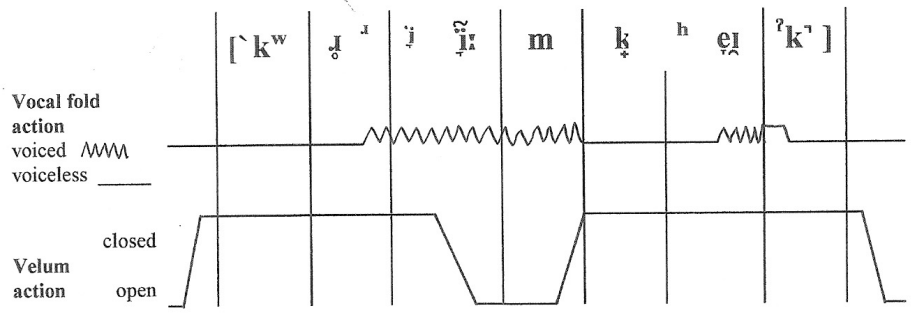
This is a model answer for an **articulatory description of *cream cake***, written by Dr Patricia Ashby. In the Commentary, please disregard references to the feedback sheet.

Articulatory Description 2: Feedback



Narrative account - fair copy

Before the utterance begins, the articulators are in the rest position: the jaw is lightly clenched, the lips closed, the tongue fills most of the oral cavity, the velum is down and the glottis open for normal breathing. The utterance will be produced on a pulmonic egressive airstream.

The velum rises in anticipation of the initial obstruent [k] and forms velar closure, with the rear side rims also in contact with the upper molars. The jaw opens to a narrow aperture and simultaneously the lips part and assume a rounded position (anticipating the following [ɹ] segment). The vocal folds remain open and pulmonic pressure is brought to bear and the auditory effect is one of silence; egressive lung air compresses behind the complete velar obstruction. At the same time, the tip and blade of the tongue rise and retract slightly assuming a position of open approximation at the back of the alveolar ridge. The front of the tongue remains low, creating a concave profile to its upper surface. After an interval of silence, the back of the tongue moves down away from the velum but remains below it in a raised position (higher than the front of the tongue). Audible plosion is heard when the channel is first opened followed immediately by voiceless friction at the post-alveolar constriction which causes the air-flow to become turbulent.

After an appreciable interval of voiceless friction, the vocal folds come together and start to vibrate for normal voice. A brief interval of voiced postalveolar approximant resonance is heard.

Almost immediately, the tip, blade and back of the tongue lower as part of the tongue just behind the front rises to a height just below fully close. Simultaneously, the lips assume a spread position and a vowel of the resonance shown on the accompanying vowel diagram is heard. The vowel is fully long in this stressed position in the utterance, the pitch commensurate with the start of a high fall intonation contour

Commentary

This paragraph, which corresponds to point 1 on the feedback sheet, is in the course pack and must preface every narrative account -simply copy it out, following your parametric diagram..

Corresponding to Feedback point 2, note here the preparation for [k], *and the anticipatory coarticulation of* [ɹ]

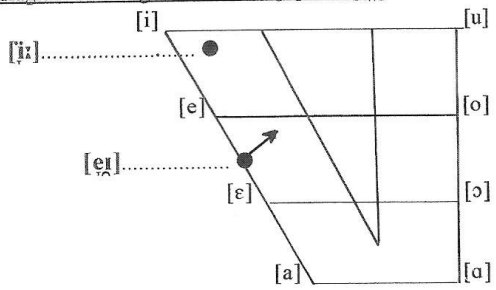
The airstream is set in motion.
The narrative makes specific reference to the auditory effect of the sound...

(and note the anticipatory coarticulation of [ɹ]*)*

...and then a description of the changes of sound as the position of the articulators changes.

Transition from voiceless to voiced, in readiness for the vowel. (The account now moves on to Feedback point 3.)

Vowel diagram showing resonance of [iː] and [eɪ]



The diagram is integrated into the narrative text and reference is made to it.

During the production of the vowel, the velum begins an opening movement in anticipation of the following nasal consonant and the vowel acquires a characteristic nasalized resonance.

