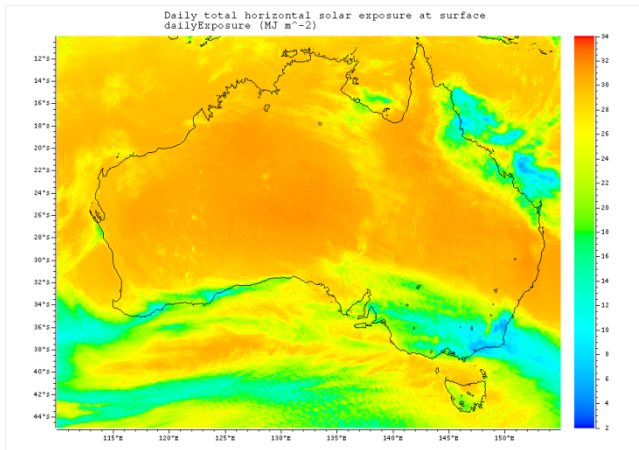
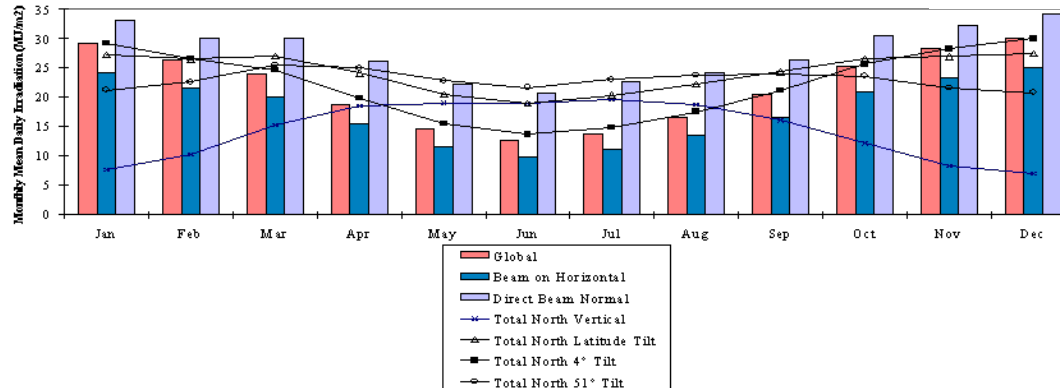
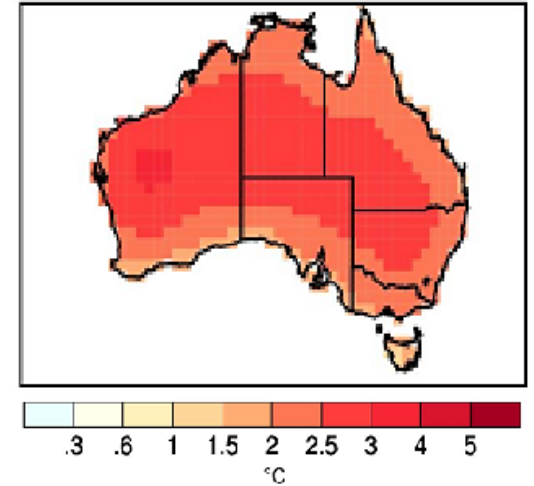


