

KIC 005475042

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})
005475042-01	OBS	3050.01	1.242613	131.897318	138.3	1.718	13.2	13.4	0.82	5520	1.14	1157.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005475042-01	OBS	PC	0.89	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.

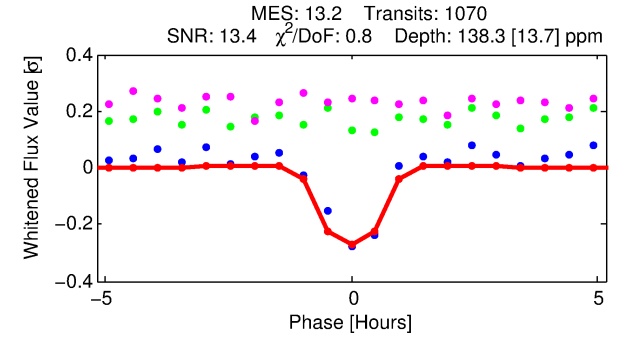
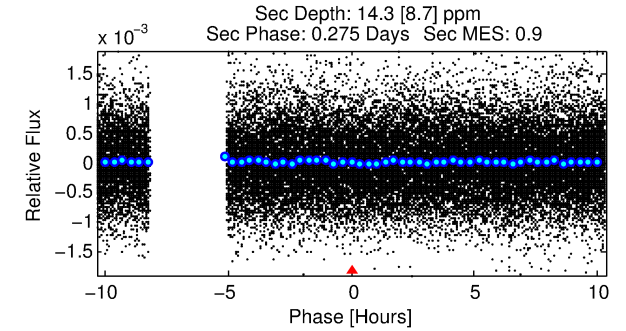
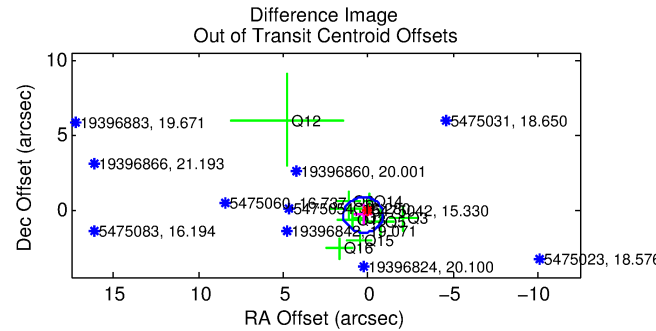
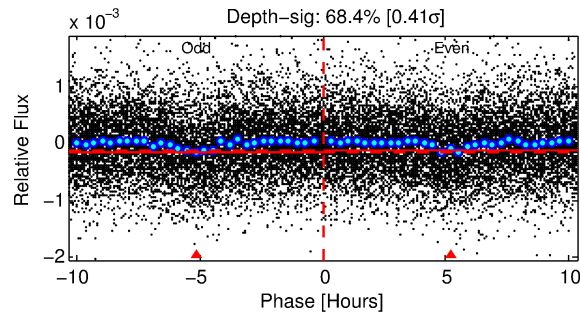
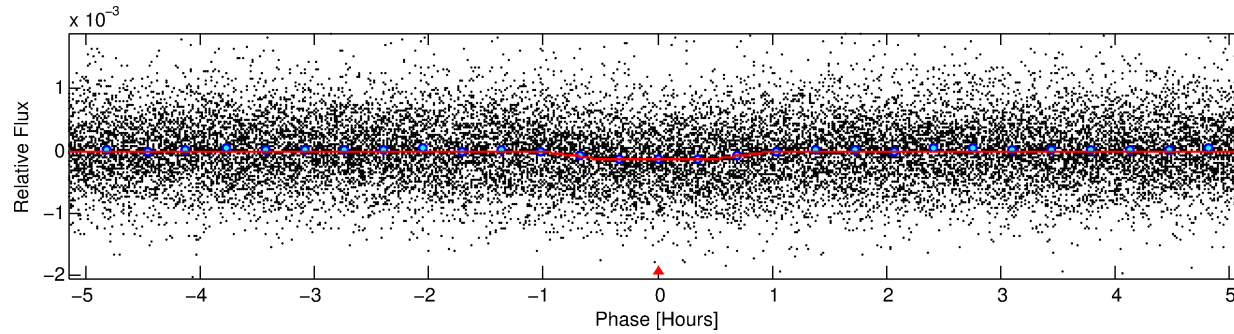
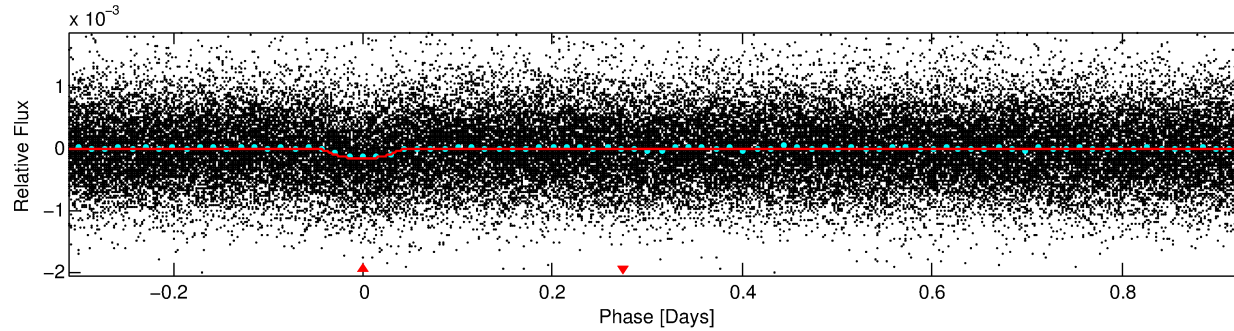
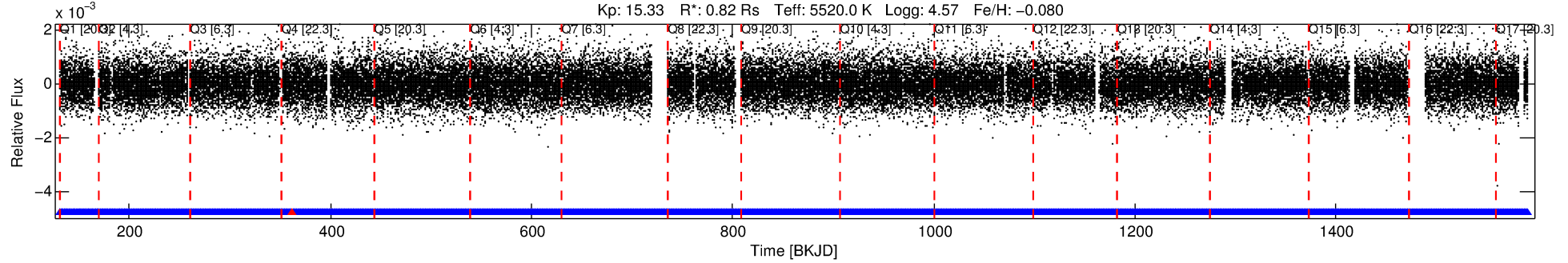
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005475042-01

No Significant Match Found

DV One-Page Summary

KIC: 5475042 Candidate: 1 of 1 Period: 1.243 d
KOI: K03050.01 Corr: 0.885



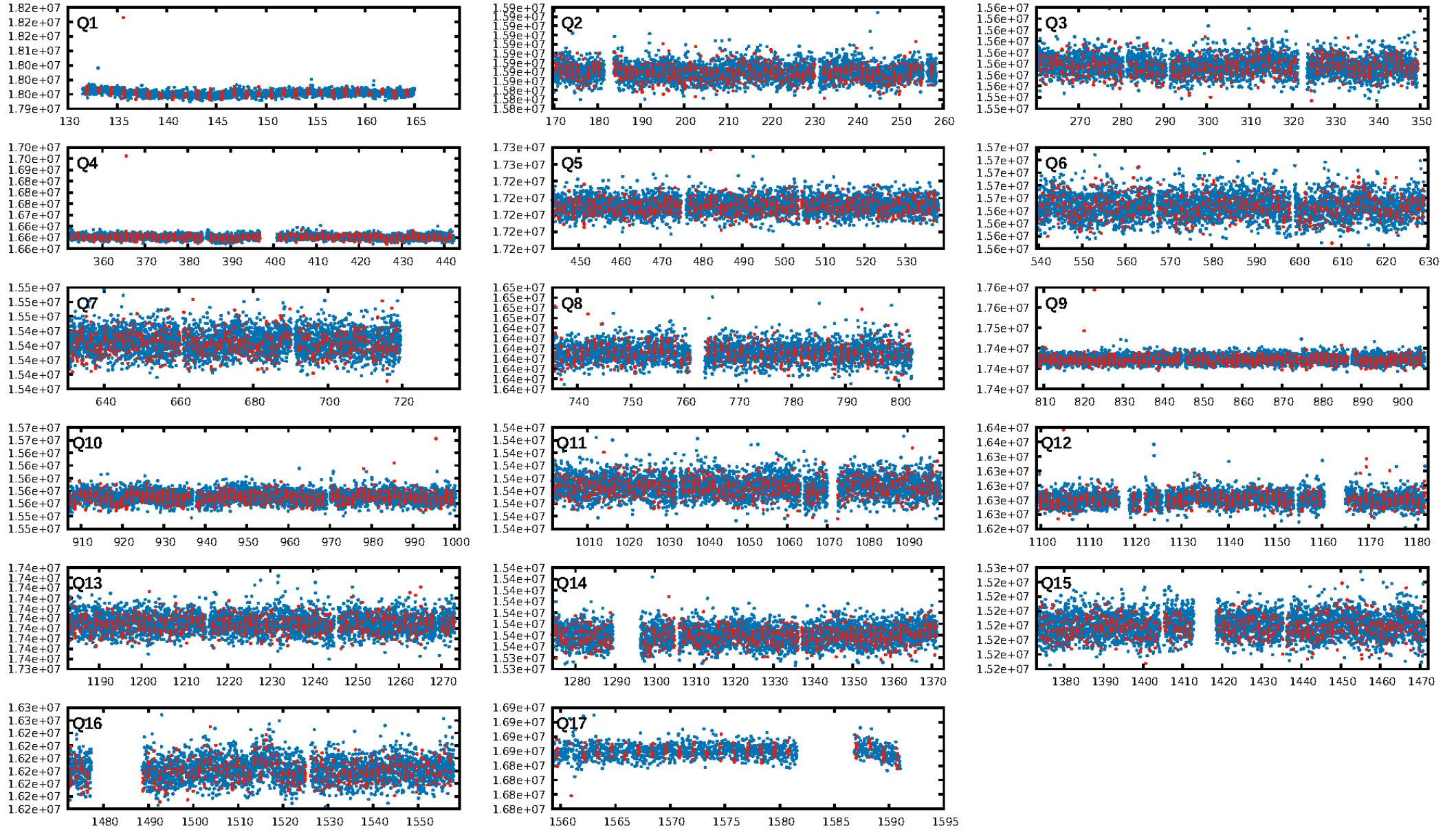
DV Fit Results:

Period = 1.24261 [0.00001] d
Epoch = 131.8973 [0.0019] BKJD
Rp/R* = 0.0128 [0.0091]
a/R* = 2.82 [7.83]
b = 0.89 [0.76]
Seff = 1157.10 [335.60]
Teq = 1487 [108] K
Rp = 1.14 [0.84] Re
a = 0.0219 [0.0038] AU
Ag = 2.90 [4.53] [0.42 σ]
Teffp = 3001 [1158] K [1.30 σ]

