

KIC 010079420

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})
010079420-01	OBS	No	0.880010	132.391392	4.5	8.886	8.8	2.6	1.99	7042	0.43	19916.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010079420-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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 010079420-01

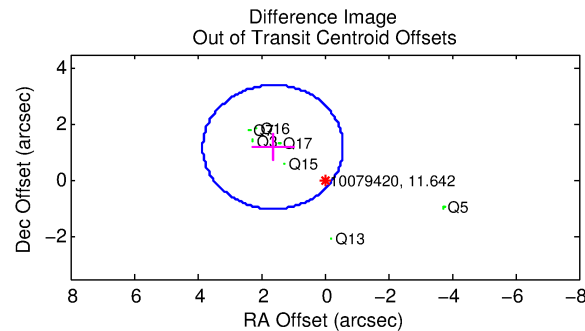
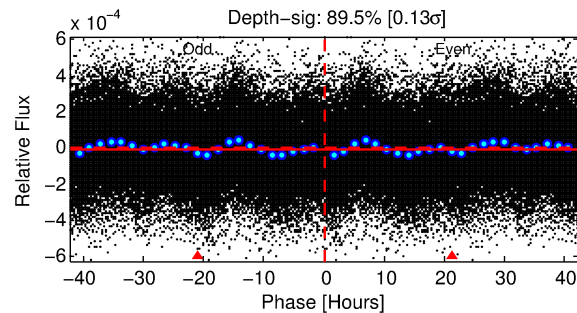
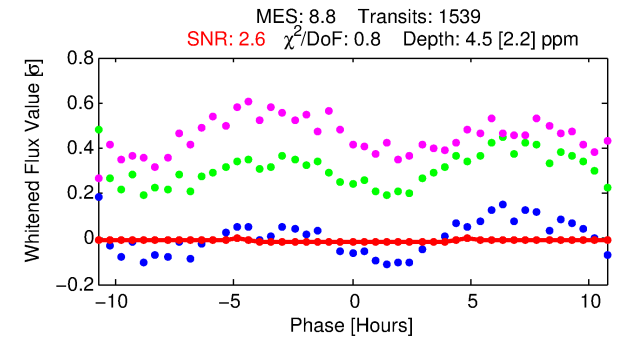
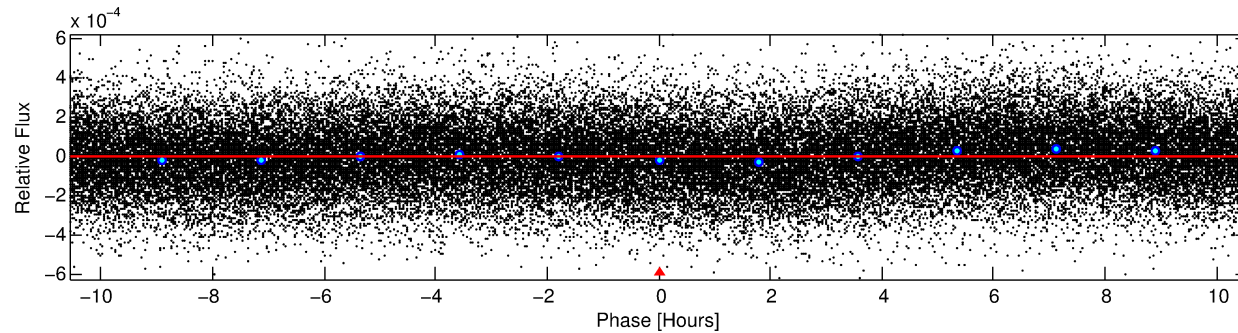
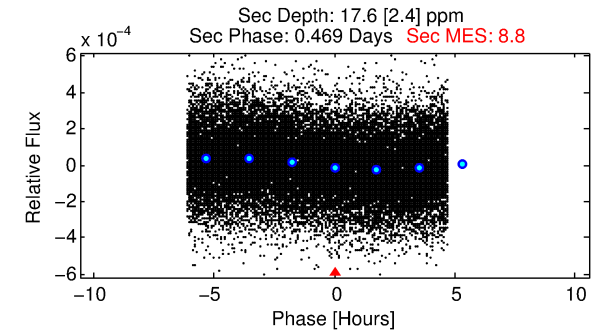
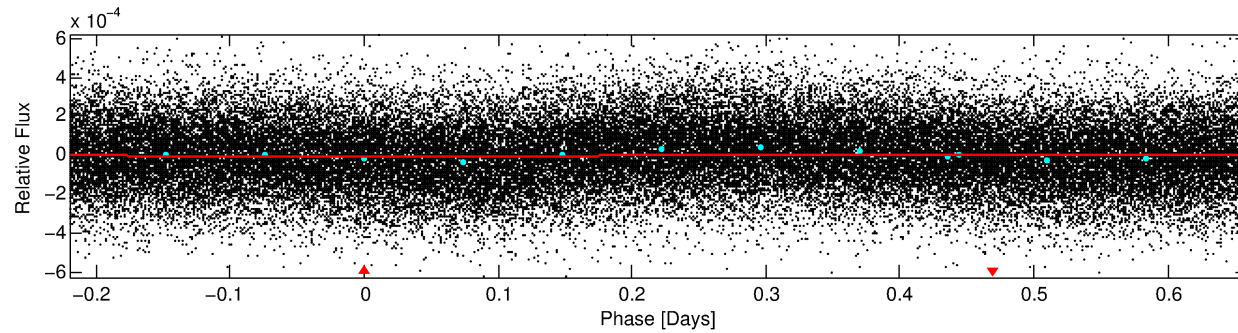
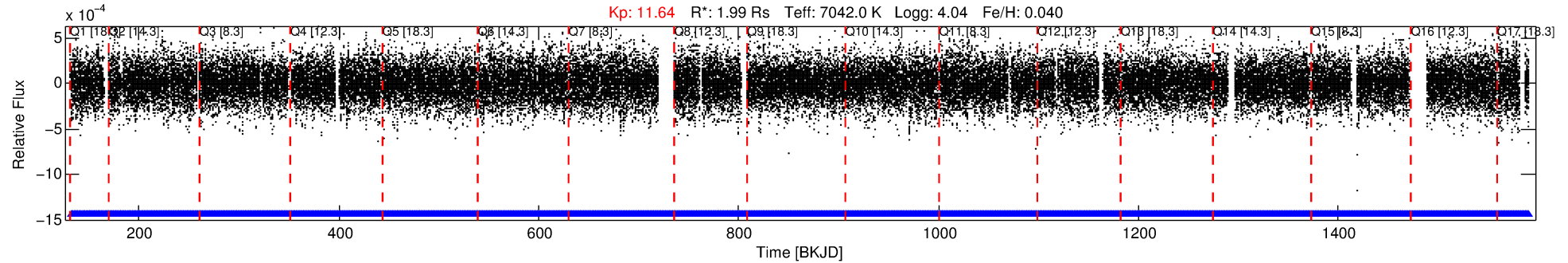
No Significant Match Found

DV One-Page Summary

KIC: 10079420 Candidate: 1 of 1 Period: 0.880 d

KOI: K07607 Corr: No Ephemeris Match

Kp: 11.64 R*: 1.99 Rs Teff: 7042.0 K Logg: 4.04 Fe/H: 0.040



DV Fit Results:

Period = 0.88001 [0.00007] d
Epoch = 132.3914 [0.0157] BKJD
Rp/R* = 0.0020 [0.0052]
a/R* = 1.03 [0.88]
b = 0.38 [34.75]
Seff = 19916.86 [7398.54]
Teq = 3029 [281] K
Rp = 0.43 [1.13] Re
a = 0.0210 [0.0049] AU
Ag = 22.92 [120.05] [0.18σ]
Teffp = 10248 [13393] K [0.54σ]

