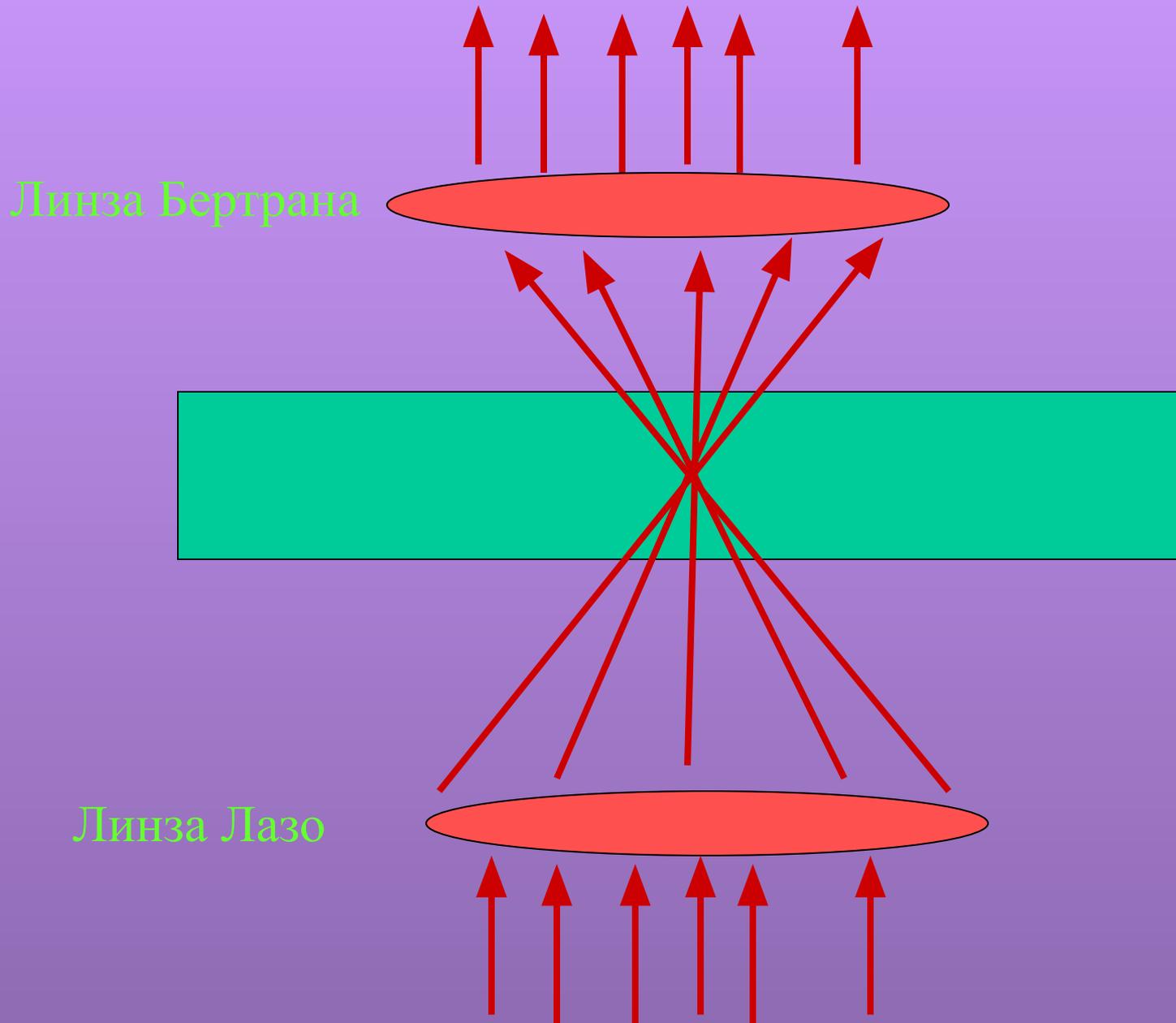


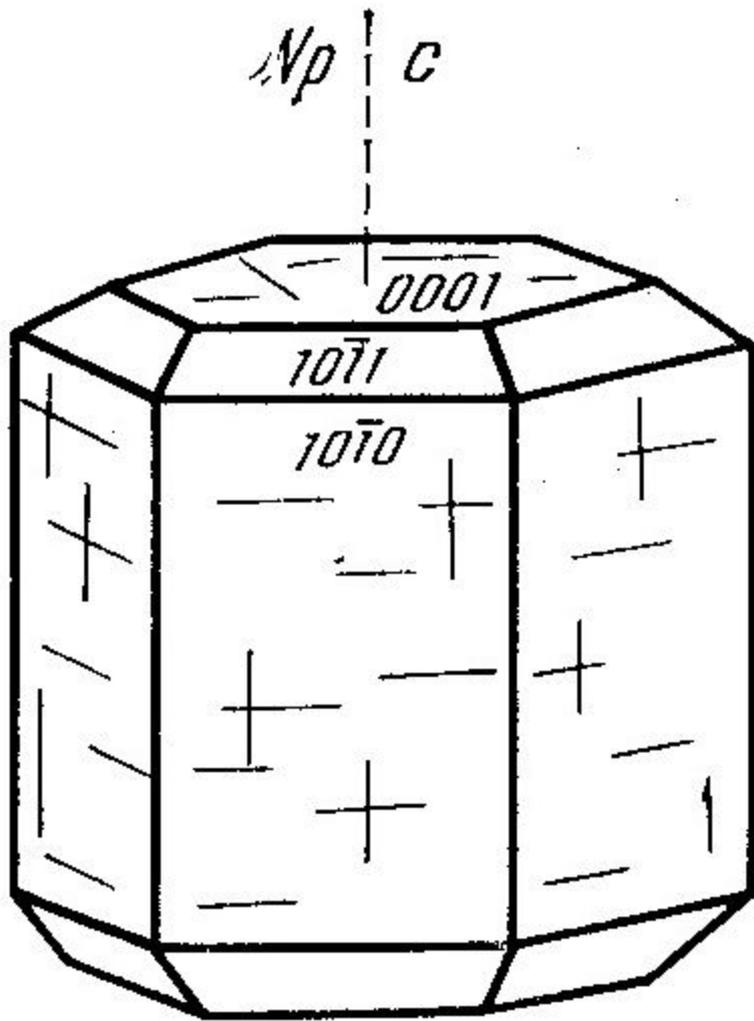
Наблюдения в сходящемся свете. Коноскопия

1. Получение коноскопических фигур
2. Коноскопическая фигура одноосных кристаллов;
Определение знака оптической индикатрисы
3. Коноскопическая фигура двуосных кристаллов;
Определение знака оптической индикатрисы
4. Определение угла $2V$
5. Определение дисперсии угла оптических осей

