

KIC 005388229

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})
005388229-01	OBS	No	0.618120	131.737924	109.5	5.686	13.9	10.0	0.95	5371	1.16	3765.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005388229-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

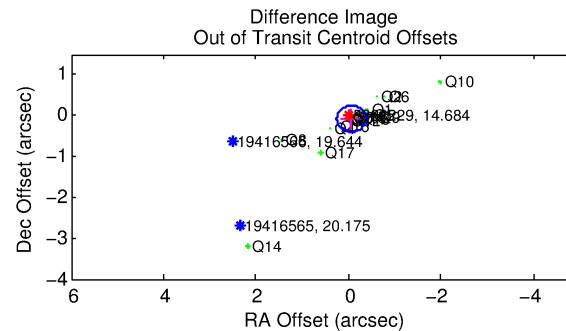
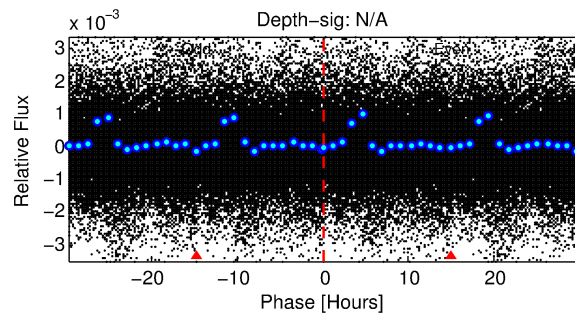
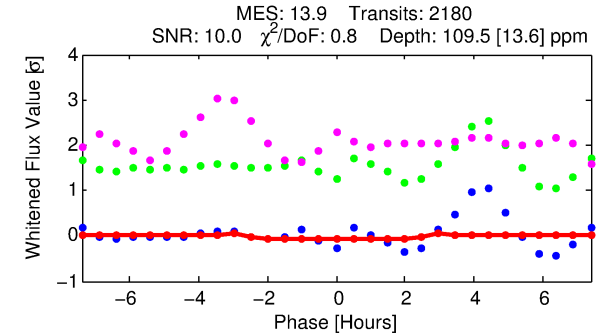
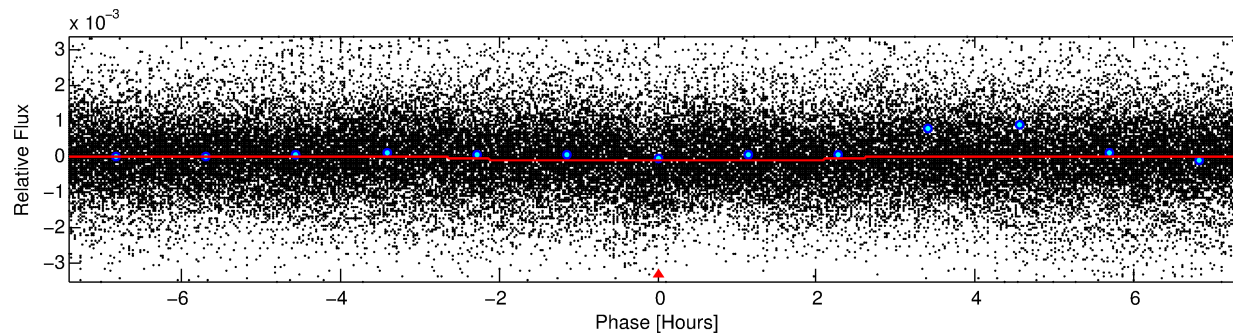
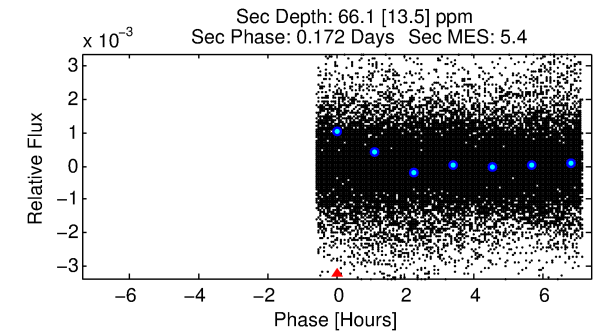
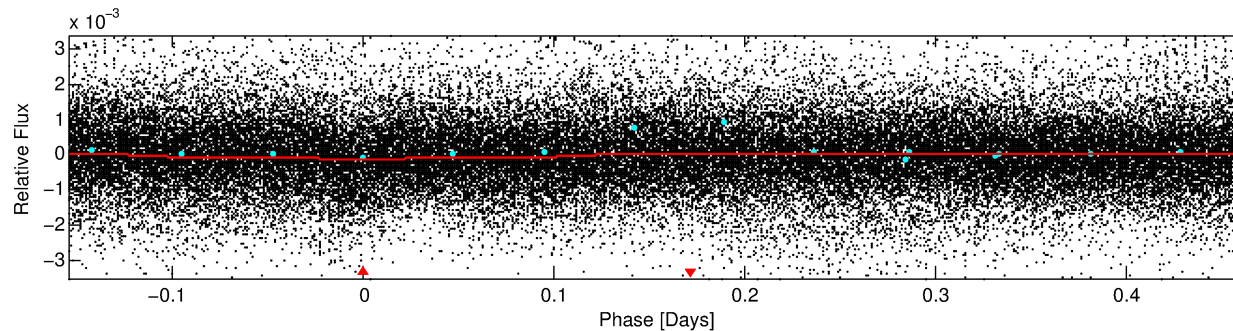
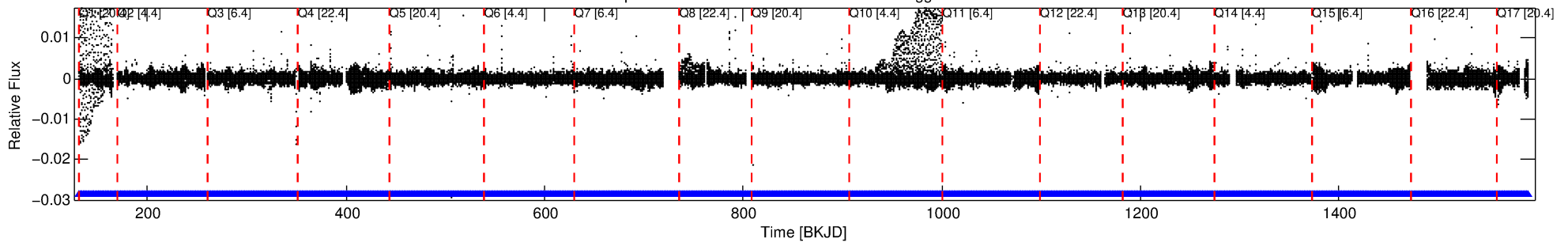
Ephemeris Match Information For 005388229-01

No Significant Match Found

DV One-Page Summary

KIC: 5388229 Candidate: 1 of 1 Period: 0.618 d
KOI: K06574.01 Corr: 0.921

Kp: 14.68 R*: 0.95 Rs Teff: 5371.0 K Logg: 4.40 Fe/H: 0.000



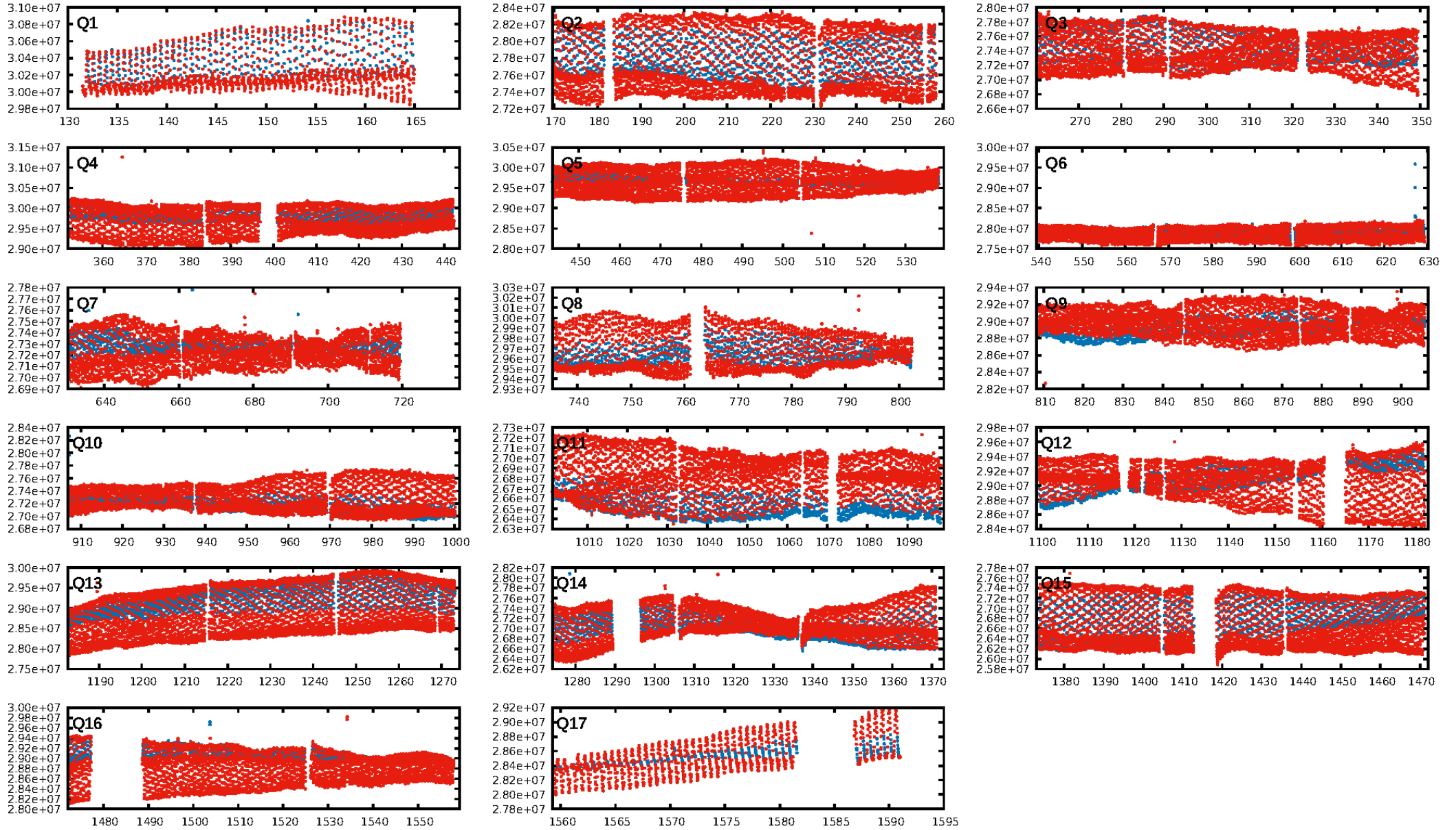
DV Fit Results:

