

KIC 007050060

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})
007050060-01	OBS	2215.01	22.045202	134.170307	318.9	46.381	22.8	39.0	1.26	5974	4.48	79.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007050060-01	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 007050060-01

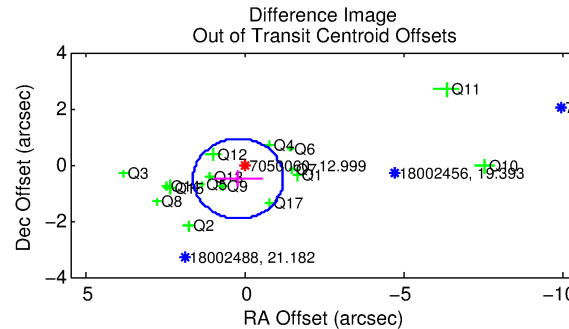
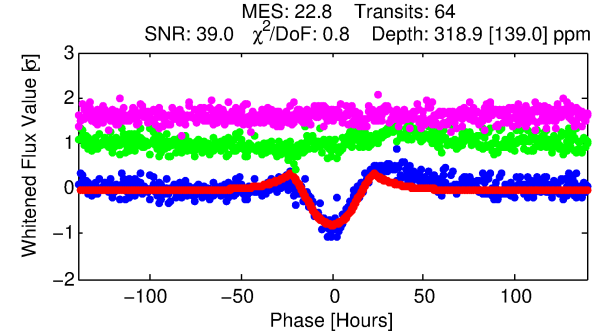
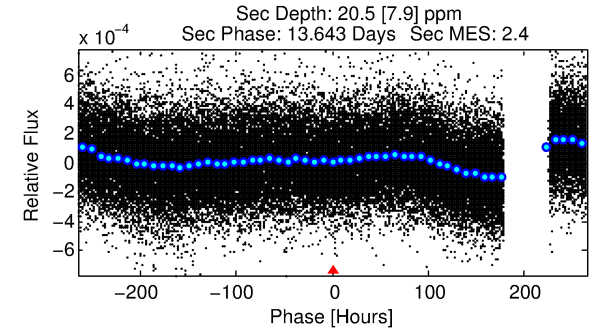
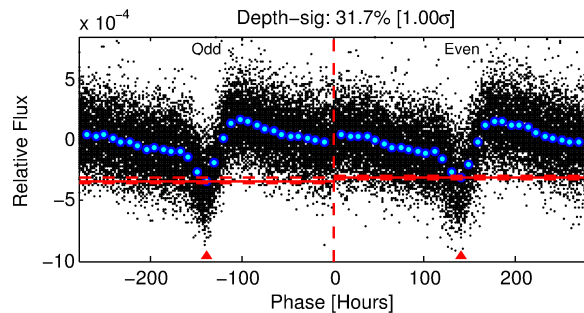
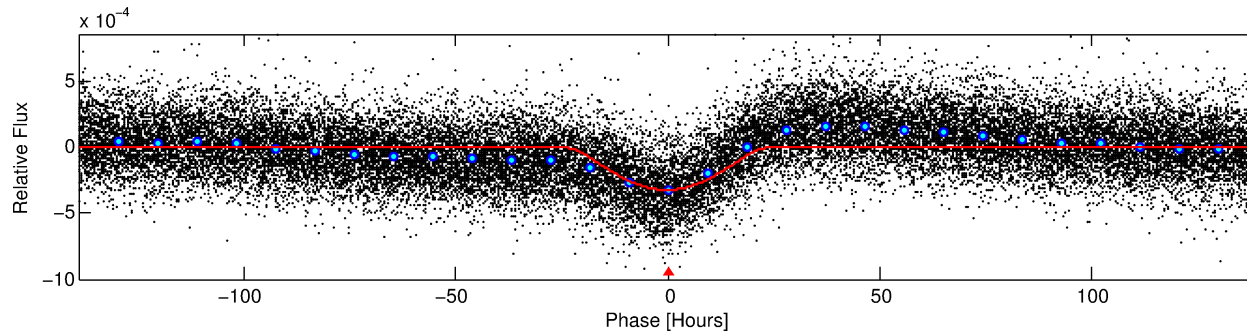
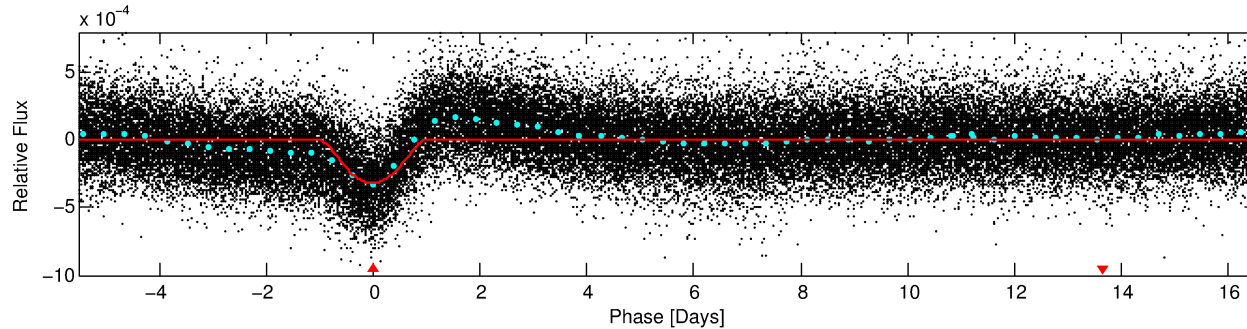
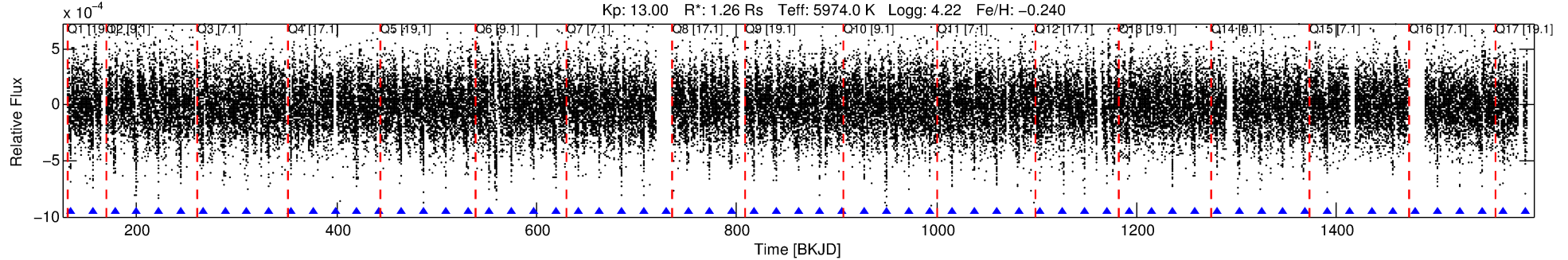
No Significant Match Found

DV One-Page Summary

KIC: 7050060 Candidate: 1 of 1 Period: 22.045 d

KOI: K02215 Corr: No Ephemeris Match

Kp: 13.00 R*: 1.26 Rs Teff: 5974.0 K Logg: 4.22 Fe/H: -0.240



DV Fit Results:

Period = 22.04520 [0.00052] d
Epoch = 134.1703 [0.0198] BKJD
Rp/R* = 0.0326 [0.0160]
a/R* = 1.38 [0.07]
b = 1.00 [0.01]
Seff = 79.03 [36.18]
Teq = 760 [87] K
Rp = 4.48 [2.52] Re
a = 0.1514 [0.0407] AU
Ag = 12.88 [14.73] [0.81σ]
Teffp = 2227 [594] K [2.44σ]

