

KIC 005036705

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})
005036705-01	OBS	2437.01	4.147852	135.538844	123.0	3.859	13.6	13.6	1.42	6150	1.85	880.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036705-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

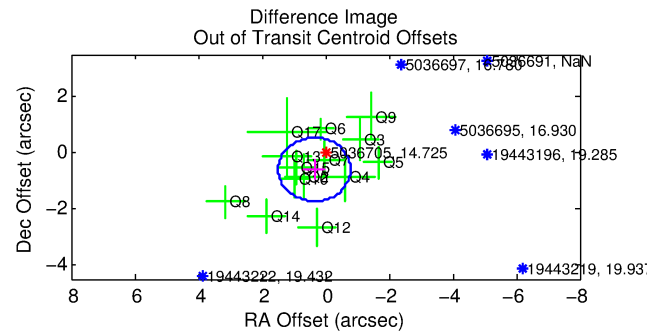
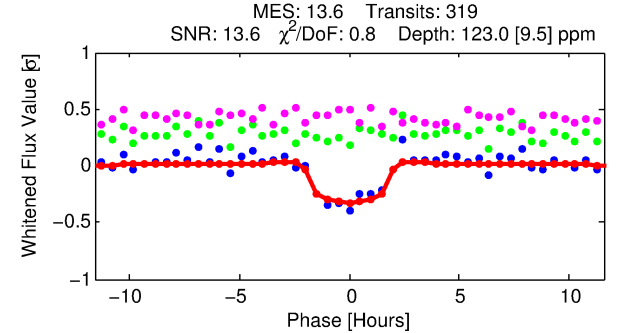
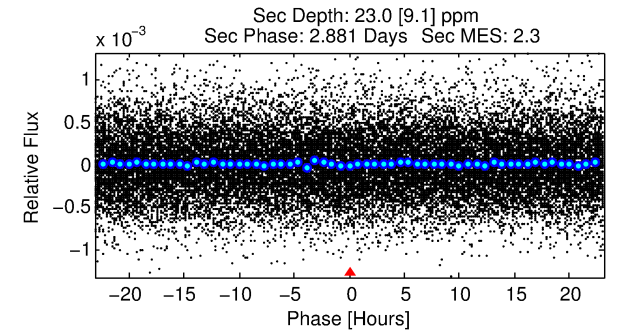
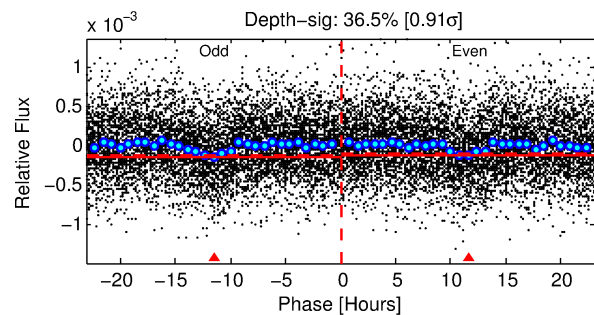
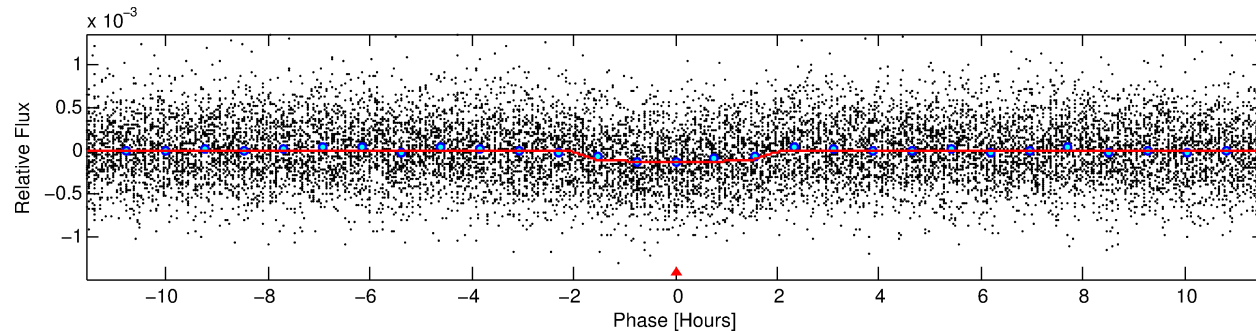
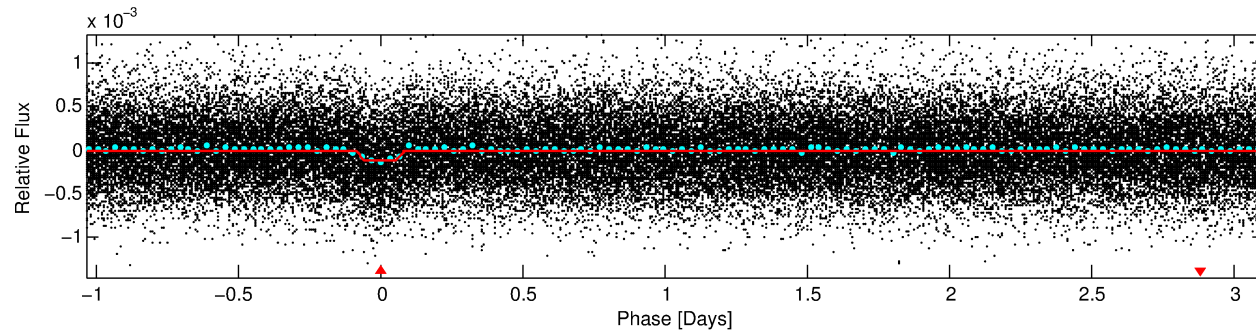
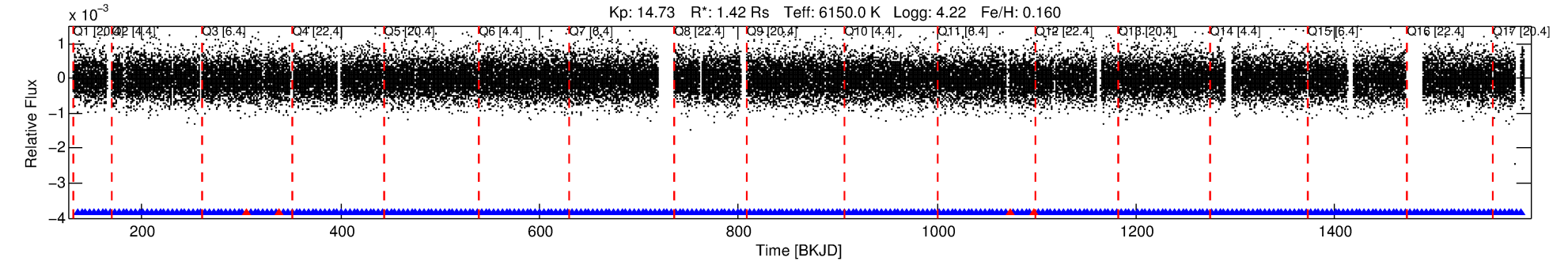
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036705-01

No Significant Match Found

DV One-Page Summary

KIC: 5036705 Candidate: 1 of 1 Period: 4.148 d
KOI: K02437.01 Corr: 0.975



DV Fit Results:

Period = 4.14785 [0.00003] d
Epoch = 135.5388 [0.0043] BKJD
Rp/R* = 0.0120 [0.0042]
a/R* = 3.90 [6.70]
b = 0.90 [0.39]
Seff = 880.80 [208.13]
Teff = 1389 [82] K
Rp = 1.85 [0.75] Re
a = 0.0541 [0.0086] AU
Ag = 10.75 [9.07] [1.08σ]
Teffp = 3889 [790] K [3.15σ]

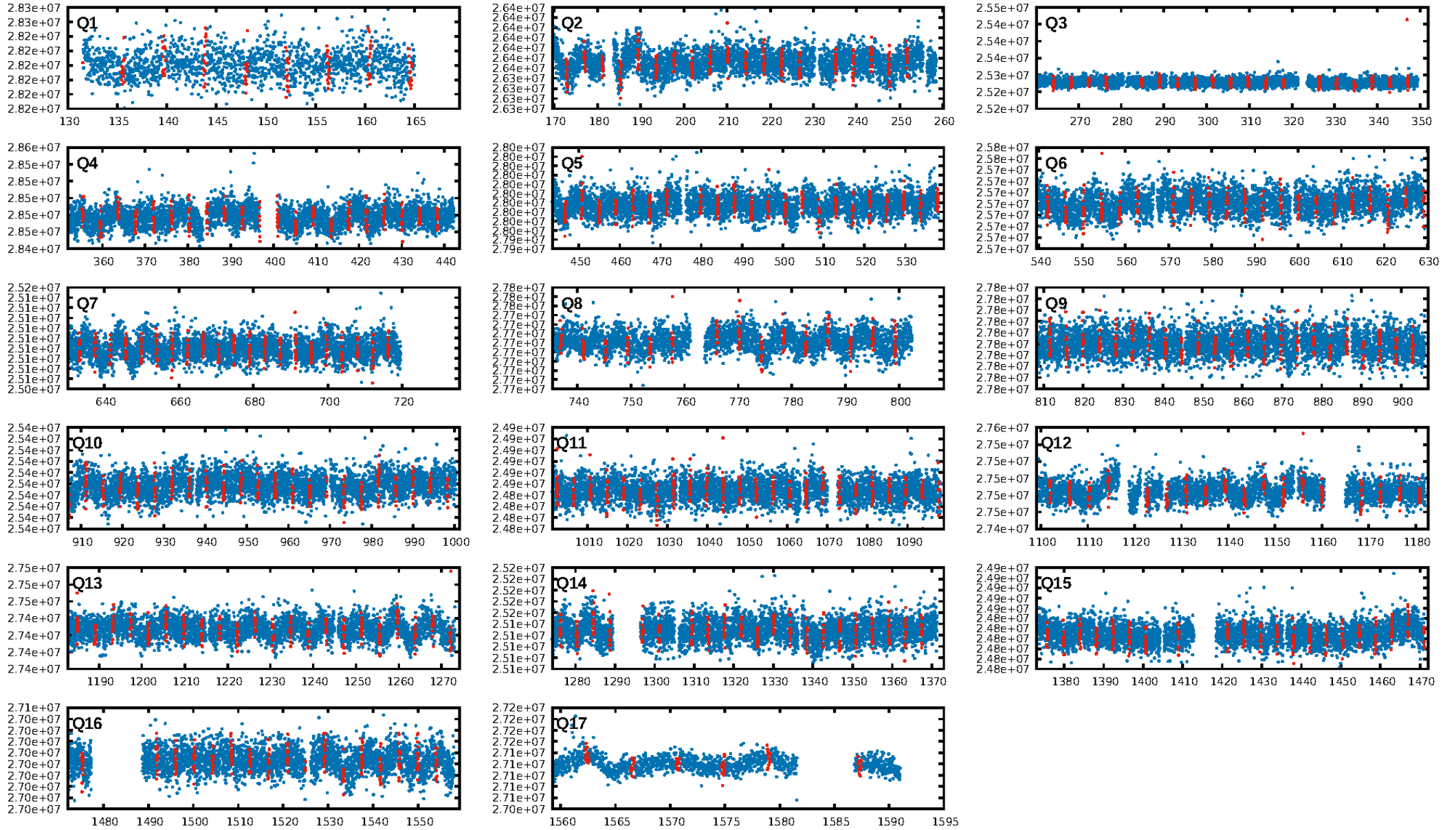
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.73e-42
RollingBand-fgt: 0.99 [301/305]
GhostDiagnostic-chr: 6.349
Centroid-sig: 0.1%
Centroid-so: 2.575 arcsec [2.61σ]
OotOffset-rm: 0.696 arcsec [1.84σ]
KicOffset-rm: 0.691 arcsec [1.73σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

