

KIC 009530253

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})
009530253-01	OBS	No	5.649362	133.470295	51.9	42.751	7.1	8.8	1.01	5915	0.73	293.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009530253-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

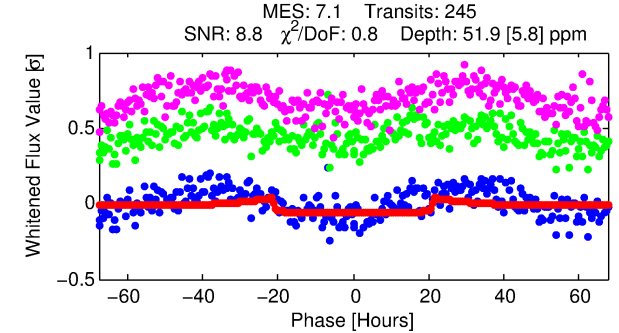
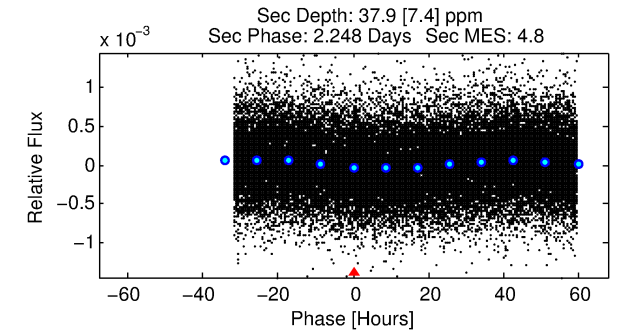
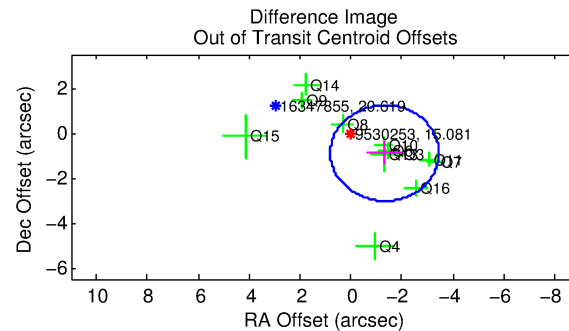
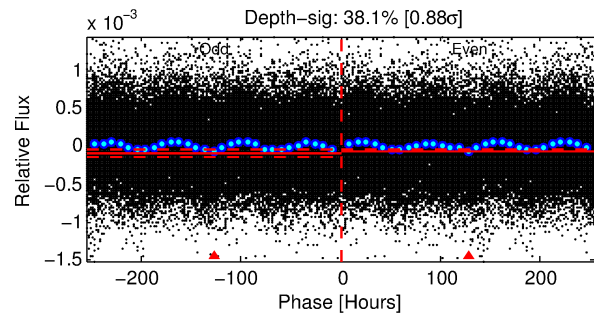
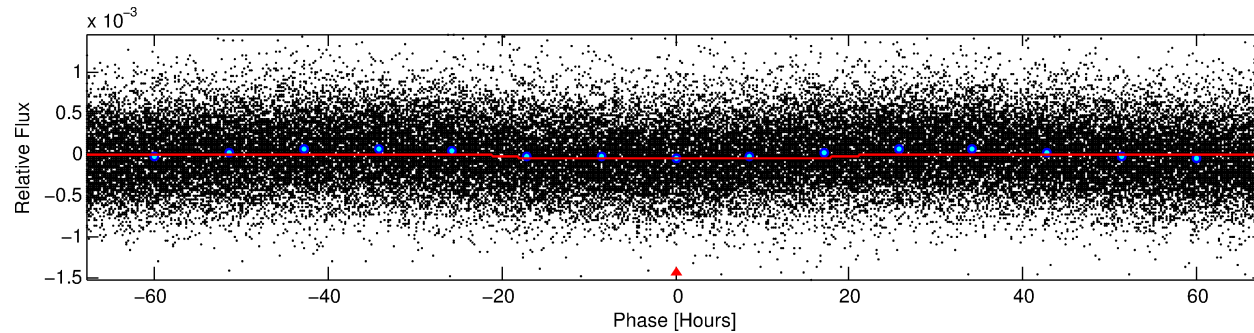
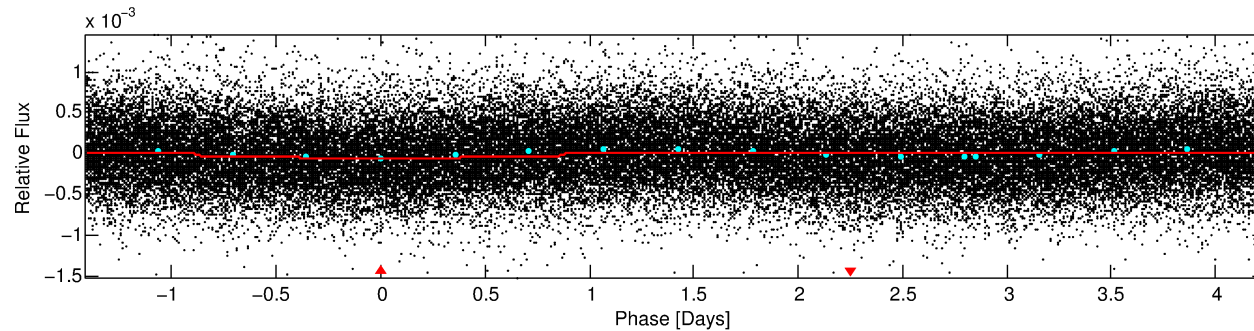
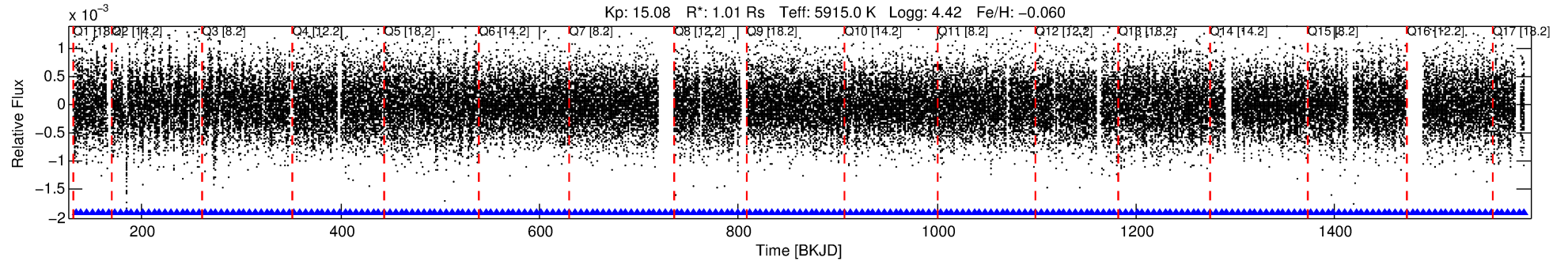
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009530253-01

No Significant Match Found

DV One-Page Summary

KIC: 9530253 Candidate: 1 of 1 Period: 5.649 d



DV Fit Results:

Period = 5.64936 [0.00018] d
Epoch = 133.4703 [0.0247] BKJD
Rp/R* = 0.0066 [0.0045]
a/R* = 1.20 [1.19]
b = 0.14 [23.67]
Seff = 293.56 [112.81]
Teq = 1055 [101] K
Rp = 0.73 [0.55] Re
a = 0.0620 [0.0155] AU
Ag = 151.47 [218.79] [0.69 σ]
Teffp = 5725 [2010] K [2.32 σ]

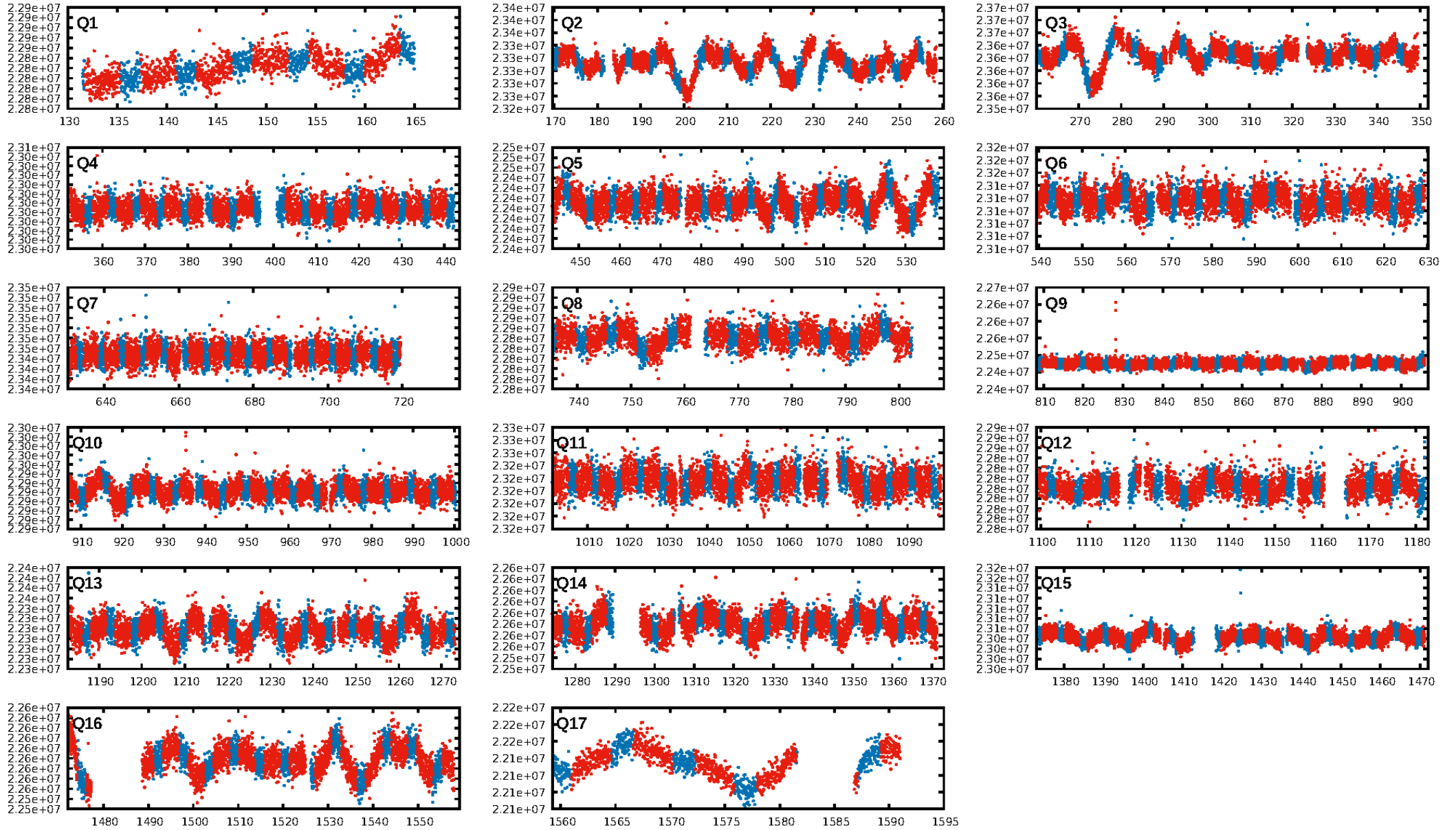
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [234/234]
GhostDiagnostic-chr: 1.971
Centroid-sig: 48.0%
Centroid-so: 0.668 arcsec [0.87 σ]
OotOffset-rm: 1.598 arcsec [2.25 σ]
KicOffset-rm: 1.696 arcsec [2.35 σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

