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# OPERATION DEEP FREEZE



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# A Brief History of NGA Support





## The Dangers of Undetected Crevasses

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Photos from 1998 Flight Season



Photo courtesy of Graeme Howden, Engineer for New Zealand Air







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# Collaborating Offices in NGA... **UNCLASSIFIED**



Office of  
Asia Pacific



Office of Global  
Navigation (PV)



GEOINT  
Foundation  
Office (S2)



PACOM NST

**...Provide Support to:**



109<sup>th</sup> AW  
(LC-130)



62<sup>nd</sup> AW  
(C-17)



US Coast Guard



U.S. Antarctic  
Program

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# Where we operate from

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5

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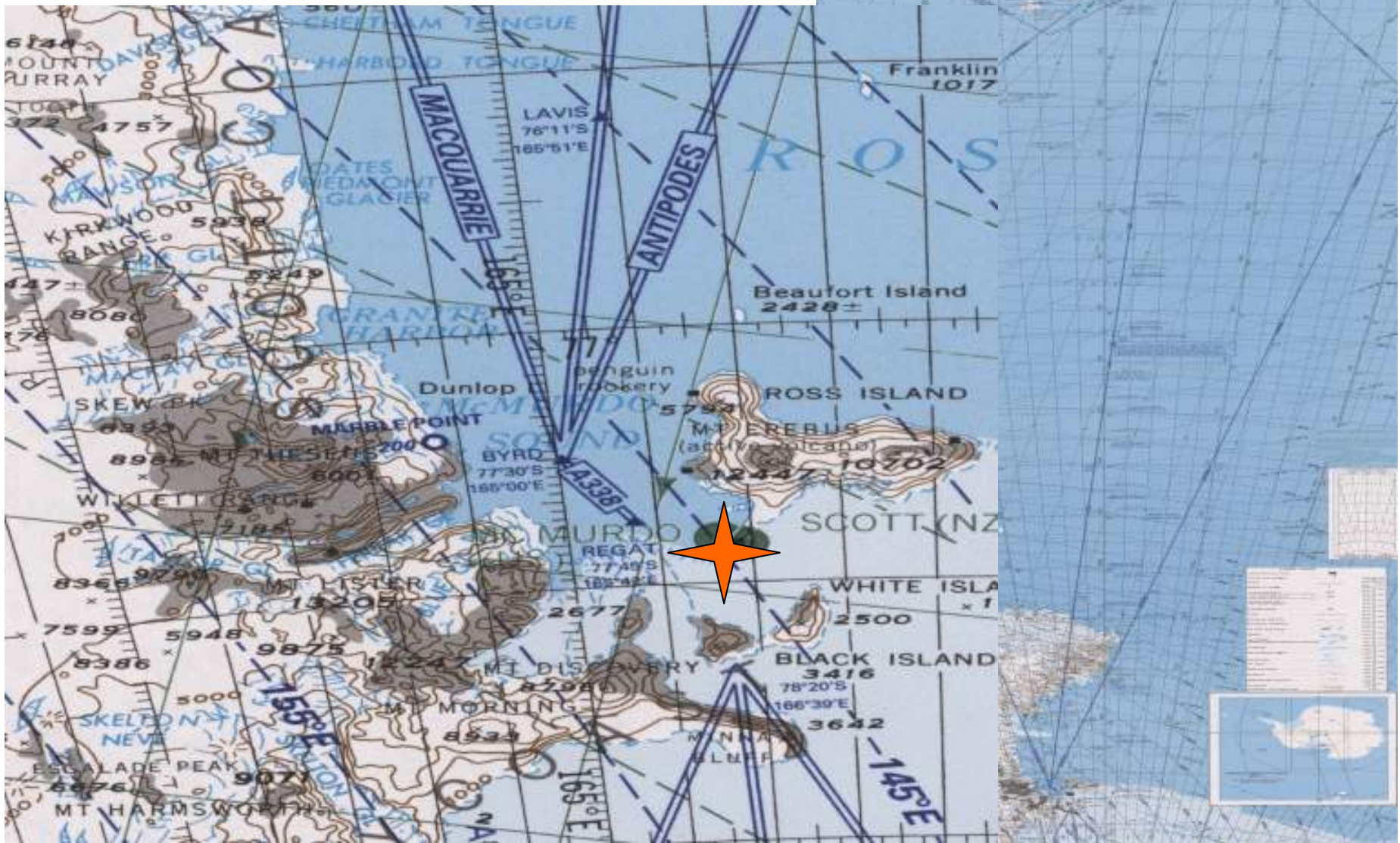


