KIC 006521136

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 ($S_\oplus$)
006521136-01	OBS	No	4.446102	134.098805	24.1	29.828	8.5	5.8	0.65	4390	0.30	67.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521136-01	OBS	FP	0.00	1	0	0	0	LPP_DV

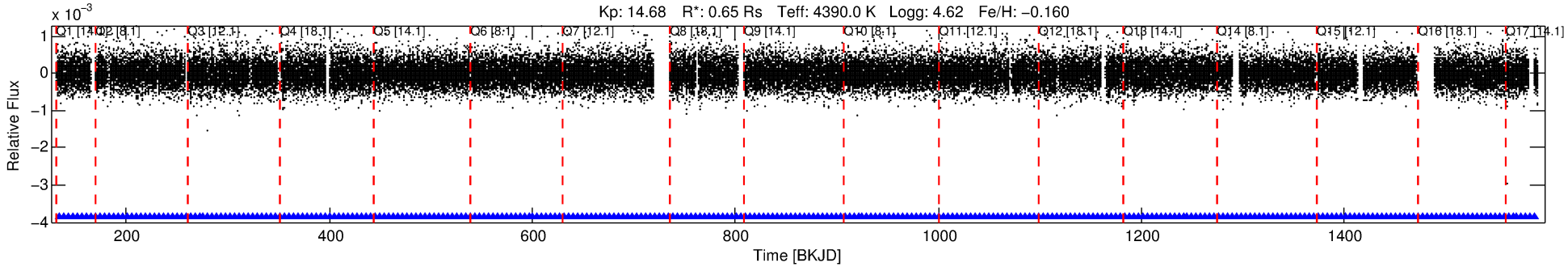
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

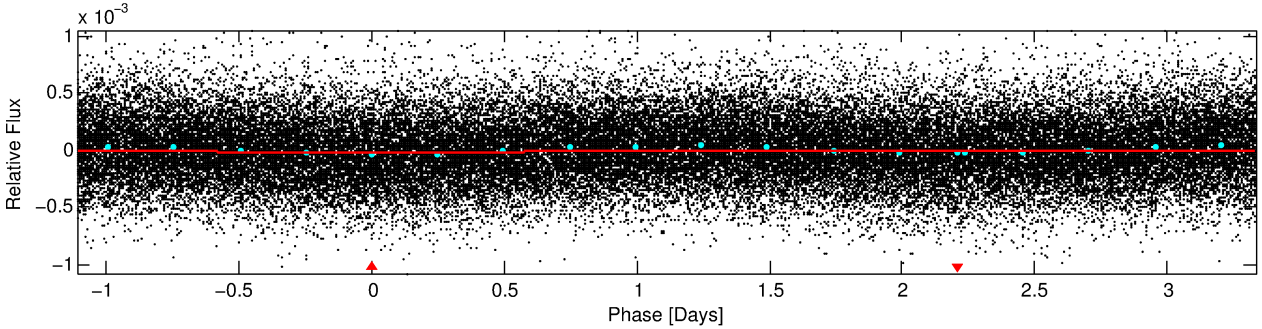
Ephemeris Match Information For 006521136-01

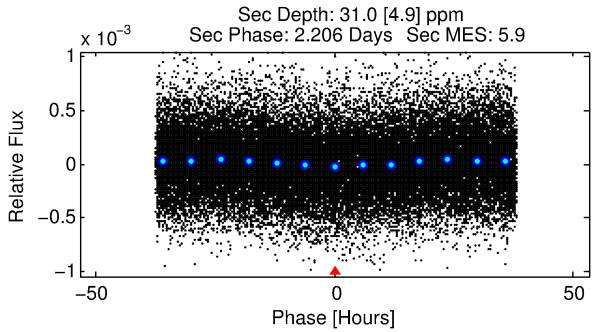
No Significant Match Found

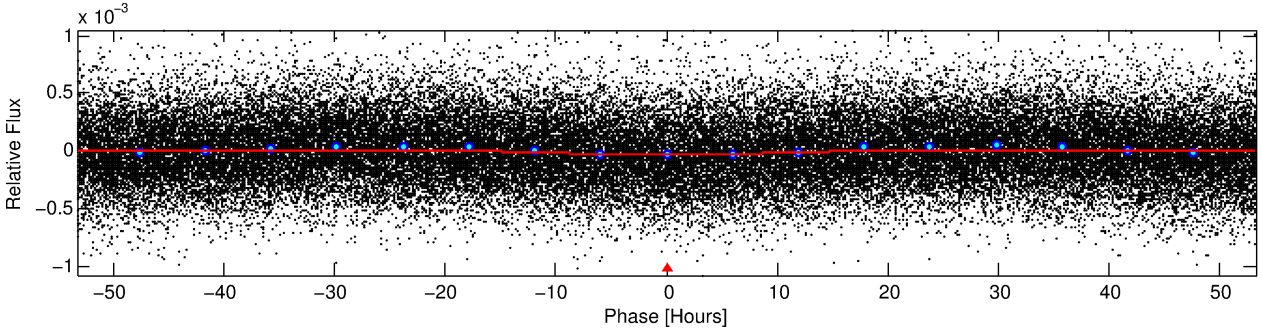
DV One-Page Summary

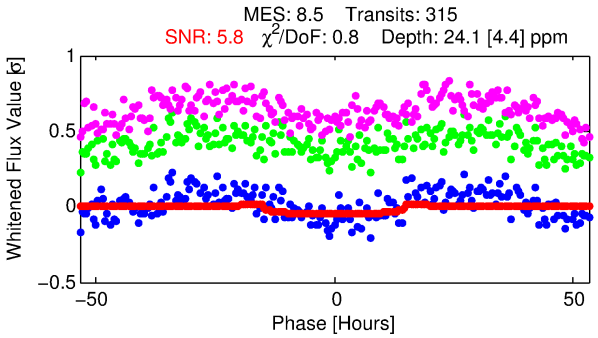
KIC: 6521136 Candidate: 1 of 1 Period: 4.446 d

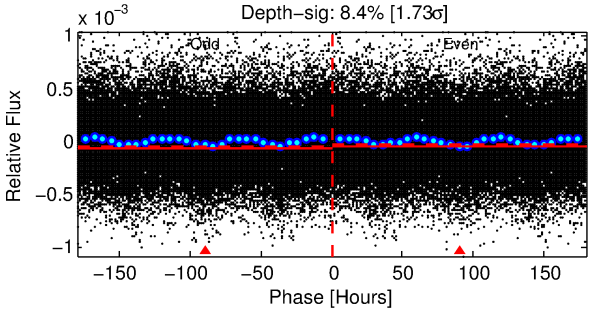


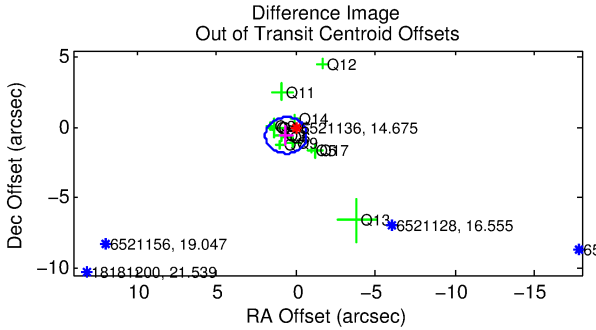












DV Fit Results:

Period = 4.44610 [0.00022] d
Epoch = 134.0988 [0.0349] BKJD
Rp/R* = 0.0043 [0.0034]
a/R* = 1.30 [1.28]
b = 0.04 [68.48]

Seff = 67.48 [10.26]
Teq = 731 [28] K
Rp = 0.30 [0.24] Re
a = 0.0455 [0.0031] AU

Ag = 382.29 [604.72] [0.63σ]
Teffp = 4996 [1978] K [2.16σ]

DV Diagnostic Results:

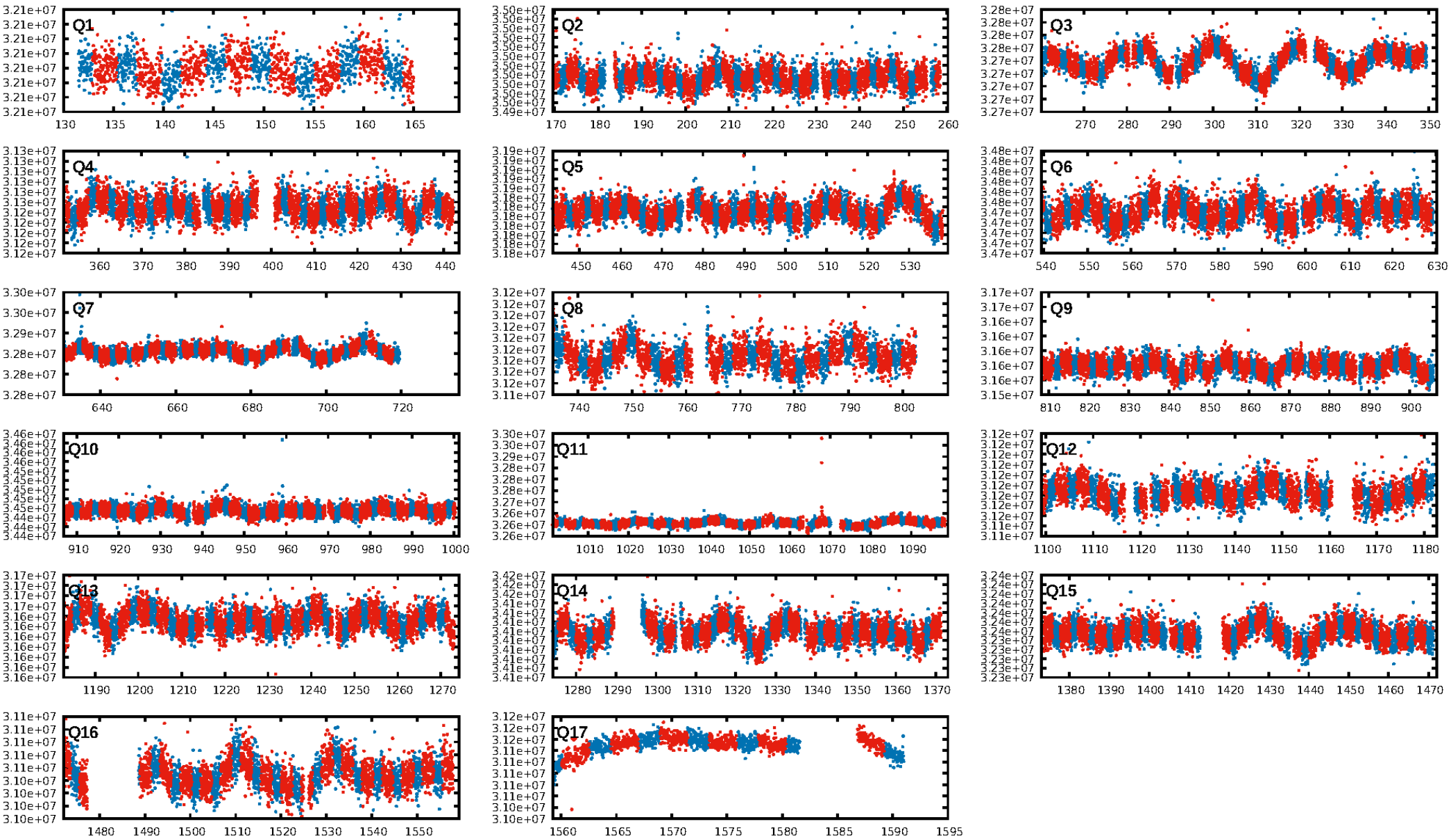
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 3.31e−20
RollingBand−fgt: 1.00 [301/301]
GhostDiagnostic−chr: −11.46

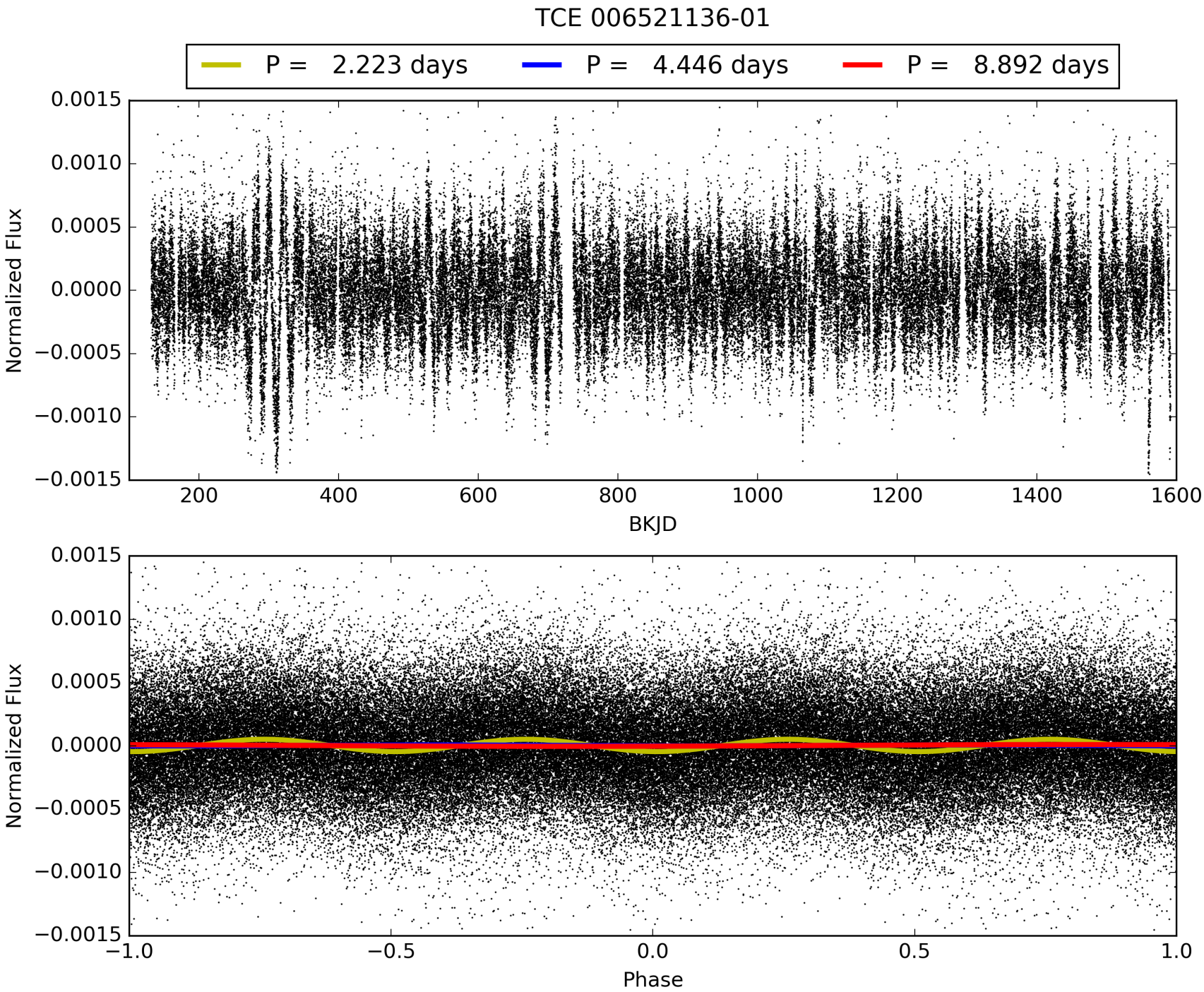
Centroid−sig: 0.2%
Centroid−so: 2.475 arcsec [1.82σ]
OotOffset−rm: 0.824 arcsec [1.91σ]
KicOffset−rm: 1.127 arcsec [3.55σ]
OotOffset−st: 2/3/4/4 [13]
KicOffset−st: 2/3/4/4 [13]
DiffImageQuality−fgm: 0.77 [10/13]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 05:03:07 Z

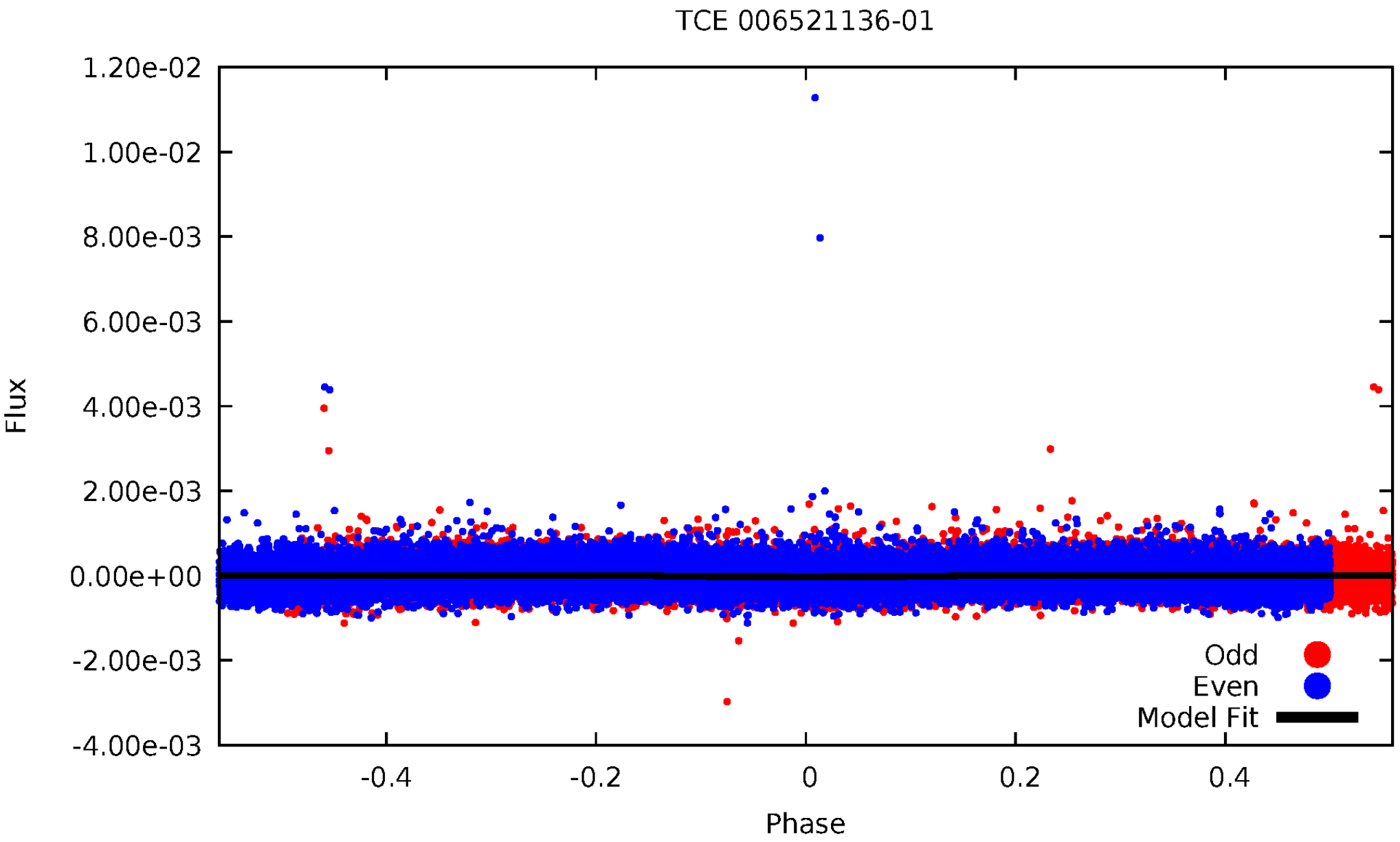
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006521136-01, PDC Light Curves

