KIC 008979238

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 ($S_\oplus$)
008979238-01	OBS	No	0.539461	132.048623	0.9	4.137	12.3	0.6	1.89	6003	0.18	23670.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008979238-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

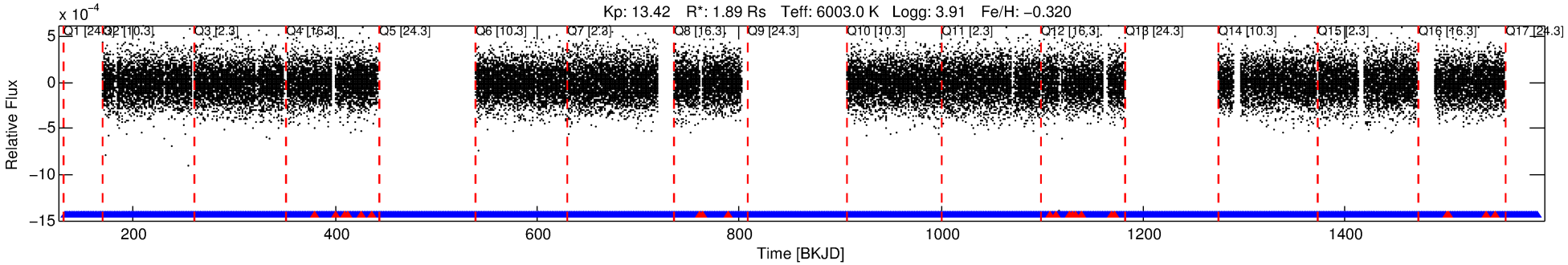
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

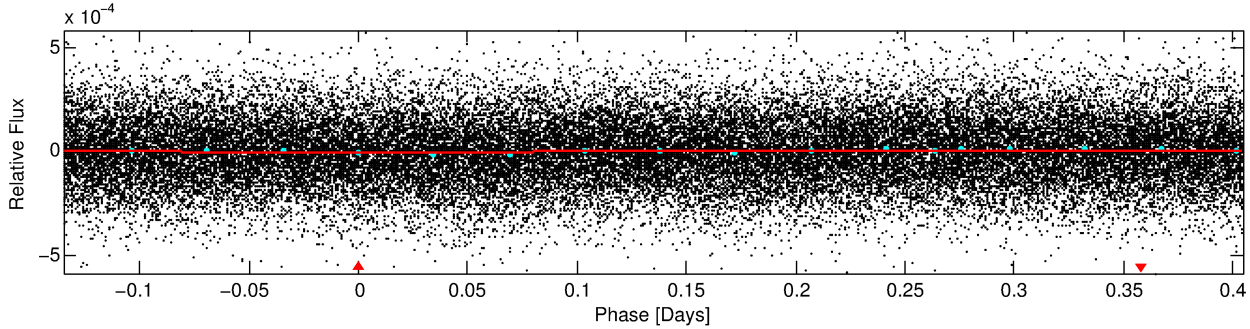
Ephemeris Match Information For 008979238-01

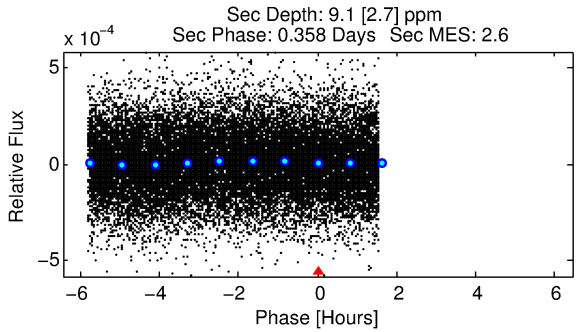
No Significant Match Found

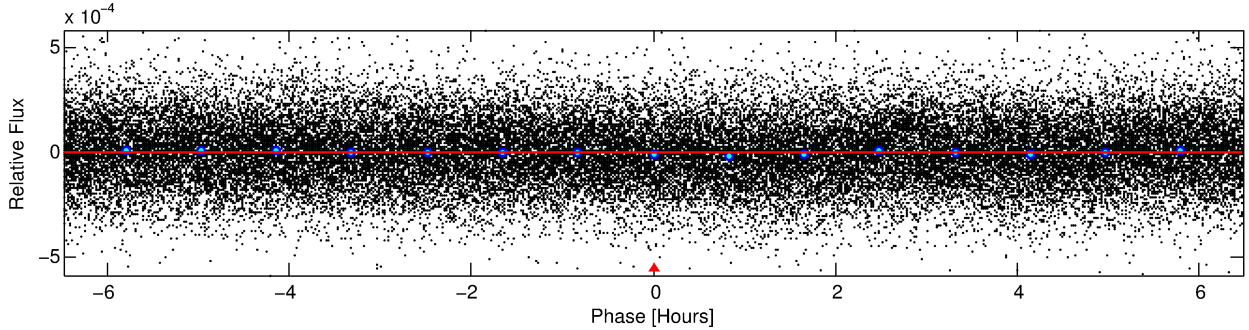
DV One-Page Summary

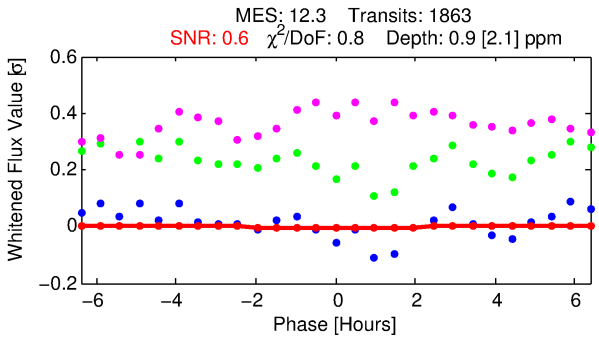
KIC: 8979238 Candidate: 1 of 1 Period: 0.539 d

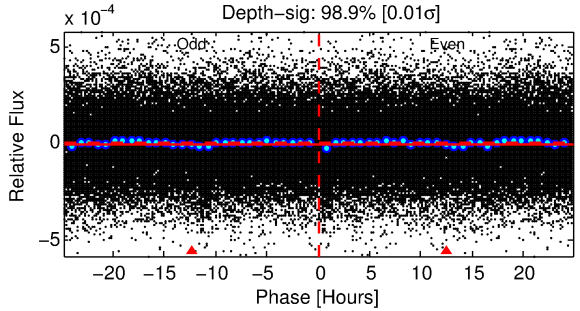


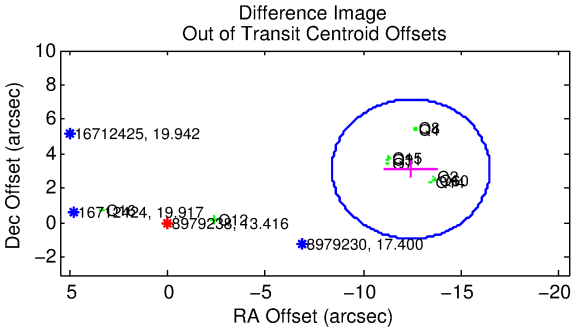












DV Fit Results:

Period = 0.53946 [0.00017] d
Epoch = 132.0486 [0.0749] BKJD
Rp/R* = 0.0009 [0.0128]
a/R* = 1.17 [22.73]
b = 0.27 [246.39]

Seff = 23670.93 [18851.31]
Teq = 3163 [630] K
Rp = 0.19 [2.64] Re
a = 0.0133 [0.0063] AU

Ag = 25.68 [731.81] [0.03σ]
Teffp = 11008 [78396] K [0.10σ]

DV Diagnostic Results:

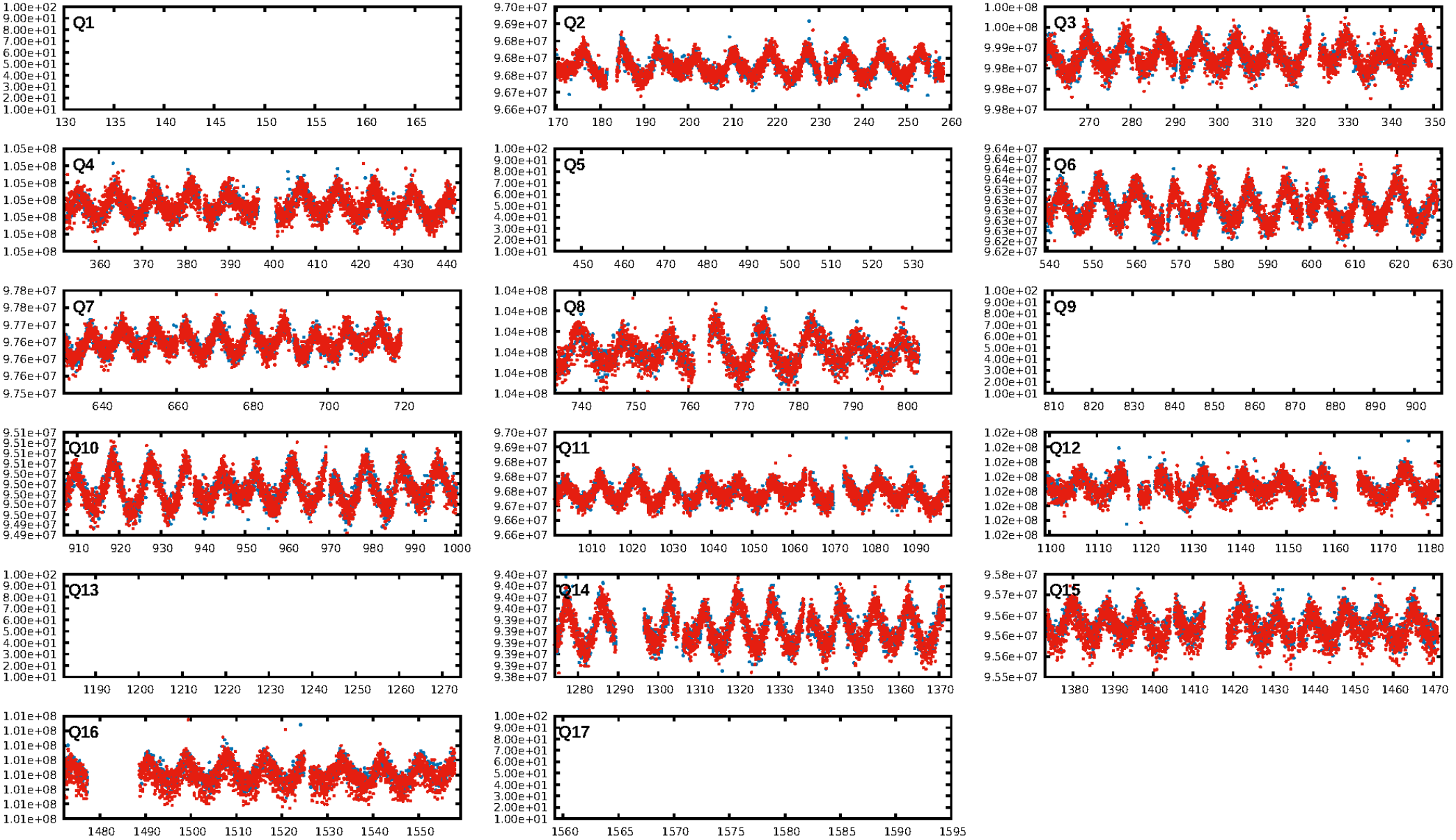
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 0.99 [1842/1863]
GhostDiagnostic−chr: N/A