Period = 0.61812 [0.00001] d
Epoch = 131.7379 [0.0026] BKJD
Rp/R* = 0.0112 [0.0018]
a/R* = 1.03 [0.04]
b = 0.87 [0.17]
Seff = 3765.84 [1695.35]
Teq = 1998 [225] K
Rp = 1.16 [0.41] Re
a = 0.0134 [0.0038] AU
Ag = 4.80 [2.76] [1.38σ]
Teffp = 4572 [451] K [5.11σ]

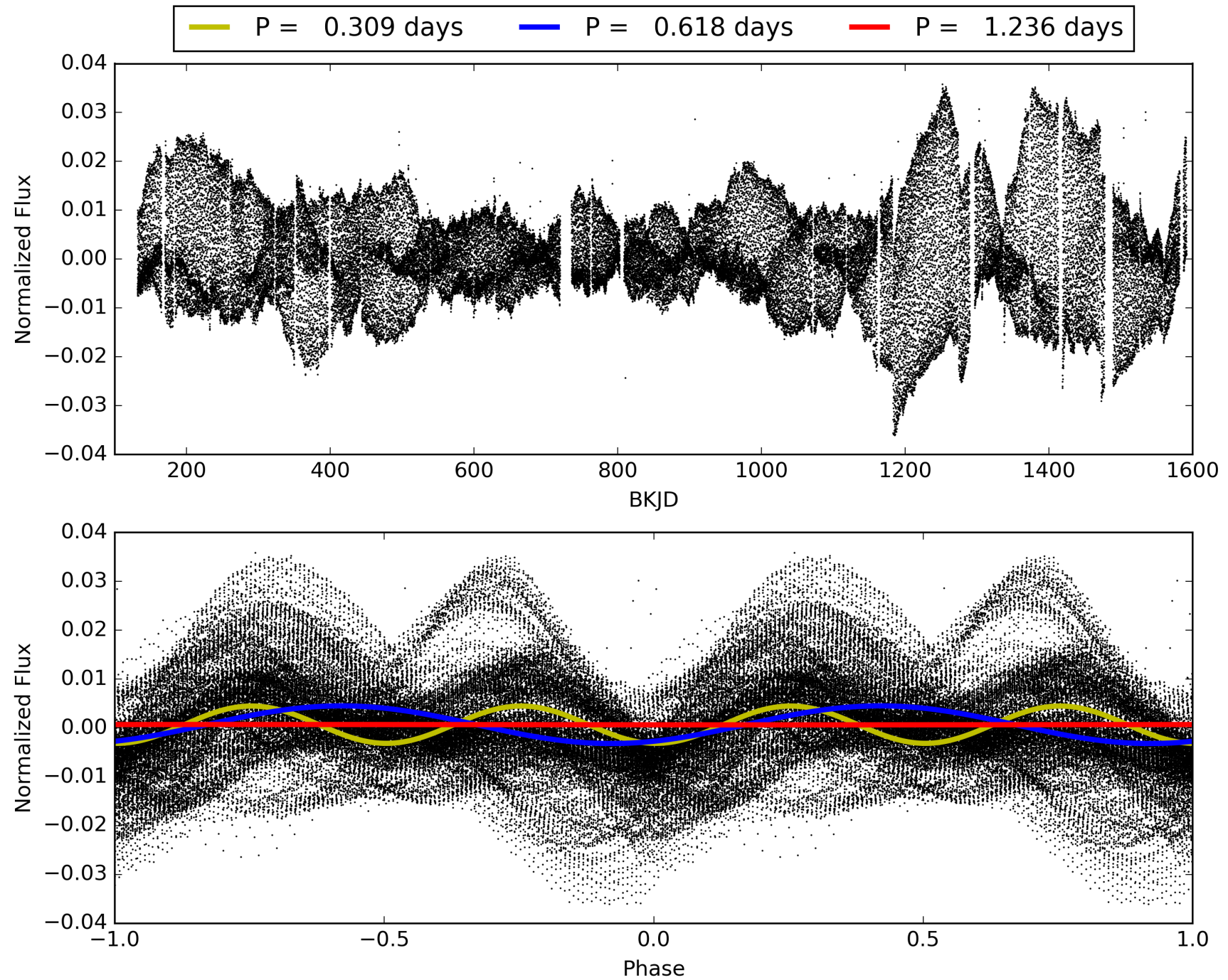
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2082/2082]
GhostDiagnostic-chr: -1.833
Centroid-sig: 51.5%
Centroid-so: 0.298 arcsec [0.79σ]
OotOffset-rm: 0.094 arcsec [0.90σ]
KicOffset-rm: 0.268 arcsec [1.82σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005388229-01, PDC Light Curves

