

KIC 009663775

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})
009663775-01	OBS	No	401.829371	432.249816	172.1	12.378	7.4	7.2	0.92	5605	1.37	0.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009663775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

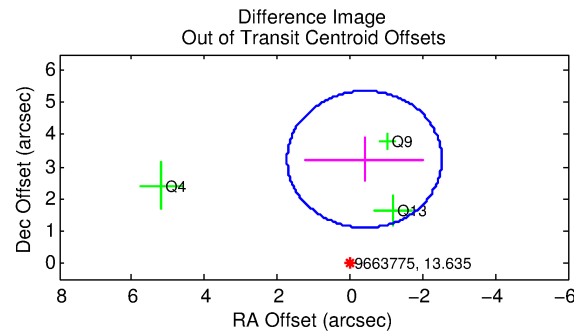
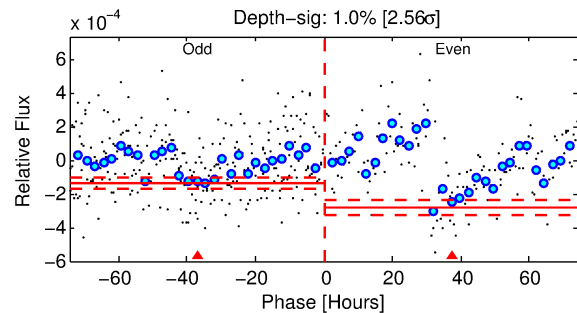
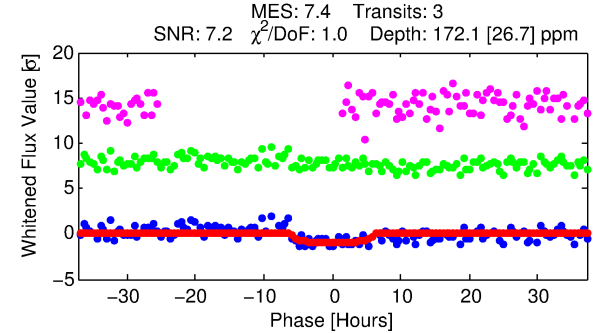
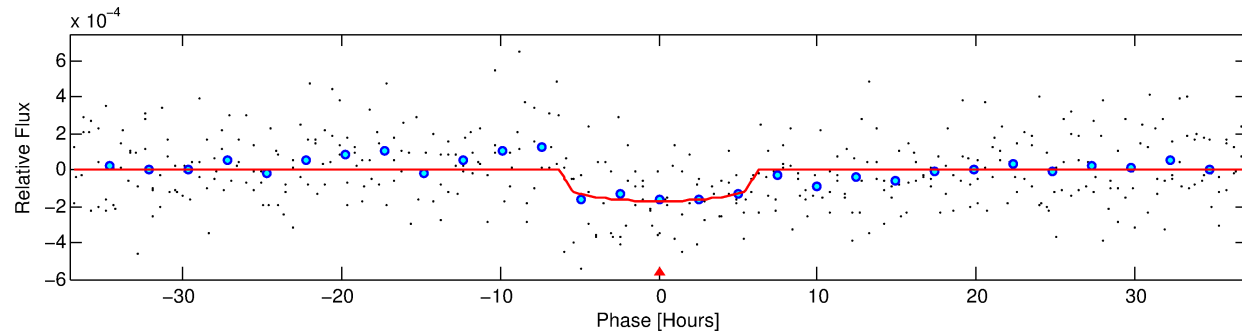
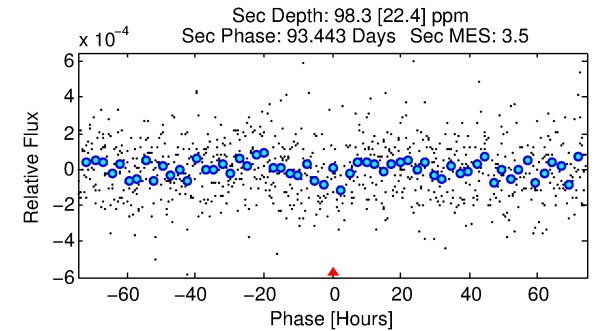
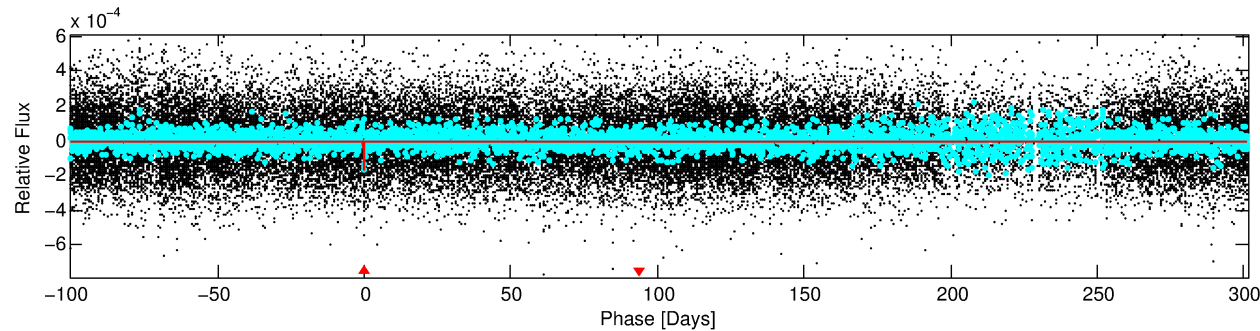
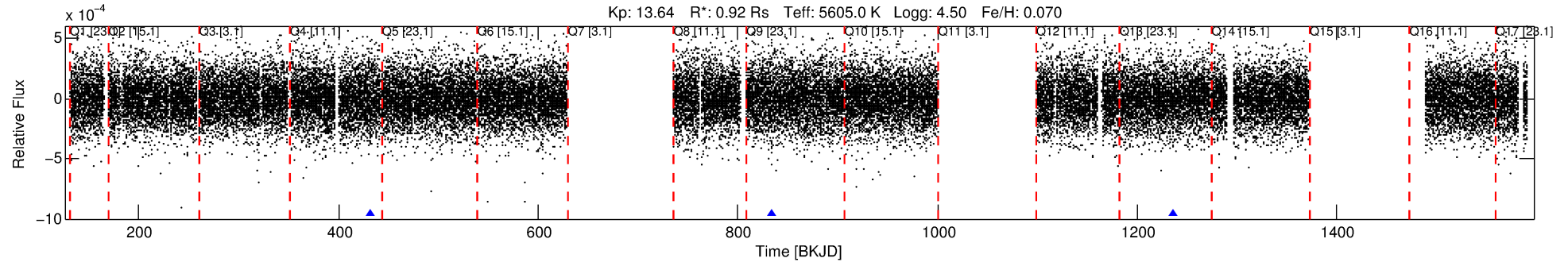
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009663775-01

No Significant Match Found

DV One-Page Summary

KIC: 9663775 Candidate: 1 of 1 Period: 401.829 d



DV Fit Results:

Period = 401.82937 [0.01967] d
Epoch = 432.2498 [0.0258] BKJD
Rp/R* = 0.0137 [0.0131]
a/R* = 138.79 [583.81]
b = 0.85 [1.44]
Seff = 0.67 [0.24]
Teq = 231 [21] K
Rp = 1.37 [1.36] Re
a = 1.0496 [0.2445] AU
Ag = 31707.87 [61697.79] [0.51σ]
Teffp = 4763 [2285] K [1.98σ]