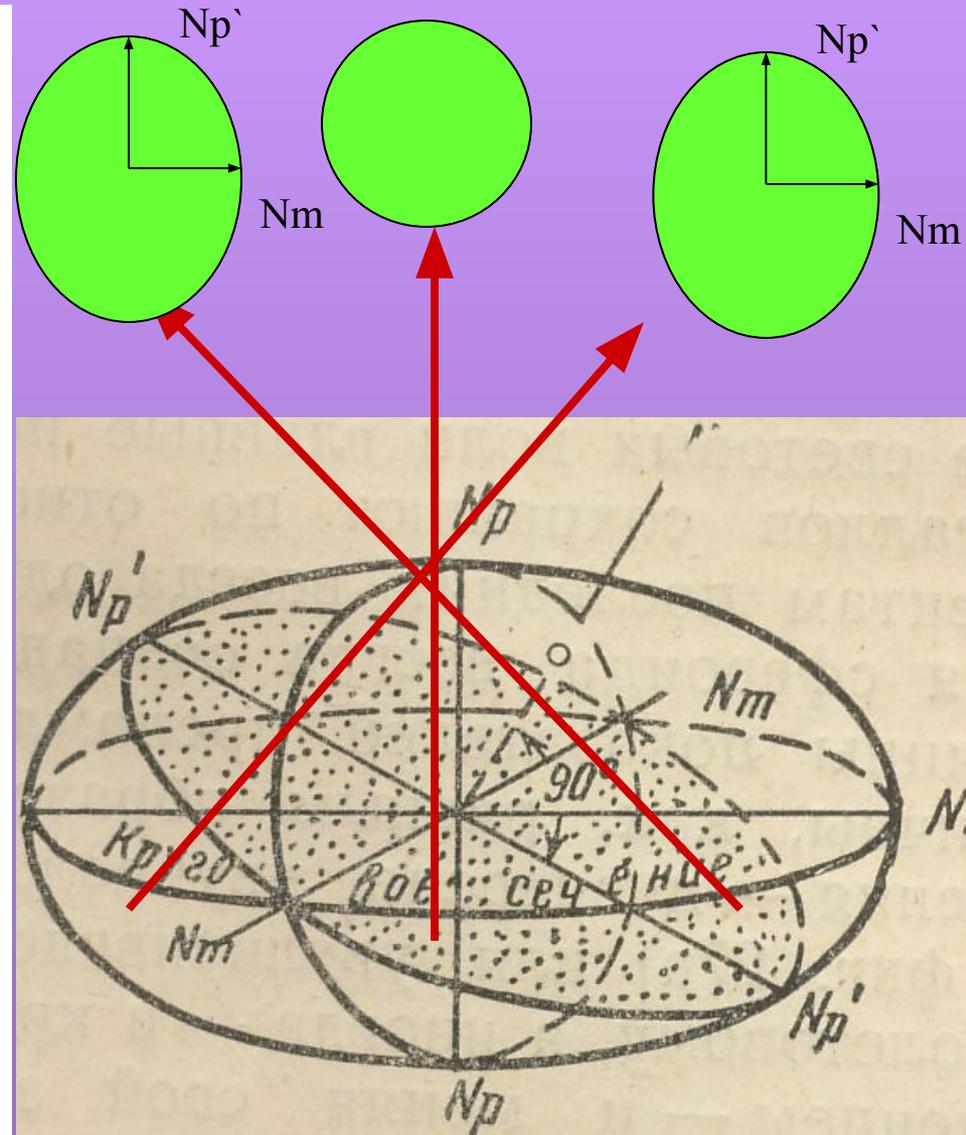
1. Получение конусокопической фигуры



Конускопическая фигура одноосного кристалла



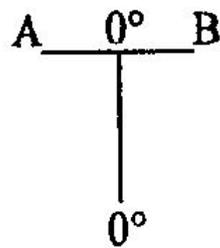
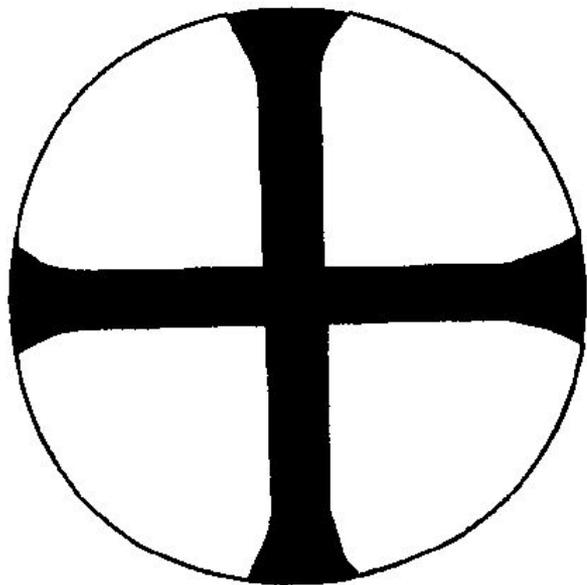
90. Анатит



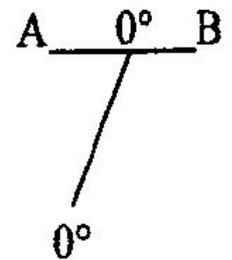
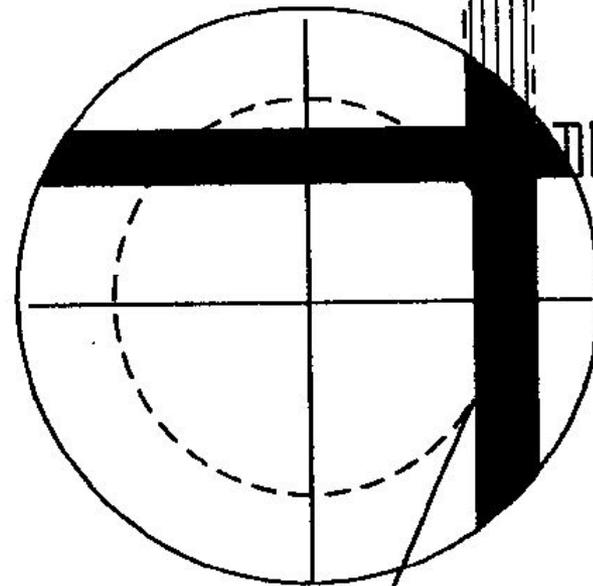
Последовательность операций при коноскопии

1. Найти нужное сечение при объективе 9х
 2. Поставить объектив 40х (60х) (не раздавить шлиф!!!)
 3. Включить анализатор