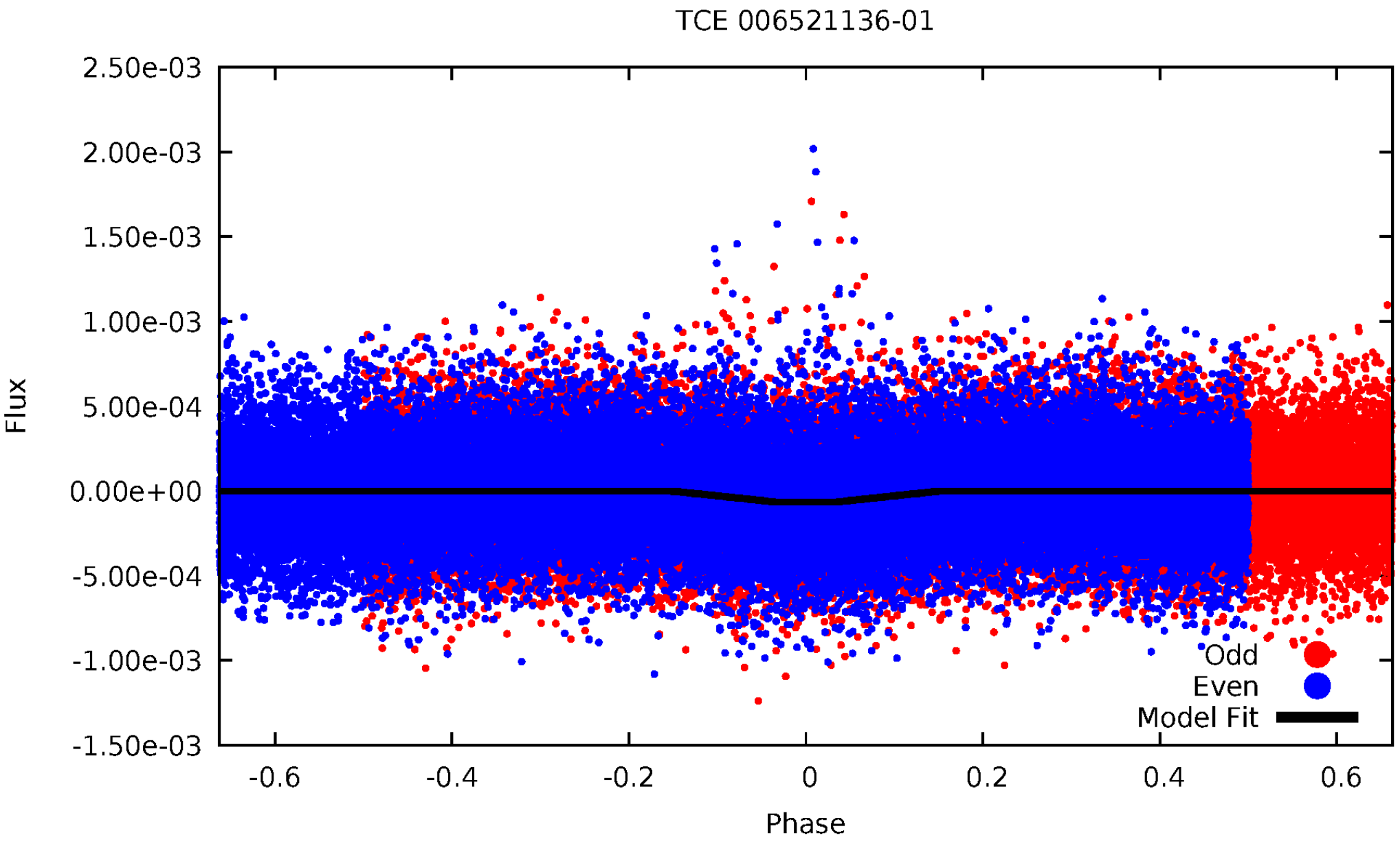



TCE 006521136-01
P = 2.223 days
P = 4.446 days
P = 8.892 days
Normalized Flux
BKJD
Normalized Flux
Phase

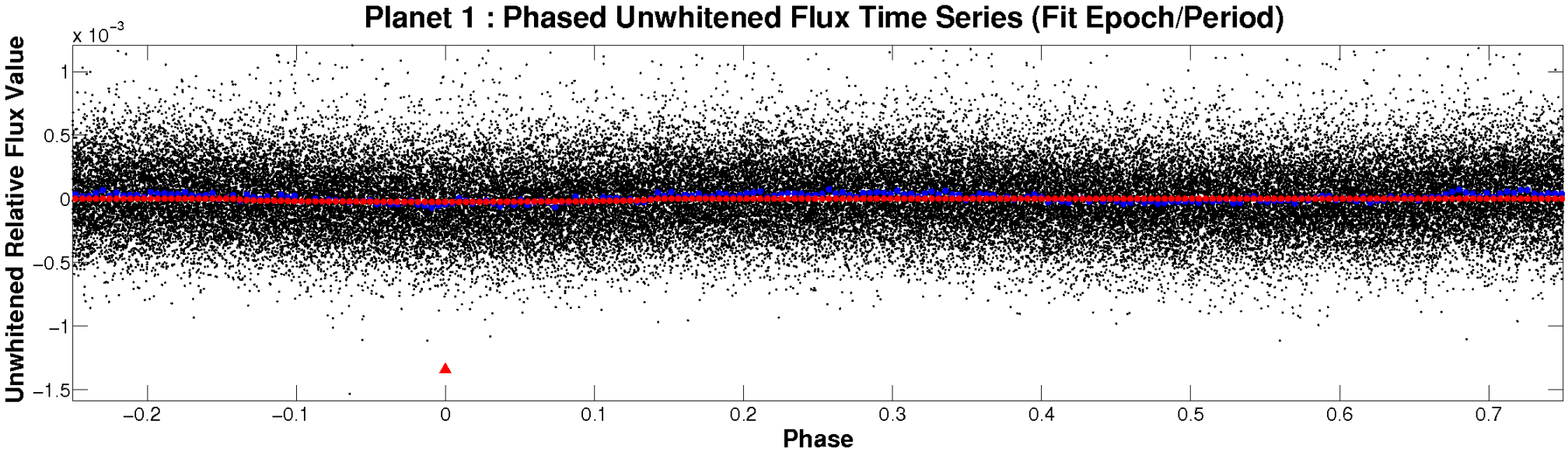
DV Odd/Even

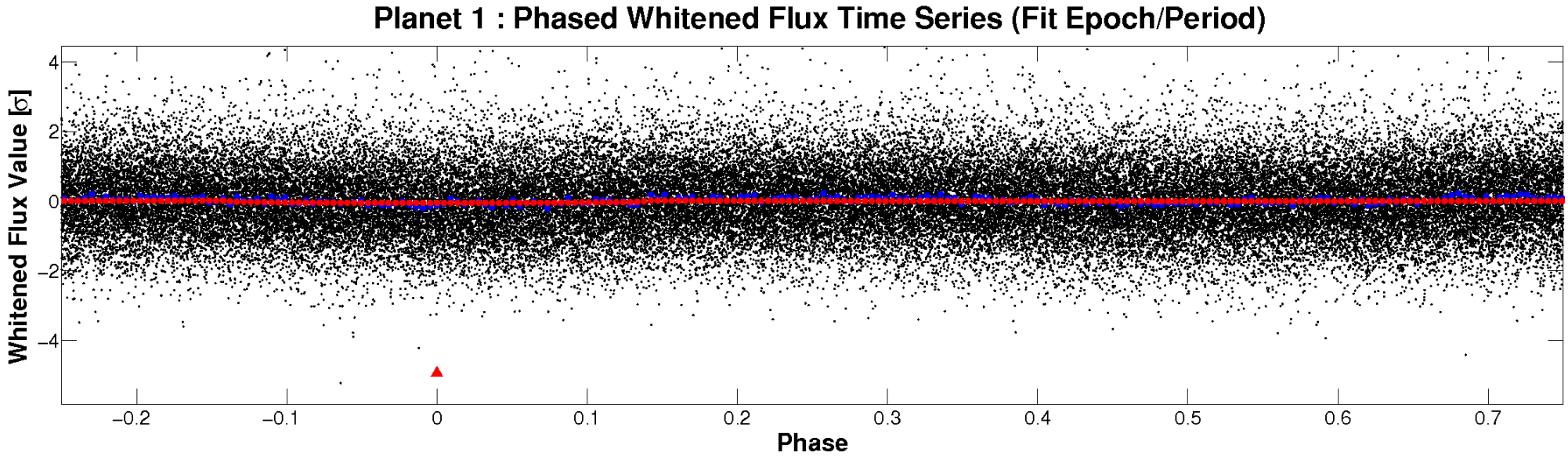

TCE 006521136-01
1.20e-02
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
Flux
-0.4
-0.2
0
0.2
0.4
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006521136-01
2.50e-03
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

