

KIC 002712825

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})
002712825-01	OBS	8086.01	18.384332	133.421707	111.1	5.493	10.8	11.5	1.40	6335	1.71	137.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002712825-01	OBS	FP	0.32	1	0	0	0	MOD_NONUNIQ_DV

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

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

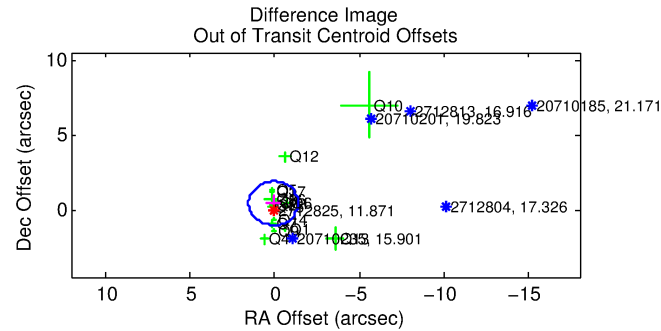
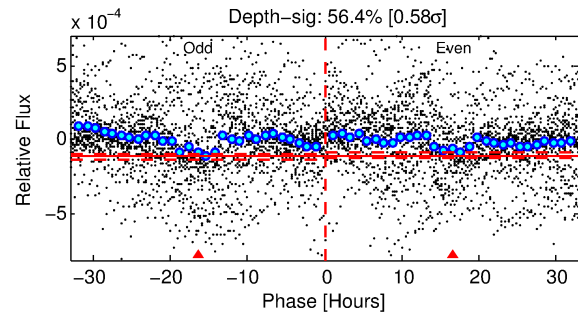
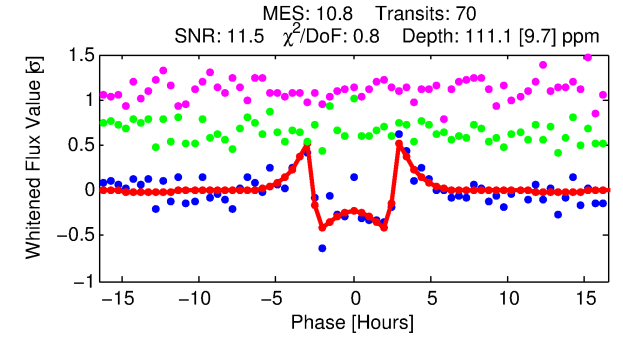
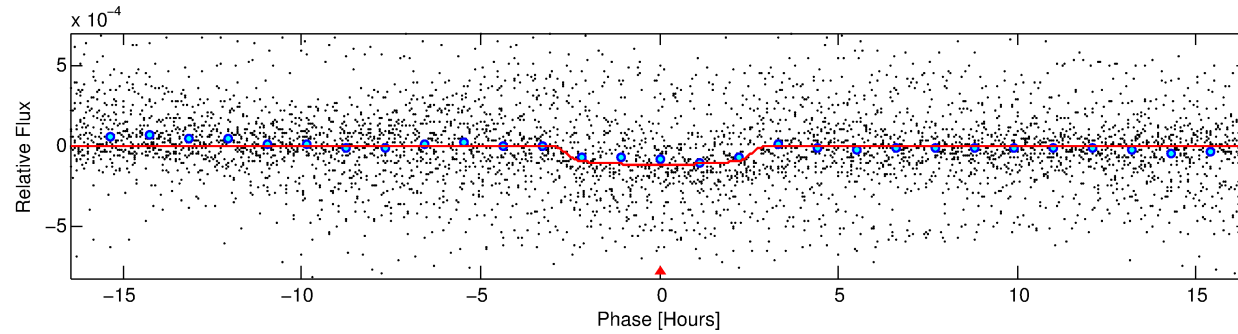
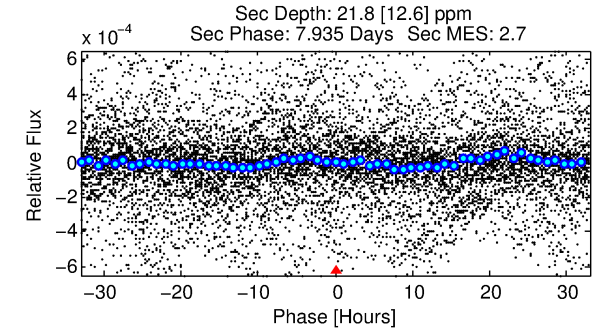
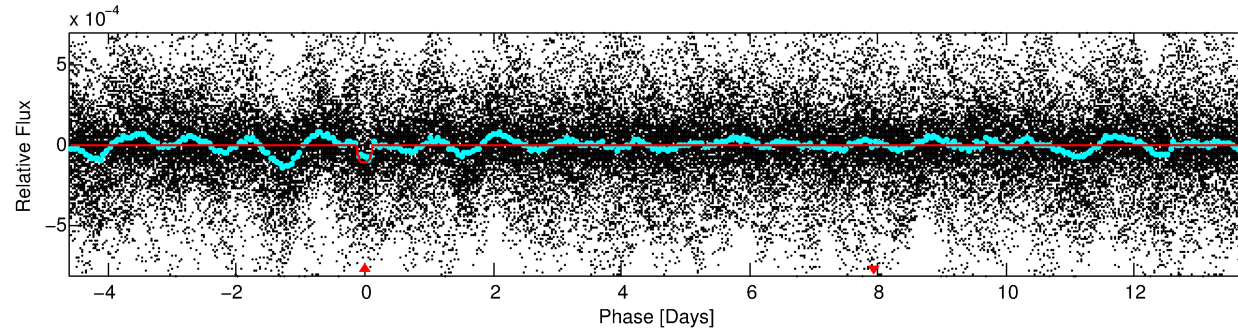
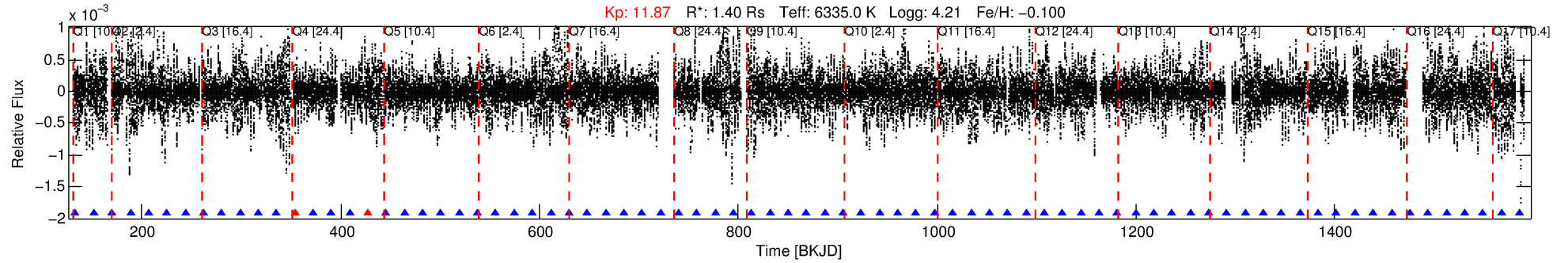
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002712825-01

No Significant Match Found

DV One-Page Summary

KIC: 2712825 Candidate: 1 of 1 Period: 18.384 d



DV Fit Results:

Period = 18.38433 [0.00007] d
Epoch = 133.4217 [0.0033] BKJD
Rp/R* = 0.0112 [0.0014]
a/R* = 12.67 [7.35]
b = 0.88 [0.15]
Seff = 137.06 [33.45]
Teff = 872 [53] K
Rp = 1.71 [0.36] Re
a = 0.1438 [0.0223] AU
Ag = 85.26 [57.37] [1.47σ]
Teffp = 4099 [646] K [4.98σ]

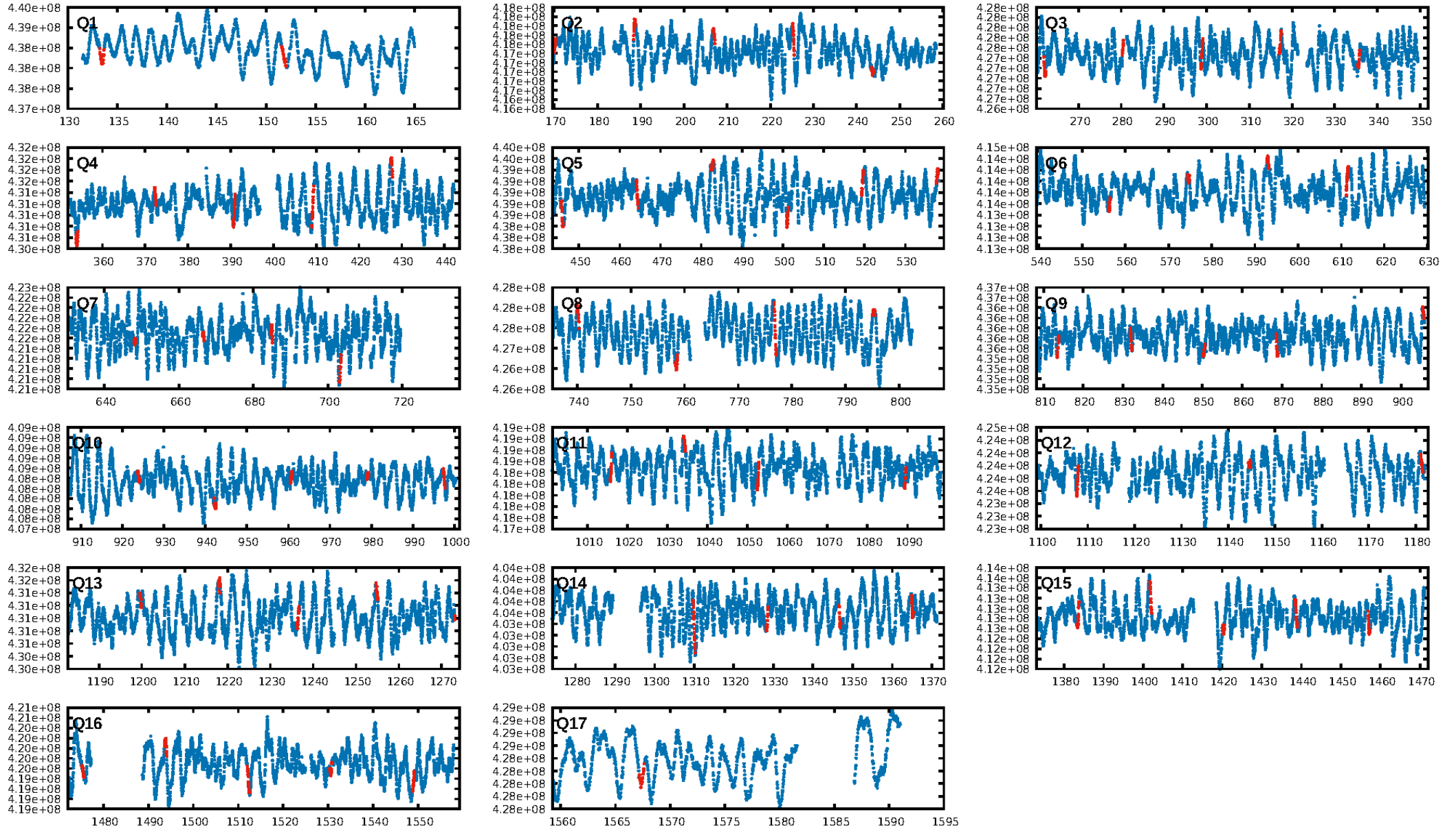
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.72e-26
RollingBand-fgt: 0.97 [65/67]
GhostDiagnostic-chr: 1.1
Centroid-sig: 2.5%
Centroid-so: 0.903 arcsec [1.62σ]
OotOffset-rm: 0.429 arcsec [0.88σ]
KicOffset-rm: 0.448 arcsec [1.03σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