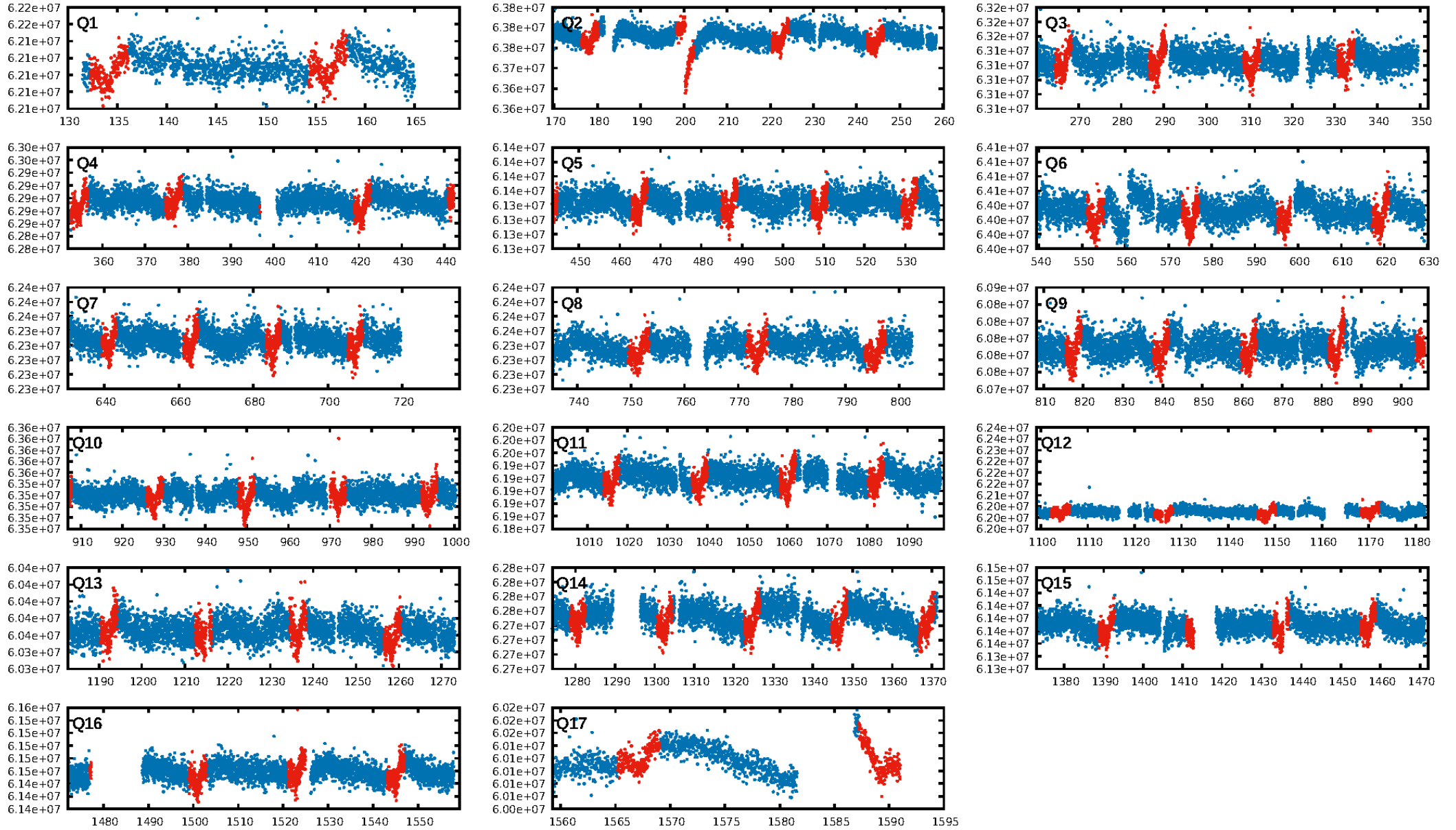
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.85e-108
RollingBand-fgt: 1.00 [60/60]
GhostDiagnostic-chr: 2.75
Centroid-sig: 0.0%
Centroid-so: 0.818 arcsec [3.50σ]
OotOffset-rm: 0.545 arcsec [1.15σ]
KicOffset-rm: 0.534 arcsec [0.79σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [16/16]

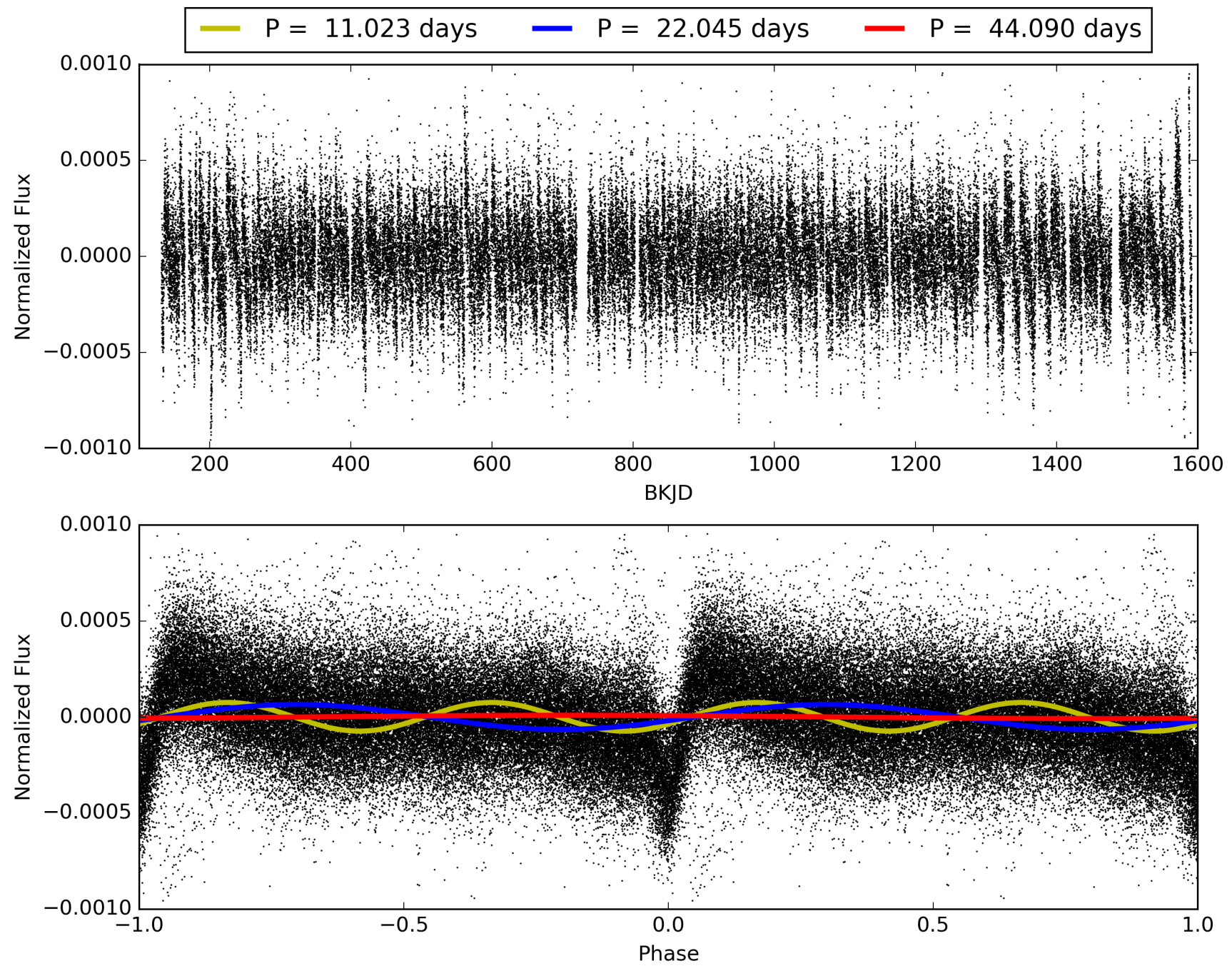
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:38:14 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007050060-01, PDC Light Curves

