
Subject: Array multiplication: implicit loop query
Posted by [george](#) on Fri, 10 Aug 2001 10:56:55 GMT
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Hi there

I was just calculating the following equation:

$$\text{DEN_H} = \text{MMR_H} * \text{Pres} * \text{RMT} / (\text{atomic_mass_H} * \text{Gas_constant} * \text{TN})$$

These numbers are 3D arrays, 1D arrays and constants, i.e.,

```
MMR_H = fltarr(30,91,40)
Pres = fltarr(30)
RMT = fltarr(30,91,40)
atomic_mass_H = constant
Gas_constant = constant
TN = fltarr(30,91,40)
```

The result of this is DEN_H (previously undefined) which ends up being fltarr(30) - i.e., 1 dimensional.

To my mind DEN_H should be 3D (30,91,40) - shouldn't it ? Doesn't IDL understand that I am implicitly doing a full 3D calculation here ? It would seem that, to get this to work I need to make Pres=fltarr(30,91,40). However, this seems unnecessary because that means that the 2 new dimensions for pressure are redundant.

Any advice ?? Cheers,
George Millward
