

KIC 008321270

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})
008321270-01	OBS	No	6.496190	137.591657	51.3	30.581	9.3	12.1	1.00	5780	0.75	215.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008321270-01	OBS	FP	0.00	1	0	1	0	LPP_DV—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.

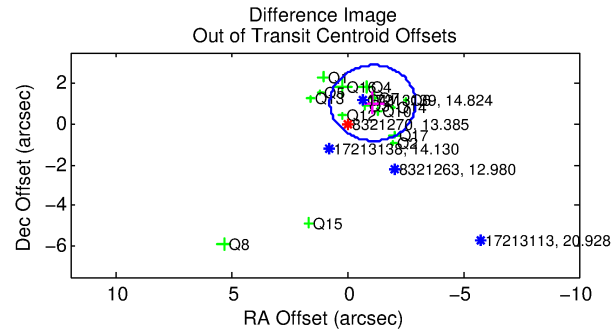
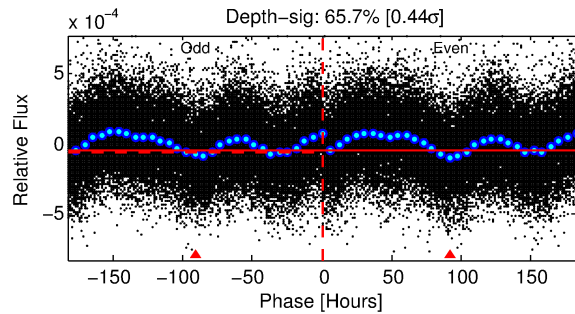
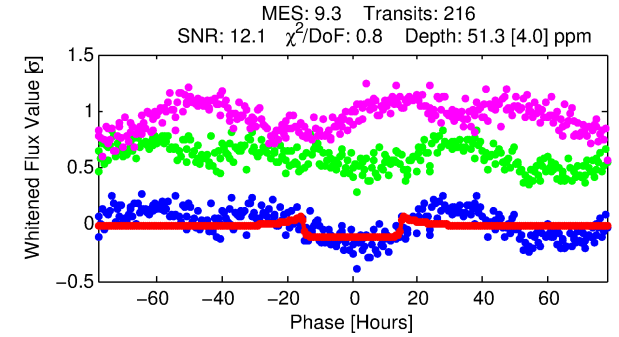
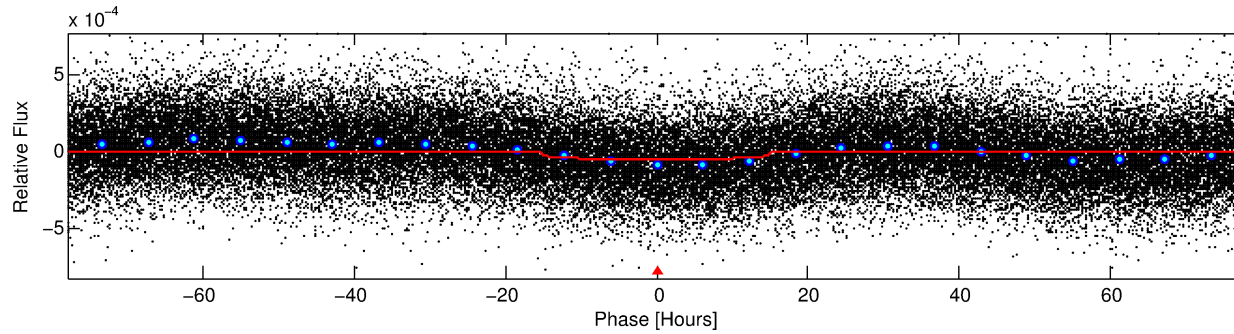
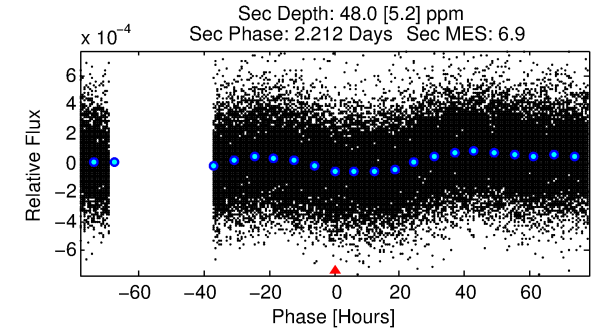
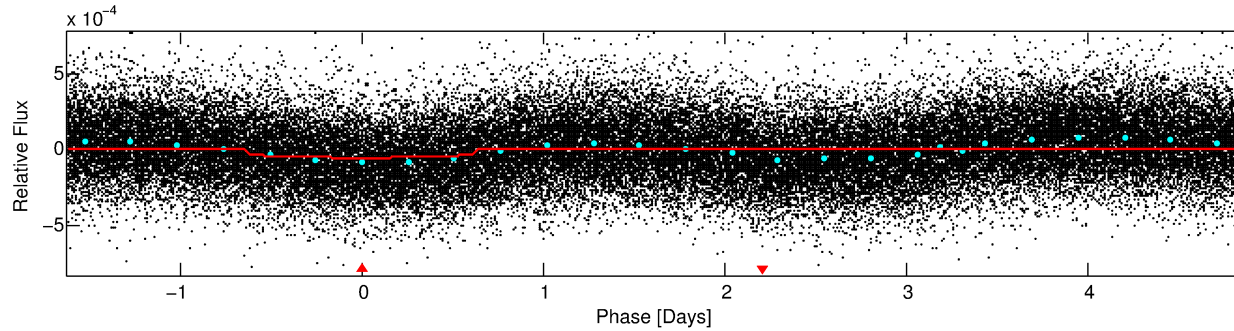
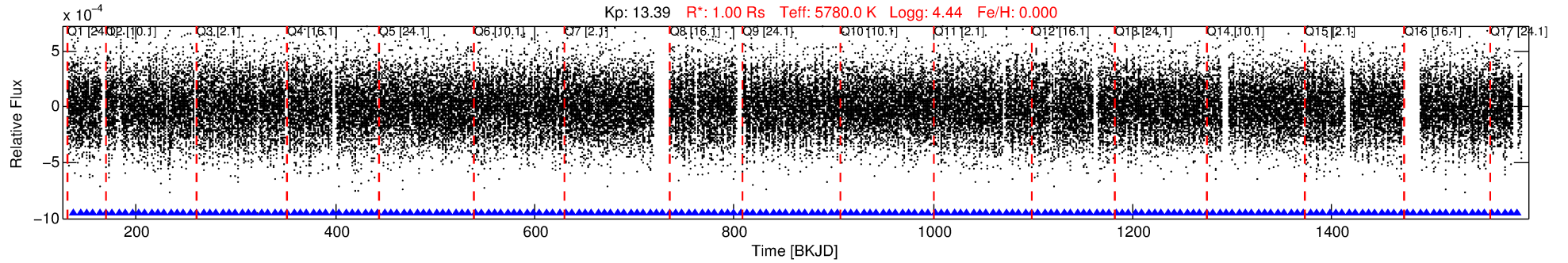
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008321270-01

No Significant Match Found

DV One-Page Summary

KIC: 8321270 Candidate: 1 of 1 Period: 6.496 d



DV Fit Results:

Period = 6.49619 [0.00011] d
Epoch = 137.5917 [0.0133] BKJD
Rp/R* = 0.0069 [0.0015]
a/R* = 1.49 [0.76]
b = 0.64 [0.86]
Seff = 215.31 [0.01]
Teq = 977 [0] K
Rp = 0.75 [0.16] Re
a = 0.0682 [0.0000] AU
Ag = 217.04 [94.84] [2.28σ]
Teffp = 5797 [633] K [7.61σ]

