

KIC 006528141

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})
006528141-01	OBS	4340.01	2.022612	131.848746	134.1	4.811	15.3	16.6	0.97	6091	1.54	1141.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006528141-01	OBS	FP	0.01	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.

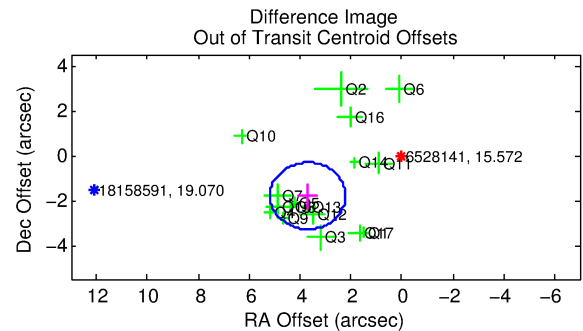
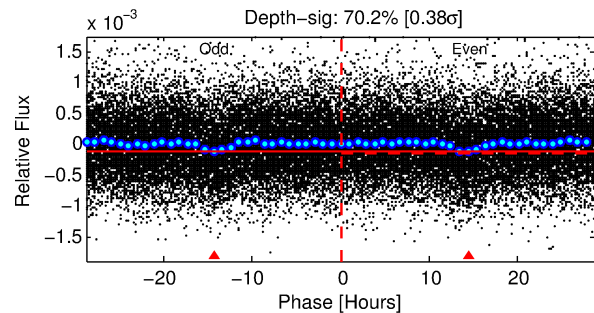
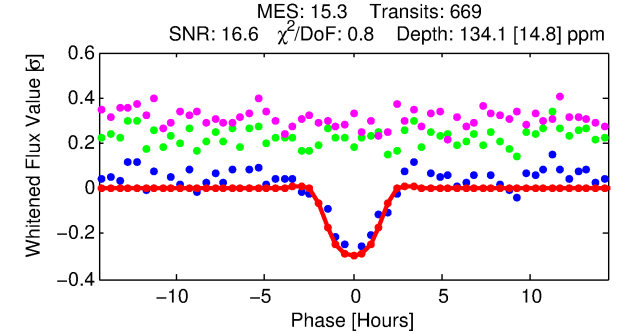
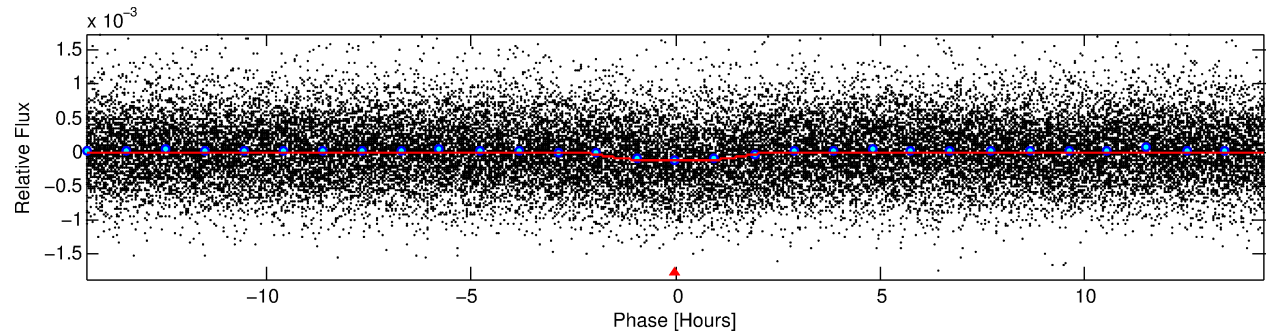
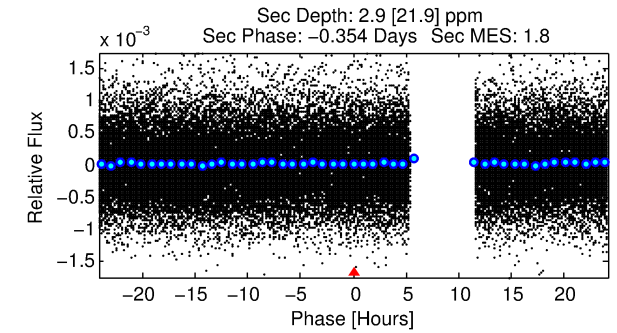
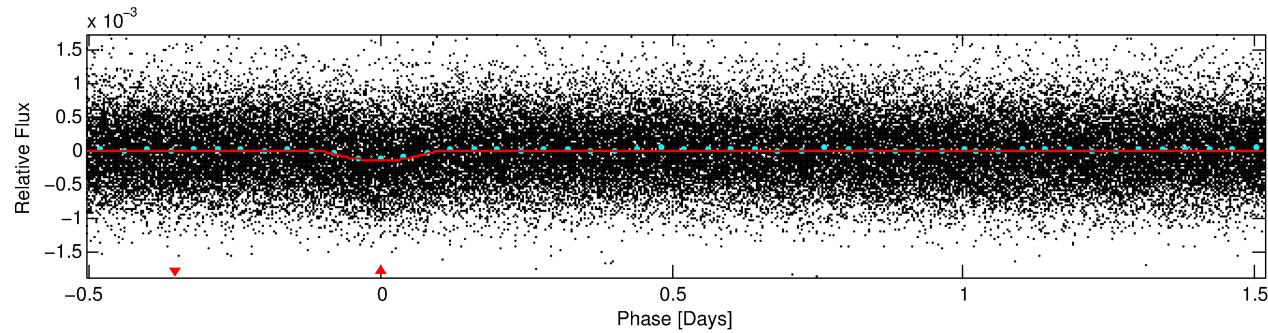
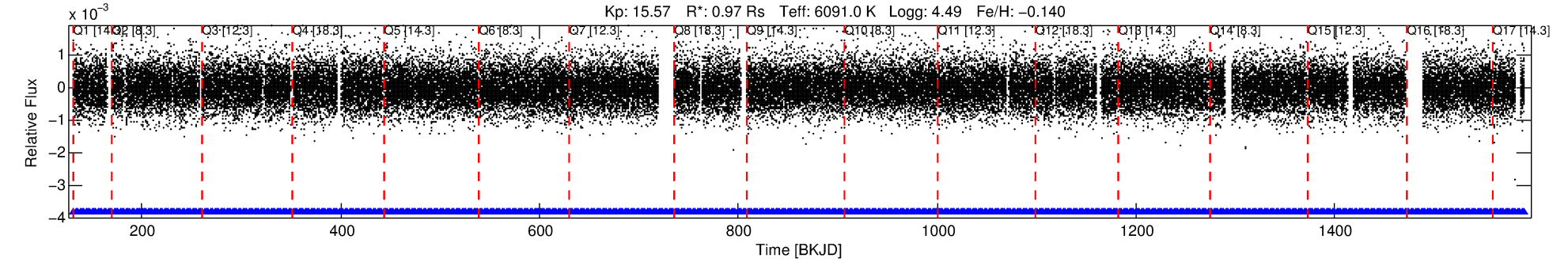
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006528141-01

No Significant Match Found

DV One-Page Summary

KIC: 6528141 Candidate: 1 of 1 Period: 2.023 d
KOI: K04340.01 Corr: 0.909



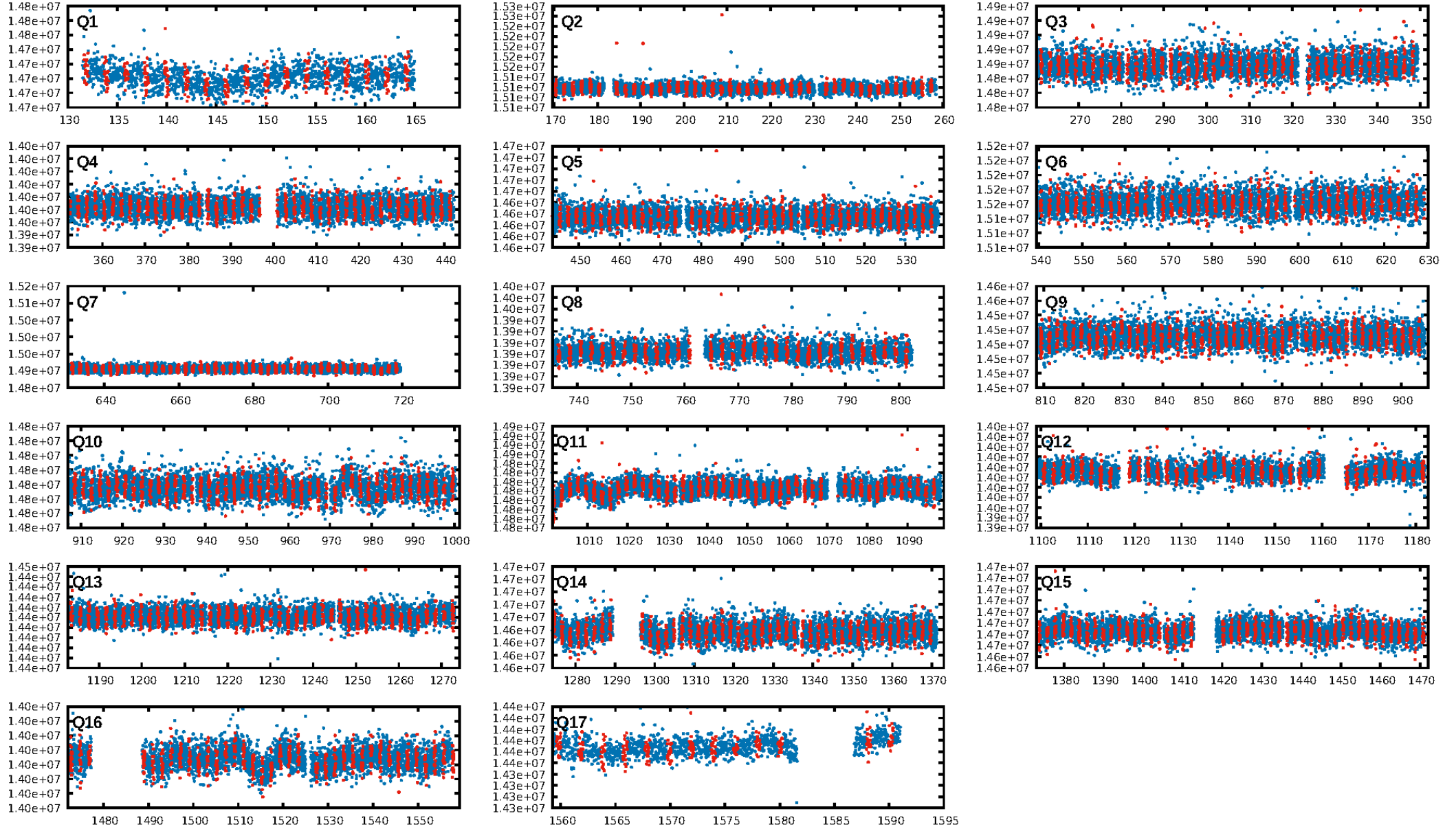
DV Fit Results:

Period = 2.02261 [0.00002] d
Epoch = 131.8487 [0.0054] BKJD
Rp/R* = 0.0146 [0.0011]
a/R* = 1.27 [0.07]
b = 0.98 [0.01]
Seff = 1141.26 [467.69]
Teff = 1482 [152] K
Rp = 1.54 [0.49] Re
a = 0.0318 [0.0083] AU
Ag = 0.67 [5.11] [-0.06σ]
Teffp = 2075 [3940] K [0.15σ]

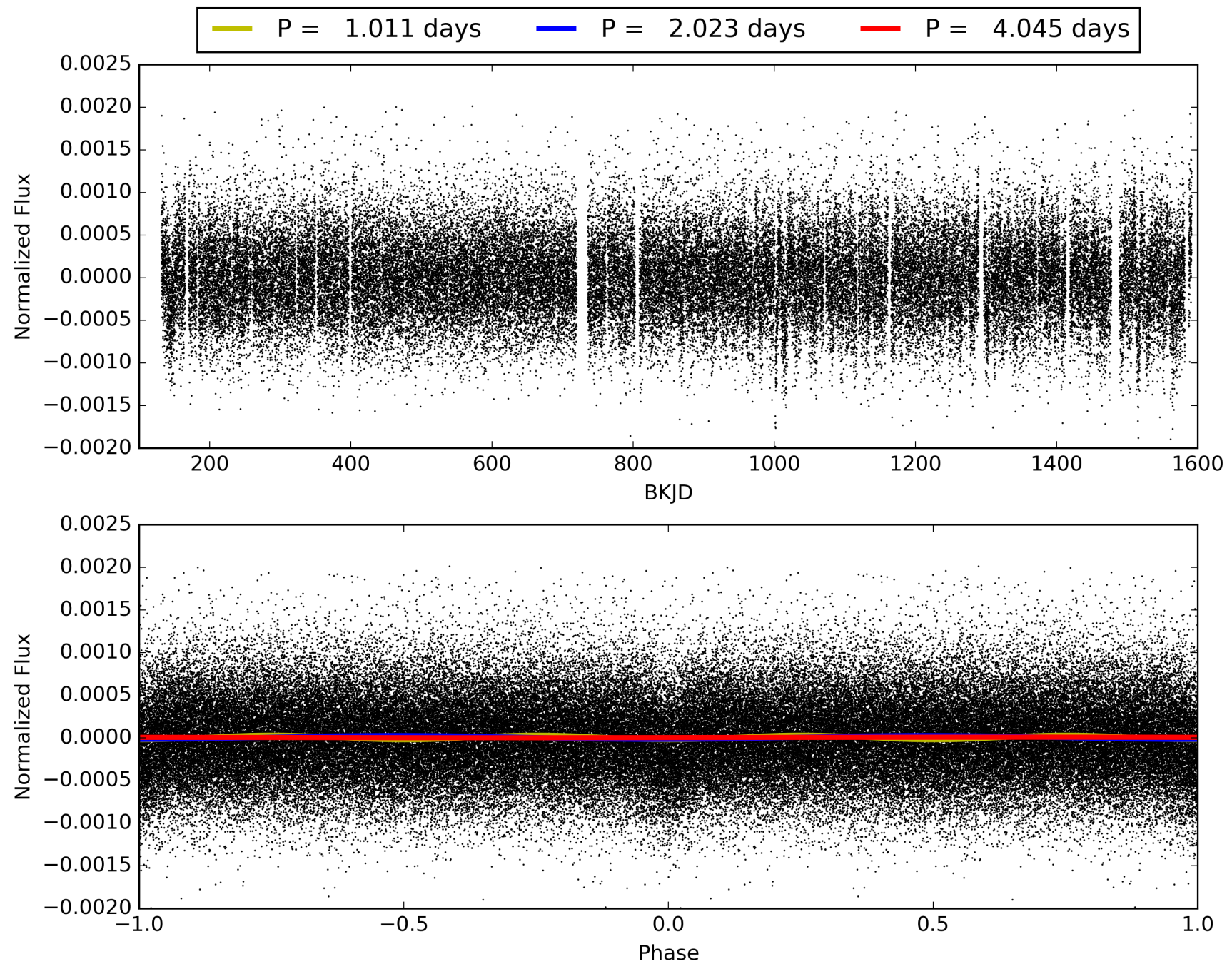
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.65e-50
RollingBand-fgt: 1.00 [639/639]
GhostDiagnostic-chr: 0.3993
Centroid-sig: 0.0%
Centroid-so: 3.982 arcsec [4.23σ]
OotOffset-rm: 4.115 arcsec [8.31σ]
KicOffset-rm: 4.304 arcsec [9.39σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006528141-01, PDC Light Curves

