

KIC 005166899

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})
005166899-01	OBS	No	368.054838	390.533576	444.8	3.083	13.2	5.5	5.20	4791	10.59	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005166899-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

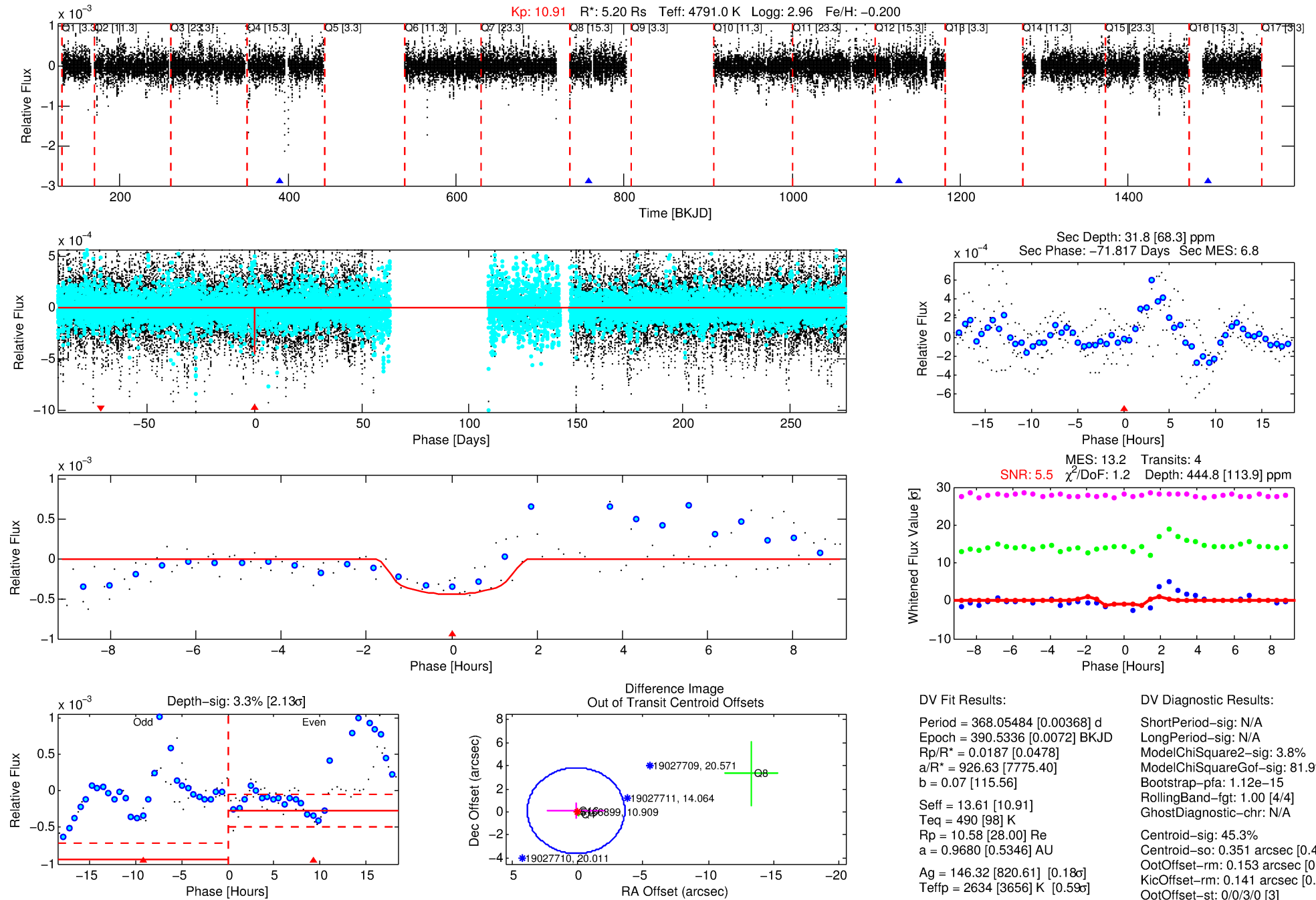
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005166899-01

No Significant Match Found

DV One-Page Summary

KIC: 5166899 Candidate: 1 of 1 Period: 368.055 d



DV Fit Results:

Period = 368.05484 [0.00368] d
Epoch = 390.5336 [0.0072] BKJD
Rp/R* = 0.0187 [0.0478]
a/R* = 926.63 [7775.40]
b = 0.07 [115.56]
Seff = 13.61 [10.91]
Teq = 490 [98] K
Rp = 10.58 [28.00] Re
a = 0.9680 [0.5346] AU
Ag = 146.32 [820.61] [0.18 σ]
Teffp = 2634 [3656] K [0.59 σ]

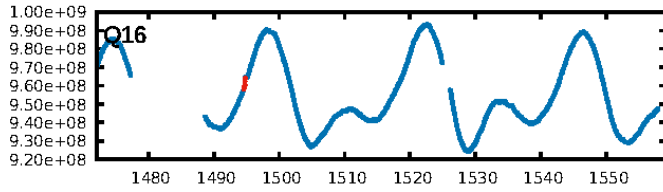
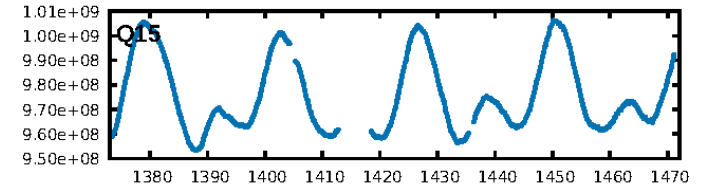
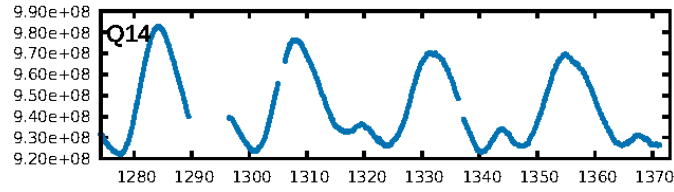
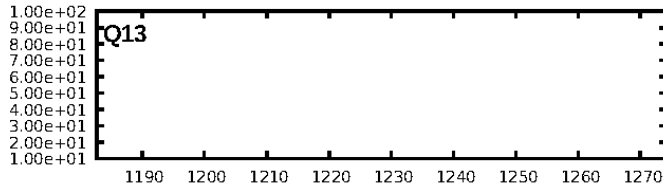
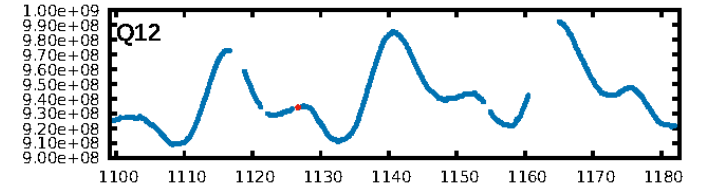
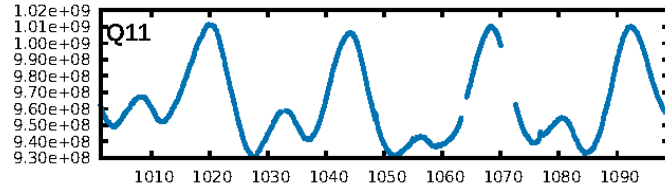
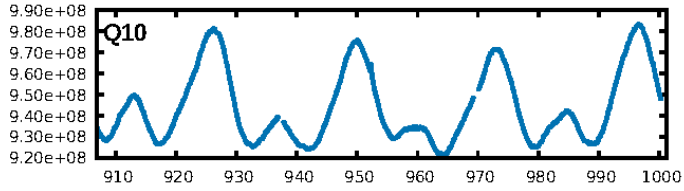
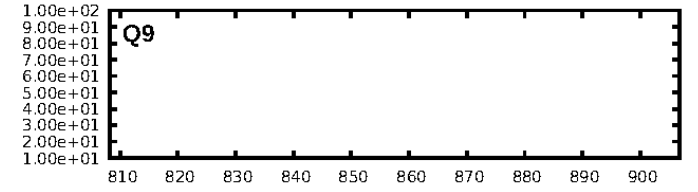
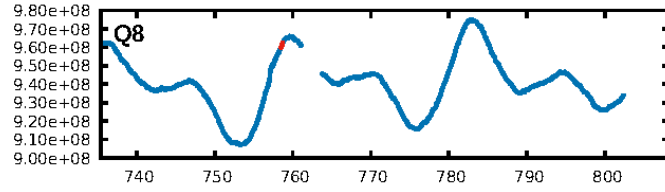
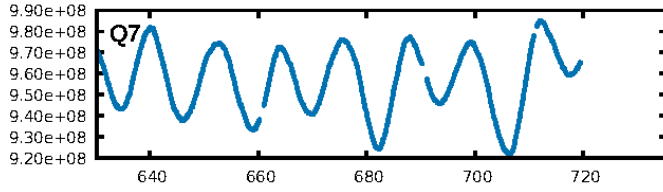
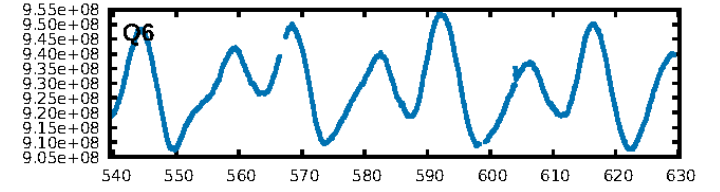
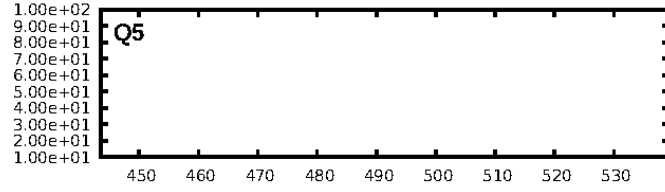
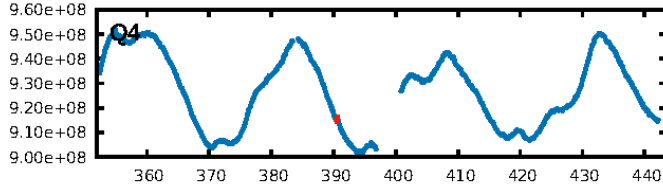
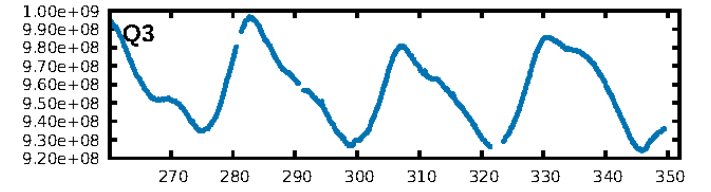
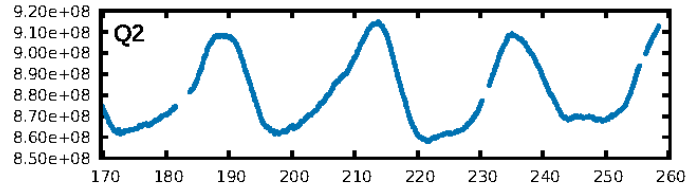
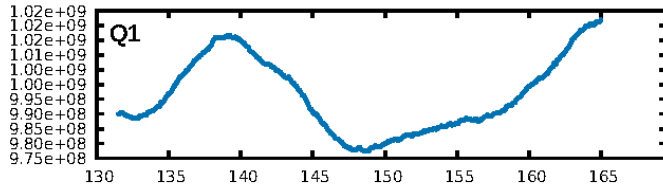
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.8%
ModelChiSquareGof-sig: 81.9%
Bootstrap-pfa: 1.12e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 45.3%
Centroid-so: 0.351 arcsec [0.43 σ]
OotOffset-rm: 0.153 arcsec [0.12 σ]
KicOffset-rm: 0.141 arcsec [0.15 σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

