KIC 008976589

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 ($S_\oplus$)
008976589-01	OBS	No	0.614019	131.848151	19.9	2.223	9.4	6.7	1.98	6581	1.03	26090.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008976589-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

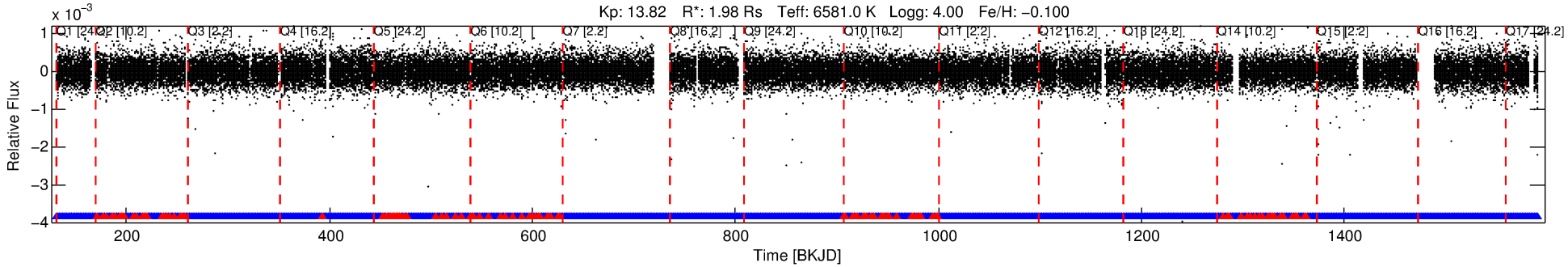
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

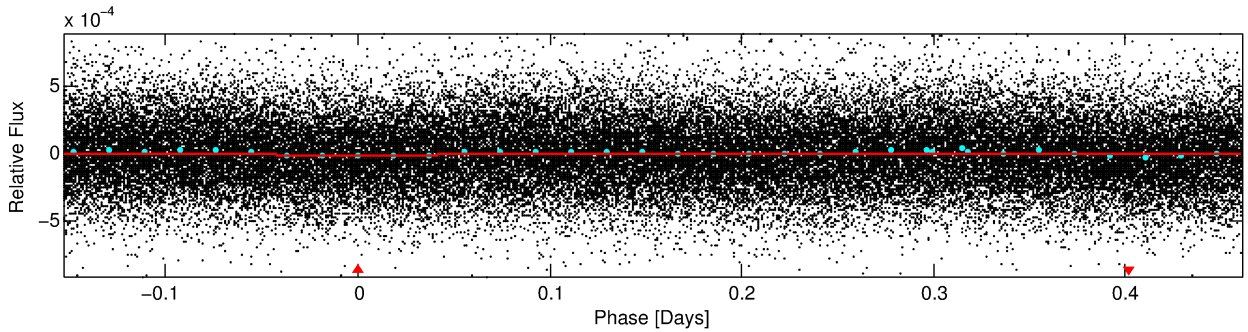
Ephemeris Match Information For 008976589-01

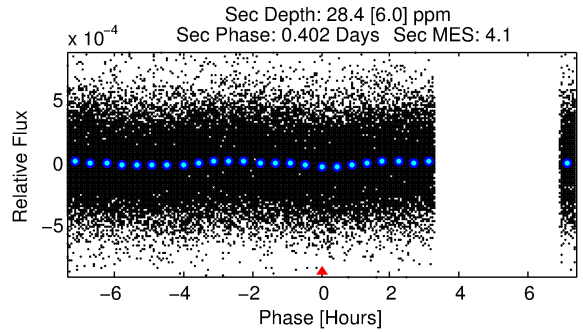
No Significant Match Found

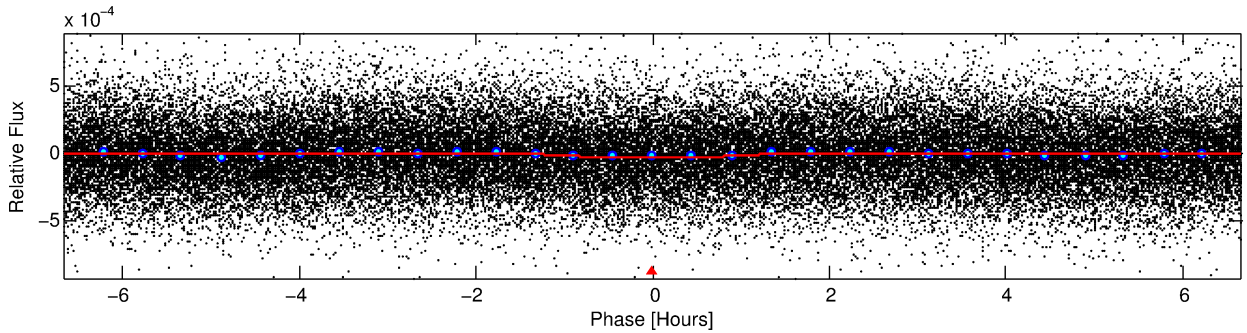
DV One-Page Summary

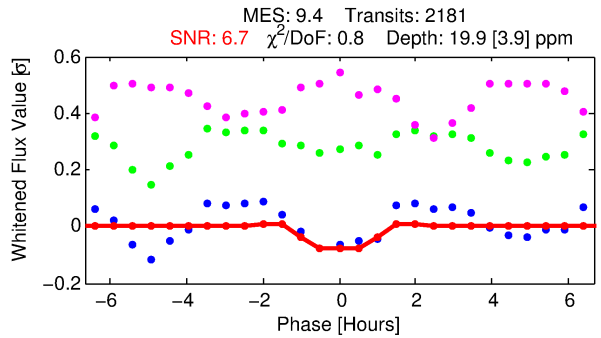
KIC: 8976589 Candidate: 1 of 1 Period: 0.614 d

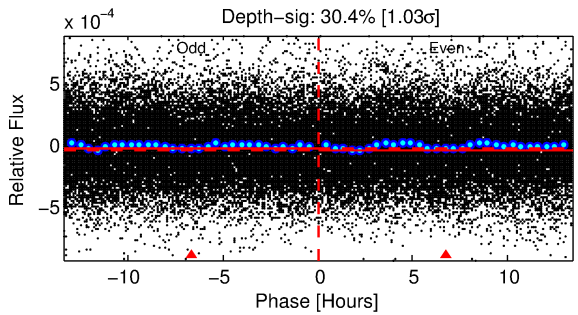


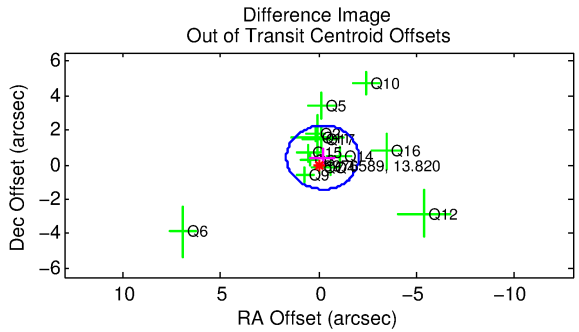












DV Fit Results:

Period = 0.61402 [0.00001] d
Epoch = 131.8482 [0.0042] BKJD
Rp/R* = 0.0048 [0.0030]
a/R* = 1.34 [2.15]
b = 0.90 [0.80]

Seff = 26090.99 [14142.95]
Teq = 3241 [439] K
Rp = 1.03 [0.76] Re
a = 0.0159 [0.0054] AU

Ag = 3.70 [5.10] [0.53σ]
Teffp = 6951 [2227] K [1.63σ]

DV Diagnostic Results:

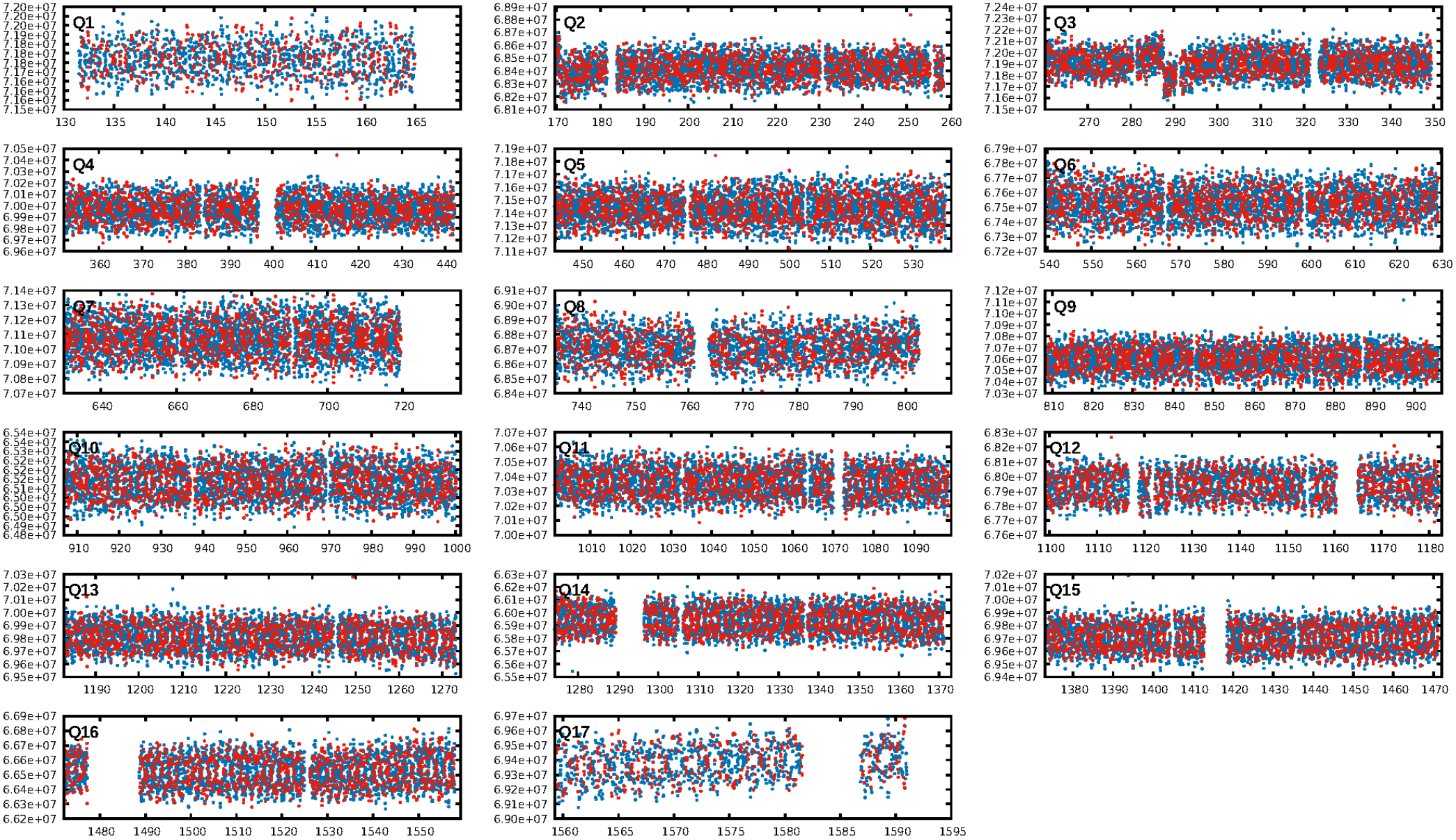
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 1.68e−18
RollingBand−fgt: 0.94 [1958/2082]
GhostDiagnostic−chr: 0.9135

