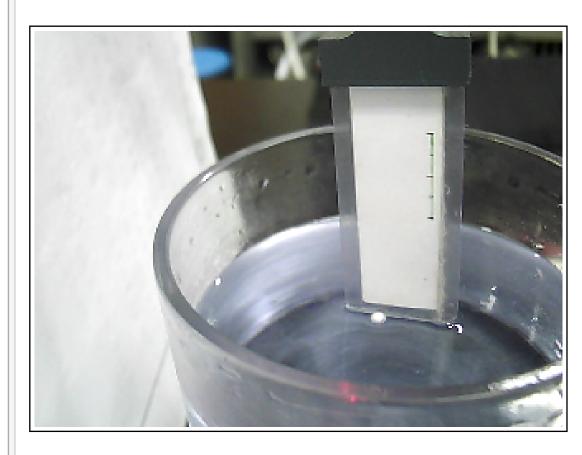
```
ln[12]:= Manipulate Framed [Show[img, ImageSize → 550]],
       Item[" ", ControlPlacement → Top],
       Item[Row[{" ", Style["旋转液体物理特性研究实验改进的数据处理程序 ", {Red, 25, Bold}],
           " "}, Spacer[220]], ControlPlacement → Top],
       Delimiter, Item["\n ", ControlPlacement → Top],
       Item[Style["重力加速度计算", {20, Blue}],
        ControlPlacement -> Right], Delimiter,
       Item[Grid[{{Control[{{t1, Null, "T"}, InputField[#, FieldSize → 9.6] &}],
            Control[{{x1, Null, "X"}, InputField[#, FieldSize → 9.6] &}],
            Button[Style["计算", Red], Module[{indata, data = {}},
               indata = {{t1, x1}, {t2, x2}, {t3, x3}};
               Do[If[(!SameQ[indata[[i,1]],Null]) && (!SameQ[indata[[i,2]],Null]),
                  data = Append[data, {indata[[i, 1]], indata[[i, 2]],
                     NumberForm \left[N\left[\frac{2\pi}{\text{indata[[i,1]]}}\right]^2 \text{indata[[i,2]]], {4, 3}\right]
                     Row[{ NumberForm[
                           100 Abs \left[ \left( \frac{2 \pi}{\text{indata}[[i, 1]]} \right)^2 \text{indata}[[i, 2]] - 9.8 \right] / 9.8, {4, 3} \right], "%" }
                    }]],
                 {i, 1, 3}];
               data = Prepend[data, {"周期 T/s", "距离 X/m", "重力加速度 g/(m/s²)", "相对误差"}];
               CreateDialog[Grid[data, Frame → All]]], ImageSize → {83, 25}],
            Button[Style["清空", Red],
              t1 = t2 = t3 = x1 = x2 = x3 = Null, ImageSize \rightarrow {83, 25}},
           {Control[{{t2, Null, ""}, InputField[#, FieldSize → 9.6] &}],
            Control[{{x2, Null, ""},
               InputField[#, FieldSize → 9.6] &}]},
           {Control[{{t3, Null, ""}, InputField[#, FieldSize → 9.6] &}],
            Control[{{x3, Null, ""},
               InputField[#, FieldSize → 9.6] &}]}},
          Spacings \rightarrow \{\{0, 2.5, 2.5, 2.5, 0\}, \{Automatic\}\},\
          Alignment → Right], ControlPlacement → Right],
       Delimiter,
       Delimiter,
       Item [Row [{Button ["检查CCD", CreateDialog [Show [CurrentImage [], ImageSize → 700]],
            ImageSize \rightarrow {83,30}], Button["调整", CreateDialog[Dynamic[Show[CurrentImage[],
                ImageSize \rightarrow 700]]], ImageSize \rightarrow {83, 30}],
           Button["拍照", img = CurrentImage[], ImageSize → {83, 30}],
           Button[Style["计算", {Red}], (*TODO*)
            Module \big[ \big\{ \texttt{indata, 1, data = \{} \}, \texttt{report = } \big\{ \big\{ \texttt{"周期T(s)", "转速} \omega(\texttt{rad/s}) \texttt{", "焦距f(cm)", } \vdots \big\},
                  {…,…,"实测:","理论:"}}},
              indata =
               \{\{\omega 1, p1\}, \{\omega 2, p2\}, \{\omega 3, p3\}, \{\omega 4, p4\}, \{\omega 5, p5\}, \{\omega 6, p6\}, \{\omega 7, p7\}, \{\omega 8, p8\}\};
              Do[If[!SameQ[indata[[i, 1]], Null] && ListQ[indata[[i, 2]]],
                data = Append [data,
                   \left\{\frac{2\pi}{\text{indata[i,1]}},\right.
