

KIC 010148521

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})
010148521-01	OBS	1084.01	1.204280	131.646535	166.4	1.425	27.4	31.3	0.85	5668	1.31	1417.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010148521-01	OBS	FP	0.00	0	0	1	0	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.

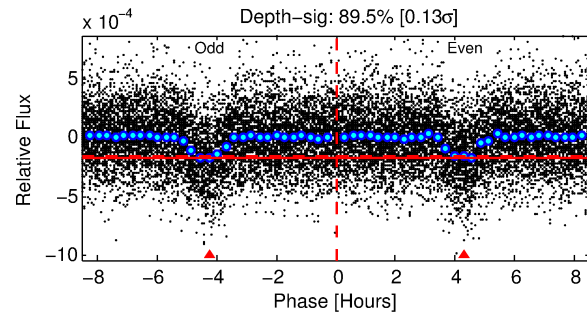
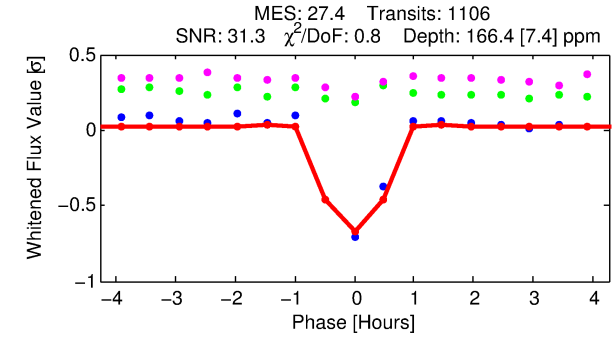
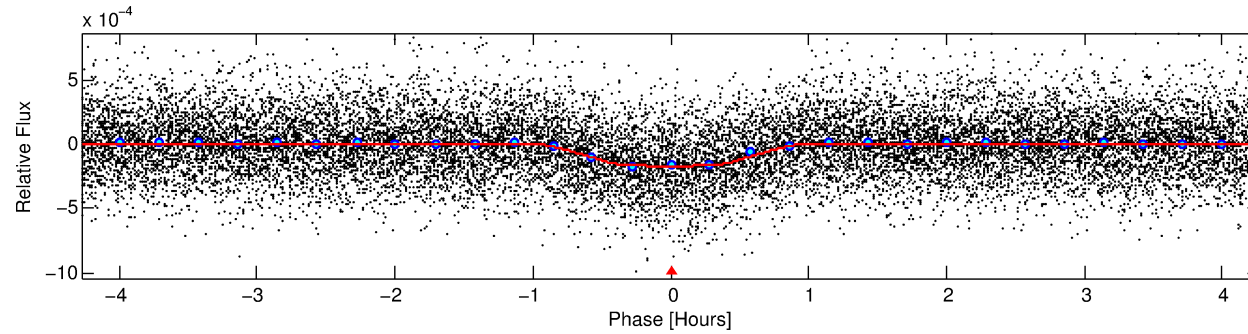
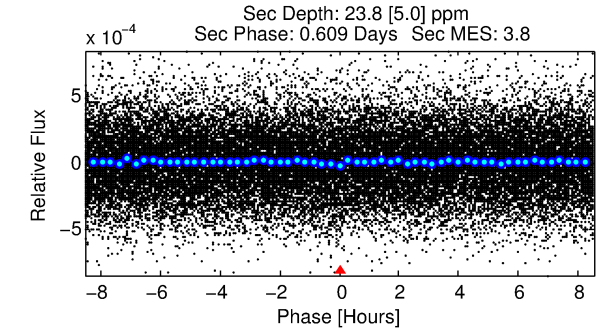
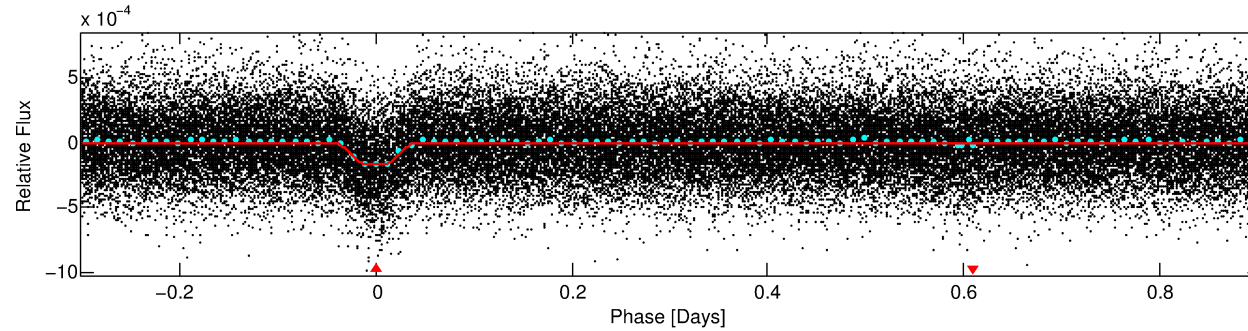
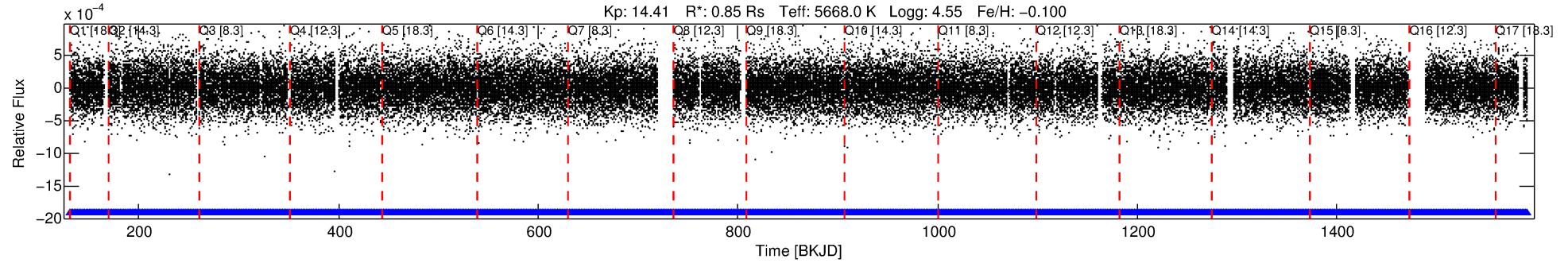
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010148521-01

No Significant Match Found

DV One-Page Summary

KIC: 10148521 Candidate: 1 of 1 Period: 1.204 d
KOI: K01084.01 Corr: 0.964



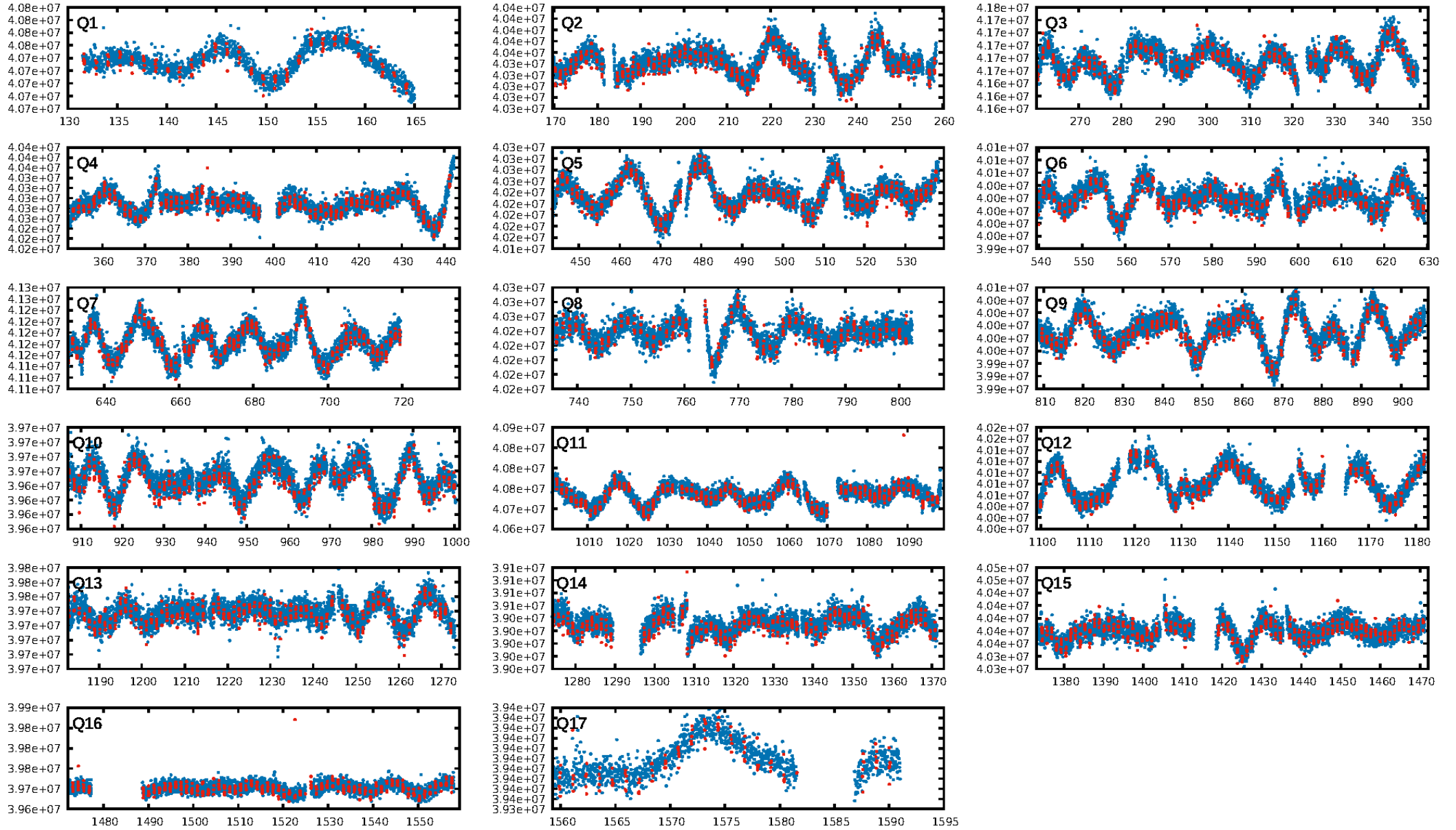
DV Fit Results:

Period = 1.20428 [0.00000] d
Epoch = 131.6465 [0.0007] BKJD
Rp/R* = 0.0141 [0.0036]
a/R* = 3.17 [3.42]
b = 0.90 [0.26]
Seff = 1417.69 [503.90]
Teq = 1565 [139] K
Rp = 1.31 [0.49] Re
a = 0.0217 [0.0050] AU
Ag = 3.59 [2.32] [1.11σ]
Teffp = 3329 [473] K [3.58σ]

