

KIC 002860114

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})
002860114-01	OBS	2170.01	0.941600	132.035609	378.0	1.094	33.4	41.5	0.84	5237	1.99	1584.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002860114-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

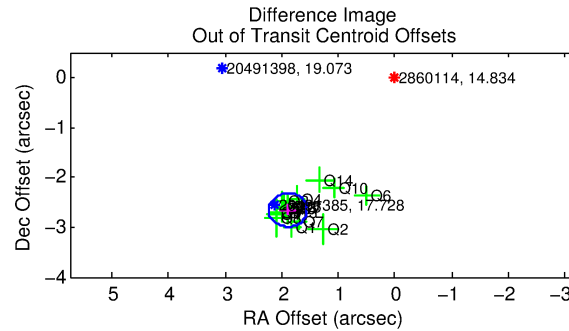
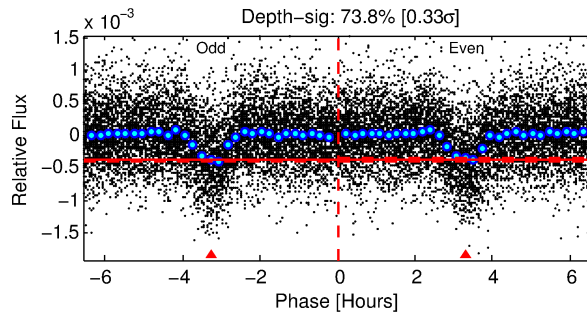
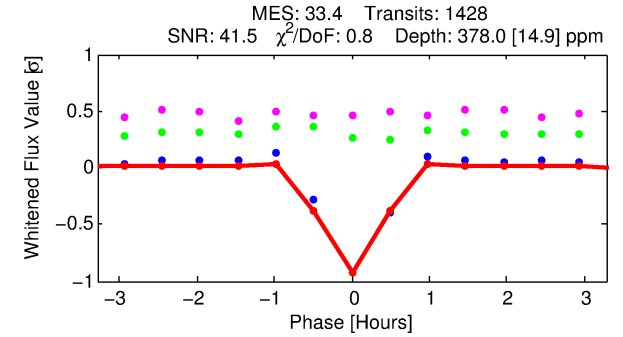
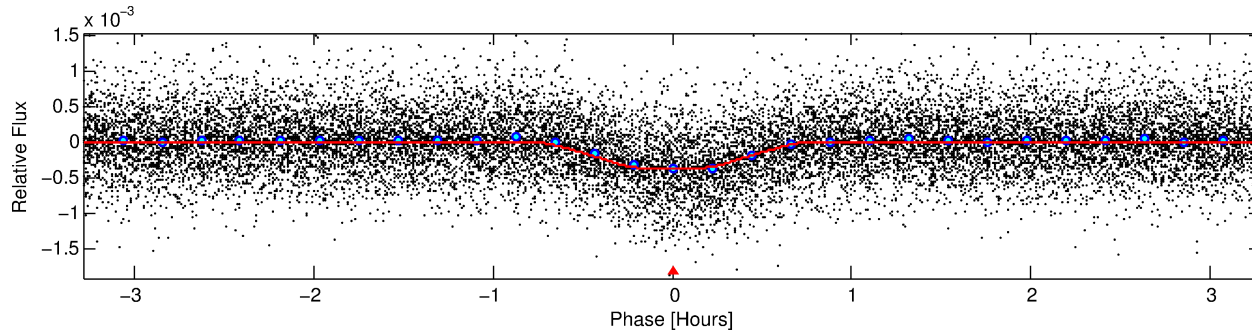
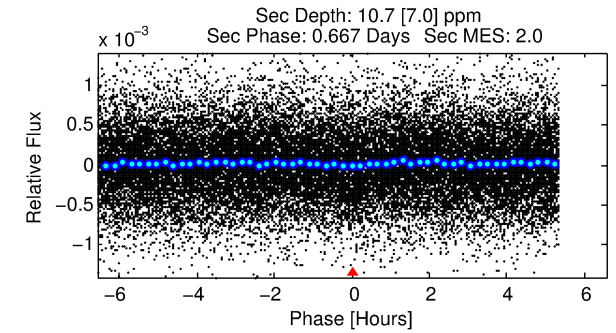
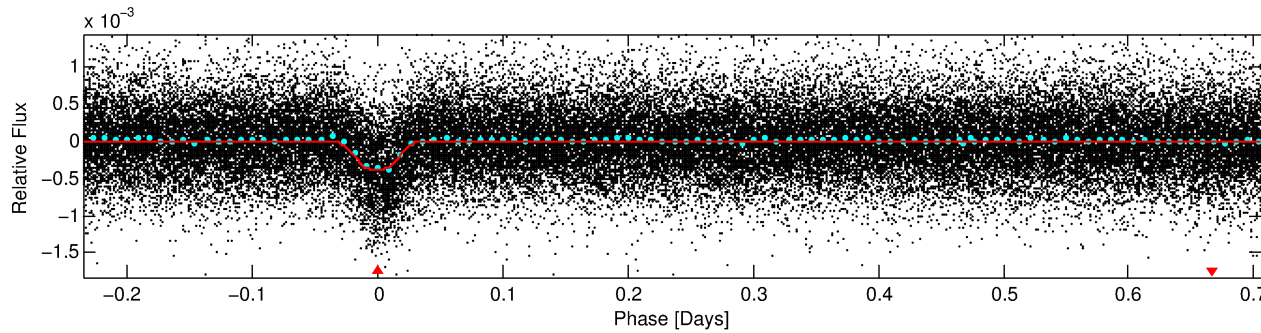
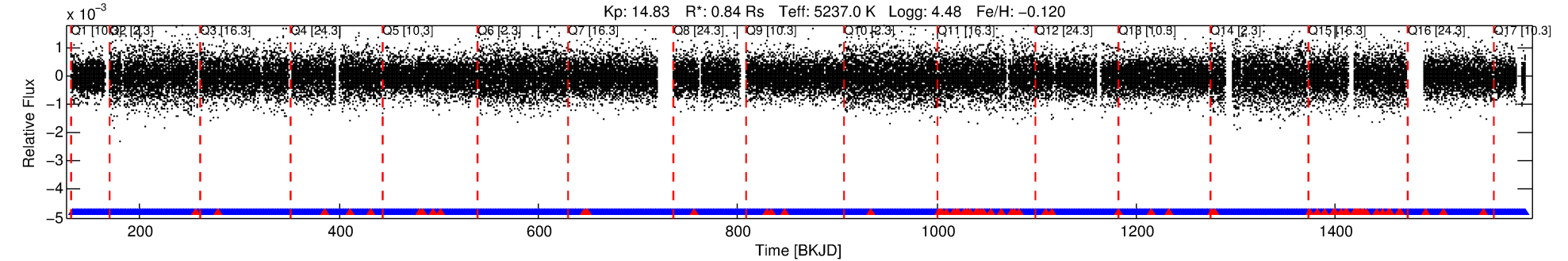
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002860114-01

No Significant Match Found

DV One-Page Summary

KIC: 2860114 Candidate: 1 of 1 Period: 0.942 d
KOI: K02170.01 Corr: 0.957



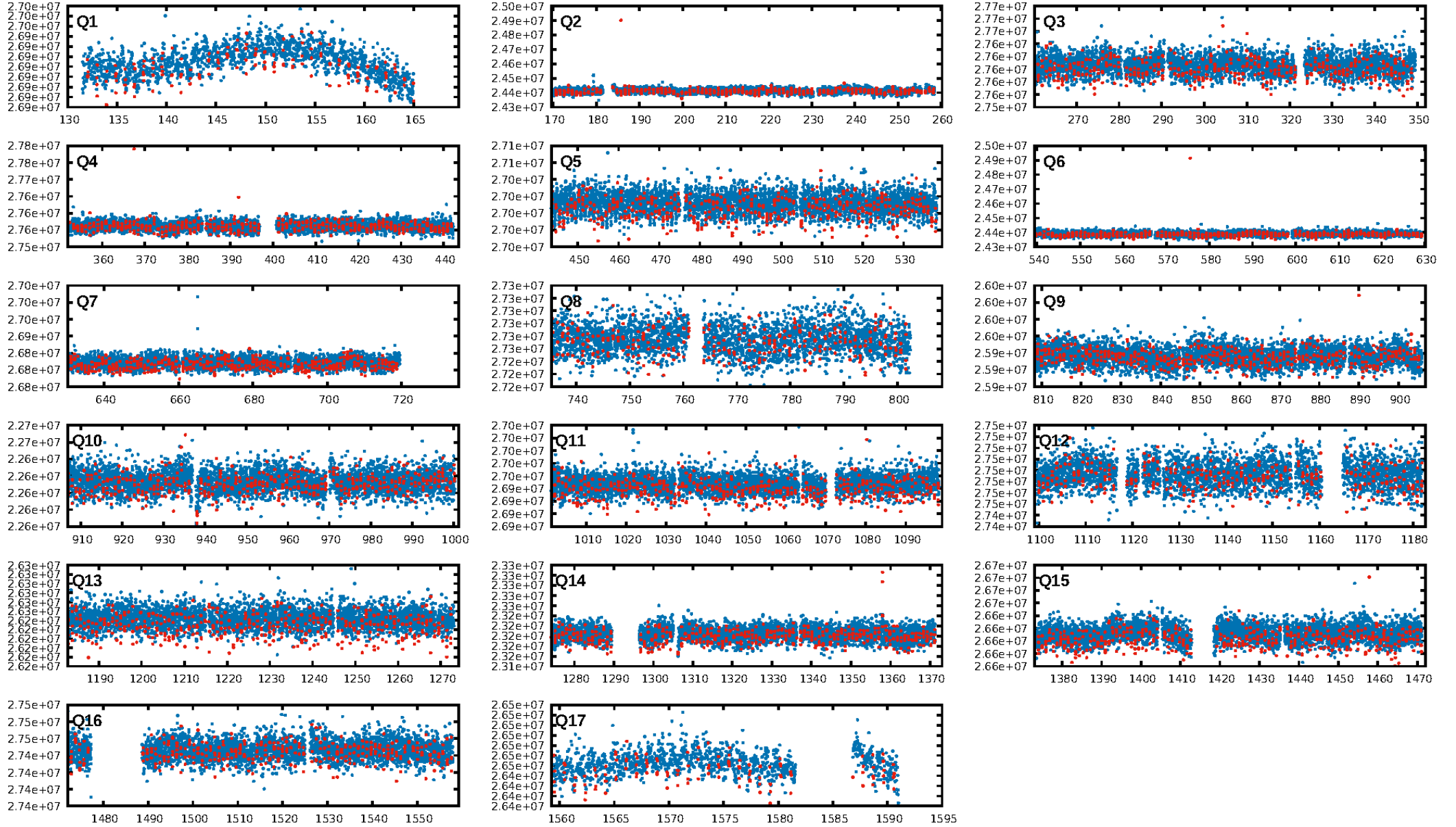
DV Fit Results:

Period = 0.94160 [0.00000] d
Epoch = 132.0356 [0.0004] BKJD
Rp/R* = 0.0218 [0.0052]
a/R* = 3.26 [2.92]
b = 0.90 [0.20]
Seff = 1584.48 [385.04]
Teq = 1609 [98] K
Rp = 1.99 [0.57] Re
a = 0.0173 [0.0024] AU
Ag = 0.44 [0.37] [-1.50σ]
Teffp = 2030 [415] K [0.99σ]

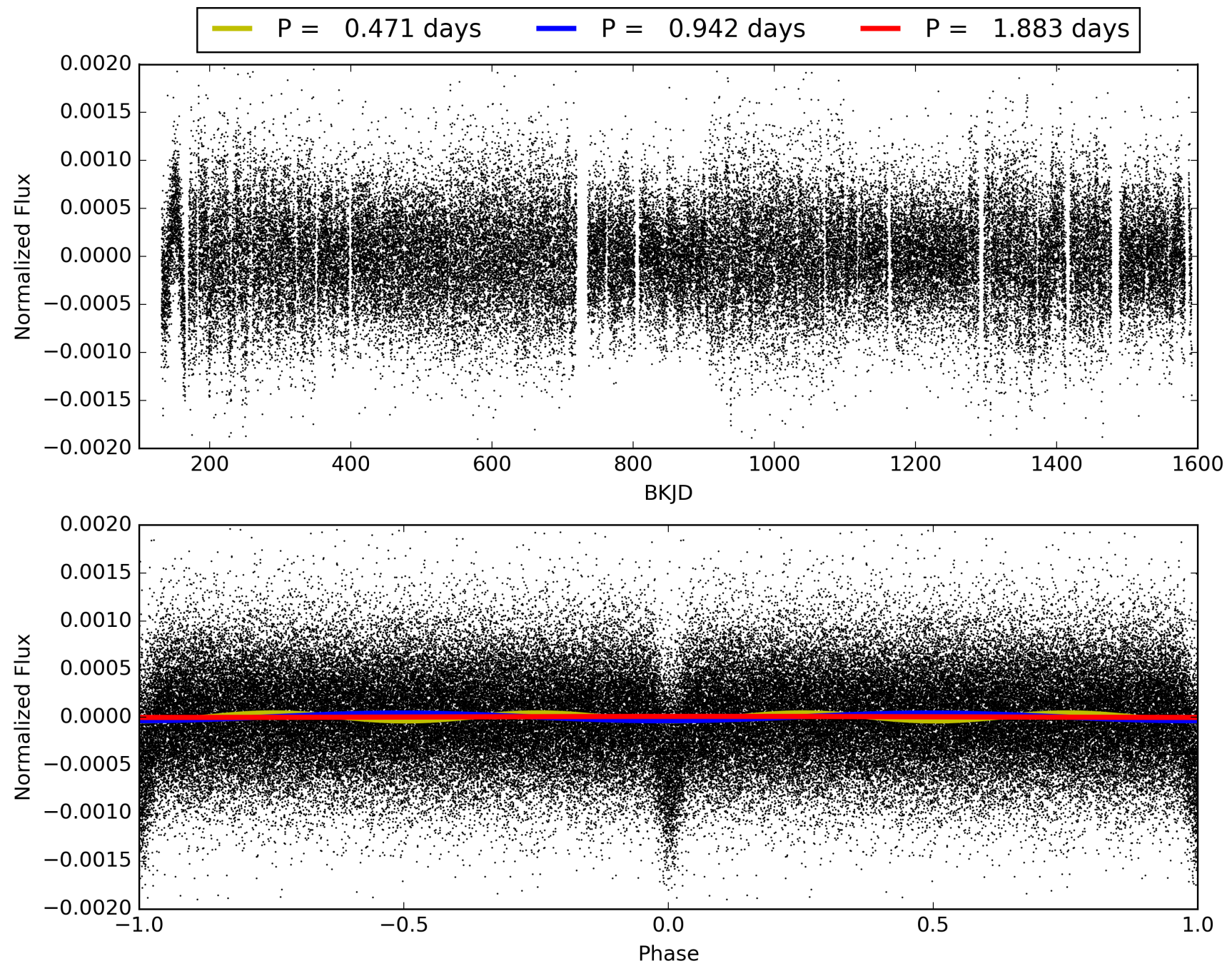
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.48e-238
RollingBand-fgt: 0.95 [1295/1363]
GhostDiagnostic-chr: 0.4964
Centroid-sig: 0.0%
Centroid-so: 5.502 arcsec [19.70σ]
OotOffset-rm: 3.262 arcsec [28.92σ]
KicOffset-rm: 3.462 arcsec [41.50σ]
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]

