

KIC 003429205

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})
003429205-01	OBS	No	545.377830	449.635963	215.0	12.945	7.3	7.0	3.50	5081	5.74	3.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003429205-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

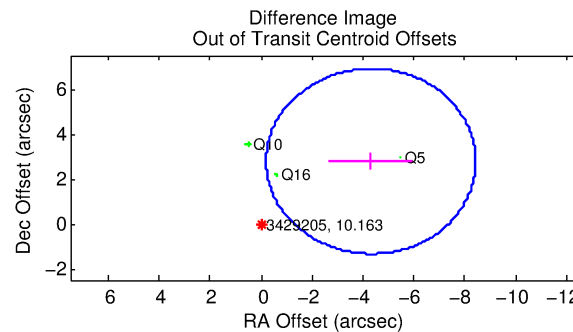
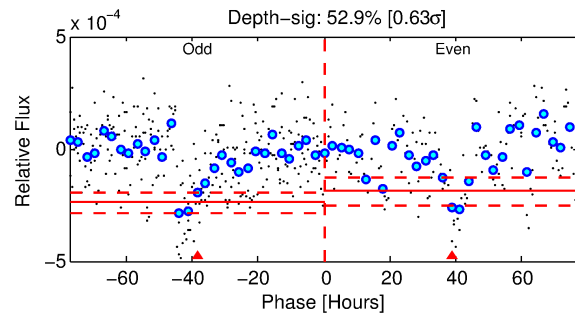
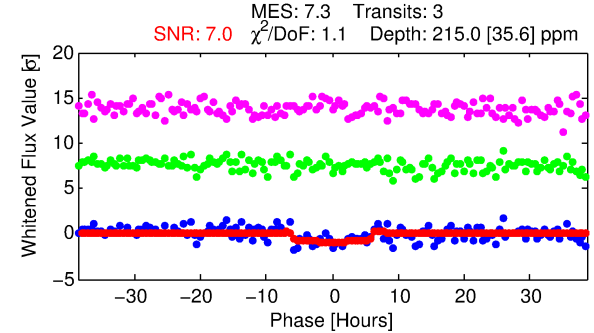
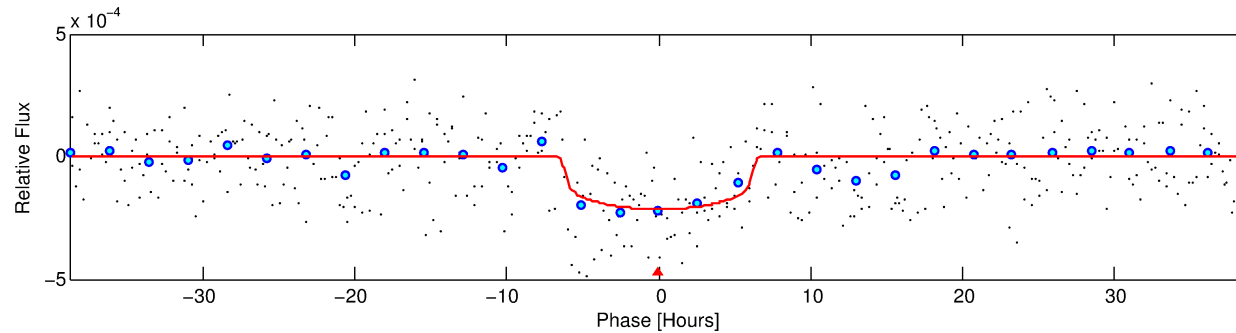
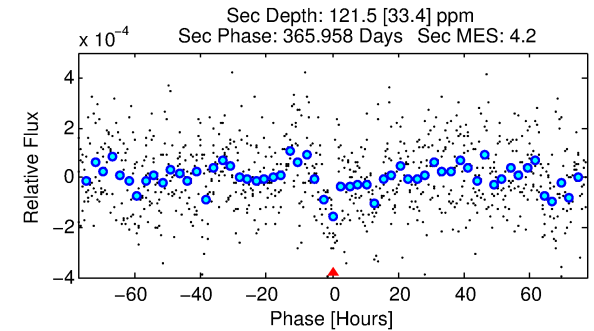
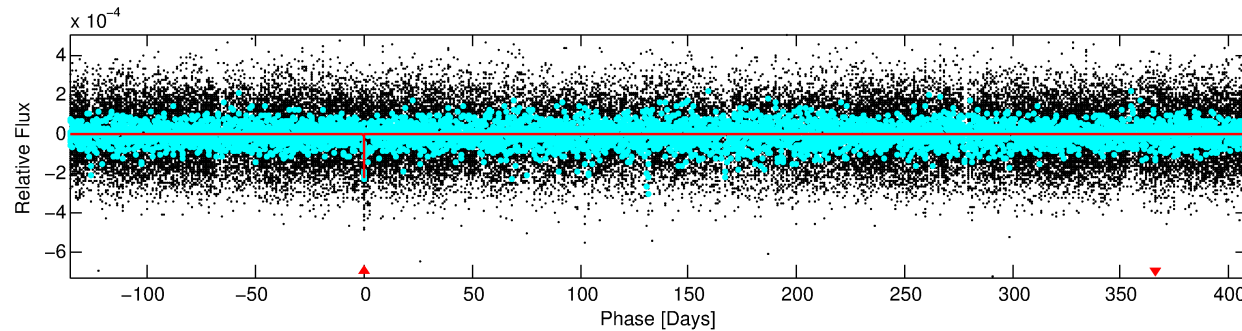
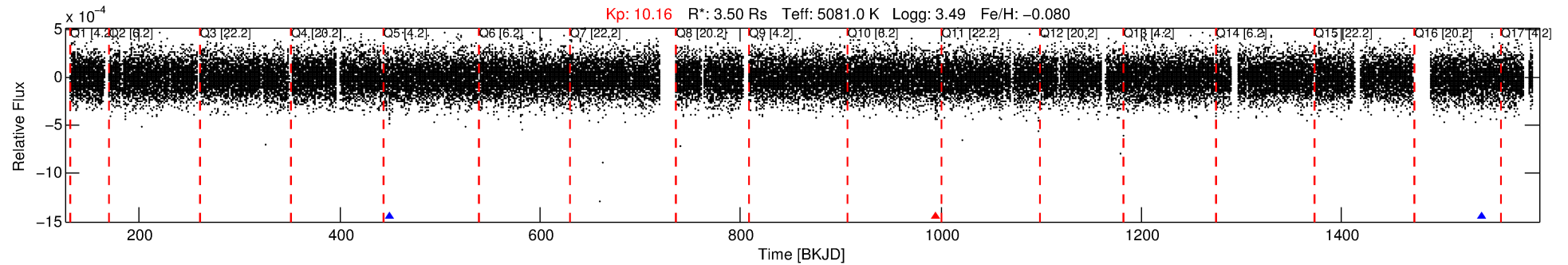
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003429205-01

No Significant Match Found

DV One-Page Summary

KIC: 3429205 Candidate: 1 of 1 Period: 545.378 d



DV Fit Results:

Period = 545.37783 [0.01471] d
Epoch = 449.6360 [0.0197] BKJD
Rp/R* = 0.0150 [0.0049]
a/R* = 199.81 [236.40]
b = 0.80 [0.53]
Seff = 3.47 [0.40]
Teq = 348 [10] K
Rp = 5.74 [1.98] Re
a = 1.4497 [0.1199] AU
Ag = 4266.91 [3015.19] [1.41σ]
Teffp = 4350 [768] K [5.21σ]

