KIC 009156808

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 ($S_\oplus$)
009156808-01	OBS	No	1.228867	131.836649	20.9	7.175	8.5	8.1	2.22	7282	1.06	17657.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009156808-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

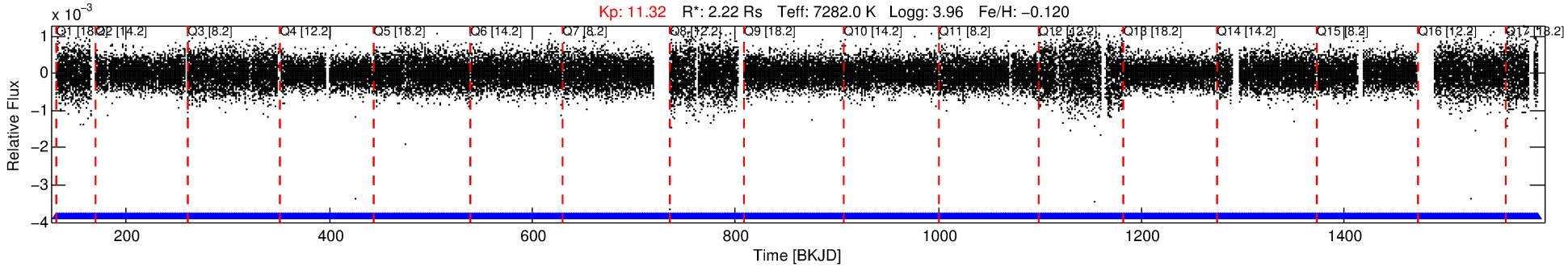
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

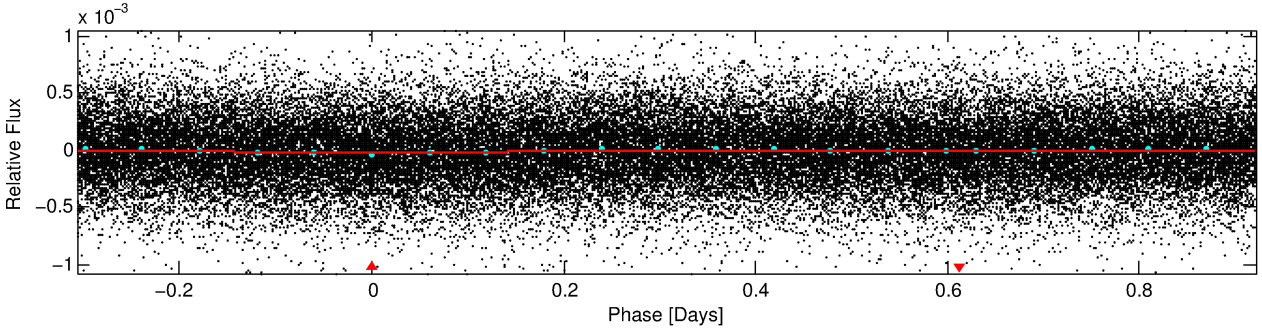
Ephemeris Match Information For 009156808-01

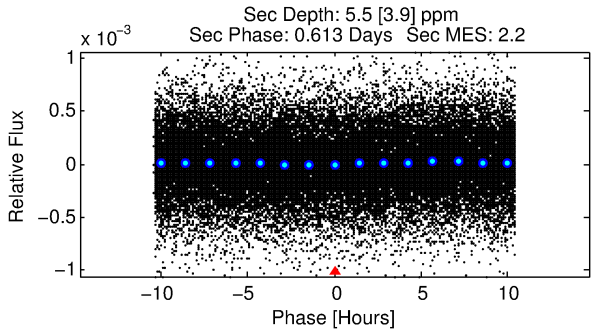
No Significant Match Found

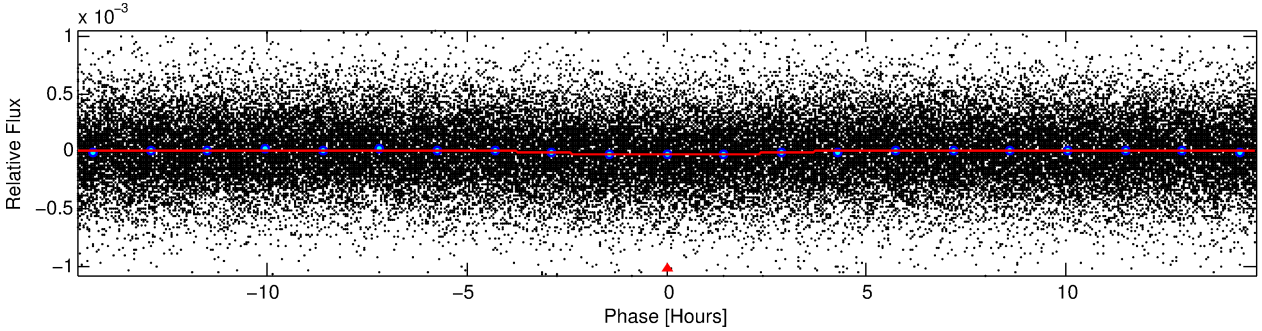
DV One-Page Summary

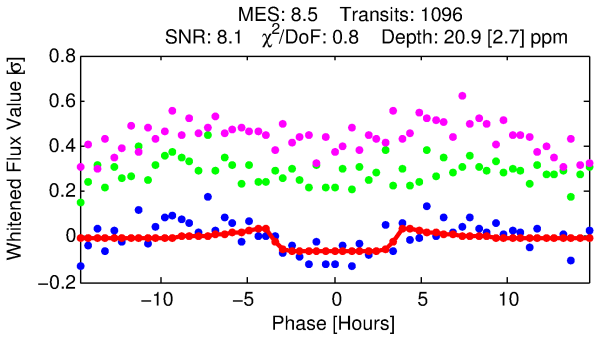
KIC: 9156808 Candidate: 1 of 1 Period: 1.229 d

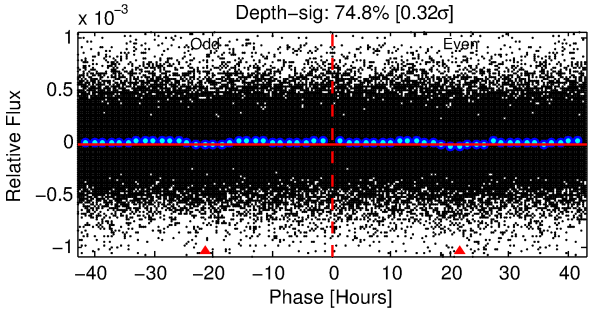


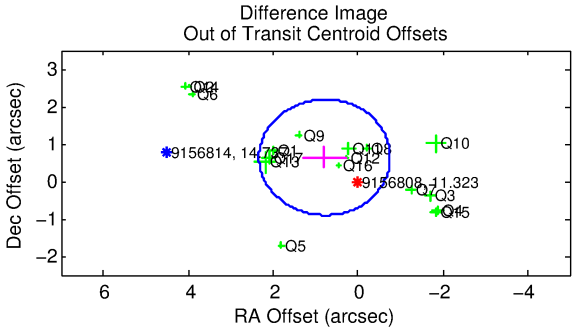












DV Fit Results:

Period = 1.22887 [0.00002] d
Epoch = 131.8366 [0.0063] BKJD
Rp/R* = 0.0044 [0.0029]
a/R* = 1.33 [2.19]
b = 0.55 [4.76]

Seff = 17657.82 [8505.75]
Teq = 2939 [354] K
Rp = 1.06 [0.77] Re
a = 0.0265 [0.0077] AU

Ag = 1.90 [2.95] [0.30σ]
Teffp = 5333 [1994] K [1.18σ]

DV Diagnostic Results:

