

KIC 003830820

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})
003830820-01	OBS	6360.01	15.582768	135.109953	60641.8	2.500	1355.7	-1.0	0.55	3849	13.26	5.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003830820-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—CENT_NOFITS

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 003830820-01

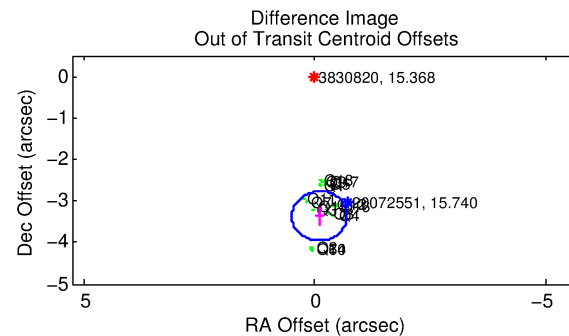
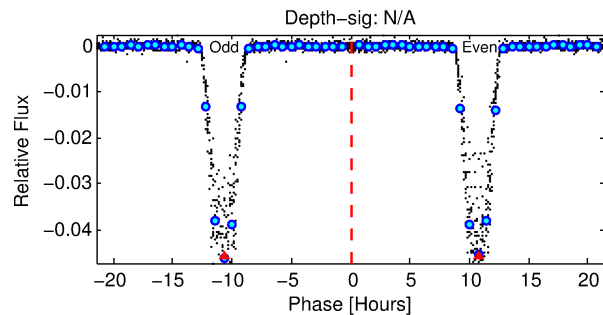
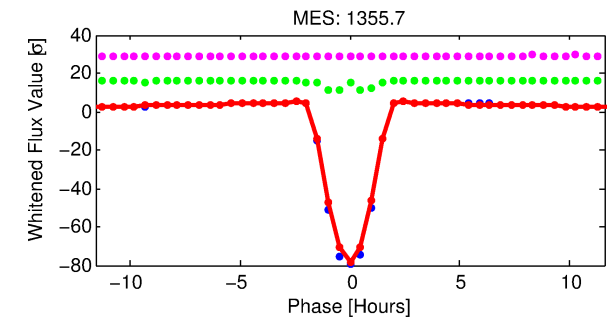
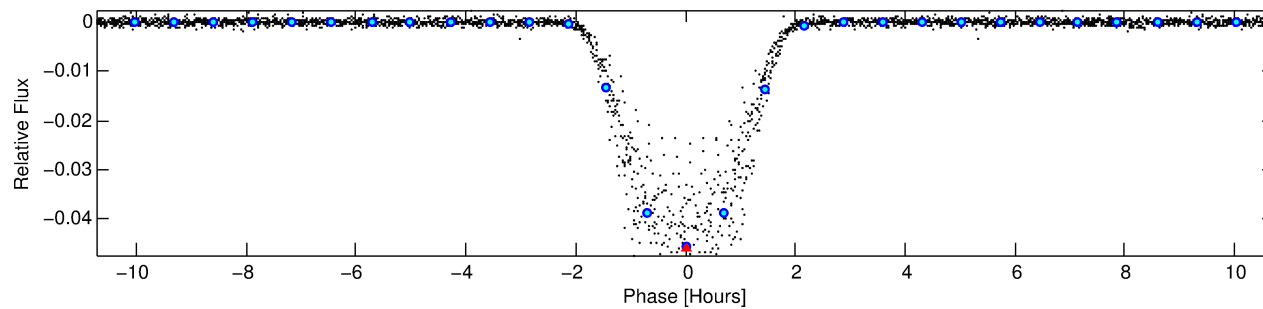
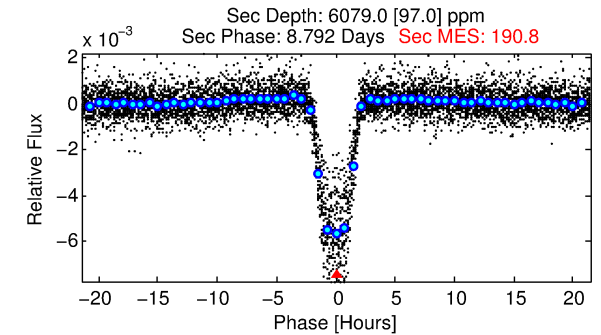
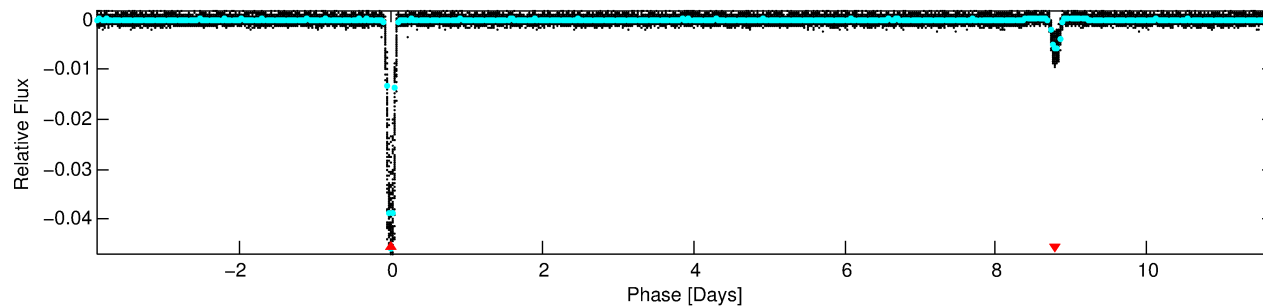
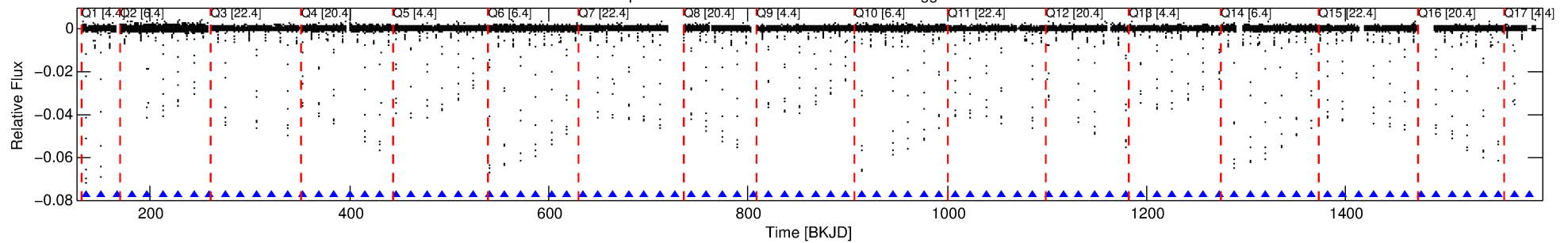
No Significant Match Found

DV One-Page Summary

KIC: 3830820 Candidate: 1 of 1 Period: 15.583 d

KOI: K06360.01 Corr: 0.806

Kp: 15.37 R*: 0.55 Rs Teff: 3849.0 K Logg: 4.70 Fe/H: 0.000



TPS TCE Results:

Period = 15.58277 d

Epoch = 135.1100 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: N/A

LongPeriod-sig: N/A

ModelChiSquare2-sig: N/A

ModelChiSquareGof-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 1.00 [77/77]

GhostDiagnostic-chr: 1.027

Centroid-sig: 0.0%

Centroid-so: 3.189 arcsec [496.96σ]

OotOffset-rm: 3.365 arcsec [16.95σ]

KicOffset-rm: 3.295 arcsec [45.30σ]

OotOffset-st: 4/4/4/5 [17]

KicOffset-st: 4/4/4/5 [17]

