

KIC 011520787

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})
011520787-01	OBS	No	6.444622	133.357043	82.4	20.270	8.5	8.1	1.15	6036	1.36	340.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011520787-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

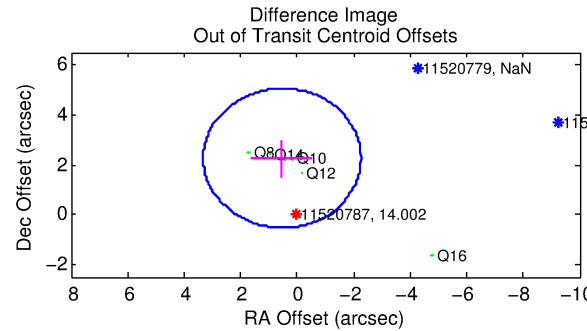
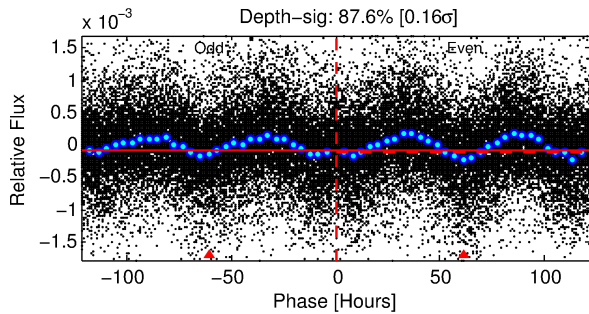
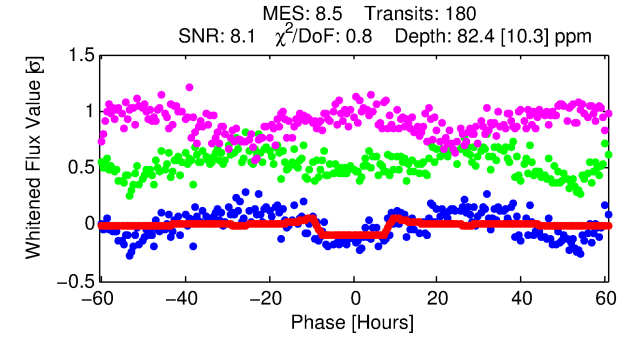
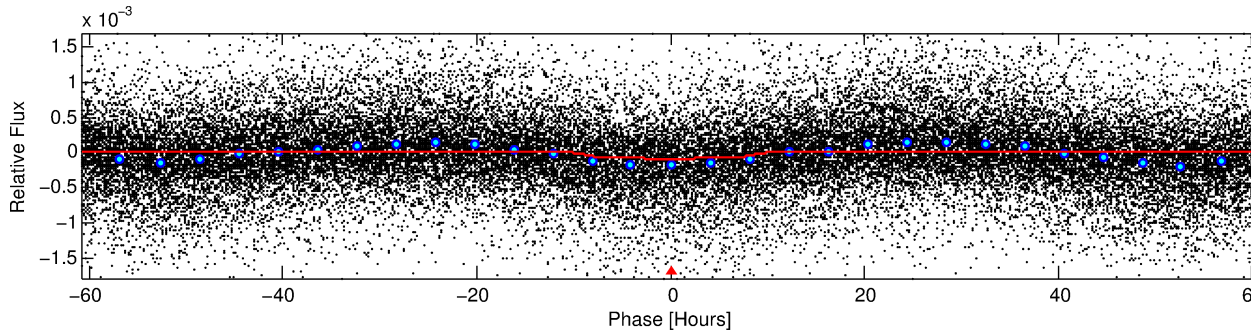
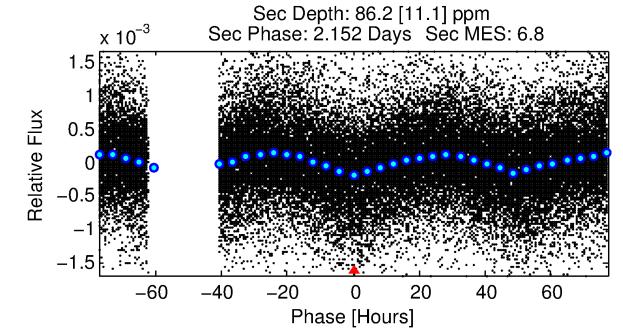
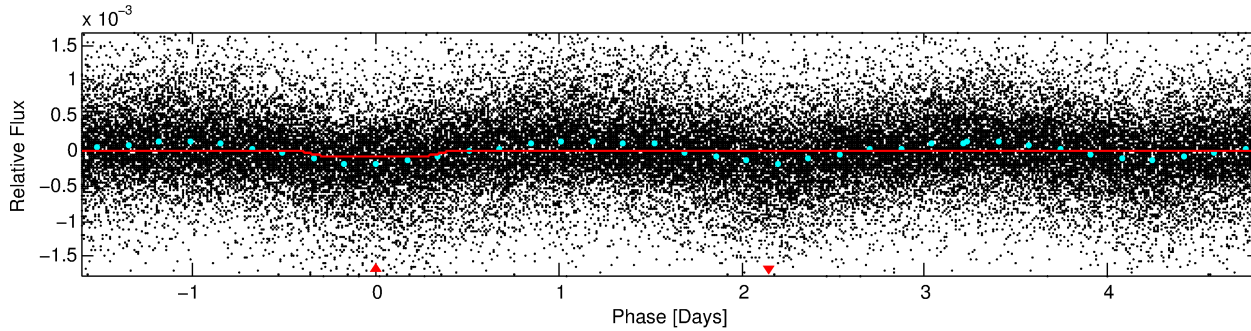
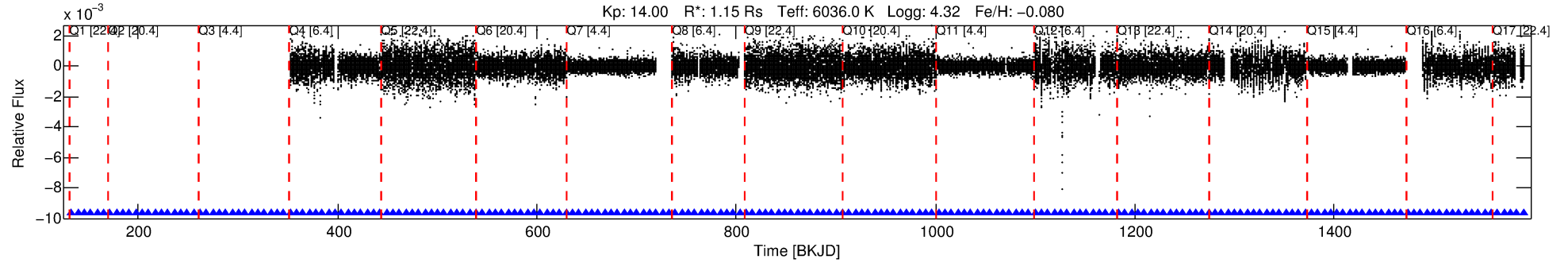
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011520787-01

No Significant Match Found

DV One-Page Summary

KIC: 11520787 Candidate: 1 of 1 Period: 6.445 d



DV Fit Results:

Period = 6.44462 [0.00029] d
Epoch = 133.3570 [0.0413] BKJD
Rp/R* = 0.0108 [0.0009]
a/R* = 1.22 [0.10]
b = 0.97 [0.02]
Seff = 340.22 [135.98]
Teq = 1095 [109] K
Rp = 1.36 [0.44] Re
a = 0.0682 [0.0176] AU
Ag = 119.69 [50.54] [2.35σ]
Teffp = 5600 [359] K [12.00σ]

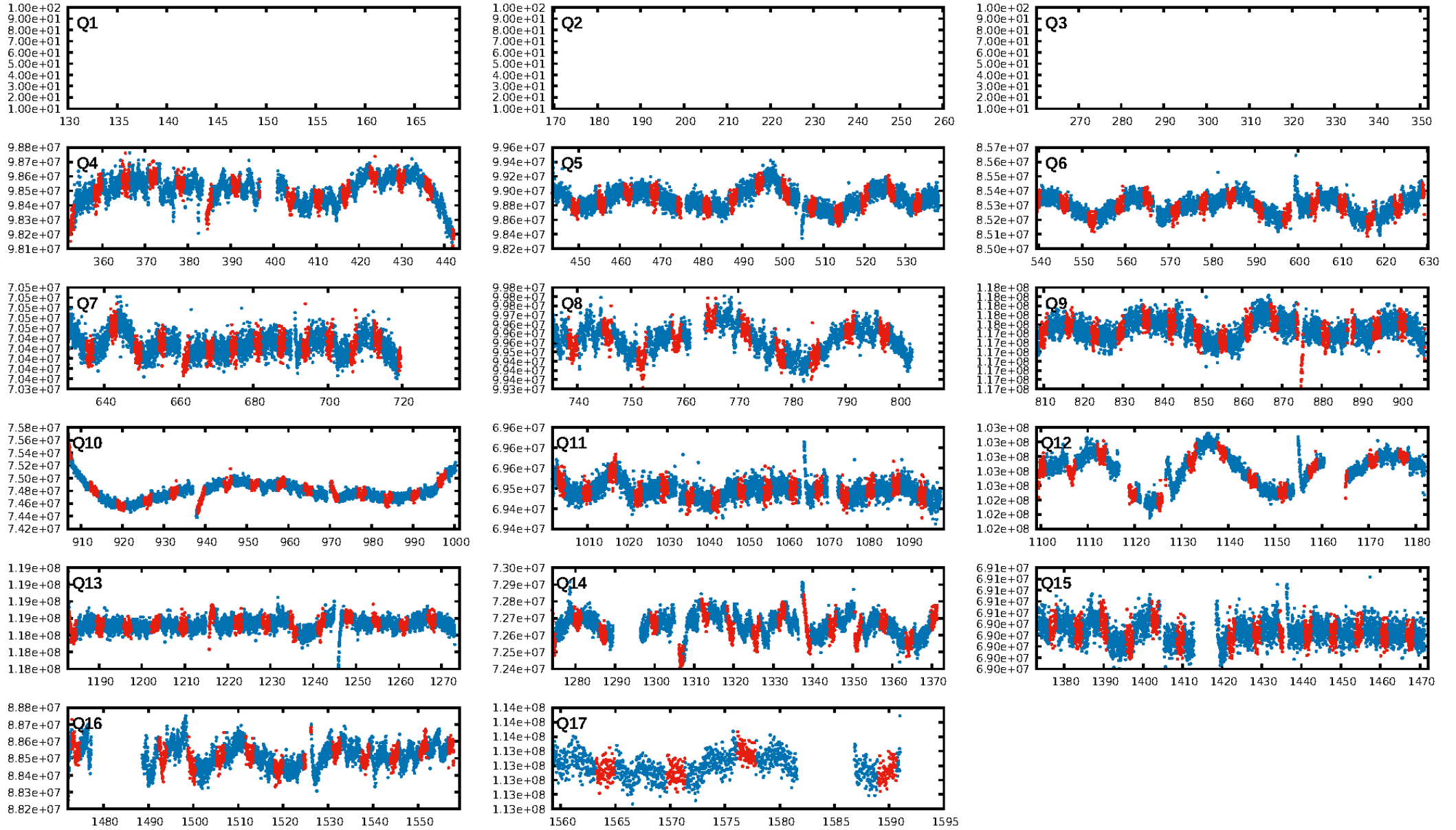
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.10e-11
RollingBand-fgt: 1.00 [176/176]
GhostDiagnostic-chr: -0.2462
Centroid-sig: 0.2%
Centroid-so: 3.884 arcsec [14.76σ]
OotOffset-rm: 2.321 arcsec [2.49σ]
KicOffset-rm: 5.727 arcsec [8.88σ]
OotOffset-st: 2/0/3/0 [5]
KicOffset-st: 2/0/3/0 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [14/14]