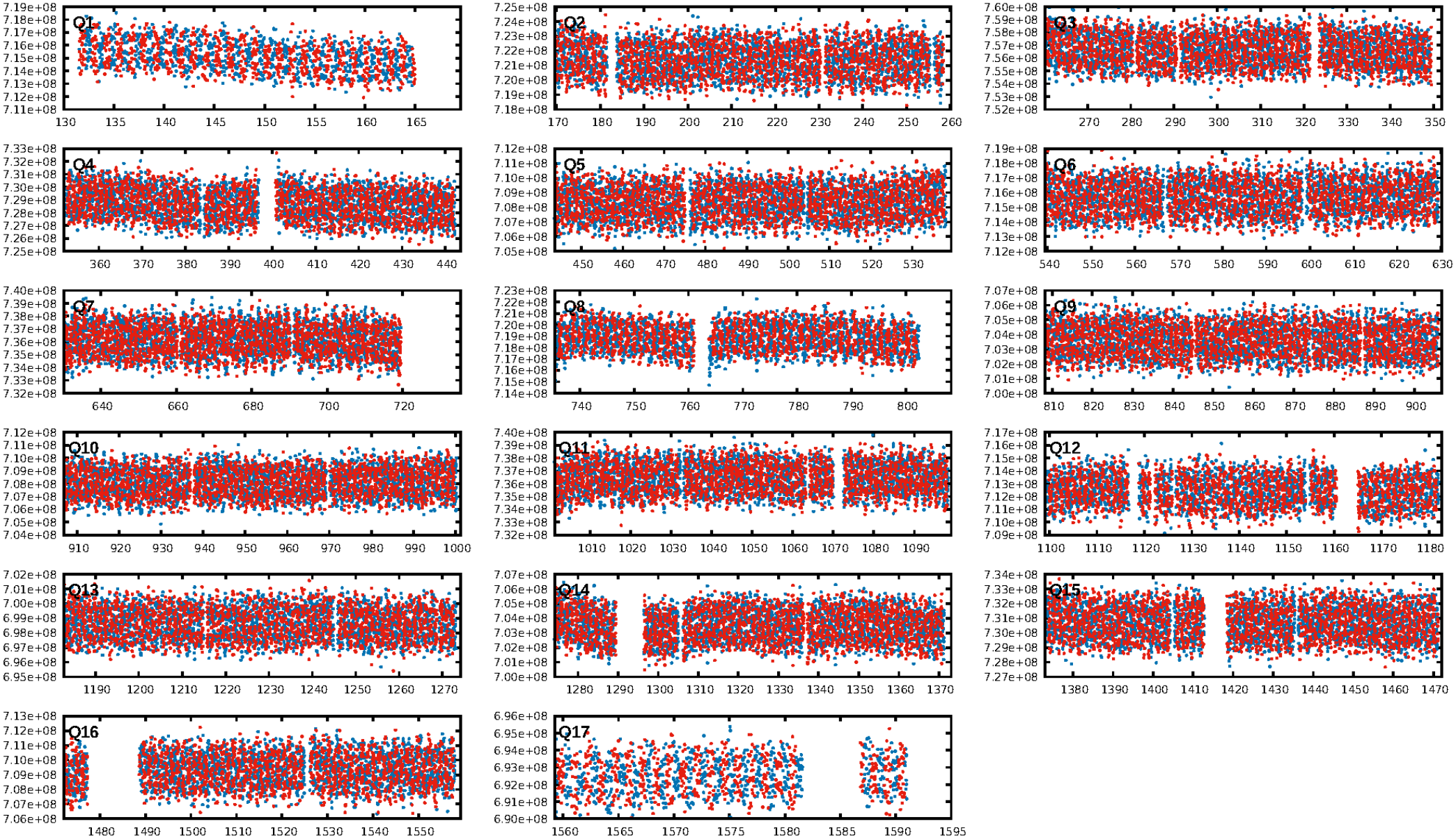
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 8.04e−13
RollingBand−fgt: 1.00 [1046/1046]
GhostDiagnostic−chr: 1.422

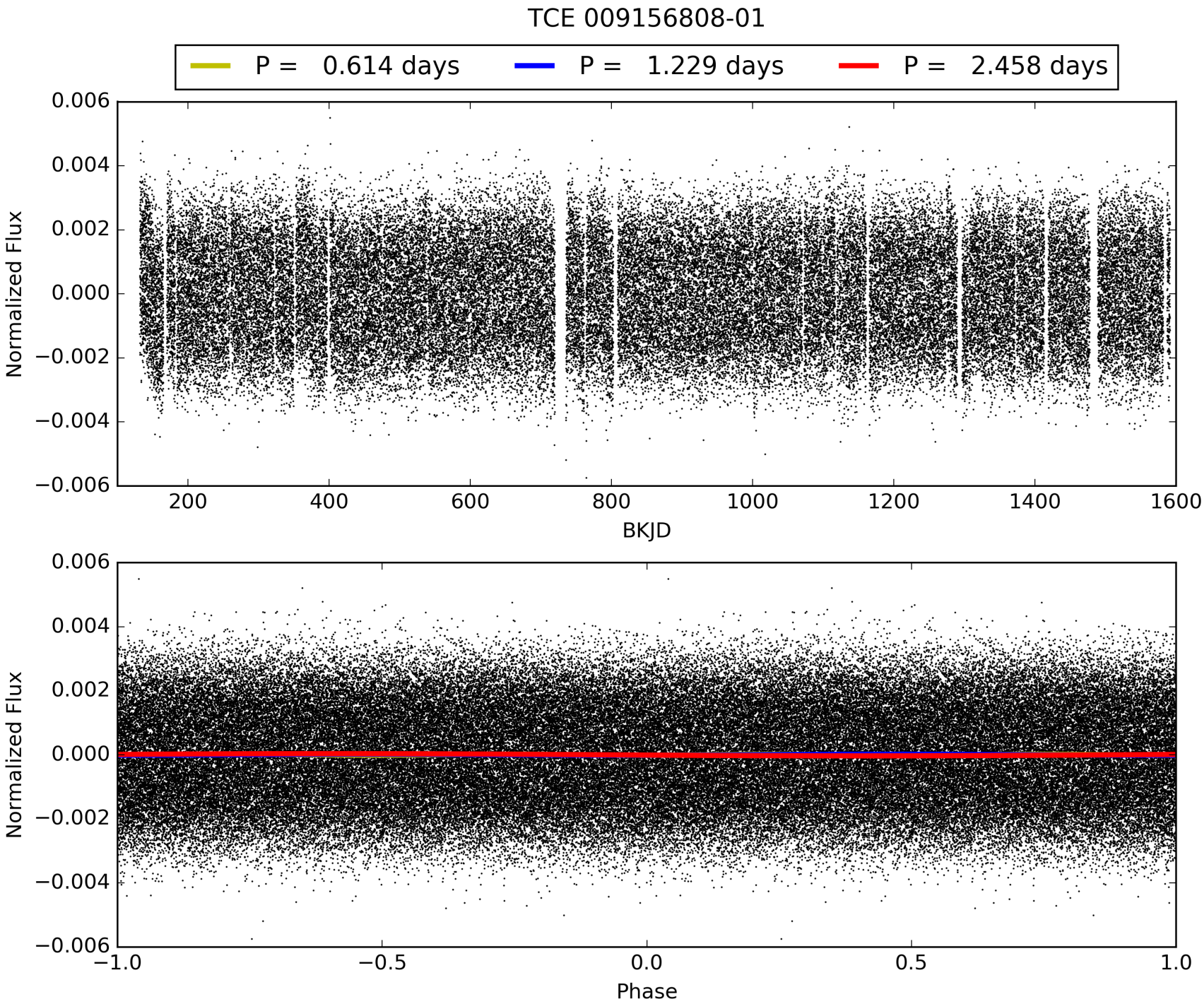
Centroid−sig: 88.8%
Centroid−so: 0.170 arcsec [0.39σ]
OotOffset−rm: 1.014 arcsec [1.97σ]
KicOffset−rm: 1.407 arcsec [2.64σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 0.71 [12/17]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 17:12:12 Z

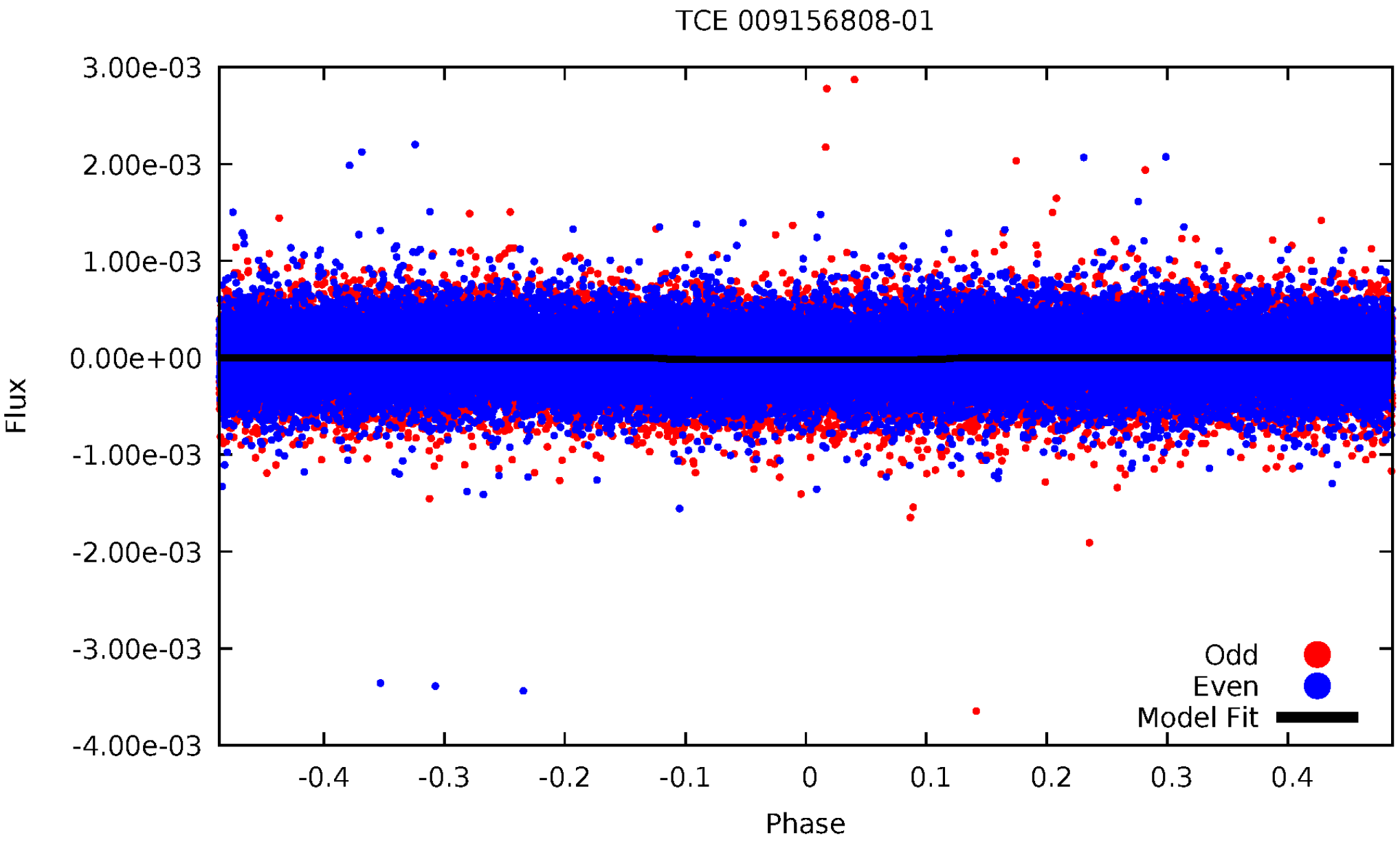
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009156808-01, PDC Light Curves