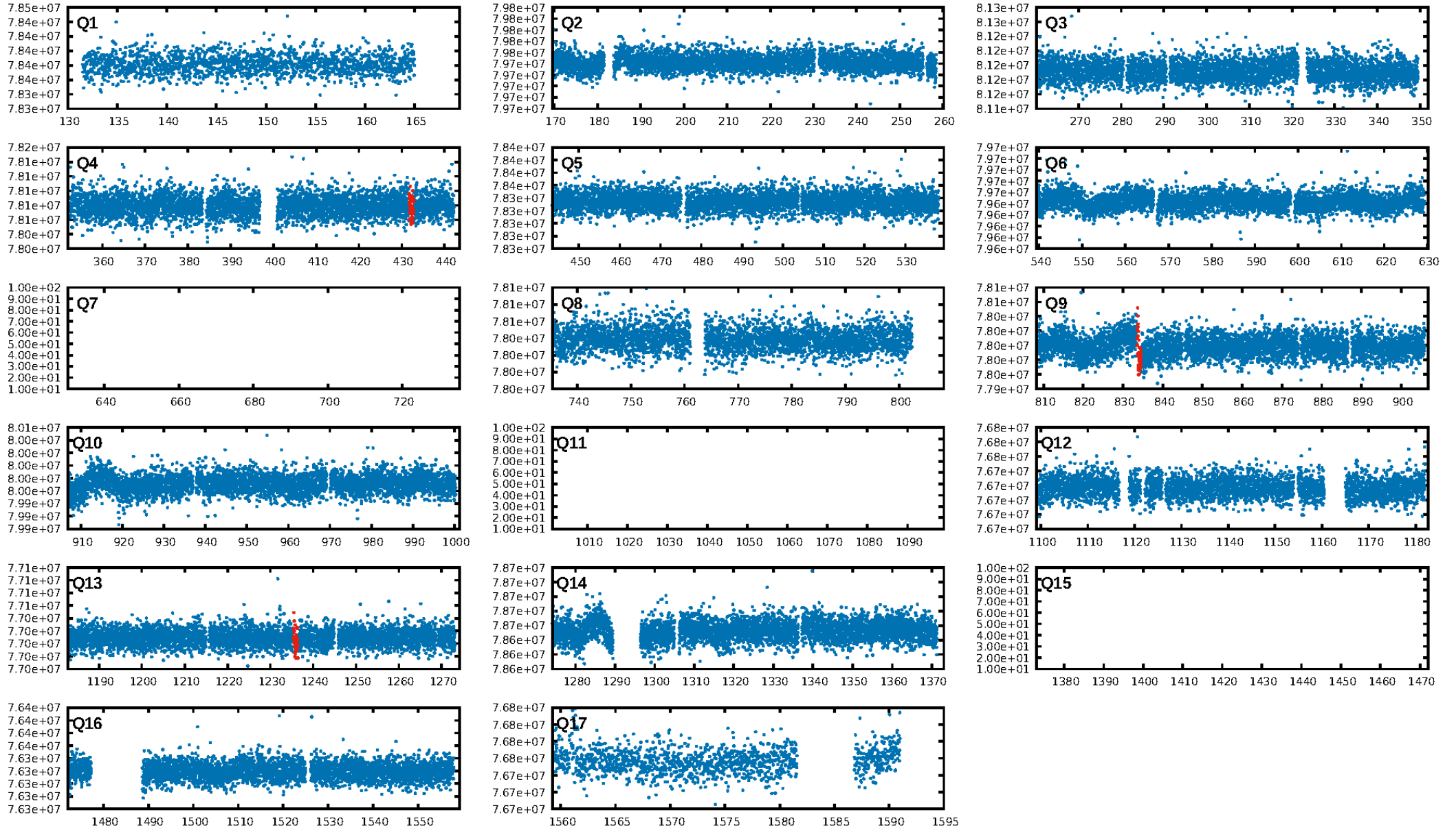
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.5%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 1.76e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.323
Centroid-sig: 0.0%
Centroid-so: 4.192 arcsec [2.45σ]
OotOffset-rm: 3.251 arcsec [4.58σ]
KicOffset-rm: 3.261 arcsec [4.58σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

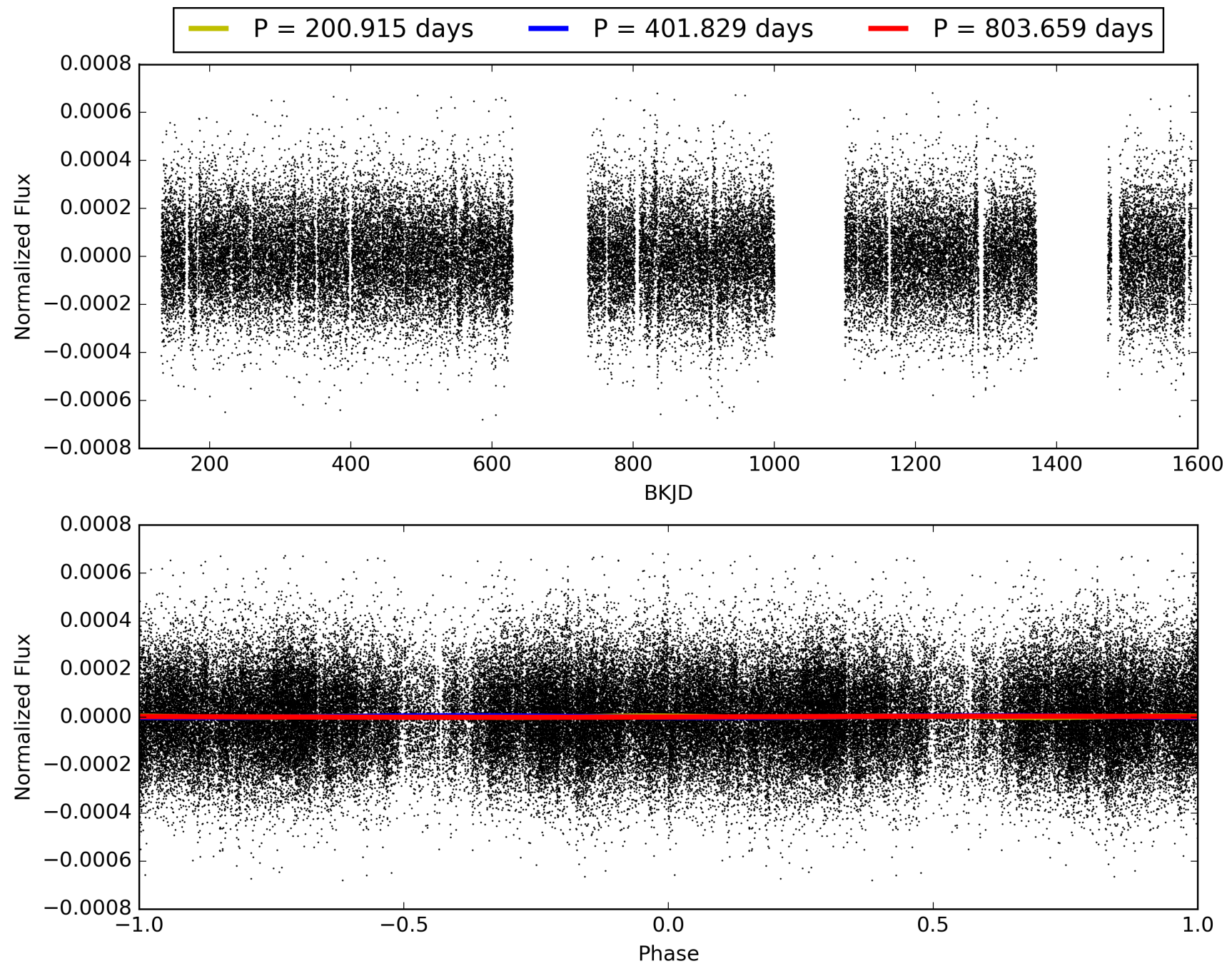
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:03:49 Z