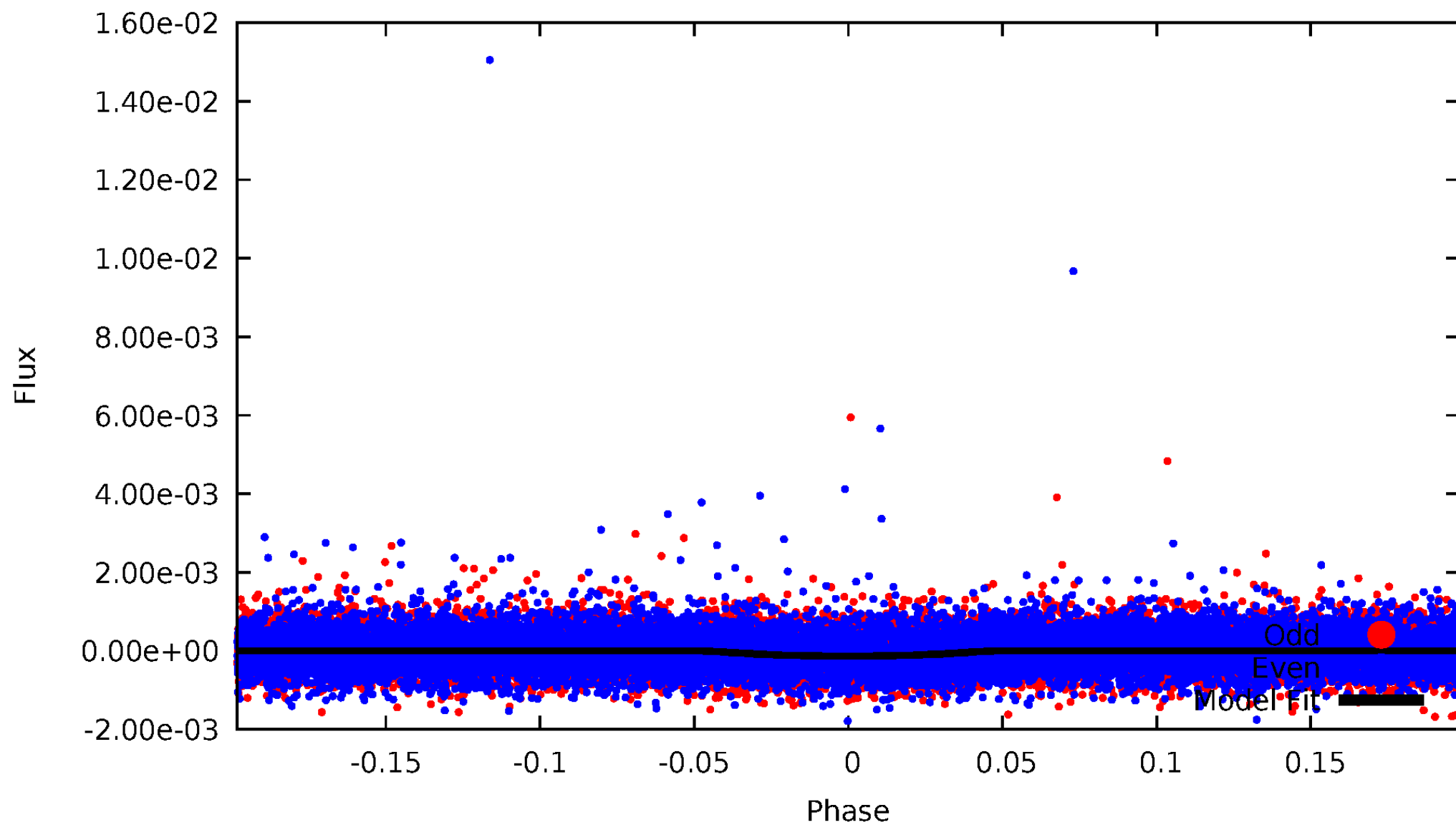


TCE 006528141-01



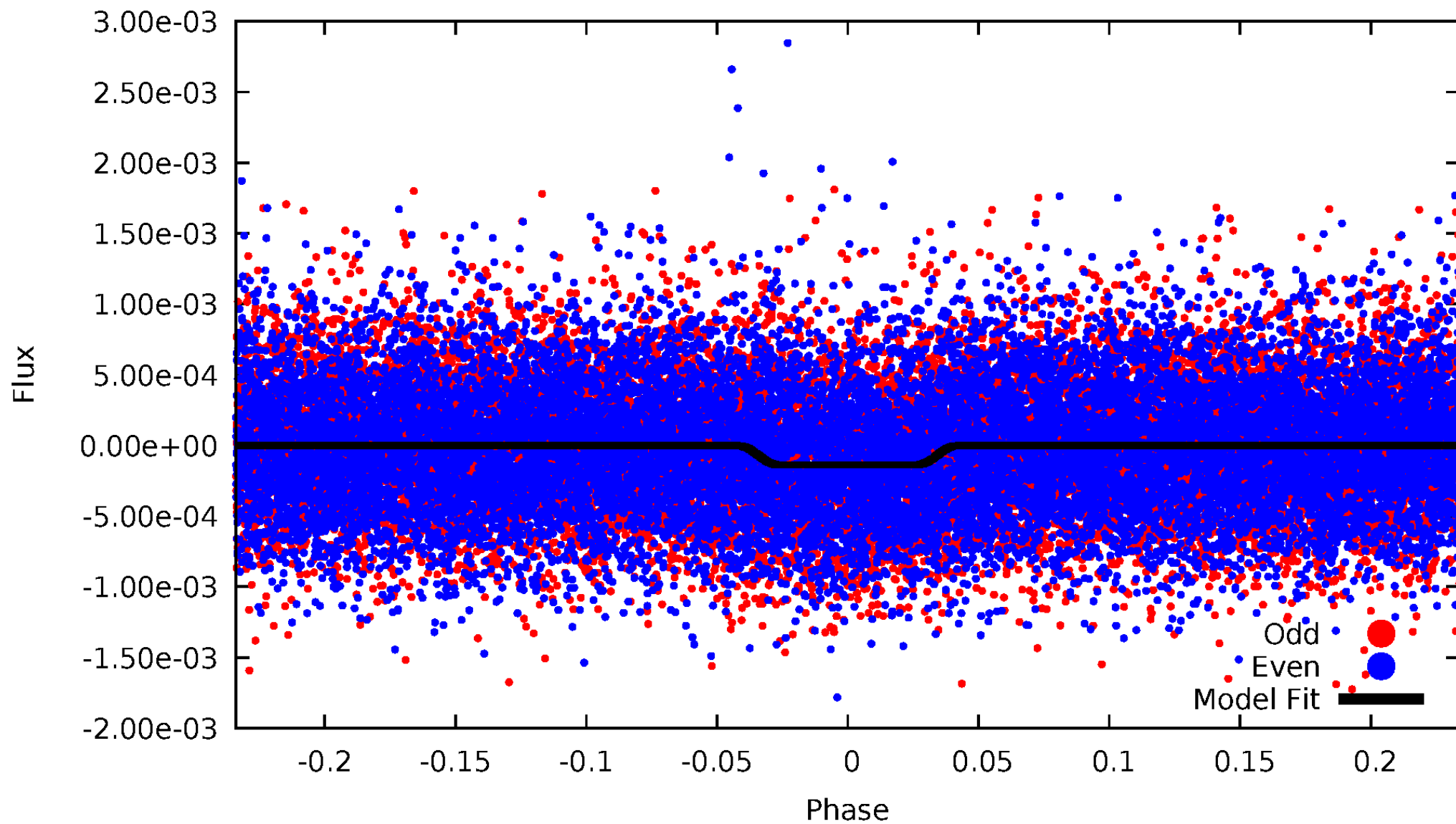
DV Odd/Even

TCE 006528141-01



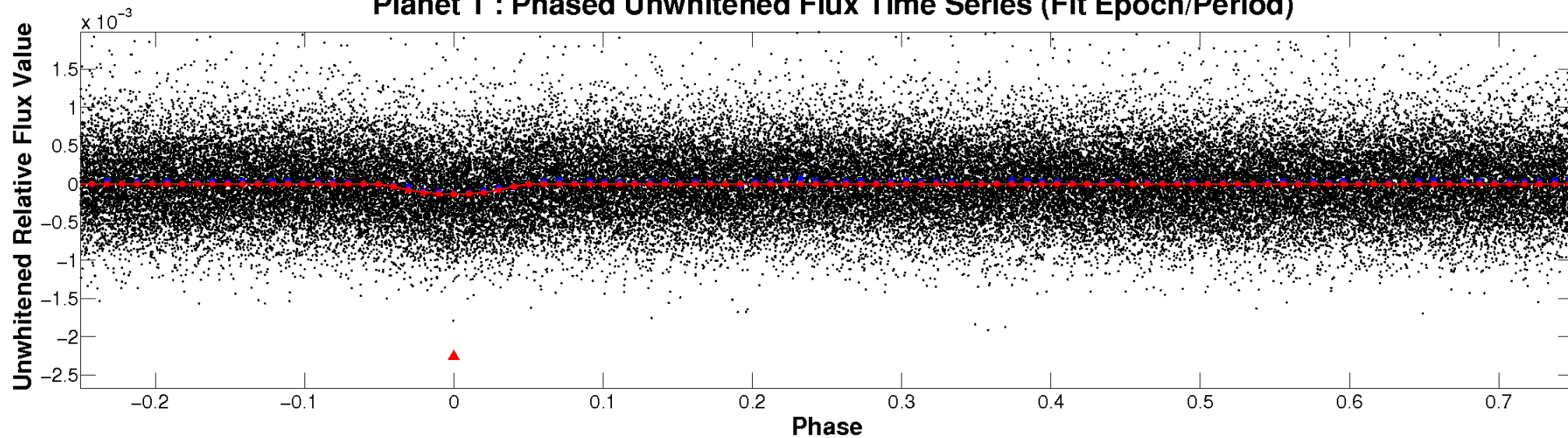
ALT Odd/Even

TCE 006528141-01

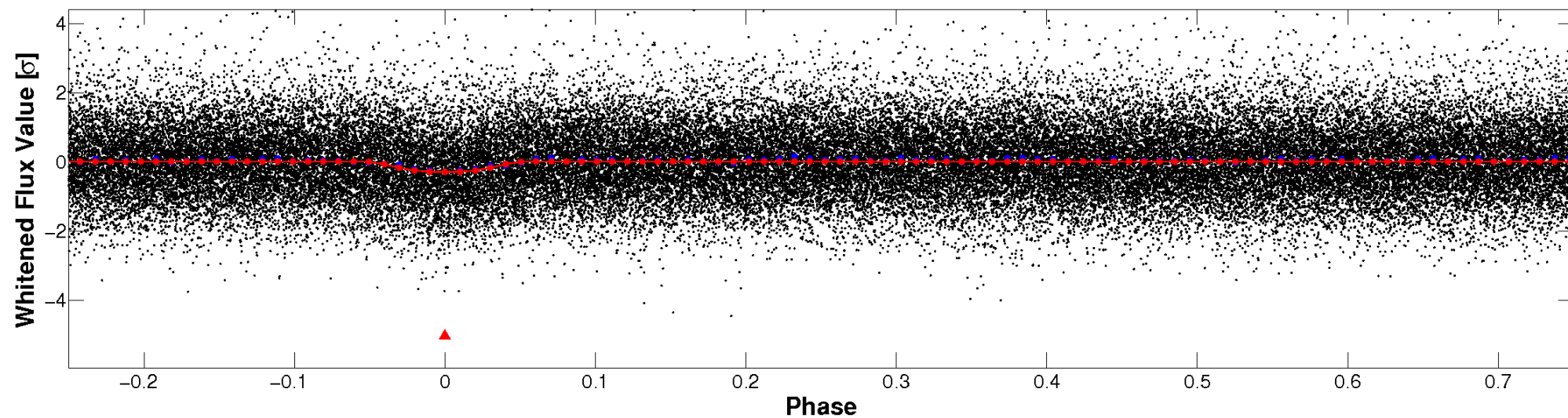


Non-Whitened Vs. Whitened Light Curve

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

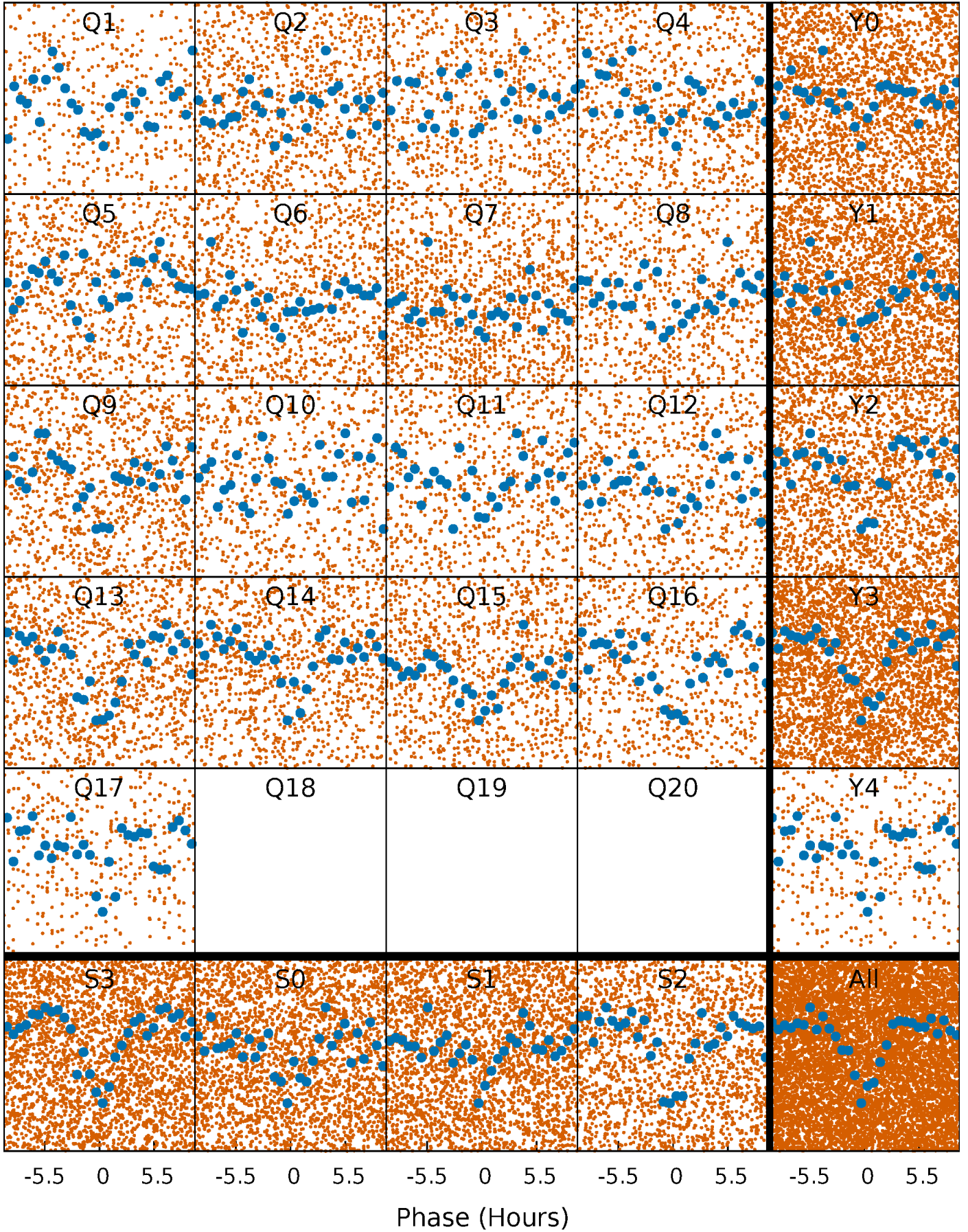


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