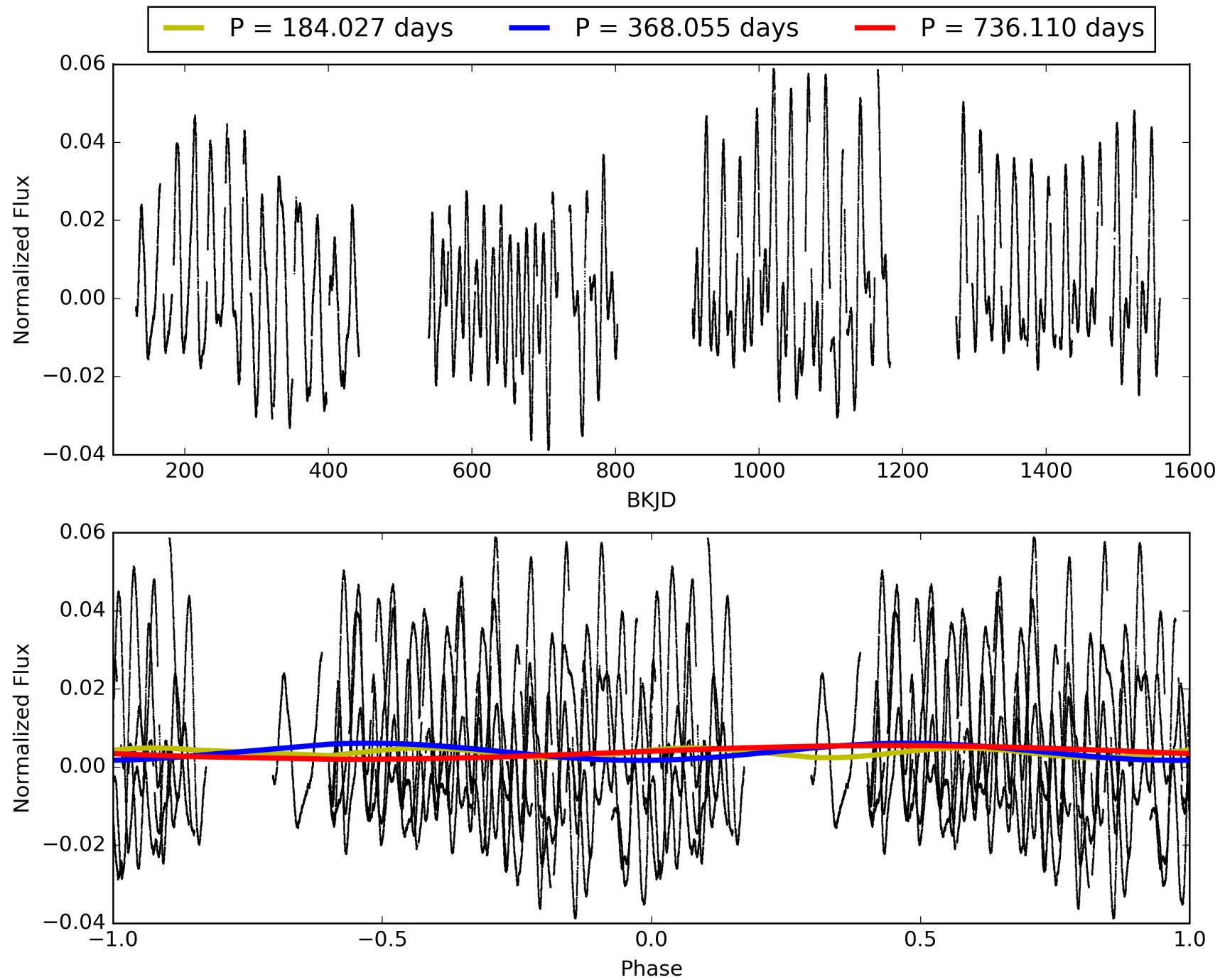
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:00:11 Z

