

An aerial photograph of a mountainous region covered in snow. The terrain is rugged, with various ridges and valleys. A semi-transparent blue and black banner is overlaid across the middle of the image, containing the title text. The overall scene is bright and high-contrast due to the snow.

# *Tyrolean Rescue* System

***Location and rescue of victims of  
avalanches and crevasses***

We present:

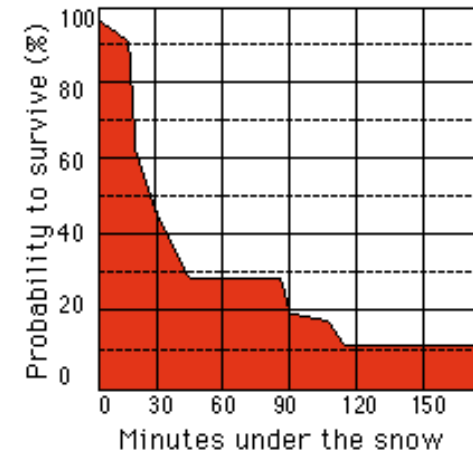
The

# **WORLD WIDE NEWEST FACTS**

about locating and rescuing victims of  
avalanches and crevasses

# The Challenge

- ⊕ Probability to rescue someone alive drops to less than 50 % after 30 minutes.
- ⊕ Shovelling and checking masses of snow costs time.
- ⊕ When using probe poles often false reports.



***How can suspicious ice- and snow masses be checked in the shortest possible time?***

# ***The solution***

- ✦ Within few minutes a steam nozzle can steam channels into the snow.
- ✦ A location camera can check these channels.

