

KIC 011520150

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})
011520150-01	OBS	No	5.521510	132.396149	43.6	26.496	8.6	9.2	2.07	7094	1.40	1940.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011520150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

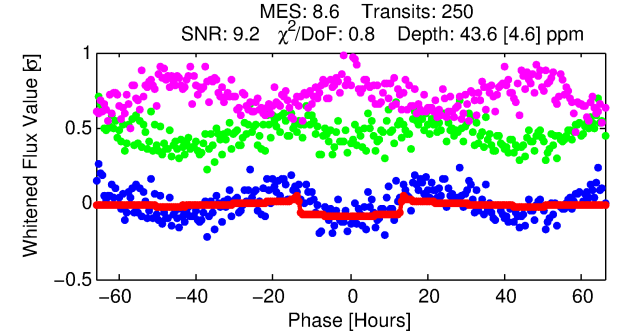
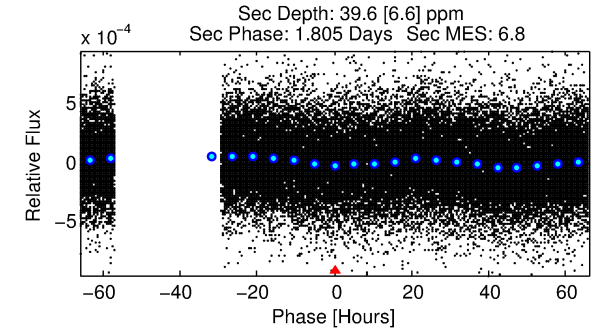
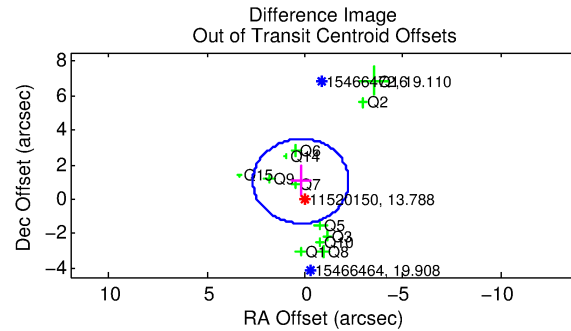
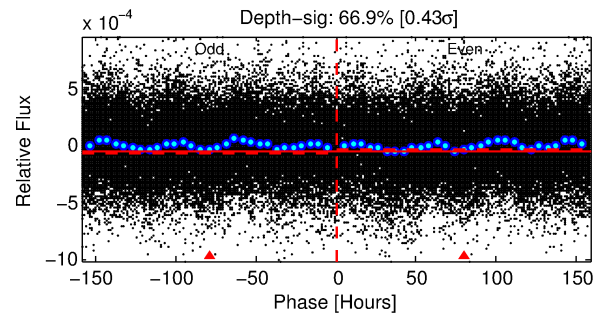
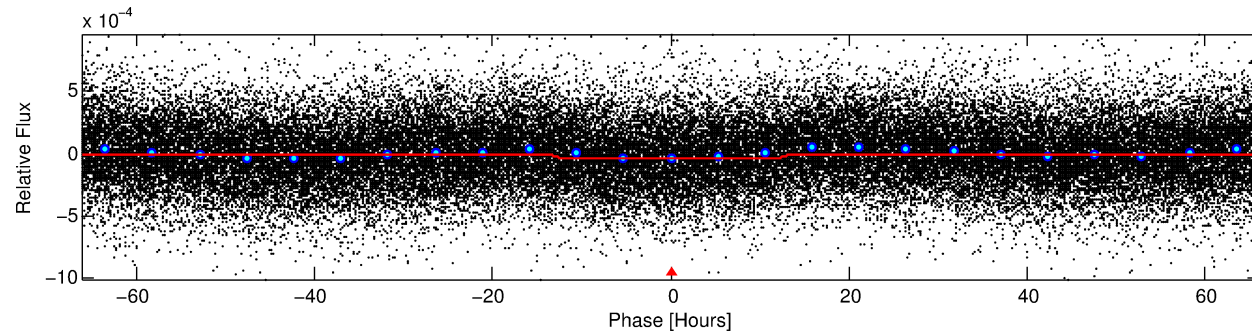
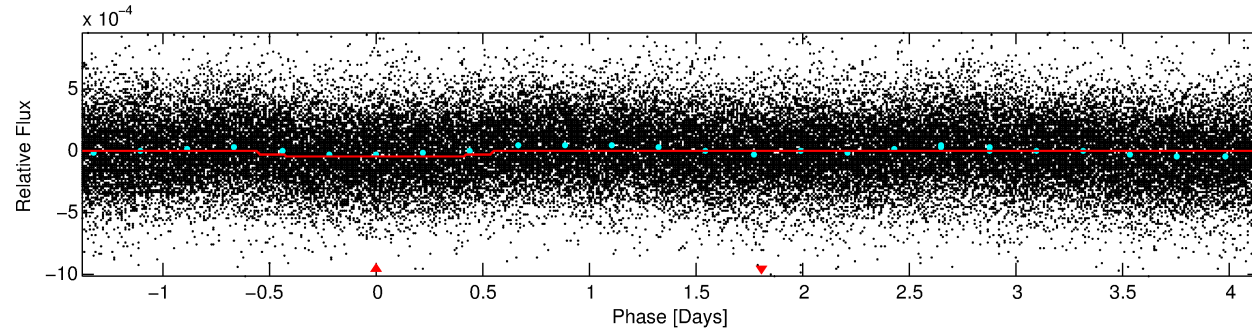
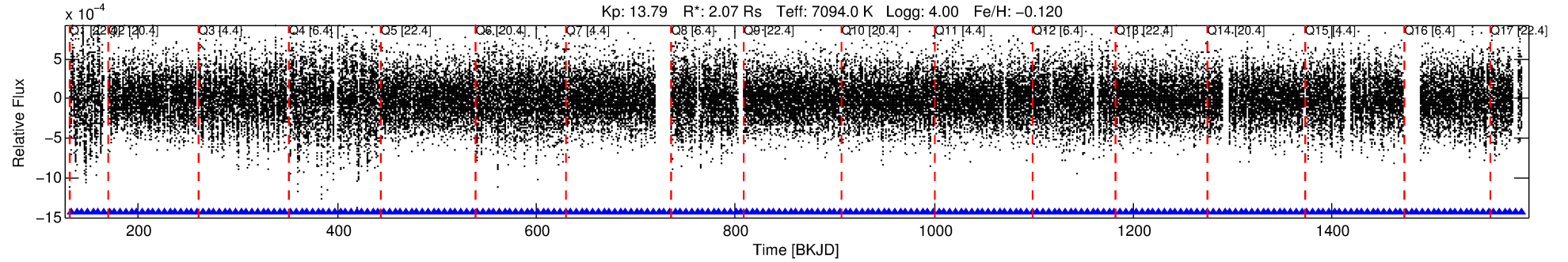
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011520150-01

No Significant Match Found

DV One-Page Summary

KIC: 11520150 Candidate: 1 of 1 Period: 5.522 d



DV Fit Results:

Period = 5.52151 [0.00009] d
Epoch = 132.3961 [0.0121] BKJD
Rp/R* = 0.0062 [0.0028]
a/R* = 1.64 [2.78]
b = 0.35 [6.77]
Seff = 1940.63 [875.29]
Teq = 1692 [191] K
Rp = 1.40 [0.76] Re
a = 0.0707 [0.0191] AU
Ag = 55.86 [57.22] [0.96 σ]
Teffp = 7154 [1699] K [3.19 σ]

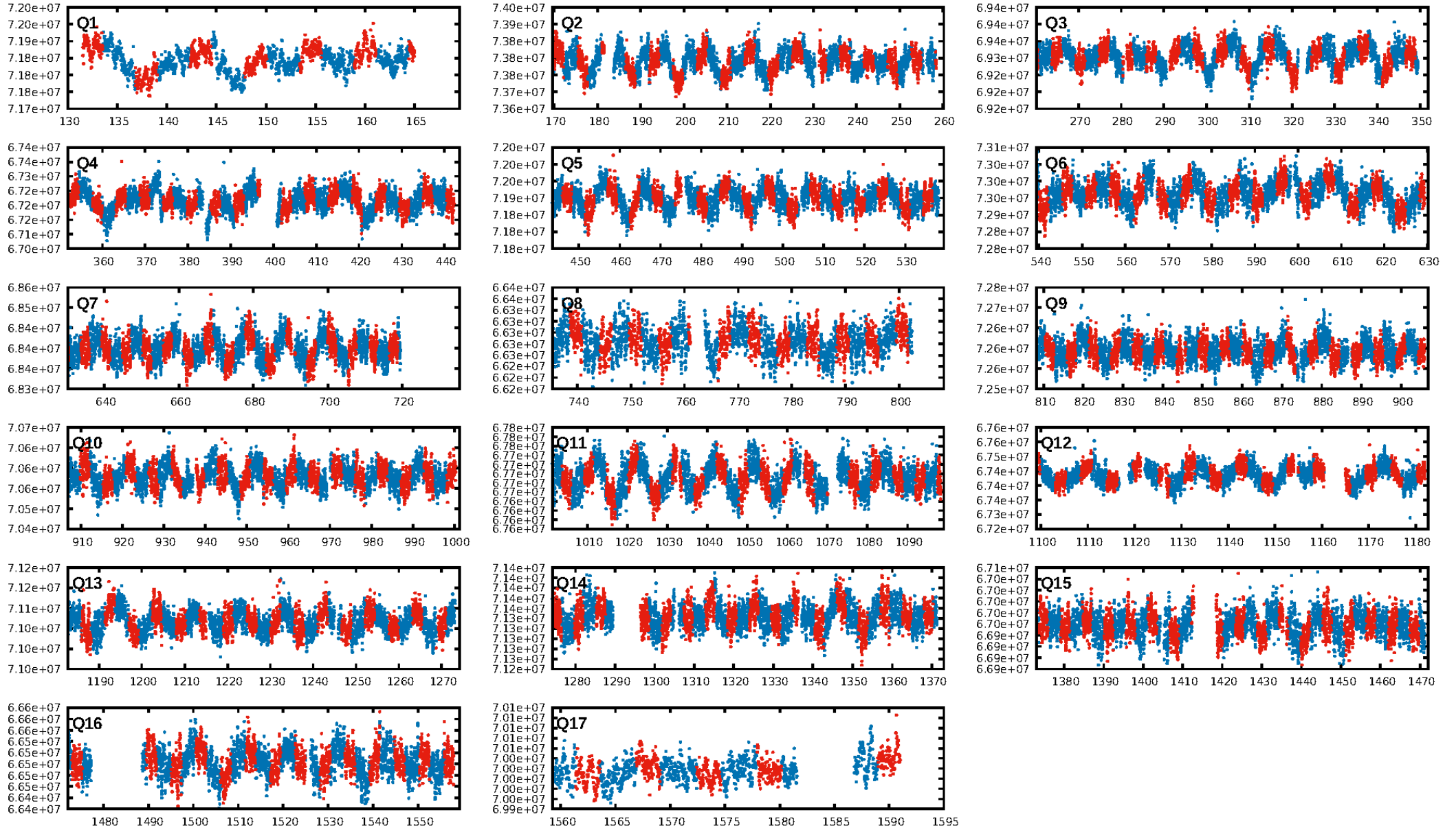
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.60e-19
RollingBand-fgt: 1.00 [238/238]
GhostDiagnostic-chr: 1.709
Centroid-sig: 40.7%
Centroid-so: 0.635 arcsec [0.96 σ]
OotOffset-rm: 1.066 arcsec [1.31 σ]
KicOffset-rm: 1.066 arcsec [1.18 σ]
OotOffset-st: 4/3/2/3 [12]
KicOffset-st: 4/3/2/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

