

KIC 007915458

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})
007915458-01	OBS	No	0.779978	132.027428	31.3	1.860	7.9	8.3	2.22	7554	1.44	36429.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007915458-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

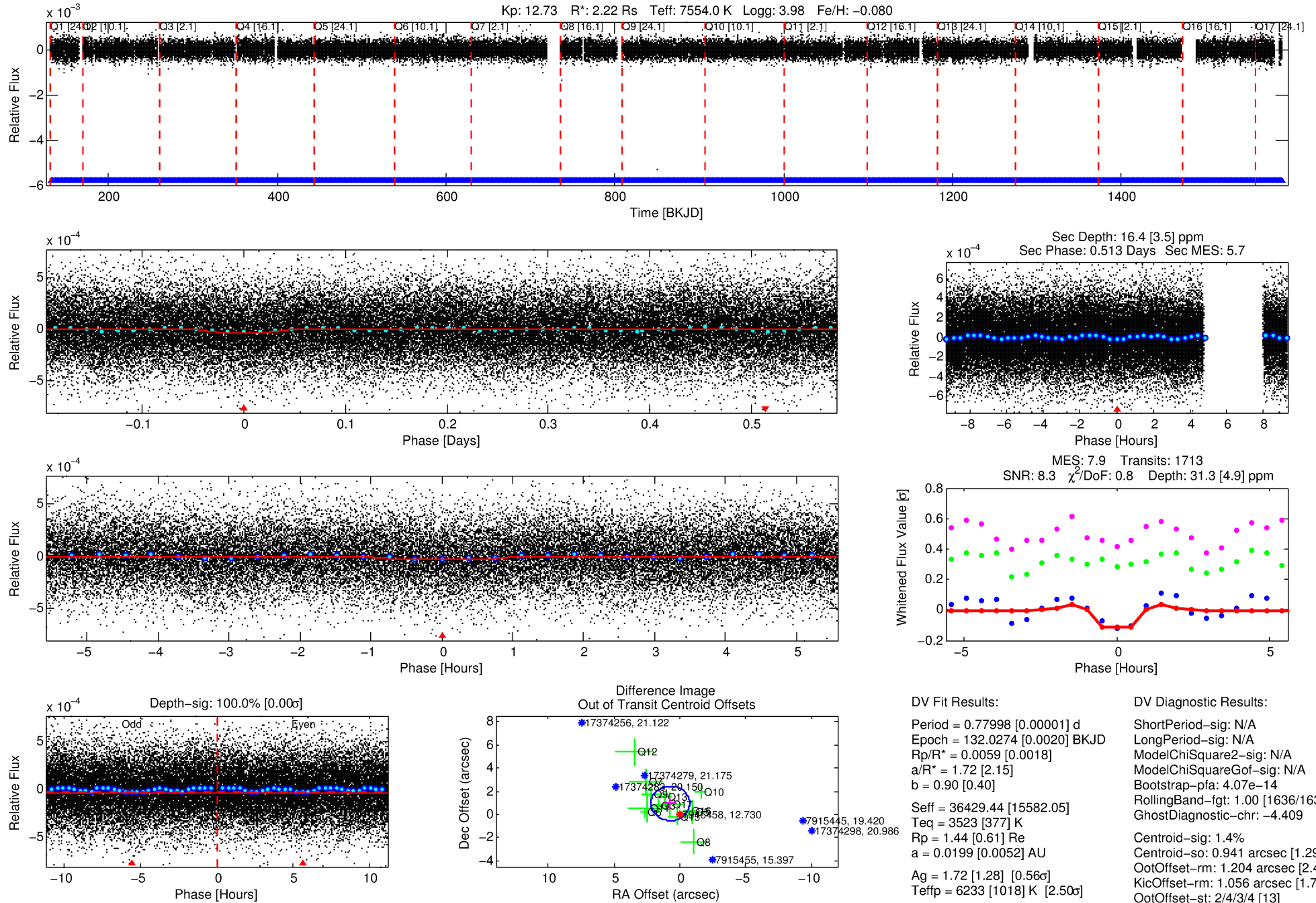
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007915458-01

No Significant Match Found

DV One-Page Summary

KIC: 7915458 Candidate: 1 of 1 Period: 0.780 d



DV Fit Results:

Period = 0.77998 [0.00001] d
Epoch = 132.0274 [0.0020] BKJD
Rp/R* = 0.0059 [0.0018]
a/R* = 1.72 [2.15]
b = 0.90 [0.40]
Seff = 36429.44 [15582.05]
Teq = 3523 [377] K
Rp = 1.44 [0.61] Re
a = 0.0199 [0.0052] AU
Ag = 1.72 [1.28] [0.56 σ]
Teffp = 6233 [1018] K [2.50 σ]

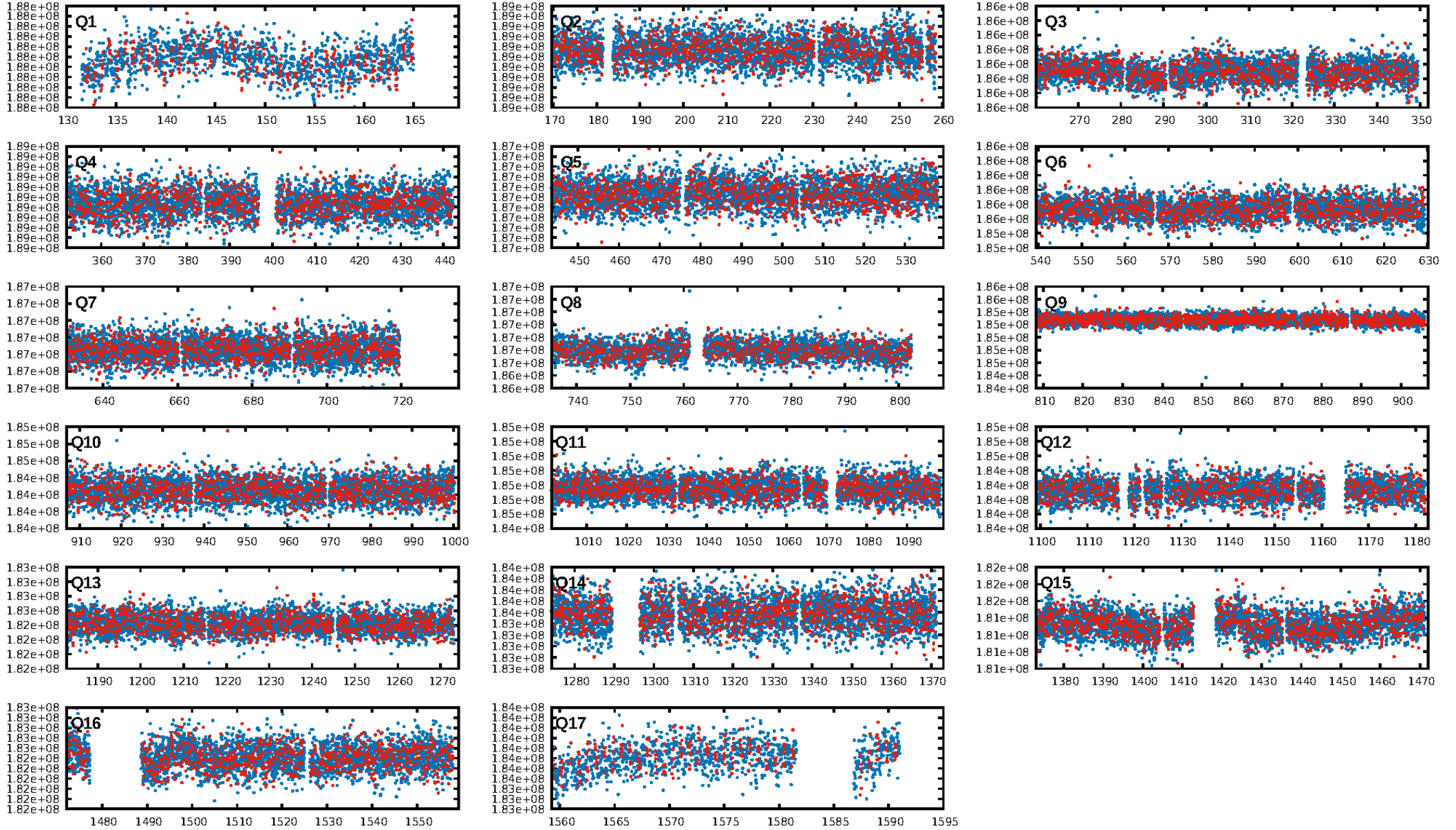
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.07e-14
RollingBand-fgt: 1.00 [1636/1636]
GhostDiagnostic-chr: -4.409
Centroid-sig: 1.4%
Centroid-so: 0.941 arcsec [1.29 σ]
OotOffset-rm: 1.204 arcsec [2.45 σ]
KicOffset-rm: 1.056 arcsec [1.74 σ]
OotOffset-st: 2/4/3/4 [13]
KicOffset-st: 2/4/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