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

TCE 009663775-01, PDC Light Curves

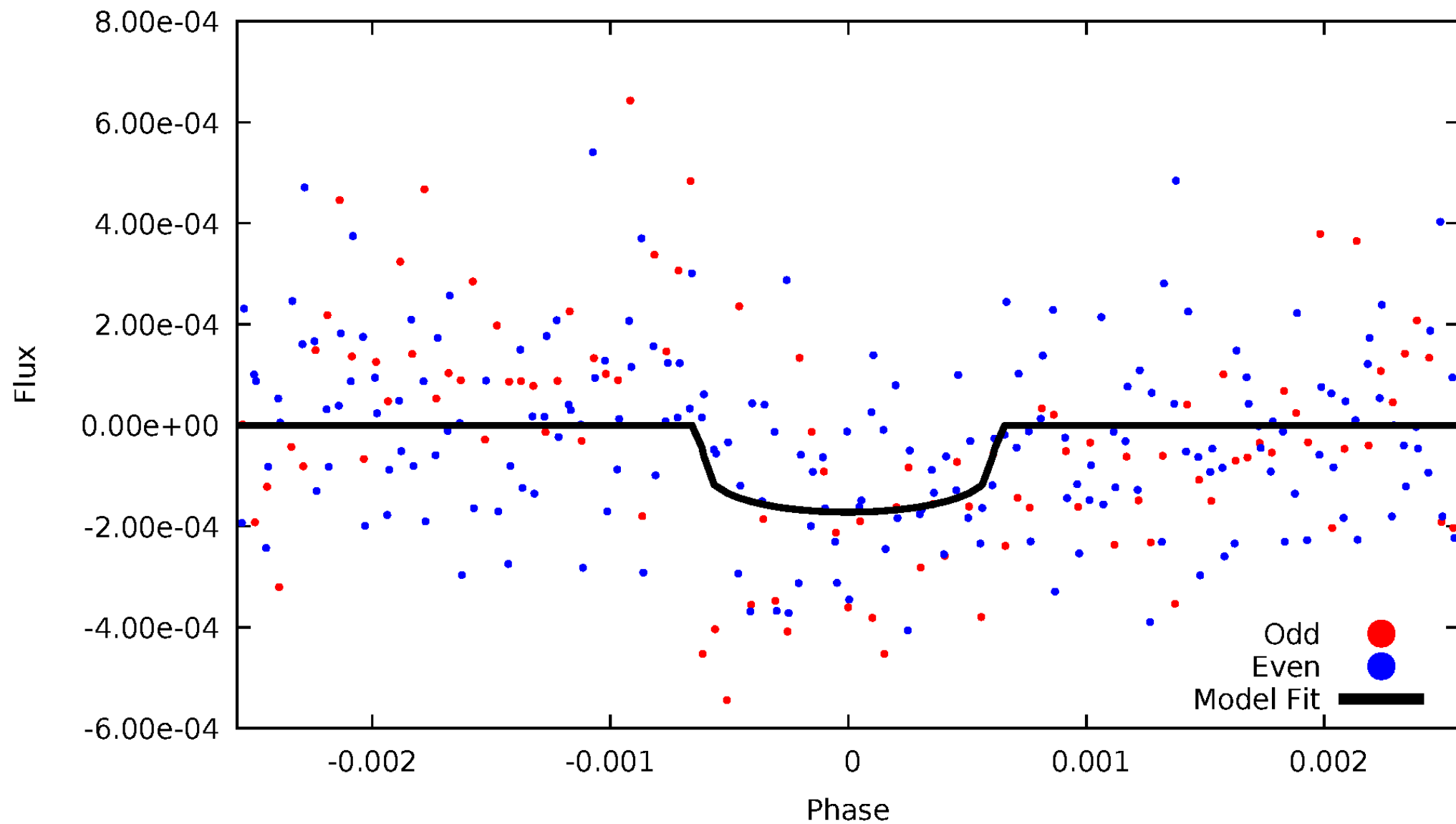


TCE 009663775-01



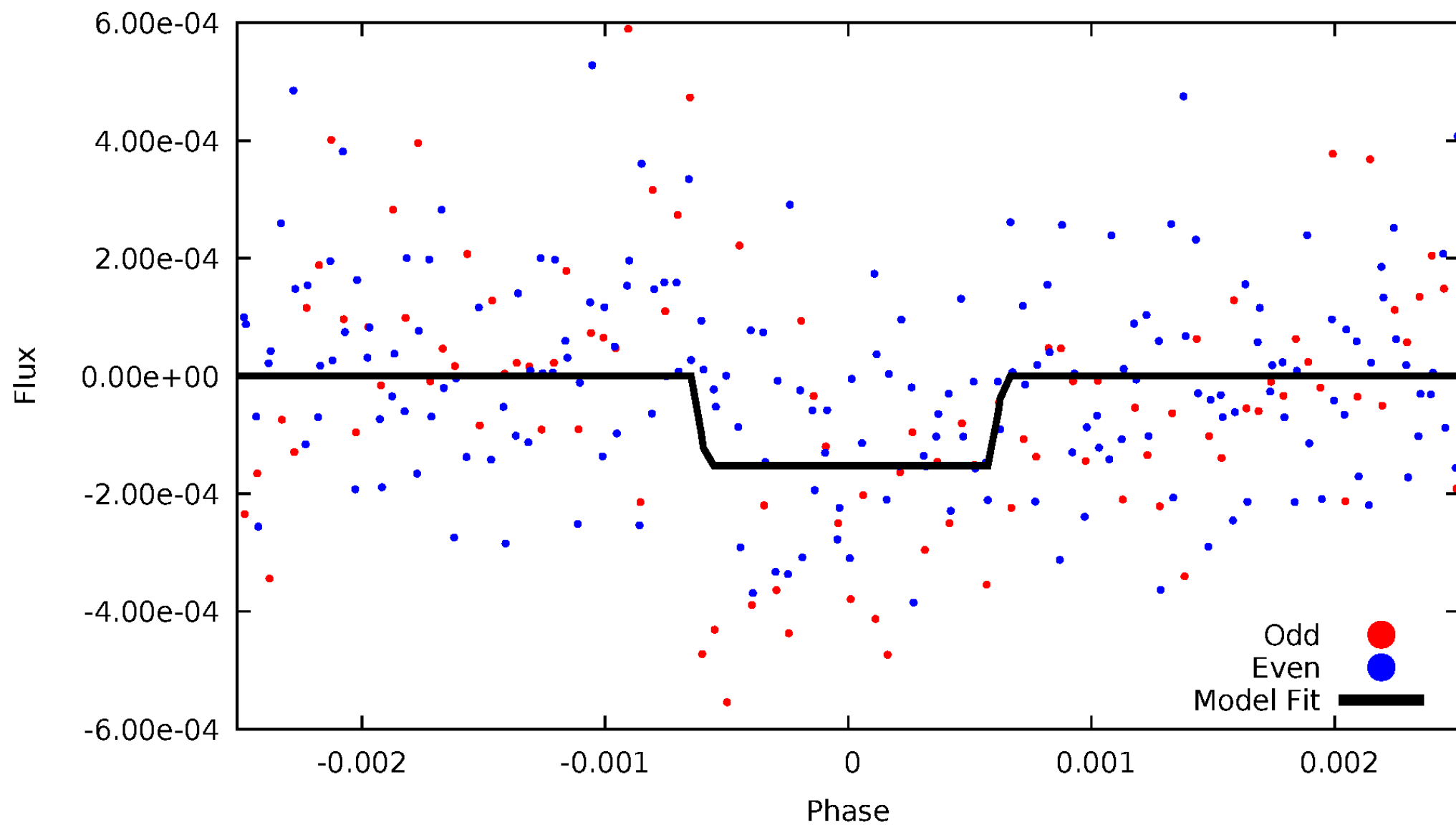
DV Odd/Even

TCE 009663775-01

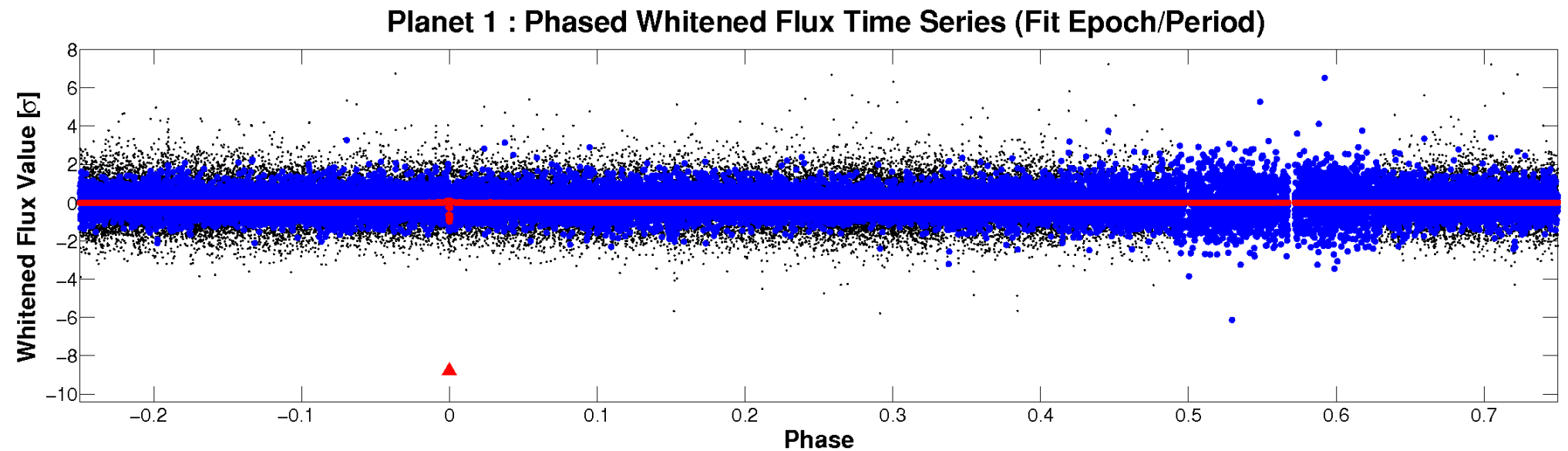