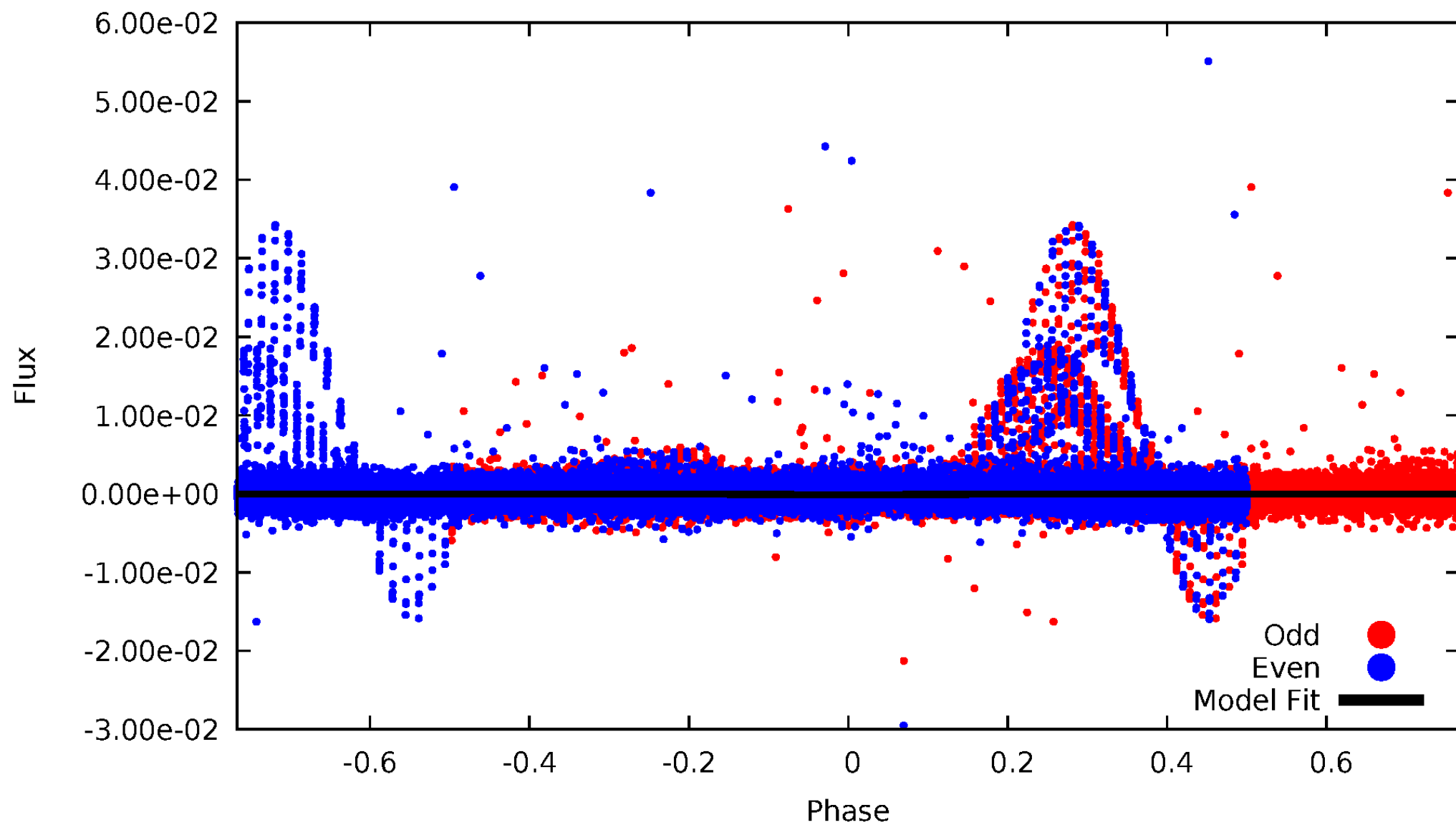


TCE 005388229-01



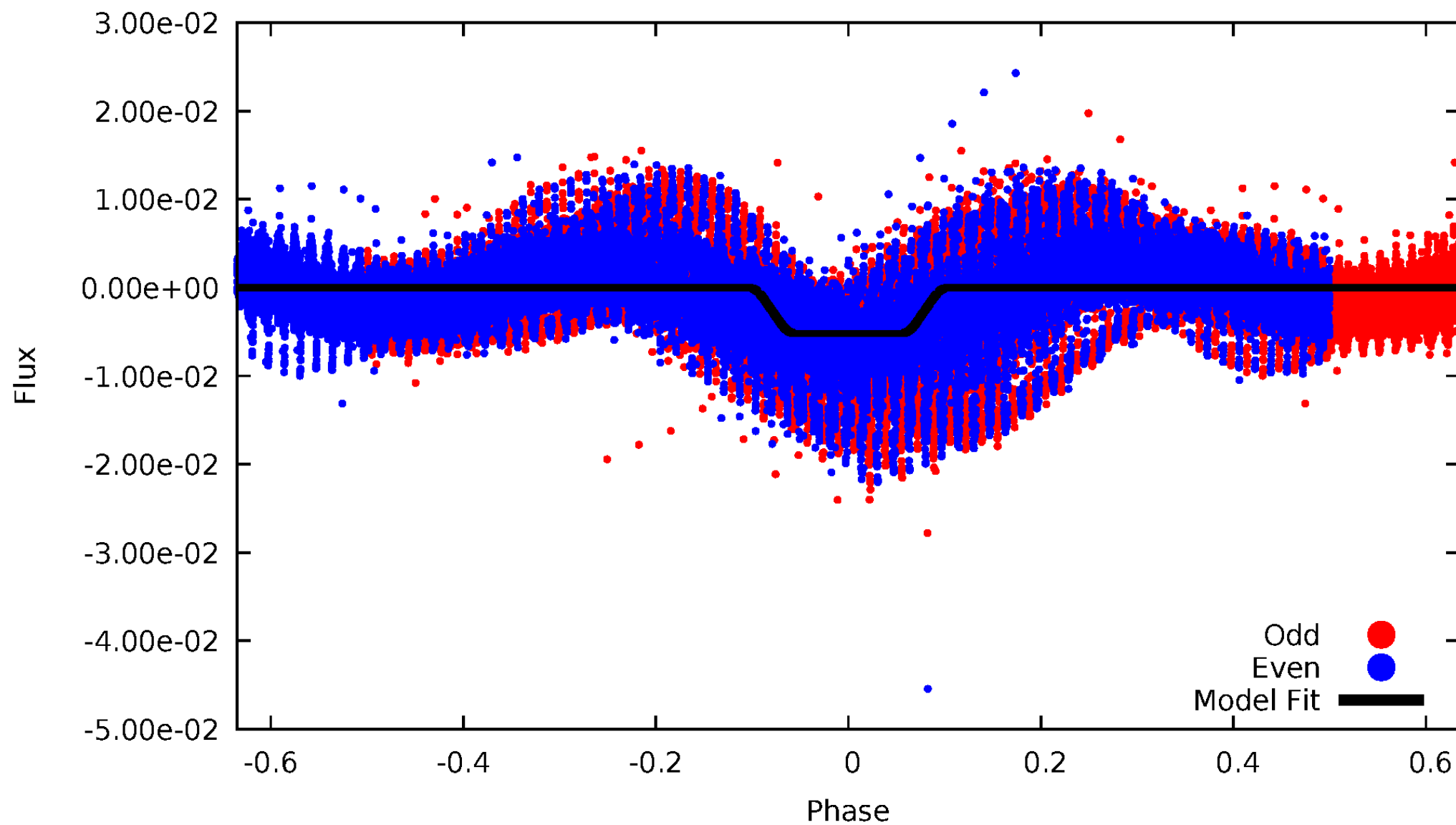
DV Odd/Even

TCE 005388229-01

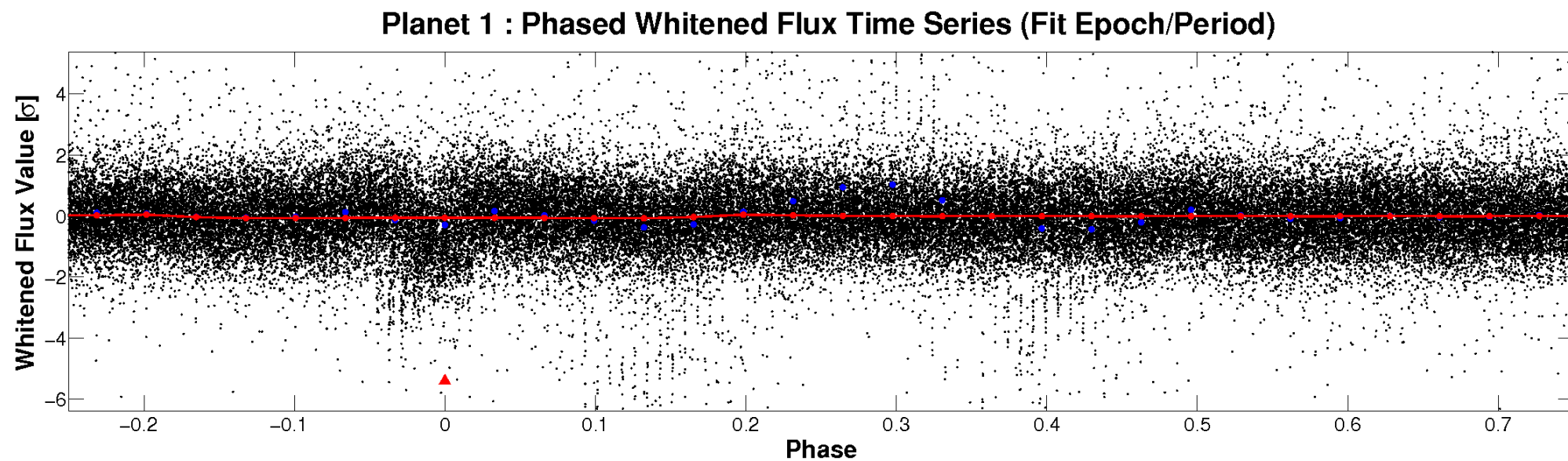
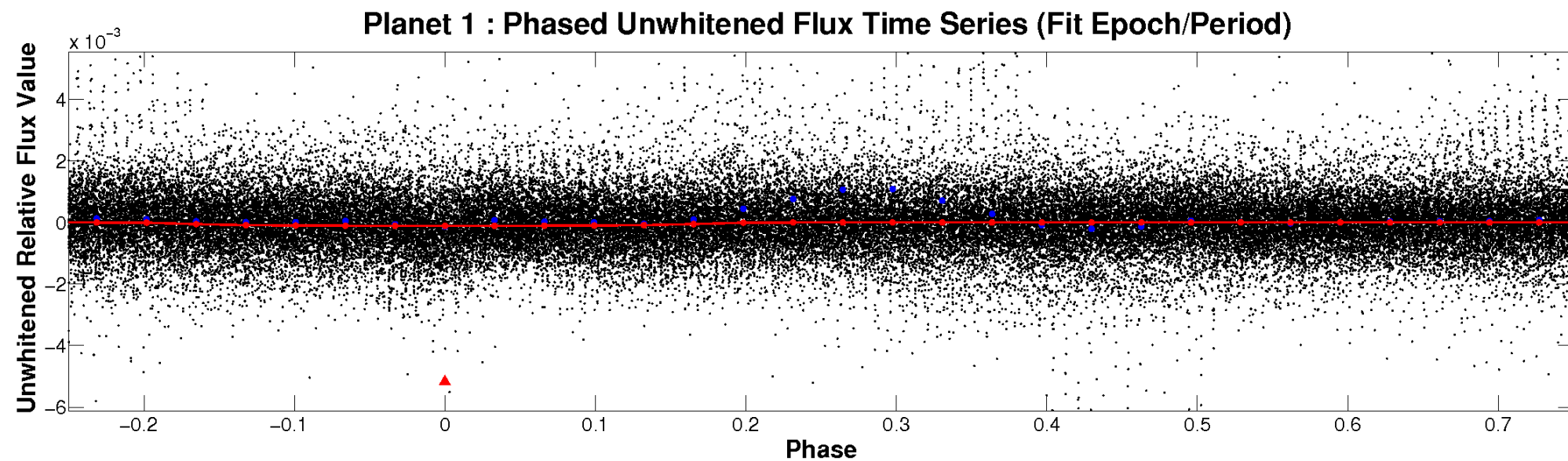


