

# SC/D15/AWMP/GEN/1

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## Initial evaluation of two options for addressing infrequent surveys of the Bering-Beaufort Seas bowhead whale

Andre E Punt



INTERNATIONAL  
WHALING COMMISSION

## Initial Evaluation of Two Options for Addressing Infrequent Surveys of the Bering-Beaufort Seas Bowhead Whales

ANDRÉ E. PUNT

*School of Aquatic and Fishery Sciences, University of Washington, Box 355020, Seattle, WA 98195-5020, USA*

Contact e-mail: [aepunt@uw.edu](mailto:aepunt@uw.edu)

### ABSTRACT

The framework developed during the 2015 Annual Meeting of the Scientific Committee to evaluate options for dealing with situations when a recent estimate of abundance for the Bering-Chukchi-Beaufort Seas stock of bowhead whales has not been obtained is implemented. Diagnostic statistics are provided to evaluate the conditioning of the trials, along with the values for the ‘mandatory’ performance statistics for two ways to deal with a lack of a recent estimate of abundance (‘phase-out’ and ‘interim allowance’) and for four scenarios regarding future surveys.

### INTRODUCTION

IWC (2016a,b) note that for more than a decade the Commission has been unable to agree on an *Aboriginal Whaling Scheme*, partly due to objections from hunters regarding potential quota reductions (‘phase-out’) when a recent whale abundance estimate has not been obtained due to factors outside their control. IWC (2016a) considered a proposal that the ‘phase out’ approach – in which catch limits are reduced by 50% (the ‘grace period’) once a recent abundance estimate has not been available for 10 years – be replaced by an ‘interim allowance’ approach in which the 50% phase-out during the grace period would not apply. IWC (2016a) recognized that simulation testing along the lines of the approach used to test the Bowhead SLA in 2003 (IWC, 2003) would need to be conducted to determine whether the ‘interim allowance’ approach would satisfactorily meet the conservation and need satisfaction goals of the Commission.

IWC (2016b) established specifications for the trials that would need to be conducted, and this paper provides results based on implementing those specifications.

### METHODS

#### Operating model structure

The operating model is essentially identical to that on which the 2003 implementation was based, except that:

- a) the first year of the projection period was modified from 2003 to 2019 and the catches were updated to 2014, with the catches from 2015-18 assumed to be 58 (29 of each sex);
- b) the abundance estimates were updated to include the estimates for 2004 and 2011 (Table 1);
- c) the model projection started at equilibrium in 1940 rather than being assumed to be at unfished equilibrium in 1848 (deterministic trials) or 1748 (stochastic trials) because analyses presented to IWC (2016a) showed that starting projections in 1848 did not allow the population model to mimic the rate of increase in abundance from 1978 to 2011 (the age-structure in 1940 is based on the exploitation rate corresponding to the ratio of 1940 to unfished numbers);
- d) the length of each quota block was increased from 5 to 6 years to reflect the biannual nature of Commission meetings; and
- e) the prior on ‘current’ abundance applies to 2004 rather than 1993.

Preliminary attempts to fit the operating model to the data (results not shown) indicated that it would be necessary to modify how historical survey bias changed over time for trials with  $MSYR_{1+} = 1\%$ . The Steering Group agreed that these trials would be conducted with survey bias increasing from 0.5 in 1978 to 1 in 2018. Because this bias assumption is quite extreme, and the fits were fairly poor, all trials with  $MSYR_{1+} = 1\%$  have also been re-run with  $MSYR_{1+} = 1.5\%$ . For these latter trials, survey bias increased from 0.67 in 1978 to 1 in 2007. For the trials (11, 12, 13 and 14; Table 2) in which survey bias is 1 in 1978, the biases in 2018 (for trials with  $MSYR_{1+} = 1\%$ ) or 2007 (for trials with  $MSYR_{1+} = 1.5\%$ ) change over time by the same proportion as for trials 7 and 8, except that the bias in 1978 is 1.

Table 2 lists the trials and which trials had to be conditioned. The list of trials differs from those specified by IWC (2016b) in that two stochastic trials (based on BE06 and BE20) were dropped owing the lack of impact on the values for the performance statistics of stochasticity in birth rate<sup>1</sup>. Table 3 lists the priors for the parameters of the operating model.

Table 4 lists the four scenarios regarding future surveys. Future surveys are determined by when the next survey is undertaken, the frequency of surveys and how many years it takes for an abundance estimate to become available following a survey. The four scenarios are illustrated in Figure 1.

Table 5 lists the performance statistics defined for the B-C-B bowheads. This paper provides only the ‘mandatory’ statistics, but the full set of results is available on request.

## RESULTS AND DISCUSSION

### Conditioning

Figure 2 compares the posterior distributions for the time-trajectory of total (1+) abundance with the estimates of abundance for the 13 trials that had to be conditioned. The trial with the highest MSY rate (trial BE09A) fits the data best, along with the trial with  $MSYR_{1+}=2.5\%$  and a 20-year time-lag (trial BE20A). The trials with  $MSYR_{1+} = 2.5\%$  generally fit the data well (the confidence intervals for the abundance estimates intersect the pointwise median simulated time series of 1+ abundance for almost all years). The fits to trials with  $MSYR_{1+} = 1.5\%$  and (particularly)  $MSYR_{1+} = 1\%$  are adequate for evaluating Strike Limit Algorithms, but there is evidence that the predicted abundance is too high in early years and too low in 2011 (Figure 2).

Figure 3 shows the posterior distributions for five of the parameters of the population dynamics model for the 13 trials. The most evident feature of the results is that the posterior for  $K(1+)$  is updated substantially for trials with  $MSYR_{1+} = 1\%$ ,  $1.5\%$  and  $2.5\%$ , with the posteriors supporting values close to the upper bound of the prior (50,000).

### Projections

Table 6 lists the numbers (1-8) used to identify the eight options (two options for dealing with recent estimates of abundance not being available crossed with four scenarios regarding future surveys), while Table 7 lists the values for mandatory performance statistics.

## REFERENCES

- International Whaling Commission (IWC). 2003. Report of the Standing Working Group (SWG) on the Development of an Aboriginal Subsistence Whaling Management Procedure (AWMP). *J. Cetacean Res. Manage* 5 (Suppl): 154–225
- International Whaling Commission (IWC). 2016a. Report of the AWMP Workshop on Developing *Strike Limit Algorithms (SLAs)* for the Greenland Hunts. *J. Cetacean Res. Manage* 17 (Suppl): 00-00.
- International Whaling Commission (IWC). 2016b. Report of the Standing Working Group on the Aboriginal Whaling Management Procedure (AWMP). *J. Cetacean Res. Manage* 17 (Suppl): 00-00.

<sup>1</sup> This is hardly surprising given the stochasticity only starts in 1940.

Table 1  
Survey estimates of abundance used when conditioning the operating model (account is taken in the computations of the variance-covariance matrix for the estimates of abundance)

Year	Estimate	CV
1978	4765	0.305
1980	3885	0.343
1981	4467	0.273
1982	7395	0.281
1983	6573	0.345
1985	5762	0.253
1986	8917	0.215
1987	5298	0.327
1988	6928	0.12
1993	8167	0.071
2001	10545	0.128
2004	12631	0.244
2011	16892	0.058

Table 2  
The *Evaluation Trials* on which the analyses are based. For these trials need is set for 6-year blocks.

Trial No.	Old Trial No.	Trial parameters are based on <sup>®</sup>	Description	Model	$MSYR_{1+}$	$MSYL_{1+}$	Final need	Historical survey bias	Future survey bias	Survey CV (true, est)
BE01A*	BE01		Base case	D	2.5%	0.6	134	1	1	0.25, 0.25
BE01B*	BE01		Base case	S <sub>E</sub>	2.5%	0.6	134	1	1	0.25, 0.25
BE02A	BE02	BE01A	Constant need	D	2.5%	0.6	<b>67</b>	1	1	0.25, 0.25
BE03A	BE03	BE01A	Future +ve bias	D	2.5%	0.6	134	1	<b>1→1.5 in yr 25</b>	0.25, 0.25
BE03B	BE03	BE01B	Future +ve bias	S <sub>E</sub>	2.5%	0.6	134	1	<b>1→1.5 in yr 25</b>	0.25, 0.25
BE04A	BE04	BE01A	Future -ve bias	D	2.5%	0.6	134	1	<b>1→.67 in yr 25</b>	0.25, 0.25
BE05A	BE05	BE01A	Underestimated CVs	D	2.5%	0.6	134	1	1	<b>0.25, 0.10</b>
BE06A*	BE07		$MSYL_{1+} = 0.8$	D	2.5%	<b>0.8</b>	134	1	1	0.25, 0.25
BE07A*	BE09		$MSYR_{1+} = 1%$	D	<b>1%</b>	0.6	134	<b>0.5 → 1<sup>1</sup></b>	1	0.25, 0.25
BE07B*	BE09		$MSYR_{1+} = 1%$	S <sub>E</sub>	<b>1%</b>	0.6	134	<b>0.5 → 1<sup>1</sup></b>	1	0.25, 0.25
BE08A*	BE09		$MSYR_{1+} = 1.5%$	D	<b>1.5%</b>	0.6	134	<b>0.67 → 1<sup>2</sup></b>	1	0.25, 0.25
BE08B*	BE09		$MSYR_{1+} = 1.5%$	S <sub>E</sub>	<b>1.5%</b>	0.6	134	<b>0.67 → 1<sup>2</sup></b>	1	0.25, 0.25
BE09A*	BE10		$MSYR_{1+} = 4%$	D	<b>4%</b>	<b>0.8</b>	134	1	1	0.25, 0.25
BE10A	BE11	BE01A	Bad data	D	2.5%	0.6	134	1	<b>1→1.5 in yr 25</b>	<b>0.25, 0.10</b>
BE11A*	BE12		Difficult 1%	D	<b>1%</b>	0.6	134	<b>1 → 2</b>	<b>2</b>	<b>0.25, 0.10</b>
BE12A*	BE12		Difficult 1.5%	D	<b>1.5%</b>	0.6	134	<b>1 → 1.5</b>	<b>1.5</b>	<b>0.25, 0.10</b>
BE12B*	BE12		Difficult 1.5%	S <sub>E</sub>	<b>1.5%</b>	0.6	134	<b>1 → 1.5</b>	<b>1.5</b>	<b>0.25, 0.10</b>
BE13A	BE13	BE11A	Difficult 1%; constant need	D	<b>1%</b>	0.6	<b>67</b>	<b>1 → 2</b>	<b>2</b>	<b>0.25, 0.10</b>
BE14A	BE13	BE13A	Difficult 1.5%; const need	D	<b>1.5%</b>	0.6	<b>67</b>	<b>1 → 1.5</b>	<b>1.5</b>	<b>0.25, 0.10</b>
BE15A	BE14	BE01A	Need increases to 201	D	2.5%	0.6	<b>201</b>	1	1	0.25, 0.25
BE16A	BE16	BE07A	$MSYR_{1+} = 1%$ ; 201 need	D	<b>1%</b>	0.6	<b>201</b>	<b>0.5 → 1</b>	1	0.25, 0.25
BE16B	BE16	BE07B	$MSYR_{1+} = 1%$ ; 201 need	S <sub>E</sub>	<b>1%</b>	0.6	<b>201</b>	<b>0.5 → 1</b>	1	0.25, 0.25
BE17A	BE16	BE08A	$MSYR_{1+} = 1.5%$ ; 201 need	D	<b>1.5%</b>	0.6	<b>201</b>	<b>0.67 → 1</b>	1	0.25, 0.25
BE17B	BE16	BE08B	$MSYR_{1+} = 1.5%$ ; 201 need	S <sub>E</sub>	<b>1.5%</b>	0.6	<b>201</b>	<b>0.67 → 1</b>	1	0.25, 0.25
BE18A	BE20	BE09A	$MSYR_{1+} = 4%$ ; 201 need	D	<b>4%</b>	<b>0.8</b>	<b>201</b>	1	1	0.25, 0.25
BE19A*	BE21		Integrated	D	<b>U[1,4%]</b>	<b>U[.4-.8]</b>	134	1	1	0.25, 0.25
BE20A*	BE22		20yr time lag	D	2.5%	0.6	134	1	1	0.25, 0.25

