

KIC 005607631

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})
005607631-01	OBS	2254.01	20.569713	140.249105	310.3	4.231	21.1	17.6	0.84	6098	2.61	42.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005607631-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

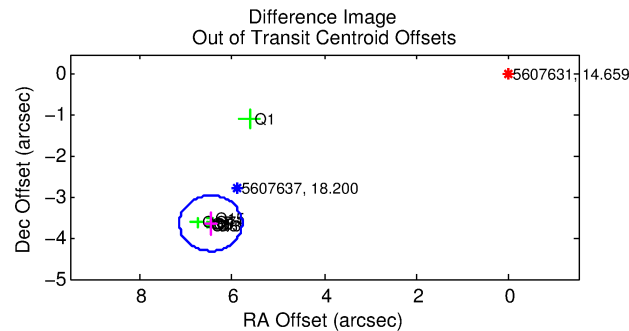
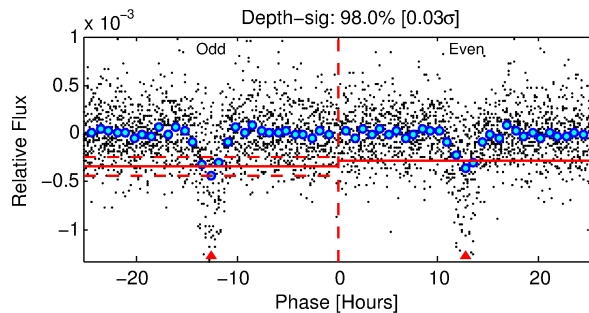
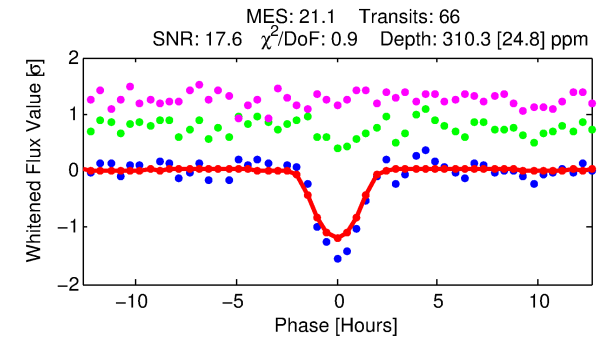
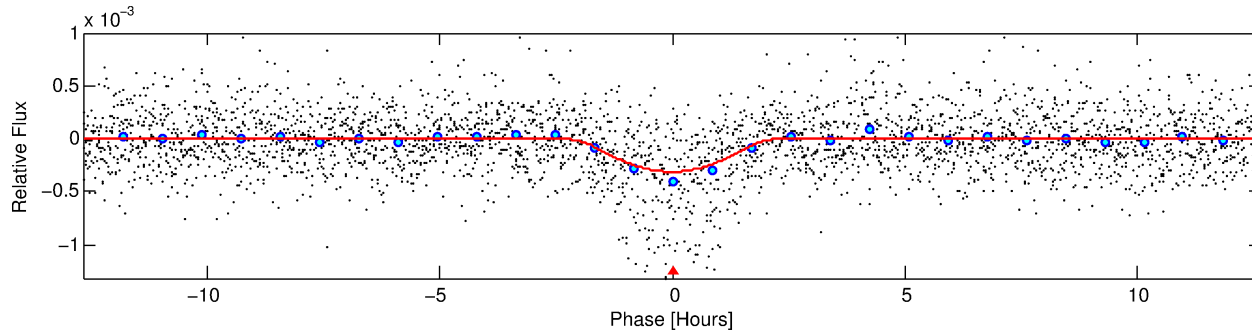
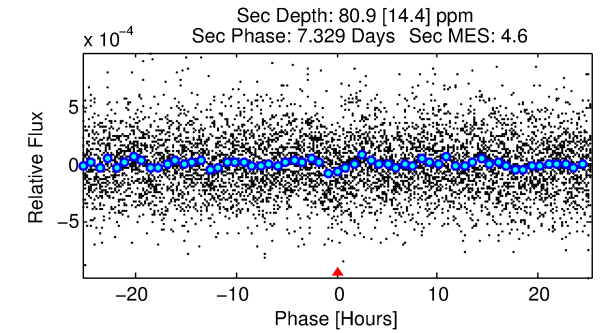
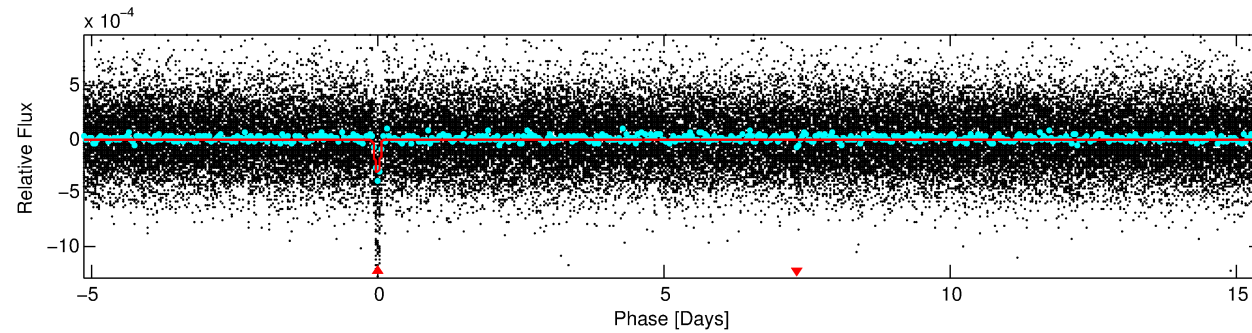
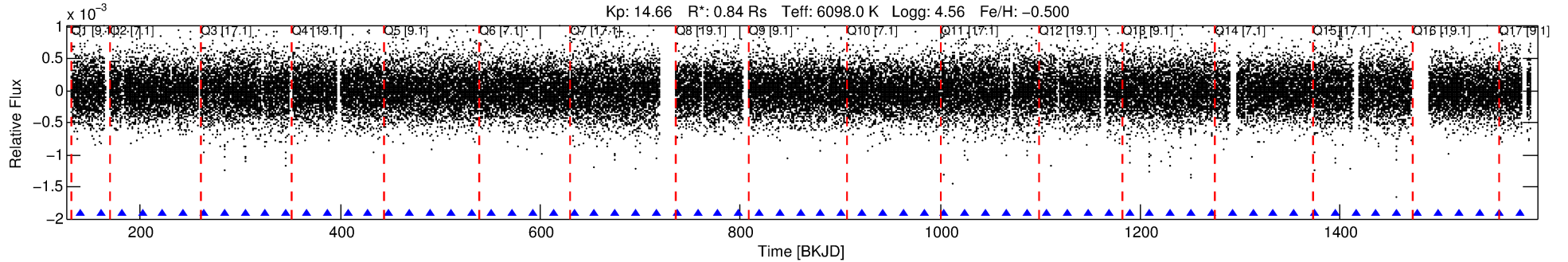
Ephemeris Match Information For 005607631-01

No Significant Match Found

DV One-Page Summary

KIC: 5607631 Candidate: 1 of 1 Period: 20.570 d
KOI: K02254.01 Corr: 0.993

Kp: 14.66 R*: 0.84 Rs Teff: 6098.0 K Logg: 4.56 Fe/H: -0.500



DV Fit Results:

Period = 20.56971 [0.00015] d
Epoch = 140.2491 [0.0057] BKJD
Rp/R* = 0.0286 [0.0443]
a/R* = 9.75 [4.65]
b = 0.99 [0.07]
Seff = 42.15 [15.79]
Teq = 650 [61] K
Rp = 2.61 [4.11] Re
a = 0.1437 [0.0338] AU
Ag = 134.52 [420.34] [0.32σ]
Teffp = 3421 [2658] K [1.04σ]

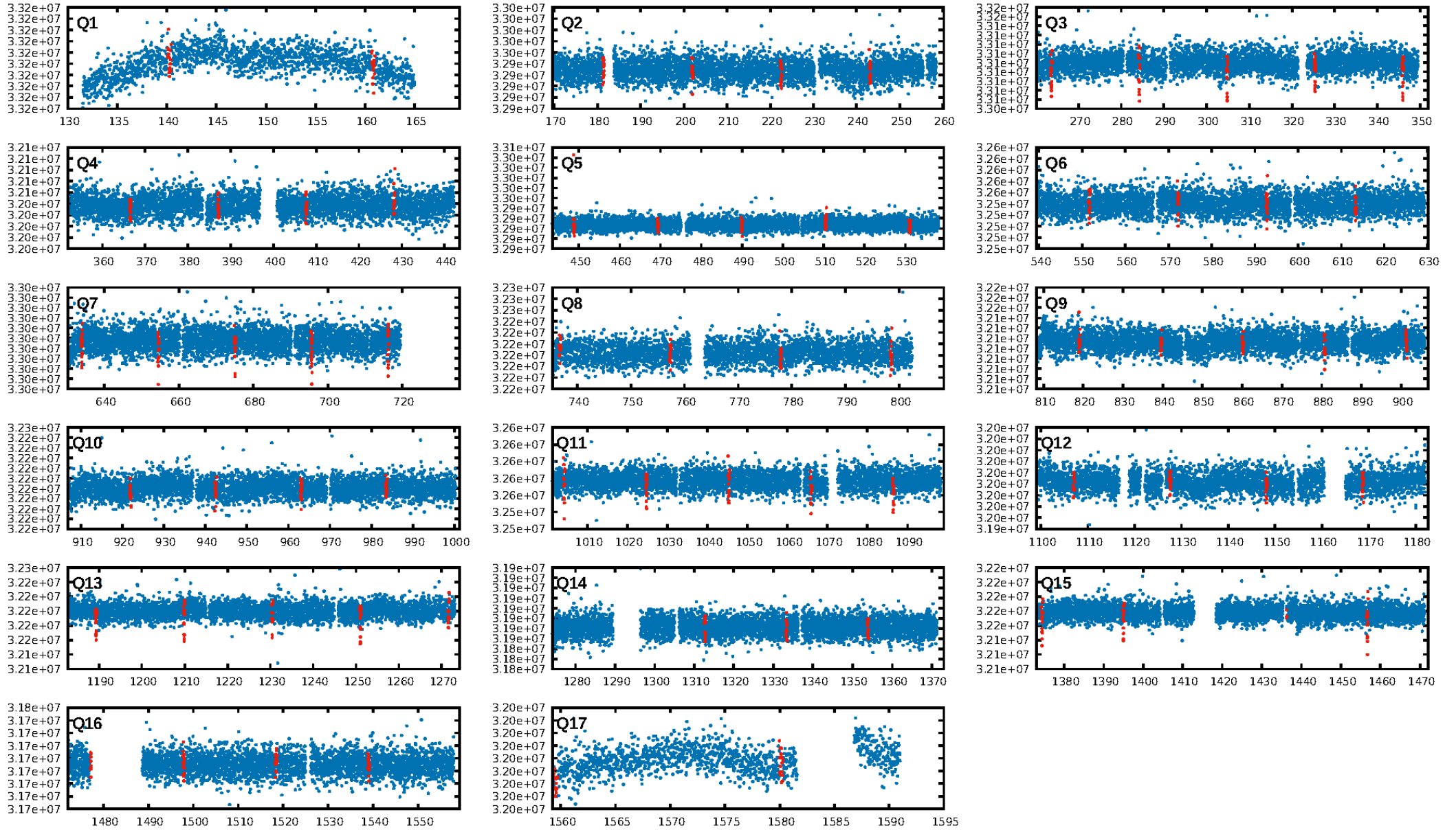
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.39e-94
RollingBand-fgt: 1.00 [62/62]
GhostDiagnostic-chr: -0.3307
Centroid-sig: 0.0%
Centroid-so: 44.065 arcsec [59.87σ]
OotOffset-rm: 7.410 arcsec [32.74σ]
KicOffset-rm: 7.439 arcsec [36.51σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