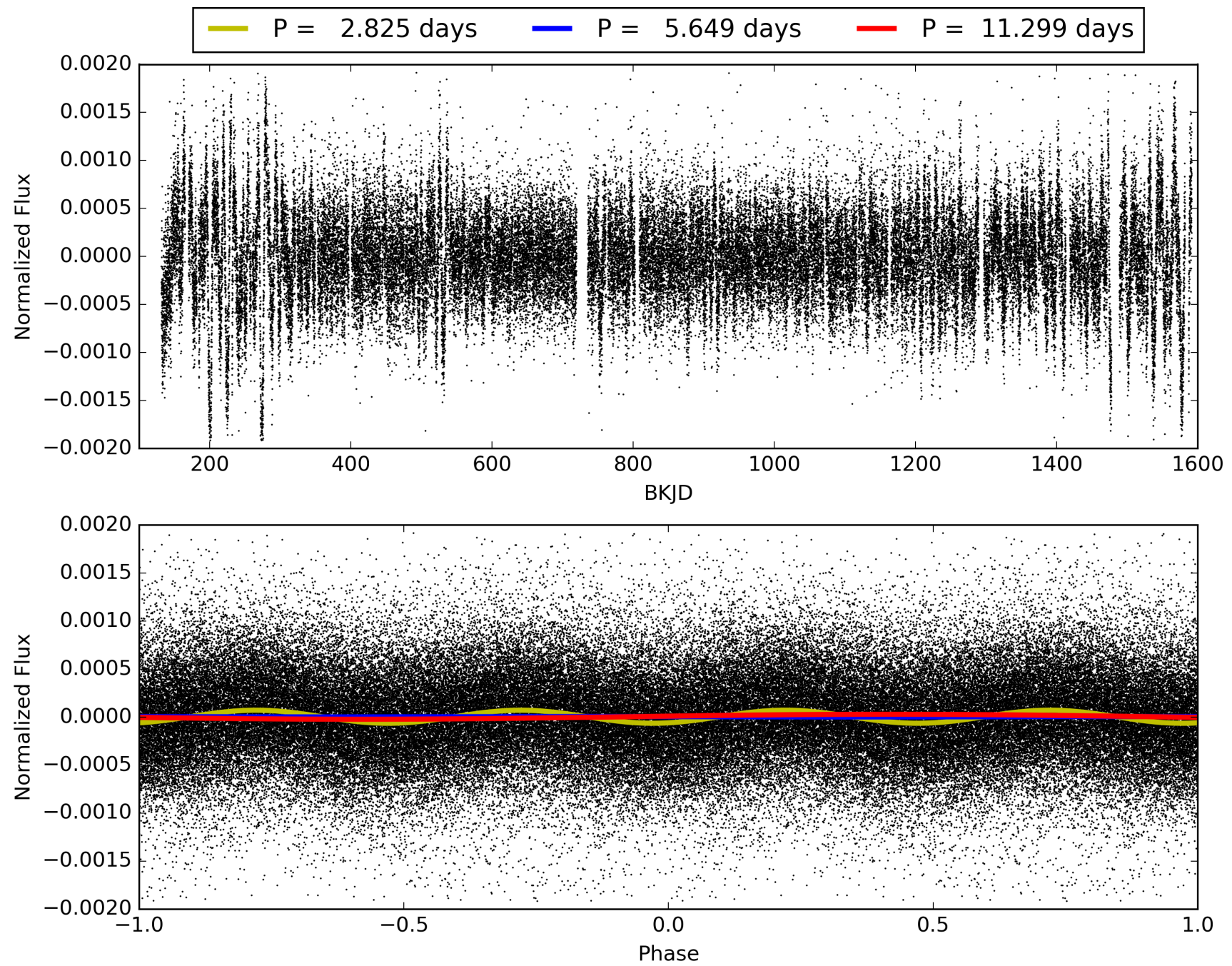
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:26:32 Z