& A blank entry means that the parameter values for the trial concerned are based on that trial.

\* Requires conditioning.

<sup>1</sup> Bias equals 1 in 2018.

<sup>2</sup> Bias equals 1 in 2007.

Table 3  
The prior distributions for the parameters of the population dynamics model

$MSYL_{1+}^1$	Pre-specified (usually 0.6)
$MSYR_{1+}$	Pre-specified (usually 0.01, 0.015, 0.025, 0.04)
Transition age from $S_{juv}$ to $S_{adult}$	$U[1, 9]$
Adult survival rate, $S_{adult}$	$N(0.99, 0.02^2)$ (constrained to be $< 0.995$ )
Inverse of the pregnancy rate	$U[2, 4]$
Age at maturity, $a_{mat}$	$N(20, 3^2)$ (constrained to be between 14 and 26)
$\ln(N_{2004})$	$N(\ell n 12, 631, 0.244^2)$
$K_+$	$U[15, 000; 50, 000]$

Table 4  
Specifications for future surveys

	Scenario			
	9-1-18	10-2-20	13-3-17	12-4-20
Next survey	2018	2020	2017	2020
Survey frequency	9	10	13	12
Time until estimate becomes available	1	2	3	4

Table 5  
The performance statistics

ID	Name	Mandatory	Optional	Time Periods	Use to explain performance to layperson	Use to evaluate performance for SC	Details
D1	Final Depletion	1+, mature		100	Yes	Yes	$P_T / K$
D2	Lowest Depletion		mature	100	Yes	Yes	$\min(P_t / K) : t = 0, 1, \dots, T$
D6	Trajectories 1 and 2		1+, mature	100	Yes	No	
D7	Pointwise Quantile Trajectories		1+, mature	100	Yes	No	
D8	Rescaled final Depletion	Yes		100		No	$P_T / P_T^*$
D9	Minimum number of whales		1+, mature	100		No	$\min(P_t) : t = 0, 1, \dots, T$
D10	Relative Increase	Yes		100		Yes	$P_T / P_0$
N1	Total Need Satisfaction		Yes	20, 100	Yes	Yes	$\sum_{t=0}^{T-1} C_t / \sum_{t=0}^{T-1} Q_t$
N2	Longest Shortfall		Yes	20, 100	Yes, after rescaling	Yes	(negative of the greatest number of consecutive years in which $C_t < Q_t$ ) / T
N4	Fraction of years in which catch = quota		Yes	20, 100	Yes	Yes	
N7	Percent Need Satisfaction Pointwise Quantile Trajectory Plot		Yes	100	No	Yes	
N8	Percent Need Satisfaction Trajectories 1 and 2 Plot		Yes	100	No	Yes	
N9	Average need satisfaction	Yes		20, 100	Yes	Yes	$\frac{1}{T} \sum_{t=0}^{T-1} \frac{C_t}{Q_t}$
N10	Average Annual Variation in Catch		Yes	100	No	Yes	
N11	Anti-curvature Catch Variation Statistic		Yes	100	No	Yes	
N12	Mean downstep	Yes					
R1	Relative Recovery	1+		100	Yes	Yes	$P_{t_r^*} / P_t^*$ where $t_r^*$ = 1st year in which $P_{t_r^*}$ passes through <i>MSYL</i>
R3	Time Frequency in Recovered State after Recovery		1+, mature	100	Yes	Yes	
R4	Relative Time to Recovery		1+, mature	100	Yes	Yes	

Table 6  
SLA Options

Number	SLA Variant	Survey Scenario
1PO	With Grace Period Phase-out	9-1-18
1IA	Interim Allowance	9-1-18
2PO	With Grace Period Phase-out	10-2-20
2IA	Interim Allowance	10-2-20
3PO	With Grace Period Phase-out	13-3-17
3IA	Interim Allowance	13-3-17
4PO	With Grace Period Phase-out	12-4-20
4IA	Interim Allowance	12-4-20

Table 7  
Performance statistics for the trials to compare the performance of the ‘phase out’ and ‘interim allowance’ options.

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE01A	1PO	0.958	0.968	0.971	0.891	0.916	0.927	0.958	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01A	1IA	0.958	0.968	0.971	0.891	0.916	0.927	0.958	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01A	2PO	0.958	0.968	0.971	0.891	0.916	0.928	0.958	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01A	2IA	0.958	0.968	0.971	0.891	0.916	0.928	0.958	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01A	3PO	0.959	0.969	0.972	0.895	0.919	0.930	0.960	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.89	0.90	0.91	0.027	0.029	0.029
BE01A	3IA	0.961	0.970	0.973	0.899	0.922	0.932	0.961	0.971	0.973	1.71	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.93	0.93	0.080	0.080	0.081
BE01A	4PO	0.972	0.979	0.981	0.924	0.941	0.949	0.972	0.980	0.981	1.73	2.19	2.45	0.96	0.97	0.99	0.89	0.89	0.89	0.73	0.73	0.74	0.128	0.129	0.130
BE01A	4AI	0.958	0.968	0.971	0.892	0.917	0.927	0.959	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.002
BE01B	1PO	0.940	0.968	0.989	0.887	0.916	0.943	0.960	0.968	0.976	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.001	0.003
BE01B	1IA	0.940	0.968	0.989	0.887	0.916	0.943	0.960	0.968	0.976	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.001	0.003
BE01B	2PO	0.940	0.968	0.989	0.887	0.916	0.943	0.960	0.968	0.976	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01B	2IA	0.940	0.968	0.989	0.887	0.916	0.943	0.960	0.968	0.976	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE01B	3PO	0.941	0.969	0.990	0.891	0.920	0.945	0.960	0.970	0.977	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.90	0.90	0.91	0.027	0.029	0.030
BE01B	3IA	0.943	0.970	0.991	0.895	0.923	0.948	0.961	0.970	0.978	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.93	0.93	0.93	0.080	0.080	0.081
BE01B	4PO	0.952	0.978	0.997	0.916	0.941	0.967	0.973	0.979	0.984	1.74	2.16	2.50	0.96	0.97	0.99	0.89	0.89	0.89	0.73	0.73	0.74	0.128	0.129	0.130
BE01B	4AI	0.941	0.968	0.989	0.888	0.917	0.943	0.960	0.969	0.976	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE02A	1PO	0.977	0.983	0.984	0.937	0.951	0.958	0.978	0.983	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE02A	1IA	0.977	0.983	0.984	0.937	0.951	0.958	0.978	0.983	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE02A	2PO	0.977	0.983	0.984	0.937	0.951	0.958	0.978	0.983	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE02A	2IA	0.977	0.983	0.984	0.937	0.951	0.958	0.978	0.983	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE02A	3PO	0.978	0.983	0.984	0.939	0.953	0.959	0.978	0.984	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.033	0.033	0.033
BE02A	3IA	0.978	0.983	0.985	0.941	0.954	0.960	0.979	0.984	0.986	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	0.94	0.94	0.94	0.067	0.067	0.067
BE02A	4PO	0.984	0.988	0.989	0.955	0.964	0.969	0.985	0.989	0.990	1.75	2.21	2.48	0.96	0.97	0.99	0.89	0.89	0.89	0.75	0.75	0.75	0.137	0.137	0.137
BE02A	4AI	0.977	0.983	0.984	0.937	0.951	0.958	0.978	0.983	0.985	1.74	2.20	2.46	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE03A	1PO	0.956	0.967	0.971	0.888	0.915	0.929	0.957	0.968	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03A	1IA	0.956	0.967	0.971	0.888	0.915	0.929	0.957	0.968	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03A	2PO	0.956	0.967	0.975	0.888	0.915	0.931	0.957	0.968	0.975	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.97	1.00	1.00	0.000	0.000	0.002
BE03A	2IA	0.956	0.967	0.973	0.888	0.915	0.929	0.957	0.968	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03A	3PO	0.958	0.968	0.988	0.893	0.918	0.963	0.959	0.969	0.989	1.70	2.18	2.45	0.96	0.97	0.99	1.00	1.00	1.00	0.66	0.91	0.91	0.027	0.027	0.075
BE03A	3IA	0.959	0.969	0.975	0.896	0.920	0.934	0.960	0.970	0.975	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.081
BE03A	4PO	0.972	0.978	0.985	0.922	0.940	0.958	0.972	0.979	0.986	1.73	2.19	2.46	0.96	0.97	0.99	0.89	0.89	0.89	0.68	0.74	0.74	0.129	0.130	0.151
BE03A	4AI	0.957	0.968	0.972	0.889	0.915	0.929	0.957	0.969	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03B	1PO	0.940	0.968	0.989	0.885	0.916	0.942	0.959	0.968	0.976	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03B	1IA	0.940	0.968	0.989	0.885	0.916	0.942	0.959	0.968	0.976	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE03B	2PO	0.940	0.967	0.992	0.885	0.915	0.947	0.958	0.968	0.978	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.94	1.00	1.00	0.000	0.000	0.000
BE03B	2IA	0.940	0.967	0.989	0.885	0.915	0.946	0.958	0.968	0.977	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.97	1.00	1.00	0.000	0.000	0.000
BE03B	3PO	0.942	0.968	0.996	0.889	0.919	0.961	0.959	0.969	0.984	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.81	0.91	0.91	0.027	0.027	0.075
BE03B	3IA	0.942	0.969	0.990	0.892	0.921	0.961	0.961	0.970	0.979	1.72	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.081
BE03B	4PO	0.954	0.980	0.997	0.915	0.942	0.975	0.973	0.980	0.988	1.74	2.16	2.51	0.96	0.97	0.99	0.89	0.89	0.89	0.65	0.74	0.74	0.129	0.130	0.152
BE03B	4AI	0.940	0.969	0.989	0.885	0.916	0.943	0.959	0.968	0.977	1.71	2.14	2.48	0.96	0.97	0.99	1.00	1.00	1.00	0.97	1.00	1.00	0.000	0.000	0.000
BE04A	1PO	0.958	0.969	0.972	0.891	0.918	0.929	0.958	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE04A	1IA	0.958	0.969	0.972	0.891	0.918	0.929	0.958	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE04A	2PO	0.959	0.969	0.972	0.893	0.918	0.930	0.959	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE04A	2IA	0.959	0.969	0.972	0.893	0.918	0.930	0.959	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE04A	3PO	0.959	0.970	0.973	0.894	0.921	0.932	0.959	0.971	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.89	0.90	0.90	0.029	0.029	0.030
BE04A	3IA	0.960	0.971	0.973	0.898	0.924	0.934	0.960	0.972	0.974	1.70	2.18	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.081	0.082
BE04A	4PO	0.972	0.979	0.981	0.923	0.942	0.950	0.972	0.980	0.982	1.73	2.19	2.45	0.96	0.97	0.99	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.129	0.130
BE04A	4AI	0.958	0.969	0.972	0.891	0.919	0.929	0.958	0.970	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003



Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE05A	1PO	0.957	0.967	0.970	0.888	0.915	0.926	0.957	0.968	0.971	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE05A	1IA	0.957	0.967	0.970	0.888	0.915	0.926	0.957	0.968	0.971	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE05A	2PO	0.956	0.967	0.970	0.888	0.915	0.926	0.957	0.968	0.971	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE05A	2IA	0.956	0.967	0.970	0.888	0.915	0.926	0.957	0.968	0.971	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE05A	3PO	0.958	0.968	0.971	0.891	0.917	0.928	0.958	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.90	0.91	0.91	0.027	0.027	0.029
BE05A	3IA	0.959	0.969	0.972	0.895	0.920	0.930	0.959	0.969	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.081
BE05A	4PO	0.972	0.978	0.980	0.922	0.940	0.948	0.972	0.979	0.981	1.73	2.19	2.45	0.96	0.97	0.99	0.89	0.89	0.89	0.74	0.74	0.74	0.129	0.129	0.130
BE05A	4AI	0.957	0.967	0.970	0.889	0.915	0.926	0.957	0.968	0.971	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE06A	1PO	0.981	0.992	0.994	0.848	0.924	0.942	0.981	0.992	0.994	1.19	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE06A	1IA	0.981	0.992	0.994	0.848	0.924	0.942	0.981	0.992	0.994	1.19	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE06A	2PO	0.981	0.992	0.994	0.848	0.925	0.942	0.981	0.992	0.994	1.18	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE06A	2IA	0.981	0.992	0.994	0.848	0.925	0.942	0.981	0.992	0.994	1.18	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE06A	3PO	0.981	0.992	0.994	0.847	0.927	0.943	0.981	0.992	0.994	1.18	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.89	0.90	0.91	0.027	0.029	0.030
BE06A	3IA	0.982	0.992	0.994	0.849	0.928	0.944	0.982	0.992	0.994	1.19	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.080	0.081
BE06A	4PO	0.992	0.996	0.997	0.890	0.947	0.960	0.992	0.996	0.997	1.20	2.10	2.83	0.94	0.95	1.00	0.89	0.89	0.89	0.73	0.73	0.74	0.128	0.129	0.130
BE06A	4AI	0.981	0.992	0.994	0.848	0.926	0.943	0.981	0.992	0.994	1.18	2.09	2.82	0.92	0.95	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.003
BE07A	1PO	0.681	0.722	0.770	0.544	0.601	0.672	0.800	0.818	0.832	1.54	1.84	2.02	0.85	0.88	0.94	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07A	1IA	0.681	0.722	0.770	0.544	0.601	0.672	0.800	0.818	0.832	1.54	1.84	2.02	0.85	0.88	0.94	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07A	2PO	0.681	0.722	0.771	0.544	0.601	0.672	0.800	0.818	0.831	1.54	1.84	2.02	0.85	0.88	0.94	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07A	2IA	0.681	0.722	0.771	0.544	0.601	0.672	0.800	0.818	0.831	1.54	1.84	2.02	0.85	0.88	0.94	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07A	3PO	0.697	0.737	0.786	0.563	0.620	0.692	0.820	0.836	0.849	1.57	1.88	2.07	0.86	0.89	0.94	1.00	1.00	1.00	0.89	0.90	0.90	0.029	0.029	0.031
BE07A	3IA	0.692	0.734	0.784	0.559	0.615	0.689	0.814	0.832	0.845	1.57	1.87	2.06	0.85	0.88	0.94	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.081	0.082
BE07A	4PO	0.731	0.769	0.822	0.602	0.658	0.735	0.861	0.874	0.886	1.65	1.97	2.17	0.88	0.91	0.94	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.128	0.129
BE07A	4AI	0.681	0.721	0.771	0.544	0.601	0.672	0.800	0.818	0.831	1.54	1.84	2.02	0.85	0.88	0.94	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE07B	1PO	0.652	0.731	0.805	0.516	0.618	0.703	0.796	0.821	0.846	1.42	1.83	2.04	0.84	0.88	0.97	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07B	1IA	0.652	0.731	0.805	0.516	0.618	0.703	0.796	0.821	0.846	1.42	1.83	2.04	0.84	0.88	0.97	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07B	2PO	0.652	0.730	0.805	0.516	0.619	0.702	0.796	0.821	0.846	1.42	1.83	2.04	0.84	0.88	0.97	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07B	2IA	0.652	0.730	0.805	0.516	0.619	0.702	0.796	0.821	0.846	1.42	1.83	2.04	0.84	0.88	0.97	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE07B	3PO	0.668	0.746	0.820	0.535	0.635	0.722	0.816	0.838	0.860	1.44	1.88	2.09	0.86	0.89	0.97	1.00	1.00	1.00	0.89	0.90	0.90	0.029	0.029	0.030
BE07B	3IA	0.664	0.743	0.817	0.530	0.631	0.719	0.811	0.835	0.858	1.44	1.87	2.07	0.84	0.88	0.97	1.00	1.00	1.00	0.92	0.93	0.93	0.080	0.081	0.082
BE07B	4PO	0.699	0.778	0.853	0.573	0.675	0.765	0.859	0.876	0.894	1.50	1.96	2.17	0.88	0.91	0.97	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.128	0.129
BE07B	4AI	0.651	0.731	0.805	0.516	0.618	0.703	0.795	0.820	0.846	1.42	1.83	2.04	0.84	0.88	0.97	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08A	1PO	0.869	0.884	0.894	0.723	0.772	0.800	0.902	0.913	0.920	1.75	2.34	2.63	0.90	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.002	0.002	0.003
BE08A	1IA	0.869	0.884	0.894	0.723	0.772	0.800	0.902	0.913	0.920	1.75	2.34	2.63	0.90	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.002	0.002	0.003
BE08A	2PO	0.870	0.884	0.894	0.723	0.772	0.800	0.902	0.913	0.921	1.75	2.34	2.63	0.90	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08A	2IA	0.870	0.884	0.894	0.723	0.772	0.800	0.902	0.913	0.921	1.75	2.34	2.63	0.90	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08A	3PO	0.877	0.891	0.900	0.739	0.785	0.811	0.909	0.921	0.927	1.76	2.36	2.65	0.91	0.92	0.96	1.00	1.00	1.00	0.89	0.90	0.90	0.028	0.029	0.030
BE08A	3IA	0.876	0.891	0.901	0.738	0.785	0.812	0.909	0.921	0.927	1.76	2.36	2.65	0.90	0.92	0.96	1.00	1.00	1.00	0.92	0.93	0.93	0.080	0.081	0.082
BE08A	4PO	0.897	0.911	0.922	0.772	0.818	0.844	0.934	0.941	0.946	1.81	2.41	2.71	0.92	0.93	0.96	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.129	0.130
BE08A	4AI	0.870	0.884	0.894	0.725	0.772	0.800	0.902	0.914	0.921	1.75	2.34	2.63	0.90	0.92	0.96	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003
BE08B	1PO	0.848	0.887	0.940	0.699	0.785	0.840	0.891	0.916	0.934	1.63	2.33	2.70	0.89	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08B	1IA	0.848	0.887	0.940	0.699	0.785	0.840	0.891	0.916	0.934	1.63	2.33	2.70	0.89	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08B	2PO	0.847	0.887	0.940	0.700	0.785	0.840	0.891	0.916	0.934	1.63	2.33	2.70	0.89	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08B	2IA	0.847	0.887	0.940	0.700	0.785	0.840	0.891	0.916	0.934	1.63	2.33	2.70	0.89	0.92	0.96	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE08B	3PO	0.856	0.894	0.947	0.712	0.798	0.853	0.901	0.923	0.939	1.64	2.35	2.73	0.90	0.92	0.96	1.00	1.00	1.00	0.89	0.90	0.90	0.028	0.029	0.030
BE08B	3IA	0.856	0.894	0.946	0.711	0.798	0.852	0.901	0.924	0.939	1.65	2.35	2.72	0.89	0.92	0.96	1.00	1.00	1.00	0.92	0.93	0.93	0.080	0.081	0.082
BE08B	4PO	0.878	0.915	0.964	0.746	0.828	0.880	0.928	0.944	0.956	1.69	2.39	2.78	0.91	0.94	0.96	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.129	0.130
BE08B	4AI	0.846	0.888	0.940	0.700	0.785	0.842	0.892	0.917	0.934	1.63	2.33	2.70	0.89	0.92	0.96	1.00	1.00	1.00	0.99	0.99	0.99	0.001	0.002	0.003