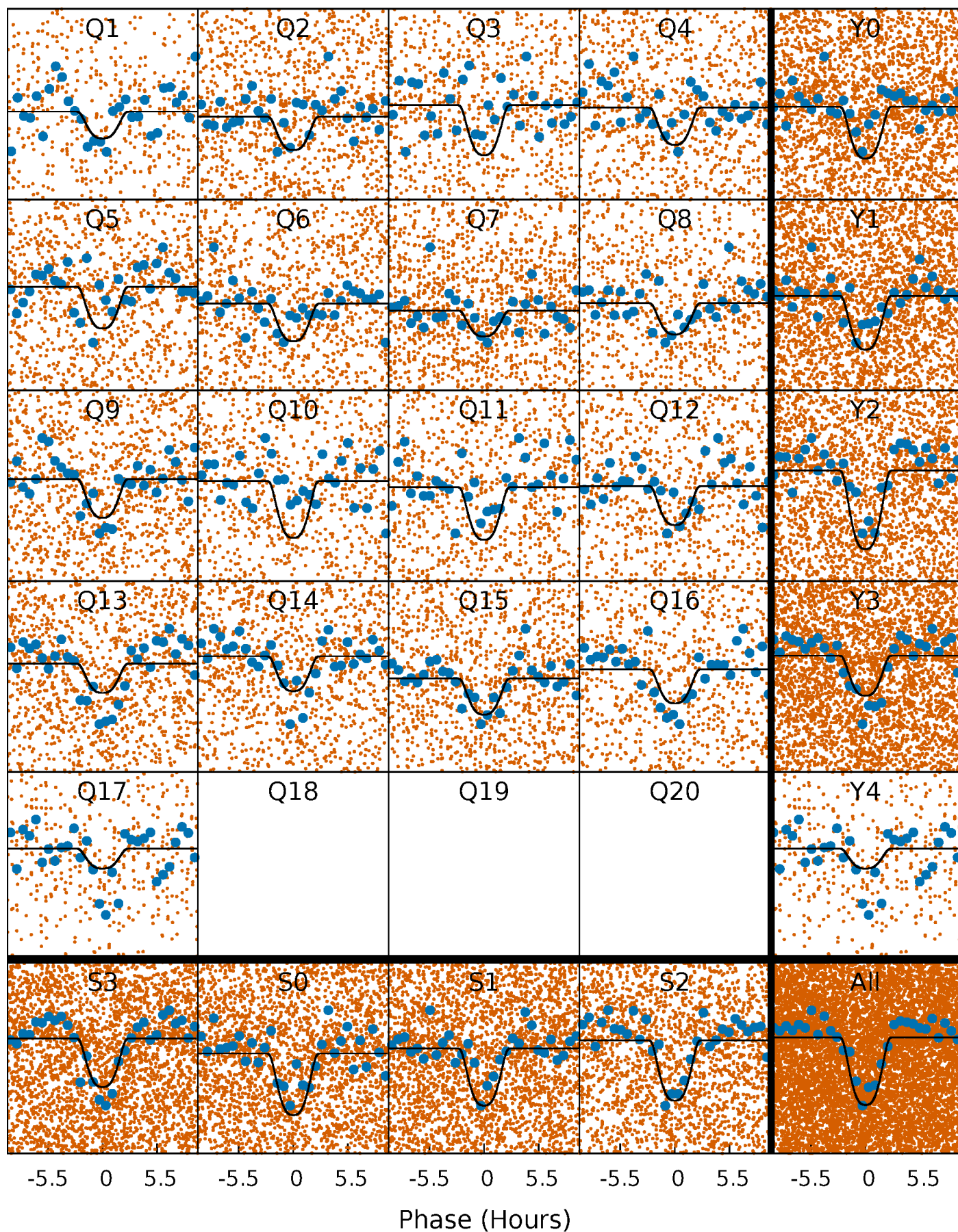
PDC Quarter-Phased Transit Curves

TCE 006528141-01 P= 2.022612 Days $T_0=131.848746$ (BKJD)



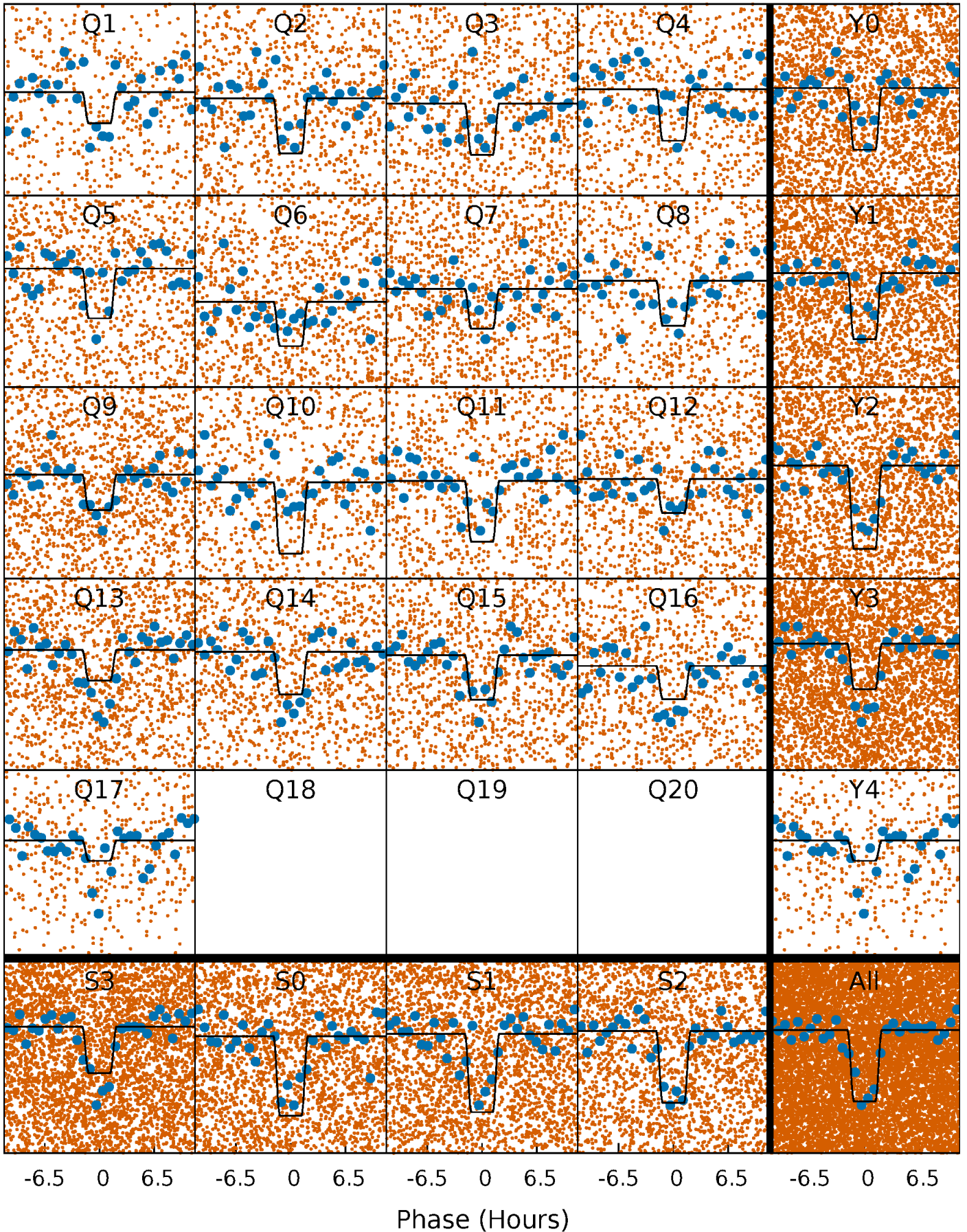
DV Quarter-Phased Transit Curves

TCE 006528141-01 P= 2.022612 Days $T_0=131.848746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

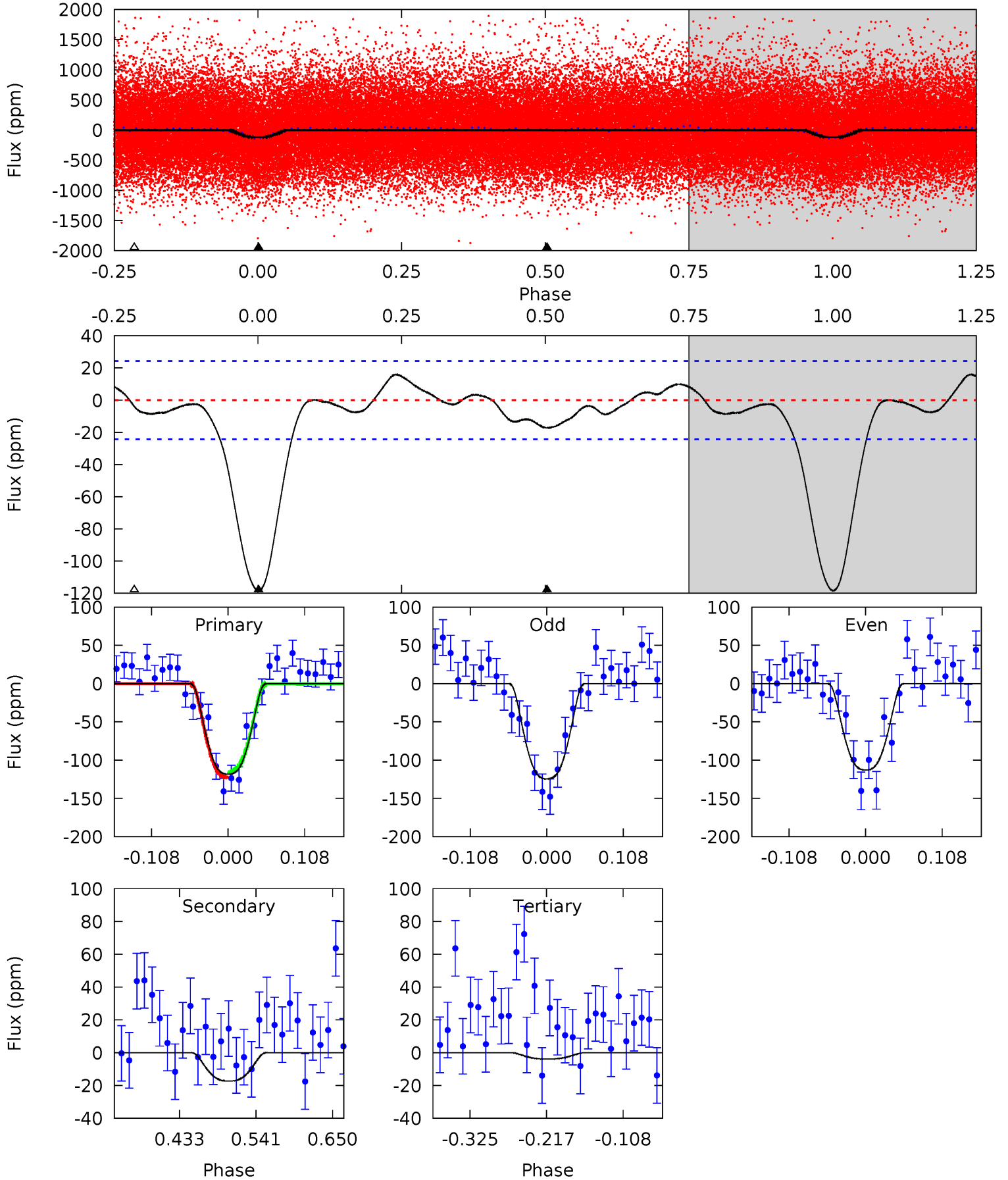
TCE 006528141-01 P= 2.022673 Days $T_0=131.823362$ (BKJD)