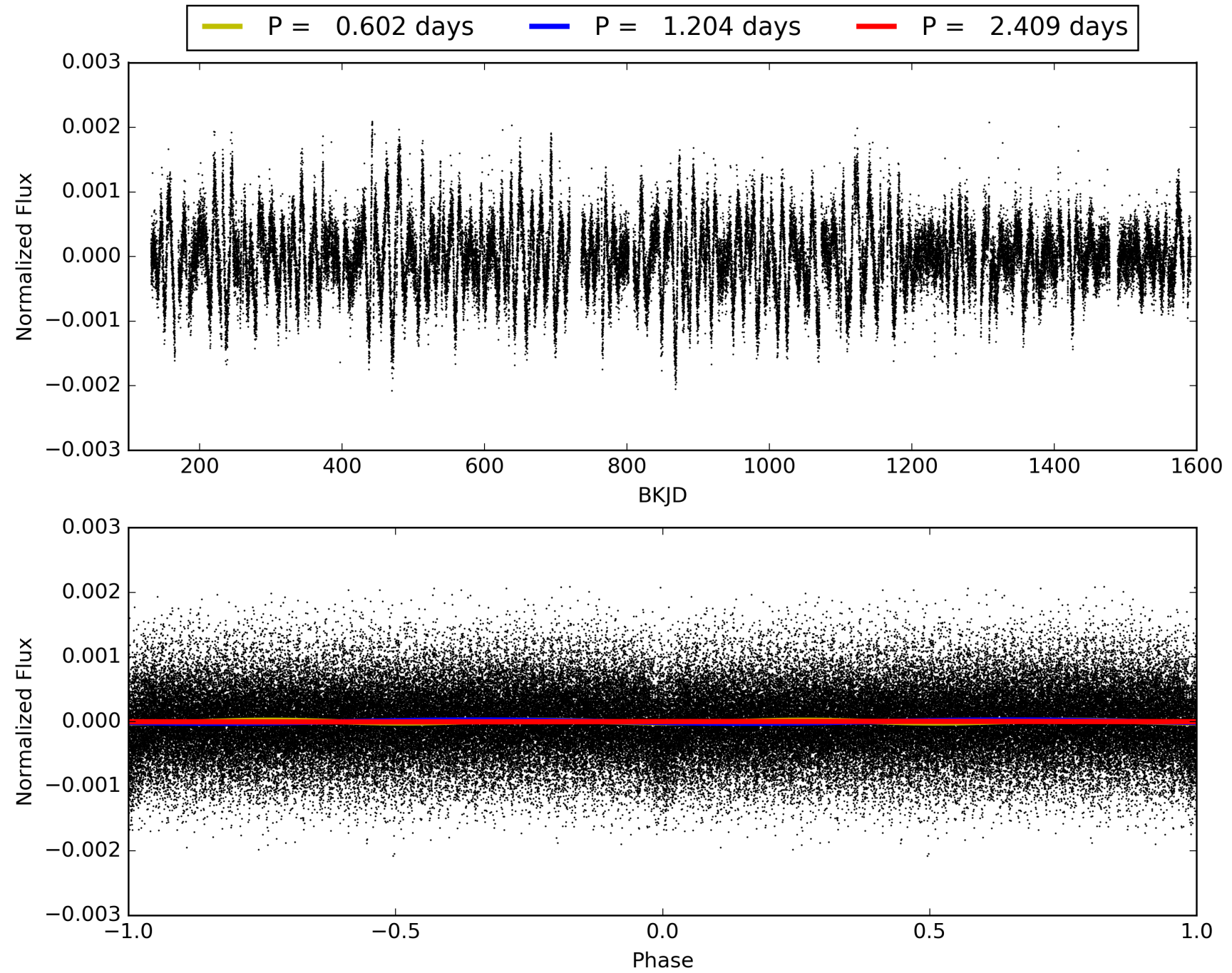
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.33e-156
RollingBand-fgt: 1.00 [1056/1056]
GhostDiagnostic-chr: -0.6577
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010148521-01, PDC Light Curves