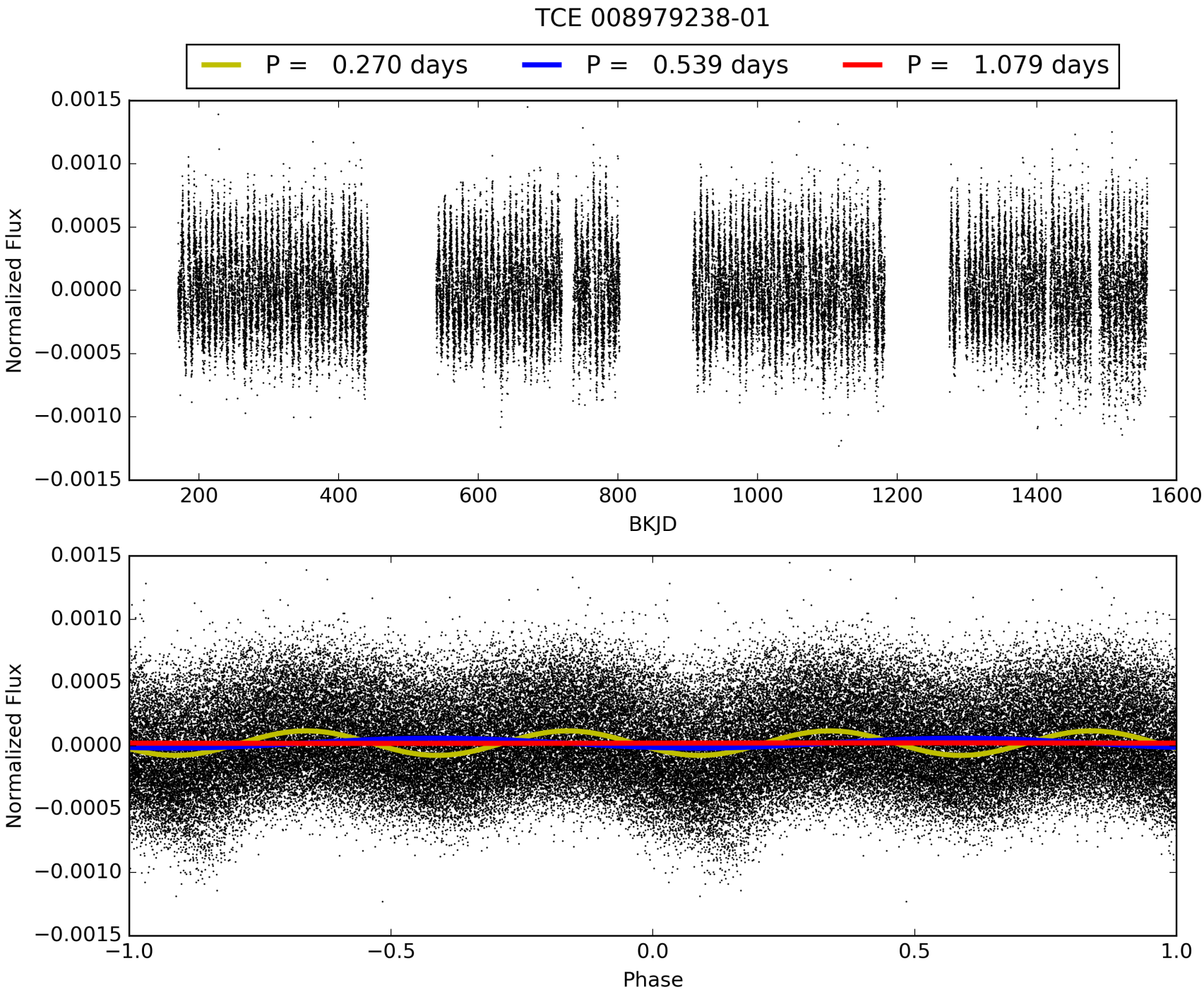
Centroid−sig: N/A
Centroid−so: N/A
OotOffset−rm: 12.816 arcsec [9.53σ]
KicOffset−rm: 12.998 arcsec [8.54σ]
OotOffset−st: 4/4/4/0 [12]
KicOffset−st: 4/4/4/0 [12]
DiffImageQuality−fgm: 0.33 [4/12]
DiffImageOverlap−fno: 1.00 [12/12]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 09:41:58 Z

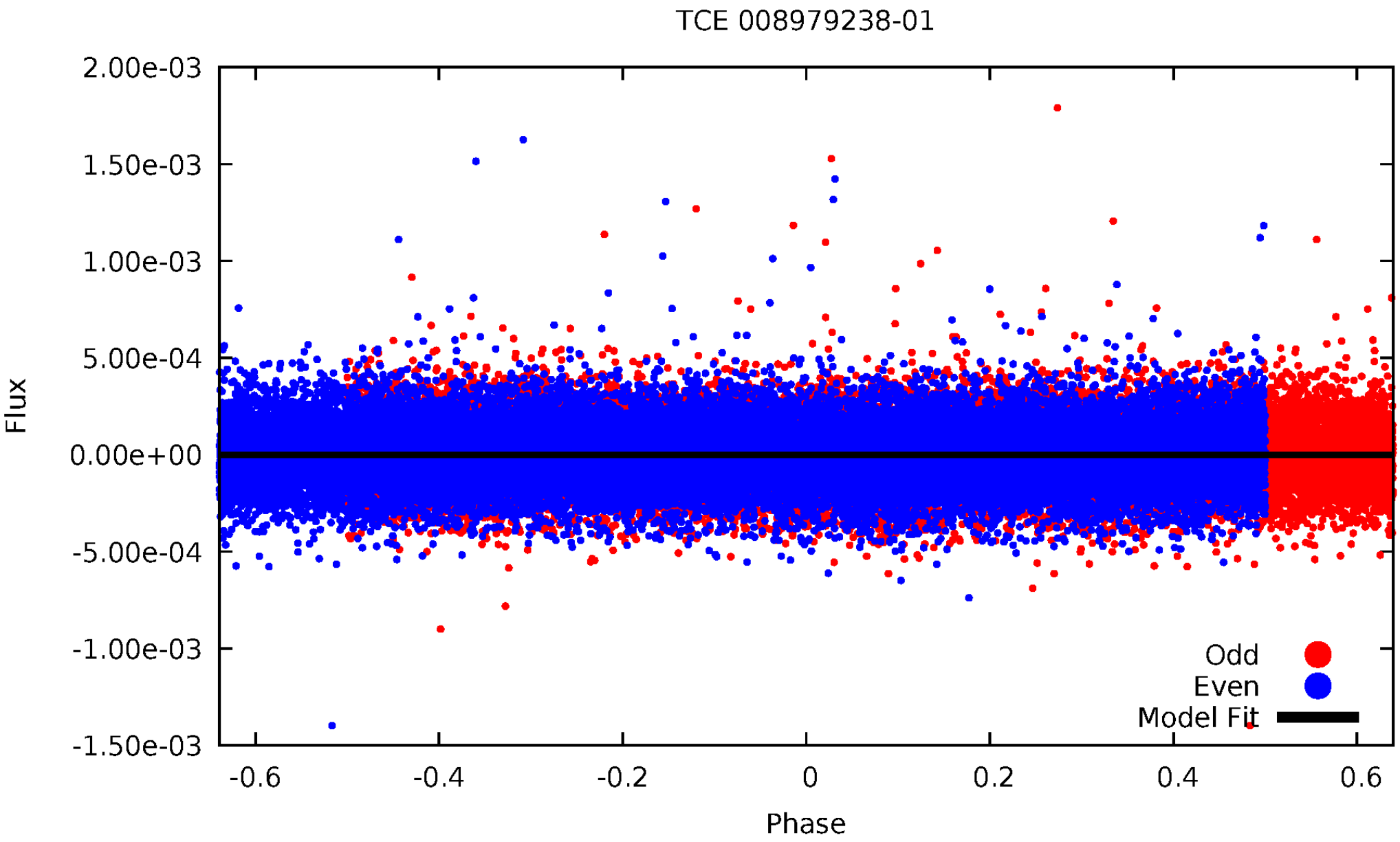
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008979238-01, PDC Light Curves