TCE 002860114-01, PDC Light Curves

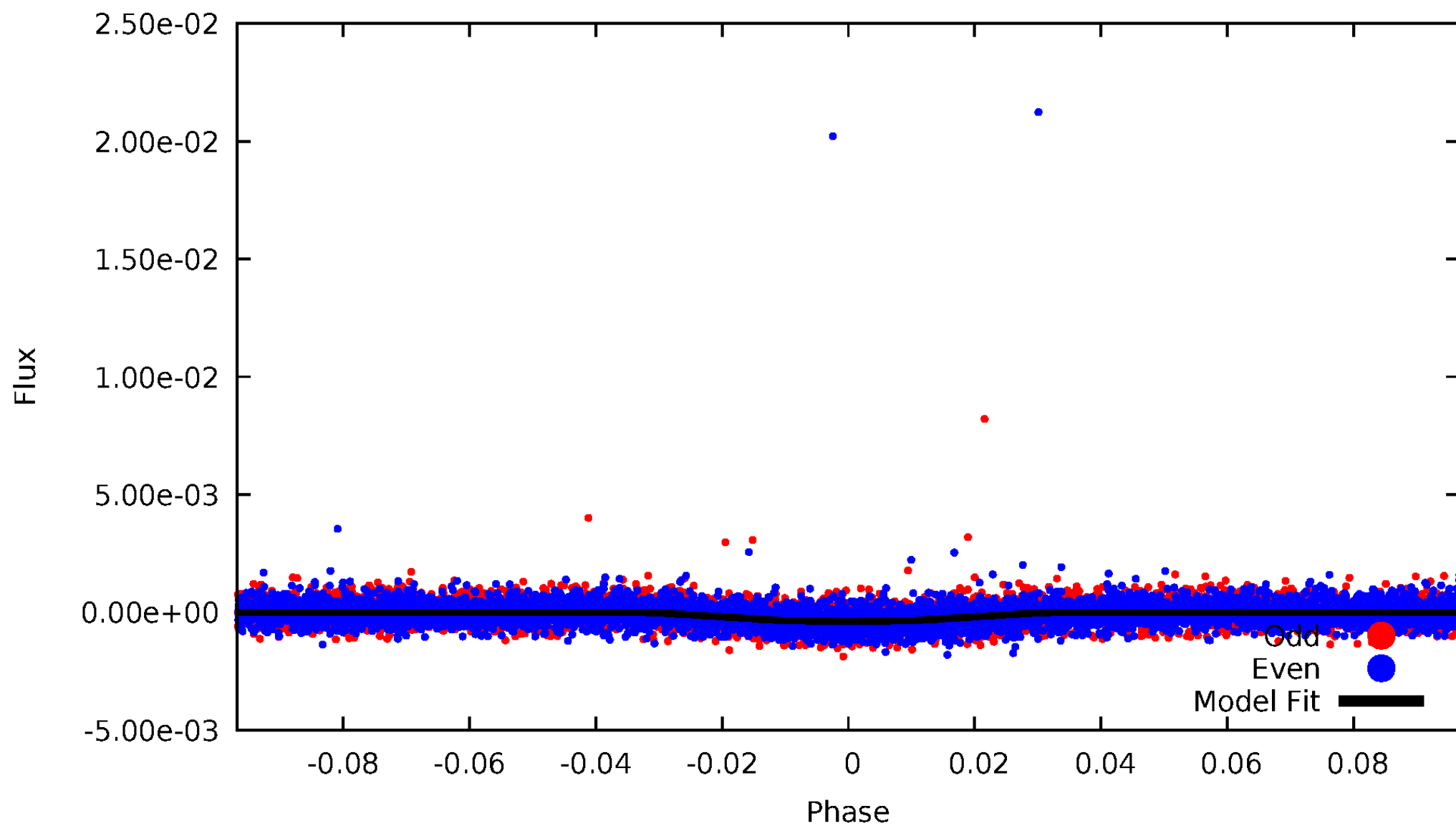


TCE 002860114-01



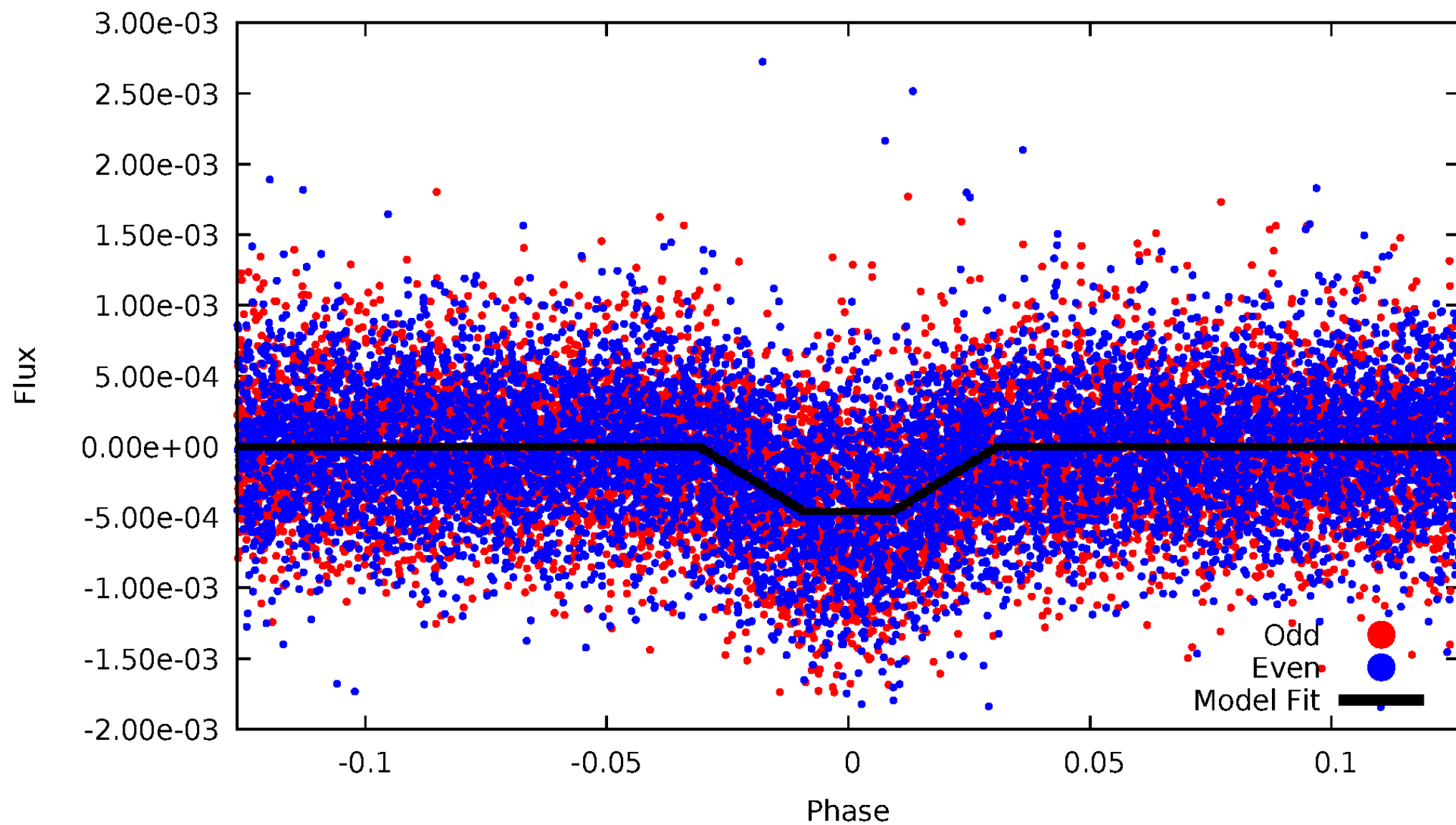
DV Odd/Even

TCE 002860114-01

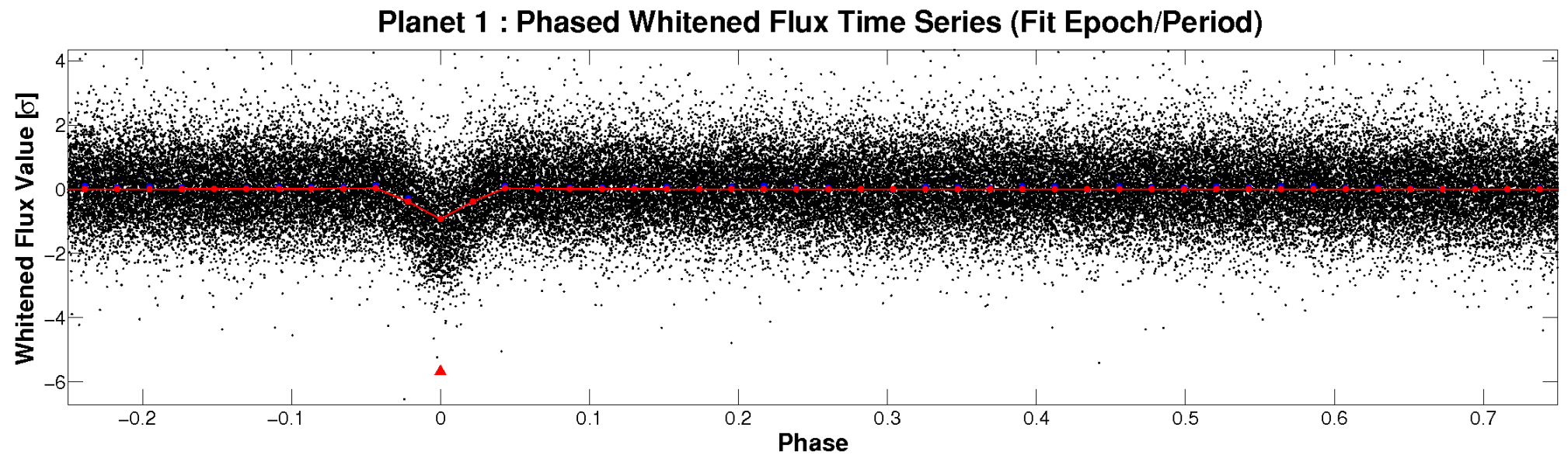
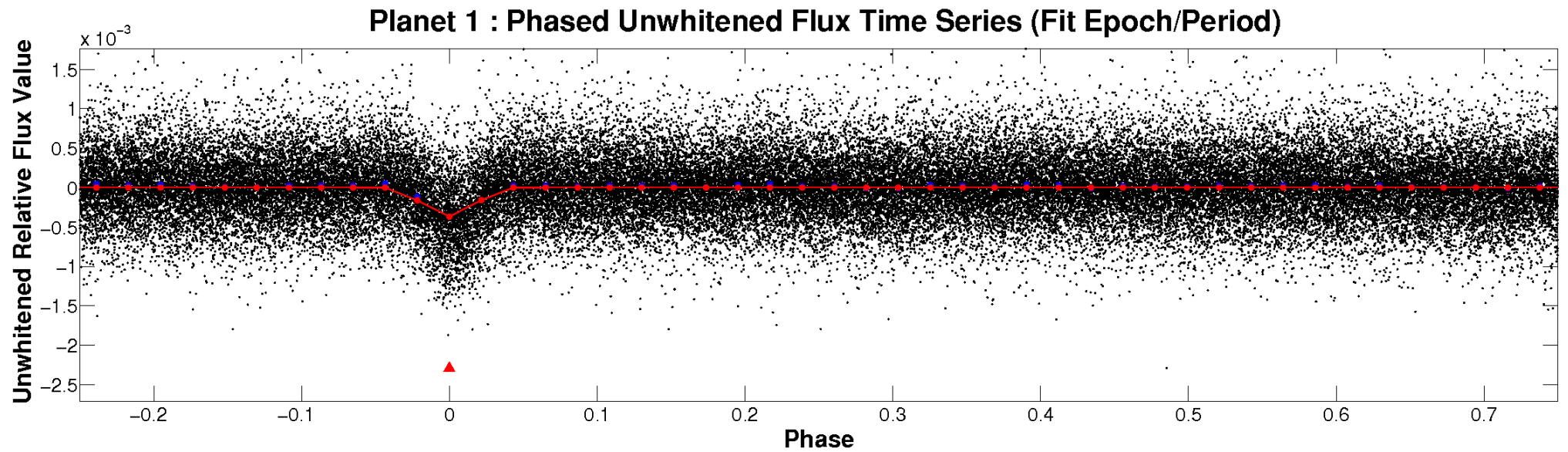