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

TCE 005166899-01, PDC Light Curves

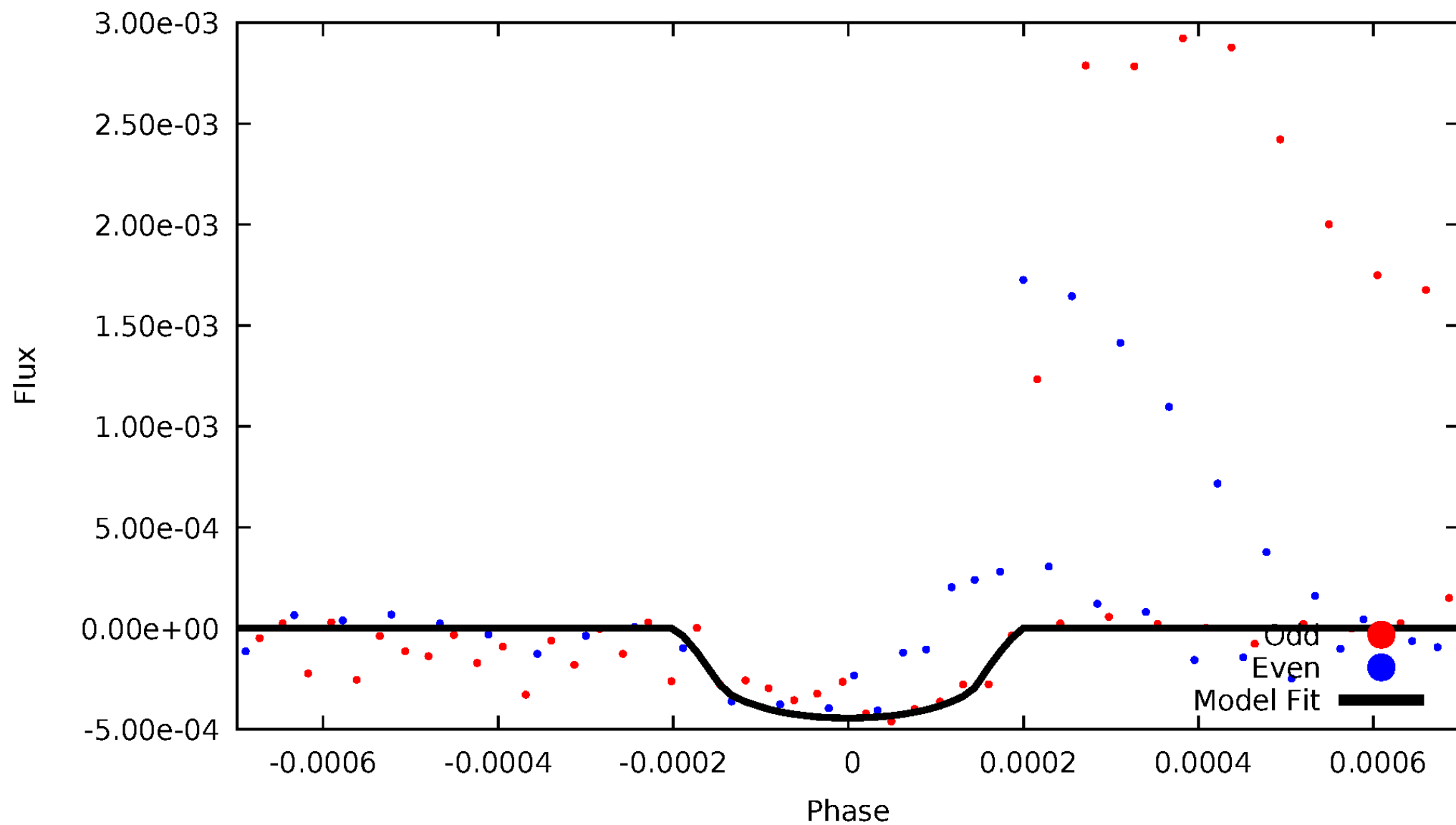


TCE 005166899-01



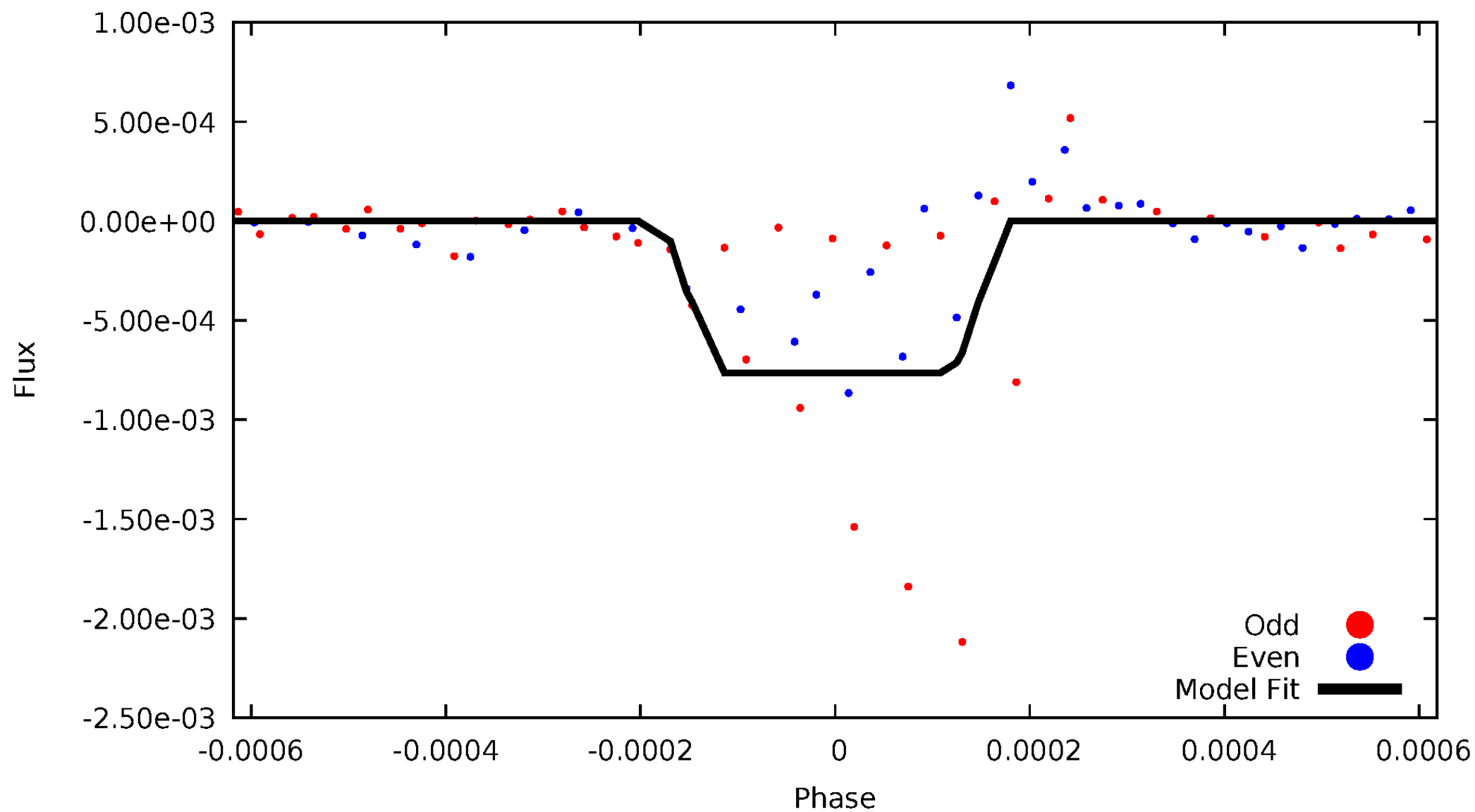
DV Odd/Even

TCE 005166899-01



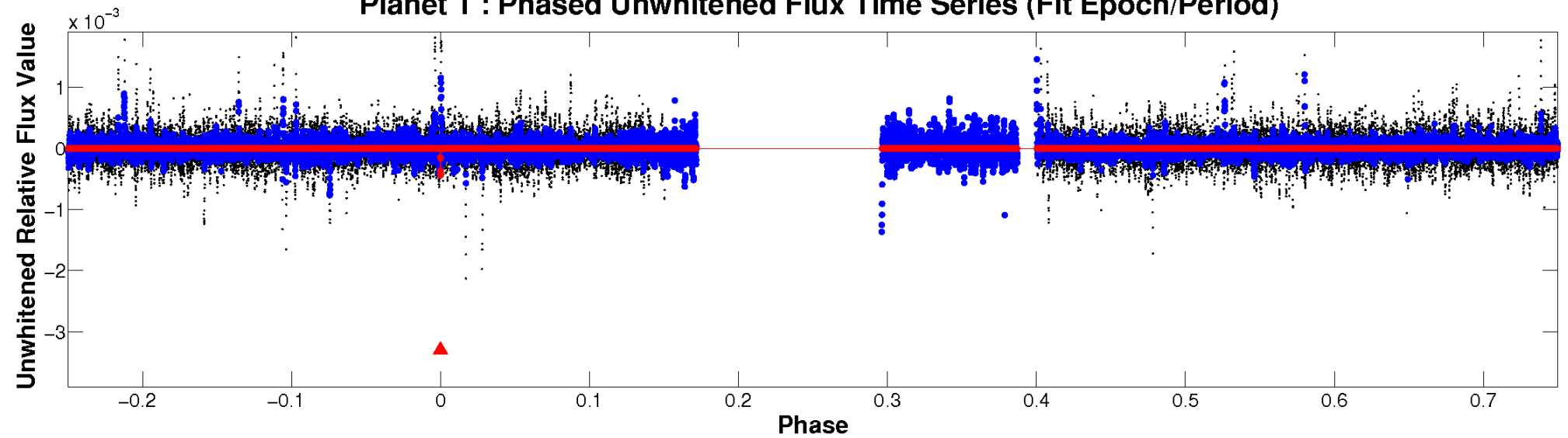
ALT Odd/Even

TCE 005166899-01

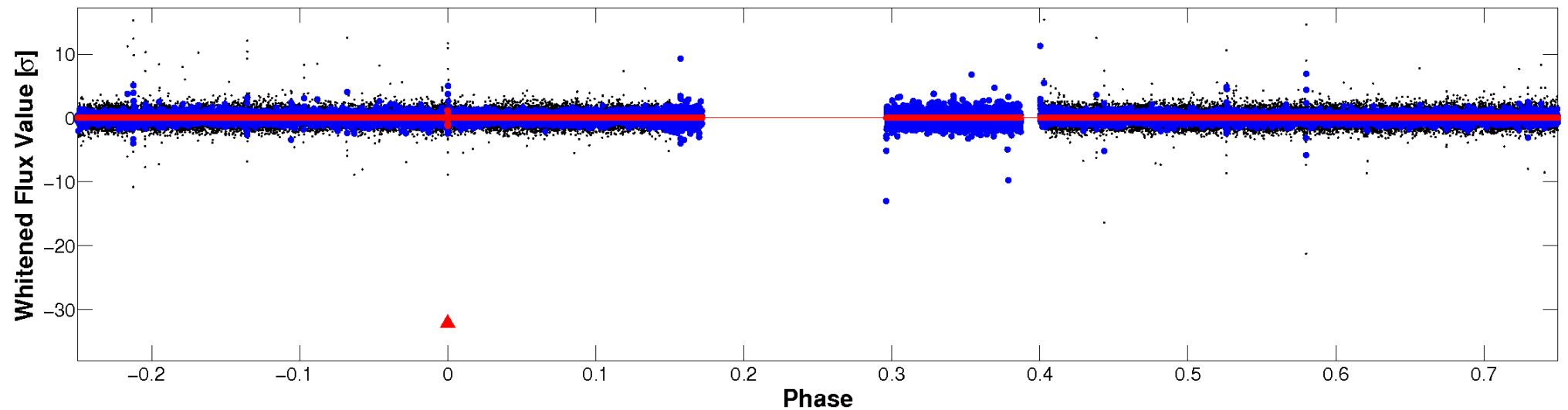


Non-Whitened Vs. Whitened Light Curve