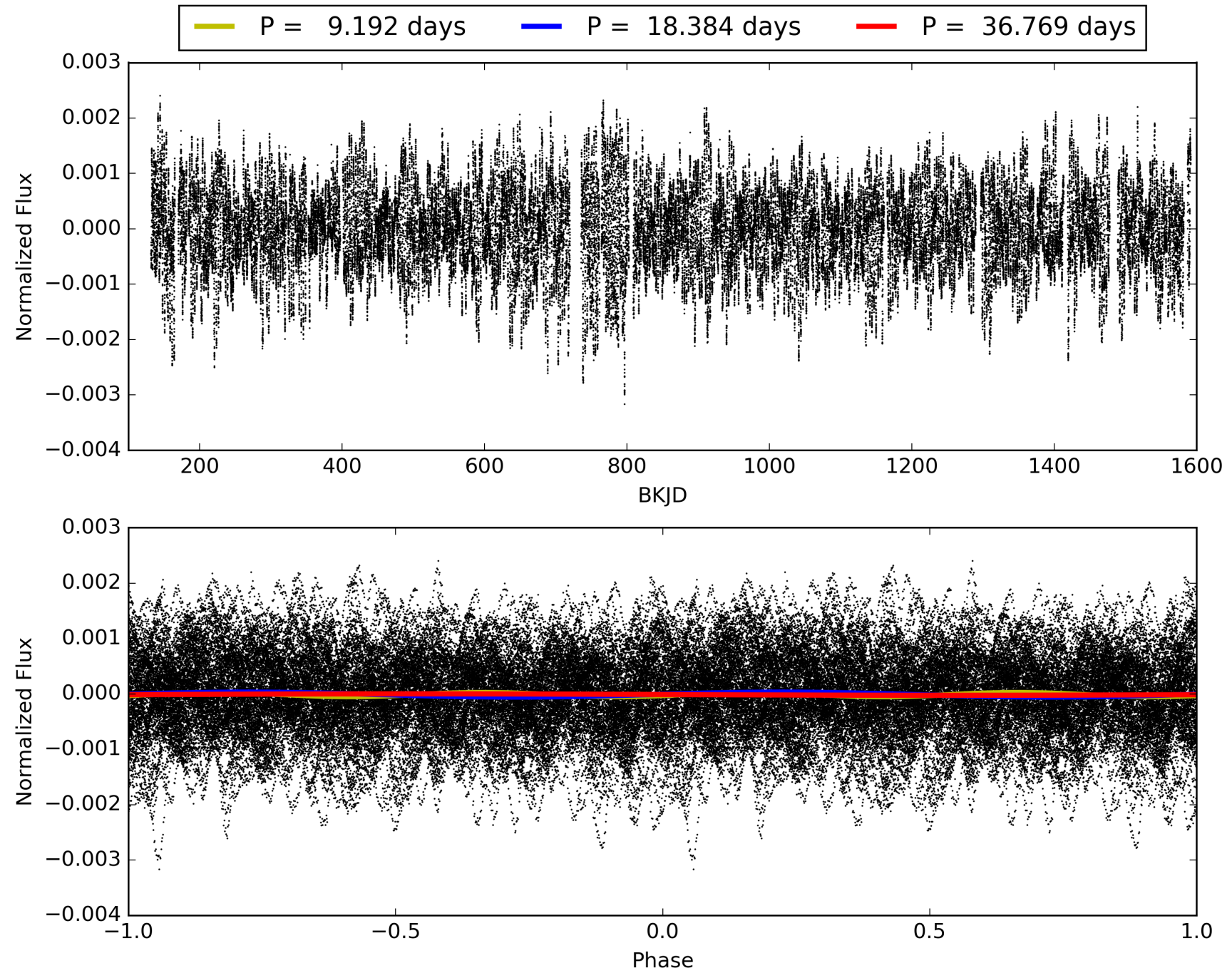
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:00:13 Z

