

```
typedef double XFLOAT;
typedef double OTA_FLOAT;

namespace POLQAV2
{
#pragma warning(once:4305)
XFLOAT* GetNBAlign8kTaps(int &TapsLength)
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int NBAlignTaps8kLength = 320;
XFLOAT NBAlignTaps8k[] = {
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};

TapsLength = NAlignTaps8kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(NAlignTaps8k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetNAlign16kTaps(int &TapsLength)
{
int NAlignTaps16kLength = 640;
XFLOAT NAlignTaps16k[] = {
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};
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    TapsLength = NAlignTaps16kLength;
    XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
    matbCopy(NAlignTaps16k, Taps, TapsLength);

    return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetNAlign48kTaps(int &TapsLength)
{
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1.421679563601730e-004,
};

TapsLength = NAlignTaps48kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(NAlignTaps48k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetSWBAlign8kTaps(int &TapsLength)
{
int SWBAlignTaps8kLength = 320;
XFLOAT SWBAlignTaps8k[] = {
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};

TapsLength = SWBAlignTaps8kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(SWBAlignTaps8k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetSWBAlign16kTaps(int &TapsLength)
{
int SWBAlignTaps16kLength = 640;
XFLOAT SWBAlignTaps16k[] = {
5.443947336772447e-004,

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};

TapsLength = SWBAlignTaps16kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(SWBAlignTaps16k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetSWBAlign48kTaps(int &TapsLength)
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TapsLength = SWBAlignTaps48kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(SWBAlignTaps48k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetIRS8kTaps(int &TapsLength)

```

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};

TapsLength = IRSTaps8kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(IRSTaps8k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetIRS16kTaps(int &TapsLength)
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TapsLength = IRSTaps16kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(IRSTaps16k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetIRS48kTaps(int &TapsLength)

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};

TapsLength = IRSTaps48kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(IRSTaps48k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetWideHead8kTaps(int &TapsLength)
{
int WideHeadTaps8kLength = 320;
XFLOAT WideHeadTaps8k[] = {
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};

TapsLength = WideHeadTaps8kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(WideHeadTaps8k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
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};

TapsLength = WideHeadTaps16kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(WideHeadTaps16k, Taps, TapsLength);

return Taps;
}

#pragma warning(once:4305)
XFLOAT* GetWideHead48kTaps(int &TapsLength)
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int WideHeadTaps48kLength = 1920;
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1.961900583951217e-004,
2.050918521627996e-004,
2.128423648629259e-004,
2.005475895863531e-004,
1.894840490126190e-004,
1.995098890936528e-004,
2.090575548674904e-004,
1.969444096178753e-004,
1.839340979452909e-004,
1.919387723332984e-004,
2.015916540565963e-004,
1.913478419624019e-004,
1.795447340653251e-004,
1.866535352582763e-004,
1.944414762314243e-004,
1.833524792731808e-004,
1.721653702079637e-004,
1.802108507993923e-004,
1.882610356965377e-004,
1.767702382545830e-004,
1.649000366324078e-004,
1.722004039066994e-004,
1.797918922538836e-004,
1.686369526814861e-004,
1.577733014601664e-004,
1.656347015350767e-004,
1.723480919720780e-004,
1.594434467106631e-004,
1.477861616914402e-004,
1.567962528180977e-004,
1.653182194705075e-004,
1.526294392087520e-004,
1.391035374161955e-004,
1.461838556507511e-004,
1.548606286111714e-004,
1.440450802263261e-004,
1.317434642868778e-004,
1.379979720452510e-004,
1.449001931278398e-004,
1.332999678139227e-004,
1.216464215387707e-004,

