AU-Programs

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AU programs

Pulse program: performed at run time on the spectrometer

real time

edpul

AU-program: performed on data station (INDY, ASPECT Station, X32)

no run-time access to spectrometer

indirect action on pulse program execution by changing acquisition parameters prior acquisition start

slow

edau

Macros: Macros simply contain a series of Topspin-commands

slow

edmac

Commands used for AU-programs:

pure C code

pure Topspin standard commands (via library)

mixture of C-code and Topspin commands

AU programs

General structure:

```
GETCURDATA
FT
QUIT
```

Program loops:

```
TIMES(10)
<command sequence>
END
```

Additional loop commands:

TIMES2(i)
TIMES3(i)

```
TIMES(n)
...
        TIMES2(m)
        ...
                TIMES3(p)
                ...
                END
        END
END
```

AU programs

Termination of an AU program:

QUIT
QUITMSG (“end of AU program“)
STOP
STOPMSQ(“AU program stopped“)

Nested AU programs:

XAU(“AU-program“)

AU programs

Predefined variables:

```
int i1, i2, i3;
float f1, f2, f3;
double d1, d2, d3;
char [text100];
char name[15], disk[15], user[15];
int expno, procno;
```

AU programs

Setting parameters:

STOREPAR(‘’parameter name’’, parameter value) F2-dimension

example: STOREPAR(‘’SW’’,12.5)
STOREPAR(‘’D 5’’,0.001)
STOREPAR(‘’SI’’, 16*1024)

STOREPARS(‘’parameter name’’, parameter value) F2-dimension status parameter

STOREPAR1(‘’parameter name’’, parameter value) F1-dimension

STOREPAR1S(‘’parameter name’’, parameter value) F1-dimension status parameter

AU programs

Reading parameters:

FETCHPAR(‘’parameter name’’, &variable) F2-dimension

FETCHPAR1‘’parameter name’’, &variable) F1-dimension

example:
```
FETCHPAR(‘’P 1’’, &f1)
f1+=10;
STOREPAR(‘’P 1’’, f1)
ZG
```

AU programs

Setting and reading plot parameters:

STOREPLPAR()

FETCHPLPAR()

syntax for content within brackets corresponds to STOREPAR and FETCHPAR

AU programs

Reading and writing complete parameter sets:

WPAR(‘’parameter set name’’,’’parameter class’’)

RPAR(‘’parameter set name’’,’’parameter class’’)

example: RPAR(‘’COSY’’,’’all’’)
RPAR(‘’COSY’’,’’proc’’)
WPAR(‘’COSY’’,’’proc plot outd’’)

AU programs

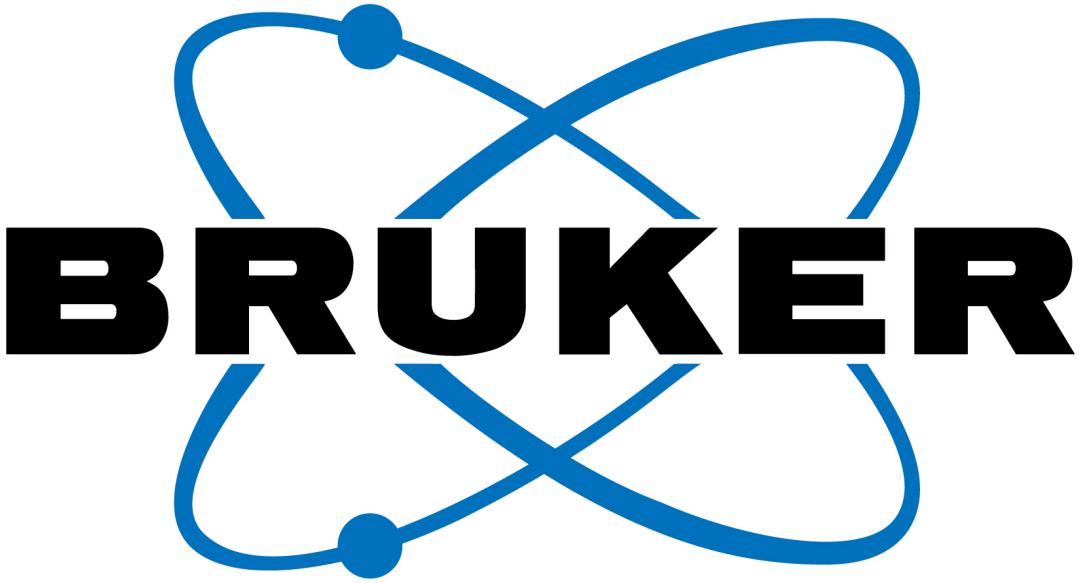
Simple and useful C commands:

entering a variable:

```
char *Gets();
...
d1=atoi(Gets(‘’enter number of experiments’’,’’10’’));
f1=atof(Gets(‘’enter evolution delay 1/2J(HC)’’, ‘’0.0036’’));
```

Display error window, select OK or Cancel:

```
AUERR=Proc_err(ERROPT_AK_CAN|ERROPT_BEEP_DEF,
                                        ‘’text’’);
if(AUERR==ERR_CANCEL) abort
```



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