 4. Включить линзу Лазо
 5. Включить линзу Бертрана
 6. Повернуть столик микроскопа
- Наблюдаем коноскопическую фигуру

Коноскопическая фигура одноосного минерала.
А) сечение, перпендикулярное оптической оси;
Б) - косое сечение.

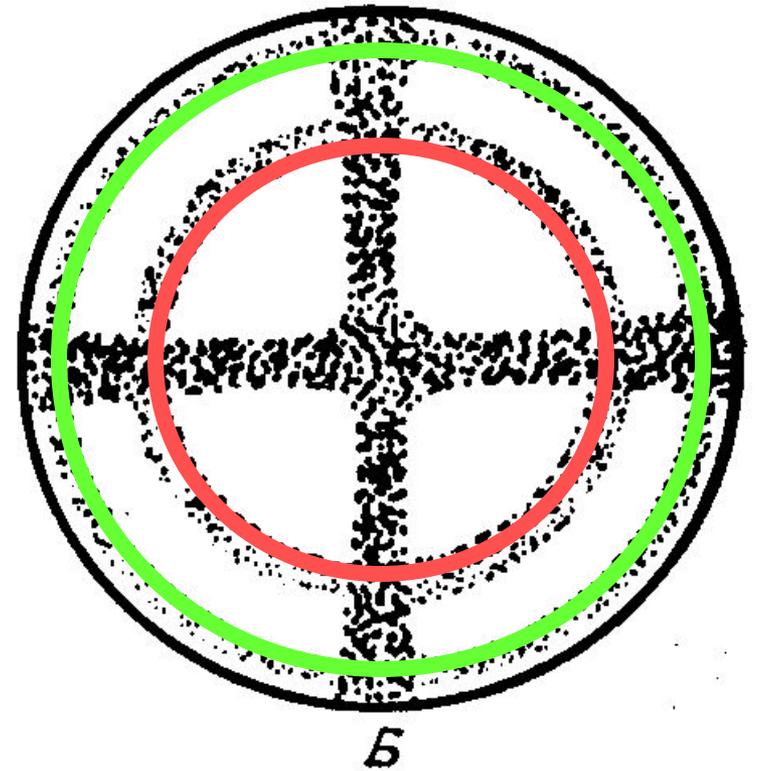
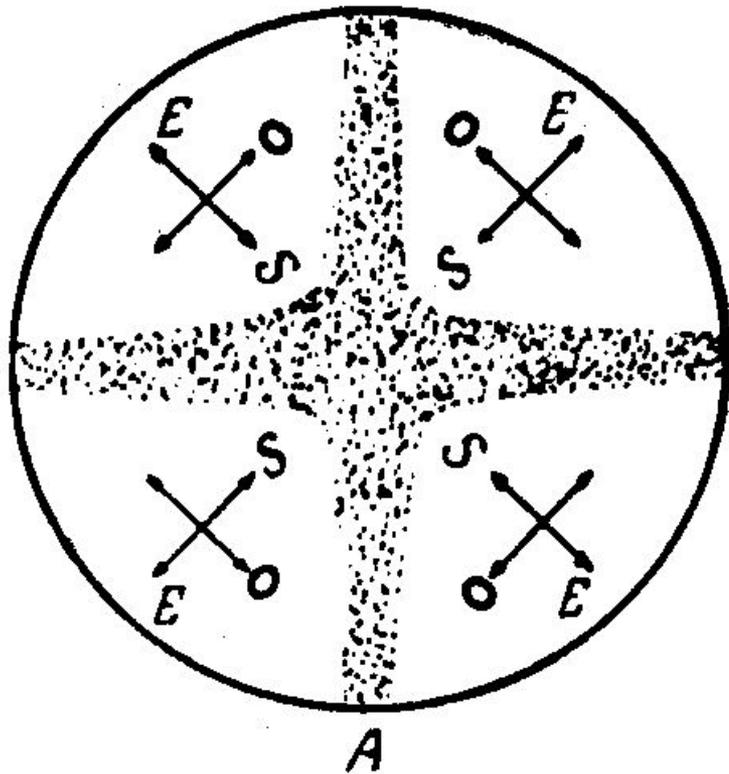


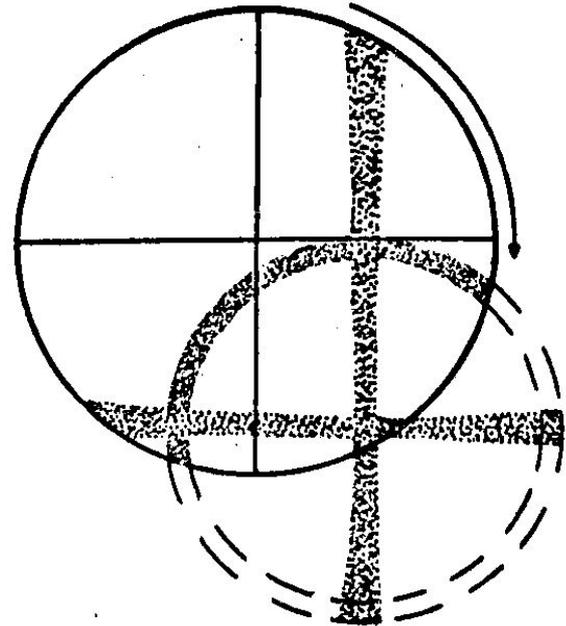
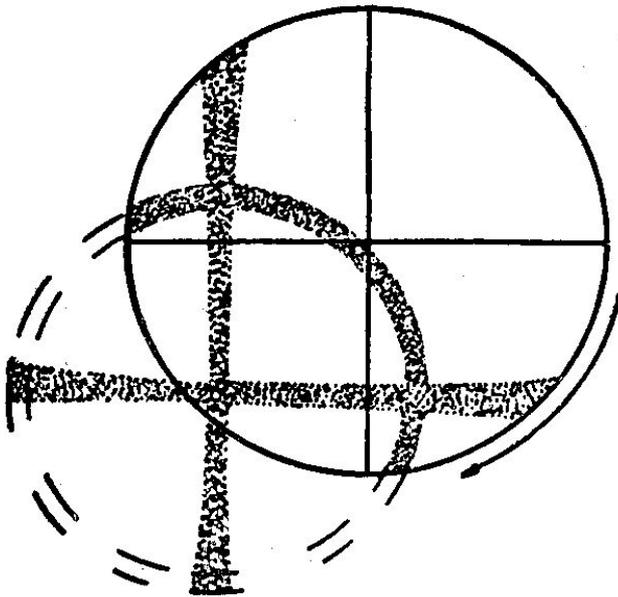
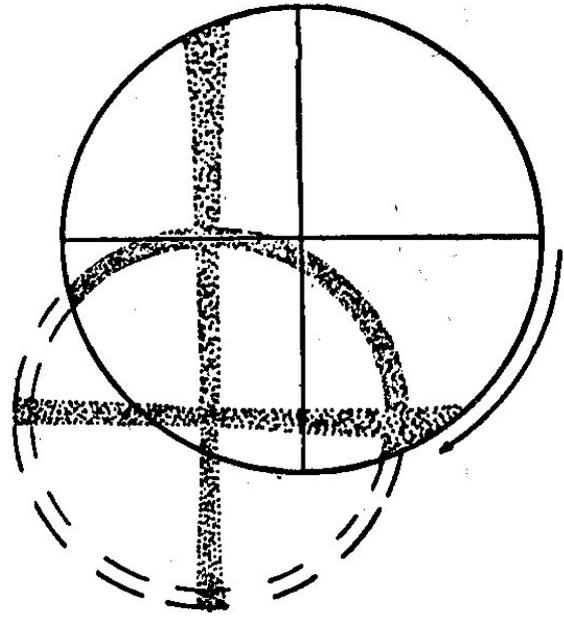
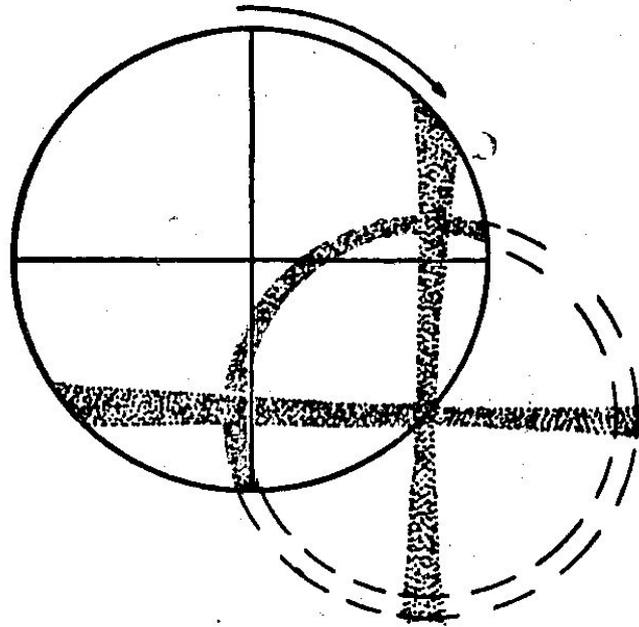
a



