KIC 009207508

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 ($S_\oplus$)
009207508-01	OBS	7146.01	2.015165	132.103567	89295.7	4.500	18744.7	-1.0	1.65	6988	50.01	4663.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009207508-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—CENT_NOFITS

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.

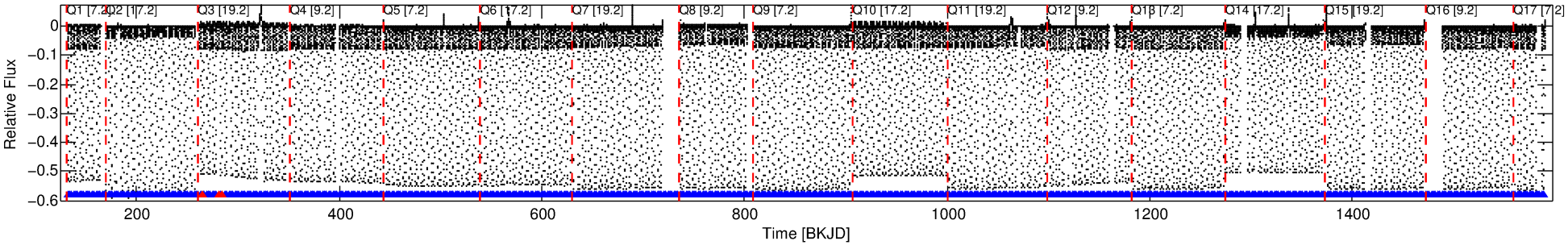
Ephemeris Match Information For 009207508-01

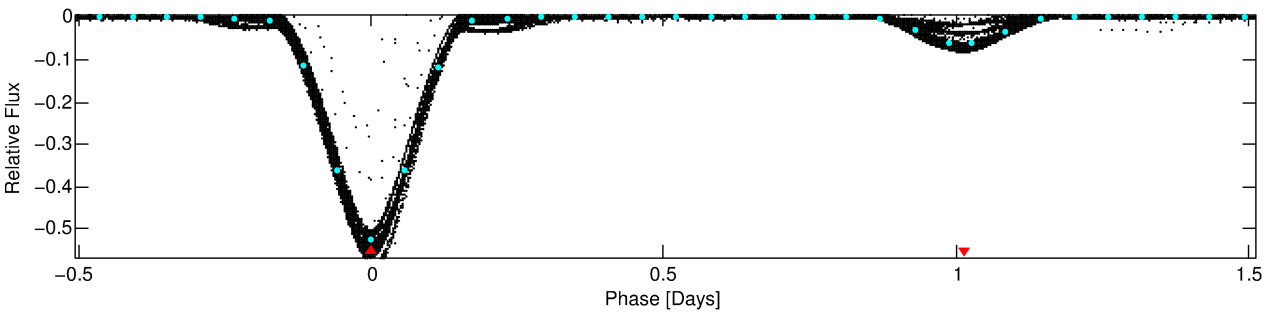
No Significant Match Found

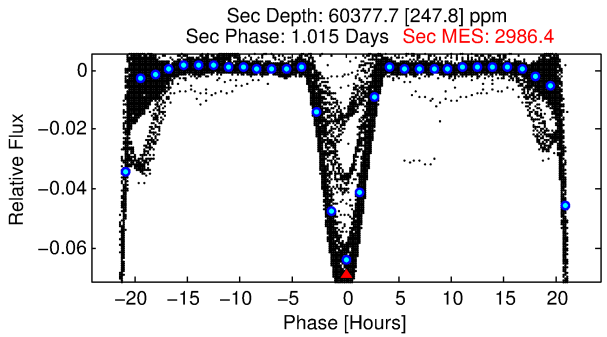
DV One-Page Summary

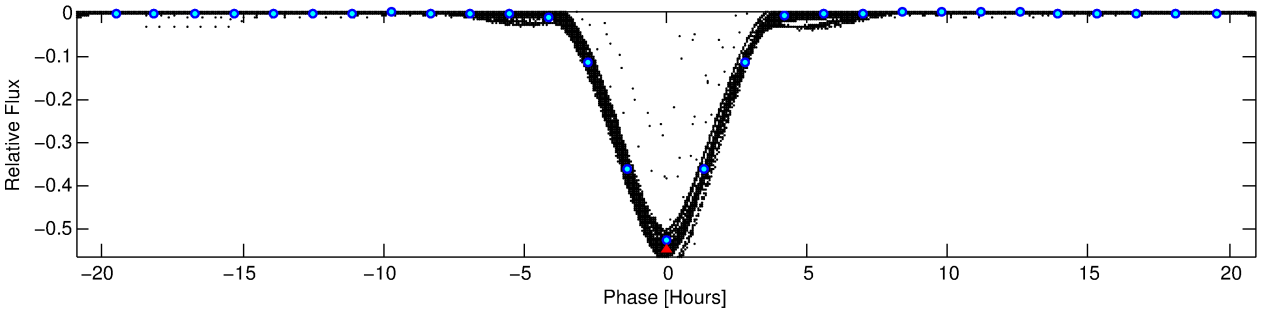
KIC: 9207508 Candidate: 1 of 1 Period: 2.015 d
KOI: K07146 Corr: No Ephemeris Match

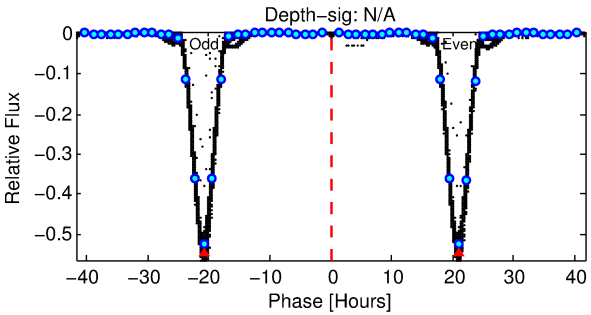
Kp: 13.70 R*: 1.65 Rs Teff: 6988.0 K Logg: 4.16 Fe/H: −0.040

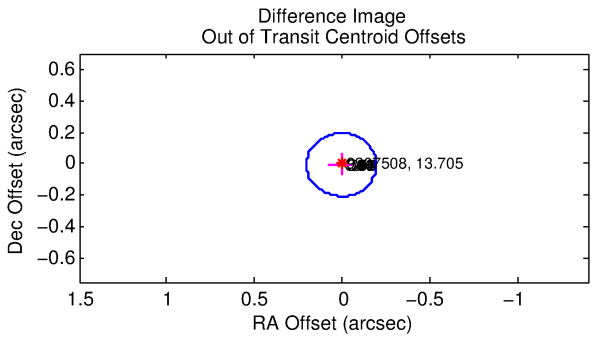












TPS TCE Results:

Period = 2.01517 d
Epoch = 132.1036 BKJD

DV fit results are unavailable

DV Diagnostic Results:

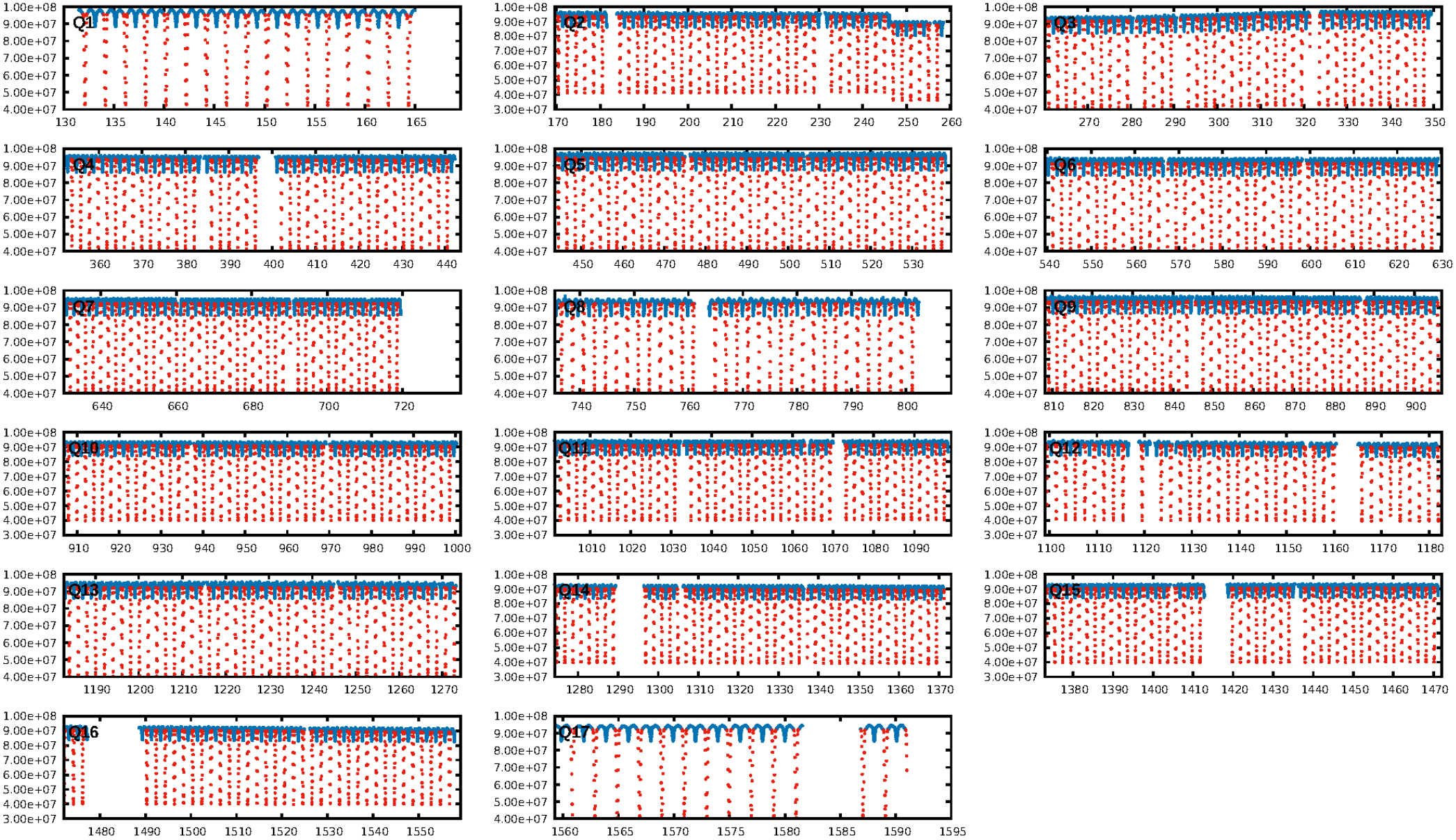
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [639/642]
GhostDiagnostic−chr: 0.9888

