

KIC 006515439

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})
006515439-01	OBS	No	300.110143	197.864132	274.3	23.827	8.5	8.0	1.09	6323	1.95	2.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006515439-01	OBS	FP	0.00	1	0	1	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

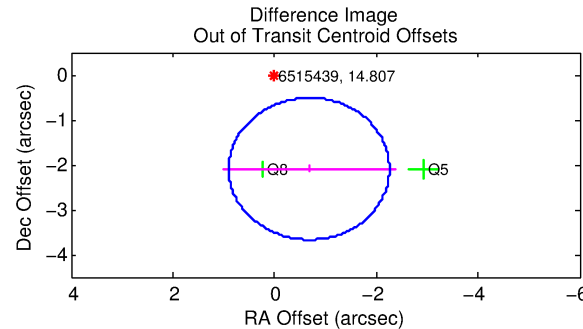
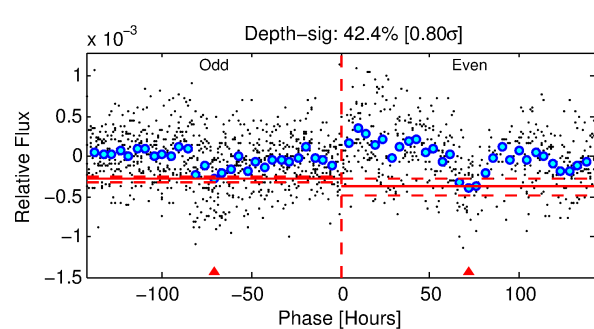
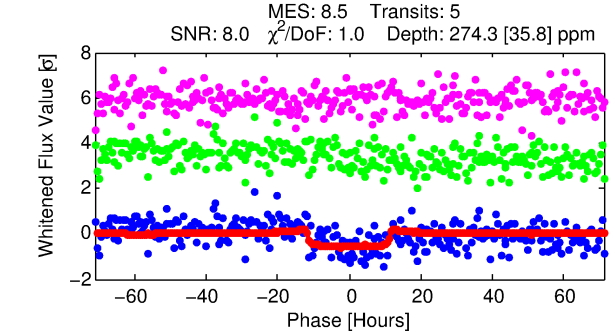
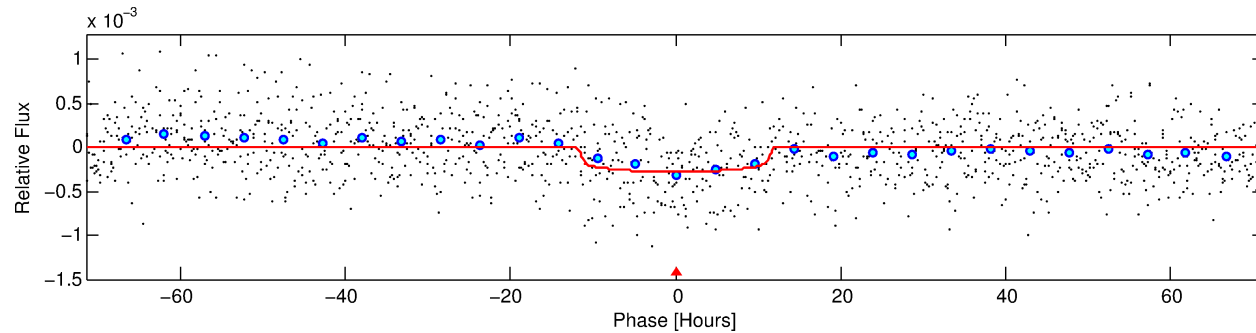
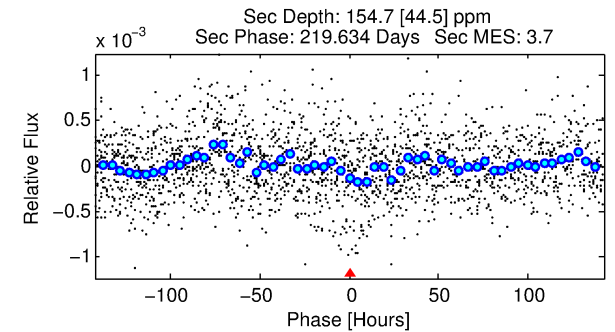
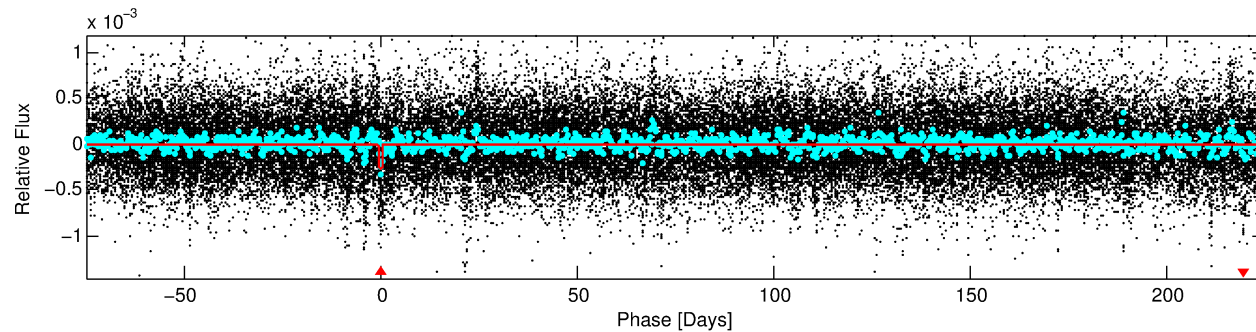
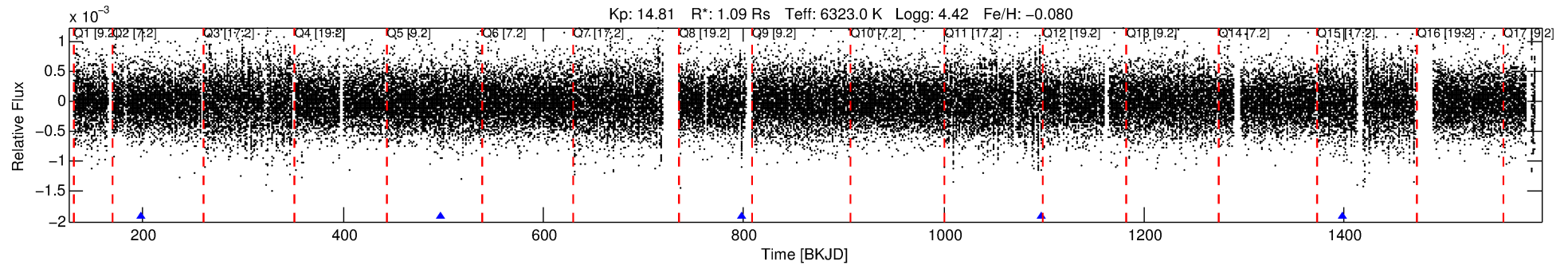
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006515439-01

No Significant Match Found

DV One-Page Summary

KIC: 6515439 Candidate: 1 of 1 Period: 300.110 d



DV Fit Results:

Period = 300.11014 [0.01235] d
Epoch = 197.8641 [0.0283] BKJD
Rp/R* = 0.0163 [0.0042]
a/R* = 68.92 [89.78]
b = 0.72 [0.87]
Seff = 2.04 [0.85]
Teff = 305 [32] K
Rp = 1.95 [0.81] Re
a = 0.9168 [0.2491] AU
Ag = 18872.83 [13478.50] [1.40 σ]
Teffp = 5519 [843] K [6.18 σ]