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



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



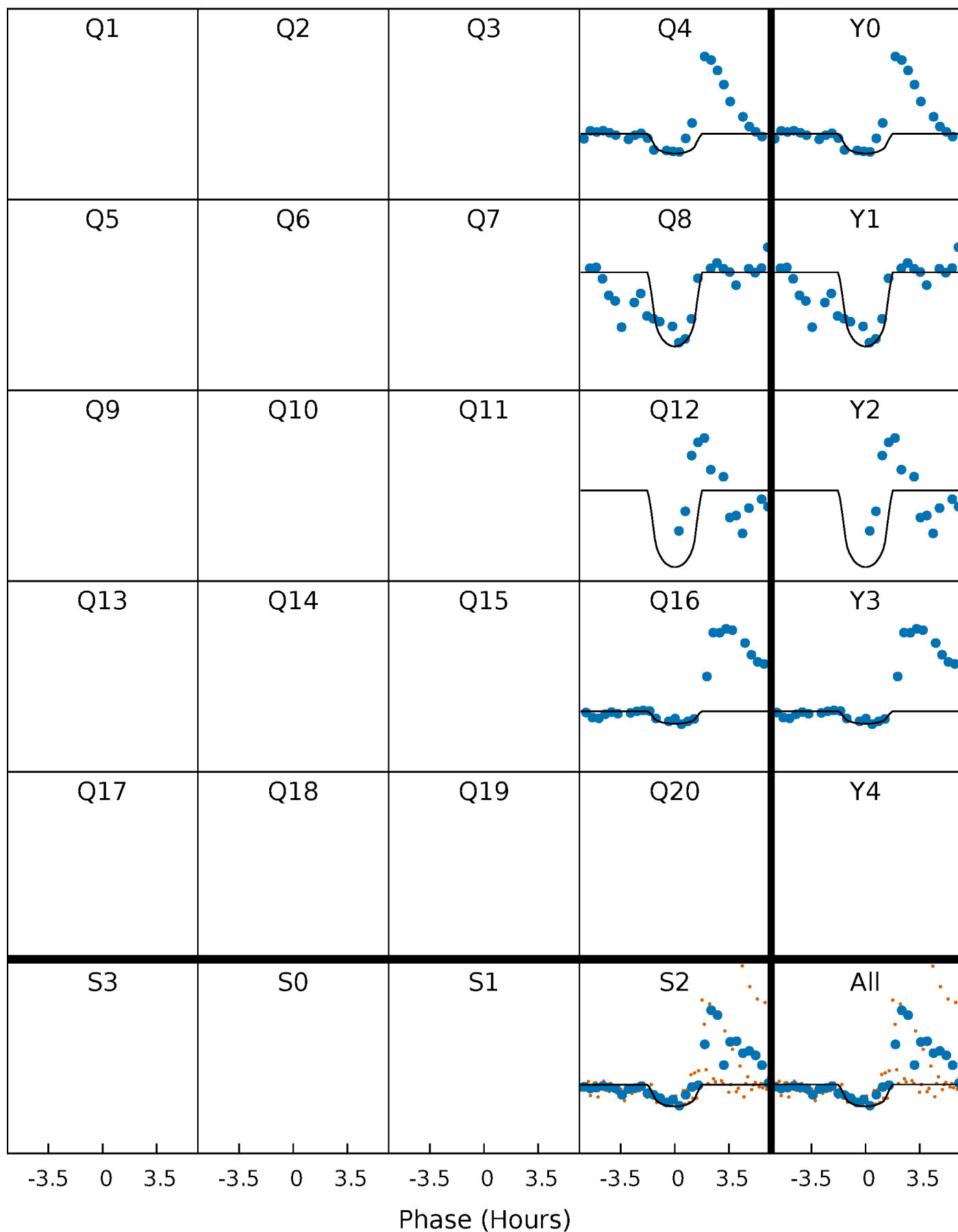
PDC Quarter-Phased Transit Curves

TCE 005166899-01 P=368.054838 Days $T_0=390.533576$ (BKJD)



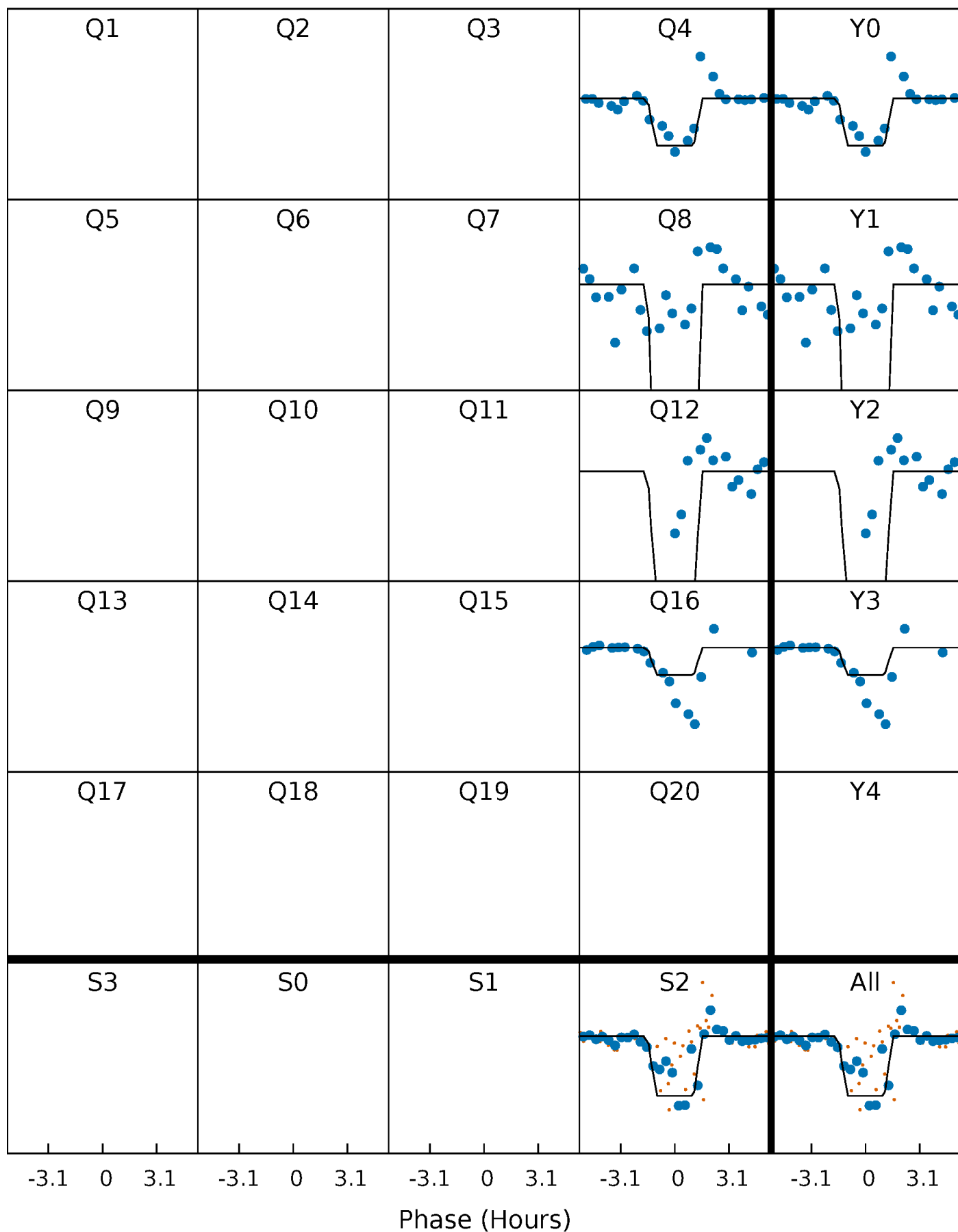
DV Quarter-Phased Transit Curves

TCE 005166899-01 P=368.054838 Days $T_0=390.533576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