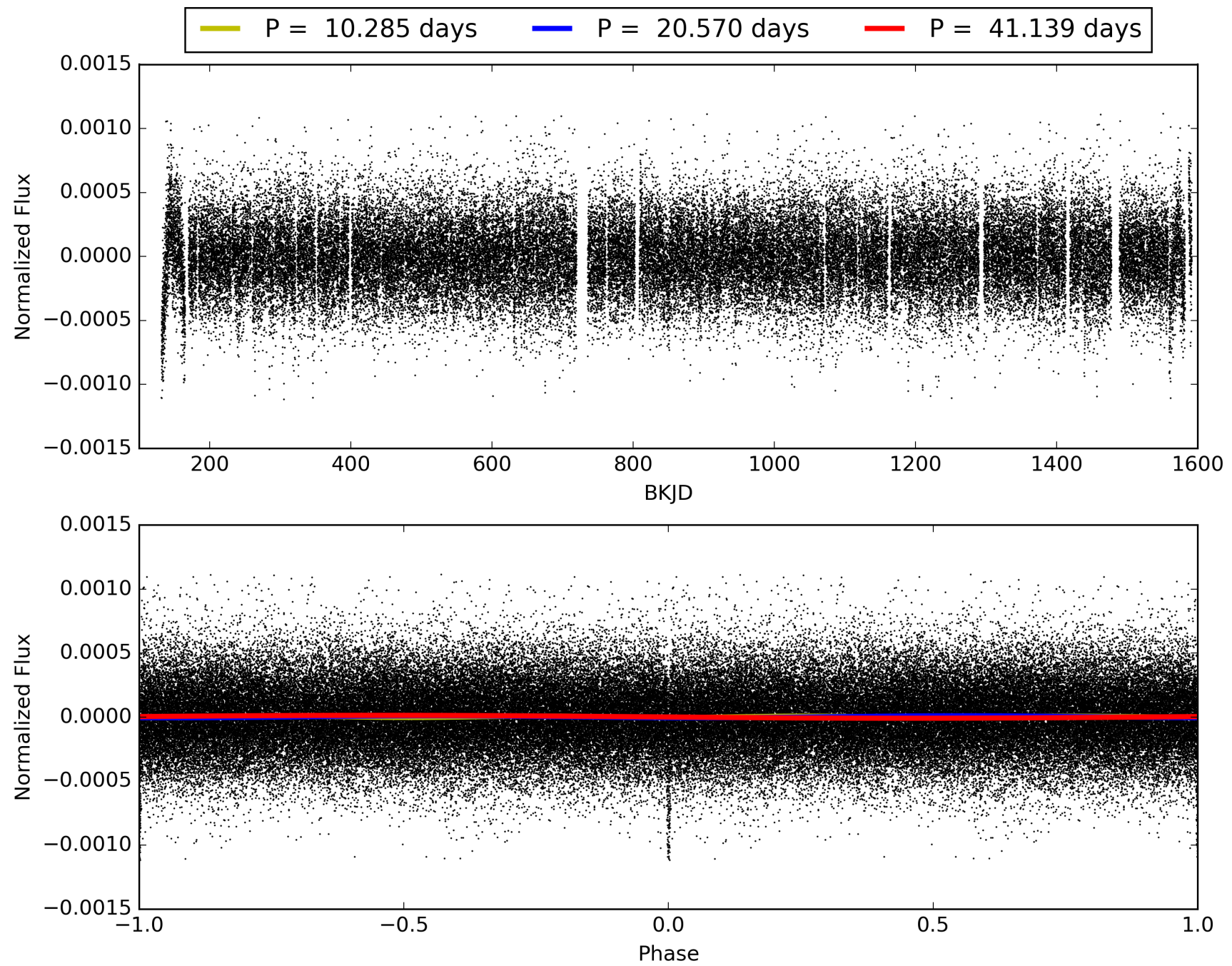
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:07:06 Z

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

TCE 005607631-01, PDC Light Curves

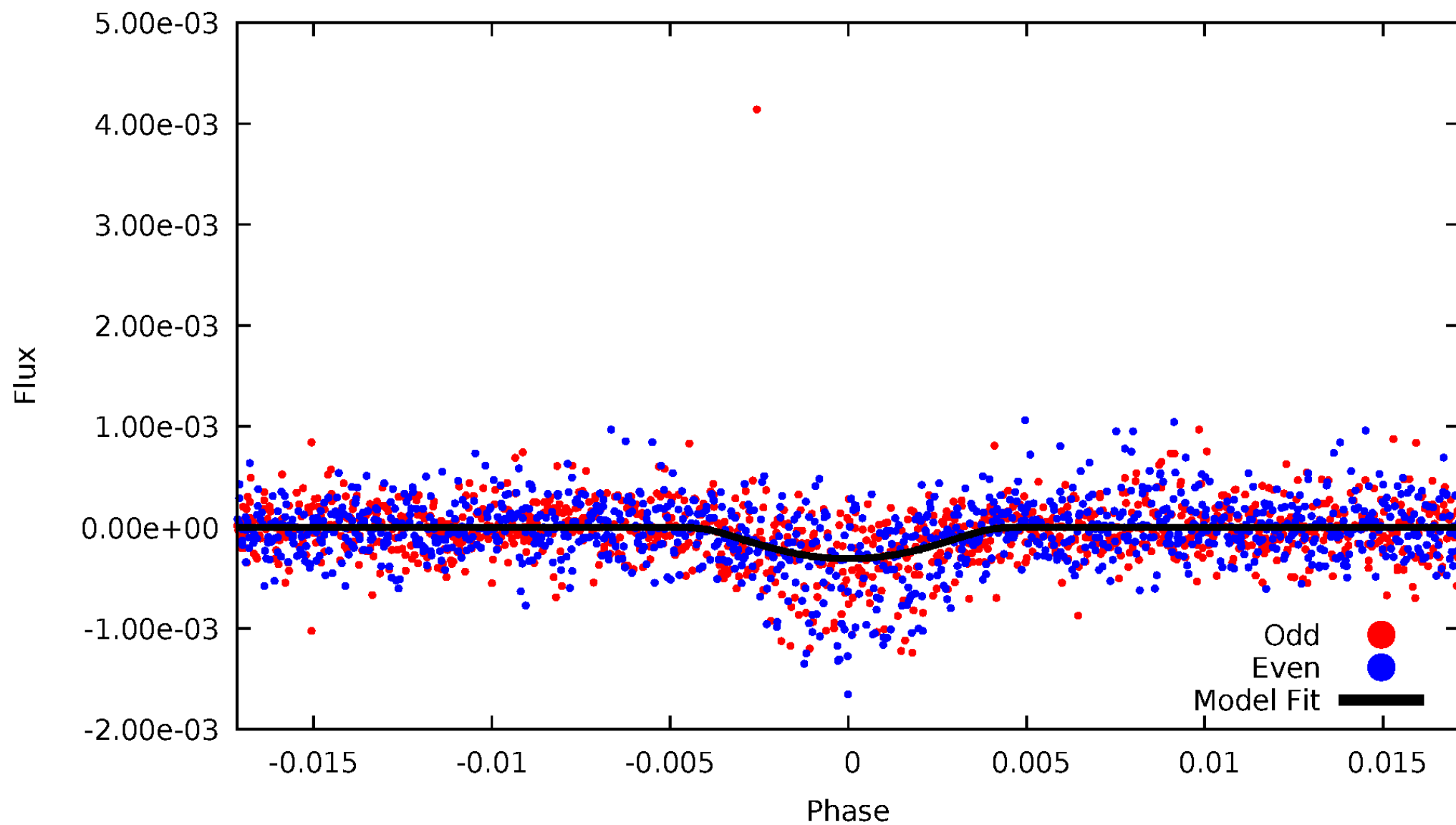


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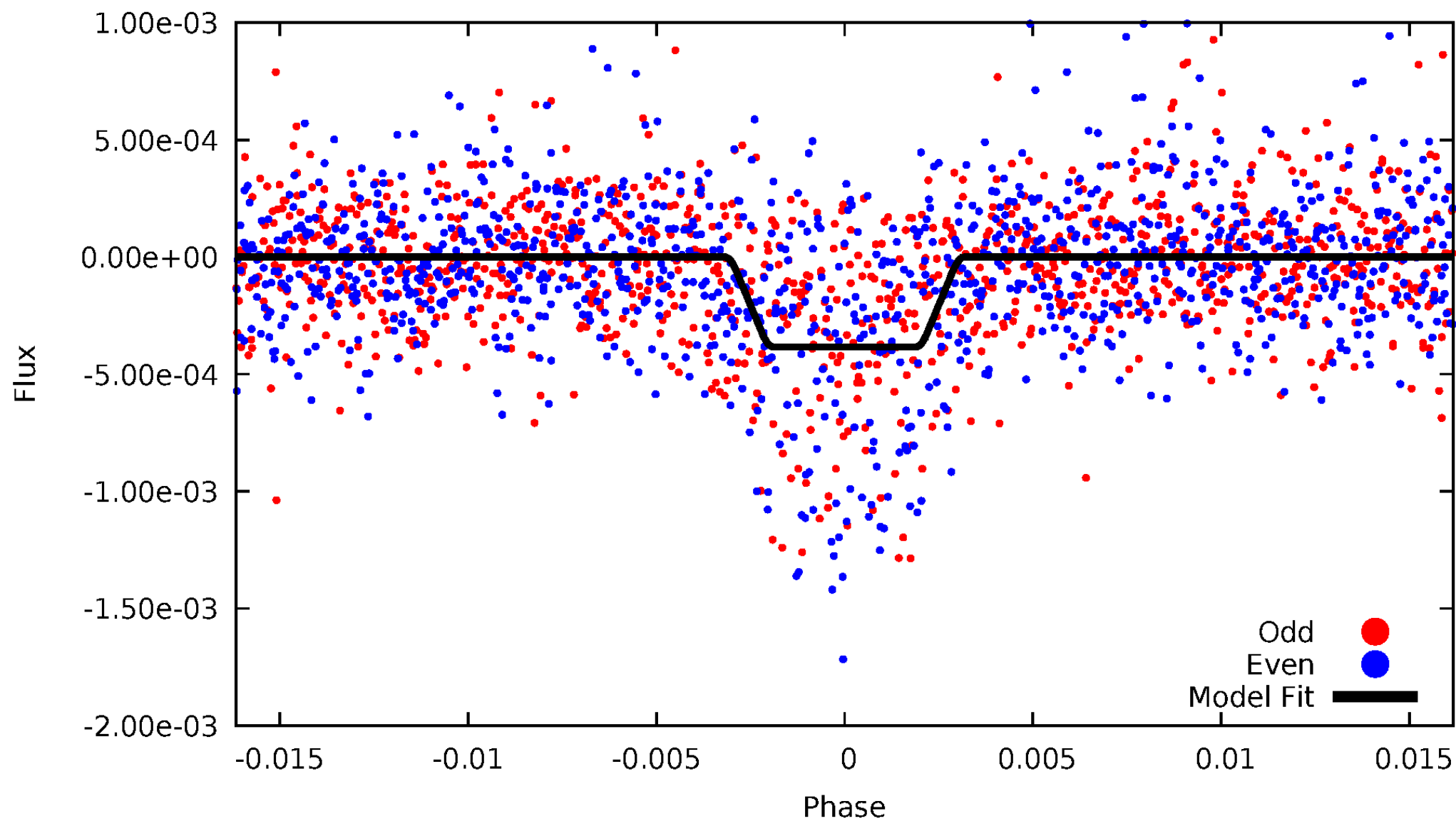
DV Odd/Even