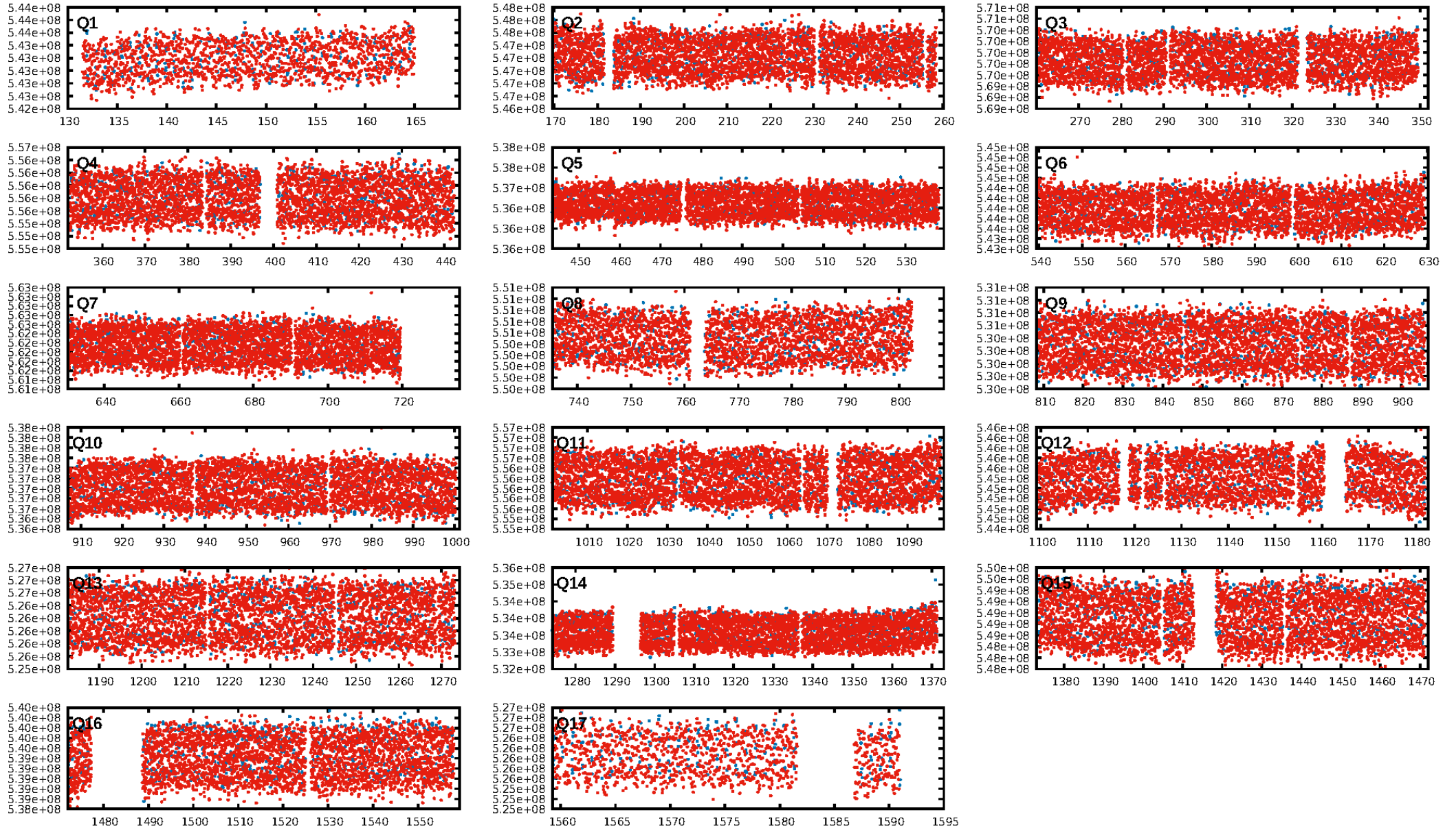
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1469/1469]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.019 arcsec [2.75σ]
KicOffset-rm: 1.887 arcsec [2.35σ]
OotOffset-st: 0/3/1/3 [7]
KicOffset-st: 0/3/1/3 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [17/17]

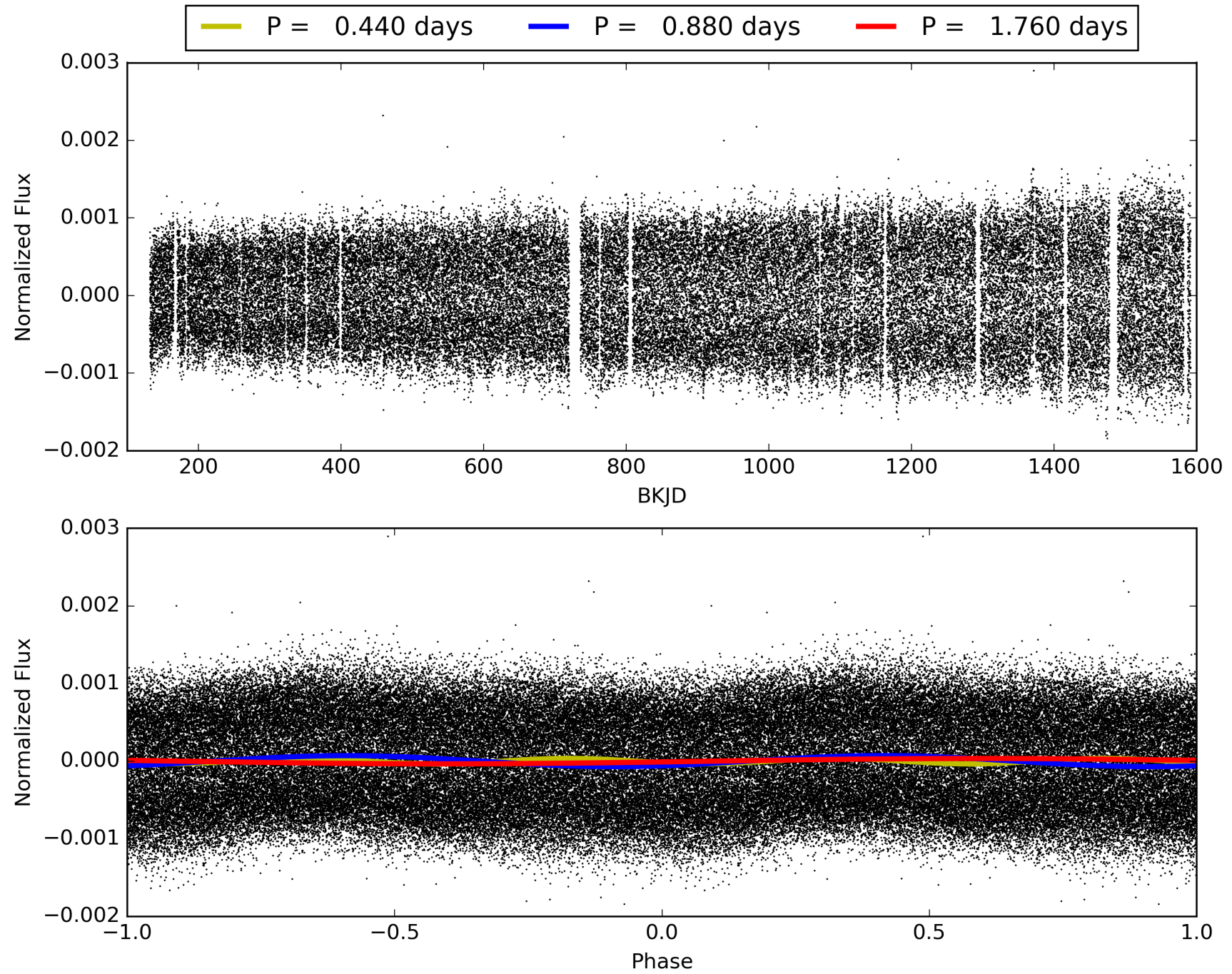
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:43:07 Z

