

KIC 005281113

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})
005281113-01	OBS	4411.01	11.179310	131.642372	91.8	3.216	11.9	12.0	1.87	6292	2.11	427.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005281113-01	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

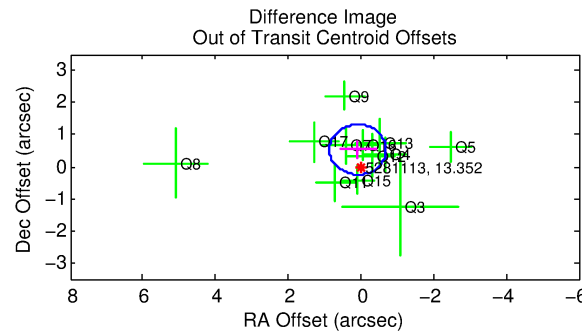
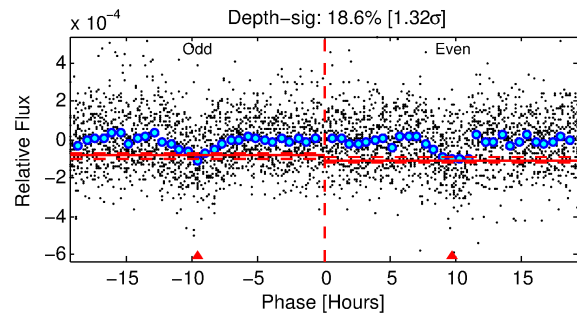
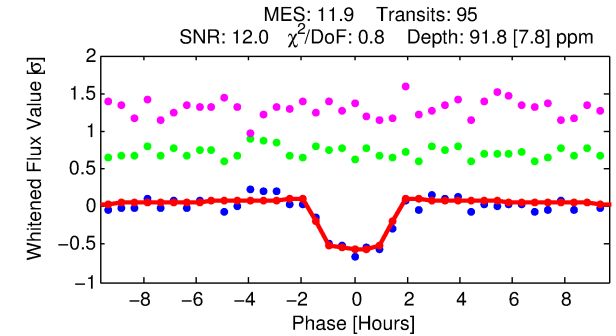
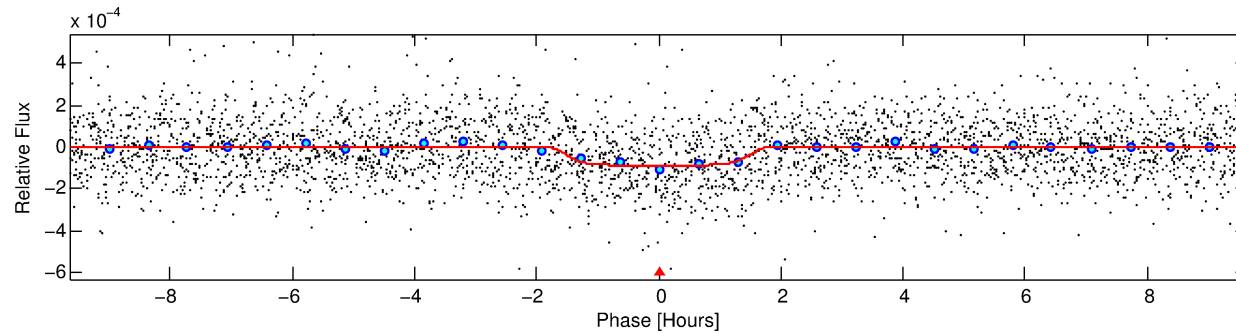
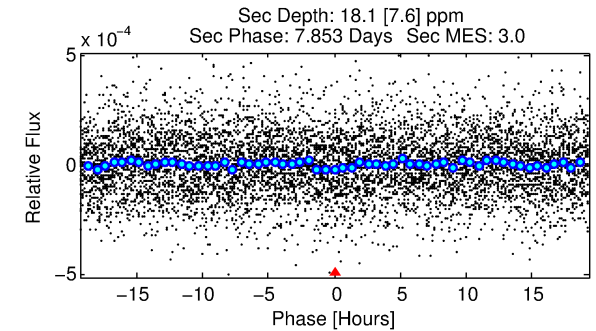
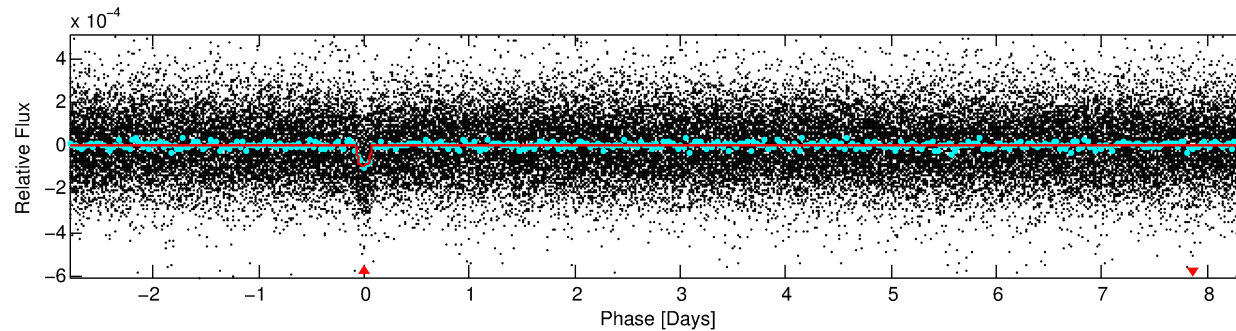
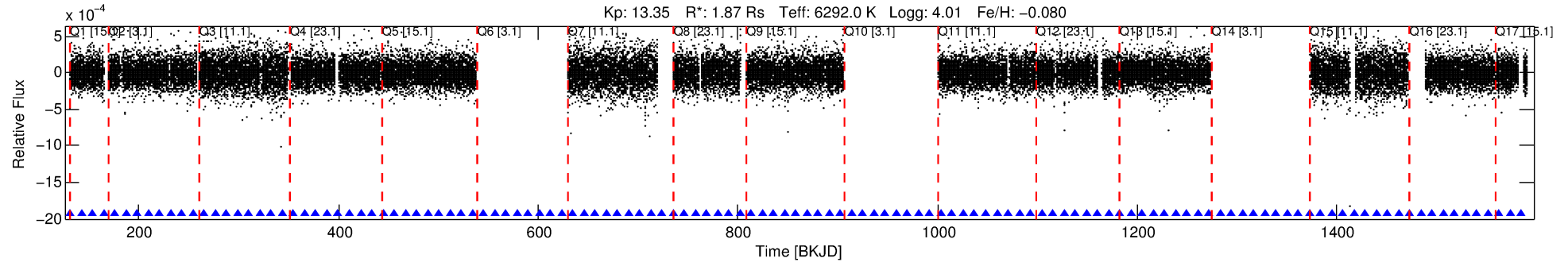
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005281113-01

No Significant Match Found

DV One-Page Summary

KIC: 5281113 Candidate: 1 of 1 Period: 11.179 d
KOI: K04411.01 Corr: 0.973



DV Fit Results:

Period = 11.17931 [0.00007] d
Epoch = 131.6424 [0.0048] BKJD
Rp/R* = 0.0103 [0.0037]
a/R* = 12.06 [23.96]
b = 0.90 [0.41]
Seff = 427.09 [186.67]
Teq = 1159 [127] K
Rp = 2.11 [1.00] Re
a = 0.1074 [0.0298] AU
Ag = 25.75 [24.11] [1.03σ]
Teffp = 4037 [850] K [3.35σ]

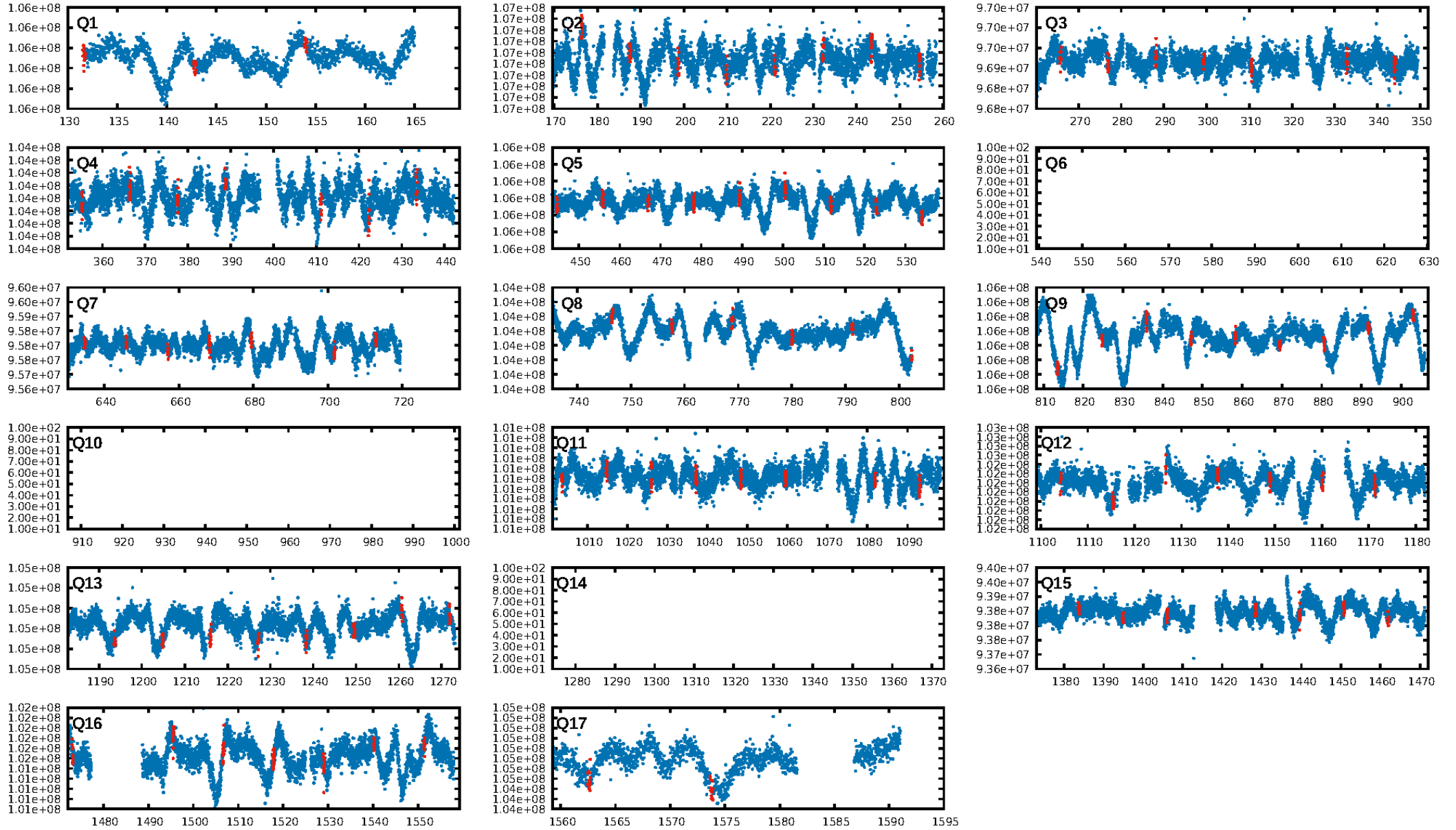
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 9.38e-32
RollingBand-fgt: 1.00 [90/90]
GhostDiagnostic-chr: 6.707
Centroid-sig: 29.1%
Centroid-so: 1.155 arcsec [1.45σ]
OotOffset-rm: 0.537 arcsec [2.07σ]
KicOffset-rm: 0.734 arcsec [2.75σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [14/14]

