



RESULTS OF ECHOINTEGRATION AND TRAWL
SURVEYS IN THE DONUT HOLE

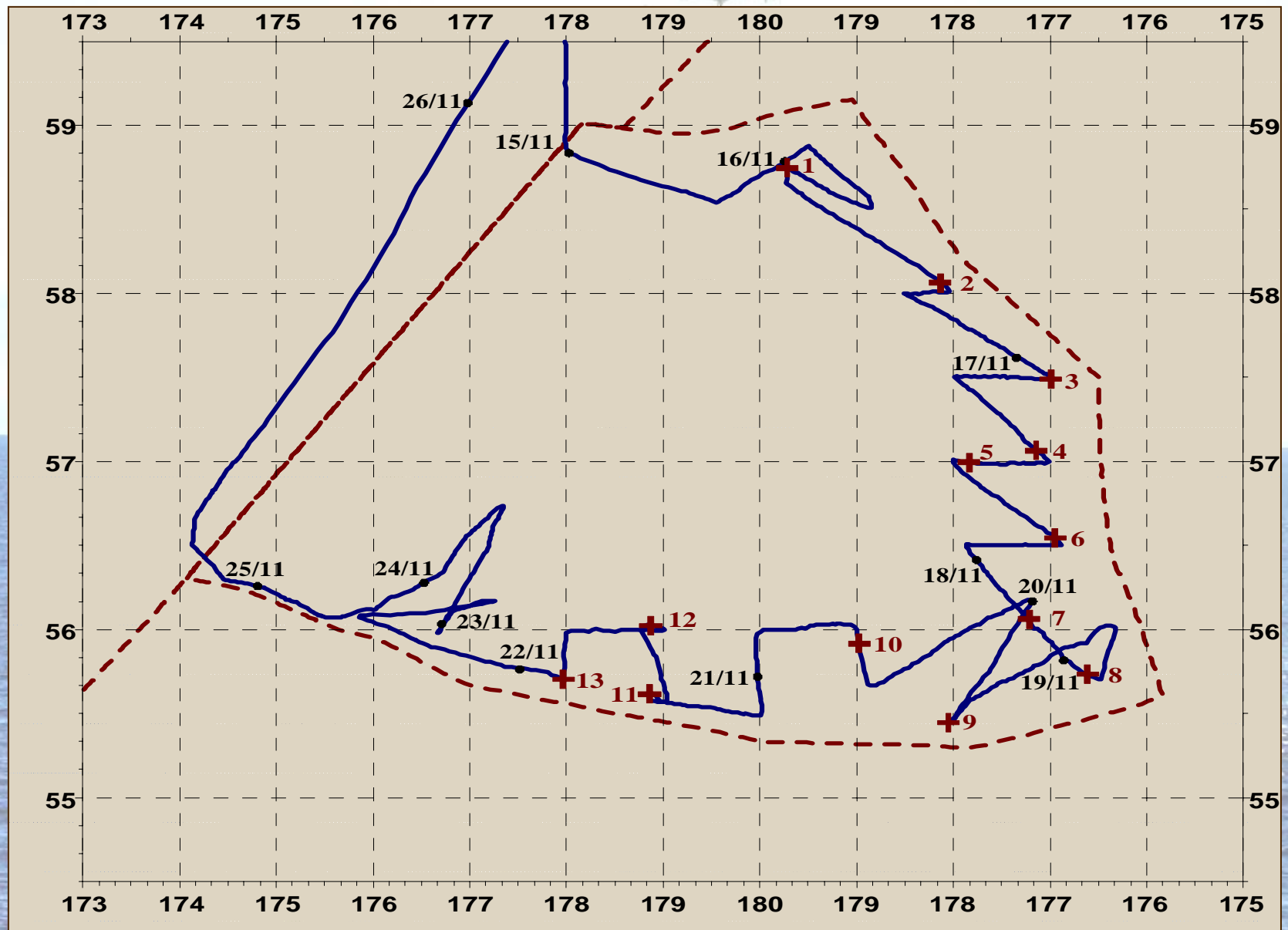
DURING NOVEMBER 2003
ABOARD THE SHIP "PIONER NIKOLAYEVA"

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Figure 3. Map of tacks in the echointegration survey, and sites of trawlings in the Donut Hole and Aleutian Basin (haul sites marked red).