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1.024301344108752e-004,
1.095940732140192e-004,
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1.023752061636130e-004,
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9.875959204932566e-005,
1.066184379580826e-004,
9.364282907224432e-005,
7.988827159155723e-005,
8.640816119607945e-005,
9.448288730597440e-005,
8.340239343760269e-005,
7.090462663226227e-005,
7.667592899975629e-005,
8.306985428954438e-005,
7.127235040266122e-005,
5.946677094881003e-005,
6.626068684012611e-005,
7.302812833349291e-005,
6.094399180437650e-005,
4.858007437555347e-005,
5.477595965200667e-005,
6.122309589448463e-005,
4.956773027484819e-005,
3.828184101465328e-005,
4.514541361463886e-005,
5.086824079409552e-005,
3.762535397730252e-005,
2.567819403959387e-005,
3.378220428536460e-005,
4.138491118302355e-005,
2.845860427144887e-005,
1.480840289627573e-005,
2.117140798137216e-005,
2.905507974466070e-005,
1.805571438543713e-005,
5.702295473852121e-006,
1.139374176945190e-005,
1.768656862353273e-005,
6.037477073975866e-006,
-5.575470653744359e-006,
1.192254194679690e-006,
7.920948303020315e-006,
-3.953705339324679e-006,
-1.606093566556393e-005,
-9.817399176855966e-006,
-3.338649872695887e-006,
-1.473287184956702e-005,
-2.571821838656865e-005,
-1.874882321299375e-005,
-1.292033991958106e-005,
-2.582808988838720e-005,
-3.741132368607202e-005,
-2.914986765246951e-005,
-2.139740123855149e-005,
-3.393754768117995e-005,
-4.715104624893492e-005,
-4.054755747396234e-005,
-3.245273134340072e-005,
-4.303229894601374e-005,
-5.490955599273886e-005,
-4.890830921425622e-005,
-4.232549781303281e-005,
-5.349550743617288e-005,
-6.458769063175072e-005,
-5.745972333352813e-005,
-5.038438957227440e-005,
-6.172674773372658e-005,
-7.325814974493417e-005,

```

-6.659023078650477e-005,
-5.970364077652705e-005,
-7.052069173462139e-005,
-8.089131594202723e-005,
-7.344621220964209e-005,
-6.714748932776967e-005,
-7.941851641404657e-005,
-9.033537903215909e-005,
-8.155280109114505e-005,
-7.329049042984592e-005,
-8.515240644930896e-005,
-9.764294813621941e-005,
-9.045214268553966e-005,
-8.179682080080979e-005,
-9.167007367371464e-005,
-1.027926896300567e-004,
-9.614932571763857e-005,
-8.894494127542514e-005,
-9.936417706650144e-005,
-1.096677553245005e-004,
-1.018572722126839e-004,
-9.411608532954507e-005,
-1.046689794171709e-004,
-1.153722872590574e-004,
-1.079738144400442e-004,
-1.003756986455269e-004,
-1.103717076841593e-004,
-1.198868272597397e-004,
-1.116729803820053e-004,
-1.046180559438039e-004,
-1.160289770348077e-004,
-1.260564951034553e-004,
-1.164720446149954e-004,
-1.074244952818260e-004,
-1.184002847766950e-004,
-1.299667920043372e-004,
-1.219302631970535e-004,
-1.124554069908260e-004,
-1.214258181108333e-004,
-1.316061795364053e-004,
-1.240821200960736e-004,
-1.160200222264548e-004,
-1.255120508610638e-004,
-1.348553630701627e-004,
-1.261389703141697e-004,
-1.175131653173175e-004,
-1.271196659209227e-004,
-1.368436726001547e-004,
-1.285120312653274e-004,
-1.200037634634550e-004,
-1.290397909871640e-004,
-1.375643312370181e-004,
-1.283966783908482e-004,
-1.204088833700360e-004,
-1.308454524319565e-004,
-1.398705317720526e-004,
-1.293155075297185e-004,
};

TapsLength = WideHeadTaps48kLength;
XFLOAT* Taps = (XFLOAT*)matMalloc(TapsLength*sizeof(XFLOAT));
matbCopy(WideHeadTaps48k, Taps, TapsLength);

return Taps;
}

XFLOAT gAlignFilterdB Narrow [31][2] = {
    {0., -500.0},
    {50., -500.0},
    {100., -100.0},
    {125., -50.0},
    {160., -30.0},
    {200., -15.0},
    {250., -8.0},
    {300., 0.0},
    {350., 0.0},