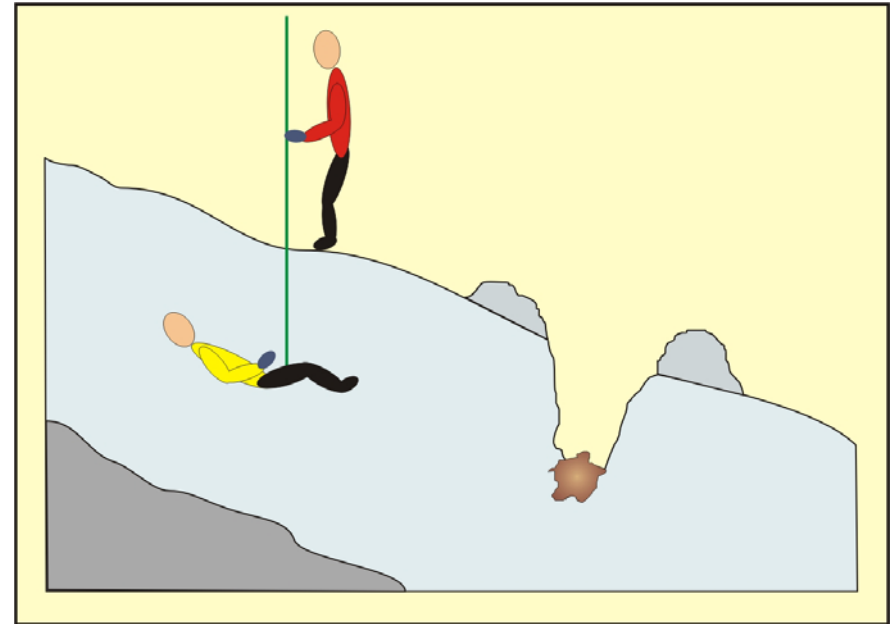


**Tyrolean Rescue System**

***Steam nozzles and camera system to locate victims of avalanches and crevasses***

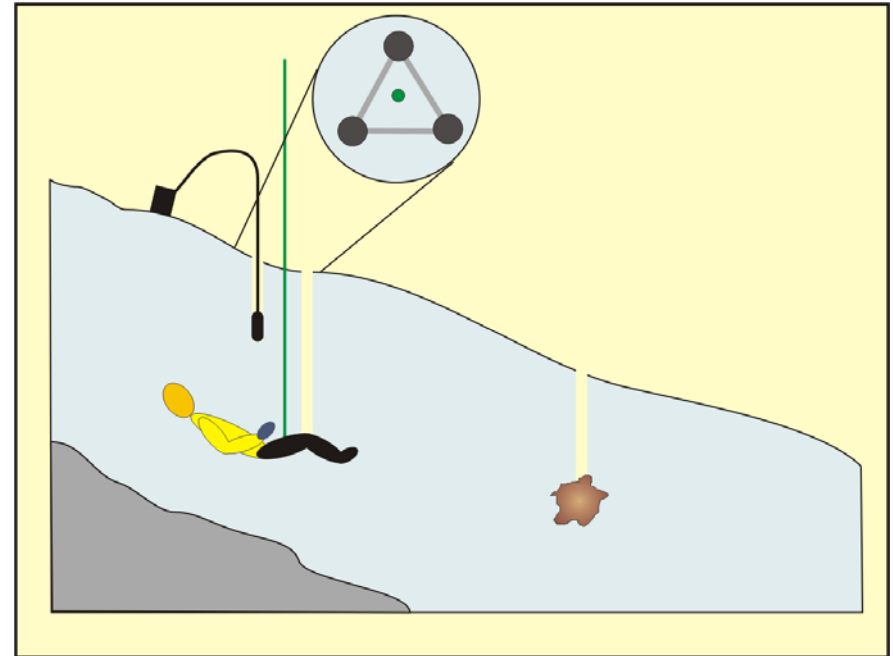
## Conventional search (since turn of the century)

- ⊕ Locating the victim with the help of probe poles.
- ⊕ When suspicion arises, one starts to shovel.
- ⊕ Often the person using the probe pole is wrong.
- ⊕ When the next slight suspicion arises, they don't react.
- ⊕ Checking the suspicion by shovelling is extremely time- and energy consuming.



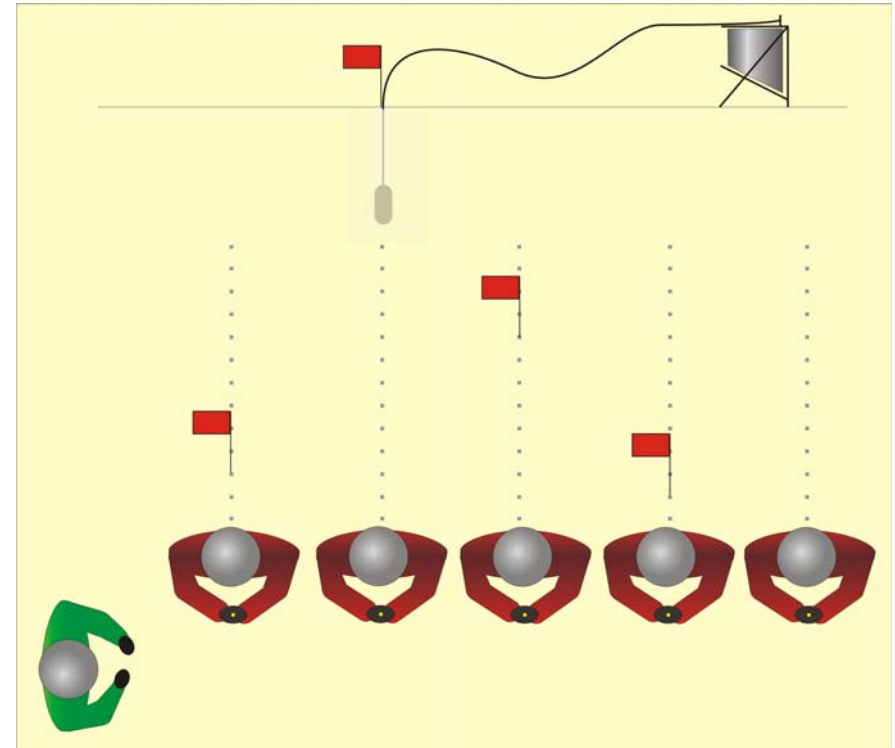
## The Tyrolean Rescue System

- ⊕ Person using the probe pole has a suspicion.
- ⊕ Instead of shovelling the steam nozzle is used.
- ⊕ The steam nozzle forms a channel measuring 2,5 cm or 6 cm.
- ⊕ The location camera checks if it is the victim.



