

KIC 005645888

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})
005645888-01	OBS	No	0.557843	131.713436	12.0	1.951	8.7	7.4	2.04	7673	0.82	52172.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005645888-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

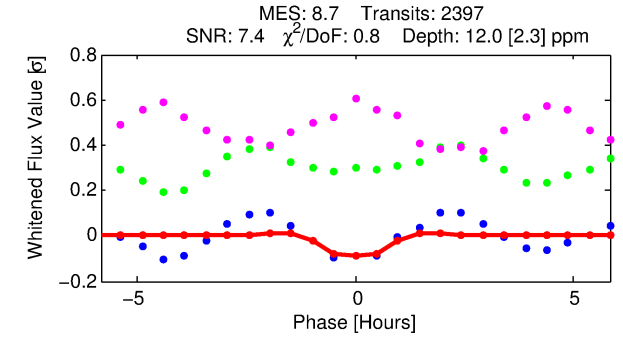
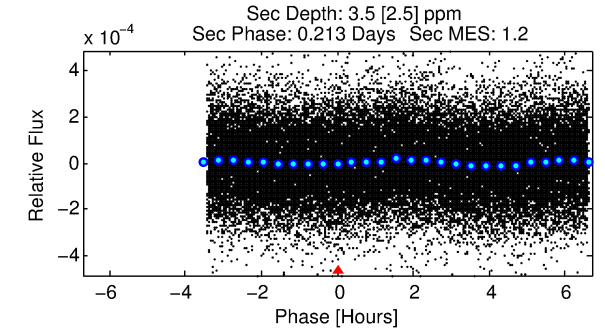
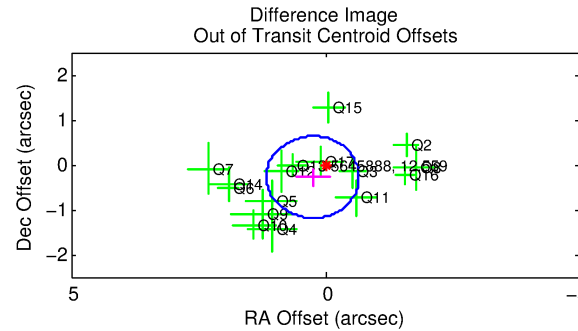
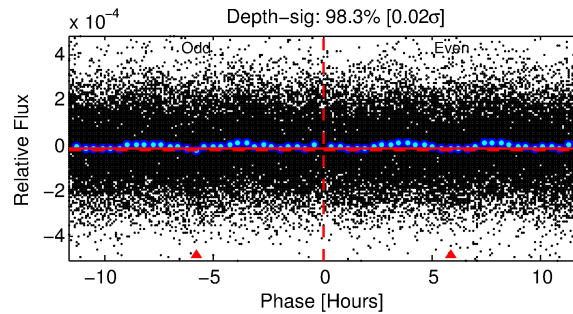
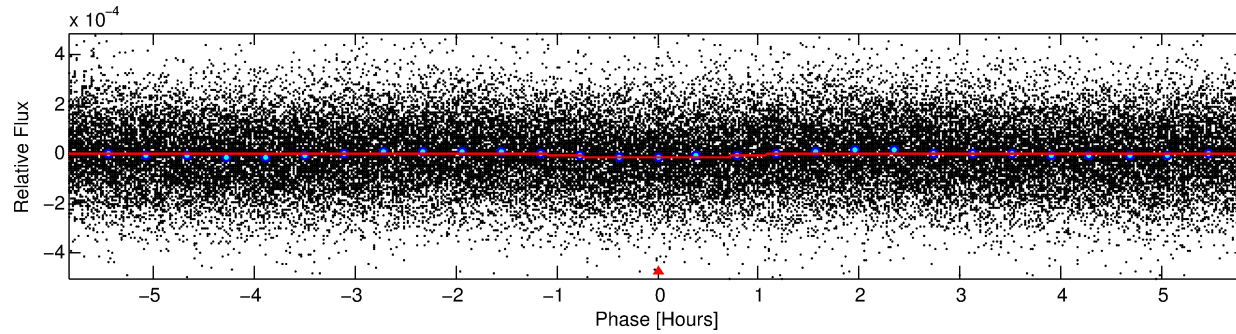
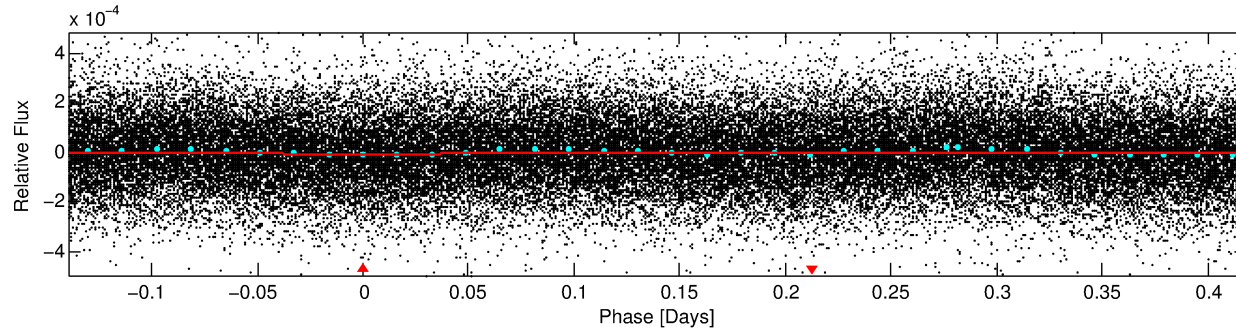
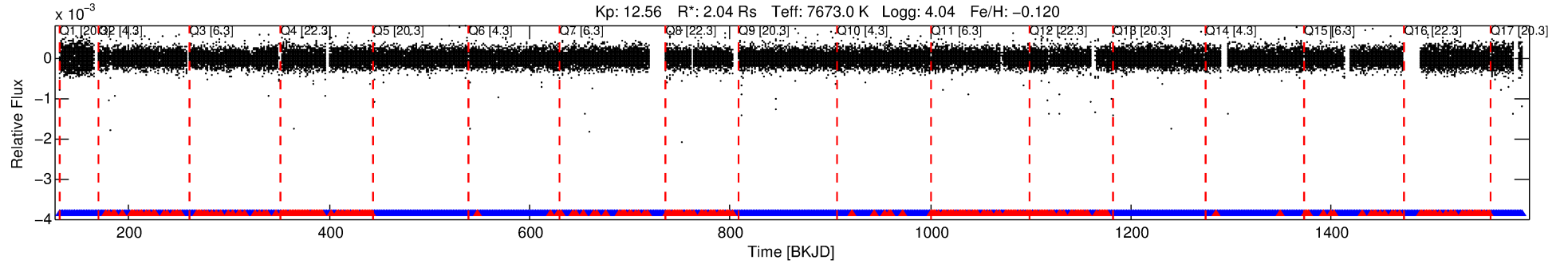
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005645888-01

No Significant Match Found

DV One-Page Summary

KIC: 5645888 Candidate: 1 of 1 Period: 0.558 d



DV Fit Results:

Period = 0.55784 [0.00001] d
Epoch = 131.7134 [0.0034] BKJD
Rp/R* = 0.0037 [0.0009]
a/R* = 1.35 [0.85]
b = 0.90 [0.30]
Seff = 52172.61 [19321.68]
Teq = 3854 [357] K
Rp = 0.82 [0.28] Re
a = 0.0158 [0.0035] AU
Ag = 0.72 [0.66] [-0.43σ]
Teffp = 5484 [1198] K [1.30σ]

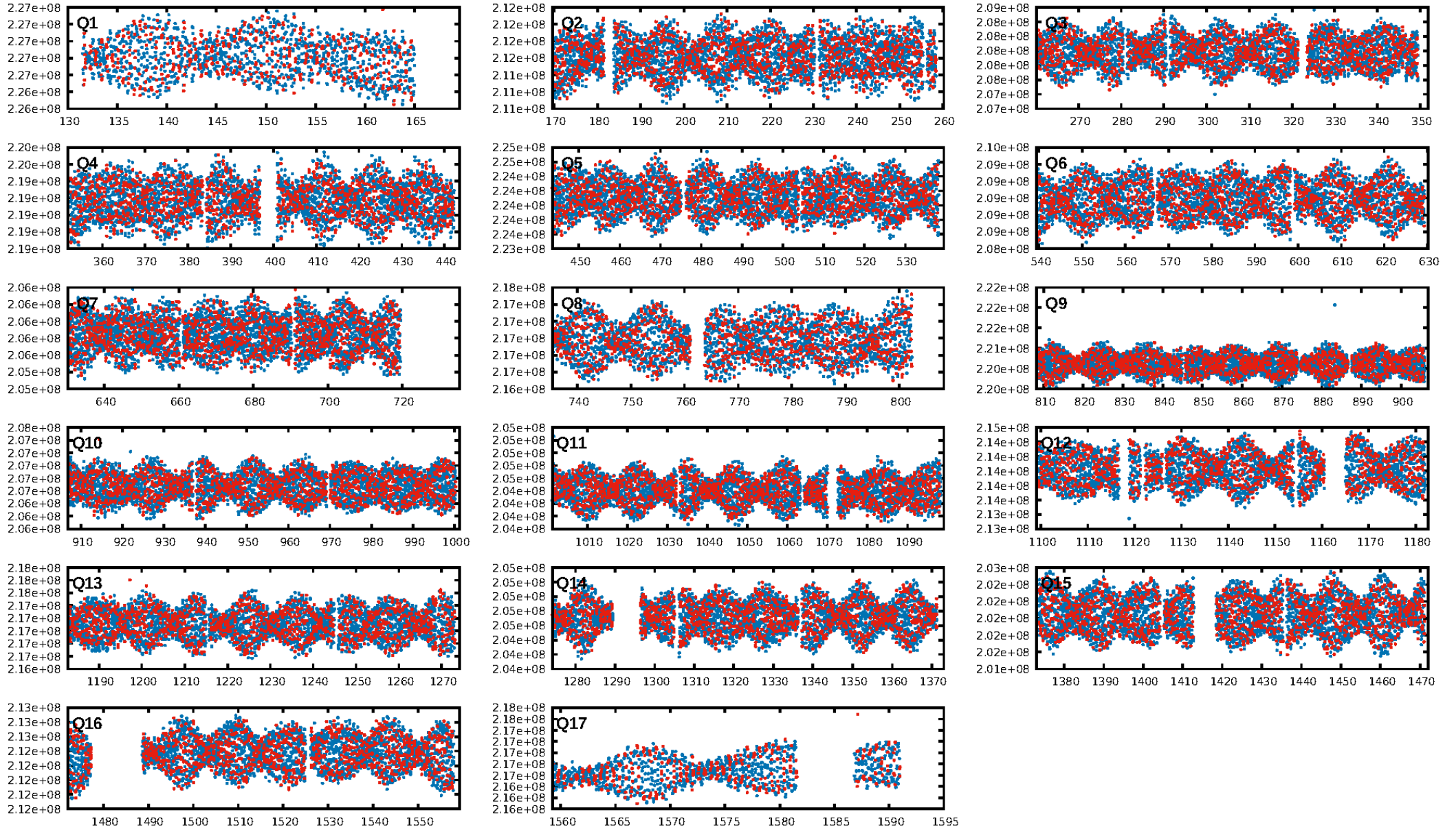
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.09e-16
RollingBand-fgt: 0.85 [1935/2289]
GhostDiagnostic-chr: 4.87
Centroid-sig: 1.8%
Centroid-so: 3.039 arcsec [2.09σ]
OotOffset-rm: 0.375 arcsec [1.23σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.361 arcsec [1.11σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