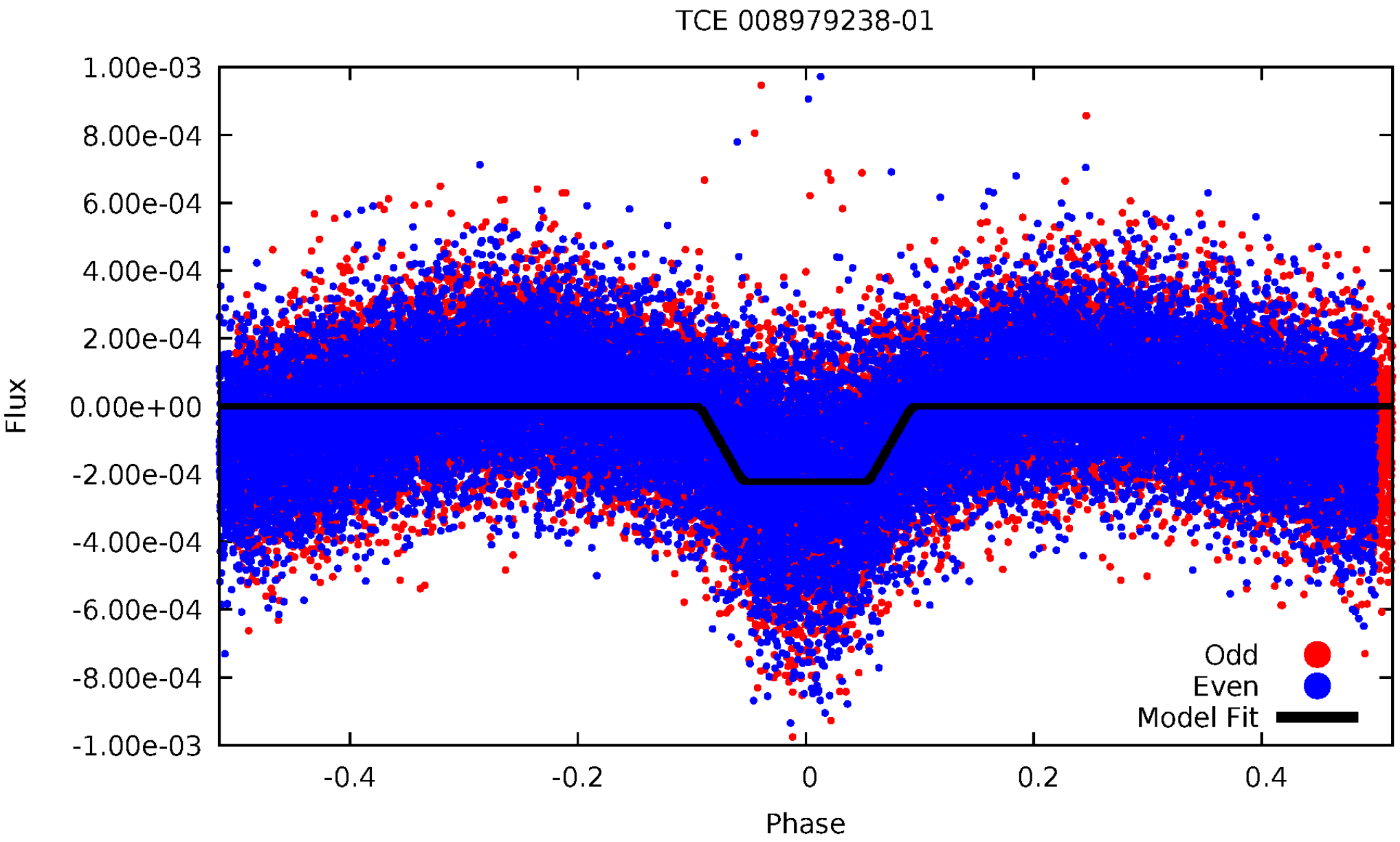



TCE 008979238-01
P = 0.270 days
P = 0.539 days
P = 1.079 days
Normalized Flux
BKJD
Normalized Flux
Phase

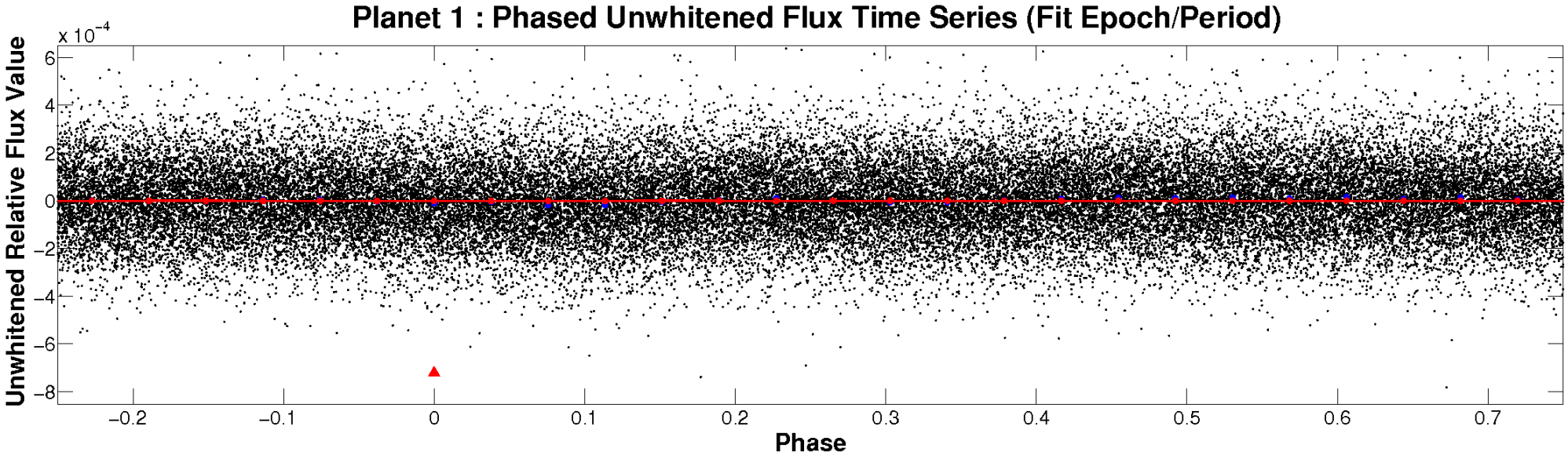
DV Odd/Even

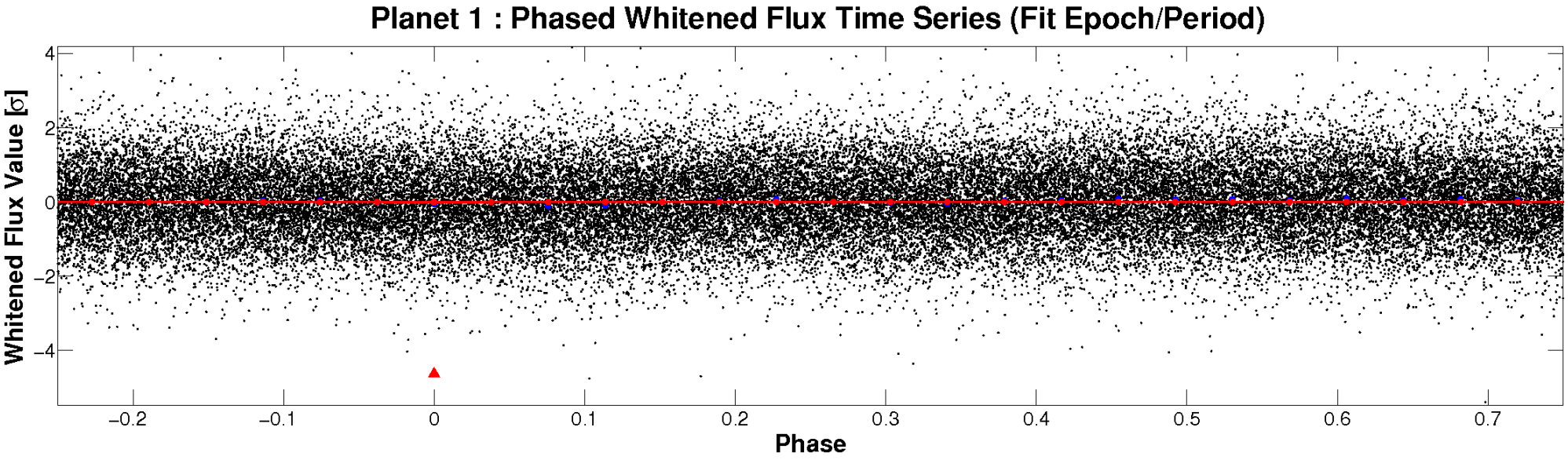

TCE 008979238-01
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008979238-01
1.00e-03
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
Flux
-0.4
-0.2
0
0.2
0.4
Phase
Odd
Even
Model Fit

