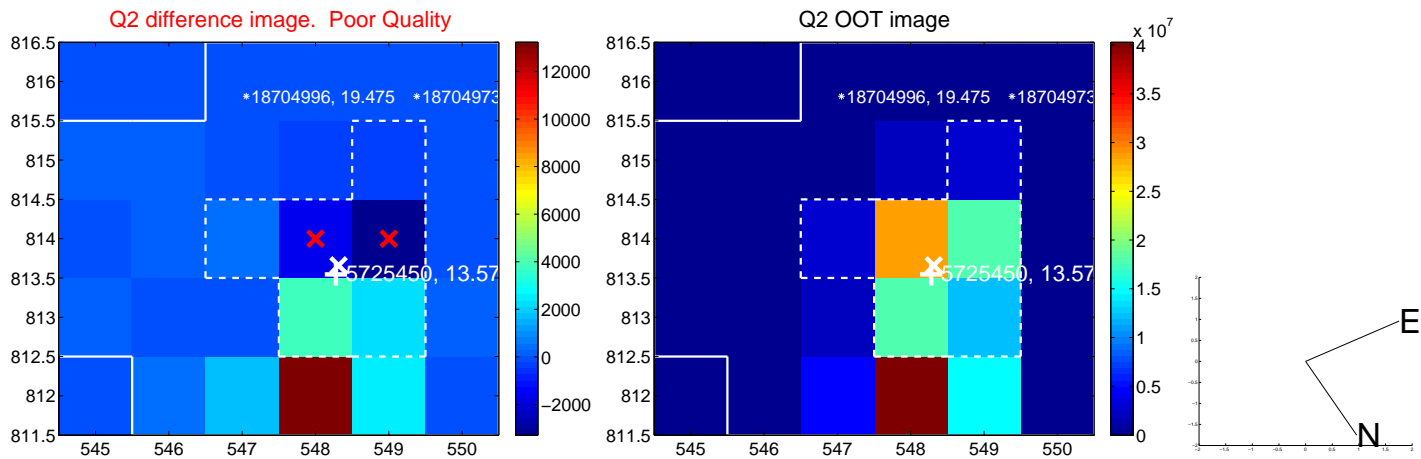
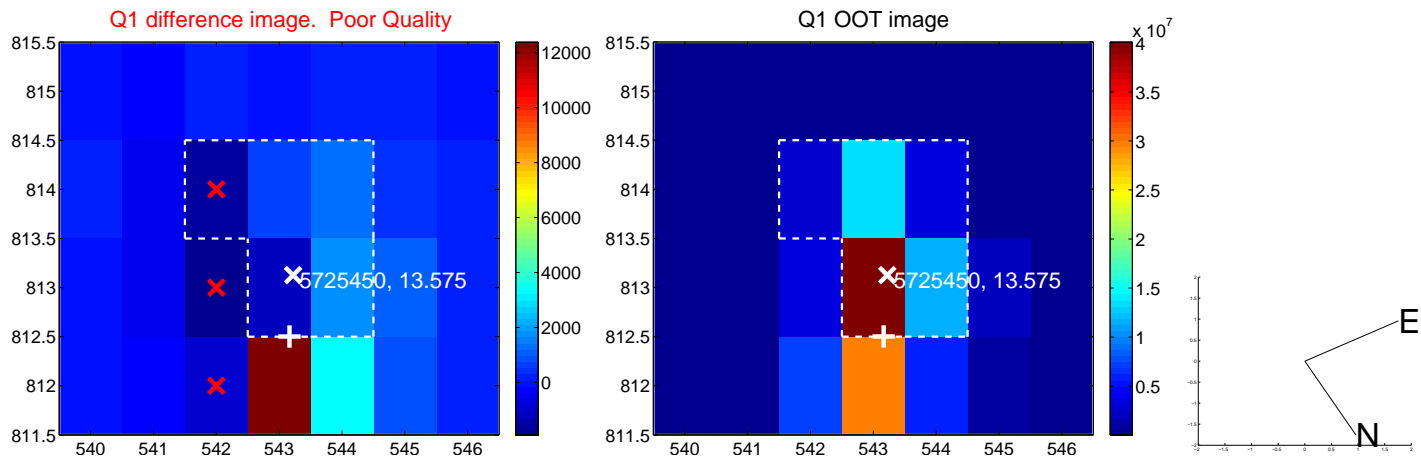


offset from photometric centroids

