

KIC 012056139

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})
012056139-01	OBS	3262.01	13.227503	137.717303	213.4	6.418	13.5	14.4	1.16	6269	1.95	133.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012056139-01	OBS	PC	0.97	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.

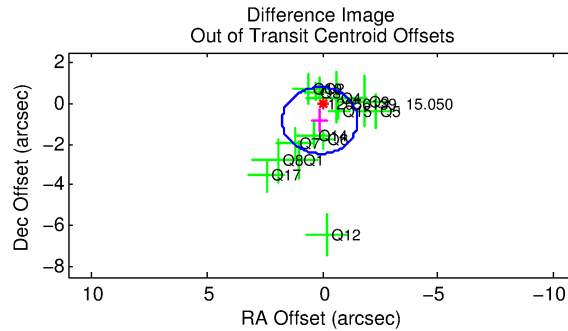
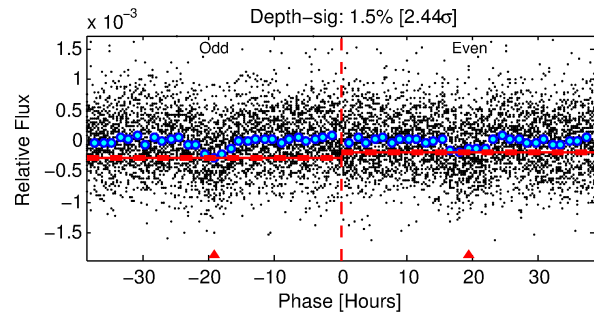
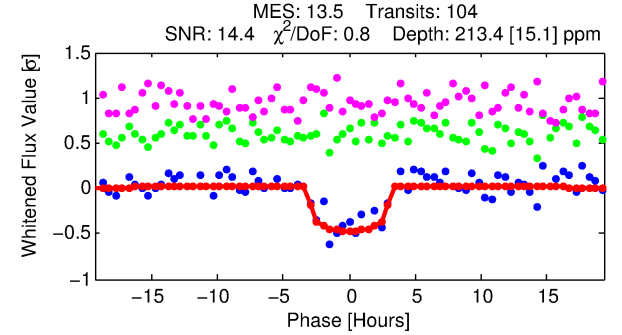
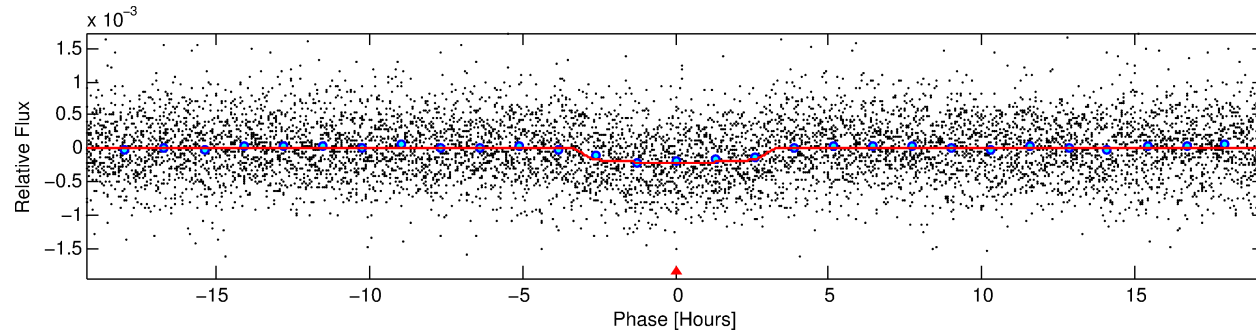
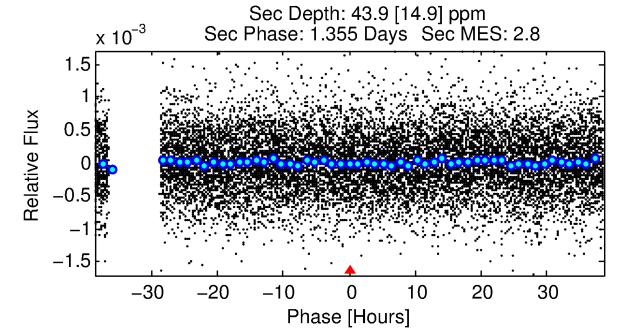
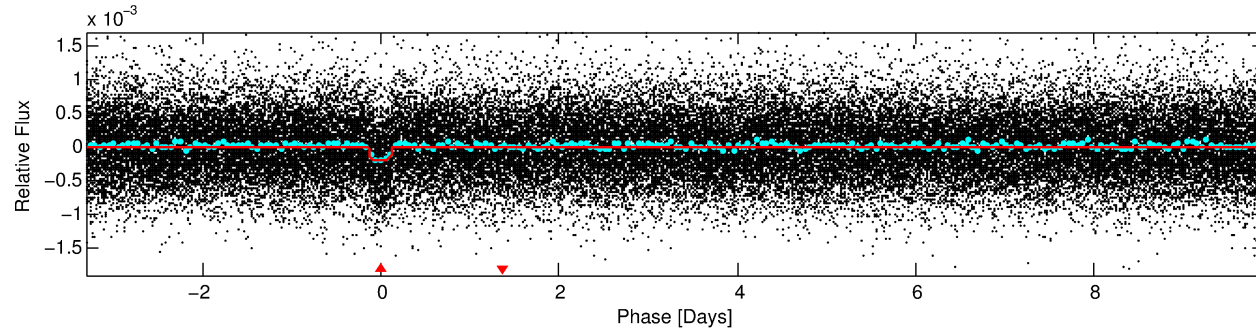
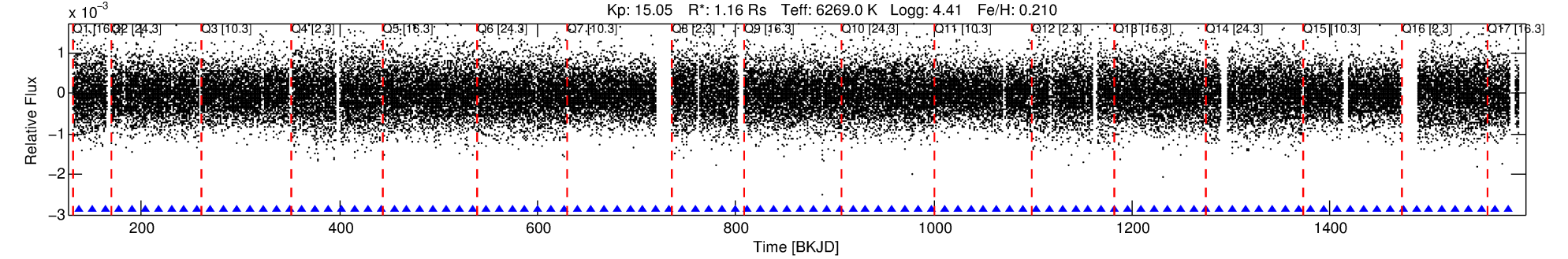
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012056139-01

No Significant Match Found

DV One-Page Summary

KIC: 12056139 Candidate: 1 of 1 Period: 13.228 d
KOI: K03262.01 Corr: 0.975



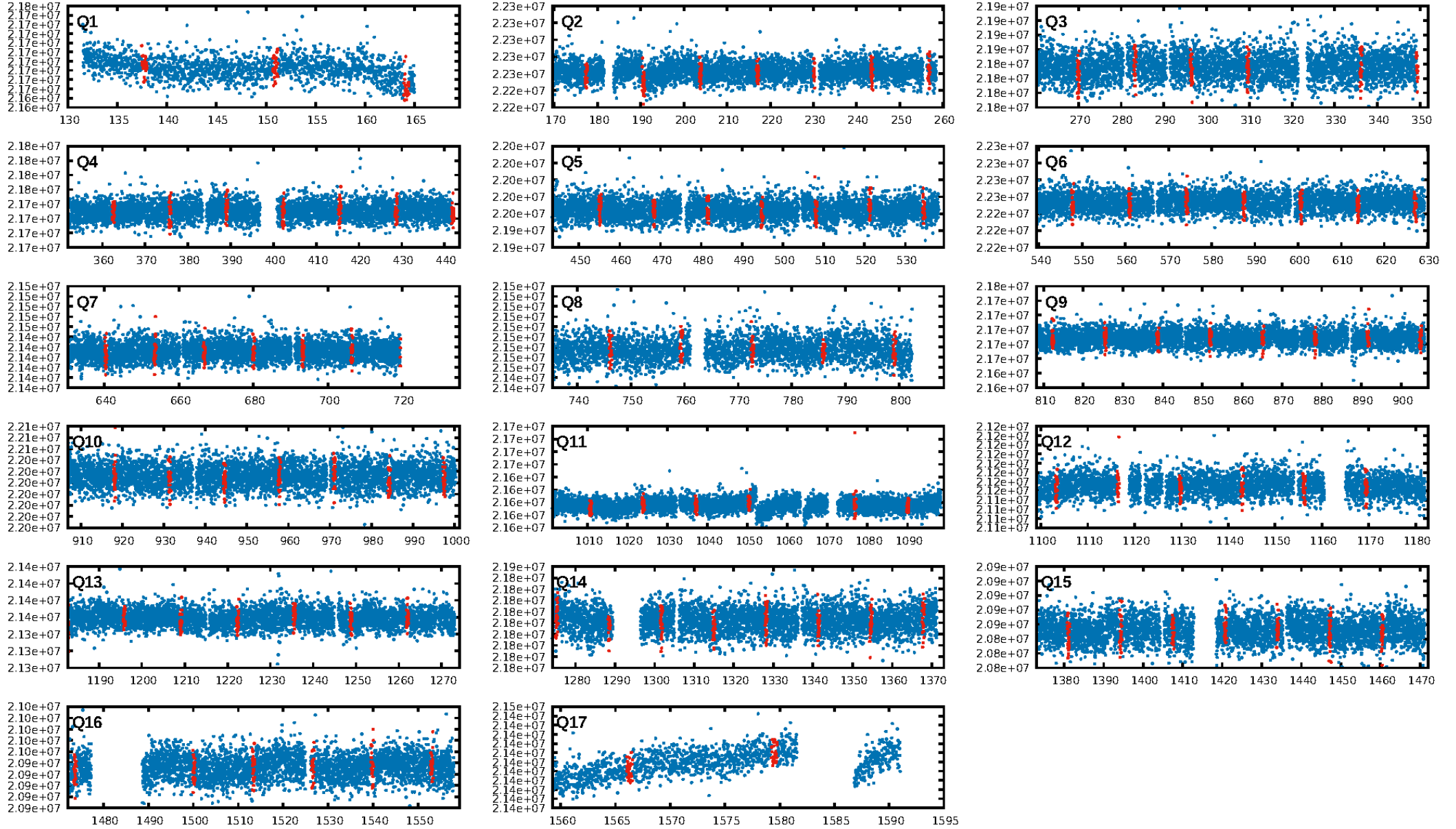
DV Fit Results:

Period = 13.22750 [0.00014] d
Epoch = 137.7173 [0.0086] BKJD
Rp/R* = 0.0155 [0.0034]
a/R* = 8.05 [8.82]
b = 0.88 [0.29]
Seff = 133.69 [56.41]
Teff = 867 [91] K
Rp = 1.95 [0.77] Re
a = 0.1175 [0.0321] AU
Ag = 87.52 [59.47] [1.45σ]
Teffp = 4100 [585] K [5.46σ]

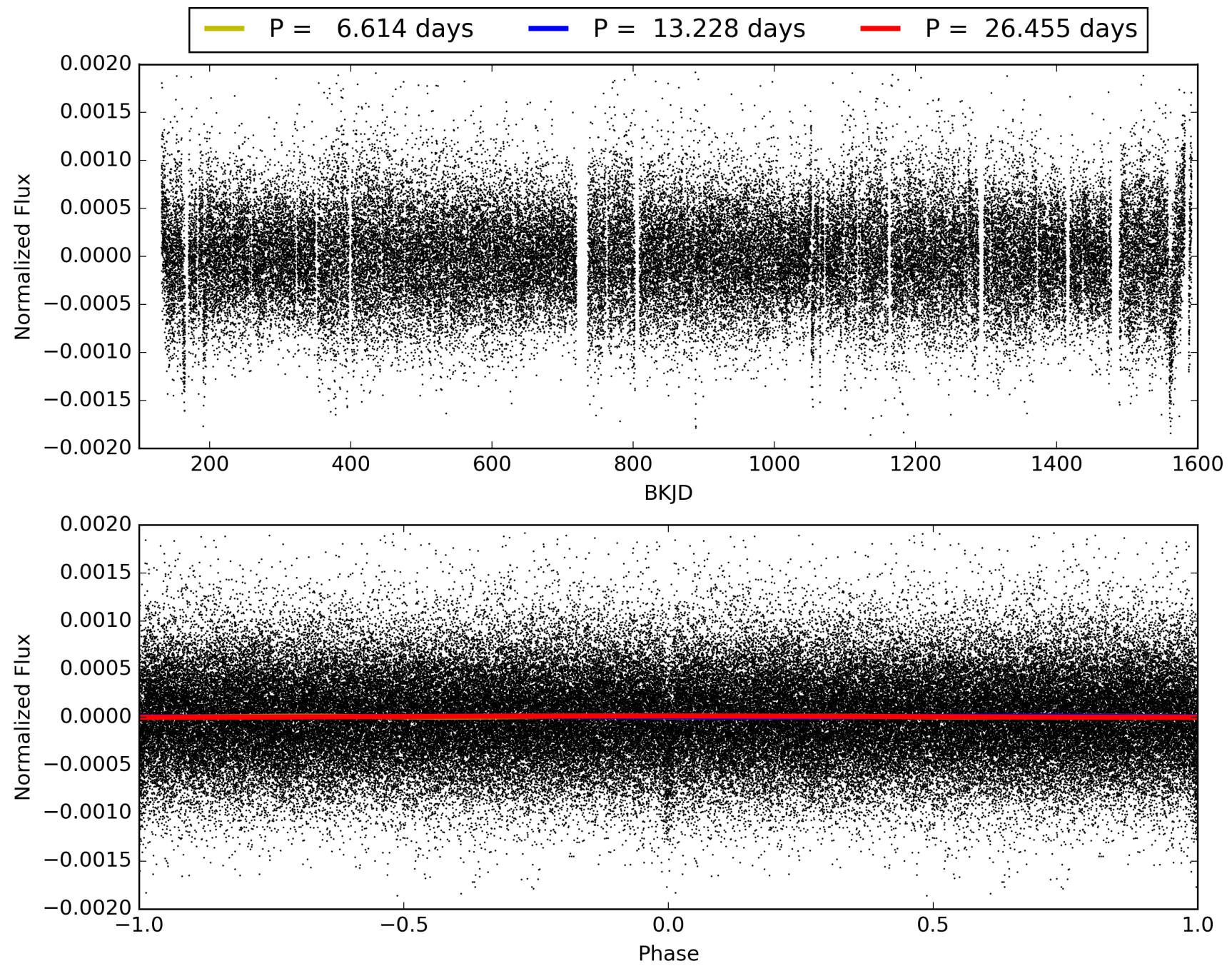
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.06e-39
RollingBand-fgt: 1.00 [99/99]
GhostDiagnostic-chr: 1.472
Centroid-sig: 8.9%
Centroid-so: 1.812 arcsec [1.86σ]
OotOffset-rm: 0.845 arcsec [1.56σ]
KicOffset-rm: 0.954 arcsec [1.85σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 012056139-01, PDC Light Curves