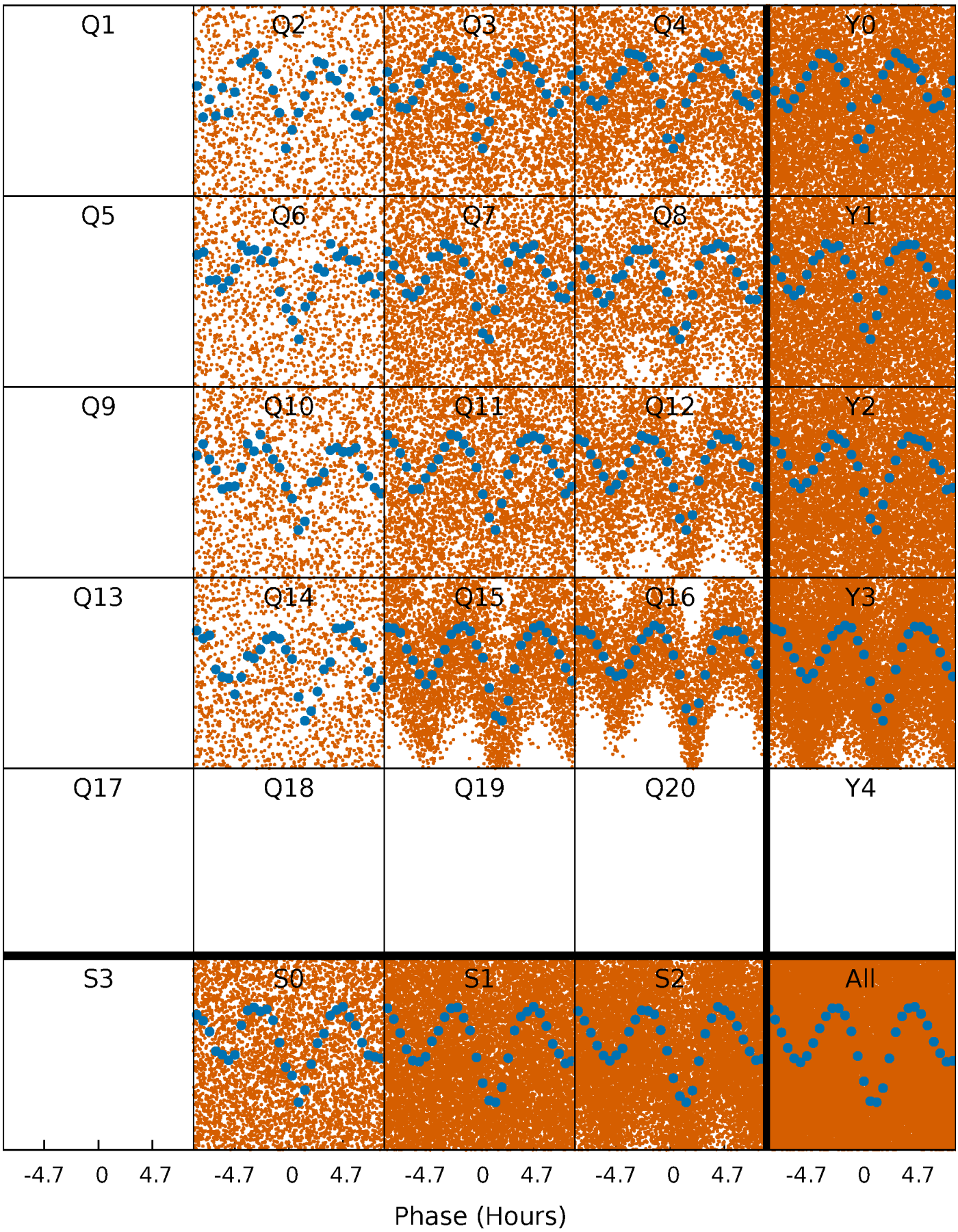
Non-Whitened Vs. Whitened Light Curve





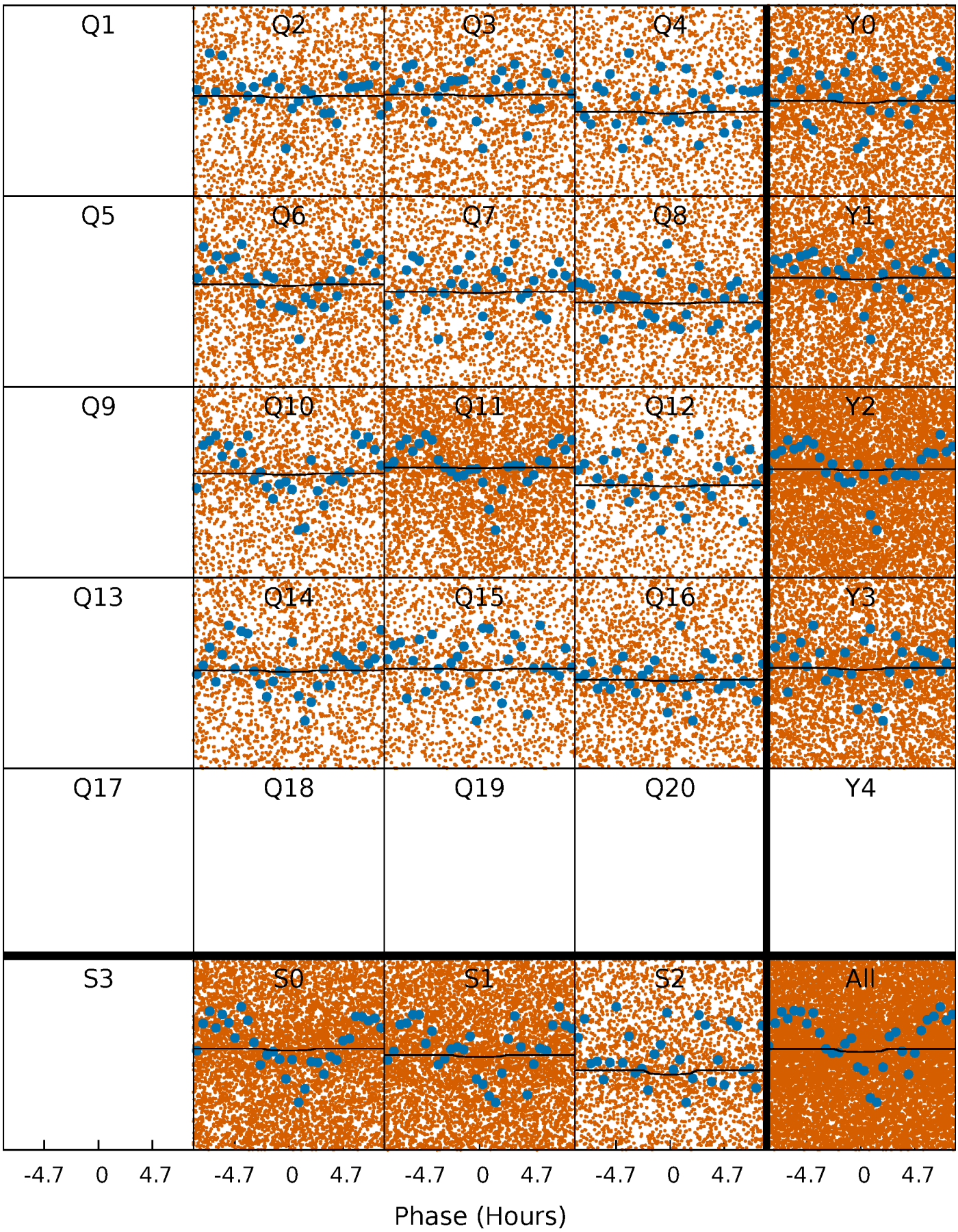
PDC Quarter-Phased Transit Curves

TCE 008979238-01 P= 0.539461 Days T_0=132.048623 (BKJD)