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE09A	1PO	0.989	0.994	0.996	0.881	0.928	0.952	0.989	0.994	0.996	1.01	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE09A	1IA	0.989	0.994	0.996	0.881	0.928	0.952	0.989	0.994	0.996	1.01	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE09A	2PO	0.989	0.994	0.996	0.879	0.929	0.952	0.989	0.994	0.996	1.01	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.003
BE09A	2IA	0.989	0.994	0.996	0.879	0.929	0.952	0.989	0.994	0.996	1.01	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.003
BE09A	3PO	0.989	0.994	0.996	0.879	0.930	0.952	0.989	0.994	0.996	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.89	0.90	0.91	0.027	0.029	0.030
BE09A	3IA	0.989	0.994	0.996	0.879	0.930	0.952	0.989	0.994	0.996	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.080	0.081
BE09A	4PO	0.997	0.999	0.999	0.914	0.950	0.967	0.997	0.999	0.999	1.01	1.27	1.90	0.98	1.00	1.00	0.89	0.89	0.89	0.73	0.73	0.74	0.127	0.129	0.130
BE09A	4AI	0.989	0.994	0.996	0.881	0.929	0.953	0.989	0.994	0.996	1.01	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.002
BE10A	1PO	0.956	0.967	0.971	0.887	0.915	0.930	0.956	0.968	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE10A	1IA	0.956	0.967	0.971	0.887	0.915	0.930	0.956	0.968	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE10A	2PO	0.956	0.967	0.975	0.887	0.915	0.938	0.956	0.968	0.975	1.70	2.17	2.44	0.96	0.97	0.99	1.00	1.00	1.00	0.97	1.00	1.00	0.000	0.000	0.000
BE10A	2IA	0.956	0.967	0.971	0.887	0.915	0.928	0.956	0.968	0.972	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE10A	3PO	0.957	0.968	0.983	0.890	0.917	0.953	0.957	0.969	0.984	1.70	2.17	2.45	0.96	0.97	0.99	1.00	1.00	1.00	0.81	0.91	0.91	0.027	0.027	0.075
BE10A	3IA	0.958	0.969	0.973	0.894	0.920	0.934	0.958	0.969	0.974	1.70	2.17	2.44	0.96	0.97	0.99	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.078
BE10A	4PO	0.971	0.978	0.985	0.921	0.940	0.958	0.971	0.979	0.987	1.72	2.19	2.46	0.96	0.97	0.99	0.89	0.89	0.89	0.65	0.74	0.74	0.129	0.129	0.152
BE10A	4AI	0.956	0.967	0.972	0.887	0.915	0.929	0.956	0.968	0.973	1.70	2.17	2.43	0.96	0.97	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.000
BE11A	1PO	0.281	0.351	0.463	0.203	0.258	0.342	0.470	0.514	0.550	1.26	1.64	1.85	0.48	0.55	0.70	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE11A	1IA	0.281	0.351	0.463	0.203	0.258	0.342	0.470	0.514	0.550	1.26	1.64	1.85	0.48	0.55	0.70	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE11A	2PO	0.281	0.350	0.458	0.204	0.260	0.337	0.473	0.513	0.550	1.27	1.64	1.85	0.48	0.55	0.70	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE11A	2IA	0.281	0.350	0.458	0.204	0.260	0.337	0.473	0.513	0.550	1.27	1.64	1.85	0.48	0.55	0.70	1.00	1.00	1.00	0.99	0.99	1.00	0.001	0.002	0.003
BE11A	3PO	0.314	0.387	0.505	0.228	0.287	0.385	0.530	0.567	0.608	1.40	1.81	2.02	0.53	0.60	0.72	1.00	1.00	1.00	0.89	0.90	0.90	0.027	0.029	0.031
BE11A	3IA	0.301	0.372	0.487	0.218	0.276	0.369	0.507	0.548	0.591	1.36	1.75	1.96	0.51	0.58	0.70	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.081	0.082
BE11A	4PO	0.375	0.450	0.588	0.273	0.340	0.475	0.625	0.662	0.702	1.67	2.12	2.32	0.63	0.68	0.77	0.89	0.89	0.89	0.73	0.73	0.73	0.127	0.129	0.130
BE11A	4AI	0.282	0.351	0.461	0.204	0.258	0.336	0.471	0.513	0.553	1.26	1.64	1.85	0.48	0.55	0.70	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.003

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE12A	1PO	0.761	0.794	0.821	0.578	0.639	0.695	0.831	0.849	0.863	2.05	2.92	3.33	0.81	0.83	0.88	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE12A	1IA	0.761	0.794	0.821	0.578	0.639	0.695	0.831	0.849	0.863	2.05	2.92	3.33	0.81	0.83	0.88	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE12A	2PO	0.760	0.794	0.821	0.578	0.640	0.696	0.831	0.849	0.863	2.06	2.92	3.33	0.81	0.83	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE12A	2IA	0.760	0.794	0.821	0.578	0.640	0.696	0.831	0.849	0.863	2.06	2.92	3.33	0.81	0.83	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE12A	3PO	0.776	0.809	0.835	0.597	0.658	0.715	0.850	0.865	0.876	2.09	2.97	3.39	0.83	0.85	0.88	1.00	1.00	1.00	0.90	0.91	0.91	0.027	0.027	0.029
BE12A	3IA	0.772	0.806	0.834	0.592	0.654	0.712	0.848	0.861	0.874	2.09	2.96	3.37	0.81	0.83	0.88	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.081
BE12A	4PO	0.807	0.840	0.872	0.636	0.703	0.767	0.889	0.900	0.909	2.19	3.08	3.53	0.85	0.87	0.90	0.89	0.89	0.89	0.73	0.74	0.74	0.129	0.130	0.131
BE12A	4AI	0.761	0.795	0.821	0.578	0.640	0.696	0.833	0.850	0.863	2.06	2.92	3.33	0.81	0.83	0.88	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE12B	1PO	0.713	0.797	0.848	0.562	0.648	0.720	0.812	0.854	0.878	2.02	2.93	3.47	0.80	0.84	0.90	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE12B	1IA	0.713	0.797	0.848	0.562	0.648	0.720	0.812	0.854	0.878	2.02	2.93	3.47	0.80	0.84	0.90	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE12B	2PO	0.714	0.797	0.848	0.562	0.648	0.722	0.812	0.854	0.878	2.02	2.93	3.47	0.80	0.84	0.90	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE12B	2IA	0.714	0.797	0.848	0.562	0.648	0.722	0.812	0.854	0.878	2.02	2.93	3.47	0.80	0.84	0.90	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.002
BE12B	3PO	0.730	0.812	0.861	0.580	0.667	0.737	0.831	0.869	0.890	2.05	2.98	3.52	0.82	0.85	0.90	1.00	1.00	1.00	0.90	0.91	0.91	0.027	0.027	0.029
BE12B	3IA	0.725	0.808	0.860	0.575	0.664	0.737	0.827	0.866	0.888	2.05	2.97	3.51	0.80	0.84	0.90	1.00	1.00	1.00	0.93	0.94	0.94	0.078	0.078	0.081
BE12B	4PO	0.769	0.842	0.892	0.618	0.709	0.782	0.872	0.904	0.918	2.14	3.08	3.65	0.85	0.87	0.91	0.89	0.89	0.89	0.73	0.74	0.74	0.129	0.130	0.131
BE12B	4AI	0.715	0.798	0.848	0.562	0.649	0.720	0.813	0.854	0.878	2.02	2.93	3.47	0.80	0.84	0.90	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.002
BE13A	1PO	0.383	0.459	0.601	0.278	0.347	0.498	0.637	0.675	0.721	1.71	2.17	2.37	0.64	0.68	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE13A	1IA	0.383	0.459	0.601	0.278	0.347	0.498	0.637	0.675	0.721	1.71	2.17	2.37	0.64	0.68	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE13A	2PO	0.383	0.459	0.601	0.278	0.347	0.498	0.637	0.675	0.721	1.71	2.17	2.37	0.64	0.68	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE13A	2IA	0.383	0.459	0.601	0.278	0.347	0.498	0.637	0.675	0.721	1.71	2.17	2.37	0.64	0.68	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE13A	3PO	0.404	0.480	0.624	0.293	0.365	0.522	0.668	0.705	0.748	1.79	2.27	2.46	0.67	0.71	0.78	1.00	1.00	1.00	0.92	0.92	0.92	0.033	0.033	0.033
BE13A	3IA	0.395	0.472	0.615	0.286	0.358	0.515	0.655	0.694	0.740	1.76	2.23	2.42	0.66	0.70	0.75	1.00	1.00	1.00	0.94	0.94	0.94	0.067	0.067	0.067
BE13A	4PO	0.443	0.520	0.677	0.321	0.400	0.570	0.730	0.763	0.802	1.94	2.46	2.65	0.73	0.76	0.81	0.89	0.89	0.89	0.75	0.75	0.75	0.137	0.137	0.137
BE13A	4AI	0.383	0.459	0.601	0.278	0.347	0.498	0.637	0.675	0.721	1.71	2.17	2.37	0.64	0.68	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE14A	1PO	0.814	0.848	0.883	0.645	0.716	0.784	0.897	0.909	0.918	2.21	3.11	3.56	0.85	0.86	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE14A	1IA	0.814	0.848	0.883	0.645	0.716	0.784	0.897	0.909	0.918	2.21	3.11	3.56	0.85	0.86	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE14A	2PO	0.814	0.848	0.883	0.645	0.716	0.784	0.897	0.909	0.918	2.21	3.11	3.56	0.85	0.86	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE14A	2IA	0.814	0.848	0.883	0.645	0.716	0.784	0.897	0.909	0.918	2.21	3.11	3.56	0.85	0.86	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE14A	3PO	0.821	0.855	0.890	0.656	0.727	0.795	0.906	0.916	0.925	2.23	3.13	3.59	0.86	0.87	0.89	1.00	1.00	1.00	0.92	0.92	0.92	0.033	0.033	0.033
BE14A	3IA	0.819	0.854	0.889	0.653	0.724	0.794	0.903	0.915	0.923	2.23	3.13	3.58	0.85	0.86	0.89	1.00	1.00	1.00	0.94	0.94	0.94	0.067	0.067	0.067
BE14A	4PO	0.839	0.873	0.911	0.680	0.751	0.826	0.926	0.935	0.942	2.28	3.19	3.66	0.88	0.89	0.91	0.89	0.89	0.89	0.75	0.75	0.75	0.137	0.137	0.137
BE14A	4AI	0.814	0.848	0.883	0.645	0.716	0.784	0.897	0.909	0.918	2.21	3.11	3.56	0.85	0.86	0.89	1.00	1.00	1.00	1.00	1.00	1.00	0.000	0.000	0.000
BE15A	1PO	0.946	0.960	0.964	0.865	0.898	0.912	0.946	0.961	0.965	1.68	2.15	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.000	0.001	0.001
BE15A	1IA	0.946	0.960	0.964	0.865	0.898	0.912	0.946	0.961	0.965	1.68	2.15	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.000	0.001	0.001
BE15A	2PO	0.946	0.960	0.964	0.865	0.898	0.912	0.946	0.961	0.965	1.68	2.15	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.000	0.001	0.001
BE15A	2IA	0.946	0.960	0.964	0.865	0.898	0.912	0.946	0.961	0.965	1.68	2.15	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.000	0.001	0.001
BE15A	3PO	0.948	0.962	0.965	0.870	0.902	0.915	0.948	0.962	0.966	1.68	2.16	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.83	0.83	0.83	0.025	0.027	0.028
BE15A	3IA	0.948	0.962	0.965	0.873	0.904	0.917	0.948	0.963	0.966	1.68	2.16	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.86	0.87	0.87	0.079	0.080	0.080
BE15A	4PO	0.964	0.973	0.975	0.905	0.927	0.937	0.965	0.974	0.976	1.71	2.18	2.44	0.96	0.97	0.99	0.89	0.89	0.89	0.66	0.67	0.67	0.108	0.110	0.112
BE15A	4AI	0.946	0.960	0.964	0.865	0.898	0.912	0.946	0.961	0.965	1.68	2.15	2.41	0.96	0.97	0.99	1.00	1.00	1.00	0.92	0.92	0.92	0.000	0.001	0.001
BE16A	1PO	0.637	0.679	0.719	0.495	0.553	0.610	0.743	0.768	0.788	1.43	1.73	1.88	0.82	0.86	0.93	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.002	0.006
BE16A	1IA	0.637	0.679	0.719	0.495	0.553	0.610	0.743	0.768	0.788	1.43	1.73	1.88	0.82	0.86	0.93	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.002	0.006
BE16A	2PO	0.637	0.679	0.725	0.499	0.554	0.618	0.749	0.768	0.788	1.43	1.73	1.89	0.82	0.86	0.93	1.00	1.00	1.00	0.92	0.93	0.95	0.000	0.001	0.005
BE16A	2IA	0.636	0.679	0.725	0.498	0.554	0.617	0.748	0.767	0.787	1.43	1.73	1.89	0.82	0.86	0.93	1.00	1.00	1.00	0.92	0.93	0.95	0.000	0.003	0.005
BE16A	3PO	0.658	0.699	0.748	0.521	0.577	0.640	0.771	0.793	0.811	1.48	1.79	1.96	0.84	0.87	0.93	1.00	1.00	1.00	0.83	0.83	0.86	0.025	0.027	0.028
BE16A	3IA	0.649	0.691	0.741	0.514	0.568	0.632	0.759	0.784	0.804	1.47	1.77	1.94	0.82	0.86	0.93	1.00	1.00	1.00	0.86	0.88	0.90	0.079	0.083	0.087
BE16A	4PO	0.706	0.747	0.796	0.573	0.628	0.705	0.828	0.847	0.860	1.60	1.90	2.09	0.87	0.89	0.94	0.89	0.89	0.89	0.66	0.67	0.69	0.107	0.111	0.117
BE16A	4AI	0.634	0.675	0.726	0.499	0.551	0.615	0.737	0.767	0.789	1.45	1.73	1.89	0.82	0.86	0.93	1.00	1.00	1.00	0.92	0.93	0.96	0.000	0.003	0.005