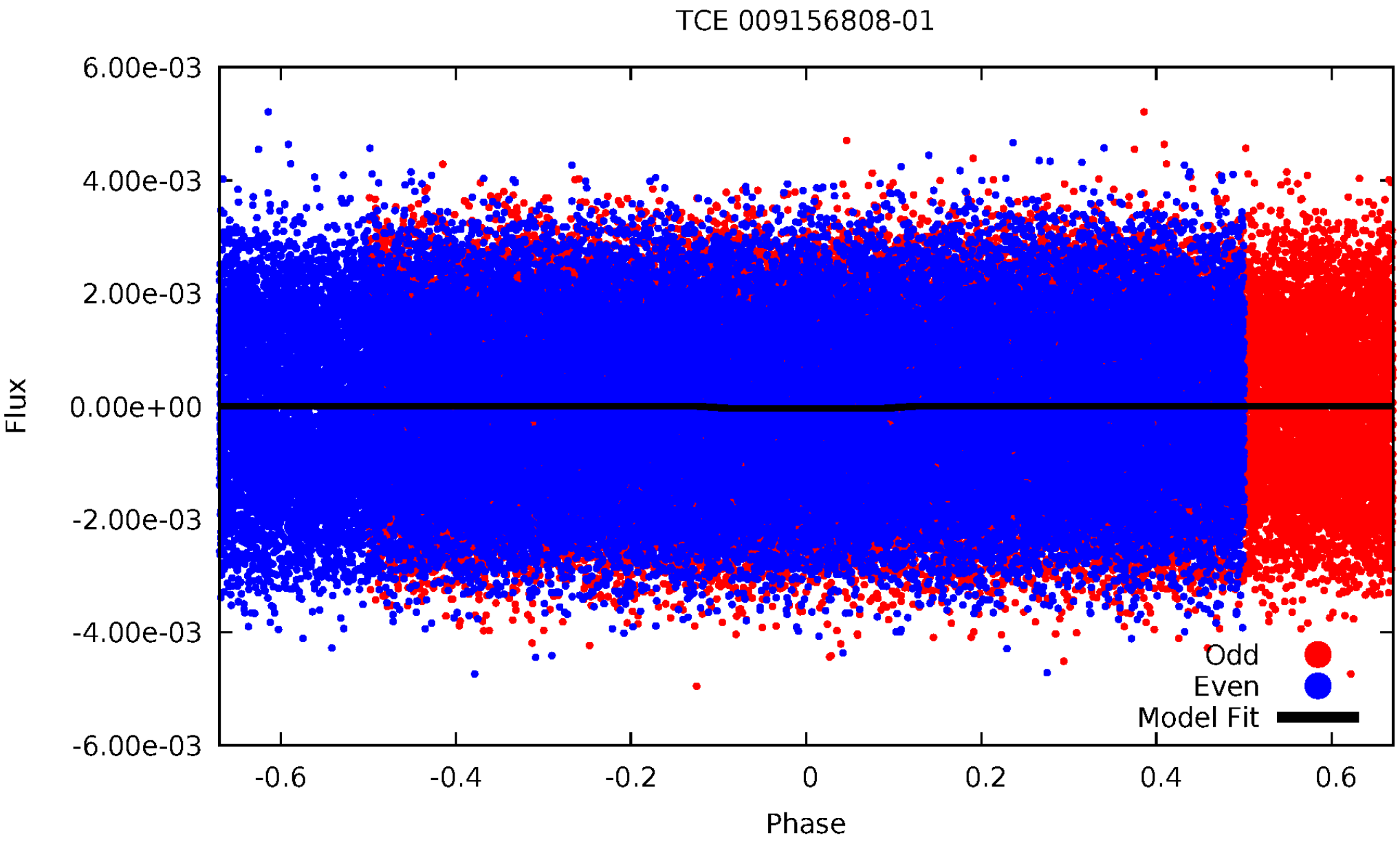



TCE 009156808-01
P = 0.614 days
P = 1.229 days
P = 2.458 days
Normalized Flux
BKJD
Phase

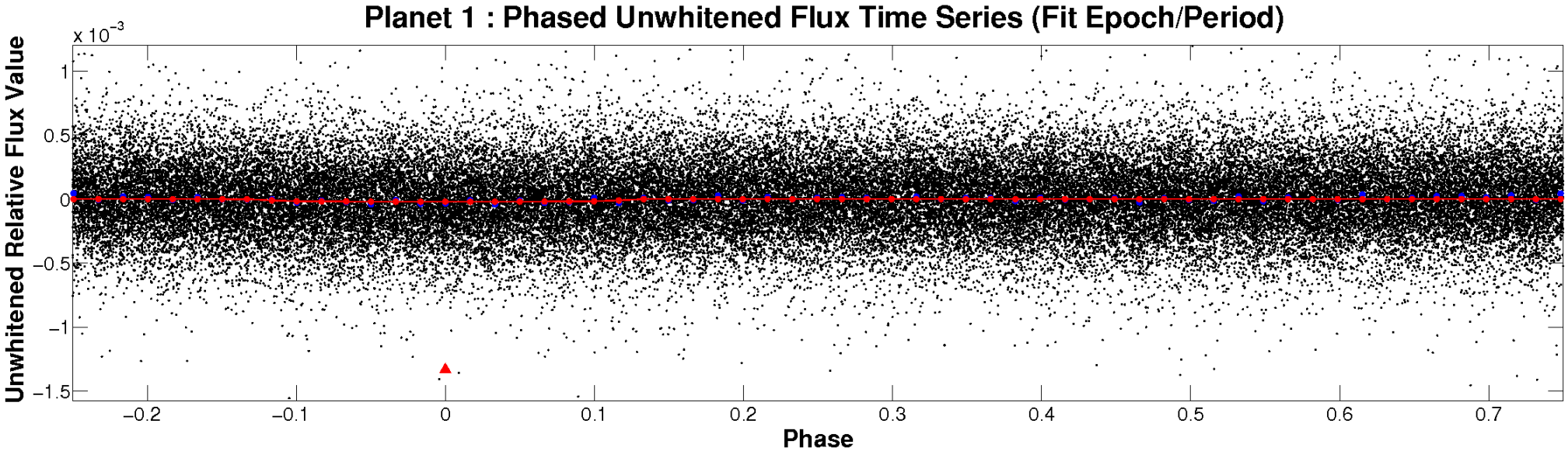
DV Odd/Even

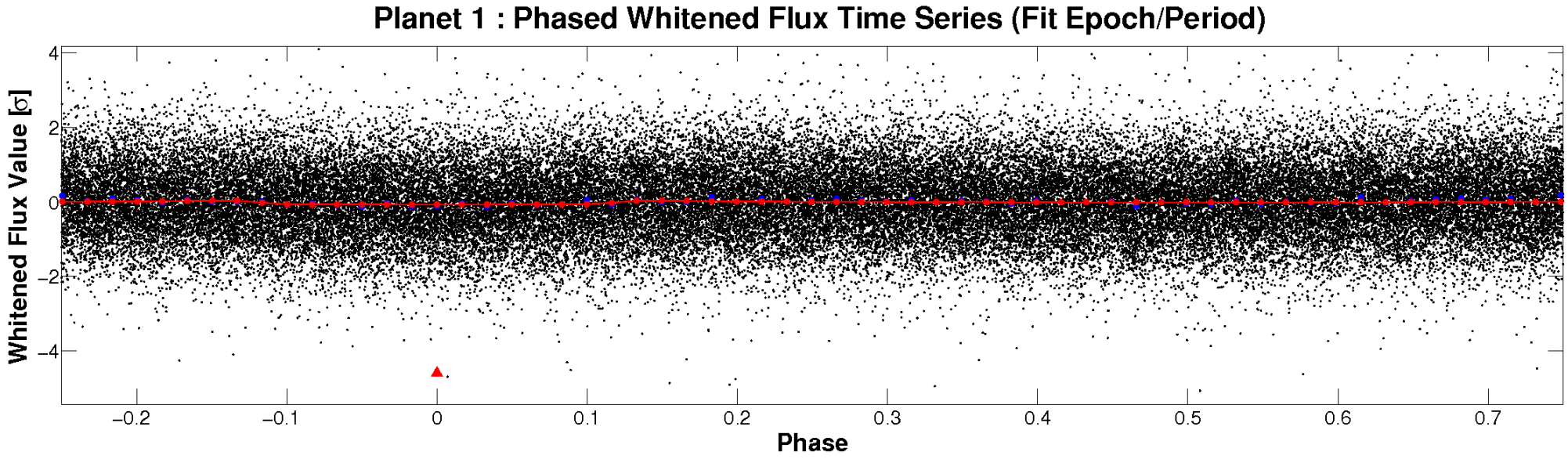

TCE 009156808-01
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009156808-01
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

