

Table 5.--Estimates of walleye pollock biomass (in metric tons (t)) by survey area and management area from February-March echo integration-trawl surveys in the Bogoslof Island area between 1988 and 2005.

<u>Bogoslof Survey Area</u>				<u>Central Bering Sea Specific Area</u>	
Year	Biomass (million t)	Area nmi²	Relative estimation error (%)	Biomass (million t)	Relative estimation error (%)
1988	2.396	--	--	2.396	--
1989	2.126	--	--	2.084	--
1990	--	No survey	--	--	--
1991	1.289	8,411	11.7	1.283	--
1992	0.940	8,794	20.4	0.888	--
1993	0.635	7,743	9.2	0.631	--
1994	0.490	6,412	11.6	0.490	--
1995	1.104	7,781	10.7	1.020	--
1996	0.682	7,898	19.6	0.582	--
1997	0.392	8,321	14.0	0.342	--
1998	0.492	8,796	19.0	0.432	19.0
1999	0.475	Conducted by Japan Fisheries Agency		0.393	--
2000	0.301	7,863	14.3	0.270	12.7
2001	0.232	5,573	10.2	0.208	11.8
2002	0.227	2,903	12.2	0.227	12.2
2003	0.198	2,993	21.5	0.198	21.5
2004	--	No survey	--	--	--
2005	0.253	3,112	16.7	0.253	16.7