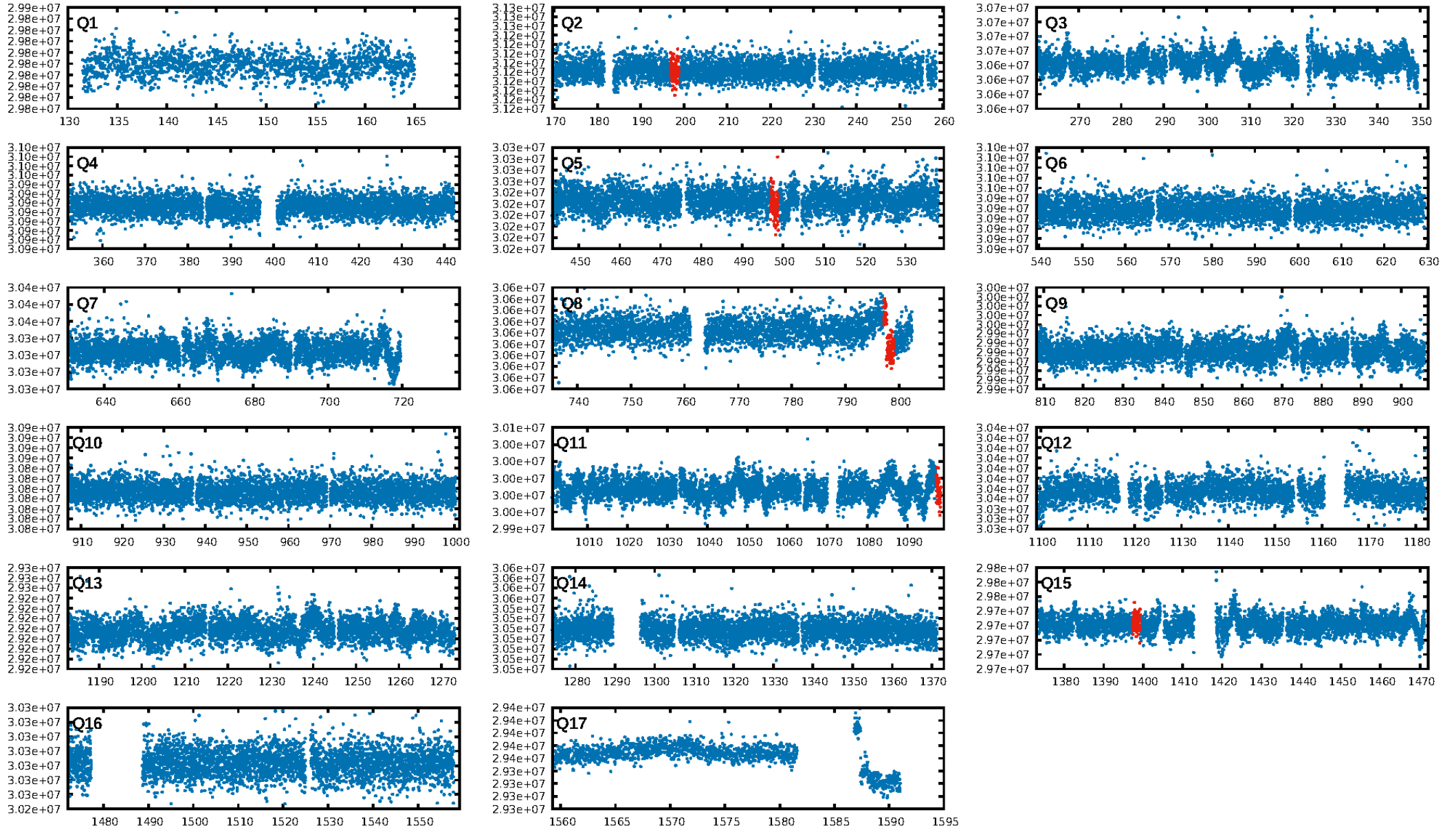
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.72e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.02796
Centroid-sig: 13.1%
Centroid-so: 2.152 arcsec [1.23 σ]
OotOffset-rm: 2.201 arcsec [4.18 σ]
KicOffset-rm: 2.143 arcsec [4.29 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

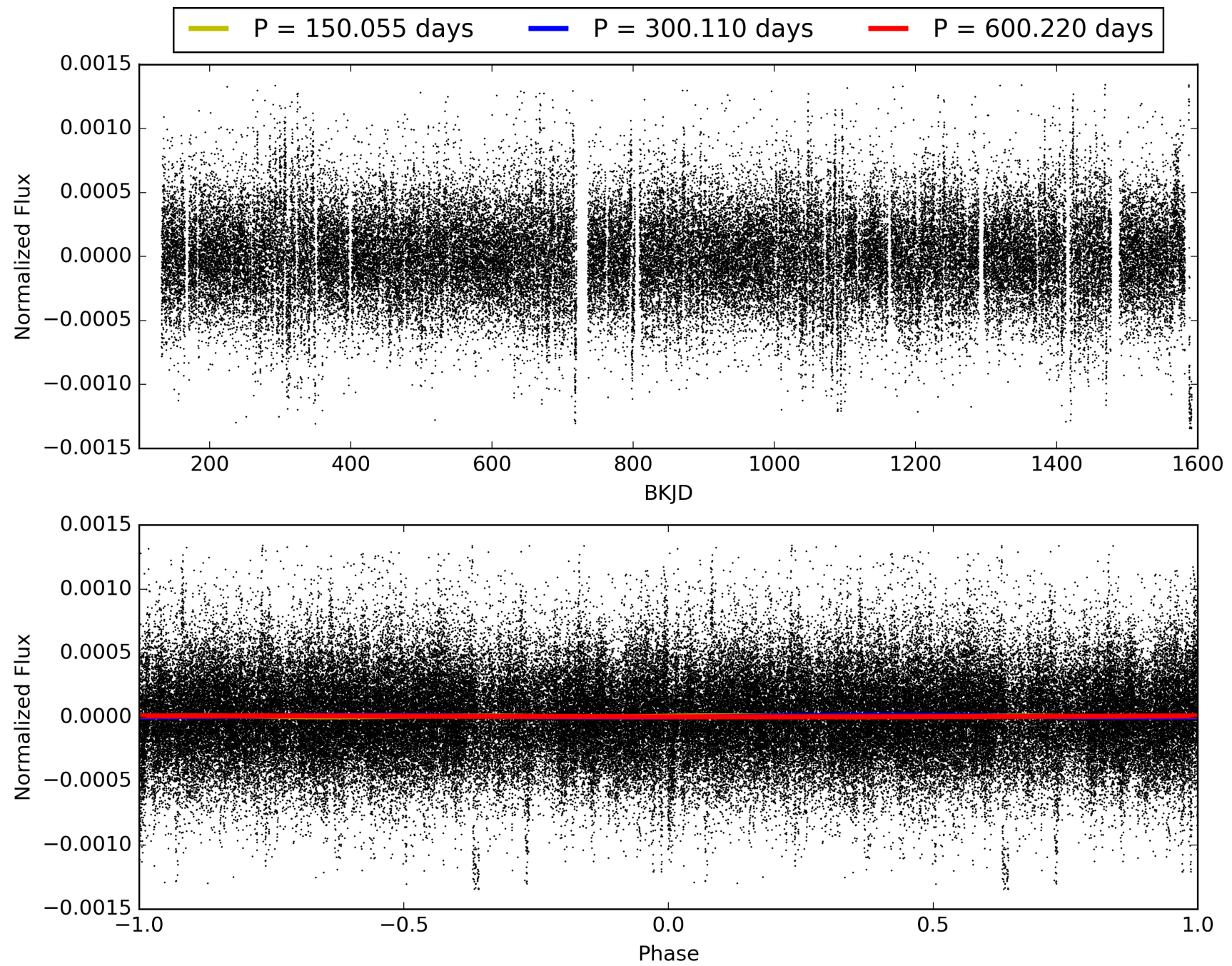
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:18:36 Z

