

KIC 002577353

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})
002577353-01	OBS	7635.01	60.458204	136.361159	162.6	8.639	8.2	8.4	1.18	5865	1.72	16.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002577353-01	OBS	PC	0.87	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.

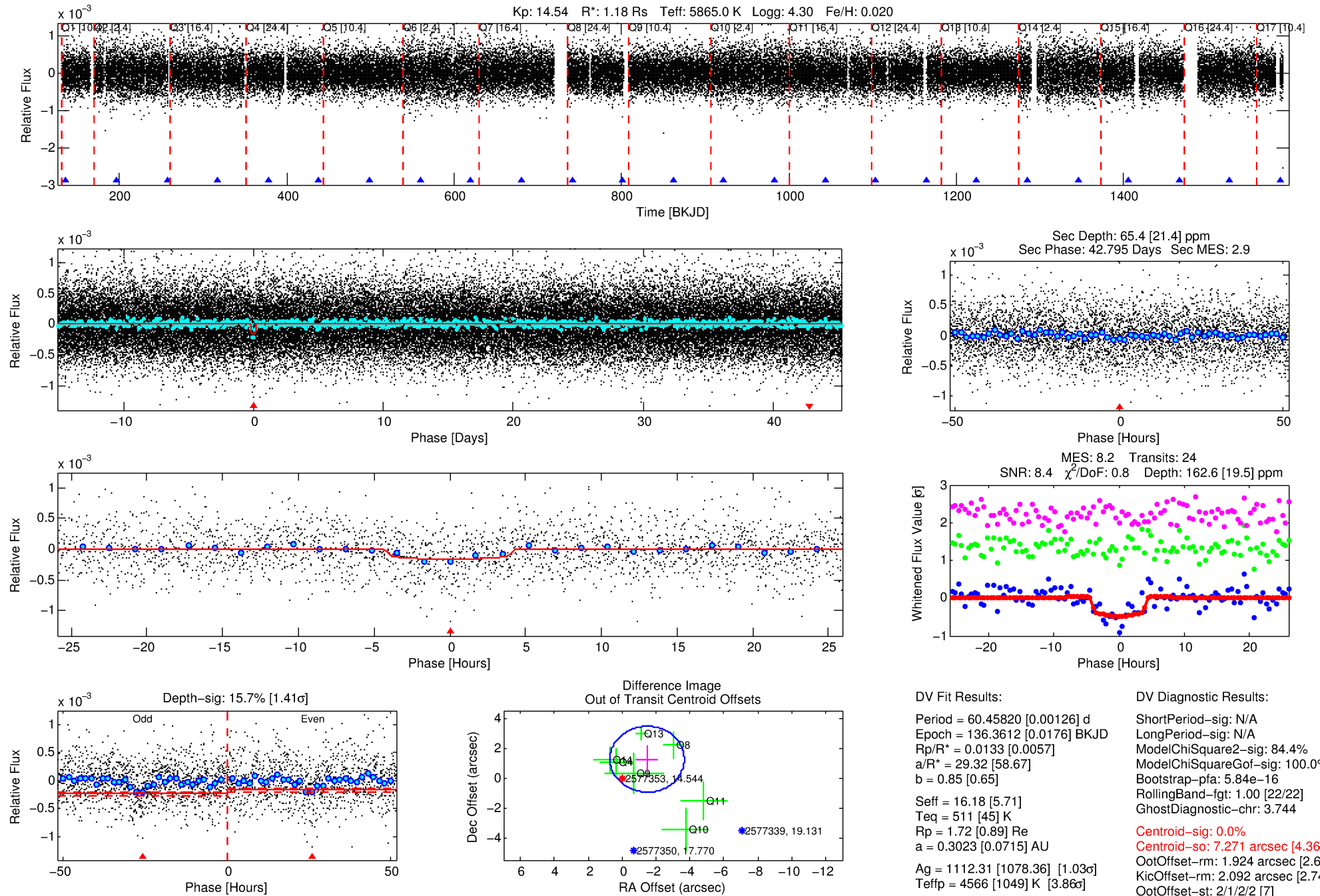
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002577353-01

No Significant Match Found

DV One-Page Summary

KIC: 2577353 Candidate: 1 of 1 Period: 60.458 d



DV Fit Results:

Period = 60.45820 [0.00126] d
Epoch = 136.3612 [0.0176] BKJD
Rp/R* = 0.0133 [0.0057]
a/R* = 29.32 [58.67]
b = 0.85 [0.65]
Seff = 16.18 [5.71]
Teff = 511 [45] K
Rp = 1.72 [0.89] Re
a = 0.3023 [0.0715] AU
Ag = 1112.31 [1078.36] [1.03 σ]
Teffp = 4566 [1049] K [3.86 σ]

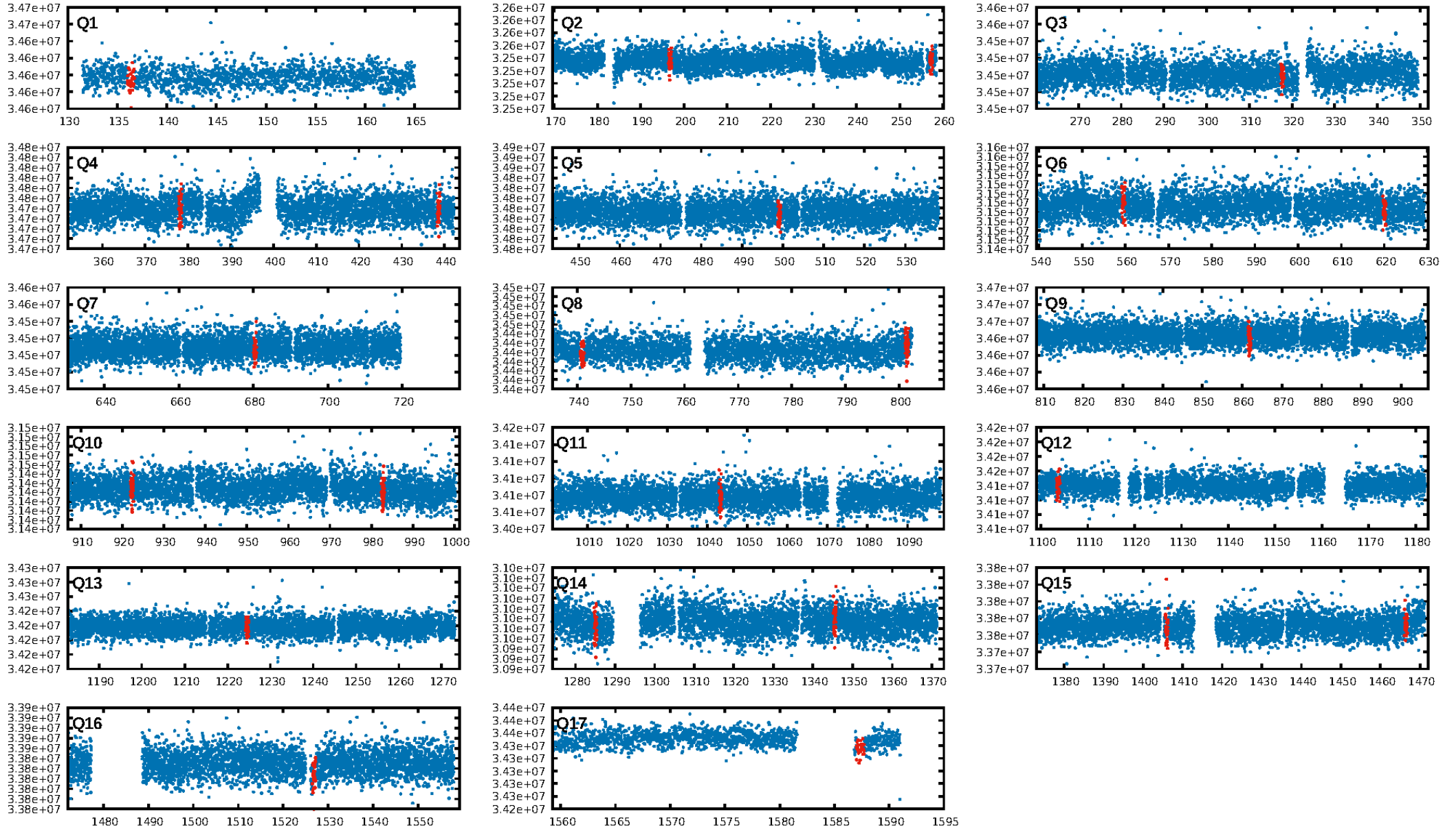
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.84e-16
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: 3.744
Centroid-sig: 0.0%
Centroid-so: 7.271 arcsec [4.36 σ]
OotOffset-rm: 1.924 arcsec [2.62 σ]
KicOffset-rm: 2.092 arcsec [2.74 σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-st: 2/1/2/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [14/14]

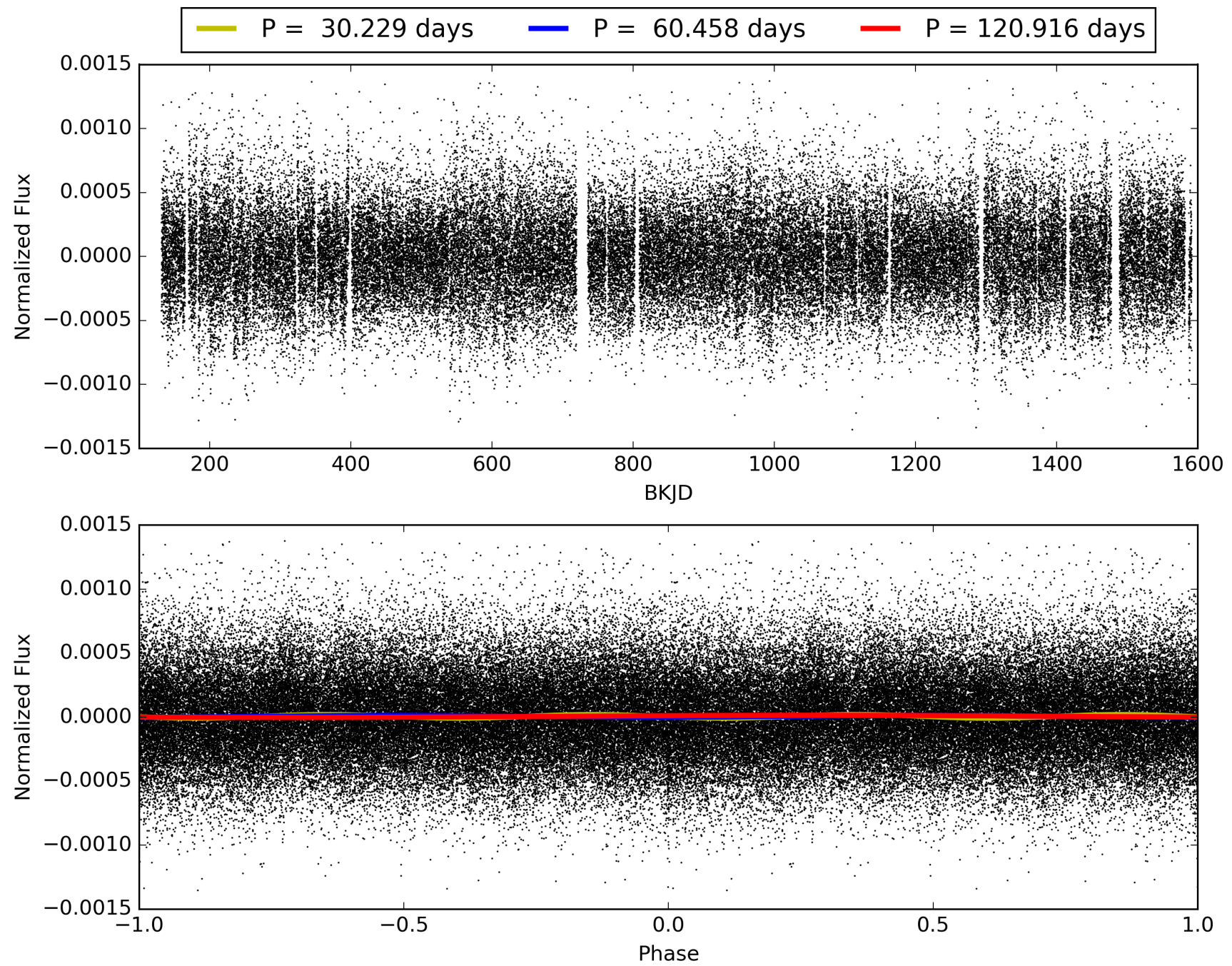
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:05:31 Z