TCE 005607631-01

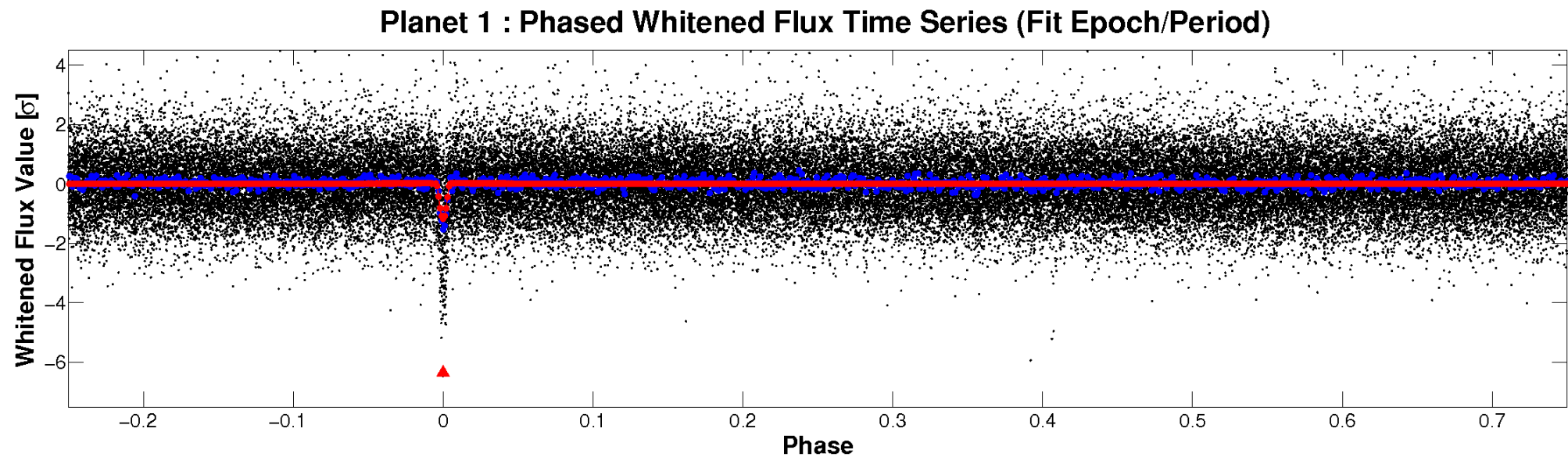
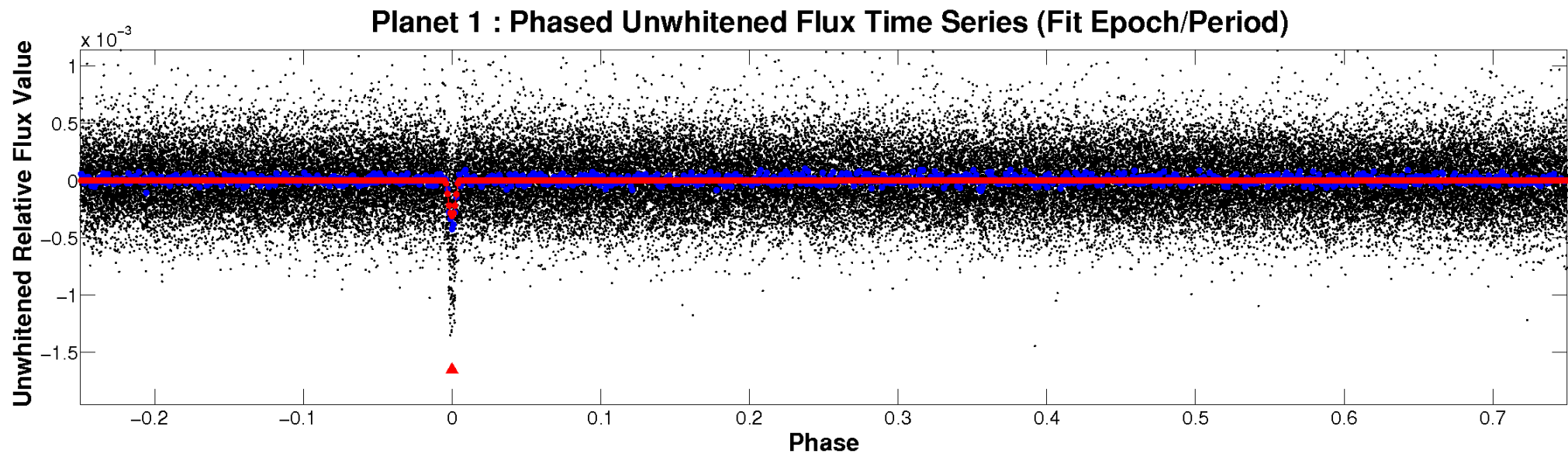


ALT Odd/Even

TCE 005607631-01

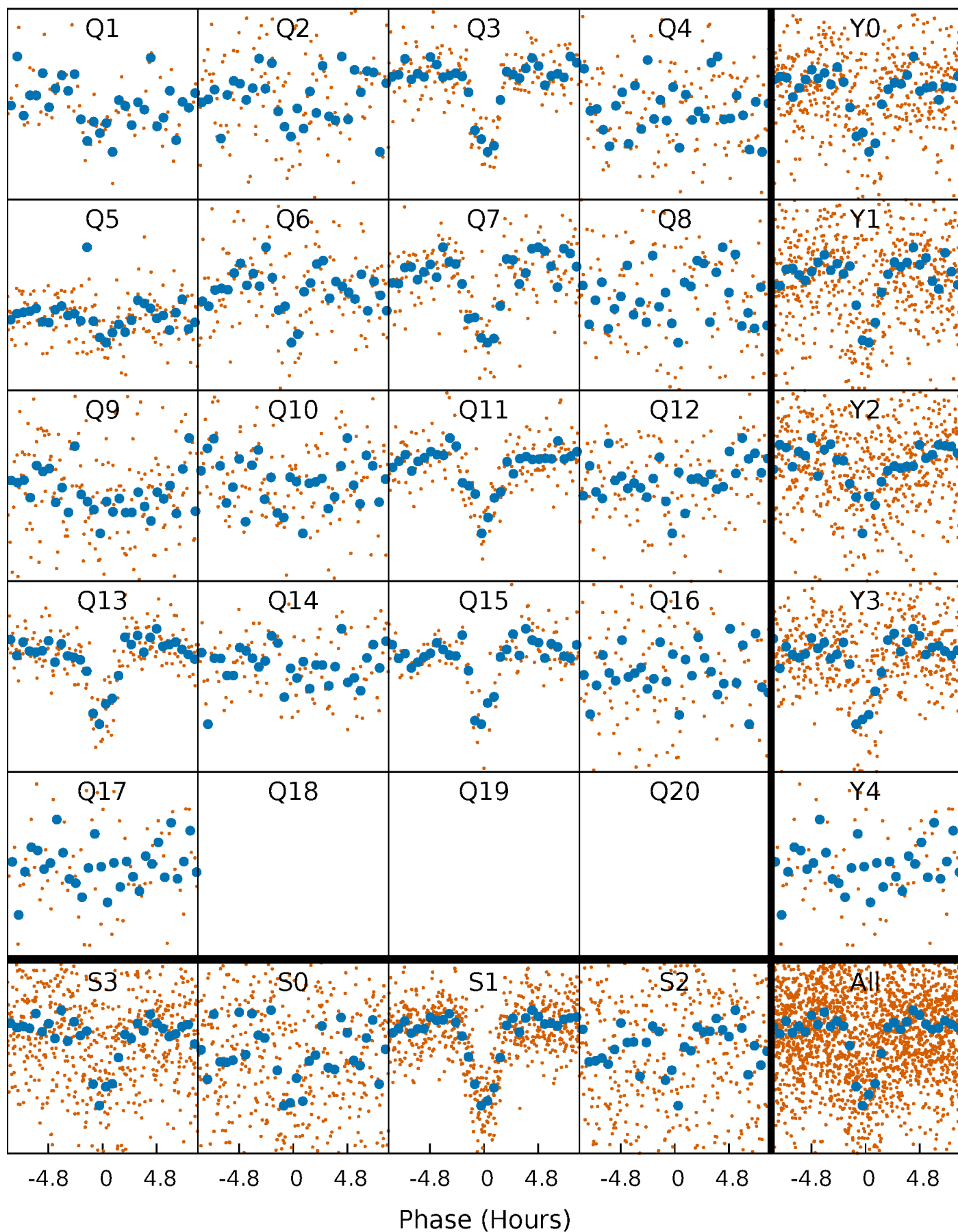


Non-Whitened Vs. Whitened Light Curve



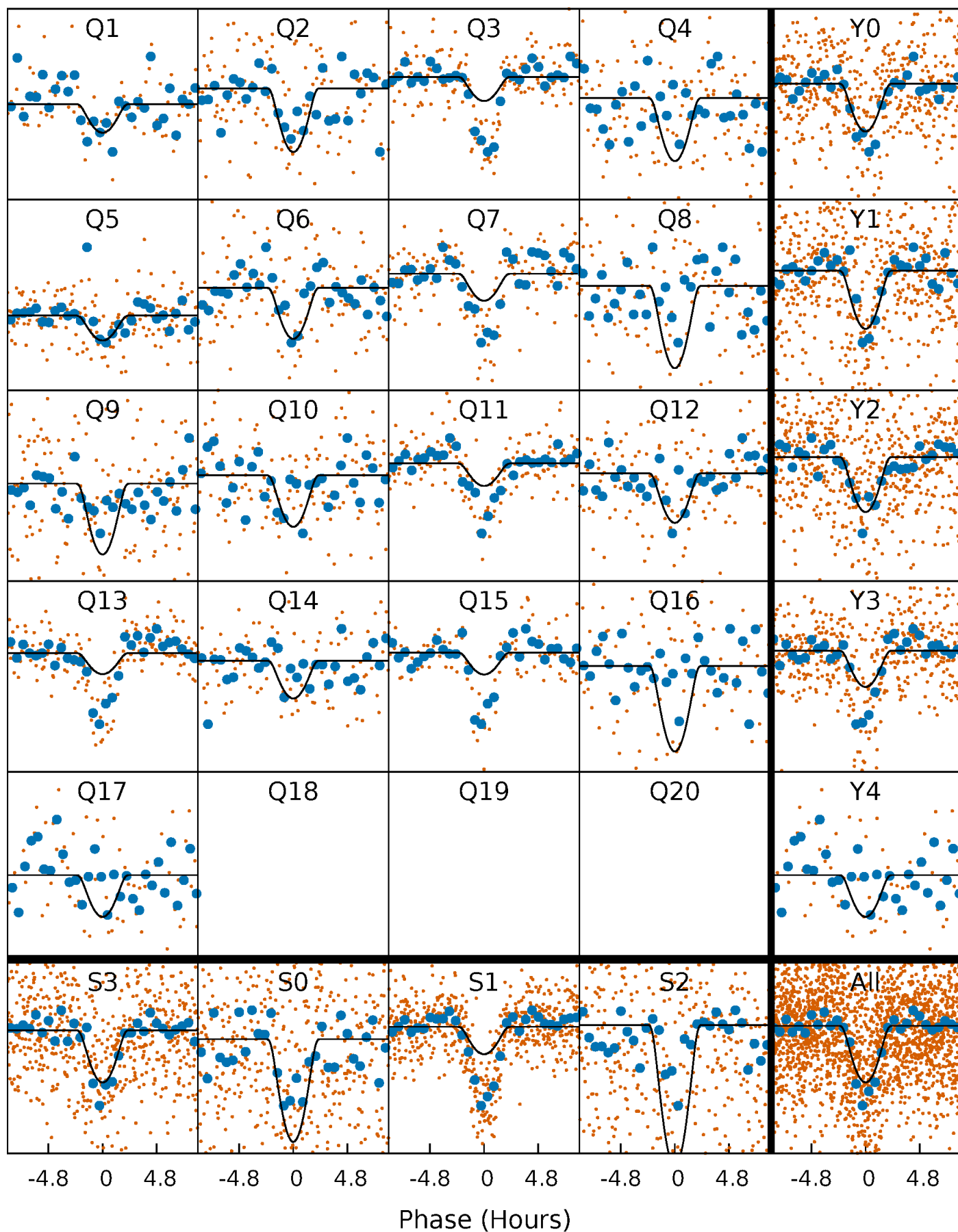
PDC Quarter-Phased Transit Curves

TCE 005607631-01 P= 20.569713 Days $T_0=140.249104$ (BKJD)