                     (2\sqrt{(indata[i, 2, 3, 1] - indata[i, 2, 4, 1])^2 + (indata[i, 2, 3, 2] - indata[i, 2, 3, 2])}
                                  2, 4, 2]) ^{2}) / (\sqrt{(indata[i, 2, 1, 1] - indata[i, 2, 2, 1])^{2} + indata[i, 2, 2, 1]}
```

```
(indata[i, 2, 1, 2] - indata[i, 2, 2, 2])^{2}))]],
          \{i, 1, 8\}; 1 = \text{Length}[\text{data}]; \text{Do}[\text{report} = \text{Append}[\text{report}, \{\frac{2\pi}{\text{data}[[i, 1]]}, \frac{\pi}{\text{data}[[i, 1]]}\}]
              N[data[[i, 1]]], data[[i, 2]], \frac{100 g}{2 data[[i, 1]]^2}], {i, 1, 1}];
        report = Transpose[report];
        \label{eq:createdialog} $$\operatorname{CreateDialog}(\star TODO\star) \ If [\operatorname{Length}[\operatorname{data}] \neq 0, \ \operatorname{Column}[\{\operatorname{Grid}[\operatorname{report}, \ \operatorname{Frame} \rightarrow \operatorname{All}], \ ], $$
              "\n", Show[Plot[\frac{100 \text{ g}}{2 \omega^2}, {\omega, 2\pi, 6\pi}], ListPlot[data], ImageSize \rightarrow 400]}],
            "没有输入数据"]
        ]], ImageSize \rightarrow {83, 30}], Button[Style["清空", Red],
      \omega 1 = p1 = \omega 2 = p2 = \omega 3 = p3 = \omega 4 = p4 = \omega 5 = p5 = \omega 6 = p6 = \omega 7 = p7 = \omega 8 = p8 = Null
       , ImageSize → {83, 30}]}, Spacer[20]], ControlPlacement → Right],
Delimiter,
Item[Grid[{
     {Style["周期/s", {20, Blue}], Style["坐标", {20, Blue}]},
     {Control[{\{\omega 1, Null, ""\}, InputField[\#, FieldSize \rightarrow 7] \&}],
      Control[{{p1, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     \{Control[\{\{\omega 2, Null, ""\}, InputField[\#, FieldSize \rightarrow 7] \&\}], \}
      Control[{{p2, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     {Control[{\{\omega 3, Null, ""\}, InputField[#, FieldSize \rightarrow 7] \&}],}
      Control[{{p3, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     {Control[{\{\omega 4, Null, ""\}, InputField[\#, FieldSize \rightarrow 7] \&}],
      Control[{{p4, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     \{\texttt{Control}[\{\{\omega 5,\, \texttt{Null},\, \texttt{""}\},\, \texttt{InputField}[\sharp,\, \texttt{FieldSize} \rightarrow 7] \,\,\&\}]\,,
      Control[{{p5, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     \{Control[\{\{\omega 6, Null, ""\}, InputField[\#, FieldSize \rightarrow 7] \&\}], \}
      Control[{{p6, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     {Control[{\{\omega 7, Null, ""\}, InputField[\#, FieldSize \rightarrow 7] \&\}],
      Control[{{p7, Null, ""},
          InputField[#, FieldSize → 35] &}]},
     \{\texttt{Control}[\{\{\omega 8,\, \texttt{Null},\, \texttt{""}\}\,,\, \texttt{InputField}[\#,\, \texttt{FieldSize} \rightarrow 7]\,\,\&\}]\,,
      Control[{{p8, Null, ""},
          InputField[#, FieldSize → 35] &}]}
   \}, Frame \rightarrow All ], ControlPlacement \rightarrow Right ], SaveDefinitions \rightarrow True,
Initialization :→ g = 9.8; img =
```

旋转液体物理特性研究实验改进的数



Out[12]=