31st LNF Scientific Committee, 30 November 2005
Summary of Recommendations

Short-term DAΦNE operations:

1. KLOE will very soon reach the integrated luminosity goal of 2 fb^{-1} for the 2004-2005 run. The Committee confirms its recommendation to then continue immediately with the off-peak running: a scan of four points, with 10 pb^{-1} each, to be possibly completed before the end of the year, followed by 200 pb^{-1} at 1000 MeV, to be collected by 31 March 2006.
2. The beginning of the shutdown should be confirmed for 31 March 2006. If KLOE collects the approved luminosity earlier than 31 March 2006, KLOE may present a request to the Director for further running at 1000 MeV, or for running with a reduced magnetic field. The Director will review this request, together with the option of allocating excess machine time to synchrotron-light or other studies.
3. The Committee endorses the proposed DAΦNE upgrades and scheduling of the shutdown operations. These modifications should be completed before 31 July 2006, and the FINUDA commissioning should start as soon as possible.

Planning the FINUDA run and physics analysis:

1. The Committee would like the Collaboration to demonstrate a better understanding of their data, supported by a Monte Carlo study of the compatibility of the observed signals with the proposed interpretations.
2. The Committee requests a more complete justification of the goals of the forthcoming run, including a discussion of the target selection.
3. The Committee encourages the Collaboration to provide a more detailed analysis strategy, and to setup an organizational structure based on analysis groups dedicated to bound states and to hypernuclear spectroscopy.

SIDDHARTA:

1. The Committee notes that the planning for implementation of the new detector and data-acquisition system is consistent with the installation and testing of the apparatus in early 2007
2. The Committee supports the intention of the Collaboration to begin data taking in 2007 with a short run (10 to 100 pb^{-1}) on kaonic helium for calibration purposes, to be continued with a study of level shifts and widths in kaonic hydrogen (500 pb^{-1}) and deuterium (perhaps 1 fb^{-1}).
3. The Committee strongly encourages the search for *K*-He bound states formed by K^- interactions with the KLOE drift-chamber gas.

SRFF experiment:

1. The Committee is worried by the potential interference of the planning for this experiment with the other ongoing efforts of the AD, both local and external (SPARC, collaboration on ILC, etc.). In view of the high priority of the preparation of the DAΦNE2 TDR, the Committee invites the AD to

reconsider the advisability of this experiment, which in any case should be given a lower priority than DAΦNE2 R&D for as long as DAΦNE2 is on the horizon.

Long-term plans:

1. The Committee endorses the plans of the Laboratory management to prepare a TDR for DAΦNE2 along the lines presented during the meeting, to be ready by fall 2006. The Committee endorses the proposal of the DAΦNE team to include a single interaction region in the design of DAΦNE2.
2. The Committee recognizes a clear need for rejuvenation and additional staff in the AD if DAΦNE2 goes ahead.
3. The Committee welcomes the preliminary expressions of interest for experiments to be carried out with DAΦNE2
4. The Committee invites the proponents of future experiments to consider that the design of these future experiments should be developed around a single common detector and a set of replaceable modules specific to a given physics goal. The Committee considers the physics programme driven by the high-luminosity upgrade to have higher priority.
5. The Committee looks forward to receiving Letters of Intent by the spring of 2006. These LOIs should discuss:
   a. the physics case;
   b. the implications for the detector, including the needs for maintenance and upgrade of the existing hardware, data acquisition systems, and offline software;
   c. the expected composition of the collaboration.

   In view of the crucial role that the KLOE detector may play in the experiments at DAΦNE2, it is essential that strong participation and support by the KLOE physicists be highlighted in the LOIs, and that a model for collaboration and cooperation on the required detector upgrades be presented.