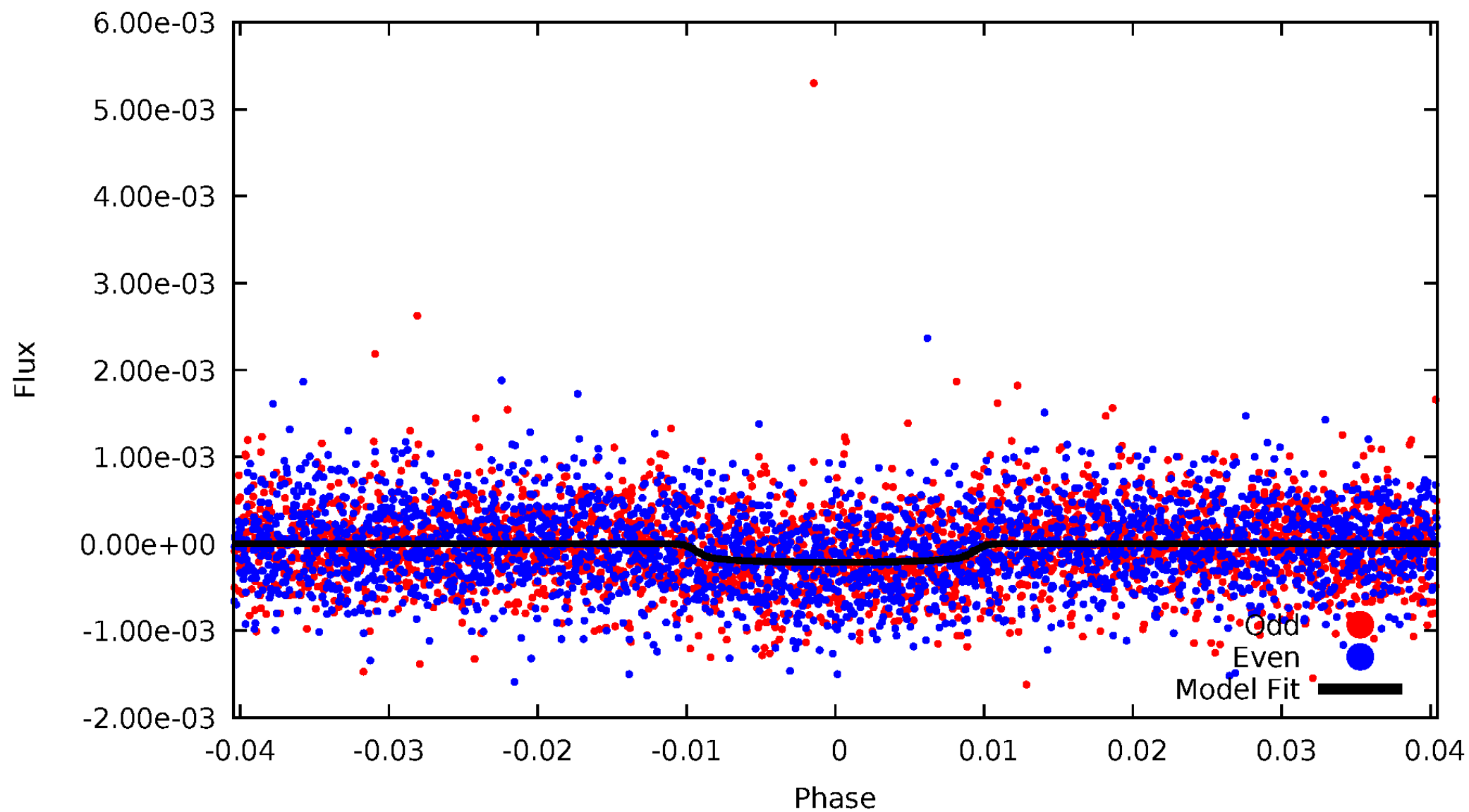


TCE 012056139-01



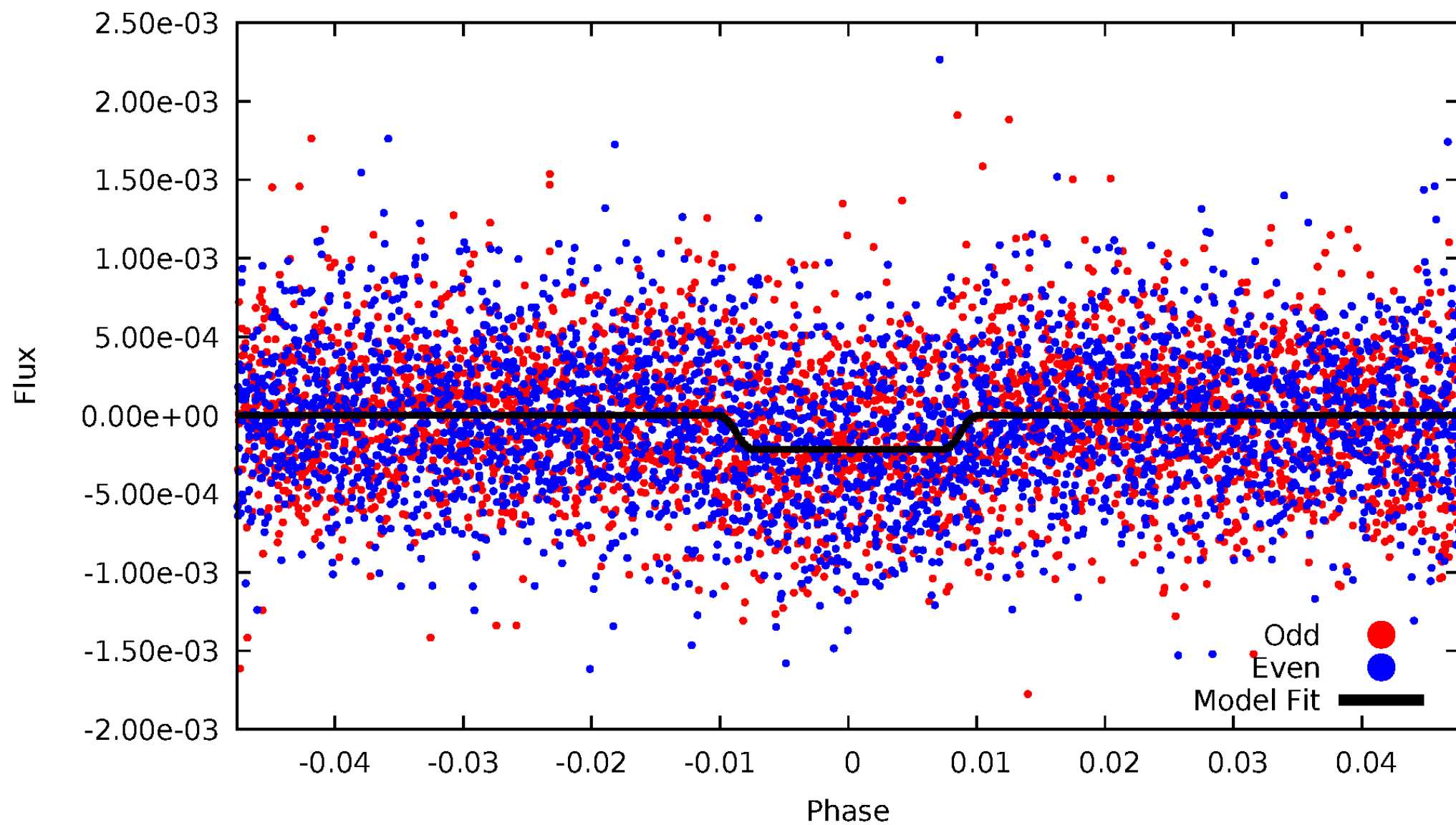
DV Odd/Even

TCE 012056139-01

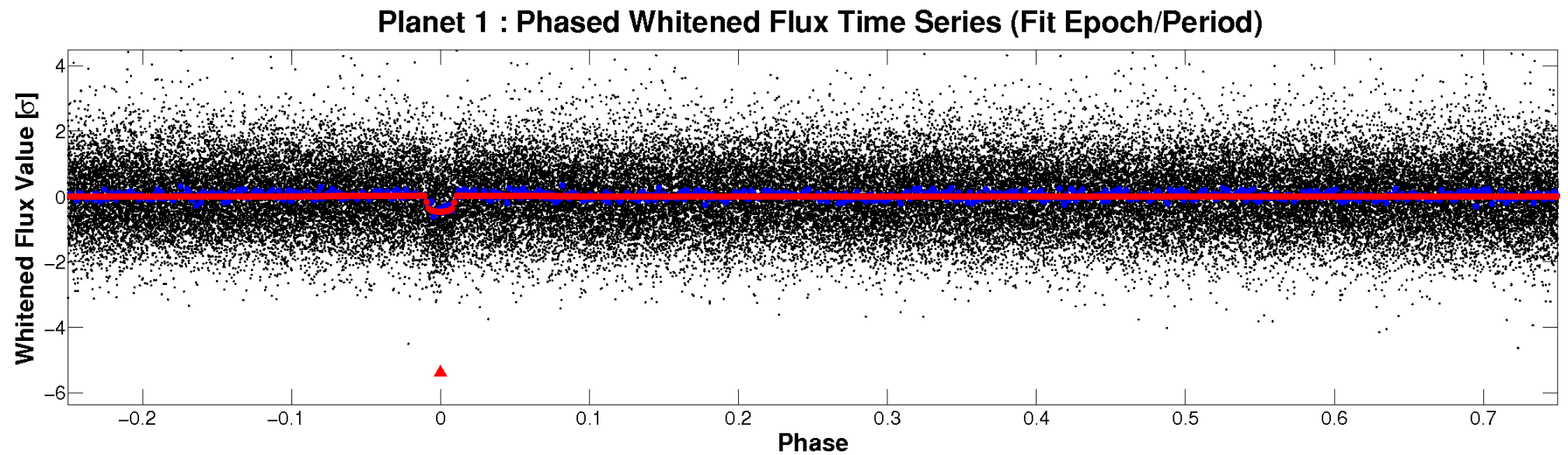
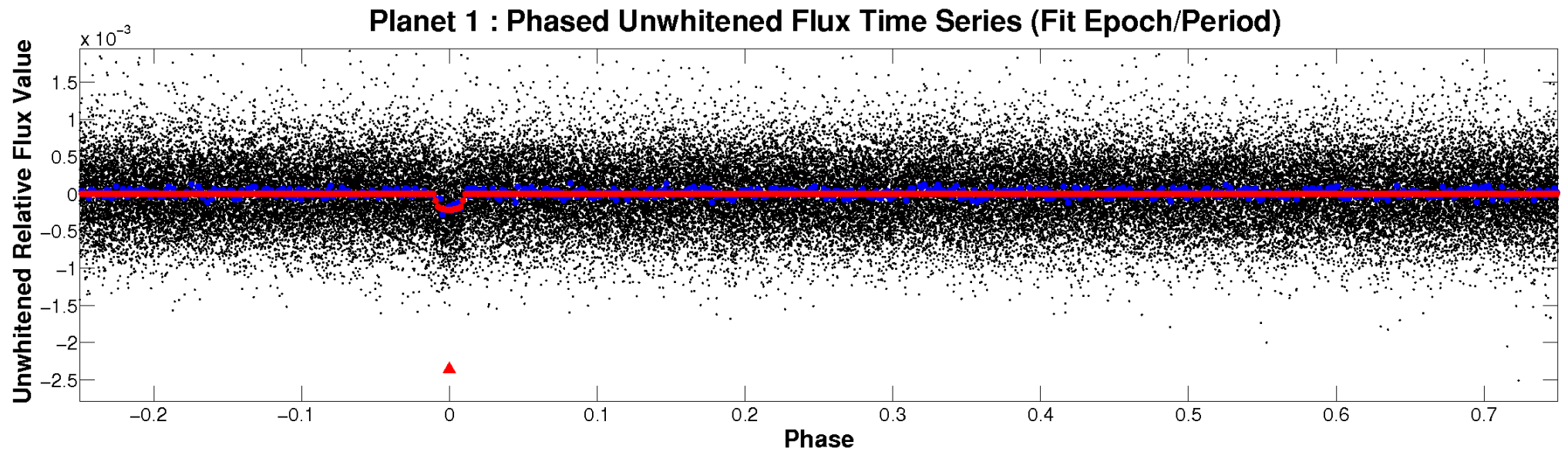


