

KIC 011499228

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})
011499228-01	OBS	2109.01	19.791789	149.313528	395.9	3.428	22.4	24.9	1.04	6285	2.37	69.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011499228-01	OBS	PC	1.00	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.

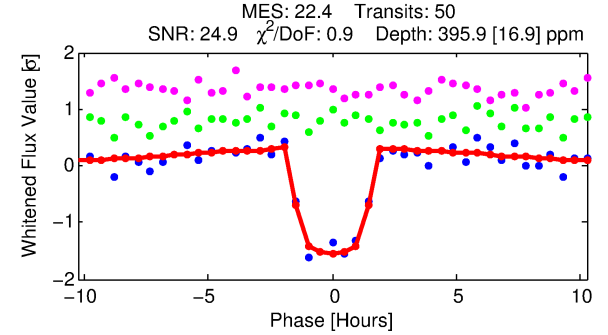
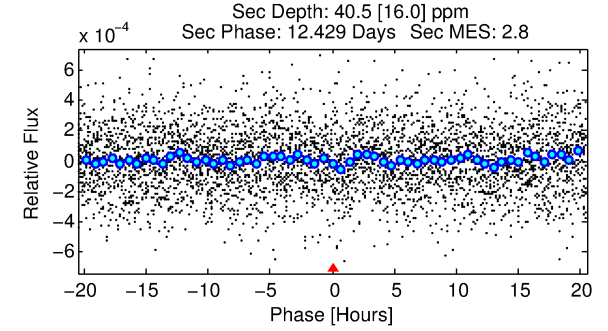
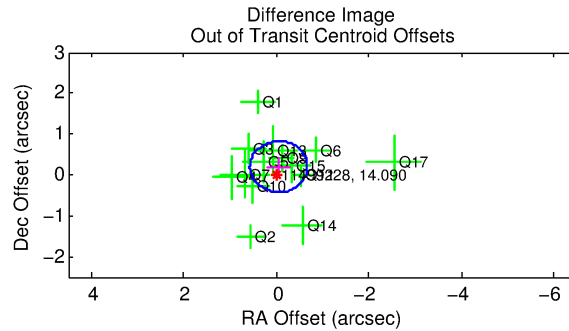
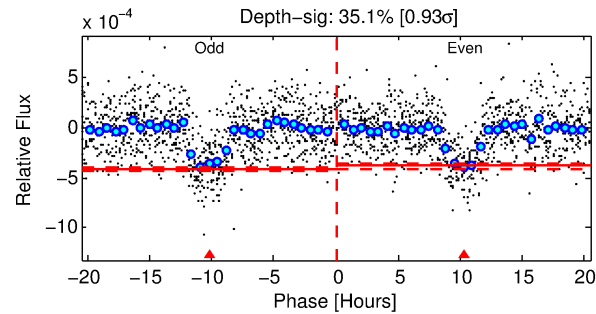
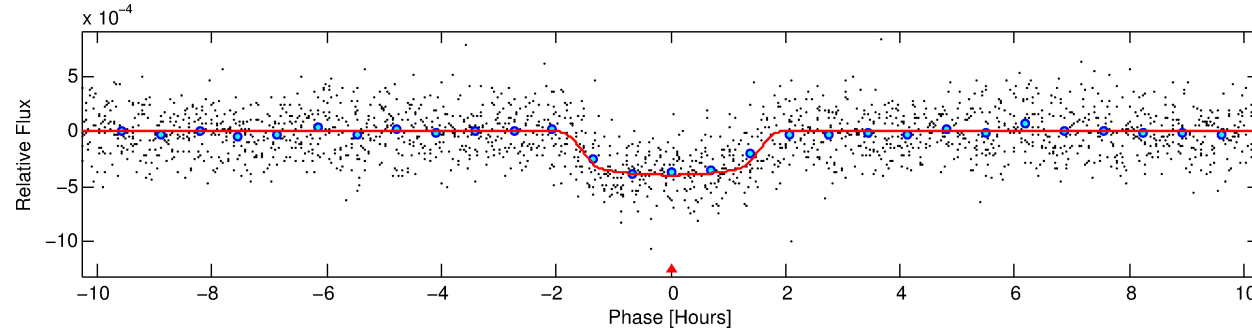
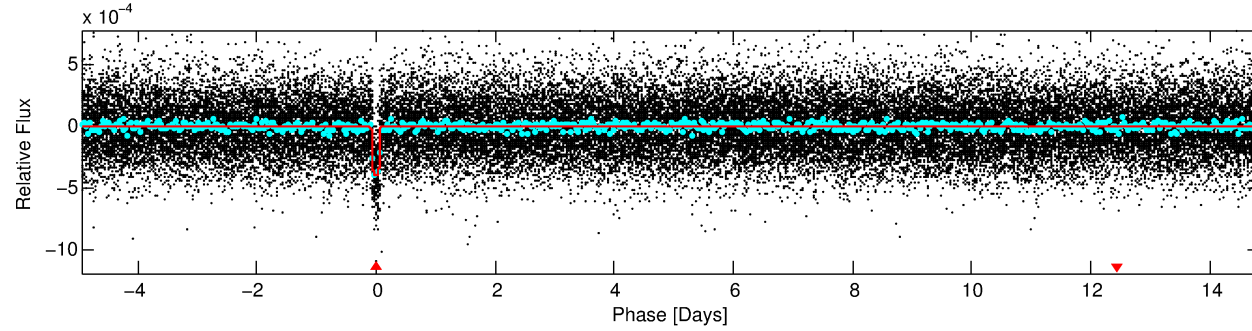
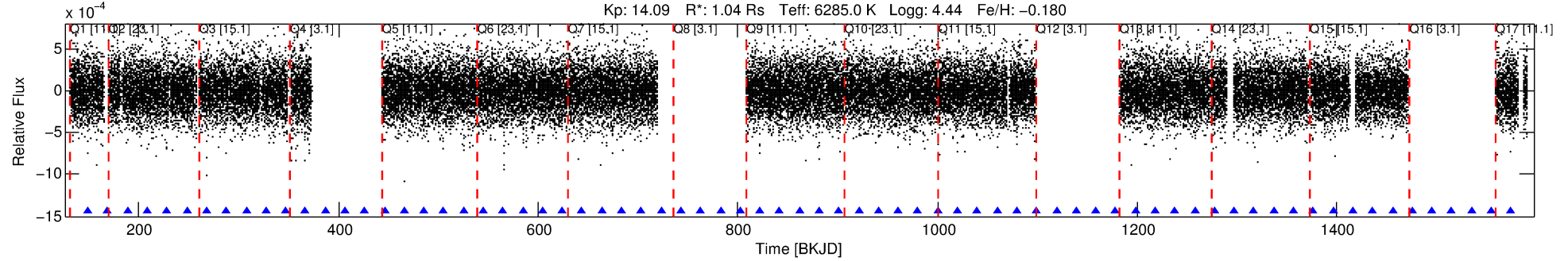
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011499228-01

No Significant Match Found

DV One-Page Summary

KIC: 11499228 Candidate: 1 of 1 Period: 19.792 d
KOI: K02109.01 Corr: 0.962



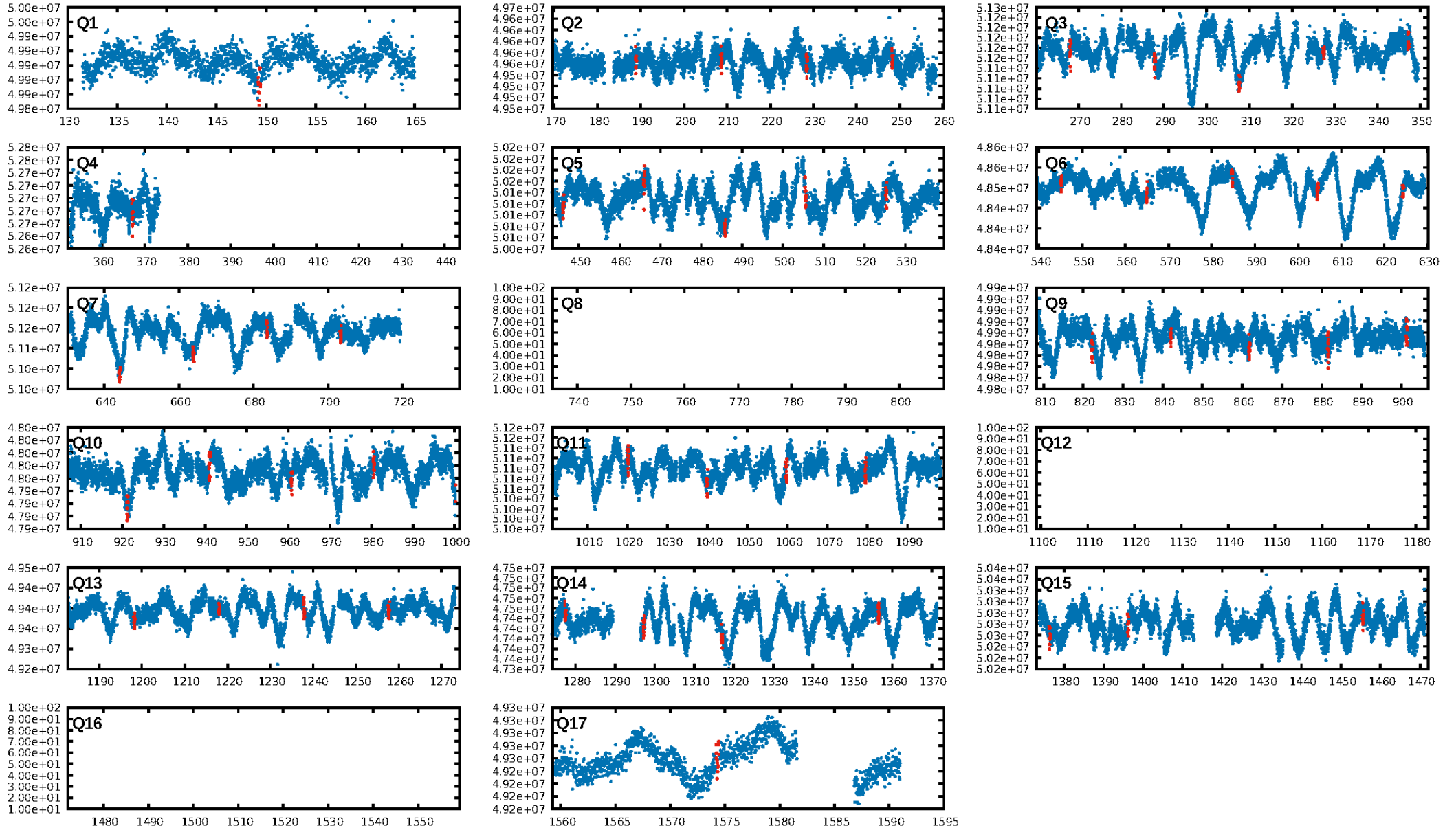
DV Fit Results:

Period = 19.79179 [0.00007] d
Epoch = 149.3135 [0.0027] BKJD
Rp/R* = 0.0209 [0.0031]
a/R* = 23.76 [18.65]
b = 0.87 [0.23]
Seff = 69.59 [28.80]
Teq = 736 [76] K
Rp = 2.37 [0.87] Re
a = 0.1473 [0.0406] AU
Ag = 86.30 [54.58] [1.56σ]
Teffp = 3471 [445] K [6.06σ]

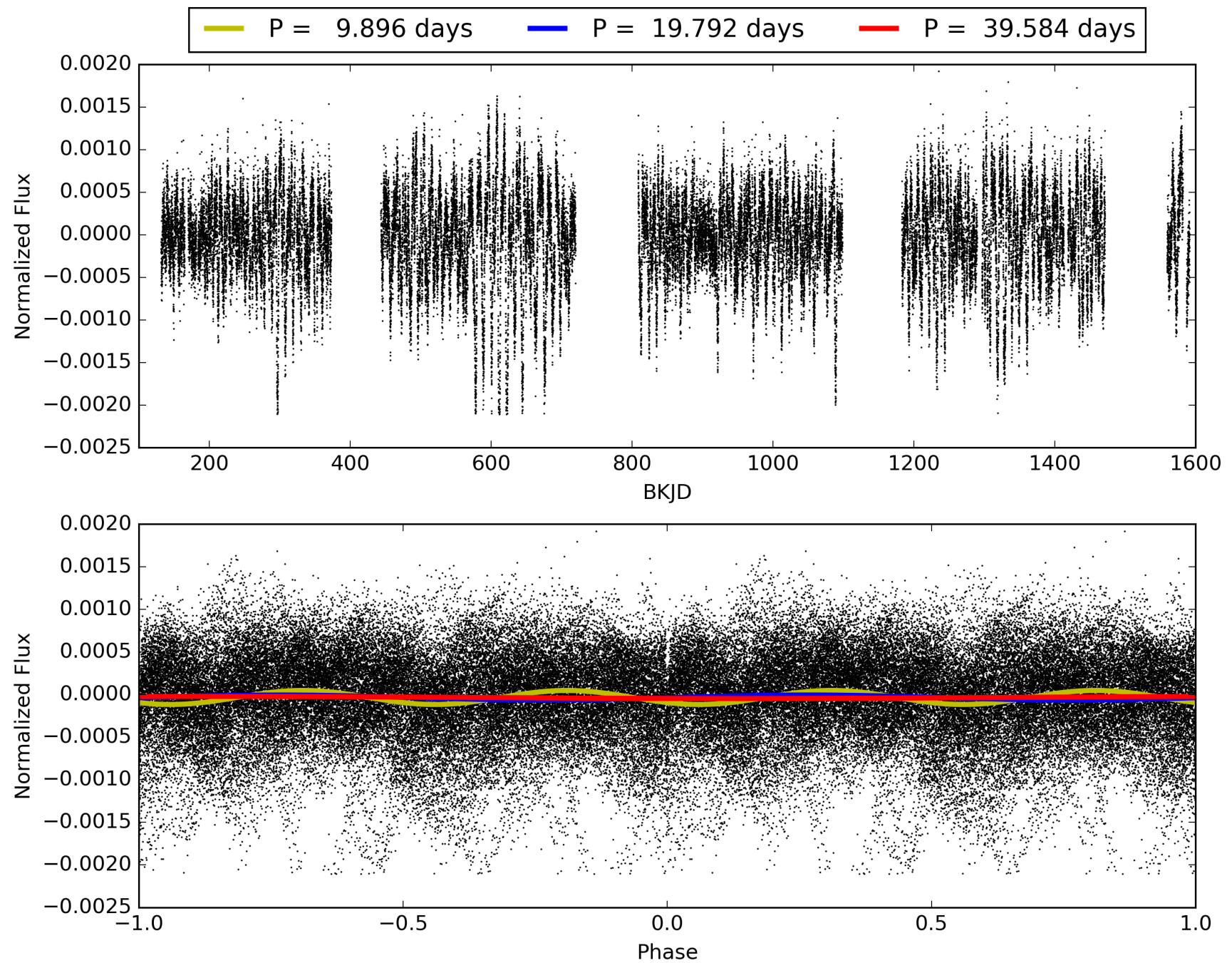
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.95e-109
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: 2.808
Centroid-sig: 54.5%
Centroid-so: 0.294 arcsec [0.57σ]
OotOffset-rm: 0.206 arcsec [0.99σ]
KicOffset-rm: 0.265 arcsec [1.31σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011499228-01, PDC Light Curves