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

TCE 009530253-01, PDC Light Curves

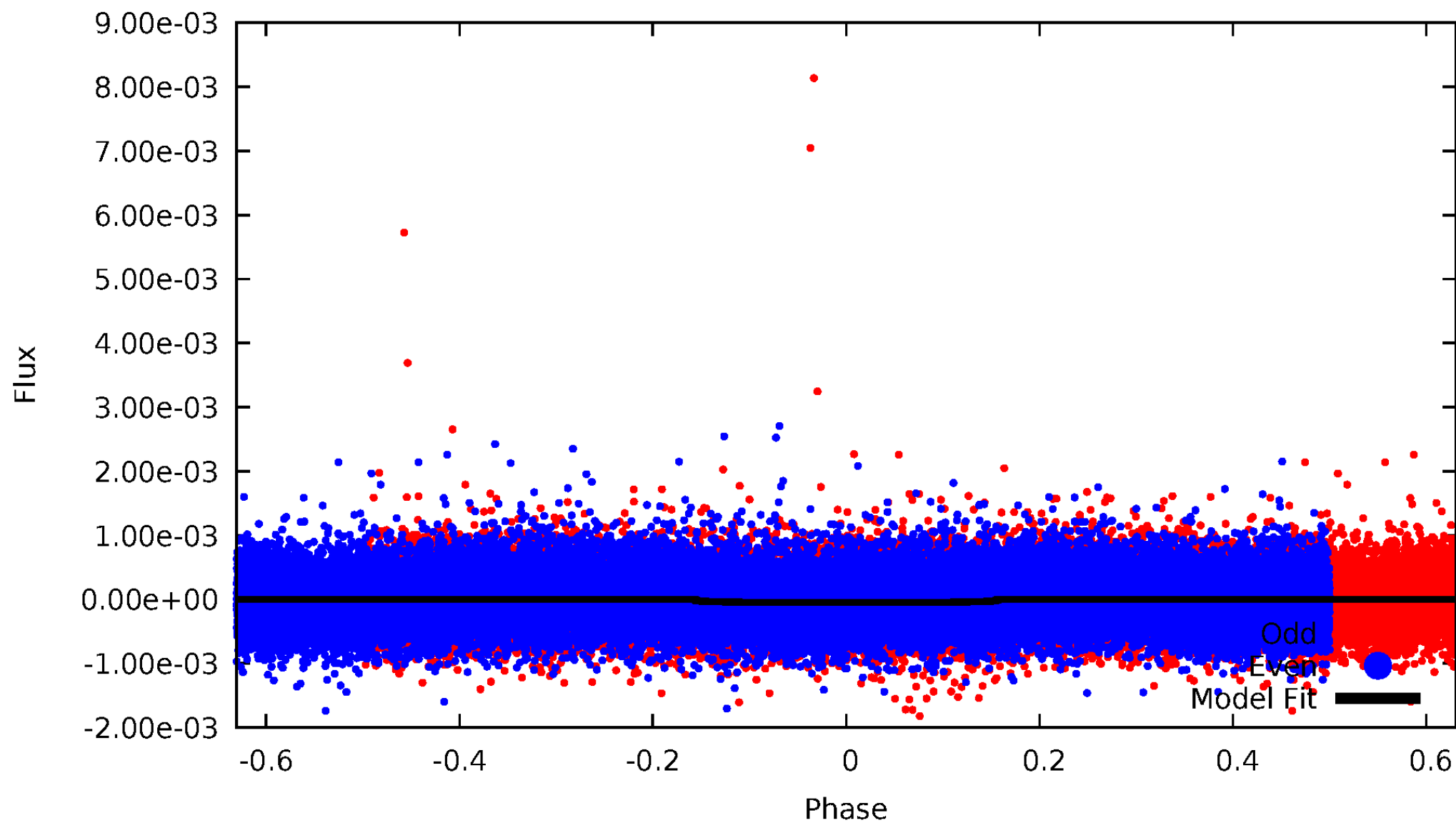


TCE 009530253-01



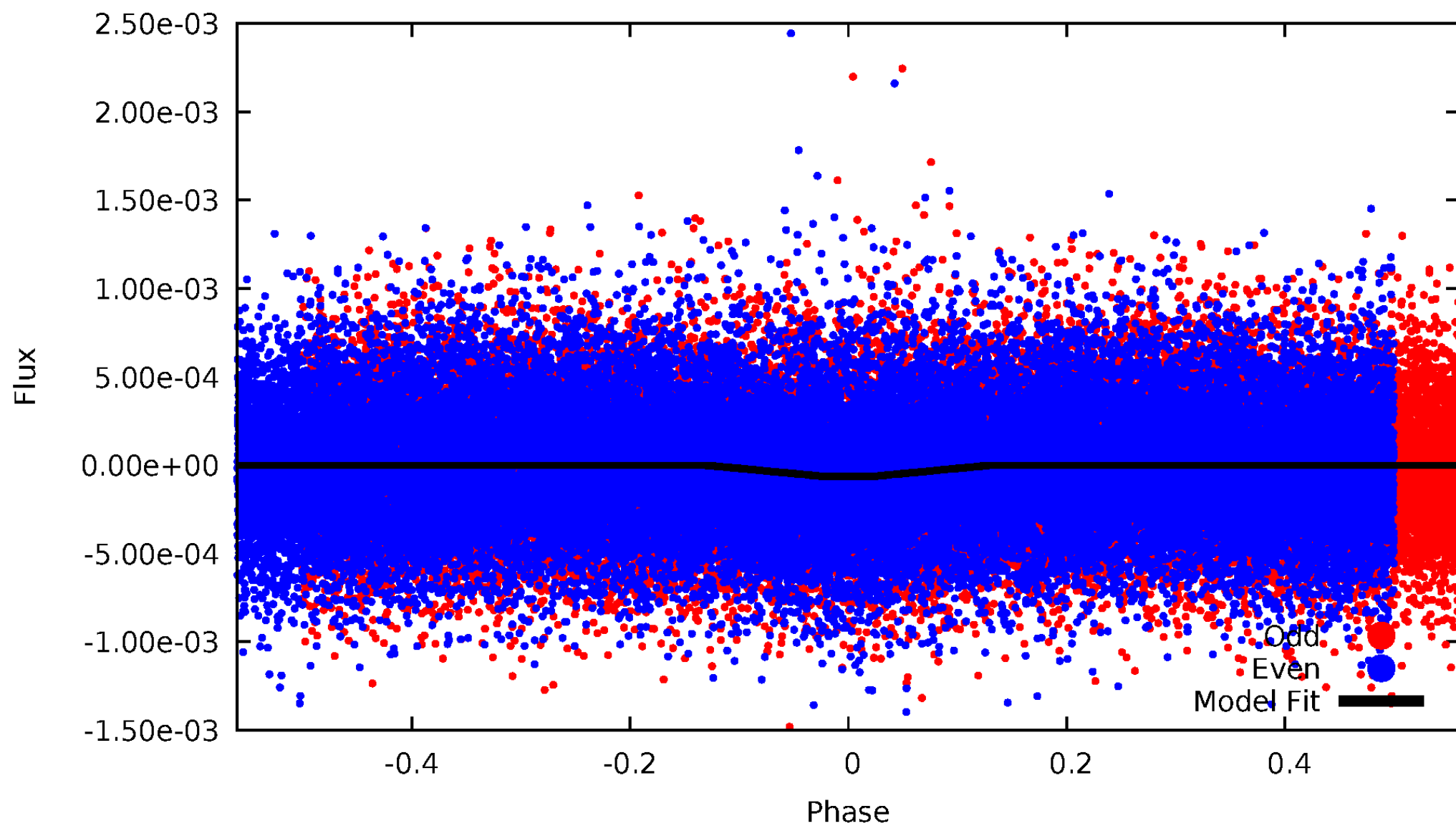
DV Odd/Even

TCE 009530253-01

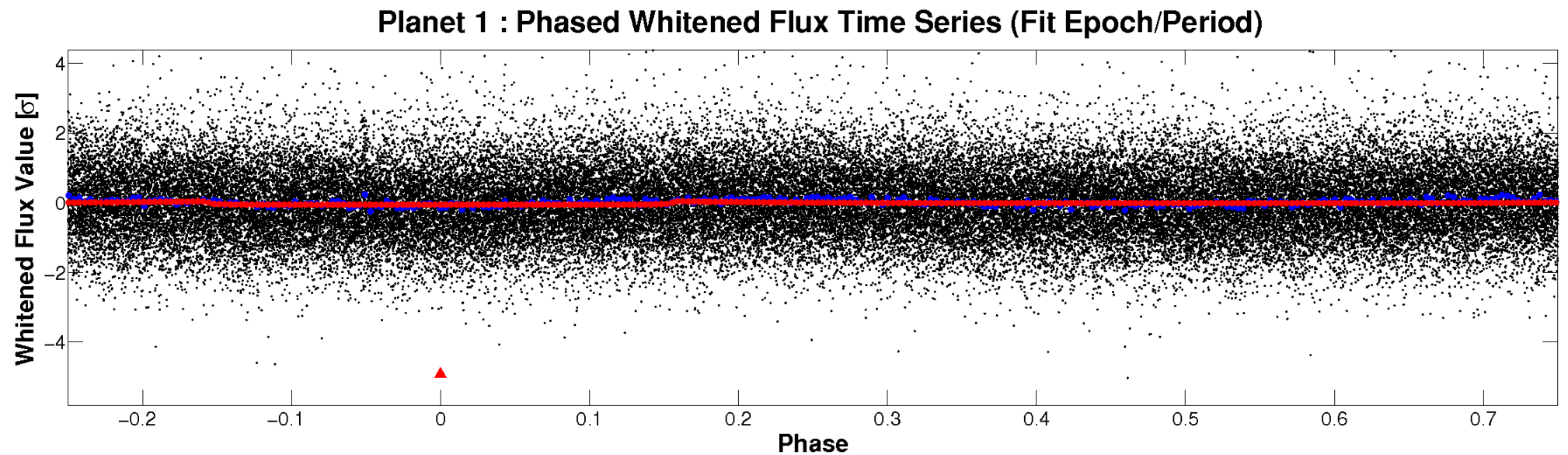
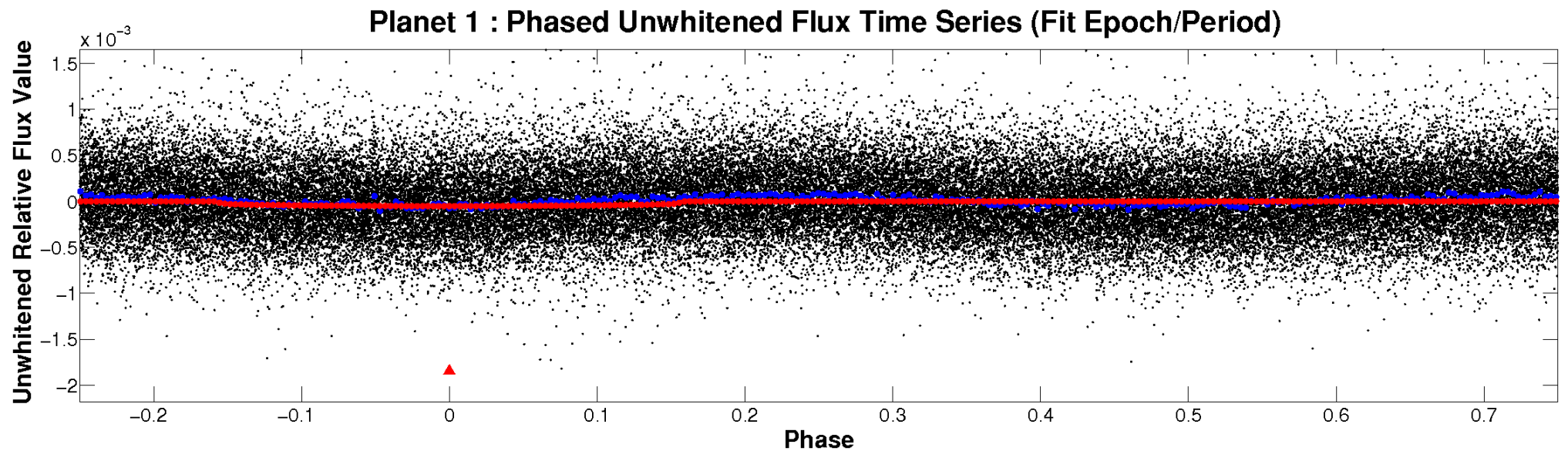