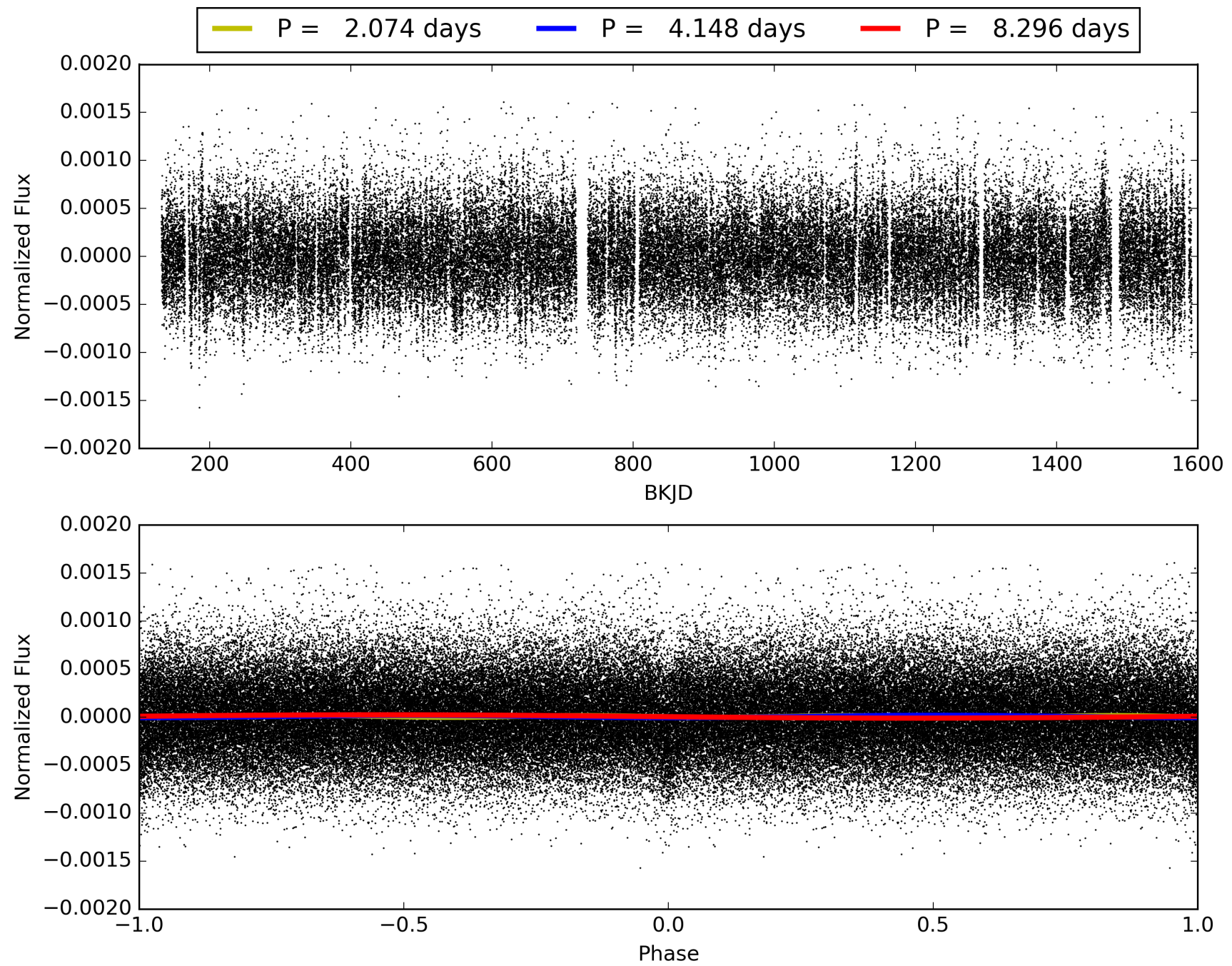
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:49:29 Z