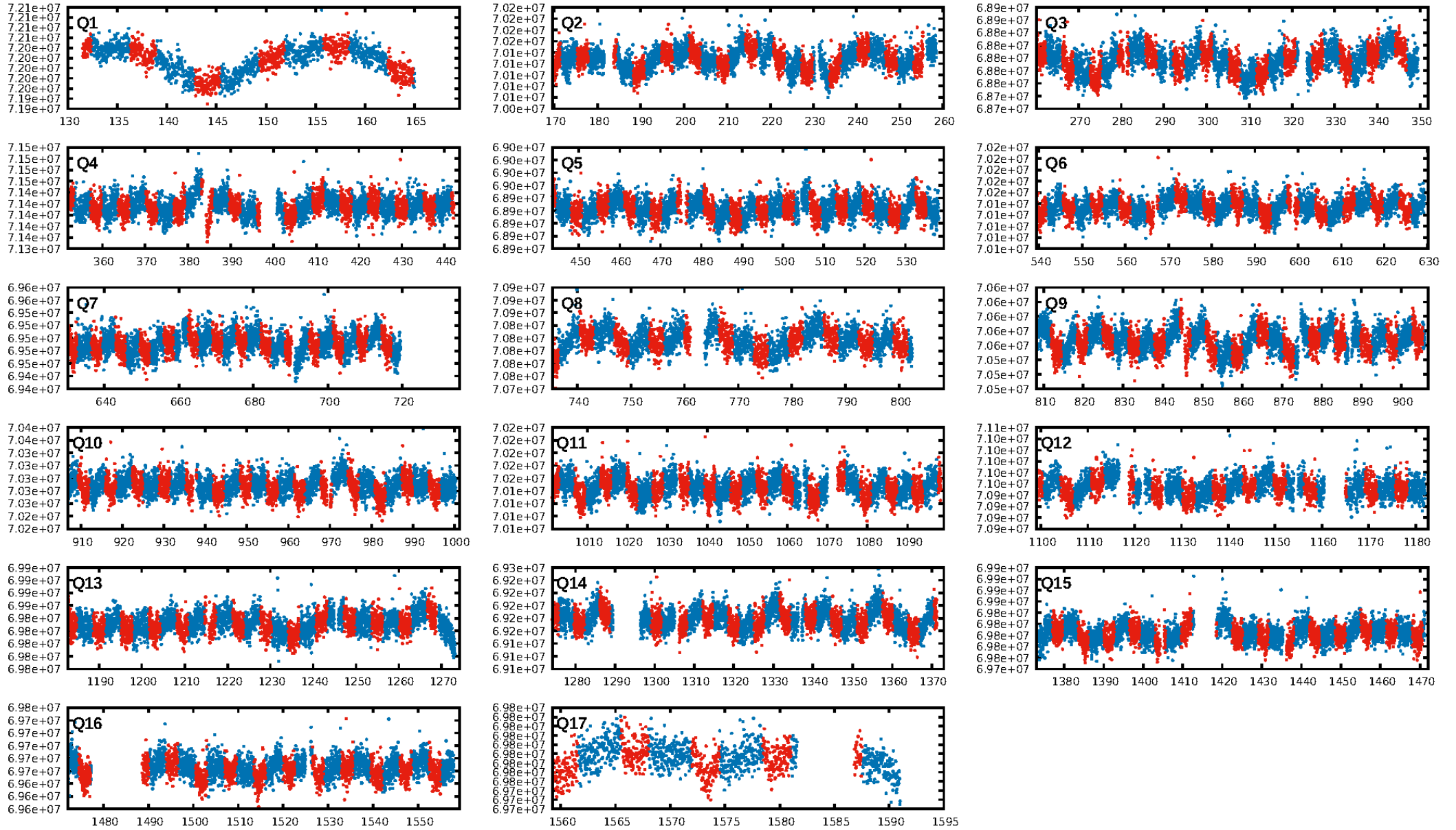
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.17e-20
RollingBand-fgt: 1.00 [205/205]
GhostDiagnostic-chr: 1.82
Centroid-sig: 0.0%
Centroid-so: 2.269 arcsec [3.16σ]
OotOffset-rm: 1.487 arcsec [2.41σ]
KicOffset-rm: 1.235 arcsec [1.96σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

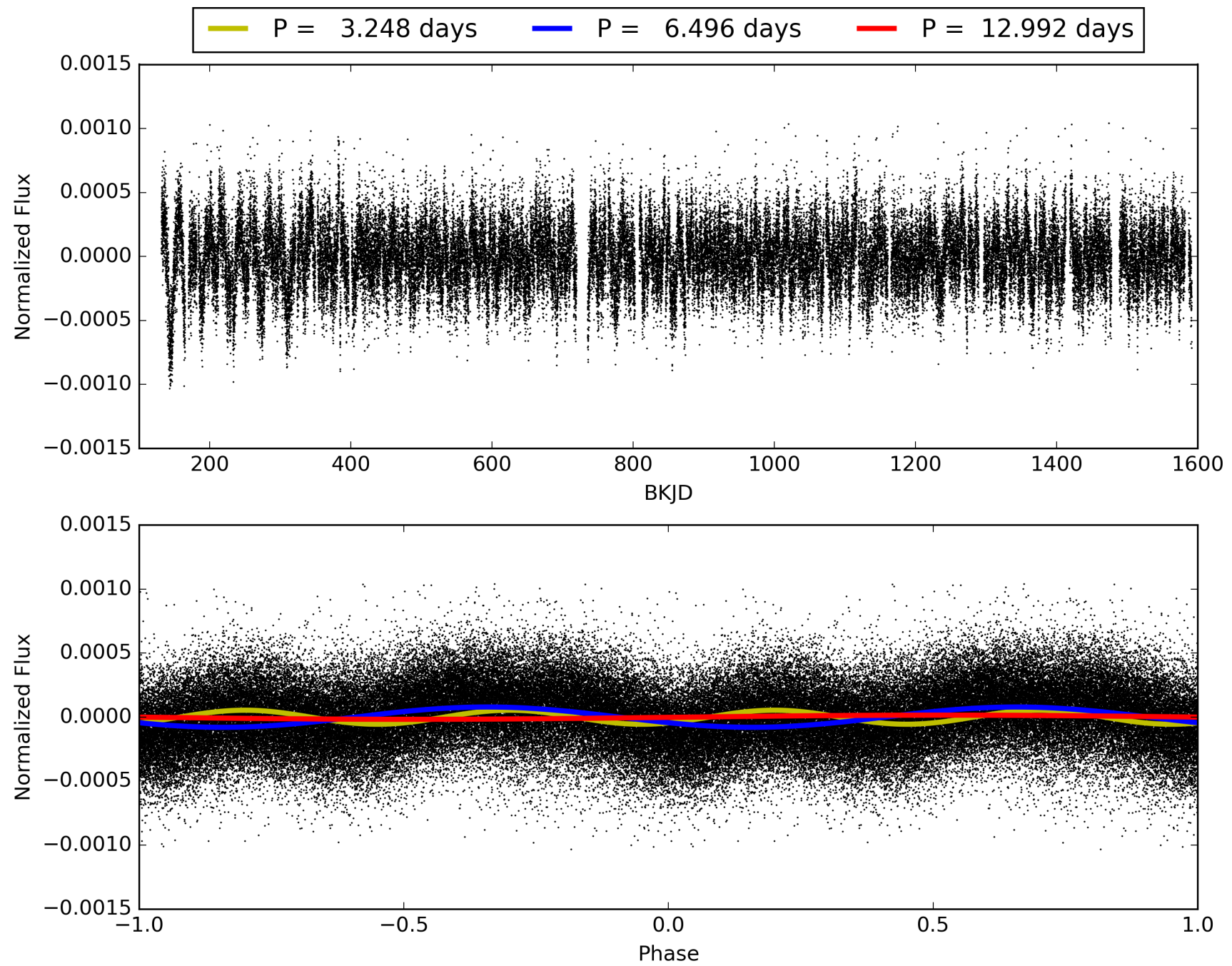
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:16:44 Z