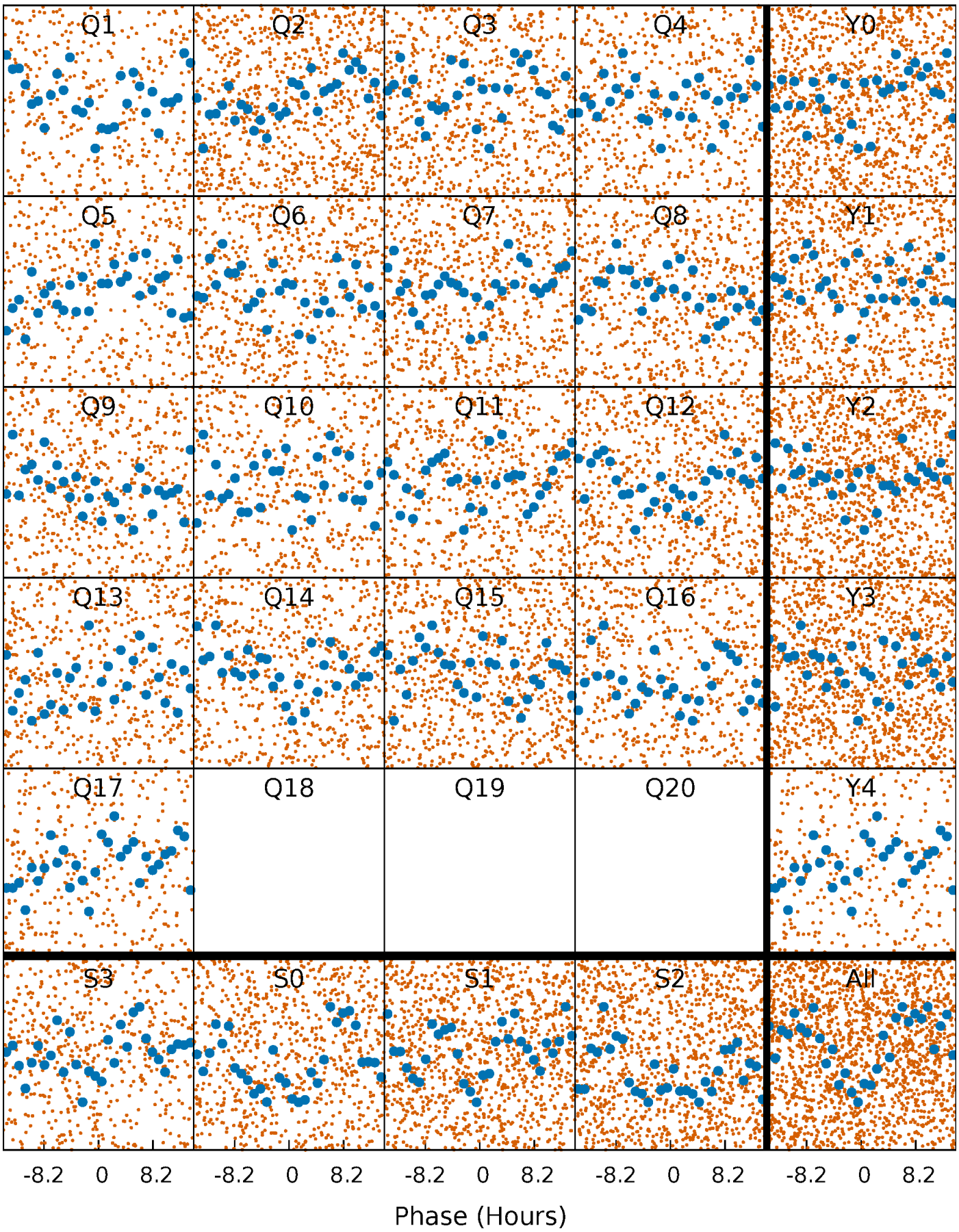
Non-Whitened Vs. Whitened Light Curve





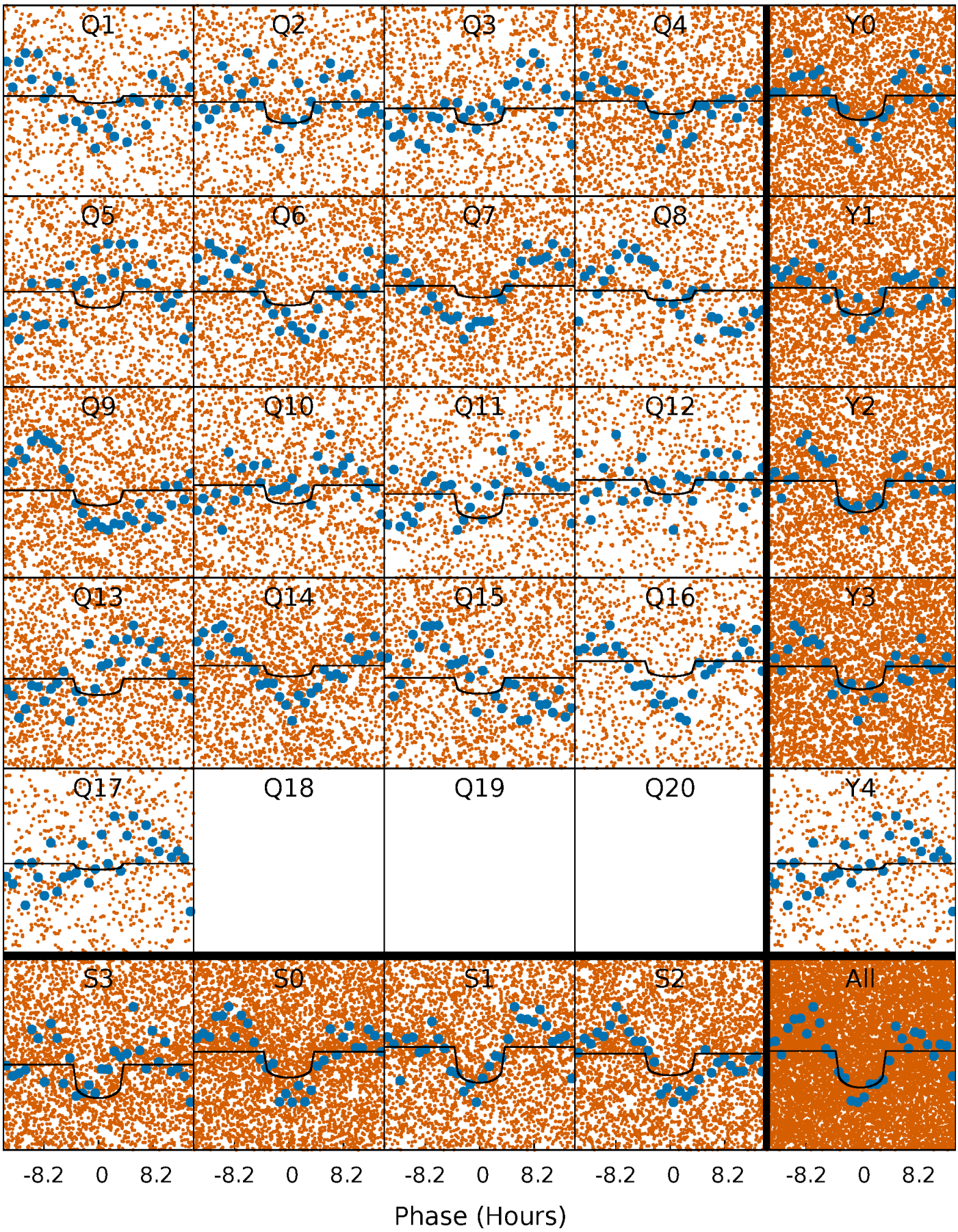
PDC Quarter-Phased Transit Curves

TCE 009156808-01 P= 1.228867 Days T_0=131.836649 (BKJD)