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

TCE 005036705-01, PDC Light Curves

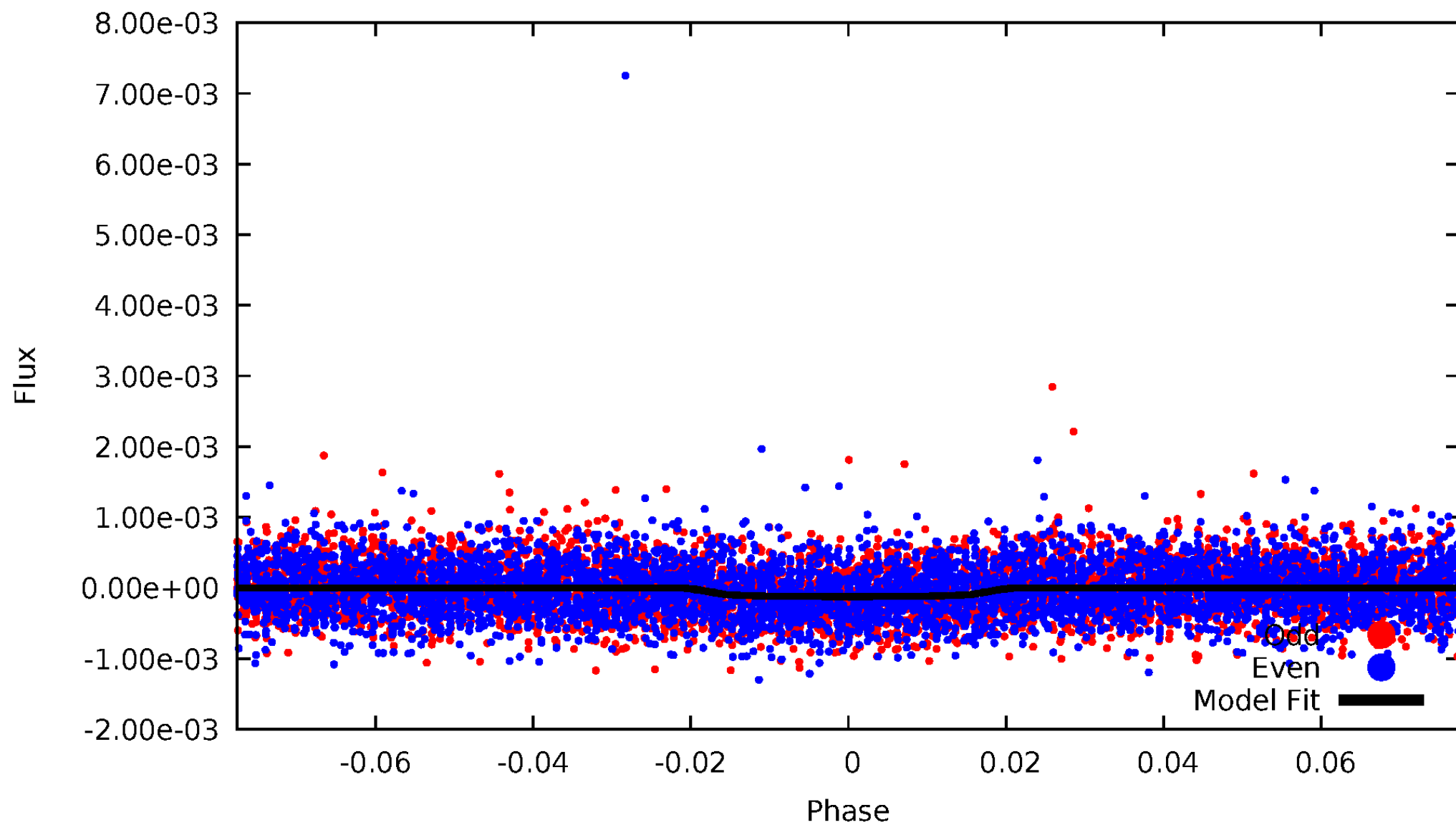


TCE 005036705-01



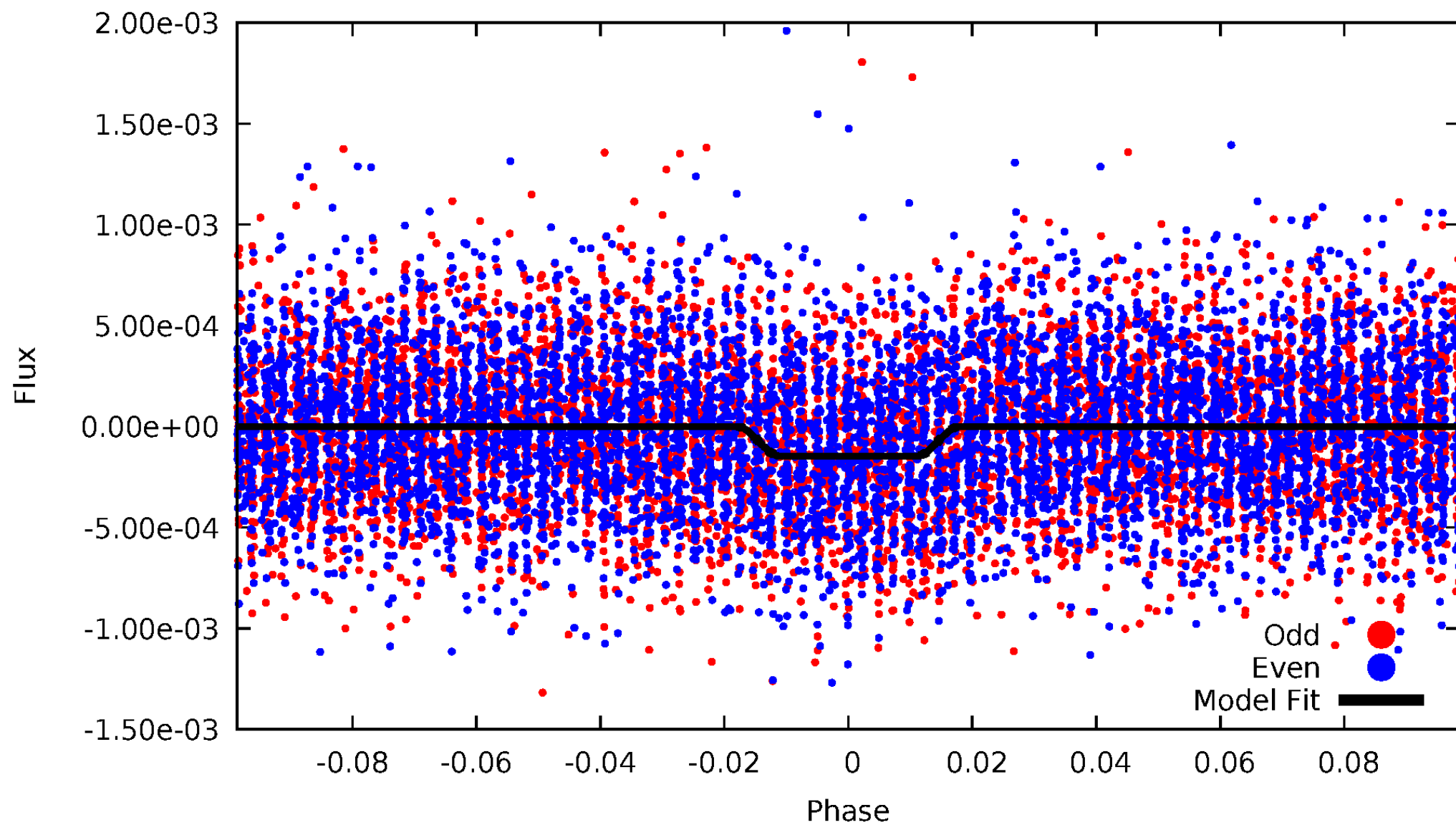
DV Odd/Even

TCE 005036705-01



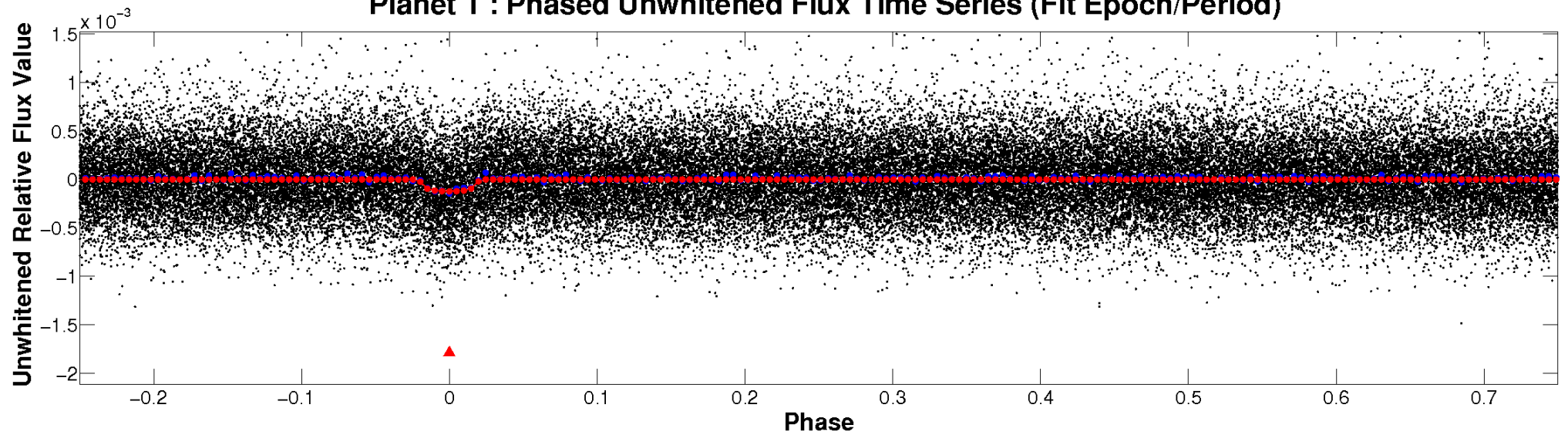
ALT Odd/Even

TCE 005036705-01

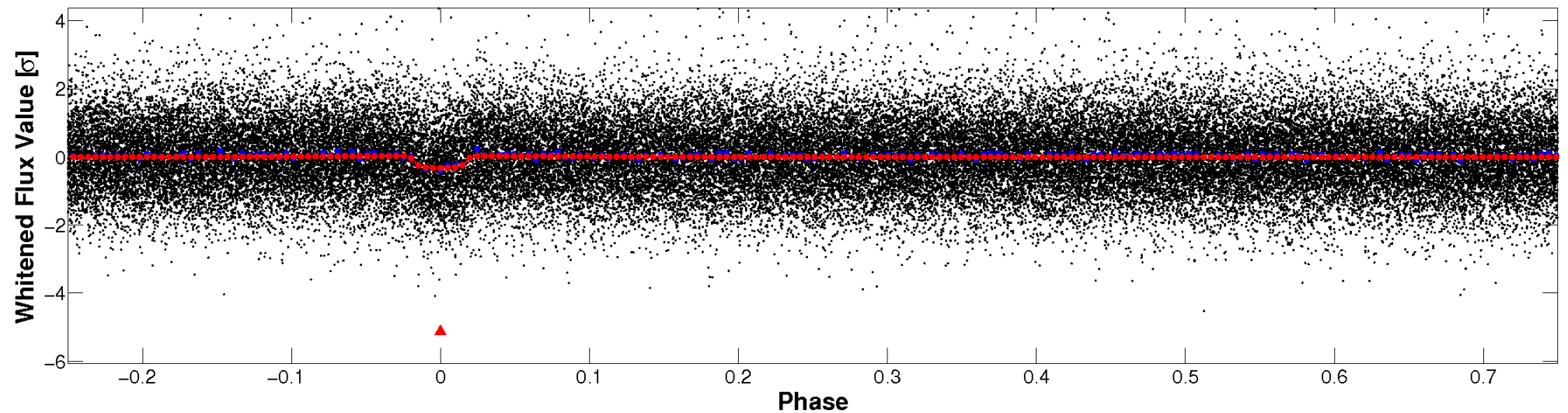


Non-Whitened Vs. Whitened Light Curve

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

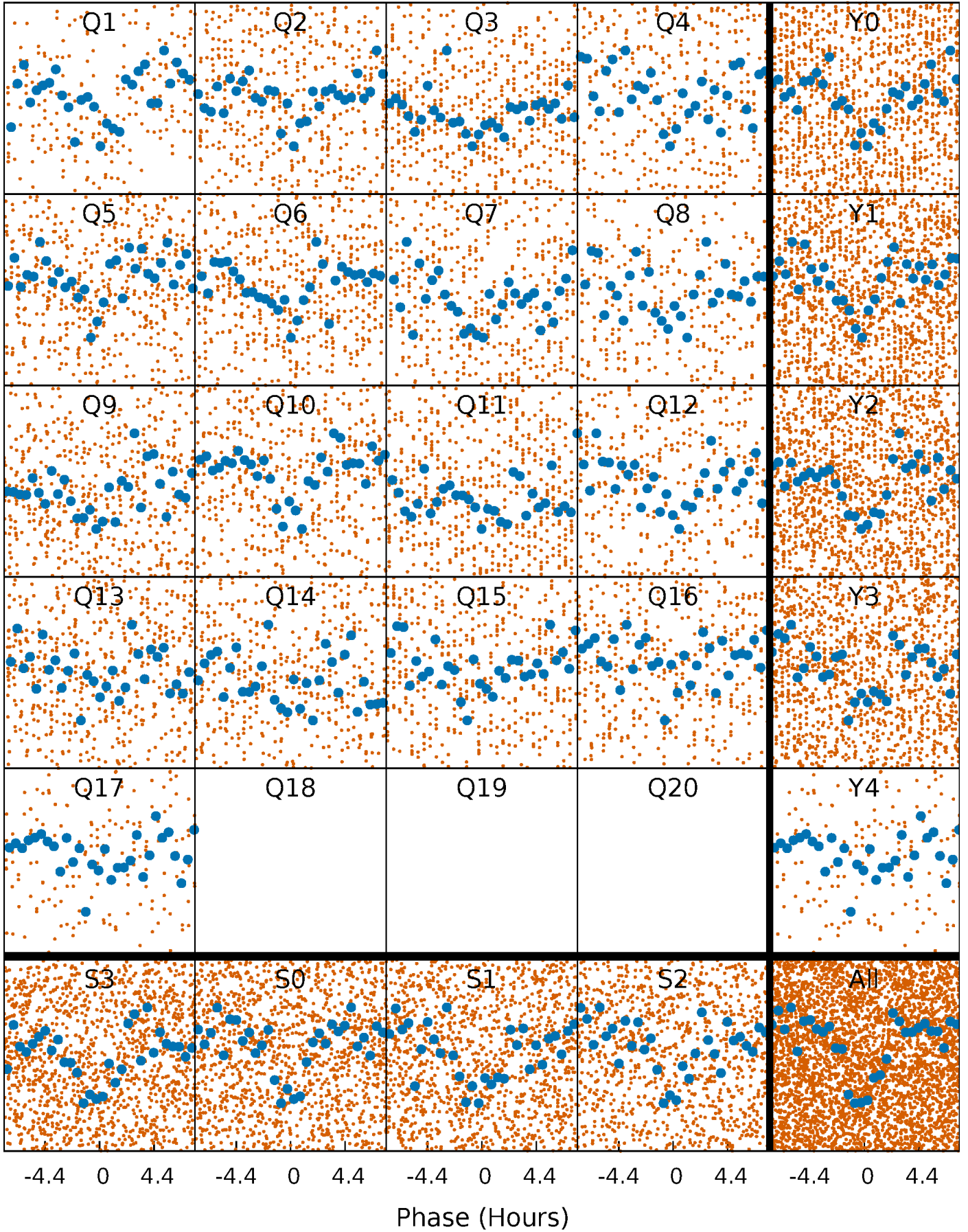