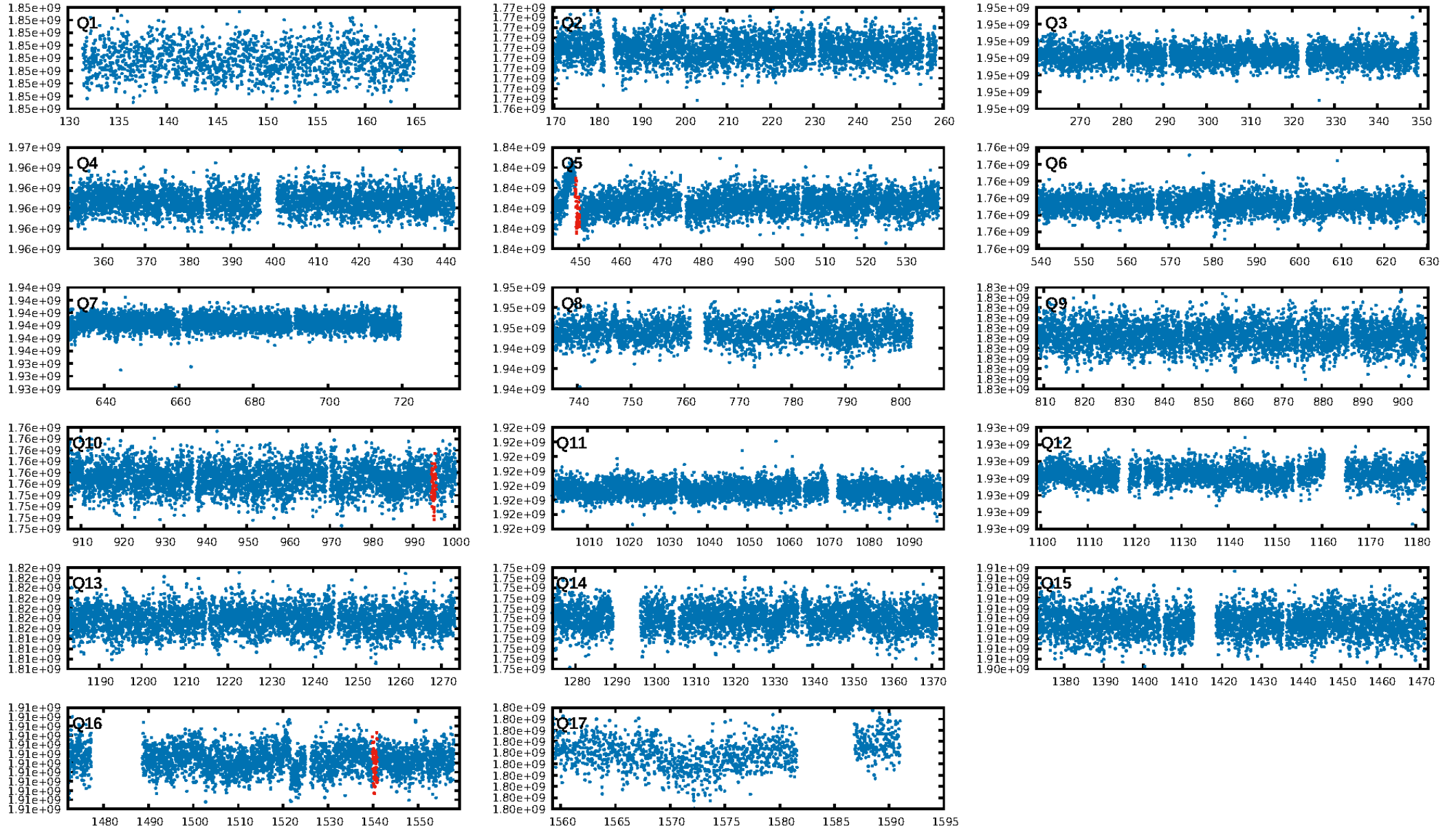
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 45.6%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: 1.29e-11
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 1.553
Centroid-sig: 67.1%
Centroid-so: 1.199 arcsec [0.70σ]
OotOffset-rm: 5.139 arcsec [3.74σ]
KicOffset-rm: 5.537 arcsec [3.46σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

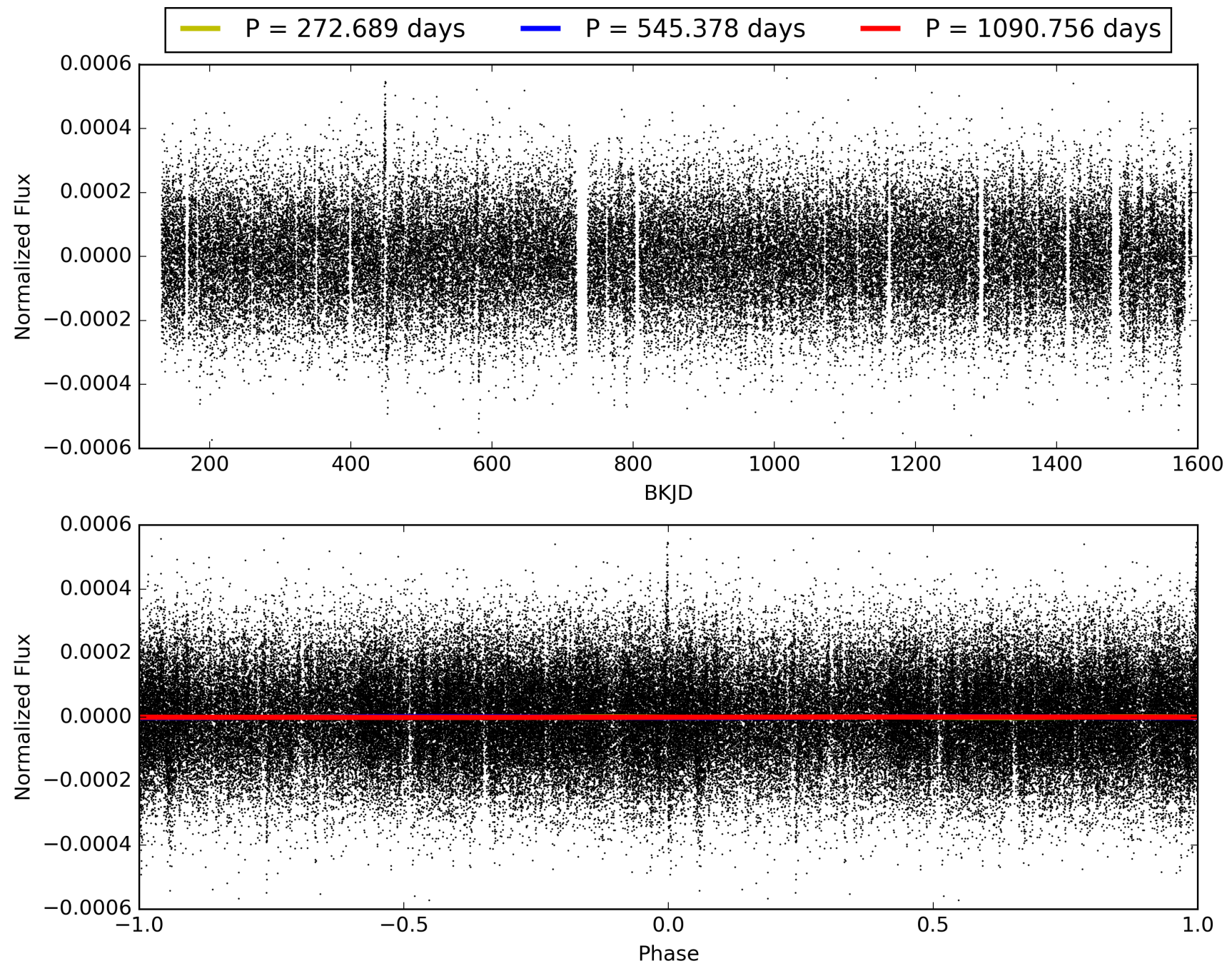
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:40:24 Z