Note the anticipatory coarticulation of [m] *here*

After an appreciable interval of nasalized vocalic resonance, the lips close, obstructing oral air flow and directing the air stream via the nasal cavities only. A bilabial nasal resonance is heard.

(Account moves on to Feedback point 4.)

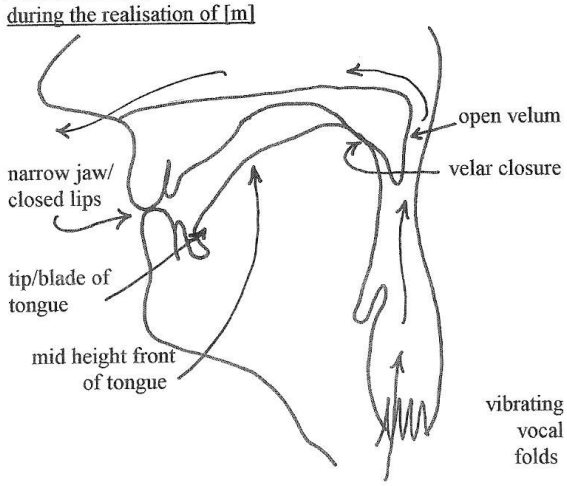
Note again the auditory effect is described.

Behind the bilabial closure, the tongue prepares for the following [k] sound (see accompanying vocal tract diagram): the back rises and forms a pre-velar closure (under the influence of the following front vowel) while the front, blade and tip all either remain or assume a low position; the rear side rims re-contact the upper molars. The velum then rises and re-forms velic closure and simultaneously, the vocal folds open and cease to vibrate. The auditory effect is once again silence.

Anticipatory coarticulation of [k]. *This sound will, in turn, also demonstrate anticipatory coarticulation of the following front vowel.*

Note again the auditory effect is described.

Vocal tract diagram showing anticipatory coarticulation of [k] during the realisation of [m]



egressive pulmonic airstream

Note again the integration of the diagram into the narrative text. Note also that the diagram has a title and legends/labels.

During this silent interval of compression, the front of the tongue rises to mid height (the tip and blade remaining low) and the jaw opens to a medium aperture. The lips assume a slightly spread position.

Anticipatory coarticulation of the following vowel. (The account move on to Feedback point 5 here.)

The back of the tongue then moves down away from the velum to a position lower than the front of the tongue. Audible plosion is heard when the channel first opened followed immediately by voiceless [h]-like friction with the resonance of a mid height front vowel (the quality of the onset of the vowel glide shown in the accompanying vowel diagram).

Auditory effects are described again.

Aspiration of [k].

After this interval of voiceless friction (known as "aspiration"), the vocal folds come together and start to vibrate and a vowel of the quality just referred to is heard. The vowel is relatively short in duration and a change in quality is heard as part of the tongue nearer to the centre than front rises towards the half-close position and becomes the highest point, causing a change in the resonant quality. The second value is only briefly maintained creating a diphthongal glide with falling prominence of the type shown in the vowel diagram above. The rate of vocal fold vibration has slowed during the production of the utterance and now produces a low pitch typical of the end of a high fall intonation contour - we can say the utterance has been produced with a high fall intonation tune followed by a low level tail.

Note the description of the duration of the vowel.
Note continued reference to auditory effect and the cross reference of this to the accompanying vowel diagram.

Account includes information about rate of vocal fold vibration and intonation.

The vocal folds then come together and cease to vibrate, forming a complete glottal closure, obstructing the air flow, terminating the vowel and pre-glottalizing the following voiceless plosive. During the hold-phase of this stop, the back of the tongue rises and re-forms velar closure as described above. Velar closure established, the glottis re-opens and egressive pulmonic air now compresses behind the velar obstruction. After a brief interval of compression - the auditory effect here is again silence - the speaker relaxes the articulators which return to the rest position described above and the compressed air dissipates through the system. No audible effect of the release of this plosive is heard as the speaker resumes normal quiet breathing.

The account now moves on to Feedback point 6.

A pre-glottalized allophone is chosen here, involving "overlapping hold phases".

The chosen allophone also has "inaudible release" - the absence of auditory effect is noted along with the return to the rest position.