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



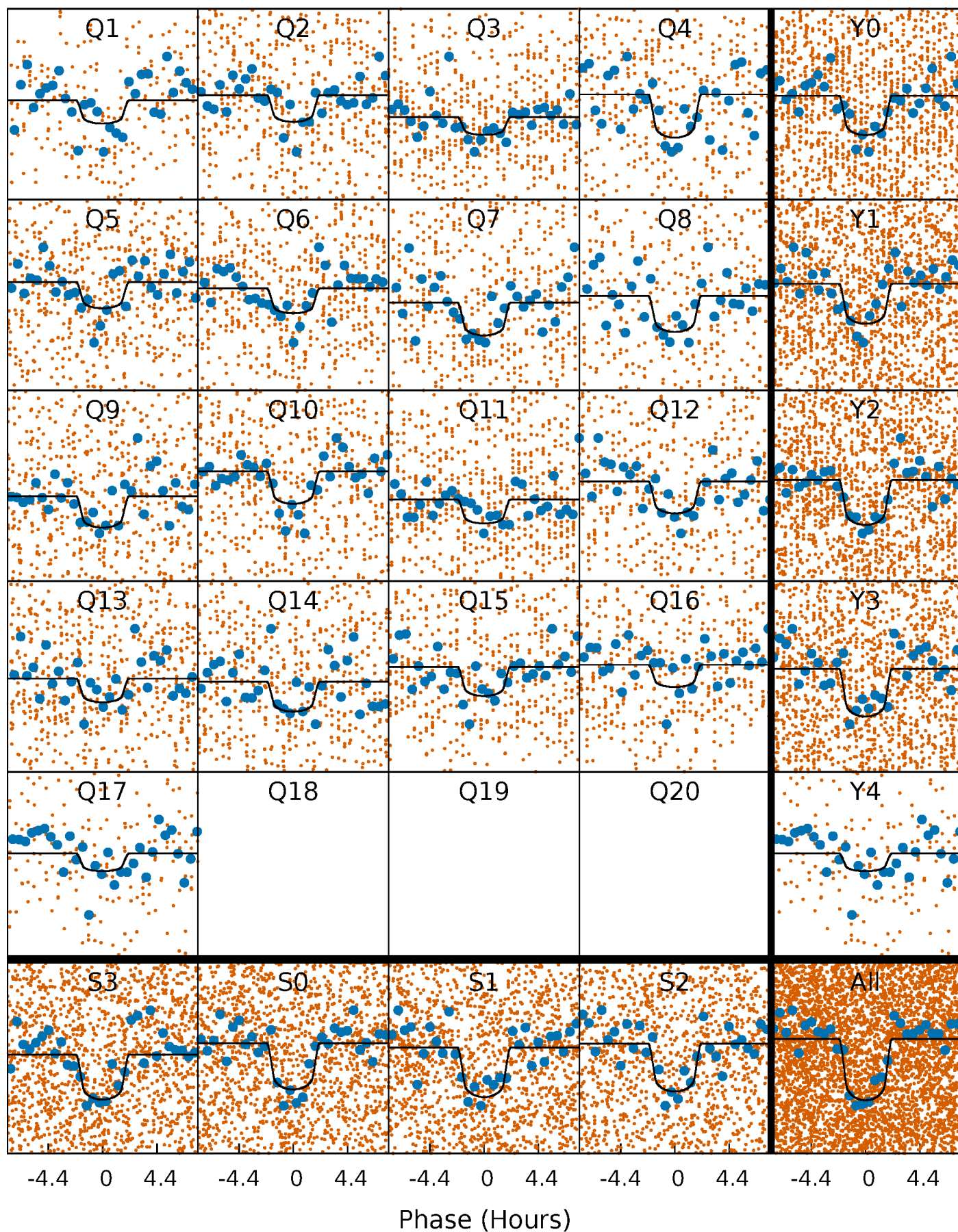
PDC Quarter-Phased Transit Curves

TCE 005036705-01 P= 4.147852 Days $T_0=135.538844$ (BKJD)



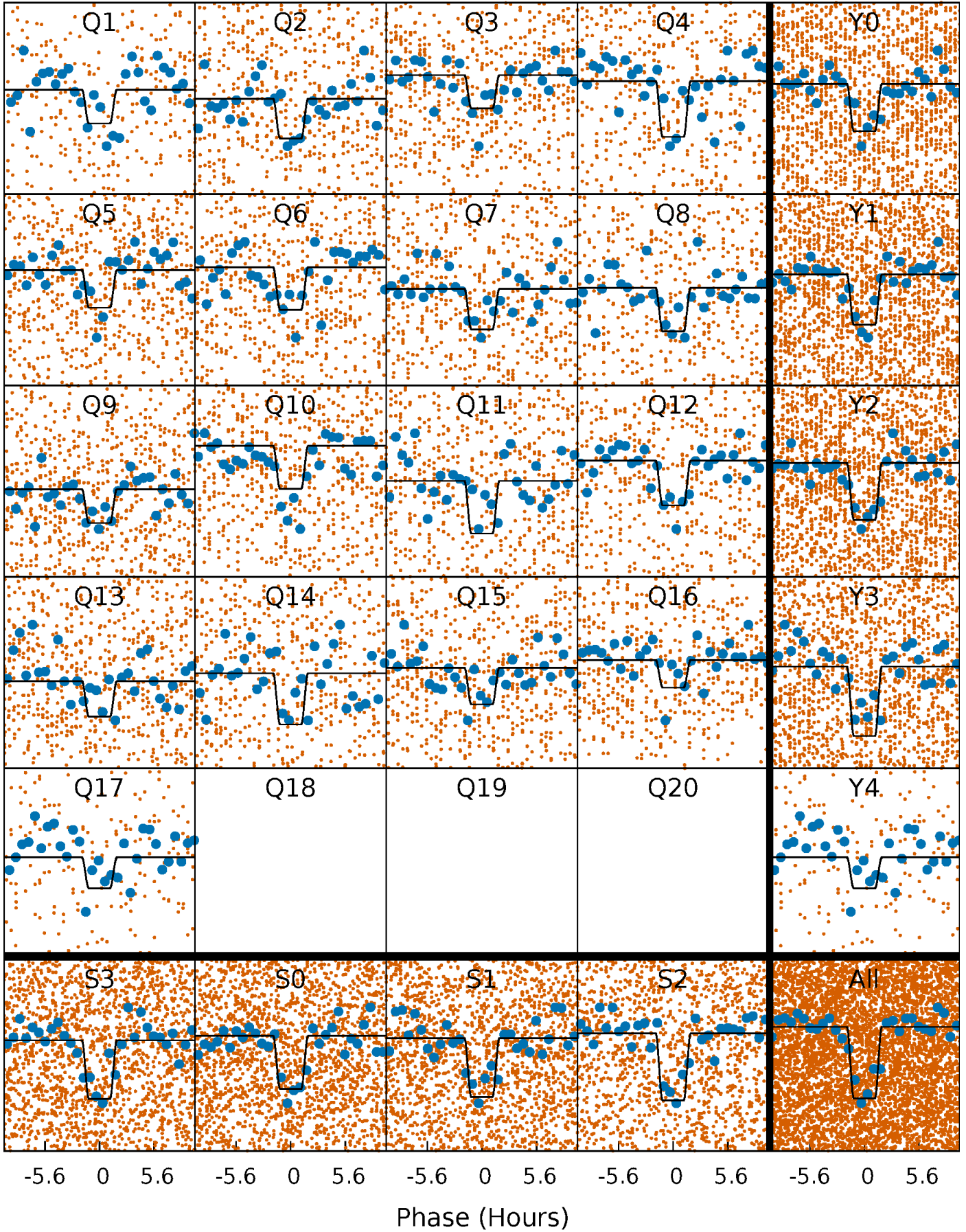
DV Quarter-Phased Transit Curves

TCE 005036705-01 P= 4.147852 Days $T_0=135.538844$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

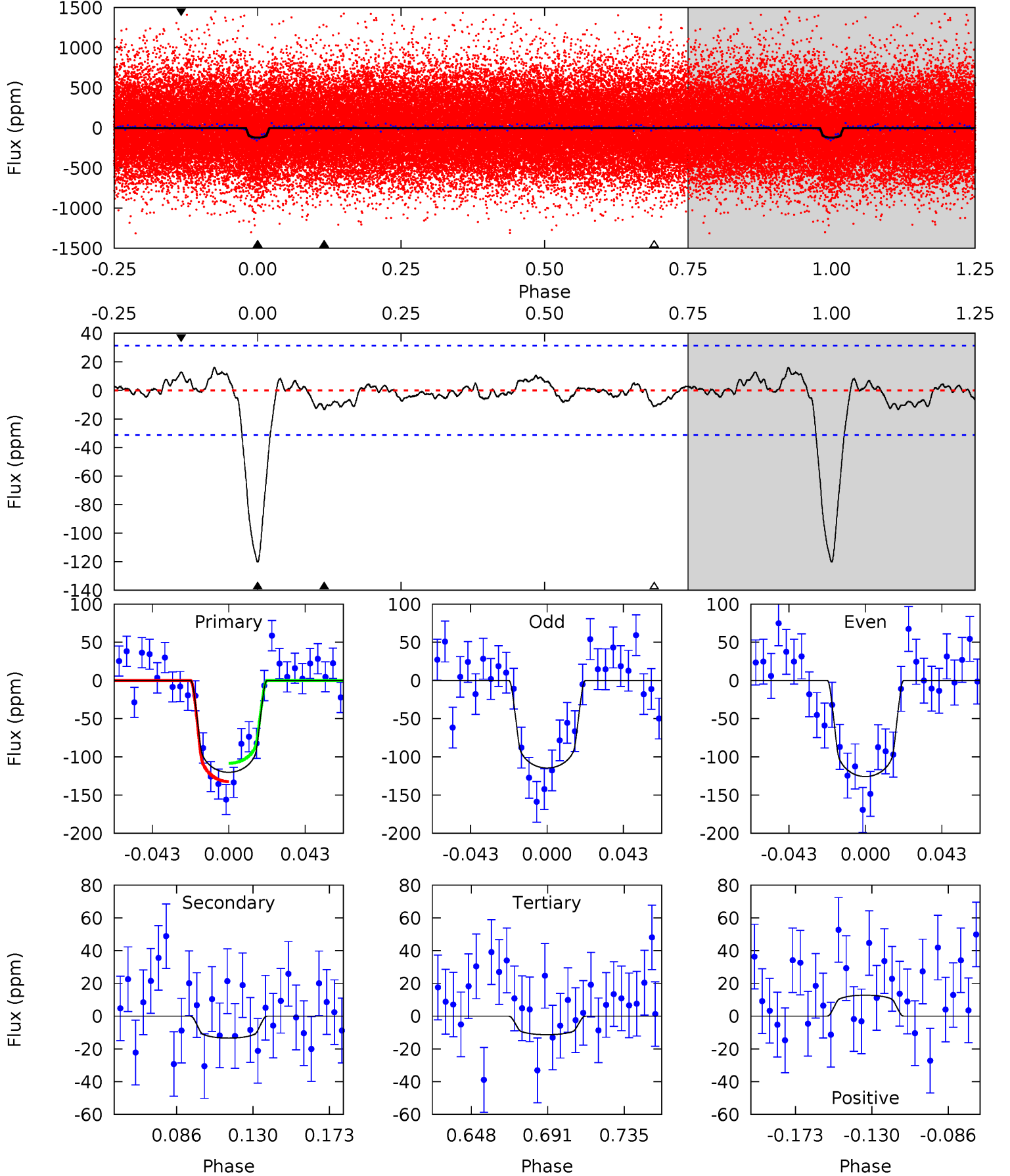
TCE 005036705-01 P= 4.147914 Days $T_0=135.520779$ (BKJD)