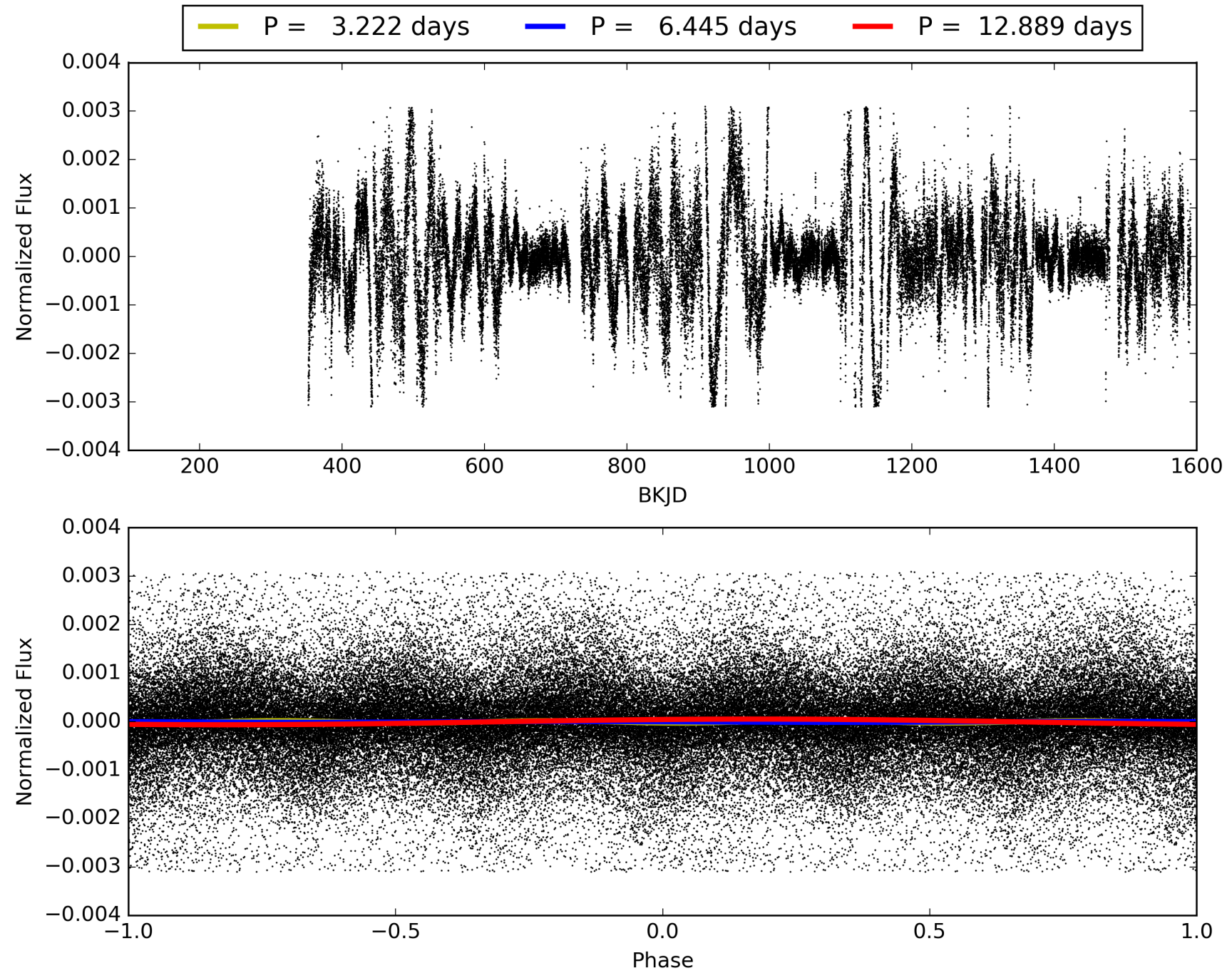
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:43:36 Z

