

KIC 007897936

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})
007897936-01	OBS	7856.01	362.909881	401.508870	361.0	12.917	9.4	12.8	4.84	10134	11.01	101.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007897936-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—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.

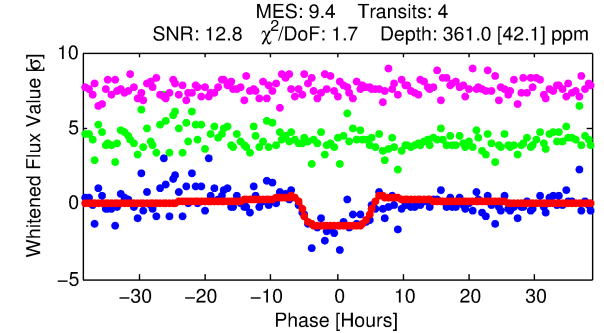
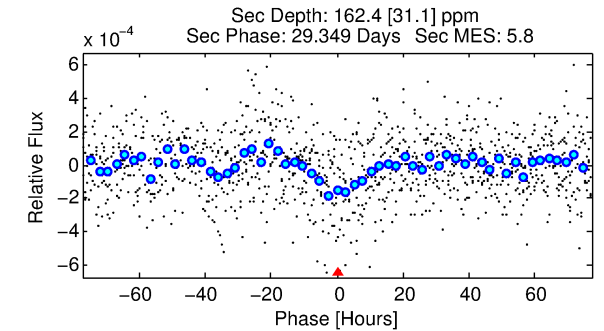
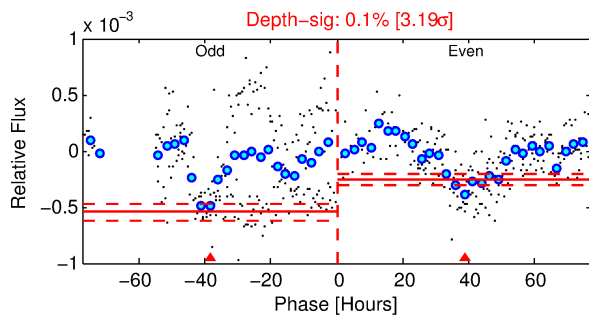
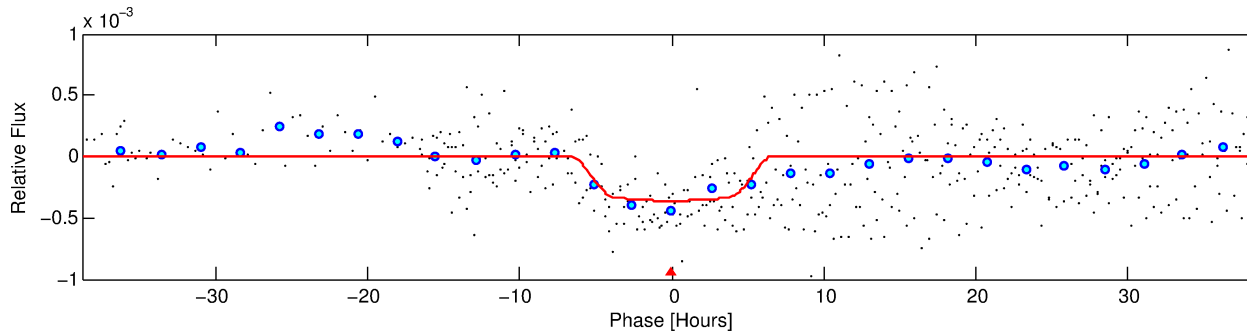
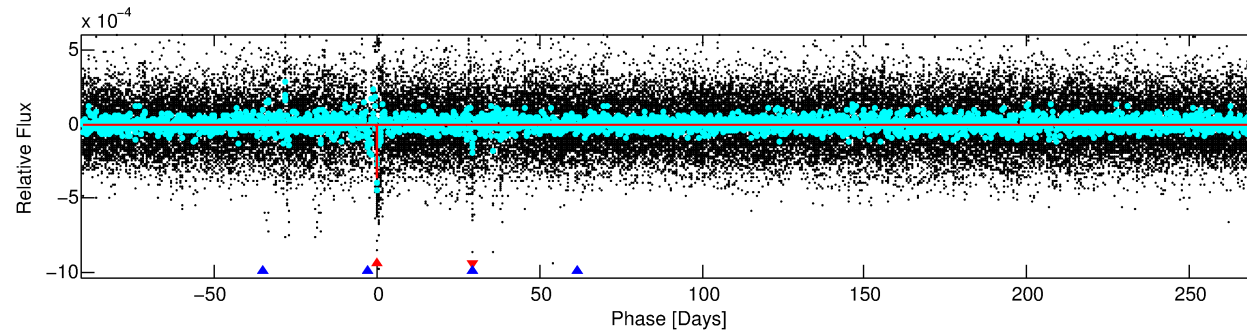
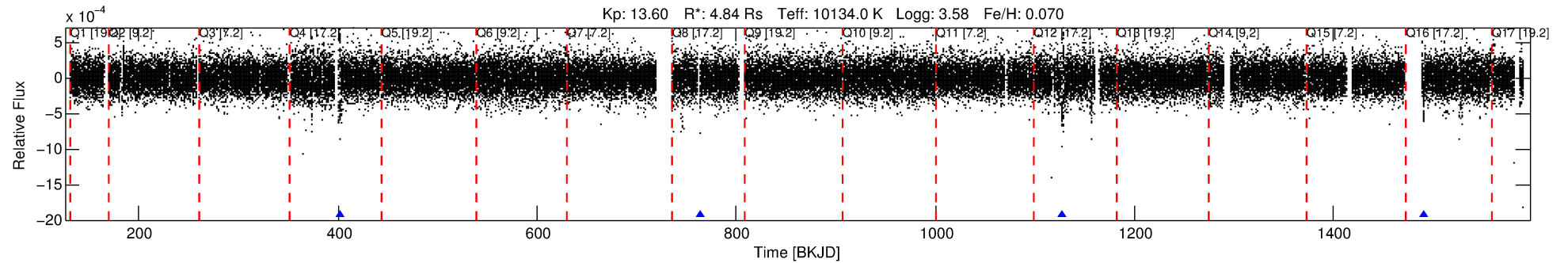
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007897936-01