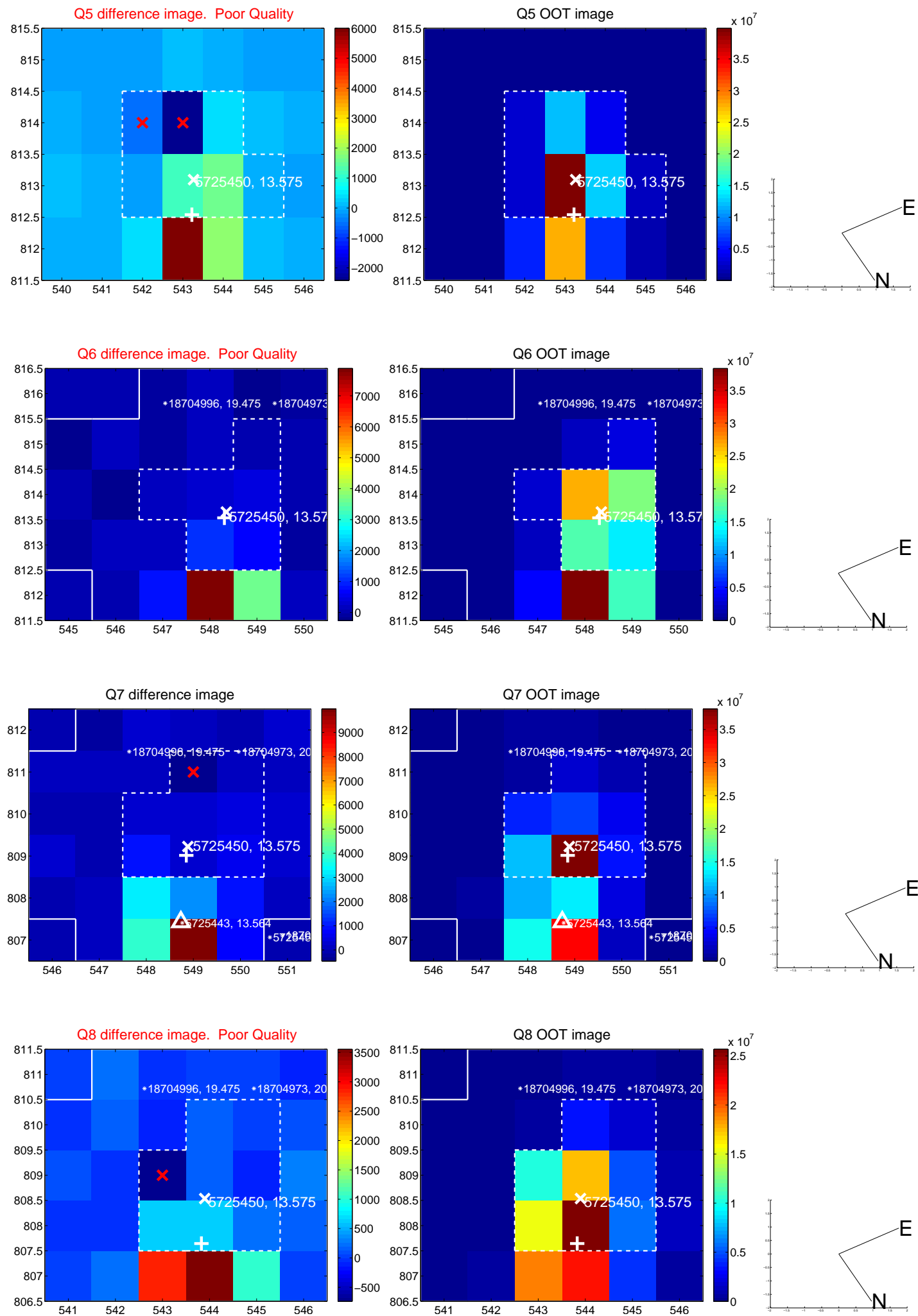


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