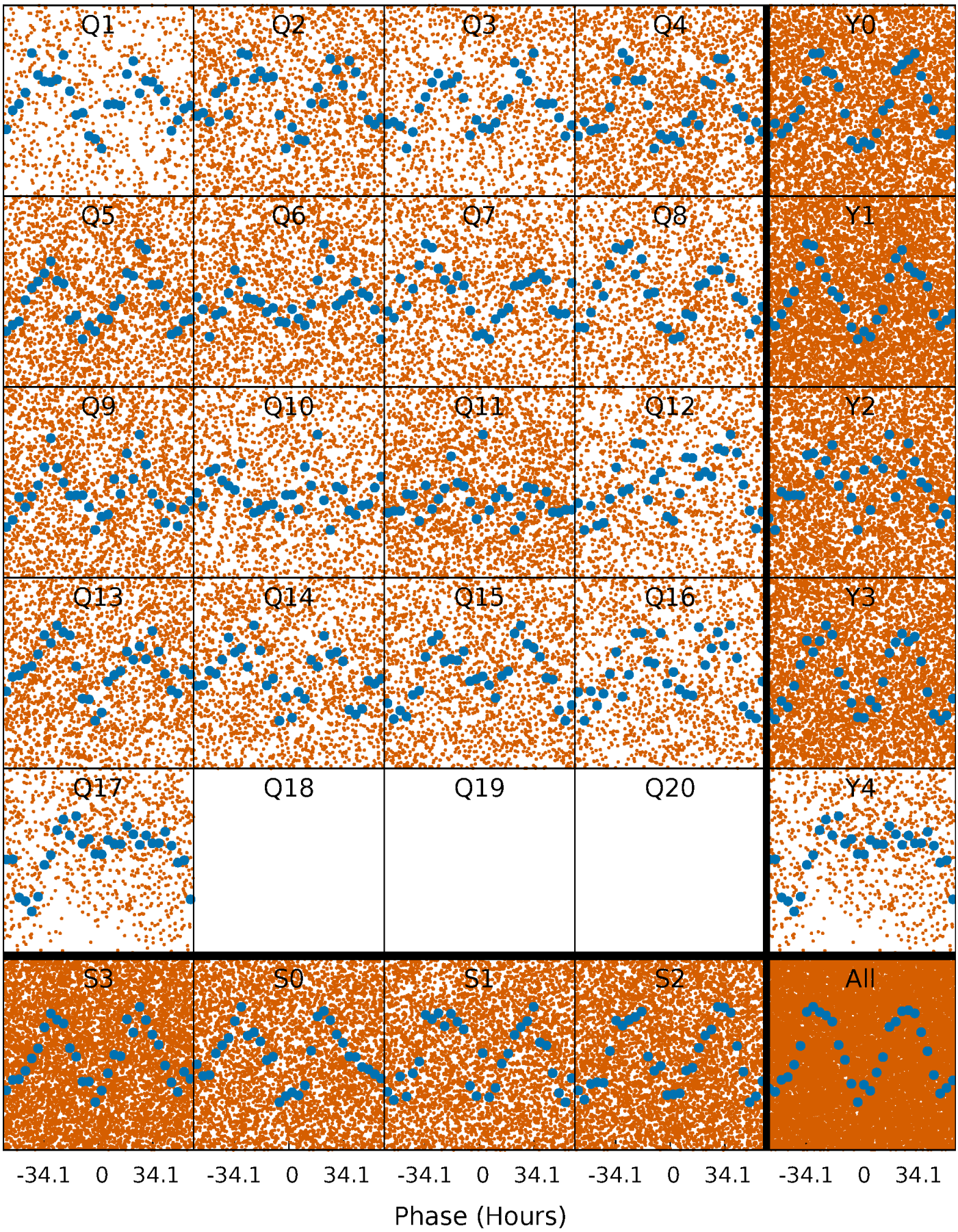
Non-Whitened Vs. Whitened Light Curve





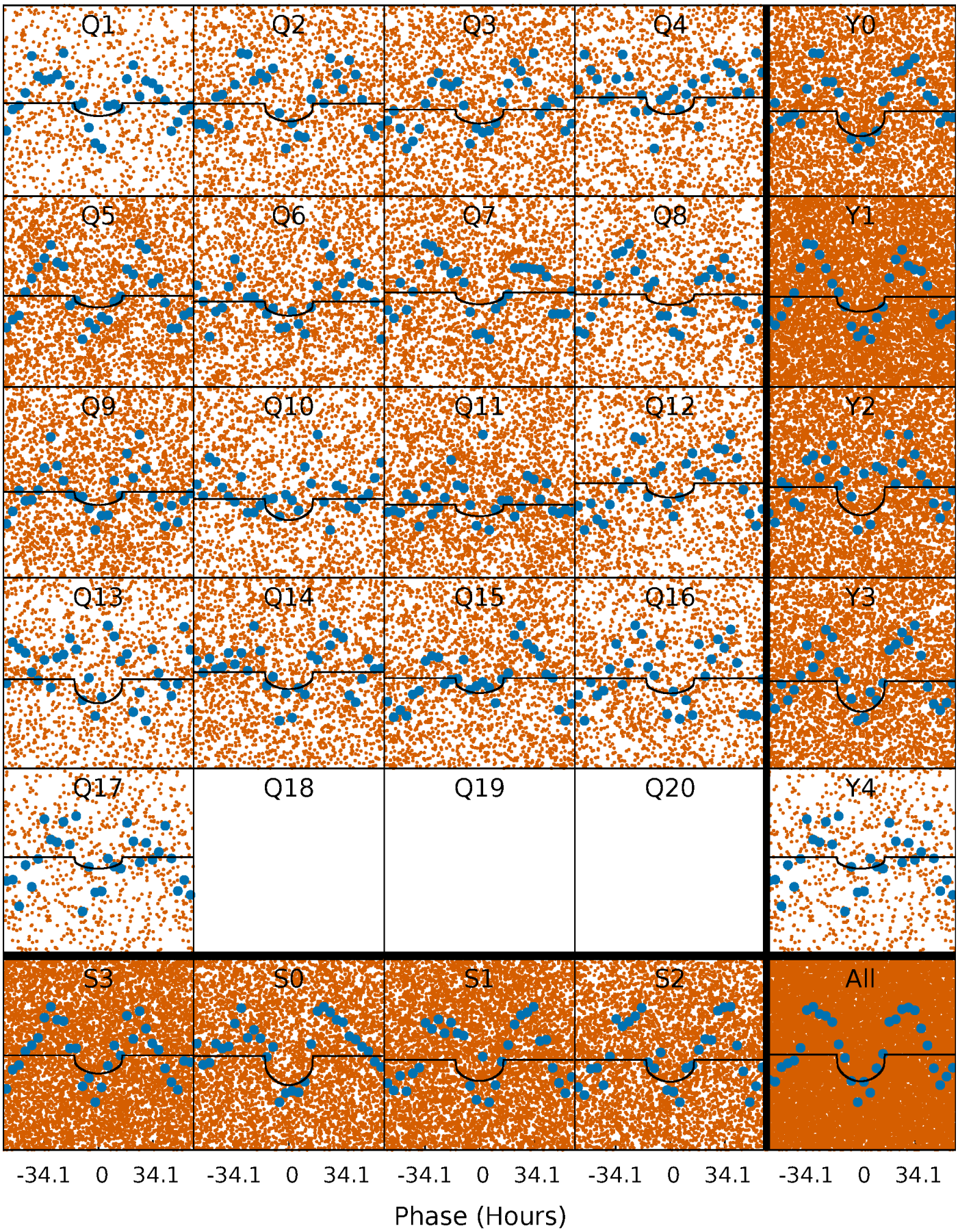
PDC Quarter-Phased Transit Curves

TCE 006521136-01 P= 4.446102 Days T_0=134.098805 (BKJD)