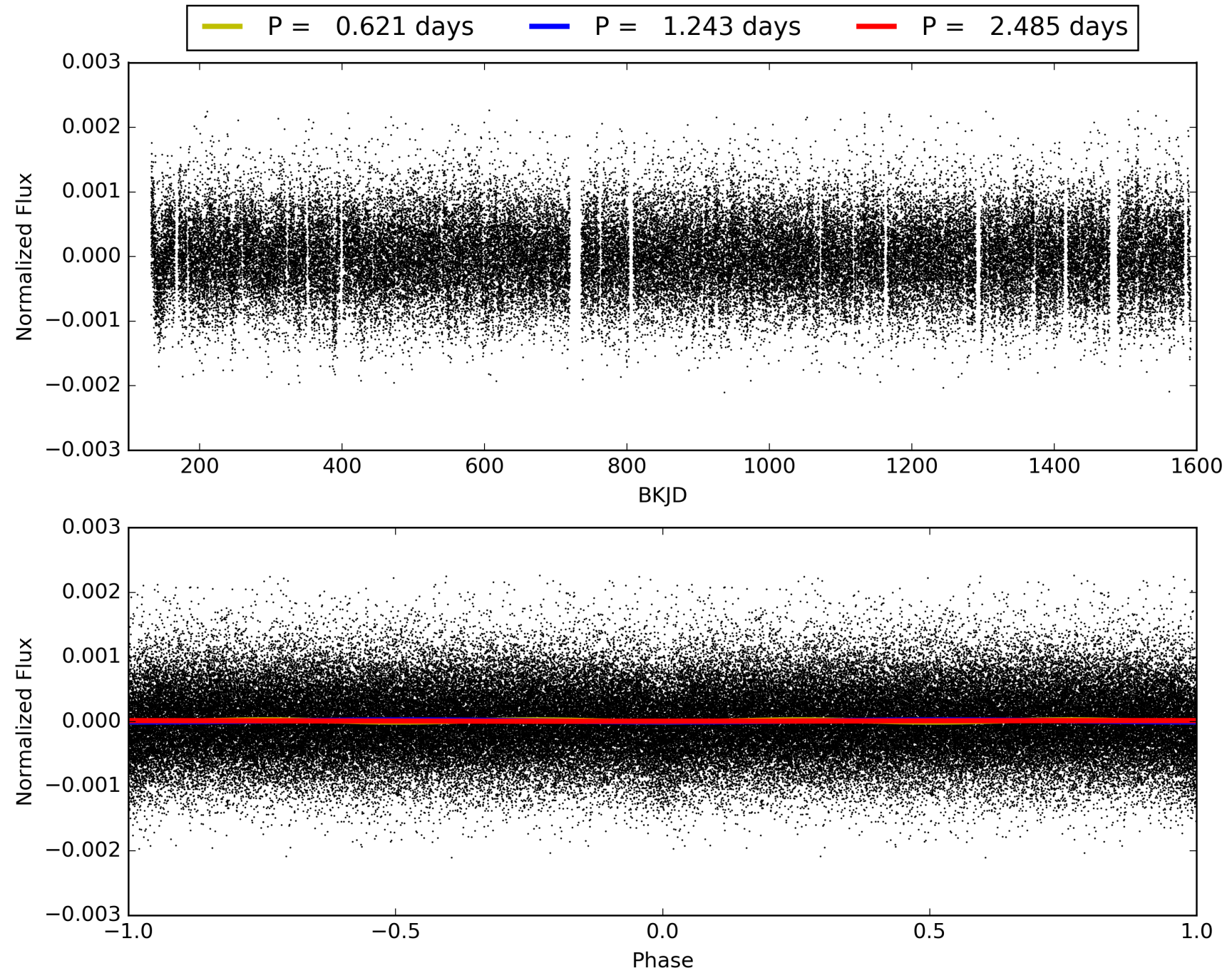
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.60e-40
RollingBand-fgt: 1.00 [1021/1022]
GhostDiagnostic-chr: 14.04
Centroid-sig: 30.4%
Centroid-so: 1.987 arcsec [1.96 σ]
OotOffset-rm: 0.458 arcsec [1.18 σ]
OotOffset-st: 2/3/2/3 [10]
KicOffset-rm: 0.707 arcsec [1.81 σ]
KicOffset-st: 2/3/2/3 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005475042-01, PDC Light Curves