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# Getting There



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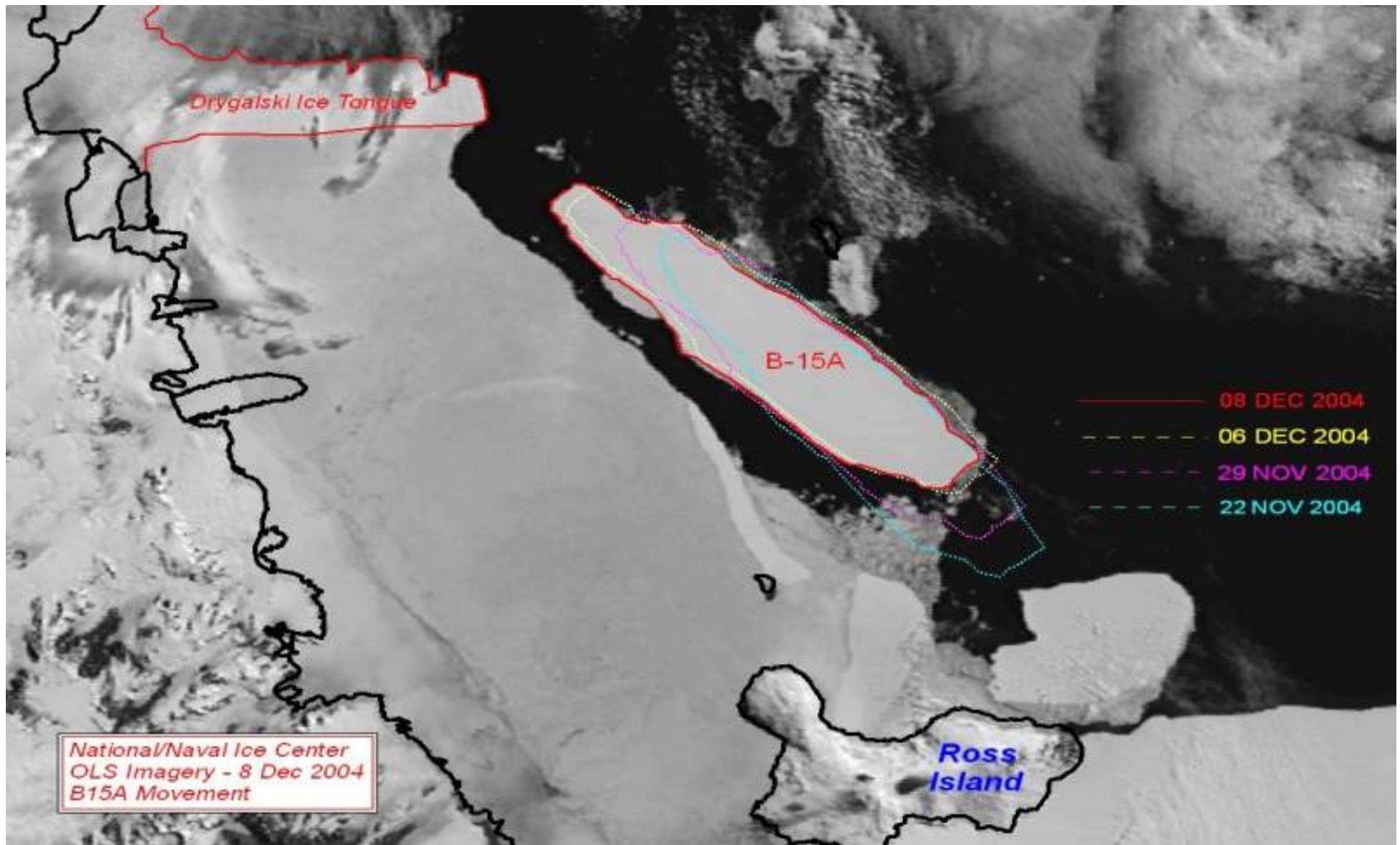
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## Weird Weather