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

TCE 002712825-01, PDC Light Curves

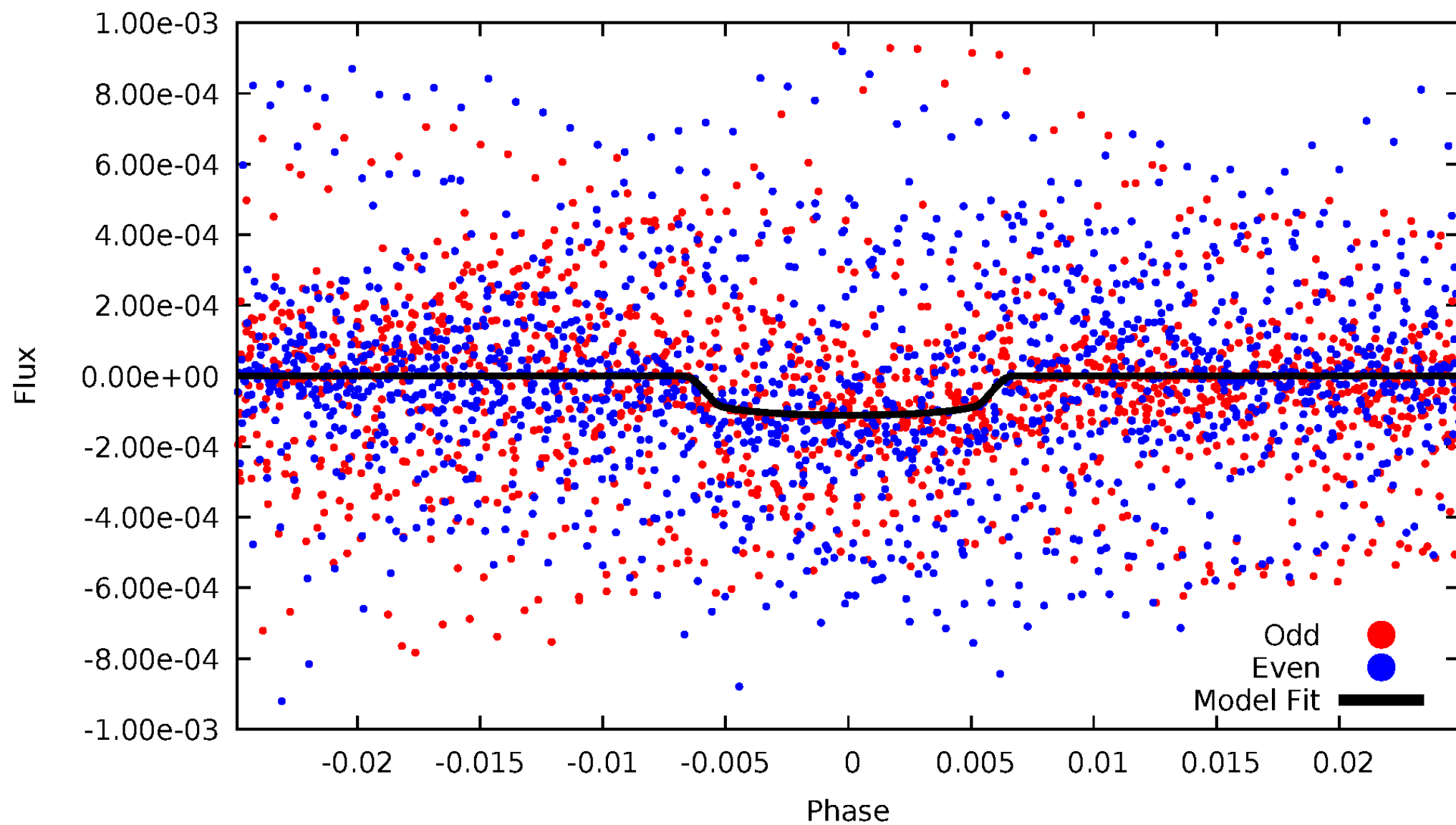


TCE 002712825-01



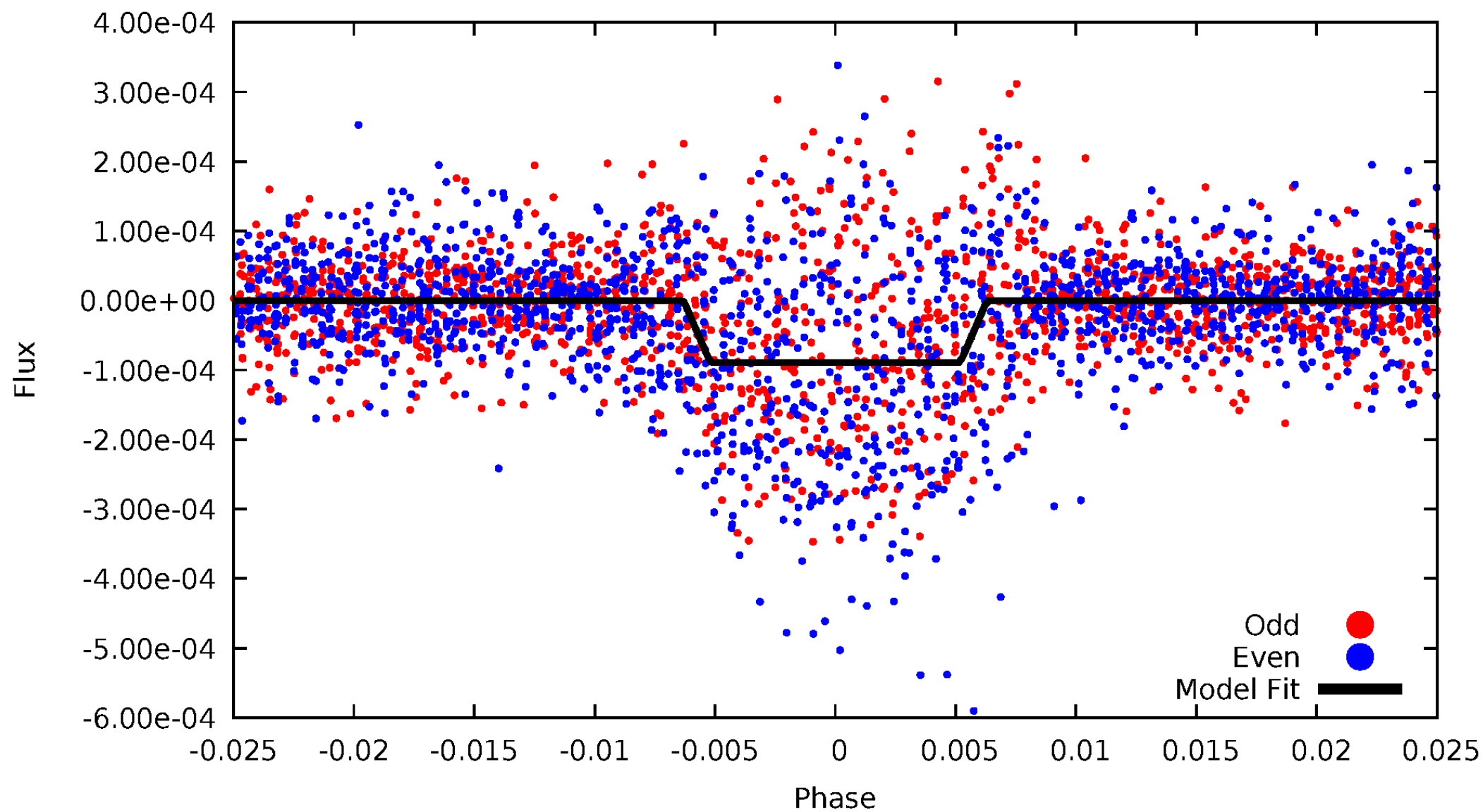
DV Odd/Even

TCE 002712825-01

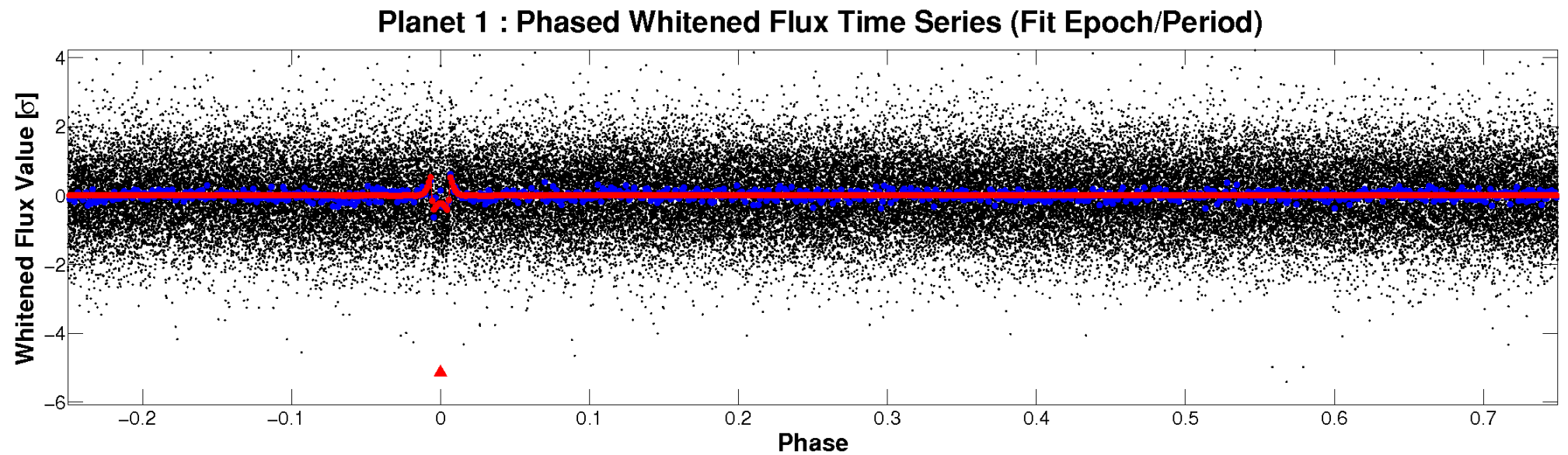
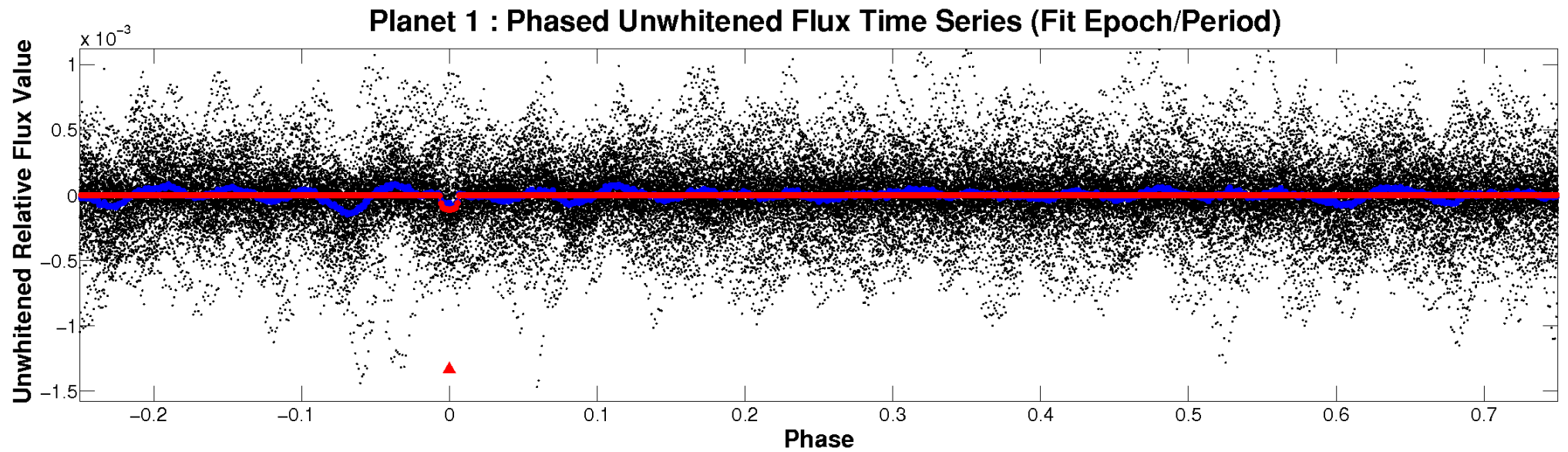