ALT Odd/Even

TCE 012056139-01

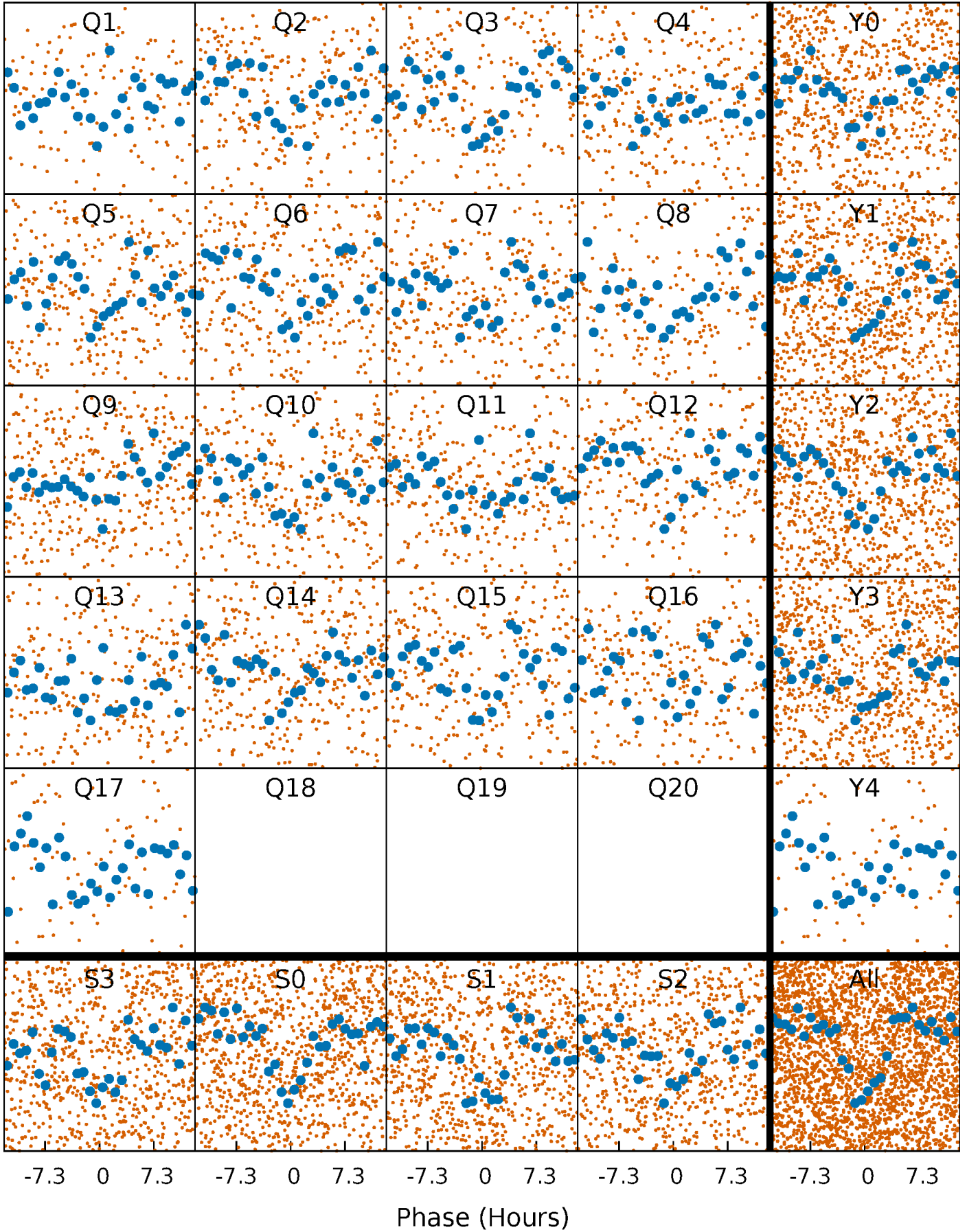


Non-Whitened Vs. Whitened Light Curve



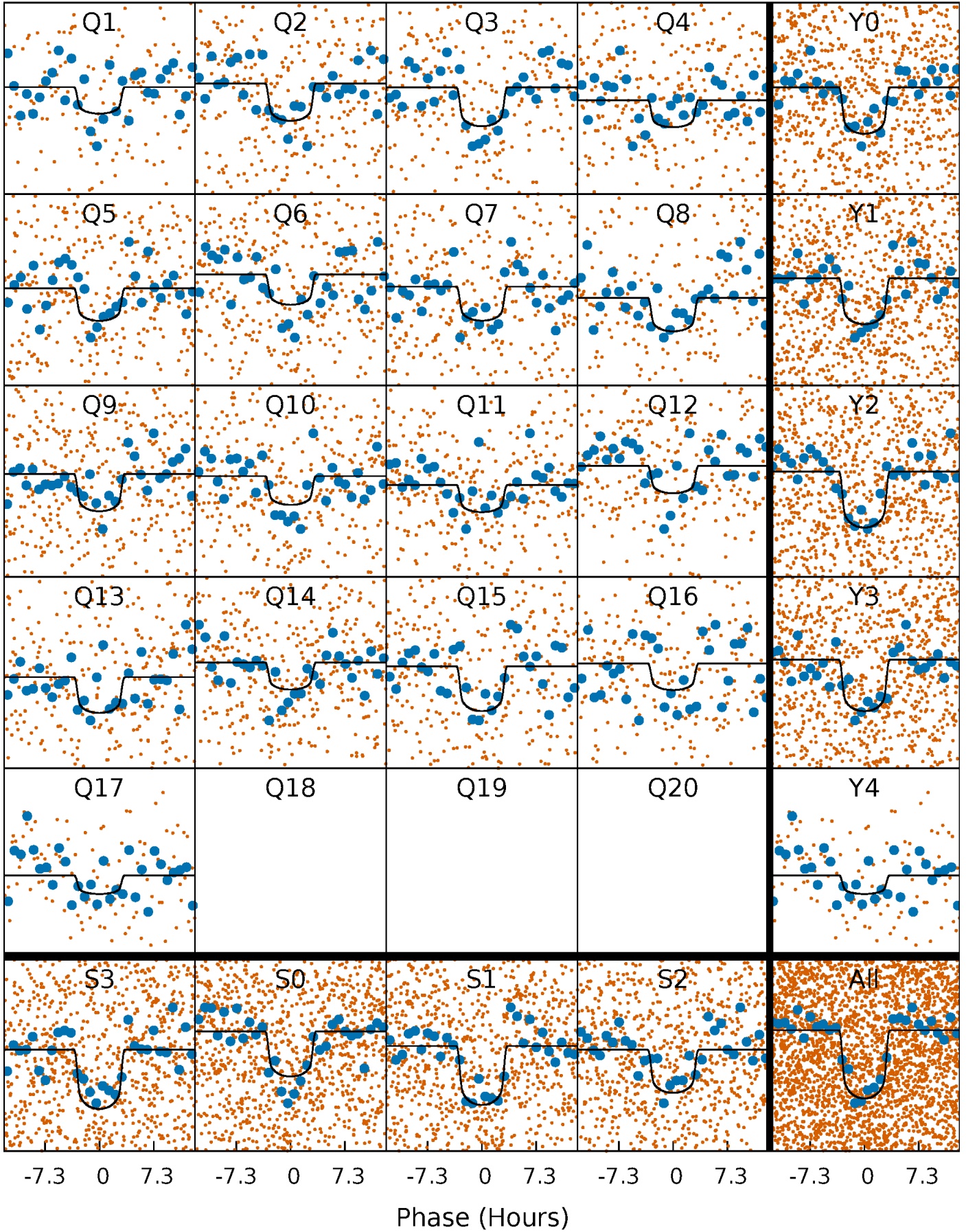
PDC Quarter-Phased Transit Curves

TCE 012056139-01 P= 13.227503 Days $T_0=137.717303$ (BKJD)



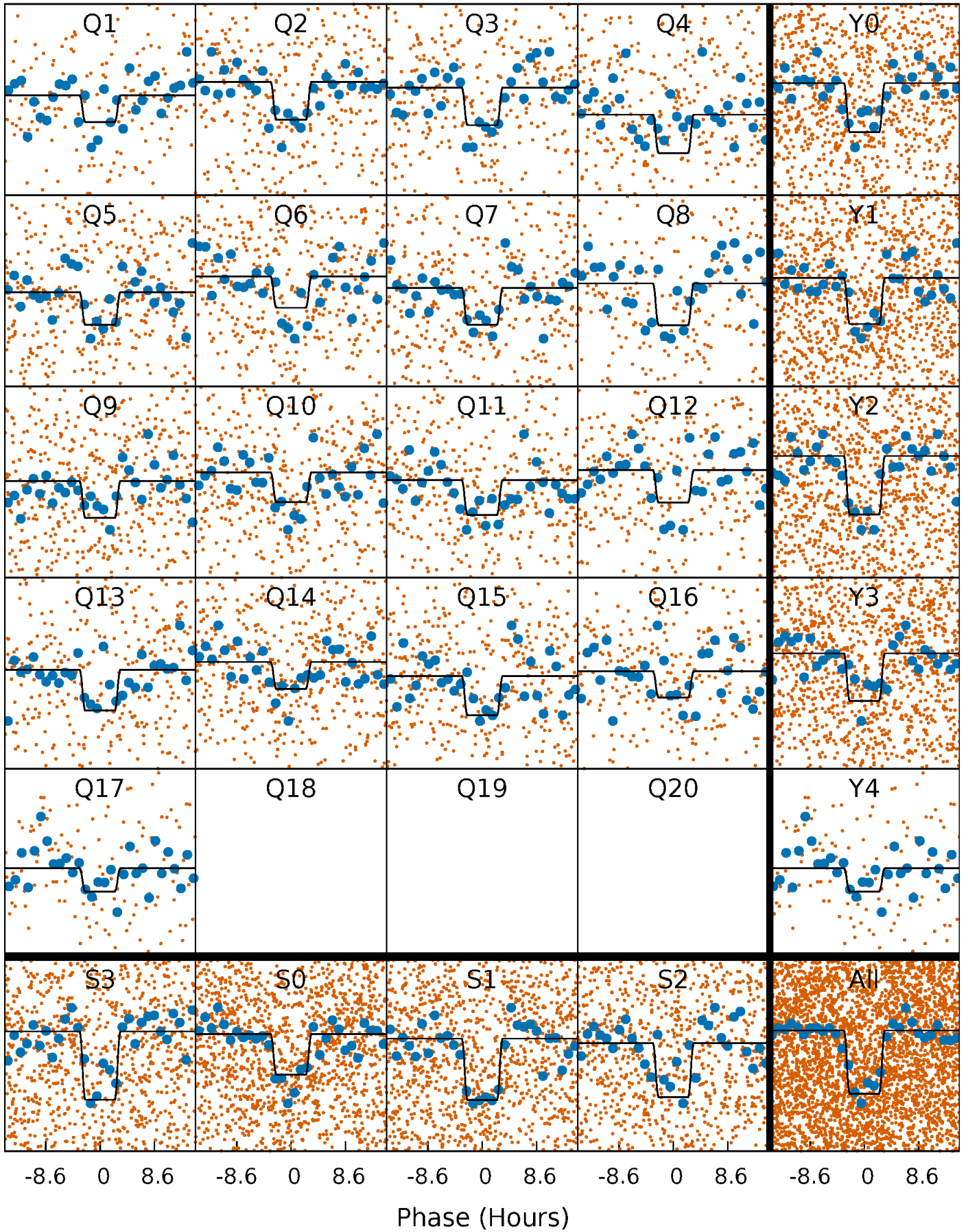
DV Quarter-Phased Transit Curves

TCE 012056139-01 P= 13.227503 Days $T_0=137.717303$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

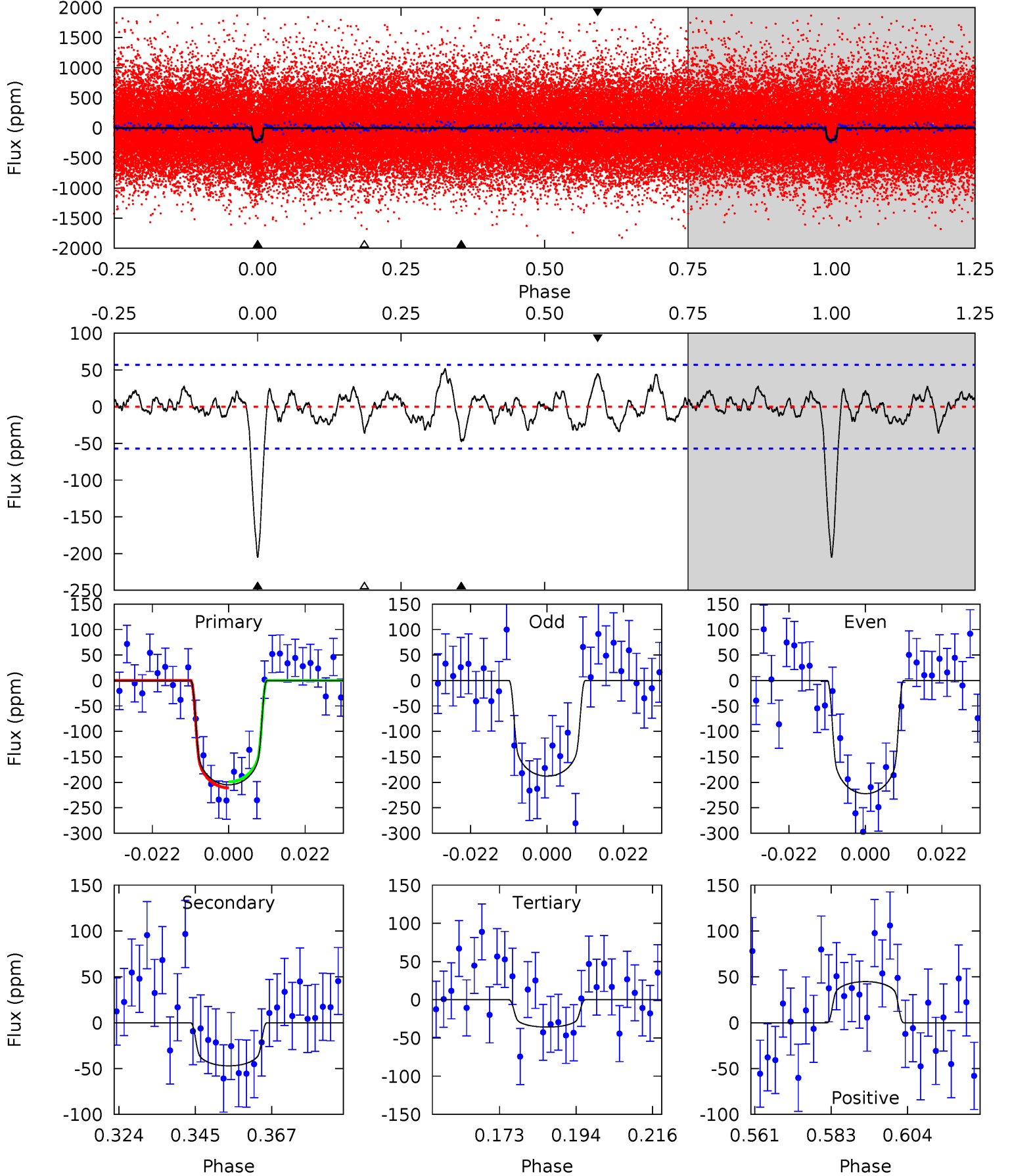
TCE 012056139-01 P= 13.226982 Days $T_0=137.743373$ (BKJD)



