SnT 2025 CTBT: SCIENCE AND TECHNOLOGY CONFERENCE
8 SEPTEMBER ONLINE DAY
9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE

Assessment of local Seismic records and the largest earthquake magnitude in Comoro-Islands between 2017 and 2021

LIGHTNING TALK

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P1.2-523

- The subject highlighted in this poster is about the assessment of the spatiotemporal distribution using the Comoros Karthala Volcano Observatory (KVO) Seismic Bulletin of 5 consecutive years (2017, 2018, 2019, 2020, 2021). The magnitude of duration (Md) ranges 0-4.95.
- This 5-year time frame includes the earthquake swarm of Mayotte Island of the year 2018
  - Where, the highest magnitude recorded on May 15, 2018 is Mw5.9
- B-value calculation:
  - 0.994 is the calculated b-value
  - while previous studies showed
  - similar values, meaning close range
  - e.g. White et al. (2019) Submarine
  - volcanoes, ranging “0.9-1.3”,
  - which matches the Mayotte submarine eruption

$$b = \frac{\log_{10}(e)}{\langle M \rangle - \left(M_c - \frac{\Delta M}{2}\right)} = 0.994$$

- The Final b-value: 0.994±0.13

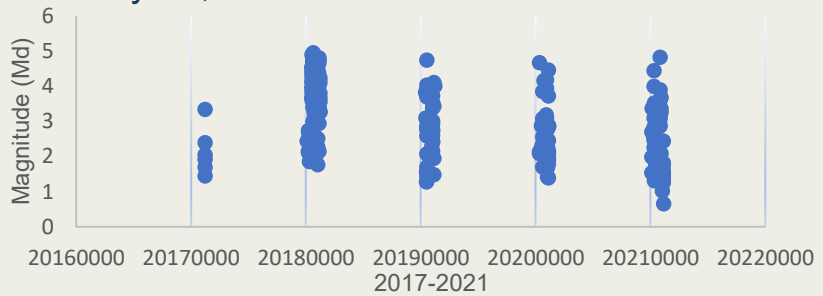

Fig:2: Spatial distribution of the 5years (2017,2018,2019,2020 and 2021)

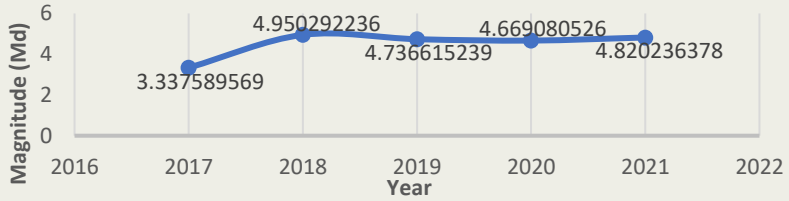

Fig.3: highest (Md) magnitudes from each year