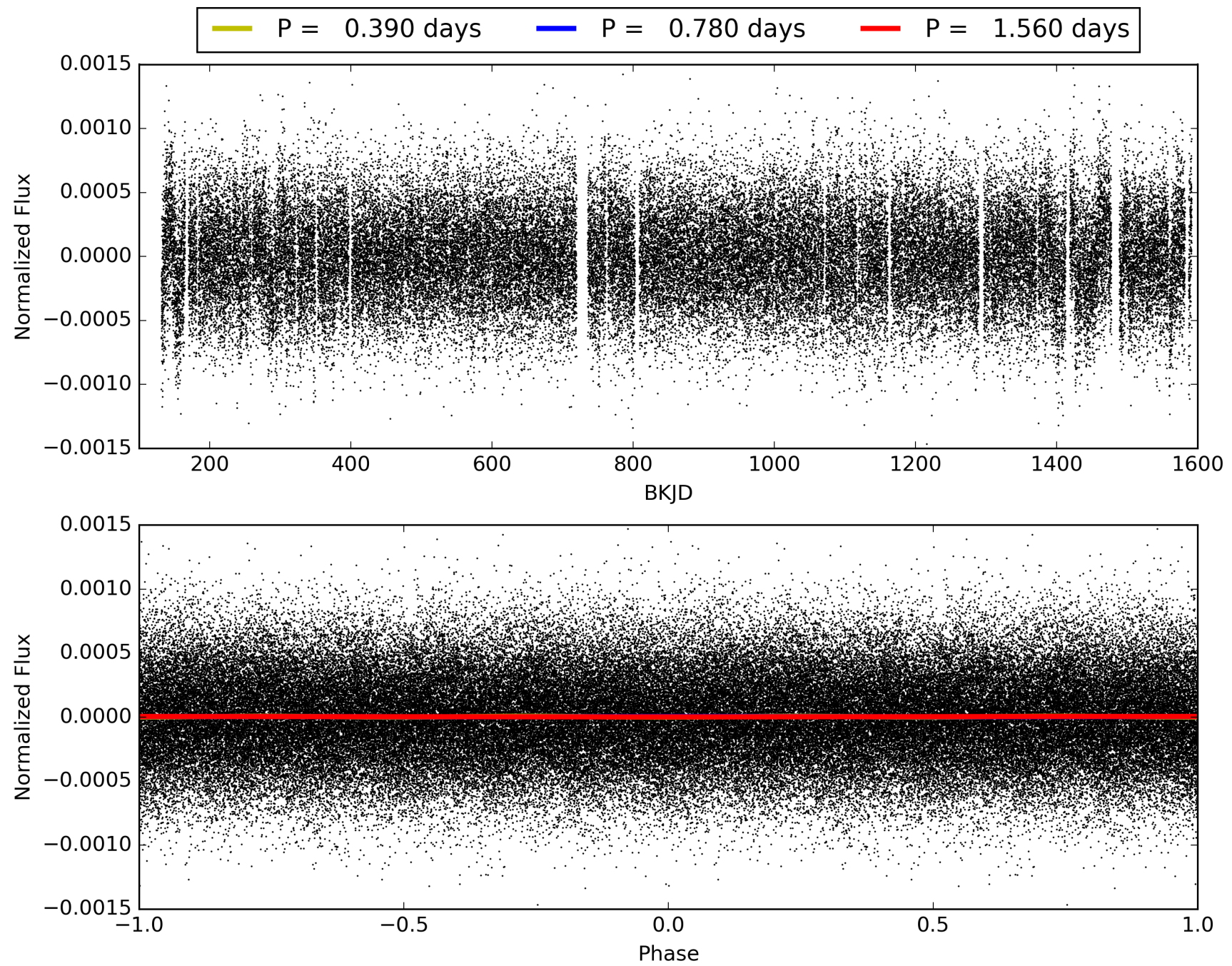
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:17:40 Z