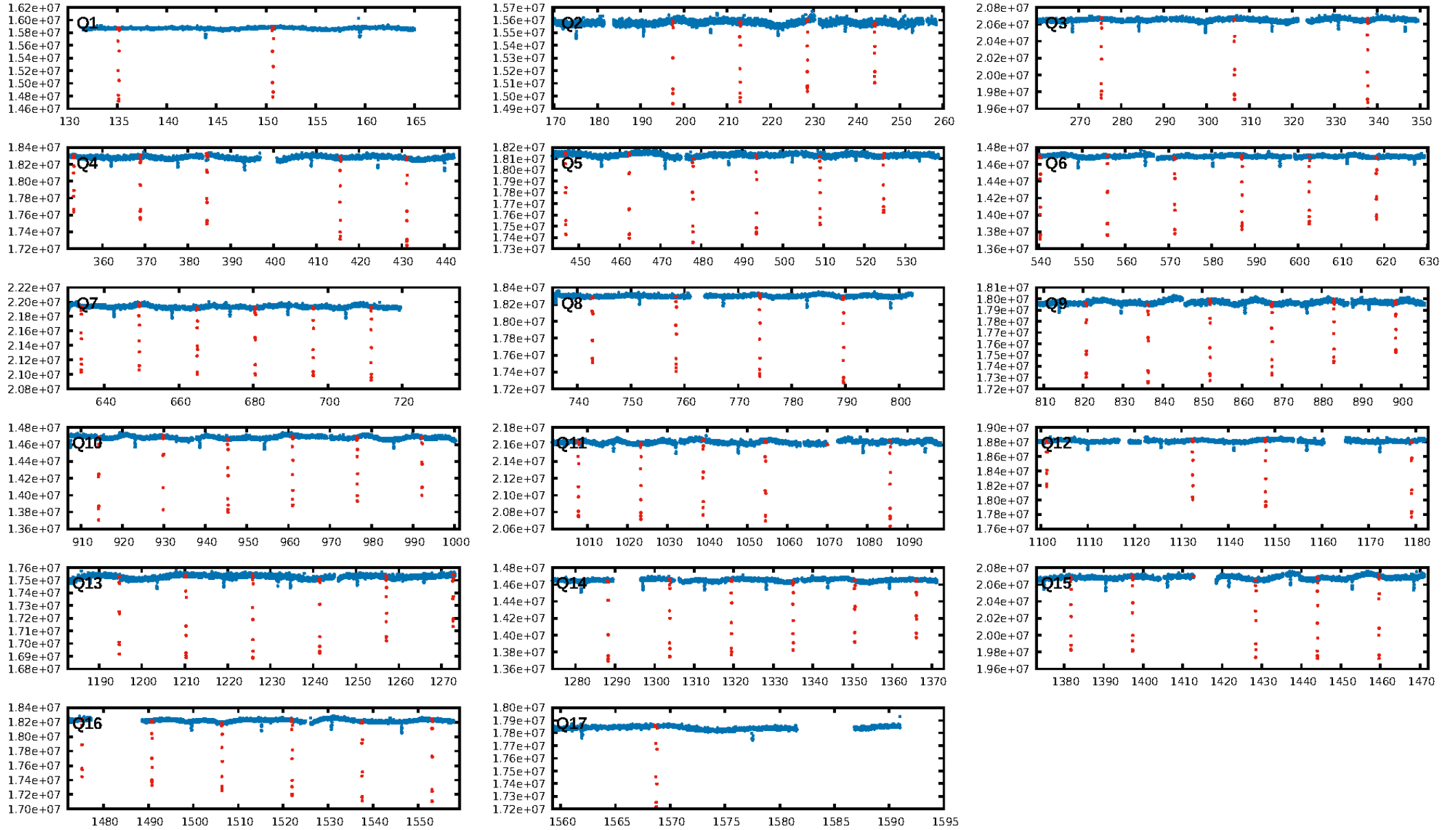
DiffImageQuality-fgm: 1.00 [17/17]

DiffImageOverlap-fno: 1.00 [17/17]

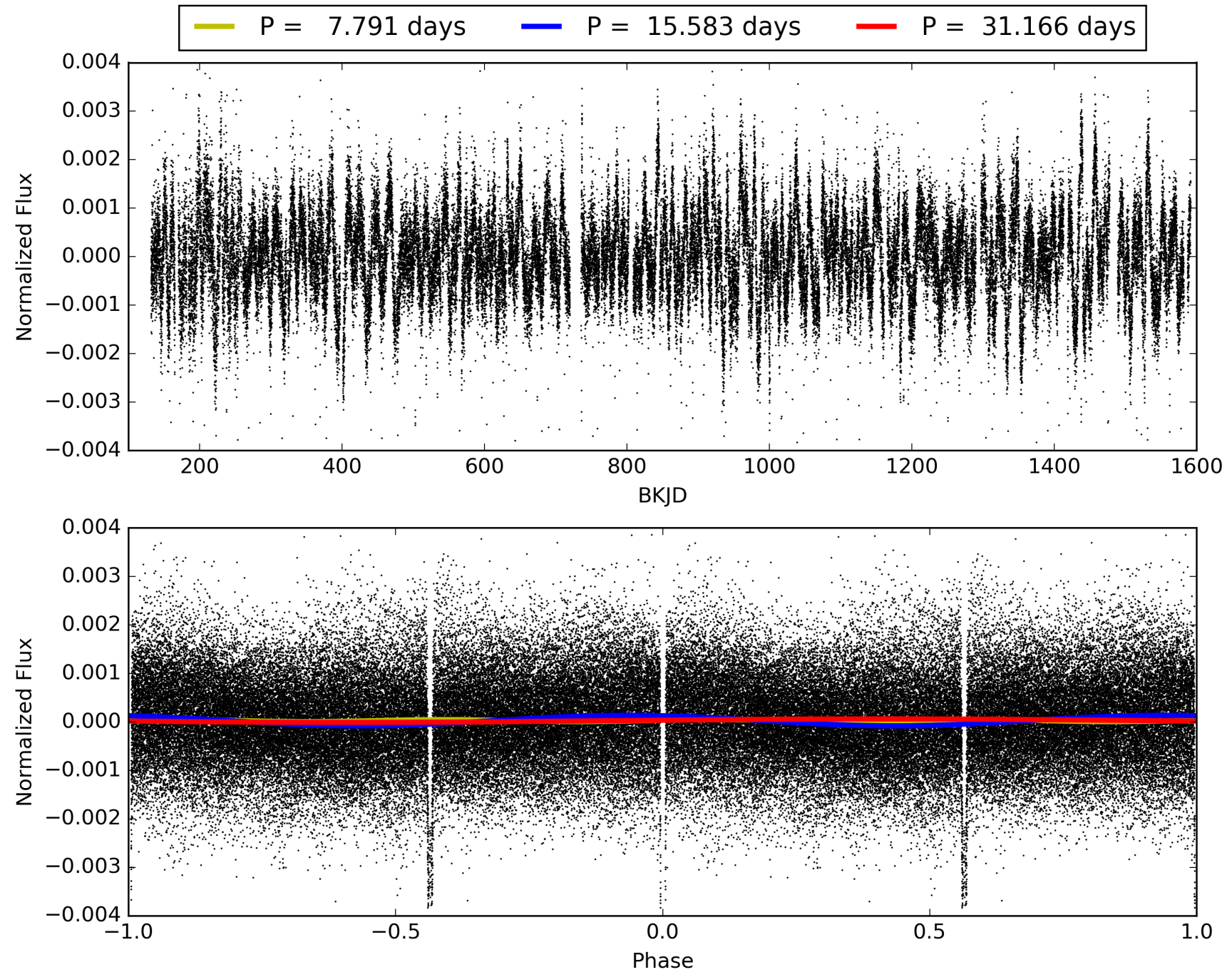
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:58:10 Z