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

TCE 006515439-01, PDC Light Curves

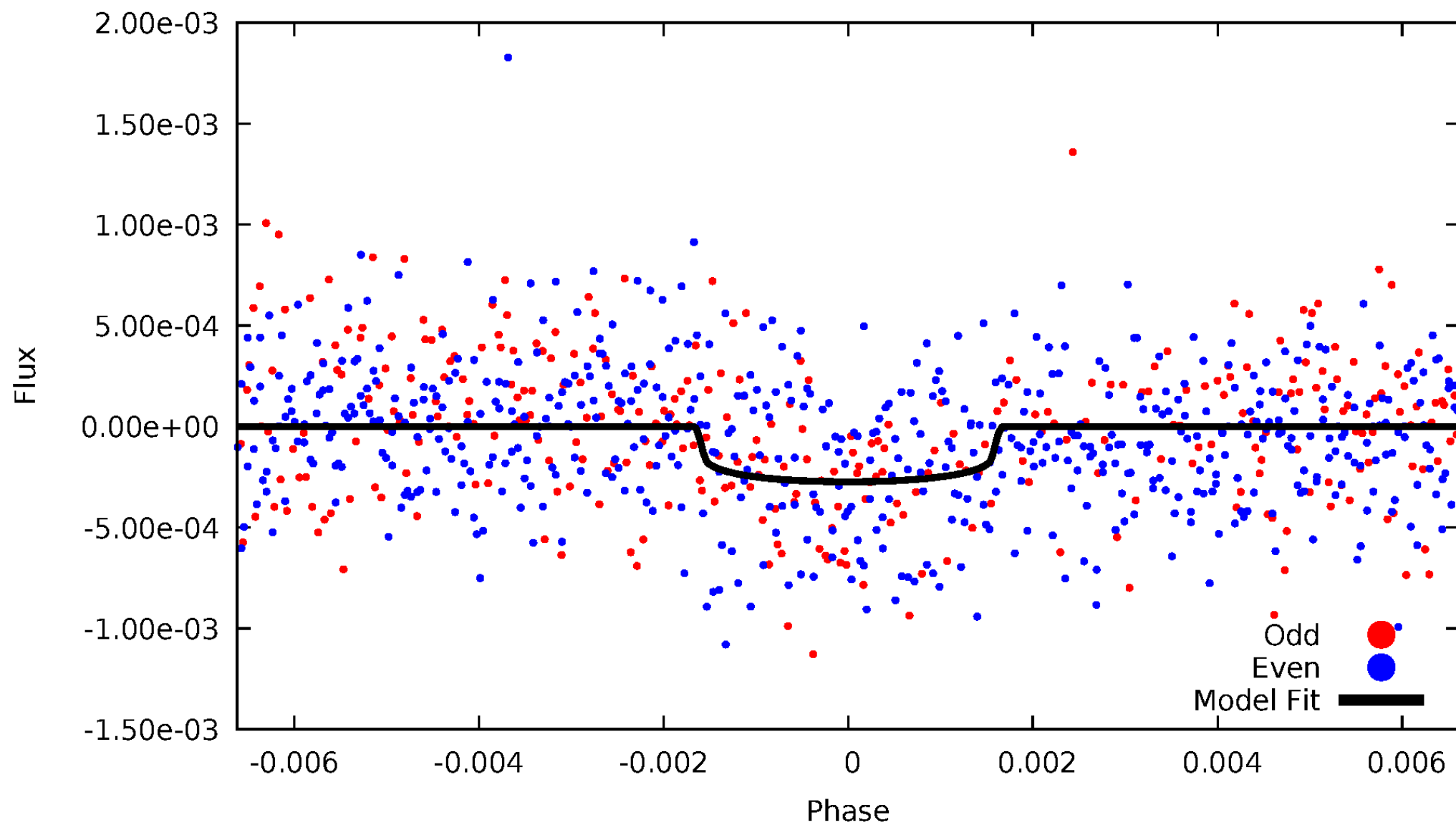


TCE 006515439-01



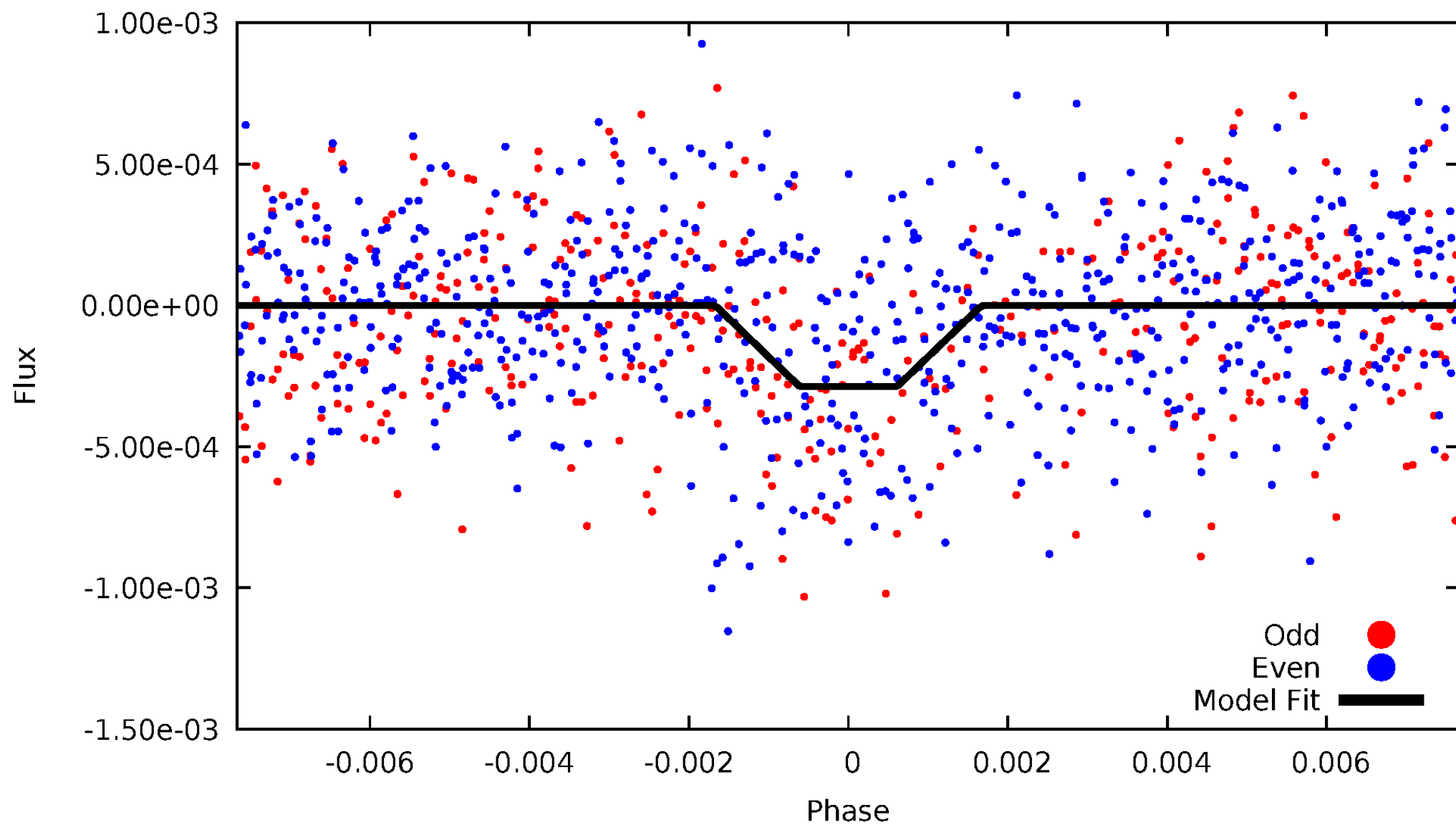
DV Odd/Even

TCE 006515439-01



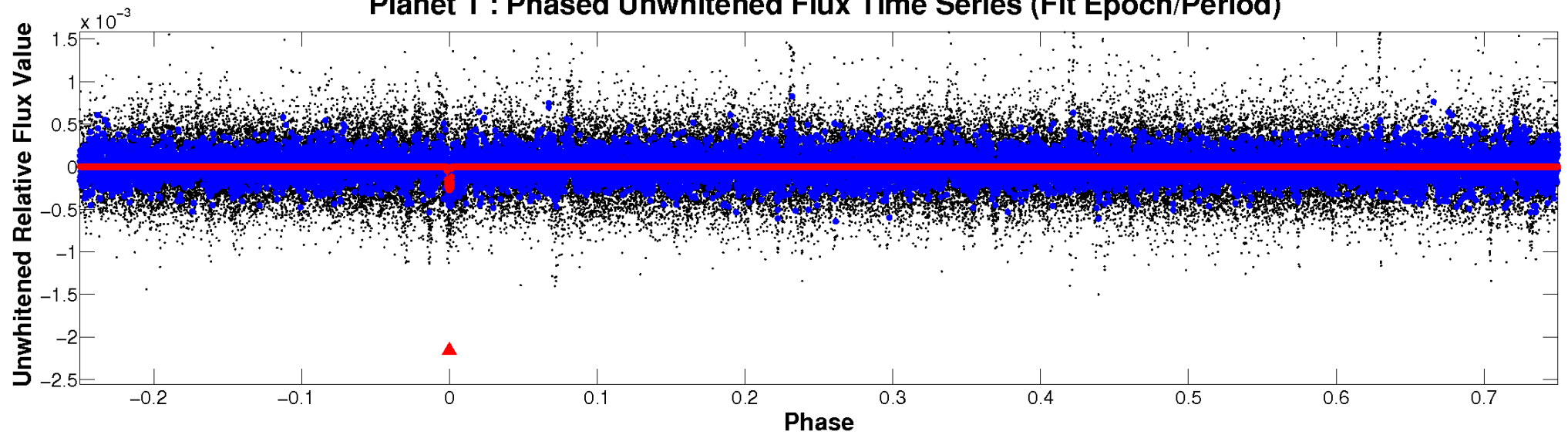
ALT Odd/Even

TCE 006515439-01