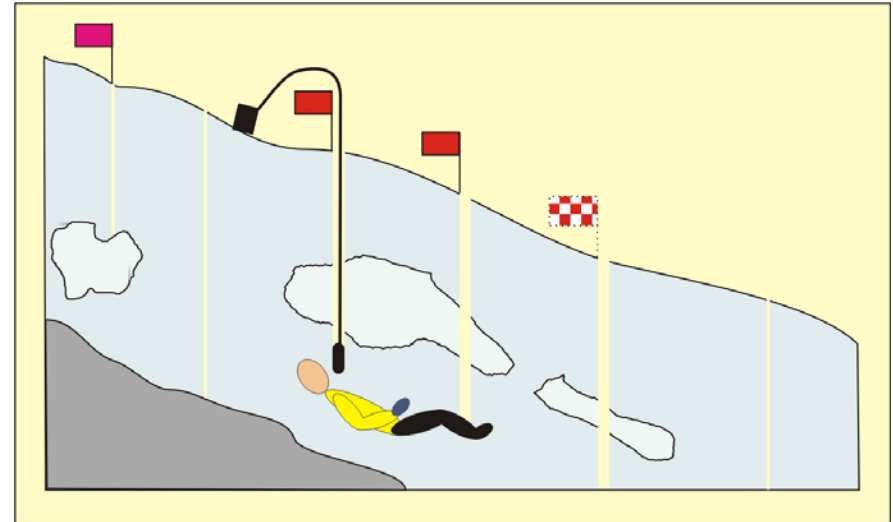
## Team using probes + Tyrolean Rescue System

- ⊕ Person using probe has a suspicion.
- ⊕ Spot is marked with a little flag.
- ⊕ Team using the probes walks on.
- ⊕ Behind the team another team checks each suspicion with the help of the Tyrolean Rescue System.



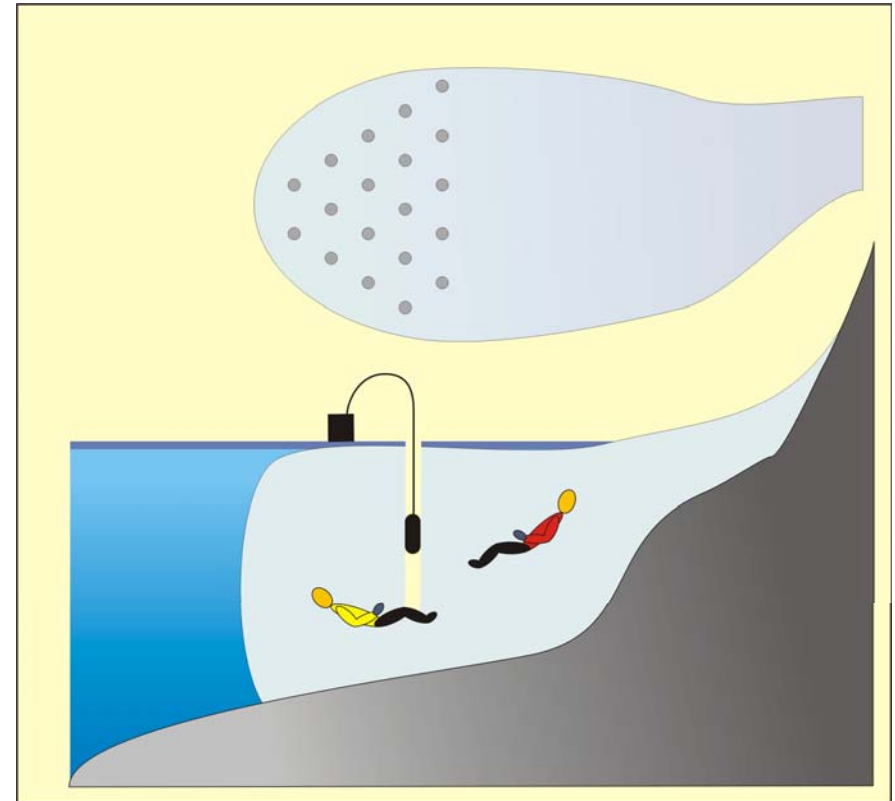
## Mixed snow and ice avalanche

- ⊕ Person is buried by an avalanche containing blocks of ice.
- ⊕ Blocks of ice cannot be pierced by probes.
- ⊕ Within few minutes channels are steamed through the blocks of ice with the help of the **Tyrolean Rescue System**.