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

TCE 010079420-01, PDC Light Curves

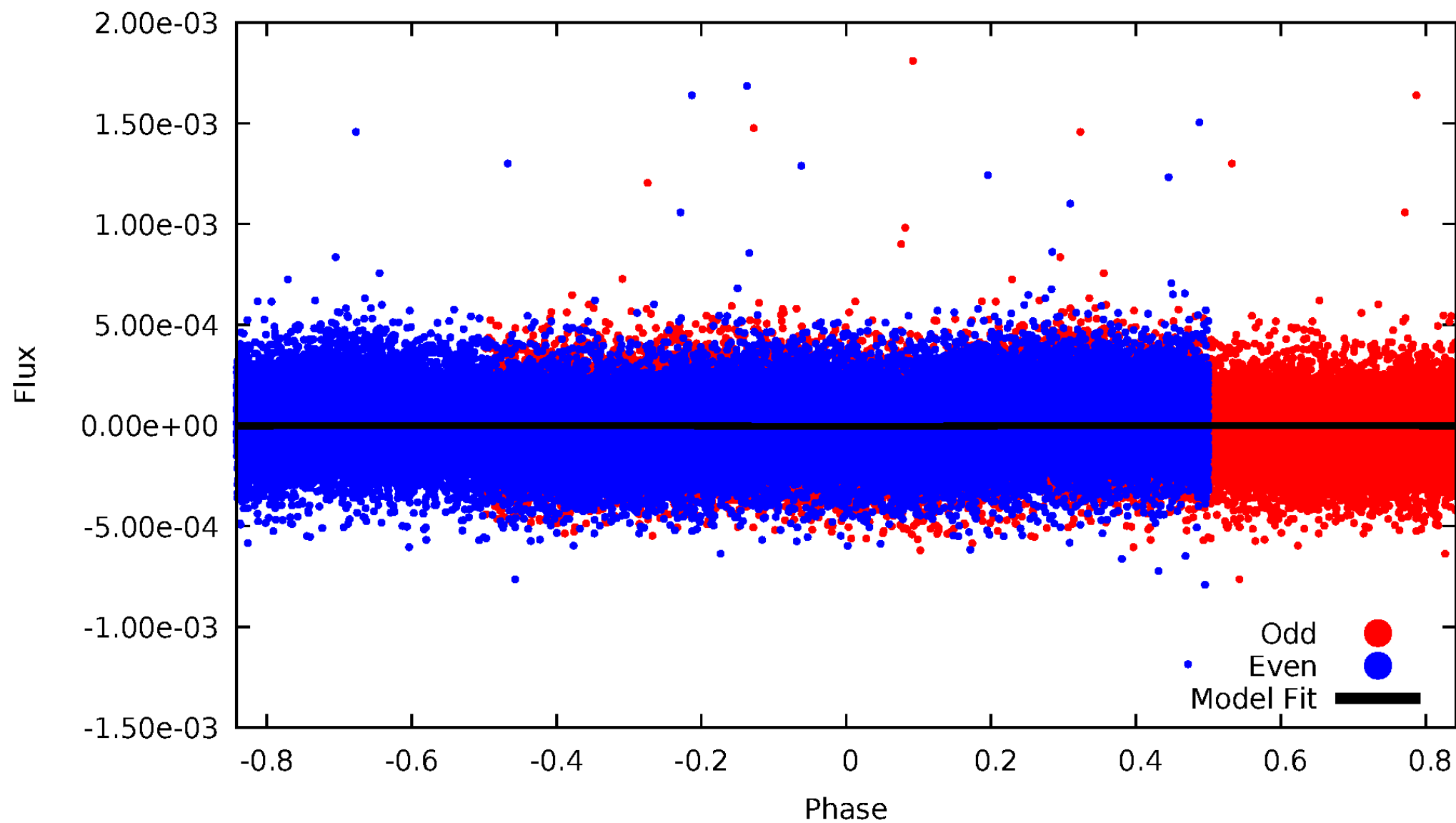


TCE 010079420-01



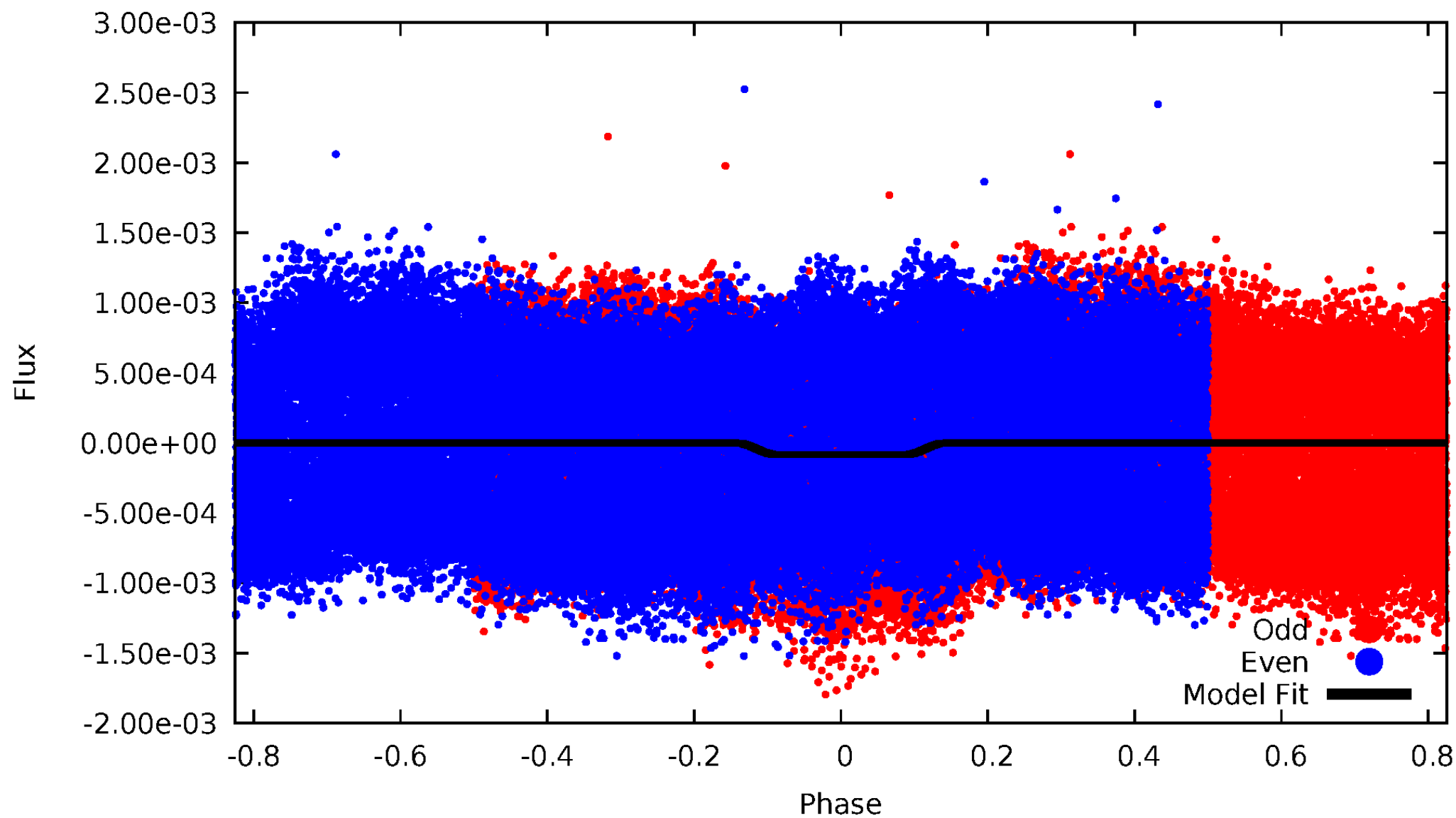
DV Odd/Even

TCE 010079420-01



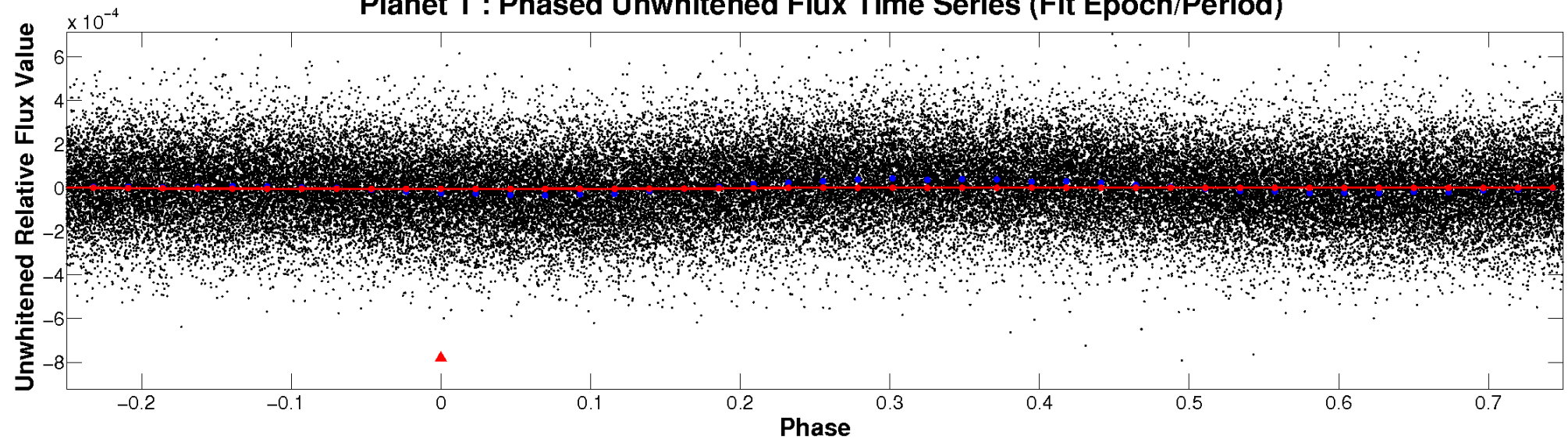
ALT Odd/Even

TCE 010079420-01

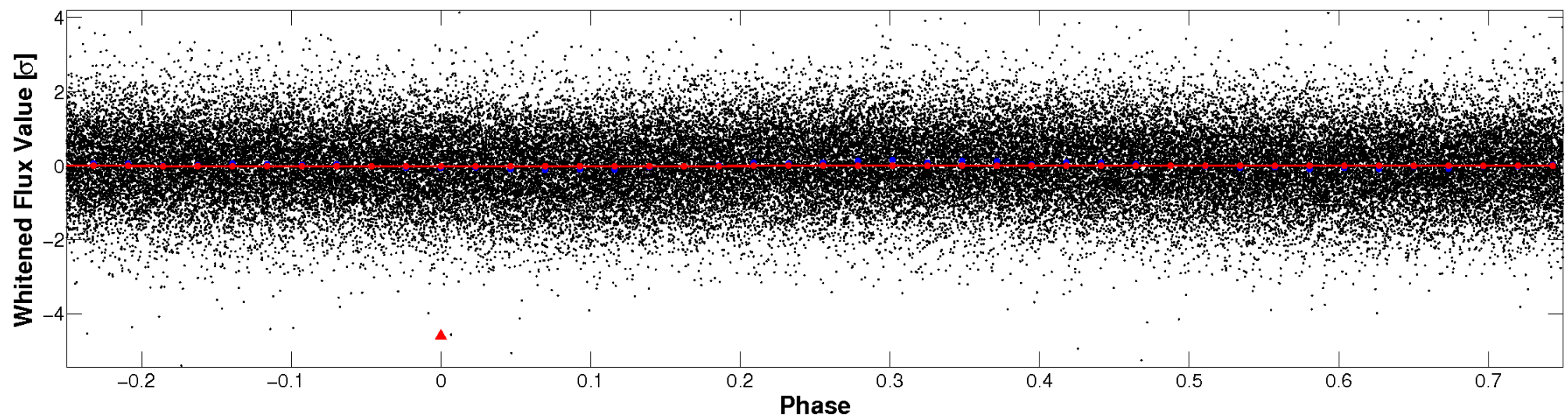


