ᖁᖓᓯᕈᖅᓯᓂᖅ ᐅᕝᕙᓘᓐᓃᑦ ᖁᖓᓯᕈᖅᓯᙱᓐᓂᖅ?

ᓄᓇᓕᖕᓂᑦ–ᐃᖏᕋᑎᑕᐅᔪᓂ ᐊᐱᖁᑎᒃᓴᑦ

ᖁᖓᓯᕈᖅᓯᓂᕐᒧᑦ ᐱᓕᕆᔾᔪᑏᑦ (radiotelemetry) ᐃᑲᔫᑎᒋᔭᐅᕙᒃᑐᖅ ᑭᐅᔭᐅᔪᑦ ᐊᐱᖁᑎᐅᕙᒃᑐᓂ ᐱᓗᐊᖅᑐᒥ ᑭᐅᔭᐅᔪᓐᓇᖏᑦᑎᐊᖅᑐᓂ ᐊᓯᐊᒍᑦ ᐱᓕᕆᔾᔪᓯᓄᑦ:

- ᓇᓄᐃᑦ ᓇᒧᖓᐅᓲᖑᖓᒪᖕᒐᑕ ᑕᐅᑐᒍᓐᓃᕋᖓᑦᑎᒍ?
- ᖃᓄᖅ ᐅᒥᐊᖅᔪᐊᖅ ᐊᒃᑐᐊᓂᖃᕐᒪᖕᒐᑕ ᓇᓄᖅᓂᑦ ᓯᑯᒦᑦᑐᓂ?
- ᖃᓄᑎᒋ ᐅᖓᓯᒃᑎᒋᕙᖕᒪᖕᒐᑕ? ᐃᓂᒋᔭᐅᔪᑦ ᑎᓯᓄᑦ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᕙ?
- ᖃᓄᖅ ᓇᓄᐃᑦ ᓱᖏᐅᑎᕙᓪᓕᐊᕙ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᔪᒥᑦ ᓯᑯᒥᑦ?
- ᐃᓂᒋᕙᓚᐅᖅᑕᖓᑕ ᐊᓯᐊᓂ ᐃᓂᖃᖃᑦᑕᓕᖅᐹ?
- ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓲᖑᕚ ᐊᐅᓚᓂᓇᔭᐅᔪᑦ ᓇᓄᖅᓂᑦ ᐃᓄᖕᓄᑦ?

ᓄᓇᕗᒻᒥᐅᓄᑦ ᑲᒪᒋᔭᒃᓴᐃᑦ

- ᓄᓇᕗᒻᒥᑦ ᐆᒪᔪᓄᑦ ᖃᐅᔨᓴᖅᑏ ᐅᓂᒃᑳᖏᑦ ᐊᐅᓚᑦᑎᖃᑎᒌᖕᓂᕐᒧᑦ ᐱᓕᕆᖃᑎᒌᓄᑦ, ᒐᕙᒪᑐᖃᒃᑯᑦ ᐱᒍᔾᔨᔨᔪᑦ, ᐊᒻᒪᓗ ᓄᓇᕐᔪᐊᒥᐅᓄᑦ ᐱᔪᓐᓇᐅᑎᖃᕐᑐᑦ ᖃᓄᐃᓕᖓᓕᖓᓄᑦ ᓇᓄᐃᑦ, ᐃᑲᔪᖅᓱᐃᕙᒃᑐᑦ ᐊᖑᓇᓱᖕᓂᕐᒥᑦ ᐊᒻᒪᓗ ᓂᐅᕕᐊᒃᓴᖃᕈᓐᓇᕐᓂᕐᒥᑦ ᓄᓇᕗᑦ ᓇᓄᕐᓂᖕᒑᖅᑐᓂ.