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

TCE 003429205-01, PDC Light Curves

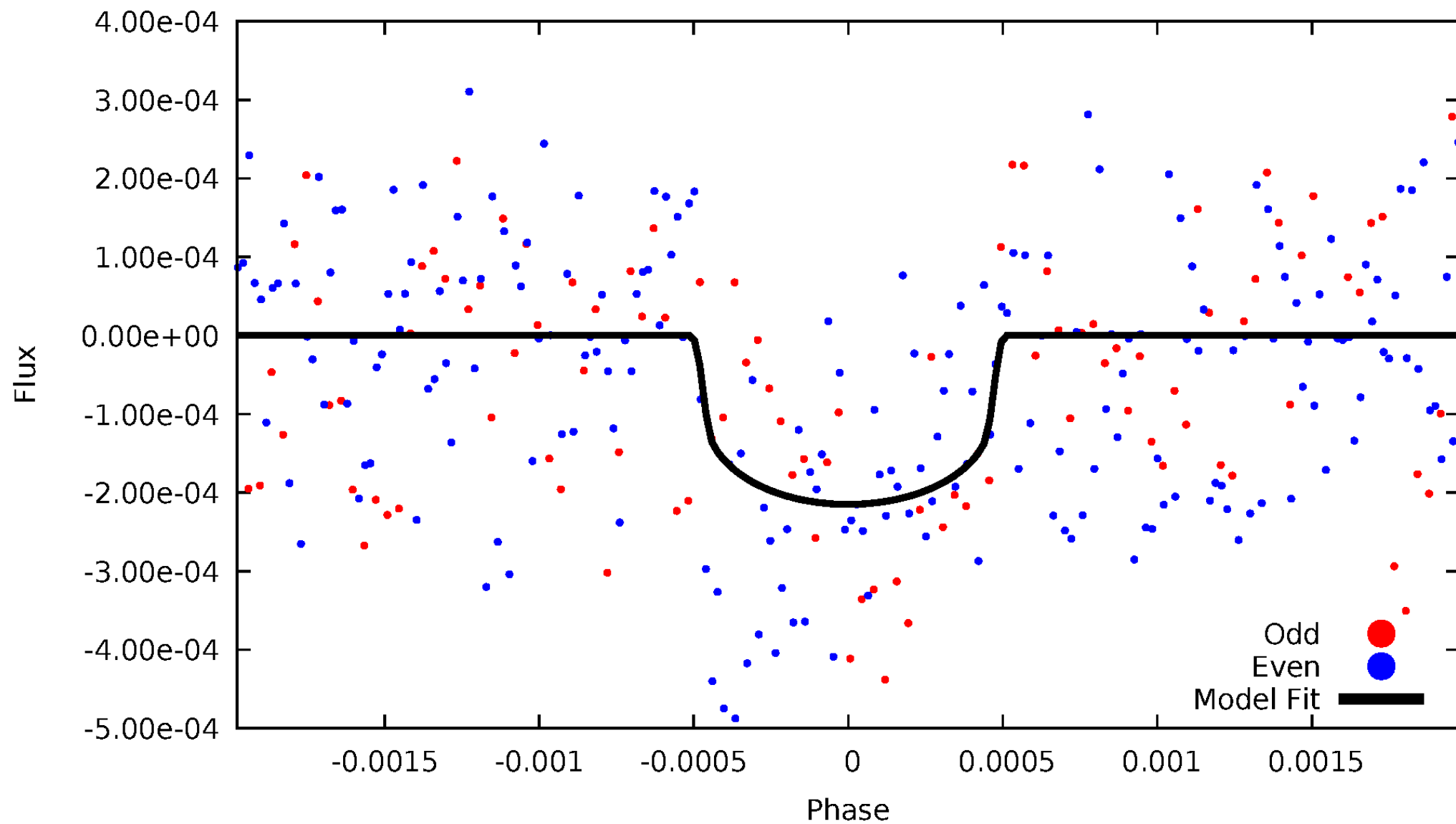


TCE 003429205-01



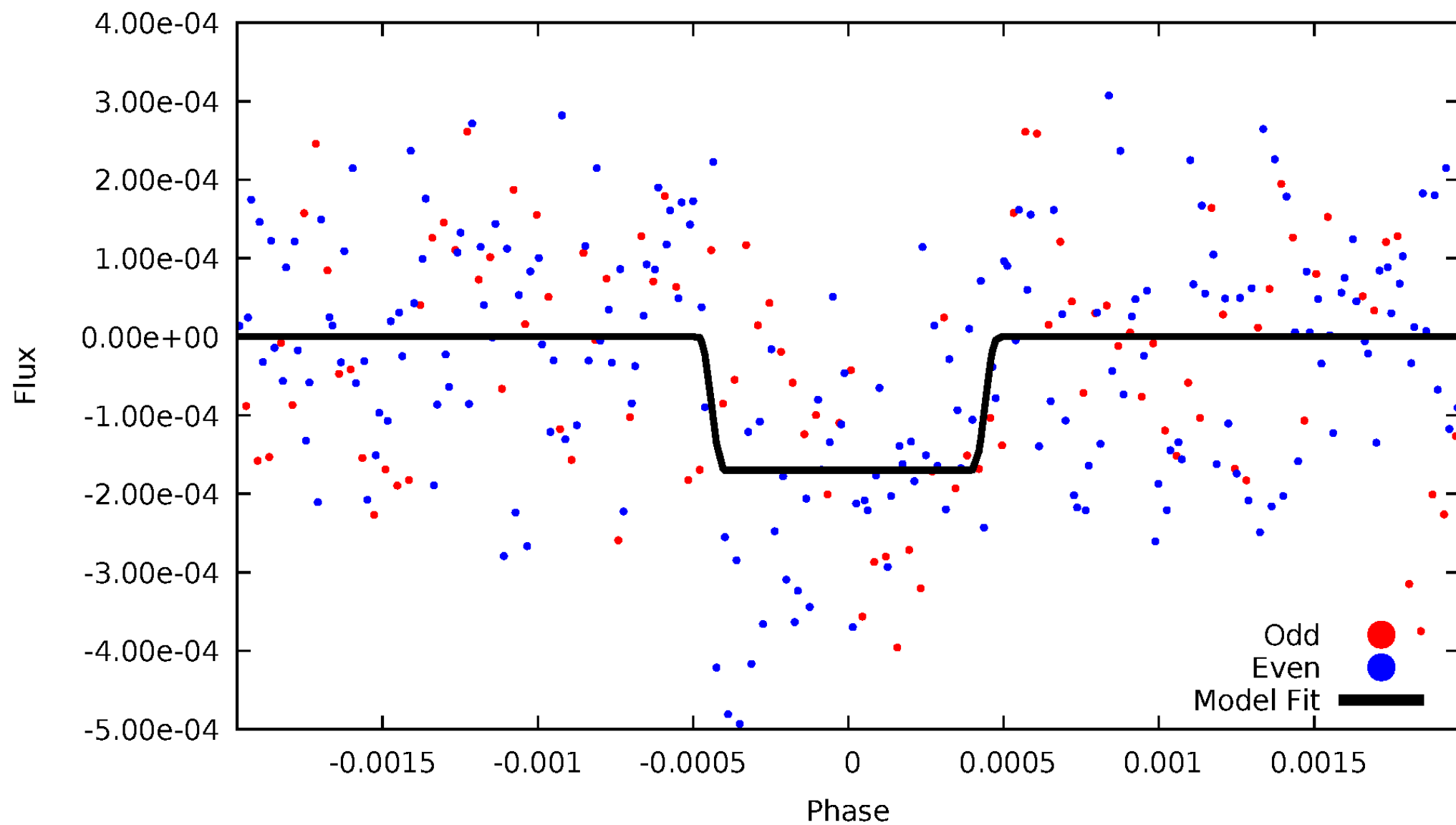
DV Odd/Even

TCE 003429205-01



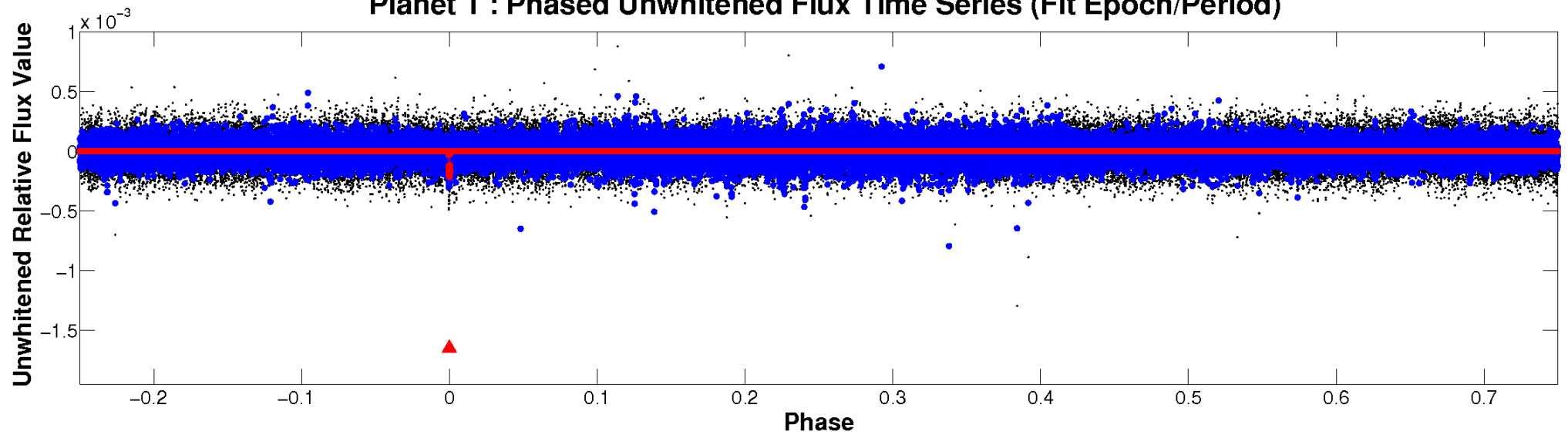
ALT Odd/Even

TCE 003429205-01