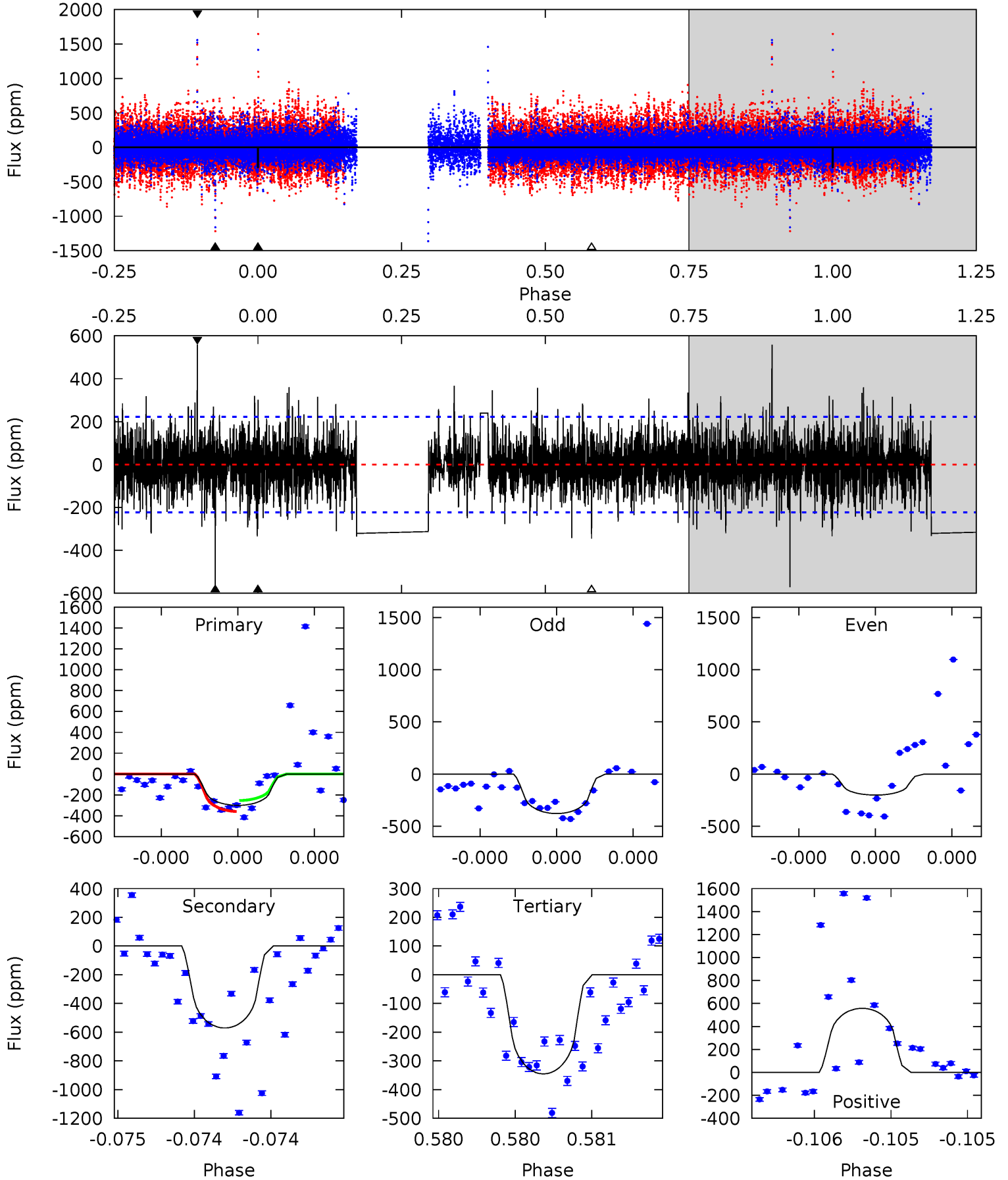
TCE 005166899-01 P=368.056094 Days $T_0=390.540716$ (BKJD)



DV Model-Shift Uniqueness Test

005166899-01, $P = 368.054838$ Days, $E = 22.478738$ Days

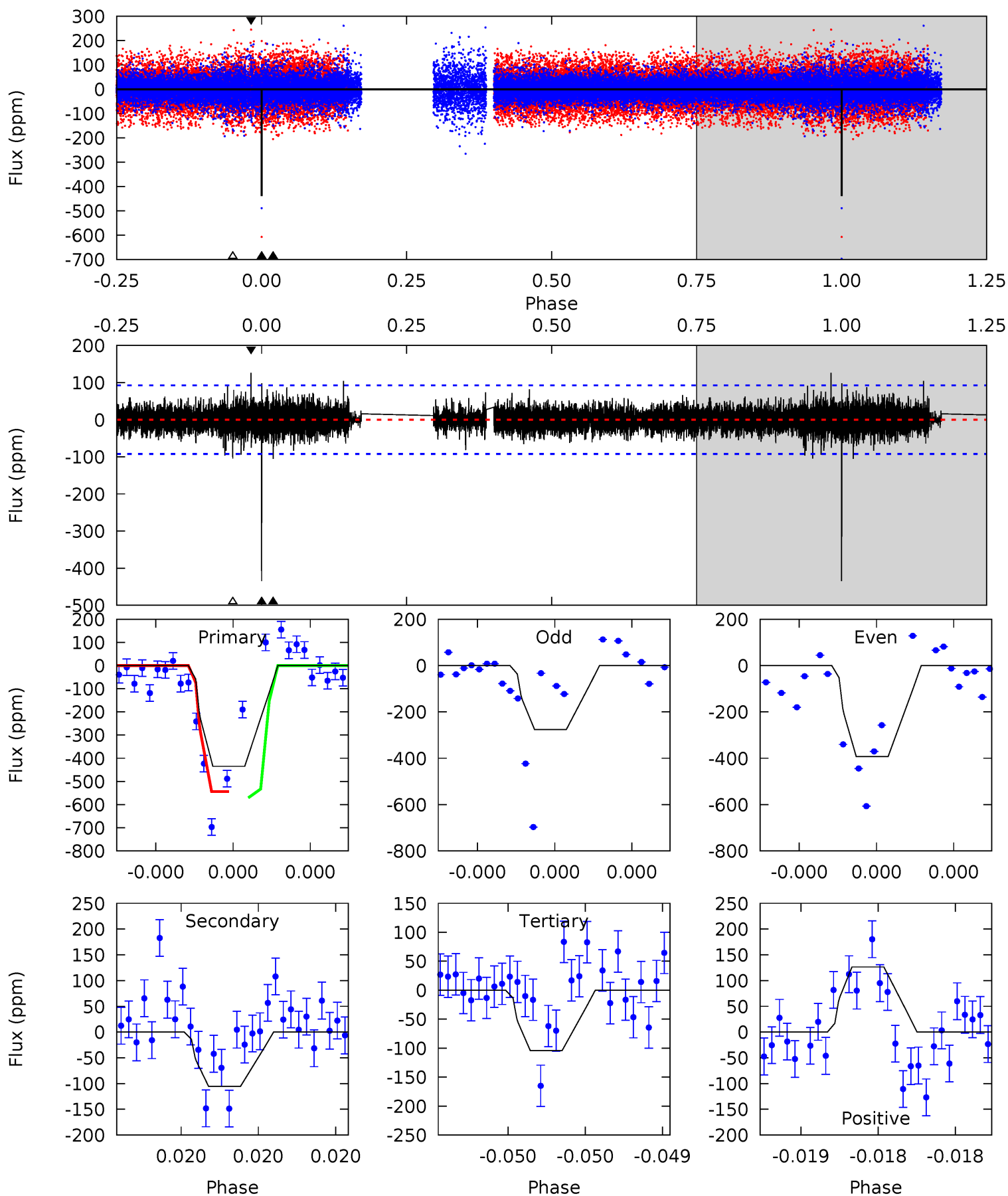
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.58	14.4	8.73	14.1	5.63	3.57	2.21	-1.15	-6.52	5.71	0.33	2.03	0.82	0.49	1.31



Alt Model-Shift Uniqueness Test

005166899-01, P = 368.056094 Days, E = 22.484622 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	6.43	6.34	7.70	5.64	3.58	1.15	20.1	18.8	0.08	-1.27	4.05	1.45	0.23	0



