

**Summary of Measurements of Primary Productivity Made
During MARMAP Surveys (Belogorsk 78-01, 78-03, 78-04)**

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INTRODUCTION

Phytoplankton primary productivity was measured during three cooperative U.S.-U.S.S.R. MARMAP surveys of coastal waters between Cape Hatteras and Nova Scotia aboard the R. V. Belogorsk (78-01, 78-03, 78-04). Table 1 gives the dates of the three surveys and the number of stations where primary productivity was measured. Figures 1, 2, and 3 depict the cruise tracks and locations of stations sampled during these surveys. During the first survey (1 August - 4 September 1978, Belogorsk 78-01), primary production was measured at 44 stations extending from Nova Scotia south to Cape Hatteras. On the second survey (6 October - 1 November 1978, Belogorsk 78-03), primary production was measured at 42 stations from the Gulf of Maine to just south of Delaware Bay. The third survey (16 November - 29 November 1978, Belogorsk 78-04) was abbreviated. Productivity was measured at 24 stations from the Gulf of Maine to the eastern tip of Long Island.

Measurements of phytoplankton productivity were made in conjunction with measurements of chlorophyll a (Evans et al., 1979), nutrients (Draxler et al., 1979), temperature, salinity, dissolved oxygen, water transparency (Secchi disc and submersible photometer), daily photosynthetically active radiation, and collections of zooplankton, ichthyoplankton and phytoplankton.

METHODS

The details of the method used to measure primary productivity are given in a separate report (O'Reilly and Thomas, 1979) which describes submersible photometry, water sampling, ^{14}C incubations, filter fractionation, and calculations of daily rates of primary productivity ($\text{gC/m}^2/\text{d}$). Six to seven depths were sampled throughout the euphotic layer. During Belogorsk surveys 78-03 and 78-04 a submersible quantum photometer was used to determine the vertical extinction of photosynthetically active radiation (400-700 nanometers) as well as sampling depths corresponding to 100%, 69%, 46%, 25%, 10%, 3%, and 1% of subsurface light intensity. During the August survey (78-01) the submersible photometer did not operate properly. Consequently, Secchi disc disappearance-depths were used with the equation: ($K = 1.7/\text{Secchi depth}$) to estimate sampling depths.

Duplicate "light bottles" and one "dark bottle" were filled with seawater from each sampling depth. Zooplankton larger than 300 microns were removed from productivity bottles during filling. Approximately 15 $\mu\text{Ci-}^{14}\text{C}$ were added to each productivity sample. Alkalinity and pH were measured at surface and at the 10% light-depth.

Measurements of primary productivity were usually made at two stations each day of the cruise. Incubations lasted five hours with morning stations ending and afternoon stations commencing at approximately 1200 Eastern Standard Time (~ local solar noon).

Following incubation under ambient light, the organic ^{14}C activity in productivity samples was filter-fractionated into net-plankton (>20 microns), nannoplankton (<20 microns) and dissolved organic matter (<0.45 micron) released by phytoplankton. Rates of production for each size fraction ($\text{mgC/m}^3/\text{d}$) and daily integral rates of production ($\text{mgC/m}^2/\text{d}$) were calculated using our computer program PP1074 (O'Reilly and Thomas, 1979).

RESULTS

Average daily rates ($\text{mgC/m}^3/\text{d}$) of netplankton productivity, nannoplankton productivity, release of dissolved organic matter (DOM), and total productivity are given according to date, station, sampling depth, and percent light intensity in Tables 2, 3, and 4 (78-01, 78-03, 78-04, respectively). The percent of total carbon production by nannoplankton, netplankton and percent of released DOM is also given in these tables. Tables 2, 3, and 4 represent the output ("Section D") from our computer program PP1074 (O'Reilly and Thomas, 1979). Vertical profiles of productivity versus depth (percent light intensity) can be derived from these tables.

Many of the vertical profiles of total productivity in August (31 of 44) and October (37 of 42) indicate considerably less production at 100% light intensity than at 69% intensity, and may reflect "sunlight inhibition" of surface water productivity. During October, water samples for both the 100% and 69% sunlight incubations were frequently taken from the surface (1 m) Niskin bottle. Even though biomass was identical in both treatments, in 24 of 29 cases, considerably less

total productivity was measured at 100% intensity than at 69% intensity. During August and October, maximum total production frequently occurred at depths corresponding to 46% and 25% of surface light intensity (Table 2, Table 3). During the November survey, rates of total production progressively decreased with decreasing light intensity (Table 4). Maximum production usually occurred at 100% or 69% light intensity.

Daily integral rates of productivity ($\text{mgC/m}^2/\text{day}$) measured during the three surveys are given in Tables 5, 6, and 7 according to sampling date and station number. Secchi depth, percent light-depths, euphotic depth, incubation time, daily photosynthetically active radiation (Einstiens/ m^2/d), PAR factor, and percent of total daily carbon production in netplankton, nannoplankton and DOM size fractions are also given in Tables 5, 6, and 7. These tables represent the output ("Section E") from our computer program PP1074.

The distribution of integral total daily productivity ($\text{gC/m}^2/\text{d}$), euphotic depth, percent of particulate production by nannoplankton, and euphotic percent extracellular release of DOM are depicted for each cruise in Figures 4, 5, 6, 7, 8, and 9.

In August, rates of total daily primary production ($\text{gC/m}^2/\text{d}$) were relatively high throughout the entire survey area. Daily production ranged between 0.6 and 3.7 $\text{gC/m}^2/\text{d}$. Productivity was greater than $1 \text{ gC/m}^2/\text{day}$ at 37 of 44 stations. Values were uniformly higher than $1 \text{ gC/m}^2/\text{day}$ from Nova Scotia to southern Delaware Bay, whereas south of Delaware, in waters off Maryland, Virginia and North Carolina, production was lowest with all values

less than $1\text{gC/m}^2/\text{day}$. Total daily primary production exceeded $3\text{gC/m}^2/\text{day}$ at three stations: one at the eastern tip of Long Island, a second south of Nantucket approaching the 200 m contour, and the third in the mid-western area of Georges Bank (Figure 4).

During October, total daily production throughout the survey area was also relatively high. Daily production ranged between 0.9 and $4.2\text{ gC/m}^2/\text{d}$ with maxima of 4.1 and $4.2\text{ gC/m}^2/\text{day}$ recorded at stations in the New York Bight and the eastern half of Georges Bank (Figure 6). Productivity was greater than $1\text{ gC/m}^2/\text{d}$ at 40 of the 42 stations and greater than $2\text{gC/m}^2/\text{d}$ at 17 of the 42 stations.

During the November survey, productivity was relatively low. Daily production ranged between 0.2 and $2.3\text{ gC/m}^2/\text{d}$ (Figure 8). Only 5 of the 24 stations surveyed produced more than $1\text{gC/m}^2/\text{d}$ (Figure 8). Highest production was observed over Georges Bank ($>2\text{gC/m}^2/\text{d}$).

Nannoplankton (less than 20 microns) were responsible for the majority of carbon produced during the August (78-01), October (78-03) and November (78-04) surveys (Figures 5, 7, and 9).

In August, netplankton species (greater than 20 microns) dominated over nannoplankton at only 2 stations (off the Delaware and Chesapeake estuaries). During the October survey, netplankton outproduced nannoplankton at only 9 of the 42 stations (off the New Jersey coast, on the central portion of Georges Bank, and in the northern portions of the Gulf of Maine) (Figure 7). In November (78-04), nannoplankton were the dominant photosynthesizers at 19 of 24 stations (Figure 9).

The dissolved organic carbon compounds (DOM) released by phytoplankton during photosynthesis are usually not measured when employing the ^{14}C method to measure productivity. Consequently, ^{14}C measurements reflect only particulate synthesis and are underestimates of total carbon photoassimilation. Our three MARMAP surveys of coastal waters demonstrate that the DOM fraction represents a significant portion of total production, and should be routinely measured. Euphotic percent extracellular release of DOM ($\text{EPCR} = \frac{\text{Integral DOM release, mgC/m}^2/\text{d}}{\text{integral total productivity, mgC/m}^2/\text{d}}$) during August ranged between 5% and 44% of total production and averaged 19% (Figure 5).

In October, EPCR ranged between 1 and 35% and averaged 9% (Figure 7). In November, EPCR ranged between 4% and 33% and averaged 12% of total daily carbon productivity (Figure 9).

Our observations confirm earlier descriptions of Georges Bank and the New York Bight as regions of high productivity. Our observations also indicate that primary productivity of the Northwest Atlantic Continental Shelf may be higher than expected.

ACKNOWLEDGEMENTS

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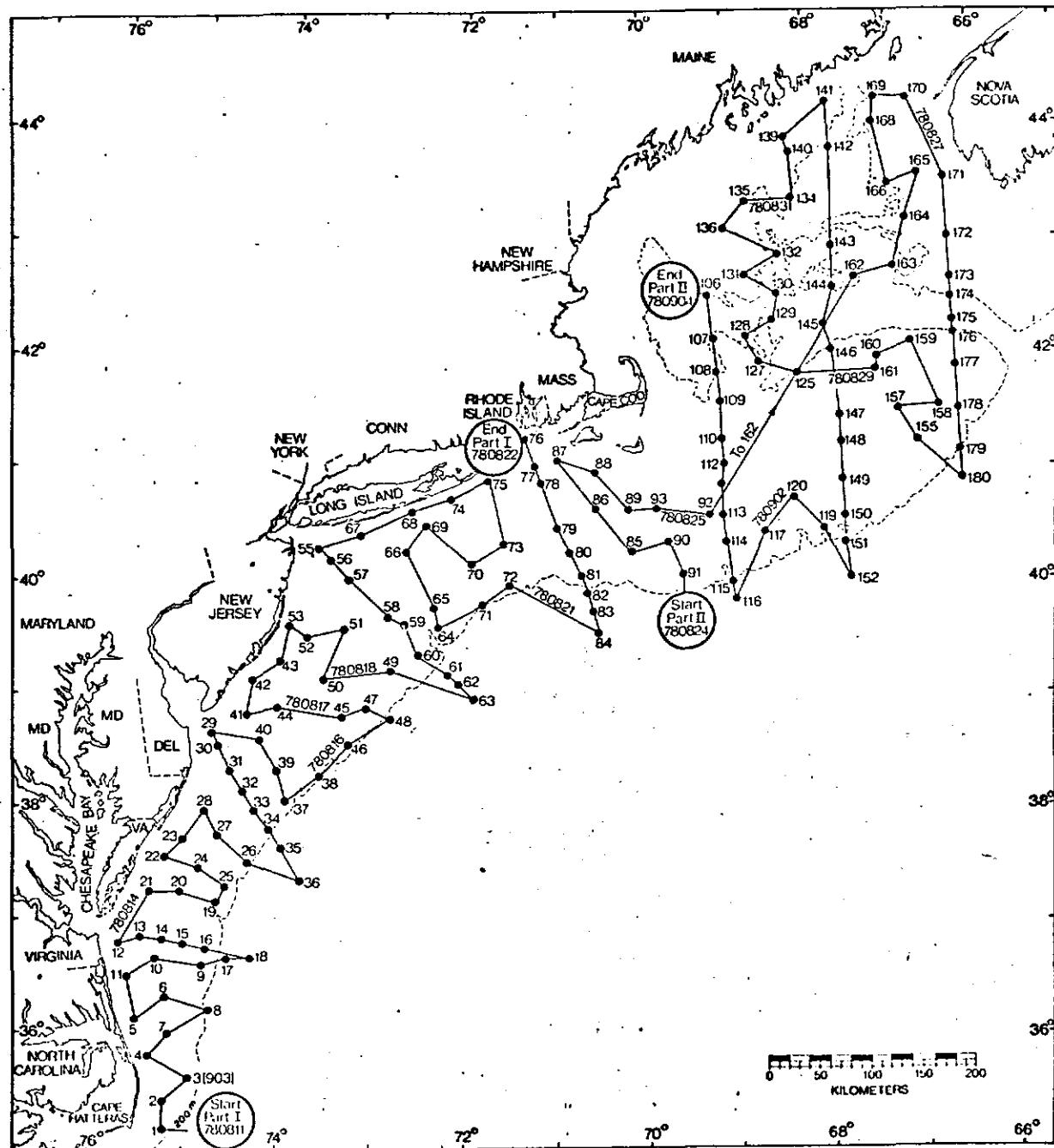


Figure 1. Cruise track and station location sampled during Belogorsk 78-01, August 11-September 4, 1978.

