KIC 006522144

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 ($S_\oplus$)
006522144-01	OBS	No	1.878165	132.454841	183.0	16.140	13.3	17.6	1.70	7550	3.04	6719.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006522144-01	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.

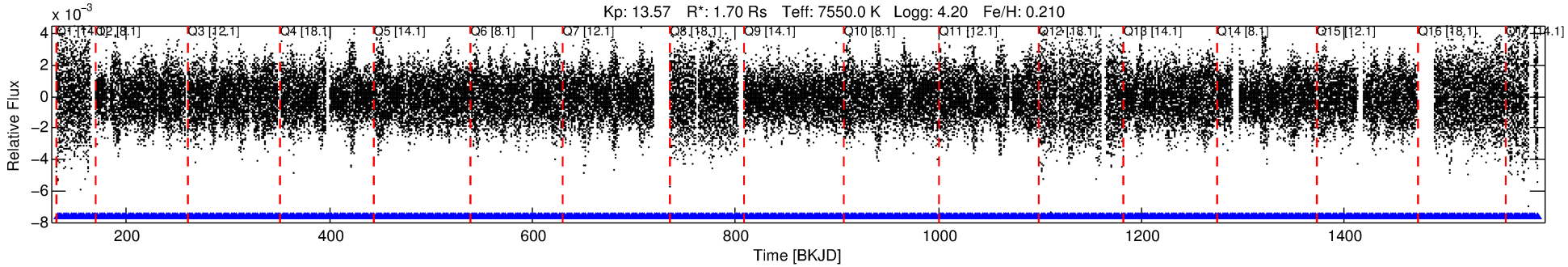
Ephemeris Match Information For 006522144-01

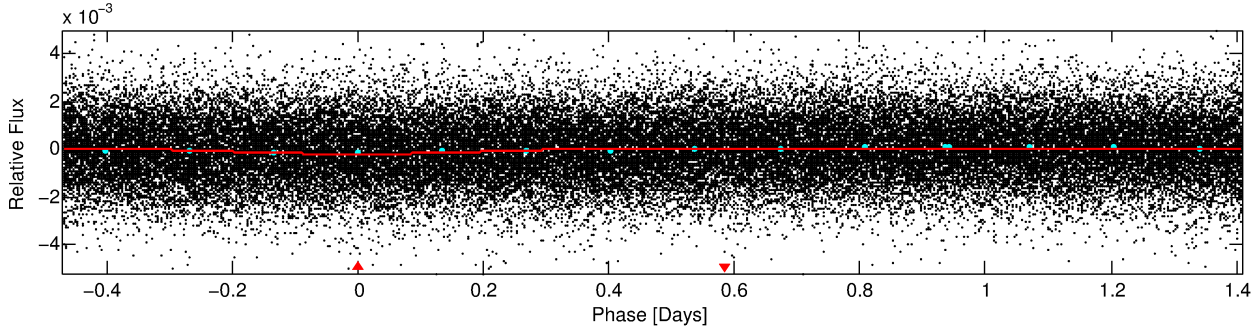
No Significant Match Found

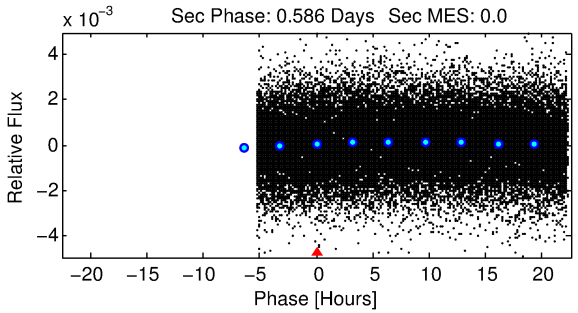
DV One-Page Summary

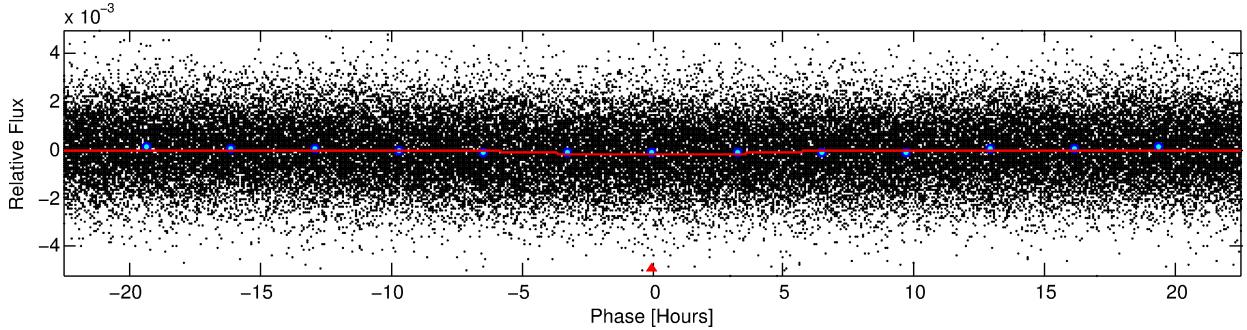
KIC: 6522144 Candidate: 1 of 1 Period: 1.878 d

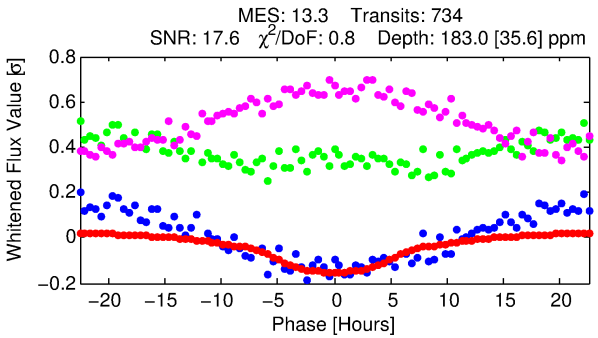
Kp: 13.57 R*: 1.70 Rs Teff: 7550.0 K Logg: 4.20 Fe/H: 0.210

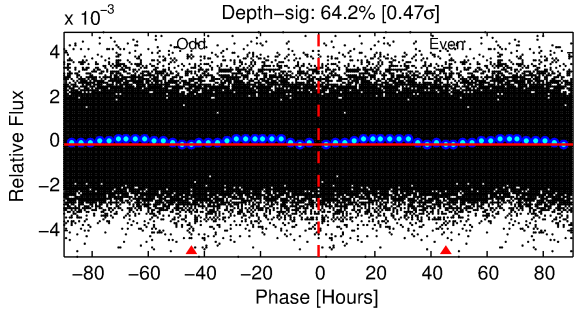


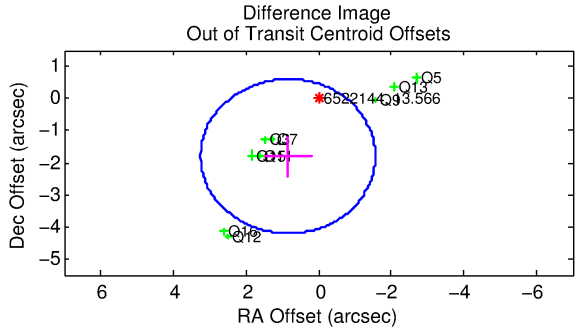












DV Fit Results:

Period = 1.87816 [0.00007] d
Epoch = 132.4548 [0.0290] BKJD
Rp/R* = 0.0163 [0.0021]
a/R* = 1.02 [0.01]
b = 0.98 [0.01]

Seff = 6719.71 [2906.20]
Teq = 2309 [250] K
Rp = 3.04 [1.11] Re
a = 0.0355 [0.0099] AU

Ag = N/A
Teffp = N/A

DV Diagnostic Results:

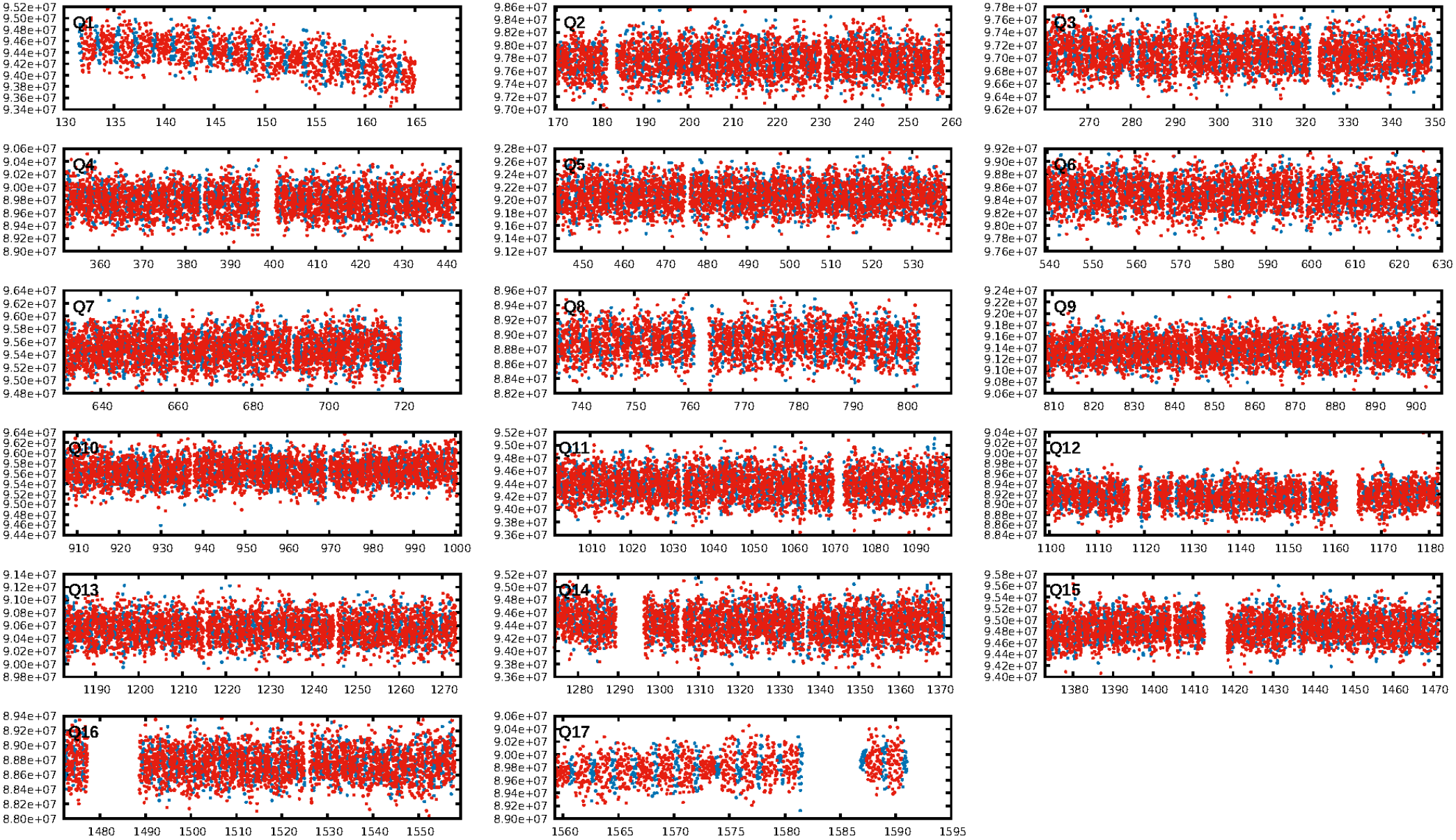
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [702/702]
GhostDiagnostic−chr: 3.985