DV Model-Shift Uniqueness Test

012056139-01, $P = 13.227503$ Days, $E = 124.489800$ Days

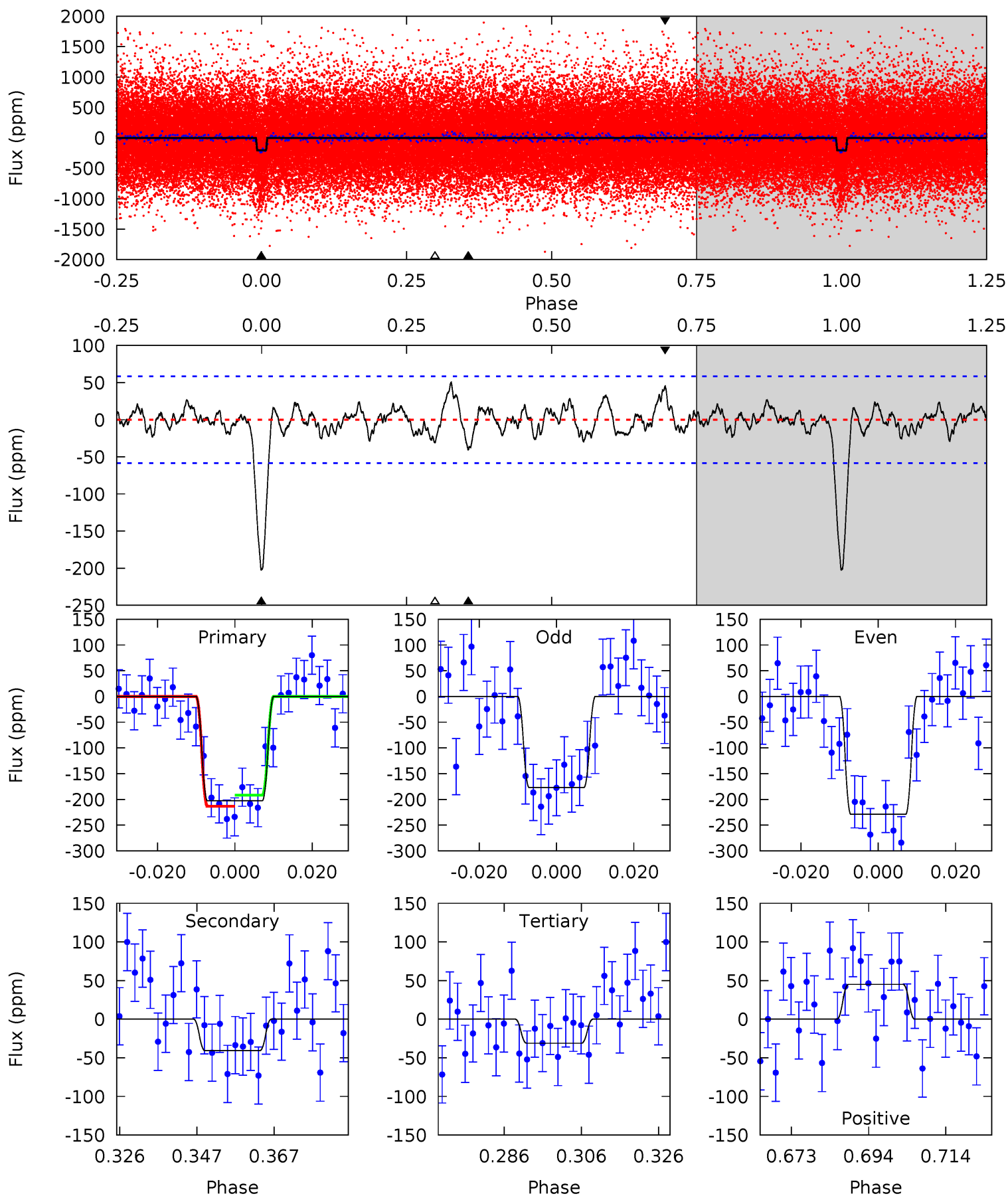
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	4.02	3.06	3.83	4.88	2.30	1.37	14.4	13.7	0.97	0.20	1.47	0.93	0.20	0.50



Alt Model-Shift Uniqueness Test

012056139-01, P = 13.226982 Days, E = 124.516391 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.41	2.60	3.76	4.89	2.32	1.21	14.3	13.2	0.80	-0.35	2.19	0.98	0.20	0.90



Stellar Parameters For KIC 012056139

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6269^{+170}_{-227}	$4.405^{+0.054}_{-0.216}$	$0.210^{+0.200}_{-0.350}$	$1.155^{+0.376}_{-0.125}$	$1.237^{+0.154}_{-0.169}$	$1.130^{+0.319}_{-0.621}$
	+3%/-4%	+1%/-5%	+95%/-167%	+33%/-11%	+12%/-14%	+28%/-55%
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 012056139-01 / KOI 3262.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 12	$2.05^{+0.56}_{-0.47}$	1237^{+96}_{-58}	4372^{+480}_{-375}	82^{+58}_{-34}
Alt.	-41 ± 12	$1.92^{+0.56}_{-0.43}$	1241^{+82}_{-67}	4329^{+544}_{-409}	80^{+62}_{-36}

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

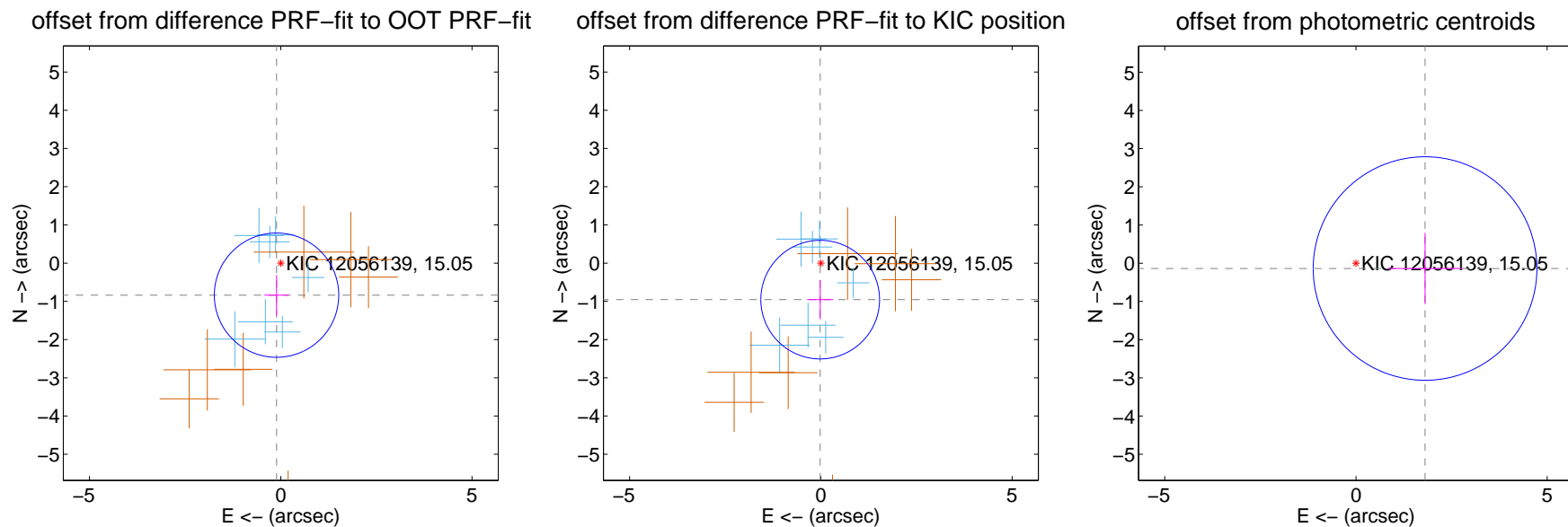
DV Centroid Data

Supplemental centroid analysis for 012056139-01. Kepler magnitude: 15.05. Transit SNR 14.40