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

TCE 011520787-01, PDC Light Curves

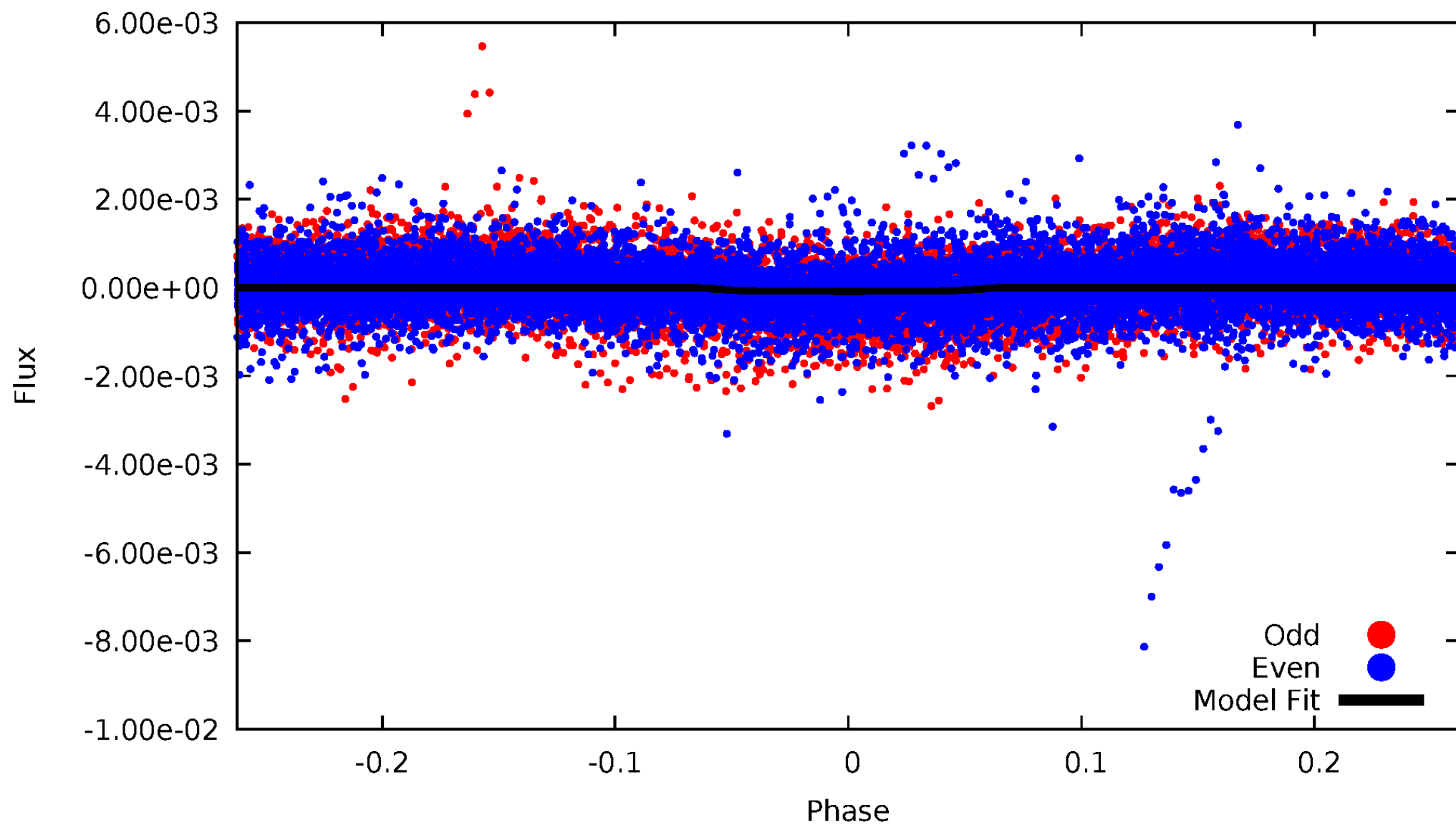


TCE 011520787-01



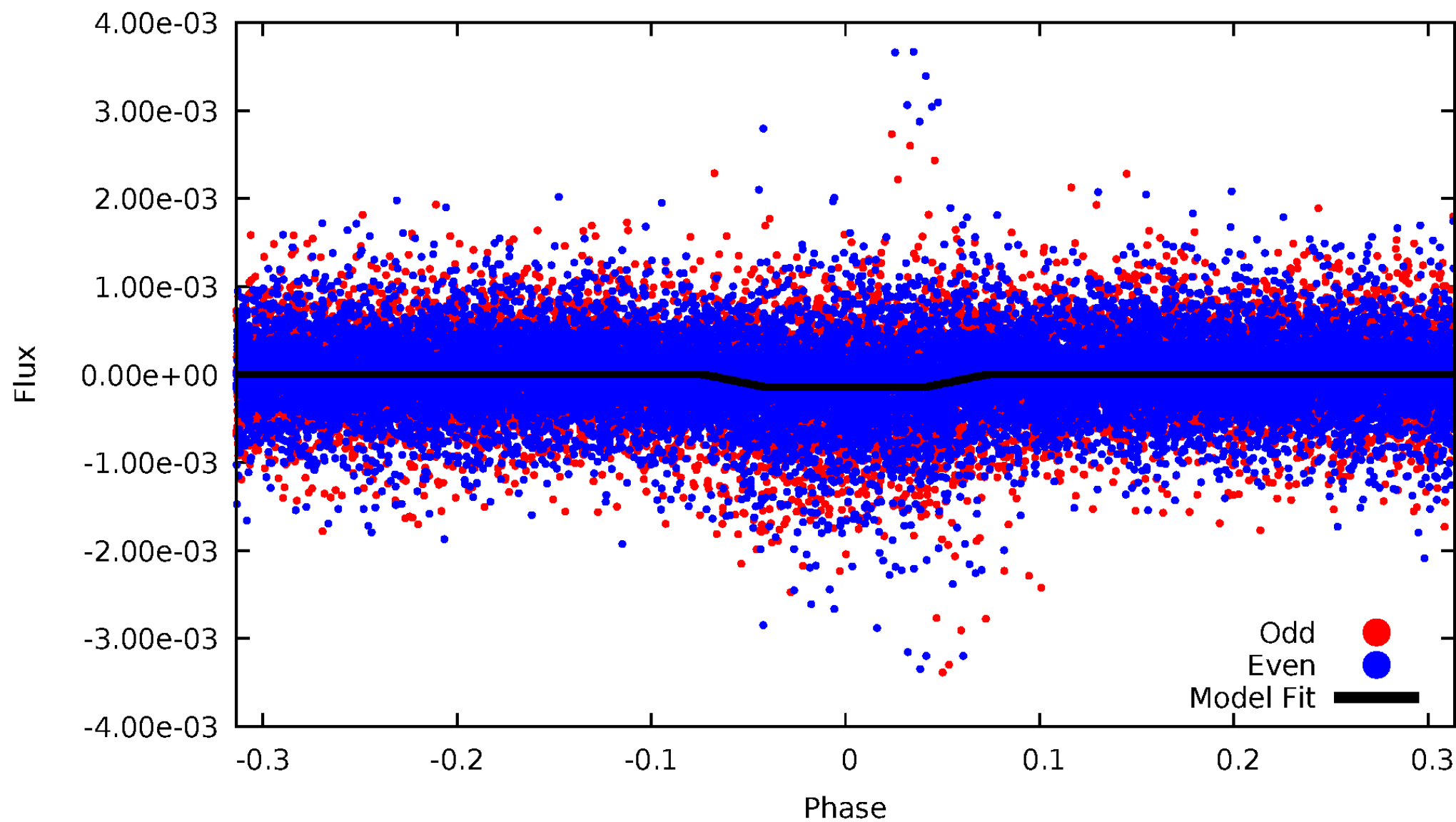
DV Odd/Even

TCE 011520787-01



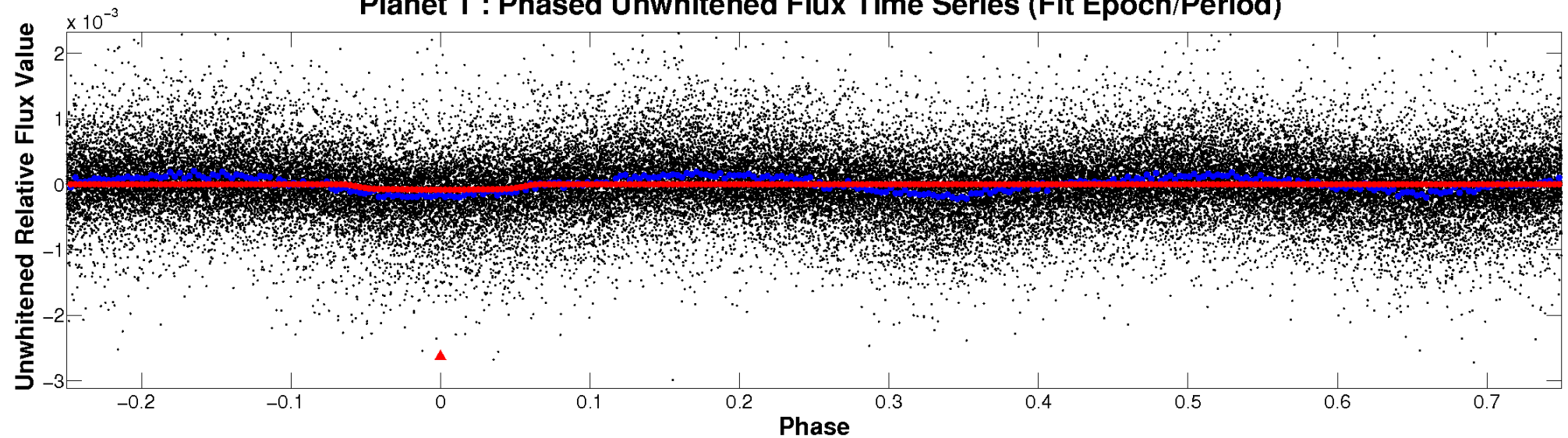
ALT Odd/Even

TCE 011520787-01

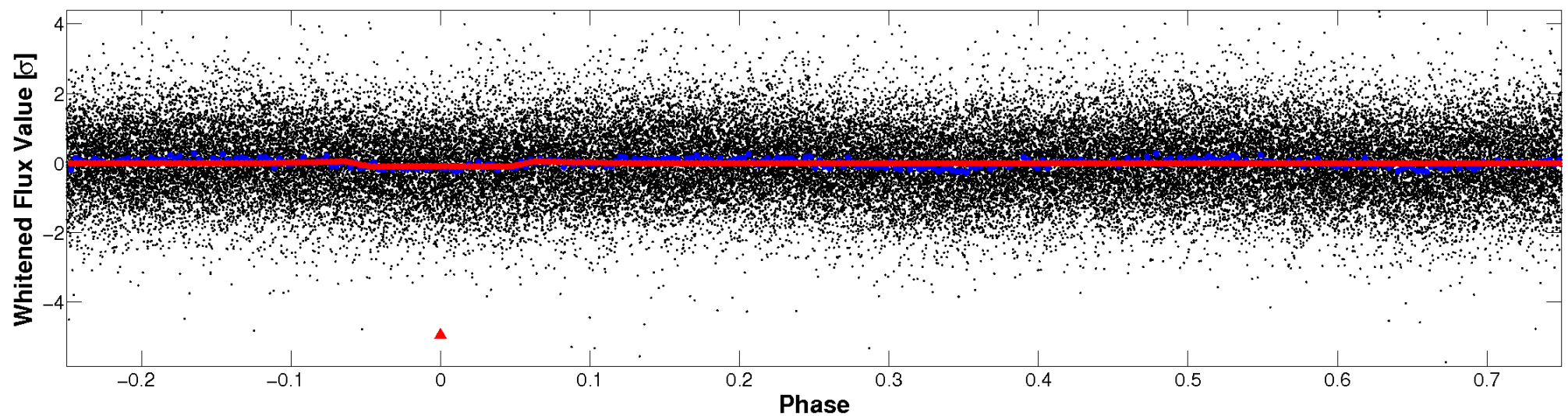


Non-Whitened Vs. Whitened Light Curve

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

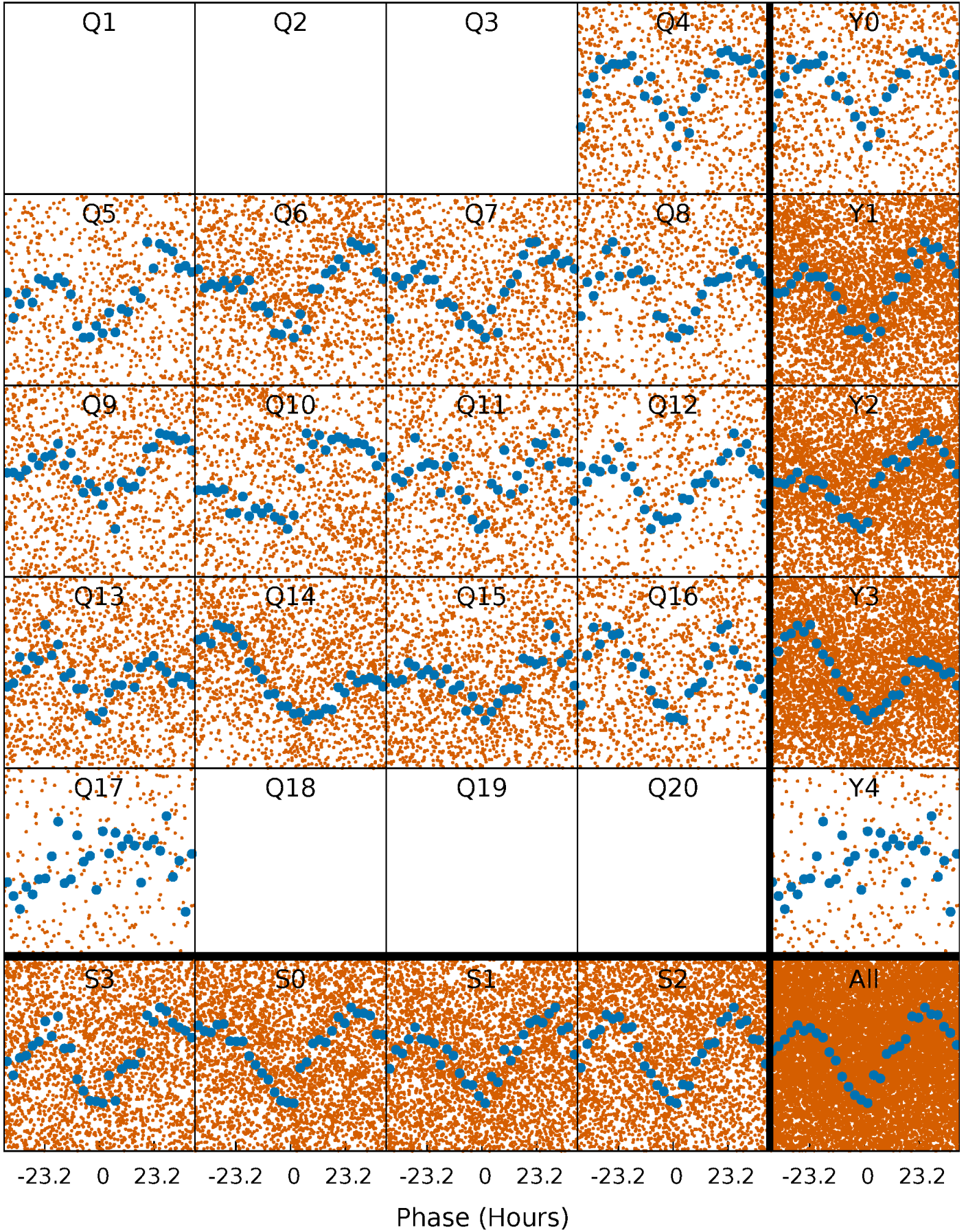


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



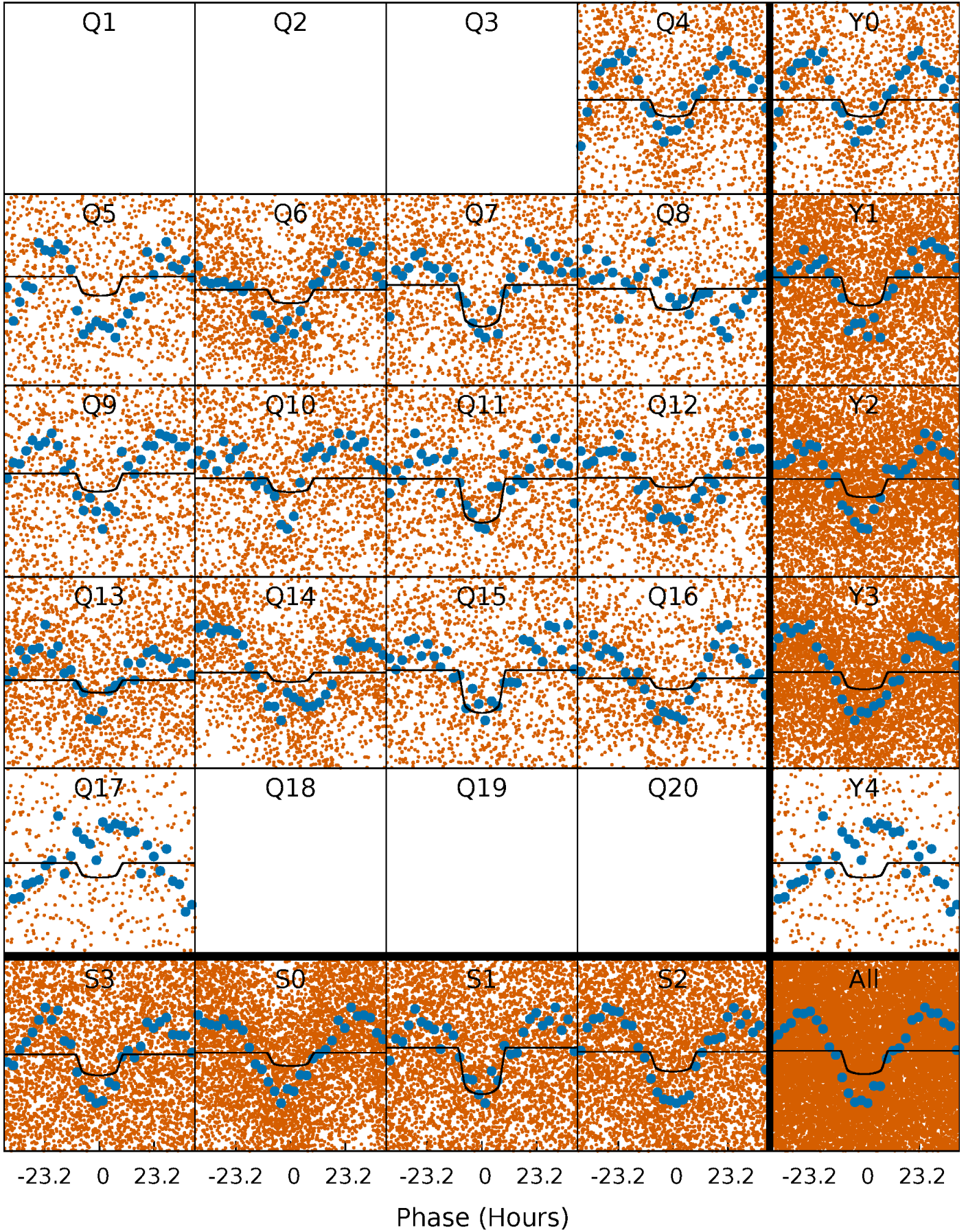
PDC Quarter-Phased Transit Curves

TCE 011520787-01 P= 6.444622 Days $T_0=133.357044$ (BKJD)