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

TCE 003830820-01, PDC Light Curves

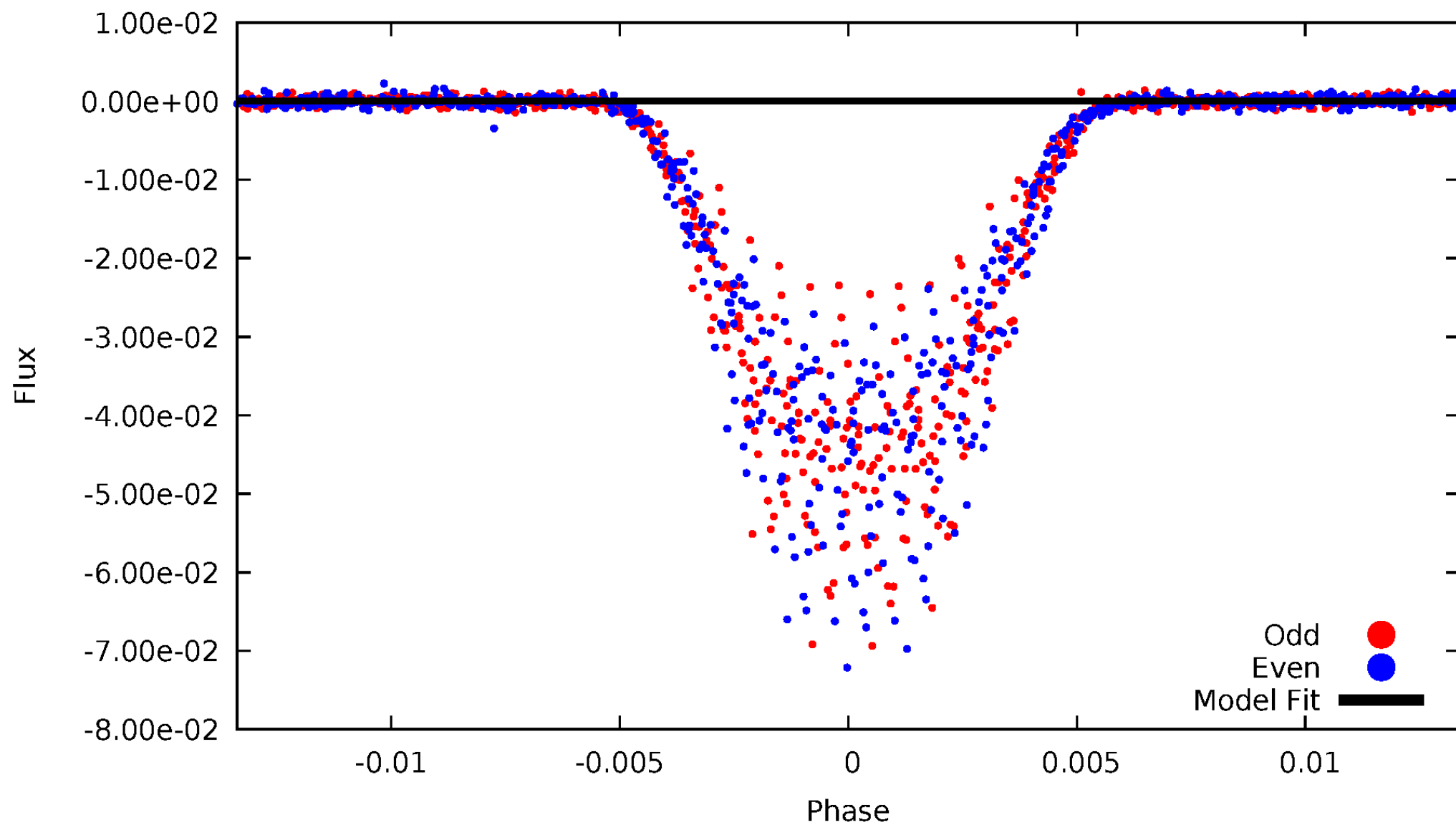


TCE 003830820-01



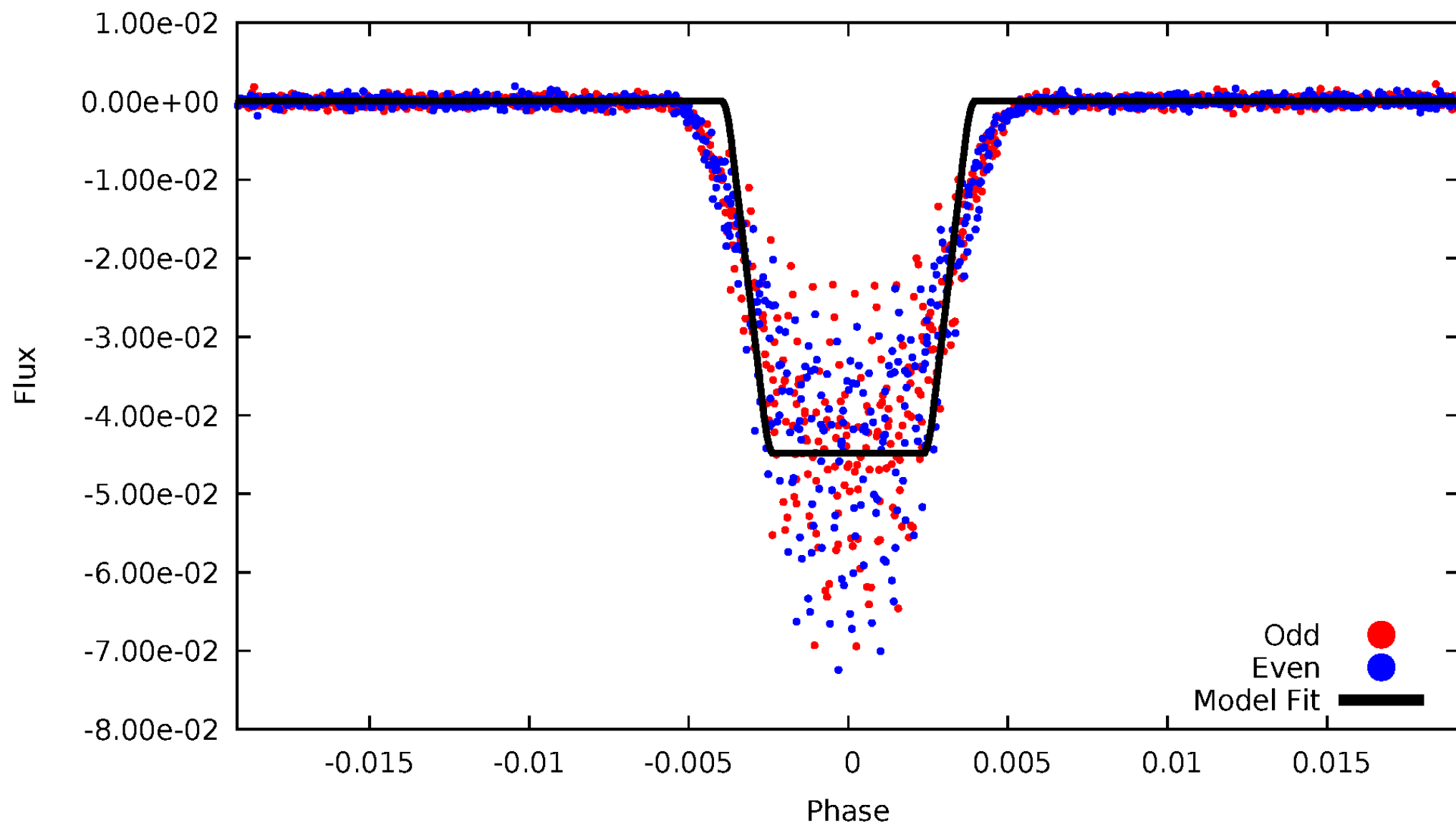
DV Odd/Even

TCE 003830820-01



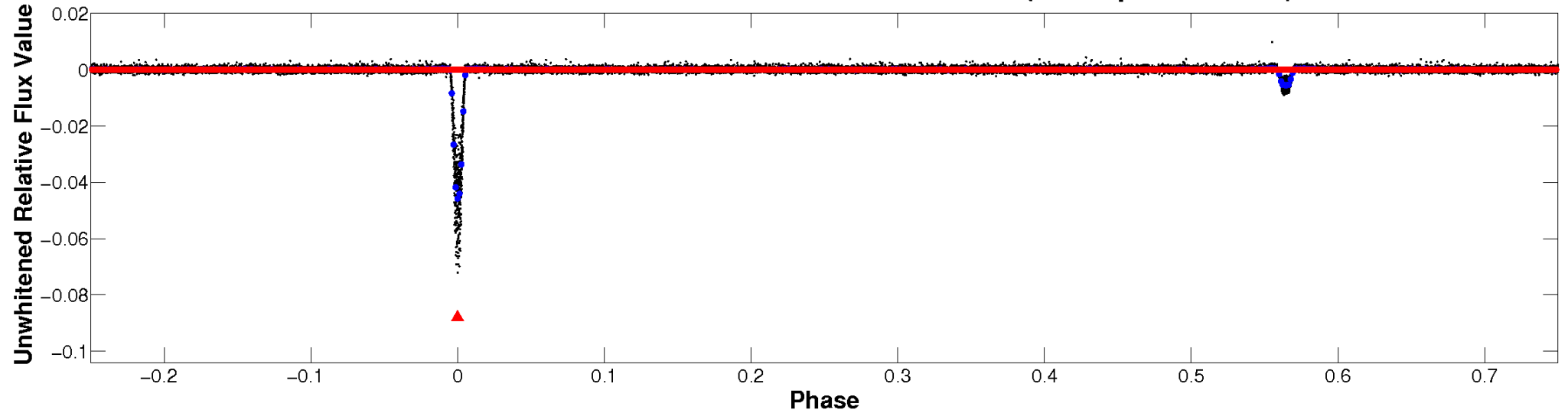
ALT Odd/Even

TCE 003830820-01

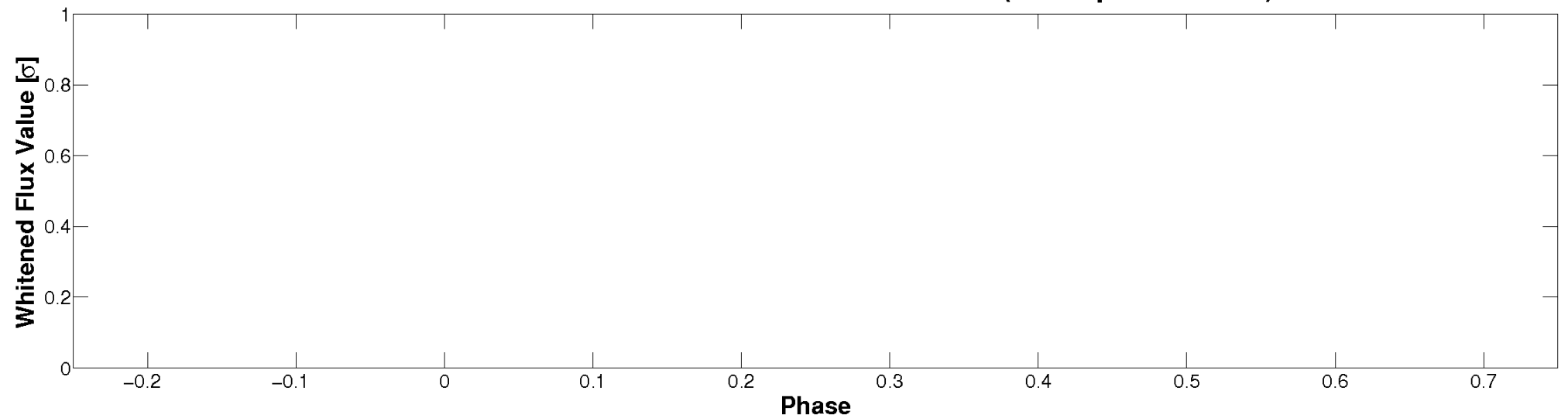


