Abstract for IGARSS10 invited session on

GEO/GEOSS—International Collaborative Opportunities Responding to the Regional/Global Climate Change Concerns in the 2010-2020 Decade

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Information Management for the Environmental Change Studies in the International Polar Year and Beyond

Multinational and multidisciplinary research programs, such as the International Polar Year, are providing new insights into environmental change at a variety of scales from global to regional. Exciting discoveries are possible when combining information from a range of data sources.

We discuss how recent developments in information management are enabling new opportunities in science. Indeed, major programs, such as the International Polar Year and GEO are based upon the premise of effective data discovery and interoperability.

We illustrate the potential with surprising analysis of the structure of multiyear ice in the Beaufort Sea that is significantly different from that implied by examination of RADARSAT II data. This has important implications for the number of years before the existence of a seasonally ice free Arctic Ocean. The work was part of the IPY Circumpolar Flaw Lead study. This was a International Polar Year experiment that fostered considerable information exchange across traditional boundaries. This is one dimension of the future of the science that will be possible with the GEO Common Information architecture.