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE16B	1PO	0.612	0.686	0.761	0.472	0.571	0.653	0.739	0.771	0.805	1.35	1.72	1.92	0.81	0.86	0.97	1.00	1.00	1.00	0.92	0.92	0.96	0.000	0.001	0.006
BE16B	1IA	0.612	0.686	0.761	0.472	0.571	0.653	0.739	0.771	0.805	1.35	1.72	1.92	0.81	0.86	0.97	1.00	1.00	1.00	0.92	0.92	0.96	0.000	0.001	0.006
BE16B	2PO	0.607	0.688	0.761	0.473	0.572	0.648	0.734	0.770	0.805	1.35	1.72	1.91	0.81	0.86	0.97	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.001	0.005
BE16B	2IA	0.606	0.688	0.761	0.473	0.572	0.648	0.734	0.770	0.805	1.35	1.72	1.91	0.81	0.86	0.97	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.002	0.005
BE16B	3PO	0.632	0.709	0.781	0.495	0.596	0.677	0.770	0.795	0.826	1.38	1.78	1.98	0.83	0.87	0.97	1.00	1.00	1.00	0.83	0.83	0.86	0.025	0.027	0.028
BE16B	3IA	0.623	0.700	0.778	0.488	0.588	0.668	0.757	0.787	0.819	1.38	1.75	1.95	0.81	0.86	0.97	1.00	1.00	1.00	0.86	0.88	0.90	0.079	0.083	0.086
BE16B	4PO	0.676	0.755	0.829	0.541	0.645	0.734	0.826	0.848	0.871	1.46	1.90	2.11	0.86	0.90	0.97	0.89	0.89	0.89	0.66	0.67	0.69	0.107	0.111	0.117
BE16B	4AI	0.607	0.683	0.761	0.473	0.569	0.651	0.739	0.769	0.804	1.35	1.71	1.90	0.81	0.86	0.97	1.00	1.00	1.00	0.92	0.93	0.96	0.000	0.003	0.005
BE17A	1PO	0.847	0.859	0.873	0.690	0.737	0.766	0.868	0.889	0.900	1.68	2.28	2.56	0.89	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.006
BE17A	1IA	0.847	0.859	0.873	0.690	0.737	0.766	0.868	0.889	0.900	1.68	2.28	2.56	0.89	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.006
BE17A	2PO	0.846	0.859	0.873	0.690	0.737	0.768	0.872	0.890	0.900	1.69	2.28	2.56	0.89	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.93	0.000	0.001	0.005
BE17A	2IA	0.846	0.859	0.873	0.689	0.737	0.767	0.872	0.890	0.900	1.69	2.28	2.56	0.89	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.93	0.000	0.002	0.005
BE17A	3PO	0.857	0.869	0.882	0.706	0.752	0.781	0.883	0.900	0.908	1.71	2.31	2.59	0.89	0.91	0.96	1.00	1.00	1.00	0.83	0.83	0.84	0.025	0.027	0.028
BE17A	3IA	0.855	0.868	0.880	0.704	0.750	0.780	0.880	0.898	0.907	1.71	2.30	2.59	0.89	0.91	0.96	1.00	1.00	1.00	0.86	0.87	0.89	0.079	0.080	0.084
BE17A	4PO	0.883	0.898	0.908	0.747	0.795	0.822	0.916	0.928	0.934	1.77	2.38	2.67	0.91	0.93	0.96	0.89	0.89	0.89	0.66	0.67	0.68	0.107	0.109	0.112
BE17A	4AI	0.847	0.859	0.872	0.690	0.736	0.766	0.868	0.889	0.900	1.68	2.28	2.56	0.89	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.005
BE17B	1PO	0.822	0.862	0.920	0.664	0.748	0.810	0.859	0.893	0.915	1.58	2.27	2.64	0.87	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.006
BE17B	1IA	0.822	0.862	0.920	0.664	0.748	0.810	0.859	0.893	0.915	1.58	2.27	2.64	0.87	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.006
BE17B	2PO	0.822	0.863	0.920	0.662	0.748	0.811	0.860	0.893	0.916	1.58	2.27	2.64	0.87	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.93	0.000	0.001	0.005
BE17B	2IA	0.822	0.863	0.920	0.662	0.748	0.811	0.860	0.893	0.916	1.58	2.27	2.64	0.87	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.93	0.000	0.002	0.005
BE17B	3PO	0.831	0.873	0.929	0.681	0.763	0.824	0.876	0.902	0.923	1.60	2.30	2.67	0.88	0.91	0.96	1.00	1.00	1.00	0.83	0.83	0.84	0.025	0.026	0.028
BE17B	3IA	0.830	0.871	0.928	0.676	0.762	0.823	0.871	0.901	0.922	1.60	2.29	2.66	0.87	0.91	0.96	1.00	1.00	1.00	0.86	0.87	0.89	0.079	0.080	0.084
BE17B	4PO	0.865	0.901	0.953	0.722	0.808	0.860	0.908	0.930	0.945	1.65	2.36	2.74	0.90	0.93	0.96	0.89	0.89	0.89	0.66	0.67	0.68	0.107	0.109	0.112
BE17B	4AI	0.822	0.863	0.920	0.662	0.748	0.811	0.860	0.893	0.916	1.57	2.27	2.64	0.87	0.91	0.96	1.00	1.00	1.00	0.92	0.92	0.94	0.000	0.001	0.005

