KIC 006587796

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 ($S_\oplus$)
006587796-01	OBS	3237.01	33.420268	159.137851	387.0	5.412	30.6	30.3	1.07	5731	2.45	27.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006587796-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

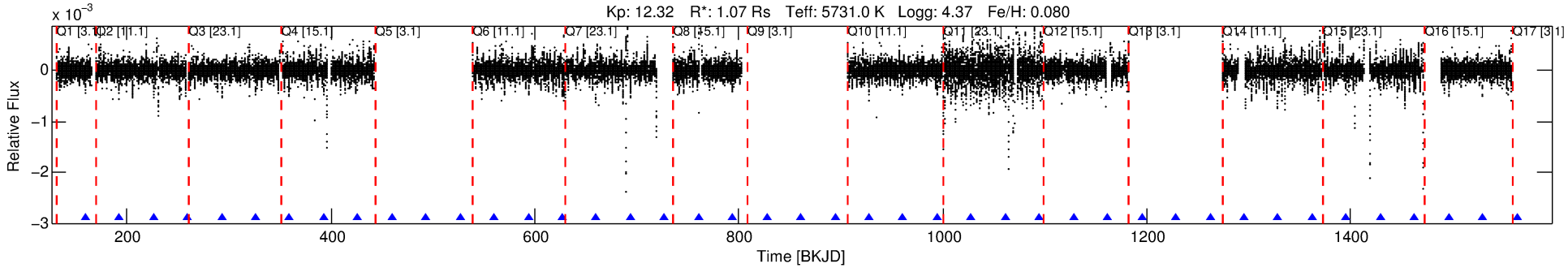
Ephemeris Match Information For 006587796-01

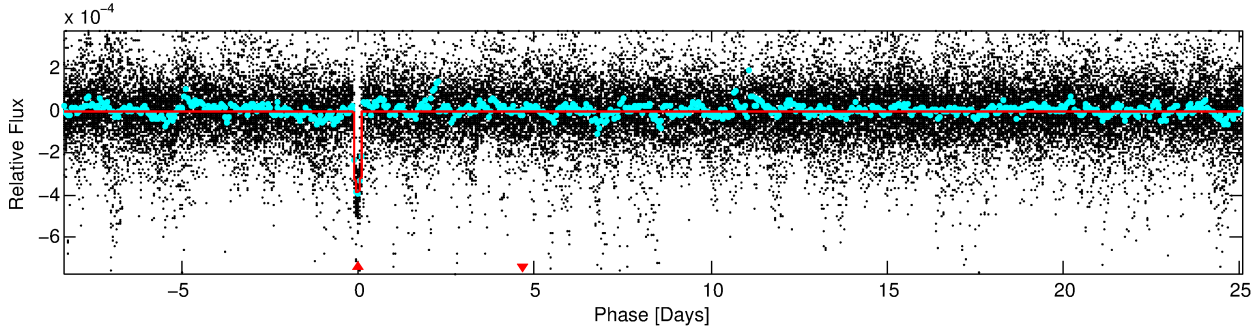
No Significant Match Found

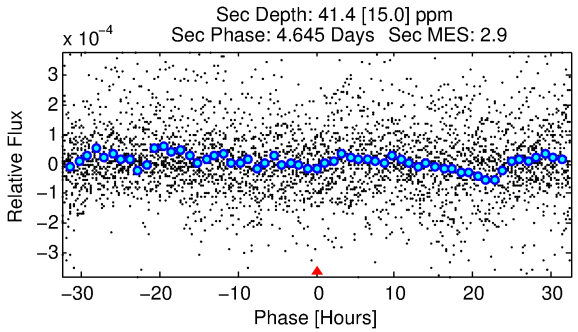
DV One-Page Summary

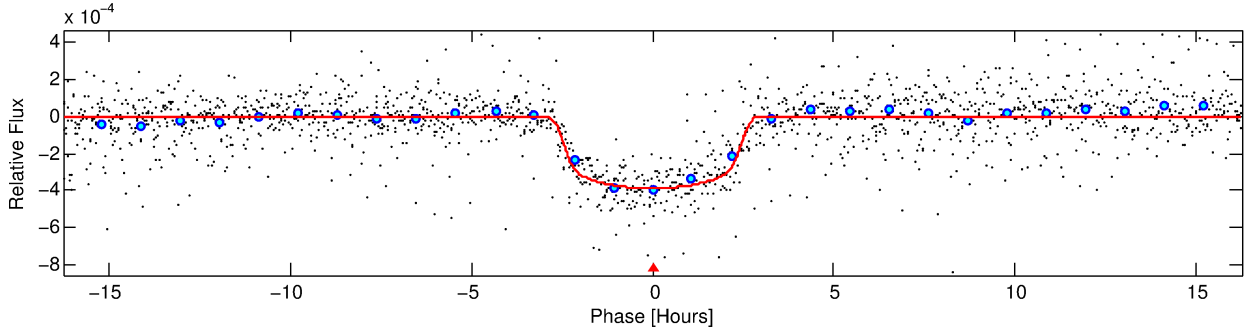
KIC: 6587796 Candidate: 1 of 1 Period: 33.420 d
KOI: K03237.01 Corr: 0.970

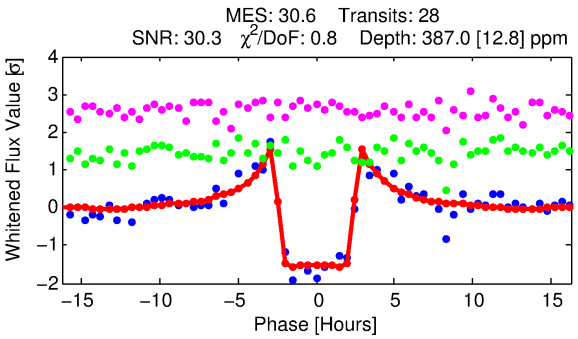
Kp: 12.32 R*: 1.07 Rs Teff: 5731.0 K Logg: 4.37 Fe/H: 0.080

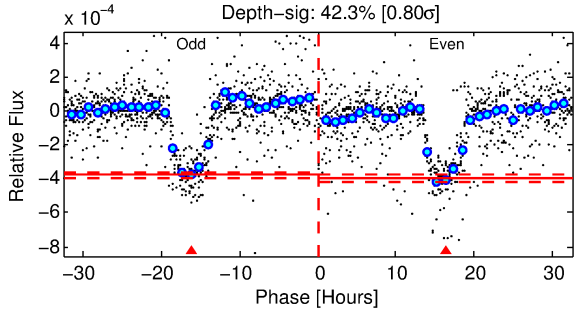


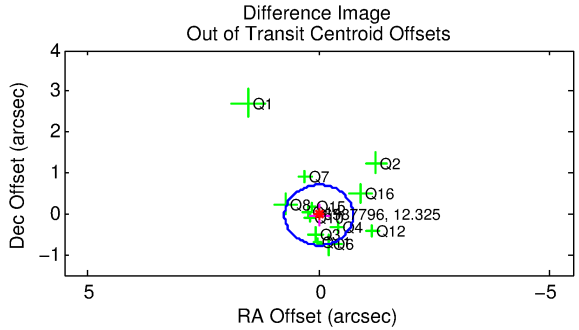












DV Fit Results:

Period = 33.42027 [0.00007] d
Epoch = 159.1379 [0.0017] BKJD
Rp/R* = 0.0211 [0.0011]
a/R* = 24.59 [5.35]
b = 0.88 [0.06]

Seff = 27.06 [5.58]
Teq = 582 [30] K
Rp = 2.45 [0.39] Re
a = 0.2015 [0.0260] AU

Ag = 153.95 [65.01] [2.35σ]
Teffp = 3167 [305] K [8.43σ]

DV Diagnostic Results:

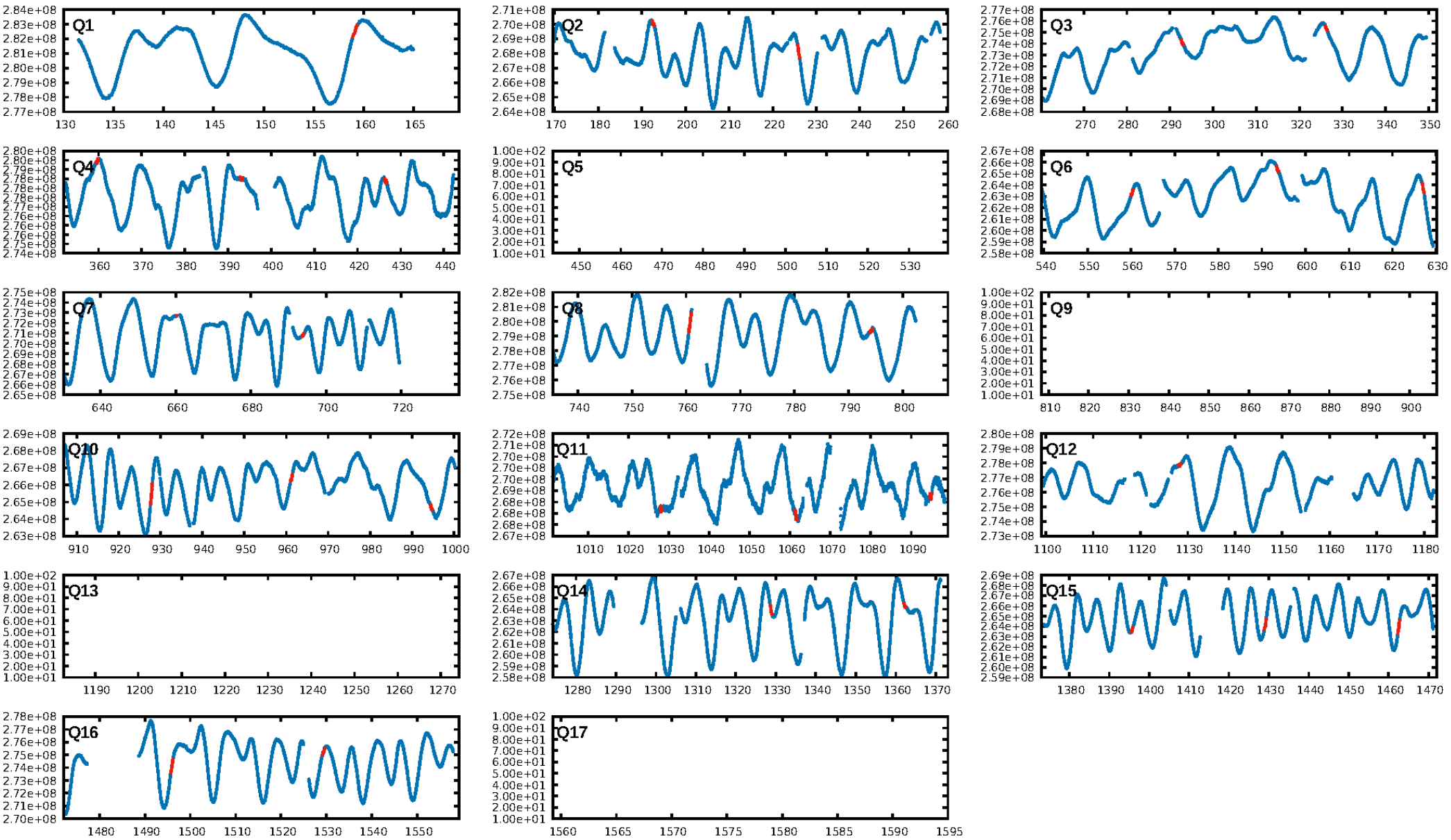
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 97.1%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 1.00e−110
RollingBand−fgt: 1.00 [27/27]
GhostDiagnostic−chr: 0.951

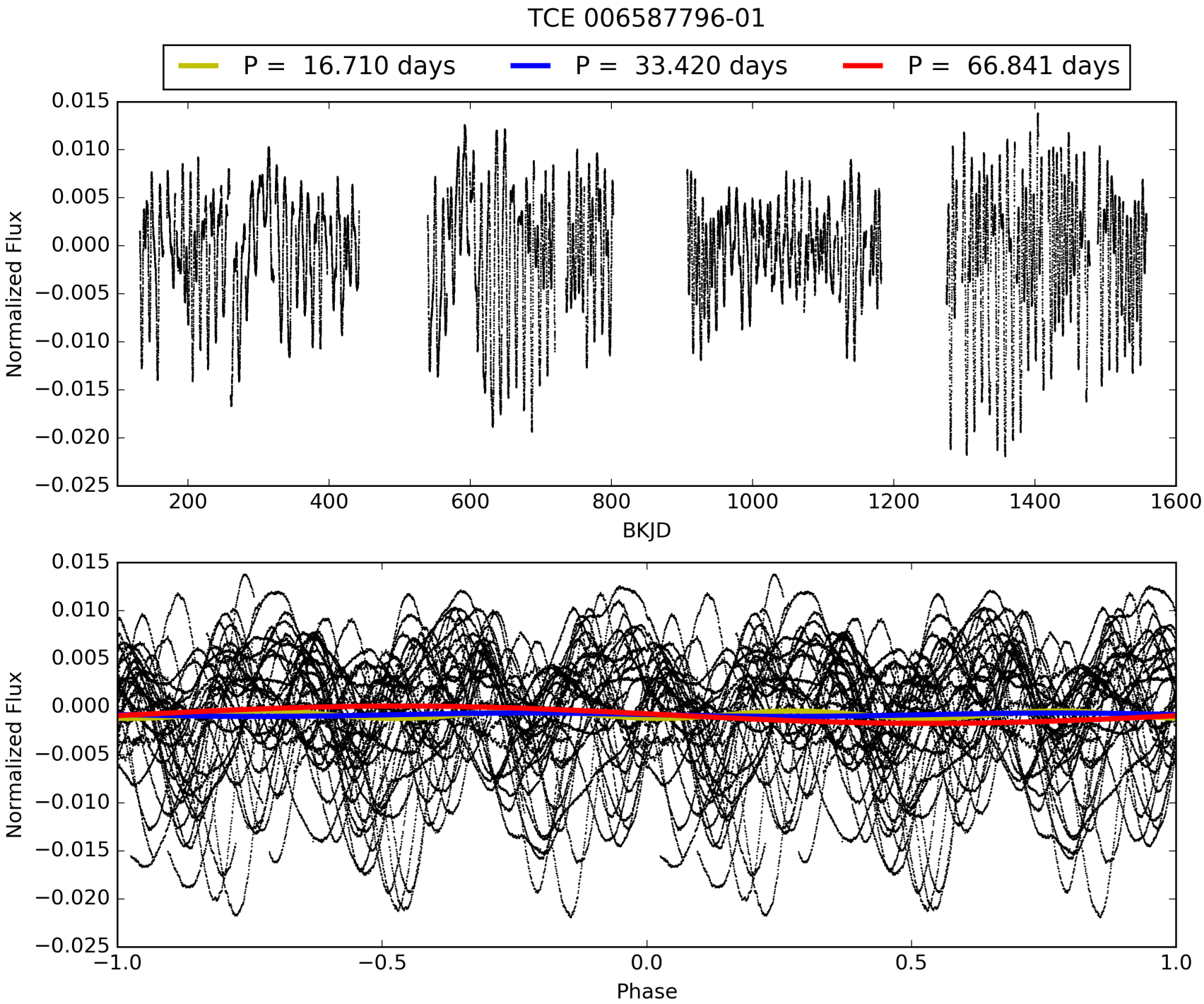
Centroid−sig: 79.0%
Centroid−so: 0.266 arcsec [1.38σ]
OotOffset−rm: 0.034 arcsec [0.14σ]
KicOffset−rm: 0.269 arcsec [0.98σ]
OotOffset−st: 4/4/4/1 [13]
KicOffset−st: 4/4/4/1 [13]
DiffImageQuality−fgm: 0.92 [12/13]
DiffImageOverlap−fno: 1.00 [13/13]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01−Feb−2016 01:47:19 Z

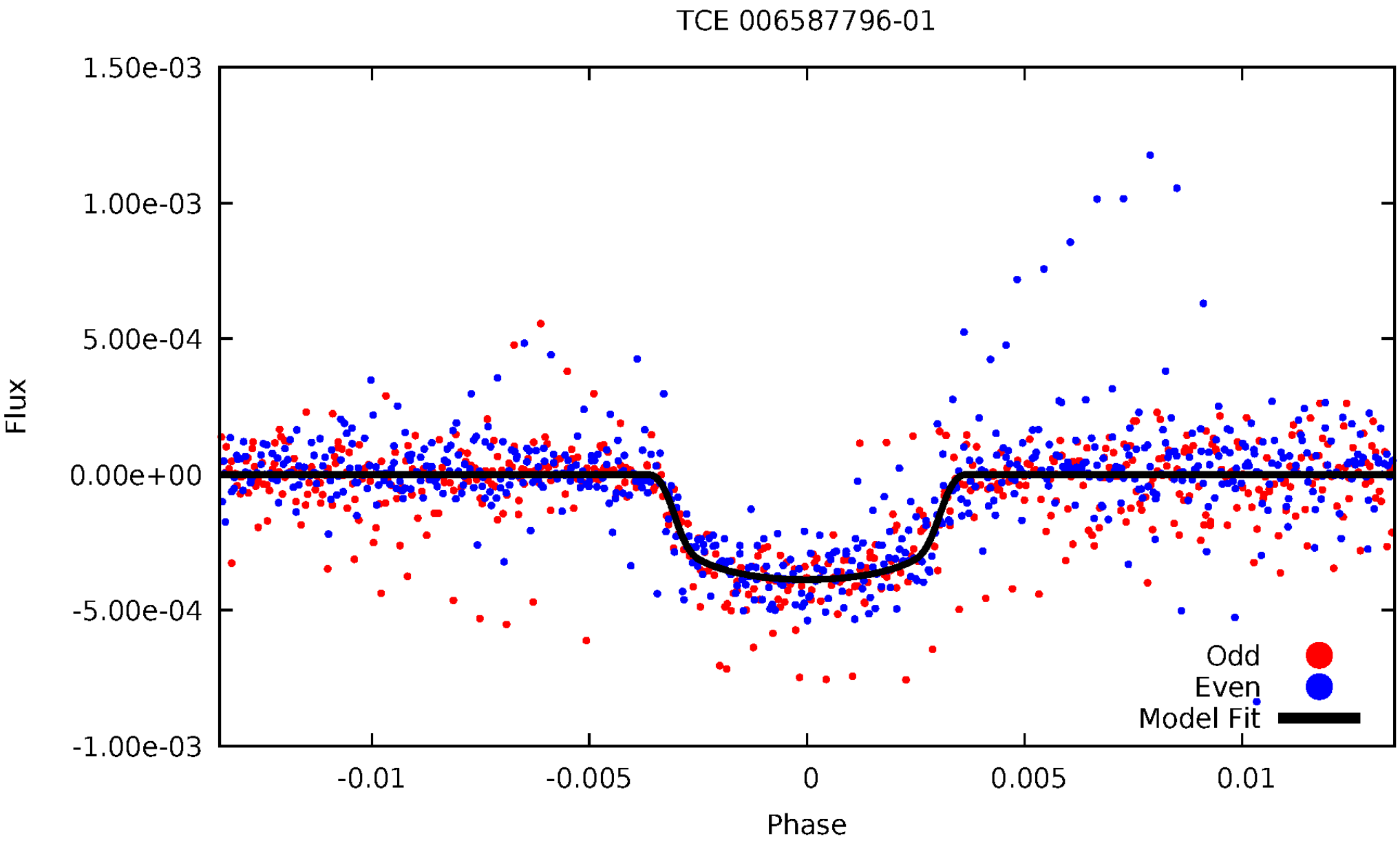
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006587796-01, PDC Light Curves

