MEETING 2 — OVERVIEW

- Levels of “stress”
- Pitch accents and prominence
- Prosodic structure and intonational tunes
- H*, L*, L+H* pitch accents
- Common contour types

WHAT IS “STRESS”?

- Dictionary entry marks syllables with primary/secondary lexical “stress”.

  `legislature`

- In a sentence or discourse, some words are “stressed” more than others — many terms have been used to describe such “stress”: “important words”, “sentence stress”, “narrow focus”, etc. etc.

  ```
  The legislature makes the laws.
  What I SAID is that the legislature doesn't DO anything.
  ```

- Increased segmental durations, increased amplitude (loudness), and PITCH ACCENTS mark such “stressed” words/syllables in discourse.

PROSODIC HIERARCHY AND PROMINENCE

Marianna made the marmalade.

```
                    x          (nuclear acc)
    x               x          (accented)
---------------------------------------------
 x  x      x        x    x     (heavy syll)
 x xx  x   x      x   x  x x   (syllables)
Marianna  made  the  marmalade.
```

- The prosodic structure of an utterance involves many levels of prominence: the rhythmic alternation of (strong/weak) syllables, higher-level prominence marked by pitch accents, and additional prominence of the nuclear accent as result of intonation phrasing.
- READ MORE: an overview of prosodic structure in Beckman (1996).

SPOTTING PITCH ACCENTS

≪spanish≫ *and I had registered for Spanish simply because I'd taken it for five years in high school*

≪park3≫ *it would be nice to be able to go right out the back door and into the park cause it's actually right behind the house*

- Labeler agreement on pitch accent location is 83-88% (Siverman et al. 1992).
- READ MORE about accent tagging reliability: Silverman et al. (1992) and Pitrelli et al. (1994).

VARIATION IN PROSODIC STRUCTURE

- The prosodic organization (defined by pitch accent placement and prosodic grouping) of a sentence can and does vary, in order to convey different pragmatic meanings.

```
    Marianna   made the marmalade.

1. (    *                *       )  e.g. standard declar

2. (    *                        )  e.g. narrow focus

3. (    *   ) ( *        *       )  e.g. bkgrnd-answer
```

PROSODIC STRUCTURE vs. INTONATION PATTERN

- Pitch accent PLACEMENT (part of the prosodic structure of an utterance) is independent of pitch accent TYPE (part of the intonational pattern (or “tune”) of an utterance).
- The intonational tune also contributes to an utterance’s meaning.

```
   Marianna made the marmalade.
1)   H*             H*       L-L%
3) L+H*            !H*       L-L%
5)   L*             L*       H-H%

2) L+H*                      L-L%
4)   H*                      L-L%
6)   L*                      H-H%
```

