

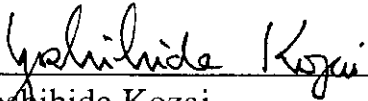
## **Attachment A to the Memorandum of Understanding between The Waves Group – University of Sannio at Benevento, Italy and the TAMA Project, Japan**

This attachment to the MOU between TAMA and TWG - University of Sannio at Benevento describes the role of TWG in the planned cooperation research. The period of performance to which the attachment refers is from February 01, 2000 to January 31, 2001. The information contained in this attachment may be modified by agreement to a revision of this attachment.

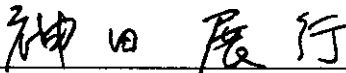
1. The following topics are the subject of past/current research at TWG. TWG cooperation in the period February 01, 2000 to January 31, 2001 will focus on some or all of them:
  - A. Testing of TWG Radon-Wigner-Ville time-frequency chirp detection/estimation codes on TAMA data;
  - B. Study and evaluation of a Radon-Wigner-Ville time-frequency algorithm operating on signum-coded data;
  - C. Implementation of a real-time Radon-Wigner-Ville time-frequency chirp detection/estimation algorithm based on A), B) above on a quad FP-DSP board;
  - D. Study of possible constructive (e.g., Edgeworth-like) characterization of non-gaussian (stationary) noise properties from time-frequency data;
  - E. Classification of observed non-stationary and/or non-gaussian noise features in the framework of Middleton's Theory;
  - F. Study of minimum-redundant (sampling-interpolated) implementations of matched-filter banks for chirp detection and estimation .
2. TWG will provide a status report on its research activities in support of TAMA every six months. The reports will consist of : i) a summary of the research status by topic, as listed in item 1. above, including new progress/insights/discoveries/publications, issues of concern if any, and an indication of invested time, ii) an updated list of Collaborators, and iii) a plan of activities for the succeeding six months.
3. During the period February 01, 2000 to January 31, 2001, the TAMA laboratory will share, as requested and appropriate, the TAMA data of relevance to the research activities in item 1) above.
4. The research cooperation described in this attachment will be coordinated by professor Innocenzo M. PINTO and professor Nobuyuki KANDA, on behalf of TWG and TAMA, respectively.

5. TWG and TAMA will provide research/computing facilities to Visitors from either Group in support of the cooperation activity.

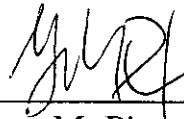
Approved:



Yoshihide Kozai  
TAMA Principal Investigator



Nobuyuki Kanda  
TAMA Data Analysis Group Leader



Innocenzo M. Pinto  
The Waves Group Principal Investigator

Date Feb. 7, 2000

Date Feb. 7, 2000