

KIC 003962357

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})
003962357-01	OBS	1210.01	14.553878	134.116515	306.0	6.921	21.4	21.7	1.51	6143	3.36	183.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003962357-01	OBS	PC	1.00	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.

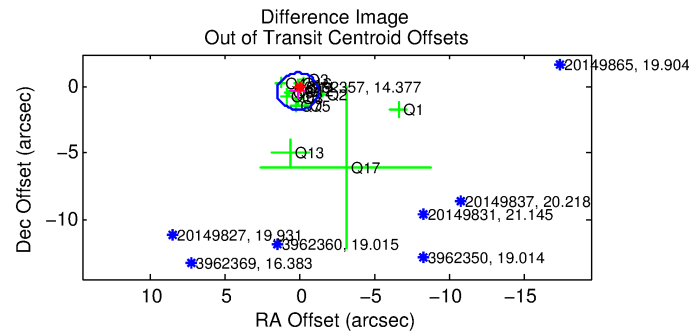
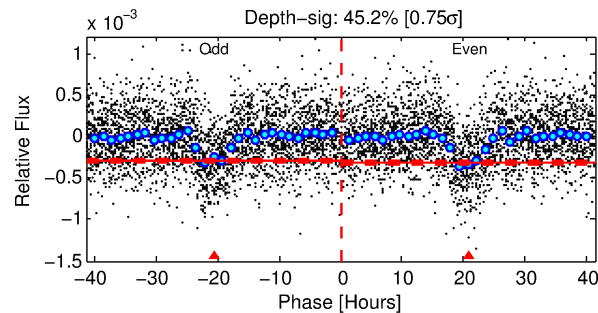
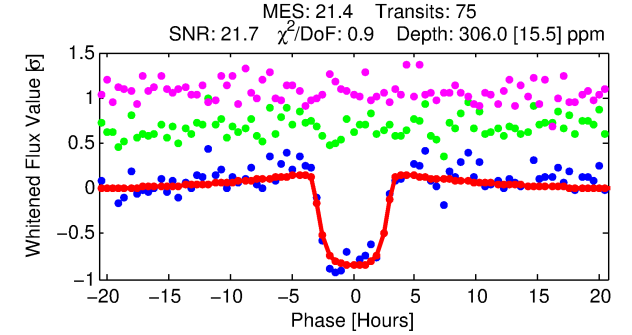
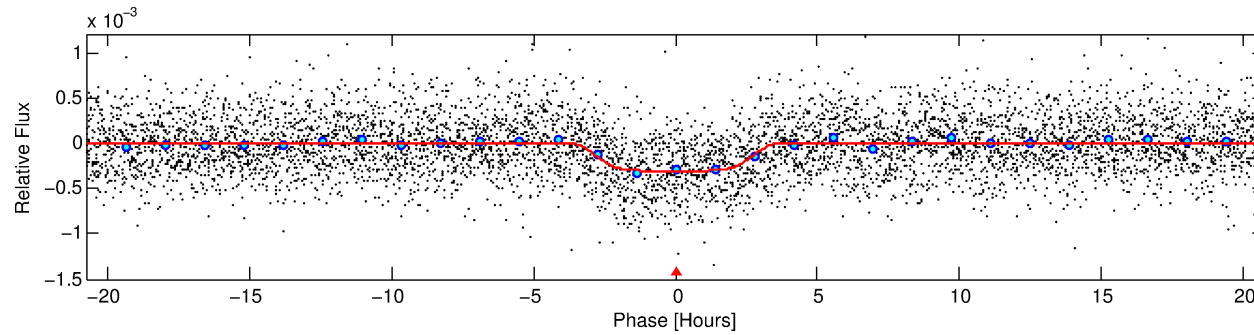
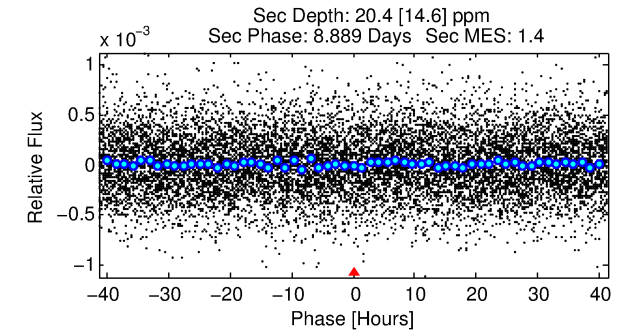
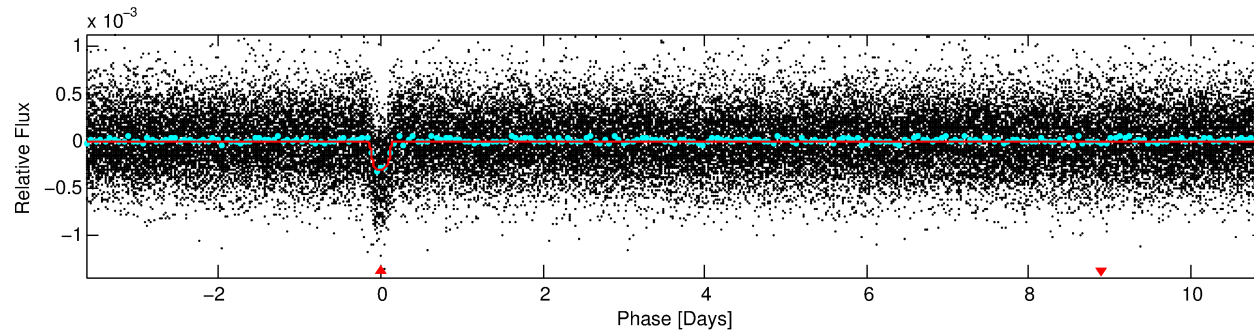
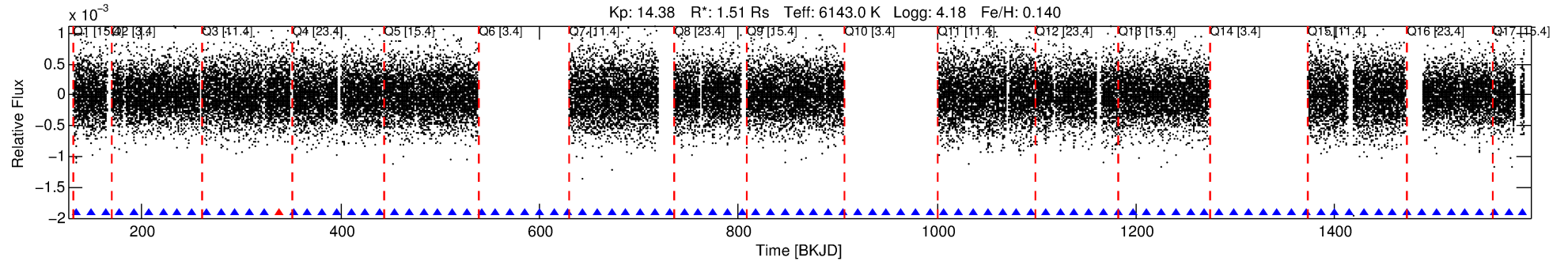
Ephemeris Match Information For 003962357-01

No Significant Match Found

DV One-Page Summary

KIC: 3962357 Candidate: 1 of 1 Period: 14.554 d

KOI: K01210.01 Corr: 0.951



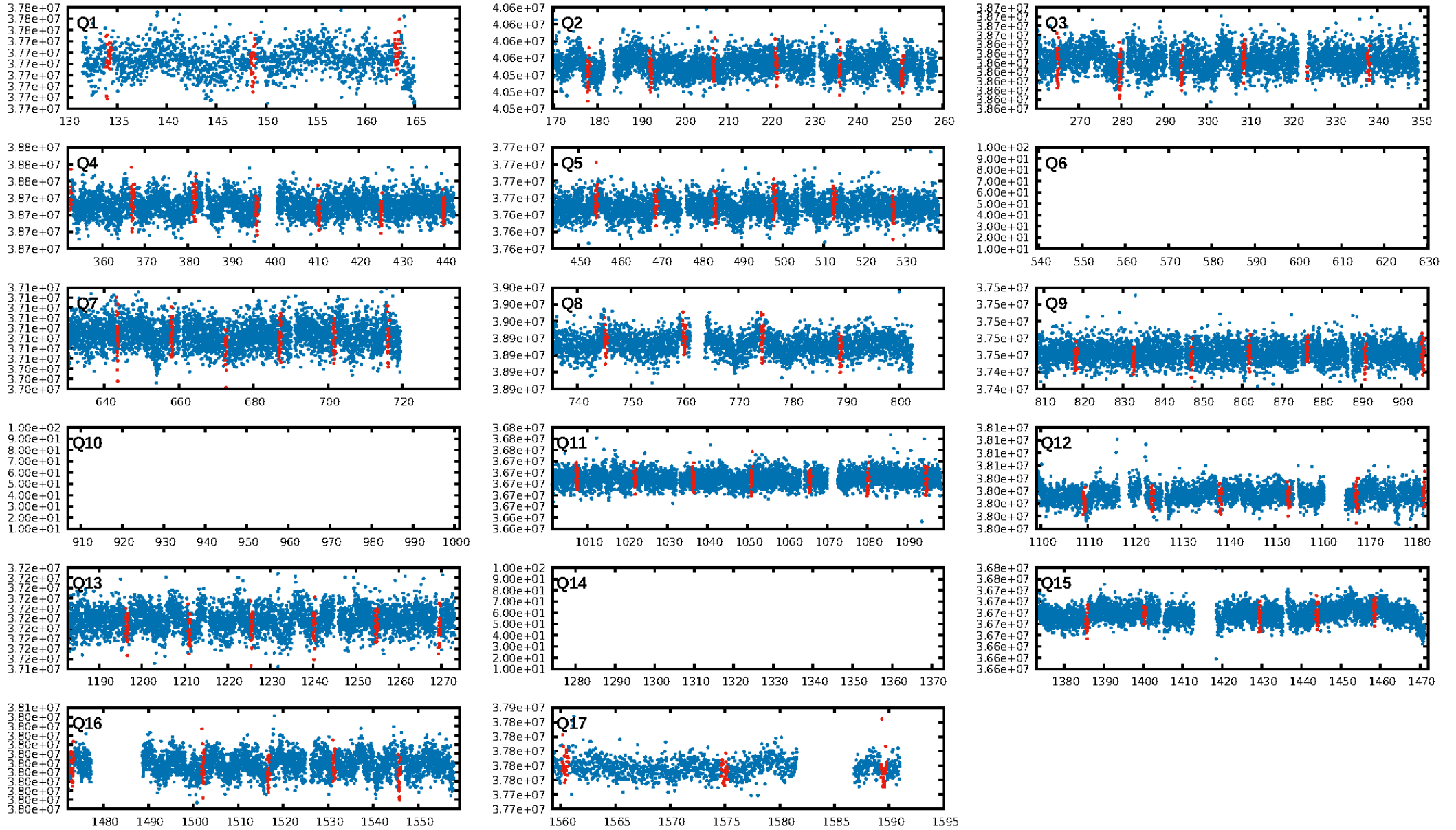
DV Fit Results:

Period = 14.55388 [0.00011] d
Epoch = 134.1165 [0.0059] BKJD
Rp/R* = 0.0204 [0.0008]
a/R* = 5.73 [0.81]
b = 0.96 [0.01]
Seff = 183.87 [48.64]
Teq = 939 [62] K
Rp = 3.36 [0.62] Re
a = 0.1255 [0.0209] AU
Ag = 15.72 [12.03] [1.22σ]
Teffp = 2891 [522] K [3.71σ]

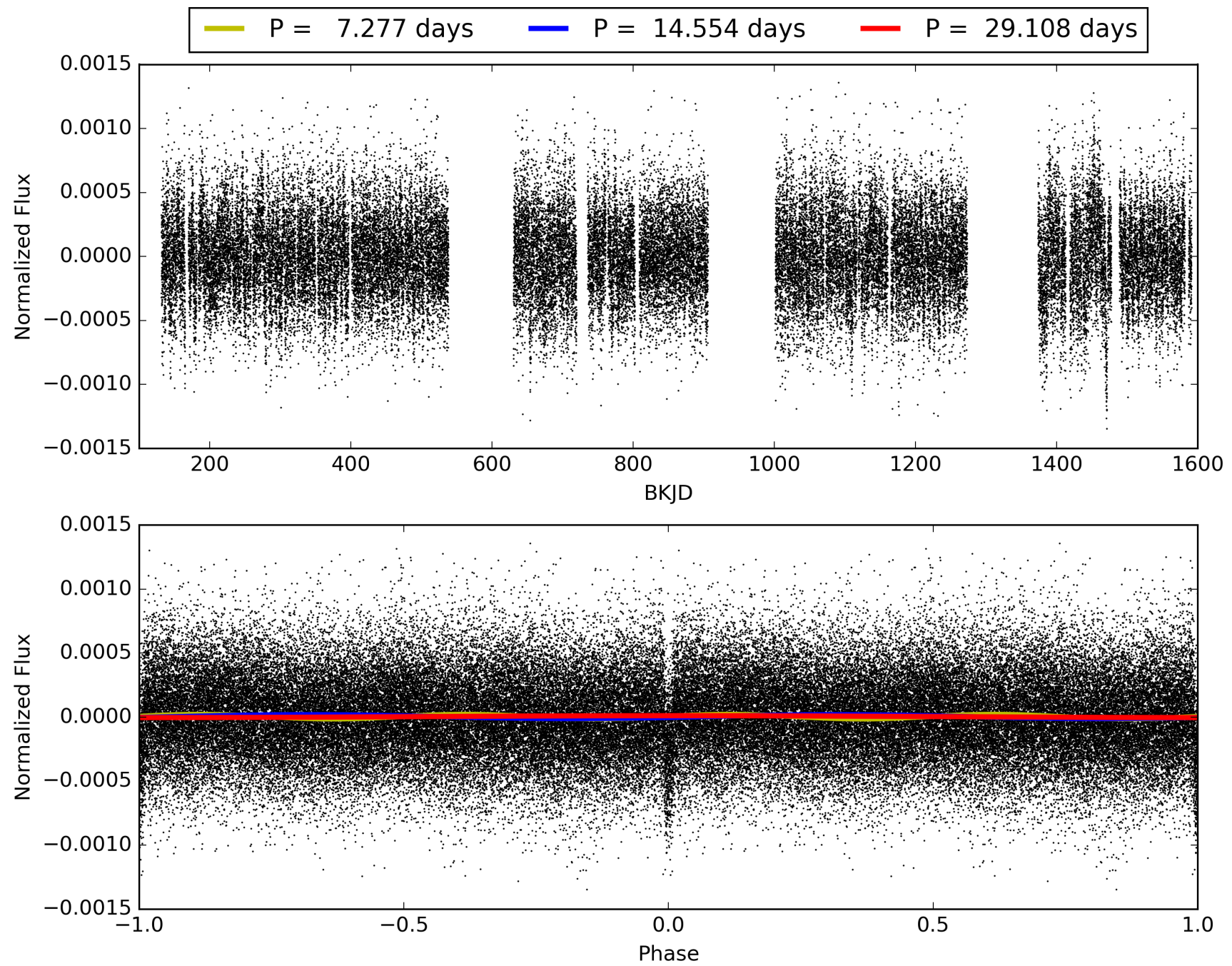
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.00e-102
RollingBand-fgt: 0.99 [68/69]
GhostDiagnostic-chr: 2.903
Centroid-sig: 0.9%
Centroid-so: 1.022 arcsec [2.07σ]
OotOffset-rm: 0.309 arcsec [0.67σ]
KicOffset-rm: 0.329 arcsec [0.53σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003962357-01, PDC Light Curves