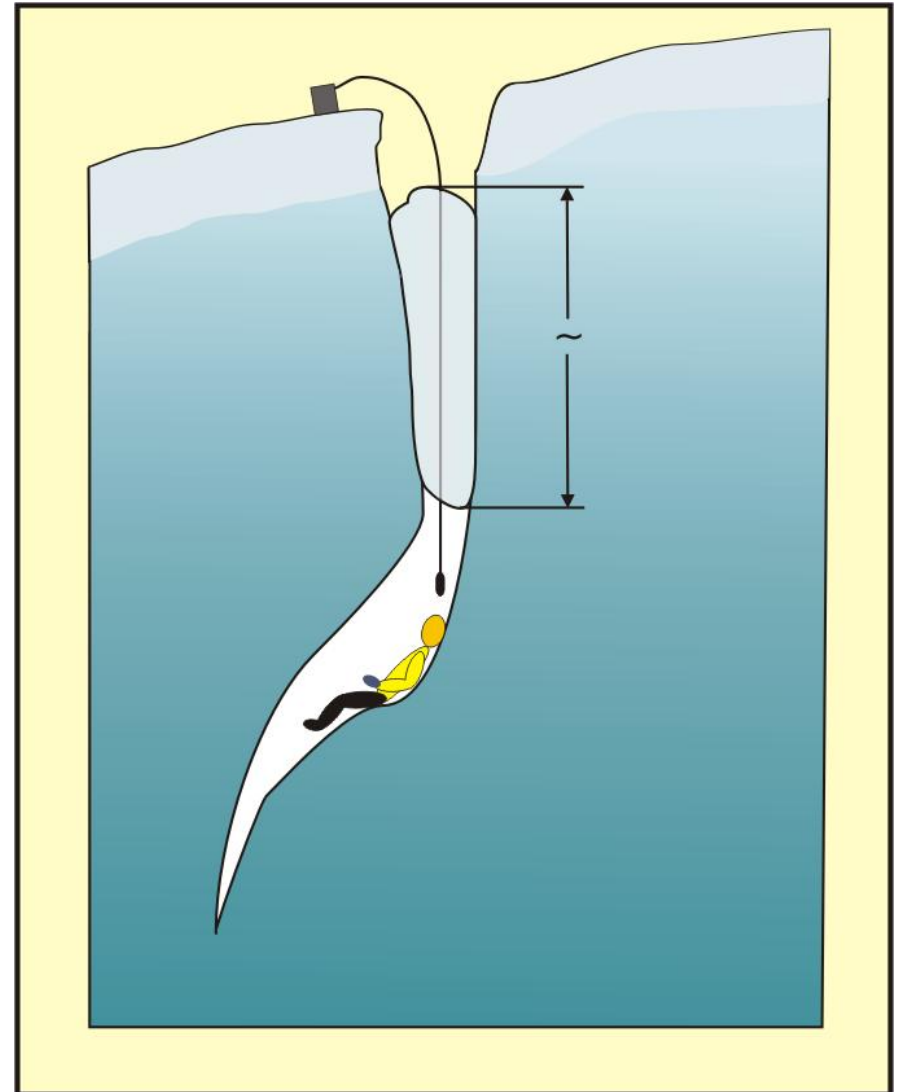
## Avalanche buries people underneath a layer of ice

- ⊕ People are swept away by an avalanche, masses of snow get underneath a layer of ice. (Grünsee accident)
- ⊕ Up to now location and rescue impossible.
- ⊕ Layer of ice and snow masses can be pierced with the help of the **Tyrolean Rescue System**.
- ⊕ After the people have been located, rescue is possible.