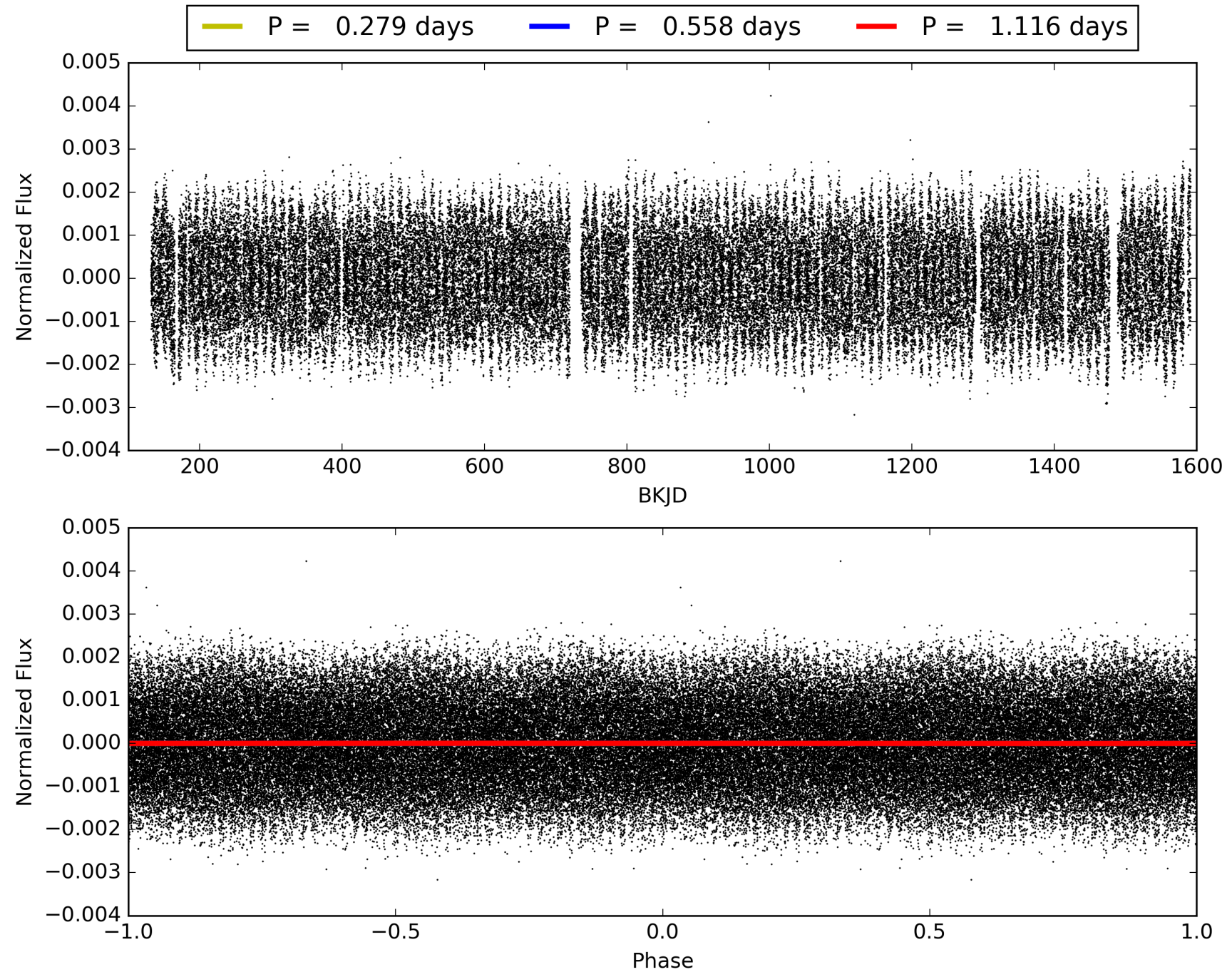
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:50:25 Z