Non-Whitened Vs. Whitened Light Curve

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

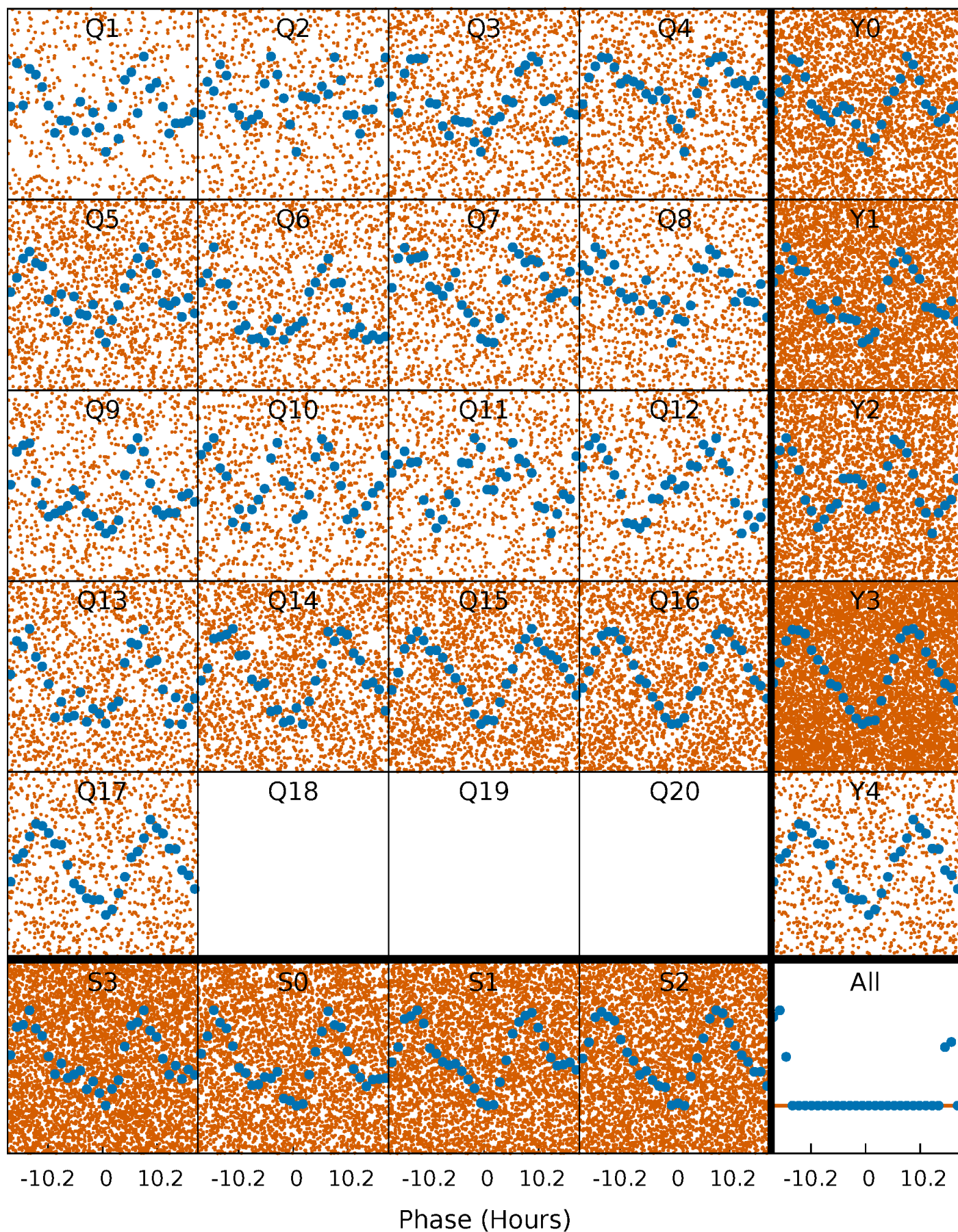


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



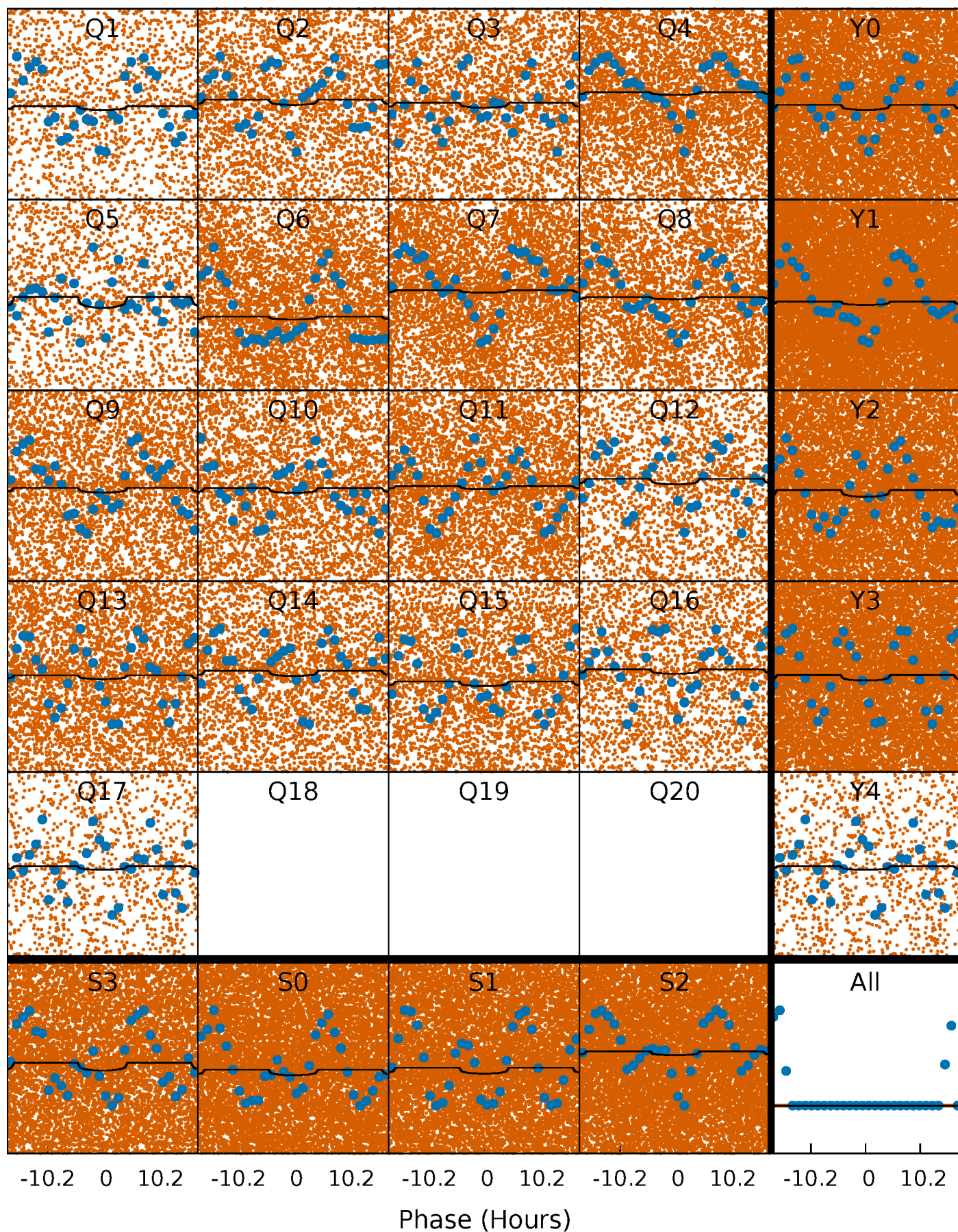
PDC Quarter-Phased Transit Curves

TCE 010079420-01 P= 0.880010 Days $T_0=132.391392$ (BKJD)