ALT Odd/Even

TCE 002712825-01

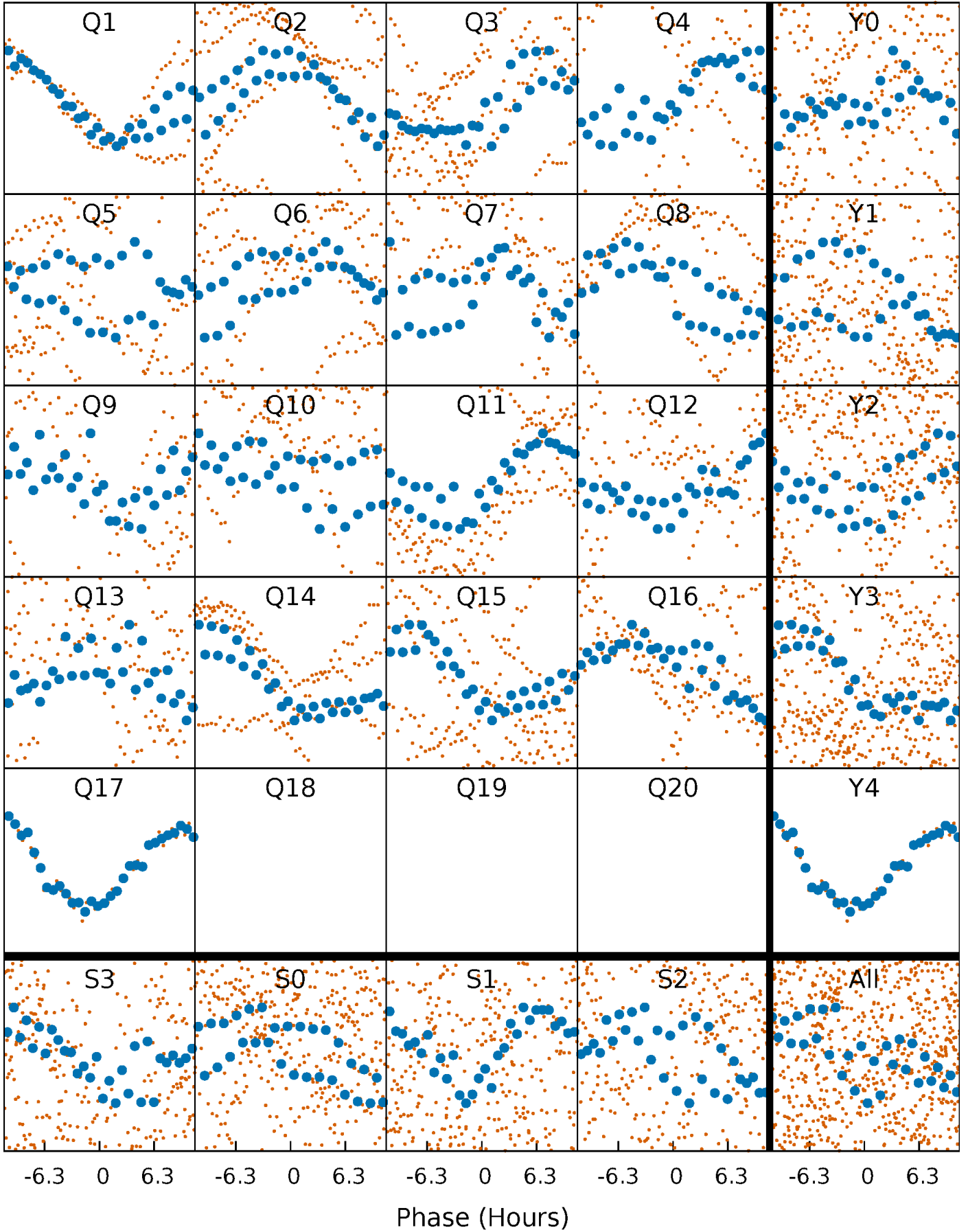


Non-Whitened Vs. Whitened Light Curve



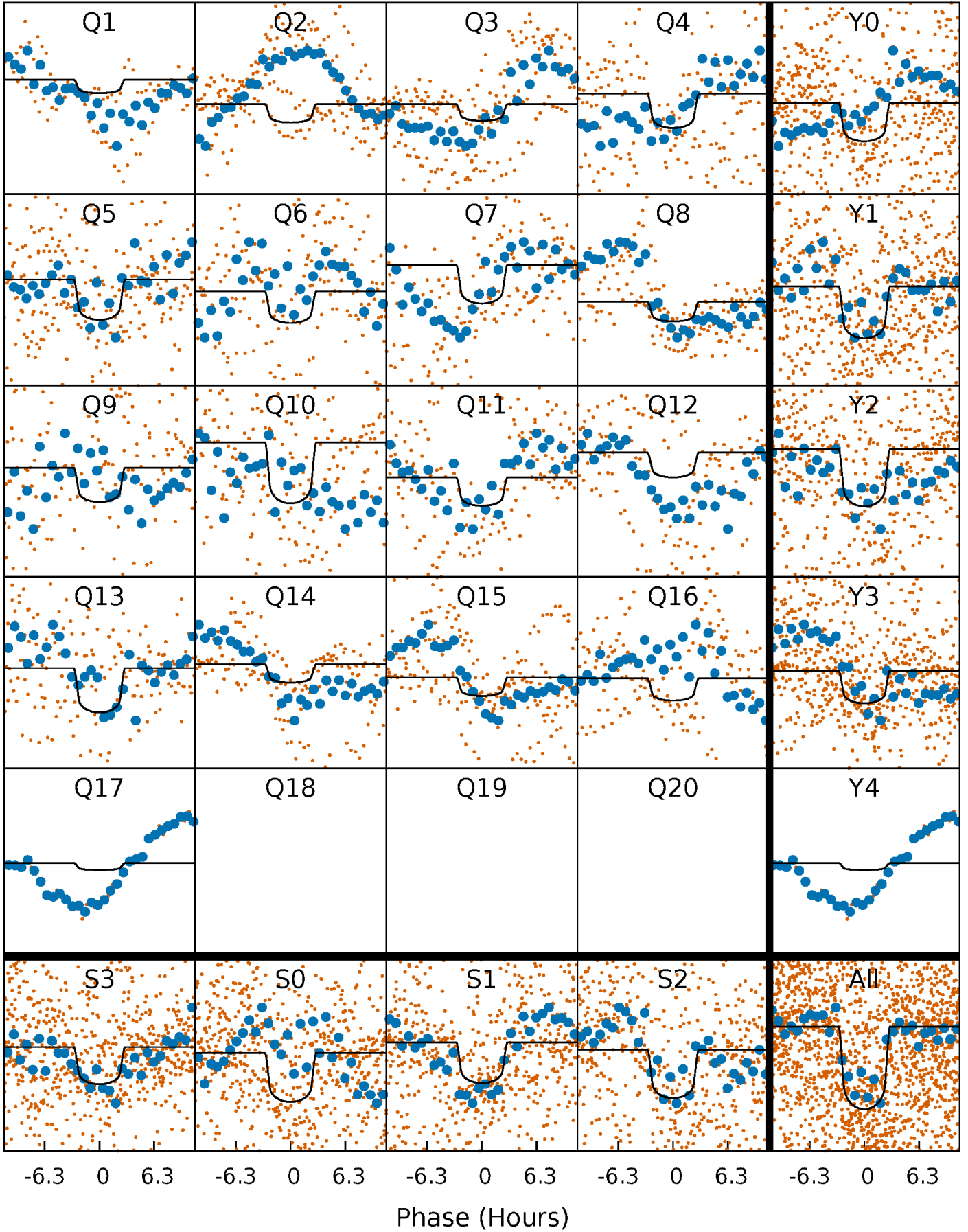
PDC Quarter-Phased Transit Curves

TCE 002712825-01 P= 18.384332 Days $T_0=133.421707$ (BKJD)



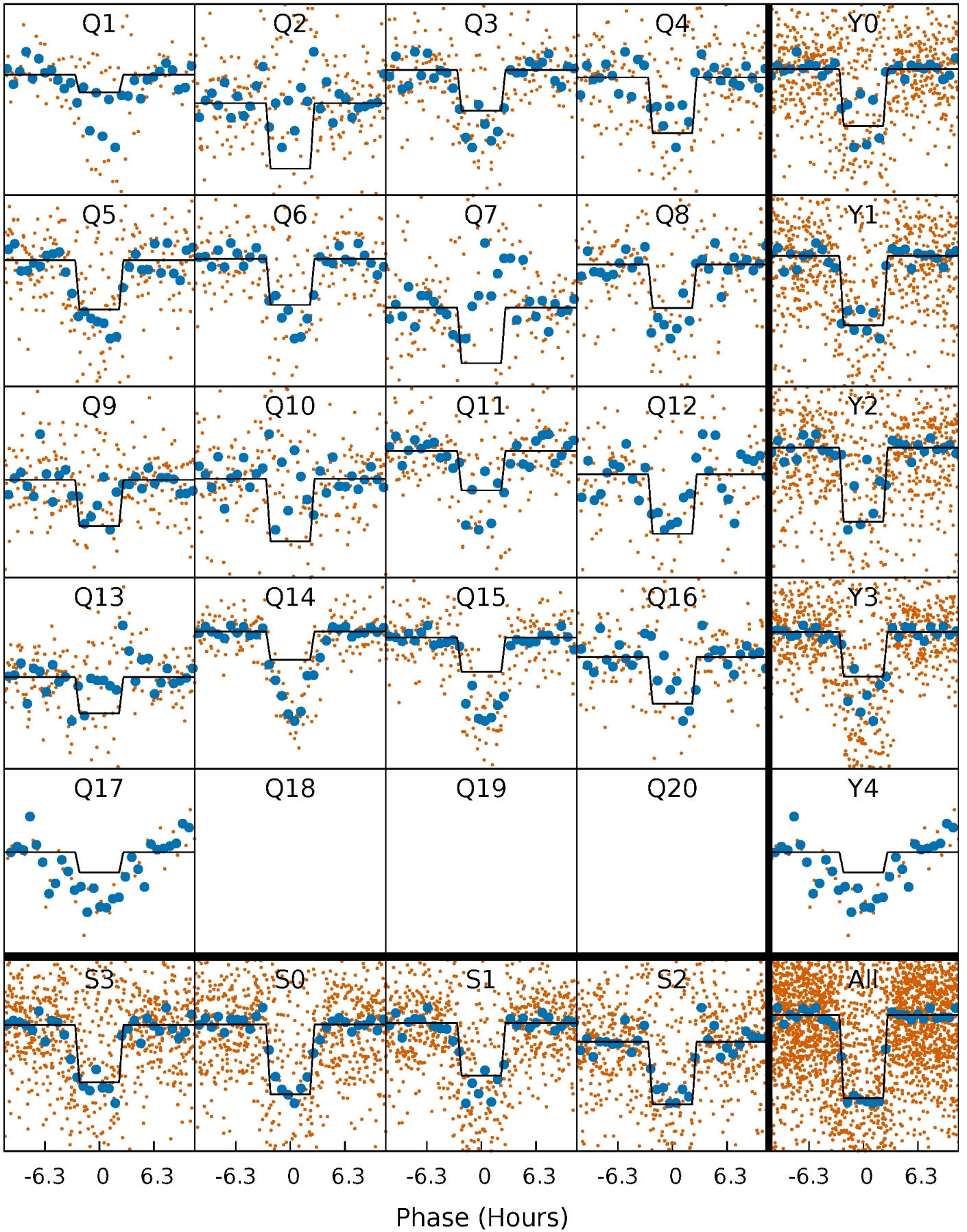
DV Quarter-Phased Transit Curves

TCE 002712825-01 P= 18.384332 Days $T_0=133.421707$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

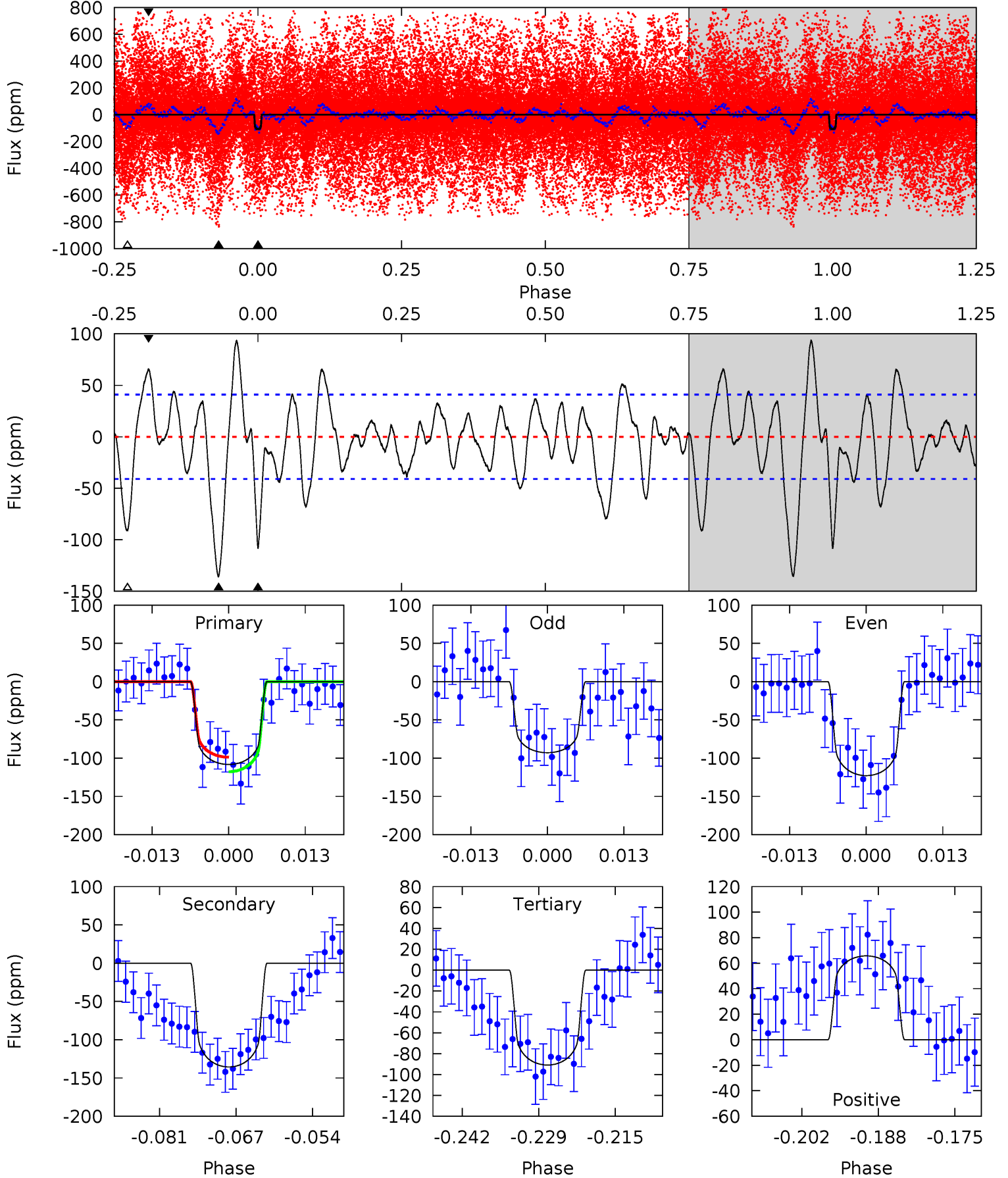
TCE 002712825-01 P= 18.384118 Days $T_0=133.429800$ (BKJD)