Trial	Option	D1 (Fin Dep) (1+)			D1 (Fin Dep) (fem)			D8 (Rescale Fin Dep)			D10 (Rel Recov)			R1 (Rel Recovery)			N9 (Ave need Sat: 20)			N9 (Ave need Sat: 20)			N12 (Mean Down Step)		
		5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%	5%	Med	95%
BE18A	1PO	0.986	0.992	0.995	0.854	0.910	0.942	0.986	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.001	0.005
BE18A	1IA	0.986	0.992	0.995	0.854	0.910	0.942	0.986	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.95	0.000	0.001	0.005
BE18A	2PO	0.986	0.992	0.995	0.851	0.910	0.942	0.986	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.96	0.000	0.000	0.003
BE18A	2IA	0.986	0.992	0.995	0.851	0.910	0.942	0.986	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.96	0.000	0.001	0.003
BE18A	3PO	0.986	0.993	0.995	0.852	0.912	0.943	0.986	0.993	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.86	0.025	0.027	0.028
BE18A	3IA	0.985	0.992	0.995	0.850	0.910	0.942	0.985	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.86	0.87	0.91	0.079	0.080	0.086
BE18A	4PO	0.996	0.998	0.999	0.891	0.936	0.959	0.996	0.998	0.999	1.01	1.26	1.89	0.98	1.00	1.00	0.89	0.89	0.89	0.66	0.66	0.70	0.108	0.110	0.119
BE18A	4AI	0.986	0.992	0.995	0.850	0.910	0.942	0.986	0.992	0.995	1.00	1.26	1.89	0.98	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.96	0.000	0.001	0.004
BE19A	1PO	0.968	0.987	0.995	0.889	0.932	0.949	0.968	0.987	0.995	1.08	1.70	2.33	0.96	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE19A	1IA	0.968	0.987	0.995	0.889	0.932	0.949	0.968	0.987	0.995	1.08	1.70	2.33	0.96	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE19A	2PO	0.968	0.987	0.995	0.890	0.931	0.948	0.968	0.987	0.995	1.08	1.70	2.33	0.96	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE19A	2IA	0.968	0.987	0.995	0.890	0.931	0.948	0.968	0.987	0.995	1.08	1.70	2.33	0.96	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003
BE19A	3PO	0.968	0.987	0.995	0.892	0.933	0.950	0.968	0.987	0.995	1.08	1.70	2.34	0.96	0.98	1.00	1.00	1.00	1.00	0.89	0.90	0.91	0.027	0.029	0.030
BE19A	3IA	0.969	0.987	0.995	0.894	0.934	0.950	0.969	0.987	0.995	1.08	1.70	2.34	0.96	0.98	1.00	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.080	0.081
BE19A	4PO	0.979	0.993	0.998	0.921	0.952	0.965	0.979	0.993	0.998	1.09	1.71	2.35	0.97	0.98	1.00	0.89	0.89	0.89	0.73	0.73	0.74	0.128	0.129	0.130
BE19A	4AI	0.968	0.987	0.995	0.890	0.932	0.949	0.968	0.987	0.995	1.08	1.70	2.33	0.96	0.98	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.000	0.002	0.003
BE20A	1PO	0.845	0.902	1.052	0.718	0.776	0.917	0.878	0.974	1.036	1.19	1.66	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.003
BE20A	1IA	0.845	0.902	1.052	0.718	0.776	0.917	0.878	0.974	1.036	1.19	1.66	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.000	0.003
BE20A	2PO	0.845	0.901	1.048	0.719	0.777	0.917	0.878	0.973	1.038	1.19	1.66	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.001	0.003
BE20A	2IA	0.845	0.901	1.048	0.719	0.777	0.917	0.878	0.973	1.038	1.19	1.66	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.001	0.003
BE20A	3PO	0.839	0.888	1.044	0.723	0.786	0.933	0.876	0.961	1.016	1.18	1.64	1.94	0.97	0.99	1.00	1.00	1.00	1.00	0.89	0.91	0.91	0.027	0.029	0.030
BE20A	3IA	0.844	0.906	1.069	0.733	0.797	0.930	0.882	0.978	1.047	1.21	1.67	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.92	0.93	0.94	0.078	0.080	0.081
BE20A	4PO	0.853	0.906	1.088	0.754	0.818	0.966	0.902	0.982	1.037	1.23	1.67	1.98	0.97	0.99	1.00	0.89	0.89	0.89	0.73	0.73	0.74	0.128	0.129	0.130
BE20A	4AI	0.845	0.903	1.050	0.719	0.777	0.917	0.879	0.974	1.039	1.18	1.66	1.97	0.97	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.000	0.002	0.003

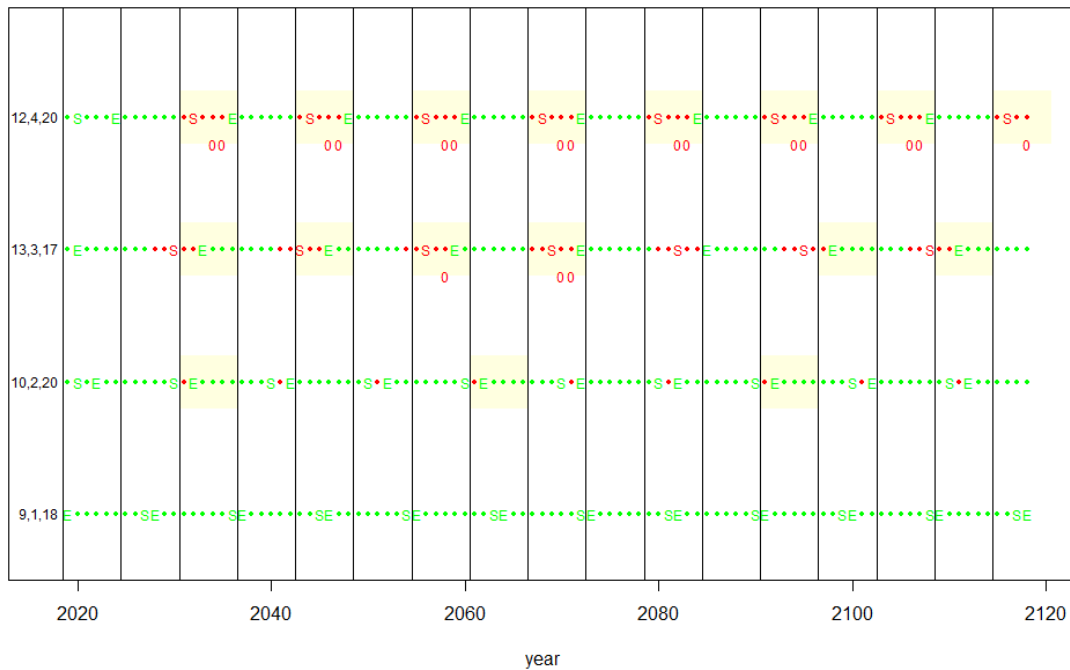


Figure1. Graphical summary of the four survey timing scenarios. In this figure, vertical lines define 6-year blocks. Yellow blocks represent grace blocks. Red symbols mean that an agreed estimate is overdue in that year. Green means that nothing is overdue. "S" means that a survey took place in that year. "E" means that an estimate was agreed that year. A "dot" means neither. Underneath the row of symbols may be another row with a few zeros in it. Assuming that the 50% phase-out rule is operational and that hunters fully satisfy need for as long as possible during the grace period, then a "0" means that there would be no strikes remaining in the indicated year. The scenario labels in the left edge of the figure correspond to the specifications in Table 6.