DV Model-Shift Uniqueness Test

006528141-01, P = 2.022612 Days, E = 129.826134 Days

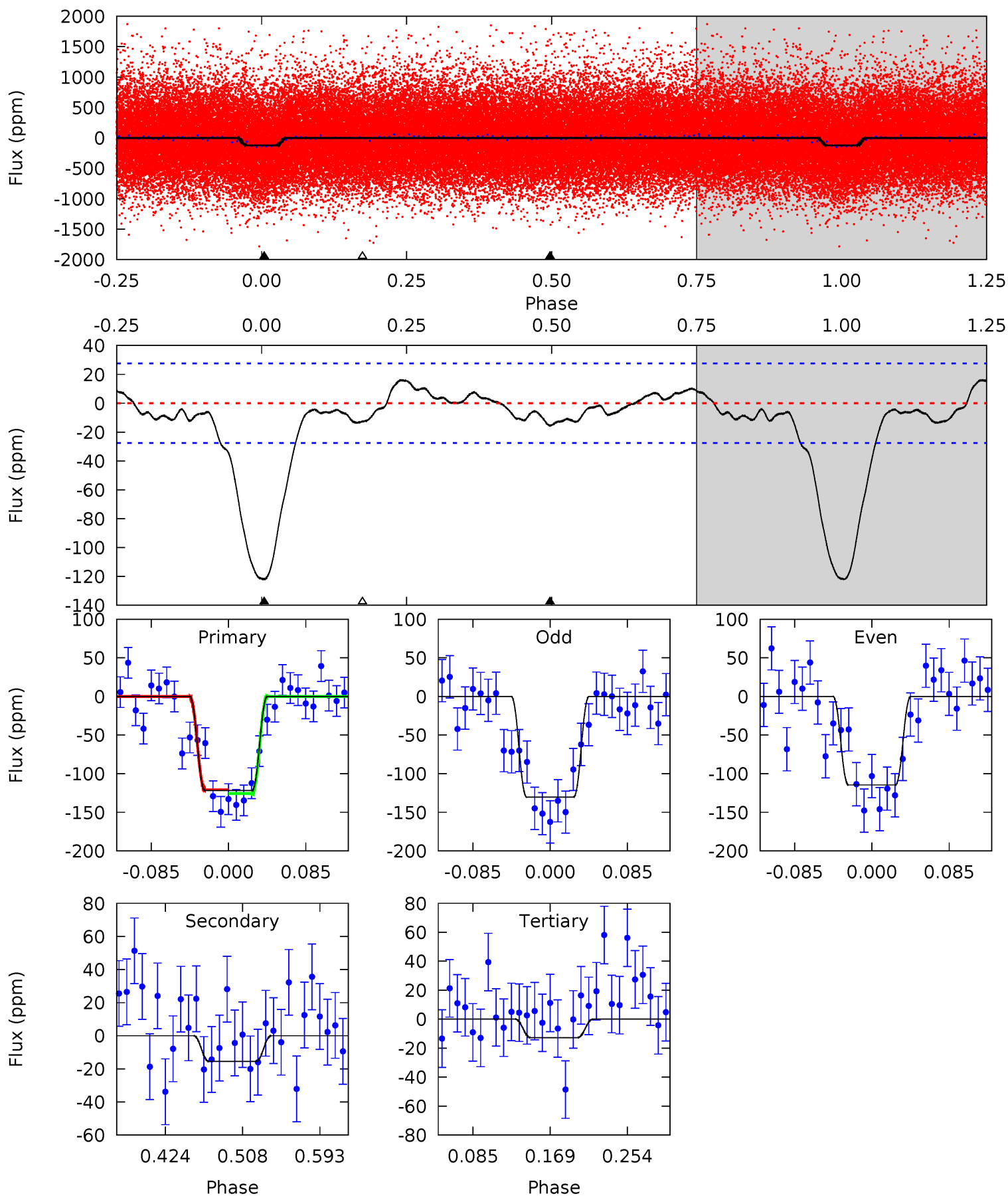
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	3.23	0.72	0	4.55	1.61	1.21	21.4	22.1	2.50	3.23	1.08	0.91	0.12	0.64



Alt Model-Shift Uniqueness Test

006528141-01, P = 2.022673 Days, E = 129.800689 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	2.59	2.12	0	4.60	1.72	1.26	18.2	20.3	0.47	2.59	1.30	0.88	0.12	0.40



Stellar Parameters For KIC 006528141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6091^{+189}_{-232}	$4.487^{+0.052}_{-0.208}$	$-0.140^{+0.300}_{-0.300}$	$0.967^{+0.300}_{-0.100}$	$1.045^{+0.139}_{-0.139}$	$1.627^{+0.451}_{-0.851}$
	+3%/-4%	+1%/-5%	+214%/-214%	+31%/-10%	+13%/-13%	+28%/-52%
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 006528141-01 / KOI 4340.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 5	$1.60^{+0.30}_{-0.20}$	2110^{+169}_{-103}	3606^{+241}_{-245}	$3.505^{+1.746}_{-1.223}$
Alt.	-16 ± 6	$1.30^{+0.21}_{-0.18}$	2114^{+146}_{-113}	3811^{+339}_{-336}	$4.882^{+2.835}_{-2.136}$

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

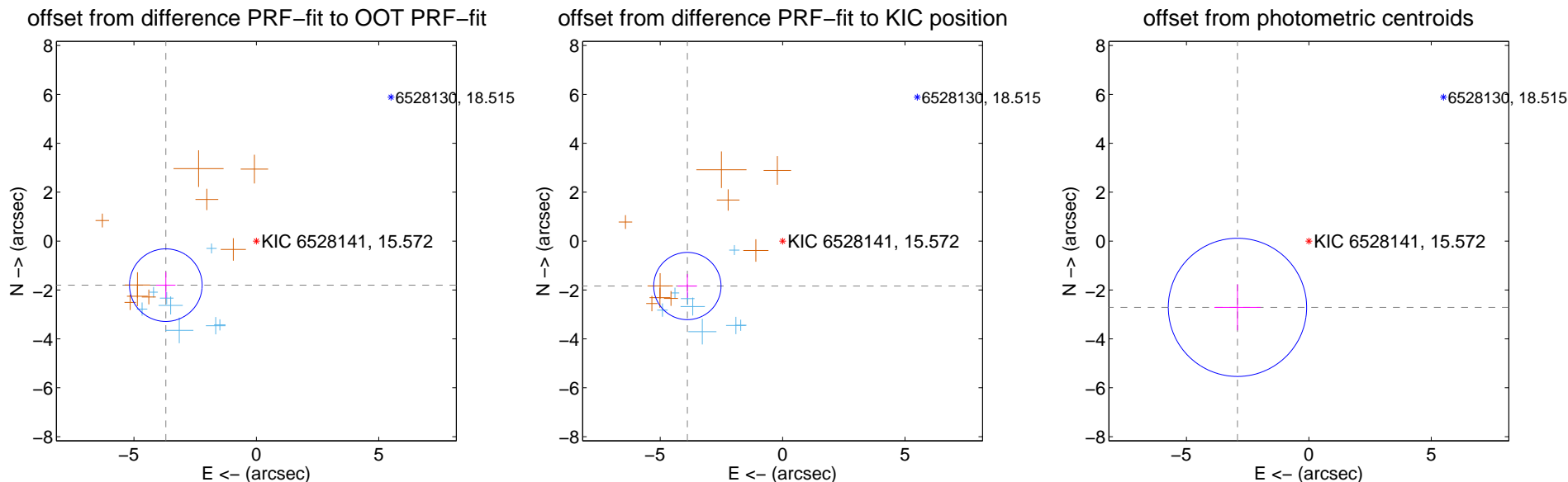
DV Centroid Data

Supplemental centroid analysis for 006528141-01. Kepler magnitude: 15.57. Transit SNR 16.57