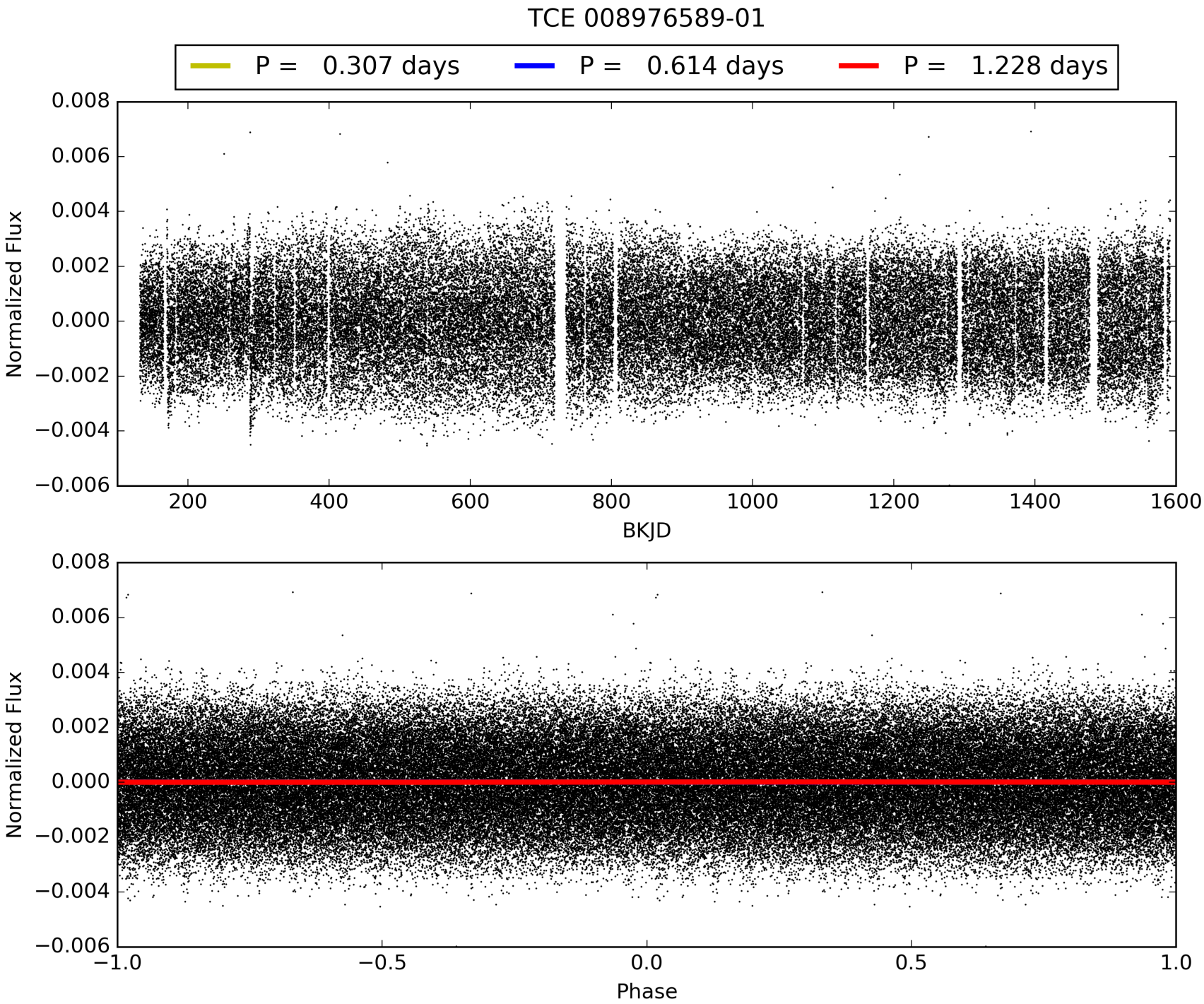
Centroid−sig: 25.6%
Centroid−so: 2.009 arcsec [1.19σ]
OotOffset−rm: 0.468 arcsec [0.76σ]
KicOffset−rm: 0.489 arcsec [0.72σ]
OotOffset−st: 4/4/3/3 [14]
KicOffset−st: 4/4/3/3 [14]
DiffImageQuality−fgm: 0.36 [5/14]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 21:05:15 Z

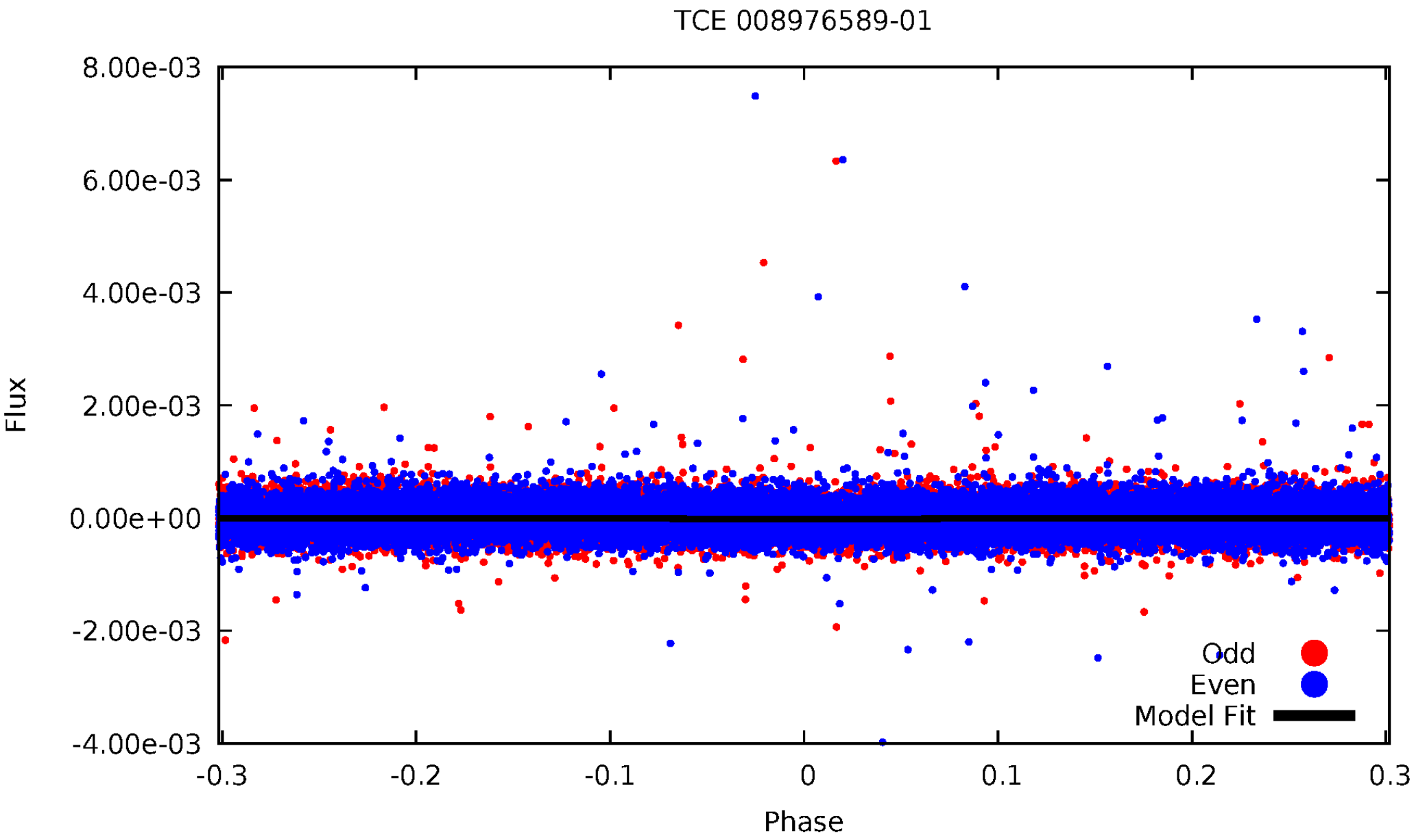
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008976589-01, PDC Light Curves