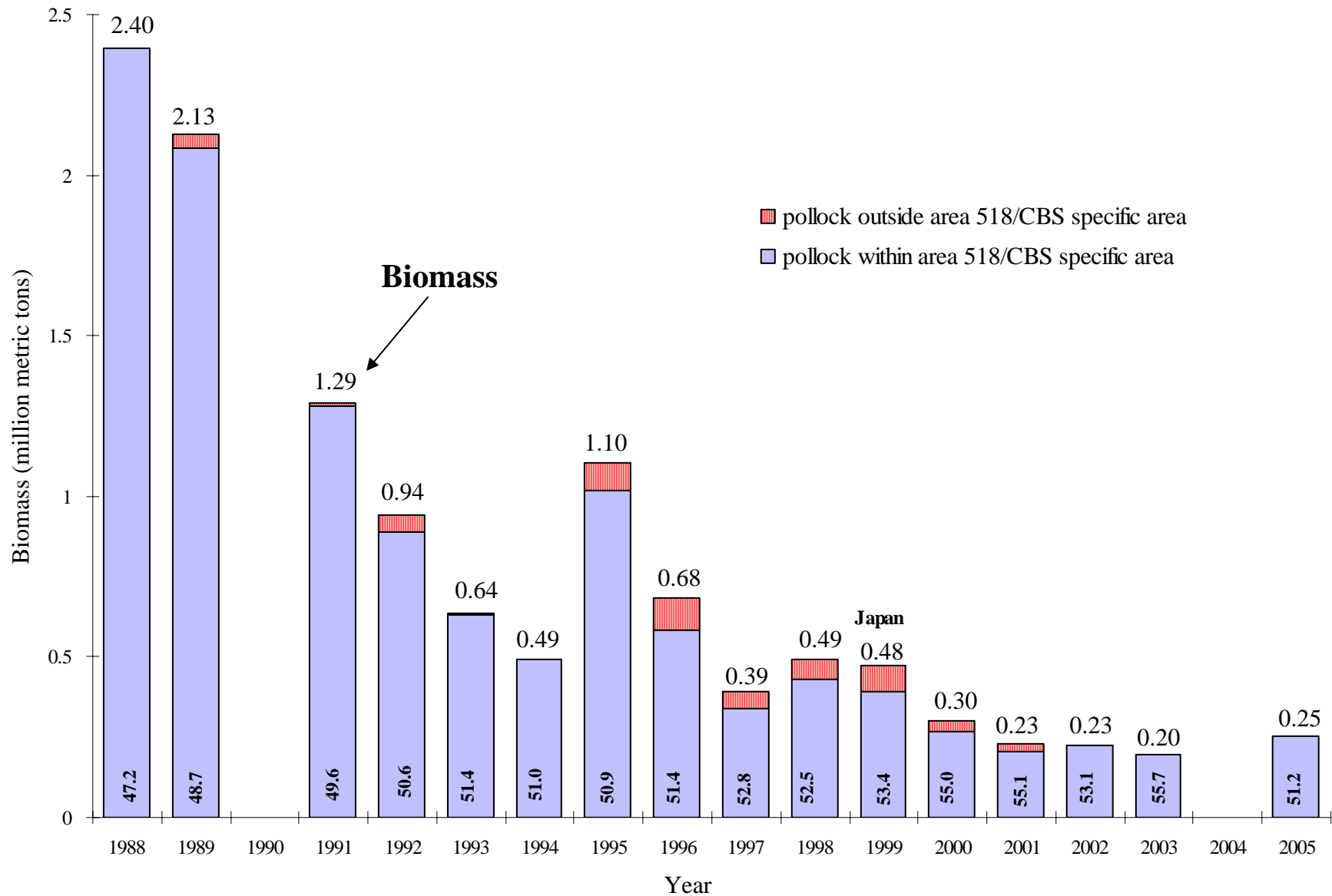
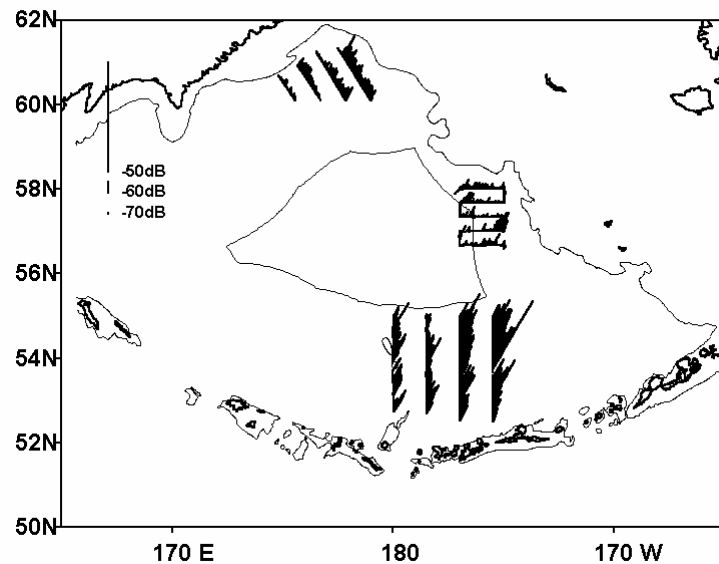