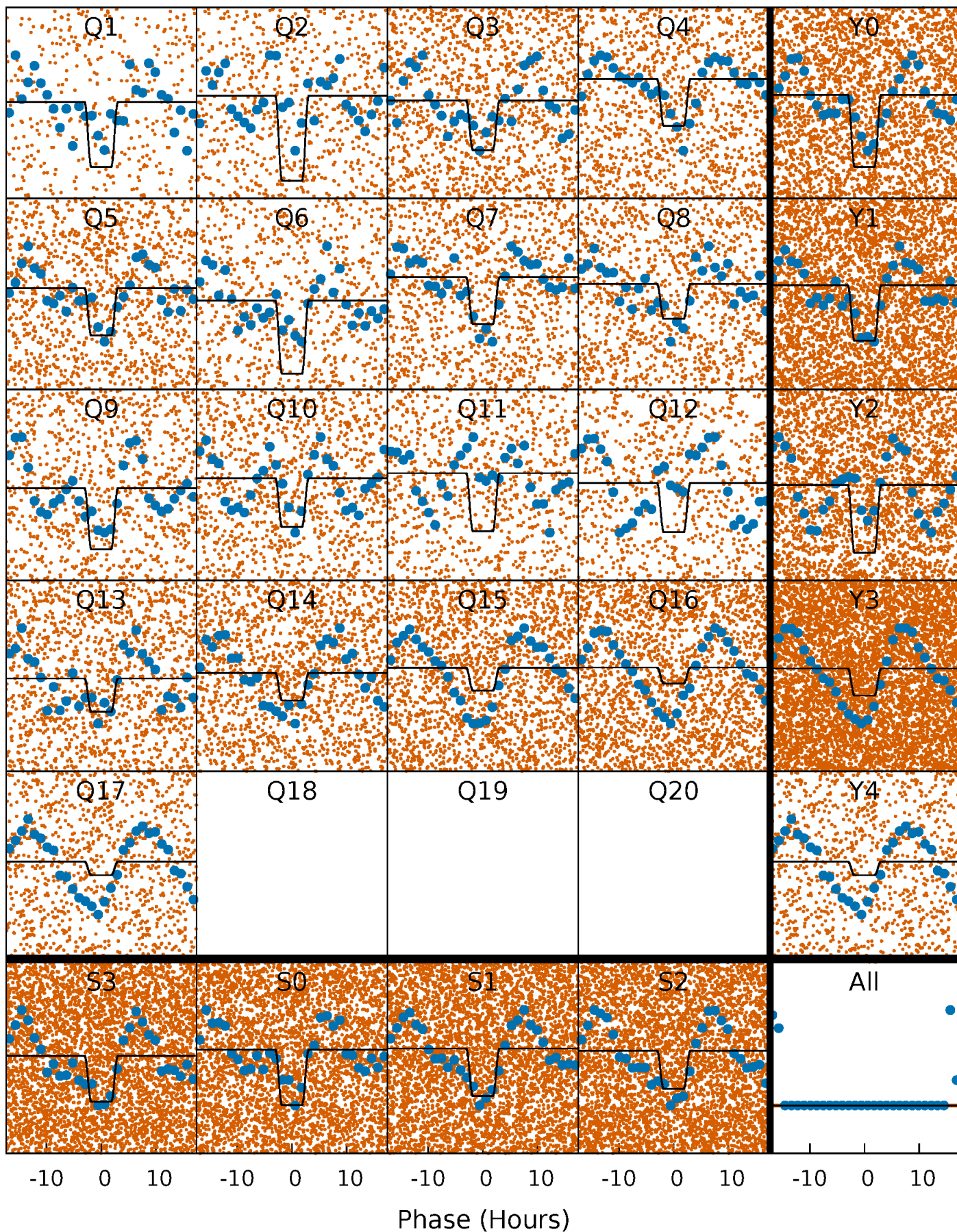
DV Quarter-Phased Transit Curves

TCE 010079420-01 P= 0.880010 Days $T_0=132.391392$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

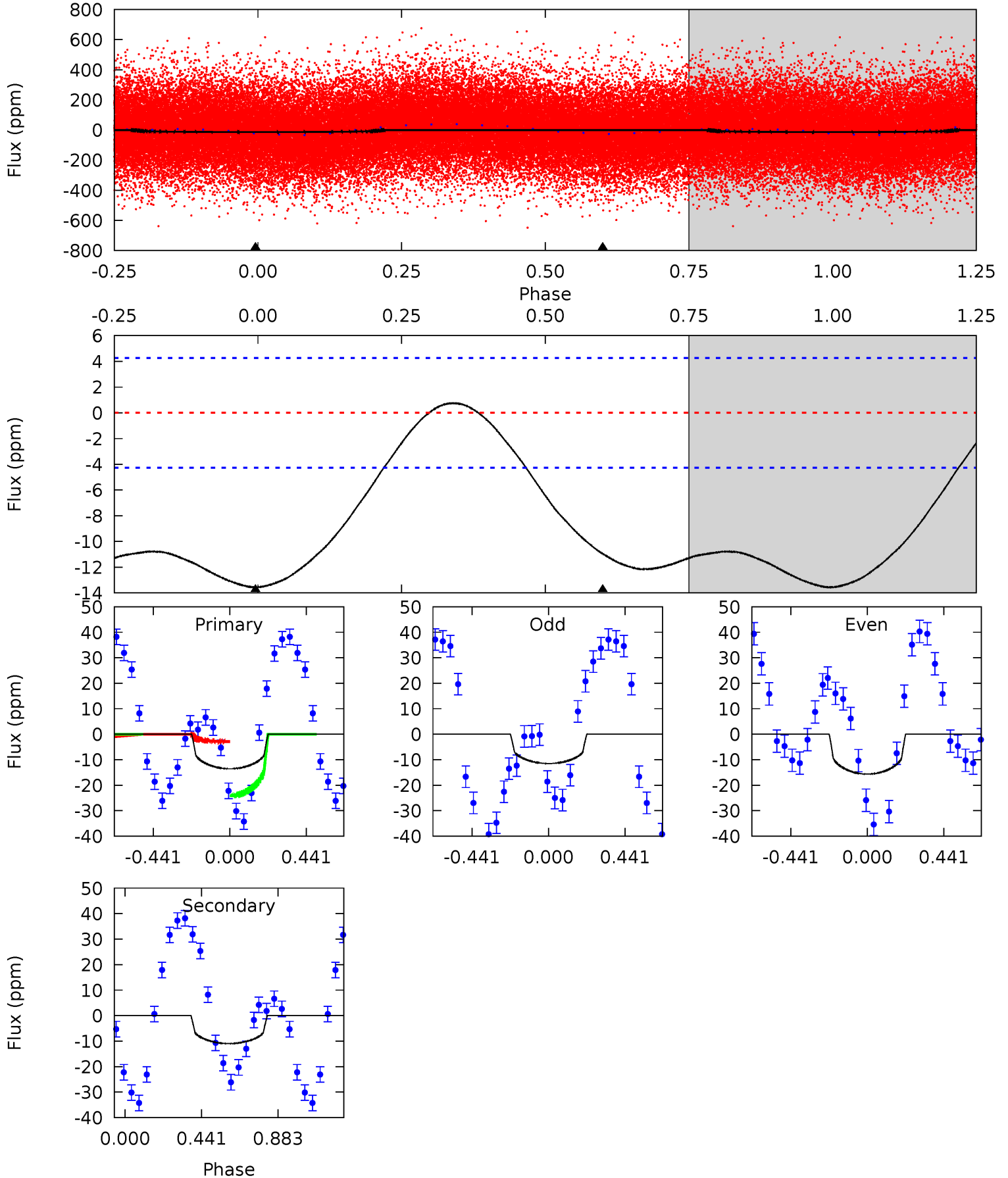
TCE 010079420-01 P= 0.880063 Days $T_0=132.366924$ (BKJD)



DV Model-Shift Uniqueness Test

010079420-01, P = 0.880010 Days, E = 131.511382 Days

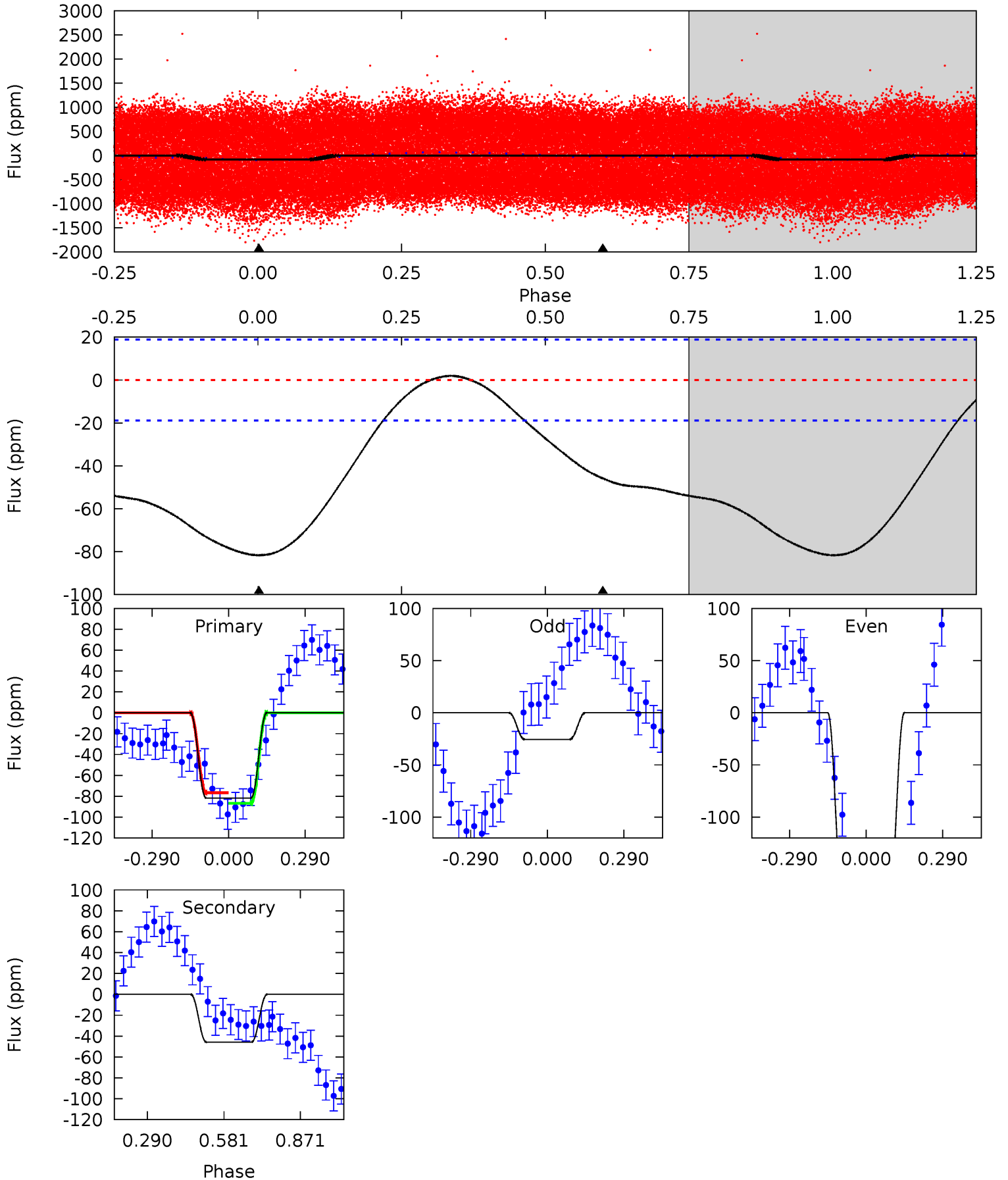
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	10.9	0	0	4.24	0.77	0.99	13.5	13.5	10.9	10.9	2.09	0.82	0.05	11.0