- ᑐᓴᐅᒪᑎᑦᑎᔾᔪᑏᑦ ᓇᓄᐃᑦ ᒥᒃᓵᓄᑦ ᓄᓇᕗᒻᒥᑦ ᓇᓗᓇᐃᔭᐃᔾᔪᑎᐅᕙᒃᐳᖅ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᐊᒃᑐᐊᓂᕆᕙᒃᑕᖏᓐᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᔾᔪᑎᓄᑦ ᑐᒃᓯᕋᕆᔭᐅᔪᒧᑦ ᓴᓇᔾᔪᑎᕐᔪᐊᓄᑦ ᐱᕙᓪᓕᐊᑎᑦᑎᓂᕐᒧᑦ ᑐᑭᓕᐅᕆᓗᒍ ᐅᔭᕋᖕᓂᐊᕐᕕᑦ, ᐅᒥᐊᕐᔪᐊᓄᑦ, ᐊᓯᖏᓐᓄᓗ. ᐊᐅᓚᓂᕆᔭᐅᔪᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᑦ ᐃᑲᔫᑎᒋᔭᔪᓐᓇᕐᐳᖅ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᓂᕐᒥᑦ ᐊᒻᒪᓗ ᑕᒻᒪᖅᓯᒪᖏᑦᑐᒥ ᖃᐅᔨᓴᖅᑕᐅᑎᑦᑎᔾᔪᑎᓂᒃ ᐊᒃᑐᐊᓂᕆᔭᐅᔪᓂᑦ.

- ᐊᐅᓚᓂᕆᔭᐅᔪᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᑦ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᕙᒃᑐᖅ ᐊᓐᓇᐅᒪᔪᓐᓇᕐᓂᕐᒥᑦ ᐅᓄᕐᓂᖏᑦ ᐊᒻᒪᓗ ᐃᓄᕐᓂᖏᑦ ᓇᓚᐅᑦᑖᑕᐅᓯᒪᔪᑦ. ᐅᓄᕐᓂᖏᑦ ᐊᒻᒪᓗ ᐊᓐᓇᐅᒪᔪᓐᓇᕐᓂᖅ ᓇᓄᕐᓂᑦ ᐊᒃᑐᐊᓂᖃᕐᐳᖅ ᐊᖑᓇᓱᒃᑏᑦ ᐅᓄᕐᓂᖏᑦ.

ᖃᓄᐃᒻᒪᓕ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᐊᑐᖅᑕᐅᙱᓕᒪ?

- ᐊᑐᖅᑕᐅᔪᖅ! ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ (IQ) ᓴᙱᓕᖑᖃᑕᐅᕗᖅ ᐱᓕᕆᔾᔪᑎᓄᑦ. ᓄᓇᕖᓂᑦ ᖃᐅᔨᒪᑐᖃᓇᔭᐅᔪᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᐅᓂᒃᑳᖃᕐᒪᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓂ, ᓴᓇᔾᔪᑎᕐᔪᐊᓄᑦ ᐱᕙᓪᓕᐊᑎᑦᑎᓂᖅ, ᐊᒻᒪᓗ ᐅᒥᐊᕐᔪᐊᓄᑦ ᐊᒃᑐᐊᓂᖃᕈᓐᓇᕐᒪᑦ ᓇᓄᕐᓂᑦ.

- ᐆᒪᔪᓂ ᖃᐅᔨᓴᖅᑏᑦ ᑐᑭᓯᐅᒪᕗᖅ ᐊᒻᒪᓗ ᐃᓱᒪᒋᔭᖃᑦᑎᐊᕐᐳᖅ ᐱᒻᒪᕆᐅᓂᖓ ᐱᕙᓪᓕᕈᑕᐅᕙᒃᐳᖅ ᐊᑲᐅᖏᓕᐅᕈᑎᓂ ᖁᖓᓯᕈᖅᓯᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᓕᕆᖃᑦᑕᖅᓯᒪᓪᓗᑎᒃ ᐊᔪᕈᓐᓃᖅᓴᕐᓂᕐᒥᑦ ᐸᕙᕕᓇᖏᓐᓂᖅᓴᓂᒃ ᐃᓕᑦᑎᔾᔪᑕᐅᔪᓐᓇᕐᑐᓂ ᑲᑎᖅᓱᐃᓂᕐᒧᑦ.