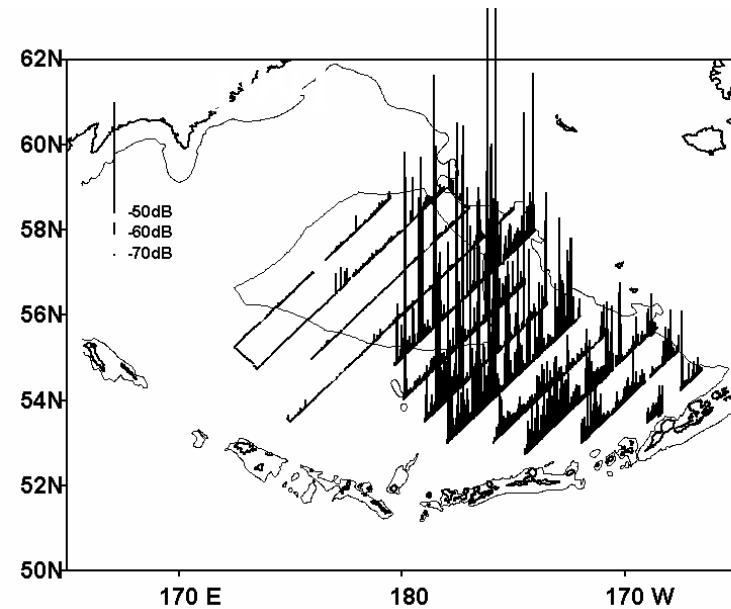
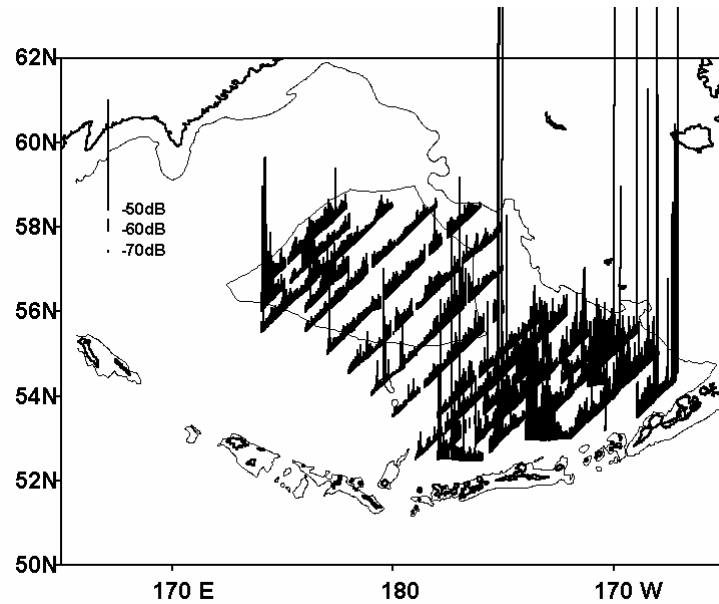


