

ALPIN SVING TEKNIKK: ET MEKANISK PERSPEKTIV

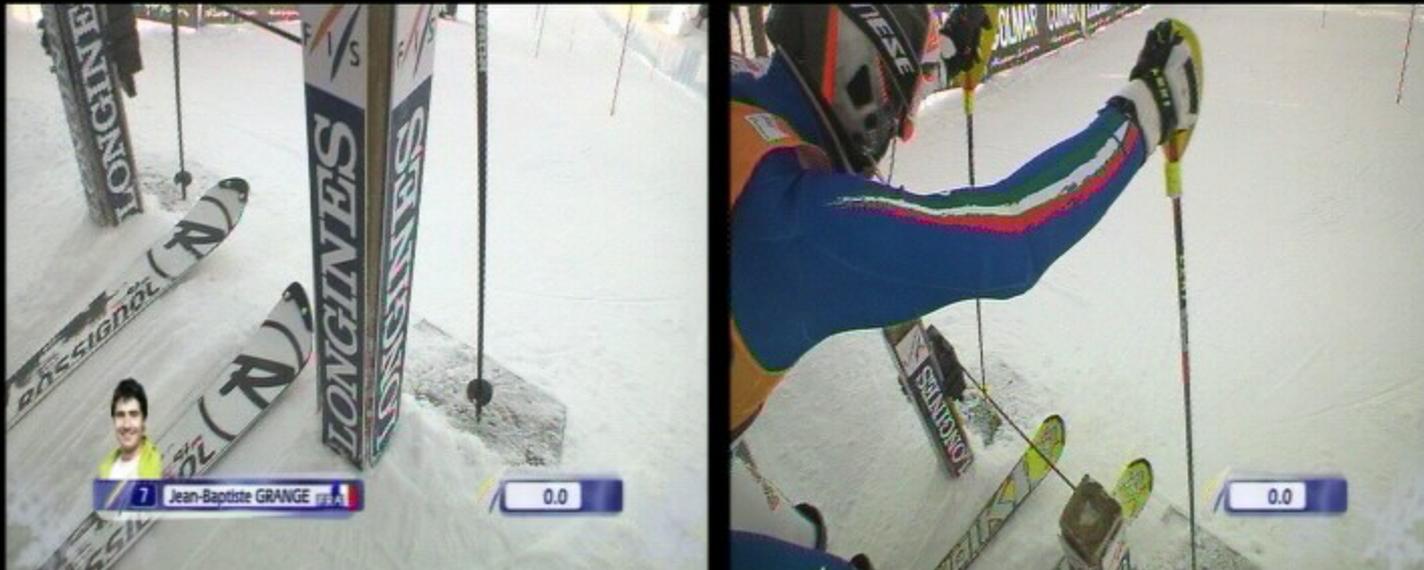
Robert C. Reid, Jörgen Nordlund

BAKGRUNN



Byggmark, Saas Fee

BAKGRUNN



Levi November 2011, 1. omgang

Grange #1, Deville #2 – men 1. split Grange 0.55 raskere

Hvilke effekter oppnår vi gjennom dynamikk?

FYSIKK

Hva er en kraft?

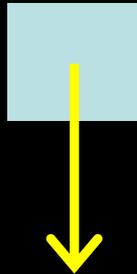
Hva er en kraft?

Et mål for effekten av en objekt på en annen.