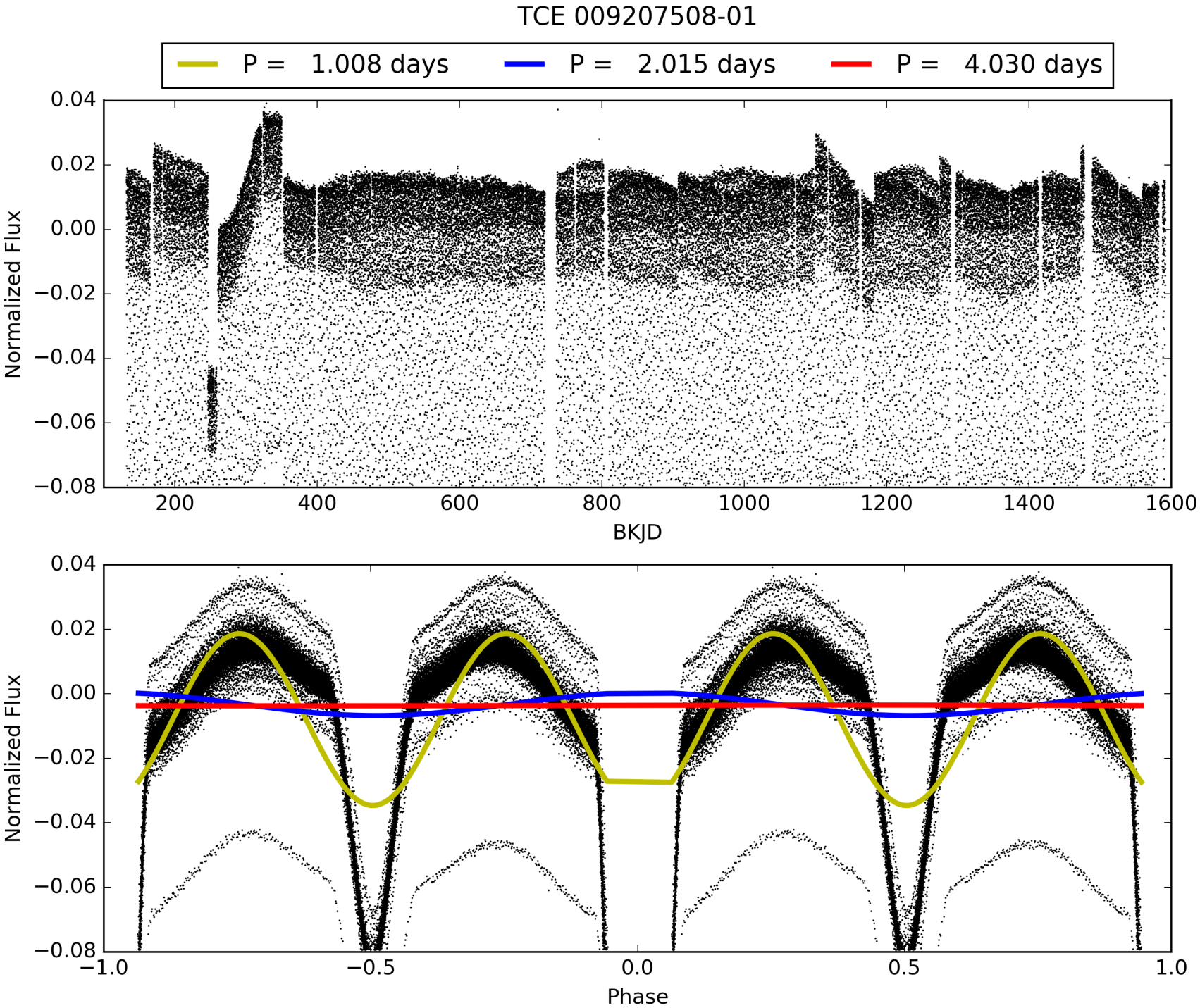
Centroid−sig: N/A
Centroid−so: 0.265 arcsec [1155.36σ]
OotOffset−rm: 0.008 arcsec [0.12σ]
KicOffset−rm: 0.237 arcsec [3.40σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 1.00 [17/17]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 07:14:09 Z

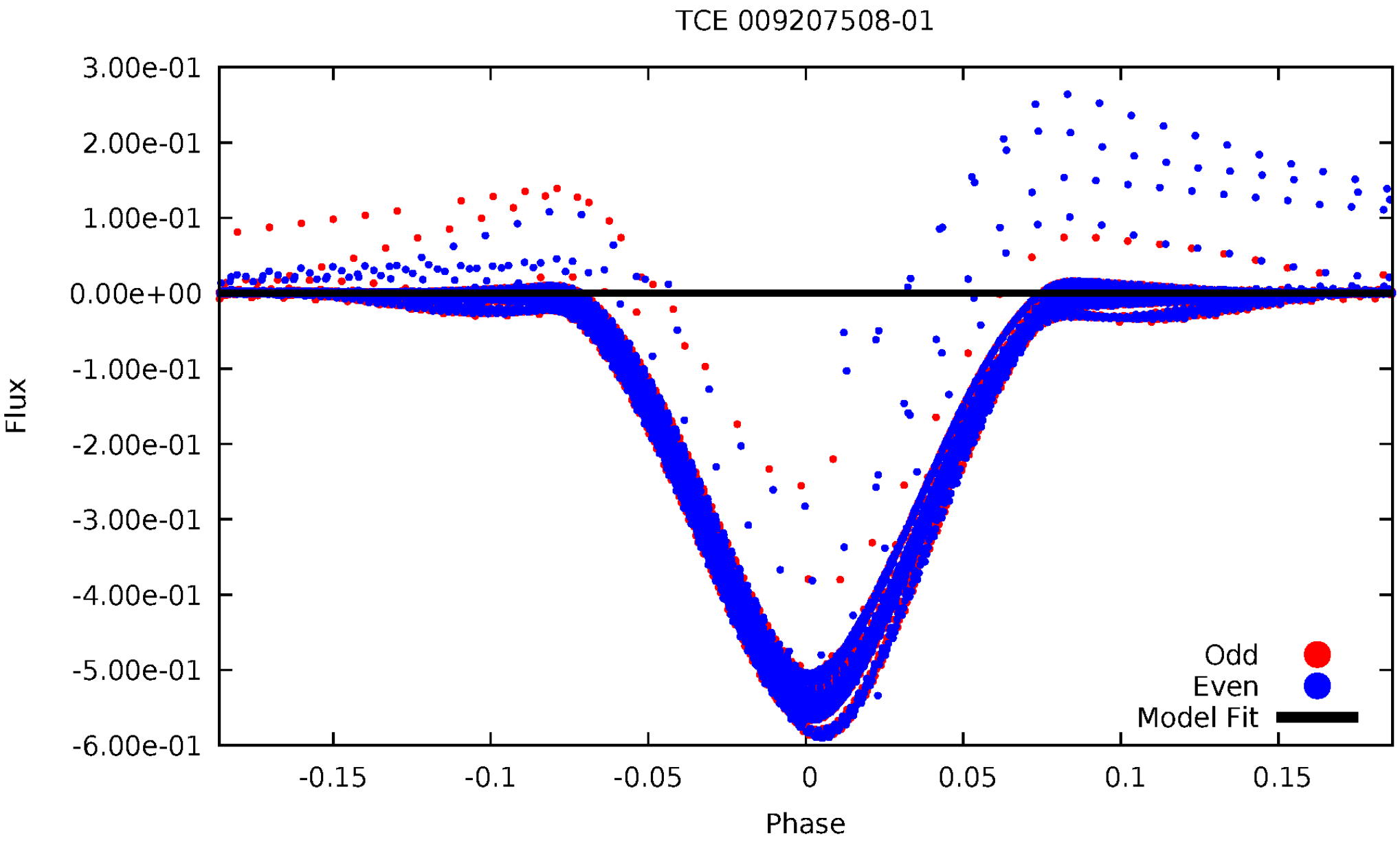
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009207508-01, PDC Light Curves

