

**Article Title:****High Mach Number Quasi-Perpendicular Shocks: Spatial Vs. Temporal Structure****Authors:**

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**Total Data Size:** 165 Mb**Data Description:**

Data for each Figure in the paper is provided in separate location. Both the 2-D and 1-D data are in “Direct Access” (.gda) format (readable by visualization packages such as IDL). The dimensions of 2-D and 1-D files provided for each Figure is specified in “Note on Dimensions” file provided in that folder.

**Information on Units:**

The units for the data correspond to the following:

**Density** is normalized to solar wind value and can be converted to  $\text{Cm}^{-3}$  by multiplying by 10.5.

**Magnetic Field** is normalized to IMF value and can be converted to nT by multiplying by 2.6 in all cases except for Figure 9 where factor of 10 is used.

**Velocity** is normalized to the Alfvén speed in the solar wind and can be converted to km/s by multiplying by 17.9 except for Figure 9 where factor of 68.8 is used.

**Ion Temperature** is normalized to solar wind value and can be converted to eV by multiplying by 2.75.

Note that in the Figures in the published journal the maximum limits for the color bar may have been set at numbers below the actual limit for the purpose of clarity.

### Generic Code for Reading 2-D Data (e.g. dns.gda):

```
RecordLength (in bytes) = 4 x (size_in_X x size_in_Y)
```

```
OPEN (10,file='dns.gda',form='unformatted',access='direct',status= &  
      'unknown',recl= RecordLength)
```

Note: 10 is arbitrary I/O unit ID number chosen here for example. This number is used when reading 'dns.gda' file as shown below.

```
READ (10,rec=1) (((dns(i,j),i=1, size_in_X),j=1, size_in_Y))
```

Note: Here rec=1 since 2-D data is shown at 1 time.

### Generic Code for Reading 1-D Data (e.g. bx.gda):

```
RecordLength (in bytes) = 4 x (size_in_X)
```

```
OPEN (20,file='bx.gda',form='unformatted',access='direct',status= &  
      'unknown',recl= RecordLength)
```

```
READ (20,rec=1-tsize) (bx(i),i=1, size_in_X)
```

Note: Here rec=1- t<sub>size</sub> since 1-D data is shown at t<sub>size</sub> times during the run. t<sub>size</sub> is specified under time in “Note on Dimensions” file. Also, 1-D data is identified in “Note on Dimension” file by setting Y = 1.