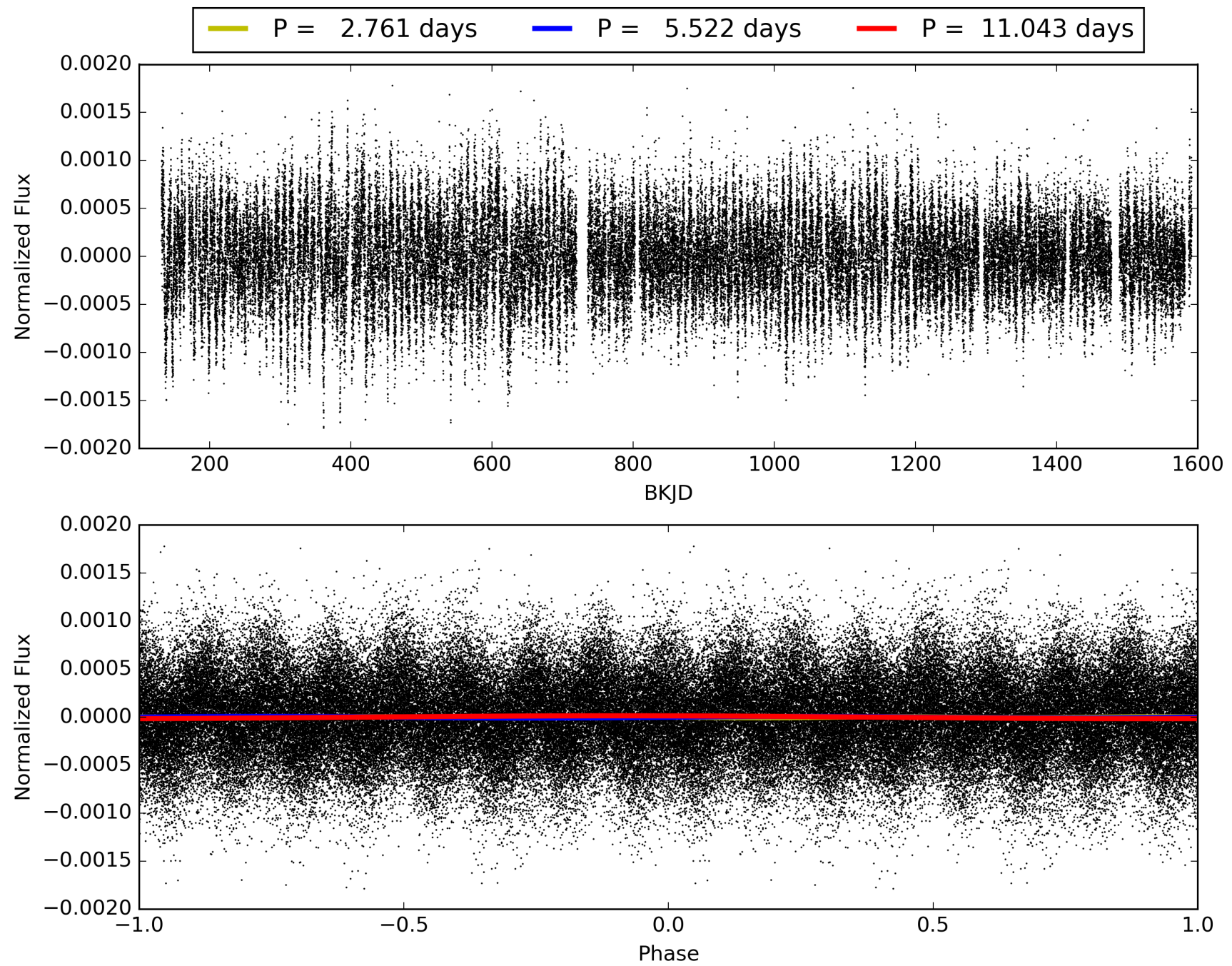
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:52:13 Z