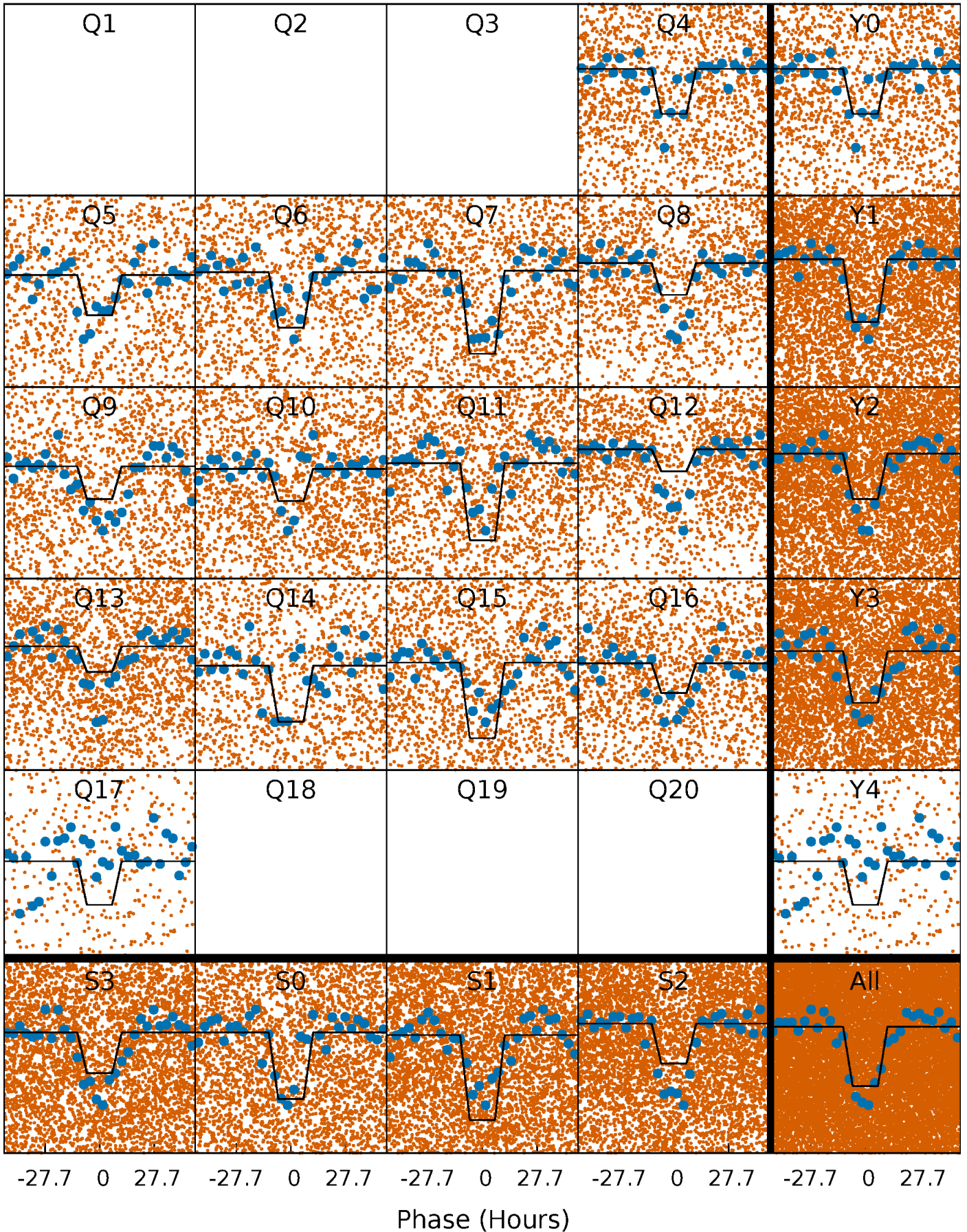
DV Quarter-Phased Transit Curves

TCE 011520787-01 P= 6.444622 Days $T_0=133.357044$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

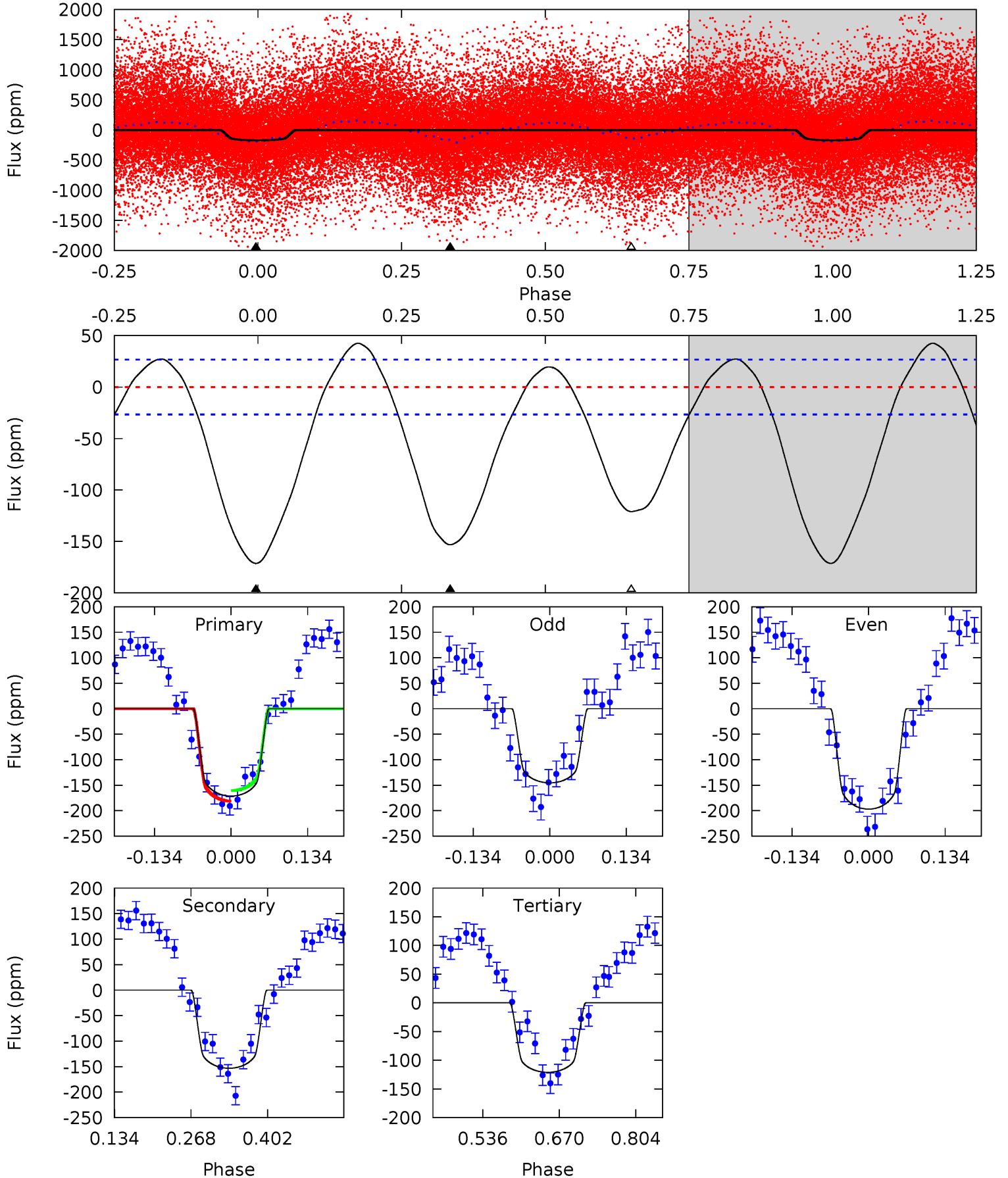
TCE 011520787-01 P= 6.443944 Days $T_0=133.427786$ (BKJD)



DV Model-Shift Uniqueness Test

011520787-01, P = 6.444622 Days, E = 133.357044 Days

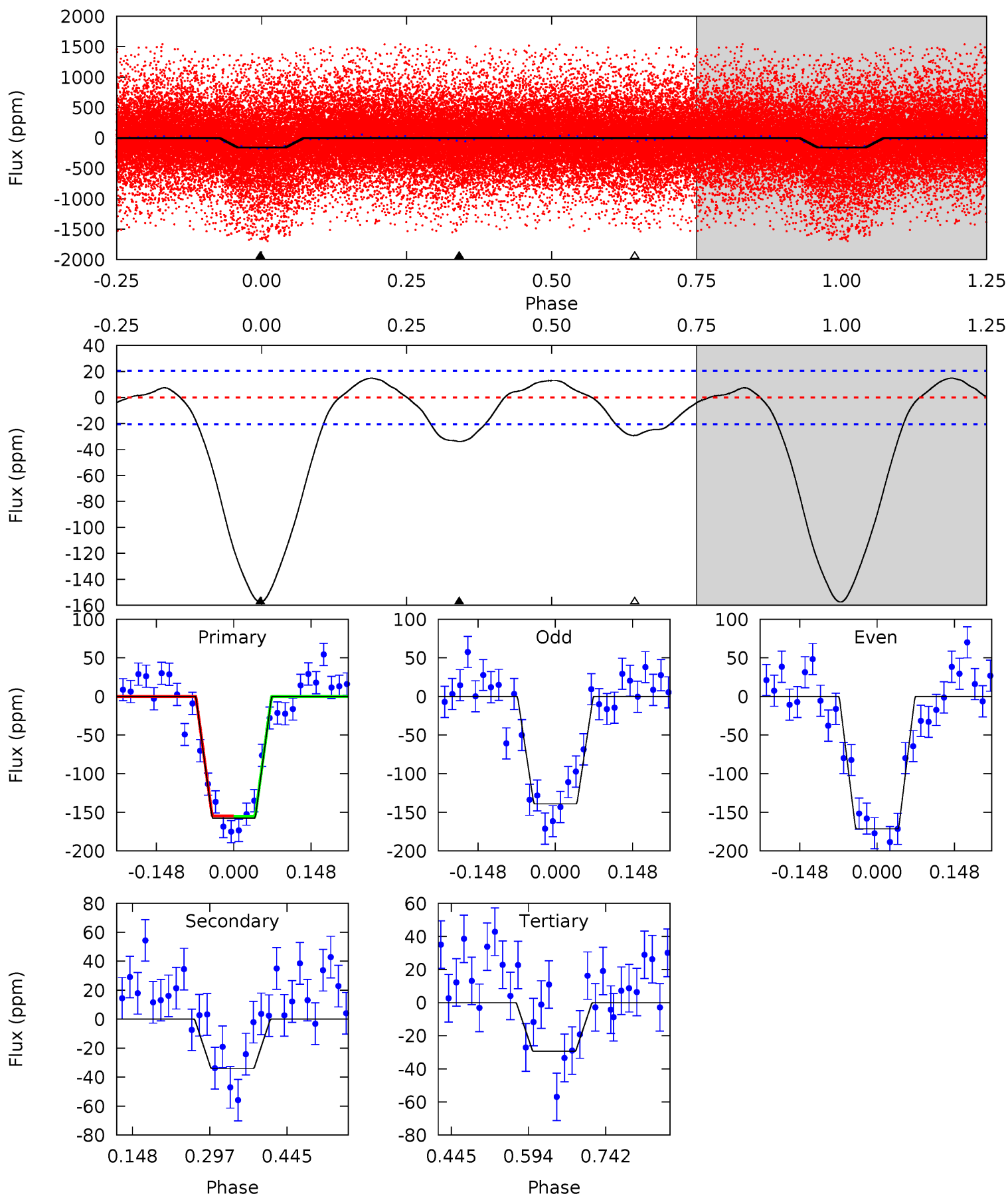
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	25.8	20.4	0	4.50	1.50	9.13	8.49	28.9	5.43	25.8	4.37	1.11	0.20	1.73