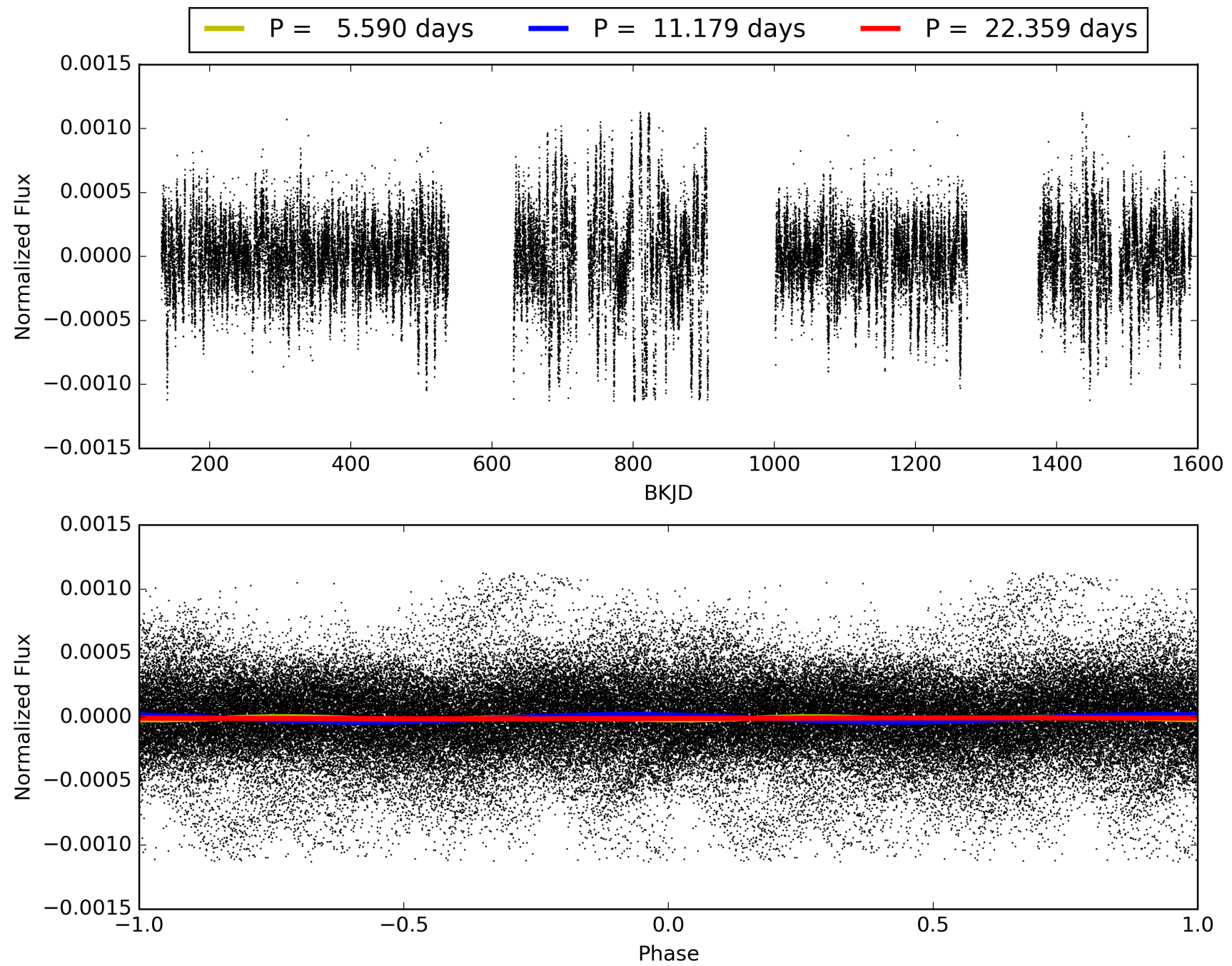
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:06:03 Z