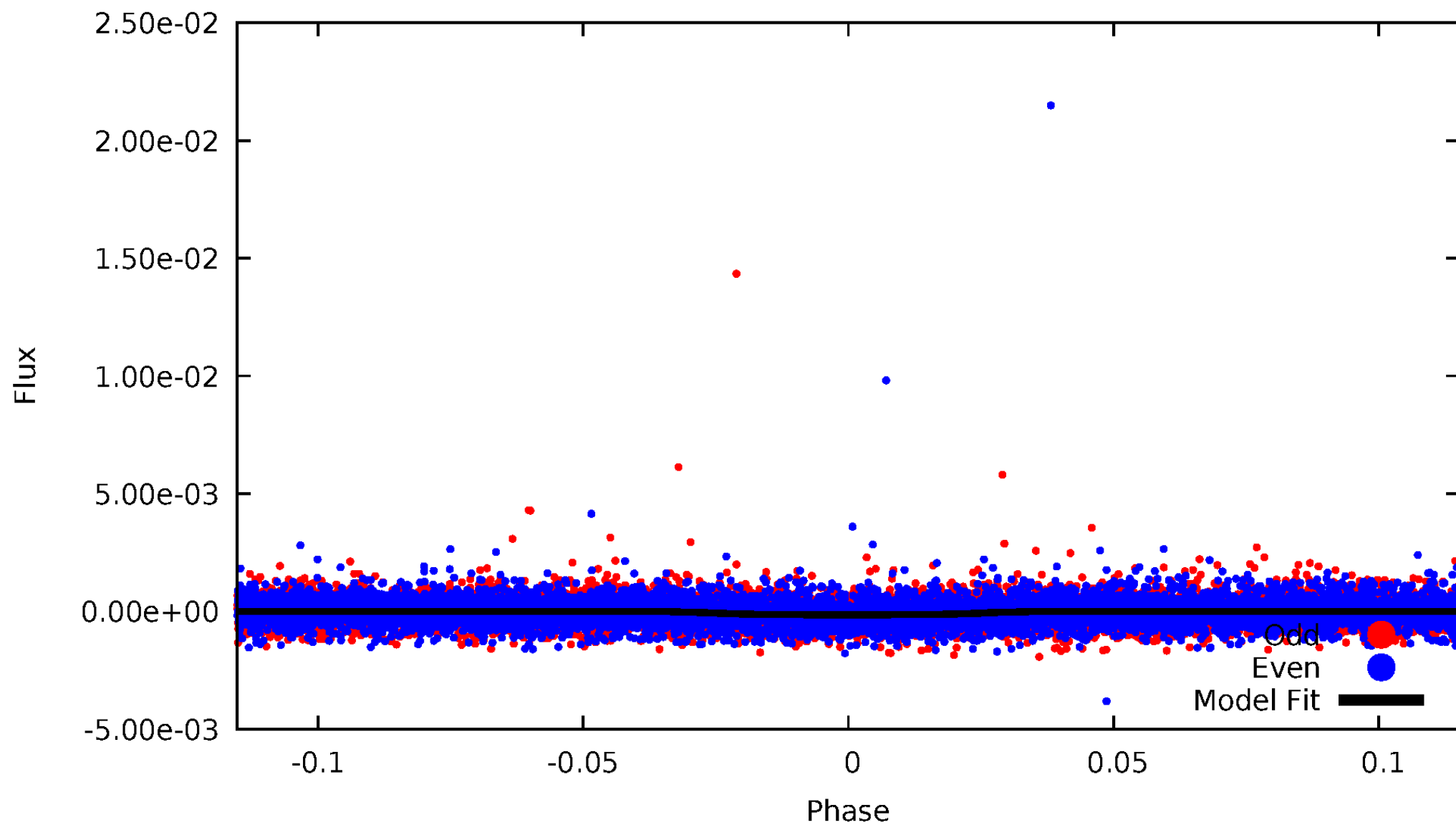


TCE 005475042-01



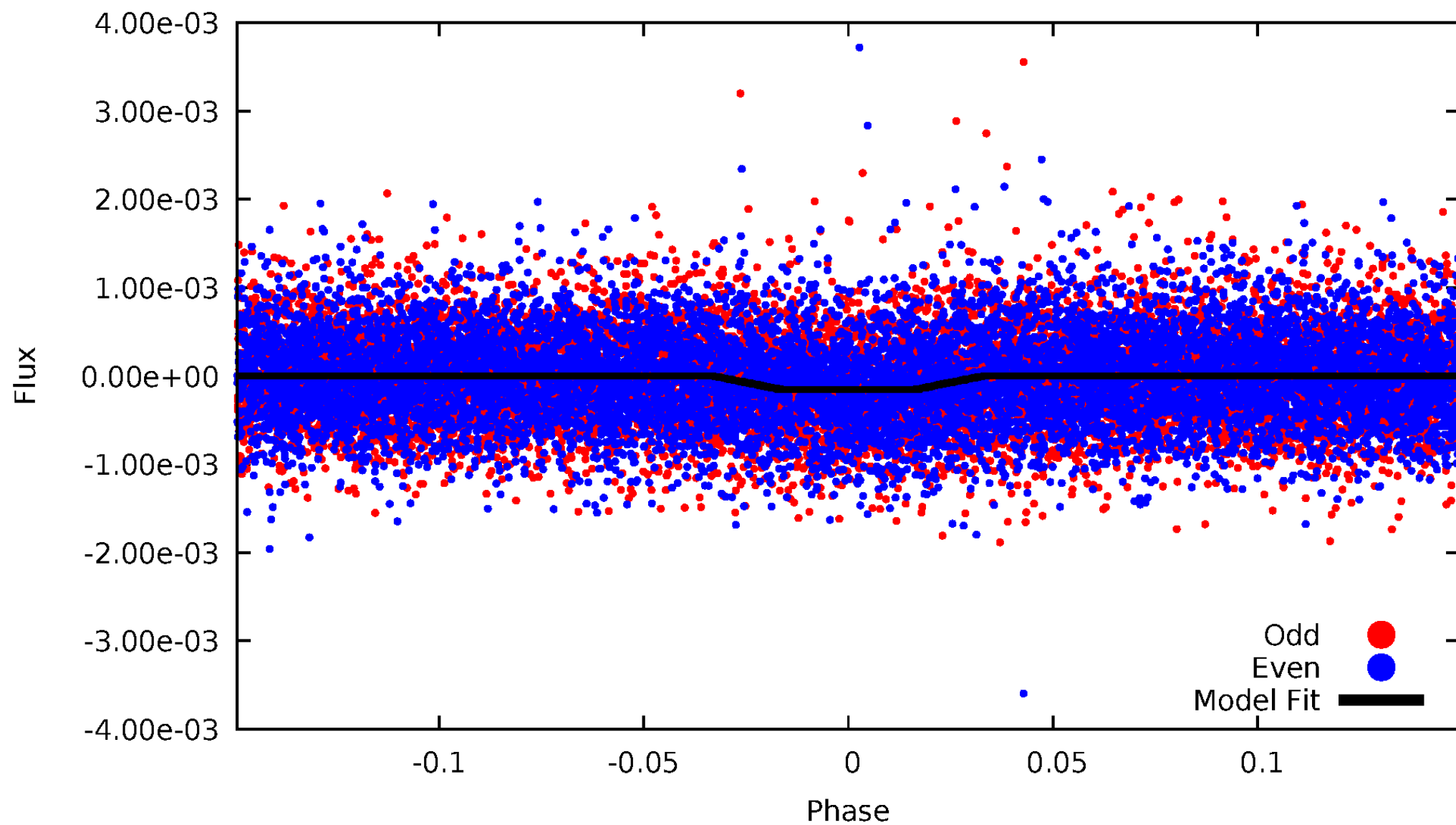
DV Odd/Even

TCE 005475042-01

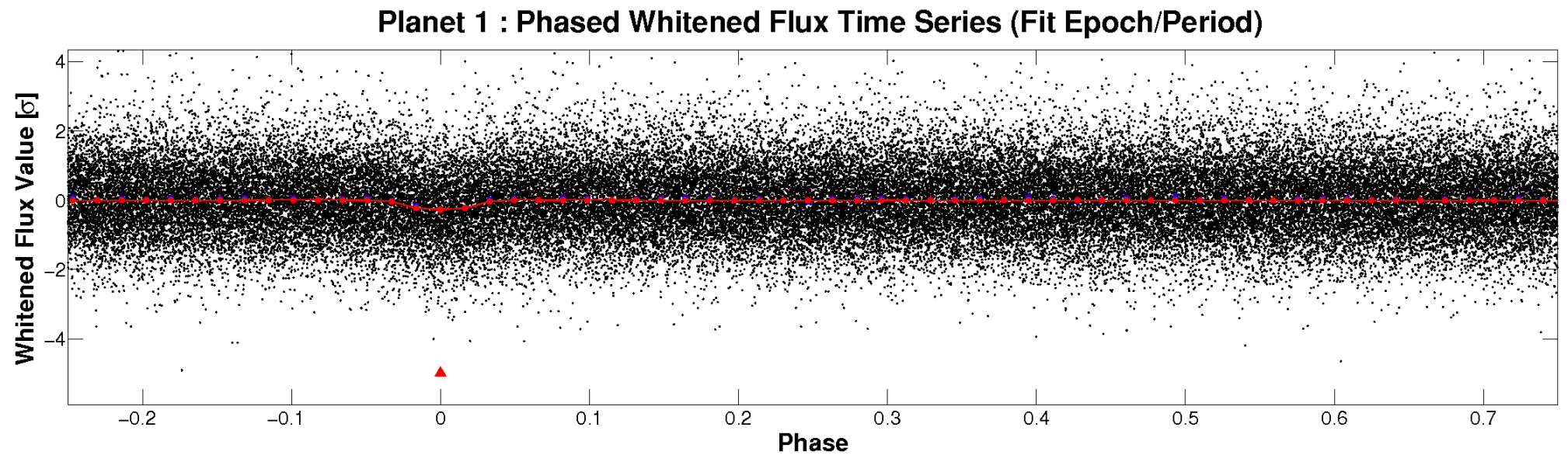
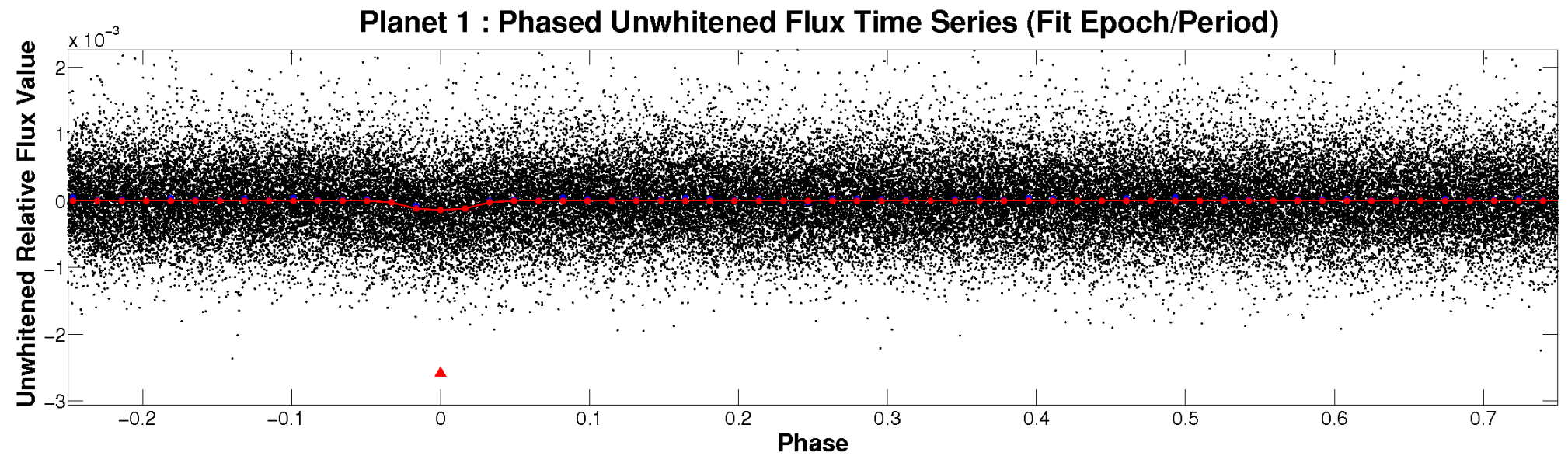