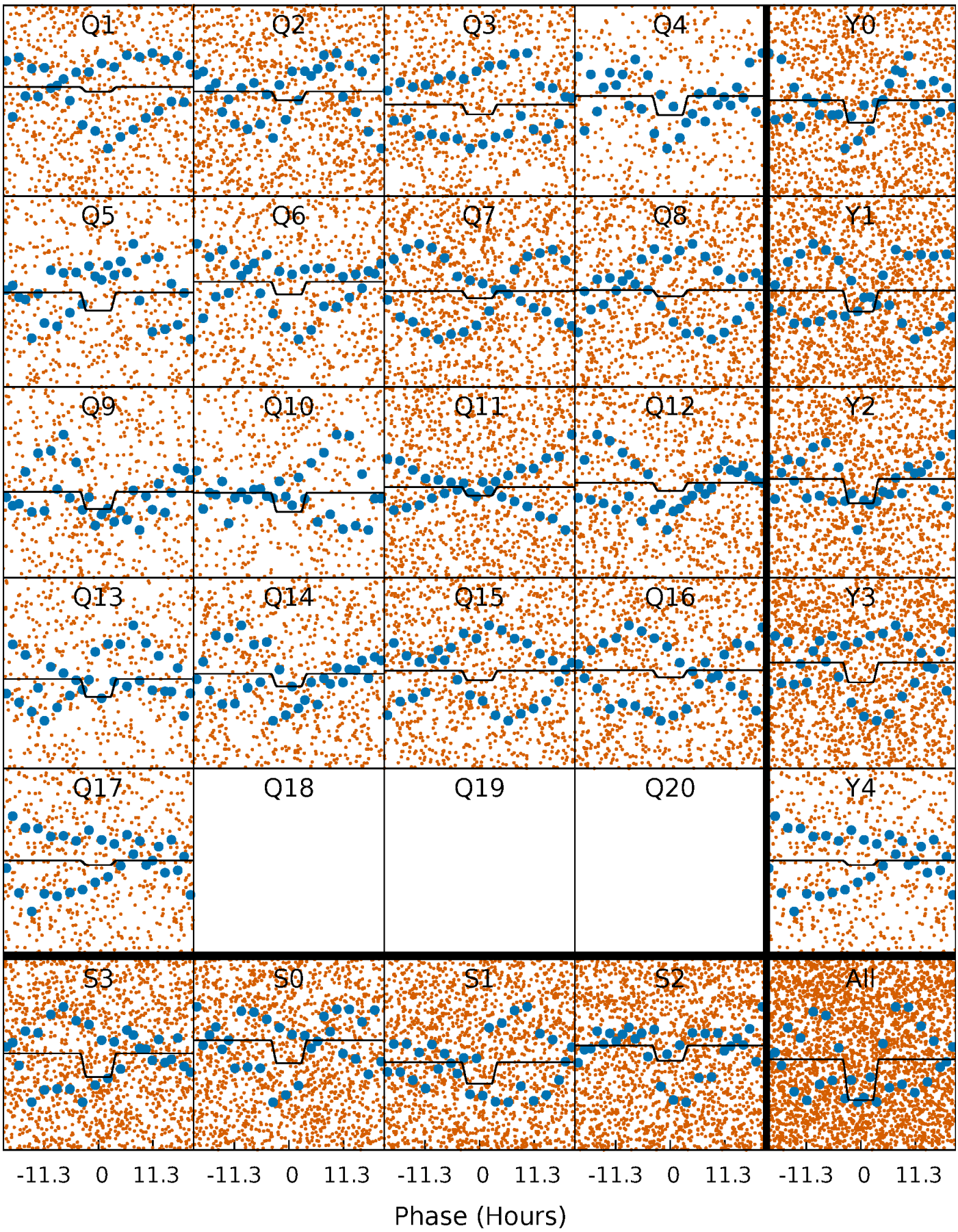
DV Quarter-Phased Transit Curves

TCE 009156808-01 P= 1.228867 Days T_0=131.836649 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

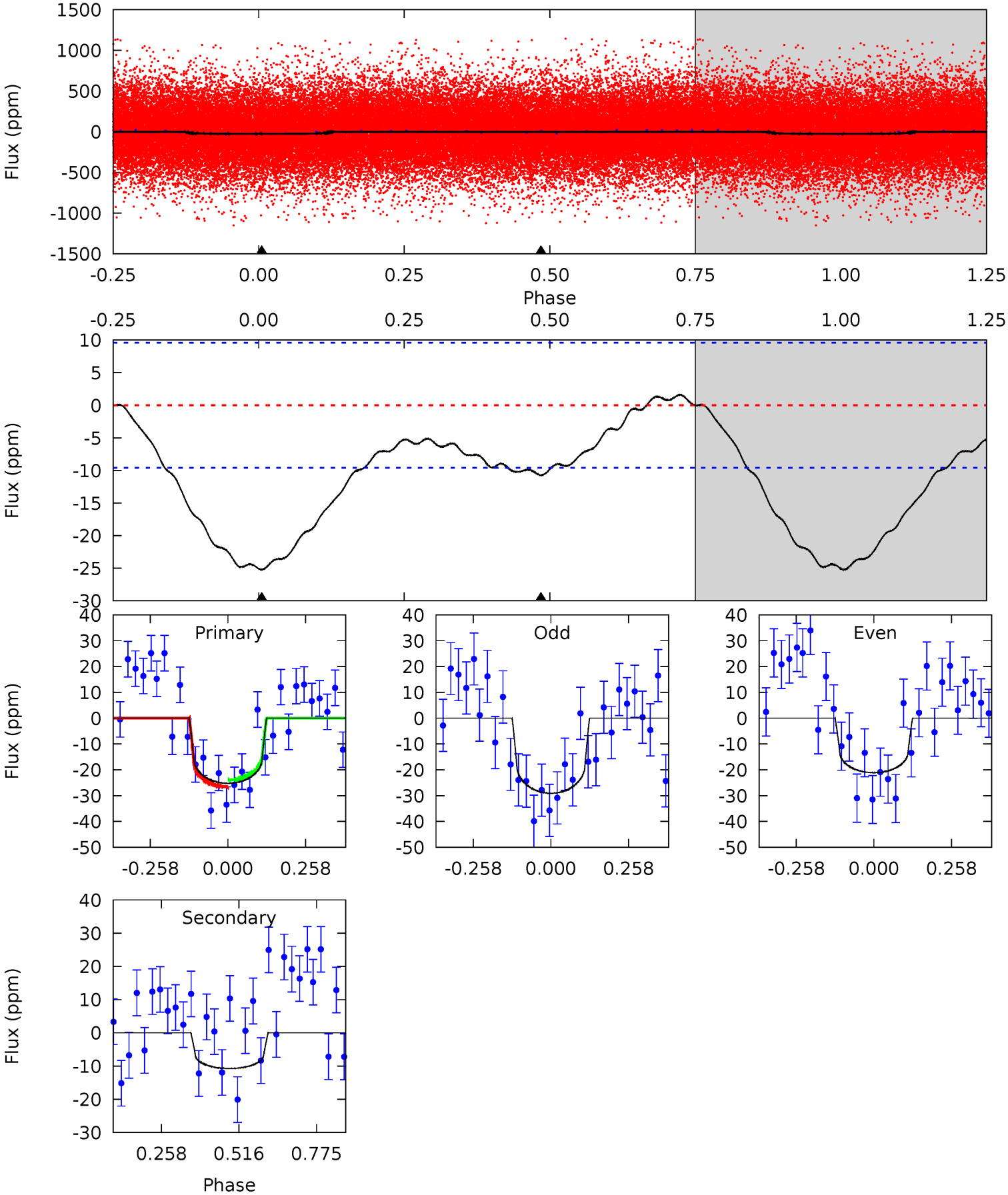
TCE 009156808-01 P= 1.228804 Days T_0=131.843329 (BKJD)



DV Model-Shift Uniqueness Test

009156808-01, P = 1.228867 Days, E = 130.607782 Days

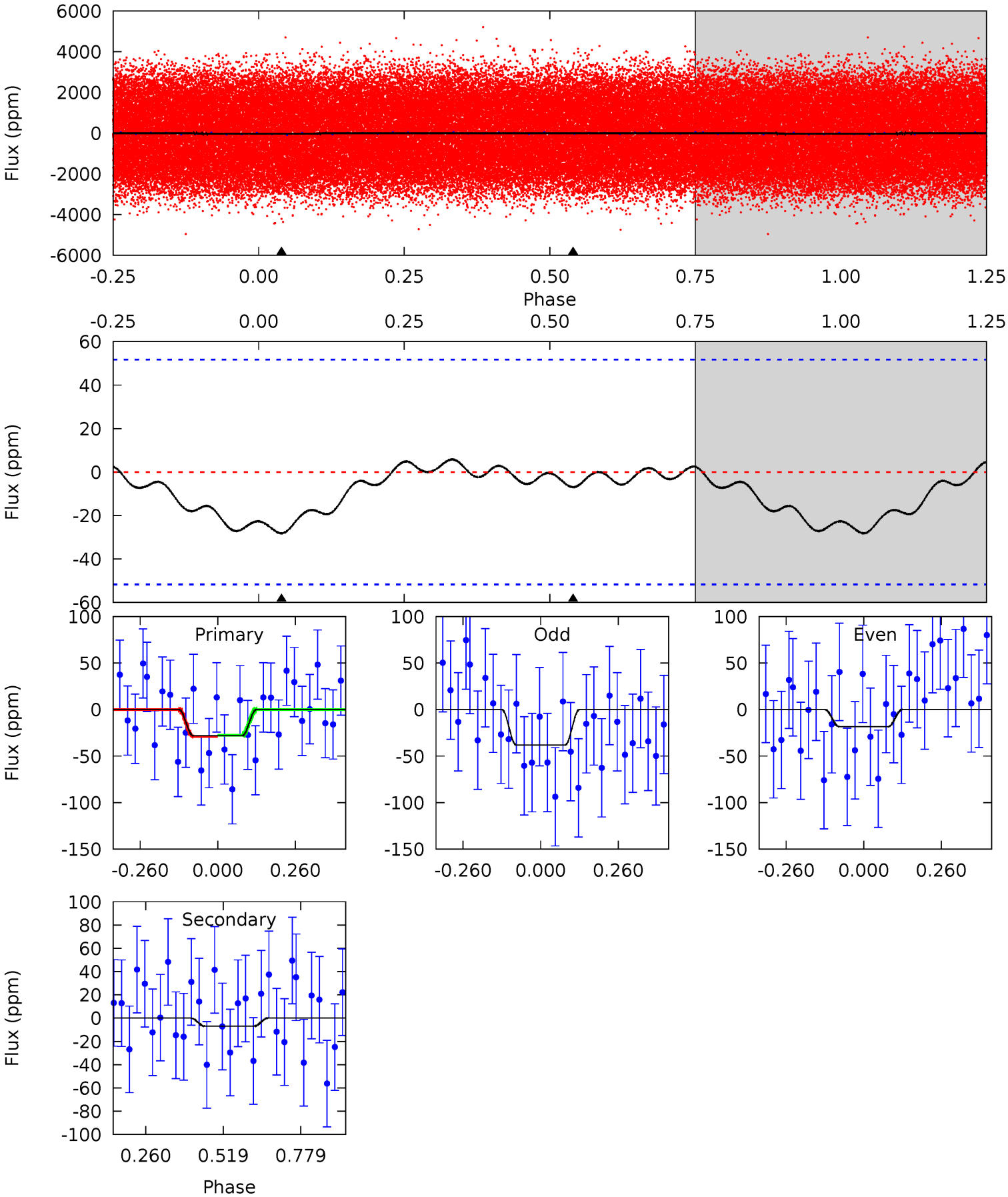
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	4.88	0	0	4.36	1.13	1.32	11.5	11.5	4.88	4.88	1.80	0.88	0.06	0.59