ALT Odd/Even

TCE 009530253-01

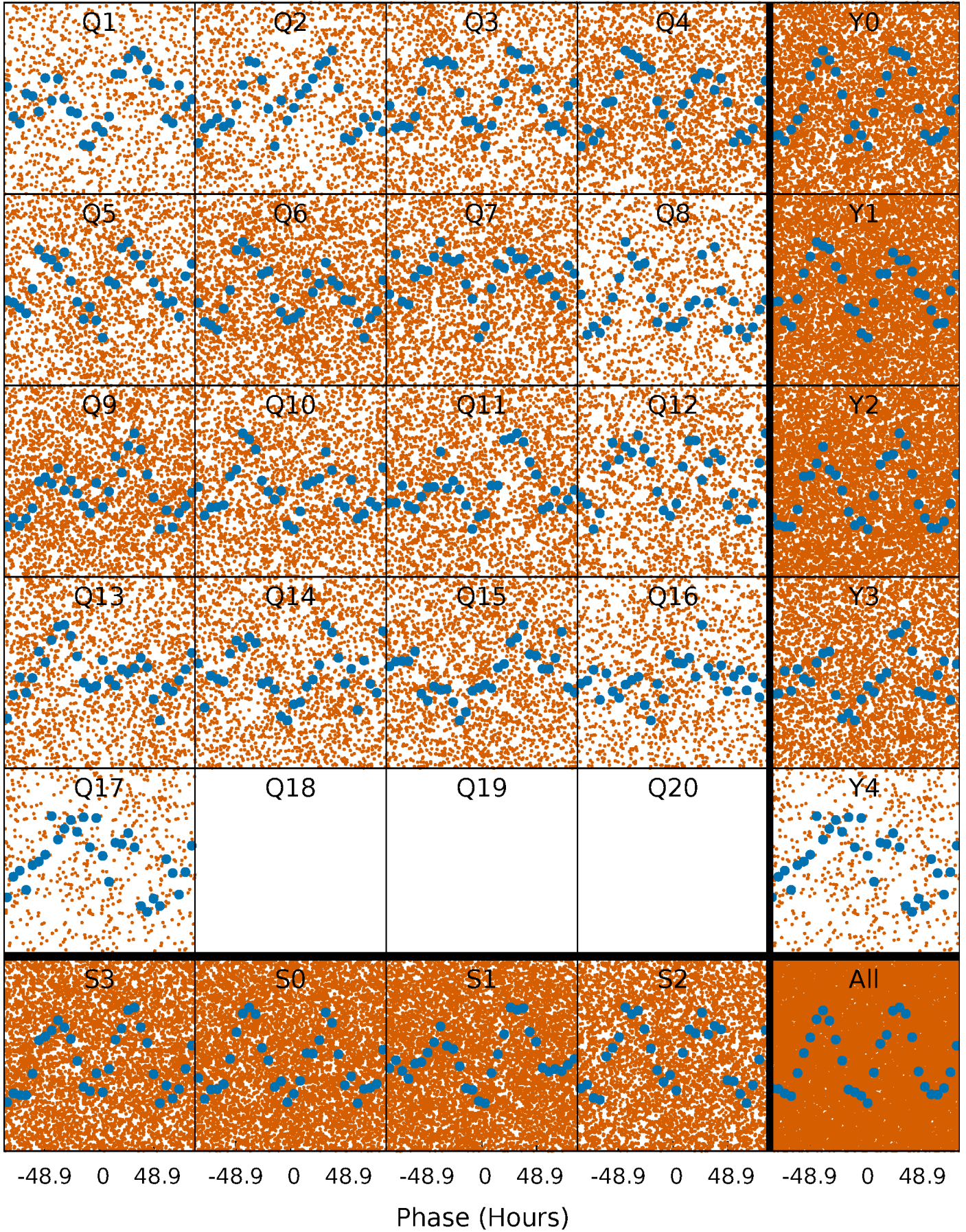


Non-Whitened Vs. Whitened Light Curve



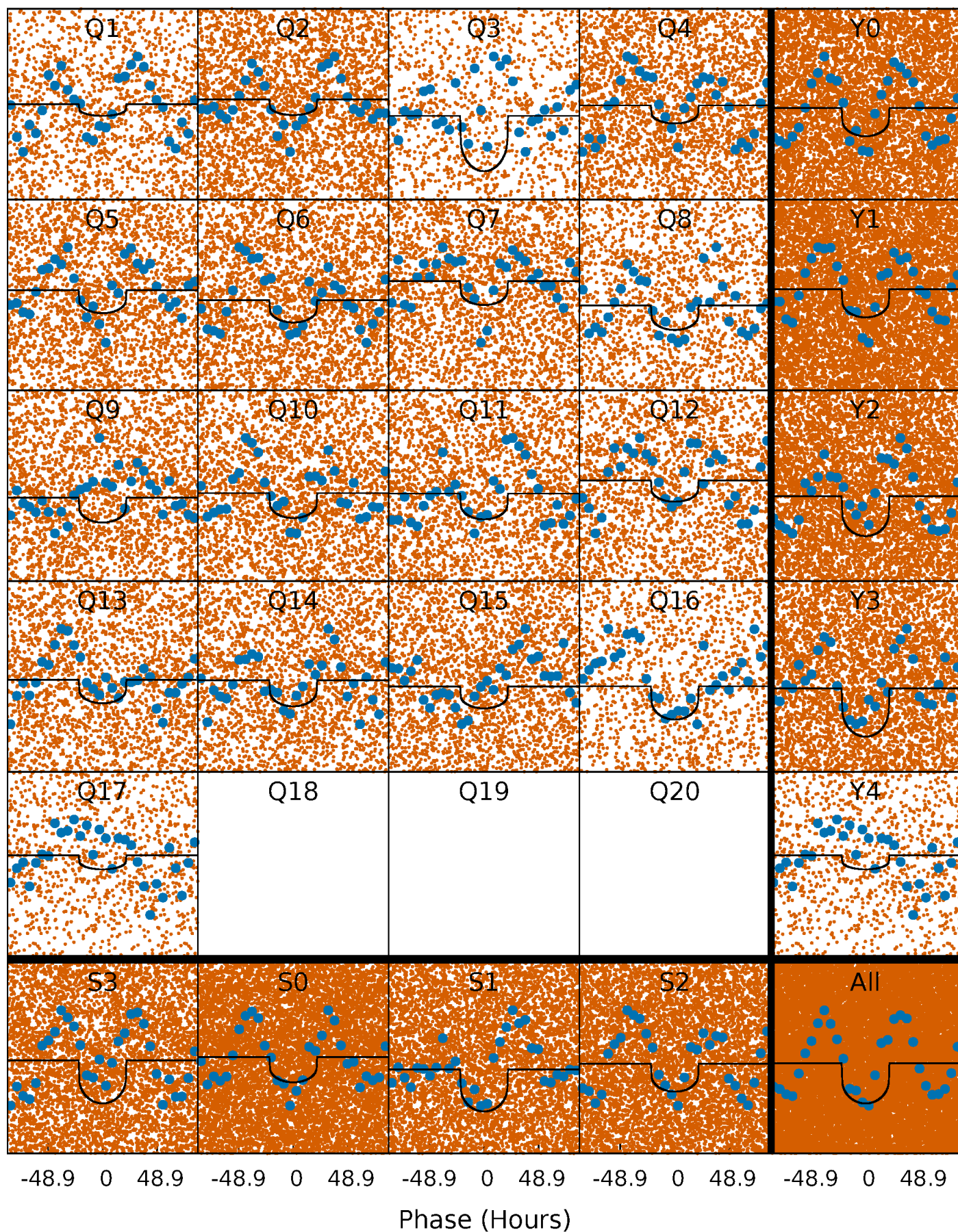
PDC Quarter-Phased Transit Curves

TCE 009530253-01 P= 5.649362 Days $T_0=133.470295$ (BKJD)



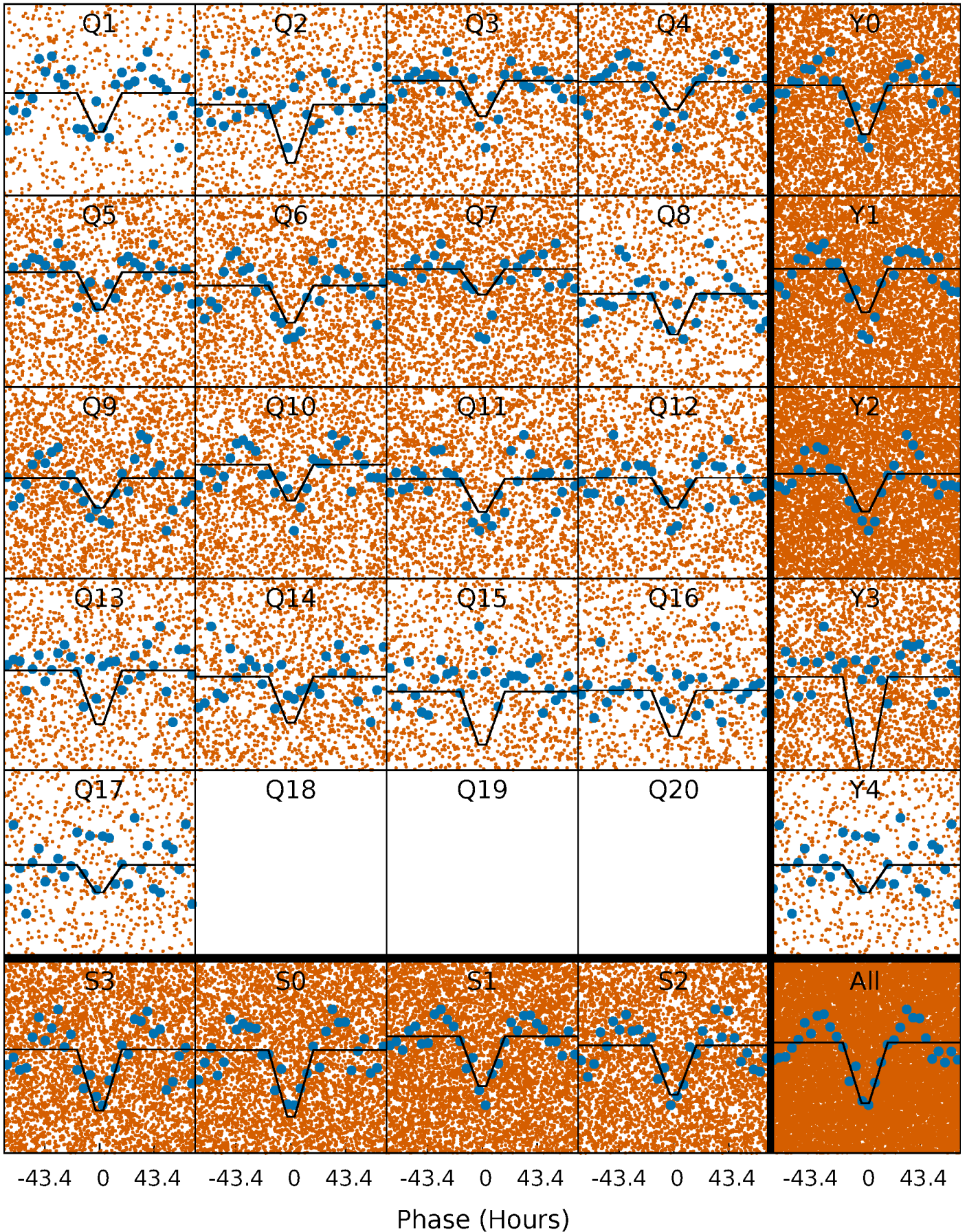
DV Quarter-Phased Transit Curves

TCE 009530253-01 P= 5.649362 Days $T_0=133.470295$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