No Significant Match Found

DV One-Page Summary

KIC: 7897936 Candidate: 1 of 2 Period: 362.910 d



DV Fit Results:

Period = 362.90988 [0.01079] d
Epoch = 401.5089 [0.0205] BKJD
Rp/R* = 0.0208 [0.0015]
a/R* = 79.02 [20.47]
b = 0.95 [0.03]
Seff = 101.93 [80.29]
Teq = 810 [160] K
Rp = 11.01 [5.28] Re
a = 1.4743 [0.6978] AU
Ag = 1600.82 [1294.21] [1.24σ]
Teffp = 7924 [565] K [12.12σ]

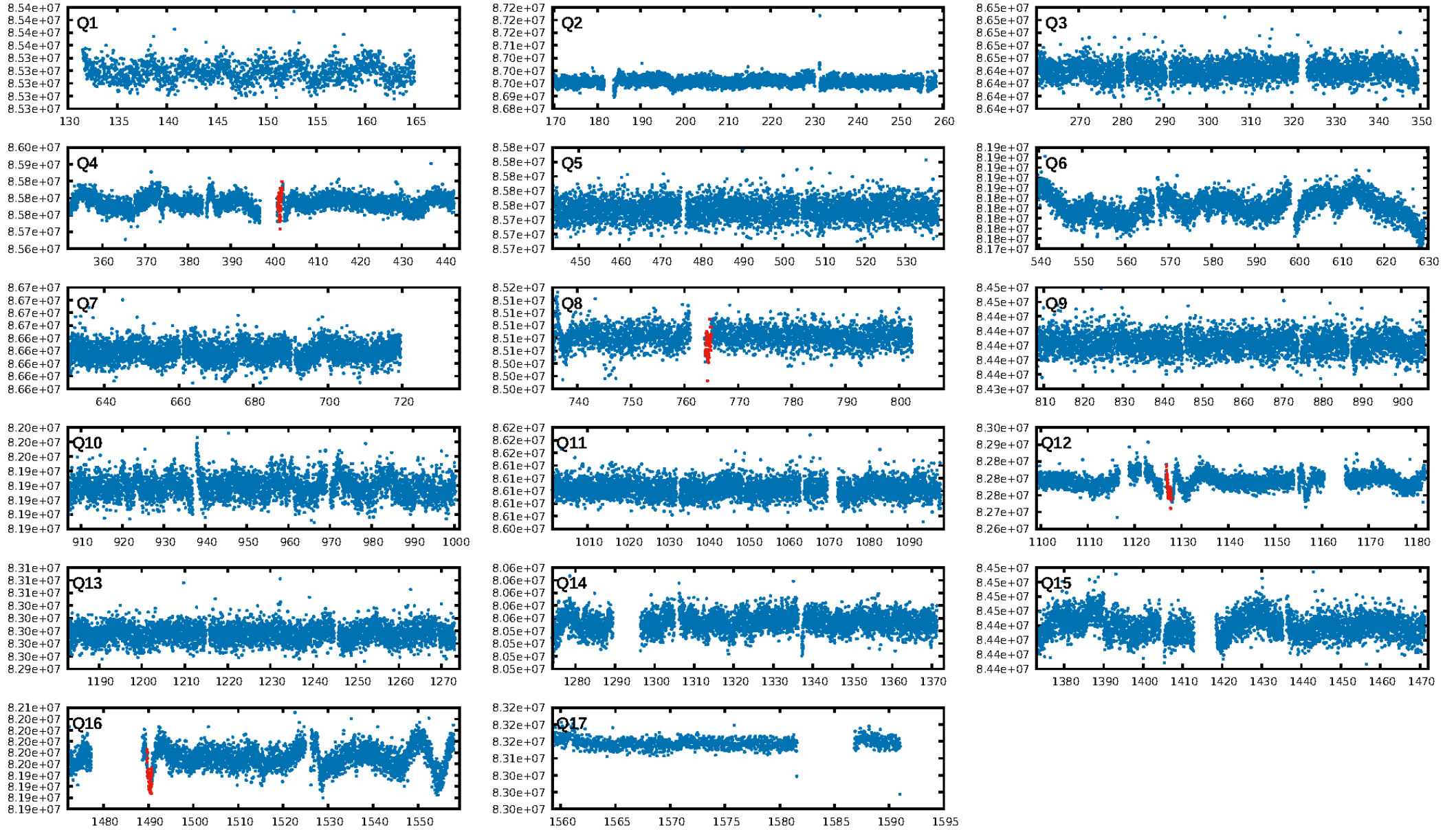
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [55.34σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 17.5%
Bootstrap-pfa: 9.82e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7985
Centroid-sig: 0.2%
Centroid-so: 3.290 arcsec [2.23σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