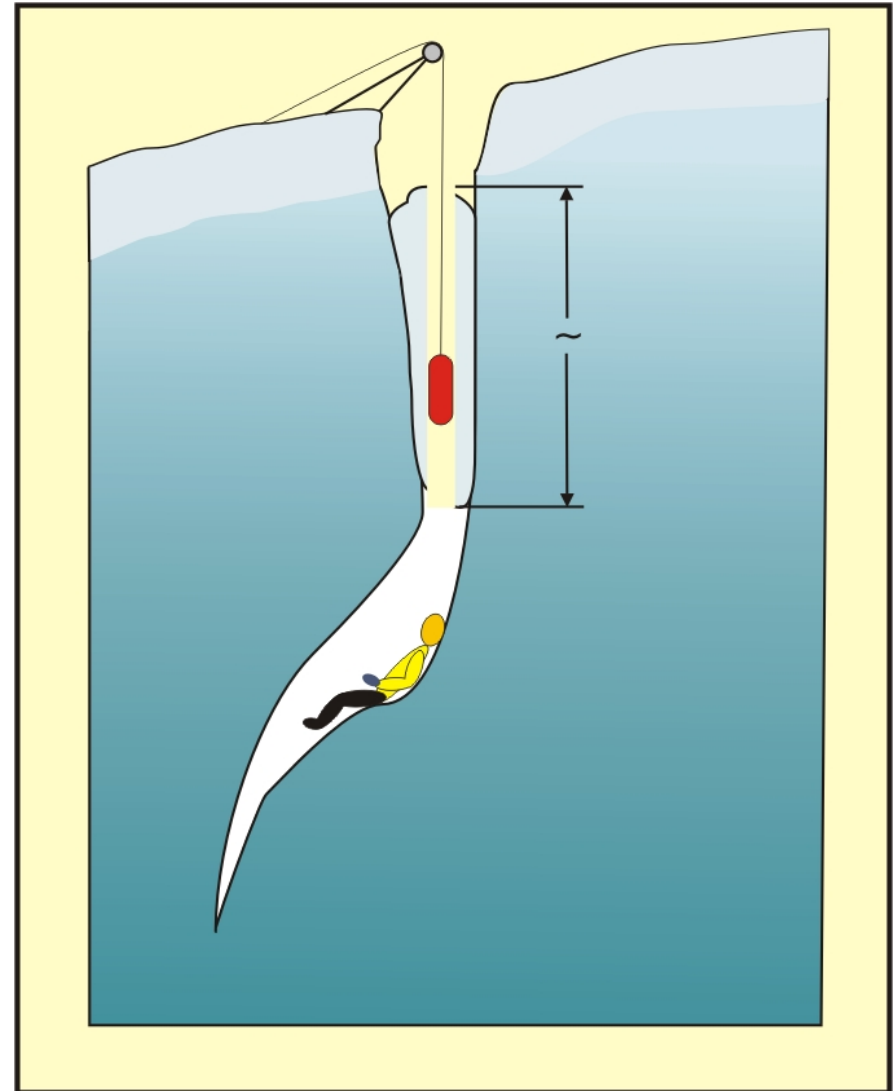
## Use with falls into crevasses

- ⊕ Person falls into a crevasse, following snow masses close the crevasse.
- ⊕ Fast location and rescue almost impossible.
- ⊕ The **Tyrolean Rescue System** makes it possible to pierce the snow masses within minutes.
- ⊕ The location of the person is possible in a short time.