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

TCE 002577353-01, PDC Light Curves

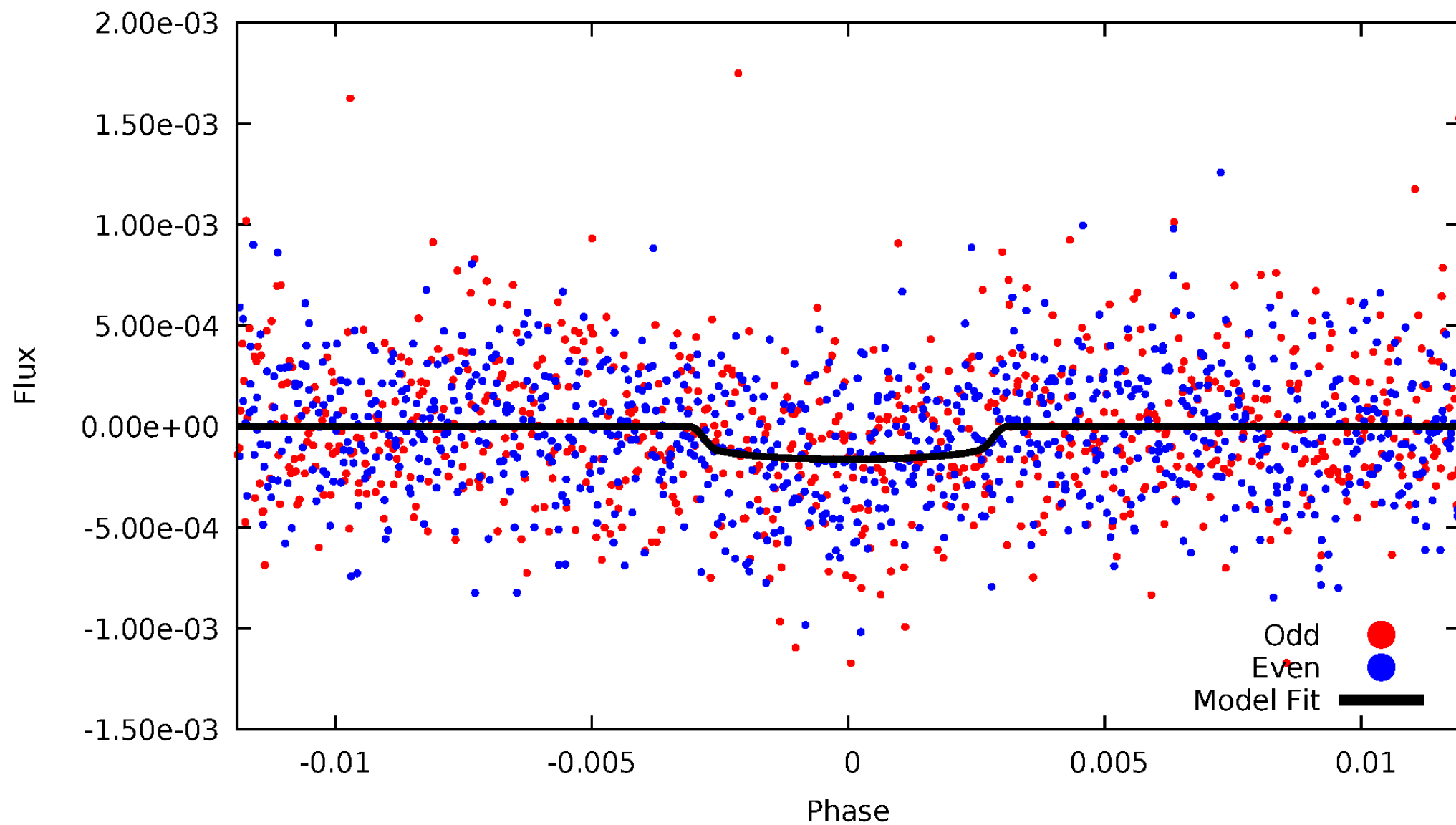


TCE 002577353-01



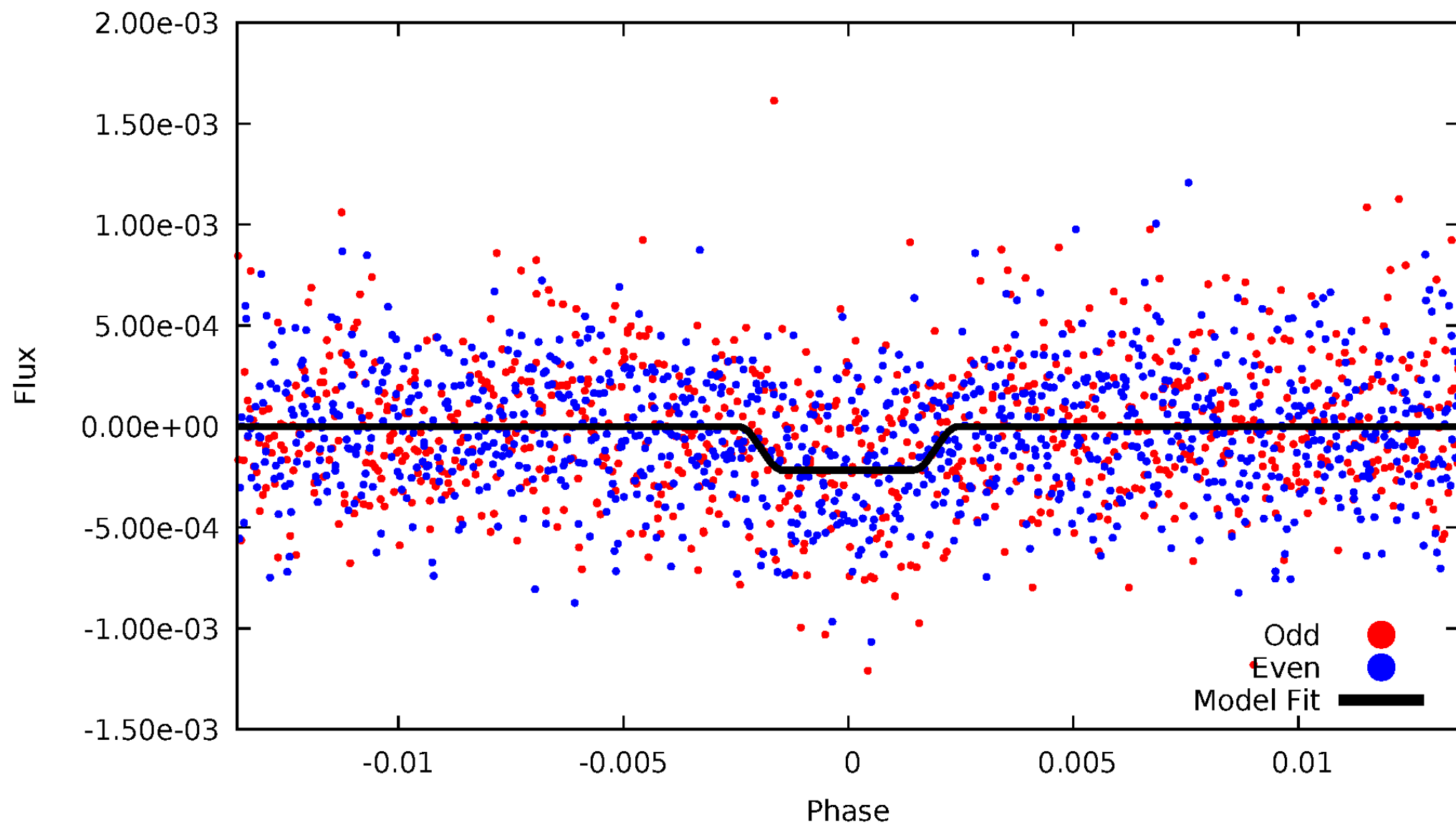
DV Odd/Even

TCE 002577353-01



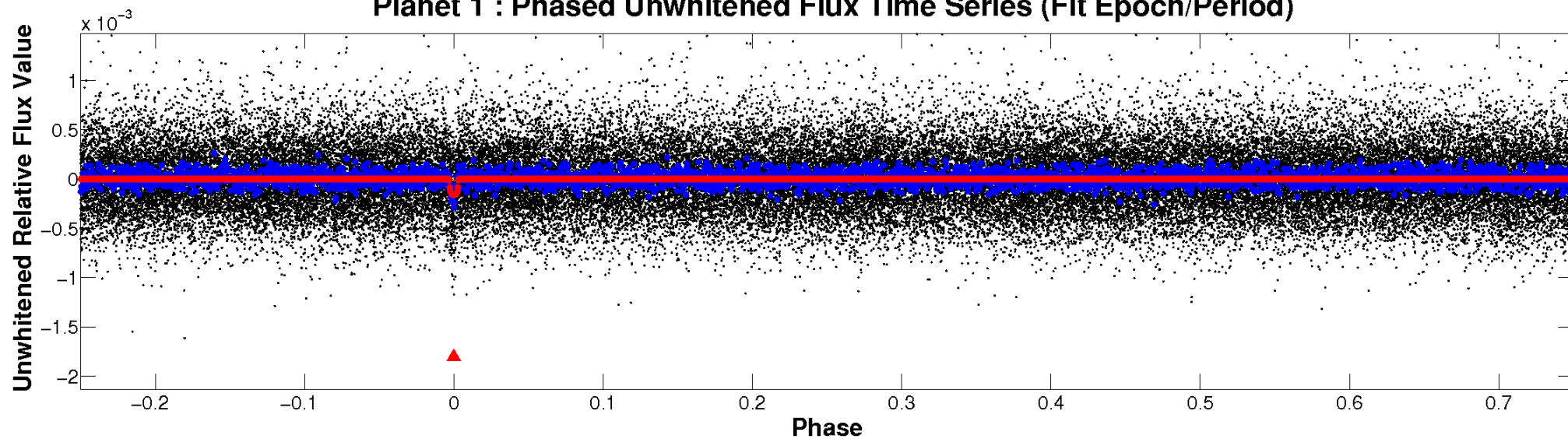
ALT Odd/Even

TCE 002577353-01

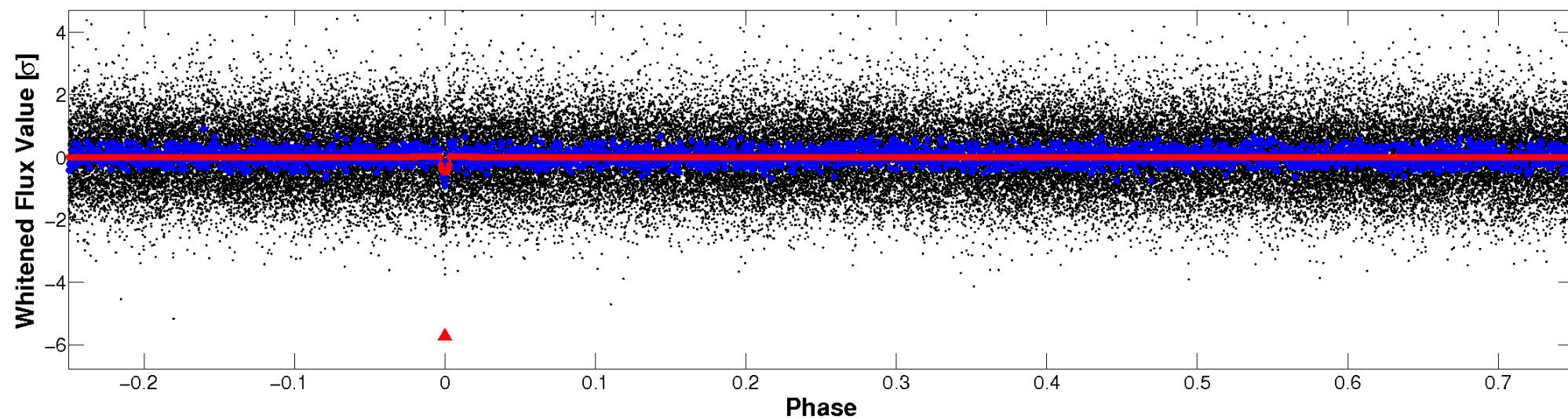


