

Attachment Number 1
to the Memorandum of Understanding
between VIRGO and the TAMA Project

June 1, 1998

This Attachment to the Memorandum of Understanding between VIRGO and the TAMA project (VIR-PLA-DIR-1000-80, and TAMA-) covers research about the optimization, monitoring and control, of a gravitational wave interferometer. These subjects have been studied, analytically and numerically for more than ten years, by different teams from both projects, and have led to diverse achievements and new ideas on both sides. Great benefit for Virgo and for TAMA is expected from a deeper exchange in this field. More precisely, the field to be investigated under this agreement covers : the understanding of interferometer losses through the analysis of the various beams reflected and transmitted by the interferometer, the analysis of the subsequent optical optimizations and the development of appropriate tools and procedures to realize this analysis. These studies are restricted to the analysis of the stationary state of a " standard " power recycling interferometer. They do not cover other possible interferometer geometries, nor the study of transients, nor interferometer locking.

The period of performance for the activities in this Attachment is from July 1st, 1998 to June 30th, 1999. This period may be modified by agreement to a revision of this Attachment.

1 - This document is an agreement between VIRGO and the TAMA project. Dr.Nary Man, for Virgo, and Prof. Kimio Tsubono, for TAMA, will serve as points of contact and coordinators for the work described below.

2 - In a first step, Virgo and TAMA will collect and will communicate to each other the titles and abstracts, in English, of all the relevant documents they have already produced in this field. In addition, each group will prepare and send a copy of all the published documents, (articles, thesis, ...) whatever the language they are written in. Other relevant documents (internal notes and memos, ...) will be sent on request from the other group.

3 - In a second phase, the coordinators will define and realize the most appropriate way of getting full understanding of each other's previous work, through mail exchanges and through exchange of physicists (particularly students and post-docs) when possible.

4 - After these first exchanges, Virgo and TAMA will convene a workshop in order to define precisely the new studies to be made together, and the possible extension of the present attachment.

5 - Virgo and TAMA agree that the content of previous unpublished documents, as well as the results of the common studies developed within the frame of this attachment, will not be communicated to external parties without a written consent of the other partner.

Approved:

1/6/98

Yoshihide Kozai

Yoshihide Kozai

June 12, 1998

Kimio Tsubono

K. Tsubono

2/6/98

Alain Brillet

Alain Brillet

Nary Man

Nary Man