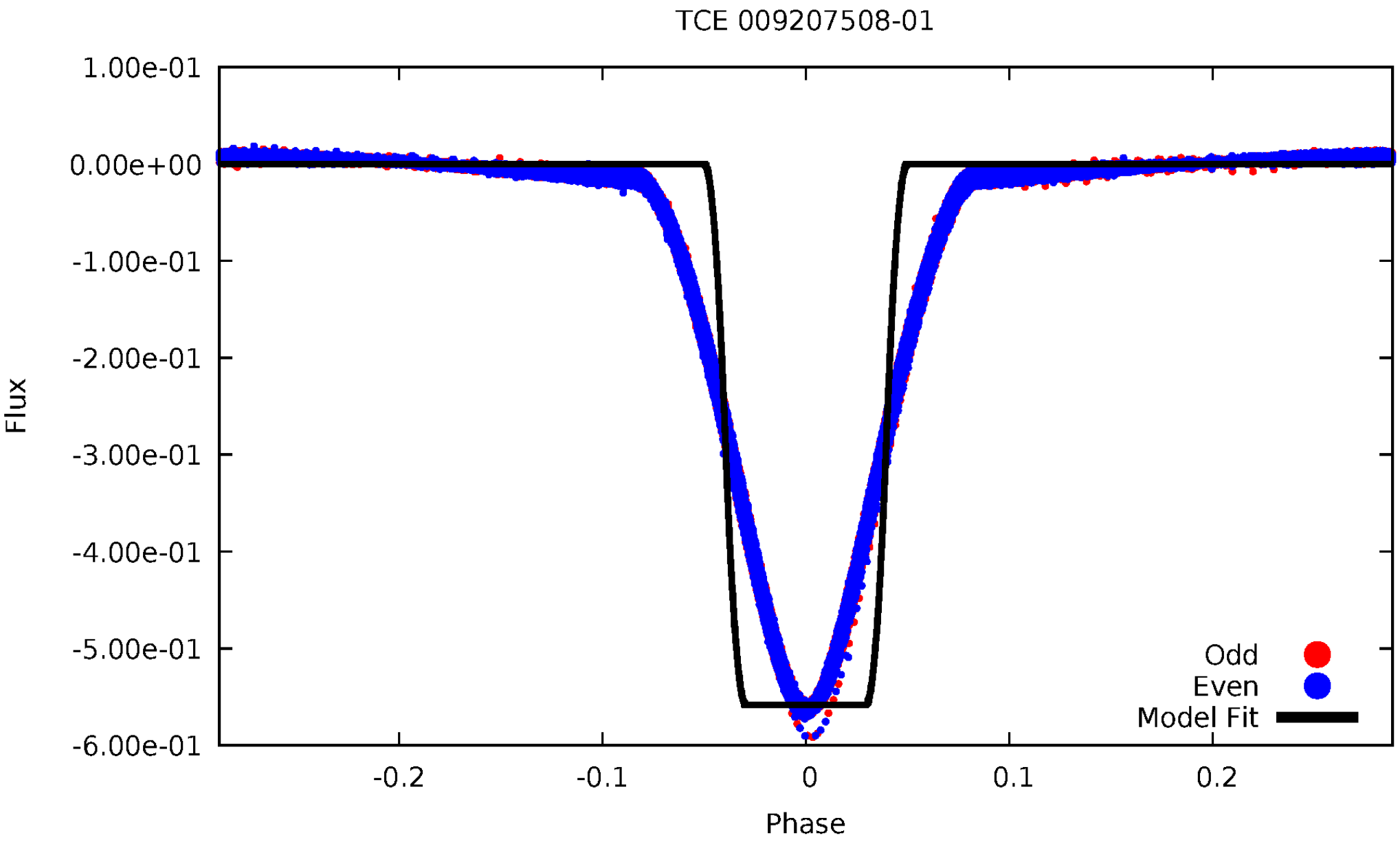



TCE 009207508-01
P = 1.008 days
P = 2.015 days
P = 4.030 days
Normalized Flux
BKJD
Phase
0.04
0.02
0.00
−0.02
−0.04
−0.06
−0.08
200
400
600
800
1000
1200
1400
1600
−1.0
−0.5
0.0
0.5
1.0

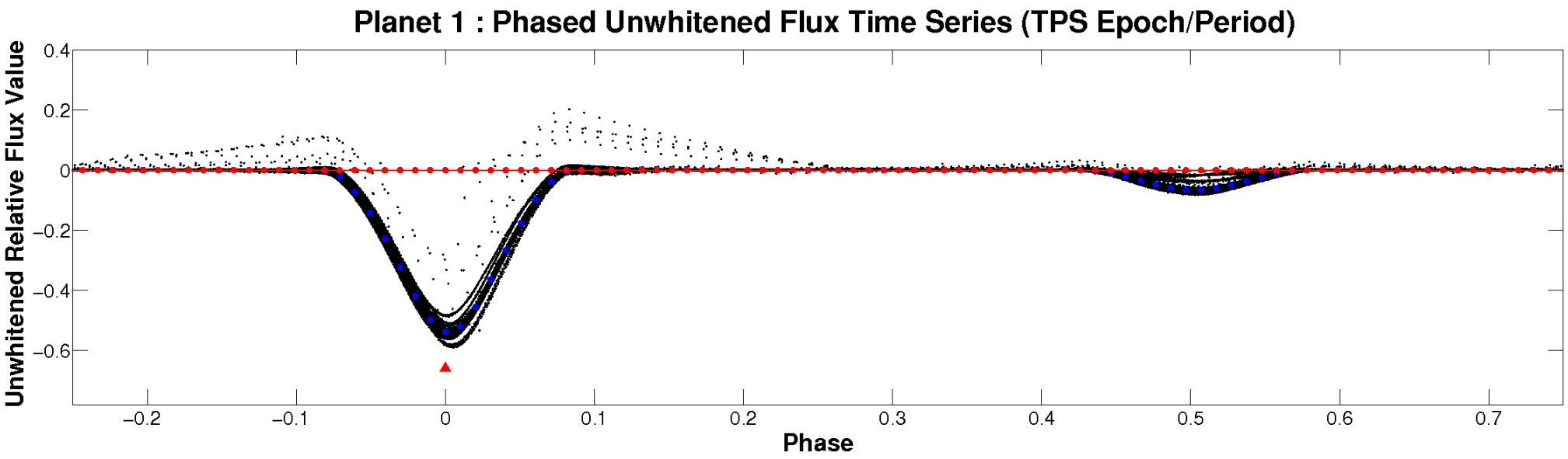
DV Odd/Even

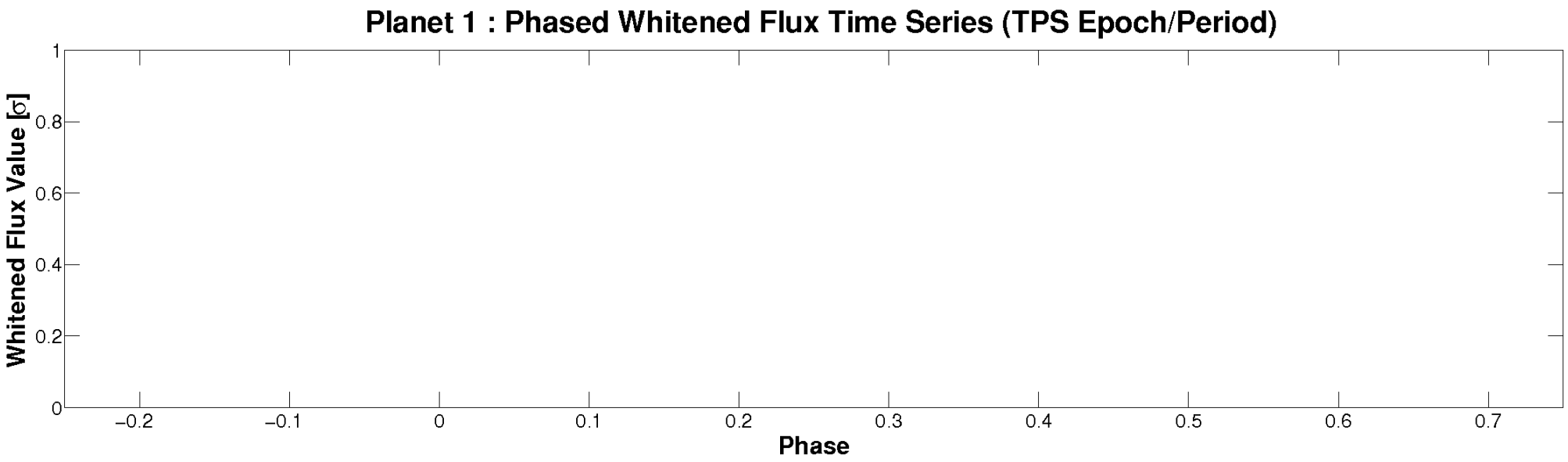

TCE 009207508-01
3.00e-01
2.00e-01
1.00e-01
0.00e+00
-1.00e-01
-2.00e-01
-3.00e-01
-4.00e-01
-5.00e-01
-6.00e-01
Flux
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009207508-01
1.00e-01
0.00e+00
-1.00e-01
-2.00e-01
-3.00e-01
-4.00e-01
-5.00e-01
-6.00e-01
Flux
-0.2
-0.1
0
0.1
0.2
Phase
Odd
Even
Model Fit

