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## **Modelling of airborne gravity data**

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The collection of gravity data from aircraft is a method now being used in the oil exploration of frontier onshore areas for which access from the ground is difficult. The major objectives of these surveys is to locate sedimentary basins and to give some indication of their structure. The method relies on being able to recover the true gravity variation from measurements which contain much larger accelerations, and in doing this the output from the gravity meter has to be heavily filtered before profiles and maps can be produced which are suitable for geological interpretation. Modelling of the results of such surveys may be undertaken, but corresponding filters

must be applied to the model data for a valid comparison. The cascade of filters typically applied to airborne gravity data is applied to model data computed for some simple geometric shapes, and it is shown that the effect of these filters is very similar to an upward continuation. The best-fitting upward continuation heights are derived for a range of models, and models are also used to illustrate the resolution of the airborne gravity data in comparison to what can be achieved with ground measurements.