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

TCE 008321270-01, PDC Light Curves

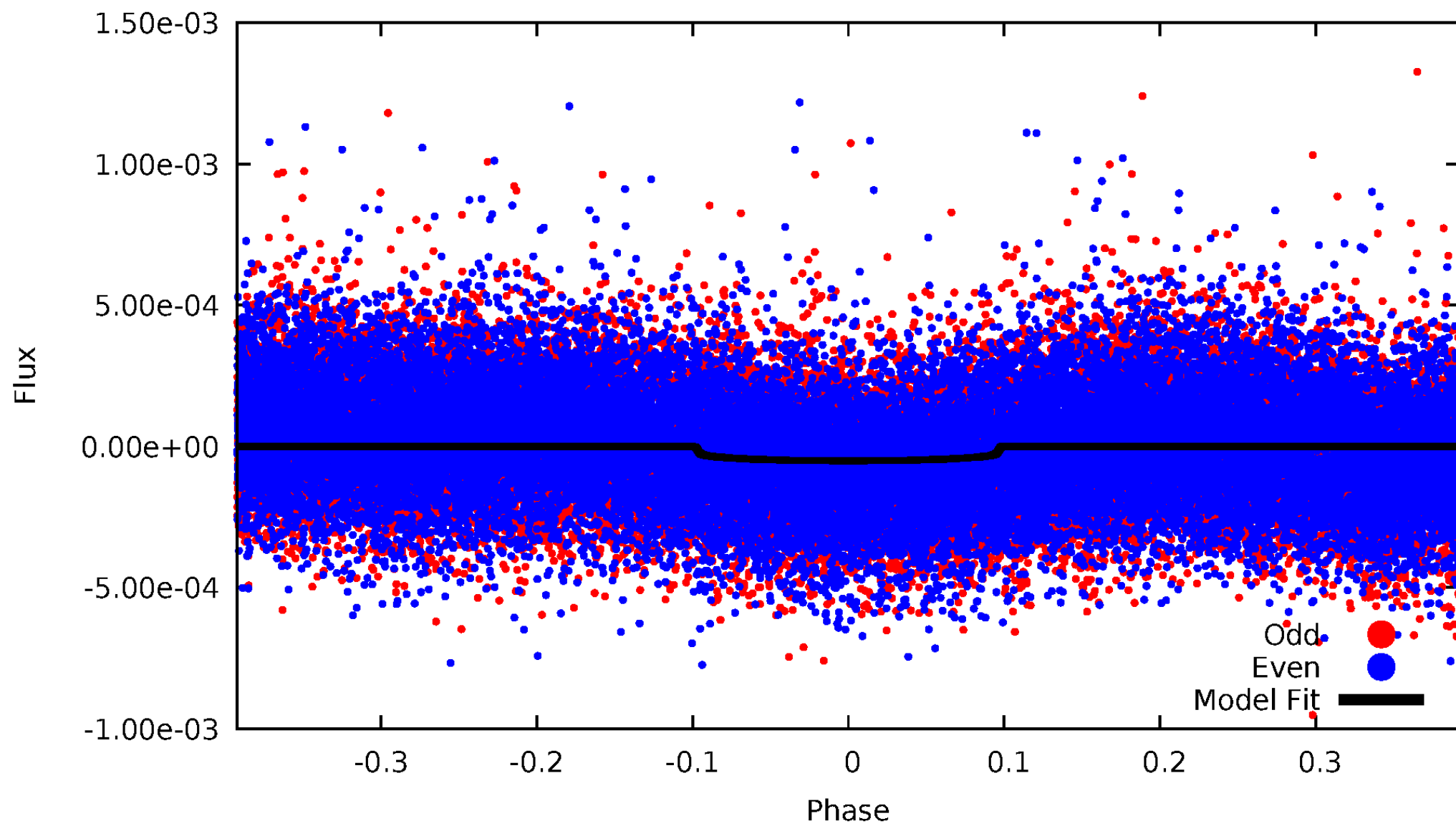


TCE 008321270-01



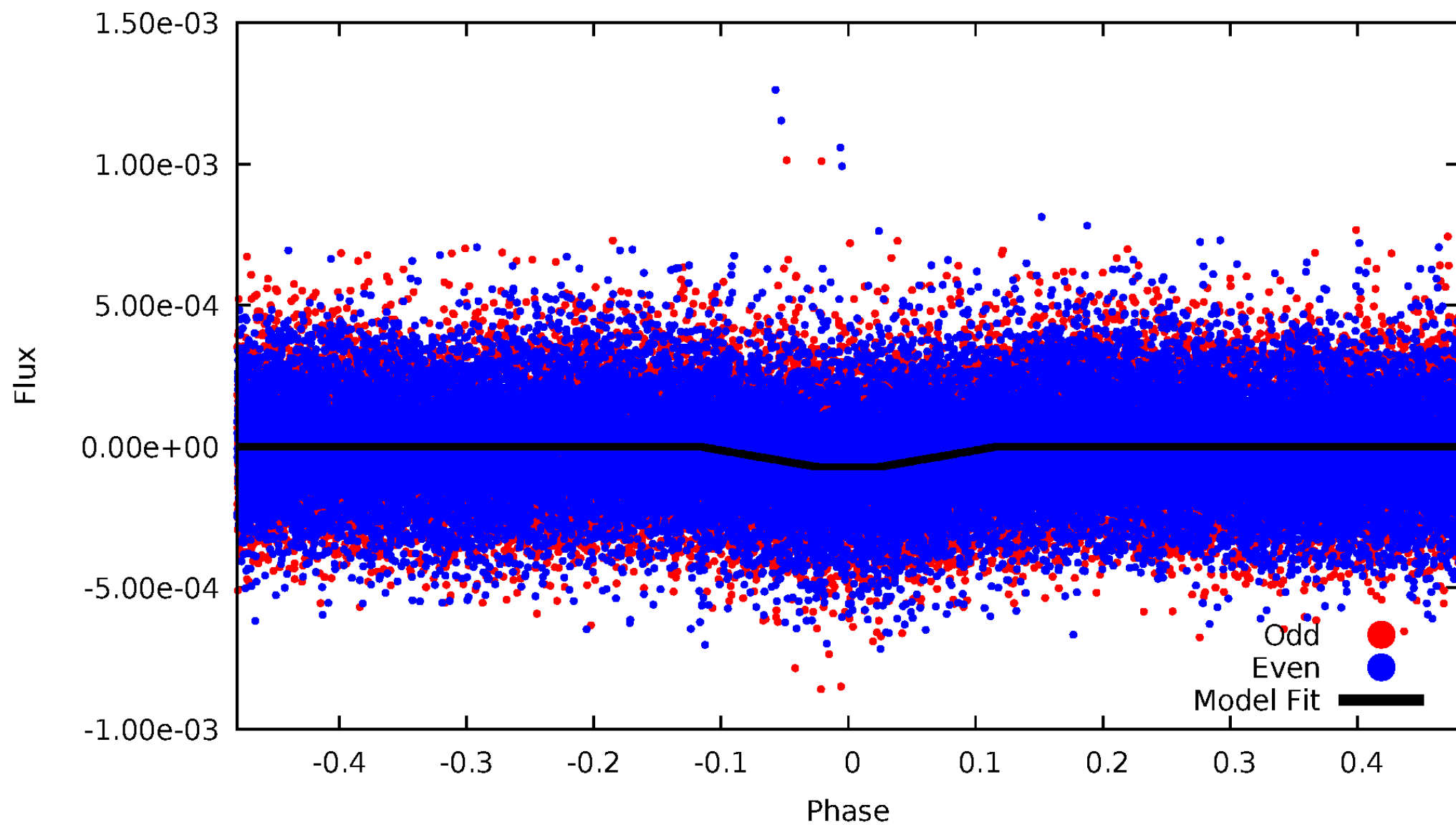
DV Odd/Even

TCE 008321270-01

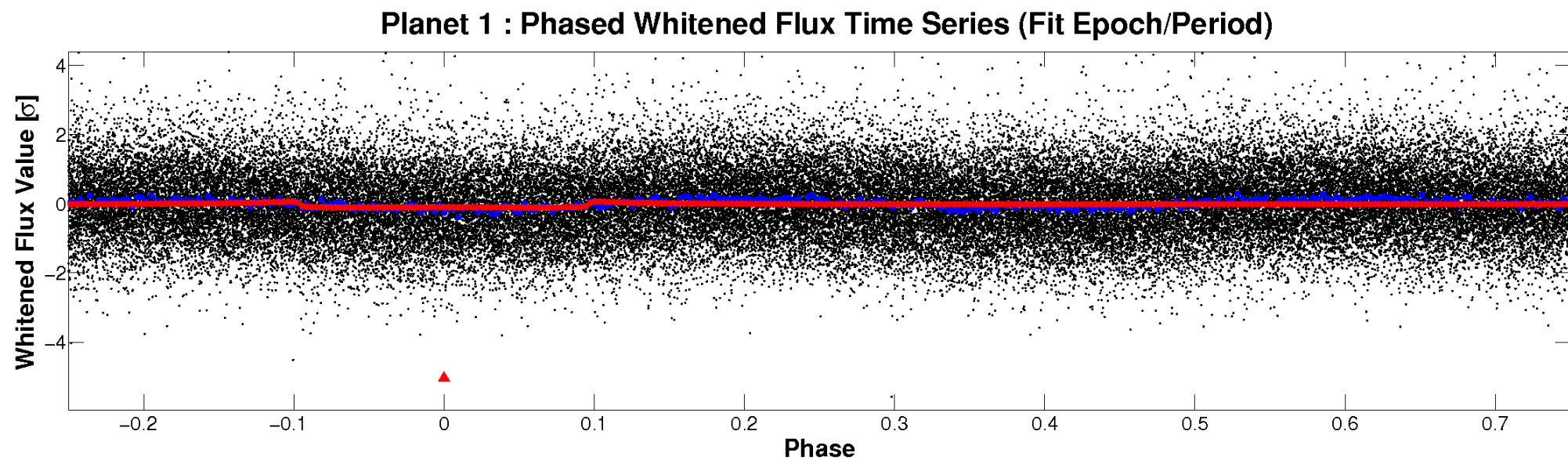
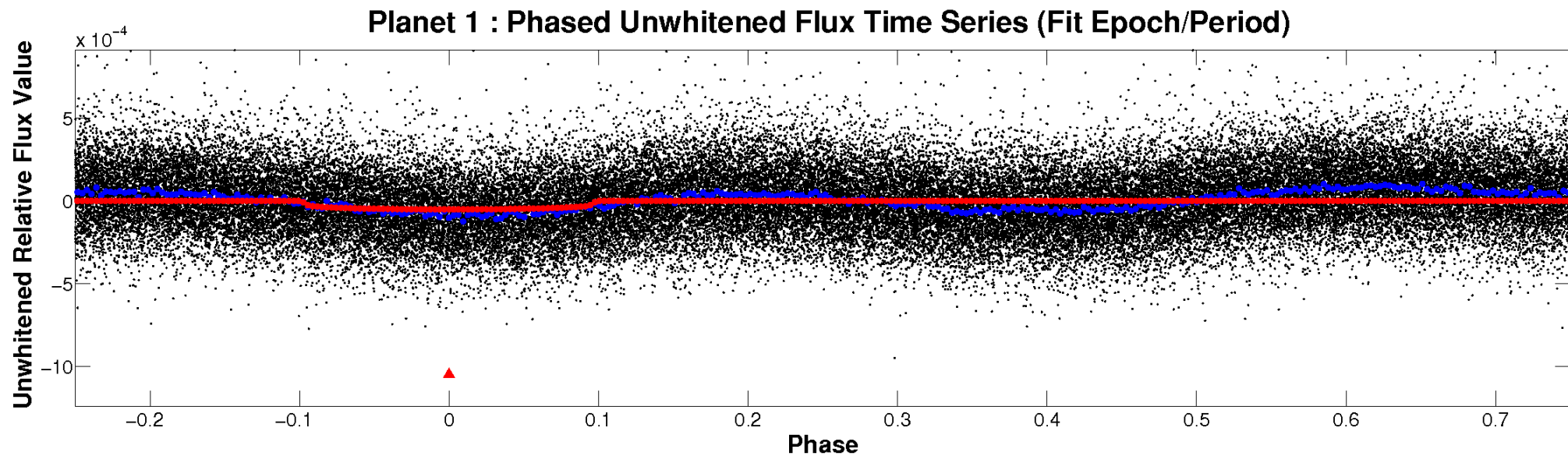