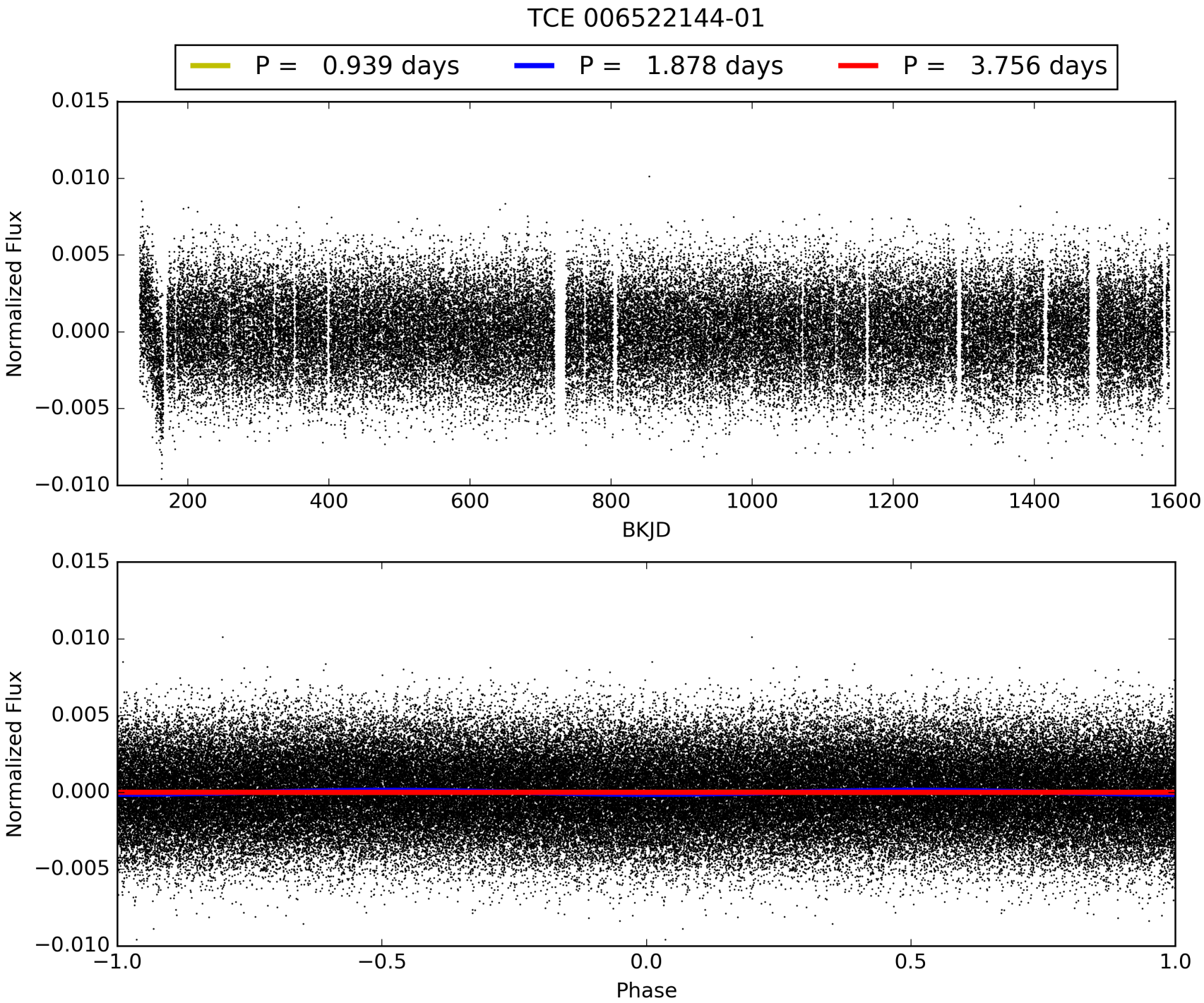
Centroid−sig: 0.0%
Centroid−so: 0.588 arcsec [3.30σ]
OotOffset−rm: 1.988 arcsec [2.48σ]
KicOffset−rm: 2.353 arcsec [2.56σ]
OotOffset−st: 0/4/2/3 [9]
KicOffset−st: 0/4/2/3 [9]
DiffImageQuality−fgm: 0.78 [7/9]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 16:48:48 Z

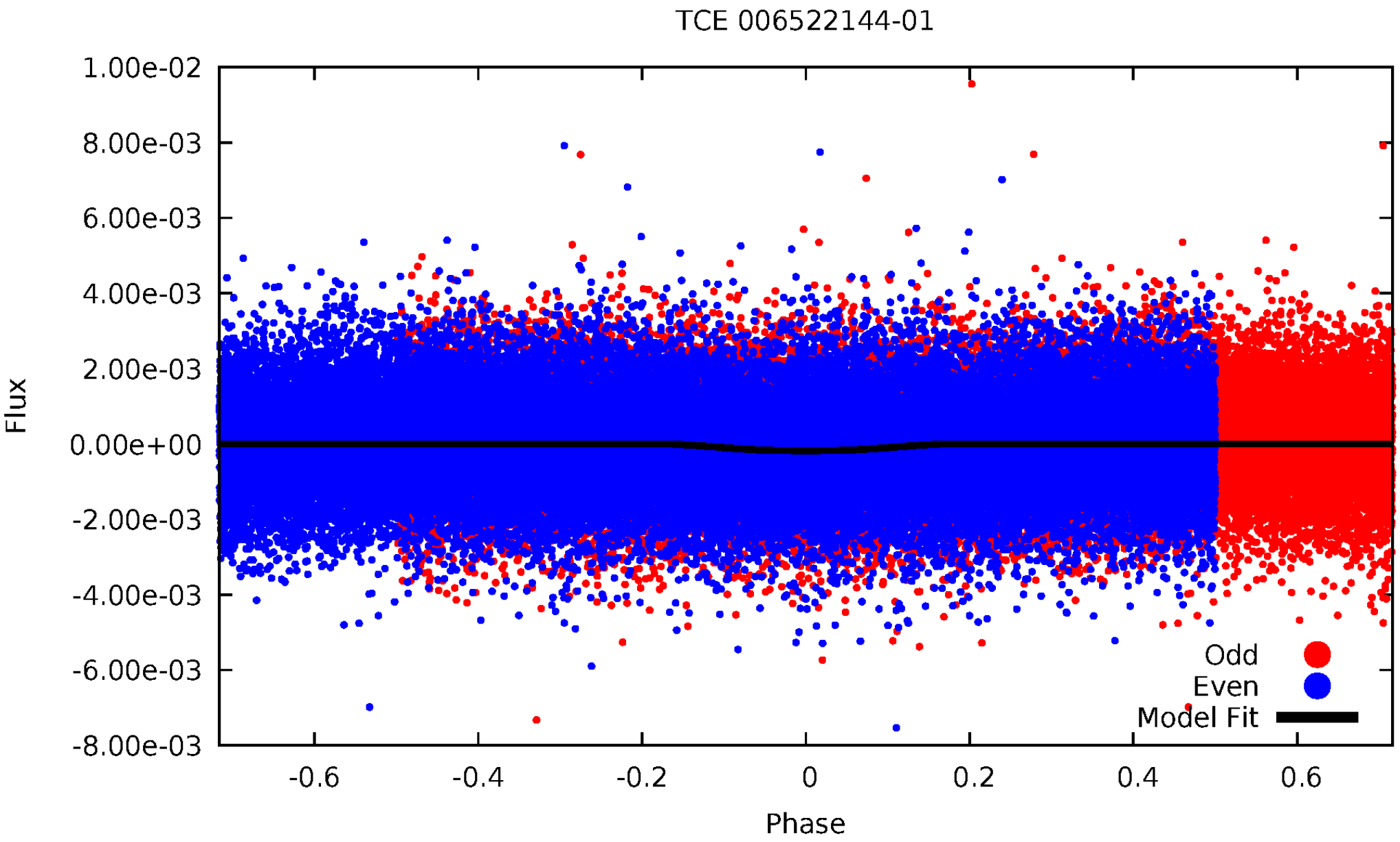
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006522144-01, PDC Light Curves