There are 7 quarters with good PRF difference image offsets

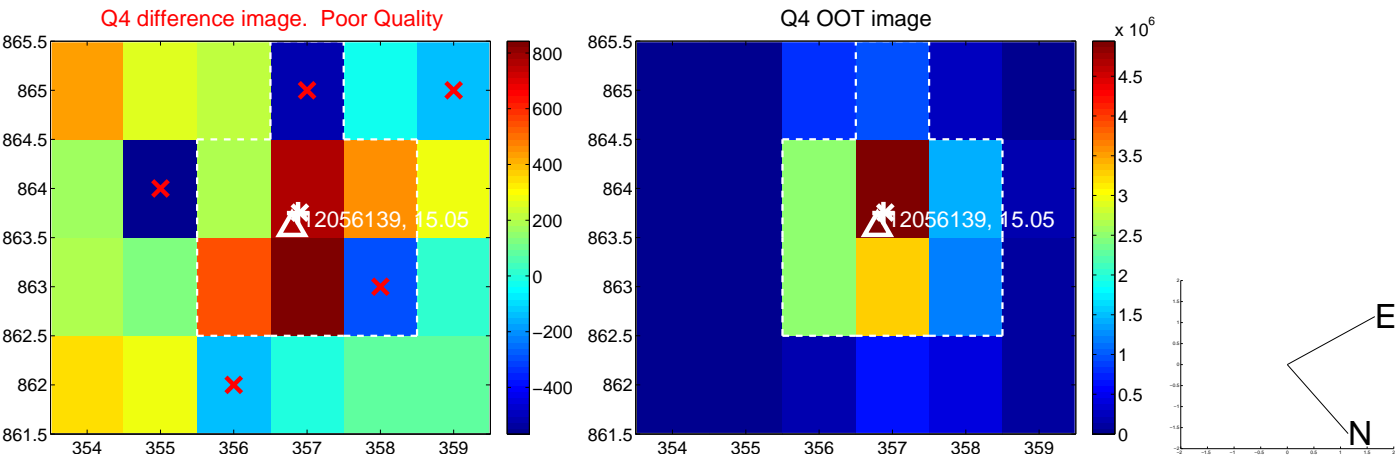
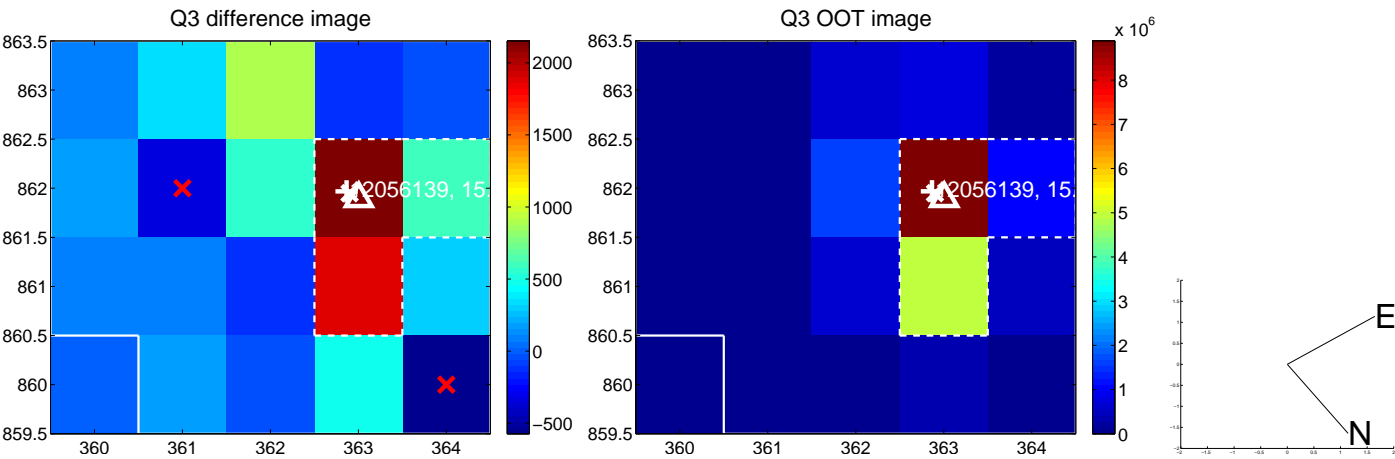
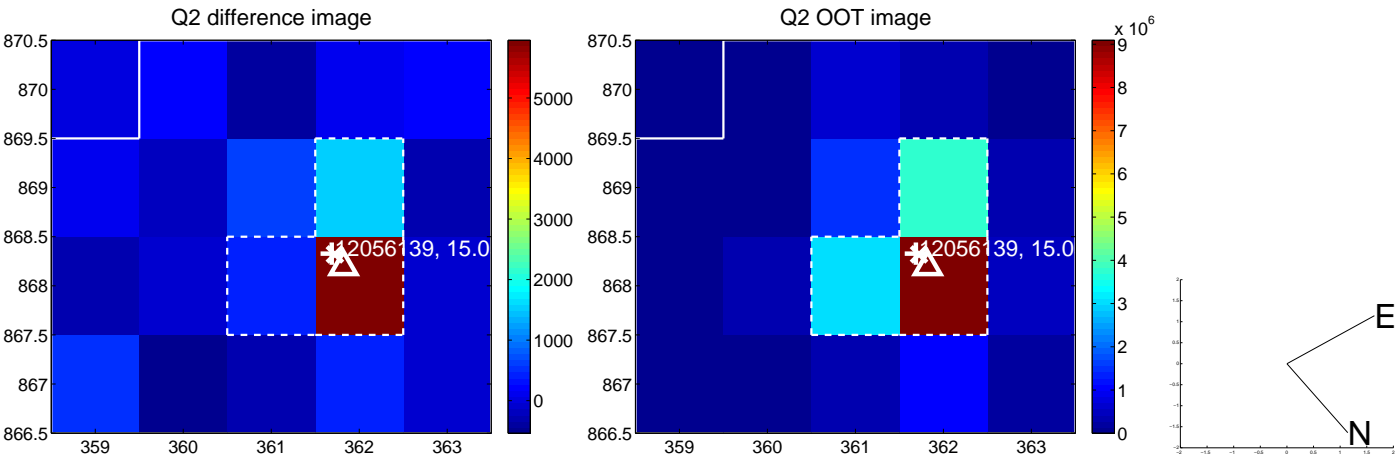
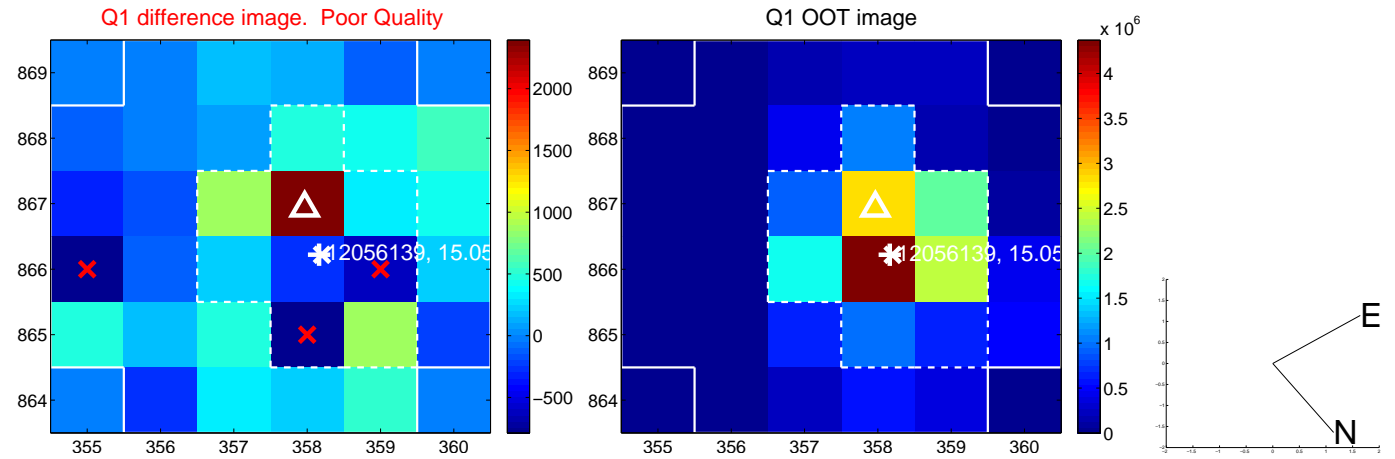
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.845 ± 0.542	1.56	0.110 ± 0.318	-0.838 ± 0.528
PRF-fit source offset from KIC position	0.954 ± 0.517	1.85	0.017 ± 0.339	-0.954 ± 0.515
photometric centroid source offset	1.81 ± 0.97	1.86	-1.81 ± 0.98	-0.14 ± 0.93

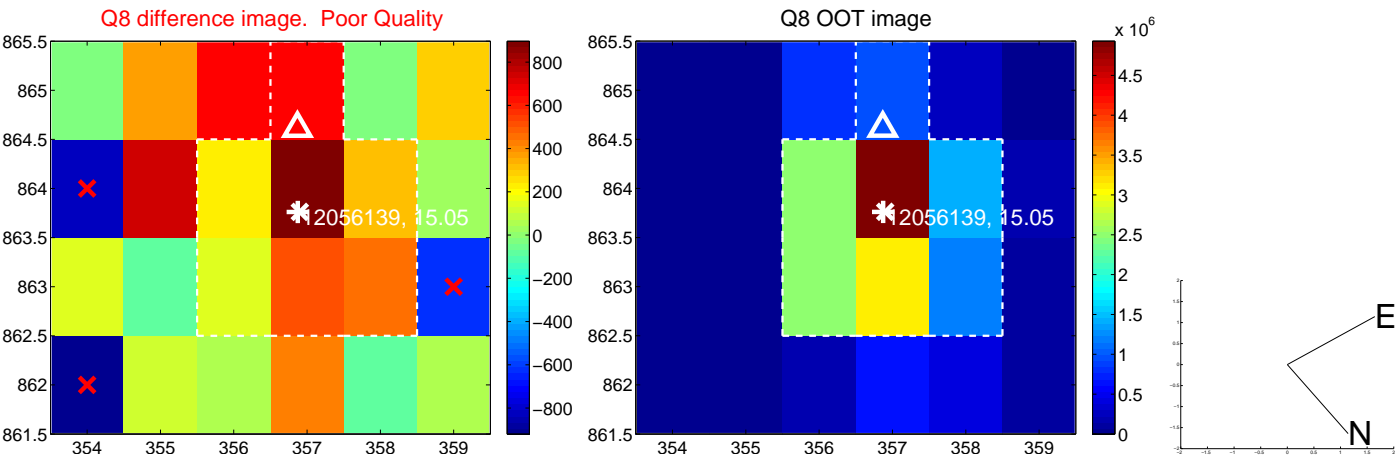
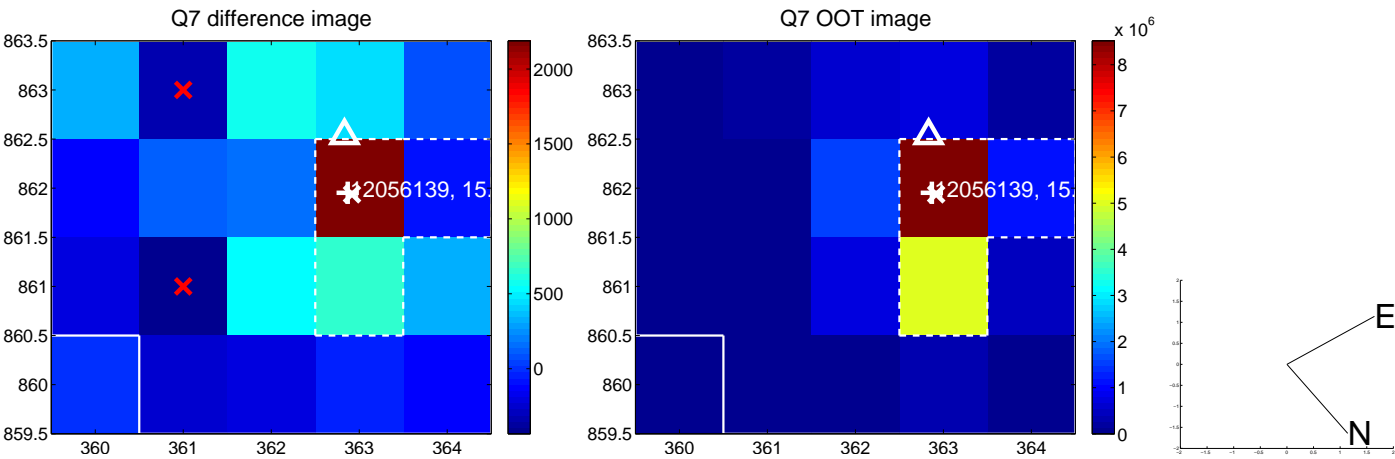
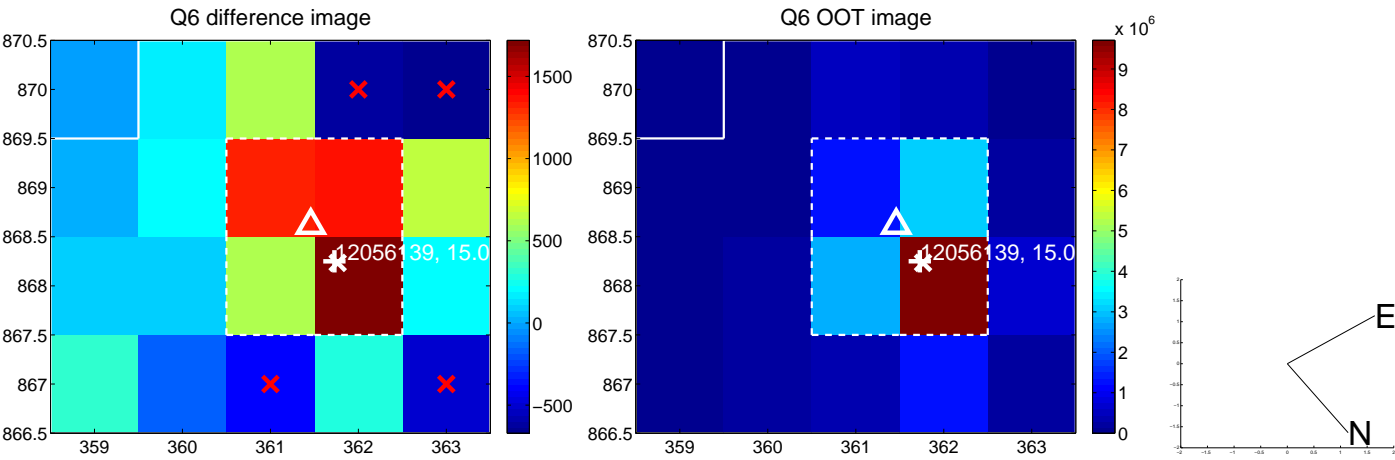
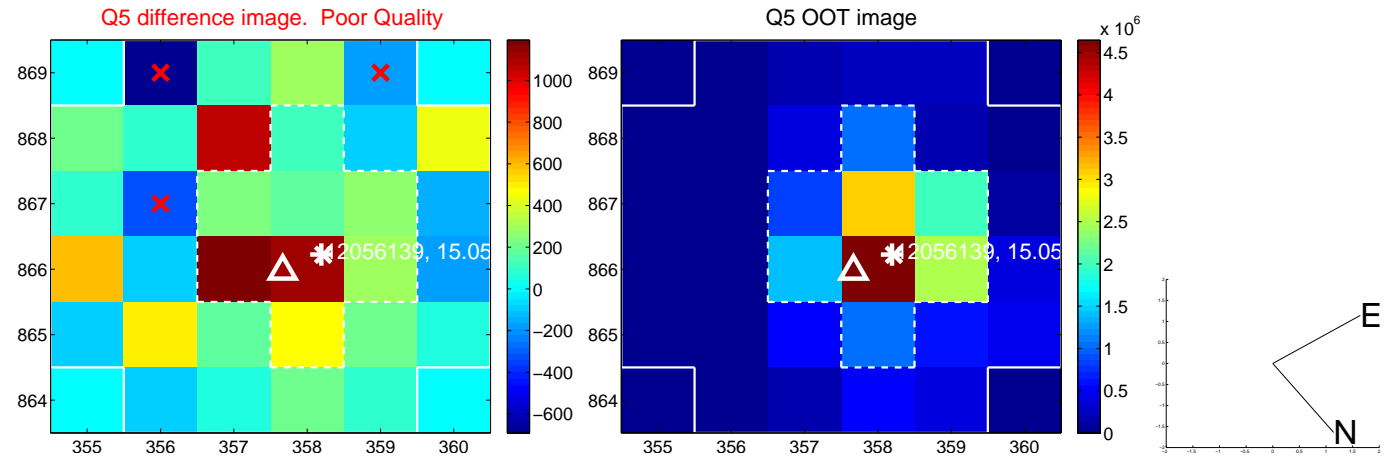