ALT Odd/Even

TCE 005475042-01

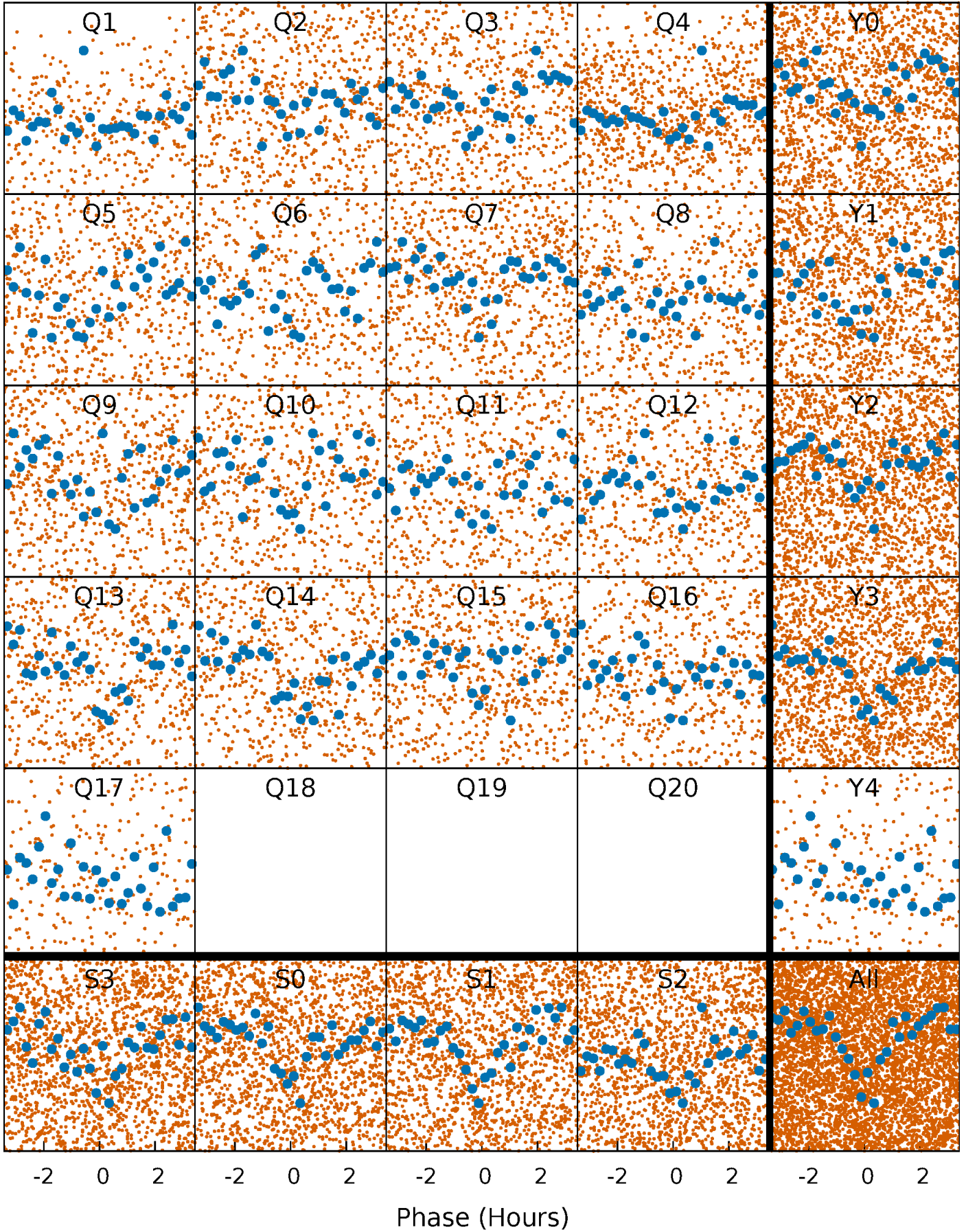


Non-Whitened Vs. Whitened Light Curve



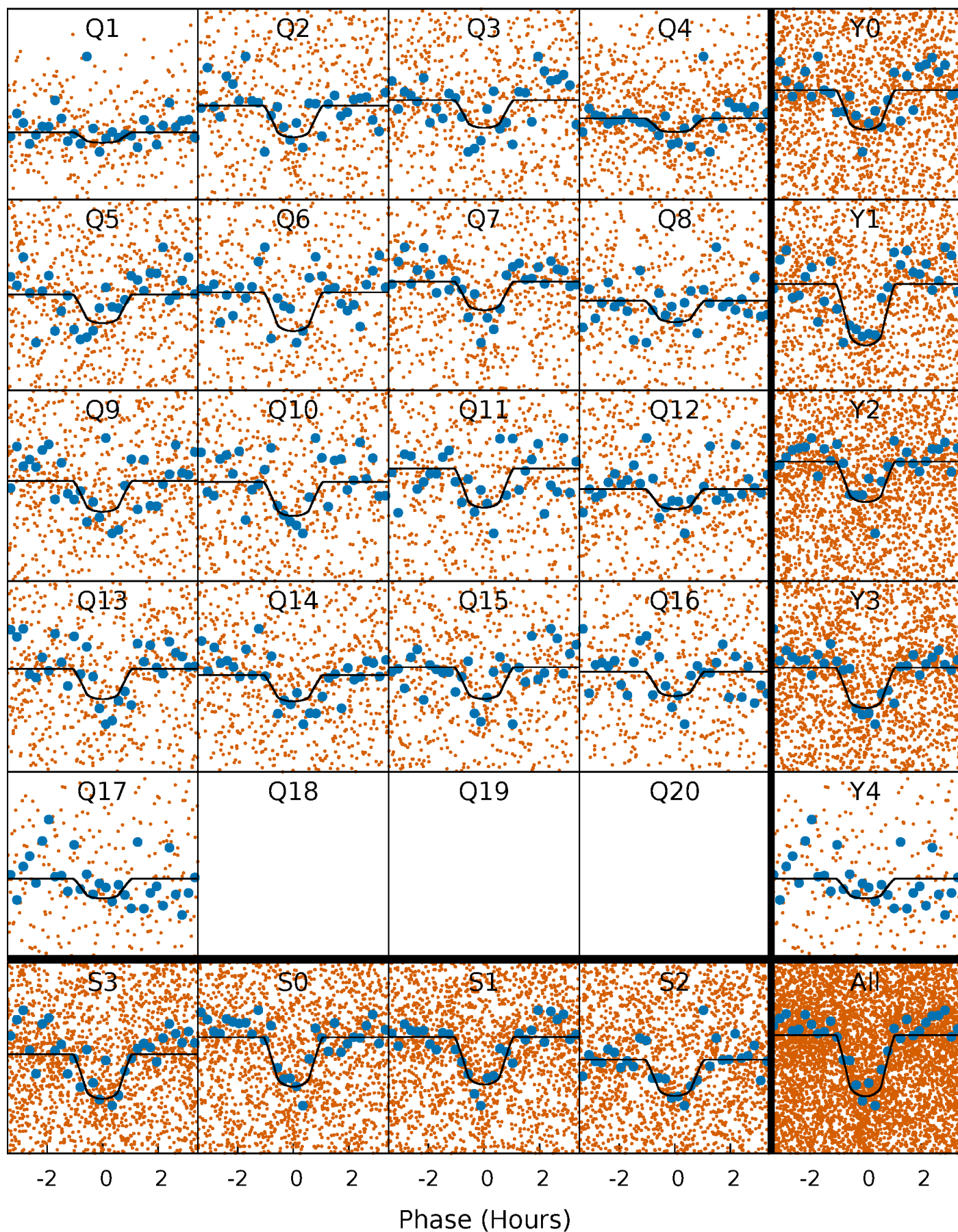
PDC Quarter-Phased Transit Curves

TCE 005475042-01 P= 1.242613 Days $T_0=131.897318$ (BKJD)



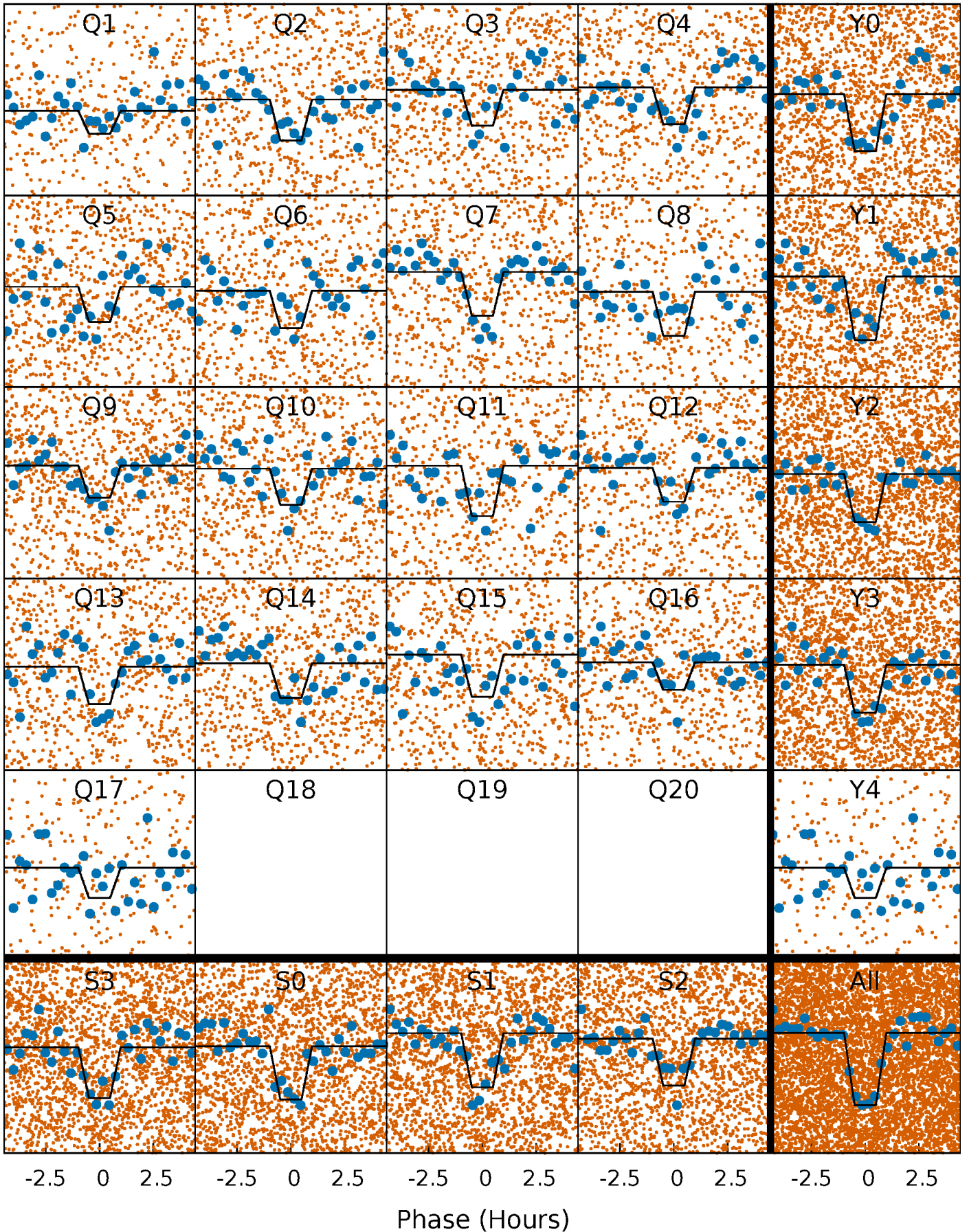
DV Quarter-Phased Transit Curves

TCE 005475042-01 P= 1.242613 Days $T_0=131.897318$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

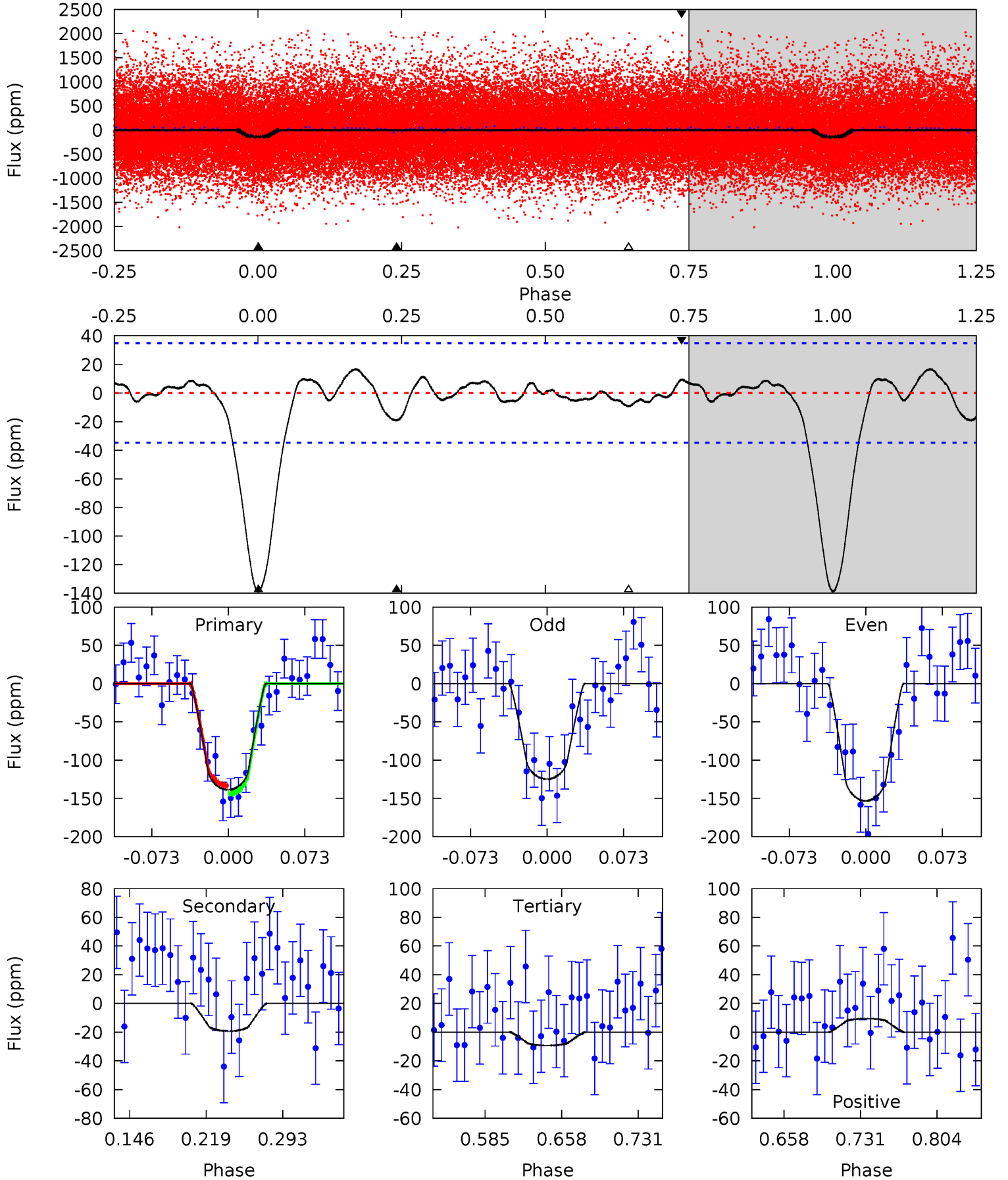
TCE 005475042-01 P= 1.242624 Days $T_0=131.891749$ (BKJD)