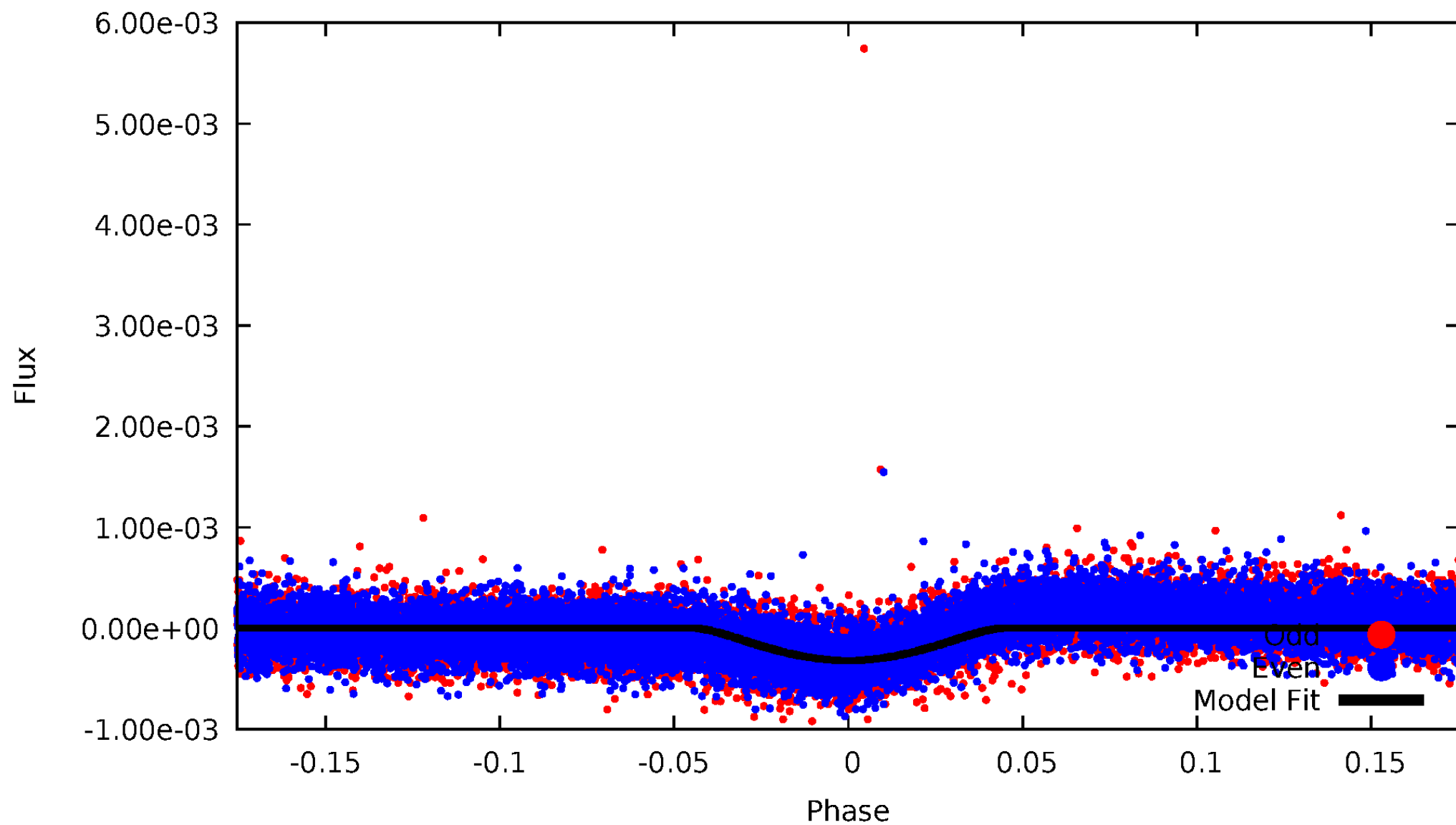


TCE 007050060-01



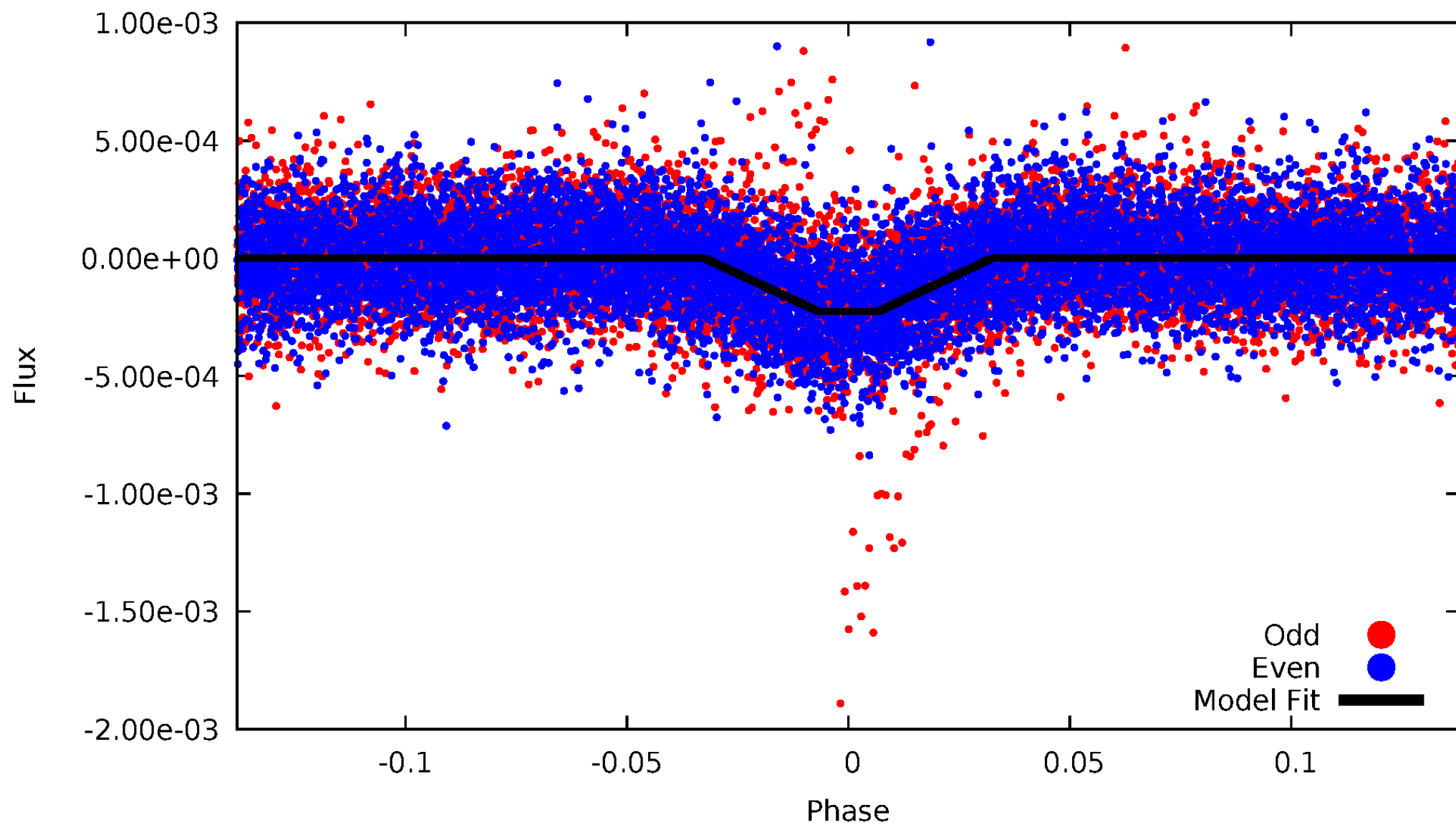
DV Odd/Even

TCE 007050060-01



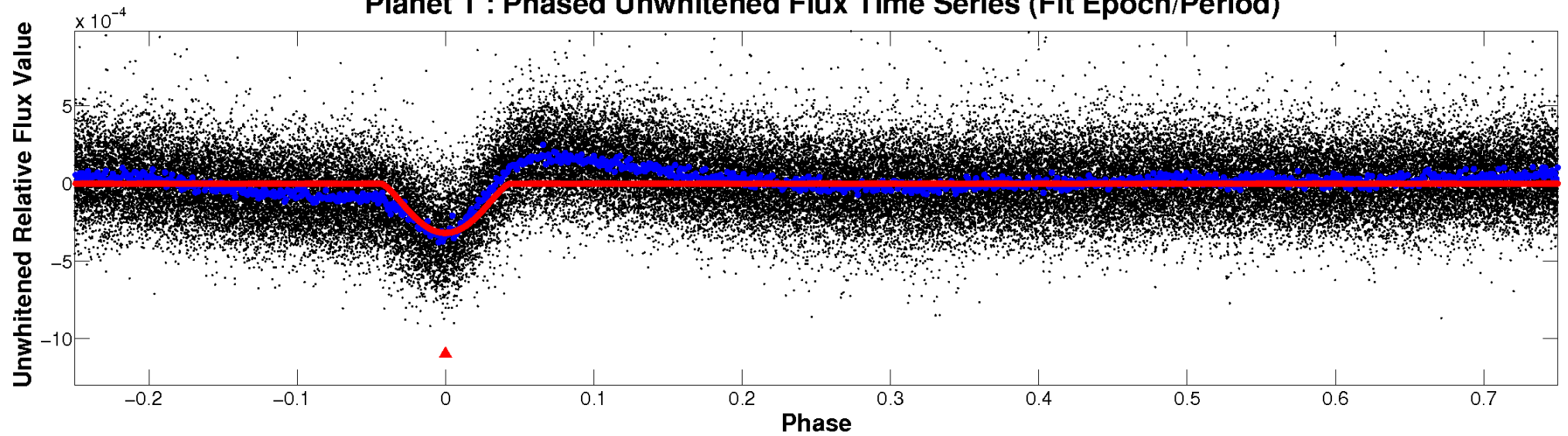
ALT Odd/Even

TCE 007050060-01

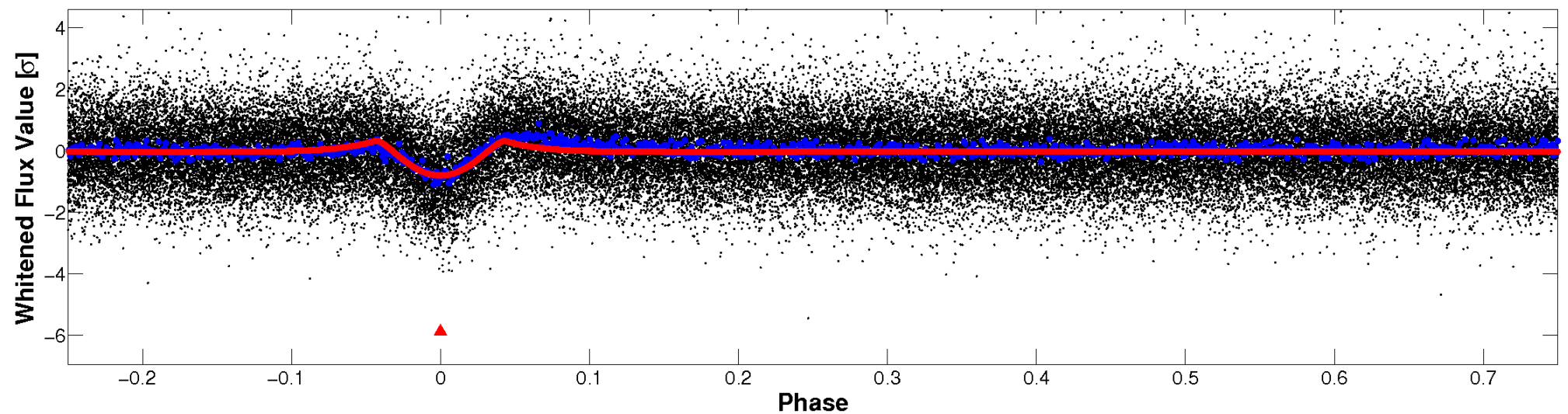


Non-Whitened Vs. Whitened Light Curve

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

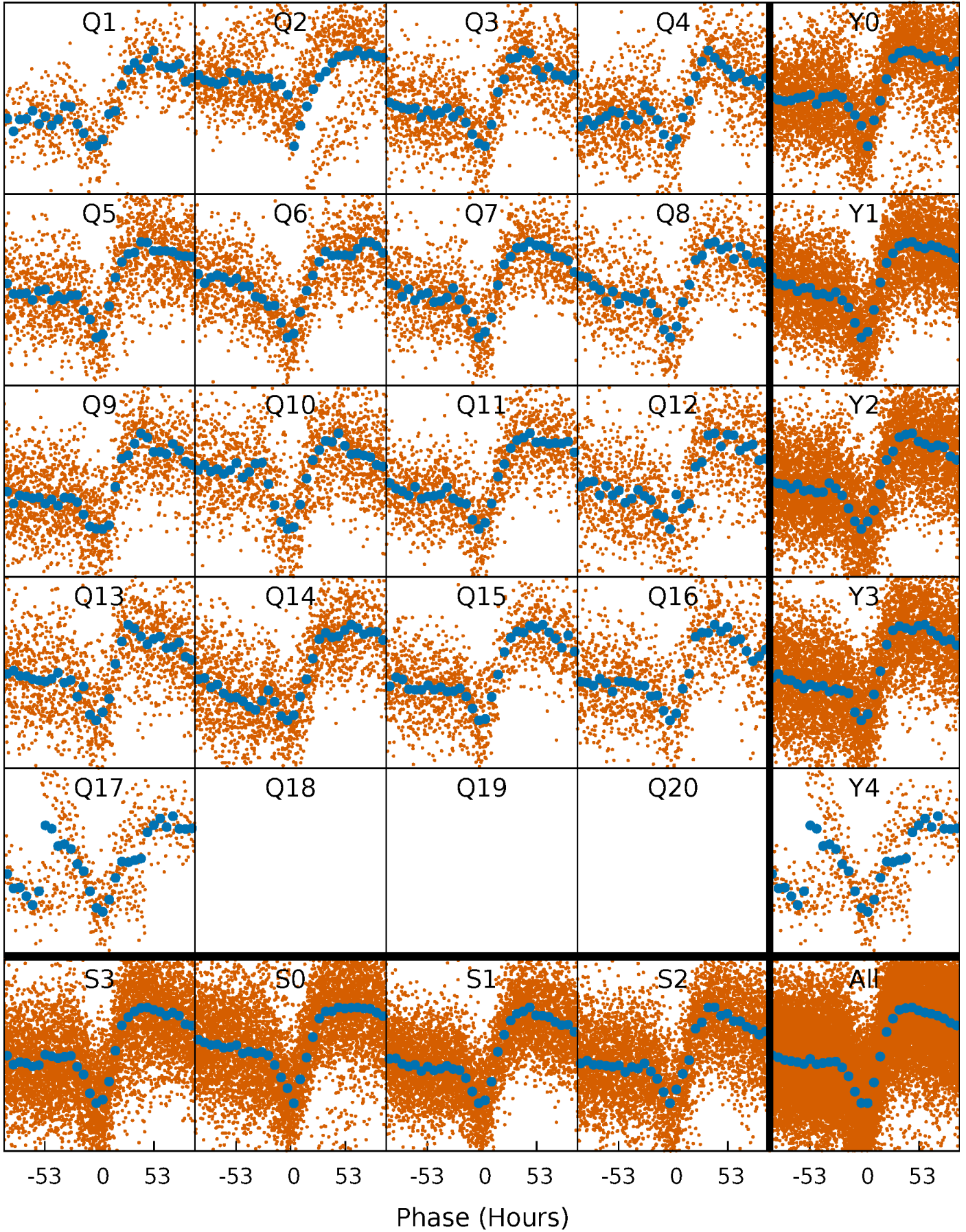