DV Model-Shift Uniqueness Test

005036705-01, P = 4.147852 Days, E = 131.390992 Days

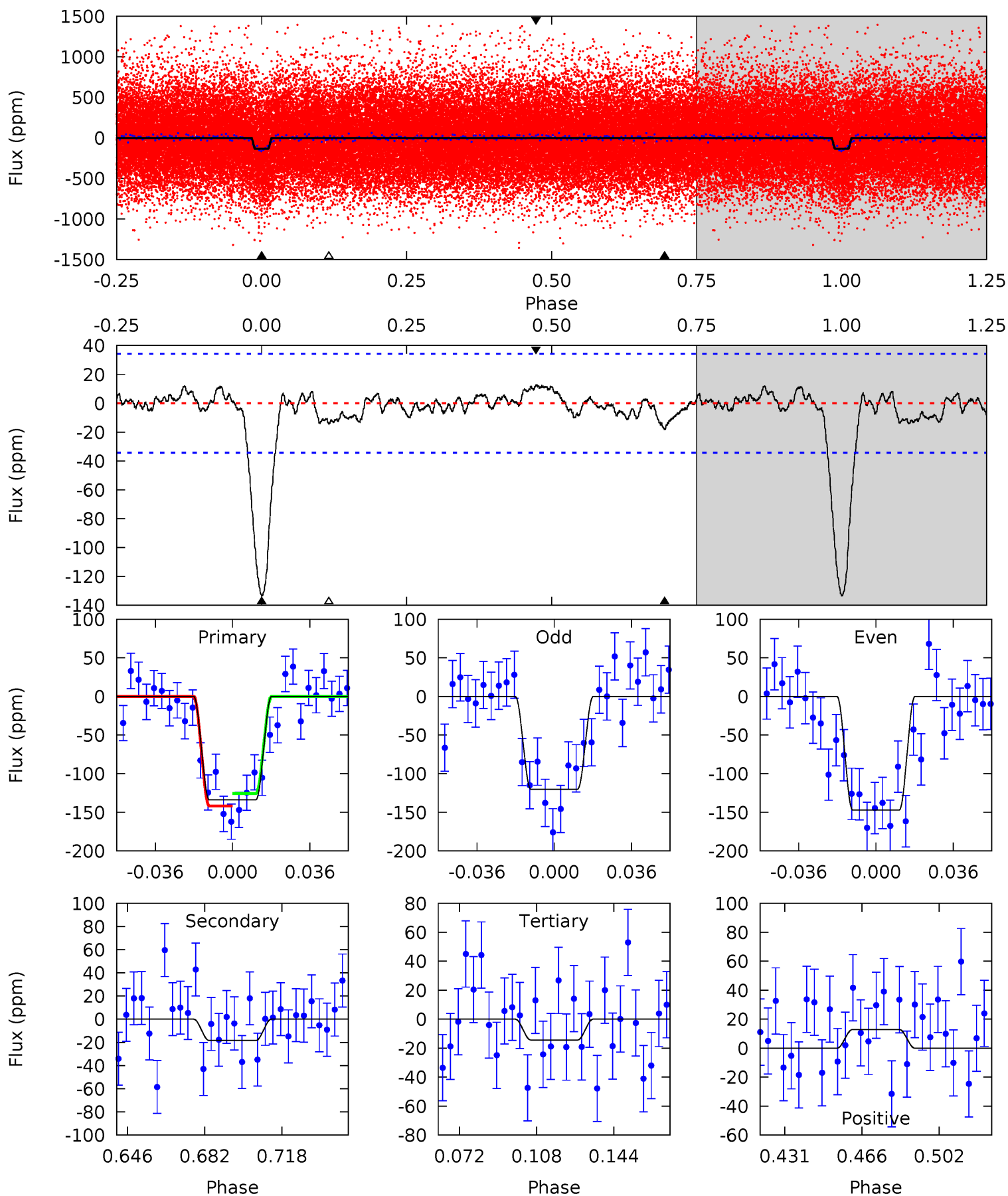
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	2.03	1.71	1.94	4.74	2.02	0.76	16.5	16.3	0.31	0.09	0.85	1.08	0.12	1.81



Alt Model-Shift Uniqueness Test

005036705-01, P = 4.147914 Days, E = 131.372865 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	2.56	2.00	1.79	4.78	2.10	0.83	16.6	16.8	0.56	0.77	1.87	1.03	0.09	1.13



Stellar Parameters For KIC 005036705

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6150^{+79}_{-79}	$4.223^{+0.125}_{-0.125}$	$0.160^{+0.150}_{-0.150}$	$1.417^{+0.272}_{-0.223}$	$1.230^{+0.088}_{-0.110}$	$0.609^{+0.351}_{-0.222}$
	+1%/-1%	+3%/-3%	+94%/-94%	+19%/-16%	+7%/-9%	+58%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 005036705-01 / KOI 2437.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 7	$1.80^{+0.76}_{-0.64}$	1940^{+94}_{-83}	3765^{+793}_{-585}	$6.451^{+10.563}_{-4.097}$
Alt.	-18 ± 7	$1.85^{+0.76}_{-0.67}$	1940^{+94}_{-89}	3961^{+792}_{-511}	$8.481^{+12.977}_{-4.691}$

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 $A_{obs} \gg 1.0$

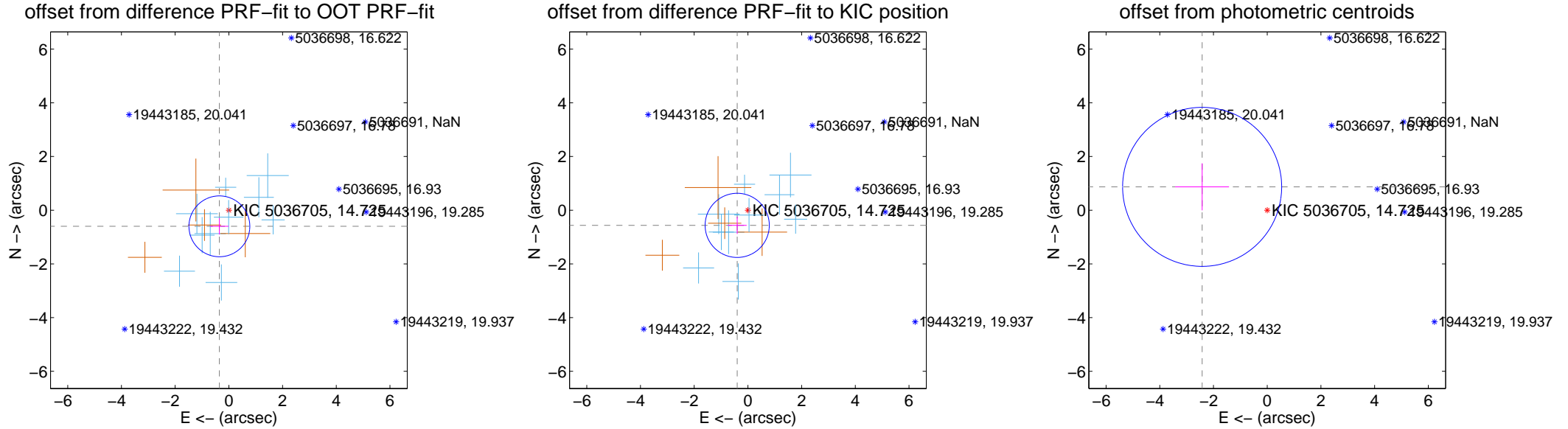
DV Centroid Data

Supplemental centroid analysis for 005036705-01. Kepler magnitude: 14.72. Transit SNR 13.64

