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- Introduction:** Improvement of I17CI detections by adding dummy sensors
- Main proposal:** upgrade the I17CI infrasound station in order to improve these detections by adding additional sensors. This is part of the CTBTO's medium-term objectives.
- Used methods :**
 - add fictitious sensors to the existing real sensors;
 - combined coherence, SNR and network covering methods to take part of the similarity of signals across all sensors.
- Results:**
 - ✓ these multi-criteria optimization of the I17CI network improves directional coherence, expands coverage, and homogenizes SNR.
 - ✓ the network thus becomes more reliable, sensitive, and robust in the face of noise and atmospheric conditions

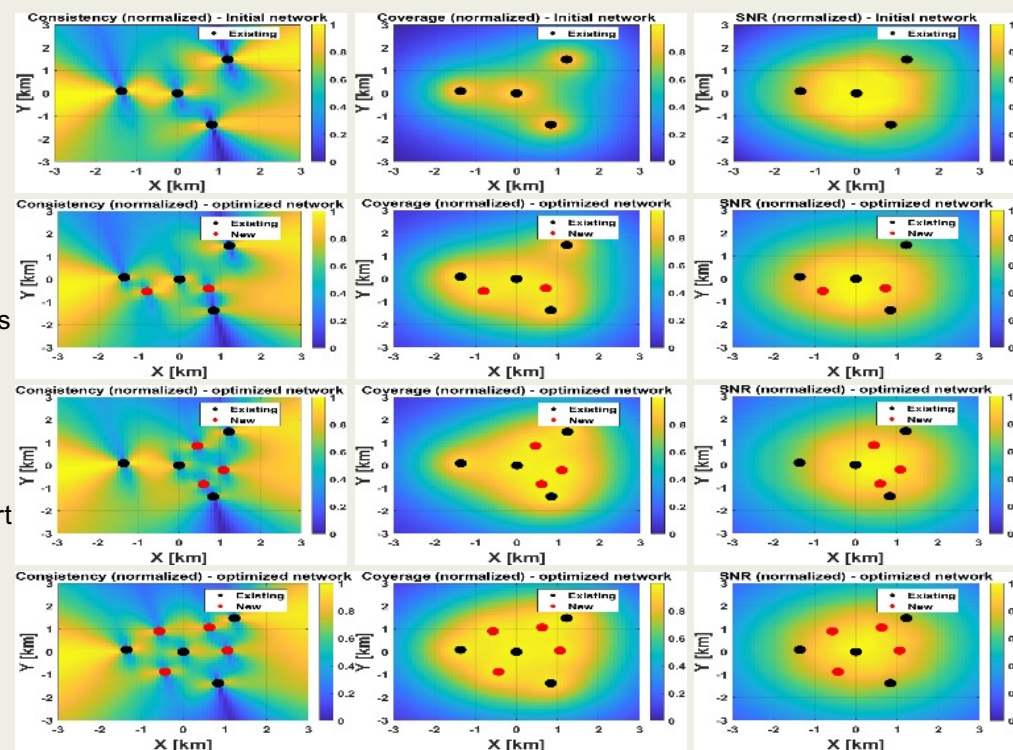


Figure : Impact of increasing the number of sensors on coherence (left), coverage (middle), and SNR (right) for the I17CI network for 2 sensors (top), 3 sensors (middle) and 4 sensors (bottom)

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