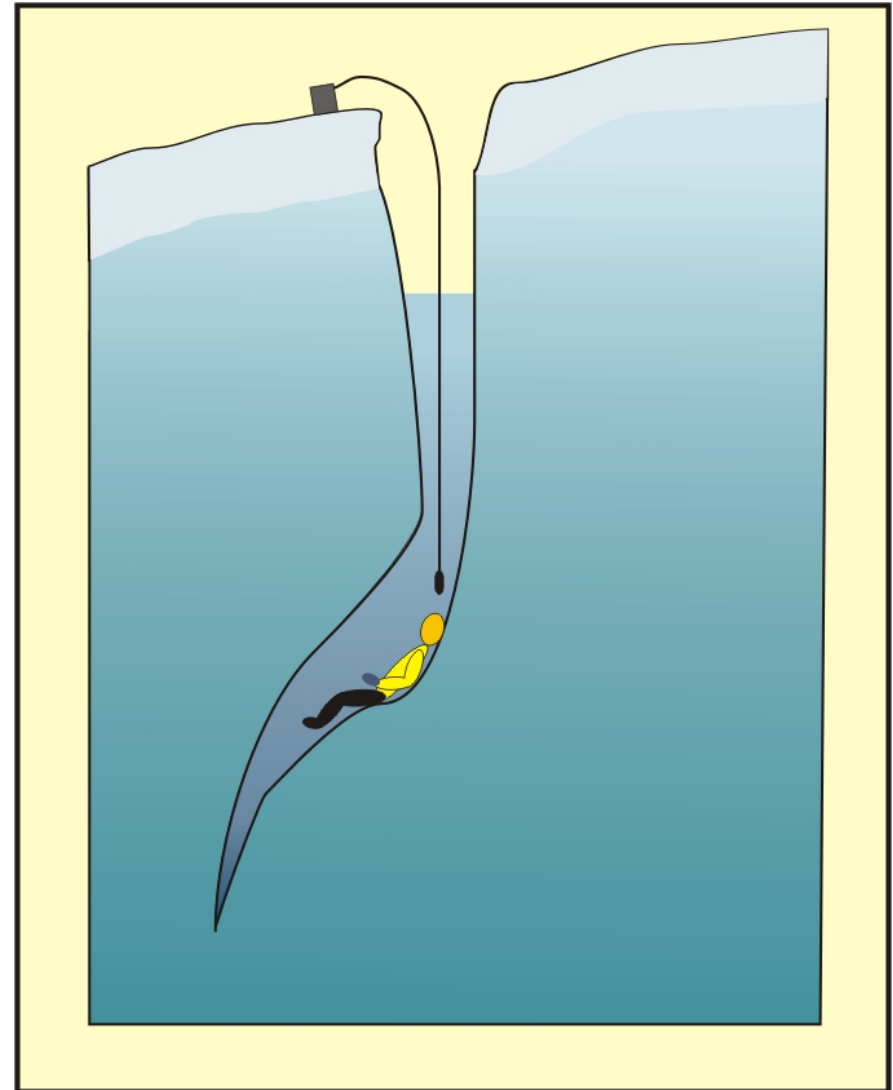
## Supplying the victim

- ⊕ If the victim cannot be rescued at once, a wide channel is steamed into the snow masses.
- ⊕ With the help of the supplying unit the victim can be taken care of.



