```
> nu := 2*nue;
```

$$\nu := 2\,nue \tag{1}$$

```
> traf := 1/(1+exp((2*ip-pmin)/pwidth));
  cosarray[nn,ip] = cos((pi*2*ip*(nn))/(N))
                  /  (2*ip)**(1+1)
                  *  (f0*(1d0-traf)+finf*(traf));
```

$$traf := \frac{1}{1 + e^{\frac{2\,ip - pmin}{pwidth}}}$$

$$cosarray_{nn,\,ip} = \frac{\cos\left(\frac{2\,\pi\,ip\,nn}{N}\right)\left(f0\left(1. - \frac{1}{1 + e^{\frac{2\,ip - pmin}{pwidth}}}\right) + \frac{finf}{1 + e^{\frac{2\,ip - pmin}{pwidth}}}\right)}{4\,ip^2} \tag{2}$$

```
> ff2  := -2* (N)**nu *(1*q)**2/(3*Pi**2);
```

$$ff2 := -\frac{2\,N^{2\,nue}\,l^2\,q^2}{3\,\pi^2} \tag{3}$$

```
> rate      := (2*ip)**(2)/tau_R*(1-traf) +
               (W*Pi**2)* (2*ip/pmin)**pexinf/Ne0**2 * traf;
```

$$rate := \frac{4\,ip^2\left(1 - \frac{1}{1 + e^{\frac{2\,ip - pmin}{pwidth}}}\right)}{tau\_R} + \frac{W\,\pi^2\left(\frac{2\,ip}{pmin}\right)^{pexinf}}{Ne0^2\left(1 + e^{\frac{2\,ip - pmin}{pwidth}}\right)} \tag{4}$$

```
> ewfac := 1-exp(-t * rate );
```

$$ewfac := 1 - e^{-t\left(\frac{4\,ip^2\left(1 - \frac{1}{1 + e^{\frac{2\,ip - pmin}{pwidth}}}\right)}{tau\_R} + \frac{W\,\pi^2\left(\frac{2\,ip}{pmin}\right)^{pexinf}}{Ne0^2\left(1 + e^{\frac{2\,ip - pmin}{pwidth}}\right)}\right)} \tag{5}$$

```
> DynamicBnm:=sum(ff2*cosarray[abs(nn-mm),ip]*ewfac,ip=1..N/2);
```

$$DynamicBnm := \sum_{ip=1}^{\frac{N}{2}} -\frac{1}{3\,\pi^2}\left(2\,N^{2\,nue}\,l^2\,q^2\,cosarray_{|-nn+mm|,\,ip}\left(1 - e^{-t\left(\frac{4\,ip^2\left(1-\frac{1}{1+e^{\frac{2\,ip-pmin}{pwidth}}}\right)}{tau\_R} + \frac{W\pi^2\left(\frac{2\,ip}{pmin}\right)^{pexinf}}{Ne0^2\left(1+e^{\frac{2\,ip-pmin}{pwidth}}\right)}\right)}\right)\right) \quad \textbf{(6)}$$

```
> DynamicBnm:=sum(ff2*cos((pi*2*ip*(nn))/(N))
                              /  (2*ip)**(2)
                              *  (f0*(1d0-traf)+finf*(traf))*ewfac,ip=
  1..N/2);
```

ip=1..N/2 realisiert p=2..N, p gerade ! p=2*ip