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

TCE 005281113-01, PDC Light Curves

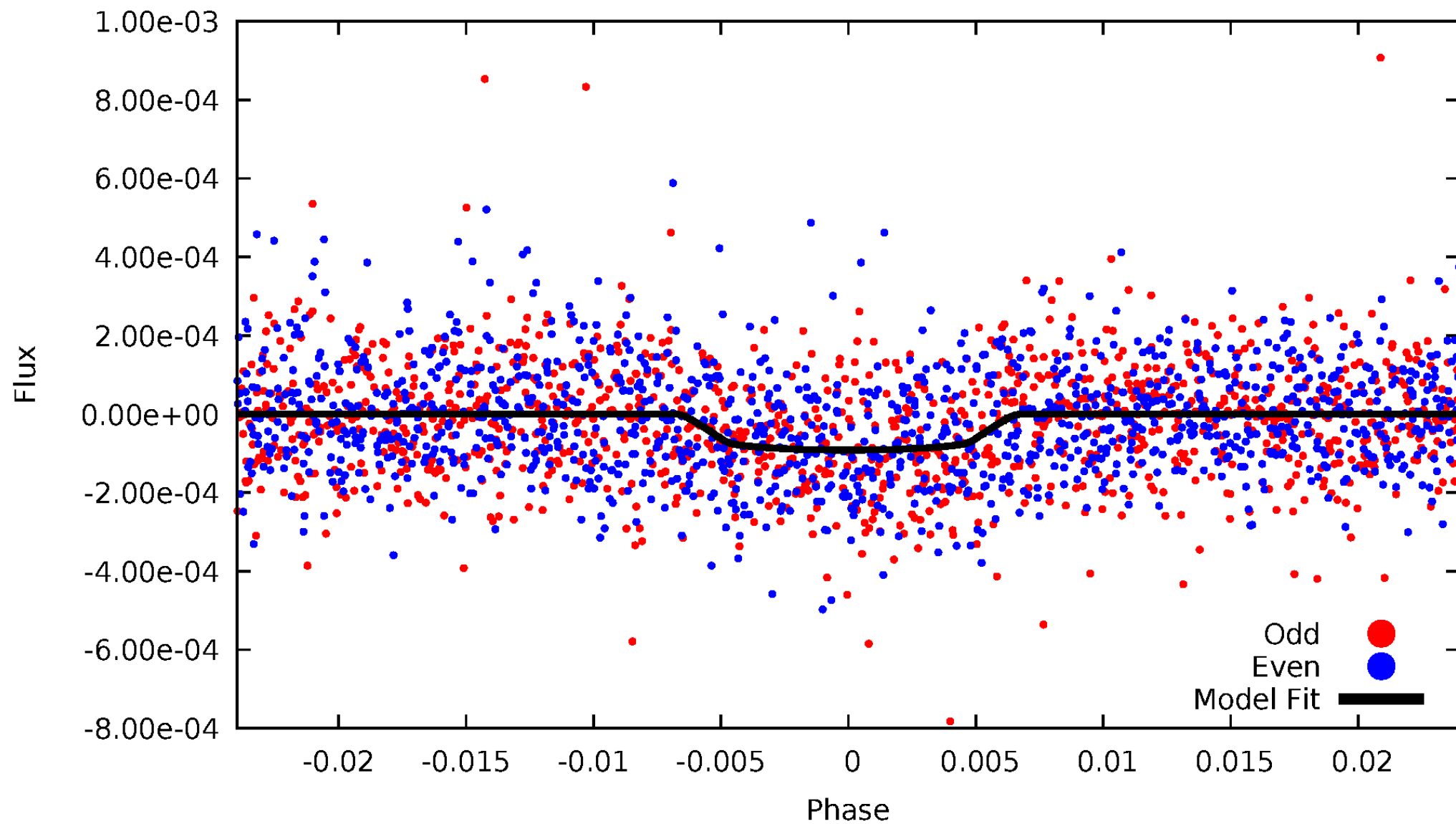


TCE 005281113-01



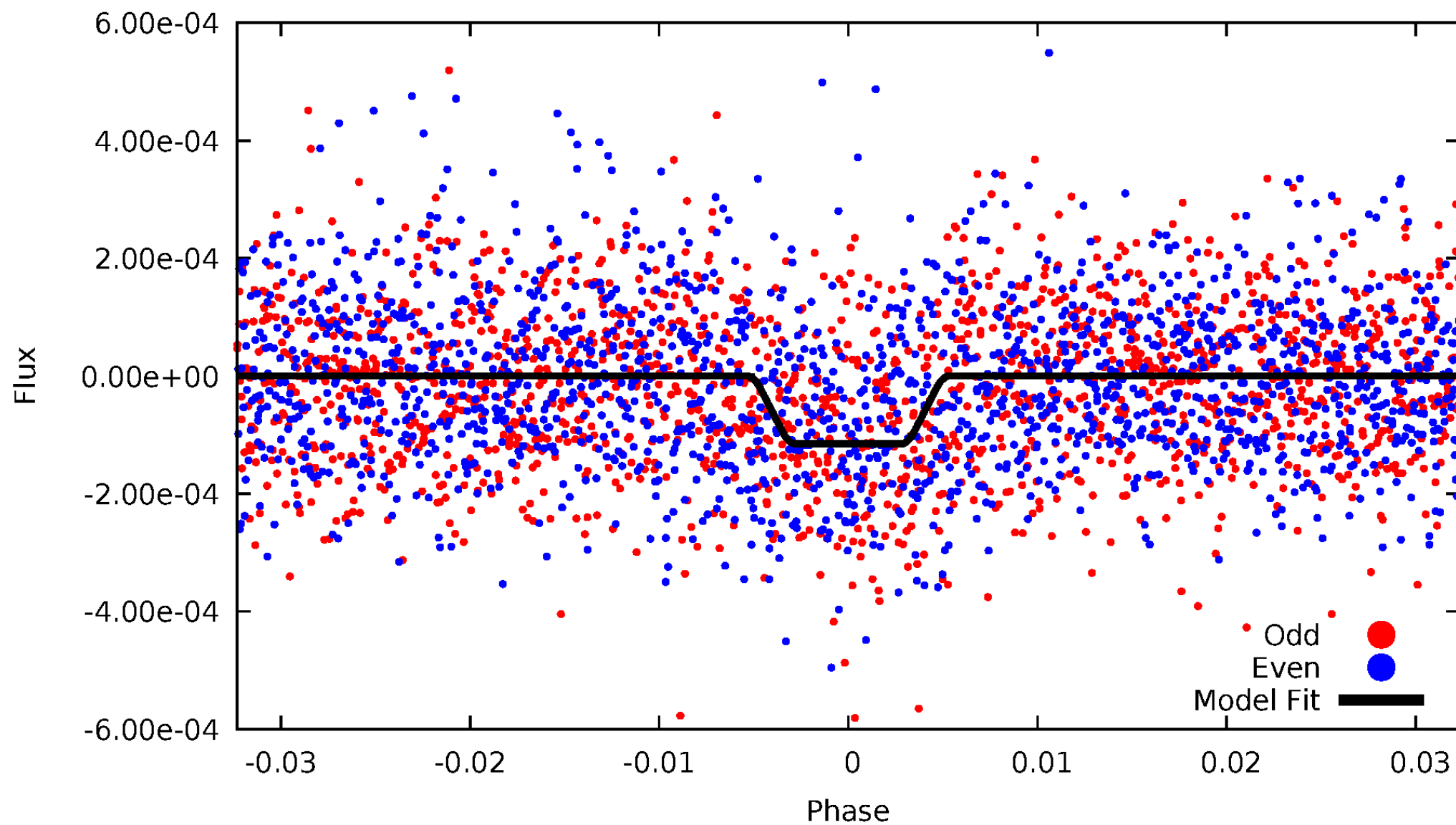
DV Odd/Even

TCE 005281113-01



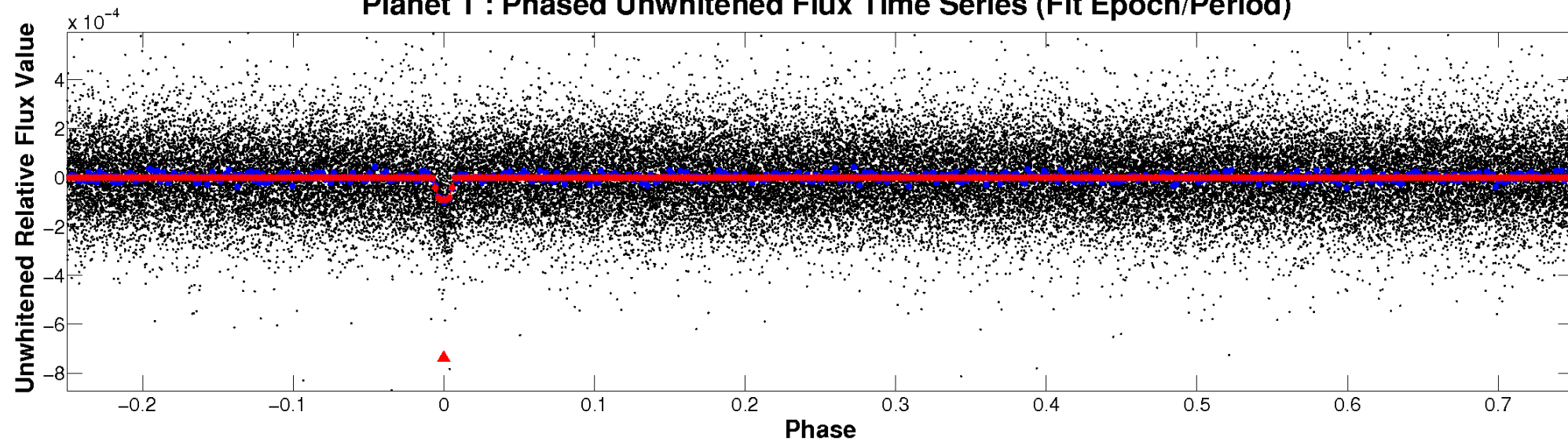
ALT Odd/Even

TCE 005281113-01

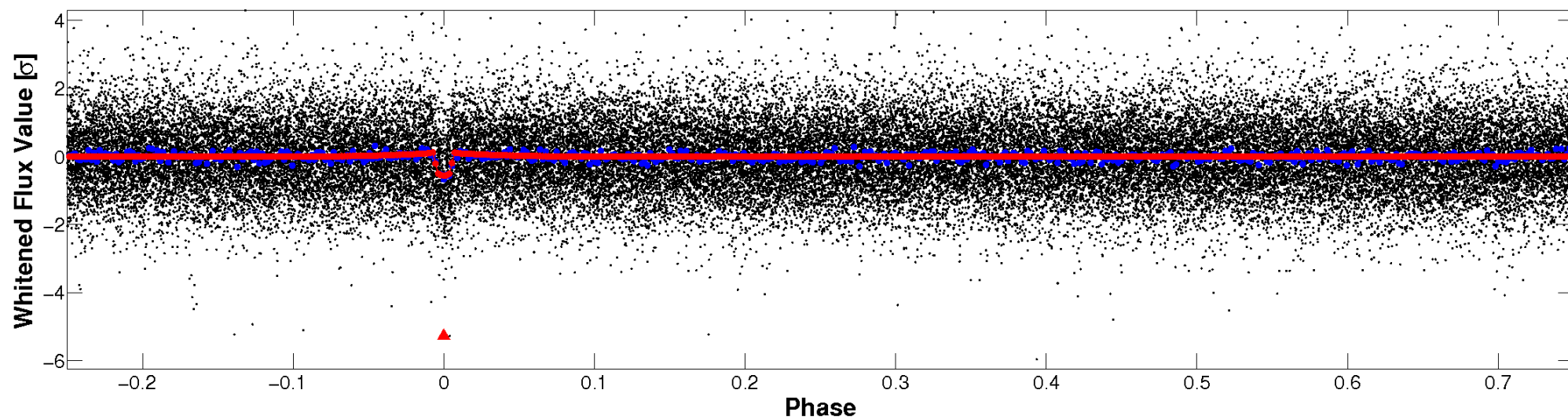


Non-Whitened Vs. Whitened Light Curve

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

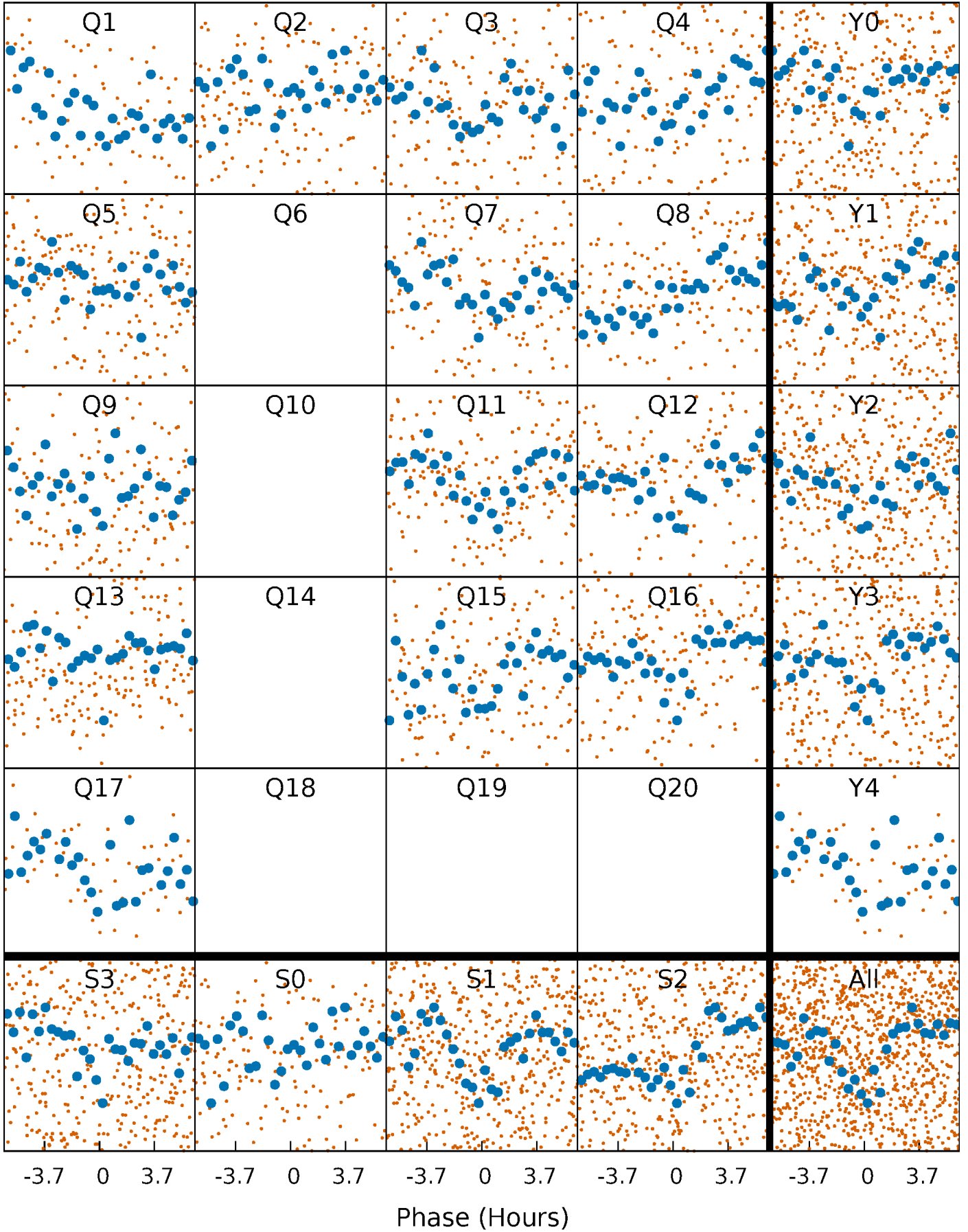


