* **Compute Expertise:**
  + Utrecht (Parallel OBLIMAP scanner):
    - Skills needed : Parallel Fortran

Task: Parallelise a Fortran code.  MPI/OpenMP to be determined – he has some experience with MPI but doesn’t know anything about the differences, will need to be explored with hackers pending algorithm explanation and code posting

* + - * He hasn’t yet put the code up anywhere – was waiting for it to be perfect, I’ve asked he post a version and fork it to our repo for the hack so hopefully will appear [here](https://github.com/polar-computing/Parallel-OBLIMAP-Scanning).
    - Data: is in the GB range
  + Maryland (Classified Aerosols-to-glacier geo mapping and visualisation):
    - Skills needed:  Python NETCDF and raster shape file manipulation.
    - Task:  Map geolocated aerosol and glacier/ice-sheet data to each other, average/summarise aerosol quantities over different time periods for different aerosol species.  Probably best visualised in some form of time series map
    - Data: NetCDF, Vector Shape files
      * MEERA-2: <http://disc.sci.gsfc.nasa.gov/mdisc>/
      * GLINS (Glacier Inventory)
  + Stony Brook (3D reconstruction of seals):
    - Skills needed:  Python image/computer vision tools, GPU programming experience.
    - Task:  Develop a workflow for creating a Weddell Seal image library involving computer assisted matching of images. The 3D geometry of seals is likely to require that the images be georegistered (rotated, and warped) to a 3D seal template mesh.
    - Data: Raster images (couple of GB worth)
  + Mixed Sea Ice Team (open source tools for segmentation and classification of imagery):
    - Skills needed:  Python image/computer vision tools, remote sensing experience useful but probably not required
    - Task:  Create open source tools for segmentation and classification of sea ice in high resolution satellite imagery using Python libraries to replace analogous tools currently available in ENVI/IDL and eCognition
    - Data: Raster images (hundreds of GB worth)