There are 10 quarters with good PRF difference image offsets

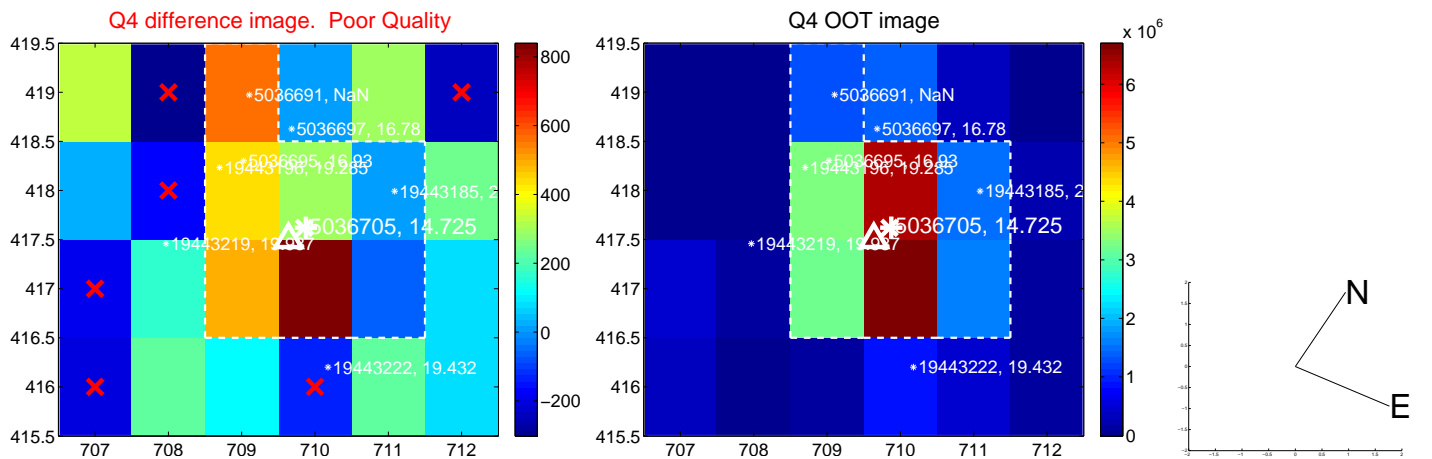
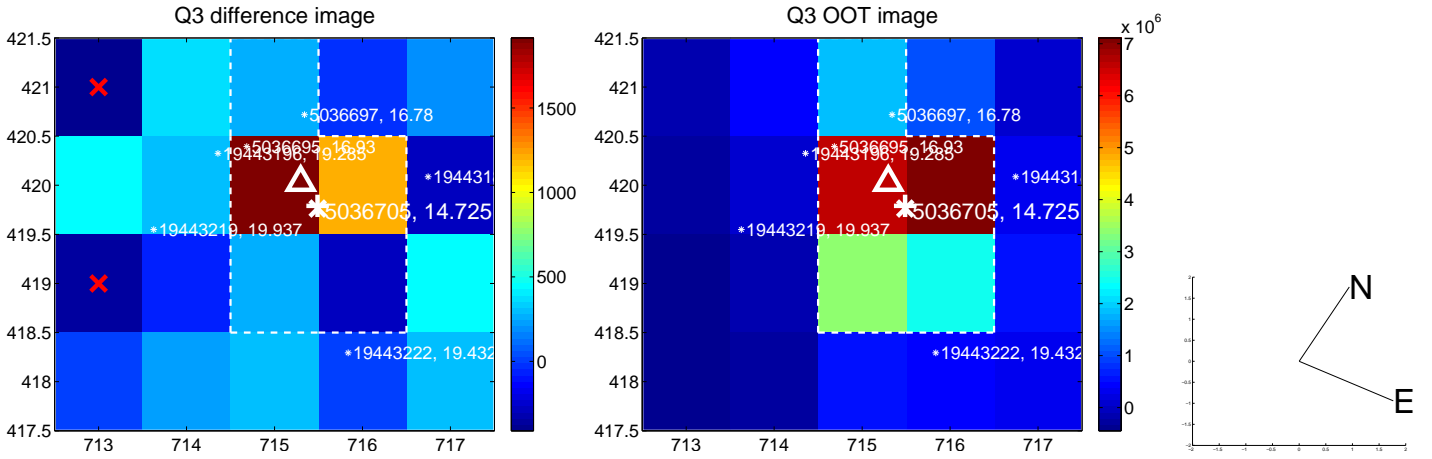
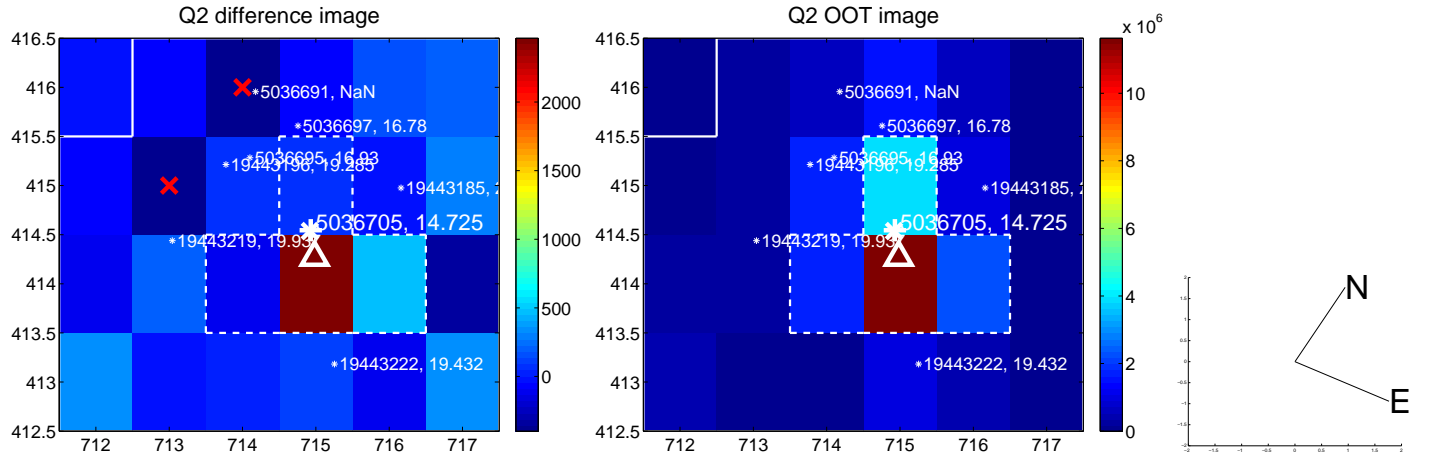
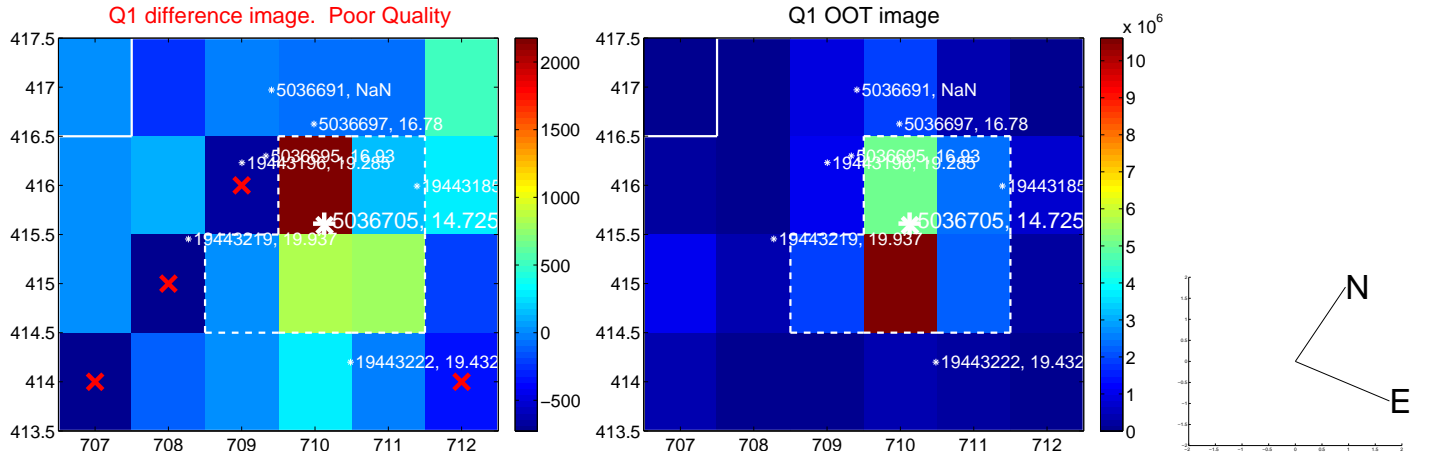
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.696 ± 0.378	1.84	0.353 ± 0.346	-0.600 ± 0.307
PRF-fit source offset from KIC position	0.691 ± 0.398	1.73	0.398 ± 0.351	-0.565 ± 0.320
photometric centroid source offset	2.57 ± 0.99	2.61	2.42 ± 1.00	0.87 ± 0.88

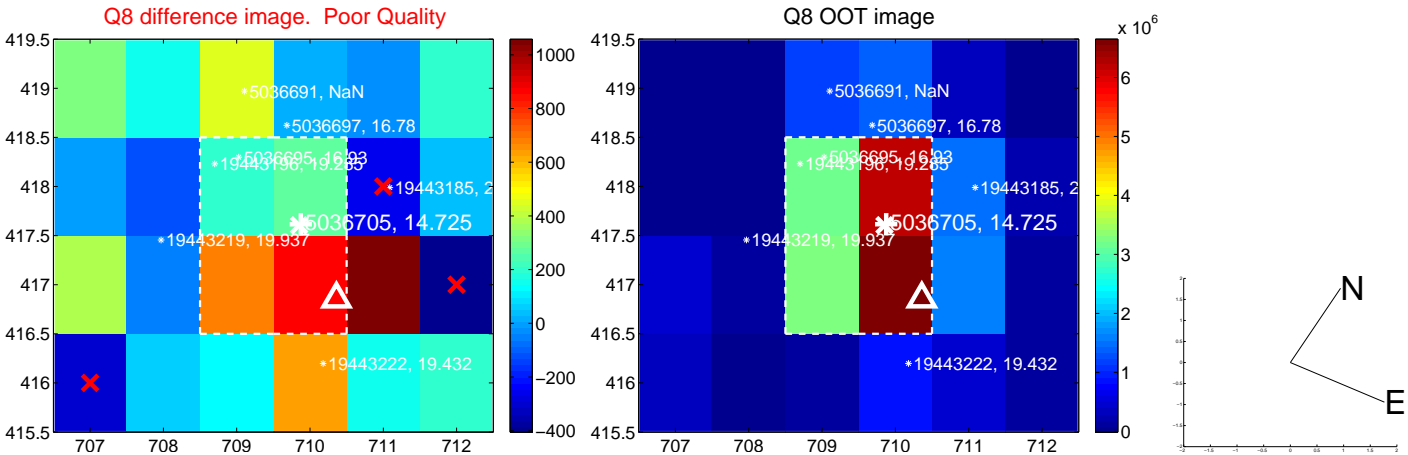
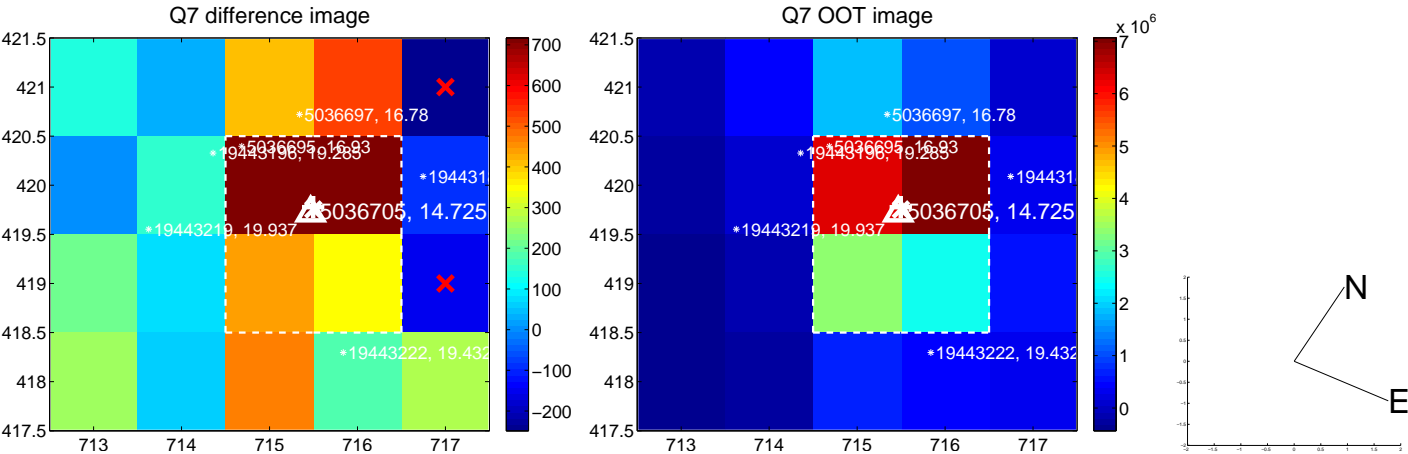
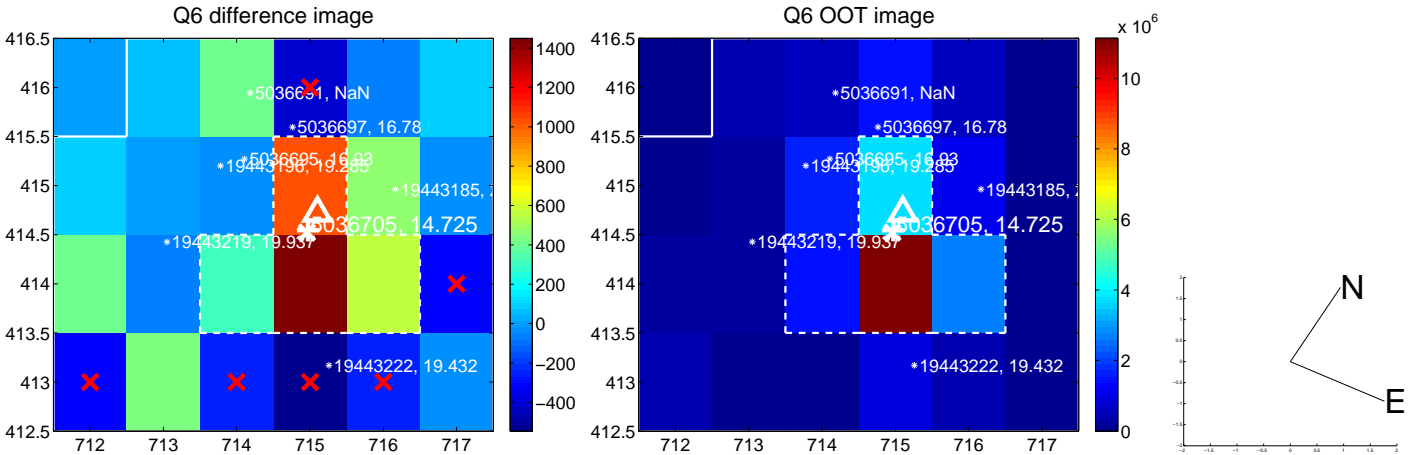
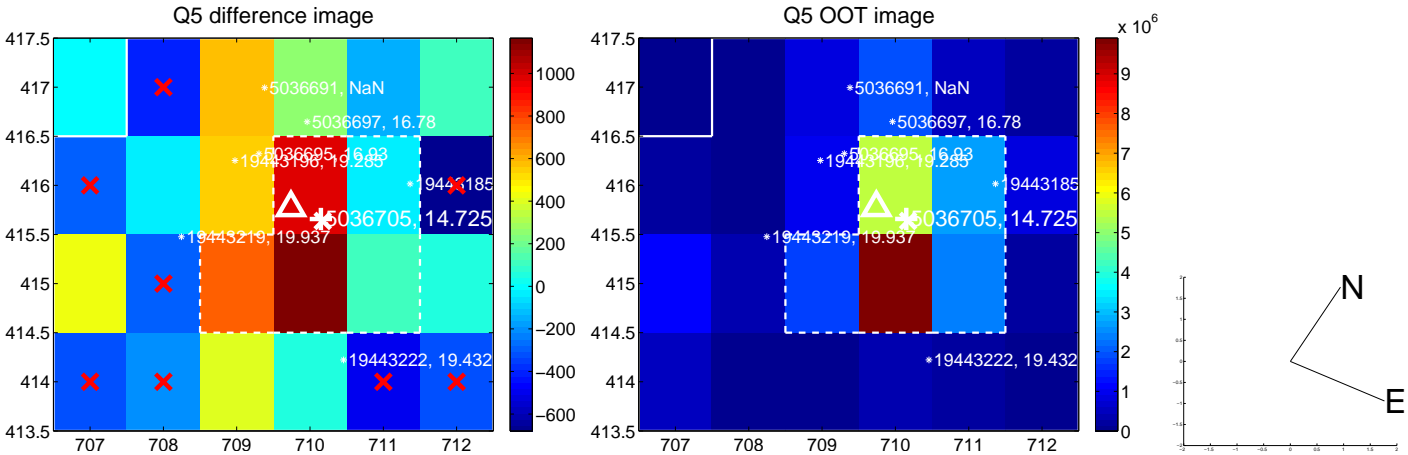