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



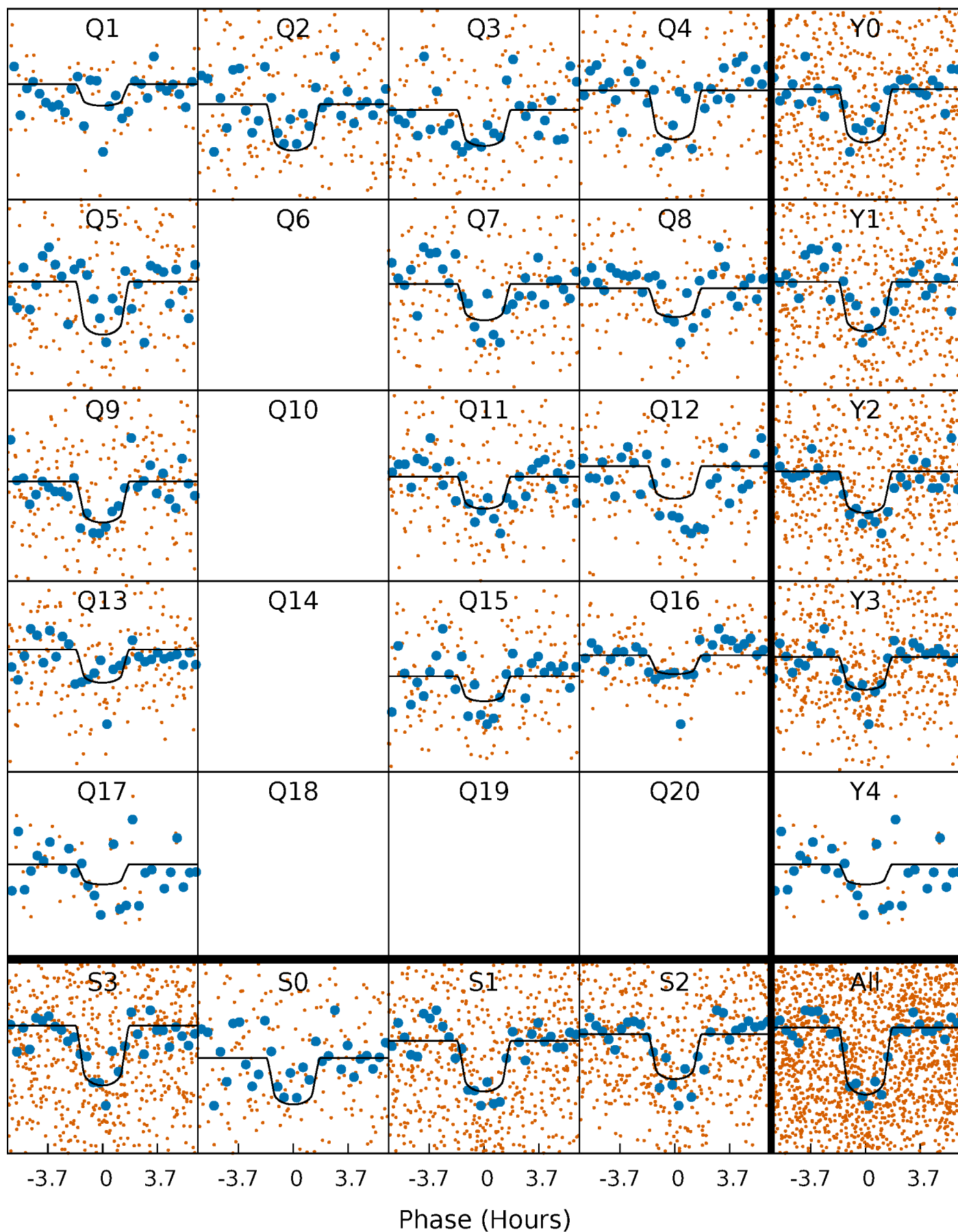
PDC Quarter-Phased Transit Curves

TCE 005281113-01 P= 11.179310 Days $T_0=131.642372$ (BKJD)



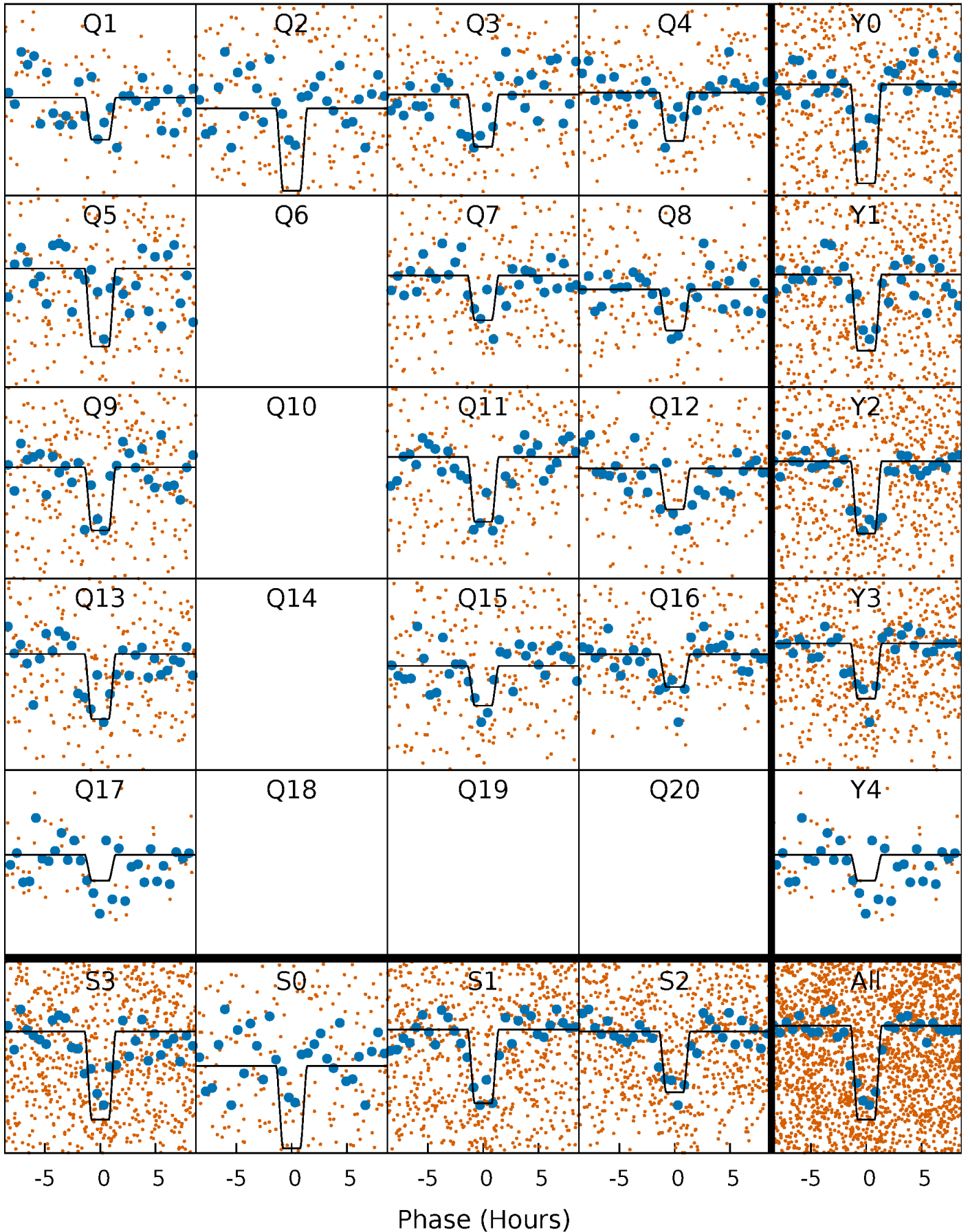
DV Quarter-Phased Transit Curves

TCE 005281113-01 P= 11.179310 Days $T_0=131.642372$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

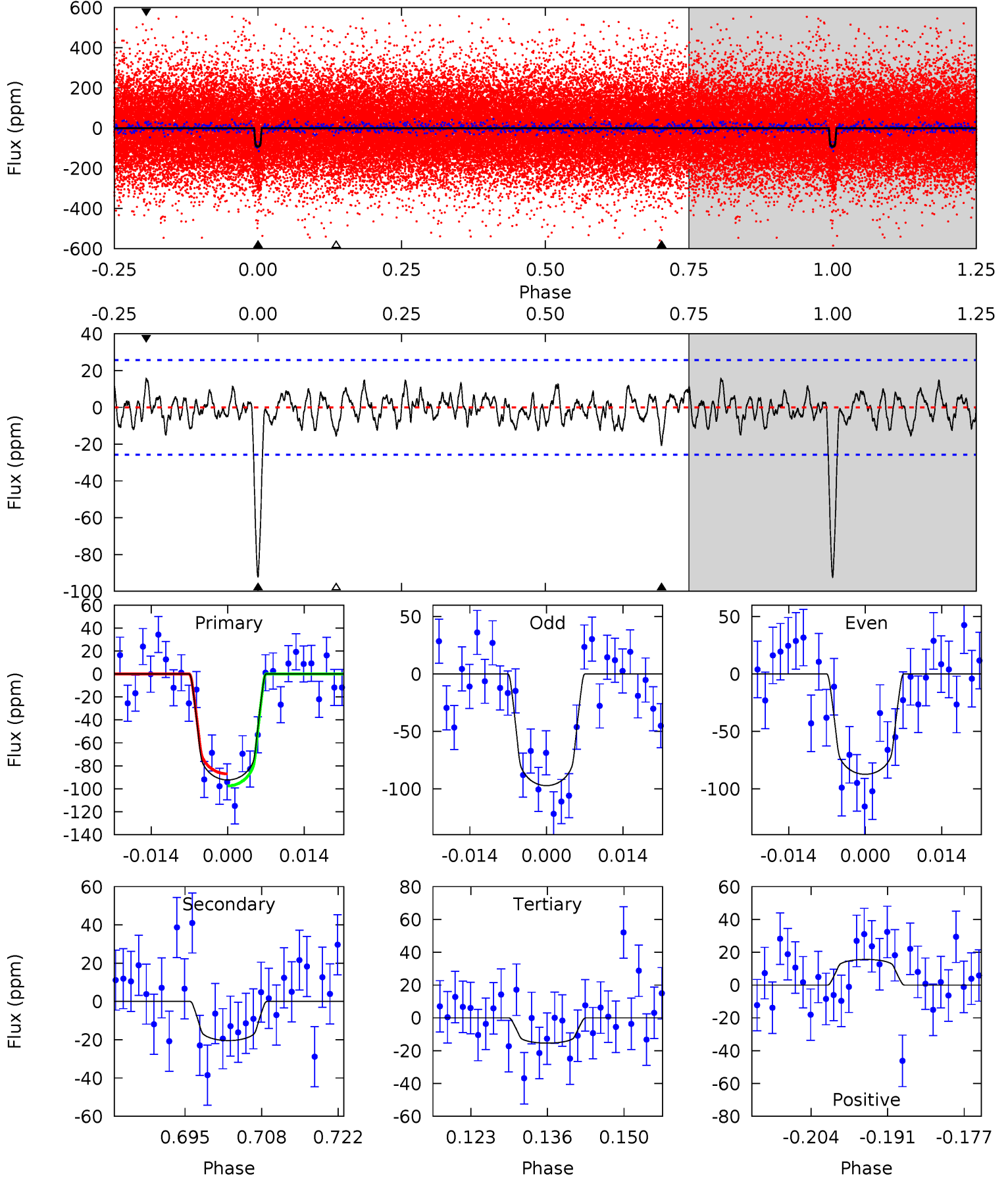
TCE 005281113-01 P= 11.179365 Days $T_0=131.640517$ (BKJD)