Solar and Coincident Weather Data for Large Scale Solar Deployment



Trevor Lee



Climate Data for Renewable Energy and Energy Conservation Applications

The Australian Solar and Climate Resource

- Australian Solar Radiation Data Handbook background and applications

Beyond TMY: Climate Data for Specific Applications

- Australian Climate Data Bank and using Reference Meteorological Years

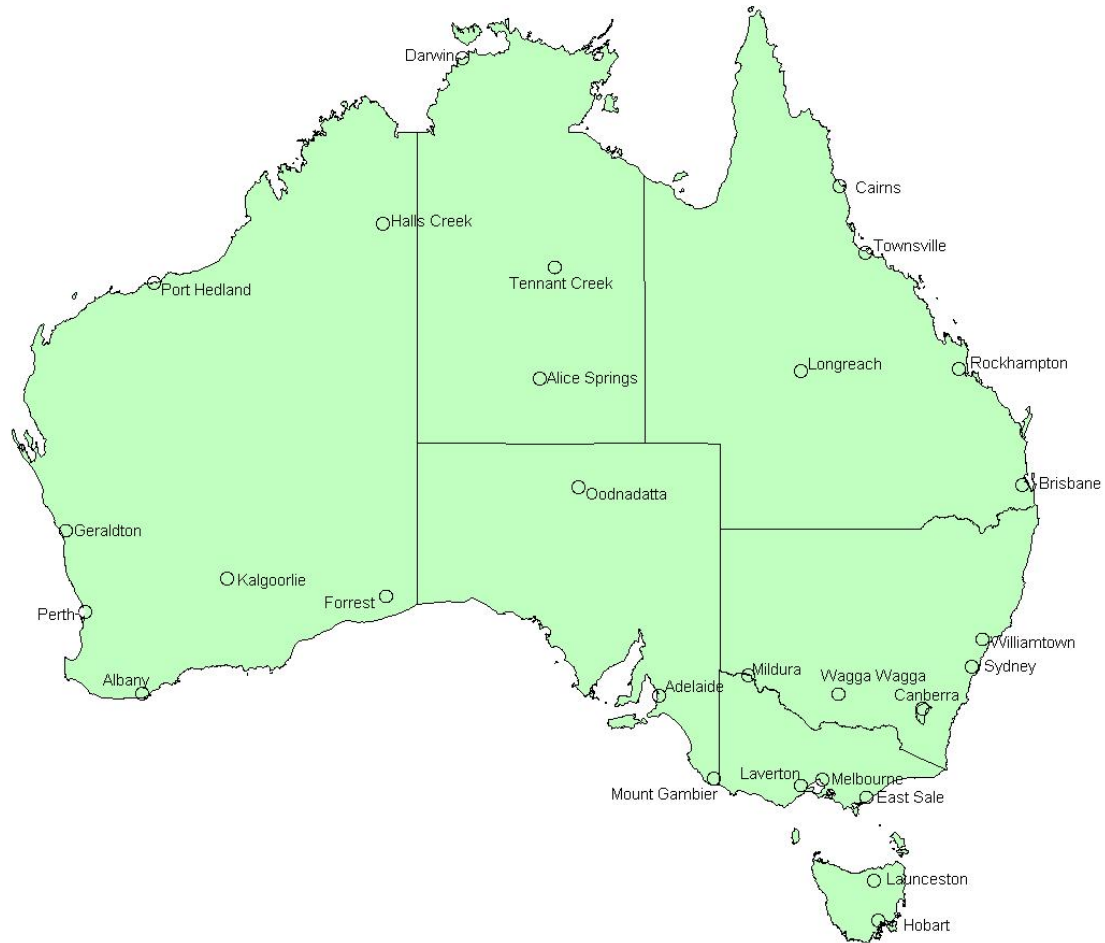
Creation of Ersatz Future Weather Data Files

- Measuring energy performance of buildings under predicted future weather conditions

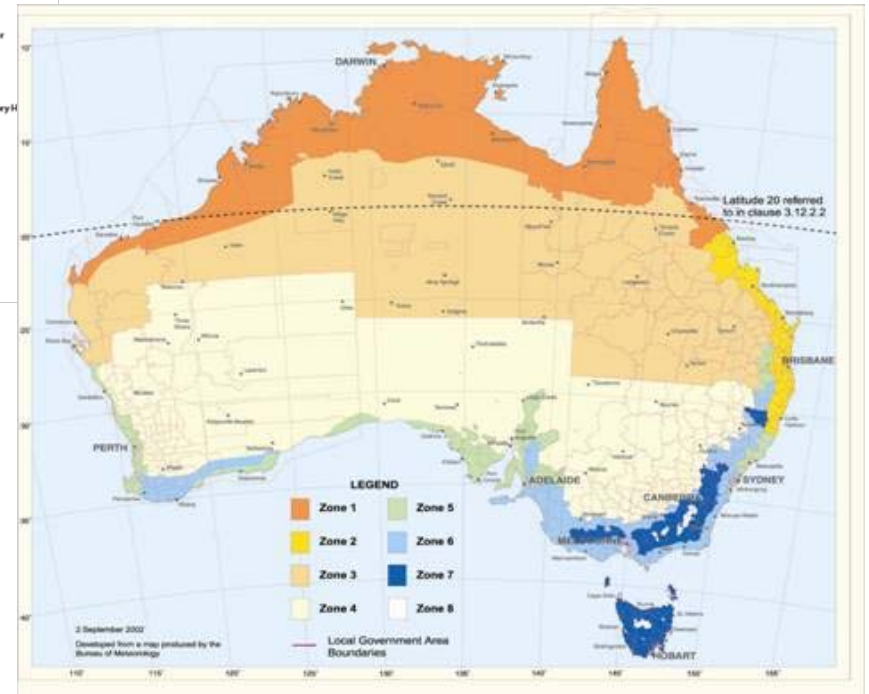
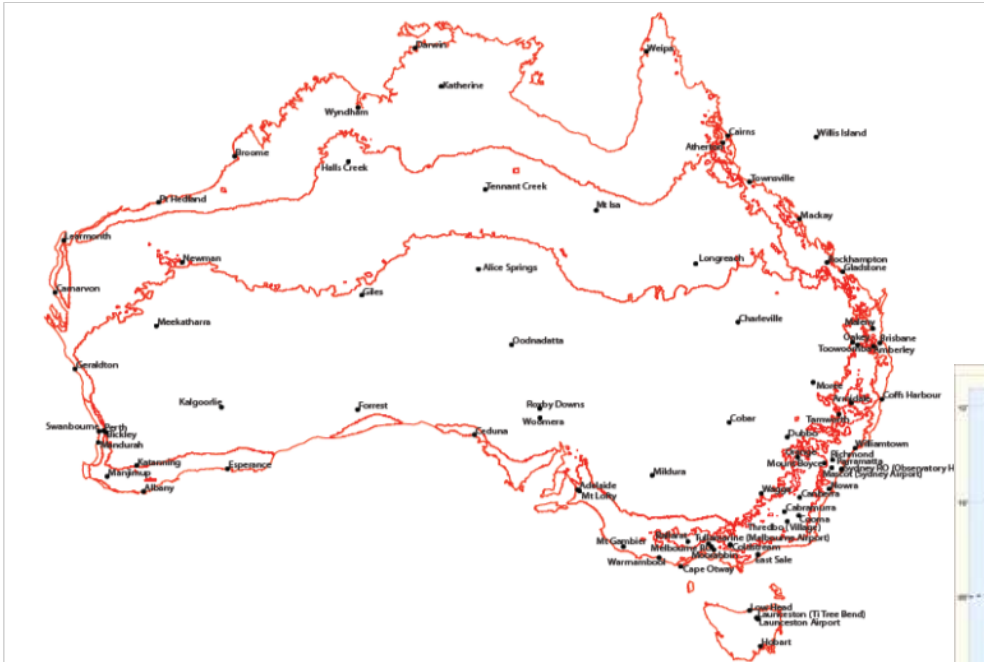
Associated Papers