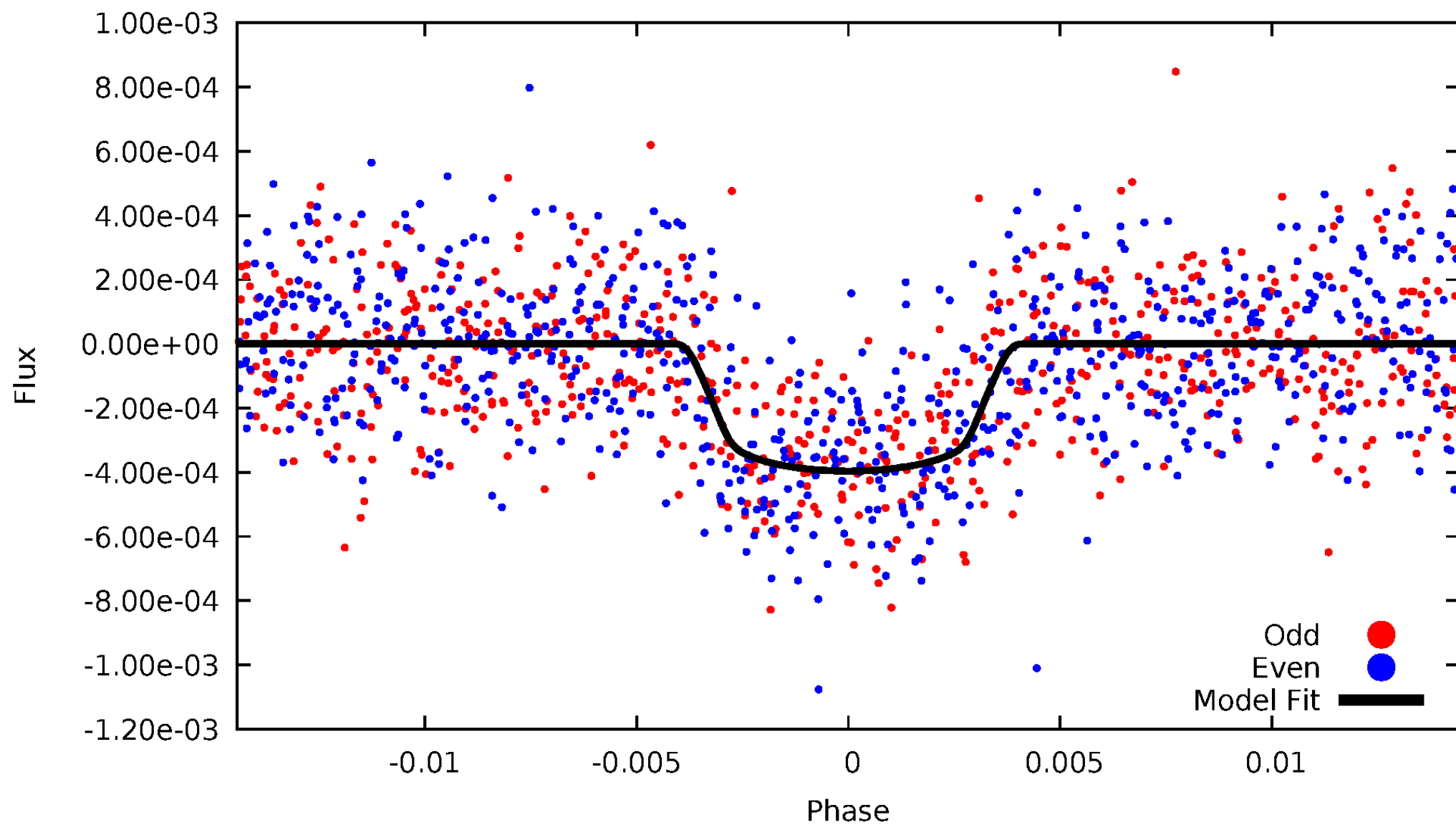


TCE 011499228-01



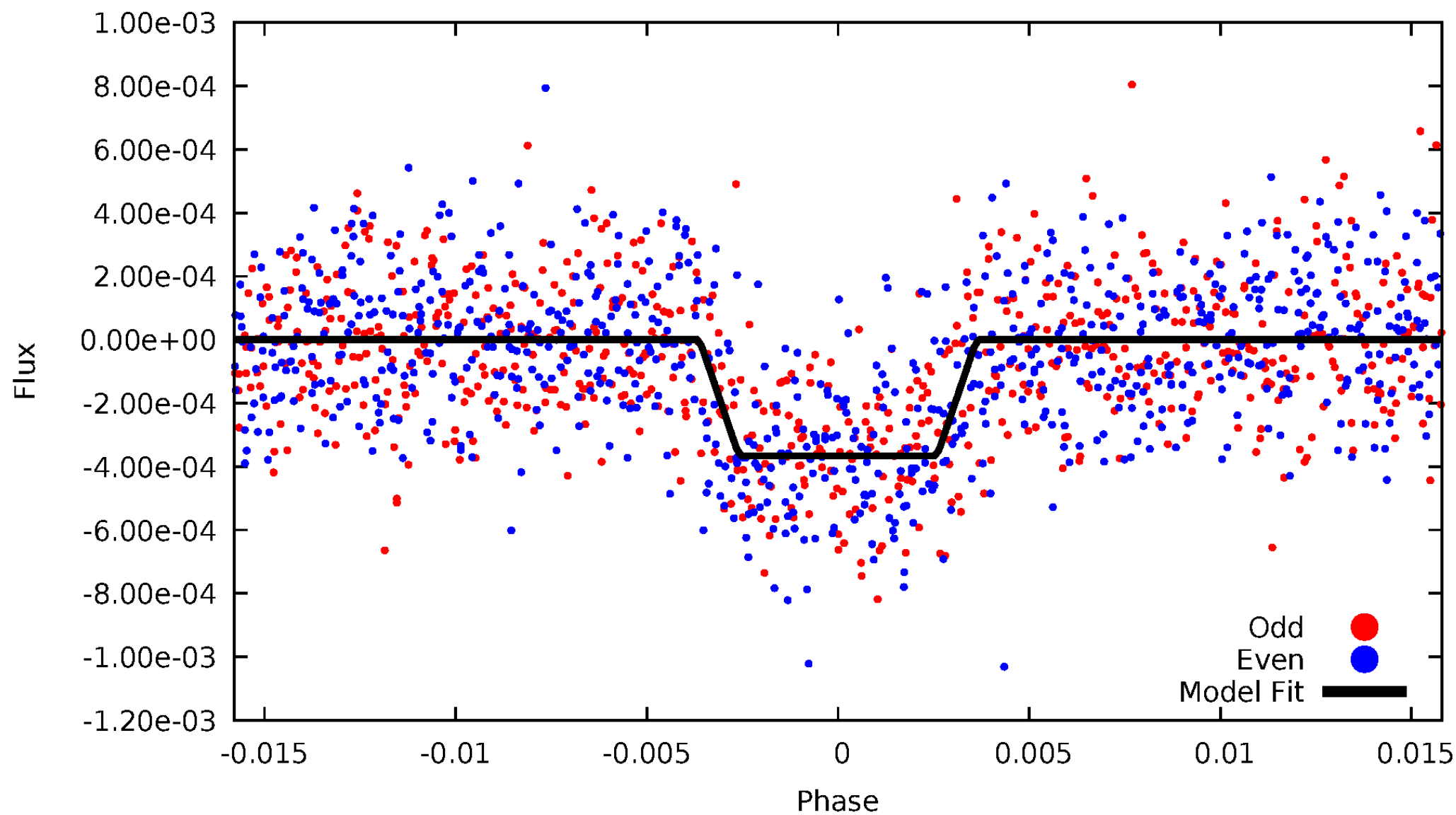
DV Odd/Even

TCE 011499228-01

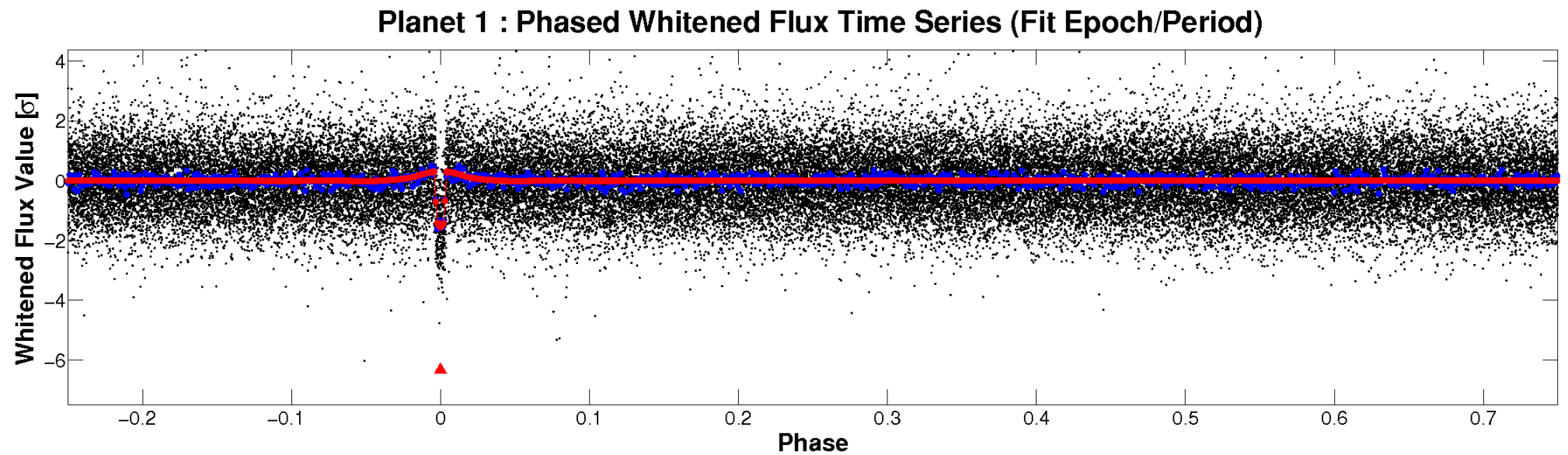
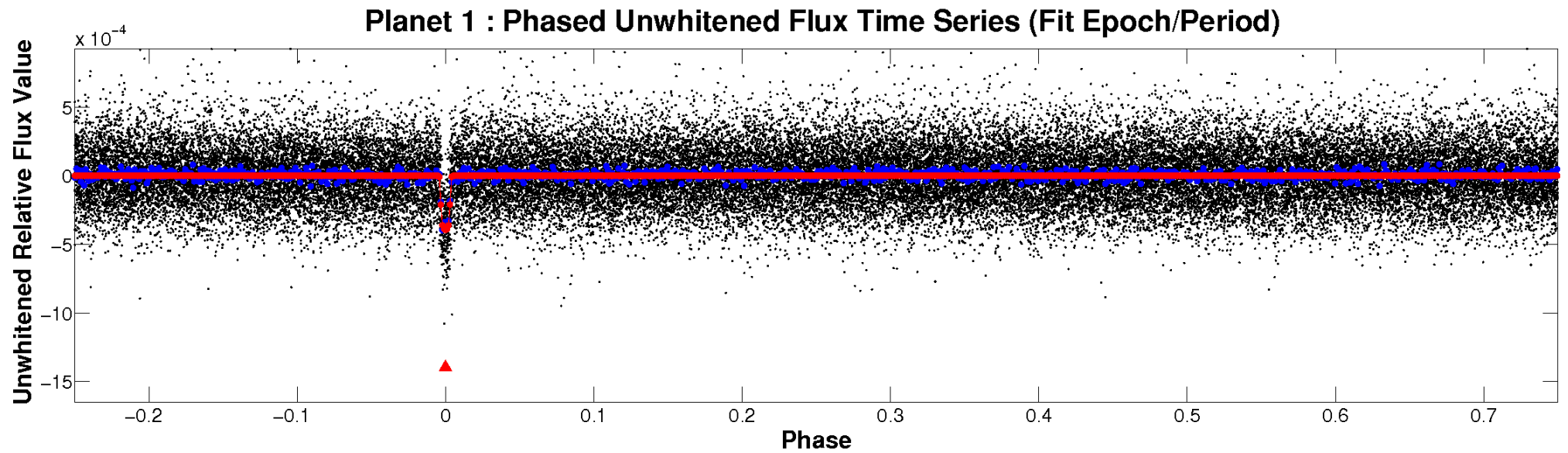