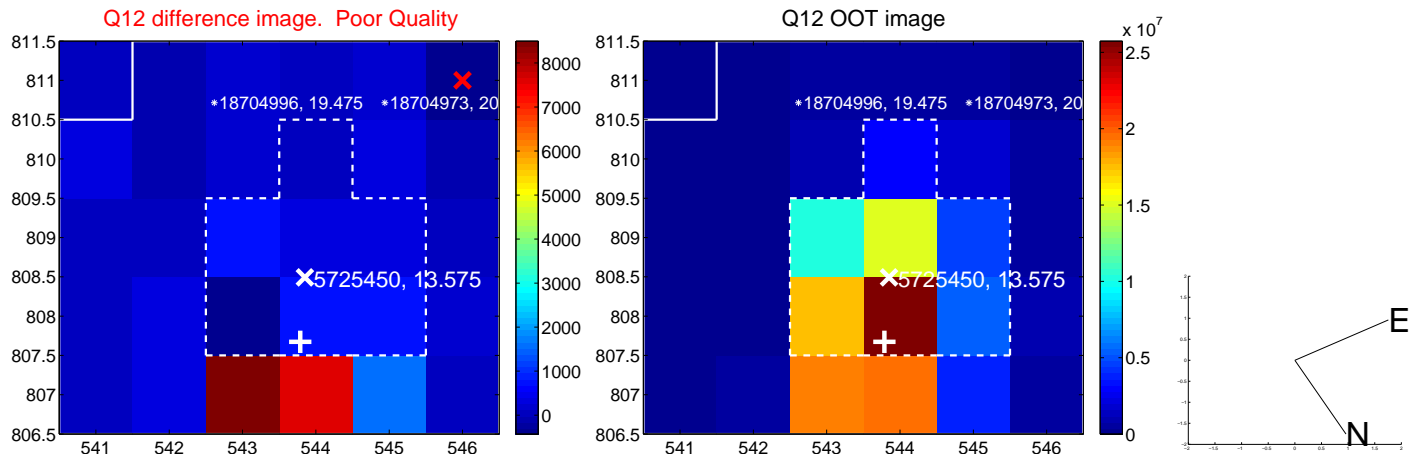
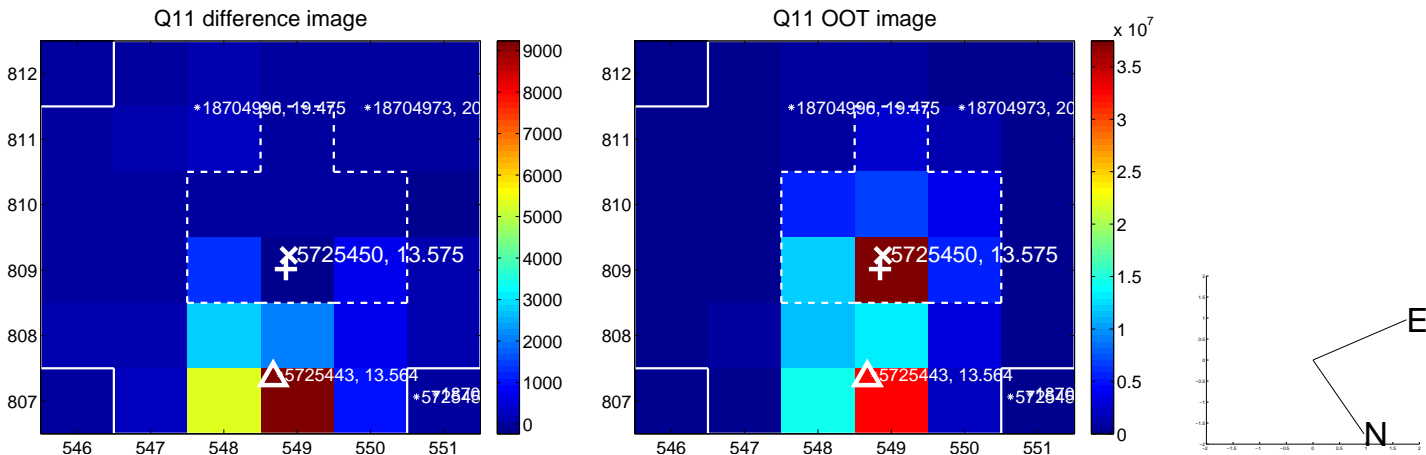
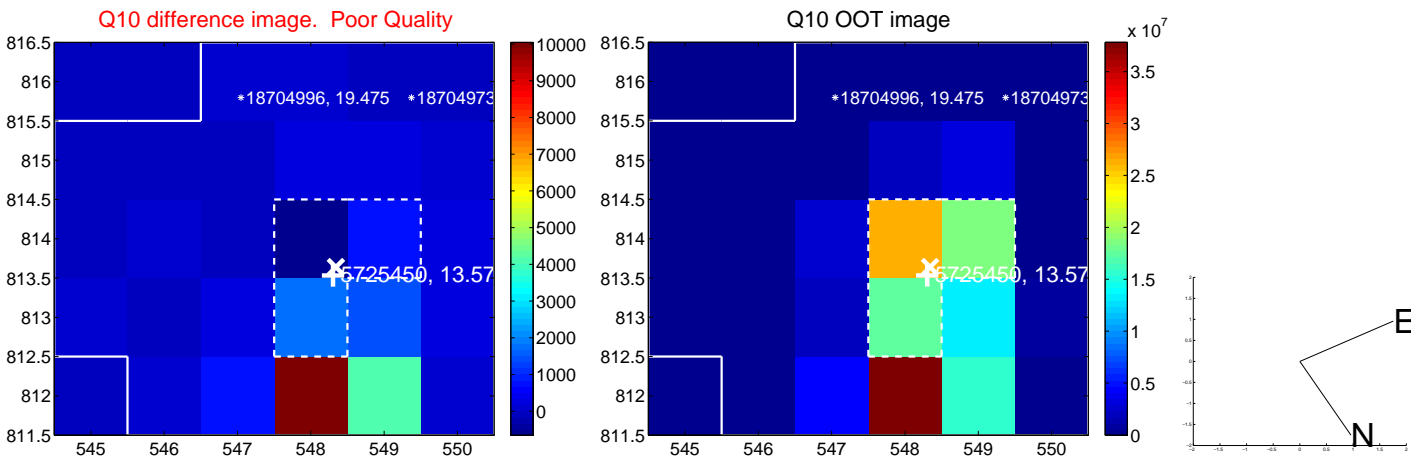