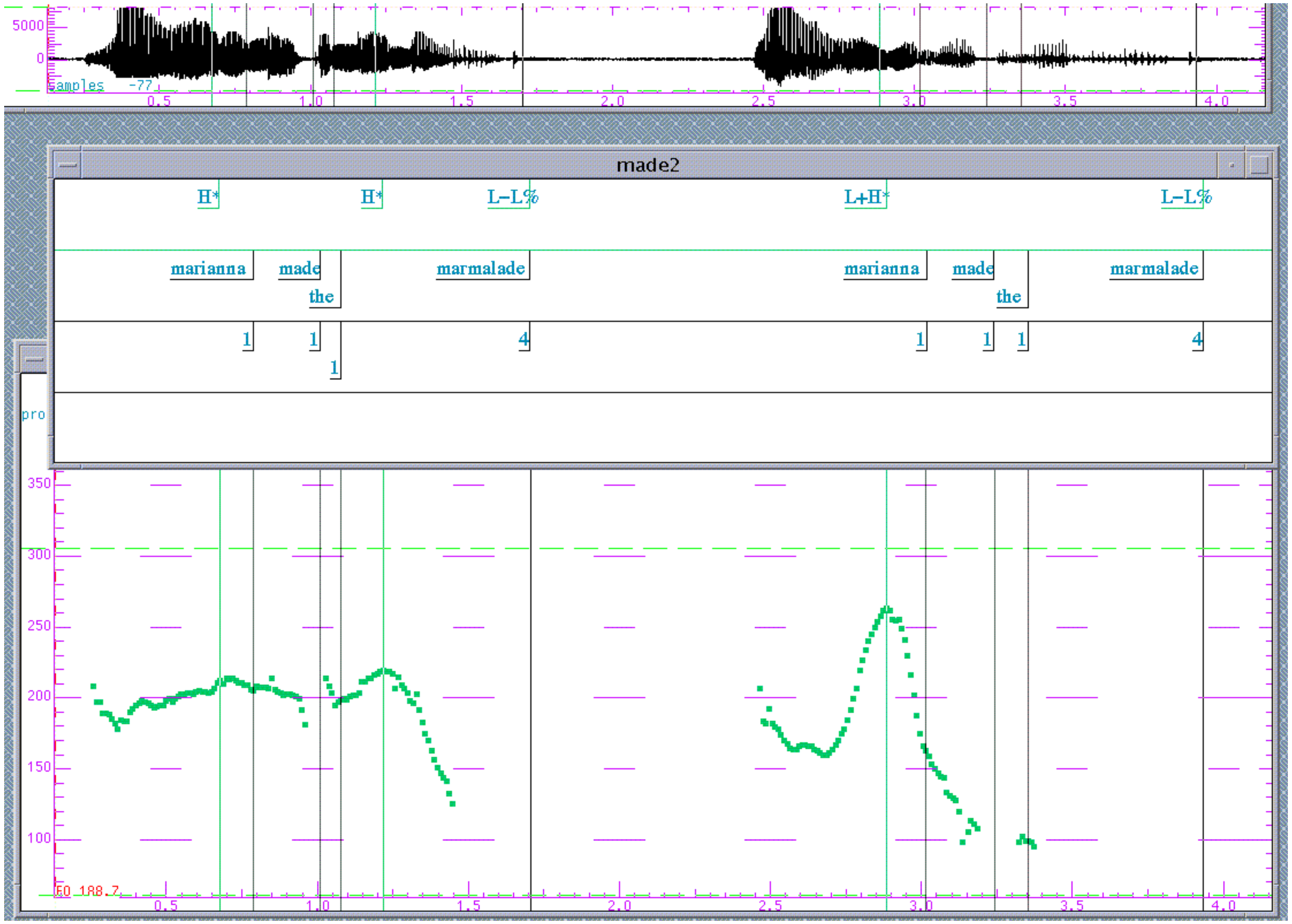

Figure 1: *Marianna made the marmalade*, utterances 1 and 2.