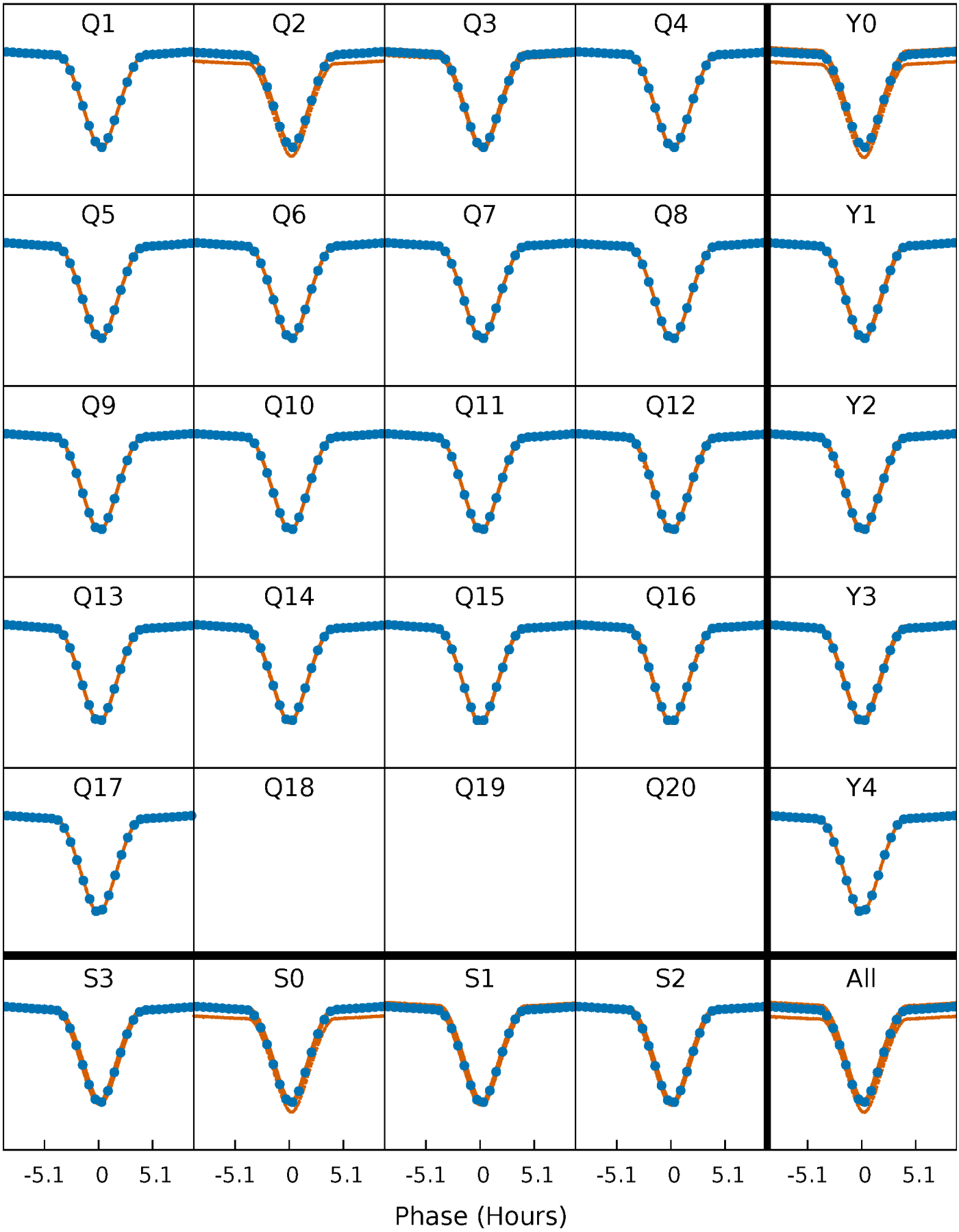
Non-Whitened Vs. Whitened Light Curve





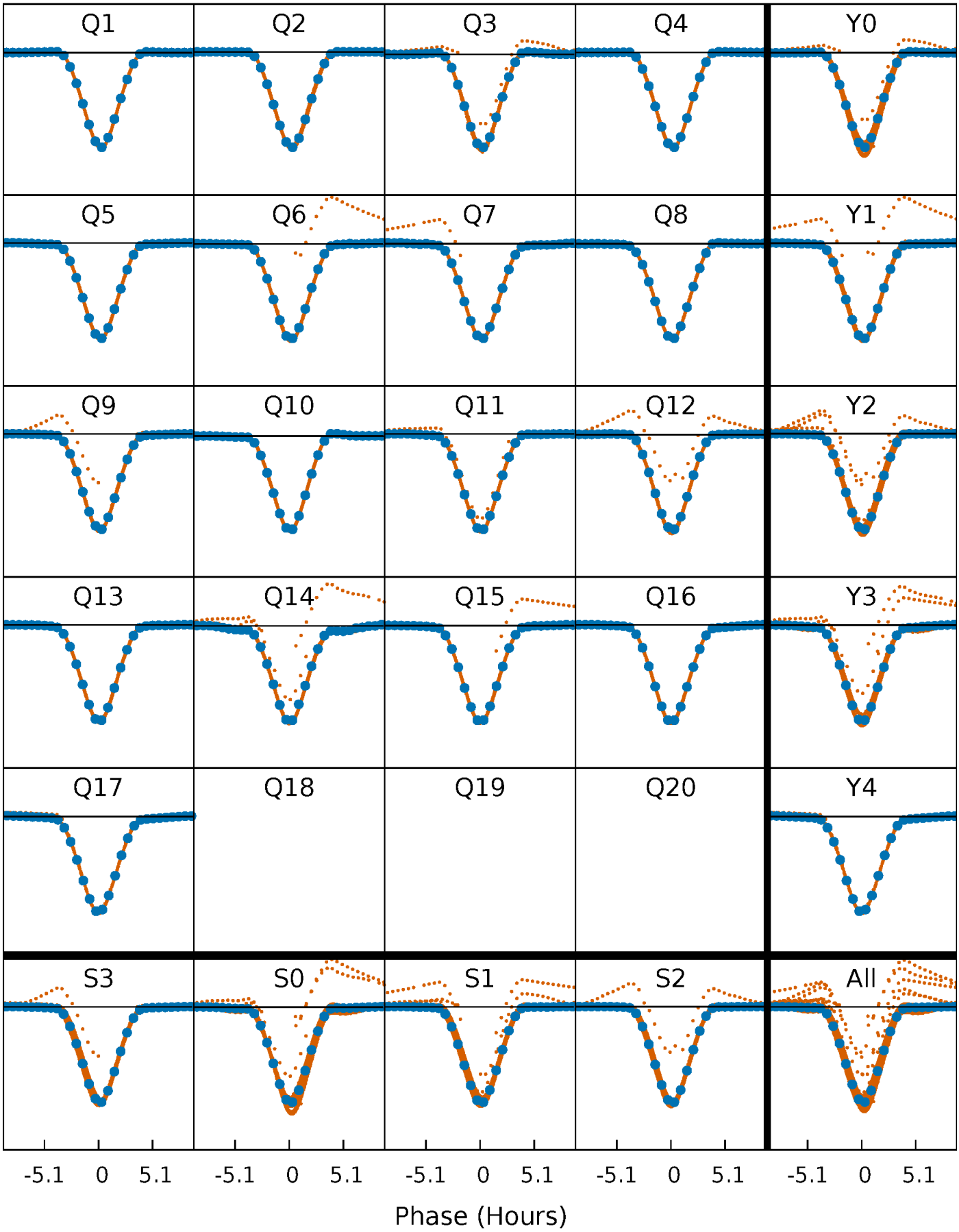
PDC Quarter-Phased Transit Curves

TCE 009207508-01 P= 2.015165 Days T_0=132.103567 (BKJD)



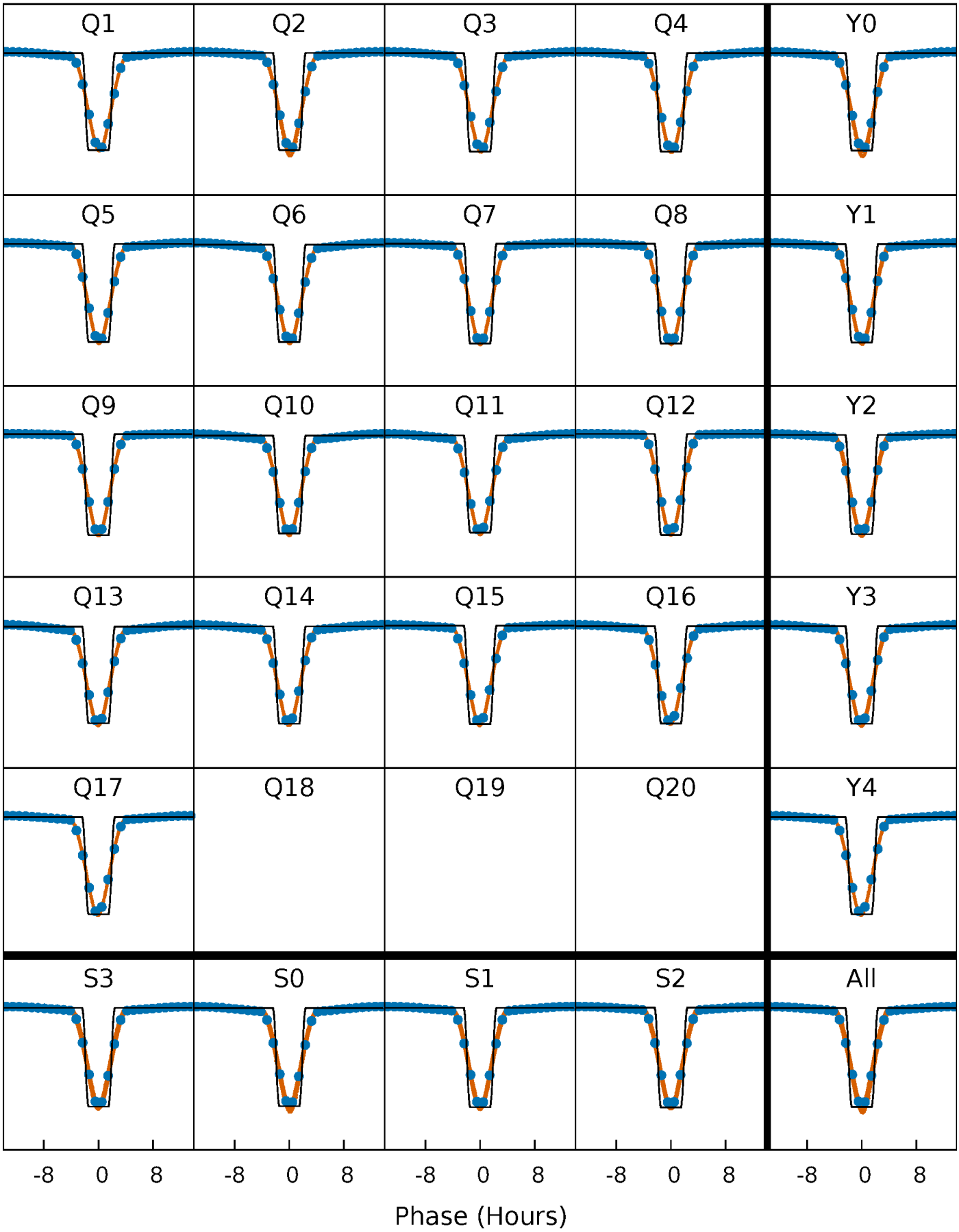
DV Quarter-Phased Transit Curves

TCE 009207508-01 P= 2.015165 Days T_0=132.103567 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