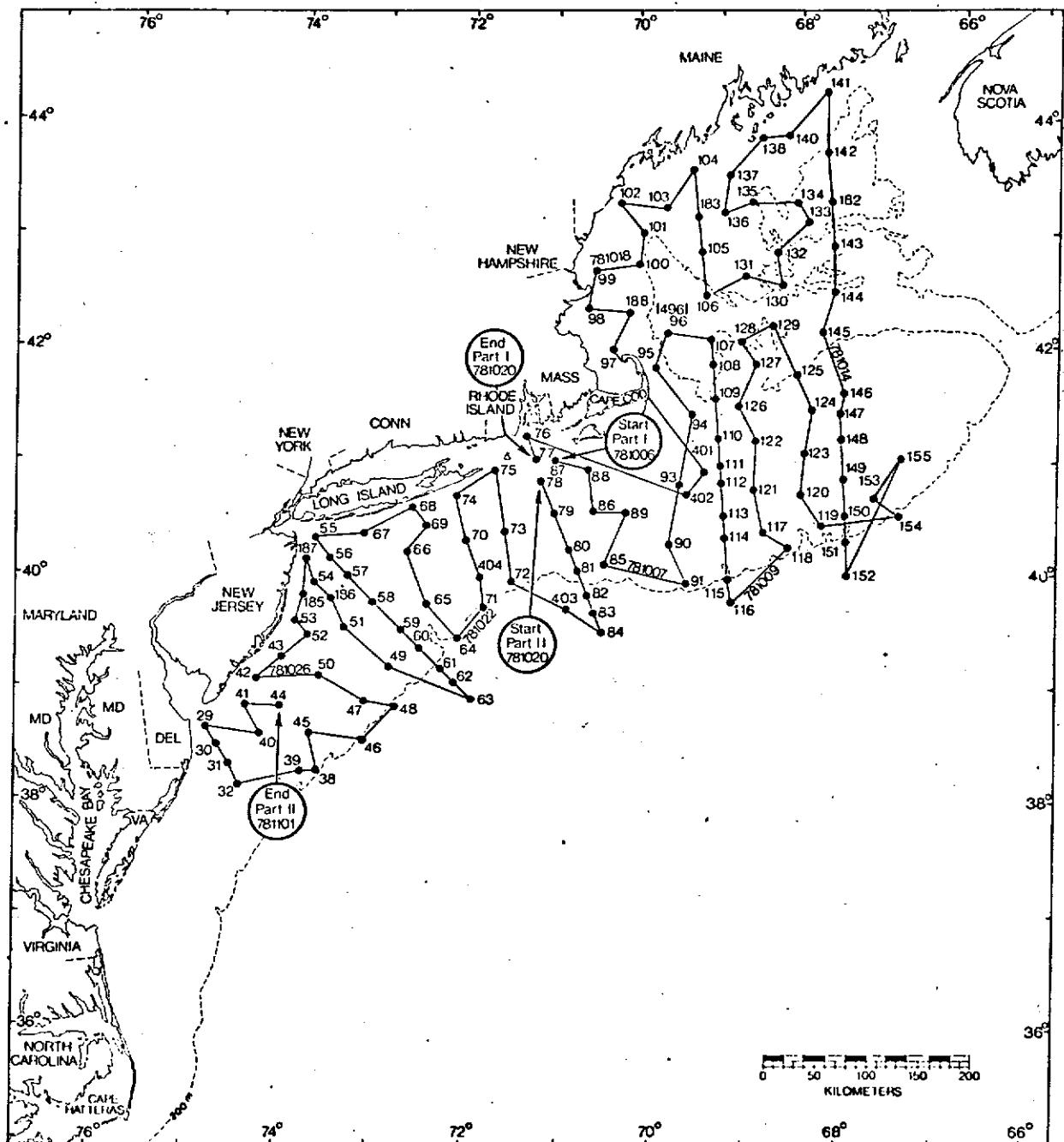


Figure 2. Cruise track and station location sampled during Belogorsk 78-03, October 6-November 1, 1972.

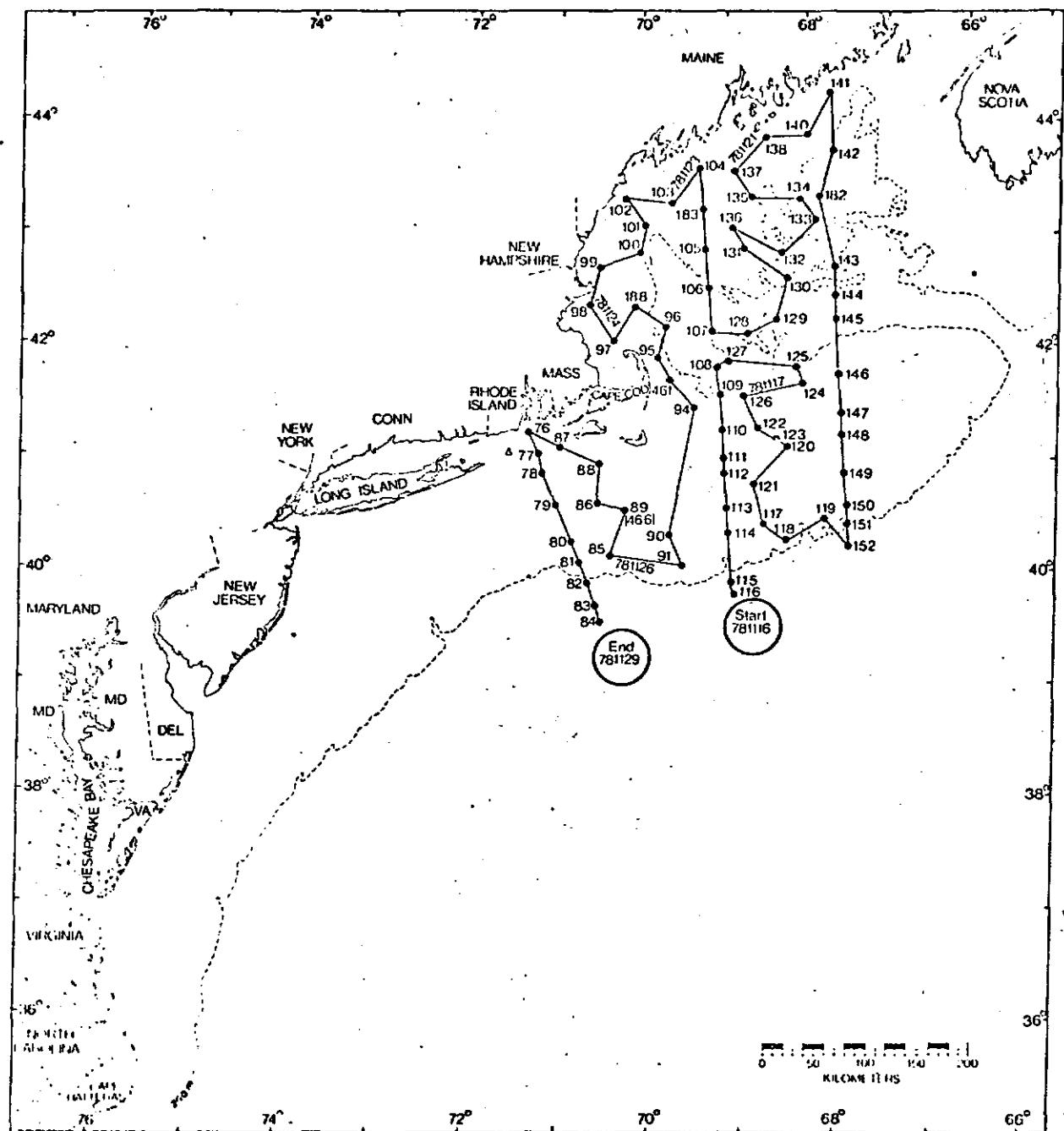


Figure 3. Cruise track and station location sampled during Belogorsk 78-04, November 16-
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FIGURE 4.