- **CREATION OF ERSATZ FUTURE WEATHER DATA FILES (Solar 08)**
 - Trevor Lee and David Ferrari
 - Energy Partners, PO Box 4170, Manuka ACT 2603, Australia
- **AUSTRALASIAN SOLAR RADIATION DATA PROPOSAL FOR ENHANCED KNOWLEDGE DISSEMINATION (Solar 08)**
 - Trevor Lee
 - Energy Partners, PO Box 4170, Manuka ACT 2603, Australia
- **THE AUSTRALIAN CLIMATIC DATA BANK (Solar 06)**
 - Trevor Lee and Mark Snow
 - Energy Partners, PO Box 4170, Manuka ACT 2603, Australia
- **DEVELOPMENT OF CLIMATE DATA FOR BUILDING RELATED ENERGY RATING SOFTWARE (Solar 05)**
 - Barbara Ridley and John Boland
 - Centre for Industrial and Applicable Mathematics
University of South Australia
Mawson Lakes Boulevard, Mawson Lakes SA 5095, Australia

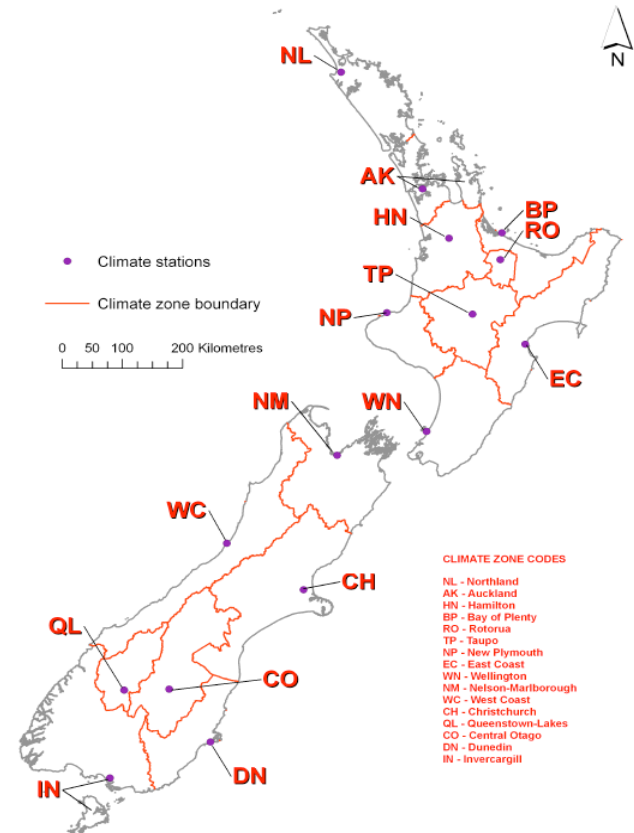
ASRDH – Geographic Coverage



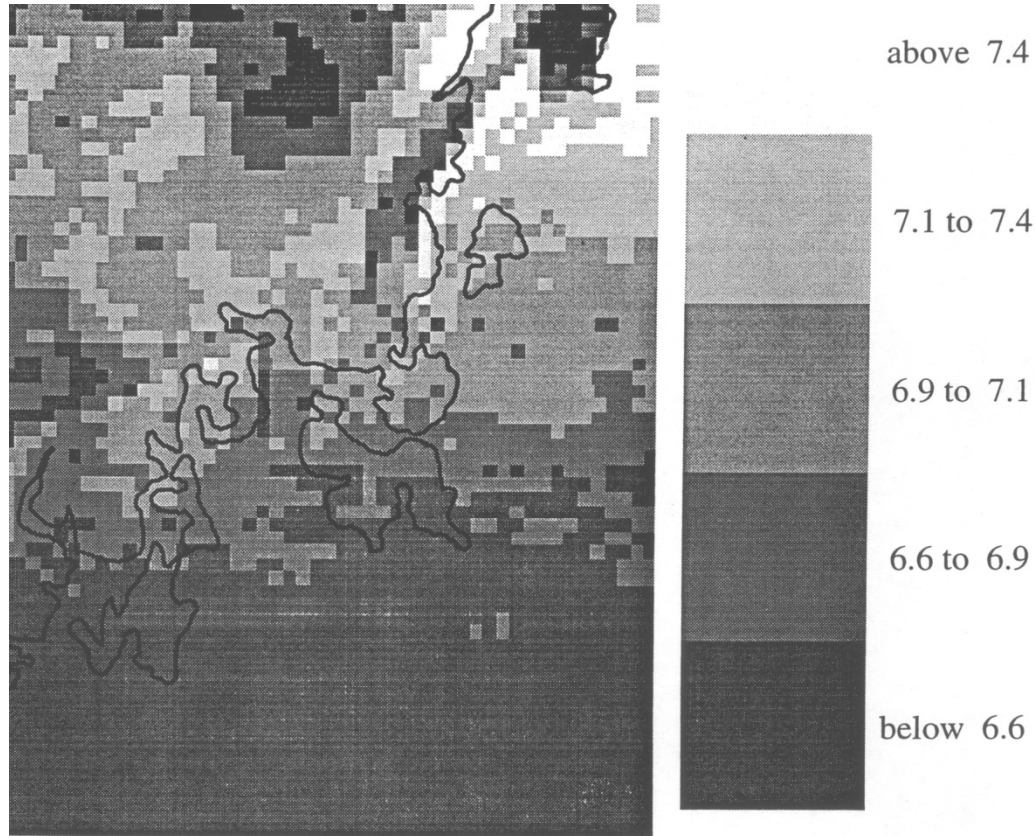
BCA – Geographic Coverage



Geographic Coverage – New Zealand



ASRDH - Sample Graphical Summary

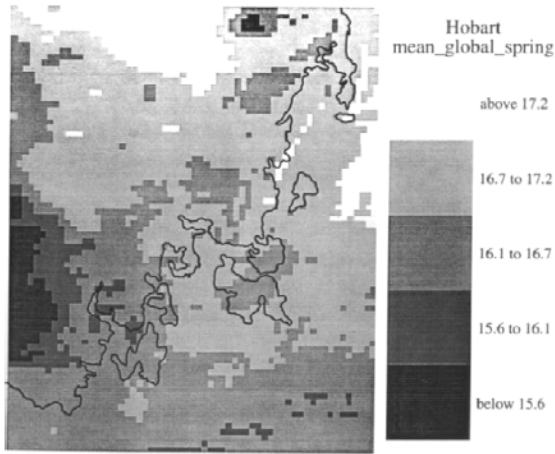


location at centre of map

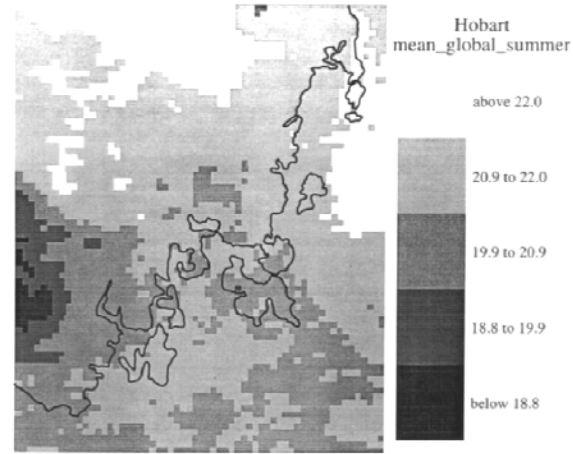
Scale 0

50 km

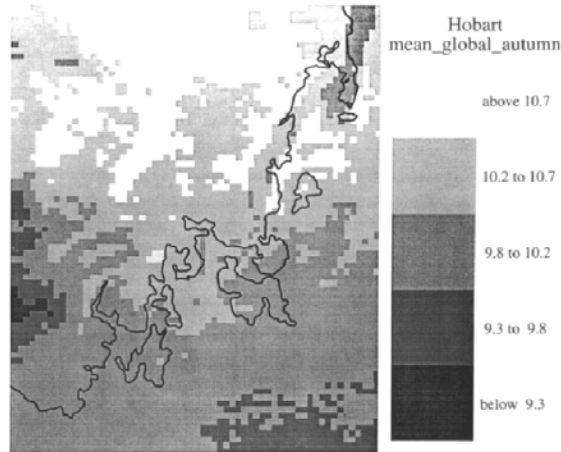
ASRDH - Sample Graphical Summary



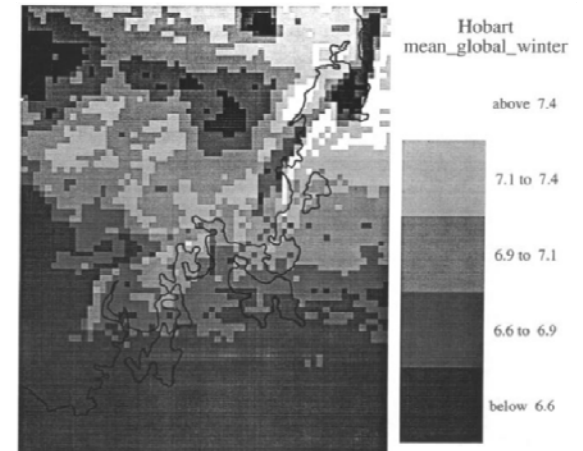
Measuring station location at centre of map Scale 0 50 km