**Figure 4. Morning time echogram (November 16, 2003,
11.18 a.m., 58°39'3 N, 179°43'7 W)**



**Figure 5. Night time echogram (November 18, 2003,
03.00 a.m., 56°03'7 N, 177°12'8 W)**

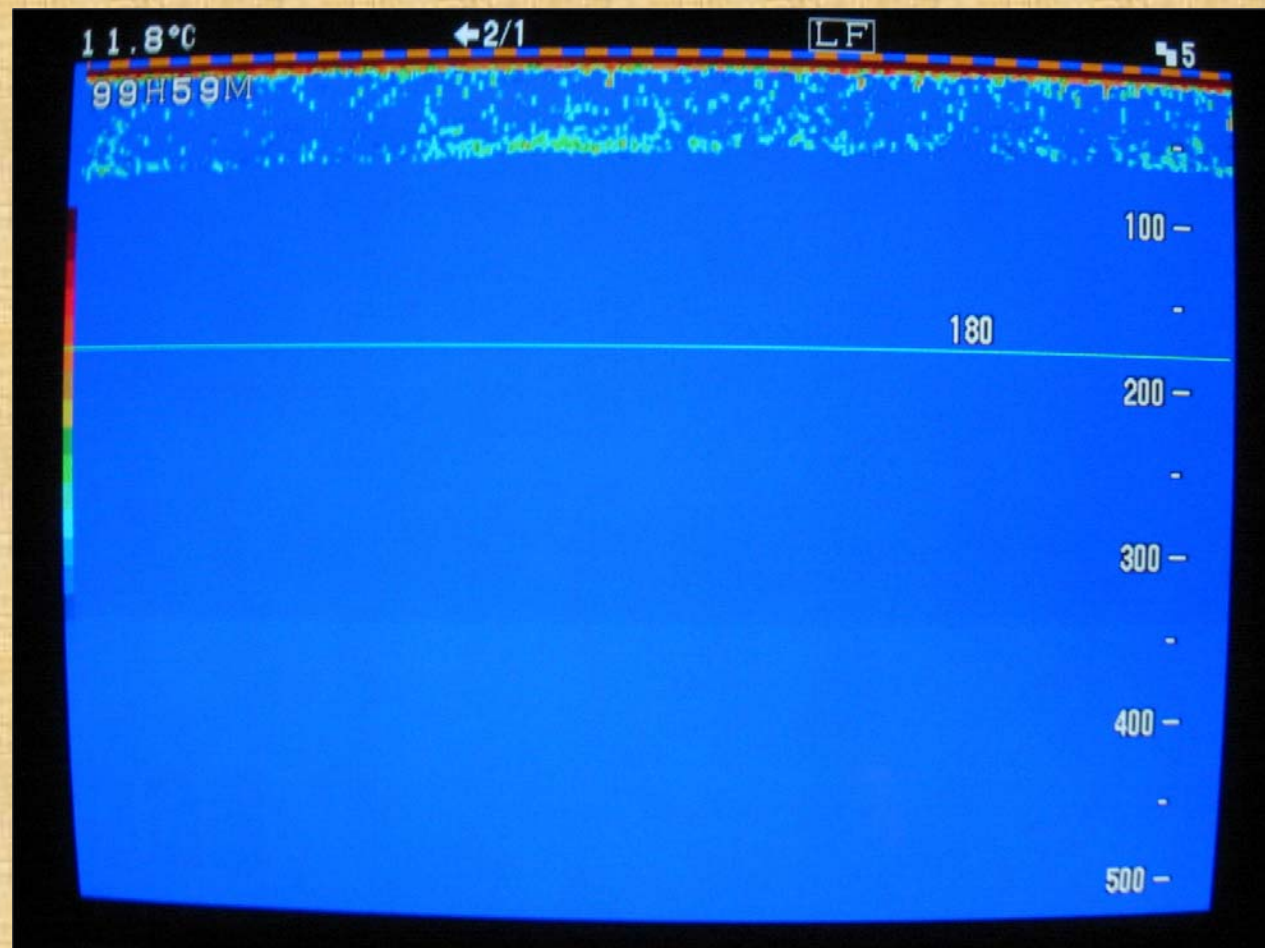




Fig. 7. Capture location sites of pollock in the Donut hole, 1998-2001.