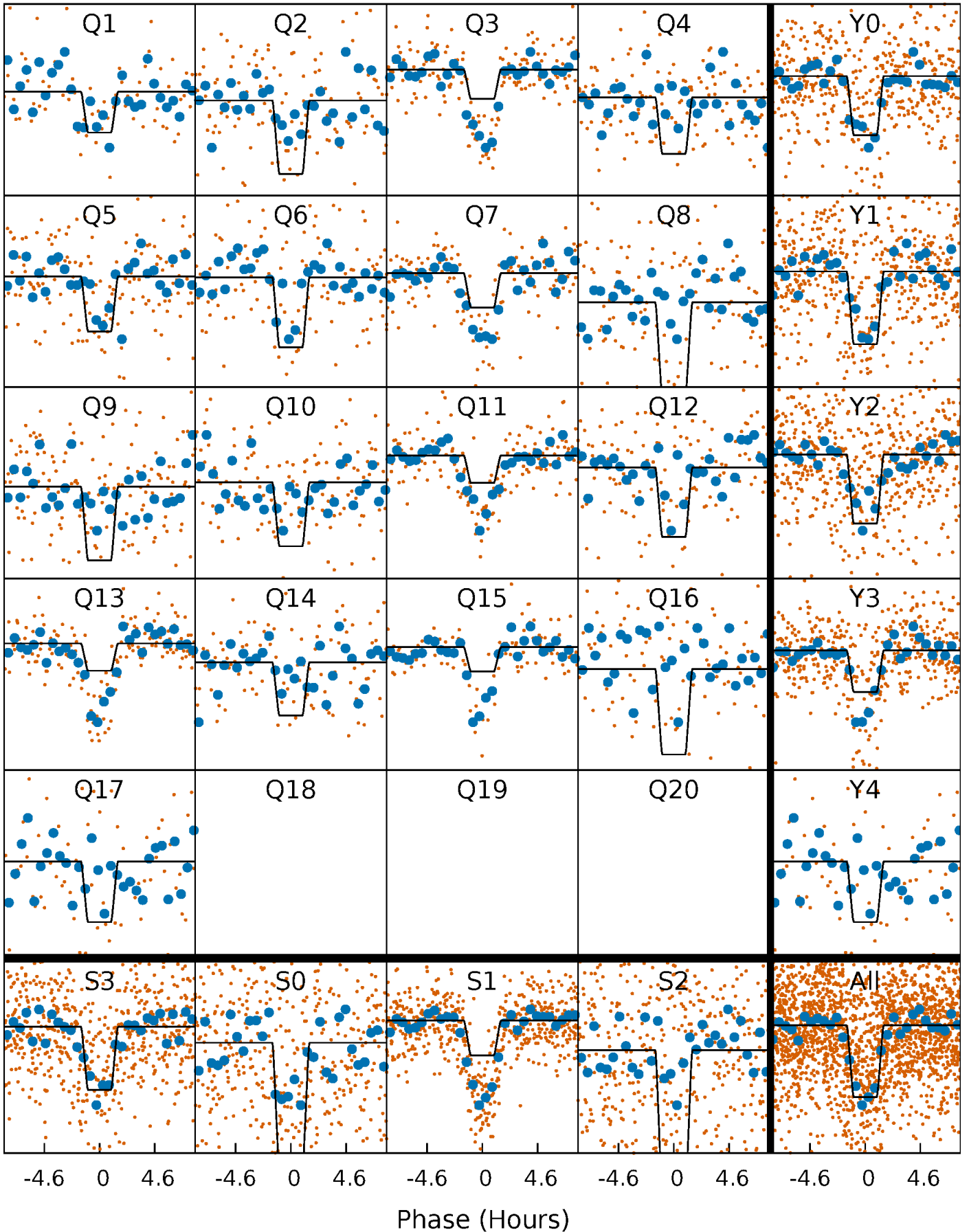
DV Quarter-Phased Transit Curves

TCE 005607631-01 P= 20.569713 Days $T_0=140.249104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

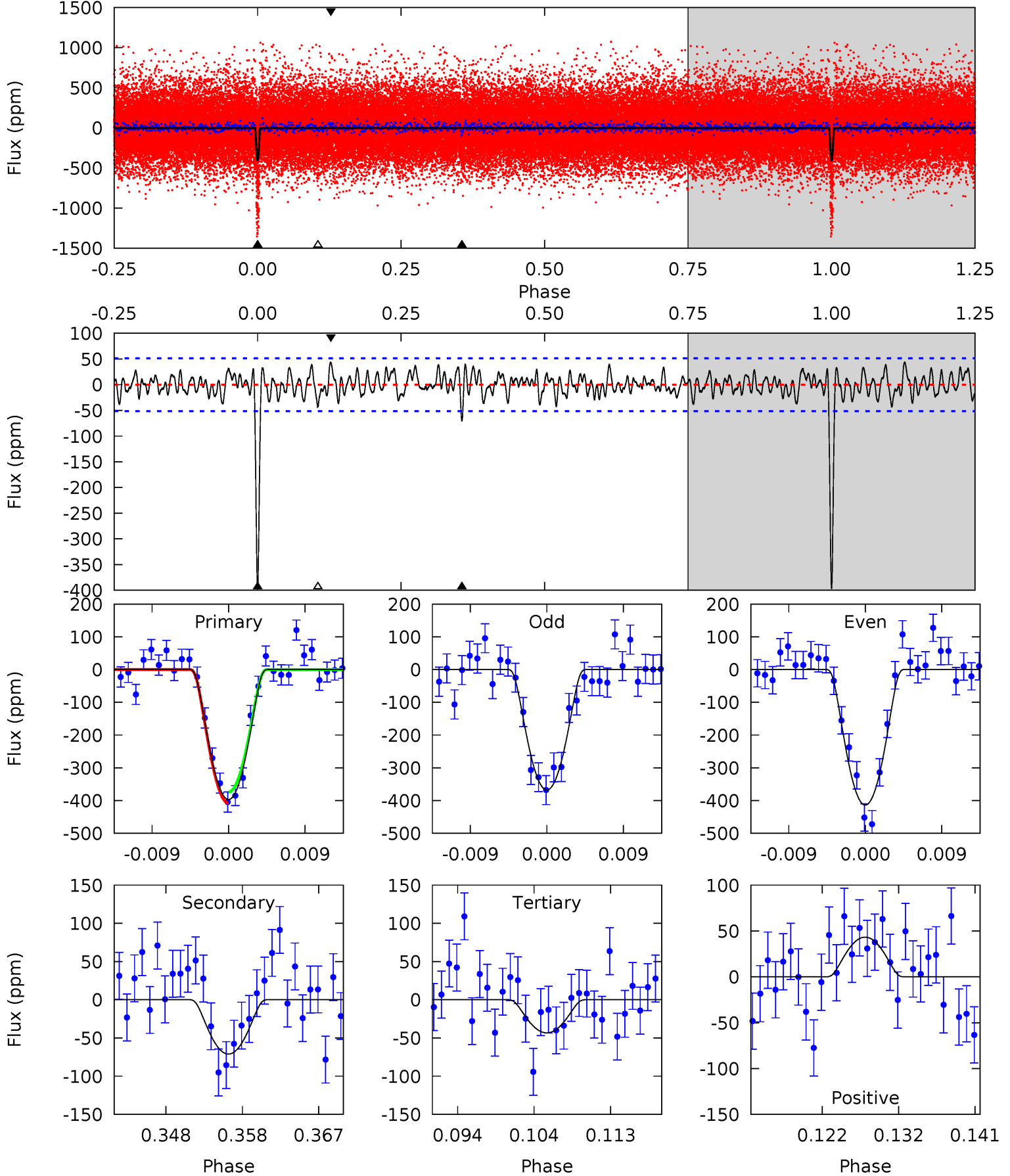
TCE 005607631-01 P= 20.569709 Days $T_0=140.250086$ (BKJD)