DV Model-Shift Uniqueness Test

002712825-01, P = 18.384332 Days, E = 115.037375 Days

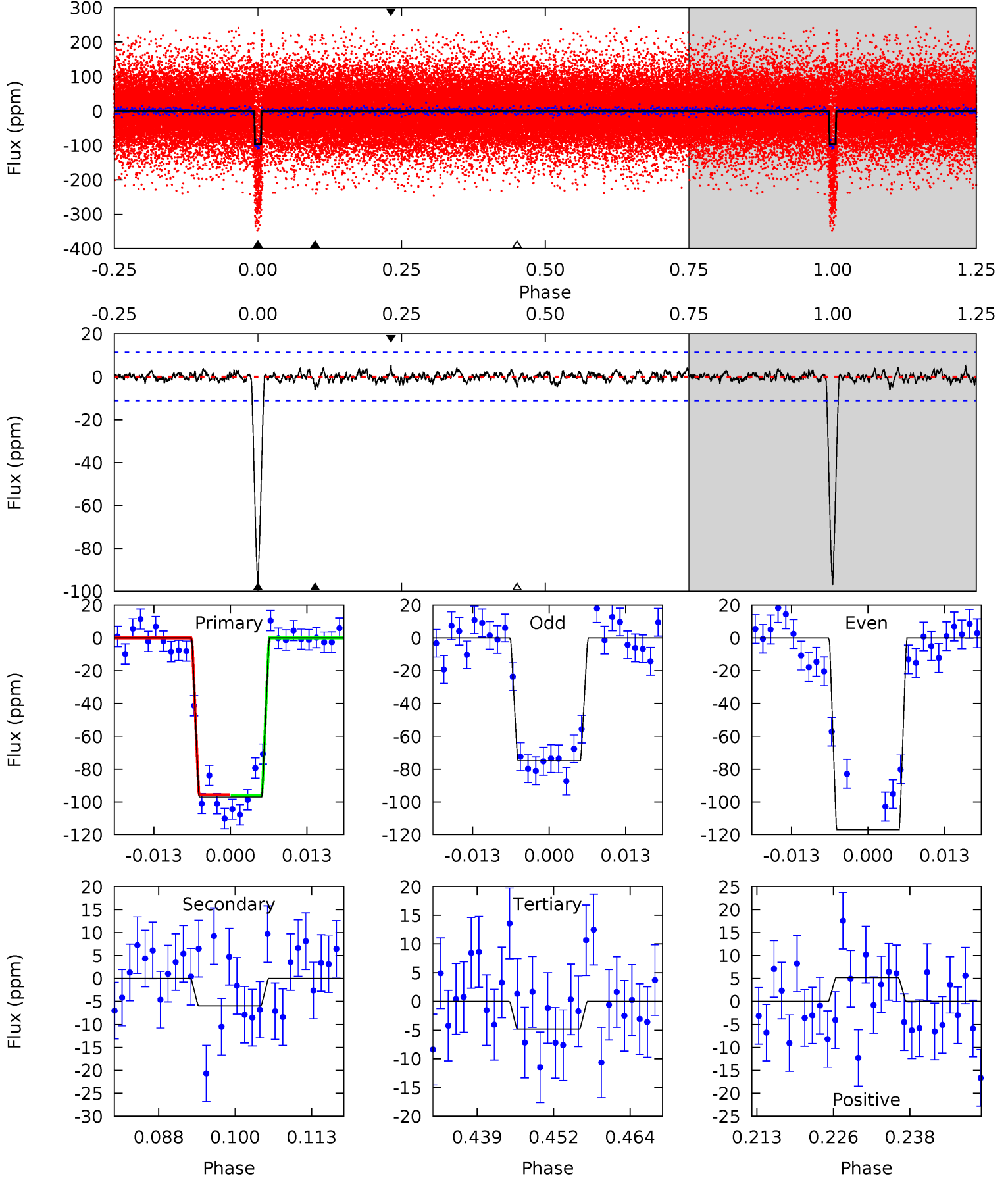
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	16.4	11.0	7.97	4.97	2.47	3.77	2.10	5.15	5.41	8.47	1.83	0.72	0.41	1.16



Alt Model-Shift Uniqueness Test

002712825-01, P = 18.384118 Days, E = 115.045682 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	2.61	2.11	2.28	4.98	2.50	0.67	40.6	40.4	0.50	0.33	9.26	1.16	0.05	0.10



Stellar Parameters For KIC 002712825

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6335^{+76}_{-76}	$4.214^{+0.137}_{-0.125}$	$-0.100^{+0.150}_{-0.150}$	$1.401^{+0.240}_{-0.240}$	$1.172^{+0.096}_{-0.096}$	$0.601^{+0.391}_{-0.201}$
	+1%/-1%	+3%/-3%	+150%/-150%	+17%/-17%	+8%/-8%	+65%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 002712825-01 / KOI 8086.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-136 ± 8	$1.72^{+0.25}_{-0.26}$	1218^{+55}_{-57}	6465^{+490}_{-389}	528^{+211}_{-136}
Alt.	-6 ± 2	$1.44^{+0.28}_{-0.25}$	1222^{+56}_{-58}	3638^{+295}_{-304}	32^{+21}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

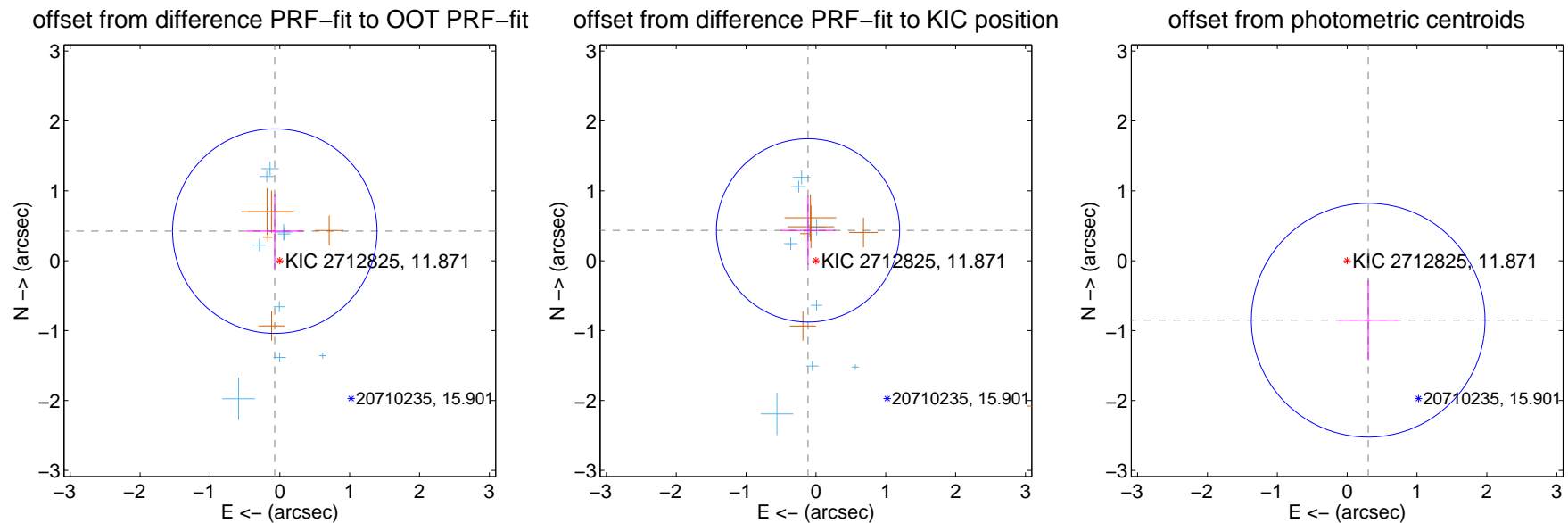
DV Centroid Data

Supplemental centroid analysis for 002712825-01. **Kepler magnitude: 11.87.** Transit SNR 11.50