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## PVM Support

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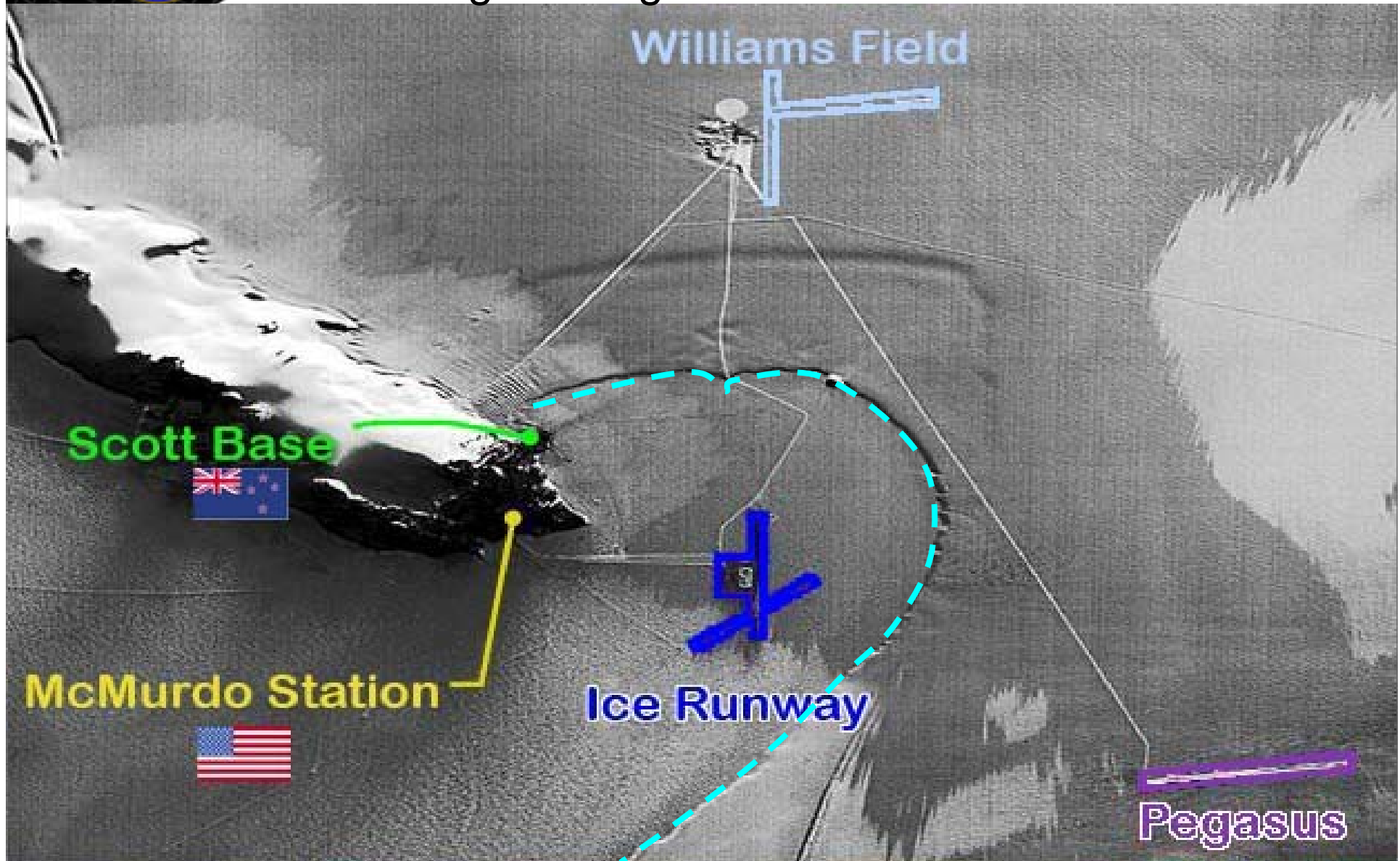




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## Detecting Ice Edges With Radar

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## ► PVA Support of ODF

- Fifty terminal instrument approach procedures
- Collaboration with S2 for elevation data



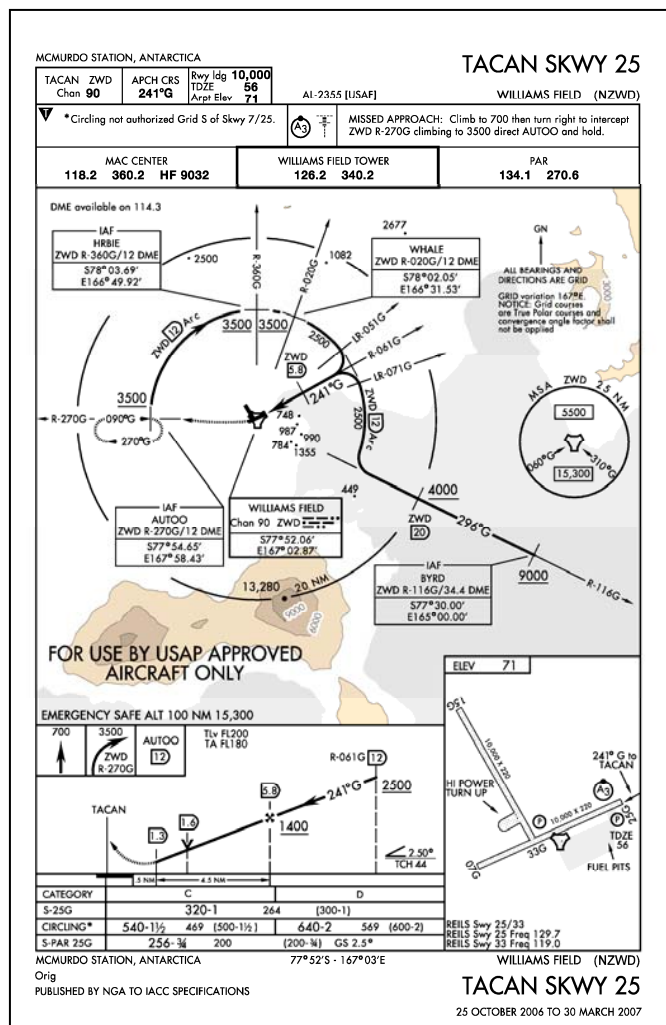
- Continued support for Greenland training sessions
- Ensure safety of navigation for future C-17 South Pole operations and LC-130 deep camp “put-ins”