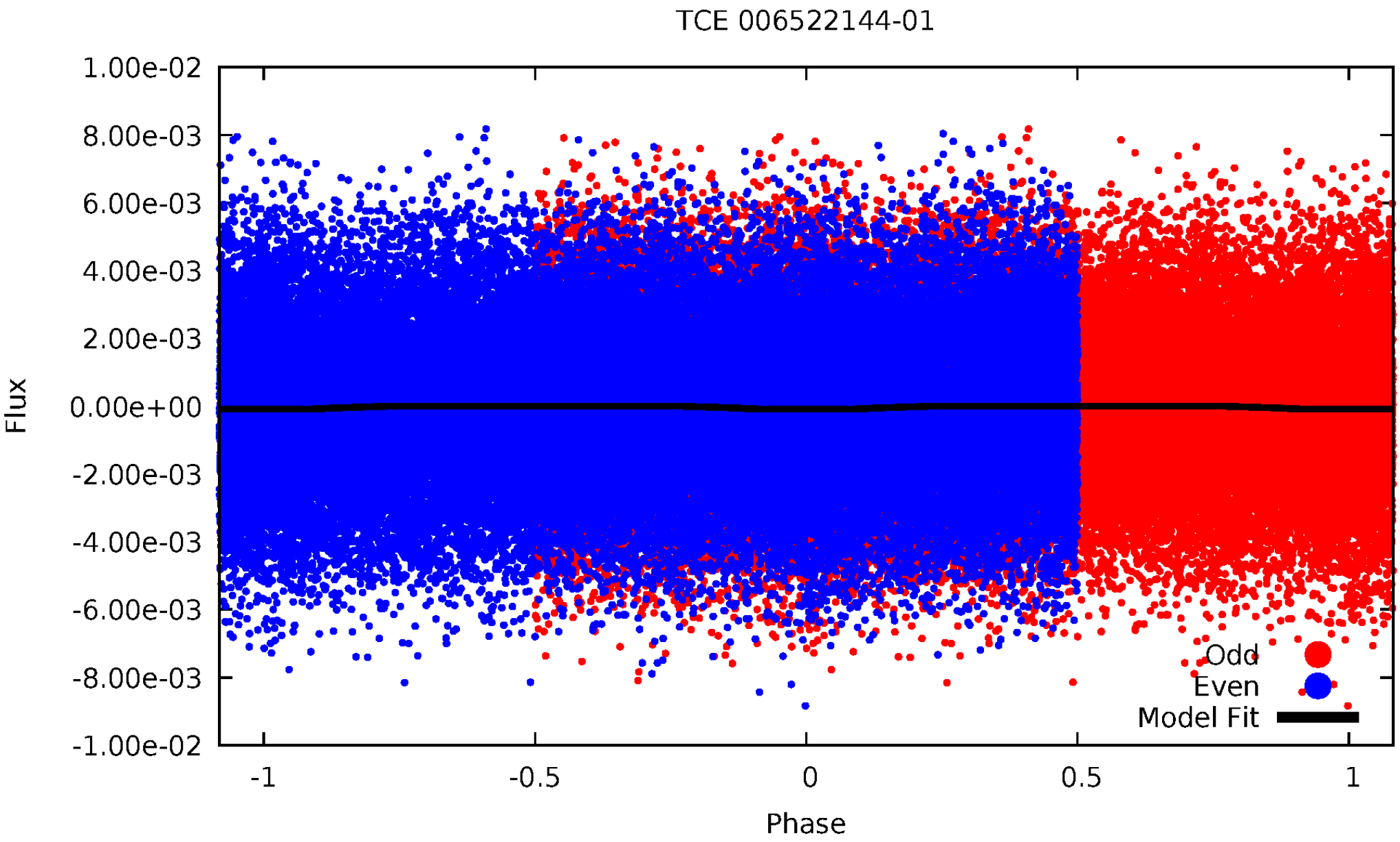



TCE 006522144-01
P = 0.939 days
P = 1.878 days
P = 3.756 days
Normalized Flux
BKJD
Normalized Flux
Phase

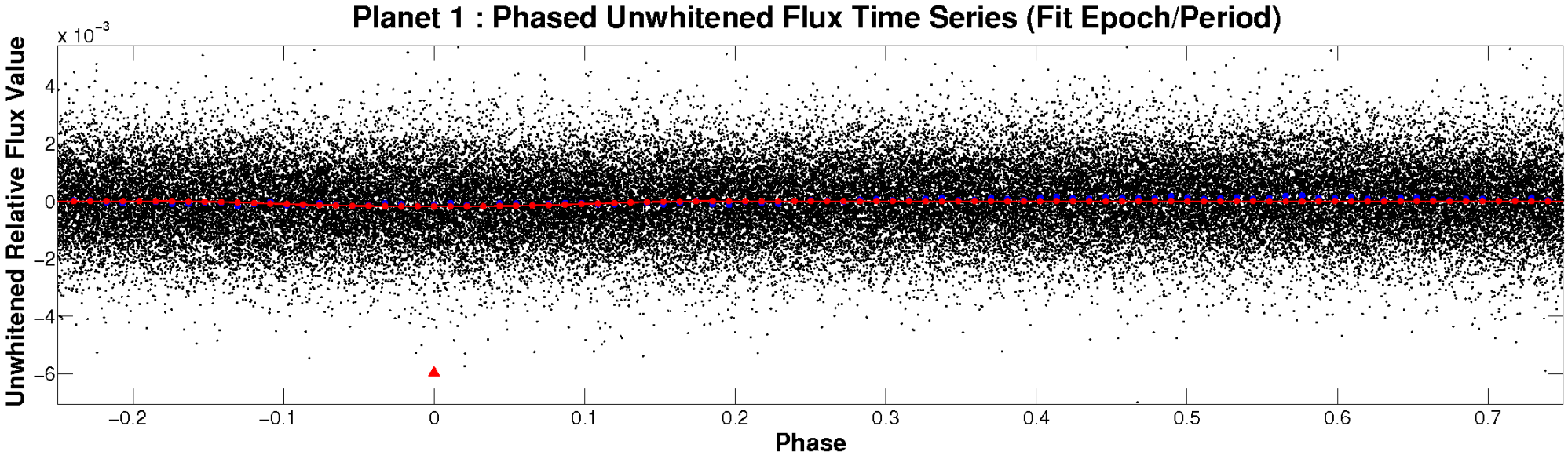
DV Odd/Even

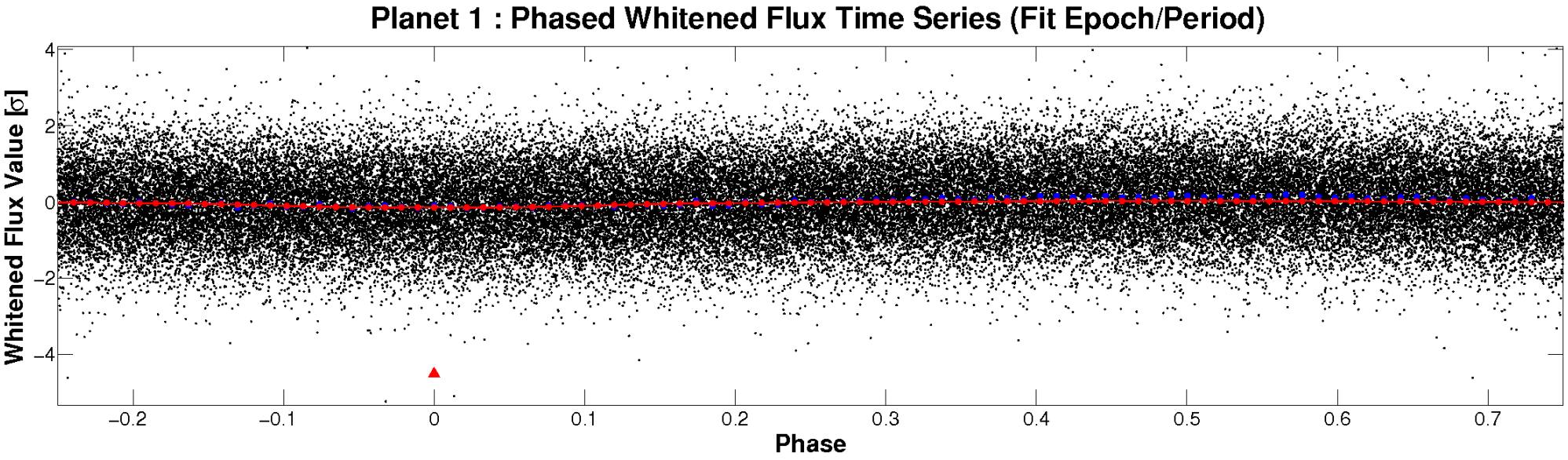

TCE 006522144-01
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
-8.00e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006522144-01
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
-8.00e-03
-1.00e-02
Flux
-1
-0.5
0
0.5
1
Phase
Odd
Even
Model Fit