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

TCE 005645888-01, PDC Light Curves

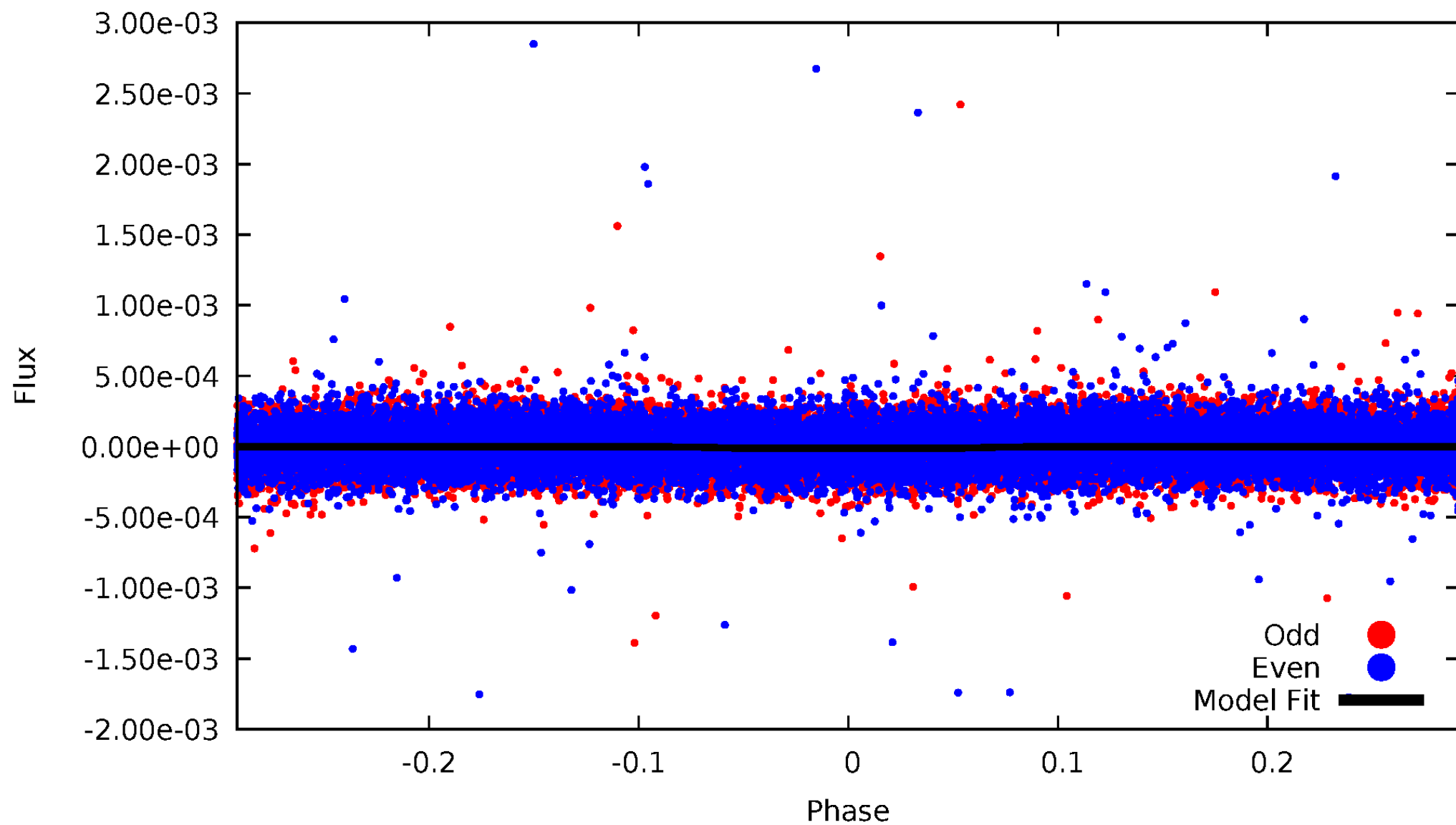


TCE 005645888-01



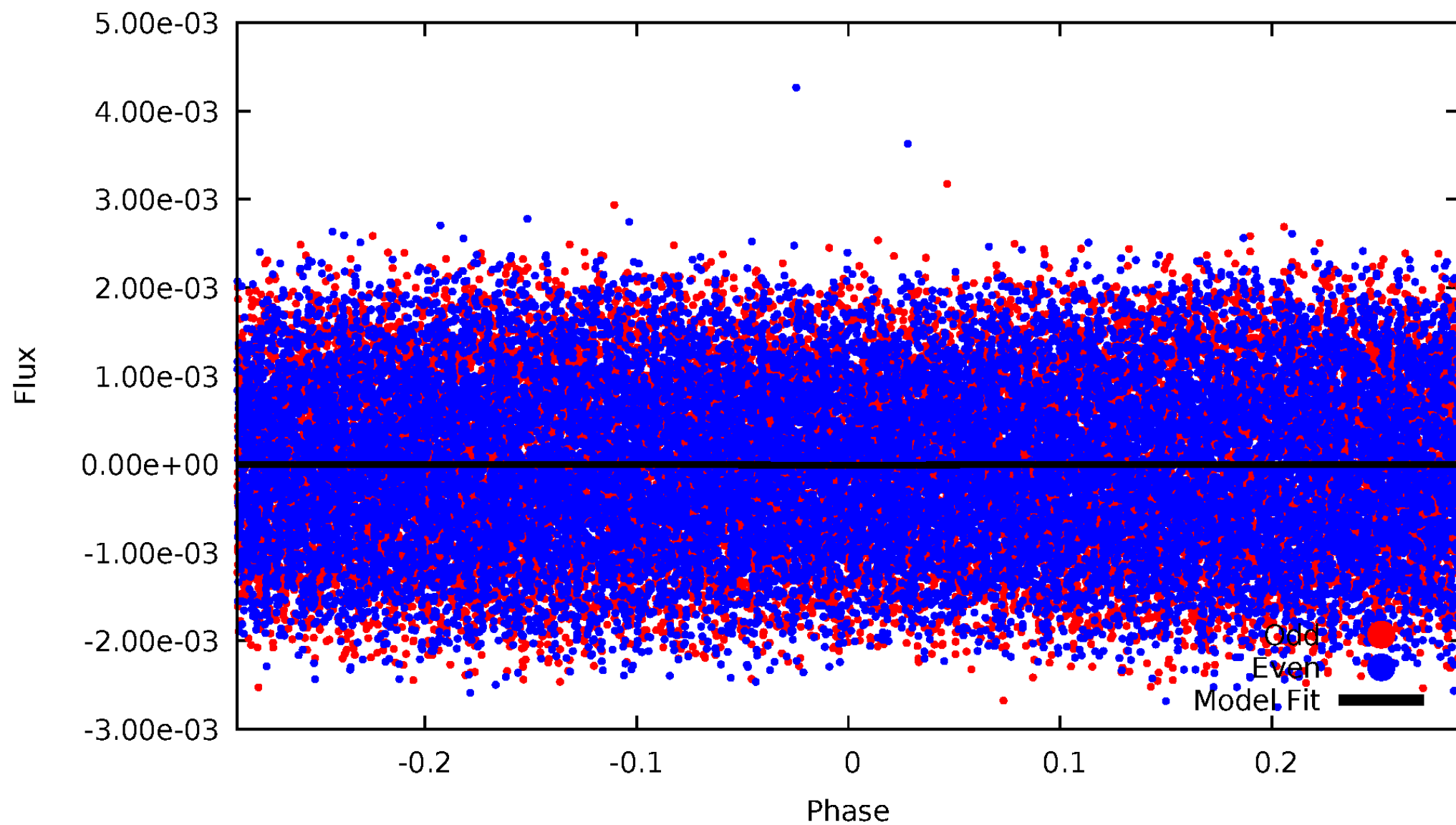
DV Odd/Even

TCE 005645888-01



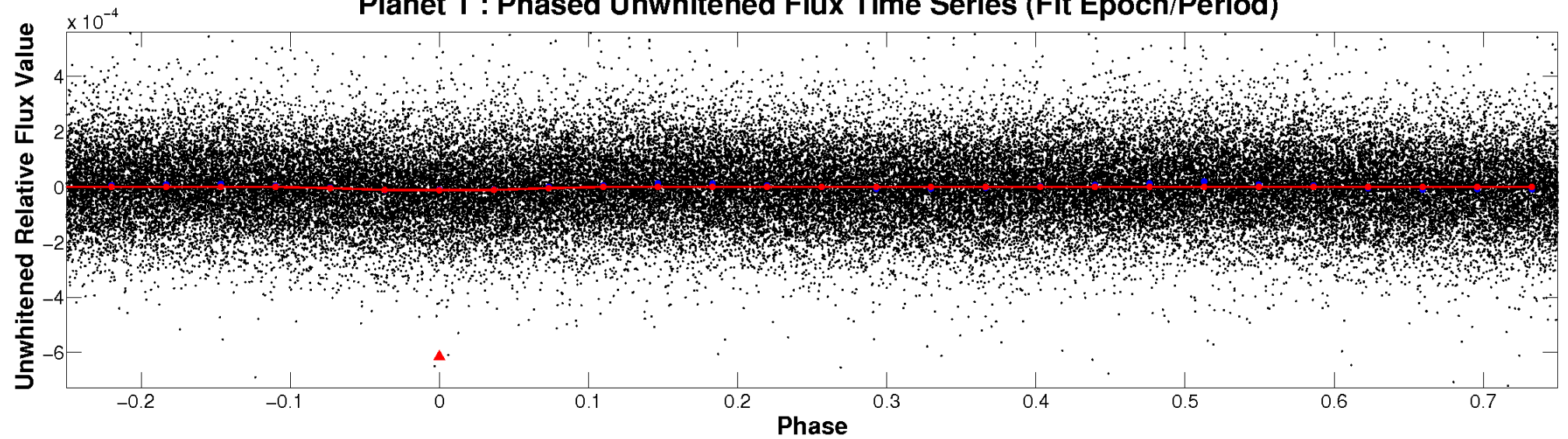
ALT Odd/Even

TCE 005645888-01

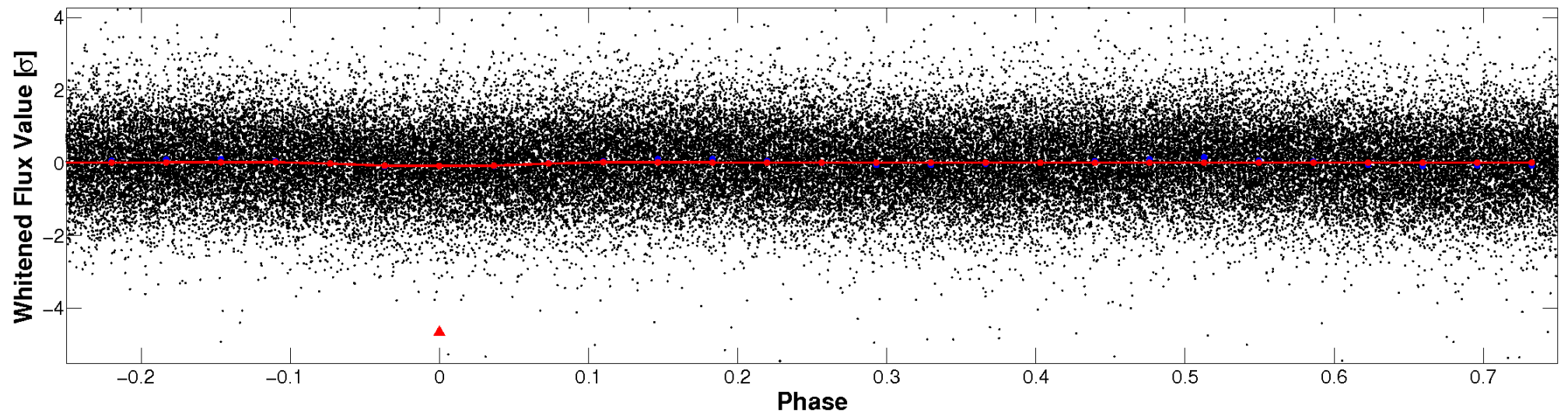


Non-Whitened Vs. Whitened Light Curve

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

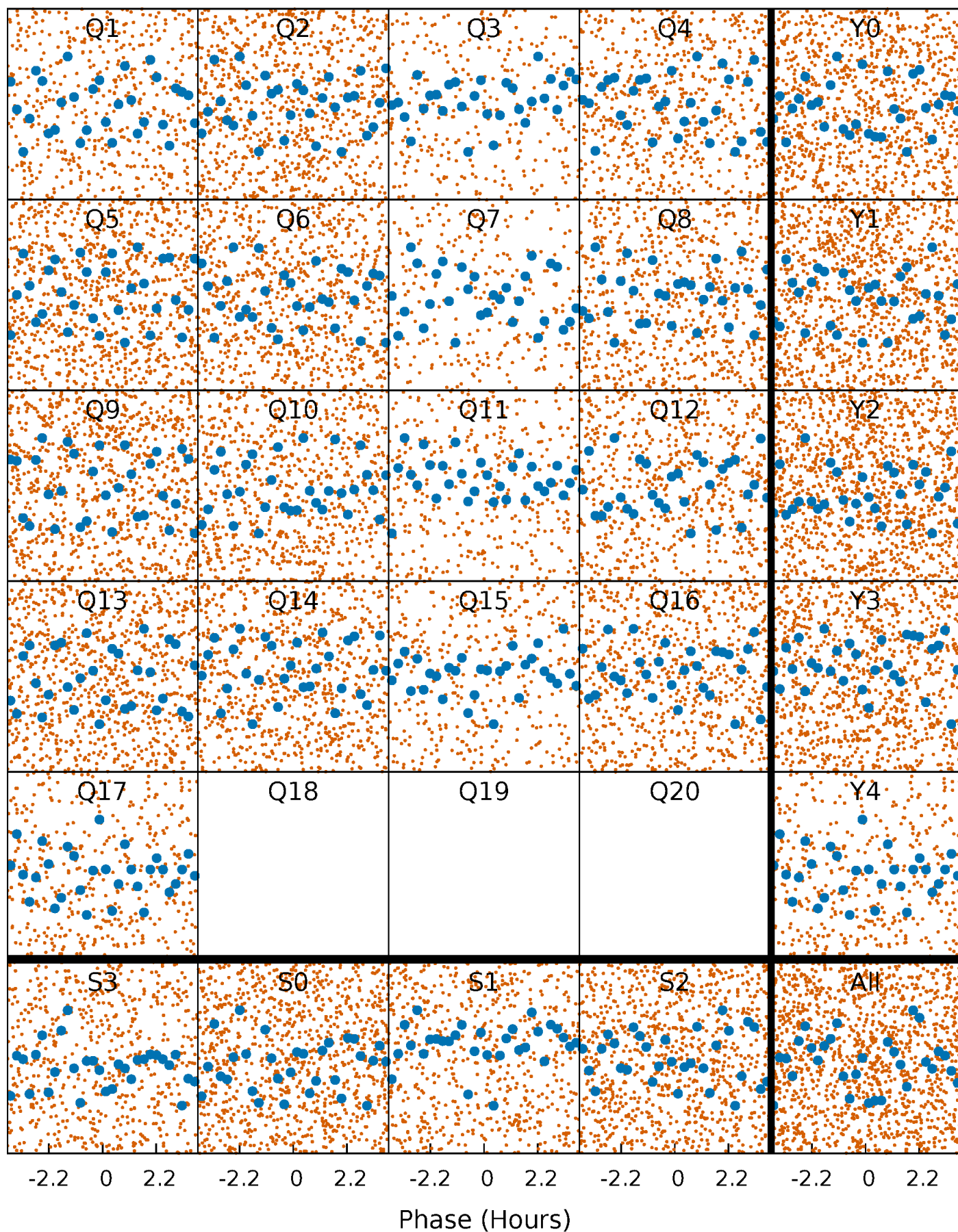