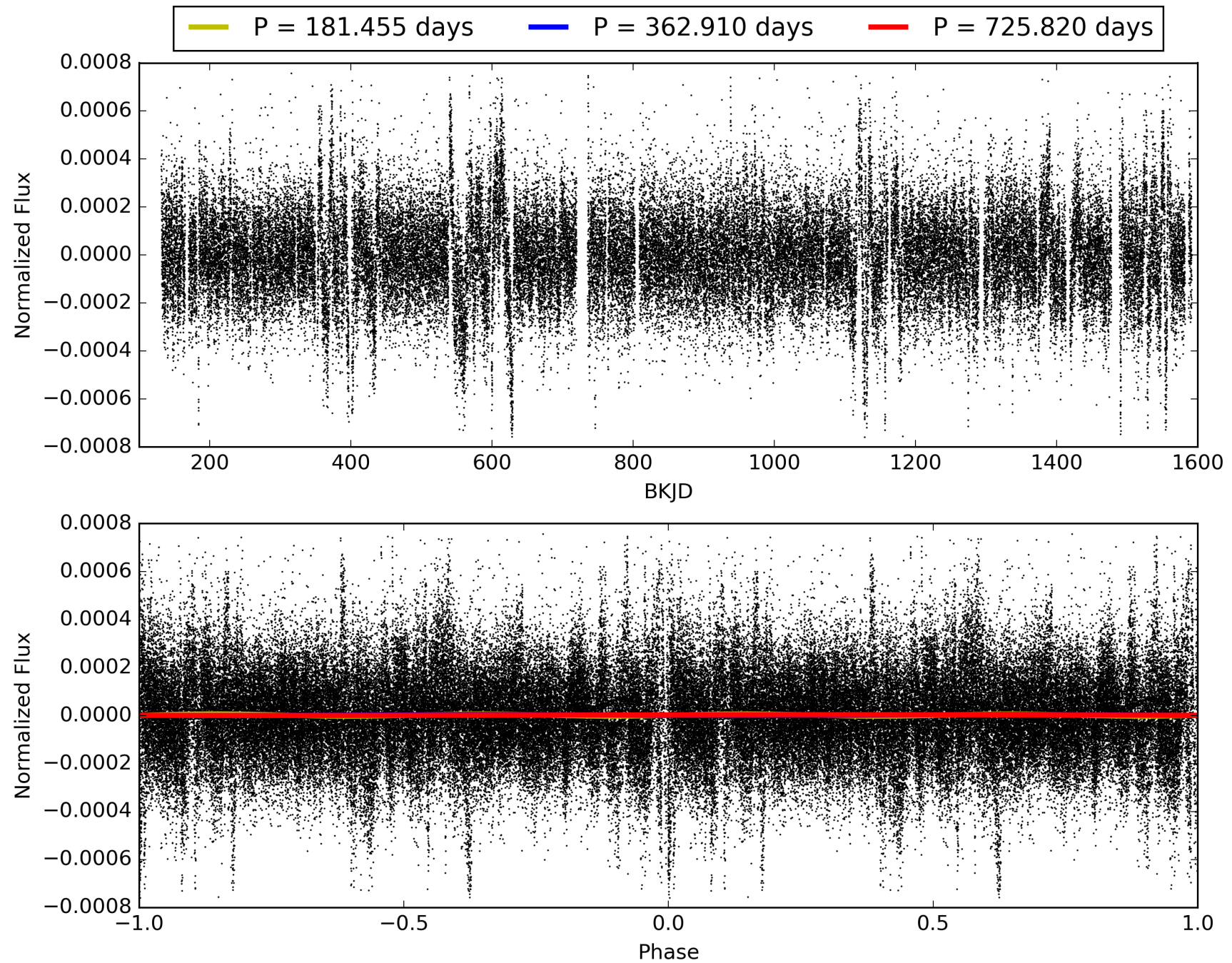
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:46:08 Z