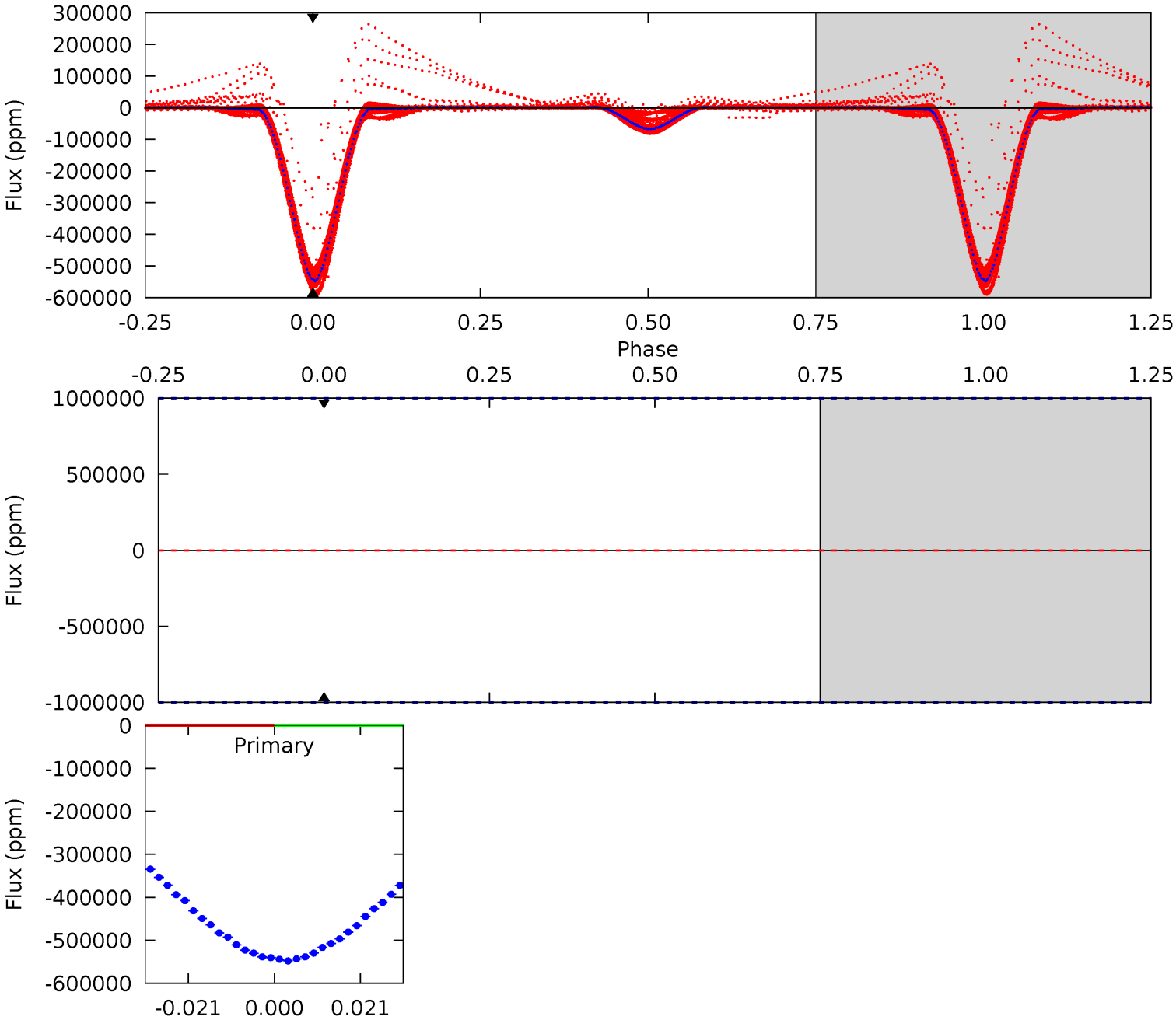
TCE 009207508-01 P= 2.015165 Days T_0=132.107501 (BKJD)



DV Model-Shift Uniqueness Test

009207508-01, P = 2.015165 Days, E = 130.088402 Days

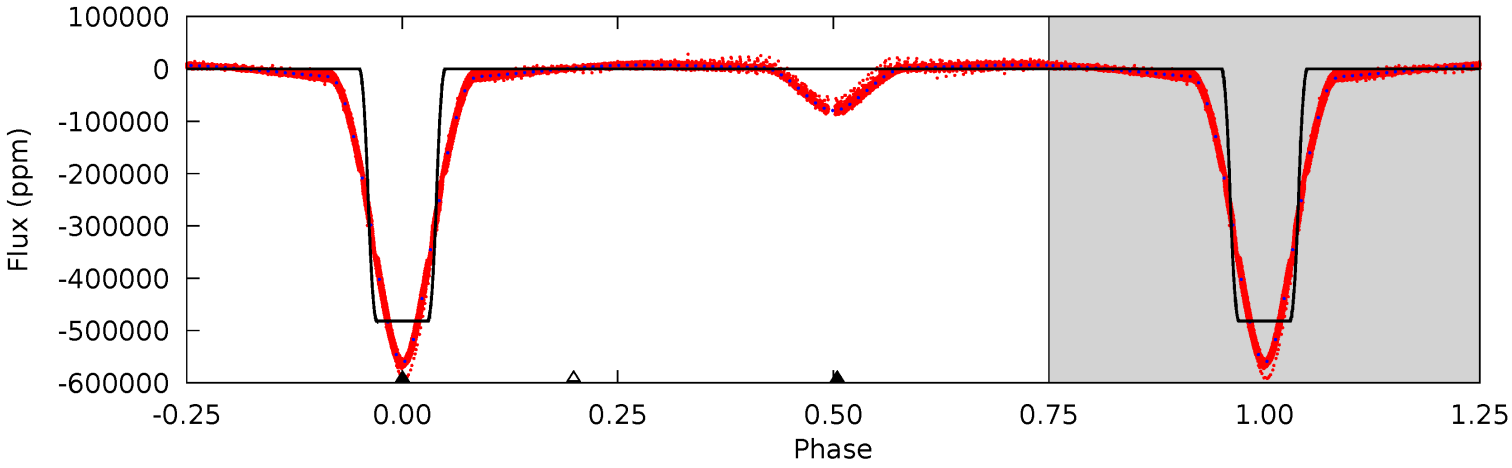
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0

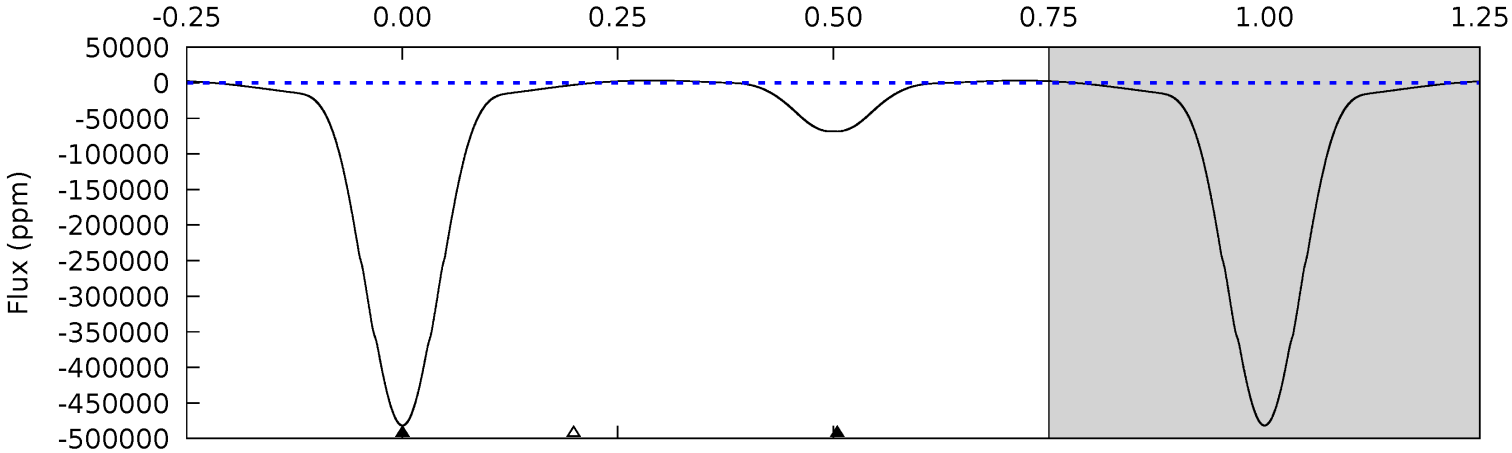


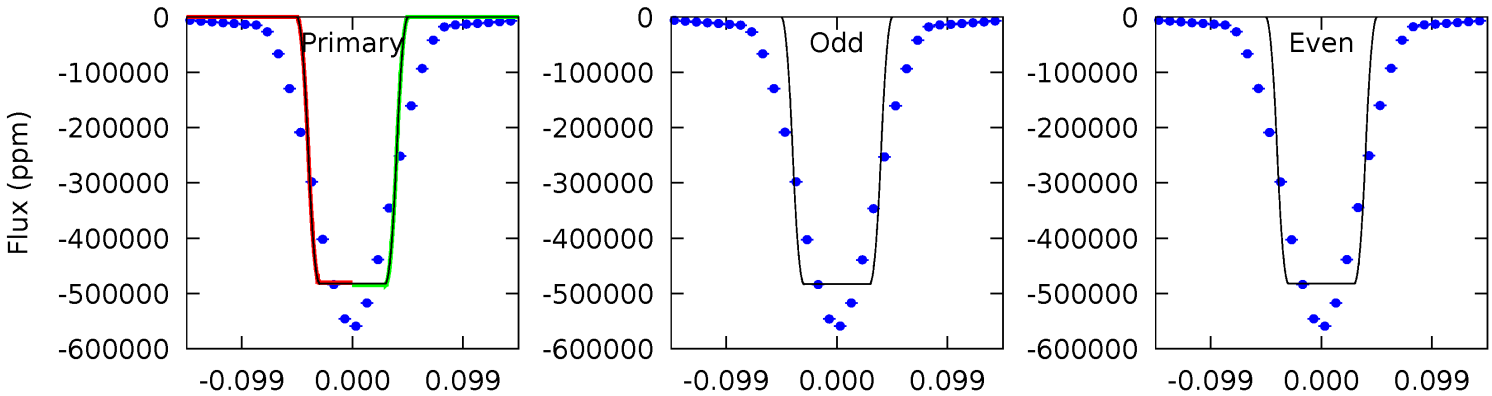
Alt Model-Shift Uniqueness Test

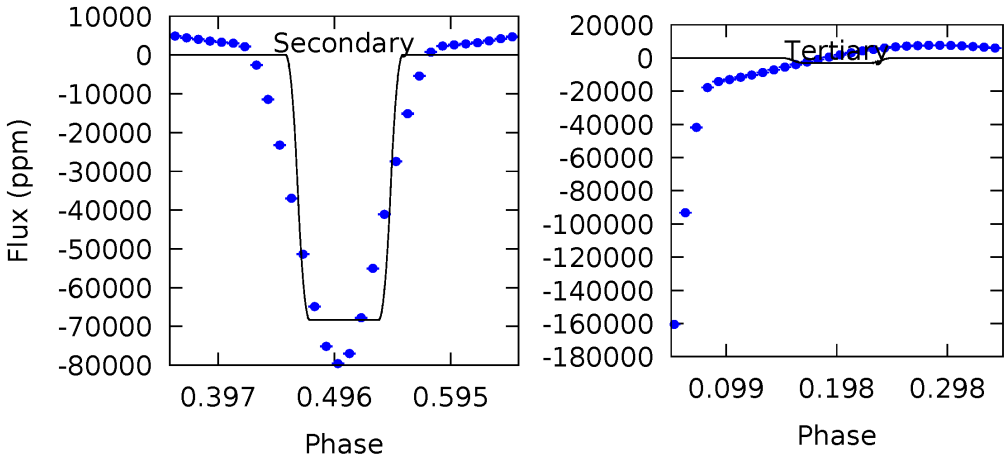
009207508-01, P = 2.015165 Days, E = 130.092336 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5457	773.4	33.8	0	4.57	1.65	76.1	5424	5457	739.6	773.4	4.88	1.00	0.01	25.7