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

TCE 011520150-01, PDC Light Curves

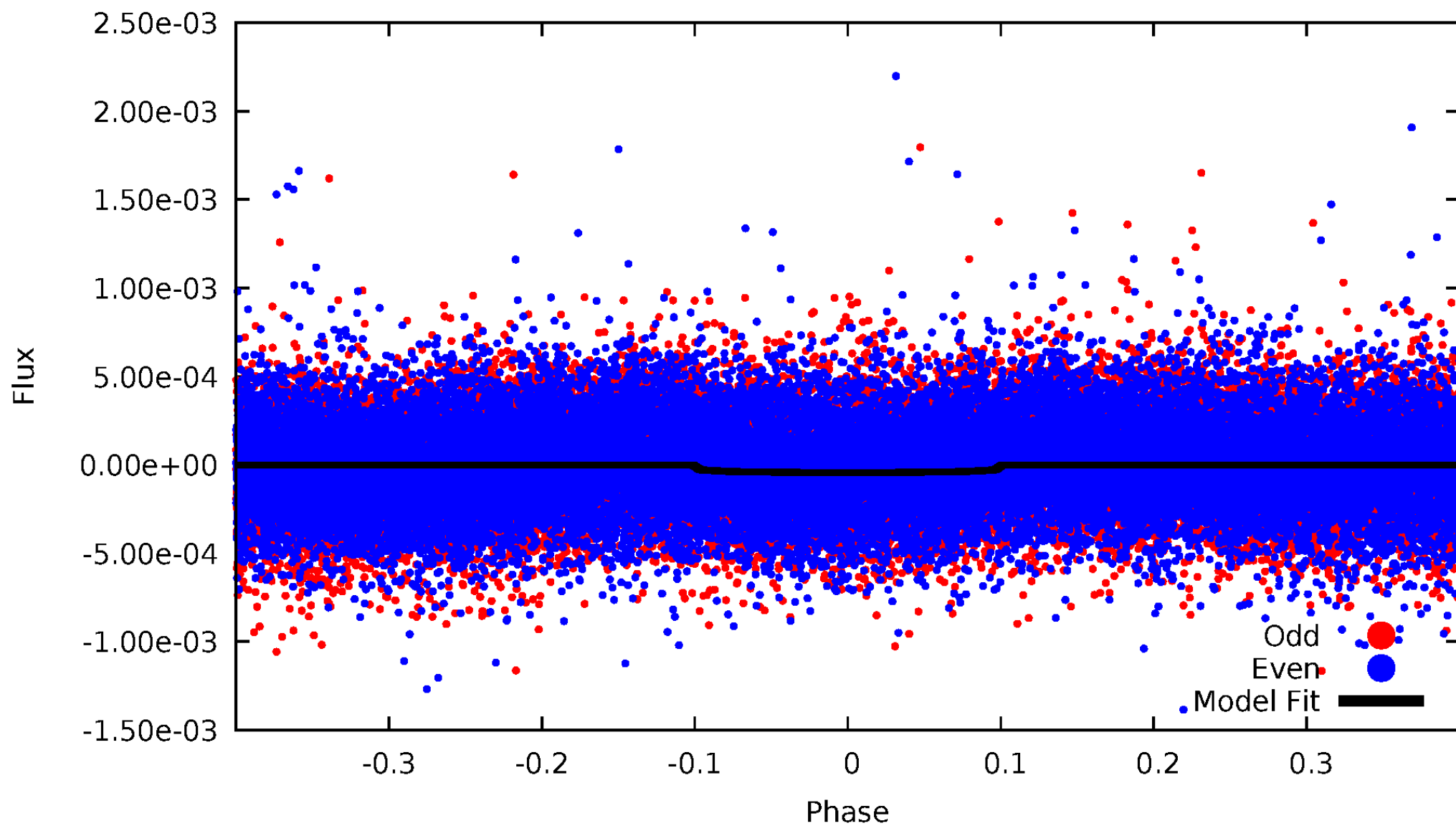


TCE 011520150-01



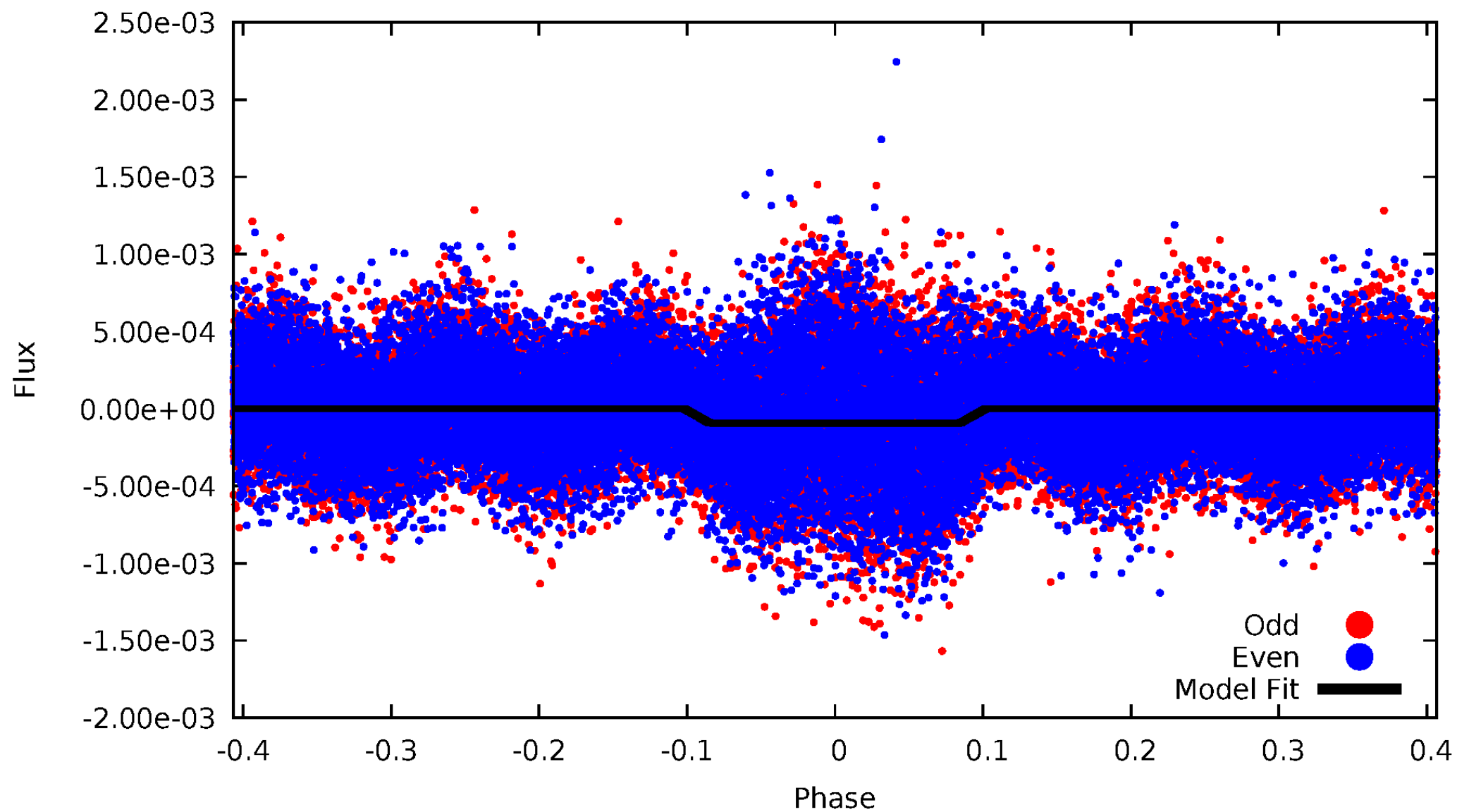
DV Odd/Even

TCE 011520150-01



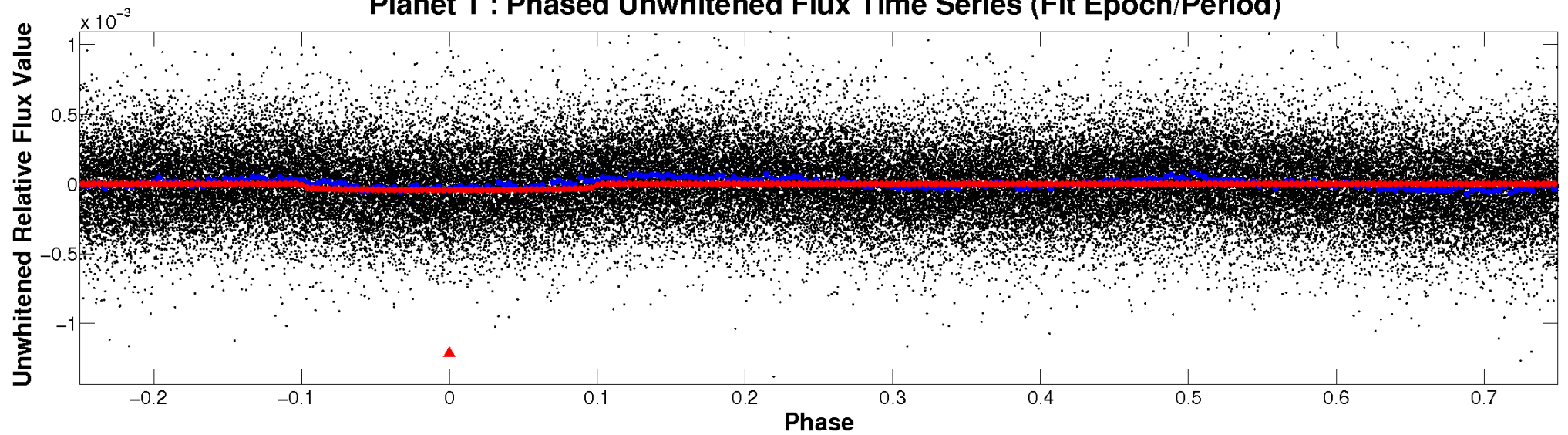
ALT Odd/Even

TCE 011520150-01

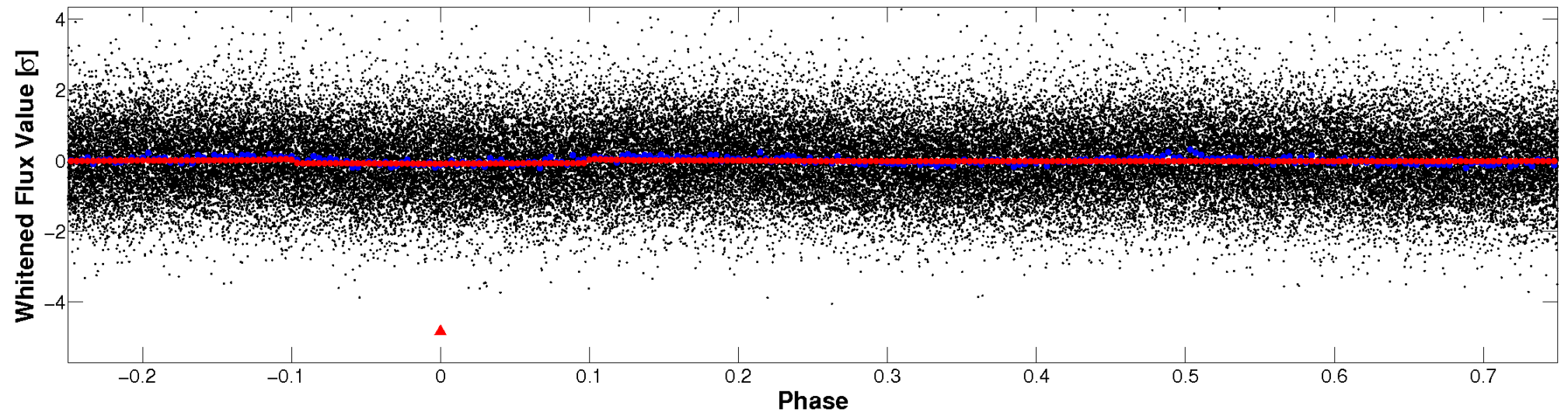


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