DV Model-Shift Uniqueness Test

005607631-01, P = 20.569713 Days, E = 119.679391 Days

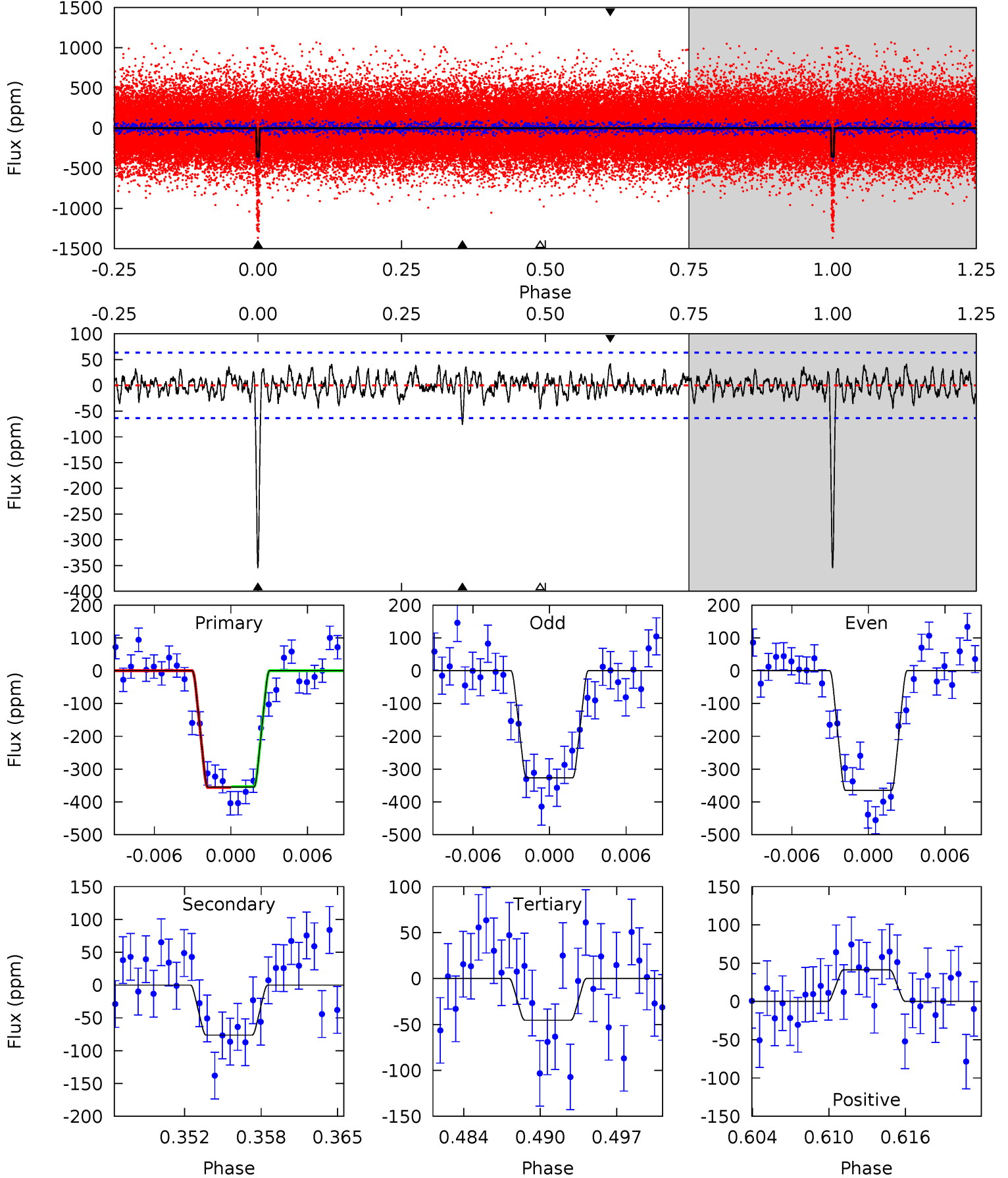
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.8	6.95	4.23	4.23	5.04	2.60	1.57	34.6	34.6	2.71	2.72	2.26	1.46	0.10	0



Alt Model-Shift Uniqueness Test

005607631-01, P = 20.569709 Days, E = 119.680377 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	6.13	3.65	3.33	5.11	2.73	1.22	24.9	25.2	2.48	2.80	1.53	1.62	0.10	0.12



Stellar Parameters For KIC 005607631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6098^{+163}_{-200}	$4.562^{+0.035}_{-0.196}$	$-0.500^{+0.300}_{-0.300}$	$0.838^{+0.227}_{-0.071}$	$0.938^{+0.089}_{-0.119}$	$2.248^{+0.404}_{-1.085}$
	+3%/-3%	+1%/-4%	+60%/-60%	+27%/-8%	+9%/-13%	+18%/-48%
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 005607631-01 / KOI 2254.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-71 ± 10	$4.41^{+3.57}_{-2.76}$	929^{+65}_{-42}	3219^{+1182}_{-506}	41^{+241}_{-28}
Alt.	-76 ± 12	$3.61^{+3.34}_{-2.45}$	930^{+58}_{-42}	3441^{+1751}_{-617}	65^{+550}_{-48}

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 $A_{\text{obs}} \gg 1.0$

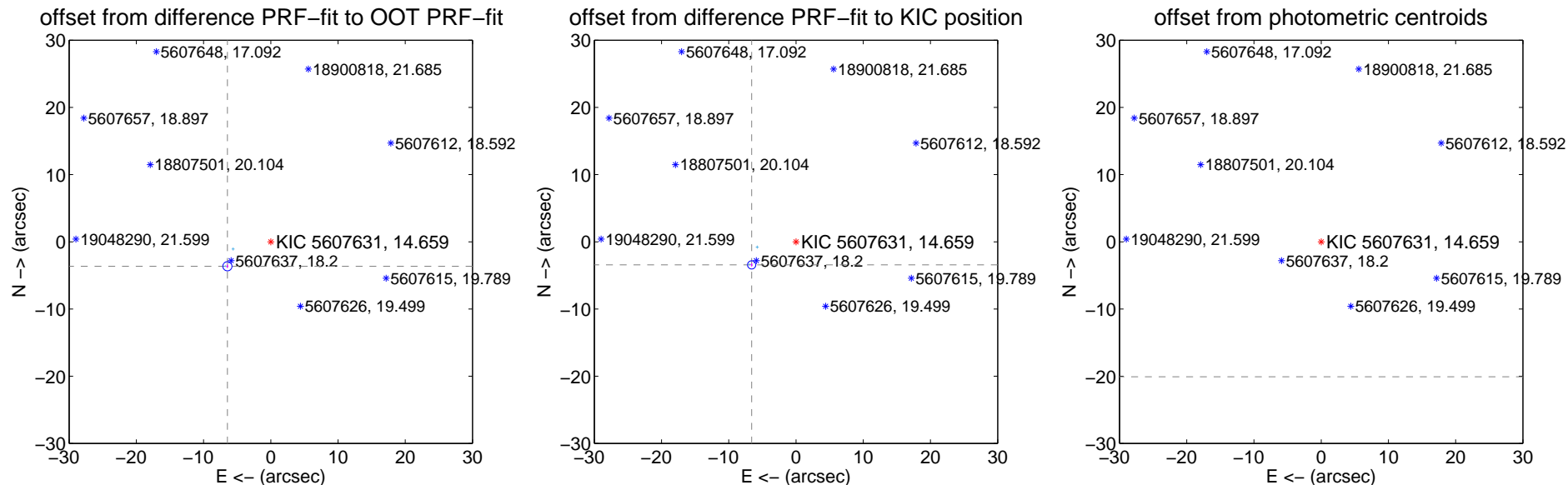
DV Centroid Data

Supplemental centroid analysis for 005607631-01. Kepler magnitude: 14.66. Transit SNR 17.62

There are 9 quarters with good PRF difference image offsets

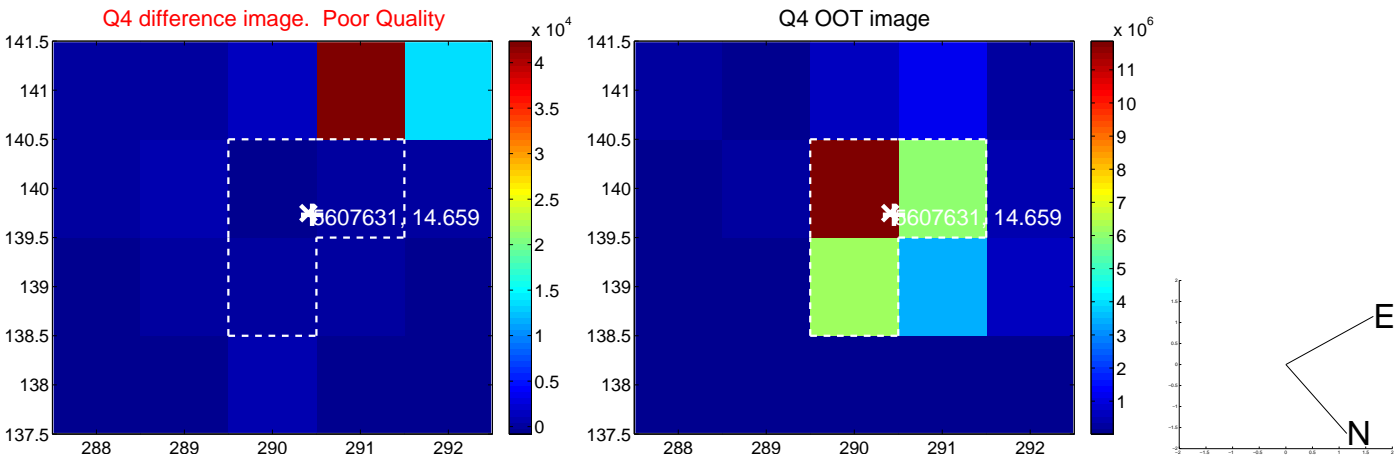
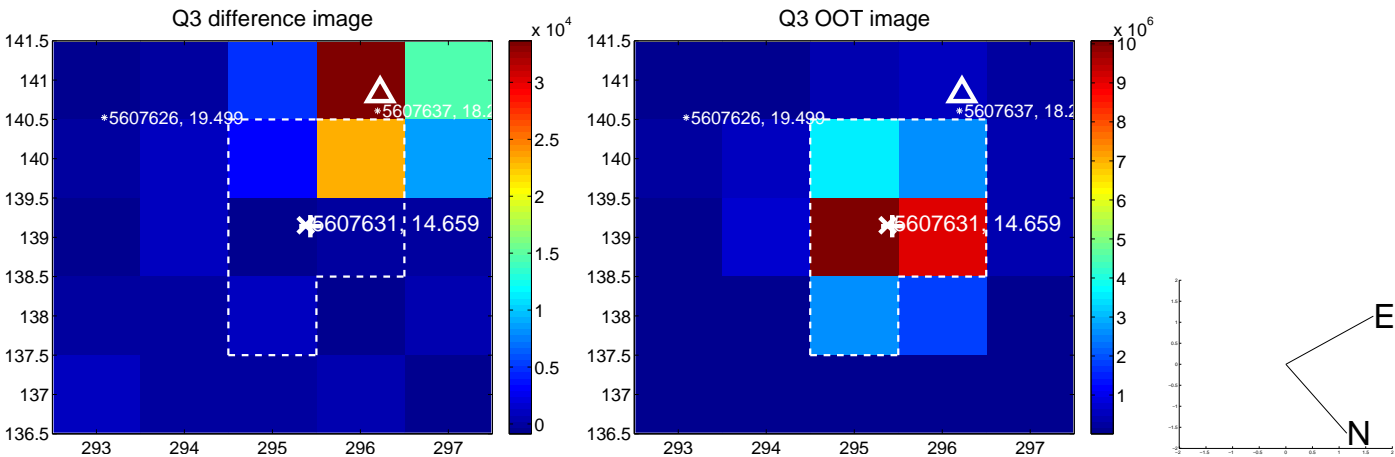
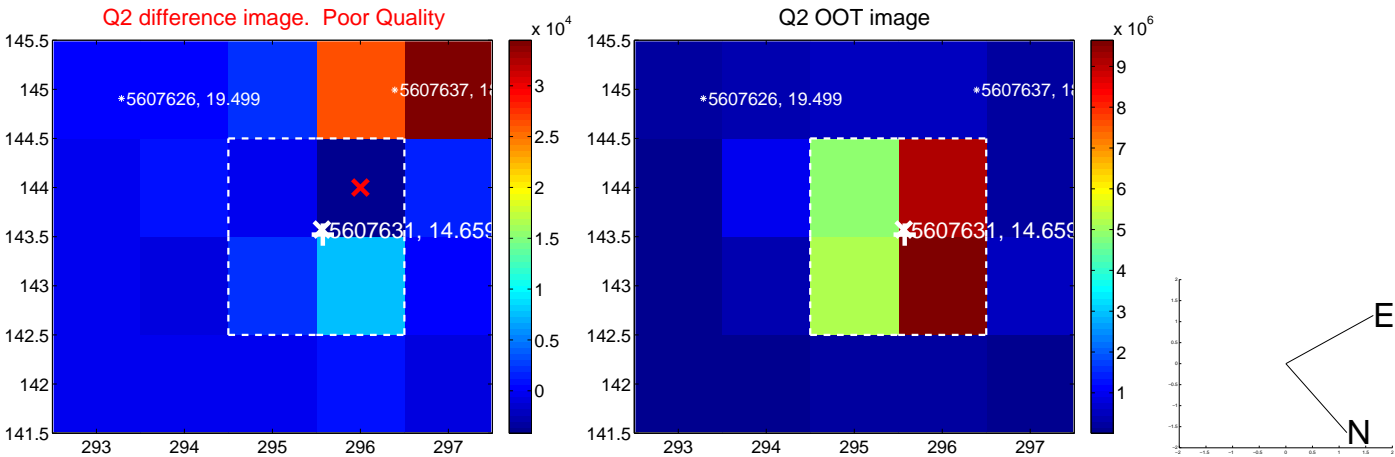
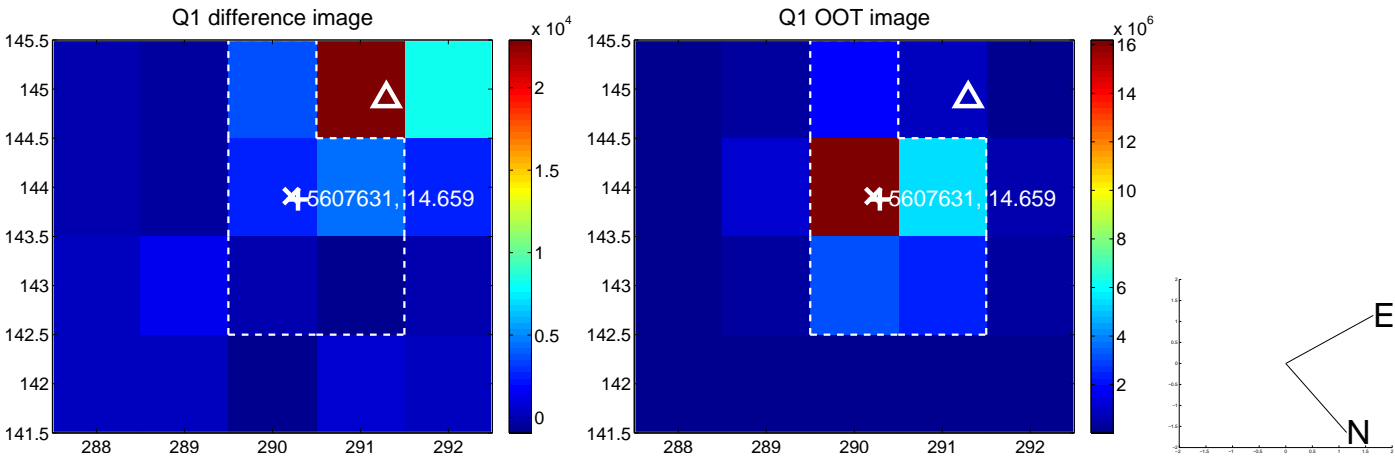
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.410 \pm 0.226	32.74	6.455 \pm 0.120	-3.639 \pm 0.277
PRF-fit source offset from KIC position	7.439 \pm 0.204	36.51	6.598 \pm 0.114	-3.436 \pm 0.258
photometric centroid source offset	44.07 \pm 0.74	59.87	39.23 \pm 0.74	-20.08 \pm 0.74