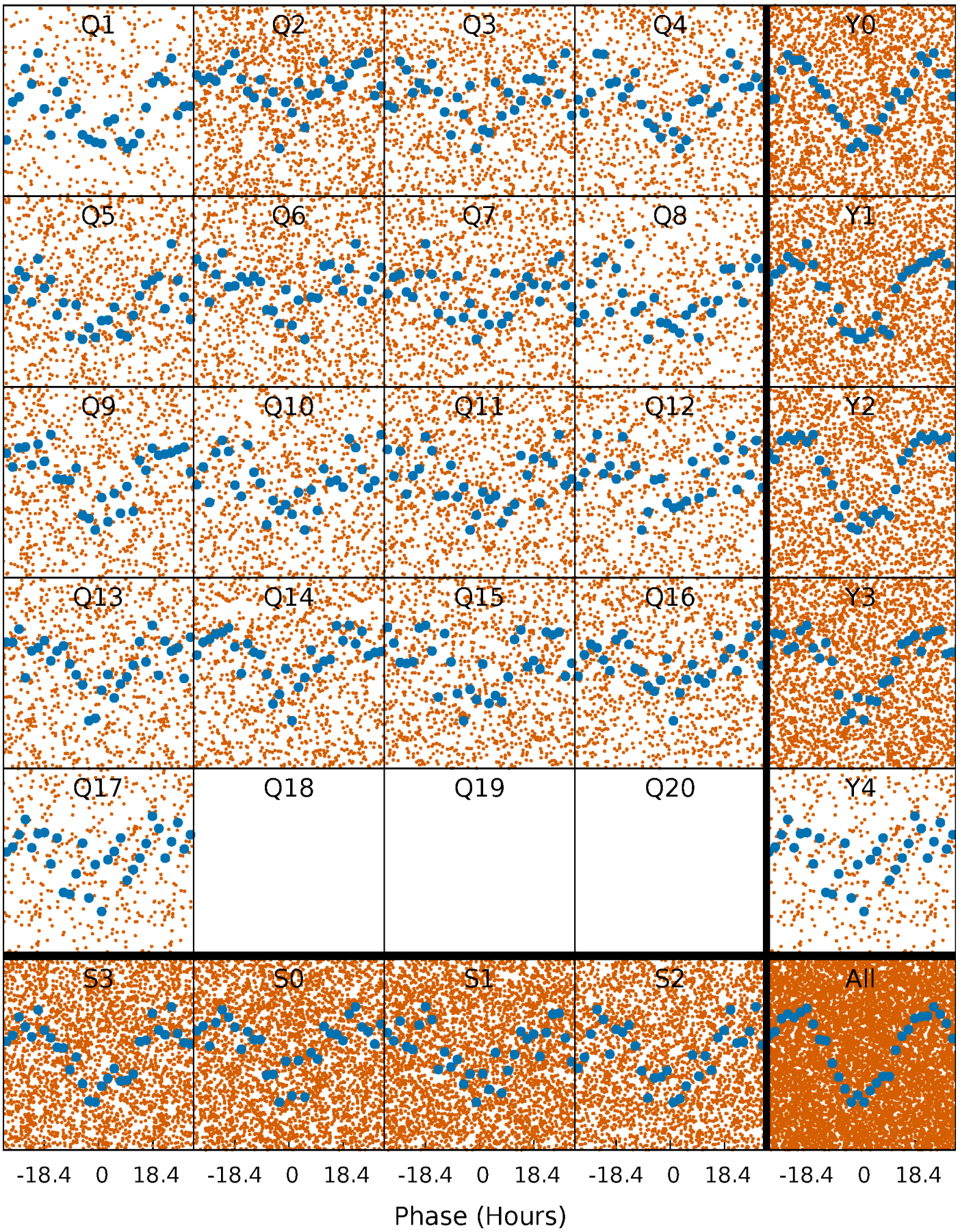
Non-Whitened Vs. Whitened Light Curve





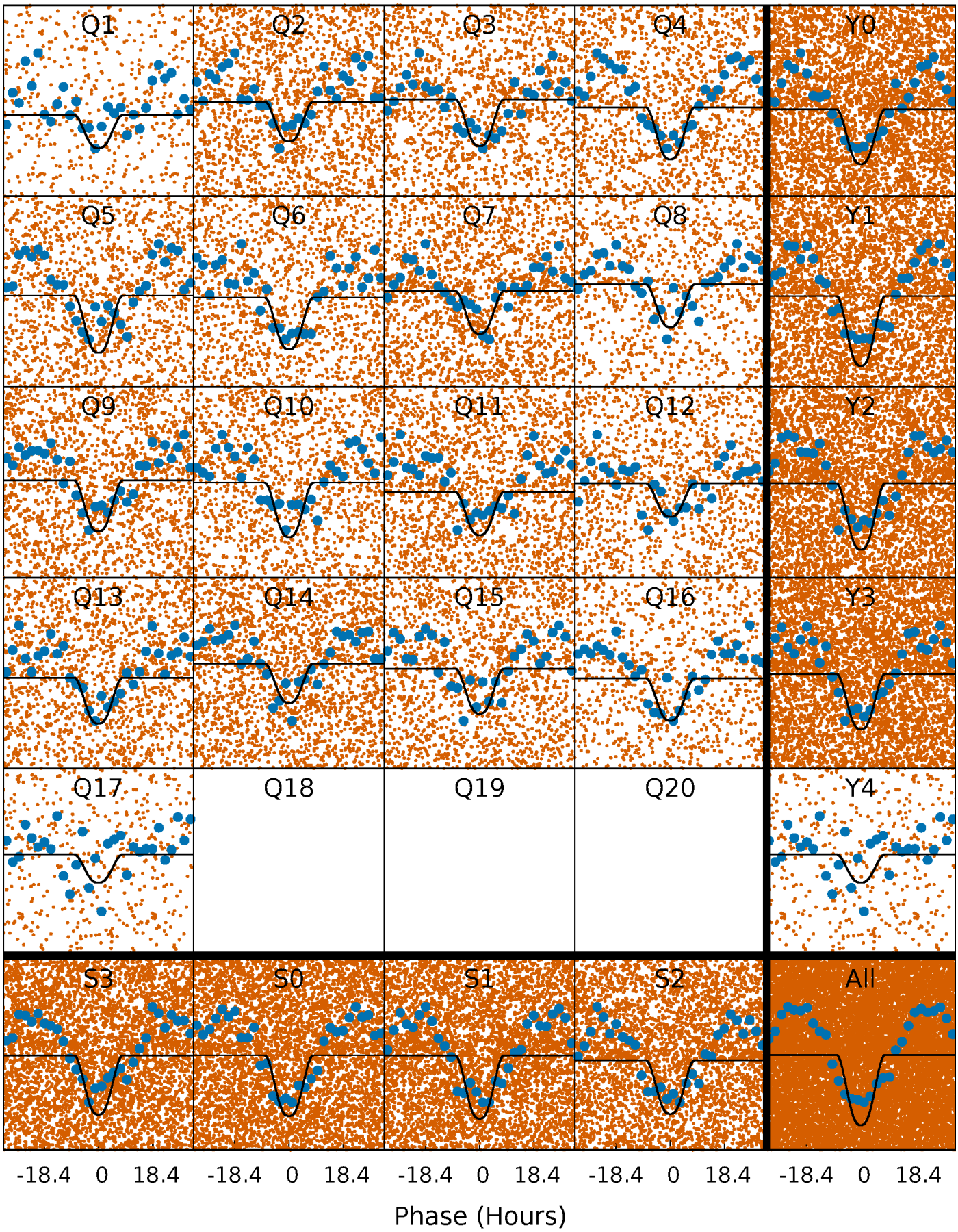
PDC Quarter-Phased Transit Curves

TCE 006522144-01 P= 1.878165 Days T_0=132.454841 (BKJD)