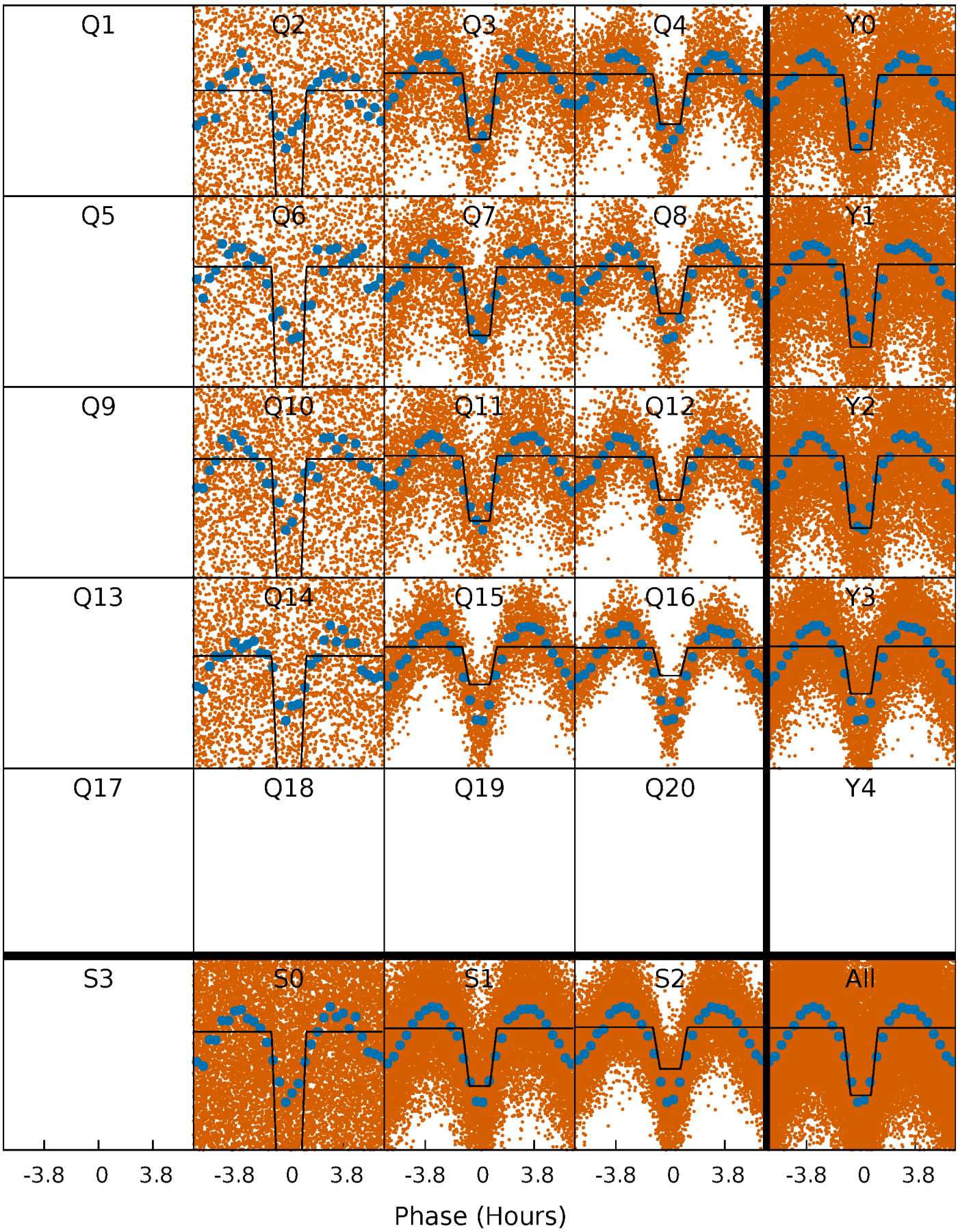
DV Quarter-Phased Transit Curves

TCE 008979238-01 P= 0.539461 Days T_0=132.048623 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

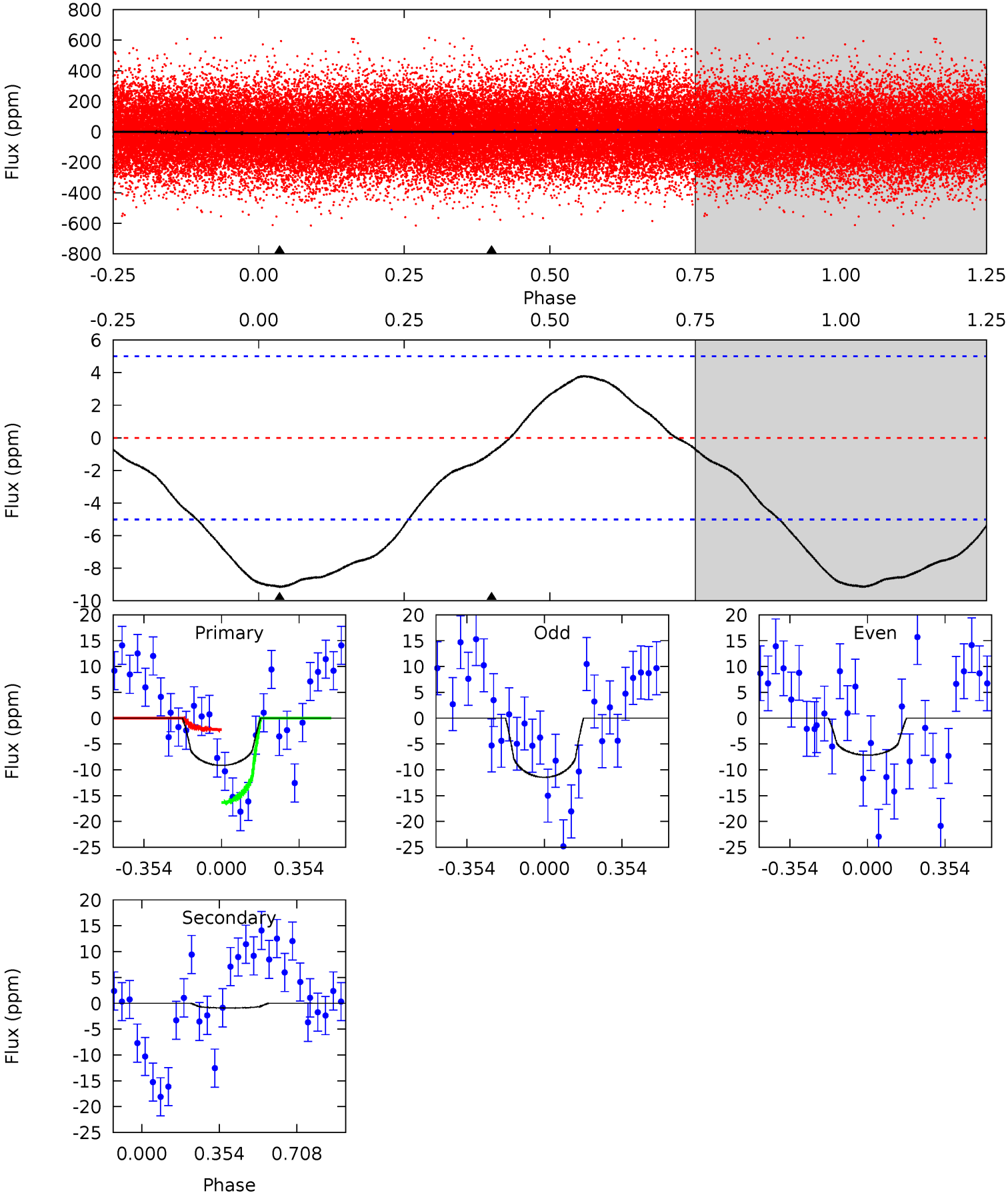
TCE 008979238-01 P= 0.539493 Days T_0=132.044344 (BKJD)



DV Model-Shift Uniqueness Test

008979238-01, P = 0.539461 Days, E = 132.048623 Days

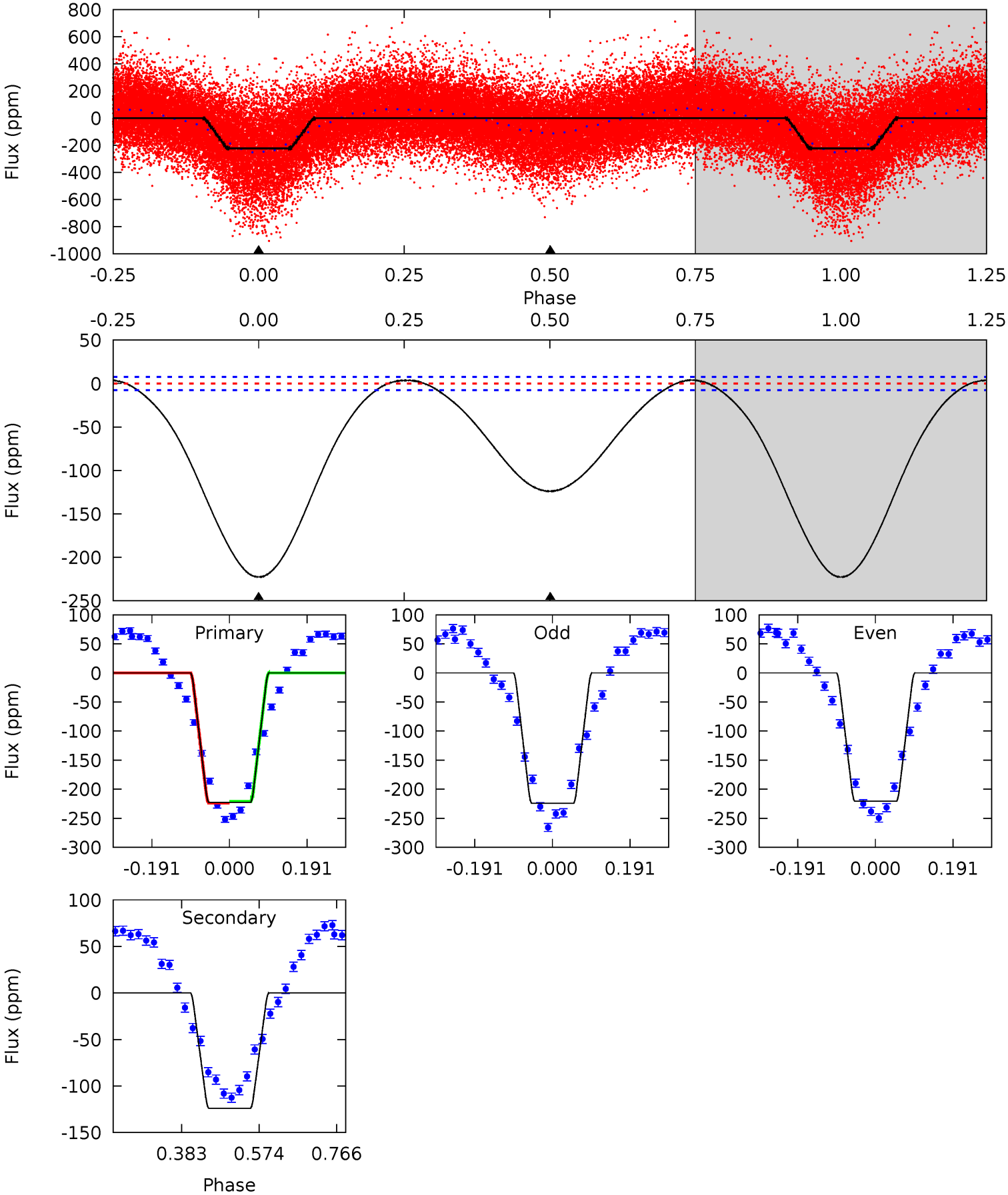
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.83	0.78	0	0	4.29	0.93	0.68	7.83	7.83	0.78	0.78	1.83	0.92	0.29	6.22