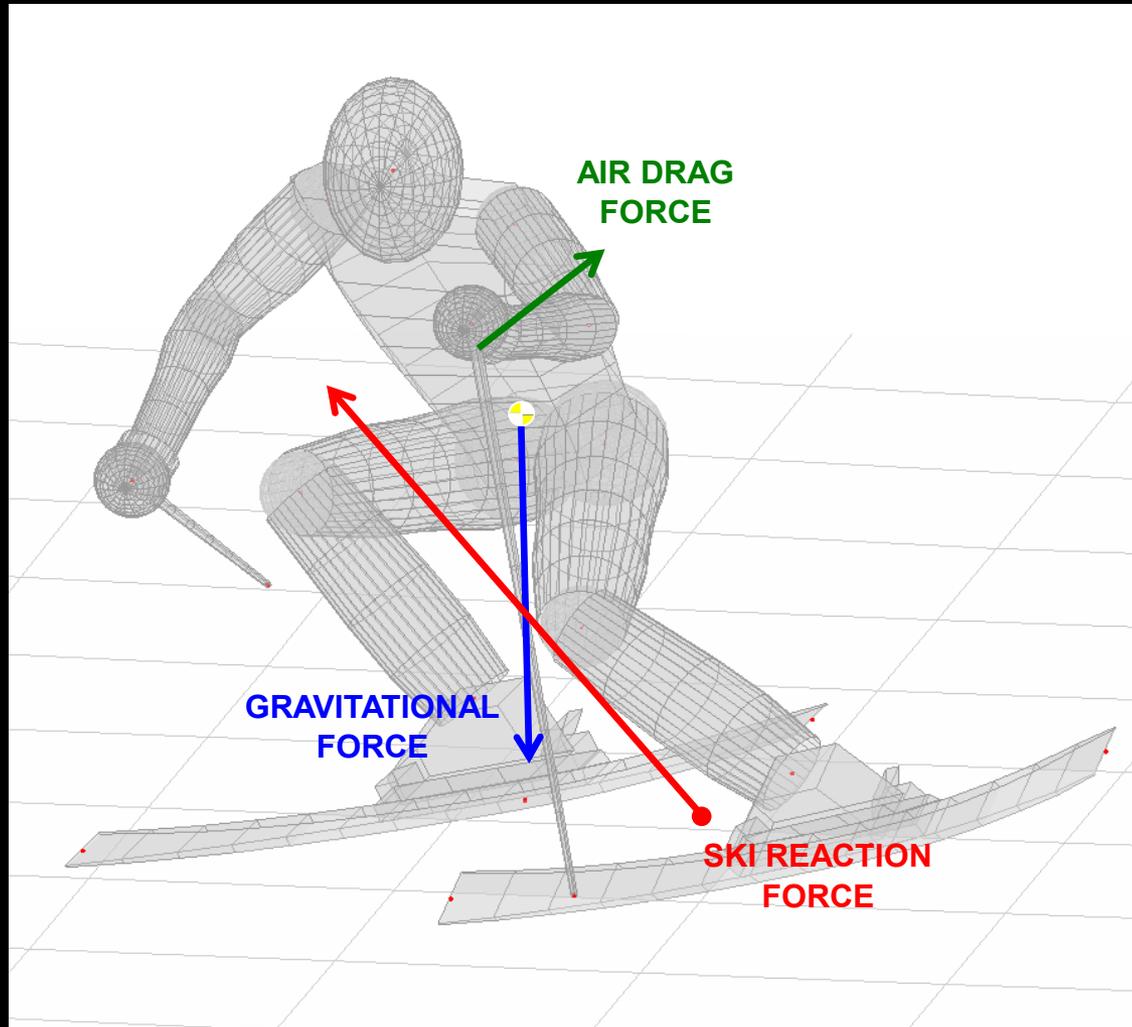
Størrelse

Retning

Angreps punkt



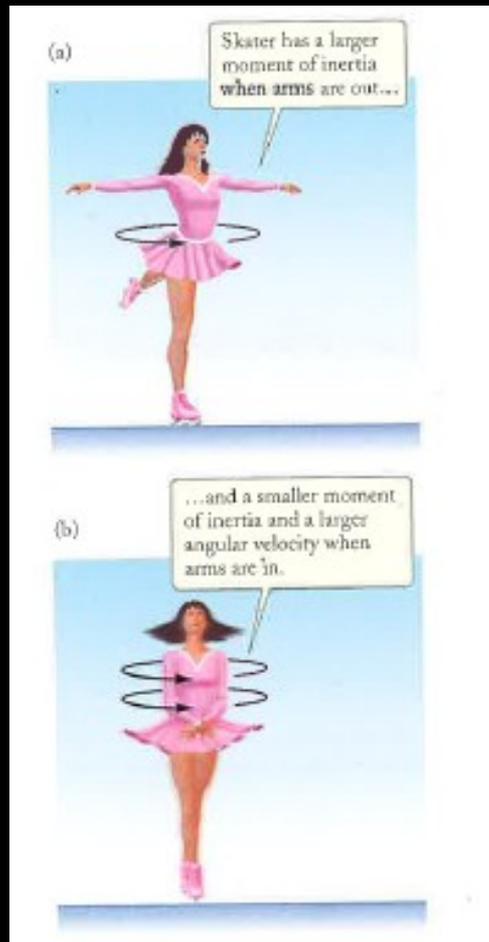
FYSIKK



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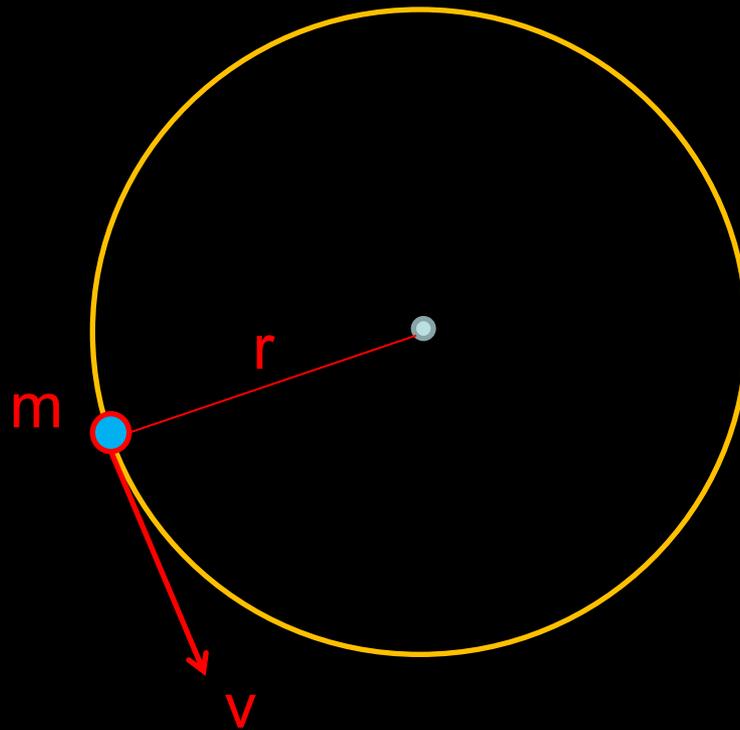


Angular momentum / Conservation angular momentum



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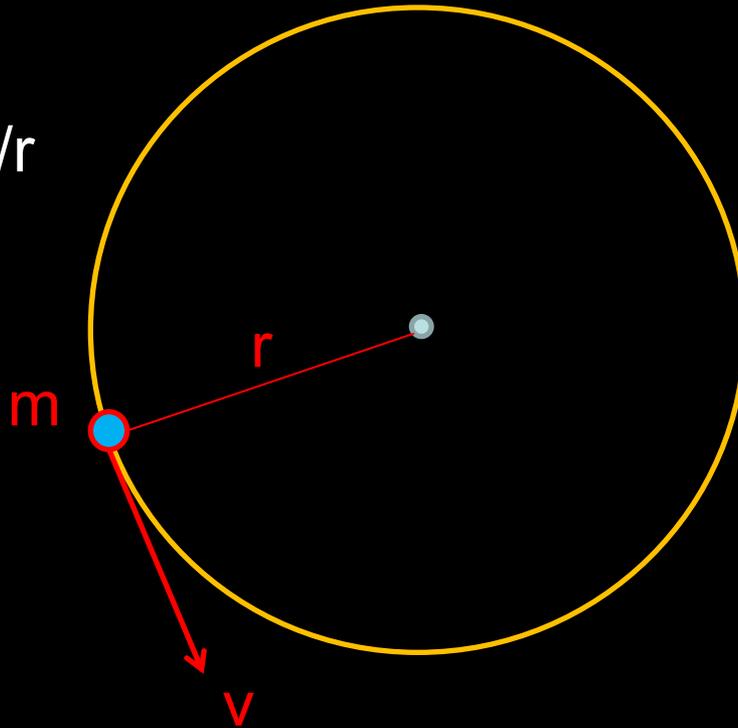
Angular momentum / Conservation angular momentum



