

KIC 005353738

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})
005353738-01	OBS	No	29.361983	137.646550	151.3	43.211	8.4	13.7	1.03	5731	1.34	30.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005353738-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

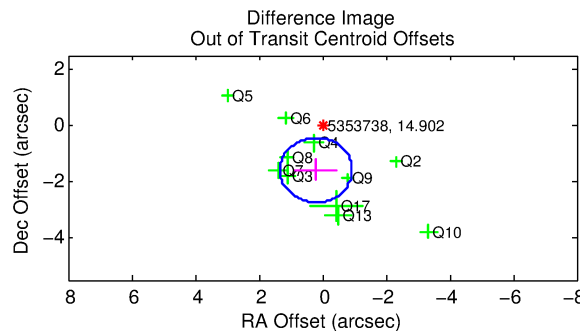
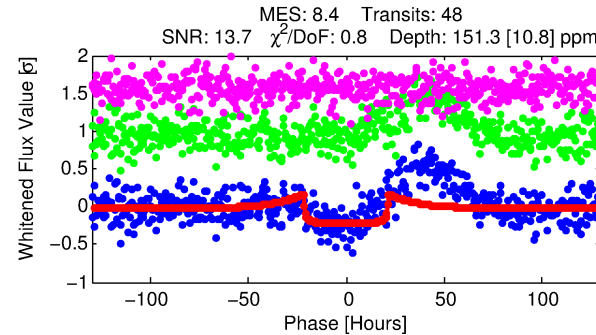
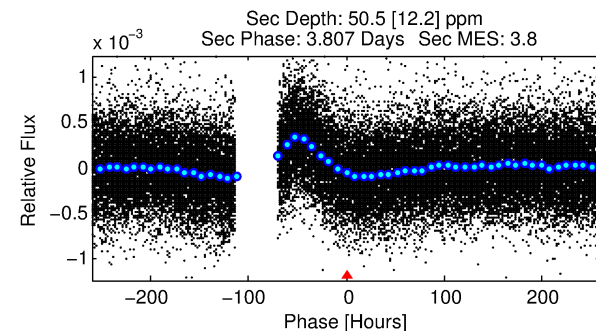
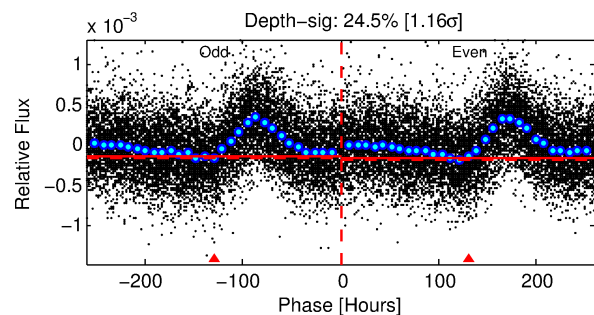
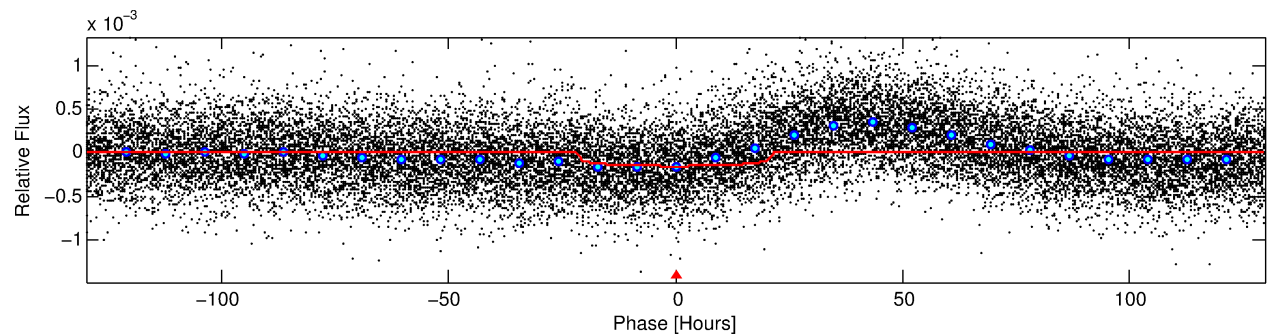
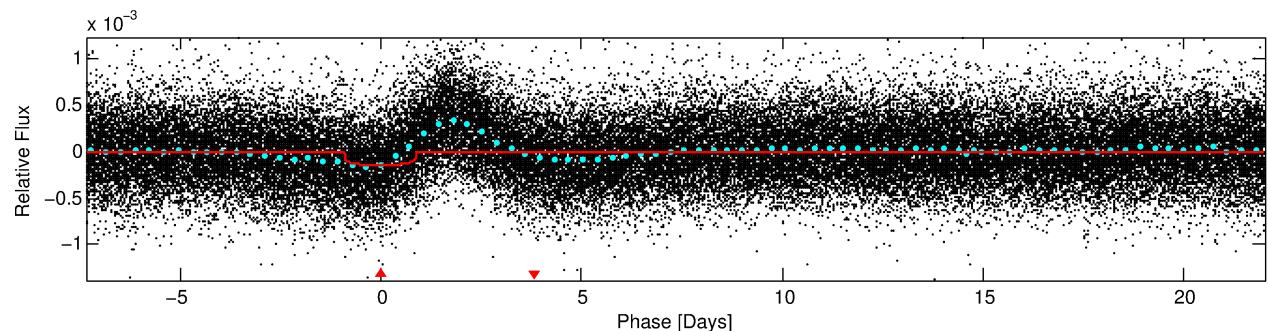
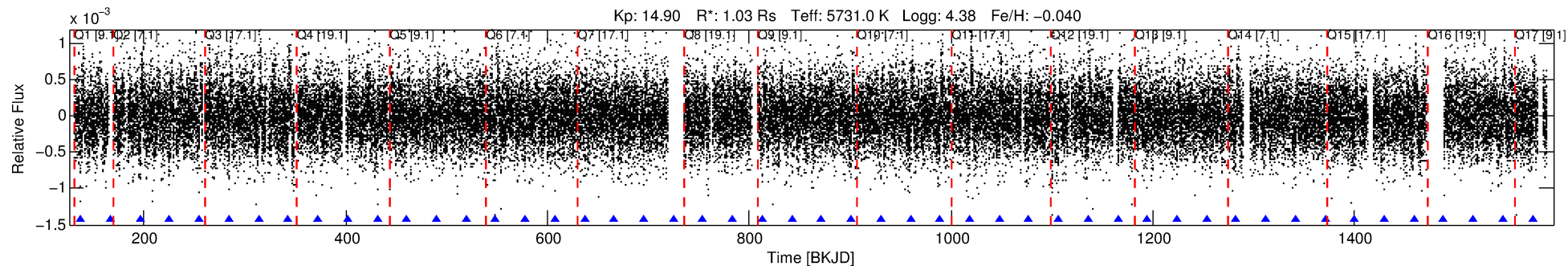
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005353738-01

No Significant Match Found

DV One-Page Summary

KIC: 5353738 Candidate: 1 of 1 Period: 29.362 d



DV Fit Results:

Period = 29.36198 [0.00081] d
Epoch = 137.6465 [0.0232] BKJD
Rp/R* = 0.0120 [0.0014]
a/R* = 3.98 [1.79]
b = 0.68 [0.38]
Seff = 30.97 [11.41]
Teff = 602 [55] K
Rp = 1.34 [0.40] Re
a = 0.1821 [0.0431] AU
Ag = 509.55 [245.81] [2.07 σ]
Teffp = 4419 [392] K [9.63 σ]

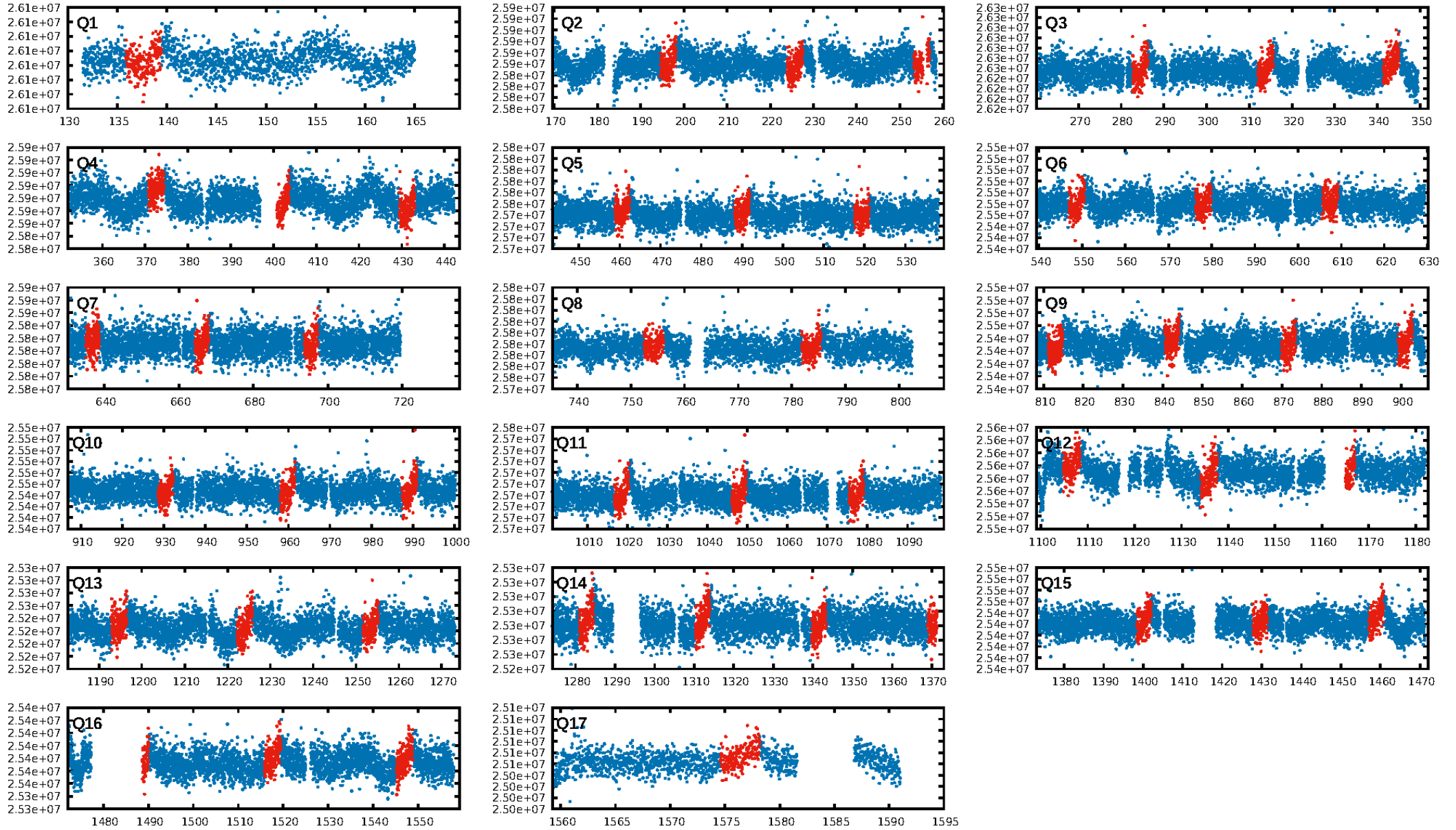
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.77e-18
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 3.648
Centroid-sig: 7.1%
Centroid-so: 0.680 arcsec [1.23 σ]
OotOffset-rm: 1.604 arcsec [4.21 σ]
KicOffset-rm: 1.587 arcsec [4.10 σ]
OotOffset-st: 3/2/2/4 [11]
KicOffset-st: 3/2/2/4 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [15/15]