There are 8 quarters with good PRF difference image offsets

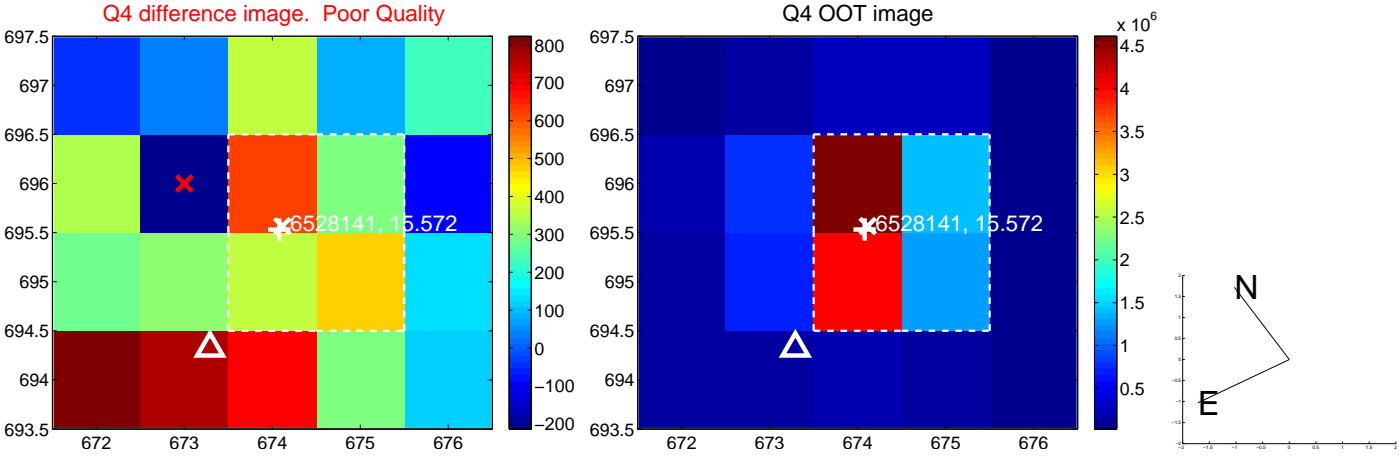
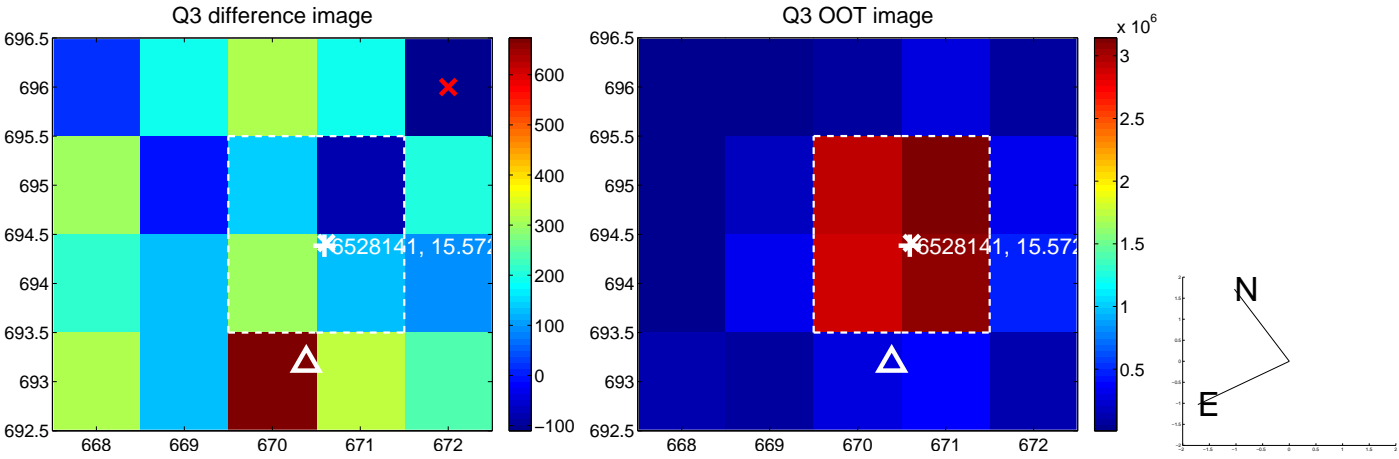
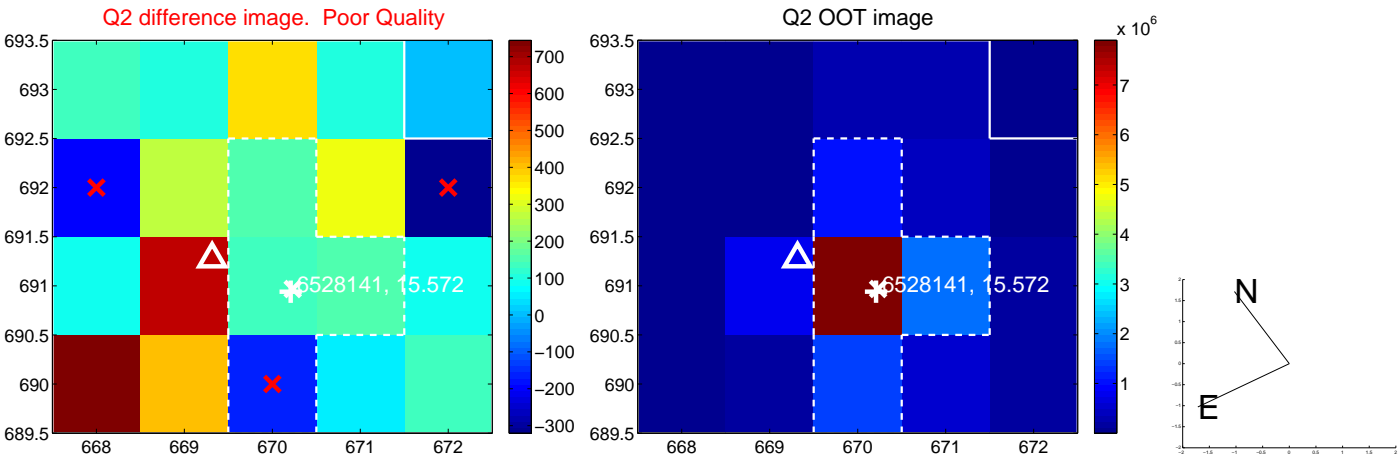
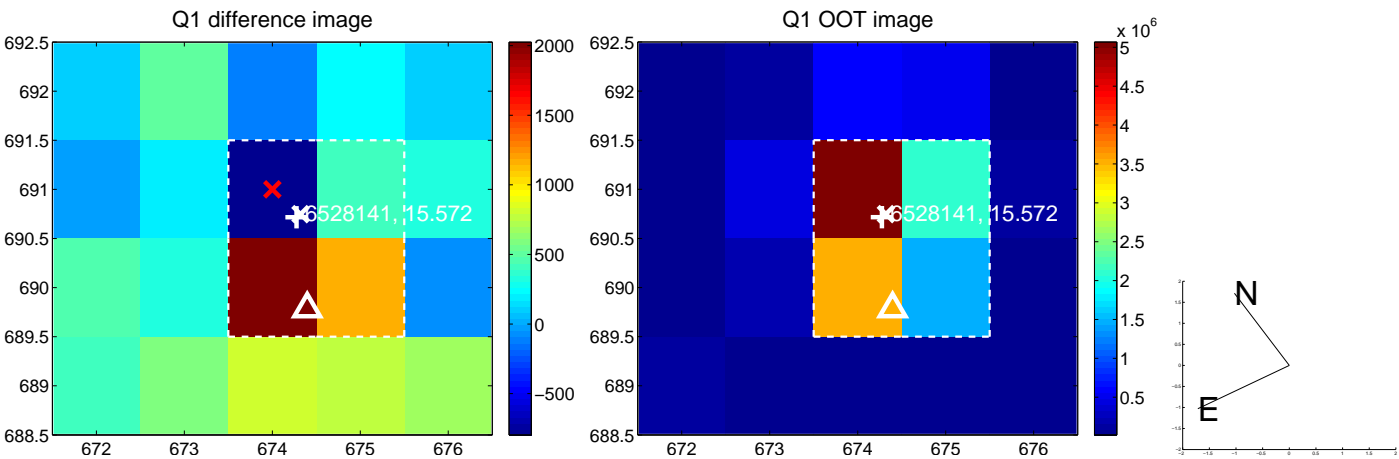
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.115 ± 0.495	8.31	3.700 ± 0.396	-1.802 ± 0.537
PRF-fit source offset from KIC position	4.304 ± 0.458	9.39	3.892 ± 0.395	-1.838 ± 0.486
photometric centroid source offset	3.98 ± 0.94	4.23	2.92 ± 0.94	-2.71 ± 0.94

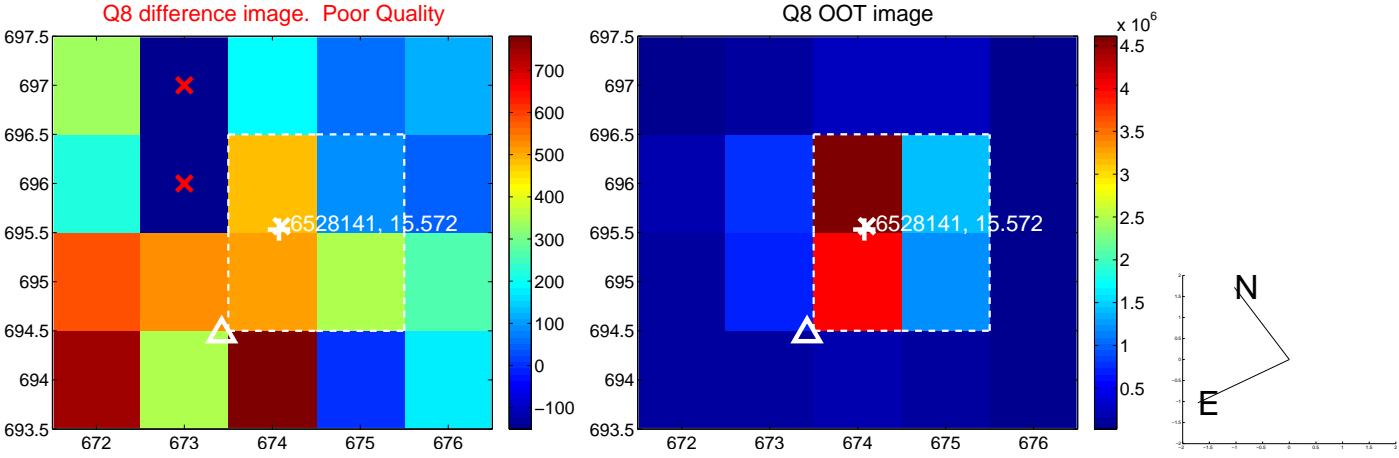
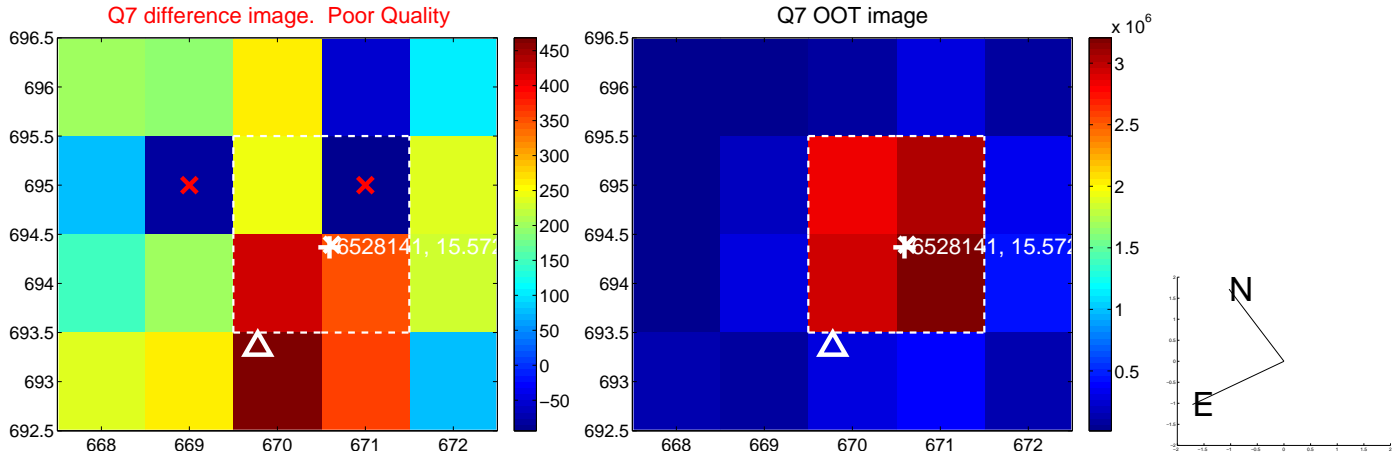
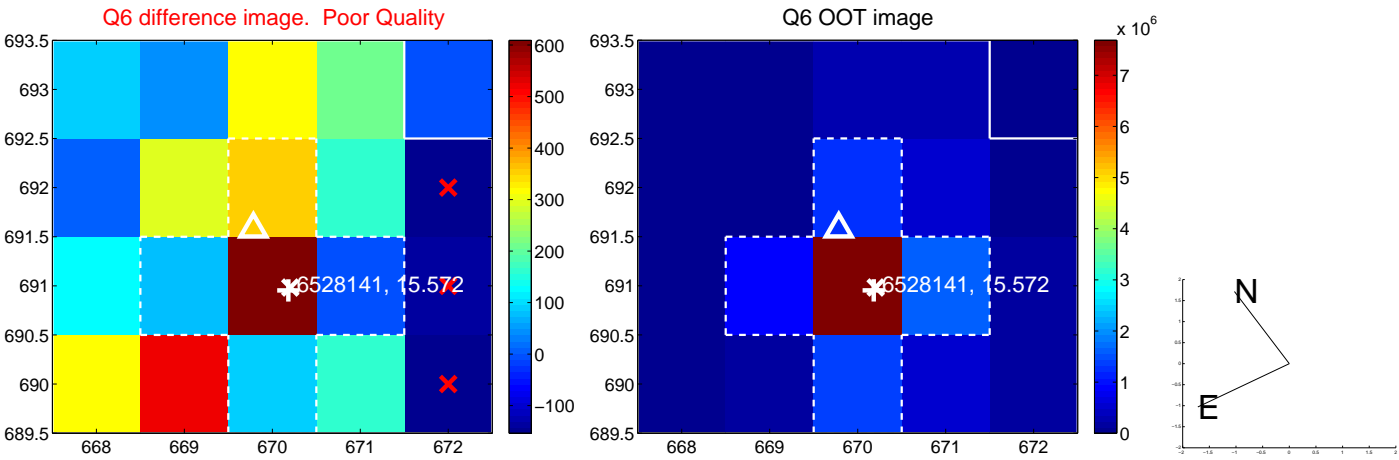
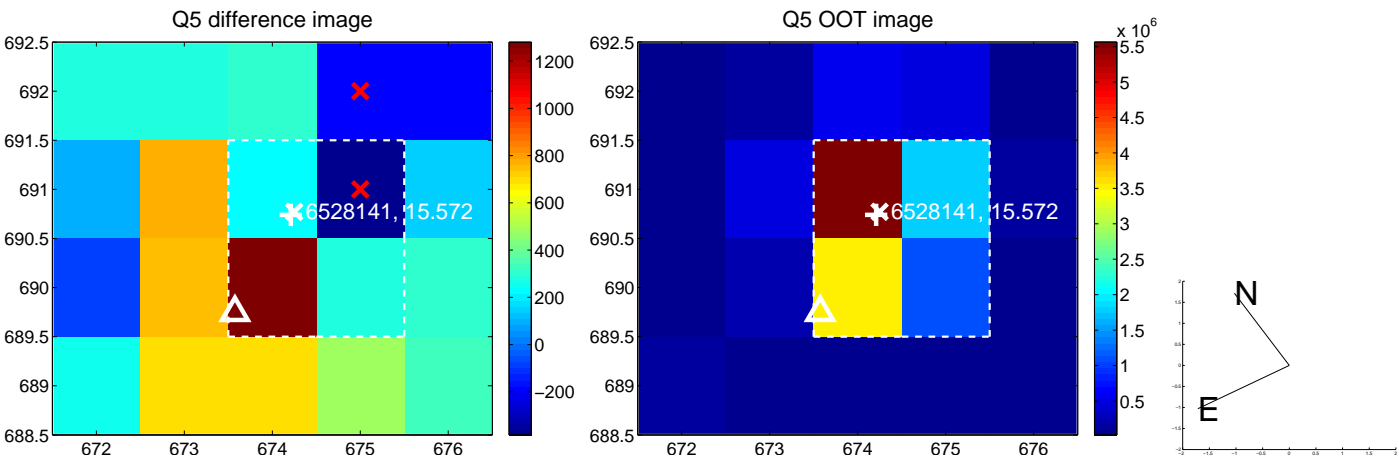