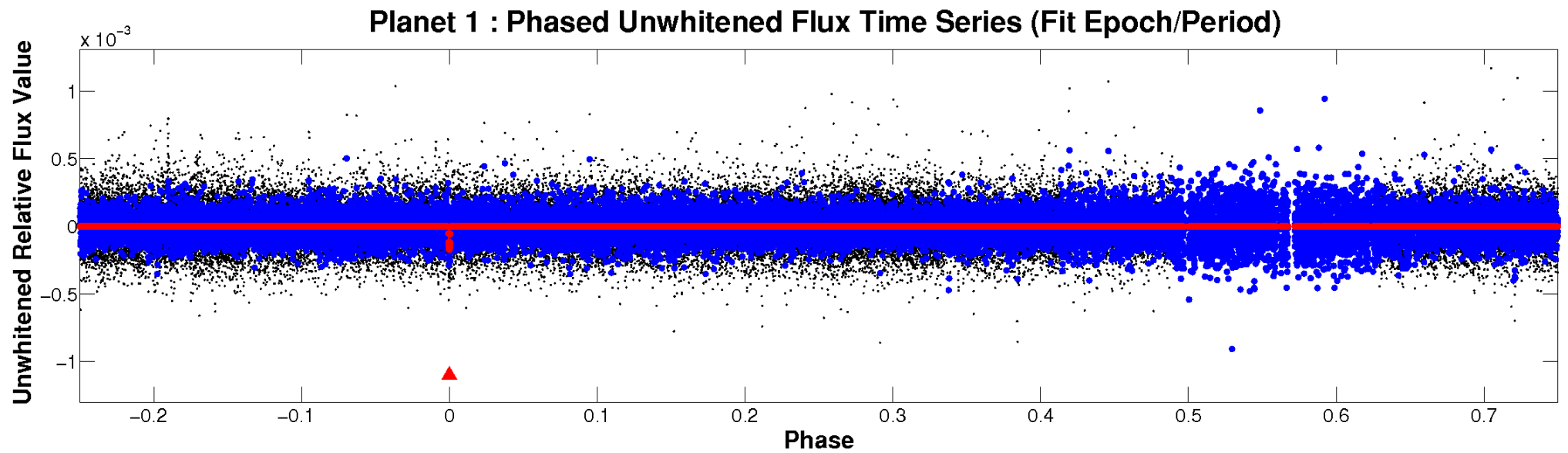


ALT Odd/Even

TCE 009663775-01



Non-Whitened Vs. Whitened Light Curve



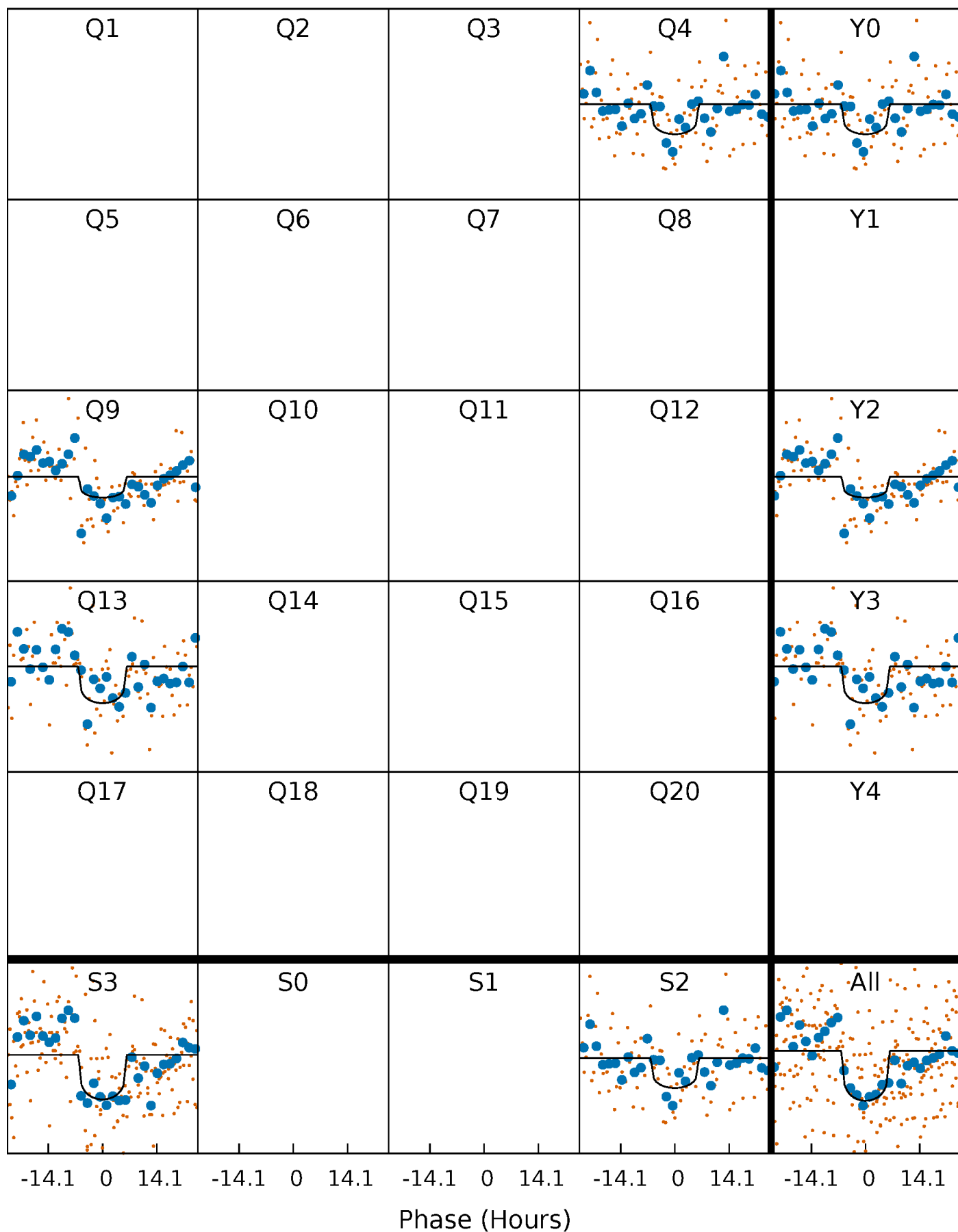
PDC Quarter-Phased Transit Curves

TCE 009663775-01 P=401.829371 Days $T_0=432.249816$ (BKJD)