ALT Odd/Even

TCE 005388229-01

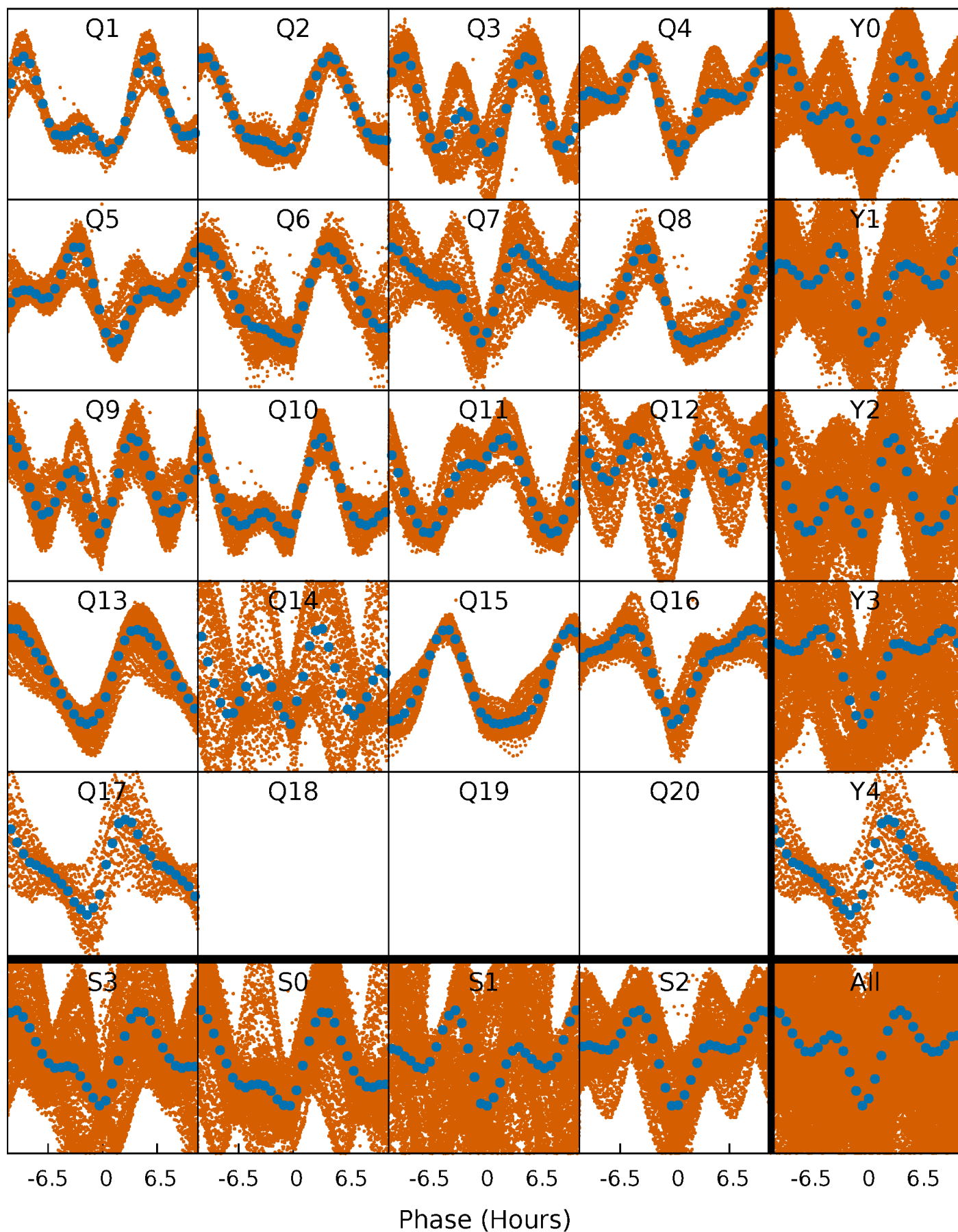


Non-Whitened Vs. Whitened Light Curve



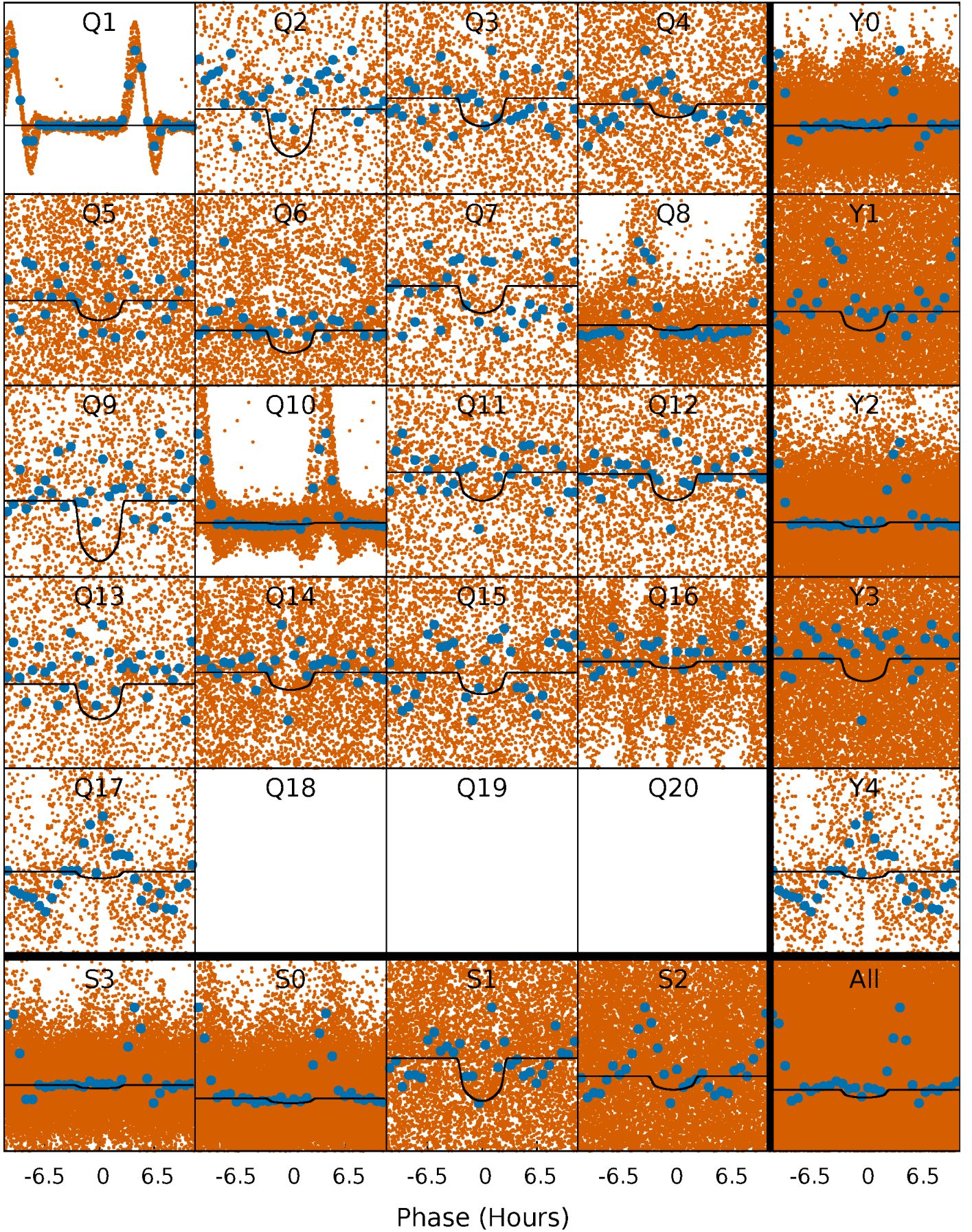
PDC Quarter-Phased Transit Curves

TCE 005388229-01 P= 0.618120 Days $T_0=131.737924$ (BKJD)