```

```

{400., 0.0},
{500., 0.0},
{600., 0.0},
{630., 0.0},
{800., 0.0},
{1000., 0.0},
{1250., 0.0},
{1600., 0.0},
{2000., 0.0},
{2500., 0.0},
{3000., -10.0},
{3250., -30.0},
{3500., -100.0},
{4000., -500.0},
{5000., -500.0},
{6300., -500.0},
{8000., -500.0},
{10000., -500.0},
{12000., -500.0},
{16000., -500.0},
{20000., -500.0},
{24000., -500.0}];

```

```

XFLOAT gAlignFilterdBWide [31][2] = {
{0., -500.0},
{50., -500.0},
{100., -500.0},
{125., -100.0},
{160., -50.0},
{200., -30.0},
{250., -20.0},
{300., -10.0},
{350., 0.0},
{400., 0.0},
{500., 0.0},
{600., 0.0},
{630., 0.0},
{800., 0.0},
{1000., 0.0},
{1250., 0.0},
{1600., 0.0},
{2000., 0.0},
{2500., 0.0},
{3000., -7.0},
{3250., -25.0},
{3500., -50.0},
{4000., -80.0},
{5000., -100.0},
{6300., -500.0},
{8000., -500.0},
{10000., -500.0},
{12000., -500.0},
{16000., -500.0},
{20000., -500.0},
{24000., -500.0}];

```

```

XFLOAT gStandardIRSdB [31][2] = {
{0., -100.0},
{50., -50.0},
{100., -20.0},
{125., -12.0},
{160., -6.0},
{200., 0.0},
{250., 4.0},
{300., 6.0},
{350., 8.0},
{400., 10.0},
{500., 11.0},
{600., 12.0},
{700., 12.0},
{800., 12.0},
{1000., 12.0},
{1300., 12.0},
{1600., 12.0},
{2000., 12.0},
{2500., 12.0},

```

```
{3000., 12.0},
{3250., 12.0},
{3500., 4.0},
{4000., -50.0},
{5000., -100.0},
{6300., -200.0},
{8000., -300.0},
{10000., -400.0},
{12000., -500.0},
{16000., -500.0},
{20000., -500.0},
{24000., -500.0}};
```

```
XFLOAT gModifiedIRSdB [31][2] = {
{ 0., -60.0},
{ 50., -30.0},
{100., -13.4},
{125., -7.4},
{160., -2.4},
{200., 3.2},
{250., 6.7},
{300., 9.2},
{315., 9.7},
{400., 11.3},
{500., 11.9},
{600., 12.1},
{630., 12.1},
{800., 12.3},
{1000., 12.6},
{1250., 12.5},
{1600., 13.1},
{2000., 12.9},
{2500., 12.6},
{3000., 13.0},
{3150., 12.9},
{3500., 10.9},
{4000., 2.1},
{5000., -11.7},
{6300., -25.0},
{8000., -50.0},
{10000., -100.0},
{12000., -200.0},
{16000., -500.0},
{20000., -500.0},
{24000., -500.0}};
```

```
XFLOAT gWidebandHeadphone [31][2] = {
{ 0., -100.0},
{ 50., -6.0},
{100., 6.0},
{125., 12.0},
{160., 12.0},
{200., 12.0},
{250., 12.0},
{300., 12.0},
{315., 12.0},
{400., 12.0},
{500., 12.0},
{600., 12.0},
{630., 12.0},
{800., 12.0},
{1000., 12.0},
{1250., 12.0},
{1600., 12.0},
{2000., 12.0},
{2500., 12.0},
{3000., 12.0},
{3150., 12.0},
{3500., 12.0},
{4000., 12.0},
{5000., 12.0},
{6300., 12.0},
{8000., 12.0},
{10000., 10.0},
{12000., 6.0},
{16000., -100.0},
```

```

        {20000., -500.0},
        {24000., -500.0}};