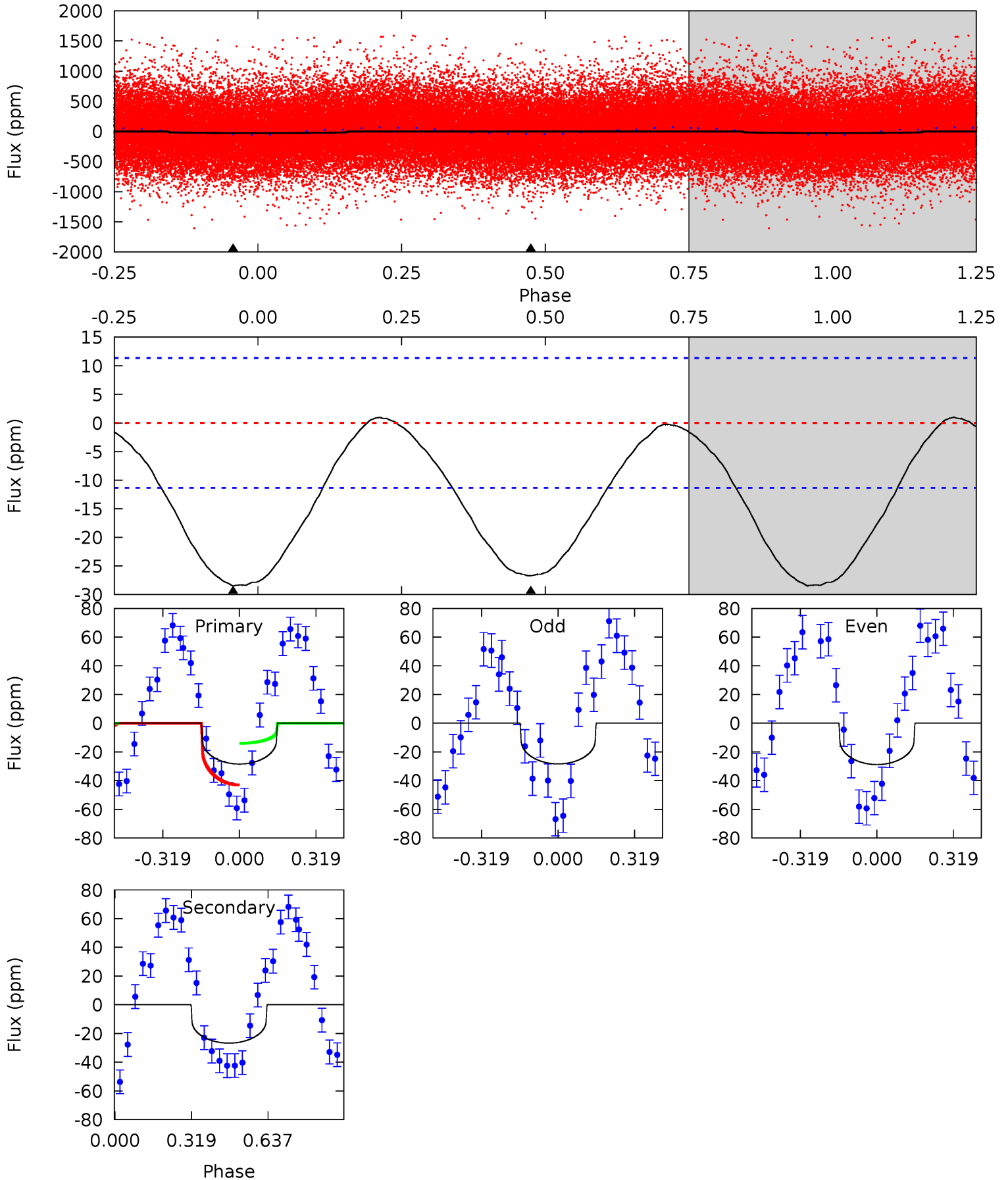
TCE 009530253-01 P= 5.648295 Days $T_0=133.509227$ (BKJD)



DV Model-Shift Uniqueness Test

009530253-01, P = 5.649362 Days, E = 127.820933 Days

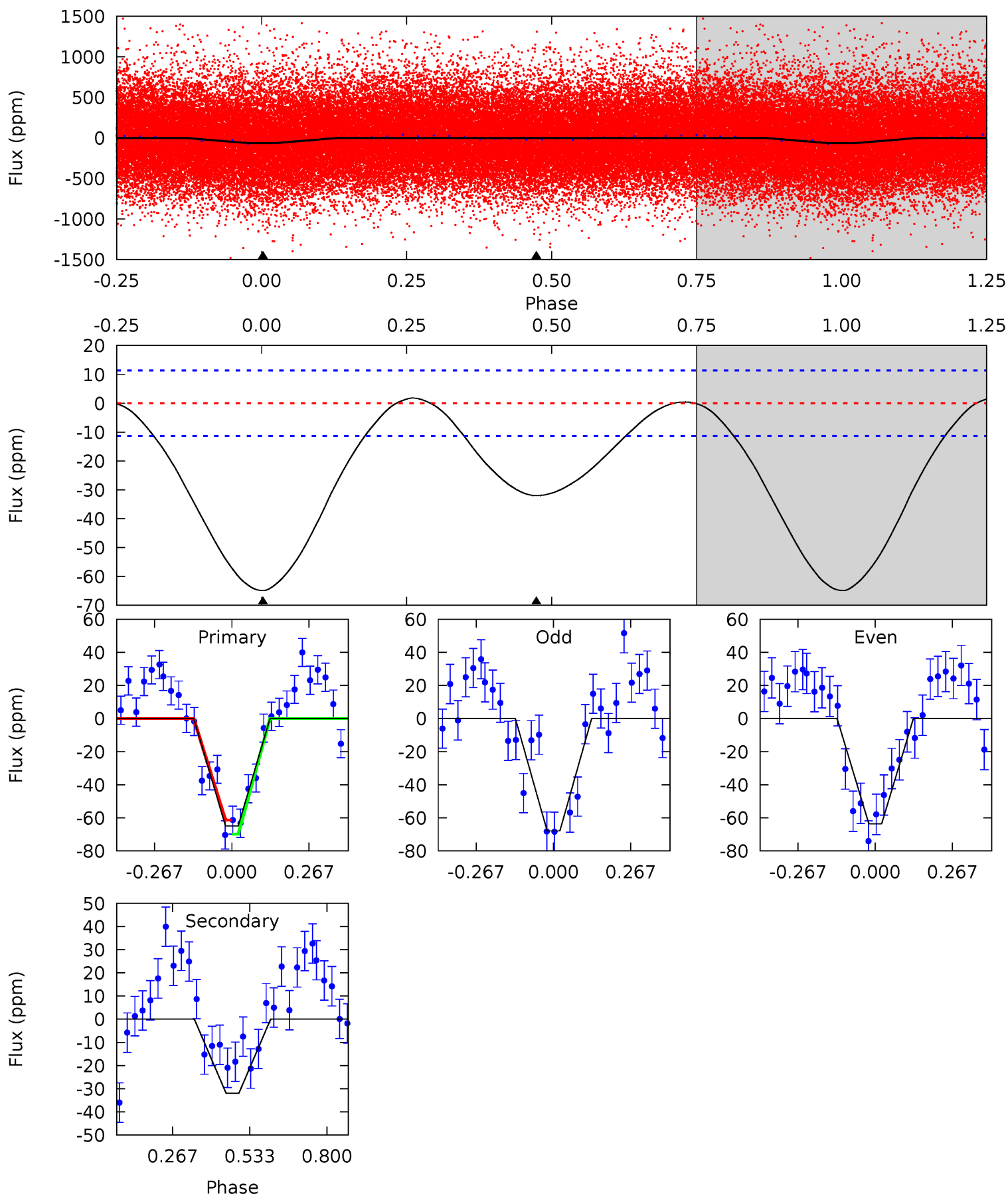
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	10.1	0	0	4.32	1.00	0.21	10.8	10.8	10.1	10.1	0.09	0.95	0.03	5.62



Alt Model-Shift Uniqueness Test

009530253-01, P = 5.648295 Days, E = 127.860932 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	12.3	0	0	4.35	1.11	0.37	24.9	24.9	12.3	12.3	0.81	1.16	0.03	1.62