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Angular momentum / Conservation angular momentum

$$L = I\omega = mr^2 * v/r$$



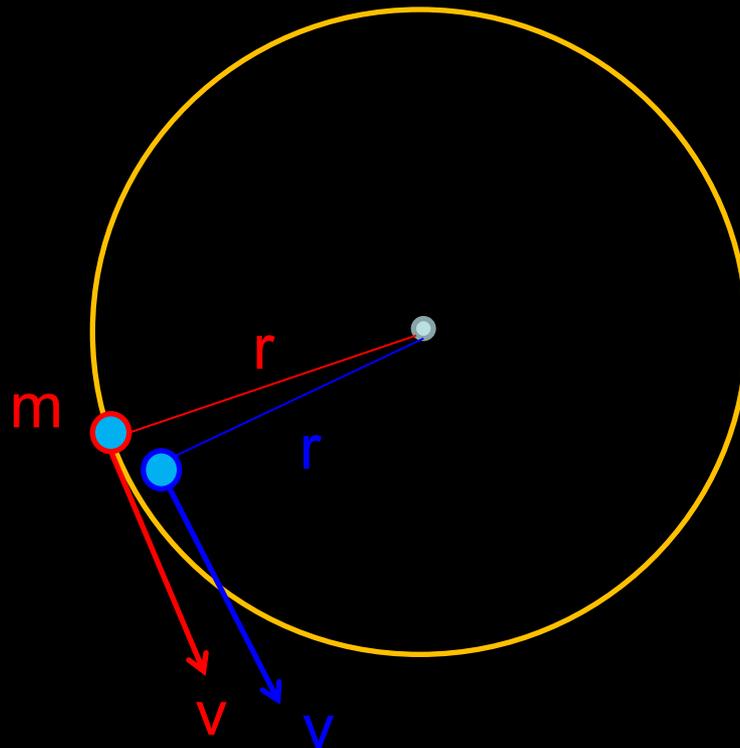
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Angular momentum / Conservation angular momentum

$$L = I\omega = mr^2 * v/r$$

$$mvr = mvr$$

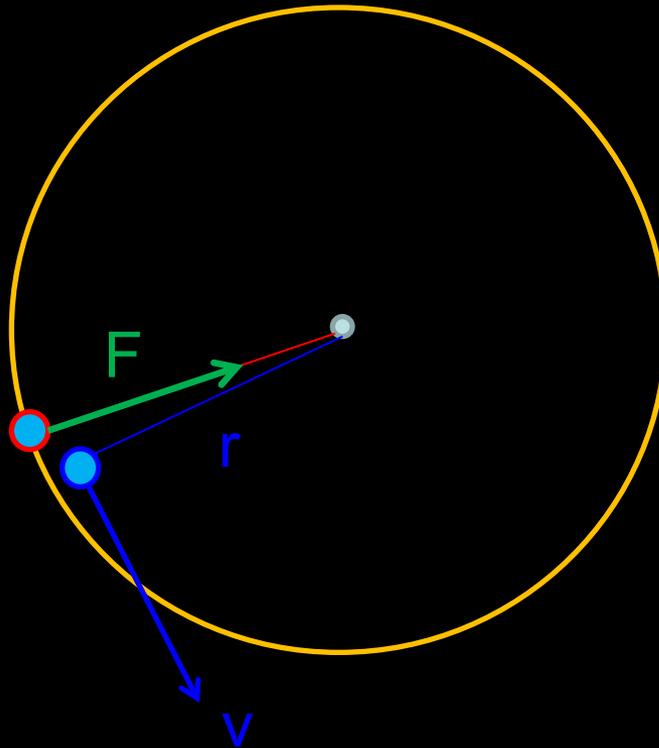
$$\downarrow r = \uparrow v$$



FYSIKK

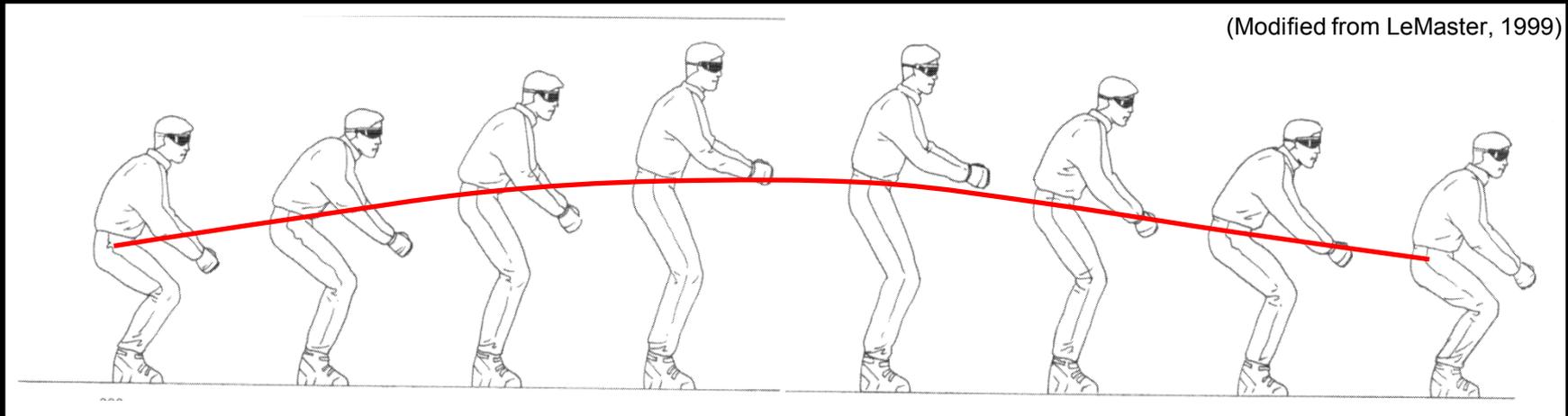
Angular momentum / Conservation angular momentum