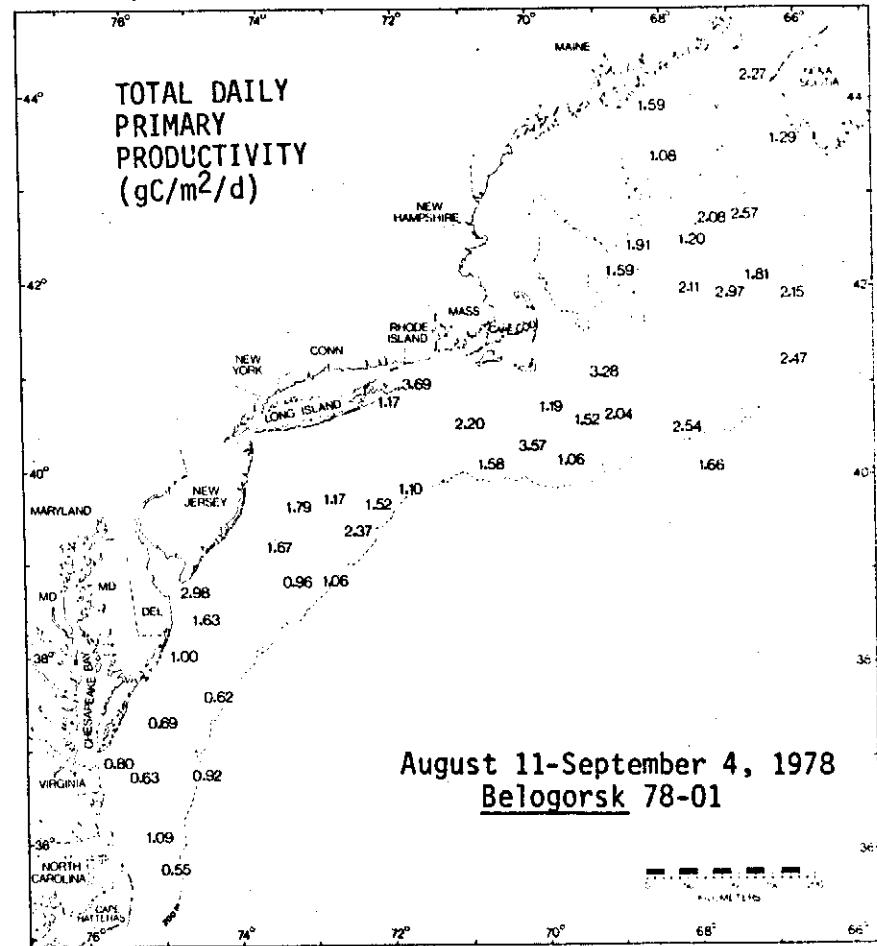
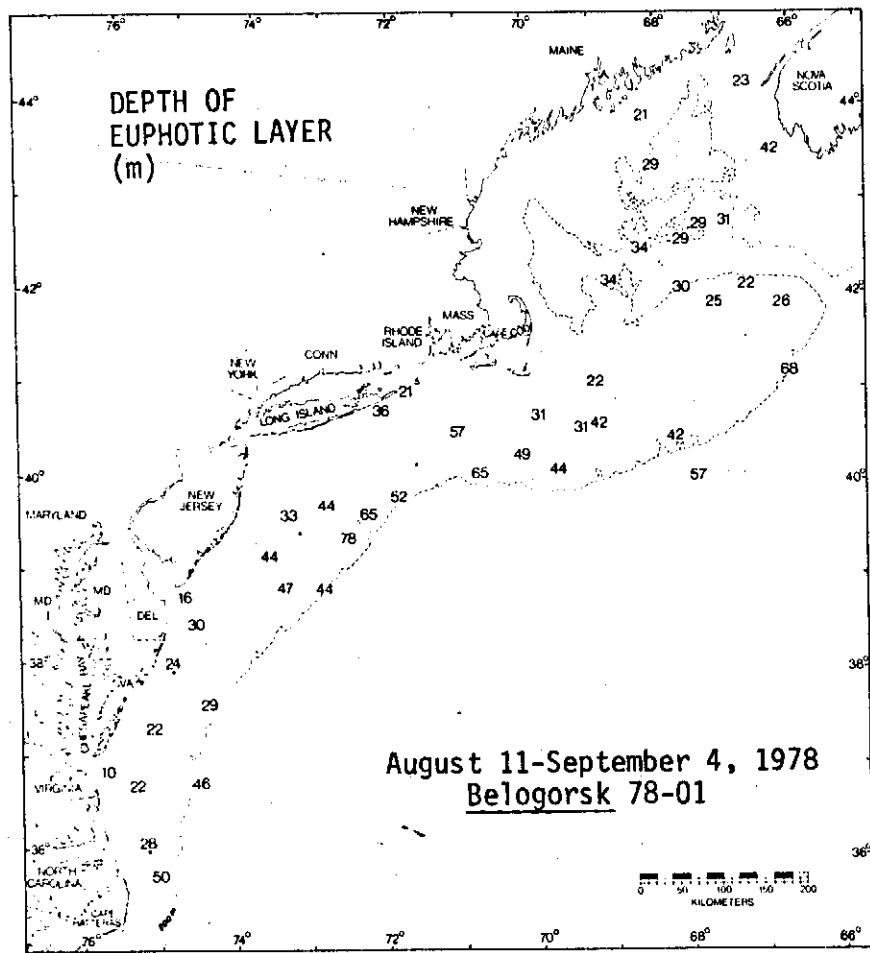


FIGURE 5.

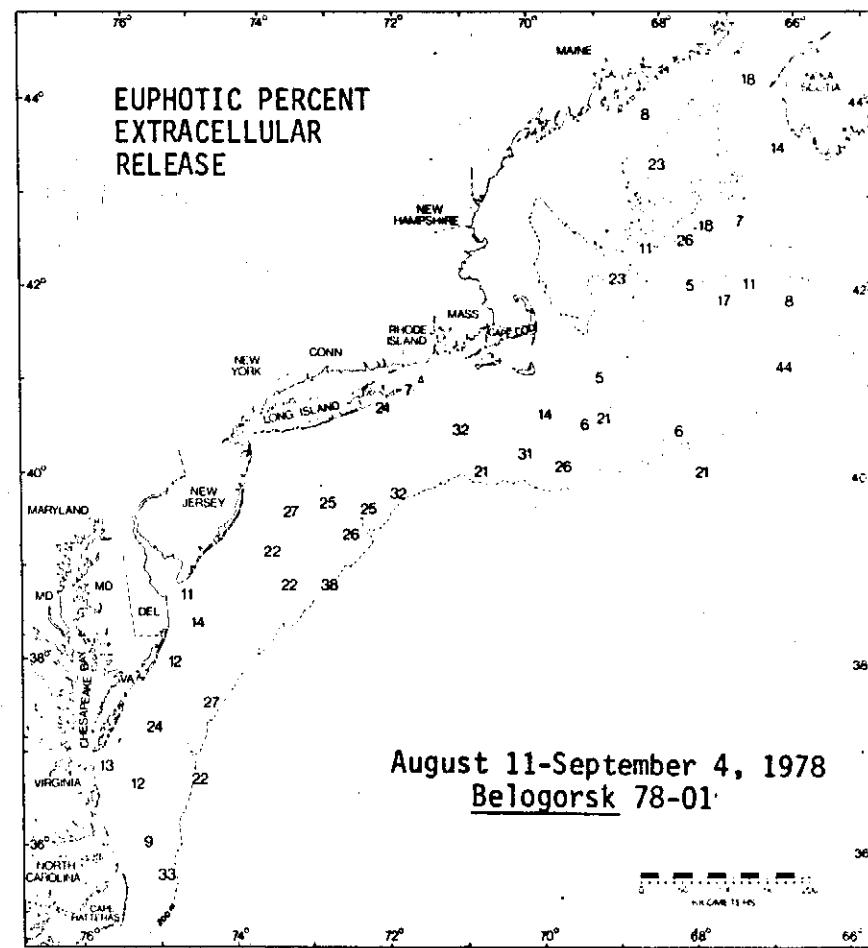
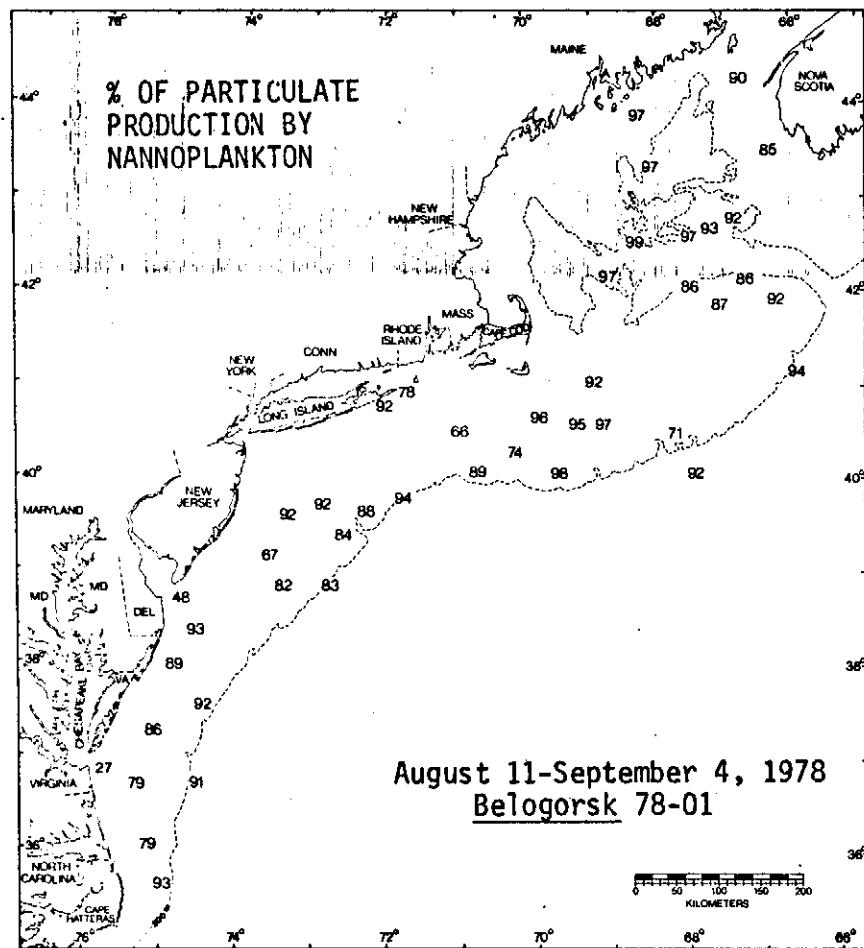


FIGURE 6.

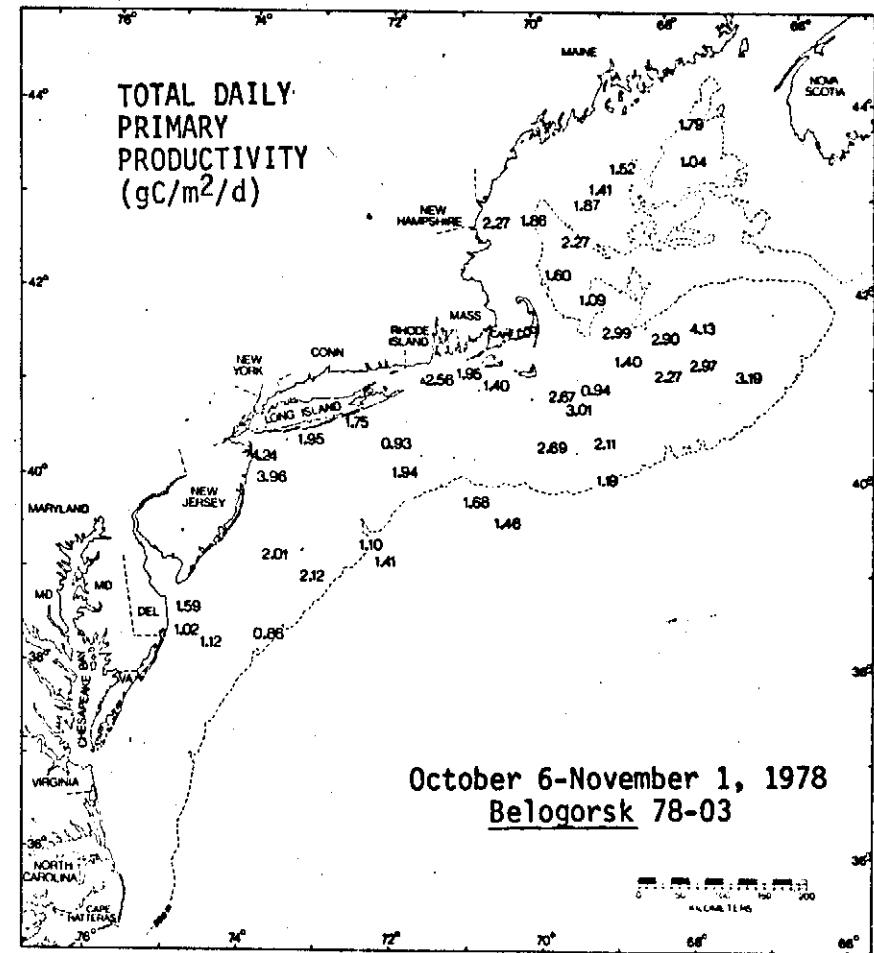
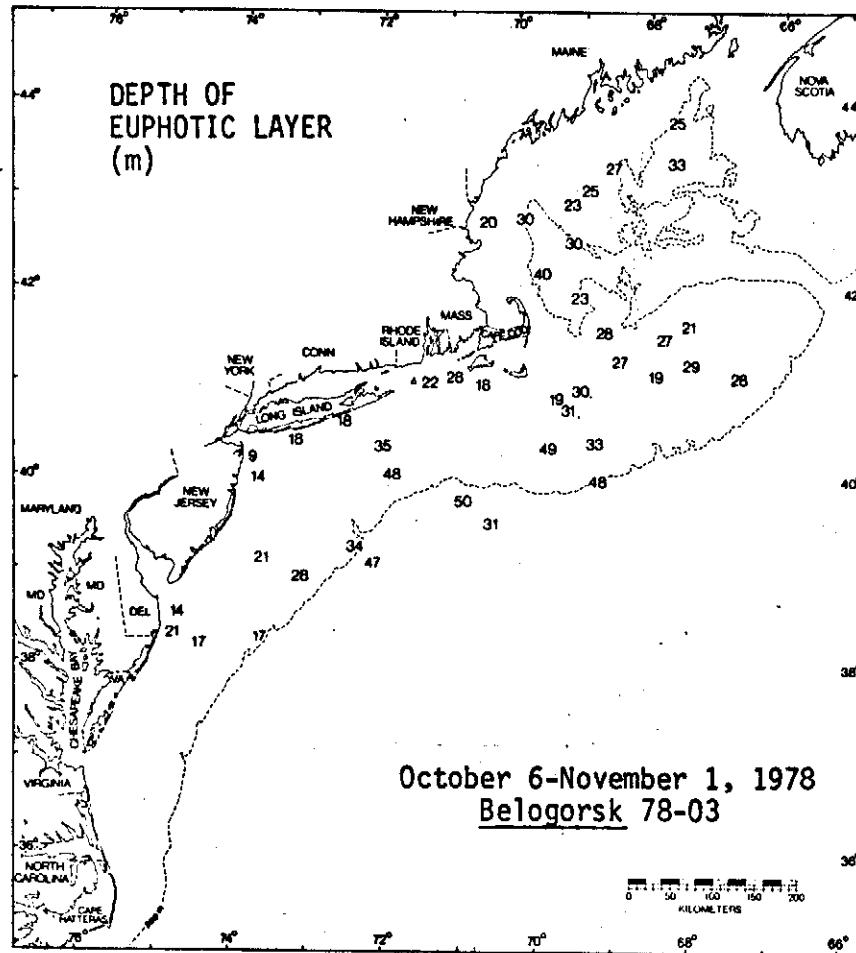