Non-Whitened Vs. Whitened Light Curve

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

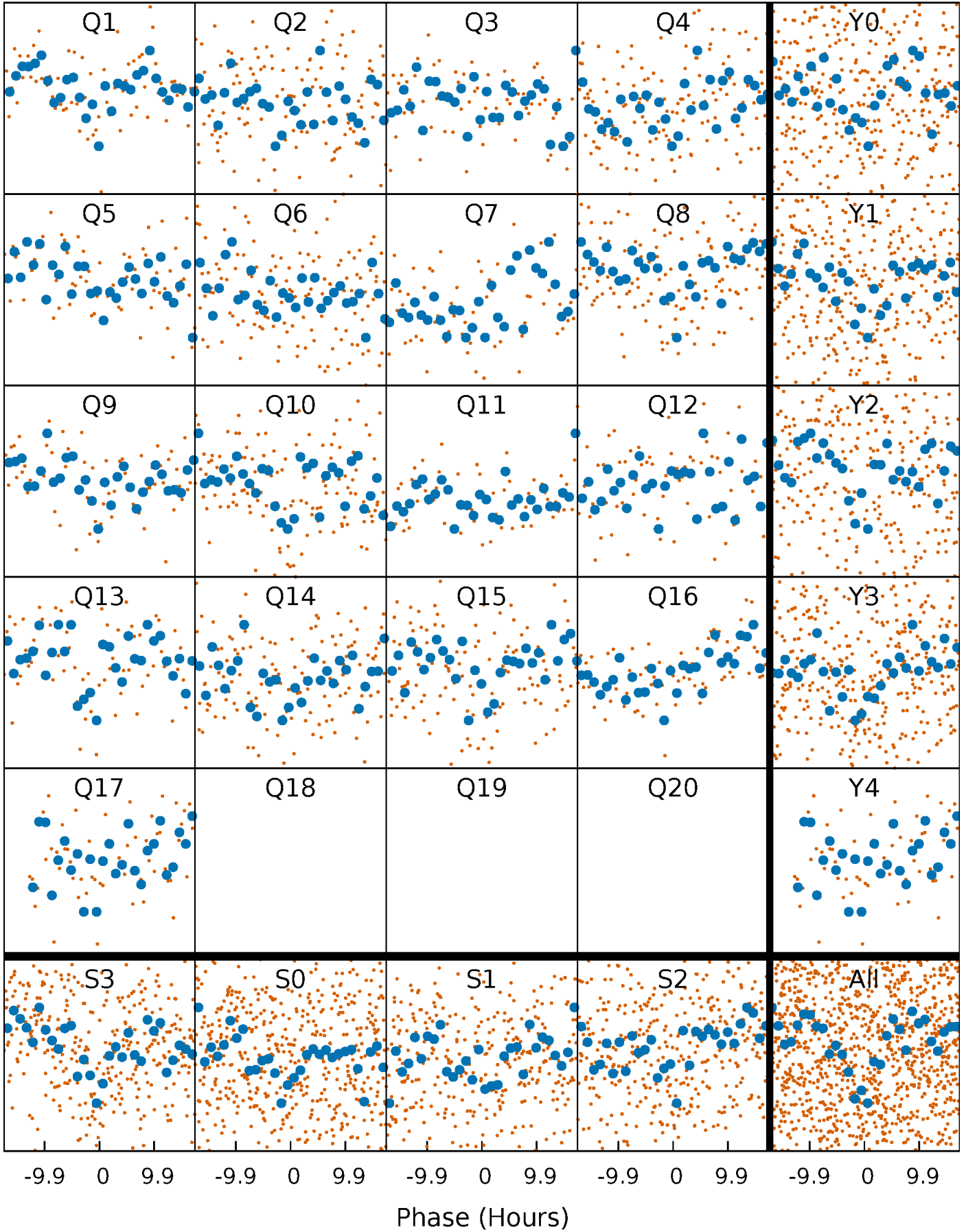


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



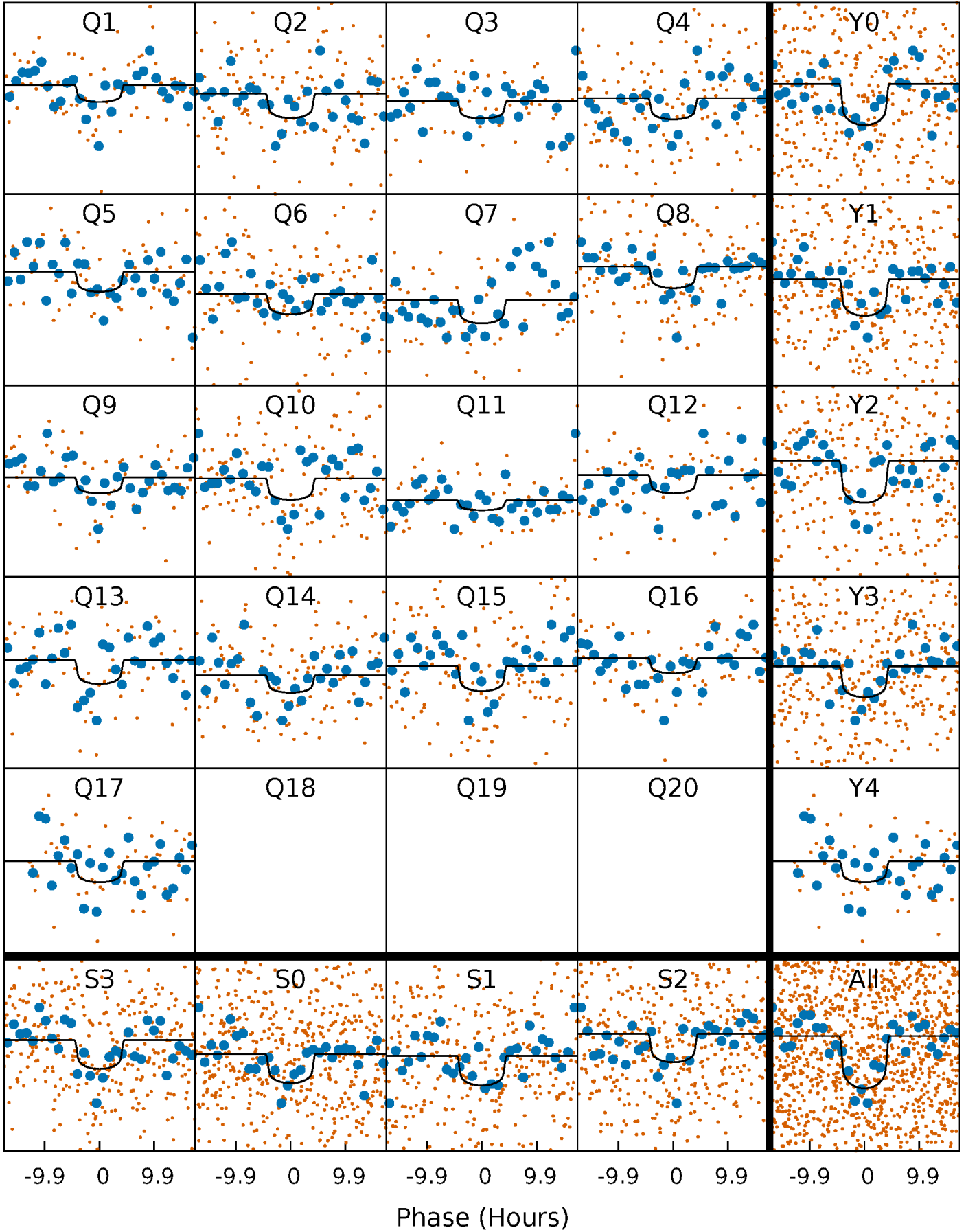
PDC Quarter-Phased Transit Curves

TCE 002577353-01 P= 60.458204 Days $T_0=136.361159$ (BKJD)