Alt Model-Shift Uniqueness Test

008979238-01, P = 0.539493 Days, E = 132.044344 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
128.6	71.6	0	0	4.43	1.31	2.89	128.6	128.6	71.6	71.6	1.08	1.05	0.02	0.83



Stellar Parameters For KIC 008979238

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6003^{+181}_{-181}	$3.913^{+0.472}_{-0.126}$	$-0.320^{+0.300}_{-0.300}$	$1.891^{+0.470}_{-0.873}$	$1.068^{+0.162}_{-0.197}$	$0.223^{+1.138}_{-0.094}$
	+3%/-3%	+12%/-3%	+94%/-94%	+25%/-46%	+15%/-18%	+511%/-42%
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 008979238-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1±1	$1.63^{+1.85}_{-1.15}$	4294^{+361}_{-543}	-3744^{+1233}_{-325}	$0.022^{+0.251}_{-0.026}$
Alt.	-124±2	$3.11^{+2.47}_{-1.90}$	4327^{+296}_{-515}	4686^{+3205}_{-1514}	$1.228^{+7.043}_{-0.836}$

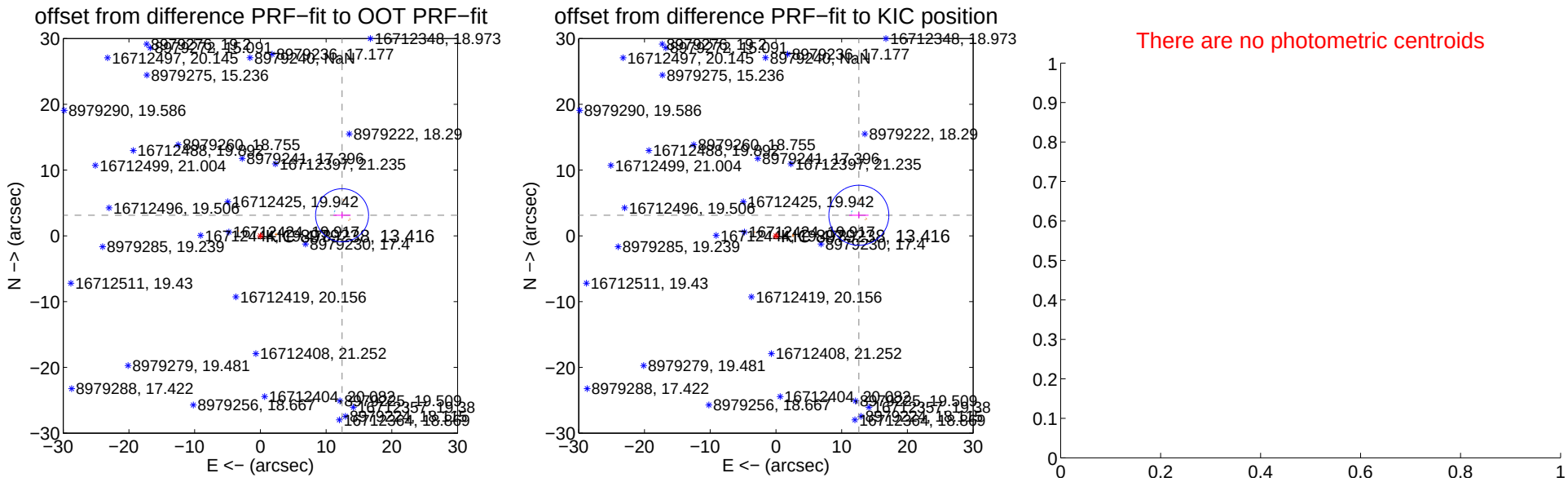
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

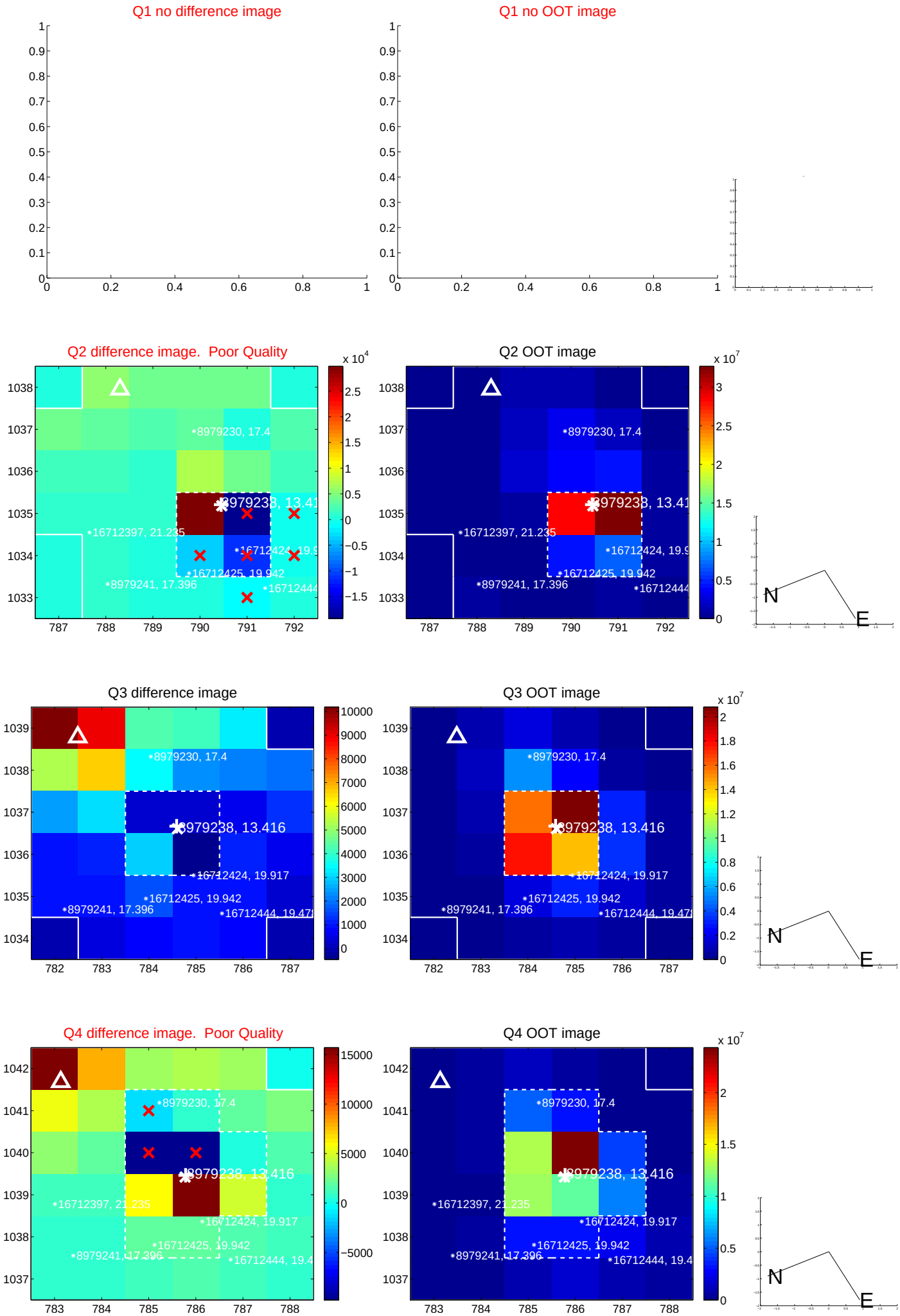
Supplemental centroid analysis for 008979238-01. Kepler magnitude: 13.42. Transit SNR 0.59
There are 4 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	12.816 ± 1.344	9.53	-12.428 ± 1.310	3.130 ± 0.472
PRF-fit source offset from KIC position	12.998 ± 1.521	8.54	-12.616 ± 1.482	3.128 ± 0.473
photometric centroid source offset	—	—	—	—