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



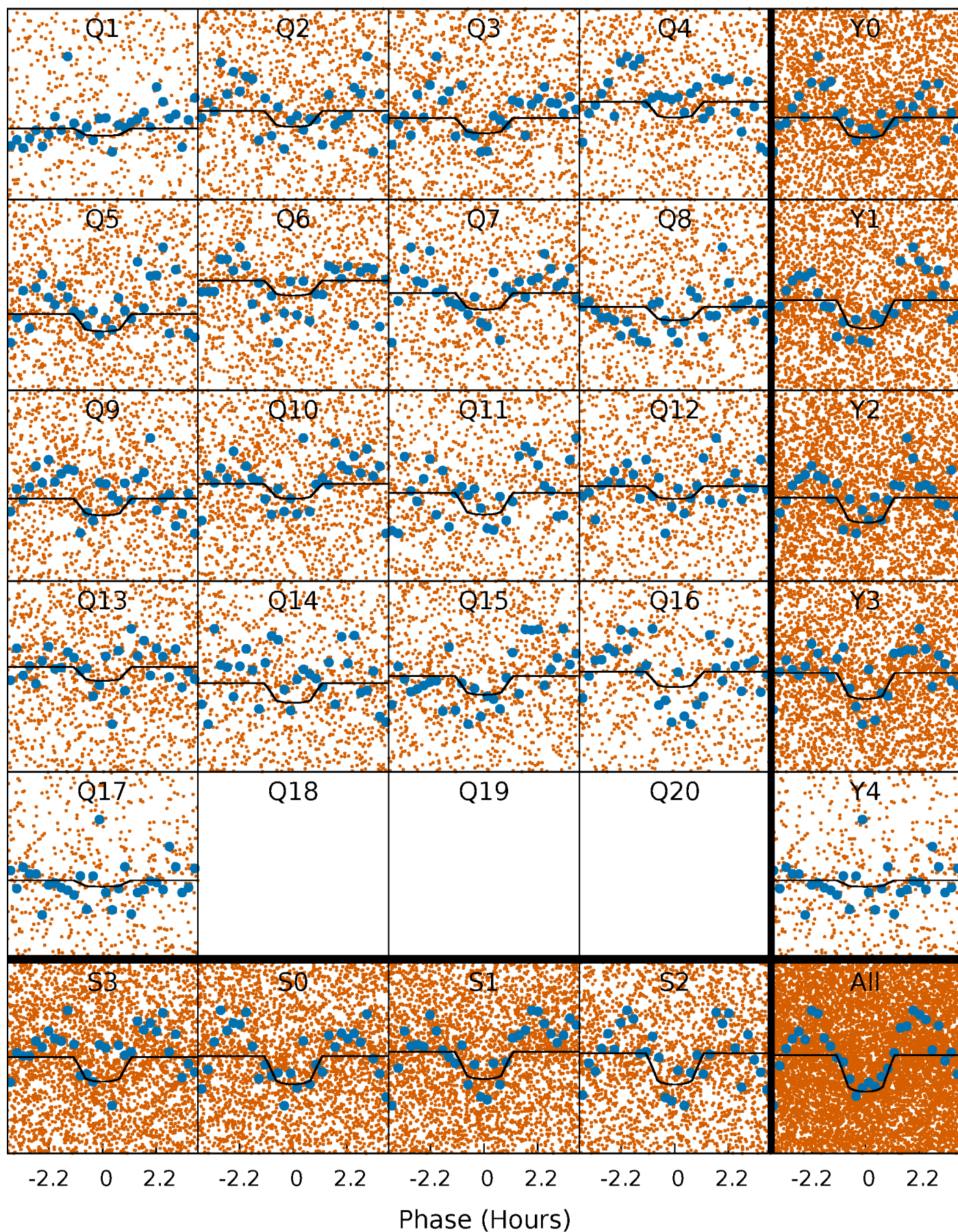
PDC Quarter-Phased Transit Curves

TCE 005645888-01 P= 0.557843 Days $T_0=131.713437$ (BKJD)



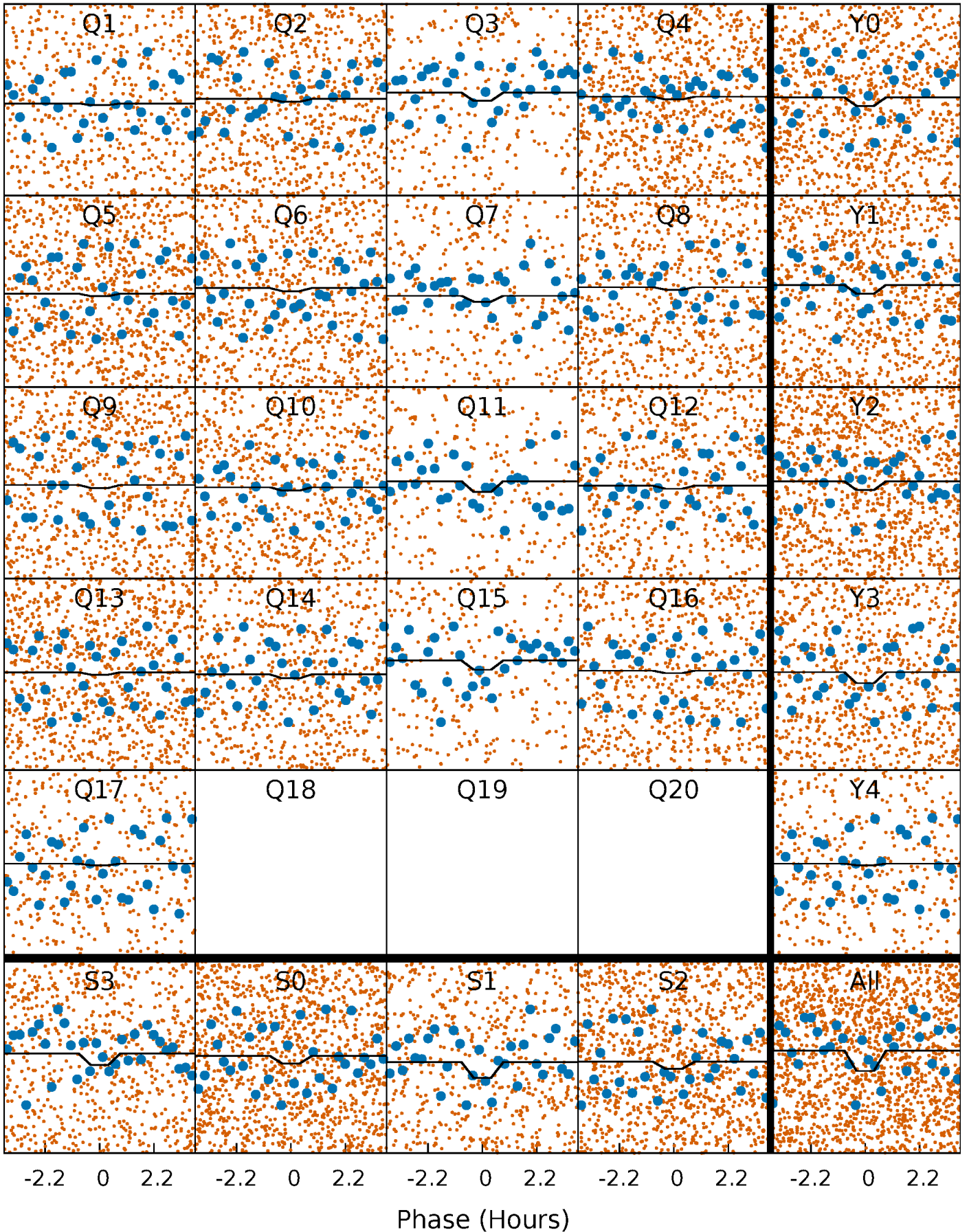
DV Quarter-Phased Transit Curves

TCE 005645888-01 P= 0.557843 Days $T_0=131.713437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

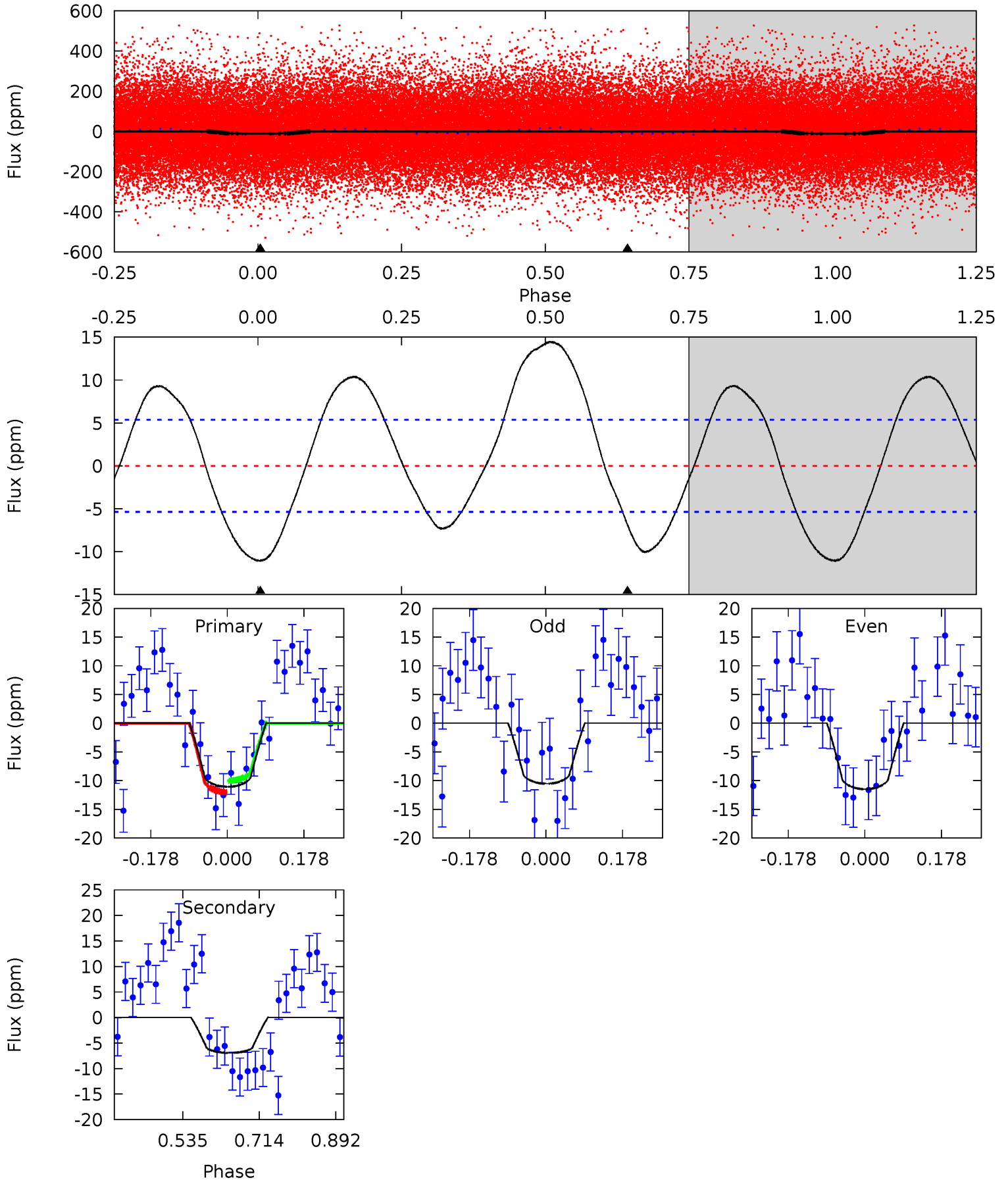
TCE 005645888-01 P= 0.557845 Days $T_0=131.713558$ (BKJD)