Stellar Parameters For KIC 005166899

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4791^{+132}_{-108}	$2.957^{+0.429}_{-0.351}$	$-0.200^{+0.300}_{-0.200}$	$5.198^{+3.457}_{-1.861}$	$0.893^{+0.367}_{-0.041}$	$0.009^{+0.026}_{-0.007}$
	+3%/-2%	+15%/-12%	+150%/-100%	+67%/-36%	+41%/-5%	+286%/-74%
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 005166899-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-571 ± 40	$20.37^{+28.46}_{-13.69}$	672^{+117}_{-82}	4066^{+2672}_{-899}	753^{+6333}_{-618}
Alt.	-105 ± 16	$25.83^{+26.24}_{-17.52}$	677^{+105}_{-76}	2941^{+1225}_{-442}	89^{+750}_{-67}

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 $A_{obs} \gg 1.0$

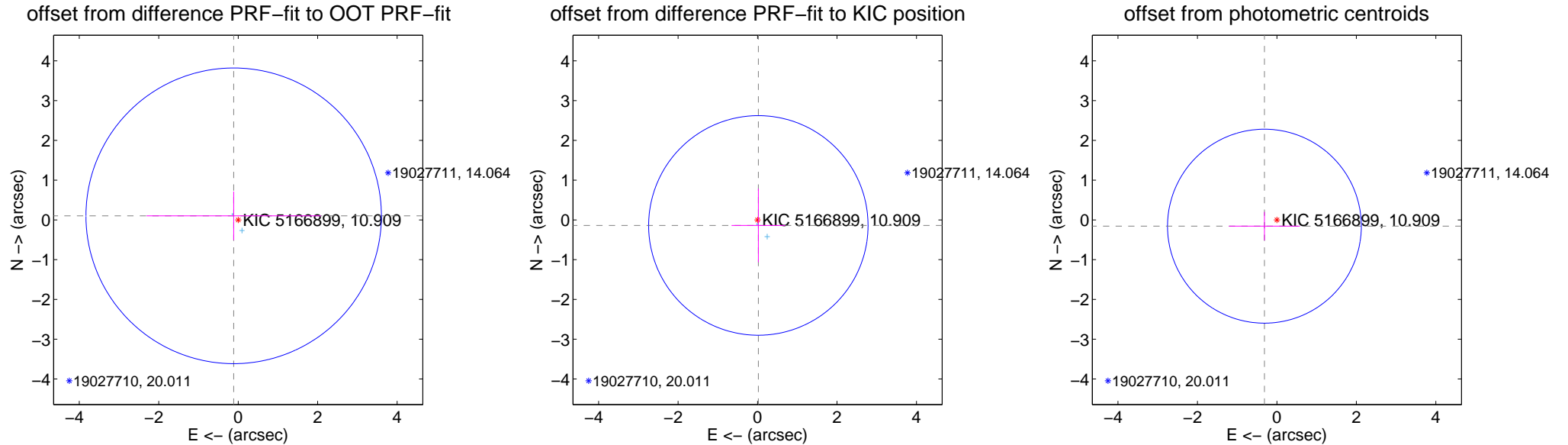
DV Centroid Data

Supplemental centroid analysis for 005166899-01. **Kepler magnitude: 10.91.** Transit SNR 5.49

There are 2 quarters with good PRF difference image offsets

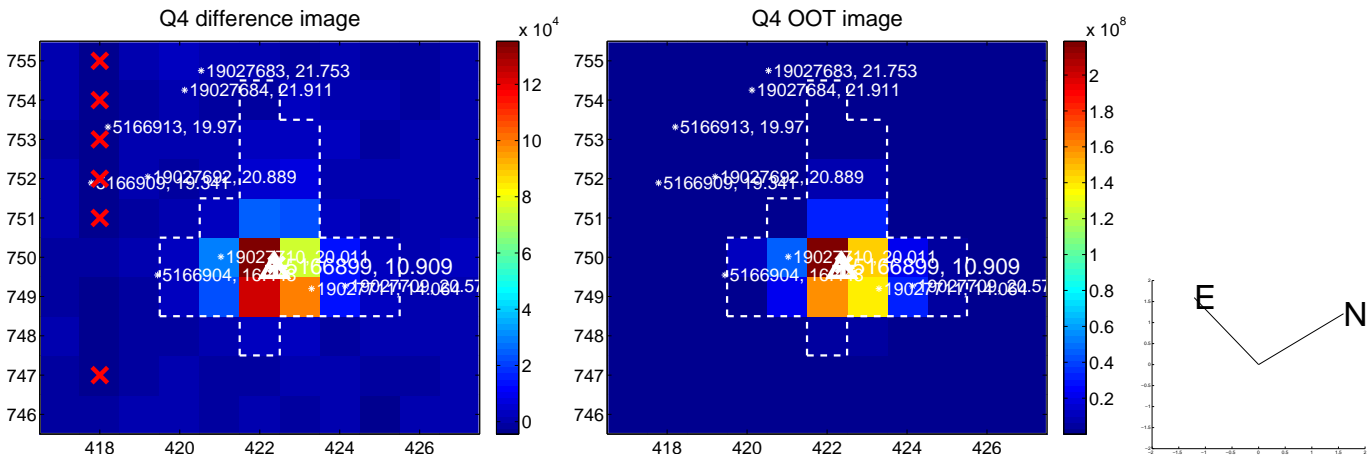
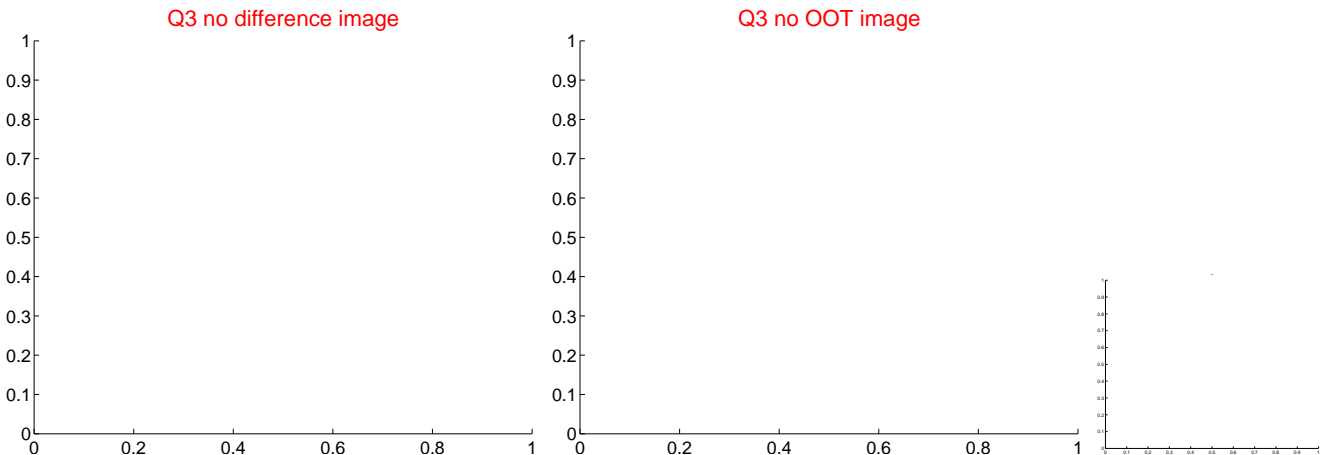
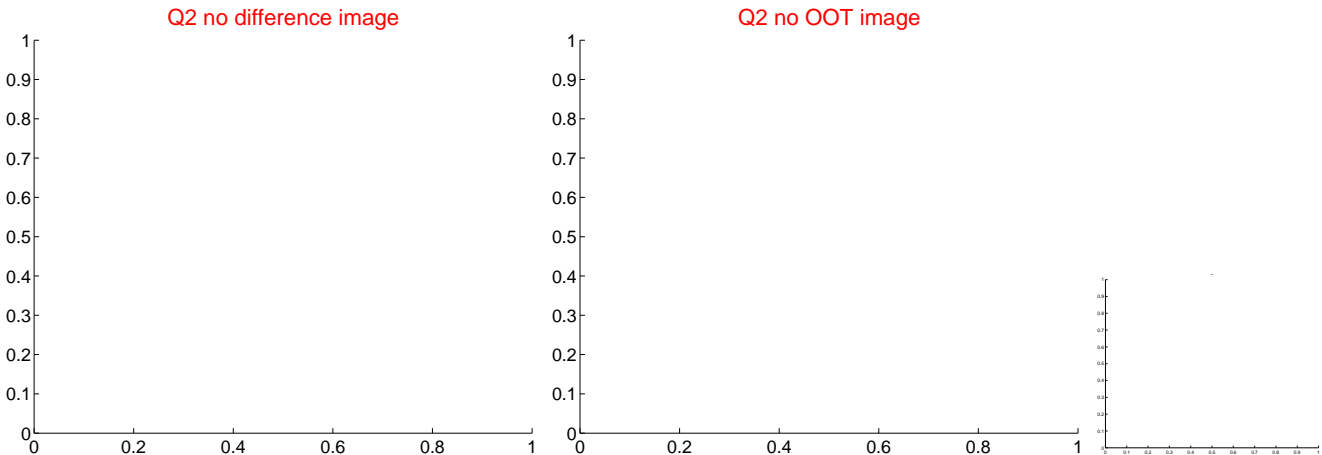
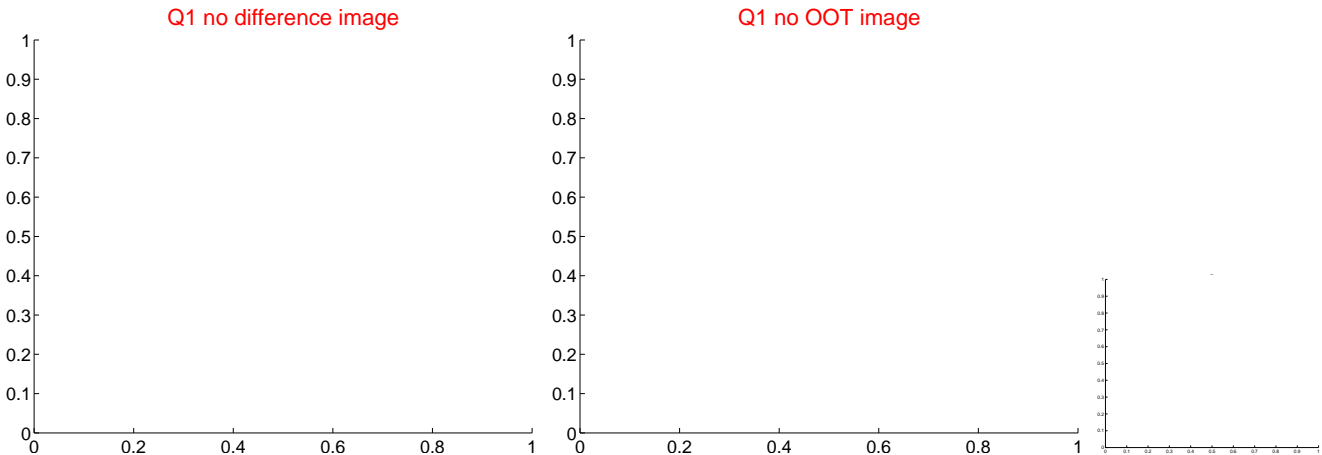
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.153 ± 1.239	0.12	0.114 ± 2.193	0.103 ± 0.610
PRF-fit source offset from KIC position	0.141 ± 0.920	0.15	-0.020 ± 0.673	-0.139 ± 0.925
photometric centroid source offset	0.35 ± 0.81	0.43	0.31 ± 0.89	-0.16 ± 0.36