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

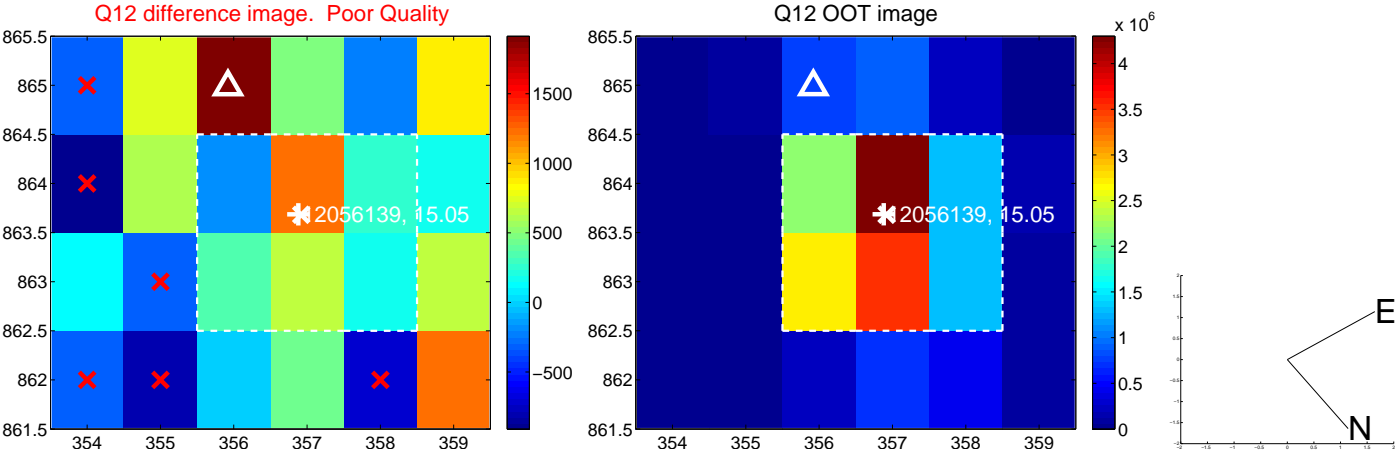
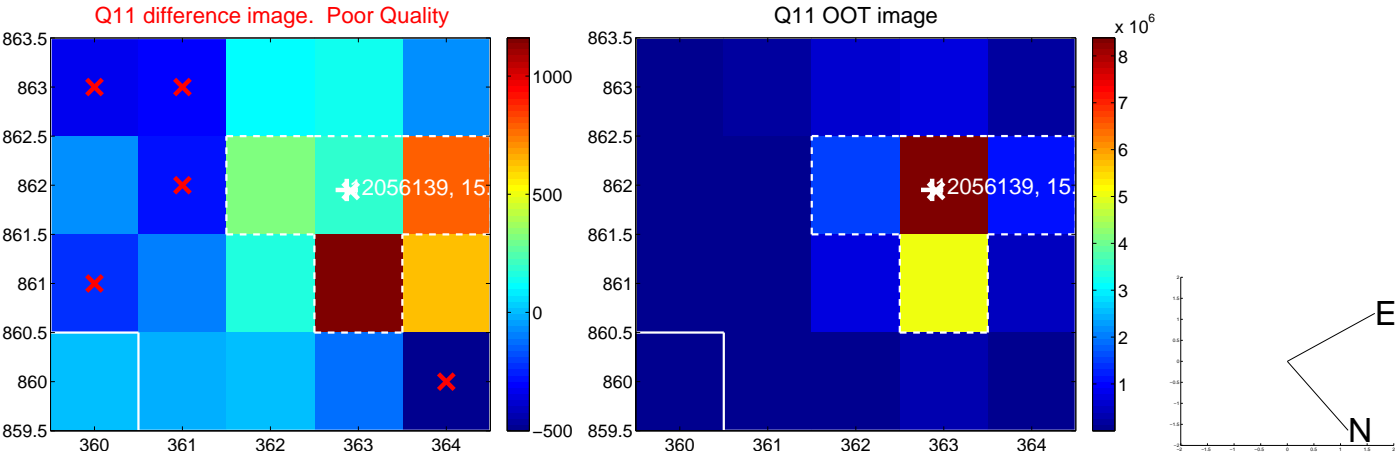
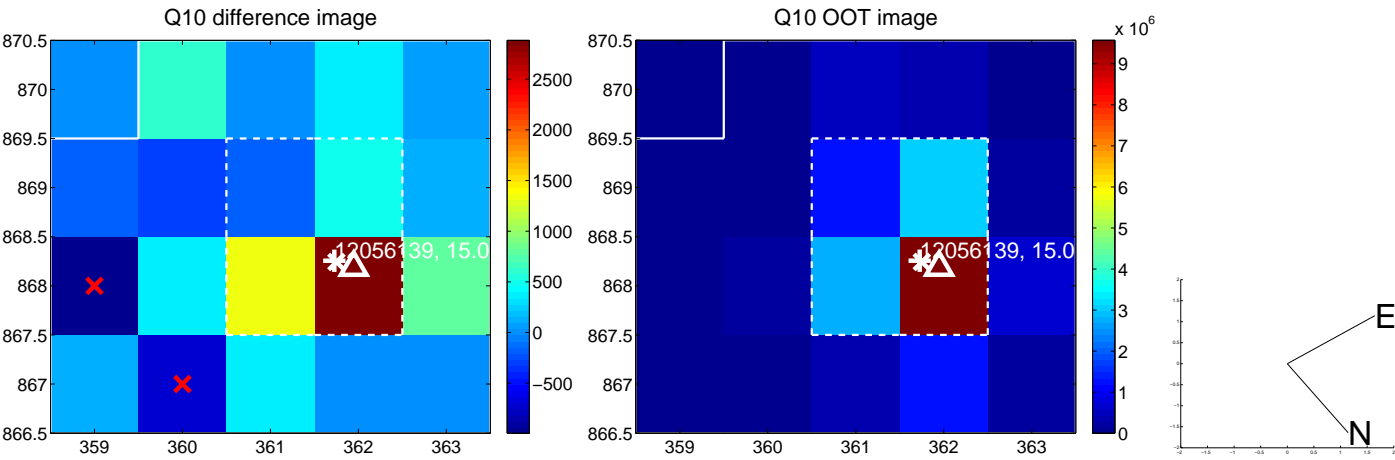
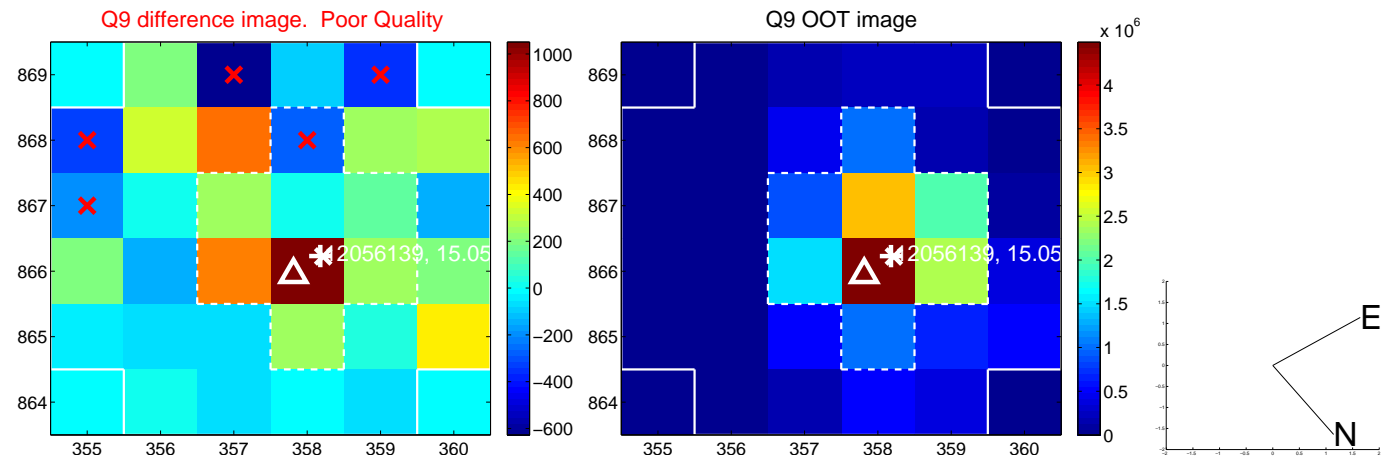
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



