



channels. Cross talk can be seen for the most intense signals as band extending over all mass channels.

For the level 3 data we have used a mask that indicates which mass channels (for burst mode data) or mass channel ranges (for normal mode data) to include for the two different mass ranges. These are given for three different levels of the post-acceleration for all our different energy tables, so in total 40 tables. The masks are given in the table files named in the format:

ICA_MASK_HEAVY_BST_PA_VNN.TAB

ICA_MASK_LIGHT_NRM_PA_VNN.TAB

The mass range can be HEAVY or SW, the mode BST (burst) or NRM (normal). The post acceleration is given as PA, where A can be 1, 2 or 3 for three different post acceleration ranges, with reference values 0-2, 3-5, 6-7. The software version (2 to 9) is given by NN.

These masks were made to provide a quick calculation of heavy and solar wind ions. Certain problematic mass channels, with weak response or prone to pick up cross talk (mass channel 4) have been removed (i.e. the mask is 0 in both mass ranges). Therefore this has been compensated for when calculating the L3 data which should have a value for all mass channels. A sample code calculating the mass ranges used for production of L3 data is given below. Note that the end user can use the same tables to separate heavy and solar wind ions for mass separation, but this separation is not included in the L3 data.

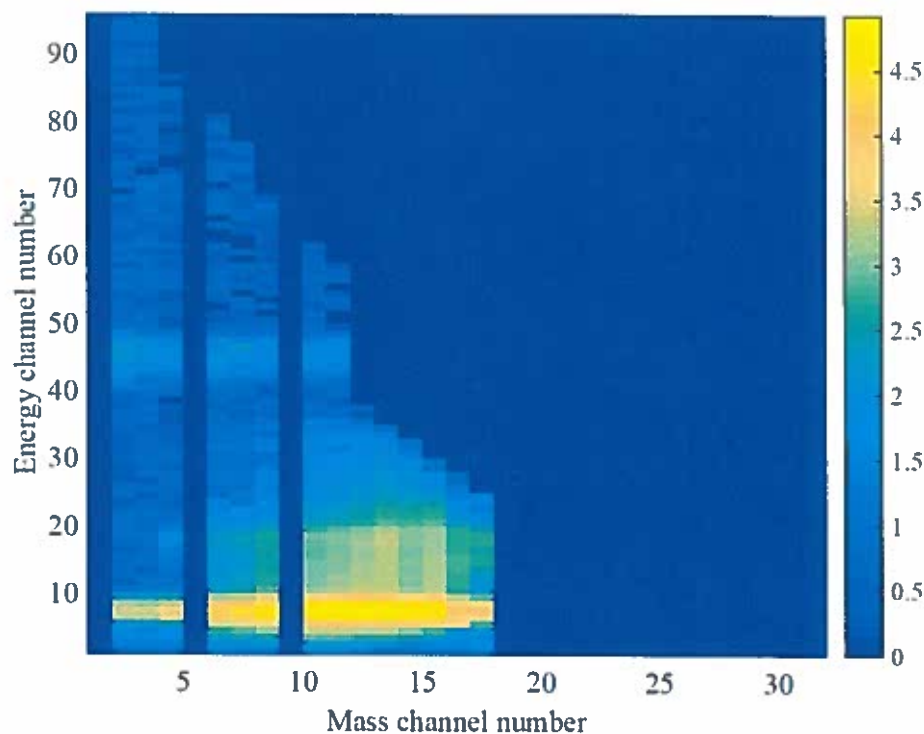


Figure 2 Mass mask applied to the sample energy-mass channel spectrum. As can be seen some cross talk from solar wind ions can be seen at around energy index 45 (typical solar wind proton energy). Note that mass channel 5, which picks up much cross talk, has also been masked out.