DV Model-Shift Uniqueness Test

005281113-01, $P = 11.179310$ Days, $E = 120.463062$ Days

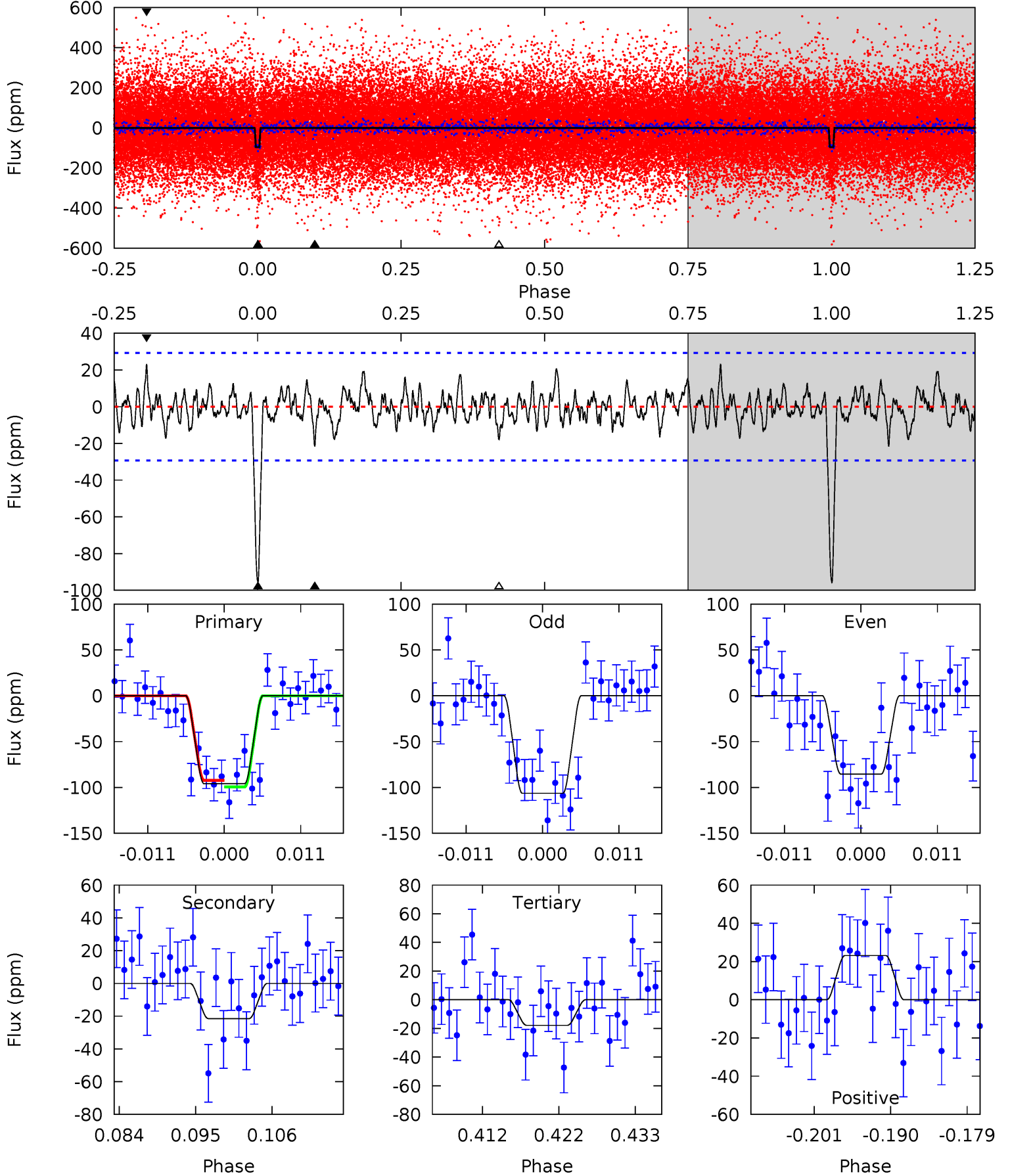
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	3.94	2.97	3.01	4.97	2.47	1.14	14.8	14.8	0.97	0.93	0.95	1.04	0.14	1.01



Alt Model-Shift Uniqueness Test

005281113-01, $P = 11.179365$ Days, $E = 120.461152$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	3.68	3.06	3.97	5.02	2.56	1.17	13.4	12.4	0.63	-0.29	1.80	0.97	0.19	0.61



Stellar Parameters For KIC 005281113

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6292^{+169}_{-169}	$4.014^{+0.241}_{-0.111}$	$-0.080^{+0.250}_{-0.250}$	$1.873^{+0.386}_{-0.580}$	$1.324^{+0.159}_{-0.259}$	$0.284^{+0.410}_{-0.108}$
	+3%/-3%	+6%/-3%	+312%/-312%	+21%/-31%	+12%/-20%	+145%/-38%
Source	PHO1	FLK73	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 005281113-01 / KOI 4411.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 5	$1.97^{+0.87}_{-0.75}$	1599^{+100}_{-130}	4389^{+1002}_{-520}	33^{+56}_{-17}
Alt.	-21 ± 6	$2.04^{+0.87}_{-0.72}$	1598^{+108}_{-130}	4324^{+811}_{-471}	31^{+47}_{-16}

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

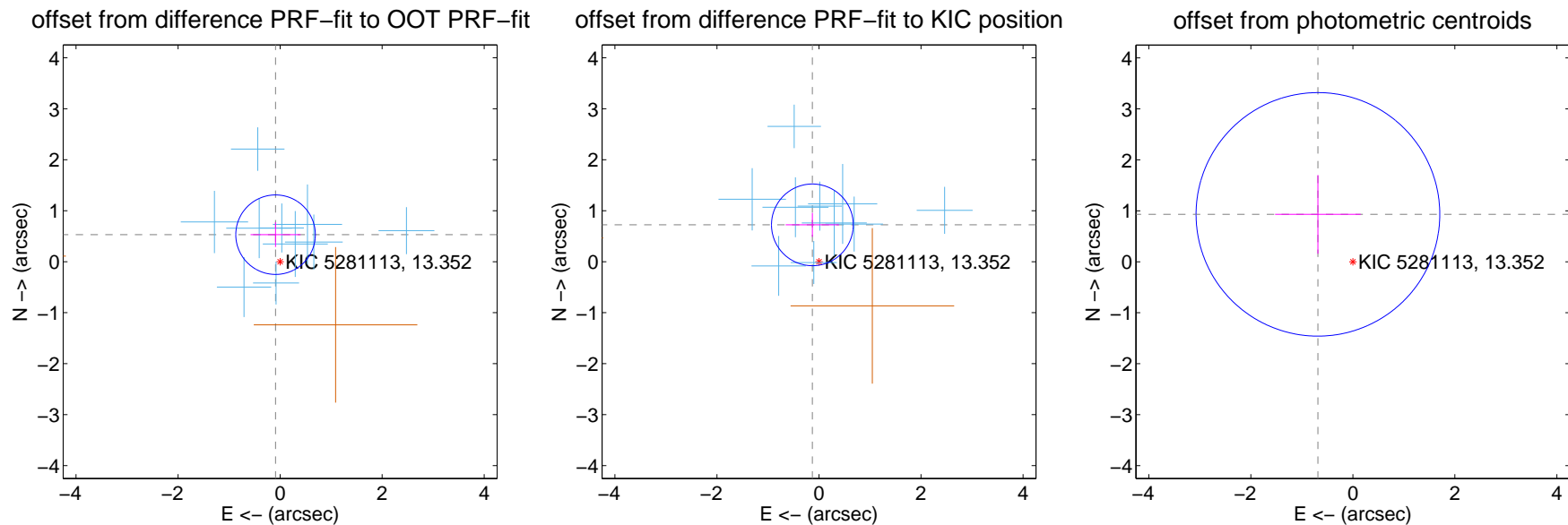
DV Centroid Data

Supplemental centroid analysis for 005281113-01. Kepler magnitude: 13.35. Transit SNR 12.04