б

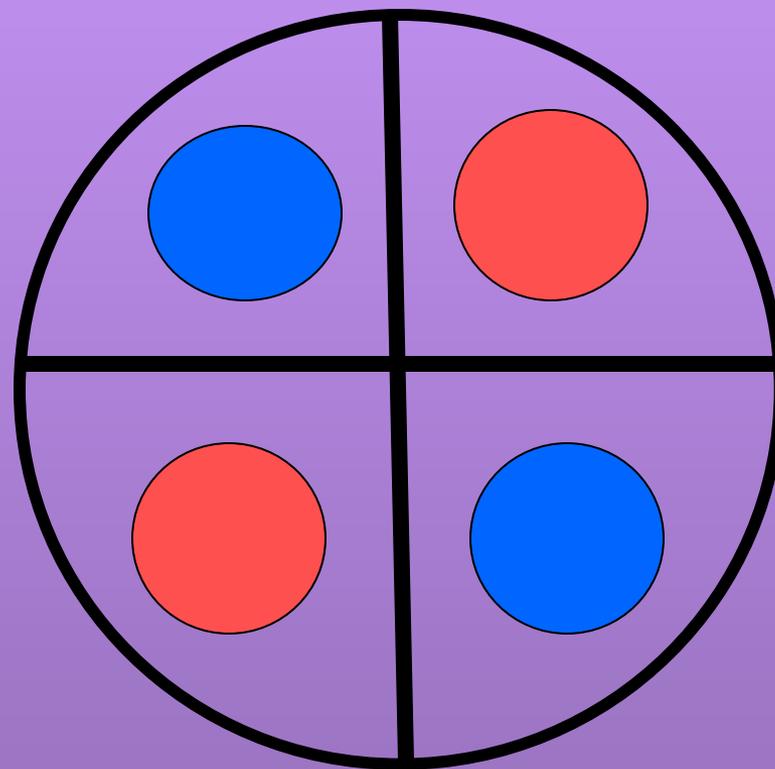
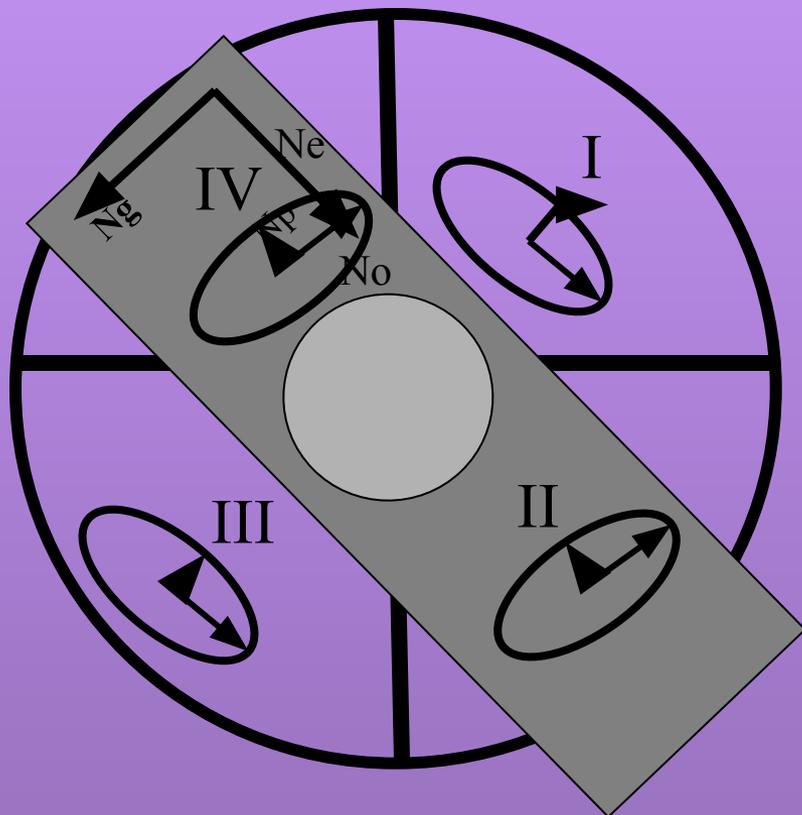
Коноскопическая фигура одноосного минерала
а) положительного с низким двупреломлением;
б) отрицательного с высоким двупреломлением;





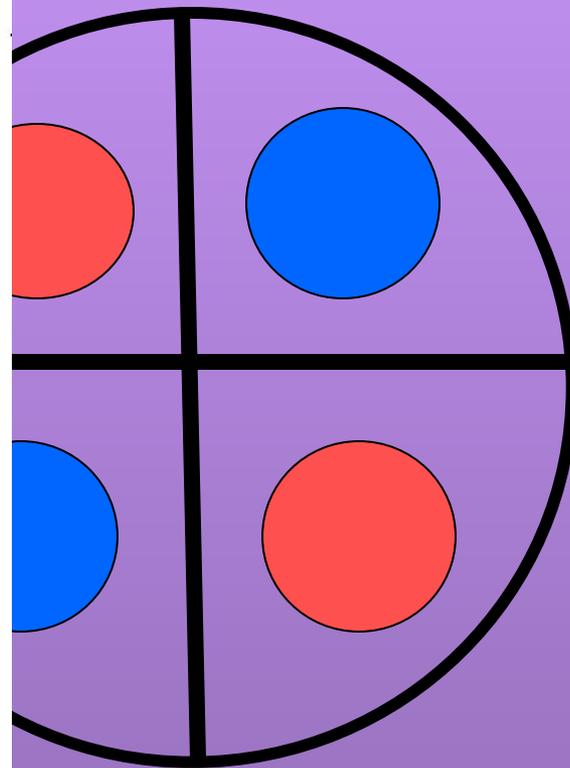
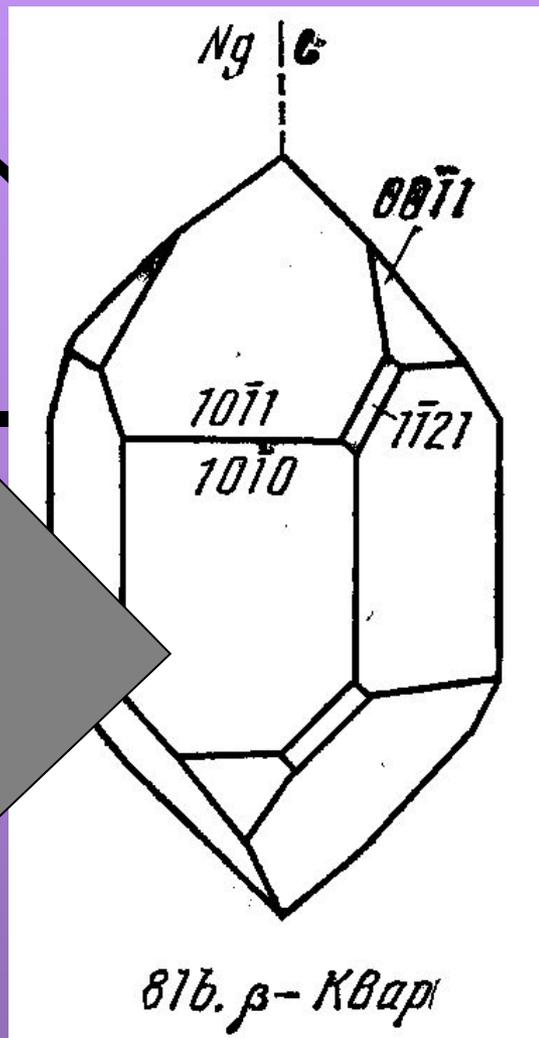
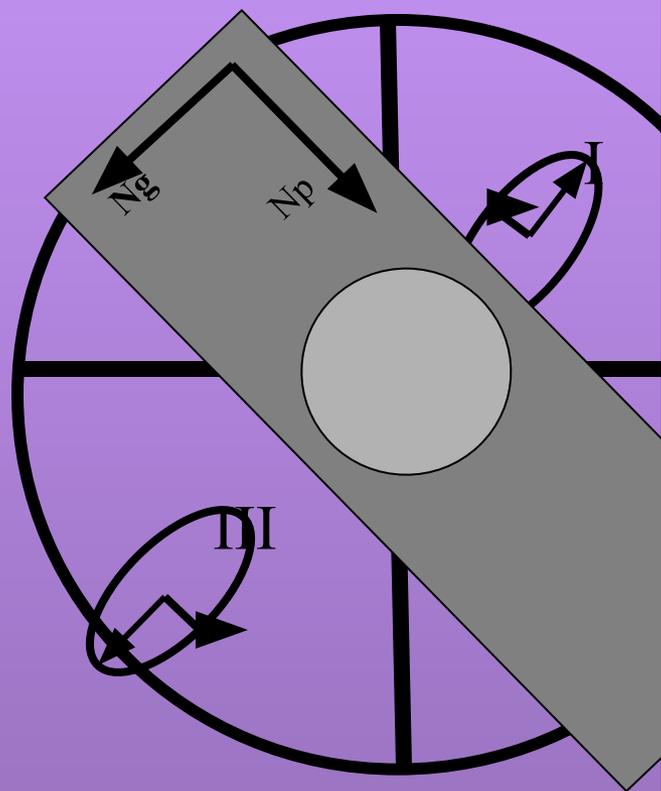
Знак одноосного кристалла

