

| Mate Terminal                       |                    |       |                  |      |                    |                  |         |     |  |
|-------------------------------------|--------------------|-------|------------------|------|--------------------|------------------|---------|-----|--|
| File Edit View Search Terminal Help |                    |       |                  |      |                    |                  |         |     |  |
| 1                                   | GeForce RTX 208... | Off   | 00000000:03:00.0 | Off  | 5944MiB / 11019MiB | 88%              | Default | N/A |  |
| 0%                                  | 53C P2 246W / 250W |       |                  |      |                    |                  | N/A     |     |  |
| 2                                   | GeForce RTX 208... | Off   | 00000000:83:00.0 | Off  | 5944MiB / 11019MiB | 86%              | Default | N/A |  |
| 0%                                  | 43C P2 232W / 250W |       |                  |      |                    |                  | N/A     |     |  |
| 3                                   | GeForce RTX 208... | Off   | 00000000:84:00.0 | Off  | 4998MiB / 11019MiB | 75%              | Default | N/A |  |
| 0%                                  | 43C P2 152W / 250W |       |                  |      |                    |                  | N/A     |     |  |
| Processes:                          |                    |       |                  |      |                    |                  |         |     |  |
| GPU                                 | GI ID              | CI ID | PID              | Type | Process name       | GPU Memory Usage |         |     |  |
| 0                                   | N/A                | N/A   | 6227             | C    | python             | 6081MiB          |         |     |  |
| 1                                   | N/A                | N/A   | 6227             | C    | python             | 5941MiB          |         |     |  |
| 2                                   | N/A                | N/A   | 6227             | C    | python             | 5941MiB          |         |     |  |
| 3                                   | N/A                | N/A   | 6227             | C    | python             | 4995MiB          |         |     |  |

```

device = torch.device('cuda' if torch.cuda.is_available() else 'cpu')

class Prop(torch.nn.Module):
    def __init__(self, dx, dt, freq):
        super().__init__()

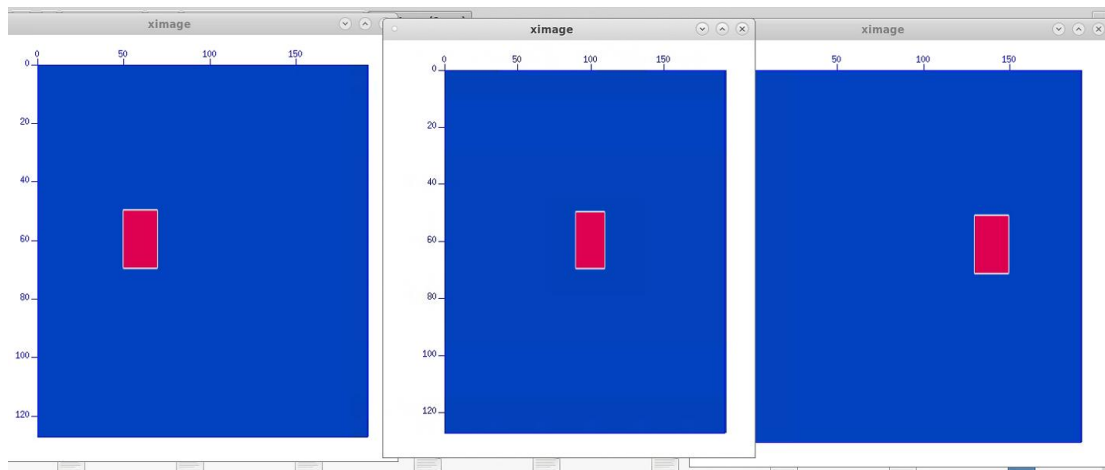
        self.dx = dx
        self.dt = dt
        self.freq = freq

    def forward(self, vp_true, vs_true, rho_true, source_amplitudes1, source_locations1,
                receiver_locations1):
        out = elastic(
            *deepwave.common.vpvsrho_to_lambmubuoynancy(vp_true, vs_true,
                                                         rho_true), self.dx, self.dt,
            source_amplitudes_y=source_amplitudes1.to(device),
            source_locations_y=source_locations1,
            receiver_locations_y=receiver_locations1,

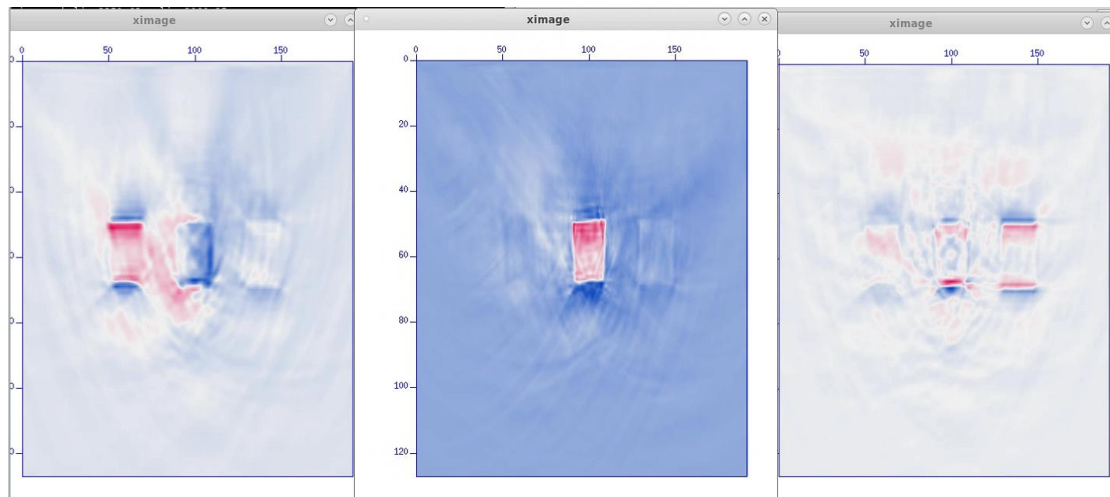
            pml_freq=self.freq,
        )
        return out[-2]

```

Labels:



## Individual source excitation



## 20 sources excitation