ALT Odd/Even

TCE 008321270-01

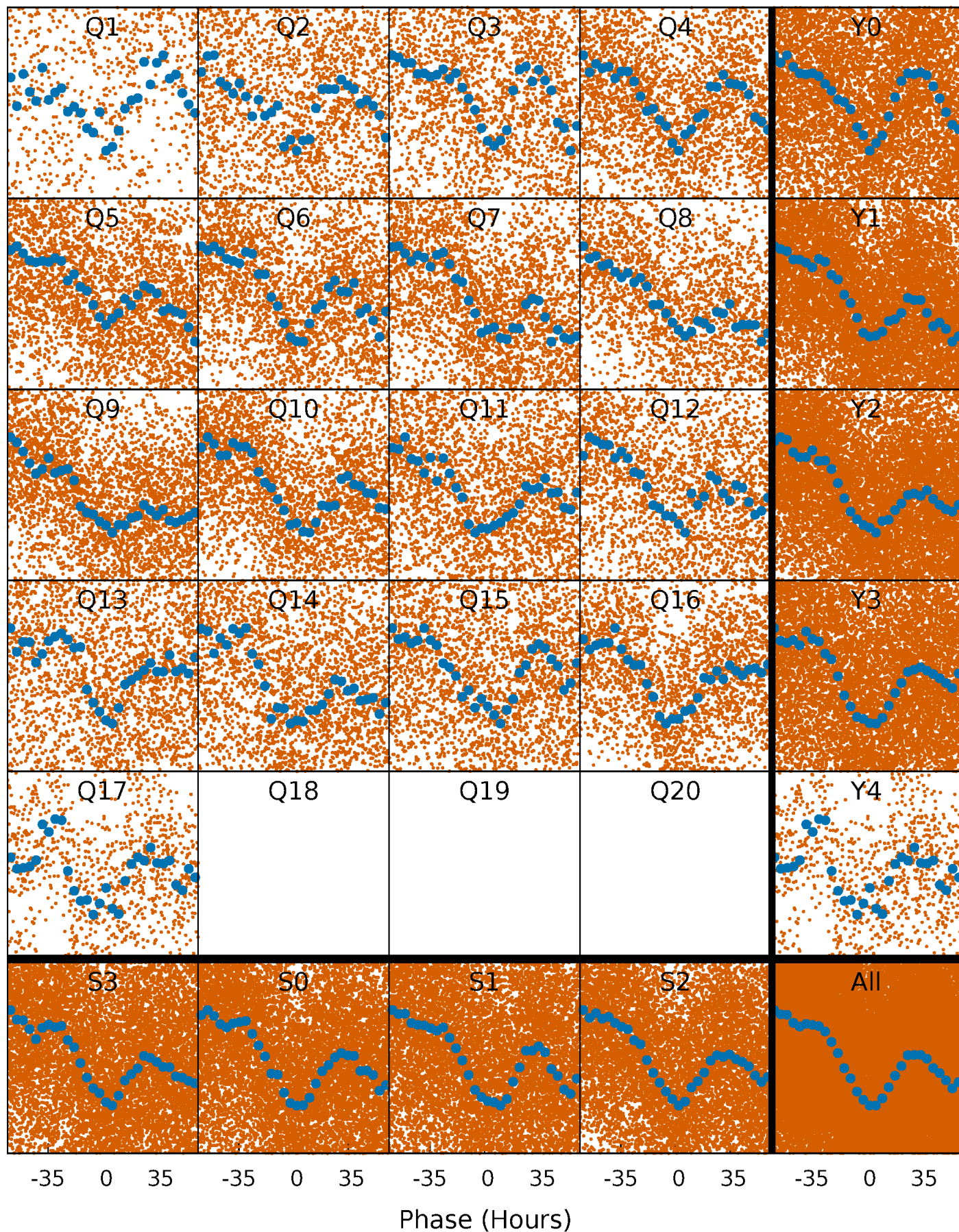


Non-Whitened Vs. Whitened Light Curve



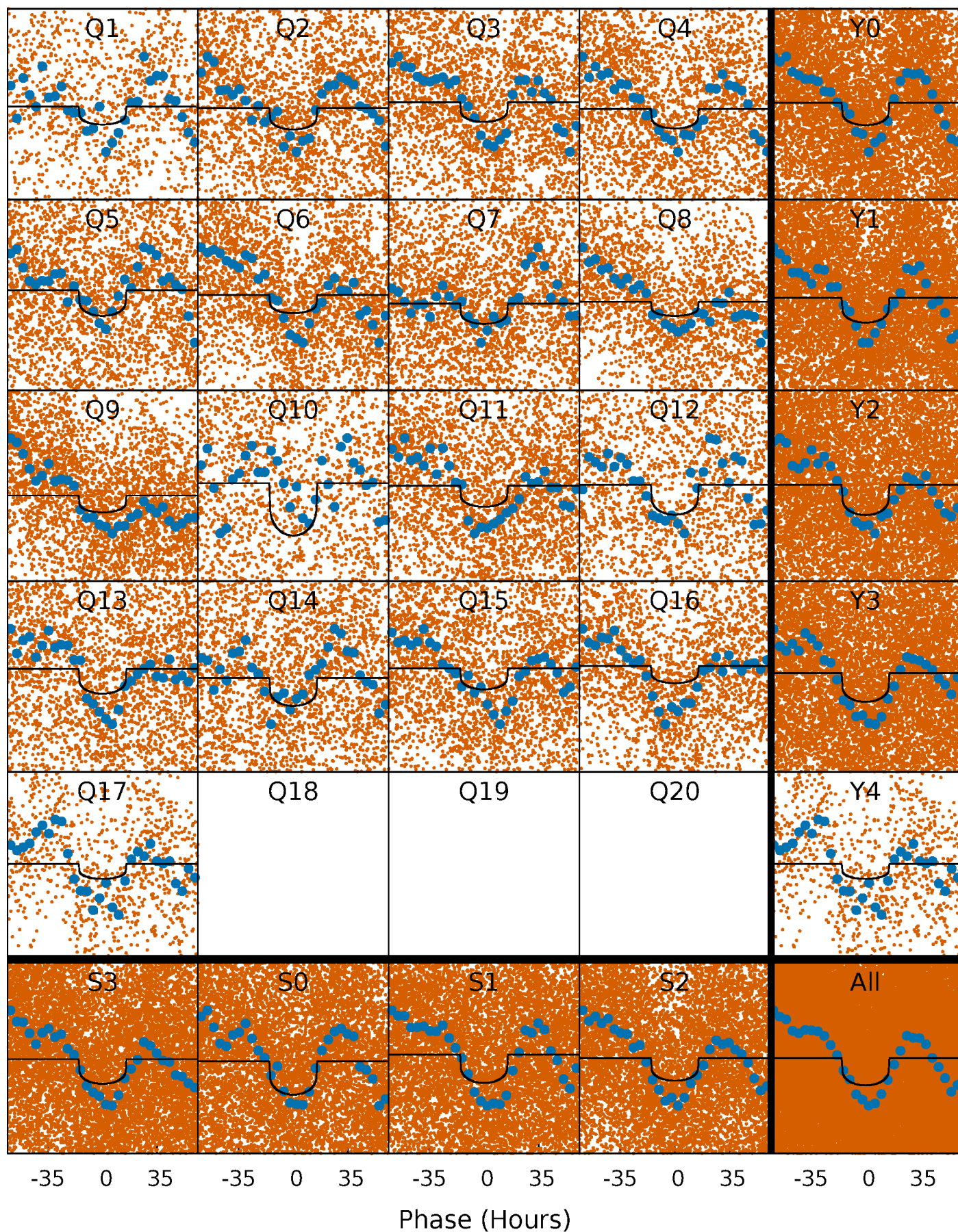
PDC Quarter-Phased Transit Curves

TCE 008321270-01 P= 6.496190 Days $T_0=137.591657$ (BKJD)



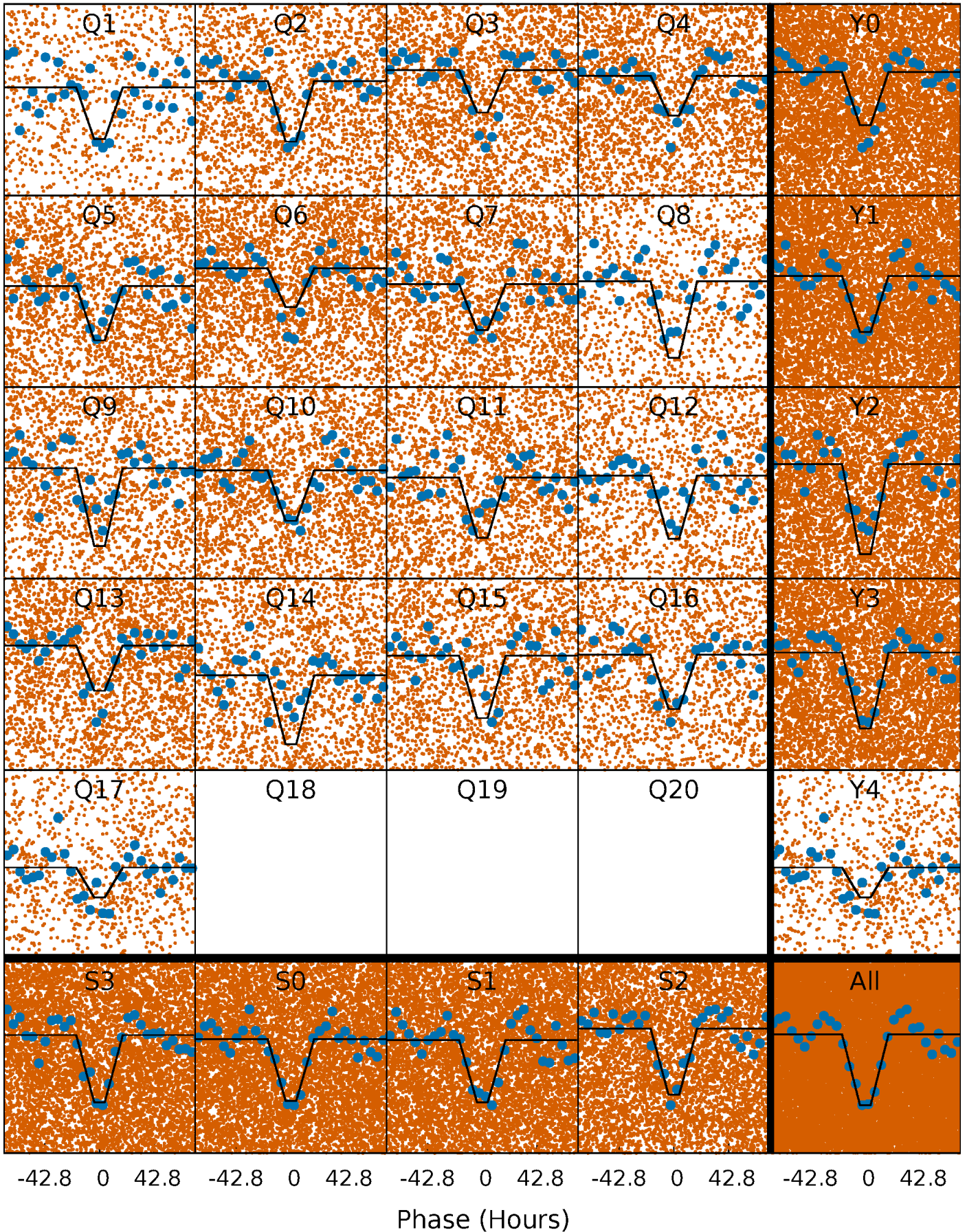
DV Quarter-Phased Transit Curves

TCE 008321270-01 P= 6.496190 Days $T_0=137.591657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