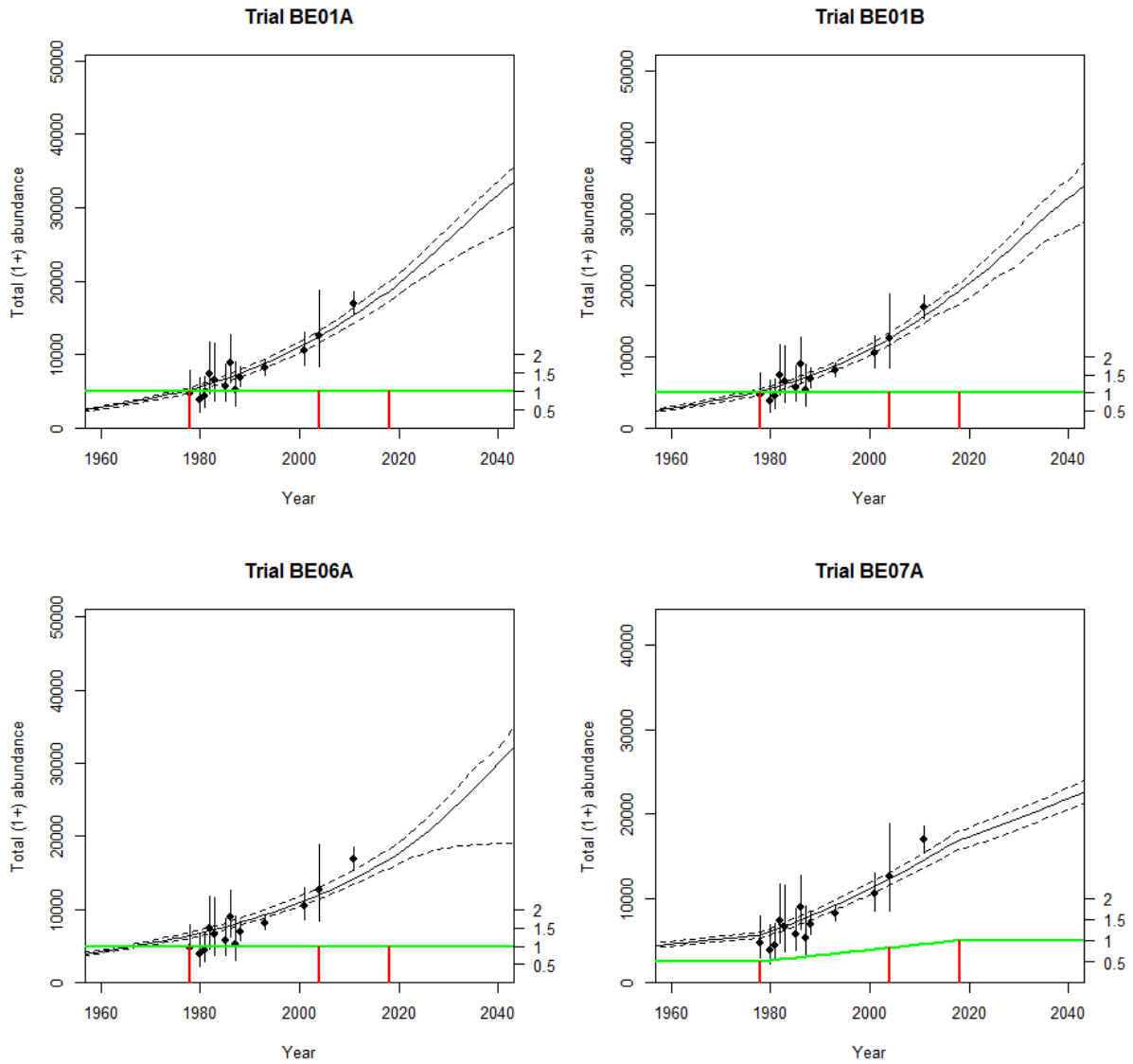
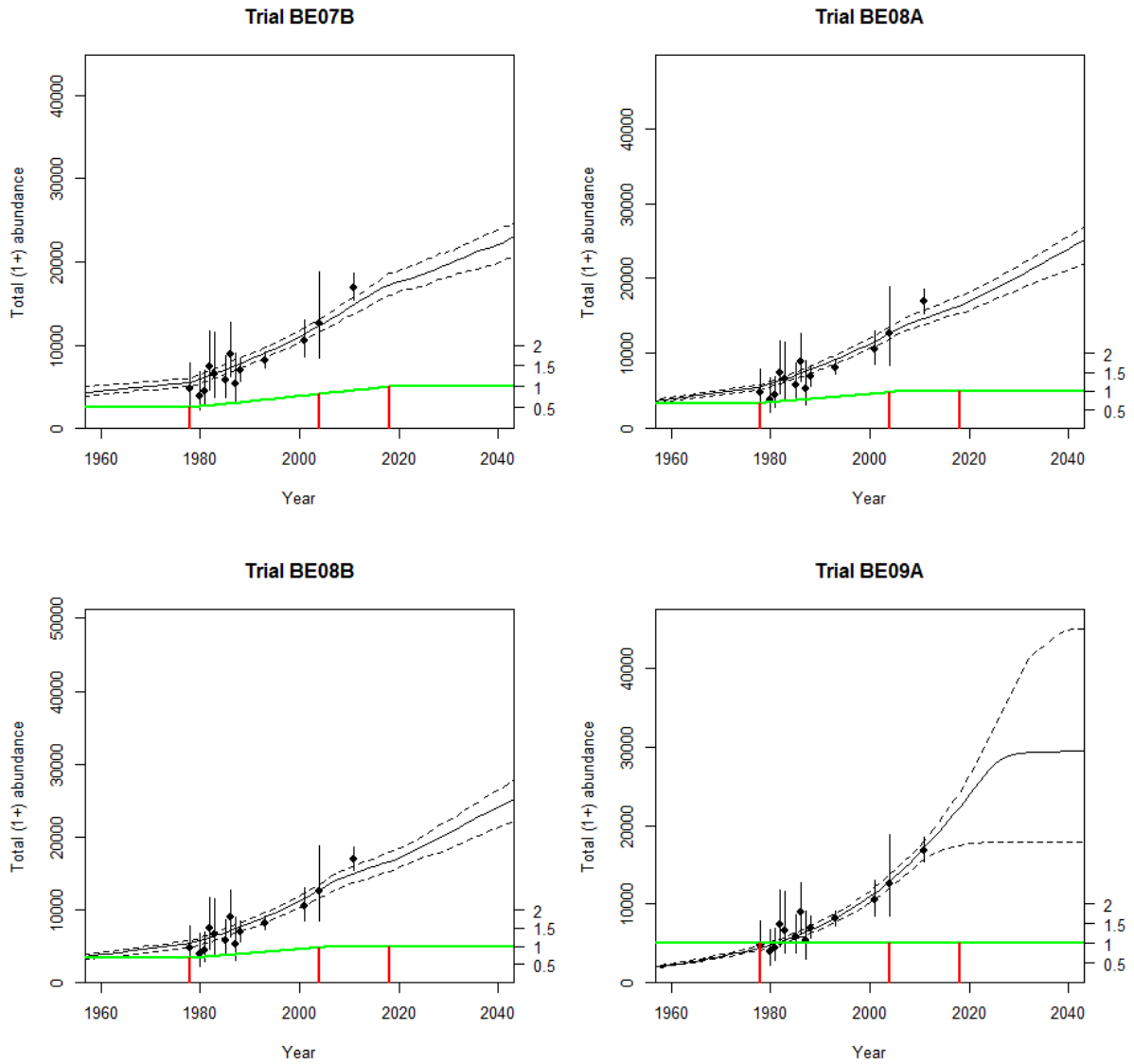
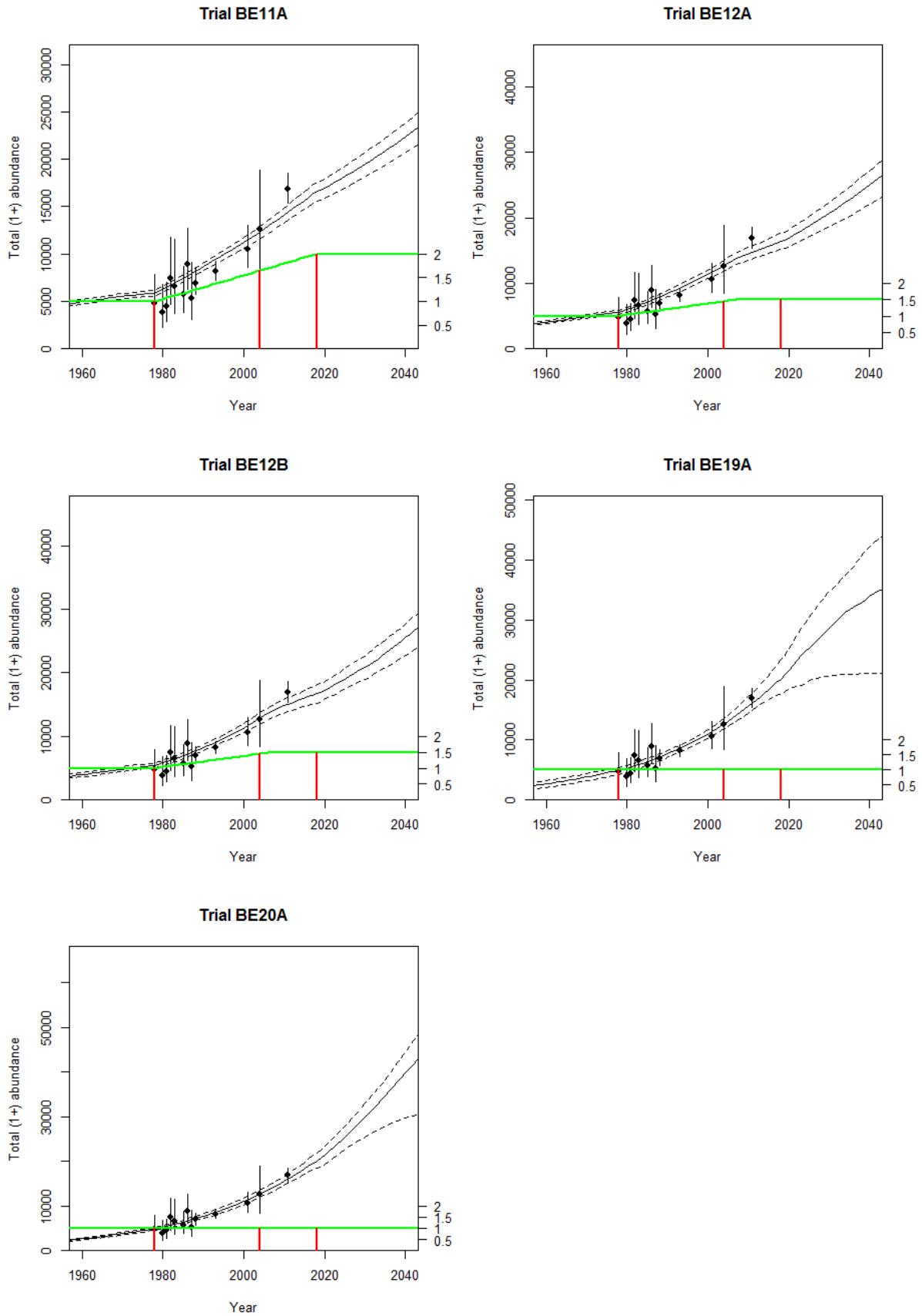


Figure 2. Posterior distributions for total (1+) abundance (posterior medians and 90% intervals), along with the estimates of abundance used for conditioning. The green line indicates how survey bias changes over time (the scale for survey bias is given in the right axis). The red vertical lines denote 1978, 2007 and 2018.



(Figure 2 Continued)



(Figure 2 Continued)