Alt Model-Shift Uniqueness Test

009156808-01, P = 1.228804 Days, E = 130.614525 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.38	0.59	0	0	4.36	1.13	0.32	2.38	2.38	0.59	0.59	0.84	1.47	0.17	0.05



Stellar Parameters For KIC 009156808

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7282^{+228}_{-304}	$3.961^{+0.260}_{-0.160}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.576}_{-0.704}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+26%/-32%	+11%/-19%	+167%/-40%
Source	KIC0	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 009156808-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11±2	$1.09^{+0.65}_{-0.58}$	4050^{+339}_{-322}	5851^{+3626}_{-1266}	$3.330^{+12.151}_{-2.074}$
Alt.	-7±12	$1.45^{+0.73}_{-0.67}$	4052^{+315}_{-347}	4260^{+2284}_{-8874}	$0.943^{+4.285}_{-1.635}$

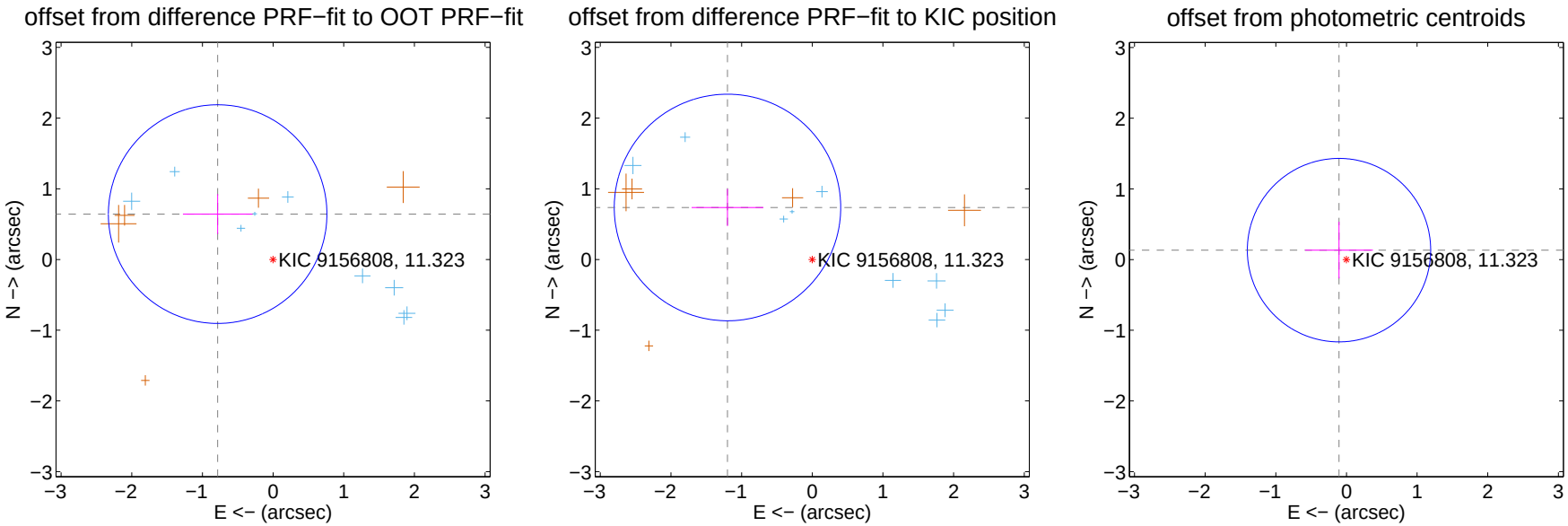
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

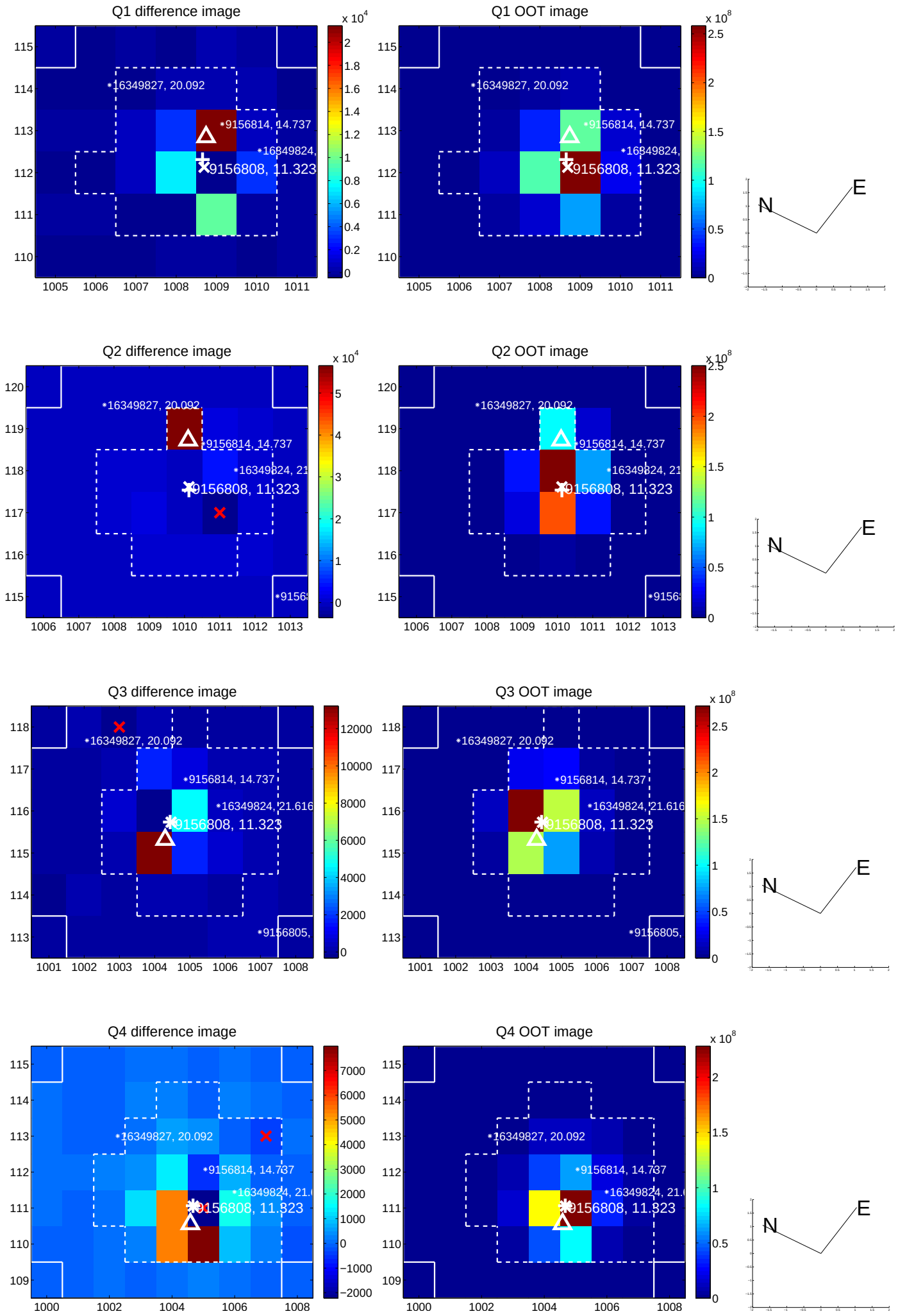
Supplemental centroid analysis for 009156808-01. Kepler magnitude: 11.32. Transit SNR 8.09
There are 12 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.014 ± 0.515	1.97	0.785 ± 0.492	0.642 ± 0.281
PRF-fit source offset from KIC position	1.407 ± 0.534	2.64	1.200 ± 0.508	0.735 ± 0.263
photometric centroid source offset	0.17 ± 0.43	0.39	0.11 ± 0.48	0.13 ± 0.40