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

TCE 007897936-01, PDC Light Curves

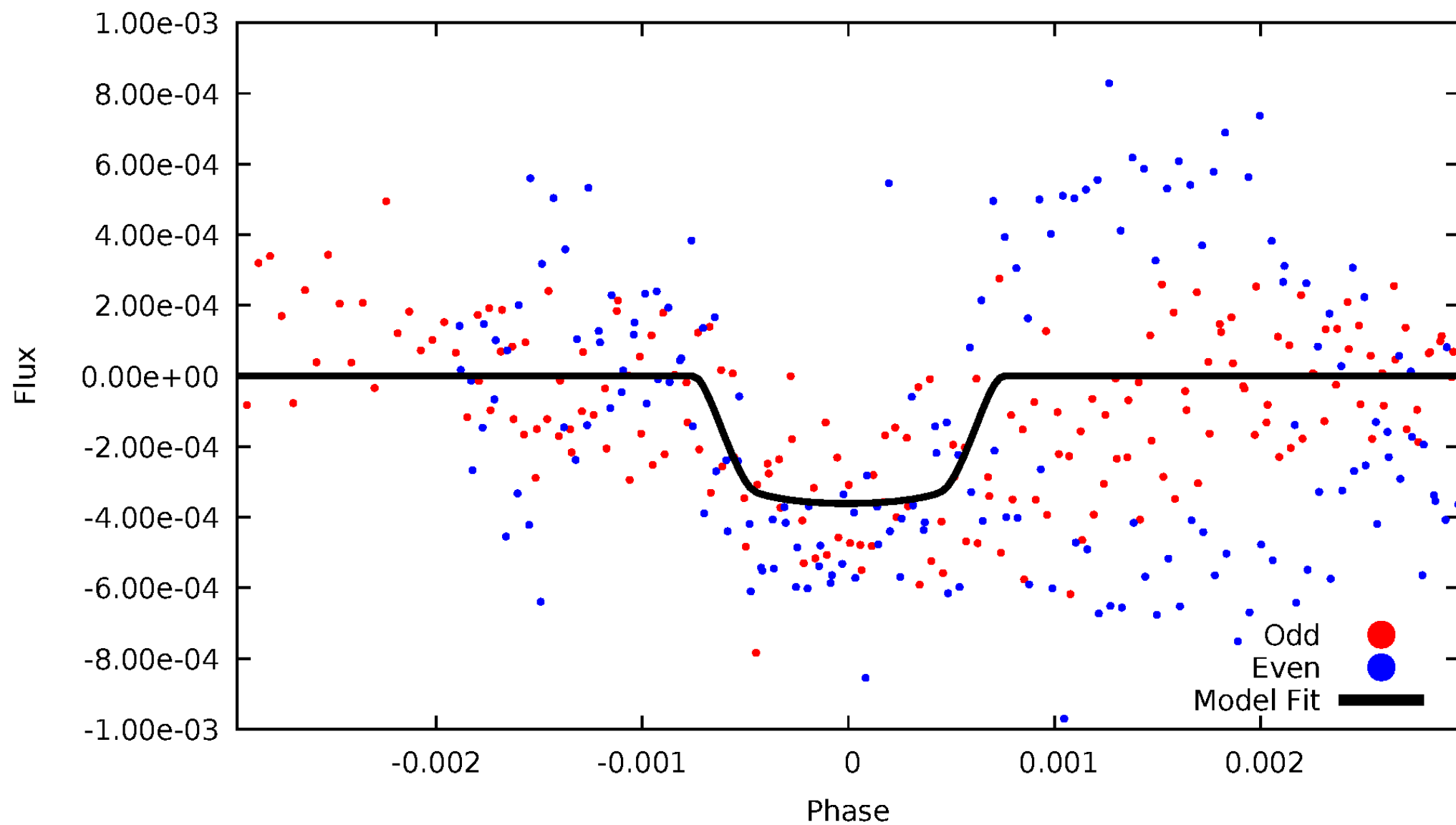


TCE 007897936-01



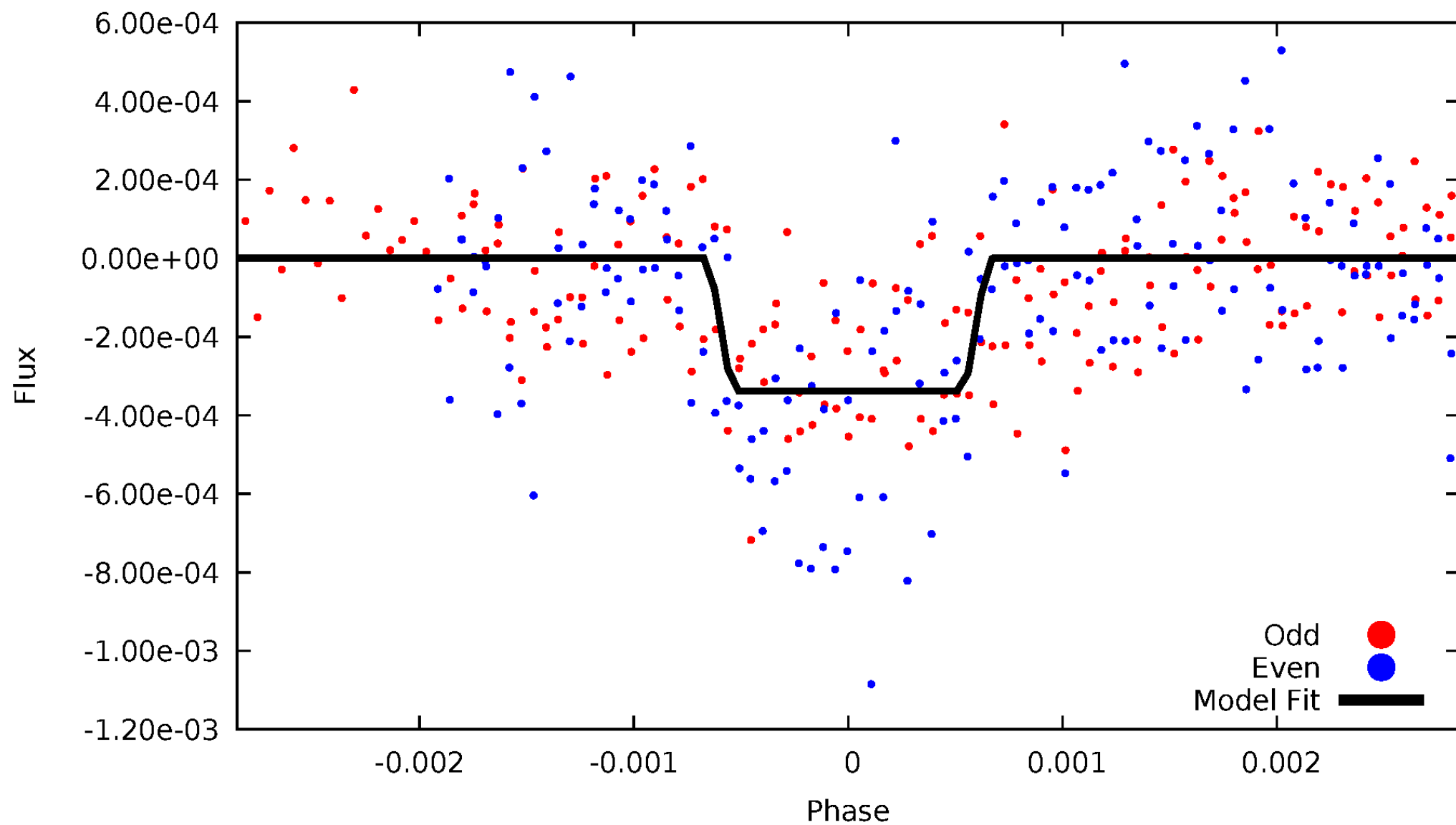
DV Odd/Even

TCE 007897936-01