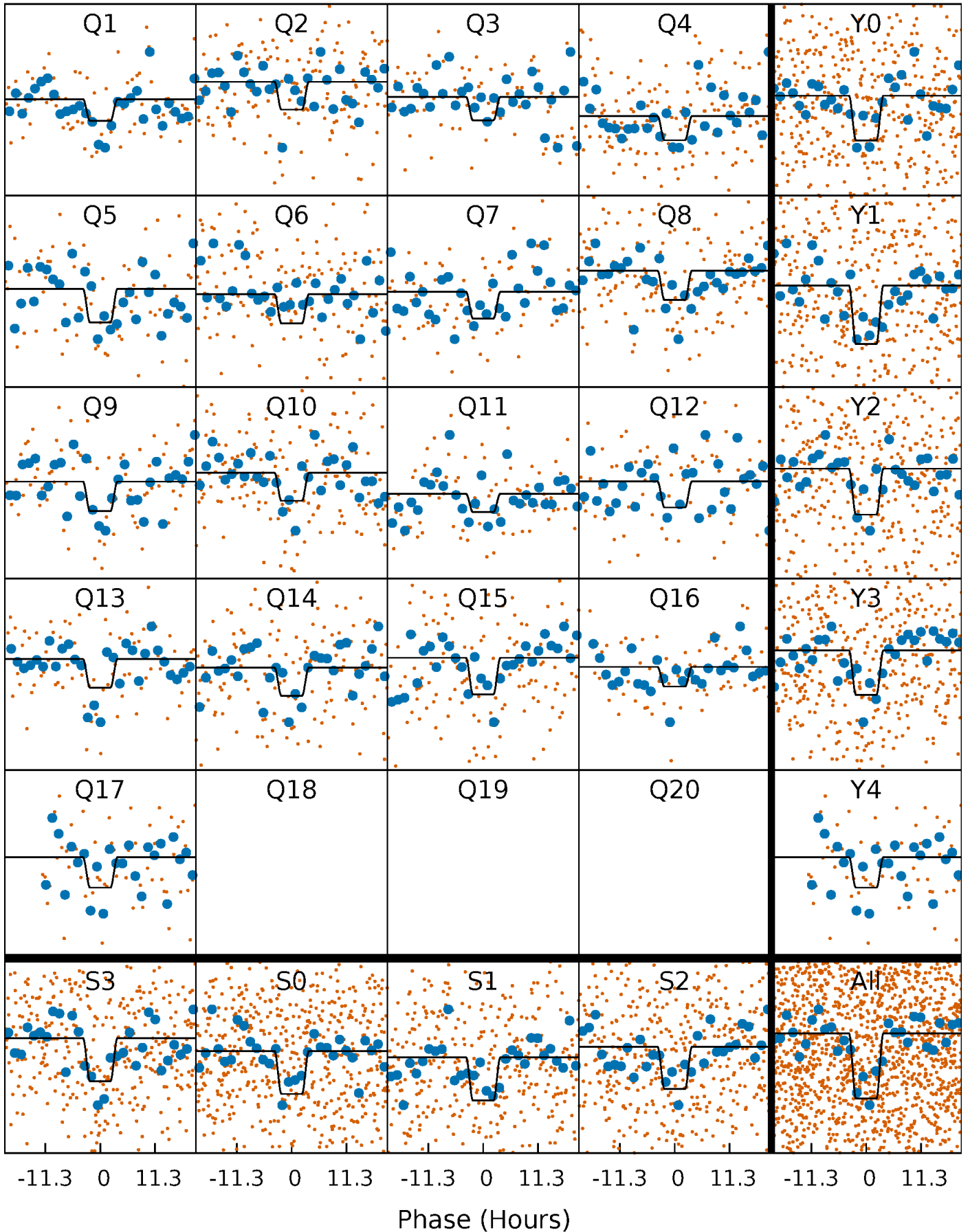
DV Quarter-Phased Transit Curves

TCE 002577353-01 P= 60.458204 Days $T_0=136.361159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

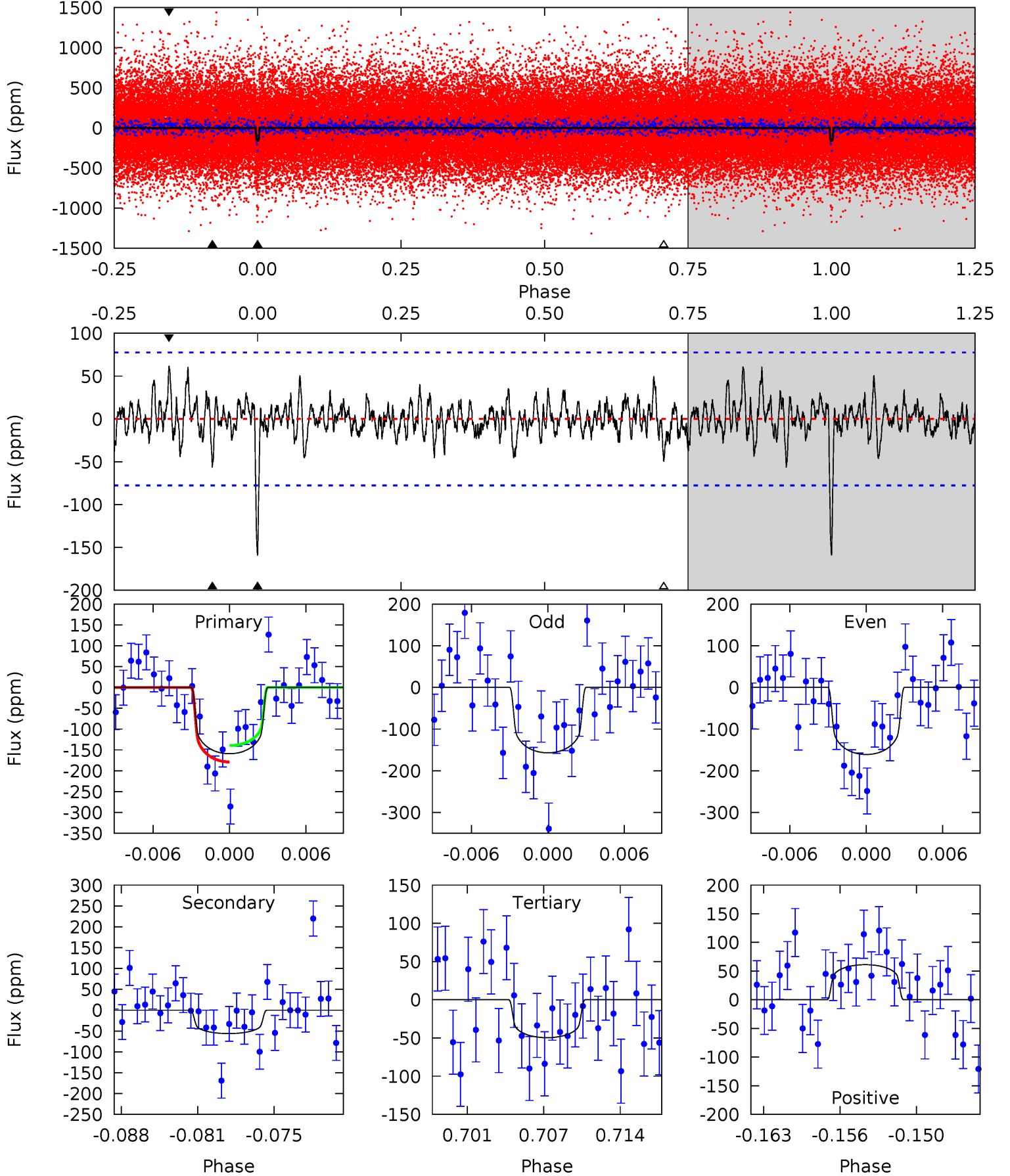
TCE 002577353-01 P= 60.457549 Days $T_0=136.345202$ (BKJD)



DV Model-Shift Uniqueness Test

002577353-01, P = 60.458204 Days, E = 75.902955 Days

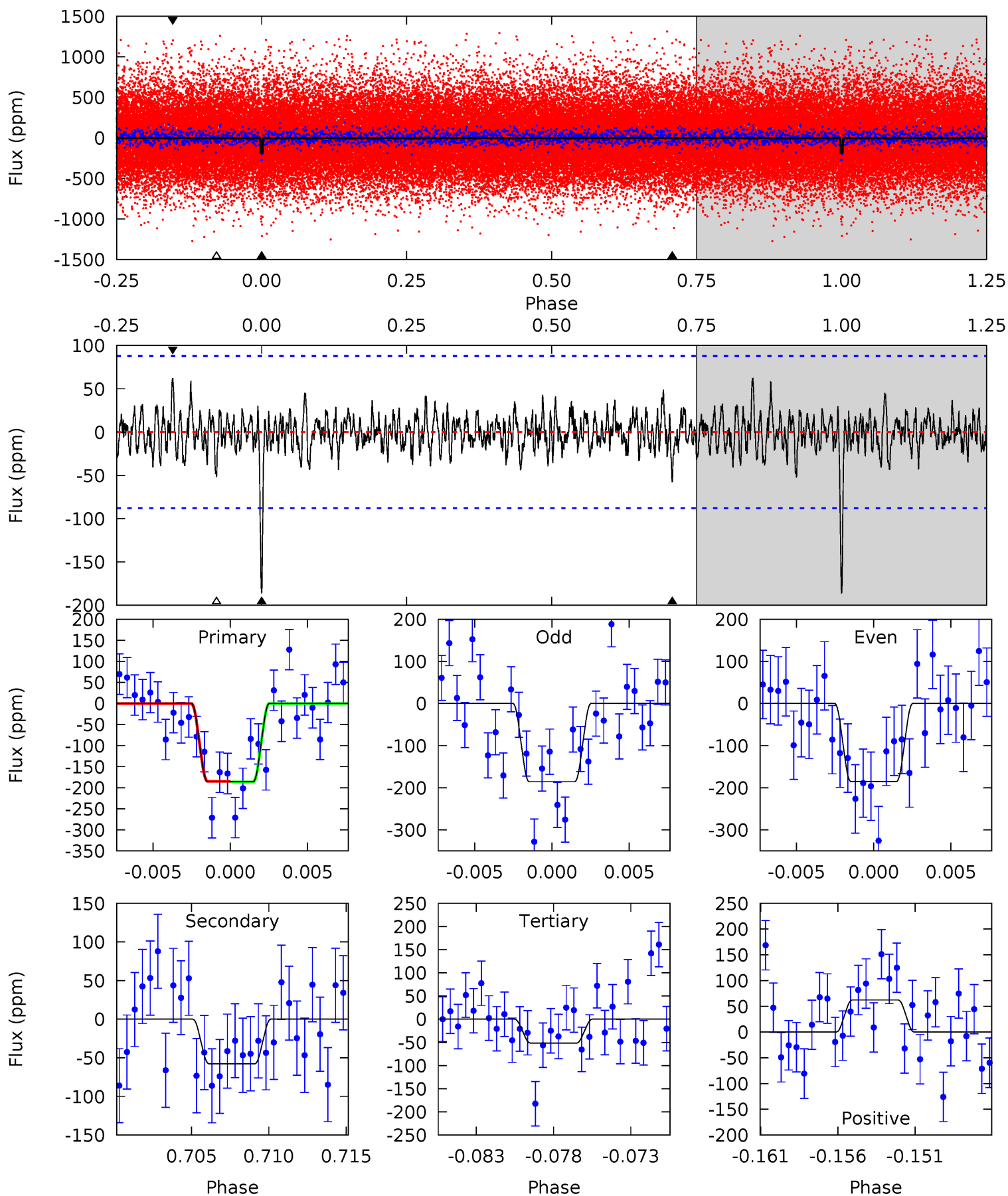
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.70	3.27	4.03	5.12	2.73	1.06	7.21	6.45	0.43	-0.33	0.13	1.00	0.28	1.30