Non-Whitened Vs. Whitened Light Curve

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

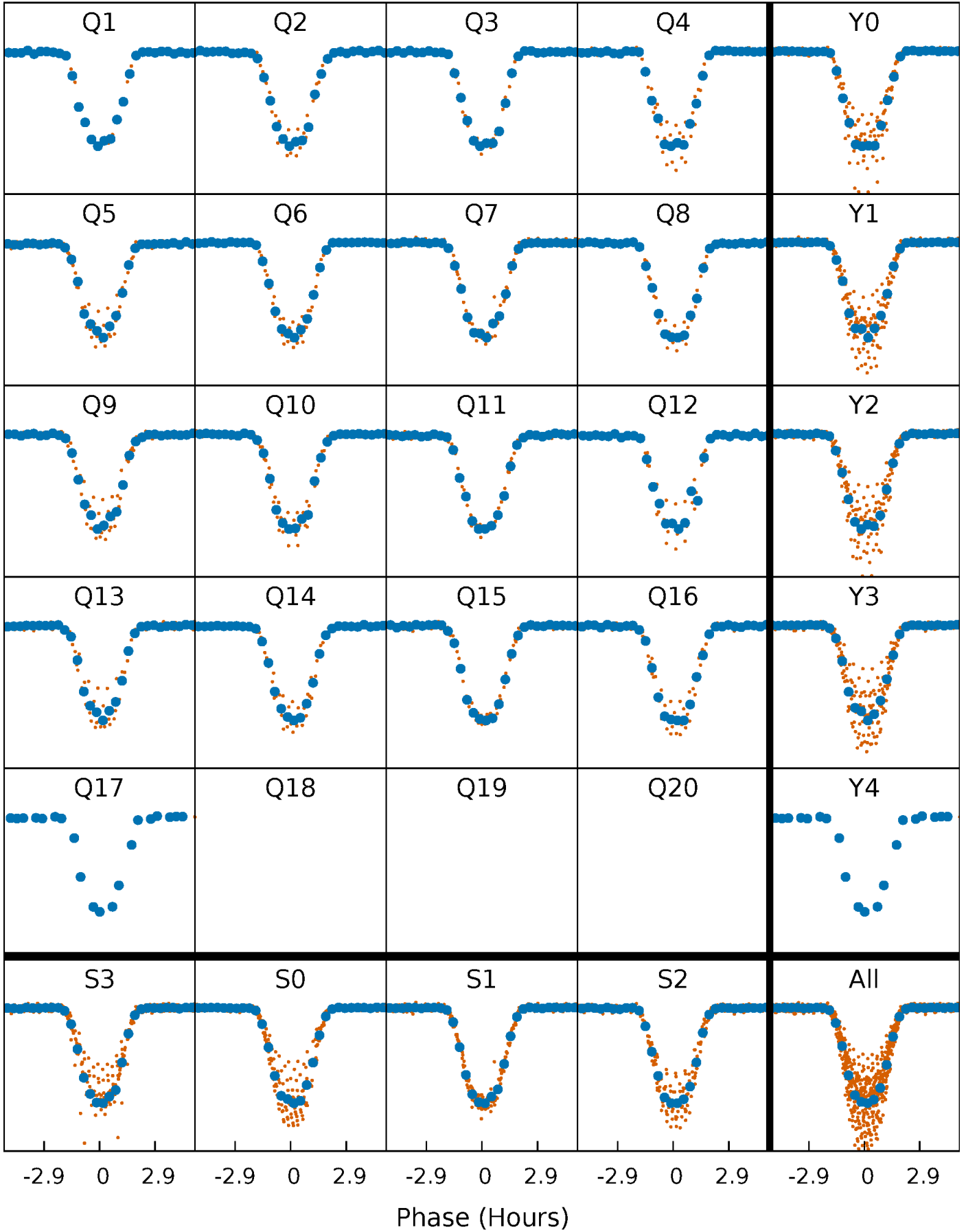


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



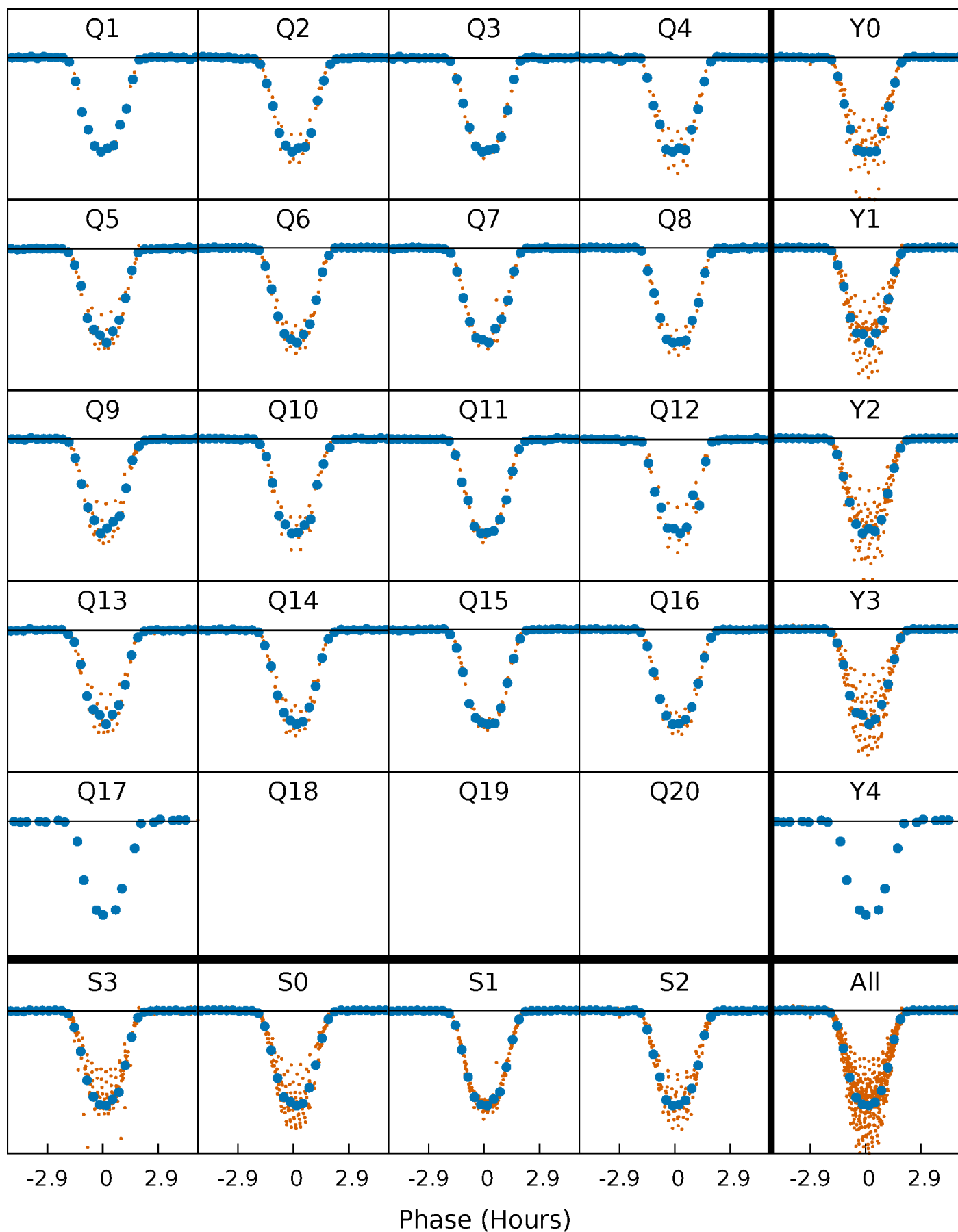
PDC Quarter-Phased Transit Curves

TCE 003830820-01 P= 15.582768 Days $T_0=135.109953$ (BKJD)