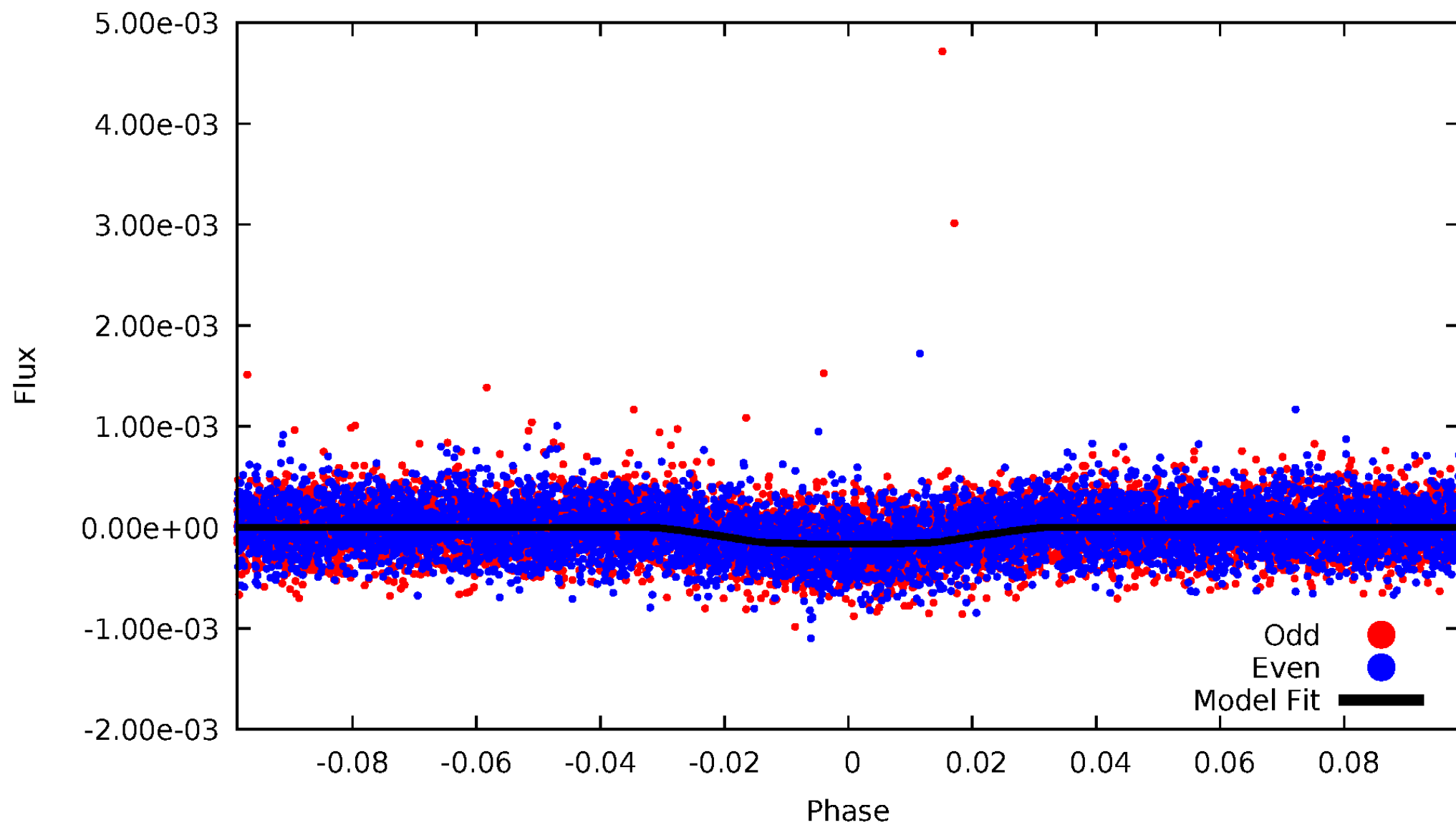


TCE 010148521-01



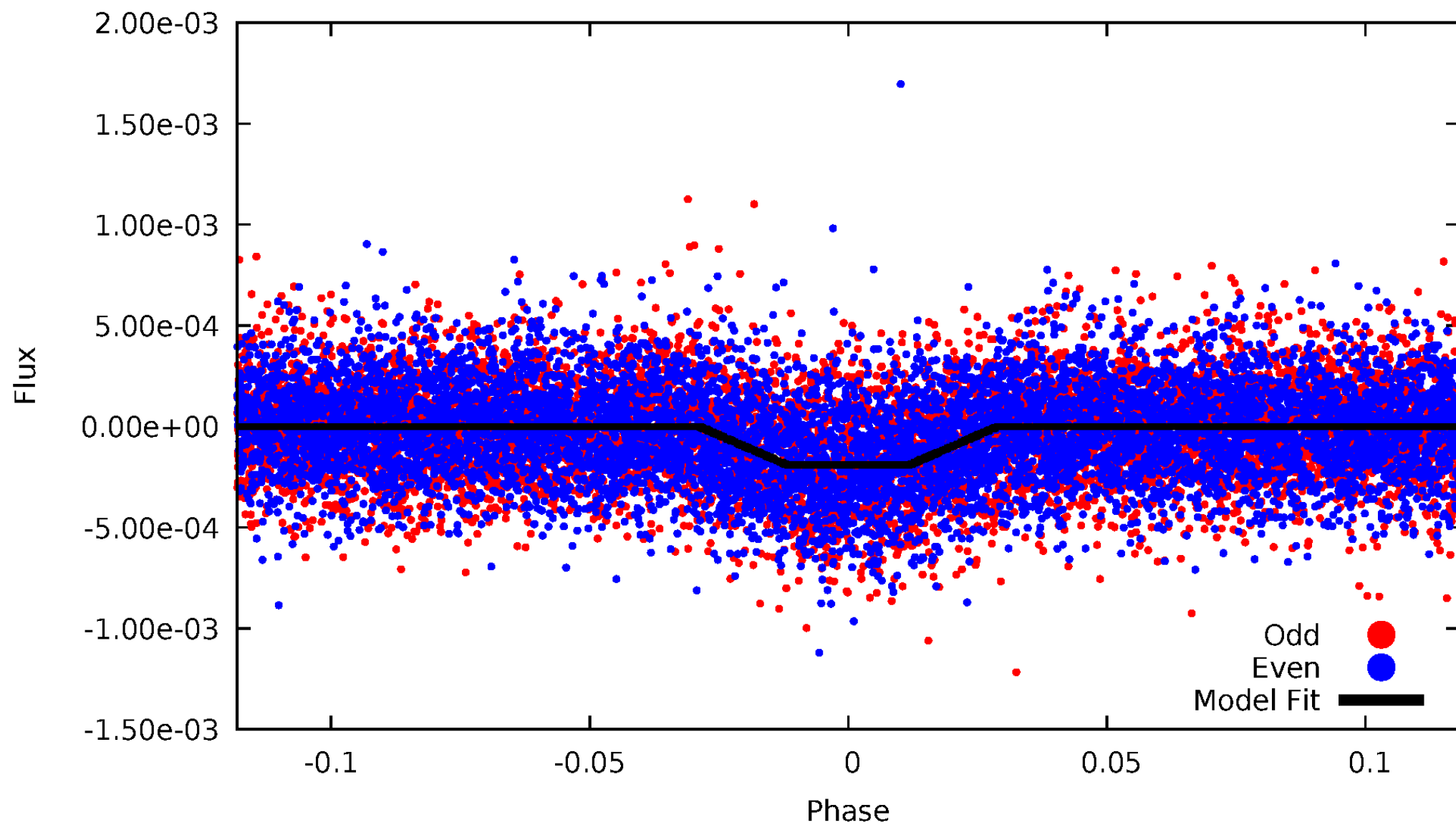
DV Odd/Even

TCE 010148521-01

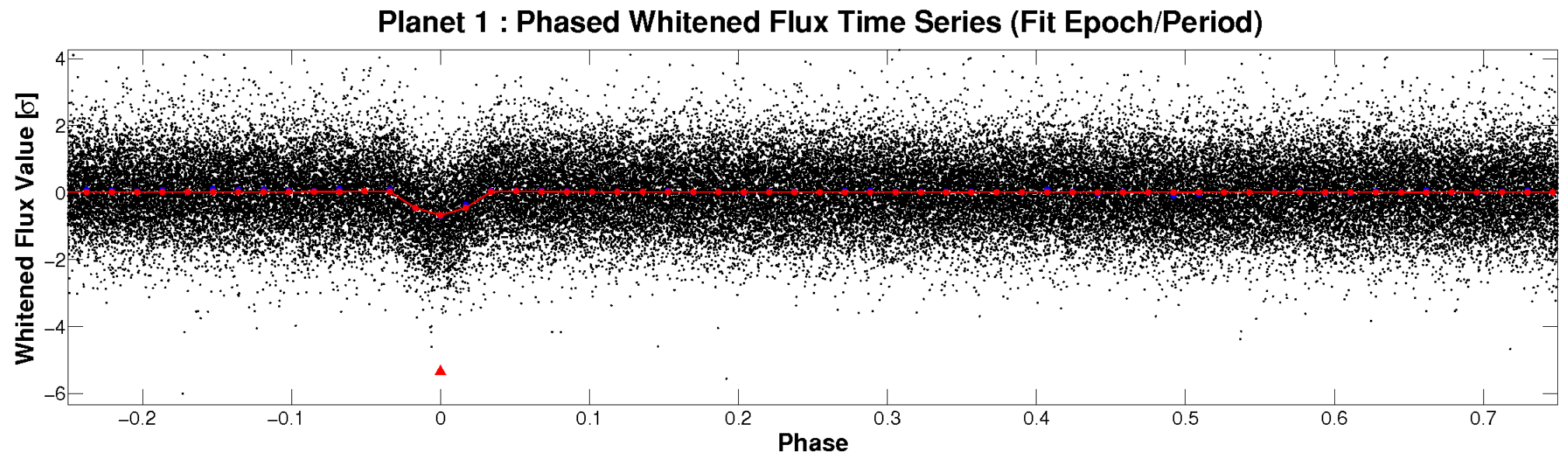
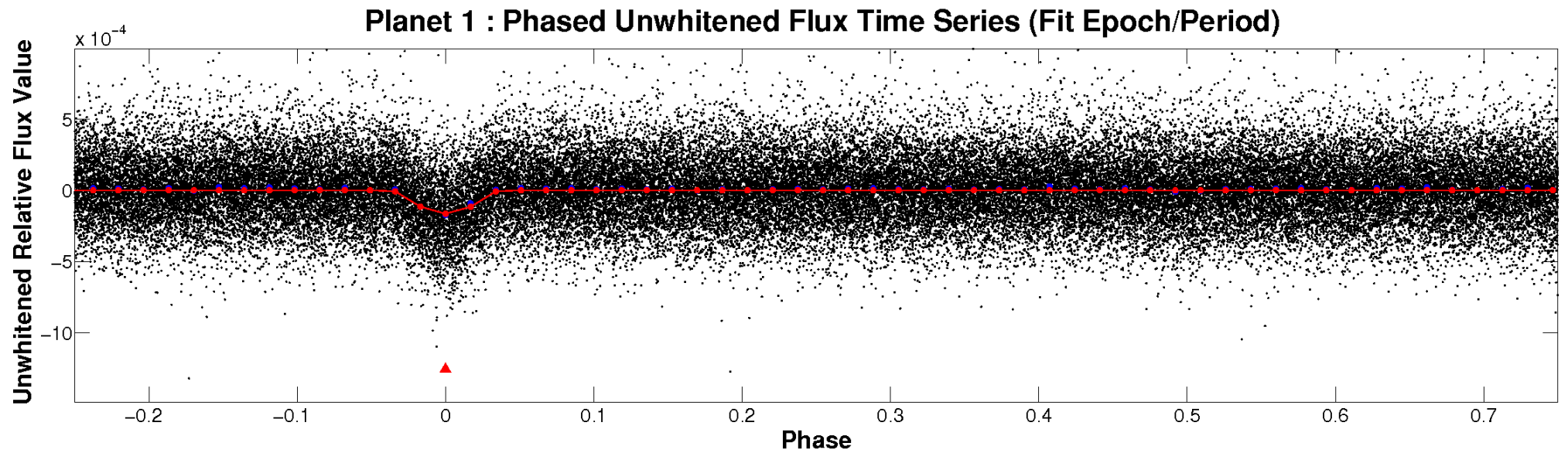


ALT Odd/Even

TCE 010148521-01

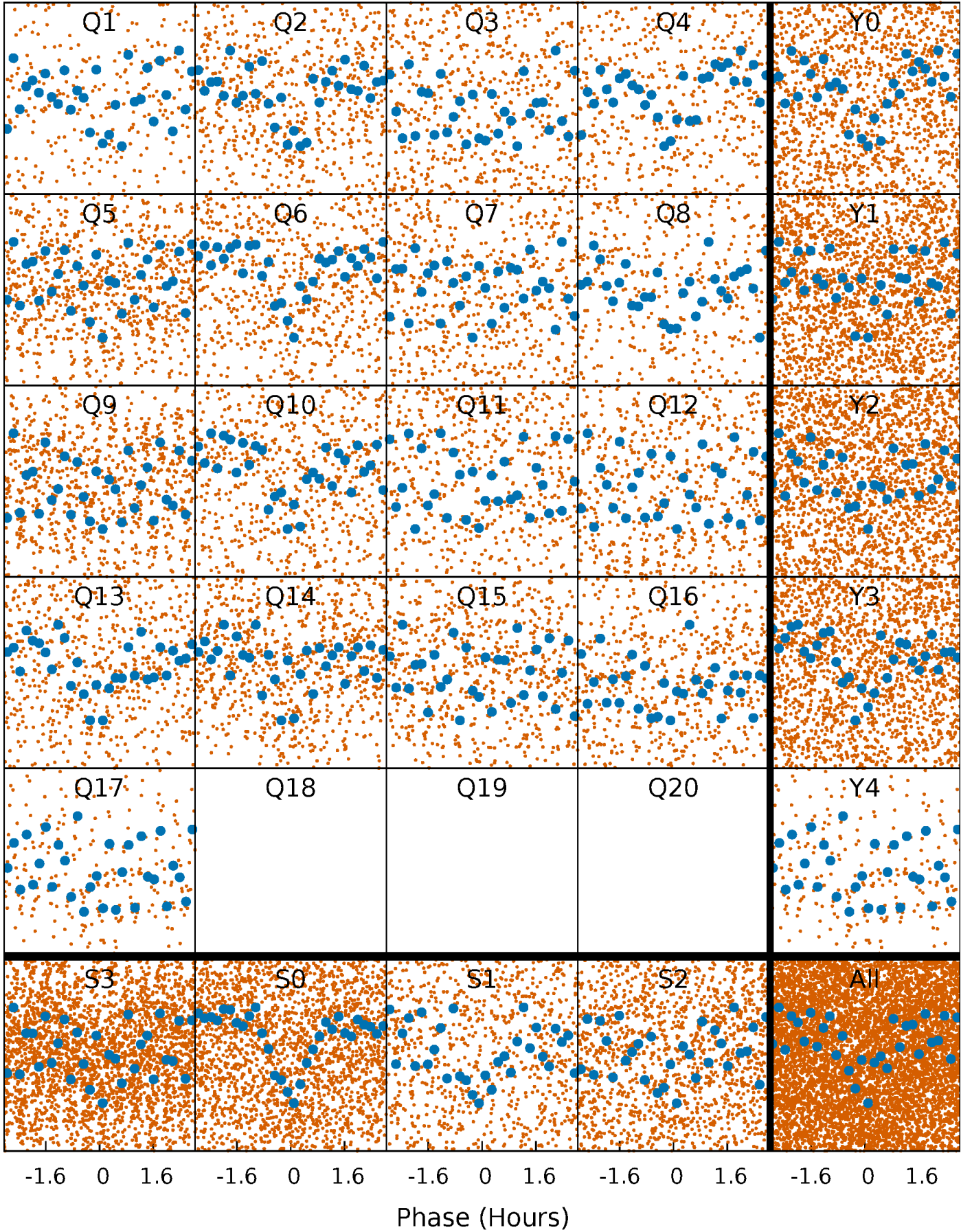


Non-Whitened Vs. Whitened Light Curve



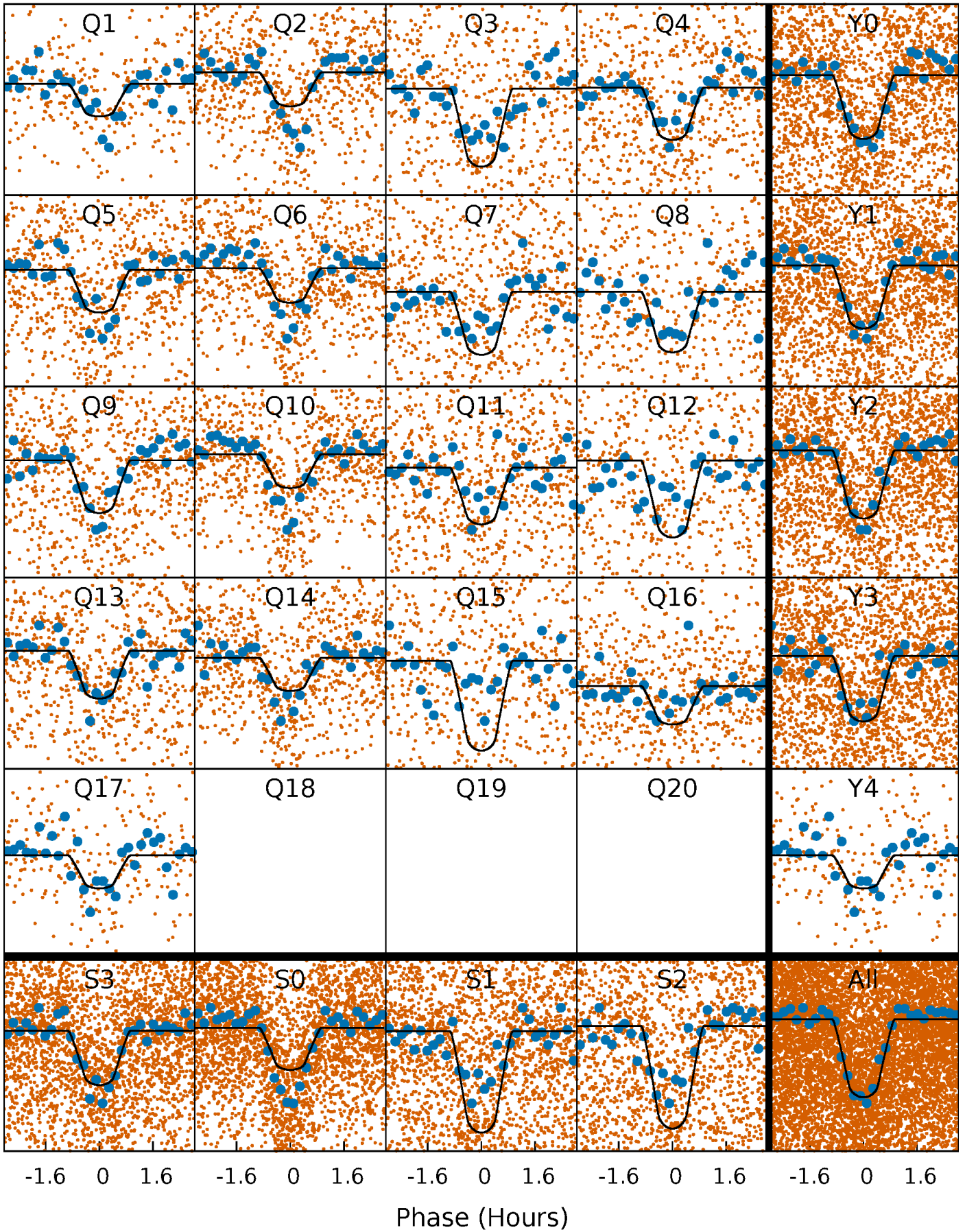
PDC Quarter-Phased Transit Curves

TCE 010148521-01 P= 1.204280 Days $T_0=131.646535$ (BKJD)