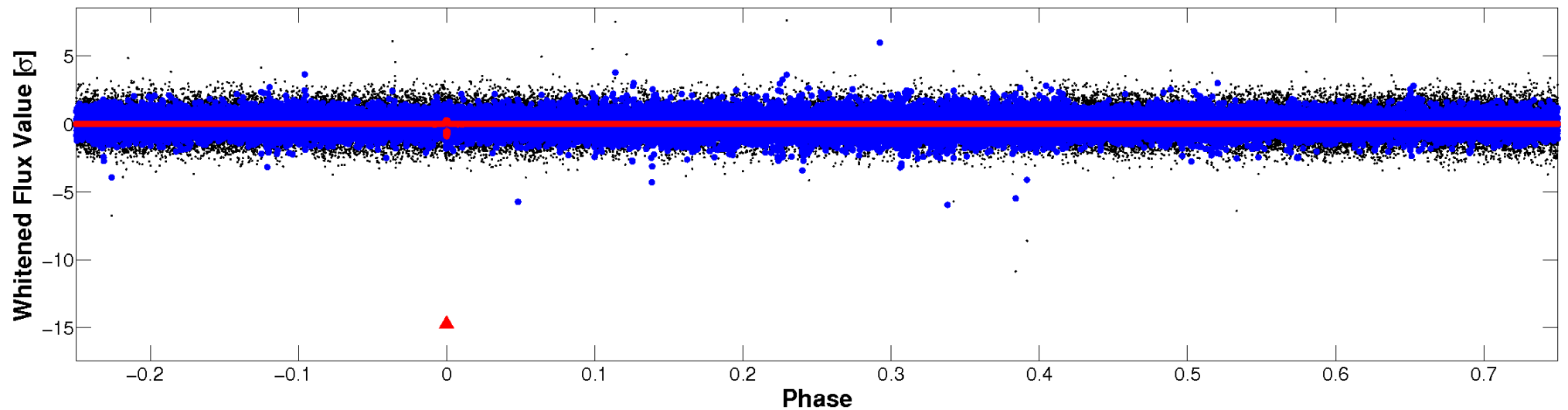


Non-Whitened Vs. Whitened Light Curve

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

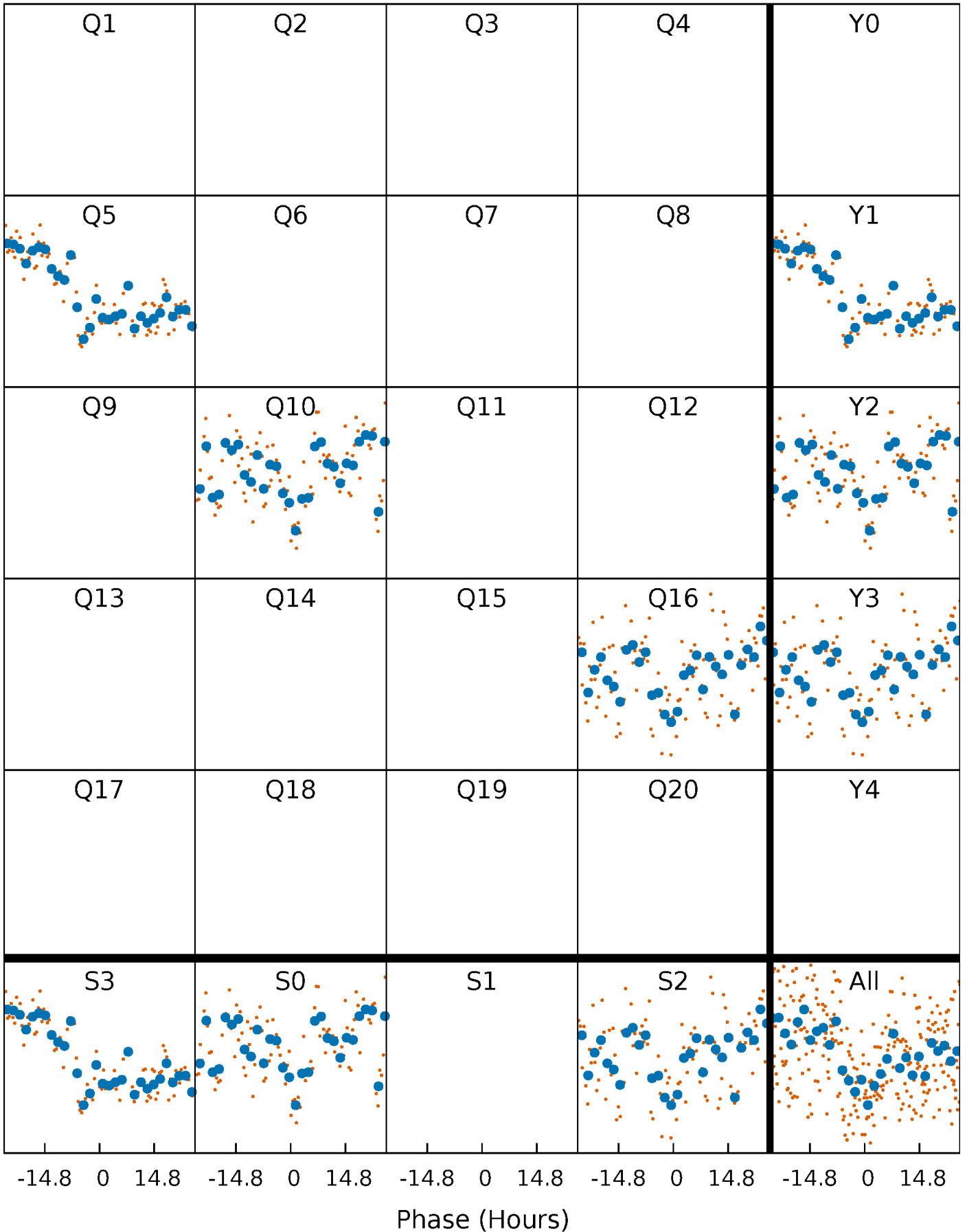


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



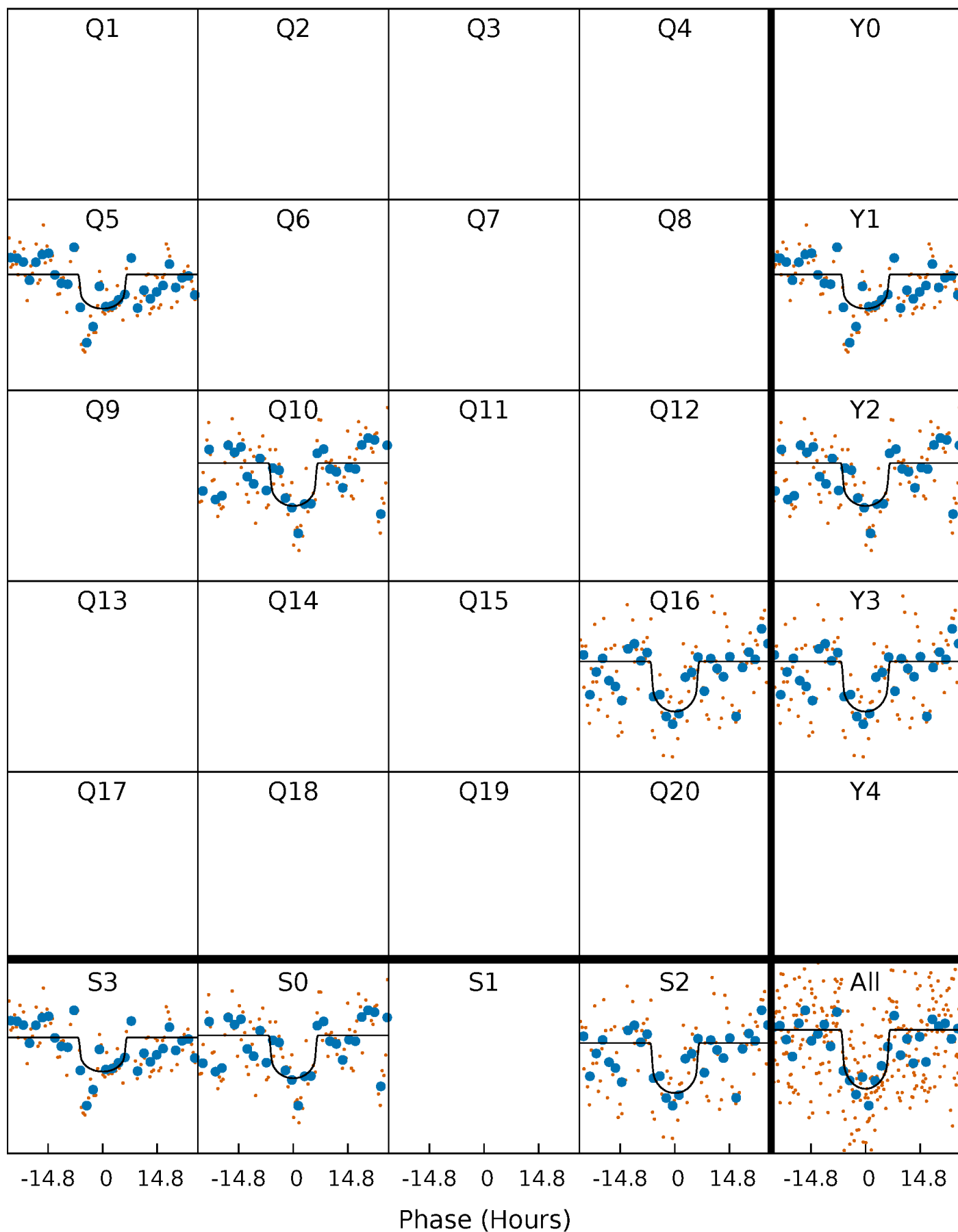
PDC Quarter-Phased Transit Curves