Stellar Parameters For KIC 009207508

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6988^{+194}_{-267}	$4.163^{+0.128}_{-0.192}$	$-0.040^{+0.250}_{-0.350}$	$1.649^{+0.550}_{-0.339}$	$1.448^{+0.216}_{-0.216}$	$0.455^{+0.284}_{-0.234}$
	+3%/-4%	+3%/-5%	+625%/-875%	+33%/-21%	+15%/-15%	+62%/-52%
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 009207508-01 / KOI 7146.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0±1000000	$50.87^{+21.06}_{-20.01}$	2964^{+233}_{-195}	2990^{+5180}_{-10627}	$0.586^{+36.525}_{-29.239}$
Alt.	-68280±88	$135.02^{+30.66}_{-21.67}$	2955^{+219}_{-189}	4288^{+271}_{-255}	$2.717^{+1.150}_{-0.843}$

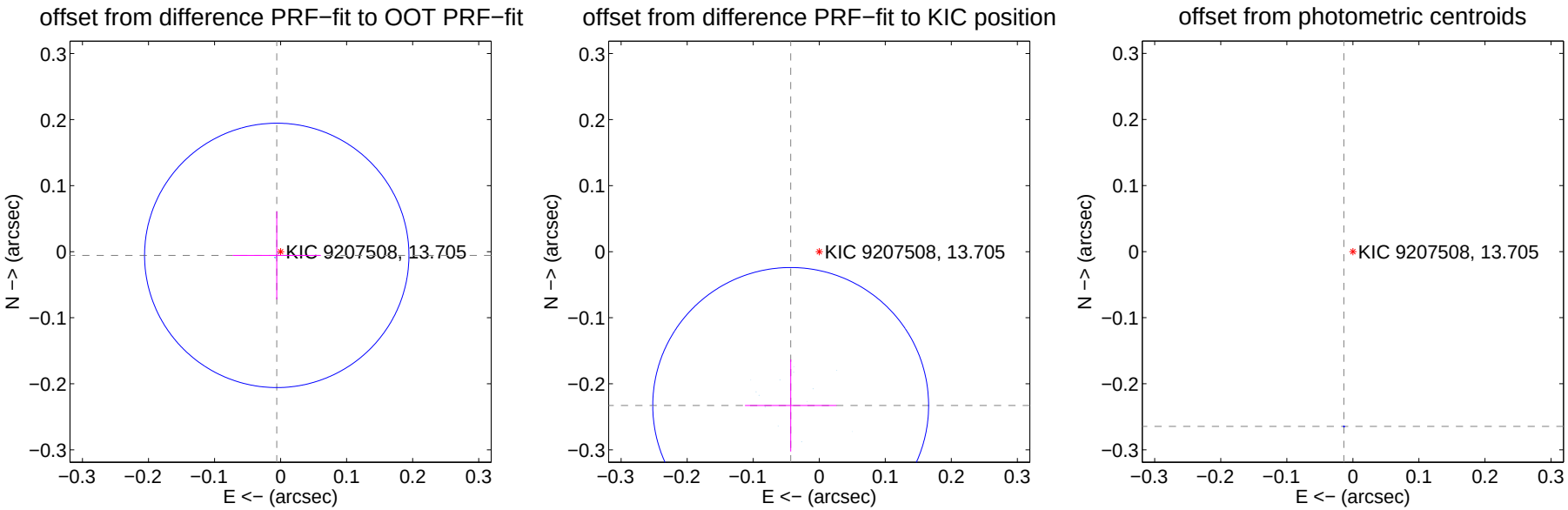
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

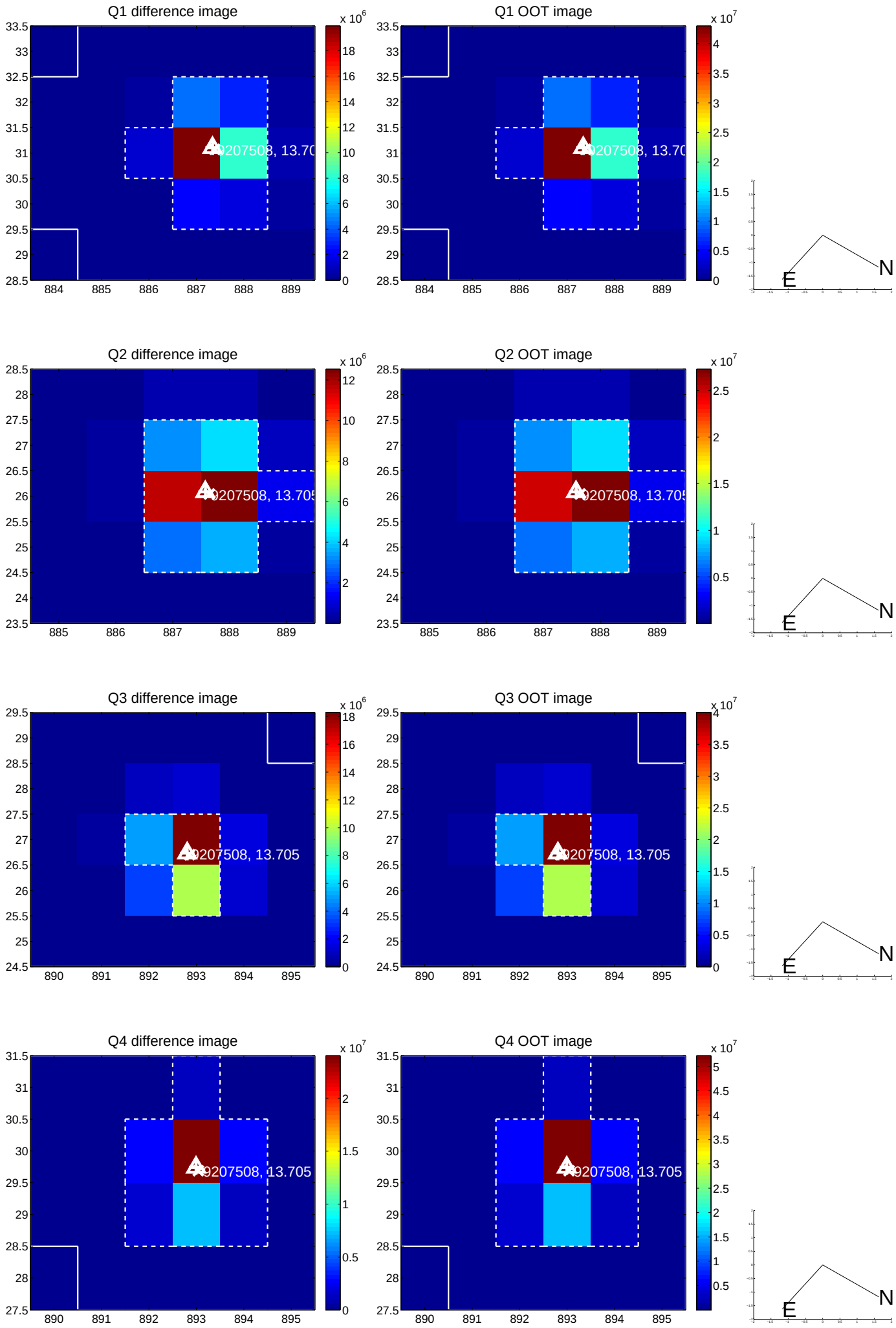
Supplemental centroid analysis for 009207508-01. Kepler magnitude: 13.71. Transit SNR -1.00
There are 17 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	0.006 ± 0.067	-0.006 ± 0.067
PRF-fit source offset from KIC position	0.237 ± 0.070	3.40	0.043 ± 0.069	-0.233 ± 0.070
photometric centroid source offset	0.26 ± 0.00	1155.36	0.01 ± 0.00	-0.26 ± 0.00