Alt Model-Shift Uniqueness Test

002577353-01, P = 60.457549 Days, E = 75.887653 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	3.40	3.04	3.66	5.16	2.82	0.99	7.86	7.23	0.36	-0.27	0.01	0.97	0.25	0.05



Stellar Parameters For KIC 002577353

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5865^{+158}_{-176}	$4.297^{+0.175}_{-0.175}$	$0.020^{+0.250}_{-0.300}$	$1.181^{+0.345}_{-0.230}$	$1.008^{+0.140}_{-0.115}$	$0.863^{+0.678}_{-0.443}$
	+3%/-3%	+4%/-4%	+1250%/-1500%	+29%/-19%	+14%/-11%	+79%/-51%
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 002577353-01 / KOI 7635.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-56 ± 15	$1.75^{+0.74}_{-0.74}$	714^{+53}_{-43}	4516^{+1252}_{-585}	900^{+2016}_{-495}
Alt.	-58 ± 17	$1.94^{+0.78}_{-0.78}$	712^{+51}_{-49}	4378^{+979}_{-546}	769^{+1544}_{-406}

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 $A_{obs} \gg 1.0$

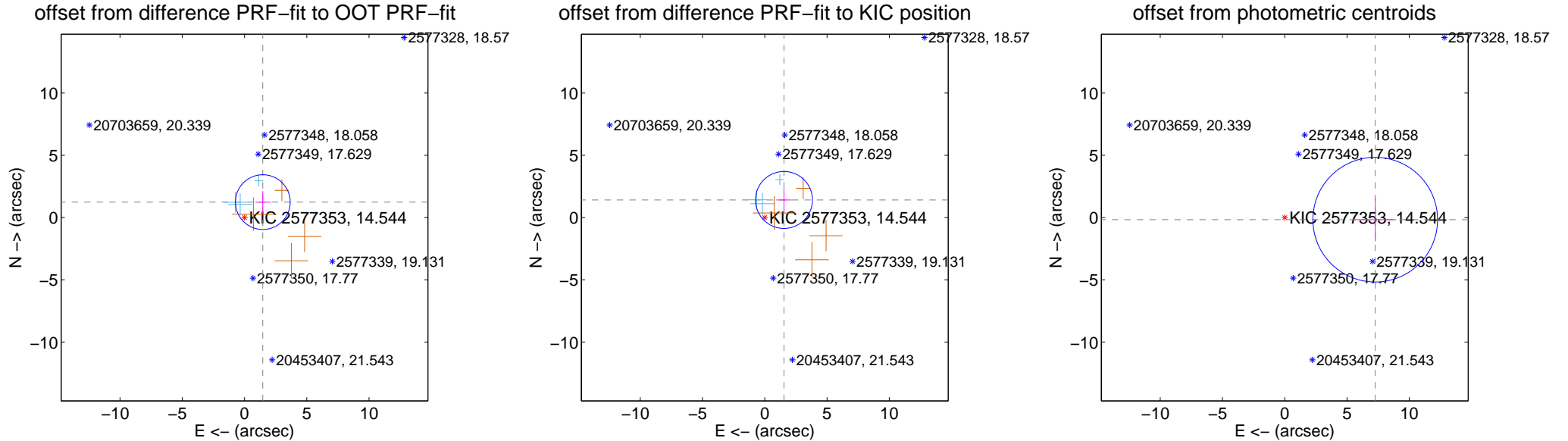
DV Centroid Data

Supplemental centroid analysis for 002577353-01. Kepler magnitude: 14.54. Transit SNR 8.36

There are 3 quarters with good PRF difference image offsets

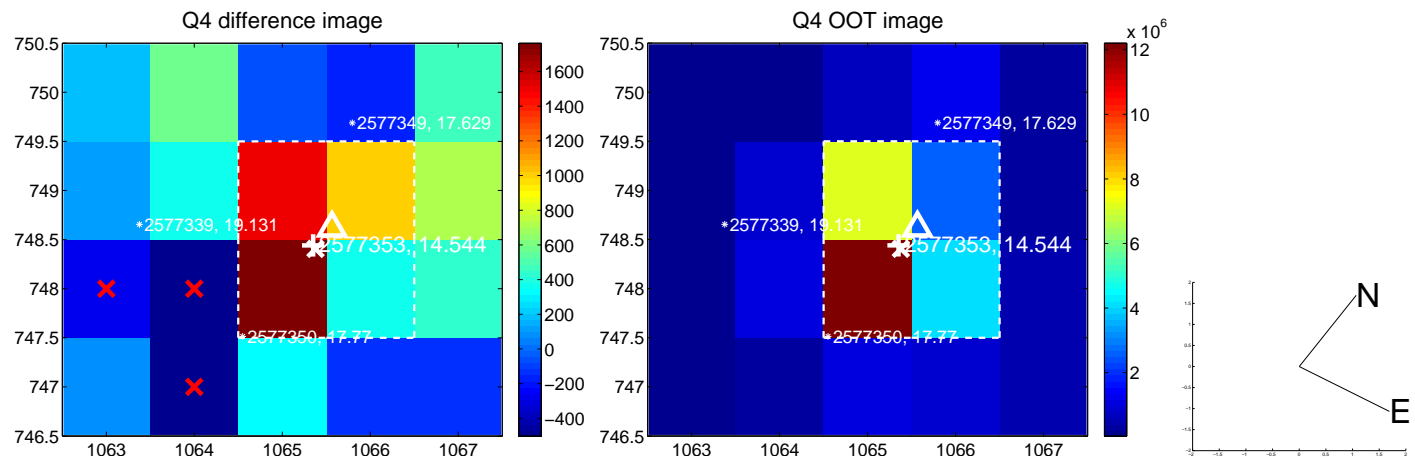
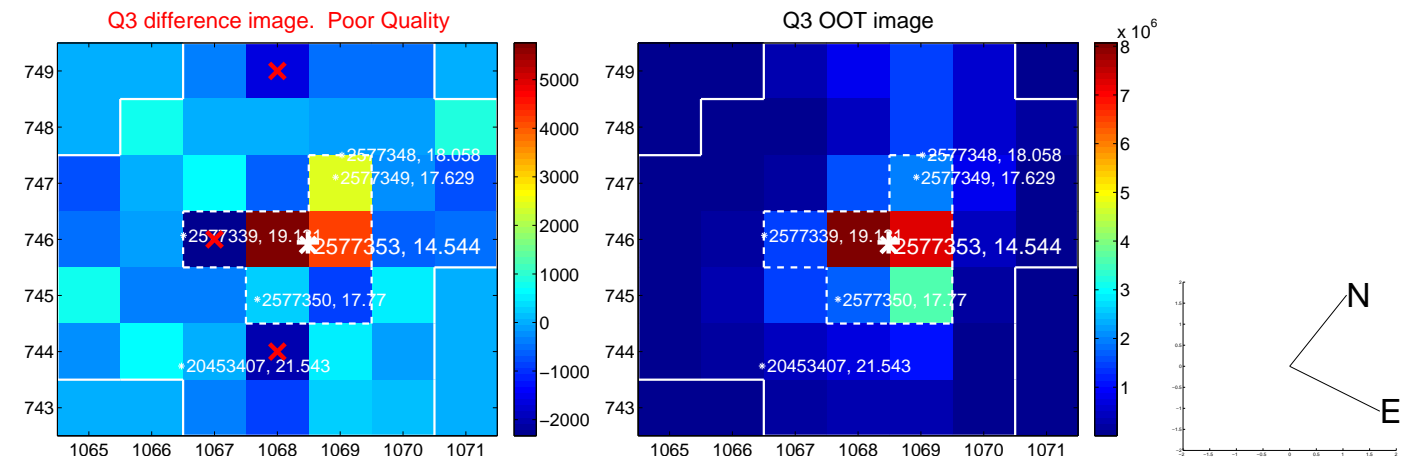
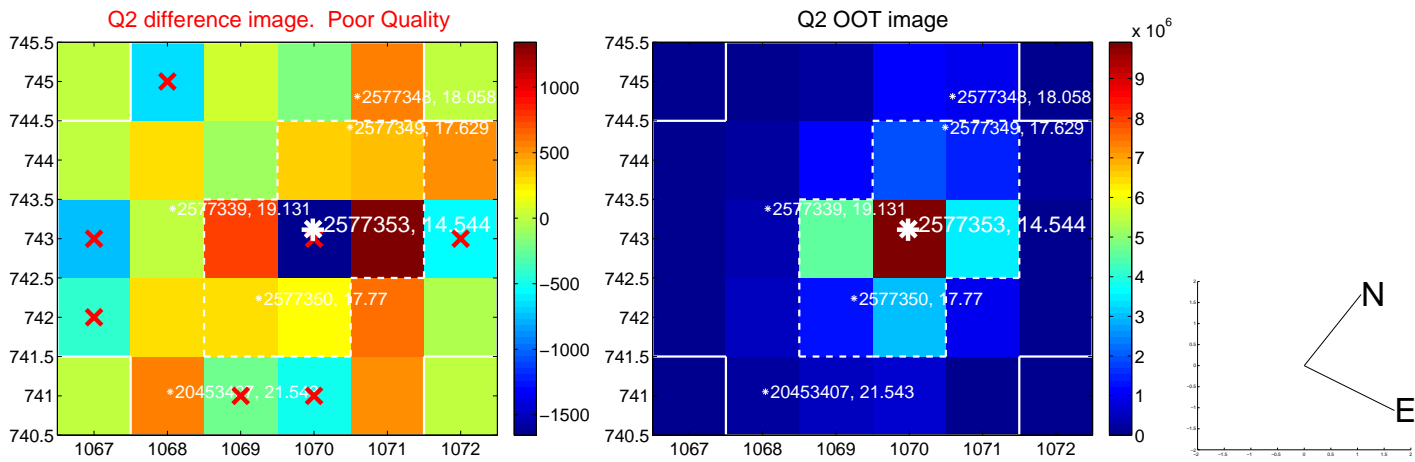
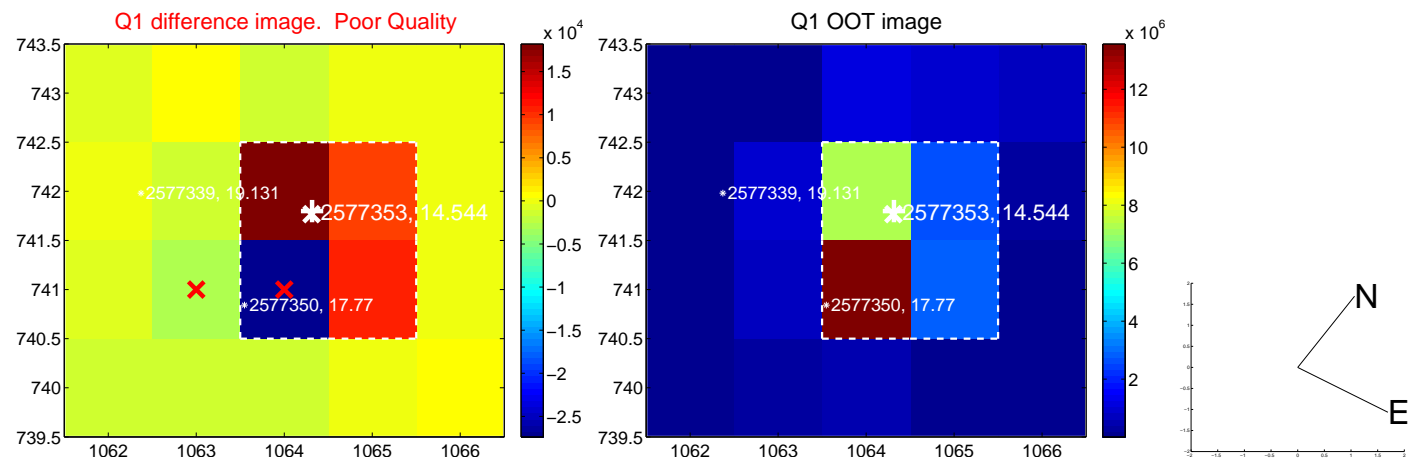
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.924 ± 0.733	2.62	-1.471 ± 0.611	1.240 ± 0.877
PRF-fit source offset from KIC position	2.092 ± 0.763	2.74	-1.542 ± 0.615	1.413 ± 0.907
photometric centroid source offset	7.27 ± 1.67	4.36	-7.27 ± 1.67	-0.17 ± 1.74