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



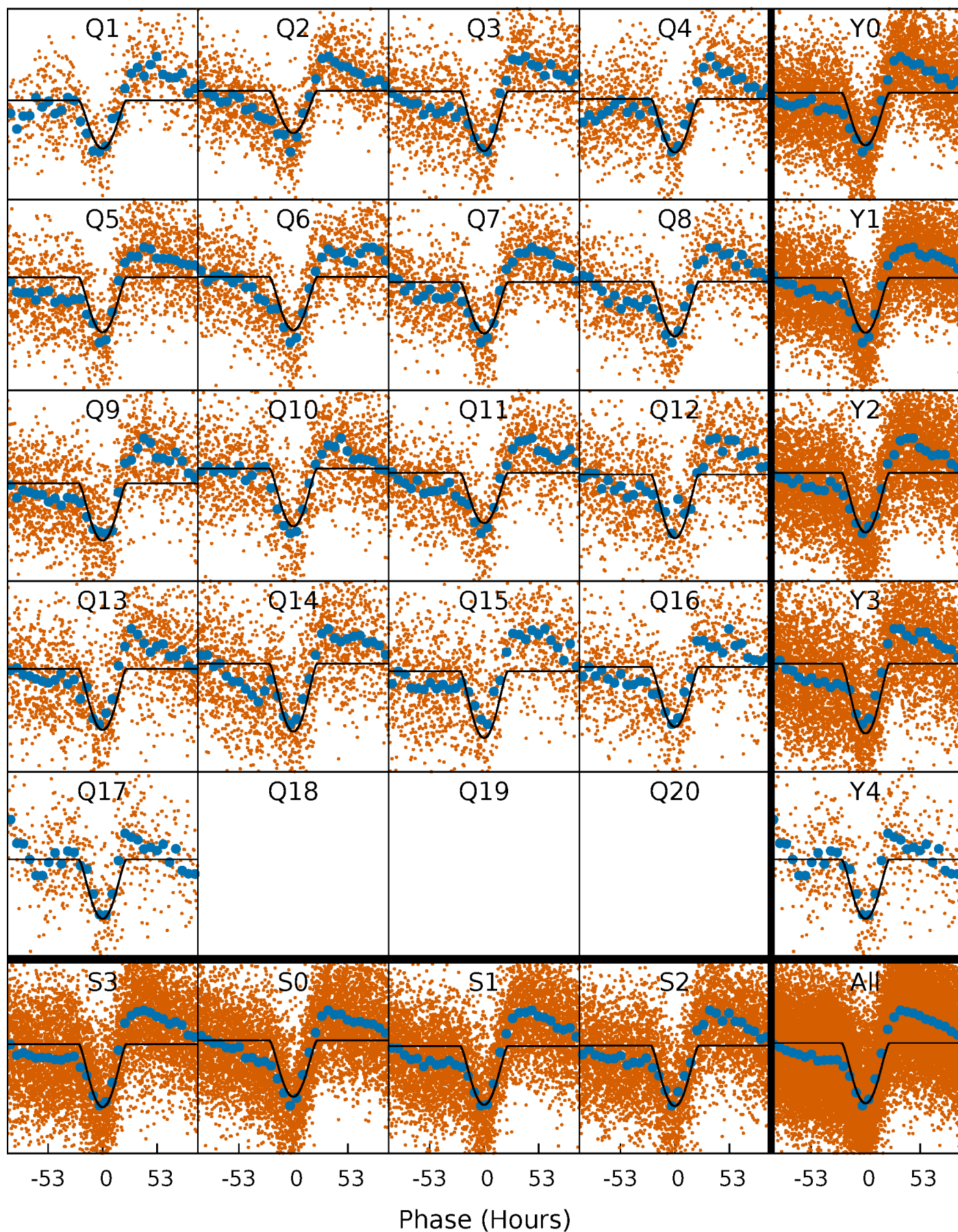
PDC Quarter-Phased Transit Curves

TCE 007050060-01 P= 22.045202 Days $T_0=134.170307$ (BKJD)



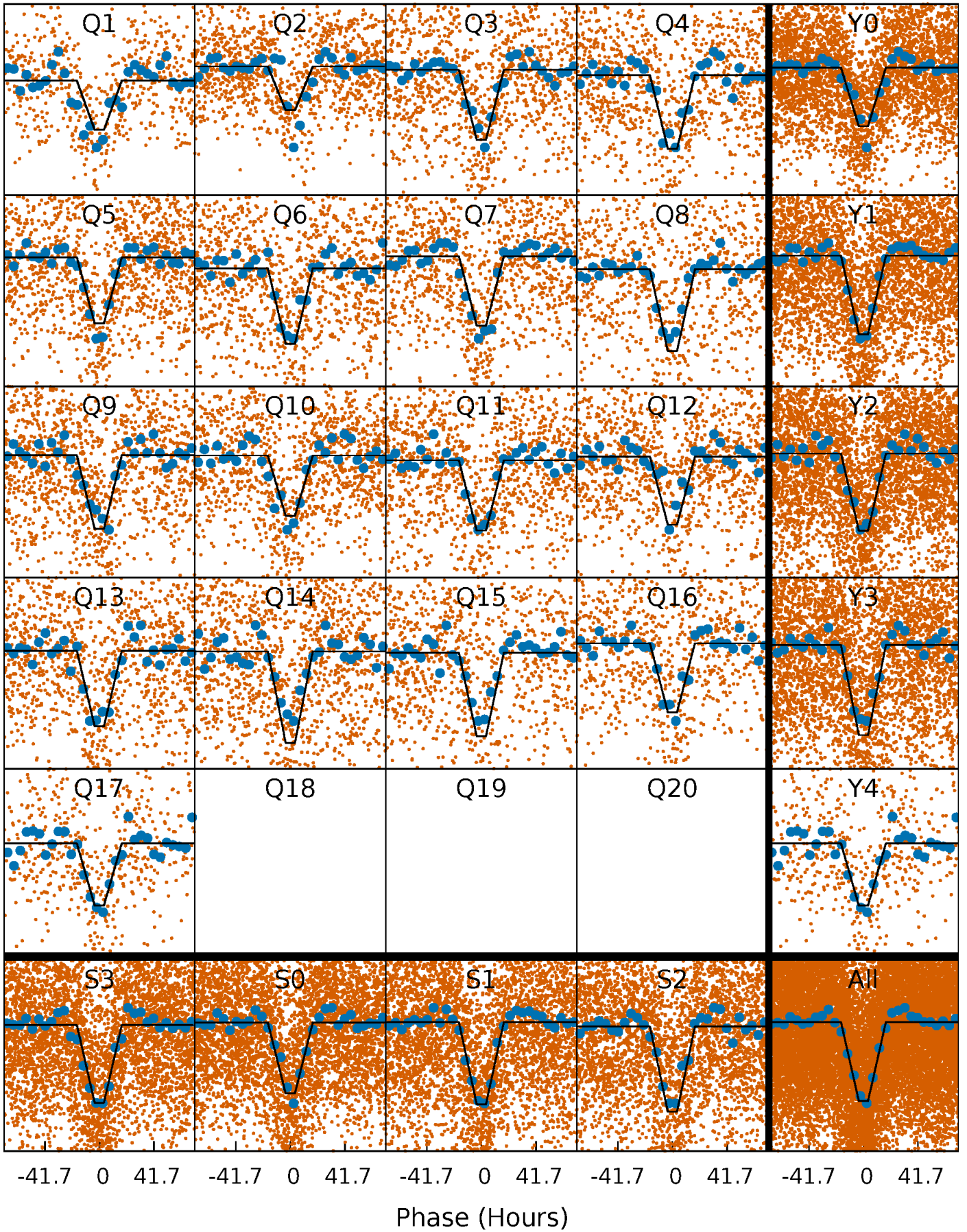
DV Quarter-Phased Transit Curves

TCE 007050060-01 P= 22.045202 Days $T_0=134.170307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