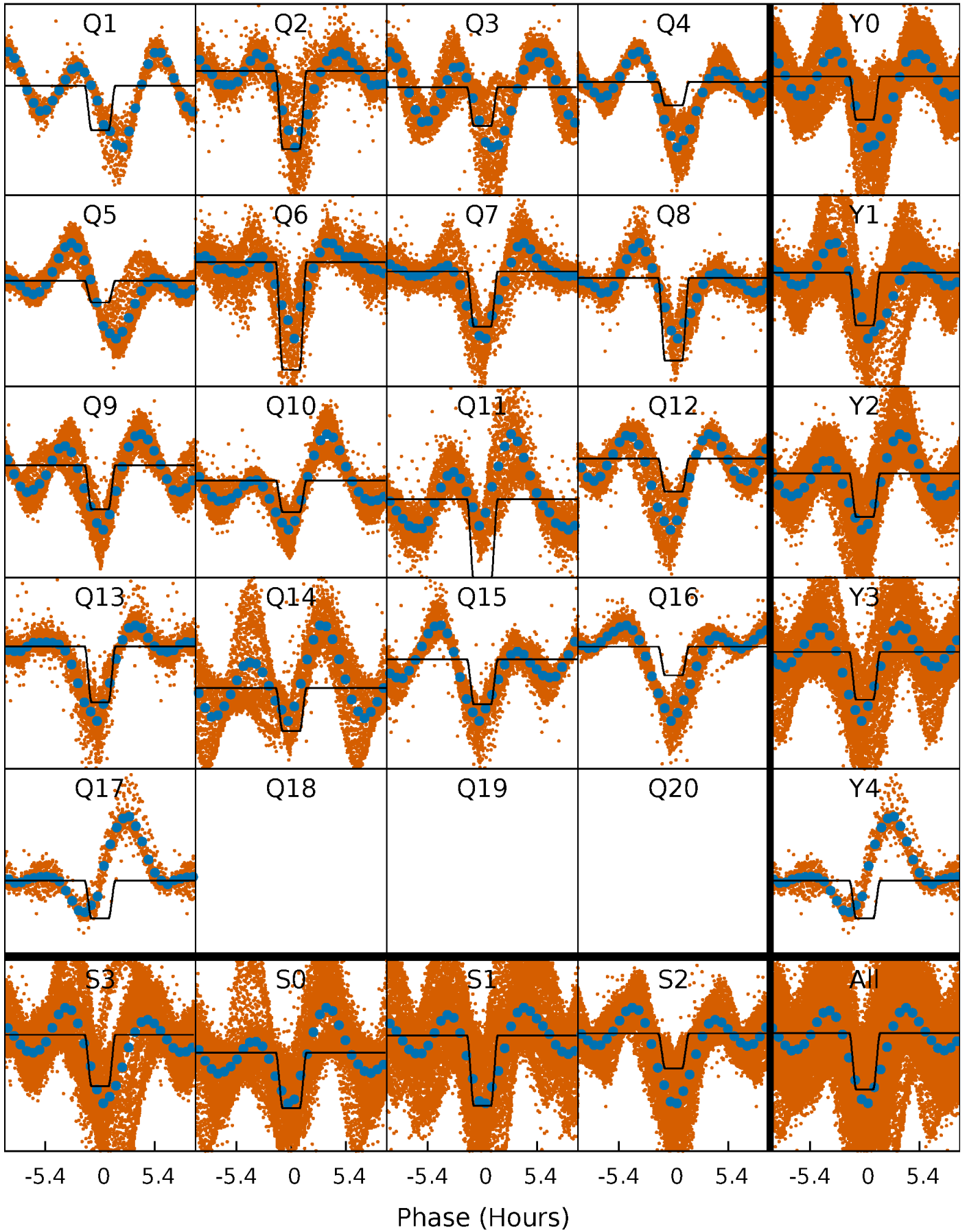
DV Quarter-Phased Transit Curves

TCE 005388229-01 P= 0.618120 Days $T_0=131.737924$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

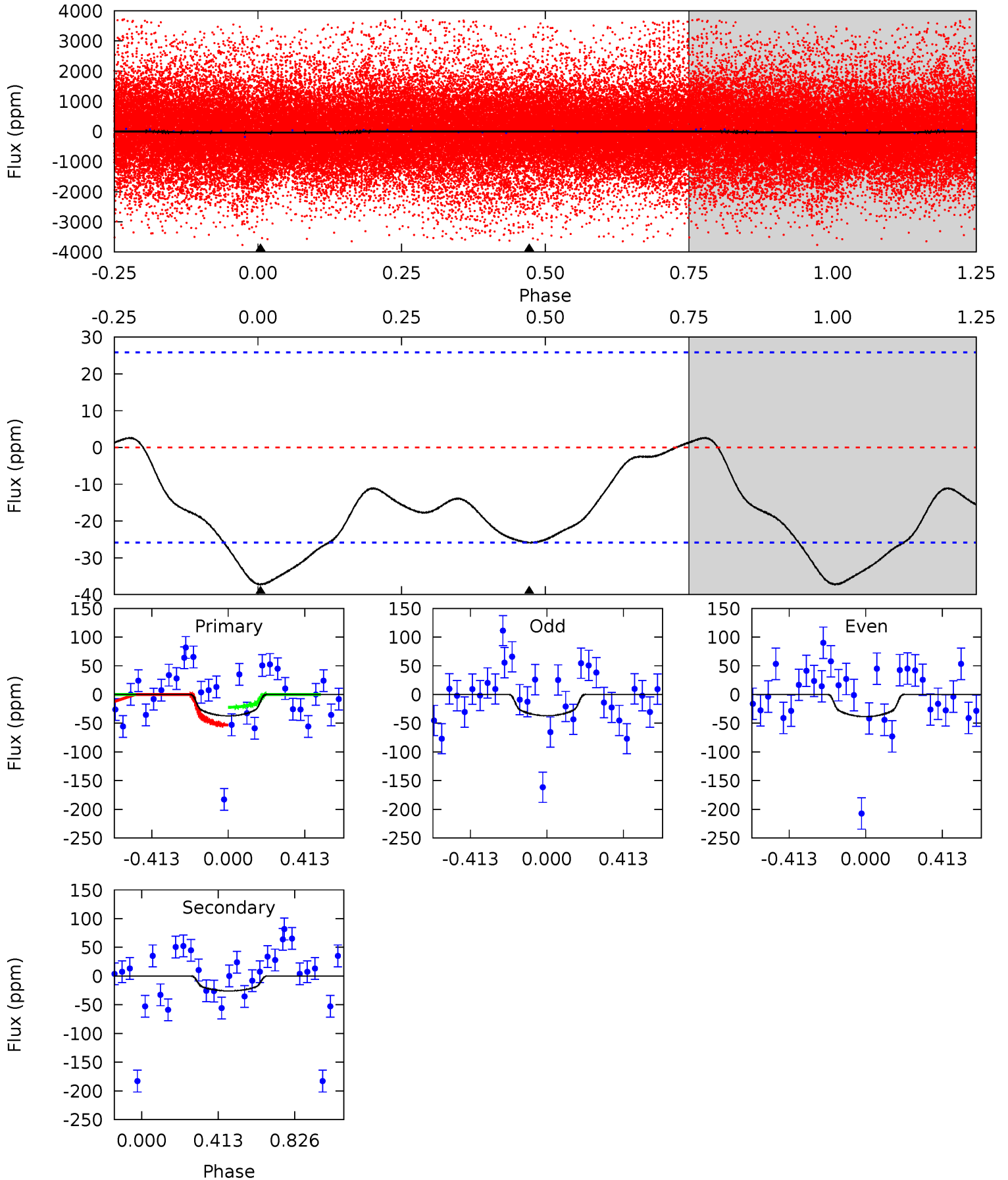
TCE 005388229-01 P= 0.618121 Days $T_0=131.729034$ (BKJD)



DV Model-Shift Uniqueness Test

005388229-01, P = 0.618120 Days, E = 131.119804 Days

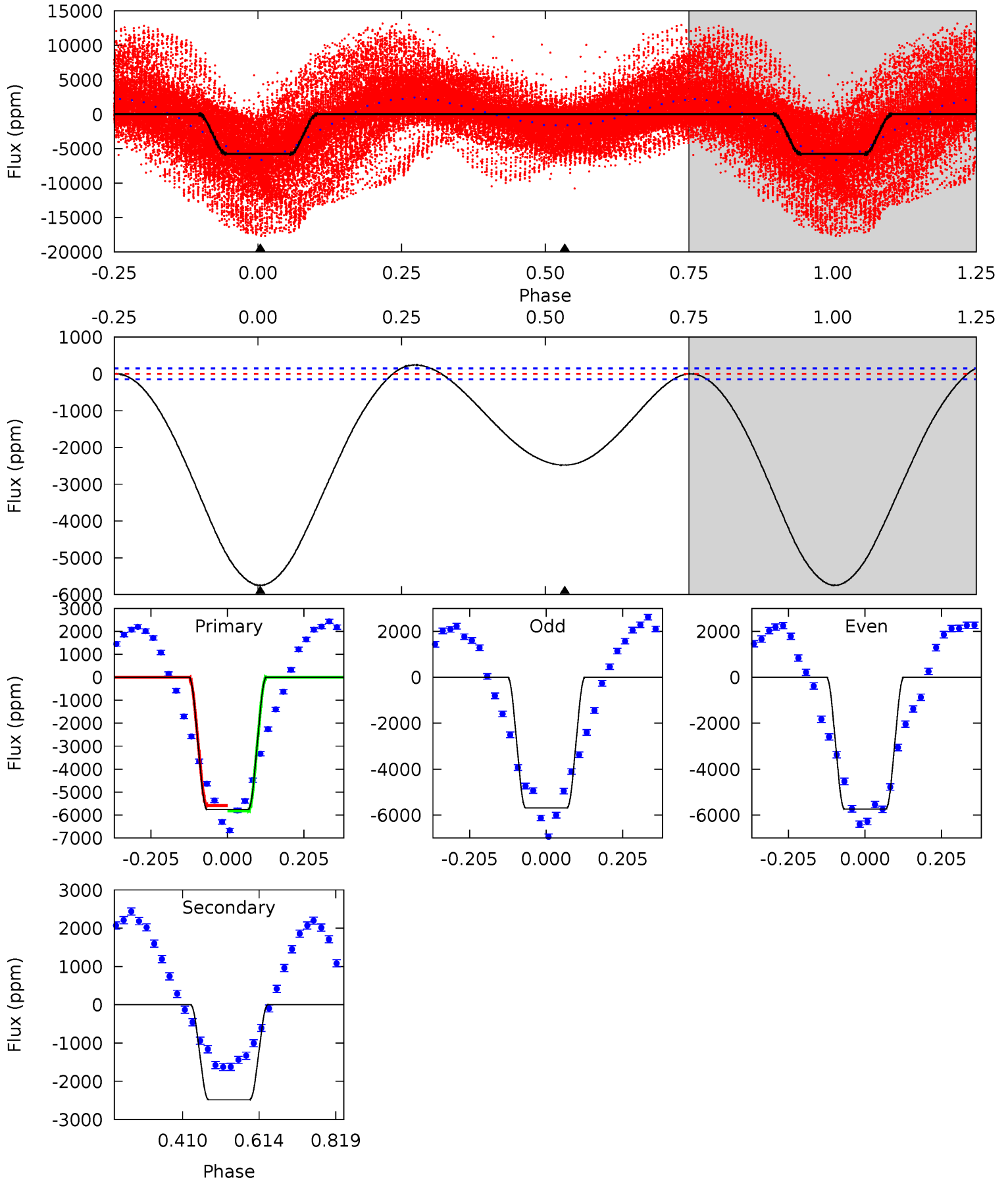
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.13	4.26	0	0	4.26	0.82	1.00	6.13	6.13	4.26	4.26	0.13	0.00	0.07	2.61