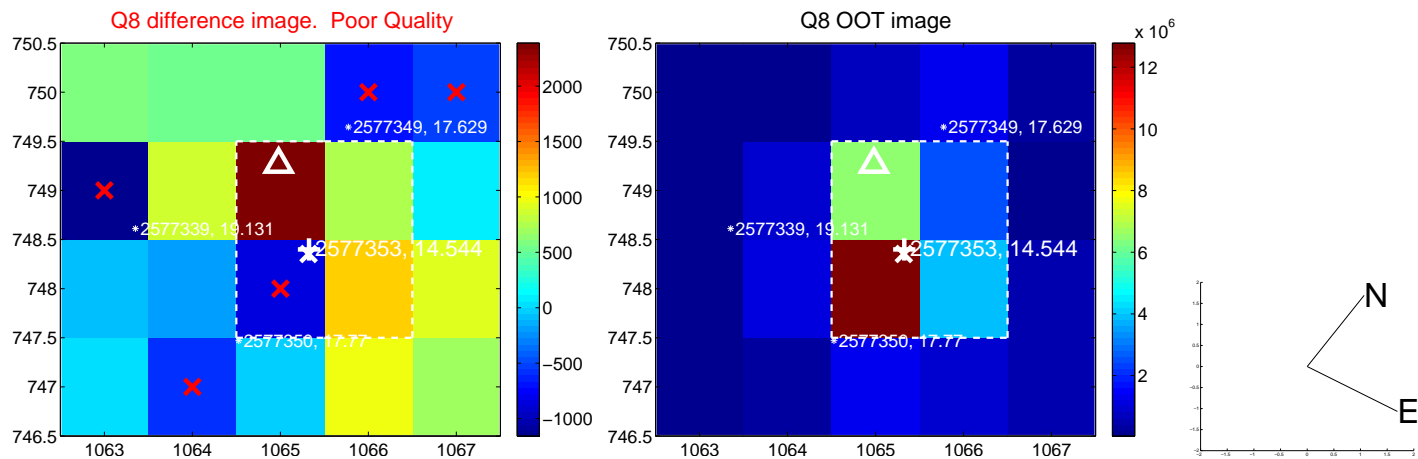
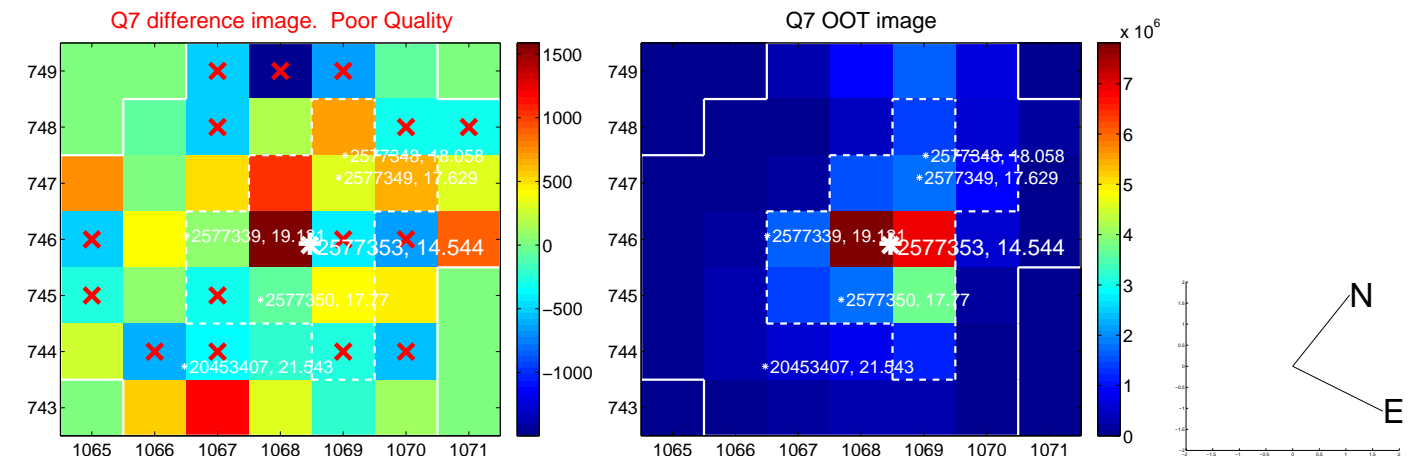
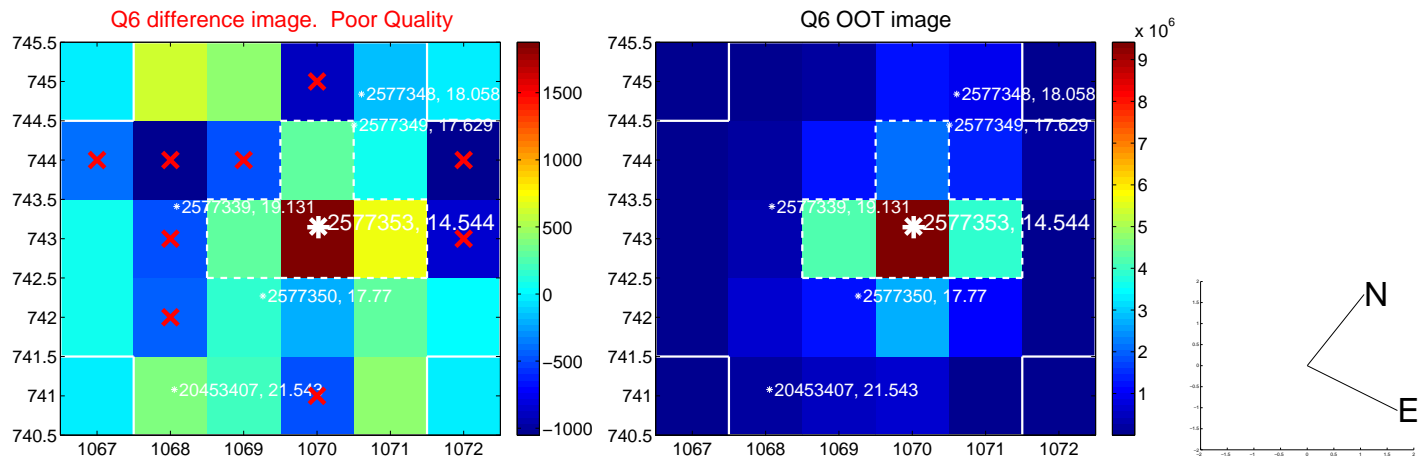
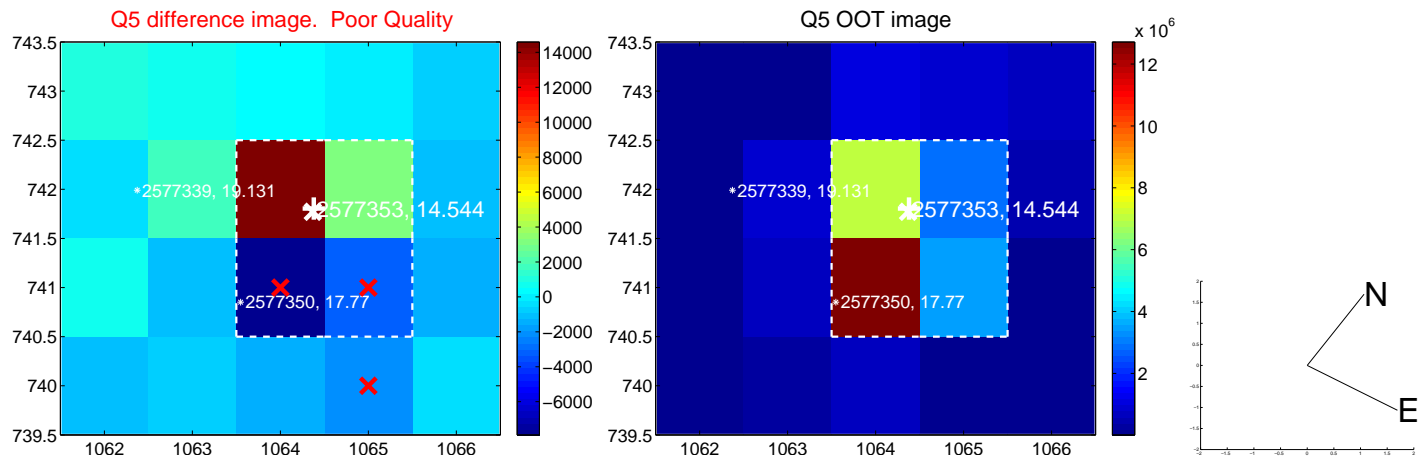