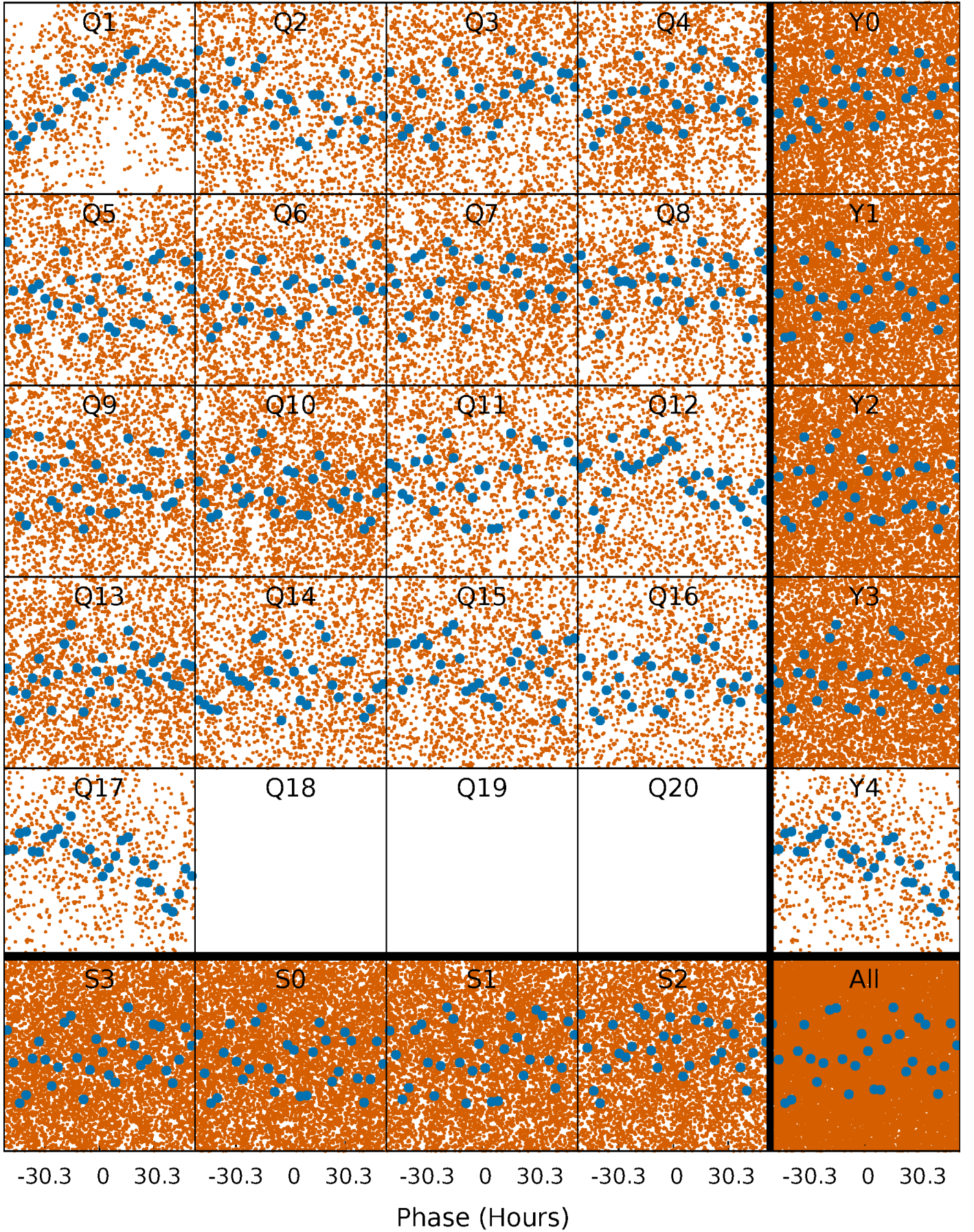


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



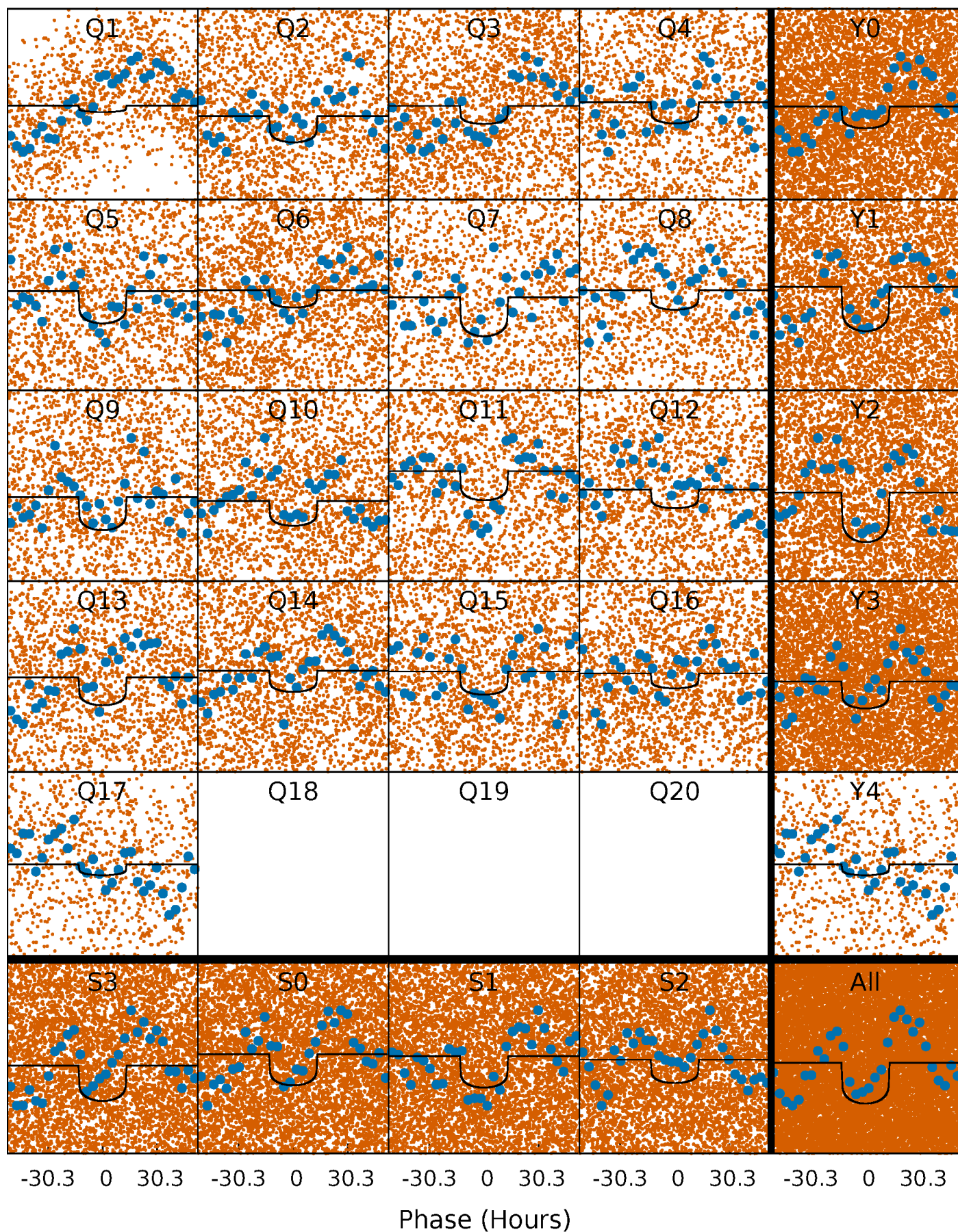
PDC Quarter-Phased Transit Curves

TCE 011520150-01 P= 5.521510 Days $T_0=132.396149$ (BKJD)



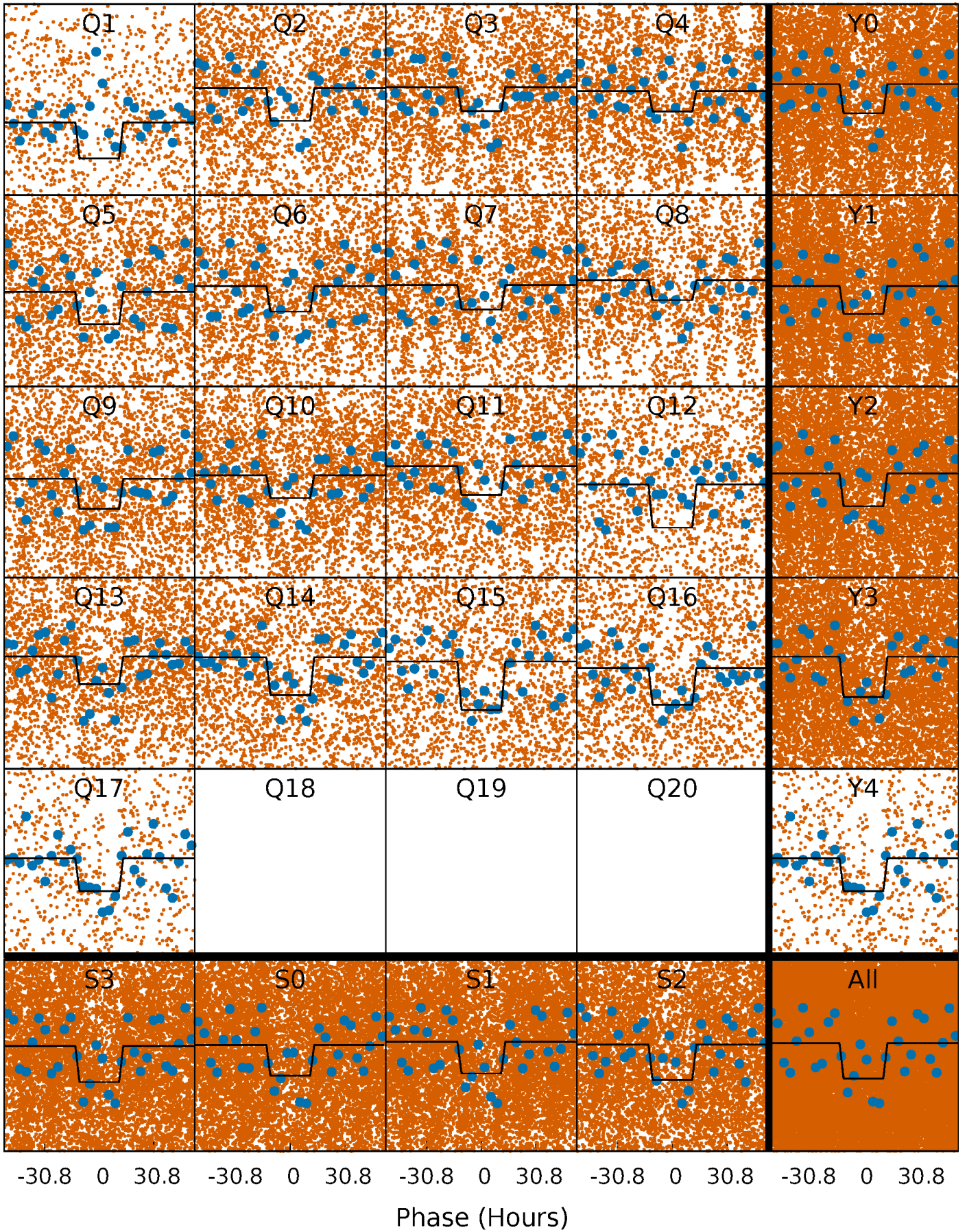
DV Quarter-Phased Transit Curves

TCE 011520150-01 P= 5.521510 Days $T_0=132.396149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