DV Model-Shift Uniqueness Test

005645888-01, P = 0.557843 Days, E = 131.155594 Days

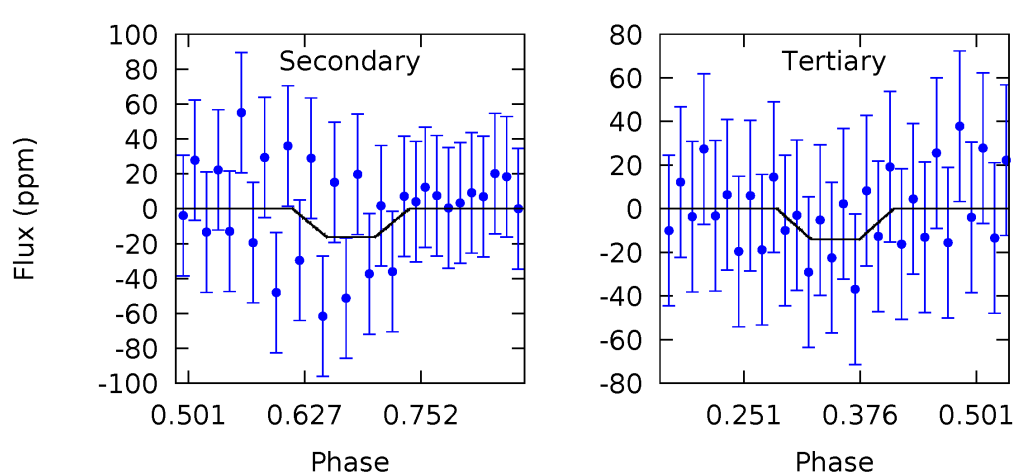
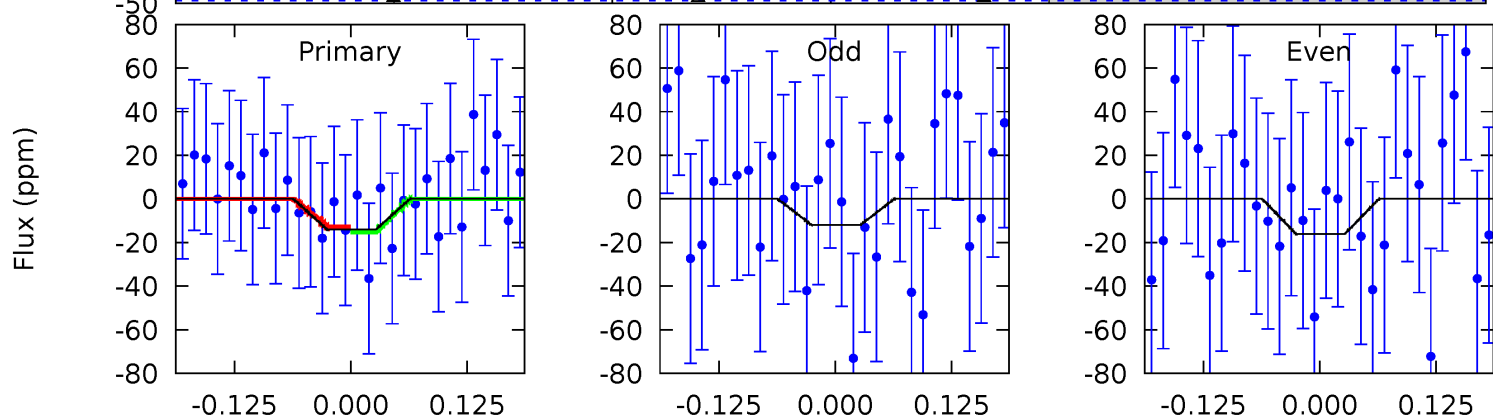
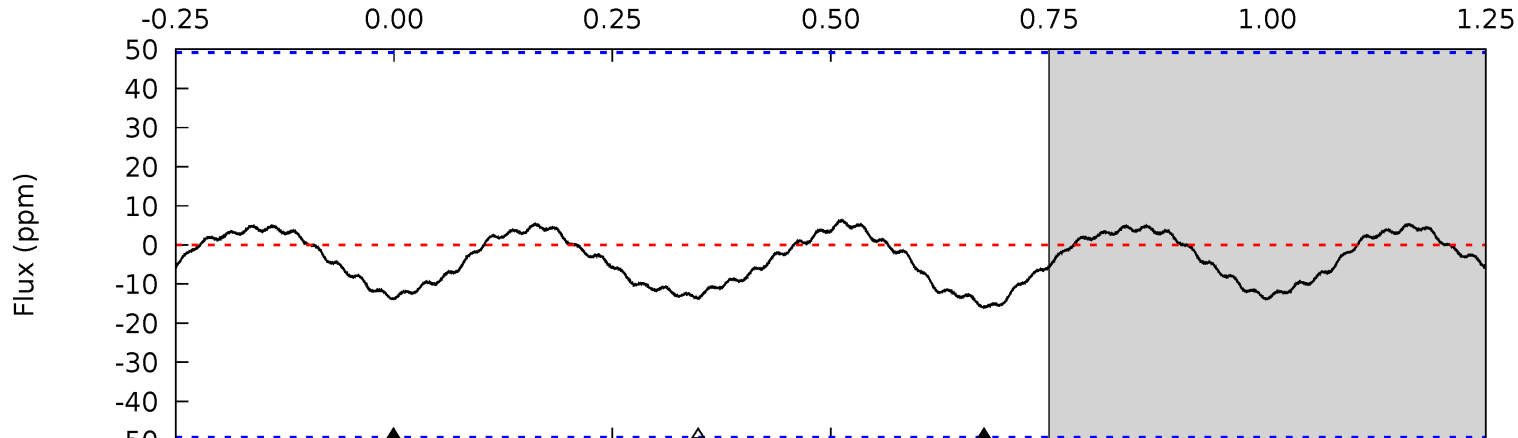
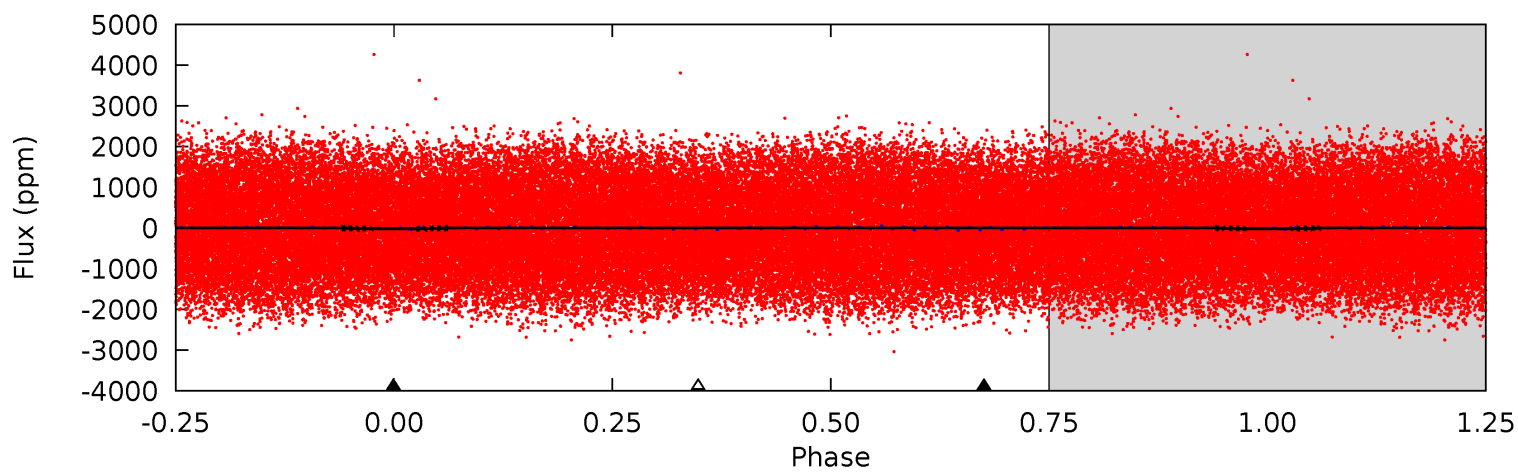
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.17	5.74	0	0	4.44	1.35	4.92	9.17	9.17	5.74	5.74	0.39	1.04	0.57	0.84



Alt Model-Shift Uniqueness Test

005645888-01, P = 0.557845 Days, E = 131.155713 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.29	1.49	1.28	0	4.52	1.53	0.58	0.01	1.29	0.20	1.49	0.19	0.87	0.29	0.12



Stellar Parameters For KIC 005645888

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7673^{+237}_{-316}	$4.042^{+0.187}_{-0.153}$	$-0.120^{+0.200}_{-0.350}$	$2.042^{+0.509}_{-0.509}$	$1.673^{+0.198}_{-0.298}$	$0.277^{+0.297}_{-0.125}$
	+3%/-4%	+5%/-4%	+167%/-292%	+25%/-25%	+12%/-18%	+107%/-45%
Source	KIC0	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 005645888-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-7 ± 1	$0.80^{+0.24}_{-0.22}$	5336^{+398}_{-410}	5968^{+1188}_{-808}	$1.422^{+1.228}_{-0.574}$
Alt.	-16 ± 11	$0.78^{+0.26}_{-0.20}$	5360^{+394}_{-380}	7921^{+2545}_{-2213}	$3.440^{+4.776}_{-2.260}$