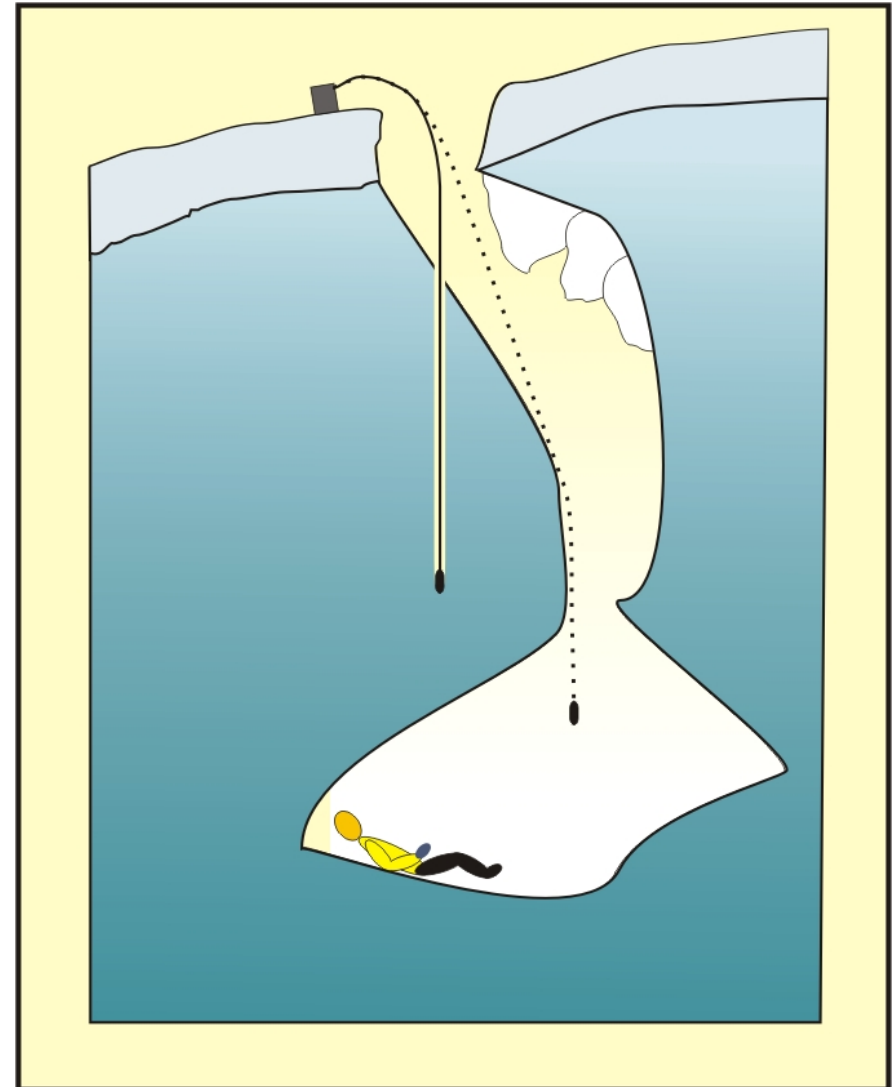
## Flooded crevasse

- ⊕ Person falls into a crevasse which is flooded by melted snow and ice.
- ⊕ Up to now location of the person only possible with the help of divers.
- ⊕ The camera unit checks the crevasse and locates the victim.



