The Beta Beam is presently worked on only within the FP7 program, the EUROnu. Three facilities for neutrino production are studied in this consortium, beta beam, neutrino factories and super-beams. One implementation of each will be costed and compared (physics reach/cost, and surely politics).

Problems that have to be solved where I am directly involved

1. Missing 18Ne rates: New experiments proposed at ISOLDE, I try to get a PJAS contract for a candidate that has been found after some efforts (Interactions with S. Myers, T. Lagrange, T. Stora). Money is in principle allocated, now we need to materialize the contract.
2. A small 55m storage ring will be transferred from Heidelberg to CERN if all goes according to wishes and plans at ISOLDE-proposal. The ring would be used for nuclear physics, storing radioactive isotopes. It contains laser cooling and electron cooling. We will see if we could use this ring to simulate the production of 8Li and 8B and also for storage of 6He.
3. Setting up of a work-plan for the contribution of INFN Legnaro in the simulation work of the production ring (with Elena Benedetto).
4. The mid term meeting for beta beams at RAL was a good experience, the advisory panel gave us o lot of support. We were encouraged to consolidate the gamma 100 beta beam to Frejus and keep the production of 8B and 8Li as parallel option. Gamma 350 beams were considered too expensive. However we will do some simple estimates also for a gamma 350 complex (low priority).
5. Two-bore Decay ring considerations are important it would be beter to have one bore and less impedance or other bunch structures. One of the most constraining parameter is the very short bunch length needed for atmospheric background suppression in the detectors.
6. The costing of the Beta Beam complex is painful to get started, mostly because we do not get the help we need for tooling etc. This is true also for the other workpackages. We need costing for the final conclusion on the 3 facilities. Second problem is access to the hardware people to get a reasonable idea of what the equipment we are proposing would look like, if it is feasible etc. Next workshop on costing at CERN in MARCH.
7. For costing we also need the civil engineering plans of the beta beam complex (including SPL and ISOLDE target stations, for example).
8. I am organizing the workpackage for the accelerator part of NUFACT11, which will be at CERN. I will try to get some interesting speakers for subjects like cooling for example (D. Möhl? F. Caspers?) and impedance estimations (From ICE?).
9. I am working on a Marie Curie “Initial Training Network” on neutrinos and dark matter. An FP7 proposal has been sent in, we will now see how this works out. I will coordinate the CERN efforts, which spans physics and accelerator sectors.