ALT Odd/Even

TCE 002860114-01

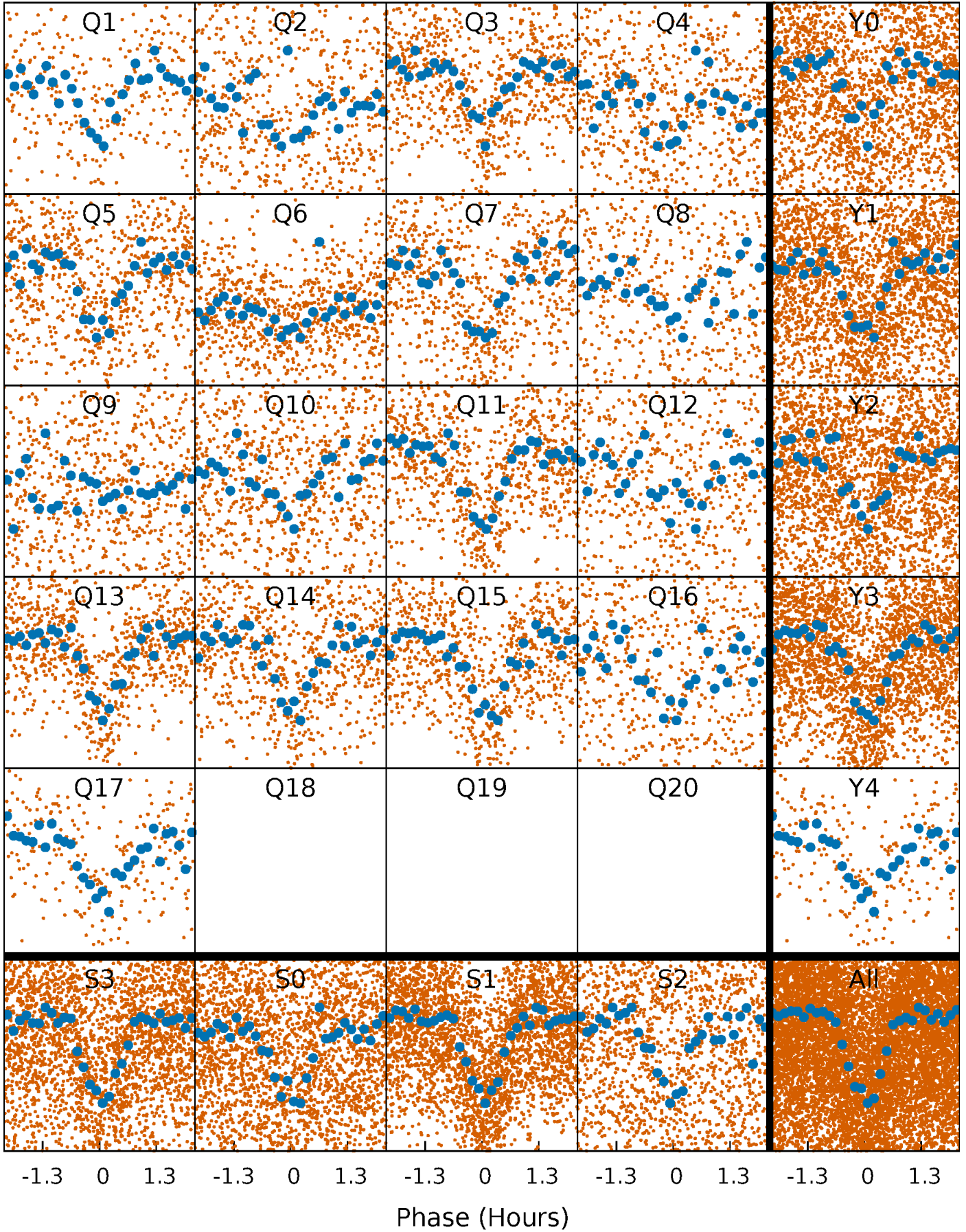


Non-Whitened Vs. Whitened Light Curve



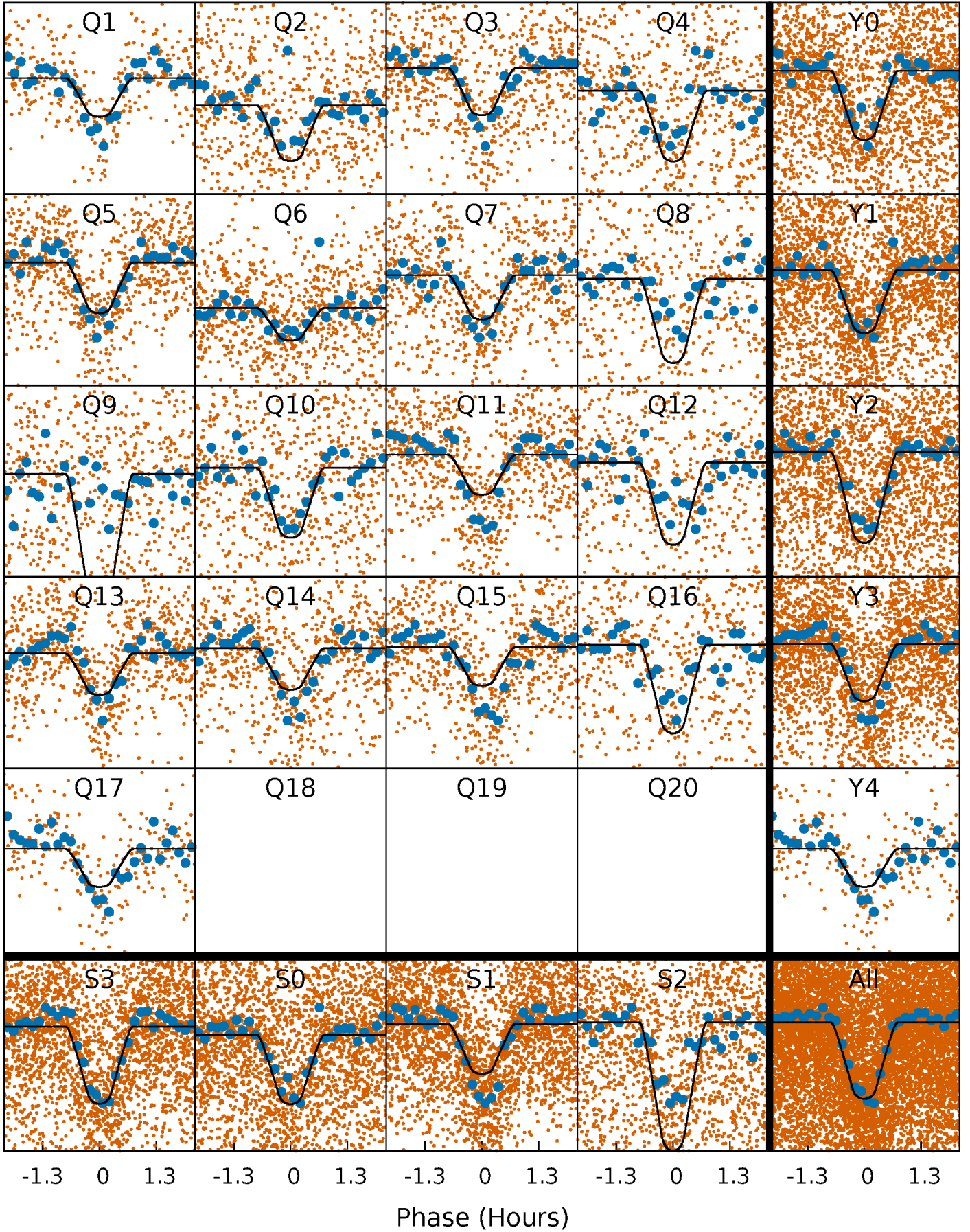
PDC Quarter-Phased Transit Curves

TCE 002860114-01 P= 0.941600 Days $T_0=132.035609$ (BKJD)



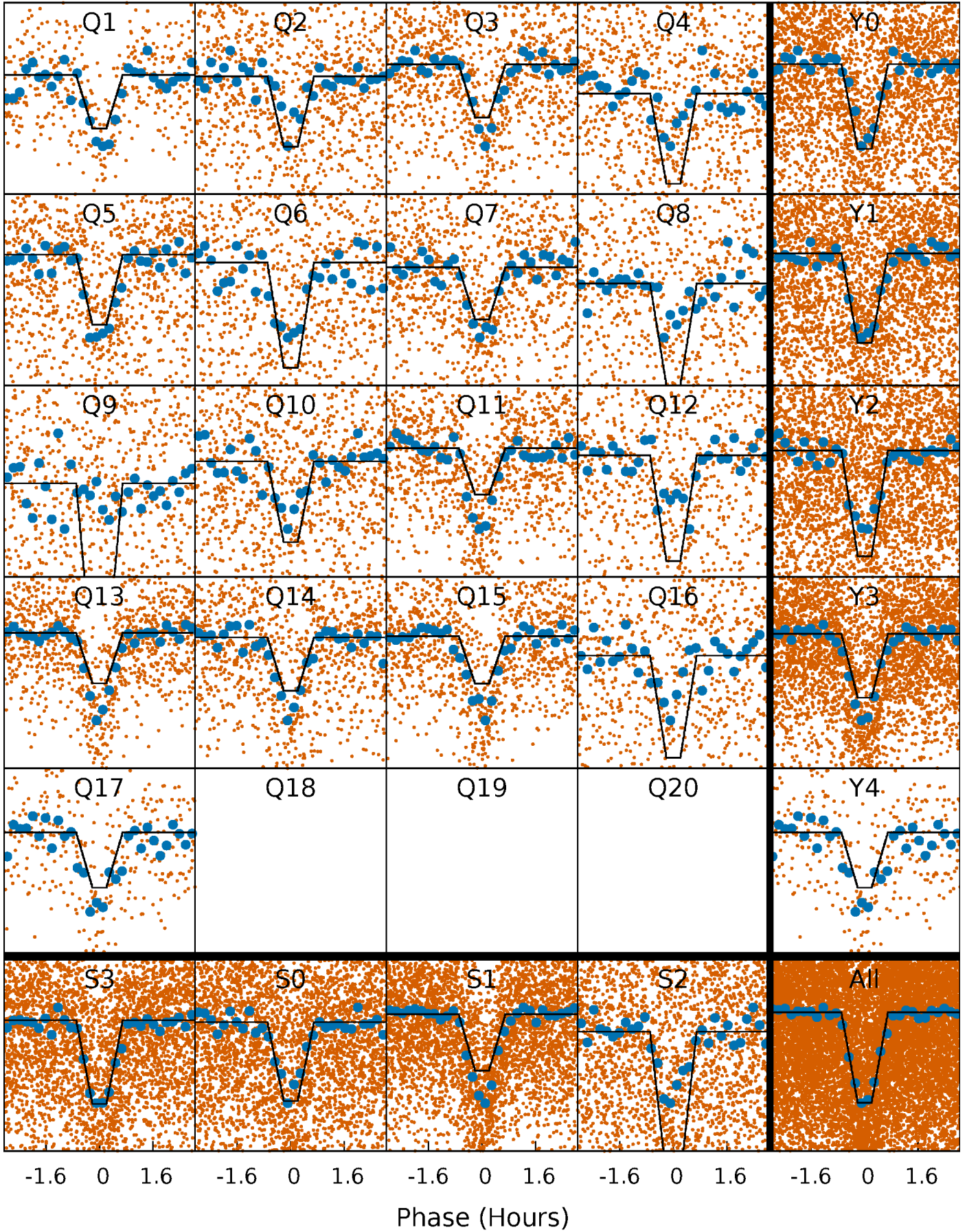
DV Quarter-Phased Transit Curves

TCE 002860114-01 P= 0.941600 Days $T_0=132.035609$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

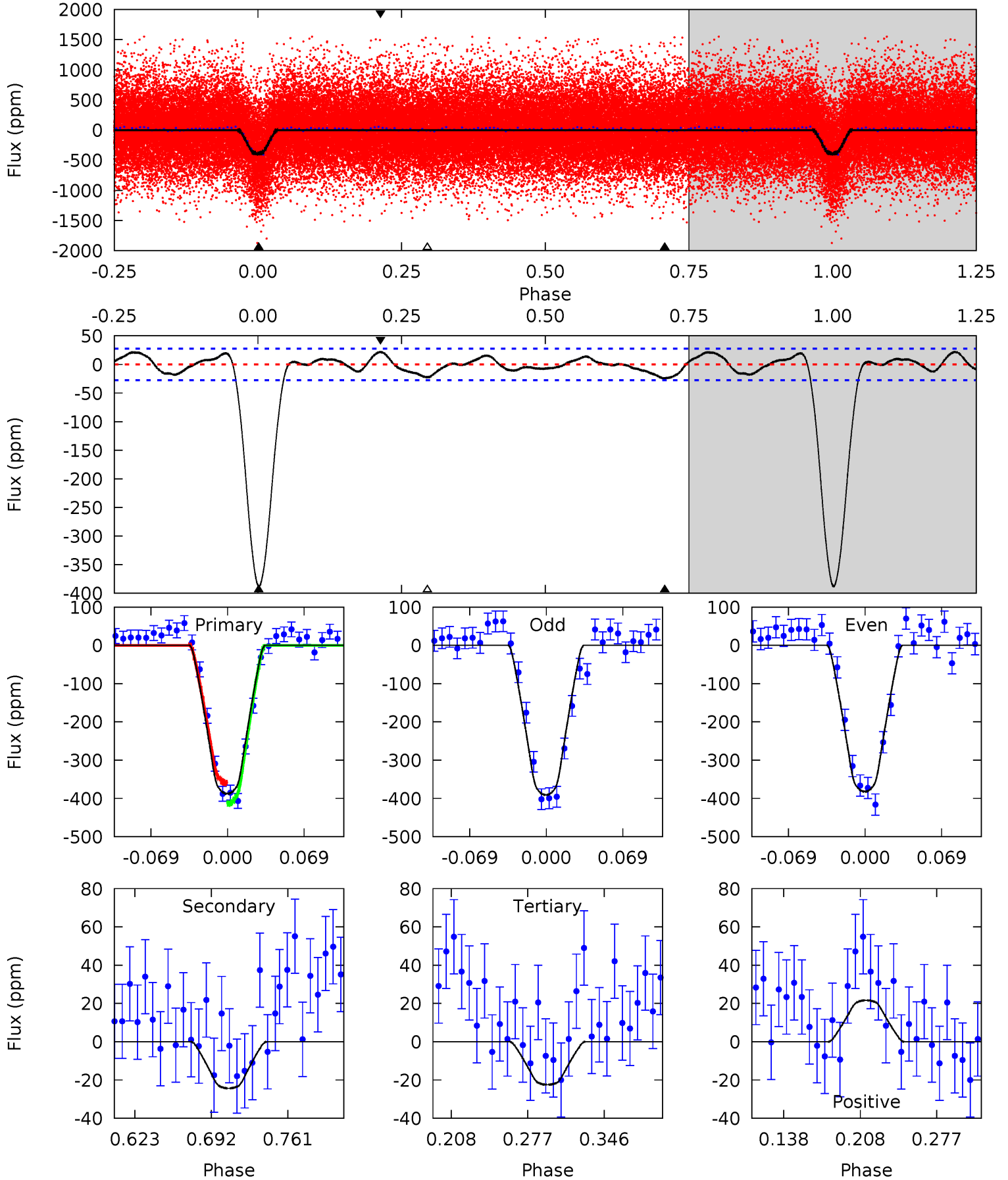
TCE 002860114-01 P= 0.941606 Days $T_0=132.032155$ (BKJD)