TCE 003429205-01 P=545.377830 Days $T_0=449.635963$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003429205-01 P=545.377830 Days $T_0=449.635963$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

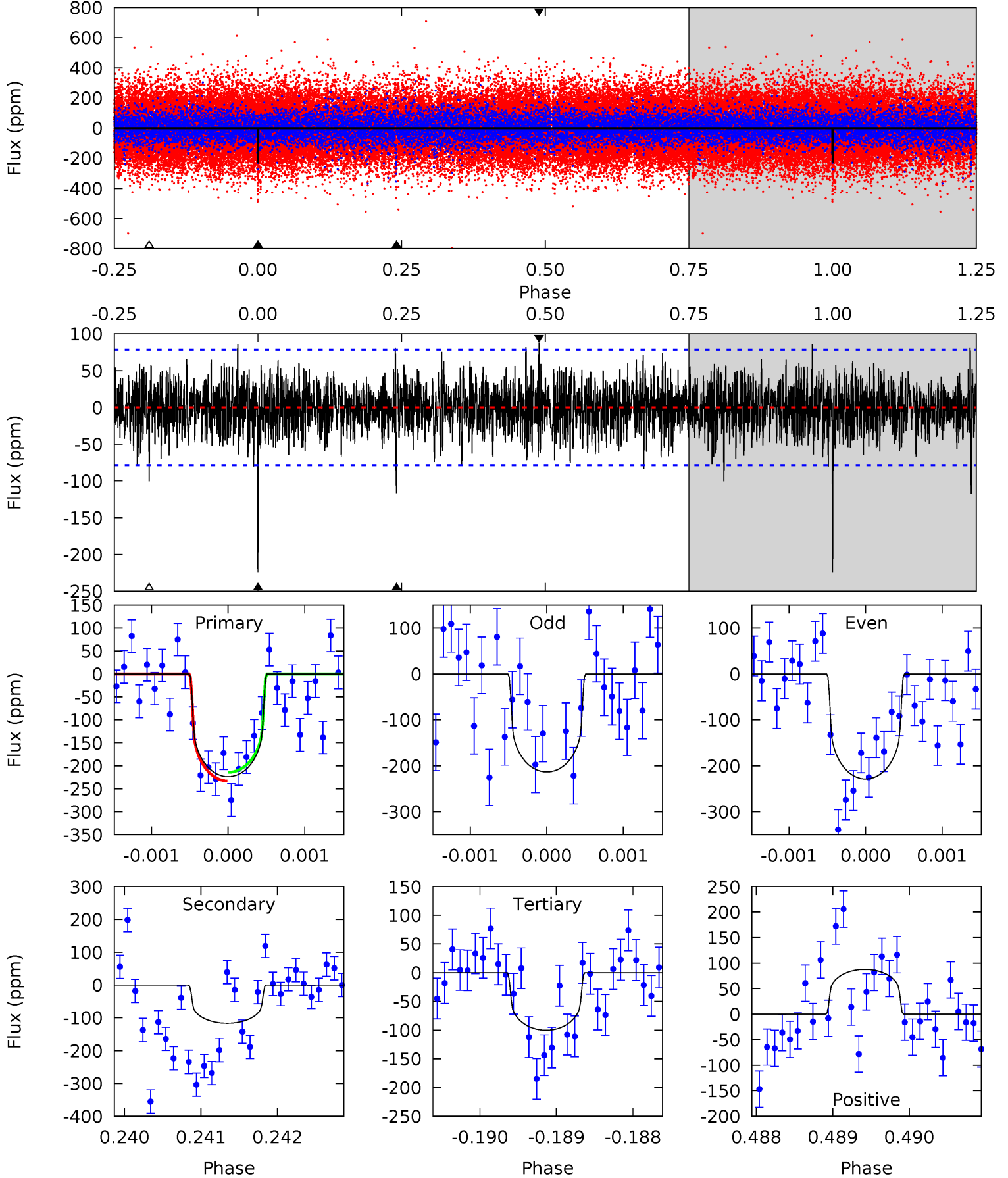
TCE 003429205-01 P=545.364905 Days $T_0=449.627503$ (BKJD)