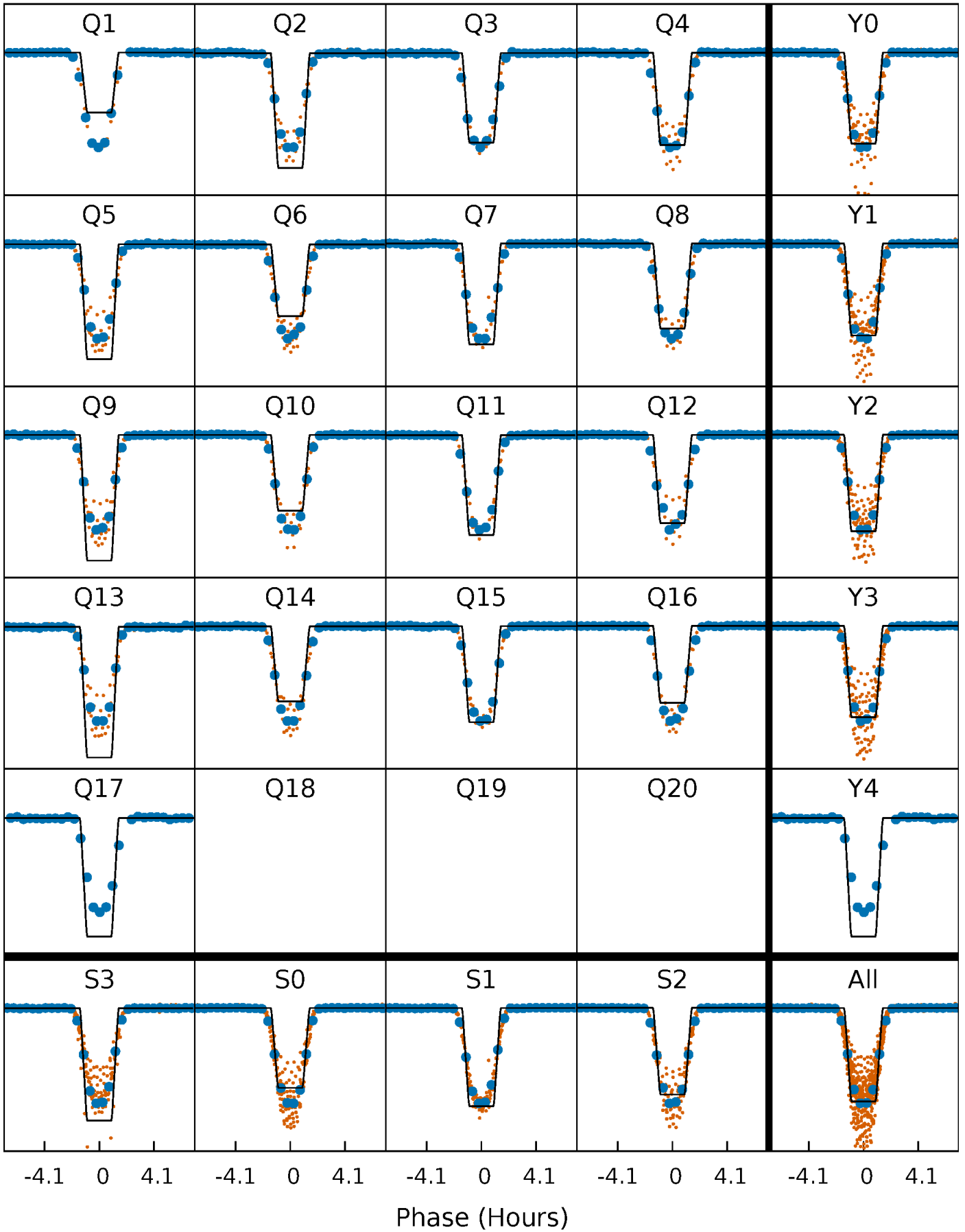
DV Quarter-Phased Transit Curves

TCE 003830820-01 P= 15.582768 Days $T_0=135.109953$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

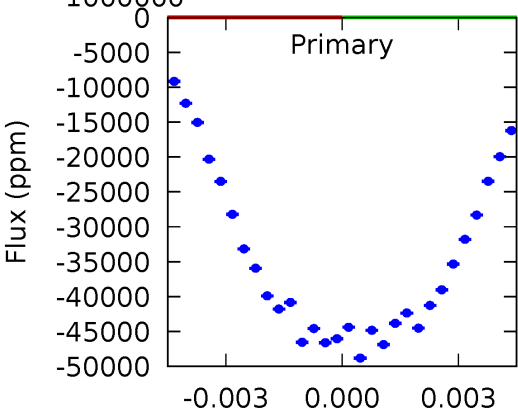
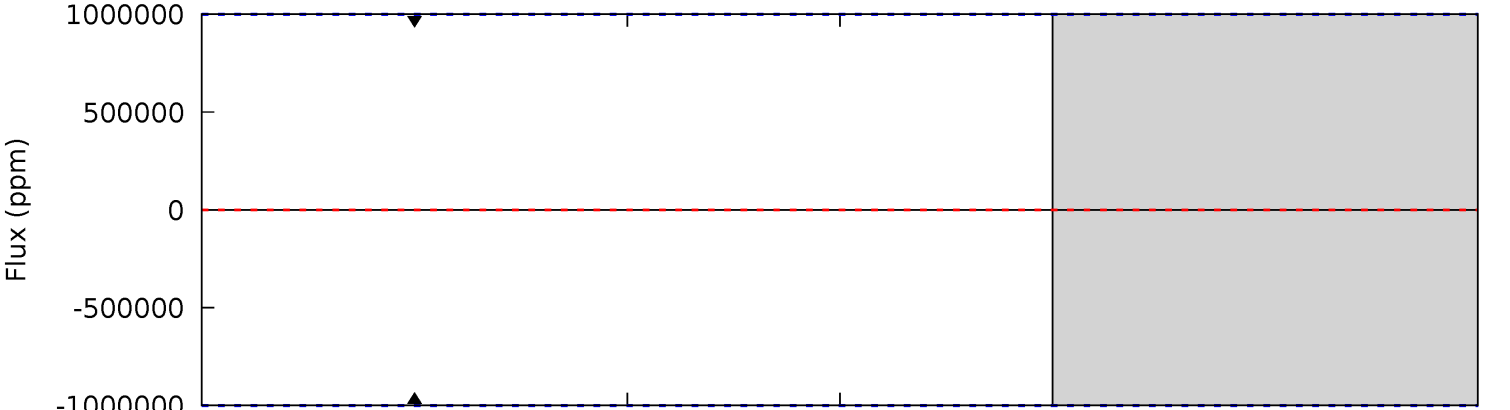
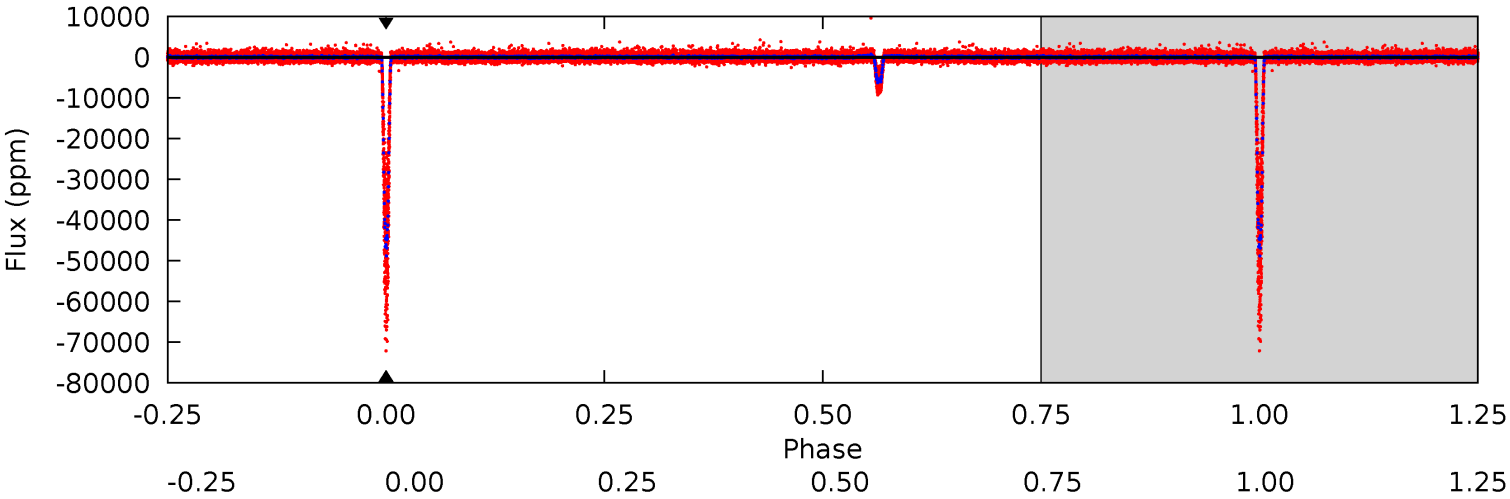
TCE 003830820-01 P= 15.582768 Days $T_0=135.114285$ (BKJD)