There are 10 quarters with good PRF difference image offsets

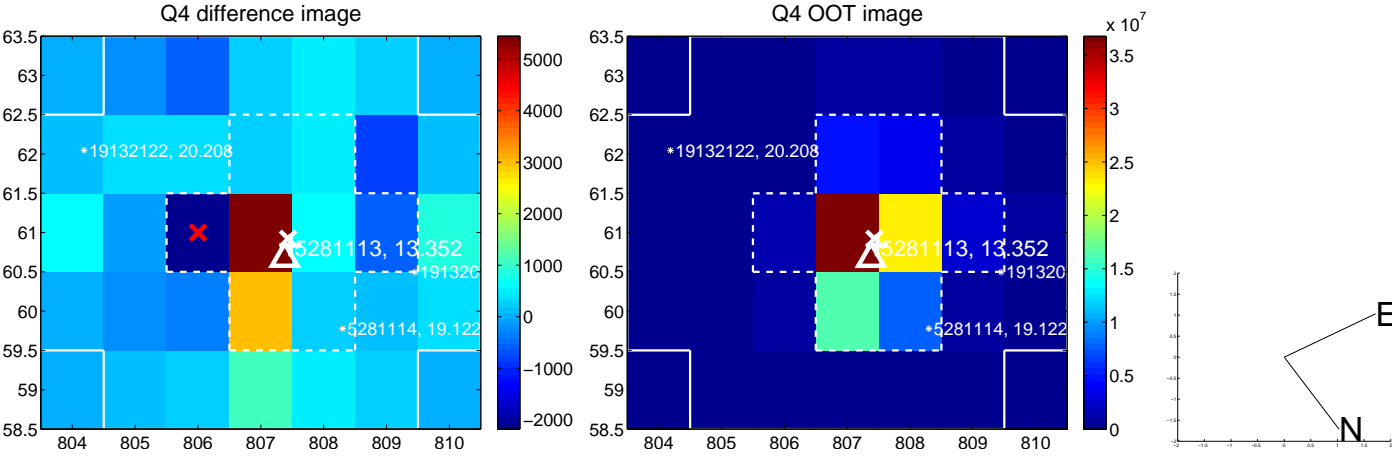
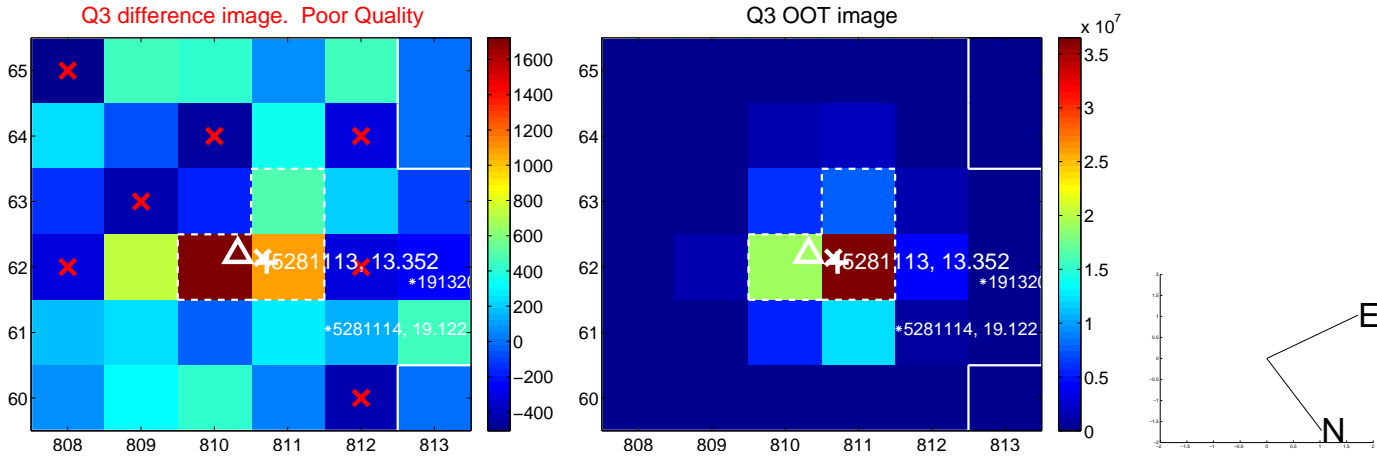
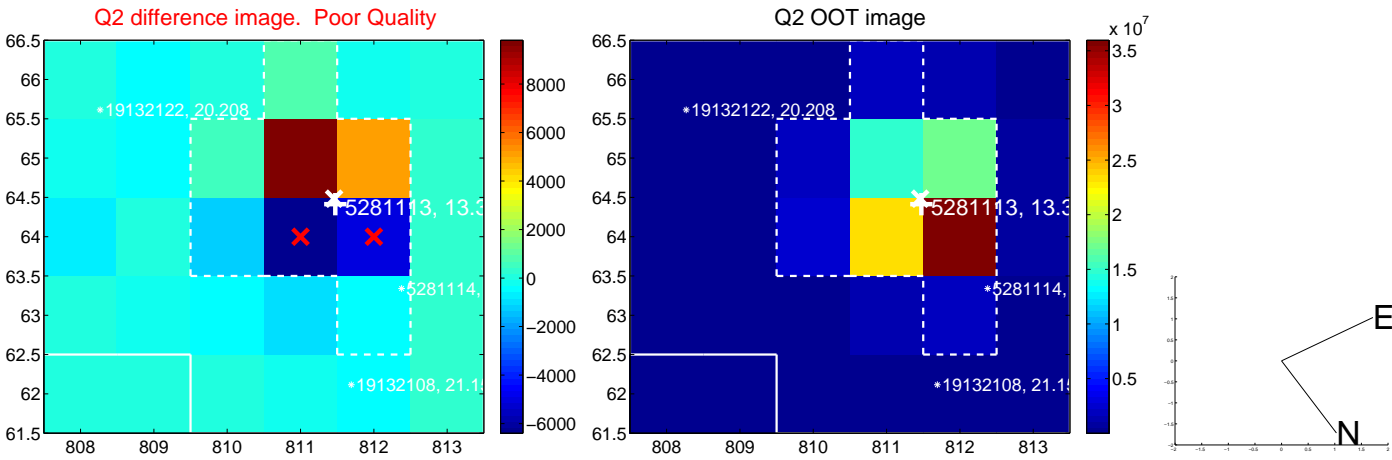
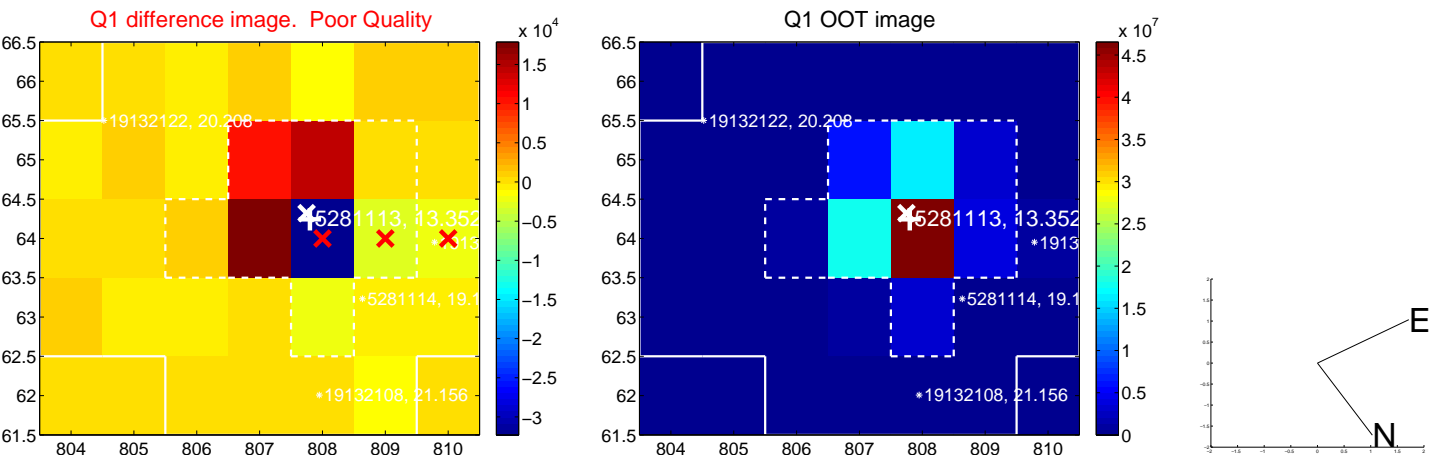
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.537 ± 0.260	2.07	0.089 ± 0.489	0.530 ± 0.241
PRF-fit source offset from KIC position	0.734 ± 0.267	2.75	0.129 ± 0.524	0.722 ± 0.235
photometric centroid source offset	1.15 ± 0.80	1.45	0.68 ± 0.84	0.93 ± 0.77

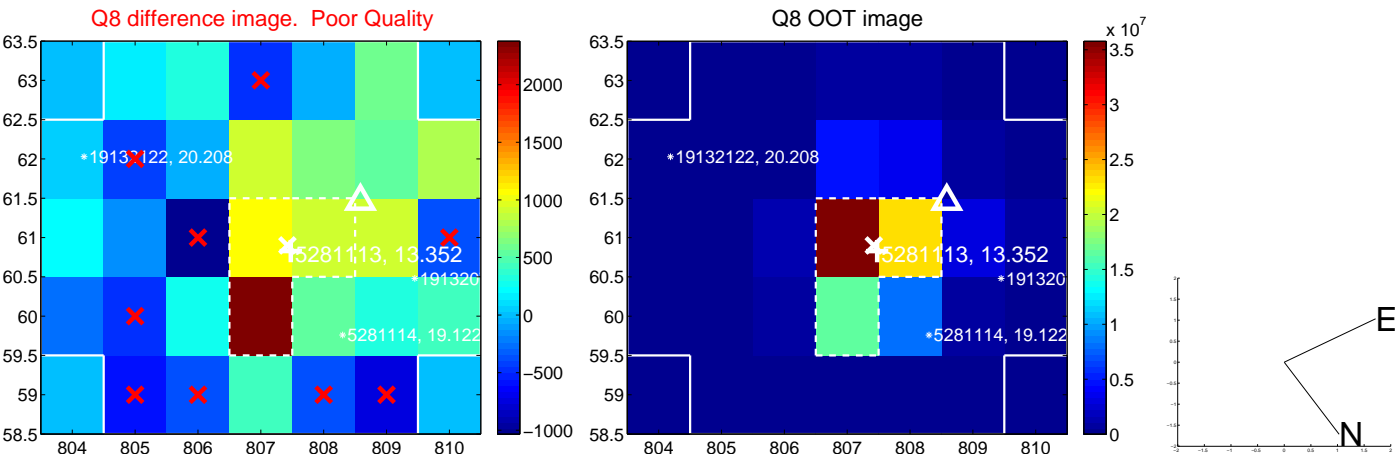
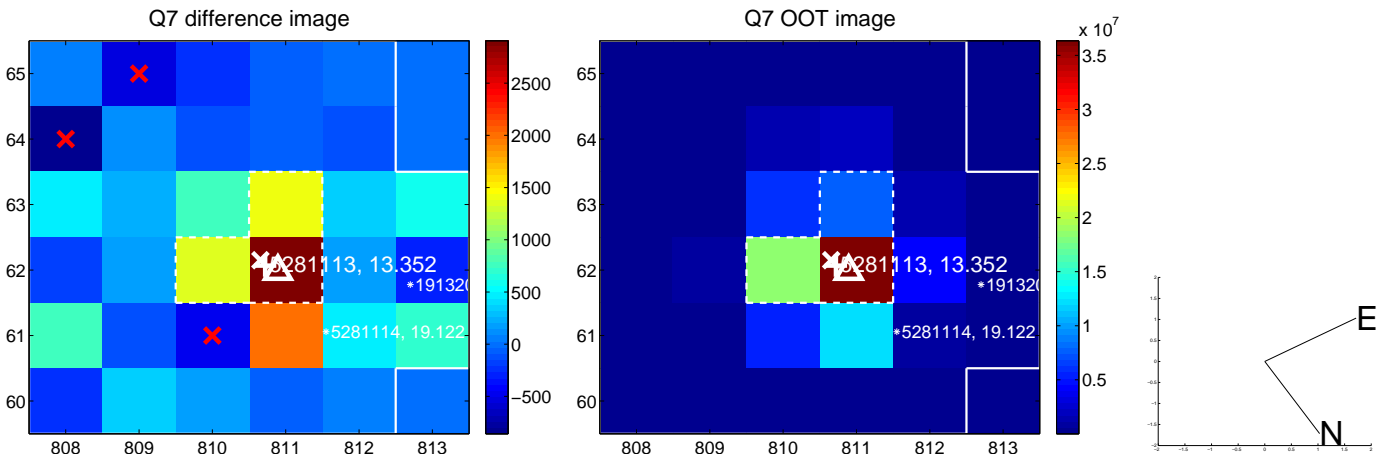
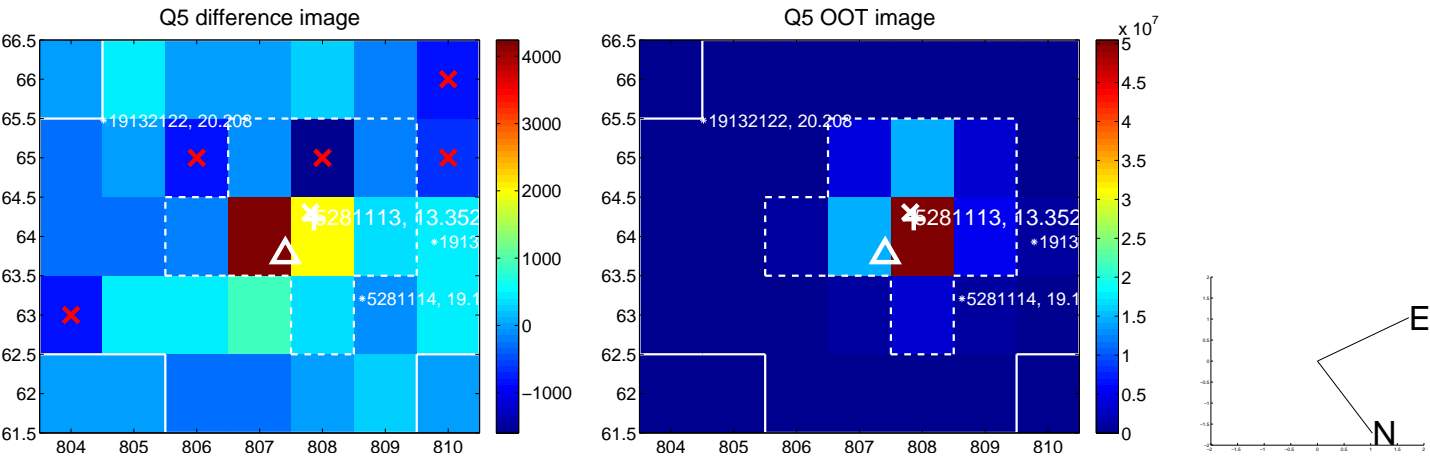