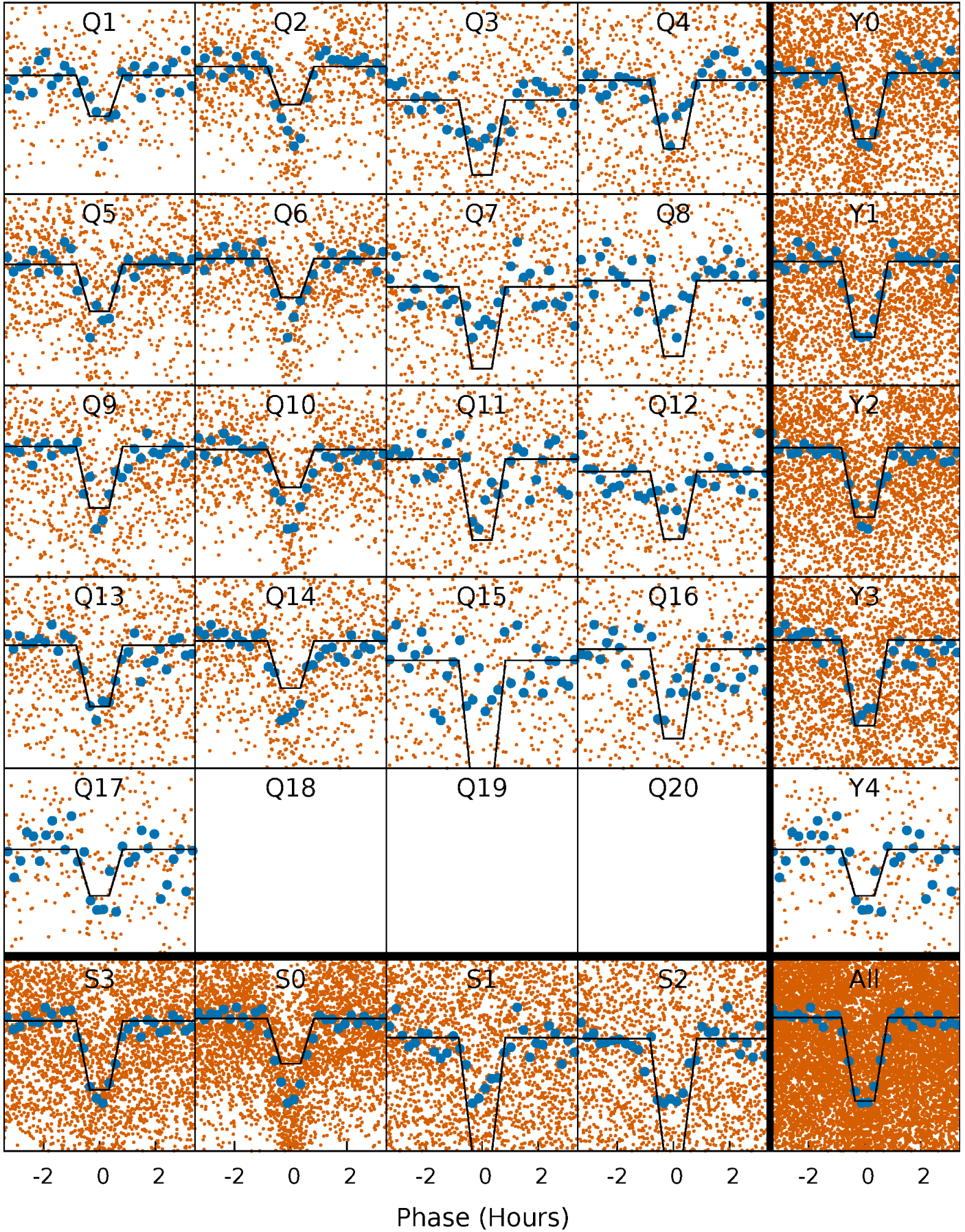
DV Quarter-Phased Transit Curves

TCE 010148521-01 P= 1.204280 Days $T_0=131.646535$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

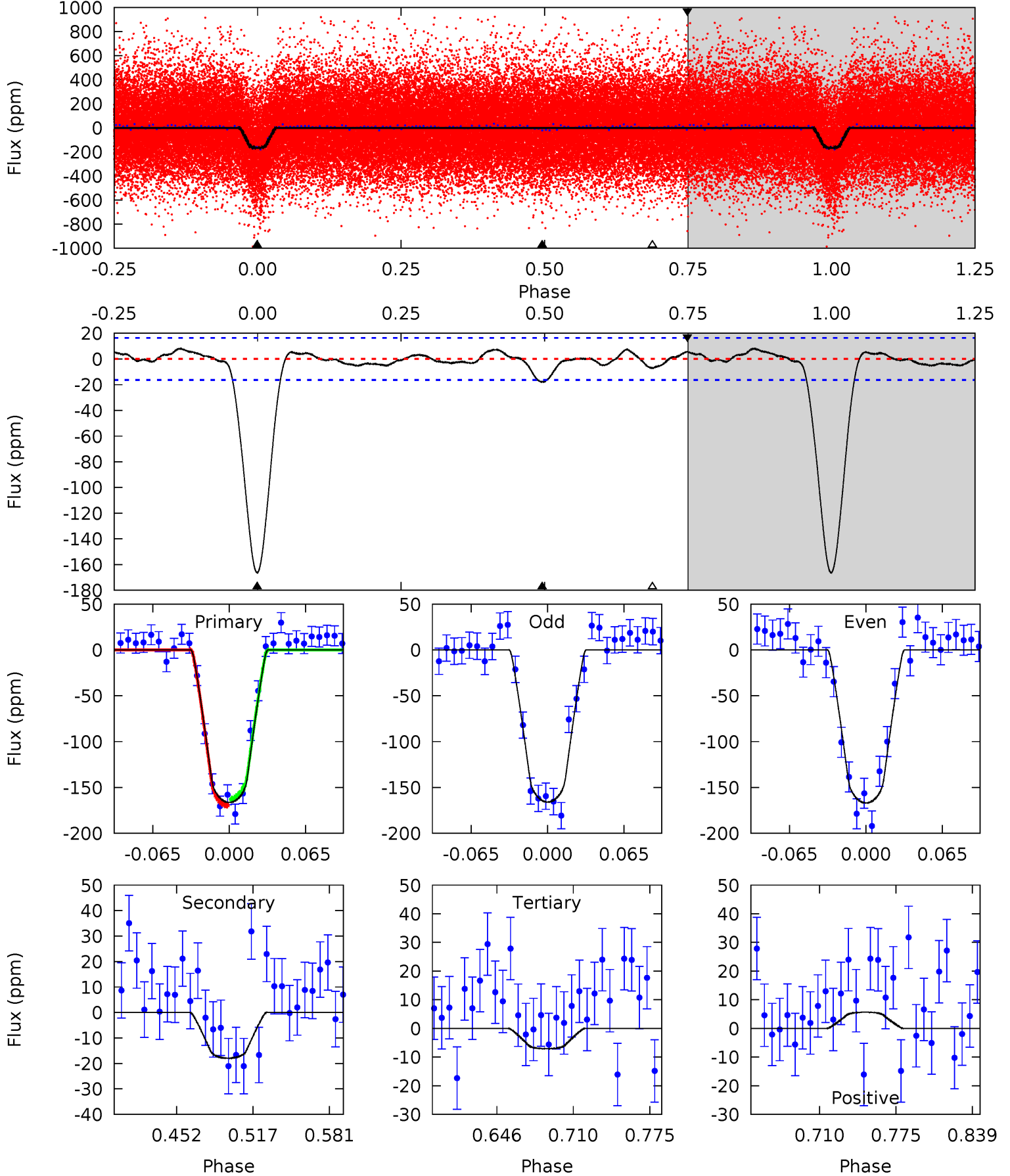
TCE 010148521-01 P= 1.204274 Days $T_0=131.649542$ (BKJD)



DV Model-Shift Uniqueness Test

010148521-01, P = 1.204280 Days, E = 130.442255 Days

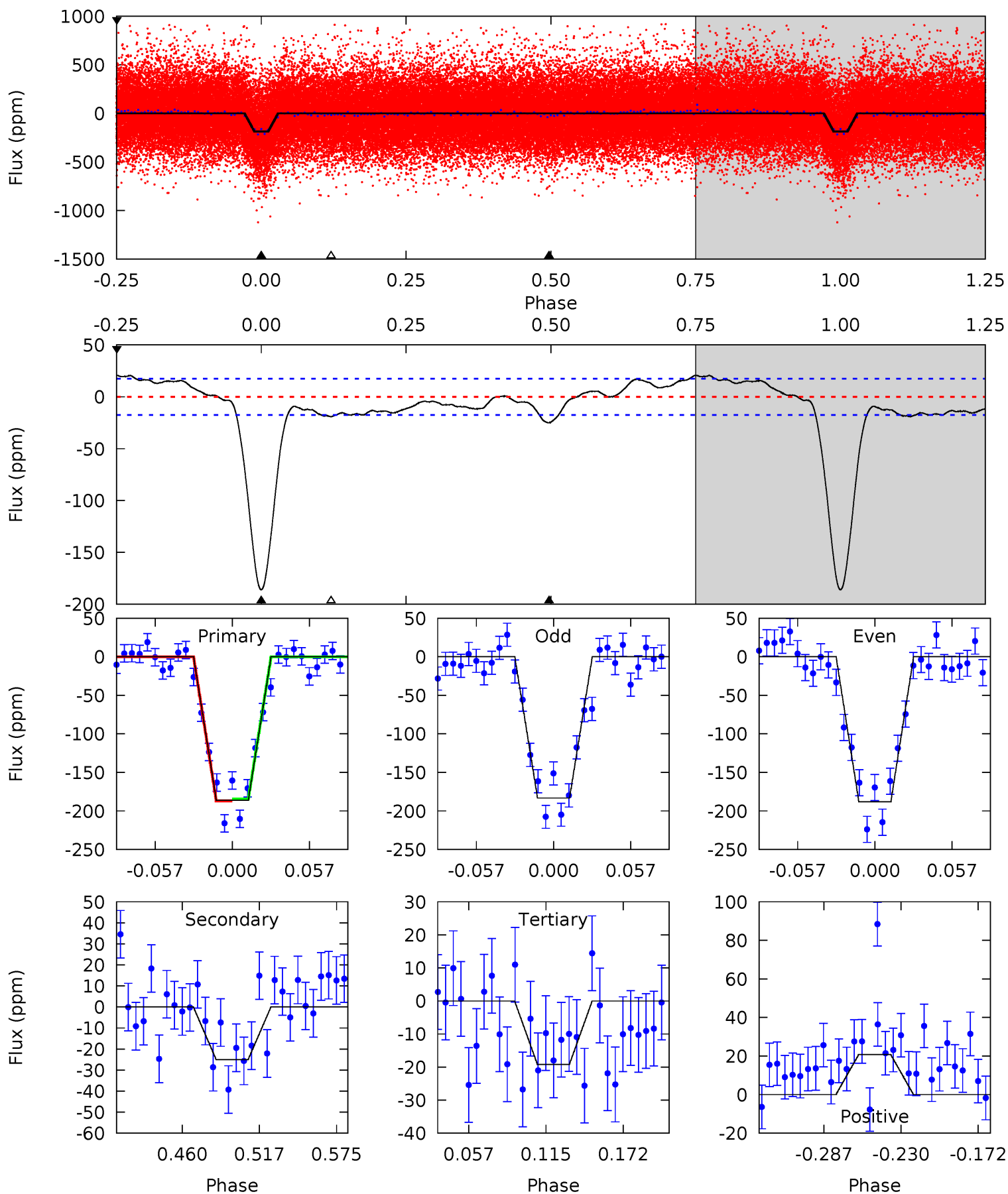
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	5.11	2.02	1.61	4.66	1.85	1.04	45.3	45.7	3.09	3.50	0.14	1.01	0.05	0.99



