

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
{(1, 190): source
cap1      [2412]
cap2      [2412]
cap3      [2417, 2422]
Name: channel, dtype: object, (1, 192): source
cap1      [2412]
cap3      [2422, 2437]
Name: channel, dtype: object, (1, 191): source
cap1      [2412]
cap2      [2412]
cap3      [2417, 2422]
Name: channel, dtype: object, (1, 195): source
cap1      [2427, 2432]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 136): source
cap1      [2427, 2442]
cap2      [2437, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 101): source
cap1      [2427, 2432, 2442, 2447]
cap2      [2432, 2437, 2447]
Name: channel, dtype: object, (1, 160): source
cap2      [2427, 2442, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 163): source
cap1      [2437]
cap2      [2427, 2437]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 166): source
cap1      [2442]
cap2      [2427, 2432, 2437]
cap3      [2432, 2437, 2442]
Name: channel, dtype: object, (1, 161): source
cap1      [2432]
cap2      [2427, 2437]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 162): source
cap1      [2442]
cap2      [2427, 2432, 2437, 2442]
cap3      [2442]
Name: channel, dtype: object, (1, 131): source
cap1      [2442]
cap2      [2427]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 127): source
cap2      [2427, 2432]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap3      [2437]
Name: channel, dtype: object, (1, 119): source
cap1      [2437, 2447]
cap2      [2427]
cap3      [2437]
Name: channel, dtype: object, (1, 140): source
cap2      [2427, 2437, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 170): source
cap2      [2437, 2442]
cap3      [2427, 2442]
Name: channel, dtype: object, (1, 196): source
cap3      [2427, 2432, 2437, 2457, 2462]
Name: channel, dtype: object, (1, 194): source
cap1      [2432]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 122): source
cap1      [2432]
cap2      [2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 164): source
cap1      [2432, 2437, 2442]
cap2      [2437]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 102): source
cap1      [2447]
cap2      [2432, 2442]
Name: channel, dtype: object, (1, 111): source
cap1      [2442, 2452]
cap2      [2432, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 121): source
cap1      [2442]
cap2      [2432, 2442]
Name: channel, dtype: object, (1, 142): source
cap1      [2442]
cap2      [2432, 2442]
cap3      [2432]
Name: channel, dtype: object, (1, 156): source
cap1      [2442]
cap2      [2432, 2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 153): source
cap1      [2442]
cap2      [2432, 2447]
cap3      [2432, 2437]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (1, 103): source
cap1      [2437, 2447]
cap2      [2432, 2437, 2442]
Name: channel, dtype: object, (1, 145): source
cap1      [2437]
cap2      [2432, 2437, 2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 165): source
cap1      [2442]
cap2      [2432, 2437]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 113): source
cap2      [2432, 2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (1, 159): source
cap1      [2442]
cap2      [2432, 2442, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 168): source
cap2      [2432, 2442]
cap3      [2442]
Name: channel, dtype: object, (1, 169): source
cap2      [2432, 2437]
cap3      [2442]
Name: channel, dtype: object, (1, 148): source
cap1      [2452]
cap2      [2432, 2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 130): source
cap2      [2437, 2452]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 151): source
cap1      [2442]
cap2      [2442, 2447]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 141): source
cap2      [2437, 2442]
cap3      [2432, 2437]
Name: channel, dtype: object, (1, 149): source
cap1      [2442, 2452]
cap2      [2442]
cap3      [2432, 2437, 2442]
Name: channel, dtype: object, (1, 158): source
cap2      [2437, 2442, 2447]
cap3      [2432, 2437, 2442]
Name: channel, dtype: object, (1, 125): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1          [2442]
cap2          [2437]
cap3  [2432, 2437, 2442]
Name: channel, dtype: object, (1, 147): source
cap1          [2452]
cap2          [2437]
cap3  [2432, 2437, 2442, 2447]
Name: channel, dtype: object, (1, 178): source
cap1          [2442]
cap3  [2432, 2442]
Name: channel, dtype: object, (1, 193): source
cap3  [2432, 2437, 2442]
Name: channel, dtype: object, (1, 106): source
cap1          [2437, 2447]
cap2  [2437, 2442, 2447]
cap3          [2437]
Name: channel, dtype: object, (1, 176): source
cap1          [2437]
cap2          [2437]
cap3  [2437, 2442]
Name: channel, dtype: object, (1, 183): source
cap1          [2437, 2442]
cap2          [2442]
cap3  [2437, 2442]
Name: channel, dtype: object, (1, 167): source
cap1          [2437]
cap2  [2437, 2442]
cap3          [2442]
Name: channel, dtype: object, (1, 180): source
cap1          [2437, 2442]
cap3          [2437]
Name: channel, dtype: object, (1, 185): source
cap1  [2437, 2442, 2447]
cap2          [2442]
cap3          [2447]
Name: channel, dtype: object, (1, 171): source
cap2  [2437, 2442]
cap3          [2437]
Name: channel, dtype: object, (1, 181): source
cap2  [2437, 2442]
cap3  [2437, 2442]
Name: channel, dtype: object, (1, 150): source
cap2  [2437, 2442]
cap3  [2437, 2442]
Name: channel, dtype: object, (1, 135): source
cap1  [2442, 2447]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap2      [2437, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 157): source
cap2      [2437, 2442]
cap3      [2442]
Name: channel, dtype: object, (1, 173): source
cap1      [2442]
cap2      [2437]
cap3      [2442]
Name: channel, dtype: object, (1, 146): source
cap1      [2442]
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (1, 177): source
cap1      [2442]
cap2      [2437, 2442, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 117): source
cap1      [2447]
cap2      [2437, 2442, 2447]
Name: channel, dtype: object, (1, 112): source
cap1      [2452]
cap2      [2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 124): source
cap1      [2442]
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (1, 174): source
cap1      [2442]
cap2      [2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 115): source
cap1      [2442]
cap2      [2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (1, 154): source
cap1      [2442]
cap2      [2437, 2442, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 182): source
cap1      [2442, 2447]
cap2      [2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 107): source
cap2      [2437, 2442]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap3      [2437]
Name: channel, dtype: object, (1, 138): source
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (1, 152): source
cap1      [2442]
cap2      [2437]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 128): source
cap1      [2442]
cap2      [2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (1, 108): source
cap1      [2447]
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (1, 137): source
cap1      [2442]
cap2      [2437]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 129): source