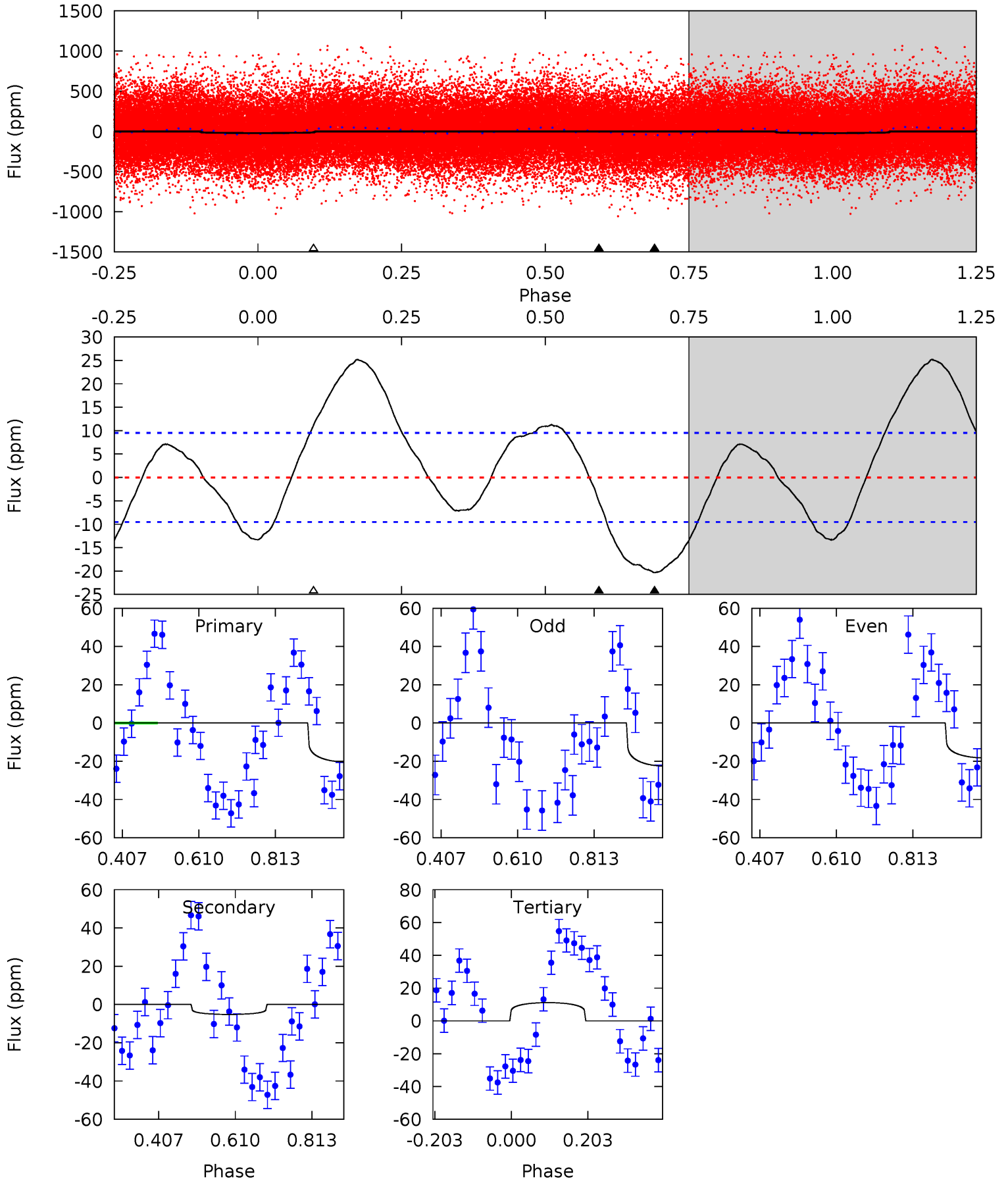
TCE 011520150-01 P= 5.521317 Days $T_0=132.405319$ (BKJD)



DV Model-Shift Uniqueness Test

011520150-01, P = 5.521510 Days, E = 126.874639 Days

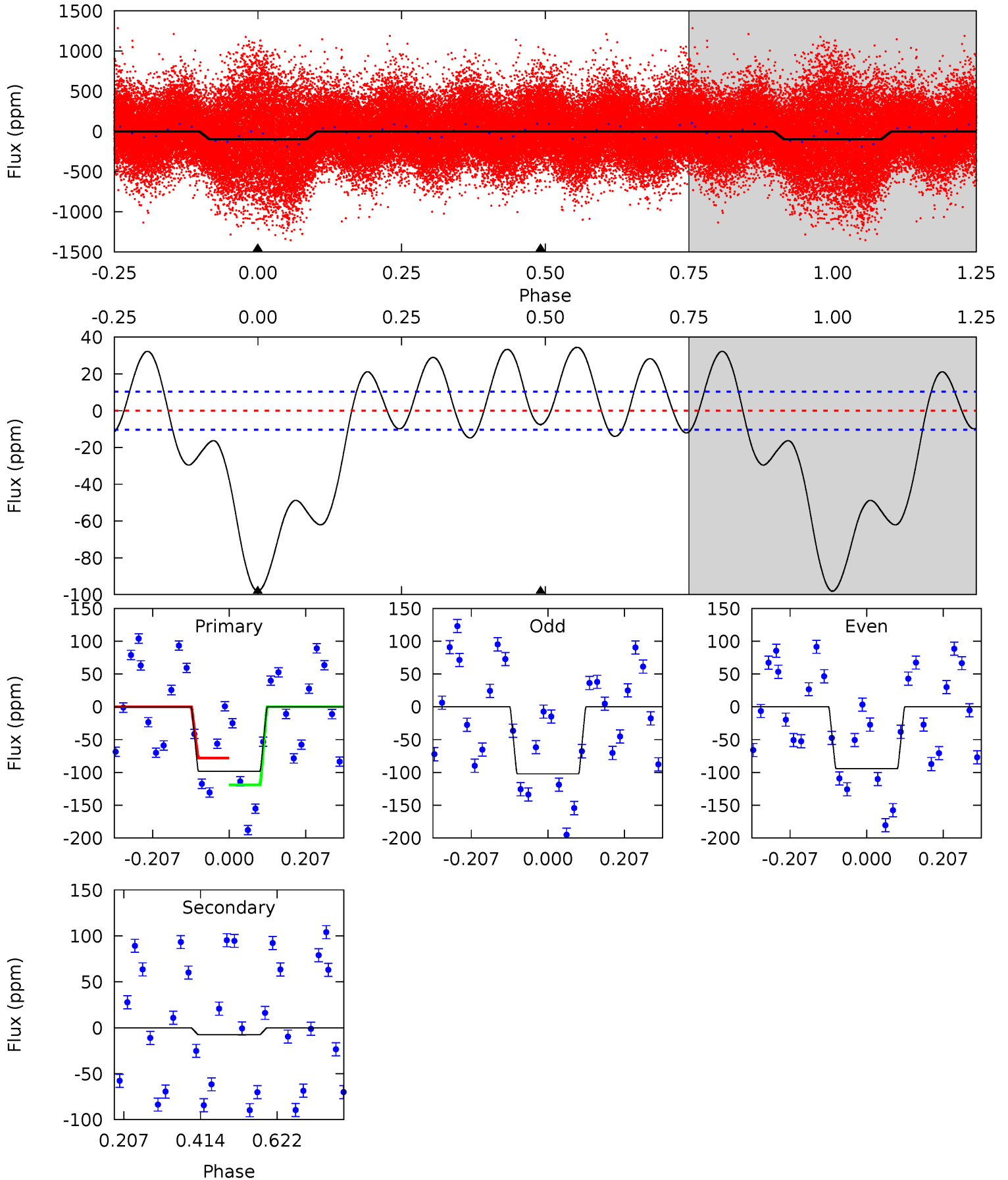
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.43	2.41	-5.17	0	4.41	1.27	5.56	14.6	9.43	7.58	2.41	1.00	1.35	0.55	2.39



Alt Model-Shift Uniqueness Test

011520150-01, P = 5.521317 Days, E = 126.884002 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.7	3.19	0	0	4.41	1.26	4.41	41.7	41.7	3.19	3.19	1.70	1.07	0.26	8.72



Stellar Parameters For KIC 011520150

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7094^{+200}_{-300}	$3.996^{+0.240}_{-0.160}$	$-0.120^{+0.250}_{-0.350}$	$2.067^{+0.613}_{-0.613}$	$1.544^{+0.209}_{-0.287}$	$0.246^{+0.359}_{-0.111}$
	+3%/-4%	+6%/-4%	+208%/-292%	+30%/-30%	+14%/-19%	+146%/-45%
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 011520150-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$1.35^{+0.78}_{-0.61}$	2329^{+180}_{-178}	4355^{+1353}_{-717}	$7.220^{+19.128}_{-4.429}$
Alt.	-8 ± 2	$2.10^{+0.75}_{-0.66}$	2335^{+180}_{-204}	3946^{+654}_{-427}	$4.341^{+5.675}_{-2.193}$