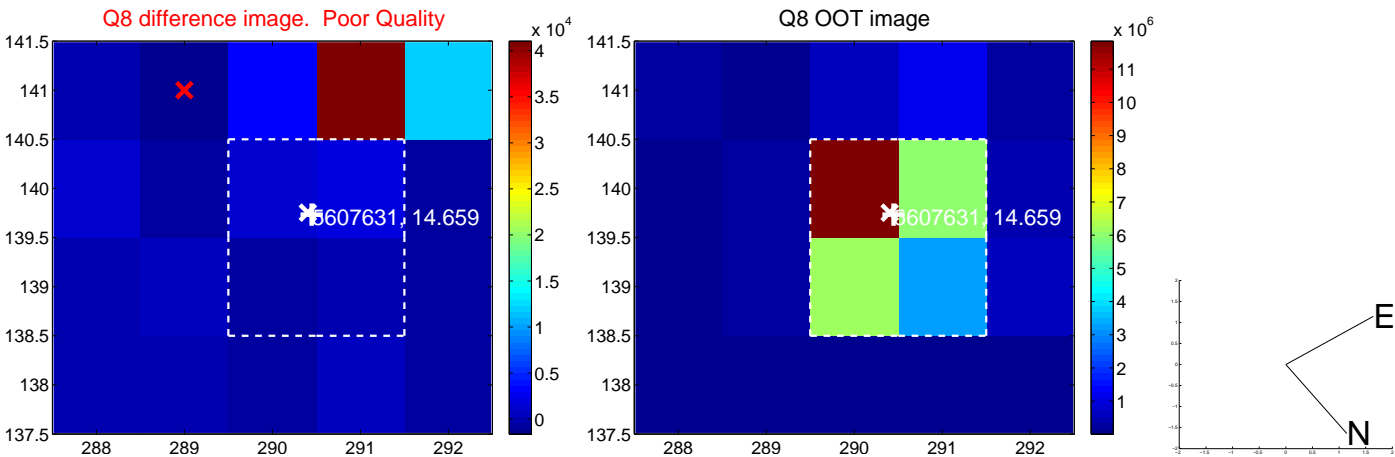
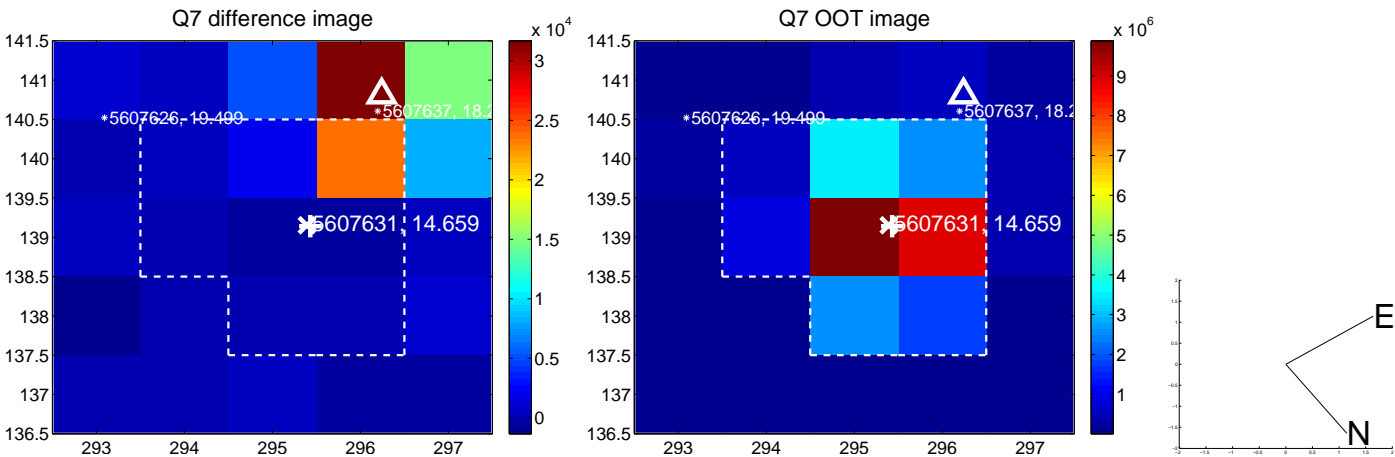
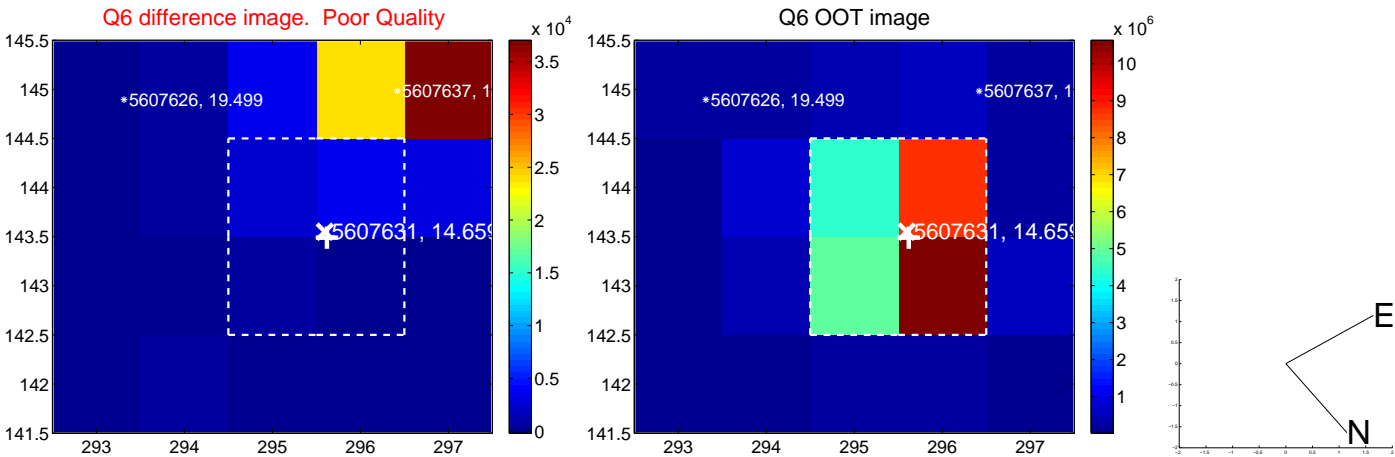
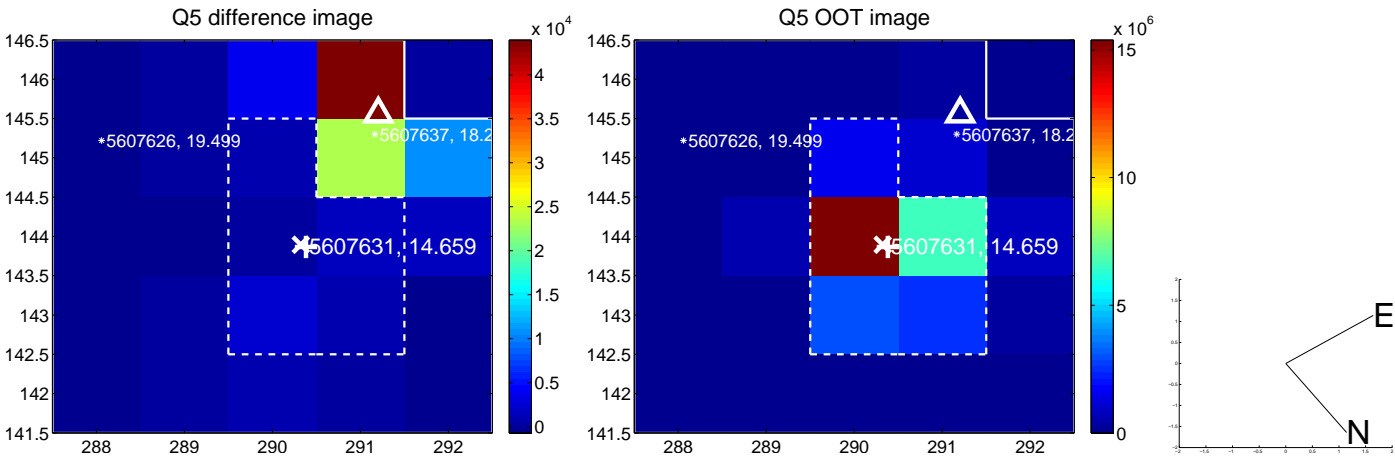