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

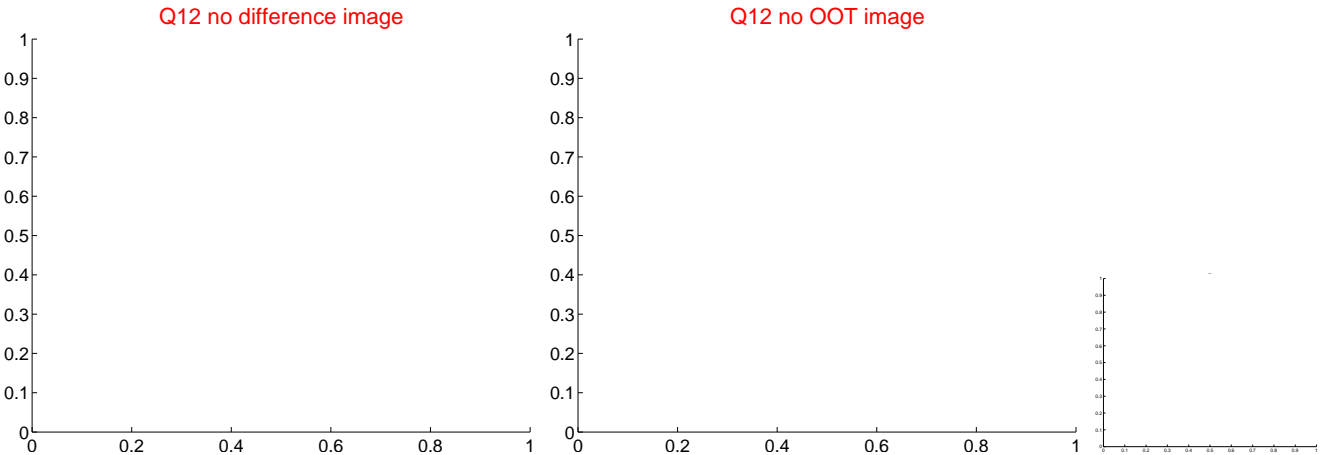
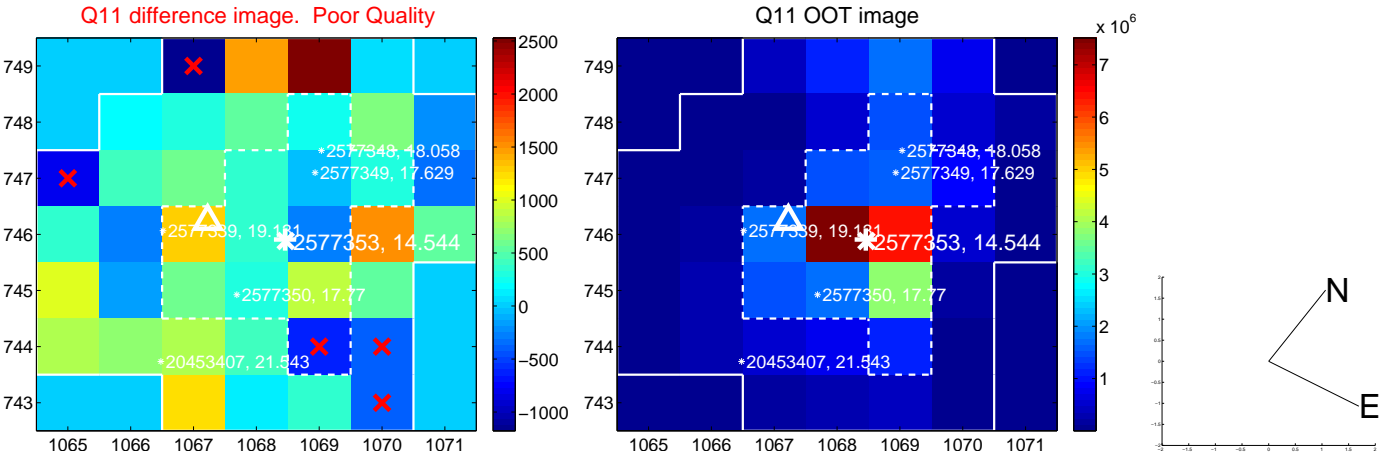
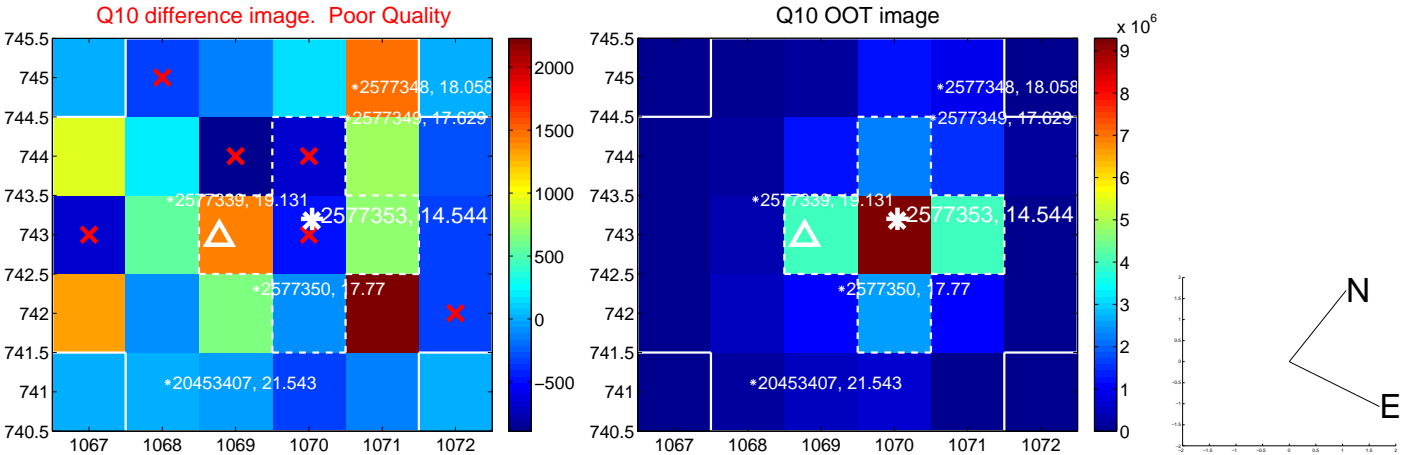
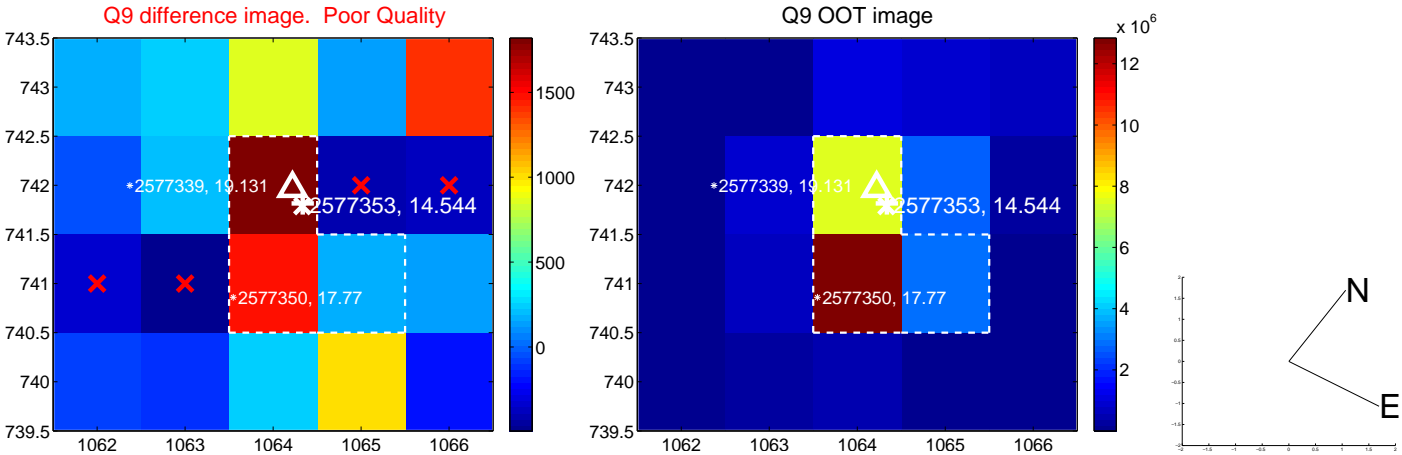
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



