**neighborProc：**各方向的邻居进程标识数组

**bufsize：**缓冲区大小

**databuf：**用户缓冲区

**win：**内存共享窗口

**negProc：**沿坐标轴负方向的邻居进程标识

**posProc：**沿坐标轴正方向的邻居进程标识

**negbufAddress：**沿坐标轴负方向的邻居进程缓冲区起始地址

**posbufAddress：**沿坐标轴正方向的邻居进程缓冲区起始地址

**n：**沿坐标轴负方向的通信数据字节数

**m：**沿坐标轴正方向的通信数据字节数

1: **MPI\_Win\_allocate\_shared(bufsize, 1,**

**MPI\_INFO\_NULL, MPI\_COMM\_..., &databuf, &win); //** 开辟内存共享窗口

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2: for(int i=0 ; i < 2; i++ ) //二维体系，两个坐标维度

3: {

4: negProc = neighborProc[2\*i];

5: posProc = neighborProc[2\*i + 1];

6:

7: memcpy(databuf, &n, sizeof(int));

8: memcpy(databuf+sizeof(int), &m, sizeof(int));

9:CopyToBuf(databuf+2\*sizeof(int), n, …);

10:CopyToBuf(databuf+2\*sizeof(int)+n, m, …);

11: **MPI\_Win\_fence(0,win); //** 同步操作

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12: **MPI\_Win\_shared\_query(win, negProc, …, &negbufAddress);**

13: **MPI\_Win\_shared\_query(win, posProc, …, &posbufAddress);**

14: memcpy(&n, negbufAddress, sizeof(int));

15: memcpy(&m, negbufAddress+sizeof(int), sizeof(int));

16: ProcessData(negbufAddress+2\*sizeof(int), n+m, …);

17: memcpy(&n, posbufAddress, sizeof(int));

18: memcpy(&m, posbufAddress+sizeof(int), sizeof(int));

19: ProcessData(posbufAddress+2\*sizeof(int), n+m, …);

20: **MPI\_Win\_fence(0,win); //** 同步操作

21: }

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22: MPI\_Win\_free(&win);