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

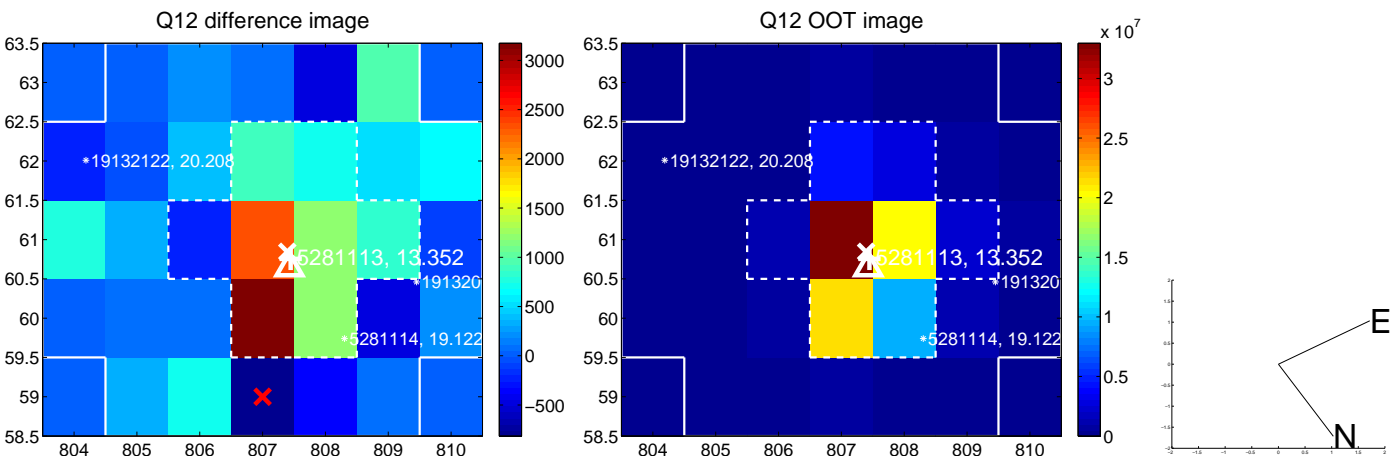
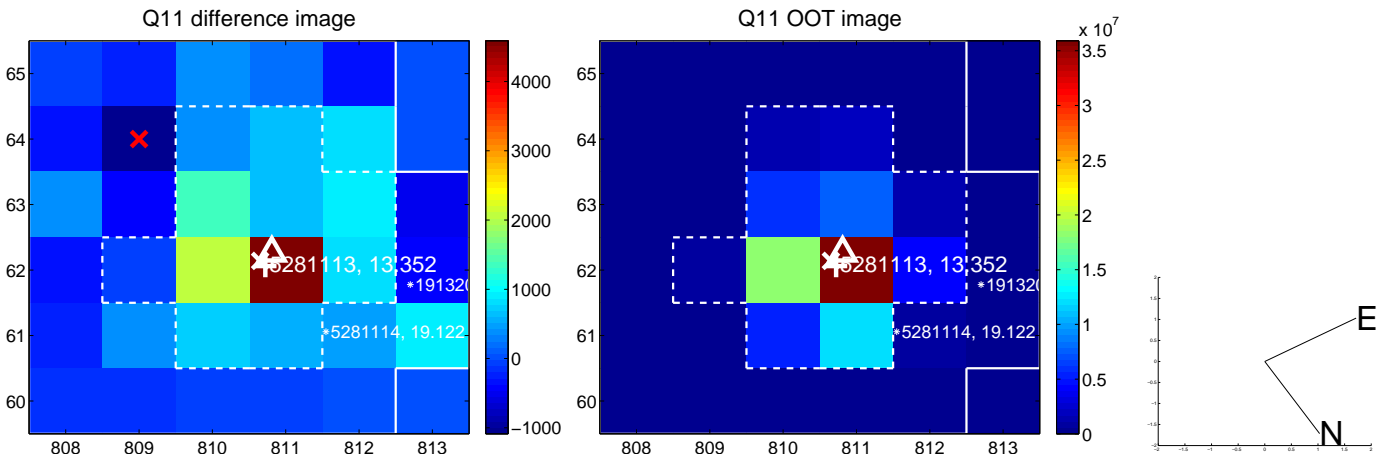
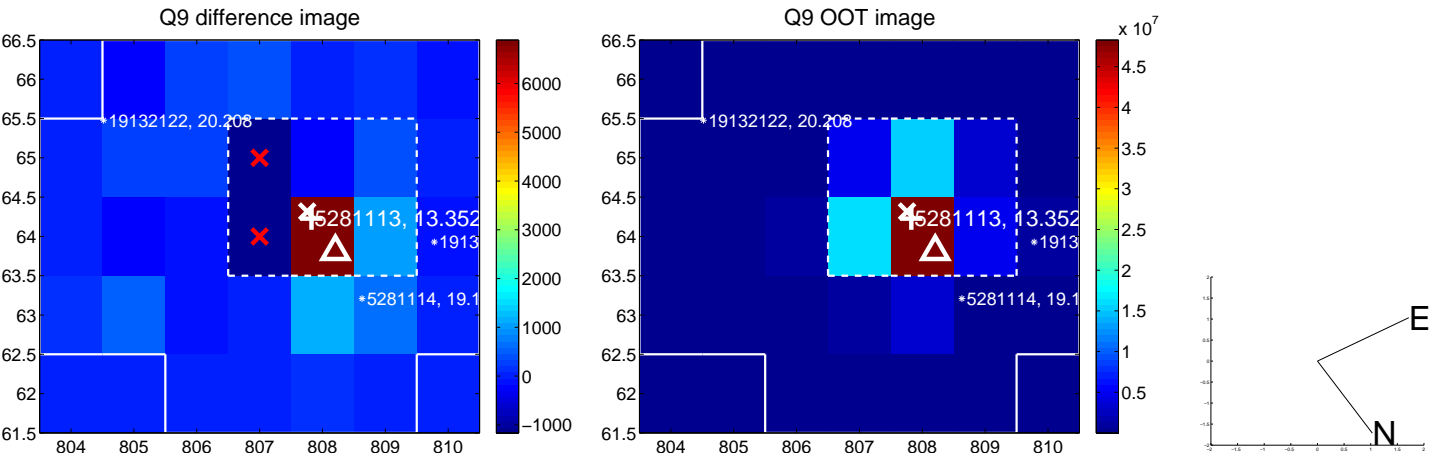
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