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

TCE 007915458-01, PDC Light Curves

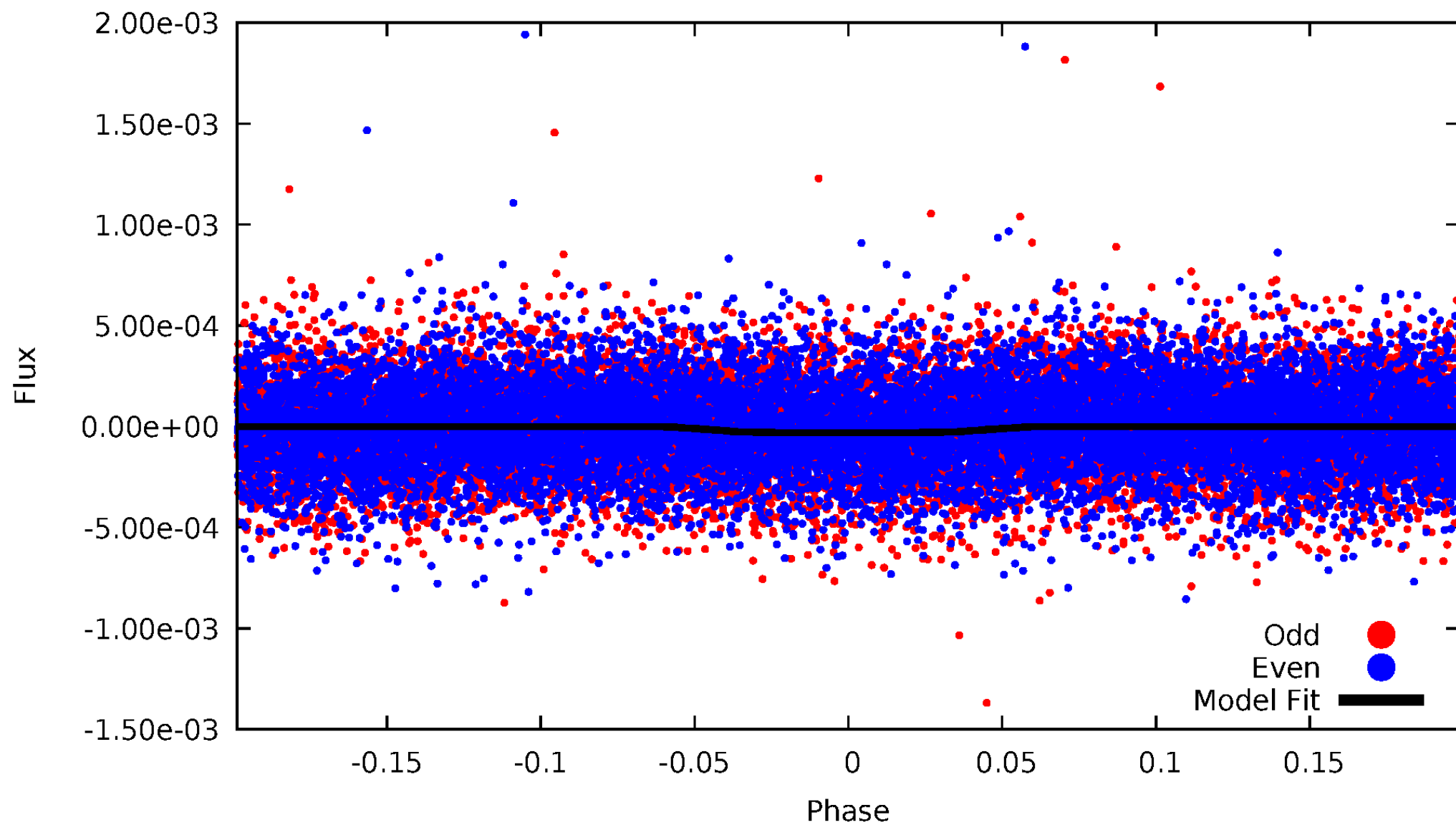


TCE 007915458-01



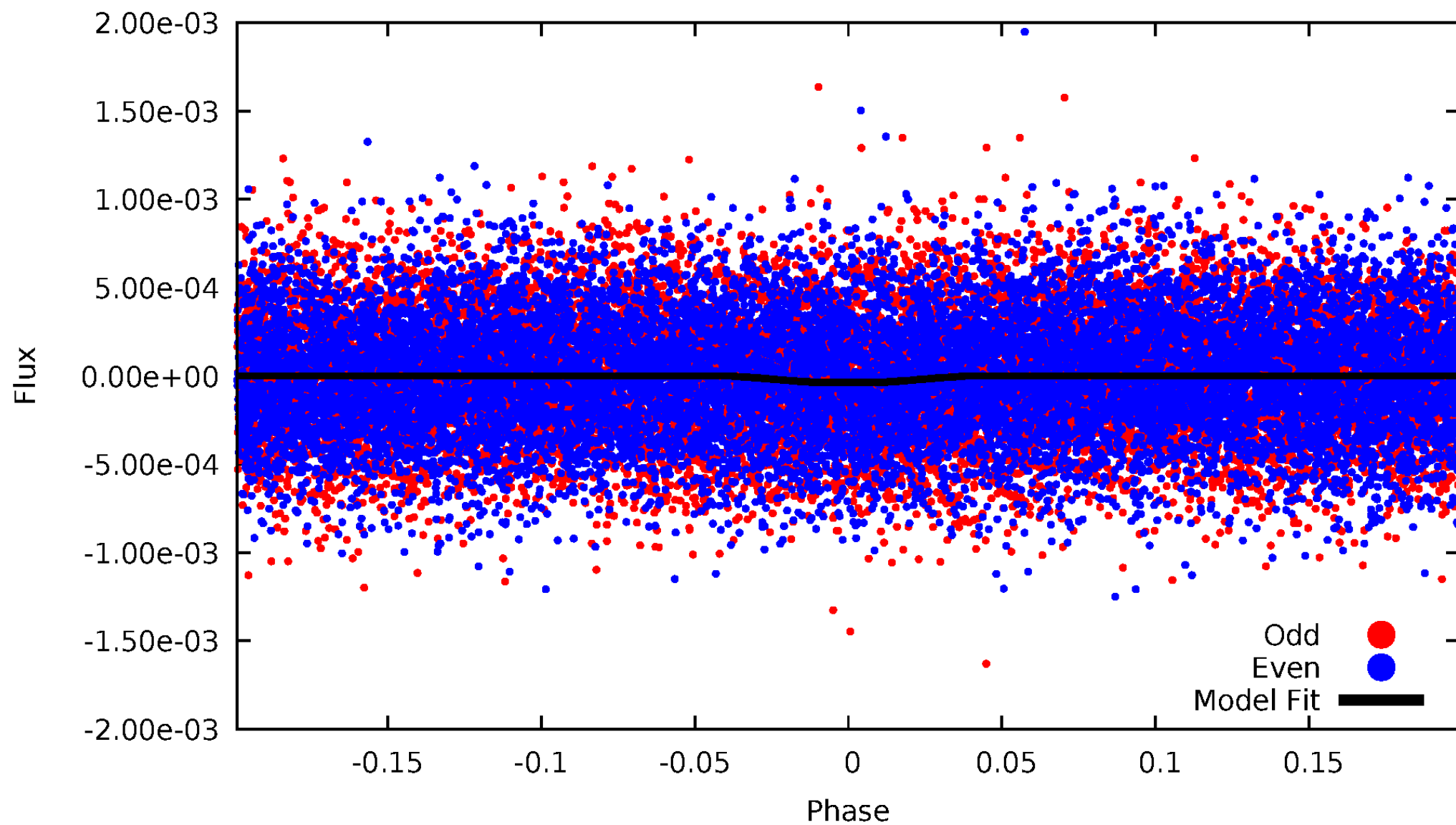
DV Odd/Even

TCE 007915458-01



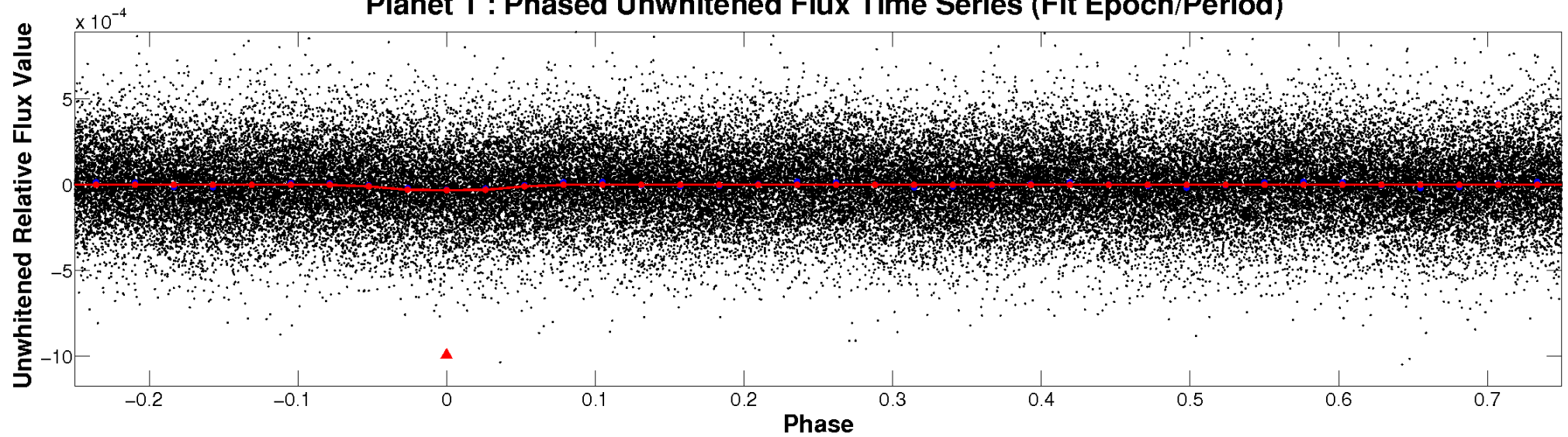
ALT Odd/Even

TCE 007915458-01

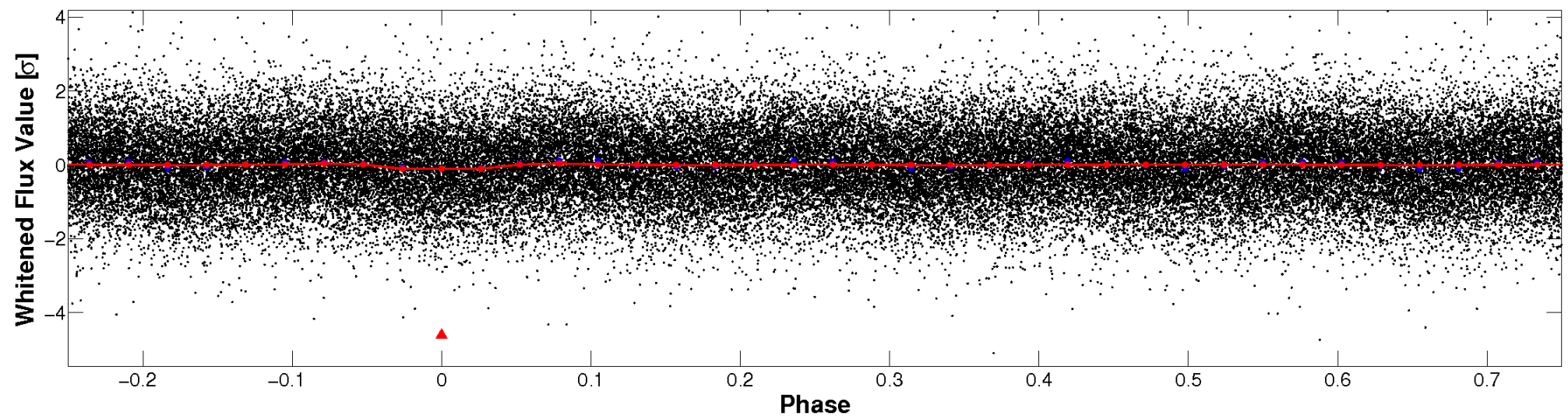


Non-Whitened Vs. Whitened Light Curve

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

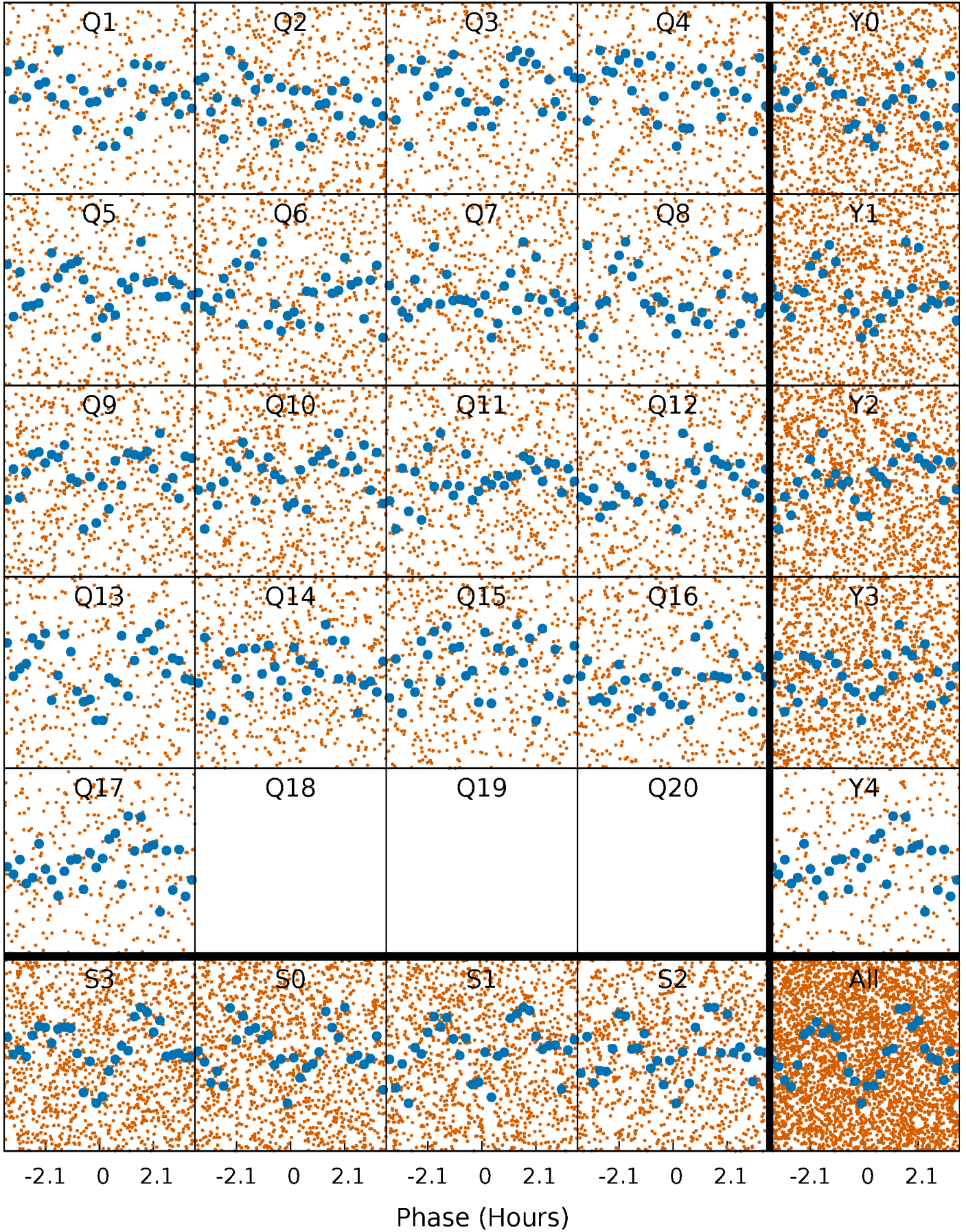


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



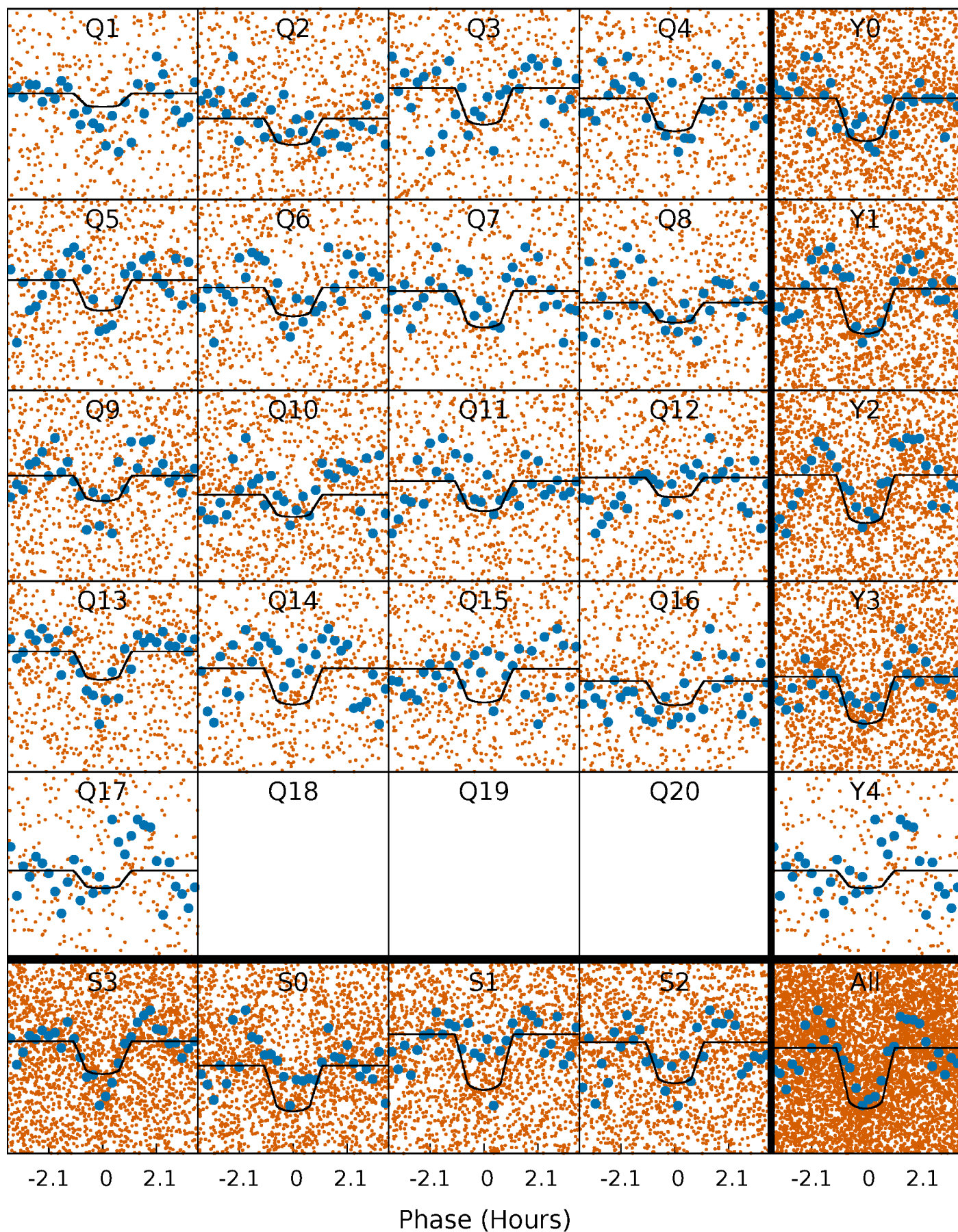
PDC Quarter-Phased Transit Curves

TCE 007915458-01 P= 0.779978 Days $T_0=132.027428$ (BKJD)