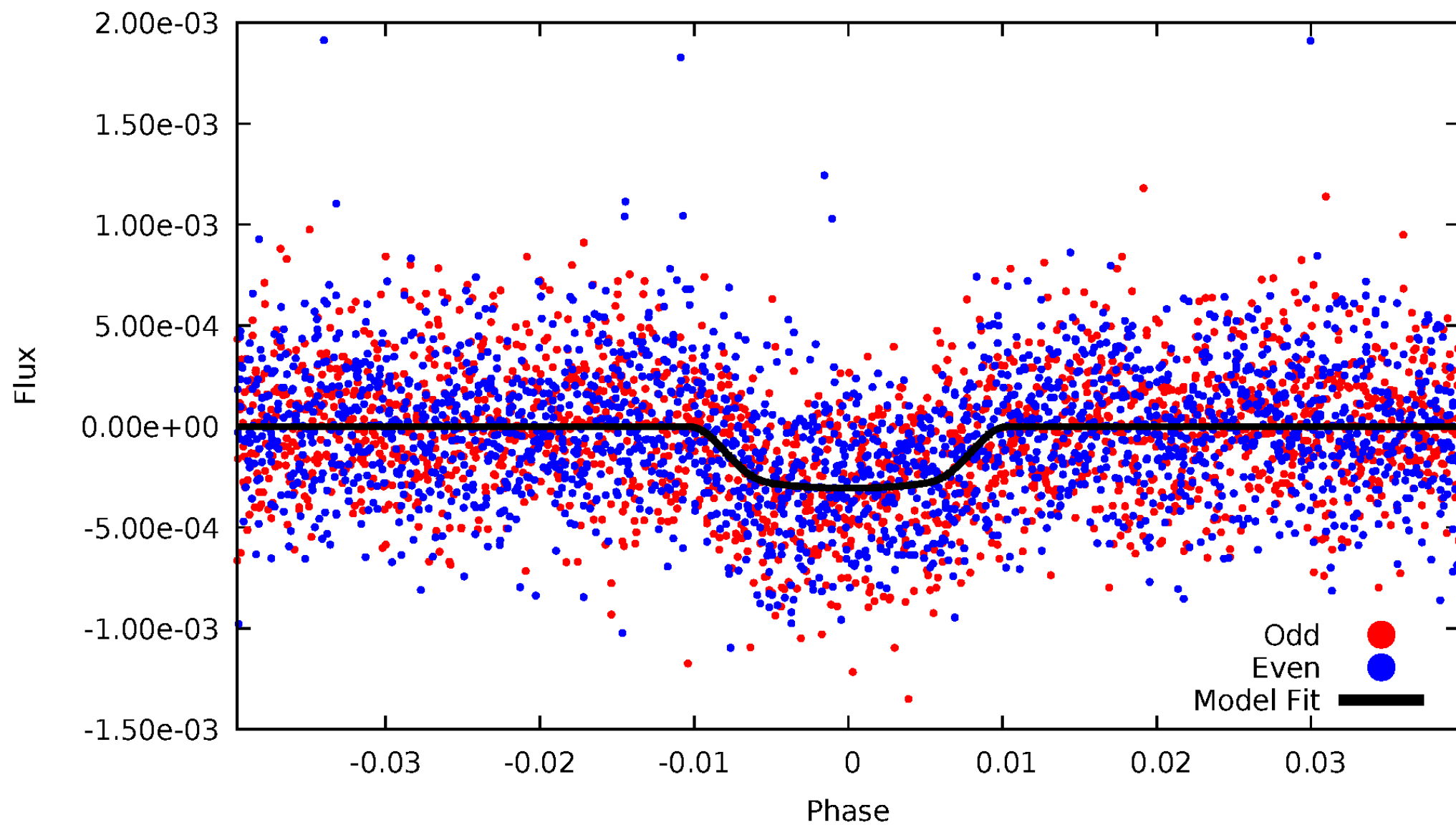


TCE 003962357-01



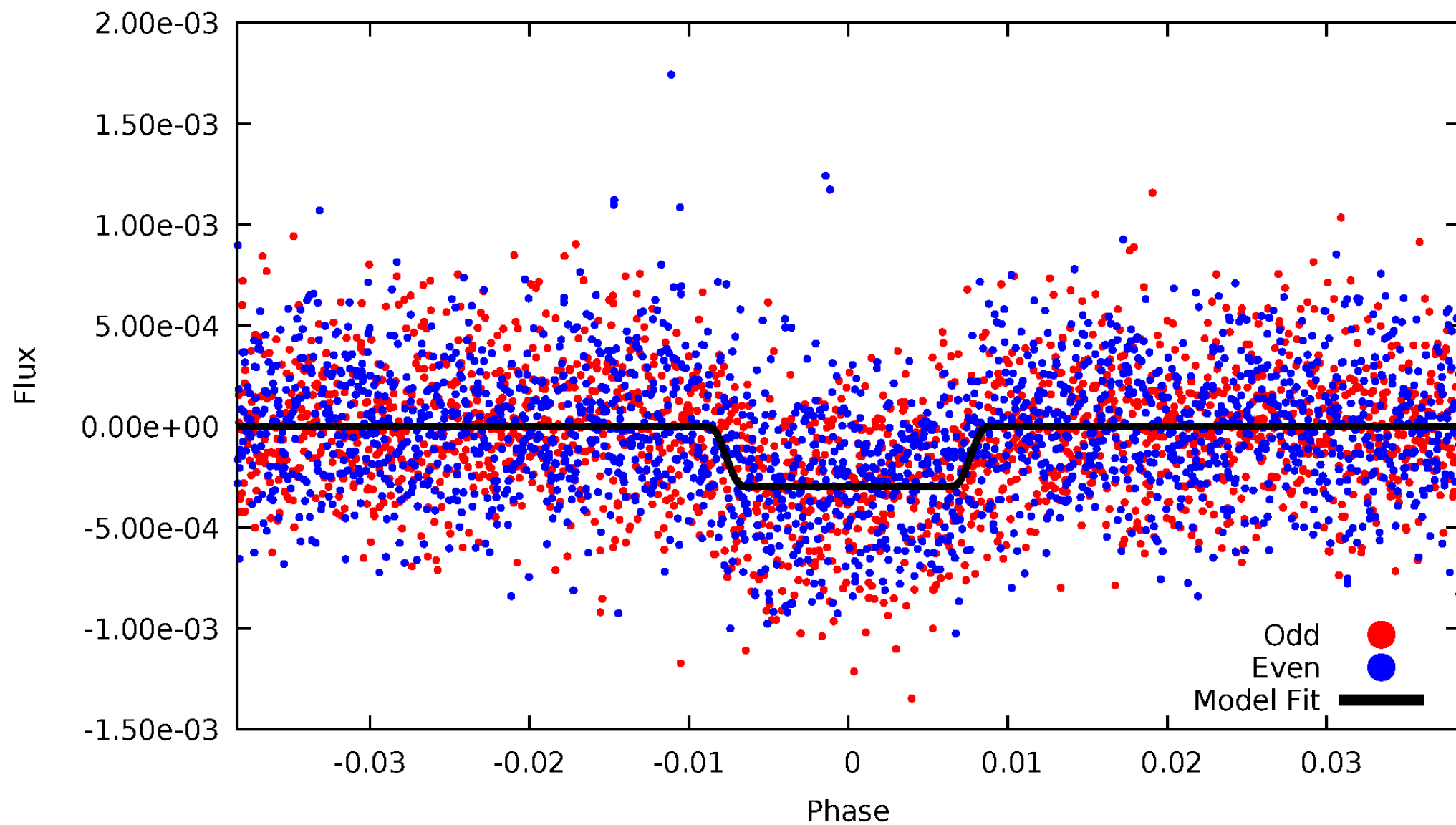
DV Odd/Even

TCE 003962357-01

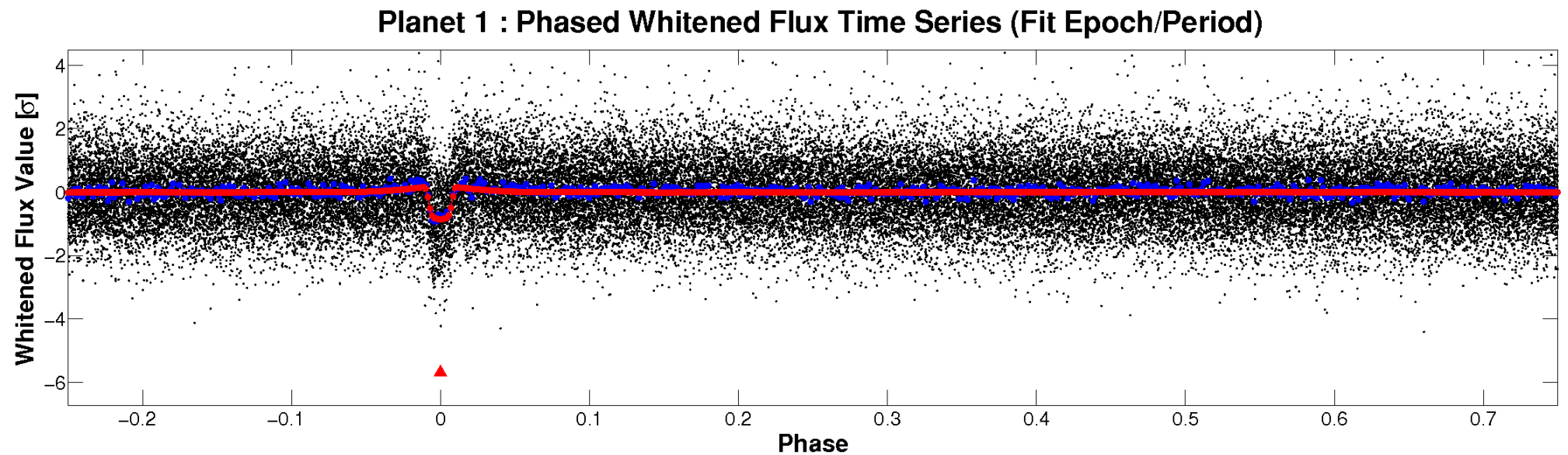
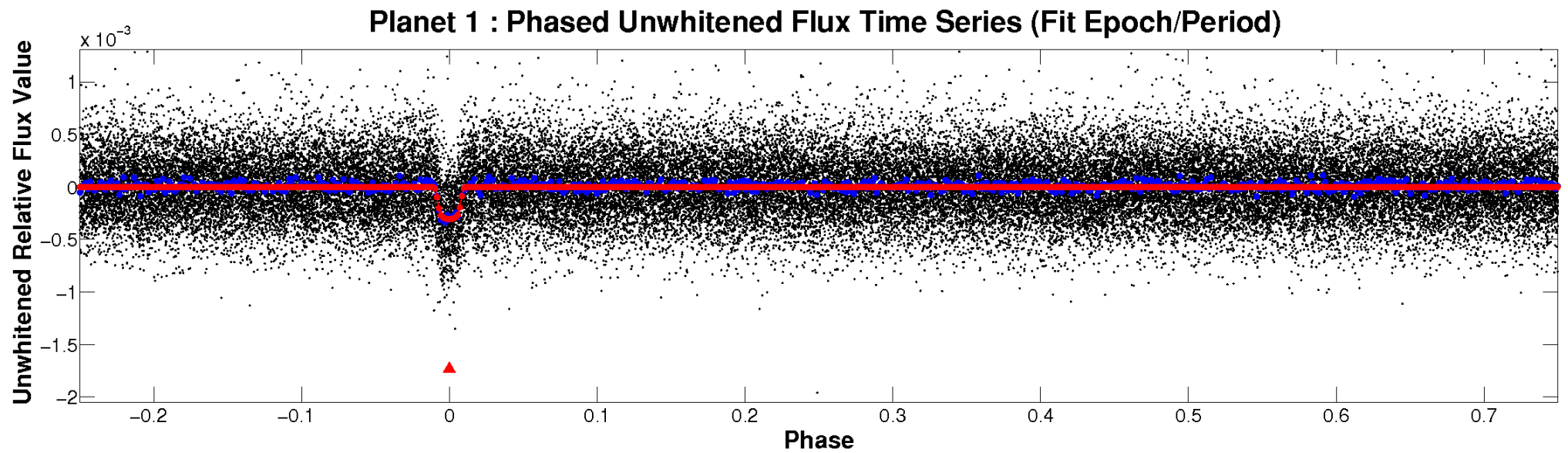