FIGURE 7.

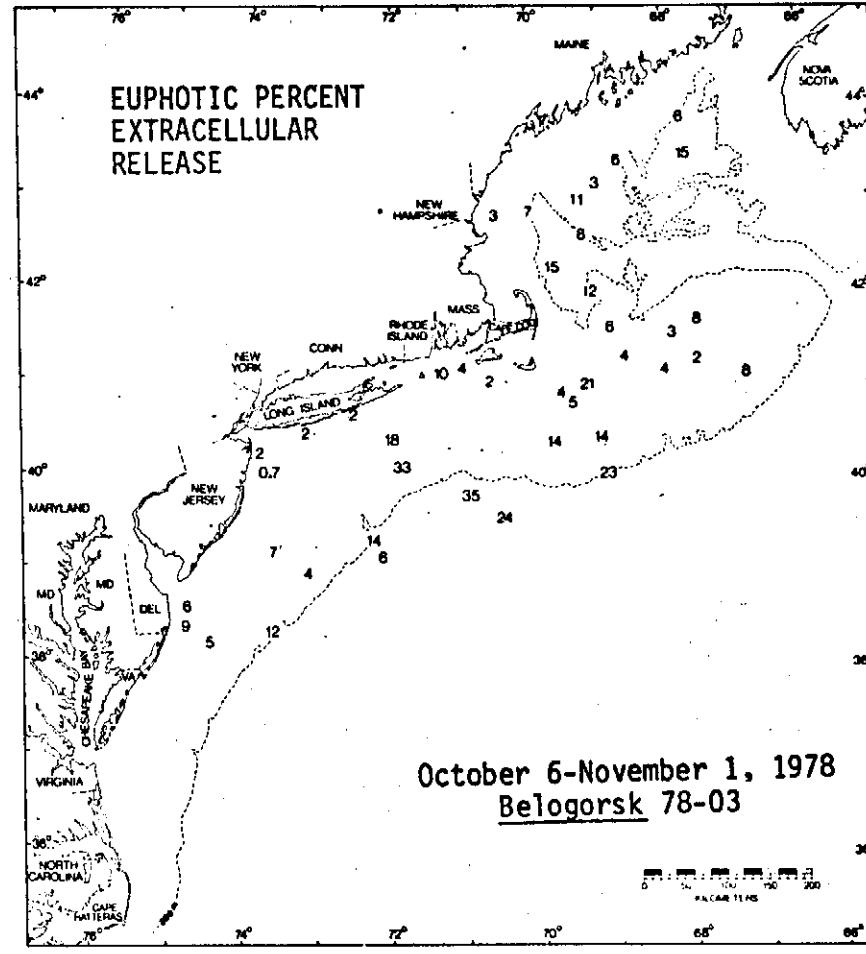
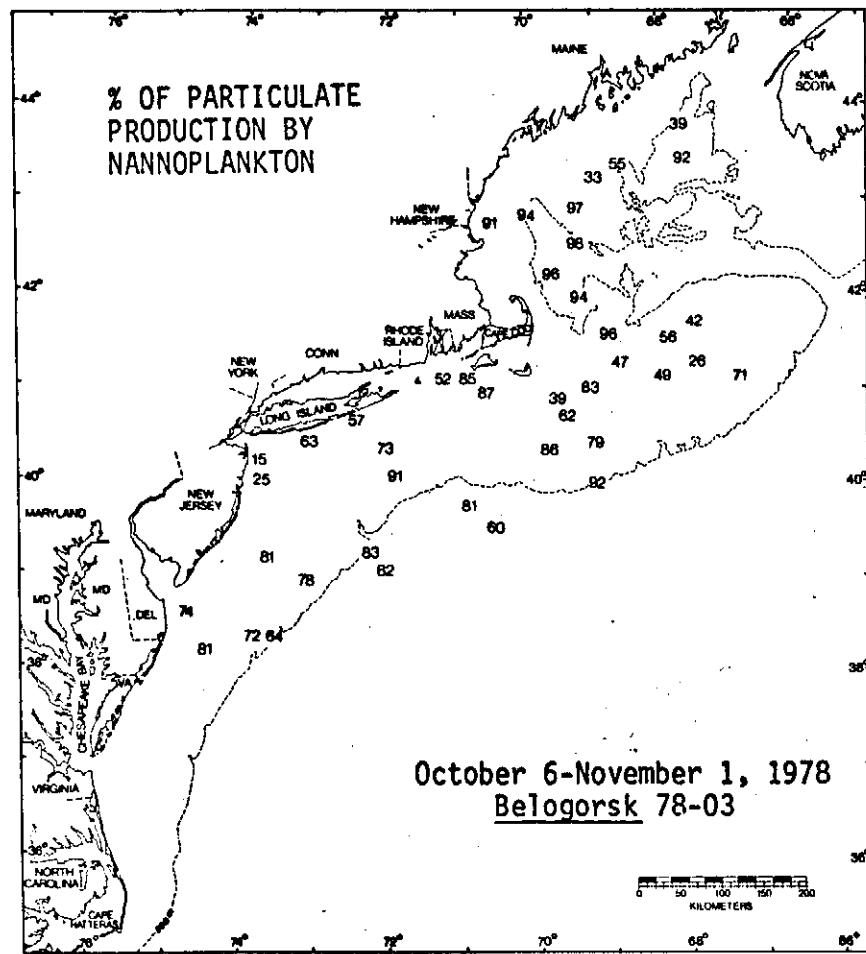


FIGURE 8.

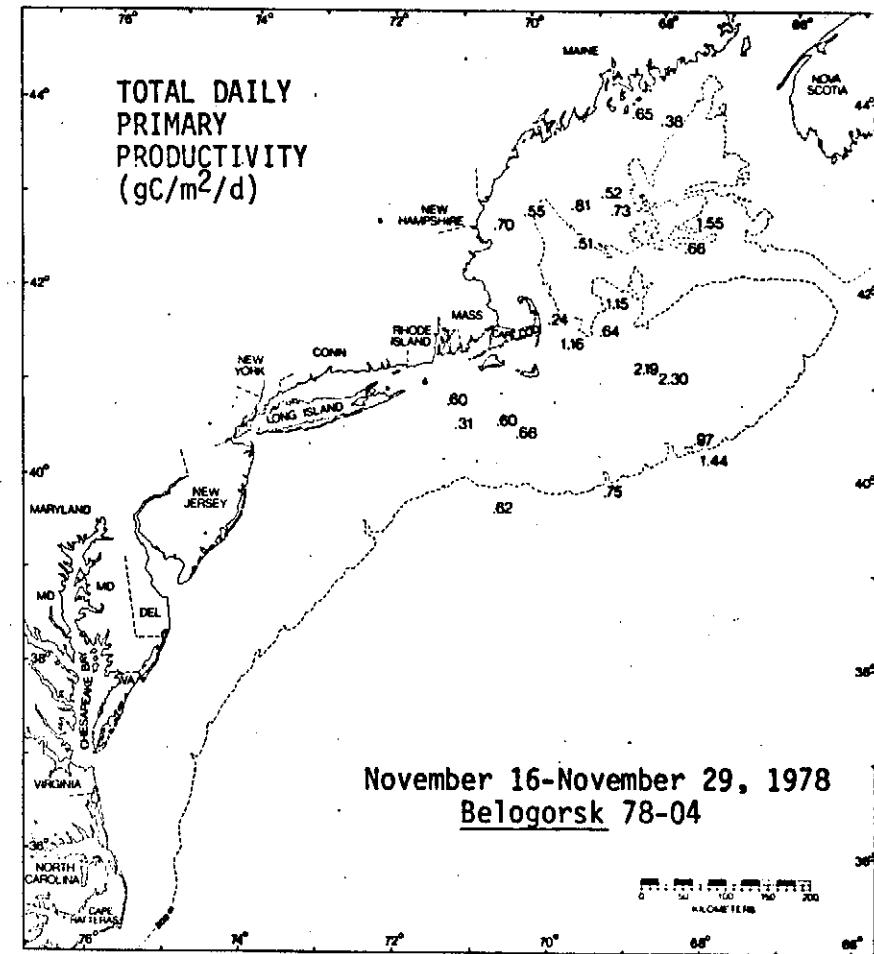
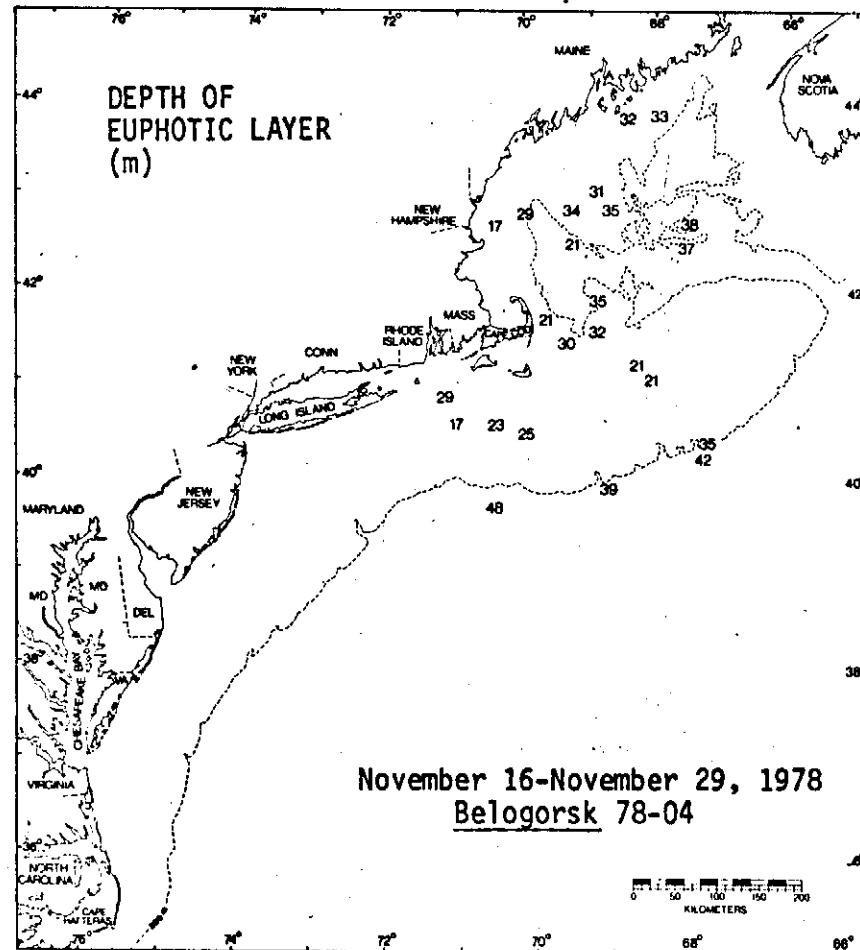


FIGURE 9.