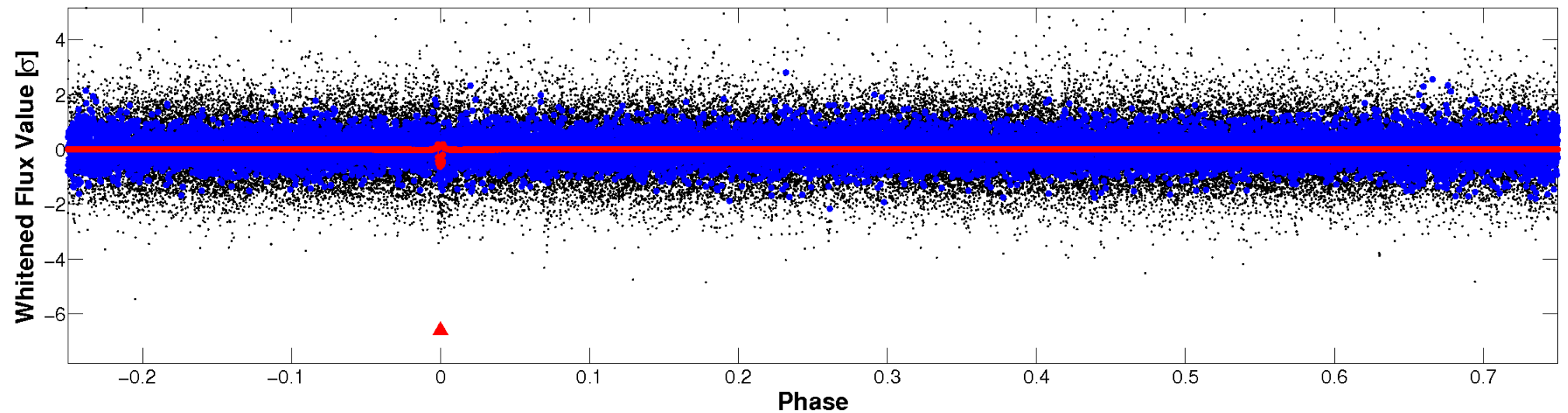


Non-Whitened Vs. Whitened Light Curve

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



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



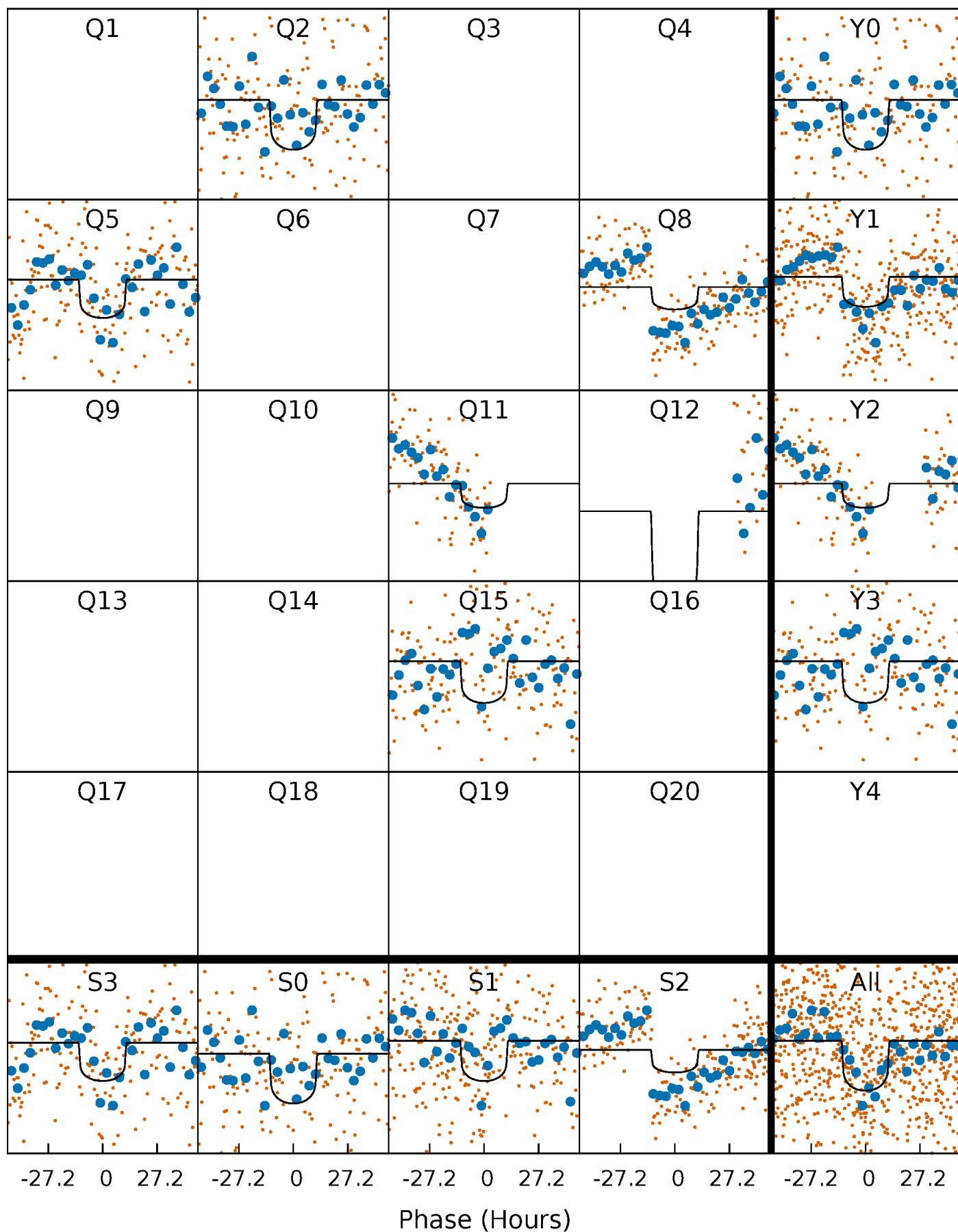
PDC Quarter-Phased Transit Curves

TCE 006515439-01 P=300.110143 Days $T_0=197.864132$ (BKJD)