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

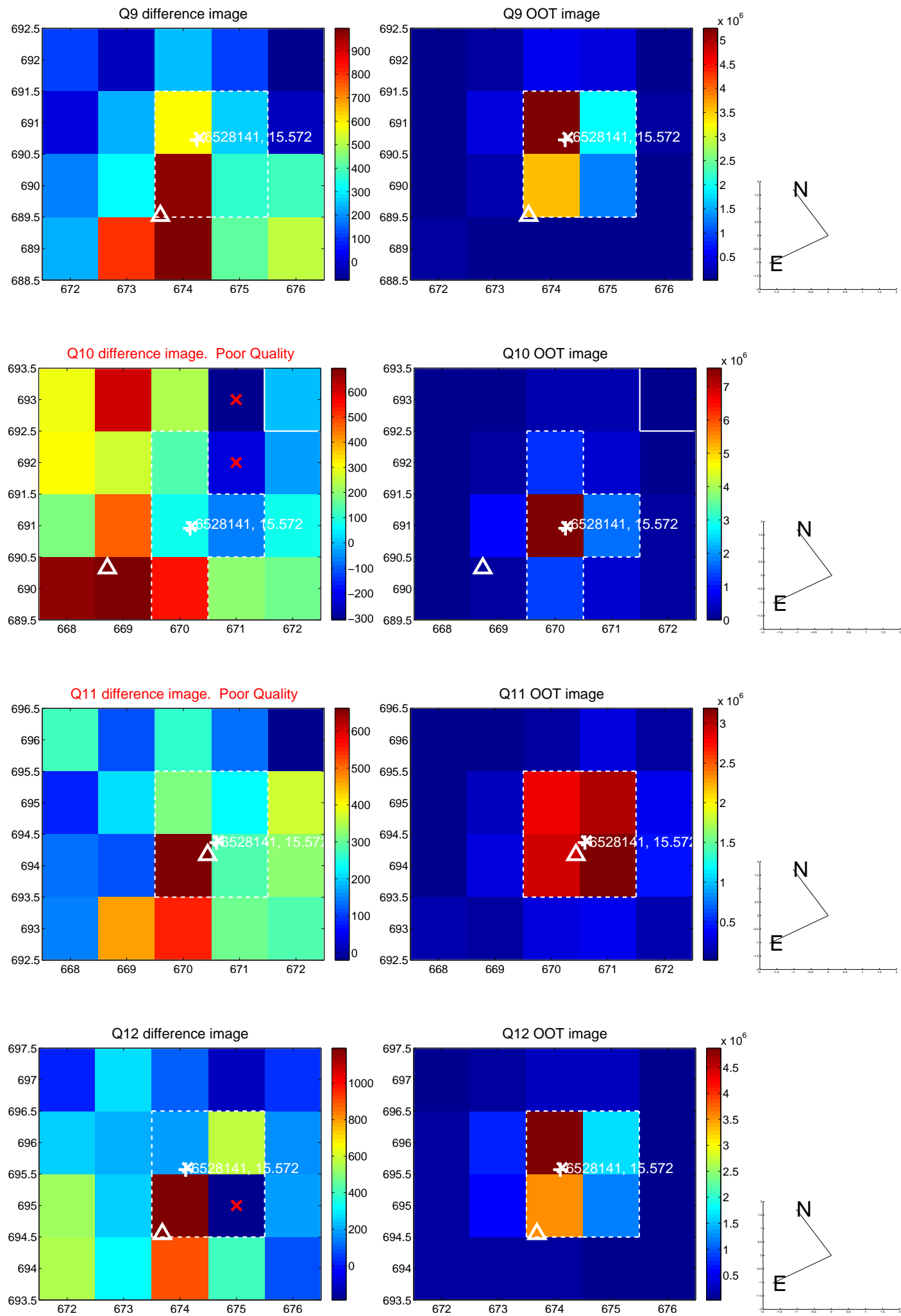
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