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 $A_{obs} \gg 1.0$

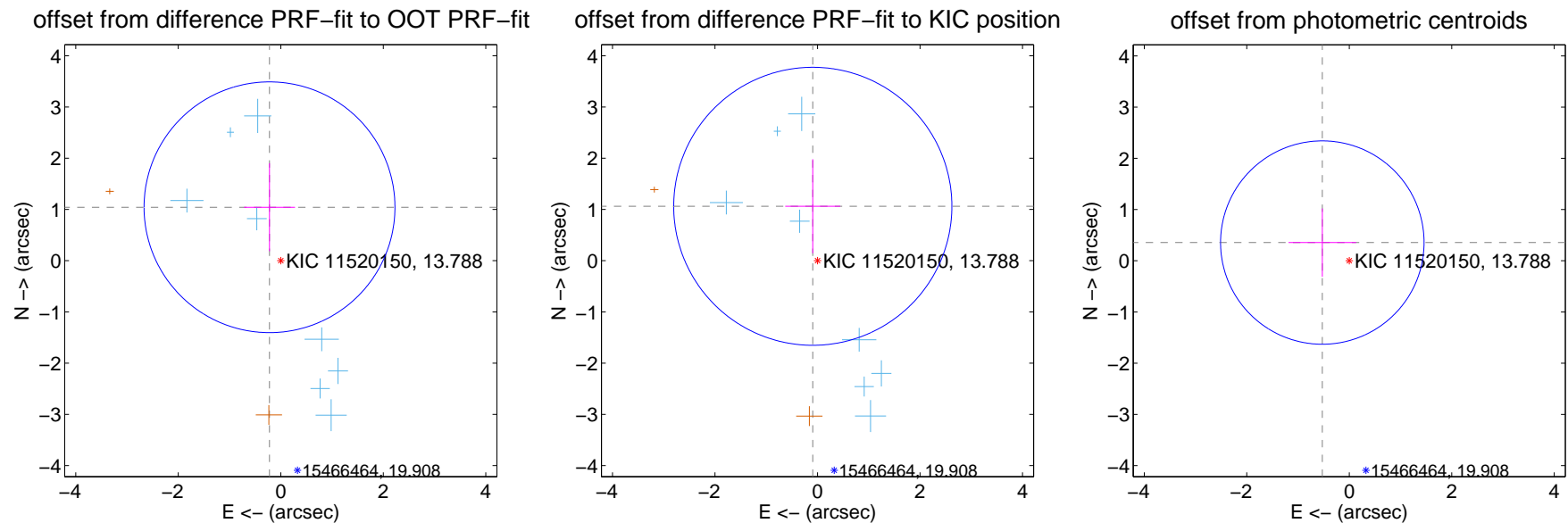
DV Centroid Data

Supplemental centroid analysis for 011520150-01. Kepler magnitude: 13.79. Transit SNR 9.20

There are 9 quarters with good PRF difference image offsets

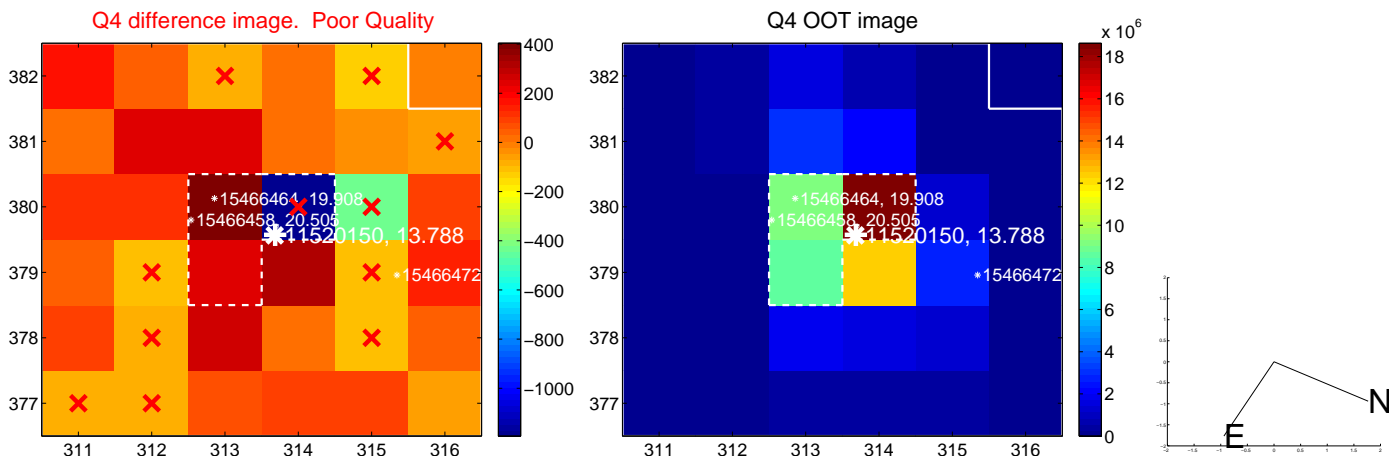
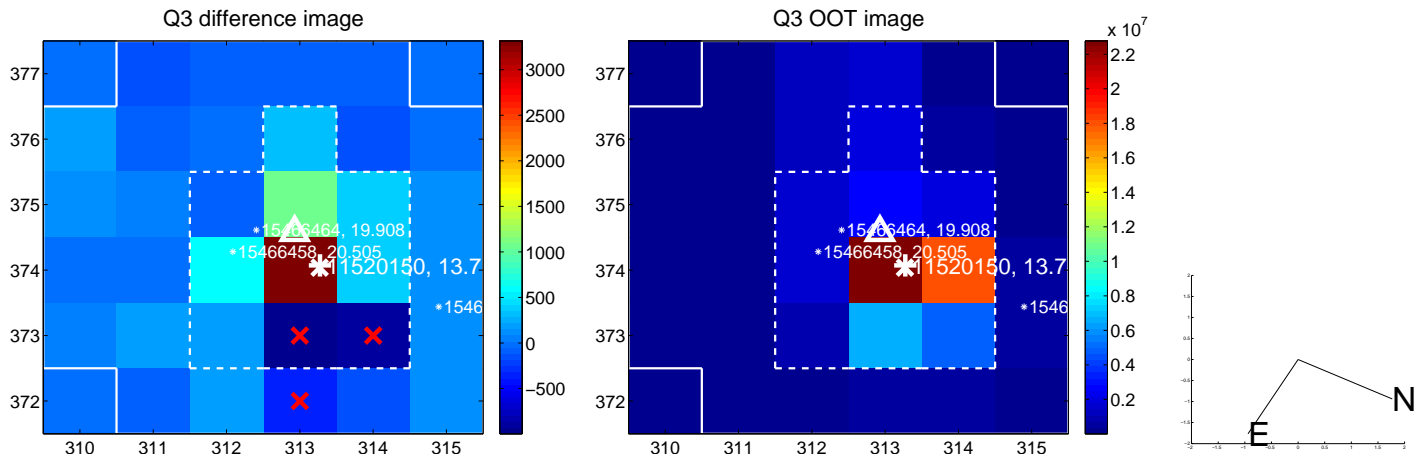
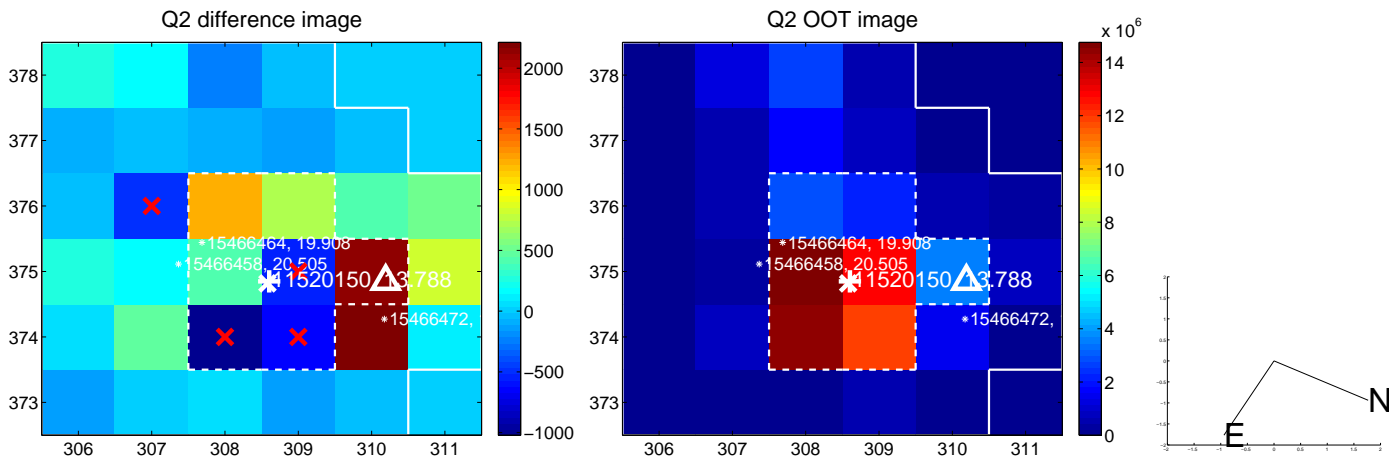
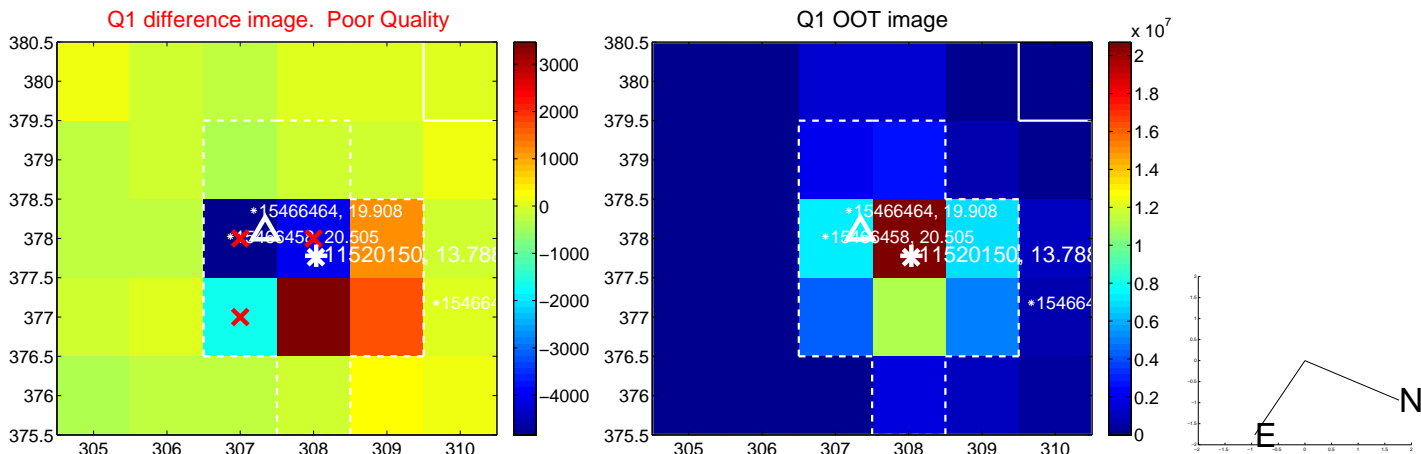
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.066 ± 0.816	1.31	0.220 ± 0.498	1.043 ± 0.860
PRF-fit source offset from KIC position	1.066 ± 0.905	1.18	0.092 ± 0.537	1.062 ± 0.918
photometric centroid source offset	0.63 ± 0.66	0.96	0.53 ± 0.66	0.36 ± 0.67

