

**From:** Weglein, Arthur B (aweglein@Central.UH.EDU)  
**To:** aweglein@Central.UH.EDU;  
**Date:** Sat, September 3, 2011 1:08:50 AM  
**Cc:**  
**Subject:** Seismic Imaging and Inversion: Application of Linear Inverse Theory, Stolt and Weglein, Cambridge University Press, November,2011

**Dear M-OSRP Sponsors and Invited Guests,**

**Attached please find the book cover for the forthcoming first of a two volume set “Seismic Imaging and Inversion: Application of Linear Inverse Theory” by Robert H. Stolt and Arthur B. Weglein to be published by Cambridge University Press in November, 2011. The second volume” Seismic Imaging and Inversion: Application of Direct Non-Linear Inverse Theory”, is currently being written by Weglein and Stolt. These two volumes are intended as a graduate text in Seismic Physics, with the first volume providing a new single and consistent scattering theory underpinning and framework for both specular and diffractive scattering by introducing a point reflectivity function and imaging, that also serves as the foundation for linear and non-linear inversion. The second volume focuses on direct non-linear inverse methods derived from the inverse scattering series, and isolated task subseries, that can directly and without subsurface information: (1) remove free surface multiples; (2) remove internal multiples, ( 3) depth image primaries, ( 4) invert for changes in earth mechanical properties; and, (5) Q compensation without Q.**

**The relationship between Green’s theorem and scattering theory will be described, with the former providing the opportunity to predict the source signature and radiation pattern, and de-ghosted data, required by, and in a manner that is consistent with the processing chain of inverse scattering series methods (listed above).**

**These volumes will provide a new view, perspective and algorithmic contribution for current leading-edge seismic imaging, inversion and seismic physics as well as the foundation and tools for those students and researchers fascinated by and striving towards a fundamental new capability and vision of what might be possible- and that new and increased capability will be needed to address the outstanding and pressing challenges in exploration seismology.**

**I look forward to seeing you at the SEG Conference in San Antonio.**

**Best regards,**

**Art**

**Dear M-OSRP Sponsors and Invited Guests,**

**You are most warmly and cordially invited to attend the M-OSRP Executive Summary Technical Review Meeting at the 2011 SEG International Conference and Convention in San Antonio, Texas on Monday Sept. 19<sup>th</sup>, 2011, from 6:30 PM-8:00 PM. The Meeting will be held at the Mokara Hotel ( formerly the Watermark Hotel) in the Saddlery Ballroom located at 212 Crockett Street, San Antonio, Texas, 78205, phone 210-396-5800.**

**Attached please find a selection of highlights from our last Annual Meeting in June 2011 and a paper that you might find of interest. By separate e -mails, next week, we will send: (1) three papers that will appear in the August, 2011 TLE Special Section on Multiple Attenuation; (2) two recently published papers on a new and consistent RTM method, and; (3) a paper that details the logic behind the**

**synthetic and field data tests and analysis that concluded that ISS direct depth imaging without a velocity model is viable.**

**We look forward seeing you at our meeting at the SEG Convention in San Antonio.**

**Thank you for your encouragement and your support.**

**Best regards,**

**Art**

**Arthur B. Weglein**