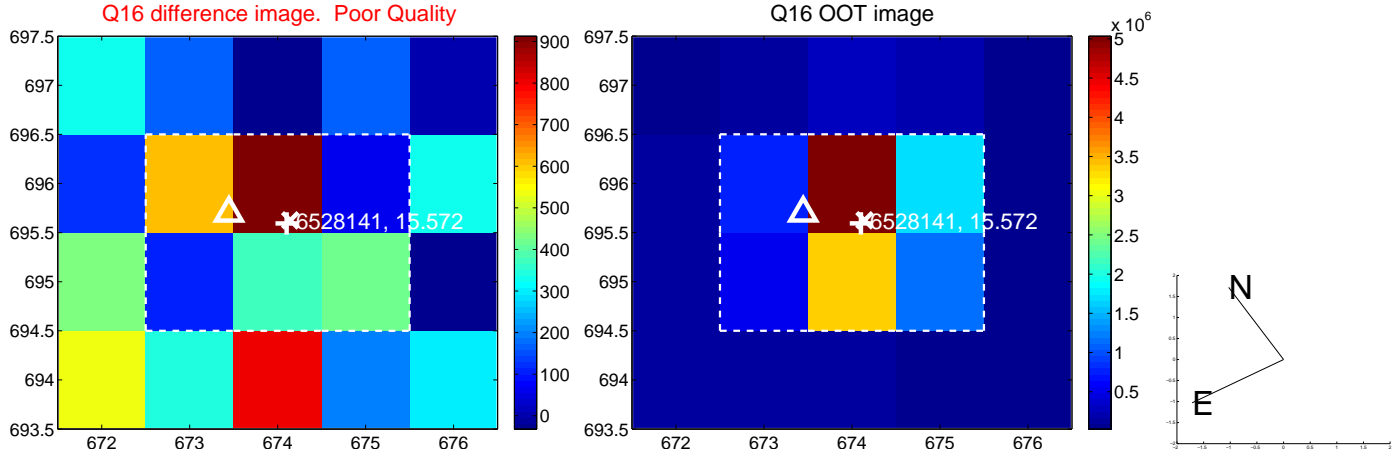
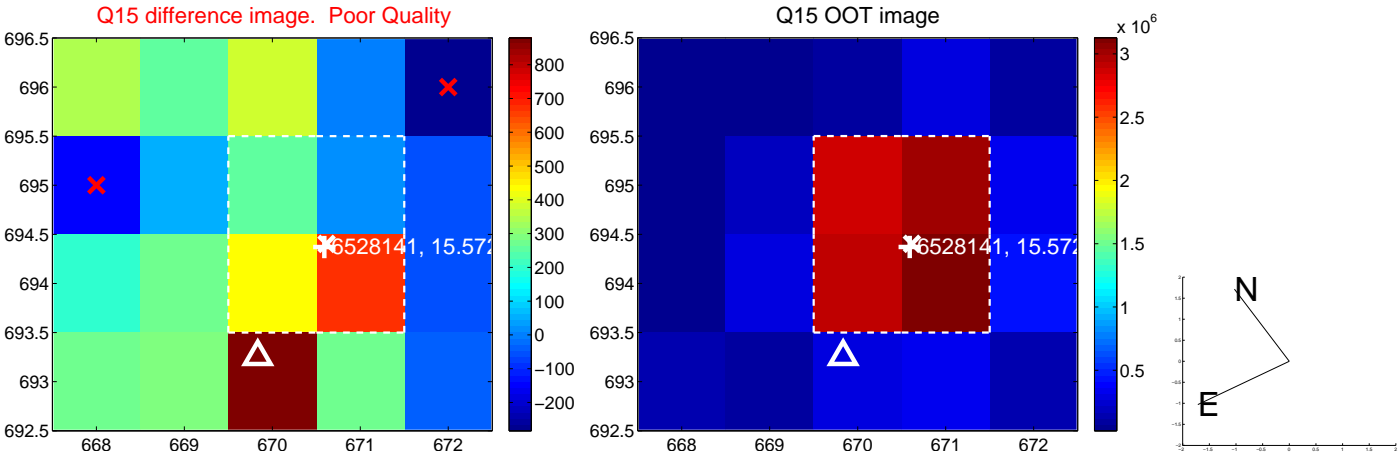
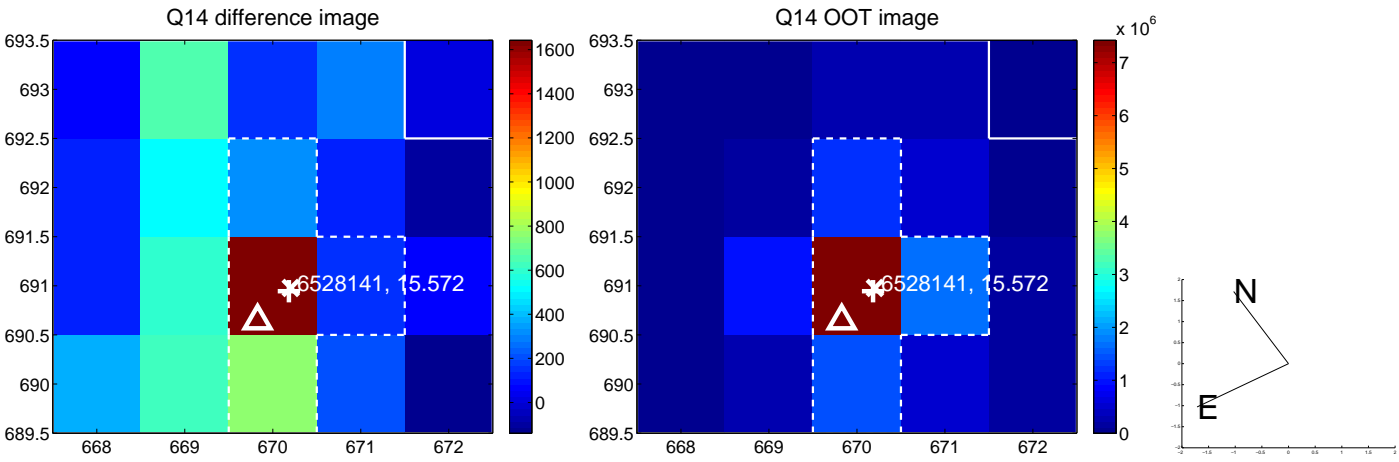
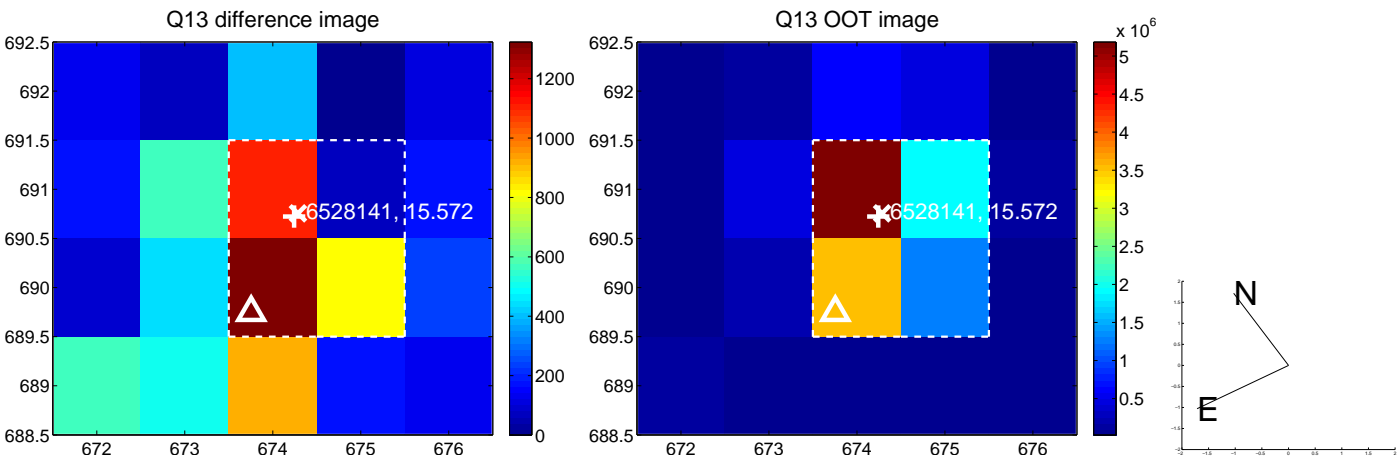
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



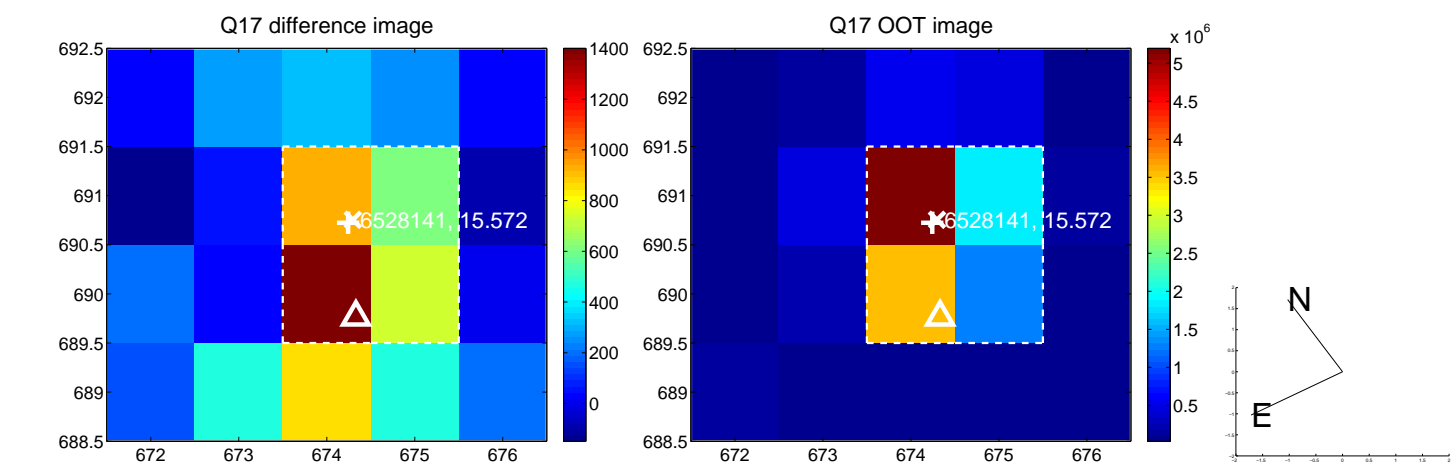
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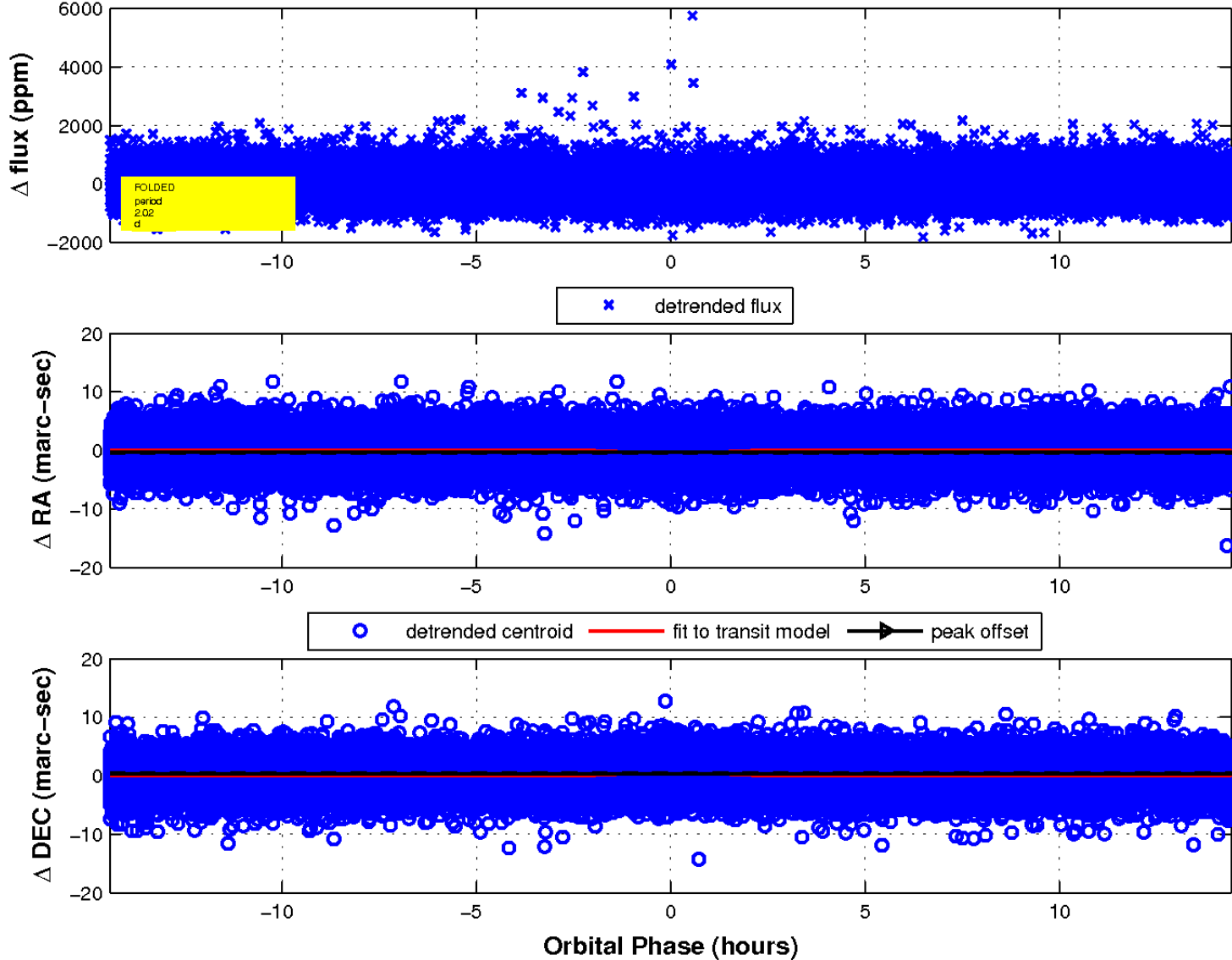
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