DV Model-Shift Uniqueness Test

003830820-01, P = 15.582768 Days, E = 119.527185 Days

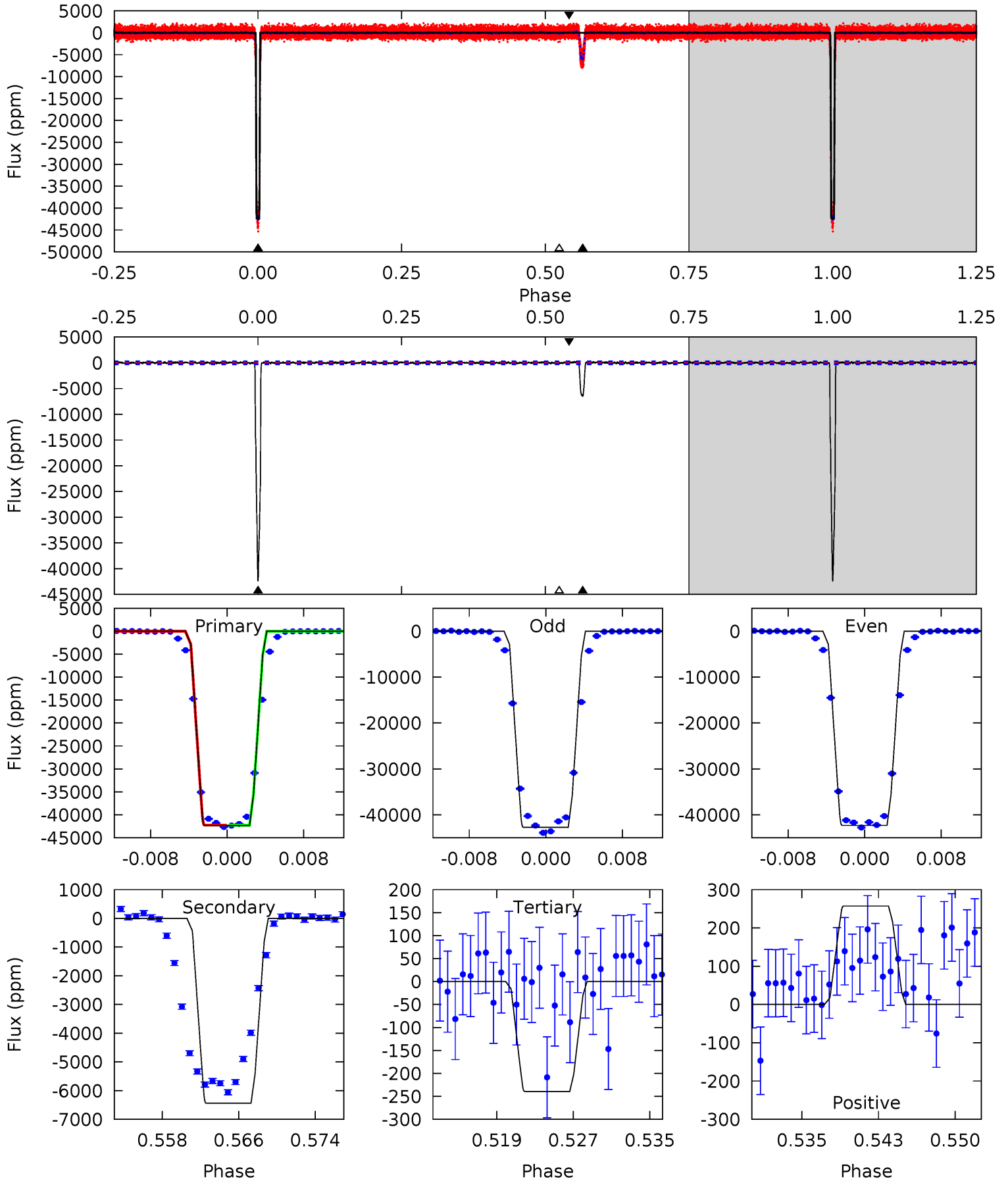
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003830820-01, P = 15.582768 Days, E = 119.531517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
780.1	118.7	4.41	4.74	5.07	2.66	1.22	775.7	775.4	114.3	113.9	3.90	1.05	0.01	0



Stellar Parameters For KIC 003830820

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3849^{+50}_{-50}	$4.703^{+0.032}_{-0.012}$	$0.000^{+0.100}_{-0.100}$	$0.546^{+0.017}_{-0.026}$	$0.549^{+0.025}_{-0.020}$	$4.743^{+0.555}_{-0.297}$
	+1%/-1%	+1%/-0%	+inf%/-inf%	+3%/-5%	+5%/-4%	+12%/-6%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 003830820-01 / KOI 6360.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$13.18^{+6.12}_{-5.88}$	552^{+9}_{-9}	2456^{+2202}_{-6939}	68^{+4169}_{-3630}
Alt.	-6440 ± 54	$12.97^{+5.25}_{-5.64}$	552^{+8}_{-9}	2853^{+495}_{-255}	213^{+456}_{-105}

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

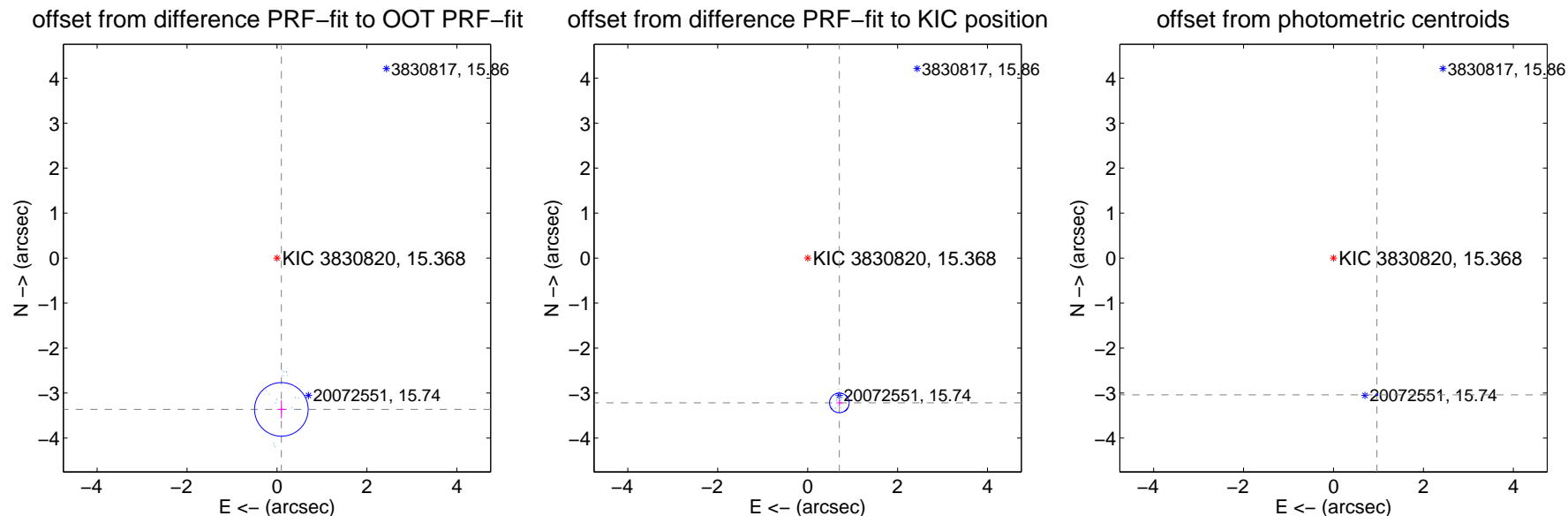
DV Centroid Data

Supplemental centroid analysis for 003830820-01. Kepler magnitude: 15.37. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

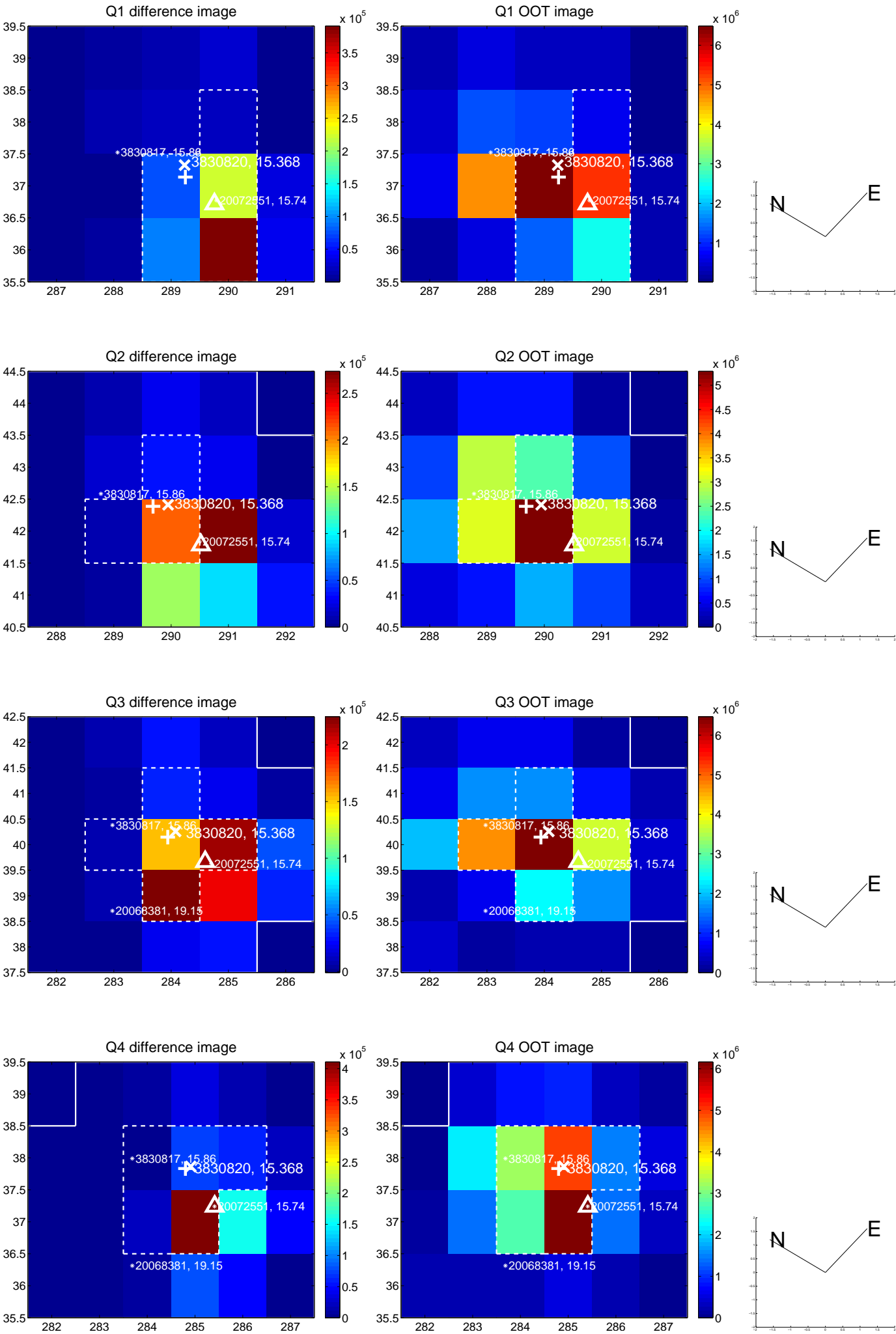
The direct PRF centroid is offset from the target star catalog position by about 0.76 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.365 ± 0.199	16.95	-0.098 ± 0.087	-3.364 ± 0.199
PRF-fit source offset from KIC position	3.295 ± 0.073	45.30	-0.705 ± 0.068	-3.218 ± 0.073
photometric centroid source offset	3.19 ± 0.01	496.97	-0.97 ± 0.01	-3.04 ± 0.01