cap2      [2437]
cap3      [2442]
Name: channel, dtype: object, (1, 109): source
cap1      [2442]
cap2      [2437]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 110): source
cap2      [2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (1, 139): source
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (1, 132): source
cap1      [2442]
cap2      [2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 104): source
cap1      [2442]
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 143): source
cap2      [2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 133): source
cap1      [2442]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap2      [2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 114): source
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 126): source
cap2      [2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (1, 144): source
cap1      [2447]
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 172): source
cap1      [2442]
cap2      [2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 188): source
cap1      [2442]
cap2      [2447]
cap3      [2437]
Name: channel, dtype: object, (1, 116): source
cap1      [2442]
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 118): source
cap1      [2442, 2447]
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 123): source
cap1      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 120): source
cap2      [2442]
cap3      [2437]
Name: channel, dtype: object, (1, 189): source
cap1      [2442]
cap2      [2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 175): source
cap1      [2442]
cap2      [2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 187): source
cap1      [2447]
cap2      [2442]
cap3      [2437]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (1, 179): source
cap1      [2442]
cap2      [2442, 2452]
cap3      [2437, 2442]
Name: channel, dtype: object, (1, 105): source
cap1      [2442]
cap2      [2442]
Name: channel, dtype: object, (1, 186): source
cap1      [2442]
cap2      [2442, 2447]
Name: channel, dtype: object, (1, 155): source
cap1      [2442]
cap2      [2442, 2447]
cap3      [2442]
Name: channel, dtype: object, (1, 184): source
cap1      [2442, 2447]
cap2      [2442]
cap3      [2442]
Name: channel, dtype: object, (1, 134): source
cap1      [2447]
cap2      [2447]
Name: channel, dtype: object, (1, 201): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 209): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 212): source
cap1      [2452, 2457]
cap2      [2452, 2457]
cap3      [2457, 2462]
Name: channel, dtype: object, (1, 211): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 205): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (1, 207): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 210): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (1, 213): source
cap1      [2452]
cap2      [2452]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 197): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 202): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 203): source
cap1      [2452]
cap3      [2457]
Name: channel, dtype: object, (1, 206): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 200): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 41): source
cap1      [2452, 2457, 2462]
cap2      [2457]
Name: channel, dtype: object, (1, 11): source
cap1      [2452, 2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 50): source
cap1      [2452, 2457, 2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (1, 18): source
cap1      [2462]
cap2      [2452, 2462]
Name: channel, dtype: object, (1, 35): source
cap1      [2462]
cap2      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 1): source
cap1      [2457, 2462]
cap2      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 32): source
cap1      [2457, 2462]
cap2      [2452]
Name: channel, dtype: object, (1, 20): source
cap1      [2462]
cap2      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 68): source
cap1      [2457, 2462]
cap2      [2452]
Name: channel, dtype: object, (1, 21): source
cap1      [2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap2      [2452, 2462]
Name: channel, dtype: object, (1, 33): source
cap1      [2457]
cap2      [2452, 2457]
Name: channel, dtype: object, (1, 198): source
cap3      [2452, 2457]
Name: channel, dtype: object, (1, 208): source
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (1, 43): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 60): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 2): source
cap1      [2457]
cap2      [2462]
Name: channel, dtype: object, (1, 3): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 59): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 23): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 24): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 5): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 15): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 16): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 51): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 77): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (1, 34): source
cap1      [2457, 2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap2      [2462]
Name: channel, dtype: object, (1, 6): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 53): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 54): source
cap1      [2457, 2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 26): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 46): source
cap1      [2462]
cap2      [2457]
Name: channel, dtype: object, (1, 28): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 45): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 47): source
cap1      [2462]
cap2      [2457]
Name: channel, dtype: object, (1, 62): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 22): source
cap1      [2462]
cap2      [2457]
Name: channel, dtype: object, (1, 30): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 69): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 36): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 31): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (1, 70): source
cap1      [2462]
cap2      [2457, 2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap3      [2462]
Name: channel, dtype: object, (1, 199): source
cap3      [2457, 2462]
Name: channel, dtype: object, (1, 204): source
cap3      [2457]
Name: channel, dtype: object, (1, 52): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 7): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 25): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 61): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (1, 78): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (1, 48): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 4): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 13): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 44): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 8): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 10): source
cap1      [2462]