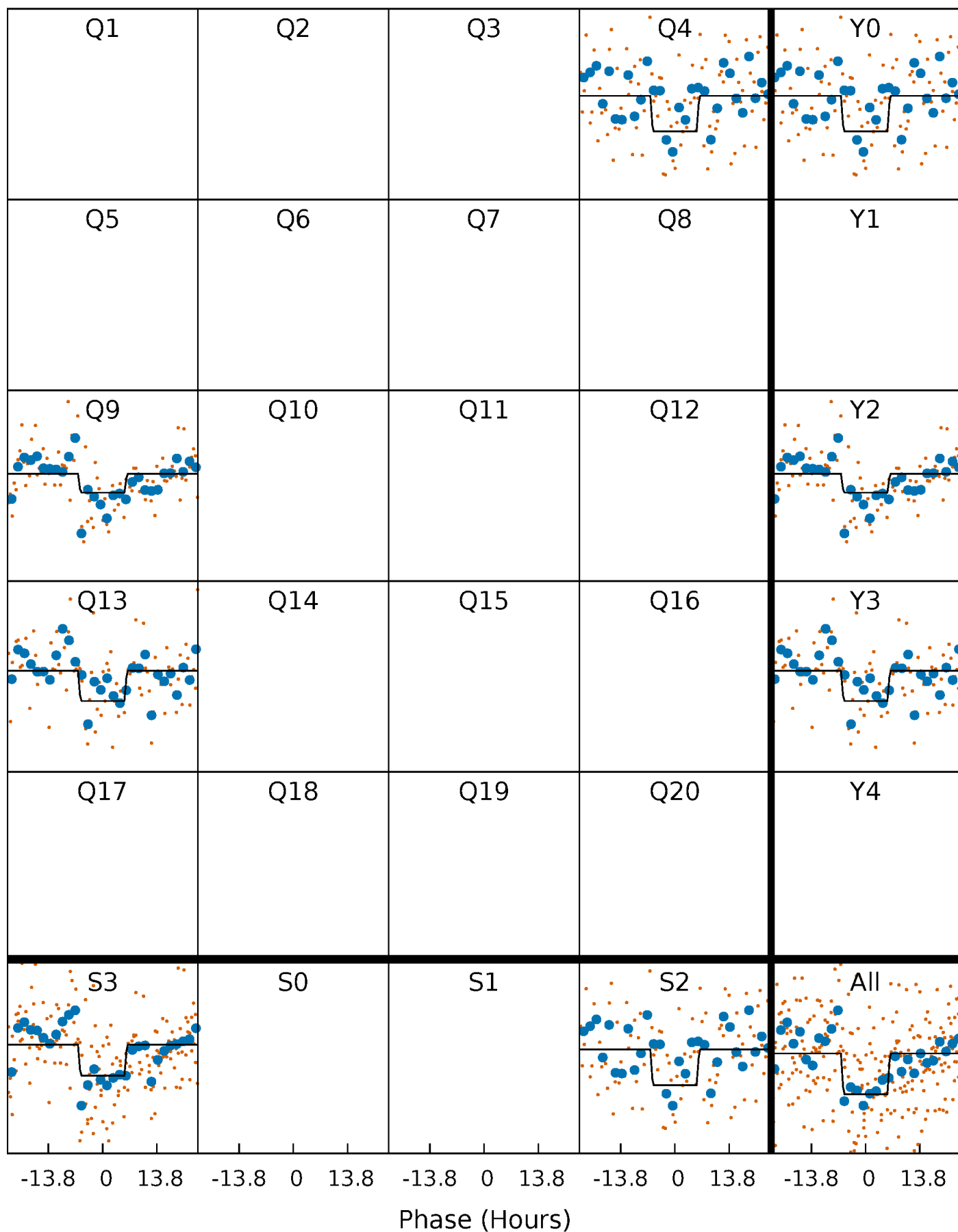
DV Quarter-Phased Transit Curves

TCE 009663775-01 P=401.829371 Days $T_0=432.249816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

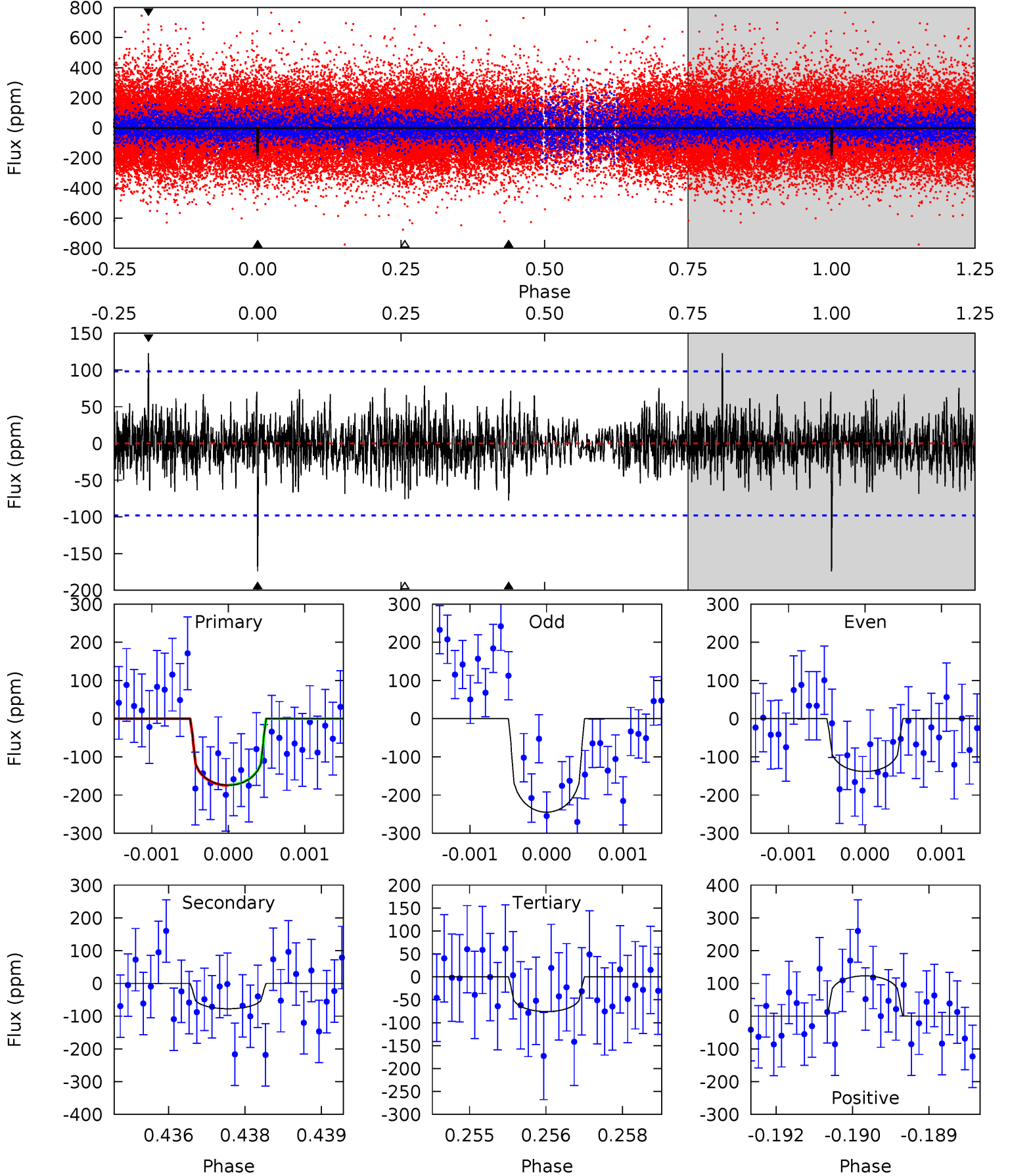
TCE 009663775-01 P=401.825957 Days $T_0=432.248966$ (BKJD)



DV Model-Shift Uniqueness Test

009663775-01, P = 401.829371 Days, E = 30.420445 Days

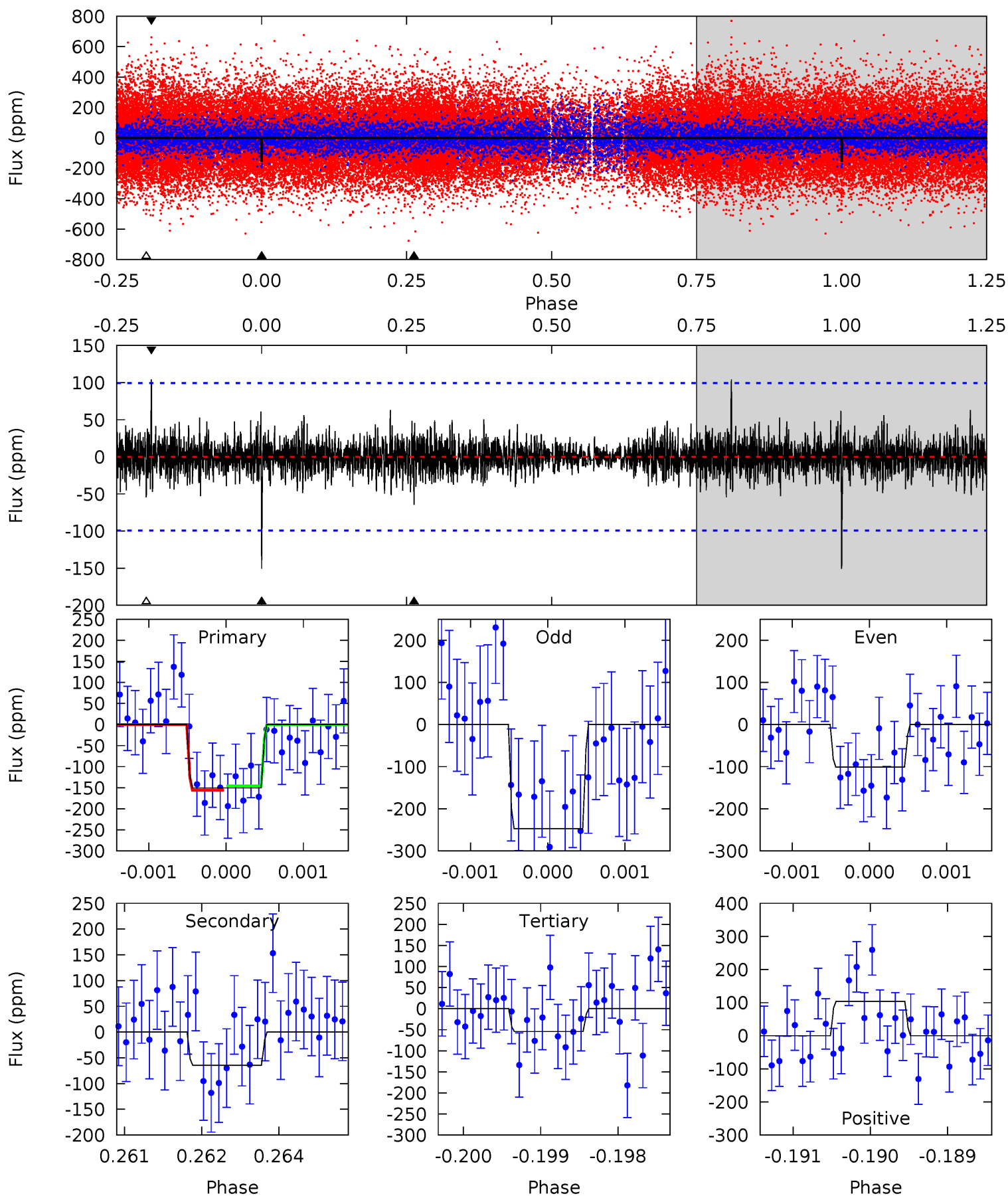
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	4.26	4.17	6.76	5.40	3.21	1.27	5.41	2.82	0.09	-2.50	2.78	1.22	0.41	0.04