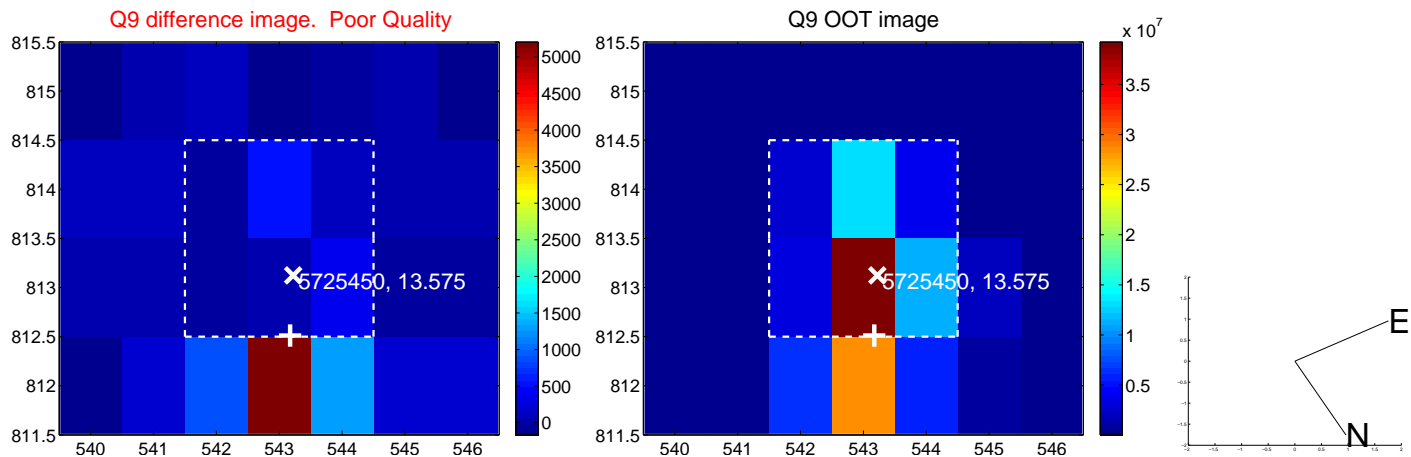
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