ALT Odd/Even

TCE 003962357-01

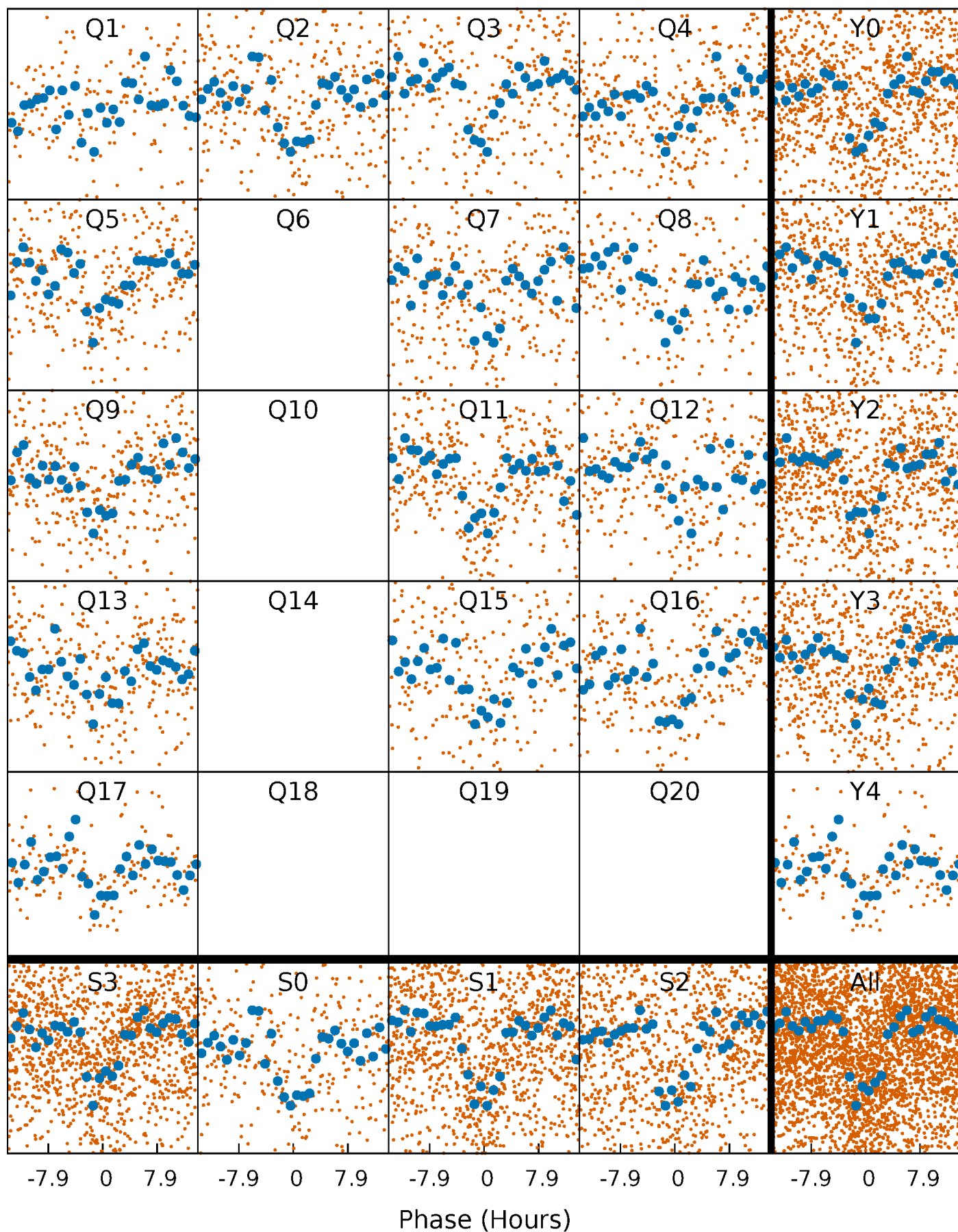


Non-Whitened Vs. Whitened Light Curve



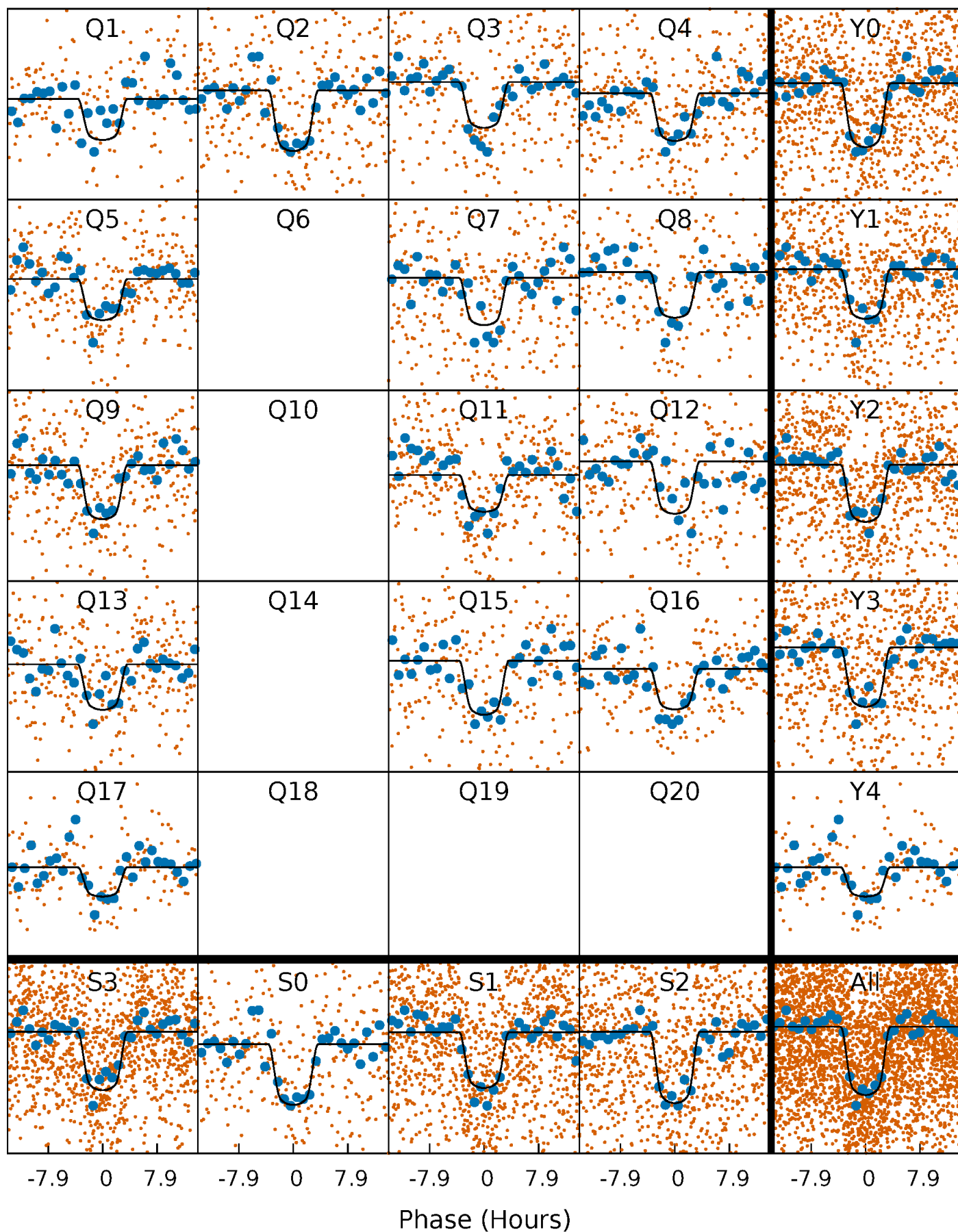
PDC Quarter-Phased Transit Curves

TCE 003962357-01 P= 14.553878 Days $T_0=134.116515$ (BKJD)



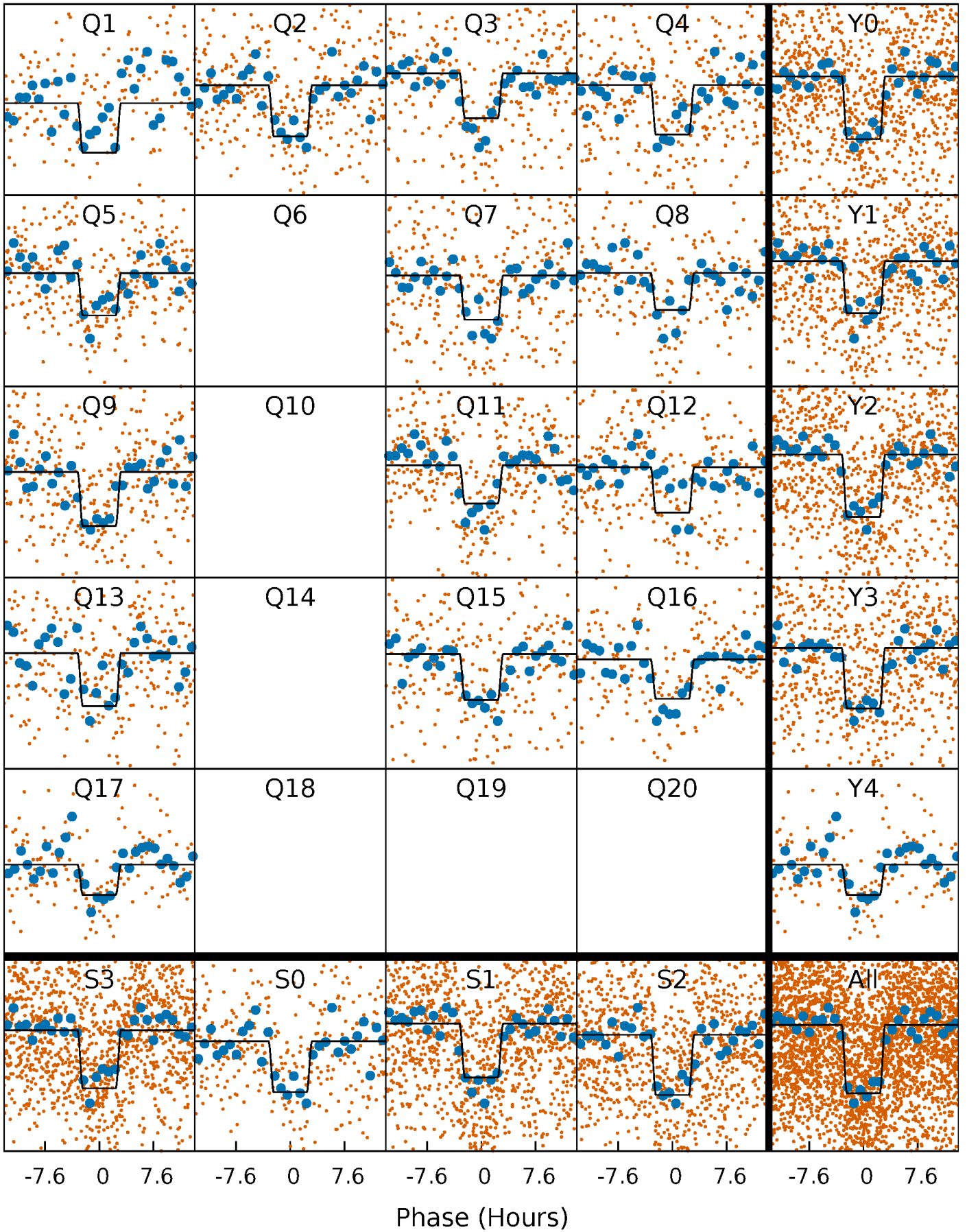
DV Quarter-Phased Transit Curves

TCE 003962357-01 P= 14.553878 Days $T_0=134.116515$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

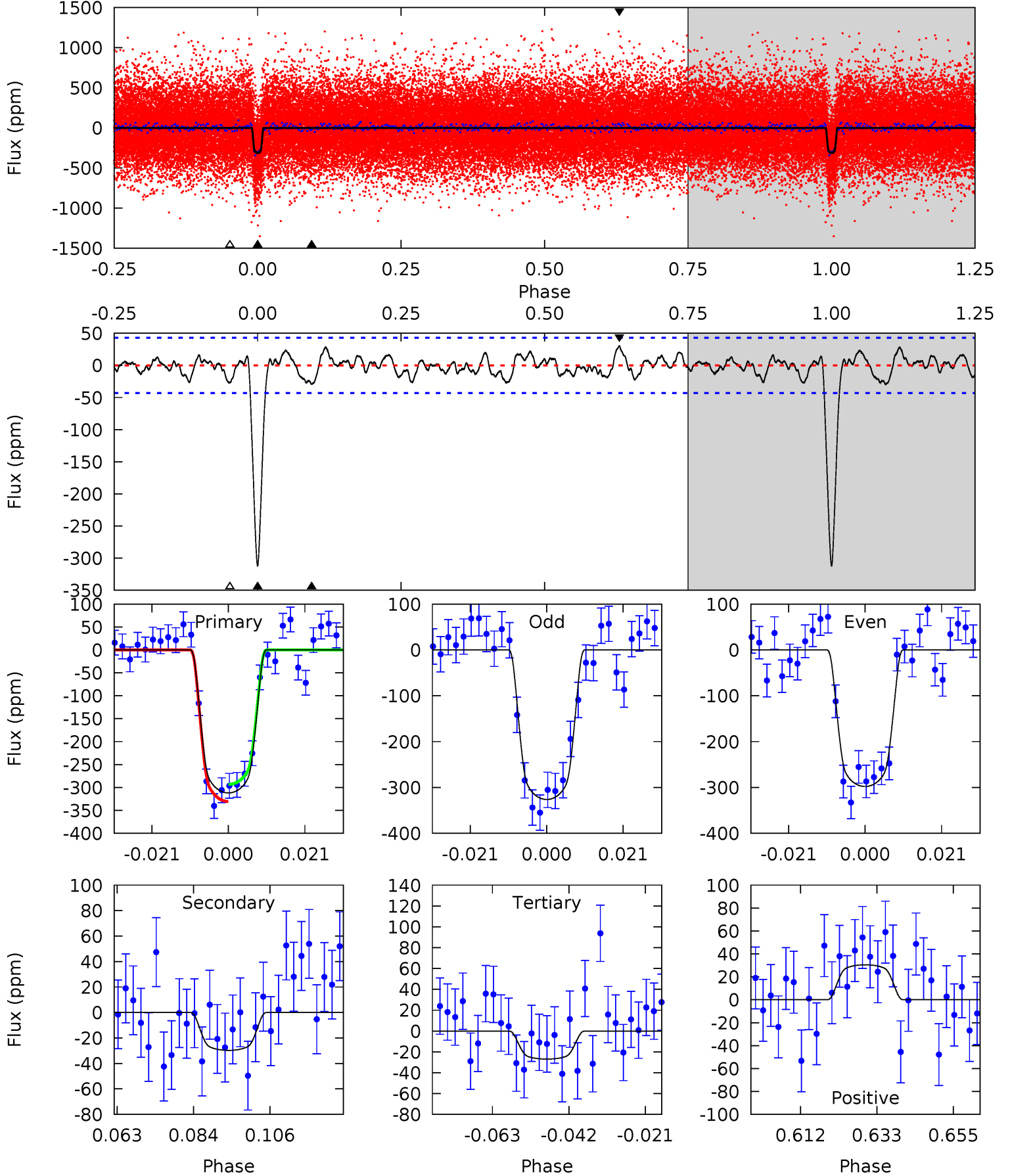
TCE 003962357-01 P= 14.553945 Days $T_0=134.113161$ (BKJD)