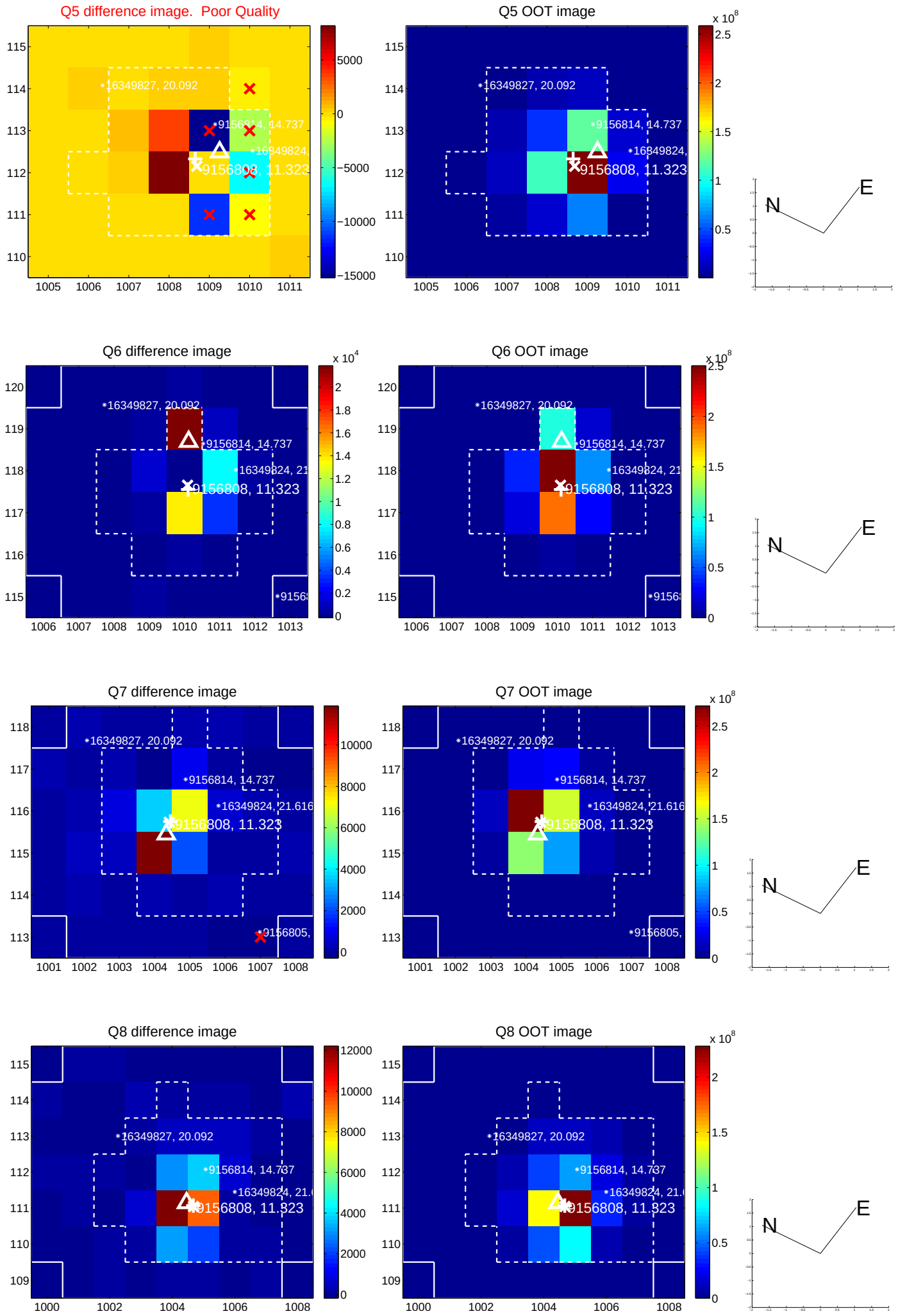


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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



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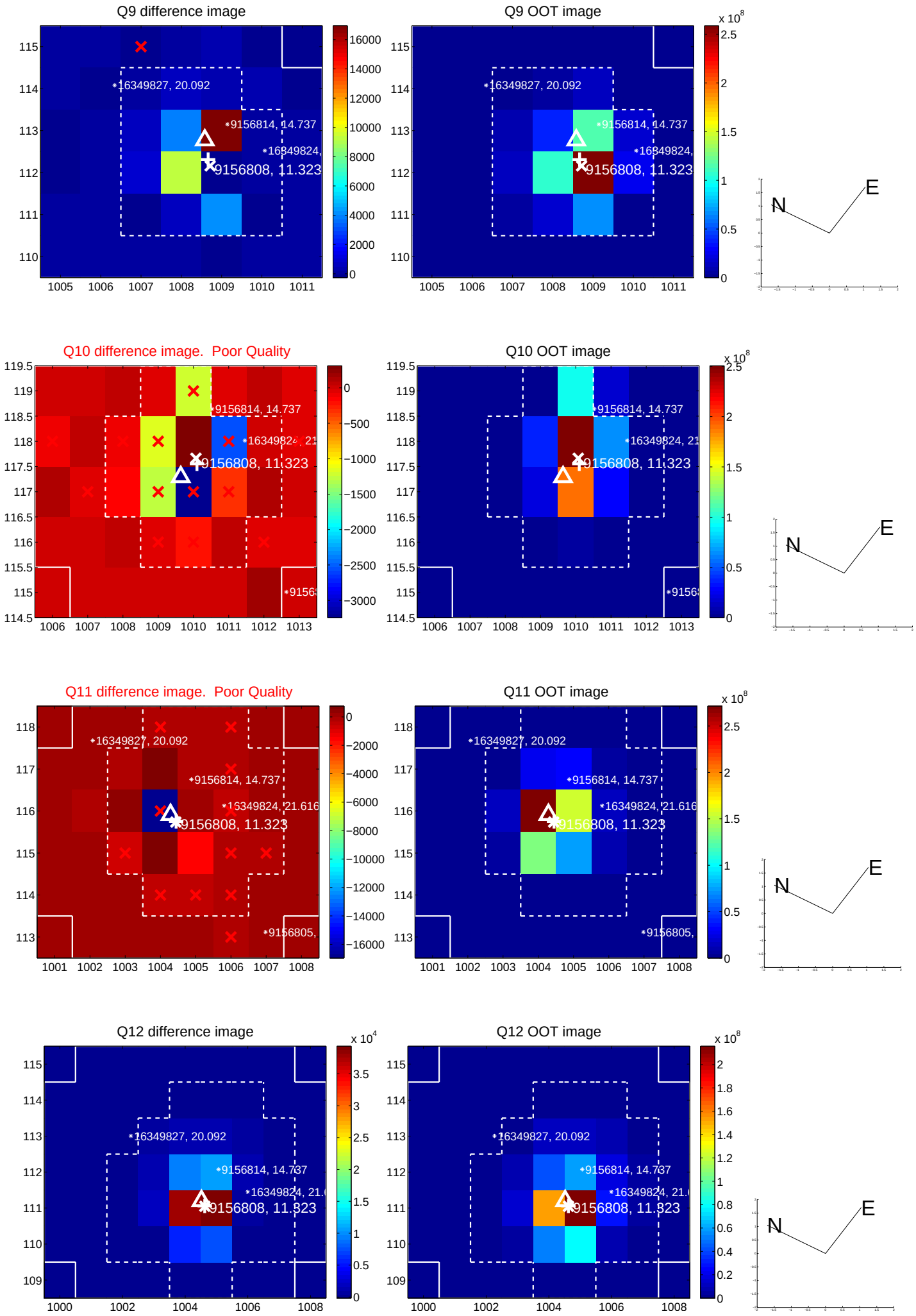
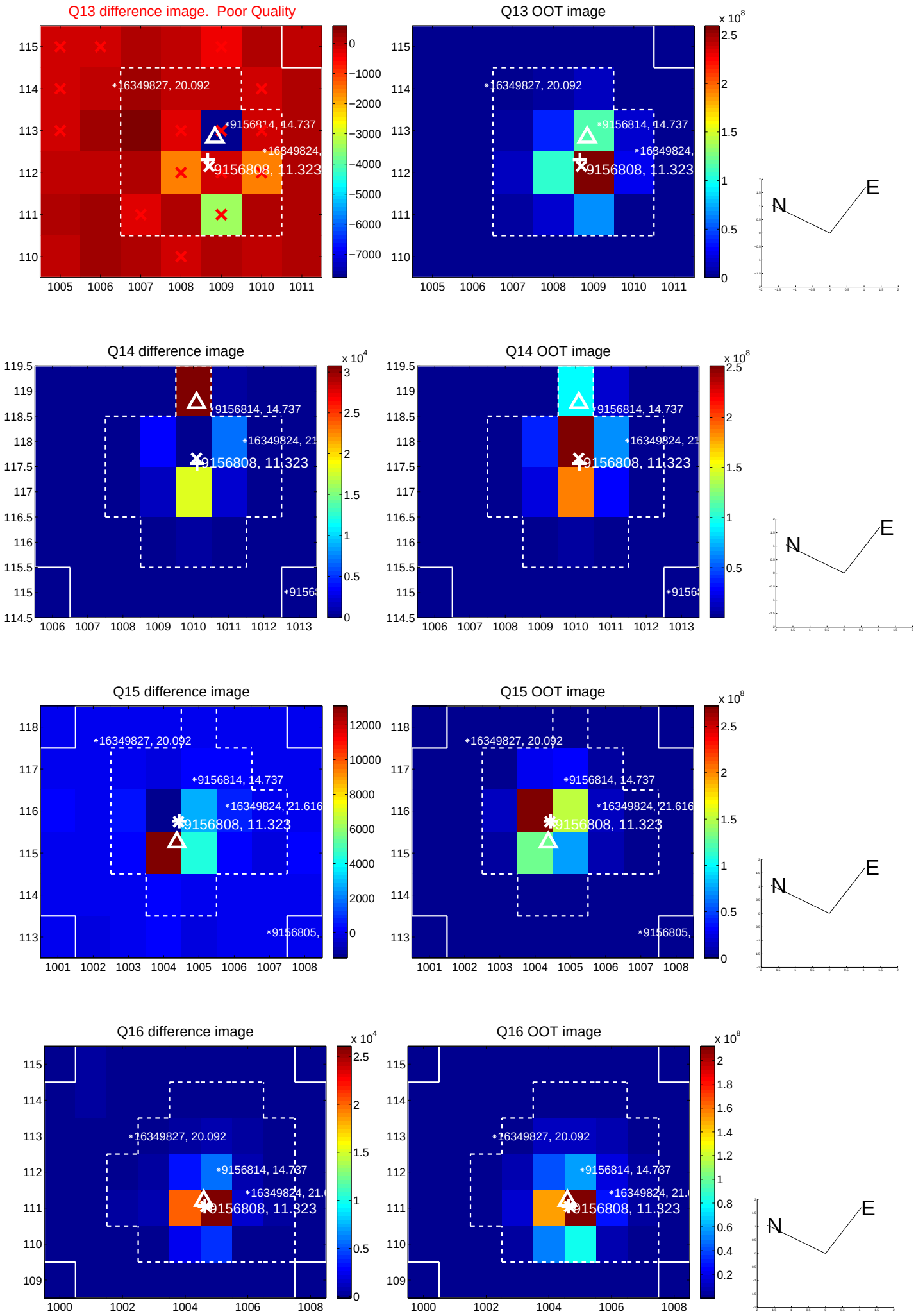
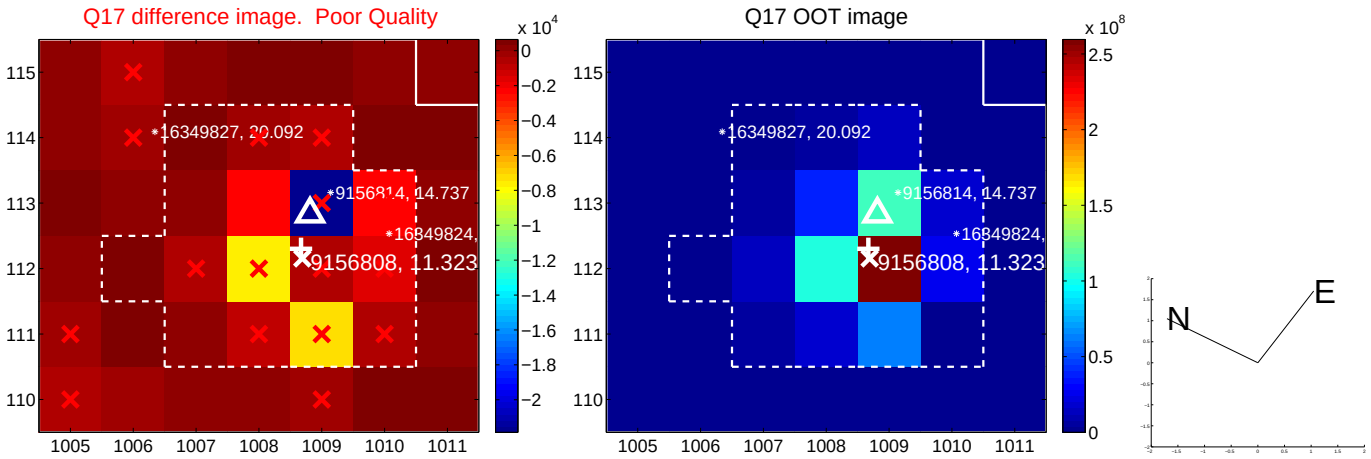
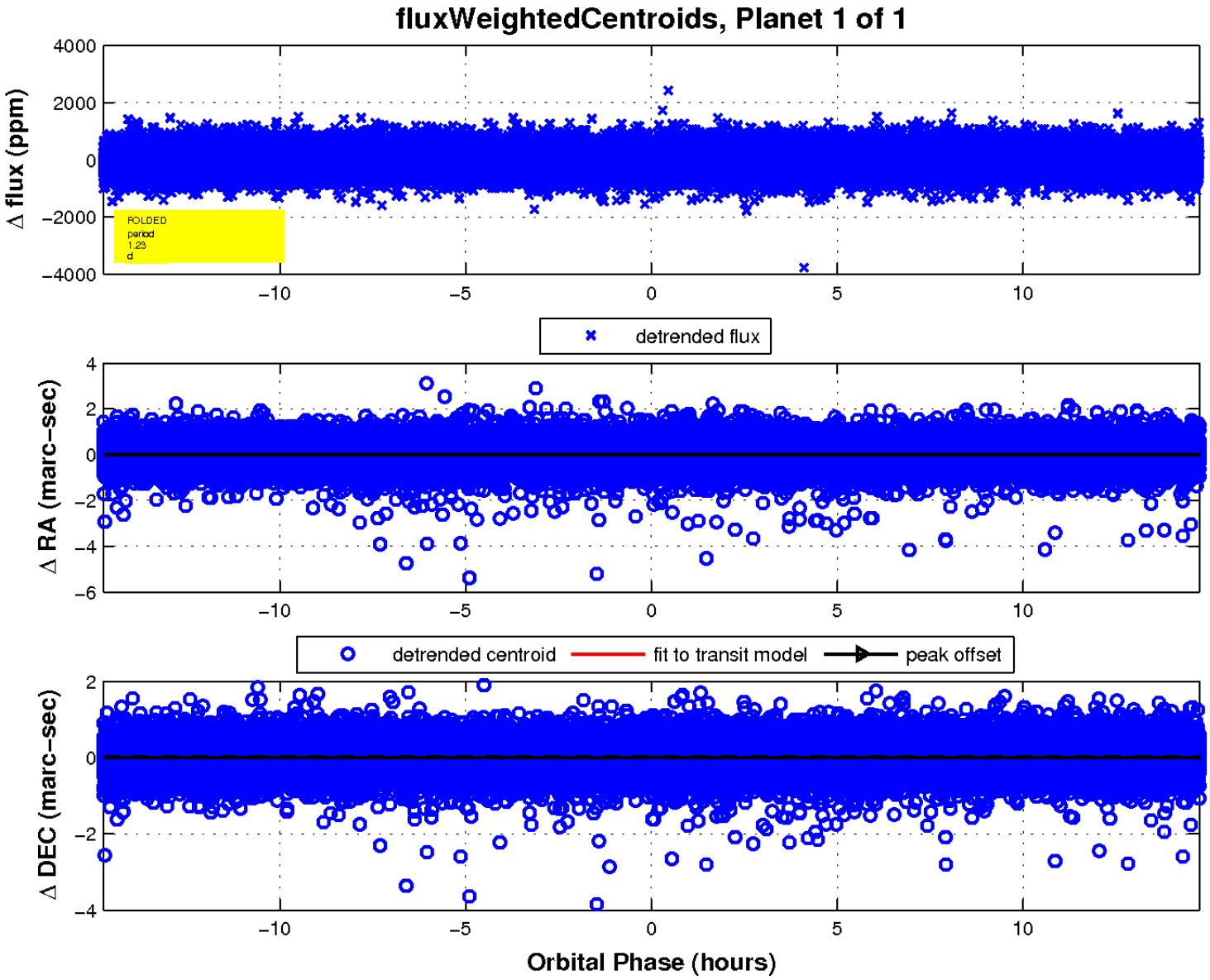