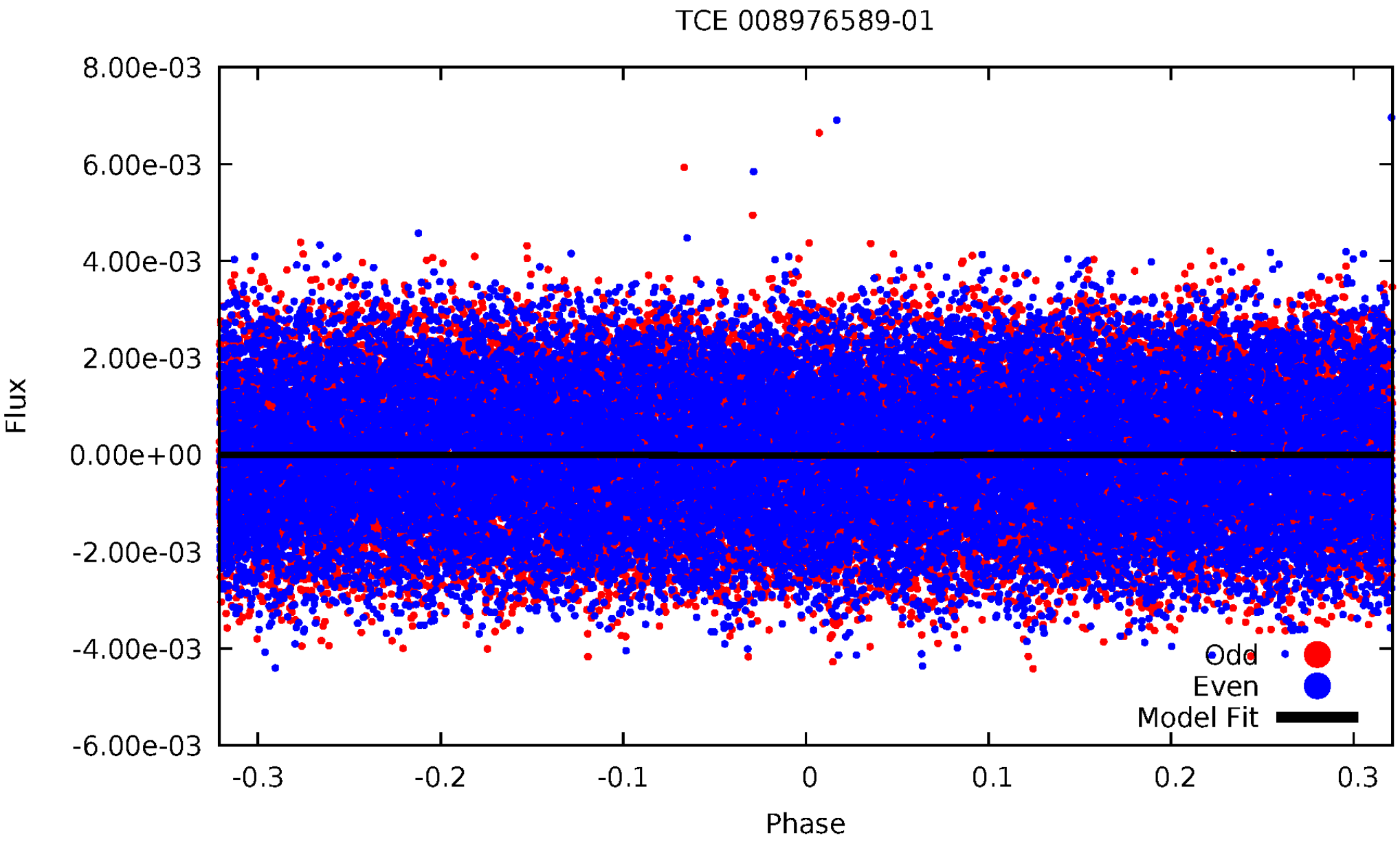



TCE 008976589-01
P = 0.307 days
P = 0.614 days
P = 1.228 days
Normalized Flux
BKJD
Normalized Flux
Phase

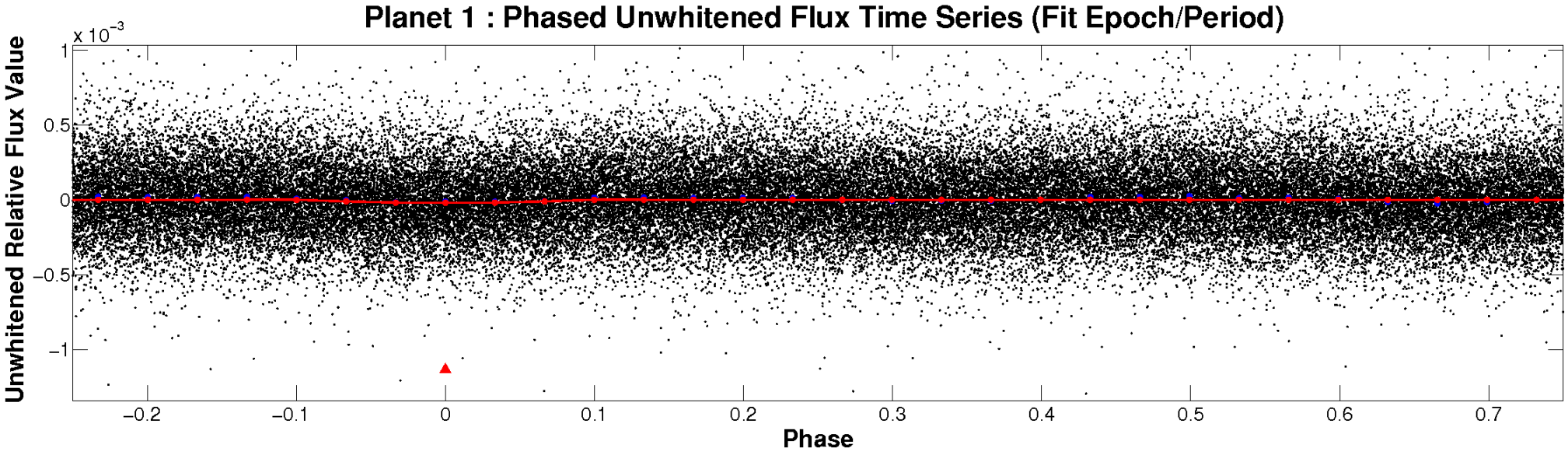
DV Odd/Even

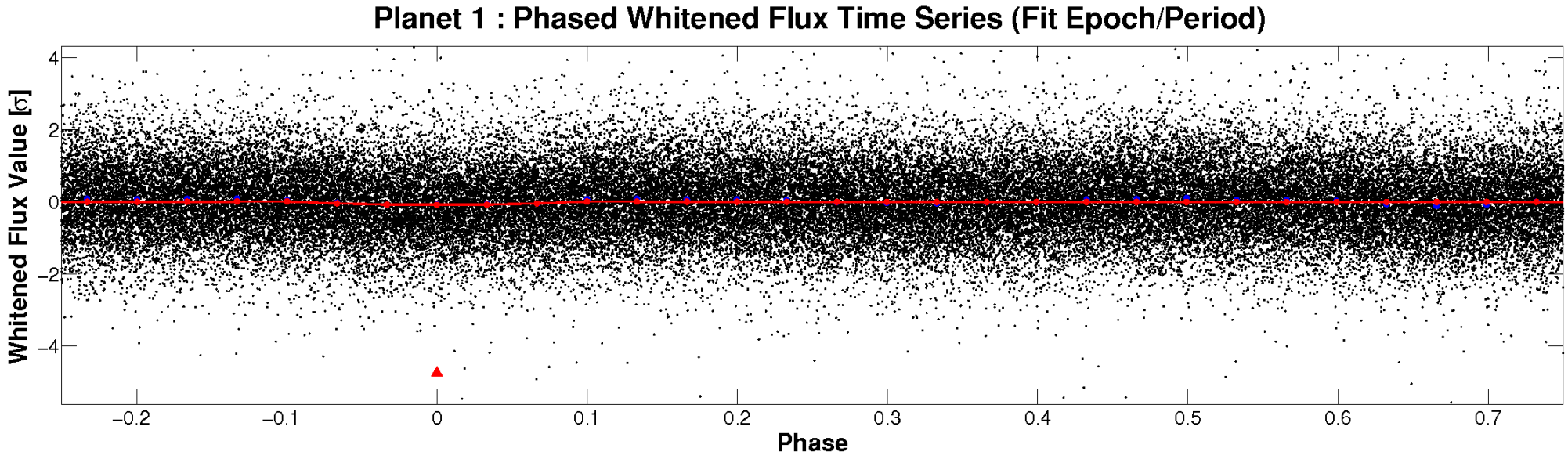

TCE 008976589-01
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008976589-01
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