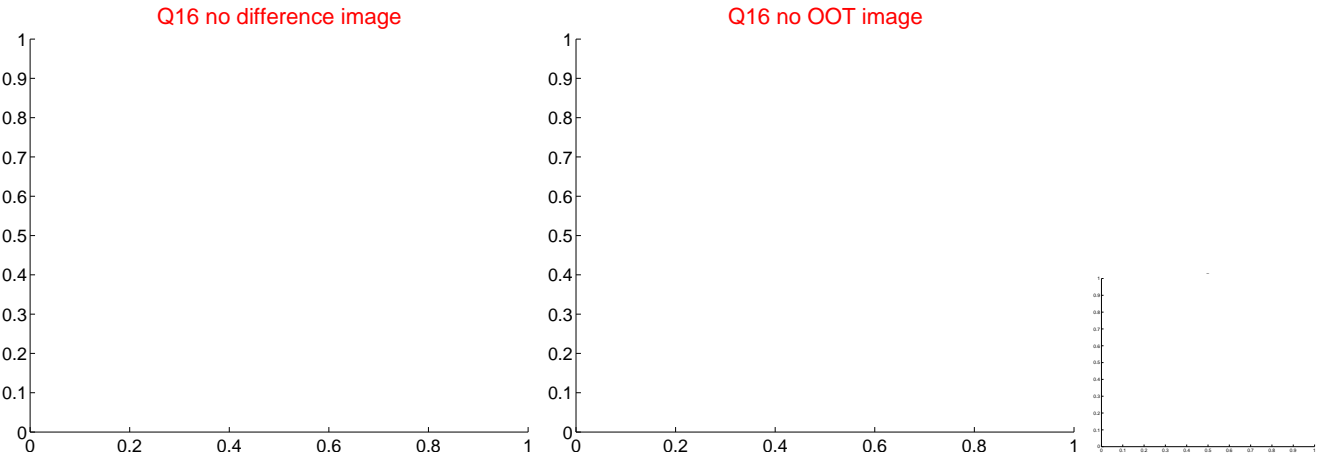
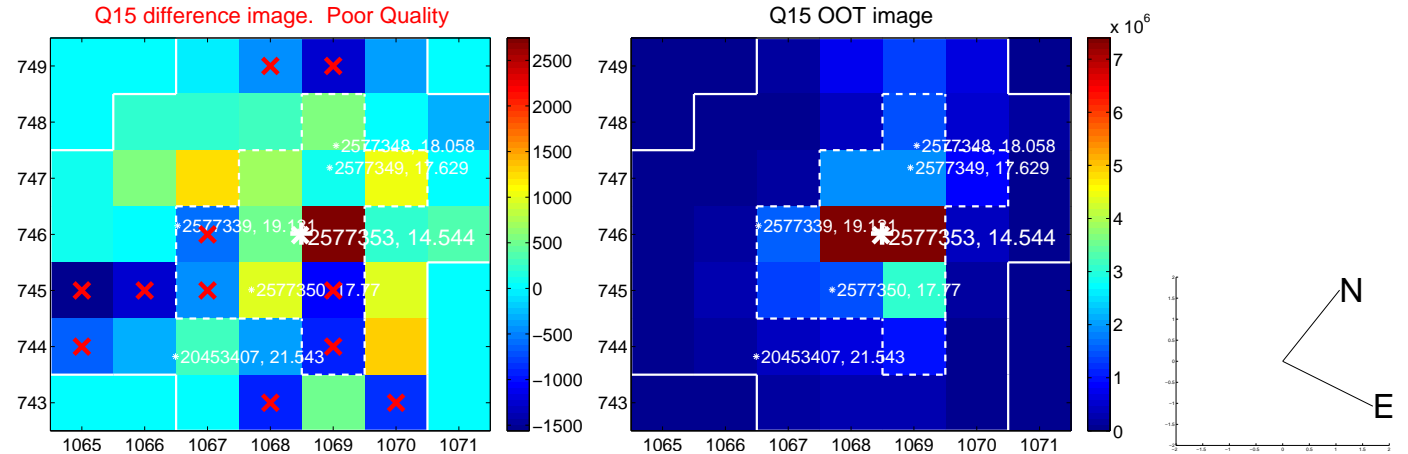
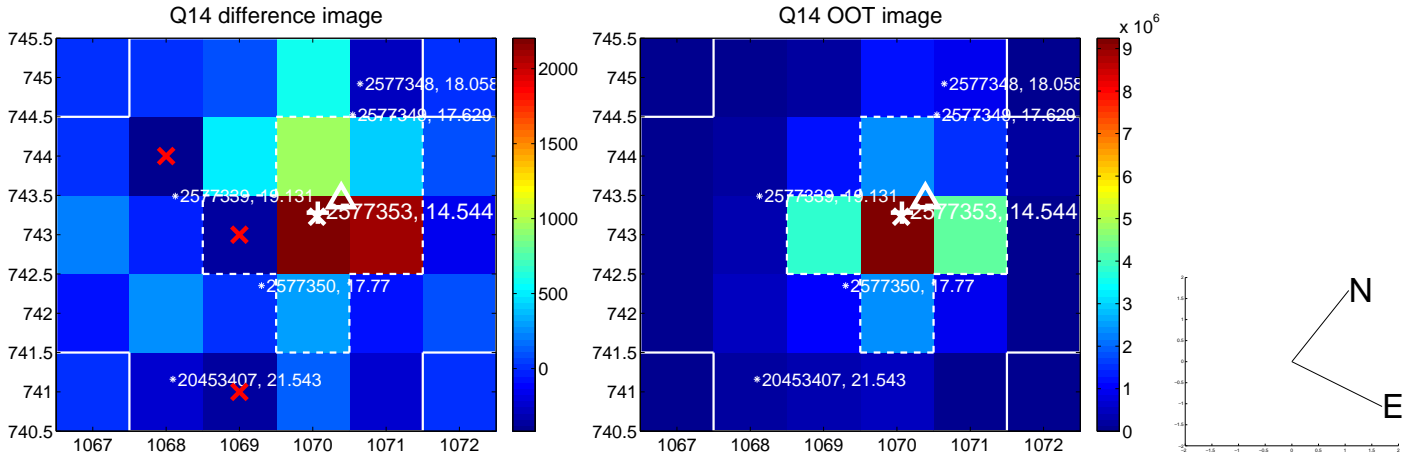
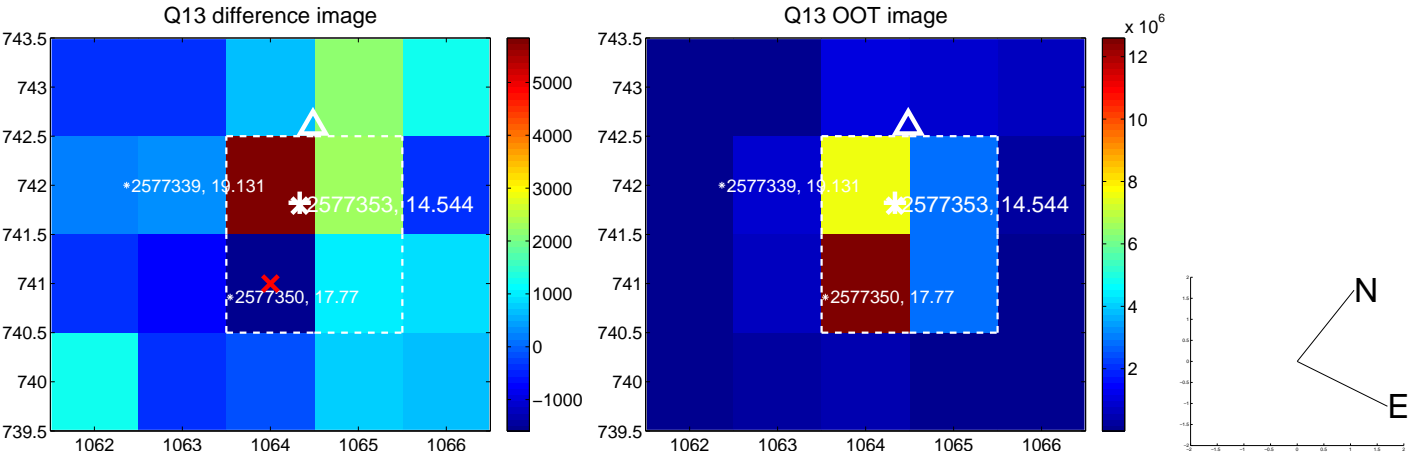
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



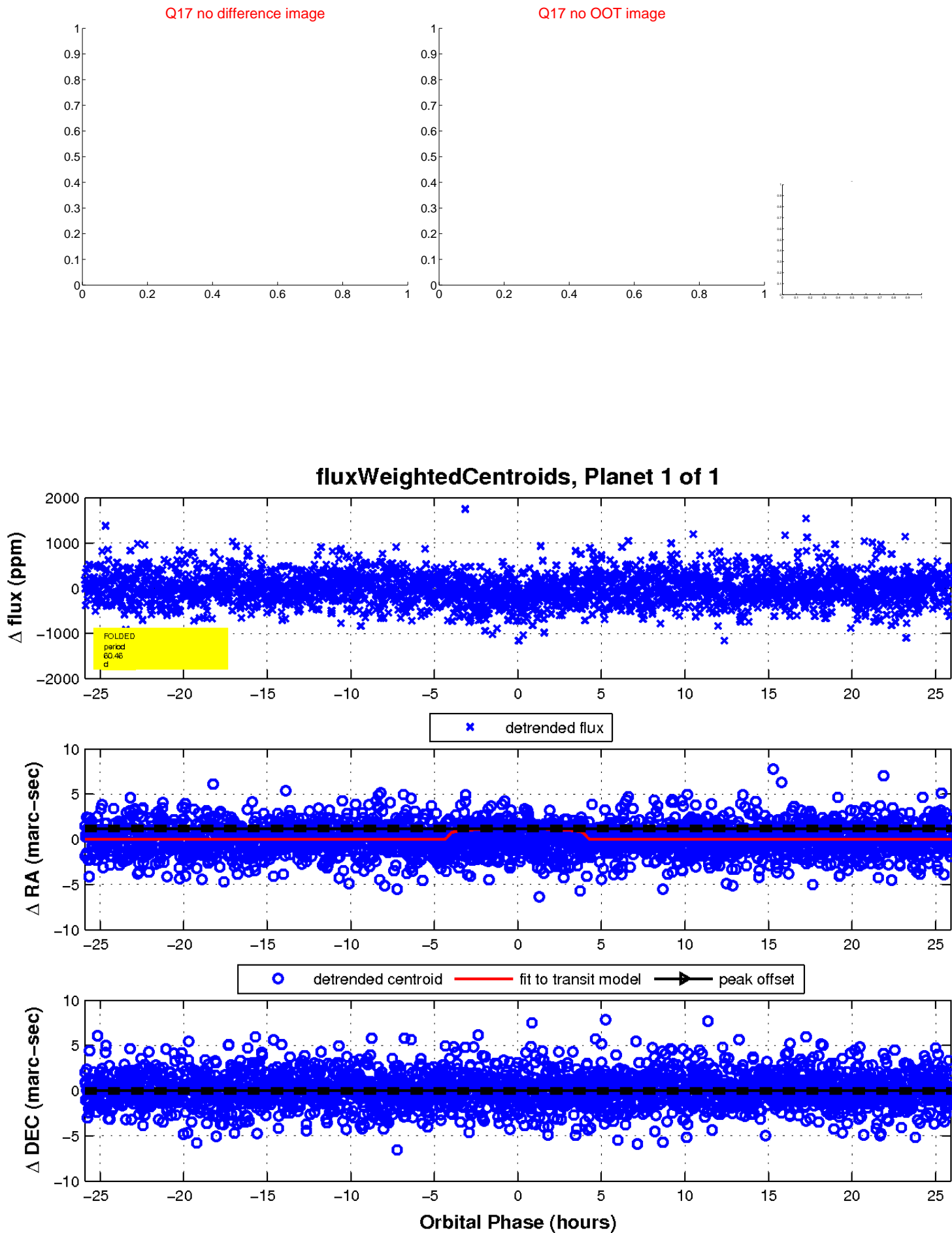
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