## Terminal Instrument Approach Procedures

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## Production and Updates



## Standardized DoD product increasing safety of navigation



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# **Non-Standard Landing Sites.** **UNCLASSIFIED**



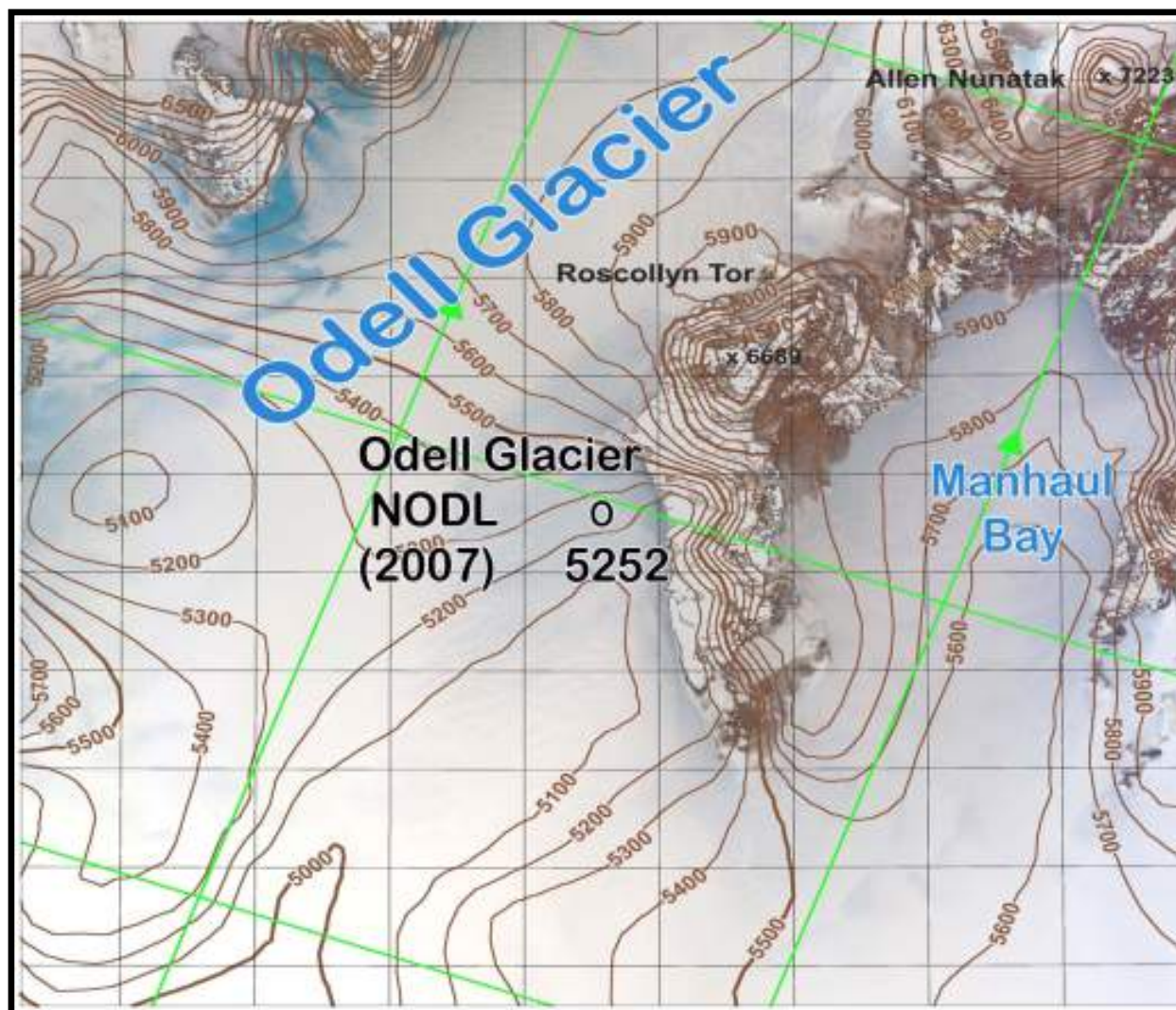
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# Antarctic Landing Site Graphics (ALSG) **UNCLASSIFIED**