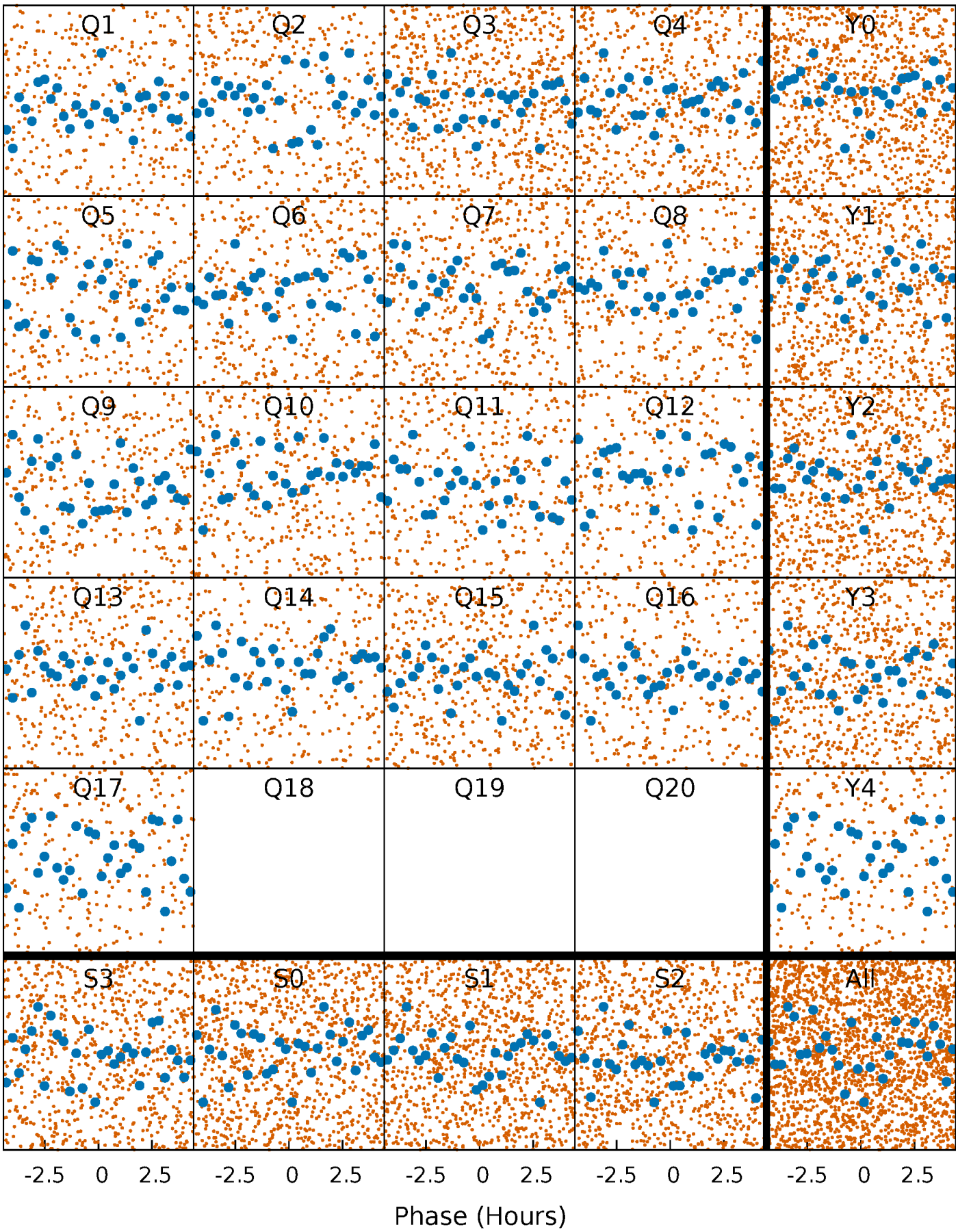
Non-Whitened Vs. Whitened Light Curve





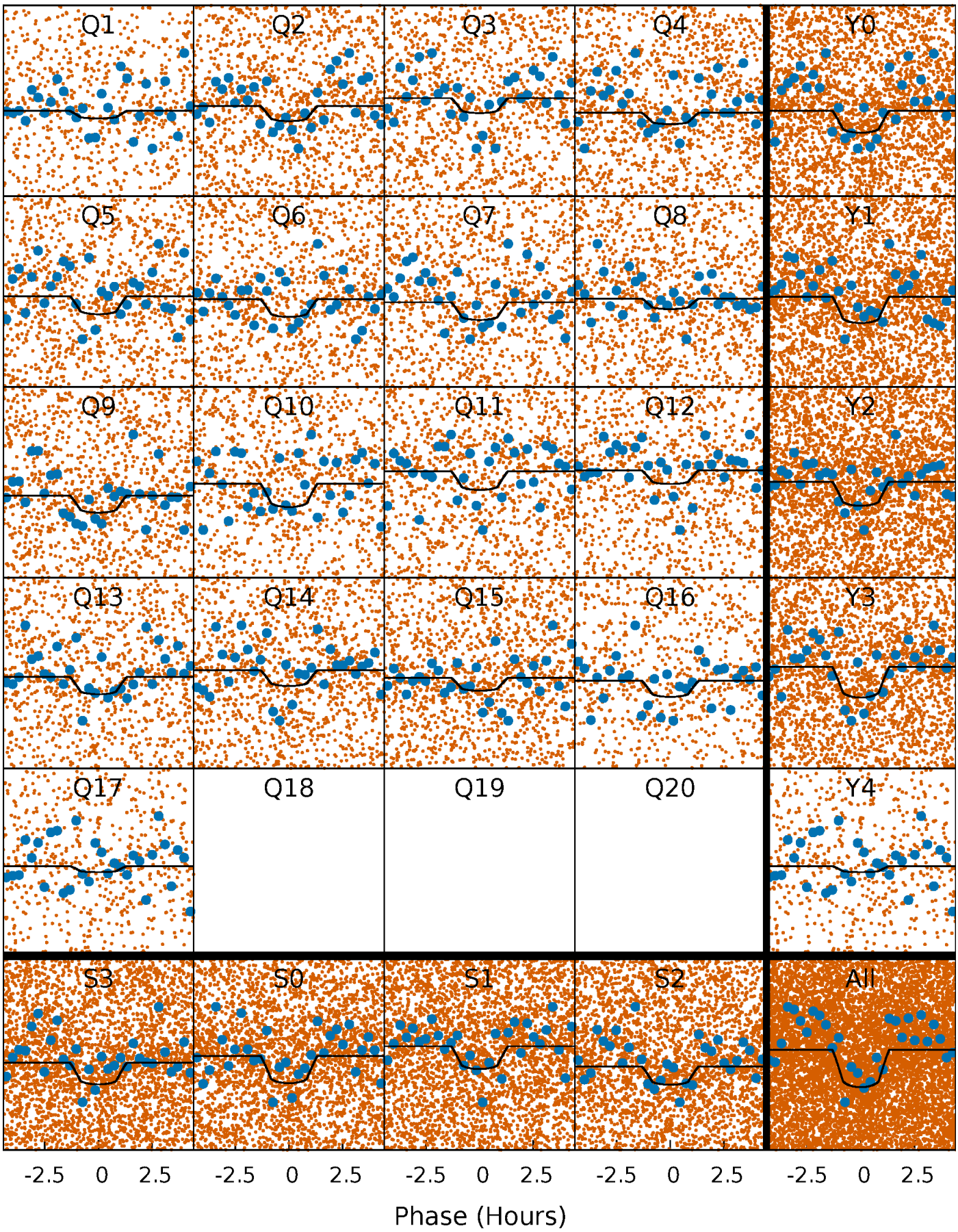
PDC Quarter-Phased Transit Curves

TCE 008976589-01 P= 0.614019 Days T_0=131.848151 (BKJD)



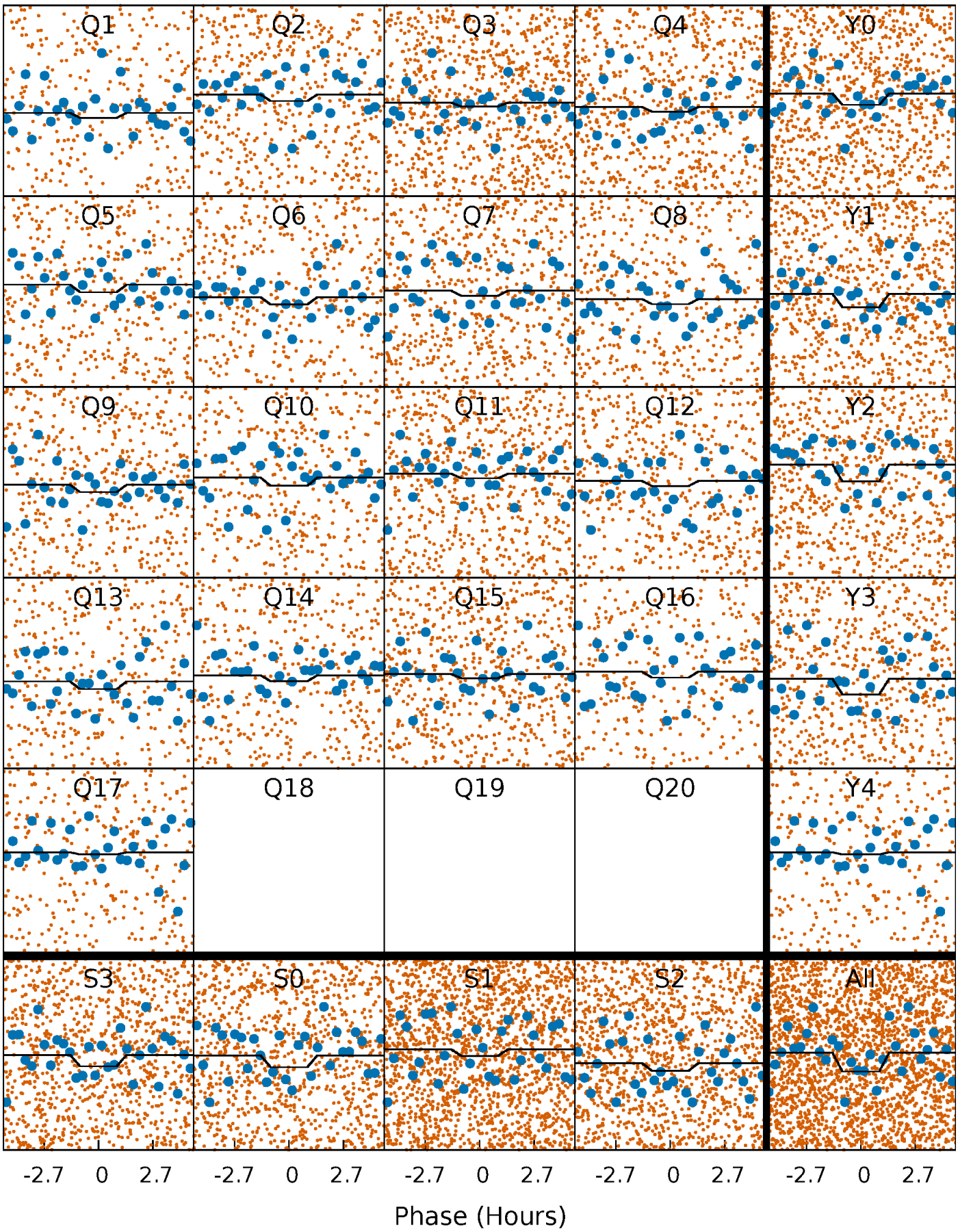
DV Quarter-Phased Transit Curves

TCE 008976589-01 P= 0.614019 Days T_0=131.848151 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