Measuring station location at centre of map Scale 0 50 km

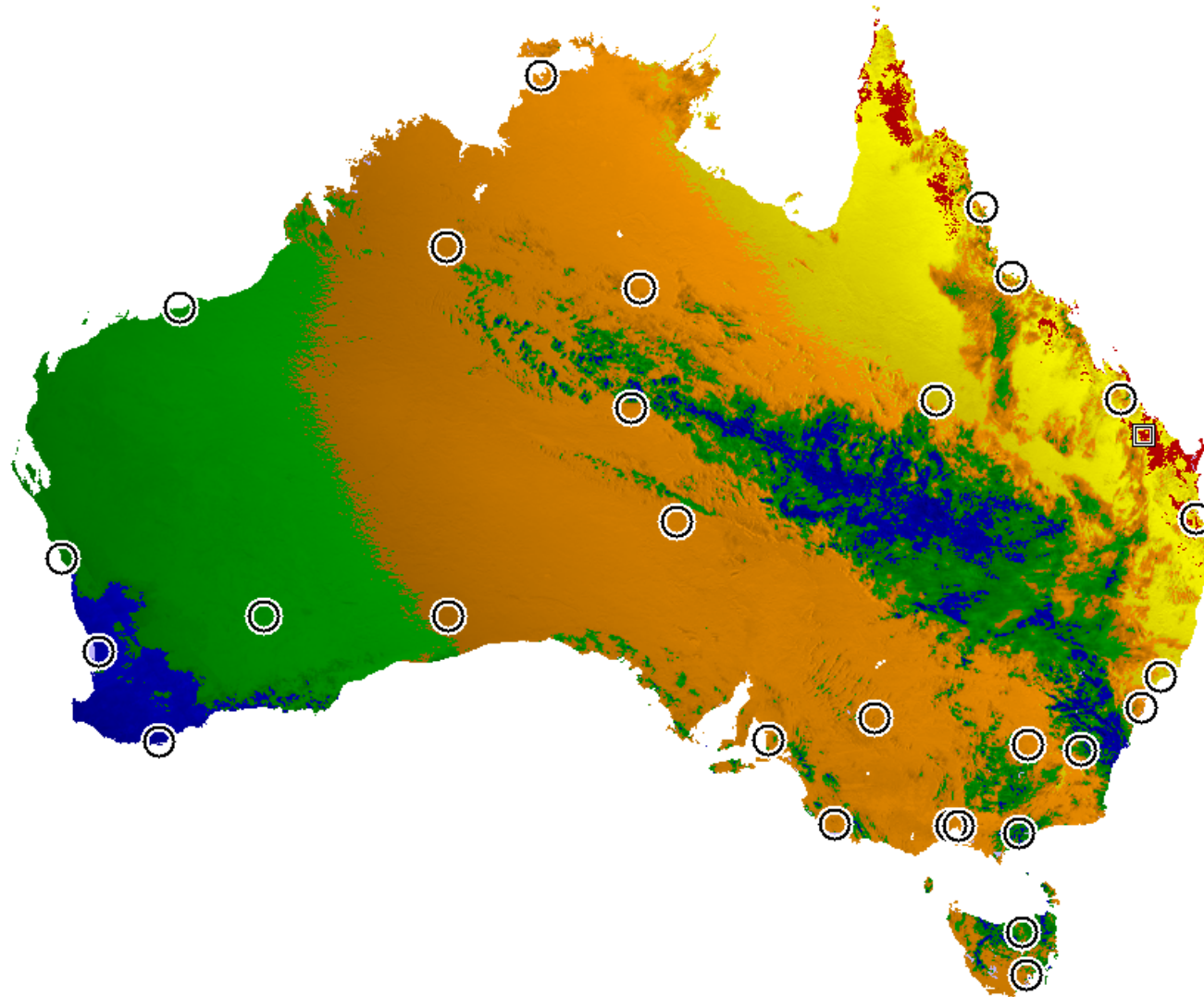


Measuring station location at centre of map Scale 0 50 km

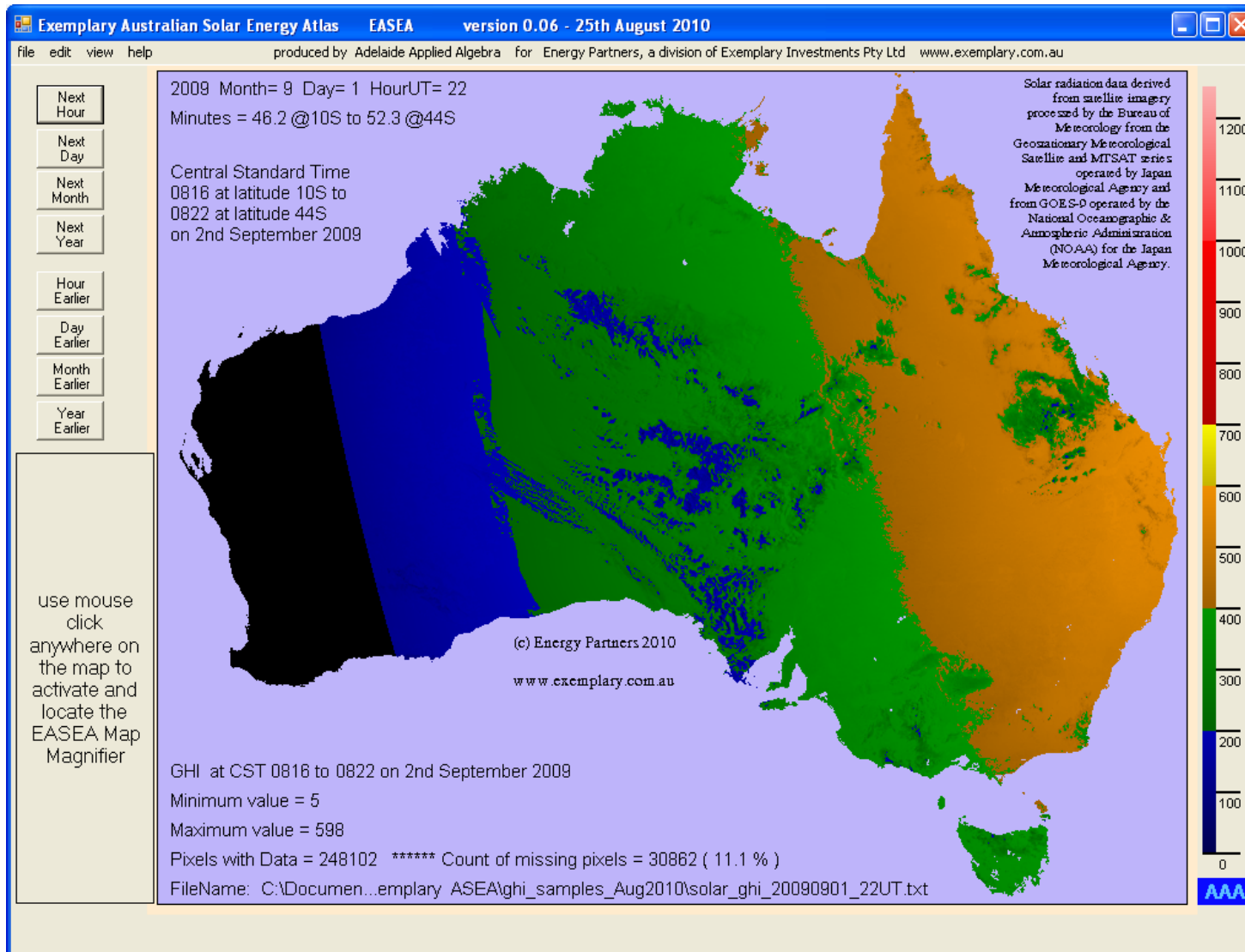


Measuring station location at centre of map Scale 0 50 km

ASRDH - Sample Graphical Summary



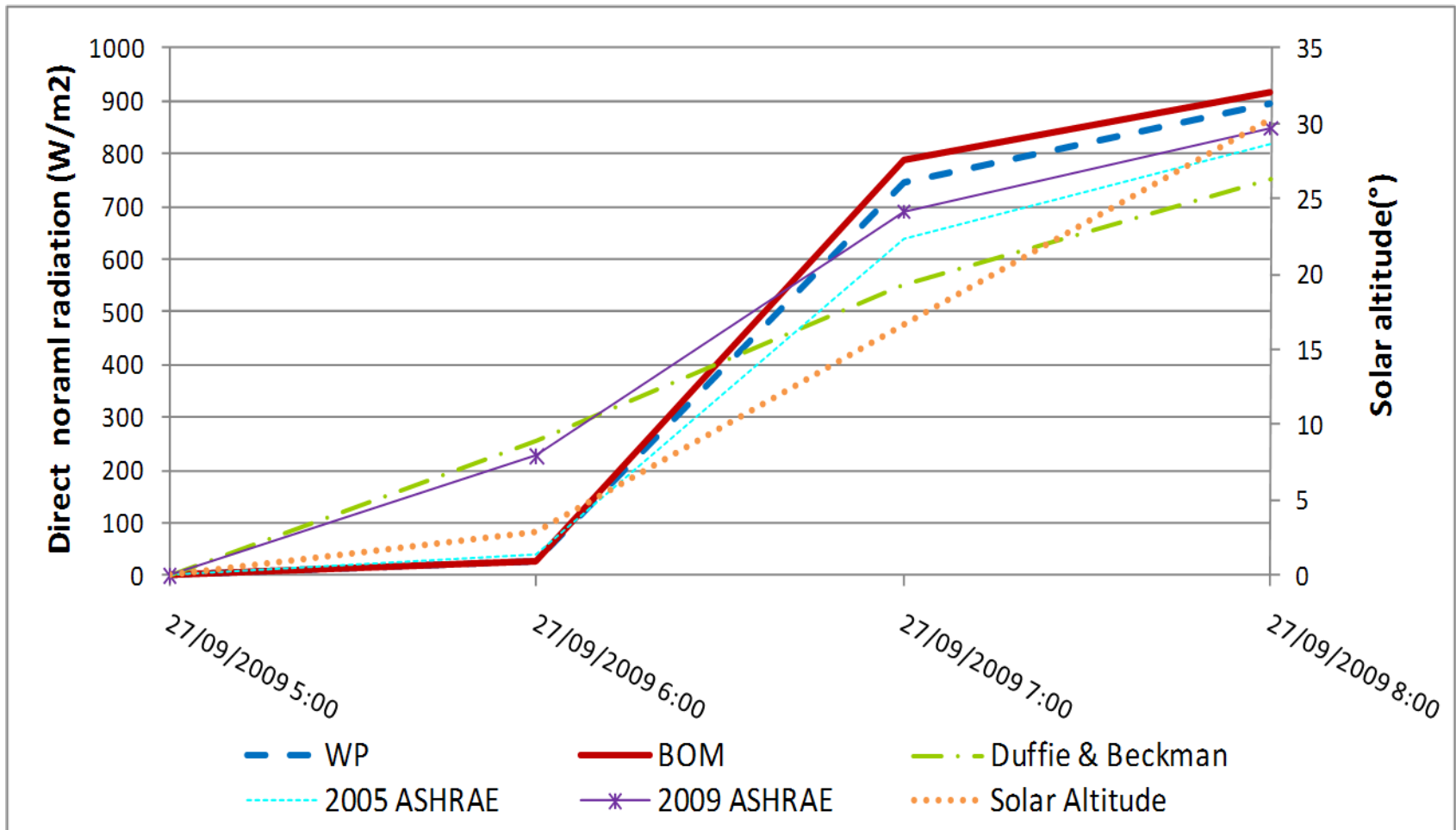