DV Model-Shift Uniqueness Test

003429205-01, P = 545.377830 Days, E = 449.635963 Days

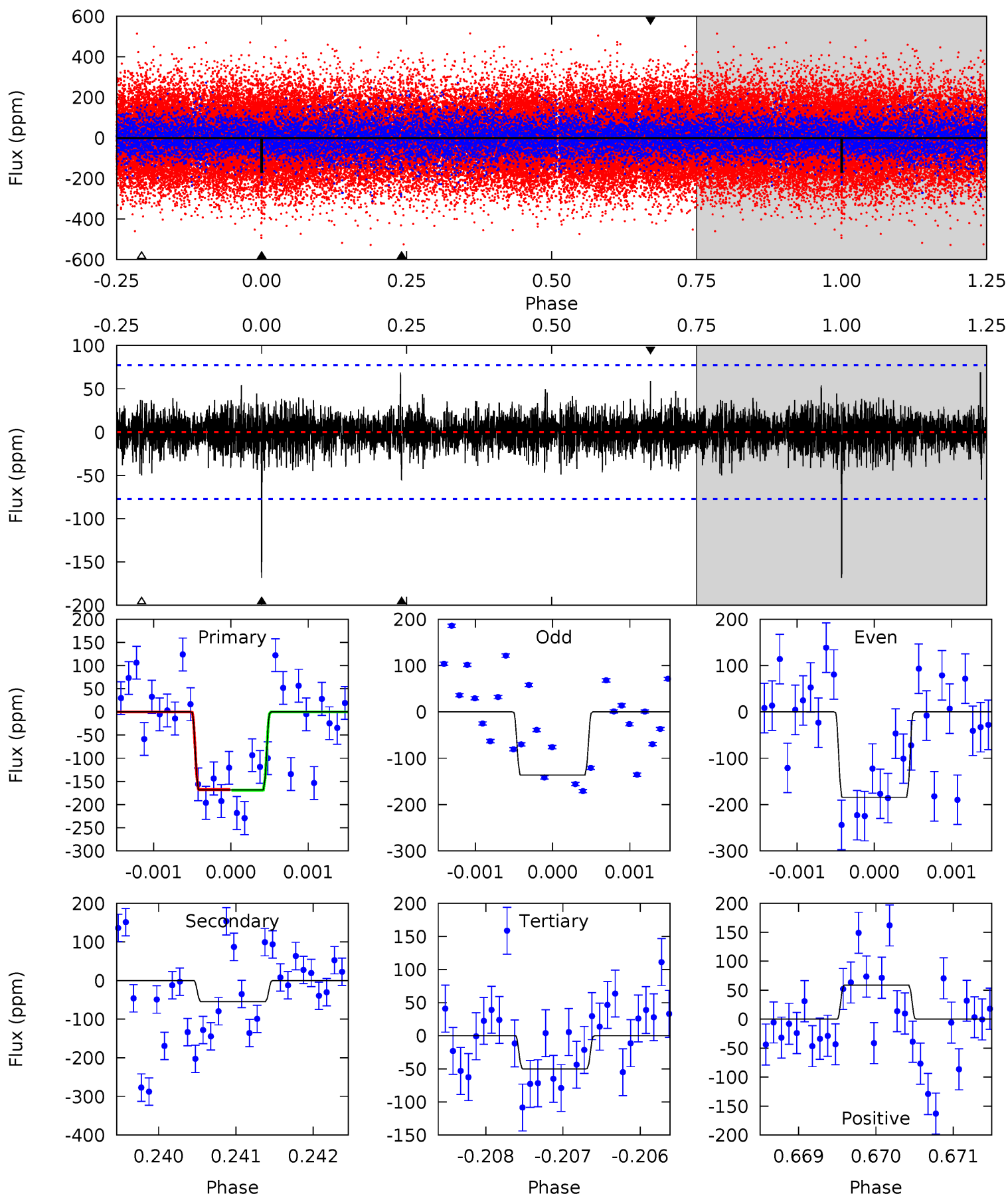
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	8.09	6.96	6.11	5.45	3.29	1.77	8.57	9.42	1.13	1.98	0.50	1.05	0.28	0.66



Alt Model-Shift Uniqueness Test

003429205-01, P = 545.364905 Days, E = 449.627503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	3.87	3.52	4.15	5.46	3.30	0.98	8.35	7.72	0.34	-0.28	1.59	1.22	0.29	0.05



Stellar Parameters For KIC 003429205

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5081^{+45}_{-98}	$3.486^{+0.012}_{-0.012}$	$-0.080^{+0.100}_{-0.150}$	$3.497^{+0.135}_{-0.431}$	$1.365^{+0.102}_{-0.305}$	$0.045^{+0.007}_{-0.002}$
	+1%/-2%	+0%/-0%	+125%/-188%	+4%/-12%	+7%/-22%	+15%/-4%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003429205-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-116 ± 14	$5.88^{+1.82}_{-1.87}$	486^{+7}_{-10}	4383^{+721}_{-437}	3949^{+4131}_{-1744}
Alt.	-55 ± 14	$4.95^{+2.05}_{-1.92}$	486^{+6}_{-10}	4070^{+804}_{-488}	2569^{+4123}_{-1326}

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 $A_{obs} \gg 1.0$

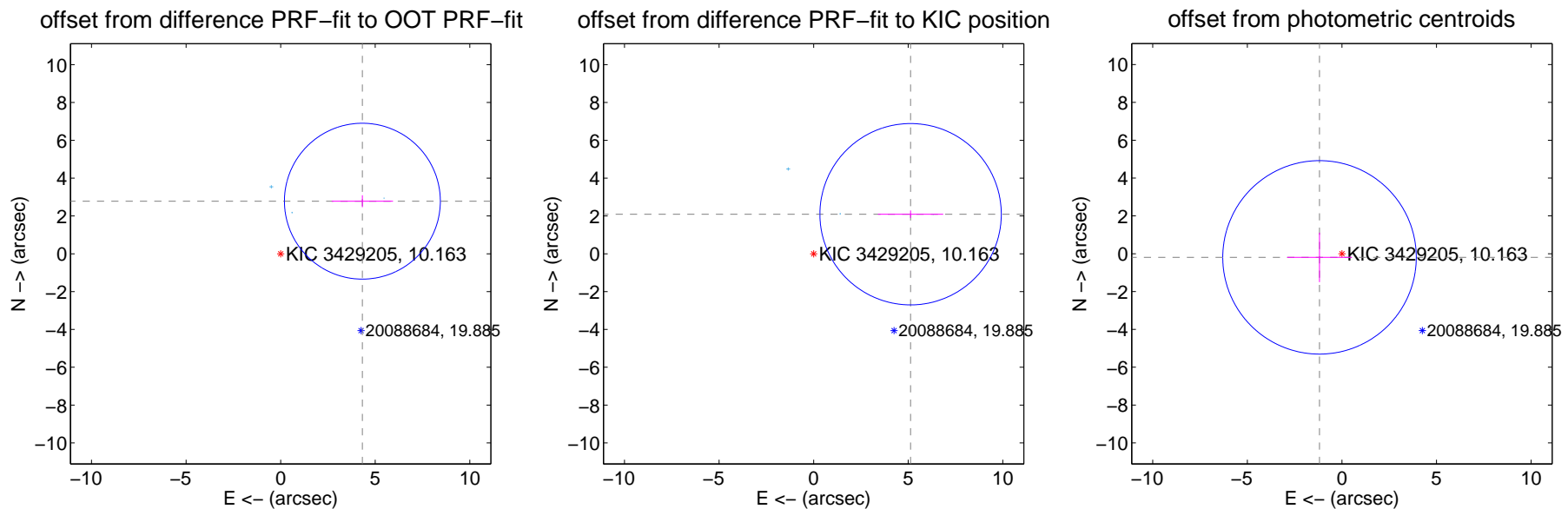
DV Centroid Data

Supplemental centroid analysis for 003429205-01. **Kepler magnitude: 10.16.** Transit SNR 6.97

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.139 ± 1.374	3.74	-4.322 ± 1.621	2.782 ± 0.315
PRF-fit source offset from KIC position	5.537 ± 1.598	3.46	-5.127 ± 1.724	2.092 ± 0.196
photometric centroid source offset	1.20 ± 1.70	0.70	1.18 ± 1.71	-0.19 ± 1.31