DV Model-Shift Uniqueness Test

002860114-01, P = 0.941600 Days, E = 131.094009 Days

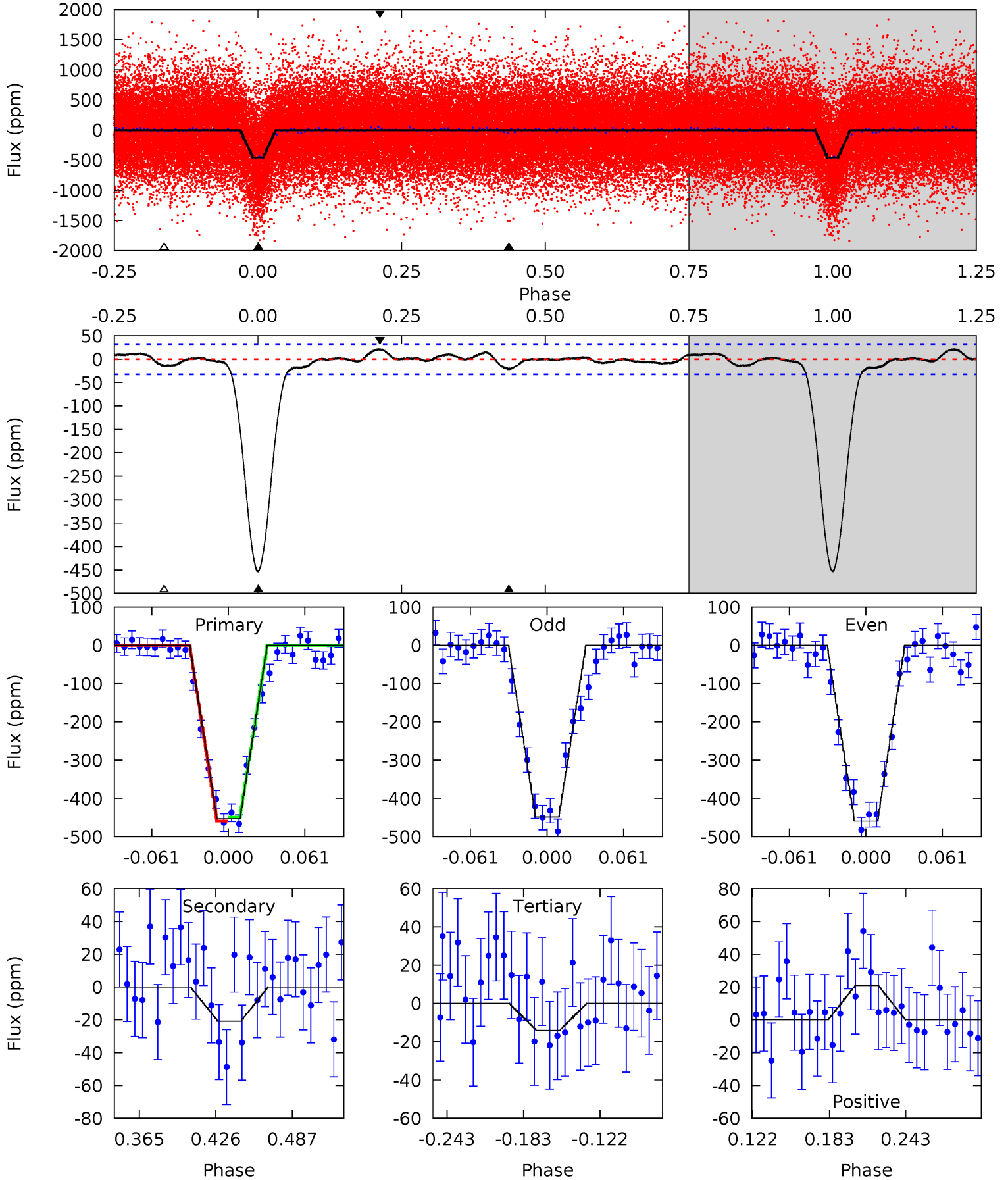
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.2	4.09	3.78	3.64	4.64	1.82	1.73	61.4	61.5	0.32	0.45	0.75	0.94	0.05	4.55



Alt Model-Shift Uniqueness Test

002860114-01, P = 0.941606 Days, E = 131.090549 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.4	3.01	2.03	3.02	4.67	1.87	1.08	63.4	62.4	0.98	-0.01	0.74	1.01	0.04	0.72



Stellar Parameters For KIC 002860114

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5237^{+158}_{-158}	$4.481^{+0.096}_{-0.120}$	$-0.120^{+0.300}_{-0.300}$	$0.837^{+0.129}_{-0.105}$	$0.774^{+0.112}_{-0.060}$	$1.856^{+0.784}_{-0.649}$
	+3%/-3%	+2%/-3%	+250%/-250%	+15%/-13%	+14%/-8%	+42%/-35%
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 002860114-01 / KOI 2170.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 6	$2.00^{+0.50}_{-0.50}$	2253^{+108}_{-98}	2944^{+324}_{-314}	$0.976^{+0.820}_{-0.382}$
Alt.	-21 ± 7	$1.99^{+0.50}_{-0.50}$	2266^{+112}_{-114}	2864^{+388}_{-393}	$0.869^{+0.814}_{-0.394}$

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 $A_{obs} \gg 1.0$

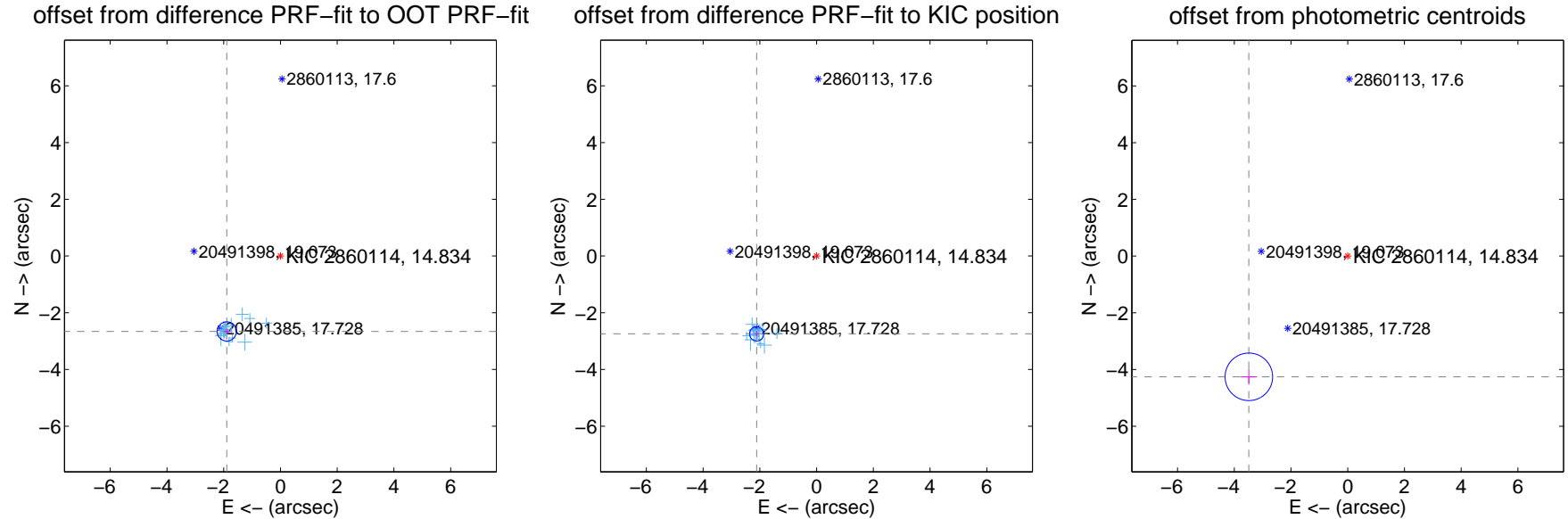
DV Centroid Data

Supplemental centroid analysis for 002860114-01. Kepler magnitude: 14.83. Transit SNR 41.50