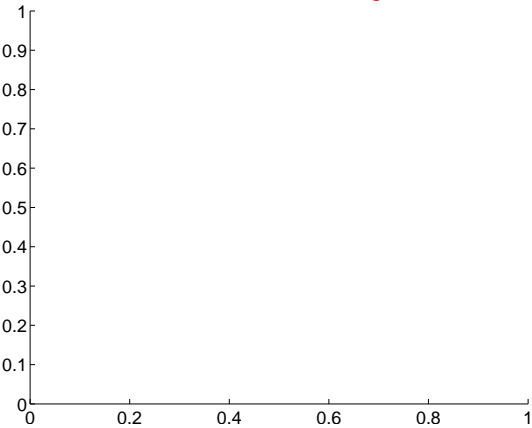
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

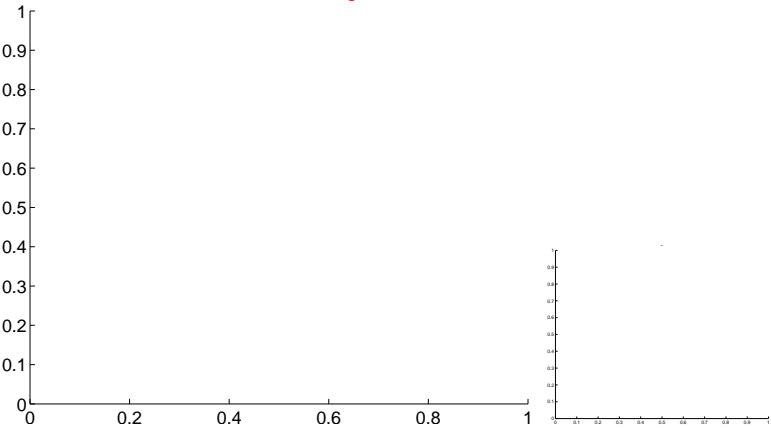


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

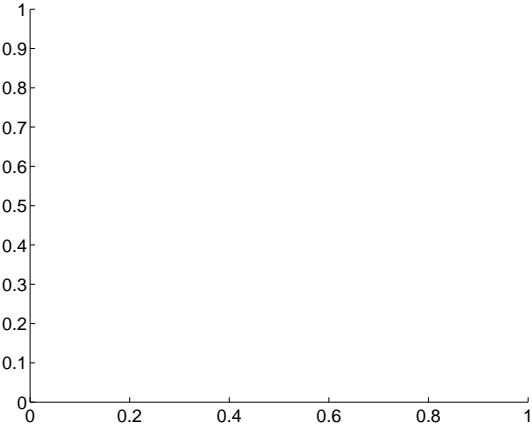
Q5 no difference image



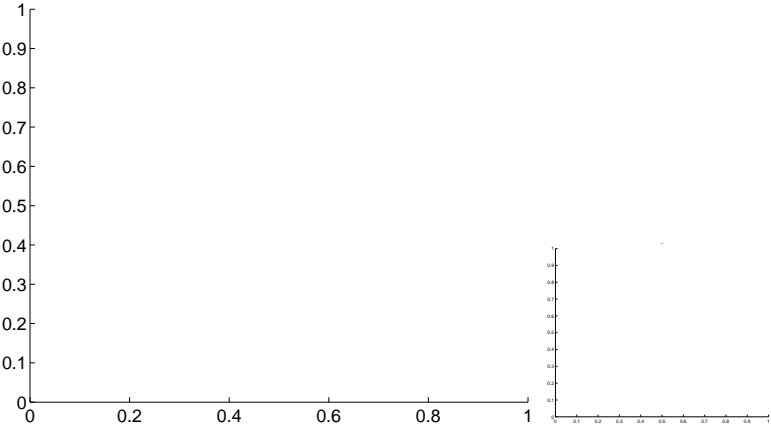
Q5 no OOT image



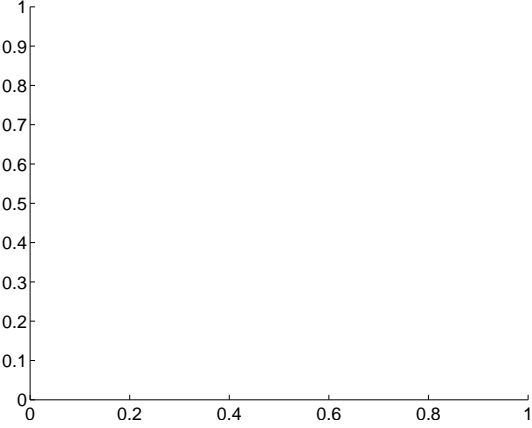
Q6 no difference image



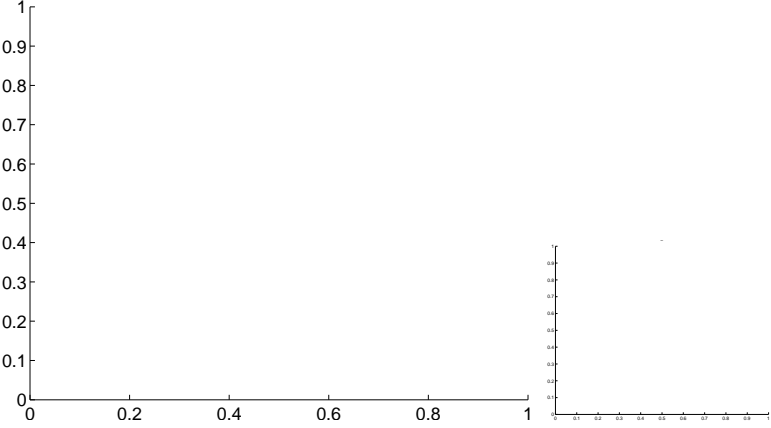
Q6 no OOT image



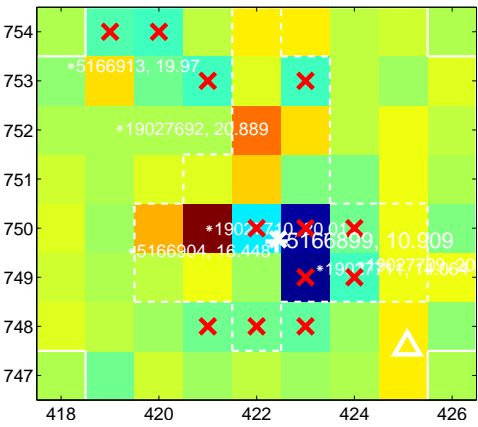
Q7 no difference image



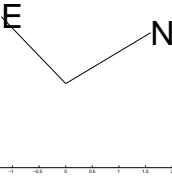
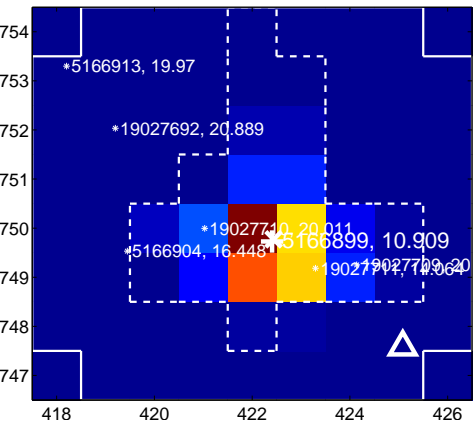
Q7 no OOT image