ALT Odd/Even

TCE 011499228-01

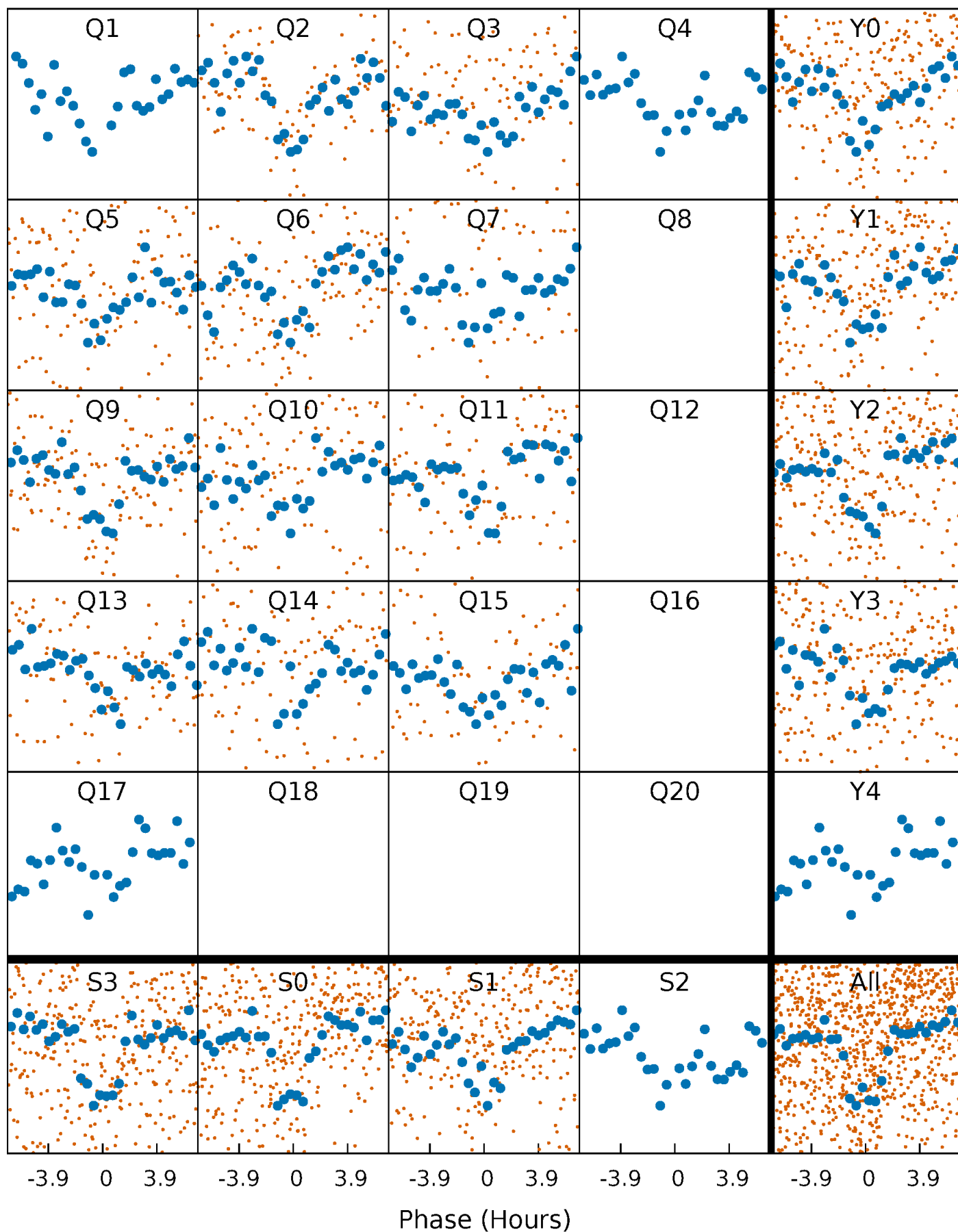


Non-Whitened Vs. Whitened Light Curve



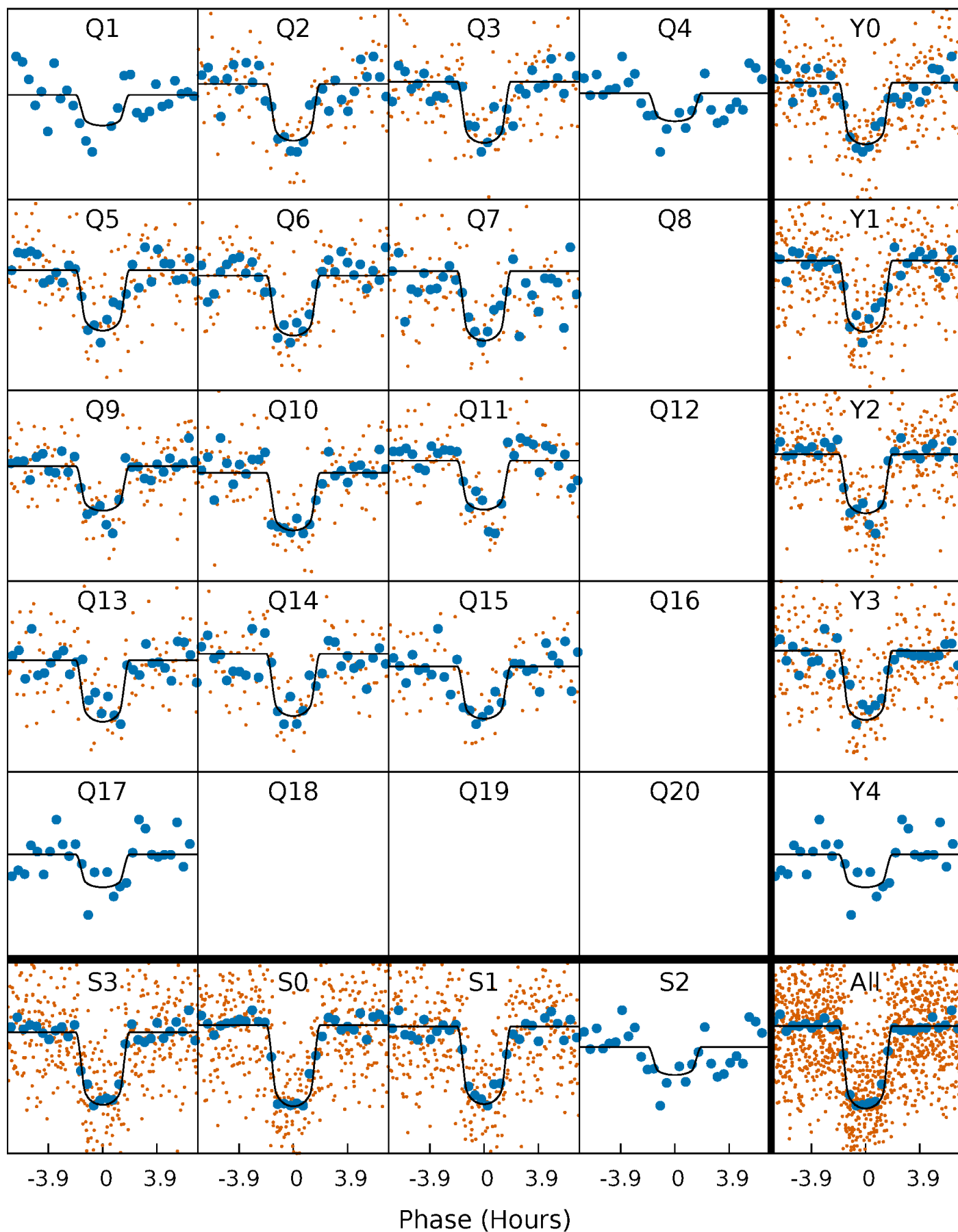
PDC Quarter-Phased Transit Curves

TCE 011499228-01 P= 19.791789 Days $T_0=149.313528$ (BKJD)



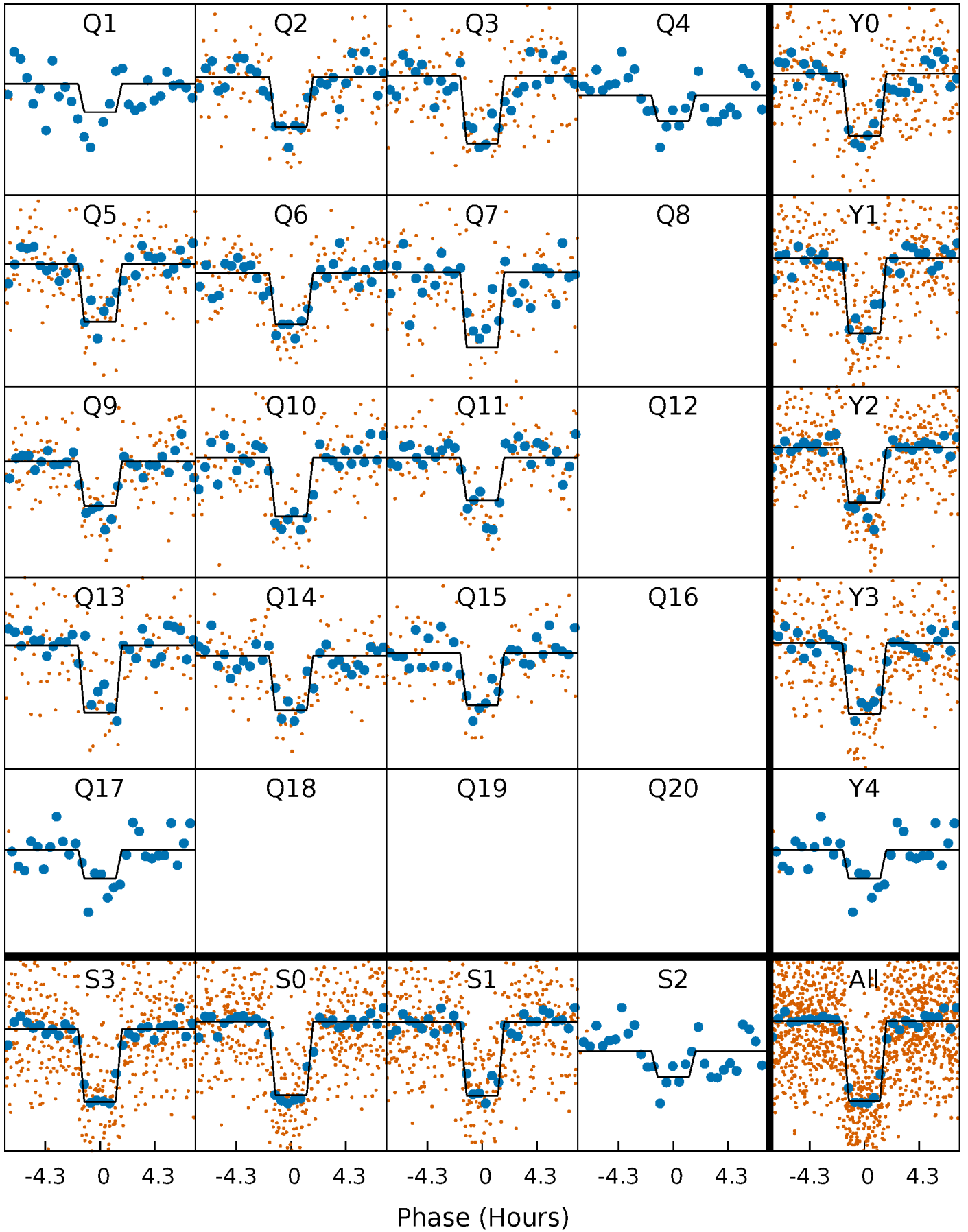
DV Quarter-Phased Transit Curves

TCE 011499228-01 P= 19.791789 Days $T_0=149.313528$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

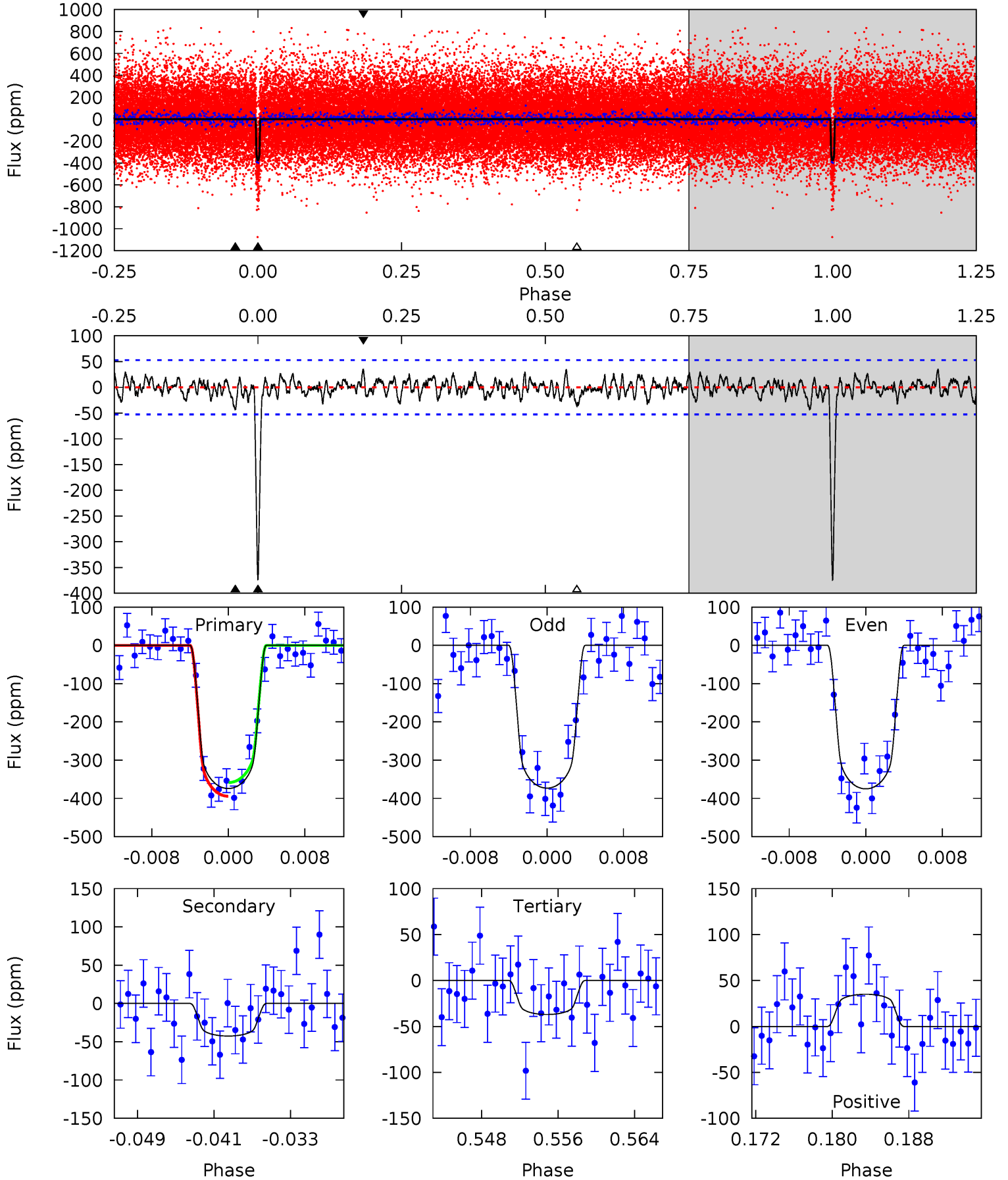
TCE 011499228-01 P= 19.791712 Days $T_0=149.316080$ (BKJD)