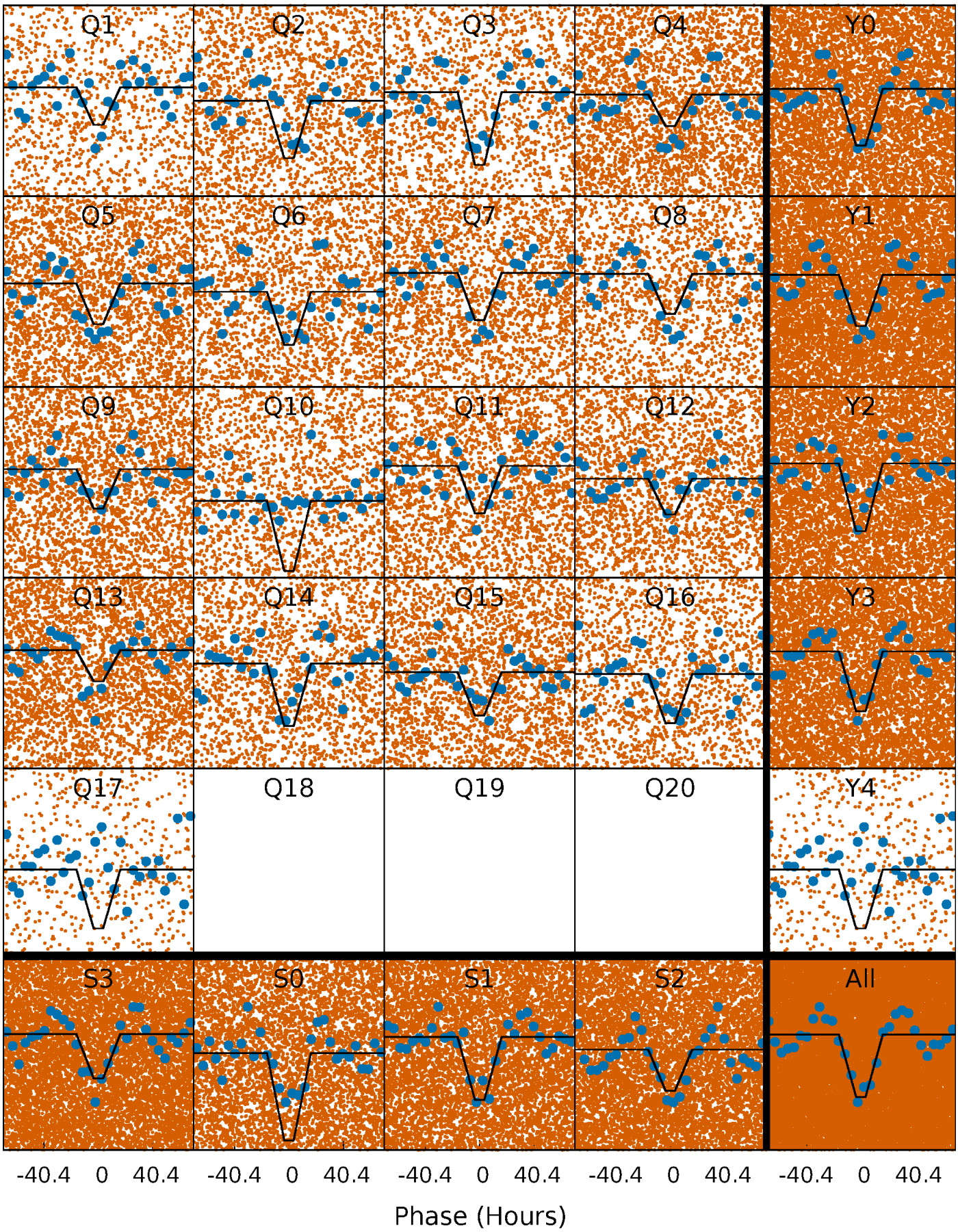
DV Quarter-Phased Transit Curves

TCE 006521136-01 P= 4.446102 Days T_0=134.098805 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

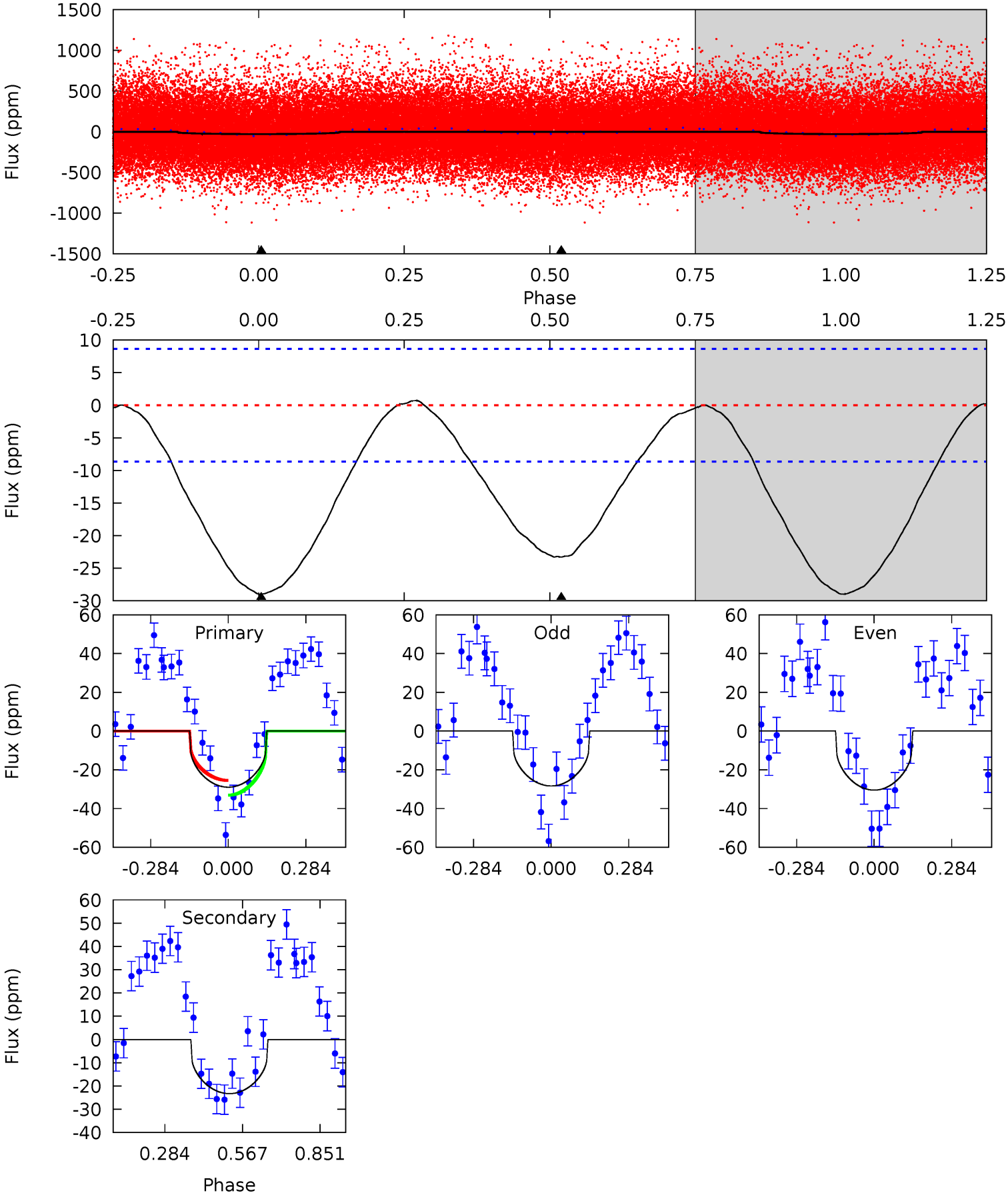
TCE 006521136-01 P= 4.446596 Days T_0=134.036918 (BKJD)



DV Model-Shift Uniqueness Test

006521136-01, P = 4.446102 Days, E = 129.652703 Days

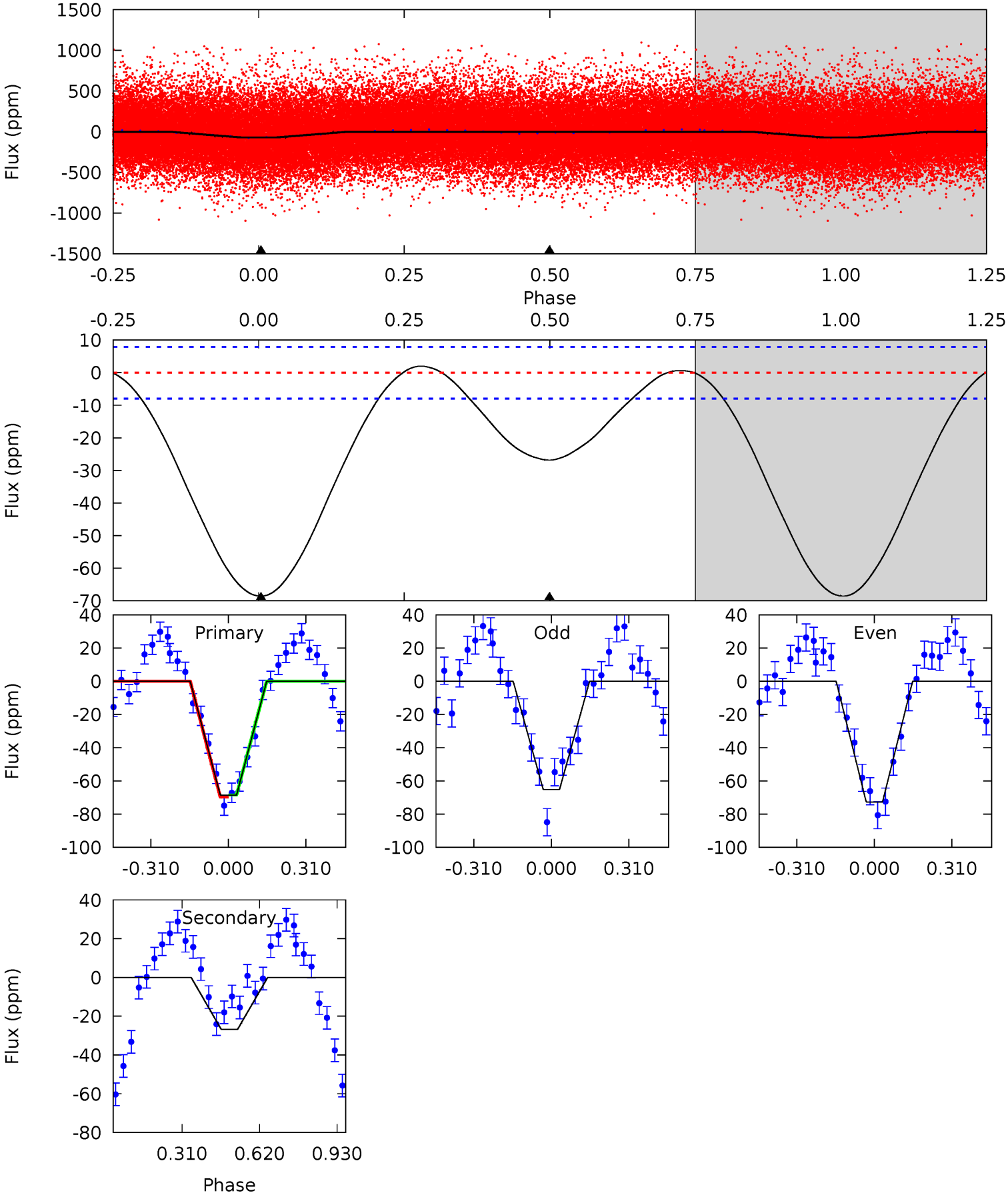
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	11.7	0	0	4.34	1.07	0.21	14.6	14.6	11.7	11.7	0.55	0.71	0.02	1.89