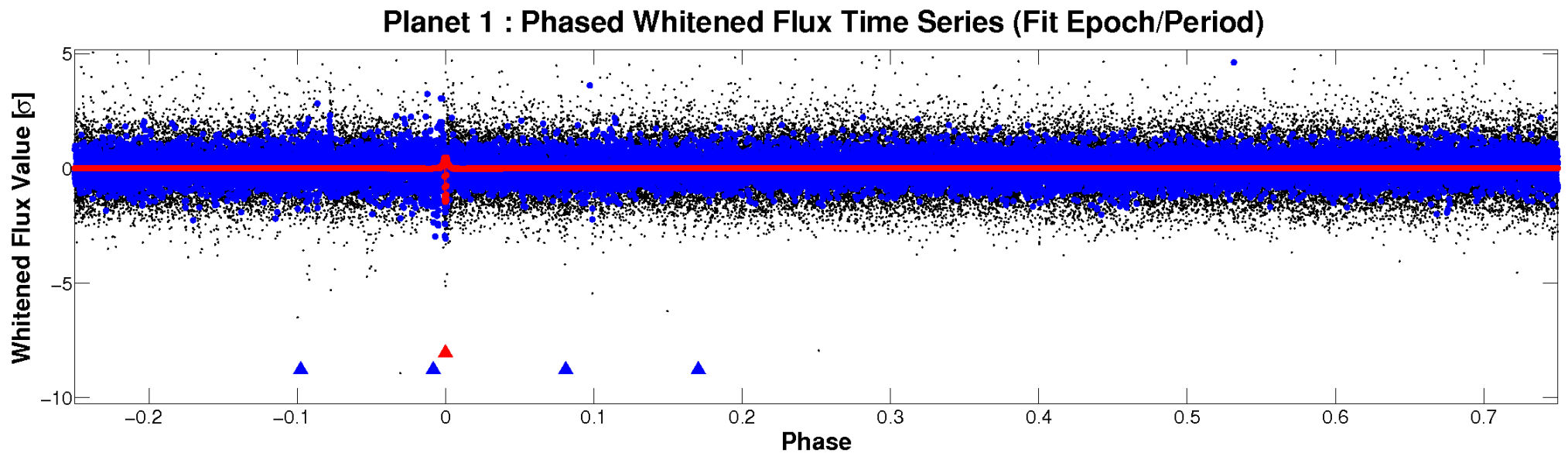
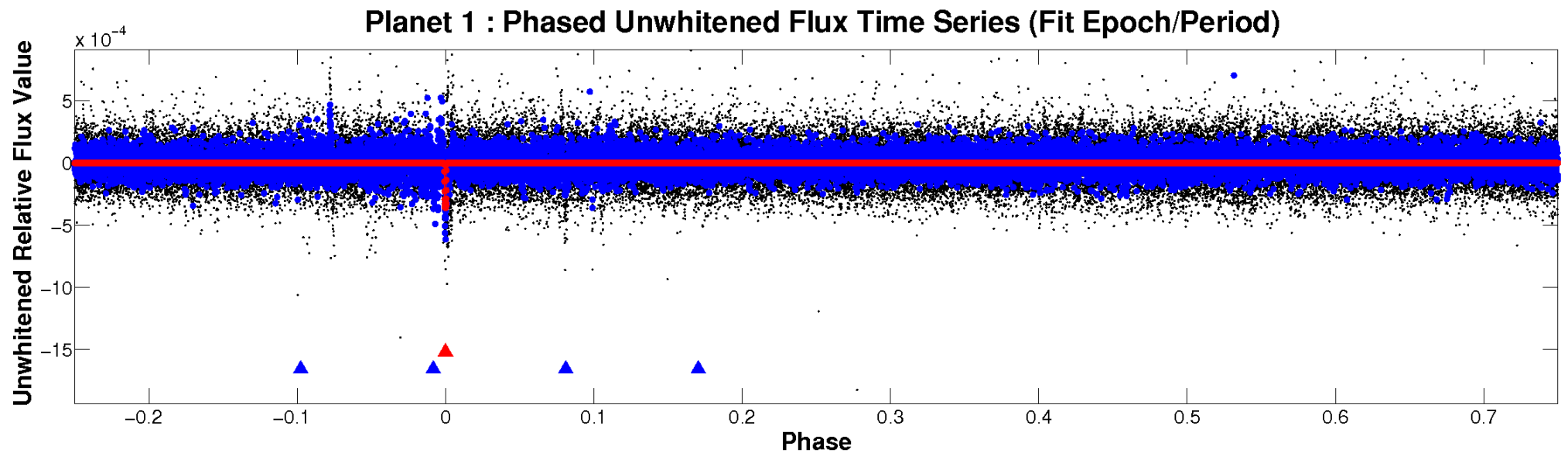


ALT Odd/Even

TCE 007897936-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 007897936-01 P=362.909881 Days $T_0=401.508870$ (BKJD)