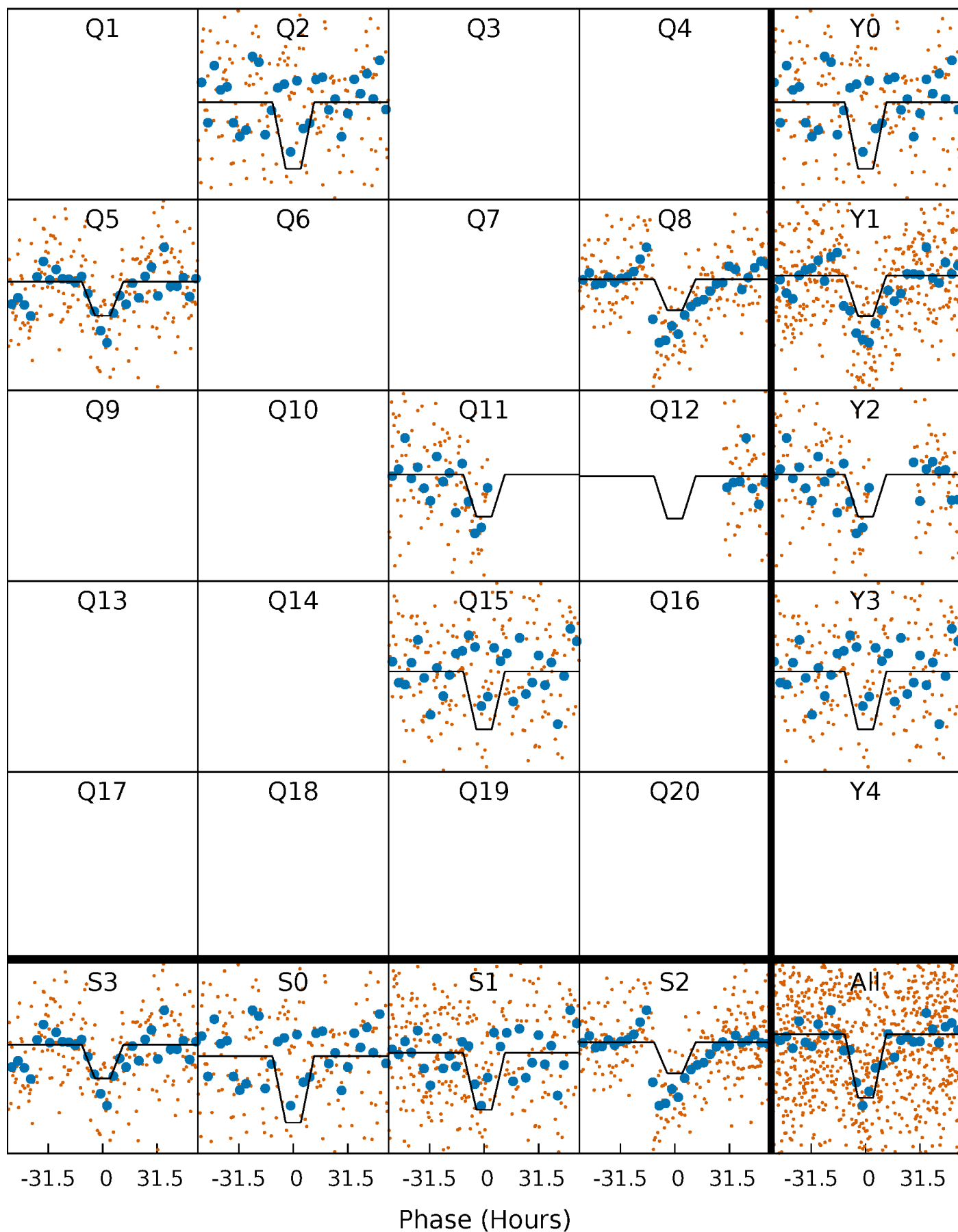
DV Quarter-Phased Transit Curves

TCE 006515439-01 P=300.110143 Days $T_0=197.864132$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

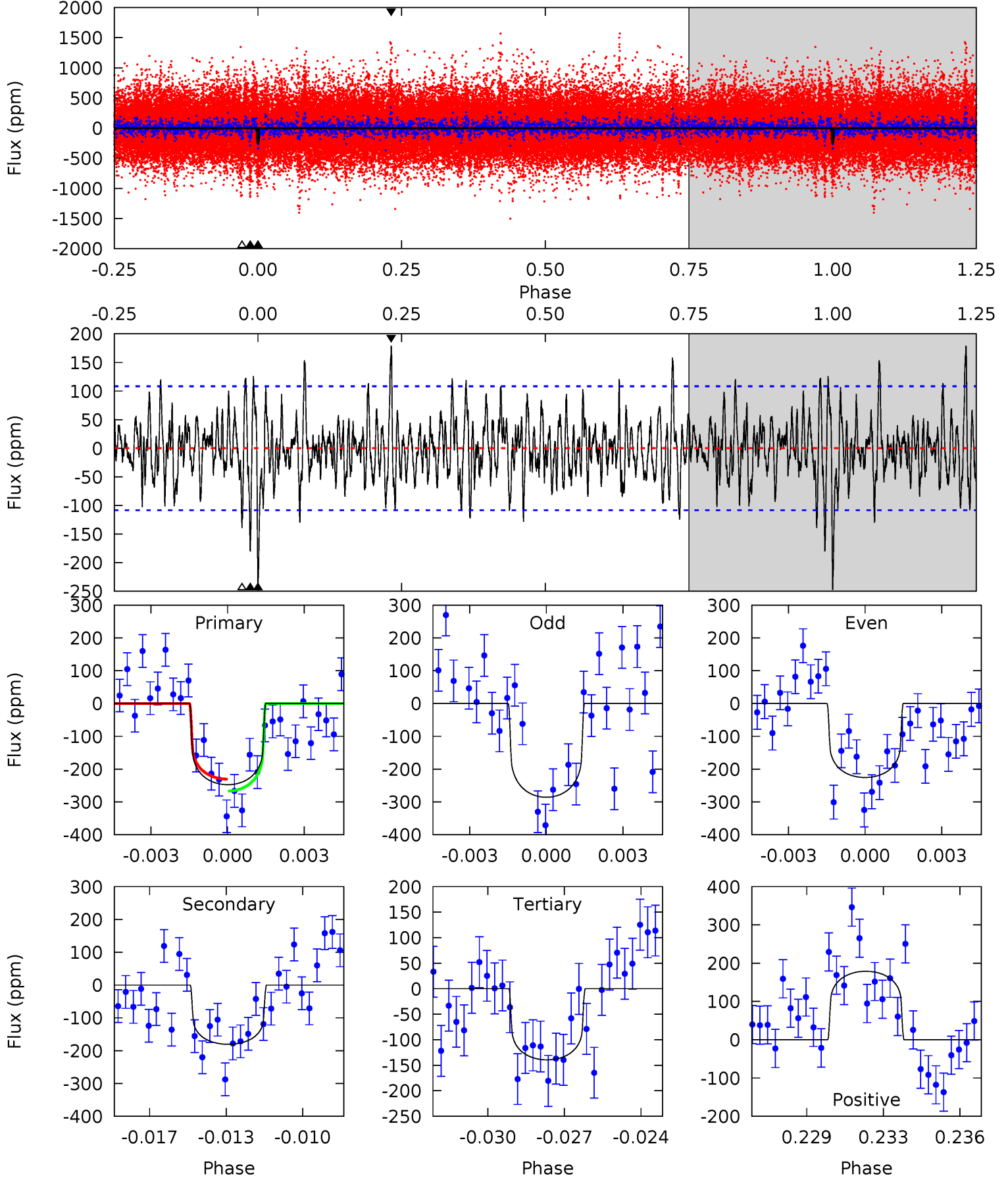
TCE 006515439-01 P=300.107696 Days $T_0=197.923225$ (BKJD)



DV Model-Shift Uniqueness Test

006515439-01, P = 300.110143 Days, E = 197.864132 Days

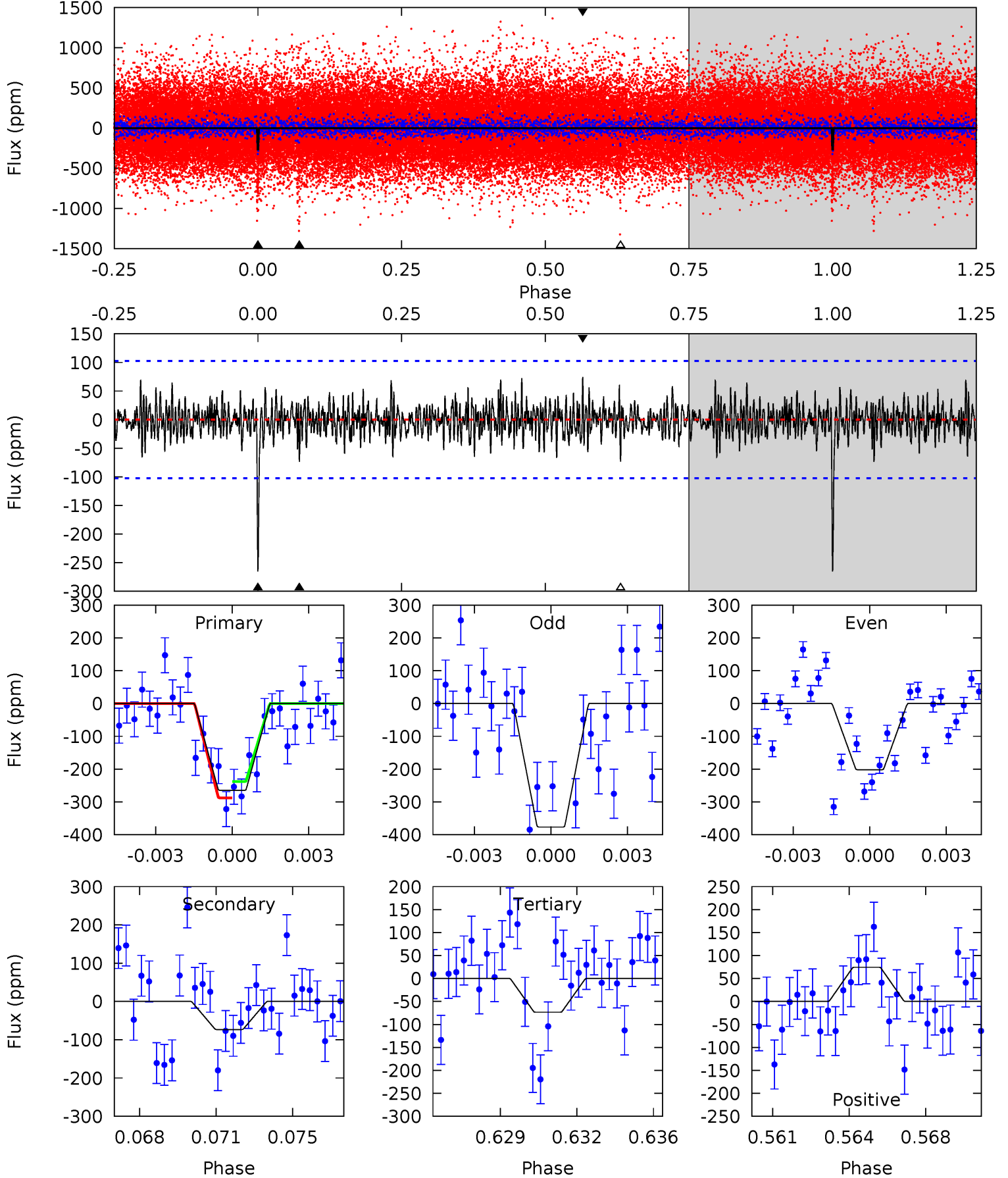
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	8.73	6.74	8.65	5.23	2.93	2.22	5.22	3.32	1.99	0.09	1.41	1.07	0.42	0.88