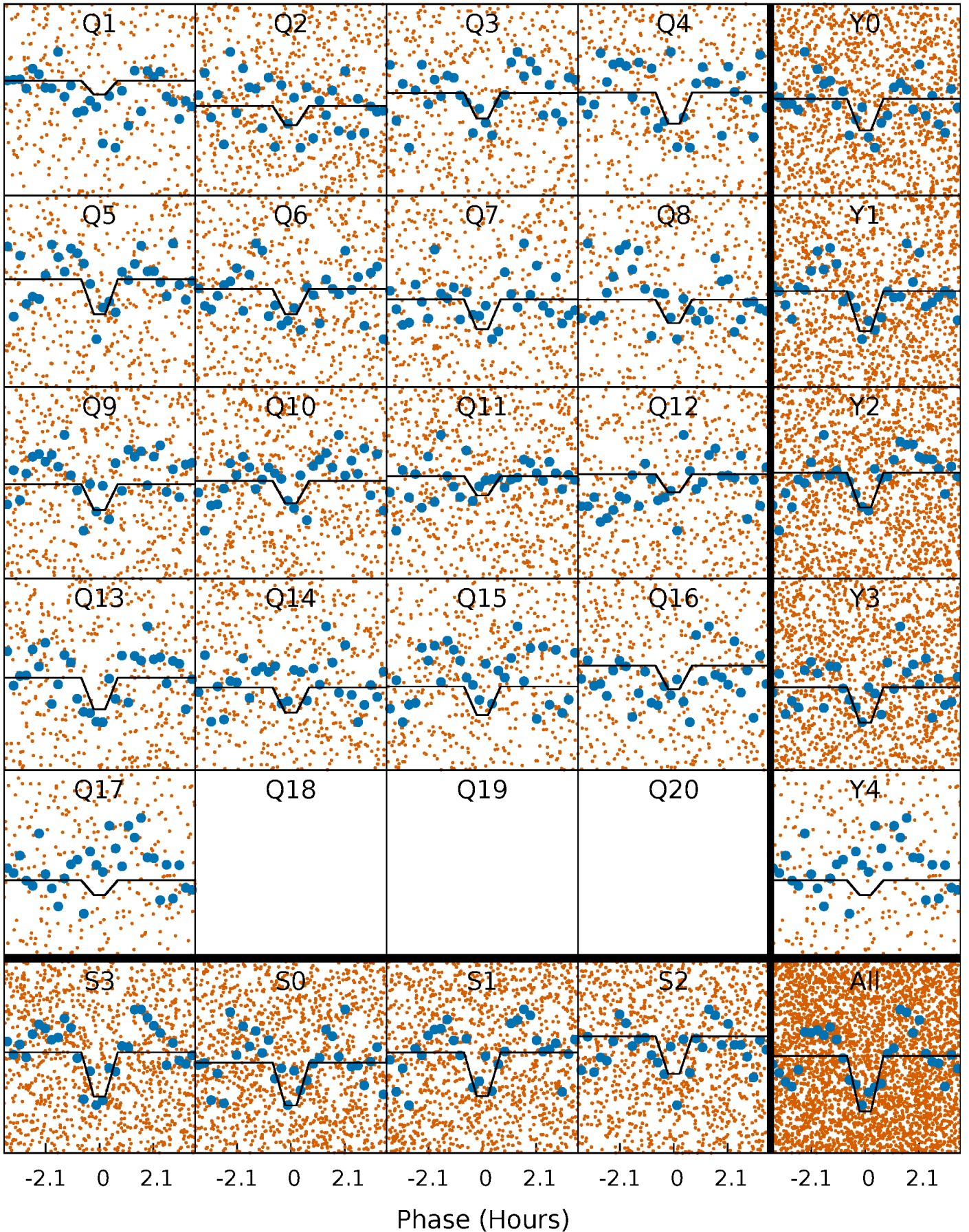
DV Quarter-Phased Transit Curves

TCE 007915458-01 P= 0.779978 Days $T_0=132.027428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

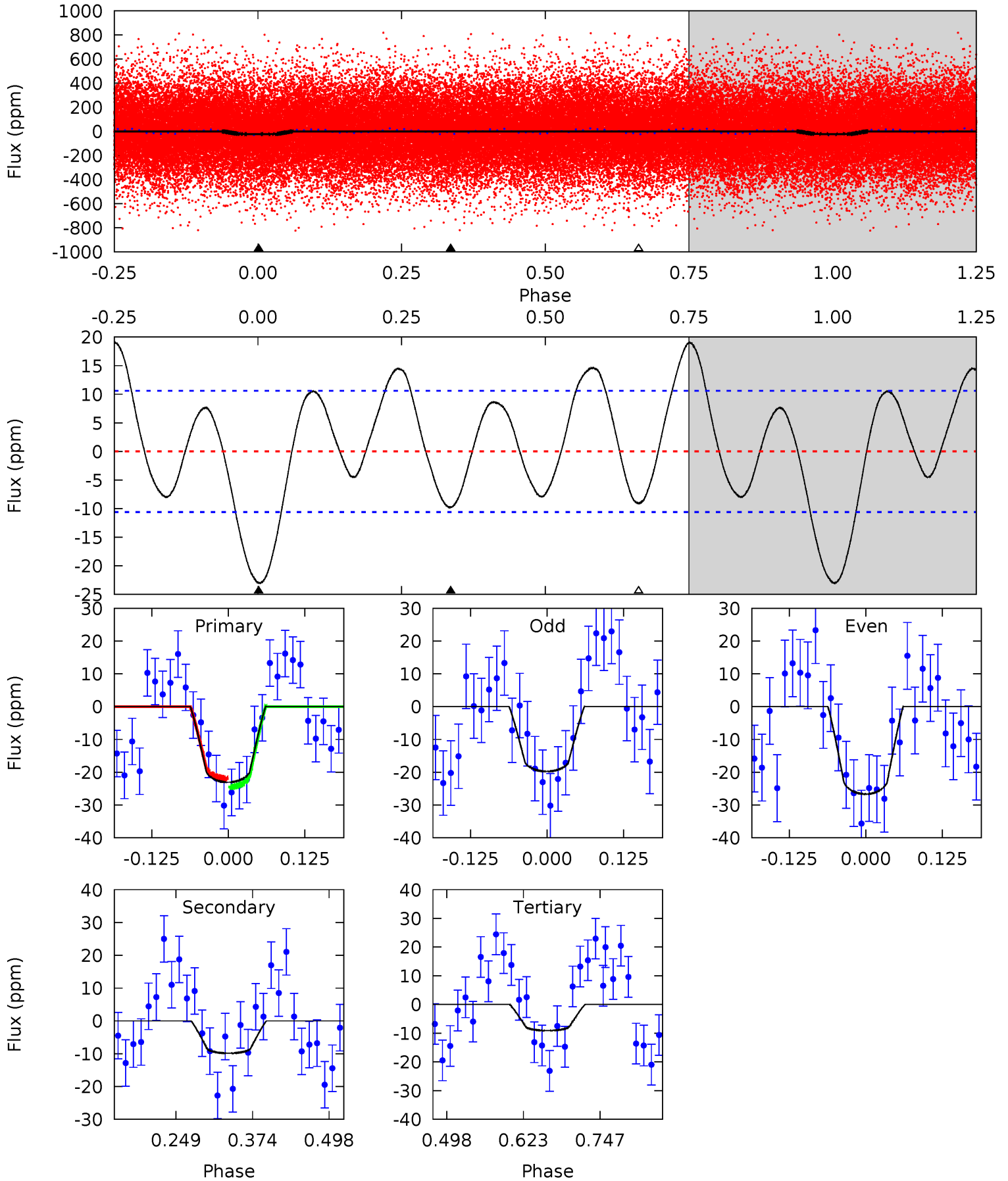
TCE 007915458-01 P= 0.779978 Days $T_0=132.027411$ (BKJD)