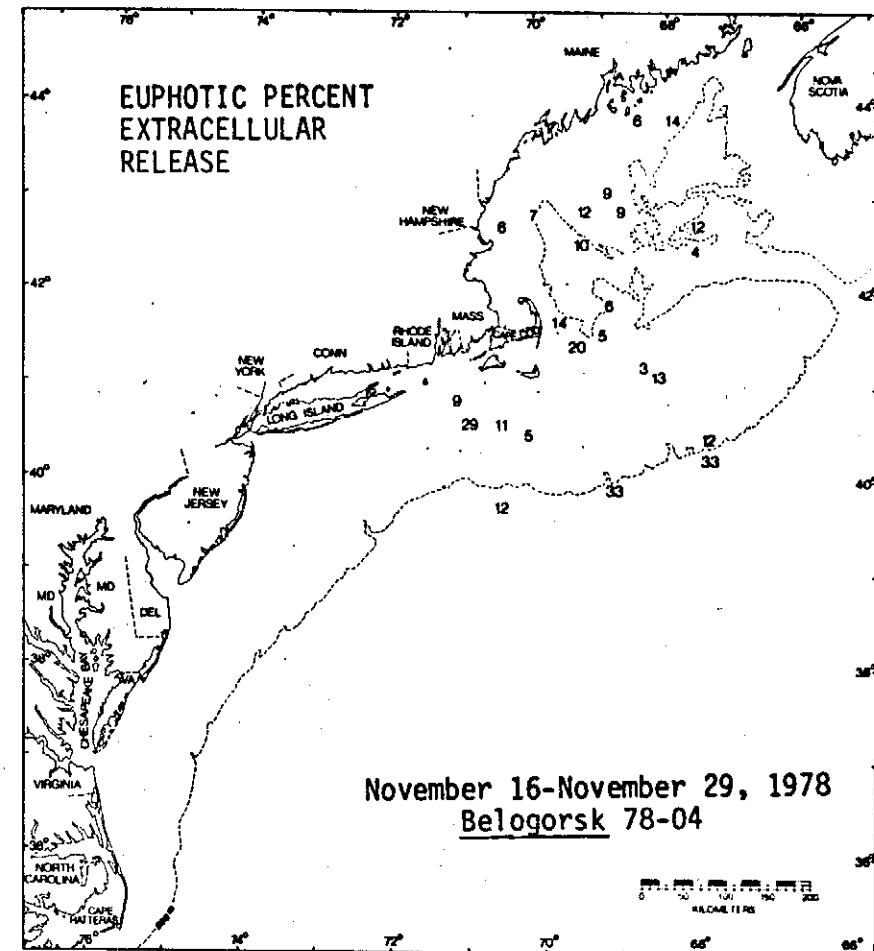
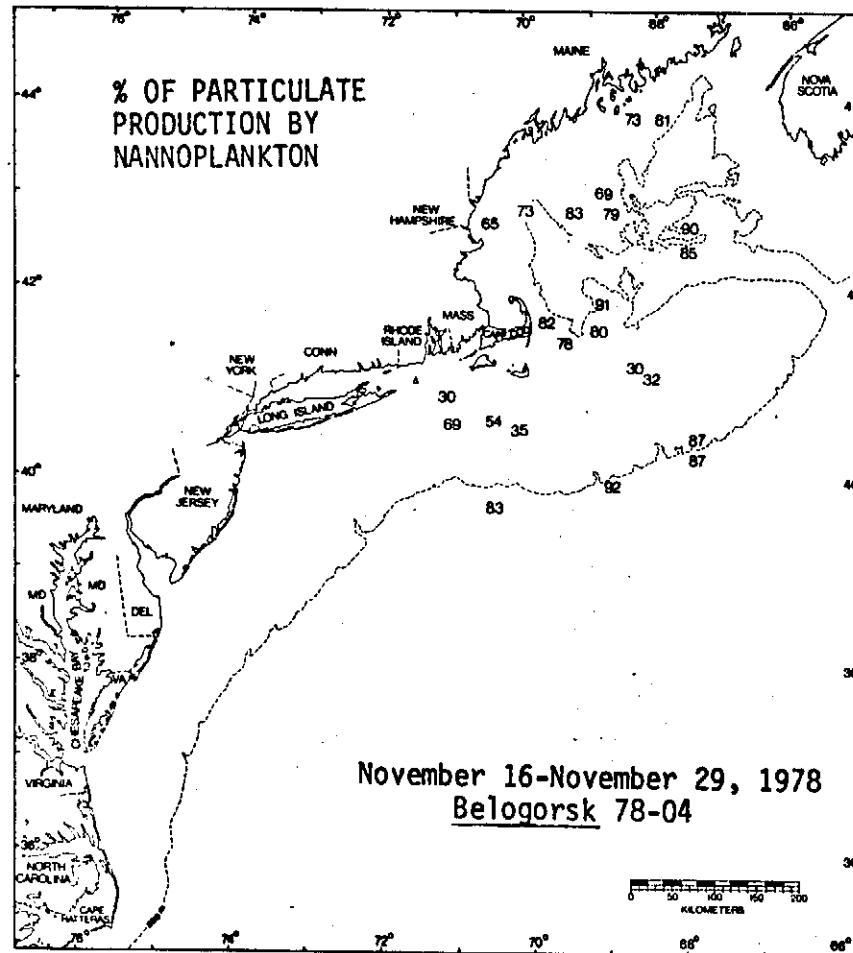


Table 1. Dates of MARMAP Surveys

<u>Cruise</u>	<u>Dates</u>	<u># of Productivity Stations</u>
Belogorsk 78-01	Aug. 11-Sept. 4, 1978	44
Belogorsk 78-03	Oct. 6-Nov. 1, 1978	42
Belogorsk 78-04	Nov. 16-Nov. 29, 1978	24

Table 2.

Table 2 (continued).

Table 2 (continued).