There are 17 quarters with good PRF difference image offsets

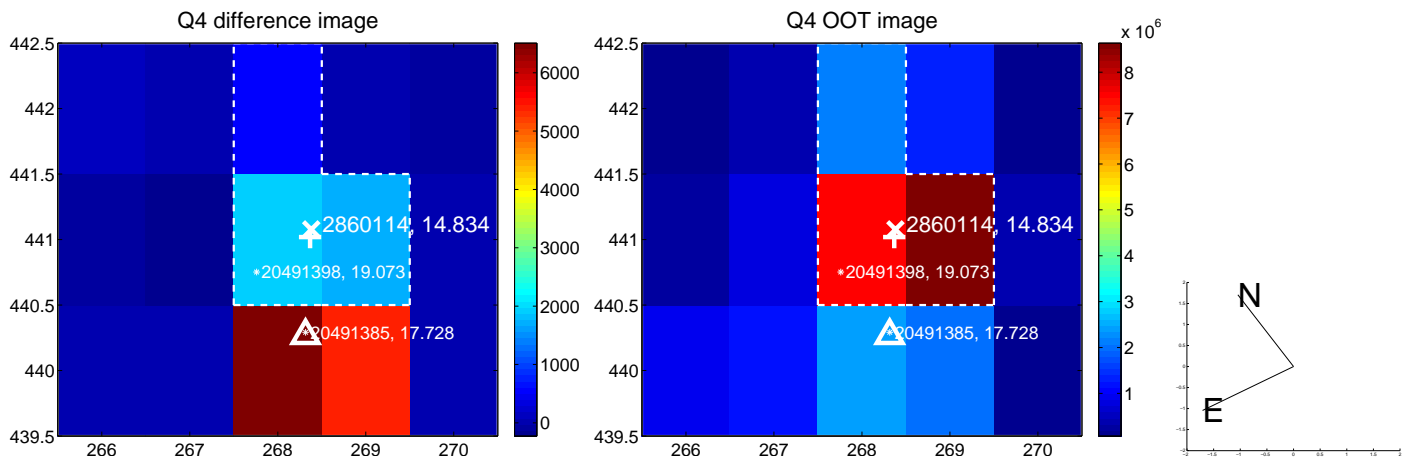
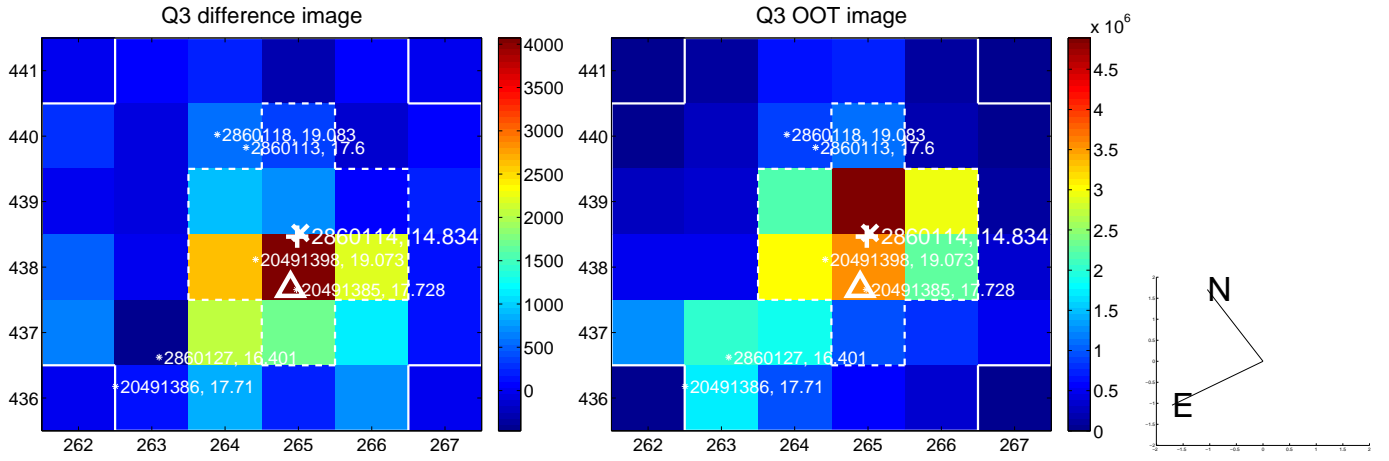
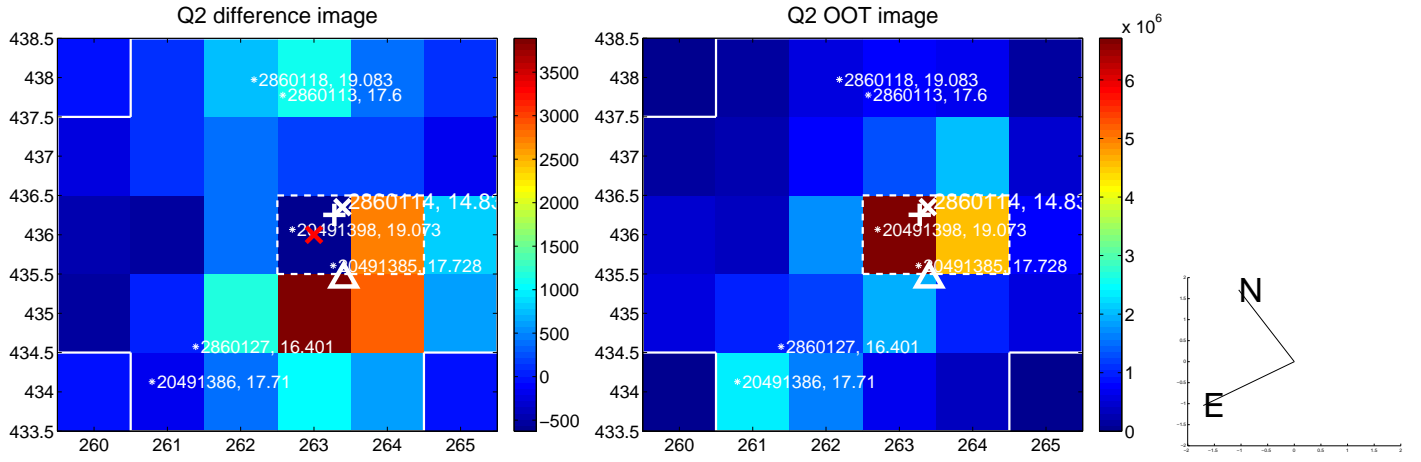
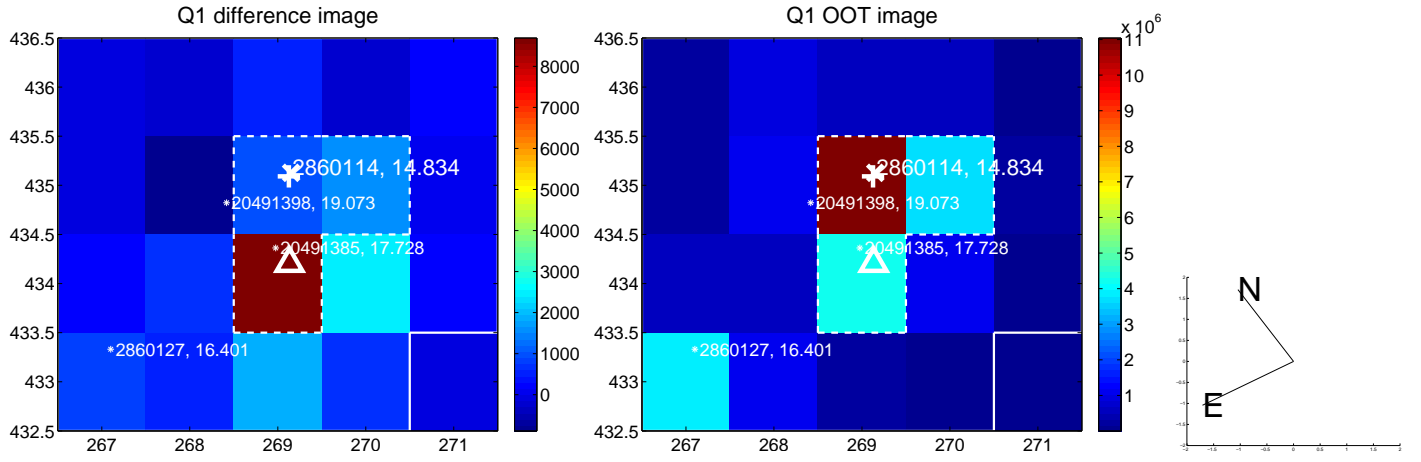
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.262 ± 0.113	28.92	1.891 ± 0.121	-2.658 ± 0.092
PRF-fit source offset from KIC position	3.462 ± 0.083	41.50	2.112 ± 0.079	-2.744 ± 0.086
photometric centroid source offset	5.50 ± 0.28	19.70	3.49 ± 0.29	-4.26 ± 0.27

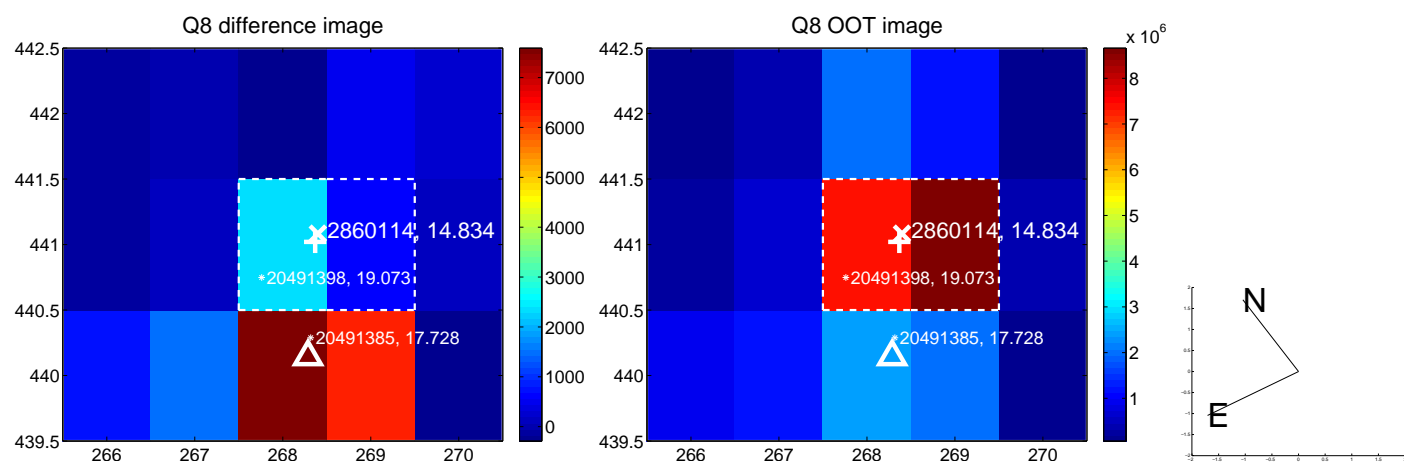
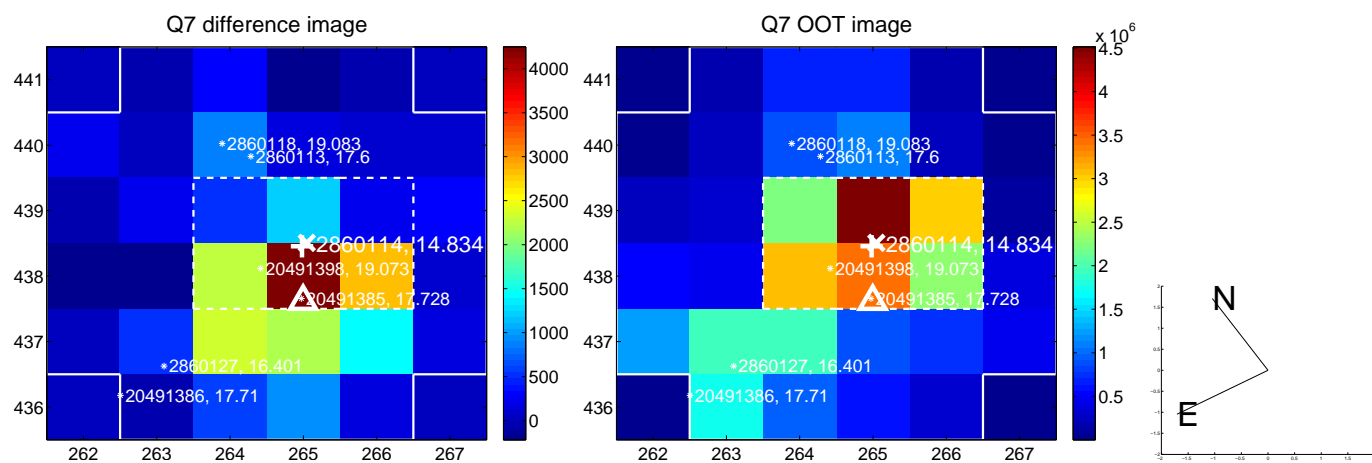
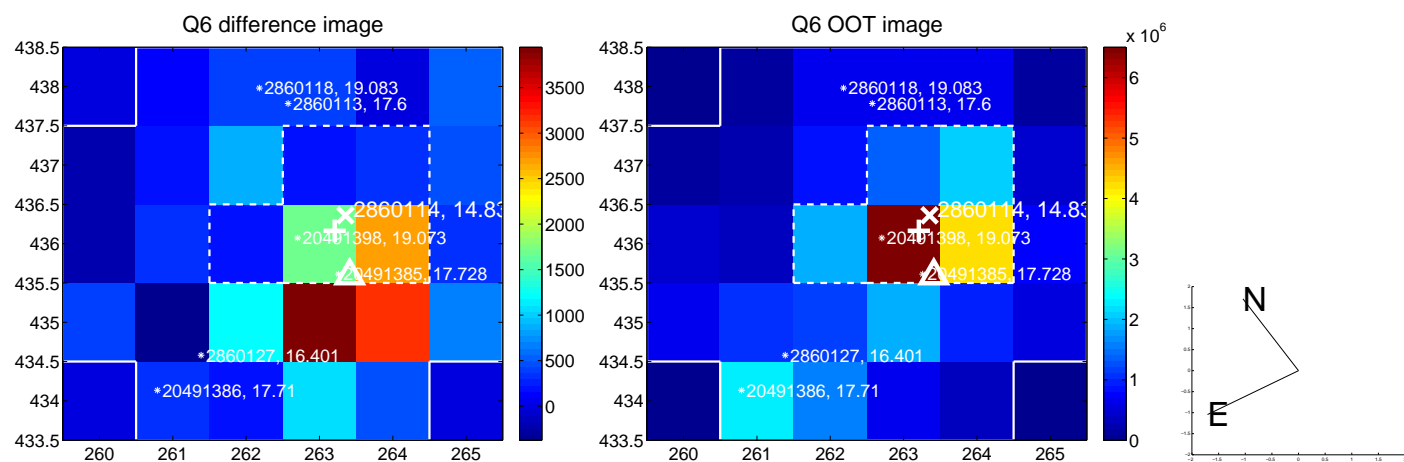
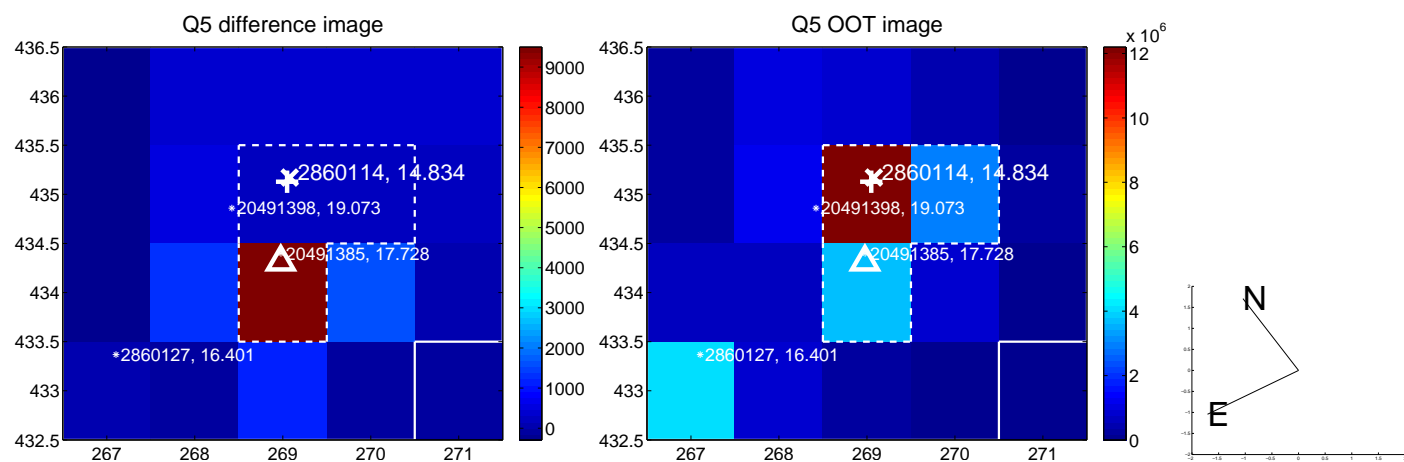