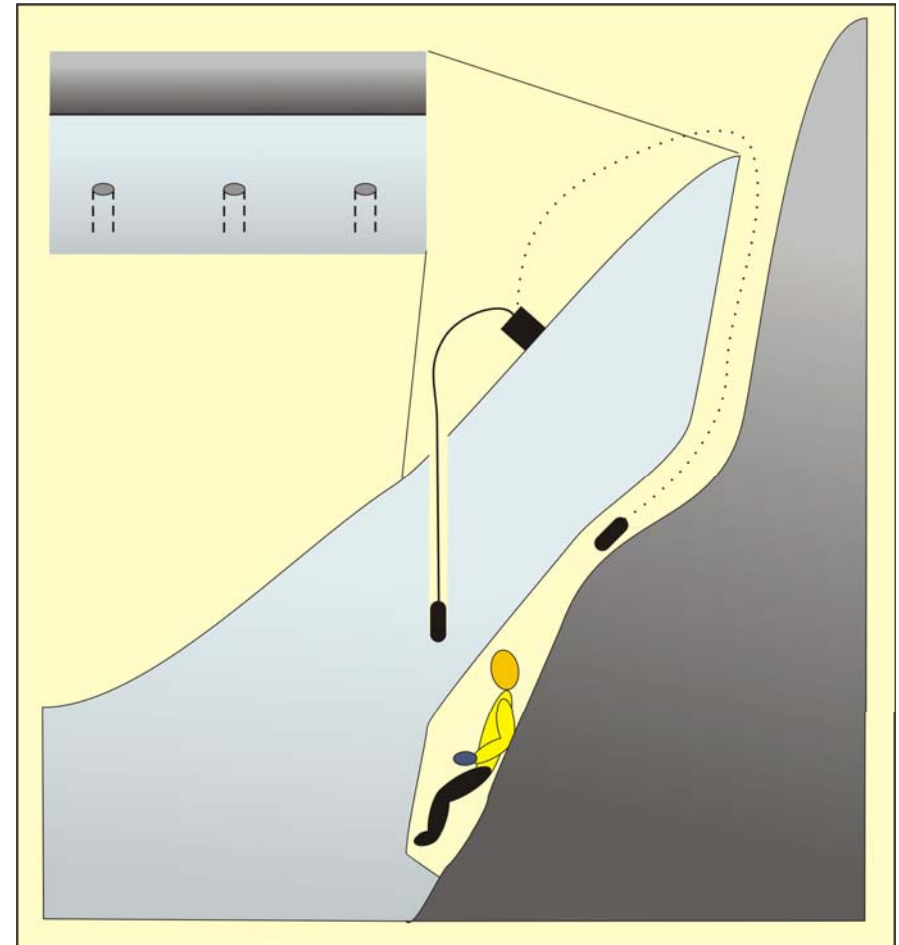
## Use with crumbling crevasse walls

- ⊕ Person falls into a crevasse and cannot be seen from above.
- ⊕ Crumbling walls in the crevasse endanger the fast descent of the rescue team.
- ⊕ The location camera looks for the victim.
- ⊕ With the help of the steam nozzle the person can be contacted through the ice.



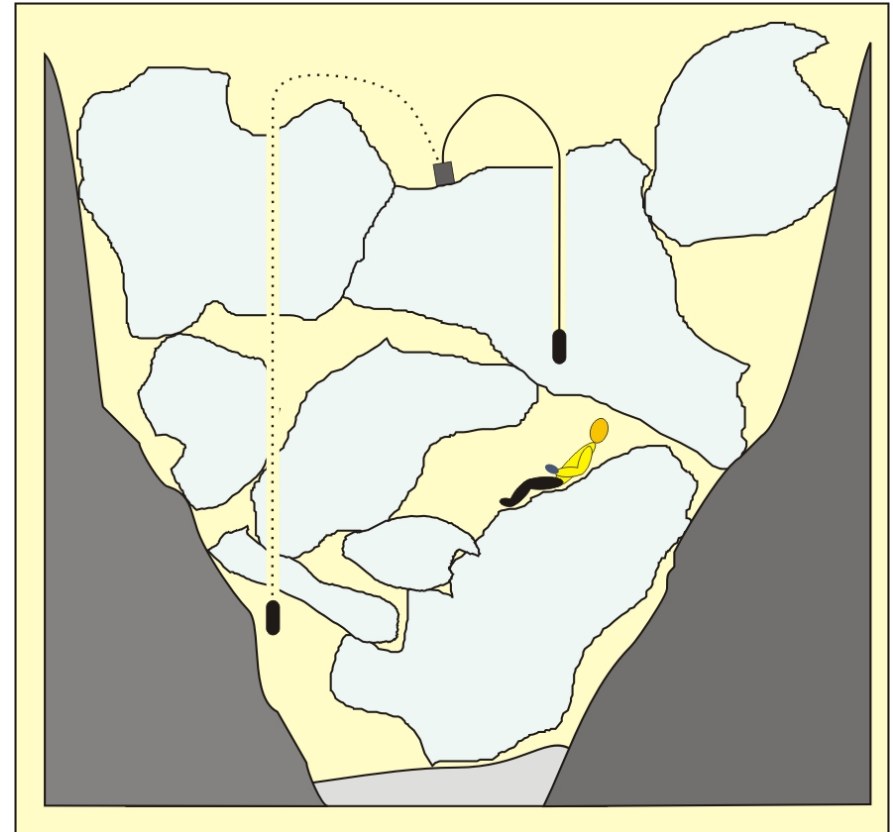
## Fall into marginal crevasse

- ⊕ Person falls into marginal crevasse.
- ⊕ Descent of rescuer impossible because of narrow crevice.
- ⊕ With the help of the location camera the person can be looked for.
- ⊕ With the help of the steam nozzle the person can be contacted through the ice.



## Seracs

- ⊕ Person is buried by falling seracs.
- ⊕ Because of the size of the seracs several big hollows form.
- ⊕ Only with the help of the **Tyrolean Rescue System** these hollows can be checked.



## Activities concerning the Tyrolean Rescue System

### ⊕ Development

At the moment the system can be used completely. Nevertheless it is constantly improved to find and use new operational possibilities.

### ⊕ Sale

The system can be ordered at our sales department at any time.

### ⊕ Rescue team

For single rescue operations a management team or a complete rescue team can be ordered. The technical and other necessary material are of course also available.

### ⊕ Training

To use the system effectively various training programmes are offered for the location in avalanches and crevasses.