		NET	NAN	CH	PPP	DGP	TPP	SUP	E NET	E NAN	CH	PPP	E DGM	NAN/NET
7808200747	74	18EE1	1,6158	14,8583	10,8838	0.0	26,7370	3,7001	55,8702	40,6307	18,6272			
7808200747	74	28FF1	3,7440	10,1507	8,7979	0.0	20,6920	18,0934	49,0547	32,8518	2,7112			
7808200747	74	38GG1	1,6479	3,5353	4,3428	0.0	9,3258	19,5257	37,9088	46,5694	2,6417			
7808201150	75	1AA1	40,2120	19,3302	20,0242	0.0	239,5671	15,4623	76,7933	7,7142	8,9564			
7808201150	75	2881	38,3393	220,6376	13,3114	0.0	281,2878	13,6299	81,0379	4,7323	9,9976			
7808201150	75	48CC1	49,6003	407,7168	23,4060	0.0	880,7307	10,3193	88,8119	4,8688	8,2187			
7808201150	75	6UD1	85,4423	252,0514	22,0162	0.0	359,5C98	23,7663	70,1097	6,1210	2,9500			
7808201150	75	10EE1	48,1308	55,2938	15,3421	0.0	118,7747	40,9295	46,5535	12,9170	1,1488			
7808201150	75	16FF1	1,6424	6,1544	3,6036	0.0	11,4004	10,4088	53,7841	31,6094	3,7472			
7808201150	75	21GG1	0,7366	1,0416	1,8802	0.0	4,0584	18,1500	35,5214	46,3286	1,9571			
7808210748	64	1AA1	2,0827	25,4293	7,7707	0.0	35,2827	5,9026	72,0730	22,0241	12,2096			
7808210748	64	5681	2,2108	30,3456	6,2303	0.0	38,7947	5,7188	70,2215	16,0397	13,6779			
7808210748	64	11CC1	4,0057	33,9651	14,6238	0.0	52,6146	7,6133	64,5545	27,8222	8,4702			
7808210748	64	20DD1	2,7680	25,7685	12,8190	0.0	41,3753	8,6899	62,3280	30,9421	0,3167			
7808210748	64	33EE1	2,2674	11,1384	4,6381	0.0	18,0419	12,5674	61,7363	25,6983	8,9124			
7808210748	64	50FF1	1,7032	3,9665	0,8947	0.0	6,5644	25,9460	60,6244	13,6296	2,3259			
7808210748	64	65GG1	0,4707	1,2463	0,1796	0.0	1,9468	24,1606	66,5930	9,2203	2,7540			
7808211207	71	1AA1	1,1659	23,5553	5,6597	0.0	29,7800	3,9160	70,0054	16,9097	20,2035			
7808211207	71	48B1	1,3155	21,6292	6,0699	0.0	29,2346	4,5682	74,6691	24,7627	16,3453			
7808211207	71	9CC1	1,5979	21,4916	11,1724	0.0	34,2619	4,6638	82,7274	32,8668	13,4000			
7808211207	71	16DD1	1,5881	24,5715	15,2617	0.0	41,4C13	3,7876	59,3496	36,8829	15,6696			
7808211207	71	28EE1	0,8328	15,7260	6,5420	0.0	23,1008	3,6051	68,0756	26,3190	18,8833			
7808211207	71	40FF1	0,3981	2,2721	2,5030	0.0	9,1732	7,6954	43,9206	48,3840	5,7074			
7808211207	71	52GG1	0,2012	0,5584	1,4968	0.0	2,2582	6,9176	24,7496	68,3127	2,7753			
7808220747	81	1AA1	3,0770	15,7463	6,7520	0.0	23,5753	13,0518	66,7415	20,1587	5,1174			
7808220747	81	58B1	3,3142	18,8259	6,6801	0.0	31,6202	10,4013	58,0950	30,6137	5,6200			
7808220747	81	11CC1	3,7000	19,2642	10,3217	0.0	33,2900	11,1142	57,6813	31,0046	5,2070			
7808220747	81	20DD1	2,8702	23,0996	5,0162	0.0	30,4960	6,1001	75,4512	16,0487	9,3180			
7808220747	81	33EE1	2,9881	26,1081	5,6946	0.0	38,7908	6,9880	75,0031	16,0381	8,7374			
7808220747	81	50FF1	0,7975	10,3615	2,4659	0.0	13,6249	5,6533	76,0463	18,0985	12,9925			
7808220747	81	65GG1	0,3408	1,7933	2,1488	0.0	4,2220	7,9572	61,8718	50,1716	9,2620			
7808221245	79	1AA1	0,8602	20,2523	9,1952	0.0	38,9C77	24,3145	52,0522	23,6314	2,1406			
7808221245	79	58B1	14,0632	24,4416	10,2507	0.0	40,7553	28,8443	90,1310	21,0247	1,7380			
7808221245	79	10CC1	12,3471	27,4737	20,7392	0.0	60,5600	20,3862	45,3661	34,2497	2,2251			
7808221245	79	17DD1	2,4705	22,5636	17,1821	0.0	42,2402	5,6671	53,4596	40,6733	9,1118			
7808221245	79	28EE1	10,1274	24,6066	12,6605	0.0	47,5943	21,2786	52,1205	26,6009	2,4494			
7808221245	79	44FF1	13,2415	7,1013	10,1139	0.0	30,4567	42,4765	23,3161	33,2075	0,5363			
7808221245	79	57GG1	0,1131	0,9513	2,6625	0.0	3,9269	2,8601	24,2252	72,8946	8,4111			
7808240726	91	1AA1	0,6256	17,1123	6,3813	0.0	20,1192	2,5938	76,9489	26,4576	27,3534			
7808240726	91	48B1	0,4313	19,2187	6,6906	0.0	26,3408	1,6374	72,9623	29,4003	84,5599			
7808240726	91	8CC1	0,2717	20,0742	6,7980	0.0	27,1439	1,0010	73,9540	25,0483	73,8837			
7808240726	91	13DD1	0,3047	25,3706	6,0881	0.0	34,7634	6,8765	72,9808	26,1427	83,2642			
7808240726	91	22EE1	0,3249	26,4116	8,9243	0.0	35,6608	0,9111	74,0634	25,0255	81,2914			
7808240726	91	34FP1	0,2483	9,9726	3,6765	0.0	13,6696	1,7684	71,7468	26,0468	40,1643			
7808240726	91	44GG1	0,1226	1,6379	1,2433	0.0	3,0044	4,0679	58,9240	41,3861	13,3370			
7808241245	85	1AA1	0,5474	69,5160	24,5785	0.0	98,6419	0,5664	71,9315	27,5020	126,9930			
7808241245	85	48B1	0,4543	75,7427	14,7098	0.0	90,9468	0,4495	83,2264	16,1741	166,8120			
7808241245	85	8CC1	0,5032	69,0462	13,2675	0.0	62,8469	0,6007	78,1203	21,0760	97,5670			
7808241245	85	15DD1	0,5568	39,9410	17,3982	0.0	97,4980	0,9710	68,7693	30,2588	70,7005			
7808241245	85	28EE1	94,0650	60,2663	57,5657	0.0	171,8970	31,4520	35,0395	33,4885	1,1147			
7808241245	85	30FF1	0,7961	6,3666	6,9695	0.0	16,1262	4,9361	51,0736	43,1683	10,5099			
7808241245	85	49GG1	0,1004	0,7086	4,5470	0.0	9,3560	1,8745	13,2300	84,8954	7,0878			
7808250750	93	1AA1	2,3264	29,1106	11,0082	0.0	62,4452	2,4810	68,5640	25,9351	12,9332			
7808250750	93	38B1	2,8263	33,7796	5,6387	0.0	42,2448	6,0908	79,9616	13,3477	11,9310			
7808250750	93	5CC1	1,2948	29,0014	7,6203	0.0	37,9243	3,4136	76,6718	20,1145	22,4018			
7808250750	93	9DD1	1,3838	31,8976	6,3546	0.0	41,6360	3,3236	76,6106	20,0658	23,0507			
7808250750	93	18EE1	2,1497	74,0536	3,6633	0.0	80,0666	2,6840	92,4900	4,8251	36,4483			
7808250750	93	24FF1	0,3616	7,5481	1,7180	0.0	9,6277	3,7558	76,3998	17,8443	20,8742			

Table 2 (continued).

	NET	MAN OR PPP	DOP	TPP	SUM	E NET	E MAN OR PPP	E DOP	W/NET
7808250700 92 31GG1	0.0072	1.04538	67.1542	0.0	78.4925	1.0172	70.6295	78.4925	10.0000
7808251481 92 1AA1	1.04538	90.9519	0.0	0.0	93.7538	1.0197	93.1194	93.7538	82.5491
7808251351 92 3B61	0.00575	90.9507	0.0	0.0	91.9330	1.0197	92.9330	91.9330	34.9158
7808251251 92 SGC1	1.03797	90.9507	0.0	0.0	90.9505	1.0197	90.7935	90.9505	14.0000
7808251251 92 9001	0.04116	82.2415	0.0	0.0	82.2415	1.0197	82.2415	82.2415	0.0000
7808251251 92 10651	1.04006	80.1242	0.0	0.0	80.1242	1.0197	80.1242	80.1242	0.0000
7808251251 92 3GCC1	1.04006	80.9168	0.0	0.0	80.9168	1.0197	80.9167	80.9168	0.0000
7808251251 92 24PF1	1.04006	32.6497	0.0	0.0	32.6497	1.0197	32.6497	32.6497	0.0000
7808251251 92 1AA1	1.04006	0.40923	0.0	0.0	0.40923	1.0197	0.40923	0.40923	0.0000
7808251251 92 22PF1	1.04006	1.3262	0.0	0.0	1.3262	1.0197	1.3262	1.3262	0.0000
7808250747162 1AA1	1.04944	2.0190	0.0	0.0	2.0190	1.0197	2.0190	2.0190	0.0000
7808250747162 24GG1	2.0194	24.0580	0.0	0.0	24.0580	1.0197	24.0580	24.0580	0.0000
7808250747162 3B61	2.0194	0.1730	0.0	0.0	0.1730	1.0197	0.1730	0.1730	0.0000
7808250747162 3GCC1	2.0194	20.7067	0.0	0.0	20.7067	1.0197	20.7067	20.7067	0.0000
7808250747162 3GGC1	2.0194	77.1100	0.0	0.0	77.1100	1.0197	77.1100	77.1100	0.0000
7808250747162 41GG1	2.0194	0.2449	0.0	0.0	0.2449	1.0197	0.2449	0.2449	0.0000
7808250747162 45GG1	2.0194	76.9804	0.0	0.0	76.9804	1.0197	76.9804	76.9804	0.0000
7808250747162 47GG1	2.0194	1.0401	0.0	0.0	1.0401	1.0197	1.0401	1.0401	0.0000
7808250747162 51GG1	2.0194	20.9334	0.0	0.0	20.9334	1.0197	20.9334	20.9334	0.0000
7808250747162 53GG1	2.0194	0.1303	0.0	0.0	0.1303	1.0197	0.1303	0.1303	0.0000
7808250747162 55GG1	2.0194	4.1654	0.0	0.0	4.1654	1.0197	4.1654	4.1654	0.0000
7808250747162 57GG1	2.0194	5.1226	0.0	0.0	5.1226	1.0197	5.1226	5.1226	0.0000
7808250747162 59GG1	2.0194	41.2106	0.0	0.0	41.2106	1.0197	41.2106	41.2106	0.0000
7808250747162 61GG1	2.0194	0.6356	0.0	0.0	0.6356	1.0197	0.6356	0.6356	0.0000
7808250747162 63GG1	2.0194	85.2547	0.0	0.0	85.2547	1.0197	85.2547	85.2547	0.0000
7808250747162 65GG1	2.0194	91.9553	0.0	0.0	91.9553	1.0197	91.9553	91.9553	0.0000
7808250747162 67GG1	2.0194	0.6663	0.0	0.0	0.6663	1.0197	0.6663	0.6663	0.0000
7808250747162 69GG1	2.0194	11.3559	0.0	0.0	11.3559	1.0197	11.3559	11.3559	0.0000
7808250747162 71GG1	2.0194	126.0007	0.0	0.0	126.0007	1.0197	126.0007	126.0007	0.0000
7808250747162 73GG1	2.0194	100.0503	0.0	0.0	100.0503	1.0197	100.0503	100.0503	0.0000
7808250747162 75GG1	2.0194	20.9334	0.0	0.0	20.9334	1.0197	20.9334	20.9334	0.0000
7808250747162 77GG1	2.0194	0.1303	0.0	0.0	0.1303	1.0197	0.1303	0.1303	0.0000
7808250747162 79GG1	2.0194	23.4767	0.0	0.0	23.4767	1.0197	23.4767	23.4767	0.0000
7808250747162 81GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 83GG1	2.0194	0.1303	0.0	0.0	0.1303	1.0197	0.1303	0.1303	0.0000
7808250747162 85GG1	2.0194	91.1644	0.0	0.0	91.1644	1.0197	91.1644	91.1644	0.0000
7808250747162 87GG1	2.0194	7.4663	0.0	0.0	7.4663	1.0197	7.4663	7.4663	0.0000
7808250747162 89GG1	2.0194	10.2876	0.0	0.0	10.2876	1.0197	10.2876	10.2876	0.0000
7808250747162 91GG1	2.0194	122.4927	0.0	0.0	122.4927	1.0197	122.4927	122.4927	0.0000
7808250747162 93GG1	2.0194	138.9440	0.0	0.0	138.9440	1.0197	138.9440	138.9440	0.0000
7808250747162 95GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 97GG1	2.0194	0.1303	0.0	0.0	0.1303	1.0197	0.1303	0.1303	0.0000
7808250747162 99GG1	2.0194	27.7051	0.0	0.0	27.7051	1.0197	27.7051	27.7051	0.0000
7808250747162 101GG1	2.0194	122.2428	0.0	0.0	122.2428	1.0197	122.2428	122.2428	0.0000
7808250747162 103GG1	2.0194	12.9250	0.0	0.0	12.9250	1.0197	12.9250	12.9250	0.0000
7808250747162 105GG1	2.0194	40.1151	0.0	0.0	40.1151	1.0197	40.1151	40.1151	0.0000
7808250747162 107GG1	2.0194	77.6803	0.0	0.0	77.6803	1.0197	77.6803	77.6803	0.0000
7808250747162 109GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 111GG1	2.0194	20.4867	0.0	0.0	20.4867	1.0197	20.4867	20.4867	0.0000
7808250747162 113GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 115GG1	2.0194	10.2876	0.0	0.0	10.2876	1.0197	10.2876	10.2876	0.0000
7808250747162 117GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 119GG1	2.0194	2.0194	0.0	0.0	2.0194	1.0197	2.0194	2.0194	0.0000
7808250747162 121GG1	2.0194	34.7456	0.0	0.0	34.7456	1.0197	34.7456	34.7456	0.0000
7808250747162 123GG1	2.0194	38.4959	0.0	0.0	38.4959	1.0197	38.4959	38.4959	0.0000
7808250747162 125GG1	2.0194	7.9142	0.0	0.0	7.9142	1.0197	7.9142	7.9142	0.0000
7808250747162 127GG1	2.0194	38.4959	0.0	0.0	38.4959	1.0197	38.4959	38.4959	0.0000
7808250747162 129GG1	2.0194	6.5030	0.0	0.0	6.5030	1.0197	6.5030	6.5030	0.0000
7808250747162 131GG1	2.0194	31.0270	0.0	0.0	31.0270	1.0197	31.0270	31.0270	0.0000
7808250747162 133GG1	2.0194	20.4867	0.0	0.0	20.4867	1.0197	20.4867	20.4867	0.0000
7808250747162 135GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 137GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 139GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 141GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 143GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 145GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 147GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 149GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 151GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 153GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 155GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 157GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 159GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 161GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 163GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 165GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 167GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 169GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 171GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 173GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 175GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 177GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 179GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 181GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 183GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 185GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 187GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 189GG1	2.0194	1.1649	0.0	0.0	1.1649	1.0197	1.1649	1.1649	0.0000
7808250747162 191GG1	2.0194	1.1649	0.0	0.0					

Table 2 (continued).