Alt Model-Shift Uniqueness Test

010079420-01, P = 0.880063 Days, E = 131.486861 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	10.5	0	0	4.34	1.06	0.76	18.7	18.7	10.5	10.5	18.8	1.05	0.02	1.20



Stellar Parameters For KIC 010079420

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7042^{+169}_{-232}	$4.039^{+0.192}_{-0.175}$	$0.040^{+0.200}_{-0.350}$	$1.992^{+0.549}_{-0.494}$	$1.583^{+0.220}_{-0.244}$	$0.282^{+0.305}_{-0.126}$
	+2%/-3%	+5%/-4%	+500%/-875%	+28%/-25%	+14%/-15%	+108%/-44%
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 010079420-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 1	$0.93^{+0.91}_{-0.64}$	4228^{+290}_{-304}	5978^{+7548}_{-1858}	$3.042^{+30.380}_{-2.265}$
Alt.	-46 ± 4	$2.03^{+1.19}_{-0.97}$	4216^{+325}_{-320}	5688^{+2552}_{-1141}	$2.598^{+6.936}_{-1.509}$

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

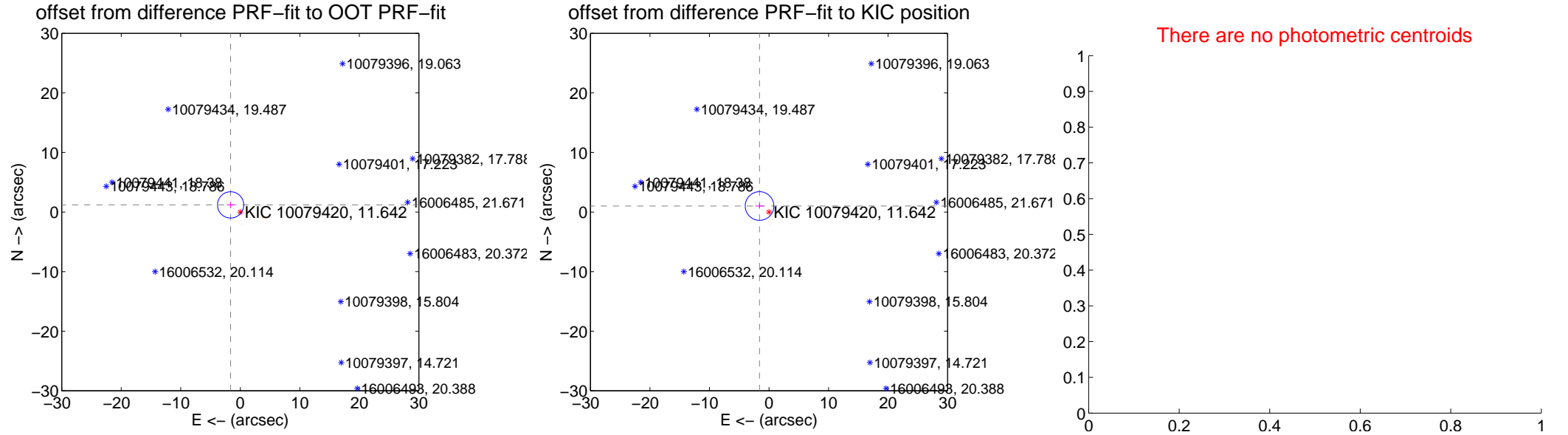
DV Centroid Data

Supplemental centroid analysis for 010079420-01. **Kepler magnitude: 11.64.** Transit SNR 2.57