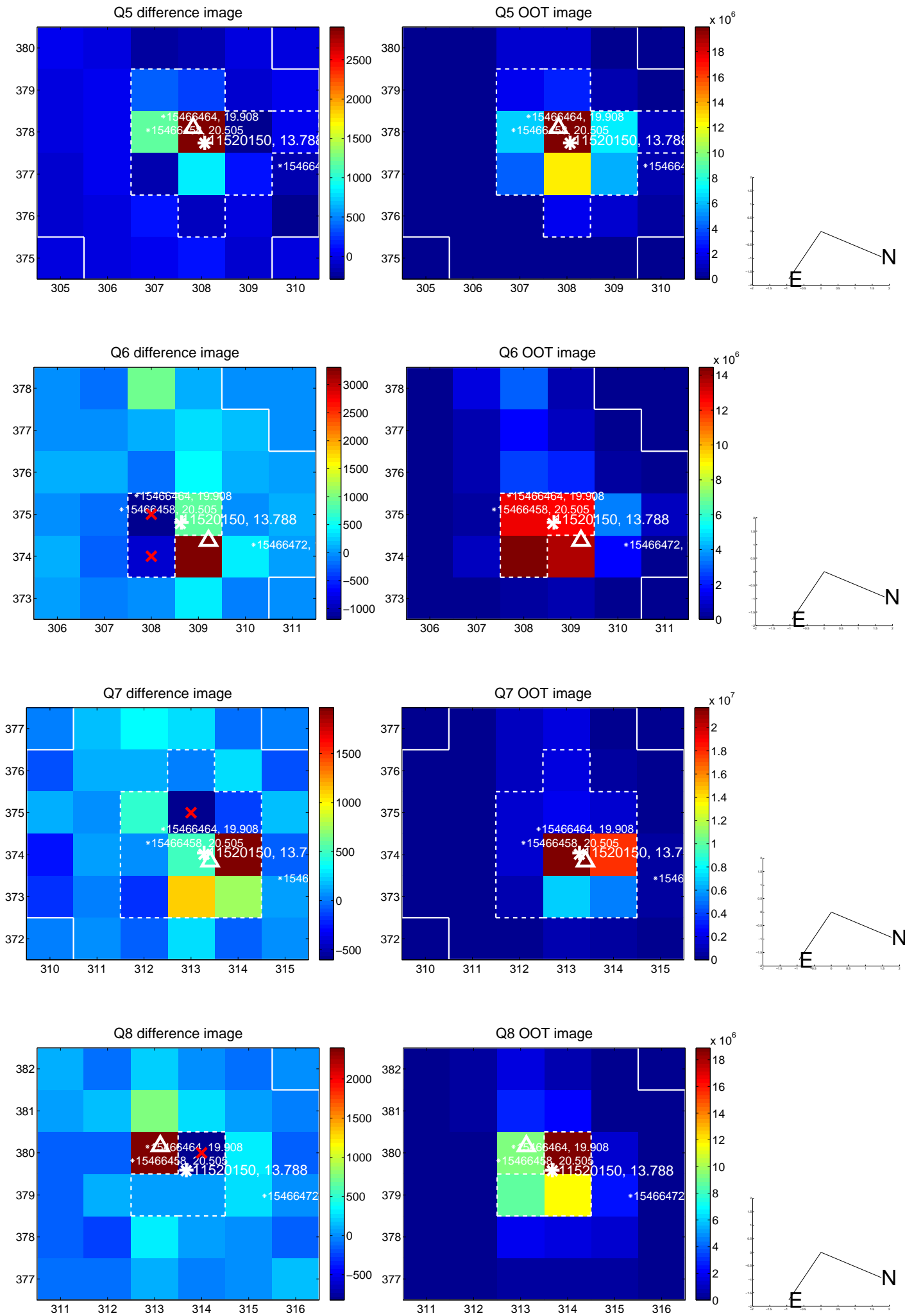


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

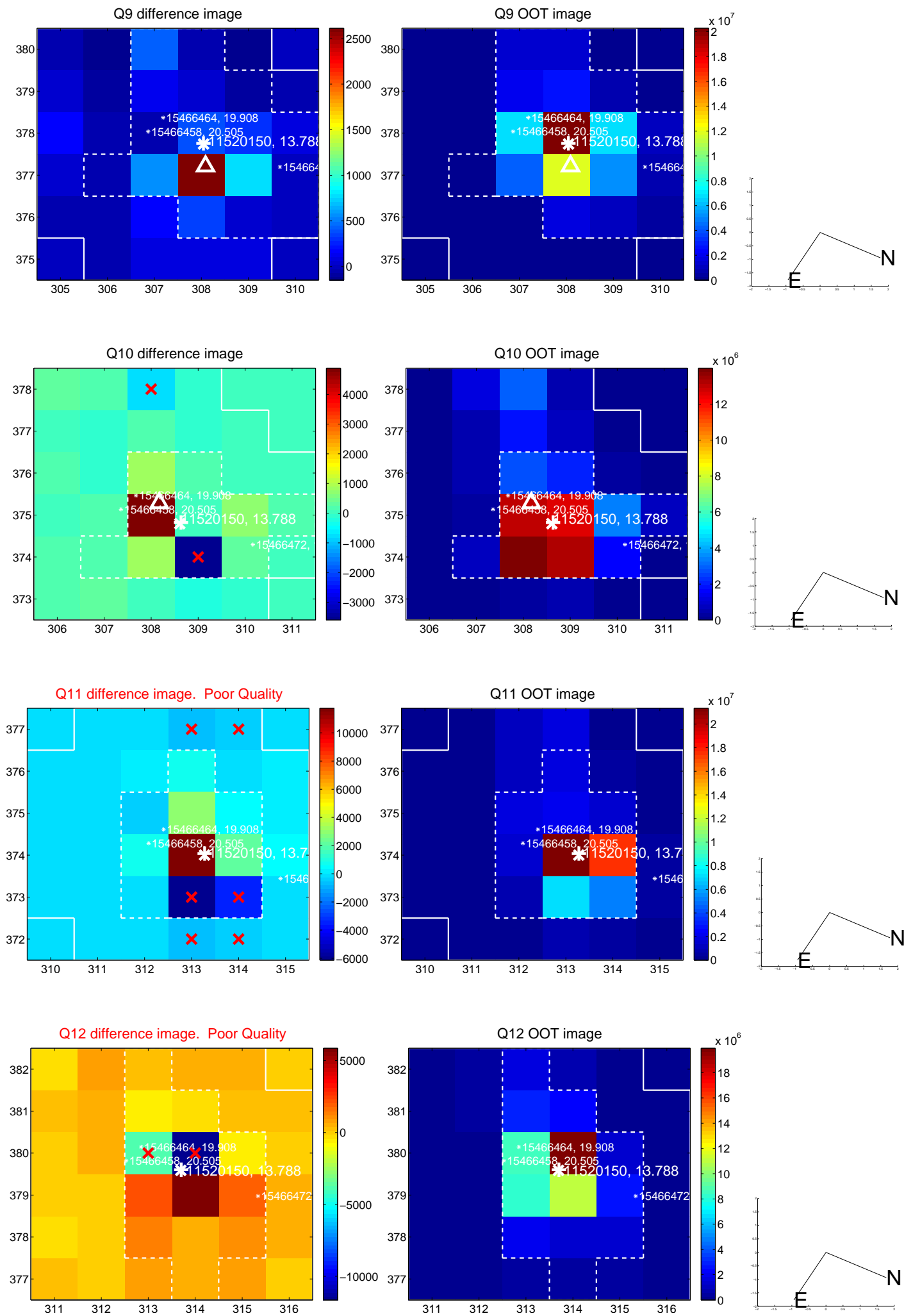
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