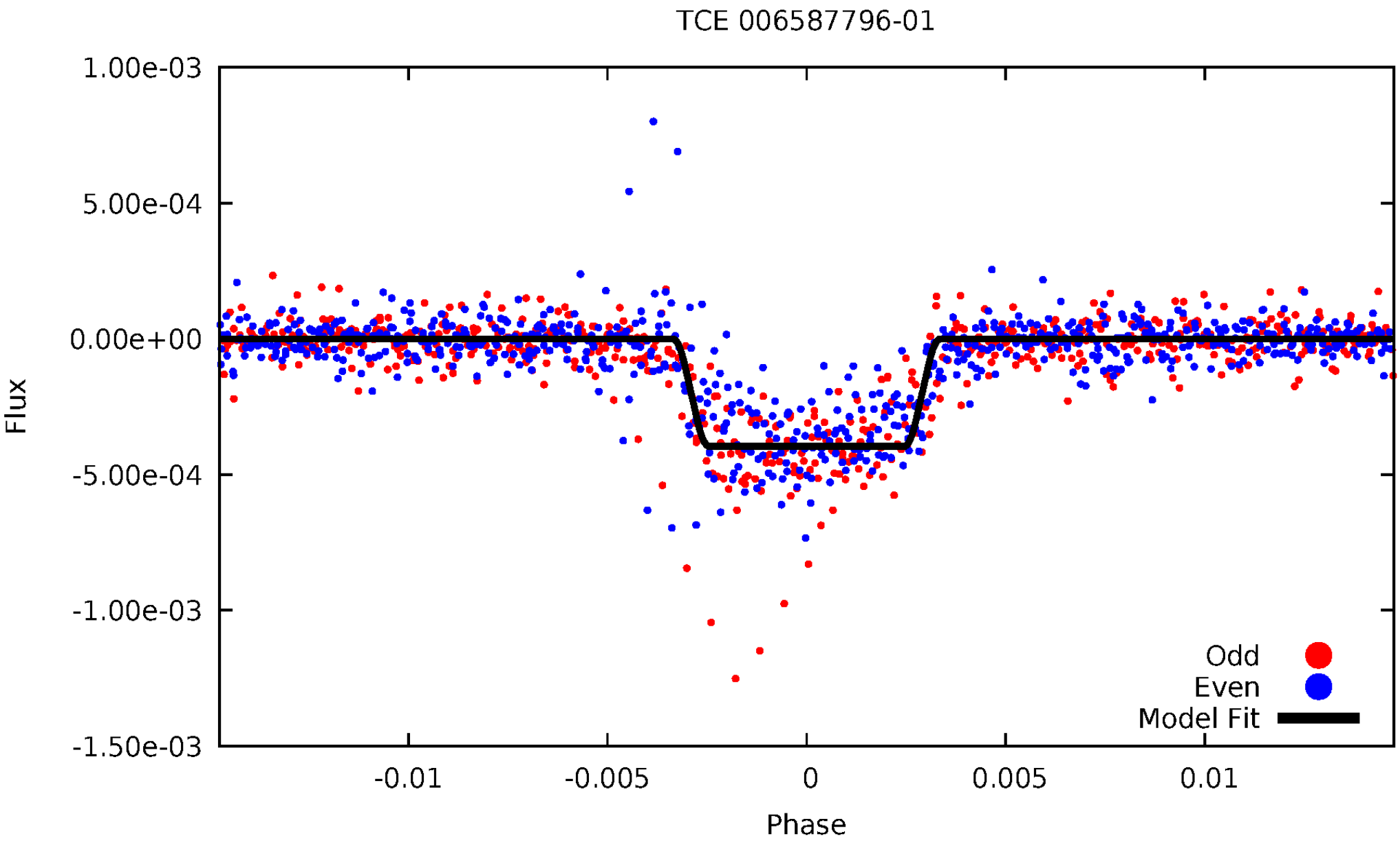



TCE 006587796-01
P = 16.710 days
P = 33.420 days
P = 66.841 days
Normalized Flux
BKJD
Normalized Flux
Phase

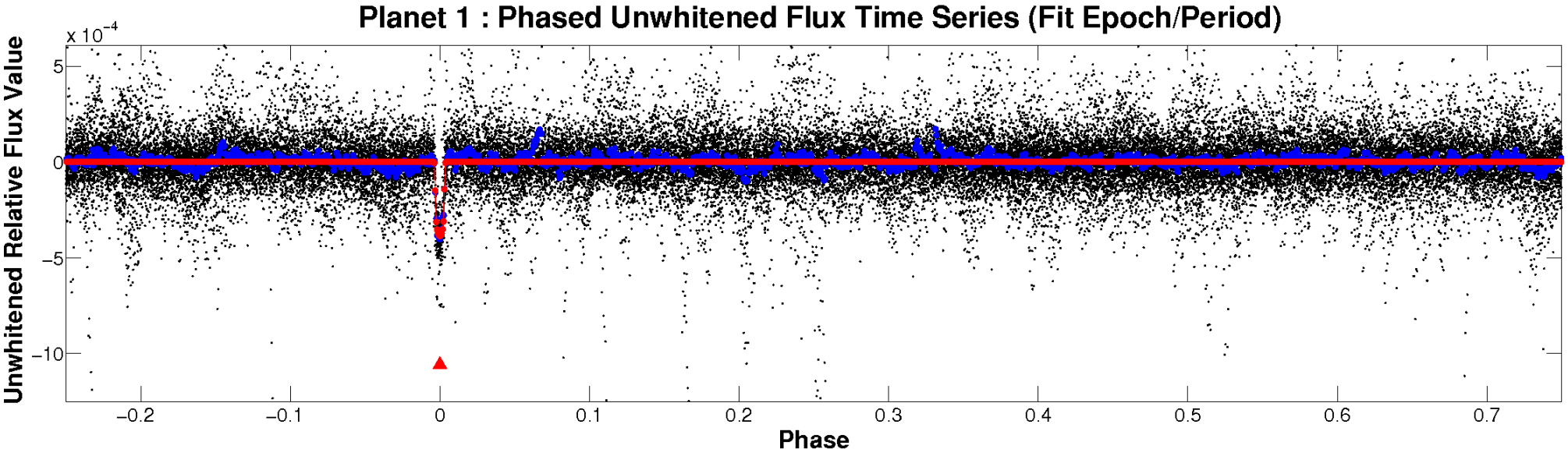
DV Odd/Even

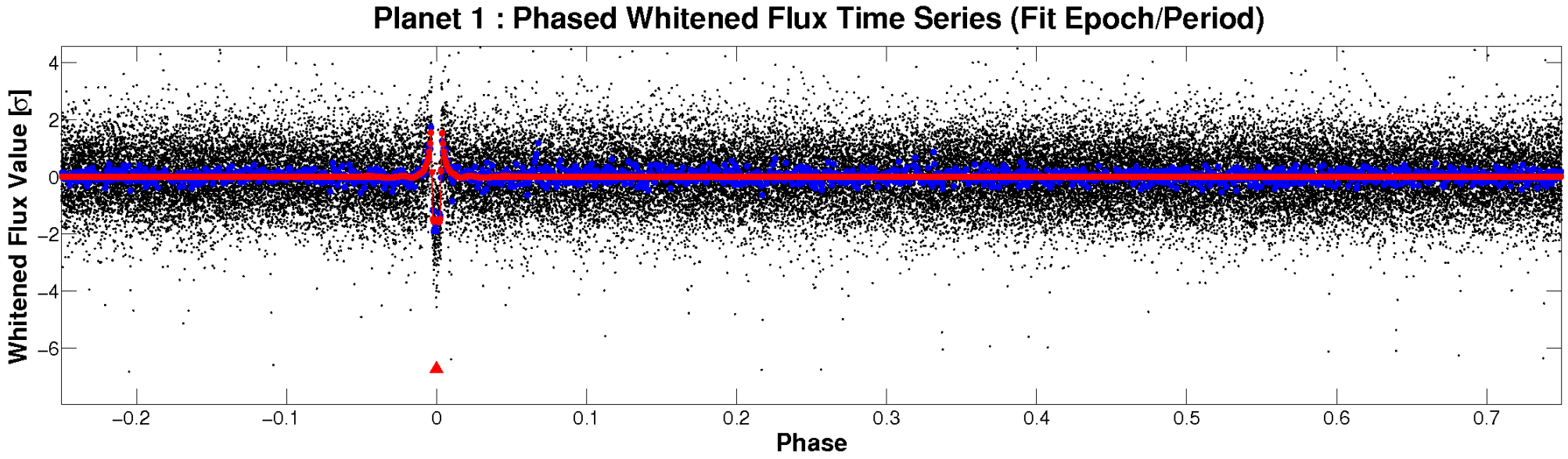

TCE 006587796-01
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006587796-01
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