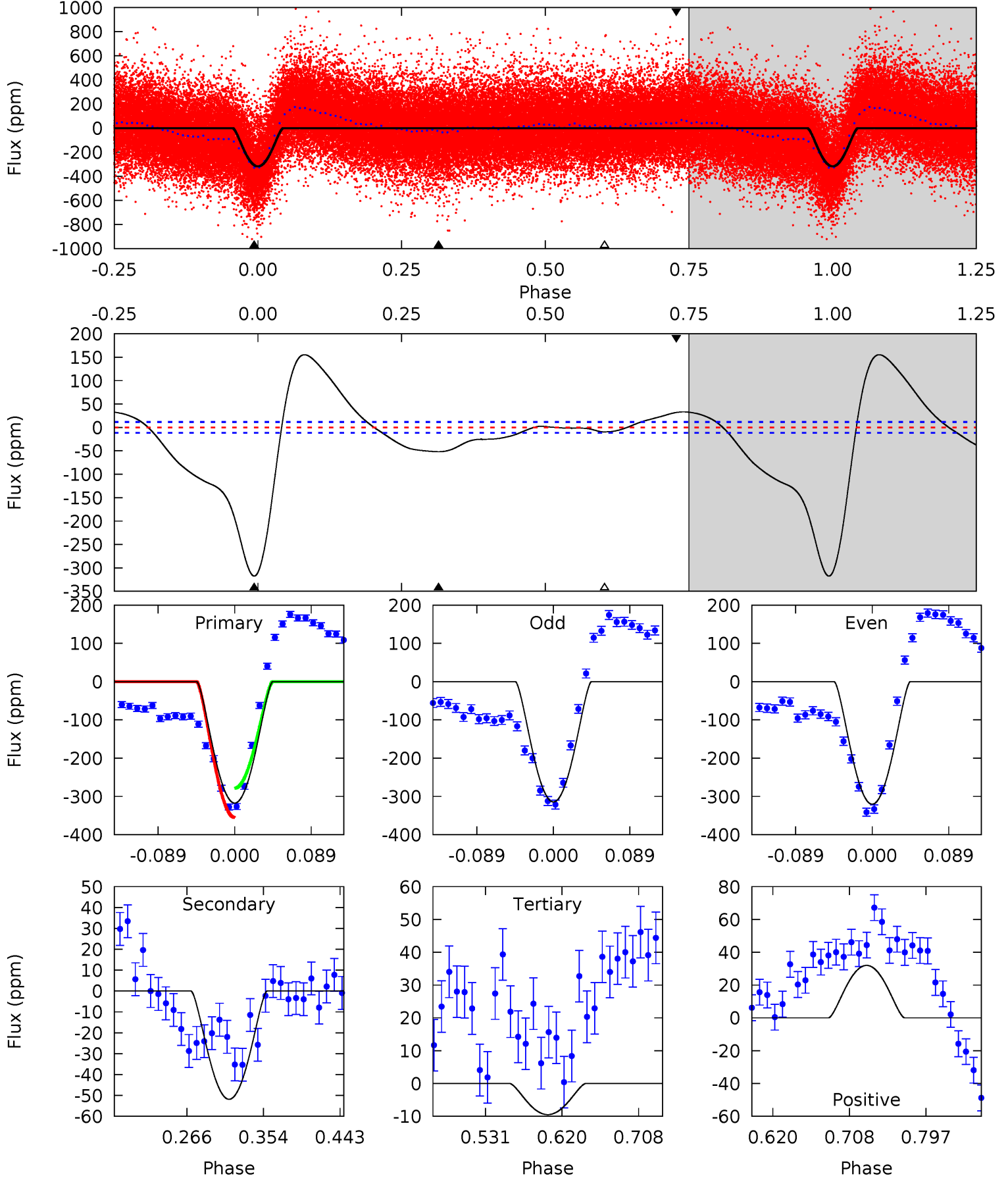
TCE 007050060-01 P= 22.045194 Days $T_0=134.237743$ (BKJD)



DV Model-Shift Uniqueness Test

007050060-01, P = 22.045202 Days, E = 112.125105 Days

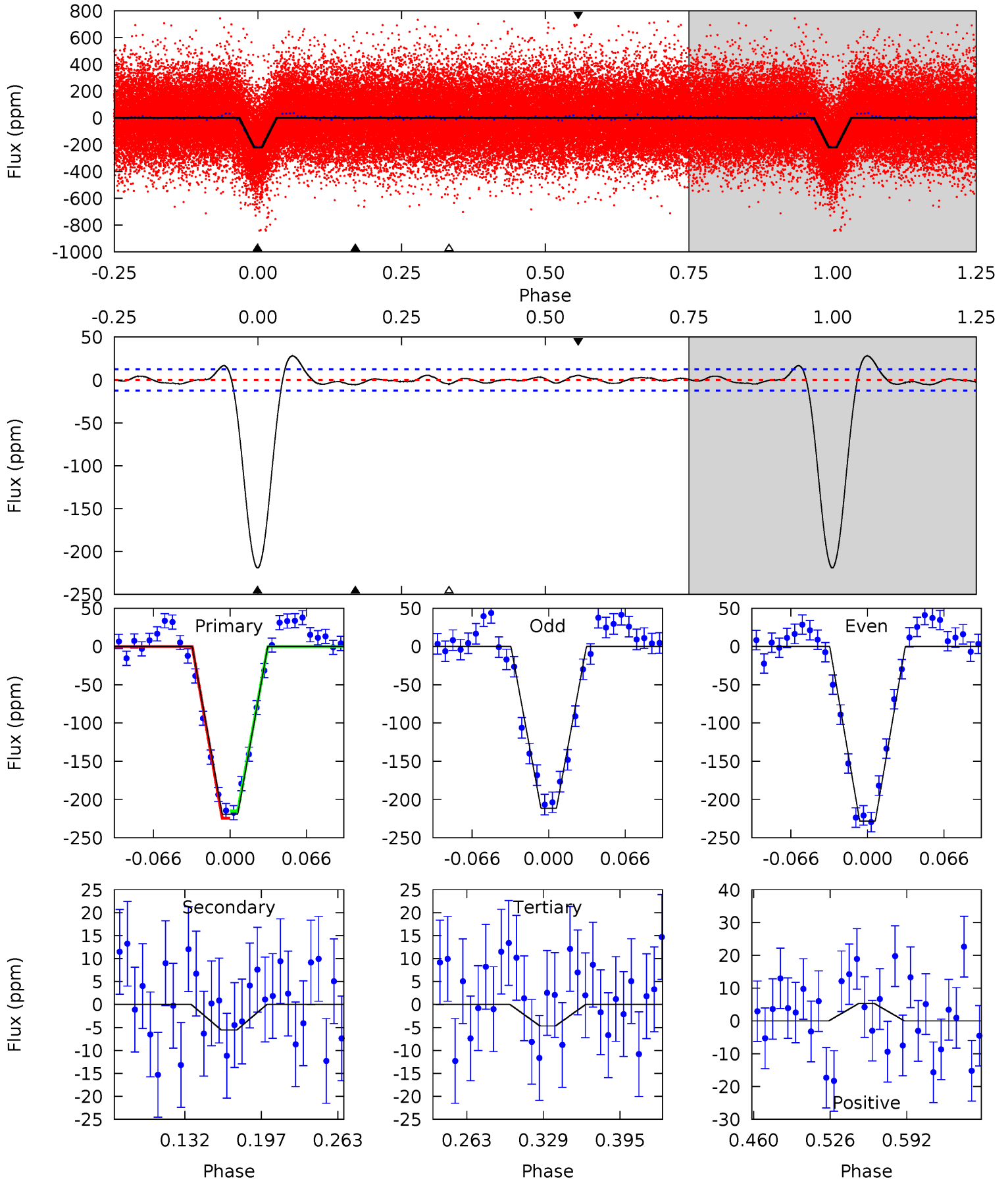
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
124.8	20.4	3.73	12.6	4.59	1.70	19.9	121.1	112.3	16.7	7.81	1.18	0.92	0.33	15.0



Alt Model-Shift Uniqueness Test

007050060-01, P = 22.045194 Days, E = 112.192549 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.0	2.08	1.75	1.99	4.65	1.84	1.54	80.3	80.0	0.33	0.09	3.15	0.97	0.11	1.79