$$\uparrow v \approx Fd$$



HVORFOR VERTIKAL DYNAMIKK

1. Skap eller ta bort reaksjons kraft.



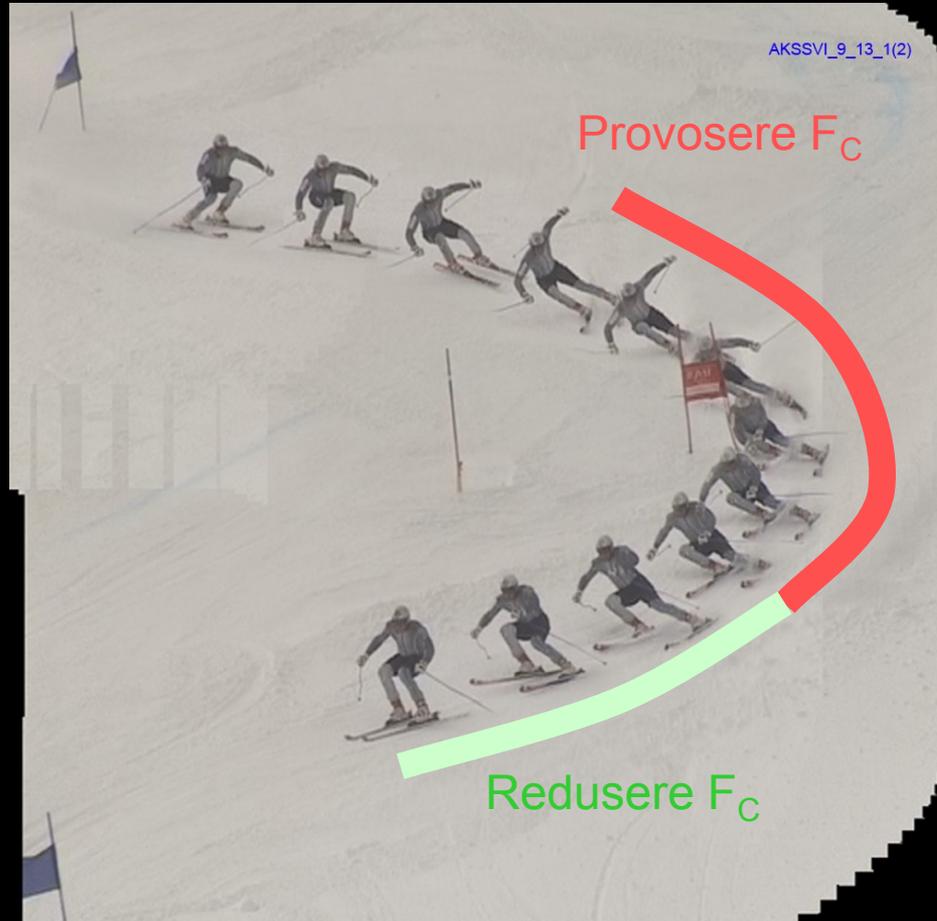
BELASTNING

AVLASTNING

BELASTNING

HVORFOR VERTIKAL DYNAMIKK

1. Skap eller ta bort reaksjons kraft.



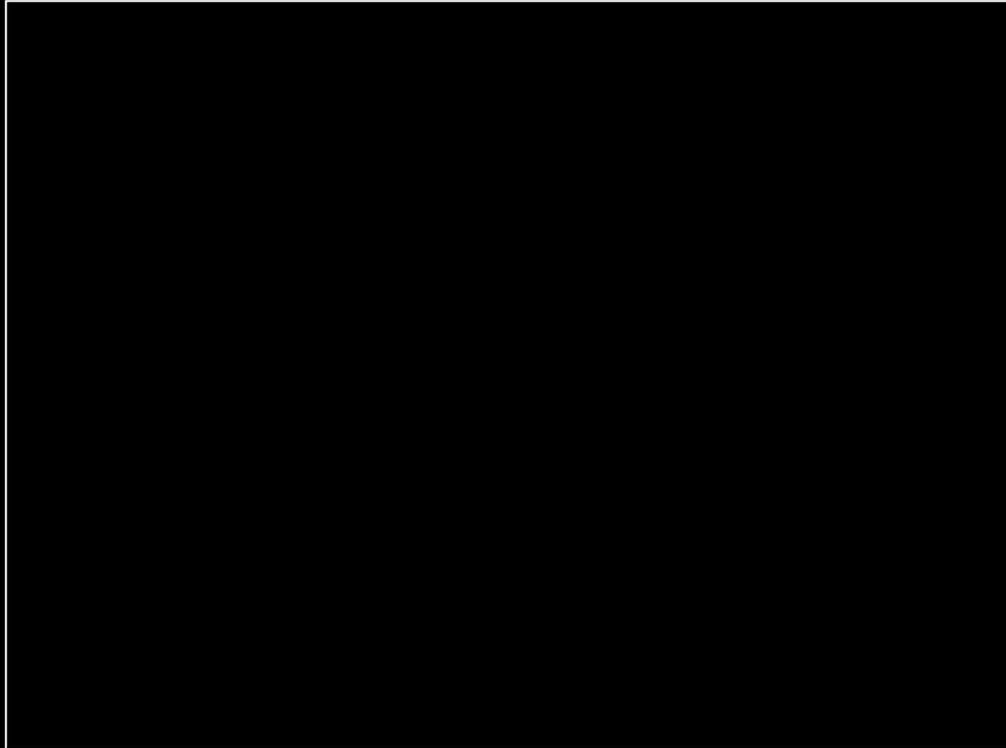
HVORFOR VERTIKAL DYNAMIKK

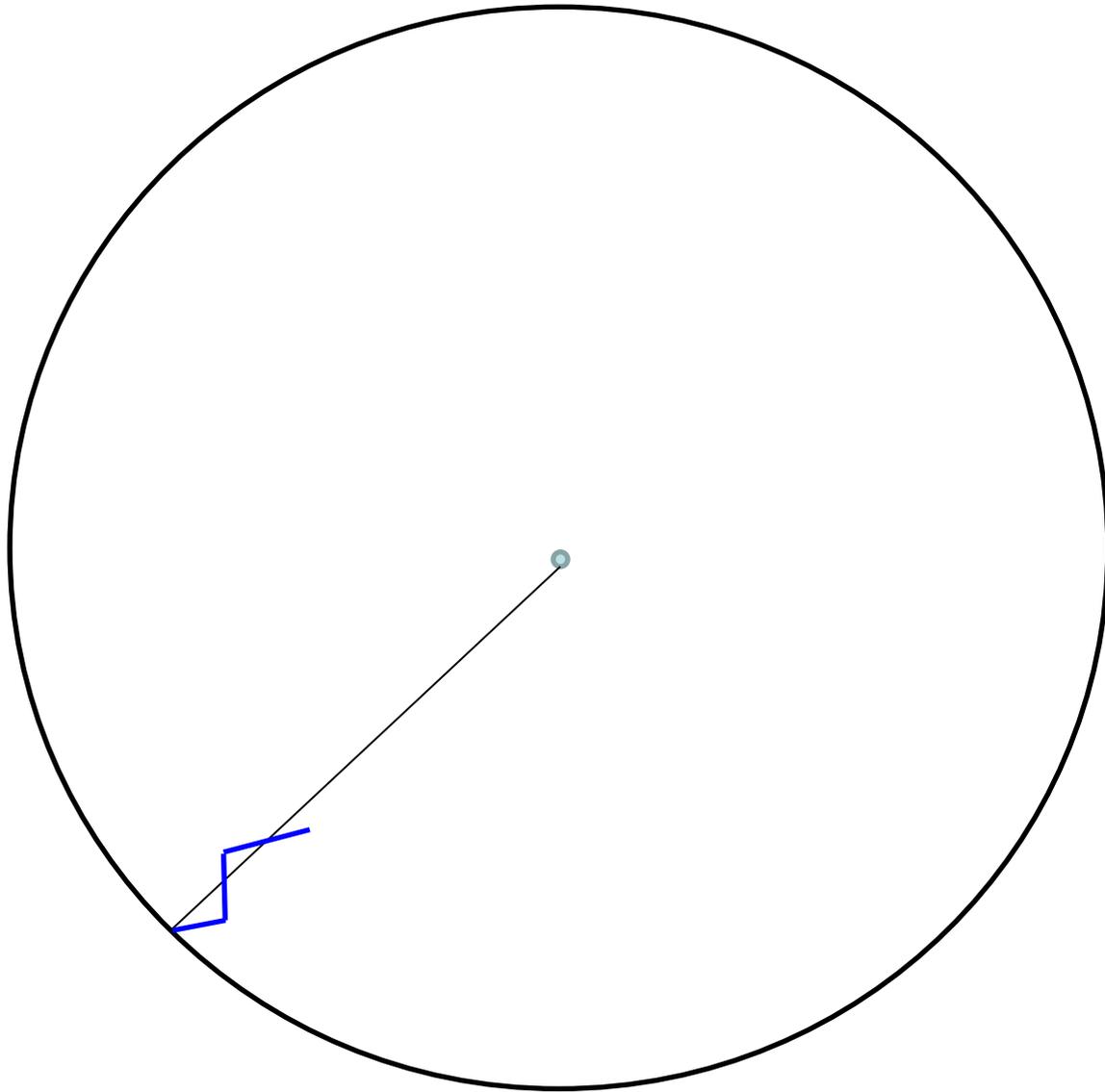
2. Behold kontakt med underlaget.