There are 4 quarters with good PRF difference image offsets

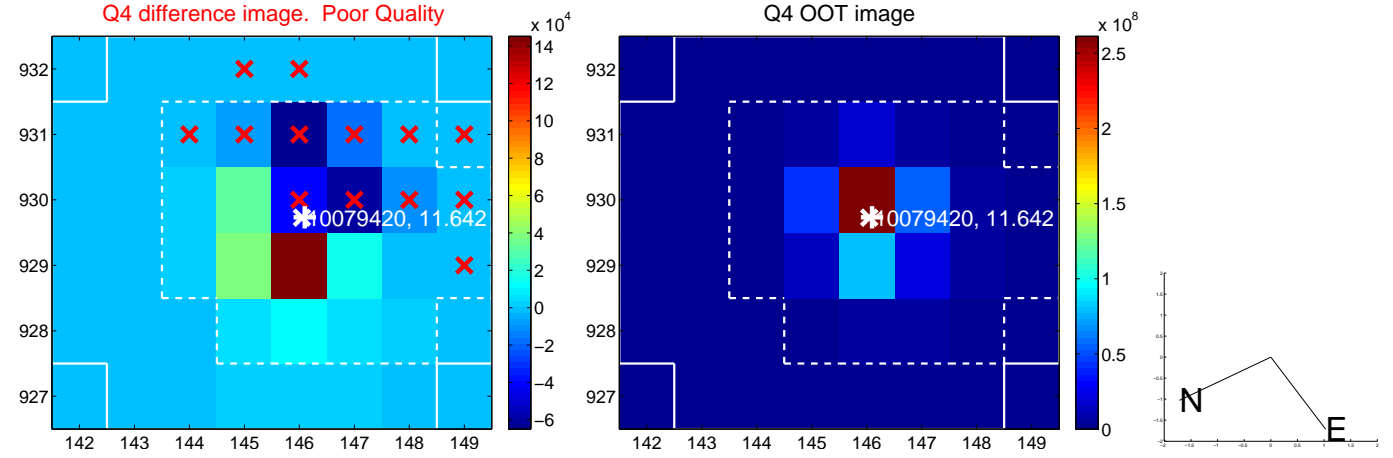
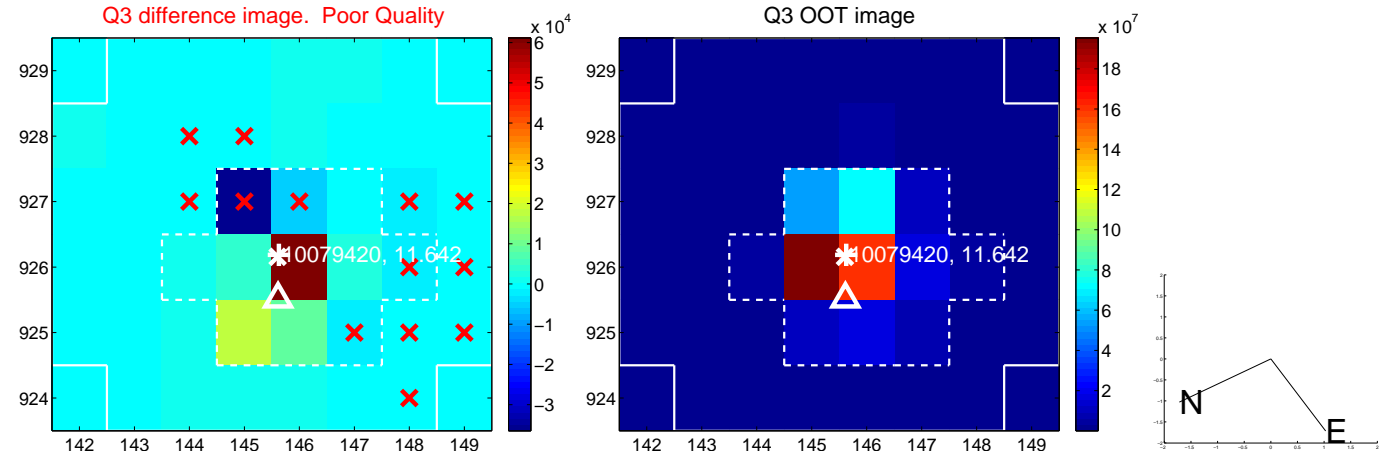
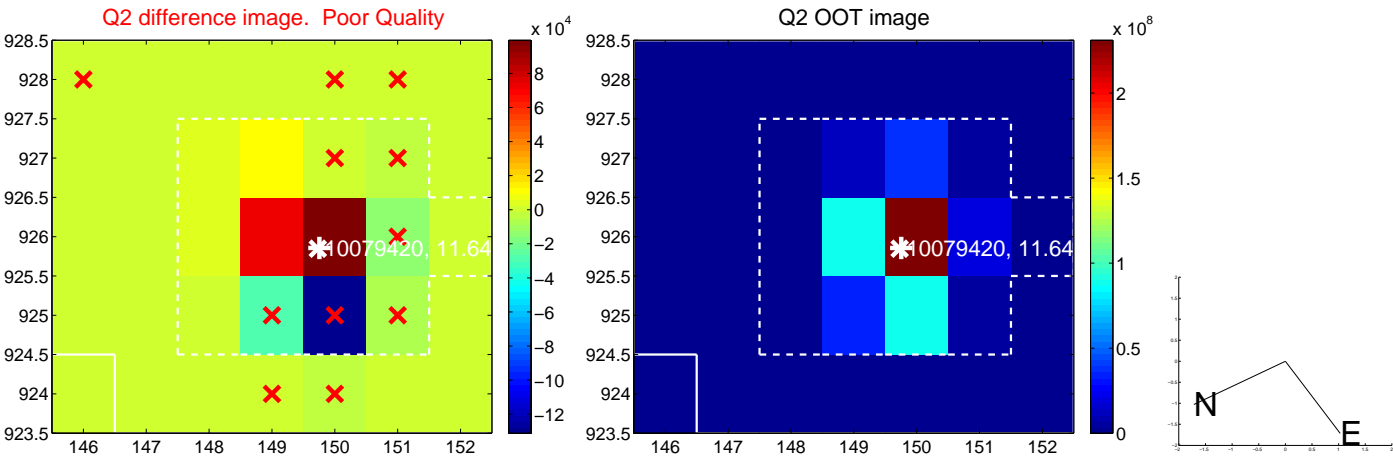
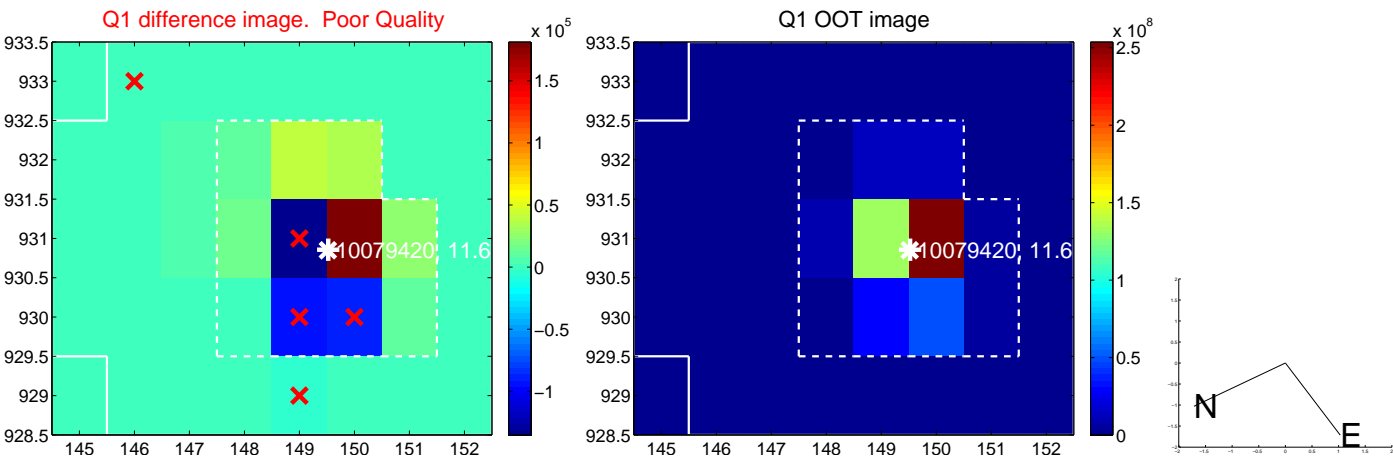
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.019 ± 0.735	2.75	1.626 ± 0.637	1.196 ± 0.493
PRF-fit source offset from KIC position	1.887 ± 0.801	2.35	1.594 ± 0.713	1.010 ± 0.456
photometric centroid source offset	—	—	—	—