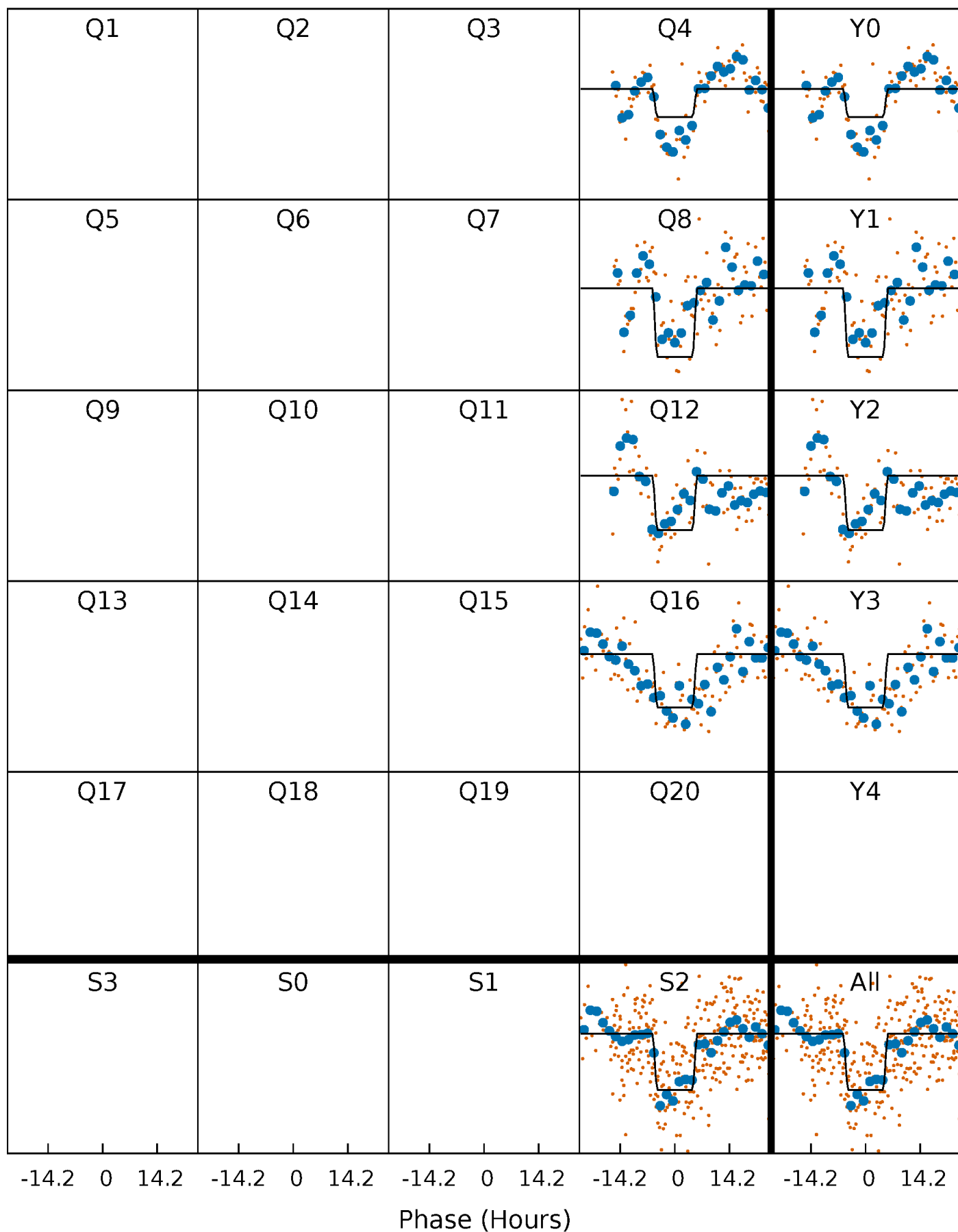
DV Quarter-Phased Transit Curves

TCE 007897936-01 P=362.909881 Days $T_0=401.508870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

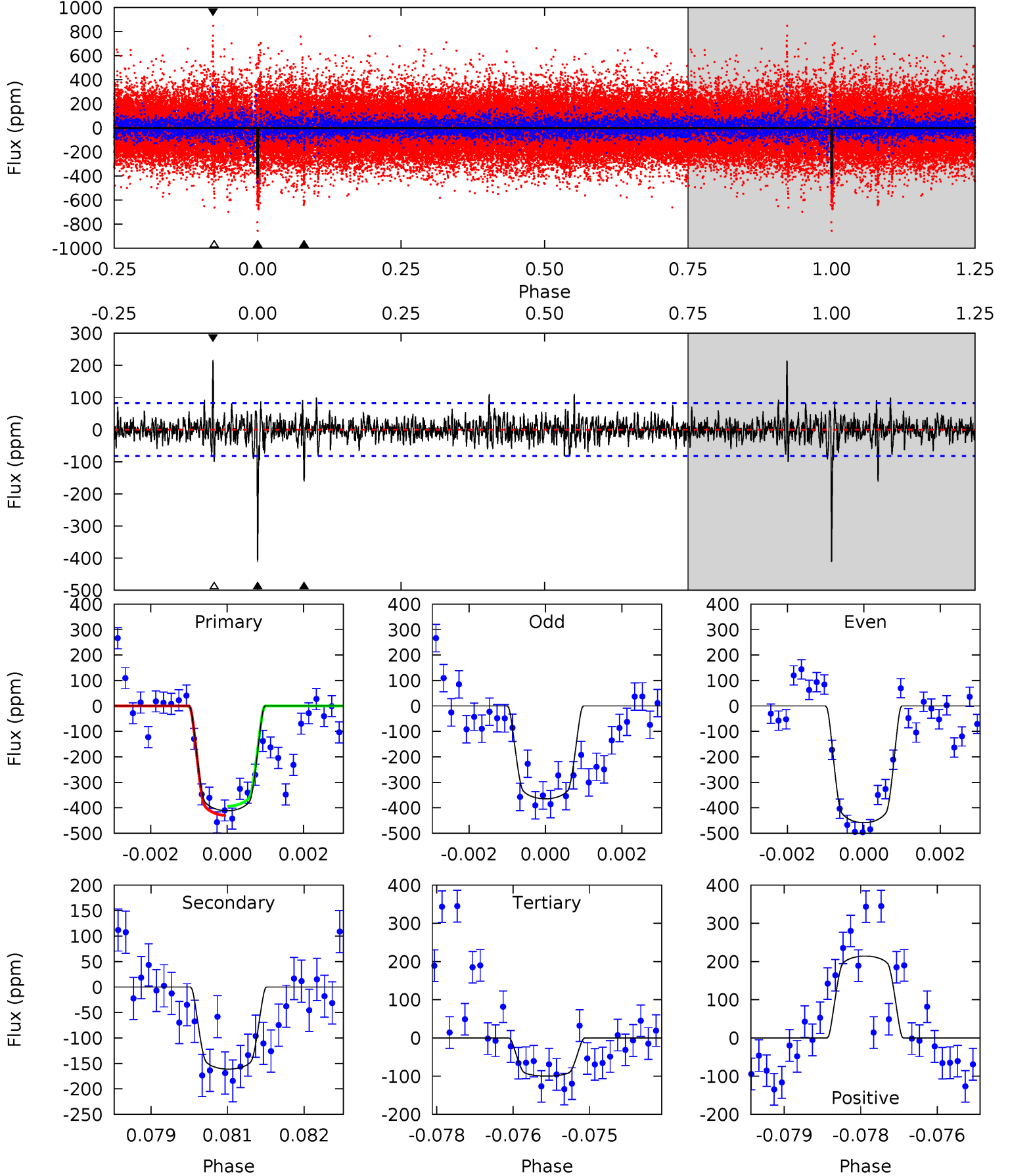
TCE 007897936-01 P=362.920459 Days $T_0=401.500323$ (BKJD)