- ᐊᐅᓯᑐᐊᕐᒥᑦ ᐱᓕᕆᔾᔪᓯᕐᒥᑦ ᖃᐅᔨᒪᓂᖃᕐᑐᖃᖏᑉᐳᖅ ᖃᓄᐃᓕᐅᖅᑕᐅᔪᓕᒫᒥ. ᐊᑲᐅᑖᖑᕗᖅ ᐊᑐᖃᑦᑕᕐᓗᒋᑦ ᐱᓕᕆᔾᔪᑎᒋᕙᒃᑕᕗ ᐊᒻᒪᓗ ᓂᕈᐊᑦᑎᐊᕐᐸᒡᓗᑕ ᐊᑲᐅᑖᖑᔪᒥᑦ ᐱᓕᕆᔾᔪᓯᕐᒥᑦ ᓇᓗᓇᐃᔭᑦᑎᐊᕐᓯᒪᔪᒥᑦ ᐊᐱᖁᑎᒧᑦ.

- ᓇᓄᐃᑦ ᓅᐸᐸᓪᓕᐊᔪᓐᓇᕐᑐᑦ ᐃᓄᐃᑦ ᐅᐸᑲᐅᑎᒋᔪᓐᓇᖏᑦᑕᖏᓐᓄᑦ. Radiotelemetry ᐱᔪᓐᓇᐅᑎᐅᕗᖅ ᐃᓄᖕᓂᑦ 'ᒪᓕᒃᓴᕈᓐᓇᕐᓂᕐᒥᑦ' ᓇᓄᕐᓂᒃ 24–ᓂᑦ ᐃᑲᕐᓱᓄᑦ, ᐱᓇᓱᐊᕈᓯᕐᒥᑦ ᐃᑖᓐᓂᒃᑯᑦ ᐅᑭᐅᓕᒫᕐᒧᑦ ᐅᖓᑖᓂᓗ.

ᓇᓗᓇᐃᔭᐃᔾᔪᑎᒃᑲᓐᓃᑦ ᖁᖓᓯᕈᖅᓯᓂᕐᒧᑦ ᓇᓄᕐᓂᑦ ᖃᐅᔨᓴᕐᓂᒃᑯᑦ ᑕᐅᑐᒃᑕᐅᔪᒃᑯᑦ....

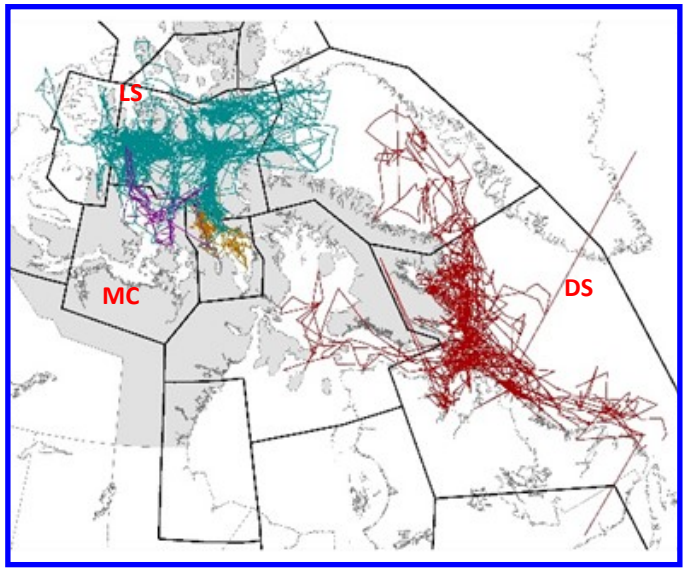
- Radiotelemetry ᐊᑐᖅᑕᐅᖃᑦᑕᖅᓯᒪᓕᖅᑐᖅ ᐅᑭᐅᖅ ᖁᓖᑦ ᐅᖓᑖᓄᑦ ᐅᔨᒌᖕᒋᑦᑐᓄ ᓂᕐᔪᑎᓄᑦ, ᐱᖃᓯᐅᑎᓗᒋᑦ ᐃᖃᓗᖕᓂᑦ ᑕᕐᕋᓕᒋᓴᕐᓄᑦ, ᐳᐃᔨᓄᑦ ᑐᒃᑐᓂᓪᓗ. ᐹᑕᓖᖓ ᓴᙱᓕᔭᕆᐊᖃᕐᐳᖅ ᓇᒃᓯᐅᔾᔨᔪᓐᓇᕐᓗᓂ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔭᒃᓴᓄᑦ ᑕᕿᓄᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐅᑭᐅᓄᑦ ᐊᑕᐅᓯᐅᖕᒋᑦᑐᒥᑦ; ᑕᐃᒪᐃᑎᓪᓗᒍ ᖁᖓᓯᕈᐃᖅ ᓇᓄᕐᓄᑦ ᐊᖏᓂᖅᓴᐅᕗᑦ ᐊᓯᖏᓐᓂᑦ ᓂᕐᔪᑎᓄᑦ.
- ᖁᖓᓯᕈᖅᓯᓂᖅ ᐱᔭᕆᐊᖃᕐᖅ ᓇᓄᕐᒥᑦ ᓯᓂᒃᑎᑦᑎᓗᓂ ᐃᑲᕐᕋᐅ ᓇᐸᖓᓂ ᐊᑯᓂᐅᑎᒋᔪᒥᑦ. ᓯᓂᓕᕐᓇᖅᑐᖅ ᐊᑦᑕᕐᓇᖏᐸᖅ ᐊᒻᒪᓗ ᓂᕿᖓᓂ ᓇᓂᔭᐅᔪᓐᓇᖏᓗᓂ ᐱᓇᓱᐊᕈᓯᓂ ᑎᓴᒪᓂᑦ. ᐃᓄᒃᑎᑐᑦ, ᓇᓄᐃᑦ ᑎᒥᖏᑦ ᓴᒋᒃᑎᐸᖓᒪᑦ, ᐅᕙᓘᓐᓃᑦ ᐃᖏᕋᑦᑎᑦᑐᔪᓐᓇᕐᒪᑦ, ᓯᓂᖕᓚᖅᑐ ᑎᒥᖓᓃᑦᑐᓐᓃᖅᑎᑦᑐᓐᓇᕐᒪᑦ ᑎᖑᖏᑦ ᑕᖅᑐᖏᓪᓗ ᐊᑐᖅᓱᑎᒃ.

