Summary

The work done during this quarter includes adding a streamline plot to vcs, exporting patterns and hatches as vectors and fixes to PDF file size.

Bug fixes and enhancements to CDAT

- ENH: Export patterns and hatches as vectors. This work allows pattern/hatch plots to be exported in the vector graphics format allowing scaling without a compromise in quality.
- BUG # 121: Fix issue with opacity for missing values
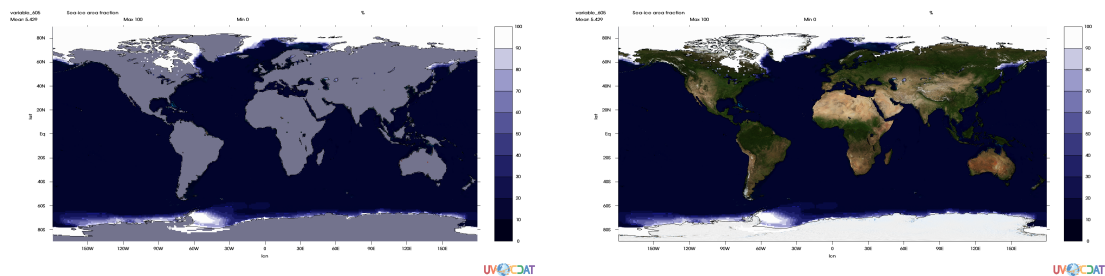
- ENH: Implement streamlines in vcs: Options include the number of streamlines, color streamlines by vector magnitude or with specified color, number of arrows along streamlines and size of arrows.
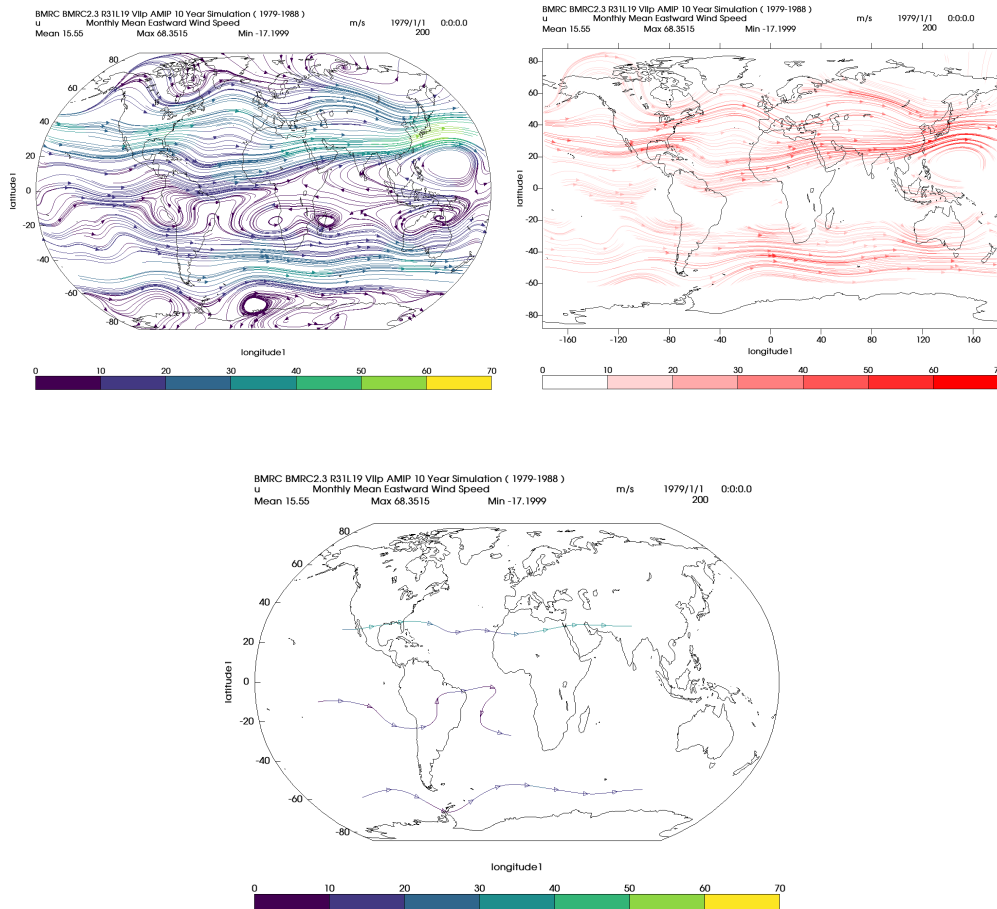
Streamline plots with color (top left) or transparency (top right) mapped to velocity magnitude.
For bottom plot we show three streamlines with equally spaced arrows along a streamline.

Bug fixes and enhancements to VTK

- ENH: Add support for text alignment in PDF documents.Alignment used to work only for TextAsPath true. Now it works for TextAsPath false as well. This fix results in significant PDF size reduction in vcs if TextAsPath false is used (from 800K to 100K for the images below)
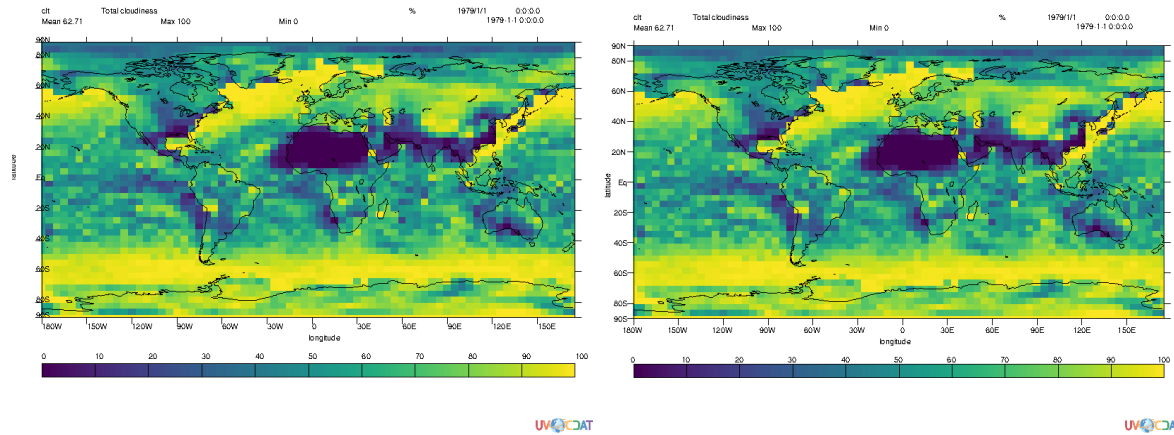
Boxfill plot with TextAsPath=false before (left) and after (right) fixing PDF text alignment.

- ● ENH: Add a new vtkCookieCutter filter that allows to stencil out a vtkPolyData using another vtkPolyData as a cookie cutter.