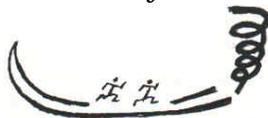


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(address orders
and letters to
Tim Marshall)

CHASE PREPARATION ISSUE

I. COMMENTARY

Gentlemen and ladies, start your engines. The severe weather season has begun. Several mini-outbreaks have occurred in the southern states in February and March which is typical to start off the year. The first chaseable day in North Texas arrived on March 16th as a powerful storm system swept onto the plains. Although, conditions looked most favorable for a squall line, Phil and I decided to "just get our feet wet" after hibernating all winter. It was sure pleasing to get out Abilene way again. Our next adventure was March 22, where we saw a highly sheared supercell near Canadian, TX. Again!

ST welcomes the 85 new subscribers this issue! Many saw the storm chasing article in Weatherwise magazine a few months ago. Most wrote that they have always loved the extremes of weather and were elated at finding a common bond with others in ST. That's it! That is why ST is here. For many of you, it may be your first year out to visit the plains. You'll need to have plenty of road maps, gasoline credit cards, and have places to stay overnight. Read on.

Hey, if you visit a National Weather Service this year, there are a few things which could make your visit more helpful to all. First, be courteous to the employees, and make known your intentions (i.e. Do you want to look at the convective outlook, surface data (P25), soundings, or LFM, etc.) Do not come right out and ask: "Where's the severe weather going to be today folks?". And if you sight a funnel tornado, or hail golfball-size or larger, please let me or the local weather service know about it after the event. Don't wait five months until STORM DATA is published to find out your severe weather report wasn't listed. After all, we are the eyes to the sky out there. A little extra thoughtfulness can insure you will be welcomed the next time you visit a National Weather Service.

Caution is advised when visiting the National Severe Storms Lab and Weather Service Office in Norman, OK. New policy changes towards private storm chasers have been implemented. Chasers who plan to visit the Norman area this spring are urged to carefully read the enclosed policy statement.

The debate continues over El Nino's effects on severe weather (if any). Since the last commentary, dozens of letters have been received. Most people believe the effect of El Nino means more tornadoes; others believe a drought year. So much interest has evolved from this commentary that one person has launched a research project to find out about El Nino's strength and severe weather. "Some of the strongest El Nino years have had largest numbers of tornadoes in the plains", says Al Moller.

In the next issue, each subscriber will receive a form to fill out and send back concerning where and when you chased. A chase log will be published in a future ST. The purpose is to help those who want to exchange their observations about storms on a particular day to do so.

II. CHASER NEWS

The Texas Department of Public Safety has issued a stern warning to storm chasers in Texas: "You better follow the rules of the road". In a recent meeting, storm chasers were mentioned as a problem and a "crackdown" will be in order. Some of the state troopers have Mustangs which are faster than the older cars. So BWER.

The Senate and House have passed a resolution to raise interstate speed limits from 55 to 65 mph on rural highways. Proponents conceded that the 55 mph limit, mandated by Congress during the oil shortage of 1973, was to save fuel which some believe is no longer needed. Both Sen. Phil Gramm and Sen. Lloyd Bentsen of Texas agree the state should raise its limit. Secretary of Transportation Elizabeth Dole also thinks raising the limit is a good idea. Watch the veto though!

Neil Frank, the director and energetic voice of the National Hurricane Center since 1974, will soon switch from forecasting to broadcasting. Dr. Frank will be moving to Houston, TX to join the staff of KHOU-TV. Good Luck Dr. Frank.