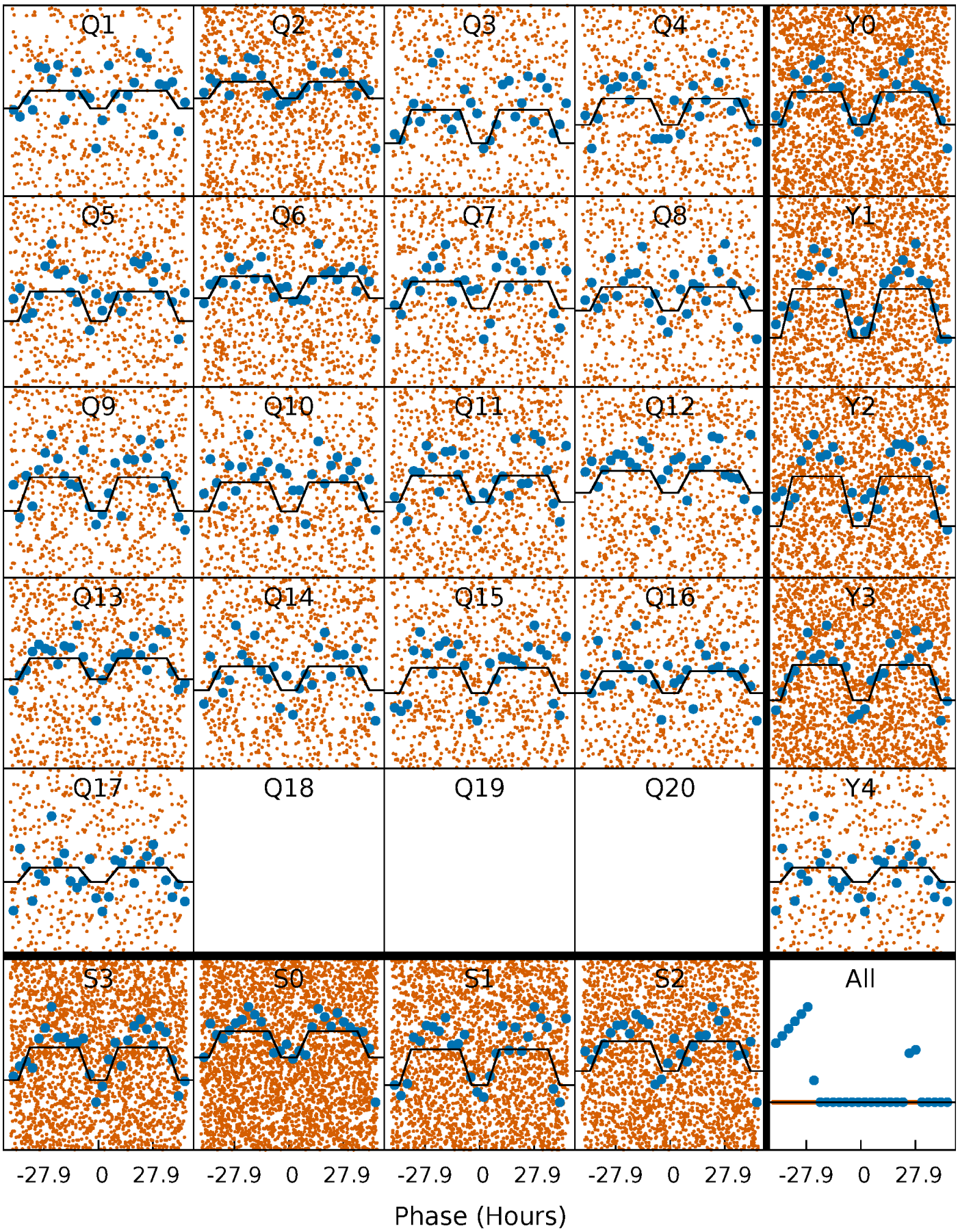
DV Quarter-Phased Transit Curves

TCE 006522144-01 P= 1.878165 Days T_0=132.454841 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

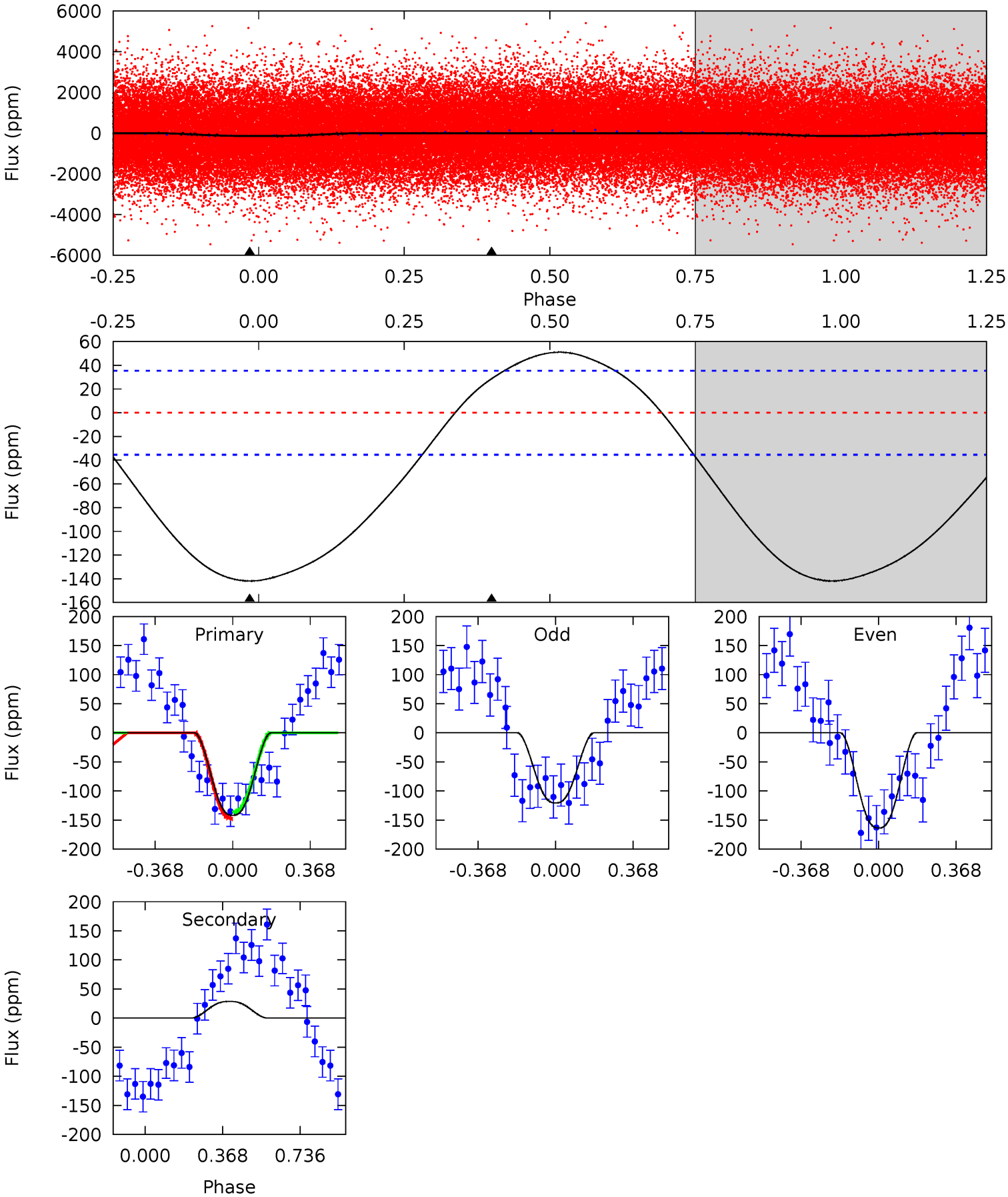
TCE 006522144-01 P= 1.878135 Days T_0=132.432022 (BKJD)



DV Model-Shift Uniqueness Test

006522144-01, P = 1.878165 Days, E = 130.576676 Days

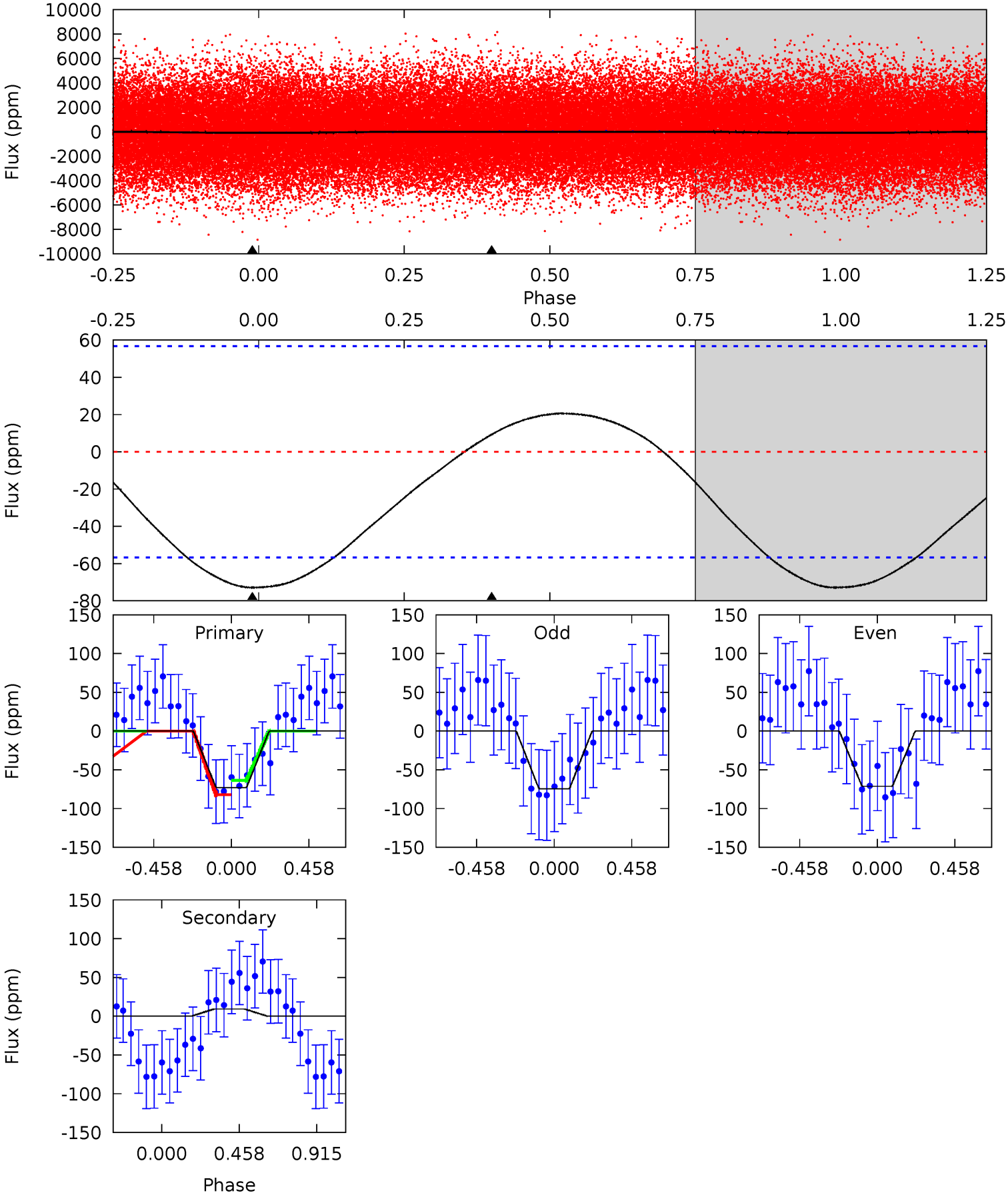
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	-3.47	0	0	4.28	0.90	2.07	17.2	17.2	-3.47	-3.47	2.63	0.93	0.26	0.66



Alt Model-Shift Uniqueness Test

006522144-01, P = 1.878135 Days, E = 130.553887 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.44	-0.69	0	0	4.23	0.74	0.58	5.44	5.44	-0.69	-0.69	0.12	0.92	0.22	0.68