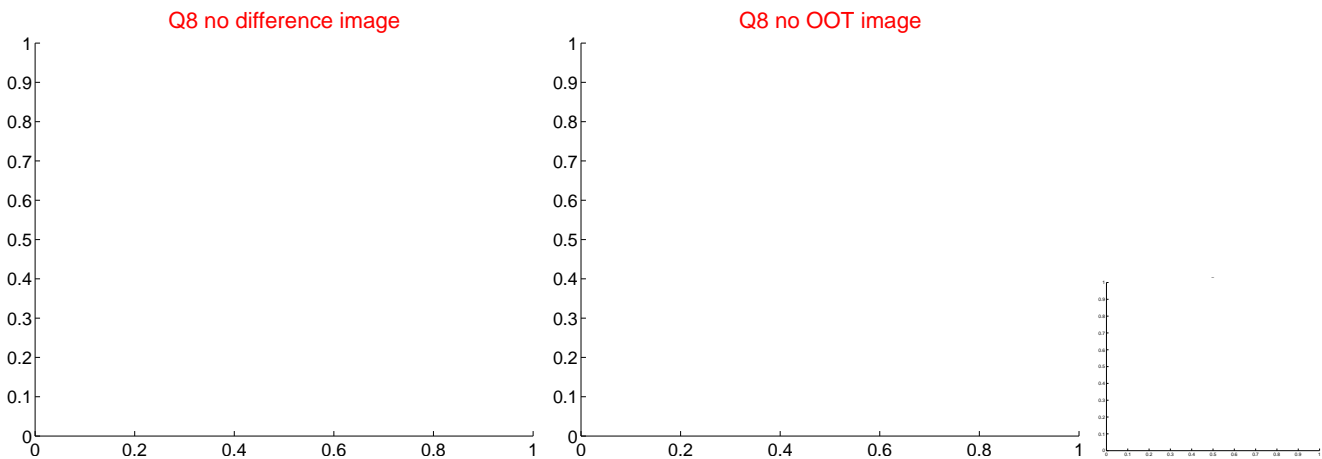
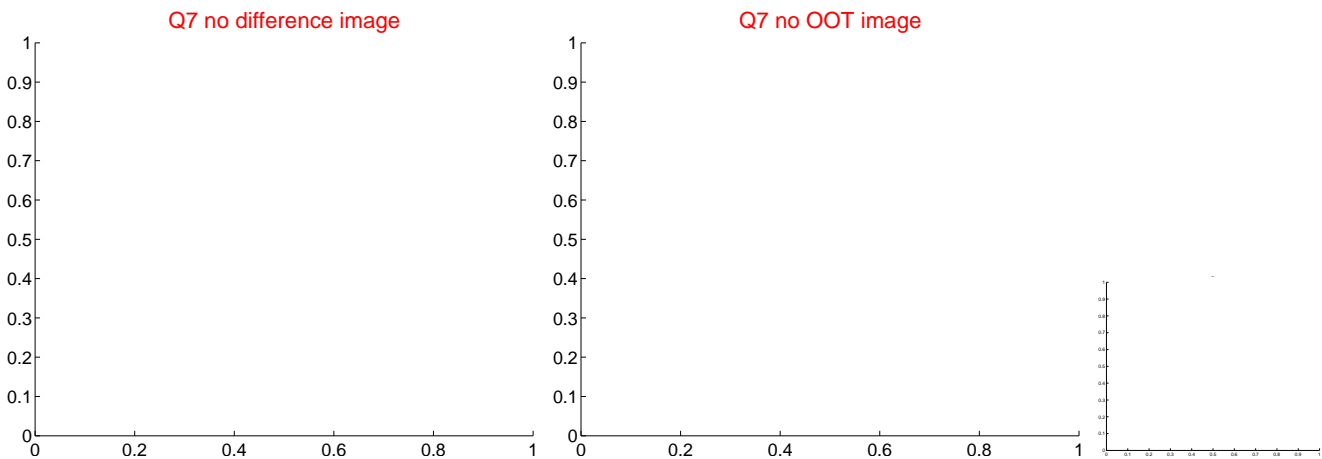
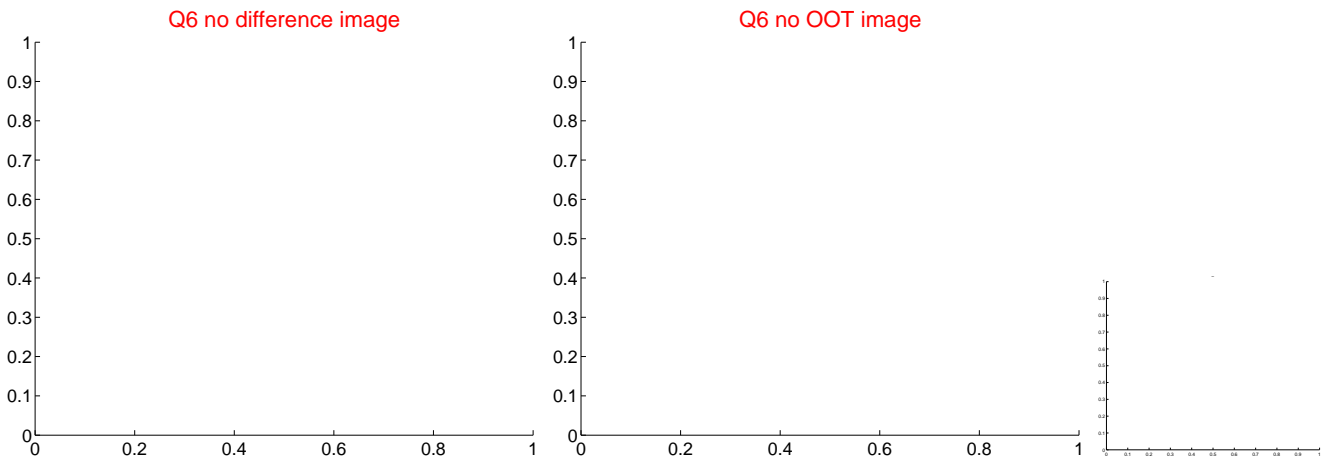
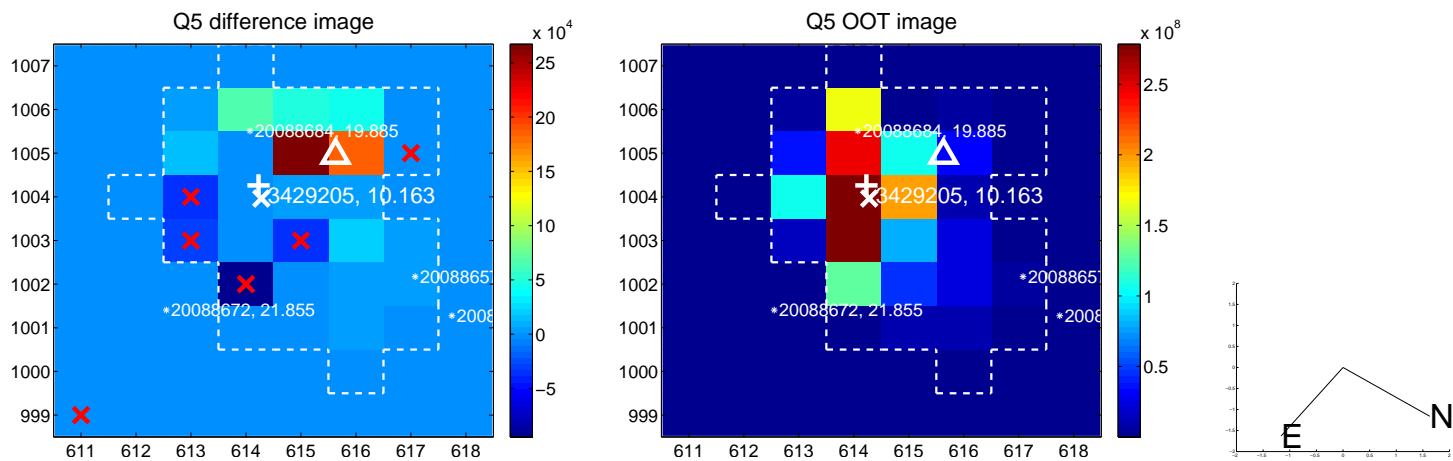


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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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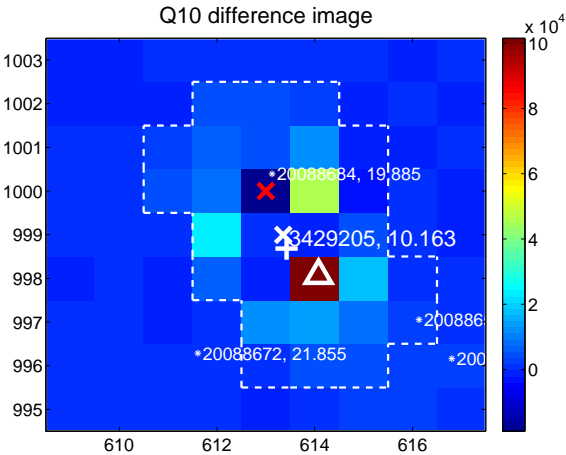
Q9 no difference image



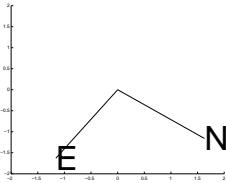
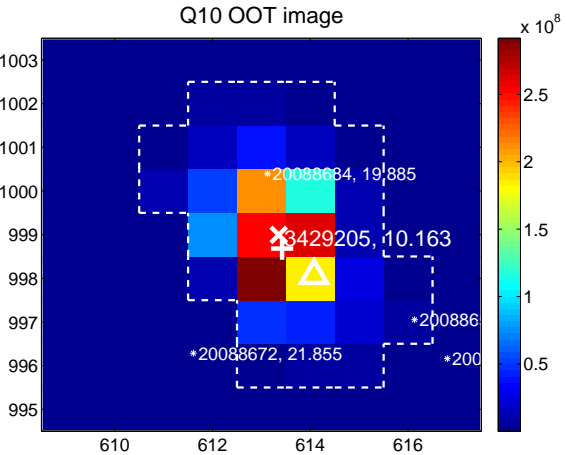
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