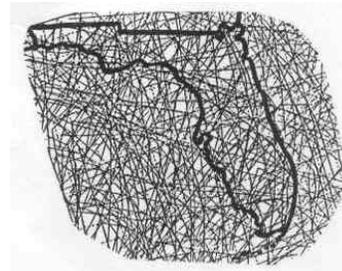
III. LETTERS/PHONE CALLS TO THE EDITOR

Ralph Kirste says: "I just received my first copy of ST and I'm glad to have finally found you people with my interests! Since we are not blessed with much severe weather in southern California, I have shifted my activities towards chasing dust devils. I have been able to obtain various environmental readings inside them. After intercepting their trajectories across the desert floor, I have been able to stay as long as twenty seconds within the swirling dust column. Not an easy task with rocks, bushes, and other debris in the way. On a good afternoon, I've been able to sample 3 or 4 dust devils. By using yellow-green polaroid glasses, I can see the vortices several miles away and ascertain their trajectory for interception. Rarely do dust devils grow to large diameters. The largest one I've seen was some 60 yards across. It knocked down a couple of electric power poles in Pomona, CA. "

Karl Leiker lives in Westfield, MA and says: "Snow, as a severe weather phenomenon gets boring in a hurry. Already, I yearn for the spring and the green, balmy prairies of Kansas. I plan to be at my mother's house in Hays by the last week of May. "

Bill Crouch, MIC-SAT, comments about El Nino: "El Nino this year seems to be weaker than in 1983. As a result, we are expecting increased severe weather in south Texas this spring. West and North Texas through Oklahoma may also see an increase. A weak El Nino, excessive soil moisture, and expected upper air patterns, lead us to believe an active severe weather season is ahead. The Gulf of Mexico surface temperatures are not below normal. "

Randy Zipser sent in some interesting information about Florida hurricanes. Presented here is a map which shows the tracks of 136 hurricanes and 234 tropical storms which have struck Florida since 1886. That's right, only during the last 100 years. Source: FSU Beaches and Shores.



IV. ROSTER

The ST Roster lists names, addresses, and brief bibliographies of those persons interested in or willing to correspond with others about storms. Normally, only recent entries since the last issue are included.

Name	Address	Chase country-range
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Tim Vasquez	3222 Kingswood Dr. Garland, Texas 75040	North Texas and Southern Oklahoma
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Bibliography: I am coordinator of storm chase team "STATIC", comprised of 4 people. Our team is active in chasing severe weather, and we make extensive documentation of our operations and area weather. If you are interested in our data, exchanging data, or want to chase with us, please write.

Dan Nichols	14 Cross St. Manchester, Conn 06040	Florida
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Bibliography: Age 43, employed as a graphic illustrator with avocations in music, art, and foreign language study. "Although, I've never seen a tornado and would like to; my chief interest is in severe thunderstorms the likes of which I usually manage to miss somehow. Having been terrified and fascinated by lightning and thunder as a young child, happily my fears subsided quite early, and my fascination intensified into a longtime desire to catch the 'big one'. I'm presently seeking someone willing to chase and share lodging, or car costs. I would also be happy to hear from anyone (not necessarily desiring travel) in sharing information on storm related experiences."

Dean Cosgrove	Rt. 2, Box 9B Creighton, NE 68729	Nebraska
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Bibliography: Age 29, employed at Burlington Northern R. R., but not working currently due to a back injury. I am willing to go anywhere to chase storms. Although, I can't drive, I'm willing to be a participant. I've got a Cb, scanner, and video. Please write.

Chris Novy	P. O. Box 231 Murphysboro, IL 62966	
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"If you are an amateur radio operator that can operate on the HF bands, I would love to talk storms with whoever. I will be doing some video taping this spring with the hope of putting together a 'How to set up and operate a spotter's net' training film for our State Emergency Services agency."

Jeff Deloach	9500 N. E. St Johns Rd. Vancouver, WA 98665	
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Bibliography (unedited): Age 15, and I'm interested in severe storms and meteorology. I have been since I was 7 years old. I'm a severe storm spotter for the Vancouver area. Every summer I go in the field to try to catch a thunderstorm. I plan on going to Norman, OK when I'm 17 years old. Maybe another storm chaser could teach.

