

## **Changing Location Methods at the ISC**

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One of the principal functions of the International Seismological Centre is to calculate definitive earthquake locations using the largest possible selection of arrival times, which are contributed from stations around the world. The software used at the ISC to perform these locations is currently being replaced with a more modern equivalent and decisions have had to be made whether to change the underlying algorithms. One obvious opportunity for improvement is to use more phases from the readings received. Up until now, only the initial phase of each reading has been considered and then only if it had been identified as a type of P wave. Using secondary phases and a broader range of initial phases should allow improved accuracy when locating events for which a limited number of readings are available. It should also allow the depth of hypocentres to be better resolved, even for well reported events. This poster explains which changes are being incorporated in the new ISC location software and why, using data from the ISC database to demonstrate the affect of these changes.