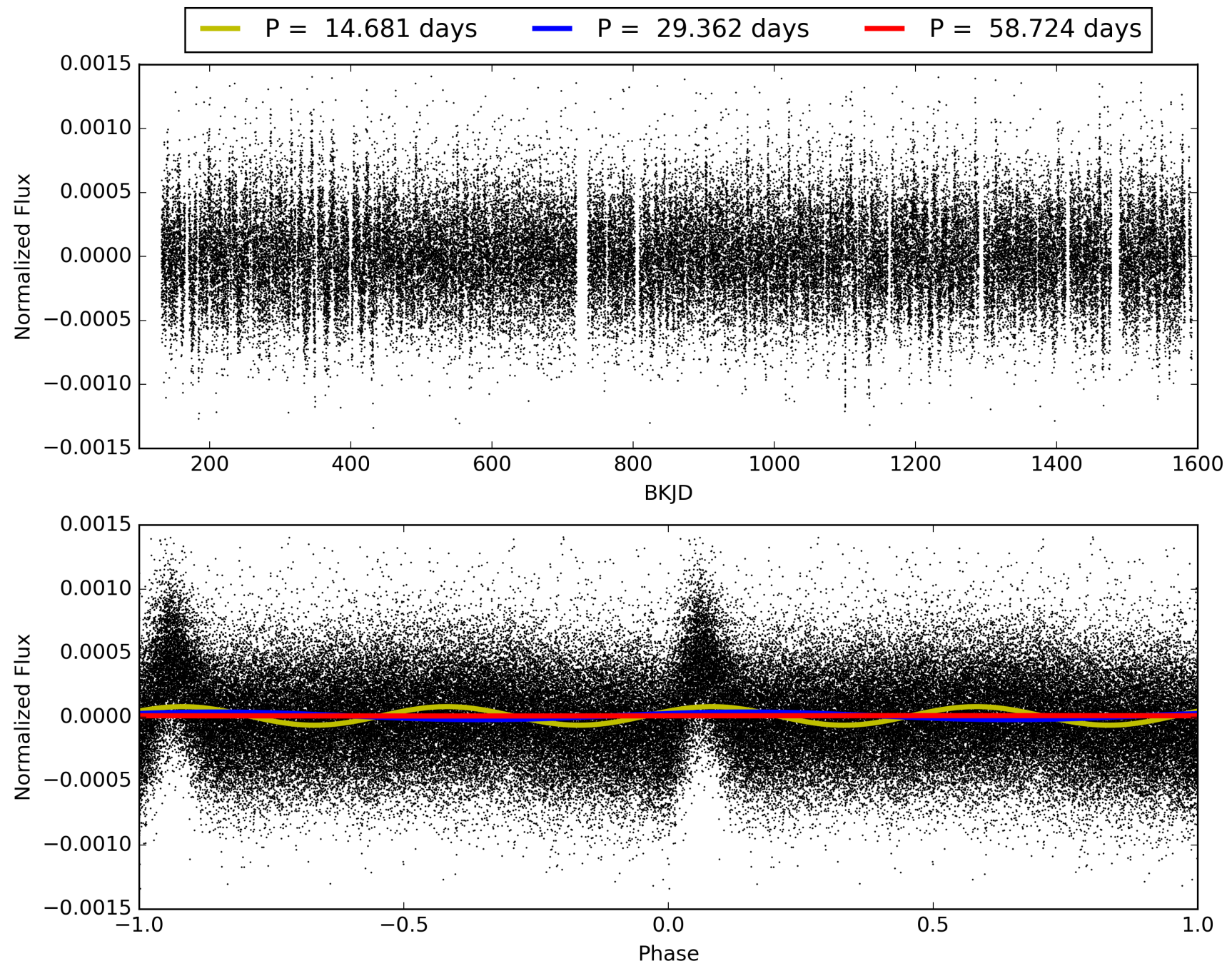
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:45:35 Z