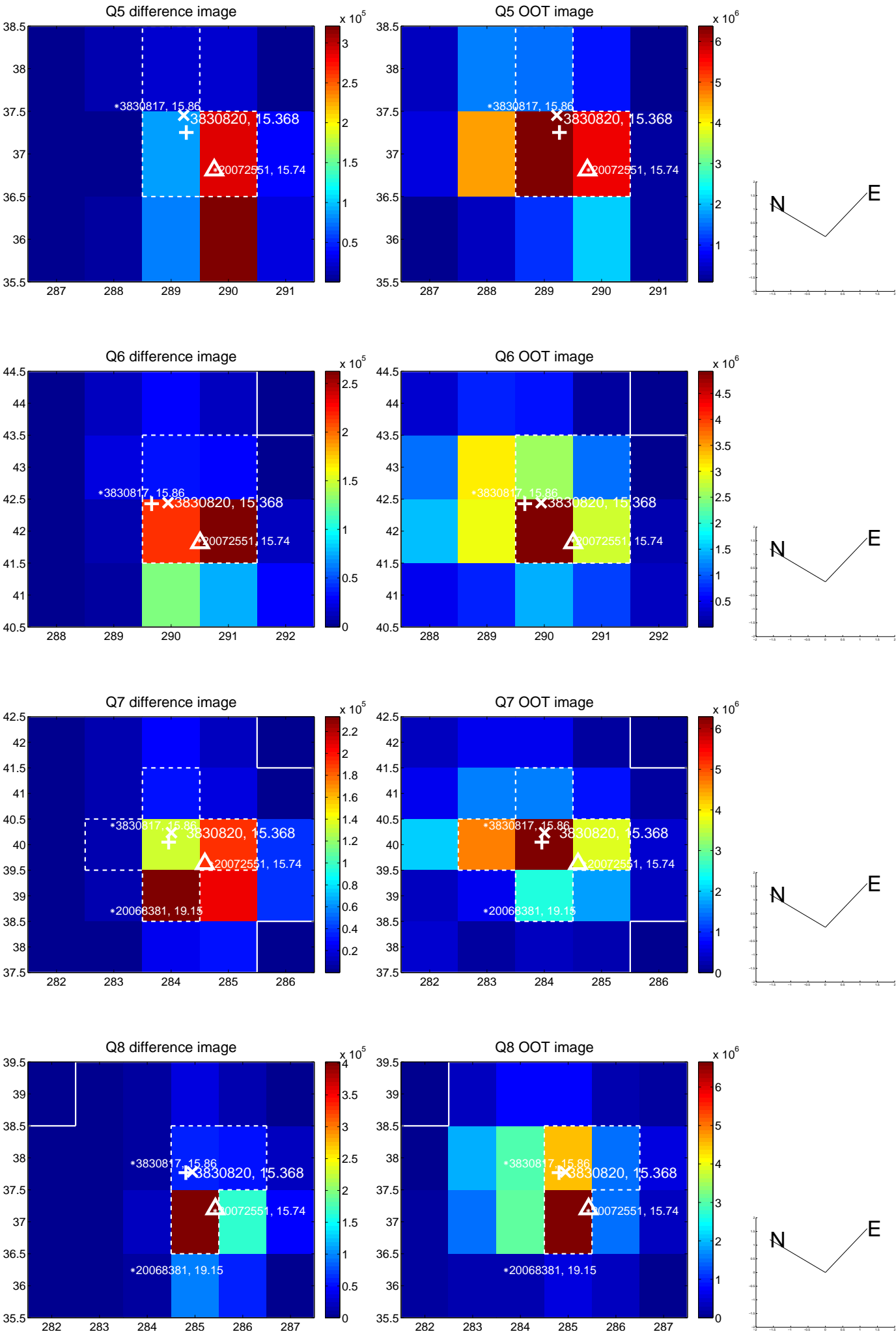


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

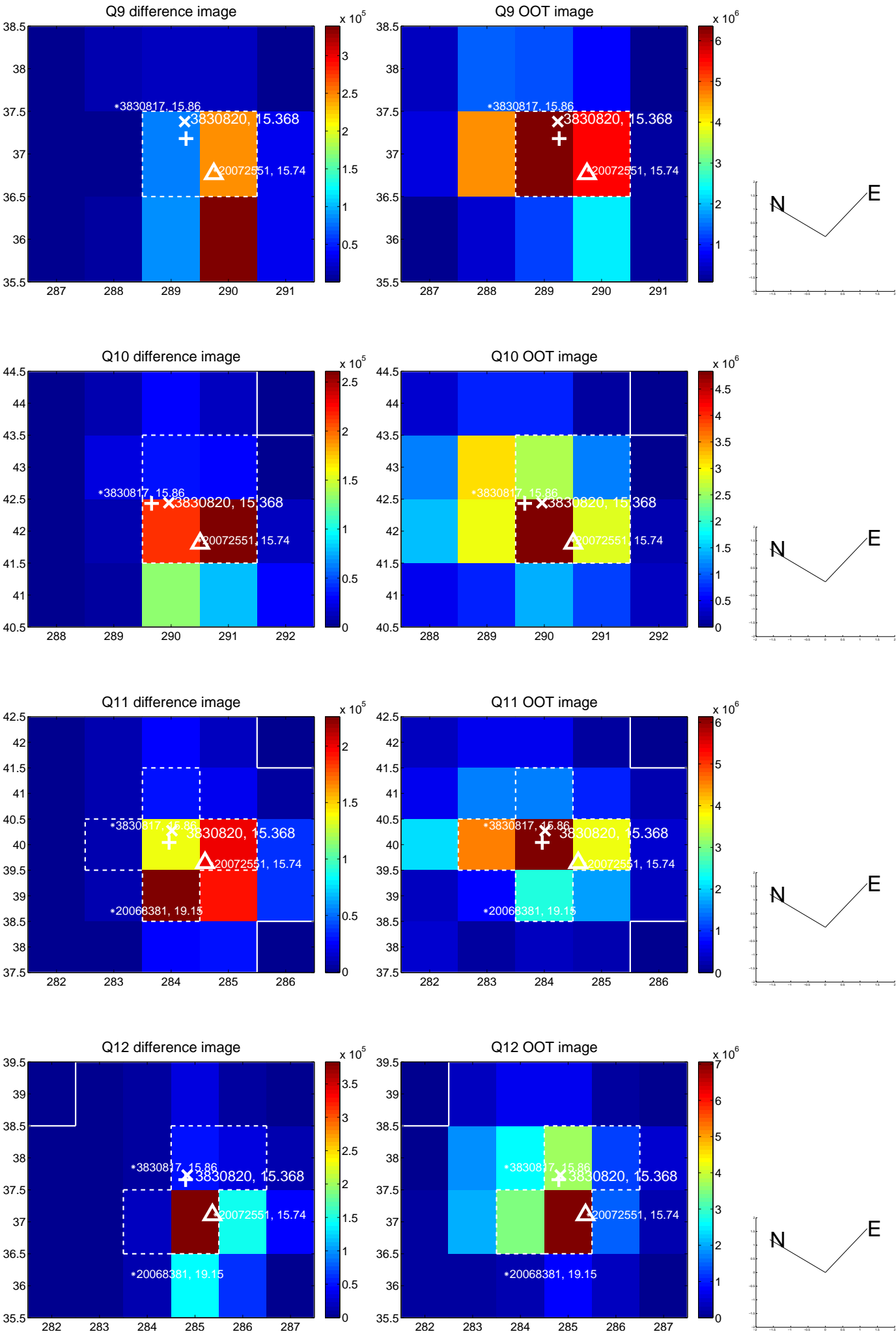
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