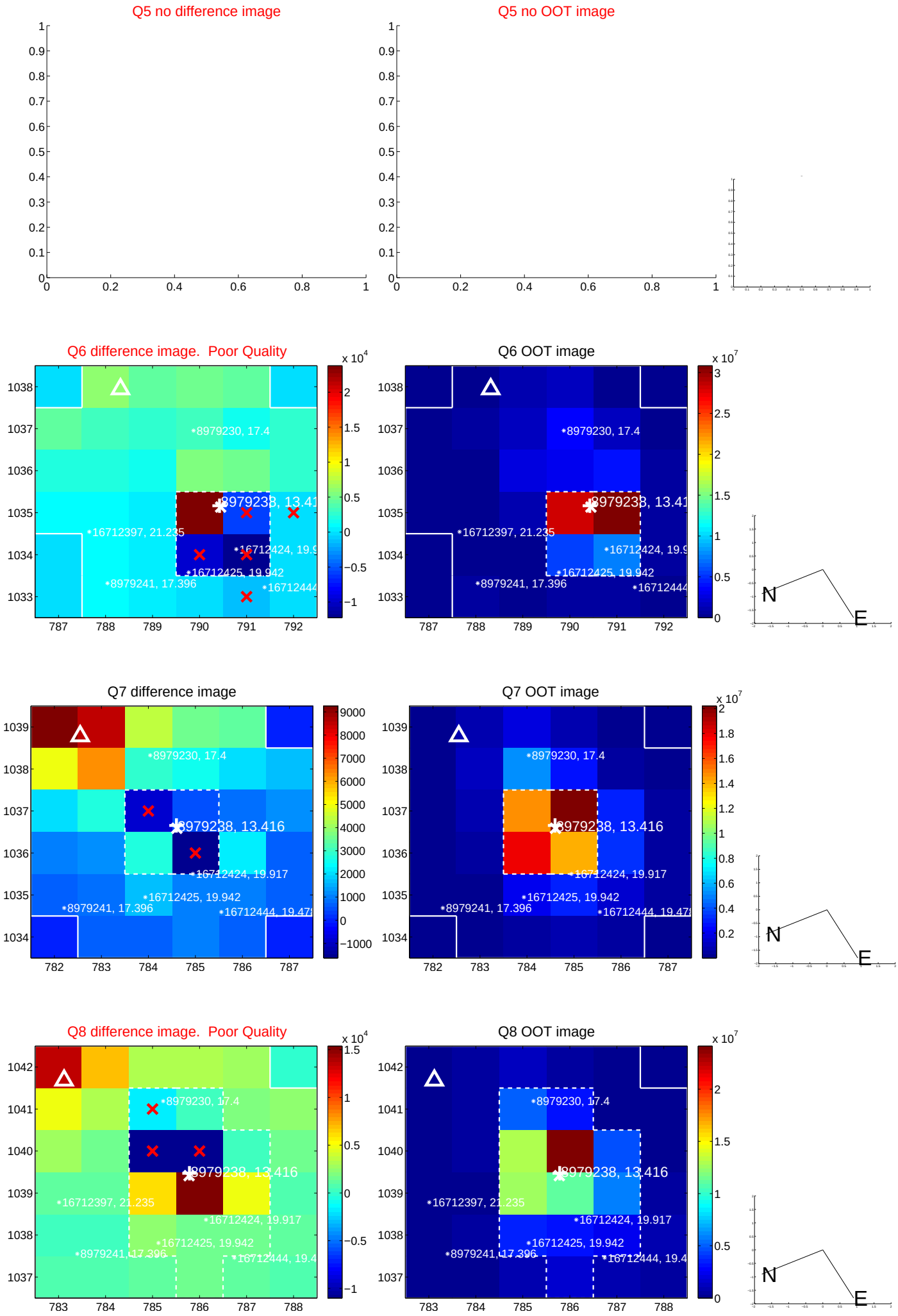


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

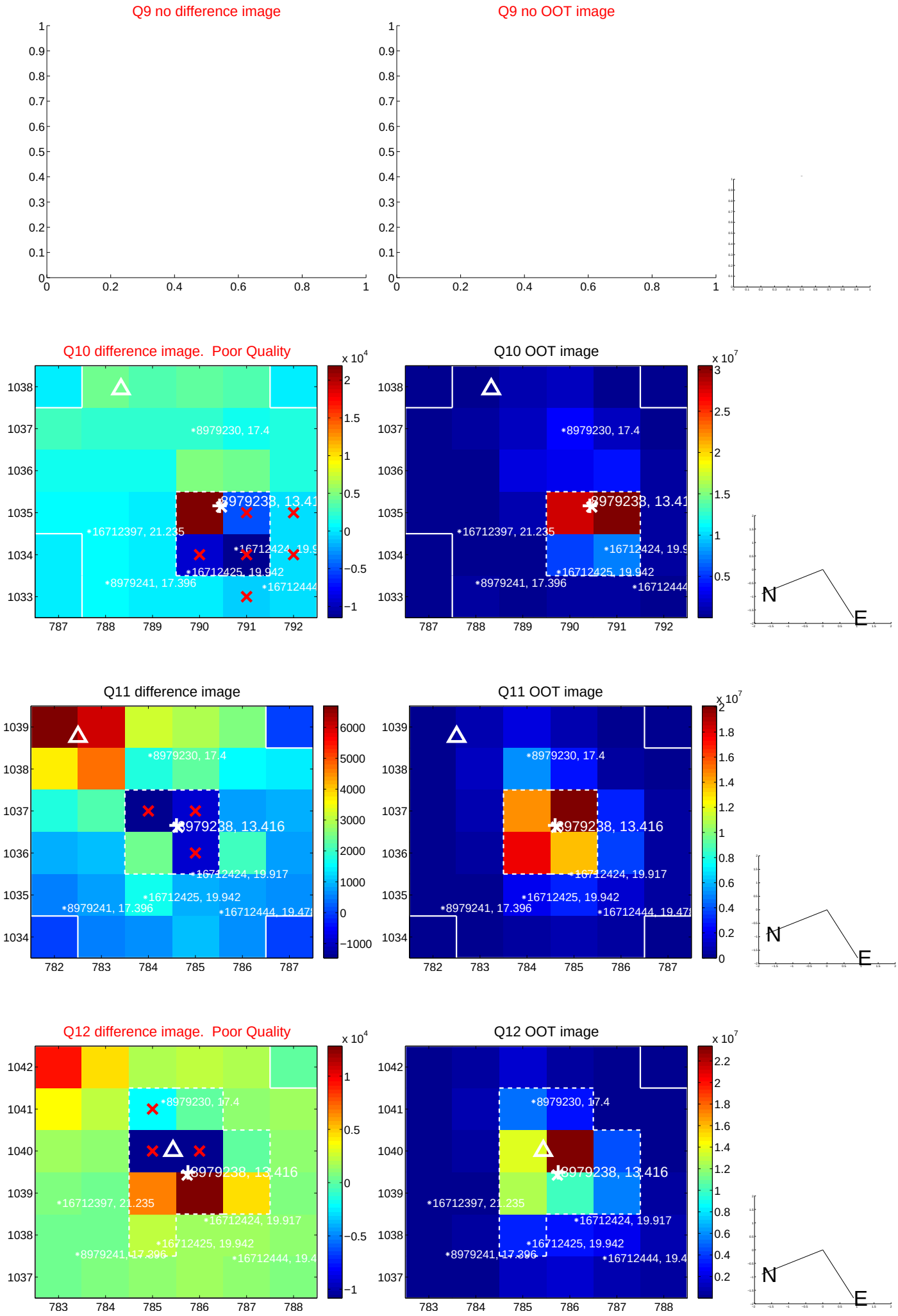
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



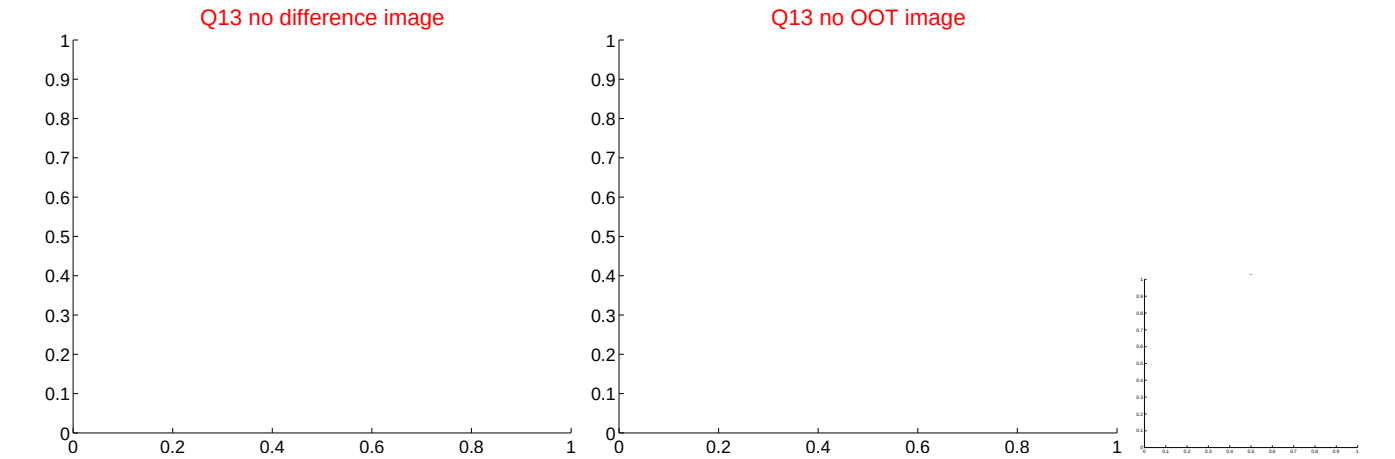
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