Alt Model-Shift Uniqueness Test

009663775-01, $P = 401.825957$ Days, $E = 30.423009$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.20	3.51	2.96	5.68	5.41	3.22	0.86	5.24	2.52	0.56	-2.16	3.74	1.26	0.41	0.27



Stellar Parameters For KIC 009663775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5605^{+150}_{-150}	$4.495^{+0.050}_{-0.188}$	$0.070^{+0.250}_{-0.300}$	$0.915^{+0.251}_{-0.101}$	$0.954^{+0.094}_{-0.094}$	$1.754^{+0.436}_{-0.849}$
	+3%/-3%	+1%/-4%	+357%/-429%	+27%/-11%	+10%/-10%	+25%/-48%
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 009663775-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-77 ± 18	$1.70^{+1.25}_{-1.06}$	329^{+23}_{-15}	4379^{+2207}_{-838}	16535^{+95325}_{-11666}
Alt.	-65 ± 18	$1.53^{+1.23}_{-0.95}$	330^{+22}_{-15}	4349^{+2292}_{-851}	16295^{+92805}_{-11831}

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 $A_{obs} \gg 1.0$

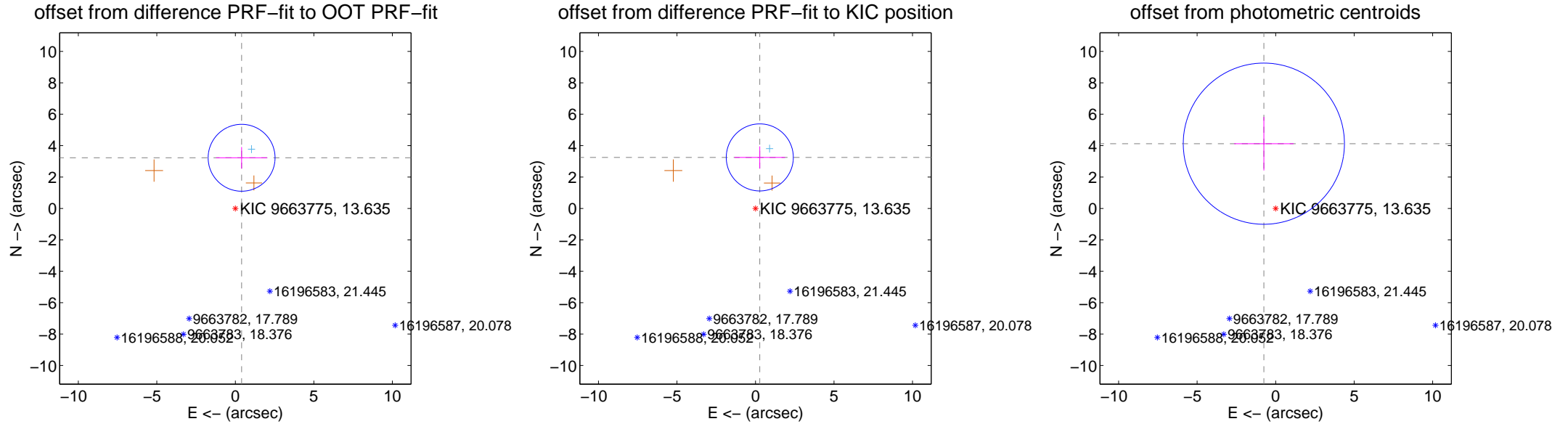
DV Centroid Data

Supplemental centroid analysis for 009663775-01. Kepler magnitude: 13.63. Transit SNR 7.17

There are 1 quarters with good PRF difference image offsets

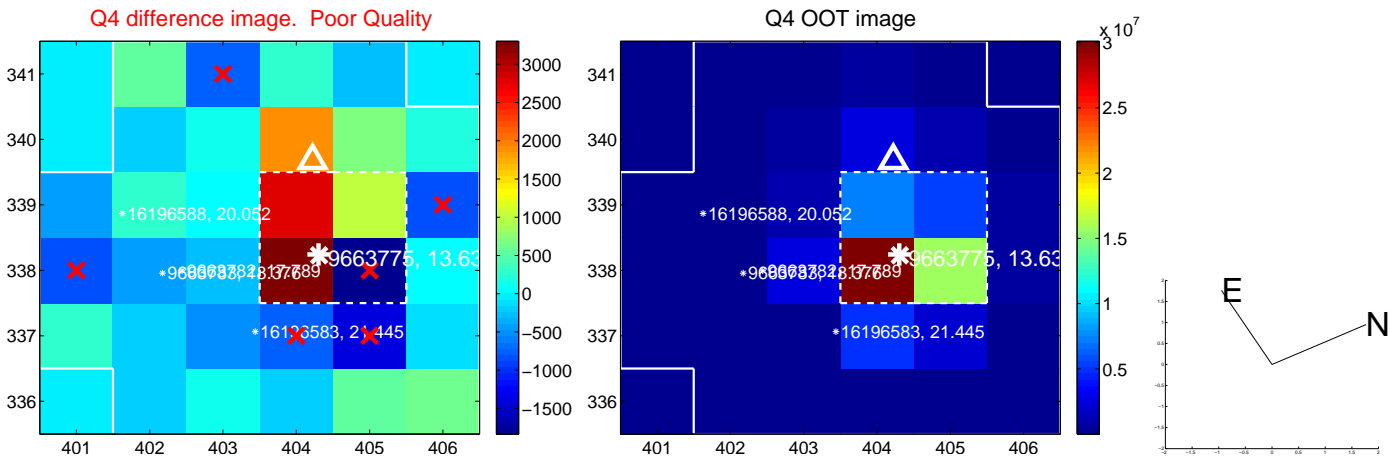
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.251 ± 0.710	4.58	-0.399 ± 1.628	3.227 ± 0.687
PRF-fit source offset from KIC position	3.261 ± 0.712	4.58	-0.274 ± 1.610	3.250 ± 0.701
photometric centroid source offset	4.19 ± 1.71	2.45	0.75 ± 1.89	4.12 ± 1.70



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.