Figure 8. Biomass estimates (top of each bar) and average fork lengths (cm) (inside bar) obtained during winter echo integration-trawl surveys for walleye pollock in the Bogoslof Island area, 1988-2005. The U.S. conducted all but the 1999 survey, which was conducted by Japan.

Biomass estimates from Aleutian Basin/Bogoslof EIT surveys between 1983 and 2005							Attachment 8	
Year	Dates	Nation	Region	Area (nmi ²)	Biomass (metric tons (t))			Comments
					Bogoslof ¹	Aleutian Basin	Between	
1983	Jan-Mar	Japan	Aleutian Basin			1,269,000 - 5,442,000		Okada 1986
1988	Feb 2-11, 12-Mar 4	USA	Bogoslof/Aleutian Basin		2,396,000	not estimated		no signif. echosign in basin
1988	Aug 14-Oct 12	Japan	Aleutian Basin	133,480		995,000		JFA 1992 Coop Rept
1989	Mar 1-7, Jan 20-Feb 8	USA	Bogoslof/Aleutian Basin		2,084,000	not estimated		no signif. echosign in basin
1989	Dec 8 (88)-Feb 26	Japan	Bogoslof/Aleutian Basin	6,799 149,928	1,155,000	1,103,000		Total Bogoslof, 1996 WG doc
1989	Jul 7 - Oct 16	Japan	Aleutian Basin	39,606		182,000		Includes a little EBS shelf.
1990	Aug 26 - Sep 26	Japan	Aleutian Basin			113,000		May 1992 INPFC WG doc J-2
1991	Feb 23-Mar 3, 7-10	USA	Bogoslof		1,283,000			
1991	Jun 28 - Aug 24	Japan	Aleutian Basin	144,264		765,000		Preliminary results in 1994
1992	Feb 28-Mar 8	USA	Bogoslof		888,000			Tokyo WG meeting
1993	Jan 3 - Mar 24	Japan	eastern/western Aleutian Basin			not estimated		no significant pollock
1993	Feb 5-9, Feb 27-Mar 5	USA	Bogoslof		631,000			
1993	Jun 28 - Aug 2	China	Donut Hole	37,880		52,541		Third International Stock assessment workshop
1994	Feb 27-Mar 9	USA	Bogoslof		490,000			
1994	Jul 3-28	Korea	Bogoslof, Donut Hole, Between	6,650 38,595 26,500	22,980	2,290	18,930	
1994	Aug 2 - Sep 20	Japan	Aleutian Basin 175-180 W, 52.5-55 N	29,427		155,000		STC Seattle October 1995,
1994			Aleutian Basin 174-179 E, 60-62 N	7,626		14,000		north of Aleutian chain
1994			Kamchatka Basin			no fish sign		Navarin basin
1995	Feb 25- Mar 8	USA	Bogoslof		1,020,000			
1995	Jul 9-31	Korea	Bogoslof, Donut Hole, Between	11,800 64,800 42,900	36,450	--	3,380	
1996	Feb 13-24, Mar 6-12	Japan	Bogoslof/Aleutian Basin		439,000	80,199		Basin west of 169 W
1996	Feb 27-Mar 7	USA	Bogoslof		582,000			
1996	May 13-31	Korea	Bogoslof, Donut Hole, Between	14,100 72,000 47,580	44,070	1,600	11,680	
1996	Nov 1 - 24	Japan	Donut Hole			no fish sign		1998 CBS conference
1997	Mar 1-10	USA	Bogoslof		342,000			
1997	May 17 - Jun 12	Korea	Bogoslof, Donut Hole, Between	8,885 57,392 31,842	13,274	12,096	17,795	STC 1997 / 2nd Annual Conf
1998	Jan 4 -13	Japan	Donut Hole			no fish sign		1998 CBS conference
1998	Mar 2-9	USA	Bogoslof		432,000			
1998	Sep 19-23	Russia	Donut Hole			no fish sign		no pollock caught in 3 hauls
1999	Jan 21 - Mar 19	Japan	Bogoslof		393,000			
1999	May 23 - Jun 17	Korea	Bogoslof, Donut Hole, Between	8,875 79,250	84,600	--		4th annual conference papers
2000	Mar 2-12	USA	Bogoslof		270,000			
2000	Mar 6-27	Korea	Bogoslof (518), Donut Hole, Between	699 56,002	257,000	32,000	--	Basin, but some shelf pollock
2001	Mar 5-11	USA	Bogoslof		208,000			
2002	Feb 2 - Mar 20	Japan	Bogoslof/Aleutian Basin west of 170 W	2,409 12,768	180,000	92,000		2002 7th Annual Conf.;
2002	Mar 5-10	USA	Bogoslof		227,000			basin W of Specific area, N of
2003	Mar 7-13	USA	Bogoslof		198,000			Aleutians (not Donut Hole)
2005	Mar 7-13	USA	Bogoslof (518)	3,112	253,000			
	International zone area	205,311 km2 = 59,859 nmi2		¹ USA, 1999 Japan, 2000		Korea estimates = Specific area		spawning surveys

Horizontal SA distribution (summer)