Alt Model-Shift Uniqueness Test

005388229-01, P = 0.618121 Days, E = 131.110913 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
172.0	74.2	0	0	4.41	1.27	5.18	172.0	172.0	74.2	74.2	0.72	1.07	0.04	3.54



Stellar Parameters For KIC 005388229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5371^{+160}_{-160}	$4.403^{+0.152}_{-0.247}$	$0.000^{+0.300}_{-0.250}$	$0.949^{+0.301}_{-0.139}$	$0.830^{+0.115}_{-0.062}$	$1.370^{+0.978}_{-0.795}$
	+3%/-3%	+3%/-6%	+inf%/-inf%	+32%/-15%	+14%/-7%	+71%/-58%
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 005388229-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 6	$1.19^{+0.31}_{-0.21}$	2822^{+253}_{-174}	3798^{+338}_{-331}	$1.737^{+1.075}_{-0.690}$
Alt.	-2481 ± 33	$7.55^{+1.35}_{-0.75}$	2815^{+235}_{-169}	4534^{+127}_{-128}	$4.287^{+0.994}_{-1.162}$

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

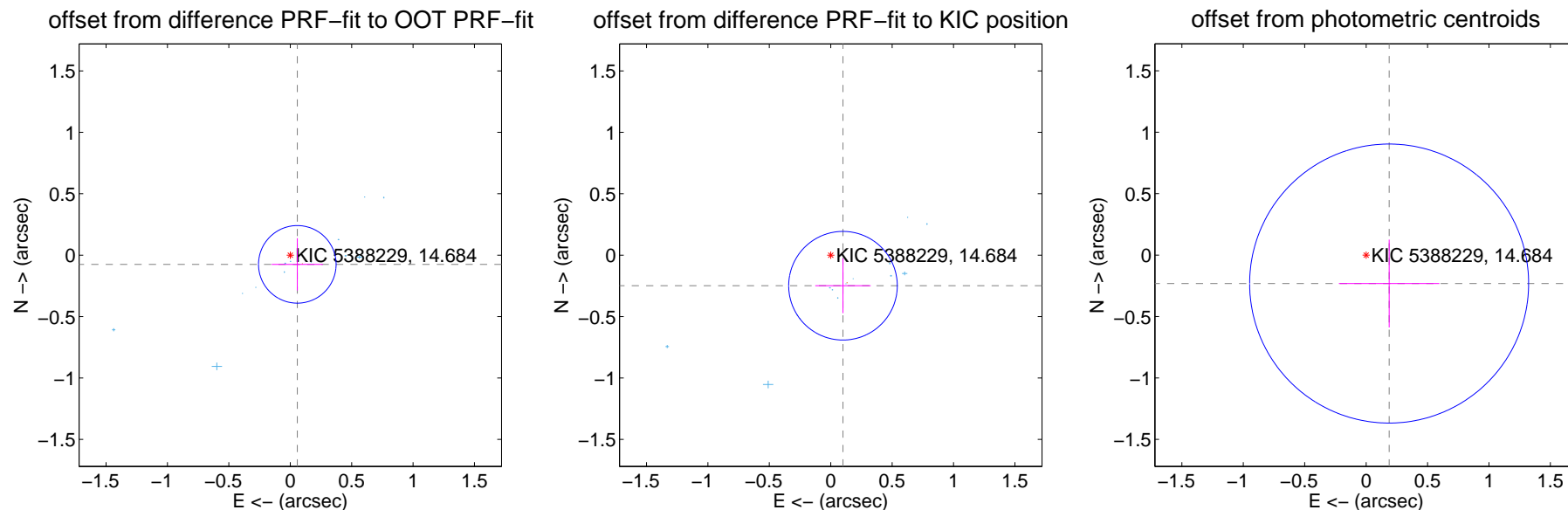
DV Centroid Data

Supplemental centroid analysis for 005388229-01. Kepler magnitude: 14.68. Transit SNR 9.96

There are 15 quarters with good PRF difference image offsets

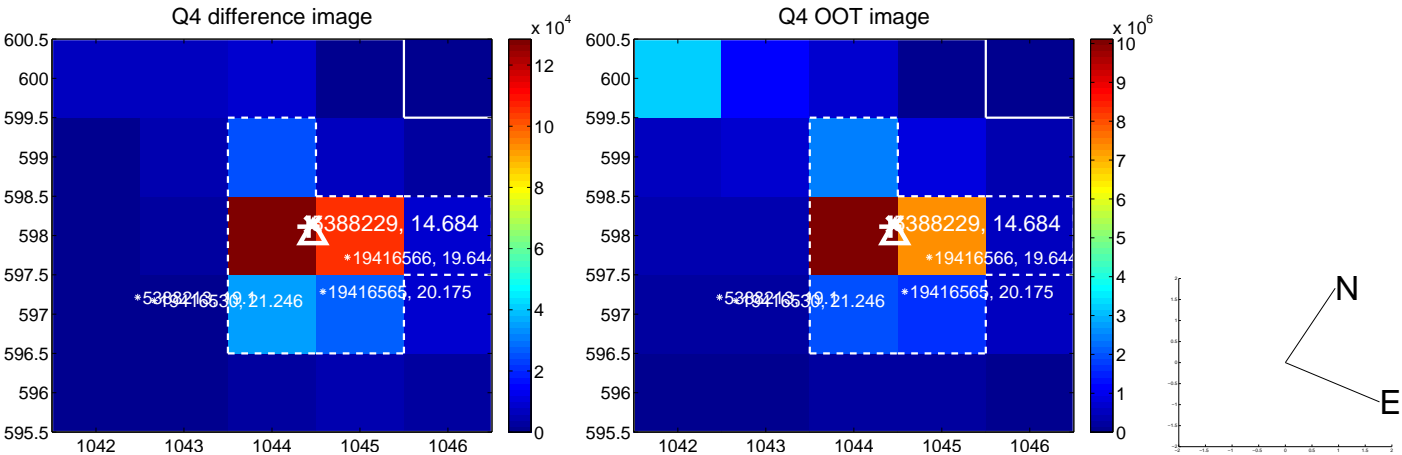
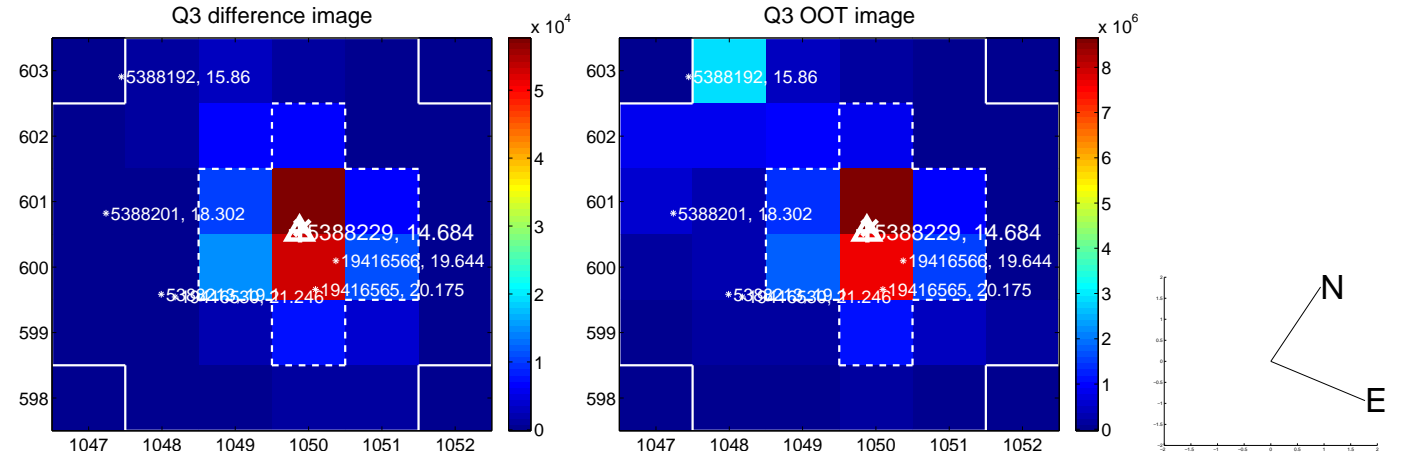
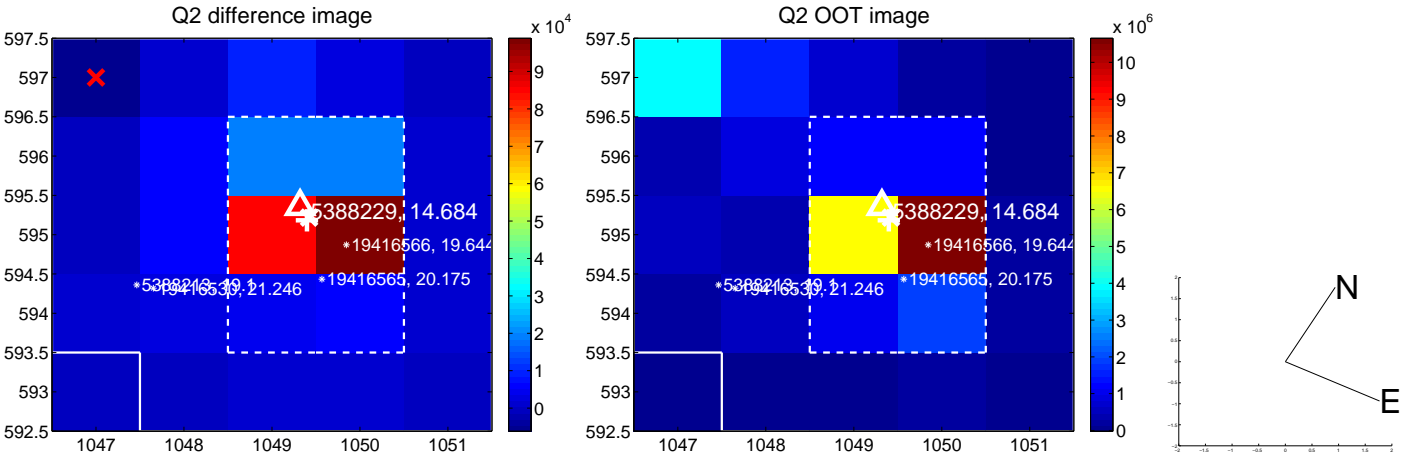
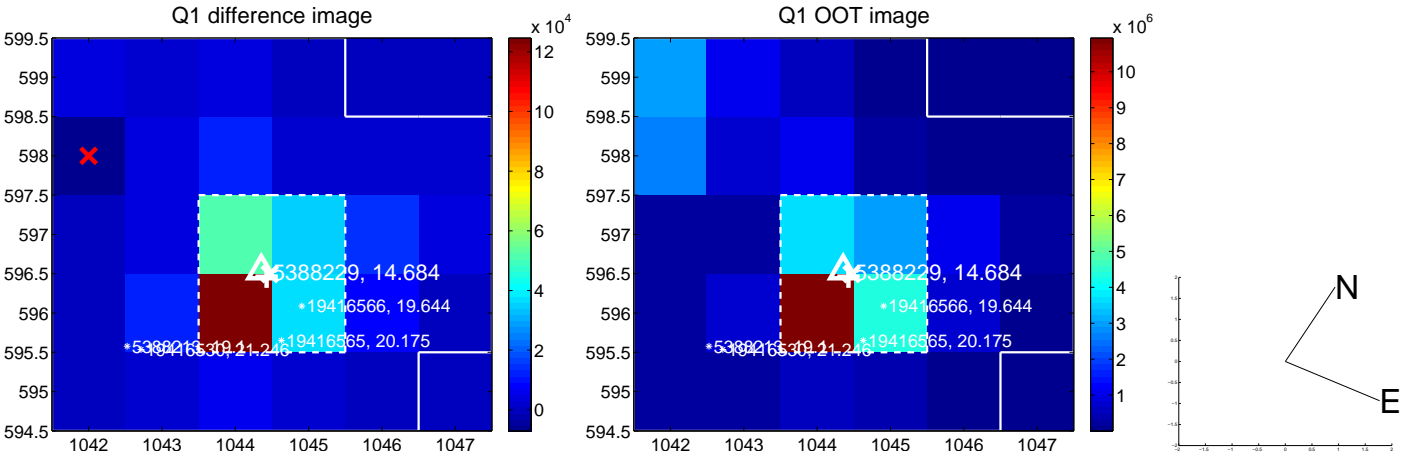
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.094 ± 0.105	0.90	-0.057 ± 0.209	-0.075 ± 0.213
PRF-fit source offset from KIC position	0.268 ± 0.147	1.82	-0.100 ± 0.226	-0.249 ± 0.222
photometric centroid source offset	0.30 ± 0.38	0.79	-0.19 ± 0.41	-0.23 ± 0.36