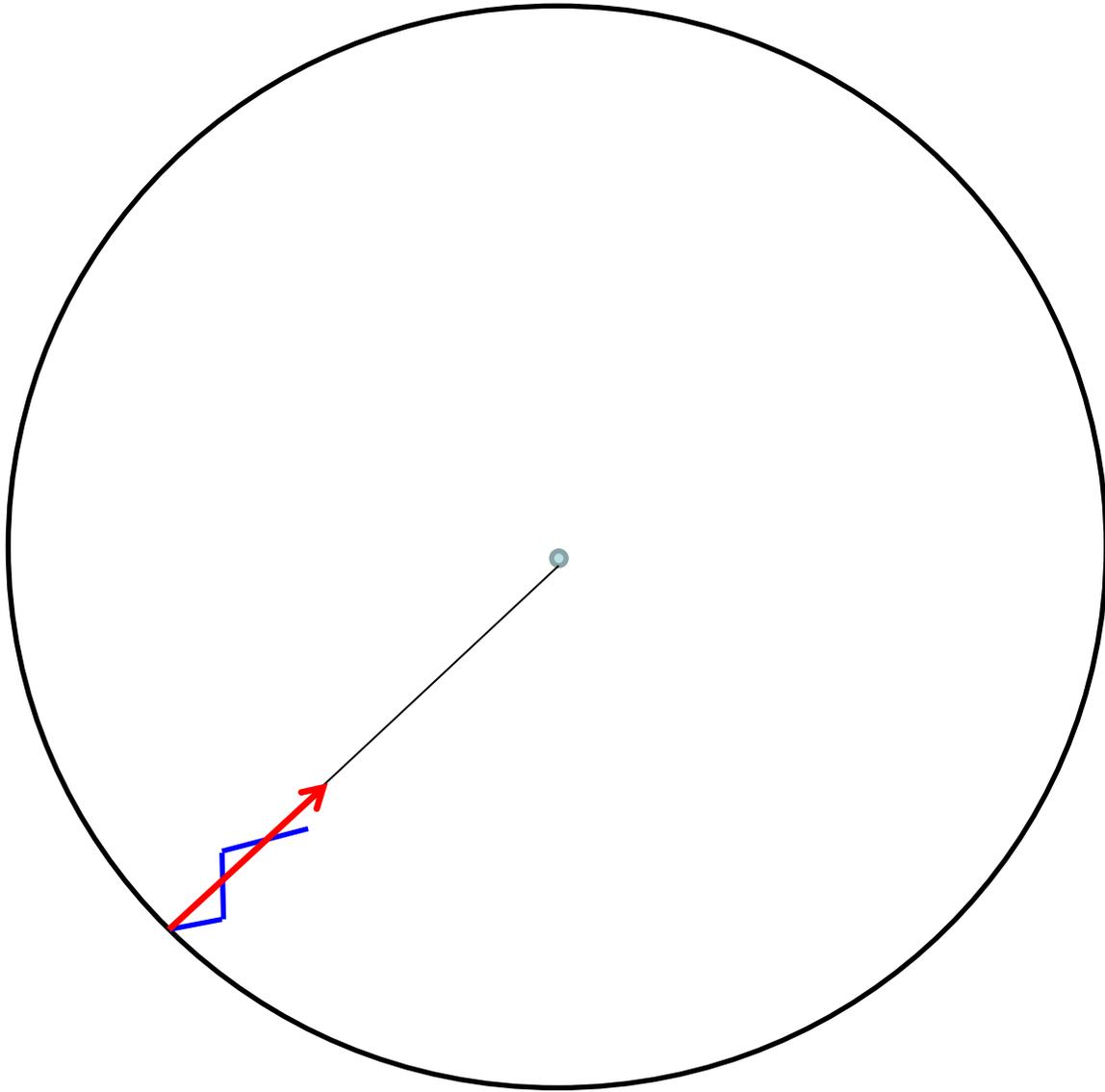


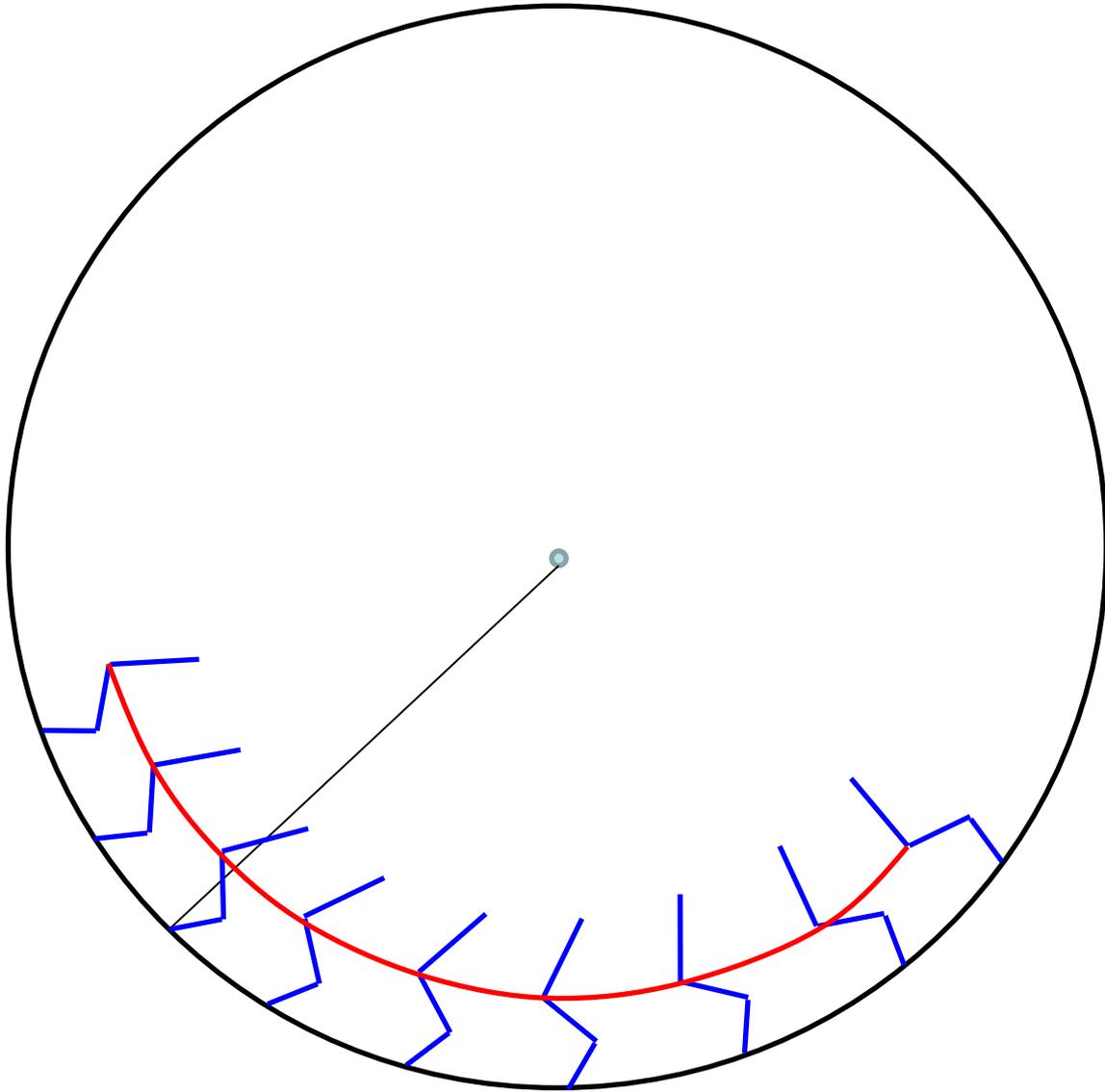