V. FEATURE #1

TORNADO CHASER TRIVIA

You may see one or more of the following people out there chasing storms this spring. Who are they? These chasers have shared with us their adventures in ST. Can you answer the trivia questions below?



sketches by David Hoadley

- 1) The Top Hat Hotel was visited several times by this chaser.
- 2) While enroute to a storm, this chaser had to stop at a roadblock
- 3) Hail caused considerable vehicle damage to this chaser's car near Mountain View.
- 4) These two chasers were struck by lightning near Katie.
- 5) This chaser was vacationing in Hawaii when his hometown was struck by a December tornado.
- 6) The fall season was spent flying into hurricanes by this chaser.
- 7) Photogrammetry of the Tulia storm was this chaser's prime interest for a while.
- 8) This chaser ran off the road during a blinding dusty outflow.
- 9) Which chaser photographed a picturesque supercell near Berger?
- 10) A roaring sound was heard from a storm near Jacksboro by this top-hatted chaser.
- 11) This chaser's car was broad-sided in Archer City during a chase.
- 12) What OU-student chaser filmed a hair-raising tornado at Altus?
- 13) This chaser successfully deployed TOTO in a tornado near Ardmore.

VI. FEATURE #2

CHASE EQUIPMENT: VIDEO

By Tim Marshall

The craze these days is video. Many people have bought or rented them. If you plan to chase with a video system, it helps to shop around for the system you want, at the price you want to pay. But before you go, you should have in mind some idea of what you want. There are many cameras and recorders available. Some systems are fancier than others but don't necessarily produce a better picture. To get started, it will take about \$1,000 for the bottom line "camcorders", camera and recorder all in one. Most video places carry camcorders entirely.

Why video? Videotaped movies are remarkably inexpensive. A VHS tape, which runs for two hours at its fastest speed, costs about \$5. In contrast, two hours of Super-8 film, including processing, can cost \$500. Ouch.

A. VIDEO CAMERAS

Collect product information on the type of system you want. It always helps to pay a visit to a store and see a demonstration of the equipment. There are many pros and cons about picture quality. Image noise can be a problem with some inexpensive systems. Focus on a still object and look at your monitor or TV carefully. Make sure the image is sharp, detail crisp, and colors true. If the border of the stationary image appears wavy, that's image noise.

Almost all the lenses suffer some degree of flare. When directed toward bright light and suddenly moved, a faded streak or tail appears following the trajectory of the light. The manifestation of that type of highlight problem seems to depend largely on the camera's image detector which is the component that picks up the image and transforms it into an electrical image. Solid state detectors provide better color but more flare than vacuum-tube detectors.

Picture quality is also influenced by two kinds of video "noise". Chroma noise appears as streaks or flecks of the wrong color across the screen. Luminance noise is the same as "snow" where some portions of the image appears too dim or too bright. Steady improvement in camera technology has minimized these problems.

As the light becomes dimmer, the camera's lens opens wider to restore the brightness of the TV image. This is not a very good feature for shooting ominous, dark scenes as the lens will adjust and show a light blue scene. So, I recommend a camera where you can manually adjust the aperture, to allow those ominous scenes to hold true.

Almost all the cameras have a built-in microphone which is satisfactory for most purposes. Remote microphones are available on some models. Mikes are either omnidirectional (pick up sounds equally all around) or directional. I prefer the directional mike to home in on the tornado sounds or wind.

Zoom lenses are essential on a chase camera. Zooms are typically 6:1 or 8:1 ratio. Many cameras have an "auto-focus". This can be detrimental when shooting through a window. Instead of a cone-shaped tornado, you may get an

enlarged bug smear. I recommend an override where you can manually set the focus.

Natural outdoor light tends to be bluish, while indoor light tends to be more orange in color. For these reasons, a video camera must be "white balanced" to keep the colors true. There are four methods of white balancing. The white card balance is most common and usually very accurate. You aim a white card or white surface (a white T-shirt will do) illuminated by the same light as the subject to be taped; then press a button, and the camera adjusts itself.

According to Consumer Reports, the best cameras are top of the line JVC, Magnavox, and RCA products. At the bottom of the list are GE, Quasar, and Panasonic. In the middle are Canon, Sears, Zenith, and Sony. Specific models will vary in price and quality.

B. VIDEO RECORDERS

In purchasing a video recorder or VCR, there are currently three types of systems: beta, VHS, or 8 mm cassette. VHS format is most popular but with improved quality of the cassettes this may change. Most VHS models have three recording and playback speeds: standard play (SP), long play (LP), and super long play (SLP). I recommend using the SP mode ALL the time as you definitely get a better picture.