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

TCE 005353738-01, PDC Light Curves

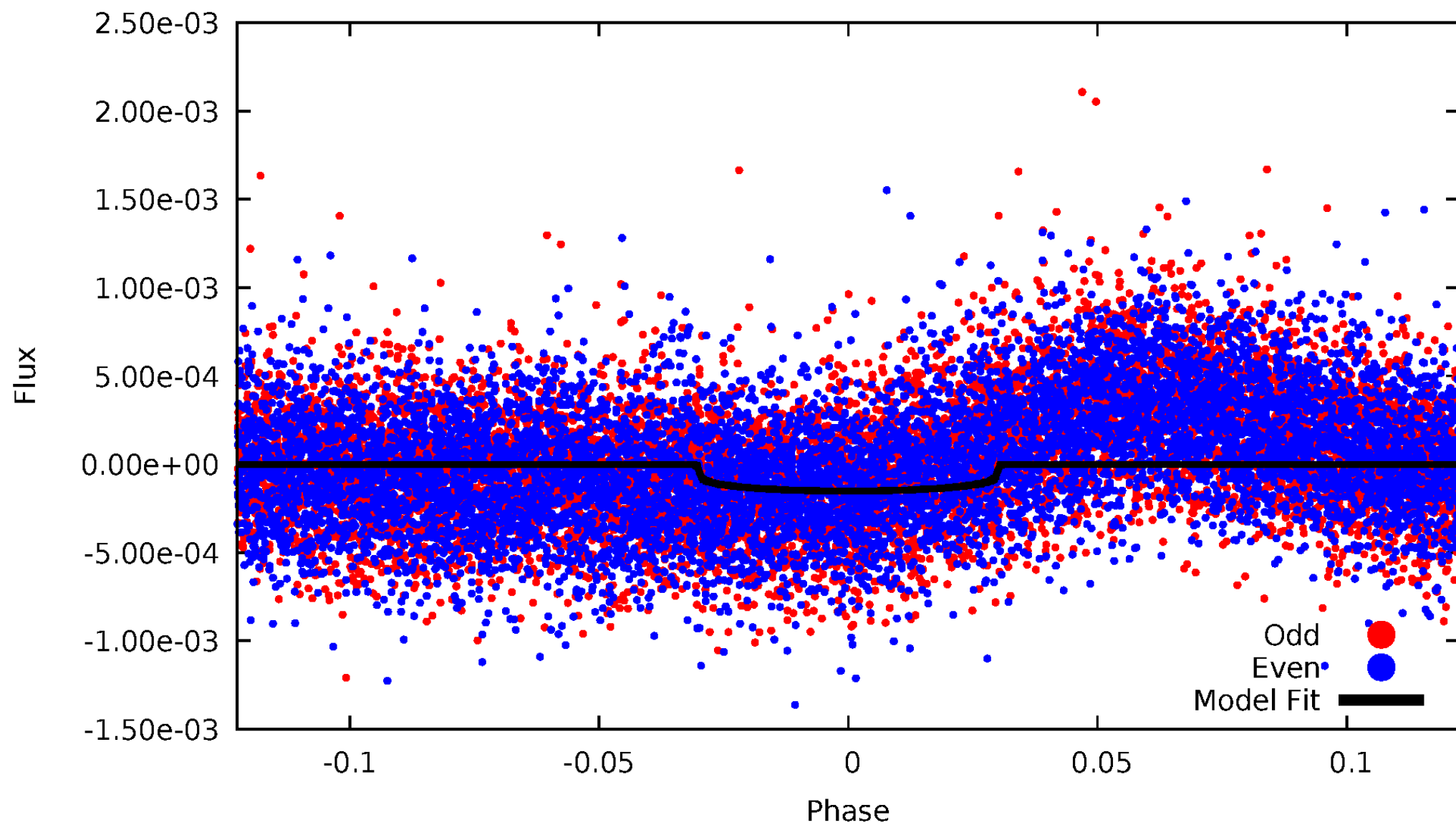


TCE 005353738-01



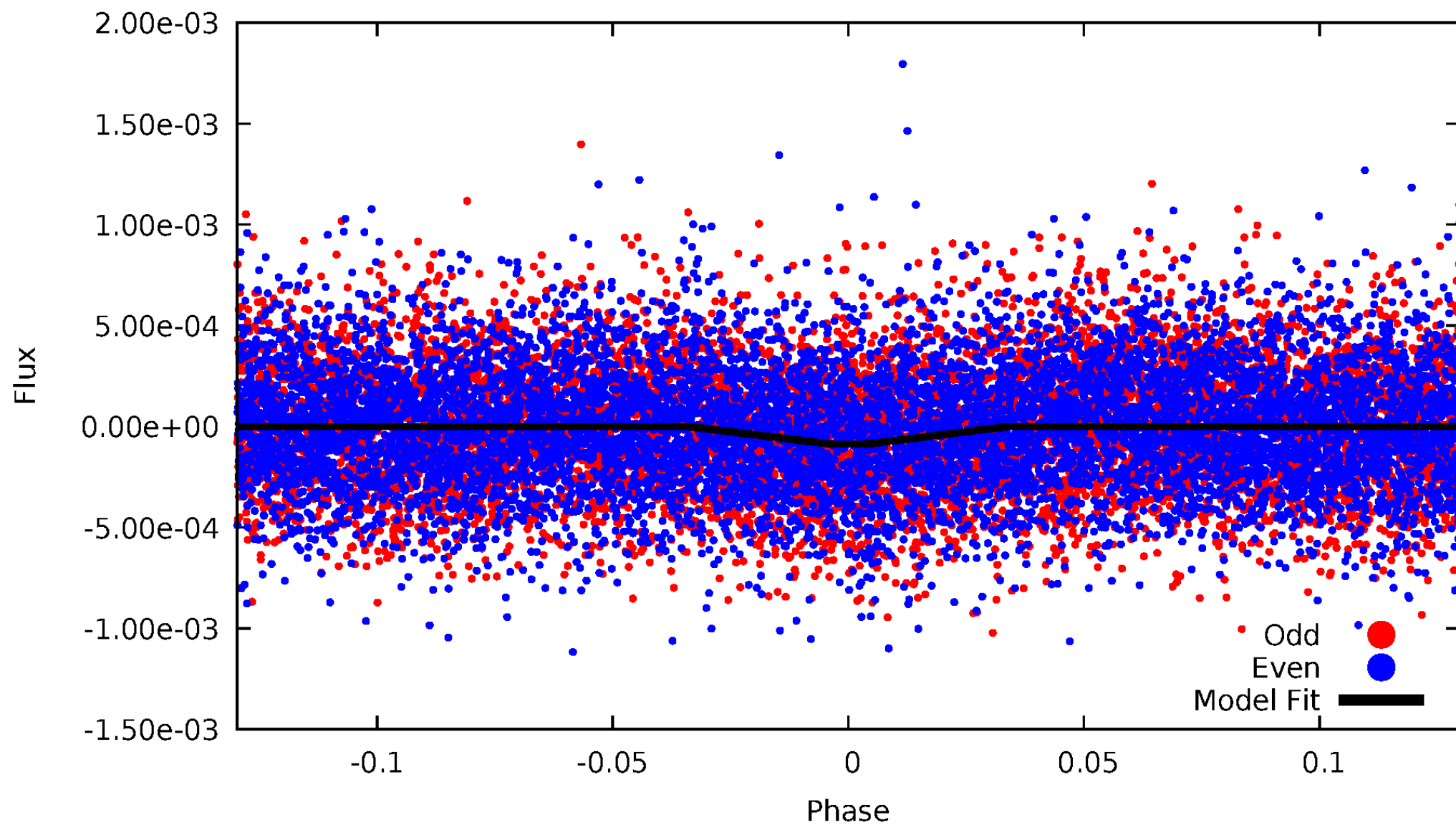
DV Odd/Even

TCE 005353738-01



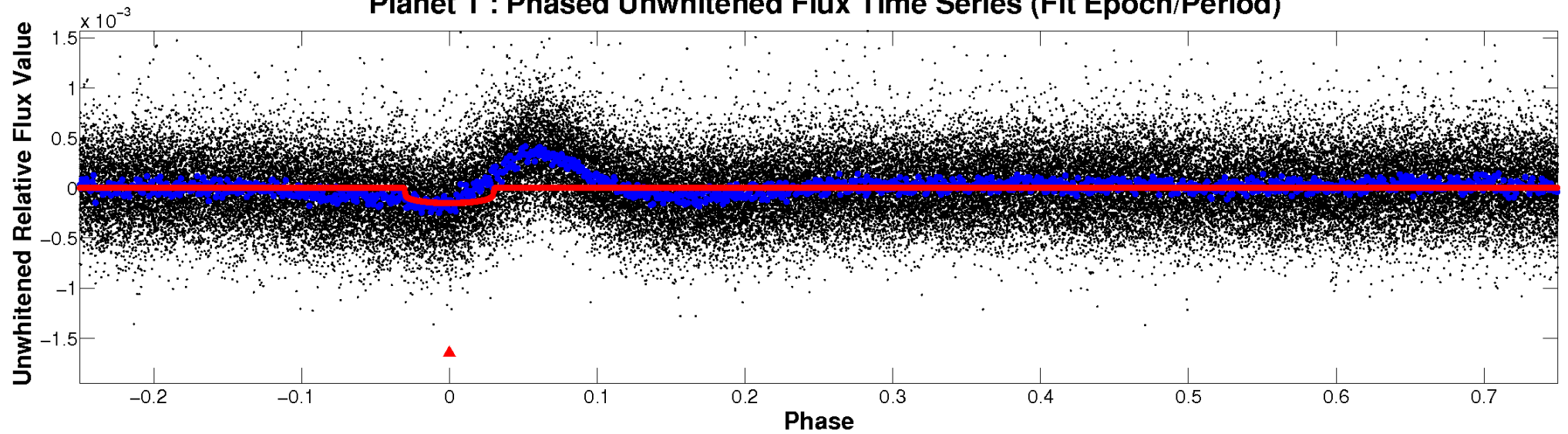
ALT Odd/Even

TCE 005353738-01

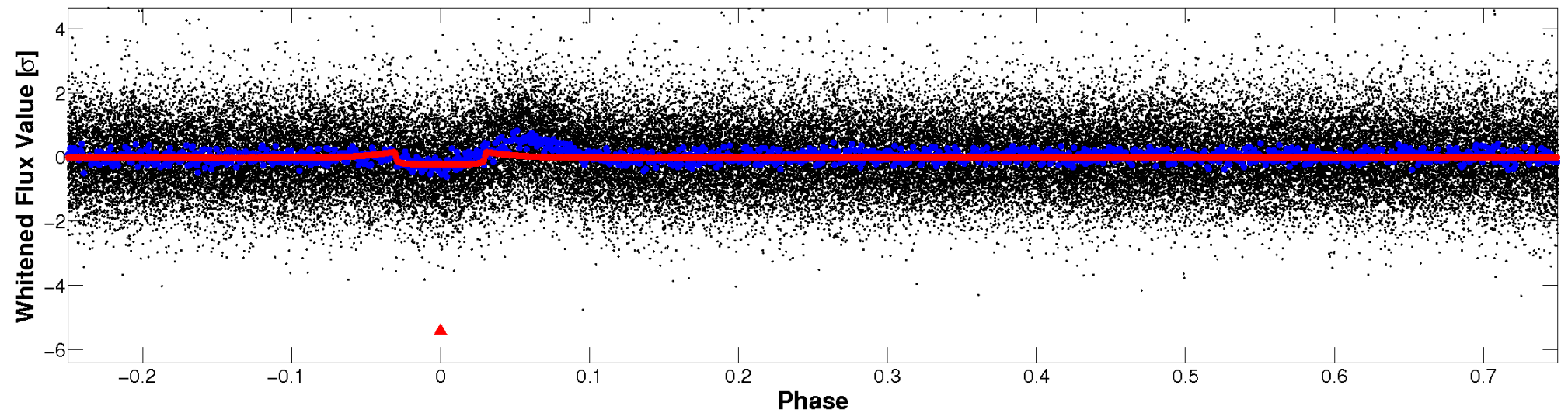


Non-Whitened Vs. Whitened Light Curve

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

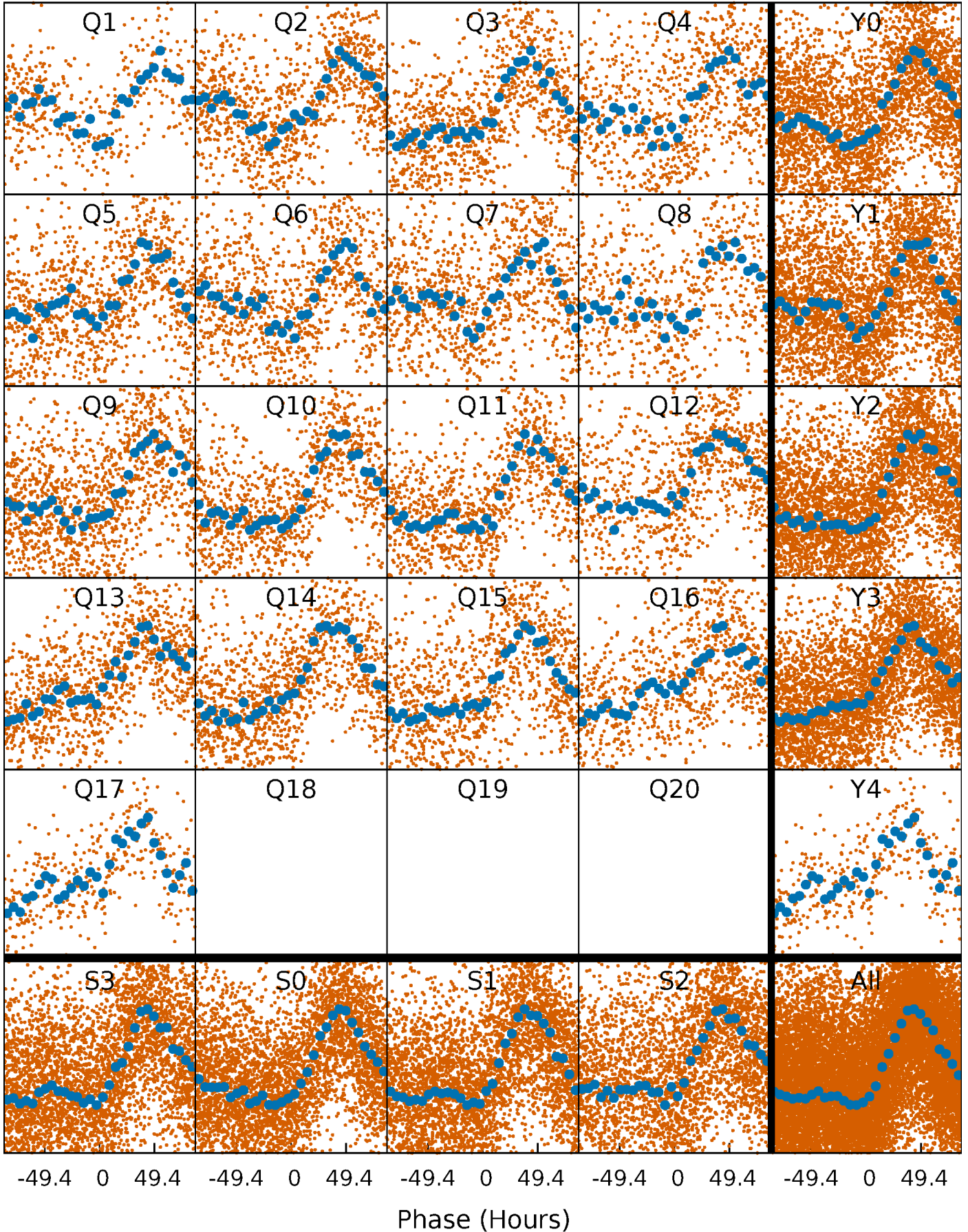