Q8 difference image. Poor Quality



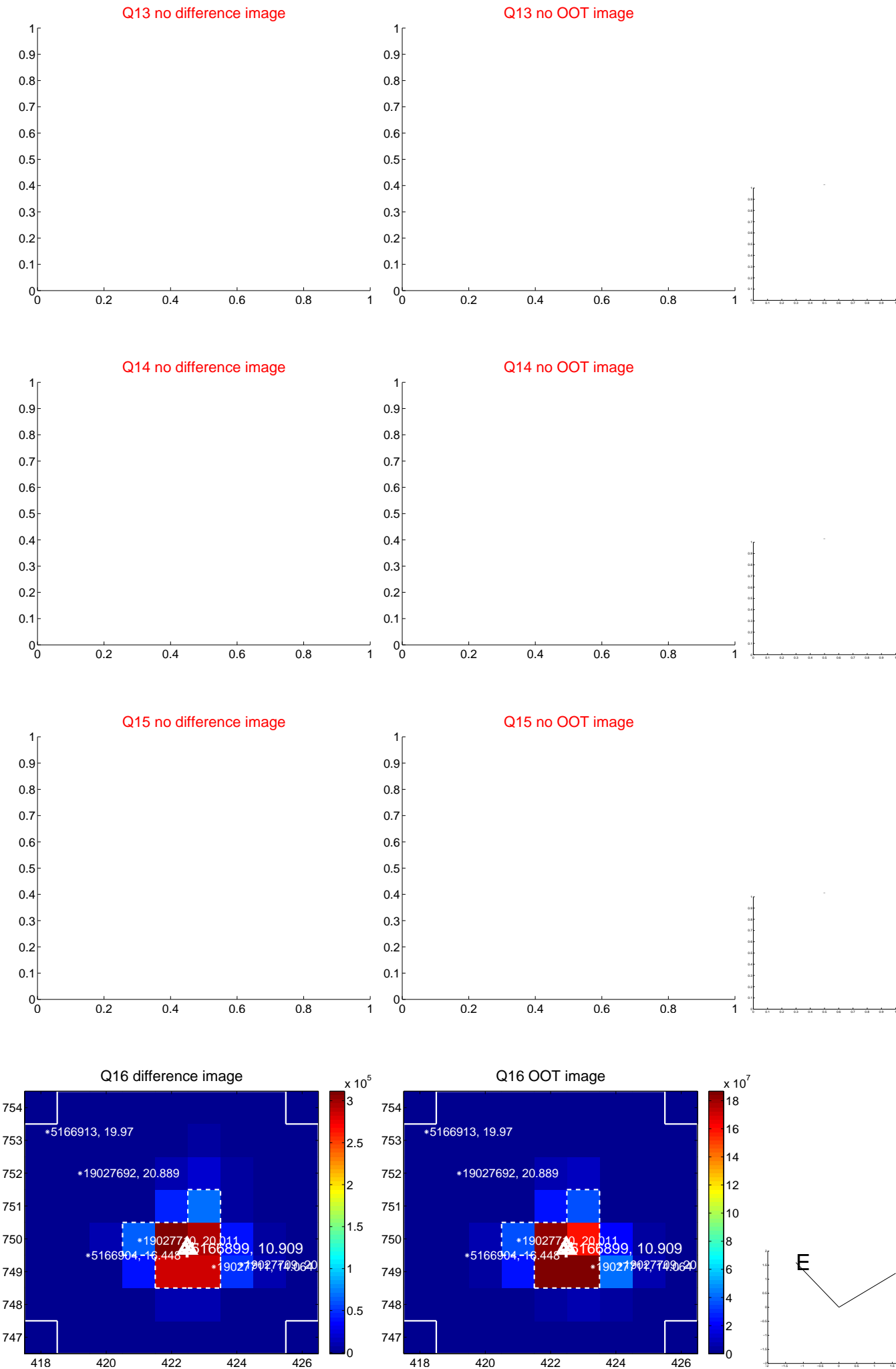
Q8 OOT image



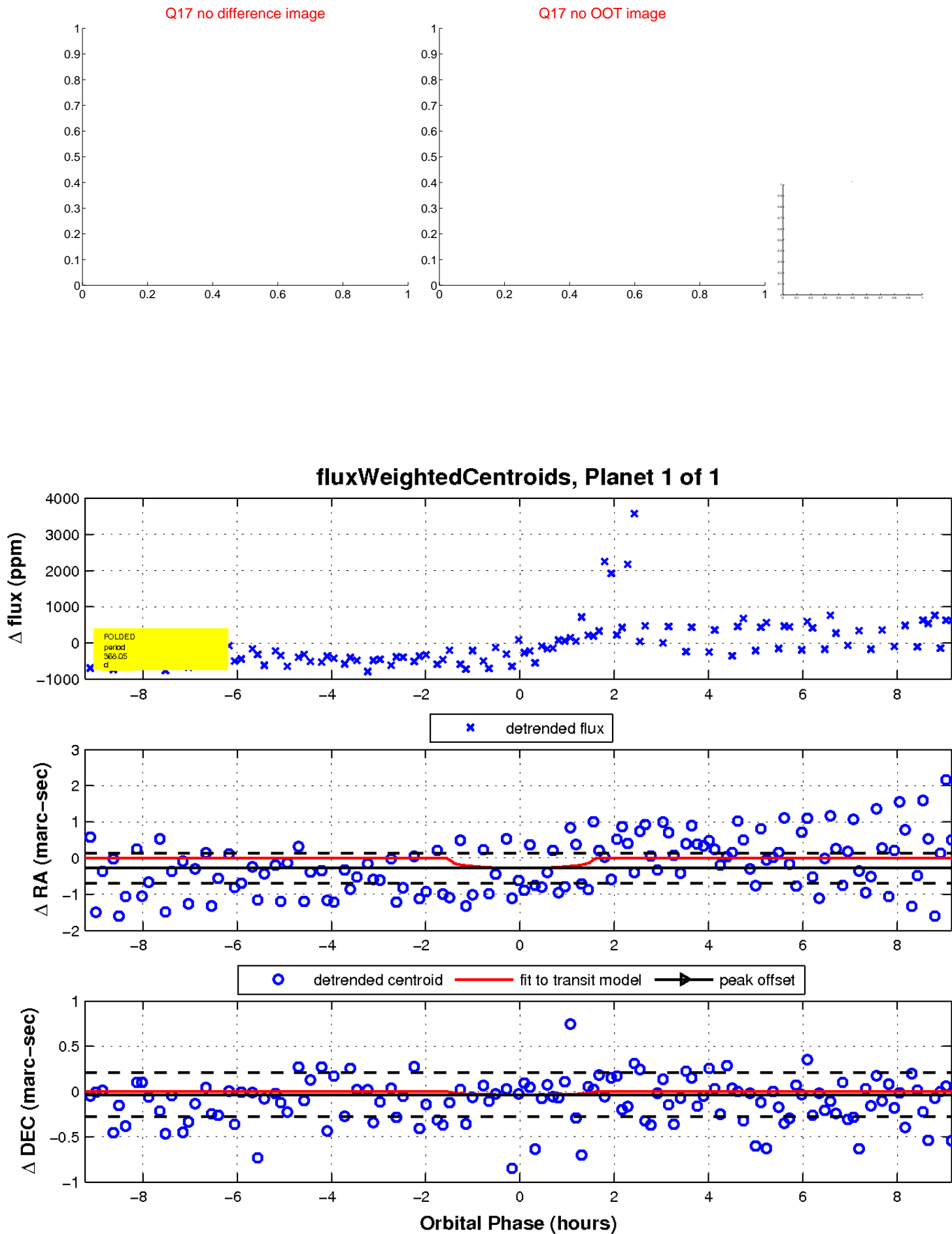
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