Alt Model-Shift Uniqueness Test

011520787-01, P = 6.443944 Days, E = 133.427786 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	7.40	6.39	0	4.48	1.45	3.07	27.9	34.3	1.01	7.40	3.54	1.48	0.09	0.03



Stellar Parameters For KIC 011520787

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6036^{+190}_{-232}	$4.322^{+0.149}_{-0.198}$	$-0.080^{+0.250}_{-0.300}$	$1.154^{+0.362}_{-0.195}$	$1.018^{+0.159}_{-0.130}$	$0.933^{+0.615}_{-0.473}$
	+3%/-4%	+3%/-5%	+312%/-375%	+31%/-17%	+16%/-13%	+66%/-51%
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 011520787-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-153 ± 6	$1.36^{+0.27}_{-0.18}$	1534^{+124}_{-96}	6471^{+365}_{-347}	208^{+70}_{-56}
Alt.	-34 ± 5	$1.51^{+0.28}_{-0.19}$	1533^{+127}_{-94}	4411^{+226}_{-203}	37^{+14}_{-10}

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

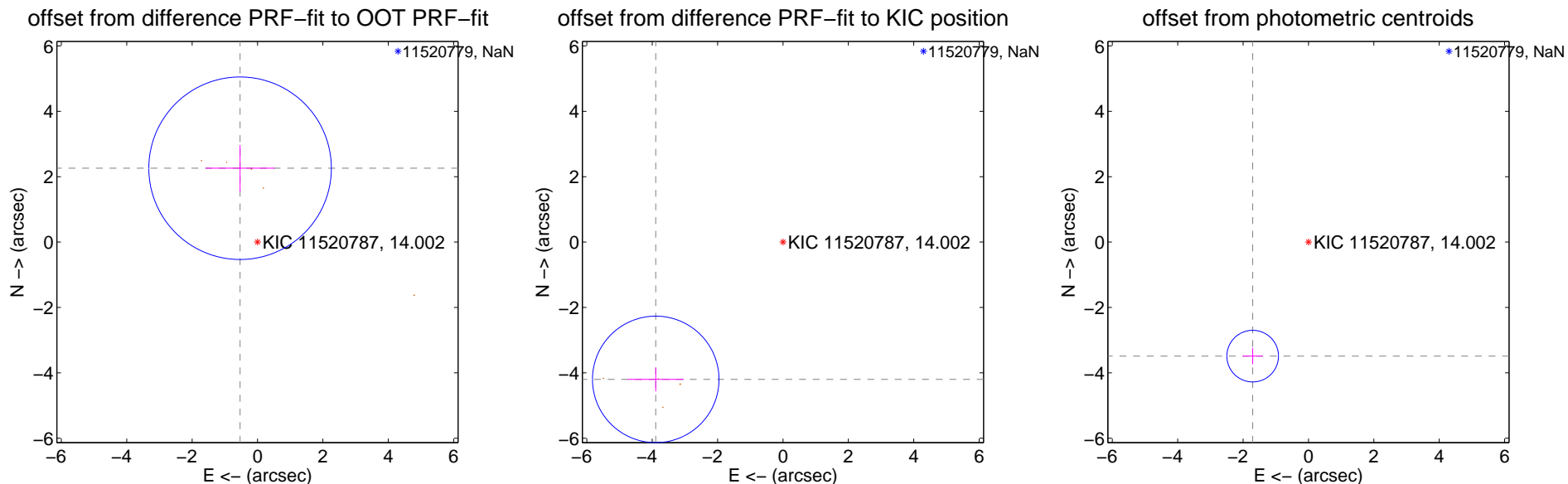
DV Centroid Data

Supplemental centroid analysis for 011520787-01. Kepler magnitude: 14.00. Transit SNR 8.10

There are 0 quarters with good PRF difference image offsets

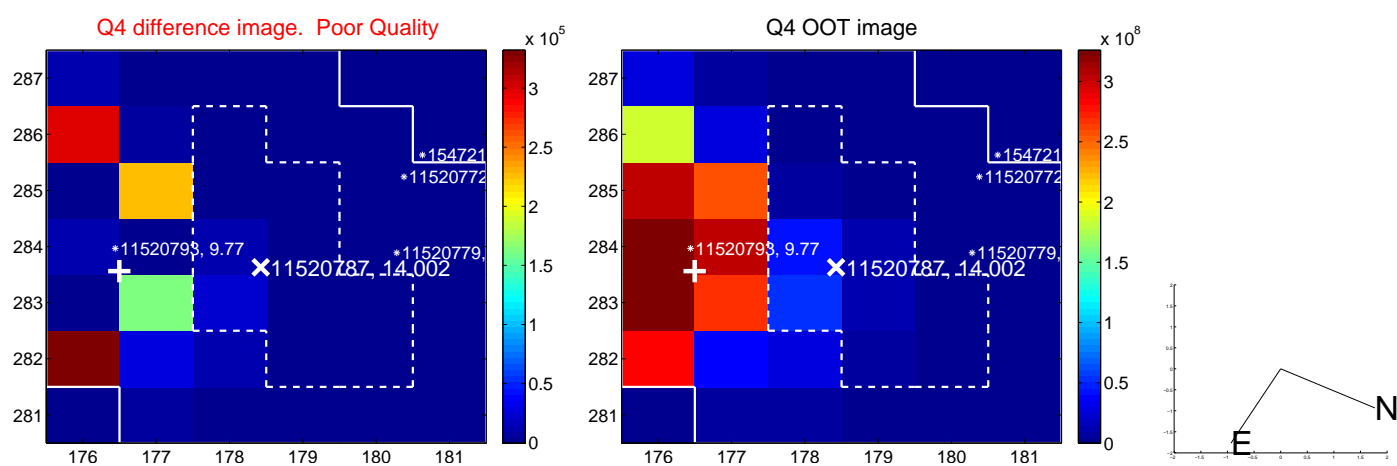
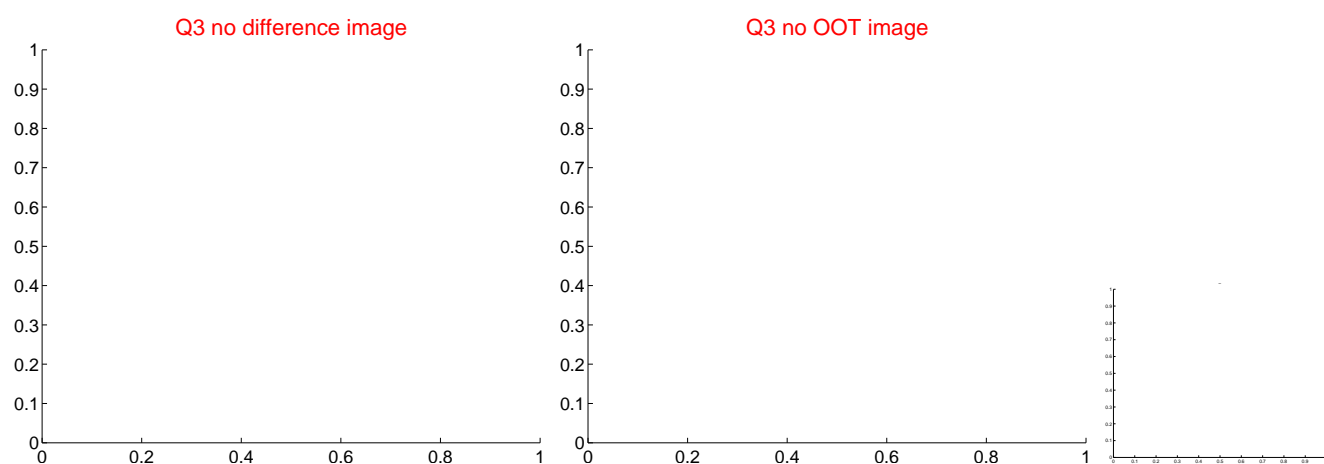
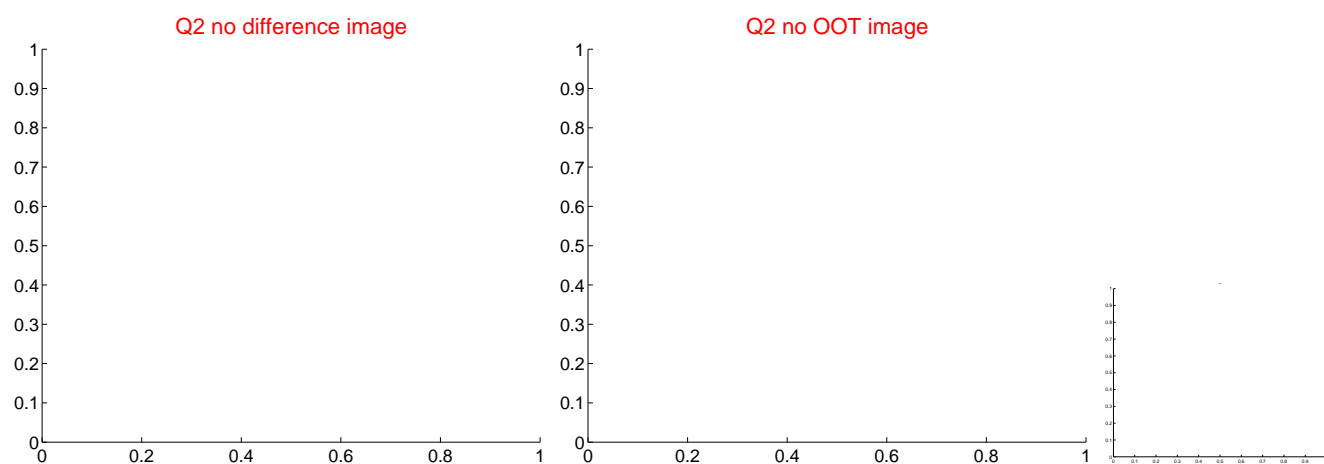
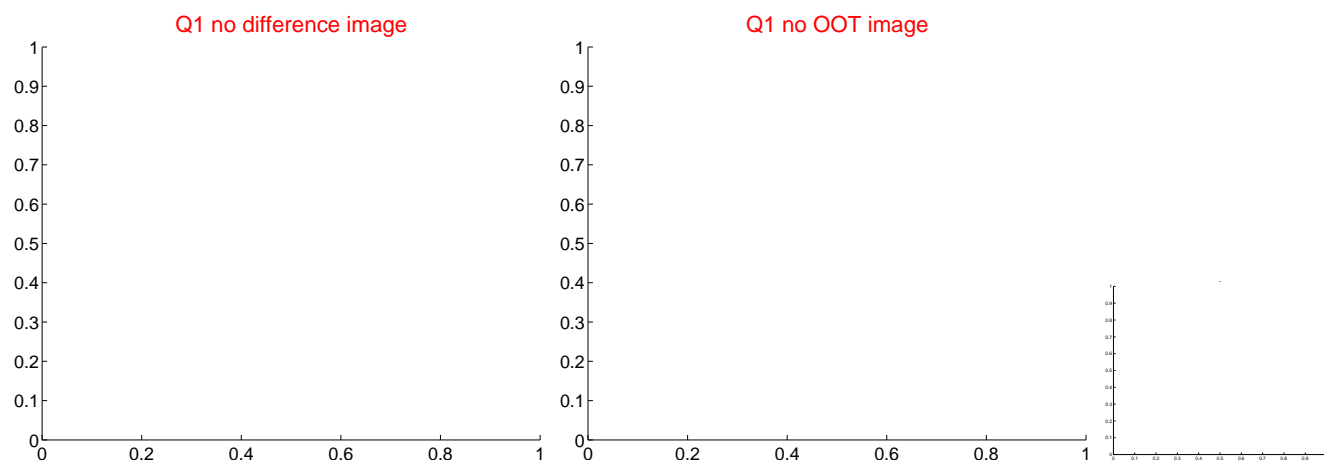
The OOT PRF centroid is offset from the target star catalog position by about 7.70 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.321 ± 0.931	2.49	0.533 ± 1.055	2.259 ± 0.711
PRF-fit source offset from KIC position	5.727 ± 0.645	8.88	3.893 ± 0.864	-4.201 ± 0.365
photometric centroid source offset	3.88 ± 0.26	14.76	1.71 ± 0.31	-3.49 ± 0.25