Stellar Parameters For KIC 006522144

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7550^{+210}_{-330}	$4.202^{+0.070}_{-0.210}$	$0.210^{+0.150}_{-0.400}$	$1.704^{+0.586}_{-0.234}$	$1.696^{+0.212}_{-0.233}$	$0.483^{+0.181}_{-0.251}$
	+3%/-4%	+2%/-5%	+71%/-190%	+34%/-14%	+12%/-14%	+38%/-52%
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 006522144-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	29±8	$3.15^{+0.69}_{-0.53}$	3272^{+252}_{-191}	-4559^{+315}_{-350}	$-1.912^{+0.745}_{-1.155}$
Alt.	9±13	$1.71^{+0.52}_{-0.45}$	3276^{+245}_{-171}	-4633^{+8197}_{-1017}	$-1.983^{+2.867}_{-3.977}$

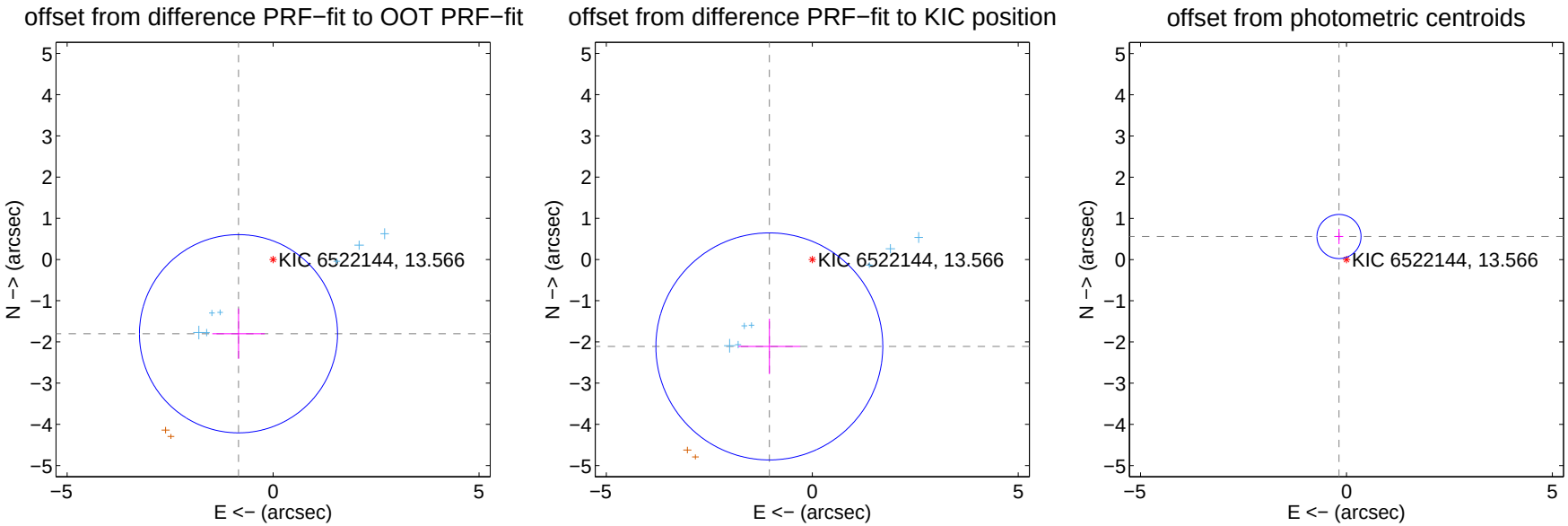
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

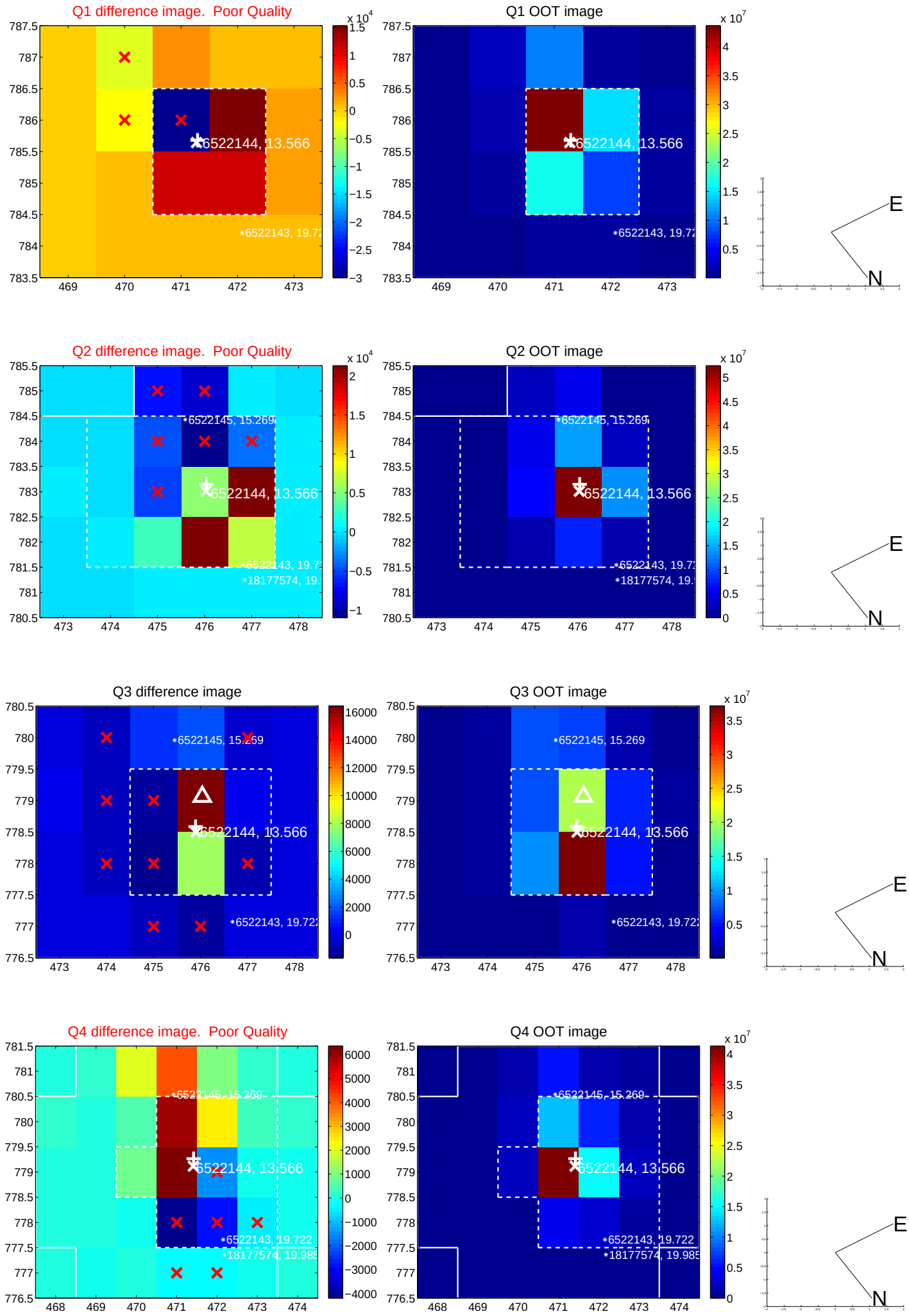
Supplemental centroid analysis for 006522144-01. Kepler magnitude: 13.57. Transit SNR 17.61
There are 7 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.64 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.988 ± 0.802	2.48	0.840 ± 0.636	-1.802 ± 0.610
PRF-fit source offset from KIC position	2.353 ± 0.918	2.56	1.043 ± 0.752	-2.109 ± 0.670
photometric centroid source offset	0.59 ± 0.18	3.30	0.18 ± 0.10	0.56 ± 0.18