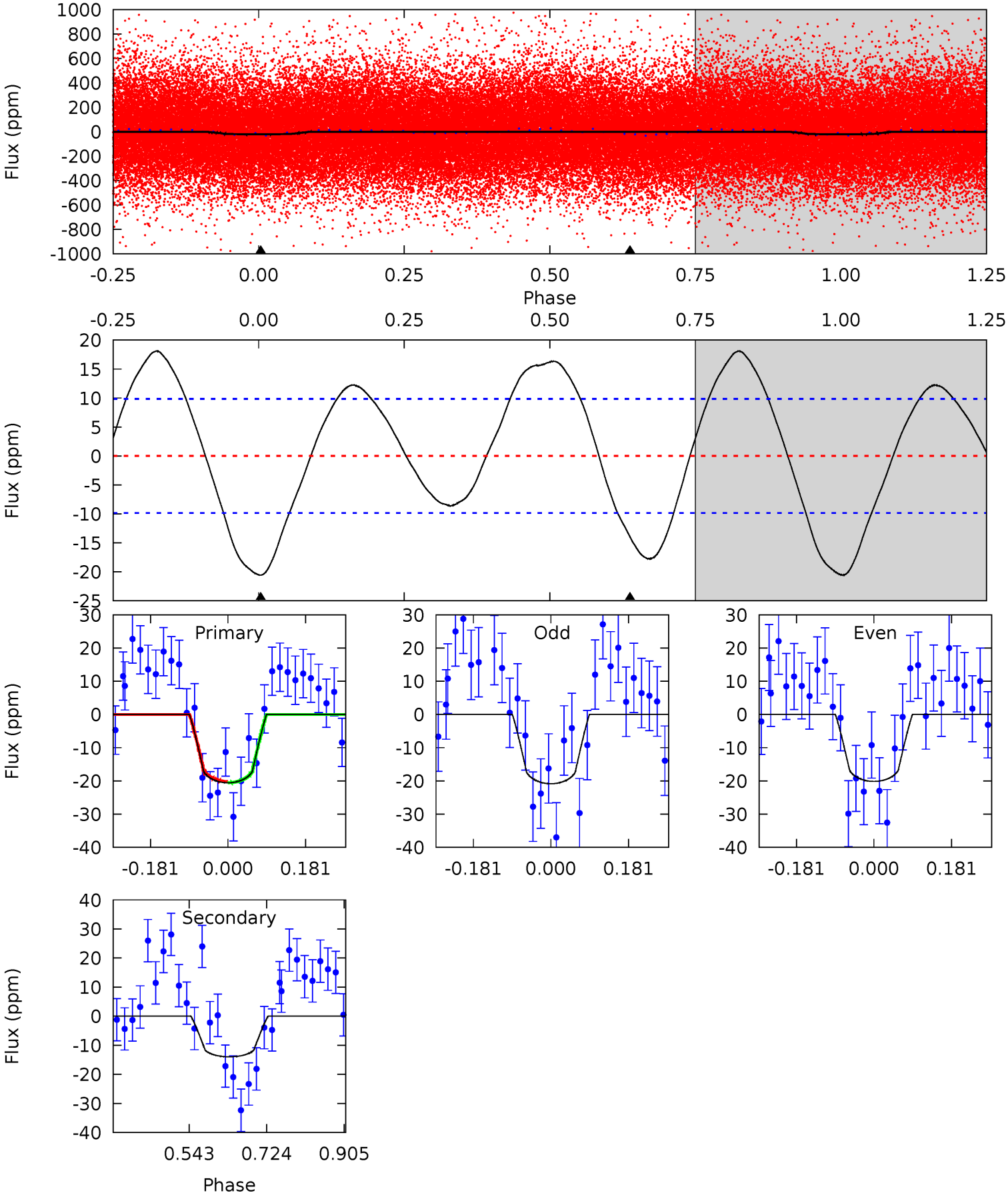
TCE 008976589-01 P= 0.614022 Days T_0=131.848708 (BKJD)



DV Model-Shift Uniqueness Test

008976589-01, P = 0.614019 Days, E = 131.234132 Days

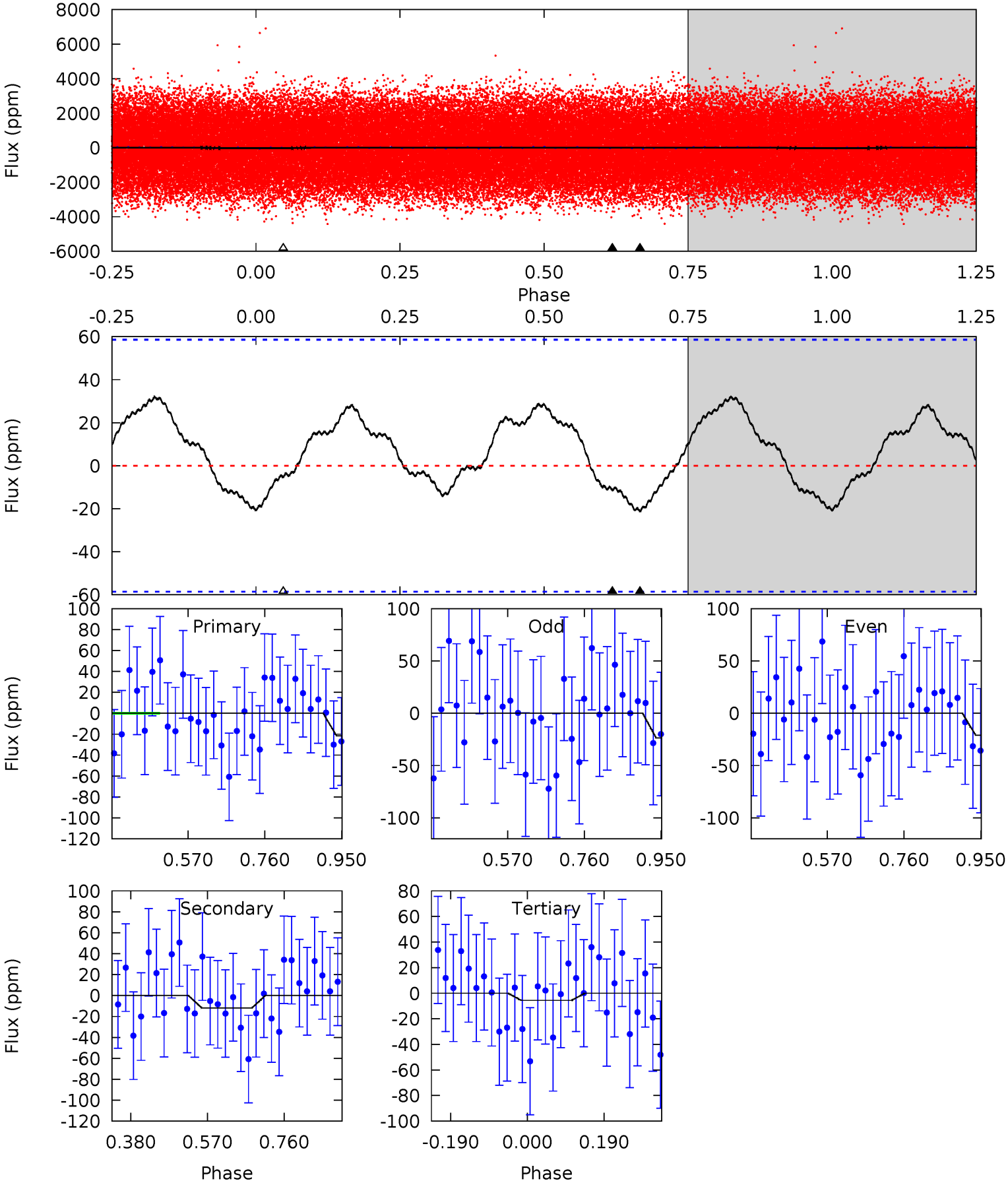
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.28	6.30	0	0	4.44	1.34	3.28	9.28	9.28	6.30	6.30	0.16	0.81	0.47	0.08



Alt Model-Shift Uniqueness Test

008976589-01, P = 0.614022 Days, E = 131.234686 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.63	0.90	0.42	0	4.43	1.31	0.96	1.20	1.63	0.47	0.90	0.10	0.75	0.60	0.05



Stellar Parameters For KIC 008976589

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	6581^{+182}_{-228}	$3.996^{+0.299}_{-0.161}$	$-0.100^{+0.250}_{-0.300}$	$1.977^{+0.563}_{-0.750}$	$1.415^{+0.198}_{-0.297}$	$0.258^{+0.556}_{-0.120}$
	+3%/-3%	+7%/-4%	+250%/-300%	+28%/-38%	+14%/-21%	+216%/-47%
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 008976589-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14±2	$1.07^{+0.60}_{-0.58}$	4460^{+372}_{-410}	5385^{+2783}_{-1240}	$1.720^{+6.866}_{-1.053}$
Alt.	-12±13	$1.00^{+0.73}_{-0.52}$	4485^{+353}_{-406}	4887^{+3154}_{-9155}	$1.194^{+6.020}_{-1.351}$

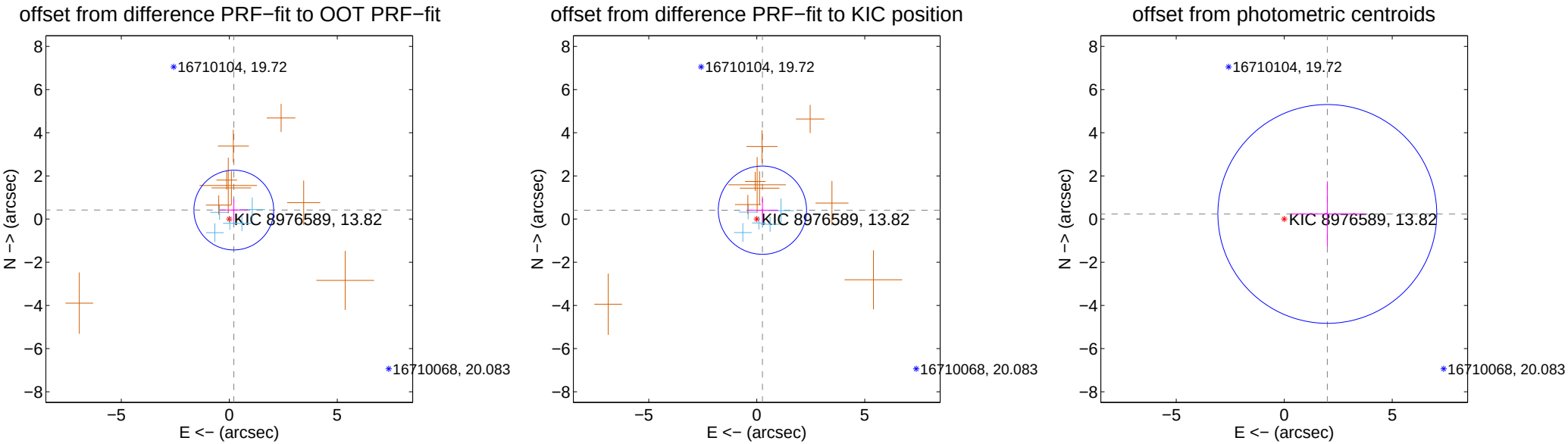
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