```

```

XFLOAT gNarrowbandHeadphone [31][2] = {
    { 0., -100.0},
    { 50., -40.0},
    {100., -16.0},
    {125., -10.0},
    {160., -5.0},
    {200., 0.0},
    {250., 4.0},
    {300., 6.0},
    {350., 8.0},
    {400., 10.0},
    {500., 11.0},
    {600., 12.0},
    {700., 12.0},
    {800., 12.0},
    {1000., 12.0},
    {1300., 12.0},
    {1600., 12.0},
    {2000., 12.0},
    {2500., 12.0},
    {3000., 12.0},
    {3250., 12.0},
    {3500., 4.0},
    {4000., -50.0},
    {5000., -100.0},
    {6300., -200.0},
    {8000., -500.0},
    {10000., -500.0},
    {12000., -500.0},
    {16000., -500.0},
    {20000., -500.0},
    {24000., -500.0}};

```

```

XFLOAT* GetAmplitudeAlignFilter(int ListeningCondition, int SampleFrequency, int
&FilterLength)
{
    XFLOAT* AlignFilter = 0;
    switch(ListeningCondition)
    {
        case 2:
            switch(SampleFrequency)
            {
                case 8000:
                    AlignFilter = GetNBAlign8kTaps(FilterLength);
                    break;
                case 16000:
                    AlignFilter = GetNBAlign16kTaps(FilterLength);
                    break;
                case 48000:
                    AlignFilter = GetNBAlign48kTaps(FilterLength);
                    break;
                default:
                    ASSERT(1==2);
            }
            break;

        case 3:
            switch(SampleFrequency)
            {
                case 8000:
                    AlignFilter = GetSWBAlign8kTaps(FilterLength);
                    break;
                case 16000:
                    AlignFilter = GetSWBAlign16kTaps(FilterLength);
                    break;
                case 48000:
                    AlignFilter = GetSWBAlign48kTaps(FilterLength);
                    break;
                default:
                    ASSERT(1==2);
            }
            break;
    }
}

```

```

    return AlignFilter;
}

XFLOAT* GetInputFilterFilter(int ListeningCondition, int SampleFrequency, int
&FilterLength)
{
    XFLOAT* InputFilter = 0;
    switch(ListeningCondition)
    {
        case 2:
            switch(SampleFrequency)
            {
                case 8000:
                    InputFilter = GetIRS8kTaps(FilterLength);
                    break;
                case 16000:
                    InputFilter = GetIRS16kTaps(FilterLength);
                    break;
                case 48000:
                    InputFilter = GetIRS48kTaps(FilterLength);
                    break;
                default:
                    ASSERT(1==2);
            }
            break;

        case 3:
            switch(SampleFrequency)
            {
                case 8000:
                    InputFilter = GetWideHead8kTaps(FilterLength);
                    break;
                case 16000:
                    InputFilter = GetWideHead16kTaps(FilterLength);
                    break;
                case 48000:
                    InputFilter = GetWideHead48kTaps(FilterLength);
                    break;
                default:
                    ASSERT(1==2);
            }
            break;
    }

    return InputFilter;
}

void AddNoiseFloor(CTimeSeries* TimeSeries, int Length)
{
    const XFLOAT MaxNoiseVal = 5;
    XFLOAT NoiseVal;
    srand(1);

    for (int i=0; i<Length; i++)
    {
        NoiseVal = MaxNoiseVal * (((XFLOAT)rand()/(XFLOAT)RAND_MAX) +
        ((XFLOAT)rand()/(XFLOAT)RAND_MAX) + ((XFLOAT)rand()/(XFLOAT)RAND_MAX) +
        ((XFLOAT)rand()/(XFLOAT)RAND_MAX) + ((XFLOAT)rand()/(XFLOAT)RAND_MAX) - 2.5) /
        2.5;
        (*TimeSeries)[i] += NoiseVal;
    }
}

void CPairParameters::NormalizationProcess (XFLOAT CalibrationDb)
{
    CNewStdString s;

    CTimeSeries alignFilteredOriginalTimeSeries, alignFilteredDistortedTimeSeries;
    alignFilteredOriginalTimeSeries.Initialize("alignFilteredOriginalTimeSeries",
POLQAHandle);
    alignFilteredDistortedTimeSeries.Initialize("alignFilteredDistortedTimeSeries",
POLQAHandle);

    int AmplitudeAlignFilterLength;