DV Model-Shift Uniqueness Test

007897936-01, $P = 362.909881$ Days, $E = 38.598989$ Days

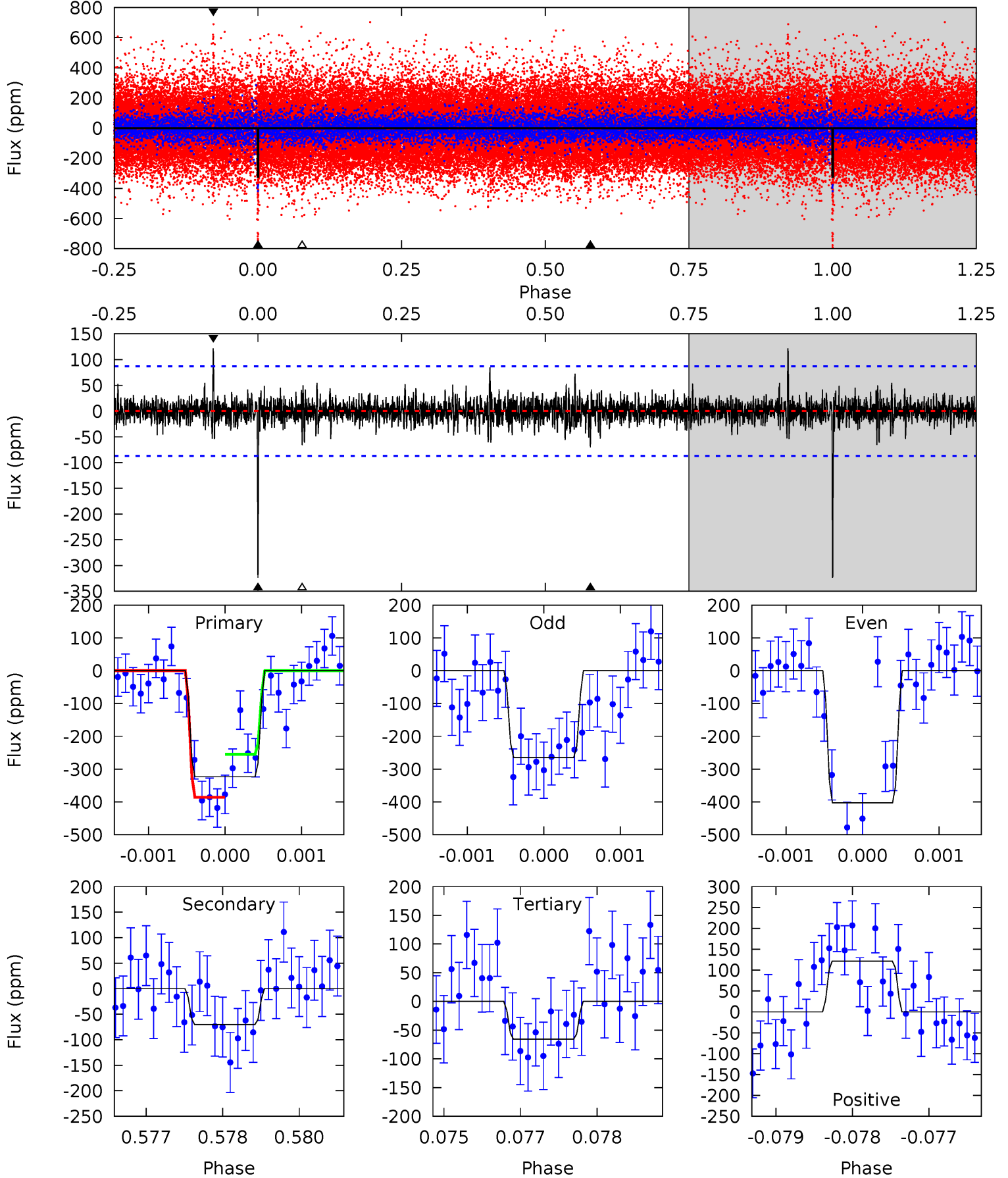
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	10.5	6.51	14.0	5.38	3.17	1.65	20.4	12.9	4.01	-3.47	3.09	0.96	0.34	1.18



Alt Model-Shift Uniqueness Test

007897936-01, $P = 362.920459$ Days, $E = 38.579864$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	4.38	4.09	7.56	5.40	3.22	1.01	16.0	12.5	0.29	-3.18	4.32	1.18	0.27	4.07



Stellar Parameters For KIC 007897936

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10134^{+286}_{-393}	$3.579^{+0.459}_{-0.051}$	$0.070^{+0.150}_{-0.550}$	$4.842^{+0.405}_{-2.296}$	$3.246^{+0.182}_{-0.774}$	$0.040^{+0.180}_{-0.007}$
	+3%/-4%	+13%/-1%	+214%/-786%	+8%/-47%	+6%/-24%	+446%/-17%
Source	KIC0	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 007897936-01 / KOI 7856.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-161 ± 15	$10.29^{+1.43}_{-2.54}$	1089^{+70}_{-131}	7284^{+459}_{-370}	1842^{+1218}_{-467}
Alt.	-70 ± 16	$9.02^{+1.43}_{-2.04}$	1092^{+68}_{-126}	6250^{+454}_{-473}	1040^{+680}_{-341}

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

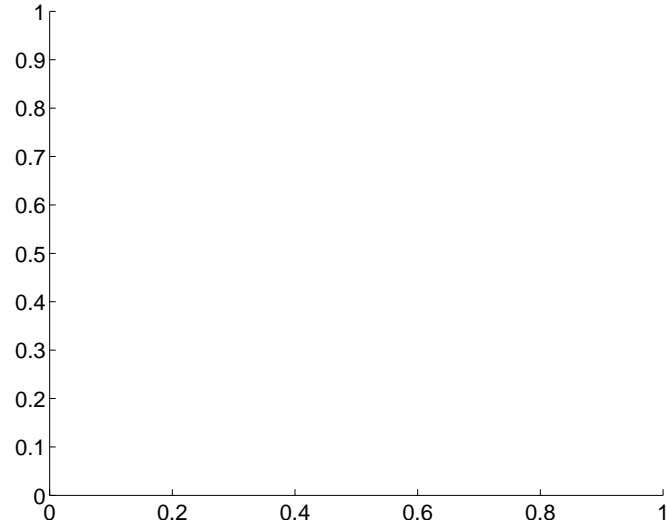
Supplemental centroid analysis for 007897936-01. Kepler magnitude: 13.60. Transit SNR 12.78