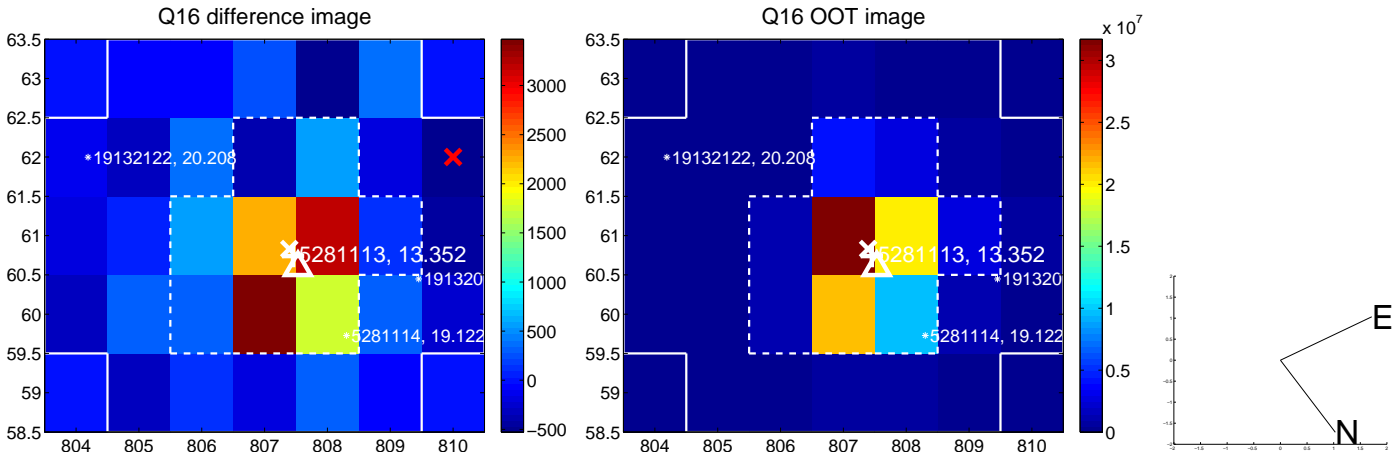
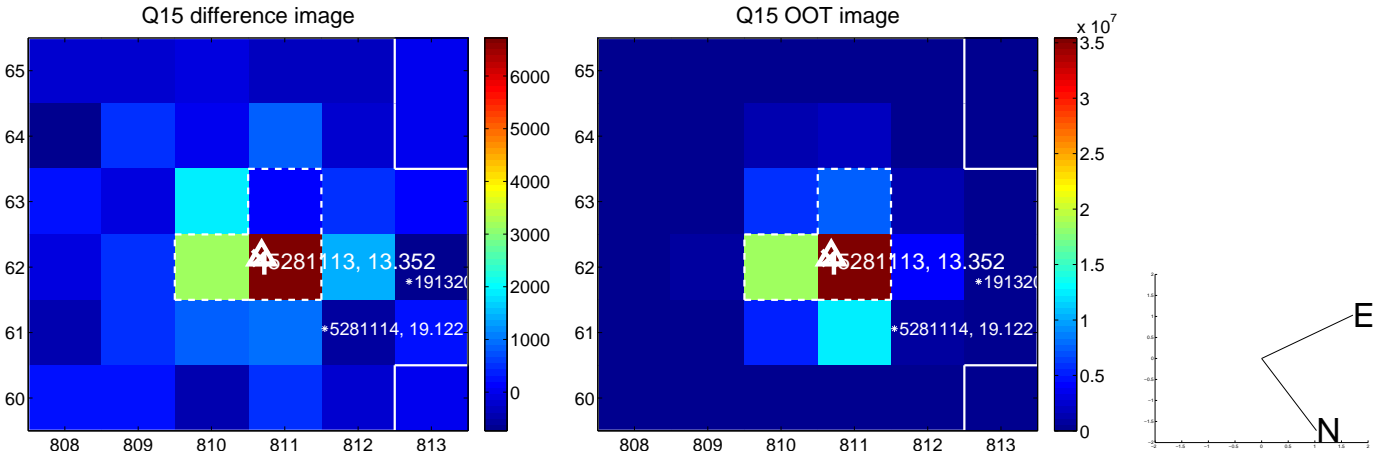
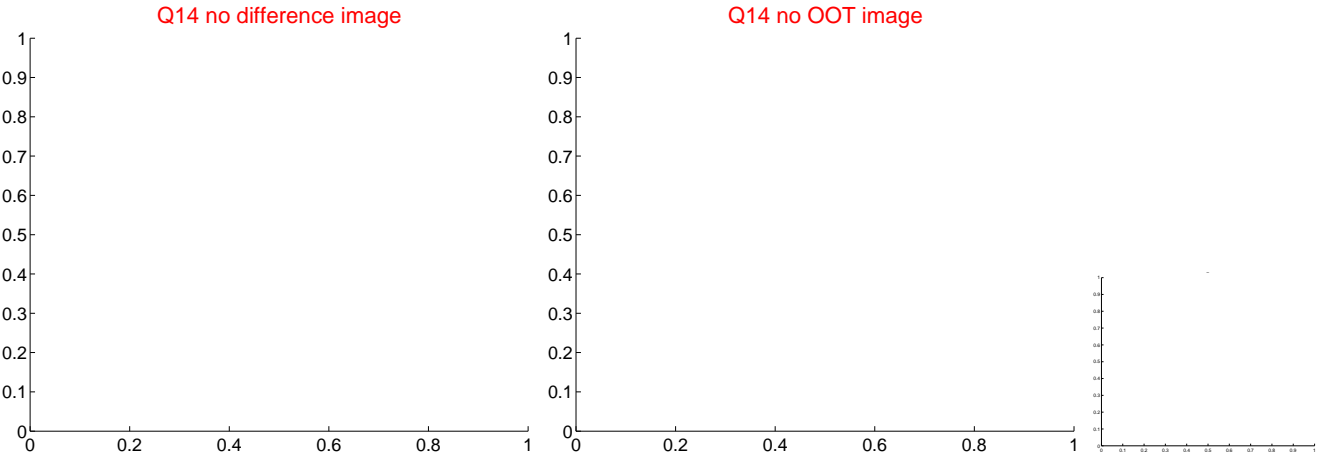
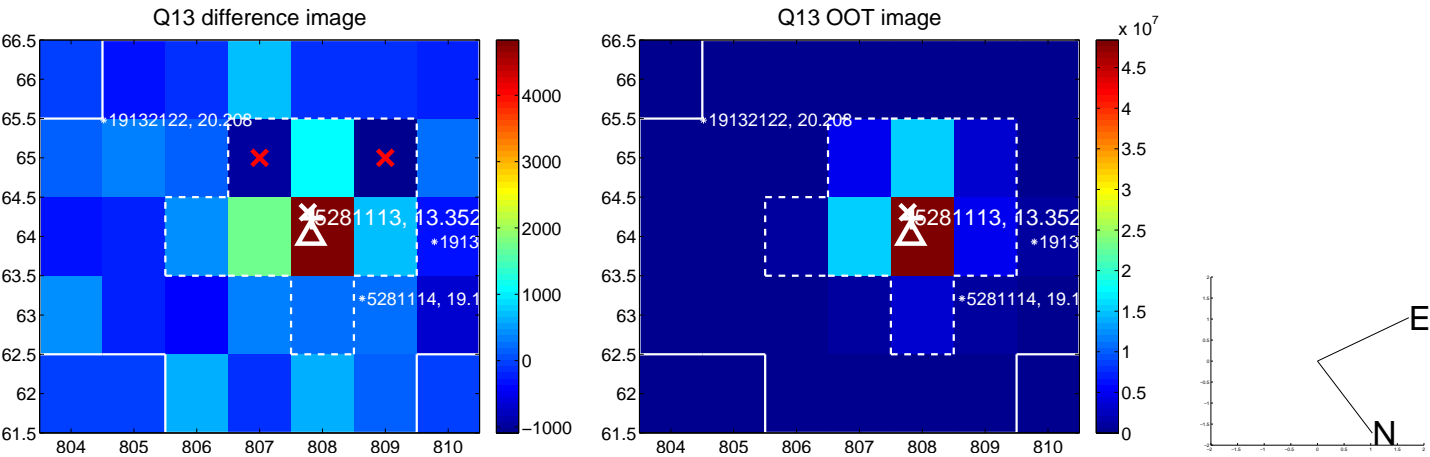
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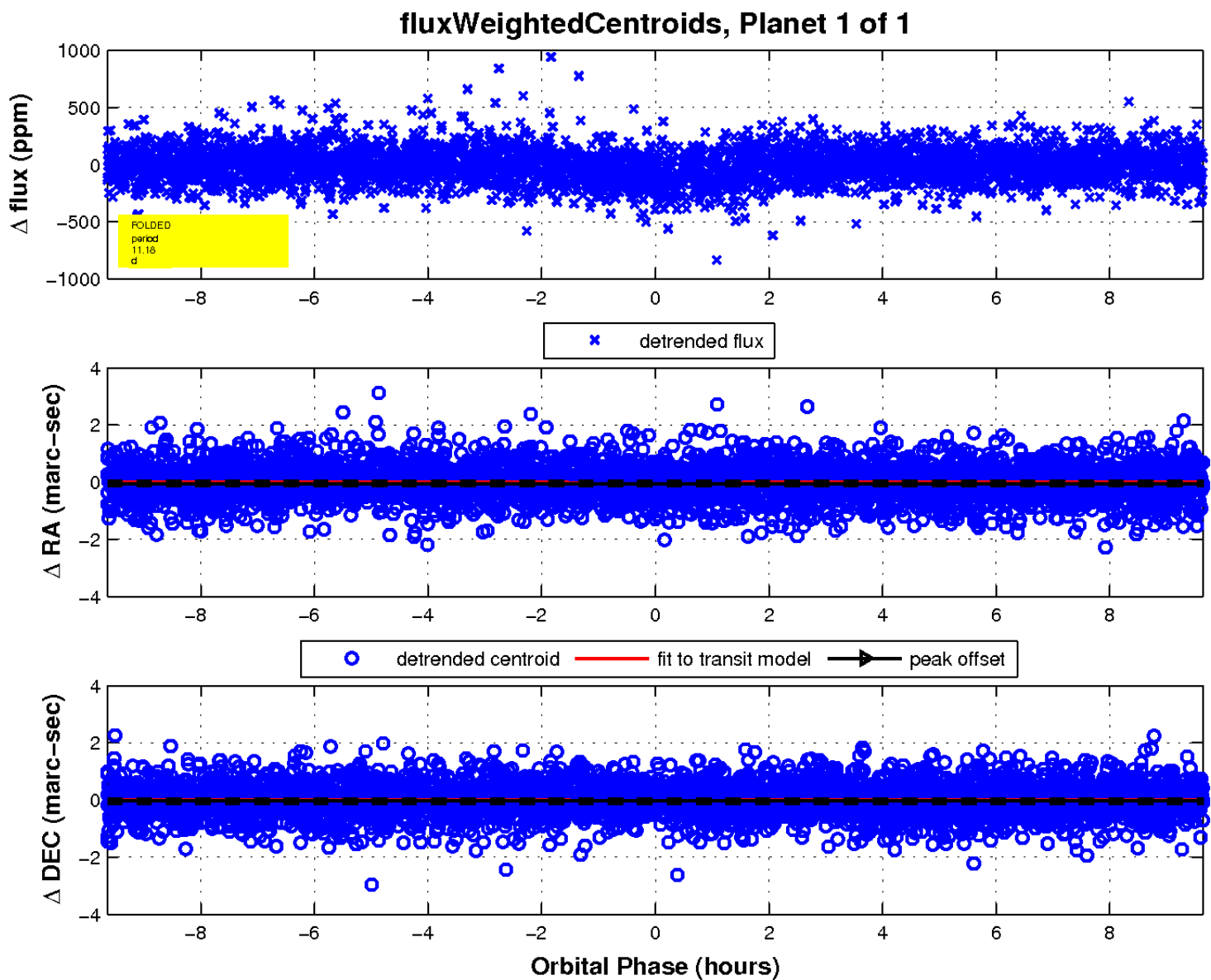
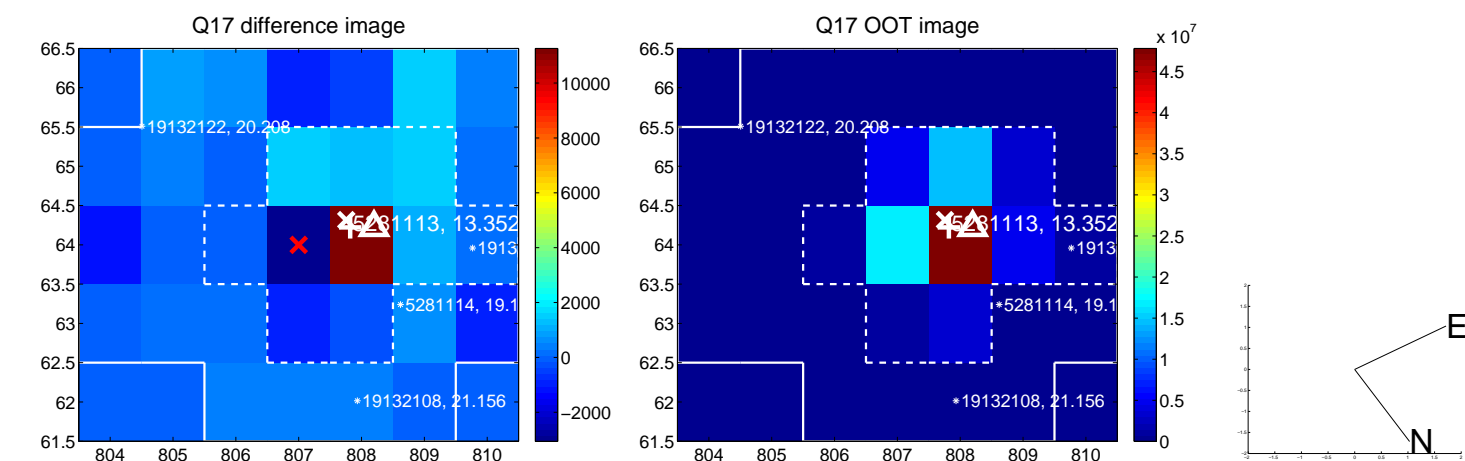
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UKIRT Image

