

### **3.3-P19. Joint Hypocenter Determination along the Gulf of Aqaba by using Egypt and Saudi Arabia seismic stations.**

The bulletin data from Egypt and Saudi Arabia Seismic Networks are used for the period January 2003 through June 2004 to relocate over 100 earthquakes occurring in and around the Gulf of Aqaba. The earthquakes have picks in the bulletin for stations surrounding the Gulf (Egypt and Saudi Arabia). Joint hypocenter determination method used to estimate the seismic station corrections and Earthquakes relocation. eight stations KAT, DHB, TR2, RDS, BDA, TAY, JMQ and TBK have minus signs in the station P-wave travel time corrections and their values -0.765, -0.126, -0.332, -0.369, -0.402, -0.302, -0.501 and -0.416. It is possible to assume that the underground structure in this area has a particular characteristic of high velocity structure and other stations BST, TR1, SHR, HAQ, JMO and ALW have positive sign and their values 0.776, 0.405, 0.900, 0.233, 0.262 and 0.638 respectively. It is possible to assume that underground structure in this area has particular characteristic of low velocity structure. The method simultaneously solves for earthquake location and station corrections.

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**Track Classification:** 3. Advances in sensors, networks and processing