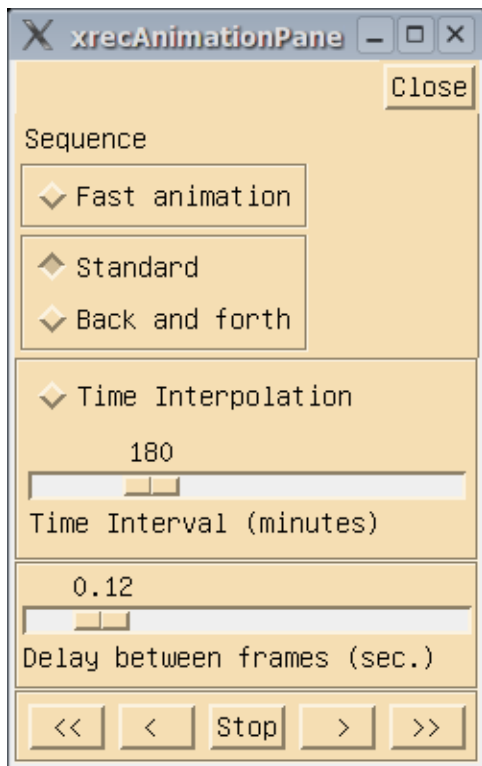


## The Animation Panel



The “Animation” panel of xrec allows the user to visualize the temporal evolution of meteorological fields.

To use this function, at least one field needs to be selected. Then clicking on any icon of the bottom row (except stop) starts the animation.



The animation is first done by looking in the standard file(s) for the records that match all the attributes of the field(s) displayed except time. All the relevant fields are then loaded into memory, and the animation sequence starts.

Here is a brief explanation of the functions of the elements of this panel.

**Fast animation toggle :** This toggle, when activated, keeps the images in memory, so that when all images are generated, the animation sequence is done by only flipping the images. This gives the fastest animation, but is the most memory intensive, especially during very long sequences (100 + frames) On the modern workstations we have nowadays, this option is getting less and less useful or needed..

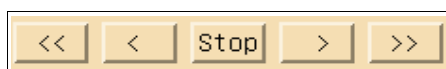
When this option is de-activated, more animation speed can be gained by removing display elements from the display window, such as smoothing, colors, heavy lines, etc. Zooming on a smaller area also increases animation speed.

**Standard / back and forth toggle :** This toggle is used to define the direction of animation, from the first to last frame (standard) or back and forth (first to last, last to first going backwards, etc.). For a 7 frame animation sequence, the order of animation when “Standard” is selected is 1-2-3-4-5-6-7-1-2-3-4-5-6-7-1-2-3... When “Back and forth” is selected, the order of animation is 1-2-3-4-5-6-7-6-5-4-3-2-1-2-3-4-5-6-7-6-5-4-3-2-1-2.

**Time interpolation :** This toggle activates the use of temporal interpolation to smooth the animation. For instance, frames can be interpolated to 10-minutes intervals even if the original frames are defined at every 3 hours. The interpolation between fields is done through linear point-to-point interpolation. The time between frames is set by moving the slider. For mass fields, this technique gives reasonable results when the time step between the original frames is not too big (6 hours or less). The derived fields like precipitation, this techniques introduces “slinky” effects between frames. Use with caution.

Delay between frames (sec.) : This slider sets the delay between frames. The default (0.12 seconds) gives about 8 frames / second. Animation speed can be less if the field takes more time to generate. The slider can go from 0.00 sec (no delay) to 1.00 second between frames.

The icons from the last row have the following function, by order of appearance :



<< : Fast backwards animation; < : one frame backwards; **STOP** : stops the animation; > : one step forward; >> : Fast forward animation.