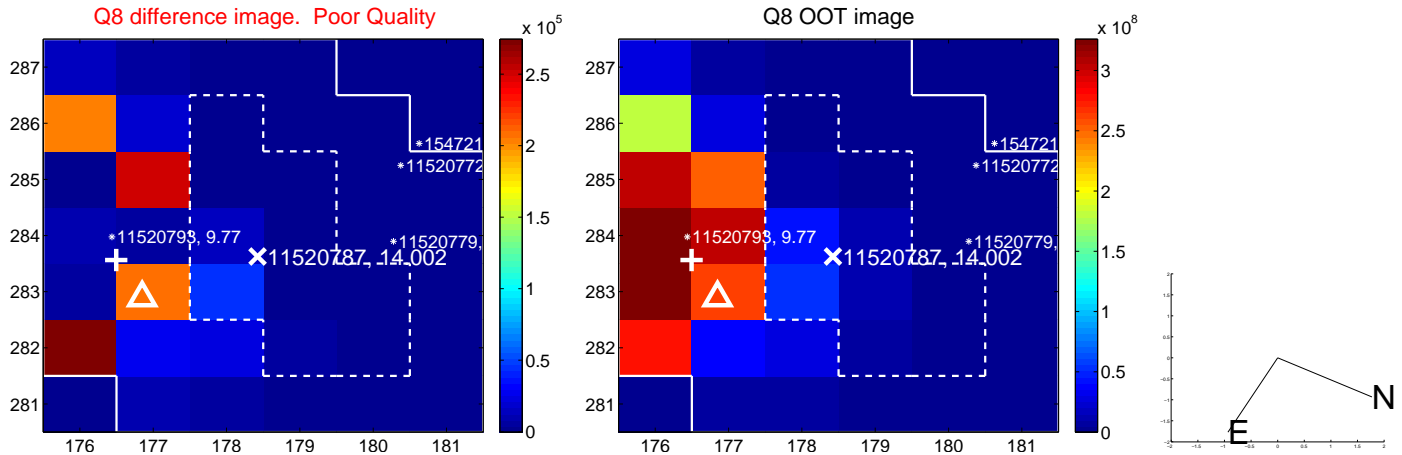
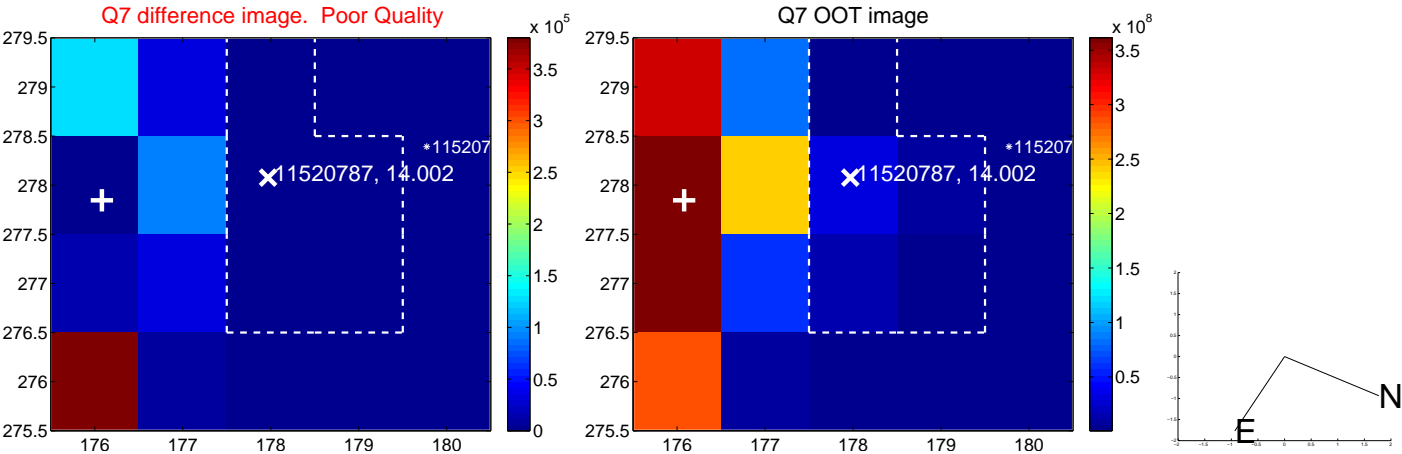
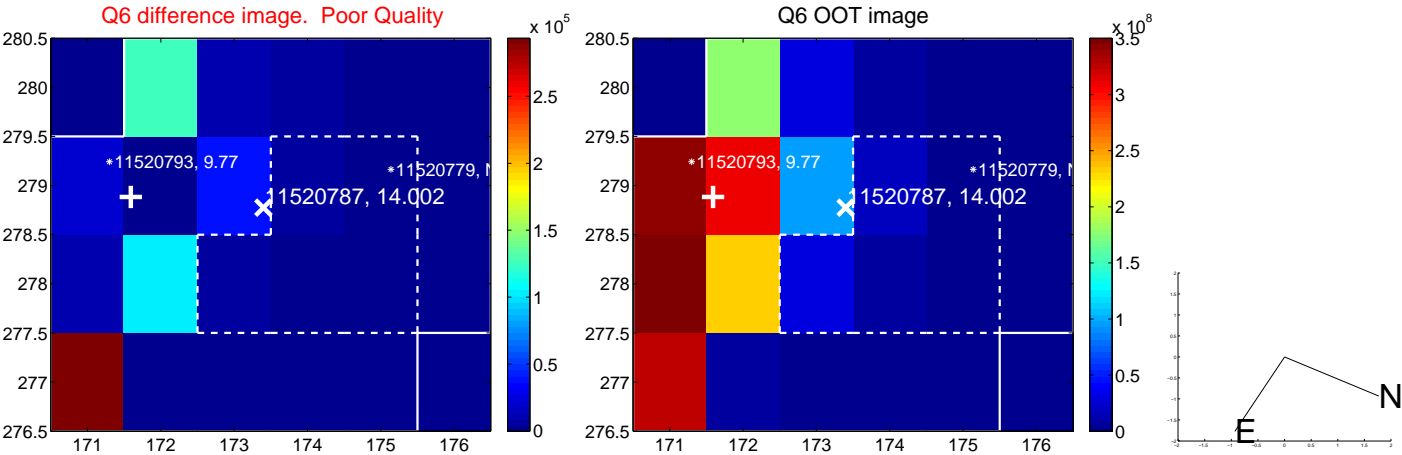
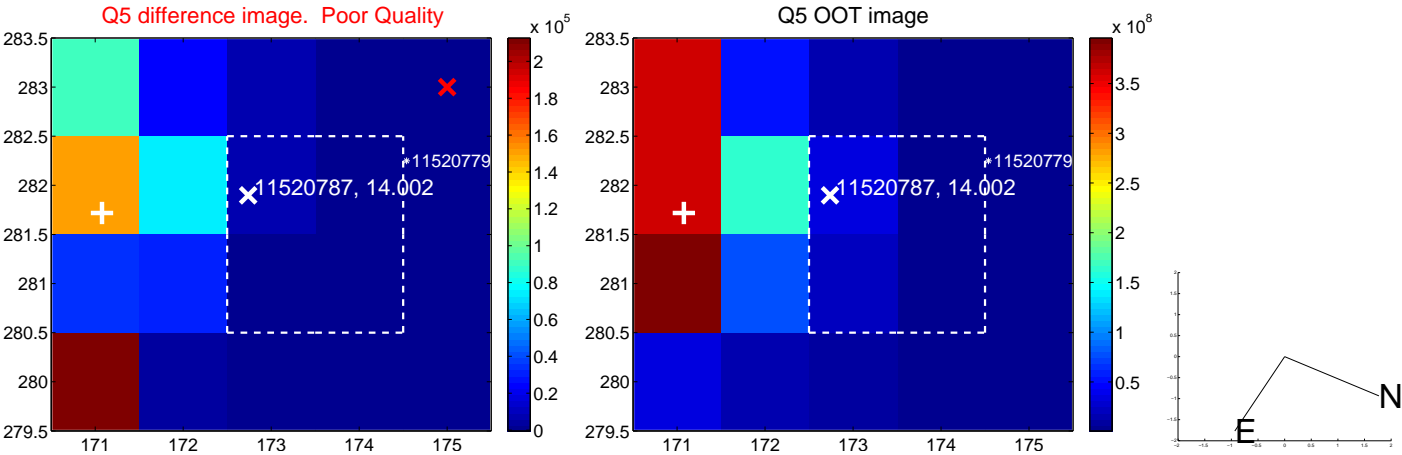