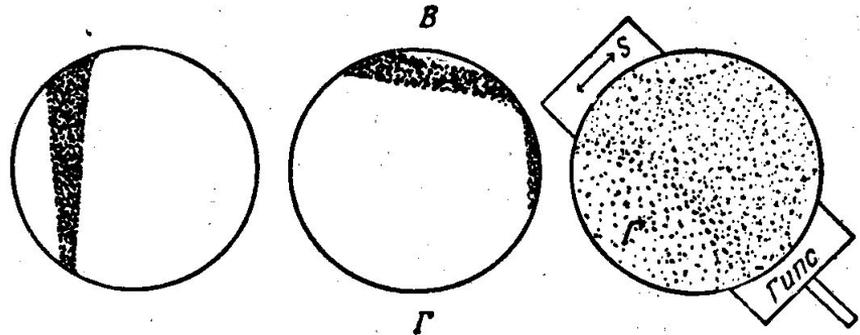
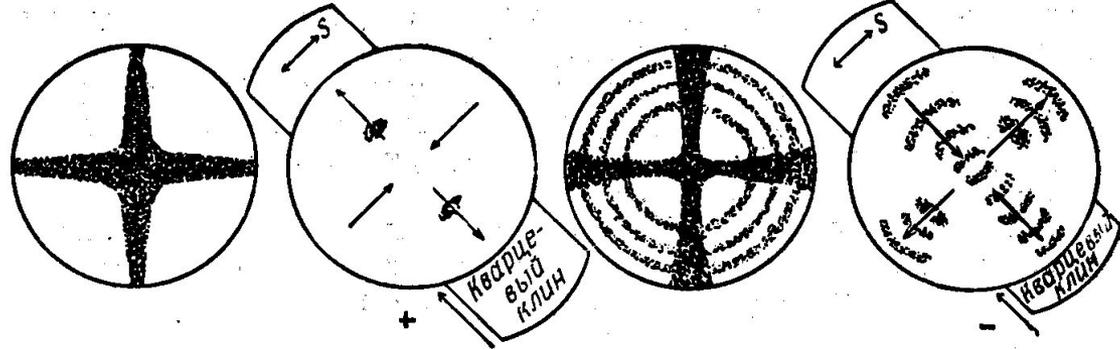
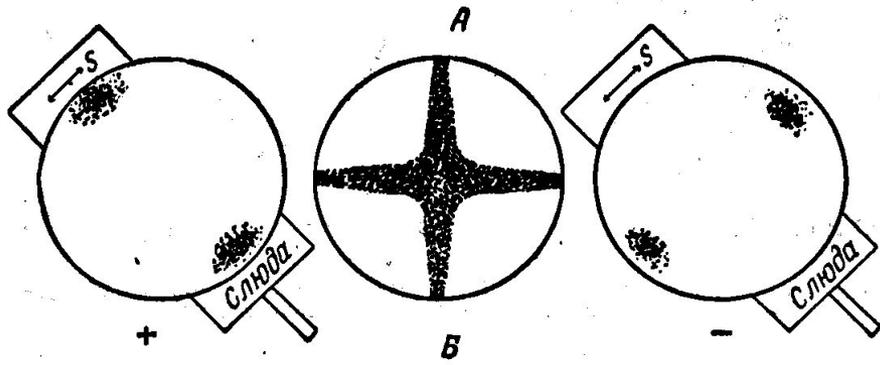
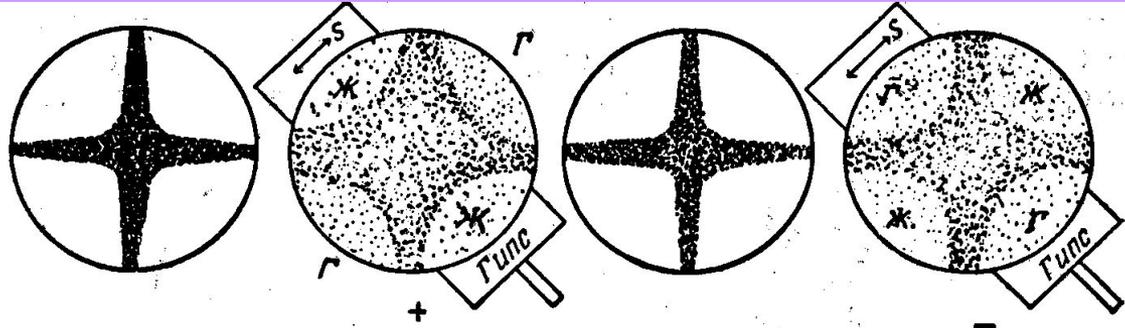
отрицательный



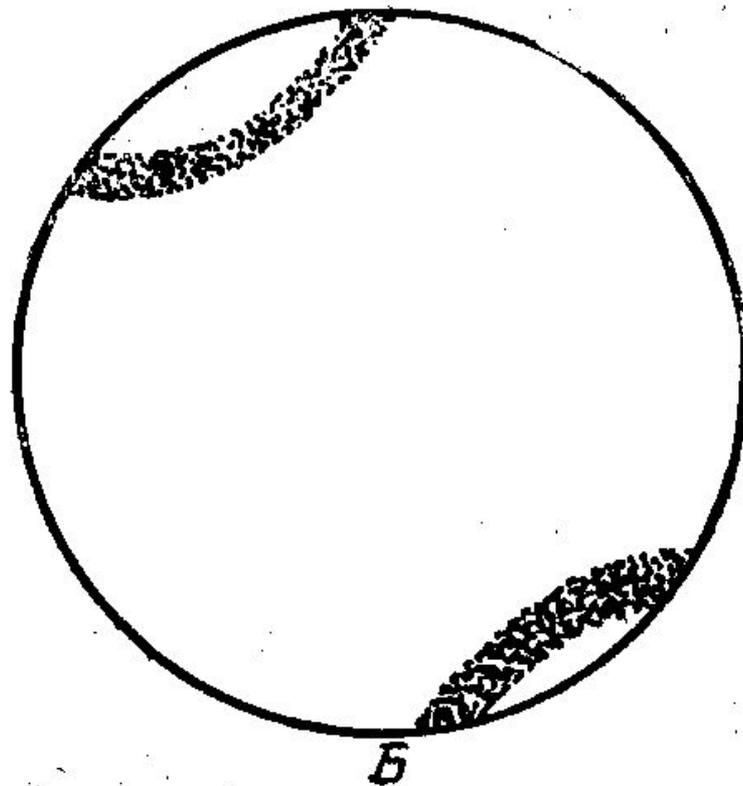
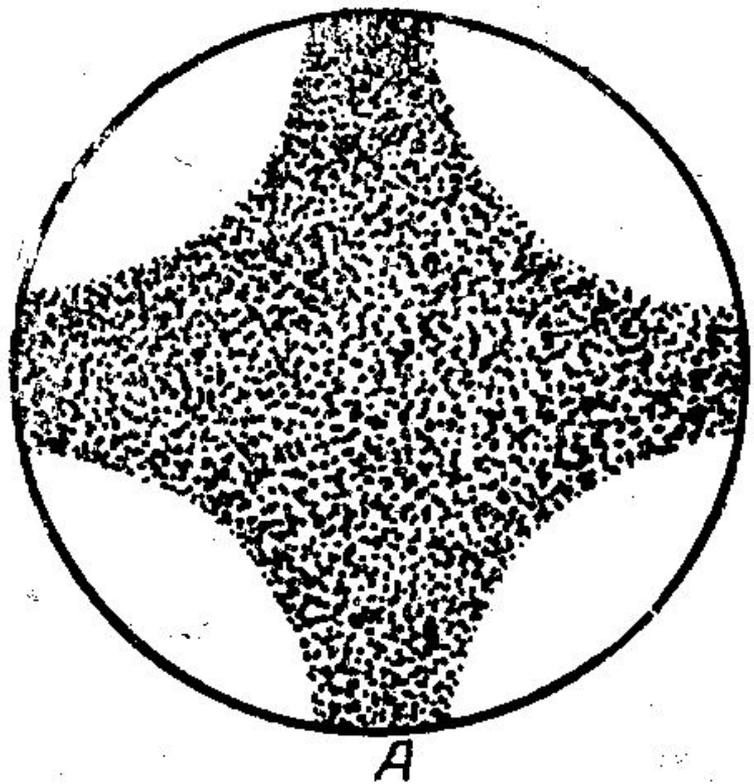
Знак одноосного кристалла