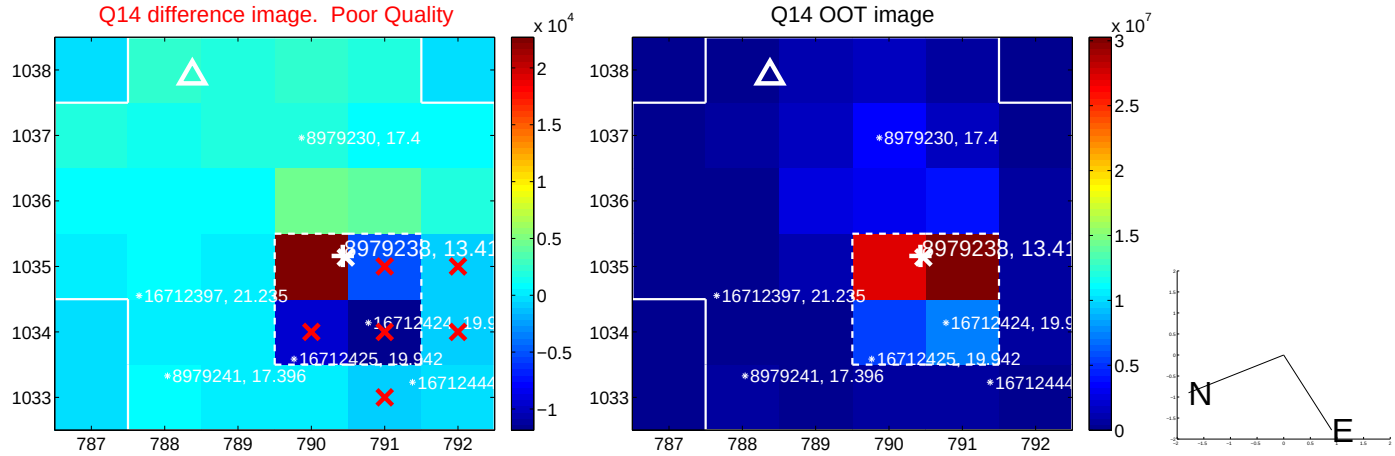


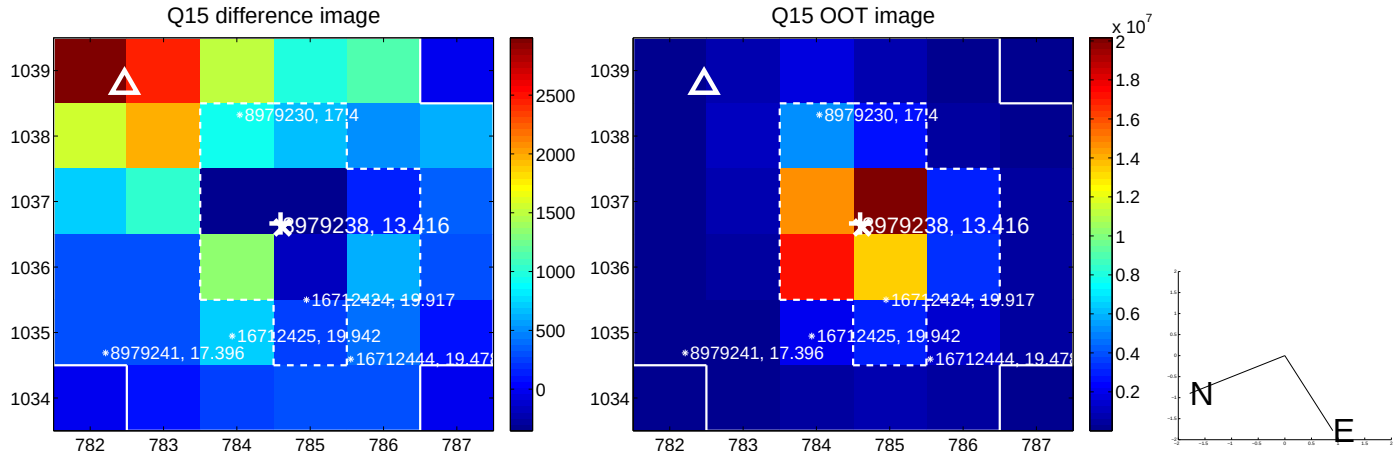
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

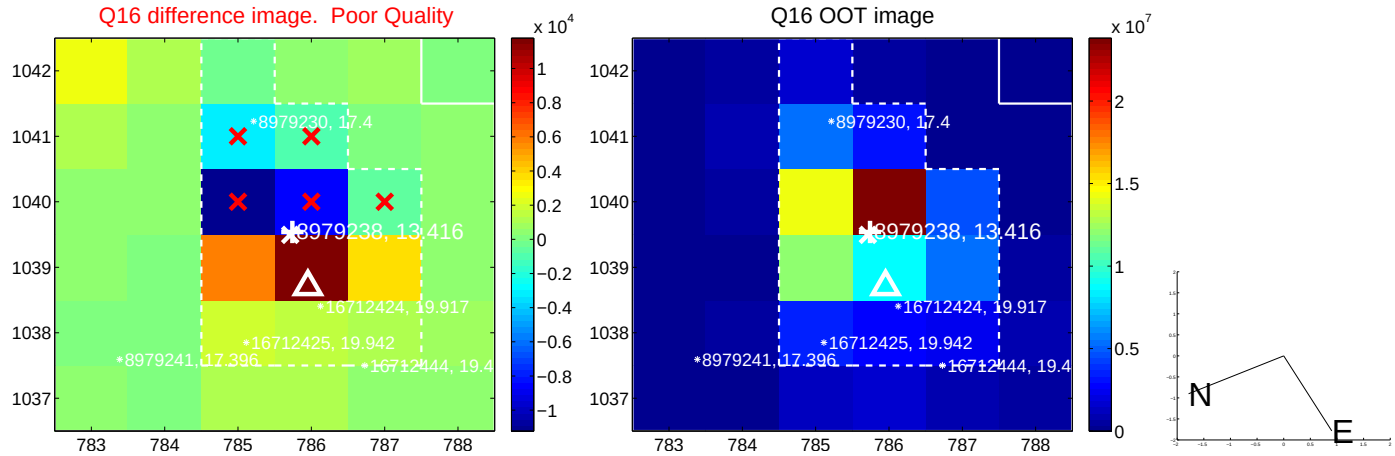


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

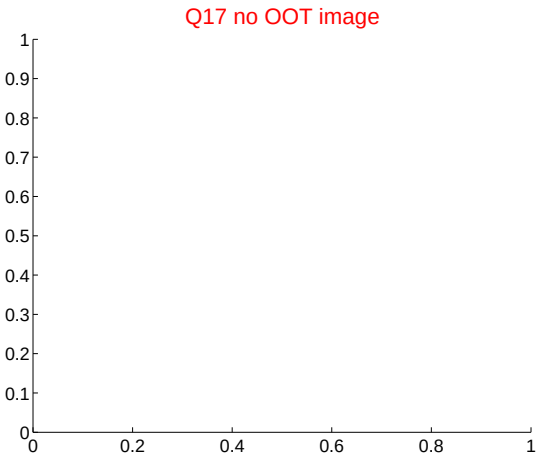


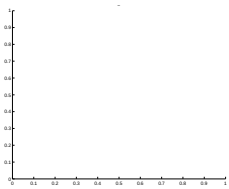






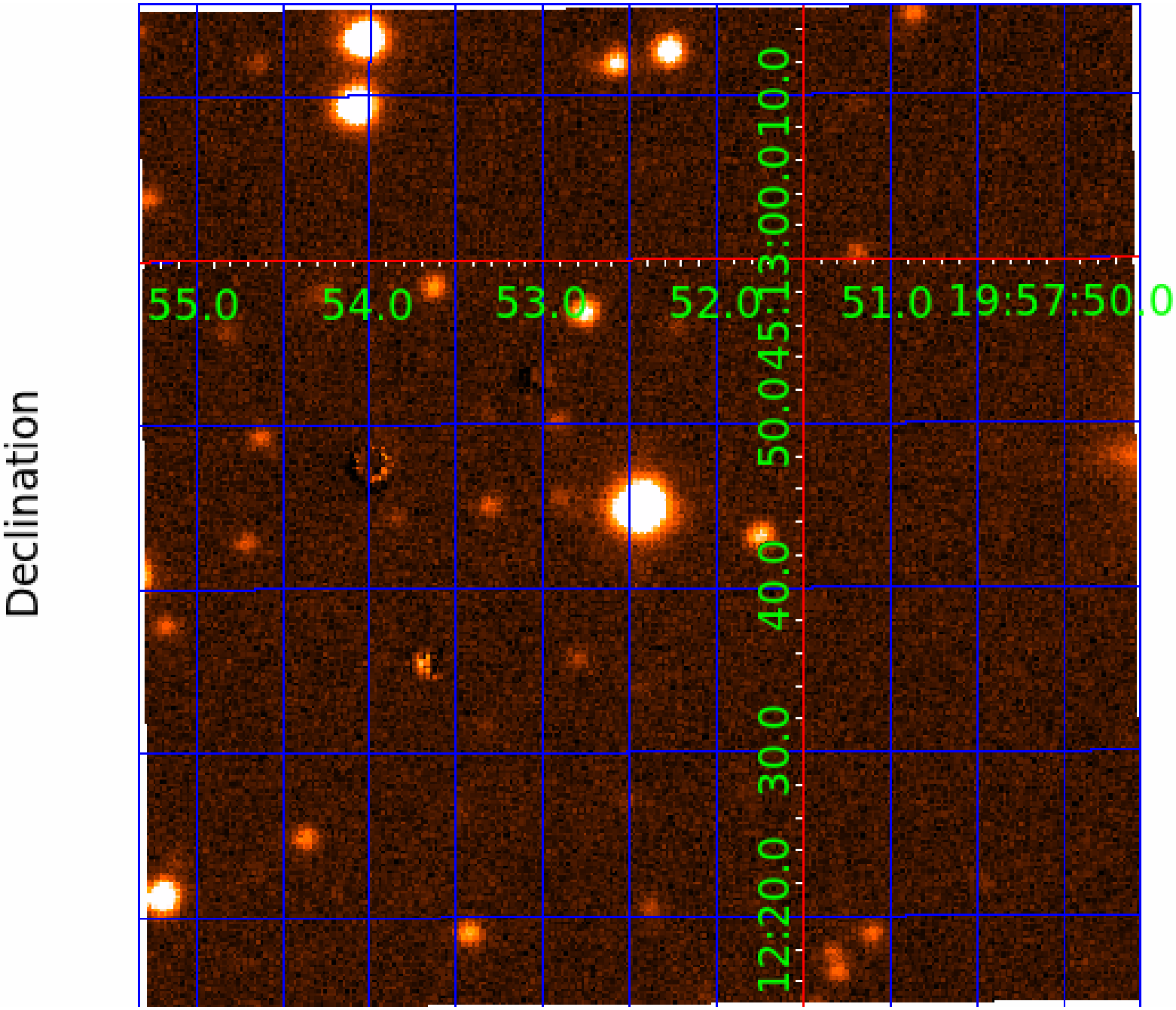
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





olded centroid time series figure for this object.

UKIRT Image


Declination
12:20.0
30.0
40.0
50.0
45.0
13:00.0
10.0
55.0
54.0
53.0
52.0
51.0
19:57:50.0