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

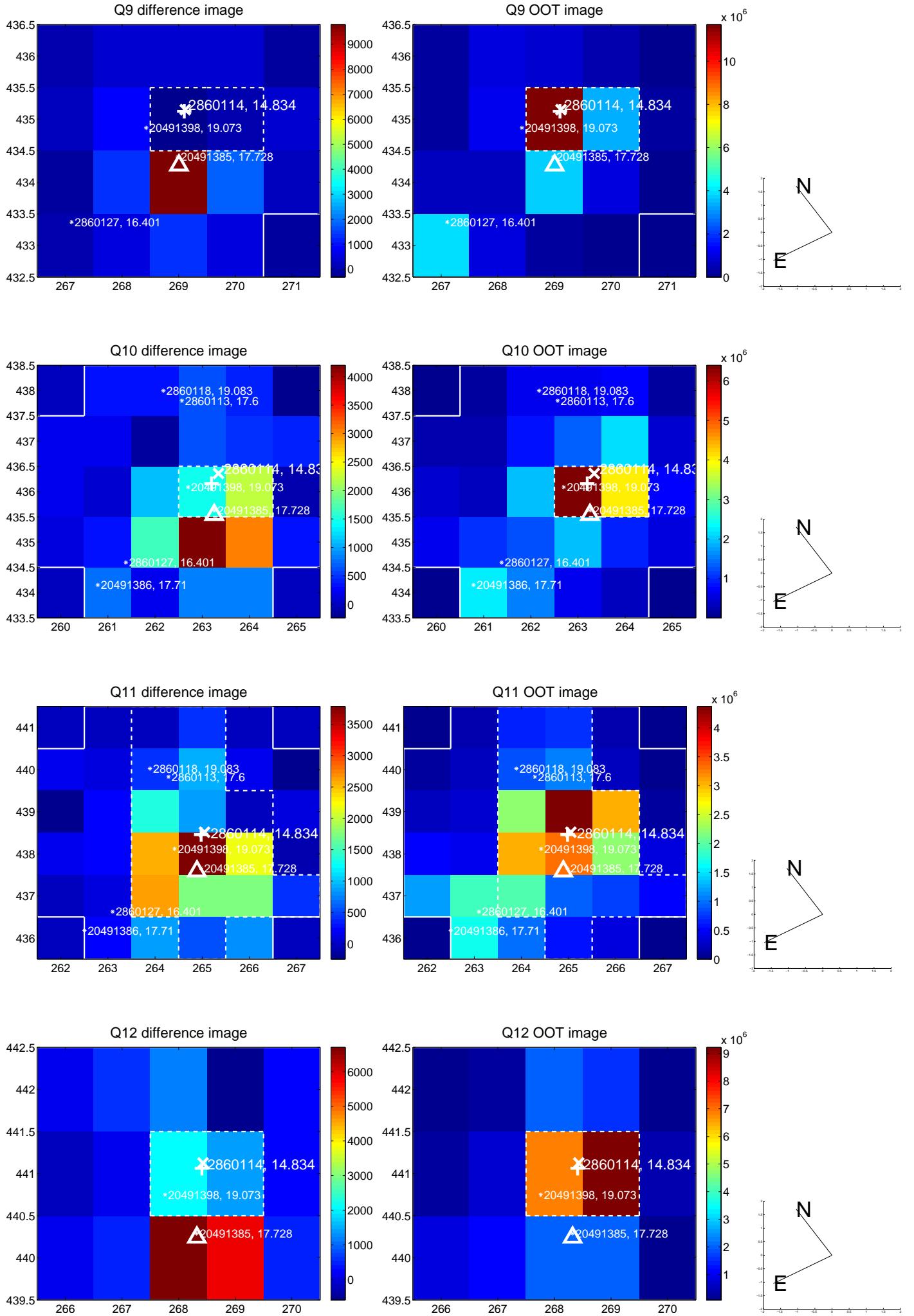
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