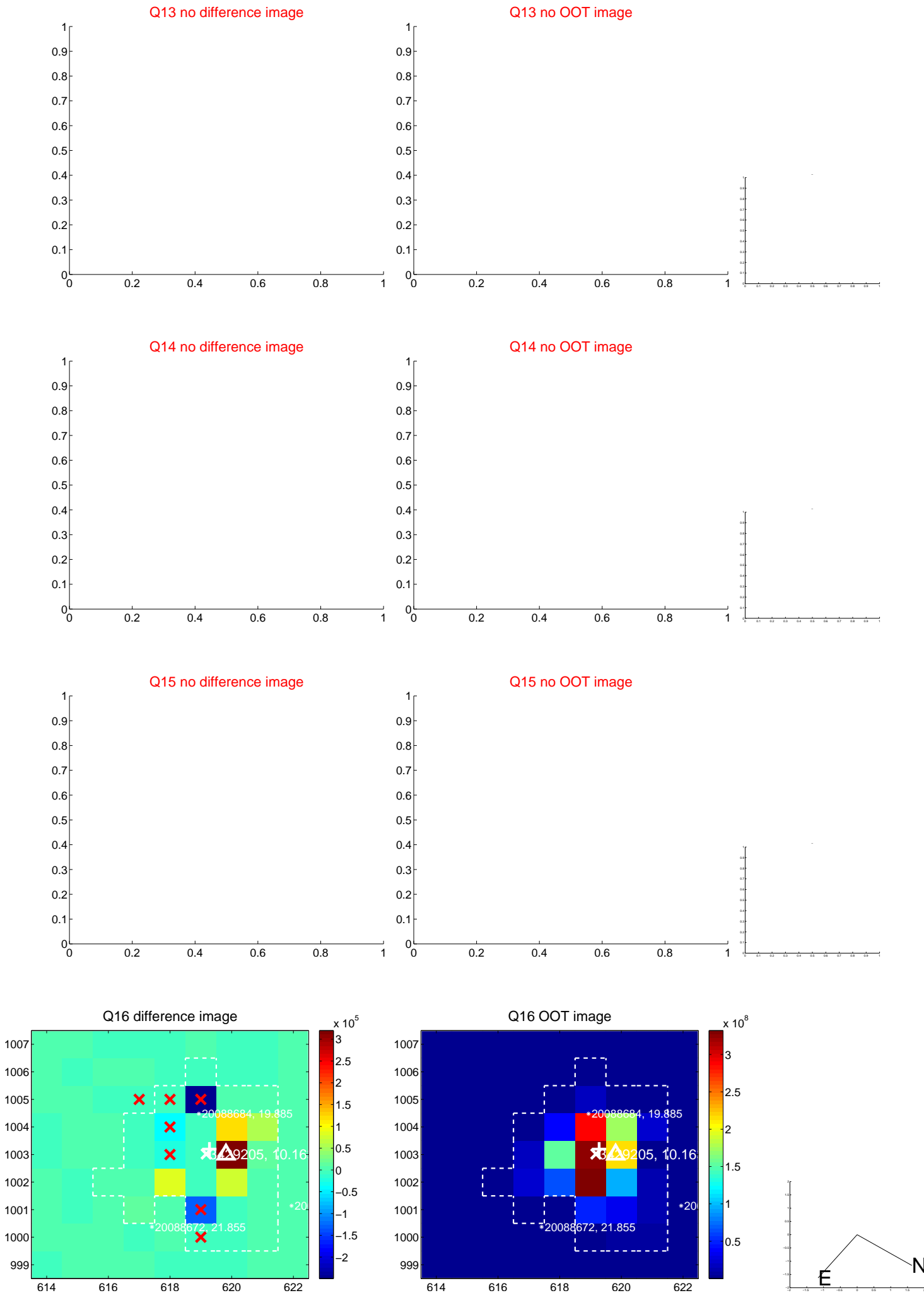
Q12 no difference image



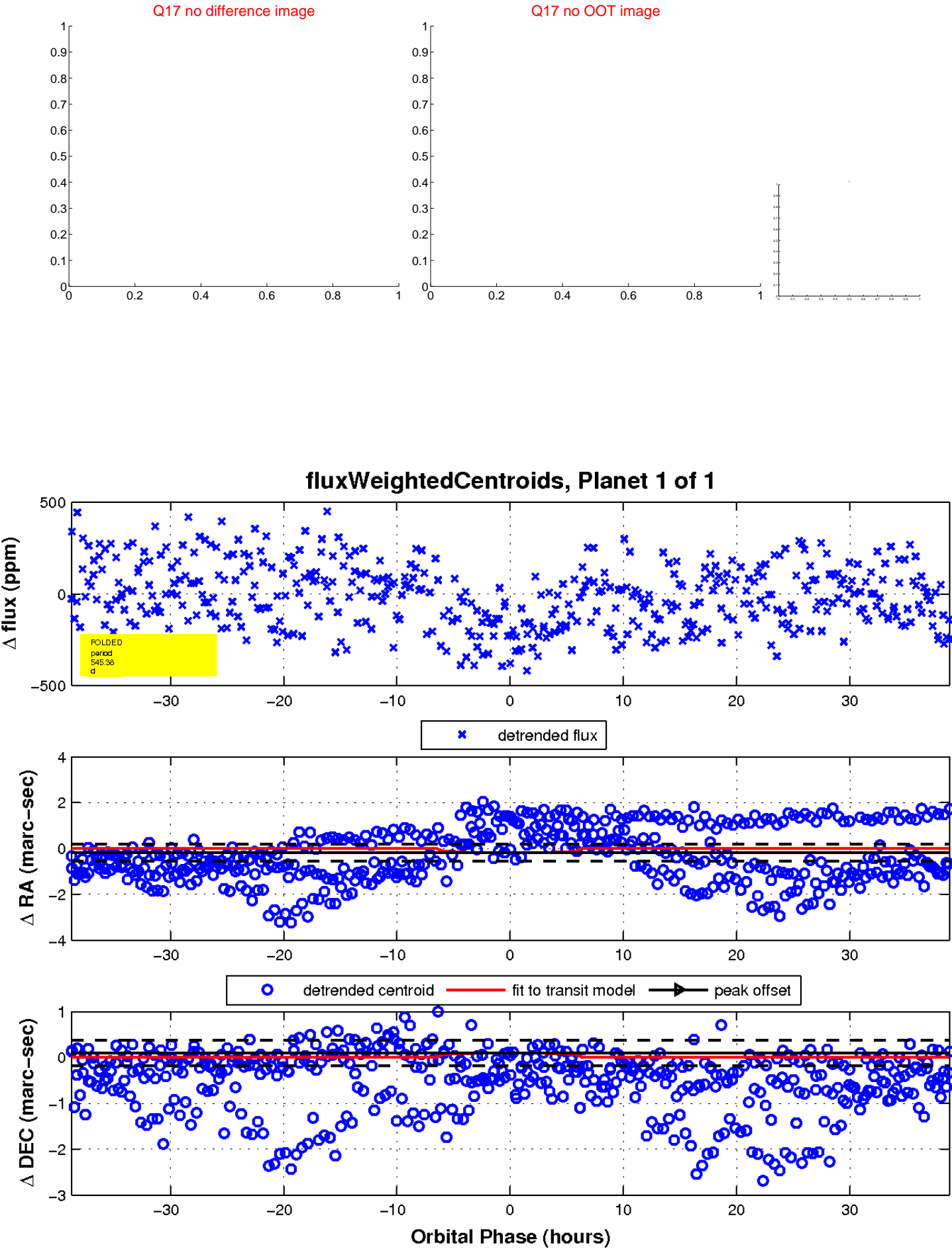
Q12 no OOT image



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UKIRT Image

Declination