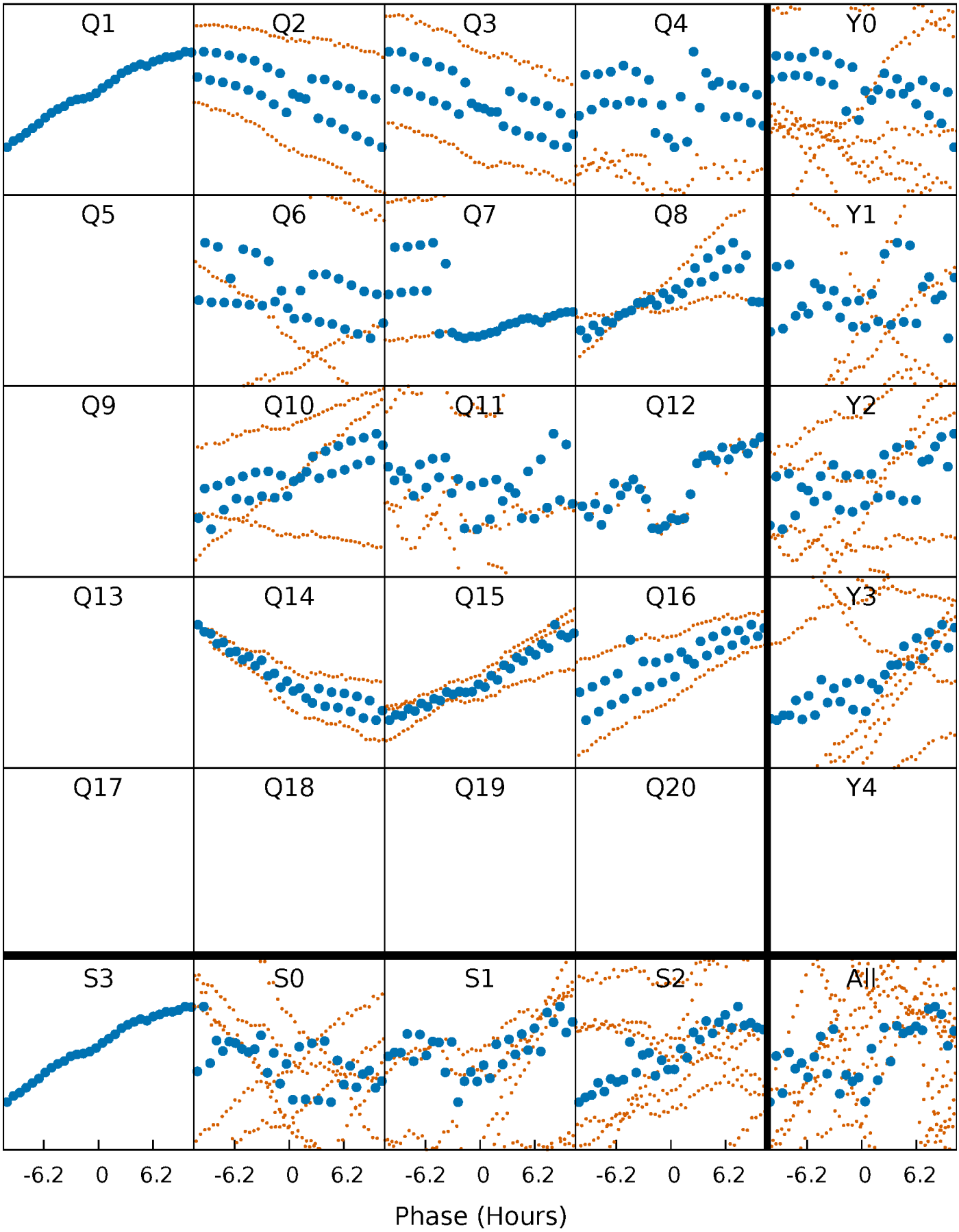
Non-Whitened Vs. Whitened Light Curve





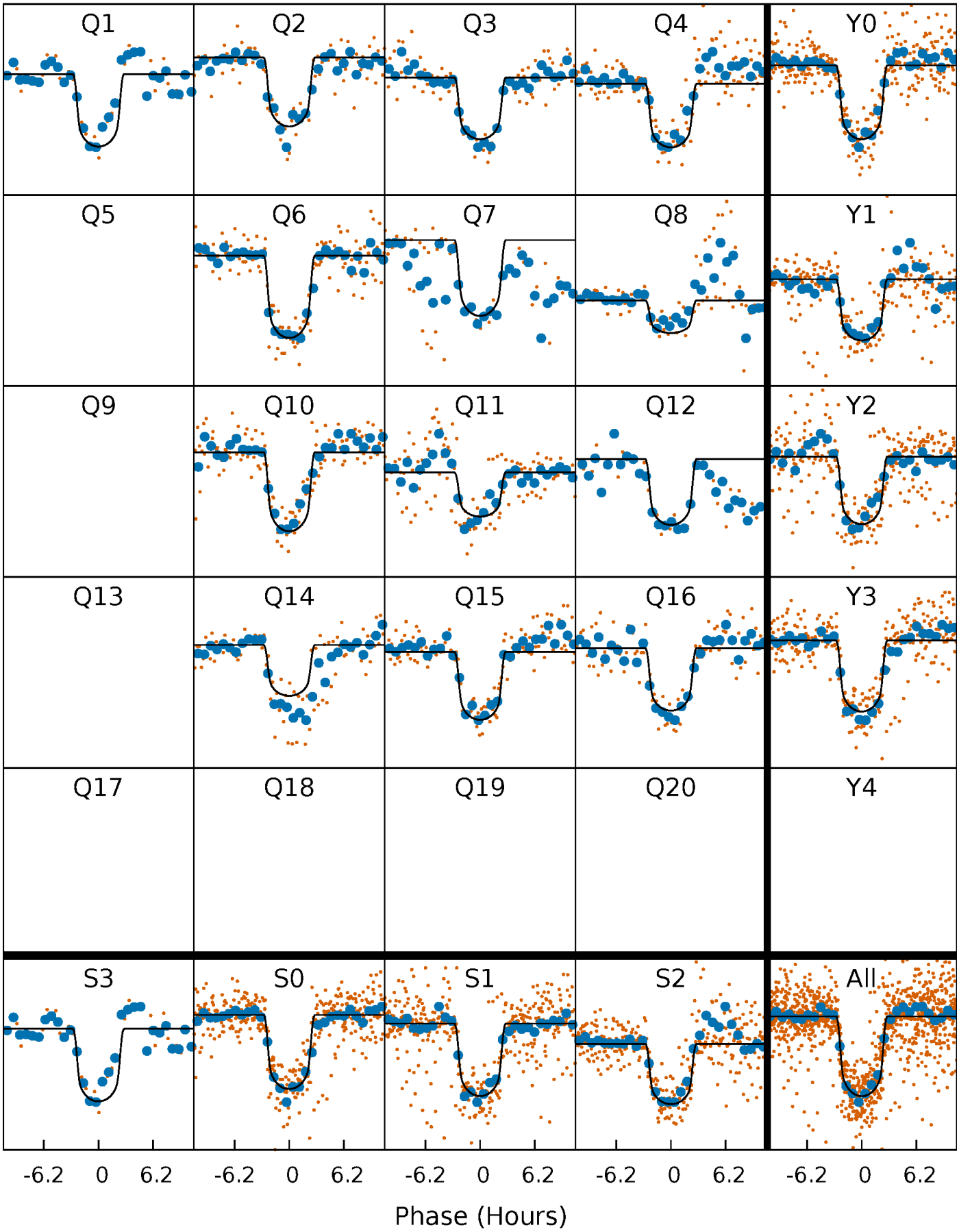
PDC Quarter-Phased Transit Curves

TCE 006587796-01 P= 33.420268 Days T_0=159.137851 (BKJD)