DV Model-Shift Uniqueness Test

005475042-01, P = 1.242613 Days, E = 130.654705 Days

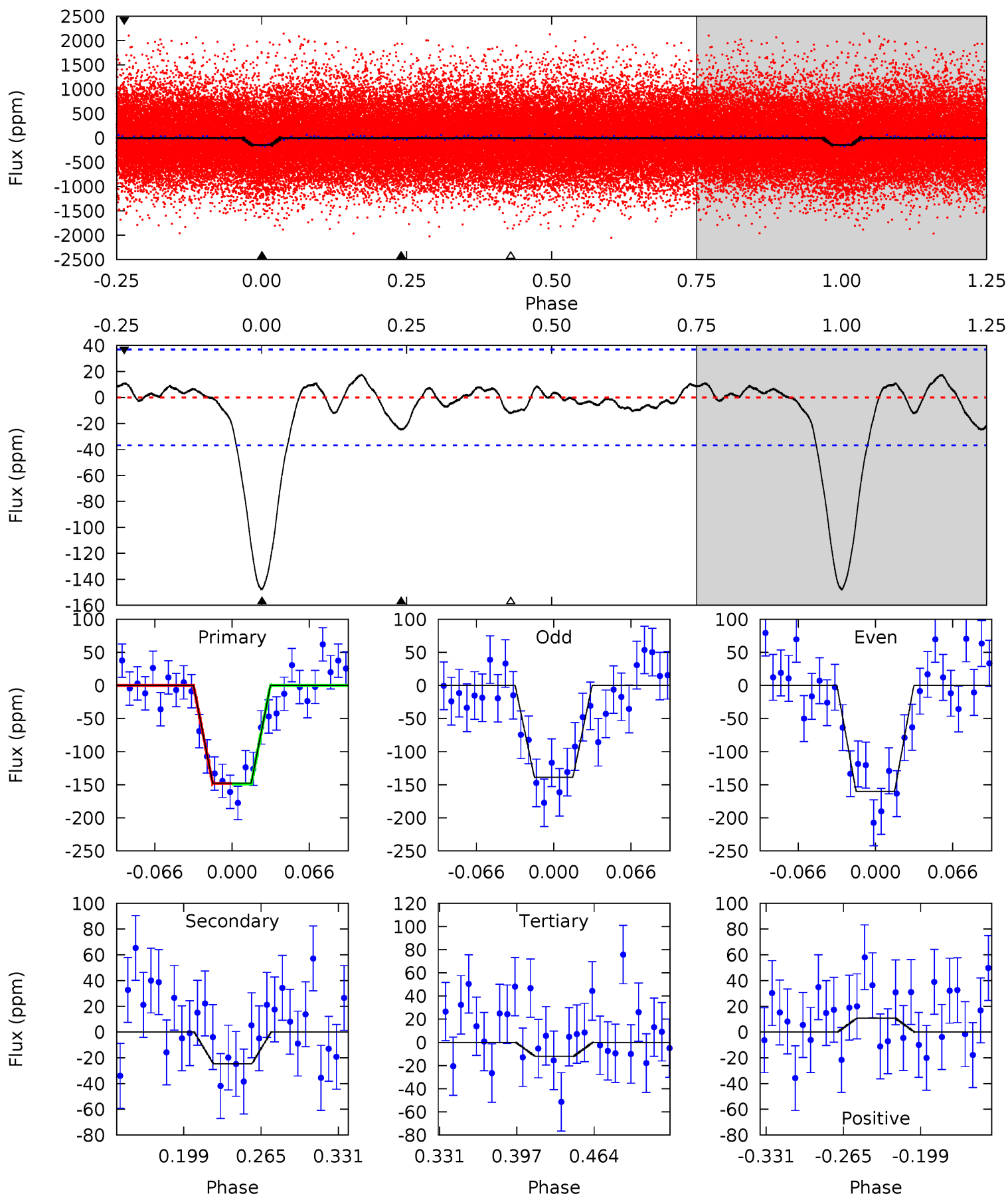
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	2.57	1.23	1.25	4.63	1.79	0.72	17.2	17.2	1.33	1.32	1.90	0.94	0.11	0.71



Alt Model-Shift Uniqueness Test

005475042-01, P = 1.242624 Days, E = 130.649125 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	3.10	1.52	1.36	4.65	1.84	0.82	17.1	17.2	1.58	1.74	1.34	1.00	0.11	0.04



Stellar Parameters For KIC 005475042

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5520^{+149}_{-182}	$4.572^{+0.034}_{-0.144}$	$-0.080^{+0.300}_{-0.300}$	$0.818^{+0.164}_{-0.070}$	$0.917^{+0.074}_{-0.111}$	$2.358^{+0.431}_{-0.935}$
	+3%/-3%	+1%/-3%	+375%/-375%	+20%/-9%	+8%/-12%	+18%/-40%
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 005475042-01 / KOI 3050.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 8	$1.23^{+0.82}_{-0.71}$	2109^{+116}_{-80}	3508^{+1288}_{-646}	$3.088^{+13.866}_{-2.093}$
Alt.	-25 ± 8	$1.23^{+0.85}_{-0.71}$	2114^{+111}_{-90}	3681^{+1613}_{-650}	$4.082^{+21.653}_{-2.741}$

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

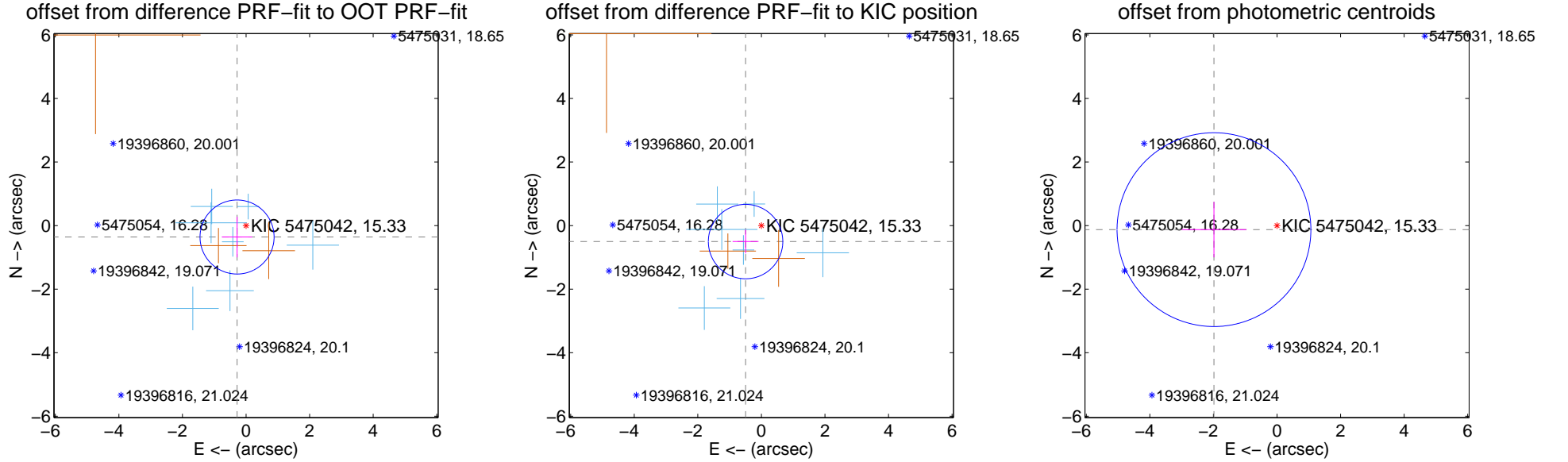
DV Centroid Data

Supplemental centroid analysis for 005475042-01. Kepler magnitude: 15.33. Transit SNR 13.45

There are 7 quarters with good PRF difference image offsets

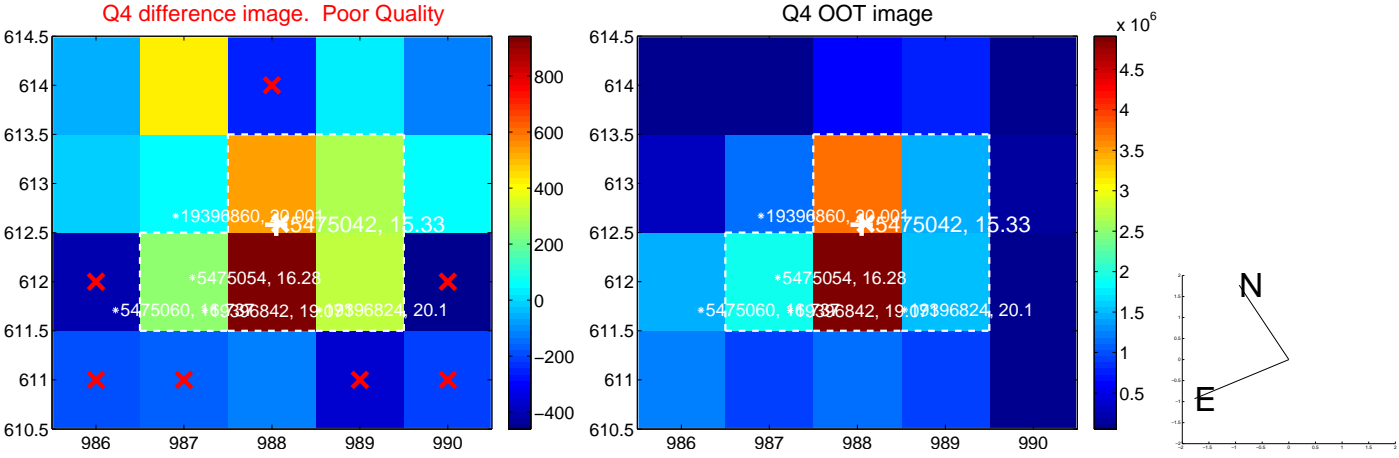
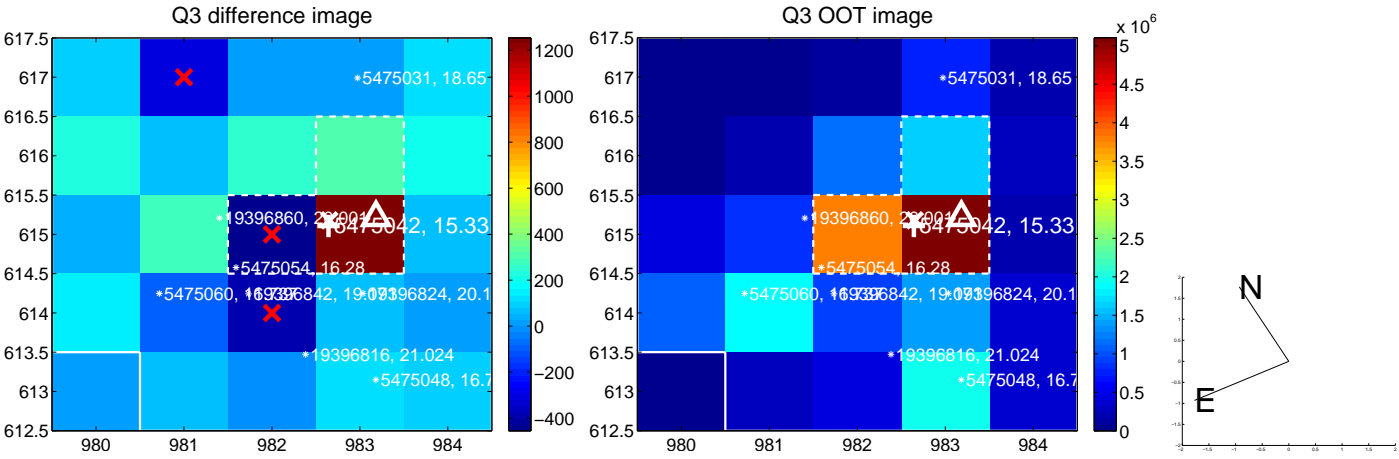
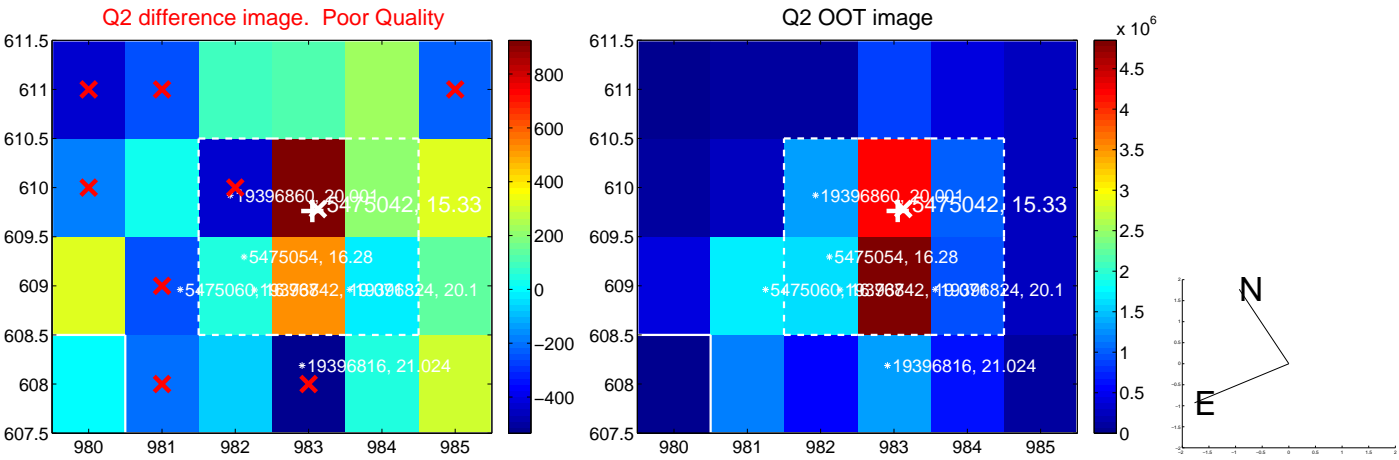
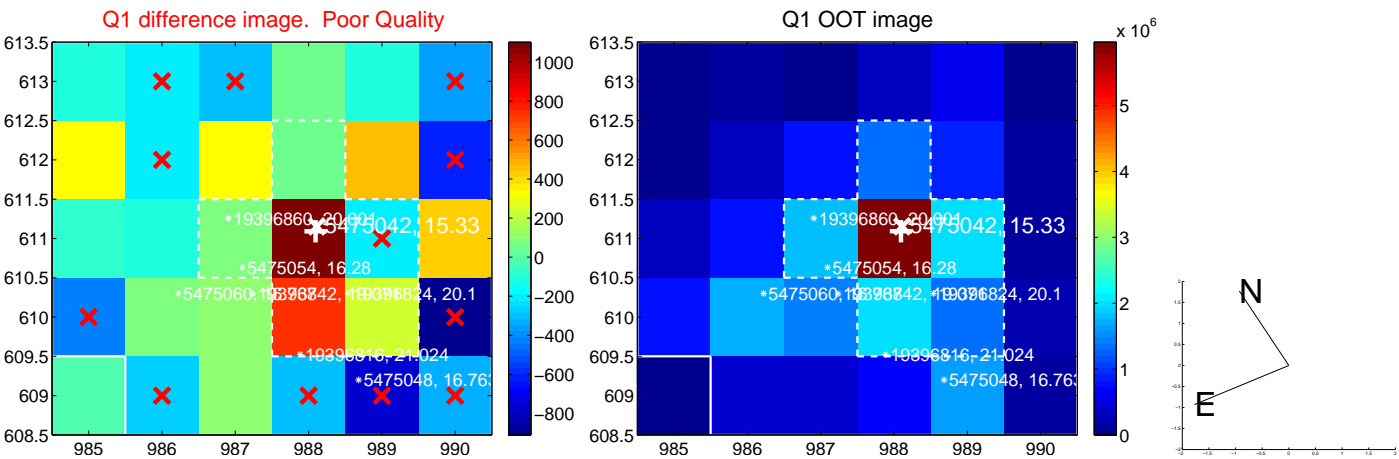
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.458 ± 0.388	1.18	0.283 ± 0.477	-0.360 ± 0.639
PRF-fit source offset from KIC position	0.707 ± 0.390	1.81	0.497 ± 0.408	-0.503 ± 0.372
photometric centroid source offset	1.99 ± 1.02	1.96	1.98 ± 1.02	-0.13 ± 0.87