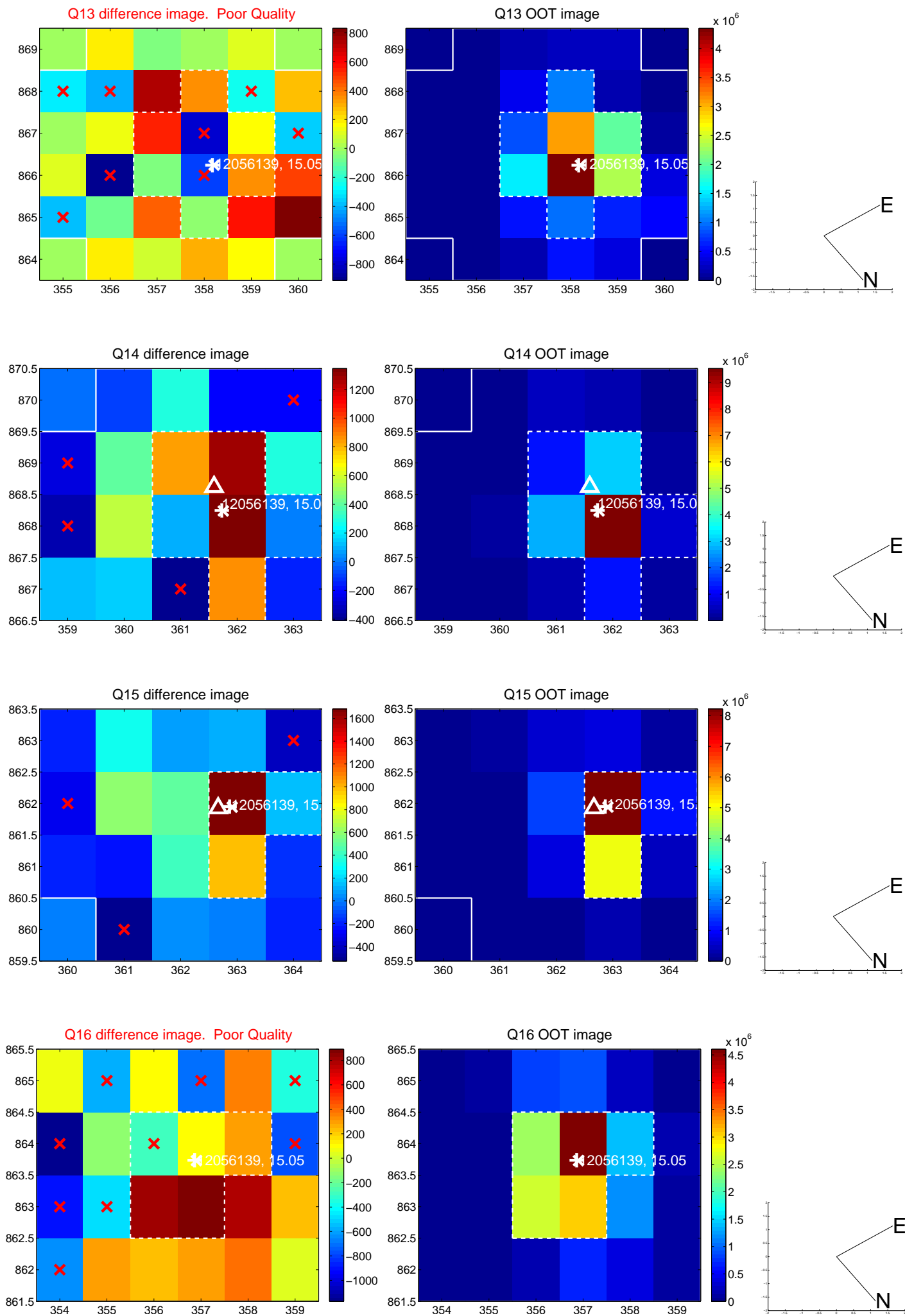
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



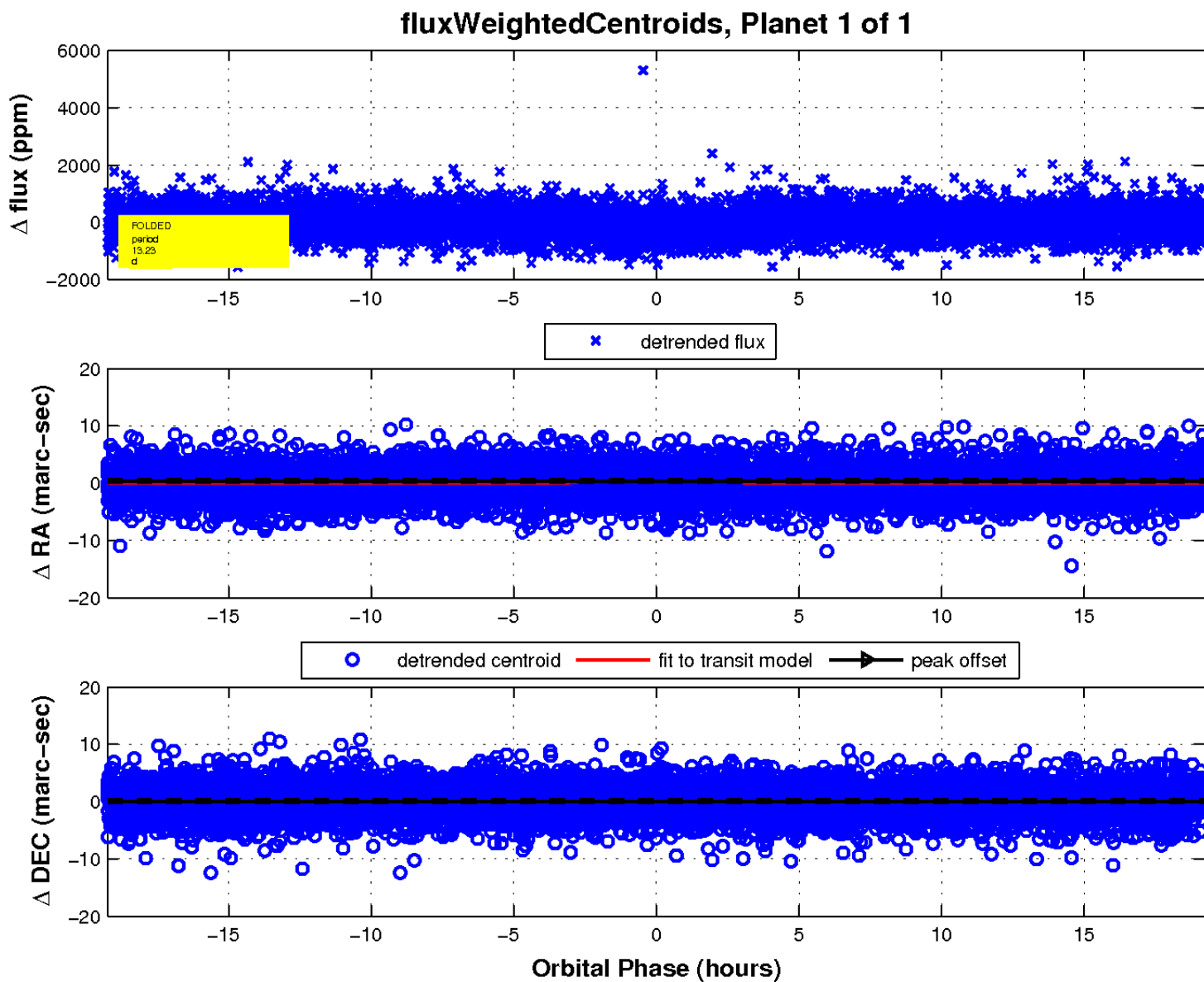
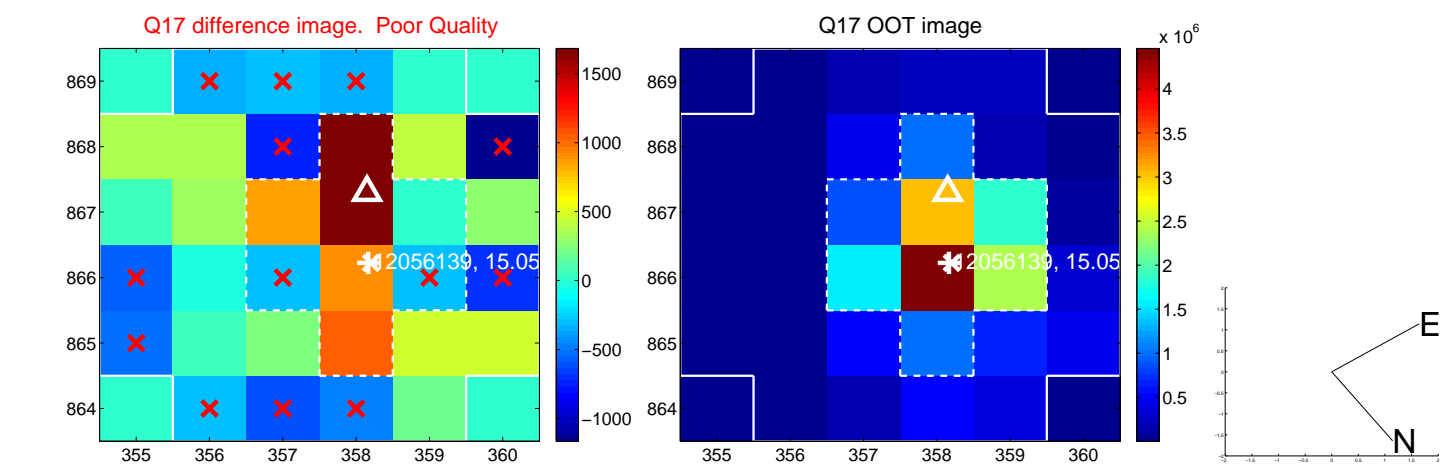
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UKIRT Image

Declination