The most basic VCR has two heads. (A video head is a tiny electromagnet that "reads" information from the tape during playback and "writes" information on the tape when recording.) More heads don't necessarily mean a better picture. The extra heads are used to deliver high quality sounds, or special effects such as over-dubbing audio or video. Audio dubbing is a good feature as you can delete some of the chase expletives without losing the video. Even the cheapest VCR has the basic controls like play, record, rewind, fast forward, search/scan, pause, and stop. Most systems have a remote control. I prefer the wireless remote for convenience.

According to Consumer Reports, no video recorder now on the market is markedly superior to another. They say, "Among the tested models, regardless of brand, style, format, or price, we saw no large differences in picture quality." So a \$300 VCR will give the same picture quality as the \$1000 VCR; you're just paying more for the extra features.

C. VIDEO TAPES

The most popular video tapes are the T-120 which plays for two, four, or six hours depending on the VCR speed selected. Many companies sell two "grades" of video tape: standard, and high grade. The average price for a standard tape is about \$5. Yes, the higher grade tapes cost more, sometimes up to \$15.

Video tape has two main elements. The base is the tape which is made of polyester. Then there is a coating which contains millions of magnetic particles adhered to the base with a binder. These particles become arranged in certain patterns when you record. They will stay that way until you erase or change them. It makes sense that the more particles there are on the tape, the more information the tape can receive. I say "can receive", since

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March 17, 1987 R/E/NS

Timothy P. Marshall
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Dear Mr. Marshall:

I've talked with most of the NSSL staff who are involved in the Spring Project about your list of questions concerning NSSL meteorological support available to private or free-lancing chasers this Spring. As you're aware, a number of important changes have occurred during recent months here on the O. U. North Campus. All activities this year are occurring in close cooperation with the NWS Forecast Office for Oklahoma which is now operating out of a new building directly to the east of NSSL. Guidelines that we've developed for you and your subscribers are as follows:

- * Although we are willing to try to accommodate private chasers, the needs of our DOPLIGHT 87 (hereafter D87) program and the WSFO must take the highest priority. Thus, private chasers are encouraged to seek their weather information elsewhere (e. g., the OU School of Meteorology and the WSO at Will Rogers Airport). Neither we nor the WSFO will be able to deal with inquiries from walk-ins.
- * The forecast area is accessible only through the southwest door of the WSFO. The forecaster on duty will rarely grant access to the D87 forecast area. Persons not involved in DOPLIGHT or employed at the WSFO who might be granted access must be limited to a small area which includes a map board and the NSSL D87 AFOS console area. Access to the WSFO forecast operations area is prohibited, a policy which will be enforced strictly by the NSSL D87 forecaster.
- * The D87 daily briefings may be opened to a limited number of non- project attendees if we can obtain a briefing room that is not in the main F0 area. We will attempt to keep some maps posted in the briefing area. Specific directions will be posted at the south entrance to the new building. If the briefing on any given day must occur within the F0, it will be considered a closed briefing.
- * Real-time information of interest to private chasers will flow exclusively into the F0 and no real-time information will be displayed or used within the NSSL building. Thus, there is no reason for chasers to seek chase information within any NSSL facilities, but the laboratory can be visited, of course, during normal duty hours.

* We agree that NSSL and our science can benefit from the input of private chasers, so we will attempt to provide support to private chasers at the D87 forecast site (at the SW corner door of new building) to the best of our abilities with the resources available. This will include the following:

1. Very limited numbers of people may be allowed to enter the D87 forecast area but only with permission of the D87 duty forecaster. They can look at maps on the map board, the Doppler consoles in the D87 chase coordination room, the D87 AFOS console, etc.. Under no circumstances should private chasers handle any of the equipment in the area without supervision. If several people are chasing in a group, they should send a single representative. When several groups are seeking weather information at the same time, we can accommodate only a single representative from each group, up to a number determined by the D87 duty forecaster. That number may vary depending on circumstances, from zero up to a maximum of about three.

2. We will attempt to post some information on the windows at the main entrance (south) door, so that chasers not granted access inside can get some guidance, but this will necessarily be limited. It may be confined to the outlook narrative discussion and our summary of the forecast.

