Scattering problems on rotating acoustic black holes CHRISTIAN
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Bio - Medico — Analog curved spacetimes emerging from non relativistic consensed
matter systems can be very useful to understand General Relativistic effects. Scat-
tering problems on rotating acoustic black holes in particular can be studied in the
time domain by using numerical methods only. In order to obtain high quality re-
sults in simulations, tools developed by numerical relativists in the case of rotating
Kerr black holes must be adopted, i.e. constrained evolution schemes for strongly
symmetric and non symmetric hyperbolic systems of PDEs and excision techniques
in horizon penetrating coordinates. In this talk such a program is presented and
analogies between astrophysical and acoustic black holes are discussed in relation
with Press and Teukolsky's relativistic "black hole bomb."

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Date submitted: 15 Jan 2007   Electronic form version 1.4