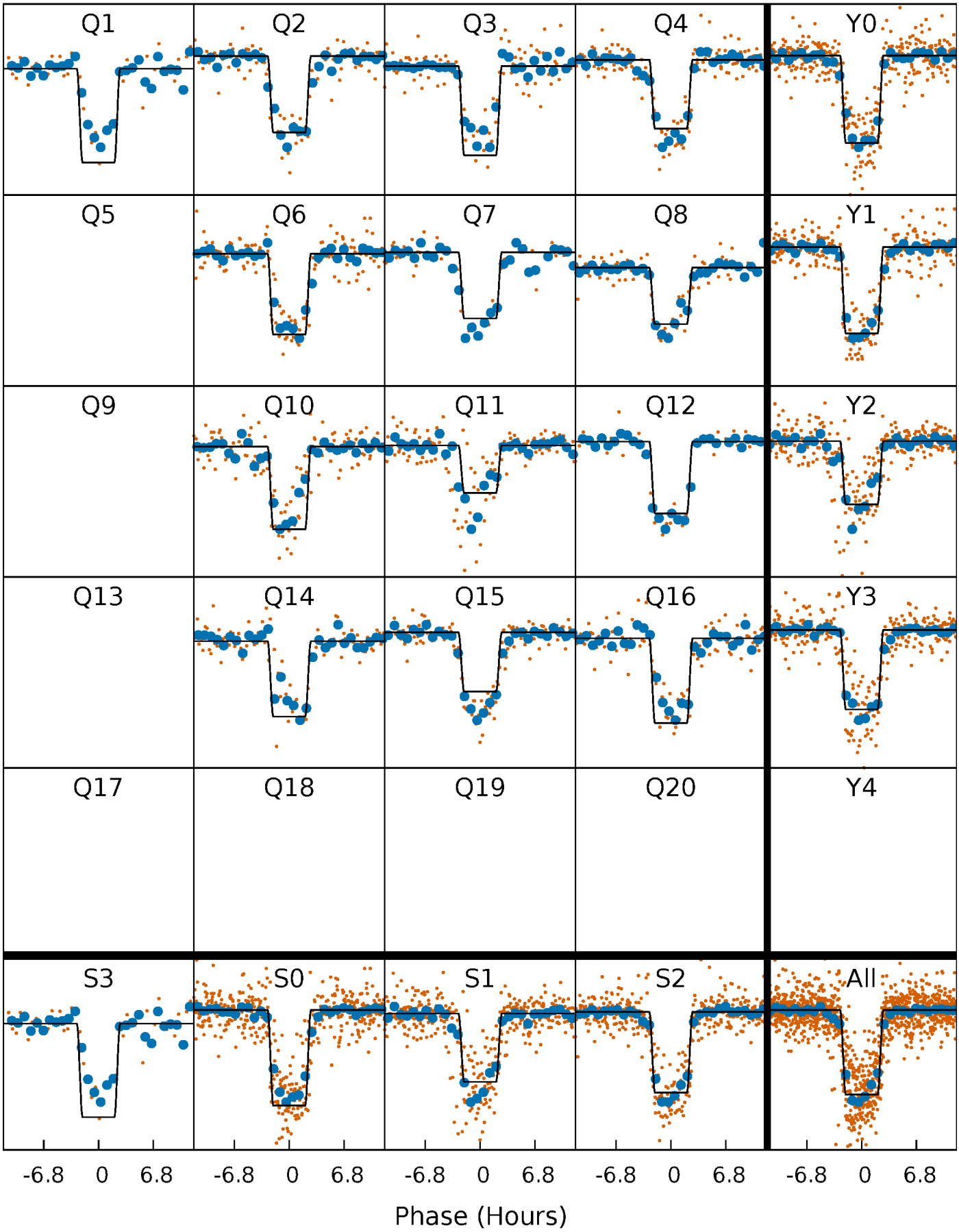
DV Quarter-Phased Transit Curves

TCE 006587796-01 P= 33.420268 Days T_0=159.137851 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

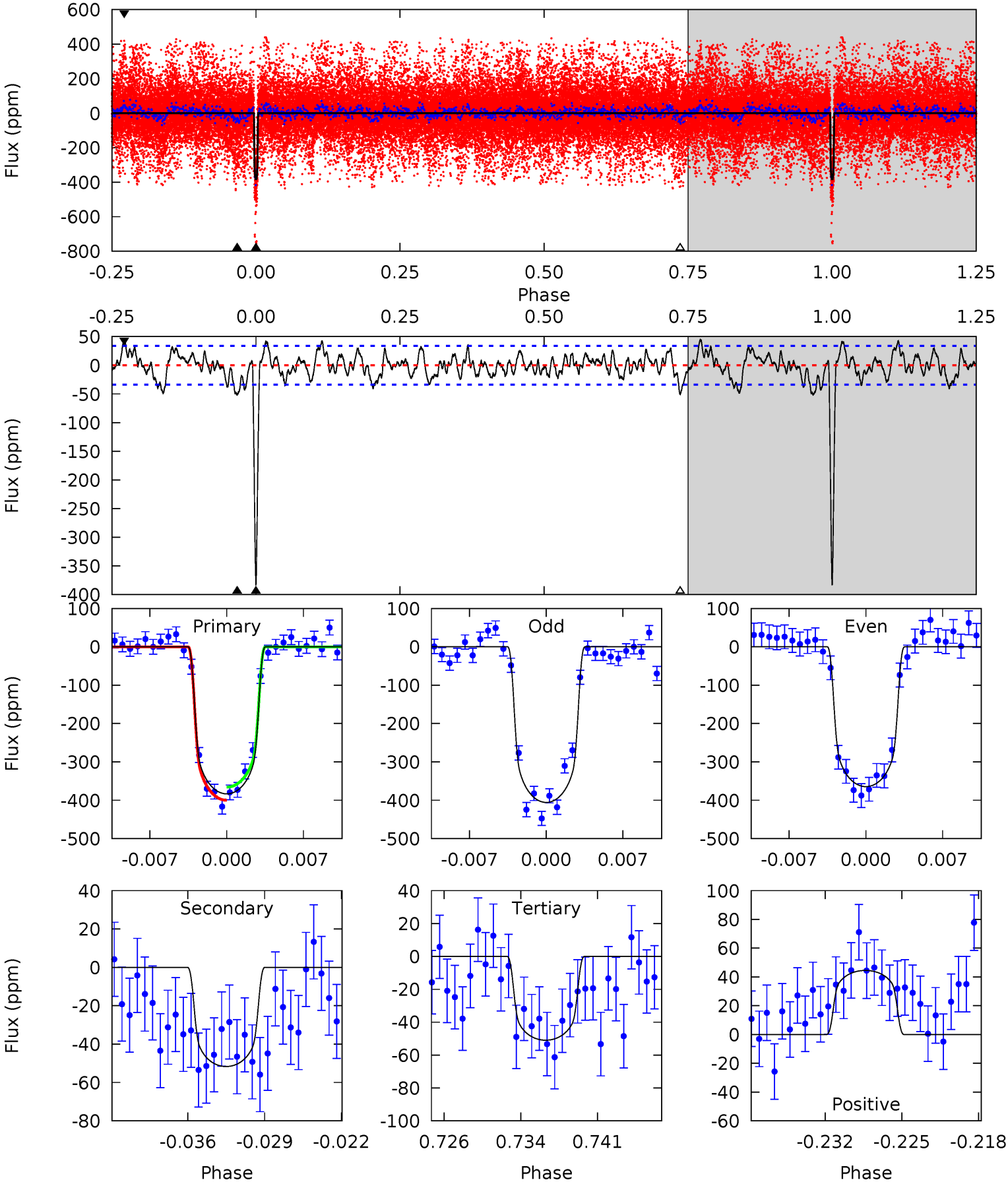
TCE 006587796-01 P= 33.420314 Days T_0=159.134718 (BKJD)



DV Model-Shift Uniqueness Test

006587796-01, P = 33.420268 Days, E = 125.717583 Days

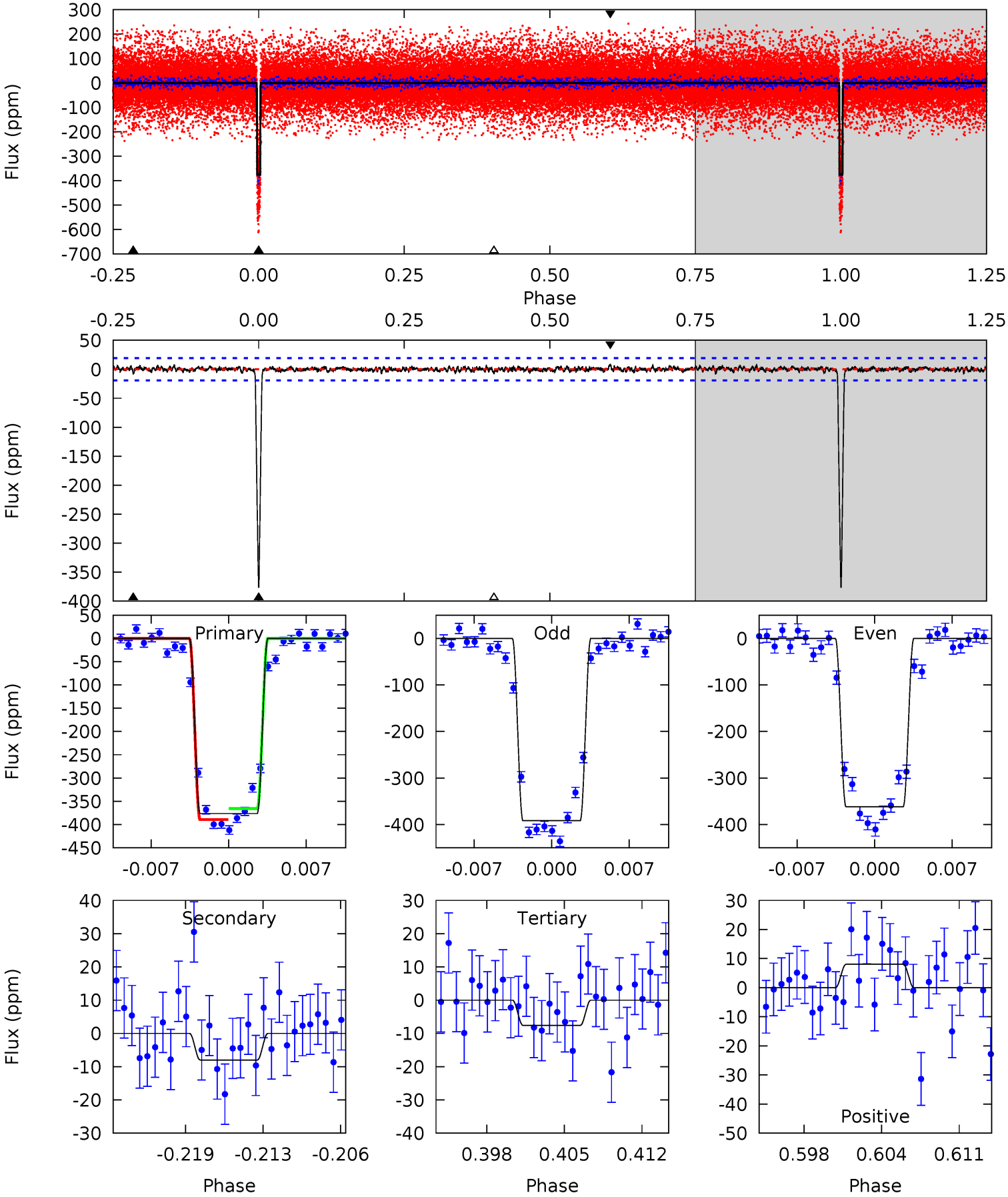
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.6	7.76	7.65	6.69	5.09	2.68	2.49	49.9	50.9	0.11	1.08	3.12	0.97	0.10	2.60