Alt Model-Shift Uniqueness Test

010148521-01, P = 1.204274 Days, E = 130.445268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.8	6.69	5.14	5.56	4.68	1.90	3.27	44.7	44.2	1.55	1.13	0.65	1.03	0.10	0.36



Stellar Parameters For KIC 010148521

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5668^{+152}_{-169}	$4.552^{+0.035}_{-0.184}$	$-0.100^{+0.300}_{-0.300}$	$0.849^{+0.229}_{-0.082}$	$0.938^{+0.094}_{-0.115}$	$2.159^{+0.405}_{-1.077}$
	+3%/-3%	+1%/-4%	+300%/-300%	+27%/-10%	+10%/-12%	+19%/-50%
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 010148521-01 / KOI 1084.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 4	$1.39^{+0.37}_{-0.35}$	2242^{+133}_{-96}	3472^{+396}_{-313}	$2.352^{+2.022}_{-0.946}$
Alt.	-25 ± 4	$1.33^{+0.41}_{-0.34}$	2229^{+152}_{-94}	3739^{+428}_{-360}	$3.570^{+2.861}_{-1.517}$

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

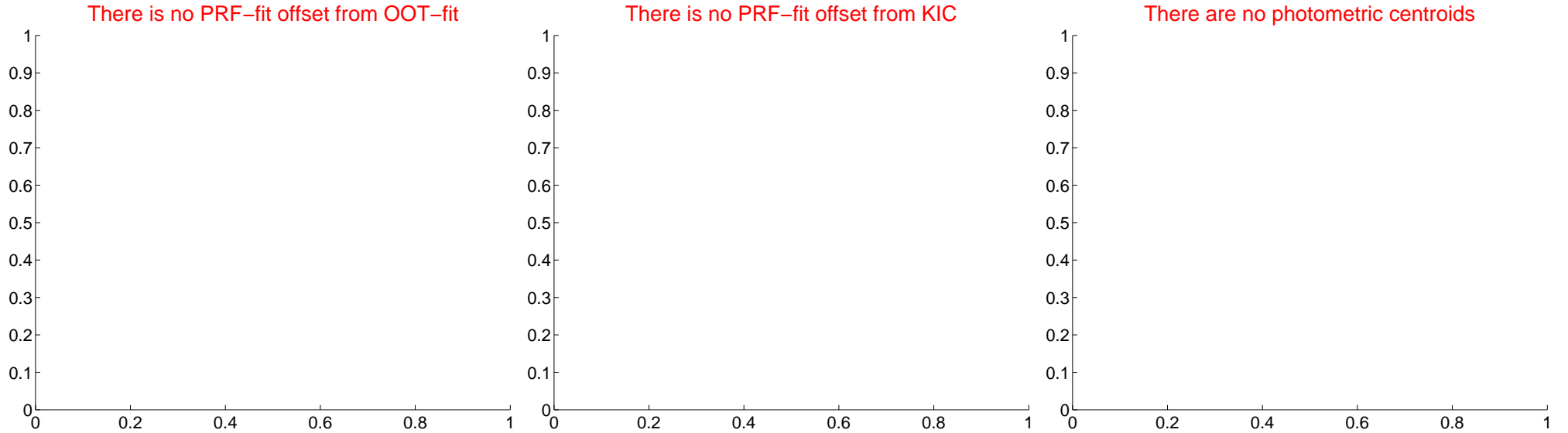
DV Centroid Data

Supplemental centroid analysis for 010148521-01. Kepler magnitude: 14.41. Transit SNR 31.29

There are 0 quarters with good PRF difference image offsets

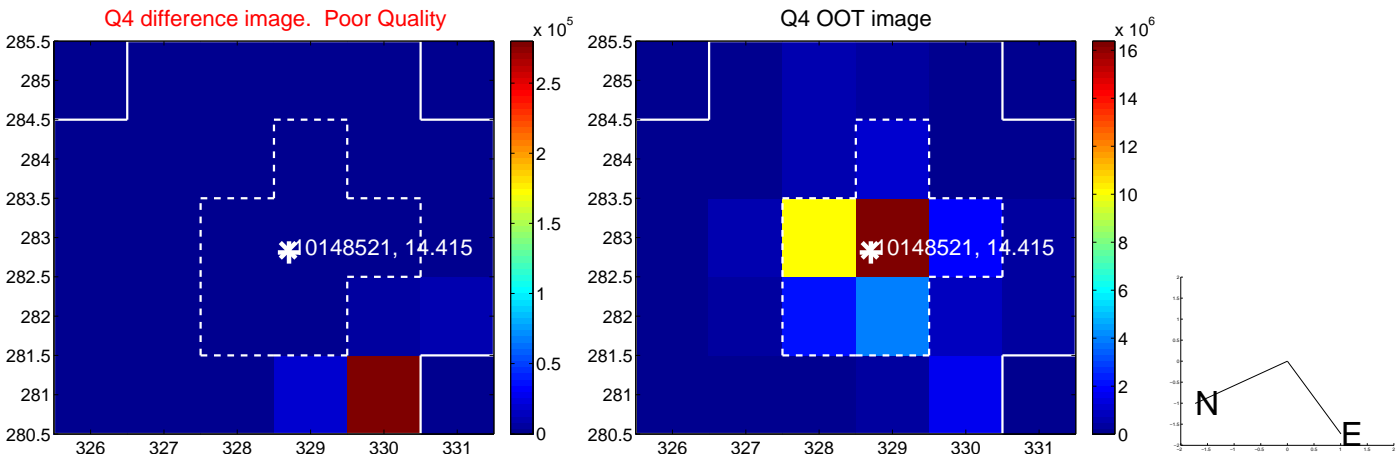
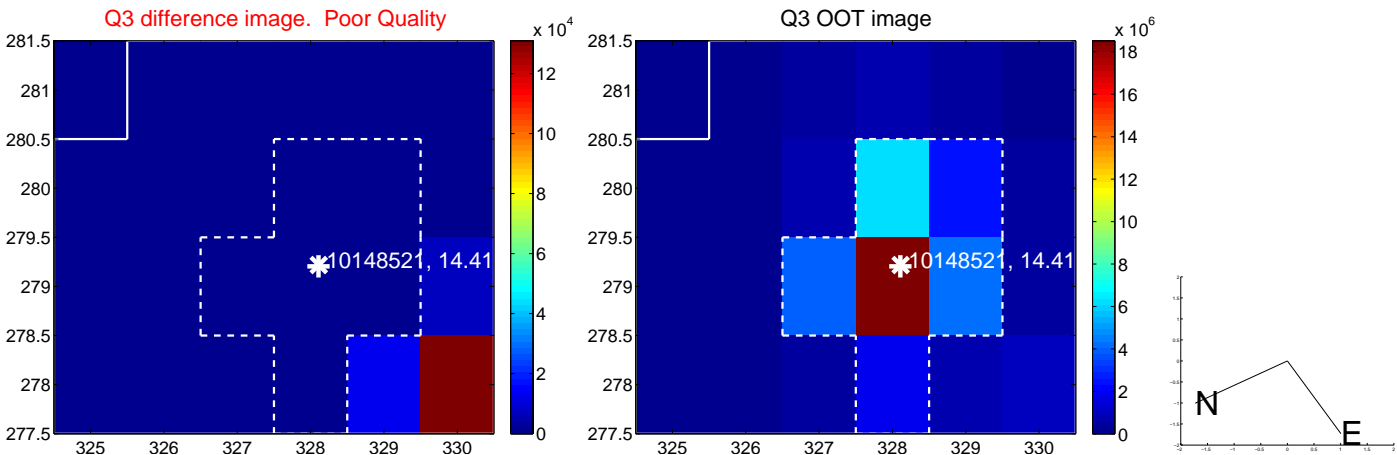
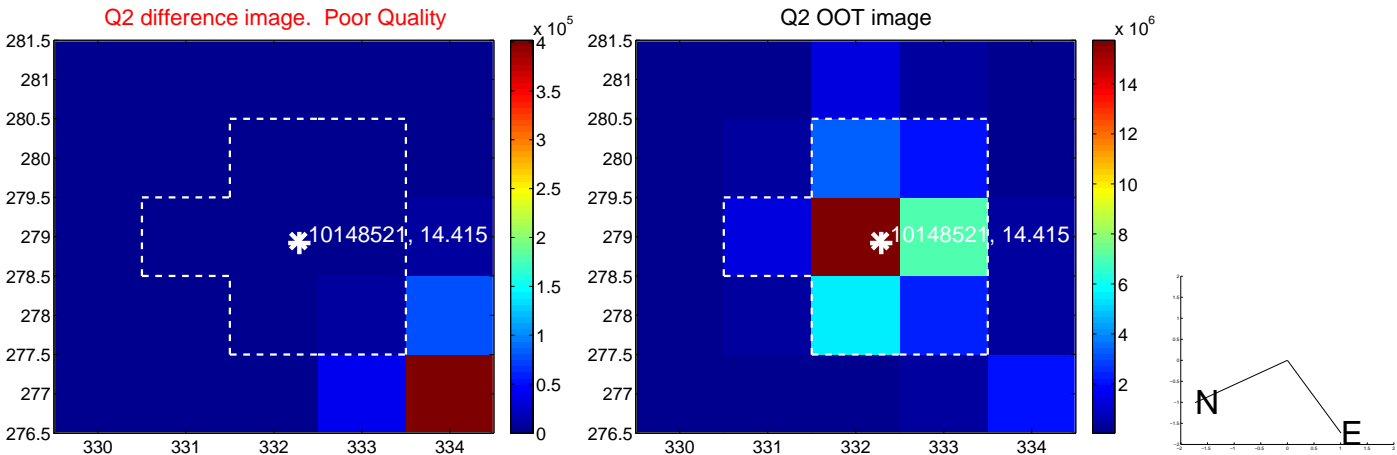
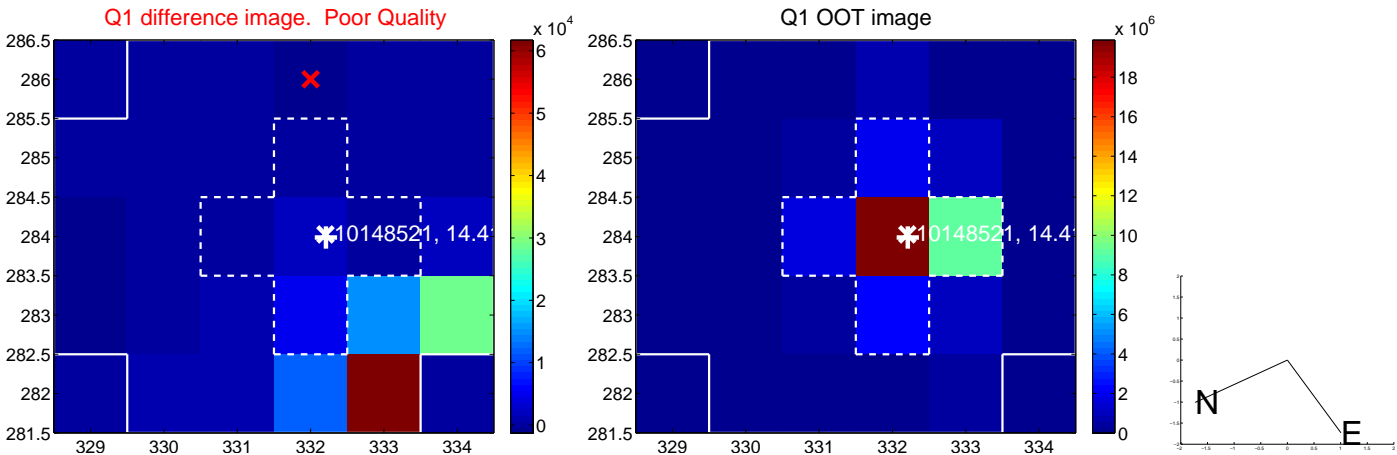
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