3. Private chasers with established credentials can be given an unlisted phone number (any requests for this number must be made directly to Drs. Davies-Jones or Doswell to which they can make collect calls. This service is granted with the understanding that it must be kept confidential, its use must be limited, and we expect to get severe weather reports and the chance to review photography and chase logs, in return for short situation briefings. We will not accept collect calls from anyone not granted this privilege. Those not given the privilege will not be given the number. Private chasers must be aware that our own chase teams may be using this line as a backup operational link to the chase coordinators, so we must keep calls from private chasers brief. Calls to the Doppler room per se are out of the question.

* We will appreciate dissemination of this information in STORM TRACK, to avoid having to spell out our operating constraints to each and every chase team. It would also be of some value to re-run Dave Hoadley's admonitions to chasers when they deal with NWS forecast offices in general. It is important for them to know that they should not expect NWS personnel to make their chase forecasts for them - the NWS can provide access to information, but it is up to the chasers themselves to decide where to go to intercept the storms. NWS personnel cannot accept a horde of chasers descending on their office, disrupting their operational tasks. Be courteous and respectful of NWS staff, stay out of their way, don't handle the AFOS consoles without supervision, and let the NWS personnel get on with their mission. Be understanding of the situations in which NWS personnel are operating - their first duty is to protect lives and property.

/signed/

Robert A. Maddox, Director
National Severe Storms Laboratory

VII. FEATURE #3

THE "NEW" SOPHISTICATED CHASER

By Phil Sherman

Based on my professional computer experience, I'd like to present some information about using personal computers for chasing that you will hopefully find valuable. I have engaged a small computer for the past year to obtain weather data from ACCU-DATA, a database run by ACCU-WEATHER, INC. The convenience of receiving real-time data at home is really worth the cost:, because it allows you more flexibility on a) deciding to chase on that particular day, and b) determining where to chase, and c) finding out what really happened after you chased.

Having access to real time weather information is also convenient for other reasons: a) you don't have to drive over to the weather service which may be out of your way, b) you can access weather information on weekends when no A.M Weather program is available, and c) during the evenings, when you might want to get more detailed information to get a head start on the next days chase.

Within the last eight months, several newer, smaller portable "lap top" computers were released by different companies. The lap tops are brief-case sized or smaller that one can easily take on the road. When hooked up with the proper auxiliary equipment, chasers could easily access weather data through a normal phone whenever and wherever they wish. Shop around for the right price and let the salesman know what you want to do with the computer.

There are currently four lap tops which I recommend to chasers as the best the market has to offer which may range in price from \$1,000 to \$3,000. These are the Toshiba 1100PLUS, Zenith Z-181, NEC MULTISPEED, and the IBM Convertible.

You will need a modem which is a separate device that allows one computer to communicate with another via the telephone lines. Modems cost between \$100 and \$300. There are two types of modems: direct connect and acoustic coupled. The direct connect modem is the most common and plugs directly into the phone line with a normal phone jack. The acoustic coupled modem has cups where a telephone handset can be placed, This type of modem would be useful when pay phones and hotel phones (without a jack excess) must be used.

Finally, you will need to obtain a language disk which can talk with the language of another computer. These disks are available at most computer stores for about \$150.

Now that you have a computer, and practice communicating with it, the next step is to select a data service. ACCU-DATA is an excellent source of weather information. Yes, it does cost. Depending on the type of modem you have, be expected to pay between \$45 and \$90 per hour of computer time. During an average spring chase season, it will cost me about \$250 to access the weather information I need. For more information about the weather data service you can write ACCU-DATA in care of ACCU-WEATHER, 619 College Ave., State College, PA 16801. There is no question that it costs some dollars to go this route. So, make sure you want to make this sort of investment.

FUNNEL FUNNIES: The New Sophisticated Chasers (Fact)

The "new sophisticated chasers" will be armed with portable laptops, and be able to access weather data from any phone booth, ANYTIME, ANYWHERE! Thus, a single phone booth in a sleepy little town can easily become in high demand by these computer chasers.

