Antarctic Peninsula Automatic Weather Station Servicing by BAS for Summer 2007/08

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The British Antarctic Survey service 5 AWS on the Antarctic Peninsula. The AWS are Fossil Bluff, Sky Blu, Limbert, Butler Island and Larsen Ice Shelf. All of the AWS have now been updated to the new Campbell Scientific loggers based around the CR1000. They all have ST-20 ARGOS transmitters on them and they have the same ARGOS IDs as the old Wisconsin stations had. The data is downloaded from the University of Wisconsin website every hour then decoded and error checked. The data is then formatted into a synoptic message that includes the wind speed, wind direction, temperature, dewpoint, station pressure, sea level pressure, pressure trend and the time of the observation. The synoptic message is then sent to the Met Office via E-mail for insertion onto the GTS. This last season an AWS was installed by BAS at our Baldrick site (82.46S 13.03W) to fill one of the data voids that exists over Antarctica. This system is functioning well but it does have an intermittent fault with the pressure sensor that will be investigated next season. The data from this system is being received via ARGOS and processed at BAS and then inserted onto the GTS with WMO ID 89013. An AWS was also installed at Patriot Hills by a collaborative effort between Ronald Ross and ALE (Antarctic Logistics & Expeditions) and the data from this AWS is being downloaded on a daily basis via Iridium and it is then processed at BAS and inserted onto the GTS with WMO number 89081 Iridium modems were installed on the AWS at Butler Island and Limbert and these are working well with the data being downloaded once a week. This then allows completed CLIMAT messages to be calculated and the 10 minute values are also being uploaded onto the university of Wisconsin ftp site on a monthly basis. The one problem that has been encountered with the modems is that they do not operate below -28Â°C but the system is designed to that if it misses a weekly download it will then try every day until the download has occurred and then switch back to weekly. The plans for next season are to install 3 more Iridium modems on the AWS at Fossil Bluff, Sky Blu and Larsen Ice Shelf. It is also planned to add a CNR1 solar radiation sensor to the AWS on Larsen Ice Shelf and this will give incoming and outgoing short and long wave radiation.