ᐊᕐᓇᓪᓗᒃ ᖁᖓᓯᕈᖅᑕᐅᖓᕐ, ᐊᒻᒪᓗ ᑖᓐᓇᑦᑕᐃᓐᓇᖅ ᐅᑭᐅᓂ ᒪᕿᖕᓄᑦ ᐊᓂᒍᕐᒪᑦ ᖁᖓᓯᕈᖓ ᐲᖅᑕᐅᓪᓗᓂ, ᓇᓗᓇᐃᖅᓯᓚᐅᕐᑐᑦ ᐊᓯᔾᔨᕈᑎᖃᓚᐅᖏᓐᓂᖓᓄᑦ ᒥᖁᖓᓂ.

- ᖁᖓᓯᕈᖏᑦ ᐅᕿᙱᓐᓂᖅᖃᕐᖅ 5 ᐸᐅᓐᓴᒥᒃ ᐊᒻᒪᓗ ᖃᐅᔨᔪᖃᓚᐅᖏᓚᖅ ᐊᒃᑐᐊᓂᓇᔭᐅᔪᓂ ᐊᑎᖅᑕᓕᖕᓄᑦ, ᐋᒫᒪᒃᑎᑦᑎᓂᕐᔪᑦ ᐊᐅᓚᓂᓇᔭᐅᔪᓄᑦ, ᐅᕙᓘᓐᓃᑦ ᒥᖅᑯᐃᔭᕐᓂᕐᒥᑦ.
- ᑲᒪᒋᔭᐅᕋᓂᒃᑳᖓᒥ, ᐊᐅᓚᓂᓇᔭᐅᔪᑦ ᐊᒻᒪᓗ ᐃᓕᖁᓯᒋᔭᐅᔪᑦ ᐅᑎᖅᐸᑐᒃ 48–72 ᐃᖃᕐᕋᑦ ᐊᓂᒍᕋᖓ.
- **ᖁᖓᓯᕈᐃᑦ ᐃᓚᐃᓐᓇᖏᑦ ᐊᑐᐃᓐᓇᐅᑎᑦᑎᔪᓐᓇᕐᑐᑦ ᐊᔾᔨᒌᖕᒋᕈᓗᔭᕐᑐᓂ ᑐᑭᓯᑎᑦᑎᔾᔪᑎᓂᑦ.**
- ᖁᖓᓯᕈᐃᑦ ᐱᖃᕐᑐᓴᒃᑯᑦᑎᔾᔪᑎᒥᑦ ᐋᕿᒃᑕᐅᕙᒋᔭᓯᒪᔪᒥᑦ ᖁᖓᓯᕈᖅ ᑲᑕᒃᑎᑕᐅᓪᓗᑎ ᑲᒪᒋᔭᐅᖏᓪᓗᓂ.
- ᖃᐅᔨᓴᖅᑕᐅᑎᑦᑎᔾᔪᑎᓄᑦ ᑐᓴᐅᒪᑎᑦᑎᔾᔪᑎᑕᖃᖕᒋᑦᑐᖅ ᐃᓱᒪᓕᐊᓇᓗᒍ ᓇᓄᐃᑦ ᑐᓵᔪᓐᓃᕐᓂᕐᒧᑦ ᐅᕙᓘᓐᓃᑦ ᐃᖅᓯᓇᖅᓯᓂᕐᒧᑦ ᑲᒪᒋᔭᐅᕋᓂᒃᑳᖓᒪᑦ.