Alt Model-Shift Uniqueness Test

006521136-01, P = 4.446596 Days, E = 129.590322 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.4	14.6	0	0	4.32	1.02	0.80	37.4	37.4	14.6	14.6	2.04	1.03	0.03	0.34



Stellar Parameters For KIC 006521136

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	4390^{+131}_{-131}	$4.618^{+0.049}_{-0.021}$	$-0.160^{+0.300}_{-0.300}$	$0.648^{+0.045}_{-0.055}$	$0.635^{+0.067}_{-0.050}$	$3.293^{+0.767}_{-0.351}$
	+3%/-3%	+1%/-0%	+188%/-188%	+7%/-8%	+11%/-8%	+23%/-11%
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 006521136-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23±2	$0.33^{+0.22}_{-0.19}$	1014^{+35}_{-35}	4420^{+2009}_{-748}	247^{+1102}_{-160}
Alt.	-27±2	$0.56^{+0.26}_{-0.24}$	1016^{+34}_{-36}	3751^{+878}_{-438}	97^{+217}_{-51}

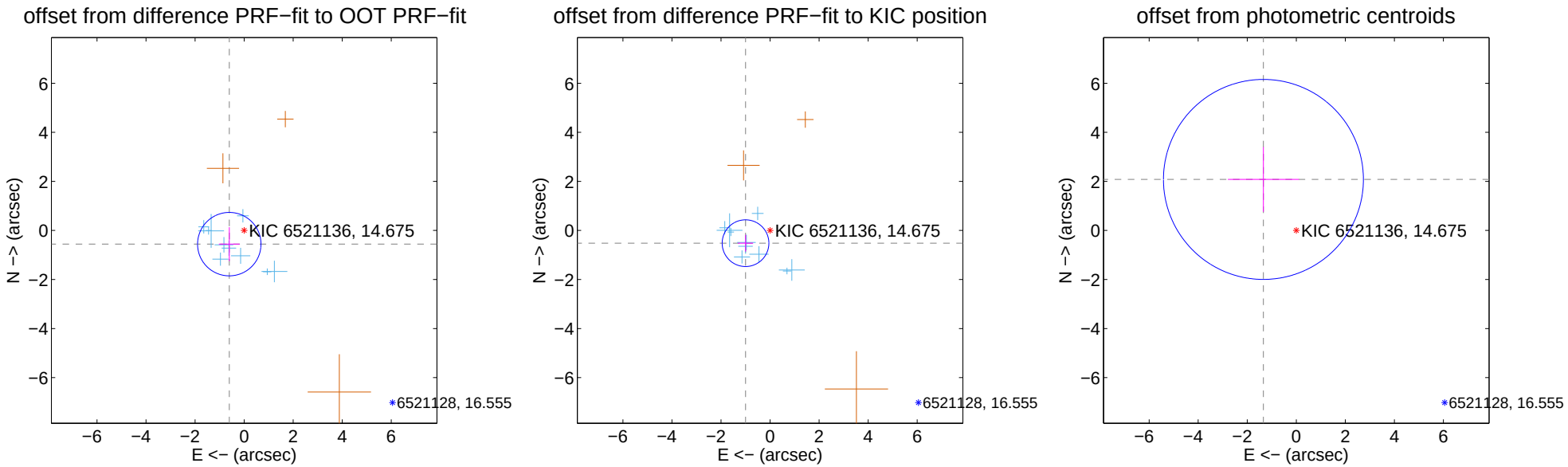
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

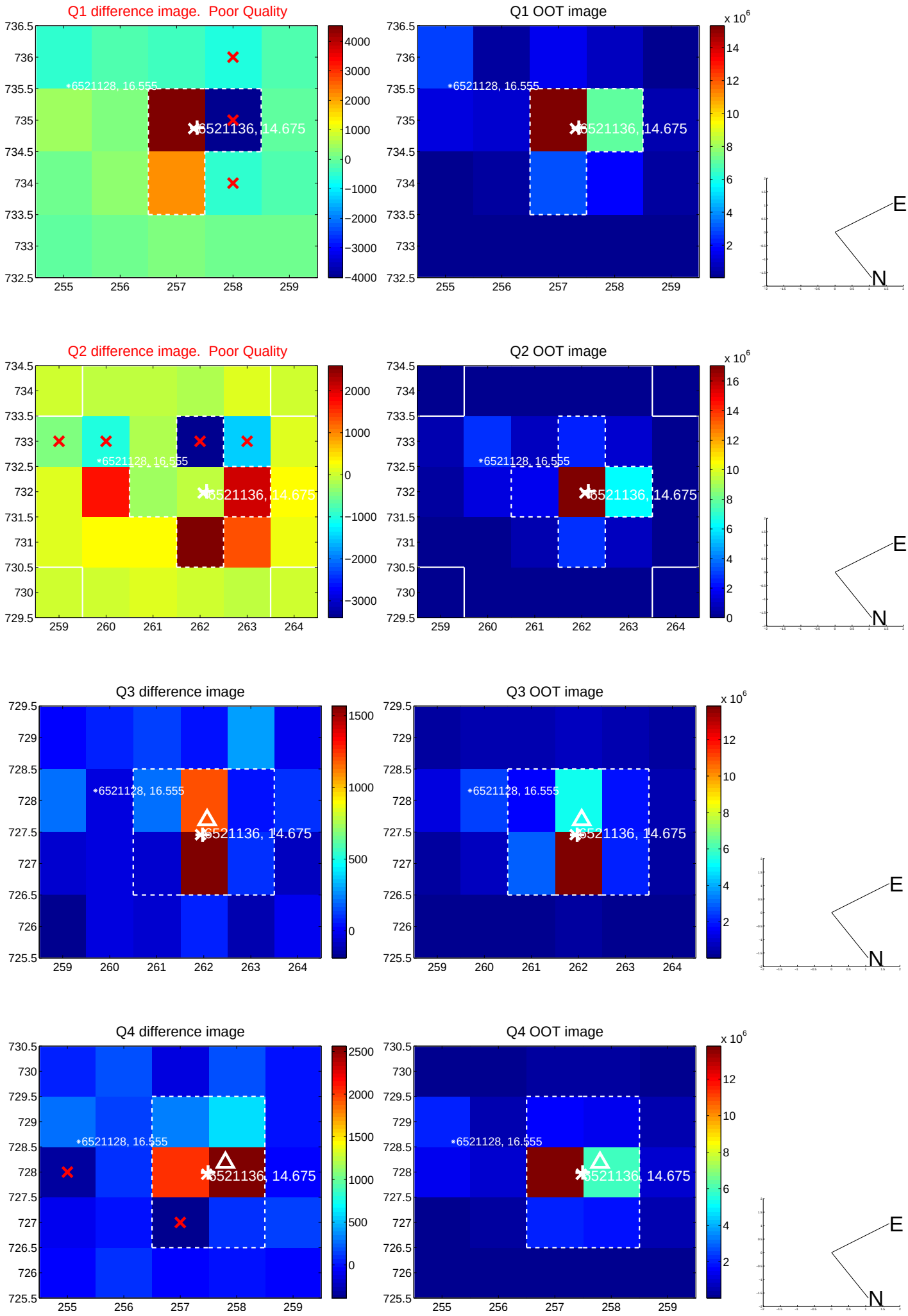
Supplemental centroid analysis for 006521136-01. Kepler magnitude: 14.68. Transit SNR 5.83
There are 10 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.824 ± 0.431	1.91	0.606 ± 0.424	-0.558 ± 0.692
PRF-fit source offset from KIC position	1.127 ± 0.317	3.55	1.001 ± 0.311	-0.519 ± 0.339
photometric centroid source offset	2.47 ± 1.36	1.82	1.34 ± 1.45	2.08 ± 1.32