Name: channel, dtype: object, (1, 14): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 40): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 17): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 39): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 42): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 9): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 49): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 71): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 37): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 27): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 38): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (1, 79): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (1, 12): source
cap2      [2462]
Name: channel, dtype: object, (1, 29): source
cap2      [2462]
Name: channel, dtype: object, (2, 152): source
cap1      [2432, 2437, 2452]
cap2      [2442, 2447, 2457]
cap3      [2442, 2462]
Name: channel, dtype: object, (2, 176): source
cap1      [2432]
cap2      [2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 172): source
cap1      [2442, 2447]
cap2      [2437, 2442]
cap3      [2432, 2437]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (2, 140): source
cap1      [2437, 2462]
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 112): source
cap1      [2442, 2462]
cap2      [2437, 2462]
cap3      [2442]
Name: channel, dtype: object, (2, 171): source
cap1      [2442, 2452]
cap2      [2437, 2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (2, 181): source
cap1      [2442]
cap2      [2437]
cap3      [2437]
Name: channel, dtype: object, (2, 183): source
cap1      [2442, 2452]
cap2      [2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (2, 175): source
cap1      [2447]
cap2      [2437, 2442]
cap3      [2437]
Name: channel, dtype: object, (2, 173): source
cap2      [2437, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 177): source
cap2      [2437, 2442]
cap3      [2442]
Name: channel, dtype: object, (2, 179): source
cap1      [2442]
cap2      [2437, 2442]
cap3      [2442]
Name: channel, dtype: object, (2, 174): source
cap2      [2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 189): source
cap1      [2442]
cap2      [2442, 2447]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 188): source
cap1      [2452]
cap2      [2442, 2447]
cap3      [2437]
Name: channel, dtype: object, (2, 184): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1          [2442]
cap2      [2442, 2447]
cap3          [2437]
Name: channel, dtype: object, (2, 185): source
cap2      [2442, 2452]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 187): source
cap2      [2452]
cap3      [2437]
Name: channel, dtype: object, (2, 182): source
cap1          [2442]
cap2          [2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 178): source
cap1          [2447]
cap2          [2442]
cap3      [2437, 2442]
Name: channel, dtype: object, (2, 186): source
cap1      [2447, 2452]
cap3      [2437]
Name: channel, dtype: object, (2, 124): source
cap1          [2442]
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 123): source
cap1          [2442]
cap2      [2442, 2447, 2457, 2462]
cap3          [2442, 2462]
Name: channel, dtype: object, (2, 135): source
cap1      [2442, 2462]
cap2          [2442]
cap3          [2462]
Name: channel, dtype: object, (2, 125): source
cap1      [2442, 2462]
cap2          [2457]
cap3          [2462]
Name: channel, dtype: object, (2, 121): source
cap1          [2442]
cap2      [2442, 2457, 2462]
cap3      [2442, 2457, 2462]
Name: channel, dtype: object, (2, 134): source
cap1      [2442, 2457, 2462]
cap2          [2442, 2447]
cap3          [2442, 2462]
Name: channel, dtype: object, (2, 111): source
cap1          [2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap2      [2442, 2462]
cap3      [2442, 2462]
Name: channel, dtype: object, (2, 113): source
cap1      [2462]
cap2      [2442]
cap3      [2462]
Name: channel, dtype: object, (2, 122): source
cap1      [2462]
cap2      [2442, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 127): source
cap1      [2447, 2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 169): source
cap1      [2447, 2457, 2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 198): source
cap3      [2447, 2452, 2462]
Name: channel, dtype: object, (2, 192): source
cap3      [2447, 2452, 2457]
Name: channel, dtype: object, (2, 193): source
cap3      [2447, 2452, 2457, 2462]
Name: channel, dtype: object, (2, 195): source
cap1      [2452]
cap3      [2447, 2452, 2457]
Name: channel, dtype: object, (2, 210): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 191): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 197): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (2, 199): source
cap1      [2452]
cap3      [2457]
Name: channel, dtype: object, (2, 207): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 209): source
cap1      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 190): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2452]
cap2      [2452]
cap3      [2457]
Name: channel, dtype: object, (2, 203): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (2, 204): source
cap1      [2452]
cap3      [2457]
Name: channel, dtype: object, (2, 206): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (2, 211): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (2, 205): source
cap1      [2452]
cap3      [2452, 2457, 2462]
Name: channel, dtype: object, (2, 212): source
cap1      [2452, 2457]
cap2      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (2, 202): source
cap1      [2452, 2457]
cap2      [2452]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 213): source
cap1      [2452]
cap3      [2452, 2457]
Name: channel, dtype: object, (2, 5): source
cap1      [2452, 2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (2, 69): source
cap1      [2452, 2462]
cap2      [2462]
Name: channel, dtype: object, (2, 42): source
cap1      [2452, 2462]
cap2      [2462]
Name: channel, dtype: object, (2, 126): source
cap2      [2452, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 161): source
cap1      [2462]
cap2      [2452, 2457]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 148): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1 [2462]
cap2 [2452, 2457, 2462]
cap3 [2462]
Name: channel, dtype: object, (2, 20): source
cap1 [2462]
cap2 [2452, 2462]
Name: channel, dtype: object, (2, 21): source
cap1 [2462]
cap2 [2452, 2457, 2462]
Name: channel, dtype: object, (2, 201): source
cap3 [2452, 2457]
Name: channel, dtype: object, (2, 167): source
cap1 [2462]
cap2 [2457, 2462]
cap3 [2452, 2457, 2462]
Name: channel, dtype: object, (2, 200): source
cap3 [2452, 2457, 2462]
Name: channel, dtype: object, (2, 196): source
cap3 [2452, 2457, 2462]
Name: channel, dtype: object, (2, 194): source
cap3 [2452, 2457, 2462]
Name: channel, dtype: object, (2, 6): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 4): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 33): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 77): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 59): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 34): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 41): source