DV Model-Shift Uniqueness Test

011499228-01, $P = 19.791789$ Days, $E = 129.521739$ Days

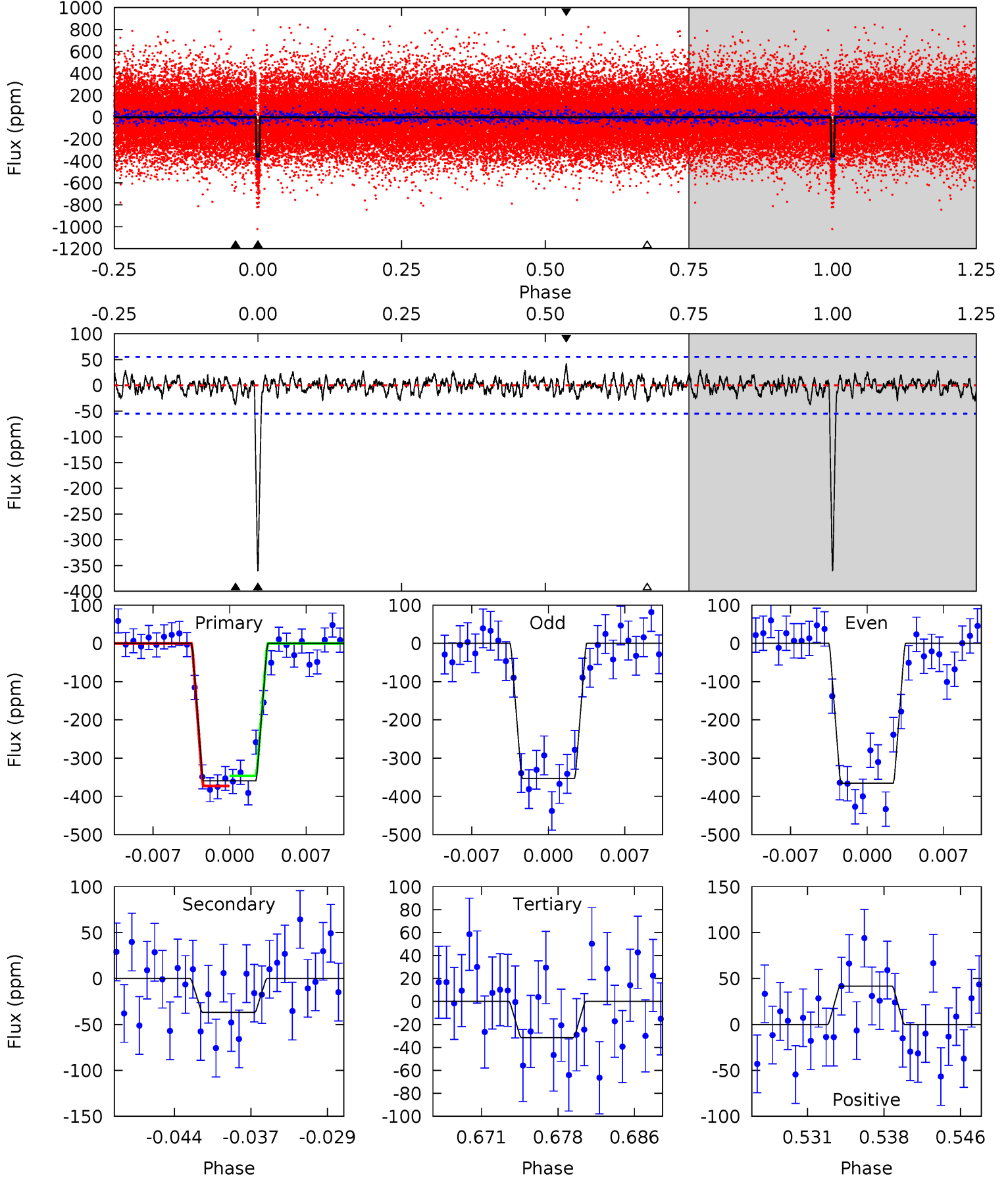
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	4.09	3.56	3.36	5.06	2.64	1.22	32.4	32.6	0.53	0.73	0.09	1.02	0.09	1.71



Alt Model-Shift Uniqueness Test

011499228-01, P = 19.791712 Days, E = 129.524368 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	3.41	2.91	3.84	5.08	2.68	1.03	30.3	29.3	0.50	-0.43	0.59	0.95	0.10	1.24



Stellar Parameters For KIC 011499228

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6285^{+169}_{-206}	$4.441^{+0.056}_{-0.210}$	$-0.180^{+0.250}_{-0.300}$	$1.039^{+0.349}_{-0.116}$	$1.084^{+0.158}_{-0.144}$	$1.361^{+0.394}_{-0.720}$
	+3%/-3%	+1%/-5%	+139%/-167%	+34%/-11%	+15%/-13%	+29%/-53%
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 011499228-01 / KOI 2109.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-43 ± 10	$2.46^{+0.51}_{-0.45}$	1051^{+77}_{-54}	3879^{+273}_{-264}	80^{+47}_{-28}
Alt.	-37 ± 11	$2.28^{+0.52}_{-0.44}$	1051^{+86}_{-53}	3887^{+356}_{-305}	85^{+52}_{-38}

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 $A_{obs} \gg 1.0$

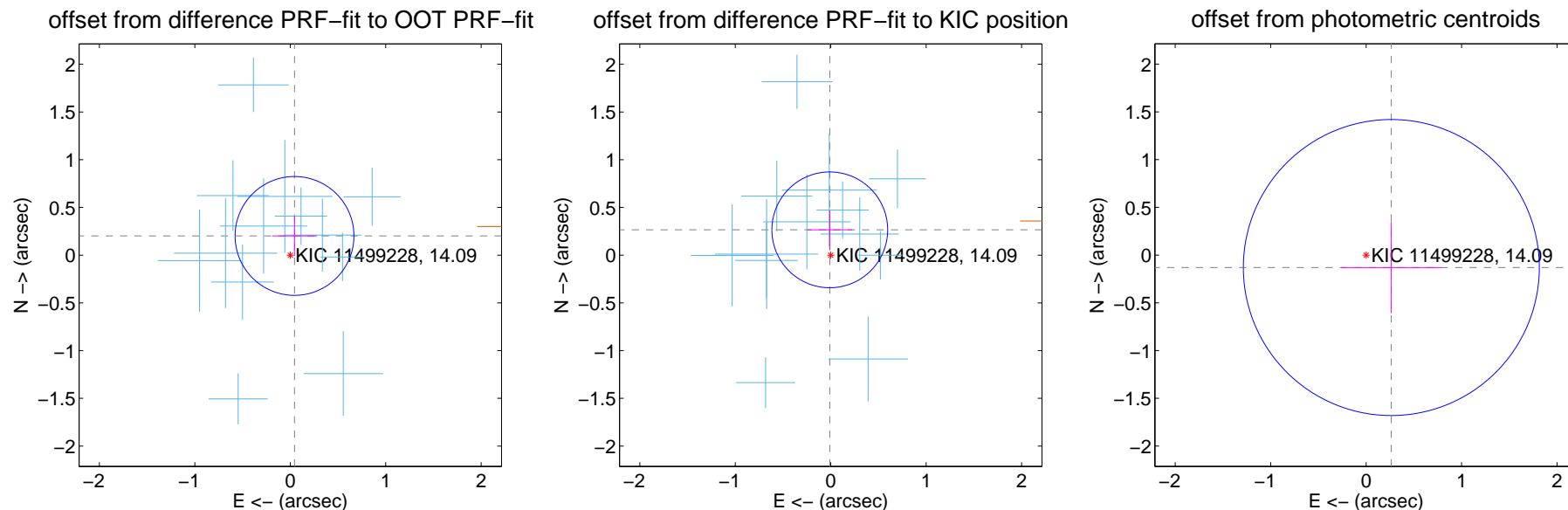
DV Centroid Data

Supplemental centroid analysis for 011499228-01. Kepler magnitude: 14.09. Transit SNR 24.88

There are 13 quarters with good PRF difference image offsets

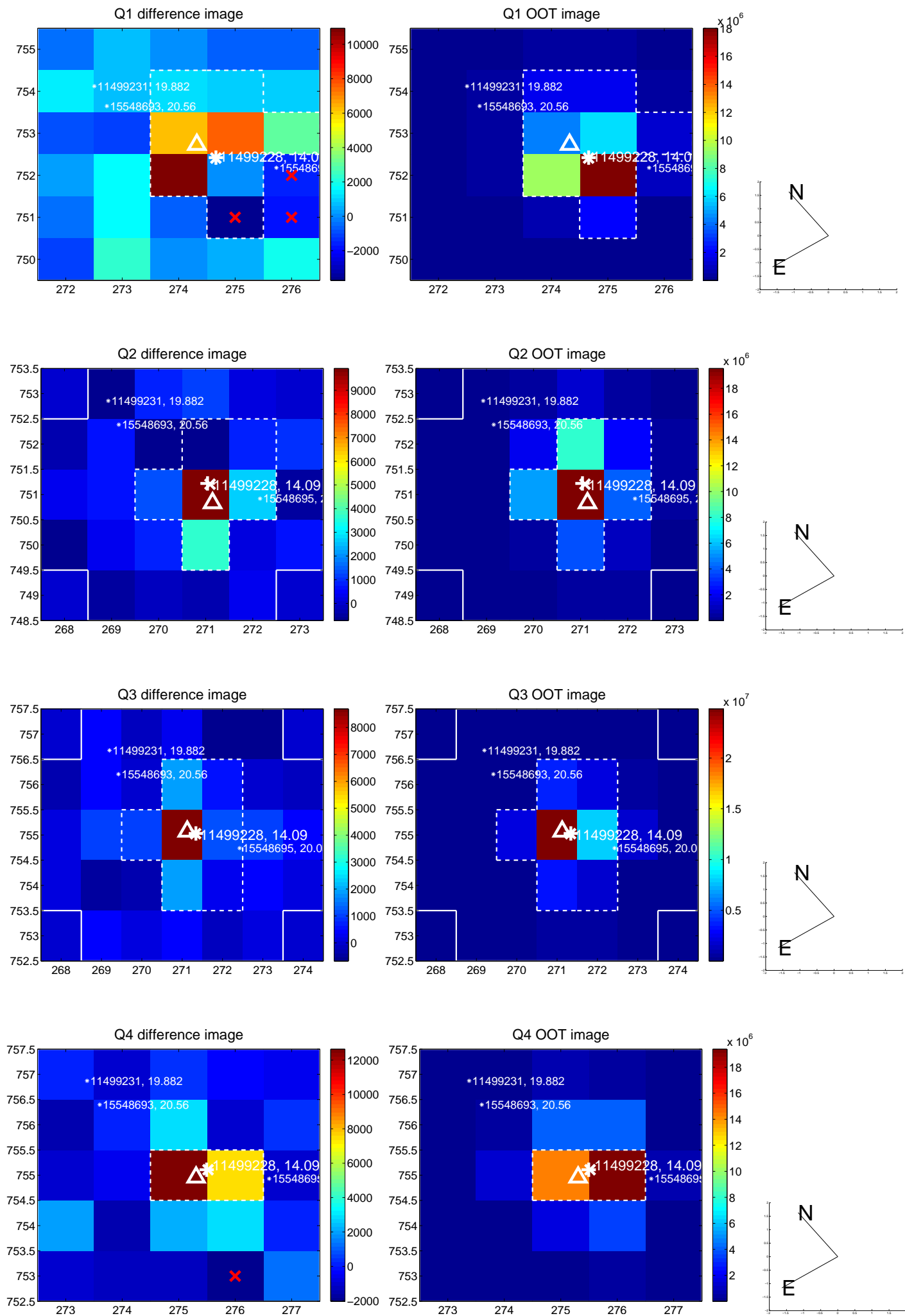
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.206 ± 0.208	0.99	-0.044 ± 0.235	0.201 ± 0.209
PRF-fit source offset from KIC position	0.265 ± 0.202	1.31	0.010 ± 0.236	0.265 ± 0.202
photometric centroid source offset	0.29 ± 0.52	0.57	-0.26 ± 0.53	-0.13 ± 0.48