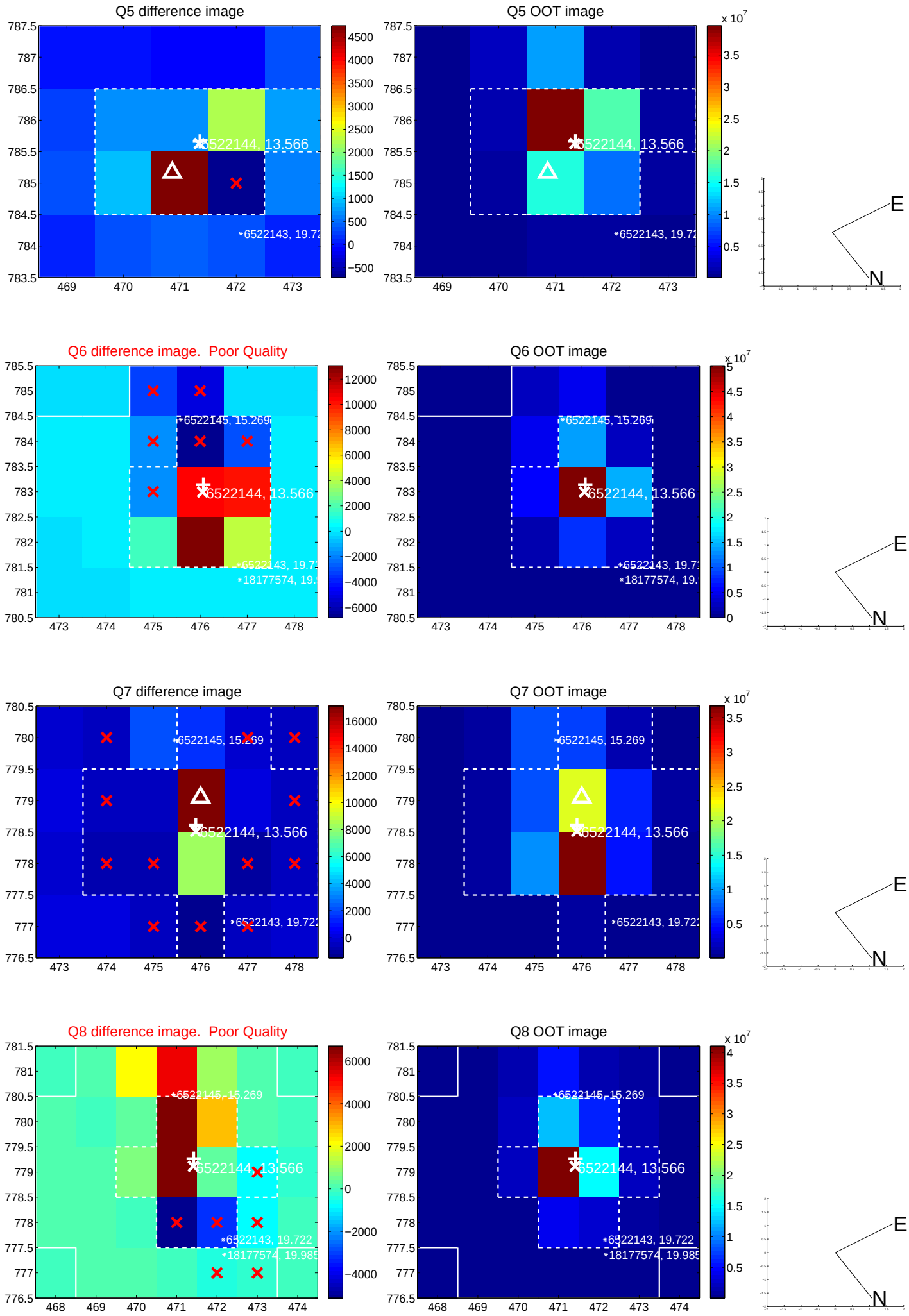


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

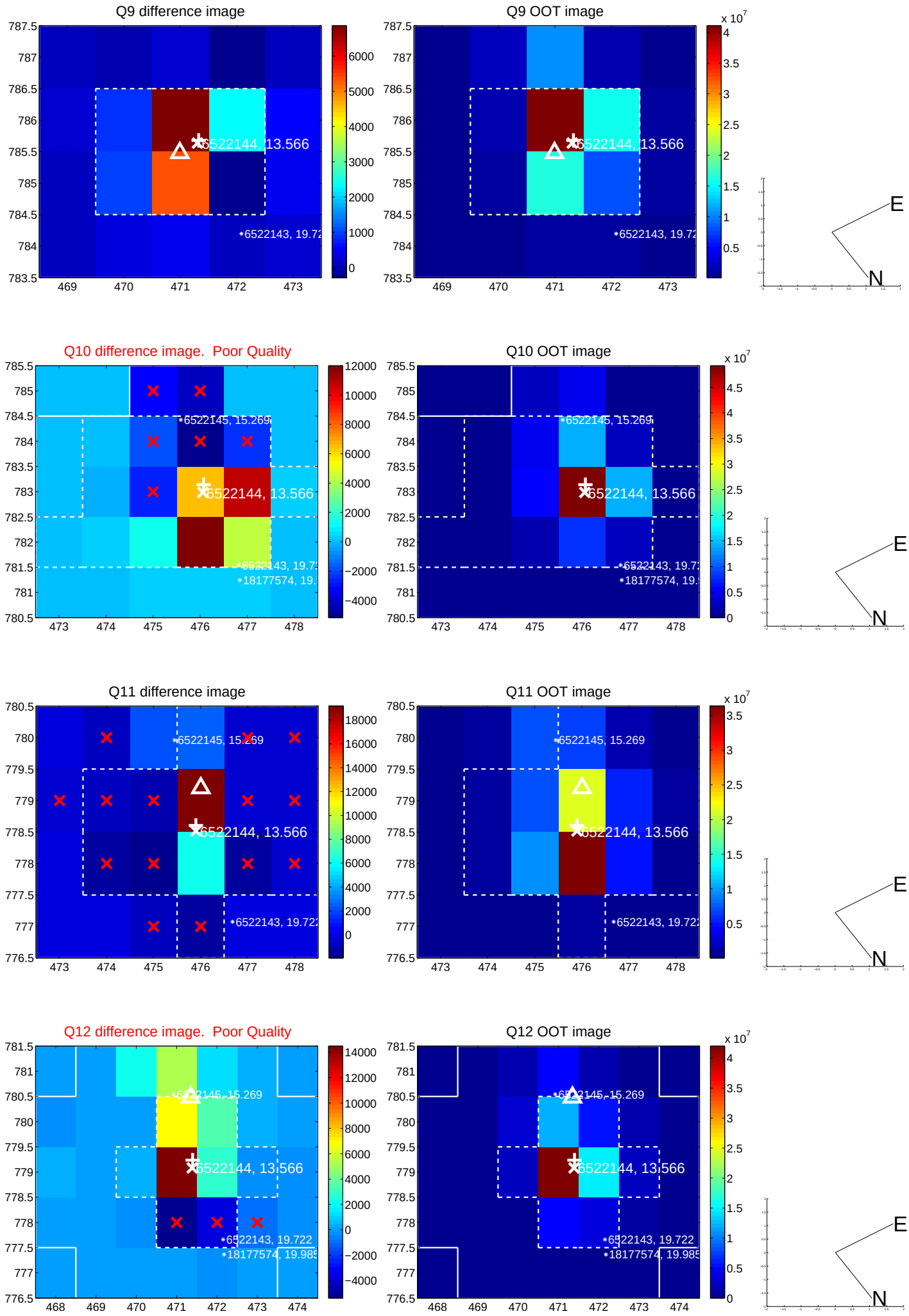
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



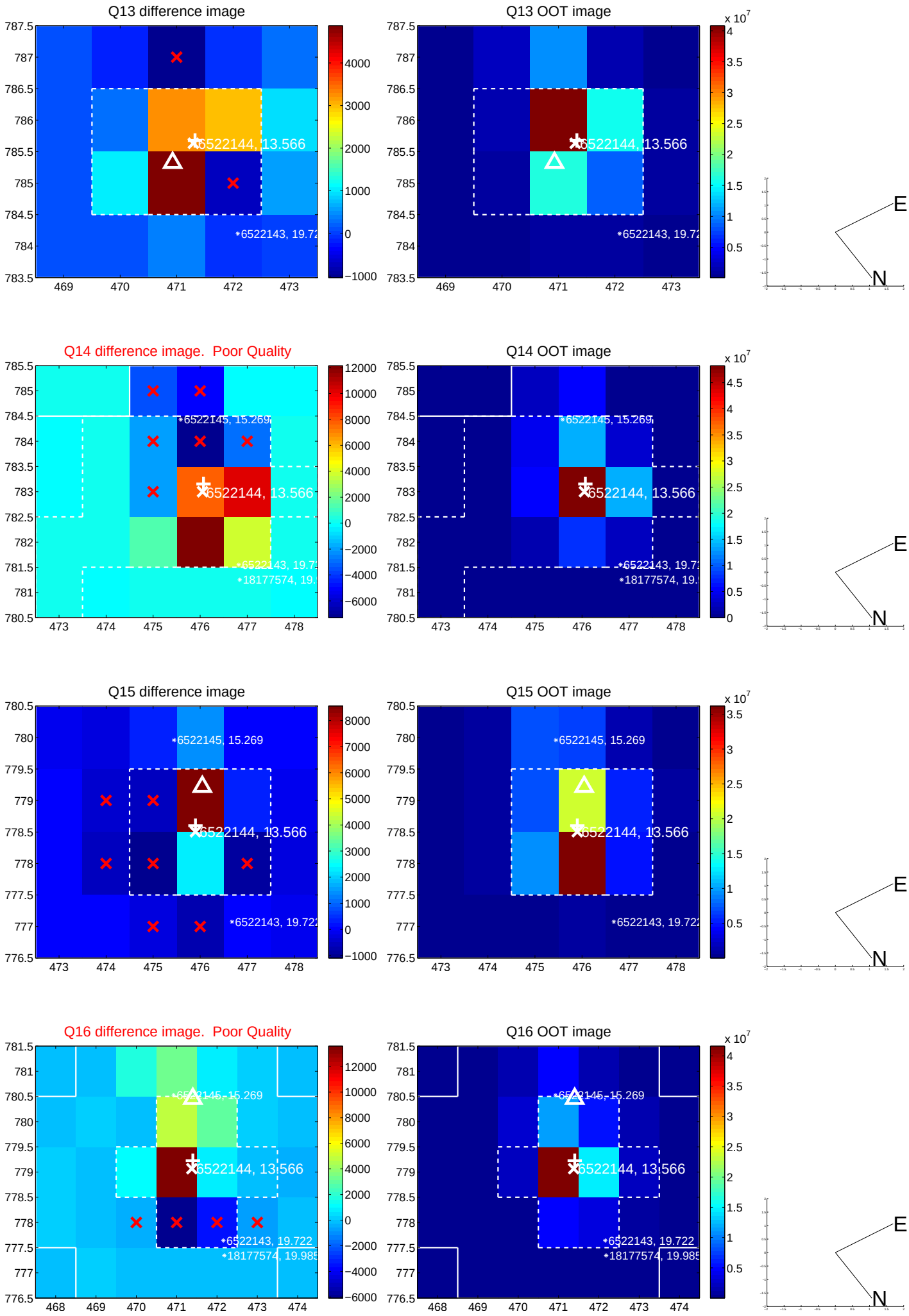
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