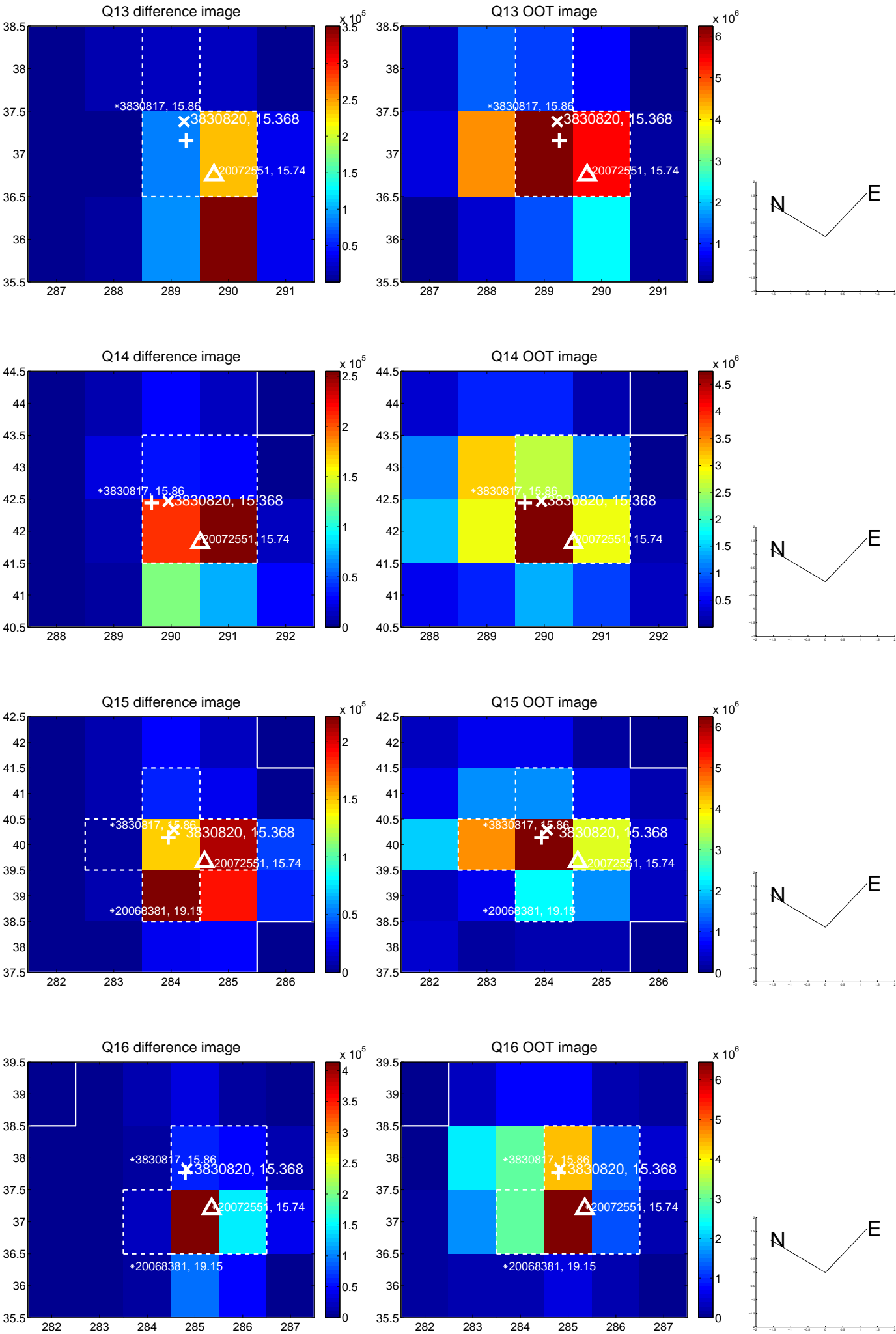
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



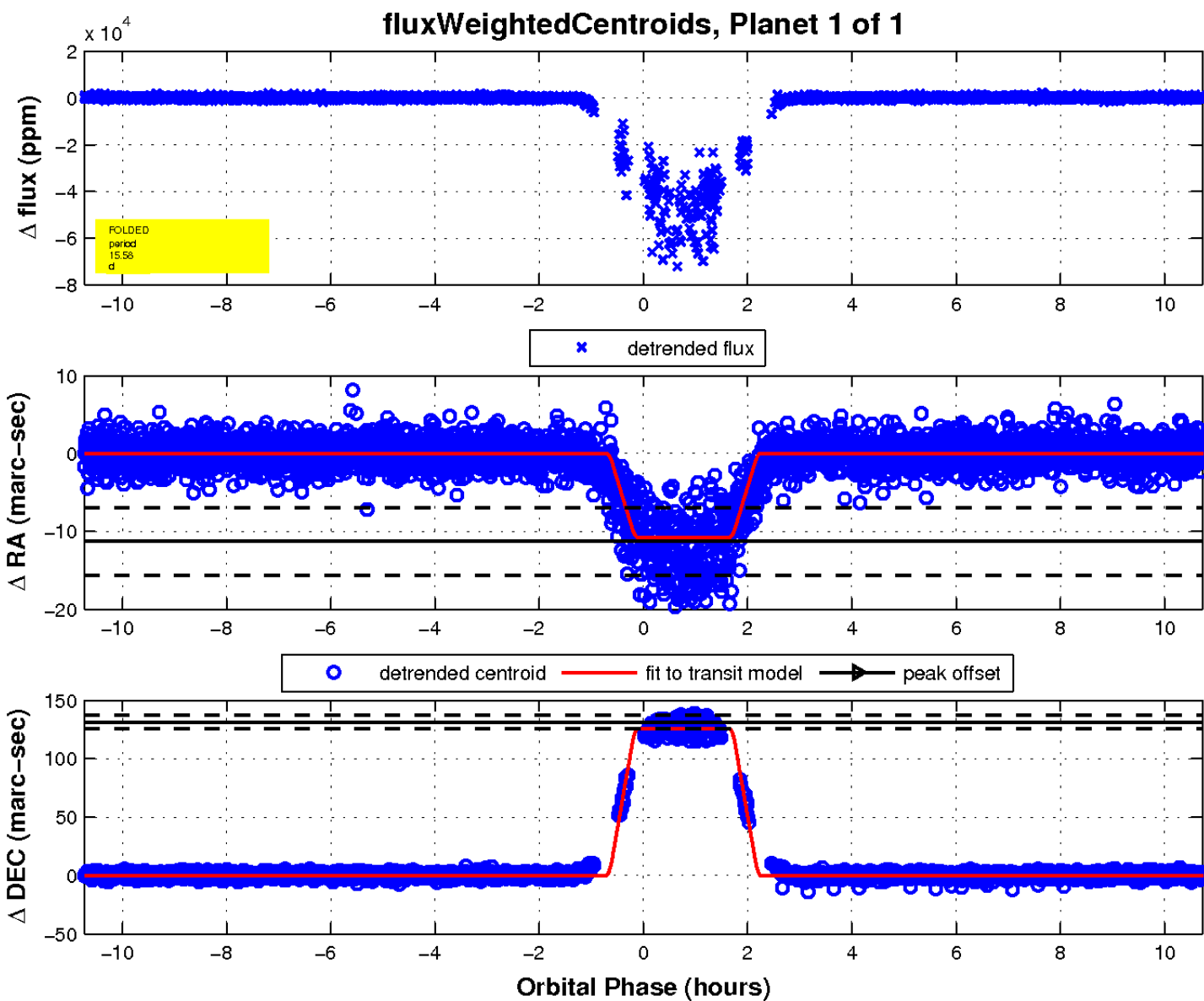
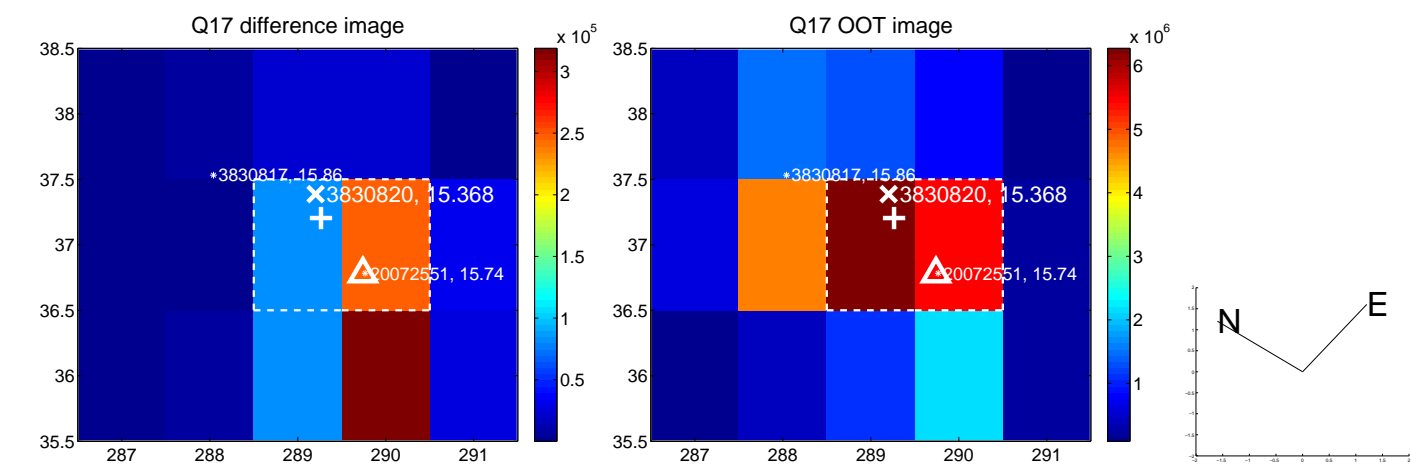
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UKIRT Image

Declination