Stellar Parameters For KIC 007050060

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5974^{+189}_{-210}	$4.216^{+0.258}_{-0.172}$	$-0.240^{+0.300}_{-0.300}$	$1.260^{+0.343}_{-0.343}$	$0.953^{+0.145}_{-0.109}$	$0.671^{+0.980}_{-0.300}$
	+3%/-4%	+6%/-4%	+125%/-125%	+27%/-27%	+15%/-11%	+146%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007050060-01 / KOI 2215.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 3	$4.21^{+2.36}_{-1.95}$	1052^{+89}_{-87}	3361^{+803}_{-367}	36^{+96}_{-21}
Alt.	-6 ± 3	$2.51^{+2.24}_{-1.55}$	1057^{+81}_{-81}	2788^{+1038}_{-458}	$9.911^{+67.197}_{-7.503}$

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

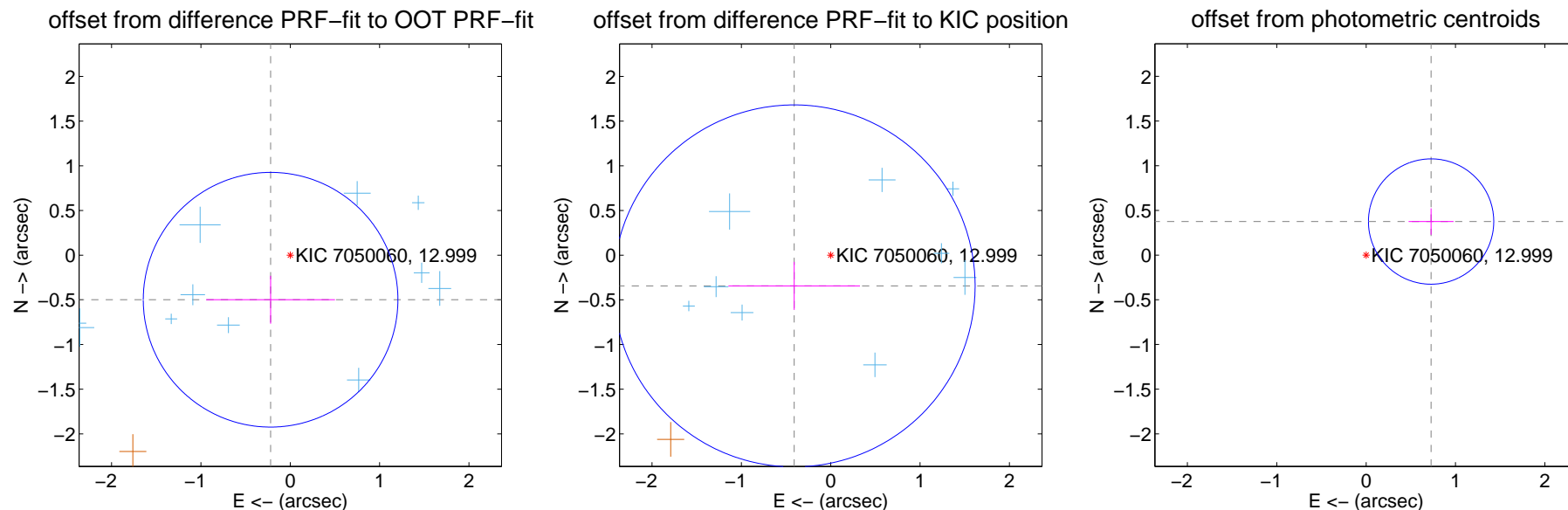
DV Centroid Data

Supplemental centroid analysis for 007050060-01. Kepler magnitude: 13.00. Transit SNR 39.02

There are 12 quarters with good PRF difference image offsets

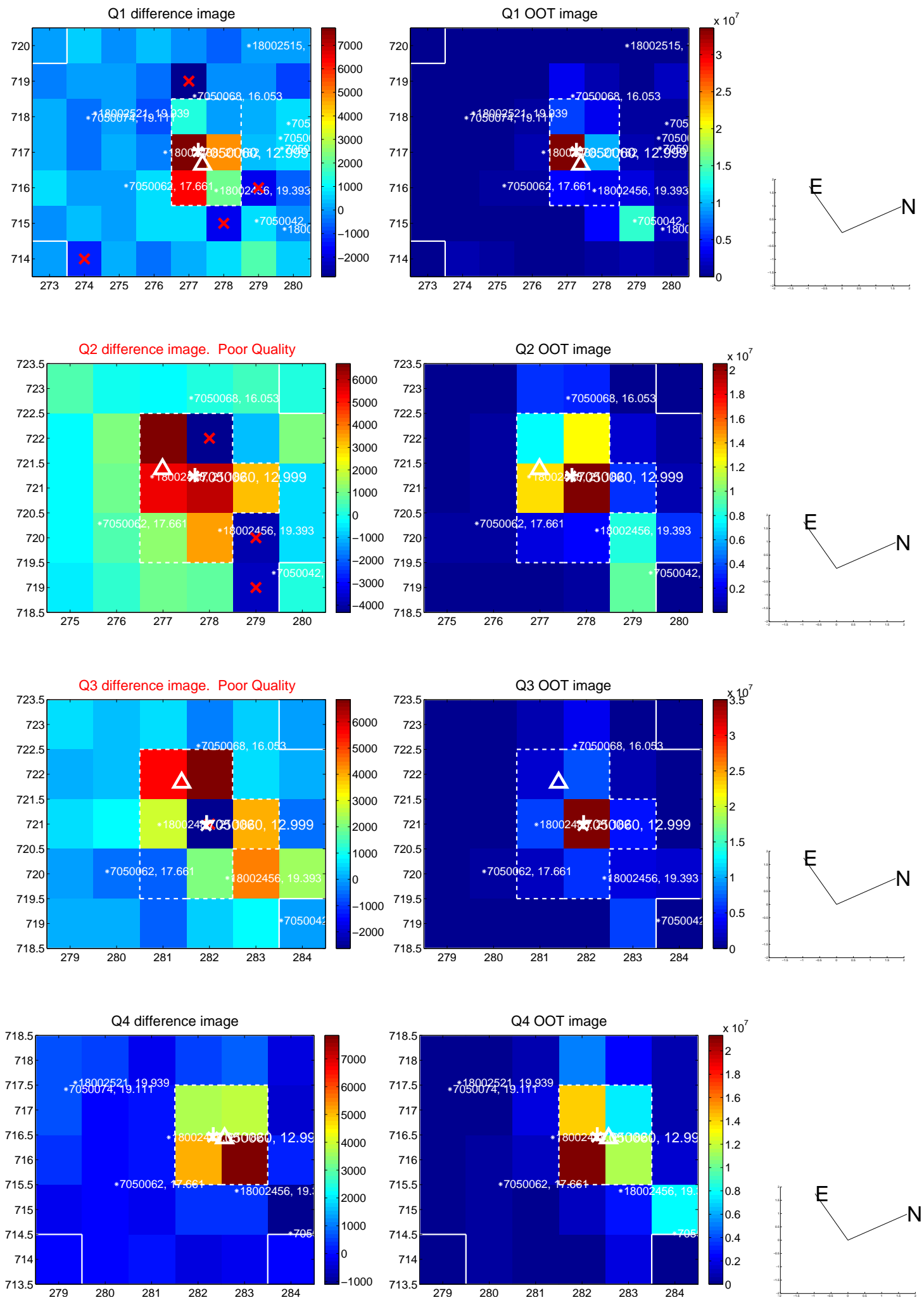
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.545 ± 0.475	1.15	0.220 ± 0.721	-0.499 ± 0.268
PRF-fit source offset from KIC position	0.534 ± 0.675	0.79	0.409 ± 0.736	-0.344 ± 0.268
photometric centroid source offset	0.82 ± 0.23	3.50	-0.73 ± 0.25	0.38 ± 0.15