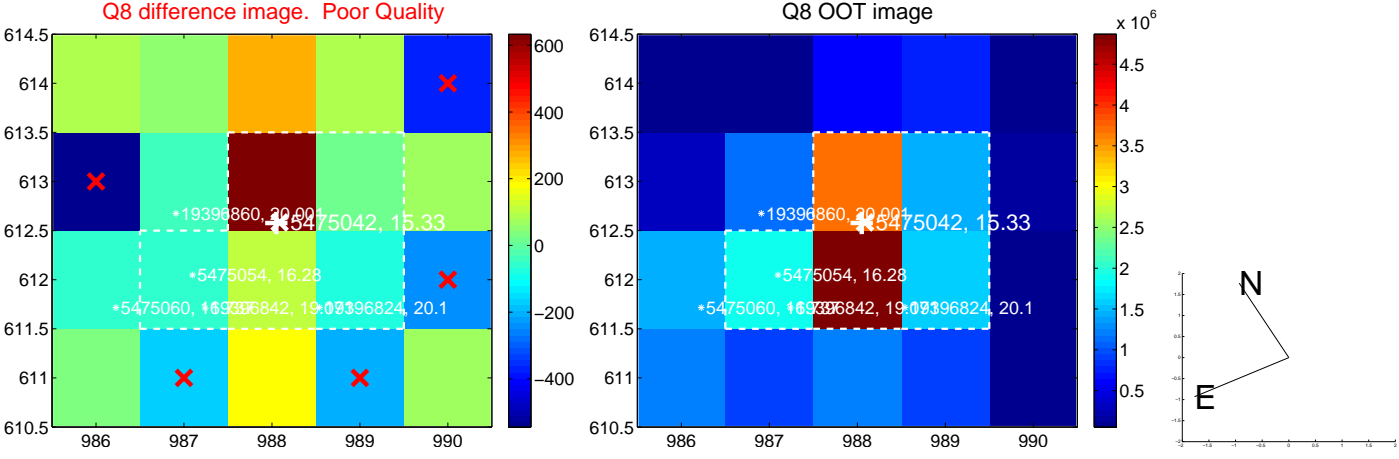
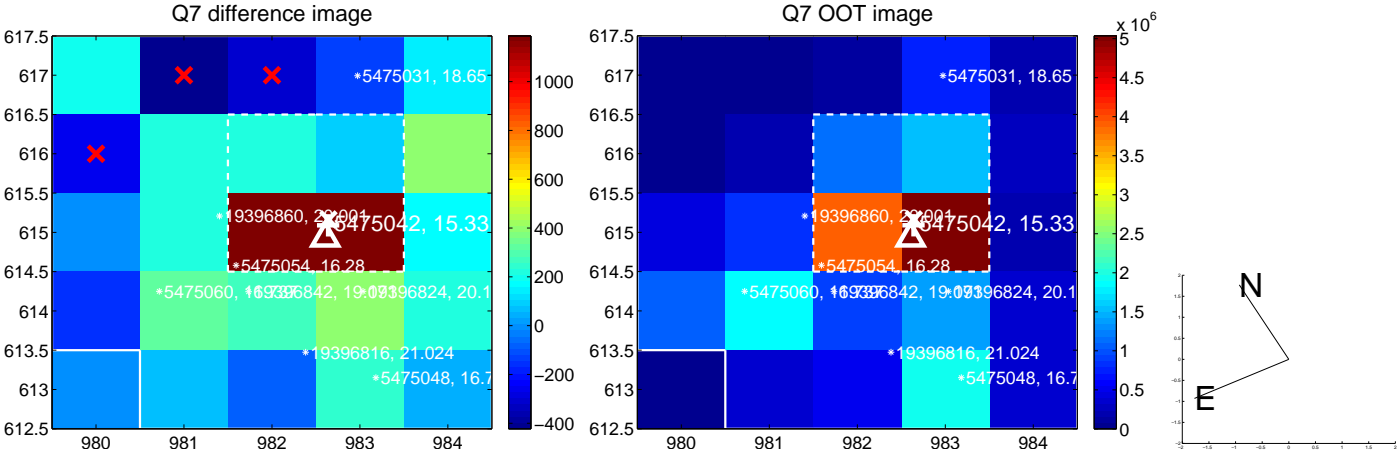
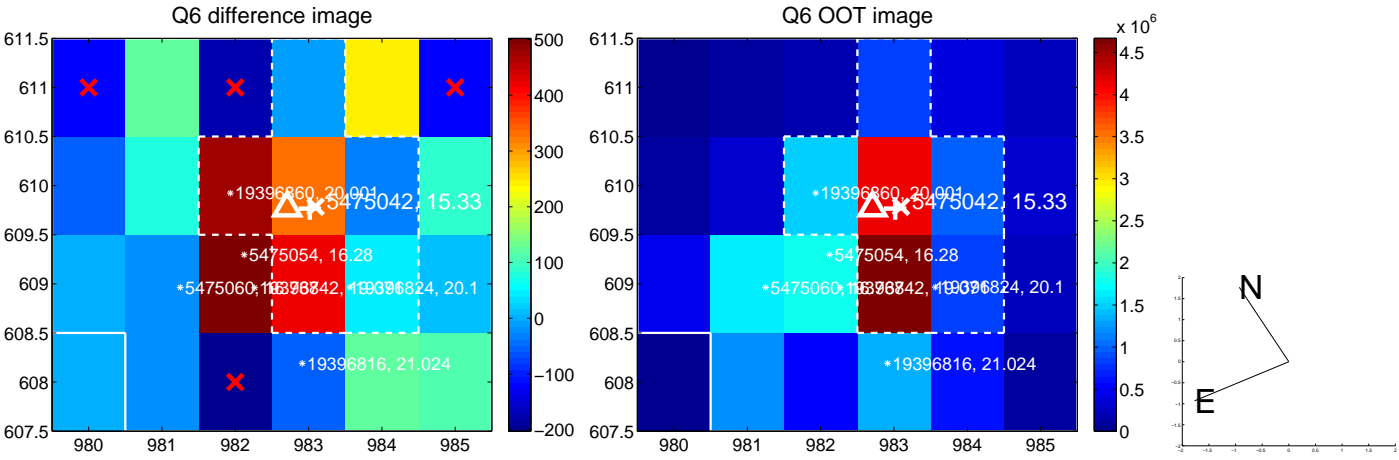
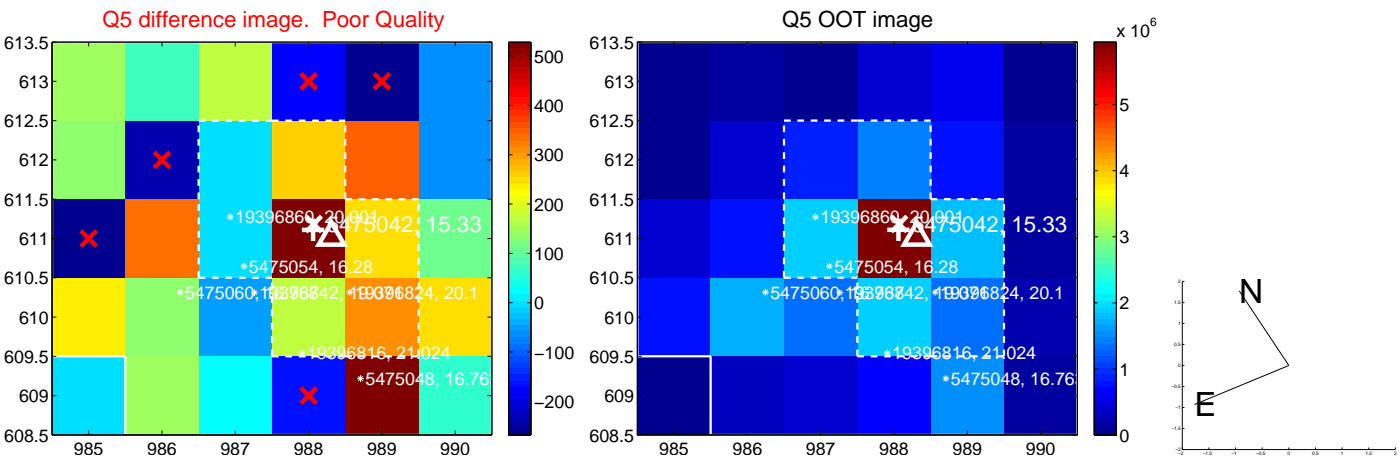