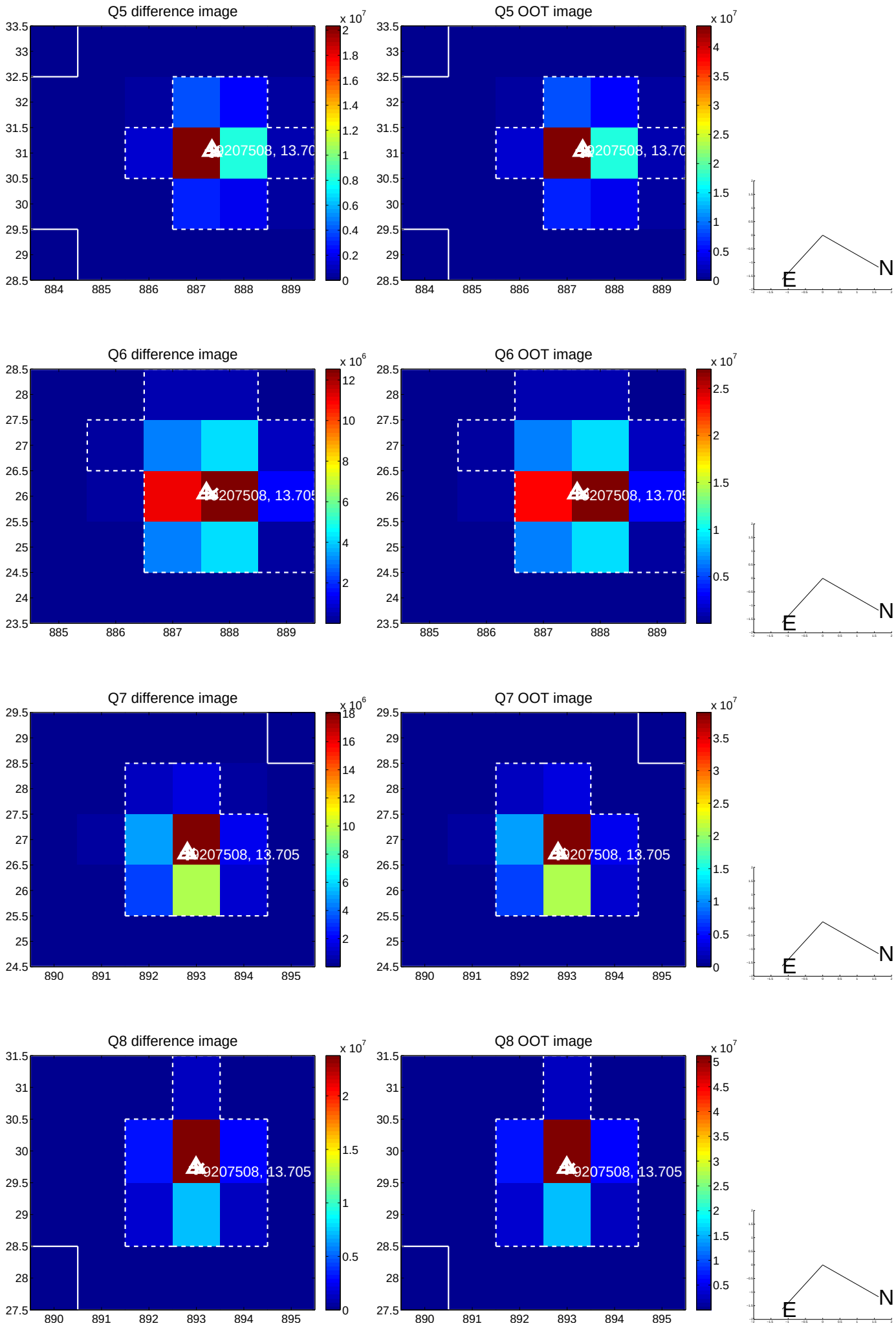


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

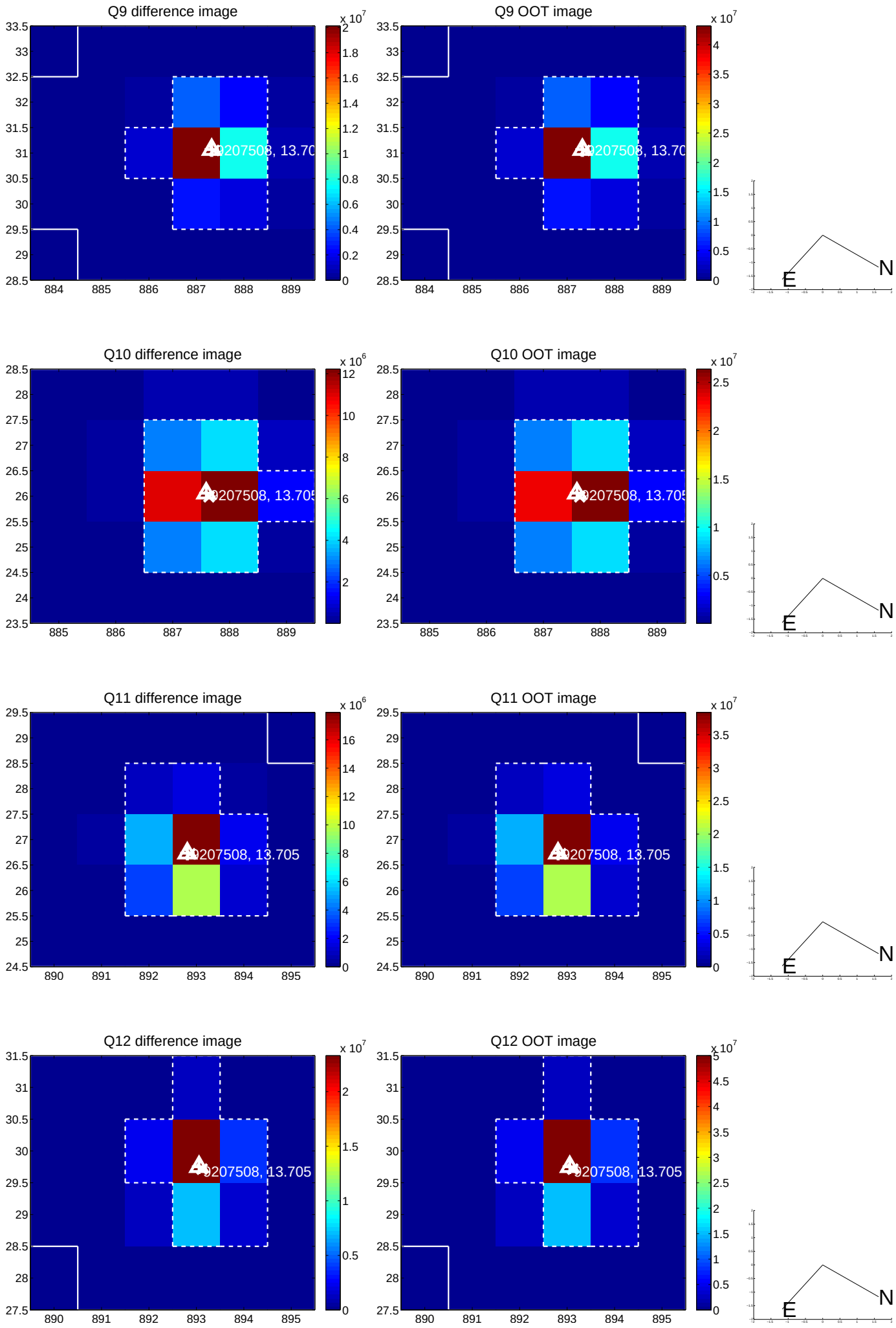
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



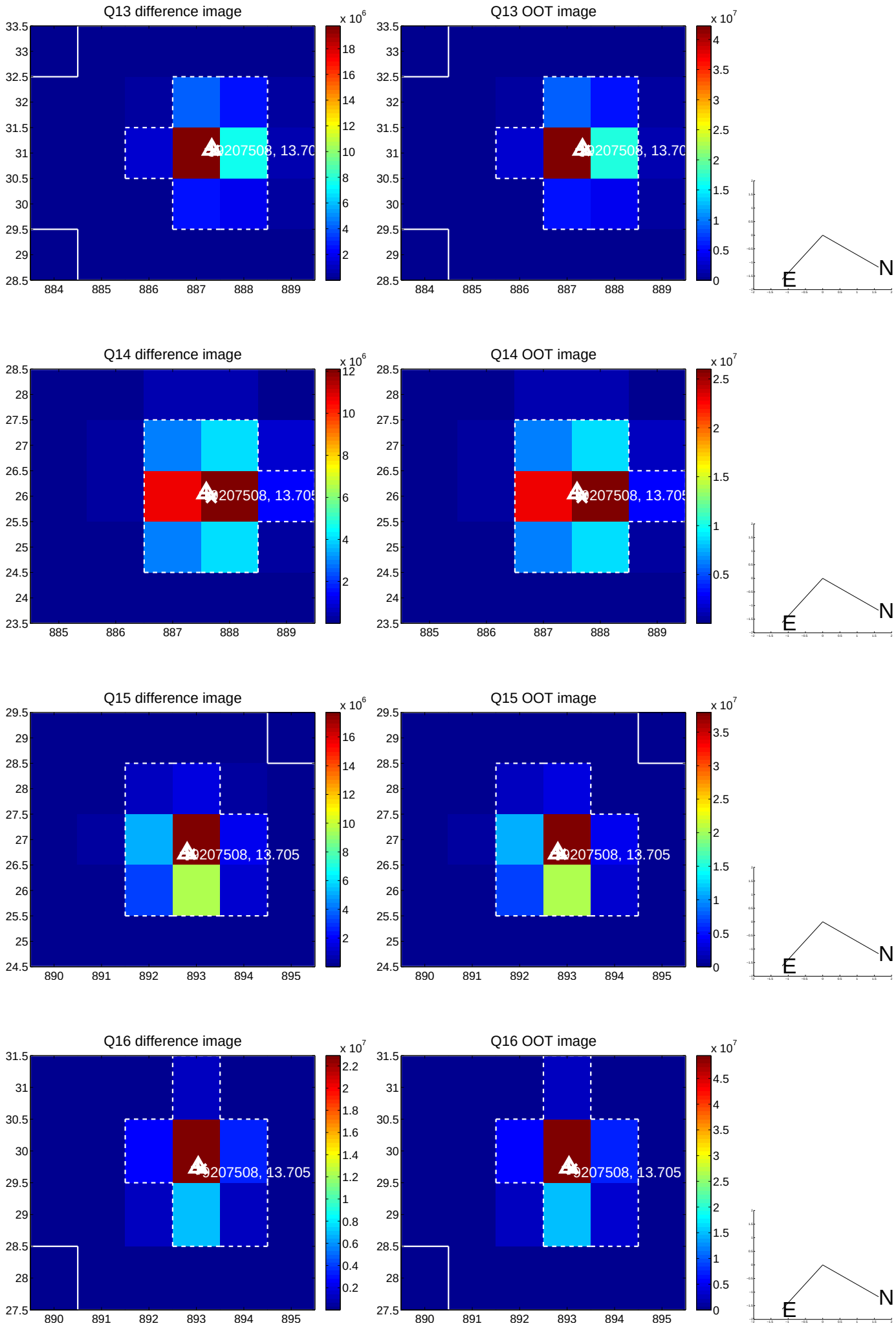
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