Stellar Parameters For KIC 009530253

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5915^{+158}_{-193}	$4.424^{+0.084}_{-0.196}$	$-0.060^{+0.250}_{-0.300}$	$1.015^{+0.305}_{-0.131}$	$0.998^{+0.140}_{-0.115}$	$1.346^{+0.491}_{-0.695}$
	+3%/-3%	+2%/-4%	+417%/-500%	+30%/-13%	+14%/-12%	+37%/-52%
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 009530253-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27 ± 3	$0.82^{+0.52}_{-0.46}$	1489^{+110}_{-73}	5103^{+2539}_{-899}	85^{+331}_{-54}
Alt.	-32 ± 3	$0.98^{+0.57}_{-0.51}$	1508^{+108}_{-94}	4958^{+2077}_{-819}	70^{+215}_{-42}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

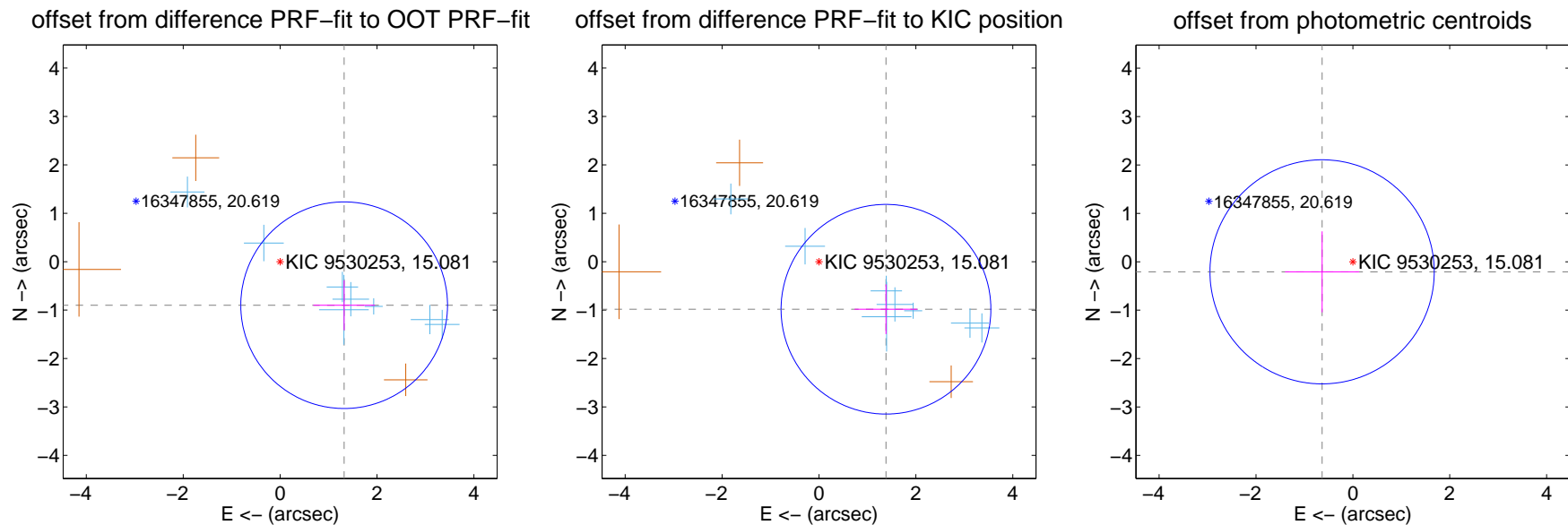
DV Centroid Data

Supplemental centroid analysis for 009530253-01. Kepler magnitude: 15.08. Transit SNR 8.83

There are 8 quarters with good PRF difference image offsets

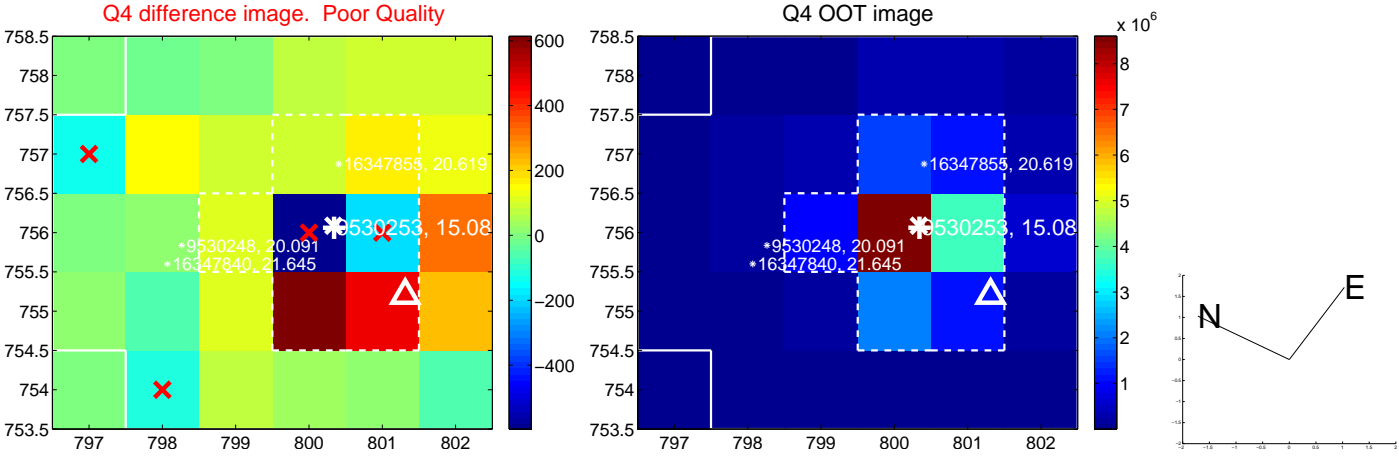
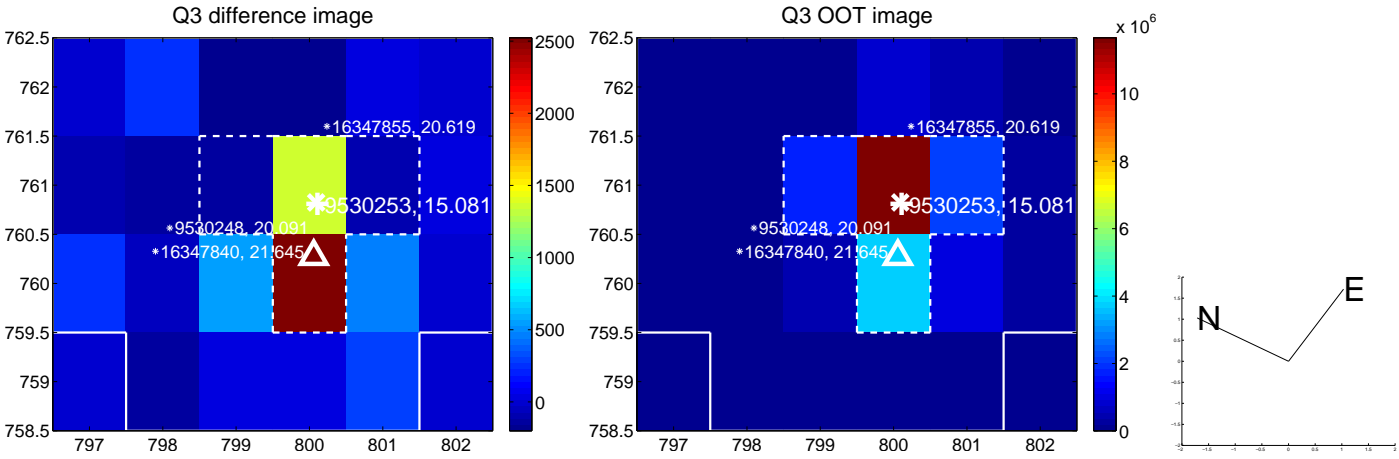
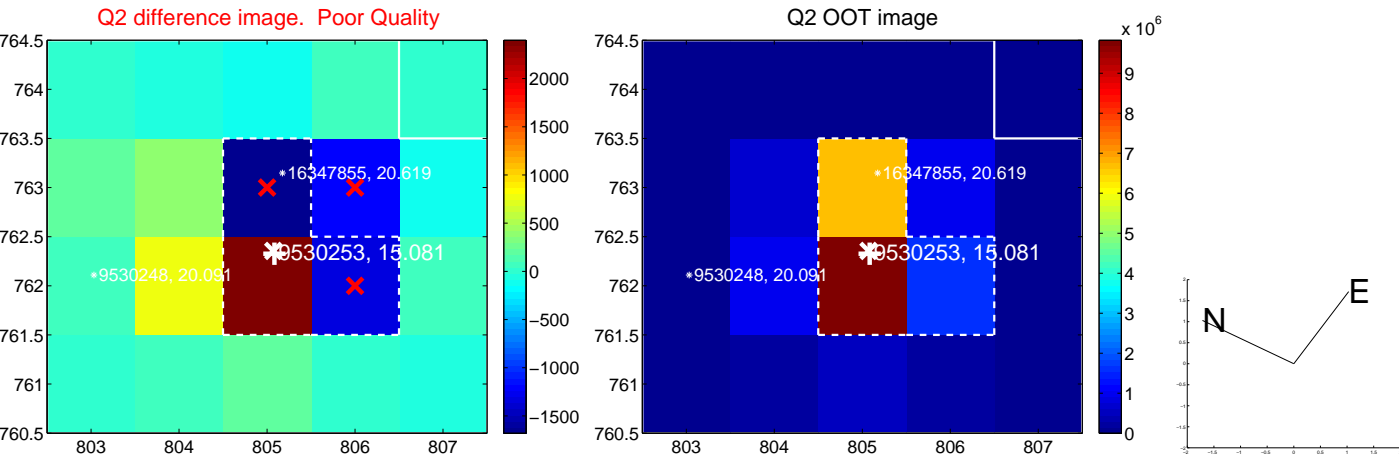
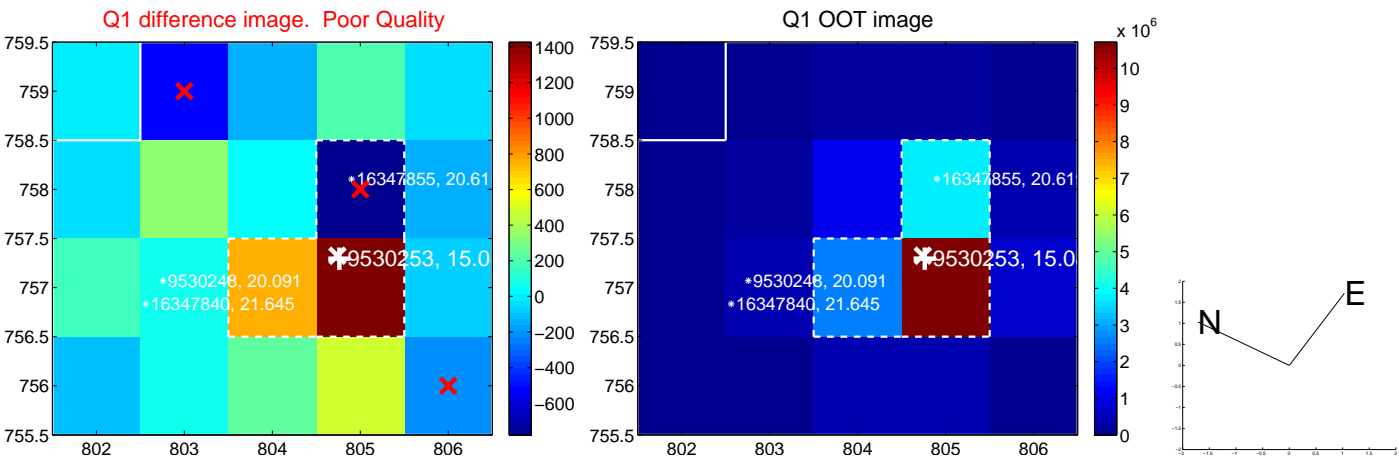
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.598 ± 0.711	2.25	-1.322 ± 0.636	-0.899 ± 0.515
PRF-fit source offset from KIC position	1.696 ± 0.722	2.35	-1.382 ± 0.649	-0.982 ± 0.513
photometric centroid source offset	0.67 ± 0.77	0.87	0.63 ± 0.76	-0.21 ± 0.84