Alt Model-Shift Uniqueness Test

006515439-01, P = 300.107696 Days, E = 197.923225 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	3.75	3.75	3.80	5.23	2.93	1.12	9.79	9.73	0.00	-0.05	4.28	0.78	0.22	1.27



Stellar Parameters For KIC 006515439

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6323^{+178}_{-223}	$4.418^{+0.067}_{-0.216}$	$-0.080^{+0.250}_{-0.300}$	$1.093^{+0.353}_{-0.141}$	$1.140^{+0.170}_{-0.154}$	$1.230^{+0.358}_{-0.655}$
	+3%/-4%	+2%/-5%	+312%/-375%	+32%/-13%	+15%/-14%	+29%/-53%
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 006515439-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-181±21	$2.04^{+0.66}_{-0.57}$	435^{+33}_{-26}	5741^{+929}_{-647}	19725^{+16544}_{-8618}
Alt.	-73±20	$2.08^{+0.61}_{-0.57}$	432^{+36}_{-23}	4680^{+645}_{-501}	7644^{+7344}_{-3445}

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

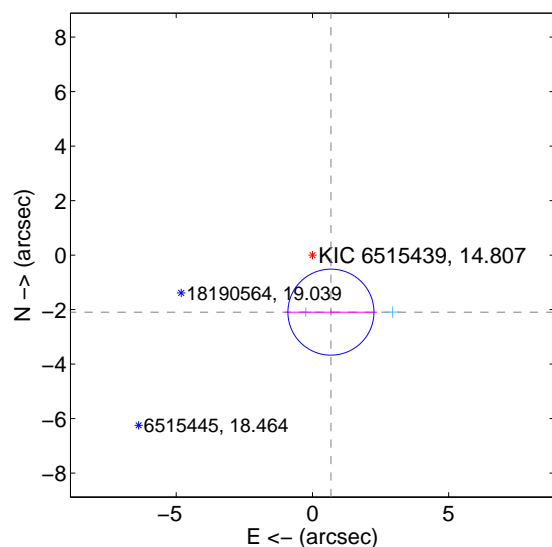
Supplemental centroid analysis for 006515439-01. Kepler magnitude: 14.81. Transit SNR 8.02

There are 2 quarters with good PRF difference image offsets

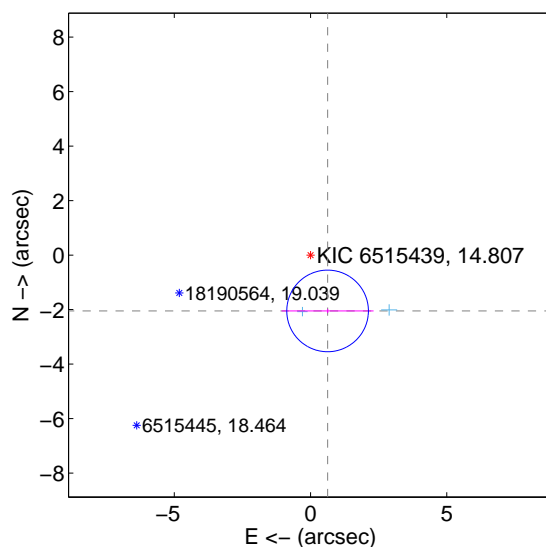
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.201 ± 0.526	4.18	-0.679 ± 1.694	-2.094 ± 0.067
PRF-fit source offset from KIC position	2.143 ± 0.499	4.29	-0.626 ± 1.690	-2.049 ± 0.075
photometric centroid source offset	2.15 ± 1.75	1.23	1.67 ± 1.78	-1.36 ± 1.70

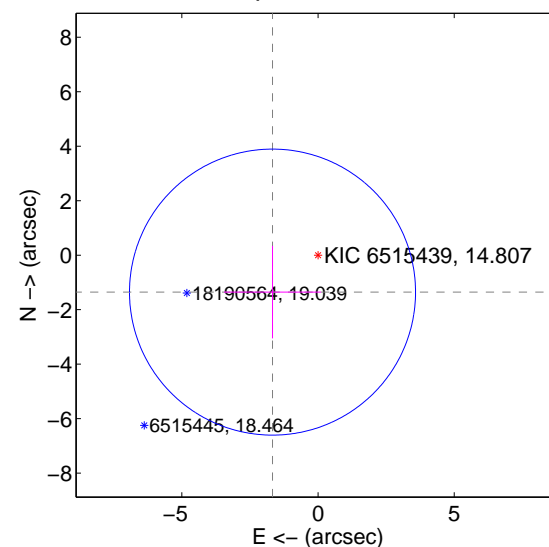
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