Alt Model-Shift Uniqueness Test

006587796-01, P = 33.420314 Days, E = 125.714404 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.8	2.12	2.01	2.13	5.10	2.71	0.61	97.8	97.7	0.11	-0.01	4.03	1.00	0.02	0



Stellar Parameters For KIC 006587796

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5731^{+104}_{-115}	$4.372^{+0.105}_{-0.105}$	$0.080^{+0.150}_{-0.150}$	$1.066^{+0.161}_{-0.120}$	$0.977^{+0.074}_{-0.062}$	$1.136^{+0.507}_{-0.379}$
	+2%/-2%	+2%/-2%	+188%/-188%	+15%/-11%	+8%/-6%	+45%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006587796-01 / KOI 3237.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52±7	$2.45^{+0.23}_{-0.21}$	811^{+35}_{-30}	3740^{+124}_{-127}	192^{+44}_{-38}
Alt.	-8±4	$2.31^{+0.24}_{-0.21}$	811^{+34}_{-33}	2875^{+161}_{-234}	34^{+17}_{-16}

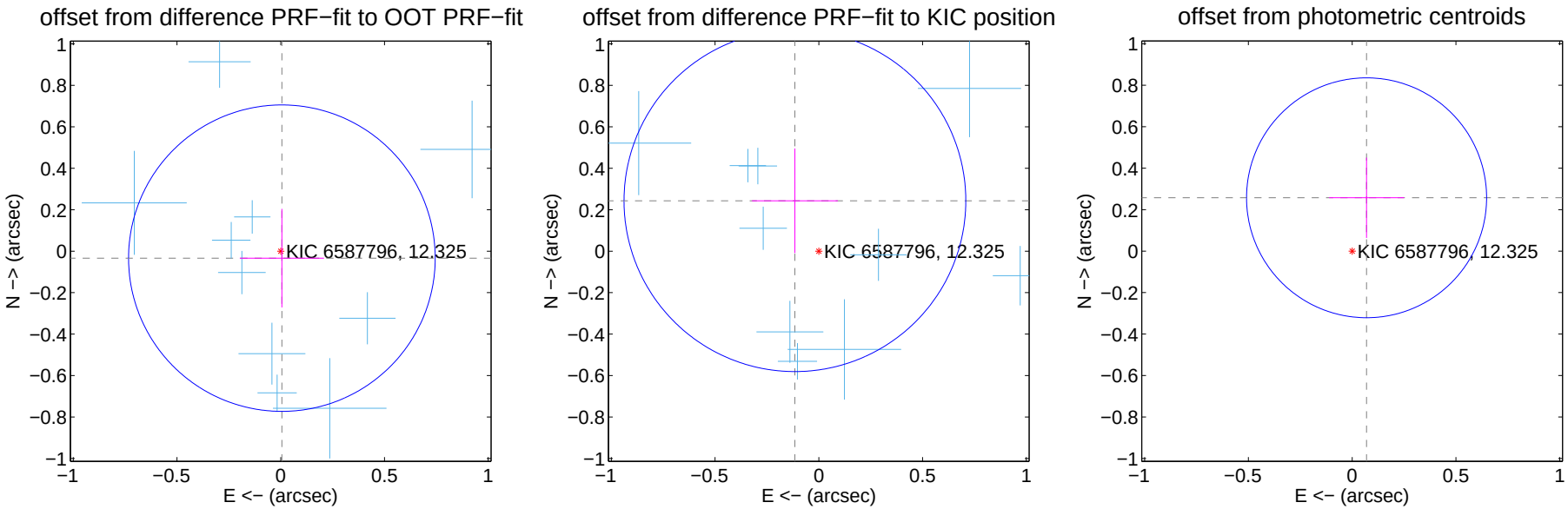
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

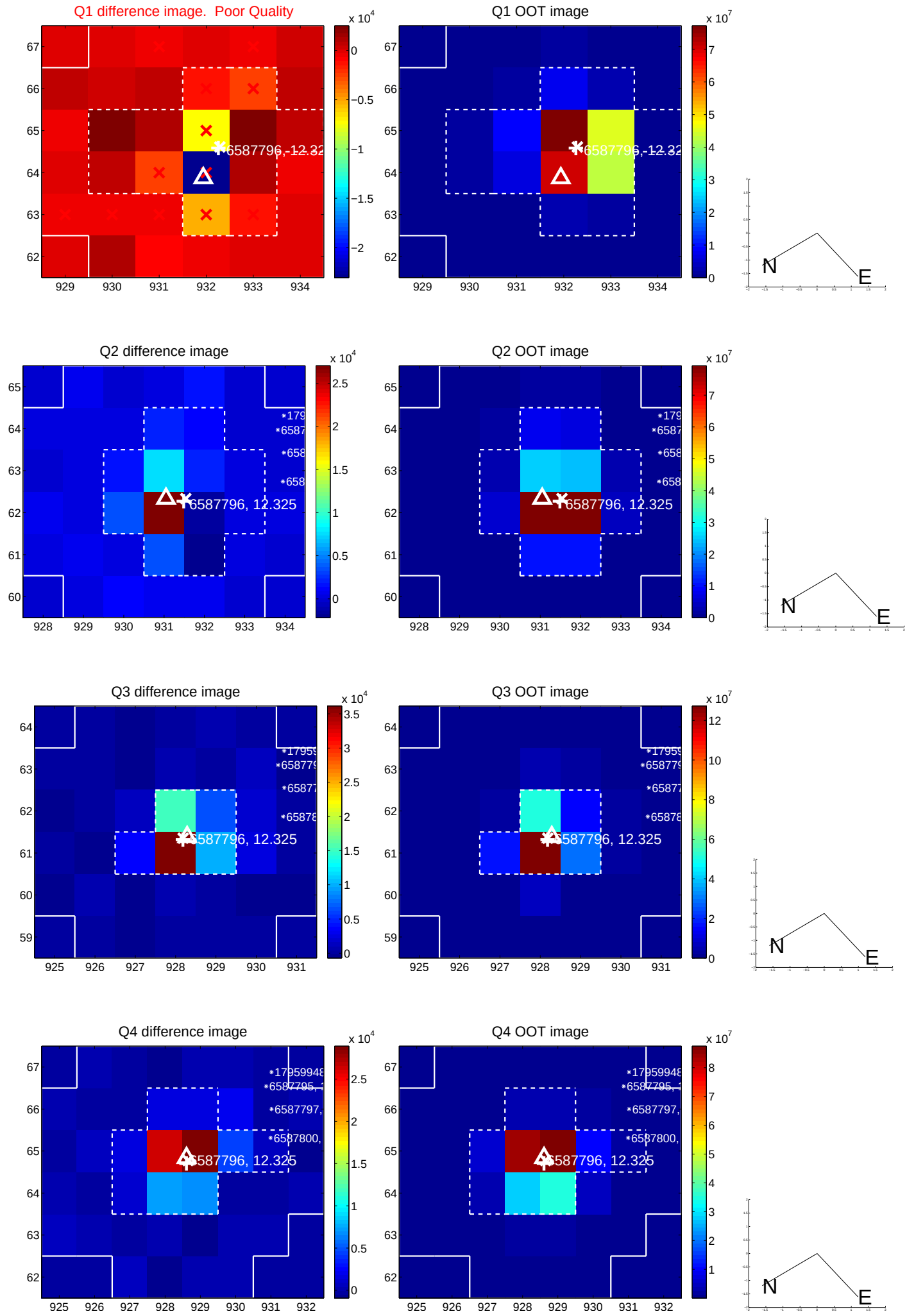
Supplemental centroid analysis for 006587796-01. Kepler magnitude: 12.32. Transit SNR 30.33
There are 12 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.034 ± 0.246	0.14	-0.005 ± 0.203	-0.034 ± 0.238
PRF-fit source offset from KIC position	0.269 ± 0.275	0.98	0.115 ± 0.207	0.243 ± 0.252
photometric centroid source offset	0.27 ± 0.19	1.38	-0.07 ± 0.18	0.26 ± 0.19