There are 9 quarters with good PRF difference image offsets

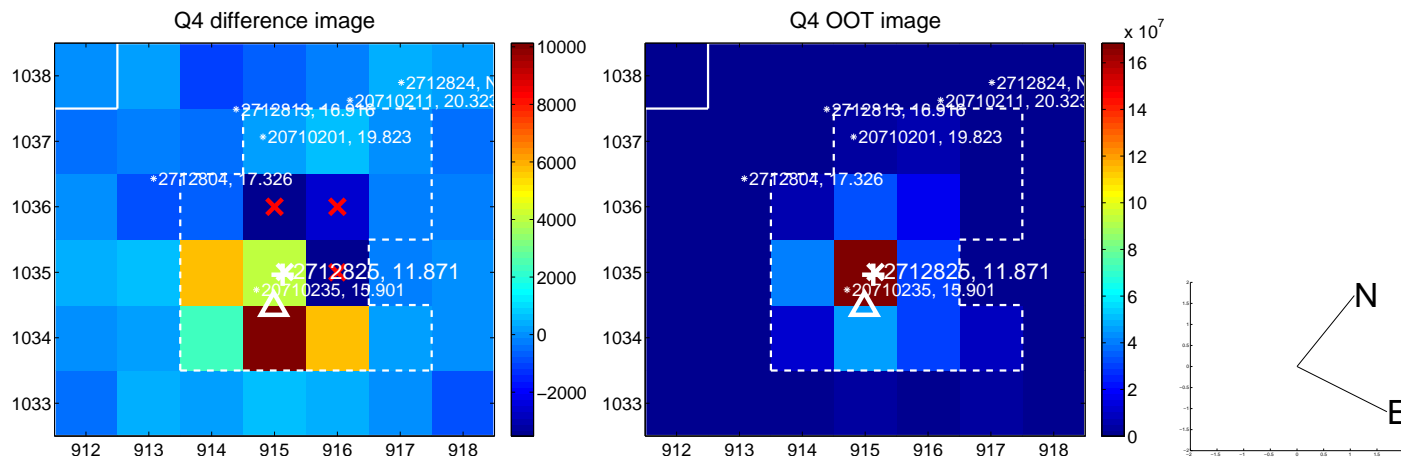
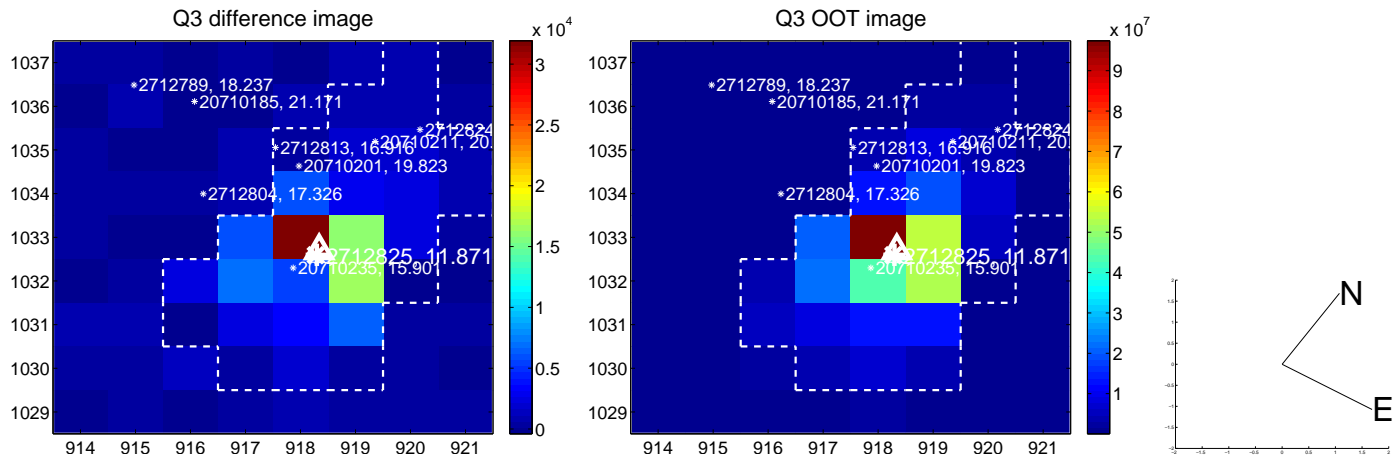
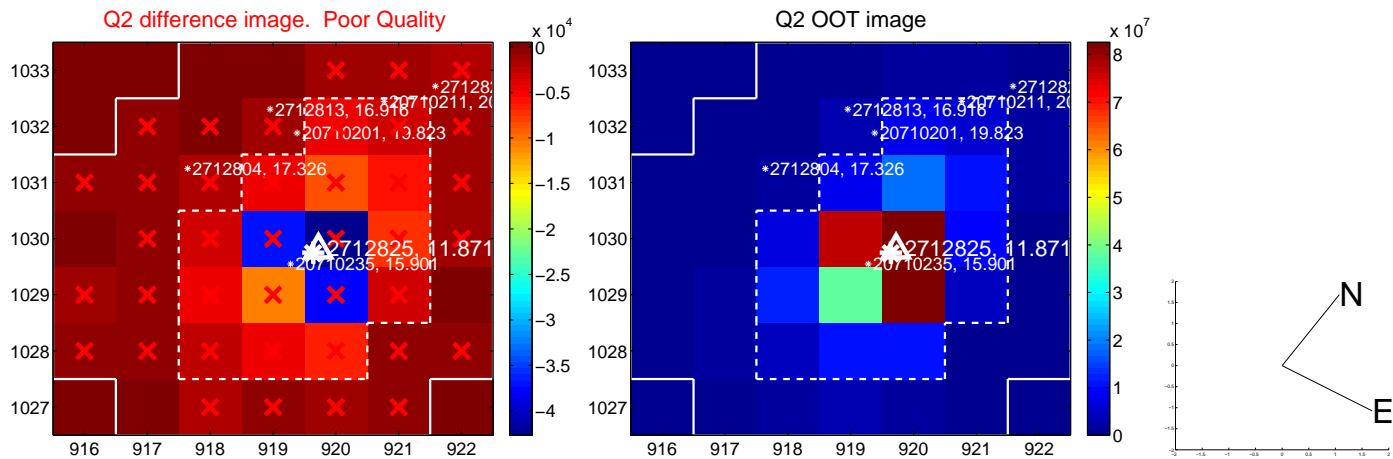
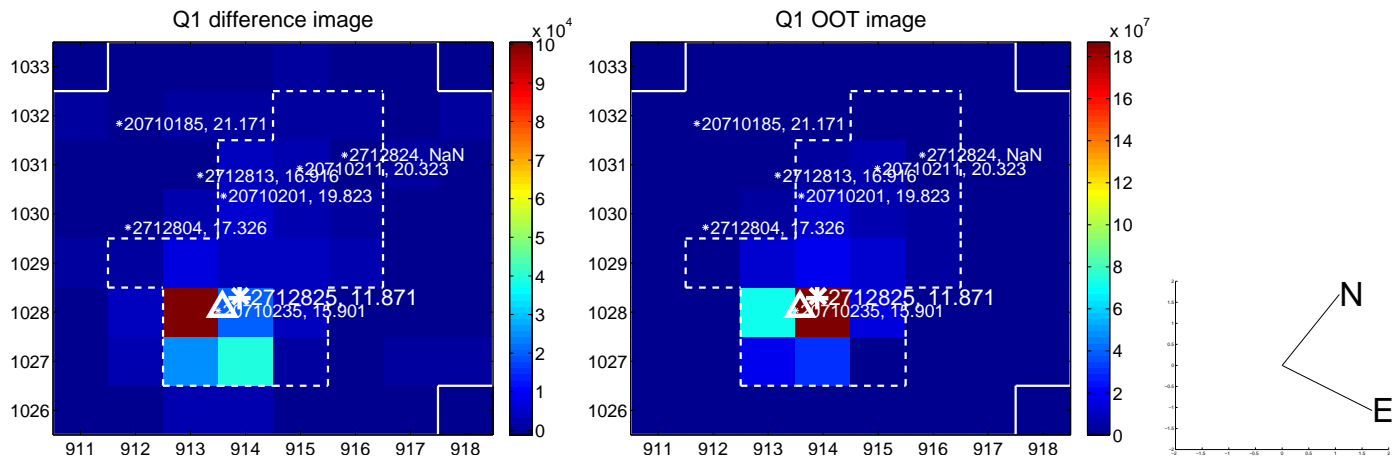
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.429 ± 0.488	0.88	0.072 ± 0.413	0.423 ± 0.536
PRF-fit source offset from KIC position	0.448 ± 0.437	1.03	0.113 ± 0.391	0.434 ± 0.492
photometric centroid source offset	0.90 ± 0.56	1.62	-0.30 ± 0.43	-0.85 ± 0.57