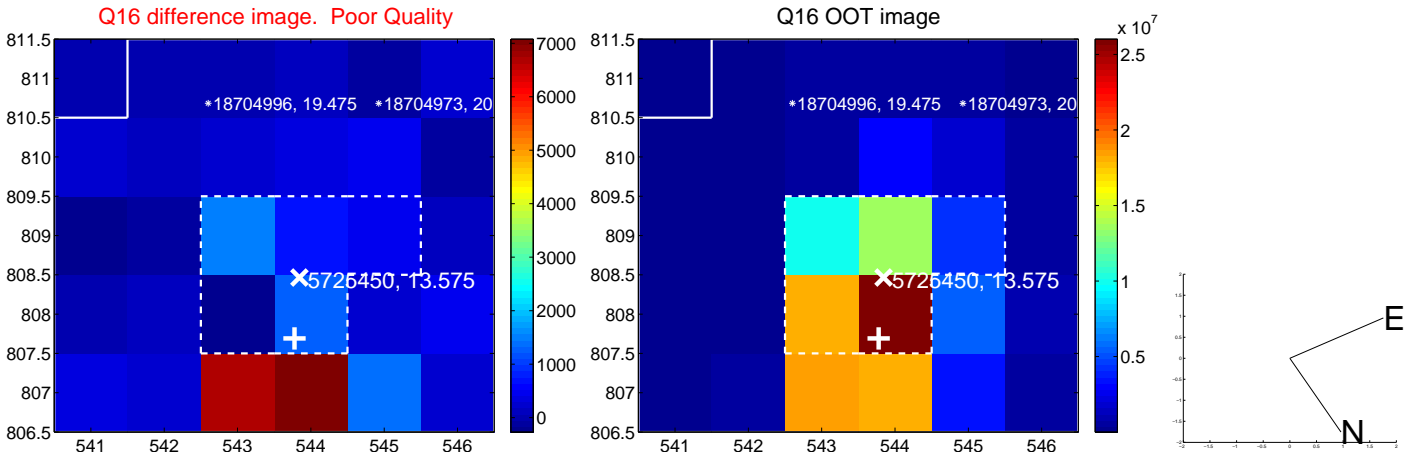
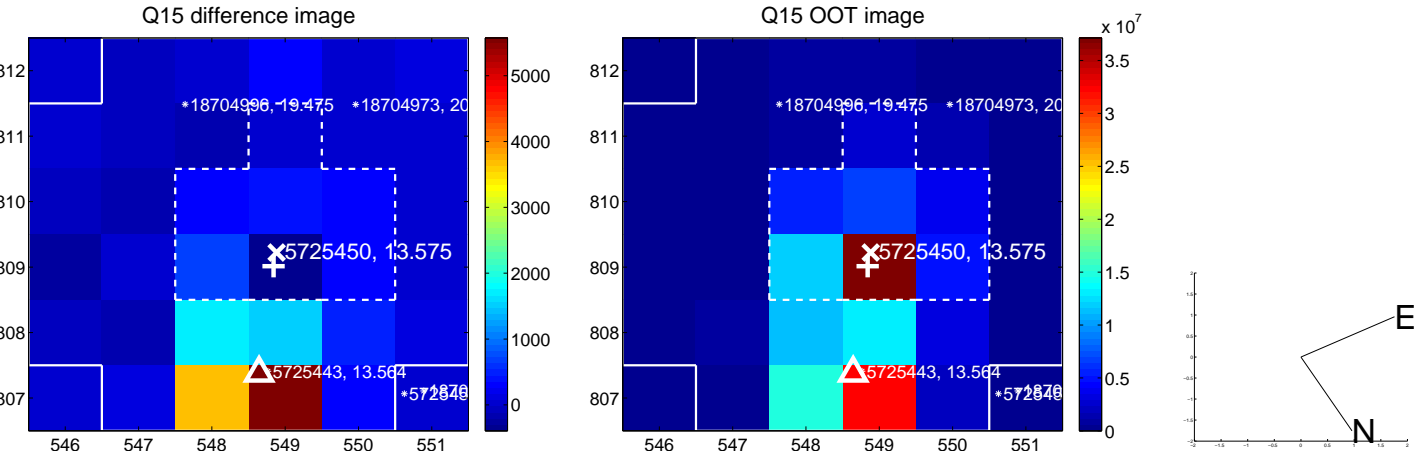