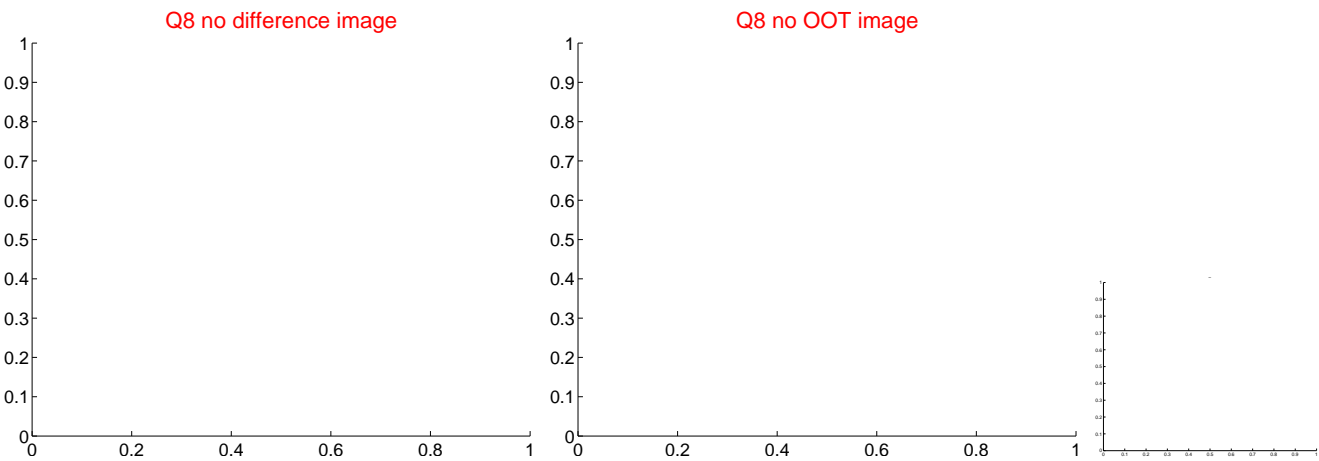
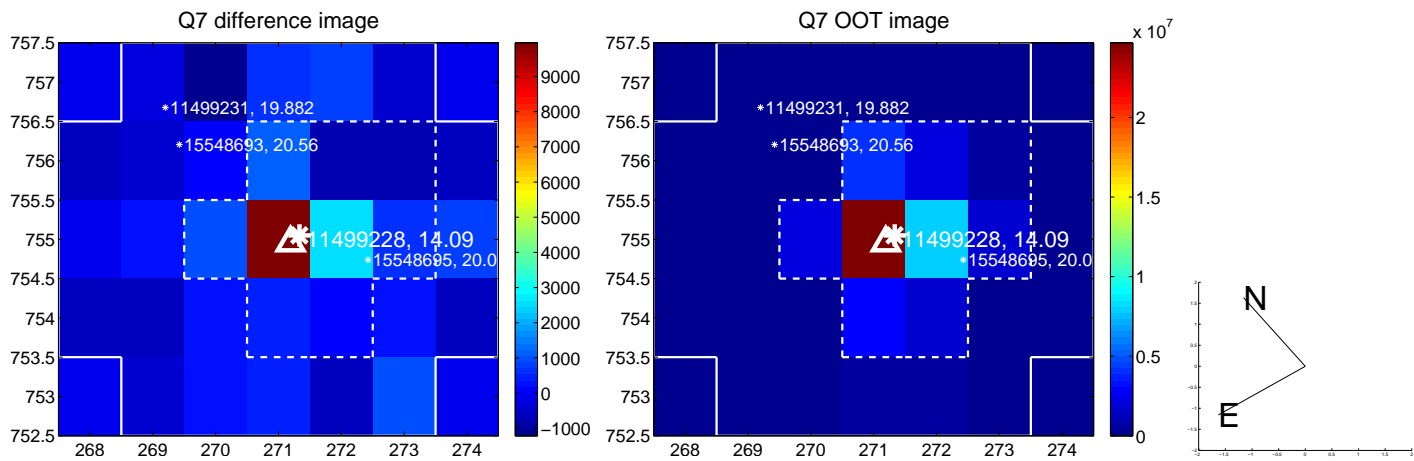
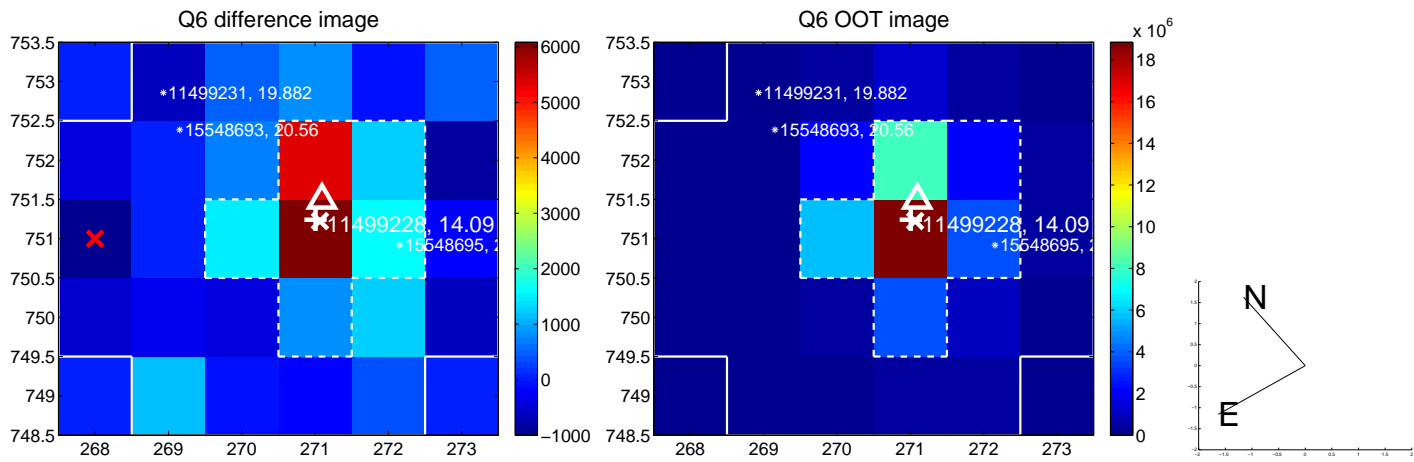
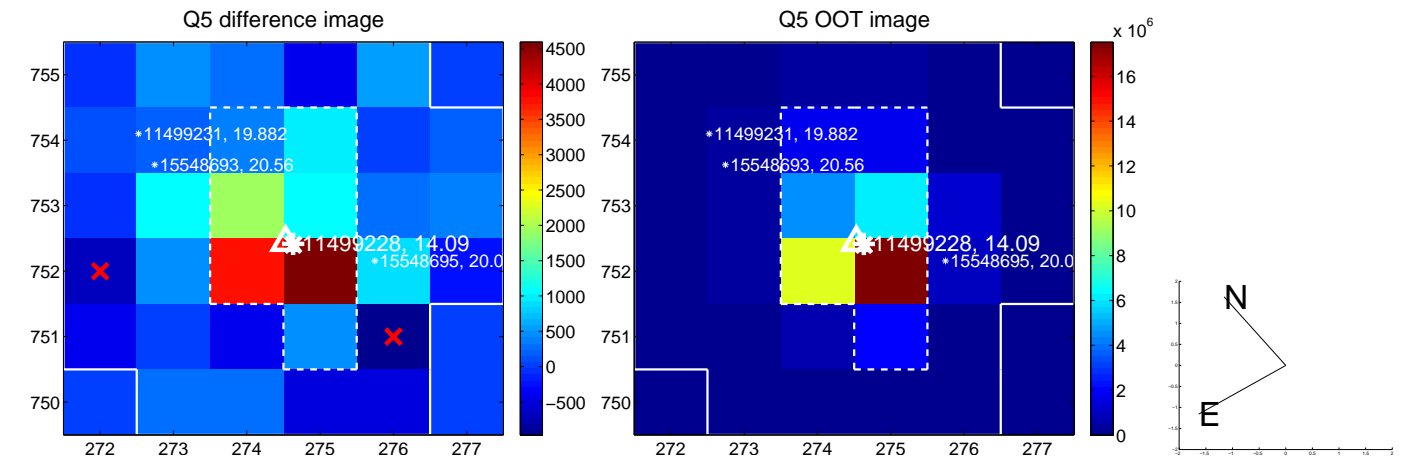