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

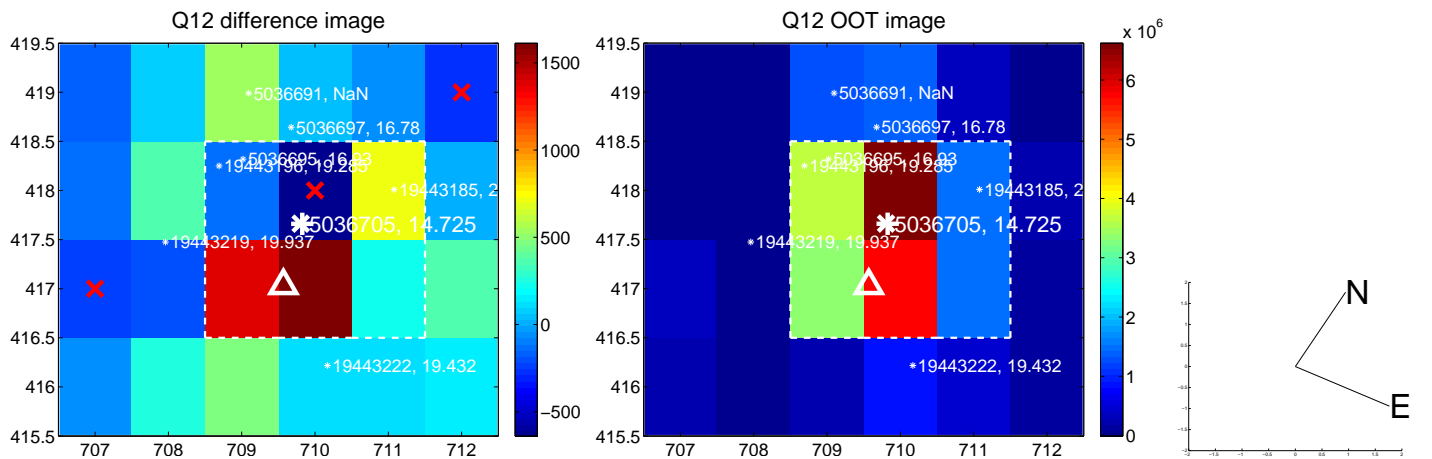
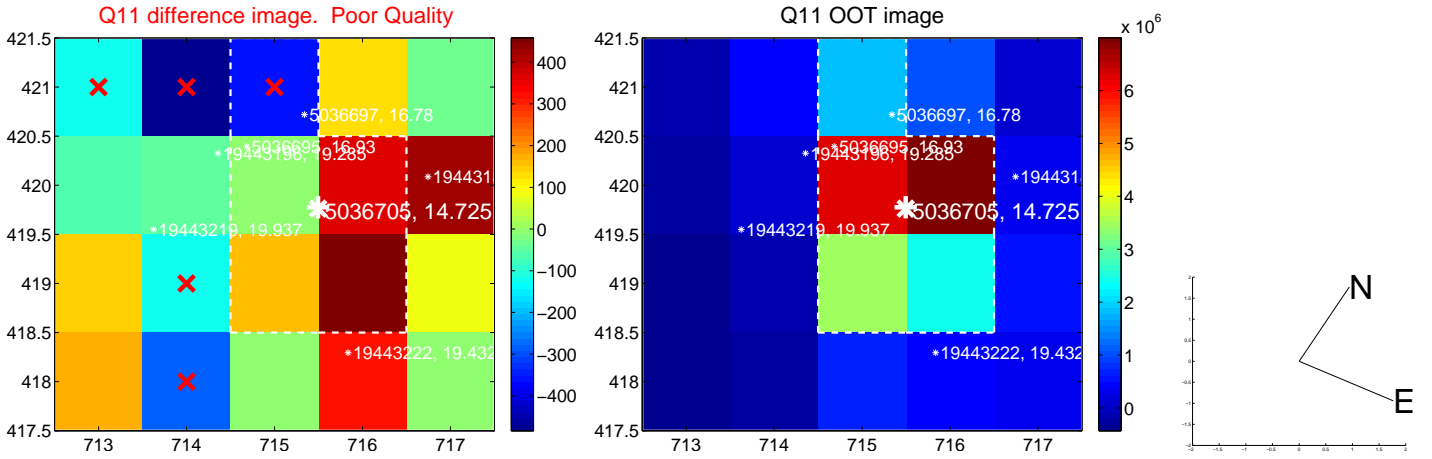
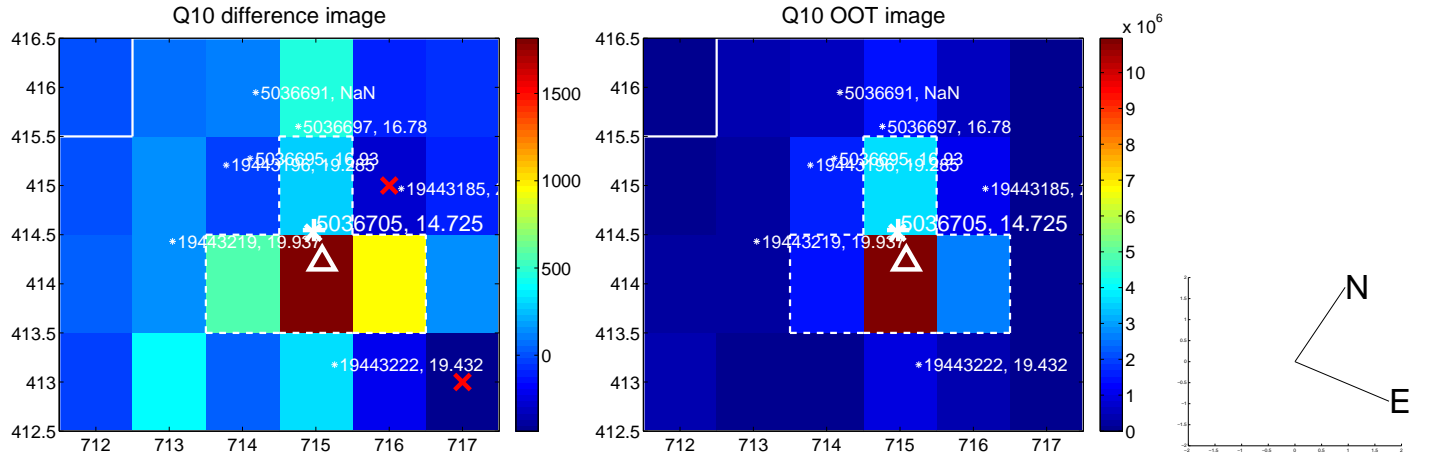
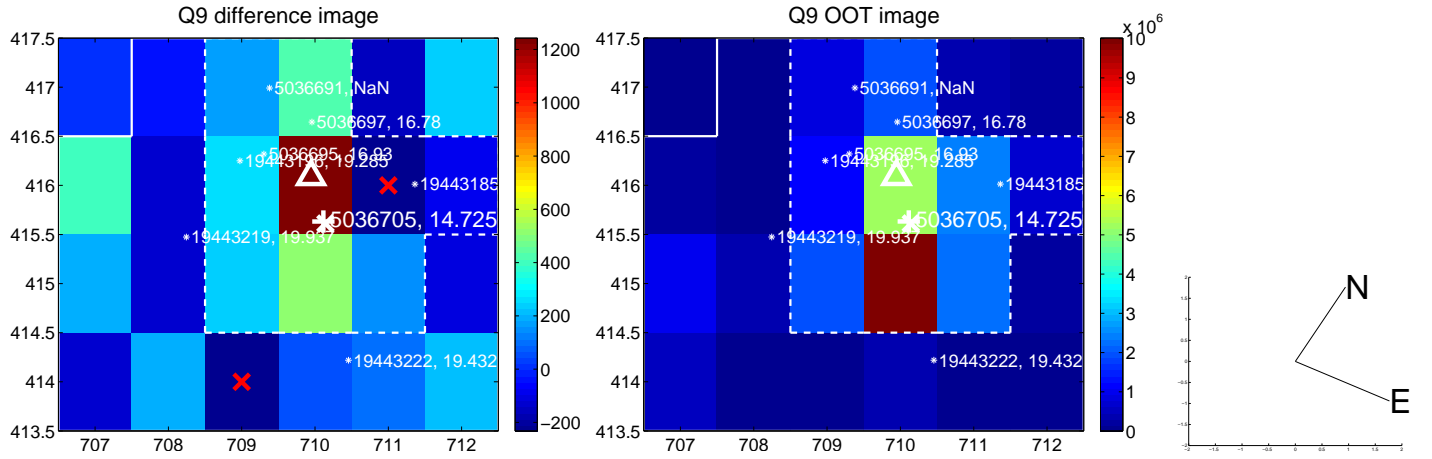
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