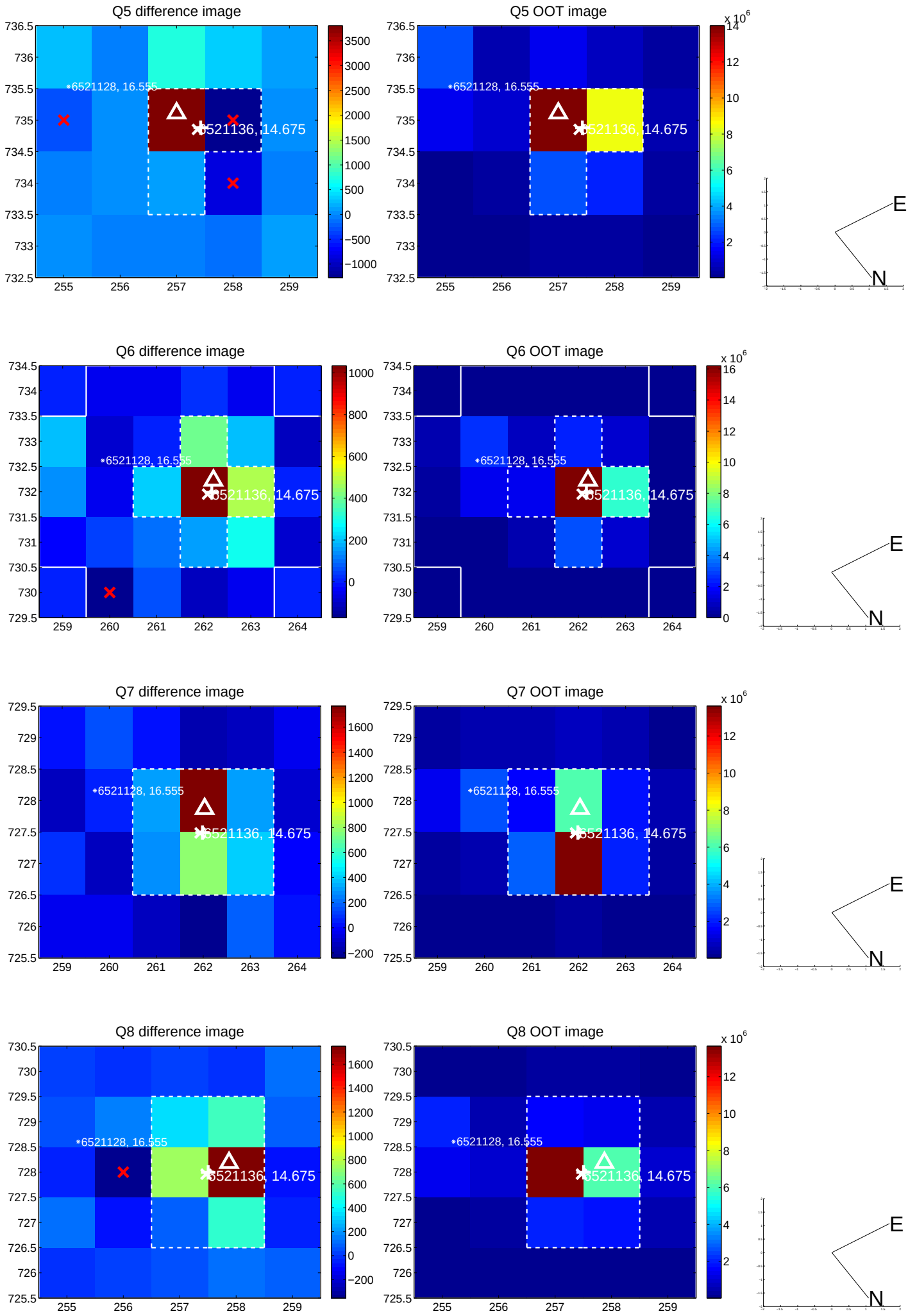


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

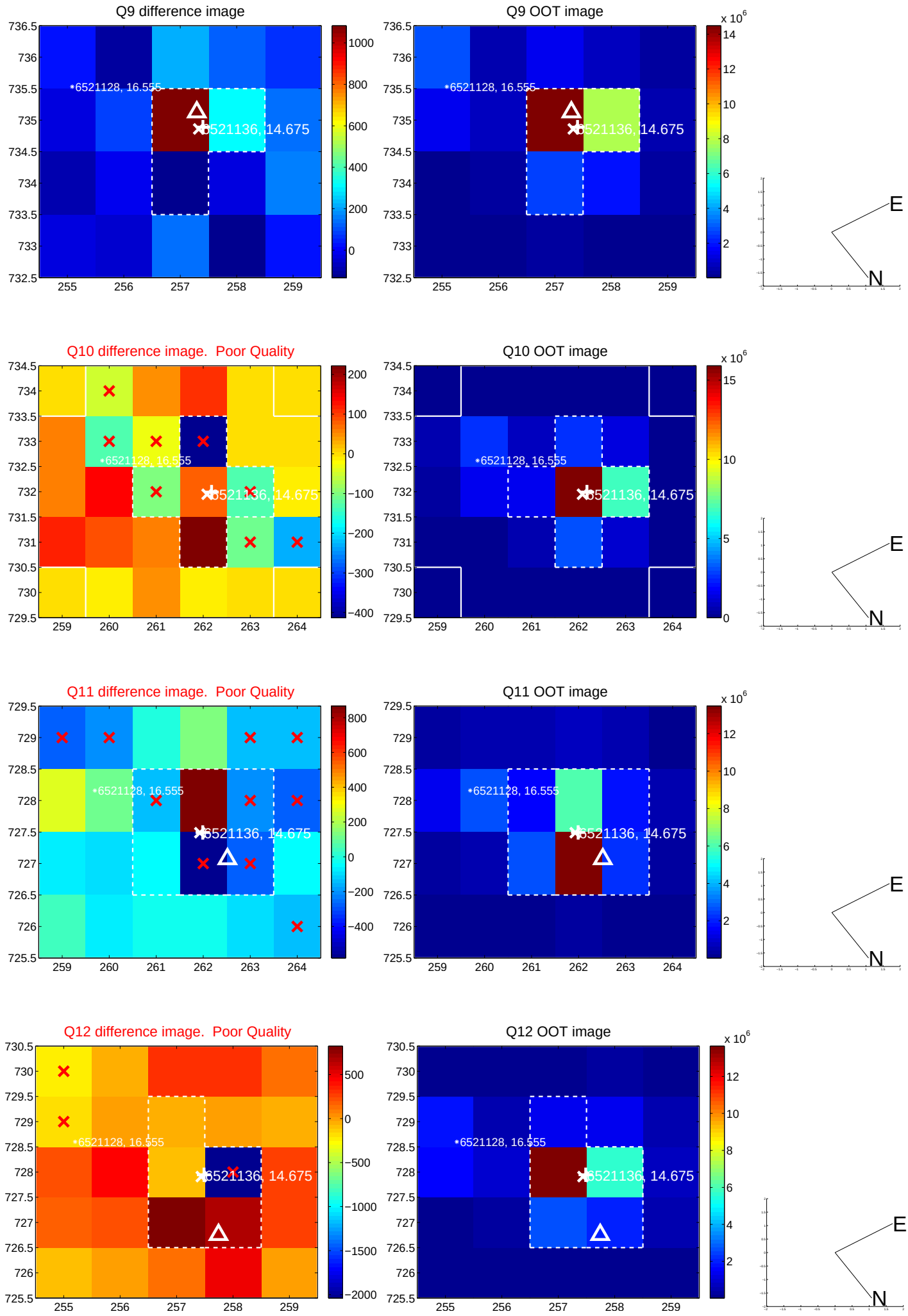
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



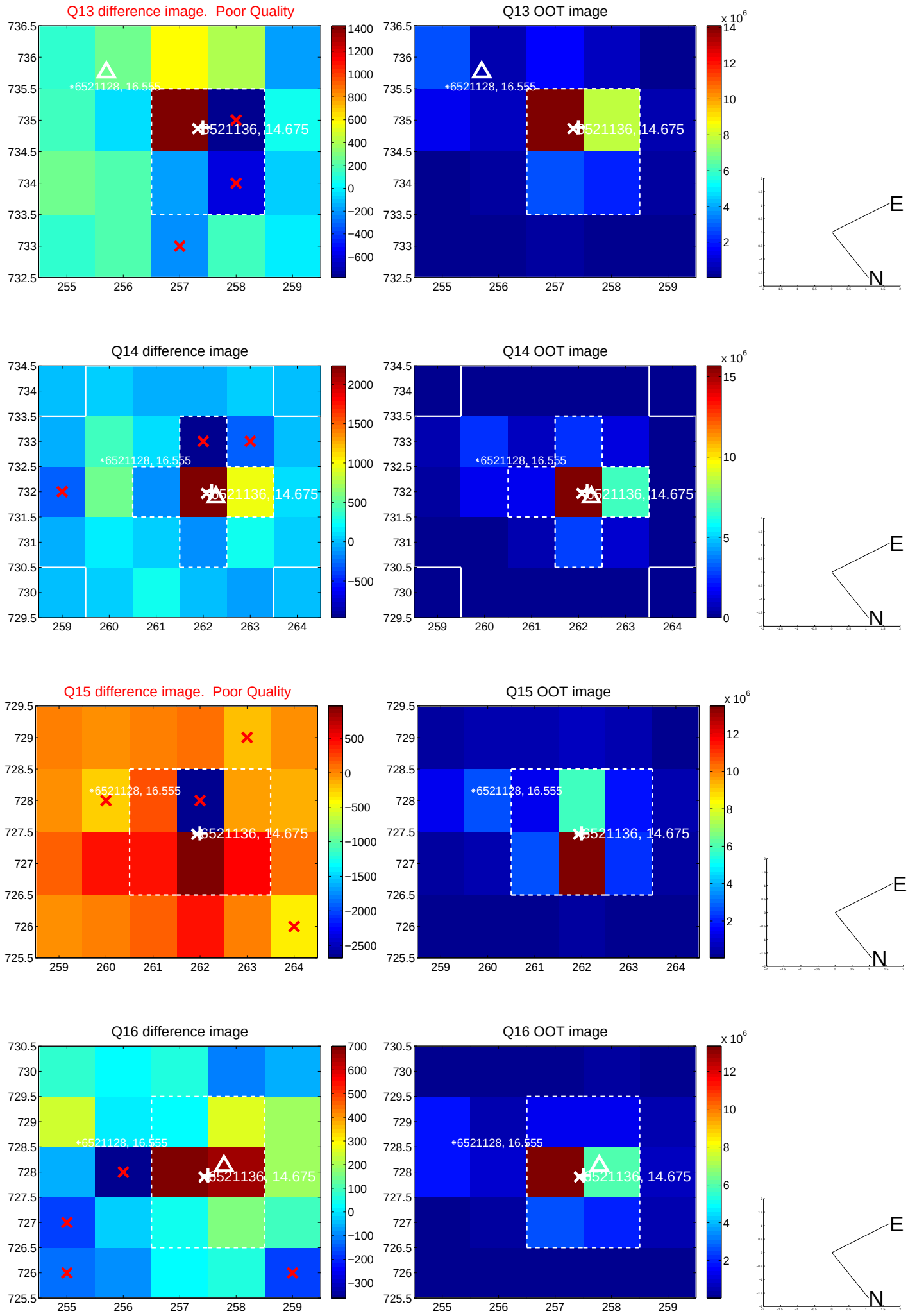
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