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 $A_{obs} \gg 1.0$

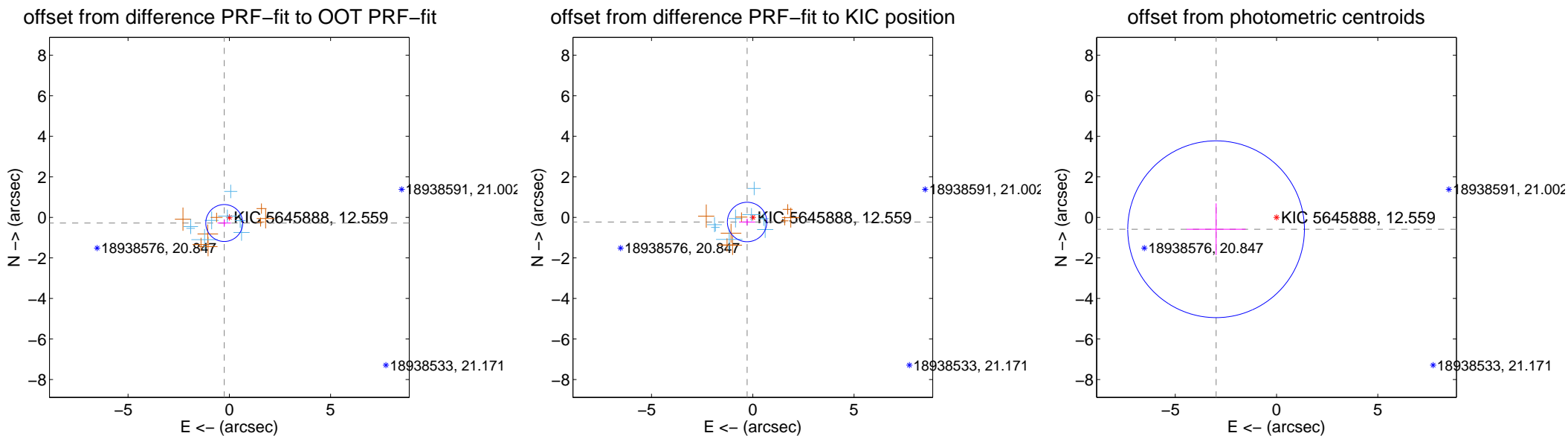
DV Centroid Data

Supplemental centroid analysis for 005645888-01. Kepler magnitude: 12.56. Transit SNR 7.36

There are 8 quarters with good PRF difference image offsets

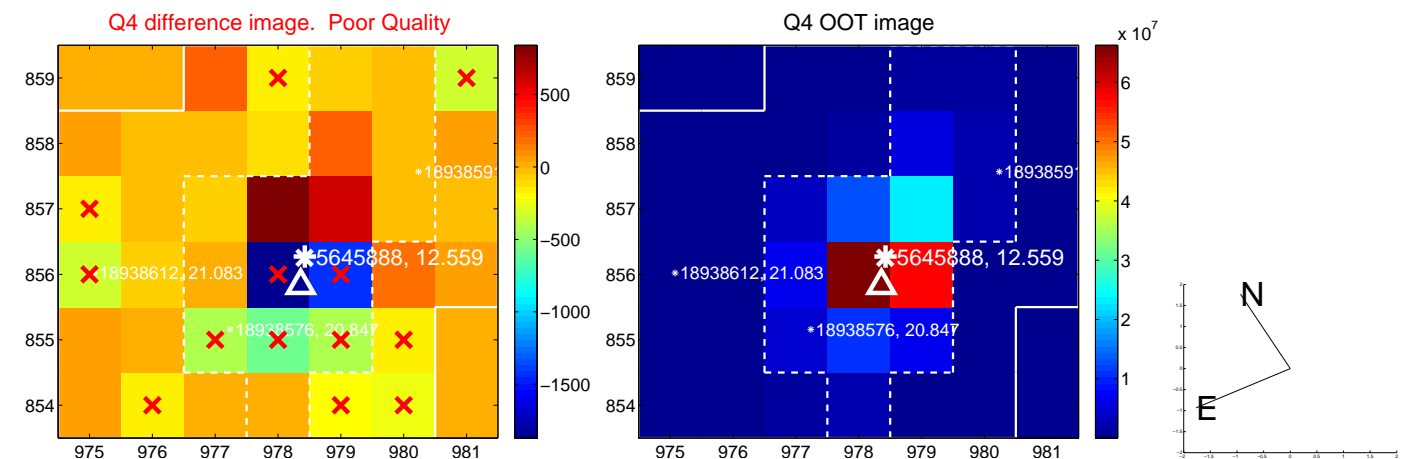
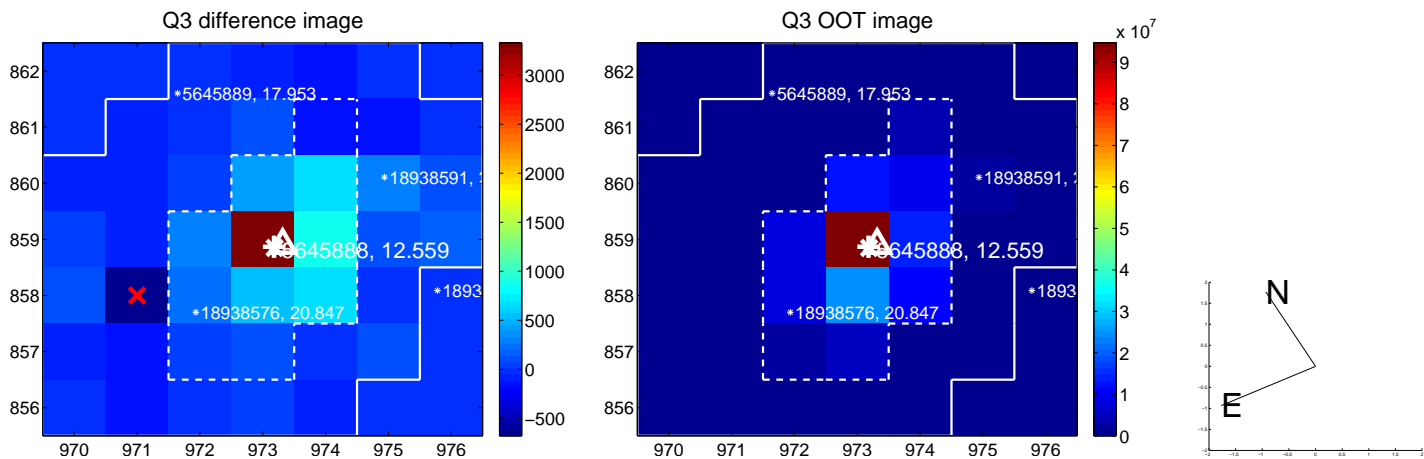
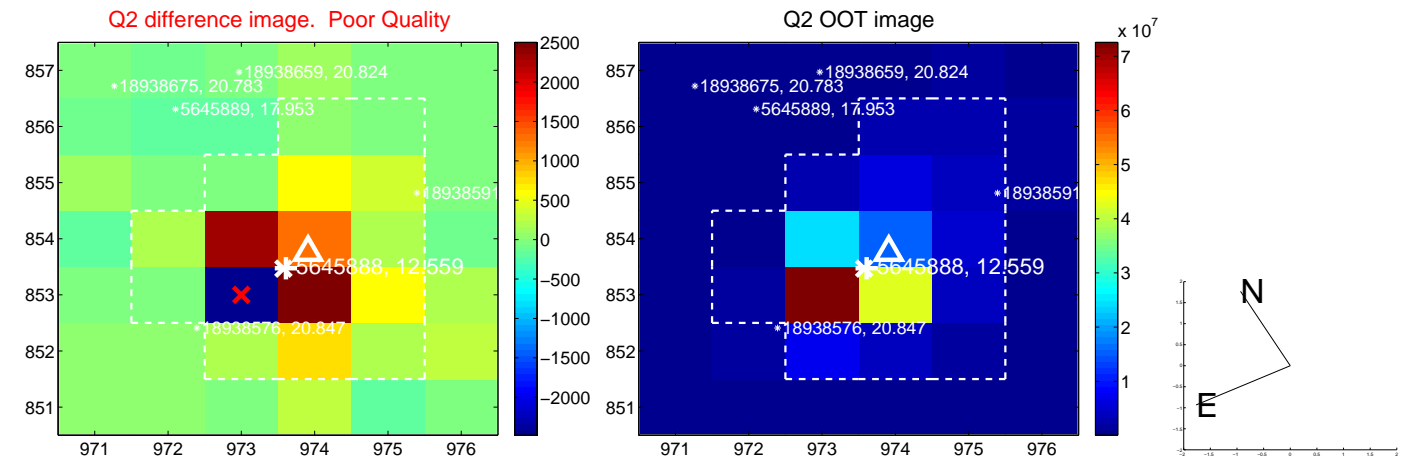
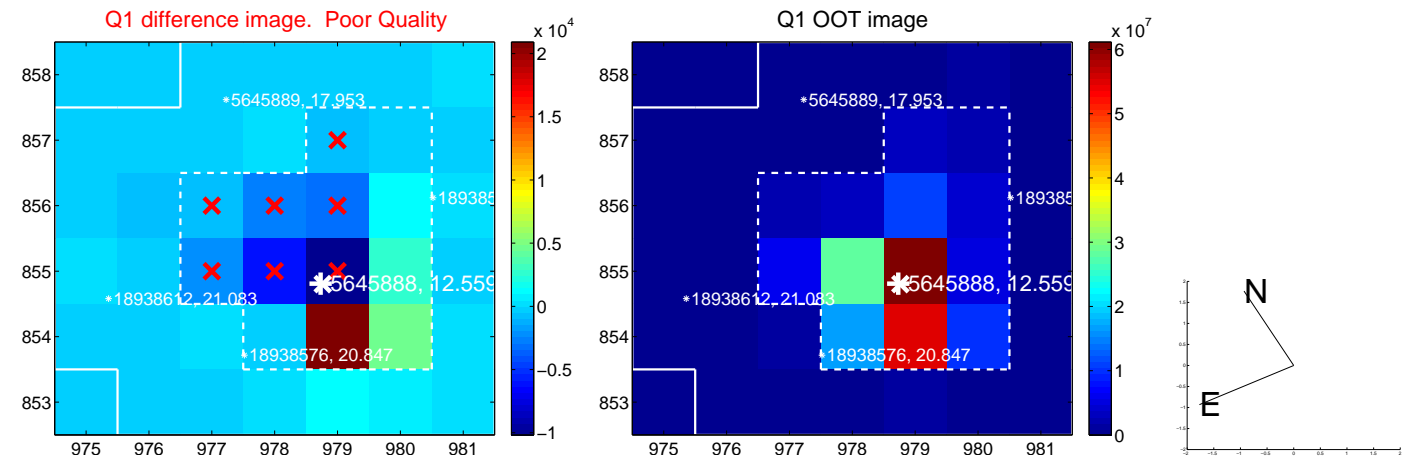
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.375 ± 0.304	1.23	0.251 ± 0.328	-0.278 ± 0.185
PRF-fit source offset from KIC position	0.361 ± 0.324	1.11	0.281 ± 0.395	-0.227 ± 0.165
photometric centroid source offset	3.04 ± 1.45	2.09	2.98 ± 1.46	-0.58 ± 1.28