DV Model-Shift Uniqueness Test

003962357-01, $P = 14.553878$ Days, $E = 119.562637$ Days

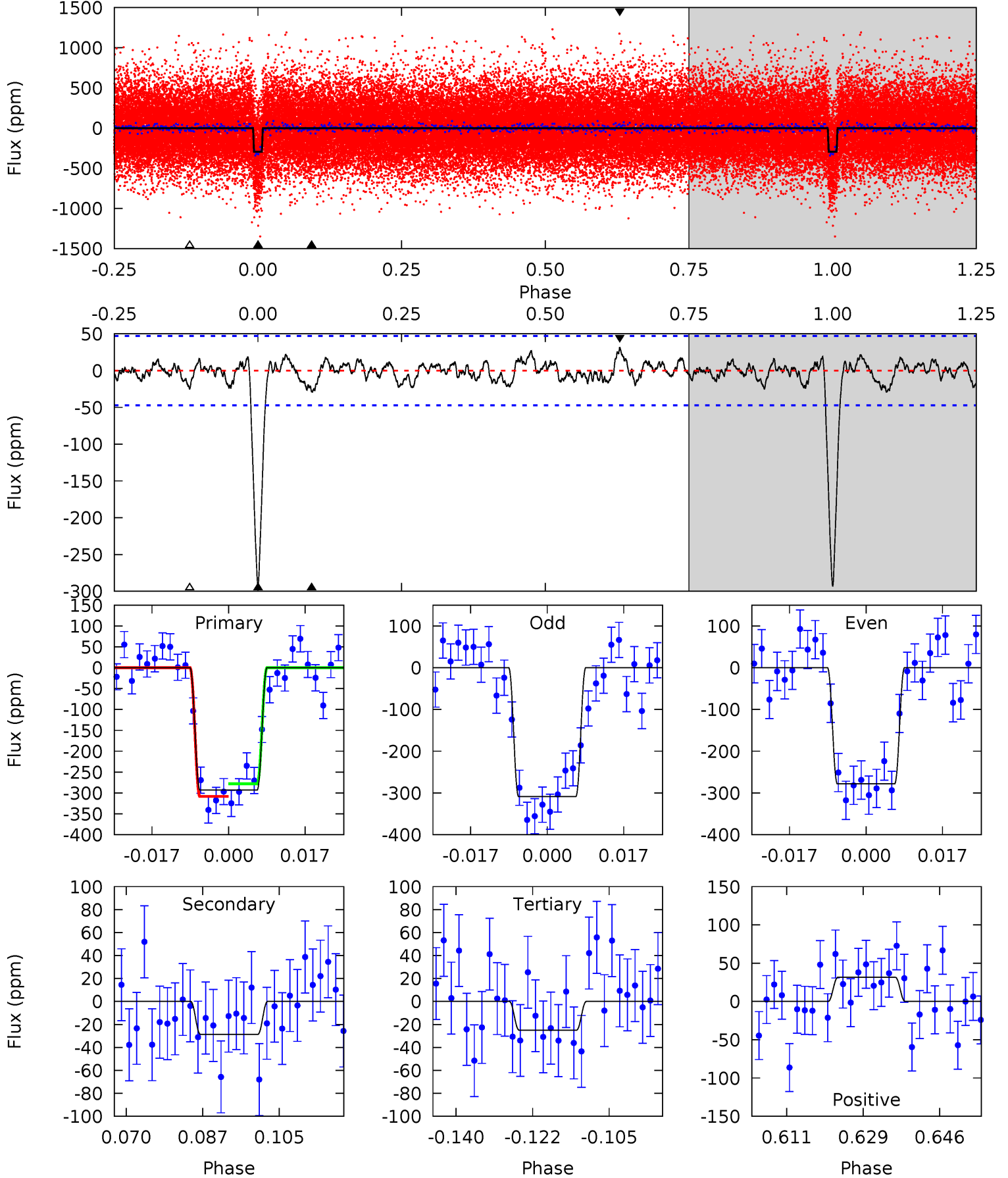
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.4	3.37	3.06	3.46	4.88	2.31	1.28	32.3	31.9	0.31	-0.09	1.61	1.03	0.09	2.12



Alt Model-Shift Uniqueness Test

003962357-01, $P = 14.553945$ Days, $E = 119.559216$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	2.99	2.60	3.29	4.92	2.38	1.05	27.9	27.2	0.38	-0.30	1.58	1.02	0.10	1.59



Stellar Parameters For KIC 003962357

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6143^{+73}_{-85}	$4.177^{+0.149}_{-0.122}$	$0.140^{+0.150}_{-0.150}$	$1.507^{+0.273}_{-0.273}$	$1.246^{+0.099}_{-0.110}$	$0.513^{+0.375}_{-0.184}$
	+1%/-1%	+4%/-3%	+107%/-107%	+18%/-18%	+8%/-9%	+73%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003962357-01 / KOI 1210.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-30 ± 9	$3.35^{+0.38}_{-0.37}$	1313^{+62}_{-73}	3603^{+176}_{-204}	22^{+10}_{-7}
Alt.	-29 ± 10	$2.84^{+0.30}_{-0.33}$	1313^{+59}_{-73}	3805^{+195}_{-257}	31^{+14}_{-11}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

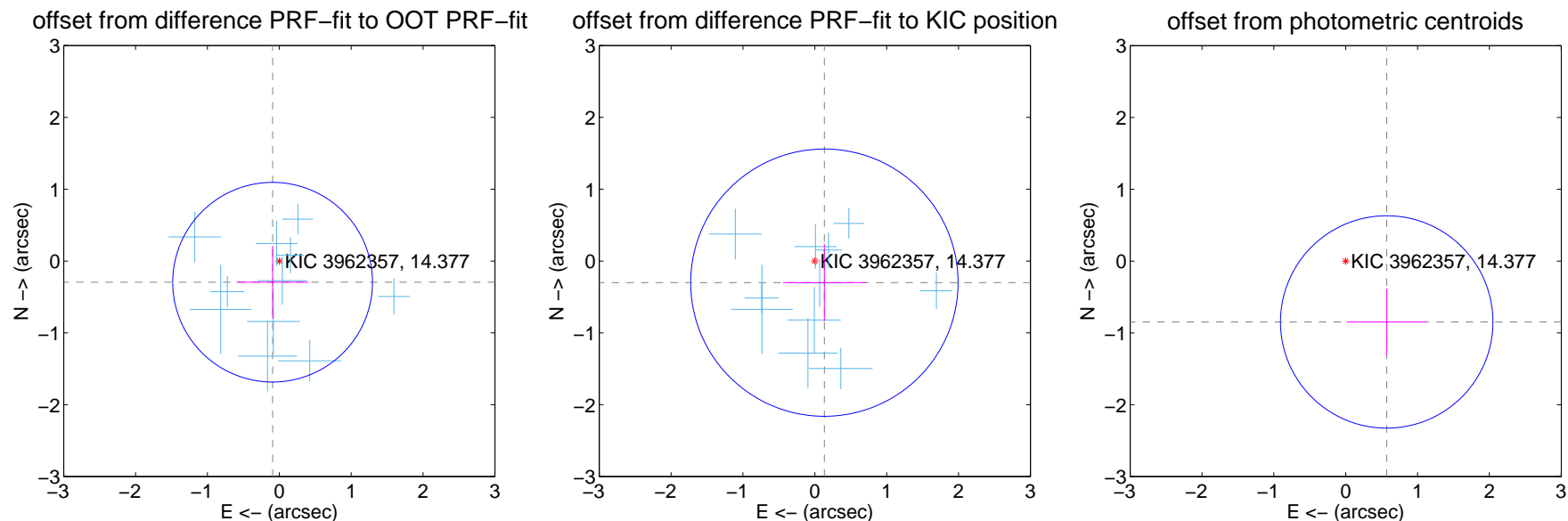
DV Centroid Data

Supplemental centroid analysis for 003962357-01. Kepler magnitude: 14.38. Transit SNR 21.72

There are 11 quarters with good PRF difference image offsets

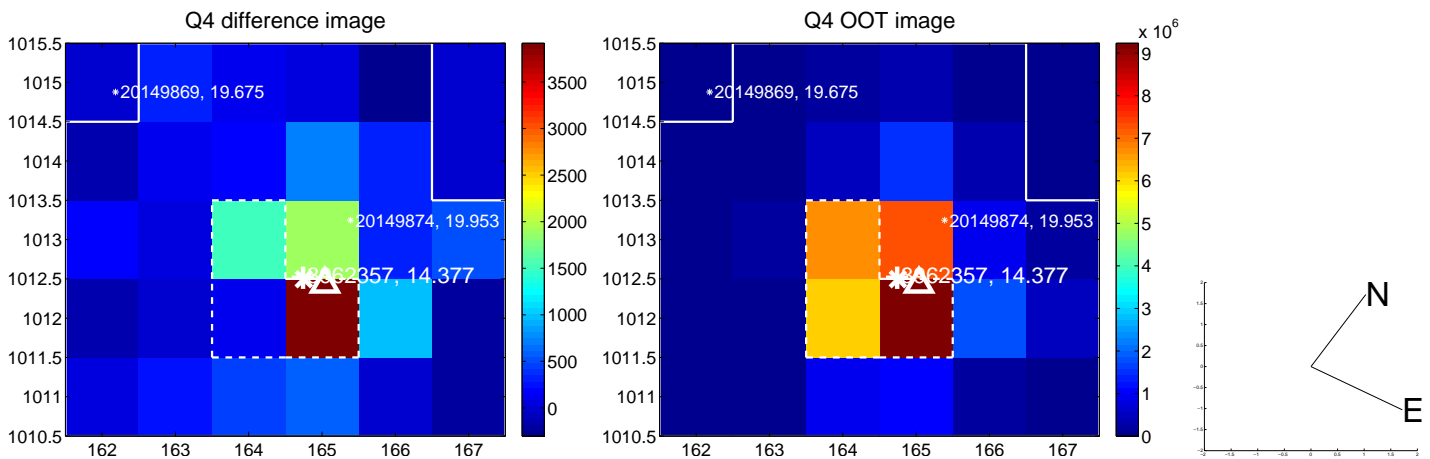
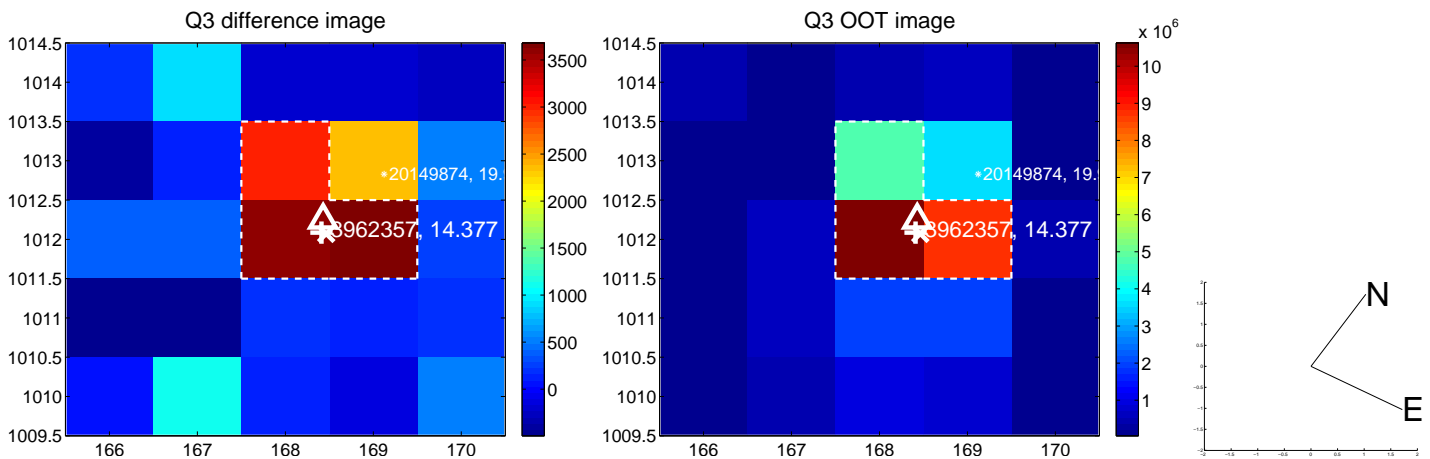
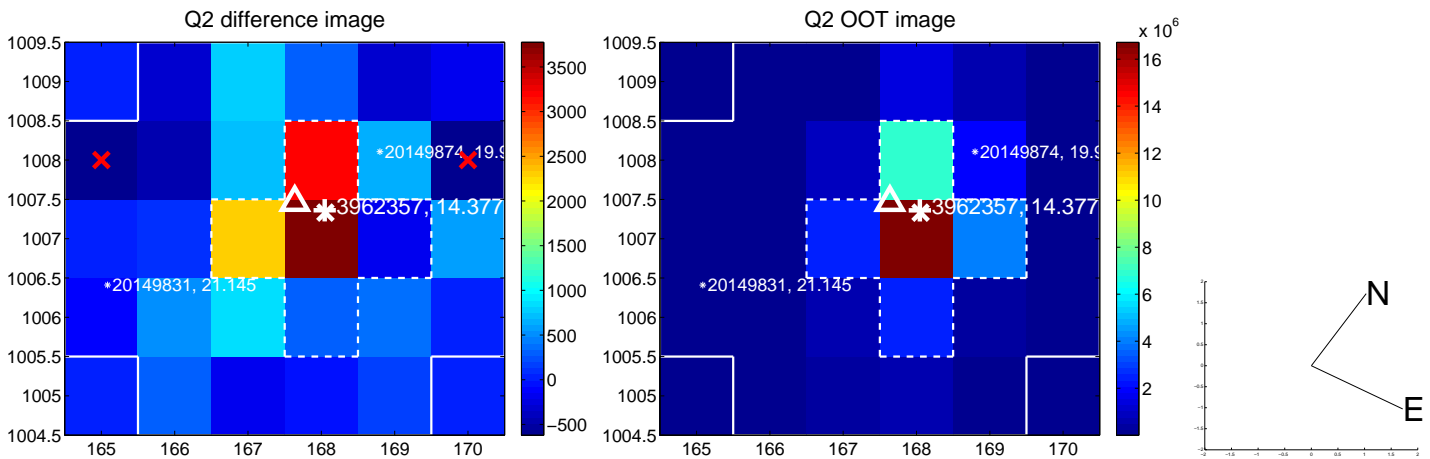
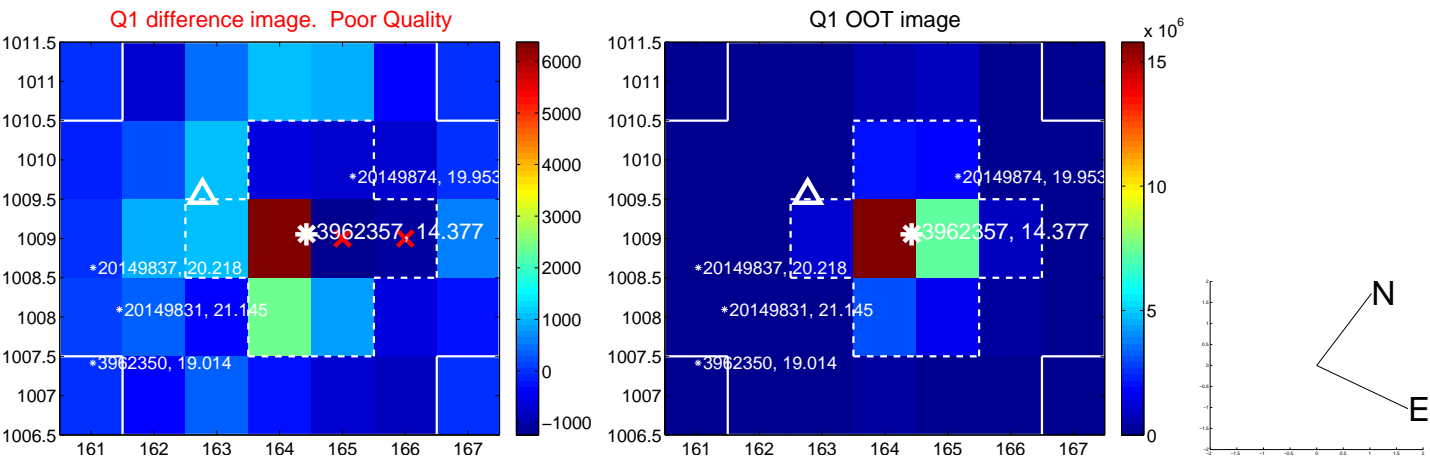
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.309 ± 0.463	0.67	0.093 ± 0.501	-0.295 ± 0.507
PRF-fit source offset from KIC position	0.329 ± 0.620	0.53	-0.133 ± 0.574	-0.301 ± 0.537
photometric centroid source offset	1.02 ± 0.49	2.07	-0.57 ± 0.55	-0.85 ± 0.46