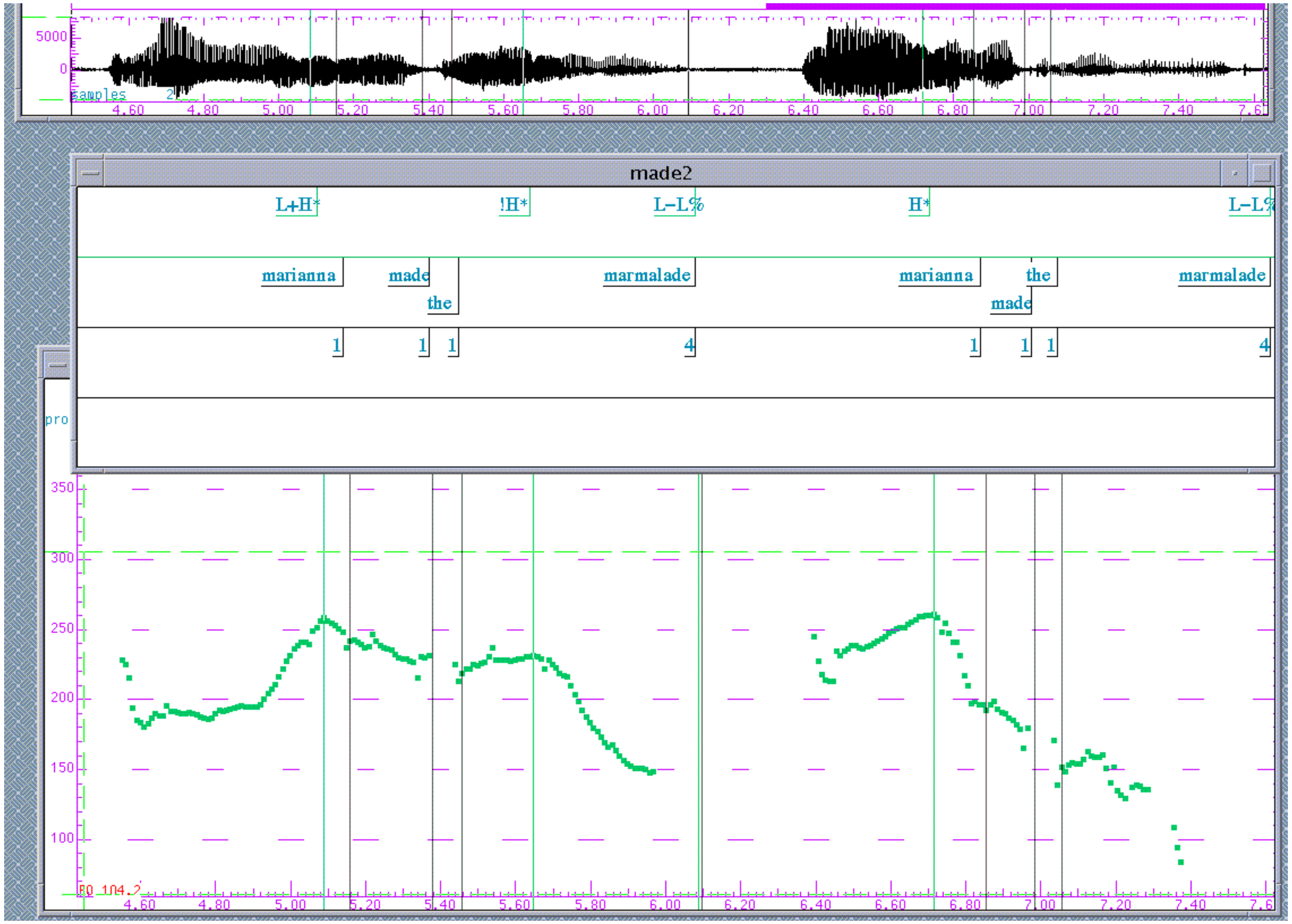

Figure 2: *Marianna made the marmalade*, utterances 3 and 4.