положительный



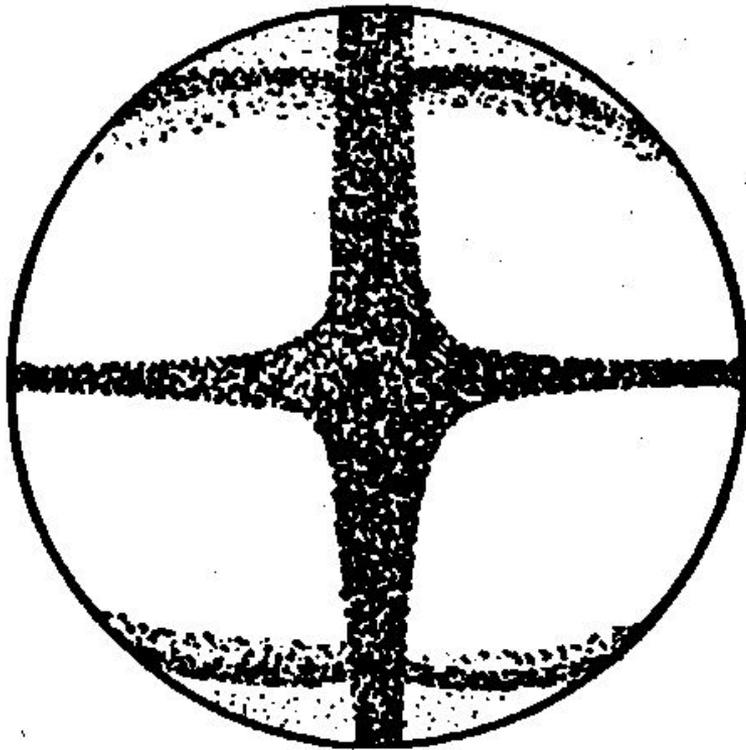


Коноскопическая фигура
в сечении параллельном оптической оси

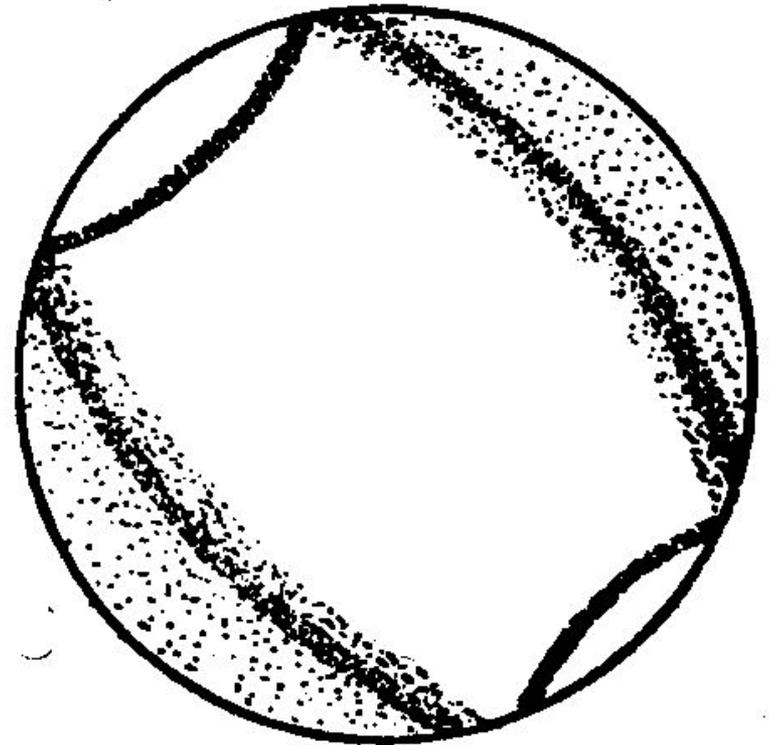


Коноскопическая фигура двуосного минерала

Сечение, перпендикулярное биссектрисе острого угла $2V$

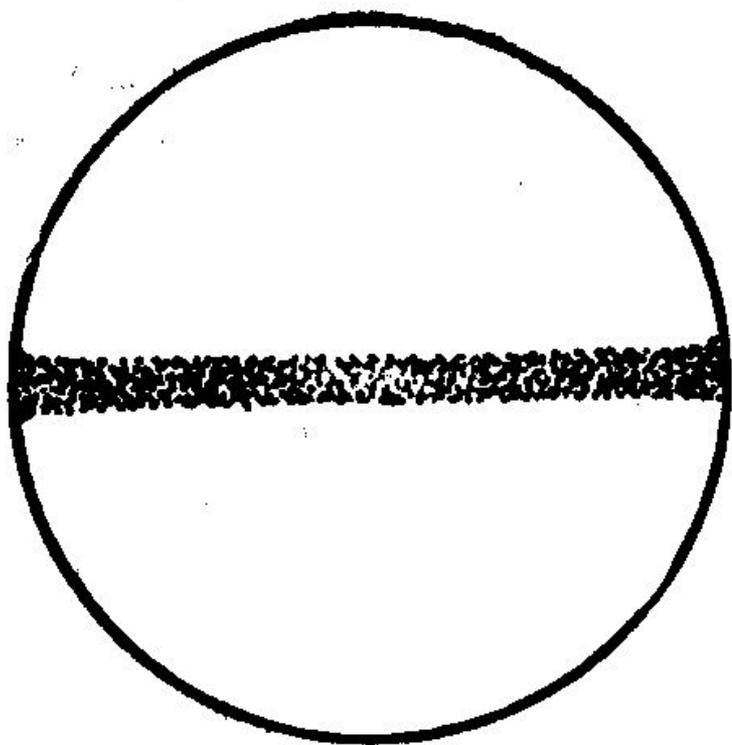


А

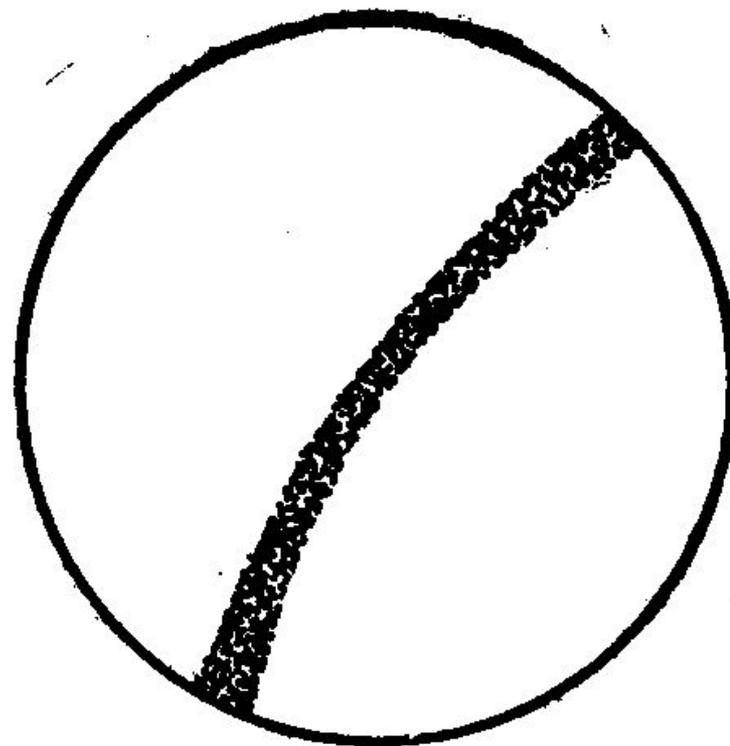


Б

Сечение, перпендикулярное оптической оси

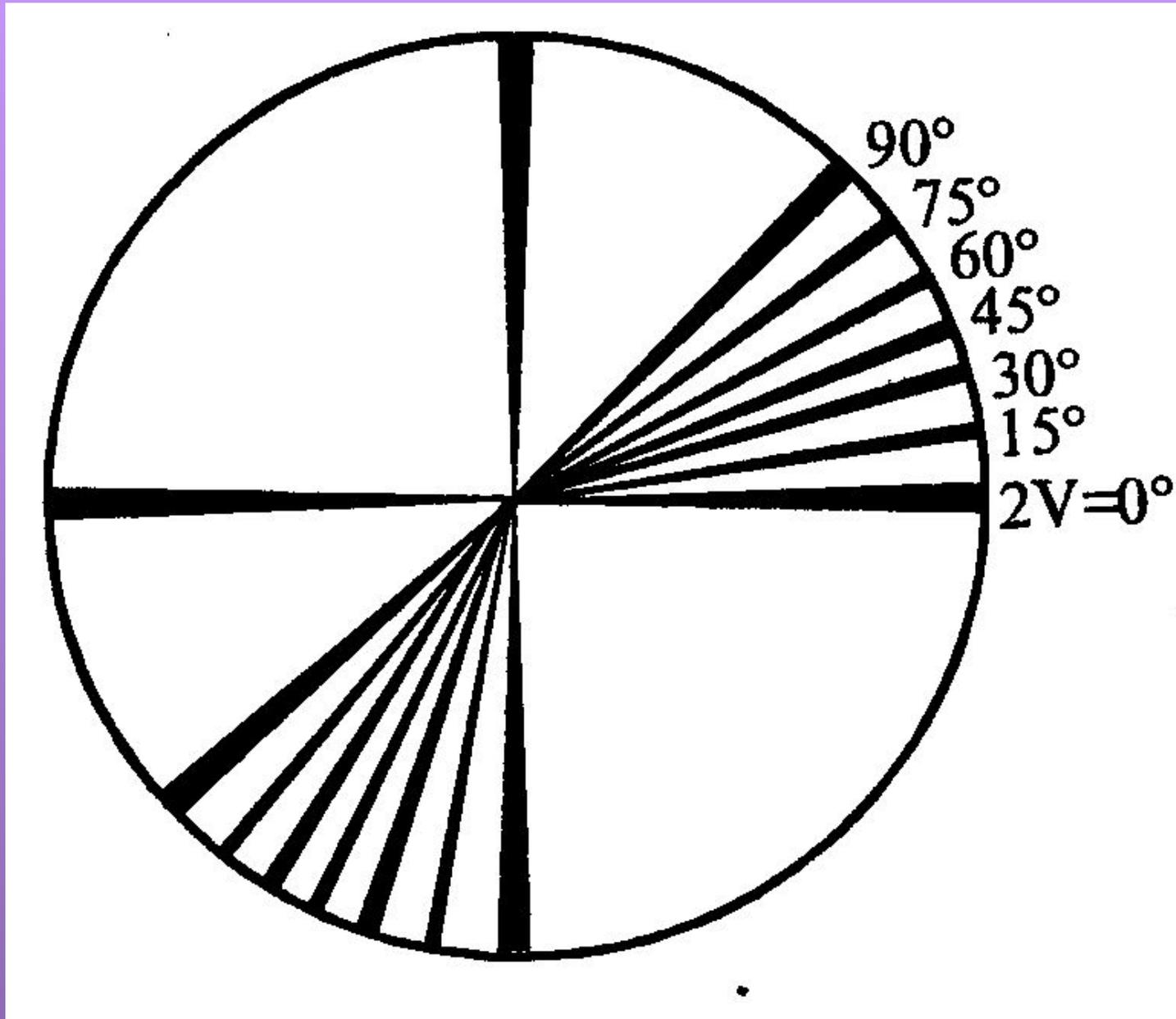


A

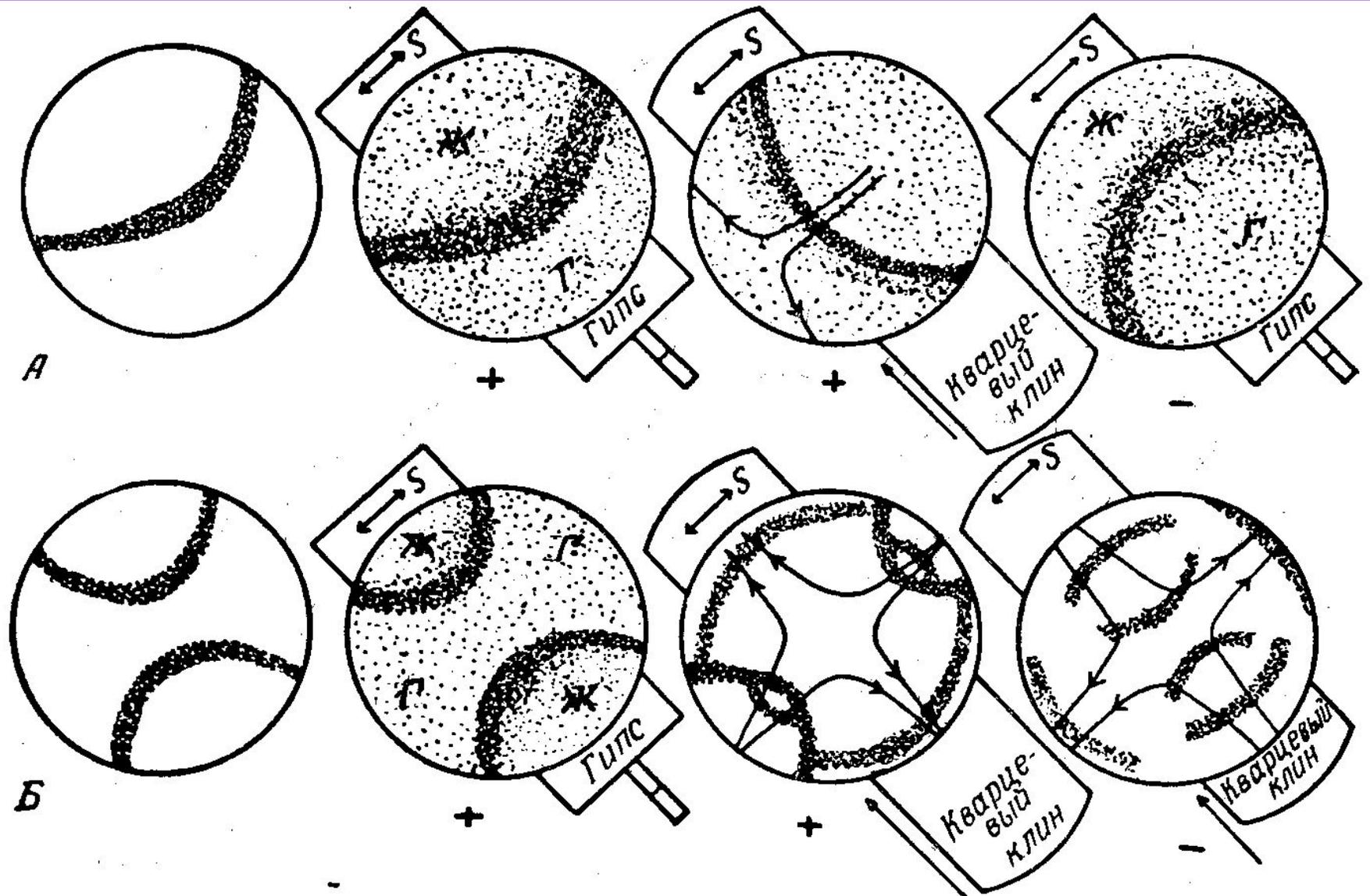


Б.

Определение угла оптических осей $2V$ в сечении, перпендикулярном оптической оси, по кривизне изогирь