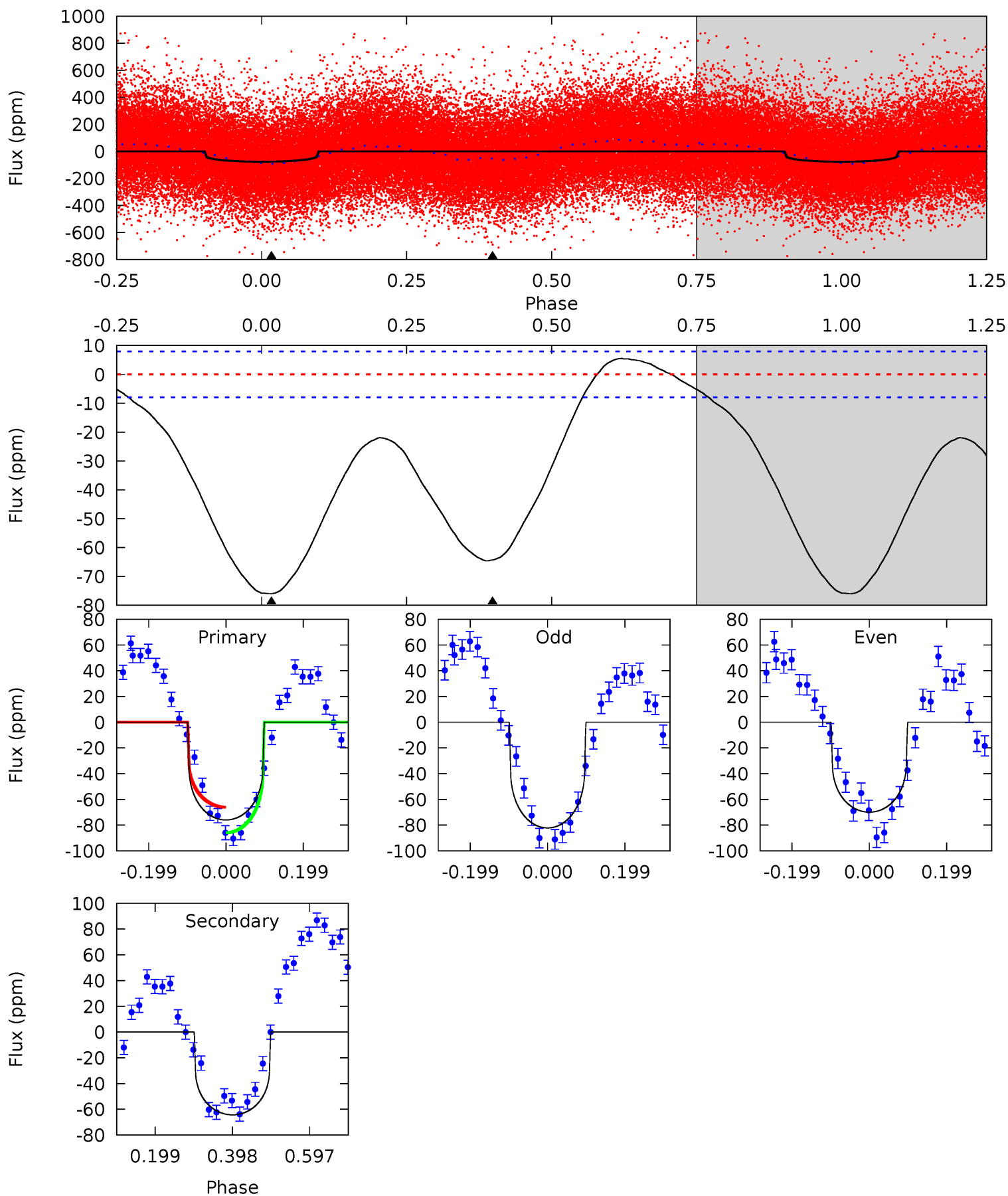
TCE 008321270-01 P= 6.495912 Days $T_0=137.772487$ (BKJD)



DV Model-Shift Uniqueness Test

008321270-01, P = 6.496190 Days, E = 131.095467 Days

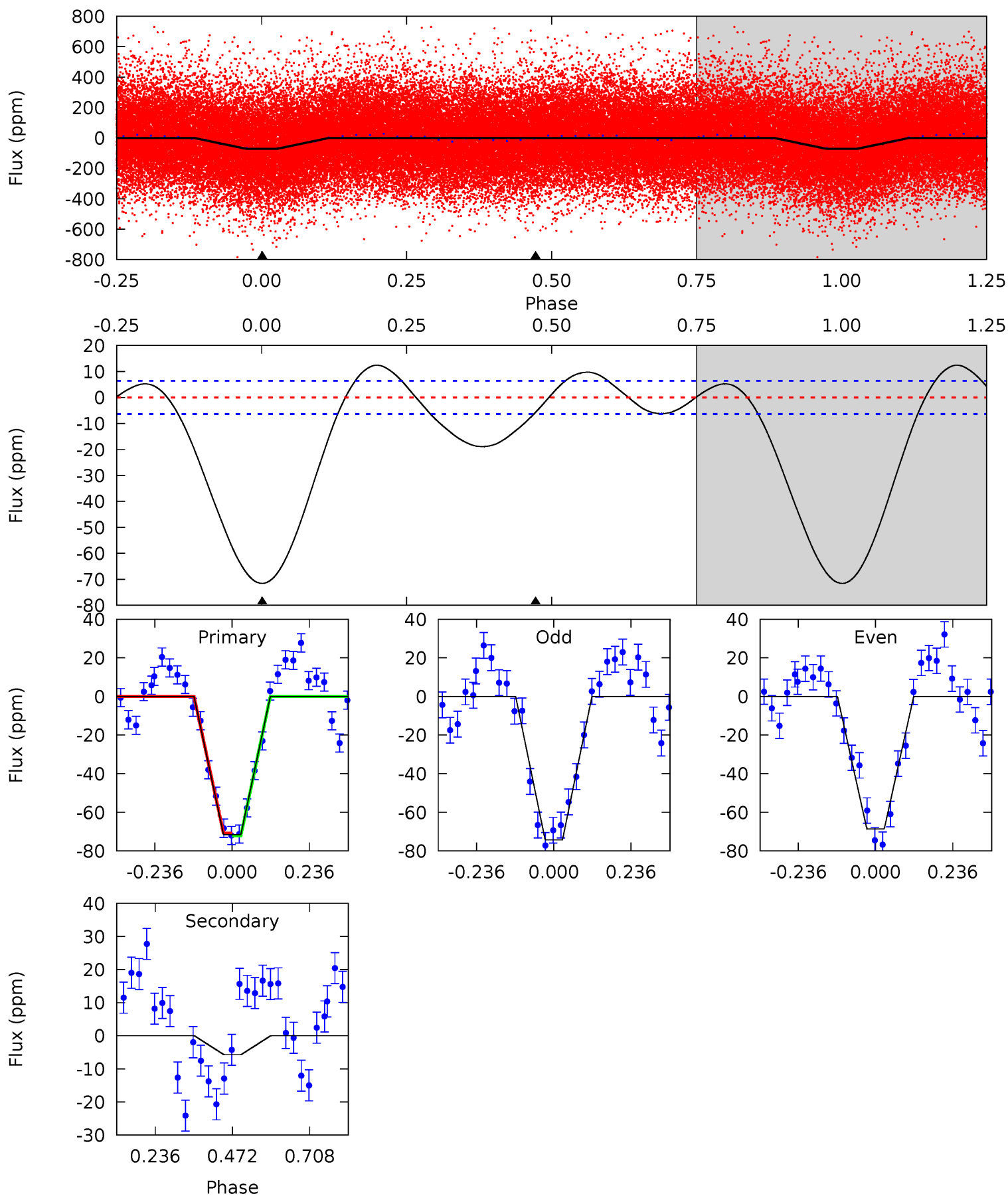
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.2	35.7	0	0	4.42	1.28	3.57	42.2	42.2	35.7	35.7	3.42	0.96	0.07	5.66



Alt Model-Shift Uniqueness Test

008321270-01, P = 6.495912 Days, E = 131.276575 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.2	3.93	0	0	4.38	1.18	3.30	49.2	49.2	3.93	3.93	1.93	1.25	0.15	0.52



Stellar Parameters For KIC 008321270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 008321270-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-64 ± 2	$0.76^{+0.17}_{-0.16}$	1369^{+67}_{-68}	6232^{+830}_{-604}	289^{+173}_{-99}
Alt.	-6 ± 1	$0.93^{+0.18}_{-0.18}$	1368^{+66}_{-65}	3523^{+291}_{-241}	17^{+11}_{-6}

