



## S-lang-related Bugs: general

### Bugs

#### 1. *load\_arf with set\_inst\_expr vs. instrument with farfld*

The following commands:

```
(() = load_arf( "arf1", "arf.fits" );
() = set_inst_expr( 1, "arf1" );
```

do not produce the same results as:

```
instrument 1 = farfld[arf1](arf.fits)
```

1. The analysis setting is "Channel" and not "Energy" after performing the S-Lang calls.
2. The return value of `get_axes()` does not obey the analysis setting, although it appears to do so.

This issue also holds if you create a fake arf using a struct.

#### 2. *When a fake arf has been created, using S-lang functions to define the same instrument model for different datasets confuses Sherpa.*

This works fine when the ARF is loaded from a file.

3. *There are no consistent error message system in the Sherpa Slang/Varmm environment.*
4. *Currently, the Sherpa/S-Lang module can report parameter links, but it cannot create them.*

This works:

```
sherpa> gauss[g1]
sherpa> gauss[g2]
sherpa> g2.fwhm => g1.fwhm
sherpa> get_par("g2.fwhm").linkexpr
g1.fwhm
```

but this doesn't:

```
sherpa> ampl2 = get_par("g2.ampl")
sherpa> ampl2.linked = 1
sherpa> ampl2.linkexpr = "g1.ampl"
sherpa> set_par(ampl2)
1
sherpa> show g2
gaussld[g2] (integrate: on)
  Param   Type      Value       Min       Max          Units
  -----  ----  -----  ---  -----
  1  fwhm    link      10  expression: g1.fwhm
  2  pos     thawed    0 -3.403e+38 3.4028e+38
  3  ampl    thawed    1 -3.403e+38 3.4028e+38
sherpa> print(get_par("g2.ampl"))
name      =  g2.ampl
model     =  gaussld
type      =  src
value     =  1
```

## S-lang-related Bugs: general – CIAO 3.4

```
min          = -3.40282e+38
max          = 3.40282e+38
delta        = -1
units        = NULL
frozen       = 0
linked       = 0
linkexpr     = NULL
```

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URL:  
[http://cxc.harvard.edu/sherpa3.4/bugs/sl\\_general.html](http://cxc.harvard.edu/sherpa3.4/bugs/sl_general.html)  
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