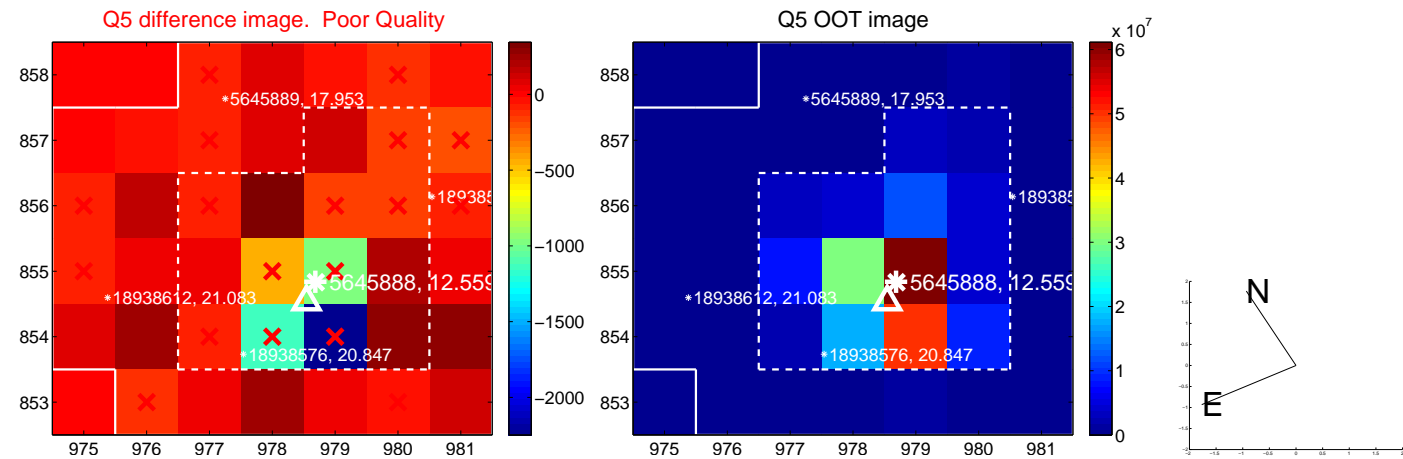


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

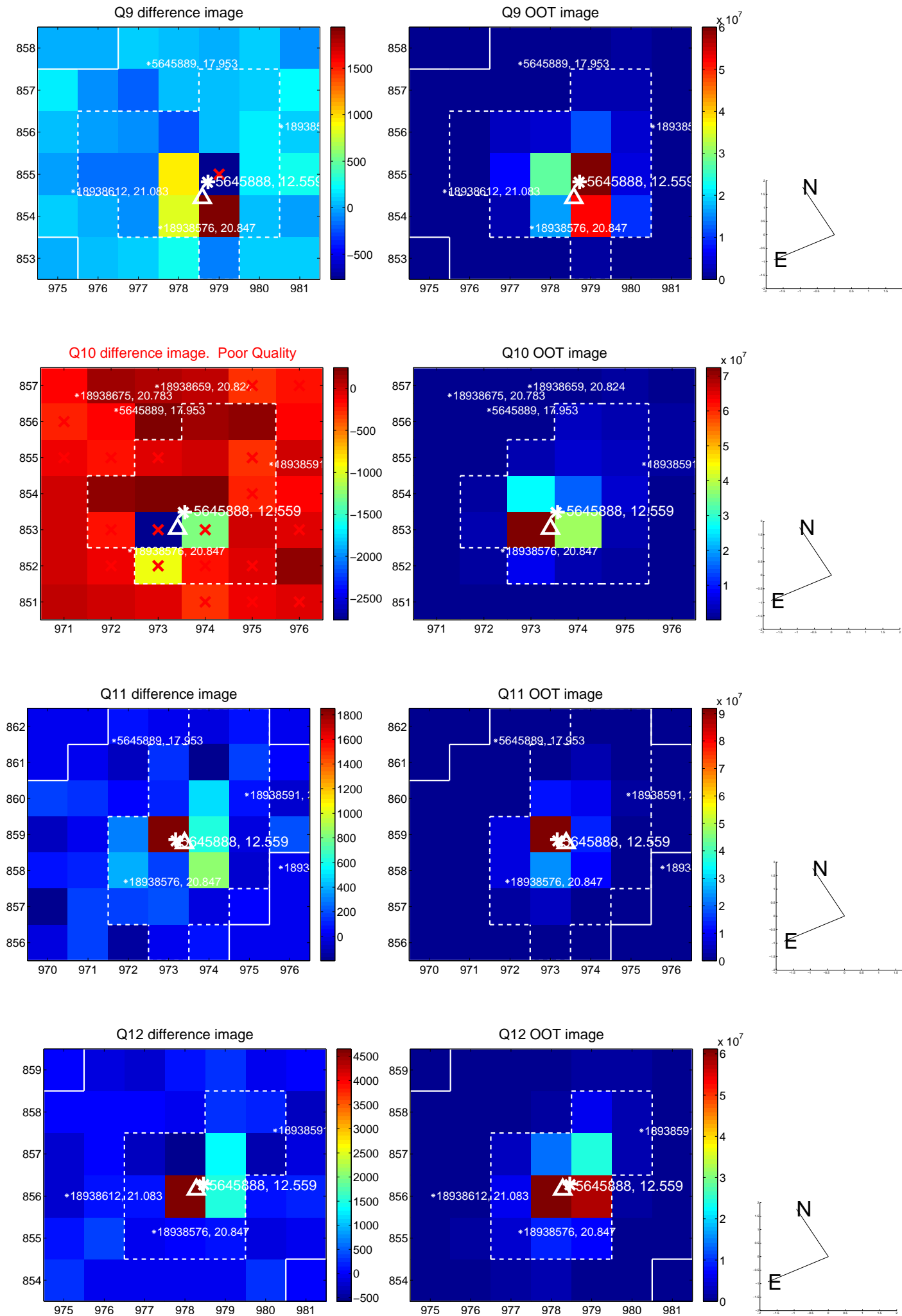
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