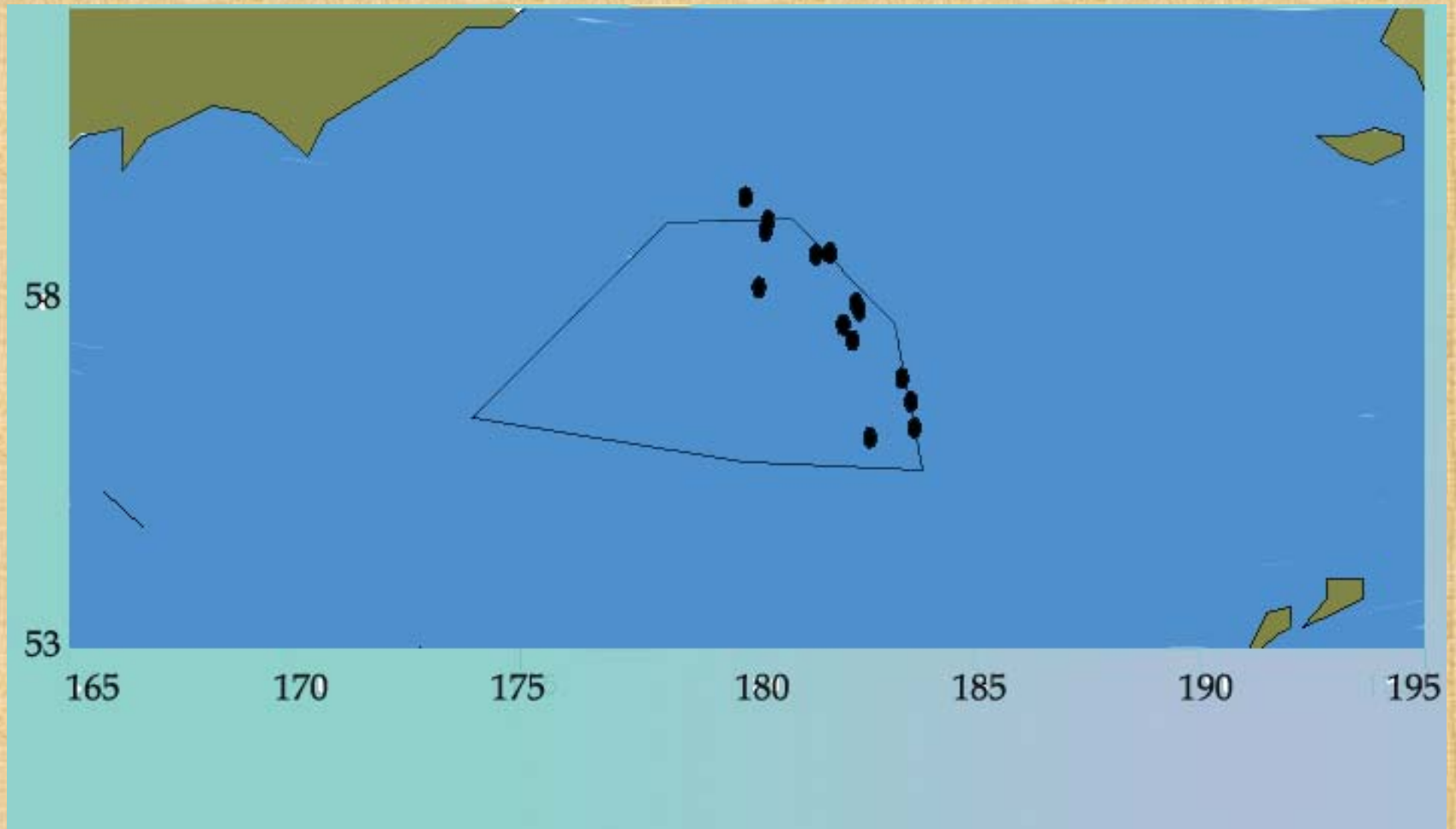


Table 1

Results of pollock researches in the Donut Hole, 1998-2001.