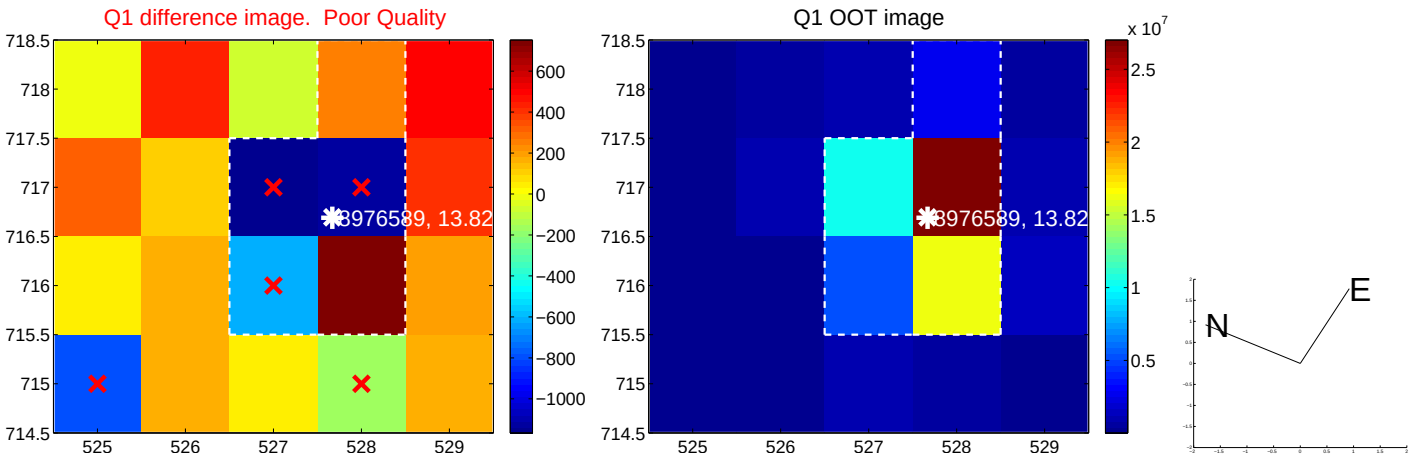
Supplemental centroid analysis for 008976589-01. Kepler magnitude: 13.82. Transit SNR 6.74
There are 5 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

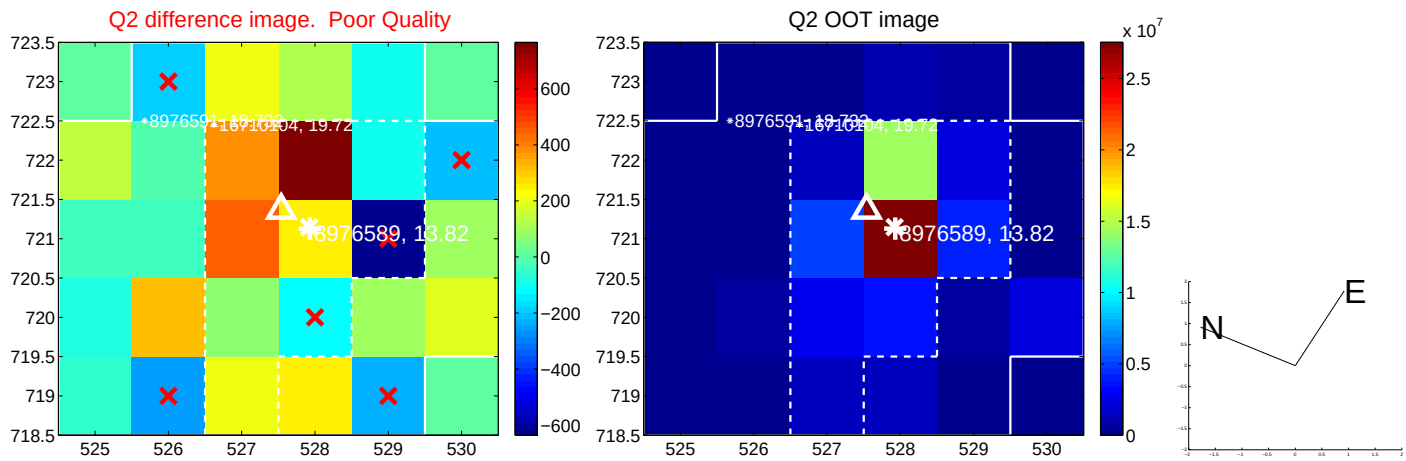
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.468 ± 0.616	0.76	-0.210 ± 0.645	0.419 ± 0.519
PRF-fit source offset from KIC position	0.489 ± 0.681	0.72	-0.262 ± 0.724	0.413 ± 0.553
photometric centroid source offset	2.01 ± 1.69	1.19	-1.99 ± 1.69	0.24 ± 1.51

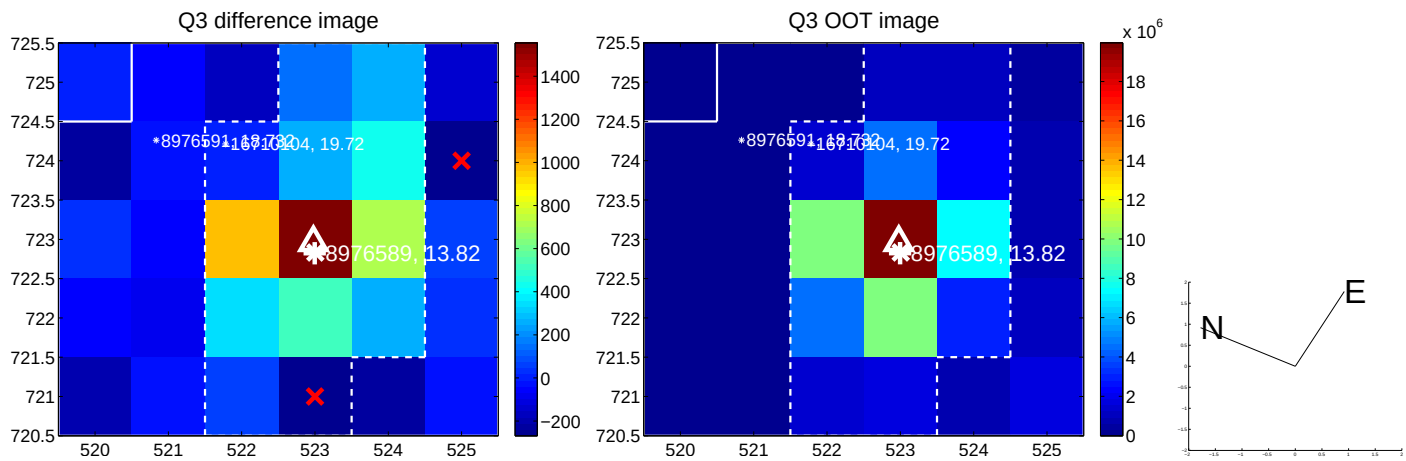


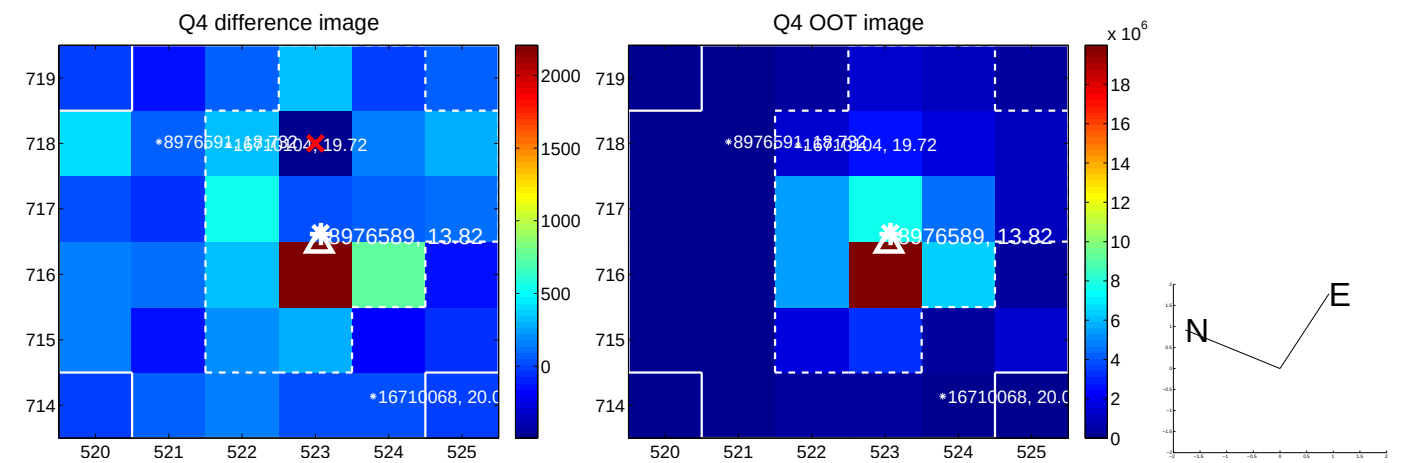
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red *: 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

