

Communicating What Science Is, Not What It Is Like – Non-professionally Executed Astronomy of Professional Standard

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Attempts to communicate astronomy fall into three categories: (a) witnessing, where an astronomer or a representative describes to an audience of students what astronomers have done and found out; (b) exercises, where the students simulate what astronomers do; and (c) participation, where the non-professional scientists carry out astronomical programmes. About 150 years ago or more, amateur astronomers opened up research in astronomical areas such as deep-sky surveys and spectroscopy through participation. Programmes like these remained operative in for example the activities of the American Association of Variable Star Observers. But for the last century the professionalisation of astronomy and the growth of an entertainment industry as a model for communication to a passive audience have shifted the balance of the communication of astronomy towards witnessing, and directed exercises (like public viewing nights). There are now available new generations of affordable, sensitive detectors, powerful astronomical telescopes are within the financial reach of an individual, and professionally-equipped large telescopes are becoming available through various access schemes. Archives from professionally executed surveys are becoming open. These developments bring so many possible astronomical objects within range that it is becoming easy again for the non-professional astronomer to participate in the discovery of new information. The value of this shift is that science is communicated as a process, not as a collection of results. Are we ready?