DV Model-Shift Uniqueness Test

007915458-01, P = 0.779978 Days, E = 131.247450 Days

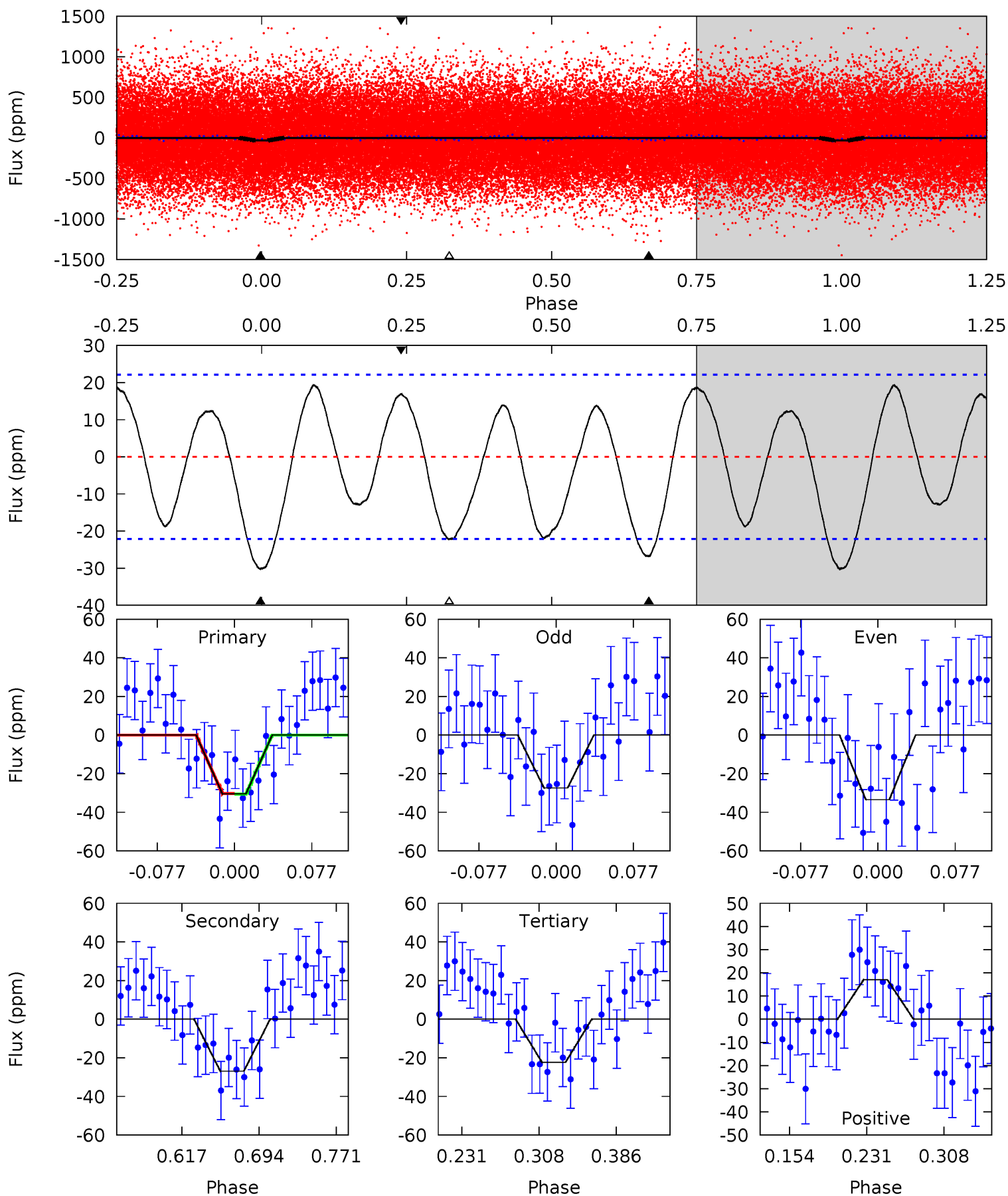
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	4.21	3.88	0	4.52	1.54	3.53	5.95	9.83	0.33	4.21	1.49	1.45	0.45	0.56



Alt Model-Shift Uniqueness Test

007915458-01, P = 0.779978 Days, E = 131.247433 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.34	5.61	4.66	3.56	4.62	1.77	2.67	1.69	2.79	0.95	2.05	0.63	0.92	0.39	0.03



Stellar Parameters For KIC 007915458

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7554^{+209}_{-314}	$3.981^{+0.222}_{-0.148}$	$-0.080^{+0.200}_{-0.350}$	$2.223^{+0.540}_{-0.660}$	$1.722^{+0.212}_{-0.317}$	$0.221^{+0.302}_{-0.098}$
	+3%/-4%	+6%/-4%	+250%/-438%	+24%/-30%	+12%/-18%	+137%/-44%
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 007915458-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 2	$1.41^{+0.50}_{-0.48}$	4866^{+364}_{-364}	4967^{+1303}_{-872}	$1.031^{+1.407}_{-0.486}$
Alt.	-27 ± 5	$1.43^{+0.46}_{-0.46}$	4884^{+344}_{-364}	6640^{+1744}_{-978}	$2.856^{+3.019}_{-1.289}$

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

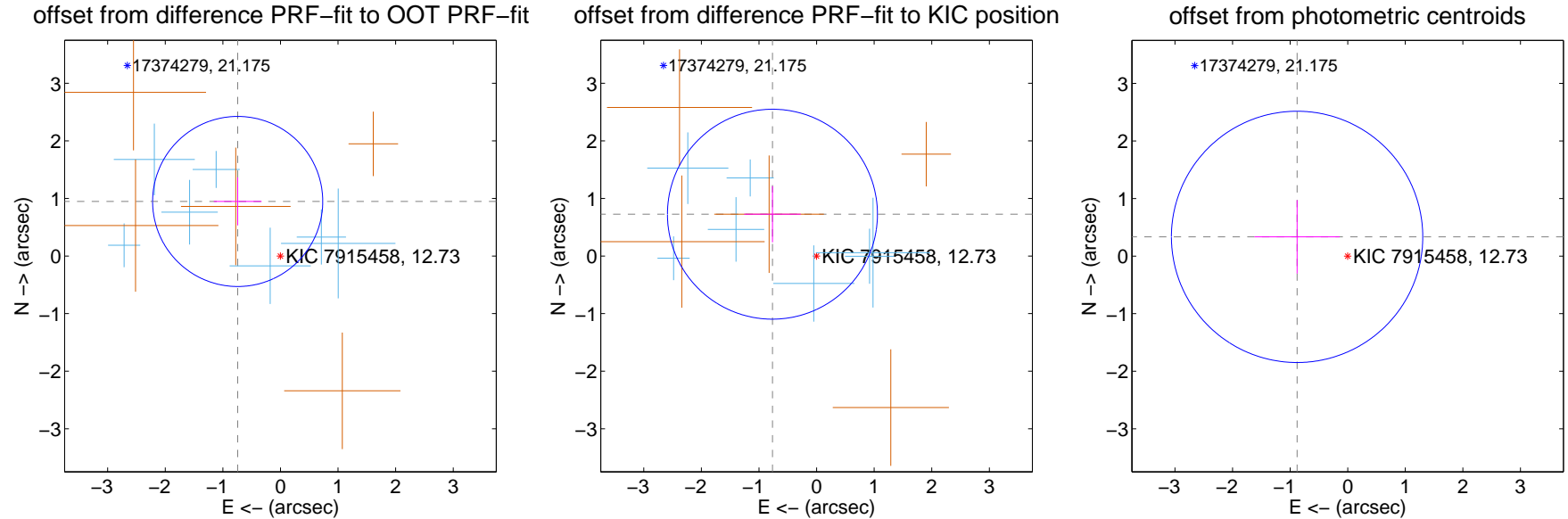
DV Centroid Data

Supplemental centroid analysis for 007915458-01. Kepler magnitude: 12.73. Transit SNR 8.29