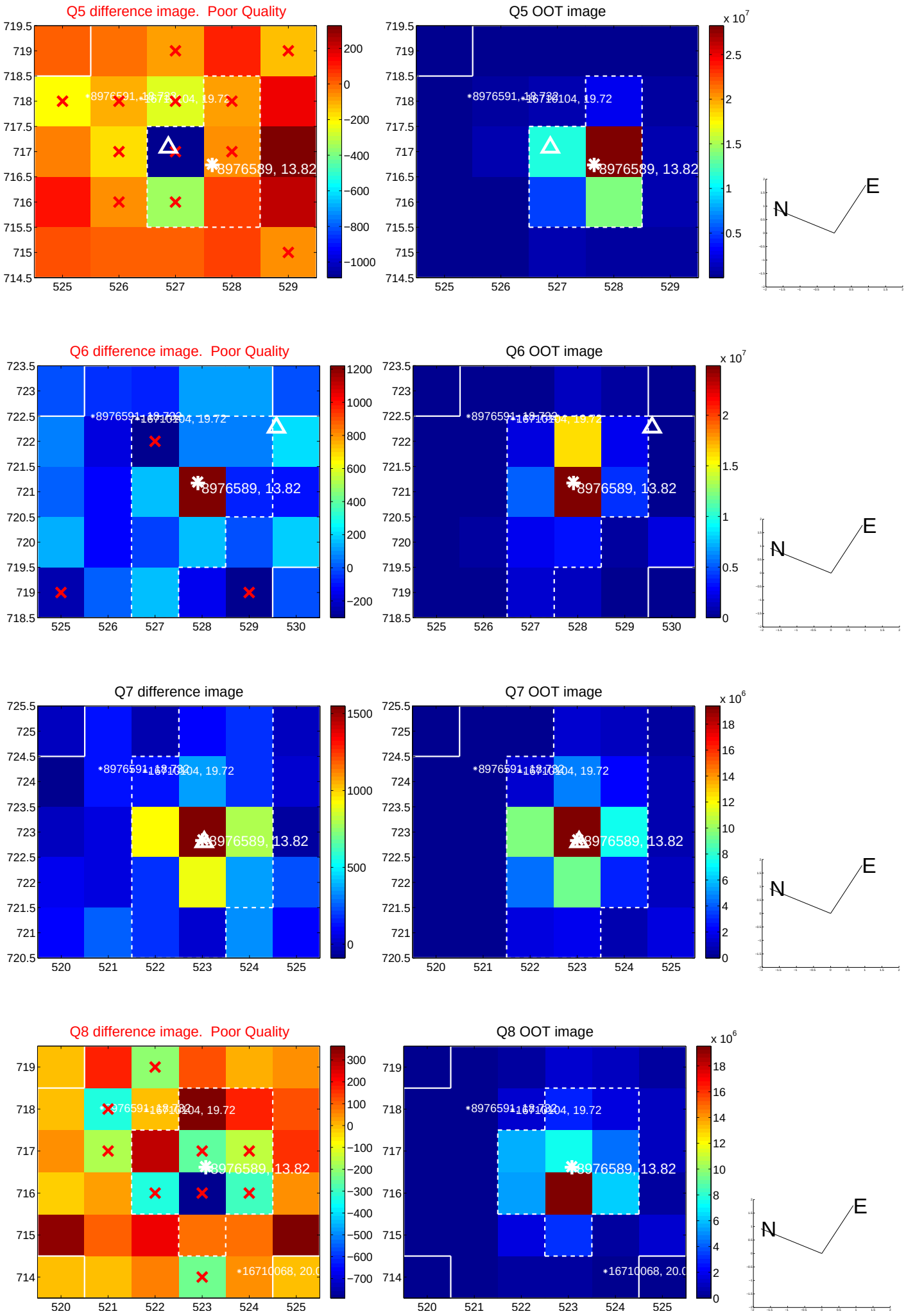




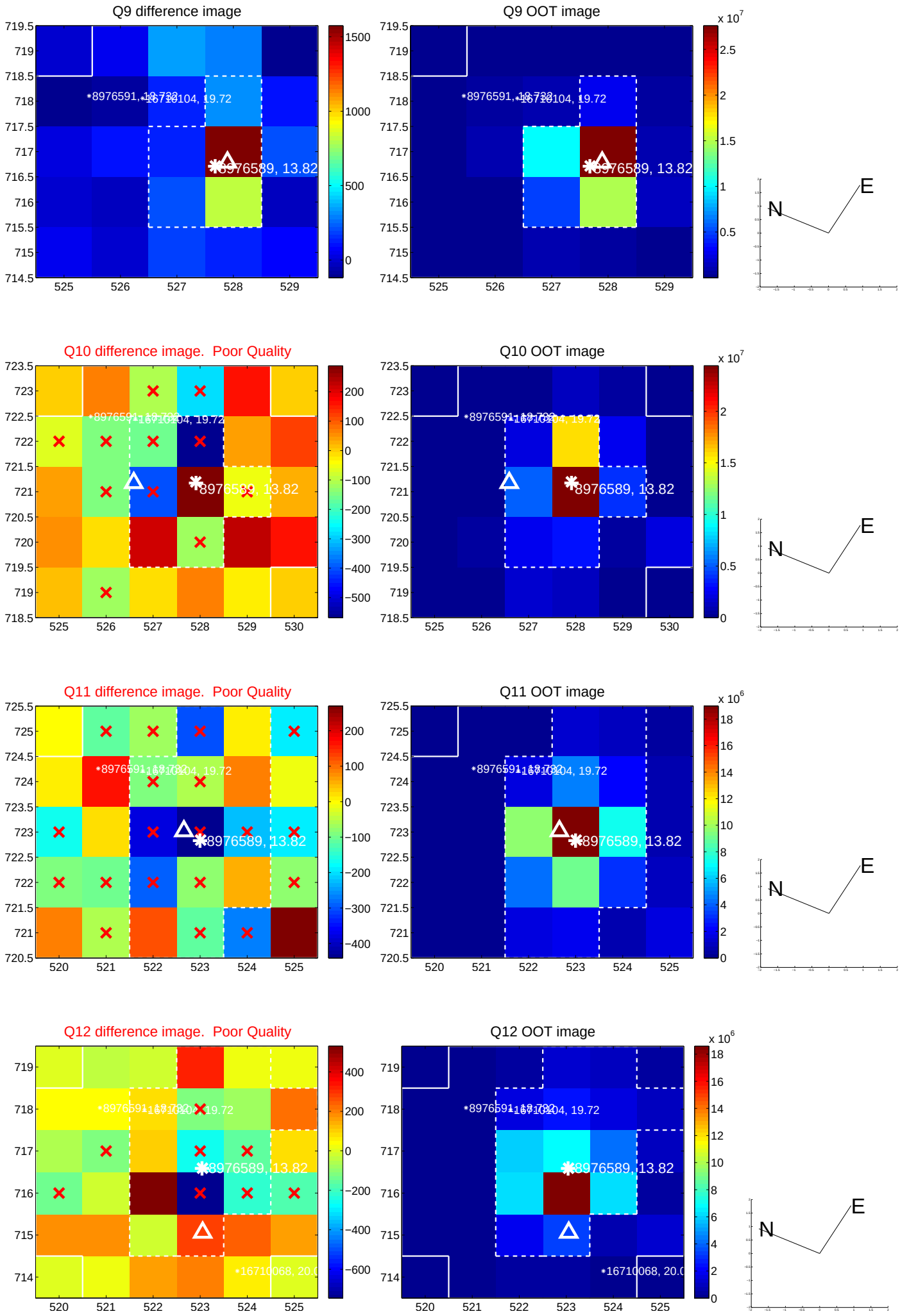




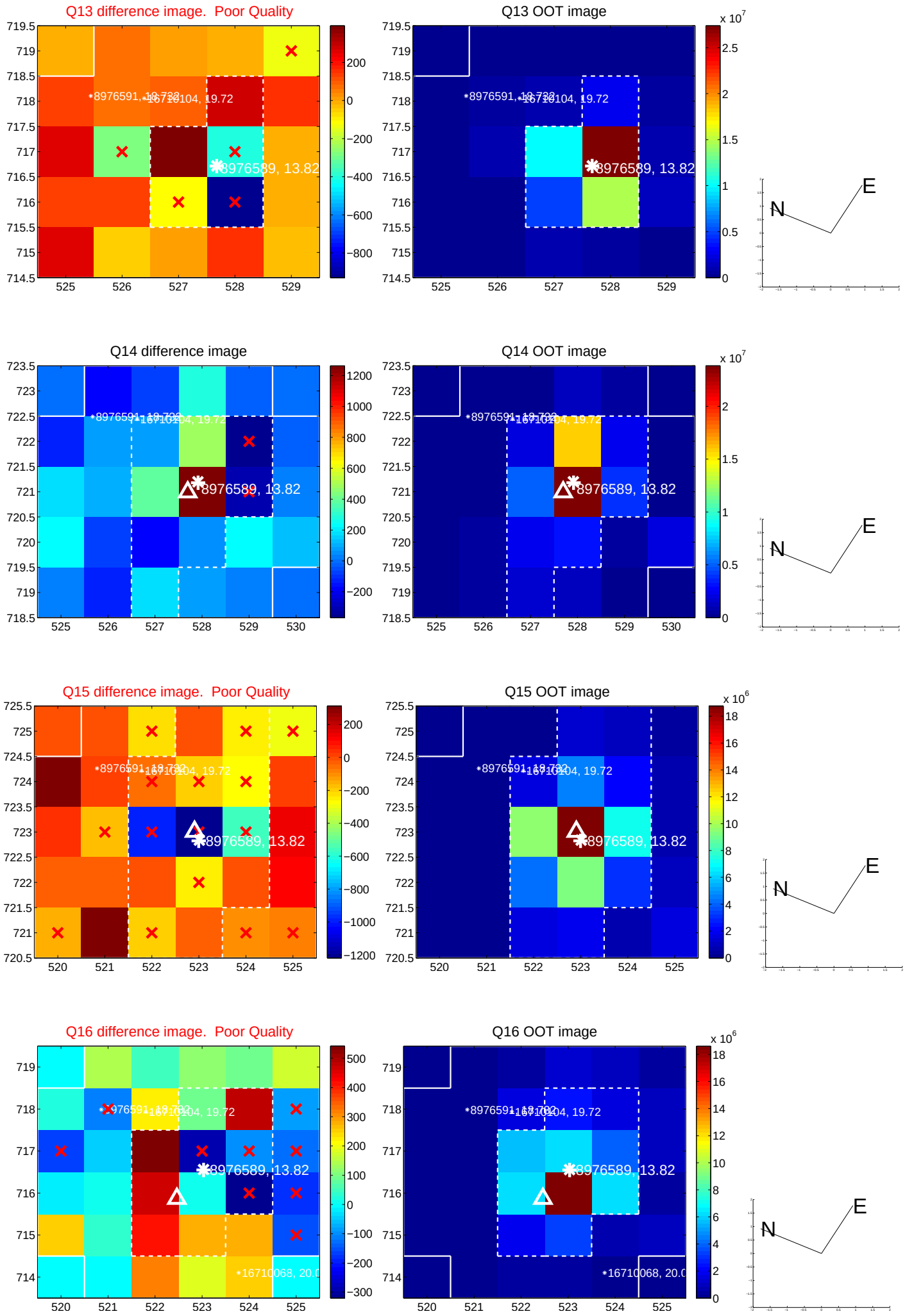
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