HVORFOR VERTIKAL DYNAMIKK

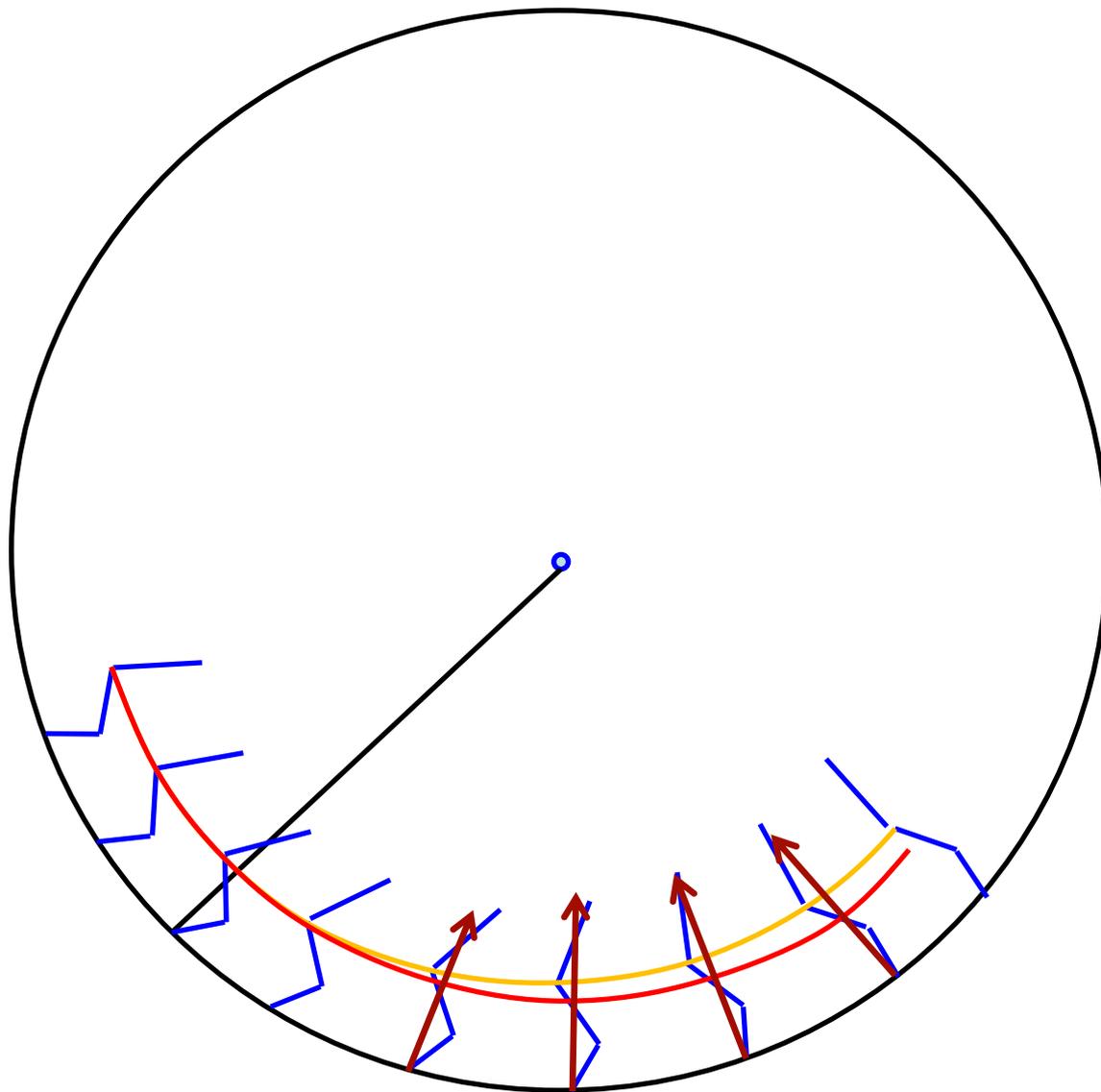
3. Skap hastighet.