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



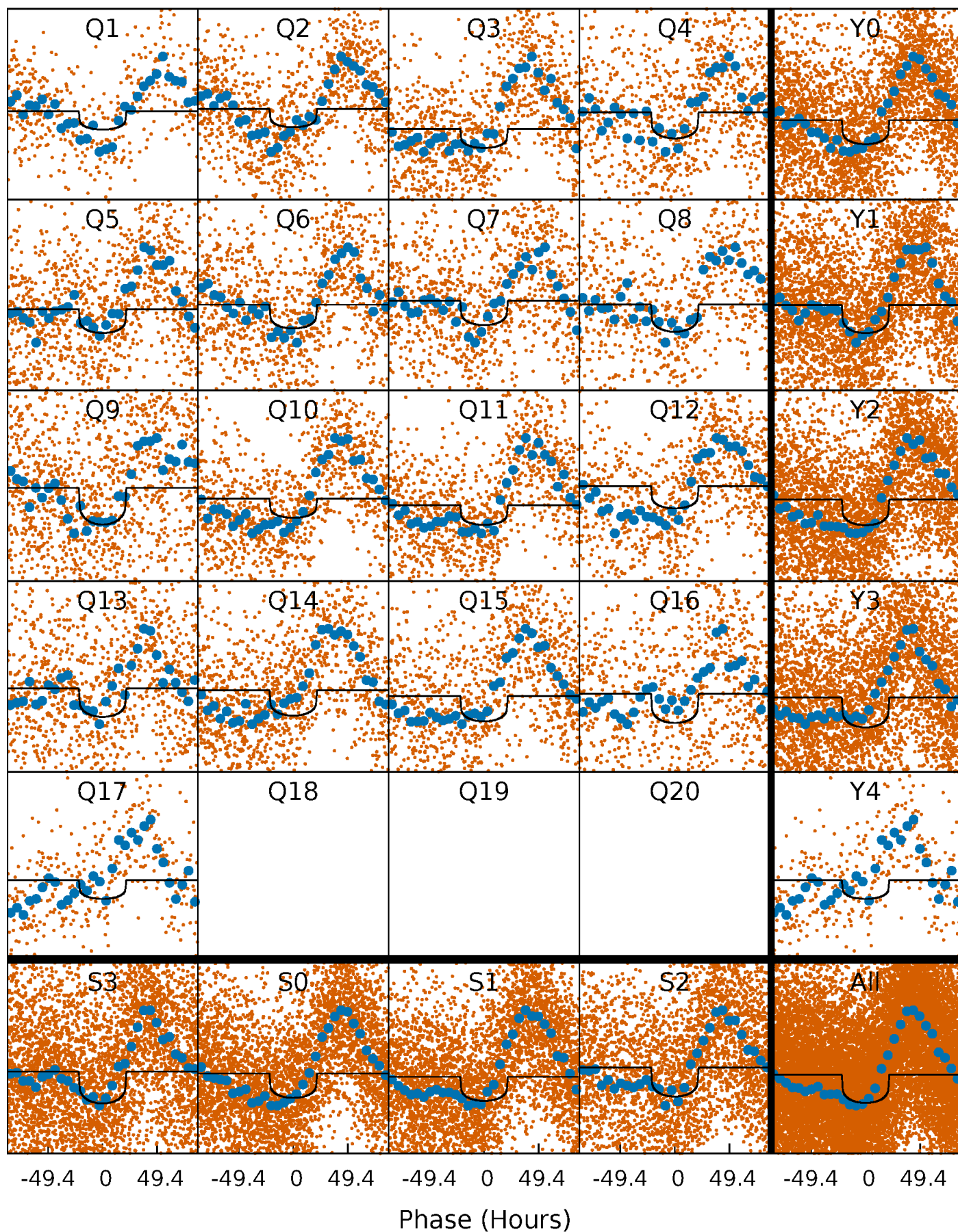
PDC Quarter-Phased Transit Curves

TCE 005353738-01 P= 29.361983 Days $T_0=137.646550$ (BKJD)



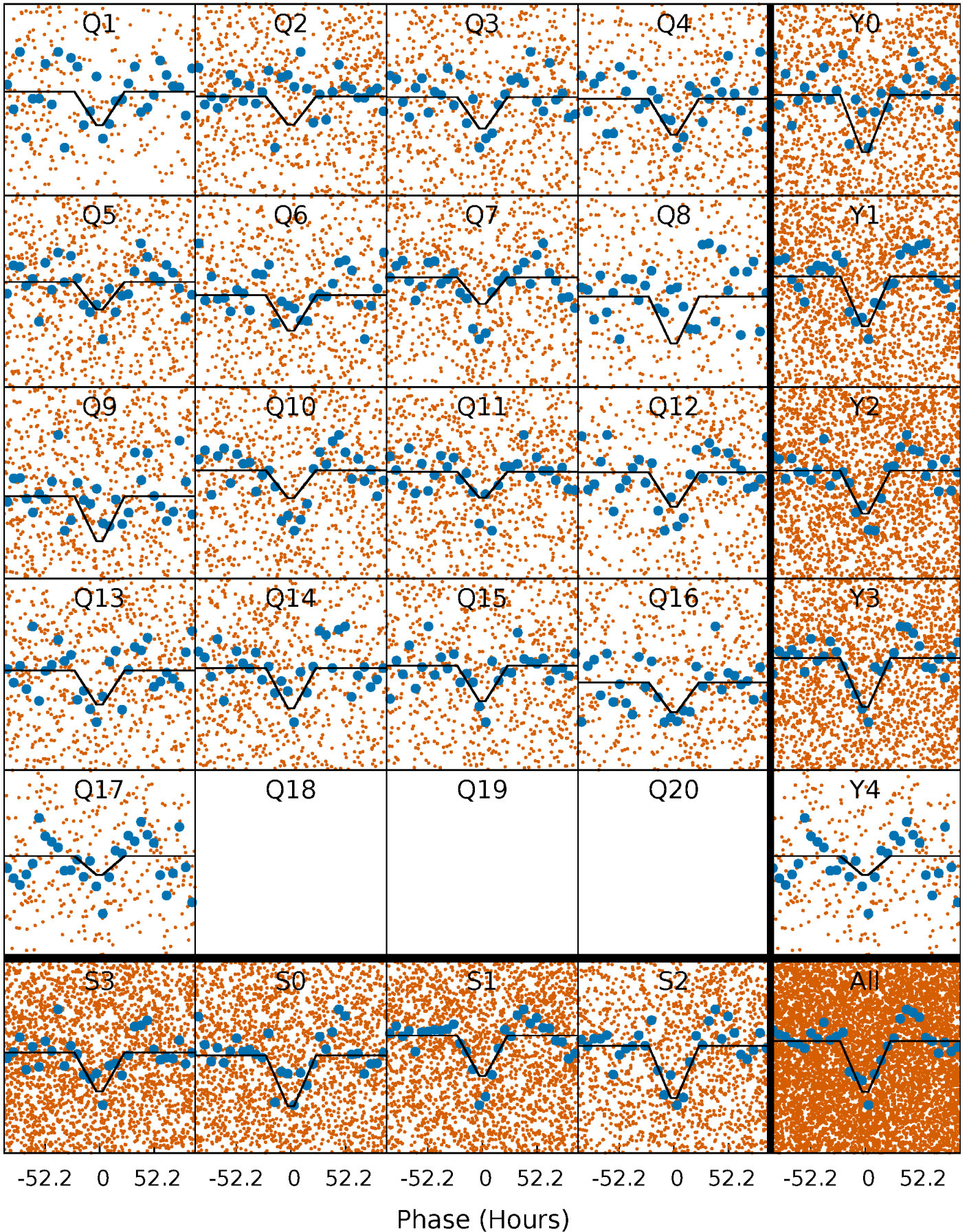
DV Quarter-Phased Transit Curves

TCE 005353738-01 P= 29.361983 Days $T_0=137.646550$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

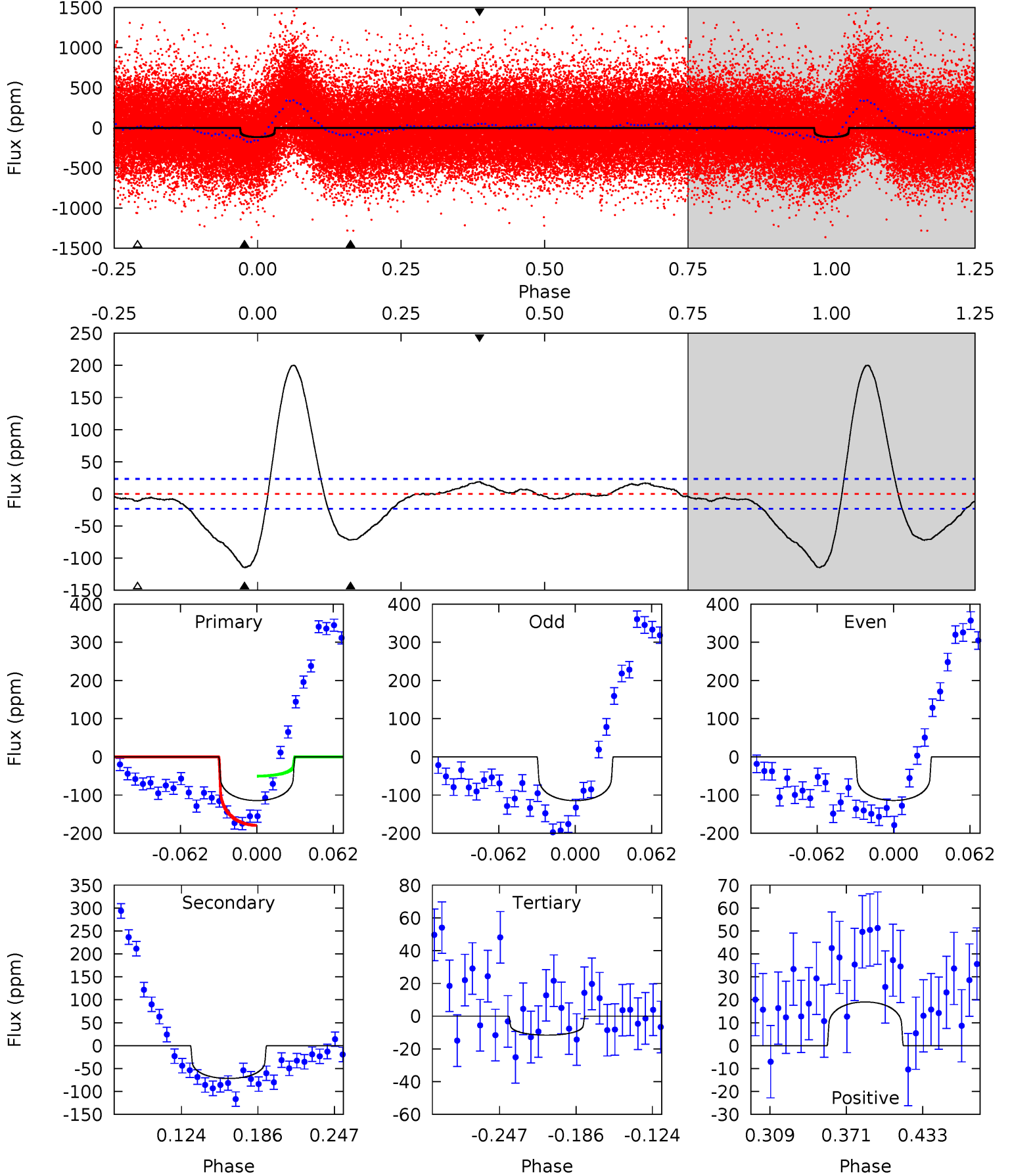
TCE 005353738-01 P= 29.365196 Days $T_0=137.520818$ (BKJD)