	NET	MAN CH APP	ODP	TPP	BUP	E NET	E MAN CR PPP	E ODP	MAN/NET
27.40000	187.9107	81.0727	0.0	0.0	356.7442	10.0707	7.3.0227	16.3046	6.0313
7603291220161	4CC1	27.44009	187.5119	81.0918	818.6446	11.0699	7.0.9413	17.0498	6.0310
7603291220161	7001	20.1393	137.1415	40.4540	197.7358	10.1381	6.0.9413	20.4368	6.0310
7603291220161	12681	11.6425	75.4559	14.4501	101.5910	11.0439	6.0.9413	16.4352	6.0311
7603291220161	10FF1	2.5069	16.6371	4.6159	101.3013	7.4.3013	17.7745	16.4352	6.0311
7603291220161	39CC1	1.9194	4.4498	1.6431	9.9618	7.2.5367	7.0.7790	7.0.7790	6.0311
7603291220161	1AA1	2.0231	27.0720	6.0487	16.9051	16.0726	6.0.4604	20.7797	6.0311
7603291220161	3881	1.6271	36.3766	10.1683	48.3740	15.2239	5.9162	17.1721	13.0350
7603291220161	4CC1	1.4817	41.4233	10.0319	53.1148	10.0319	5.0.2028	21.4334	22.3779
7603291220161	10CC1	1.1260	45.5375	9.9127	54.5782	2.0688	7.7.9652	16.0.9464	24.0.9464
7603291220161	7001	0.7540	61.6228	23.1421	65.7149	6.0.7704	7.9.7704	16.1.9424	38.9711
7603291220161	26FF1	0.6866	16.6515	5.1090	5.1090	0.0.0000	7.2.1261	26.9.9589	62.4304
7603291220161	34CC1	0.3904	3.0797	0.9954	24.6493	3.2.9943	3.2.9943	20.7348	27.4348
7603291220161	1AA1	0.6120	46.5981	1.7753	46.3740	0.0.0000	4.6.9458	22.2.9458	7.6646
7603291220161	3881	0.6443	63.0174	0.9064	49.4493	0.0.0000	4.6.9458	1.6.9458	37.4363
7603291220161	4CC1	0.6851	64.9267	0.8415	64.3864	1.6.9424	7.7.9743	7.2.9743	72.9721
7603291220161	10DD1	0.6693	69.0232	4.2.9886	71.0150	1.6.9424	1.6.9424	1.6.9424	73.9552
7603291220161	17EE1	0.6366	69.5937	3.1984	73.4467	0.0.0000	9.2.8355	9.1.9495	74.4315
7603291220161	26FF1	0.5251	32.7950	16.1292	16.1292	0.0.0000	7.6.4750	20.7348	27.4348
7603291220161	34CC1	0.0905	3.4465	0.9244	4.6.9458	0.0.0000	4.6.9458	12.0.9458	62.4304
7603291220161	1AA1	2.1093	59.2699	9.9642	59.2699	0.0.0000	5.0.2028	1.6.9458	27.3531
7603291220161	2881	1.7717	62.1587	10.0971	74.0275	2.3.9934	6.0.2028	1.6.9458	28.1086
7603291220161	4CC1	1.2446	53.4779	16.1864	72.9091	1.1.7071	8.3.3487	13.0.9497	35.0.9497
7603291220161	9DD1	0.9980	44.6972	16.2498	44.6972	0.0.0000	7.3.3487	24.0.9442	82.4315
7603291220161	34CC1	0.7994	23.1376	5.6.8008	64.1290	1.6.9458	4.6.9458	82.4315	82.4315
7603291220161	22PF1	0.3222	6.0.6994	4.7193	29.7378	2.0.0000	7.7.8054	19.0.9458	28.9.9337
7603291220161	26FF1	0.4662	1.6.9491	1.7137	47.3594	3.0.2028	5.0.2028	39.6.3462	12.0.9458
7603291220161	1AA1	1.6967	453.1993	24.9363	3.0.2028	1.3.3114	4.6.9458	49.6.3462	2.7.0119
7603291220161	2881	1.0719	51.1913	4.3.9959	49.0.9458	12.0.2735	2.3.9934	37.0.9458	10.0.9458
7603291220161	4CC1	1.0719	44.3959	16.1.5864	195.0.9458	1.6.9458	2.0.0000	4.6.9458	41.1086
7603291220161	9DD1	0.9980	44.6972	16.2498	44.6972	0.0.0000	7.3.3487	24.0.9442	82.4315
7603291220161	14EE1	0.7994	23.1376	5.6.8008	64.1290	1.6.9458	4.6.9458	82.4315	82.4315
7603291220161	22PF1	0.3222	6.0.6994	4.7193	29.7378	2.0.0000	7.7.8054	19.0.9458	28.9.9337
7603291220161	26FF1	0.4662	1.6.9491	1.7137	47.3594	3.0.2028	5.0.2028	39.6.3462	12.0.9458
7603291220161	1AA1	1.6967	453.1993	24.9363	49.0.9458	12.0.2735	2.3.9934	37.0.9458	10.0.9458
7603291220161	2881	1.0719	51.1913	4.3.9959	49.0.9458	1.6.9458	2.0.0000	4.6.9458	41.1086
7603291220161	4CC1	1.0719	44.3959	16.1.5864	195.0.9458	1.6.9458	2.0.0000	4.6.9458	41.1086
7603291220161	9DD1	0.9980	44.6972	16.2498	44.6972	0.0.0000	7.3.3487	24.0.9442	82.4315
7603291220161	1AA1	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885	45.0.9458
7603291220161	3881	2.2690	75.2601	6.7464	84.3219	2.0.0000	6.0.2028	6.0.2028	33.0.9450
7603291220161	10EE1	2.8763	29.4914	1.7664	32.1683	2.0.0000	6.0.2028	6.0.2028	33.0.9450
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	2881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	4CC1	0.4323	60.2741	29.3803	111.0.6877	1.6.9458	0.0.0000	4.6.9458	41.1086
7603291220161	9DD1	1.4323	2.194	126.5860	10.0150	139.3204	1.6.9458	0.0.0000	7.6.1885
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	3881	0.3795	1.7052	2.0.0000	9.1.2813	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	10EE1	0.8763	29.4914	1.7664	32.1683	5.0.3028	5.0.3028	37.0.9458	10.0.9458
7603291220161	1AA1	2.2413	5.512	5.6155	9.7227	5.0.3028	5.0.3028		

Table 2 (continued).

	NET	NAN CR PPP	QUP	TPP	SUP	X NET	S NAN CR PPP	N DCP	M/NET
7809021205119	42.4291	140.4604	9.5478	0.0	192.3373	22.0358	73.0182	3.1192	4.9764
7809021205119	36.7553	27.5914	2.1729	0.0	66.1995	53.2386	41.6924	0.3912	3.2725
7809021205119	2.5117	3.4861	2.4022	0.0	6.8600	34.9225	41.3616	0.1800	28.6639
7809021205119	0.5465	1.0621	0.4223	0.0	2.4311	22.4695	41.6880	1.9435	33.6124
7809021205119	0.3013	0.3013	0.0006	0.0	0.3064	2.4044	73.2426	0.0003	22.6734
7809021205119	1.441	32.0643	9.9006	0.0	63.0662	1.7331	84.1086	14.1884	36.0632
7809021205119	3881	0.6092	39.4998	0.0	46.4539	49.4027	1.4119	0.0135	46.8115
7809021205119	7CC1	0.4975	34.4128	0.0	34.4128	79.2045	78.5437	20.0244	55.0453
7809021205119	13001	1.6849	34.4142	0.0	20.9218	72.1142	71.4630	26.4148	33.6737
7809021205119	21161	2.1269	73.2930	0.0	16.9913	92.1114	2.2791	18.1686	38.5070
7809021205119	78090210756113	1.0788	2.0434	0.0	12.4178	9.0559	79.3340	16.4559	10.4554
7809021205119	32FF1	0.9444	1.2059	0.0	1.0061	19.3159	42.7867	2.2151	17.6974
7809021205119	426C1	0.5444	1.2059	0.0	1.0061	2.1684	4.6464	0.0049	4.0029
7809021205119	14A1	22.0984	29.2146	1.3*2.32	0.0	331.1857	89.5127	4.2479	13.0043
7809021205119	2861	20.4670	304.4741	14.4448	0.0	340.0196	6.1016	88.4213	16.6113
7809021205119	4CC1	16.7084	376.0062	10.3169	0.0	305.3318	6.1107	90.5037	16.7085
7809021205119	7C01	1.63597	200.6600	12.6808	0.0	231.1363	7.6117	86.4821	3.3756
7809021205119	115E1	111.3647	105.1262	9.7292	0.0	126.2201	9.0339	83.2880	3.4462
7809021205119	177F1	13.0647	13.0647	1.3076	0.0	17.4149	7.7061	7.5085	0.1999
7809021205119	22GG1	0.3694	2.0199	1.01350	0.0	4.0247	50.1676	28.2009	2.3223

Table 3.

Table 3 (continued).

Table 3 (continued).

Table 3 (continued).