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 $A_{obs} \gg 1.0$

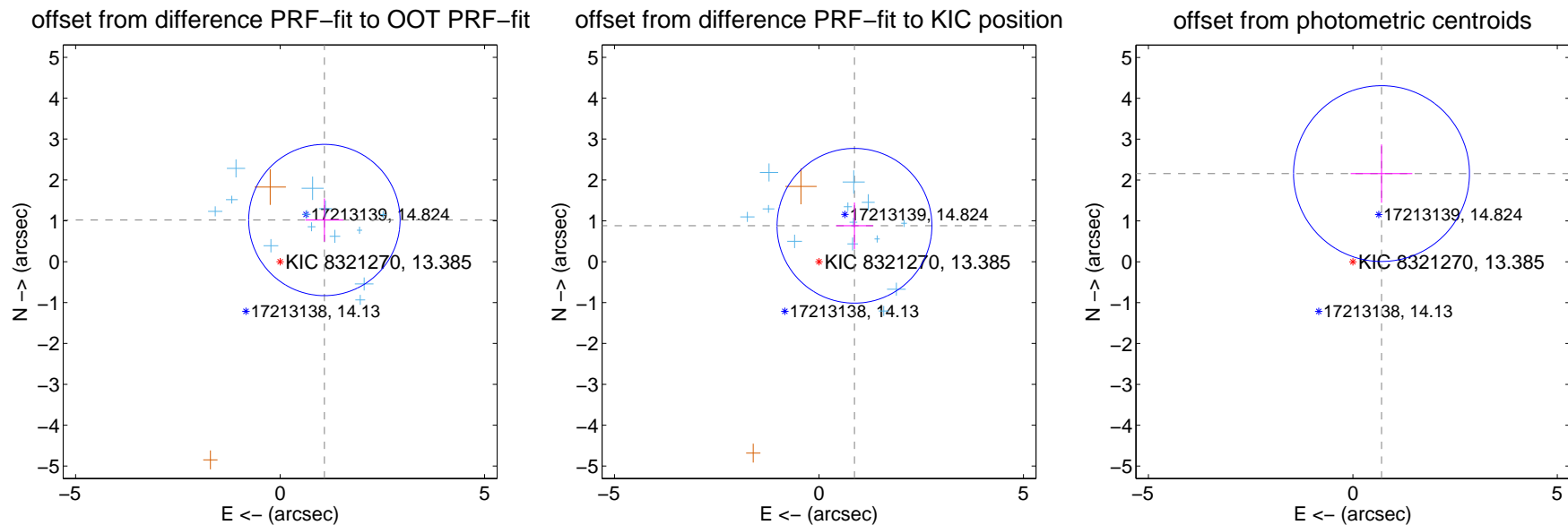
DV Centroid Data

Supplemental centroid analysis for 008321270-01. Kepler magnitude: 13.38. Transit SNR 12.09

There are 13 quarters with good PRF difference image offsets

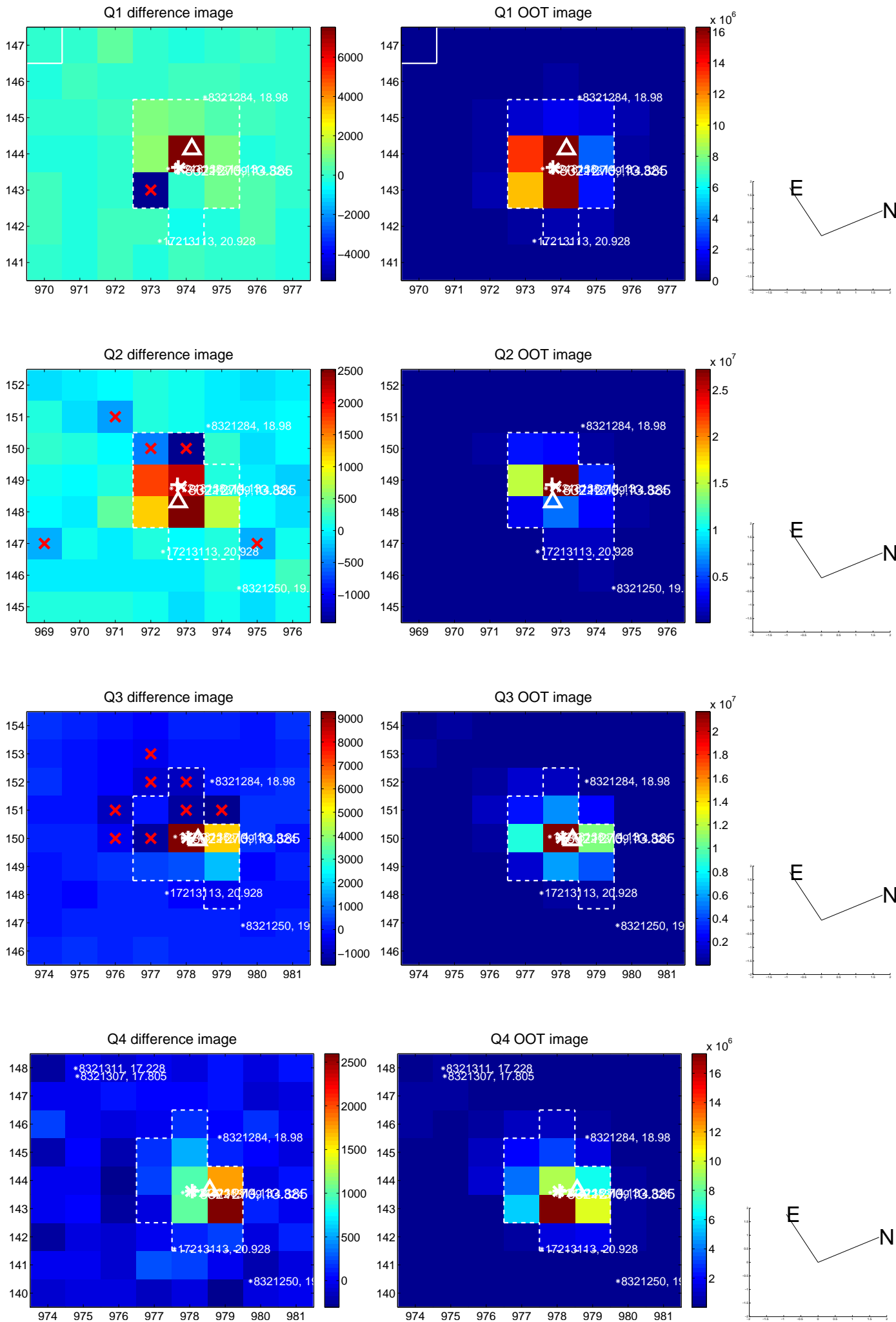
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.487 ± 0.617	2.41	-1.082 ± 0.462	1.020 ± 0.527
PRF-fit source offset from KIC position	1.235 ± 0.631	1.96	-0.868 ± 0.453	0.879 ± 0.570
photometric centroid source offset	2.27 ± 0.72	3.16	-0.70 ± 0.76	2.16 ± 0.71