There are 7 quarters with good PRF difference image offsets

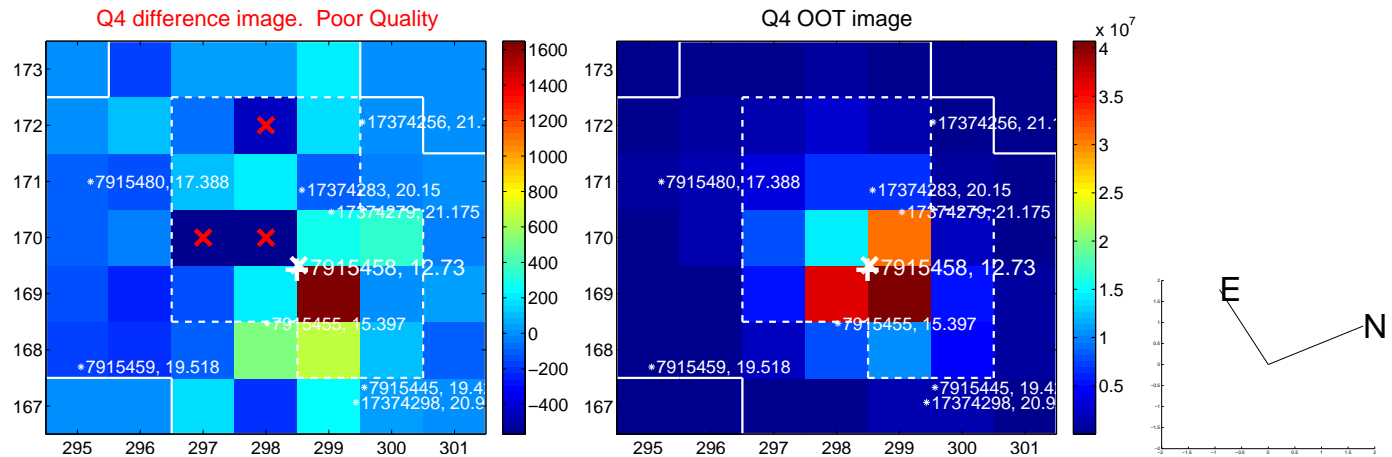
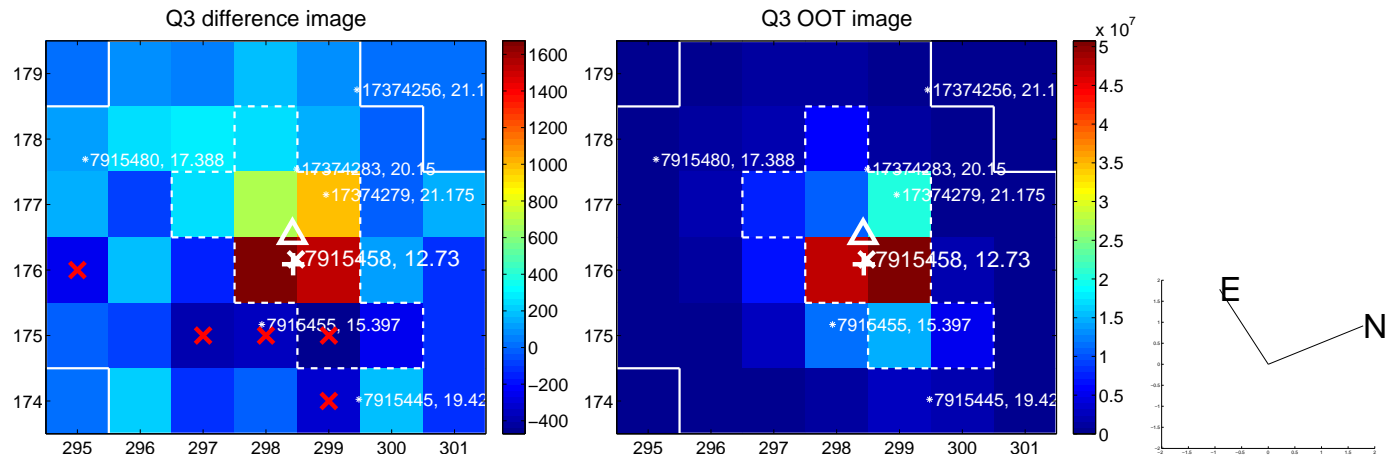
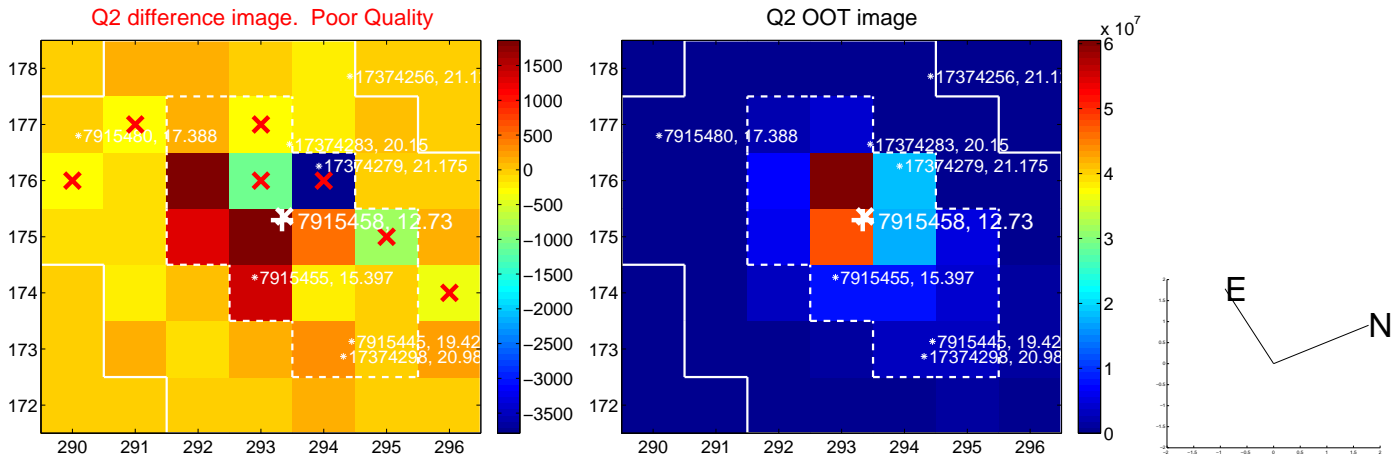
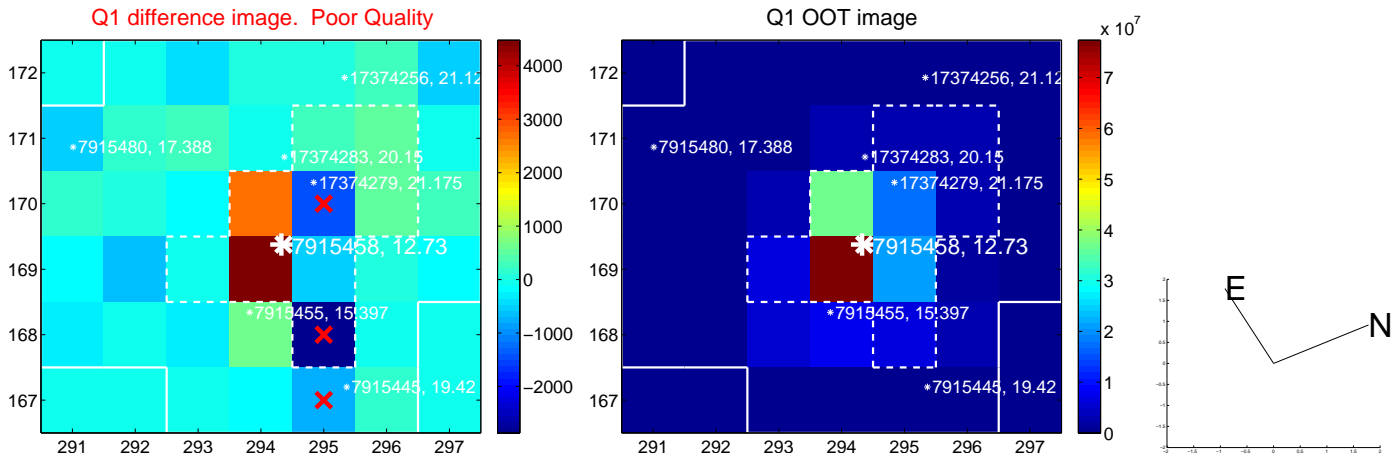
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.204 ± 0.492	2.45	0.743 ± 0.416	0.947 ± 0.417
PRF-fit source offset from KIC position	1.056 ± 0.608	1.74	0.766 ± 0.491	0.726 ± 0.488
photometric centroid source offset	0.94 ± 0.73	1.29	0.88 ± 0.74	0.33 ± 0.64