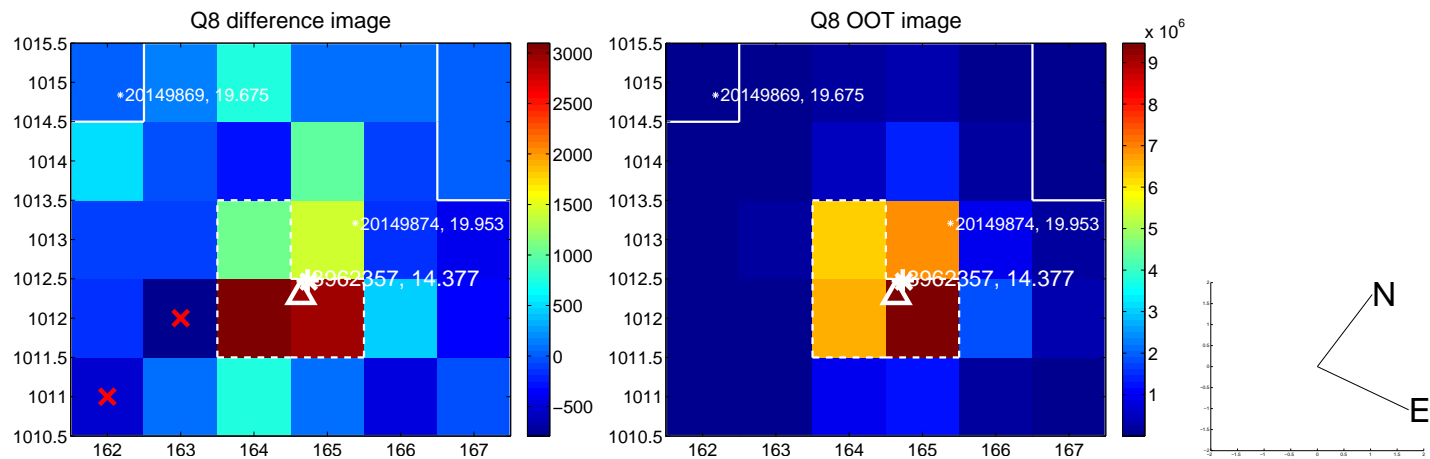
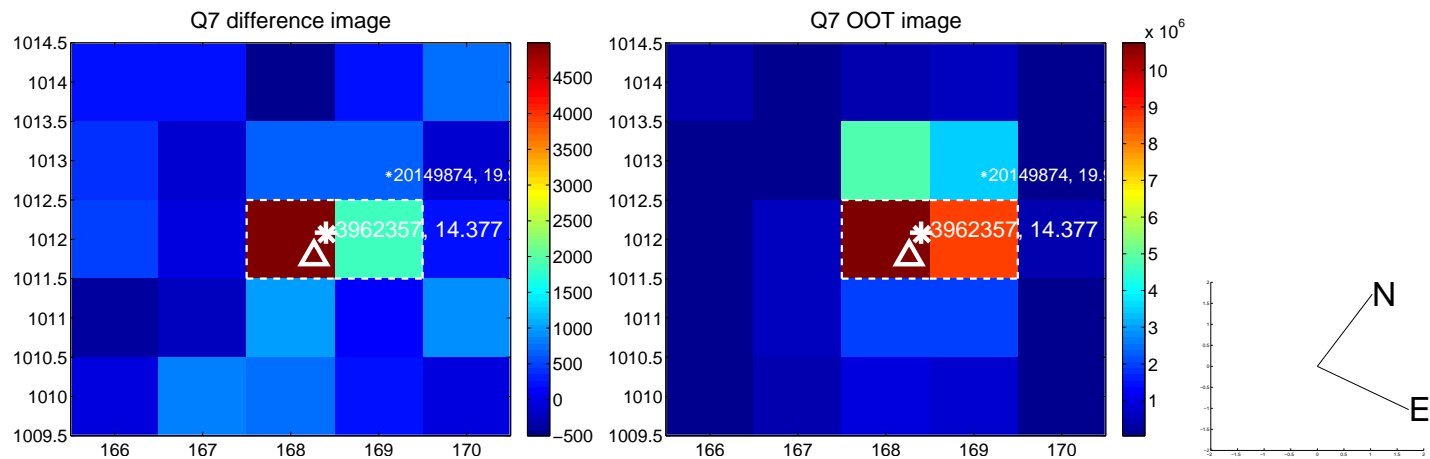
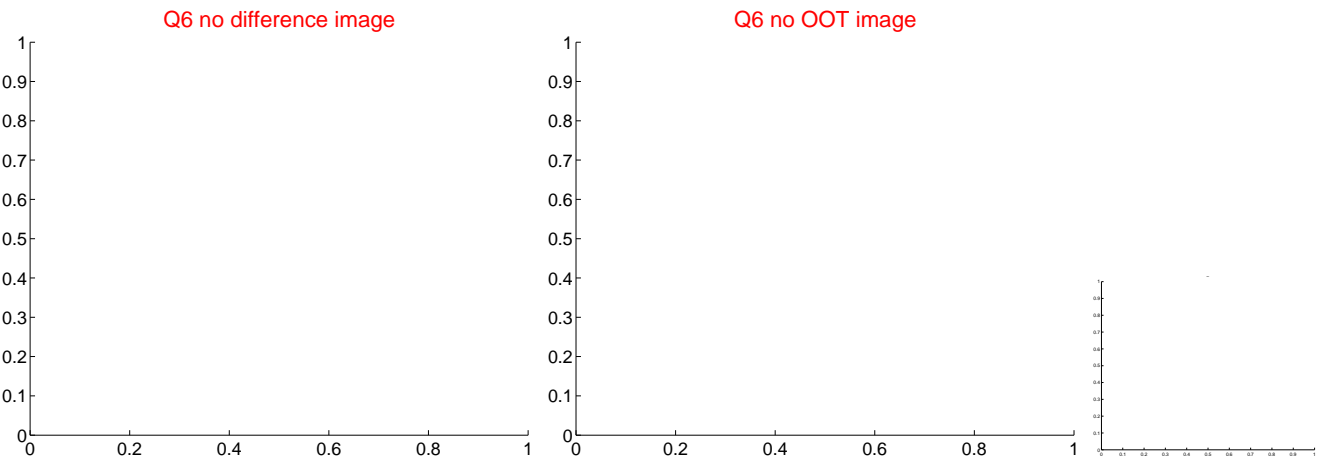
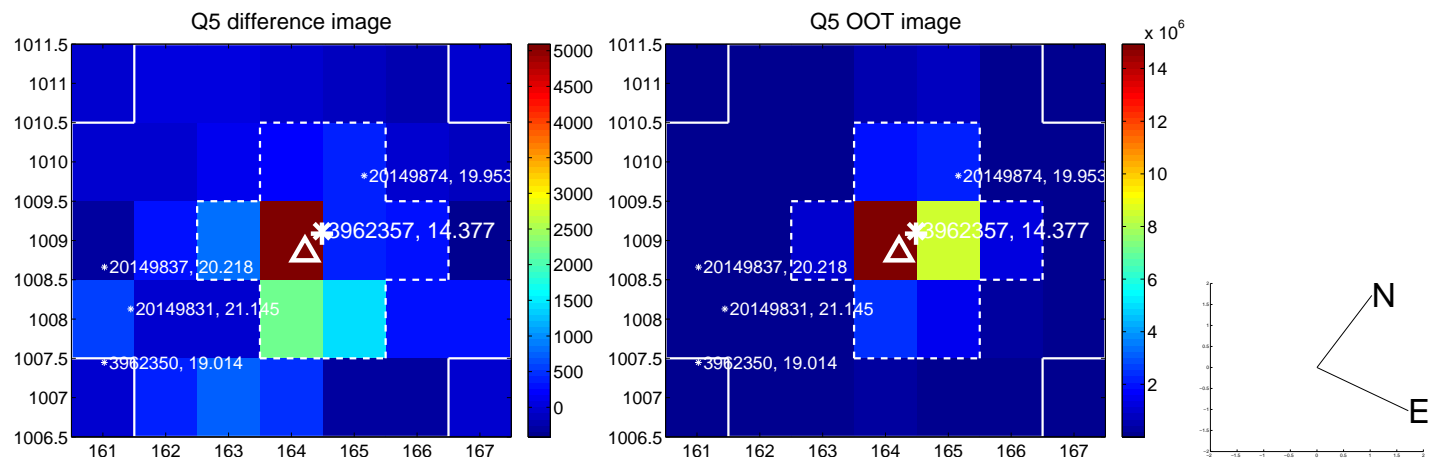