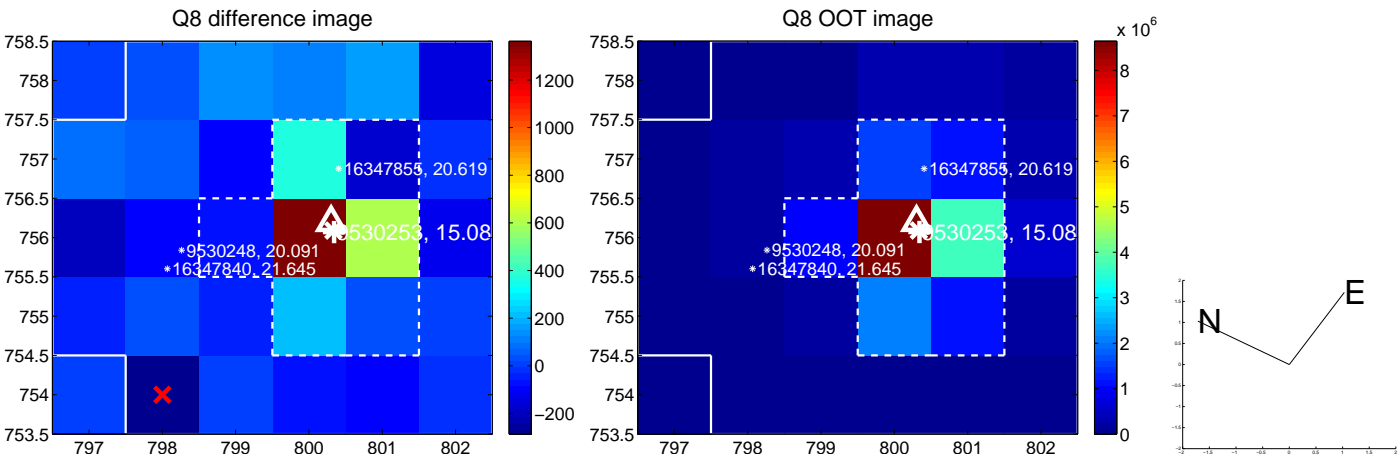
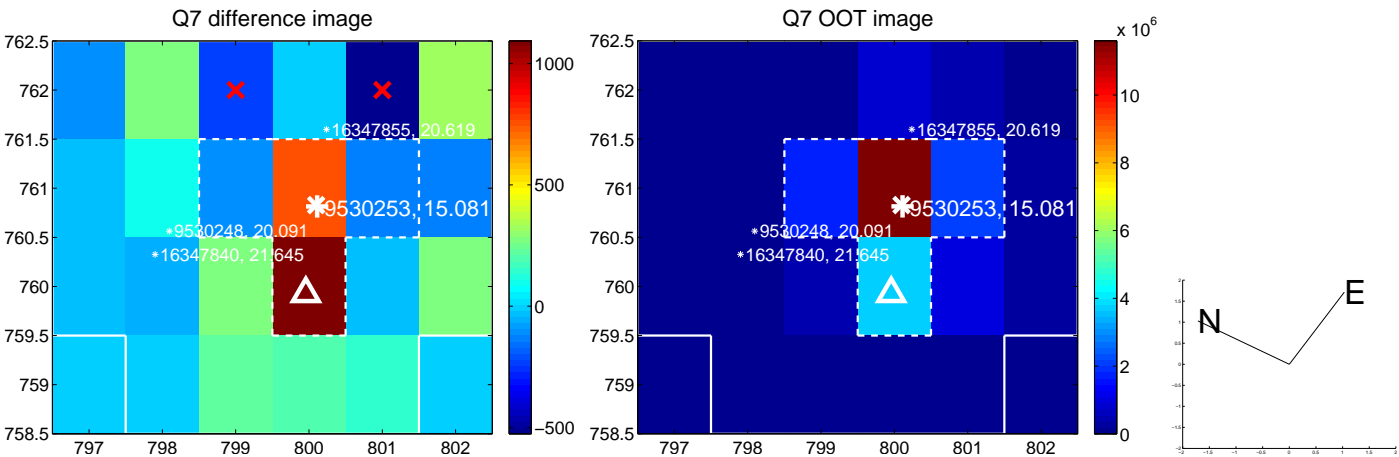
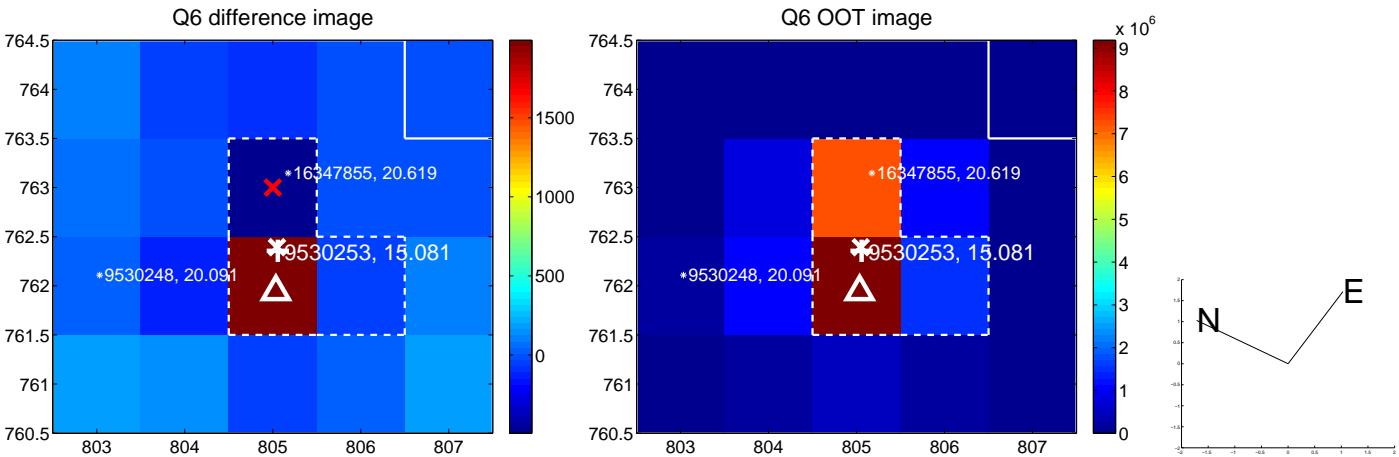
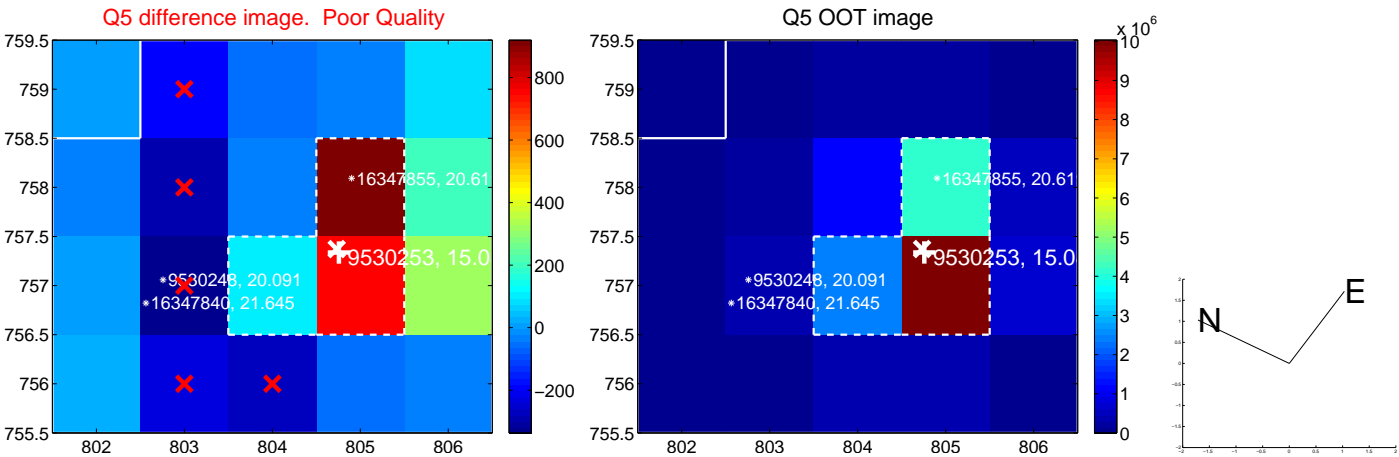