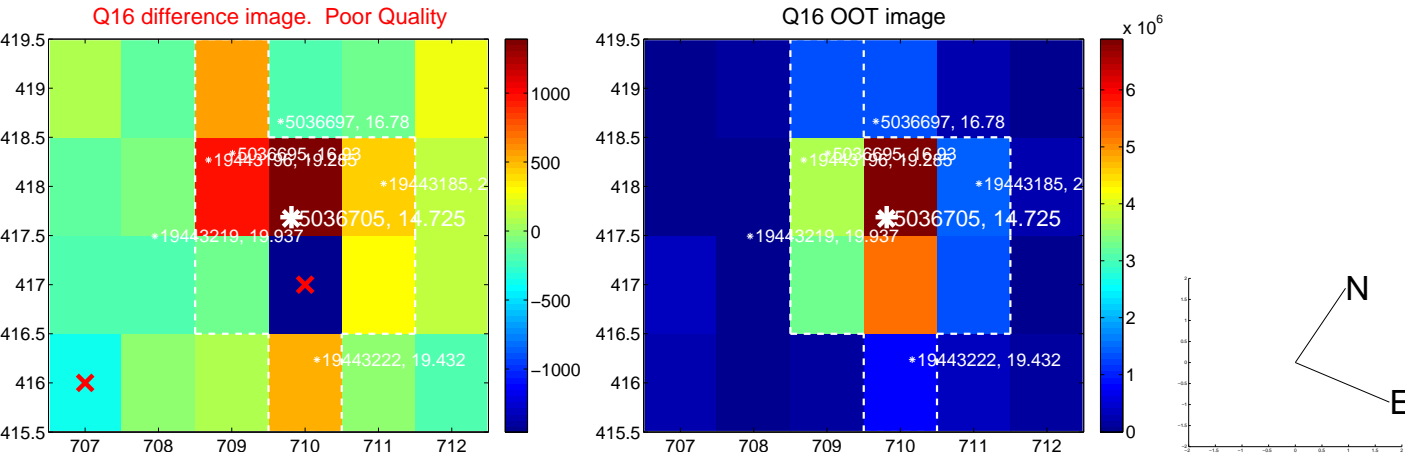
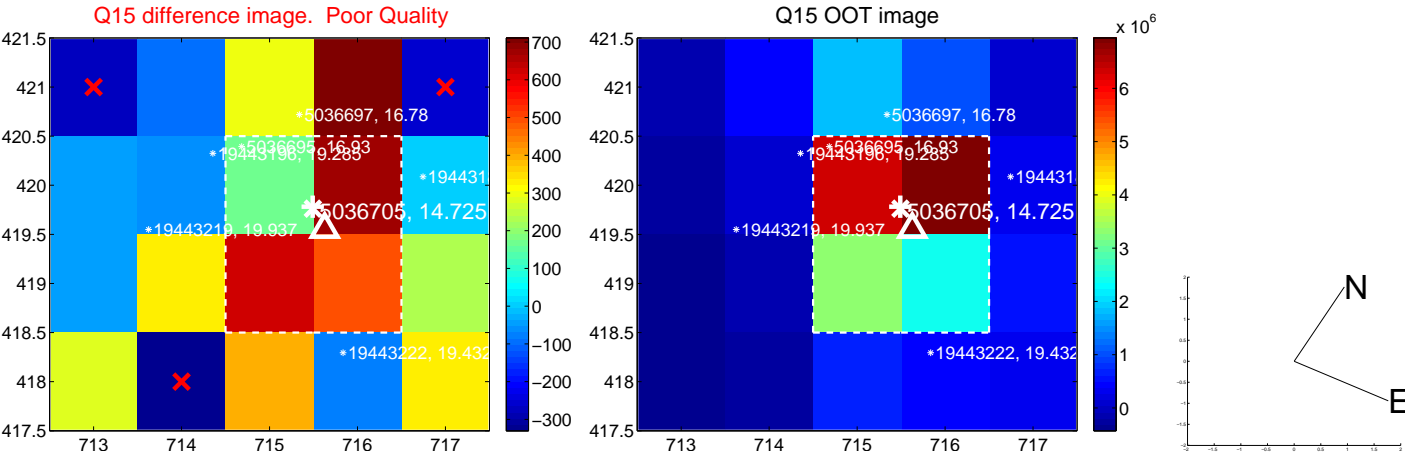
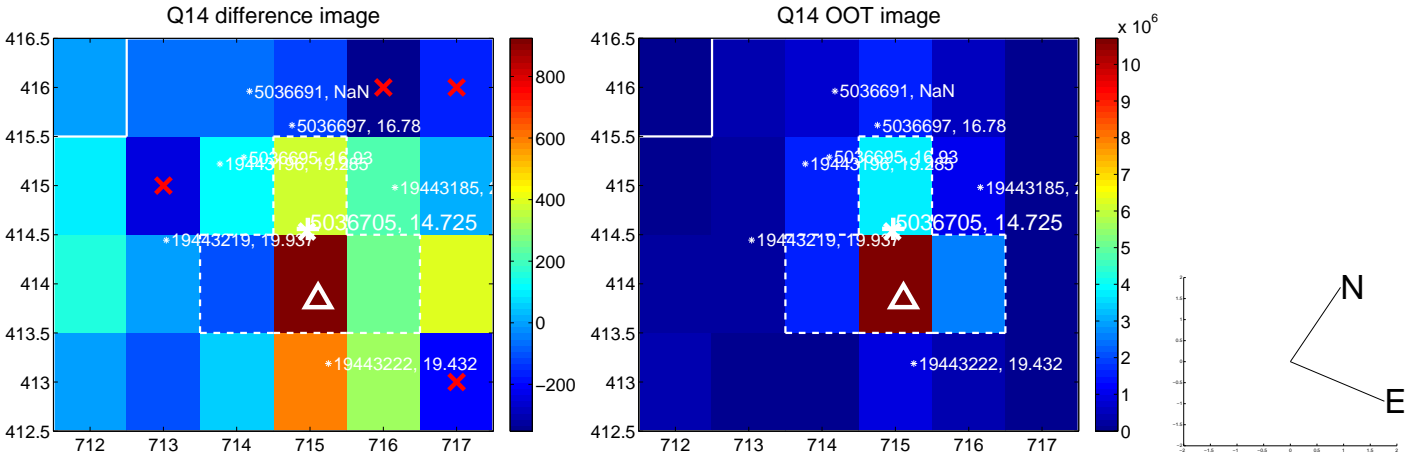
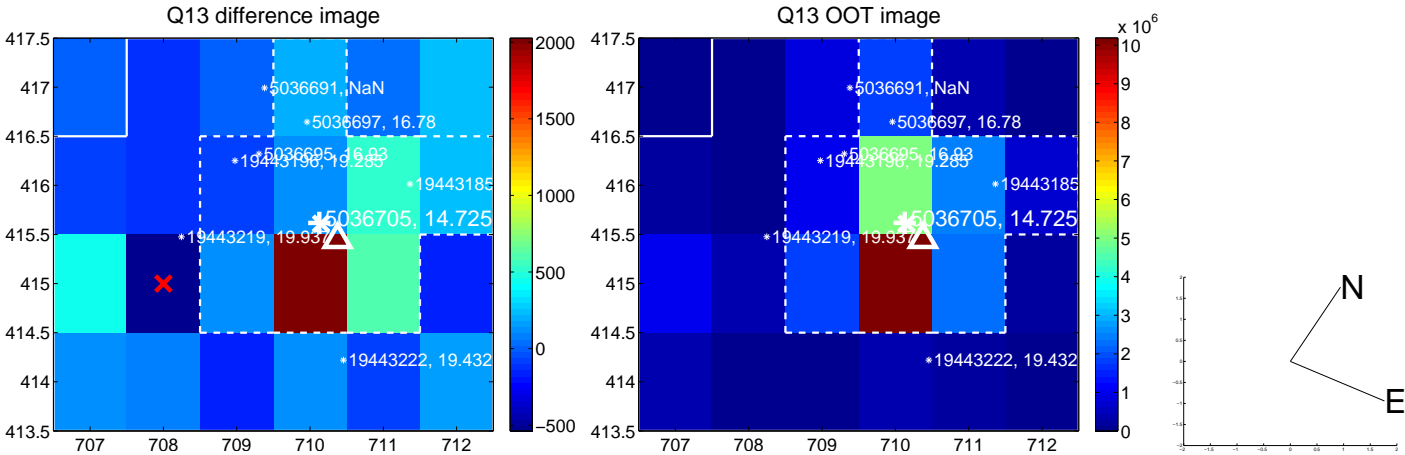
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination