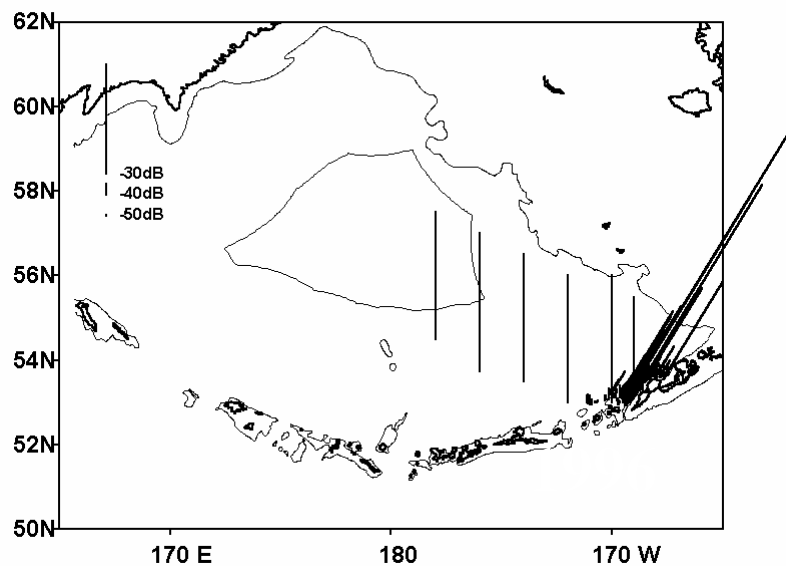
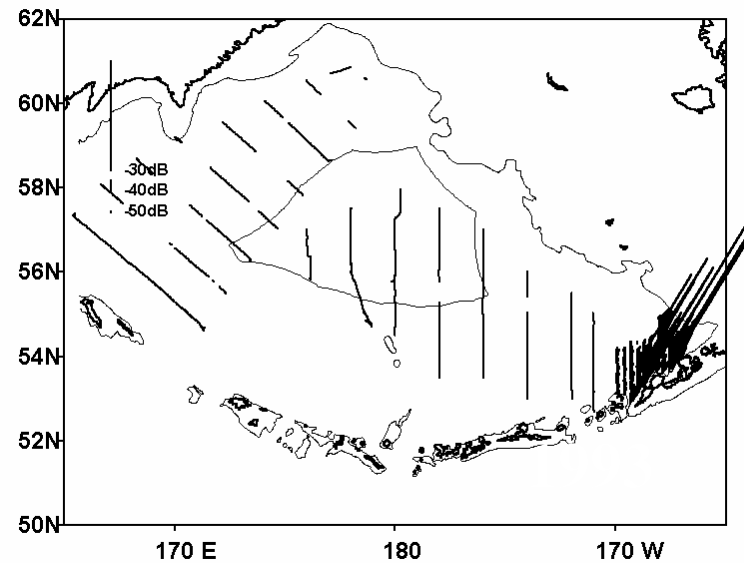
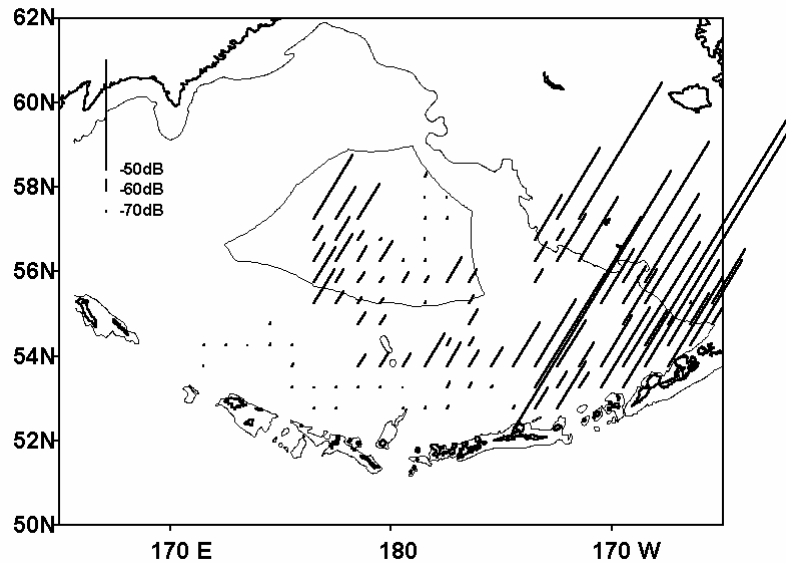
Biomass estimates:

1988: 1.00 million tons

1991: 0.77 million tons

1994: 0.17 million tons

Horizontal SA distribution (Winter)



Biomass estimates:

1988-1989: 3.29 million tons

1.16million tons in Bogoslof

1.10million tons out of Bogoslof

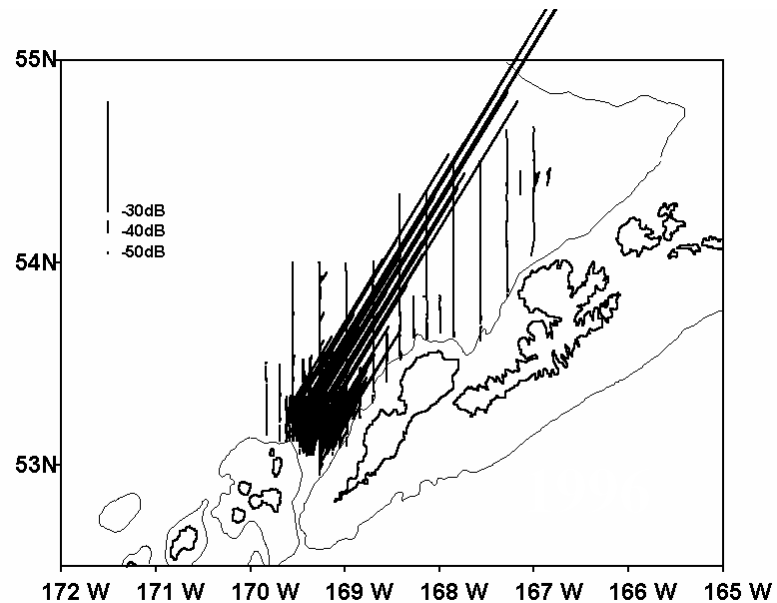
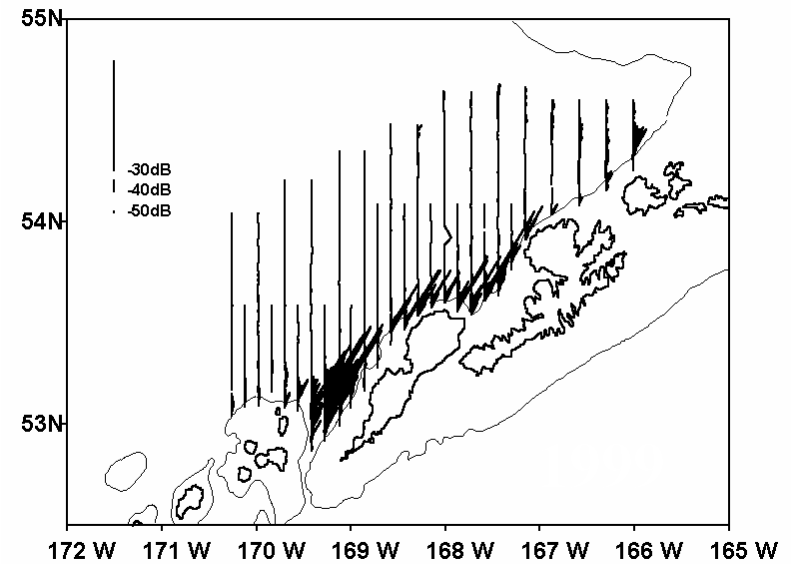
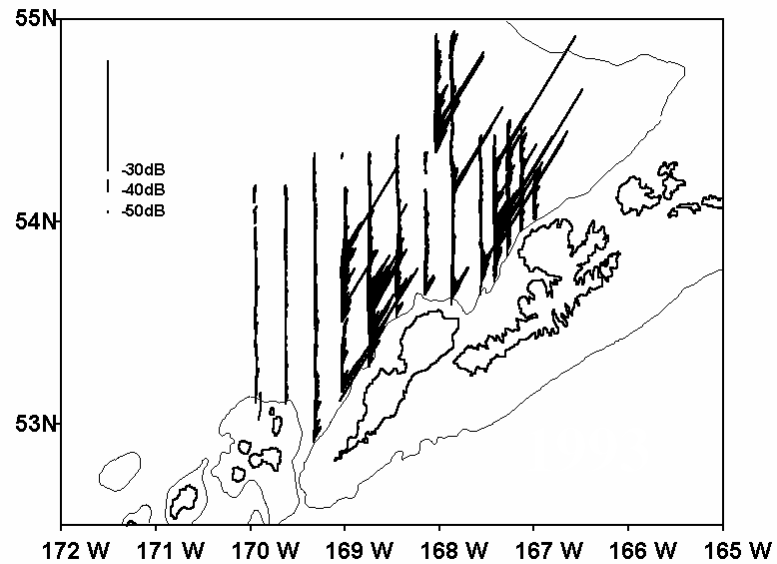
1993: ** million tons