DV Model-Shift Uniqueness Test

005353738-01, P = 29.361983 Days, E = 108.284567 Days

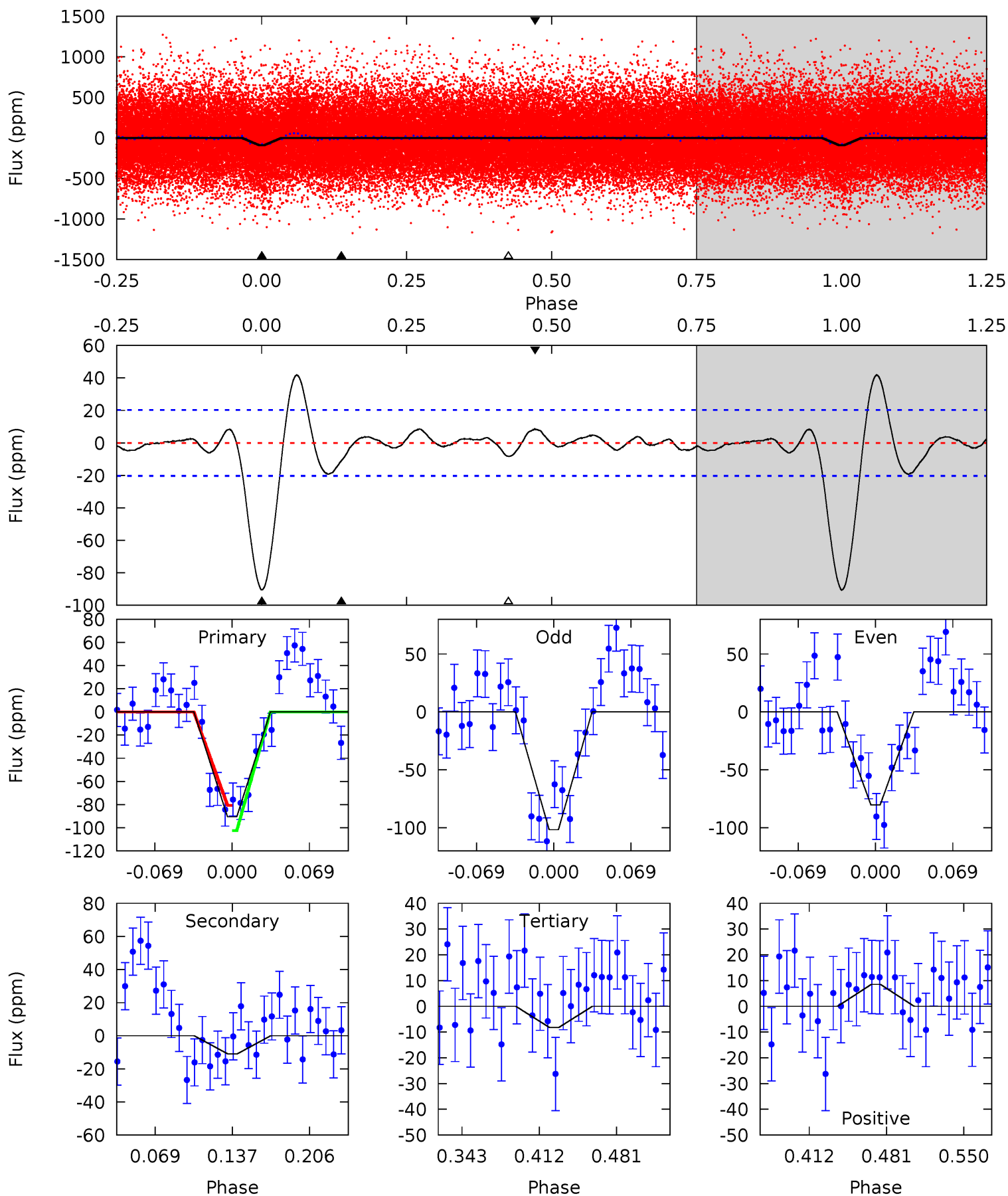
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	14.4	2.33	3.82	4.66	1.87	9.59	20.6	19.1	12.1	10.6	0.05	1.01	0.64	13.0



Alt Model-Shift Uniqueness Test

005353738-01, P = 29.365196 Days, E = 108.155622 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	2.52	1.88	1.95	4.64	1.82	0.80	18.9	18.8	0.63	0.57	2.45	1.03	0.32	2.51



Stellar Parameters For KIC 005353738

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5731^{+156}_{-173}	$4.382^{+0.128}_{-0.192}$	$-0.040^{+0.300}_{-0.300}$	$1.031^{+0.286}_{-0.176}$	$0.934^{+0.124}_{-0.093}$	$1.202^{+0.677}_{-0.584}$
	+3%/-3%	+3%/-4%	+750%/-750%	+28%/-17%	+13%/-10%	+56%/-49%
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 005353738-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-72 ± 5	$1.36^{+0.25}_{-0.20}$	846^{+62}_{-52}	4912^{+316}_{-258}	691^{+272}_{-187}
Alt.	-11 ± 4	$1.07^{+0.22}_{-0.19}$	845^{+57}_{-50}	3769^{+338}_{-326}	171^{+117}_{-81}

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 $A_{obs} \gg 1.0$

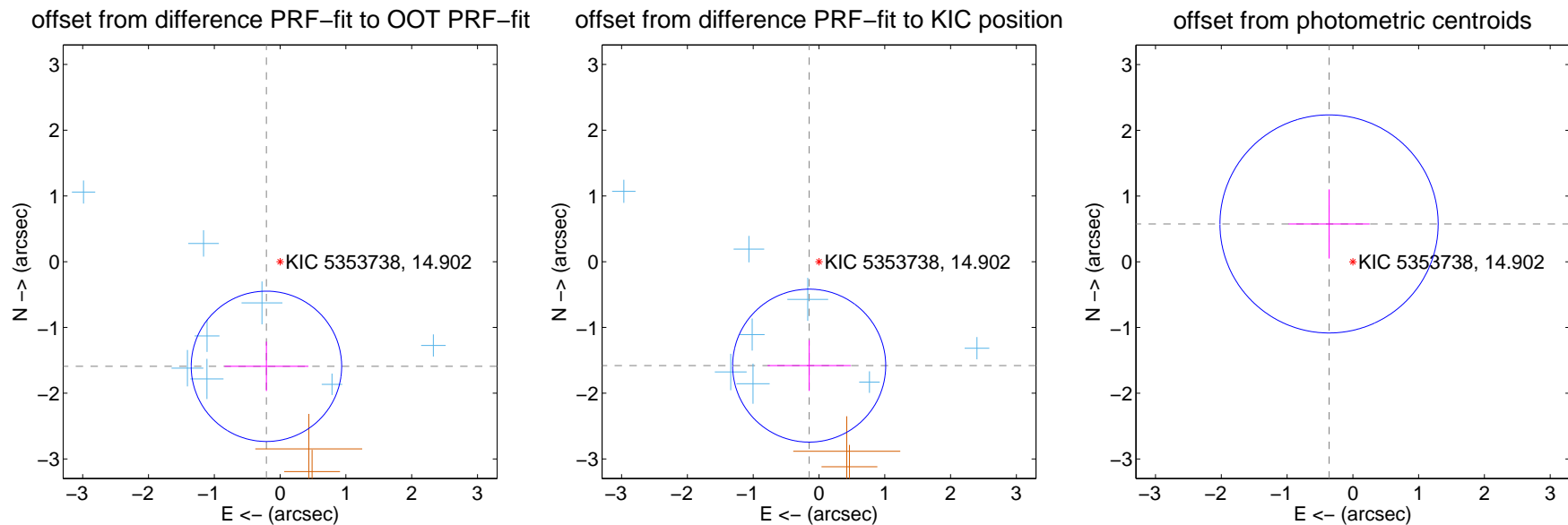
DV Centroid Data

Supplemental centroid analysis for 005353738-01. Kepler magnitude: 14.90. Transit SNR 13.67