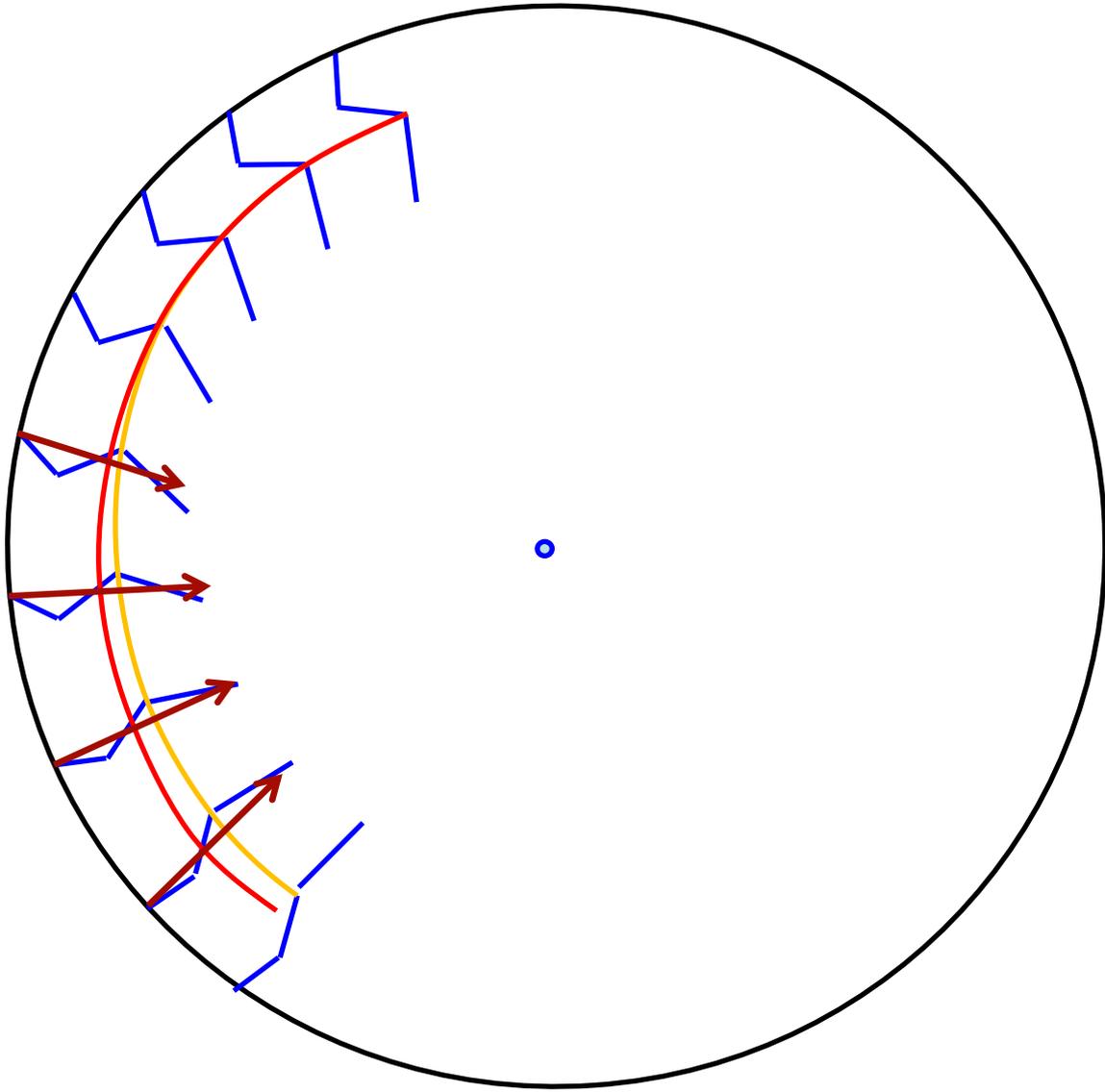


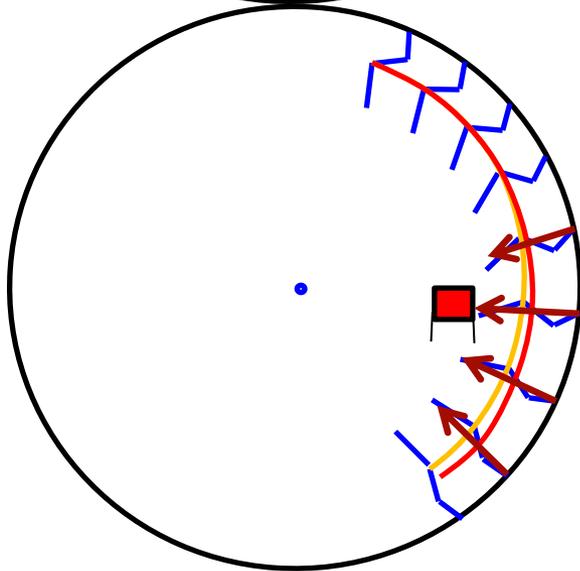
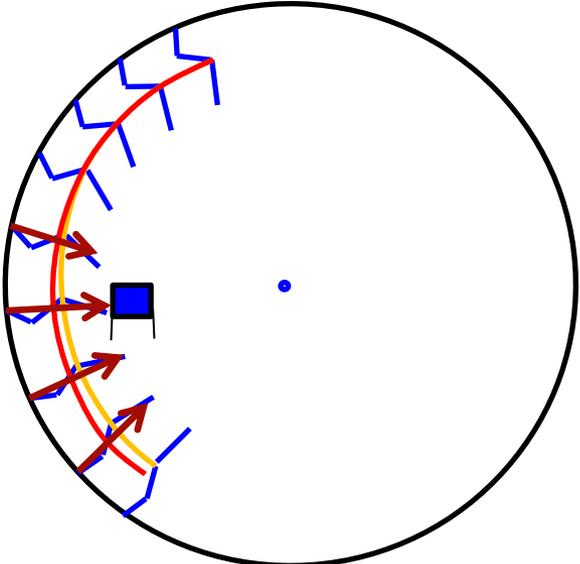