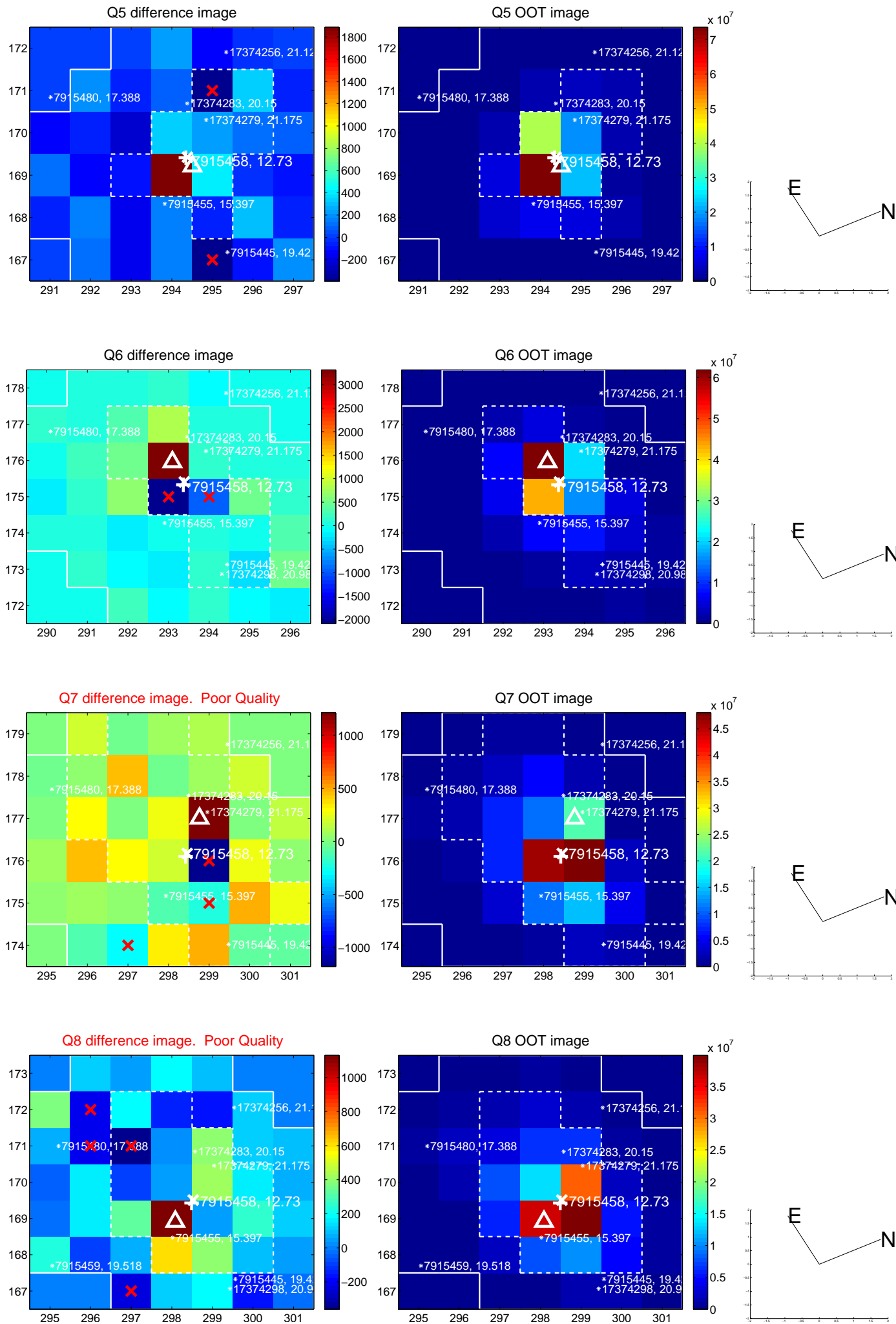


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

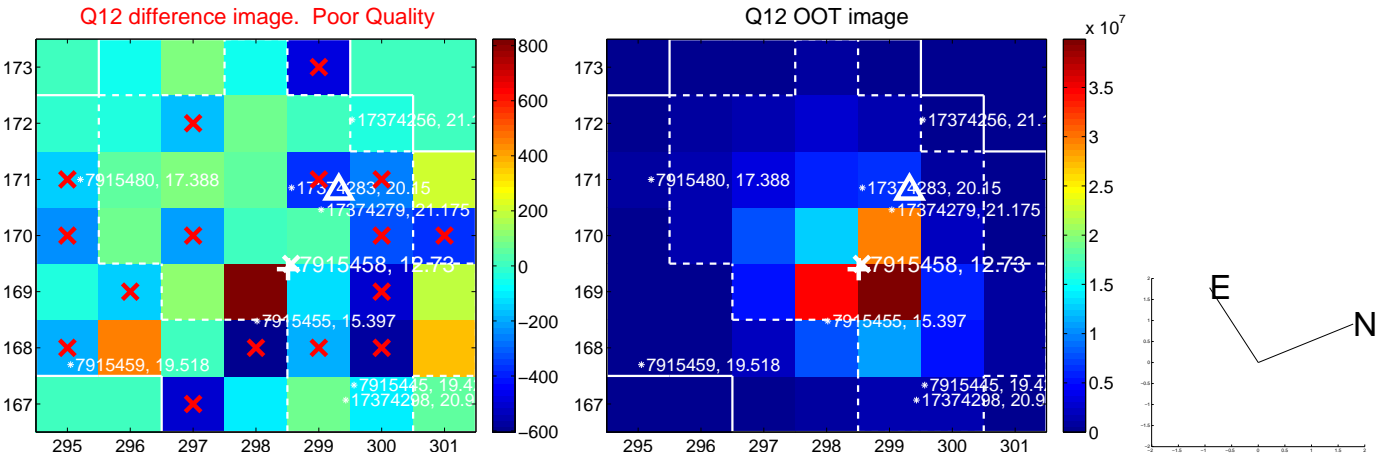
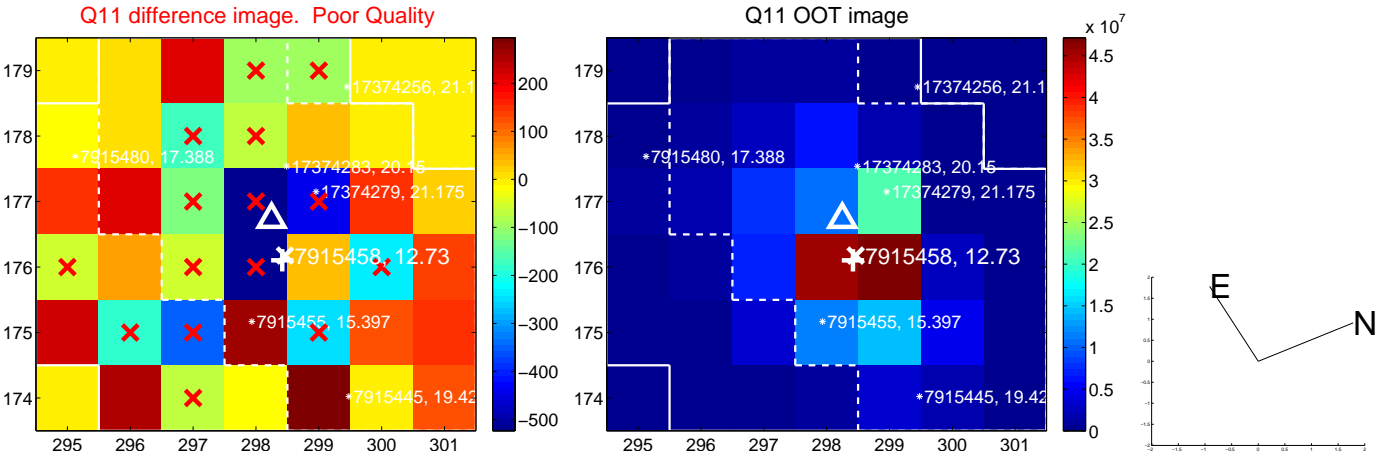
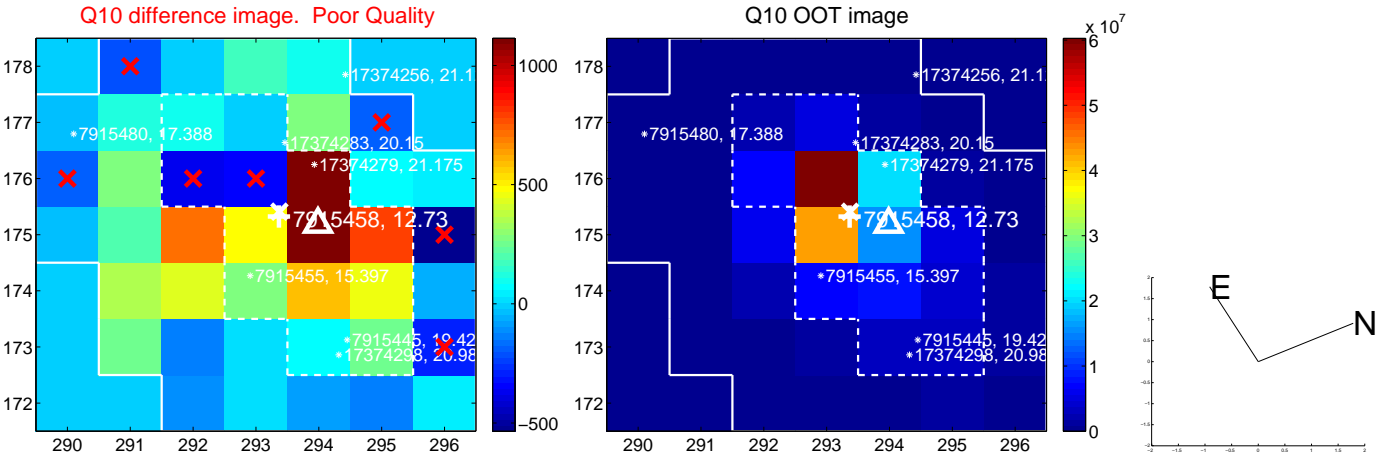
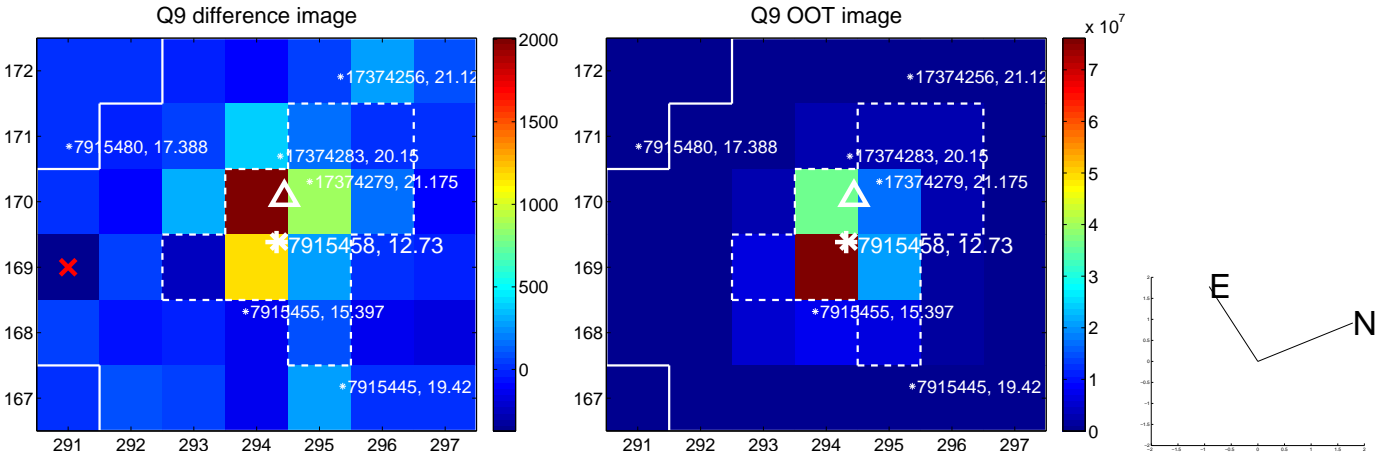
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