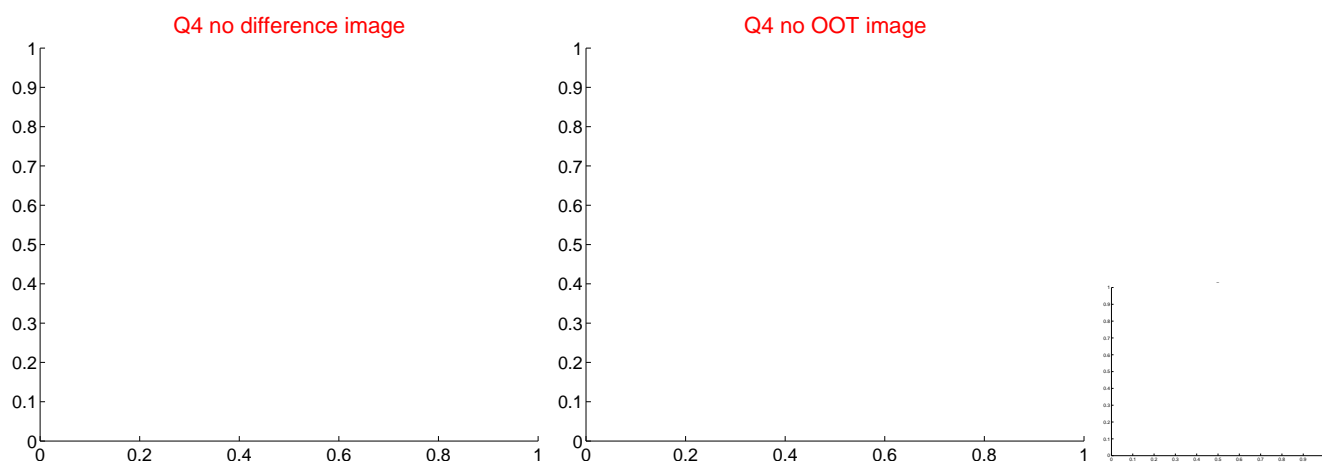
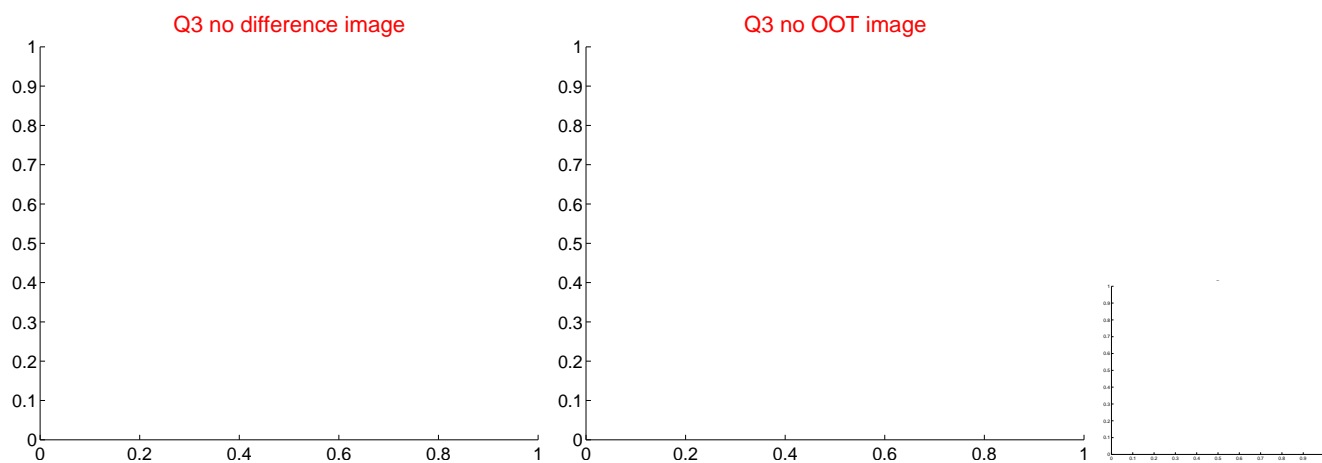
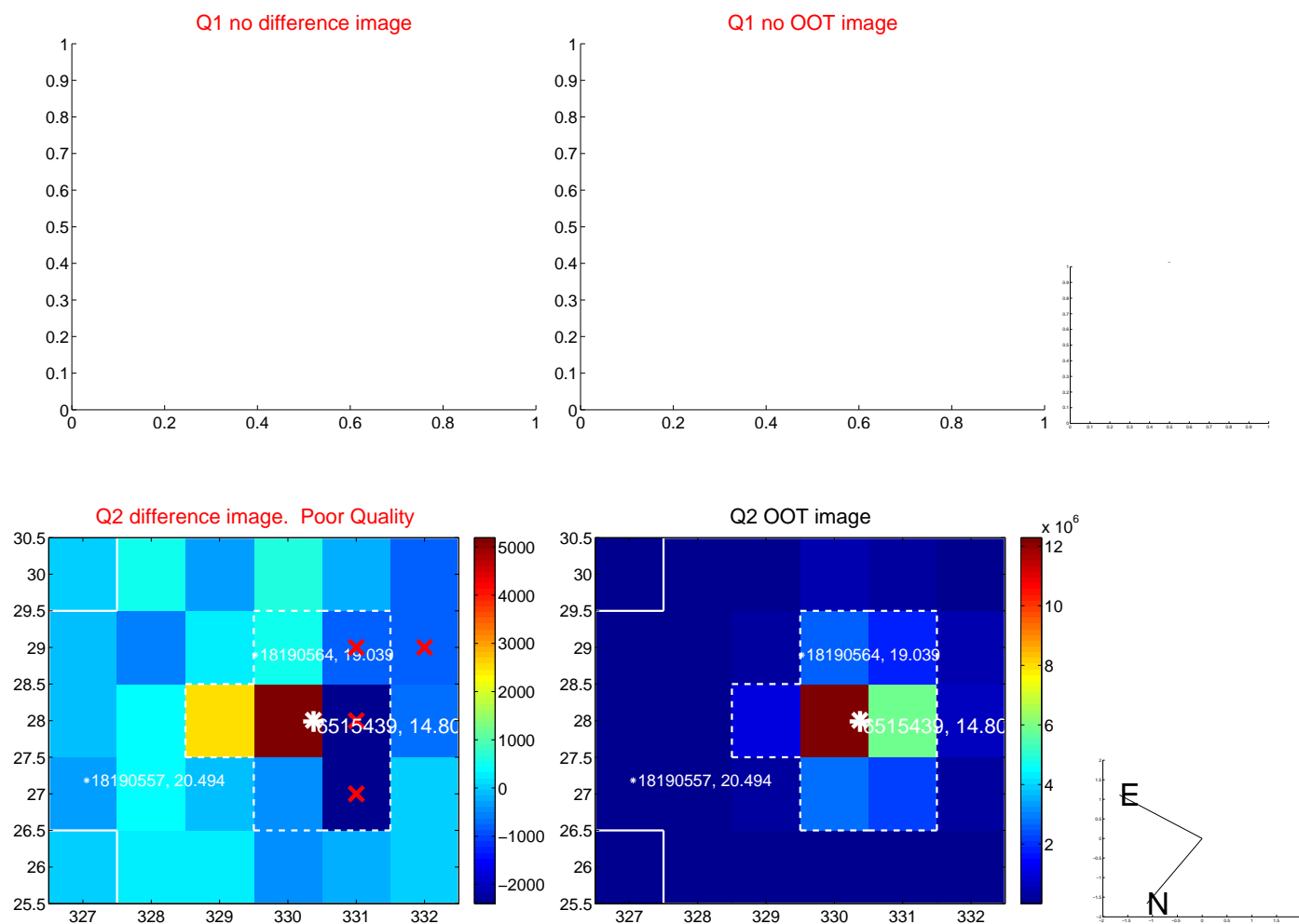


