

Letter about Sporadic E work

I am writing this letter to everyone who has expressed an interest in updating the *U.R.S.I. Handbook of Ionogram Interpretation and Reduction* in relation to Sporadic E (Es).

Context.

The scaling of Es is dealt with in chapter 4 (page 103 – 135) of UAG-23A. Within this chapter and as show in Figure 1 there are 9 sections to this chapter.

```
4 Es CHARACTERISTICS
  4.0 General Considerations
  4.1 Es Characteristics to be Tabulated
  4.2 Es Scaling Conventions
  4.3 Techniques for Distinguishing between the Magneto-electronic Components
      in Es Traces
  4.4 Scaling of foEs
  4.5 Scaling of fxEs
  4.6 Scaling of FbEs
  4.7 Scaling of h'E
  4.8 Classification of "Types of Es"
  4.9 Provisional f plot Indication of fxEs
```

Figure 1. Section of contents page of UAG-23A

In UAG-50 (high-latitude supplement) we find many examples of Es as seen at different stations. The majority ionograms touching on Es in UAG-50 are complete with comments, type identification and the actual scaling that was determined from the ionogram.

As someone who has not been involved in the URSI or INAG for very long I am not aware of what elements in UAG-23A and/or UAG-50 are:

- Incorrect;
- No longer suitable;
- Misleading or ambiguous;
- Missing; and/or
- Could be done in a better way.

The way forward

The way forward is to take chapter 4 from UAG-23A and rework this into an updated chapter that focuses entirely on Es and takes the reader from A to Z with respect to Es and deals with the five bullets above.

Once completed this chapter will then replace everything related to Es that is contained in UAG-23A and UAG-50 - *while retaining full backwards compatibility*.

Next steps

Work is progressing quickly on getting the entirety chapter 4 of UAG-23A into a word document so we can start the updating.

I will soon send out guidance on how we will do this work. Until then please sharpen those pencils, get your thoughts in order and gather those example ionograms.

Regards

Samuel

29 August 2024

samuel.ritchie@comreg.ie

Ends .../