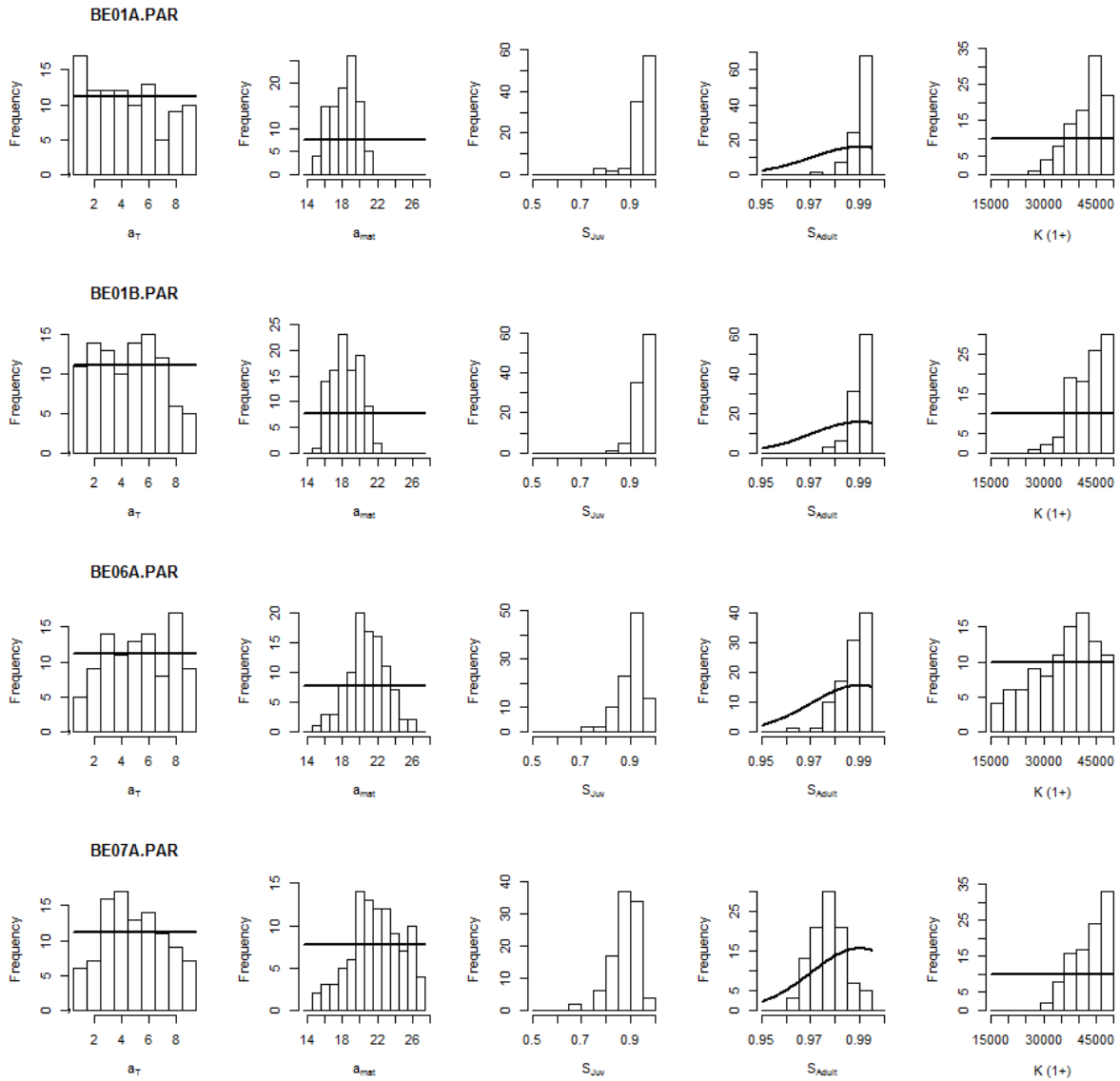
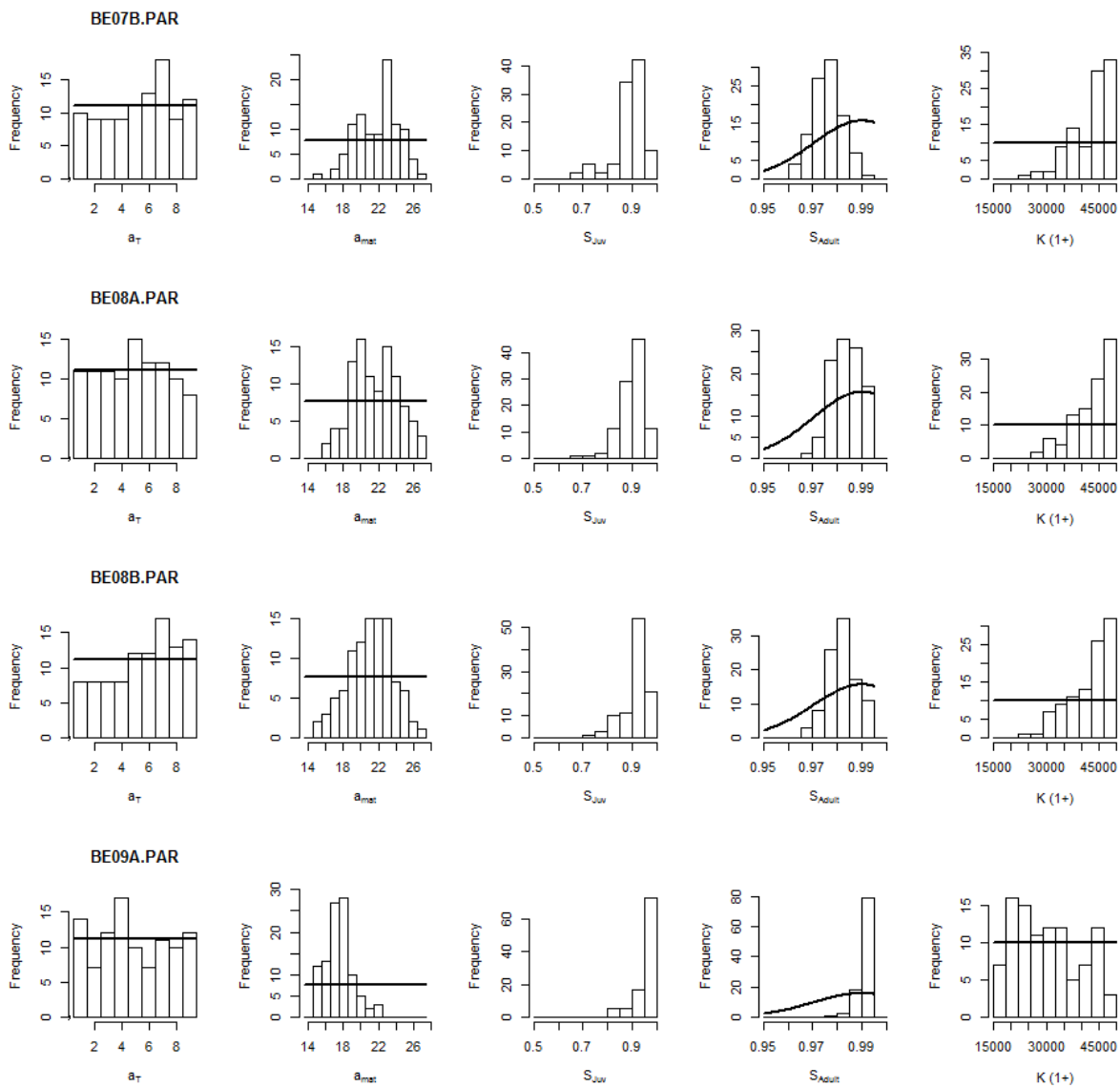
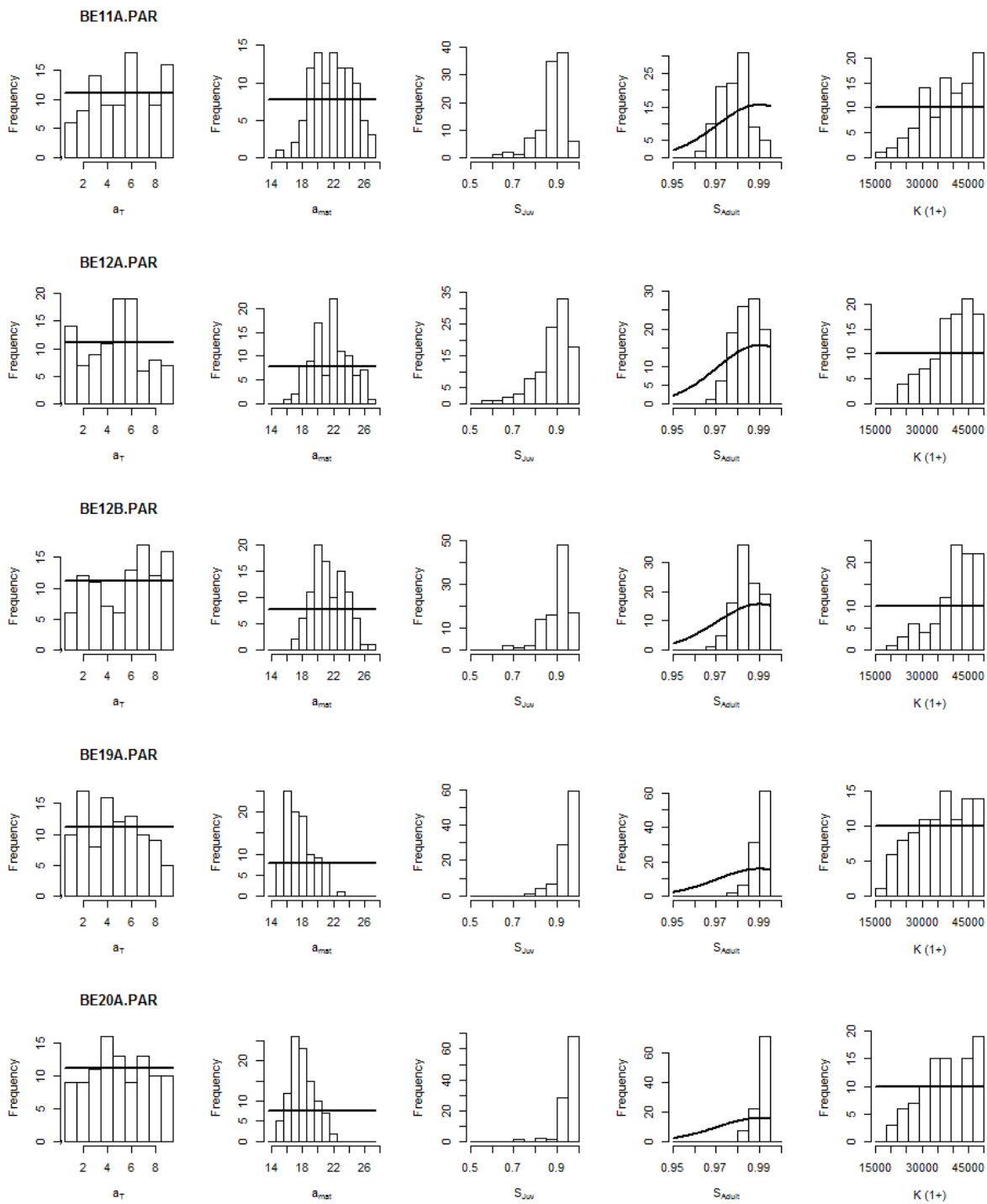


Figure 3. Samples from the posterior distributions for the age-at-transition ( $a_T$ ), the age-at-maturity ( $a_{mat}$ ), the juvenile survival rate ( $S_{Juv}$ ), the adult survival rate ( $S_{Adult}$ ), and the 1+ carrying capacity (histograms) and the priors (solid lines) – there is no prior for  $S_{Juv}$ , which is a derived parameter. Results are shown for the 13 trials that were conditioned.



(Figure 3 Continued)



(Figure 3 Continued)