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

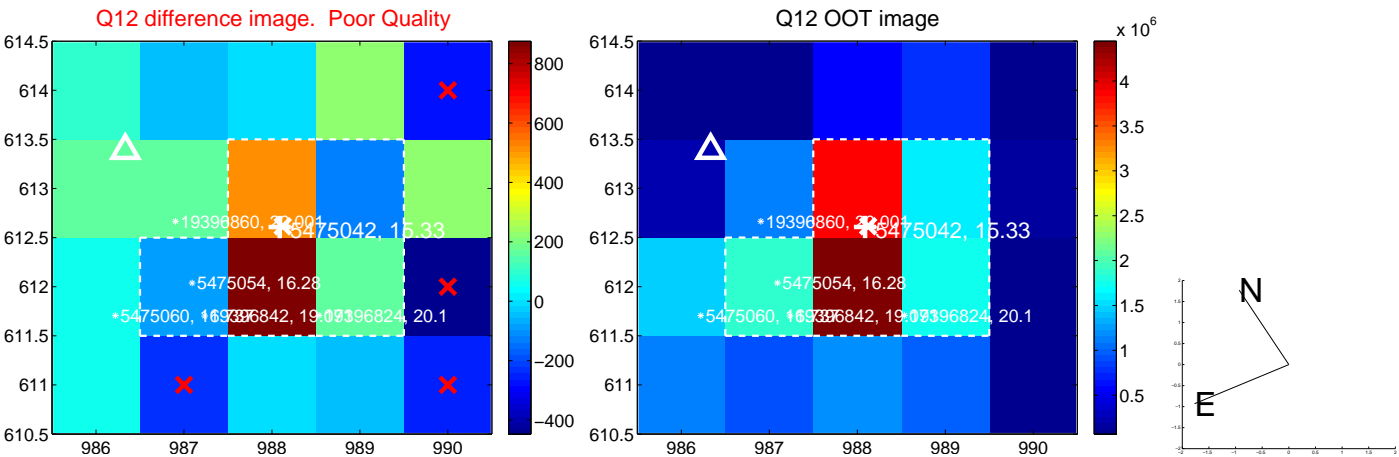
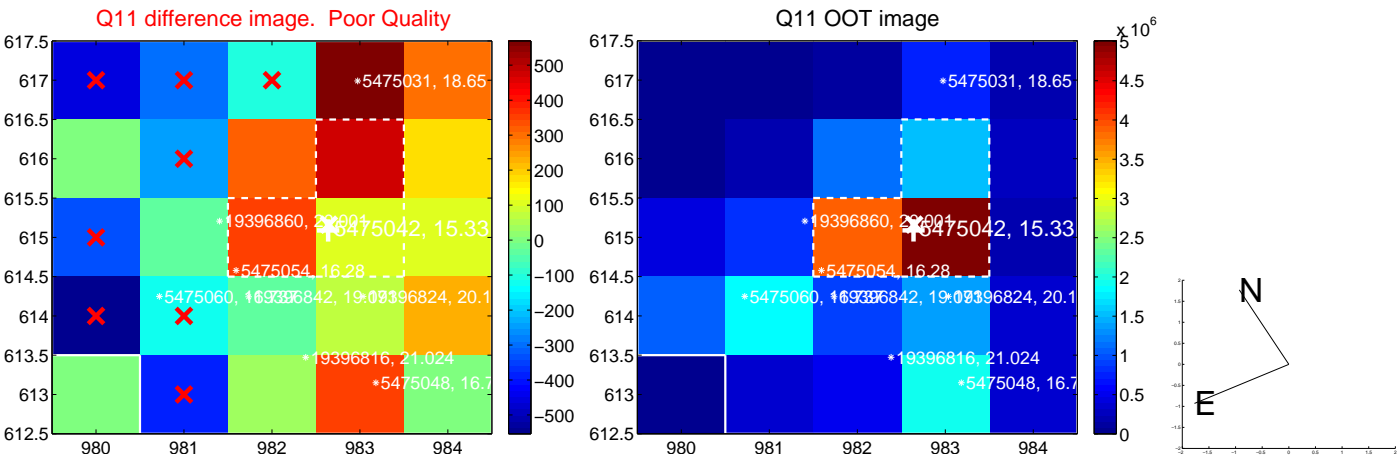
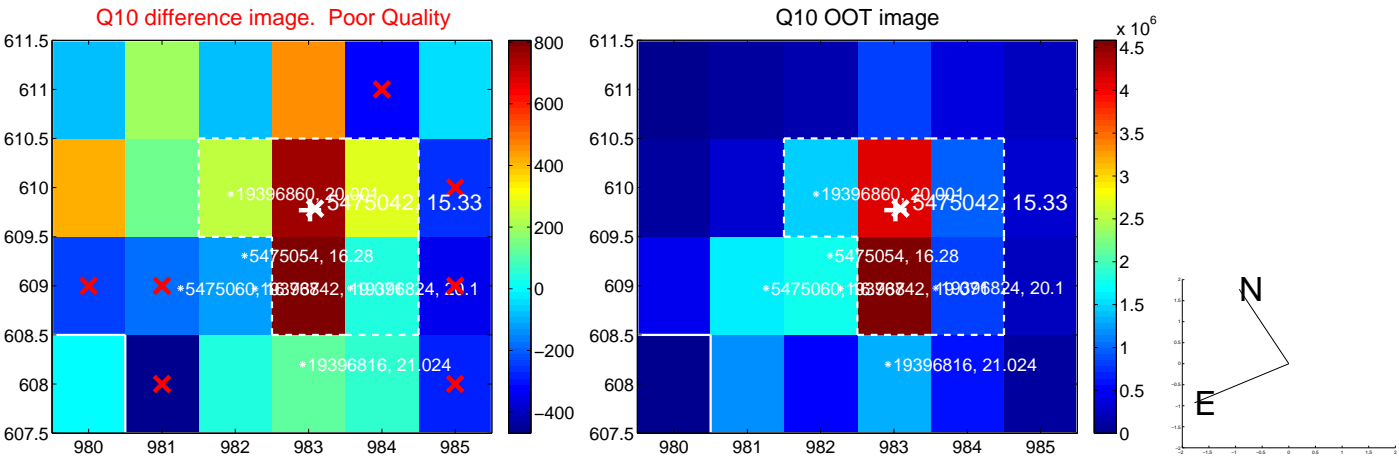
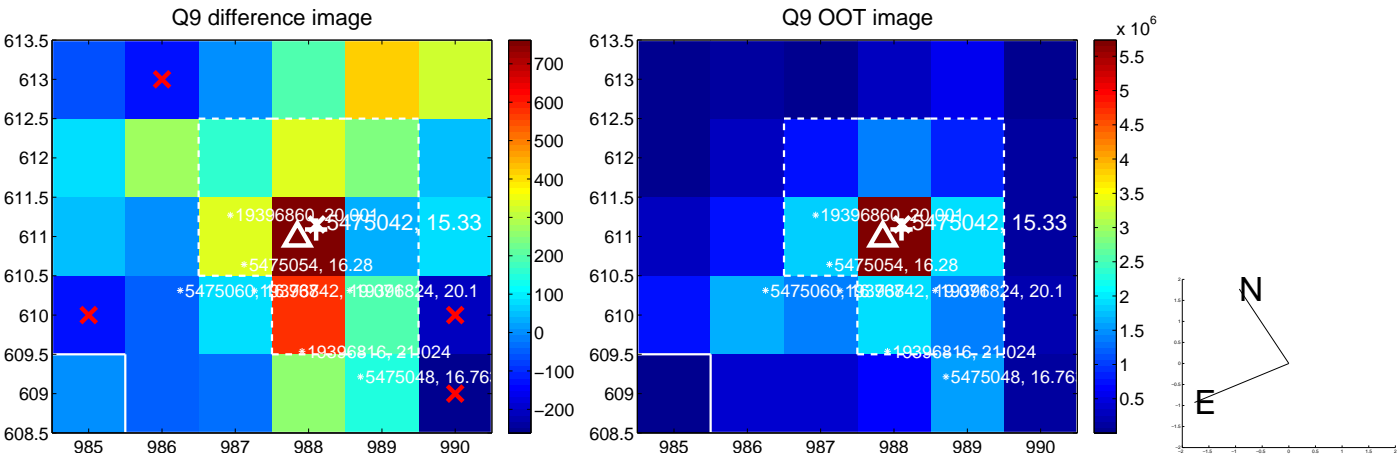
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