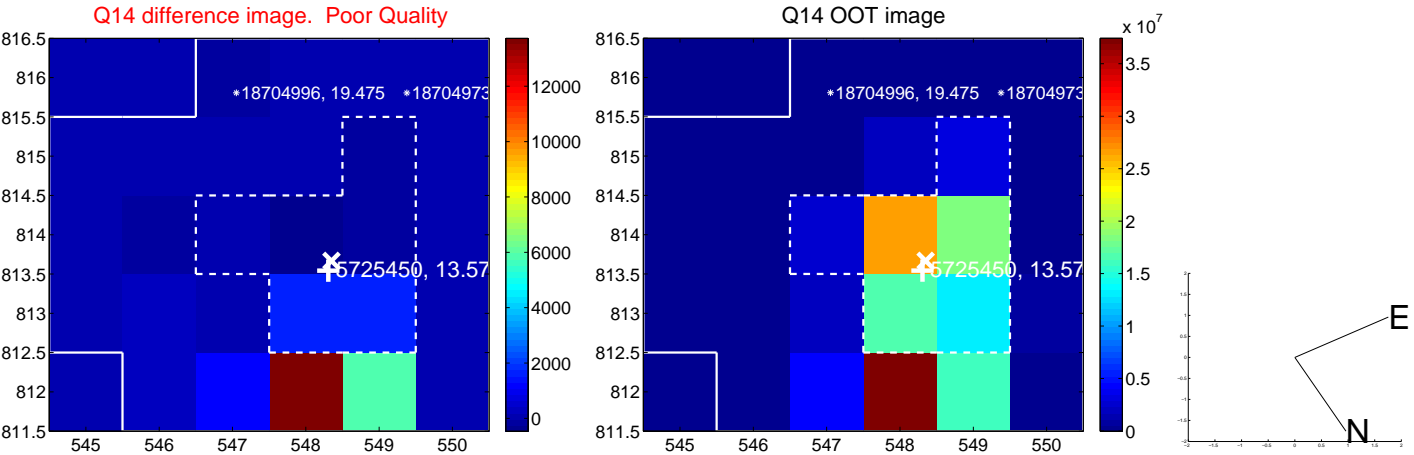
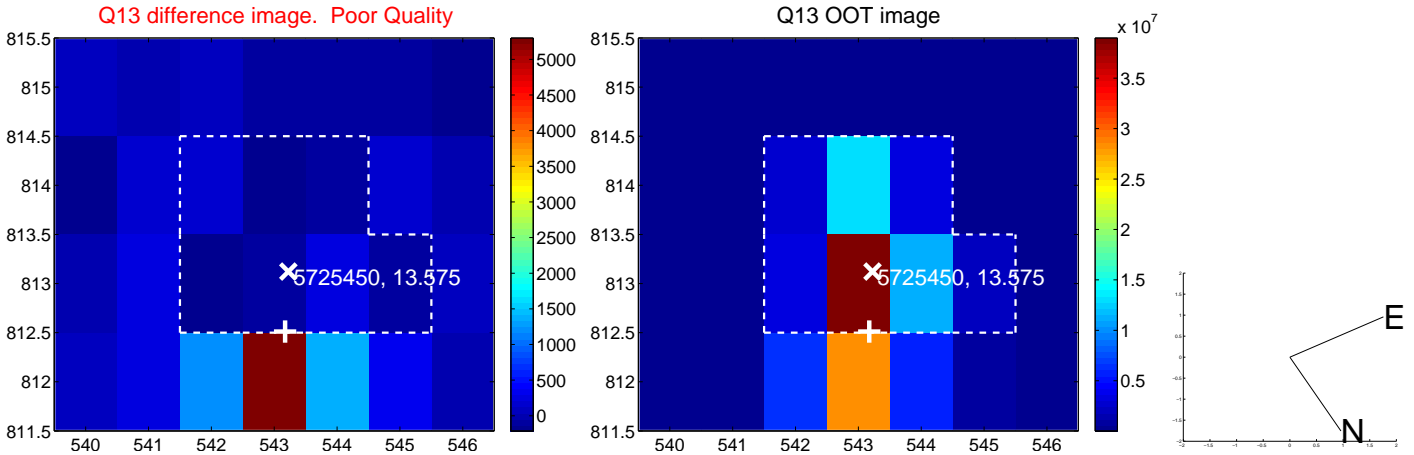
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