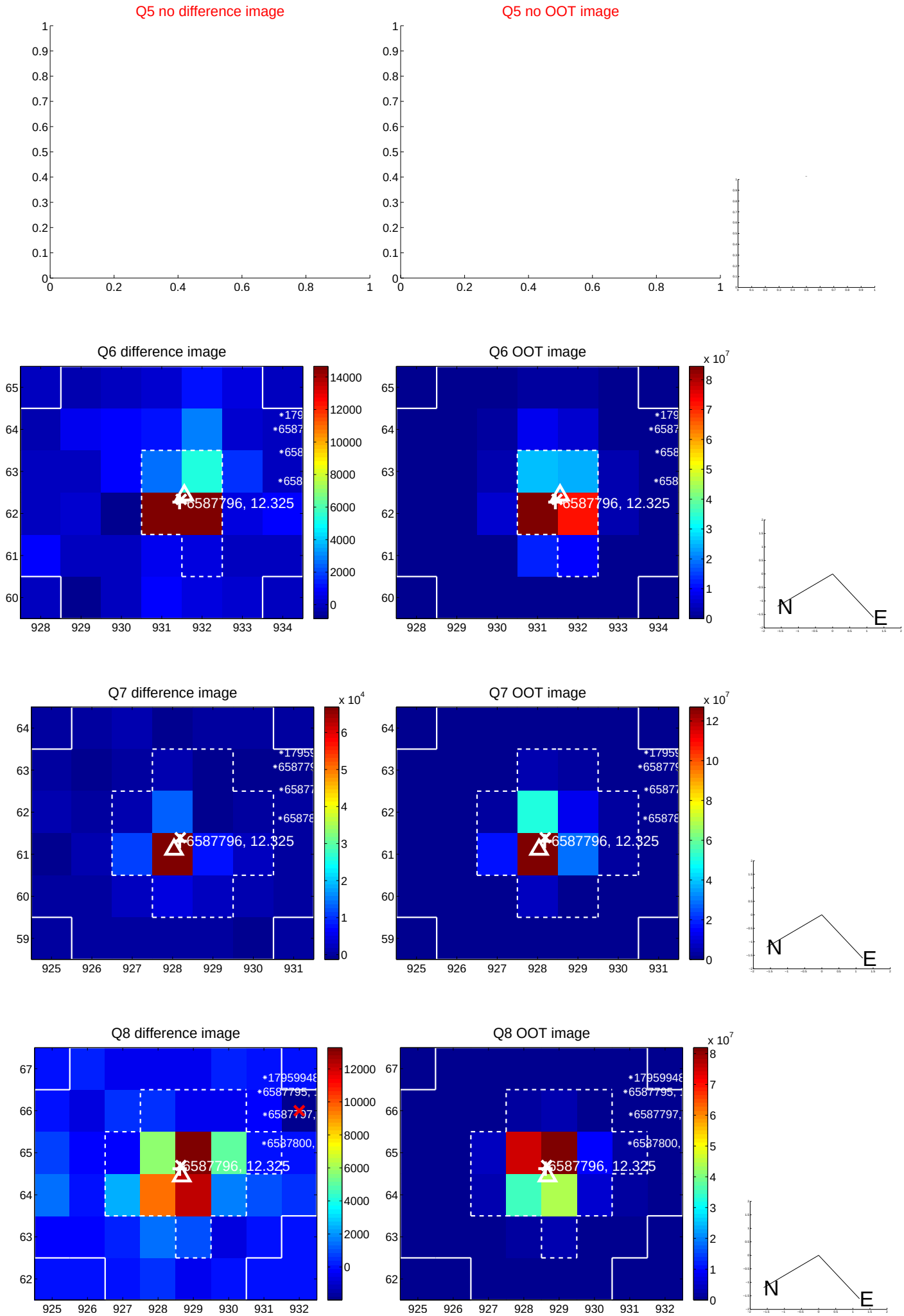


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

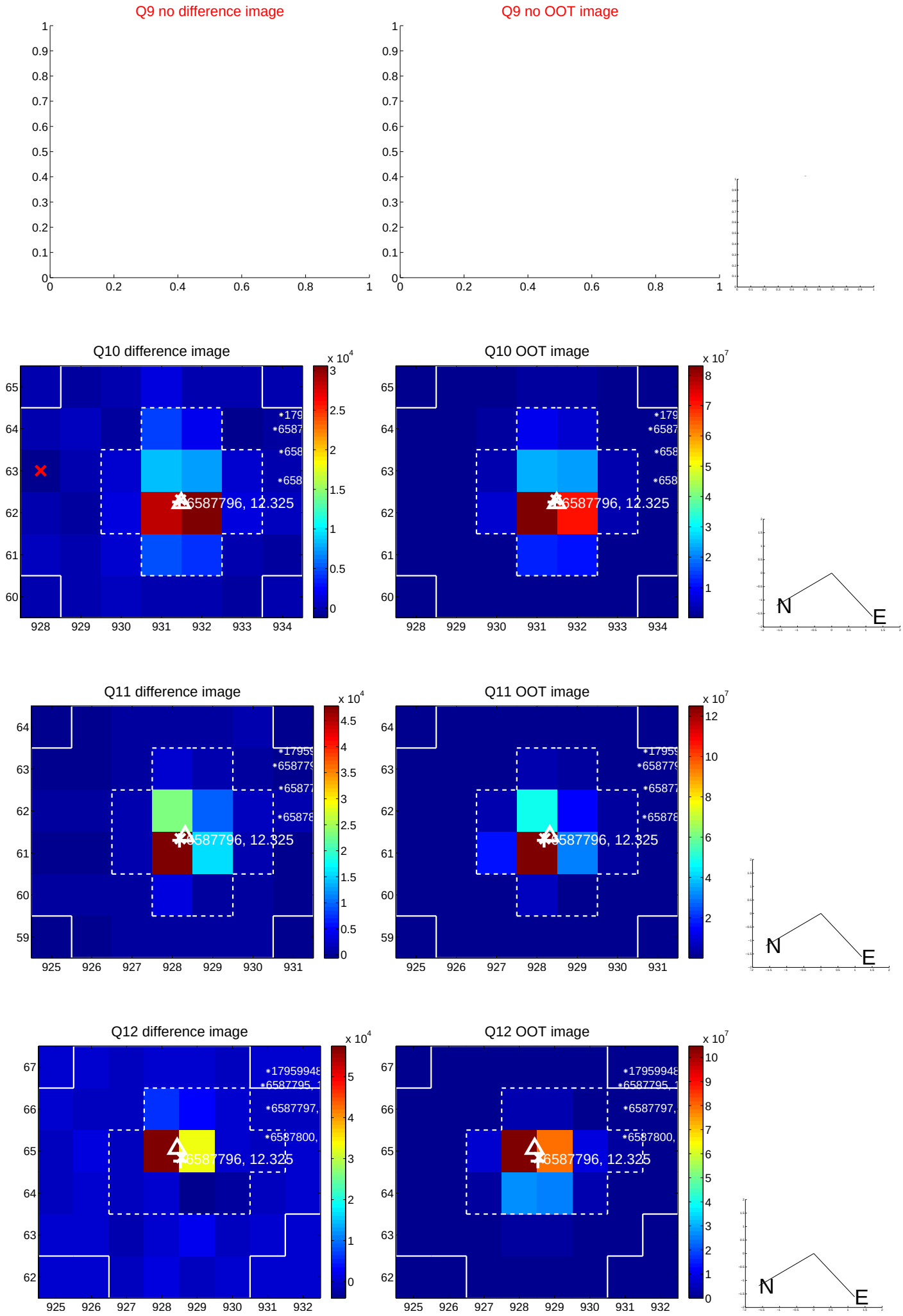
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



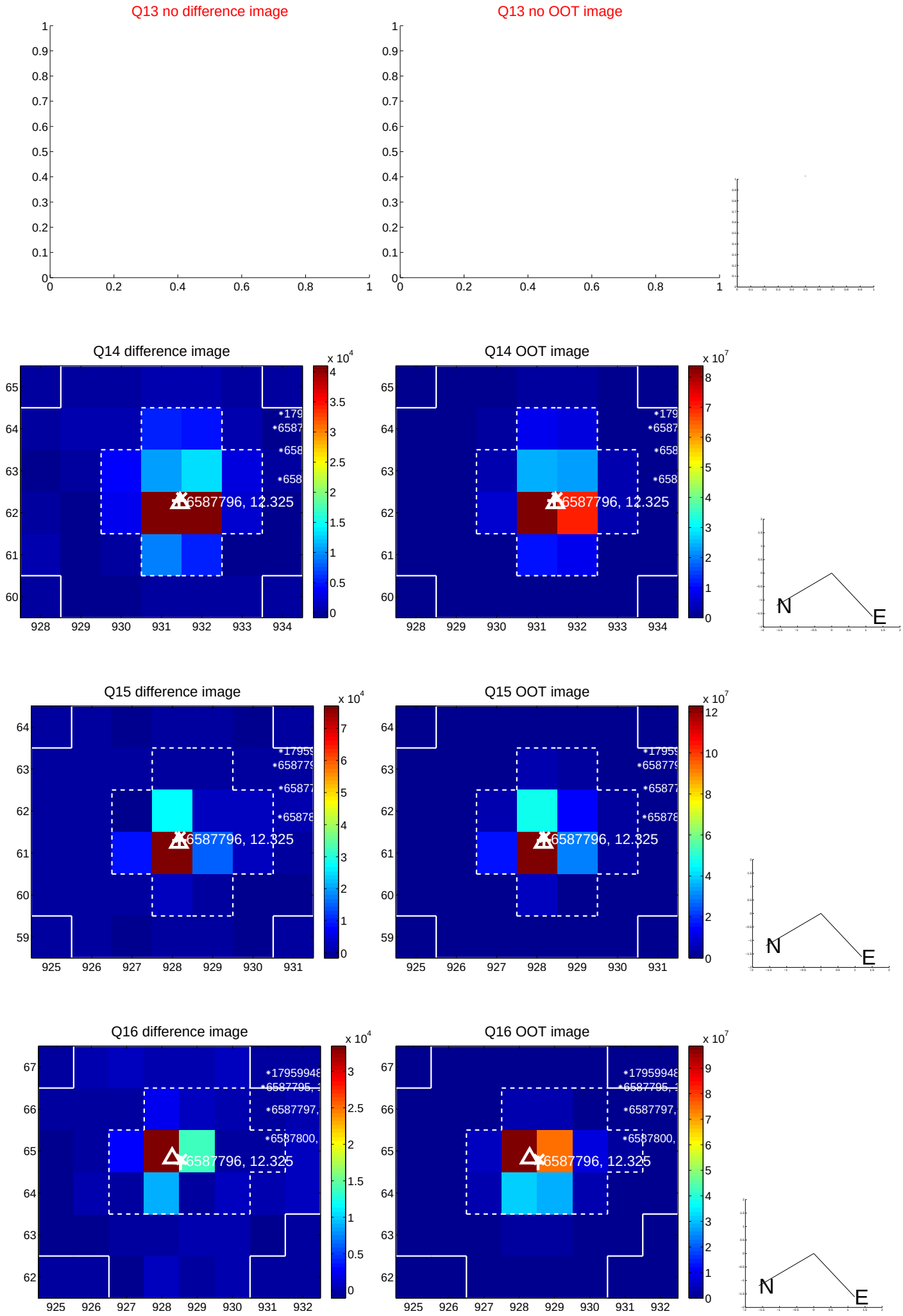
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