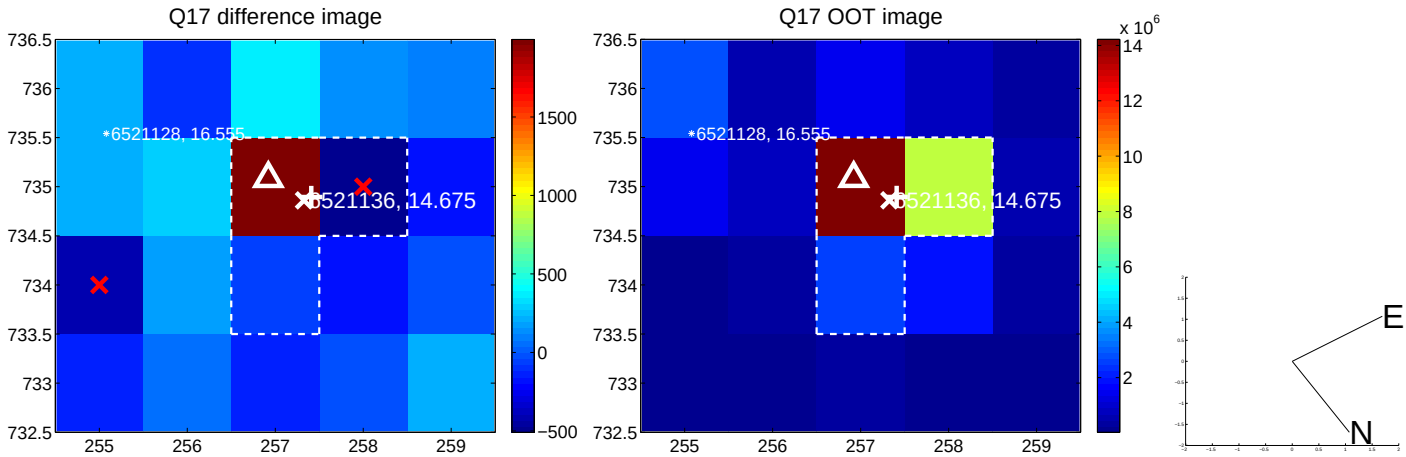
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

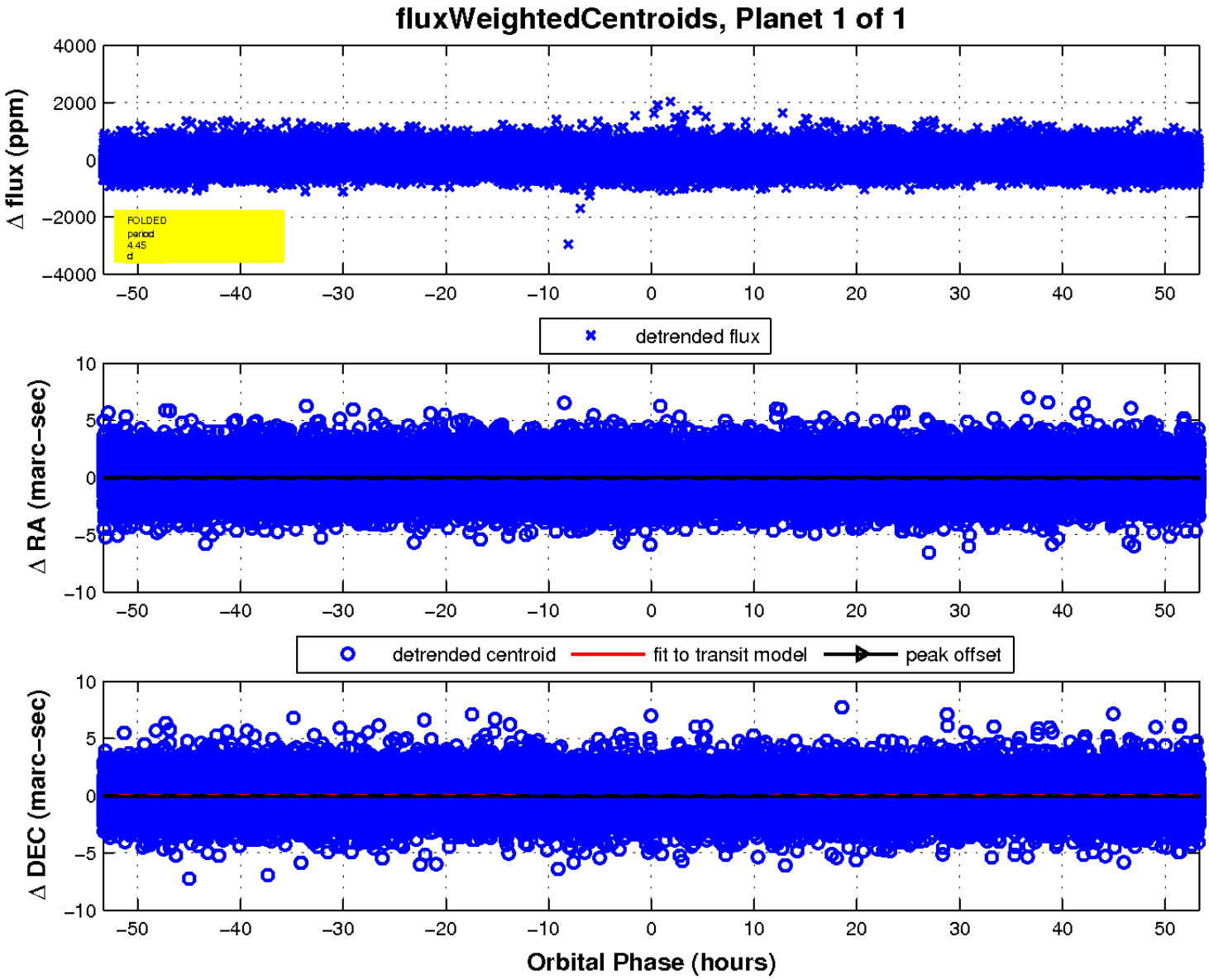
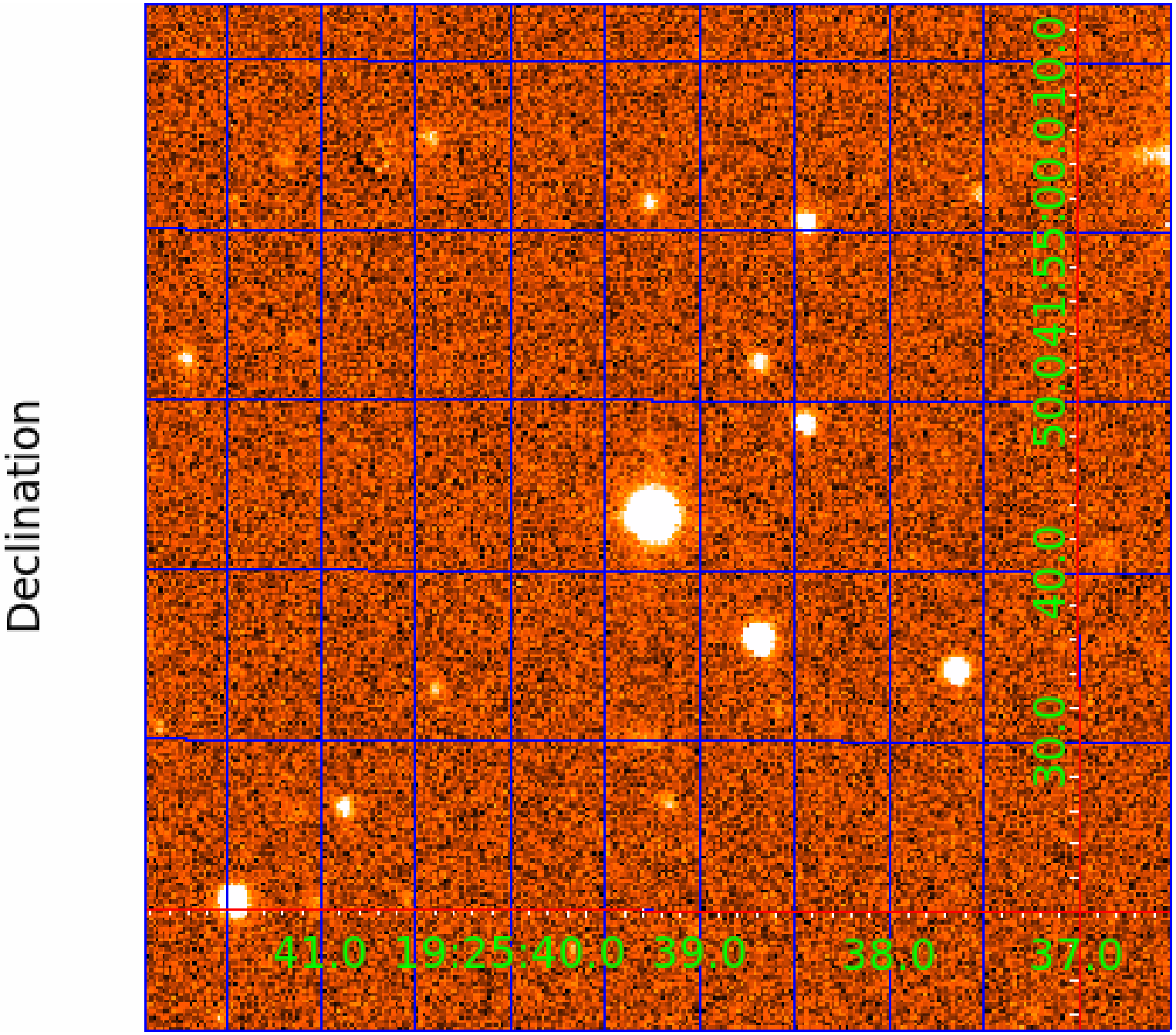


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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





UKIRT Image