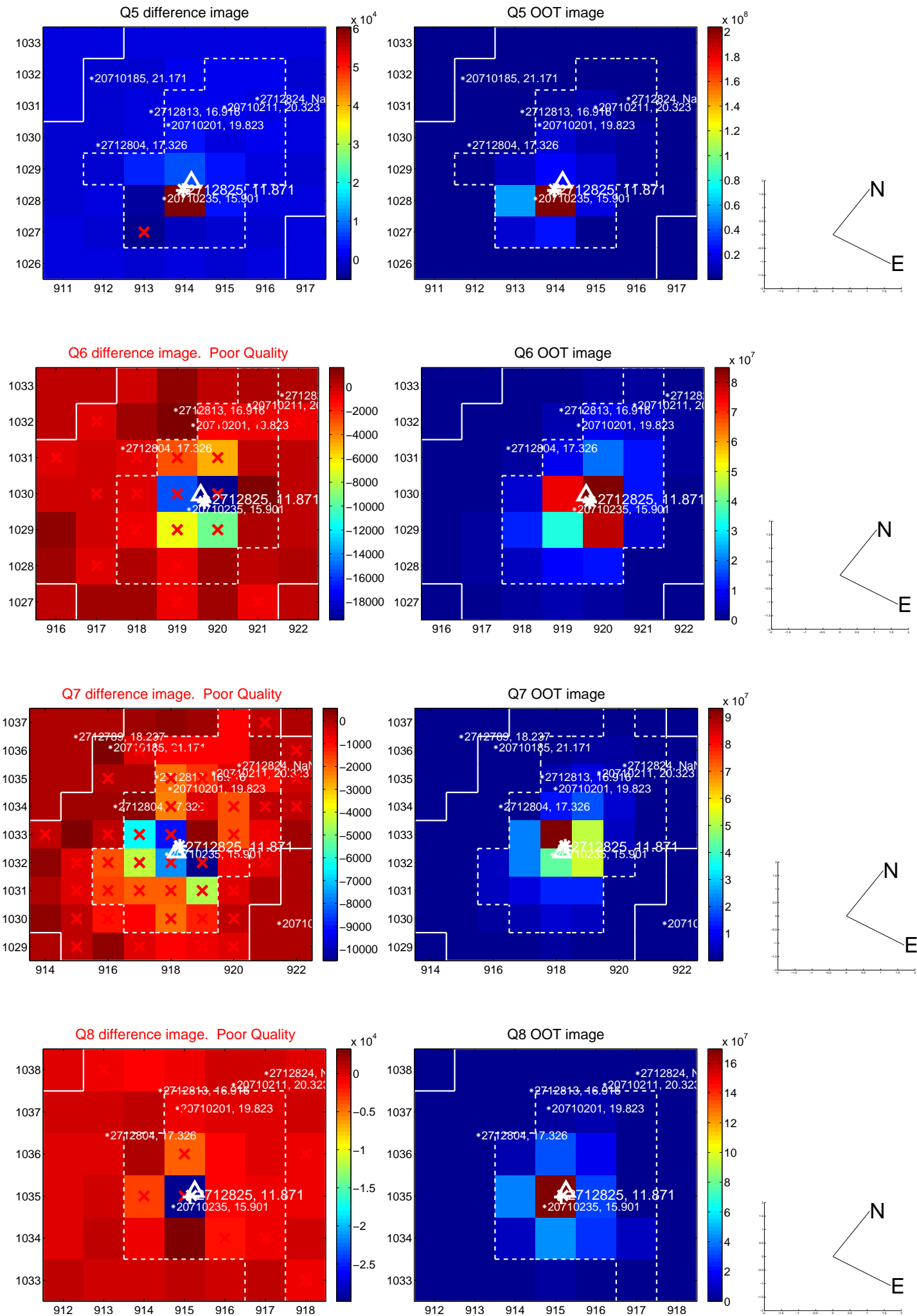


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

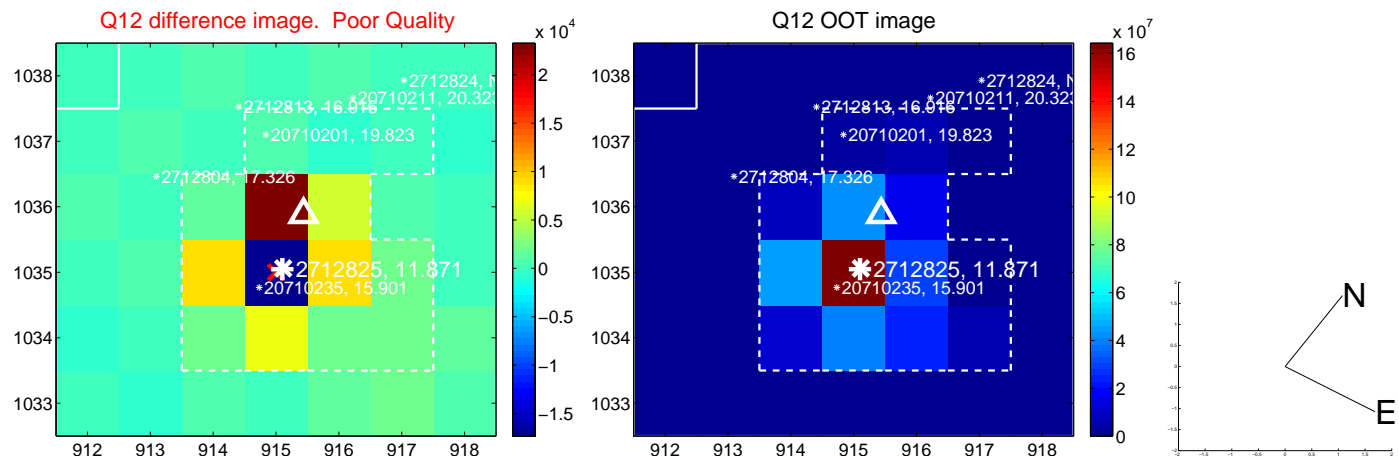
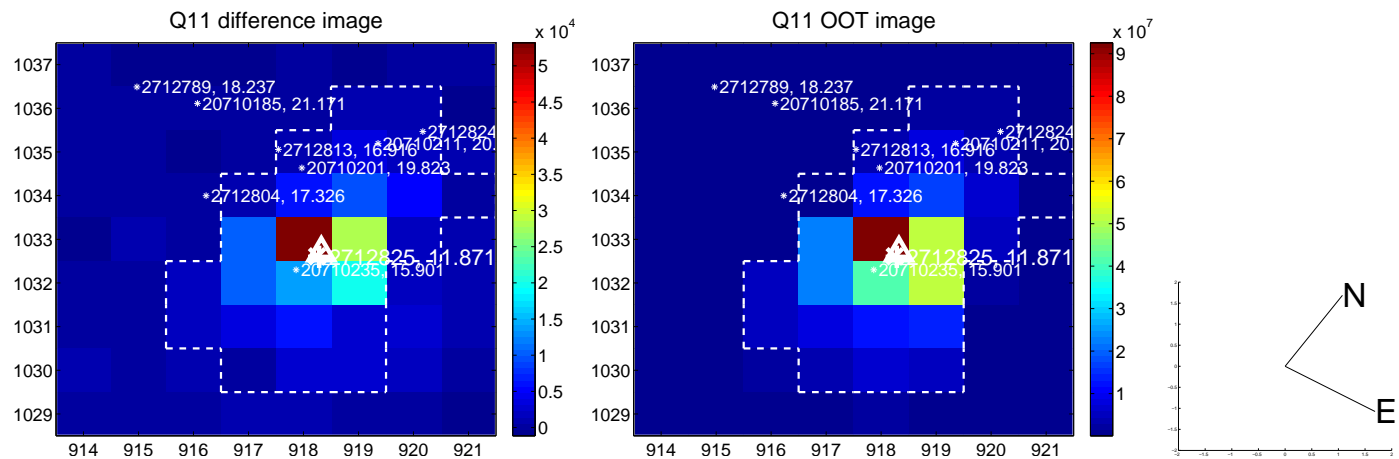
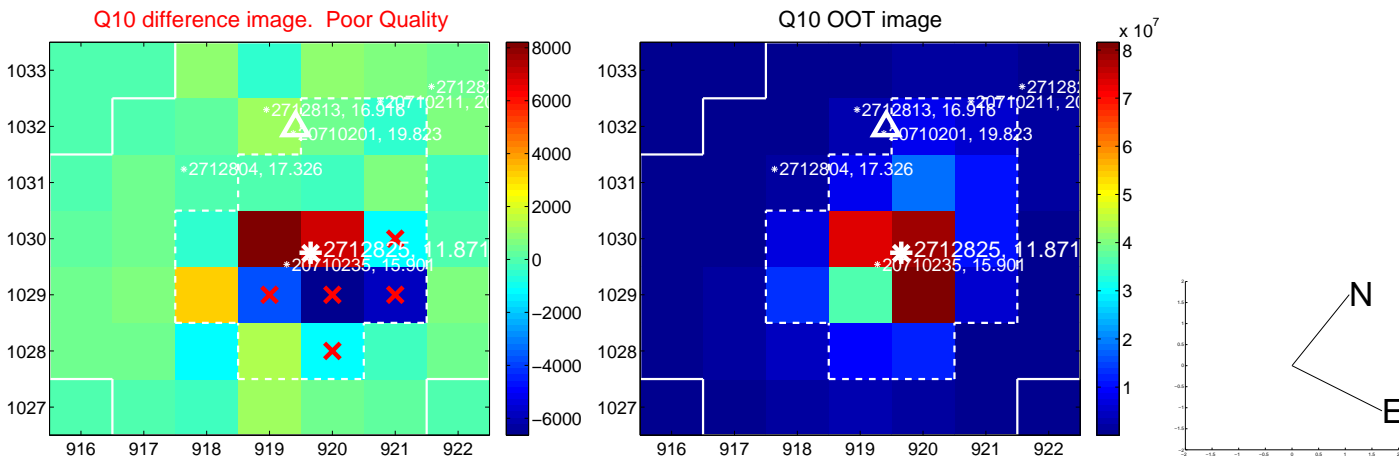
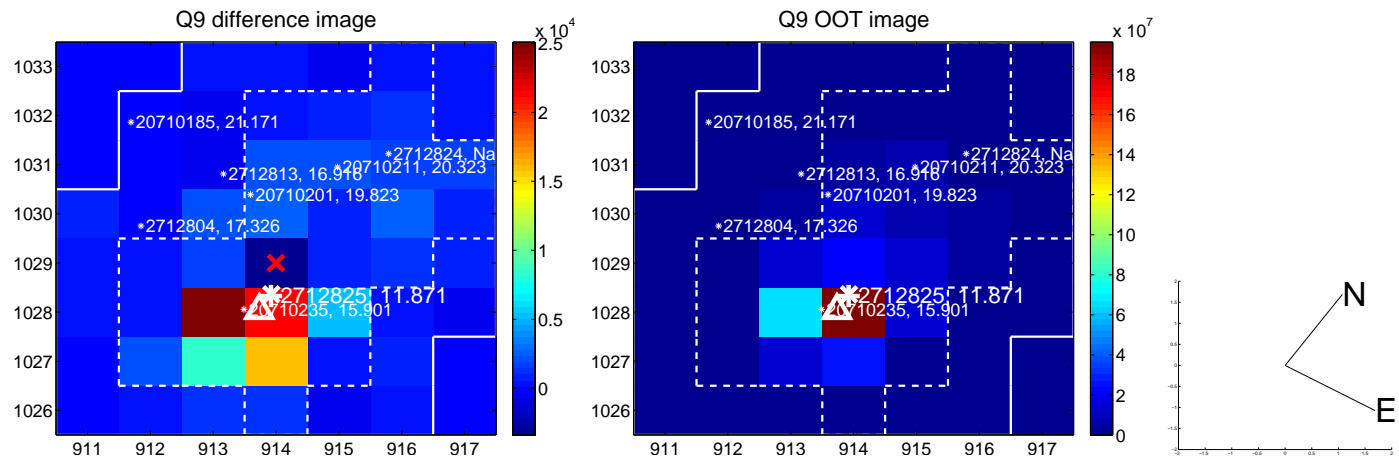
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