1996: 0.52 million tons

0.44million tons in Bogoslof

0.08million tons out of Bogoslof

Horizontal SA distribution (winter Bogoslof)



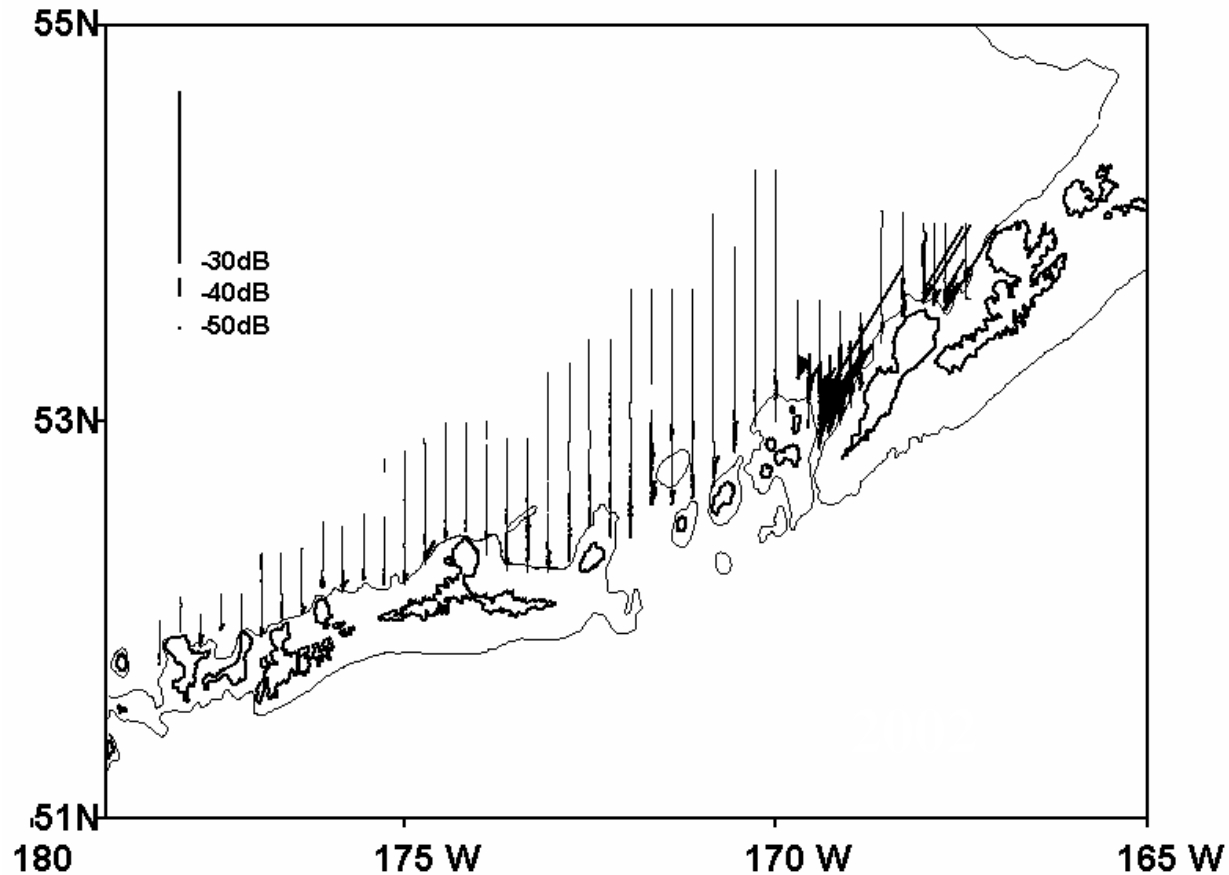
Biomass estimates:

1993: ** million tons

1996: 0.44million tons

1999: 0.48 million tons

Horizontal SA distribution (winter)



Biomass estimates:

1996: 0.52 million tons

0.18million tons in Bogoslof

0.09million tons out of Bogoslof

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