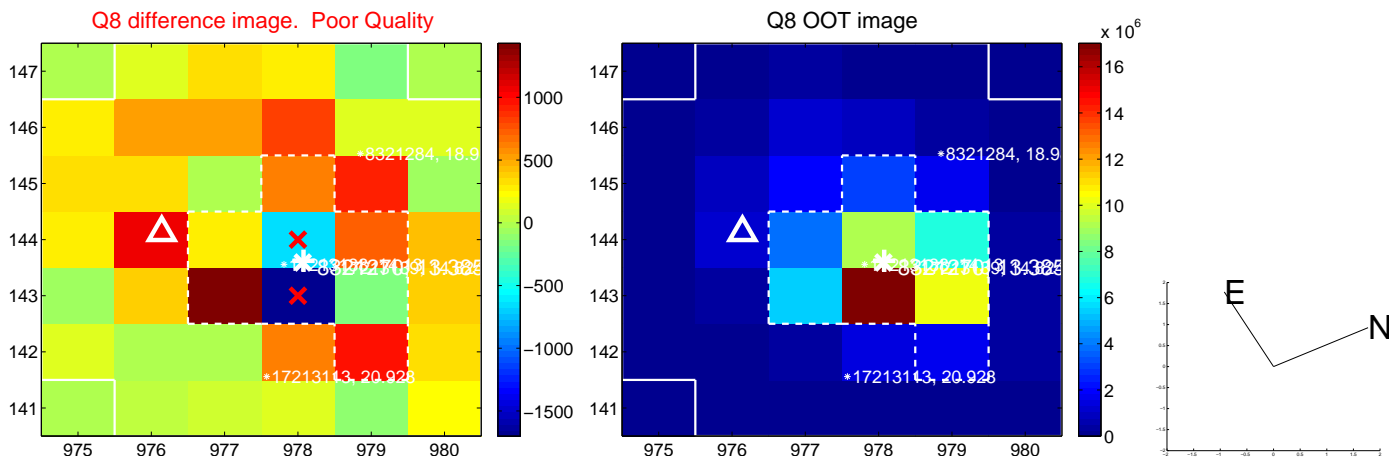
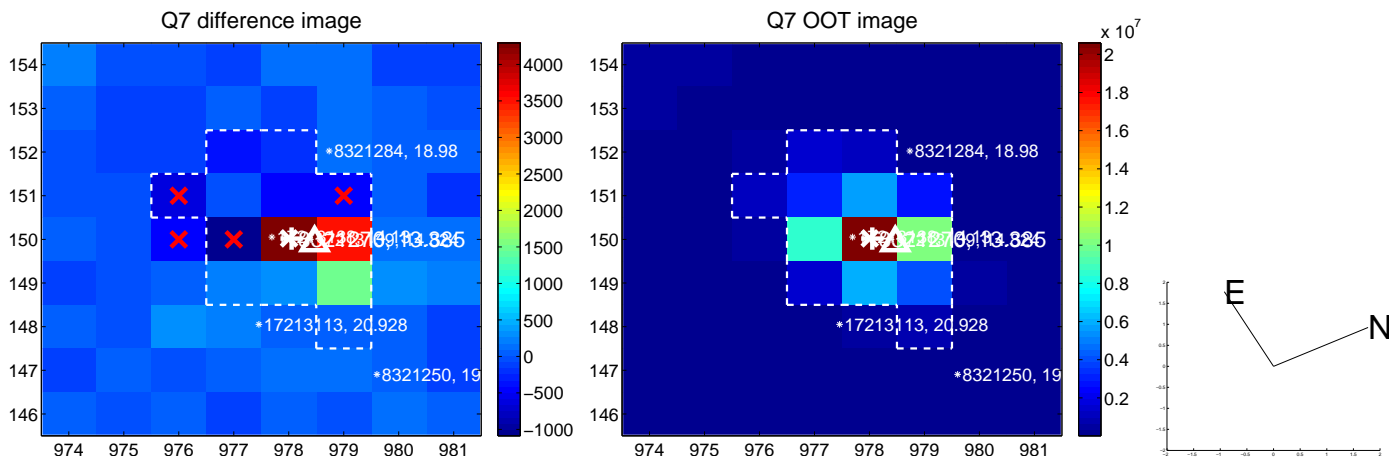
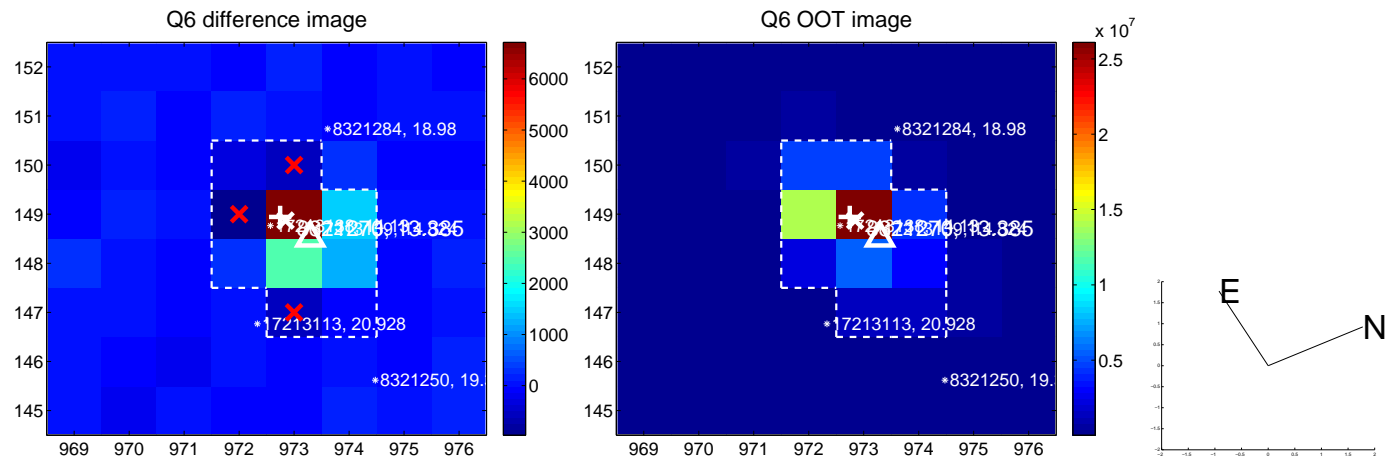
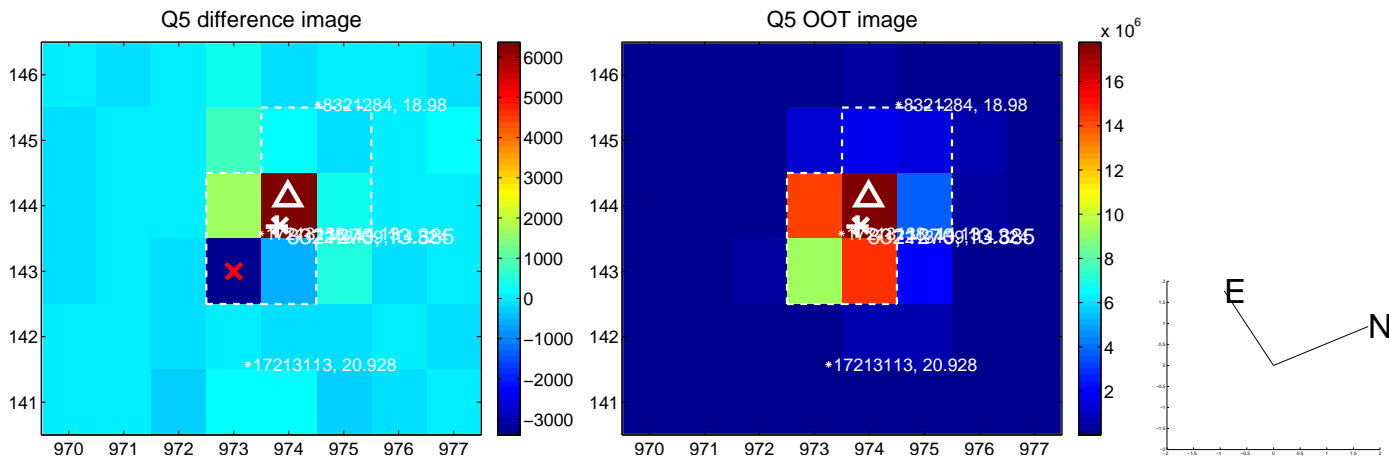


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

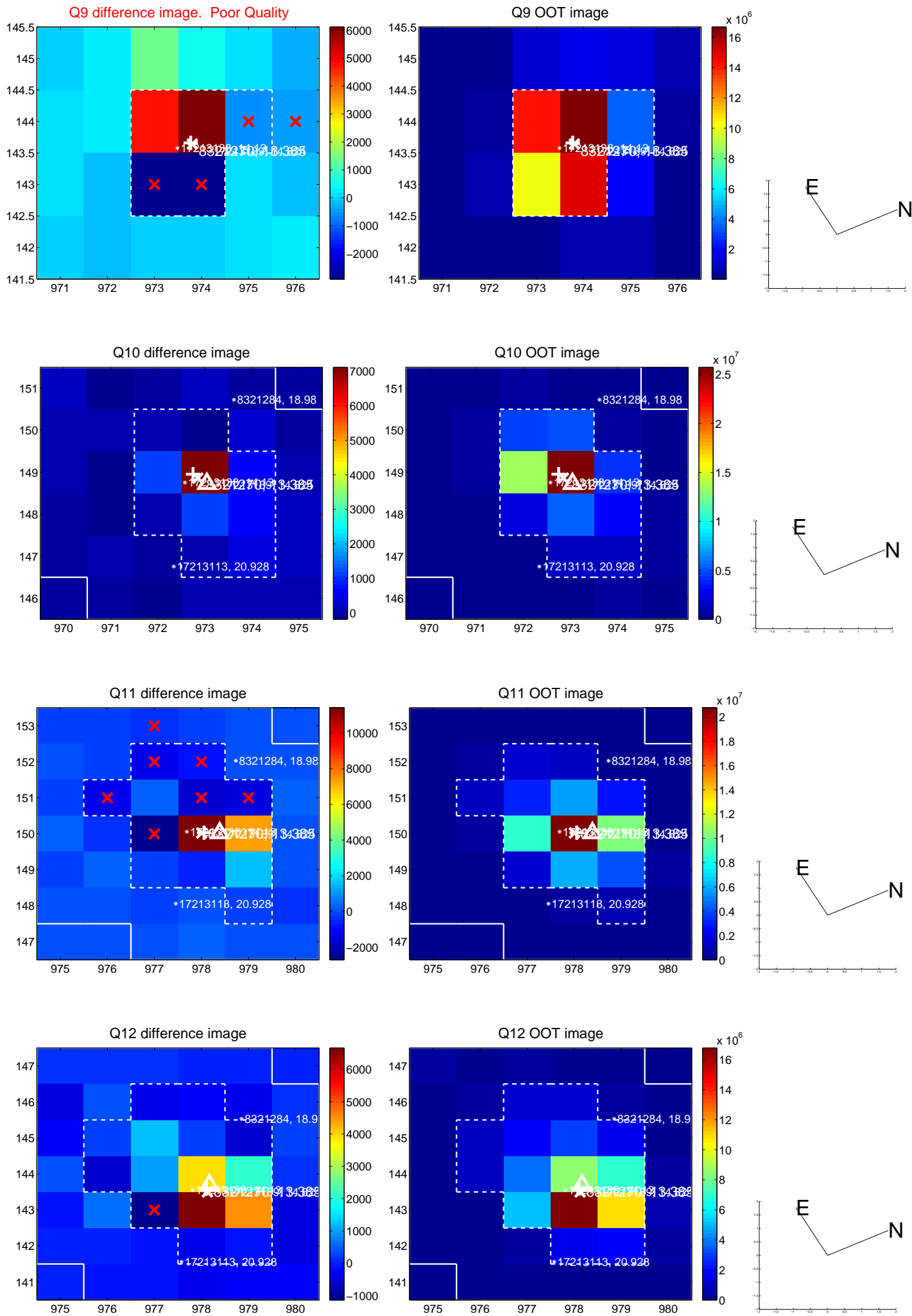
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