offset from photometric centroids

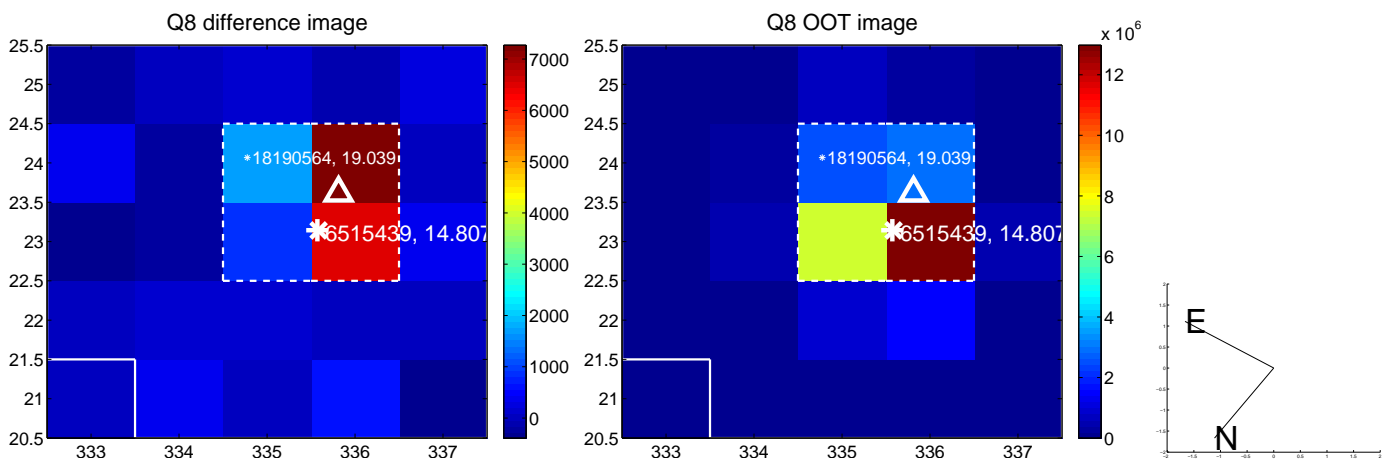
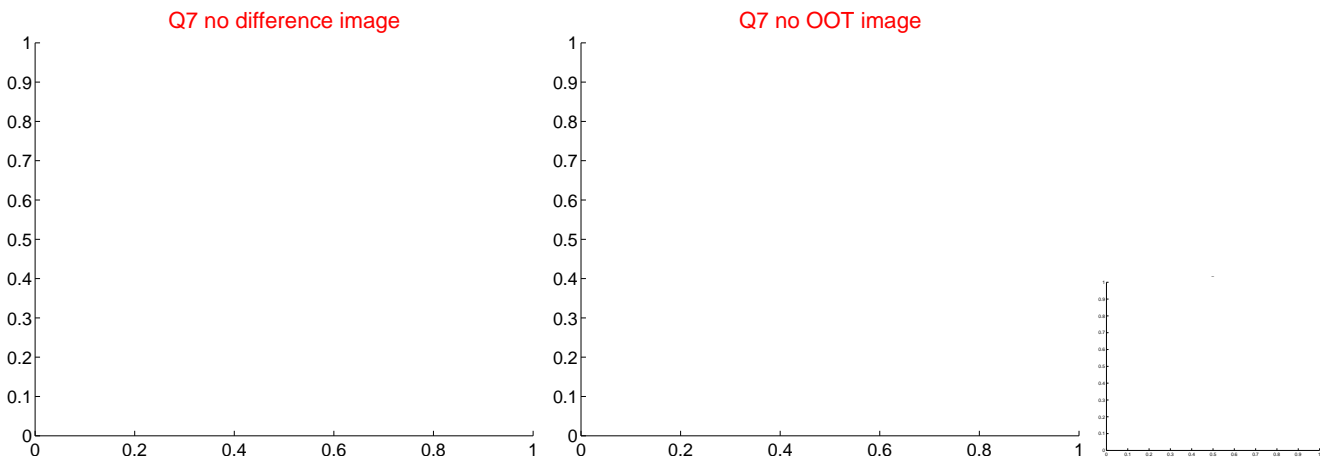
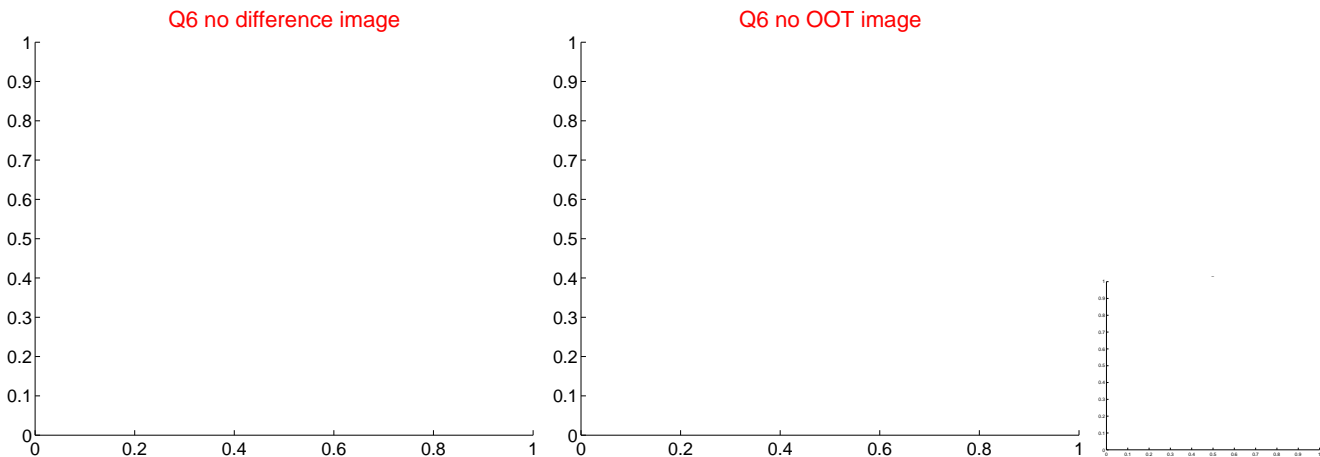
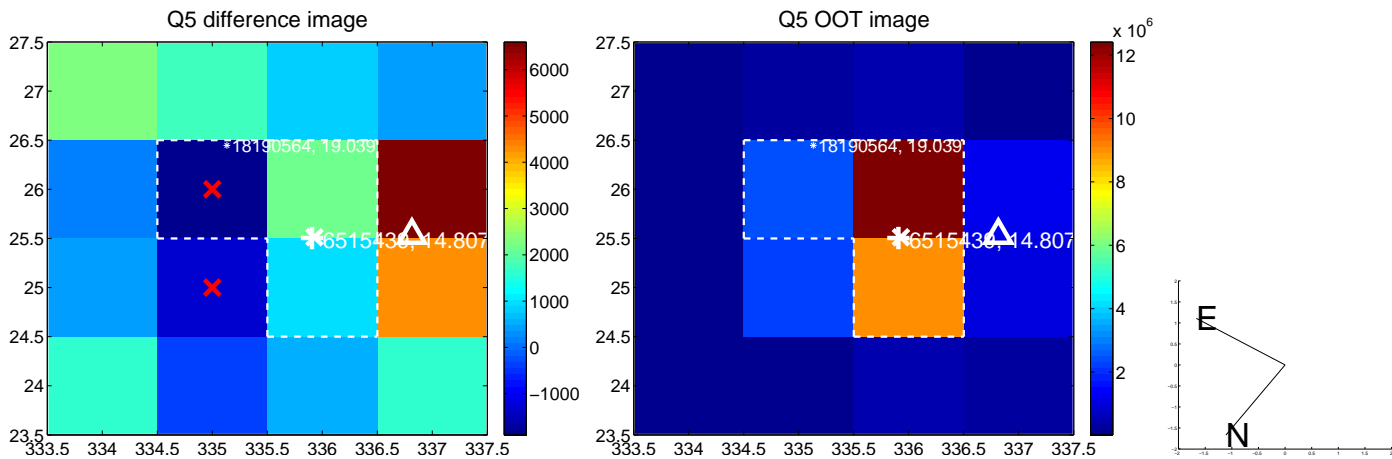


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



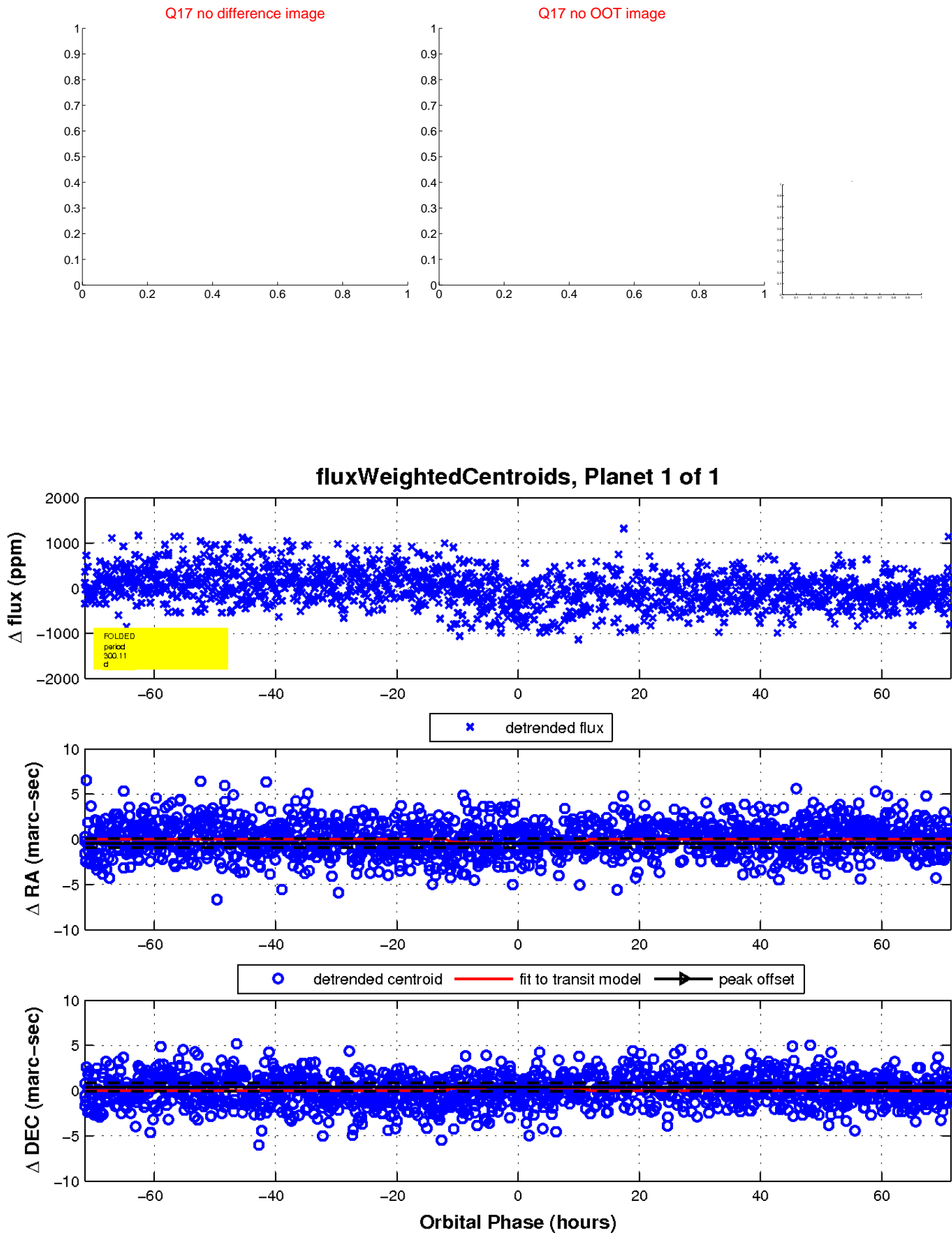
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