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

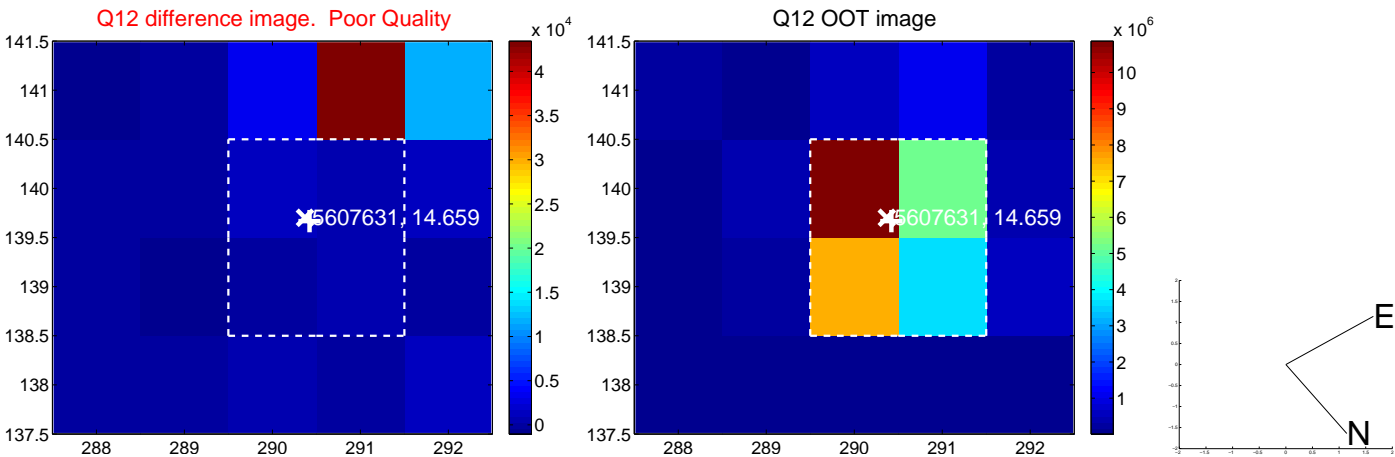
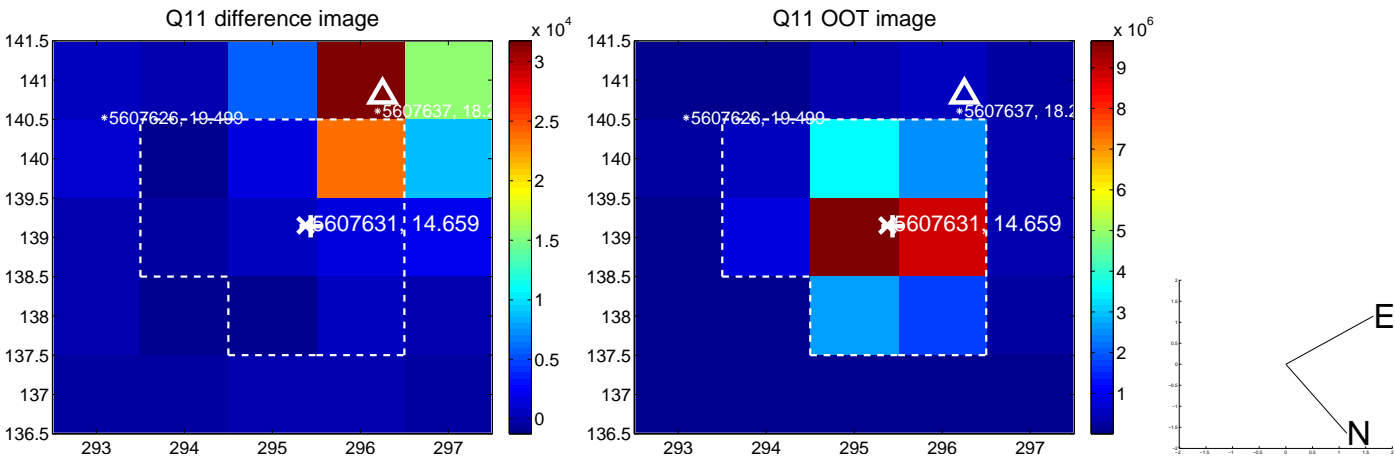
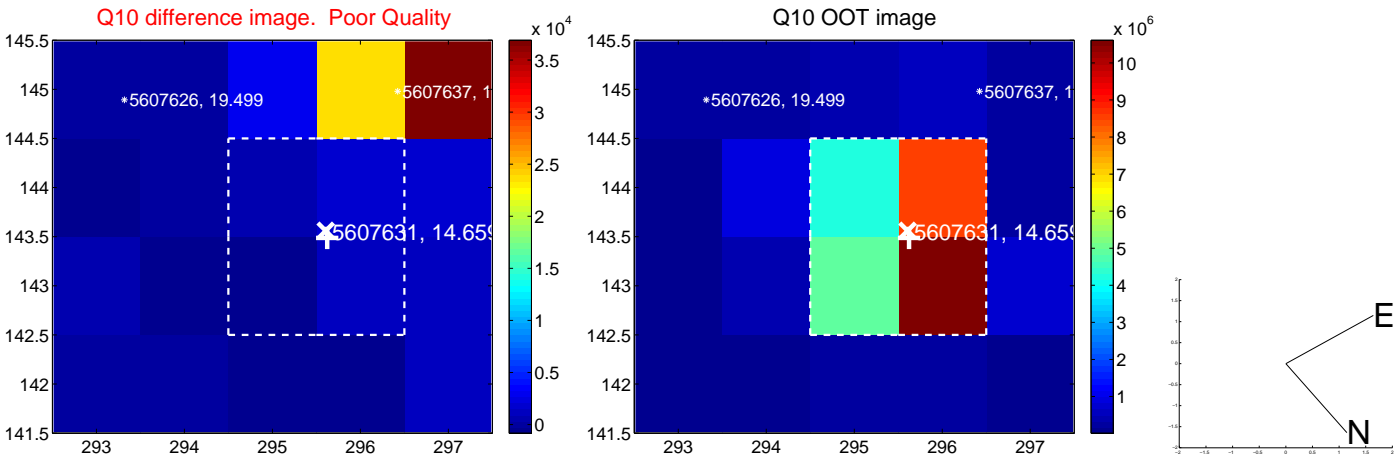
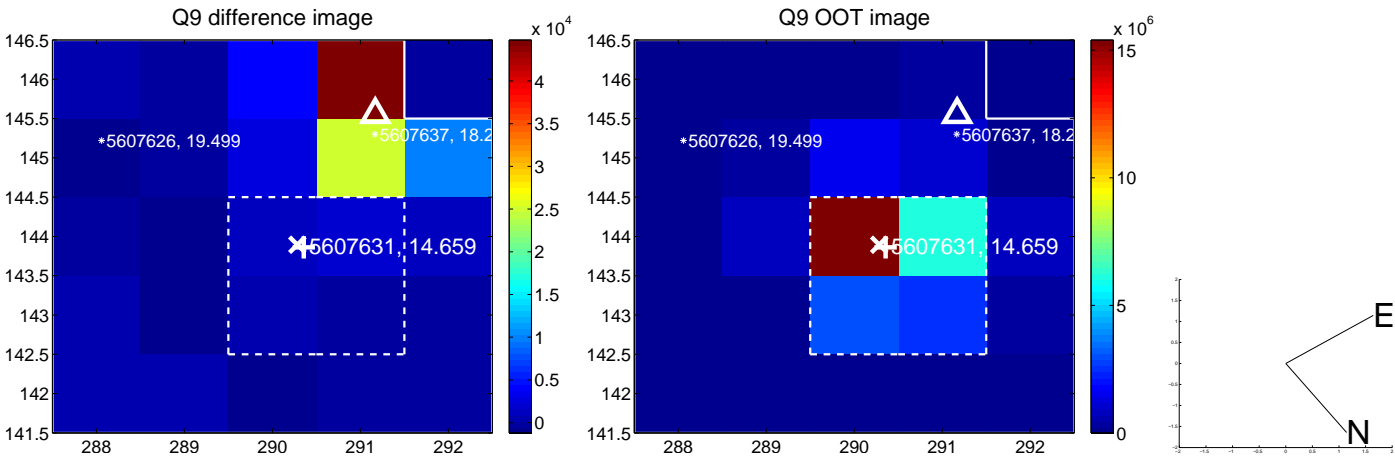
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