HVORFOR VERTIKAL DYNAMIKK

3. Skap hastighet.

Journal of Sound and Vibration (1983) **88**(1), 107–115

ACCELERATIONS INDUCED BY BODY MOTIONS DURING SNOW SKIING

C. D. MOTE, JR AND J. K. LOUIE

*Department of Mechanical Engineering, University of California, Berkeley,
California 94720, U.S.A.*

HVORFOR VERTIKAL DYNAMIKK

3. Skap hastighet.

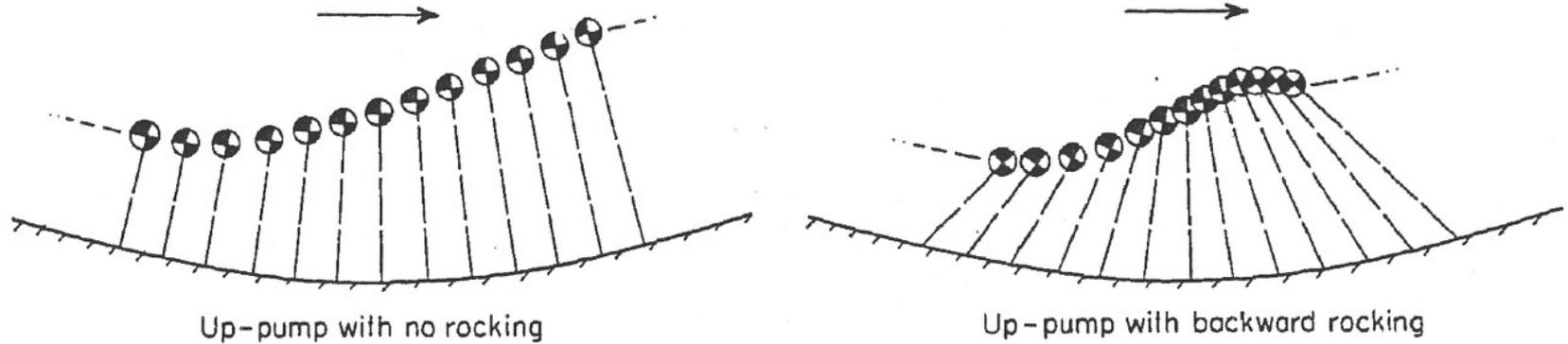
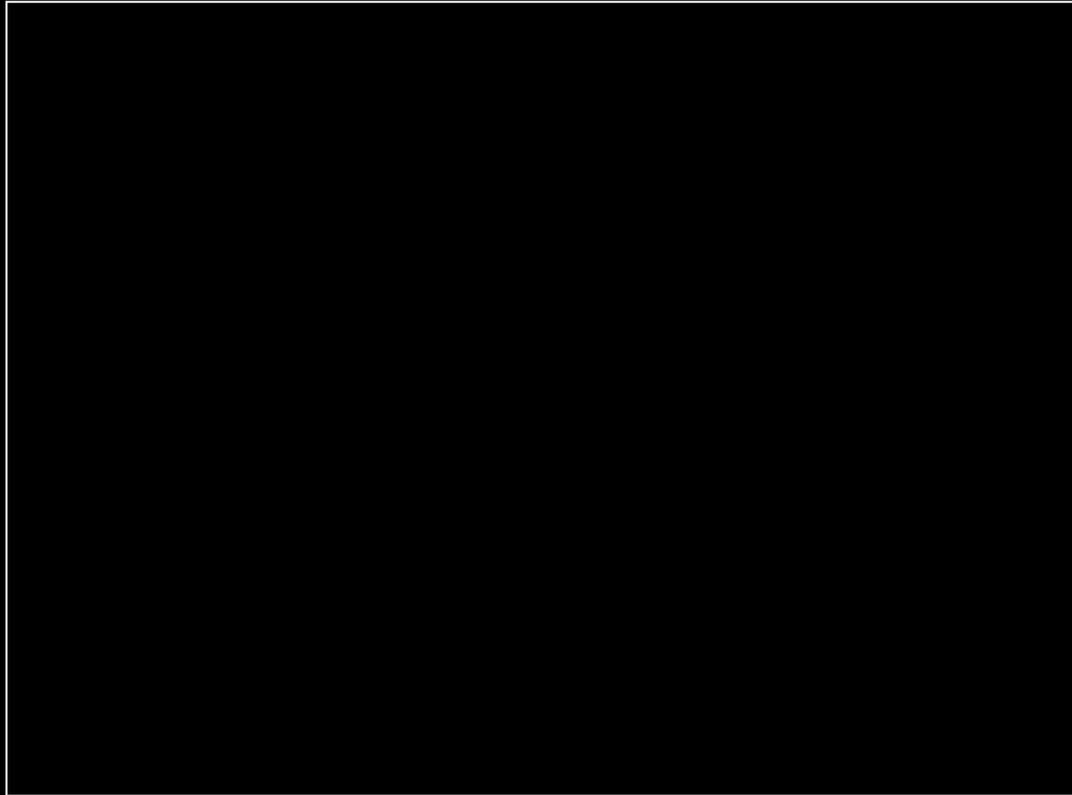


Figure 8. Center of mass trajectory during pumping with and without rocking.

HEMSEDAL TEST

Referanse Tid



HEMSEDAL TEST

Frikjøring



HEMSEDAL TEST

Dusker



HEMSEDAL TEST

Ref tid + contra ref tid 1



0,34 raskere på 8 sek

HEMSEDAL TEST

Start lengre opp + contr ref tid



GRANGE VS DEVILLE