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

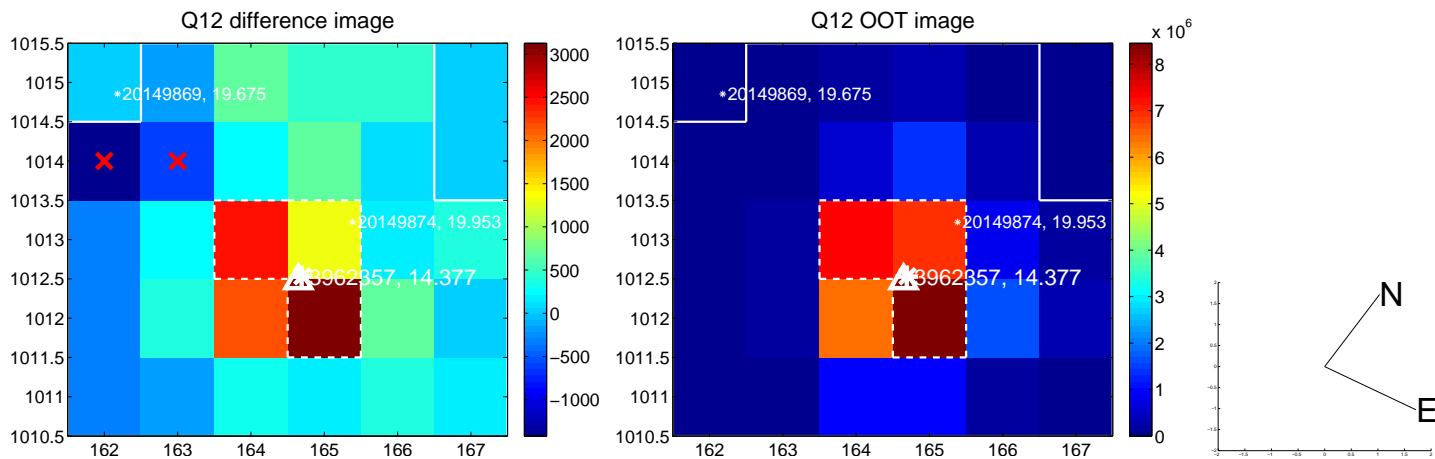
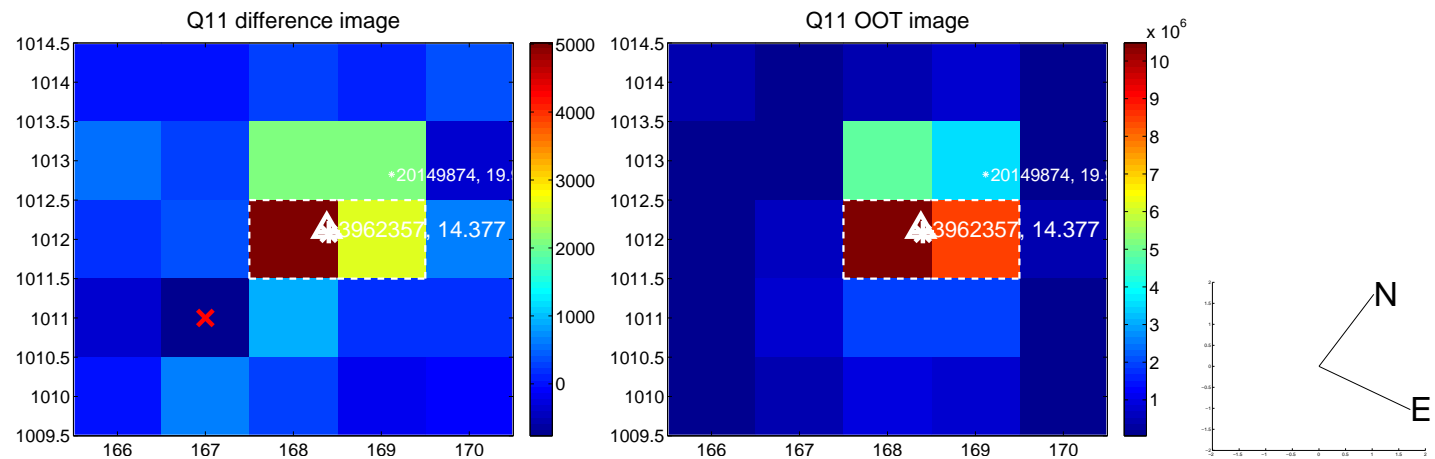
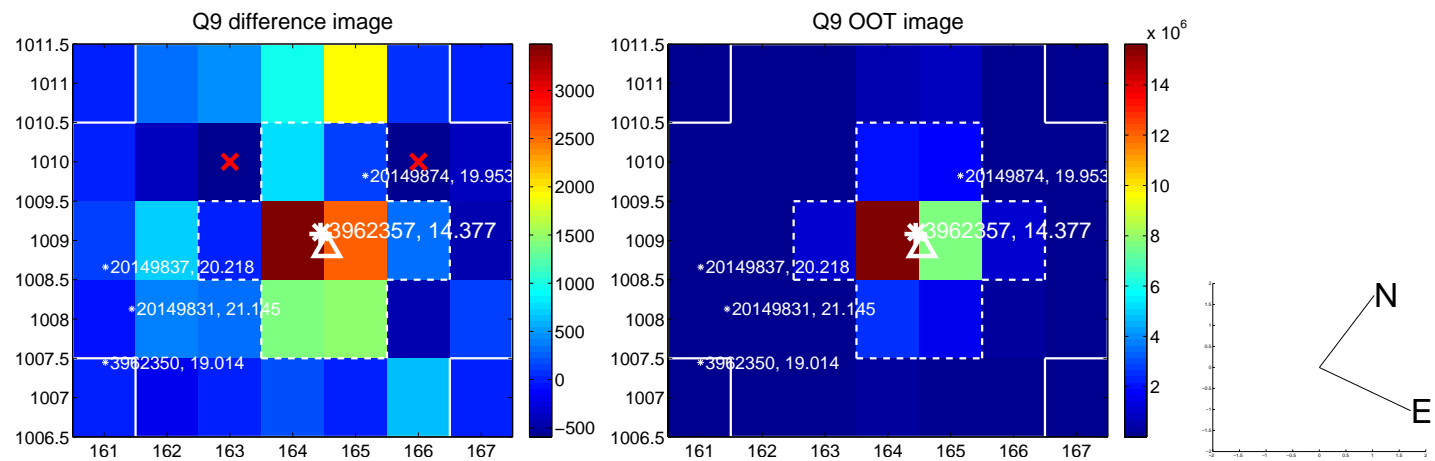
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



