FIRST "EXPERTS GROUP REVIEW," OF THE CONSORTIUM TO PROVIDE
LOCATION CALIBRATION OF 30 IMS STATIONS IN EASTERN ASIA

At Lamont, Seismology Seminar Room, February 15 and 16, 2001
The meeting will last all day Thursday, plus Friday morning.

9:00 – 9:15a 

Introduction

9:15 – 9:45a
Crust and Upper Mantle $P$- and $S$-Wave Delay Times at Eurasian Seismic Stations

Bob Engdahl, University of Colorado

10:00 – 10:30a
Derivation and validation of SSSCs for IMS stations in North America

Paul Richards (LDEO) & Mark Fisk (Mission Research Corp.)
(Paul will describe the method that was used to obtain these SSSCs, Mark will
describe the procedures for presenting the SSSCs and for judging their
acceptability)

11:00 – 11:30a
Identification and Validation of Reference Events within the Area Regionally
Monitored by IMS Stations in Asia and North Africa

Bob Engdahl, University of Colorado

1:00 – 1:30p
Determining Earth Structure and Source Parameters from Regional Waveforms

Chuck Langston, Pennsylvania State University (now visiting Center for
Earthquake Research and Information, University of Memphis)

1:30 – 2:00p
Discussion of datasets now available to infer crustal/upper mantle structure of the
Semipalatinsk Test Site
Work of Khalturin/Rautian/Richards, Belyashov, Duan, ...

2:00 – 2:30p
Preliminary evaluation of explosion waveform archive for station BRVK, using
Soviet PNEs to obtain regional travel times

Won-Young Kim
2:30 – 3:00p
Status of various Ground Truth datasets available now or in the next two years, for
the work of the consortium
DOE, CEB, EHB, CSE, ASEMSE, KNDC/NNCRK, Kyrgyzstan data (old and
new), Baykal, other Russian datasets, Chinese datasets. Explosion lists with accurate
information.

3:30 – 4:00p
The double-difference method for locating seismic events
David Schaff, Stanford University

4:00 – 4:30p
What do Quartz and Craton PNE data tell us about the observability of regional
phases? What do they tell us about travel-times of regional phases?
What is the variability of travel times along these profiles?
Igor Morozov, University of Wyoming

4:30 – 5:00p
Parameterization of 3D Earth Models for Dynamic Ray Tracing, Seismogram
Synthesis, and Travel Times to IMS Stations.
Vernon Cormier, University of Connecticut

Adjourn. Dinner@richards.2_Clinton_Avenue_South Nyack
Friday morning, 9 – 9:30p
Studies of earthquakes in India, Nepal, Pakistan, Tibet
Gene Ichinose & Chandan Saikia (URS Greiner)

Topics for discussion and resolution on Friday morning:
How should Soviet-era Deep Seismic Sounding information be merged with other
information to obtain regionally-varying models for which 2D (and in some cases
3D) travel times can be calculated?

What subsets of GT events should we seek waveforms for?

Looking ahead: when should we schedule our first submission of a proposal to the
CCB, and what specific activities are needed to complete that proposal?

Looking further ahead: what activities should initiate towards the study of the next
sets of IMS stations for which we shall prepare SSSCs?
ASEMSE  Altay-Sayan Experimental and Methodological Seismological Expedition (which operates a local network out of headquarters in Novosibirsk).

SSSC  Source Specific Station Corrections. (For each of 30 IMS stations in Eastern Asia, our consortium is to provide travel time as a function of distance and azimuth for all the major regional phases, such as Pn, Pg, Sn, Lg, to enable location estimates to be made more accurately than at present. In practice, this travel time information will be provided as corrections to the standard travel times now in use, which are known as the IASPEI91 travel times.)

BRVK  Code name of the station at Borovoye, Kazakhstan (which has operated digitally since 1965, which has a large and important archive, and which is now sending data to Lamont in near real time).

CCB  Configuration Control Board (the group of individuals at the Center for Monitoring Research that evaluates SSSCs and other inputs that affect the operation of software at the International Data Center for the Comprehensive Test Ban Treaty Organization).

CEB  Calibration Event Bulletin (a set of accurately-located seismic events, with supporting data on times of arrival of various seismic waves at stations of the IMS).

EHB  Engdahl, van der Hilst, Buland (who relocated a large fraction of the seismic events reported by the International Seismological Center).

GT  Ground Truth (often used as GT1 or GT5 or more generally GTn, where it is understood that a seismic event of GTn quality is an event whose actual location is known to within about n km).

IMS  International Monitoring System (which operates seismographic stations, and other types of stations, to monitor seismicity all over the globe).

KNDC  Kazakhstan National Data Center.

NNCRK  National Nuclear Center of the Republic of Kazakhstan.

PNE  Peaceful Nuclear Explosion (which, by definition agreed to in 1976, is a nuclear explosion taking place away from a declared nuclear weapons test site).