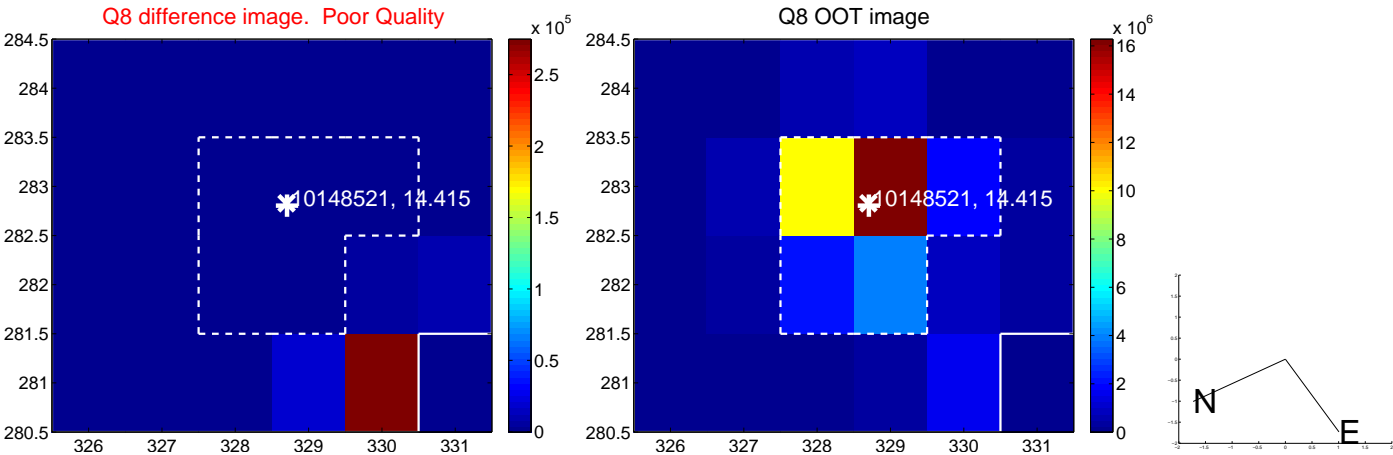
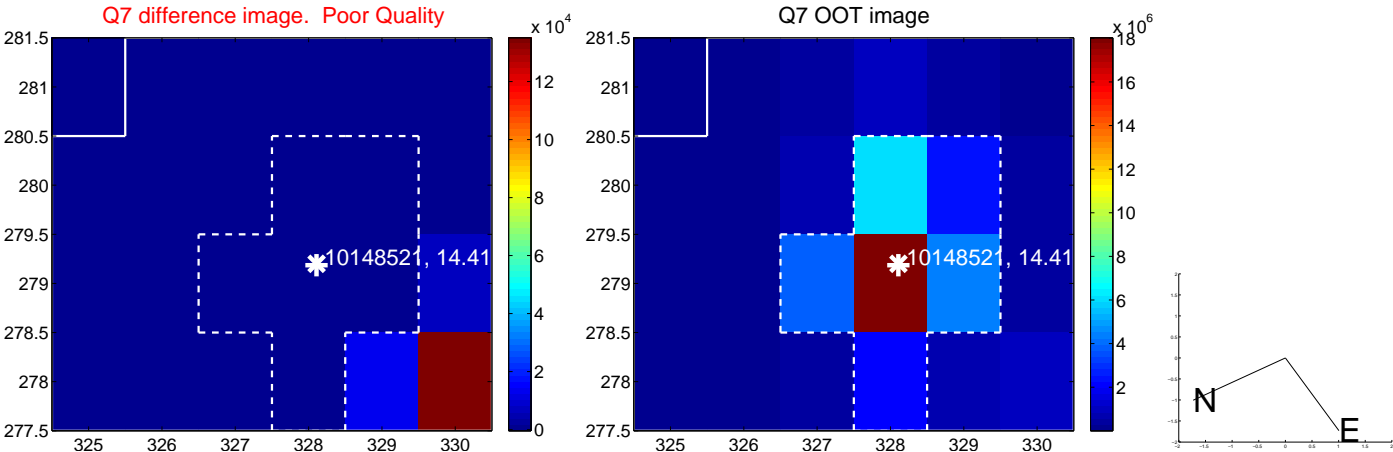
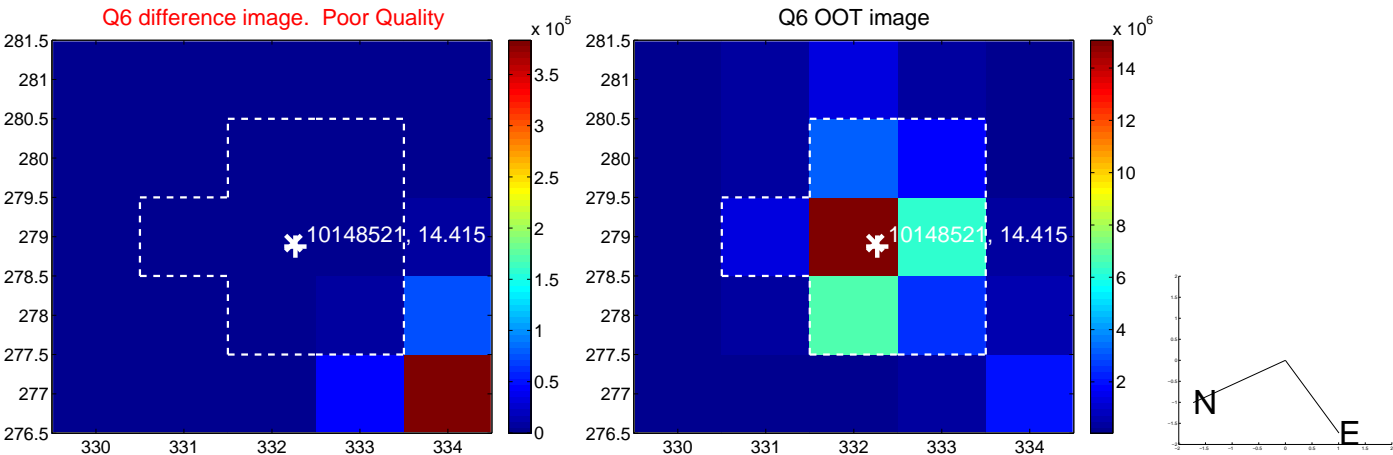
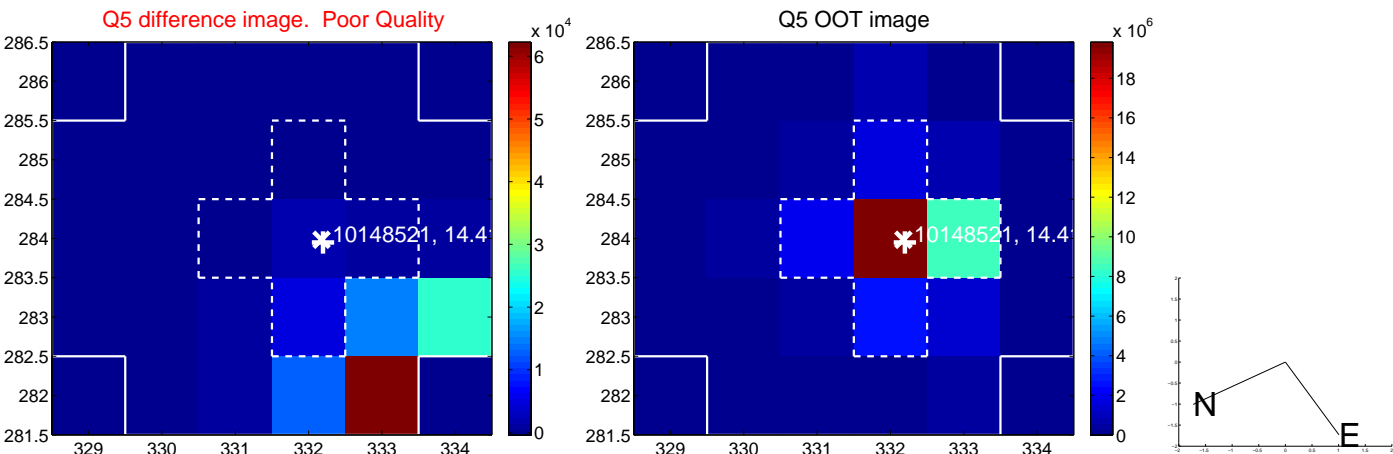