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

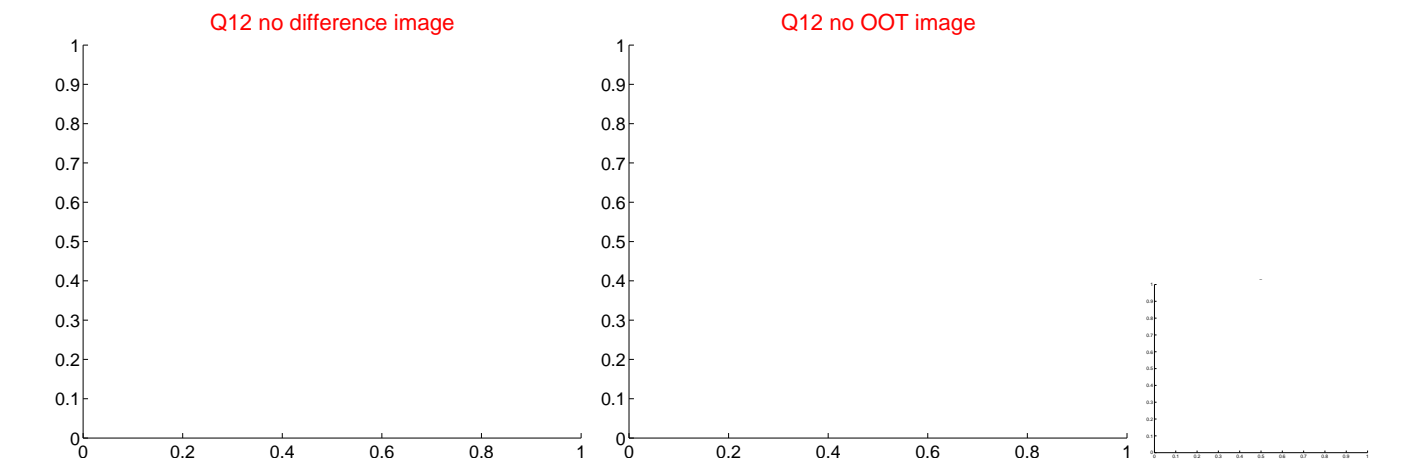
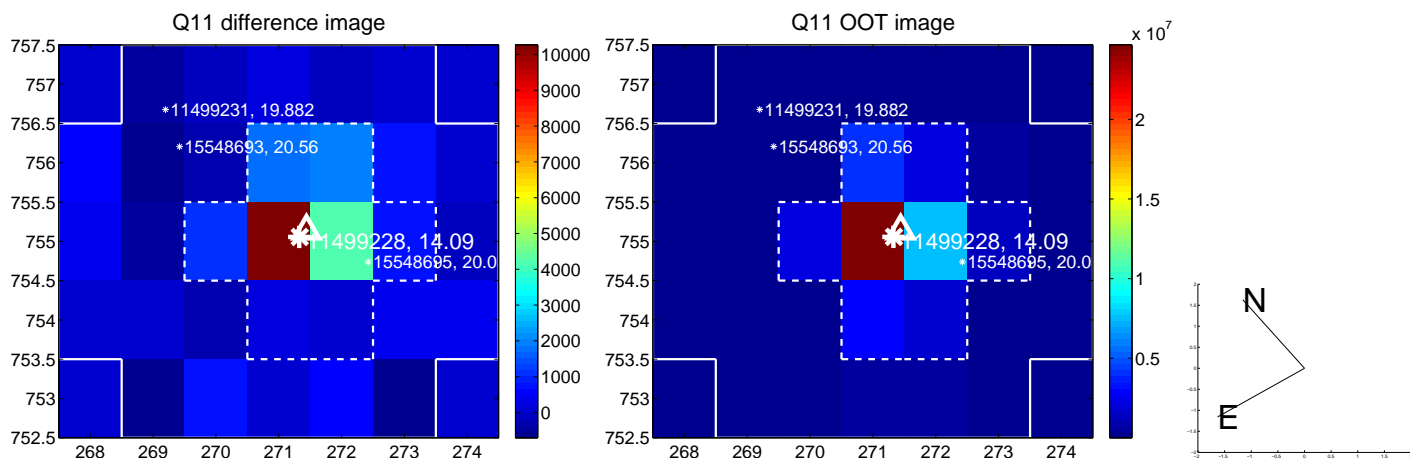
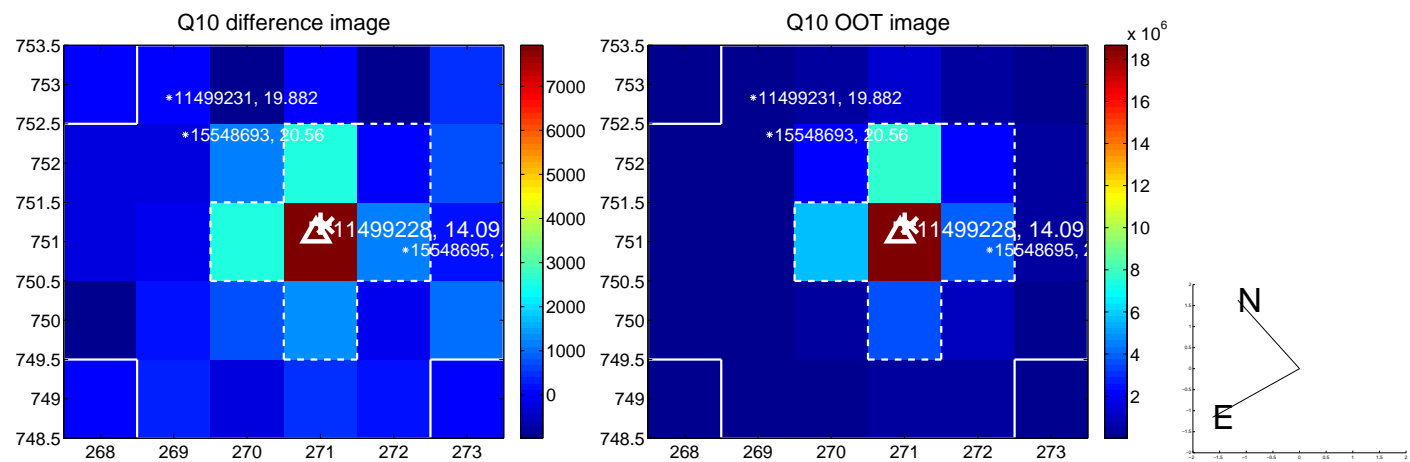
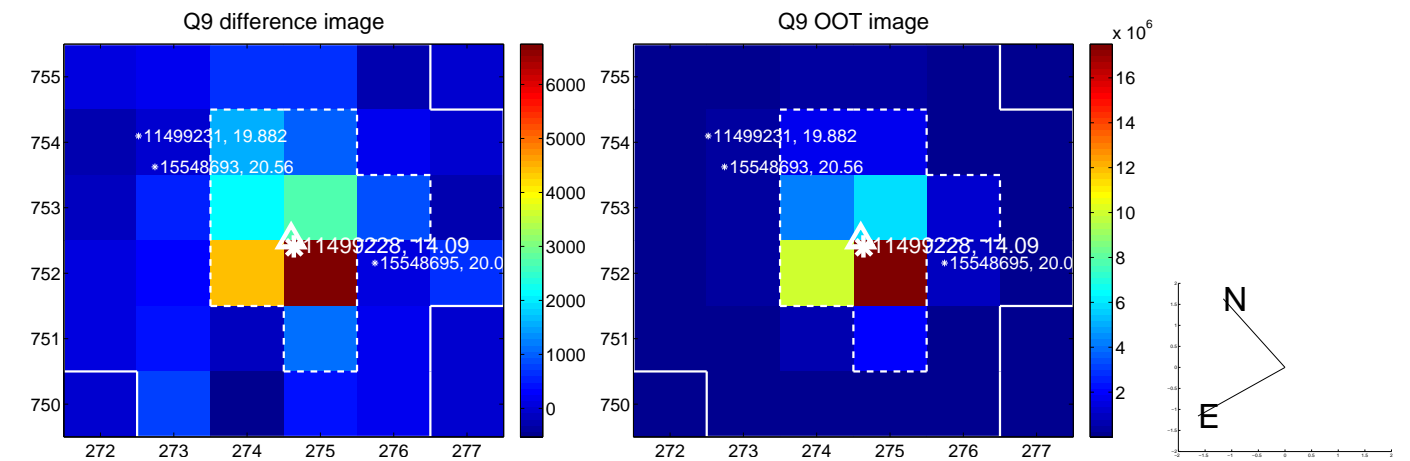
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