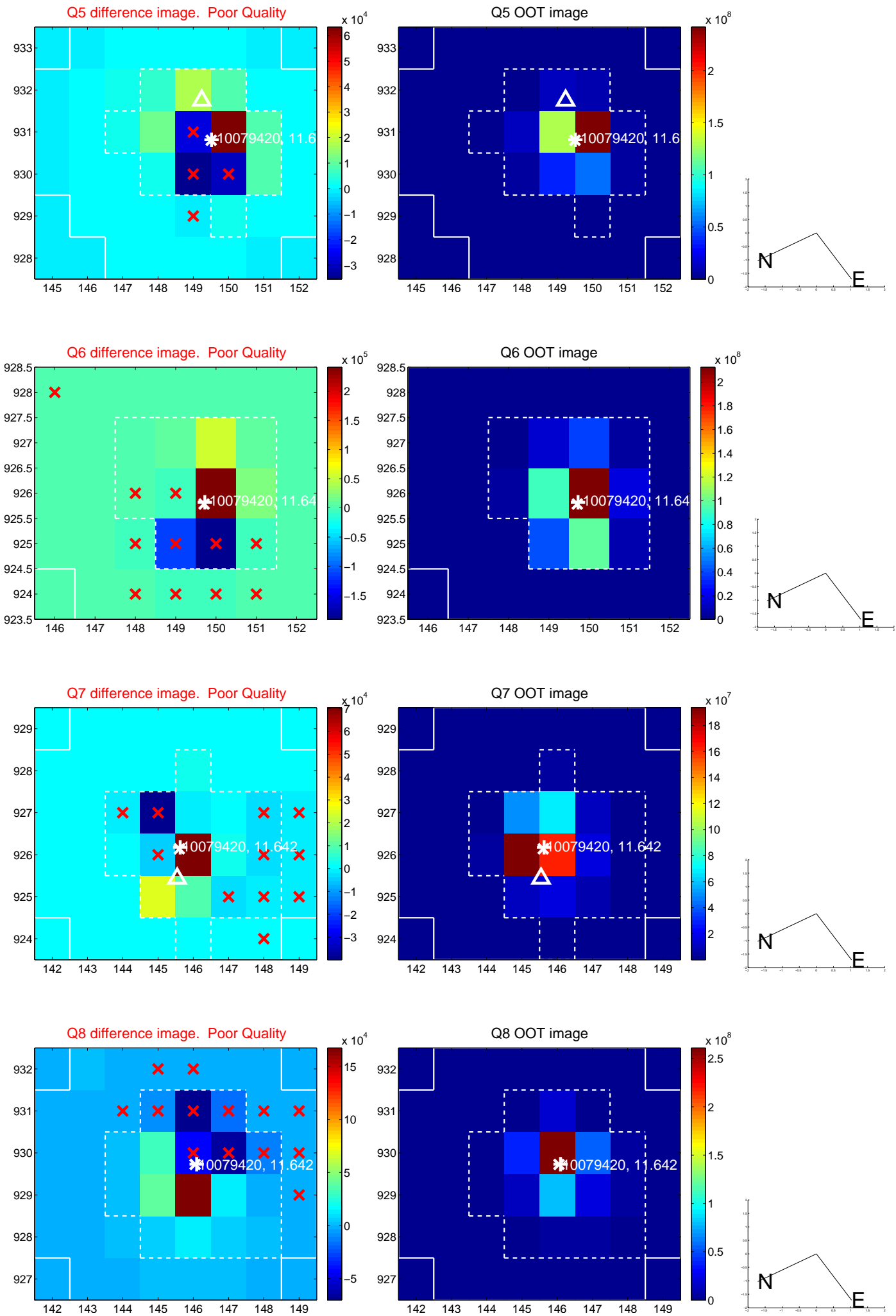


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

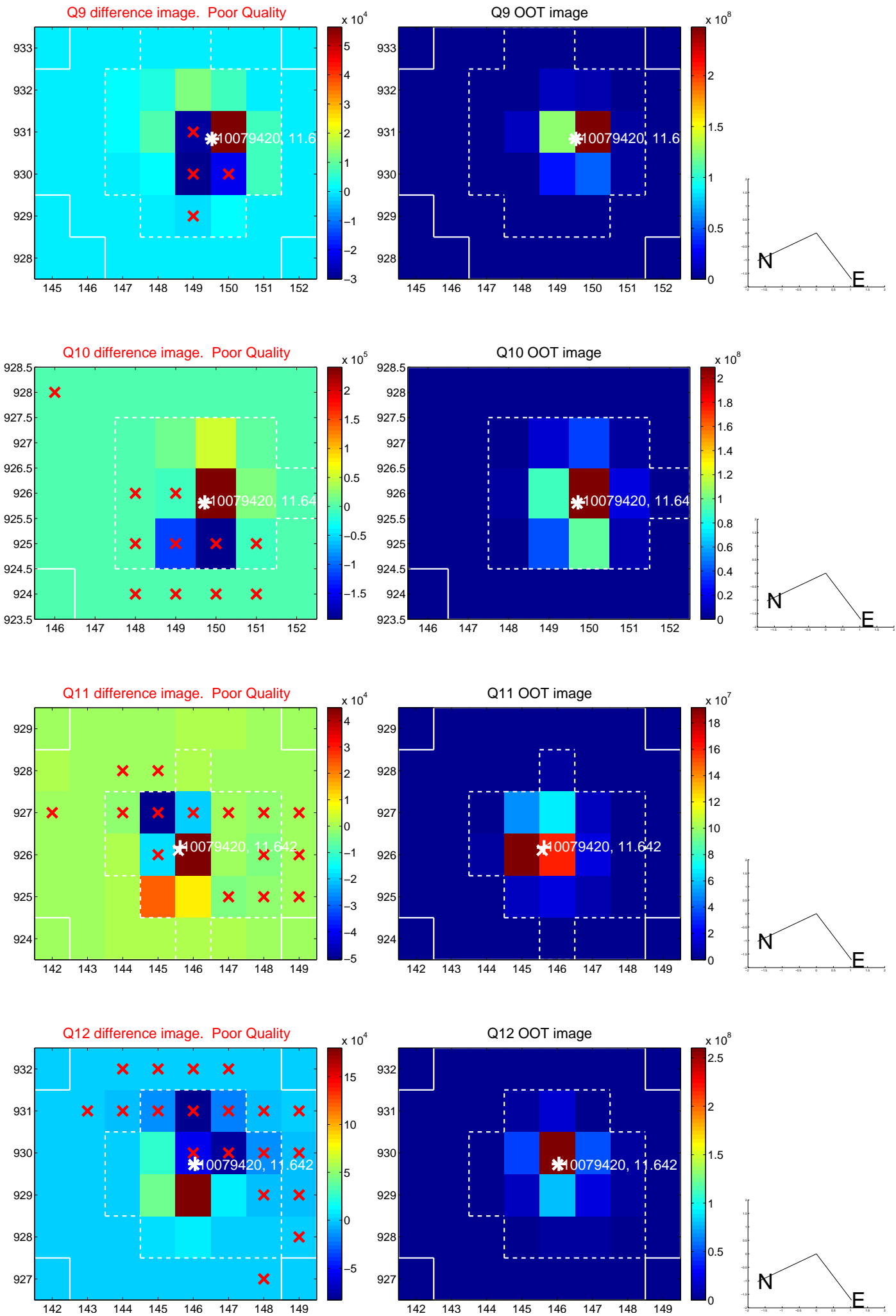
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



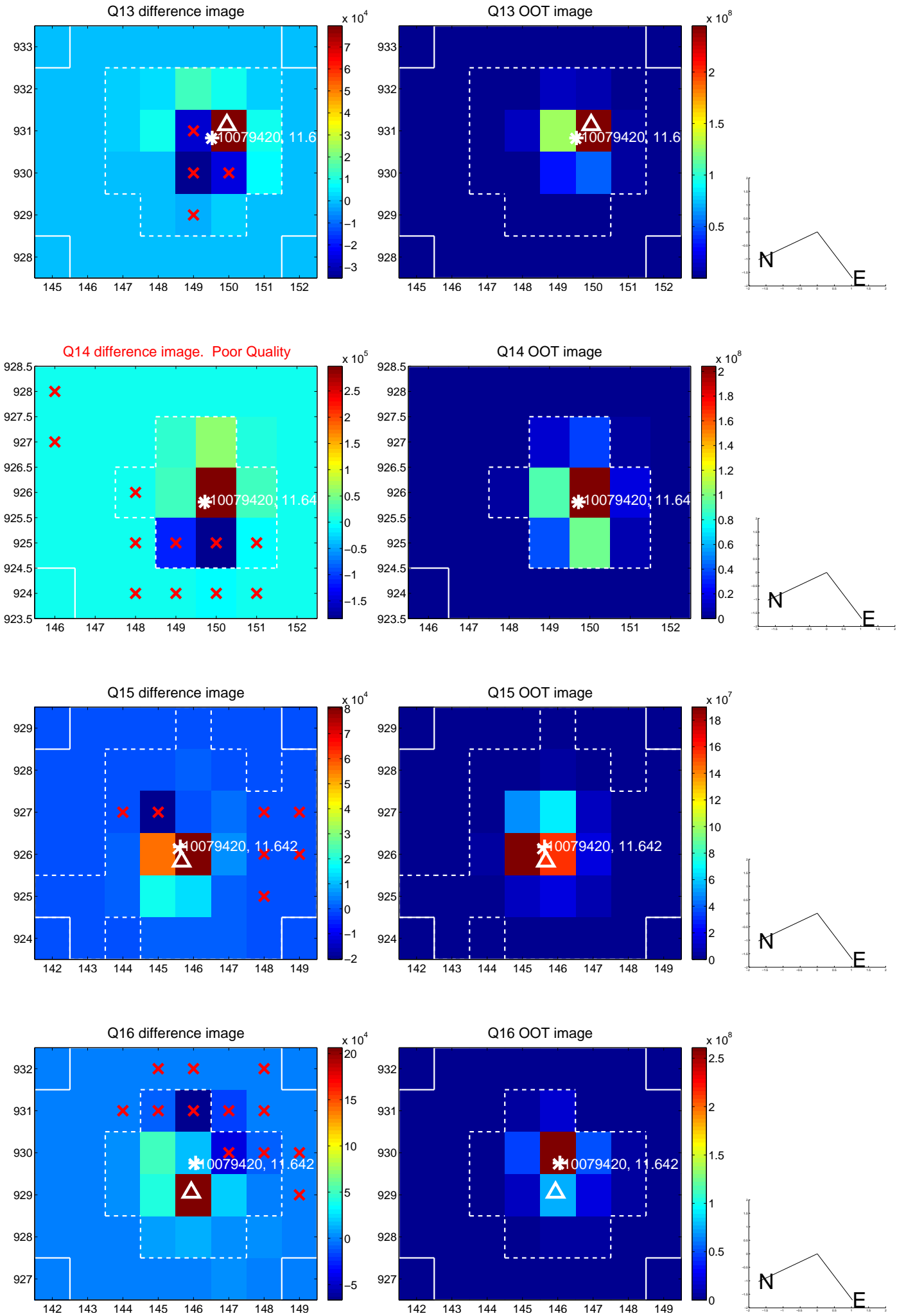
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



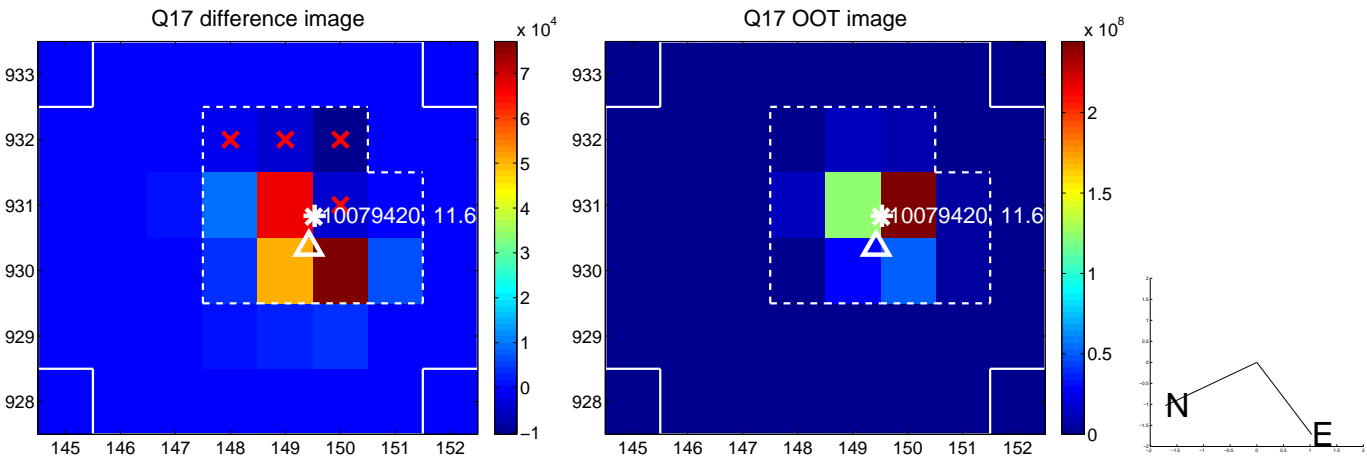
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