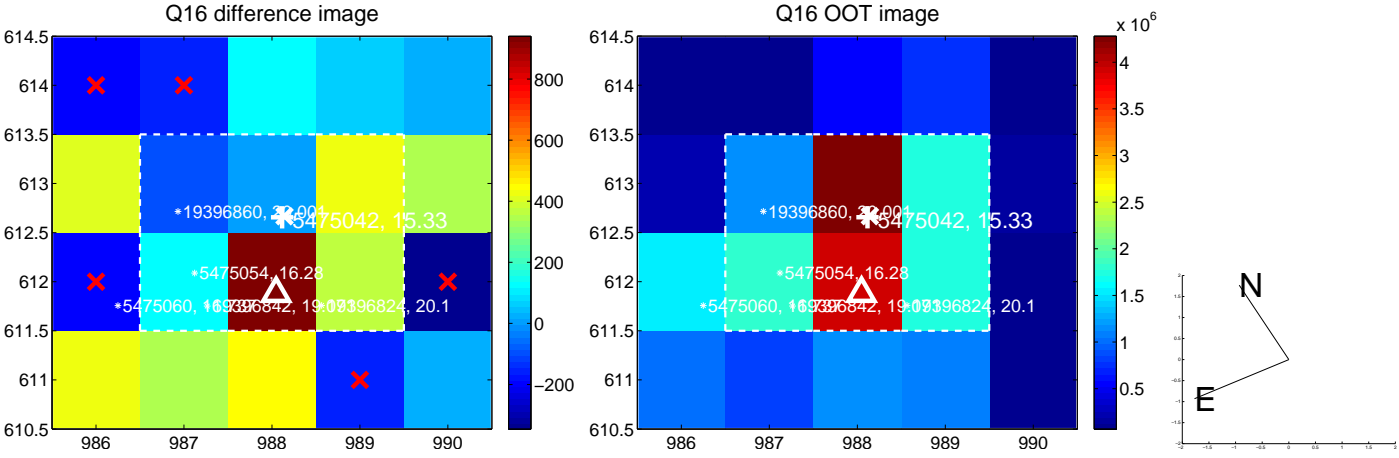
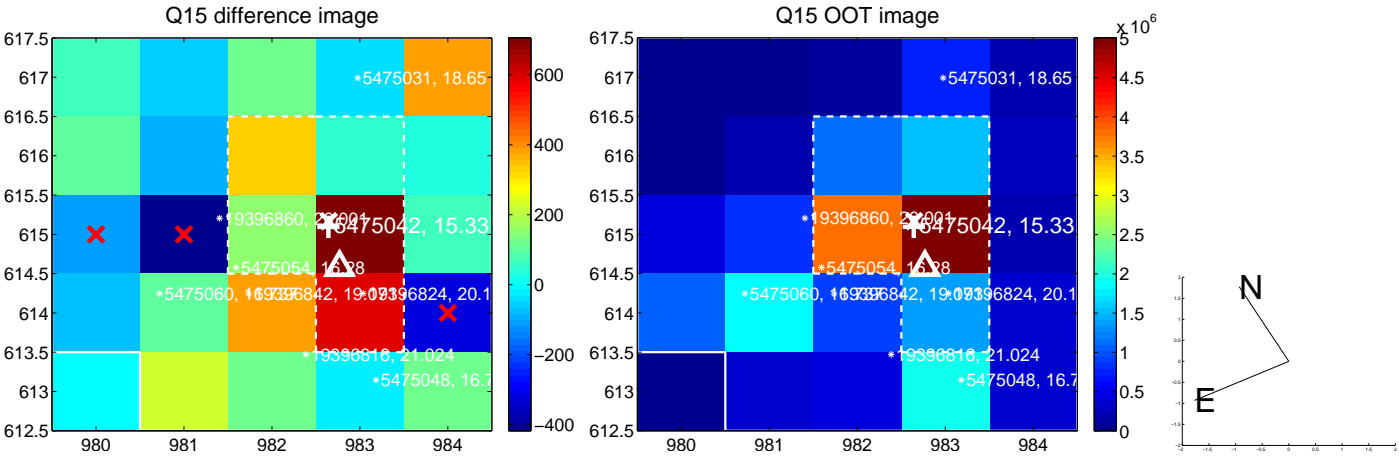
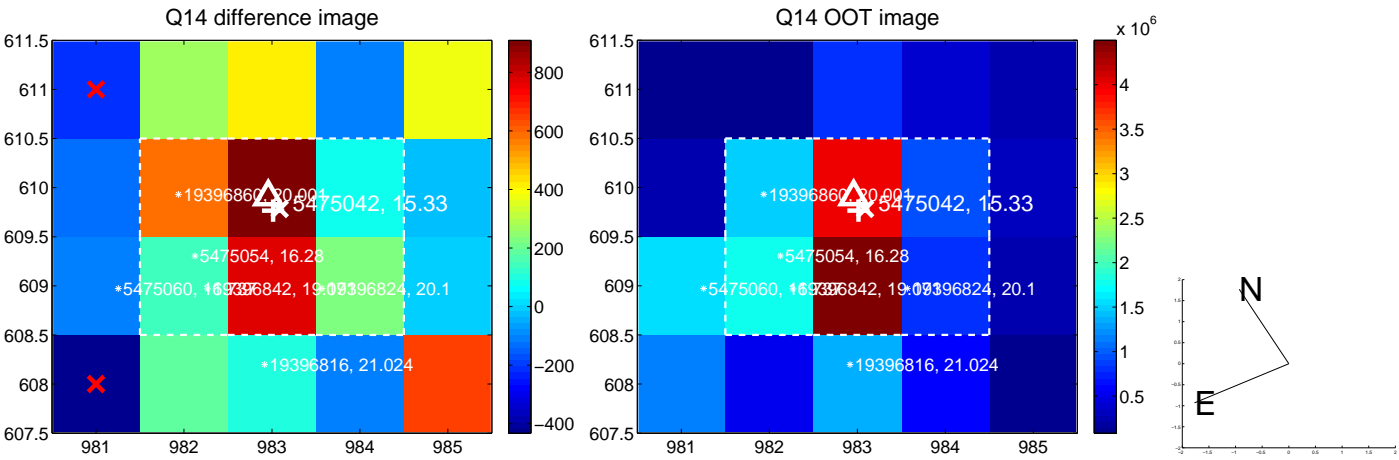
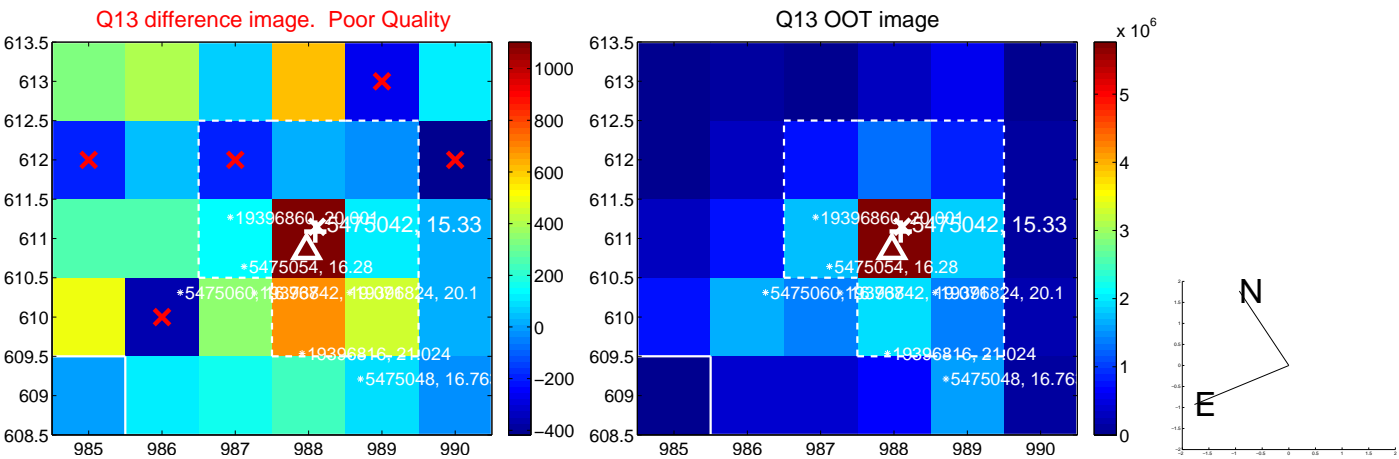
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



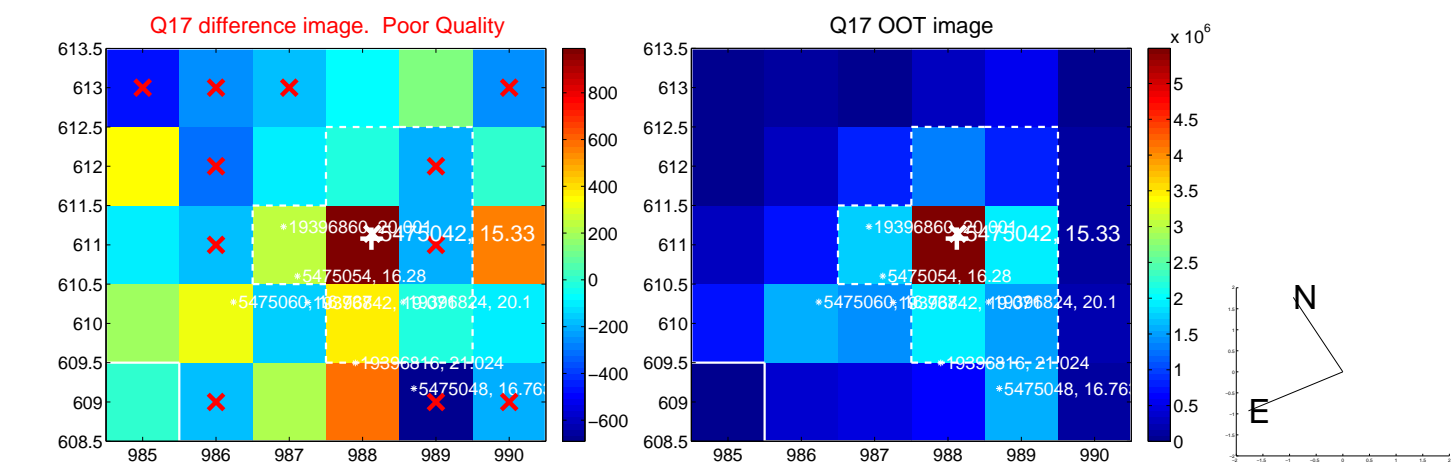
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



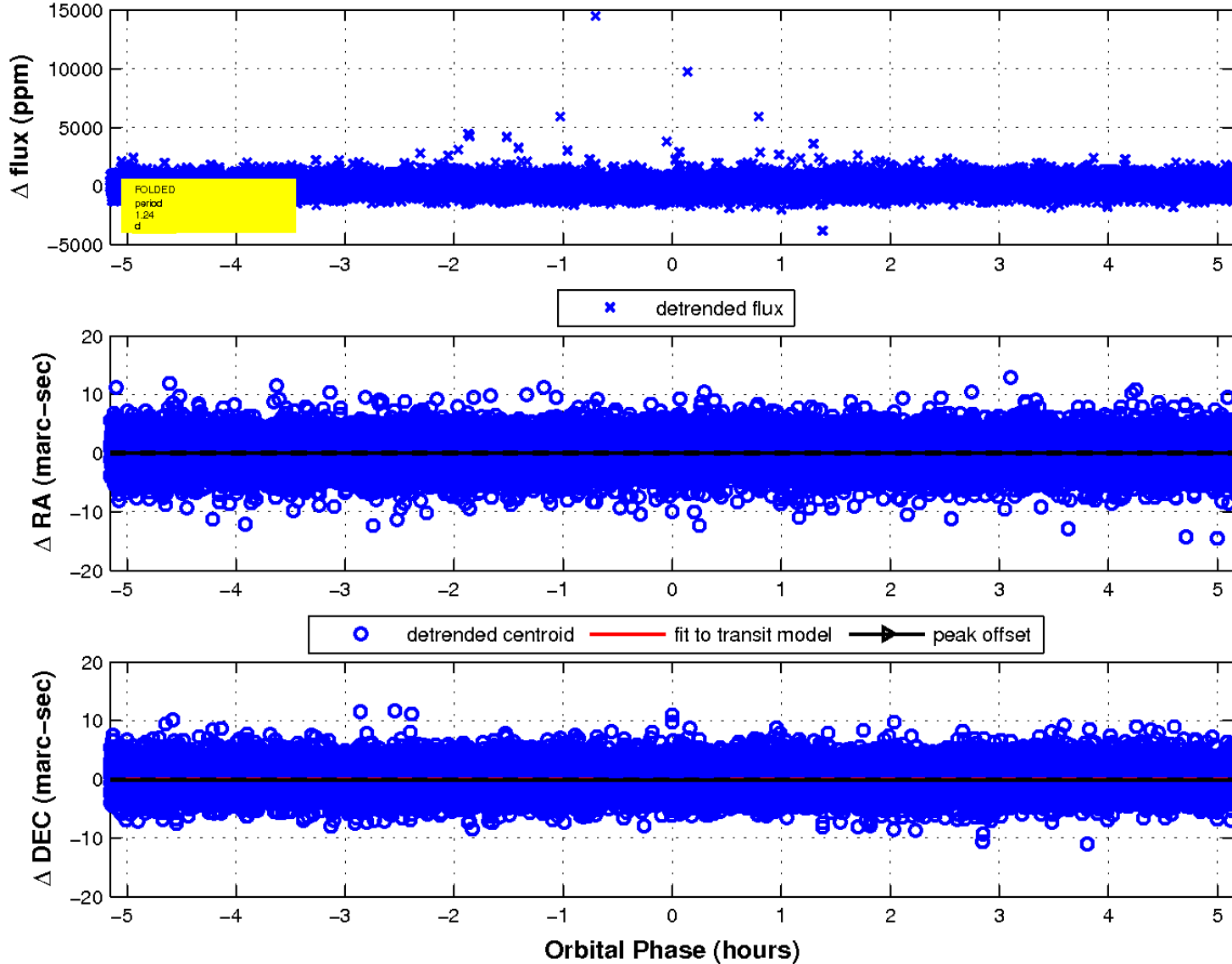
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