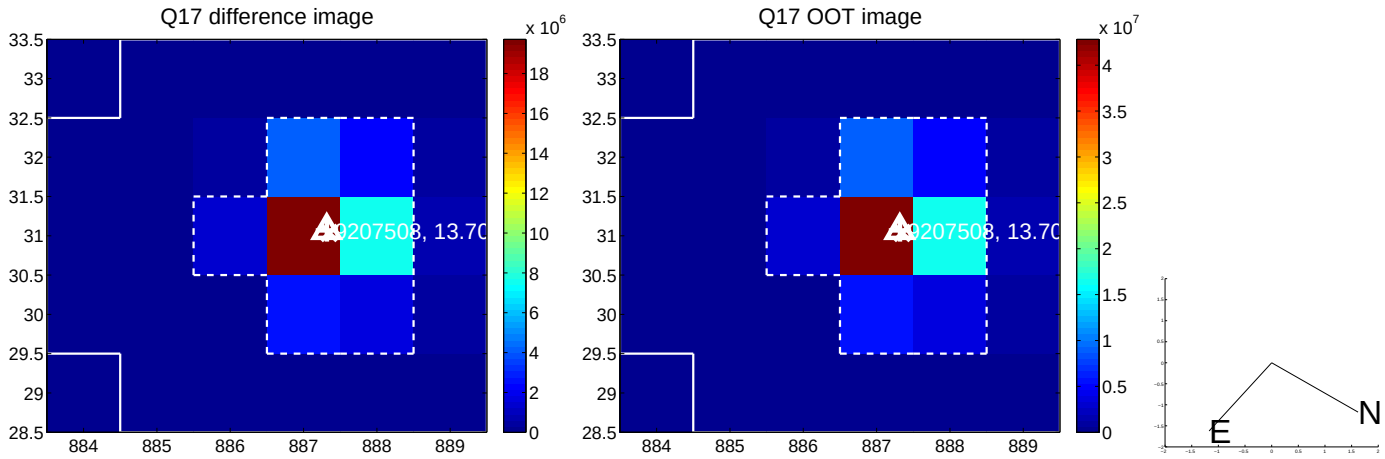
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

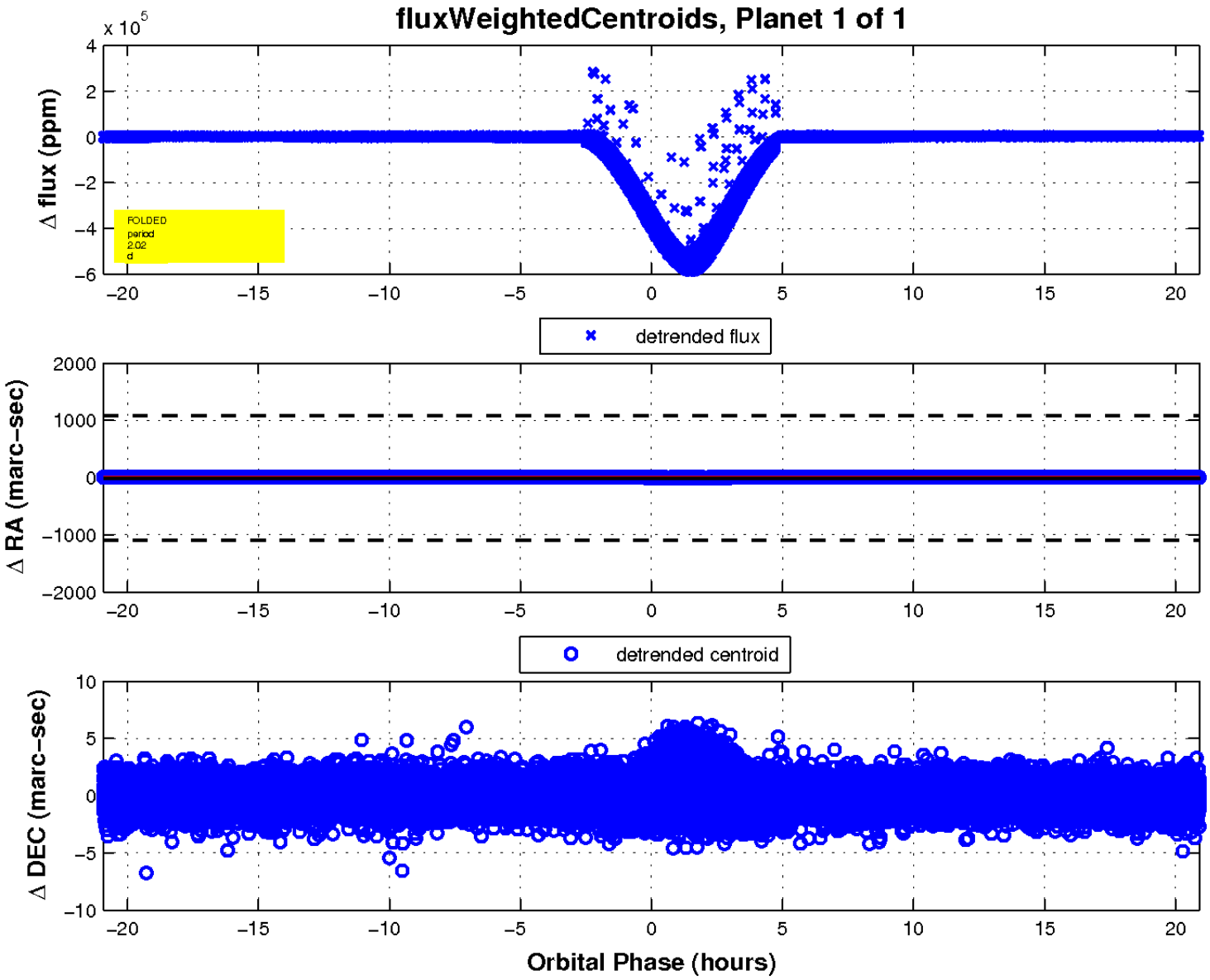


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

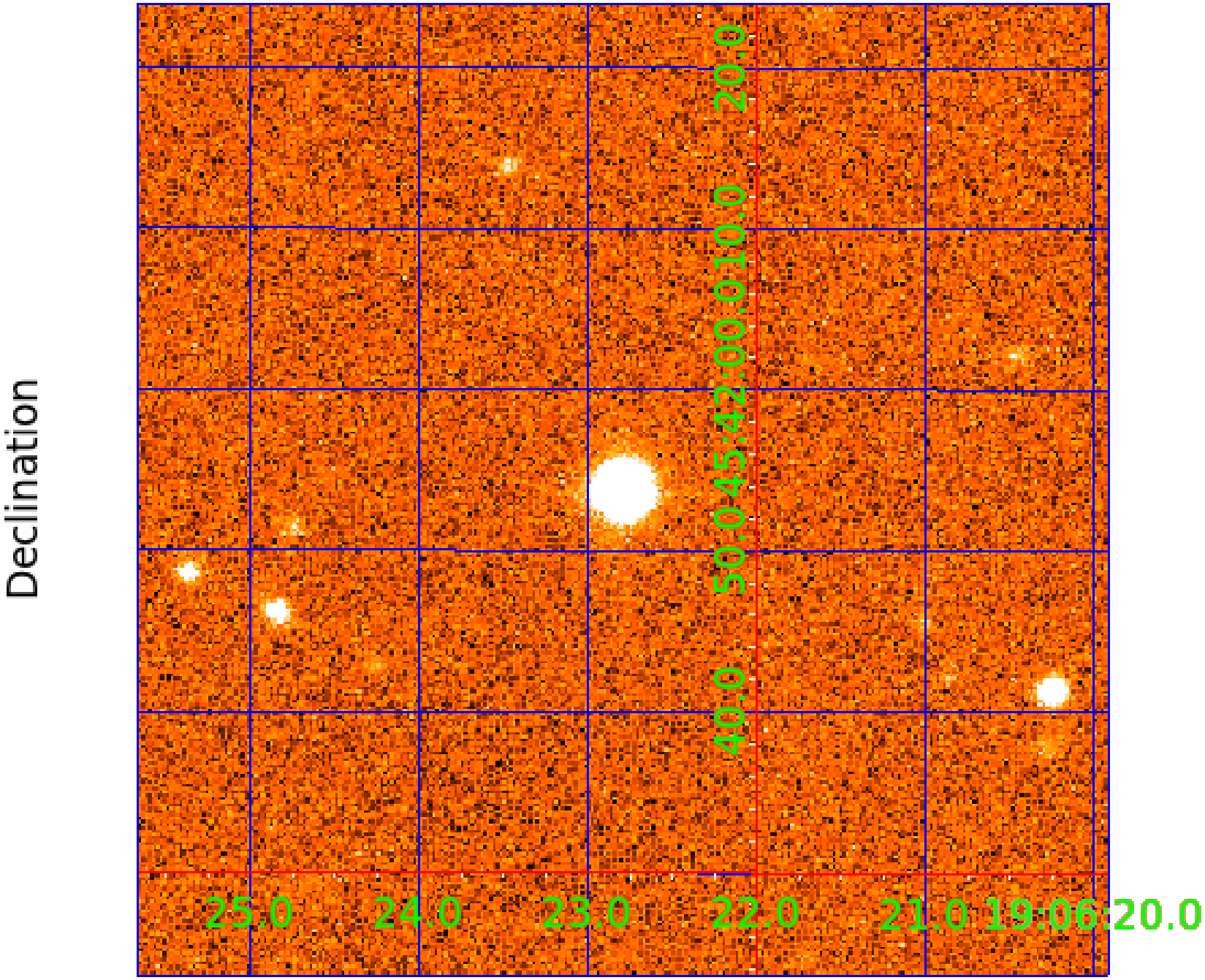


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
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40.0
20.0
25.0
24.0
23.0
22.0
21.0
19:06:20.0