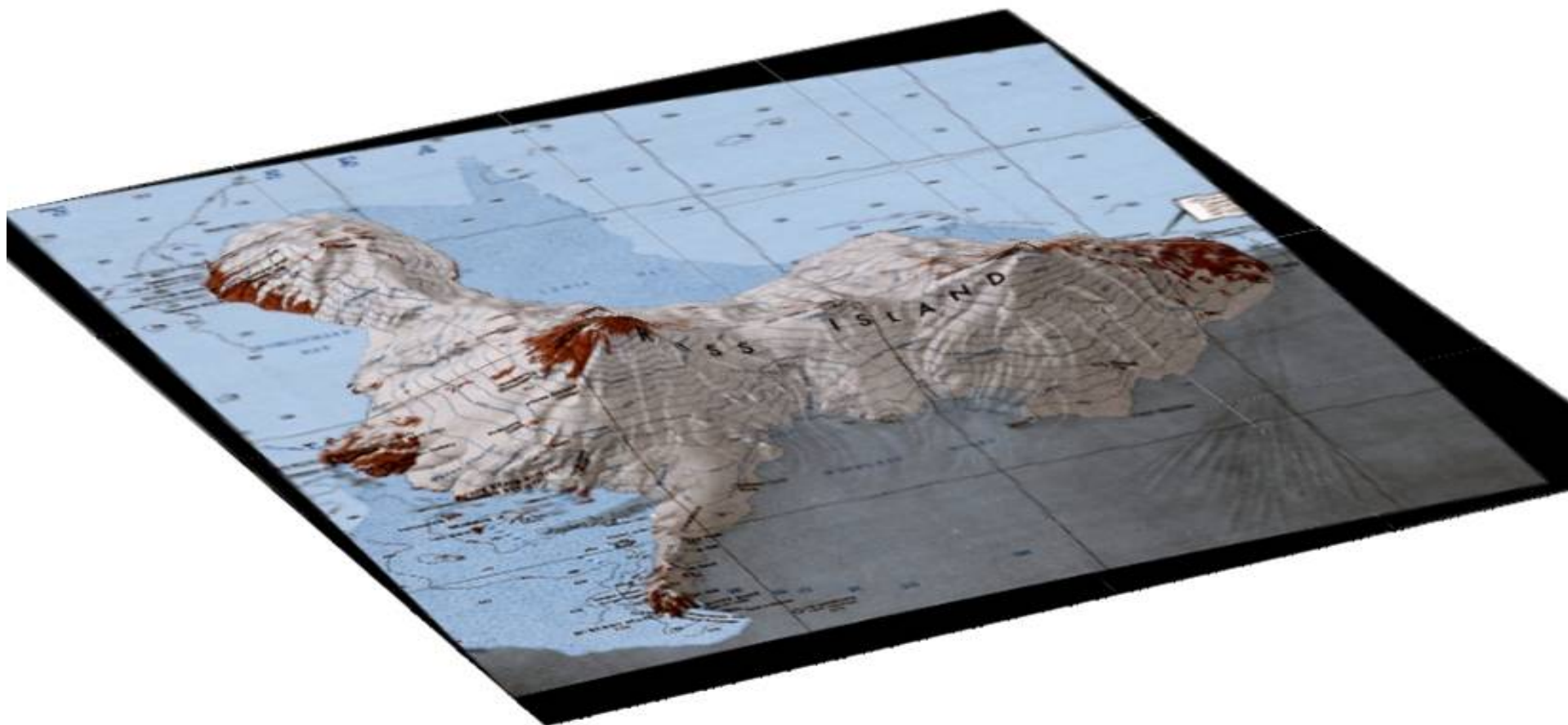




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# 3-D Modeling



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## Austral Winter Training in Greenland

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# Mission Statistics

## '06/'07 Season

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- 375 Antarctic sorties
- 240 Greenland training sorties
- 10.1 million pounds of cargo
- 5500+ passengers
- 0 Accidents



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