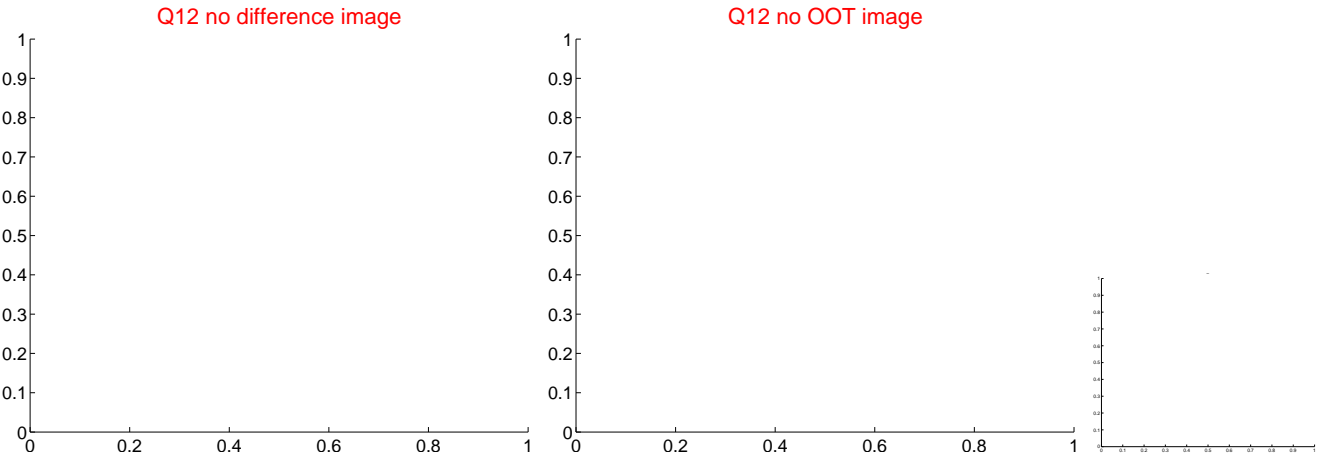
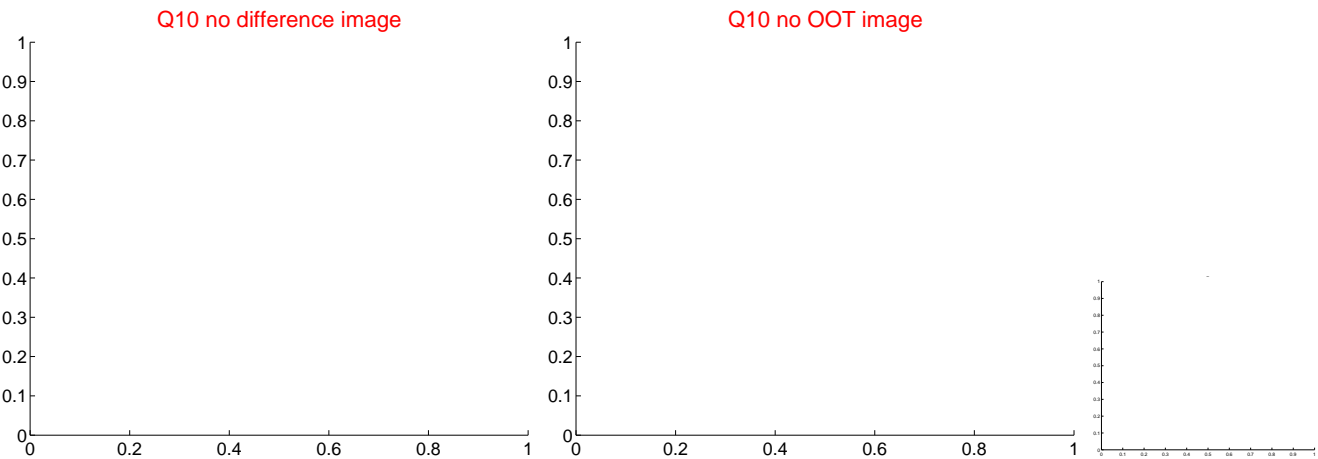
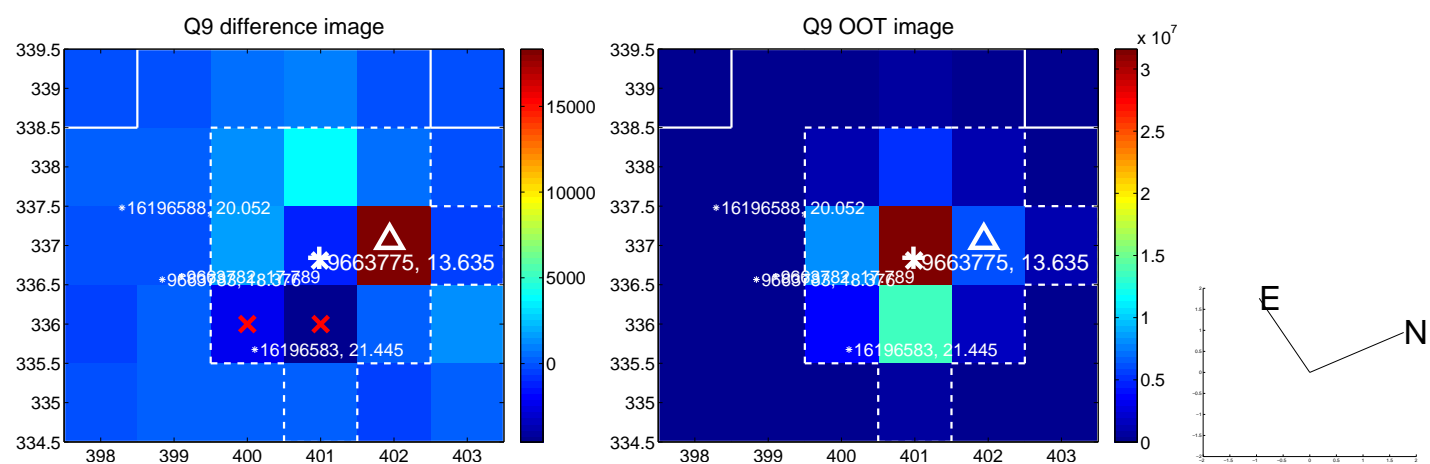
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