cap1 [2457, 2462]
cap2 [2462]
Name: channel, dtype: object, (2, 50): source
cap1 [2457, 2462]
cap2 [2457, 2462]
Name: channel, dtype: object, (2, 24): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (2, 70): source
cap1      [2457, 2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 78): source
cap1      [2457, 2462]
cap2      [2462]
Name: channel, dtype: object, (2, 131): source
cap1      [2457, 2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 164): source
cap1      [2457, 2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 110): source
cap1      [2457, 2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 144): source
cap1      [2457, 2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 133): source
cap1      [2457, 2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 128): source
cap1      [2457, 2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 114): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 163): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 150): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 26): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 137): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 11): source
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 141): source
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 53): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 101): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2457]
Name: channel, dtype: object, (2, 151): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 153): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 154): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 162): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 52): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 142): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 9): source
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 12): source
cap1      [2462]
cap2      [2457, 2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (2, 10): source
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 138): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 149): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 18): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 157): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 17): source
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 143): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 102): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 3): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 104): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 28): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 116): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 68): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 109): source
cap1      [2462]
cap2      [2457, 2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (2, 118): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 45): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 51): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 49): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 136): source
cap1      [2462]
cap2      [2457, 2462]
cap3      [2462]
Name: channel, dtype: object, (2, 48): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 22): source
cap1      [2462]
cap2      [2457, 2462]
Name: channel, dtype: object, (2, 103): source
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 146): source
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 145): source
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 130): source
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 158): source
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 180): source
cap1      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 155): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2462]
cap2      [2462]
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 208): source
cap3      [2457, 2462]
Name: channel, dtype: object, (2, 25): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 37): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 8): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 32): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 43): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 54): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 61): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 14): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 16): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 30): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 79): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 2): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 35): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 40): source
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 44): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 23): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 1): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 7): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 36): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 47): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 62): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 15): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 60): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 13): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 27): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 38): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 31): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 46): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 39): source
cap1      [2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (2, 71): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 108): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 106): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 160): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 165): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 107): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 117): source
cap1      [2462]
cap2      [2462]
Name: channel, dtype: object, (2, 129): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 166): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 132): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 159): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 105): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
```

As of December 5, 2023 (ap\_data\_5) with one 'zero'

```
Name: channel, dtype: object, (2, 119): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 156): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 120): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 115): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 168): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 147): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 139): source
cap1      [2462]
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 170): source
cap2      [2462]
cap3      [2462]
Name: channel, dtype: object, (2, 29): source
cap2      [2462]
Name: channel, dtype: object}
```