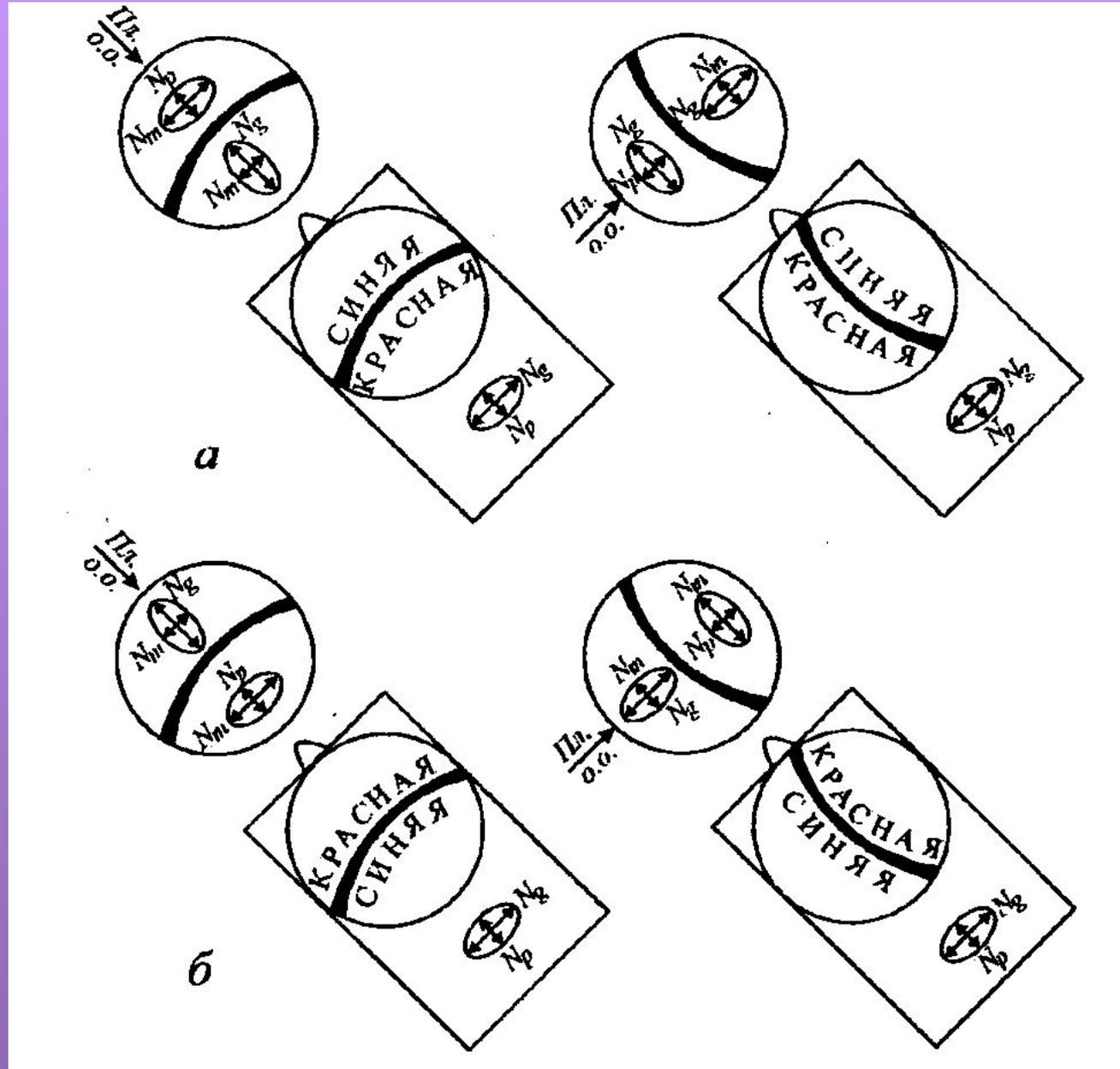


Определение оптического знака двуосного кристалла

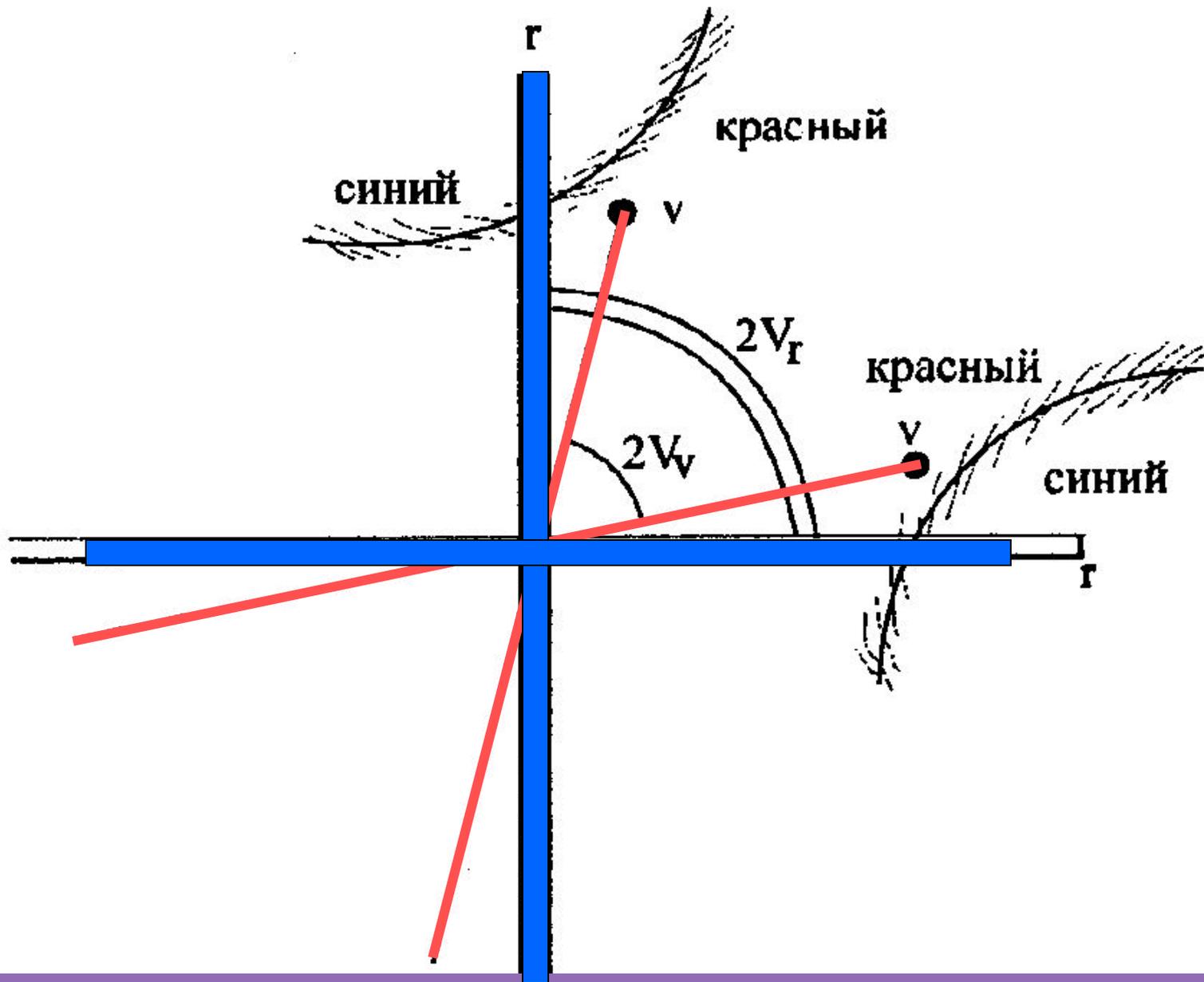


Определение оптического знака двуосного минерала в сечении, перпендикулярном оптической оси

- а) +
- б) -



Дисперсия оптических осей





а



$r > v$



б



в



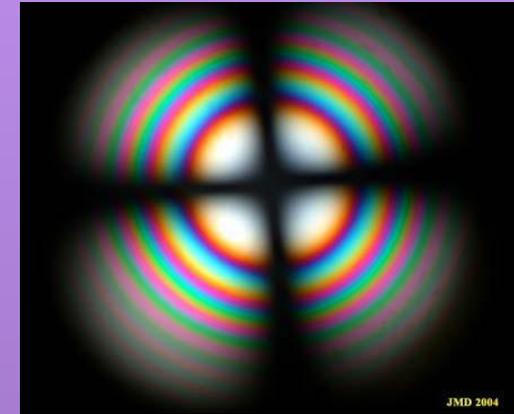
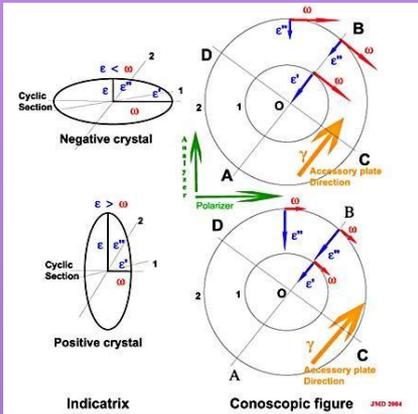
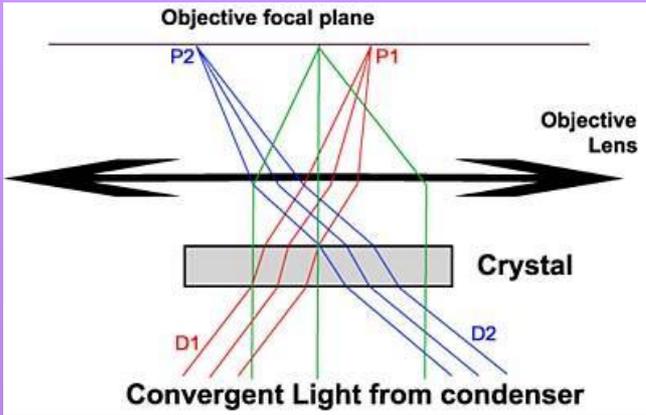
$r < v$



г

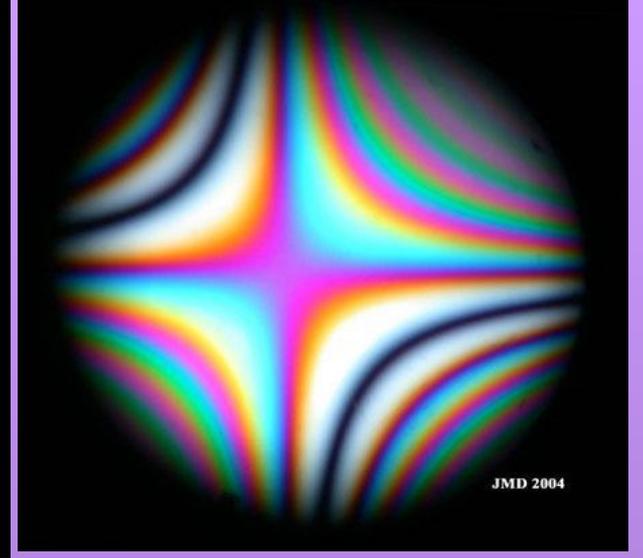
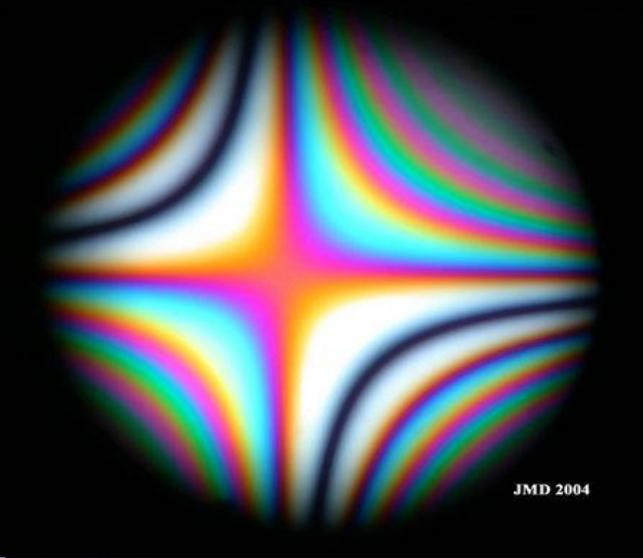
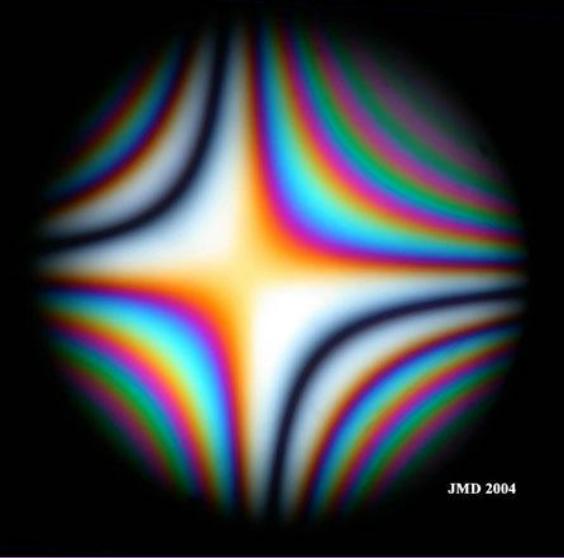


hghg



Calcite perpendicular to the optic axis with Benford plate. The isogyres disappear, only the pole of the optic axis is dark