```

```

XFLOAT* AmplitudeAlignFilter = 0;
AmplitudeAlignFilter = GetAmplitudeAlignFilter(statics->listeningCondition,
(int)statics->sampleRate, AmplitudeAlignFilterLength);

alignFilteredOriginalTimeSeries.FilterWith(POLQAHandle, aOriginalTimeSeries,
AmplitudeAlignFilter, AmplitudeAlignFilterLength);
alignFilteredDistortedTimeSeries.FilterWith(POLQAHandle, aDistortedTimeSeries,
AmplitudeAlignFilter, AmplitudeAlignFilterLength);

const int frameLength = (int)(statics->sampleRate*0.020);
const XFLOAT overlapFac = 0.5;
const int numEnvFrames = statics->nrTimesSamples / (int)(frameLength*overlapFac);
XFLOAT aAvgHighPowerDistortedPower;
CDoubleArray originalPower, distortedPower;
originalPower. SetSize (numEnvFrames);
distortedPower. SetSize (numEnvFrames);

ShowProgress (10, "Computing envelopes - original");
ShowProgress (10, "Computing envelopes - distorted");
aAvgOriginalPower = 0;
aAvgDistortedPower = 0;
int startSample = 0;
for(int frameIndex = 0; frameIndex < numEnvFrames; frameIndex++) {
    originalPower. m_pData[frameIndex] = alignFilteredOriginalTimeSeries.
Envelope (POLQAHandle, startSample, frameLength);
    distortedPower. m_pData[frameIndex] = alignFilteredDistortedTimeSeries.
Envelope (POLQAHandle, startSample, frameLength);
    startSample = frameIndex * (int)(frameLength*overlapFac);
}
matbSqr1(originalPower. m_pData, numEnvFrames);
matbSqr1(distortedPower.m_pData, numEnvFrames);

aAvgOriginalPower = matMean(originalPower. m_pData, numEnvFrames);
aAvgDistortedPower = matMean(distortedPower.m_pData, numEnvFrames);

aAvgActiveOriginalPower = 0.0;
aAvgActiveDistortedPower = 0.0;
int numberOfActiveOriginalFrames = 0;
int numberOfActiveDistortedFrames = 0;

for (int frameIndex = 0; frameIndex < numEnvFrames; frameIndex++) {
    if (distortedPower.m_pData[frameIndex] > (aAvgDistortedPower / 1.0E4)) {
        aAvgActiveDistortedPower += distortedPower.m_pData[frameIndex];
        numberOfActiveDistortedFrames++;
    }
    if (originalPower. m_pData[frameIndex] > (aAvgOriginalPower / 1.0E4)) {
        aAvgActiveOriginalPower += originalPower. m_pData[frameIndex];
        numberOfActiveOriginalFrames++;
    }
}

aAvgActiveOriginalPower = numberOfActiveOriginalFrames > 0 ?
aAvgActiveOriginalPower /numberOfActiveOriginalFrames : 0.0;
aAvgActiveDistortedPower = numberOfActiveDistortedFrames > 0 ?
aAvgActiveDistortedPower/numberOfActiveDistortedFrames : 0.0;

if (aListeningCondition==STANDARD_IRS) {
    globalScaleOriginalToFixedlevel = (XFLOAT) sqrt
(1.4e7/(aAvgActiveOriginalPower+1000.0));
    globalScaleDistortedToFixedlevel = (XFLOAT) sqrt
(1.4e7/(aAvgActiveDistortedPower+1000.0));
}
else if (aListeningCondition==WIDE_H) {
    globalScaleOriginalToFixedlevel = (XFLOAT) sqrt
(5.0e6/(aAvgActiveOriginalPower+1000.0));
    globalScaleDistortedToFixedlevel = (XFLOAT) sqrt
(5.0e6/(aAvgActiveDistortedPower+1000.0));
}
else if (aListeningCondition==NARROW_H) {
    globalScaleOriginalToFixedlevel = (XFLOAT) sqrt
(1.4e7/(aAvgActiveOriginalPower+1000.0));
    globalScaleDistortedToFixedlevel = (XFLOAT) sqrt
(1.4e7/(aAvgActiveDistortedPower+1000.0));
}

aGlobalScaleOriginal = globalScaleOriginalToFixedlevel;