There are 9 quarters with good PRF difference image offsets

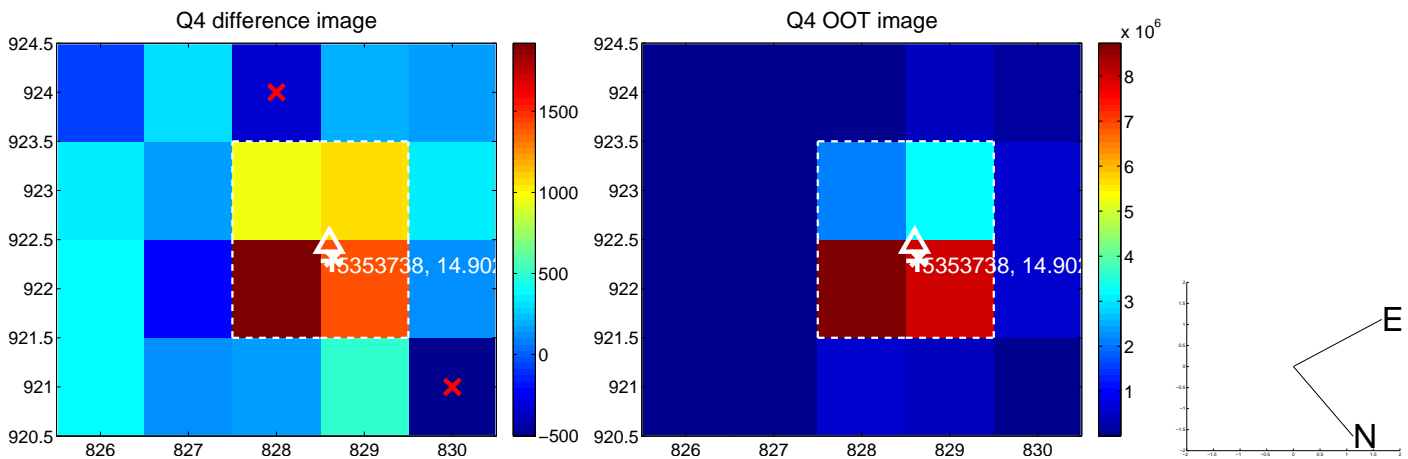
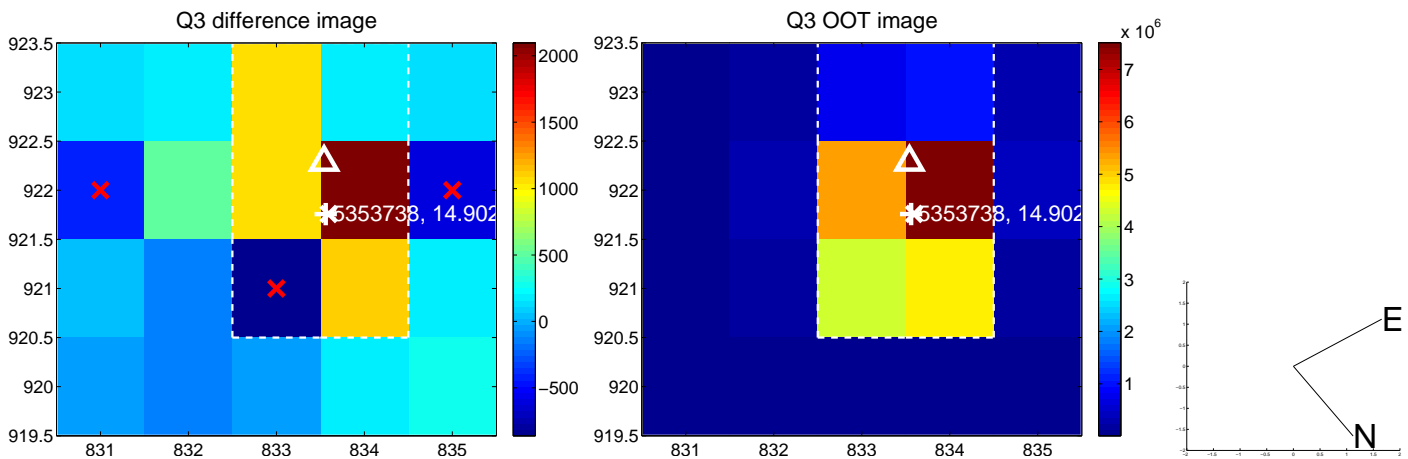
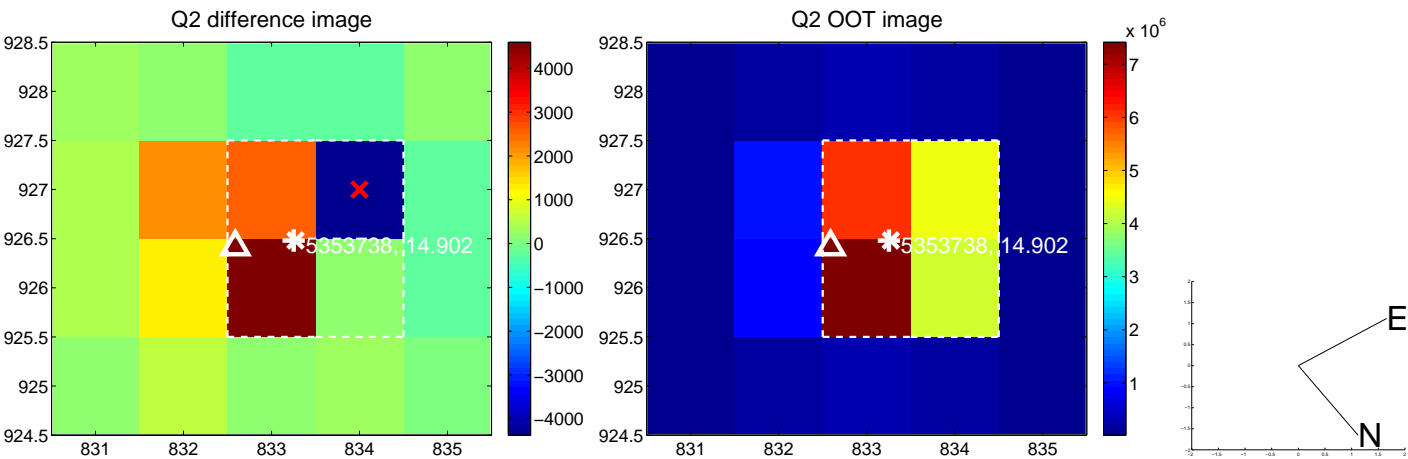
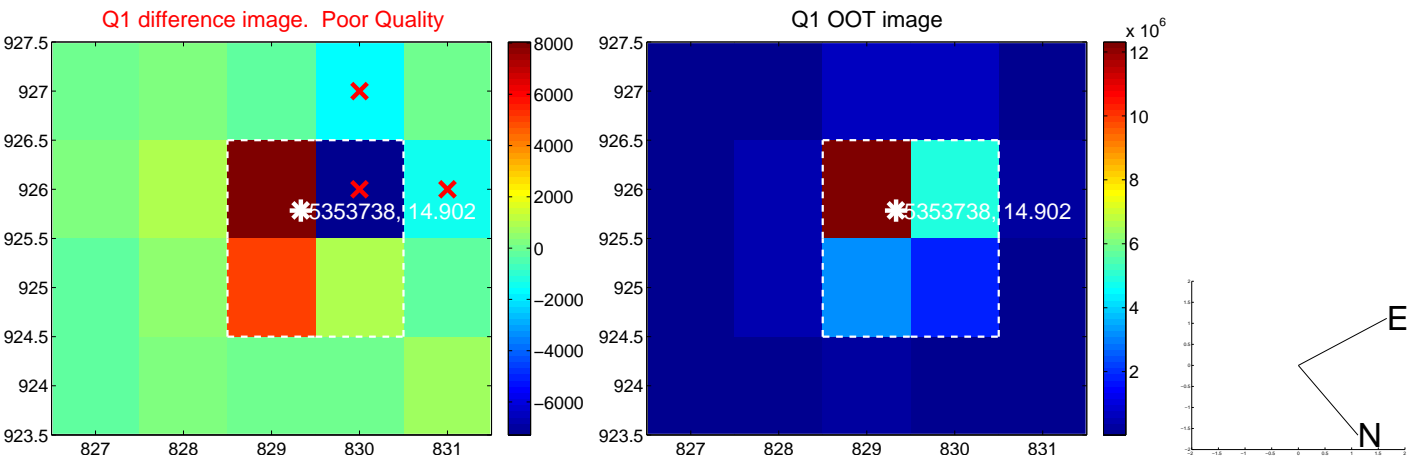
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.604 ± 0.381	4.21	0.208 ± 0.638	-1.591 ± 0.375
PRF-fit source offset from KIC position	1.587 ± 0.388	4.10	0.149 ± 0.632	-1.580 ± 0.385
photometric centroid source offset	0.68 ± 0.55	1.23	0.36 ± 0.62	0.58 ± 0.53