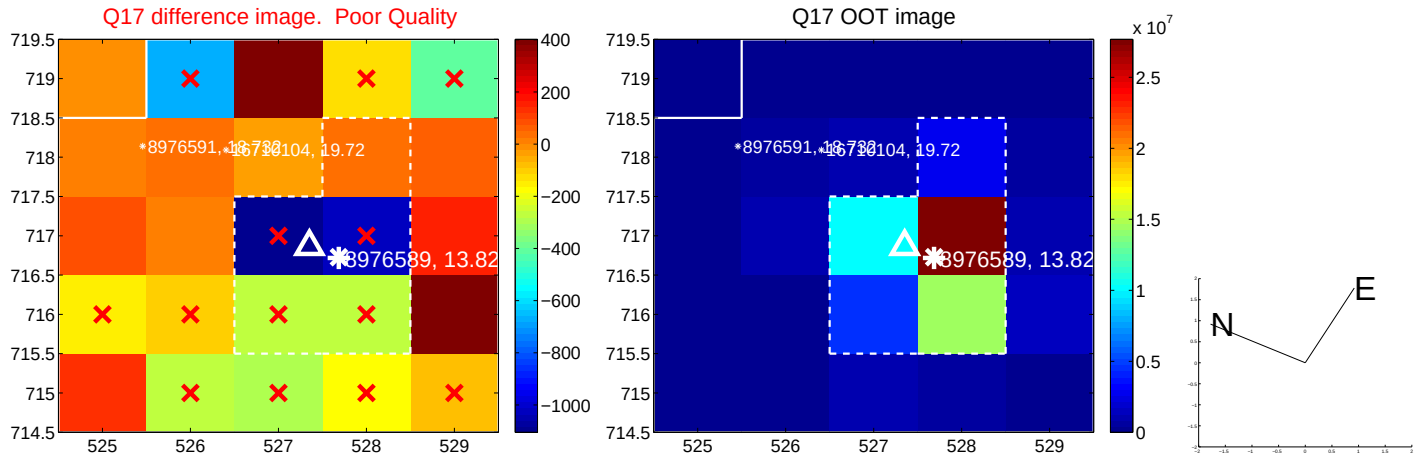
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

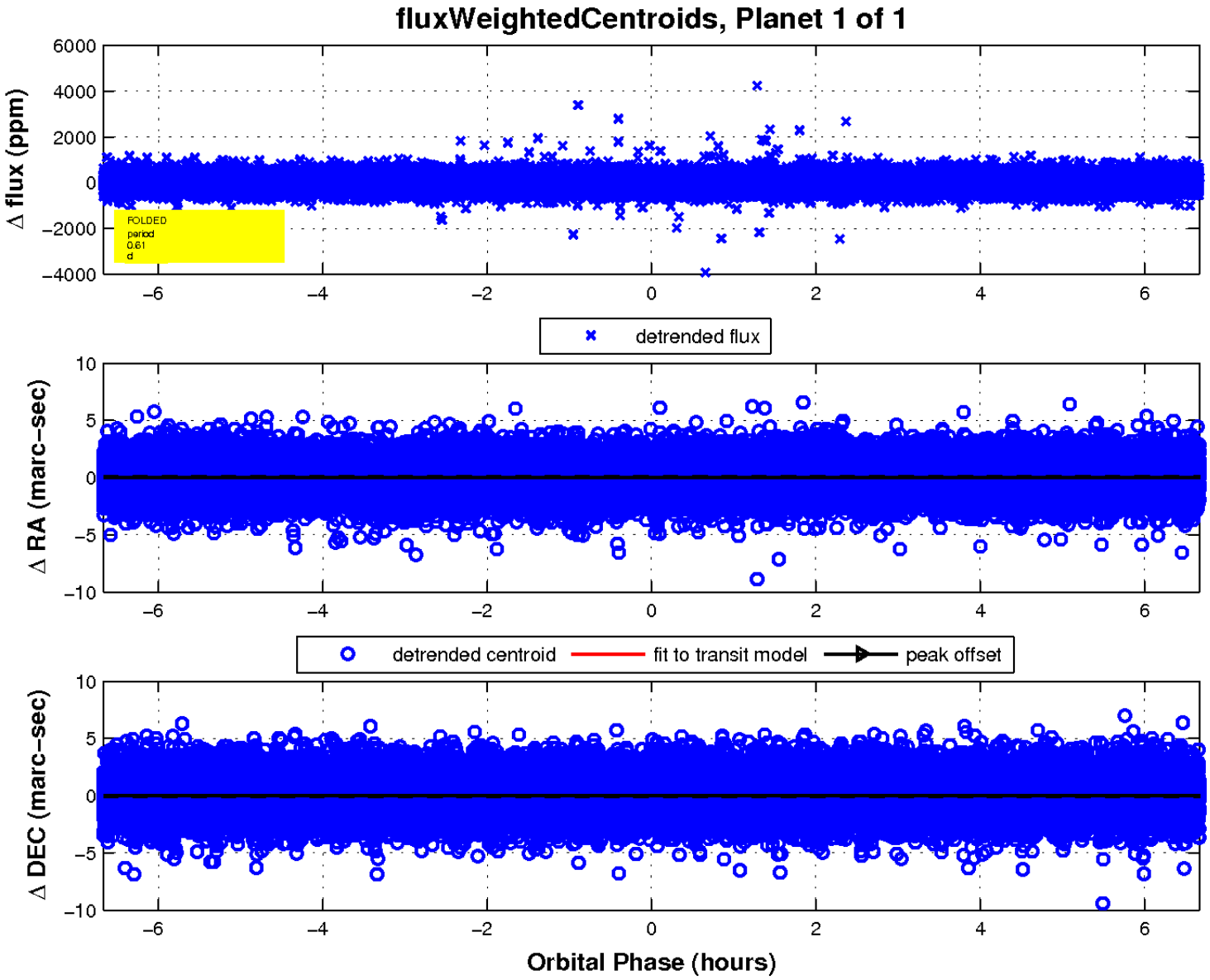


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

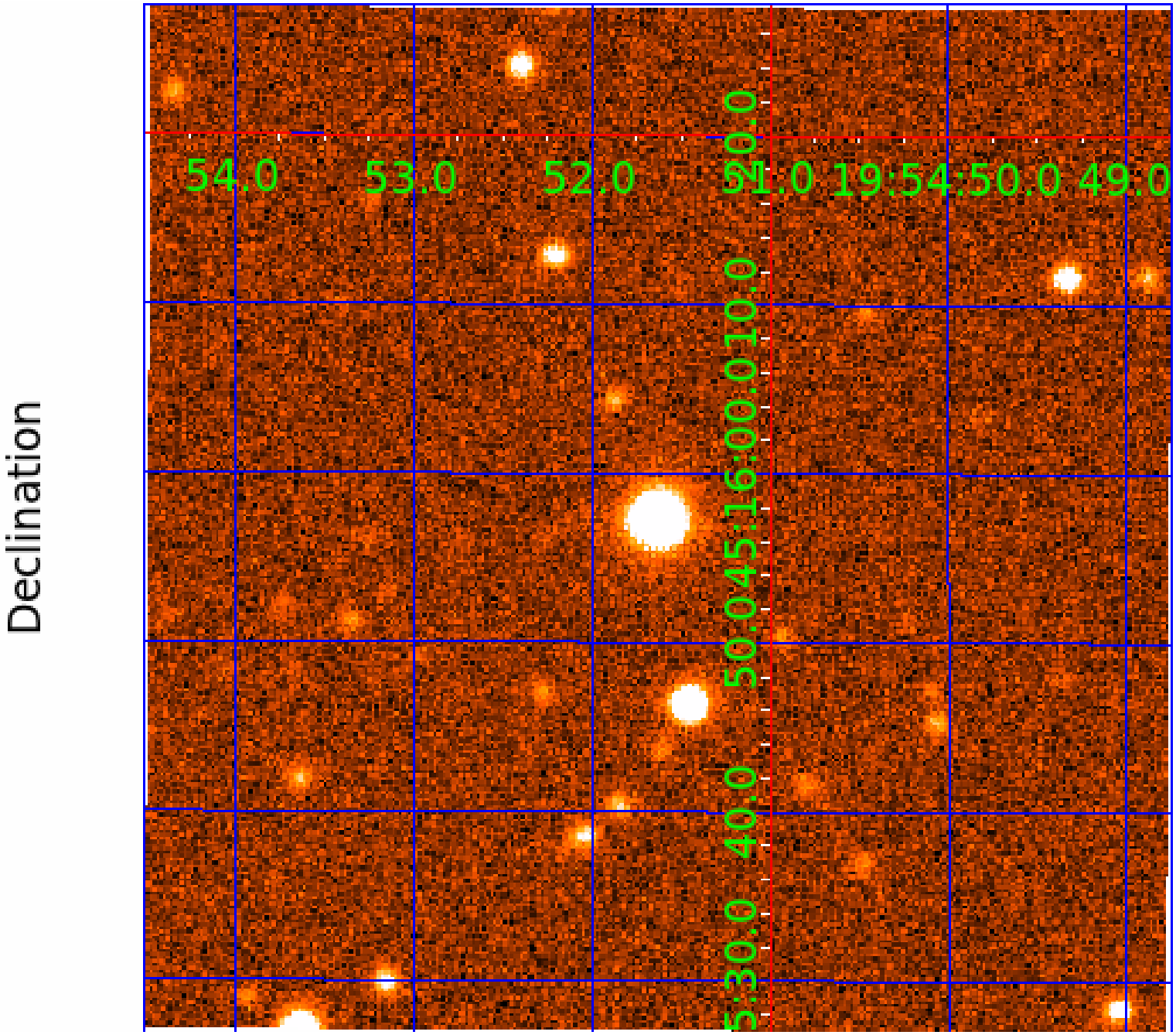


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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50.0
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40.0
30.0
Declination