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

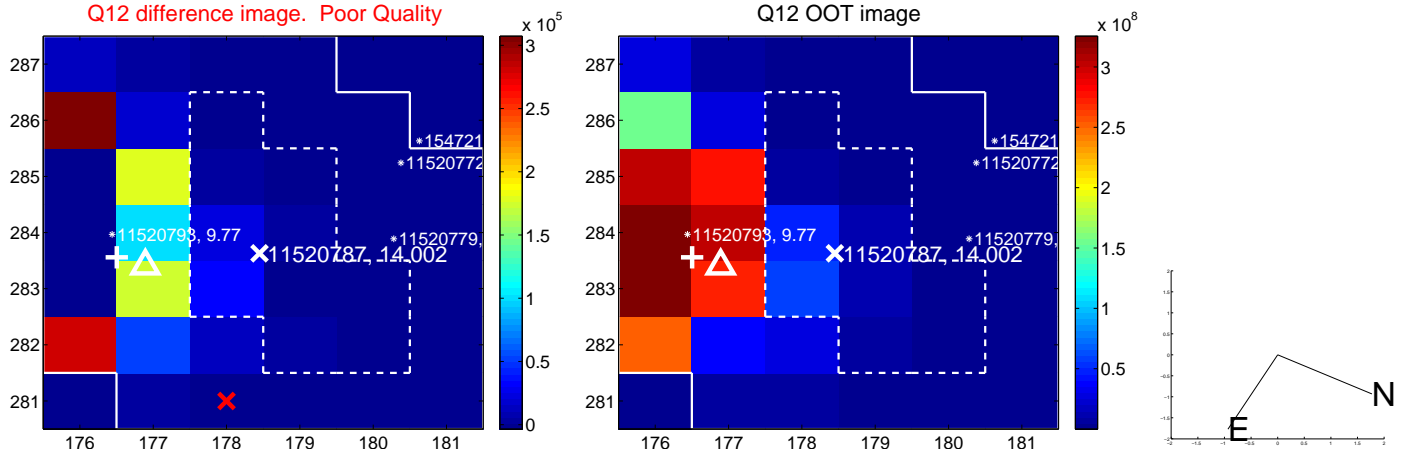
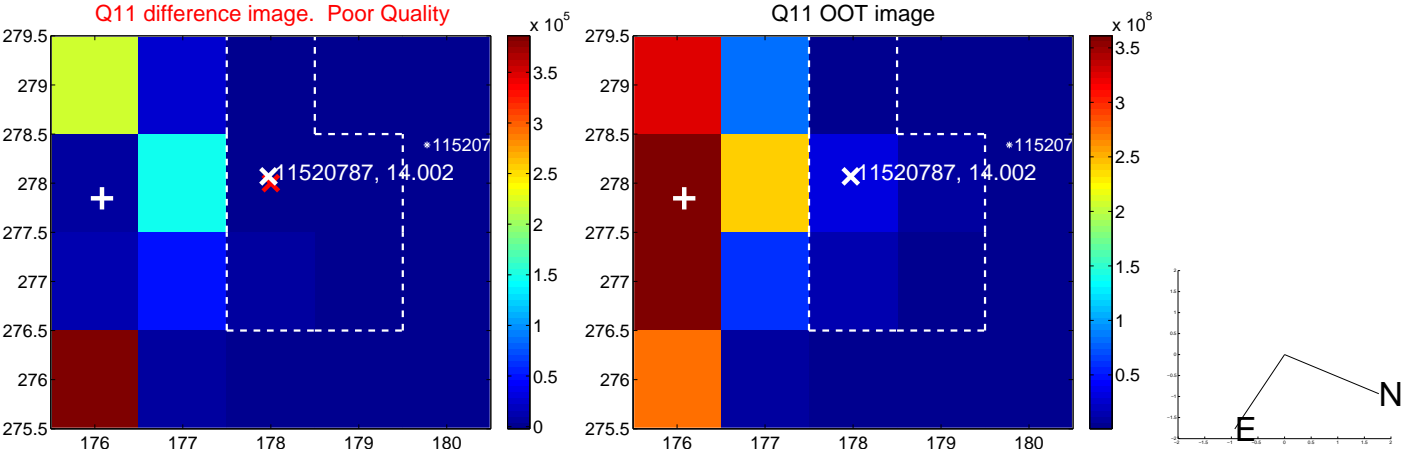
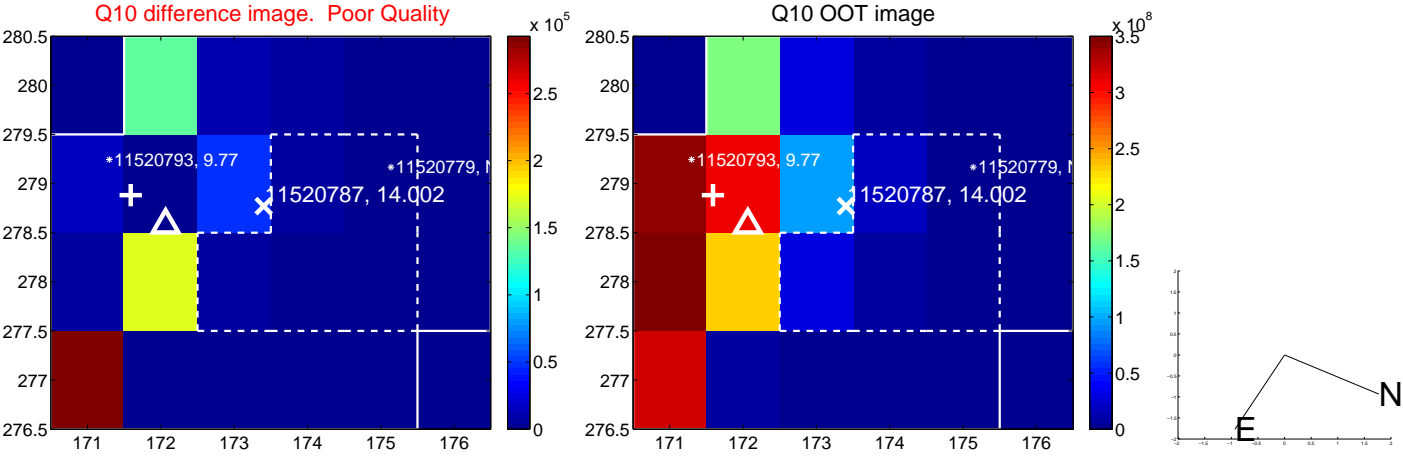
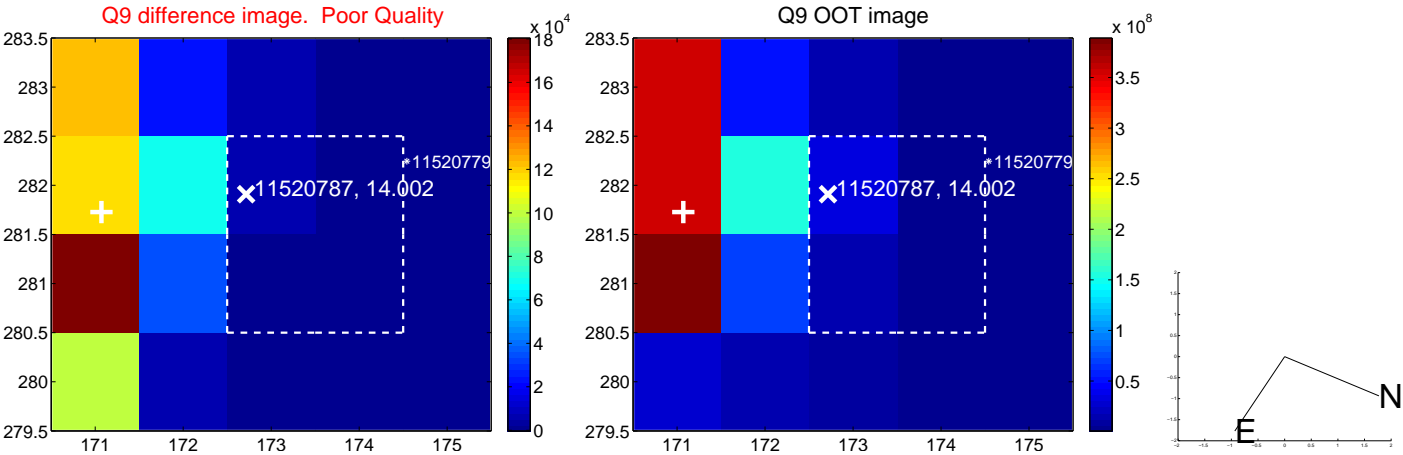
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