Year	Time	Country, Vessel	Type of work	Layer fished, m	Results	Area
1998	03.09-08.09	Poland, Akamar	Echointegration survey; 820 miles tacks; 5 hauls	100-230	No pollock recorded 2 ind. pollock (>60 cm)	Donut North part
1999	29.04-03.05	Poland, Akamar	Echointegration survey; 744 miles tacks; 5 hauls	90-390	No pollock recorded 2 ind. pollock (59,61 cm)	Donut Southeast, Northeast parts
1999	23.05-17.06	Korea Tamgu-1	Echointegration survey; 1 hauls		No pollock recorded or caught	Donut
1999	17.08-30.08	Poland, Homar	Echointegration survey; 1700 miles tacks; 10 hauls	30-180	No pollock recorded 2 ind. pollock (47,55 cm)	Donut Centraleast part
2000	20.03-27.03	Korea Tamgu-1	Echointegration survey;		No pollock recorded	Donut
2000	20.05-28.06	China, Kai Chuang	Echointegration survey; 4 hauls	40-190	No pollock recorded 43 ind. pollock (45-56 cm)	Donut North, Northeast parts
2001	07.06-14.07	China, Kai Tuo	Echointegration survey; 7 hauls	50-250	No pollock recorded 16 ind. pollock (59,61 cm)	Donut North, Northeast parts

Table 2.
Species composition and characteristics of catches in the Donut Hole (November 16-21, 2003)

Family	Species	Number	Number	Frequency	Layer (m)	Time of the day	Length (cm)	Weight (g)
		of hauls	of individual	of occurrence			<u>min/max</u>	<u>min/max</u>
		with fish	fish caught	%			average	average
In trawl								
<i>Gadidae</i>	<i>Theragra chalcogramma</i> , pollock	1	1	.7.7	120-180	day	65.1	1590
<i>Cyclopteridae</i>	<i>Aptoyclus ventricosus</i> , smooth lumpsucker	10	46	76.9	50-260	24 hour	<u>.11-34</u> 21.0	<u>110-3200</u> 1010
<i>Zaproridae</i>	<i>Zaprora silensis</i> , prowfish	4	7	.30.8	50-170	24 hour	<u>.19-30</u> .22.7	<u>105-305</u> 184
<i>Hexagrammidae</i>	<i>Pleurogrammus</i> , <i>monopterygius</i> atka mackerel	2	2	.15.4	120-225	day	<u>38-43</u> 40.5	<u>595-720</u> 658
<i>Petromyzontidae</i>	<i>Lampeta japonica</i> , arctic lamprey	1	2	.7.7	50-110	night	<u>45-47</u> 46	193
<i>Salmonidae</i>	<i>Oncorhynchus nerka</i> , sockeye	1	1	.7.7	80-140	day	49	1220
	<i>Salvelinus sp.</i> , char	1	1	.7.7	80-140	day	22	95
	Commander squid	3	4	.23.1	80-175	day	<u>25-38</u> 33.7	<u>300-660</u> 532
	Jellyfish	-	nx10	-	-	-	-	-
In mesh								
<i>Myctophidae</i>	<i>Stenobranchius leucopsarus</i> , lantern fish	6	nx100	100.0	-	night	.3-10	.1-8
<i>Bathylagidae</i>	<i>Leuroglossus schmidti</i> , smoothtonque	3	nx10	50.0	-	night	.5-16	-
<i>Chauliodontidae</i>	<i>Chauliodus macouni</i> , pacific viperfish	2	nx100	33.3	-	night	.9-20	-
	Young comander squid	10	nx10, nx100	76.9	-	24 hour	.3-16	-



THANK YOU!