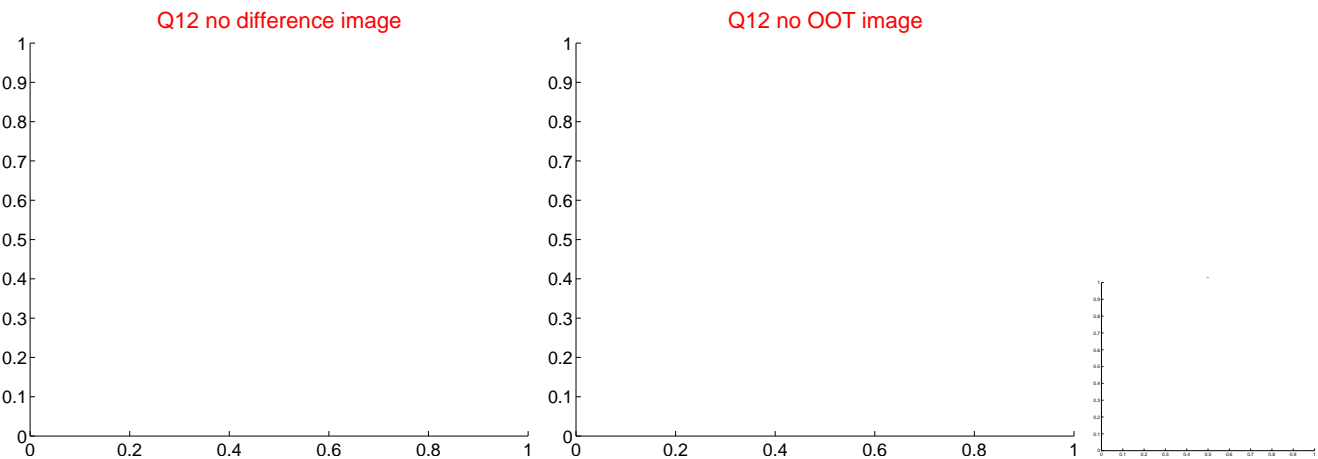
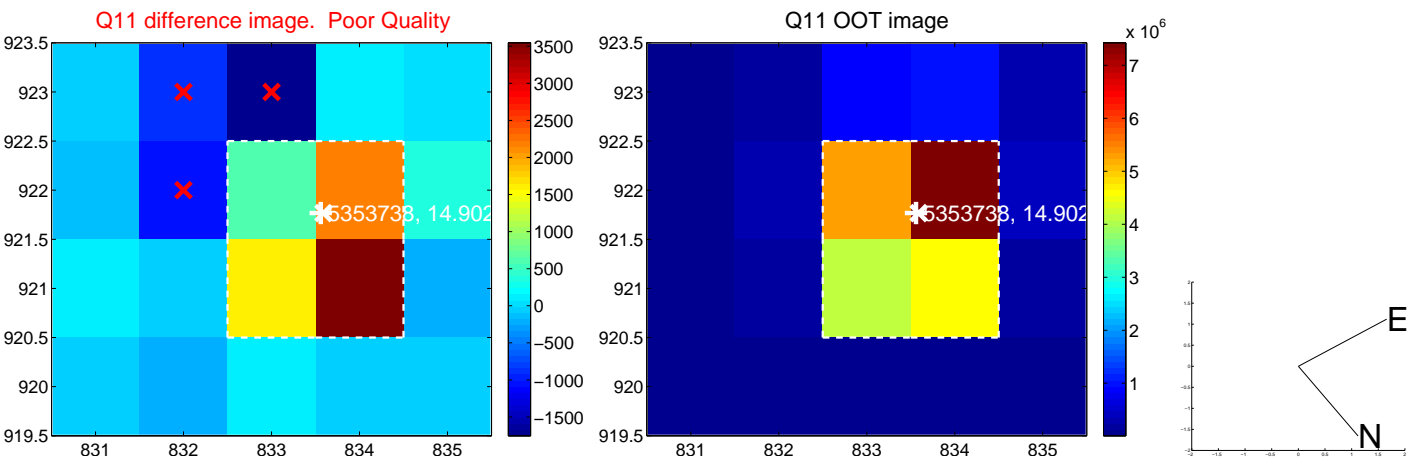
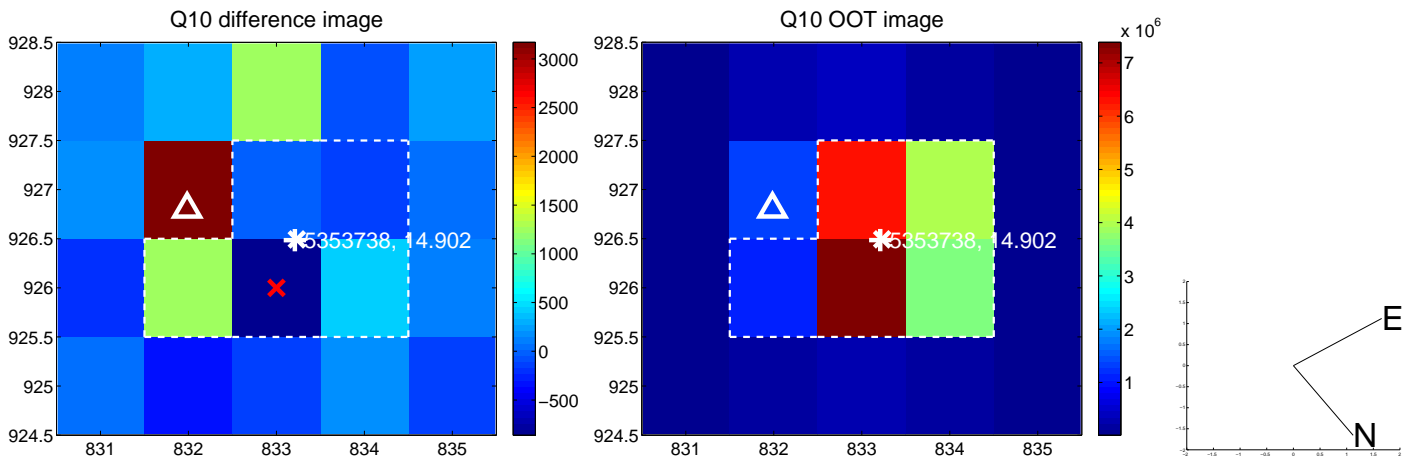
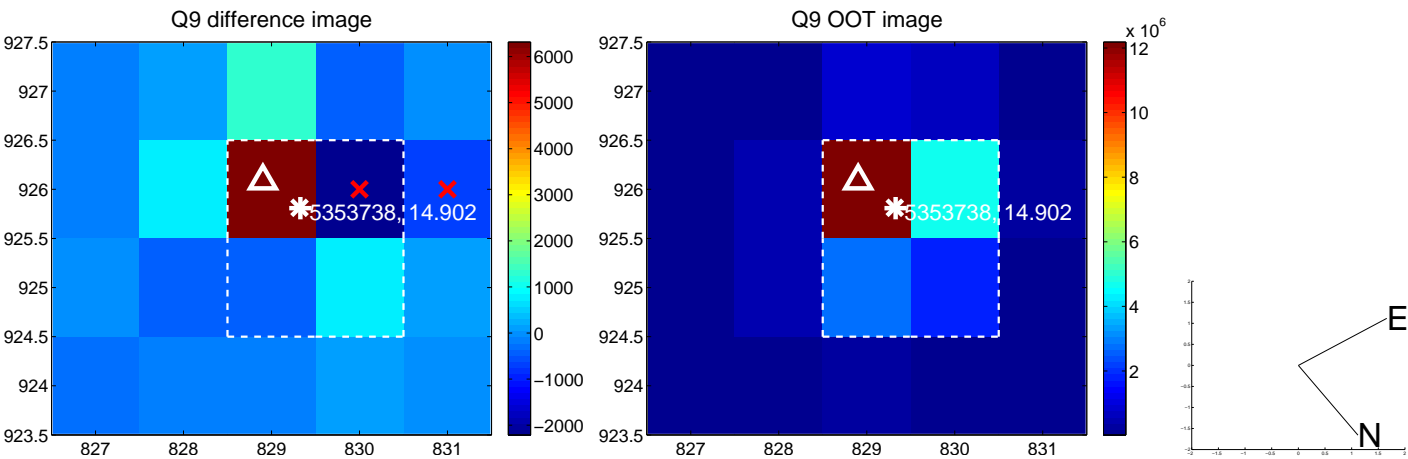