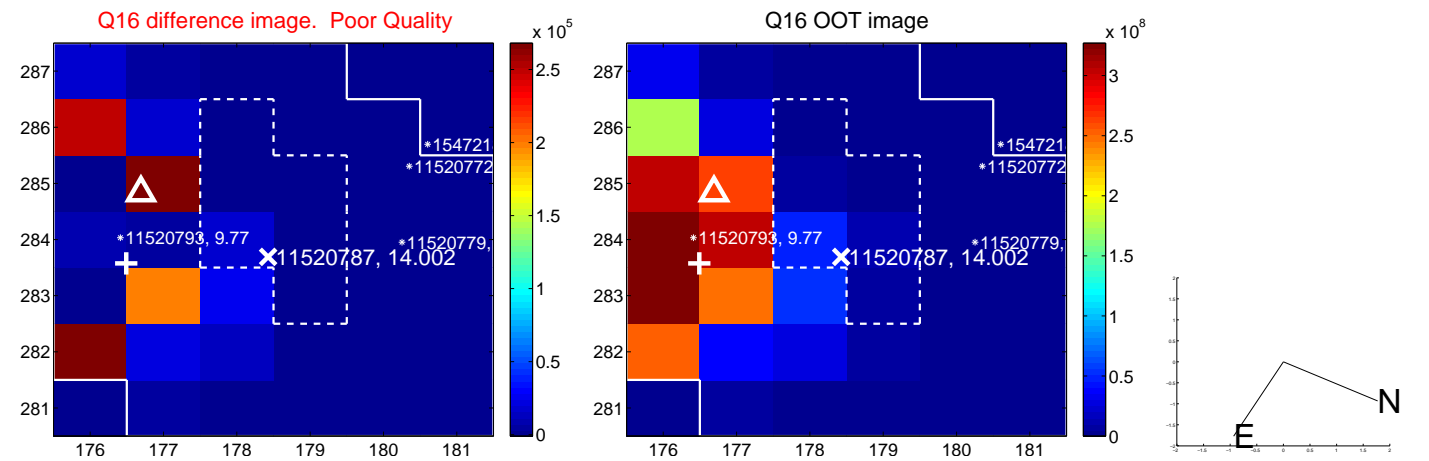
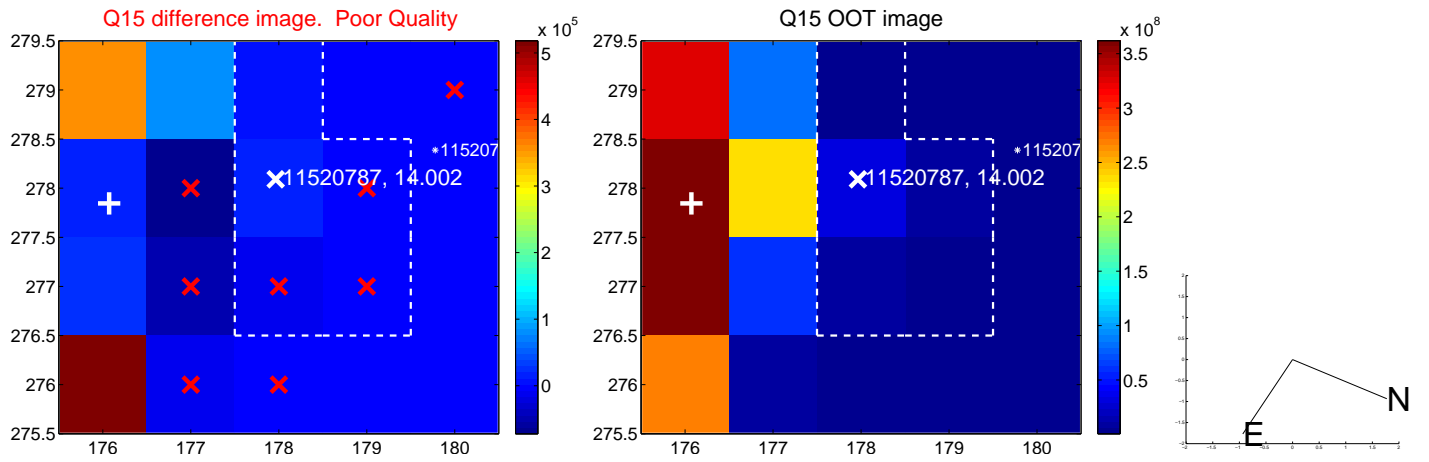
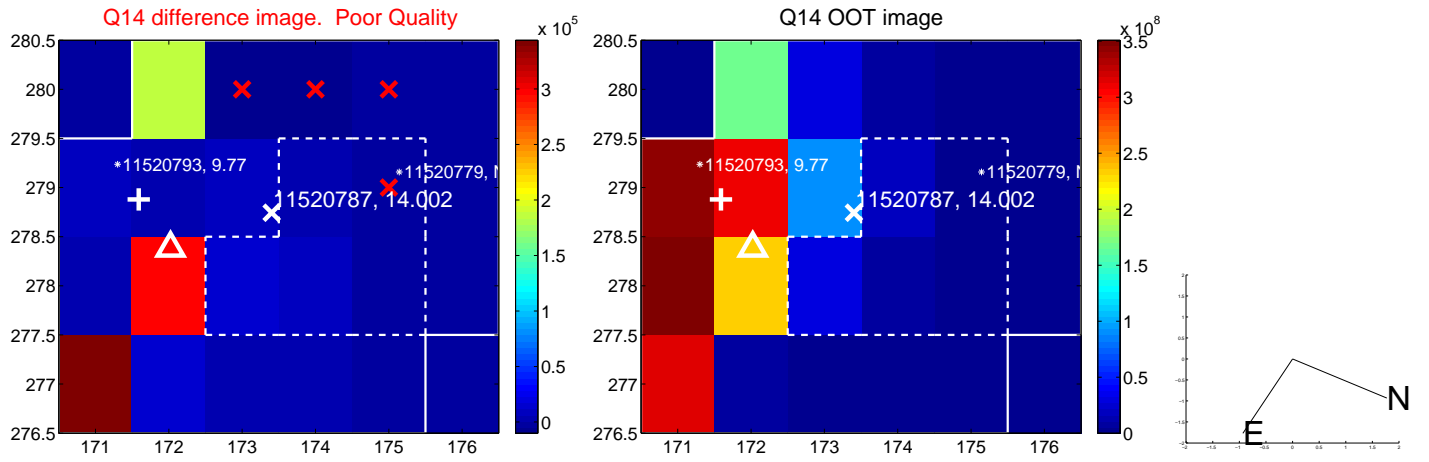
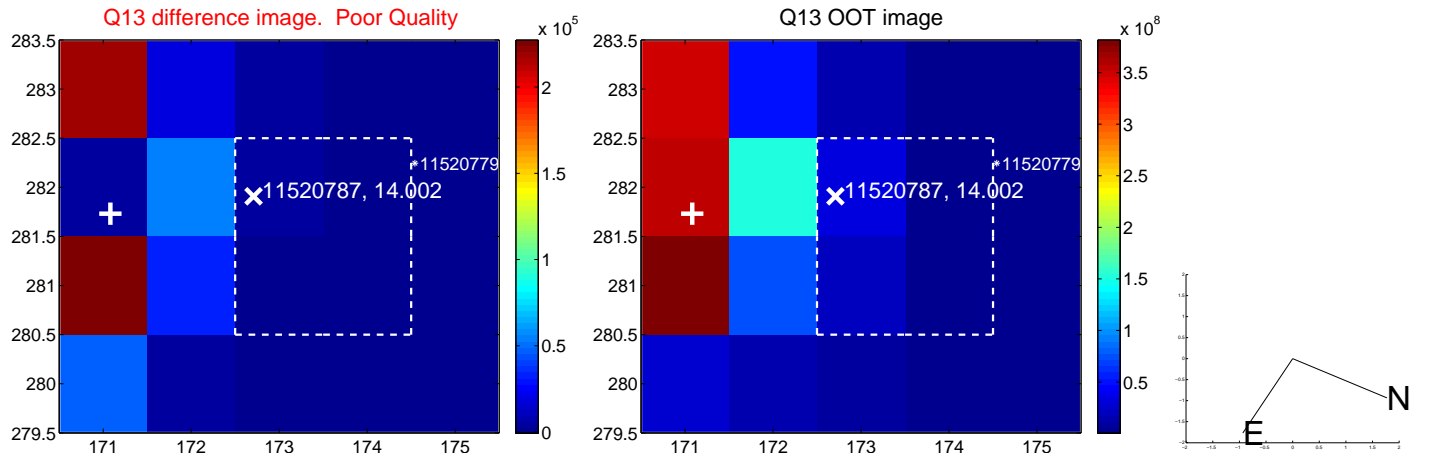
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



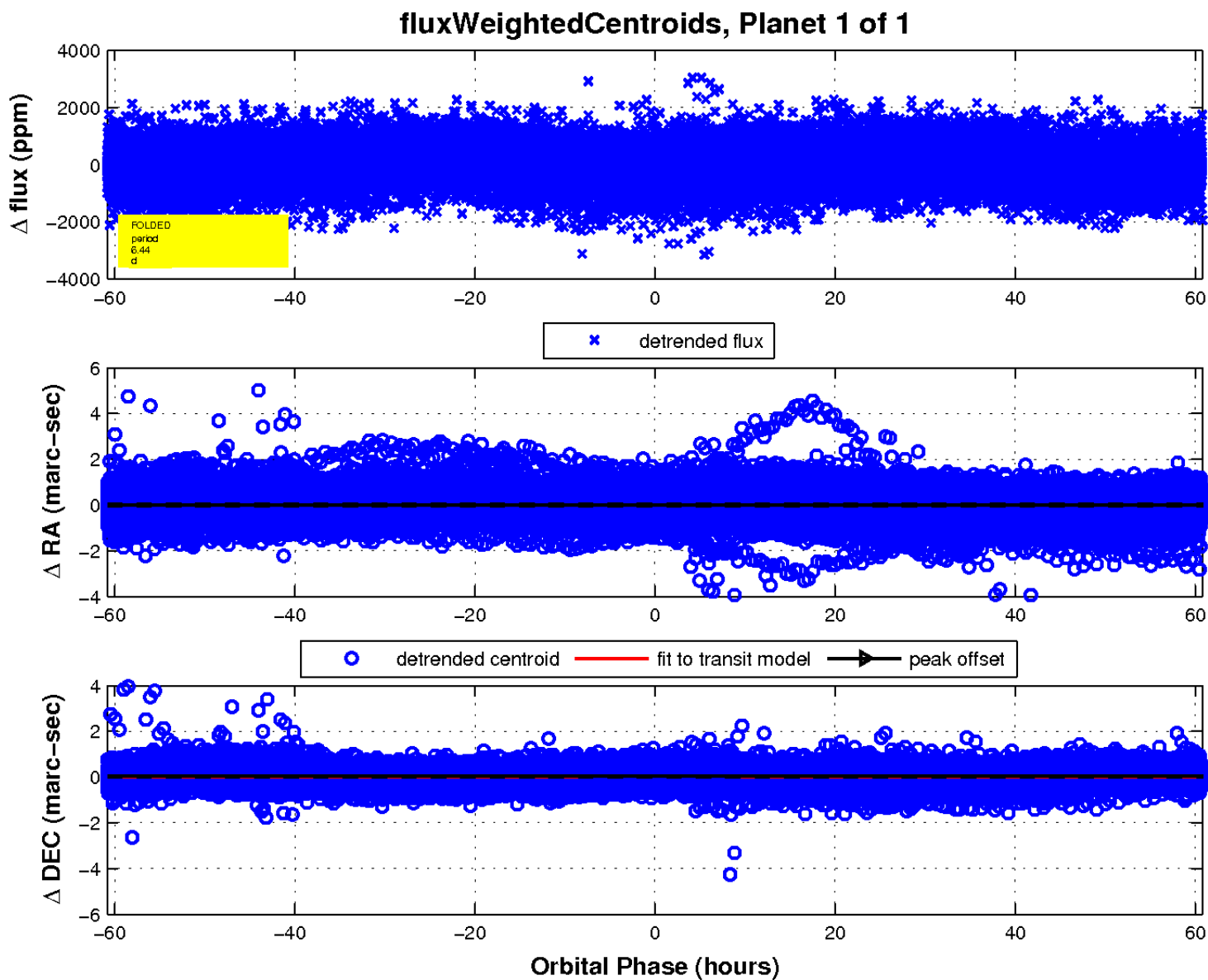
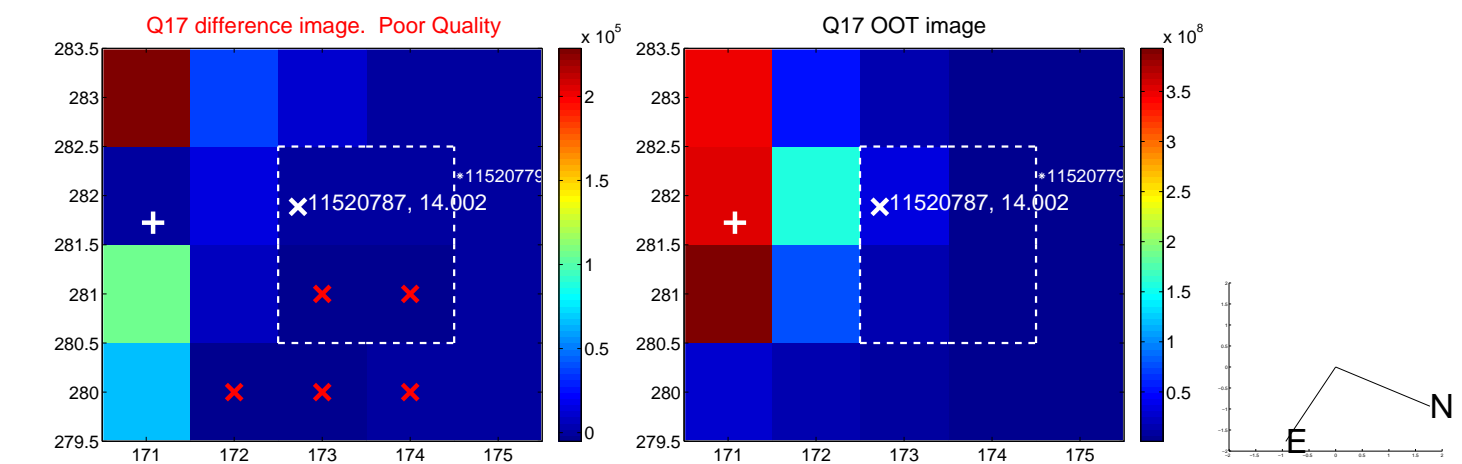
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UKIRT Image