NET	MAN CH PPP	ULP	SUM	NET	MAN CH PPP	ULP	SUM
7610212226402 51661	3.646	5.9456	9.0	11.5386	51.2674	10.1119	10.7119
7610200404077 1441	55.374	55.0466	0.0	122.7105	9.997	9.997	0.00045
7610200740077 1083	66.406	64.4068	0.0	176.9066	45.1245	45.1245	0.00045
7610200404077 3CC1	107.3874	125.4132	0.0	244.0268	46.0458	46.0458	0.00045
7610200740077 9CC1	79.0134	84.0134	0.0	169.1636	51.0932	51.0932	0.00045
7610200740077 14E1	59.009	55.0093	0.0	130.7950	47.1937	47.1937	0.00045
7610200740077 17FF1	12.3140	15.0586	0.0	41.5612	11.0414	11.0414	0.00045
7610210404077 4dG61	5.1497	4.8234	0.0	10.0054	3.0476	3.0476	0.00045
7610210404077 14A1	16.0379	22.3171	0.0	21.0158	7.3845	7.3845	0.00045
7610210404077 3001	24.5193	44.4496	0.0	22.0047	6.0108	6.0108	0.00045
7610210404077 5CC1	25.0494	30.4469	0.0	71.5639	54.0260	54.0260	0.00045
7610210404077 10CC1	28.3115	30.4469	0.0	66.1607	34.9236	34.9236	0.00045
7610210404077 12E1	15.411	20.2100	0.0	24.1069	4.3107	4.3107	0.00045
7610210404077 23FF1	4.1767	9.7336	0.0	1.0662	0.00045	0.00045	0.00045
7610210404077 31GG1	2.084	1.4197	0.0	1.0556	0.00045	0.00045	0.00045
7610210404077 35E51	1.061	1.061	0.0	2.2312	0.00045	0.00045	0.00045
7610210404077 3C81	11.0008	16.1534	0.0	46.7609	7.1579	7.1579	0.00045
7610210404077 5CC1	8.0426	12.0426	0.0	16.4921	3.0476	3.0476	0.00045
7610210404077 12CC1	10.0004	40.0532	0.0	39.9521	9.0057	9.0057	0.00045
7610210404077 23E1	1.0699	14.5468	0.0	1.0712	0.00045	0.00045	0.00045
7610210404077 35E51	0.313	0.313	0.0	0.2394	0.00045	0.00045	0.00045
7610210404077 5GG1	0.6134	0.7702	0.0	0.0	0.00045	0.00045	0.00045
7610220001070 1AA1	0.3404	1.7743	0.0	0.0	0.00045	0.00045	0.00045
7610220001070 2E61	0.3404	1.7743	0.0	0.0	0.00045	0.00045	0.00045
7610220001070 4CC1	0.3404	22.9647	0.0	2.3939	0.00045	0.00045	0.00045
7610220001070 8CC1	0.8084	26.7355	0.0	2.0591	0.00045	0.00045	0.00045
7610220001070 9CC1	12.4916	44.0486	0.0	14.3002	0.00045	0.00045	0.00045
7610220001070 13E61	0.3675	19.3750	0.0	1.0421	0.00045	0.00045	0.00045
7610220001070 43FF1	1.3895	14.5667	0.0	2.7291	0.00045	0.00045	0.00045
7610220001070 35E61	1.2371	4.1994	0.0	1.5349	0.00045	0.00045	0.00045
7610220001070 4CC1	4.2193	47.3012	0.0	16.0616	0.00045	0.00045	0.00045
7610220001070 5CC1	5.2004	44.1429	0.0	28.8349	0.00045	0.00045	0.00045
7610220001070 7CC1	4.1986	52.7136	0.0	27.7106	0.00045	0.00045	0.00045
7610220001070 9CC1	4.9968	44.3604	0.0	30.5530	0.00045	0.00045	0.00045
7610220001070 20E1	2.0530	31.5934	0.0	11.5419	0.00045	0.00045	0.00045
7610220001070 34FF1	0.5633	5.0601	0.0	3.0051	0.00045	0.00045	0.00045
7610220001070 49GG1	0.4615	1.5633	0.0	0.4955	0.00045	0.00045	0.00045
7610220001070 5CC1	39.0168	38.4040	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 6CC1	75.6938	70.3091	0.0	1.6608	0.00045	0.00045	0.00045
7610230001070 8CC1	61.4131	95.7712	0.0	1.1721	0.00045	0.00045	0.00045
7610230001070 9CC1	75.1218	110.5652	0.0	5.2933	0.00045	0.00045	0.00045
7610230001070 9CC1	45.3151	70.3136	0.0	2.1794	0.00045	0.00045	0.00045
7610230001070 9CC1	7.0167	11.3416	0.0	0.7057	0.00045	0.00045	0.00045
7610230001070 13E61	2.2117	4.4041	0.0	0.3511	0.00045	0.00045	0.00045
7610230001070 13E61	30.2117	65.0515	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	10.9043	0.0	0.4110	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	1.0619	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604	127.2068	0.0	4.0391	0.00045	0.00045	0.00045
7610230001070 9CC1	45.7844	76.0477	0.0	3.2592	0.00045	0.00045	0.00045
7610230001070 9CC1	0.4607	12.2491	0.0	1.9778	0.00045	0.00045	0.00045
7610230001070 10GG1	0.1051	9.2112	0.0	0.9337	0.00045	0.00045	0.00045
7610230001070 16GG1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 18E1	0.1071	7.9461	0.0	0.0	0.00045	0.00045	0.00045
7610230001070 2CC1	84.3135	143.4370	0.0	1.0619	0.00045	0.00045	0.00045
7610230001070 5L01	68.0604						

Table 3 (continued).

Table 3 (continued).

	NET	NAME L/H PPP	UGM	TSP	SOP	X AER	X NAME CH PPP	X UGM	X NAME
7010311272030	40001	40.3953	142.0036	10.4736	0.0	207.7121	44.3712	0.4316	2.9342
7010311252030	2221	22.3263	73.0033	4.4367	0.0	99.9619	22.3354	0.2081	3.2070
7010311252030	11911	1.7884	14.9684	1.6336	0.0	16.9438	2.5.4738	0.1495	2.6210
7010311252030	14661	0.7348	1.3965	1.0393	0.0	3.2704	0.42.7012	0.0465	1.4010
								34.3387	

Table 4,

7611161245115	1441	1.6158	16.0174	16.0174	1.7500	26.3491	14.2631	0.0	0.0	42.0019	3.0070	62.0157	33.5173	16.2818					
7611161245115	1441	3.0604	26.3563	17.4557	1.3626	22.9480	17.1086	0.0	0.0	40.4194	3.9397	63.1463	32.1463	16.2233					
7611161245115	0001	1.3626	27.5674	1.3626	1.3626	27.5674	1.3626	0.0	0.0	40.4194	2.0269	58.1612	25.6228	0.2804					
7611161245115	1441	0.0102	2.2760	0.0102	0.0102	2.2760	0.0102	0.0	0.0	41.0103	3.5210	61.3153	16.4467	16.4467					
7611161245115	1441	0.6161	2.2760	0.6161	0.6161	2.2760	0.6161	0.0	0.0	40.5567	5.3382	65.6110	6.5468	16.6504					
7611161245115	3041	0.0096	0.7426	0.0096	0.0096	0.7426	0.0096	0.0	0.0	3.3173	16.4610	68.2687	13.2502	3.4691					
7611161245115	2551	0.0096	1.7153	0.0096	1.7153	2.3705	2.075	0.0	0.0	2.4305	31.0633	24.6134	30.5534	8.0763	82.5111				
7611161245115	2551	7.4525	27.5674	7.4525	7.4525	27.5674	1.3626	0.0	0.0	36.2662	26.4104	75.6966	3.6460	2.7649					
7611161245115	5011	9.1265	27.5674	9.1265	9.1265	27.5674	9.1265	0.0	0.0	36.3202	23.0691	76.0691	6.6871	3.6195					
7611161245115	6011	7.0176	6.0140	7.0176	6.0140	7.0176	6.0140	0.0	0.0	2.6080	17.0500	16.5411	7.4111	4.6094					
7611161245115	1441	2.0481	1.7443	2.0481	1.7443	1.7443	1.7443	0.0	0.0	21.3465	12.053	84.0621	3.5327	6.7763					
7611161245115	2551	1.1264	3.4601	1.1264	1.1264	0.992	0.992	0.0	0.0	21.7144	1.9220	76.3120	3.5187						
7611161245115	3001	0.6603	1.0520	0.6603	0.6603	0.6603	0.6603	0.0	0.0	1.4625	32.2476	53.083	1.6430	1.6430					
7611161245115	1441	3.4603	4.5600	3.4603	3.4603	4.5600	3.4603	0.0	0.0	61.6604	21.4424	74.1633	3.6460	3.7167					
7611161245115	3001	7.0464	55.1403	7.0464	7.0464	55.1403	7.0464	0.0	0.0	67.9524	11.5441	62.0616	5.7445	7.1603					
7611161245115	6011	3.0564	3.0564	3.0564	3.0564	3.0564	3.0564	0.0	0.0	42.1504	9.1504	67.9500	6.8670	14.3017					
7611161245115	2551	3.4604	5.0165	3.4604	3.4604	5.0165	3.4604	0.0	0.0	66.9362	5.7421	65.6101	6.8670	14.9692					
7611161245115	1441	2.3227	1.7881	2.3227	1.7881	2.3227	2.3227	0.0	0.0	26.7874	7.0514	76.3120	3.5187	12.7674					
7611161245115	2551	0.3586	0.3586	0.3586	0.3586	0.3586	0.3586	0.0	0.0	5.2666	8.7465	91.863	1.3272	13.5225					
7611161245115	3001	0.5551	0.5245	0.5551	0.5551	0.5245	0.5245	0.0	0.0	5.5790	9.3066	90.4631	0.0	9.5161					
7611161245115	6011	1.722	1.5976	1.722	1.5976	1.722	1.5976	0.0	0.0	275.0193	92.8601	33.5103	3.5497	0.5328					
7611161245115	2551	2.0095	2.0095	2.0095	2.0095	2.0095	2.0095	0.0	0.0	276.6328	71.6782	26.5639	1.4680	0.3715					
7611161245115	1441	2.0481	2.0481	2.0481	2.0481	2.0481	2.0481	0.0	0.0	256.2156	6.675	26.0033	0.4090	0.4090					
7611161245115	3001	0.6232	0.6113	0.6232	0.6232	0.6113	0.6113	0.0	0.0	14.4613	64.5615	31.9013	3.5222	0.4656					
7611161245115	1441	0.0102	0.5245	0.0102	0.0102	0.5245	0.0102	0.0	0.0	62.1108	71.5195	26.4901	1.6902	0.3704					
7611161245115	3001	1.3062	1.4302	1.3062	1.3062	1.4302	1.3062	0.0	0.0	16.6901	6.2134	28.0335	4.1454	0.4187					
7611161245115	6011	1.3062	1.3062	1.3062	1.3062	1.3062	1.3062	0.0	0.0	5.5300	7.1210	23.5500	6.7210	0.3265					
7611161245115	2551	1.3062	1.3062	1.3062	1.3062	1.3062	1.3062	0.0	0.0	391.3220	74.9442	17.0752	1.1906	0.2407					
7611161245115	1441	0.0102	0.9552	0.0102	0.0102	0.9552	0.0102	0.0	0.0	327.1350	29.8037	56.0195	0.5209	0.5209					
7611161245115	3001	0.9291	45.9646	0.9291	0.9291	45.9646	0.9291	0.0	0.0	14.4613	1.4613	31.9013	3.5222	0.4656					
7611161245115	1441	1.0430	1.0430	1.0430	1.0430	1.0430	1.0430	0.0	0.0	17.0513	17.0513	17.0513	17.0513	0.4751					
7611161245115	3001	1.7161	1.7161	1.7161	1.7161	1.7161	1.7161	0.0	0.0	27.4053	17.0513	16.9902	1.6902	0.3704					
7611161245115	6011	1.7161	1.7161	1.7161	1.7161	1.7161	1.7161	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.7161	1.7161	1.7161	1.7161	1.7161	1.7161	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.4749	2.0777	1.4749	1.4749	2.0777	1.4749	0.0	0.0	9.7500	9.7500	9.7500	9.7500	0.2267					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	16.9902	27.4053	16.9902	0.4751	0.4751					
7611161245115	6011	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					
7611161245115	6011	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					
7611161245115	6011	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					
7611161245115	6011	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					
7611161245115	6011	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	50.1108	50.1108	50.1108	50.1108	0.4751					
7611161245115	2551	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	2.7664	9.5107	2.7664	0.7975	0.7975					
7611161245115	1441	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	27.9219	56.0195	27.9219	0.5195	0.5195					
7611161245115	3001	1.5154	1.5154	1.5154	1.5154	1.5154	1.5154	0.0	0.0	17.0513	57.0672	17.0513	0.4751	0.4751					

Table 4 (continued).

Table 4 (continued).

Table 5.

Tafel 6.

Table 7.