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

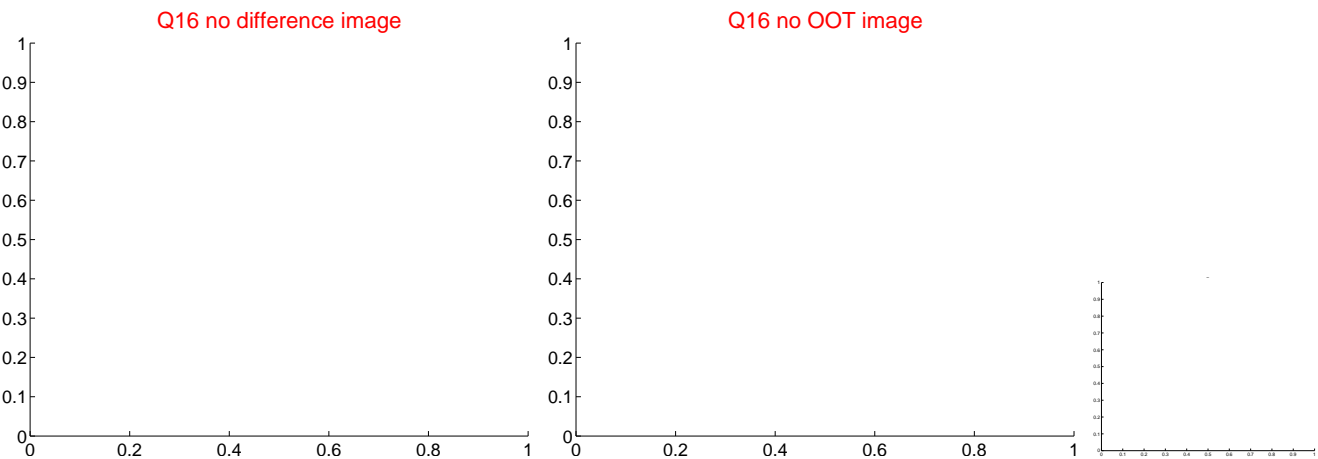
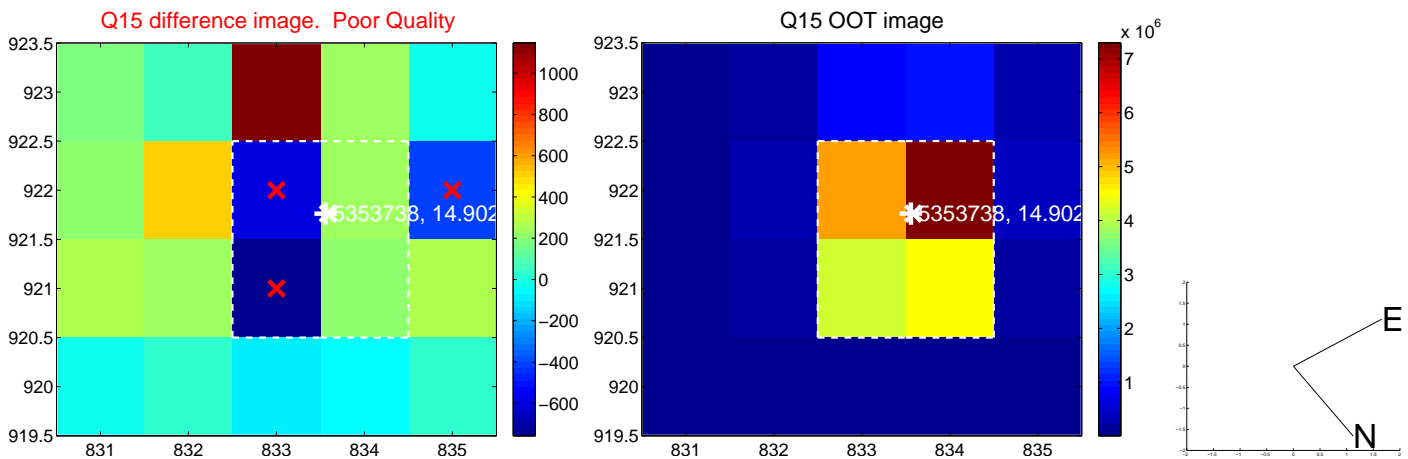
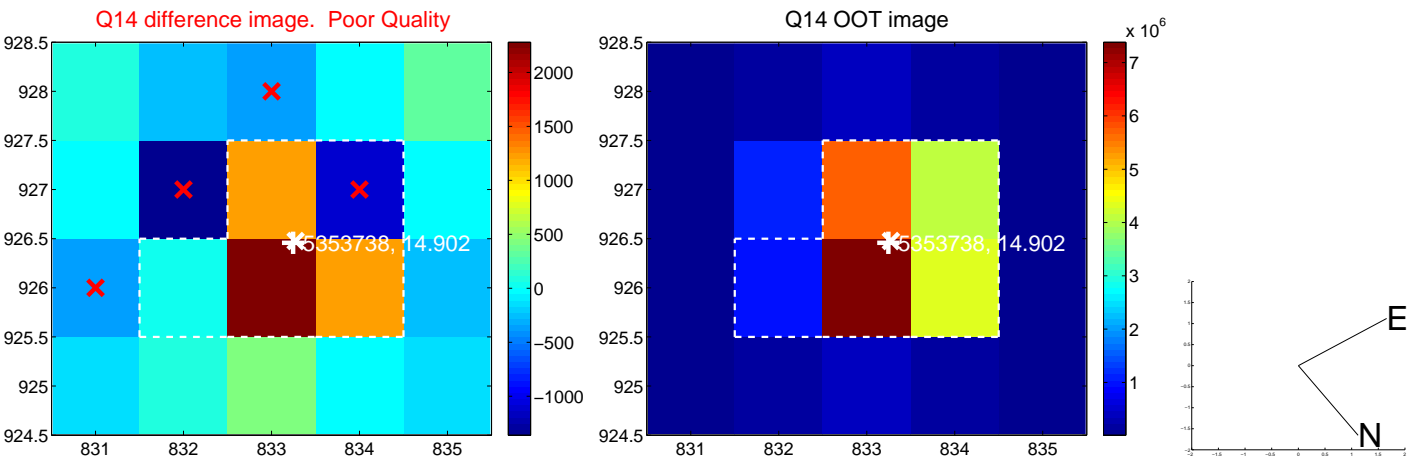
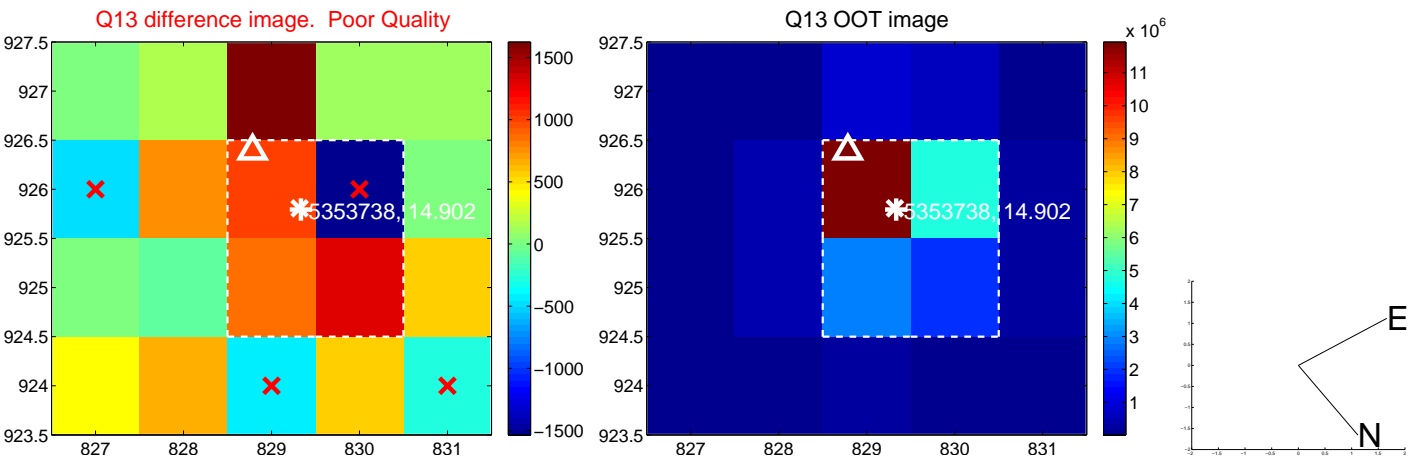
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



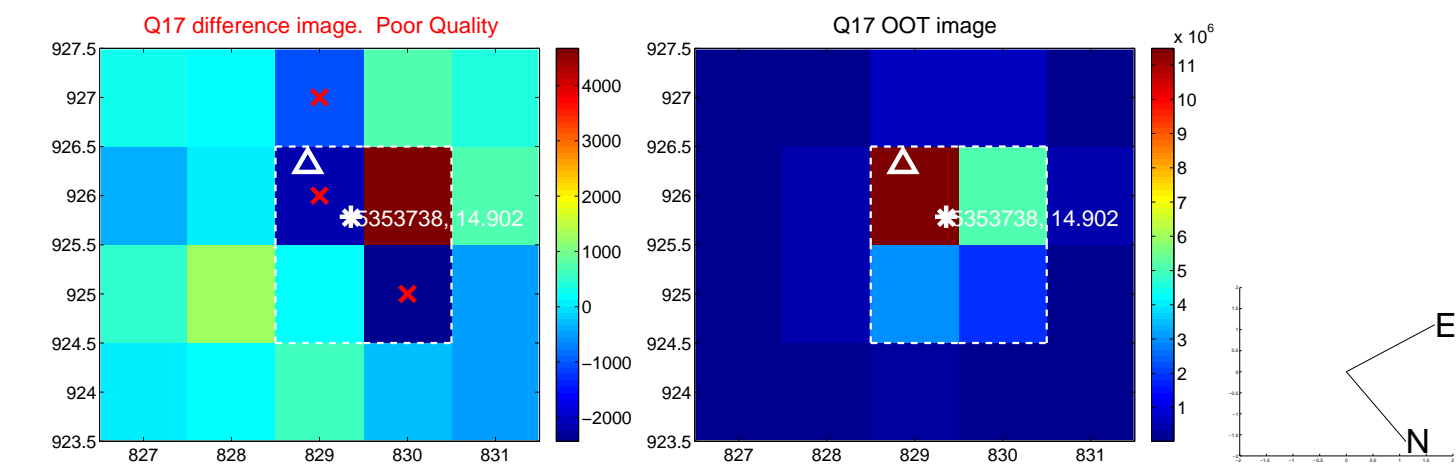
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



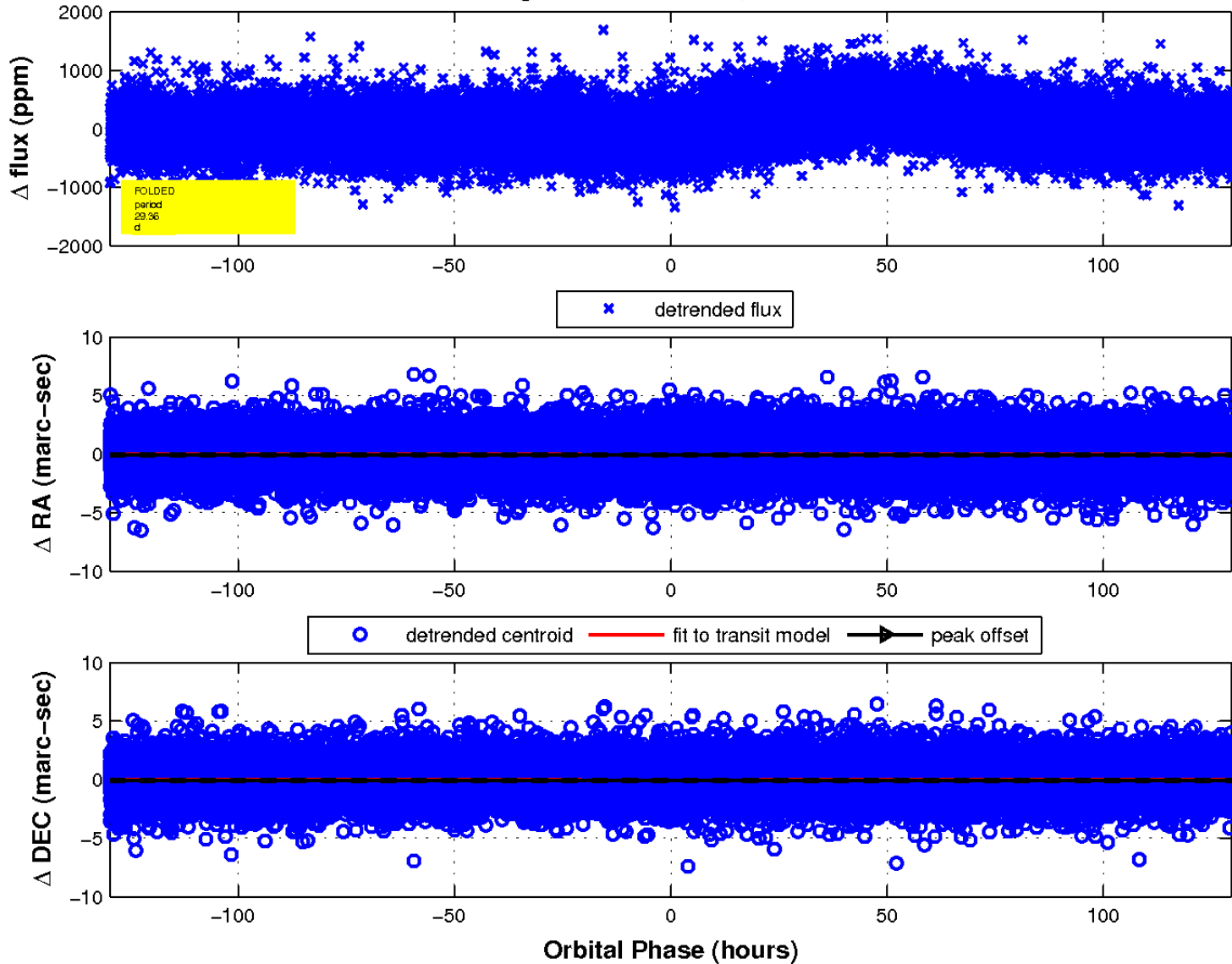
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