There are 0 quarters with good PRF difference image offsets

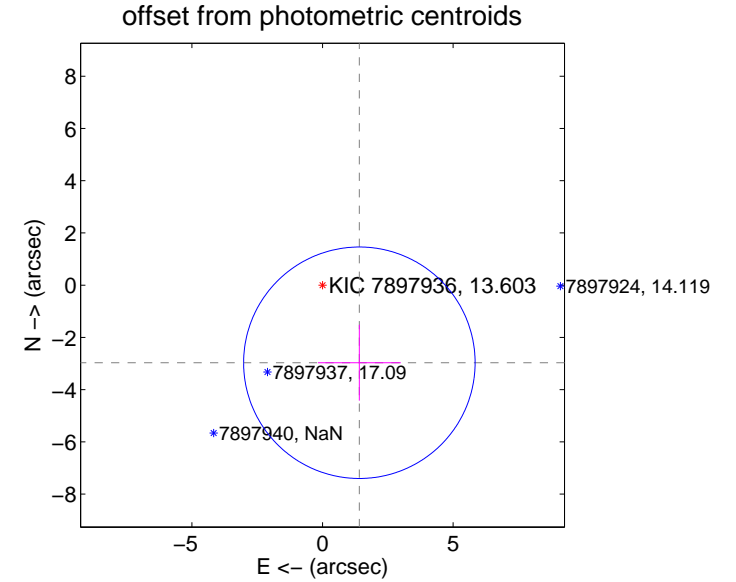
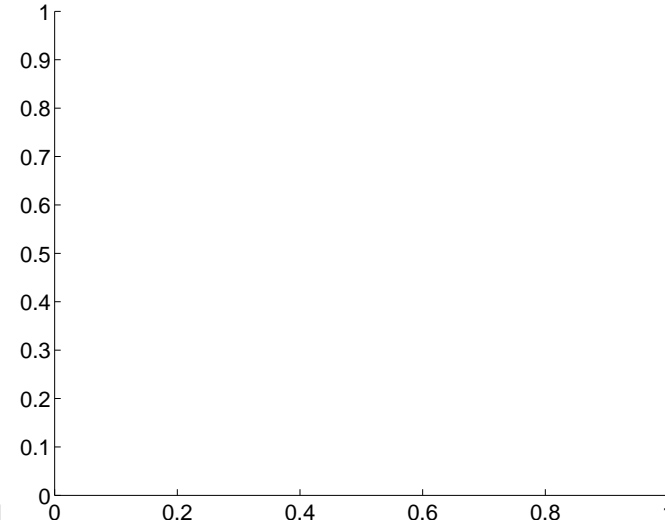
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.29 ± 1.48	2.23	-1.41 ± 1.58	-2.97 ± 1.45

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.



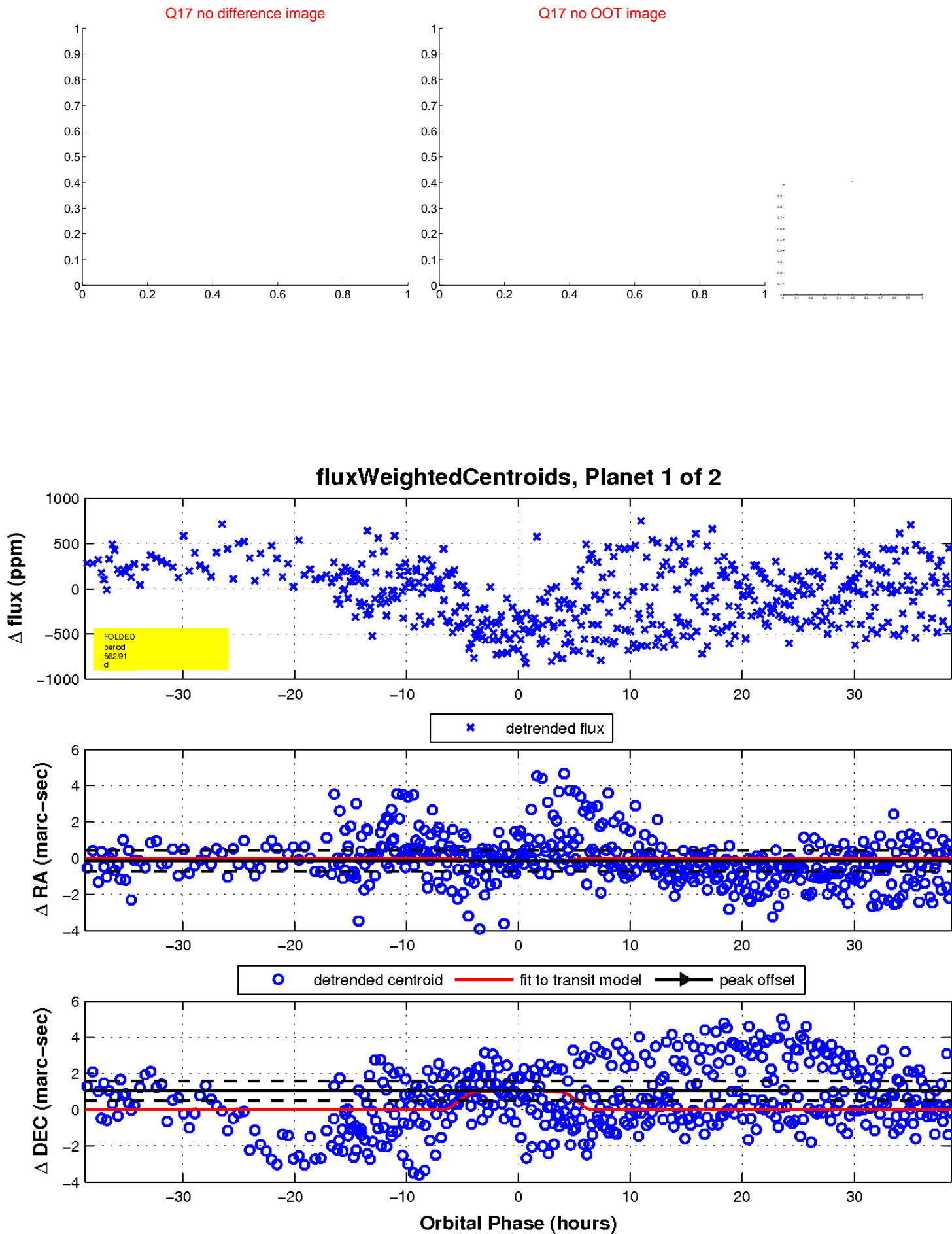
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