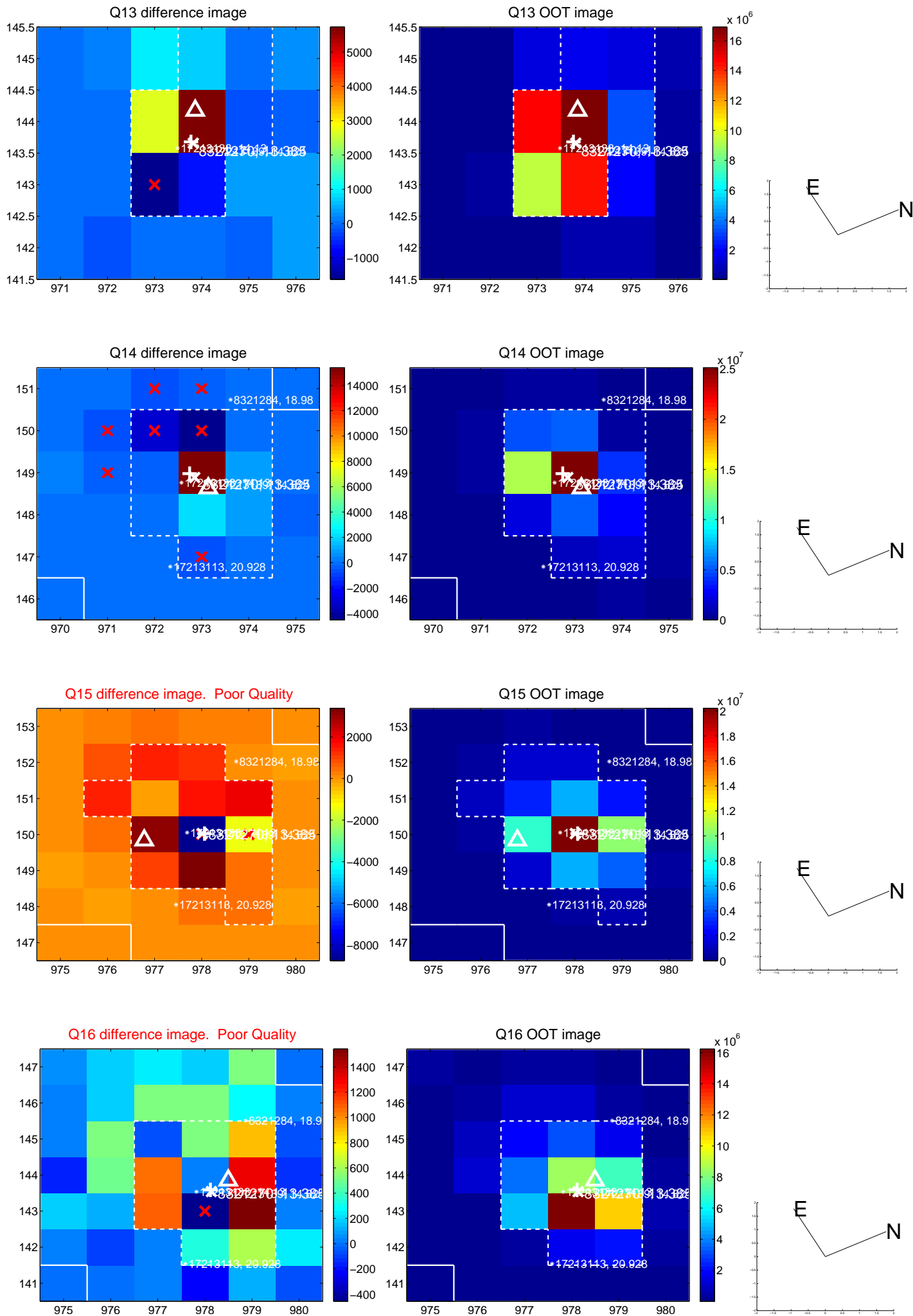
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



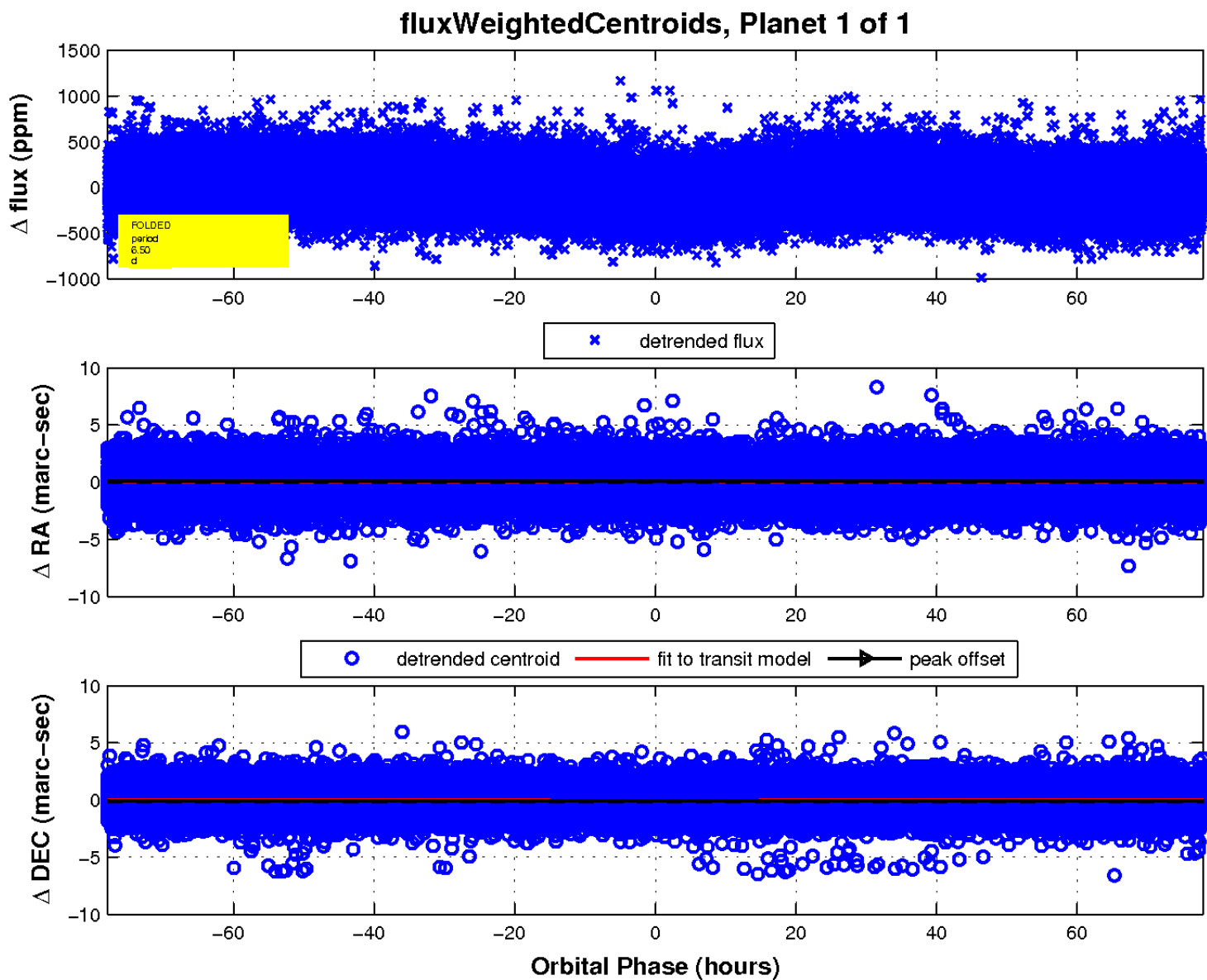
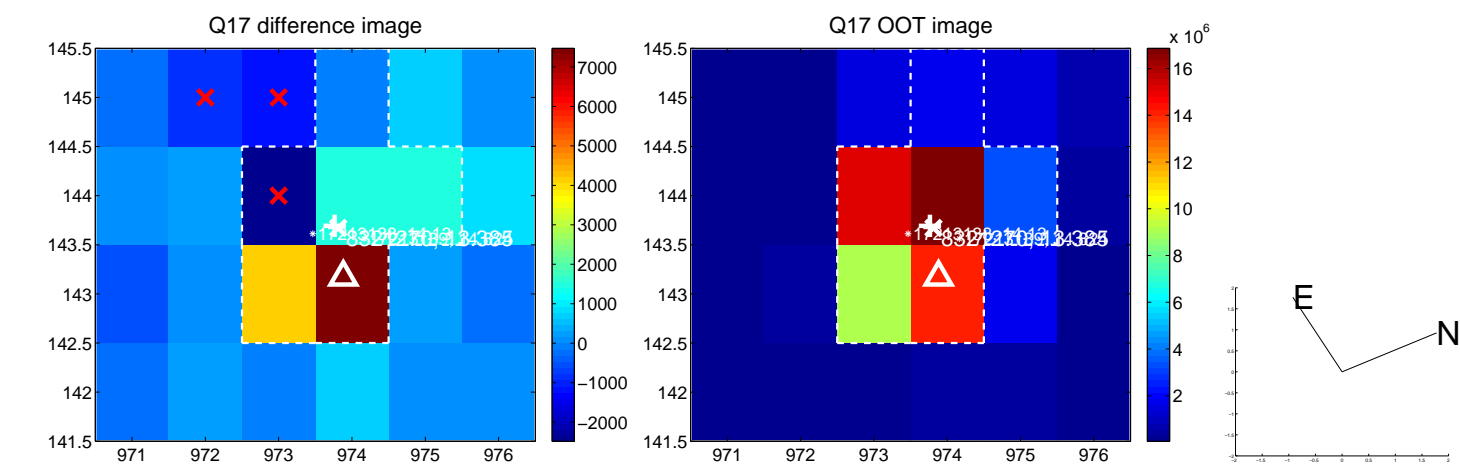
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UKIRT Image

Declination