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

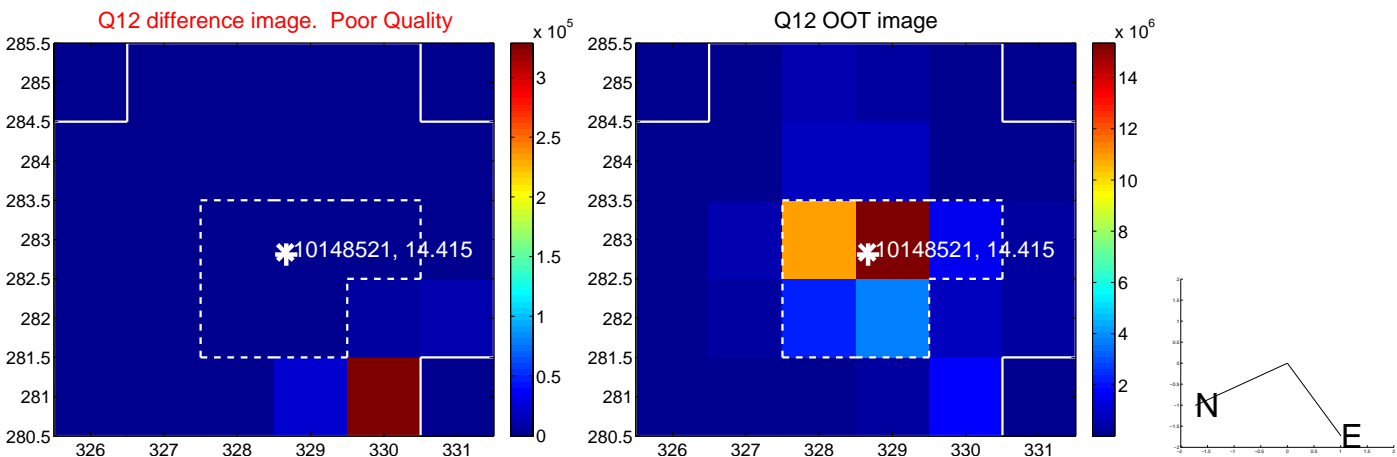
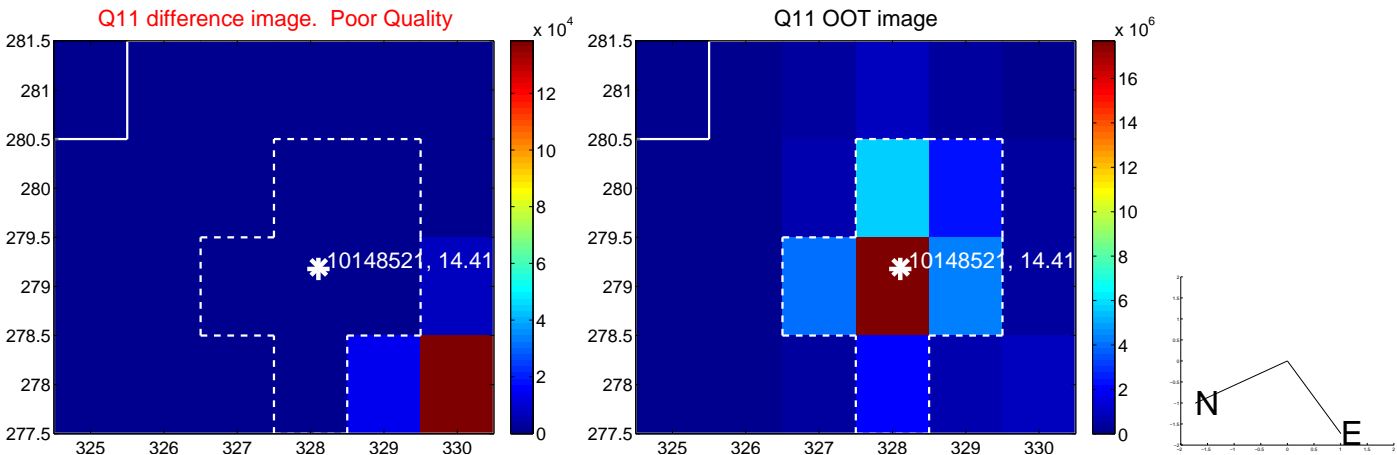
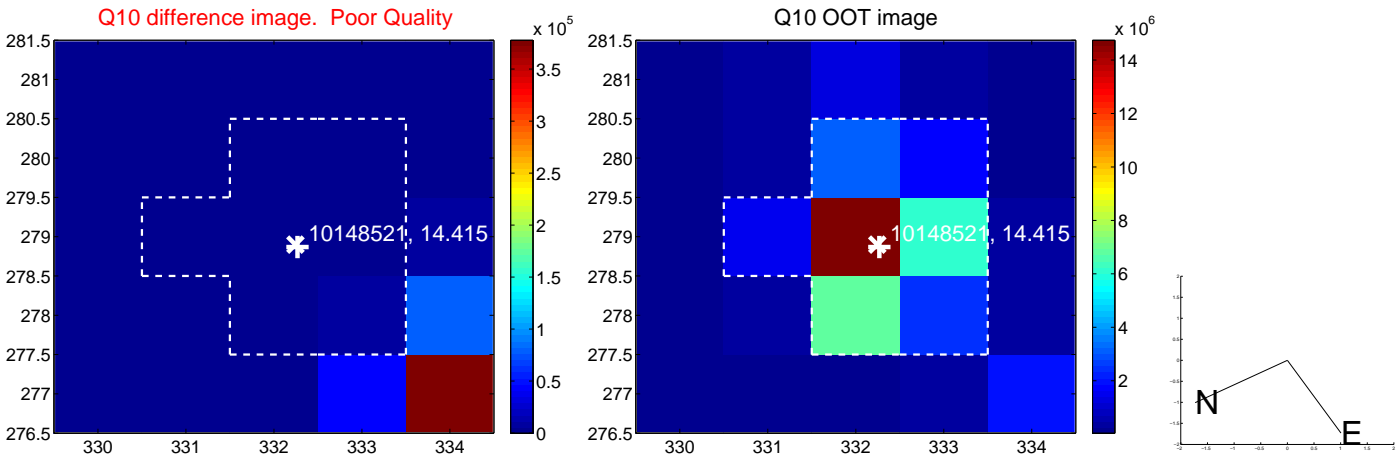
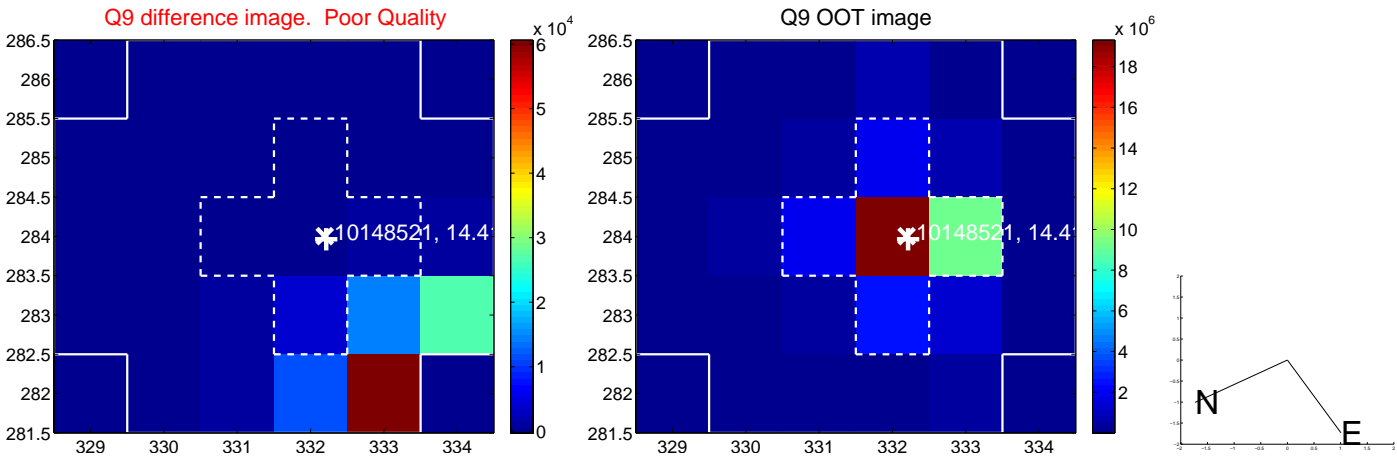
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