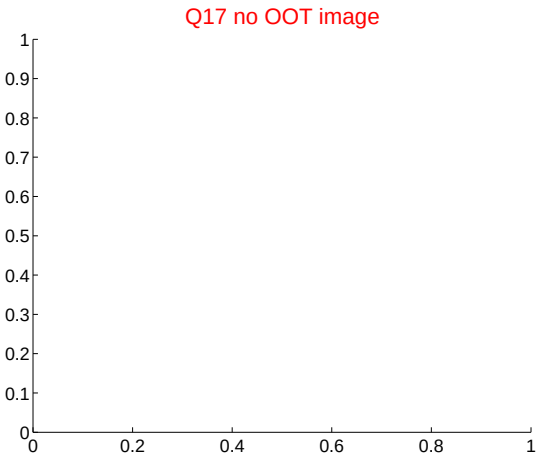
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

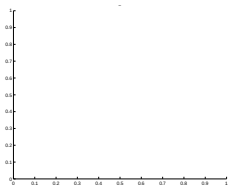


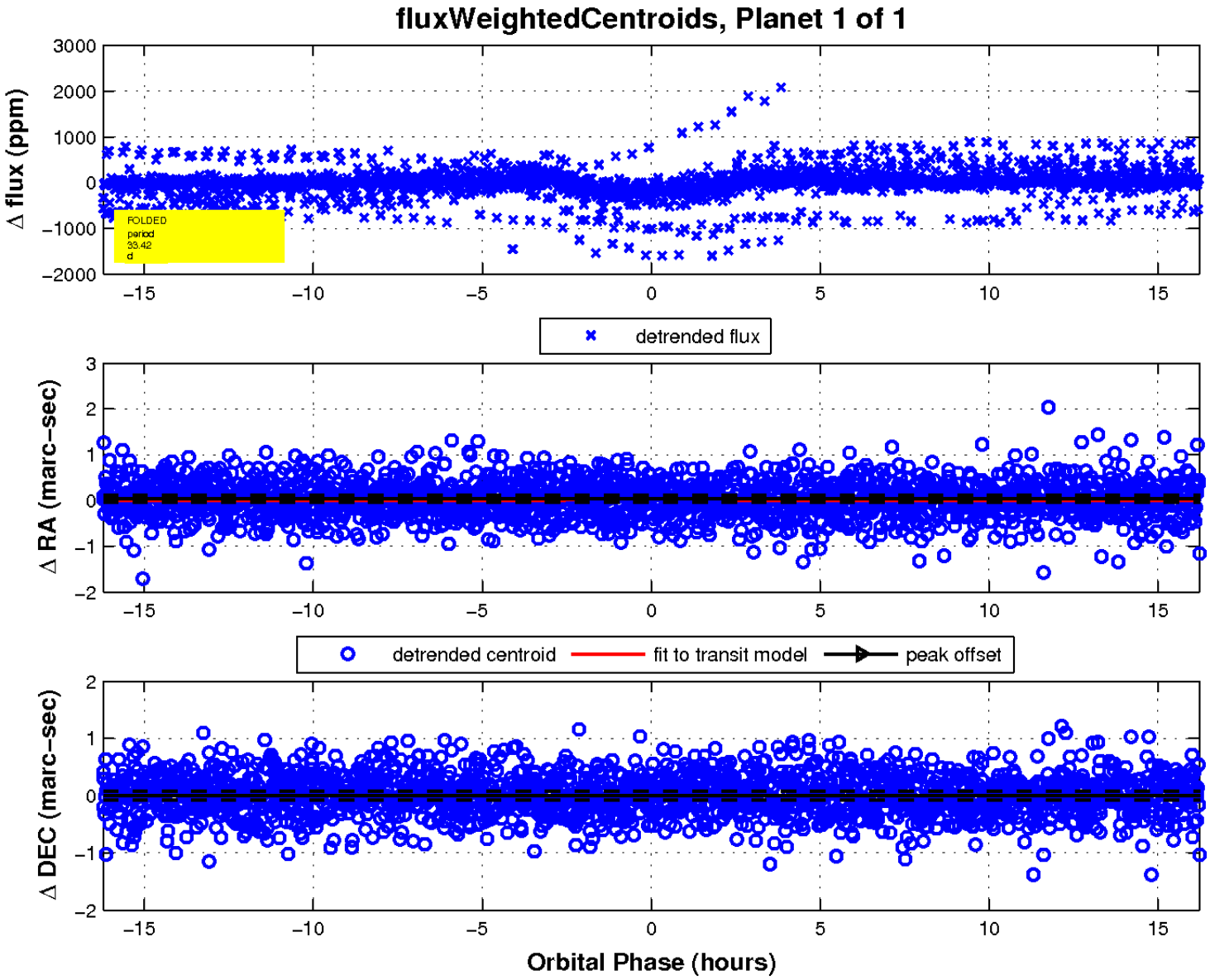
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



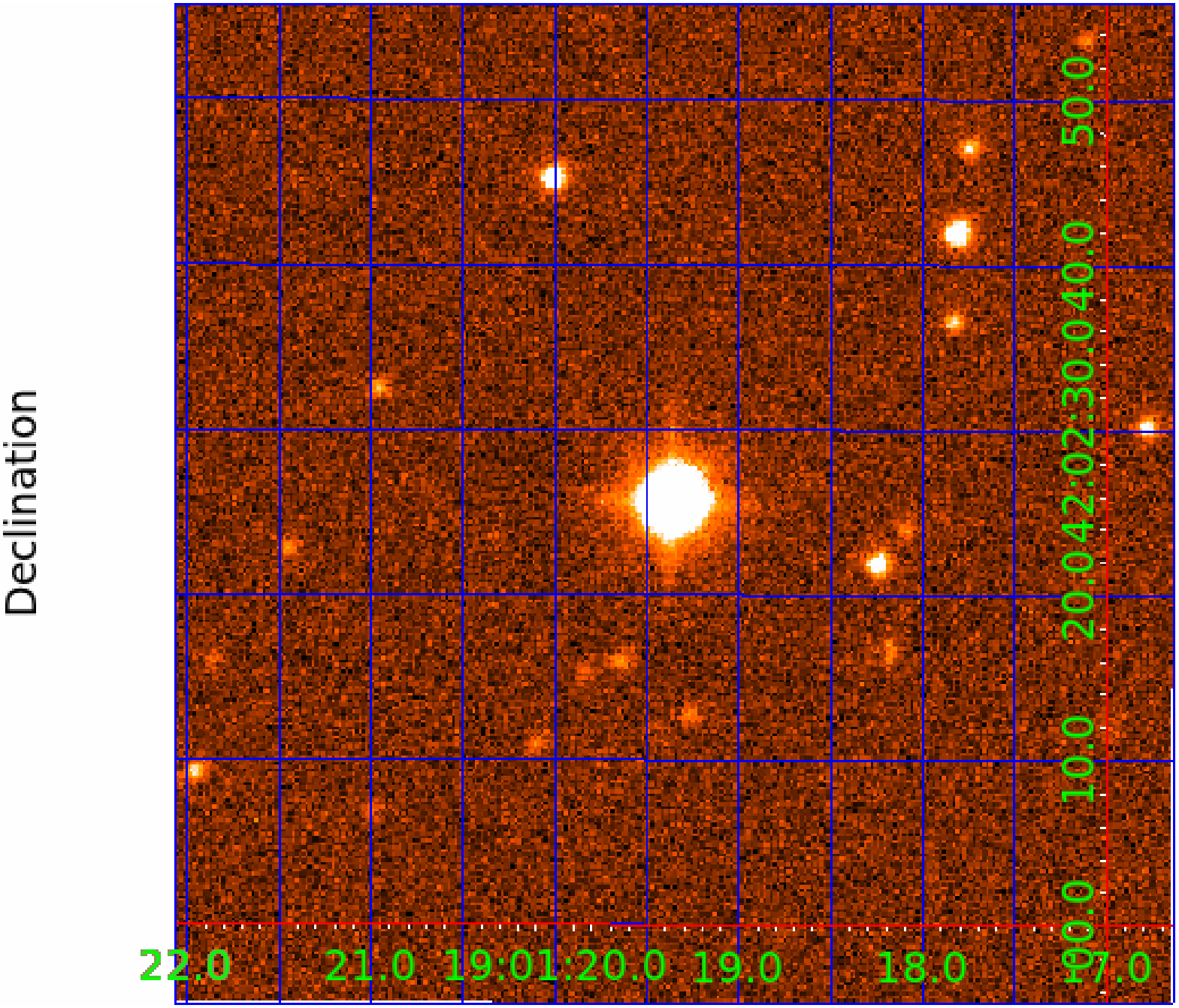
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
22.0
21.0
19:01:20.0
19.0
18.0
17.0
+00:00:10.0
20.0
42:02:30.0
40.0
50.0