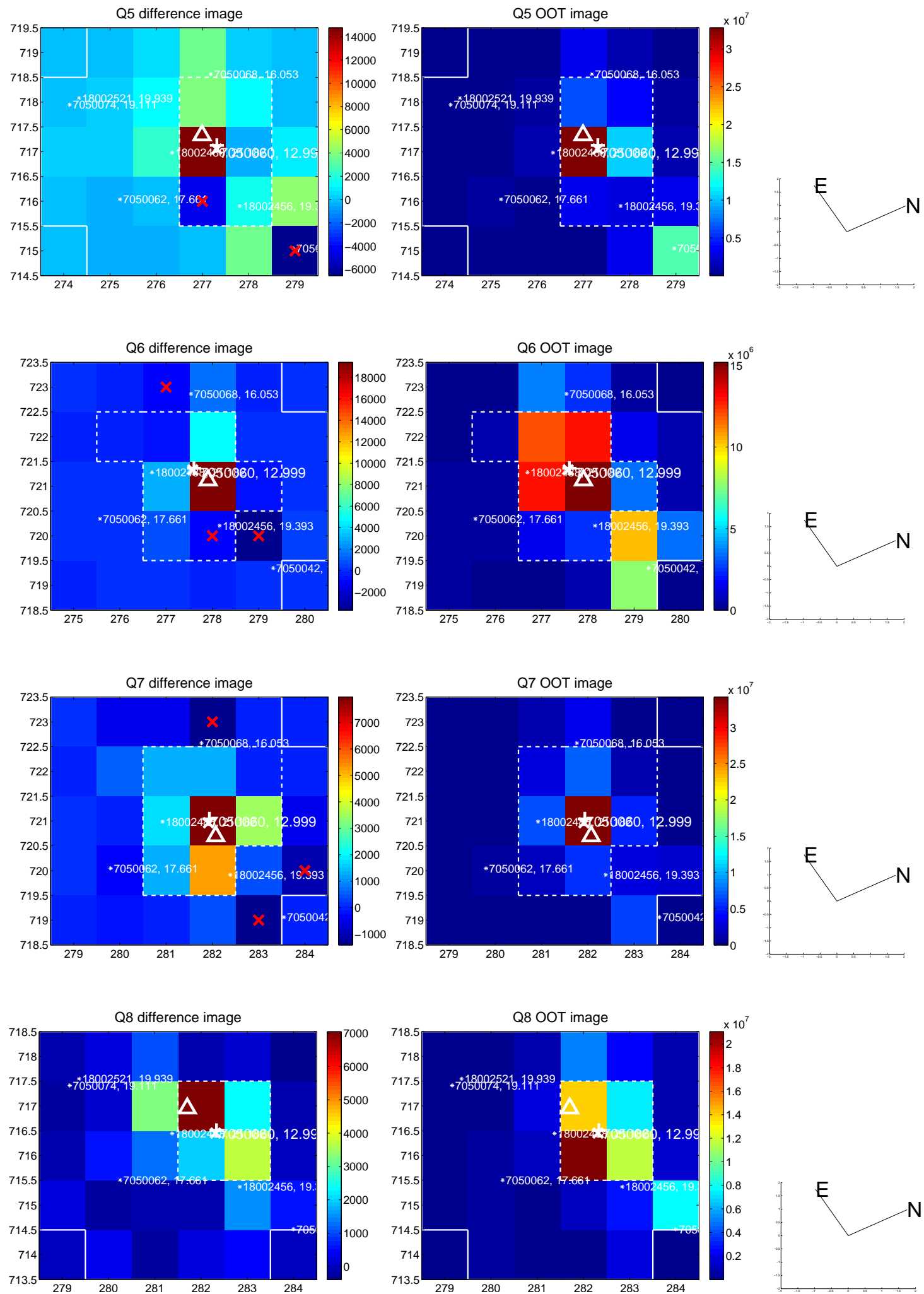


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

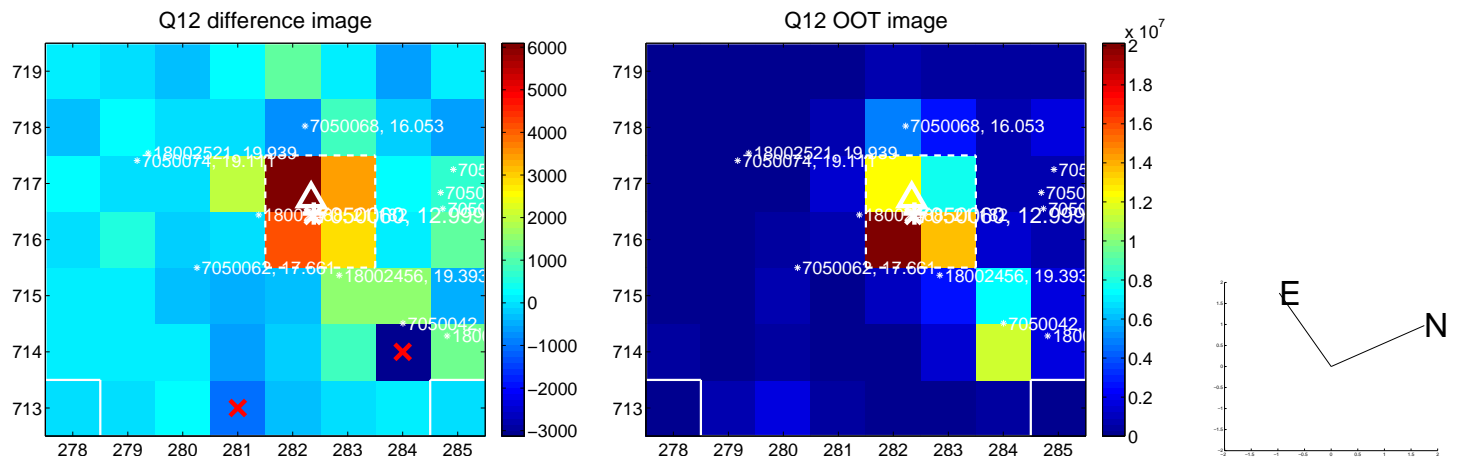
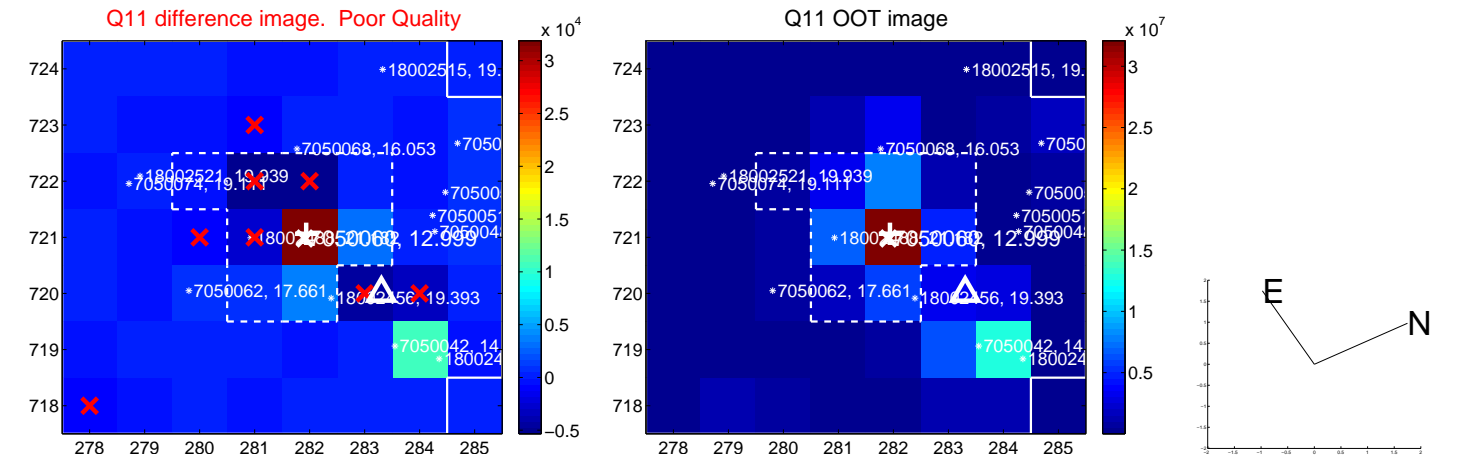
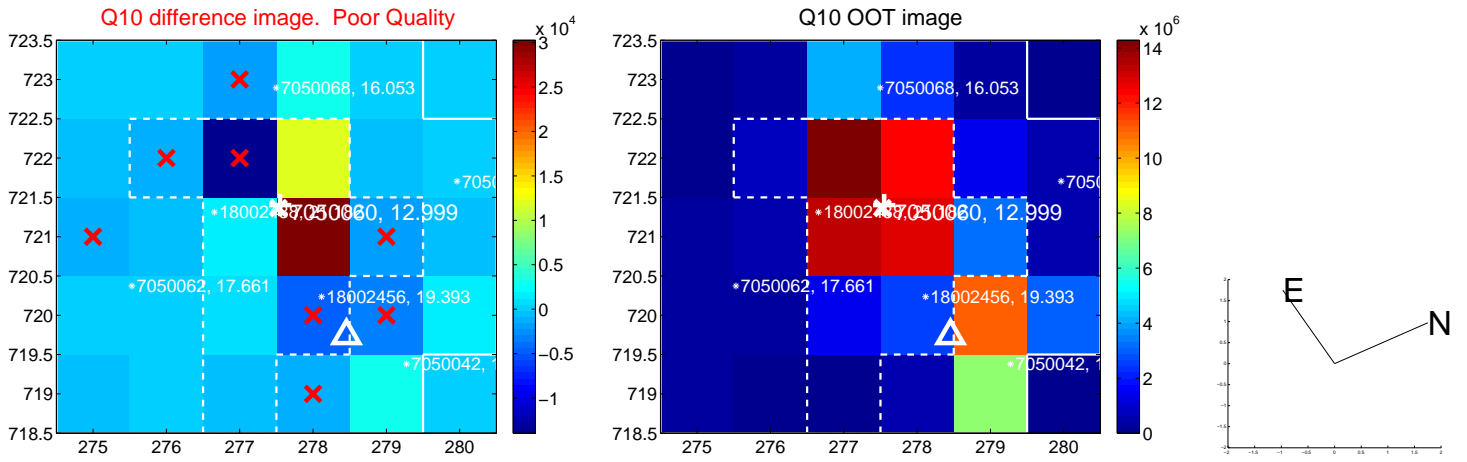
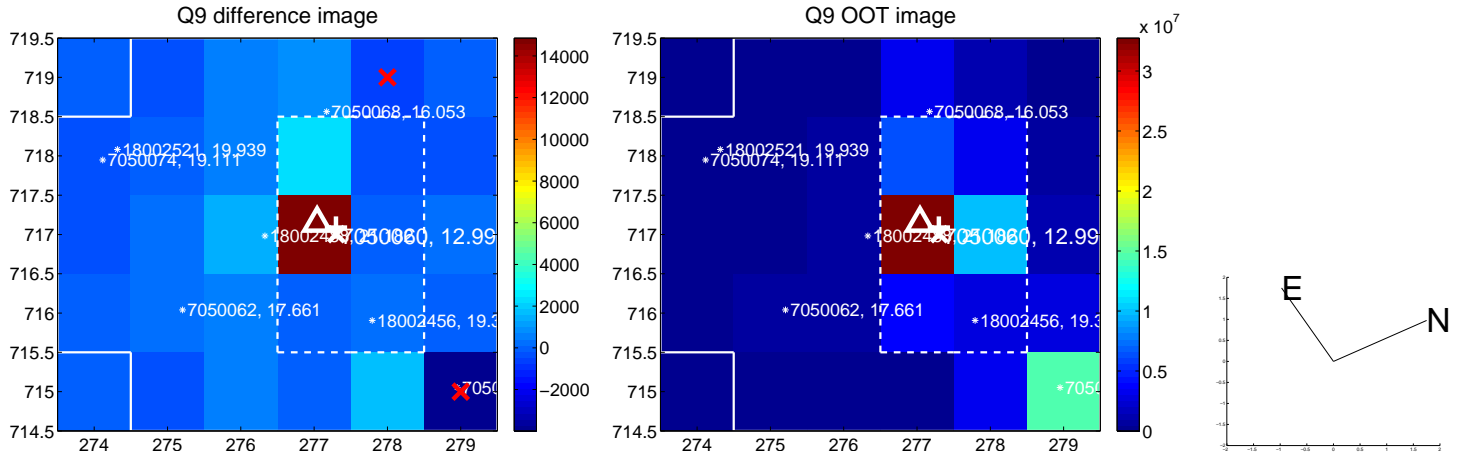
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