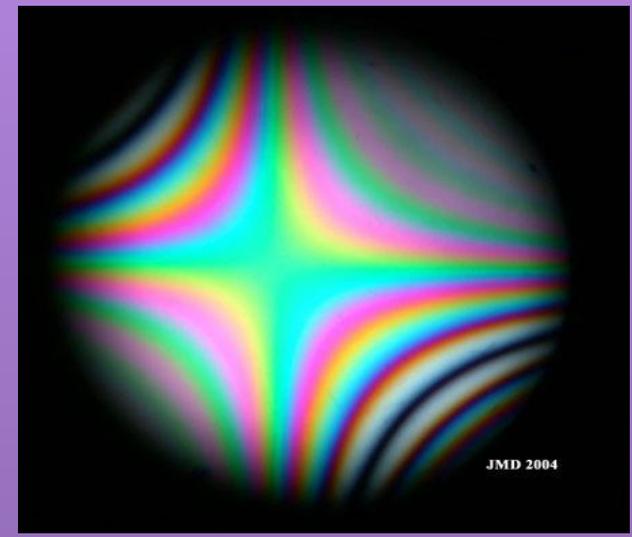
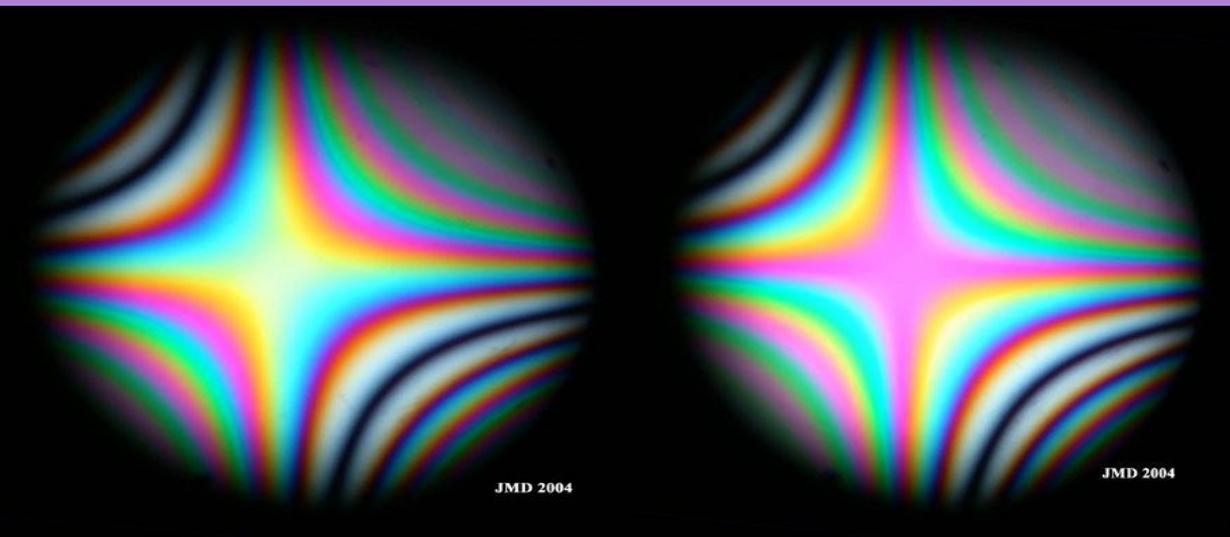




Conoscopic image of the quartz wedge. Orientation of the plate at 45° from polarizer directions. Order 1 at the center. Thickness 1

Conoscopic image of the quartz wedge. Order 1 at the center. Thickness 2

Order 2 at the center. Thickness 3.



Order 2 at the center. Thickness 4

Order 3 at the center. Thickness 5.

Order 3 at the center. Thickness 6

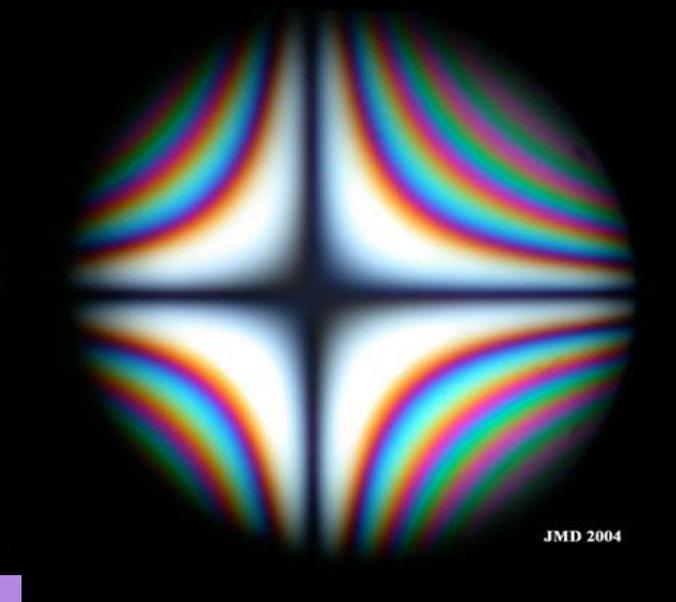
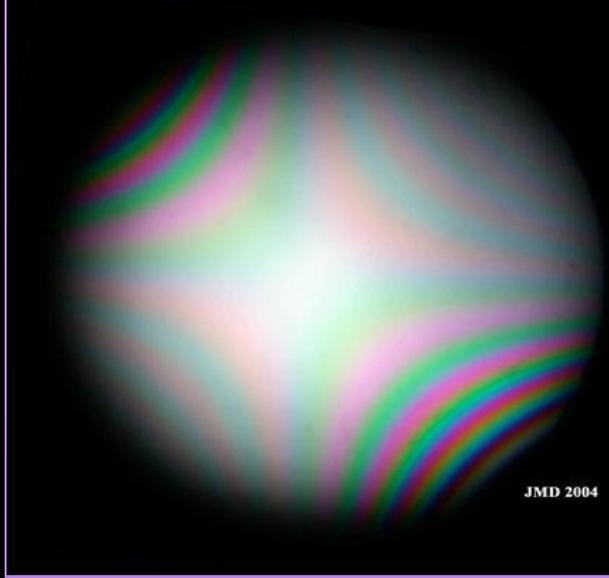
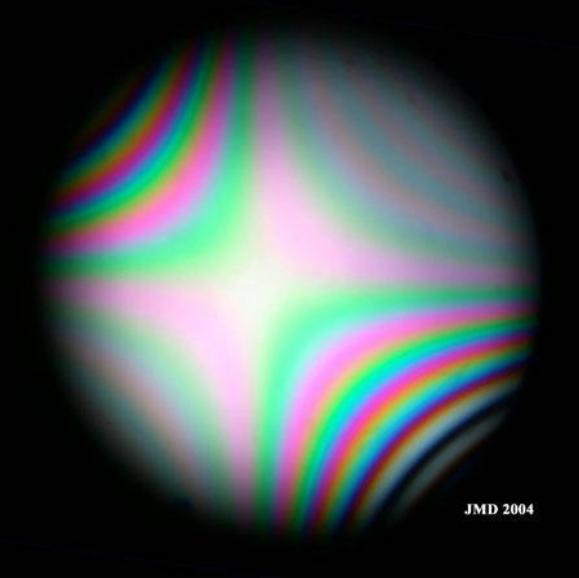


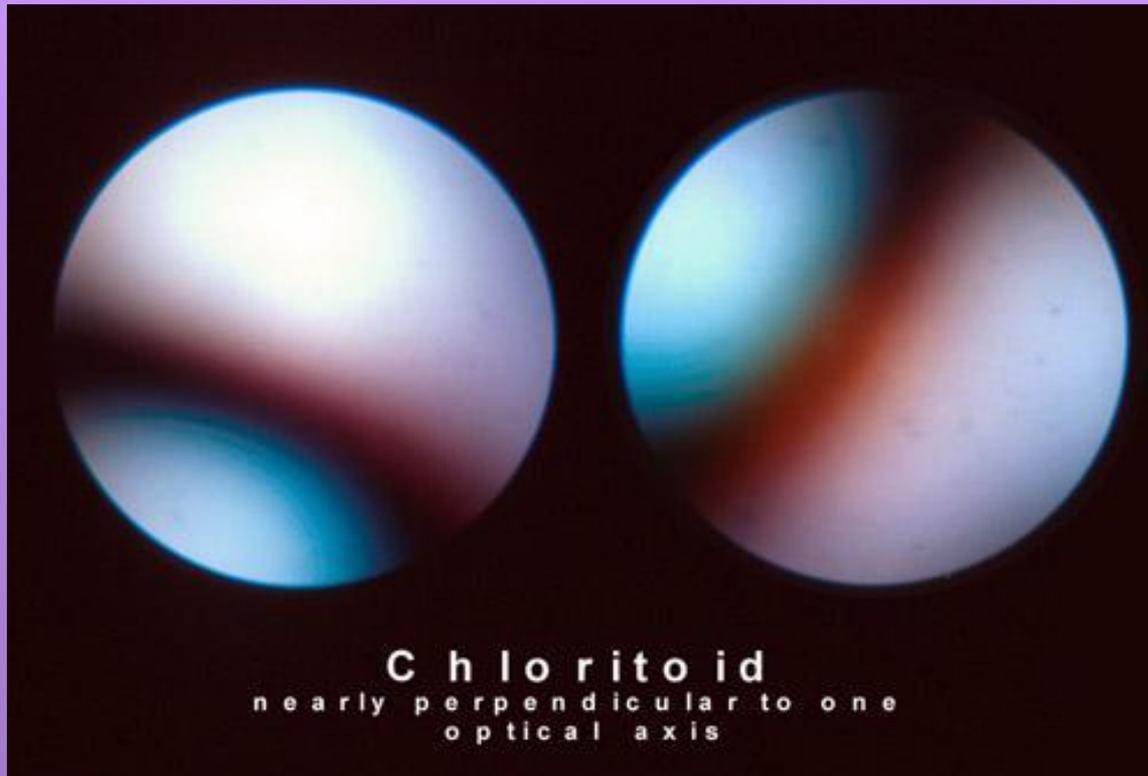
Figure 3h. Order 5 at the center. Thickness 8

Order 4 at the center. Thickness 7



Addition of a quarter wave plate to the quartz wedge with large indices perpendicular. Both retardations subtract. It is possible to find a thickness so that retardation at the center and along directions at 45° of the crystal indices is equal to 0.

Orthoscopic image of a quartz wedge. The dark line (order zero) indicates that the quartz wedge is the addition of 2 plates with large indices perpendicular to each other so their retardations subtract.



Chloritoid crystal in a talc schist. The pole of an optic axis is approximately at the center of the field. This image shows clearly the dispersion of the optic axes: the dark hyperbole displays a red and a blue fringe due to the different position of optic axes for red and blue light.