Exemplary ASEA - Sample Graphical



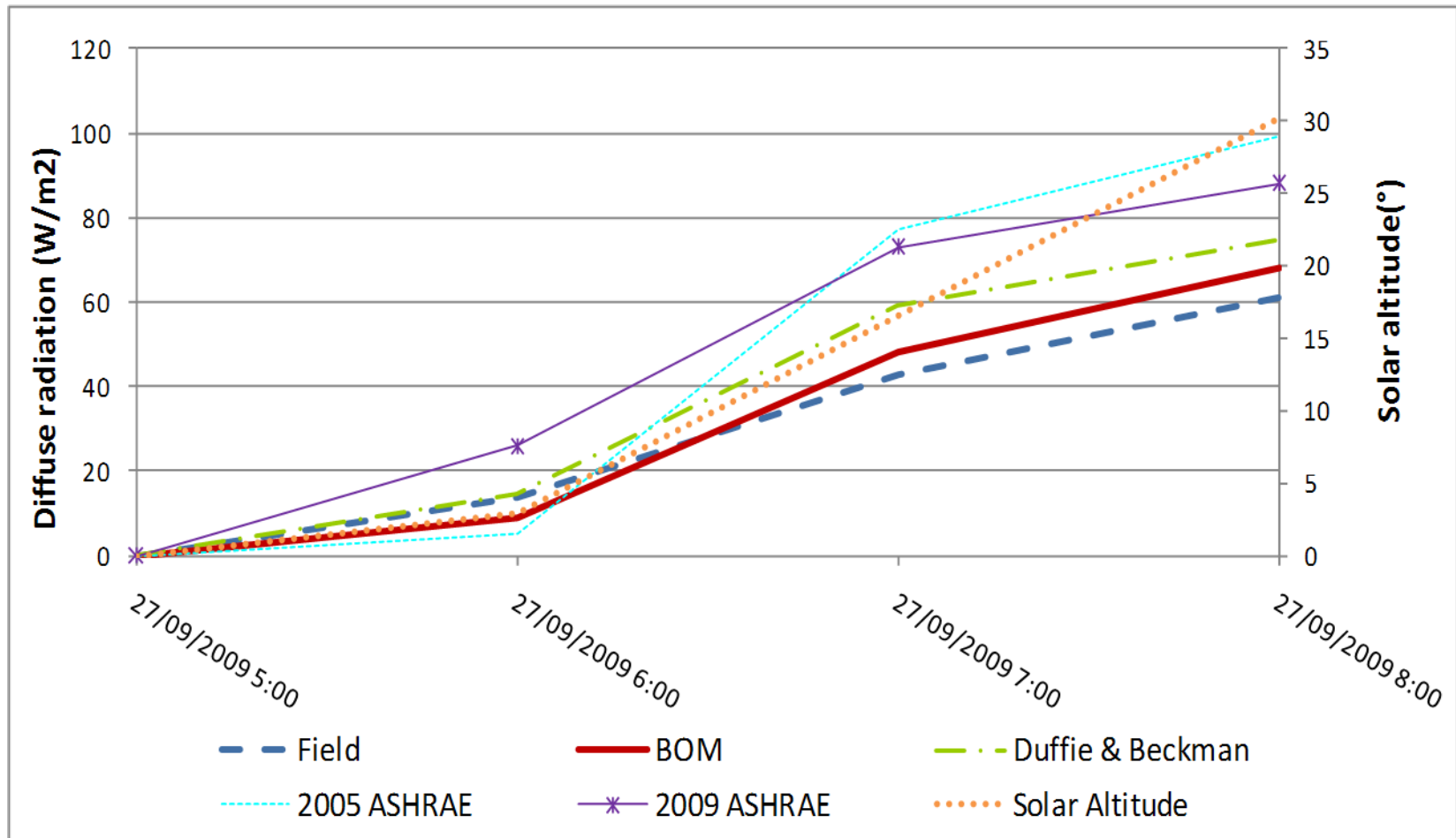
Quality Assurance

- Minute-by-minute interpolation
- ACDB or TMY accumulation
- Cap values at 110% Clear Sky
- Cap DNI at $DHI = 90\% GHI$
- Compare with BOM and other reliable ground stations
- Select nearby “pixel” when $>50\%$ sea

Detailed Comparisons - Beam



Detailed Comparisons - Diffuse



Conclusions

- Solar and Coincident Weather Data for almost anywhere
- Can target Large Scale Solar Deployment
- Key sites for publication
- Real time data series
- Exemplary Solar Energy Atlas

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Questions?



Trevor Lee