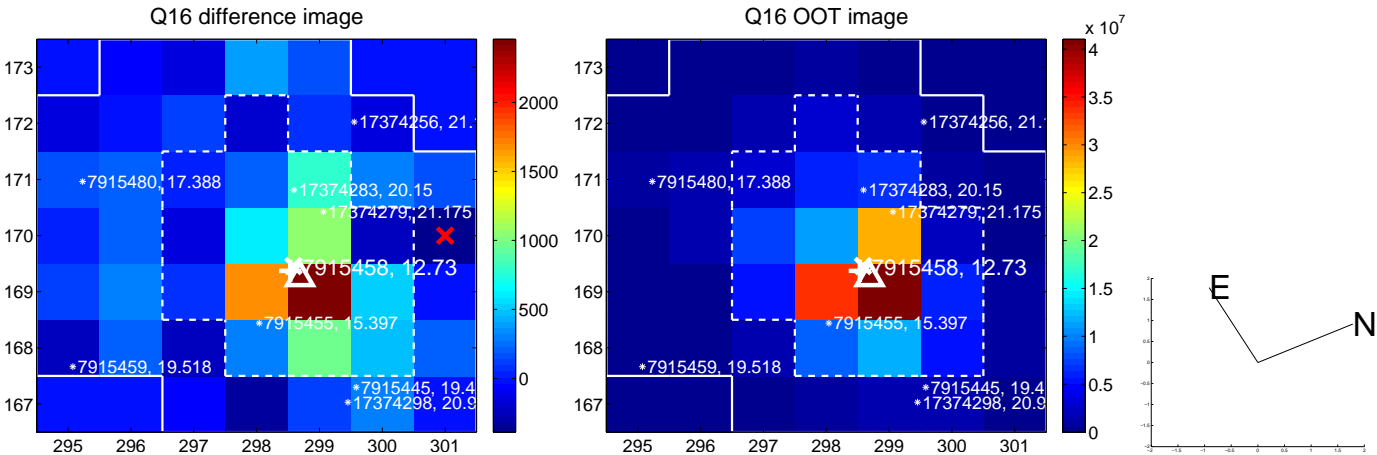
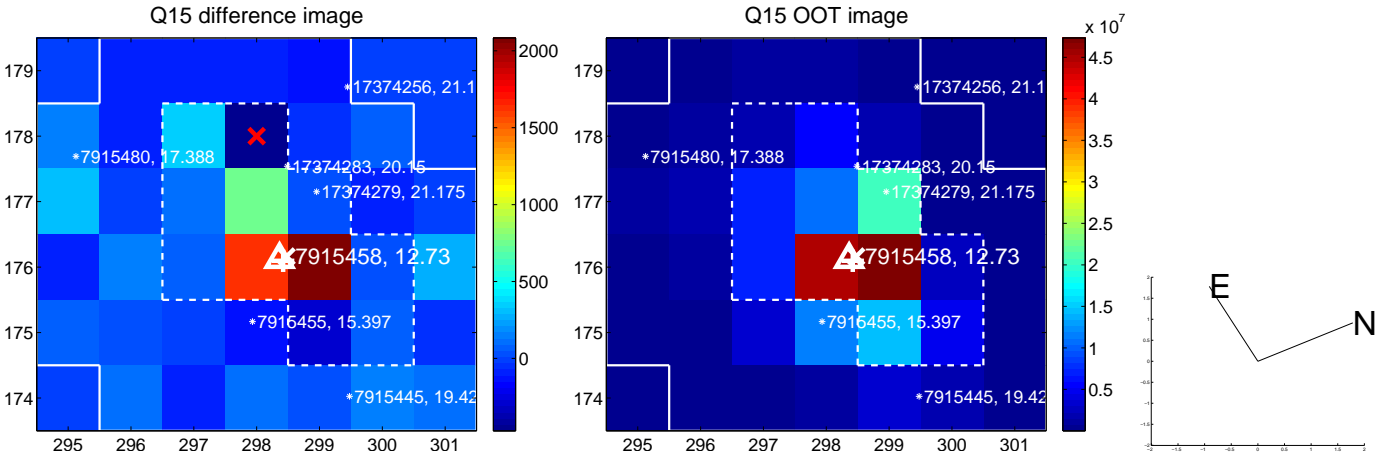
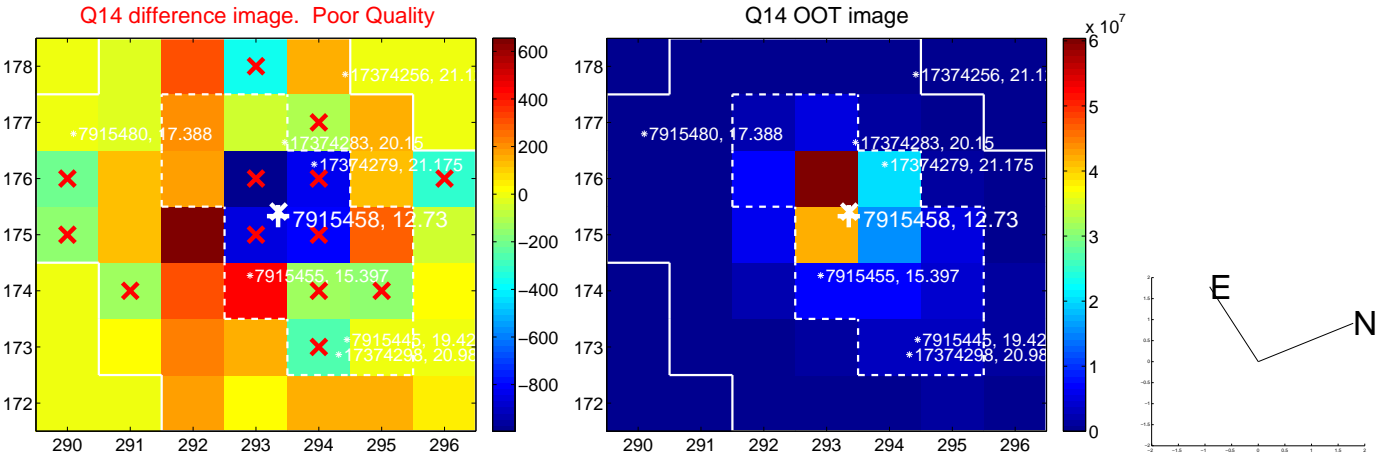
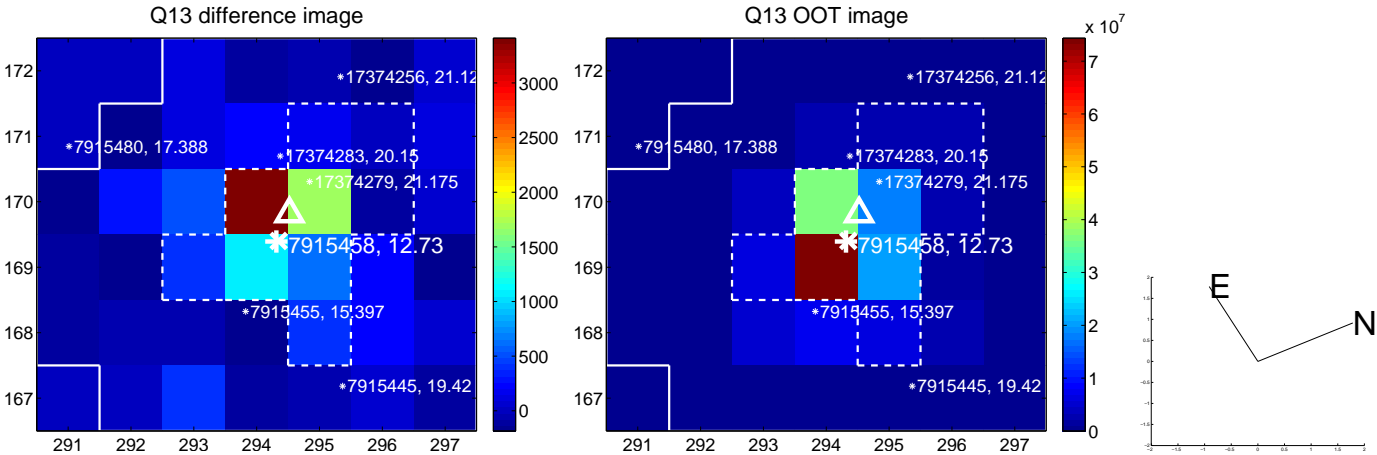
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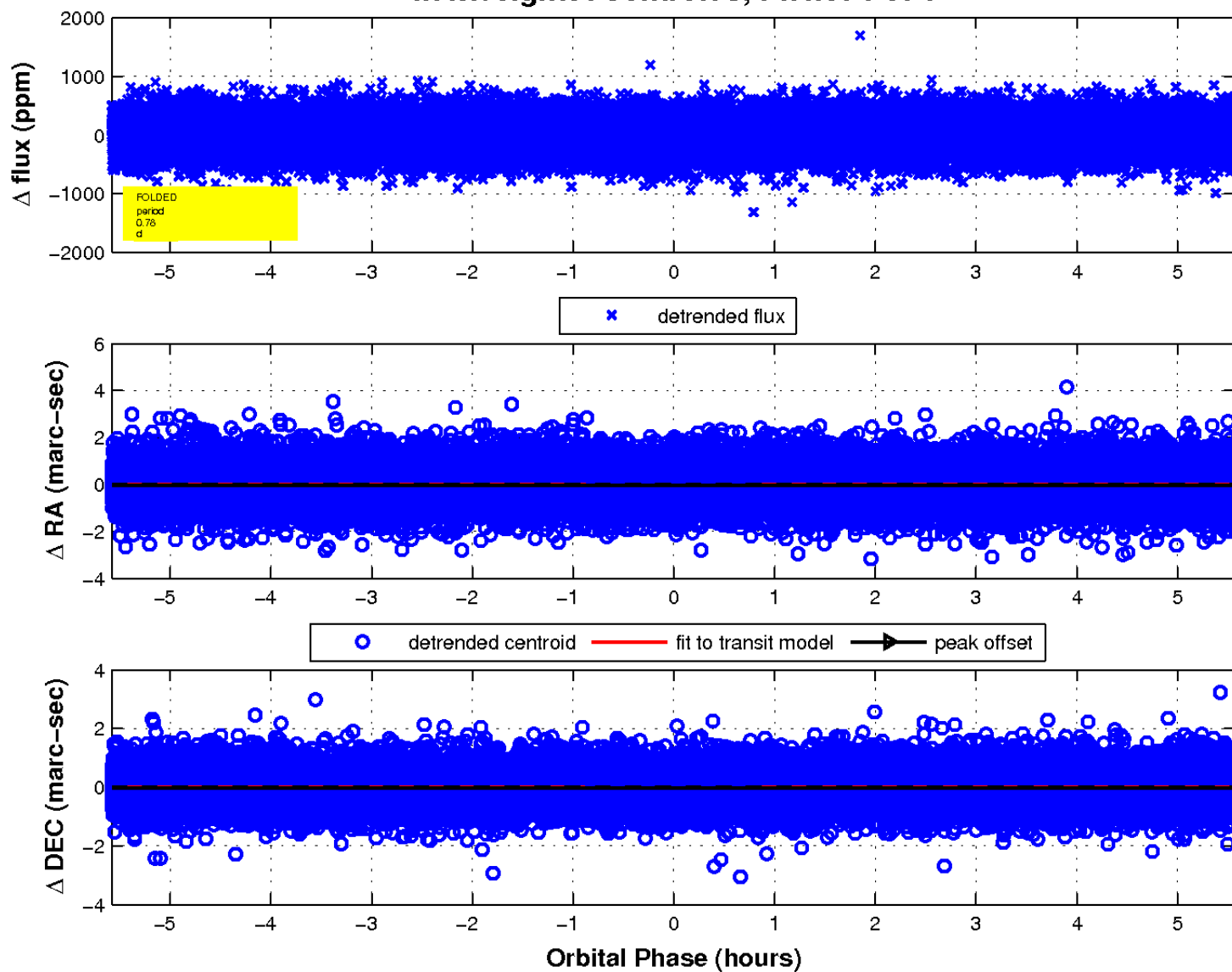
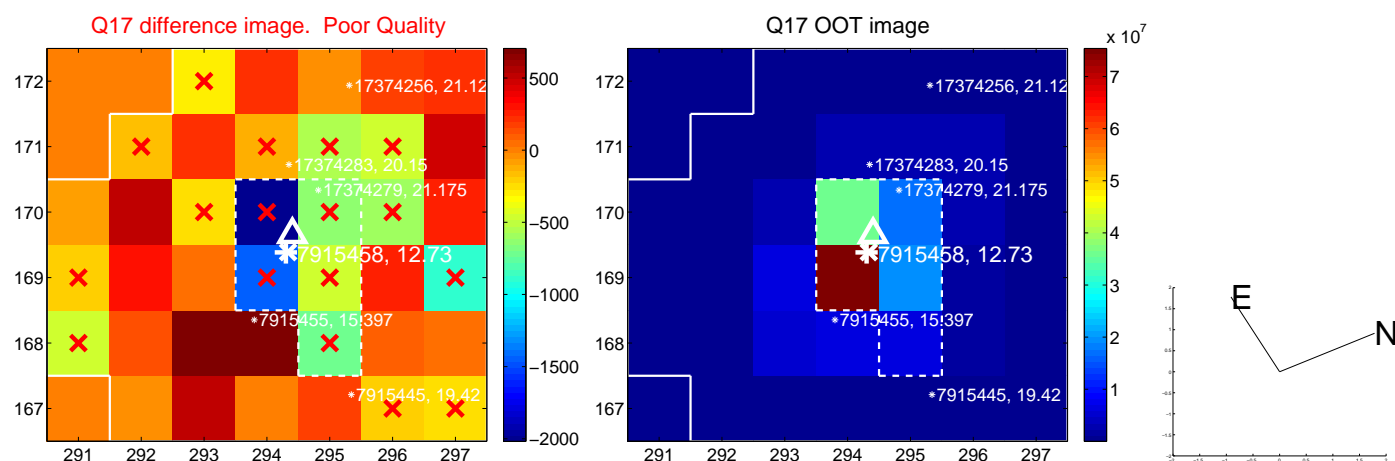
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UKIRT Image

Declination