ᐊᕐᓇᓪᓗ ᓇᓄᖅ ᒫᓐᓇᓕᓴᓂ ᖁᒻᒧᐊᖅᑎᑕᐅᓯᒪᔾᔪᑎᓄᑦ ᖁᖓᓯᕈᖏᑦ, ᓴᙱᓕᖅᑎᑕᐅᓕᐅᕐᕕᖅ

- 1980–ᒥ ᐊᒻᒪᓗ '90–ᒥᓪᓗ, ᖁᖓᓯᕈᐃᑦ ᐃᑲᔫᑎᖃᓚᐅᕐᖅ ᓴᙱᓕᖅᑎᑦᑎᓂᕐᒥᑦ ᐃᓂᒋᔭᐅᒐᔪᒃᑐᓂ ᓇᓄᐃᑦ ᐊᒥᓲᓂᖏᓐᓂᑦ (ᐊᑐᖅᑕᐅᒐᔪᒃᑐᖅ ᑐᑭᓕᐅᓇᓗᒋᑦ ᐊᐅᓚᓂᓇᔭᐅᒐᔪᒃᑐᓂ; ᖃᐅᔨᒋᐊᕈᒃ ᐊᔾᔨᒌᖕᒋᖅ 1). ᑖᒃᑯᐊᓕᒫ **ᐊᐅᓚᓂᓇᔭᐅᔪᓂ ᓇᓗᓇᐃᔭᖅᑕᐅᓯᒪᔪᑦ ᐊᑐᐃᓐᓇᐅᑎᑕᐅᔪᑦ ᓇᓄᐃᑦ ᐊᐅᓚᓂᓇᔭᐅᔪᑦ ᓄᓇᖑᐊᒥᑦ (ᐊᔾᔨᒌᖕᒋᖅ 1.) ᓴᒃᓯᐅᔾᔭᐅᕙᒃᑐᖅ**



ᐊᔾᔨᖑᐊᖅ 1: ᑐᑭᓕᐅᓇᓗᒋᑦ ᐊᕐᕌᒍᓕᒫᒧᑦ– ᐃᖏᕐᕋᓕᓇᔭᐅᔪᑦ ᐊᕐᓇᓪᓗᓄᑦ ᕿᑭᖅᑖᓘ ᐃᑭᖓᓂ (DS; ᐊᐅᐸᖅᑐᒥ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ), ᐃᑦᑐᐊᖅᑑ (MC; purple lines), ᑕᓪᓗᕈᑎᐅᐸ ᐃᒪᖓ (LS; teal lines), ᐊᒻᒪᓗ ᐃᕐᓱᐊᖅᑐᖅᕕᒃ (gold lines) ᐊᑐᖅᑕᐅᕙᒃᑐᖅ ᓇᓗᓇᐃᔭᐃᓂᕐᒧᑦ ᑭᒡᓕᒋᔭᐅᕙᒃᑐ (ᕿᒃᓂᖅᑐᒥᑦ ᓇᓗᓇᐃᒃᑯᑕᓖᑦ ᓄᓇᖑᐊᒥᑦ).