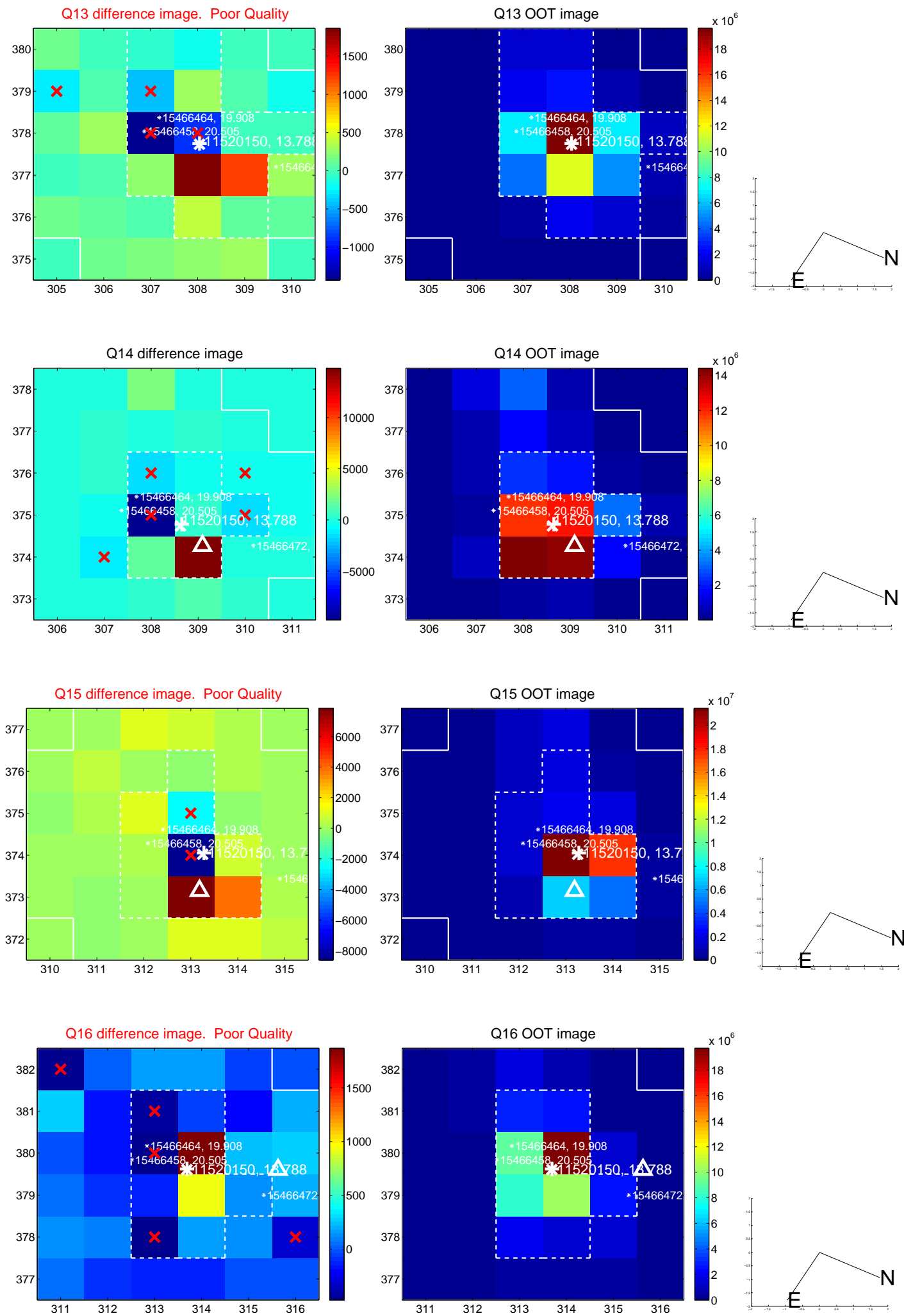
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



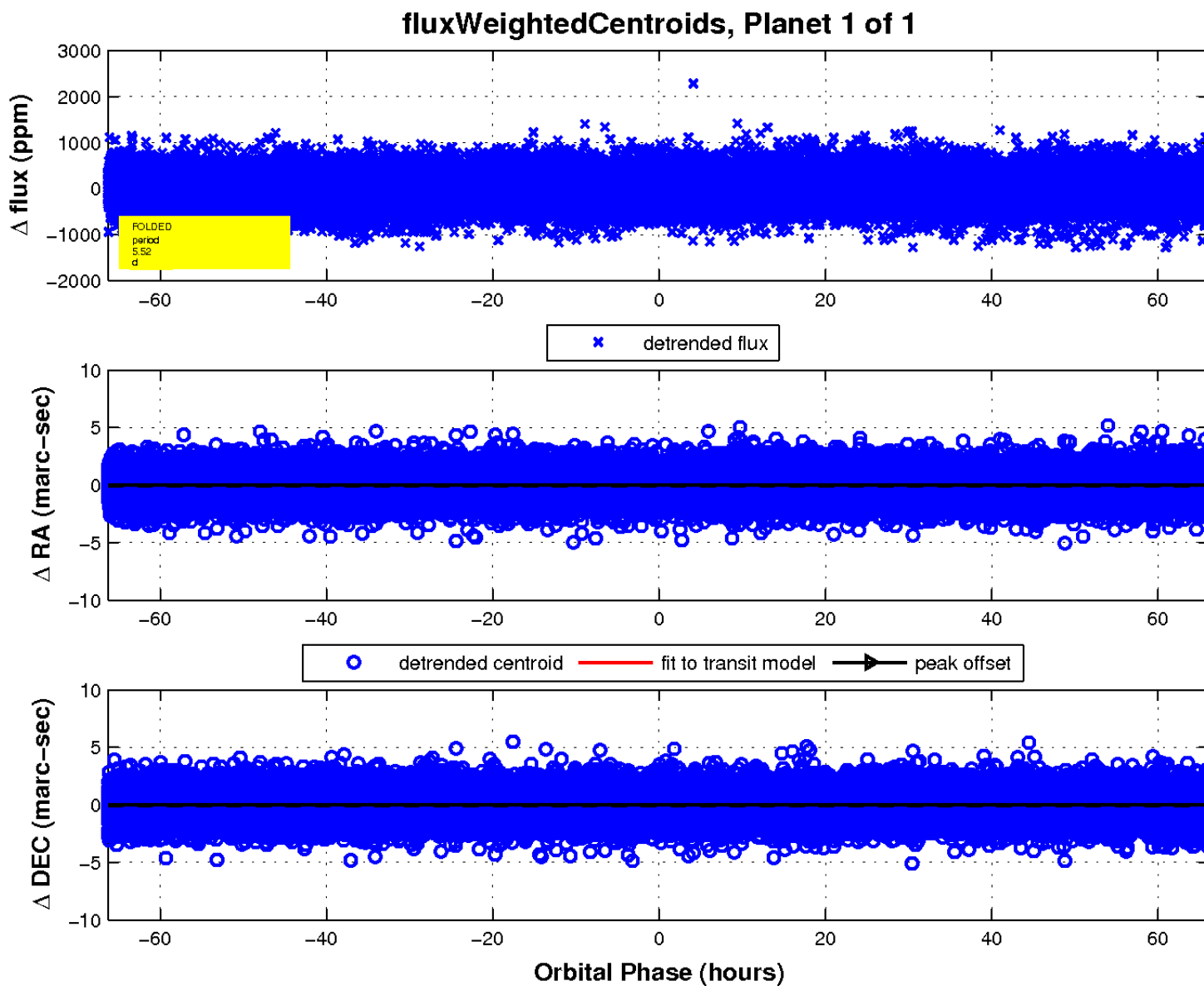
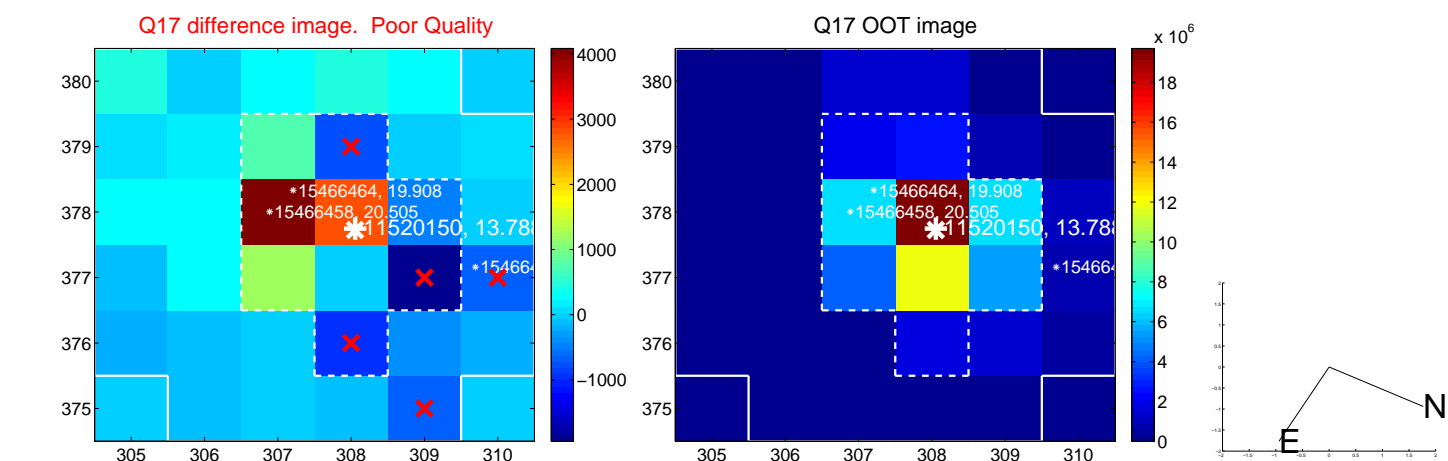
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