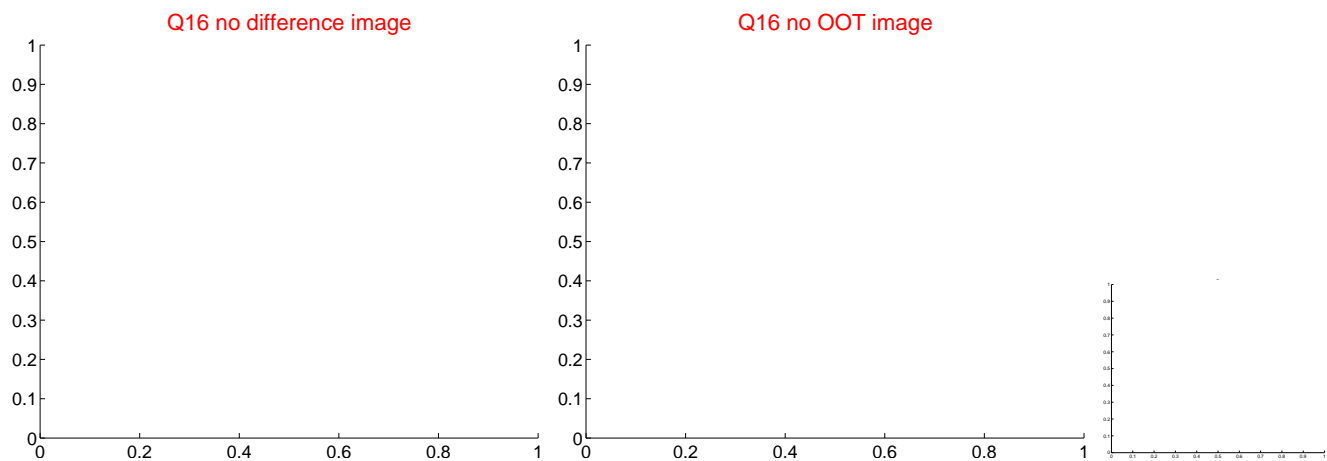
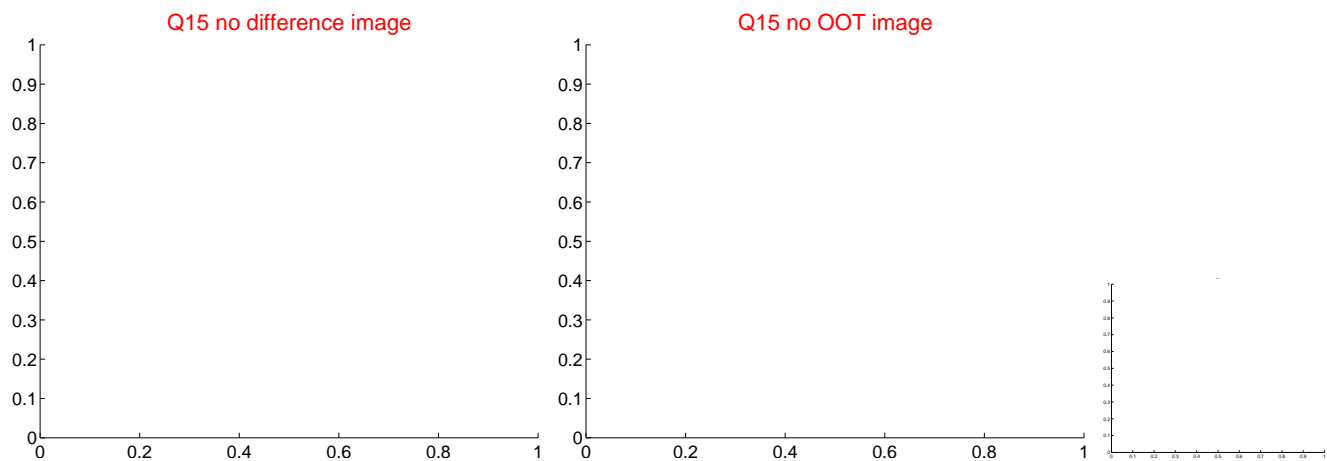
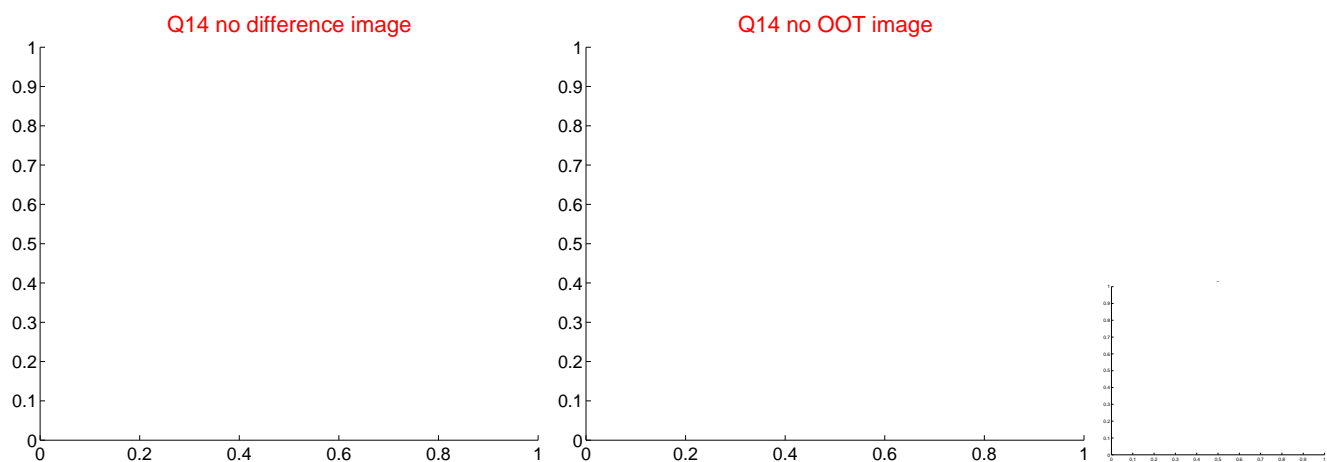
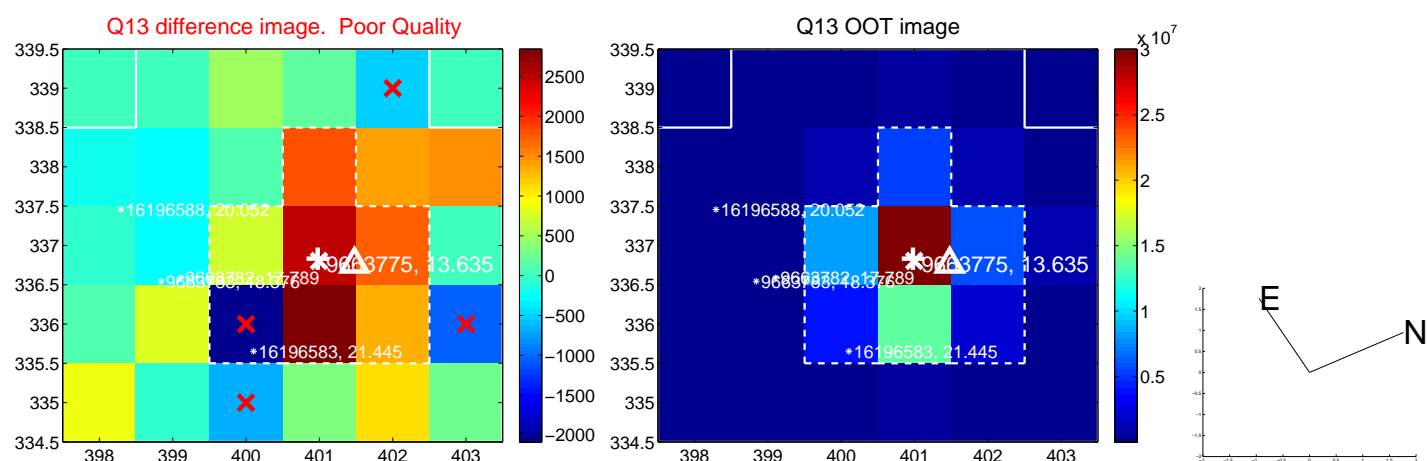
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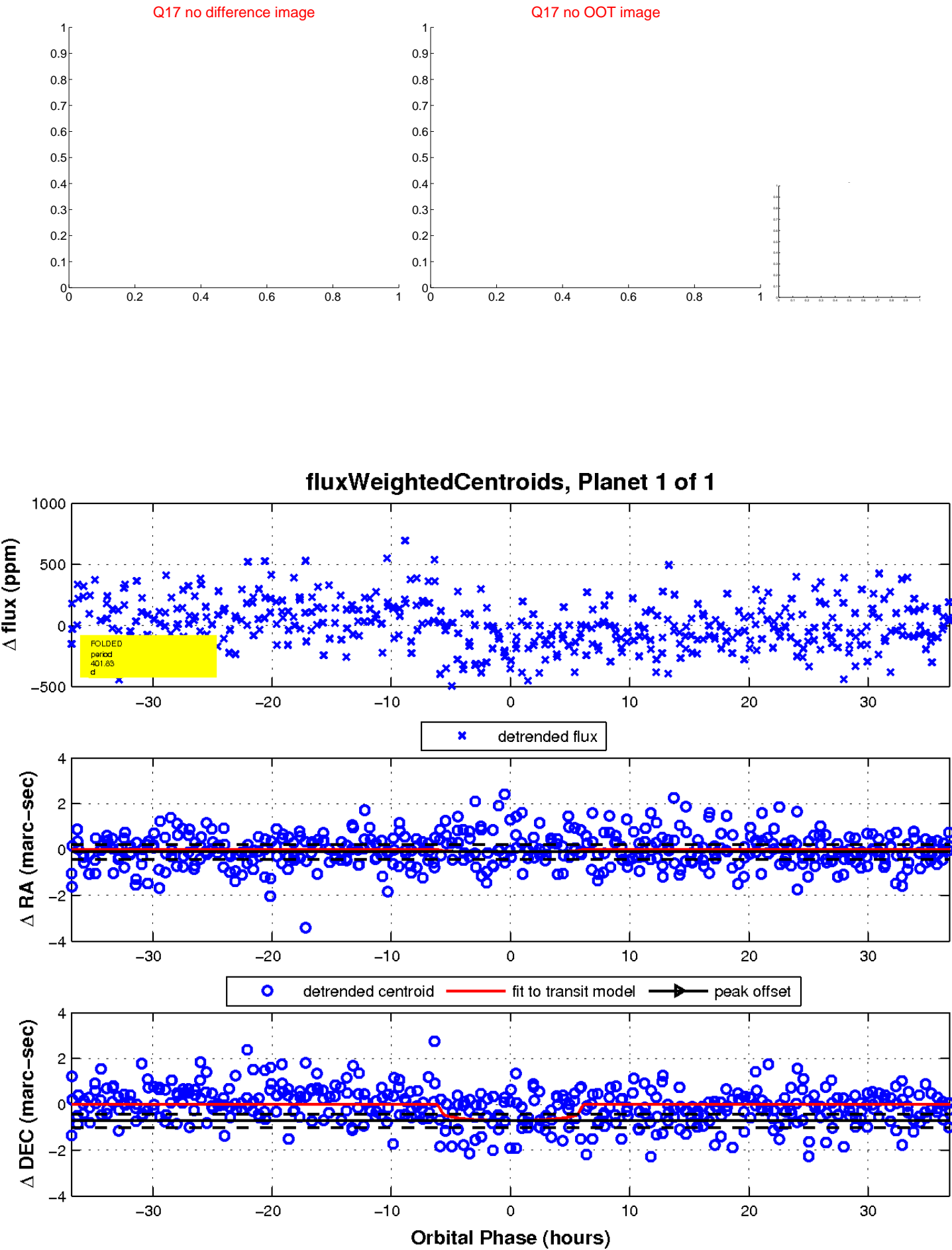
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UKIRT Image

Declination