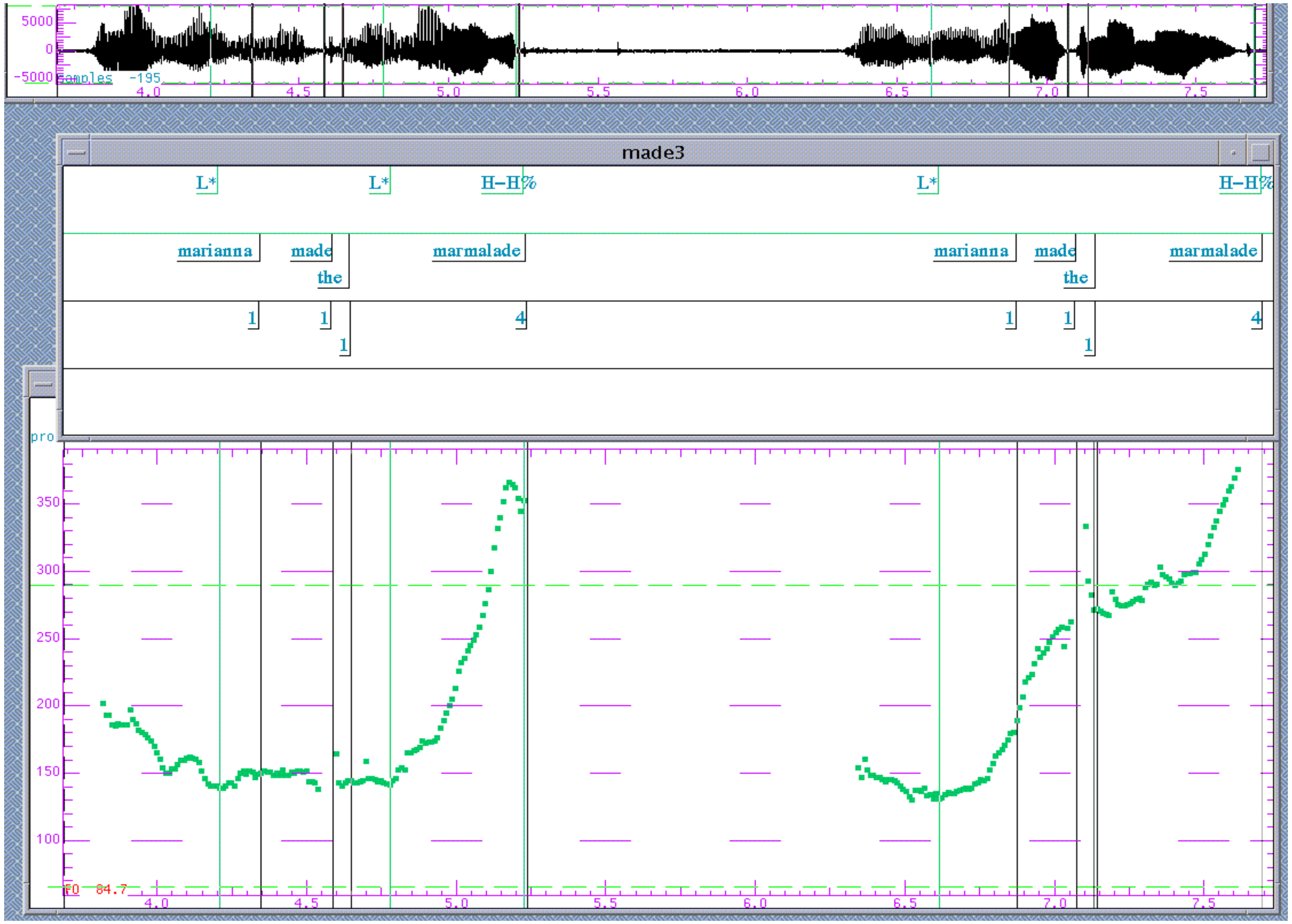

Figure 3: *Marianna made the marmalade*, utterances 5 and 6.

INTONATION TUNES as TONAL COMBINATIONS

- The tune of each intonation phrase can be described by a combination of one or more pitch accents, a phrase accent, and a boundary tone.
  - **Pitch accents** (*) Align locally with the (primary) stressed syllable of some words in the utterance.
  - **Phrase accent** (–) Fills the space between the last pitch accent in the phrase and the boundary tone.
  - **Boundary tone** (%) Aligns locally with the phrase edge.
- Some common tunes are:
  - (H*) H* L–L% ⇒ DECLARATIVE "HAT PATTERN"
  - (L*) L* H–H% ⇒ YES-NO QUESTION
  - ... H* L–H% ⇒ CONTINUATION RISE
  - L* H* L–L% ⇒ SURPRISE-REDUNDANCY

HIGH (H*) vs. LOW (L*) PITCH ACCENTS

- High vs. low distinction is relative within the *pitch range*, defined locally for each phrase. (Also, contrast is specific to phrasal position.)
- H* ("high star")
  - Peak F0 within (or slightly after) accented syllable
  - Rise to peak from middle of speaker's range
  - Height increases with expanded pitch range
  - MEANING: Cues addition to mutual belief space. (P&H 90)
- L* ("low star")
  - F0 valley within accented syllable
  - Height decreases with expanded pitch range
  - MEANING: Information is prominent/salient (due to pitch accent), but is not added to mutual belief space. (P&H 90)

TWO PEAK ACCENTS: H* vs. L+H*

- H* (“high star”)
  - Peak F0 within (or slightly after) accented syllable
  - Rise to peak from middle of speaker’s range
  - Height increases with expanded pitch range
  - MEANING: Cues addition to mutual belief space. (P&H 90)
- L+H* (“low plus high star”)
  - Peak F0 within (or slightly after) accented syllable
  - Rapid rise to peak from low in speaker’s range
  - Peak F0 often higher than H*
  - MEANING: Contrastive. Cues that accented item (and not some alternative related item) should be mutually believed. (P&H 90)