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

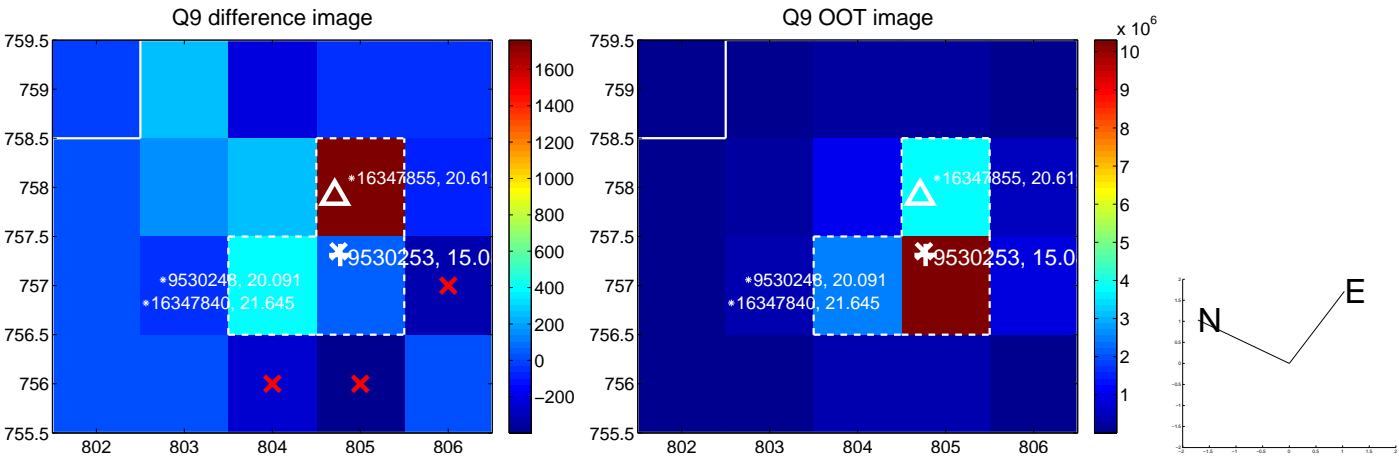
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



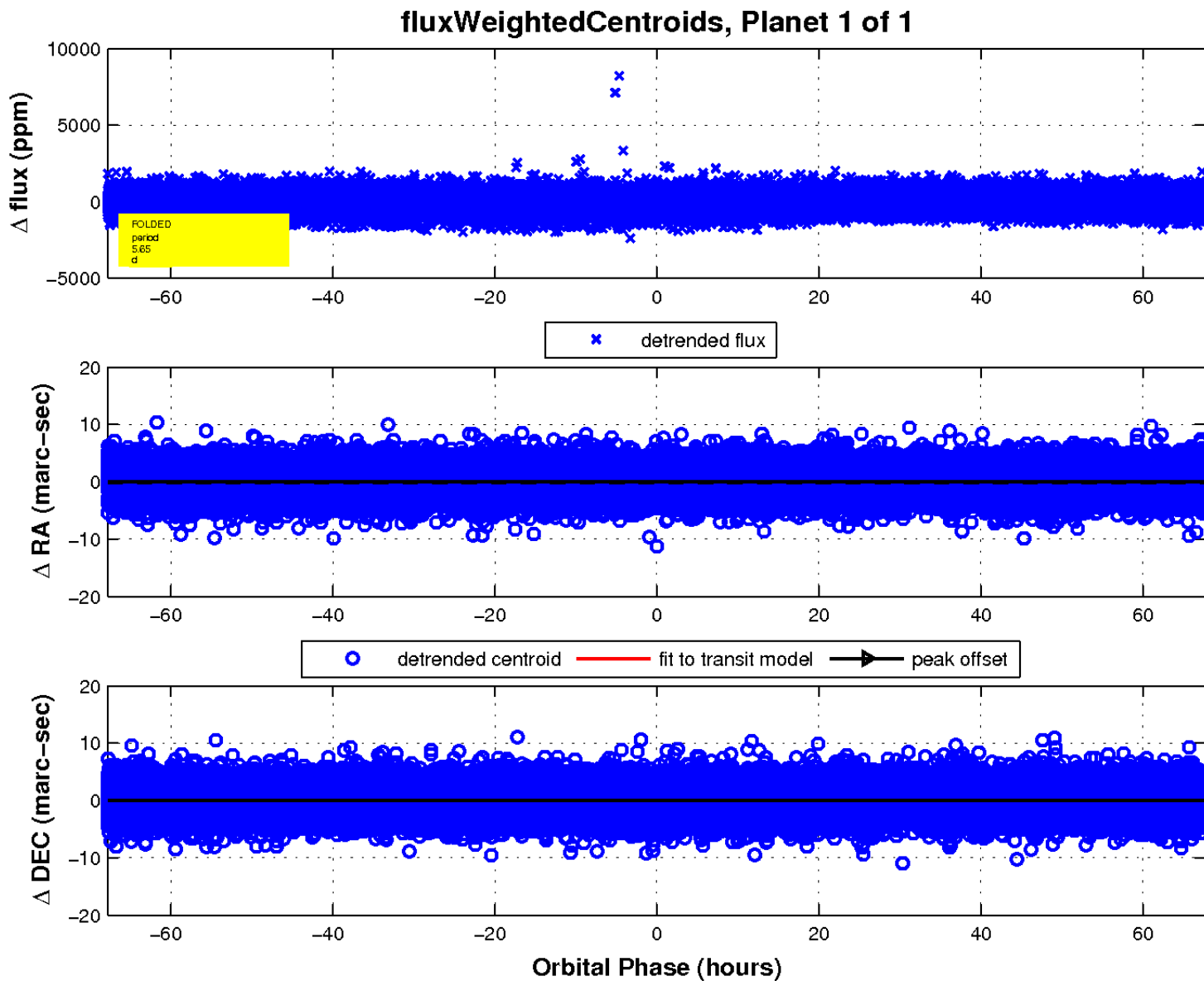
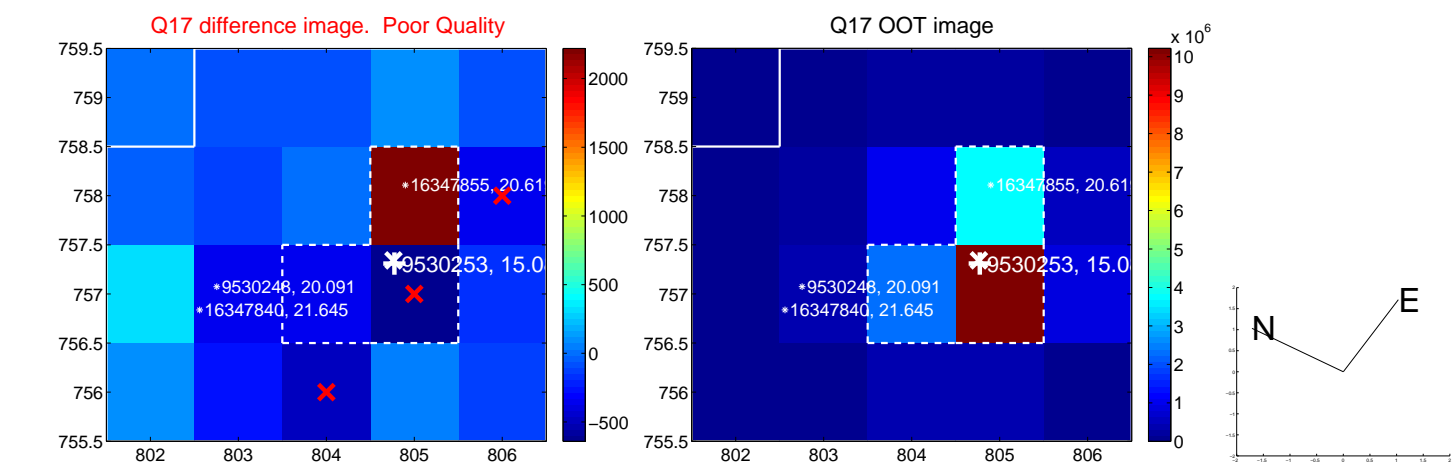
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