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

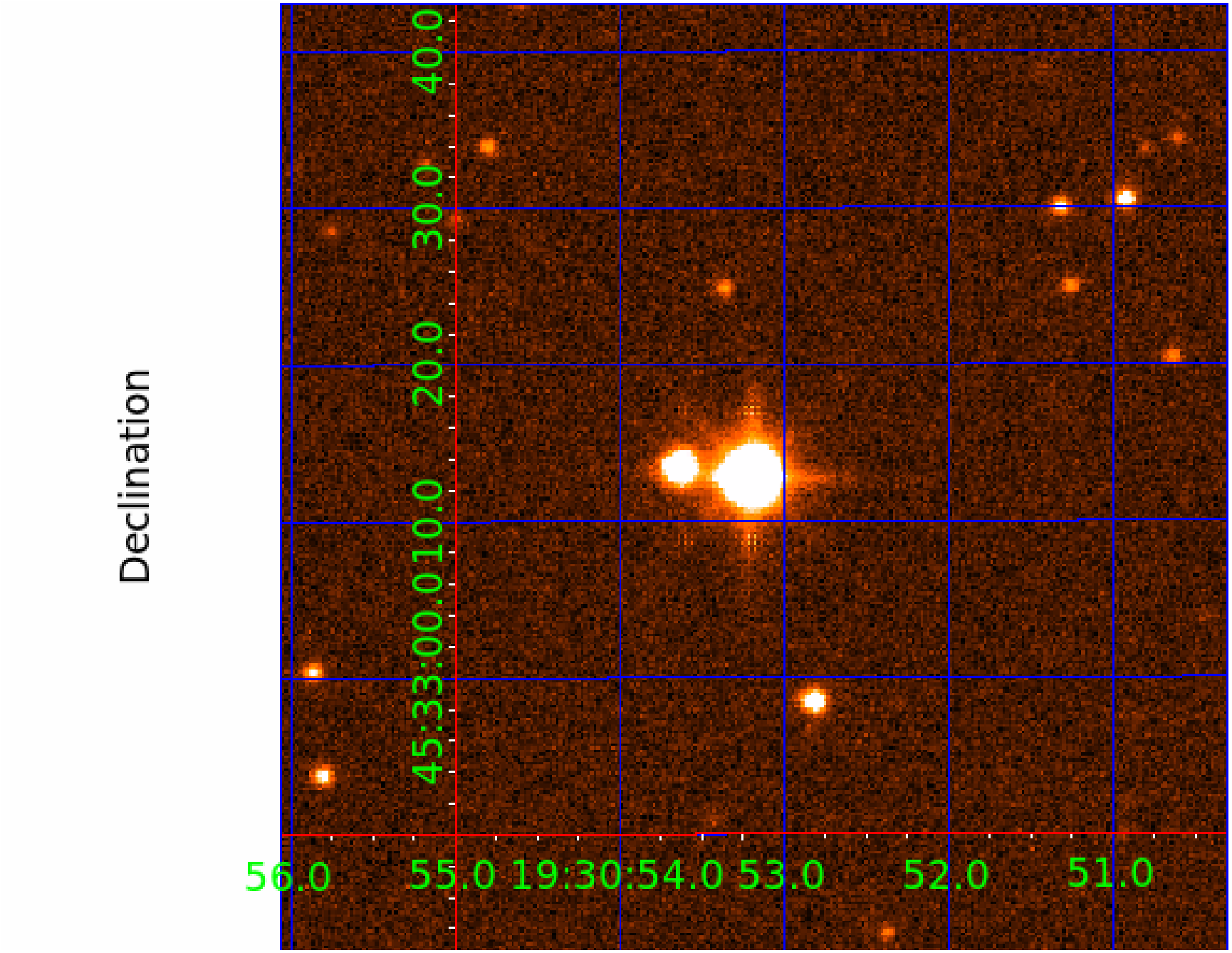


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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