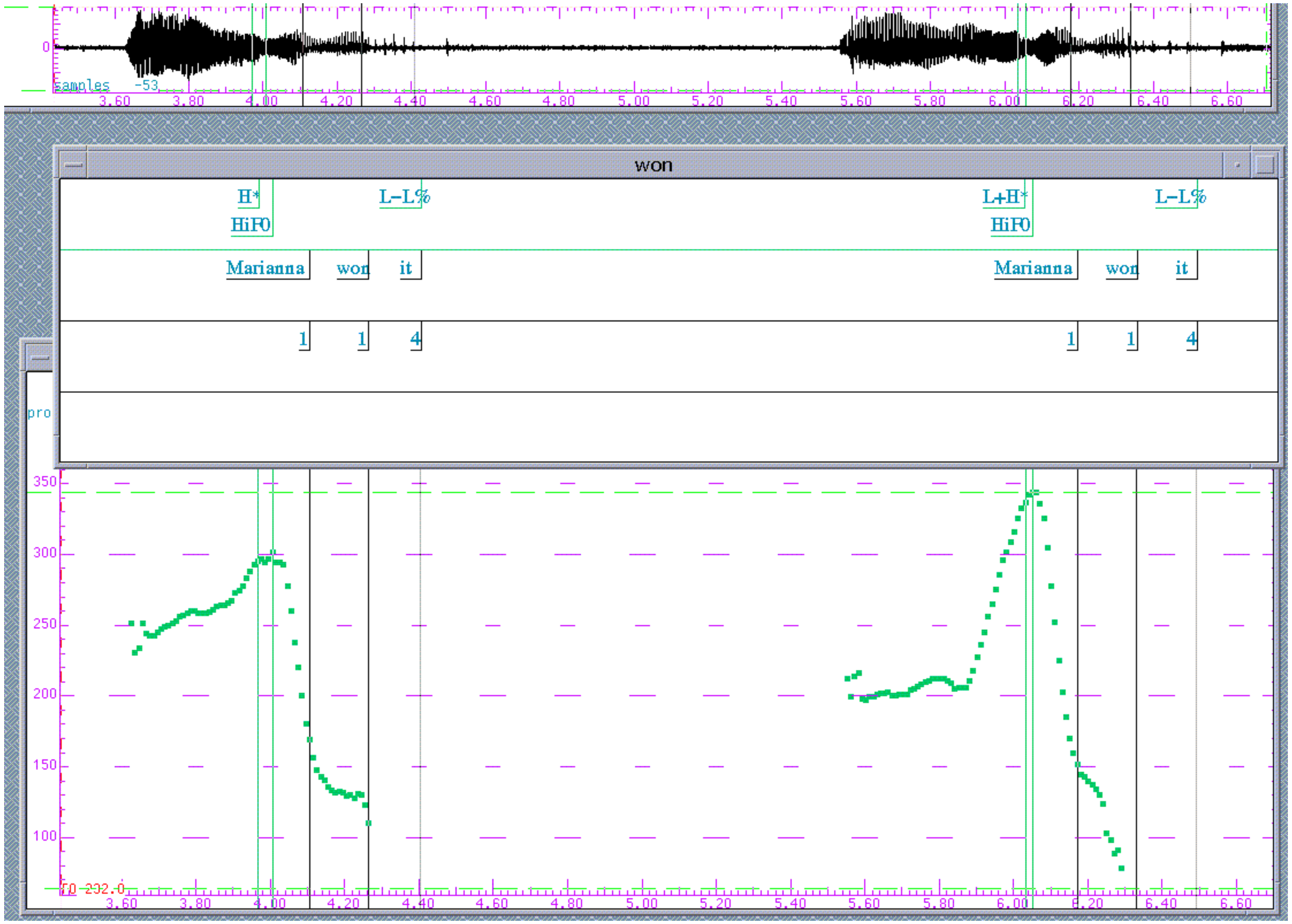

Figure 4: H* vs. L+H*

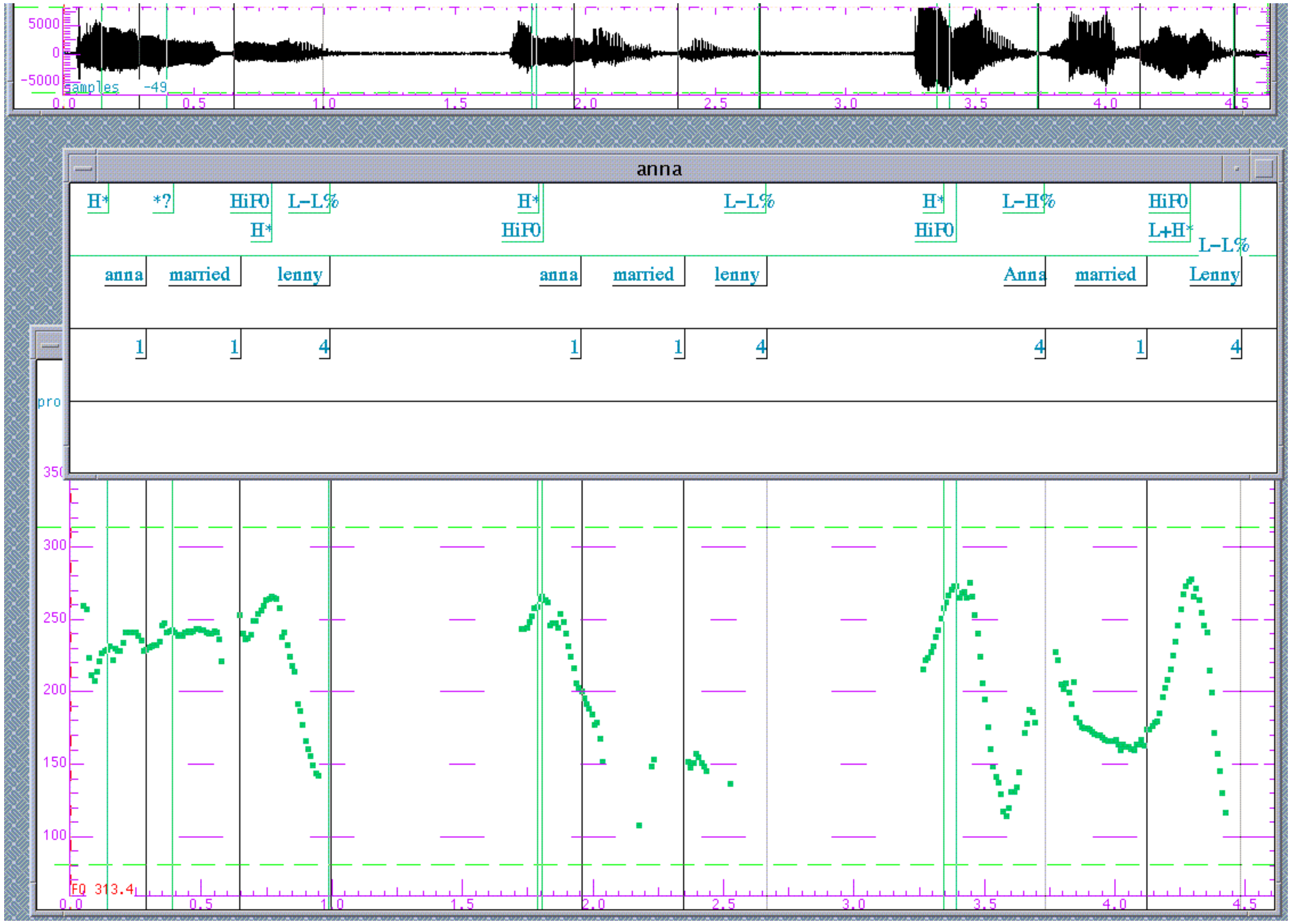

Figure 5: L+H* on initially-accented syllables can be tough to identify. When in doubt, use the H* label.