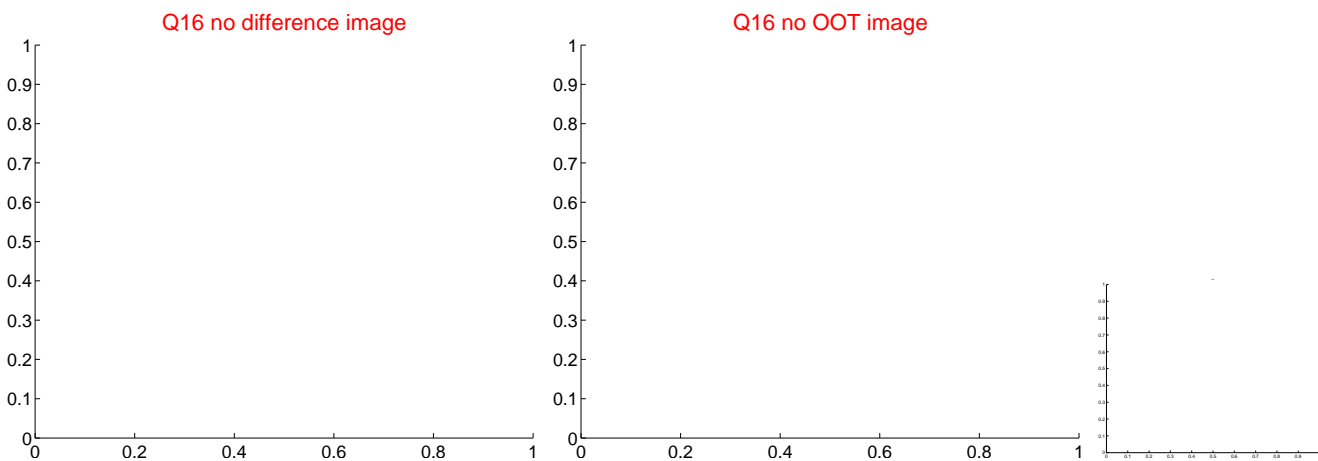
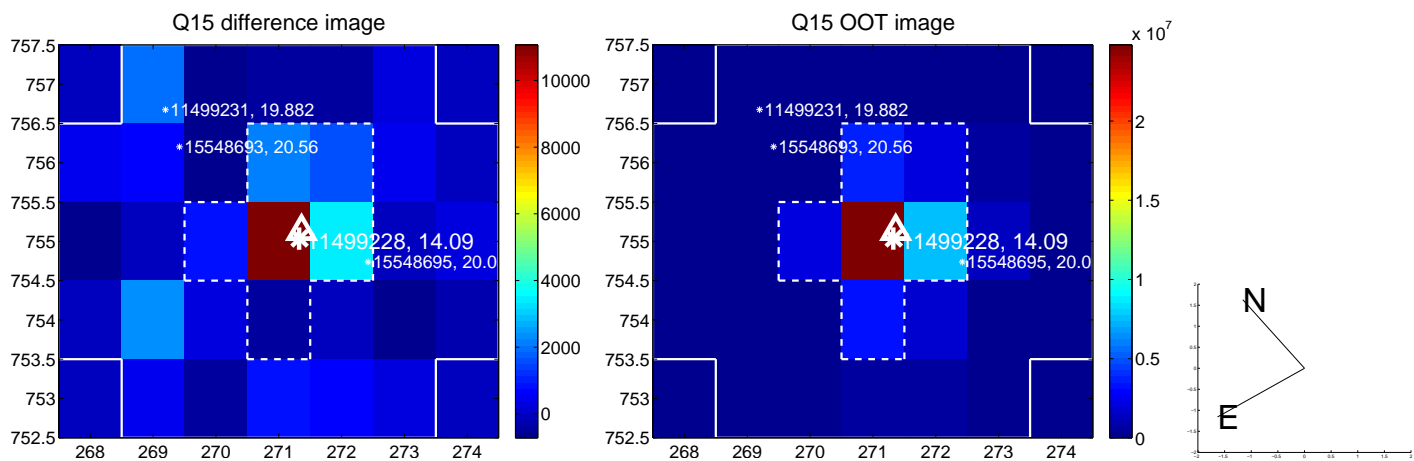
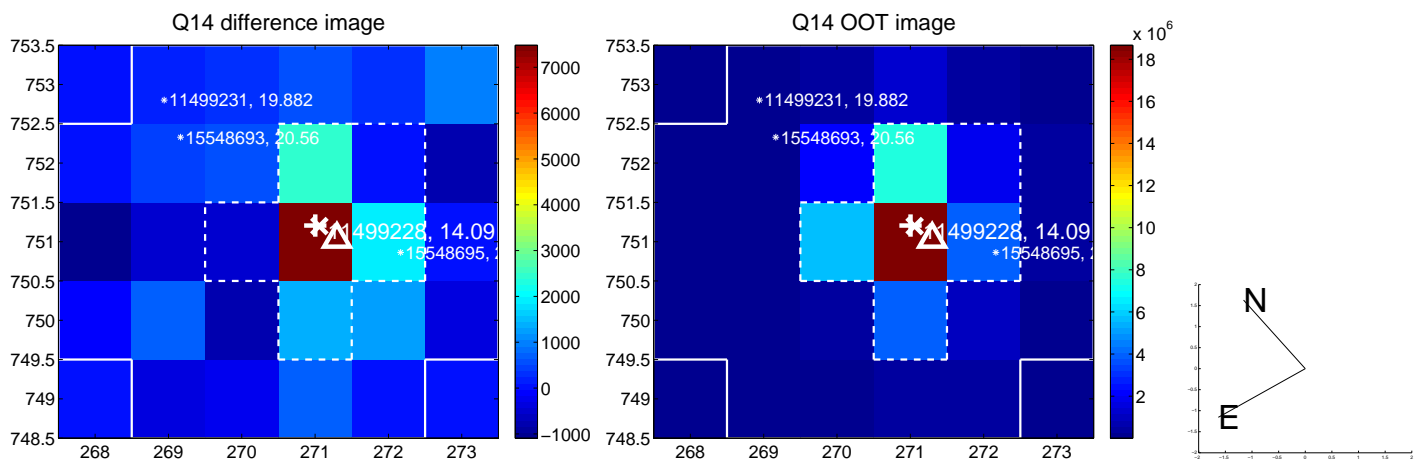
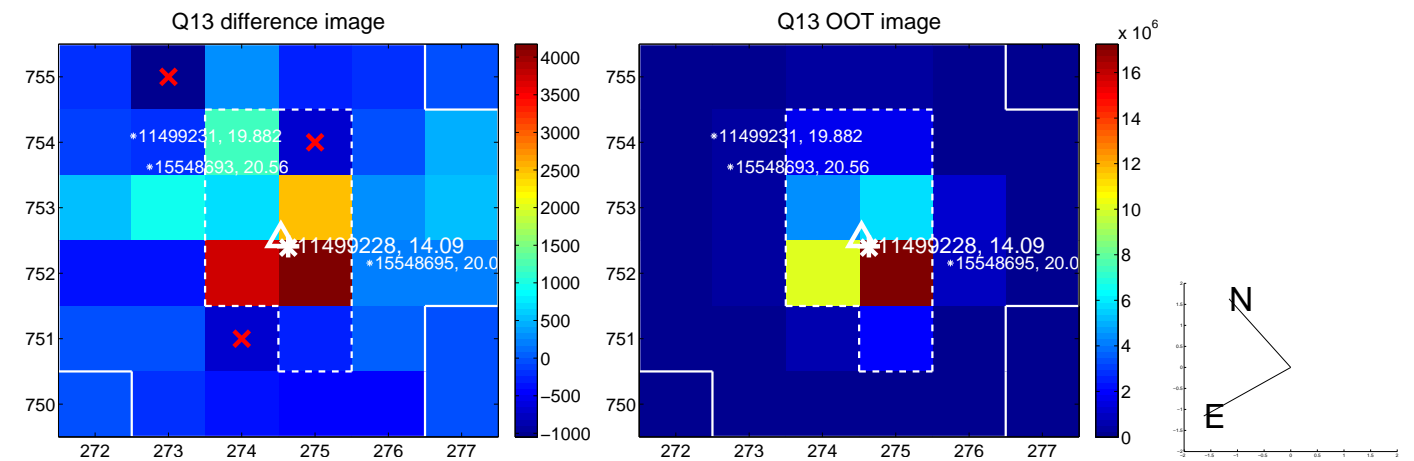
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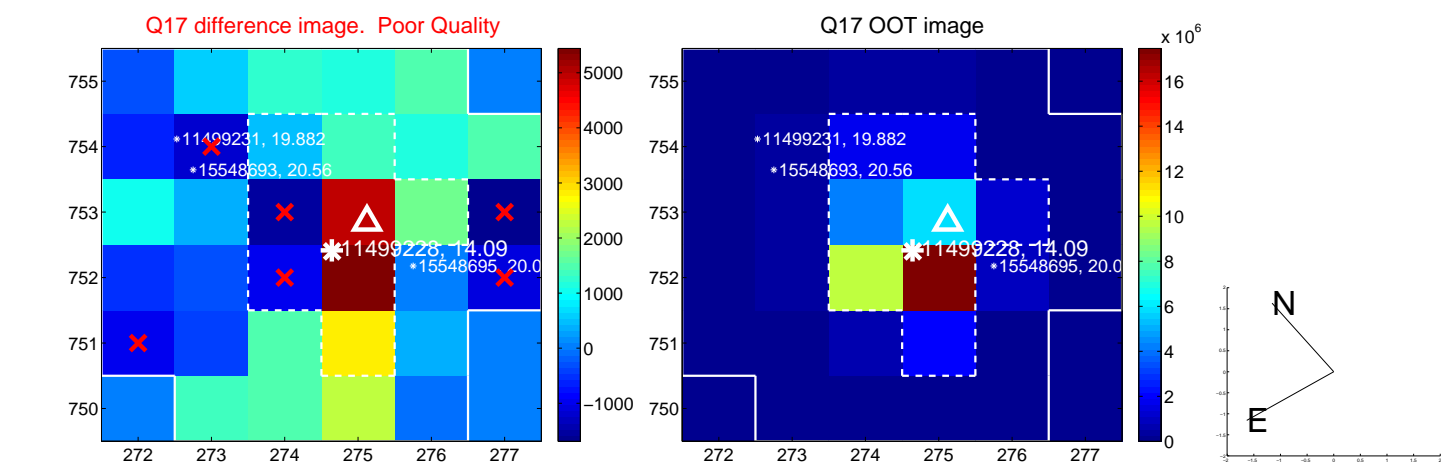
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



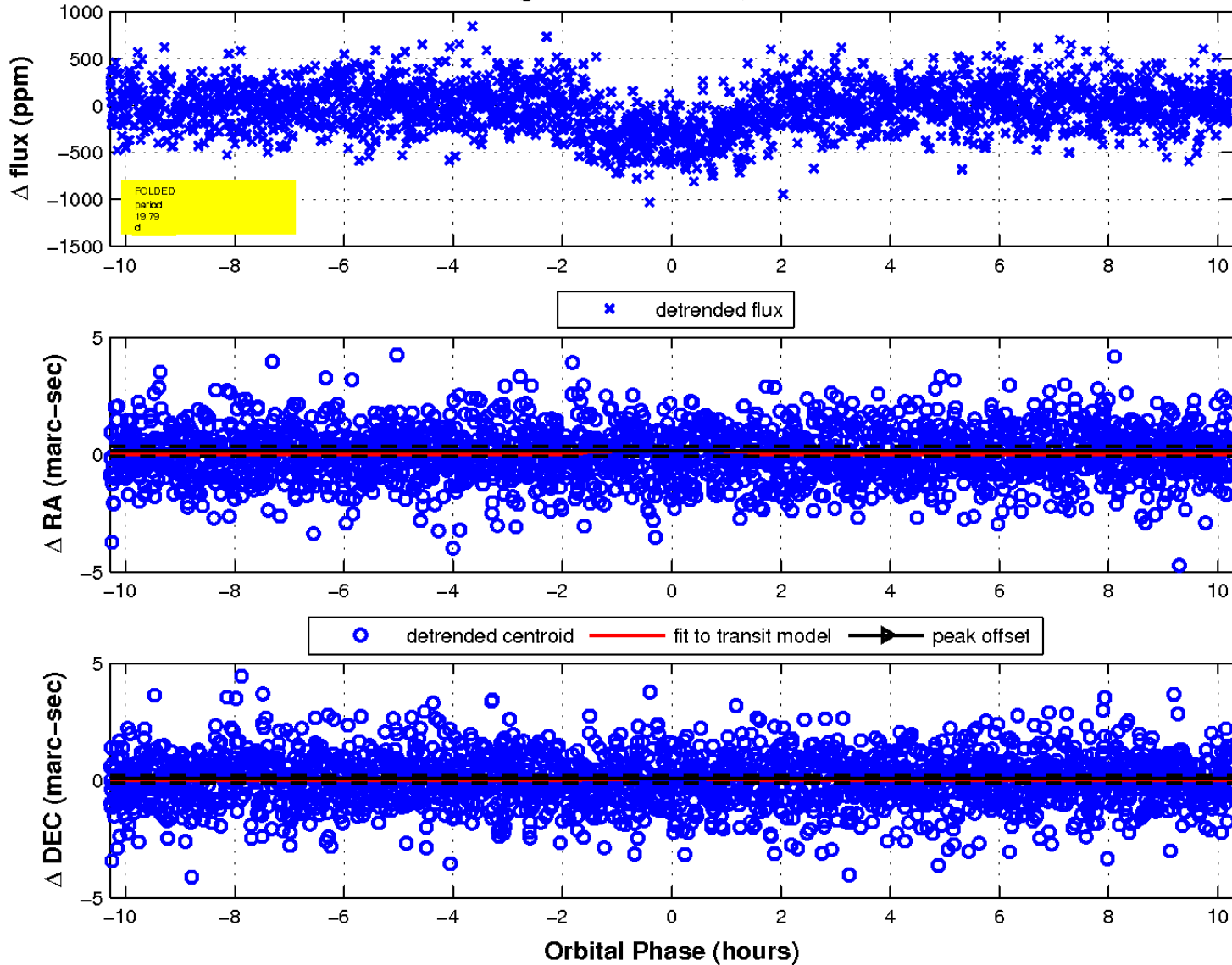
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