ᐊᔾᔨᖑᐊᖅ 2: ᑕᒪᒃᑭᖅᑐᒋᑦ radiotelemetry–ᒧᑦ ᐊᐅᓚᓂᓇᔭᐅᕙᒃᑐᑦ ᓇᓄᕐᓂᑦ ᓄᓇᕗᒻᒥᑦᖁᖓᓯᕈᖅᓯᒪᑎᓪᓗᒋᑦ ᓇᓄᐃᖅ 1989–1990–ᒥᑦ ᓂᐱᓕᐅᖅᑕᐅᕙᓚᐅᖅᑐᑦ ᐊᒻᒪᓗ ᑐᓂᔭᐅᕙᒃᑐᑎᒃ ᐊᐅᓚᑦᑎᔨᐅᖅᑕᐅᔪᓄᑦ 2002–ᒥᑦ.

- ᐱᓕᓇᔾᔪᓯᐅᔪᖅ ᐊᑐᖅᑕᐅᓕᓵᖅᑐᖅ **ᓴᓂᕐᔭᐅᑉ ᐃᒪᖓᓂ** (BB) ᐊᒻᒪᓗ **ᐱᕐᓕᕐᕕᔾᔪᐊᑉ ᑕᓇᐅᖓᓂ** (KB) ᐱᒋᐊᕐᓗᓂ **2011 ᐊᒻᒪᓗ 2015–ᒥᑦ.** ᖁᖓᓯᕈᖅᓯᓂᕐᒧᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᑦ ᓴᕿᒋᔭᖅᑎᑦᑎᓚᐅᖅᐳᖅ **ᓇᓄᐃᑦ ᓅᑉᐸᓪᓕᐊᑐᐃᓐᓇᕐᓂᖏᓐᓄᑦ ᑐᓄᕕᐊᓄᑦ, ᓄᓇᒦᓐᓂᖅᓴᐅᓕᖅᑐᑎᒃ, ᑎᓯᕐᒧᐊᖏᓲᔭᕐᓂᖅᓴᐅᓕᖅᐸᓕᓕᖅᑐᑎᒃ, ᐊᒻᒪᓗ ᓅᑉᐸᓪᓕᐊᖏᓐᓂᖅᓴᐅᓕᖅᑐᑎᒃ 1990–ᓚᐅᖅᑐᒥᑦ, ᐱᔾᔪᑎᒋᓛᓇᔭᐅᕗᖅ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖅ ᓯᑯᑦᑎᓐᓂ.**
- ᑕᕐᓇᔫᒃᓴᓄᑦ ᖁᖓᓯᕈᖅᓯᓂᕐᒥᑦ ᓇᓄᕐᓂᑦ ᓇᑦᑎᕋᓱᒃᑐᓂ ᖃᐅᔨᒋᐊᕈᓐᓇᕐᑐᑦ: https://www.youtube.com/watch?v=qXQBjZLNYT0 ᐅᕙᓘᓐᓂᑦ ᖃᐅᔨᒋᐊᕐᓗᑎᑦ USGS ᐃᑭᐊᕐᕿᕕᖓᓄᑦ: https://www.usgs.gov/news/polar-bears-film-their-own-sea-ice-world
- ᐊᐱᖁᑎᒃᓴᖃᕈᕕᑦ, ᖃᐅᔨᒋᐊᕈᓐᓇᕐᑐᑦ ᓄᓇᕗᑦ ᓇᓄᕐᓂᑦ ᖃᐅᔨᓴᖅᑐᓕᓇᔭ ᐃᒡᓗᓕᖕᒥᑦ ᐅᕙᓂ 867-934-2181 ᖃᖓᑐᐃᓐᓇᖅ.

ᐊᔾᔨᒌᖕᒋᔪᑦ: ᒪᒃᐱᖅᑐᒐᖅ 1 (ᓴᐅᒥᖕᒧᑦ ᑕᓕᖅᐱᖕᒧᑦ): macgregor.com, ᓄᓇᕋᓱᐊᖅ ᐱᕙᓪᓕᐊᔪᑦ, ᐊᓗᒃᑑᖅ ᐊᐃᐱᓕ; ᒪᒃᐱᖅᑐᒐᖅ 2: ᓄᓇᕗᑦ ᒐᕙᒪᖓ ᐊᔾᔨᖑᐊᖁᑎᖕᒋᑦ