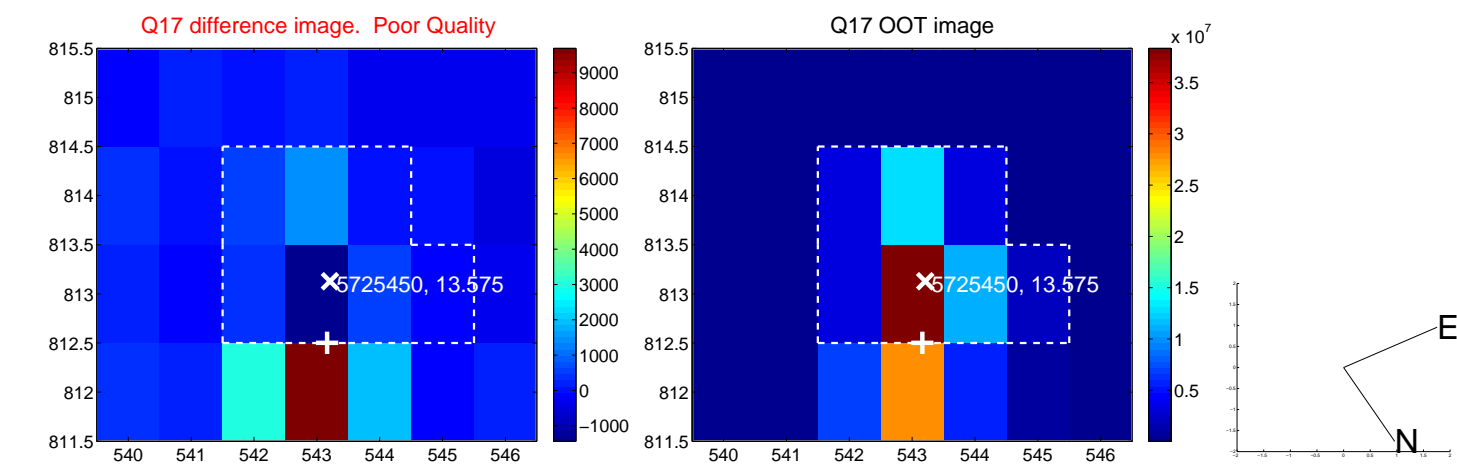
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