```

```

aGlobalScaleDistorted = min(CalibrationDb, 30.0);

if (Mode & RESF_LEVEL_ALIGN)
{
    aGlobalScaleOriginal= globalScaleOriginalToFixedlevel;
    aGlobalScaleDistorted= globalScaleDistortedToFixedlevel;
}

if (aListeningCondition==STANDARD_IRS) {
    aOriginalTimeSeries *= (1.6*aGlobalScaleOriginal);
    aDistortedTimeSeries *= (1.6*aGlobalScaleDistorted);
}
if (aListeningCondition==WIDE_H) {
    aOriginalTimeSeries *= (1.0*aGlobalScaleOriginal);
    aDistortedTimeSeries *= (1.0*aGlobalScaleDistorted);
}
if (aListeningCondition==NARROW_H) {
    aOriginalTimeSeries *= (1.6*aGlobalScaleOriginal);
    aDistortedTimeSeries *= (1.6*aGlobalScaleDistorted);
}

aGlobalCompensation1 = (aAvgOriginalPower+1.0) / (aAvgDistortedPower+1.0);
if (aGlobalCompensation1 < 1.0) {aGlobalCompensation1 = 1.0;}
aGlobalCompensation1 = pow(aGlobalCompensation1,0.2);

aAvgActiveOriginalPower = 0.0;
aAvgActiveDistortedPower = 0.0;
numberOfActiveOriginalFrames = 0;
numberOfActiveDistortedFrames = 0;
aAvgHighPowerDistortedPower = 0.0;

for (int frameIndex = 0; frameIndex < numEnvFrames; frameIndex++) {
    if (originalPower.m_pData[frameIndex] > (aAvgOriginalPower / 1.0e3)) {
        aAvgActiveOriginalPower += originalPower.m_pData[frameIndex];
        numberOfActiveOriginalFrames++;
    }
    if (distortedPower.m_pData[frameIndex] > (aAvgDistortedPower / 8.0e3)) {
        aAvgActiveDistortedPower += distortedPower.m_pData[frameIndex];
        numberOfActiveDistortedFrames++;
    }
    if (distortedPower.m_pData[frameIndex] > ((aAvgDistortedPower*2.0)+10.0)) {
        aAvgHighPowerDistortedPower += distortedPower.m_pData[frameIndex];
    }
}
aAvgActiveOriginalPower = numberOfActiveOriginalFrames > 0 ?
aAvgActiveOriginalPower / numberOfActiveOriginalFrames : 0.0;
aAvgActiveDistortedPower = numberOfActiveDistortedFrames > 0 ?
aAvgActiveDistortedPower / numberOfActiveDistortedFrames : 0.0;
crestFactor =
(aAvgHighPowerDistortedPower+100.0)/(aAvgActiveDistortedPower+100.0);

aGlobalCompensation3 = (numberOfActiveOriginalFrames +
1.0)/(numberOfActiveDistortedFrames + 1.0);
if (aGlobalCompensation3 < 1.0) aGlobalCompensation3 = 1.0;

aGlobalCompensationIntell = (numberOfActiveOriginalFrames +
0.1)/(numberOfActiveDistortedFrames + 0.1);
if (aGlobalCompensationIntell < 1.0) aGlobalCompensationIntell = 1.0;

int InputFilterLength;

XFLOAT* InputFilter = 0;
InputFilter = GetInputFilterFilter(statics->listeningCondition,
(int)statics->sampleRate, InputFilterLength);

aOriginalTimeSeries.FilterWith(POLQAHandle, aOriginalTimeSeries, InputFilter,
InputFilterLength);
aDistortedTimeSeries.FilterWith(POLQAHandle, aDistortedTimeSeries, InputFilter,
InputFilterLength);

if (AmplitudeAlignFilter)
    matFree(AmplitudeAlignFilter);
if (InputFilter)
    matFree(InputFilter);
}
}

```