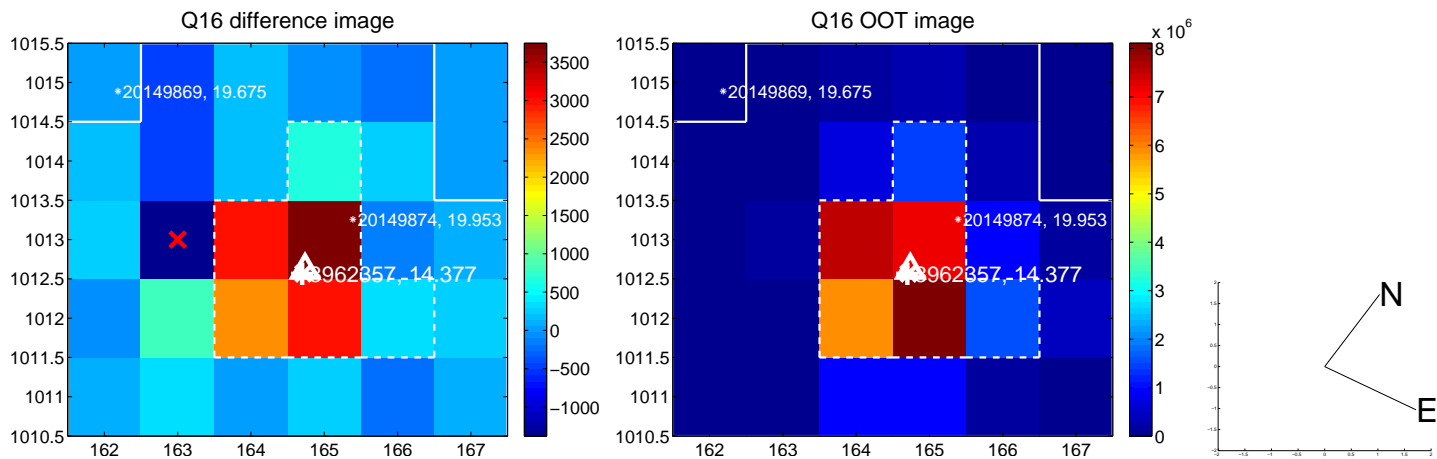
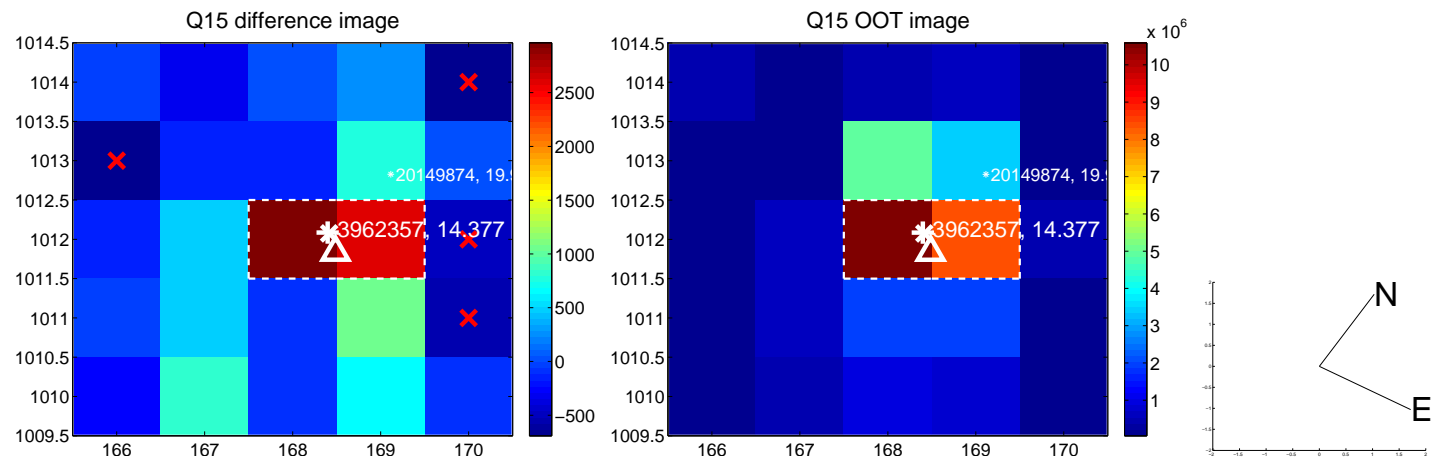
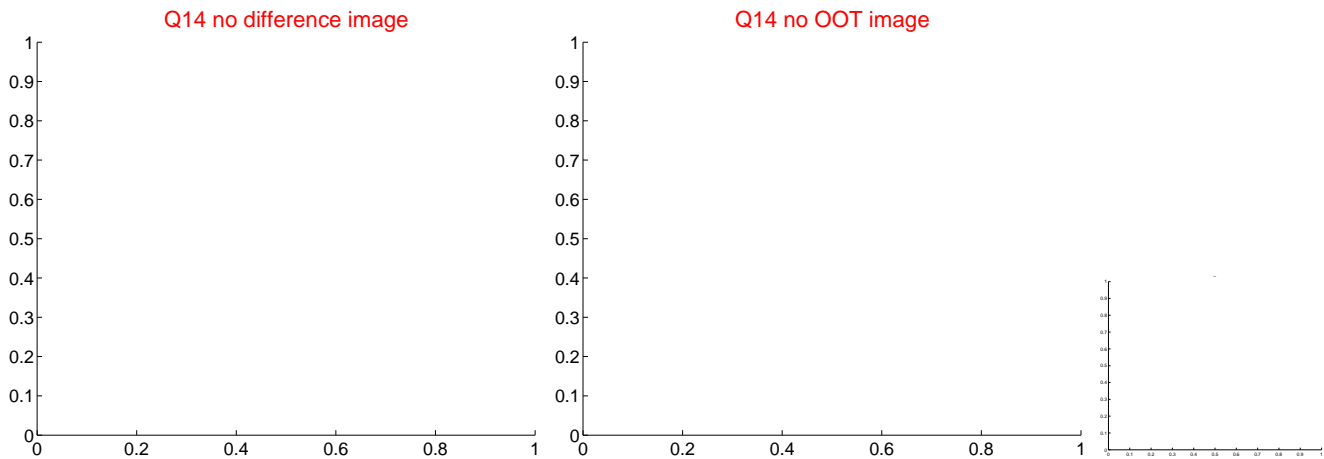
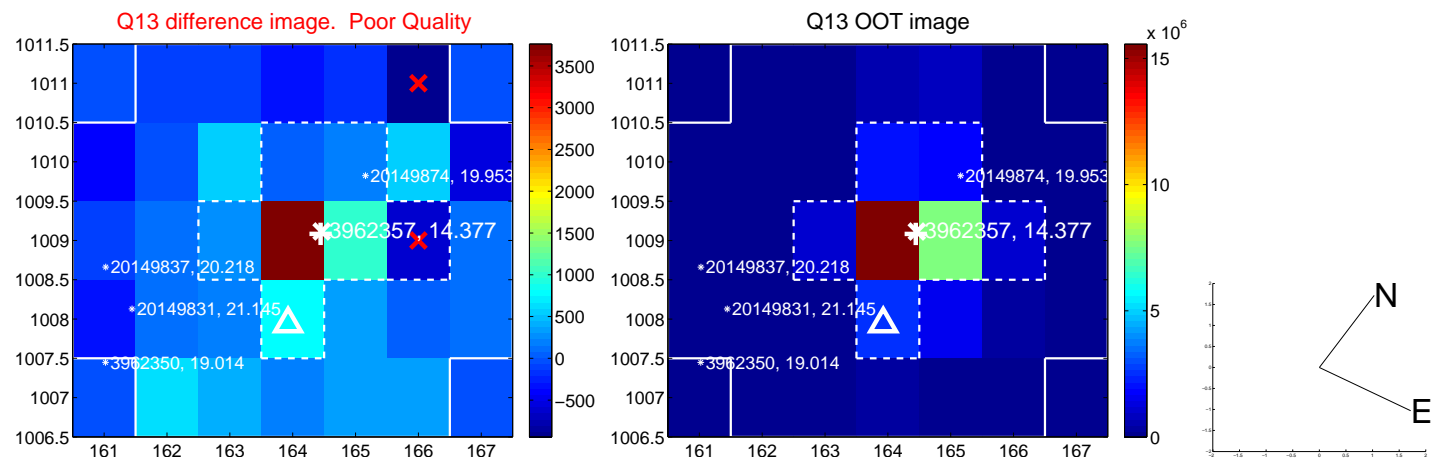
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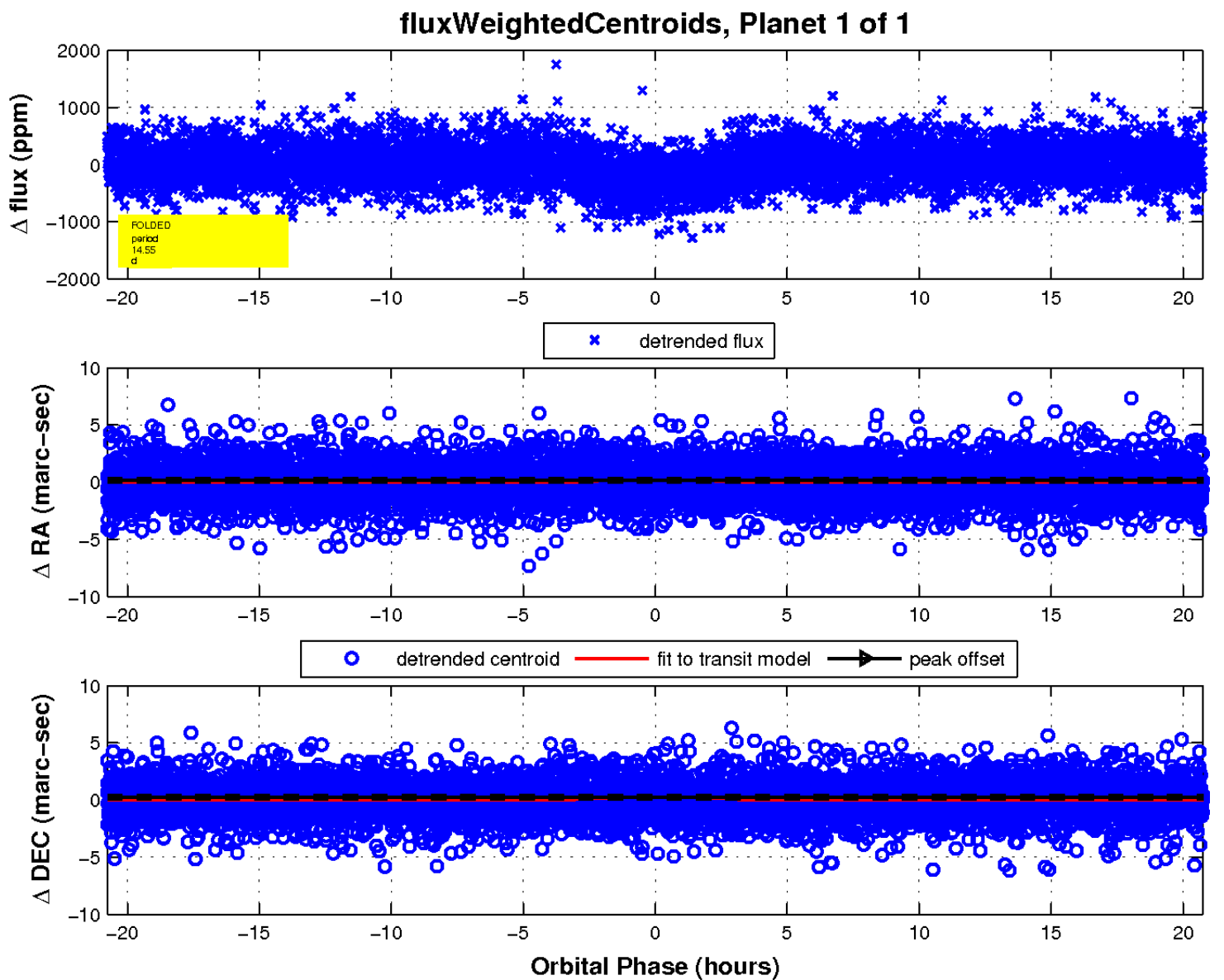
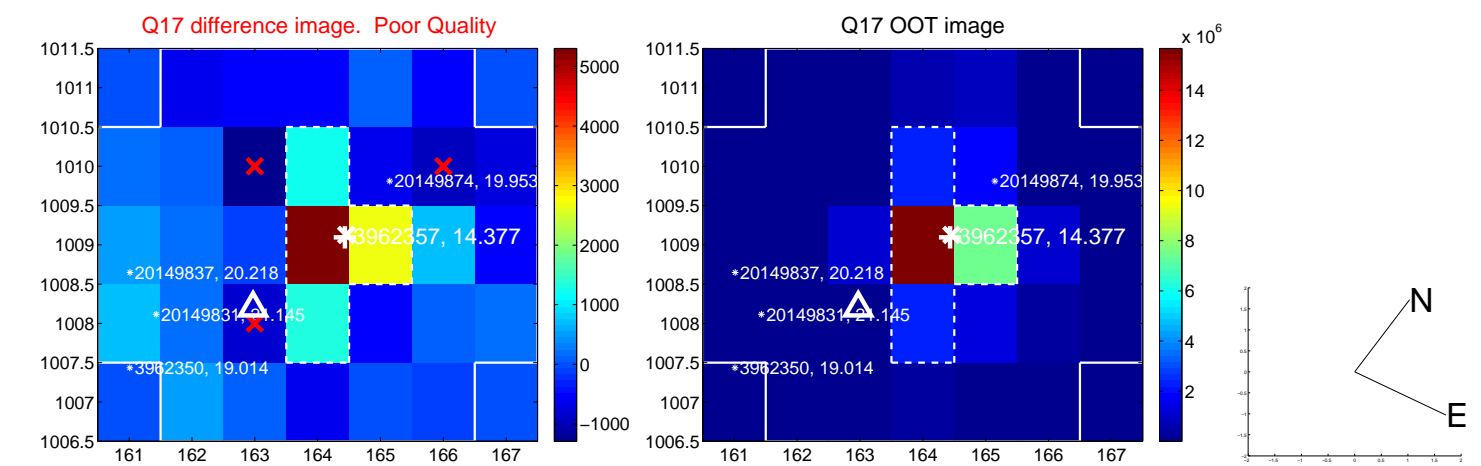
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