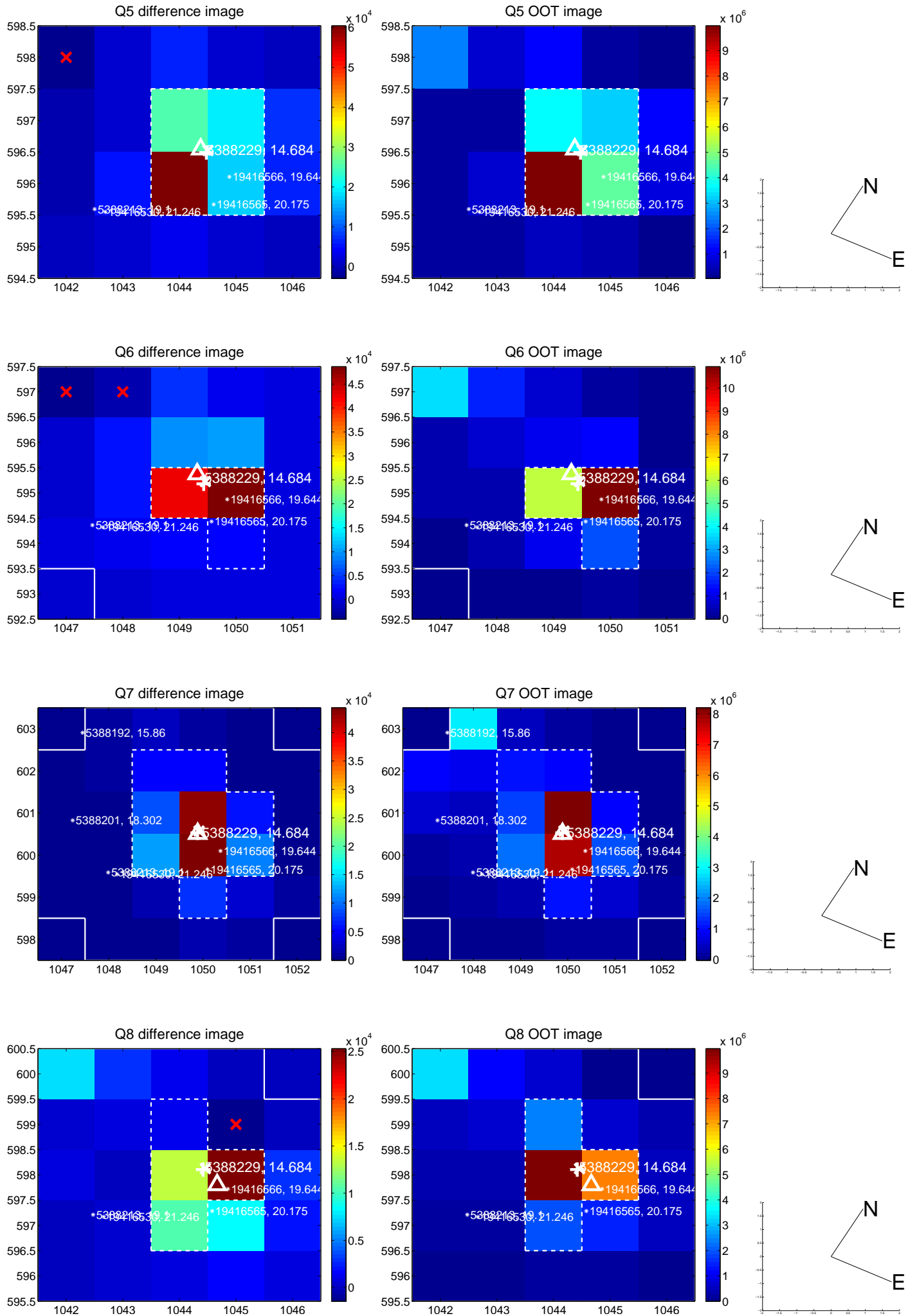


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

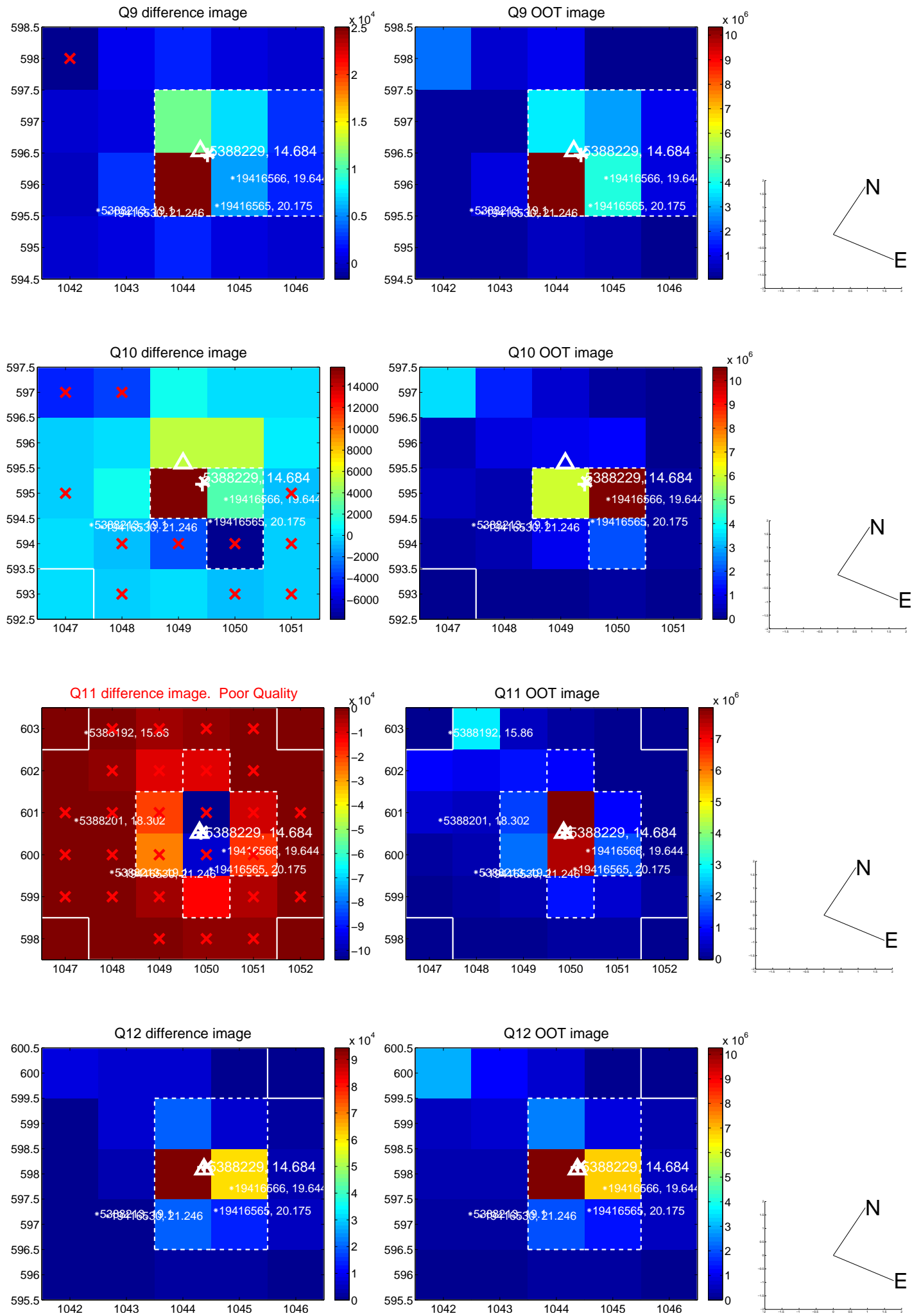
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



