Invited Paper

'i'he RADARSAT Geophysical Processor Syst em (RGPS)

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We plan to use the wi de swath ScanSAR mode of RADARSAT to provide us wi th weekly observations of t-he Arctic Ocean. These image data sets will be analyzed and assembl ed into geophysical fiel ds in the RGPS . The basi c observati ons derived from the radar imagery arc the Lagrangi anmotion of "poi nts 'I on the ice cover over the wi nter and summer. 1 n our scheme to est i mat e ice age and ice thickness, these poi nts are used to def ine the corners of a set of grid cel 1s that move and deform wi th the i ce cover. Area change s of individual cells indicate whether new ice i s being created in a cel 1 or whether exi sting (young) ice is being removed (ri dged) . '] 'hi s information on the aye. di stribut ion of ice in a cell i s translated into a thi ckness di stri