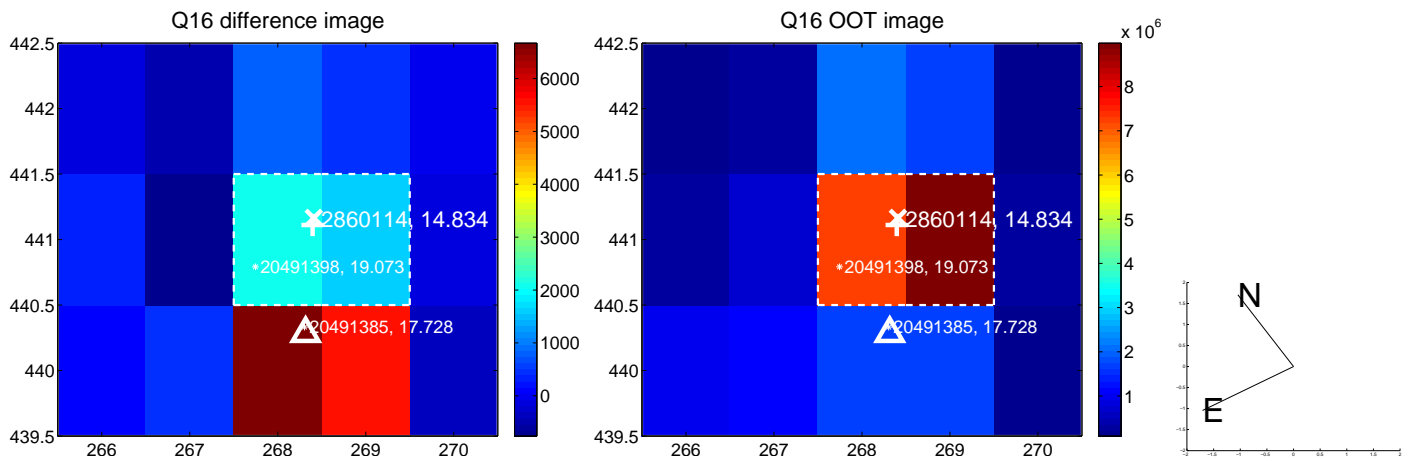
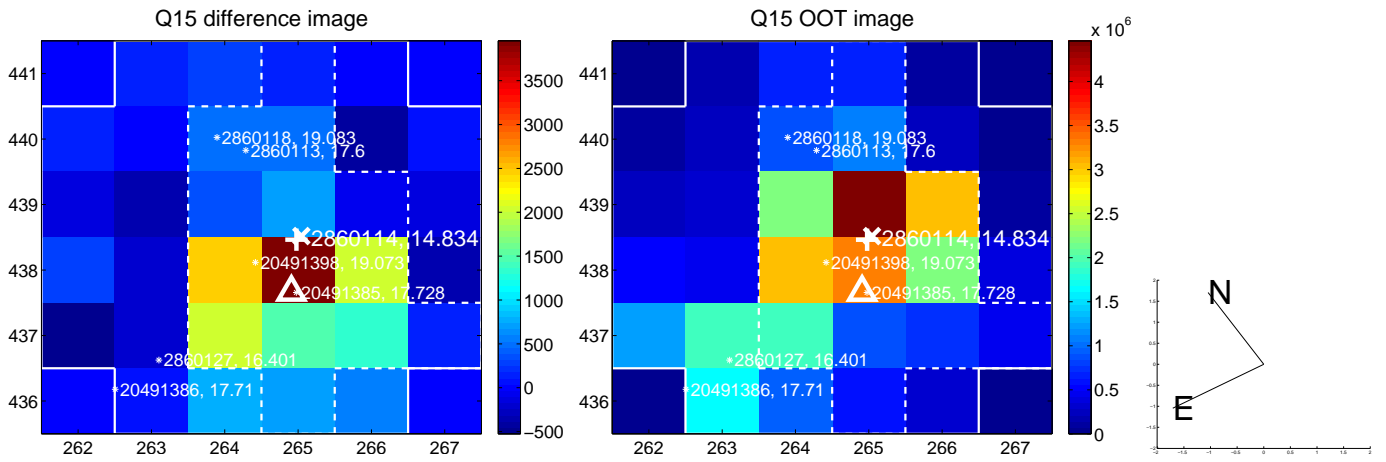
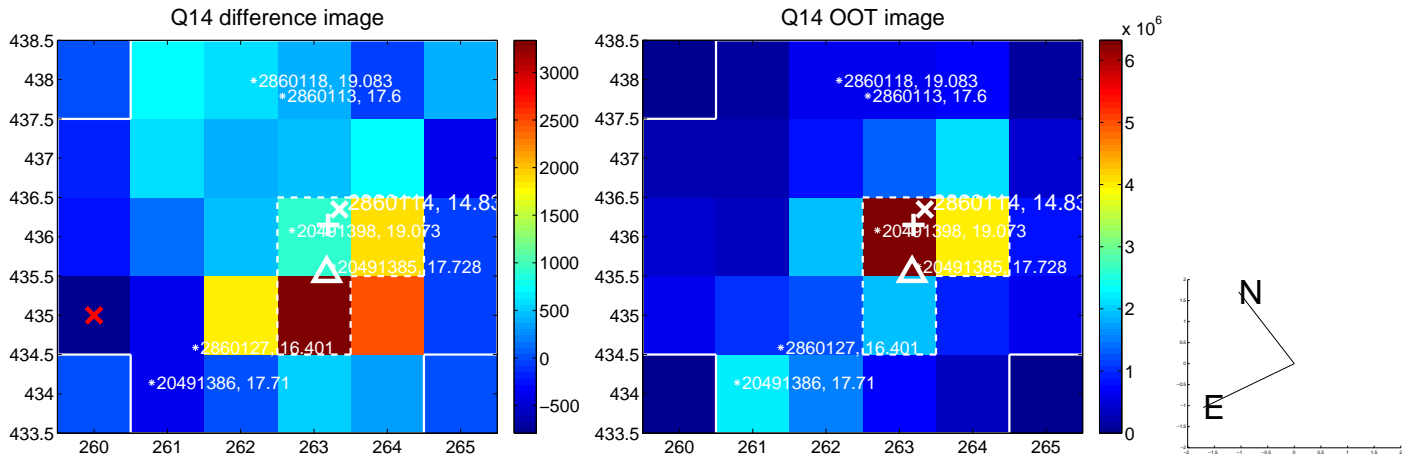
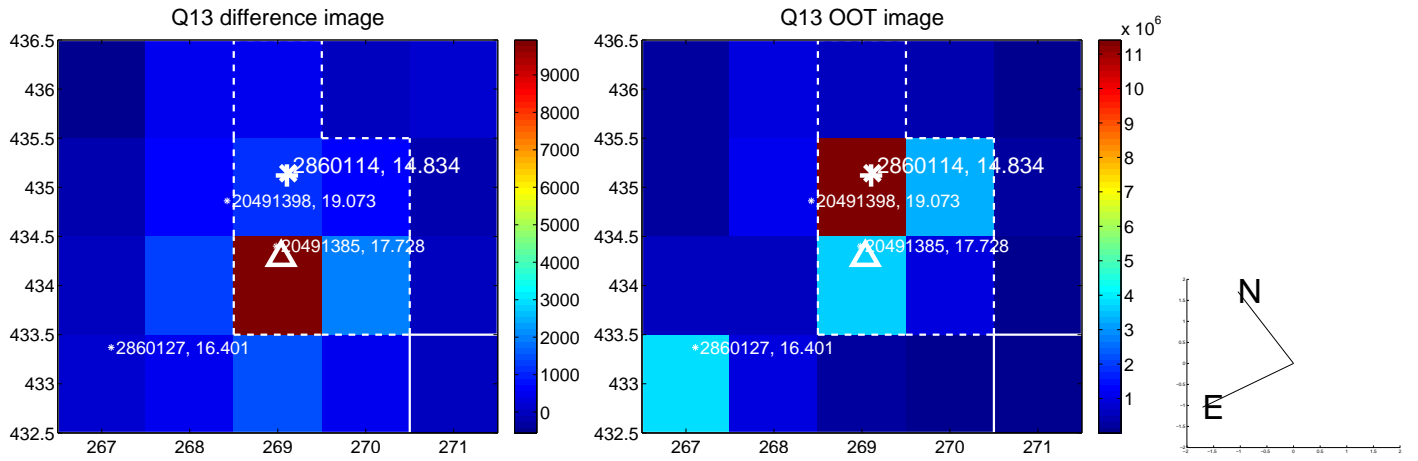
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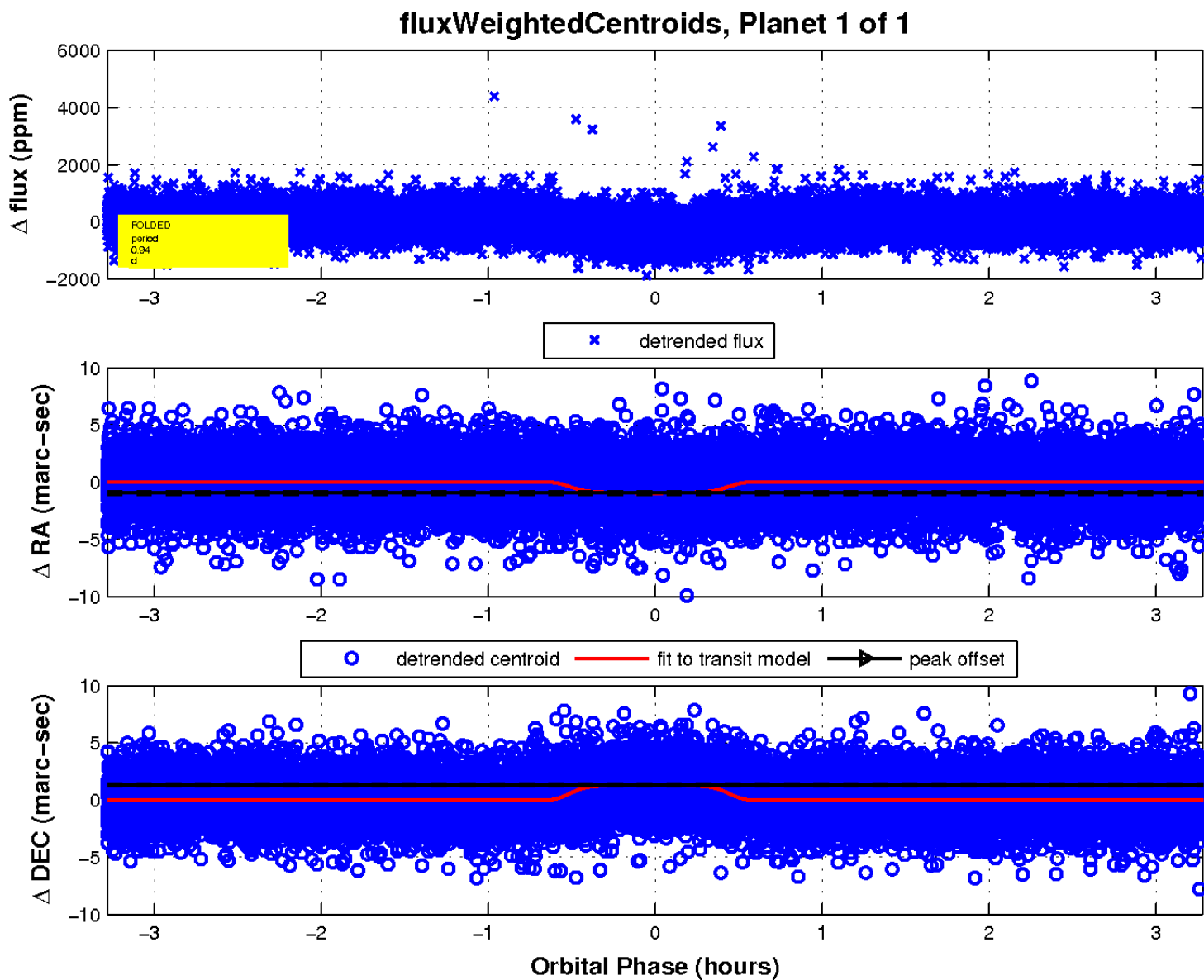
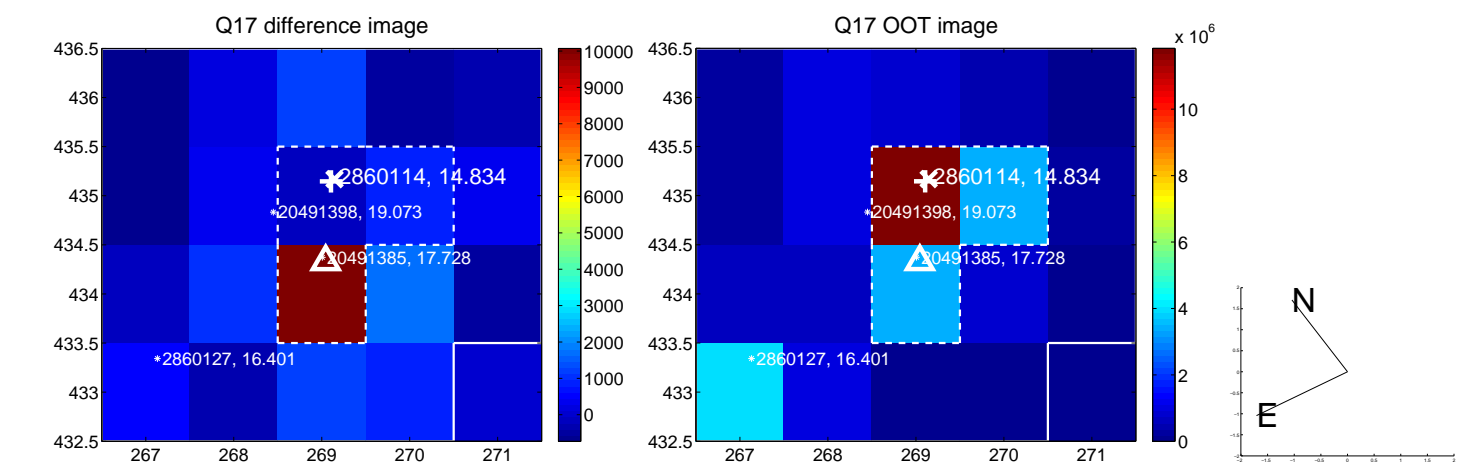
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UKIRT Image

Declination