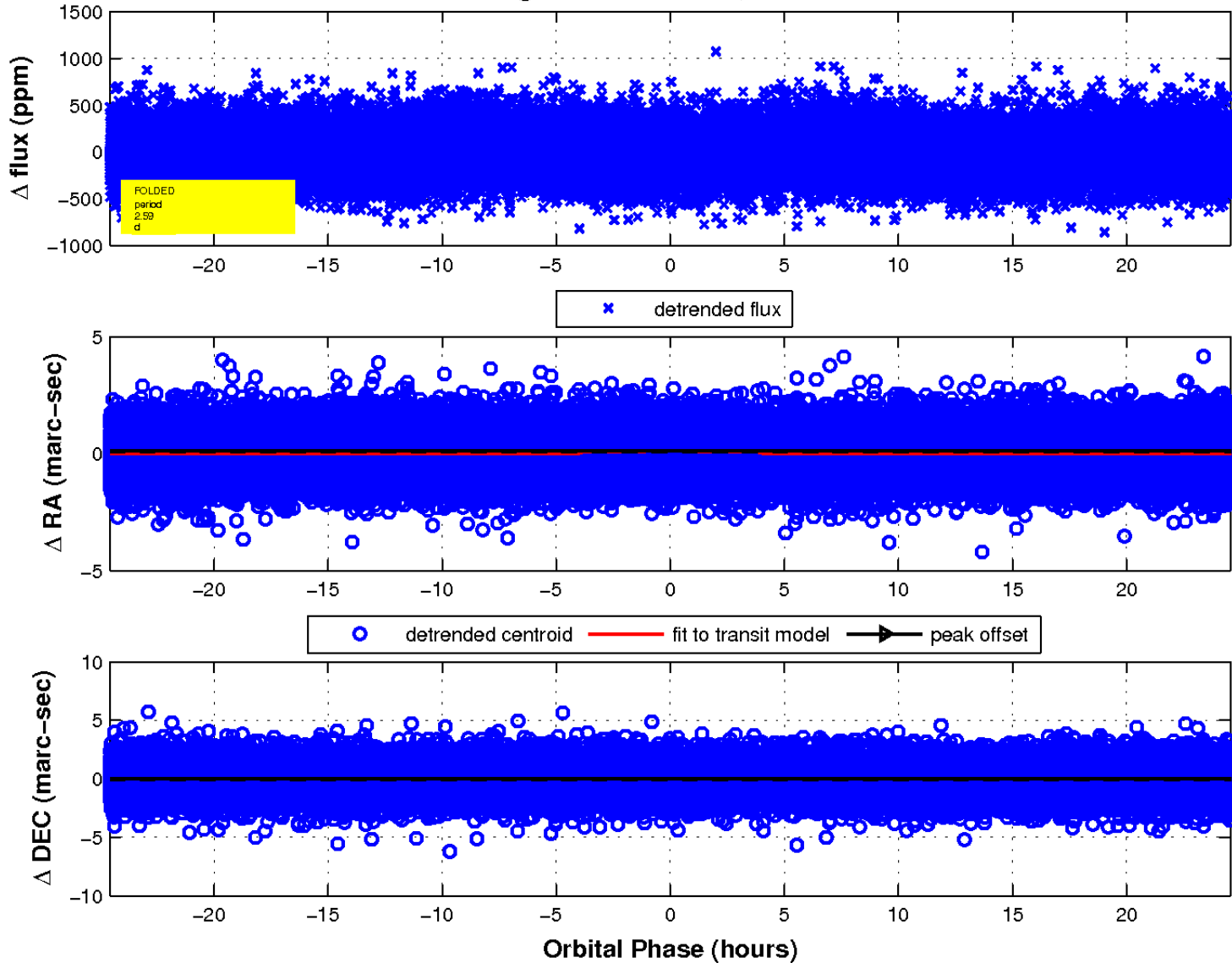
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