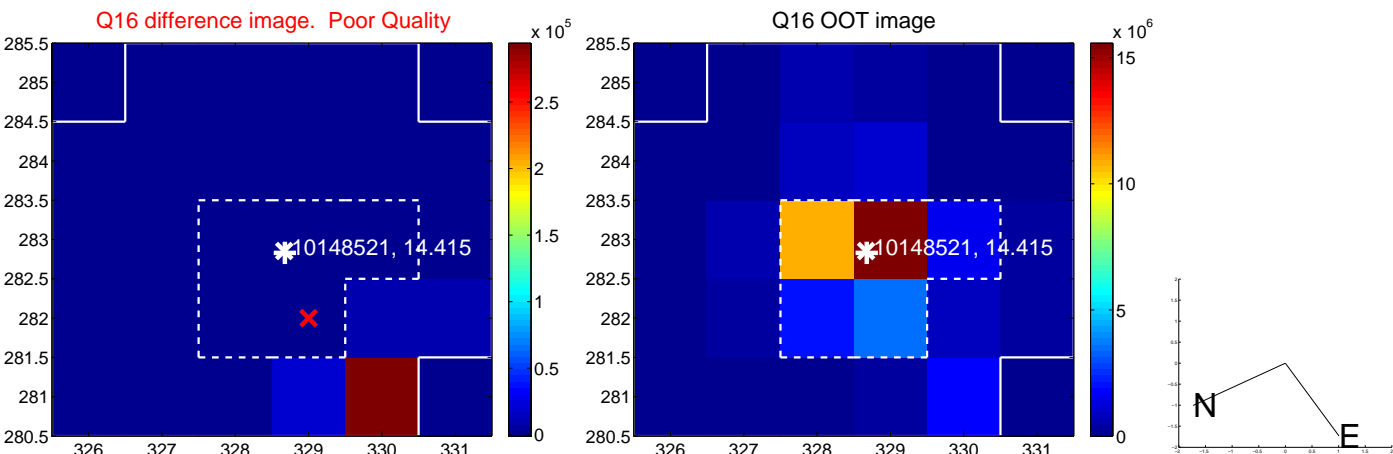
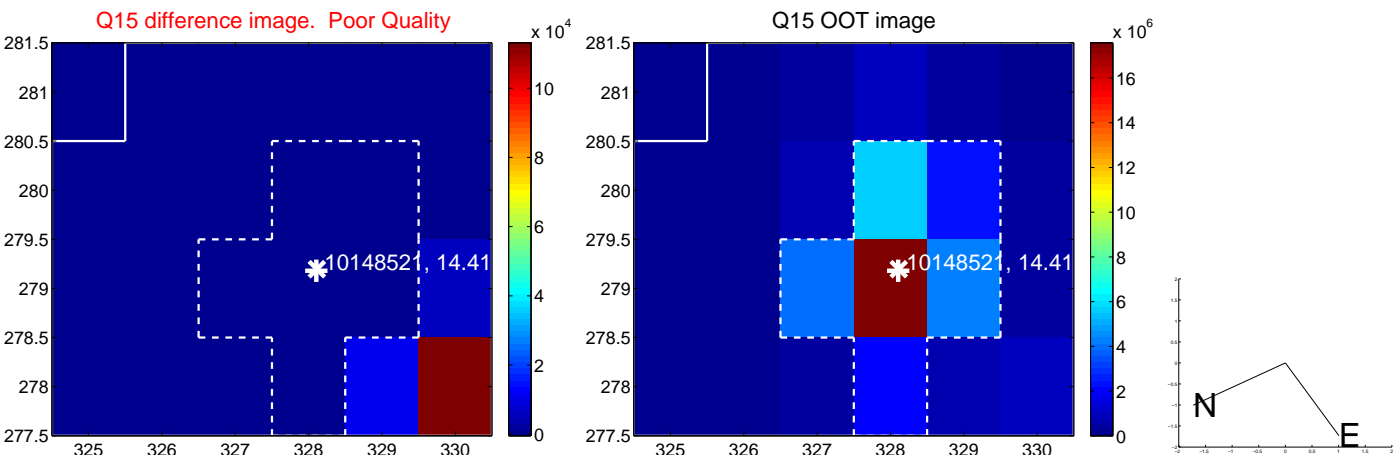
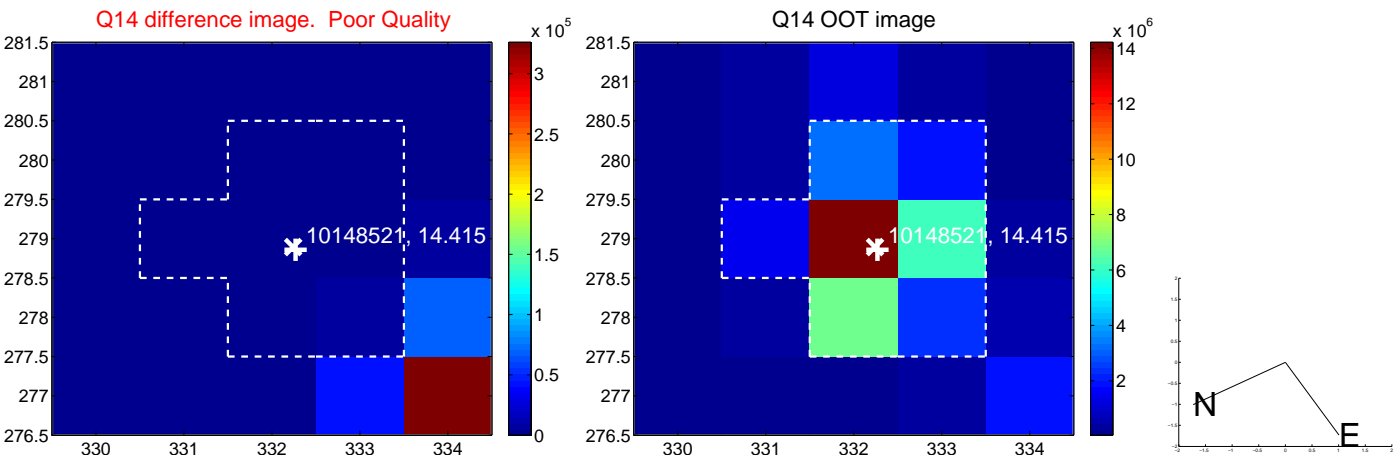
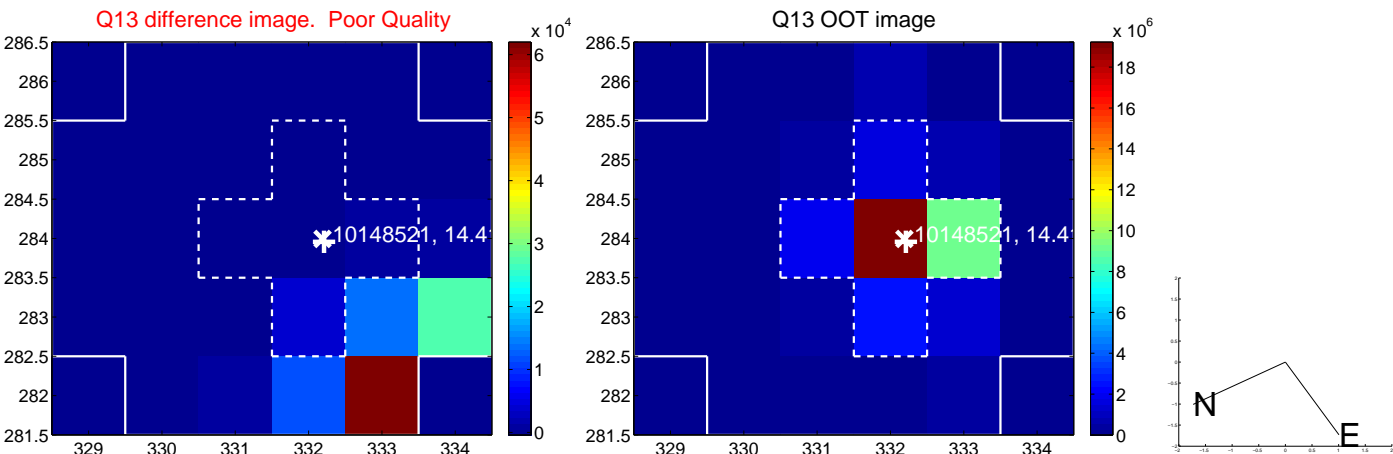
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



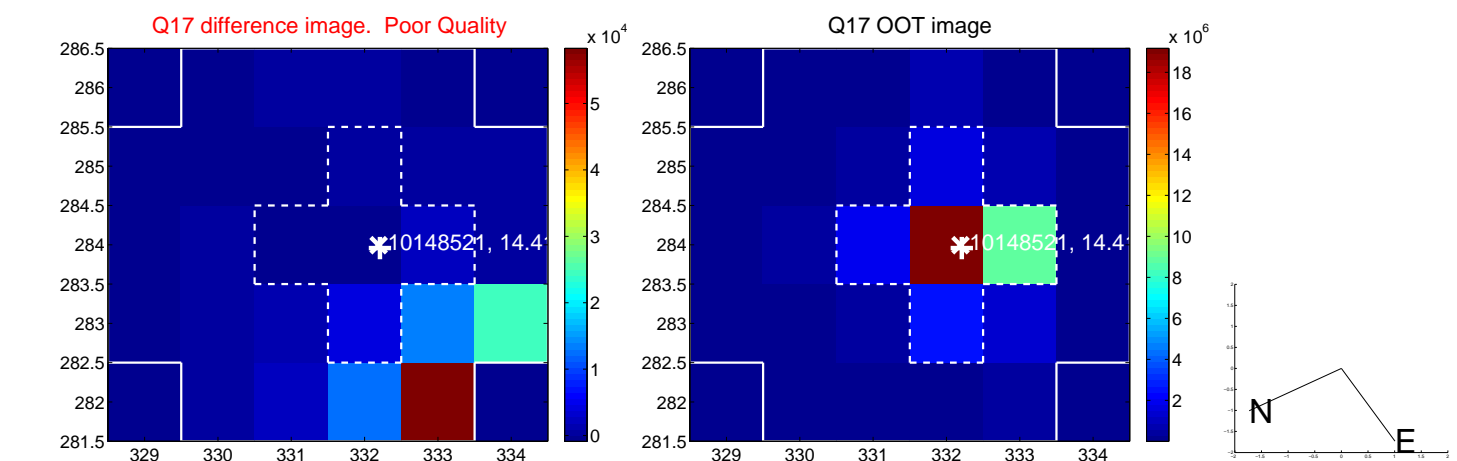
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



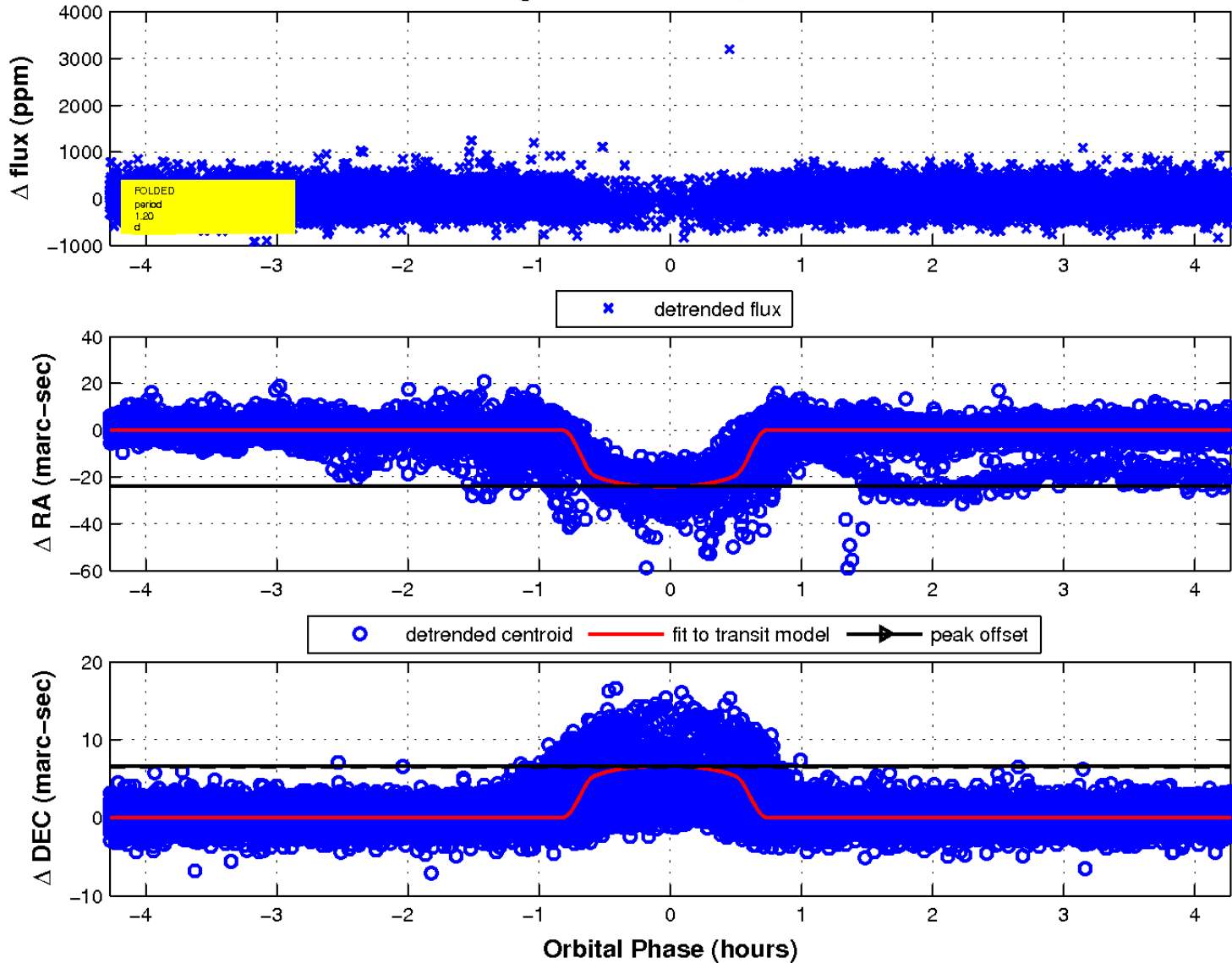
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