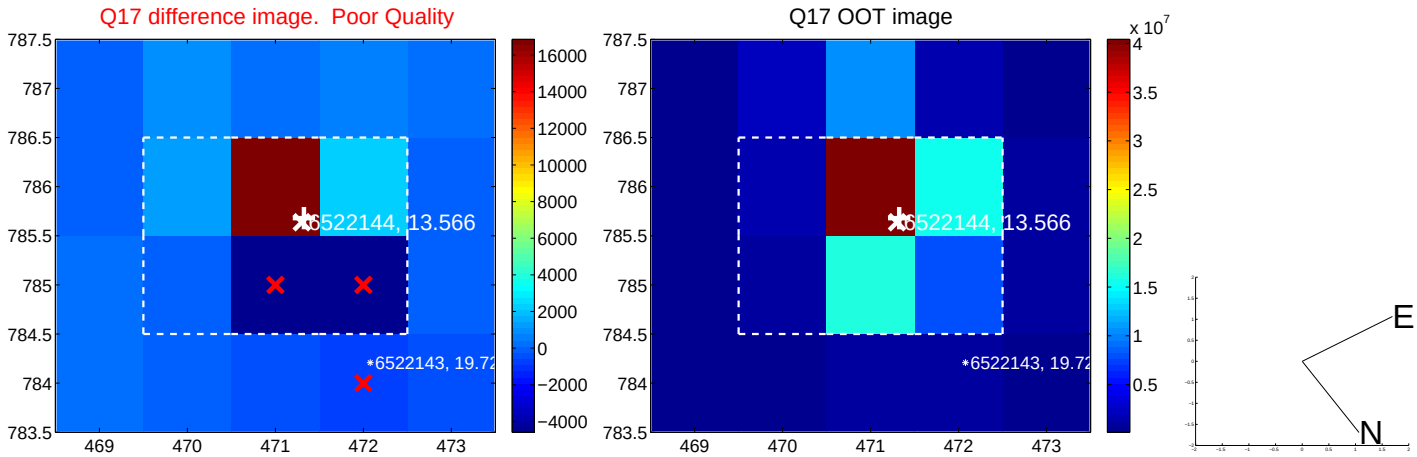
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

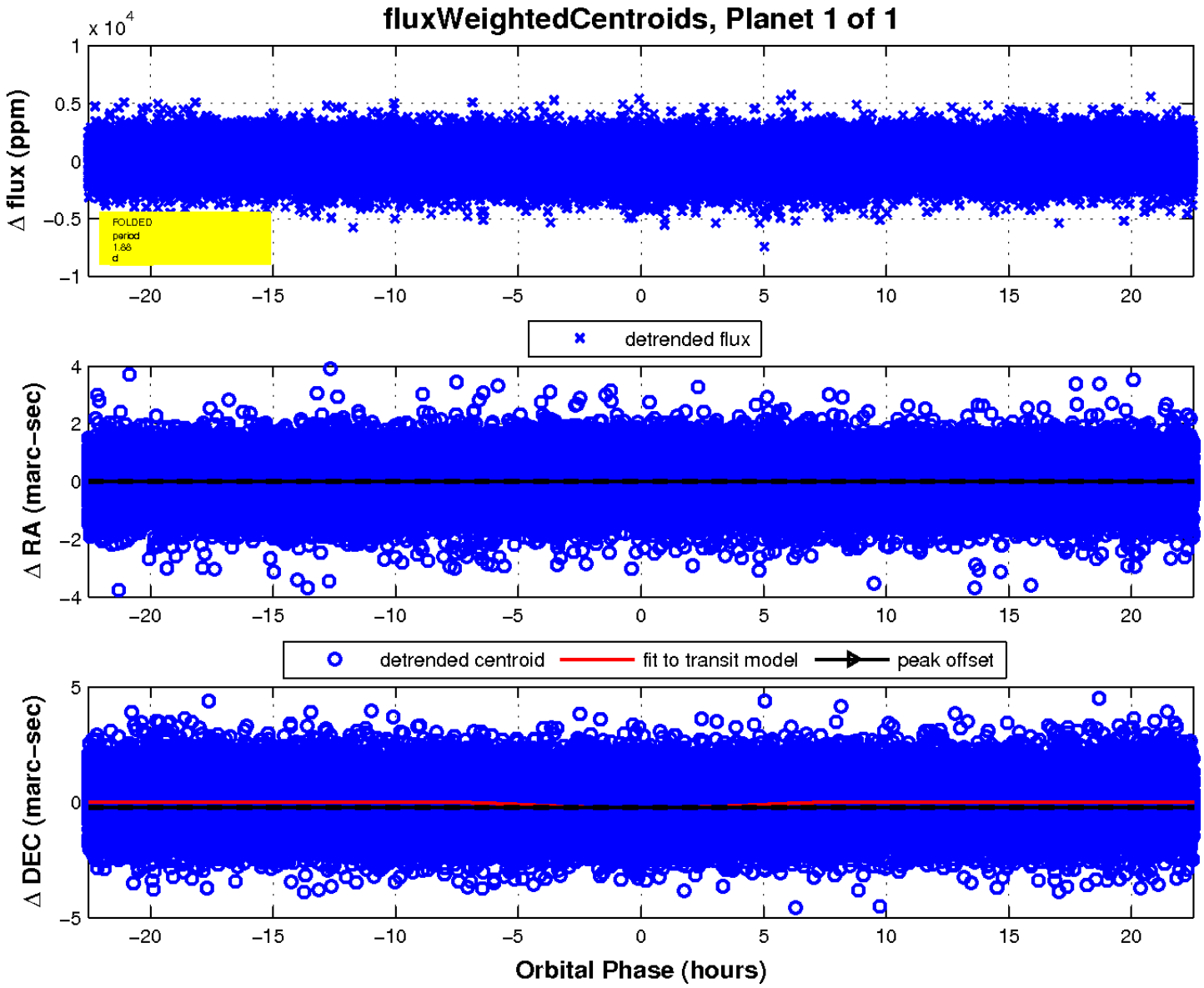


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

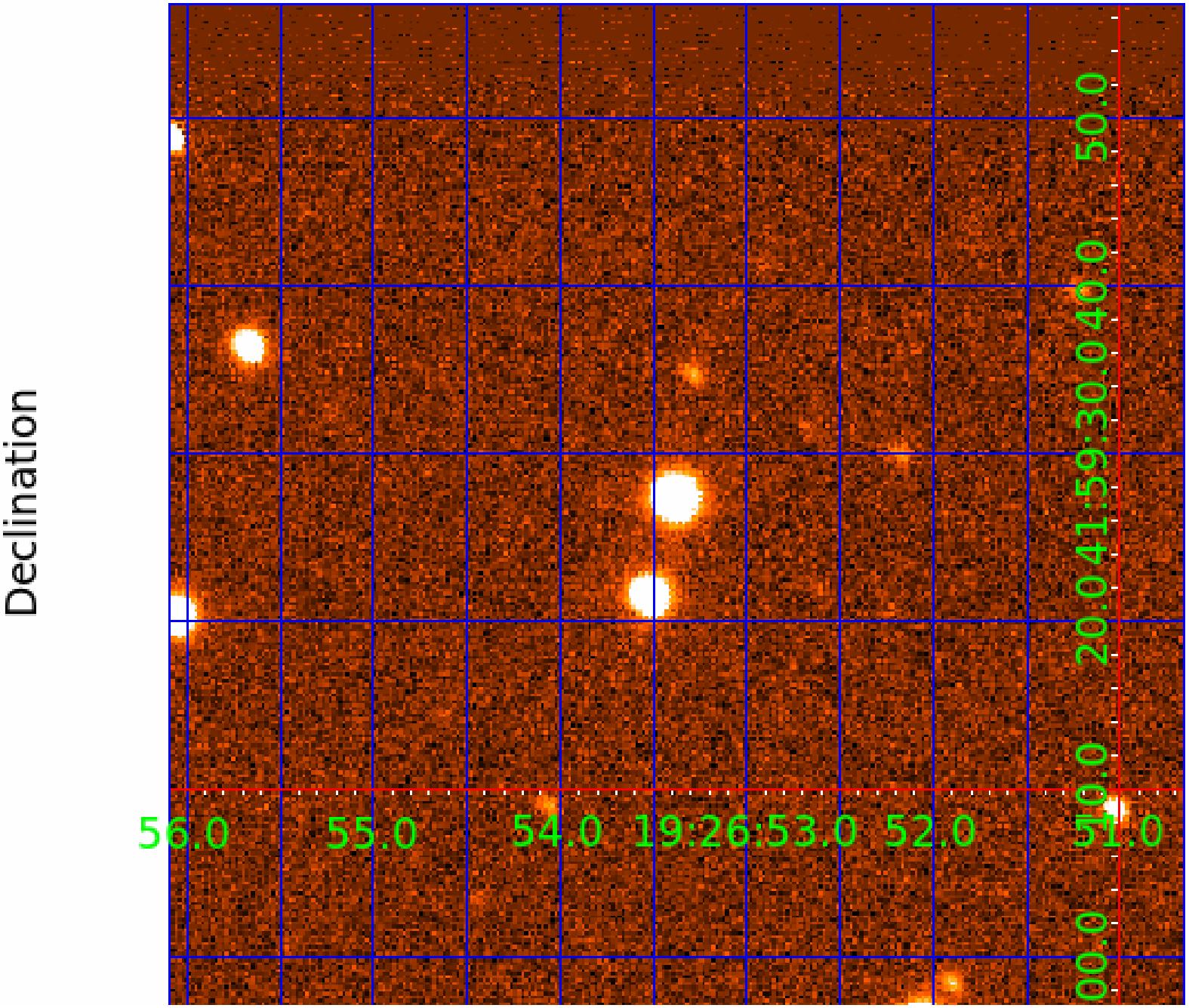


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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