

# **grib\_filter/bufr\_filter: How do I control the format of array printing - ecCodes GRIB FAQ**

## **Step-by-step guide**

One can add several 'modifiers' to a key in square brackets to control number of columns, the separator string and the output format:

```
[key!c%F'S']  
c -> number of columns  
F -> C-style formatting  
S -> separator string
```

Examples:

```
[latitude!11] -> print array using 11 columns  
[latitude','] -> print array with entries separated by a comma  
[latitude%.5f] -> print real numbers with 5 decimal places  
[latitude!11%.5f','] -> combination of the above
```

Note: to print all the values on one line, set the number of columns to 0 (zero).

Let's print the "pl" array from an input GRIB message with a reduced Gaussian grid. First create the rules file "pl.filt":

```
% cat pl.filt  
print "[pl!5', ']";
```

This will print the pl array values in 5 columns using ", " as a separator. Now let's apply it:

```
% grib_filter pl.filt samples/reduced_gg_pl_32_grib2.tmp1  
20, 27, 36, 40, 45,  
50, 60, 64, 72, 75,  
80, 90, 90, 96, 100,  
108, 108, 120, 120, 120,  
128, 128, 128, 128, 128,  
128, 128, 128, 128, 128,  
128, 128, 128, 128, 128,  
128, 128, 128, 128, 128,  
128, 128, 128, 128, 120,  
120, 120, 108, 108, 100,  
96, 90, 90, 80, 75,  
72, 64, 60, 50, 45,  
40, 36, 27, 20
```

## **Related articles**

- [grib\\_filter/bufr\\_filter: Do I always need to write a rules file - ecCodes GRIB FAQ](#)
- [How do I change the data structure in a message - ecCodes BUFR FAQ](#)
- [How do I delete a message from a file - ecCodes GRIB FAQ](#)
- [grib\\_filter/bufr\\_filter: How do I control the format of array printing - ecCodes GRIB FAQ](#)
- [Setting keys by rank - ecCodes BUFR FAQ](#)