arraysize=1 means what?

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Pop quiz! (Compulsory participation): Are

```
<column name='i' type='integer' arraysize='1'>
```

and `<column name='i' type='integer'>`

1. eqivalent?

2. different?

3. don't care.

4. don't know.

Let's see.

Take this VOTable ("test.vot"):

```
<?xml version='1.0'?>
<VOTABLE version="1.3"
 xmlns="http://www.ivoa.net/xml/VOTable/v1.3">
<RESOURCE>
<TABLE name="trap">
<FIELD datatype="short" name="f1" arraysize="1"/>
<FIELD datatype="short" name="f2"/>
<DATA>
<TABLEDATA>
   <TR>
     <TD>1</TD>
     <TD>1</TD>
   </TR>
</TABLEDATA>
</DATA>
</TABLE>
</RESOURCE>
</VOTABLE>
```

Astropy

Then the following program:

```
from astropy.table import Table

t = Table.read("test.vot")
print(t.columns[0])
print(t.columns[1])
```

prints

```
f1 [1]
------
     1
 f2
---
   1
```

A 1-array and a scalar!

TOPCAT

Load the table into TOPCAT, check the metadata:

	Name	Datatype	Shape
x	Index		
	f1	short	
	f2	short	

It's two scalars!

How Bad Is It?

Well, numpy magic where 1-arrays are sometimes quite like scalars prevent the worst.

But I *have* had to write code like
```
def force_scalar(val):
    if np.isscalar(val):
        return val
    else:
        return val[0]
```

to deal with VizieR output (that has `arraysize='1'`).

What Do We Do?

I see five main options:

- Problem? What problem?

- Nudge people to drop arraysize=1 for scalars (Note? Mild erratum?)

- Nudge people to have arraysize=1 for scalars (Note? Mild erratum?)

- Require people to only write arraysize=1 when they have 1-arrays ("Strong array erratum")

- Require people to interpret arraysize=1 as scalars ("Strong scalar erratum")