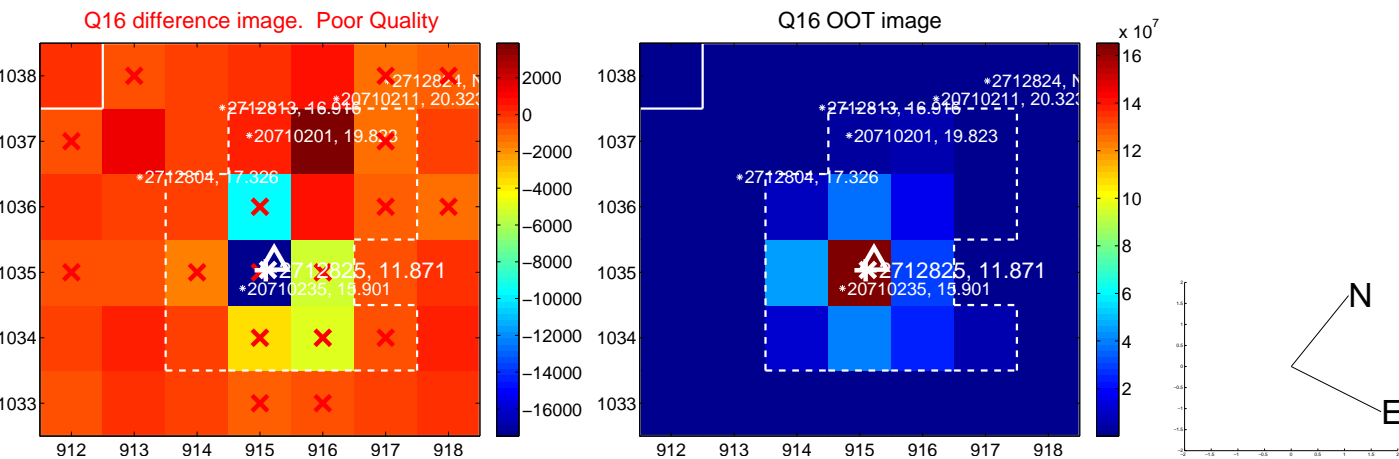
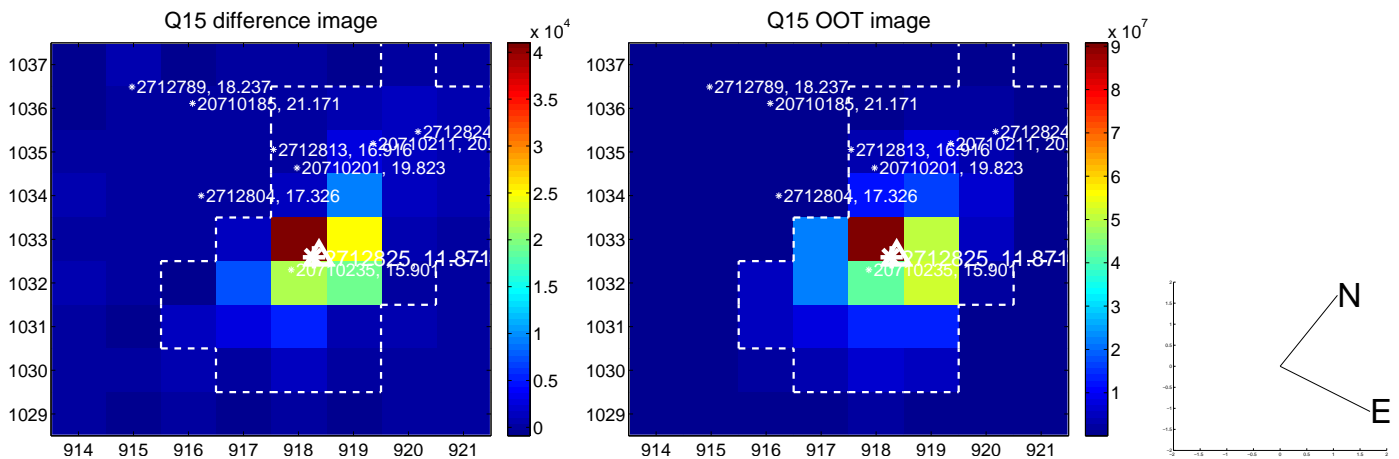
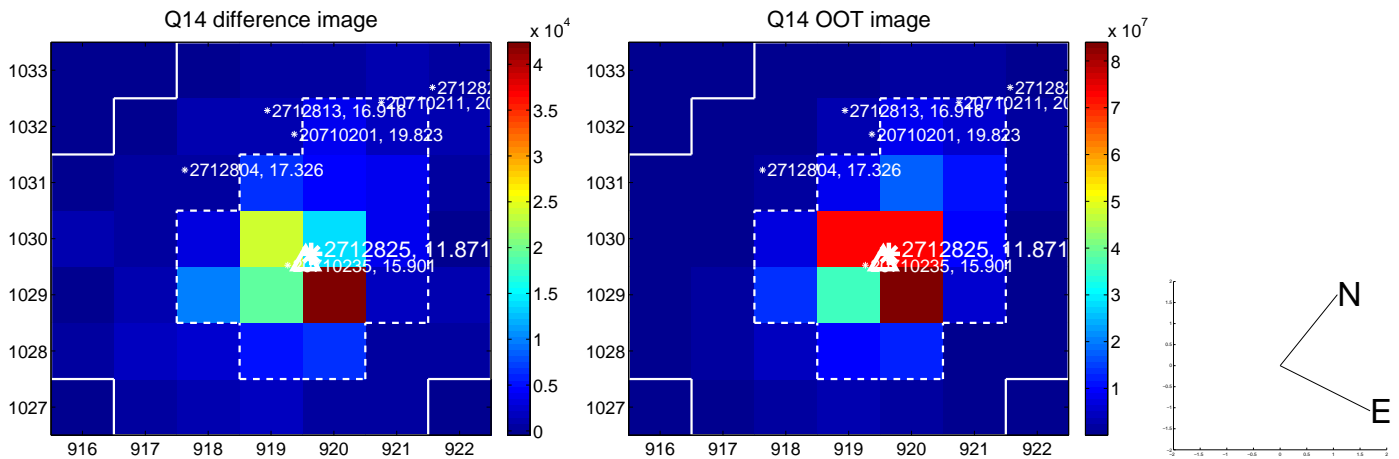
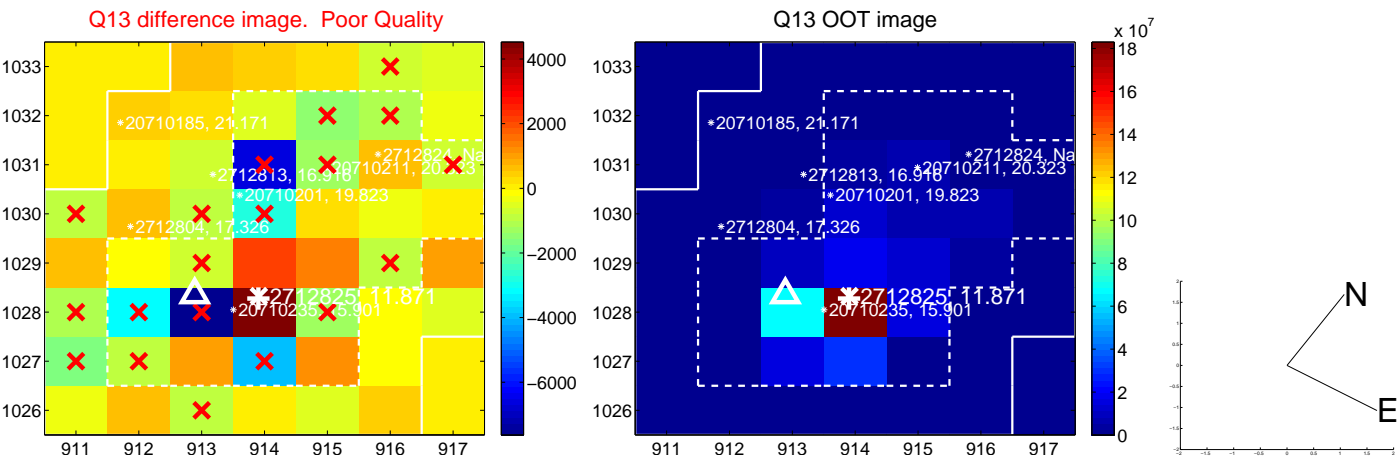
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



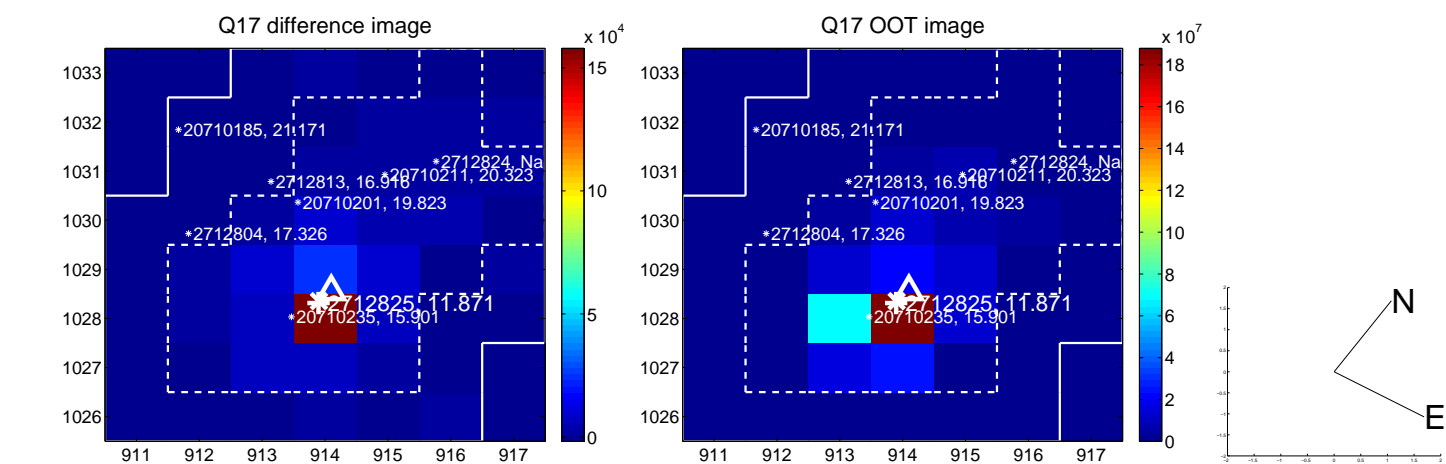
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



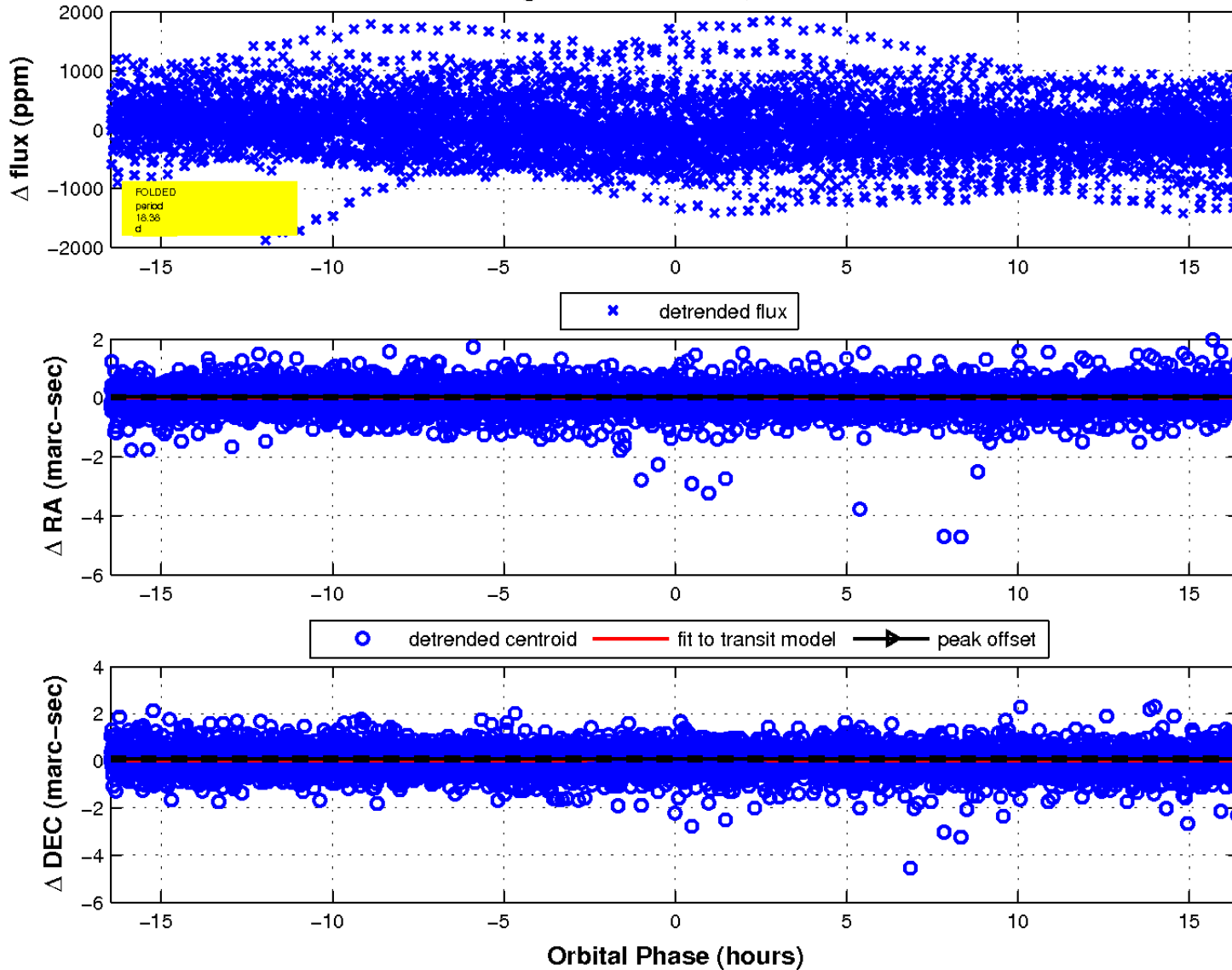
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