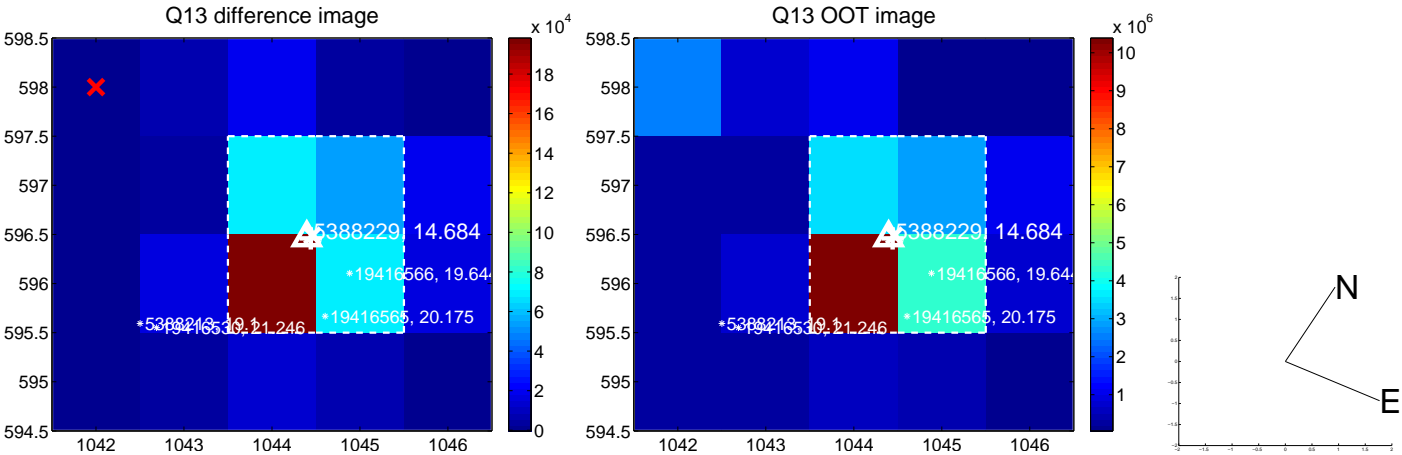
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



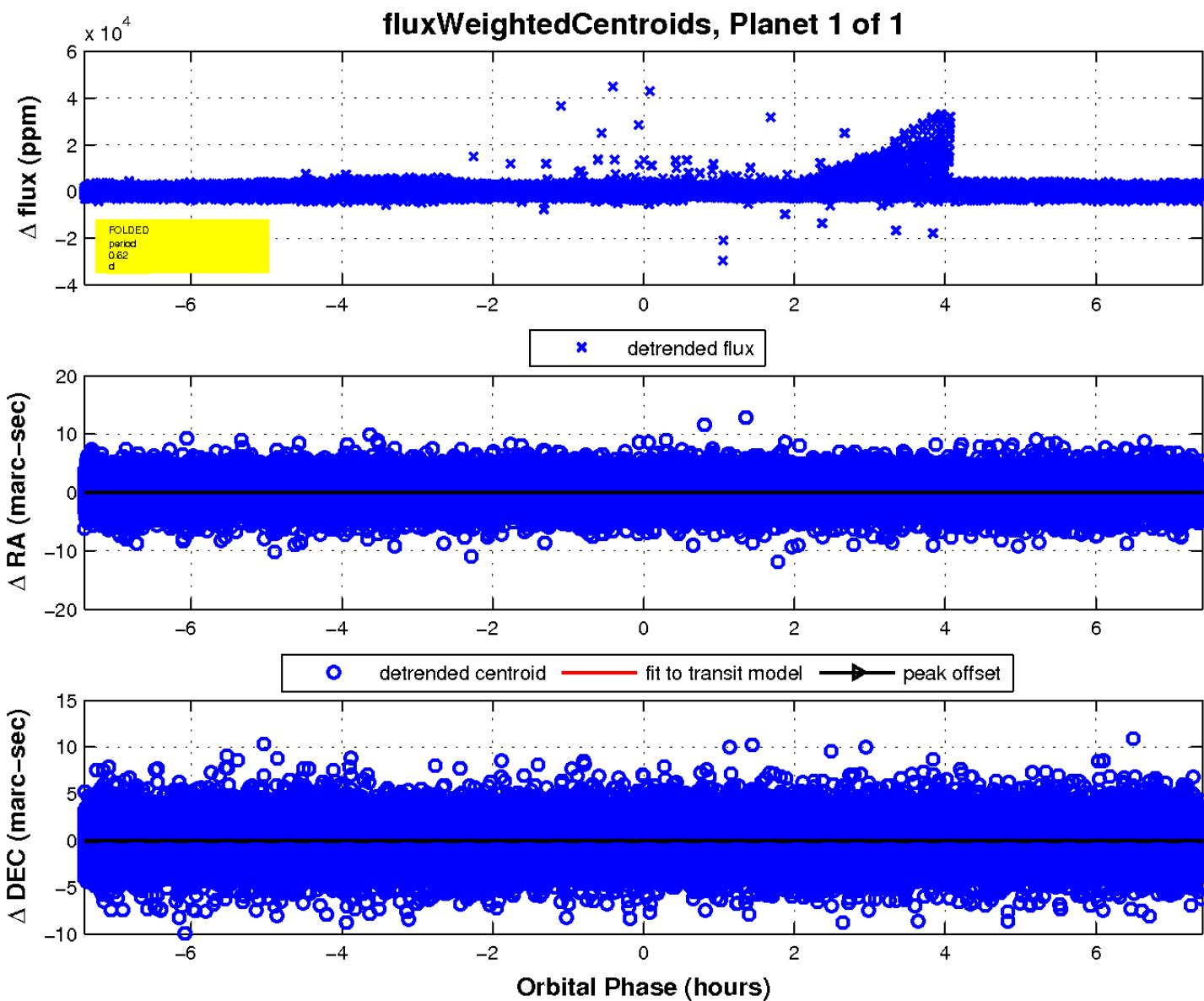
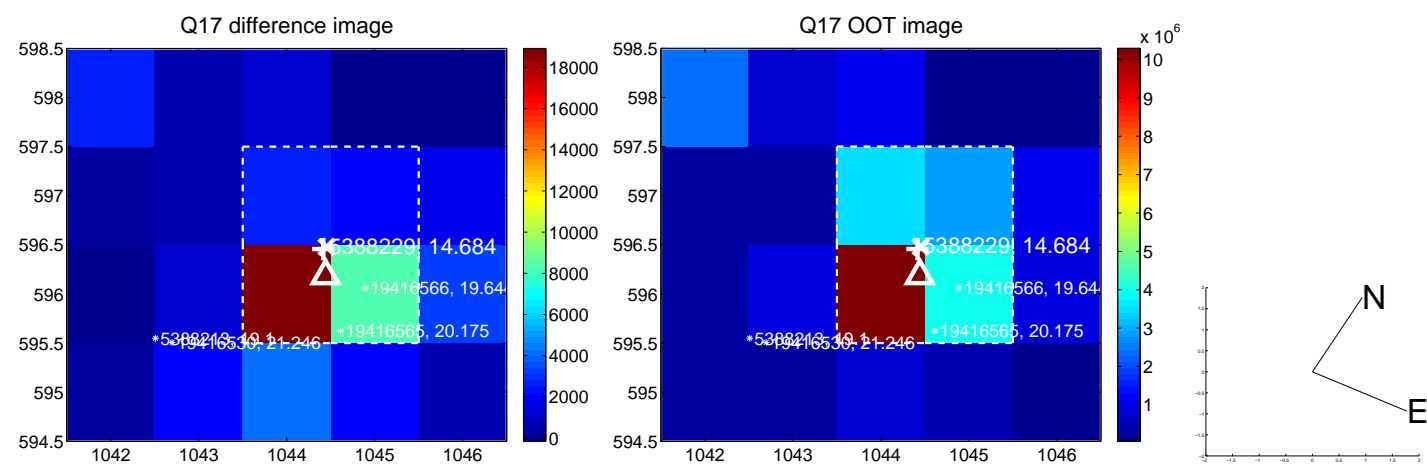
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