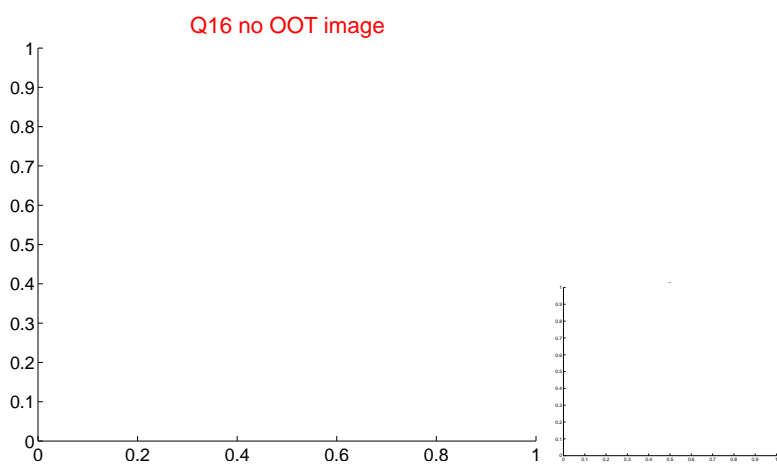
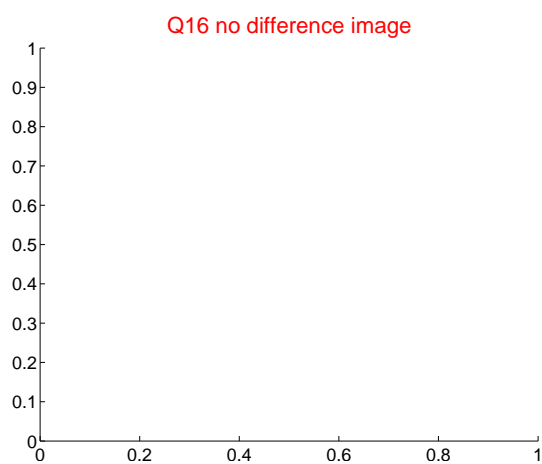
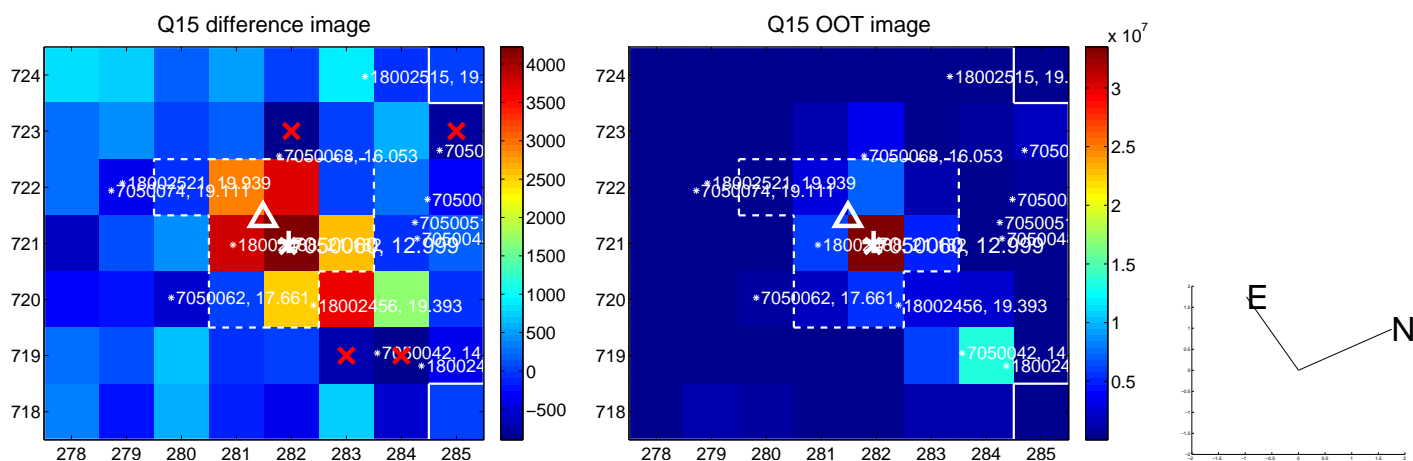
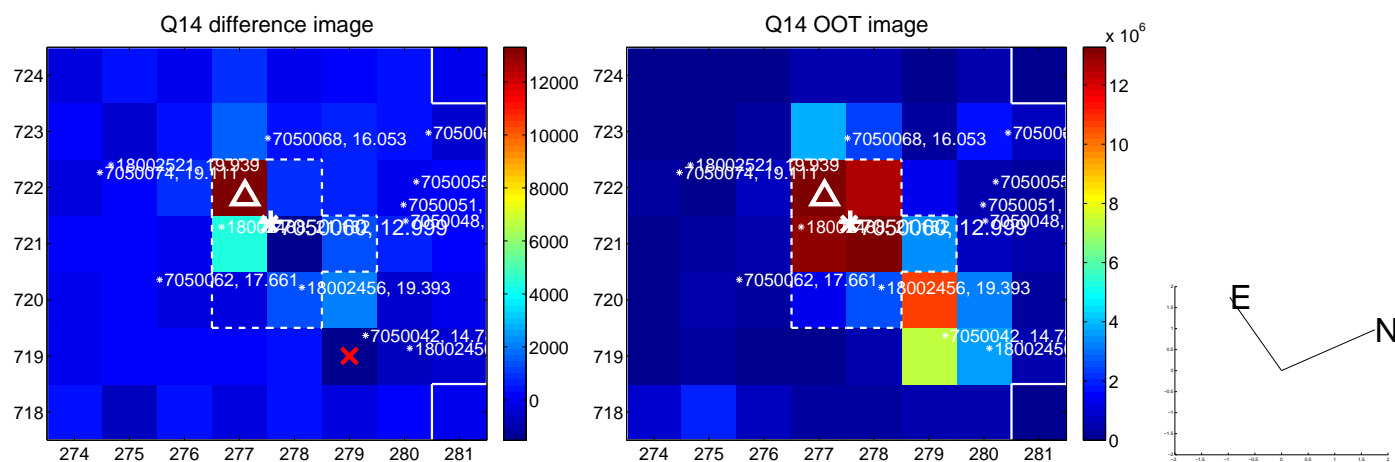
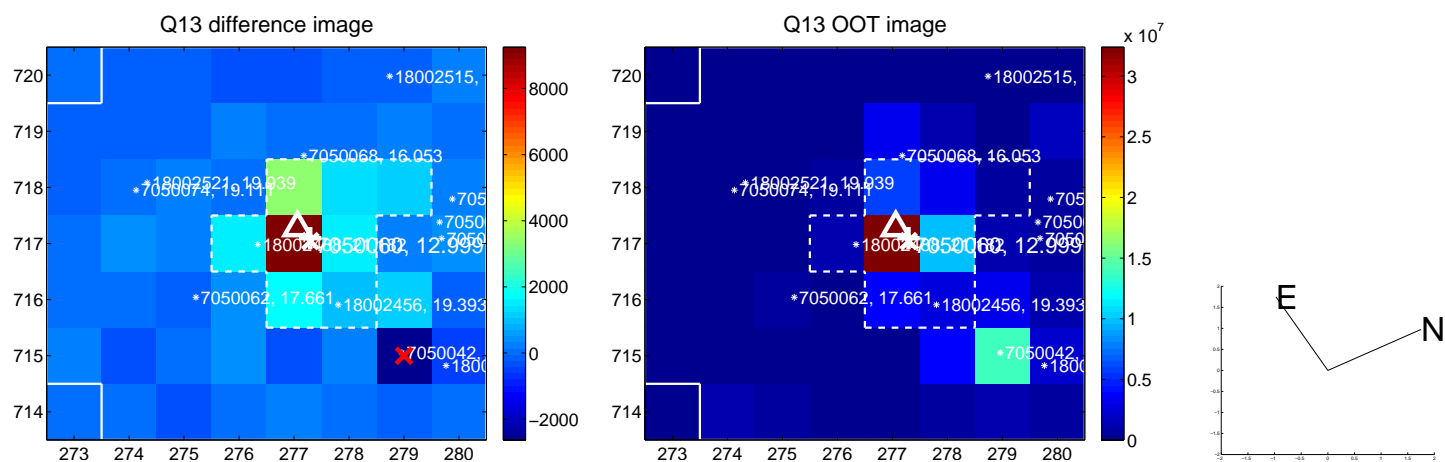
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