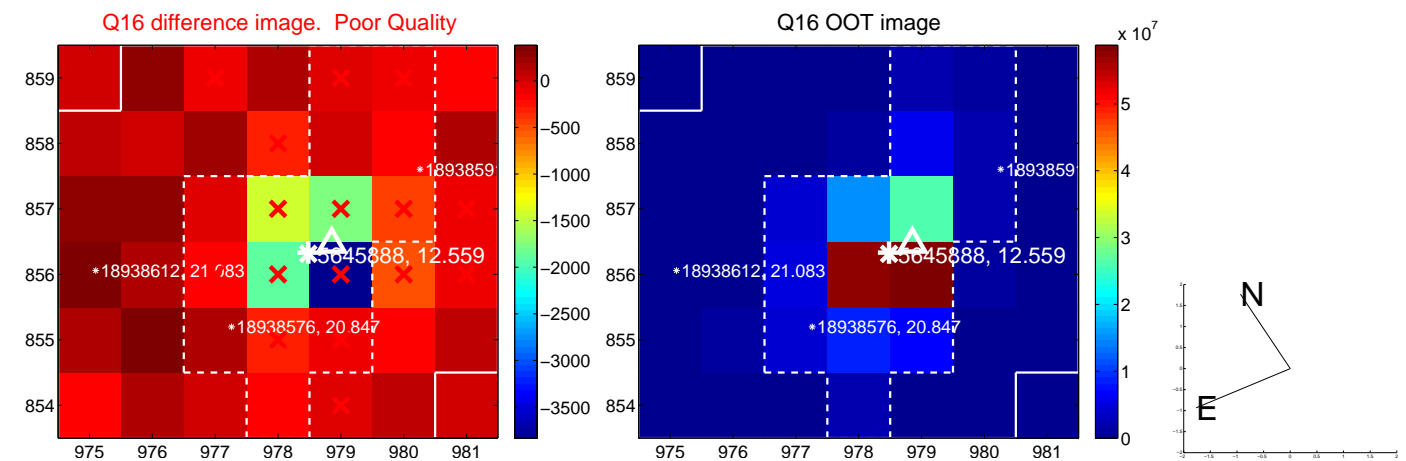
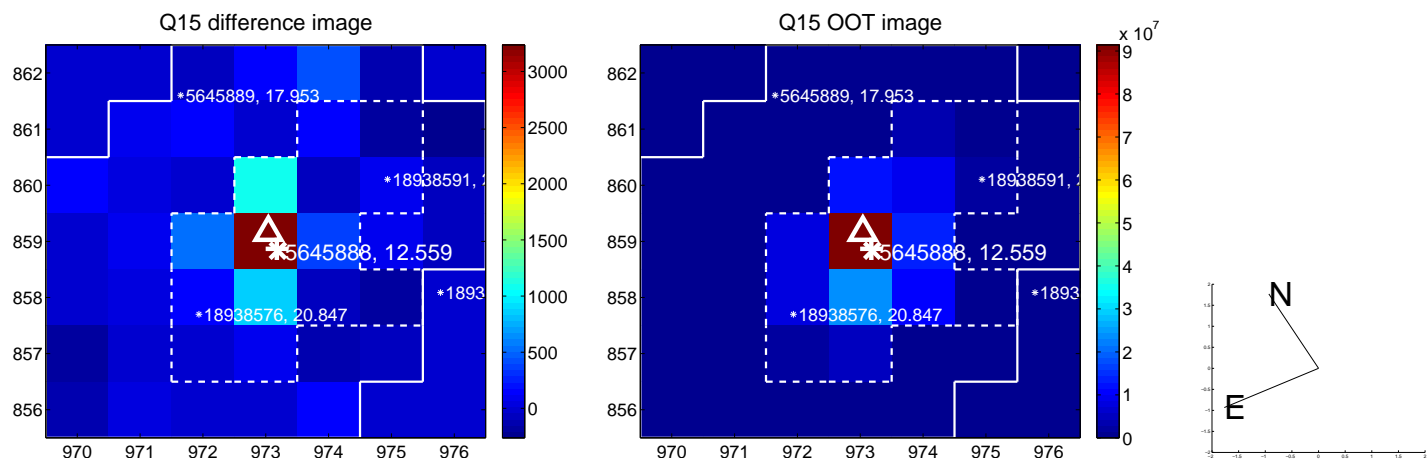
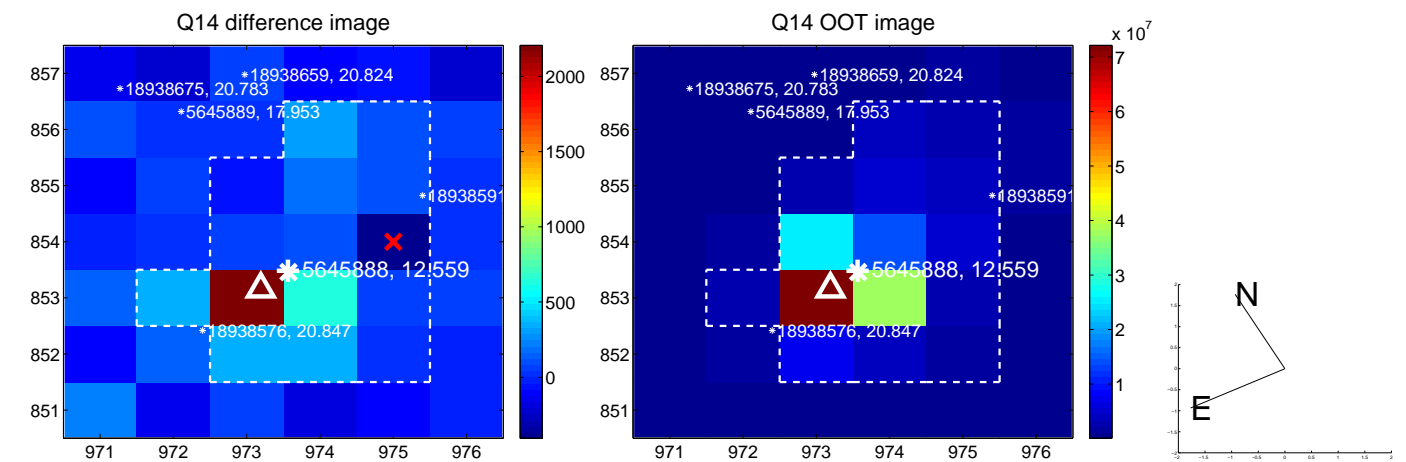
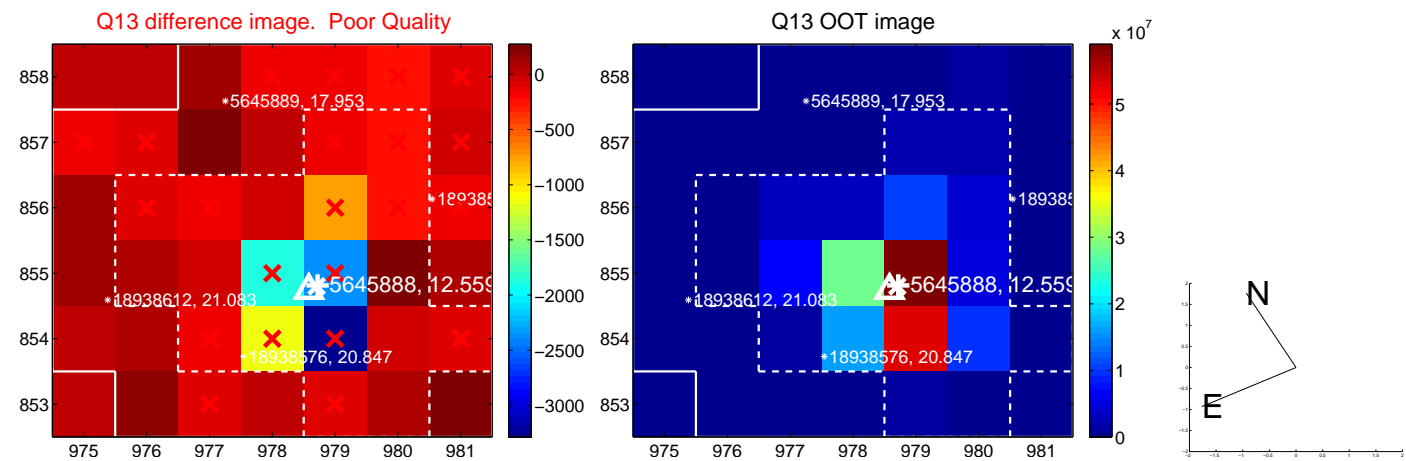
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



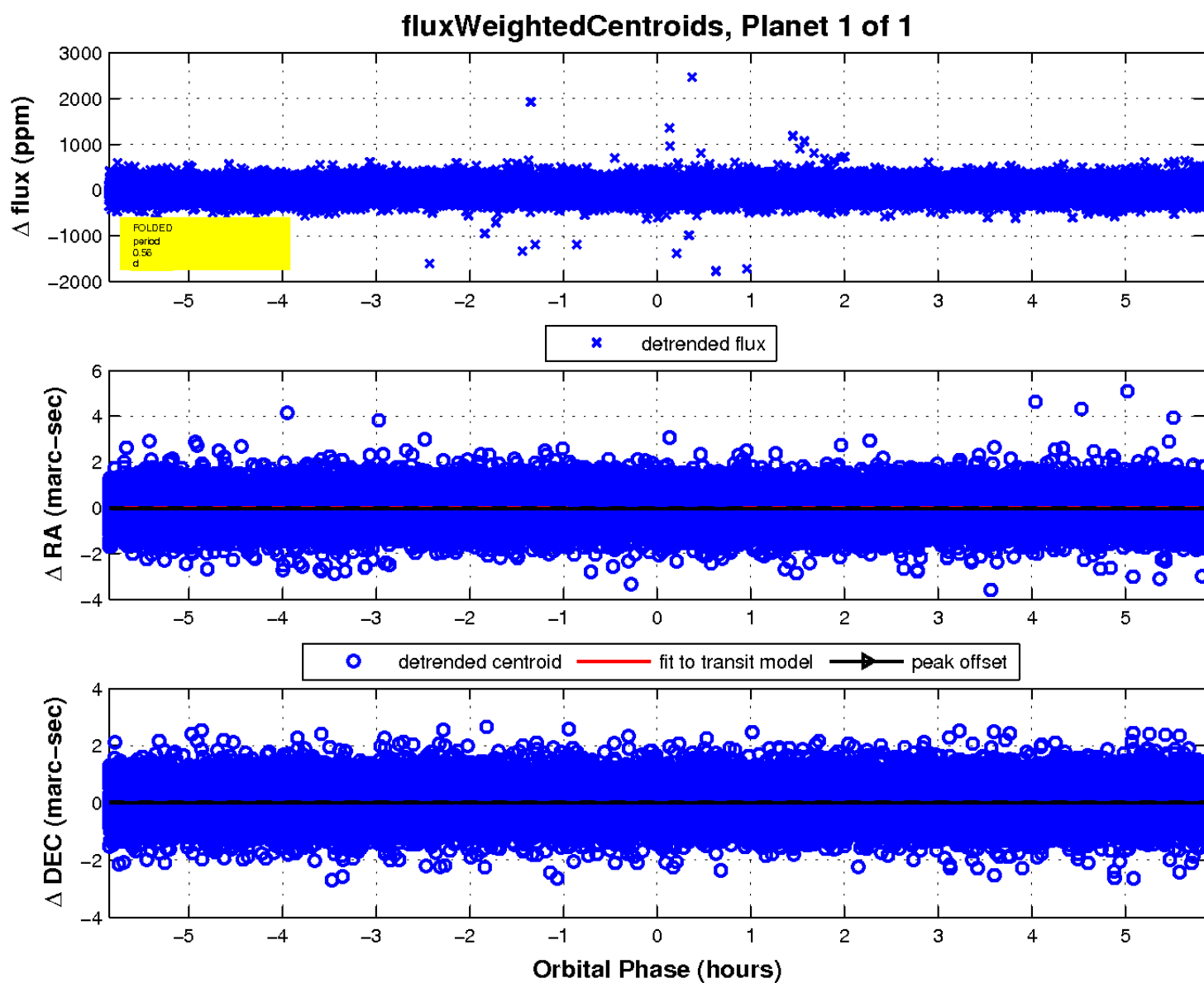
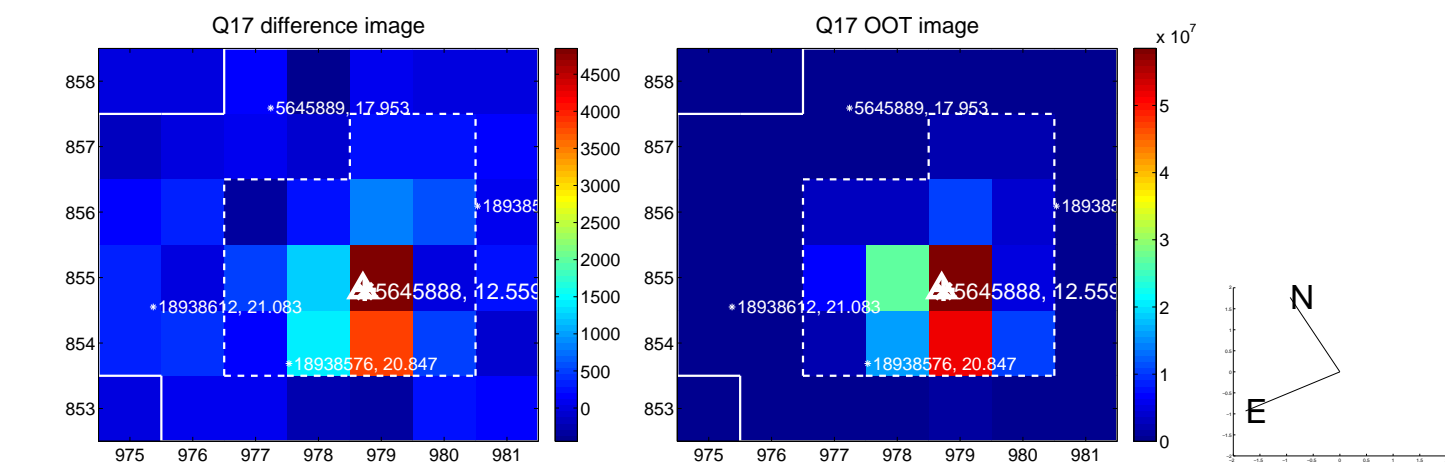
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