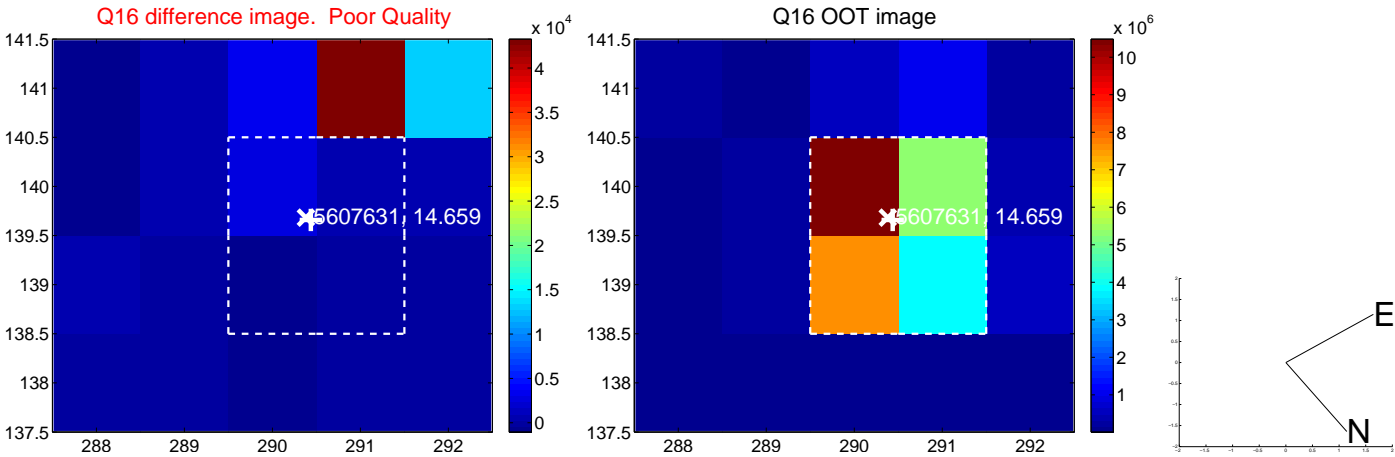
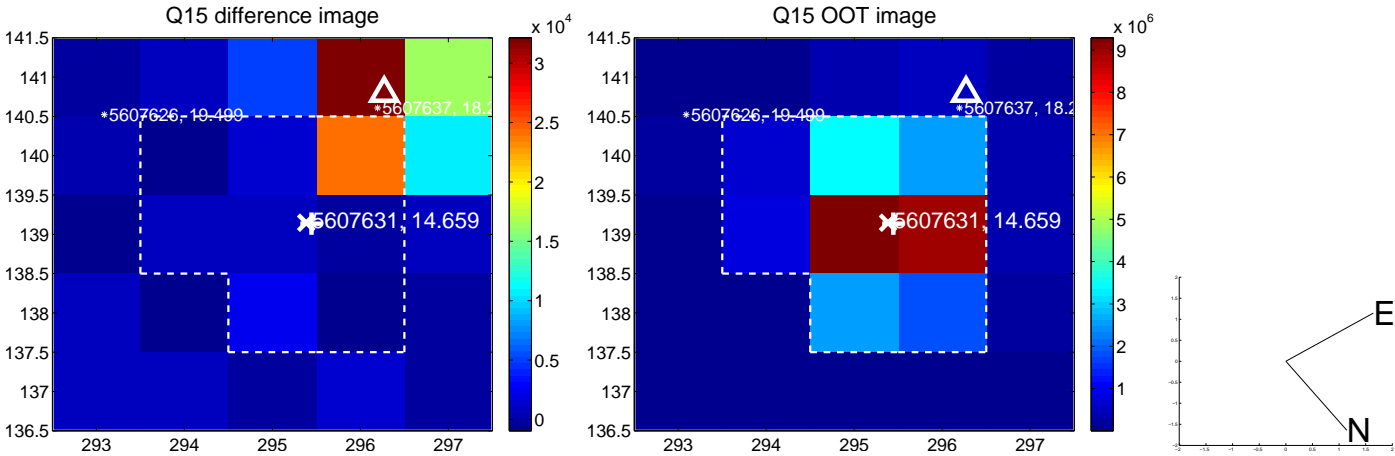
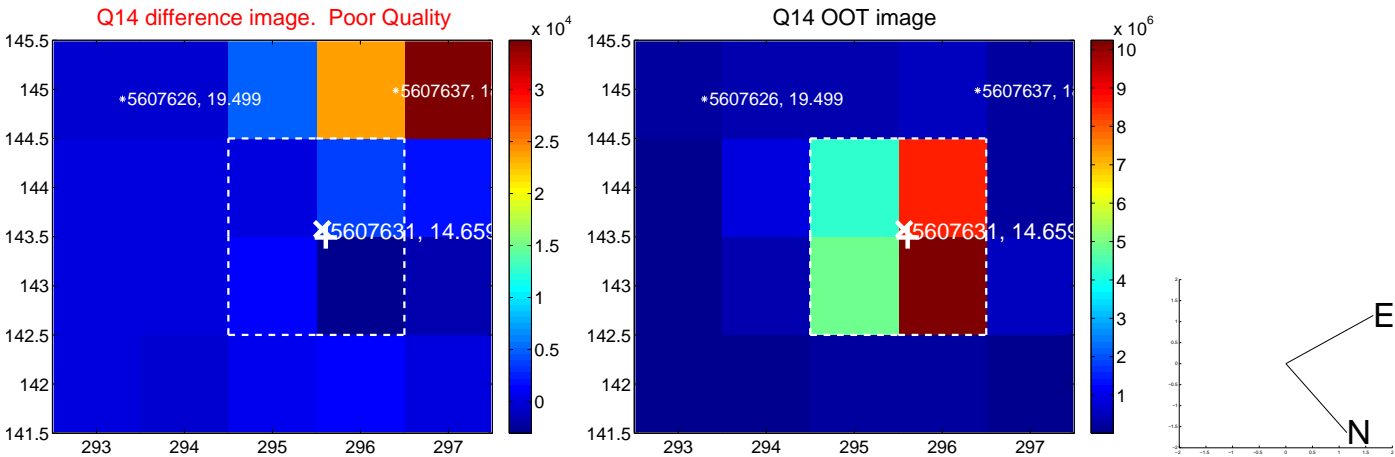
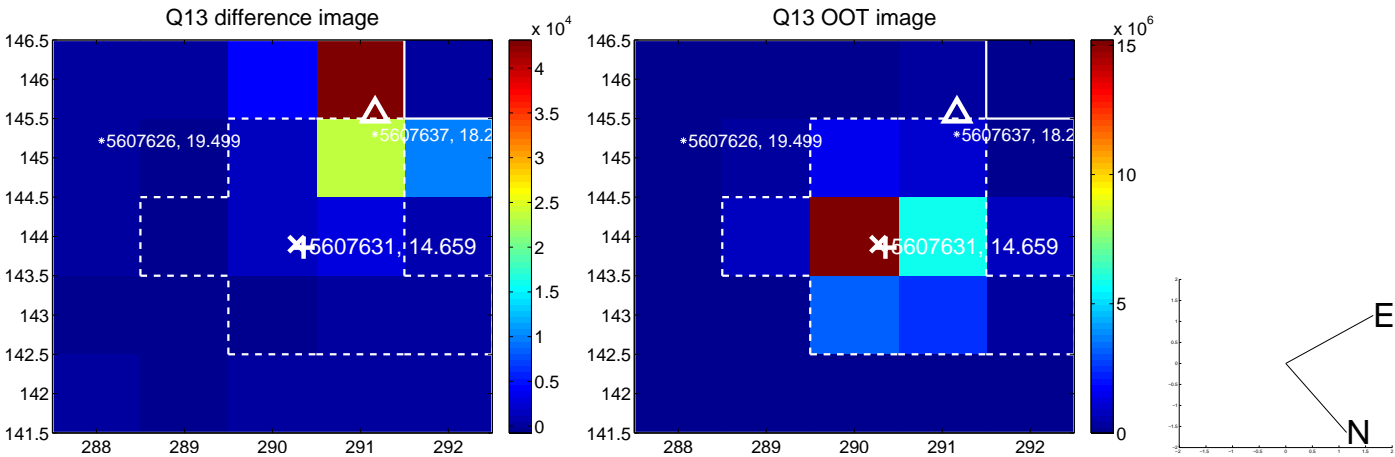
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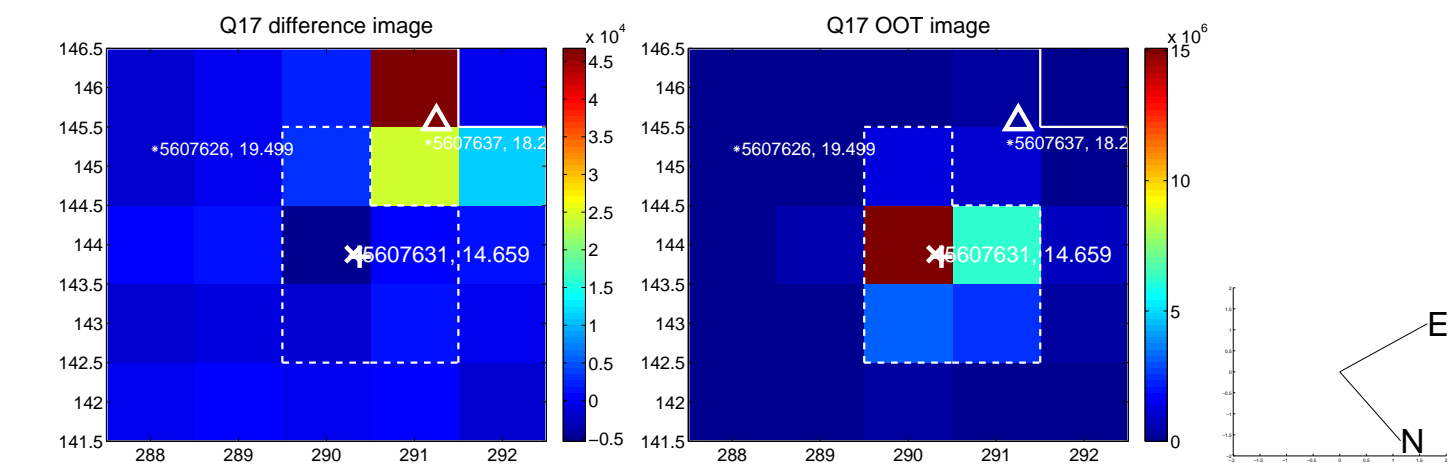
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



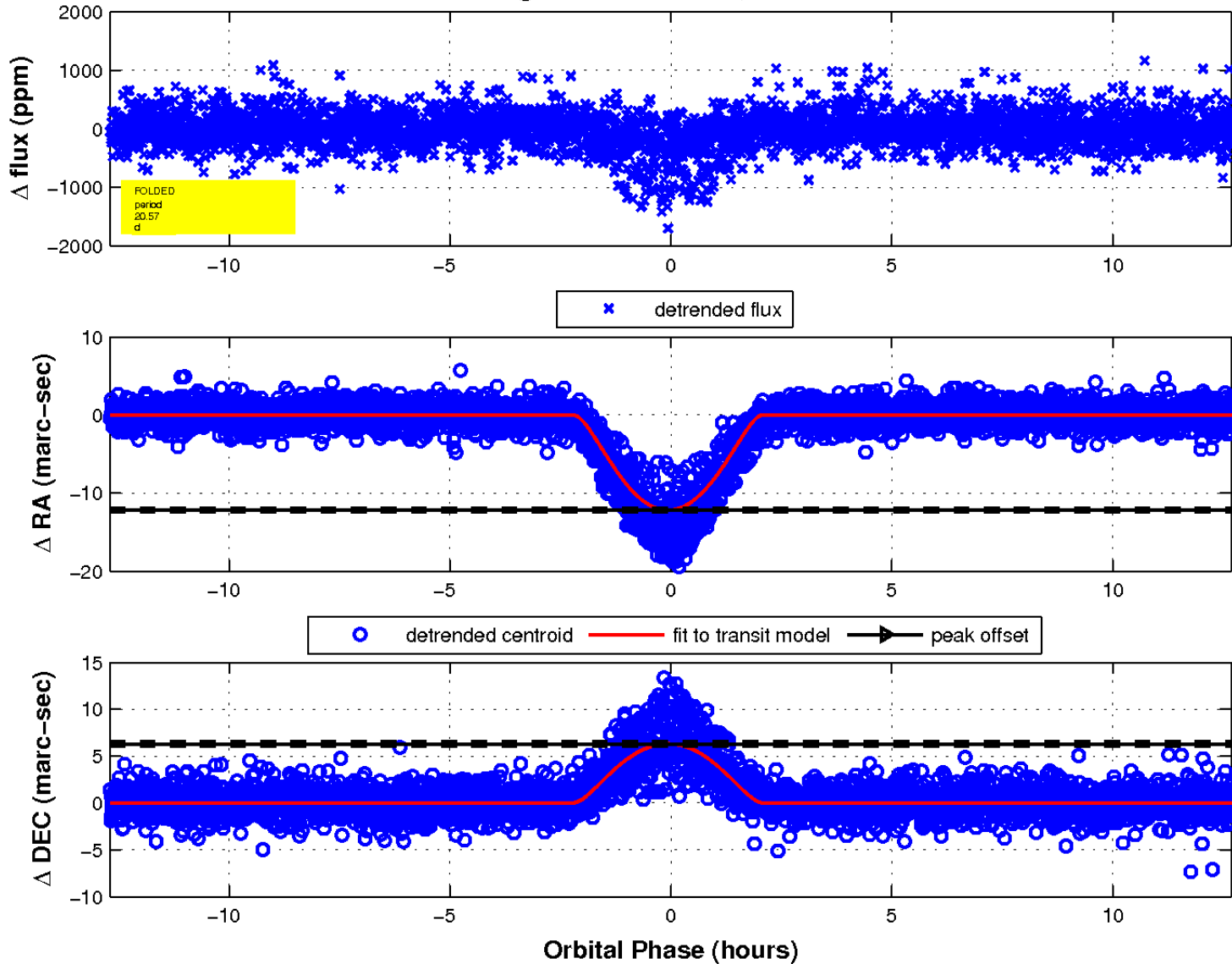
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

